Calibration Laboratory of Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland

BC-MRA



S Schweizerischer Kallbrierdienst

- C Service suisse d'étaionnage Servizio svizzero di taratura
- S Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service Is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client	Element Morgan Hill, USA		Certificate No.	EX-7682_May24
CAL		RTIFICATE		
Object		EX3DV4 - SN:7682		VATM
Calibration procedure(s)		QA CAL-01.v10, QA CAL- QA CAL-25.v8 Calibration procedure for d	·	EL alaqui
Calibra	tion date	May 13, 2024		
		ments the traceability to national stand certainties with confidence probability a		

All calibrations have been conducted in the closed laboratory facility: environment temperature (22±3) °C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	26-Mar-24 (No. 217-04036/04037)	Mar-25
Power sensor NRP-Z91	SN: 103244	26-Mar-24 (No. 217-04036)	Mar-25
OCP DAK-3.5 (weighted)	SN: 1249	05-Oct-23 (OCP-DAK3.5-1249_Oct23)	Oct-24
OCP DAK-12	SN: 1016	05-Oct-23 (OCP-DAK12-1016_Oct23)	Oct-24
Reference 20 dB Attenuator	SN: CC2552 (20x)	26-Mar-24 (No. 217-04046)	Mar-25
DAE4	SN: 660	23-Feb-24 (No. DAE4-660_Feb24)	Feb-25
Reference Probe EX3DV4	SN: 7349	03-Nov-23 (No. EX3-7349_Nov23)	Nov-24

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-22)	In house check: Jun-24
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-22)	In house check: Jun-24
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-22)	In house check: Jun-24
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-22)	In house check: Jun-24
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24

	Name	Function	Signature
Callbrated by	Aidonia Georgiadou	Laboratory Technician	May
Approved by	Sven Kühn	Technical Manager	Su
This calibration certificate shall r	not be reproduced except in full with	nout written approval of the labora	lssued: May 13, 2024 tory.

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Glossary

TSL	tissue simulating Ilquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization $\hat{\theta}$	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices – Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization $\vartheta = 0$ ($f \le 900$ MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below *ConvF*).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx, y, z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal. DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not callbrated but determined based on the signal characteristics
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of
 power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum
 calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \le 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx, y, z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (<i>k</i> = 2)
Norm $(\mu V/(V/m)^2)^A$	0.68	0.66	0.62	±10.1%
DCP (mV) ^B	102.8	104.3	104.1	±4.7%

Calibration Results for Modulation Response

UID	Communication System Name		Α	В	C	Ð	VR	Max	Max
	-		dB	dBõV		dB	m٧	dev.	Unc ^E
						i		_	<u>k</u> = 2
0	CW	X	0.00	0.00	1.00	0.00	122.6	±1.1%	±4.7%
		Y	0.00	0.00	1.00		137.9		
		Z	0.00	0.00	1.00		149.4		
10352	Pulse Waveform (200Hz, 10%)	X	1.70	61.49	7.01	10.00	60.0	±2.7%	±9.6%
		Y	1.60	61.02	6.52		60.0		
		Z	2.00	62.00	7.00		60.0	_	
10353	Pulse Waveform (200Hz, 20%)		0.80	60.00	5.16	6.99	80.0	±2.5%	±9.6%
		Y	22.00	74.00	9.00		80.0		
		Z	46.00	80.00	11.00		80.0		
10354	Pulse Waveform (200Hz, 40%)	X	8.00	70.00	7.00	3.98	95.0	±2.6%	±9.6%
		Y	0.02	123.01	0.32		95.0		
		Z	0.10	130.09	0.55		95.0		
10355	Pulse Waveform (200Hz, 60%)	X	11.28	156.52	11.55	2.22	120.0	±1.6%	±9.6%
ļ		Y	8.75	159.53	3.16		120.0		
		Z	10.13	156.32	25.35		120.0		
10387	QPSK Waveform, 1 MHz	X	0.86	66.16	13.70	1.00	150.0	±4.1%	±9.6%
		Y	0.60	62.45	11.46		150.0		
ł		Z	0.61	62.23	11.26		150.0	1	
10388	QPSK Waveform, 10 MHz	X	1.56	66.26	14.54	0.00	150.0	±1.4%	±9.6%
		Y	1.32	64.35	13.30		150.0	1	
		Z	1.33	64.17	13.13		150.0	1	·
10396	64-QAM Waveform, 100 kHz	— X	1.75	64.71	16.04	3.01	150.0	±1.2%	±9.6%
	· · · · · · · · · · · · · · · · · · ·	Y	1.60	63.41	15.34		150.0		
		Z	1.58	63.05	15.07		150.0	1	
10399	64-QAM Waveform, 40 MHz	X	3.01	66.39	15.23	0.00	150.0	±1.7%	±9.6%
		Y	2.80	65.46	14.64	1	150.0]	
		Z	2.82	65.44	14.59		150.0		
10414	WLAN CCDF, 64-QAM, 40 MHz	X	4.09	65.87	15.36	0.00	150.0	±3.3%	±9.6%
		Y	4.03	65.97	15.30		150.0	}	
		Z	4.07	66.03	15.30	1	150.0	1	

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

- E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Page 5). ^B Linearization parameter uncertainty for maximum specified field strength.

Sensor Model Parameters

	C1 fF	C2 fF	α V ⁻¹	T1 msV ⁻²	T2 ms V ⁻¹	T3 ms	T4 V ⁻²	T5 V ⁻¹	T6
x	13.4	96.51	33.26	2.61	0.00	4.90	0.48	0.00	1.00
V	12.2	88.51	33.48	3.46	0.00	4.90	0.33	0.00	1.00
<u>z</u>	12.2	88.62	33.44	2.04	0.00	4.90	0.25	0.00	1.00

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle	56.3°
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Note: Measurement distance from surface can be Increased to 3-4 mm for an Area Scan job.

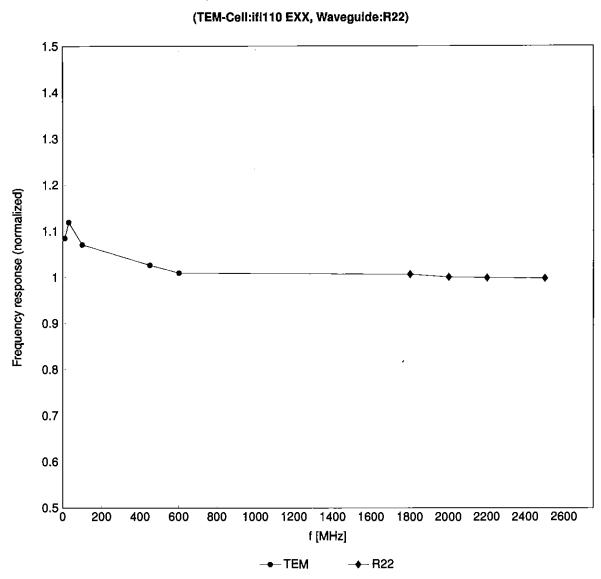
f (MHz) ^C	Relative Permittivity ^F	Conductivity ^F (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k = 2)
750	41.9	0.89	9.94	9.61	10.53	0.40	1.27	±11.0%
835	41.5	0.90	9.76	9.52	10.09	0.40	1.27	±11.0%
1750	40.1	1.37	8.36	8.20	8.70	0.26	1.27	±11.0%
1900	40.0	1.40	8.19	8.06	8.54	0.29	1.27	±11.0%
2300	39.5	1.67	8.00	7.85	8.33	0.30	1.27	±11.0%
2450	39.2	1.80	7.87	7.72	8.18	0.30	1.27	±11.0%
2600	39.0	1.96	7.72	7.57	8.04	0.29	1.27	±11.0%

Calibration Parameter Determined in Head Tissue Simulating Media

^C Frequency validity above 300 MHz of ±100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ±50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ±10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4–9 MHz, and ConvF assessed at 13 MHz is 9–19 MHz. Above 5 GHz frequency validity can be extended to ±110 MHz.

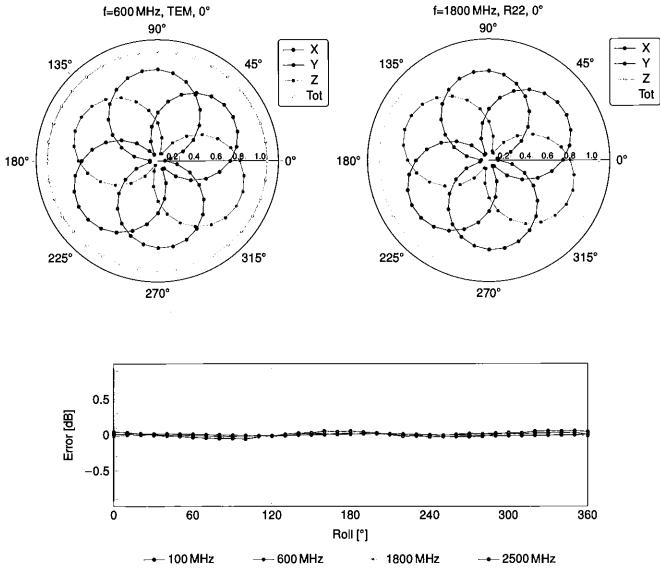
F The probes are calibrated using tissue simulating liquids (TSL) that deviate for ε and σ by less than $\pm 5\%$ from the target values (typically better than $\pm 3\%$) and are valid for TSL with deviations of up to $\pm 10\%$ if SAR correction is applied.

^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than $\pm 1\%$ for frequencies below 3 GHz and below $\pm 2\%$ for frequencies between 3–6 GHz at any distance larger than half the probe tip diameter from the boundary.



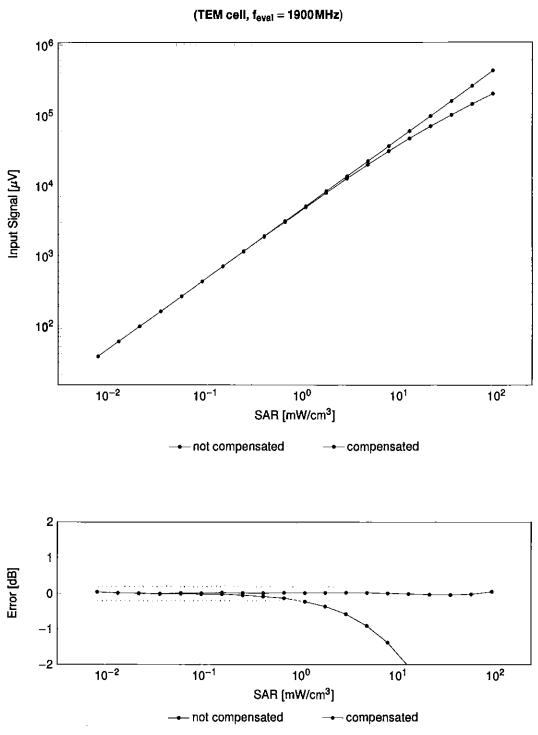
Frequency Response of E-Field

Uncertainty of Frequency Response of E-field: ±6.3% (k=2)



Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

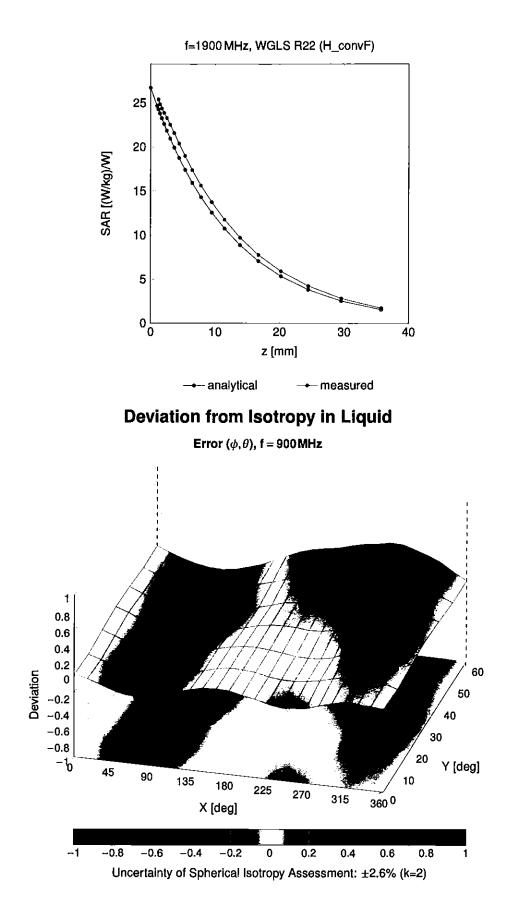
Uncertainty of Axial Isotropy Assessment: ±0.5% (k=2)



Dynamic Range f(SAR_{head})

Uncertainty of Linearity Assessment: ±0.6% (k=2)

Conversion Factor Assessment



Appendix: Modulation Calibration Parameters

	Rev	Communication System Name	Group	PAR (dB)	$Unc^{E} k = 2$
010	nev			0.00	±4.7
10010	CAB	SAR Validation (Square, 100 ms, 10 ms)	Test	10.00	±9.6
10010	CAC	UMTS-FDD (WCDMA)	WCDMA	2.91	±9.6
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	±9.6
10012	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	±9.6
10013	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	±9.6
10021	DAC	GPRS-FDD (TDMA, GMSK)	GSM	9.57	±9.6
	<u> </u>	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	6.56	±9.6
10024	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	±9.6
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	±9.6
		GPRS-FDD (TDMA, GPSK, TN 0-1-2)	GSM	4.80	±9.6
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	±9.6
10028			GSM	7.78	±9.6
	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	Bluetooth	5.30	±9.6
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	1.87	±9.6
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.16	±9.6
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)		7.74	±9.6
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth		
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	±9.6
10035	CAA	IEEE 802,15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	±9.6
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	±9.6
10037	CAA	IÈEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	±9.6
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluelooth	4.10	±9.6
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.6
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	±9.6
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS.	0.00	±9.6
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	±9.6
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	±9.6
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	±9.6
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	±9.6
10059	CAB	IEEE 802.11b WiFI 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	±9.6
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	±9.6
10061	CAB	IEEE 802.11b WiFI 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	±9.6
10062	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	±9.6
10063	CAE	IEEE 802.11a/h WIFI 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	±9.6
10064	CAE	IEEE 802.11a/h WiFI 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6
10065	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	±9.6
10066	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	±9.6
10067	CAE	IEEE 802.11a/h WiFI 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	±9.6
10068	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	±9.6
10069	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	±9.6
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	±9.6
10072	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	±9.6
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	±9.6
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	±9.6
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	±9.6
10076	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	±9.6
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLÂN	11.00	±9.6
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	±9.6
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	±9.6
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	±9.6
10097	CAC	UMTS-FDD (HSDPA)	WCDMA	3.98	±9.6
10098	CAC	UMTS-FDD (HSUPA, Sublest 2)	WCDMA	3.98	±9.6
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	±9.6
10100	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	±9.6
10101	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10102	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10103	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	±9.6
10104	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TOD	9.97	±9.6
10105	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	±9.6
10108	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	±9.6
	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10109	UNIT				
10109 10110	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	±9.6

			Group	PAR (dB)	$Unc^E k = 2$
UID	Rev	Communication System Name	Group	6.59	±9.6
10112	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10113	CAH	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	±9.6
10114	CAE	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	±9.6
10116	CAE	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	±9.6
10117	CAE	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	±9.6
10118	CAE	IEEE 802.11n (HT Mixed, 61 Mbps, 16-QAM)	WLAN	8.59	±9.6
10119	CAE	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	±9.6
10140	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10141	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	±9.6
10142	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6
10143	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)		6.35	±9.6
10144	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	±9.6
10145	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	±9.6
10146	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	±9.6
10147	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	±9.6
10149	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10150	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10151	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	±9.6
10152	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	±9.6
10153	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	
10154	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	±9.6
10155	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10156	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	±9.6
10157	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10158	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10159	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	±9.6
10160	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	±9.6
10161	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	±9.6 ±9.6
10162	CAF	LTE-FDD (SC-FDMA, 50% RB, 15MHz, 64-QAM)	LTE-FDD	6.58 5.46	±9.6
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD LTE-FDD	6.21	±9.6
10167 10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM) LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	±9.6
10168	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	±9.6
10170	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)		6.52	±9.6
10171	AAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	±9.6
10172	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	±9.6
10173	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10174	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10175	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	±9.6
10176	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10177	CAJ	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	±9.6
10178	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10179	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10180	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10181	CAF	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	±9.6
10182	CAF	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10183	AAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10184	CAF	LTE-FDD (SC-FDMA, 1 RB, 3MHz, QPSK)	LTE-FDD	5.73	±9.6
10185	CAF	LTE-FDD (SC-FDMA, 1 RB, 3MHz, 16-QAM)	LTE-FDD	6.51	±9.6
10186	AAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	±9.6
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10189 10193	AAG CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM) IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	LTE-FDD WLAN	6.50 8.09	±9.6 ±9.6
10193	CAE	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.09	±9.6
10194	CAE	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	±9.6
10195	CAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	±9.6
10198	CAE	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	±9.6
10197	CAE	IEEE 802.11n (HT Mixed, 55 Mbps, 64-QAM)	WLAN	8.27	±9.6
10130	CAE	IEEE 802.11n (HT Mixed, 05 Mbps, 04 GAM)	WLAN	8.03	±9.6
10220	CAE	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	±9.6
10221	CAE	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8,27	±9.6
10222	CAE	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	±9.6
10223	CAE	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	±9.6
10224	CAE	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	±9.6
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Dut Mod Mode Number Stress Mode Number Stress Mode Number Stress 1282 CAC IFF TDD GC FEMAL, FB, 14MHL, H-GAMB IFF TDD GC FEMAL, FB, 14MHL, GAMB IFF TDD GC FEMAL, FB, 34MHL, GAMA IFF TDD GC FEMAL, FB, 34				Crown	PAR (dB)	$Unc^{E} k = 2$
1928 TOZC CAC LTE TOD GC FDMA, T BE, 14 MHZ, 16 CAM) LTE TOD 9.40 25.9 1928 TOZC CAC LTE TOD GC FDMA, T BE, 14 MHZ, 16 CAM) LTE TOD 9.28 25.9 1928 TOZE CAC LTE TOD GC FDMA, T BE, 14 MHZ, 16 CAM) LTE TOD 9.48 45.9 1928 TOZE CAE LTE TOD GC FDMA, T BE, 34 MHZ, 16 CAM) LTE TOD 9.48 45.9 1928 TOZE CAE LTE TOD GC FDMA, T BE, 34 MHZ, 16 CAM) LTE TOD 9.48 4.95 1928 TOZE CAH LTE TOD GC FDMA, T BE, 34 MHZ, 16 CAM) LTE TOD 9.48 4.95 1928 TOZE CAH LTE TOD GC FDMA, T BE, 34 MHZ, 16 CAM) LTE TOD 9.48 4.95 1928 TOZE CAH LTE TOD GC FDMA, T BE, 34 MHZ, 16 CAM) LTE TOD 9.48 4.95 1928 TOZE CAH LTE TOD GC FDMA, 178, 10 MHZ, 16 CAM) LTE TOD 9.48 4.95 1928 TOZE CAH LTE TOD GC FDMA, 90% R5, 14 MHZ, 16 CAM) LTE TOD 9.48 4.95 1928 TOZE CAH LTE TOD GC FDMA, 90% R5, 14 MHZ, 16 CAM)	UID	Rev	Communication System Name			
1022 CAC LET TOD 0.02 4.04 10268 CAC LET TOD 0.94 4.95 10268 CAC LET TOD 0.94 4.95 10262 CAC LET TOD 0.94 4.95 10262 CAE LET TOD 0.94 4.95 10263 CAE LET TOD 0.94 4.95 10281 CAE LET TOD 0.94 4.95 10282 CAH LET TOD 0.94 4.95 10284 CAH LET TOD 0.94 4.95 10285 CAH LET TOD 0.94 4.95 10286 CAH LET TOD 0.94 4.95 10287 CAH LET TOD 0.94 4.95 10286 CAH						
1228 CAC ITE-TDD (SC-TDMA, THB, TAHHL, OPSK) LTE-TDD 9-28 4.9.6 1228 CAE ITE-TDD (SC-TDMA, THB, SMHL, 94-CAM) LTE-TDD 9.48 4.9.6 1228 CAE ITE-TDD (SC-TDMA, THB, SMHL, 94-CAM) LTE-TDD 9.48 4.9.6 1228 CAE ITE-TDD (SC-TDMA, THB, SMHL, 94-CAM) LTE-TDD 9.48 4.9.6 1228 CAH ITE-TDD (SC-TDMA, THB, SMHL, 16-CAM) LTE-TDD 9.48 4.9.6 1228 CAH LTE-TDD (SC-TDMA, THB, 10MHL, 16-CAM) LTE-TDD 9.48 4.9.6 1228 CAH LTE-TDD (SC-TDMA, THB, 10MHL, 16-CAM) LTE-TDD 9.48 4.9.6 1228 CAH LTE-TDD (SC-TDMA, THB, 10MHL, 4C-AM) LTE-TDD 9.21 4.9.6 1228 CAG LTE-TDD (SC-TDMA, THB, 10MHL, 4C-AM) LTE-TDD 9.22 4.9.6 1228 CAG LTE-TDD (SC-TDMA, THB, 10MHL, 4C-AM) LTE-TDD 9.24 4.9.6 1228 CAG LTE-TDD (SC-TDMA, THB, 10MHL, 4C-AM) LTE-TDD 9.26 4.9.6						
1222 CAE LTE-TOD 50-40 LTE-TOD 50-40 1223 CAE LTE-TOD 50-50 19-85 19-86 1223 CAE LTE-TOD 50-50 19-85 19-86 1223 CAE LTE-TOD 50-60 19-85 19-86 1223 CAH LTE-TOD 50-60 19-86 19-86 1223 CAH LTE-TOD 50-61 19-86 19-86 1224 CAH LTE-TOD 50-61 19-86 19-86 19-86 1225 CAH LTE-TOD 50-61 19-86						
10281 CAE LTE-TDD (SC-FDMA, 1 BB, 3HHz, 4C-GMA) LTE-TDD 9.49 9.98 10281 CAE LTE-TDD (SC-FDMA, 1 BB, 3HHz, 4C-GMA) LTE-TDD 9.48 49.6 10282 CAH LTE-TDD (SC-FDMA, 1 BB, 5HHz, 4C-GMA) LTE-TDD 10.25 49.6 10284 CAH LTE-TDD (SC-FDMA, 1 BB, 5HHz, 4C-GMA) LTE-TDD 5.48 49.6 10285 CAH LTE-TDD (SC-FDMA, 1 BB, 10HHz, 4C-GMA) LTE-TDD 5.48 49.6 10286 CAH LTE-TDD (SC-FDMA, 1 BB, 10HHz, 4C-GMA) LTE-TDD 9.41 49.6 10287 CAH LTE-TDD (SC-FDMA, 1 BB, 10HHz, 4C-GMA) LTE-TDD 9.42 49.6 10286 CAG LTE-TDD (SC-FDMA, 1 BB, 15HHz, 4C-GMA) LTE-TDD 9.42 49.6 10286 CAG LTE-TDD (SC-FDMA, 50K, BB, 1.4HHz, 4C-GMA) LTE-TDD 9.42 49.6 10284 CAC LTE-TDD (SC-FDMA, 50K, BB, 3.4Hz, CPSK) LTE-TDD 9.42 49.6 10284 CAC LTE-TDD (SC-FDMA, 50K, BB, 3.4Hz, CPSK) LTE-TDD 9.6						
10221 CAE CLE TOD GO-FOMA, TRG 3MH2, GPSK) LTE-TOD 9.49 49.69 10222 CAH TE-TOD GO-FOMA, TRG 5MH2, G4-CAM) LTE-TOD 9.48 49.69 10232 CAH TE-TOD GO-FOMA, TRG 5MH2, G4-CAM) LTE-TOD 9.21 49.6 10234 CAH TE-TOD GO-FOMA, TRG 5MH2, G4-CAM) LTE-TOD 9.24 49.6 10235 CAH TE-TOD GO-FOMA, TRG 10MH2, GPSK) LTE-TOD 9.48 49.6 10236 CAH TE-TOD GO-FOMA, TRG 10MH2, GPSK) LTE-TOD 9.48 49.6 10238 CAG TE-TOD GO-FOMA, TRG 15MH2, 44-CAM) LTE-TOD 9.44 49.6 10248 CAG TE-TOD GO-FOMA, TRG 15MH2, 44-CAM) LTE-TOD 9.21 49.6 10248 CAC TE-TOD GO-FOMA, SOK RB, 14MH2, GPSK) LTE-TOD 9.24 49.6 10242 CAC TE-TOD GO-FOMA, SOK RB, 14MH2, GPSK) LTE-TOD 9.84 49.6 10242 CAC TE-TOD GO-FOMA, SOK RB, 3MH2, 4CAM) LTE-TOD 9.04 49.6 1					·	
TO222 CAH TEFTDD (SCFPMA, TR8, 5HH2, 6CAM) TEFTDD 19.45 19.46 19.45 T0232 CAH TEFTDD (SCFPMA, TR8, 5HH2, CPSK) UTE-TDD 19.25 19.47 19.25 T0235 CAH TEFTDD (SCFPMA, TR8, 16HH2, CPSK) UTE-TDD 9.46 19.49 T0235 CAH TEFTDD (SCFPMA, TR8, 16HH2, 16-0AM) UTE-TDD 9.21 19.86 T0237 CAH TEFTDD (SCFPMA, TR8, 15HH2, 16-0AM) UTE-TDD 9.24 19.86 T0237 CAH TEFTDD (SCFPMA, TR8, 15HH2, 16-0AM) UTE-TDD 9.24 19.86 T0242 CAC TEFTDD (SCFPMA, 17R, 15HH2, 16-0AM) UTE-TDD 9.22 19.86 T0242 CAC TEFTDD (SCFPMA, 59K RE, 14HH2, 6-0AM) UTE-TDD 9.84 19.86 T0242 CAC TEFTDD (SCFPMA, 59K RE, 14HH2, 6-0AM) UTE-TDD 9.84 19.86 T0242 CAC TEFTDD (SCFPMA, 59K RE, 34HH2, 6-0AM) UTE-TDD 9.84 19.86 T0242 CAC TEFTDD (SCFPMA, 59K RE, 34HH2, 6-0AM) UTE-TDD					_	
1223 CAH LTE-TDD 1265 CAH LTE-TDD 1264 49.8 10226 CAH LTE-TDD 126.5 L99.6		<u> </u>				
TOZ21 CAH LTE-TDD Disc: Disc Disc <thdisc< th=""> Disc <thdisc< th=""> <</thdisc<></thdisc<>					10.25	±9.6
Totas CAH LTF-TDD CSC-PDIA TB, 10MHz, 19-CAMM Totas CAH LTF-TDD ISC-PDIAA, 1 BB, 10MHz, 0PSIG LTF-TDD 9.21 ±9.6 Totas CAH LTF-TDD (SC-PDIAA, 1 BB, 11MHz, 0PSIG) LTF-TDD 9.24 ±9.6 Totas CAG LTF-TDD (SC-PDIAA, 1 BB, 15MHz, 0PSIG) LTF-TDD 9.24 ±9.6 Totas CAG LTF-TDD (SC-PDIAA, 1 BB, 15MHz, 0PSIG) LTF-TDD 9.28 ±9.6 Totas CAG LTF-TDD (SC-PDIAA, 1 BB, 15MHz, 0PSIG) LTF-TDD 9.88 ±9.8 Totas CAC LTF-TDD (SC-PDIAA, 50% RB, 1 AMHz, 0PSIG) LTF-TDD 9.86 ±9.8 Totas CAC LTF-TDD (SC-PDIAA, 50% RB, 3 MHz, 60-AMI) LTF-TDD 10.06 ±9.6 Totas CAC LTF-TDD (SC-PDIAA, 50% RB, 3 MHz, 60-AMI) LTF-TDD 10.06 ±9.6 Totas LTF-TDD (SC-PDIAA, 50% RB, 3 MHz, 60-AMI) LTF-TDD 10.06 ±9.6 Totas LTF-TDD (SC-PDIAA, 50% RB, 3 MHz, 60-AMI) LTF-TDD 50.6 ±9.6 L				LTE-TDD	9.21	±9.6
Totage CAH LTF-TDD Display CHA TE-TDD Display CHA TE-TDD <thcha< th=""> Display Display</thcha<>		CAH		LTE-TDD	9.48	±9.6
Togar CAH LTF-TDD Ge-EDMA, T BR, 10MHz, QPSIG LTF-TDD 9.21 ±9.6 TO282 CAG LTF-TDD (GE-EDMA, T BR, 15MHz, 8+CAM) LTF-TDD 9.24 ±9.6 TO282 CAG LTF-TDD (GE-EDMA, T BR, 15MHz, 9+CAM) LTF-TDD 9.24 ±9.6 TO281 CAG LTF-TDD (GE-EDMA, 1BR, 15MHz, 9+CAM) LTF-TDD 9.82 ±9.8 TO284 CAG LTF-TDD (GE-EDMA, 50% RB, 14MHz, 40-CAM) LTF-TDD 9.86 ±9.8 TO284 CAG LTF-TDD (GE-EDMA, 50% RB, 14MHz, 40-CAM) LTF-TDD 10.06 ±9.8 TO284 CAG LTF-TDD (GE-EDMA, 50% RB, 3MHz, 40-CAM) LTF-TDD 9.30 ±9.8 TO284 CAG LTF-TDD (GE-EDMA, 50% RB, 3MHz, 40-CAM) LTF-TDD 9.30 ±9.8 T0284 CAG LTF-TDD (GE-EDMA, 50% RB, 3MHz, 40-CAM) LTF-TDD 9.30 ±9.8 T0284 CAG LTF-TDD (GE-EDMA, 50% RB, 5MHz, 40-CAM) LTF-TDD 9.30 ±9.6 T0284 CAG LTF-TDD (GE-EDMA, 50% RB, 5MHz, 40-CAM) LTF-TDD <t< td=""><td></td><td>CAH</td><td></td><td></td><td>10.25</td><td>±9.6</td></t<>		CAH			10.25	±9.6
Top280 CAG LTE-TDD (SC-FDMA, TR, 15MHz, 64-CAM) LTE-TDD 19.21 19.86 Top240 CAG LTE-TDD (SC-FDMA, 198, 15MHz, 64-CAM) LTE-TDD 9.82 19.66 Top240 CAG LTE-TDD (SC-FDMA, 50% FB, 1.4 MHz, 16-CAM) LTE-TDD 9.82 19.66 Top240 CAG LTE-TDD (SC-FDMA, 50% FB, 1.4 MHz, 16-CAM) LTE-TDD 9.66 19.66 Top240 CAC LTE-TDD (SC-FDMA, 50% FB, 3.4 MHz, 16-CAM) LTE-TDD 10.066 1.86 Top240 CAC LTE-TDD (SC-FDMA, 50% FB, 3.4 MHz, 16-CAM) LTE-TDD 9.30 9.98 Top240 CAH LTE-TDD (SC-FDMA, 50% FB, 5.4 MHz, 16-CAM) LTE-TDD 9.99 19.81 Top240 CAH LTE-TDD (SC-FDMA, 50% FB, 5.4 MHz, 64-CAM) LTE-TDD 9.09 19.81 Top240 CAH LTE-TDD (SC-FDMA, 50% FB, 5.4 MHz, 64-CAM) LTE-TDD 9.09 19.81 Top240 CAH LTE-TDD (SC-FDMA, 50% FB, 5.4 MHz, 64-CAM) LTE-TDD 9.04 19.61 Top250 CAH LTE-TDD (SC-FDMA, 50% FB, 5.4 MHz, 64-CAM)	10237	CAH		LTE-TDD	9.21	±9.6
10240 CAG TE-TDD (SC-FDMA, 19R, 15MHz, 0PSK) ITE-TDD 9.21 1.96 10241 CAC LITE-TDD (SC-FDMA, 50%, RB, 1.4MHz, 16-CMM) LITE-TDD 9.82 1.96 10242 CAC LITE-TDD (SC-FDMA, 50%, RB, 1.4MHz, 16-CMM) LITE-TDD 9.46 4.96 10244 CAE LITE-TDD (SC-FDMA, 50%, RB, 8MHz, 16-CMM) LITE-TDD 10.06 1.96 10244 CAE LITE-TDD (SC-FDMA, 50%, RB, 8MHz, 16-CMM) LITE-TDD 9.00 4.96 10246 CAE LITE-TDD (SC-FDMA, 50%, RB, 8MHz, 0FSK) LITE-TDD 9.30 4.96 10247 CAE LITE-TDD (SC-FDMA, 50%, RB, 8MHz, 0FSK) LITE-TDD 9.31 4.96 10248 CAH LITE-TDD (SC-FDMA, 50%, RB, 8MHz, 0FSK) LITE-TDD 9.31 4.96 10250 CAH LITE-TDD (SC-FDMA, 50%, RB, 8MHz, 0FSK) LITE-TDD 9.41 4.96 10252 CAH LITE-TDD (SC-FDMA, 50%, RB, 15MHz, 16-CAM) LITE-TDD 9.41 4.96 10254 CAG LITE-TDD (SC-FDMA, 50%, RB, 15MHz, 16-CAM) LITE-TDD<	10238	CAG	LTE-TDD (SC-FDMA, 1 RB, 15MHz, 16-QAM)	LTE-TDD	9.48	±9.6
Total CAC LTE*TOD 9.82 4.9.6 Total CAC LTE*TOD 9.82 4.9.6 Total CAC LTE*TOD 9.48 4.9.6 Total CAC LTE*TOD 9.48 4.9.6 Total CAC LTE*TOD 10.06 4.9.6 Total LTE*TOD CAC 1.9.6 4.9.6 Total	10239	CAG		LTE-TDD	10.25	±9.6
Total CAC LTE*TOD 9.82 4.9.6 Total CAC LTE*TOD 9.82 4.9.6 Total CAC LTE*TOD 9.48 4.9.6 Total CAC LTE*TOD 9.48 4.9.6 Total CAC LTE*TOD 10.06 4.9.6 Total LTE*TOD CAC 1.9.6 4.9.6 Total	10240	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	±9.6
Totad CAC LTE-TDD Soft B36 Totad CAE LTE-TDD Soft B36 1986 Totad CAE LTE-TDD Soft B36 1986 Totad CAE LTE-TDD Soft B37 1986 Totad CAE LTE-TDD Soft B37 1986 Totad CAE LTE-TDD Soft B31 1986 Totad CAE LTE-TDD Soft B1, Totad 1986 1986 Totad CAE LTE-TDD Soft B1, Totad 1986 1986 Totad CAE LTE-TDD Soft B1, Totad 1986 1986	10241	CAC		LTE-TDD	9.82	±9.6
Totat CAE LTE-TOD Store Store 10245 CAE LTE-TOD SC-FDMA, 50%, RB, SMHz, 64-OAM) LTE-TOD 9.30 4.96 10247 CAE LTE-TOD (SC-FDMA, 50%, RB, SMHz, 42-OSK) LTE-TDD 9.31 4.96 10247 CAH LTE-TOD (SC-FDMA, 50%, RB, SMHz, 42-OSK) LTE-TDD 9.31 4.96 10248 CAH LTE-TOD (SC-FDMA, 50%, RB, SMHz, 42-OAM) LTE-TDD 9.31 4.96 10250 CAH LTE-TOD (SC-FDMA, 50%, RB, SMHz, 42-OAM) LTE-TDD 9.31 4.96 10250 CAH LTE-TOD (SC-FDMA, 50%, RB, SMHz, 44-OAM) LTE-TDD 9.24 4.96 10252 CAG LTE-TOD (SC-FDMA, 50%, RB, SMHz, 46-OAM) LTE-TDD 9.49 4.96 10253 CAG LTE-TOD (SC-FDMA, 50%, RB, SMHz, 46-OAM) LTE-TDD 9.49 4.96 10254 CAG LTE-TOD (SC-FDMA, 50%, RB, SMHz, 46-OAM) LTE-TDD 9.49 4.96 10255 CAC LTE-TDD (SC-FDMA, 100%, RB, 3MHz, 46-OAM) LTE-TDD 9.34 4.98	10242	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	±9.6
Totage CAE LTE-TDD SO-RE SMHz A-DAM3 LTE-TDD 10.06 19.8 Totage CAE LTE-TDD SO-RE SMHz A-DAM3 LTE-TDD 9.30 4.96 Totage CAH LTE-TDD SO-RE SMHz A-DAM3 LTE-TDD 9.30 4.96 Totage CAH LTE-TDD SO-RE SMHz A-DAM3 LTE-TDD 9.30 4.96 Totage CAH LTE-TDD SO-RMA SMRz A-DAM3 LTE-TDD 9.81 4.96 Totage CAH LTE-TDD SO-RMA SMRz A-DAM3 LTE-TDD 9.84 4.96 Totage CAH LTE-TDD SO-RMA SMRz A-DAM3 LTE-TDD 9.84 4.96 Totage CAH LTE-TDD SO-RMA SMRz A-DAM3 LTE-TDD 1.96 4.96 Totage CAC LTE-TDD SO-RMA SMRZ HAM2 HAM3 HTE-TDD 1.96	10243	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TOD	9.46	±9.6
Totade CAE LTE-TDD (SC-FDMA, 599; RB, 3MHz, 0FSAM) LTE-TDD 9.30 19.6 Totady CAH LTE-TDD (SC-FDMA, 599; RB, 5MHz, 0FCAM) LTE-TDD 9.61 4.9.6 Totady CAH LTE-TDD (SC-FDMA, 599; RB, 5MHz, 0FCAM) LTE-TDD 9.8.1 4.9.6 Totady CAH LTE-TDD (SC-FDMA, 599; RB, 5MHz, 0FCAM) LTE-TDD 9.8.1 4.9.6 Totady CAH LTE-TDD (SC-FDMA, 599; RB, 10MHz, 64-CAM) LTE-TDD 9.2.4 4.9.6 Totady CAH LTE-TDD (SC-FDMA, 599; RB, 15MHz, 16-CAM) LTE-TDD 9.2.4 4.9.6 Totady CAG LTE-TDD (SC-FDMA, 599; RB, 15MHz, 16-CAM) LTE-TDD 9.2.0 4.9.6 Totady CAG LTE-TDD (SC-FDMA, 599; RB, 15MHz, 16-CAM) LTE-TDD 9.2.0 4.9.6 Totady CAE LTE-TDD (SC-FDMA, 1009; RB, 15MHz, 16-CAM) LTE-TDD 9.2.0 4.9.6 Totady CAC LTE-TDD (SC-FDMA, 1009; RB, 14MHz, 16-CAM) LTE-TDD 9.3.4 4.9.6 Totady CAC LTE-TDD (SC-FDMA, 1009; RB, 3MHz, 6-CAM)	10244	CAE	LTE-TOD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	±9.6
Totage CAH LTE-TDD (SC-FDMA, 59% RB, 5MHz, 64-CAM) LTE-TDD 10.99 1.98 T0248 CAH LTE-TDD (SC-FDMA, 59% RB, 5MHz, 64-CAM) LTE-TDD 10.09 1.98 T0249 CAH LTE-TDD (SC-FDMA, 59% RB, 10MHz, 10-CAM) LTE-TDD 9.28 1.986 T0251 CAH LTE-TDD (SC-FDMA, 59% RB, 10MHz, 0-CAM) LTE-TDD 9.24 1.986 T0252 CAH LTE-TDD (SC-FDMA, 59% RB, 10MHz, 0-CAM) LTE-TDD 9.24 1.986 T0252 CAH LTE-TDD (SC-FDMA, 59% RB, 10MHz, 0-CAM) LTE-TDD 9.24 1.986 T0254 CAG LTE-TDD (SC-FDMA, 109% RB, 15MHz, 10-CAM) LTE-TDD 9.20 1.986 T0255 CAC LTE-TDD (SC-FDMA, 100% RB, 1.5MHz, 0-CAM) LTE-TDD 9.20 1.986 T0255 CAC LTE-TDD (SC-FDMA, 100% RB, 1.5MHz, 0-CAM) LTE-TDD 10.08 1.99.6 T0256 CAC LTE-TDD (SC-FDMA, 100% RB, 3.4MHz, 0-CAM) LTE-TDD 9.38 1.98.6 T0256 LTE-TDD (SC-FDMA, 100% RB, 3.4MHz, 0-SAMA) LTE-TDD 9.	10245	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TOD	10.06	±9.6
Totade CAH LTE-TDD [SC-FDMA, 50% RB, SMHz, QFSK) LTE-TDD 10.09 41.9.6 Totade CAH LTE-TDD [SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.81 49.6 Totade CAH LTE-TDD [SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.81 49.6 Totade CAH LTE-TDD [SC-FDMA, 50% RB, 10 MHz, 46-QAM) LTE-TDD 9.24 49.6 Totade CAH LTE-TDD [SC-FDMA, 50% RB, 15 MHz, 40-QAM) LTE-TDD 9.90 49.6 Totade LTE-TDD [SC-FDMA, 50% RB, 15 MHz, 40-QAM) LTE-TDD 9.20 49.6 Totade CAG LTE-TDD [SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 9.20 49.6 Totade CAC LTE-TDD [SC-FDMA, 100% RB, 14 MHz, 40-QM) LTE-TDD 9.84 49.8 Totade CAC LTE-TDD [SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.34 49.8 Totade CAC LTE-TDD [SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.37 49.6 Totade CAC LTE-TDD [SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9	10246	CAE		LTE-TDD	9.30	±9.6
Totage CAH LTE-TDD SC-FDMA, 50%, RB, 10MHz, 60AM) LTE-TDD 9.29 ±9.6 T0250 CAH LTE-TDD (SC-FDMA, 50%, RB, 10MHz, 64-CM) LTE-TDD 10.17 ±8.6 T0251 CAH LTE-TDD (SC-FDMA, 50%, RB, 10MHz, 64-CM) LTE-TDD 9.24 ±9.6 T0252 CAH LTE-TDD (SC-FDMA, 50%, RB, 15MHz, 10-CAM) LTE-TDD 9.02 ±9.6 T0253 CAG LTE-TDD (SC-FDMA, 50%, RB, 15MHz, 10-CAM) LTE-TDD 9.02 ±9.6 T0255 CAC LTE-TDD (SC-FDMA, 100%, RB, 15MHz, 10-CAM) LTE-TDD 9.04 ±9.6 T0255 CAC LTE-TDD (SC-FDMA, 100%, RB, 14MHz, 10-CAM) LTE-TDD 9.34 ±9.6 T0256 CAC LTE-TDD (SC-FDMA, 100%, RB, 14MHz, 10-CAM) LTE-TDD 9.7 ±9.6 T0260 CAE LTE-TDD (SC-FDMA, 100%, RB, 5MHz, 40-CAM) LTE-TDD 9.7 ±9.6 T0261 CAE LTE-TDD (SC-FDMA, 100%, RB, 5MHz, 20-SK) LTE-TDD 9.7 ±9.6 T0262 CAE LTE-TDD (SC-FDMA, 100%, RB, 5MHz, 20-SK) <t< td=""><td>10247</td><td>CAH</td><td>LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)</td><td>LTE-TDD</td><td>9.91</td><td>±9.6</td></t<>	10247	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	±9.6
10280 CAH LTE-TDD 9.81 49.6 10281 CAH LTE-TDD (SC-FDMA, 50% RB, 10MHz, 64-QAM) LTE-TDD 9.81 49.6 10282 CAH LTE-TDD (SC-FDMA, 50% RB, 15MHz, 40-QAM) LTE-TDD 9.24 49.6 10283 CAG LTE-TDD (SC-FDMA, 50% RB, 15MHz, 40-QAM) LTE-TDD 9.24 49.6 10284 CAG LTE-TDD (SC-FDMA, 50% RB, 15MHz, 40-QAM) LTE-TDD 9.20 49.6 10285 CAG LTE-TDD (SC-FDMA, 100% RB, 14MHz, QPSK) LTE-TDD 9.20 49.6 10257 CAC LTE-TDD (SC-FDMA, 100% RB, 14MHz, QPSK) LTE-TDD 9.34 49.6 10285 CAC LTE-TDD (SC-FDMA, 100% RB, 3MHz, 64-QAM) LTE-TDD 9.34 49.6 10280 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, 64-QAM) LTE-TDD 9.24 49.6 10282 CAE LTE-TDD (SC-FDMA, 100% RB, 5MHz, 64-QAM) LTE-TDD 9.24 49.6 10282 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 64-QAM) LTE-TDD 9.23	10248	CAH	LTE-TDD (SC-FDMA, 50% RB, 5MHz, 64-QAM)	LTE-TDD	10.09	±9.6
10281 CAH LTE-TDD (SC-FDMA, 50%, RB, 10MHz, QFSK) LTE-TDD 10.17 ±9.6 10282 CAH LTE-TDD (SC-FDMA, 50%, RB, 15MHz, 16-CAM) LTE-TDD 9.24 ±9.6 10283 CAG LTE-TDD (SC-FDMA, 50%, RB, 15MHz, 16-CAM) LTE-TDD 9.20 ±9.6 10285 CAG LTE-TDD (SC-FDMA, 50%, RB, 15MHz, 16-CAM) LTE-TDD 9.20 ±9.6 10285 CAC LTE-TDD (SC-FDMA, 100%, RB, 15MHz, 16-CAM) LTE-TDD 9.36 ±9.6 10285 CAC LTE-TDD (SC-FDMA, 100%, RB, 14MHz, 16-CAM) LTE-TDD 9.34 ±9.6 10285 CAE LTE-TDD (SC-FDMA, 100%, RB, 3MHz, 16-CAM) LTE-TDD 9.34 ±9.6 10280 CAE LTE-TDD (SC-FDMA, 100%, RB, 3MHz, 16-CAM) LTE-TDD 9.24 ±9.6 10281 CAE LTE-TDD (SC-FDMA, 100%, RB, 3MHz, 16-CAM) LTE-TDD 9.24 ±9.6 10282 CAH LTE-TDD (SC-FDMA, 100%, RB, 3MHz, 16-CAM) LTE-TDD 9.24 ±9.6 102826 CAH LTE-TDD (SC-FDMA	10249	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	±9.6
10282 CAH LITE-TDD SC-FDMA, 50% RB, 15MHz, 16-CAM) LITE-TDD 9.40 ±9.6 10283 CAG LITE-TDD (SC-FDMA, 50% RB, 15MHz, 16-CAM) LITE-TDD 9.40 ±9.6 10285 CAG LITE-TDD (SC-FDMA, 50% RB, 15MHz, 16-CAM) LITE-TDD 9.20 ±9.6 10256 CAG LITE-TDD (SC-FDMA, 100% RB, 14MHz, 16-CAM) LITE-TDD 9.20 ±9.6 10257 CAC LITE-TDD (SC-FDMA, 100% RB, 14MHz, 16-CAM) LITE-TDD 9.34 ±9.6 10258 CAC LITE-TDD (SC-FDMA, 100% RB, 14MHz, 0FSK) LITE-TDD 9.34 ±9.6 10285 CAE LITE-TDD (SC-FDMA, 100% RB, 3MHz, 16-CAM) LITE-TDD 9.34 ±9.6 10281 CAE LITE-TDD (SC-FDMA, 100% RB, 3MHz, 16-CAM) LITE-TDD 9.24 ±9.6 10282 CAH LITE-TDD (SC-FDMA, 100% RB, 5MHz, 16-CAM) LITE-TDD 9.24 ±9.6 10283 CAE LITE-TDD (SC-FDMA, 100% RB, 5MHz, 16-CAM) LITE-TDD 9.23 ±9.6 10284 CAH LITE-TDD (SC-FDMA, 100% RB, 5MHz, 64-CAM)<	10250	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	±9.6
10253 CAG LTE-TDD SC-FDMA, 59% RB, 15 MHz, 16-CAM) LTE-TDD 9.90 ±9.6 10264 CAG LTE-TDD (SC-FDMA, 59% RB, 15 MHz, 04-CAM) LTE-TDD 9.20 ±9.6 10265 CAG LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 16-CAM) LTE-TDD 9.20 ±9.6 10265 CAC LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-CAM) LTE-TDD 9.96 ±9.6 10265 CAC LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-CAM) LTE-TDD 9.34 ±9.6 10265 CAC LTE-TDD (SC-FDMA, 100% RB, 3MHz, 16-CAM) LTE-TDD 9.34 ±9.6 10260 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, 16-CAM) LTE-TDD 9.93 ±9.6 10261 CAE LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-CAM) LTE-TDD 9.23 ±9.6 10262 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-CAM) LTE-TDD 9.24 ±9.6 10263 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-CAM) LTE-TDD 10.16 ±9.6 10264 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-CAM) <	10251	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	±9.6
10284 CAG LTE-TDD 10.14 ±9.6 10285 CAG LTE-TDD 9.20 ±9.6 10286 CAG LTE-TDD 9.20 ±9.6 10285 CAG LTE-TDD 9.20 ±9.6 10285 CAC LTE-TDD 9.34 ±9.6 10285 CAC LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 64-QAM) LTE-TDD 9.34 ±9.6 10286 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, 64-QAM) LTE-TDD 9.93 ±9.6 10281 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, 64-QAM) LTE-TDD 9.82 ±9.6 10282 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-QAM) LTE-TDD 9.83 ±9.6 10282 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-QAM) LTE-TDD 10.16 ±9.6 10282 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-QAM) LTE-TDD 10.16 ±9.6 10282 CAH LTE-TDD (SC-FDMA, 100% RB, 10MHz, 16-QAM) LTE-TDD 9.32 ±9.6 10283 CAH<	10252	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	±9.6
10255 CAG LTE-TDD 9.20 ±9.6 10256 CAC LTE-TDD 9.96 ±9.6 10257 CAC LTE-TDD 9.96 ±9.6 10258 CAC LTE-TDD 9.96 ±9.6 10257 CAC LTE-TDD 9.96 ±9.6 10258 CAC LTE-TDD 9.34 ±9.6 10260 CAE LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-OAM) LTE-TDD 9.97 ±9.6 10260 CAE LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-OAM) LTE-TDD 9.24 ±9.6 10281 CAE LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-OAM) LTE-TDD 9.23 ±9.6 10285 CAH LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-OAM) LTE-TDD 9.23 ±9.6 10286 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-OAM) LTE-TDD 9.23 ±9.6 10286 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-OAM) LTE-TDD 10.07 ±9.8 10286 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-	10253	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	±9.6
10256 CAC LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.96 ±9.6 10257 CAC LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9.34 ±9.6 10258 CAC LTE-TDD (SC-FDMA, 100% RB, 3.MHz, QPSK) LTE-TDD 9.34 ±9.6 10259 CAE LTE-TDD (SC-FDMA, 100% RB, 3.MHz, QPSK) LTE-TDD 9.97 ±9.6 10280 CAE LTE-TDD (SC-FDMA, 100% RB, 3.MHz, QPSK) LTE-TDD 9.24 ±9.6 10281 CAE LTE-TDD (SC-FDMA, 100% RB, 3.MHz, QPSK) LTE-TDD 9.24 ±9.6 10282 CAH LTE-TDD (SC-FDMA, 100% RB, 5.MHz, 16-QAM) LTE-TDD 9.23 ±9.6 10286 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.23 ±9.6 10286 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 10.16 ±9.6 10286 CAG LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 10.13 ±9.8 10286 CAG LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	10254	CAG		LTE-TDD	10.14	±9.6
10257 CAC LTE-TDD 10.08 ±9.6 10258 CAC LTE-TDD IOX RB, 14 MHz, QPSK) LTE-TDD 9.34 ±9.6 10259 CAC LTE-TDD ISC-FDMA, 100% RB, 14 MHz, QPSK) LTE-TDD 9.98 ±9.6 10260 CAE LTE-TDD ISC-FDMA, 100% RB, 3MHz, 64-QAM) LTE-TDD 9.97 ±9.6 10260 CAE LTE-TDD ISC-FDMA, 100% RB, 3MHz, QPSK) LTE-TDD 9.83 ±9.6 10262 CAH LTE-TDD ISC-FDMA, 100% RB, 5MHz, 16-QAM) LTE-TDD 9.83 ±9.6 10263 CAH LTE-TDD ISC-FDMA, 100% RB, 5MHz, 16-QAM) LTE-TDD 9.2 ±9.6 10264 CAH LTE-TDD ISC-FDMA, 100% RB, 5MHz, 16-QAM) LTE-TDD 9.92 ±9.6 10265 CAH LTE-TDD ISC-FDMA, 100% RB, 10 MHz, 44-QAM) LTE-TDD 10.07 ±9.6 10266 CAH LTE-TDD ISC-FDMA, 100% RB, 15MHz, 44-QAM) LTE-TDD 10.06 ±9.6 10268 CAG LTE-TDD ISC-FDMA, 100% RB, 15MHz, 44-QAM) LTE-TDD 10.06	10255	CAG		LTE-TDD	9.20	±9.6
10258 CAC LTE-TDD 9.34 ±9.8 10259 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, 16-QAM) LTE-TDD 9.98 ±9.6 10260 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, GPSK) LTE-TDD 9.97 ±9.6 10261 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, GPSK) LTE-TDD 9.24 ±9.6 10262 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, GPSK) LTE-TDD 9.83 ±9.8 10263 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, GPSK) LTE-TDD 9.23 ±9.6 10264 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, GPSK) LTE-TDD 9.23 ±9.6 10265 CAH LTE-TDD (SC-FDMA, 100% RB, 10MHz, 64-QAM) LTE-TDD 9.02 ±9.8 10268 CAG LTE-TDD (SC-FDMA, 100% RB, 15MHz, 64-QAM) LTE-TDD 10.07 ±9.8 10269 CAG LTE-TDD (SC-FDMA, 100% RB, 15MHz, 64-QAM) LTE-TDD 10.13 ±9.6 10269 CAG LTE-TDD (SC-FDMA, 100% RB, 15MHz, 64-QAM) LTE-TDD						
10259 CAE LTE-TDD (S.F.PDMA, 100%, RB, 3MHz, 16-QAM) LTE-TDD 9.98 ±9.8 10260 CAE LTE-TDD (S.F.PDMA, 100%, RB, 3MHz, Q-PSK) LTE-TDD 9.24 ±9.6 10261 CAE LTE-TDD (S.C.FDMA, 100%, RB, 5MHz, Q-PSK) LTE-TDD 9.24 ±9.6 10262 CAH LTE-TDD (SC.FDMA, 100%, RB, 5MHz, Q-PSK) LTE-TDD 9.23 ±9.6 10263 CAH LTE-TDD (SC.FDMA, 100%, RB, 5MHz, Q-PSK) LTE-TDD 9.23 ±9.6 10264 CAH LTE-TDD (SC.FDMA, 100%, RB, 10MHz, Q-QAM) LTE-TDD 9.22 ±9.6 10265 CAH LTE-TDD (SC.FDMA, 100%, RB, 10MHz, QPSK) LTE-TDD 9.00 ±9.8 10264 CAG LTE-TDD (SC.FDMA, 100%, RB, 15MHz, QPSK) LTE-TDD 10.07 ±9.8 10265 CAG LTE-TDD (SC.FDMA, 100%, RB, 15MHz, QPSK) LTE-TDD 10.3 ±9.8 10266 CAG LTE-TDD (SC.FDMA, 100%, RB, 15MHz, QPSK) LTE-TDD 10.3						
10260 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, 64-QAM) LTE-TDD 9.97 ±9.8 10261 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, 64-QAM) LTE-TDD 9.83 ±9.6 10262 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 64-QAM) LTE-TDD 9.83 ±9.6 10263 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 64-QAM) LTE-TDD 9.22 ±9.6 10264 CAH LTE-TDD (SC-FDMA, 100% RB, 10MHz, 16-QAM) LTE-TDD 9.22 ±9.6 10265 CAH LTE-TDD (SC-FDMA, 100% RB, 10MHz, 64-QAM) LTE-TDD 9.92 ±9.8 10266 CAH LTE-TDD (SC-FDMA, 100% RB, 10MHz, 64-QAM) LTE-TDD 9.92 ±9.8 10267 CAH LTE-TDD (SC-FDMA, 100% RB, 10MHz, 64-QAM) LTE-TDD 10.07 ±9.8 10268 CAG LTE-TDD (SC-FDMA, 100% RB, 10MHz, 64-QAM) LTE-TDD 10.07 ±9.8 10269 CAA LTE-TDD (SC-FDMA, 100% RB, 15MHz, 0PSK) LTE-TDD 10.06 ±9.6 10270 CAG LTE-TDD (SC-FDMA, 100% RB, 15MHz, 0PSK) LTE-TDD					1-	
10281 CAE LTE-TDD (SC-FDMA, 100% RB, 3MHz, QPSK) LTE-TDD 9.24 ±9.6 10282 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-QAM) LTE-TDD 9.83 ±9.6 10283 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 04-QAM) LTE-TDD 9.23 ±9.6 10284 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 04-QAM) LTE-TDD 9.22 ±9.6 10285 CAH LTE-TDD (SC-FDMA, 100% RB, 10MHz, 16-QAM) LTE-TDD 9.92 ±9.6 10286 CAH LTE-TDD (SC-FDMA, 100% RB, 10MHz, 04-QAM) LTE-TDD 9.30 ±8.6 10287 CAH LTE-TDD (SC-FDMA, 100% RB, 15MHz, 04-QAM) LTE-TDD 10.06 ±9.6 10288 CAG LTE-TDD (SC-FDMA, 100% RB, 15MHz, 04-QAM) LTE-TDD 10.13 ±9.8 10270 CAG LTE-TDD (SC-FDMA, 100% RB, 15MHz, 04-QAM) LTE-TDD 10.13 ±9.8 10274 CAC UMTS-FDD (HSUPA, Sublest 5, 3GPP Rel8.10) WCDMA 4.87 ±9.6 10275 CAC UMTS-FDD (HSUPA, Sublest 5, 3GPP Rel8.10) WCDMA						
10262 CAH LTE-TDD SC-FDMA, 100% RB, 5MHz, 16-QAM) LTE-TDD 9.83 ±9.6 10263 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 64-QAM) LTE-TDD 10.16 ±9.6 10264 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 64-QAM) LTE-TDD 9.23 ±9.6 10265 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.92 ±9.6 10266 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 9.30 ±9.8 10268 CAA LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 9.30 ±9.8 10268 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.06 ±9.6 10270 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ±9.6 10274 CAC UTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 9.58 ±9.6 10275 CAC LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 9.58 ±9.6 10274 CAC UMTS-FDD (HSUPA, Sublest 5, 30PP Rel8.10)						
10263 CAH LTE-TDD 10.16 ±9.6 10264 CAH LTE-TDD (SC-FDMA, 100% RB, 5MHz, 0PSK) LTE-TDD 9.23 ±9.6 10265 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.92 ±9.6 10266 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 10.07 ±9.6 10267 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 9.30 ±9.6 10268 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 19-QAM) LTE-TDD 10.06 ±9.6 10269 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0PSK) LTE-TDD 10.13 ±9.6 10270 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0PSK) LTE-TDD 9.58 ±9.6 10274 CAC UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ±9.6 10277 CAC UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ±9.6 10279 CAA PHS (QPSK, BW 884 MHz, Rolioff 0.5) PHS 11.81 ±9.6						
10264 CAH LTE-TDD 9.23 ±9.6 10265 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.92 ±9.6 10266 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 9.92 ±9.6 10266 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 9.30 ±9.6 10267 CAH LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 18-QAM) LTE-TDD 9.30 ±9.6 10268 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.06 ±9.6 10270 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 9.58 ±9.6 10270 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 04-QAM) LTE-TDD 9.58 ±9.6 10275 CAC UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ±9.6 10276 CAC UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ±9.6 10277 CAA PHS (QPSK) WB84 MHz, Rolloff 0.5) PHS 11.81 ±9.6						
10265 CAH LTE-TDD 9.92 ±9.6 10266 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM) LTE-TDD 10.07 ±9.6 10266 CAH LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK) LTE-TDD 9.30 ±9.6 10268 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ±9.6 10268 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM) LTE-TDD 10.06 ±9.6 10270 CAG LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0PSK) LTE-TDD 9.58 ±9.6 10274 CAC UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ±9.6 10275 CAC UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ±9.6 10276 CAA PHS (QPSK) PHS 11.81 ±9.6 10276 CAA PHS (QPSK, BW 884 MHz, Rolioff 0.5) PHS 11.81 ±9.6 10279 CAA PHS (QPSK, BW 884 MHz, Rolioff 0.38) PHS 12.18 ±9.6 10290 AAB			· · · · · · · · · · · · · · · · · · ·			-
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10300 AAE LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM) LTE-FDD 6.60 ±9.6 10301 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC) WiMAX 12.03 ±9.6 10302 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC) WiMAX 12.57 ±9.6 10303 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC, 3 CTRL symbols) WiMAX 12.57 ±9.6 10303 AAA IEEE 802.16e WiMAX (31:15, 5 ms, 10 MHz, 64QAM, PUSC) WiMAX 12.52 ±9.6 10304 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6 10305 AAA IEEE 802.16e WiMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6	10298	AAE		LTE-FDD	5.72	±9.6
10301 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC) WiMAX 12.03 ±9.6 10302 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC) WiMAX 12.57 ±9.6 10303 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC, 3 CTRL symbols) WiMAX 12.57 ±9.6 10303 AAA IEEE 802.16e WiMAX (31:15, 5 ms, 10 MHz, 64QAM, PUSC) WiMAX 12.52 ±9.6 10304 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6 10305 AAA IEEE 802.16e WiMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6	10299	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	±9.6
10302 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC, 3 CTRL symbols) WiMAX 12.57 ±9.6 10303 AAA IEEE 802.16e WiMAX (31:15, 5 ms, 10 MHz, 64QAM, PUSC) WiMAX 12.52 ±9.6 10304 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6 10305 AAA IEEE 802.16e WiMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6	10300	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10303 AAA IEEE 802.16e WiMAX (31:15, 5 ms, 10 MHz, 64QAM, PUSC) WIMAX 12.52 ±9.6 10304 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6 10305 AAA IEEE 802.16e WiMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6 10305 AAA IEEE 802.16e WiMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC, 15 symbols) WiMAX 15.24 ±9.6	10301	AAA			12.03	±9.6
10304 AAA IEEE 802.16e WiMAX (29:18, 5 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6 10305 AAA IEEE 802.16e WiMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC) WiMAX 11.86 ±9.6	10302	AAA		WIMAX		±9.6
10305 AAA IEEE 802.16e WiMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC, 15 symbols) WiMAX 15.24 ±9.6						±9.6
10306 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 64QAM, PUSC, 18 symbols) WiMAX 14.67 ±9.6						
	10306	AAA	IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 64QAM, PUSC, 18 symbols)		14.67	±9.6

	Base	Communication System Name	Group	PAR (dB)	$Unc^{E} k = 2$
UID 10307	Rev AAA	IEEE 802.16e WIMAX (29:18, 10 ms, 10 MHz, QPSK, PUSC, 18 symbols)	WIMAX	14.49	±9.6
10307	AAA	IEEE 802.16e WIMAX (29:18, 10 ms, 10 MHz, 16QAM, PUSC)	WIMAX	14,46	±9.6
10309	AAA	IEEE 802.16e WIMAX (29:18, 10 ms, 10 MHz, 16QAM, AMC 2x3, 18 symbols)	WIMAX	14.58	±9.6
10310	AAA	IEEE 802.16e WIMAX (29:18, 10 ms, 10 MHz, QPSK, AMC 2x3, 18 symbols)	WIMAX	14.57	±9.6
10311	AAE	LTE-FDD (SC-FDMA, 100% RB, 15MHz, QPSK)	LTE-FDD	6.06	±9.6
10313	AAA			10.51	±9.6
10314	AAA	iDEN 1:6	IDEN	13.48	±9.6
10315	AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	WLAN	1.71	±9.6
10316	AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	±9.6
10317	AAE	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	±9.6
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	±9.6
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	±9.6
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	±9.6
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	±9.6
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	±9.6
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	±9.6
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	±9.6
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	±9.6
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	±9.6
10400	AAF	IEEE 802.11ac WiFI (20 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	±9.6
10401	AAF	IEEE 802.11ac WiFi (40 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	±9.6
10402	AAF	IEEE 802.11ac WIFI (80 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	±9.6
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	±9.6
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	±9.6
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	±9.6
10410	AAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	LTE-TDD	7.82	±9.6
10414	AAA	WLAN CCDF, 64-QAM, 40 MHz	Generic	8.54	±9.6
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	1.54	±9.6
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	±9.6
10417	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	±9.6
10418	AAA	IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	WLAN	8.14	±9.6
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	WLAN	8,19	±9.6
10422	AAD	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN WLAN	8.32	±9.6
10423	AAD	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)		8.47	±9.6
10424	AAD AAD	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN WLAN	8.40 8.41	±9.6 ±9.6
10425	AAD	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	±9.6
10420	AAD	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	±9.6
10427	AAE	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	±9.6
10431	AAE	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)		8.38	±9.6
10432	AAD	LTE-FDD (OFDMA, 15MHz, E-TM 3.1)	LTE-FDD	8.34	±9.6
10433	AAD	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	±9.6
10434	AAB	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	±9.6
10435	ÁAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10447	AAE	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	±9.6
10448	AAE	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	±9.6
10449	AAD	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.51	±9.6
10450	AAD	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	±9.6
10451	AAB	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	±9.6
10453	AAE	Validation (Square, 10 ms, 1 ms)	Test	10.00	±9.6
10456	AAD	IEEE 802.11ac WiFi (160 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	±9.6
10457	AAB	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	±9.6
10458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	±9.6
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	±9.6
10460	AAB	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	±9.6
10461	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	±9.6
10463	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	±9.6
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10465	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10466	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)		8.57	±9.6
10467	AAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, OPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10468	AAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10469	AAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	±9.6
10470	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TOD	7.82	±9.6
10471	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6

	Rev	Communication System Name	Group	PAR (dB)	$Unc^{E} k = 2$
10472	AAG	LTE-TDD (SC-FDMA, 1 RB, 10MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)		8.57	±9.6
10472	AAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10474	AAF	LTE-TDD (SC-FDMA, 1 RB, 15MHz, 16-QAM, UL Subirame=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10475	AAF	LTE-TDD (SC-FDMA, 1 RB, 15MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6
10477	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10478	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subirame=2,3,4,7,8,9)	LTE-TOD	8.57	±9.6
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10480	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	±9.6
10481	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±9.6
10482	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subirame=2,3,4,7,8,9)	LTE-TDD	7.71	±9.6
10483	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	±9.6
10484	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	±9.6
10485	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	±9.6
10486	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	±9.6
10487	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	±9.6
10488	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TOD	7.70 8.31	±9.6 ±9.6
10489	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10490	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)		7.74	±9.6
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subirame=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subirame=2,3,4,7,8,9)		8.41	
10492 10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, OL Subiraine=2,3,4,7,6,9)	LTE-TDD	8.55	±9.6
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 04-QAM, 0L Subframe=2,3,4,7,8,9)		7.74	±9.6
10494	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.37	±9.6
10496	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)		8.54	±9.6
10497	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±9.6
10498	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subirame=2,3,4,7,8,9)	LTE-TDD	8.40	±9.6
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.68	±9.6
10500	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±9.6
10501	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.44	±9.6
10502	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	±9.6
10503	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	±9.6
10504	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±9.6
10505	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subirame=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10506	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	
10507	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)		8.36	±9.6 ±9.6
10508	AAG AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)		7.99	±9.6
10509		LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QF3K, 0L Subiranie=2,3,4,7,8,9)	LTE-TDD	8.49	±9.6
10510	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.51	±9.6
10512	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10513	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.42	±9.6
10514	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±9.6
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	±9.6
10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.57	±9.6
10517	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.58	±9.6
10518	AAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.23	±9.6
10519	AAD	IEEE 802.11a/n WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.39	±9.6
10520	AAD	IEEE 802.11a/h WiFI 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.12	±9.6
10521	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	7.97	±9.6
10522	AAD	IEEE 802.11a/h WiFI 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN WLAN	8.45	±9.6
10523 10524	AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.08	±9.6 ±9.6
10524	AAD	IEEE 802.11a/n WIFI 5 GHz (OFDM, 54 Mops, 99pc outy cycle)	WLAN	8.36	±9.6
10525	AAD	IEEE 802.11ac WIFI (20 MHz, MCSU, 99pc duty cycle)	WLAN	8.42	±9.6
10527	AAD	IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle)	WLAN	8,21	±9.6
10528	AAD	IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle)	WLAN	8.36	±9.6
10529	AAD	IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.36	±9.6
10531	AAD	IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle)	WLAN	8.43	±9.6
10532	AAD	IEEE 802.11ac WIFI (20 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
10533	AAD	IEEE 802.11ac WiFi (20 MHz, MCS8, 99pc duty cycle)	WLAN	8.38	±9.6
10534	AAD	IEEE 802.11ac WiFI (40 MHz, MCS0, 99pc duty cycle)	WLAN	8.45	±9.6
10535	AAD	IEEE 802.11ac WiFi (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.45	±9.6
10536	AAD	IEEE 802.11ac WiFi (40 MHz, MCS2, 99pc duty cycle)	WLAN	8.32	±9.6
10537	AAD	IEEE 802.11ac WiFi (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6
10538	AAD	IEEE 802.11ac WiFI (40 MHz, MCS4, 99pc duty cycle)	WLAN WLAN	8.54	±9.6
10540	AAD	IEEE 802.11ac WiFi (40 MHz, MCS6, 99pc duty cycle)		8.39	±9.6

				DED (4D)	$Unc^E k = 2$
UID	Rev AAD	Communication System Name IEEE 802.11ac WiFi (40 MHz, MCS7, 99pc duty cycle)	Group WLAN	PAR (dB) 8.46	<u>unc x = z</u> ±9.6
10541	AAD	IEEE 802.11ac WiFI (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.65	±9.6
10542	AAD	IEEE 802.11ac WiFi (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.65	±9.6
10544	AAD	IEEE 802.11ac WiFI (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.47	±9.6
10545	AAD	IEEE 802.11ac WiFi (80 MHz, MCS1, 99pc duty cycle)	WLAN	8.55	±9.6
10546	AAD	IEEE 802.11ac WiFI (80 MHz, MCS2, 99pc duty cycle)	WLAN	8.35	±9.6
10547	AAD	IEEE 802.11ac WiFi (80 MHz, MCS3, 99pc duty cycle)	WLAN	8.49	±9.6
10548	AAD	IEEE 802.11ac WiFI (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.37	±9.6
10550	AAD	IEEE 802.11ac WiFi (80 MHz, MCS6, 99pc duty cycle)	WLAN	8.38	±9.6
10551	AAD	IEEE 802.11ac WiFi (80 MHz, MCS7, 99pc duty cycle)	WLAN	8.50	±9.6
10552	AAD	IEEE 802.11ac WiFI (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.42	±9.6
10553	AAD	IEEE 802.11ac WiFi (80 MHz, MCS9, 99pc duty cycle)	WLAN	8.45	±9.6
10554	AAE	IEEE 802.11ac WiFi (160 MHz, MCS0, 99pc duty cycle)	WLAN	8.48	±9.6
10555	AAE	IEEE 802.11ac WiFi (160 MHz, MCS1, 99pc duty cycle)	WLAN	8.47 8.50	±9.6 ±9.6
10556	AAE	IEEE 802.11ac WiFI (160 MHz, MCS2, 99pc duty cycle)	WLAN	8.52	±9.6
10558	AAE	IEEE 802.11ac WiFI (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.61	±9.6
10550	AAE	IEEE 802.11ac WiFI (160 MHz, MCS6, 99pc duty cycle)	WLAN	8,73	±9.6
10561	AAE	IEEE 802.11ac WiFi (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.56	±9.6
10562	AAE	IEEE 802.11ac WiFI (160 MHz, MCS8, 99pc duty cycle)	WLAN	8.69	±9.6
10563	AAE	IEEE 802.11ac WiFi (160 MHz, MCS9, 99pc duty cycle)	WLAN	8.77	±9.6
10584	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.25	±9.6
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.45	±9.6
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.13	±9.6
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.00	±9.6
10568	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.37	±9.6
10569	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.10	±9.6
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.30	±9.6
10571 10572	AAA AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN WLAN	1.99	±9.6 ±9.6
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle) IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN	1.98	±9.6
10574	AAA	IEEE 802.11b WiFI 2.4 GHz (DSSS, 5.5 Miops, 50pc duty cycle)	WLAN	1.98	±9.6
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	±9.6
10576	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	±9.6
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	±9.6
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	±9.6
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	±9.6
10580	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	±9.6
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mops, 90pc duty cycle)	WLAN	8.35	±9.6
10582	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	±9.6
10583	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	±9.6
10584	AAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	±9.6
10585	AAD	IEEE 802.11a/h WiFI 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	±9.6
10586	AAD AAD	IEEE 802.11a/h WiFl 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11a/h WiFl 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	WLAN WLAN	8.49 8.36	±9.6 ±9.6
10587	AAD	IEEE 802.11a/h WiFI 5 GHz (OFDM, 24 Mips, sope duty cycle)	WLAN	8.76	±9.6
10589	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 38 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6
10590	AAD	IEEE 802.11a/h WiFI 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	±9.6
10591	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS0, 90pc duty cycle)	WLAN	8.63	±9.6
10592	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS1, 90pc duty cycle)	WLAN	8.79	±9.6
10593	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS2, 90pc duty cycle)	WLAN	8.64	±9.6
10594	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS3, 90pc duty cycle)	WLAN	8.74	±9.6
10595	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS4, 90pc duty cycle)	WLAN	8.74	±9.6
10596	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS5, 90pc duty cycle)	WLAN	8.71	±9.6
10597	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS6, 90pc duty cycle)	WLAN	8.72	±9.6
10598	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS7, 90pc duty cycle)	WLAN	8.50	±9.6
10599	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS0, 90pc duty cycle)	WLAN	8.79	±9.6
10600	AAD AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS1, 90pc duty cycle)	WLAN WLAN	8.88	±9.6
10601	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS2, 90pc duty cycle)	WLAN	8.82 8.94	±9.6 ±9.6
10602	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS3, 90pc duty cycle)	WLAN	9.03	±9.6
10603	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS4, 900c duty cycle)		9.03	±9.6
10605	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS6, 90pc duty cycle)	WLAN	8.97	±9.6
10606	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS7, 90pc duty cycle)	WLAN	8.82	±9.6
10607	AAD	IEEE 802.11ac WiFI (20 MHz, MCS0, 90pc duty cycle)	WLAN	8.64	±9.6
10608	AAD	IEEE 802.11ac WiFi (20 MHz, MCS1, 90pc duty cycle)	WLAN	8.77	±9.6

1115	Dest	Communication System Name	Group	PAR (dB)	$Unc^E k = 2$
UID 10609	Rev AAD	IEEE 802.11ac WIFI (20 MHz, MCS2, 90pc duty cycle)	Group WLAN	8.57	±9.6
10609	AAD	IEEE 802.11ac WiFi (20 MHz, MCS2, 90pc duty cycle)	WLAN	8.78	±9.6
10610	AAD	IEEE 802.11ac WiFI (20 MHz, MCS3, 90pc duty cycle)	WLAN	8.70	±9.6
10612	AAD	IEEE 802.11ac WiFI (20 MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10612	AAD	IEEE 802.11ac WiFI (20 MHz, MCS6, 90pc duty cycle)	WLAN	8.94	±9.6
10614	AAD	IEEE 802.11ac WiFi (20 MHz, MCS7, 90pc duty cycle)	WLAN	8,59	±9.6
10615	AAD	IEEE 802.11ac WiFI (20 MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10616	AAD	IEEE 802.11ac WiFi (40 MHz, MCS0, 90pc duty cycle)	WLAN	8.82	±9.6
10617	AAD	IEEE 802.11ac WiFI (40 MHz, MCS1, 90pc duty cycle)	WLAN	8.81	±9.6
10618	AAD	IEEE 802.11ac WiFi (40 MHz, MCS2, 90pc duty cycle)	WLAN	8.58	±9.6
10619	AAD	IEEE 802.11ac WiFi (40 MHz, MCS3, 90pc duty cycle)		8.86	±9.6
10620	AAD	IEEE 802.11ac WiFI (40 MHz, MCS4, 90pc duty cycle)	WLAN	8.87	±9.6
10621	AAD	IEEE 802.11ac WiFI (40 MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10622	AAD	IEEE 802.11ac WiFi (40 MHz, MCS6, 90pc duty cycle)	WLAN	8.68	±9.6
10623	AAD	IEEE 802.11ac WiFI (40 MHz, MCS7, 90pc duty cycle)	WLAN	8.82	±9.6
10624	AAD	IEEE 802.11ac WiFi (40 MHz, MCS8, 90pc duty cycle)	WLAN	8.96	±9.6
10625	AAD	IEEE 802.11ac WiFI (40 MHz, MCS9, 90pc duty cycle)	WLAN	8.96	±9.6
10626	AAD	IEEE 802.11ac WiFi (80 MHz, MCS0, 90pc duty cycle)	WLAN	8.83	±9.6
10627	AAD	IEEE 802.11ac WiFi (80 MHz, MCS1, 90pc duty cycle)	WLAN	8.88	±9.6
10628	AAD	IEEE 802.11ac WiFi (80 MHz, MCS2, 90pc duty cycle)	WLAN	8.71	±9.6
10629	AAD	IEEE 802.11ac WIFI (80 MHz, MCS3, 90pc duty cycle)	WLAN	8.85	±9.6
10630	AAD	IEEE 802.11ac WiFi (80 MHz, MCS4, 90pc duty cycle)	WLAN	8.72	±9.6
10631	AAD	IEEE 802.11ac WiFi (80 MHz, MCS5, 90pc duty cycle)	WLAN	8.81	±9.6
10632	AAD	IEEE 802.11ac WIFI (80 MHz, MCS6, 90pc duty cycle)	WLAN	8.74	±9.6
10633	AAD	IEEE 802.11ac WiFI (80 MHz, MCS7, 90pc duty cycle)	WLAN	8.83	±9.6
10634	AAD	IEEE 802.11ac WiFi (80 MHz, MCS8, 90pc duty cycle)	WLAN	8.80	±9.6
10635	AAD	IEEE 802.11ac WiFi (80 MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6
10636	AAE	IEEE 802.11ac WiFi (160 MHz, MCS0, 90pc duty cycle)	WLAN	8.83	±9.6
10637	AAE	IEEE 802.11ac WiFi (160 MHz, MCS1, 90pc duty cycle)	WLAN	6.79	±9.6
10638	AAE	IEEE 802.11ac WiFI (160 MHz, MCS2, 90pc duty cycle)	WLAN	8.86	±9.6
10639	AAE	IEEE 802.11ac WiFI (160 MHz, MCS3, 90pc duty cycle)	WLAN	8.85	±9.6
10640	AAE	IEEE 802.11ac WiFI (160 MHz, MCS4, 90pc duty cycle)	WLAN	8.98	±9.6
10641	AAE	IEEE 802.11ac WiFi (160 MHz, MCS5, 90pc duty cycle)	WLAN	9.06	±9.6
10642	AAE	IEEE 802.11ac WiFI (160 MHz, MCS6, 90pc duty cycle)	WLAN	9.06	±9.6
10643	AAE	IEEE 802.11ac WiFi (160 MHz, MCS7, 90pc duty cycle)	WLAN	8.89	±9.6
10644	AAE	IEEE 802.11ac WiFI (160 MHz, MCS8, 90pc duty cycle)	WLAN	9.05	±9.6
10645	AAE	IEEE 802.11ac WiFi (160 MHz, MCS9, 90pc duty cycle)	WLAN	9.11	±9.6
10646	AAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	±9.6
10647	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	±9.6
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	±9.6
10652	AAF	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	±9.6
10653	AAF	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	±9.6
10654	AAE	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	±9.6
10655	AAF	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	±9.6
10658	AAB	Pulse Waveform (200Hz, 10%)	Test	10.00	±9.6
10659	AA8	Pulse Waveform (200Hz, 20%)	Test	6.99	±9.6
10660	AAB	Pulse Waveform (200Hz, 40%)	Test	3.98	±9.6
10661	AAB	Pulse Waveform (200Hz, 60%)	Test	2.22	±9.6
10662	AAB	Pulse Waveform (200Hz, 80%)	Test	0.97	±9.6
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	±9.6
10671	AAC	IEEE 802.11ax (20 MHz, MCS0, 90pc duty cycle)	WLAN	9.09	±9.6
10672	AAC	IEEE 802.11ax (20 MHz, MCS1, 90pc duty cycle)	WLAN	8.57	±9.6
10673	AAC	IEEE 802.11ax (20 MHz, MCS2, 90pc duty cycle)	WLAN	8.78	±9.6
10674	AAC	IEEE 802.11ax (20 MHz, MCS3, 90pc duty cycle)	WLAN	8.74	±9.6
10675	AAC	IEEE 802.11ax (20 MHz, MCS4, 90pc duty cycle)	WLAN	8.90	±9.6
10676	AAC	IEEE 802.11ax (20 MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10677	AAC	IEEE 802.11ax (20 MHz, MCS6, 90pc duty cycle)	WLAN	8.73	±9.6
10678	AAC	IEEE 802.11ax (20 MHz, MCS7, 90pc duty cycle)	WLAN	8.78	±9.6
10679	AAC	IEEE 802.11ax (20 MHz, MCS8, 90pc duty cycle)	WLAN	8.89	±9.6
10680	AAC	IEEE 802.11ax (20 MHz, MCS9, 90pc duty cycle)	WLAN	8.80	±9.6
10681	AAC	IEEE 802.11ax (20 MHz, MCS10, 90pc duty cycle)	WLAN	8.62	±9.6
10682	AAC	IEEE 802.11ax (20 MHz, MCS11, 90pc duty cycle)	WLAN	8.83	±9.6
10683	AAC	IEEE 802.11ax (20 MHz, MCS0, 99pc duty cycle)	WLAN	8.42	±9.6
10684	AAC	IEEE 802.11ax (20 MHz, MCS1, 99pc duty cycle)	WLAN	8.26	±9.6
10685	AAC	IEEE 802.11ax (20 MHz, MCS2, 99pc duty cycle)	WLAN	8.33	±9.6
10686	AAC	IEEE 802.11ax (20 MHz, MCS3, 99pc duty cycle)	WLAN	8.28	±9.6

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UID 10687	Rev AAC	Communication System Name IEEE 802.11ax (20 MHz, MCS4, 99pc duty cycle)	Group WLAN	PAR (dB) 8.45	±9.6
10687	AAC	IEEE 802.11ax (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.29	±9.6
10689	AAC	IEEE 802.11ax (20 MHz, MCS6, 99pc duly cycle)	WLAN	8.55	±9.6
10689	AAC	IEEE 802.11ax (20 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
10691	AAC	IEEE 802.11ax (20 MHz, MCS9, 99pc duty cycle)	WLAN	8,25	±9.6
10692	AAC	IEEE 802.11ax (20 MHz, MCS9, 99pc duty cycle)	WLAN	8.29	±9.6
10692	AAC	IEEE 802.11ax (20 MHz, MCS10, 99pc duty cycle)	WLAN	8,25	±9.6
10694	AAC	IEEE 802.11ax (20 MHz, MCS11, 99pc duty cycle)	WLAN	8.57	±9.6
10695	AAC	IEEE 802.11ax (40 MHz, MCS0, 90pc duty cycle)	WLAN	8.78	±9.6
10696	AAC	IEEE 802.11ax (40 MHz, MCS1, 90pc duty cycle)	WLAN	8.91	±9.6
10697	AAC	IEEE 802.11ax (40 MHz, MCS2, 90pc duty cycle)	WLAN	8.61	±9.6
10698	AAC	IEEE 802.11ax (40 MHz, MCS3, 90pc duty cycle)	WLAN	8.89	±9.6
10699	AAC	IEEE 802.11ax (40 MHz, MCS4, 90pc duty cycle)	WLAN	8.82	±9.6
10700	AAC	IEEE 802.11ax (40 MHz, MCS5, 90pc duty cycle)	WLAN	8.73	±9.6
10701	AAC	IEEE 802.11ax (40 MHz, MCS6, 90pc duty cycle)	WLAN	8.86	±9.6
10702	AAC	IEEE 802.11ax (40 MHz, MCS7, 90pc duty cycle)	WLAN	8.70	±9.6
10703	AAC	IEEE 802.11ax (40 MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10704	AAC	IEEE 802.11ax (40 MHz, MCS9, 90pc duty cycle)	WLAN	8.56	±9.6
10705	AAC	IEEE 802.11ax (40 MHz, MCS10, 90pc duty cycle)	WLAN	8.69	±9.6
10706	AAC	IEEE 802.11ax (40 MHz, MCS11, 90pc duty cycle)	WLAN	8.66	±9.6
10707	AAC	IEEE 802.11ax (40 MHz, MCS0, 99pc duty cycle)	WLAN	8,32	±9.6
10708	AAC	IEEE 802.11ax (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.55	±9.6
10709	AAC	1EEE 802.11ax (40 MHz, MCS2, 99pc duty cycle)	WLAN	8.33	±9.6
10710	AAC	IEEE 802.11ax (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.29	±9.6
10711	AAC	IEEE 802.11ax (40 MHz, MCS4, 99pc duty cycle)	WLAN	8.39	±9.6
10712	AAC	IEEE 802.11ax (40 MHz, MCS5, 99pc duty cycle)	WLAN	8.67	±9.6
10713	AAC	IEEE 802.11ax (40 MHz, MCS6, 99pc duty cycle)	WLAN	8.33	±9.6
10714	AAC	IEEE 802.11ax (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.26	±9.6
10715	AAC	IEEE 802.11ax (40 MHz, MCS8, 99pc duty cycle)	WLAN	8.45	±9.6
10716	AAC	IEEE 802.11ax (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.30	±9.6
10717	AAC	IEEE 802.11ax (40 MHz, MCS10, 99pc duty cycle)	WLAN	8.48	±9.6
10718	AAC	IEEE 802.11ax (40 MHz, MCS11, 99pc duty cycle)	WLAN	8.24	±9.6
10719	AAC	IEEE 802.11ax (80 MHz, MCS0, 90pc duty cycle)	WLAN	8.81	±9.6
10720	AAC	IEEE 802.11ax (80 MHz, MCS1, 90pc duty cycle)	WLAN	8.87	±9.6
10721	AAC	IEEE 802.11ax (80 MHz, MCS2, 90pc duty cycle)	WLAN	8.76	±9.6
10722	AAC	IEEE 802.11ax (80 MHz, MCS3, 90pc duty cycle)	WLAN	8.55	±9.6
10723	AAC	IEEE 802.11ax (80 MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.6
10724	AAC	EEE 802.11ax (80 MHz, MCS5, 90pc duty cycle)	WLAN	8.90	±9.6
10725	AAC	IEEE 802.11ax (80 MHz, MCS6, 90pc duty cycle)	WLAN	8.74	±9.6
10726	AAC	IEEE 802.11ax (80 MHz, MCS7, 90pc duty cycle)	WLAN	8.72	±9.6
10727	AAC	IEEE 802.11ax (80 MHz, MCS8, 90pc duty cycle)	WLAN	8.66	±9.6
10728	AAC	IEEE 802.11ax (80 MHz, MCS9, 90pc duty cycle)	WLAN	8.65	±9.6
10729	AAC	IEEE 802.11ax (80 MHz, MCS10, 90pc duty cycle)	WLAN	8.64	±9.6
10730	AAC	IEEE 802.11ax (80 MHz, MCS11, 90pc duty cycle)	WLAN	8.67	±9.6
10731	AAC	IEEE 802.11ax (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.42	±9.6
10732	AAC	IEEE 802.11ax (80 MHz, MCS1, 99pc duly cycle)	WLAN	8.46	±9.6
10733	AAC	IEEE 802.11ax (80 MHz, MCS2, 99pc duty cycle)	WLAN	8.40	±9.6
10734	AAC	IEEE 802.11ax (80 MHz, MCS3, 99pc duty cycle)	WLAN	8.25	±9.6
10735	AAC	IEEE 802.11ax (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.33	±9.6
10736	AAC	EEE 802.11ax (80 MHz, MCS5, 99pc duty cycle)	WLAN	8.27	±9.6
10737	AAC	IEEE 802.11ax (80 MHz, MCS6, 99pc duty cycle)	WLAN	8.36	±9.6
10738	AAC	IEEE 802.11ax (80 MHz, MCS7, 99pc duty cycle)	WLAN	8.42	±9.6
10739	AAC	IEEE 802.11ax (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.29	±9.6
10740	AAC	IEEE 802.11ax (80 MHz, MCS9, 99pc duty cycle)	WLAN	8.48	±9.6
10741	AAC	IEEE 802.11ax (80 MHz, MCS10, 99pc duty cycle)	WLAN	8.40	±9.6
10742	AAC	IEEE 802.11ax (80 MHz, MCS11, 99pc duty cycle)	WLAN	8.43	±9.6
10743	AAC	IEEE 802.11ax (160 MHz, MCS0, 90pc duty cycle)	WLAN	8.94	±9.6
10744	AAC	IEEE 802.11ax (160 MHz, MCS1, 90pc duty cycle)	WLAN	9.16	±9.6
10745	AAC	IEEE 802.11ax (160 MHz, MCS2, 90pc duty cycle)	WLAN	8.93	±9.6
10746	AAC	IEEE 802.11ax (160 MHz, MCS3, 90pc duty cycle)	WLAN	9.11	±9.6
10747	AAC	IEEE 802.11ax (160 MHz, MCS4, 90pc duty cycle)	WLAN	9.04	±9.6
10748	AAC	IEEE 802.11ax (160 MHz, MCS5, 90pc duty cycle)	WLAN	8.93	±9.6
10749	AAC	IEEE 802.11ax (160 MHz, MCS6, 90pc duty cycle)	WLAN	8.90	±9.6
10750	AAC	IEEE 802.11ax (160 MHz, MCS7, 90pc duty cycle)	WLAN	8.79	±9.6
	AAC	IEEE 802.11ax (160 MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10751	AAC	IEEE 802.11ax (160 MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6

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	Rev	Communication System Name	Group	PAR (dB)	$Unc^E k = 2$
10753	AAC	IEEE 802.11ax (160 MHz, MCS10, 90pc duty cycle)	WLAN	9.00	±9.6
10754	AAC	IEEE 802.11ax (160 MHz, MCS11, 90pc duty cycle)	WLAN	8.94	±9.6
10755	AAC	IEEE 802.11ax (160 MHz, MCS0, 99pc duty cycle)	WLAN	8.64	±9.6
10756	AAC	IEEE 802.11ax (160 MHz, MCS1, 99pc duty cycle)	WLAN	8.77	±9.6
10757	AAC	IEEE 802.11ax (160 MHz, MCS2, 99pc duty cycle)	WLAN	8,77	±9.6
10758	AAC	IEEE 802.11ax (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.69	±9.6
10759	AAC	IEEE 802.11ax (160 MHz, MCS4, 99pc duty cycle)	WLAN	8.58	±9.6
10760	AAC	IEEE 802.11ax (160 MHz, MCS5, 99pc duty cycle)	WLAN	8.49	±9.6
10761	AAC	IEEE 802.11ax (160 MHz, MCS6, 99pc duly cycle)	WLAN	8.58	±9.6
10762	AAC	IEEE 802.11ax (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.49	±9.6
10763	AAC	IEEE 802.11ax (160MHz, MCS8, 99pc duty cycle)	WLAN	8.53	±9.6
10764	AAC	IEEE 802.11ax (160 MHz, MCS9, 99pc duty cycle)	WLAN	8.54	±9.6
10765	AAC	IEEE 802.11ax (160 MHz, MCS10, 99pc duty cycle)	WLAN	8.54	±9.6
10766	AAC	IEEE 802.11ax (160 MHz, MCS11, 99pc duty cycle)	WLAN	8.51	±9.6
10767	AAG	5G NR (CP-OFDM, 1 RB, 5MHz, QPSK, 15kHz)	5G NR FR1 TDD	7.99	±9.6
10768	AAE	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
10769	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
10770	AAE	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10771	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10772	AAE AAF	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD 5G NR FR1 TDD	8.23	±9.6 ±9.6
10773	AAF	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.03	±9.6
10775		5G NR (CP-OFDM, 1 HB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
10776	AAE	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
10777	AAC	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
10778	AAE	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.34	±9.6
10779	AAC	5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.42	±9.6
10780	AAE	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	±9.6
10781	AAF	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	±9.6
10782	AAE	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	±9.6
10783	AAG	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
10784	AAE	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	±9.6
10785	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.40	±9.6
10786	AAE	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	<u>±9.6</u>
10787	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	±9.6
10788	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
10789 10790	AAF AAE	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	±9.6
10790	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD 5G NR FR1 TDD	8.39 7.83	±9.6
10792	AAE	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	±9.6 ±9.6
10793	AAD	5G NR (CP-OFDM, 1 RB, 15MHz, QPSK, 30kHz)	5G NR FR1 TDD	7.92	±9.6
10794	AAE	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10795	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.84	±9.6
10796	AAE	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10797	AAF	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	±9.6
10798	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
10799	AAF	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	±9.6
10801	AAF	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
10802	AAE	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	±9.6
10803	AAF	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	±9.6
10805	AAE	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10806	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.37	±9.6
10809	AAE	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10810 10812	AAF AAF	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10812	AAF	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz) 5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
10817	AAG	5G NR (CP-OFDM, 100% HB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD 5G NR FR1 TDD	8.35 8.34	±9.6 ±9.6
10818	AAD	5G NR (CP-OFDM, 100% RB, 15MHz, QPSK, 30kHz)	5G NR FR1 TDD	8.33	±9.6 ±9.6
10820	AAE	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.30	±9.6
10821	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10822	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10823	AAF	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	±9.6
10824	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	±9.6
10825	AAF	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10827	AAF	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.42	±9.6
10828	AAE	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	±9.6

	Mara		Group		Unc ^E $k = 2$
UID 10829	Rev AAF	Communication System Name 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	Group 5G NR FR1 TDD	PAR (dB) 8.40	±9.6
10829	AAF	5G NR (CP-OFDM, 100% RB, 100MHz, QPSK, 50 KHz)	5G NR FRI TDD	7.63	±9.6
10831	AAD	5G NR (CP-OFDM, 1 RB, 15MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	±9.6
10832	AAE	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.74	±9.6
10833	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10834	AAE	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	±9.6
10835	AAF	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10836	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TOD	7.66	±9.6
10837	AAF	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	±9.6
10839	AAF	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10840	AAE	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	±9.6
10841	AAF	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.71	±9.6
10843	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	±9.6
10844	AAE	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10846	AAE	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10854	AAE	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10855	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
10856	AAE	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10857	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	±9.6
10858	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
10859	AAF	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10860	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10861	AAF	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	±9.6
10863		5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz) 5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD 5G NR FR1 TDD	8.41 8.37	±9.6 ±9.6
10864	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10866	AAF	5G NR (DFT-S-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10868	AAF	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	±9.6
10869	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10870	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	±9.6
10871	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10872	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	±9.6
10873	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10874	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10875	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
10876	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.39	±9.6
10877	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	±9.6
10878	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10879	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	±9.6
10880	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.38	±9.6
10881	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10882	AAE		5G NR FR2 TDD	5.96	±9.6
10883	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	±9.6
10884	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	±9.6
10885	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10886	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10887 10888	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz) 5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD 5G NR FR2 TDD	7.78	±9.6
10888	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 KHz)	5G NR FR2 TDD	8.35 8.02	±9.6 ±9.6
10890	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 KHz)	5G NR FR2 TDD	8.40	±9.6
10891	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	±9.6
10892	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10897	AAE	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.66	±9.6
10898	AAC	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10899	AAB	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10900	AAC	5G NR (DFT s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10901	AAB	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10902	AAC	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10903	AAD	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10904	AAC	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10905	AAD	5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10906	AAD	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10907	AAE	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	±9.6
10908	AAC	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10909	AAB	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.96	±9.6
10910	AAC	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6

UID	Rev	Communication System Name	Group	PAR (dB)	$Unc^E k = 2$
10911	AAB	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10912	AAC	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10913	AAD	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10914	AAC	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.85	±9.6
10915	AAD	5G NR (DFT-s-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6
10916	AAD	5G NR (DFT-s-OFDM, 50% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±9.6
10917	AAD	5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
10918	AAE	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10919	AAC	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10920	AAB	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±9.6
10921	AAC	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10922	AAB AAC	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz) 5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD 5G NR FR1 TDD	5.82 5.84	±9.6 ±9.6
10923	AAD	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10925	AAC	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	±9.6
10926	AAD	5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FRI TDD	5.84	±9.6
10927	AAD	5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
10928	AAD	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10929	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10930	AAC	5G NR (DFT-s-OFDM, 1 RB, 15MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.52	±9.6
10931	AAC	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5,51	±9.6
10932	AAC	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10933	AAC	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10934	AAC	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10935	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10936	AAD	5G NR (DFT-s-OFDM, 50% RB, 5MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.90	±9.6
10937	AAD	5G NR (DFT-s-OFDM, 50% RB, 10MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.77	±9.6
10938	AAC	5G NR (DFT-s-OFDM, 50% RB, 15MHz, QPSK, 15kHz) 5G NR (DFT-s-OFDM, 50% RB, 20MHz, QPSK, 15kHz)	5G NR FR1 FDD 5G NR FR1 FDD	5.90 5.82	±9.6
10939	AAC	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 KHz)	5G NR FR1 FDD	5.82 5.89	±9.6 ±9.6
10941	AAC	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6
10942	AAC	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10943	AAD	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	±9.6
10944	AAD	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	±9.6
10945	AAD	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.83	±9.6
10947	AAC	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10948	AAC	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10949	AAC	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10950	AAC	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10951	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.92	±9.6
10952	AAA	5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15kHz) 5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15kHz)	5G NR FR1 FDD	8.25	±9.6
10953	AAA AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.15 8.23	±9.6
10955	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD 5G NR FR1 FDD	8.23 8.42	±9.6 ±9.6
10956	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30kHz)	5G NR FR1 FDD	8.14 8.14	±9.6
10957	AAA	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.31	±9.6
10958	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.61	±9.6
10959	AAA	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.33	±9.6
10960	AAE	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.32	±9.6
10961	AAC	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.36	±9.6
10962	AAB	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 15kHz)	5G NR FR1 TDD	9.40	±9.6
10963	AAC	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.55	±9.6
10964	AAE	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.29	±9.6
10965	AAC	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.37	±9.6
10966	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.55	<u>±9.6</u>
10967 10968	AAC AAD	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.42	±9.6
10968	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD 5G NR FR1 TDD	9.49 11.59	±9.6 ±9.6
10972	AAC	5G NR (DFT-S-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	9.06	±9.6
10974	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz)	5G NR FR1 TDD	9.08	±9.6
10978	AAA	ULLA BDR	ULLA	1.16	±9.6
10979	AAA	ULLA HDR4	ULLA	8.58	±9.6
10980	AAA	ULLA HDR8	ULLA	10.32	±9.6
10981	AAA	ULLA HDRp4	ULLA	3.19	±9.6
10982	AAA	ULLA HDRp8	ULLA	3.43	±9.6

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E $k = 2$
10983	AAC	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.31	±9.6
10984	AAB	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.42	±9.6
10985	AAC	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.54	±9.6
10986	AAB	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.50	±9.6
10987	AAC	5G NR DL (CP-OFDM, TM 3.1, 60 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.53	±9.6
10988	AAB	5G NR DL (CP-OFDM, TM 3.1, 70 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.38	±9.6
10989	AAC	5G NR DL (CP-OFDM, TM 3.1, 80 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.33	±9.6
10990	AAB	5G NR DL (CP-OFDM, TM 3.1, 90 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.52	±9.6
11003	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	10.24	±9.6
11004	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	10.73	±9.6
11005	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.70	±9.6
11006	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.55	±9.6
11007	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.46	±9.6
11008	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.51	±9.6
11009	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.76	±9.6
11010	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.95	±9.6
11011	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.96	±9.6
11012	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.68	±9.6
11013	AAB	IEEE 802.11be (320 MHz, MCS1, 99pc duty cycle)	WLAN	8.47	±9.6
11014	AAB	IEEE 802.11be (320 MHz, MCS2, 99pc duty cycle)	ŴLAN	8.45	±9.6
11015	AAB	IEEE 802.11be (320 MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6
11016	AAB	IEEE 802.11be (320 MHz, MCS4, 99pc duty cycle)	WLAN	8.44	±9.6
11017	AAB	IEEE 802.11be (320 MHz, MCS5, 99pc duty cycle)	WLAN	8.41	±9.6
11018	AAB	IEEE 802.11be (320 MHz, MCS6, 99pc duty cycle)	WLAN	8.40	±9.6
11019	AAB	IEEE 802.11be (320 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
11020	AAB	IEEE 802.11be (320 MHz, MCS8, 99pc duty cycle)	WLAN	8.27	±9.6
11021	AAB	IEEE 802.11be (320 MHz, MCS9, 99pc duty cycle)	WLAN	8.46	±9.6
11022	AAB	EEE 802.11be (320 MHz, MCS10, 99pc duty cycle)	WLAN	8.36	±9.6
11023	AAB	IEEE 802.11be (320 MHz, MCS11, 99pc duty cycle)	WLAN	8.09	±9.6
11024	AAB	IEEE 802.11be (320 MHz, MCS12, 99pc duty cycle)	WLAN	8.42	±9.6
11025	AAB	IEEE 802.11be (320 MHz, MCS13, 99pc duty cycle)	WLAN	8.37	±9.6
11026	AAB	IEEE 802.11be (320 MHz, MCS0, 99pc duty cycle)	WLAN	8.39	±9.6

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland

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5 Swiss Calibration Service

Accreditation No.: SCS 0108

EX-7782_Sep24 Element Certificate No. Client Morgan Hill, USA **CALIBRATION CERTIFICATE** EX3DV4 - SN:7782 Object QA CAL-01.v10, QA CAL-12.v10, QA CAL-14.v7, QA CAL-23.v6 Calibration procedure(s) QA CAL-25.v8 Calibration procedure for dosimetric E-field probes September 12, 2024 Calibration date This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate. All calibrations have been conducted in the closed laboratory facility: environment temperature (22±3) °C and humidity < 70%. Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	26-Mar-24 (No. 217-04036/04037)	Mar-25
Power sensor NRP-Z91	SN: 103244	26-Mar-24 (No. 217-04036)	Mar-25
OCP DAK-3.5 (weighted)	SN: 1249	05-Oct-23 (OCP-DAK3.5-1249_Oct23)	Oct-24
OCP DAK-12	SN: 1016	05-Oct-23 (OCP-DAK12-1016_Oct23)	Oct-24
Reference 20 dB Attenuator	SN: CC2552 (20x)	26-Mar-24 (No. 217-04046)	Mar-25
DAE4	SN: 660	23-Feb-24 (No. DAE4-660_Feb24)	Feb-25
Reference Probe EX3DV4	SN: 7349	03-Jun-24 (No. EX3-7349_Jun24)	Jun-25

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-24)	In house check: Jun-26
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-24)	In house check: Jun-26
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-24)	In house check: Jun-26
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-24)	In house check: Jun-26
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24

	Name	Function	Signature
Calibrated by	Krešimir Franjić	Laboratory Technician	K
Approved by	Sven Kühn	Technical Manager	Set
This calibration certificate shall	not be reproduced except in full wit	hout written approval of the laborate	Issued: September 12, 2024 ory.

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Glossary

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity In TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices – Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- NORMx, y, z: Assessed for E-field polarization $\vartheta = 0$ ($f \le 900$ MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx, y, z are only intermediate values, i.e., the uncertainties of NORMx, y, z does not affect the E²-field uncertainty inside TSL (see below *ConvF*).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx, y, z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal. DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- Ax, y,z; Bx, y,z; Cx, y,z; Dx, y,z; VRx, y,z: A, B, C, D are numerical linearization parameters assessed based on the data of
 power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum
 calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \le 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx, y, z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- · Connector Angle: The angle is assessed using the information gained by determining the NORMX (no uncertainty required).

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc $(k=2)$
Norm (µV/(V/m) ²) A	0.66	0.58	0.60	±10.1%
DCP (mV) B	106.4	105.8	108.2	±4.7%

Calibration Results for Modulation Response

UID	Communication System Name		A	В	C	D	VR	Max	Max
	-		dB	dBõV		dB	mV	dev.	Unc ^E
									<u>k</u> = 2
0		- X	0.00	0.00	1.00	0.00	143.5	±1.9%	±4.7%
		Y	0.00	0.00	1.00		138.5		
		Z	0.00	0.00	1.00		128.1		
10352	Pulse Waveform (200Hz, 10%)	X	1.50	60.49	6.35	10.00	60.0	±2.9%	±9.6%
		Y	1.78	61.75	7.02		60.0		
		Z	1.68	61.42	6.92		60.0		
10353	Pulse Waveform (200Hz, 20%)	- X	0.78	60.00	4.92	6.99	80.0	±2.4%	±9.6%
		Y	0.79	60.00	5.02		80.0]	
		Z	0.81	60.00	5.19		80.0		
10354	Pulse Waveform (200Hz, 40%)	X	0.00	122.66	0.73	3.98	95.0	±2.9%	±9.6%
		Y	20.00	72.00	7.00		95.0		
		Z	0.04	120.93	0.37		95.0]	
10355	Pulse Waveform (200Hz, 60%)	X	6.42	159.97	3.03	2.22	120.0	±1.7%	±9.6%
		Y	9.16	84.30	0.20		120.0		
		Z	11.72	154.36	7.20		120.0	l	
10387	QPSK Waveform, 1 MHz	X	0.49	63.08	12.44	1.00	150.0	±3.0%	±9.6%
		Y	0.59	66.37	14.60		150.0]	
		Z	0.58	64.19	12.71	1	150.0	l	
10388	QPSK Waveform, 10 MHz	— X	1.28	65.88	13.80	0.00	150.0	±0.9%	±9.6%
		Y	1.45	68.14	14.92	1	150.0]	
		Z	1.37	66.13	14.02		150.0]	
10396	64-QAM Waveform, 100 kHz	- X	1.54	63.06	15.23	3.01	150.0	±1.0%	±9.6%
		Y	1.67	64.58	15.94	1	150.0		
		Z	1.74	64.82	15.91		150.0]	
10399	64-QAM Waveform, 40 MHz	- X	2.76	66.26	15.08	0.00	150.0	±1.3%	±9.6%
		Y	2.87	67.17	15.61		150.0]	
		Z	2.86	66.49	15.16	1	150.0]	
10414	WLAN CCDF, 64-QAM, 40 MHz	X	3.85	66.66	15.54	0.00	150.0	±2.0%	±9.6%
		Y	3.77	66.70	15.58	1	150.0]	
		Z	3.84	66.15	15.30		150.0	1	

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Page 5).

 ^B Linearization parameter uncertainty for maximum specified field strength.
 ^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Sensor Model Parameters

	C1 fF	C2 1F	α V ⁻¹	T1 msV ⁻²	T2 msV ⁻¹	T3 ms	T4 V ⁻²	T5 V ⁻¹	T6
X	8.5	61.07	33.27	1.68	0.00	4.90	0.02	0.03	1.00
У	7.9	56.48	33.14	1.83	0.00	4.90	0.37	0.00	1.00
Z	9.6	68.24	32.72	3.77	0.00	4.91	0.52	0.00	1.00

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle	80.5°
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Note: Measurement distance from surface can be increased to 3-4 mm for an Area Scan Job.

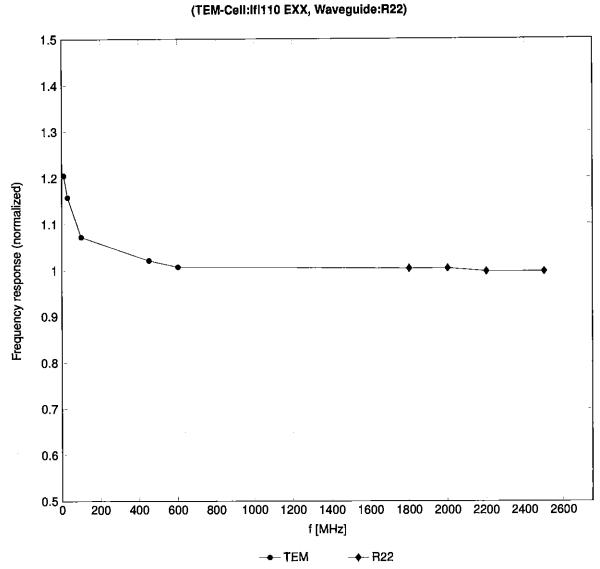
Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity ^F (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc ^H (<i>k</i> = 2)
750	41.9	0.89	9.50	8.31	8.14	0.36	1.27	±11.0%
835	41.5	0.90	9.43	8.25	8.07	0.36	1.27	±11.0%
1750	40.1	1.37	8.01	7.01	6.86	0.35	1.27	±11.0%
1900	40.0	1.40	7.77	6.80	6.65	0.35	1.27	±11.0%
2300	39.5	1.67	7.74	6.77	6.62	0.34	1.27	±11.0%
2450	39.2	1.80	7.39	6.47	6.33	0.34	1.27	±11.0%
2600	39.0	1.96	7.48	6.54	6.40	0.34	1.27	±11.0%
5250	35.9	4.71	5.91	5.17	5.06	0.30	1.27	±13.1%
5600	35.5	5.07	5.12	4.48	4.38	0.27	1.27	±13.1%
5750	35.4	5.22	5.28	4.62	4.52	0.26	1.27	±13.1%
5850	35.2	5.32	5.08	4.44	4.35	0.25	1.27	±13.1%

40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4–9 MHz, and ConvF assessed at 13 MHz is 9–19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz. F The probes are calibrated using tissue simulating liquids (TSL) that deviate for ε and σ by less than $\pm 5\%$ from the target values (typically better than $\pm 3\%$)

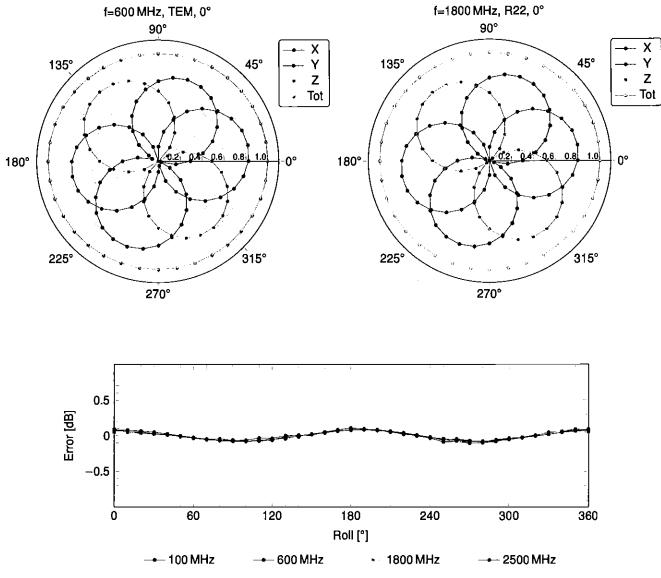
and are valid for TSL with deviations of up to $\pm 10\%$ if SAR correction is applied. ^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ±1% for frequencies below 3 GHz and below ±2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

^H The stated uncertainty is the total calibration uncertainty (k = 2) of Norm-ConvF. This is equivalent to the uncertainty component with the symbol CF In Table 9 of IEC/IEEE 62209-1528:2020.



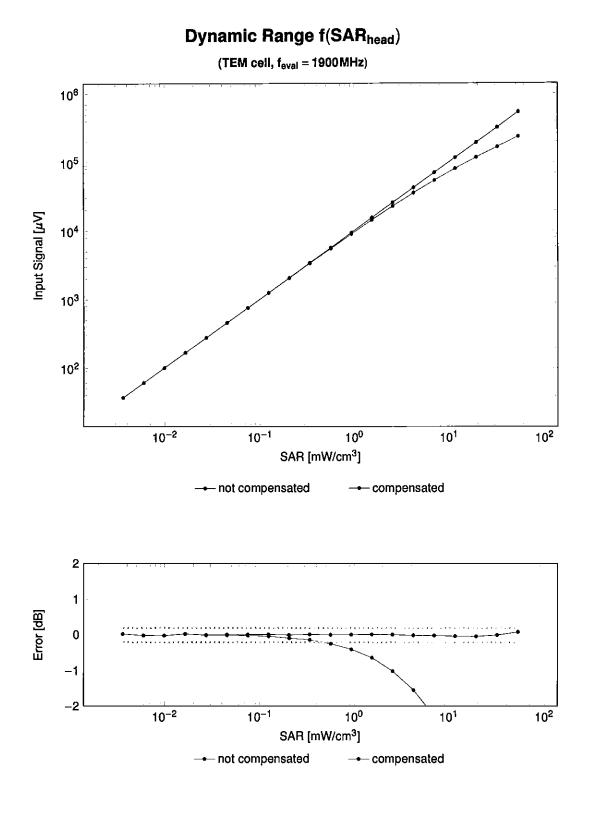
Frequency Response of E-Field

Uncertainty of Frequency Response of E-field: ±6.3% (k=2)



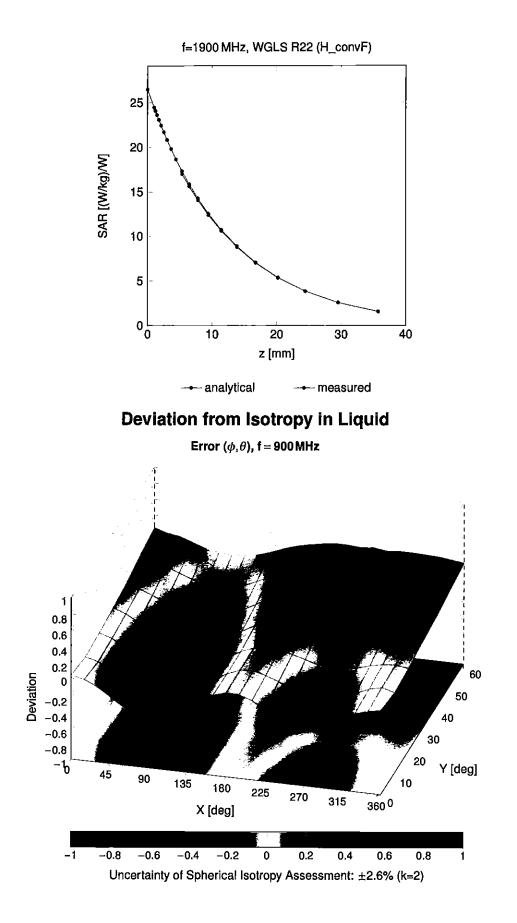
Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

Uncertainty of Axial Isotropy Assessment: ±0.5% (k=2)



Uncertainty of Linearity Assessment: ±0.6% (k=2)

Conversion Factor Assessment



Appendix: Modulation Calibration Parameters

		Communication Custom Name	Group	PAR (dB)	$Unc^{E} k = 2$
	Rev	Communication System Name	CW	0.00	±4.7
10010	CAR.	SAR Validation (Square, 100 ms, 10 ms)	Test	10.00	±9.6
	CAB CAC	UMTS-FDD (WCDMA)	WCDMA	2.91	±9.6
10011		IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	±9.6
10012	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS, 1 Midps)	WLAN	9.46	±9.6
10013	CAB		GSM	9.39	±9.6
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.55	
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	6.56	- <u>±9.6</u>
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)			
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	±9.6
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	±9.6
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	<u>±9.6</u>
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	±9.6
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	±9.6
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	_ <u>±9.6</u>
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	±9.6
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1. 16	±9.6
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	±9.6
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	±9.6
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	±9.6
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	±9.6
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	±9.6
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	±9.6
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.6
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halirate)	AMPS	7.78	±9.6
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	±9.6
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	±9.6
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	±9.6
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	±9.6
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	±9.6
10060	CAB	IEEE 802.11b WiFI 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	±9.6
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	±9.6
10061	CAE	IEEE 802.11a/h WIFI 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	±9.6
10062	CAE	IEEE 802.11a/h WIFI 5 GHz (OFDM, 9 Mbps)	WLAN	8,63	±9.6
10063			WLAN	9.09	±9.6
10064	CAE	IEEE 802.11a/h WIFI 5 GHz (OFDM, 12 Mbps)		9.09	±9.6
10065	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.38	±9.6
	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)			
10067	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	±9.6
10068	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	±9.6
10069	CAE	1EEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	±9.6
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	±9.6
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	±9.6
10073	CAB	IEEE 802.11g WiFI 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	±9.6
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	±9.6
10075	CAB	IEEE 802.11g WiFI 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	±9.6
10076	CAB	IEEE 802.11g WIFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	±9.6
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	±9.6
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	±9.6
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	±9.6
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	±9.6
10097	CAC	UMTS-FDD (HSDPA)	WCDMA	3.98	±9.6
10098	CAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	±9.6
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	±9.6
10100	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	±9.6
10101	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16 QAM)	LTE-FDD	6.42	±9.6
10102	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10103	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	±9.6
10104	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	±9.6
10105	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	±9.6
10108	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	±9.6
10100	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10110	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	±9.6
	ÇAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	±9.6
10111	ЦАН				

UID	Rev	Communication System Name	Group	PAR (dB)	$Unc^E k = 2$
10112	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	±9.6
10113	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10114	CAE	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	±9.6
10115	CAE	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	±9.6
10116	CAE		WLAN	8.15	±9.6
10117	CAE	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	±9.6
10118	CAE	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	±9.6
10119	CAE	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	±9.6
10140	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10141	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	±9.6
10142	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6
10143	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	±9.6
10144	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	±9.6
10145	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	±9.6
10146	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	±9.6
10147	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	±9.6
10149	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10150	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10151	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	±9.6
10152	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	<u>±9.6</u>
10153		LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	±9.6
10154	CAH CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)		5.75	±9.6
10155	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10156	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHZ, QPSK)	LTE-FDD	5.79	±9.6
10157	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.49 6.62	±9.6
10159	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.52	±9.6
10160	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	±9.6 ±9.6
10161	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10162	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	±9.6
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	±9.6
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	±9.6
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	±9.6
10169	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	±9.6
10170	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10171	AAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	±9.6
10172	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	±9.6
10173	CAH	LTE-TDD (SC-FDMA, 1 RB, 20MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10174	CAH	LTE-TDD (SC-FDMA, 1 RB, 20MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10175	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	±9.6
10176	CAH		LTE-FDD	6.52	±9.6
10177	CAJ		LTE-FDD	5.73	±9.6
10178		LTE-FDD (SC-FDMA, 1 RB, 5MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10179	CAH	(LTE-FDD	6.50	±9.6
	CAH		LTE-FDD	6.50	±9.6
10181		LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	±9.6
10182	AAE	LTE-FDD (SC-FDMA, 1 RB, 15MHz, 16-QAM) LTE-FDD (SC-FDMA, 1 RB, 15MHz, 64-QAM)		6.52	±9.6
10184	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	6.50	±9.6
10185	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	5.73	±9.6
10186	AAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD LTE-FDD	6.51	±9.6
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	6.50 5.73	±9.6
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6 ±9.6
10189	AAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.52	±9.6
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	±9.6
10194	CAE	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	±9.6
10195	CAE	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	±9.6
10196	CAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	±9.6
10197	CAE	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	±9.6
10198	CAE	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	±9.6
10219	CAE	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	±9.6
10220	CAE	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	±9.6
10221	CAE	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	±9.6
10222	CAE	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	±9.6
40000					
10223 10224	CAE CAE	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM) IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN WLAN	8.48	±9.6

	D		Group	PAR (dB)	Unc ^E k ⊨ 2
UID 10225	Rev CAC	Communication System Name UMTS-FDD (HSPA+)	WCDMA	5.97	±9.6
10225	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	±9.6
10220	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	±9.6
10228	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	±9.6
10229	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10230	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10231	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	±9.6
10232	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10233	CAH	LTE-TDD (SC-FDMA, 1 RB, 5MHz, 64-QAM)	LTE-TDD	10.25	<u>±9</u> .6
10234	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	±9.6
10235	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10236	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10237	CAH		LTE-TDD	9.21	±9.6
10238	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10239	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10240	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	±9.6
10241	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9,82	±9.6
10242	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	±9.6
10243	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TOD	9.46	±9.6
10244	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TOD	10.06	±9.6
10245	CAE		LTE-TDD	10.06 9.30	±9.6 ±9.6
10246	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	±9.6
10247	CAH			10.09	±9.6
10248	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)		9.29	±9.6
10249	CAH CAH			9.29	±9.6
10250	CAH		LTE-TDD	10.17	±9.6
10251	CAH		LTE-TDD	9.24	±9.6
10252	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TOD	9.90	±9.6
10254	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	±9.6
10255	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	±9.6
10256	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9,96	±9.6
10257	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	±9.6
10258	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	±9.6
10259	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	±9.6
10260	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	±9.6
10261	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	±9.6
10262	ĊAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	±9.6
10263	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	±9.6
10264	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	±9.6
10265	CAH		LTE-TDD	9.92	±9.6
10266	CAH		LTE-TDD	10.07	±9.6
10267	CAH		LTE-TOD	9.30	±9.6
10268	CAG		LTE-TDD	10.06	±9.6
10269	CAG		LTE-TDD	10.13	±9.6
10270	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK) UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	LTE-TDD WCDMA	9.58	±9.6
10274 10275	CAC	UMTS-FDD (HSUPA, Sublest 5, 3GPP Rel8.10) UMTS-FDD (HSUPA, Sublest 5, 3GPP Rel8.4)	WCDMA	4.87	±9.6 ±9.6
10275	CAC	PHS (QPSK)	PHS	11.81	±9.6 ±9.6
10277	CAA	PHS (QPSK, BW 884 MHz, Rolloff 0.5)	PHS	11.81	±9.6
10279	CAA	PHS (QPSK, BW 884 MHz, Rolloff 0.38)	PHS	12.18	±9.6
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	±9.6
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	±9.6
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	±9.6
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	±9.6
10295	AAB	CDMA2000, RC1, SO3, 1/8lh Rate 25 fr.	CDMA2000	12.49	±9.6
10297	AAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	±9.6
10298	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	±9.6
10299	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	±9.6
10300	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10301	AAA	IEEE 802.16e WIMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC)	WIMAX	12.03	±9.6
10302	AAA	IEEE 802.16e WIMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC, 3 CTRL symbols)	WIMAX	12.57	±9.6
10303	AAA	IEEE 802.16e WIMAX (31:15, 5 ms, 10 MHz, 64QAM, PUSC)	WIMAX	12.52	±9.6
10304	AAA	IEEE 802.16e WIMAX (29:18, 5 ms, 10 MHz, 64QAM, PUSC)	WIMAX	11.86	±9.6
10305	AAA	IEEE 802.16e WIMAX (31:15, 10 ms, 10 MHz, 64QAM, PUSC, 15 symbols)	WIMAX	15.24	±9.6
10306	AAA	IEEE 802.16e WIMAX (29:18, 10 ms, 10 MHz, 64QAM, PUSC, 18 symbols)	WIMAX	14.67	±9.6

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		Communication Proton Name	Group	PAR (dB)	Unc ^E $k = 2$
UID 10307	Rev AAA	Communication System Name IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, QPSK, PUSC, 18 symbols)	WiMAX	14.49	±9.6
10307		IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WIMAX	14.46	
10308	AAA	IEEE 802.16e WIMAX (29.18, 10ms, 10MHz, 16QAM, FOSO)	WIMAX	14.58	±9.6
10309	AAA	IEEE 802.16e WIMAX (29:18, 10 ms, 10 MHz, QPSK, AMC 2x3, 18 symbols)	WIMAX	14.57	±9.6
10310	AAE	LTE-FDD (SC-FDMA, 100% RB, 15MHz, QPSK)	LTE-FDD	6.06	 ±9.6
10313		IDEN 1/3	IDEN	10.51	±9.6
10314	AAA	1DEN 1:6	iden	13.48	±9.6
10315	AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	WLAN	1.71	±9.6
10316	AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	WLAN -	8.36	±9.6
10317	AAE	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	±9.6
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	±9.6
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	±9.6
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	±9.6
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	±9.6
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	±9.6
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	±9.6
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	±9.6
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	±9.6
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	±9.6
10400	AAF	IEEE 802.11ac WiFi (20 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	±9.6
10401	AAF	IEEE 802.11ac WiFi (40 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	±9.6
10402	AAF	IEEE 802.11ac WiFi (80 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	±9.6
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	±9.6
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	±9.6
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	±9.6
10410	AAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	LTE-TDD	7.82	±9.6
10414	AAA	WLAN CCDF, 64-QAM, 40 MHz	Generic	8.54	±9.6
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	1.54	±9.6
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	±9.6
10417	AAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	±9.6
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	WLAN	8.14	±9.6
10419	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	WLAN	8.19	±9.6
10422	AAD	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	±9.6
10423	AAD	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	±9.6
10424	AAD AAD	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.40 8.41	±9.6 ±9.6
10425	AAD	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	±9.6
10420	AAD	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	±9.6
10430	AAE	LTE-FDD (QFDMA, 5MHz, E-TM 3.1)	LTE-FDD	8.28	±9.6
10431	AAE	LTE-FDD (OFDMA, 10MHz, E-TM 3.1)	LTE-FDD	8.38	±9.6
10432	AAD	LTE-FDD (OFDMA, 15MHz, E-TM 3.1)	LTE-FDD	8.34	±9.6
10433	AAD		LTE-FDD	8.34	±9.6
10434	AAB	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	±9.6
10435	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10447	AAE	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	±9.6
10448	AAE	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	±9.6
10449	AAD	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.51	±9.6
10450	AAD	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	±9.6
10451	AAB	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	±9.6
10453	AAE	Validation (Square, 10 ms, 1 ms)	Test	10.00	±9.6
10456	AAD	IEEE 802.11ac WiFi (160 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	±9.6
10457	AAB	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	±9.6
10458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	±9.6
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	±9.6
10460	AAB	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	±9.6
10461	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	±9.6
10463	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)		8.56	±9.6
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10465		LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10466 10467	AAD AAG	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6
10467	AAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, GPSK, OL Subirame=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subirame=2,3,4,7,8,9)	LTE-TOD	7.82	±9.6
10468	AAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 18-QAM, UL Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TOD LTE-TOD	8.32 8.56	±9.6 ±9.6
10409	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 04-04M, 0L Subframe=2,3,4,7,8,9)		7.82	±9.6
10470	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82 8.32	±9.6
		2.2.3.2. (00 / Dining / (10) / Omine, 10.000mg/ 02.000mg/10=2,0141/1010)		0.02	19.0

	Rev	Communication System Name	Group	PAR (dB)	$Unc^{E} k = 2$
UID 10472	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6
10473	AAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10474	AAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10475	AAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	_±9.6
10477	AAG	LTE-TDD (SC-FDMA, 1 RB, 20MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TOD	8.32	±9.6
10478	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10480	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	±9.6
10481	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±9.6
10482	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TOD	7.71	±9.6
10483	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	±9.6
10484	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	±9.6
10485	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	±9.6
10486	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	±9.6
10487	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	±9.6
10488	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TOD	7.70	±9.6
10489	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±9.6
10490	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10492	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.41	±9.6
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	±9.6
10494	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10495	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subirame=2,3,4,7,8,9)	LTE-TOD	8.37	±9.6
10496	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TOD	8.54	±9.6
10497	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±9.6
10498	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.40	±9.6
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.68	±9.6
10500	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±9.6
10501	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.44	±9.6
10502	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	±9.6
10503	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	±9.6
10504	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±9.6
10505	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10506	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10507	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2.3,4,7,8,9)	LTE-TDD	8.36	±9.6
10508	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	±9.6
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.99	±9.6
10510	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.49	±9.6
10511	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.51	±9.6
10512	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10513	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.42	±9.6
10514	AAG		LTE-TDD	8.45	±9.6
10515		IEEE 802.11b WiFI 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	±9.6
10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.57	±9.6
10517	AAA	IEEE 802.11b WiFI 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.58	±9.6
10518	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN WLAN	8.23	±9.6
10519	AAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)		8.39	±9.6
				010	
10520	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.12	<u>±9.6</u>
10520 10521	AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mops, 99pc duly cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mops, 99pc duty cycle)	WLAN	7.97	±9.6
10520 10521 10522	AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duly cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duly cycle)	WLAN WLAN WLAN	7.97 8.45	±9.6 ±9.6
10520 10521 10522 10523	AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN WLAN WLAN WLAN	7.97 8.45 8.08	±9.6 ±9.6 ±9.6
10520 10521 10522 10523 10524	AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27	±9.6 ±9.6 ±9.6 ±9.6
10520 10521 10522 10523 10524 10525	AAD AAD AAD AAD AAD AAD	IEEE 802.11a/n WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36	+9.6 +9.6 +9.6 +9.6 +9.6 +9.6
10520 10521 10522 10523 10524 10525 10526	AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/n WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.42	+9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6
10520 10521 10522 10523 10524 10525 10526 10527	AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.42 8.21	+9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6
10520 10521 10522 10523 10524 10525 10526 10527 10528	AAD AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.42 8.21 8.36	+9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6
10520 10521 10522 10523 10524 10525 10526 10527 10528 10529	AAD AAD AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 64 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 64 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.42 8.21 8.36 8.36	+9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6
10520 10521 10522 10523 10524 10525 10526 10527 10528 10529 10531	AAD AAD AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.42 8.21 8.36 8.36 8.36 8.43	+9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6
10520 10521 10522 10523 10524 10525 10526 10527 10528 10529 10531 10532	AAD AAD AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.42 8.21 8.36 8.36 8.36 8.36 8.43 8.29	$ \begin{array}{r} \pm 9.6 \\ \end{array} $
10520 10521 10522 10523 10524 10525 10526 10527 10528 10529 10531 10532	AAD AAD AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS7, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.42 8.21 8.36 8.36 8.36 8.43 8.29 8.38	+9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6 +9.6
10520 10521 10522 10523 10524 10525 10526 10527 10528 10529 10531 10532 10533	AAD AAD AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.36 8.36 8.36 8.36 8.36 8.36 8.38 8.38 8.43	±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6 ±9.6
10520 10521 10522 10523 10524 10525 10526 10527 10528 10529 10531 10532 10533 10534	AAD AAD AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (40 MHz, MCS6, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.36 8.36 8.36 8.36 8.36 8.36 8.36 8.36 8.38 8.43 8.29 8.38 8.45 8.45	$\begin{array}{c} \pm 9.6 \\ \pm 9.6 \\$
10520 10521 10522 10523 10524 10525 10526 10527 10528 10529 10531 10532 10533 10534 10535	AAD AAD AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS7, 99pc duty cycle) IEEE 802.11ac WiFi (40 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (40 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (40 MHz, MCS2, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.42 8.21 8.36 8.36 8.36 8.38 8.43 8.29 8.38 8.45 8.45 8.32	±9.6 ±9.6
10520 10521 10522 10523 10524 10525 10526 10527 10528 10529 10531 10532 10533 10534	AAD AAD AAD AAD AAD AAD AAD AAD AAD AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle) IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle) IEEE 802.11ac WiFi (40 MHz, MCS6, 99pc duty cycle)	WLAN WLAN WLAN WLAN WLAN WLAN WLAN WLAN	7.97 8.45 8.08 8.27 8.36 8.36 8.36 8.36 8.36 8.36 8.36 8.36 8.36 8.38 8.43 8.29 8.38 8.45 8.45	$\begin{array}{c} \pm 9.6 \\ \pm 9.6 \\$

UID Rev Communication System Name Uroup PMI 400 Det 400 PMI 400 B 400 Lobo 1054 ADD IEEE 802.11 to Wirl (AD Mrk, McS3, Rep duty cycle) WLAN 8.64 4.85 1054 ADD IEEE 802.11 to Wirl (AD Mrk, McS3, Rep duty cycle) WLAN 8.65 4.85 10544 ADD IEEE 802.11 to Wirl (AD Mrk, McS1, Style duty cycle) WLAN 8.65 4.86 10554 ADD IEEE 802.11 to Wirl (MOS1, Style duty cycle) WLAN 8.63 4.80 10557 ADD IEEE 802.11 to Wirl (MOS1, Style duty cycle) WLAN 8.87 4.99 10556 ADD IEEE 802.11 to Wirl (MOS1, Style duty cycle) WLAN 8.46 4.85 10556 ADD IEEE 802.11 to Wirl (MOS1, MSS2, Style duty cycle) WLAN 8.46 4.85 10556 ADD IEEE 802.11 to Wirl (MOS1, MSS2, Style duty cycle) WLAN 8.45 4.85 10556 ADD IEEE 802.11 to Wirl (MOS1, MSS2, Style duty cycle) WLAN 8.45 4.85 10556 <t< th=""><th></th><th>-</th><th></th><th></th><th></th><th></th></t<>		-				
10522 ADD LEFE 802.11 tar WH (40 MeL, NOSE, 90pc duty group) WLAN 8.65 4.9.6 10643 ADD LEEE 802.11 tar WH (40 MeL, NOSE, 90pc duty group) WLAN 8.45 4.9.6 10644 ADD LEEE 802.11 tar WH (80 MeL, NOSE, 90pc duty group) WLAN 8.45 4.9.6 10648 ADD LEEE 802.11 tar WH (80 MeL, NOSE, 90pc duty group) WLAN 8.45 2.9.6 10648 ADD LEEE 802.11 tar WH (80 MeL, NOSE, 90pc duty group) WLAN 8.47 4.9.6 10648 ADD LEEE 802.11 tar WH (80 MeL, NOSE, 90pc duty group) WLAN 8.38 4.9.6 10551 ADD LEEE 802.11 tar WH (80 MeL, NOSE, 90pc duty group) WLAN 8.54 4.9.6 10552 ADD LEEE 802.11 tar WH (80 MeL, NOSE, 90pc duty group) WLAN 8.42 4.9.6 10556 ADD LEEE 802.11 tar WH (80 MeL, NOSE, 90pc duty group) WLAN 8.42 4.9.6 10556 ADD LEEE 802.11 tar WH (80 MeL, NOSE, 90pc duty group) WLAN 8.42 4.9.6 10556 AAD <td< td=""><td>UID</td><td>Rev</td><td>Communication System Name</td><td>Group</td><td>PAR (dB)</td><td>Unc^E $k=2$</td></td<>	UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E $k=2$
10543 AD IEEE 802.11 to: WIF (40 Me), KOS3, 9go duty cycle) WLAN 8.47 4.98 10544 AD IEEE 802.11 to: WIF (60 MH), KOS3, 9go duty cycle) WLAN 8.53 4.98 10546 AD IEEE 802.11 to: WIF (60 MH), KOS3, 9go duty cycle) WLAN 8.44 4.93 10547 AD IEEE 802.11 to: WIF (60 MH), KOS3, 9go duty cycle) WLAN 8.44 4.90 10558 AD IEEE 802.11 to: WIF (60 MH), KOS3, 9go duty cycle) WLAN 8.50 ±5.6 10551 AD IEEE 802.11 to: WIF (60 MH), KOS3, 9go duty cycle) WLAN 8.45 ±5.6 10553 AD IEEE 802.11 to: WIF (60 MH), KOS3, 9go duty cycle) WLAN 8.44 ±5.6 10564 AD IEEE 802.11 to: WIF (60 MH), KOS3, 9go duty cycle) WLAN 8.47 ±5.6 10555 AD IEEE 802.11 to: WIF (160 MH), KOS3, 9go duty cycle) WLAN 8.47 ±5.6 10565 AE IEEE 802.11 to: WIF (160 MH), KOS3, 9go duty cycle) WLAN 8.52 ±5.6 10565 AE IEEE 802.11 to: WI					-	
10544 AD LEEE 802.118. WFI (80 MHz, MCS, 980 duty gróle) WLAN 8.45 1.9.9 10546 AD LEEE 802.118. WFI (60 MHz, MCS, 1996 duty gróle) WLAN 8.45 1.9.9 10547 AD LEEE 802.118. WFI (60 MHz, MCS, 1996 duty gróle) WLAN 8.49 1.9.0 10547 AD LEEE 802.118. WFI (60 MHz, MCS, 1996 duty gróle) WLAN 8.49 1.9.0 10558 AD LEEE 802.118. WFI (60 MHz, MCS, 1996 duty gróle) WLAN 8.48 4.9.6 10558 AD LEEE 802.118. WFI (60 MHz, MCS, 1996 duty gróle) WLAN 8.42 2.9.6 10558 AD LEEE 802.118. WFI (60 MHz, MCS, 1996 duty gróle) WLAN 8.44 2.9.6 10558 AAE LEEE 802.118. WFI (60 MHz, MCS, 1996 duty gróle) WLAN 8.45 2.9.6 10556 AAE LEEE 802.118. WFI (60 MHz, MCS, 1996 duty gróle) WLAN 8.45 2.9.6 10556 AAE LEEE 802.118. WFI (60 MHz, MCS, 1996 duty gróle) WLAN 8.51 2.9.6 10557 AAE LEE 802.118. WKI (KOS, 1996						
TORSE ADD LEFE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 0.857 2.80 TOSAF ADD LEEE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 0.837 2.80 TOSAF ADD LEEE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 8.87 4.86 TOSAF ADD LEEE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 8.80 4.86 TOSAF ADD LEEE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 8.80 4.86 TOSAF ADD LEEE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 8.42 4.86 TOSAF ADD LEEE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 8.42 4.86 TOSAF ADD LEEE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 8.42 4.86 TOSAF ADD LEEE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 8.42 4.86 TOSAF ADE LEEE B02 Titae WHF (BO/HH, MCSS, B0po duty cycle) WLAN 8.42 4.86 1.80 ADE 1.80 AE						
10567 ADD LEEE B02 Litter WFF (B0/Hz), MCS2, Spipe duty cycle) WL.AN 8.49 4.90 10567 ADD LEEE B02 Litter WFF (B0/Hz), MCS2, Spipe duty cycle) WL.AN 8.49 4.90 10567 ADD LEEE B02 Litter WFF (B0/Hz), MCS2, Spipe duty cycle) WL.AN 8.84 8.50 10557 ADD LEEE B02 Litter WFF (B0/Hz), MCS2, Spipe duty cycle) WL.AN 8.42 8.50 10558 ADD LEEE B02 Litter WFF (B0/Hz), MCS3, Spipe duty cycle) WLAN 8.42 8.45 10556 ADE LEEE B02 Litter WFF (B0/Hz), MCS3, Spipe duty cycle) WLAN 8.44 8.45 10556 AAE LEEE B02 Litter WFF (B0/Hz), MCS3, Spipe duty cycle) WLAN 8.47 4.96 10557 AAE LEEE B02 Litter WFF (B0/Hz), MCS3, Spipe duty cycle) WLAN 8.67 4.96 10558 AAE LEEE B02 Litter WFF (B0/Hz), MCS3, Spipe duty cycle) WLAN 8.67 4.96 10557 AAE LEEE B02 Litter WFF (B0/Hz), MCS3, Spipe duty cycle) WLAN 8.67 4.96 1.96 1.96 1.96						
10547 ADD LEEP 802 11ae WFI (20 MHz, MCSS, 80pc duty cycle) WLAN 9.49 4.90 10568 ADD LEEP 802 11ae WFI (20 MHz, MCSS, 80pc duty cycle) WLAN 9.37 4.90 10561 ADD LEEP 802 11ae WFI (20 MHz, MCSS, 80pc duty cycle) WLAN 8.50 4.90 10551 ADD LEEE 802 11ae WFI (20 MHz, MCSS, 90pc duty cycle) WLAN 8.42 4.80 10553 ADD LEEE 802 11ae WFI (20 MHz, MCSS, 90pc duty cycle) WLAN 8.42 4.85 10554 ADE LEEE 802 11ae WFI (160 MHz, MCSS, 90pc duty cycle) WLAN 8.42 4.86 10555 AAE LEEE 802 11ae WFI (160 MHz, MCSS, 90pc duty cycle) WLAN 8.50 2.85 10557 AAE LEEE 802 11ae WFI (160 MHz, MCSS, 90pc duty cycle) WLAN 8.51 2.85 10558 AAE LEEE 802 11ae WFI (160 MHz, MCSS, 90pc duty cycle) WLAN 8.63 2.86 10558 AAE LEEE 802 11ae WFI (160 MHz, MCSS, 90pc duty cycle) WLAN 8.63 2.86 10558 AAE LEEE 802 11ae						
10545 ADD LEEE 802 Line WFI (80MHz, MCSK, 88po.dury orgie) WLAN 8.87 49.0 10557 ADD LEEE 802 Line WFI (80MHz, MCSK, 88po.dury orgie) WLAN 8.89 4.90.0 10558 ADD LEEE 802 Line WFI (80MHz, MCSK, 98po.dury orgie) WLAN 8.42 4.90.0 10558 ADD LEEE 802 Line WFI (80MHz, MCSK, 98po.dury orgie) WLAN 8.43 4.90.0 10554 AAE LEEE 802 Line WFI (80MHz, MCSK, 99po.dury orgie) WLAN 8.44 4.90.0 10554 AAE LEEE 802 Line WFI (80MHz, MCSK, 99po.dury orgie) WLAN 8.67 4.90.0 10555 AAE LEEE 802 Line WFI (80MHz, MCSK, 99po.dury orgie) WLAN 8.67 4.90.0 10556 AAE LEEE 802 Line WFI (80MHz, MCSK, 99po.dury orgie) WLAN 8.67 4.90.0 10557 AAE LEEE 802 Line WFI (80MHz, MCSK, 99po.dury orgie) WLAN 8.69 4.90.0 10558 AAE LEEE 802 Line WFI (80MHz, MCSK, 99po.dury orgie) WLAN 8.69 4.90.0 10558 AAE LEEE 802 Li						
10550 AAD LEEE 80.21 tas WFI (80MH, MCSK, 80pc duty cycle) WLAN 8.80 4.96 10551 AAD LEEE 80.21 tas WFI (80MH, MCSK, 90pc duty cycle) WLAN 8.42 4.96 10553 AAD LEEE 80.21 tas WFI (80MH, MCSK, 90pc duty cycle) WLAN 8.42 4.96 10554 AAD LEEE 80.21 tas WFI (80MH, MCSK, 90pc duty cycle) WLAN 8.47 4.96 10555 AAE LEEE 80.21 tas WFI (80MH, MCSK, 90pc duty cycle) WLAN 8.47 4.96 10556 AAE LEEE 80.21 tas WFI (160MH, MCSK, 90pc duty cycle) WLAN 8.50 4.96 10557 AAE LEEE 80.21 tas WFI (160MH, MCSK, 90pc duty cycle) WLAN 8.73 4.96 10568 AAE LEEE 80.21 tas WFI (160MH, MCSK, 90pc duty cycle) WLAN 8.73 4.96 10568 AAE LEEE 80.21 tas WFI (160MH, MCSK, 90pc duty cycle) WLAN 8.64 9.86 10568 AAE LEEE 80.21 tag WFI (160MH, MCSK, 90pc duty cycle) WLAN 8.64 9.86 10568 AAE LEEE 80.21 tag WFI (160M						
TODEST ADD IEEE 802 11 av Wirl (40 Mirk, WGS7, 98pc dury cycle) WLAN 64.6 25.0 TORSE ADD IEEE 802 11 av Wirl (40 Mirk, WGS8, 98pc dury cycle) WLAN 64.6 25.0 TORSE ADD IEEE 802 11 av Wirl (40 Mirk, WGS8, 98pc dury cycle) WLAN 64.6 25.0 TORSE AAE IEEE 802 11 av Wirl (40 Mirk, WGS8, 98pc dury cycle) WLAN 6.45 25.0 TORSE AAE IEEE 802 11 av Wirl (160 Mirk, WGS8, 98pc dury cycle) WLAN 6.85 25.0 TORSE AAE IEEE 802 11 av Wirl (160 Mirk, MGS8, 98pc dury cycle) WLAN 6.85 25.0 TORSE AAE IEEE 802 11 av Wirl (160 Mirk, MGS8, 98pc dury cycle) WLAN 6.85 25.0 TORSE AAE IEEE 802 11 av Wirl (160 Mirk, MGS8, 98pc dury cycle) WLAN 6.85 25.0 TORSE AAE IEEE 802 11 av Wirl (160 Mirk, MGS8, 98pc dury cycle) WLAN 6.46 25.0 TORSE AAE IEEE 802 11 av Wirl (160 Mirk, MGS8, 98pc dury cycle) WLAN 6.46 25.0 TORSE AAE						
10552 AAD IEEE 802 11 av WHF (60 MHz, WGSB, 90p ctuly cycle) WLAN 8.42 9.56 10555 AAE IEEE 802 11 av WHF (60 MHz, WGSB, 90p ctuly cycle) WLAN 8.46 9.90 10555 AAE IEEE 802 11 av WHF (160 MHz, WGSB, 90p ctuly cycle) WLAN 8.47 9.90 10555 AAE IEEE 802 11 av WHF (160 MHz, MGSB, 90p ctuly cycle) WLAN 8.52 9.90 10556 AAE IEEE 802 11 av WHF (160 MHz, MGSB, 90p ctuly cycle) WLAN 8.51 9.90 10567 AAE IEEE 802 11 av WHF (160 MHz, MGSB, 90p ctuly cycle) WLAN 8.56 9.90 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td></t<>						
1958 AAD IEEE 802 11 av WFI (80 MHz, WCSR, 98pc dity cycle) WLAN 8.46 19.96 10555 AAE IEEE 802 11 av WFI (160 MHz, WCSR, 98pc dity cycle) WLAN 8.47 19.96 10555 AAE IEEE 802 11 av WFI (160 MHz, MCSR, 98pc dity cycle) WLAN 8.52 19.96 10556 AAE IEEE 802 11 av WFI (160 MHz, MCSR, 88pc dity cycle) WLAN 8.52 19.96 10556 AAE IEEE 802 11 av WFI (160 MHz, MCSR, 88pc dity cycle) WLAN 8.61 2.96 10557 AAE IEEE 802 11 av WFI (160 MHz, MCSR, 88pc dity cycle) WLAN 8.61 2.96 10558 AAE IEEE 802 11 av WFI (160 MHz, MCSR, 88pc dity cycle) WLAN 8.62 1.96 10552 AAE IEEE 802 11 av WFI (160 MHz, MCSR, 89pc dity cycle) WLAN 8.42 1.96 10554 AAE IEEE 802 11 av WFI (160 MHz, MCSR, 89pc dity cycle) WLAN 8.42 1.96 10554 AAE IEEE 802 11 av WFI (160 MHz, MCSR, 90pc dity cycle) WLAN 8.72 1.96 1.96 1.96 1.96		-			-4	
10565 ARE IEEE 80211 ta Wirl (160 MHz, MCSC, 98pc duty cycle) WLAN 8.48 129.6 10565 ARE IEEE 80211 ta Wirl (160 MHz, MCSC, 98pc duty cycle) WLAN 8.50 129.6 10567 ARE IEEE 80211 ta Wirl (160 MHz, MCSC, 98pc duty cycle) WLAN 8.61 129.6 10567 ARE IEEE 8021 ta Wirl (160 MHz, MCSC, 89pc duty cycle) WLAN 8.61 129.6 10568 ARE IEEE 8021 ta Wirl (160 MHz, MCSC, 89pc duty cycle) WLAN 8.66 159.6 10582 ARE IEEE 8021 ta Wirl (160 MHz, MCSC, 89pc duty cycle) WLAN 8.66 159.6 10582 ARE IEEE 8021 ta Wirl (160 MHz, MCSC, 89pc duty cycle) WLAN 8.26 19.6 10584 AAT IEEE 8021 ta Wirl (160 MHz, MCSC, 89pc duty cycle) WLAN 8.26 19.6 10585 AAT IEEE 8021 ta Wirl (160 MHz, MCSC, 90pc duty cycle) WLAN 8.27 19.6 10586 AAT IEEE 8021 ta Wirl (160 MHz, MCSC, 90pc duty cycle) WLAN 8.16 19.6 10586 AAT					8.45	±9.6
10655 AAE IEEE 802.11ms WHF (160 MHz, MOSS, 99ps duly cycle) WLAN 8.47 4.9.6 10557 AAE IEEE 802.11ms WHF (160 MHz, MOSS, 90ps duly cycle) WLAN 8.50 4.9.6 10558 AAE IEEE 802.11ms WHF (160 MHz, MOSS, 90ps duly cycle) WLAN 8.73 4.9.6 10559 AAE IEEE 802.11ms WHF (160 MHz, MOSS, 90ps duly cycle) WLAN 8.73 4.9.6 10561 AAE IEEE 802.11ms WHF (160 MHz, MOSS, 90ps duly cycle) WLAN 8.73 4.9.6 10562 AAE IEEE 802.11ms WHF (160 MHz, MOSS, 90ps duly cycle) WLAN 8.77 4.9.6 10563 AAE IEEE 802.11ms WHF (160 MHz, MOSS, 90ps duly cycle) WLAN 8.45 4.9.6 10564 AAA IEEE 802.11ms WHF (20 MHz, MOSS, 90ps duly cycle) WLAN 8.45 4.9.6 10565 AAE IEEE 802.11ms WHF 2.4.6Hz (10555 OFDM, 4 MMps, 90ps duly cycle) WLAN 8.45 4.9.6 10566 AAA IEEE 802.11ms WHF 2.4.6Hz (10555 OFDM, 4 MMps, 90ps duly cycle) WLAN 8.10 4.9.6 1.9.6 1.9.6				WLAN	8.48	±9.6
TOSSE AAE IEEE 602.11a WHF (160 MHz, MCSR, 99pc duty cycle) WLAN 8.50 19.50 TOSSE AAE IEEE 602.11a WHF (160 MHz, MCSR, 99pc duty cycle) WLAN 8.61 19.60 TOSSE AAE IEEE 602.11a WHF (160 MHz, MCSR, 99pc duty cycle) WLAN 8.63 19.60 TOSSE AAE IEEE 802.11a WHF (160 MHz, MCSR, 99pc duty cycle) WLAN 8.69 19.6 TOSSE AAE IEEE 802.11a WHF (160 MHz, MCSR, 99pc duty cycle) WLAN 8.69 19.6 TOSSE AAE IEEE 802.11a WHF (160 MHz, MCSR, 99pc duty cycle) WLAN 8.72 19.6 TOSSE AAE IEEE 802.11g WHF (4.60 MHz, MCSR, 99pc duty cycle) WLAN 8.27 19.6 TOSSE AAE IEEE 802.11g WHF 2.44 Ktz (DSSS-OFDM, 24 Mbgs, 99pc duty cycle) WLAN 8.45 19.6 TOSSE AAE IEEE 802.11g WHF 2.44 Ktz (DSSS-OFDM, 24 Mbgs, 99pc duty cycle) WLAN 8.10 19.6 TOSSE AAE IEEE 802.11g WHF 2.44 Ktz (DSSS-OFDM, 24 Mbgs, 99pc duty cycle) WLAN 8.30 19.6 TOSSE				WLAN	8.47	±9.6
10555 AAE LEEE 80.21 lac WHT (150 MHz, MCS4, 99p6 duly cycle) WLAN 8.73 ±9.6 10560 AAE LEEE 80.21 lac WHT (150 MHz, MCS7, 99pc duly cycle) WLAN 8.56 ±9.6 10561 AAE LEEE 80.21 lac WHT (150 MHz, MCS7, 99pc duly cycle) WLAN 8.67 ±9.6 10563 AAE LEEE 80.21 lac WHT (150 MHz, MCS7, 99pc duly cycle) WLAN 8.77 ±9.6 10564 AAE LEEE 80.21 lag WHT (450 MHz, MCS7, 99pc duly cycle) WLAN 8.77 ±9.6 10564 AAE LEEE 80.21 lig WHT 24 GHz (DSSS-OFDM, 3 Mbps, 99pc duly cycle) WLAN 8.45 ±9.6 10566 AAA LEEE 80.21 lig WHT 24 GHz (DSSS-OFDM, 3 Mbps, 99pc duly cycle) WLAN 8.10 ±9.6 10576 AAA LEEE 80.21 lig WHT 24 GHz (DSSS-OFDM, 3 Mbps, 99pc duly cycle) WLAN 8.30 ±9.6 10576 AAA LEEE 80.21 lig WHT 24 GHz (DSSS, 2 Mbps, 90pc duly cycle) WLAN 8.30 ±9.6 10577 AAA LEEE 80.21 lig WHT 24 GHz (DSSS, 5 Mbps, 90pc duly cycle) WLAN 1.99 ±9.6 19.57	10556	AAE		WLAN	8.50	±9.6
TOBSO AAE LEEE 802:11a: WIFI (150 MHz, MCS8, 59 pc duly cycle) WLAN 8.56 19.6 10561 AAE EEEE 802:11a: WIFI (150 MHz, MCS8, 59 pc duly cycle) WLAN 8.66 19.6 10562 AAE IEEE 802:11a: WIFI (150 MHz, MCS8, 59 pc duly cycle) WLAN 8.77 19.6 10564 AAE IEEE 802:11a: WIFI (150 MHz, MCS8, 50 FDM, 18 Mbp, 98 pc duly cycle) WLAN 8.45 18.6 10565 AAE IEEE 802:11g WIFI 2.4 OHz (DSSS OFDM, 18 Mbp, 98 pc duly cycle) WLAN 8.45 18.6 10566 AAA IEEE 802:11g WIFI 2.4 OHz (DSSS OFDM, 34 Mbps, 99 pc duly cycle) WLAN 8.00 19.6 10567 AAA IEEE 802:11g WIFI 2.4 OHz (DSSS OFDM, 34 Mbps, 99 pc duly cycle) WLAN 8.30 19.6 10570 AAA IEEE 802:11g WIFI 2.4 OHz (DSSS OFDM, 34 Mbps, 99 pc duly cycle) WLAN 8.30 19.6 10577 AAA IEEE 802:11g WIFI 2.4 OHz (DSSS OFDM, 34 Mbps, 99 pc duly cycle) WLAN 1.9 19.6 10577 AAA IEEE 802:11g WIFI 2.4 OHz (DSSS OFDM, 34 Mbps, 90 pc duly cycle) WLAN 1.9	10557	AAE	IEEE 802.11ac WiFi (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.52	±9.6
10861 AAE LEEE 802.1182 WHF (160 Hk); MCS7, 98pc du/y cycle) WLAN 8.66 49.6 10582 AAE IEEE 802.1182 WHF (160 Hk); MCS8, 98pc du/y cycle) WLAN 8.67 49.6 10584 AAA IEEE 802.118 WHF (160 Hk); MCS8, 98pc du/y cycle) WLAN 8.27 49.6 10584 AAA IEEE 802.119 WHF 2.40 Hk (DSSS-OFDM, 74 Mkps, 99pc du/y cycle) WLAN 8.45 49.6 10585 AAA IEEE 802.119 WHF 2.40 Hk (DSSS-OFDM, 74 Mkps, 99pc du/y cycle) WLAN 8.13 49.6 10586 AAA IEEE 802.119 WHF 2.40 Hk (DSSS-OFDM, 44 Mkps, 99pc du/y cycle) WLAN 8.10 19.6 10586 AAA IEEE 802.119 WHF 2.40 Hk (DSSS-OFDM, 44 Mkps, 99pc du/y cycle) WLAN 8.10 19.6 10576 AAA IEEE 802.119 WHF 2.40 Hk (DSSS, 5 DFDM, 44 Mkps, 99pc du/y cycle) WLAN 8.10 19.6 10577 AAA IEEE 802.119 WHF 2.40 Hk (DSSS, 1 Mkps, 90pc du/y cycle) WLAN 1.99 19.6 10577 AAA IEEE 802.119 WHF 2.40 Hk (DSSS, OFDM, 44 Mkps, 90pc du/y cycle) WLAN 1.80 19.6	10558	AAE	IEEE 802.11ac WIFi (160 MHz, MCS4, 99pc duty cycle)	WLAN	8.61	±9.6
10582 AAE LEEE 602.11ac WIFI (160 MHz, MCS8, 99pc duty cycle) WILAN 8.60 19.8 10563 AAE LEEE 602.11ac WIFI (20 MHz, MCS8, 99pc duty cycle) WILAN 8.77 19.6 10564 AAA LEEE 602.11g WIFI 2.4.0Hz (DSSS.OFDM, 18 Mbps, 99pc duty cycle) WILAN 8.45 19.6 10565 AAA LEEE 602.11g WIFI 2.4.0Hz (DSSS.OFDM, 18 Mbps, 99pc duty cycle) WILAN 8.45 19.6 10566 AAA LEEE 602.11g WIFI 2.4.0Hz (DSSS.OFDM, 38 Mbps, 99pc duty cycle) WILAN 8.00 19.6 10568 AAA LEEE 602.11g WIFI 2.4.0Hz (DSSS.OFDM, 38 Mbps, 99pc duty cycle) WILAN 8.10 19.6 10570 AAA LEEE 602.11b WIFI 2.4.0Hz (DSSS.OFDM, 48 Mbps, 90pc duty cycle) WILAN 8.30 19.6 10571 AAA LEEE 602.11b WIFI 2.4.0Hz (DSSS, 14 Mpp, 90pc duty cycle) WILAN 1.80 19.6 10572 AAA LEEE 602.11b WIFI 2.4.0Hz (DSSS, OFDM, 12 Mbp, 90pc duty cycle) WILAN 1.88 19.6 10574 AAA LEEE 602.11b WIFI 2.4.0Hz (DSSS OFDM, 12 Mbps, 90pc duty cycle) WILAN 1.89 <td>10560</td> <td>AAE</td> <td>IEEE 802.11ac WiFi (160 MHz, MCS6, 99pc duty cycle)</td> <td>WLAN</td> <td>8.73</td> <td>±9.6</td>	10560	AAE	IEEE 802.11ac WiFi (160 MHz, MCS6, 99pc duty cycle)	WLAN	8.73	±9.6
10565 AAE IEEE 802.118 WIF (150 WIF, 24 GHz (258S OFDM, 12 Mbps, 98pc duty cycle) WLAN 8.77 19.8 10584 AAA IEEE 802.119 WIF 2.4 GHz (258S OFDM, 12 Mbps, 98pc duty cycle) WLAN 8.45 19.6 10584 AAA IEEE 802.119 WIF 2.4 GHz (258S OFDM, 12 Mbps, 98pc duty cycle) WLAN 8.13 19.6 10587 AAA IEEE 802.119 WIF 2.4 GHz (258S OFDM, 34 Mbps, 99pc duty cycle) WLAN 8.37 49.6 10586 AAA IEEE 802.119 WIF 2.4 GHz (258S OFDM, 34 Mbps, 99pc duty cycle) WLAN 8.30 49.6 10587 AAA IEEE 802.119 WIF 2.4 GHz (258S OFDM, 34 Mbps, 99pc duty cycle) WLAN 8.30 49.6 10577 AAA IEEE 802.119 WIF 2.4 GHz (258S OFDM, 34 Mbps, 99pc duty cycle) WLAN 8.30 49.6 10577 AAA IEEE 802.119 WIF 2.4 GHz (258S OFDM, 34 Mbps, 90pc duty cycle) WLAN 1.99 49.6 10577 AAA IEEE 802.119 WIF 2.4 GHz (258S OFDM, 34 Mbps, 90pc duty cycle) WLAN 1.98 49.6 10577 AAA IEEE 802.119 WIF 2.4 GHz (258S OFDM, 34 Mbps, 90pc duty cycle) WLAN	10561	AAE	IEEE 802.11ac WIFi (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.56	±9.6
1084 AAA IEEE 802.11g WIFI 24.GHz (DSSS-OFDM, 9Mps, 98pc duty cycle) WLAN 8.25 1.9.6 1056 AAA IEEE 802.11g WIFI 24.GHz (DSSS-OFDM, 12 Mbps, 98pc duty cycle) WLAN 8.45 1.9.6 1056 AAA IEEE 802.11g WIFI 24.GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle) WLAN 8.00 ±9.6 1056 AAA IEEE 802.11g WIFI 24.GHz (DSSS-OFDM, 34 Mbps, 99pc duty cycle) WLAN 8.01 ±9.6 10570 AAA IEEE 802.11g WIFI 24.GHz (DSSS-OFDM, 34 Mbps, 99pc duty cycle) WLAN 8.10 ±9.6 10571 AAA IEEE 802.11b WIFI 24.GHz (DSSS, C5FM, 54 Mbps, 90pc duty cycle) WLAN 1.90 ±9.6 10571 AAA IEEE 802.11b WIFI 24.GHz (DSSS, 5.5 Mbps, 90pc duty cycle) WLAN 1.99 ±9.6 10572 AAA IEEE 802.11b WIFI 24.GHz (DSSS, 5.5 Mbps, 90pc duty cycle) WLAN 1.98 ±9.6 10574 AAA IEEE 802.11b WIFI 24.GHz (DSSS-OFDM, 14 Mbps, 90pc duty cycle) WLAN 8.50 ±9.6 10576 AAA IEEE 802.11g WIFI 24.GHz (DSSS-OFDM, 14 Mbps, 90pc duty cycle) WLAN 8.52 <td>10562</td> <td>AAE</td> <td>IEEE 802.11ac WiFi (160 MHz, MCS8, 99pc duty cycle)</td> <td>WLAN</td> <td>8.69</td> <td>±9.6</td>	10562	AAE	IEEE 802.11ac WiFi (160 MHz, MCS8, 99pc duty cycle)	WLAN	8.69	±9.6
10865 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle) WLAN 8.45 19.6 10566 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 38 Mbps, 99pc duty cycle) WLAN 8.13 19.6 10567 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 38 Mbps, 99pc duty cycle) WLAN 8.37 19.6 10568 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle) WLAN 8.30 19.6 10570 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) WLAN 8.30 19.6 10577 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 1Mbps, 90pc duty cycle) WLAN 1.99 19.6 10577 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 1Mbps, 90pc duty cycle) WLAN 1.98 19.6 10577 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) WLAN 8.59 19.6 10576 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.59 19.6 10577 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.6 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
10666 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 16 Maps, 99pc duty cycle) WLAN 8.13 1.9.6 10587 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 24 Maps, 99pc duty cycle) WLAN 8.00 1.9.6 10588 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 48 Maps, 99pc duty cycle) WLAN 8.10 1.9.6 10570 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 48 Maps, 99pc duty cycle) WLAN 8.30 1.9.6 10571 AAA IEEE 802.110 WIFI 2.4 GHz (DSSS, OFDM, 48 Maps, 99pc duty cycle) WLAN 1.89 1.9.6 10571 AAA IEEE 802.110 WIFI 2.4 GHz (DSSS, 11 Maps, 90pc duty cycle) WLAN 1.98 1.9.6 10574 AAA IEEE 802.110 WIFI 2.4 GHz (DSSS, 0FDM, 18 Maps, 90pc duty cycle) WLAN 1.98 1.9.6 10575 AAA IEEE 802.110 WIFI 2.4 GHz (DSSS-OFDM, 18 Maps, 90pc duty cycle) WLAN 8.60 1.9.6 10576 AAA IEEE 802.110 WIFI 2.4 GHz (DSSS-OFDM, 18 Maps, 90pc duty cycle) WLAN 8.70 1.9.6 10577 AAA IEEE 802.110 WIFI 2.4 GHz (DSSS-OFDM, 18 Maps, 90pc duty cycle) WL	1	-				
10567 AAA IEEE 802.11g WHI 2.4 GHz COSS-OFDM, 24 Mbps, 89pc duty cycle) WLAN 8.00 1.96 10568 AAA IEEE 802.11g WHI 2.4 GHz COSS-OFDM, 36 Mbps, 89pc duty cycle) WLAN 8.10 1.9.6 10560 AAA IEEE 802.11g WHI 2.4 GHz COSS-OFDM, 46 Mbps, 89pc duty cycle) WLAN 8.30 4.9.6 10571 AAA IEEE 802.11g WHI 2.4 GHz COSS-S, 100 bpc, 90pc duty cycle) WLAN 1.99 4.9.6 10572 AAA IEEE 802.11g WHI 2.4 GHz COSS-S, 100 bpc, 90pc duty cycle) WLAN 1.98 4.9.6 10572 AAA IEEE 802.11g WHI 2.4 GHz COSS-S, 5 Mbps, 90pc duty cycle) WLAN 1.98 4.9.6 10574 AAA IEEE 802.11g WHI 2.4 GHz COSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.60 4.9.6 10577 AAA IEEE 802.11g WHI 2.4 GHz COSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.70 4.9.6 10577 AAA IEEE 802.11g WHI 2.4 GHz						
10588 AAA IEEE 802.11g WIF 24 GHz OBSS-OFDM, 36 Mbps, 99pc duty cycle) WLAN 8.37 19.6 10569 AAA IEEE 802.11g WIF 24 GHz (DSSS-OFDM, 46 Mbps, 99pc duty cycle) WLAN 8.10 12.6 10570 AAA IEEE 802.11b WIF 24 GHz (DSSS-OFDM, 64 Mbps, 90pc duty cycle) WLAN 1.99 19.6 10571 AAA IEEE 802.11b WIF 24 GHz (DSSS, 20 Mps, 90pc duty cycle) WLAN 1.99 19.6 10572 AAA IEEE 802.11b WIF 24 GHz (DSSS, 5.1Mbps, 90pc duty cycle) WLAN 1.98 19.6 10573 AAA IEEE 802.11g WIF 24 GHz (DSSS-OFDM, 64 Mbps, 90pc duty cycle) WLAN 8.60 19.6 10576 AAA IEEE 802.11g WIF 24 GHz (DSSS-OFDM, 14 Mbps, 90pc duty cycle) WLAN 8.60 19.6 10577 AAA IEEE 802.11g WIF 24 GHz (DSSS-OFDM, 14 Mbps, 90pc duty cycle) WLAN 8.70 19.6 10577 AAA IEEE 802.11g WIF 24 GHz <			• • • • • • • • • • • • • • • • • • •			
10660 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 44 Mbps, 99pc duty cycle) WLAN 8.10 1.96 10570 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) WLAN 8.30 ±9.6 10571 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) WLAN 1.99 ±9.6 10572 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 5 Mbps, 90pc duty cycle) WLAN 1.98 ±9.6 10574 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 5 Mbps, 90pc duty cycle) WLAN 1.98 ±9.6 10574 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-0FDM, 18 Mbps, 90pc duty cycle) WLAN 8.60 ±9.6 10577 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-0FDM, 12 Mbps, 90pc duty cycle) WLAN 8.70 ±9.6 10577 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-0FDM, 24 Mbps, 90pc duty cycle) WLAN 8.70 ±9.6 10577 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-0FDM, 34 Mbps, 90pc duty cycle) WLAN 8.36 ±9.6 10578 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-0FDM, 34 Mbps, 90pc duty cycle) WLAN 8.36						
10570 AAA IEEE 802.119 WIFI 2.4 GHz (DSSS OFDM, 64 Mbps, 99pc duty cycle) WLAN 8.30 4.9.6 10571 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) WLAN 1.99 ±9.6 10572 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) WLAN 1.98 ±9.6 10573 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) WLAN 1.98 ±9.6 10576 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) WLAN 8.59 ±9.6 10576 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS OFDM, 9 Mbps, 90pc duty cycle) WLAN 8.60 ±9.6 10577 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS OFDM, 18 Mbps, 90pc duty cycle) WLAN 8.49 ±9.6 10578 AAA IEEEE 802.11g WIFI 2.4 GHz (DSSS OFDM, 36 Mbps, 90pc duty cycle) WLAN 8.35 ±9.6 10580 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS OFDM, 48 Mbps, 90pc duty cycle) WLAN 8.35 ±9.6 10583 AAB IEEE 802.11ah WIFI 5.4 GHZ (DSSS OFDM, 58 Mbps, 90pc duty cycle) WLAN						
10571 AAA IEEE 802.119 WFI 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle) WLAN 1.99 ±9.6 10572 AAA IEEE 802.119 WFI 2.4 GHz (DSSS, 5 Mbps, 90pc duty cycle) WLAN 1.99 ±9.6 10574 AAA IEEE 802.119 WFI 2.4 GHz (DSSS, 5 Mbps, 90pc duty cycle) WLAN 1.98 ±9.6 10576 AAA IEEE 802.119 WFI 2.4 GHz (DSSS, OFDM, 90pc duty cycle) WLAN 8.59 ±9.6 10576 AAA IEEE 802.119 WFI 2.4 GHz (DSSS, OFDM, 90pc duty cycle) WLAN 8.60 ±9.6 10577 AAA IEEE 802.119 WFI 2.4 GHz (DSSS, OFDM, 24 Mbps, 90pc duty cycle) WLAN 8.70 ±9.6 10577 AAA IEEE 802.119 WFI 2.4 GHz (DSSS, OFDM, 24 Mbps, 90pc duty cycle) WLAN 8.76 ±9.6 10578 AAA IEEE 802.119 WFI 2.4 GHz (DSSS, OFDM, 24 Mbps, 90pc duty cycle) WLAN 8.76 ±9.6 10587 AAA IEEE 802.119 WFI 2.4 GHz (DSSS, OFDM, 24 Mbps, 90pc duty cycle) WLAN 8.76 ±9.6 10588 AAD IEEE 802.11ah WFI 5 GHz (OFDM, 48 Mbps, 90pc duty cycle) <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td>					_	
10572 AAA IEEE 802.11b WiFl 2.4 GHz (DSSS, 2Mbps, 90pc duty cycle) WLAN 1.99 ±9.6 10573 AAA IEEE 802.11b WiFl 2.4 GHz (DSSS, 1Mbps, 90pc duty cycle) WLAN 1.88 ±9.6 10575 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS, 0FDM, 9Mbps, 90pc duty cycle) WLAN 8.59 ±9.6 10576 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 9Mbps, 90pc duty cycle) WLAN 8.59 ±9.6 10577 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.49 ±9.6 10578 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.49 ±9.6 10579 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) WLAN 8.36 ±9.6 10580 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) WLAN 8.35 ±9.6 10583 AAD IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) WLAN 8.59 ±9.6 10584 AAD IEEE 802.11g WiFl 2.4 GHz (OFDM, 18 Mbps, 90pc duty cycle) WLAN 8.60 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
10573 AAA TEEE 802.11b WFI 2.4 GHz (DSSS, 5.5 Mbps, 00pc duty cycle) WLAN 1.98 ±9.6 10574 AAA TEEE 802.11b WFI 2.4 GHz (DSSS, 01M, 8 Mbps, 90pc duty cycle) WLAN 8.50 ±9.6 10575 AAA TEEE 802.11g WFI 2.4 GHz (DSSS, 0FDM, 9 Mbps, 90pc duty cycle) WLAN 8.60 ±9.6 10576 AAA TEEE 802.11g WFI 2.4 GHz (DSSS, 0FDM, 18 Mbps, 90pc duty cycle) WLAN 8.70 ±9.6 10577 AAA TEEE 802.11g WFI 2.4 GHz (DSSS, 0FDM, 18 Mbps, 90pc duty cycle) WLAN 8.70 ±9.6 10577 AAA TEEE 802.11g WFI 2.4 GHz (DSSS, 0FDM, 18 Mbps, 90pc duty cycle) WLAN 8.36 ±9.6 10578 AAA TEEE 802.11g WFI 2.4 GHz (DSSS, 0FDM, 84 Mbps, 90pc duty cycle) WLAN 8.35 ±9.6 10581 AAA TEEE 802.11g WFI 2.4 GHz (DSSS, 0FDM, 84 Mbps, 90pc duty cycle) WLAN 8.67 ±9.6 10582 AAA TEEE 802.11g WFI 5.4 GHz (OFDM, 18 Mbps, 90pc duty cycle) WLAN 8.67 ±9.6 10584 AAD TEEE 802.11g WFI 5.4 GHz (OFDM, 18 Mbps, 90pc duty cycle) WLAN 8.50 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
10574 AAA IEEE 802.11b WIFI 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle) WILAN 1.98 ±9.6 10575 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 8 Mbps, 90pc duty cycle) WILAN 8.69 ±9.6 10577 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) WILAN 8.70 ±9.6 10577 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) WILAN 8.49 ±9.6 10578 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) WILAN 8.49 ±9.6 10579 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle) WILAN 8.35 ±9.6 10581 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) WILAN 8.35 ±9.6 10583 AAD IEEE 802.11a/h WIFI 54 CPCM, 64 Mbps, 90pc duty cycle) WILAN 8.69 ±9.6 10584 AAD IEEE 802.11a/h WIFI 54 CPCDM, 18 Mbps, 90pc duty cycle) WILAN 8.60 ±9.6 10586 ADI IEEE 802.11a/h WIFI 54 Mz (OFDM, 41 Mbps, 90pc duty cycle) WILAN 8.49						
10575 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle) WLAN 8.59 ±9.6 10576 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.60 ±9.6 10577 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.49 ±9.6 10578 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle) WLAN 8.36 ±9.6 10580 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 38 Mbps, 90pc duty cycle) WLAN 8.35 ±9.6 10581 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) WLAN 8.35 ±9.6 10582 AAA IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) WLAN 8.59 ±9.6 10583 AAD IEEE 802.11a/h WiFl 5 GHz (OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.60 ±9.6 10584 AAD IEEE 802.11a/h WiFl 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) WLAN 8.70 ±9.6 10586 AAD IEEE 802.11a/h WiFl 5 GHz (OFDM, 48 Mbps, 90pc duty cycle) WLAN 8.						
10576 AAA LEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle) WLAN 8.60 ±9.6 10577 AAA LEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.70 ±9.6 10579 AAA LEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle) WLAN 8.49 ±9.6 10579 AAA LEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle) WLAN 8.36 ±9.6 10581 AAA LEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) WLAN 8.35 ±9.6 10581 AAA LEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle) WLAN 8.67 ±9.6 10582 AAA LEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle) WLAN 8.60 ±9.6 10583 AAD LEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) WLAN 8.60 ±9.6 10584 AAD LEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) WLAN 8.60 ±9.6 10584 AAD LEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) WLAN 8.						
10577 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duly cycle) WLAN 8.70 ±9.6 10578 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duly cycle) WLAN 8.49 ±9.6 10579 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duly cycle) WLAN 8.36 ±9.6 10580 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duly cycle) WLAN 8.36 ±9.6 10581 AAA IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duly cycle) WLAN 8.67 ±9.6 10582 AAD IEEE 802.11g/h WIFI 5 GHz (OFDM, 64 Mbps, 90pc duly cycle) WLAN 8.67 ±9.6 10583 AAD IEEE 802.11g/h WIFI 5 GHz (OFDM, 54 Mbps, 90pc duly cycle) WLAN 8.60 ±9.6 10585 AAD IEEE 802.11g/h WIFI 5 GHz (OFDM, 12 Mbps, 90pc duly cycle) WLAN 8.70 ±9.6 10586 AAD IEEE 802.11g/h WIFI 5 GHz (OFDM, 34 Mbps, 90pc duly cycle) WLAN 8.76 ±9.6 10586 AAD IEEE 802.11g/h WIFI 5 GHz (OFDM, 54 Mbps, 90pc duly cycle) WLAN 8.35						
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10606 AAD IEEE 802.11n (HT Mixed, 40 MHz, MCS7, 90pc duty cycle) WLAN 8.82 ±9.6 10607 AAD IEEE 802.11ac WiFi (20 MHz, MCS0, 90pc duty cycle) WLAN 8.64 ±9.6	10605	AAD		WLAN		
		AAD		WLAN	8.82	±9.6
10608 AAD IEEE 802.11ac WiFi (20 MHz, MCS1, 90pc duty cycle) WLAN 8.77 +9.6						±9.6
	10608	AAD	IEEE 802.11ac WIFI (20 MHz, MCS1, 90pc duty cycle)	WLAN	8.77	±9.6

	0	Oceaning leastless Strategy Manage	Group	PAR (dB)	$Unc^{E} \overline{k} = 2$
UID	Rev	Communication System Name	Group	8.57	±9.6
10609	AAD	IEEE 802.11ac WiFI (20 MHz, MCS2, 90pc duty cycle)	WLAN	8.78	±9.6
10610	AAD AAD	IEEE 802.11ac WiFi (20 MHz, MCS3, 90pc duty cycle)	WLAN	8.70	±9.6
	AAD	IEEE 802.11ac WiFi (20 MHz, MCS4, 900c duty cycle)	WLAN	8.77	±9.6
10612	AAD	IEEE 802.11ac WiFi (20 MHz, MCS6, 90pc duty cycle)	WLAN	8.94	±9.6
10613	AAD	IEEE 802.11ac WiFi (20 MHz, MCS0, 300c duty cycle)	WLAN	8.59	±9.6
10614	AAD	IEEE 802.11ac WiFI (20 MHz, MCS7, 300c duty cycle)	WLAN	8.82	±9.6
10815	AAD	IEEE 802.11ac WiFi (20 MHz, MCS0, 90pc duty cycle)	WLAN	8.82	±9.6
10617	AAD	IEEE 802.11ac WiFi (40 MHz, MCS0, sope duty cycle)	WLAN	8.81	±9.6
	AAD	IEEE 802.11ac WiFi (40 MHz, MCS1, 900c duty cycle)	WLAN	8.58	±9.6
10618	AAD	IEEE 802.11ac WiFI (40 MHz, MCS3, 90pc duty cycle)	WLAN	8.86	±9.6
10619	AAD	IEEE 802.11ac WiFi (40 MHz, MCS3, 500c duty cycle)	WLAN	8.87	±9.6
10620	AAD	IEEE 802.11ac WiFi (40 MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10621	AAD	IEEE 802.11ac WiFi (40 MHz, MCS6, 90pc duty cycle)	WLAN	8.68	±9.6
10622	AAD	IEEE 802.11ac WiFi (40 MHz, MCS0, 300c duty cycle)	WLAN	8,82	±9.6
10823	AAD	IEEE 802.11ac WiFi (40 MHz, MCS8, 90pc duty cycle)		8,96	±9.6
10624	AAD AAD	IEEE 802.11ac WIFI (40 MHz, MCS9, 90pc duty cycle)	WLAN	8.96	±9.6
10625	AAD	IEEE 802.11ac WiFi (80 MHz, MCS0, 90pc duty cycle)	WLAN	8.83	±9.6
10626	AAD	IEEE 802.11ac WiFI (80 MHz, MCS0, 90pc duty cycle)	WLAN	8.88	±9.6
10627	AAD	IEEE 802.11ac WiFi (80 MHz, MCS1, 30pc duty cycle)	WLAN	8.71	±9.6
10628	AAD	IEEE 802.11ac WiFI (80 MHz, MCS2, 90pc duty cycle)	WLAN	8.85	±9.6
10629	AAD	IEEE 802.11ac WIFI (80 MHz, MCS3, 90pc duty cycle)	WLAN	8.72	±9.6
10630	AAD	IEEE 802.11ac WiFi (80 MHz, MCS5, 90pc duty cycle)	WLAN	8.81	±9.6
10631	AAD	IEEE 802.11ac WiFI (80 MHz, MCS6, 90pc duty cycle)	WLAN	8.74	±9.6
10632	AAD	IEEE 802.11ac WiFi (80 MHz, MCS8, 90c duty cycle)	WLAN	8.83	±9.6
10634	AAD	IEEE 802.11ac WiFi (80 MHz, MCS8, 90pc duty cycle)	WLAN	8.80	±9.6
10635	AAD	IEEE 802.11ac WiFi (80 MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6
10636	AAE	IEEE 802.11ac WiFi (160 MHz, MCS0, 90pc duty cycle)	WLAN	8.83	±9.6
10637	AAE	IEEE 802.11ac WiFi (160 MHz, MCS1, 90pc duty cycle)	WLAN	8.79	±9.6
10638	AAE	IEEE 802.11ac WiFI (160 MHz, MCS2, 90pc duty cycle)	WLAN	8.86	±9.6
10639	AAE	IEEE 802.11ac WiFi (160 MHz, MCS3, 90pc duty cycle)	WLAN	8.85	±9.6
10640	AAE	IEEE 802.11ac WiFI (160 MHz, MCS4, 90pc duty cycle)	WLAN	8.98	±9.6
10641	AAE	IEEE 802.11ac WiFi (160 MHz, MCS5, 90pc duty cycle)	WLAN	9.06	±9.6
10642	AAE	IEEE 802.11ac WiFI (160 MHz, MCS6, 90pc duty cycle)	WLAN	9.06	±9.6
10643	AAE	IEEE 802.11ac WiFi (160 MHz, MCS7, 90pc duty cycle)	WLAN	8.89	±9.6
10644	AAE	IEEE 802.11ac WiFi (160 MHz, MCS8, 90pc duty cycle)	WLAN	9.05	±9.6
10645	AAE	IEEE 802.11ac WiFi (160 MHz, MCS9, 90pc duty cycle)	WLAN	9.11	±9.6
10646	AAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TOD	11.96	±9.6
10647	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	±9.6
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	±9.6
10652	AAF	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	±9.6
10653	AAF		LTE-TDD	7.42	±9.6
10654	AAE	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	±9.6
10655	AAF	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	±9.6
10658	AAB	Pulse Waveform (200Hz, 10%)	Test	10.00	±9.6
10659	AAB	Pulse Waveform (200Hz, 20%)	Test	6.99	±9.6
10660	AAB	Pulse Waveform (200Hz, 40%)	Test	3.98	±9.6
10681	AAB	Pulse Waveform (200Hz, 60%)	Test	2.22	±9.6
10662	AAB	Pulse Waveform (200Hz, 80%)	Test	0.97	±9.6
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	±9.6
10671	AAC	IEEE 802.11ax (20 MHz, MCS0, 90pc duty cycle)	WLAN	9.09	±9.6
10672	AAC	IEEE 802.11ax (20 MHz, MCS1, 90pc duty cycle)	WLAN	8.57	±9.6
10673	AAC	IEEE 802.11ax (20 MHz, MCS2, 90pc duty cycle)	WLAN	8.78	±9.6
10674	AAC	IEEE 802.11ax (20 MHz, MCS3, 90pc duty cycle)	WLAN	8.74	±9.6
10675	AAC	IEEE 802.11ax (20 MHz, MCS4, 90pc duty cycle)	WLAN	8.90	±9.6
10676	AAC	IEEE 802.11ax (20 MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10677	AAC	IEEE 802.11ax (20 MHz, MCS6, 90pc duty cycle)	WLAN	8.73	±9.6
10678	AAC	IEEE 802.11ax (20 MHz, MCS7, 90pc duty cycle)	WLAN	8.78	±9.6
10679	AAC	IEEE 802.11ax (20 MHz, MCS8, 90pc duty cycle)	WLAN	8.89	±9.6
10680	AAC	IEEE 802.11ax (20 MHz, MCS9, 90pc duty cycle)	WLAN	8.80	±9.6
10681	AAC	IEEE 802.11ax (20 MHz, MCS10, 90pc duty cycle)	WLAN	8.62	±9.6
10682	AAC	IEEE 802.11ax (20 MHz, MCS11, 90pc duty cycle)	WLAN	8.83	±9.6
1 (AAC	IEEE 802.11ax (20 MHz, MCS0, 99pc duty cycle)	WLAN	8.42	±9.6
10683					
10684	AAC	IEEE 802.11ax (20 MHz, MCS1, 99pc duty cycle)	WLAN	8.26	±9.6
		IEEE 802.11ax (20 MHz, MCS1, 99pc duty cycle) IEEE 802.11ax (20 MHz, MCS2, 99pc duty cycle) IEEE 802.11ax (20 MHz, MCS3, 99pc duty cycle)	WLAN WLAN	8.26	±9.6 ±9.6

<u> </u>	-			PAR (dB)	$Unc^E k = 2$
UID	Rev	Communication System Name	Group WLAN	8.45	±9.6
10687	AAC	IEEE 802.11ax (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.29	±9.6
10688	AAC AAC	IEEE 802.11ax (20 MHz, MCSS, 99pc duty cycle)	WLAN	8.55	±9.6
	AAC	IEEE 802.11ax (20 MHz, MCS8, 99pc duty cycle)	WLAN	8.29	±9.6
10690	AAC	IEEE 802.11ax (20 MHz, MCS7, 99pc duty cycle)	WLAN	8.25	±9.6
10691 10692	AAC	IEEE 802.11ax (20 MHz, MCS8, 99pc duty cycle)	WLAN	8.29	±9.6
10692	AAC	IEEE 802.11ax (20 MHz, MCS9, 99pc duty cycle)	WLAN	8.25	±9.6
10693	AAC	IEEE 802.11ax (20 MHz, MCS10, 99pc duty cycle)	WLAN	8.57	±9.6
10694	AAC	IEEE 802.11ax (40 MHz, MCS0, 90pc duty cycle)	WLAN	8.78	±9.6
10695	AAC	IEEE 802.11ax (40 MHz, MCS0, 90pc duty cycle)	WLAN	8.91	±9.6
10696	AAC	IEEE 802.11ax (40 MHz, MCS1, 900c duty cycle)	WLAN	8.61	±9.6
10697	AAC	IEEE 802.11ax (40 MHz, MC32, 500c duty cycle)	WLAN	8.89	±9.6
10698	AAC	IEEE 802.11ax (40 MHz, MCS3, solid duly cycle)	WLAN	8.82	±9.6
10700	AAC	IEEE 802.11ax (40 MHz, MCS4, 50pc duty cycle)	WLAN	8.73	±9.6
10700	AAC	IEEE 802.11ax (40 MHz, MCS6, 90pc duty cycle)	WLAN	8.86	±9.6
10701	AAC	IEEE 802.11ax (40 MHz, MCS0, solic duty cycle)	WLAN	8.70	±9.6
10702	AAC	IEEE 802.11ax (40 MHz, MCS7, sope duty cycle)	WLAN	8.82	±9.6
10703	AAC	IEEE 802.11ax (40 MHz, MCS9, 90pc duty cycle)	WLAN	8.56	±9.6
10704	AAC	IEEE 802.11ax (40 MHz, MCS10, 90pc duty cycle)	WLAN	8.69	±9.6
10705	AAC	IEEE 802.11ax (40 MHz, MCS11, 90pc duty cycle)	WLAN	8.66	±9.6
10708	AAC	IEEE 802.11ax (40 MHz, MCS11, 30pc duty cycle)	WLAN	8.32	
10707	AAC	IEEE 802.11ax (40 MHz, MCS0, 99pc duty cycle)	WLAN	8.55	±9.6
10708	AAC	IEEE 802.11ax (40 MHz, MCS1, 550c duty cycle)	WLAN	8.33	±9.6
10709	AAC	IEEE 802.11ax (40 MHz, MCS2, 99pc duty cycle)	WLAN	8.29	<u>19.6</u>
10710	AAC	IEEE 802.11ax (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.39	±9.6
10712	AAC	IEEE 802.11ax (40 MHz, MCS5, 99pc duty cycle)	WLAN	8.67	±9.6
10712	AAC	IEEE 802.11ax (40 MHz, MCS6, 99pc duty cycle)	WLAN	8.33	±9.6
10714	AAC	IEEE 802.11ax (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.26	±9.6
10715	AAC	IEEE 802.11ax (40 MHz, MCS8, 99pc duty cycle)	WLAN	8.45	±9.6
10716	AAC	IEEE 802.11ax (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.30	±9.6
10717	AAC	IEEE 802.11ax (40 MHz, MCS10, 99pc duty cycle)	WLAN	8.48	±9.6
10718	AAC	IEEE 802.11ax (40 MHz, MCS11, 99pc duty cycle)	WLAN	8.24	±9.6
10719	AAC	IEEE 802.11ax (80 MHz, MCS0, 90pc duly cycle)	WLAN	8.81	±9.6
10720	AAC	IEEE 802.11ax (80 MHz, MCS1, 90pc duty cycle)	WLAN	8.87	±9.6
10721	AAC	IEEE 802.11ax (80 MHz, MCS2, 90pc duty cycle)	WLAN	8.76	±9.6
10722	AAC	IEEE 802.11ax (80 MHz, MCS3, 90pc duty cycle)	WLAN	8.55	±9.6
10723	AAC	IEEE 802.11ax (80 MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.6
10724	AAC	IEEE 802.11ax (80 MHz, MCS5, 90pc duty cycle)	WLAN	8.90	±9.6
10725	AAC	IEEE 802.11ax (80 MHz, MCS6, 90pc duty cycle)	WLAN	8,74	±9.6
10726	AAC	IEEE 802.11ax (80 MHz, MCS7, 90pc duty cycle)	WLAN	8.72	±9.6
10727	AAC	IEEE 802.11ax (80 MHz, MCS8, 90pc duty cycle)	WLAN	8.66	±9.6
10728	AAC		WLAN	8.65	±9.6
10729	AAC	IEEE 802.11ax (80 MHz, MCS10, 90pc duty cycle)	WLAN	8.64	±9.6
10730	AAC	IEEE 802.11ax (80 MHz, MCS11, 90pc duty cycle)	WLAN	8.67	±9.6
10731	AAC	IEEE 802.11ax (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.42	±9.6
10732	AAC	IEEE 802.11ax (80 MHz, MCS1, 99pc duly cycle)	WLAN	8.46	±9.6
10733	AAC	IEEE 802.11ax (80 MHz, MCS2, 99pc duly cycle)	WLAN	8.40	±9.6
10734	AAC	IEEE 802.11ax (80 MHz, MCS3, 99pc duty cycle)	WLAN	8.25	±9.6
10735	AAC	IEEE 802.11ax (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.33	±9.6
10736	AAC	IEEE 802.11ax (80 MHz, MCS5, 99pc duty cycle)	WLAN	8.27	±9.6
10737	AAC	IEEE 602.11ax (80 MHz, MCS6, 99pc duty cycle)	WLAN	8.36	±9.6
10738	AAC	IEEE 802.11ax (80 MHz, MCS7, 99pc duty cycle)	WLAN	8.42	±9.6
10739	AAC	IEEE 802.11ax (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.29	±9.6
10740	AAC	IEEE 802.11ax (80 MHz, MCS9, 99pc duty cycle)	WLAN -	8.48	±9.6
10741	AAC	IEEE 802.11ax (80 MHz, MCS10, 99pc duty cycle)	WLAN	8.40	±9.6
10742	AAC	IEEE 802.11ax (80 MHz, MCS11, 99pc duty cycle)	WLAN	8.43	±9.6
10743	AAC	IEEE 802.11ax (160 MHz, MCS0, 90pc duty cycle)	WLAN	8.94	±9.6
10744	AAC	IEEE 802.11ax (160 MHz, MCS1, 90pc duty cycle)	WLAN	9.16	±9.6
10745	AAC	IEEE 802.11ax (160 MHz, MCS2, 90pc duty cycle)	WLAN	8.93	±9.6
10746	AAC	IEEE 802.11ax (160 MHz, MCS3, 90pc duty cycle)	WLAN	9.11	±9.6
10747	AAC	IEEE 802.11ax (160 MHz, MCS4, 90pc duty cycle)	WLAN	9.04	±9.6
10748	AAC	IEEE 802.11ax (160 MHz, MCS5, 90pc duty cycle)	WLAN	8.93	±9.6
10749	AAC	IEEE 802.11ax (160 MHz, MCS6, 90pc duty cycle)	WLAN	8.90	±9.6
10750	AAC	IEEE 802.11ax (160 MHz, MCS7, 90pc duty cycle)	WLAN	8.79	±9.6
10751	AAC	IEEE 802.11ax (160 MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10752	AAC	IEEE 802.11ax (160 MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6

UID	Rev	Communication System Name	Group	PAR (dB)	$Unc^{E} k = 2$
10753	AAC	IEEE 802.11ax (160 MHz, MCS10, 90pc duty cycle)	WLAN	9.00	±9.6
10754	AAC	IEEE 802.11ax (160 MHz, MCS11, 90pc duty cycle)	WLAN	8.94	±9.6
10755	AAC	IEEE 802.11ax (160 MHz, MCS0, 99pc duty cycle)	WLAN	8.64	±9.6
10756	AAC	IEEE 802.11ax (160 MHz, MCS1, 99pc duty cycle)	WLAN	8.77	±9.6
10757	AAC	IEEE 802.11ax (160 MHz, MCS2, 99pc duty cycle)	WLAN	8.77	±9.6
10758	AAC	IEEE 802.11ax (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.69	±9.6
10759	AAC	IEEE 802.11ax (160 MHz, MCS4, 99pc duty cycle)	WLAN	8.58	±9.6
10760	AAC	IEEE 602.11ax (160 MHz, MCS5, 99pc duty cycle)	WLAN	8.49	±9.6
10761	AAC	IEEE 802.11ax (160 MHz, MCS6, 99pc duty cycle)	WLAN	8.58	±9.6
10762	AAC	IEEE 802.11ax (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.49	±9.6
10763	AAC	IEEE 802.11ax (160 MHz, MCS8, 99pc duty cycle)	WLAN	8.53	±9.6
10764	AAC	IEEE 802.11ax (160 MHz, MCS9, 99pc duty cycle)	WLAN	8.54	±9.6
10765	AAC	IEEE 802.11ax (160 MHz, MCS10, 99pc duty cycle)	WLAN	8.54	±9.6
10766	AAC	IEEE 802.11ax (160 MHz, MCS11, 99pc duty cycle)	WLAN	8.51	±9.6
10767	AAG	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	7.99	±9.6
10768	AAE	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
10769	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
10770	AAE	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10771	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10772	AAE	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.23	±9.6
10773	AAF	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.03	±9.6
10774	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10775	AAF	5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
10776	AAE	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
10777	AAC	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
10778	AAE	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.34	±9.6
10779	AAC	5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD 5G NR FR1 TDD	8.42 8.38	±9.6 ±9.6
10780	AAE	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	±9.6
10782	AAE	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	±9.6
10783	AAG	5G NR (CP-OFDM, 100% RB, 5MHz, QPSK, 15kHz)	5G NR FR1 TDD	8.31	±9.6
10784	AAE	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	±9.6
10785	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.40	±9.6
10786	AAE	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	±9.6
10787	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	±9.6
10788	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
10789	AAF	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	±9.6
10790	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FRI TDD	8.39	±9.6
10791	AAG	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	±9.6
10792	AAE	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	±9.6
10793	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	±9.6
10794	AAE		5G NR FR1 TDD	7.82	±9.6
10795	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.84	±9.6
10796	AAE	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10797	AAF	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	±9.6
10798	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
10799	AAF	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	±9.6
10801	AAF	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
10802		5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	±9.6
10803	AAF	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	±9.6
10805		5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10806	AAD AAE	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz) 5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.37	±9.6
10809	AAE	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 KHz)	5G NR FR1 TDD	8.34	±9.6
10810	AAF	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 KHz)	5G NR FR1 TDD	8.34	±9.6
10812	AAG	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
10818	AAE	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD 5G NR FR1 TDD	8.35 8.34	±9.6 ±9.6
10819	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.33	±9.6
10820	AAE	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.30	±9.6
10821	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8,41	±9.6
10822	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10823	AAF	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	±9.6
10824	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	±9.6
10825	AAF	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10827	AAF	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.42	±9.6
10828	AAE	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	±9.6

TODE TAR SCR IN CO-COMM, DOWS INS, DOMING, CPEK, DOMAG TODE TAG TODE TAG TODE TAG TODE TAG TA		Deur	Communication System Name	Group	PAR (dB)	Unc ^E k = 2
10820 AAE 52 NR (CHOPDM, THR, 10MHA, QPSK, 60Hz) 50 NR FFH TOD 7.73 8.80 10831 AAD 56 NR (CHOPDM, THR, 10MHA, QPSK, 60Hz) 56 NR FFH TOD 7.73 8.80 10833 AAD 56 NR (CHOPDM, TR, 10MHA, QPSK, 60Hz) 56 NR FFH TOD 7.73 8.80 10834 AAD 56 NR (CHOPDM, TR, 10MHA, QPSK, 60Hz) 66 NR FFH TOD 7.70 8.80 10835 AAF 56 NR (CHOPDM, TR, 80, 60Hz) 66 NR FFH TOD 7.70 8.80 10835 AAF 56 NR (CHOPDM, TR, 80, 60Hz) 66 NR FFH TOD 7.70 1.86 10836 AAF 56 NR (CHOPDM, TR, 80, 60Hz) 66 NR FFH TOD 7.86 4.86 10840 AAF 56 NR (CHOPDM, TR, 80, 60Hz) 66 NR FFH TOD 7.77 4.86 10840 AAF 56 NR (CHOPDM, TR, 80, 60Hz) 66 NR FFH TOD 7.87 4.86 10841 AAF 56 NR (CHOPDM, SR, 80Hz) 56 NR FFH TOD 7.87 4.86 10844 AAF 56 NR (CHOPDM, SR, 80Hz) 56 NR FFH TOD 8.34 4.86	UID	Rev	Communication System Name	Group		·
TOBSE ADD EGN IN (CHOPTIN), THR 1, SMML, QPSK, 604H2) SG M RF PHT TOD 7.74 ±0.80 TOBSE AAD SG NIR (CHOPTIN), THR 2, 20ML, QPSK, 604H2) SG MIR FITT TOD 7.74 ±0.80 TOBSE AAE SG NIR (CHOPTIN), THR 2, 20ML, QPSK, 604H2) SG MIR FITT TOD 7.76 ±0.80 TOBSE AAE SG NIR (CHOPTIN), TIR 3, 0MLL, QPSK, 604H2) SG MIR FITT TOD 7.76 ±0.80 TOBSE AAE SG NIR (CHOPTIN), TIR 5, 0MLL, QPSK, 604H2) SG MIR FITT TOD 7.76 ±0.60 TOBSE AAE SG NIR (CHOPTIN), TIR 5, 0MLL, QPSK, 604H2) SG NIR FITT TOD 7.76 ±0.60 TOBSE AAE SG NIR (CHOPTIN), TIR 5, 0MLL, QPSK, 604H2) SG NIR FITT TOD 7.77 ±0.60 TOBSE AAE SG NIR (CHOPTIN), SVIR, HEL 20MLE, CHOPK, 604H2) SG NIR FITT TOD 4.84.8 4.86.8 TOBSE AAE SG NIR (CHOPTIN), SVIR, HEL 20MLE, CHOPK, 604H2) SG NIR FITT TOD 4.84.8 4.86.8 4.86.8 4.86.8 4.86.8 4.86.8 4.86.8 4.86.8 4.86.8 4.86.8 4.86.8						
TOBSE AAE GG NR (CP-OPM, TRE 25MHL; OPSK, 60HE) SG NR FIT TOD 7.70 49.8 TOBSE AAE SG NR (CP-OPM, TRE 25MHL; OPSK, 60HE) SG NR FIT TOD 7.70 49.8 TOBSE AAE SG NR (CP-OPM, TRE 25MHL; OPSK, 60HL) SG NR FIT TOD 7.70 49.8 TOBSE AAE SG NR (CP-OPM, TRE 25MHL; OPSK, 60HL) SG NR FIT TOD 7.68 49.8 TOBSE AAE SG NR (CP-OPM, TRE, 50MHL; OPSK, 60HL) SG NR FIT TOD 7.70 49.6 TOBSE AAF SG NR (CP-OPM, TRE, 50MHL; OPSK, 60HL) SG NR FIT TOD 7.77 49.6 TOBSE SG NR (CP-OPM, SR, RIS 15MHL; OPSK, 60HL) SG NR FIT TOD 7.47 49.6 19841 AAE SG NR (CP-OPM, SR, RIS 15MHL; OPSK, 60HL) SG NR FIT TOD 64.4 49.6 19845 AAE SG NR (CP-OPM, MG SR, RIS 15MHL; OPSK, 60HL) SG NR FIT TOD 8.4 49.6 19846 AAE SG NR (CP-OPM, MG SR, RIS 15MHL; OPSK, 60HL) SG NR FIT TOD 8.3 49.8 19845 AAE SG NR (CP-OPM, MG SR, RIS MHL; OPSK, 60HL)						±9.6
TOBSE ARE EXAMP SO NR FPT TOD 7.75 ± 96 TOBSE ARE SO NR (CP-CPCM, 1 RB, 30HHz, QPSK, 60Hz) SO NN FPT TDD 7.76 ± 96 TOBSE ARE SO NR (CP-CPCM, 1 RB, 30HHz, QPSK, 60Hz) SO NN FPT TDD 7.70 ± 96 TOBSE ARE SO NR (CP-CPCM, 1 RB, 30HHz, QPSK, 60Hz) SO NN FPT TDD 7.70 ± 96 TOBSE ARE SO NR (CP-CPCM, 1 RB, 30HHz, QPSK, 60Hz) SO NN FPT TDD 7.71 ± 96 TOBSE ARE SO NR (CP-CPCM, 1 RB, 30HHz, QPSK, 60Hz) SO NN FPT TDD 5.43 ± 86 TOBSE ARE SO NR (CP-CPCM, 1 RB, 30HHz, QPSK, 60Hz) SO NN FPT TDD 5.44 ± 86 TOBSE ARE SO NR (CP-CPCM, 100% RB, 10HHz, QPSK, 60Hz) SO NN FPT TDD 5.44 ± 86 TOBSE ARE SO NR (CP-CPCM, 100% RB, 20HHz, QPSK, 60Hz) SO NN FPT TDD 5.44 ± 86 TOBSE ARE SO NR (CP-CPCM, 100% RB, 20HHz, QPSK, 60Hz) SO NN FPT TDD 5.44 ± 86 TOBSE ARE SO NR (CP-CPCM, 100% RB, 20Hz, QPSK, 50Hz) <td></td> <td>AAE</td> <td></td> <td>5G NR FR1 TDD</td> <td>7.74</td> <td>±9.6</td>		AAE		5G NR FR1 TDD	7.74	±9.6
Todast ARF Sign Right CPC/DPM, 1 R8, 30HHz, CPSK, 60H4) Sign Right CPC, CPC, R8, 80H4)	10833	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10888 AAE 5G NR (FP CPDM, 1 RB, 50HL; QPSK, 60HL;) 5G NR FFH TDD 7.66 4.96 10887 AAF 5G NR (FP CPDM, 1 RB, 50HL; QPSK, 60HL;) 5G NR FFH TDD 7.70 4.96 109840 AAE 5G NR (FP CPDM, 1 RB, 30HL; QPSK, 60HL;) 5G NR FFH TDD 7.71 4.96 109441 AAF 5G NR (FP CPDM, 1 RB, 30HL; QPSK, 60HL;) 5G NR FFH TDD 8.44 4.96 109444 AAF 5G NR (FP CPDM, 30% RB, 30HL; QPSK, 60HL;) 5G NR FFH TDD 8.44 4.96 109445 AAE 5G NR (FP CPDM, 30% RB, 30HL; QPSK, 60HL;) 5G NR FFH TDD 8.44 4.96 10945 AAE 5G NR (FP CPDM, 30% RB, 30HL; QPSK, 60HL;) 5G NR FFH TDD 8.44 4.96 10945 AAE 5G NR (FP CPDM, 100% RB, 10HL; QPSK, 60HL;) 5G NR FFH TDD 8.34 4.96 10956 AAE 5G NR (FP CPDM, 100% RB, 30HL; QPSK, 60HL;) 5G NR FFH TDD 8.34 4.96 10958 AAE 5G NR (FP CPDM, 100% RB, 30HL; QPSK, 60HL;) 5G NR FFH TDD 8.34 4.96 10958 AAE	10834	AAE	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	±9.6
TOBST ARF EGN RE (CP-CPM, IT B8, 60H4; QPSK, 60H4;) EGN RE (PC-CPM, IT B8, 90H4; QPSK, 60H4;) EGN RE (PC-CPM, ISK, 905K B2, 20H4; QPSK, 60H4;) EGN RE (PC-CPM, ISK, 905K B2, 20H4; QPSK, 60H4;) EGN RE (PC-CPM, ISK, 905K B2, 20H4; QPSK, 60H4;) EGN RE (PC-CPM, ISK, 905K B2, 20H4; QPSK, 60H4;) EGN RE (PC-CPM, ISK, 905K B2, 20H4; QPSK, 60H4;) EGN RE (PC-CPM, ISK, 905K B2, 20H4; QPSK, 60H4;) EGN RE (PC-CPM, ISK, 905K B2, 20H4; QPSK, 60H4;) EGN RE (PC-CPM, ISK, 905K B2, 20H4; QPSK, 60H4;) EGN RE (PC-CPM, ISK, 80, 20H4; QPSK, 60H4;) EGN RE (PT IDD ISK, 80, 20H4; QPSK, 60H4;) EGN RE (PT IDD ISK, 80, 20H4; QPSK, 60H4;) EGN RE (PT IDD ISK, 80, 20H4; QPSK, 60H4;) EGN RE (PT IDD ISK, 80, 20H4; QPSK, 60H4;) EGN RE (PT IDD ISK, 80, 20H4; QPSK, 60H4;) EGN RE (PT IDD ISK, 80, 20H4; QPSK, 60H4;) EGN RE (P		AAF				
TORBAD AAF SG NA RCP-OFDM, T RB, DANK-, OPSK, GM-H2 SG NA RFFR1 TOD 7.67 ±9.6 TORMO AAF SG NA RCP-OFDM, T RB, DOMK-, OPSK, GM-H2 SG NA RFFR1 TOD 7.67 ±9.6 TORMO AAF SG NA RCP-OFDM, T RB, DOMK-, OPSK, GM-H2 SG NA RFFR1 TOD 6.34 ±9.6 TORMO SG NA RCP-OFDM, SGYR RB, SDM-K2, OPSK, GM-H2 SG NA RFFR1 TOD 6.34 ±9.6 TORMO SG NA RCP-OFDM, SGYR RB, SDM-K2, OPSK, GM-H2 SG NA RFFR1 TOD 6.34 ±9.6 TORMO SG NA RCP-OFDM, TOWYR RB, TOMK-K2, OPSK, GM-H2 SG NA RFFR1 TOD 6.34 ±9.6 TORMO SG NA RCP-OFDM, TOWYR RB, TOMK-K2, OPSK, GM-H2 SG NA RFFR1 TOD 6.33 ±9.6 TORMO SG NA RCP-OFDM, 100YR RB, 30M+L2, OPSK, GM-H2 SG NA RFFR1 TOD 6.33 ±9.6 TORMO SG NA RCP-OFDM, 100YR RB, 30M+L2, OPSK, GM-H2 SG NA RFFR1 TOD 6.34 ±9.6 TORMO SG NA RCP-OFDM, 100YR RB, 30M+L2, OPSK, GM-H2 SG NA RFFR1 TOD 6.34 ±9.6 TORMO SG NA RCP-OFDM, 100YR RB, 50M+L2, OPSK, GM-H2 SG NA RFFR1 TOD 6.37 ±9.6						
16840 AAE SG NA FIC-POPM, TRS, SDMHz, GPSK, SDMHz) SG NA FIFI TOD 7.67 28.9 16841 AAF SG NA FIC-POPM, JON, RB, 15MHz, OPSK, SDMHz) SG NA FIFI TOD 8.49 29.9 16842 AAD SG NA FIG-POPM, JON, RB, 20MHz, OPSK, SDMHz) SG NA FIFI TOD 8.41 29.9 16844 AAE SG NA FIG-POPM, JON, RB, 20MHz, OPSK, SDMHz) SG NA FIFI TOD 8.41 29.8 16844 AAE SG NA FIG-POPM, JONG, RB, 10MHz, OPSK, SDHHz) SG NA FIFI TOD 8.41 29.8 16845 AAE SG NA FIG-POPM, JONG, RB, 10MHz, OPSK, SDHHz) SG NA FIFI TOD 8.36 19.6 16955 AAE SG NA FIG-POPM, JONG, RB, 20MHz, OPSK, SD MHz) SG NA FIFI TOD 8.36 19.6 16956 AAE SG NA FIG-POPM, JONG, RB, 20MHz, OPSK, SD MHz) SG NA FIFI TOD 8.36 19.8 16957 AAE SG NA FIFI TOD 8.36 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 19.8 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
10641 AAF SG NR (CP-DDW, 1 HB, 100 MHz, CPSK, 60 Hz) SG NR FFI TDD 24.9 10642 AAD SG NR (CP-DDW, 60% RB, 10 MHz, CPSK, 60 Hz) SG NR FFI TDD 8.44 9.6 10644 AAE SG NR (CP-DDW, 60% RB, 20 MHz, CPSK, 60 Hz) SG NR FFI TDD 8.41 9.6 10645 AAE SG NR (CP-DDW, 100% RB, 10 MHz, CPSK, 60 Hz) SG NR FFI TDD 8.34 9.6 10855 AAC SG NR (CP-DDW, 100% RB, 10 MHz, CPSK, 50 Hz) SG NR FFI TDD 8.36 9.6 9.6 10855 AAE SG NR (CP-DDW, 100% RB, 20 MHz, CPSK, 50 Hz) SG NR FFI TDD 8.37 4.96 10857 AAE SG NR (CP-DCM, 100% RB, 20 MHz, CPSK, 50 Hz) SG NR FFI TDD 8.34 4.98 10859 AAE SG NR (CP-DCM, 100% RB, 30 MHz, CPSK, 60 Hz) SG NR FFI TDD 8.34 4.98 10860 AAE SG NR (CP-DCM, 100% RB, 30 MHz, CPSK, 60 Hz) SG NR FFI TDD 8.34 4.98 10864 AAE SG NR (CP-DCM, 100% RB, 30 MHz, CPSK, 60 Hz) SG NR FFI TDD 8.36 10864 SG NR (CP-DCM, 100% RB, 30 MHz,						
1984 ADD SC NR (CP-DFDM, GW, RR, 15MHz, DPSK, 69MHz) SC NR FFR 17DD 6.49 9.9. 19844 AAE SC NR (CP-DFDM, GW, RR, 20MHz, DPSK, 69HHz) SC NR FFR 17DD 6.41 9.9. 19845 AAE SC NR (CP-DFDM, GW, RR, 20MHz, DPSK, 69HHz) SC NR FFR 17DD 6.41 9.9. 19845 AAE SC NR (CP-DFDM, 100% RB, 10MHz, OPSK, 60HHz) SC NR FFR 17DD 6.36 9.9. 19855 AAD SC NR (CP-DFDM, 100% RB, 20MHz, OPSK, 60HHz) SC NR FFR 17DD 6.36 9.9. 19856 AAD SC NR (CP-DFDM, 100% RB, 20MHz, OPSK, 60HHz) SC NR FFR 17DD 6.36 9.9. 19857 AAD SC NR (CP-DFDM, 100% RB, 20MHz, OPSK, 60HHz) SC NR FFR 17DD 6.36 9.9. 19859 AAF SC NR (CP-DFDM, 100% RB, 20MHz, OPSK, 60HHz) SC NR FFR 17DD 6.34 9.8 19859 AAF SC NR (CP-DFDM, 100% RB, 20MHz, OPSK, 60HHz) SC NR FFR 17DD 6.40 9.6 19859 AF SC NR (CP-DFDM, 100% RB, 20MHz, OPSK, 60HHz) SC NR FFR 17DD 6.41 9.6 19859 <t< td=""><td>-</td><td></td><td></td><td></td><td></td><td></td></t<>	-					
1044 AAE 50 NR (CP-OFDM, 50% RB, 20MH2, OPSK, 60H42) 50 NN FRI TDD 8.24 49.6 10865 AAE EG NR (CP-OFDM, 100% RB, 10MH2, OPSK, 60H42) 50 NN FRI TDD 8.34 49.6 10855 AAD EG NR (CP-OFDM, 100% RB, 10MH2, OPSK, 60H42) 50 NN FRI TDD 8.37 49.6 10855 AAE EG NR (CP-OFDM, 100% RB, 20MH2, OPSK, 60H42) 50 NN FRI TDD 8.37 49.6 10857 AAD EG NR (CP-OFDM, 100% RB, 20MH2, OPSK, 50H42) 50 NN FRI TDD 8.38 4.86 10859 AAF EG NR (CP-OFDM, 100% RB, 20MH2, OPSK, 50H42) 50 NN FRI TDD 8.41 4.96 10851 AAF 50 NN (CP-OFDM, 100% RB, 20MH2, OPSK, 50H42) 5G NN FRI TDD 8.41 4.96 10851 AAF 50 NN (CP-OFDM, 100% RB, 20MH2, OPSK, 20H42) 5G NN FRI TDD 8.41 4.96 10851 AAF 50 NN (CP-OFDM, 100% RB, 20MH2, OPSK, 20H42) 5G NN FRI TDD 8.41 4.96 10861 AAF 50 NN (CP-OFDM, 100% RB, 20MH2, OPSK, 20H42) 5G NN FRI TDD 8.41 4.96 10861 AA						
Tiget AAE E GN IR (CP-OFDM, 50% RB; 30 ML2, OPSK, 60 Hz) SG NN FRI TDD 8.41 4.96 Tiget AAD SG NN FRI TDD 8.31 4.96 1.965 Tiget AB SG NN FRI TDD 8.31 4.96 Tiget SG NN FRI TDD 8.32 4.96 Tiget SG NN FRI TDD 8.37 4.96 Tiget SG NN FRI TDD 8.35 4.96 Tiget SG NN FRI TDD 8.35 4.96 Tiget SG NN FRI TDD 8.34 4.96 Tiget SG NN FRI TDD 8.34 4.96 Tiget SG NN FRI TDD 8.34 4.96 Tiget SG NN FRI TDD 8.41 4.96 Tiget SG NN FRI TDD SG NN FRI TDD SG NN FRI TDD SG						
10685 AAE SQ NR (CP-OPDM, 100% RB, 10AHL, OPSK, 80AHL) SQ NR FR1 TDD 8.34 4.96 10685 AAE SQ NR (CP-OPDM, 100% RB, 20AHL, OPSK, 80AHL) SQ NR FR1 TDD 8.37 4.96 10685 AAE SQ NR (CP-OPDM, 100% RB, 20AHL, OPSK, 80AHL) SQ NR FR1 TDD 8.37 4.96 10857 AAD SQ NR (CP-OPDM, 100% RB, 20AHL, OPSK, 60AHL) SQ NR FR1 TDD 8.38 4.86 10860 AAE SQ NR (CP-OPDM, 100% RB, 20AHL, OPSK, 20AHL) SQ NR FR1 TDD 8.34 4.86 10861 AAF SQ NR (CP-OPDM, 100% RB, 20AHL, OPSK, 20AHL) SQ NR FR1 TDD 8.41 4.96 10861 AAF SQ NR (CP-OPDM, 100% RB, 20AHL, OPSK, 20AHL) SQ NR FR1 TDD 8.41 4.96 10862 AAF SQ NR (CP-OPDM, 100% RB, 20AHL, QPSK, 20AHL) SQ NR FR1 TDD 8.41 4.96 10868 AAF SQ NR (CP-OPDM, 100% RB, 20AHL, QPSK, 20AHL) SQ NR FR1 TDD 5.81 4.94 10868 AAF SQ NR (CP-OPDM, 100% RB, 20AHL, QPSK, 20AHL) SQ NR FR1 TDD 5.81 4.96 1.96 1.96 <t< td=""><td></td><td>-</td><td></td><td></td><td></td><td></td></t<>		-				
10655 AAD EG NH (CP-OFDM, 100% RB, 15MHz, OPSK, 50MHz) EG NH RF1 TDD 8.37 49.8 10657 AAD EG NH RC-OFDM, 100% RB, 20MHz, OPSK, 50MHz) EG NH RF1 TDD 8.37 49.8 10657 AAD EG NH RC-OFDM, 100% RB, 20MHz, OPSK, 50MHz) EG NH RF1 TDD 8.37 49.6 10658 AAF EG NH RC-OFDM, 100% RB, 20MHz, OPSK, 60HHz) EG NH RF1 TDD 8.41 4.96 10680 AAF EG NH RC-OFDM, 100% RB, 20MHz, OPSK, 60HHz) EG NH RF1 TDD 8.41 4.96 10861 AAF EG NH RC-OFDM, 100% RB, 60MHz, OPSK, 60HHz) EG G NH RF1 TDD 8.41 4.96 10861 AAF EG NH RC-OFDM, 100% RB, 60MHz, OPSK, 60HHz) EG NH RF1 TDD 8.41 4.96 10864 AAF EG NH RC-OFDM, 100% RB, 60MHz, OPSK, 60HHz) EG NH RF1 TDD 8.41 4.96 10868 AAF EG NH RC-OFDM, 100% RB, 100MHz, OPSK, 100HHz) EG NH RF1 TDD 8.41 4.96 10868 AAF EG NH RC-OFDM, 100% RB, 100MHz, OPSK, 100Hz) EG NH RF1 TDD 8.41 4.96 10868 AAF<						
10685 AAE 5G NR (CP-OFDM, 100%, RB, 20 MHz, OPSK, 50 UHz) 5G NR FRI TDD 8.37 496 10857 AAE 5G NR (CP-OFDM, 100%, RB, 30 MHz, OPSK, 50 UHz) 5G NR FRI TDD 8.38 496 10859 AAE 5G NR (CP-OFDM, 100%, RB, 30 MHz, OPSK, 50 UHz) 5G NR FRI TDD 8.44 29.6 10860 AAE 5G NR (CP-OFDM, 100%, RB, 50 MHz, QPSK, 50 UHz) 5G NR FRI TDD 8.41 29.6 10861 AAF 5G NR (CP-OFDM, 100%, RB, 50 MHz, QPSK, 50 UHz) 5G NR FRI TDD 8.41 49.6 10864 AAE 5G NR (CP-OFDM, 100%, RB, 50 MHz, QPSK, 60 UHz) 5G NR FRI TDD 8.41 49.6 10865 AAF 5G NR (CP-OFDM, 100%, RB, 50 MHz, QPSK, 60 UHz) 5G NR FRI TDD 8.37 49.6 10866 AAF 5G NR (CP-OFDM, 100%, RB, 50 MHz, QPSK, 50 WHz) 5G NR FRI TDD 5.37 49.6 10868 AAF 5G NR (CP-OFDM, 100%, RB, 10 MHz, QPSK, 120 Hz) 5G NR FRI TDD 5.38 49.6 10870 AAE 5G NR (CP-OFDM, 100%, RB, 10 MHz, QPSK, 120 Hz) 5G NR FRI TDD 5.56 49.6 19.75						
10657 AAD 6G NR (CP-CFDM, 100%, RB, 20H4z, OPSK, 50H4t) 5G NR FRI TDD 8.38 49.6 10659 AAF 5G NR (CP-CFDM, 100%, RB, 40 MHz, QPSK, 50H4t) 5G NR FRI TDD 8.34 49.6 10860 AAF 5G NR (CP-CFDM, 100%, RB, 60 MHz, QPSK, 50H4t) 5G NR FRI TDD 8.44 49.6 10861 AAF 5G NR (CP-CFDM, 100%, RB, 60 MHz, QPSK, 50H4t) 5G NR FRI TDD 8.41 49.6 10864 AAF 5G NR (CP-CFDM, 100%, RB, 60 MHz, QPSK, 50H4t) 5G NR FRI TDD 8.41 49.6 10864 AAF 5G NR (CP-CFDM, 100%, RB, 100 MHz, QPSK, 50H4t) 5G NR FRI TDD 8.41 49.6 10866 AAF 5G NR (CP-CFDM, 100%, RB, 100 MHz, QPSK, 50H4t) 5G NR FRI TDD 5.88 49.6 10866 AAF 5G NR (CP-CFDM, 100%, RB, 100 MHz, QPSK, 120 H4t) 5G NR FRI TDD 5.88 49.6 10877 AAE 5G NR (CP-CFDM, 100%, RB, 100 MHz, QPSK, 120 H4t) 5G NR FRI TDD 5.86 49.6 10877 AAE 5G NR (CP-CFDM, 100%, RB, 100 MHz, QPSK, 120 H4t) 5G NR FRI TDD 5.64 49.6						
10889 AF 56 NR (CP-CPDM, 100%; RB, 40 MHz, QPSK, 60 MHz) 56 NR FR1 TDD 8.41 1.96 10880 AAF 5G NR (CP-CPDM, 100%; RB, 60 MHz, QPSK, 60 HHz) 5G NR FR1 TDD 8.41 1.96 10881 AAF 5G NR (CP-CPDM, 100%; RB, 60 MHz, QPSK, 60 Hz) 5G NR FR1 TDD 8.41 4.96 10884 AAF 5G NR (CP-CPDM, 100%; RB, 60 MHz, QPSK, 60 Hz) 5G NR FR1 TDD 8.41 4.96 10884 AAF 5G NR (CP-CPDM, 100%; RB, 100 MHz, QPSK, 60 Hz) 5G NR FR1 TDD 8.41 4.96 10886 AAF 5G NR (CPT-CPDM, 100%; RB, 100 MHz, QPSK, 60 Hz) 5G NR FR1 TDD 5.84 4.96 10886 AAF 5G NR (CPT-SOFDM, 100%; RB, 100 MHz, QPSK, 120 Hz) 5G NR FR2 TDD 5.86 4.96 10870 AAE 5G NR (CPT-SOFDM, 100%; RB, 100 MHz, QPSK, 120 Hz) 5G NR FR2 TDD 5.86 4.96 10871 AAE 5G NR (CPT-SOFDM, 100%; RB, 100 MHz, 102 AML, 120 Hz) 5G NR FR2 TDD 5.86 4.96 10872 AAE 5G NR (CPT-SOFDM, 100%; RB, 100 MHz, 162 AM, 120 Hz) 5G NR FR2 TDD 5.86 4.96	10857	AAD		5G NR FR1 TDD	8.35	±9.6
10800 AAE 56 NR (CP-OFDM, 100%, BB, 80 MHz, CPSK, 60 Hz) 56 NR FRI TDD 8.41 19.6 10861 AAF 56 NR (CP-OFDM, 100%, BB, 80 MHz, CPSK, 60 Hz) 56 NR FRI TDD 8.41 19.6 10863 AAF 56 NR (CP-OFDM, 100%, BB, 80 MHz, CPSK, 60 Hz) 56 NR FRI TDD 8.41 19.6 10866 AAF 56 NR (CP-OFDM, 100%, BB, 80 MHz, CPSK, 80 Hz) 56 NR FRI TDD 8.41 19.6 10866 AAF 56 NR (DFTs-OFDM, 100%, BB, 100 MHz, OFSK, 80 Hz) 56 NR FRI TDD 5.88 19.6 10868 AAF 56 NR (DFTs-OFDM, 100%, BB, 100 MHz, OFSK, 120 Hz) 56 NR FRI TDD 5.85 19.6 10870 AAE 56 NR (DFTs-OFDM, 1 BB, 100 MHz, OFSK, 120 Hz) 56 NR FRI TDD 5.75 19.6 10871 AAE 56 NR (DFTs-OFDM, 1 BB, 100 MHz, 16CAM, 120 Hz) 56 NR FRI TDD 6.82 19.6 10872 AAE 56 NR (DFTs-OFDM, 1 BB, 100 MHz, 16CAM, 120 Hz) 56 NR FRI TDD 6.82 19.6 10872 AAE 56 NR (DFTs-OFDM, 1 BB, 100 MHz, 16CAM, 120 Hz) 56 NR FRI TDD 6.81 19.6	10858	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)		8.36	
1988 AAF 56 NR (CP-OFDM, 109%, RB, 80 MHz, CPSK, 60 Hz) 56 NR FR1 TDD 8.41 19.6 10883 AAF 56 NR (CP-OFDM, 100%, RB, 90 MHz, CPSK, 60 Hz) 56 NR FR1 TDD 8.41 19.6 10884 AAE 56 NR (CP-OFDM, 100%, RB, 100 MHz, QPSK, 60 Hz) 56 NR FR1 TDD 8.41 19.8 10866 AAF 56 NR (CP-OFDM, 100%, RB, 100 MHz, QPSK, 50 Hz) 56 NR FR1 TDD 5.88 19.8 10868 AAF 56 NR (DFTs-OFDM, 100%, RB, 100 MHz, QPSK, 30 Hz) 56 NR FR2 TDD 5.75 19.6 10869 AAE 56 NR (DFTs-OFDM, 100%, RB, 100 MHz, QPSK, 120 Hz) 56 NR FR2 TDD 5.75 19.6 10871 AAE 56 NR (DFTs-OFDM, 100%, RB, 100 MHz, 160 AHz) 56 NR (DFTs-OFDM, 100%, RB, 100 MHz, 100 Hz) 56 NR FR2 TDD 5.75 19.6 10872 AAE 56 NR (DFTs-OFDM, 100%, RB, 100 MHz, 040 AM, 120 Hz) 56 NR FR2 TDD 5.75 19.6 10872 AAE 56 NR (DFTs-OFDM, 100%, RB, 100 MHz, 040 AM, 120 Hz) 56 NR FR2 TDD 6.61 19.6 10872 AAE 56 NR (DFTs-OFDM, 100%, RB, 100 MHz, 040 AM, 120 Hz) 56 NR FR2	10859	AAF	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10883 A.F. 5G NR (CP-OFDM, 100% RB, 80 MHz, CPSK, 60 Hz) 5G NR FRI TDD 8.37 4.96 10864 A.A.F. 5G NR (CP-OFDM, 100% RB, 80 MHz, CPSK, 60 Hz) 5G NR FRI TDD 8.37 4.96 10865 A.A.F. 5G NR (CP-OFDM, 100% RB, 100 MHz, CPSK, 50 Hz) 5G NR FRI TDD 5.68 4.9.6 10866 A.F. 5G NR (DFT=OFDM, 100% RB, 100 MHz, CPSK, 30 Hz) 5G NR FRI TDD 5.68 4.9.6 10868 A.E. 5G NR (DFT=OFDM, 108% RB, 100 MHz, CPSK, 120 Hz) 5G NR FRIZ TDD 5.65 4.9.6 10870 A.E. 5G NR (DFT=OFDM, 108% RB, 100 MHz, CPSK, 120 Hz) 5G NR FRIZ TDD 5.65 4.9.6 10871 A.E. 5G NR (DFT=OFDM, 108% RB, 100 MHz, 204M, 120 Hz) 5G NR FRIZ TDD 5.6.1 4.9.6 10872 A.E. 5G NR (DFT=OFDM, 118%, 100 MHz, 204M, 120 Hz) 5G NR FRIZ TDD 5.6.1 4.9.6 10872 A.E. 5G NR (DFT=OFDM, 118%, 100 MHz, 204Mz, 120 Hz) 5G NR FRIZ TDD 7.8.6 4.9.6 10872 A.E. 5G NR (DFT=OFDM, 118%, 100 MHz, 204Mz, 120 Hz) 5G NR FRIZ TDD 7.9.5 4.9.6 <td>·</td> <td></td> <td></td> <td>5G NR FR1 TDD</td> <td>8.41</td> <td>±9.6</td>	·			5G NR FR1 TDD	8.41	±9.6
10664 AAE 5G NR (CP-OFDM, 100% RB, 00MHz, CPSK, 60MH2) 5G NR FR1 TDD 6.37 49.6 10865 AAF 5G NR (CP-OFDM, 100% RB, 100MHz, CPSK, 60MH2) 5G NR FR1 TDD 5.68 49.6 10866 AAF 5G NR (DFTe-OFDM, 100% RB, 100MHz, CPSK, 30MH2) 5G NR FR1 TDD 5.88 49.6 10868 AAF 5G NR (DFTe-OFDM, 100% RB, 100MHz, CPSK, 120MH2) 5G NR FR2 TDD 5.86 49.6 10870 AAE 5G NR (DFTe-OFDM, 100% RB, 100MHz, CPSK, 120MH2) 5G NR FR2 TDD 5.86 49.6 10871 AAE 5G NR (DFTe-OFDM, 100% RB, 100MHz, CPSK, 120H2) 5G NR FR2 TDD 5.86 49.6 10872 AAE 5G NR (DFTe-OFDM, 100% RB, 100MHz, 19CAM, 120H2) 5G NR FR2 TDD 6.81 49.6 10873 AAE 5G NR (DFTe-OFDM, 100% RB, 100MHz, 0FSK, 120Hz) 5G NR FR2 TDD 6.81 49.6 10874 AAE 5G NR (CP-OFDM, 100% RB, 100MHz, 0FSK, 120Hz) 5G NR FR2 TDD 7.78 49.6 10877 AAE 5G NR (CP-OFDM, 100% RB, 100MHz, 0FSK, 120Hz) 5G NR FR2 TDD 7.85 49.6 <td< td=""><td></td><td>_</td><td></td><td></td><td></td><td></td></td<>		_				
10865 AAF 5G NR (DP-CPDM, 100% RB, 100MHz, QPSK, 30KHz) 5G NR FR1 TDD 6.41 49.6 10866 AAF 5G NR (DFFs-OFDM, 1RB, 100MHz, QPSK, 30KHz) 5G NR FR1 TDD 5.88 49.6 10868 AAF 5G NR (DFFs-OFDM, 100% RB, 100MHz, QPSK, 30KHz) 5G NR FR2 TDD 5.75 49.6 10870 AAE 5G NR (DFFs-OFDM, 178, 100MHz, QPSK, 120KHz) 5G NR FR2 TDD 5.75 49.6 10871 AAE 5G NR (DFFs-OFDM, 178, 100MHz, QPSK, 120KHz) 5G NR FR2 TDD 5.75 49.6 10872 AAE 5G NR (DFFs-OFDM, 178, 100MHz, 16CAM, 120KHz) 5G NR FR2 TDD 5.61 49.6 10873 AAE 5G NR (DFFs-OFDM, 178, 100MHz, 16CAM, 120KHz) 5G NR FR2 TDD 6.61 49.6 10874 AAE 5G NR (DFFs-OFDM, 100% RB, 100MHz, QPSK, 120KHz) 5G NR FR2 TDD 6.61 49.6 10875 AAE 5G NR (DFFs-OFDM, 100% RB, 100MHz, QPSK, 120KHz) 5G NR FR2 TDD 6.81 49.6 10876 AAE 5G NR (DFFs-OFDM, 100% RB, 100MHz, QAQAM, 120KHz) 5G NR FR2 TDD 8.39 49.6 10878					-	-
10666 AAF 5G NR (DFT=0FDM, I RB, 100 MHz, QFSK, 30 Hz) 5G NR FRI TDD 5.88 49.6 10868 AAF 5G NR (DFT=0FDM, 100%, RB, 100 MHz, QFSK, 120 Hz) 5G NR FR2 TDD 5.86 49.6 10870 AAE 5G NR (DFT=0FDM, 100 MHz, QFSK, 120 Hz) 5G NR FR2 TDD 5.86 49.6 10870 AAE 5G NR (DFT=0FDM, 100 MHz, QFSK, 120 Hz) 5G NR FR2 TDD 5.86 49.6 10872 AAE 5G NR (DFT=0FDM, 100 MHz, QFSK, 120 Hz) 5G NR FR2 TDD 6.82 49.6 10872 AAE 5G NR (DFT=0FDM, 100 MLz, GAQAM, 120 Hz) 5G NR FR2 TDD 6.81 49.6 10873 AAE 5G NR (DFT=0FDM, 100 ME, 6QAAM, 120 Hz) 5G NR FR2 TDD 6.81 49.6 10874 AAE 5G NR (DFT=0FDM, 100 Mz, 6QAAM, 120 Hz) 5G NR FR2 TDD 7.78 49.6 10877 AAE 5G NR (DFT=0FDM, 108, 100 MHz, 16QAM, 120 Hz) 5G NR FR2 TDD 7.35 49.6 10877 AAE 5G NR (DFT=0FDM, 1 RB, 100 MHz, 16QAM, 120 Hz) 5G NR FR2 TDD 8.41 49.6 10877 AAE						
10888 AAF ISG NR (DFT-OFDM, 10%; RB, 100 MHz, OPSK, 120 Hz) ISG NR FR7 TDD S.89 ±9.6 10869 AAE SG NR (DFT-OFDM, 1 RB, 100 MHz, OPSK, 120 Hz) SG NR FR7 TDD 5.75 ±9.6 10870 AAE SG NR (DFT-OFDM, 108, 100 MHz, OPSK, 120 Hz) SG NR FR7 TDD 5.75 ±9.6 10871 AAE SG NR (DFT-OFDM, 108, 100 MHz, OPSK, 120 Hz) SG NR FR7 TDD 5.62 ±9.6 10873 AAE SG NR (DFT-OFDM, 118, 100 MHz, GAGAM, 120 Hz) SG NR FR7 TDD 6.61 ±9.6 10873 AAE SG NR (DFT-OFDM, 118, 100 MHz, GAGAM, 120 Hz) SG NR FR7 TDD 6.65 ±9.6 10875 AAE SG NR (DFO-OFDM, 118, 100 MHz, GPSK, 120 Hz) SG NR FR7 TDD 7.78 ±9.6 10876 AAE SG NR (DFO-OFDM, 118, 100 MHz, GPSK, 120 Hz) SG NR FR7 TDD 8.39 ±9.6 10877 AAE SG NR (DFT-OFDM, 118, 100 MHz, GPSK, 120 Hz) SG NR FR7 TDD 8.41 ±9.6 10878 AAE SG NR (DFT-OFDM, 118, 100 MHz, GPSK, 120 Hz) SG NR FR7 TDD 8.41 ±9.6 10877						
10680 AAE 5G NR (DFTs-OFDM, 1 RB, 100 MHz, QPSK, 120 HHz) 5G NR FR2 TDD 5.75 ±9.6 10870 AAE 5G NR (DFTs-OFDM, 10% RB, 100 MHz, QPSK, 120 HHz) 5G NR FR2 TDD 5.86 ±9.6 10870 AAE 5G NR (DFTs-OFDM, 10% RB, 100 MHz, QPSK, 120 HHz) 5G NR FR2 TDD 6.575 ±9.6 10872 AAE 5G NR (DFTs-OFDM, 10% RB, 100 MHz, QPSK, 120 HHz) 5G NR FR2 TDD 6.661 ±9.6 10873 AAE 5G NR (DFTs-OFDM, 108, TB, 100 MHz, QPSK, 120 HHz) 5G NR FR2 TDD 6.661 ±9.6 10874 AAE 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 HHz) 5G NR FR2 TDD 6.661 ±9.6 10875 AAE 5G NR (CP-OFDM, 108, RB, 100 MHz, QPSK, 120 HHz) 5G NR FR2 TDD 6.83 ±9.6 10877 AAE 5G NR (CP-OFDM, 108, RB, 100 MHz, 16QAM, 120 HHz) 5G NR FR2 TDD 8.34 ±9.6 10876 AAE 5G NR (CP-OFDM, 118, 100 MHz, 4QAM, 120 HHz) 5G NR FR2 TDD 8.41 ±9.6 10877 AAE 5G NR (CP-OFDM, 118, 50 MHz, QCAM, 120 HHz) 5G NR FR2 TDD 5.75 ±9.6						
10 870 AAE 5G NR (DFTs-OFDM, 100%, RB, 100MHz, 102NHz) 5G NR FR2 TDD 5.86 ±9.6 10 871 AAE 5G NR (DFTs-OFDM, 100%, RB, 100MHz, 16QAM, 120KHz) 5G NR FR2 TDD 5.75 ±9.6 10 872 AAE 5G NR (DFTs-OFDM, 100% RB, 100MHz, 16QAM, 120KHz) 5G NR FR2 TDD 6.61 ±9.6 10 873 AAE 5G NR (DFTs-OFDM, 100% RB, 100MHz, 64QAM, 120KHz) 5G NR FR2 TDD 6.61 ±9.6 10 876 AAE 5G NR (CP-OFDM, 1 RB, 100MHz, 100Hz, 120KHz) 5G NR FR2 TDD 7.83 ±9.6 10 876 AAE 5G NR (CP-OFDM, 1 RB, 100MHz, 102NHz) 5G NR FR2 TDD 7.93 ±9.6 10 877 AAE 5G NR (CP-OFDM, 1 RB, 100MHz, 16QAM, 120KHz) 5G NR FR2 TDD 8.39 ±9.6 10 878 AAE 5G NR (CP-OFDM, 1 RB, 100MHz, 46QAM, 120KHz) 5G NR FR2 TDD 8.41 ±9.6 10 880 AAE 5G NR (DFTs-OFDM, 1 RB, 50 MHz, 64QAM, 120KHz) 5G NR FR2 TDD 8.32 ±9.6 10 881 AAE 5G NR (DFTs-OFDM, 1 RB, 50 MHz, 04QAM, 120 KHz) 5G NR FR2 TDD 5.75 ±9.6						
10871 AAE 5G NR (DFTs-OFDM, 109% RB, 100MHz, 16QAM, 120KHz) 5G NR FR2 TDD 5.75 ±9.6 10872 AAE 5G NR (DFTs-OFDM, 100% RB, 100MHz, 46QAM, 120KHz) 5G NR FR2 TDD 6.52 ±9.6 10873 AAE 5G NR (DFTs-OFDM, 100% RB, 100MHz, 46QAM, 120KHz) 5G NR FR2 TDD 6.65 ±9.6 10874 AAE 5G NR (CP-OFDM, 100% RB, 100MHz, 05K, 120KHz) 5G NR FR2 TDD 6.65 ±9.6 10876 AAE 5G NR (CP-OFDM, 100% RB, 100MHz, 05K, 120KHz) 5G NR FR2 TDD 7.78 ±9.6 10876 AAE 5G NR (CP-OFDM, 108, RB, 100MHz, 05AK, 120KHz) 5G NR FR2 TDD 7.85 ±9.6 10877 AAE 5G NR (CP-OFDM, 108, RB, 100MHz, 16QAM, 120KHz) 5G NR FR2 TDD 8.31 ±9.6 10879 AAE 5G NR (CP-OFDM, 118, 100MHz, 64QAM, 120KHz) 5G NR FR2 TDD 8.48 ±9.6 10879 AAE 5G NR (DFTs-OFDM, 118, 50MHz, 04QAM, 120KHz) 5G NR FR2 TDD 5.75 ±9.6 10889 AAE 5G NR (DFTs-OFDM, 100% RB, 50MHz, 04QAM, 120KHz) 5G NR FR2 TDD 5.56 ±9.6 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td></t<>						
10872 AAE 5G NR (DFTs-OFDM, 100% RB, 100MHz, 4GAM, 120KHz) 5G NR FR2 TDD 6.62 ±9.6 10873 AAE 5G NR (DFTs-OFDM, 100% RB, 100MHz, 64GAM, 120KHz) 5G NR FR2 TDD 6.61 ±9.6 10875 AAE 5G NR (DFTs-OFDM, 100% RB, 100MHz, 64GAM, 120KHz) 5G NR FR2 TDD 6.63 ±9.6 10875 AAE 5G NR (CP-OFDM, 100% RB, 100MHz, QPSK, 120KHz) 5G NR FR2 TDD 6.39 ±9.6 10877 AAE 5G NR (CP-OFDM, 100% RB, 100MHz, QPSK, 120KHz) 5G NR FR2 TDD 8.41 ±9.6 10878 AAE 5G NR (CP-OFDM, 100% RB, 100MHz, 40AM, 120KHz) 5G NR FR2 TDD 8.41 ±9.6 10879 AAE 5G NR (CP-OFDM, 108, 100MHz, 40AM, 120KHz) 5G NR FR2 TDD 8.41 ±9.6 10880 AAE 5G NR (DFTs-OFDM, 100% RB, 100MHz, 04CAM, 120KHz) 5G NR FR2 TDD 5.75 ±9.6 10881 AAE 5G NR (DFTs-OFDM, 100% RB, 50MHz, 04SK, 120KHz) 5G NR FR2 TDD 5.75 ±9.6 10882 AAE 5G NR (DFTs-OFDM, 100% RB, 50MHz, 04SK, 120KHz) 5G NR FR2 TDD 5.75 ±9.6		<u> </u>				
10873 AAE 6G NR (DFT-s-OFDM, 1 RB, 100 MHz, 640AM, 120 KHz) 5G NR FR2 TDD 6.61 ±9.6 10874 AAE 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 640AM, 120 KHz) 5G NR FR2 TDD 6.65 ±9.6 10875 AAE 5G NR (DF-OFDM, 18B, 100 MHz, 029K, 120 KHz) 5G NR FR2 TDD 8.39 ±9.6 10876 AAE 5G NR (CP-OFDM, 17B, 100 MHz, 029K, 120 KHz) 5G NR FR2 TDD 8.39 ±9.6 10877 AAE 5G NR (CP-OFDM, 100% RB, 100 MHz, 160AM, 120 KHz) 5G NR FR2 TDD 8.12 ±9.6 10878 AAE 5G NR (CP-OFDM, 100% RB, 100 MHz, 160AM, 120 KHz) 5G NR FR2 TDD 8.12 ±9.6 10879 AAE 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 640AM, 120 KHz) 5G NR FR2 TDD 8.12 ±9.6 10880 AAE 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 640AM, 120 KHz) 5G NR FR2 TDD 5.75 ±9.6 10881 AAE 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 026K, 120 KHz) 5G NR FR2 TDD 5.56 ±9.6 10884 AAE 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 102 AHz) 5G NR FR2 TDD 5.66 ±9.6						
10874 AAE 5G NR (DFT-9-OFDM, 10%, RB, 100 MHz, 64QAM, 120 KHz) 5G NR FR2 TDD 6.65 ±9.6 10875 AAE 5G NR (CP-OFDM, 10%, RB, 100 MHz, QPSK, 120 KHz) 5G NR FR2 TDD 5.39 ±9.6 10876 AAE 5G NR (CP-OFDM, 10%, RB, 100 MHz, QPSK, 120 KHz) 5G NR FR2 TDD 7.78 ±9.6 10877 AAE 5G NR (CP-OFDM, 10%, RB, 100 MHz, 16QAM, 120 KHz) 5G NR FR2 TDD 8.41 ±9.6 10877 AAE 5G NR (CP-OFDM, 10%, RB, 100 MHz, 16QAM, 120 KHz) 5G NR FR2 TDD 8.41 ±9.6 10878 AAE 5G NR (CP-OFDM, 100%, RB, 50 MHz, 40QAM, 120 KHz) 5G NR FR2 TDD 8.38 ±9.6 10880 AAE 5G NR (DFT-S-OFDM, 1 RB, 50 MHz, QPSK, 120 KHz) 5G NR FR2 TDD 5.76 ±9.6 10881 AAE 5G NR (DFT-S-OFDM, 10%, RB, 50 MHz, QPSK, 120 KHz) 5G NR FR2 TDD 6.57 ±9.6 10884 AAE 5G NR (DFT-S-OFDM, 10%, RB, 50 MHz, 100 AHz, 100 AHz) 5G NR FR2 TDD 6.51 ±9.6 10884 AAE 5G NR (DFT-S-OFDM, 100%, RB, 50 MHz, 100 AHz, 100 AHz) 5G NR FR2 TDD 6.51 ±9.6<	10873	AAE			-	
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10880 AAE 5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz) 5G NR FR2 TDD 8.38 19.6 10881 AAE 5G NR (DFTs-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz) 5G NR FR2 TDD 5.75 19.6 10882 AAE 5G NR (DFTs-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz) 5G NR FR2 TDD 5.75 19.6 10883 AAE 5G NR (DFTs-OFDM, 1 RB, 50 MHz, 120 kHz) 5G NR FR2 TDD 6.57 19.6 10884 AAE 5G NR (DFTs-OFDM, 1 RB, 50 MHz, 120 kHz) 5G NR FR2 TDD 6.61 19.6 10885 AAE 5G NR (DFTs-OFDM, 100% RB, 50 MHz, 40AM, 120 kHz) 5G NR FR2 TDD 6.61 19.6 10886 AAE 5G NR (DFT-S-OFDM, 100% RB, 50 MHz, 40AM, 120 kHz) 5G NR FR2 TDD 6.65 19.6 10886 AAE 5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz) 5G NR FR2 TDD 8.35 19.6 10888 AAE 5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz) 5G NR FR2 TDD 8.32 19.6 10889 AAE 5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz) 5G NR FR2 TDD 8.40 19.6 <td< td=""><td></td><td></td><td></td><td></td><td></td><td>±9.6</td></td<>						±9.6
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10890 AAE 5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz) 5G NR FR2 TDD 8.40 ±9.6 10891 AAE 5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz) 5G NR FR2 TDD 8.13 ±9.6 10892 AAE 5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz) 5G NR FR2 TDD 8.41 ±9.6 10892 AAE 5G NR (DFT-o-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz) 5G NR FR2 TDD 8.41 ±9.6 10897 AAE 5G NR (DFT-o-OFDM, 1 RB, 5MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.66 ±9.6 10898 AAC 5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.67 ±9.6 10899 AAB 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.67 ±9.6 10900 AAC 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 10900 AAC 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 10900 AAC 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 109	10889	AAE				
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10898 AAC 5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.67 ±9.6 10899 AAB 5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.67 ±9.6 10899 AAB 5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.67 ±9.6 10900 AAC 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 10901 AAB 5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 10902 AAC 5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 10902 AAC 5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 10903 AAD 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 10904 AAC 5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 10905 AAD 5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.68 ±9.6 109				5G NR FR2 TDD	8.41	±9.6
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	-	AAC				
10910 AAC 5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz) 5G NR FR1 TDD 5.83 ±9.6					5.96	±9.6
	10910	AAC	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6

	-			PAR (dB)	$Unc^{E}k=2$
	Rev	Communication System Name 5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	Group 5G NR FR1 TDD	5.93	±9.6
10911	AAB		5G NR FR1 TDD	5.84	±9.6
10912	AAC	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10913	AAD	5G NR (DFT-S-OFDM, 50% RB, 50MHz, QPSK, 30KHz)	5G NR FR1 TDD	5.85	±0.0
10914	AAC	5G NR (DFT-s-OFDM, 50% RB, 60MHz, QPSK, 30KHz)	5G NR FR1 TDD	5.83	±9.6
	AAD	5G NR (DFT-s-OFDM, 50% RB, 80MHz, QPSK, 30KHz)	5G NR FR1 TDD	5.87	±9.6
10916		5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
	AAD AAE	5G NR (DFT-s-OFDM, 30% RB, 5MHz, QPSK, 30KHz)	5G NR FR1 TDD	5.86	±9.6
10918		5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10919	AAC AAB	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±9.6
10920	AAB	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10921	AAB	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.82	±9.6
10922	AAB	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10923	AAD	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5,84	±9.6
10924	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	±9.6
		5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10926	AAD	5G NR (DFT-S-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
10927	AAD	5G NR (DFT-S-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
	AAD	5G NR (DFT-S-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10929	AAD	5G NR (DFT-S-OFDM, 1 RB, 15 MHz, QPSK, 15 KHz)	5G NR FR1 FDD	5.52	±9.6
10930		5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10931	AAC AAC	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 KHz)	5G NR FR1 FDD	5.51	±9.0 ±9.6
			5G NR FR1 FDD	5.51	±9.6
10933	AAC AAC	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz) 5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10934	AAC	5G NR (DFT-S-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10935	AAD	5G NR (DFT-s-OFDM, 50% RB, 5MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.90	±9.6
10936	AAD	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.77	±9.6
10937	AAC	5G NR (DFT-s-OFDM, 50% RB, 15MHz, QPSK, 15KHz)	5G NR FR1 FDD	5.90	±9.6
10939	AAC	5G NR (DFT-s-OFDM, 50% RB, 20MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.82	±9.6
10939	AAC	5G NR (DFT-s-OFDM, 50% RB, 25MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.89	±9.6
10940	AAC	5G NR (DFT-s-OFDM, 50% RB, 30MHz, QPSK, 15KHz)	5G NR FR1 FDD	5.83	±9.6
10942	AAC	5G NR (DFT-s-OFDM, 50% RB, 40MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.85	±9.6
10942	AAD	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	±9.6
10943	AAD	5G NR (DFT-s-OFDM, 100% RB, 5MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.81	±9.6
10945	AAD	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15MHz, QPSK, 15kHz)	5G NR FR1 FDD	5.83	±9.6
10947	AAC	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9,6
10948	AAC	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10949	AAC	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10950	AAC	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10951	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.92	±9.6
10952	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.25	±9.6
10953	AAA	5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15kHz)	5G NR FR1 FDD	8.15	±9.6
10954	AAA	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 15kHz)	5G NR FR1 FDD	8.23	±9.6
10955	AAA	5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 15kHz)	5G NR FR1 FDD	8.42	±9.6
10956	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.14	±9.6
10957	AAA	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.31	±9.6
10958	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.61	±9.6
10959	AAA	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.33	±9.6
10960	AAE	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.32	±9.6
10961	AAC	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.36	±9.6
10962	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.40	±9.6
10963	AAC	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.55	±9.6
10964	AAE	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.29	±9.6
10965	AAC	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.37	±9.6
10966	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.55	±9.6
10967	AAC	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.42	±9.6
10968	AAD	5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.49	±9.6
10972	AAC	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	11.59	±9.6
10973	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	9.06	±9.6
10974	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz)	5G NR FR1 TDD	10.28	±9.6
10978	AAA		ULLA	1.16	±9.6
10979	AAA	ULLA HDR4	ULLA	8.58	±9.6
10980	AAA	ULLA HDR8	ULLA	10.32	±9.6
10981	ÄÄÄ	ULLA HDRp4	ULLA	3.19	±9.6
10982	AAA	ULLA HDRp8	ULLA	3.43	±9.6
		<u></u>			

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E $k = 2$
10983	AAC	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.31	±9.6
10984	AAB	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.42	±9.6
10985	AAC	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.54	±9.6
10986	AAB	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.50	±9.6
10987	AAC	5G NR DL (CP-OFDM, TM 3.1, 60 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.53	±9.6
10988	AAB	5G NR DL (CP-OFDM, TM 3.1, 70 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.38	±9.6
10989	AAC	5G NR DL (CP-OFDM, TM 3.1, 80 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.33	±9.6
10990	AAB	5G NR DL (CP-OFDM, TM 3.1, 90 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.52	±9.6
11003	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	10.24	±9.6
11004	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	10.73	±9.6
11005	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.70	±9.6
11006	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.55	±9.6
11007	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.46	±9.6
11008	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.51	±9.6
11009	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.76	±9.6
11010	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.95	±9.6
11011	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.96	±9.6
11012	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.68	±9.6
11013	AAB	IEEE 802.11be (320 MHz, MCS1, 99pc duty cycle)	WLAN	8.47	±9.6
11014	AAB	IEEE 802.11be (320 MHz, MCS2, 99pc duty cycle)	WLAN	8.45	±9.6
11015	AAB	IEEE 802.11be (320 MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6
11016	AAB	IEEE 802.11be (320 MHz, MCS4, 99pc duty cycle)	WLAN	8.44	±9.6
11017	AAB	IEEE 802.11be (320 MHz, MCS5, 99pc duty cycle)	WLAN	8.41	±9.6
11018	AAB	IEEE 802.11be (320 MHz, MCS6, 99pc duty cycle)	WLAN	8.40	±9.6
11019	AAB	IEEE 802.11be (320 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
11020	AAB	IEEE 802.11be (320 MHz, MCS8, 99pc duty cycle)	WLAN	8.27	±9.6
11021	AAB	IEEE 802.11be (320 MHz, MCS9, 99pc duty cycle)	WLAN	8.46	±9.6
11022	AAB	IEEE 802.11be (320 MHz, MCS10, 99pc duty cycle)	WLAN	8.36	±9.6
11023	AAB	IEEE 802.11be (320 MHz, MCS11, 99pc duty cycle)	WLAN	8.09	±9.6
11024	AAB	IEEE 802.11be (320 MHz, MCS12, 99pc duty cycle)	WLAN	8.42	±9.6
11025	AAB	IEEE 802.11be (320 MHz, MCS13, 99pc duty cycle)	WLAN	8.37	±9.6
11026	AAB	IEEE 802.11be (320 MHz, MCS0, 99pc duty cycle)	WLAN	8.39	±9.6

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Calibration Laboratory of Schmid & Partner **Engineering AG** Zeughausstrasse 43, 8004 Zurlch, Switzerland



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Swiss Calibration Service

Accreditation No.: SCS 0108

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Cllent

Element

Morgan Hill, USA

Certificate No.

EUmm-9487_Apr24

CALIBRATION CERTIFICATE

Object	EUmmWV4 - SN:94 87	4/25/24
Calibration procedure(s)	QA CAL-02.v9, QA CAL-25.v8, QA CAL-42.v3 Calibration procedure for E-field probes optimized for close evaluations in air	•
Callbration date	April 08, 2024	
	nents the traceability to national standards, which realize the physical units of mea ertaintles with confidence probability are given on the following pages and are par	

All calibrations have been conducted in the closed laboratory facility: environment temperature (22±3) °C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID —	Cal Date (Certificate No.)	Scheduled Calibration
Power sensor NRP110T	SN: 101244	12-Apr-23 (No. 0001A300692178)	Apr-24
Spectrum analyzer FSV40	SN: 101832	25-Jan-24 (No. 4030-315007551)	Jan-25
Ref. Probe EUmmWV3	SN: 9374	04-Dec-23 (No. EUmm-9374_Dec23)	Dec-24
DAE4ip	SN: 1662	08-Nov-23 (No. DAE4lp-1662_Nov23)	Nov-24

Secondary Standards	ID	Check Date (In house)	Scheduled Check
Generator APSIN28G	SN: 669	28-Mar-17 (In house check May-23)	In house check: May-24
Generator Agilent E8251A	SN: US41140111	28-Mar-17 (in house check May-23)	In house check: May-24

	Name	Function	Signature
Callbrated by	Joanna Lleshaj	Laboratory Technician	Applied
Approved by	Sven Kühn	Technical Manager	S. L
This calibration certificate shall	not be reproduced except in full wit	nout written approval of the lab	Issued: April 10, 2024

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Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Swiss Calibration Service

Accreditation No.: SCS 0108

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Glossary

space
on point
ty_cycle) of the RF signal
ndent linearization parameters
l probe axis
an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is axis
in DASY system to align probe sensor X to the robot coordinate system
from the probe axis, used to calculate the field orientation and polarization
agation direction
o t l l f

Calibration is Performed According to the Following Standards:

a) IEEE Std 1309-2005, "IEEE Standard for calibration of electromagnetic field sensors and probes, excluding antennas, from 9 kHz to 40 GHz", December 2005

Methods Applied and Interpretation of Parameters:

- NORMx, y: Assessed for E-field polarization $\vartheta = 0$ ($f \le 900$ MHz in TEM-cell; f > 1800 MHz: R22 waveguide). For frequencies > 6 GHz, the far field in front of waveguide horn antennas is measured for a set of frequencies in various waveguide bands up to 110 GHz.
- DCPx,y: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal. DCP does not depend on frequency nor media.

Note: As the field is measured with a diode detector sensor, it is warrantied that the probe response is linear (E^2) below the documented lowest calibrated value.

- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- The frequency sensor model parameters are determined prior to calibration based on a frequency sweep (sensor model involving resistors R, R_p, inductance L and capacitors C, C_p).
- Ax,y; Bx,y; Cx,y; Dx,y; VRx,y: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- · Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).
- · Equivalent Sensor Angle: The two probe sensors are mounted in the same plane at different angles. The angles are assessed using the information gained by determining the NORMx (no uncertainty required).
- Spherical isotropy (3D deviation from isotropy): In a locally homogeneous field realized using an open waveguide / horn setup.

Parameters of Probe: EUmmWV4 - SN:9487

Basic Calibration Parameters

	Sensor X	Sensor Y	Unc (<i>k</i> = 2)
Norm (µV/(V/m) ²)	0.01865	0.02608	±10.1%
DCP (mV) B	105.0	105.0	±4.7%
Equivalent Sensor Angle	-59.1	36.6	

Calibration Results for Frequency Response (750 MHz – 110 GHz)

Frequency GHz	Target E-Fleid V/m	Deviation Sensor X dB	Deviation Sensor Y dB	Unc (<i>k</i> = 2) dB
0.75	77.2		-0.21	±0.43
1.8	140.4	0.01	-0.03	±0.43
2.0	133.0	0.12	0.16	±0.43
2.2	124.8	-0.08	-0.06	±0.43
2.5	123.0	0.09	0.11	±0.43
3.5	256.2	-0.14	-0.18	±0.43
3.7	249.8	-0.01	-0.07	±0.43
6.6	74.7	-0.04	-0.26	±0.98
8.0	67.2	-0.01	-0.11	±0.98
10.0	66.2	-0.01	0.02	±0.98
15.0	51.2	0.12	0.17	±0.98
26.6	112.6	0.20	0.18	±0.98
30.0	121.9	0.02	0.01	±0.98
35.0	121.3	-0.14	-0.14	±0.98
40.0	102.3	-0.25	-0.25	±0.98
50.0	61.5	-0.03	-0.07	±0.98
55.0	75.9	0.01	-0.05	±0.98
60.0	80.5	0.01	0.03	±0.98
65.0	77.1	0.10	0.14	±0.98
70.0	74.3	0.12	0.11	±0.98
75.0	74.8	0.01	-0.06	±0.98
75.0	96.6	0.00	-0.05	±0.98
80.0	95.4	-0.12	-0.12	±0.98
85.0	58.0	-0.10	-0.08	±0.98
90.0	84.0	-0.00	0.01	±0.98
92.0	83.9	0.03	0.02	±0.98
95.0	76.2	0.03	-0.01	±0.98
97.0	69.1	0.07	0.00	±0.98
100.0	66.9	0.13	0.11	±0.98
105.0	67.2	-0.21	-0.13	±0.98
110.0	78.1	0.05	0.01	±0.98

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

^B Linearization parameter uncertainty for maximum specified field strength.

Parameters of Probe: EUmmWV4 - SN:9487

Calibration Results for Modulation Response

UID	Communication System Name		Α	B	С	D	VR	Max	Max
			dB	dBõV		dB	mV	dev.	Unc ^E
									k = 2
0	CW	X	0.00	0.00	1.00	0.00	121.6	±2.7%	±4.7%
		Ý	0.00	0.00	1.00		80.2		
10352	Pulse Waveform (200Hz, 10%)	X	1.32	60.00	14.15	10.00	6.0	±1.3%	±9.6%
		Y	1.56	60.00	14.48		6.0]	
10353	Pulse Waveform (200Hz, 20%)	X	0.90	60.00	13.14	6.99	12.0	±1.2%	±9.6%
		Y	1.06	60.00	13.49		12.0	1	
10354	Pulse Waveform (200Hz, 40%)	X	0.54	60.00	12.07	3.98	23.0	±1.3%	±9.6%
		Y	0.66	60.00	12.31	ĺ	23.0	1	
10355	Pulse Waveform (200Hz, 60%)	X	0.34	60.00	11.48	2.22	27.0	±0.9%	±9.6%
		Y	0.50	60.00	11.18	1	27.0	1	
10387	QPSK Waveform, 1 MHz	X	0.89	60.00	11.58	1.00	22.0	±1.7%	±9.6%
		Y	1.10	60.00	11.07		22.0	1	
10388	QPSK Waveform, 10 MHz	X	1.20	60.00	11.99	0.00	22.0	±0.7%	±9.6%
		T	1.44	60.00	11.41	1	22.0	1	
10396	64-QAM Waveform, 100 kHz	X	1.94	61.62	14.64	3.01	17.0	±0.7%	±9.6%
		Y	1.91	60.00	13.48		17.0	1	
10399	64-QAM Waveform, 40 MHz	X	2.04	60.00	12.45	0.00	19.0	±0.9%	±9.6%
	, , , , , , , , , , , , , , , , , , , ,	Ý	2.26	60.00	12.09	1	19.0	1	
10414	WLAN CCDF, 64-QAM, 40 MHz	X	3.02	60.00	12.87	0.00	12.0	±0.9%	±9.6%
			3.35	60.00	12.52		12.0	1	

Note: For details on UID parameters see Appendix

E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Parameters of Probe: EUmmWV4 - SN:9487

Target E-Field **Deviation Sensor Y** Unc (k=2)Frequency **Deviation Sensor X** dB GHz V/m dB dB 50.0 0.06 -0.04 ±0.2 0.9 0.9 ±0.2 100.0 -0.01 -0.03 0.03 ±0.2 0.9 500.0 0.04 0.9 1000.0 0.06 0.05 ±0.2 0.03 ±0.2 0.9 1500.0 0.05 0.00 ±0.2 0.9 2100.0 0.00

Calibration Results for Linearity Response

Sensor Frequency Model Parameters (750 MHz - 55 GHz)

	Sensor X	Sensor Y
R (Ω)	69.29	67.20
R _p (Ω)	99.29	92.47
L (nH)	0.06722	0.06235
C (pF)	0.2389	0.2979
Cp (pF)	0.0805	0.0932

Sensor Frequency Model Parameters (55 GHz – 110 GHz)

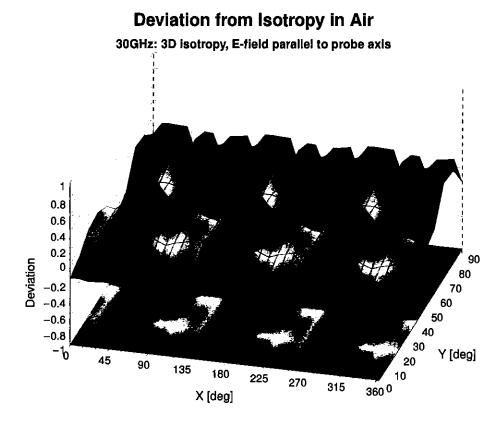
	Sensor X	Sensor Y
R (Ω)	44.96	45.23
R _p (Ω)	197.48	206.10
L (nH)	0.09565	0.10398
C (pF)	0.0473	0.0449
Cp (pF)	0.0534	0.0501

Sensor Model Parameters

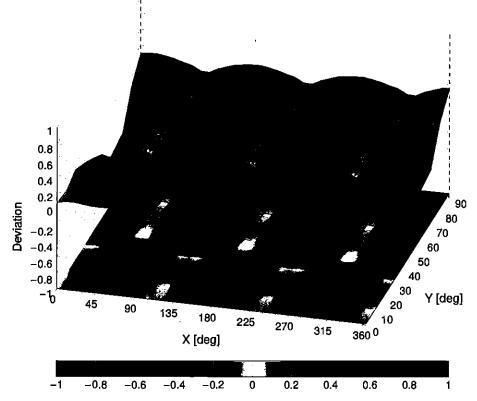
	C1 fF	C2 fF	α V ⁻¹	T1 msV ⁻²	T2 msV ⁻¹	T3 ms	T4 V ⁻²	T5 V ⁻¹	T6
X	27.4	199.34	33.78	0.92	2.25	4.99	0.00	0.68	1.01
У	28.6	207.90	33.76	2.66	2.55	5.01	0.00	0.87	1.01

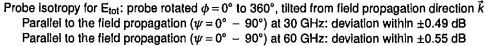
Other Probe Parameters

Sensor Arrangement	Rectangular
Connector Angle	-1 11.4 °
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	320 mm
Probe Body Diameter	8 mm
Tip Length	23 mm
Tip Diameter	8.0 mm
Probe Tip to Sensor X Calibration Point	1.5 mm
Probe Tip to Sensor Y Calibration Point	1.5 mm



60GHz: 3D isotropy, E-field parallel to probe axis





Appendix: Modulation Calibration Parameters

	Dave	Communication Sustan Name	Group	PAR (dB)	$Unc^E k = 2$
UID	Rev	Communication System Name	CW	0.00	±4,7
	CAR	CW	Test	10.00	±9.6
10010	CAB		WCDMA	2.91	
10011	CAC	UMTS-FDD (WCDMÅ)	WLAN	1.87	±9.6
10012	CAB	IEEE 802.110 WIFI 2.4 GHz (DSSS, TMOps)	WLAN	9.46	
10013	CAB		GSM	9.39	±9.6
10021	DAC	GSM-FDD (TDMA, GMSK)		9.57	±9.6
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	6.56	±9.6
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	12.62	±9.6
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM		±9.6
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	±9.6
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM		
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	±9.6
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	±9.6
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	±9.6
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	±9.6
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	±9.6
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	±9.6
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	±9.6
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	±9.6
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	±9.6
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	±9.6
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	±9.6
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.6
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halirate)	AMPS	7.78	±9.6
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	±9.6
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	±9.6
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	±9.6
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	±9.6
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	±9.6
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	±9.6
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	±9.6
10061	CAB	IEEE 802.11b WIFI 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	±9.6
10062	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	±9.6
10063	CAE	IEEE 802.11a/h WIFI 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	±9.6
10064	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6
10065	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	±9.6
10066	CAE	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	±9.6
10067	CAE	IEEE 802.11a/h WIFI 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	±9.6
10068	CAE	IEEE 802.11a/h WIFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	±9.6
10069	CAE	IEEE 802.11a/h WiFI 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	±9.6
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	±9.6
10072	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	±9.6
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps) ,	WLAN	9.94	±9.6
10074	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	±9.6
10075	CAB	IEEE 802.11g WiFI 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	±9.6
10076	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	±9.6
10077	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	±9.6
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	±9.6
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	±9.6
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	±9.6
10097	CAC	UMTS-FDD (HSDPA)	WCDMA	3.98	±9.6
10098	CAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	±9.6
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	±9.6
10100	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	±9.6
10101	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10102	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10103	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	±9.6
10104	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TOD	9.97	±9.6
10105	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	±9.6
10108	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	±9.6
10109	CAH		LTE-FDD	6.43	±9.6
10110	CAH		LTE-FDD	5.75	±9.6
10111	CAH		LTE-FDD	6.44	±9.6
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UID	Rev	Communication System Name	Group	PAR (dB)	$Unc^{E} k = 2$
10112	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	±9.6
10113	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)		6.62	±9.6
10114	CAE	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	±9.6
10115	CAE	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	±9.6
10116	CAE	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	±9.6
10117	CAE	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	<u>±9.6</u>
10118	CAE	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	±9.6
10119	CAE	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	±9.6
10140	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10141	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	±9.6
10142	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)		5.73	±9.6
10143	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	±9.6
10144	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	±9.6
10145	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	±9.6
10146	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	±9.6
10147	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	±9.6
10149	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10150	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)		6.60	±9.6
10151	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	±9.6
10152	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	±9.6
10153	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)		10.05	±9.6
10154	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	±9.6
10155	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10156	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	±9.6
10157	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10158	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10159	CAH	LTE-FDD (SC-FDMA, 50% RB, 5MHz, 64-QAM)	LTE-FDD	6.56	±9.6
10160	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	±9.6
10161	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)		6.43	±9.6
10162	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	<u>±9.6</u>
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	±9.6
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	±9.6
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	±9.6
10169	CAF	LTE-FDD (SC-FDMA, 1 RB, 20MHz, QPSK)	LTE-FDD	5.73	±9.6
10170	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)		6.52	±9.6
10171	AAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	±9.6
10172	CAH	LTE-TDD (SC-FDMA, 1 RB, 20MHz, QPSK)	LTE-TDD	9.21	±9.6
10173	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10174	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25 5.72	±9.6 ±9.6
10175 10176	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
	CAH CAJ			5.73	±9.6 ±9.6
10177		LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK) LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD LTE-FDD	6.52	±9.6
10178	CAH				
10179 10180		LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 1 RB, 5MHz, 64-QAM)	LTE-FDD LTE-FDD	6.50 6.50	±9.6 ±9.6
10180	CAH CAF	LTE-FDD (SC-FDMA, 1 RB, 15MHz, QPSK)	LTE-FDD	5.72	±9.6
10181		LTE-FDD (SC-FDMA, 1 RB, 15MHz, GPSK)		6.52	±9.6
10182	AAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10183	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6
10184	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	±9.6
10185	AAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10186		LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	±9.6
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10189	AAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	±9.6
10193	CAE	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.03	±9.6
10194	CAE	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	
10195	CAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	±9.6
10190	CAE	IEEE 802.11n (HT Mixed, 99 Mbps, 16-QAM)	WLAN	8.13	±9.6
10198	CAE	IEEE 802.11n (HT Mixed, 55 Mbps, 64-QAM)	WLAN	8.27	<u>±9.6</u>
10193	CAE	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	±9.6
10210	CAE	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	±9.6
10220	CAE	IEEE 802.11n (HT Mixed, 73.2 Mbps, 64-QAM)	WLAN	8.27	±9.6
10222	CAE	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	±9.6
10222	CAE	IEEE 802.11n (HT Mixed, 90 Mbps, 16 QAM)	WLAN	8.48	±9.6
10223	CAE	IEEE 802.11n (HT Mixed, 350 Mbps, 64-QAM)	WLAN	8.08	±9.6
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UID	Rev	Communication System Name	Group	PAR (dB)	
10225	CAC	UMTS-FDD (HSPA+)	WCDMA	5.97	±9.6
10226	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	±9.6
10227	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	±9.6
10228	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	±9.6
10229	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10230	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10231	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	±9.6
10232	CAH	LTE-TDD (SC-FDMA, 1 RB, 5MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10233	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	<u>±9.6</u>
10234	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	±9.6
10235	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10236	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10237	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	±9.6
10238	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10239	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10240	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9,21	±9.6
10241	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	±9.6
10242	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	±9.6
10243	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TOD	9.46	±9.6
10243	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	±9.6
	-	•	LTE-TDD	10.06	±9.0 ±9.6
10245	CAE		LTE-TDD	9.30	<u>±9.6</u>
10246	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	_		
10247	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	±9.6
10248	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	<u>±9.6</u>
10249	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	±9.6
10250	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	±9.6
10251	CAH		LTE-TDD	10.17	±9.6
10252	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	±9.6
10253	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	±9.6
10254	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	±9.6
10255	ĊĂG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	±9.6
10256	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	±9.6
10257	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	±9.6
10258	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	±9.6
10259	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	±9.6
10260	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	±9.6
10261	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	±9.6
10262	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	±9.6
10263	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	 ±9.6
10264	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	±9.6
10265	CAH	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	±9.6
10266	CAH		LTE-TDD	10.07	±9.6
10267	CAH	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	±9.6
10268	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	±9.6
10269	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	±9.6
10269	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 04-CAM)		9.58	±9.6
10270	CAG	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	±9.6
			WCDMA	3.96	±9.6
10275	CAC	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)			
	CAA		PHS	11.81	±9.6
10278	CAA	PHS (QPSK, BW 884 MHz, Rolloff 0.5)	PHS	11.81	±9.6
10279		PHS (QPSK, BW 884 MHz, Rolloff 0.38)	PHS	12.18	±9.6
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	±9.6
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	±9.6
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	±9.6
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	±9.6
10295	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	±9.6
10297	AAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	±9.6
10298	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	±9.6
10299	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	±9.6
10300	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	<u>±9.6</u>
10001	AAA	IEEE 802.16e WIMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC)	WIMAX	12.03	±9.6
10301		IEEE 802.16e WIMAX (29:18, 5 ms, 10 MHz, QPSK, PUSC, 3 CTRL symbols)	WIMAX	12.57	±9.6
10301	AAA				
	AAA	IEEE 802.16e WIMAX (31:15, 5 ms, 10 MHz, 64QAM, PUSC)	WiMAX	12.52	±9.6
10302		IEEE 802.16e WIMAX (31:15, 5 ms, 10 MHz, 64QAM, PUSC) IEEE 802.16e WIMAX (29:18, 5 ms, 10 MHz, 64QAM, PUSC)	WIMAX	12.52 11.86	±9.6 ±9.6
10302 10303	AAA				

10307 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, QPSK, PUSC, 18 symbols) W 10308 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 16QAM, PUSC) W 10309 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 16QAM, AMC 2x3, 18 symbols) W 10310 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 16QAM, AMC 2x3, 18 symbols) W 10310 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, QPSK, AMC 2x3, 18 symbols) W 10311 AAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LT 10313 AAA IDEN 1:3 ID	/imax /imax /imax /imax /imax	PAR (dB) 14.49 14.46 14.58	Unc ^E $k = 2$ ± 9.6 ± 9.6
10308 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 16QAM, PUSC) W 10309 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 16QAM, AMC 2x3, 18 symbols) W 10310 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 16QAM, AMC 2x3, 18 symbols) W 10311 AAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LT 10313 AAA IDEN 1:3 ID	/imax/imax	14.46 14.58	±9.6
10309 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, 16QAM, AMC 2x3, 18 symbols) W 10310 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, QPSK, AMC 2x3, 18 symbols) W 10311 AAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LT 10313 AAA IDEN 1:3 ID	/IMAX	14.58	
10310 AAA IEEE 802.16e WiMAX (29:18, 10 ms, 10 MHz, QPSK, AMC 2x3, 18 symbols) W 10311 AAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LT 10313 AAA IDEN 1:3 ID	/iMAX		1 1910
10311 AAE LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LT 10313 AAA IDEN 1:3 ID		14.57	±9.6
10313 AAA IDEN 1:3	TE-FDD	6.06	±9.6
		10.51	±9.6
	DEN	13.48	±9.6
	/LAN	1.71	±9.6
	/LAN	8.36	±9.6
	/LAN	8.36	±9.6
	ieneric	10.00	±9.6
	ieneric	6.99	±9.6
	ieneric	3.98	±9.6
	ieneric	2.22	±9.6
	ieneric	0.97	±9.6
	ieneric	5,10	±9.6
	ieneric	5.22	±9.6
	ieneric	6.27	±9.6
	ieneric	6.27	±9.6
	VLAN	8.37	±9.6
	/LAN	8.60	±9.6
	VLAN VLAN	8.53	±9.6
	DMA2000	3.76	±9.6
	DMA2000	3.76	±9.6
	DMA2000	5.22	±9.6
	TE-TDD	7.82	±9.6
	ieneric	8.54	±9.6
	LAN	1.54	±9.6
	VLAN	8.23	±9.6
to the cost in grant and the cost of the c		8.23	±9.6
	VLAN	8.14	±9.6
	VLAN	8.19	±9.6
	VLAN	8.32	±9.6
	VLAN	8.47	±9.6
	VLAN	8.40	±9.6
	VLAN	8.41	±9.6
	VLAN	8.45	±9.6
	VLAN	8.41	±9.6
	TE-FDD	8.28	±9.6
	TE-FDD	8.38	±9.6
	TE-FDD	8.34	±9.6
	TE-FDD	8.34	±9.6
	CDMA	8.60	±9.6
	TE-TDD	7.82	±9.6
	TE-FDD	7.56	±9.6
	TE-FDD	7.53	±9.6
	TE-FDD	7.51	±9.6
	TE-FDD	7.48	±9.6
	VCDMA	7.59	±9.6
	est	10.00	±9.6
	VLAN	8.63	±9.6
	CDMA	6.62	±9.6
	DMA2000	6.55	±9.6
	DMA2000	8.25	±9.6
	CDMA	2.39	±9.6
	TE-TOD	7.82	±9.6
	TE-TDD	8.30	±9.6
	TE-TDD	8.56	±9.6
	TE-TDD	7.82	±9.6
	TE-TDD	8.32	±9.8
	TE-TDD	8.57	±9.6
10407 AAO LITE TOD (SO EDMA 1 DD SALLY ODOK UL Outling 0.0.4.7.9.0)	TE-TDD	7.82	±9.6
10467 AAG LTE-TDD (SC-FDMA, 1 RB, 5MHz, QPSK, UL Subframe=2,3,4,7,8,9)	TC TO 2	8.32	±9.6
	TE-TDD		·
10468 AAG LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) LT 10469 AAG LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) LT	TE-TDD TE-TDD	8.56	±9.6
10468 AAG LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) LT 10469 AAG LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9) LT			

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UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E $k = 2$
10472	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)		8.57	
10473	AAF	LTE-TDD (SC-FDMA, 1 RB, 15MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10474	AAF AAF	LTE-TDD (SC-FDMA, 1 RB, 15MHz, 16-QAM, UL Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 15MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6
10475	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)		8.32	±9.6
10477	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)		8.57	±9.6
10478	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	±9.6
10481	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±9.6
10482	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.71	±9.6
10483	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	±9.6
10484	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	±9.6
10485	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	±9.6
10486	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TOD	8.38	±9.6
10487	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	±9.6
10488	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	±9.6
10489	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±9.6
10490	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10492	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.41	±9.6
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	±9.6
10494	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10495	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.37	±9.6
10496	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10497	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±9.6
10498	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.40	±9.6
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.68	±9.6
10500	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±9.6
10501	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.44	±9.6
10502	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	±9.6
10503	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	±9.6
10504	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±9.6
10505	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6
10506	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6
10507	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.36	±9.6
10508	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TOD	8.55	±9.6 ±9.6
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.49	±9.6
10510	AAF AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 10 QAM, 0L Subiranie=2,3,4,7,8,9)	LTE-TDD	8.51	±9.6
10512	AAC	LTE-TDD (SC-FDMA, 100% RB, 19MHz, 04-QAM, 0L Subframe=2,3,4,7,8,9)		7.74	±9.6
10512	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)		8.42	±9.6
10514	AAG		LTE-TDD	8.45	±9.6
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	±9.6
10516	AAA	IEEE 802.11b WiFI 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.57	±9.6
10517	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.58	±9.6
10518	AAD	IEEE 802.11a/h WIFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.23	±9.6
10519	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.39	±9.6
10520	AAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.12	±9.6
10521	AAD	IEEE 802.11a/h WiFI 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	7.97	±9.6
10522	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.45	±9.6
10523	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.08	±9.6
10524	AAD	IEEE 802.11a/n WIFI 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.27	±9.6
10525	AAD	IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle)	WLAN	8.36	±9.6
10526	AAD	IEEE 802.11ac WiFI (20 MHz, MCS1, 99pc duty cycle)	WLAN	8.42	±9.6
10527	AAD	IEEE 802.11ac WiFI (20 MHz, MCS2, 99pc duty cycle)	WLAN	8.21	±9.6
10528	AAD	IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle)	WLAN	8.36	±9.6
10529	AAD	IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.36	±9.6
10531	AAD	IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle)	WLAN	8.43	±9.6
10532	AAD	IEEE 802.11ac WiFI (20 MHz, MCS7, 99pc duty cycle)	WLAN	8,29	±9.6
10533	AAD	IEEE 802.11ac WiFi (20 MHz, MCS8, 99pc duty cycle)	WLAN	8.38	±9.6
10534	AAD	IEEE 802.11ac WiFi (40 MHz, MCS0, 99pc duty cycle)	WLAN	8.45	±9.6
10535	AAD	IEEE 802.11ac WiFi (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.45	±9.6
10536	AAD	IEEE 802.11ac WiFI (40 MHz, MCS2, 99pc duty cycle)	WLAN WLAN	8.32	±9.6 ±9.6
10537	AAD AAD	IEEE 802.11ac WIFI (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.54	±9.6
10538	AAD	IEEE 802.11ac WiFI (40 MHz, MCS4, 99pc duty cycle)	WLAN	8.39	±9.6
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UID	Rev	Communication System Name	Group	PAR (dB) 8.46	±9.6
10541	AAD	IEEE 802.11ac WiFi (40 MHz, MCS7, 99pc duty cycle)	WLAN WLAN	8.65	±9.6
10542	AAD	IEEE 802.11ac WiFi (40 MHz, MCS8, 99pc duty cycle)	WLAN	8.65	±9.6
10543	AAD	IEEE 802.11ac WiFI (40 MHz, MCS9, 99pc duty cycle) IEEE 802.11ac WiFI (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.47	±9.6
10544	AAD	IEEE 802.11ac WiFI (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.55	±9.6
10545 10546	AAD AAD	IEEE 802.11ac WiFI (80 MHz, MCS1, 99pc duty cycle)	WLAN	8.35	<u>±9.6</u>
10546		IEEE 802.11ac WiFI (80 MHz, MCS2, 99pc duty cycle)	WLAN	8.49	±9.6
10547	AAD	IEEE 802.11ac WIFI (80 MHz, MCS3, 99pc duty cycle)	WLAN	8.37	±9.6
10548	AAD	IEEE 802, 11ac WiFI (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.38	
10550	AAD AAD	IEEE 802.11ac WiFi (80 MHz, MCS7, 99pc duty cycle)	WLAN	8.50	±9.6
10552	AAD	IEEE 802.11ac WiFI (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.42	±9.6
10552	AAD	IEEE 802.11ac WiFi (80 MHz, MCS9, 99pc duty cycle)	WLAN	8.45	±9.6
10555	AAE	IEEE 802.11ac WiFi (160 MHz, MCS0, 99pc duty cycle)	WLAN	8.48	±9.6
10555	AAE	IEEE 802.11ac WiFI (160 MHz, MCS1, 99pc duty cycle)	WLAN	8.47	±9.6
10556	AAE	IEEE 802.11ac WiFi (160 MHz, MCS2, 99pc duty cycle)	WLAN	8.50	±9.6
10557	AAE	IEEE 802.11ac WiFi (160 MHz, MCS3, 99pc duty cycle)	WLAN	8,52	±9.6
10558	AAE	IEEE 802.11ac WiFI (160 MHz, MCS4, 99pc duty cycle)	WLAN	8.61	±9.6
10560	AAE	IEEE 802.11ac WiFI (160 MHz, MCS6, 99pc duty cycle)	WLAN	8.73	±9.6
10561	AAE	IEEE 802.11ac WiFi (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.56	±9.6
10562	AAE	IEEE 802.11ac WiFI (160 MHz, MCS8, 99pc duty cycle)	WLAN	8.69	±9.6
10563	AAE	IEEE 802.11ac WiFi (160 MHz, MCS9, 99pc duty cycle)	WLAN	8.77	±9.6
10564		IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.25	±9.6
10565	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 12 Mbps, 00pc duty cycle)	WLAN	8.45	±9.6
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.13	±9.6
10567	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.00	±9.6
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.37	±9.6
10569	AAA	IEEE 802.11g WiFl 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.10	±9.6
10570	AAA	IEEE 802.11g WIFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.30	±9.6
10571	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6
10573	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN	1.98	±9.6
10574	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	WLAN	1.98	±9.6
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	±9.6
10576	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	±9.6
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	±9.6
10578	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	±9.6
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	±9.6
10580	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	±9.6
10581	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6
10582	AAA	IEEE 602.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	±9.6
10583	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	±9.6
10584	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	±9.6
10585	AAD	IEEE 802.11a/h WIFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	±9.6
10586	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	±9.6
10587	AAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	±9.6
10588	AAD	IEEE 802.11a/h WiFl 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	±9.6
10589	AAD	IEEE 802.11a/h WIFI 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6
10590	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	±9.6
10591	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS0, 90pc duty cycle)	WLAN	8.63	±9.6
10592	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS1, 90pc duty cycle)	WLAN	8.79	±9.6
10593	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS2, 90pc duty cycle)	WLAN	8.64	±9.6
10594	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS3, 90pc duty cycle)	WLAN	8.74	±9.6
10595	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS4, 90pc duty cycle)	WLAN	8.74	±9.6
10596	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS5, 90pc duty cycle)	WLAN	8.71	±9.6
10597	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS6, 90pc duty cycle)	WLAN	8.72	±9.6
10598	AAD	IEEE 802.11n (HT Mixed, 20 MHz, MCS7, 90pc duty cycle)	WLAN	8.50	±9.6
10599	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS0, 90pc duty cycle)	WLAN	8.79	±9.6
10600	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS1, 90pc duty cycle)	WLAN	8.88	±9.6
10601	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS2, 90pc duty cycle)	WLAN	8.82	±9.6
10602	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS3, 90pc duty cycle)	WLAN	8.94	±9.6
10603	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS4, 90pc duty cycle)	WLAN	9.03	±9.8
10604	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS5, 90pc duty cycle)	WLAN	8.76	±9.6
10605	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS6, 90pc duty cycle)	WLAN	8.97	±9.6
10606	AAD	IEEE 802.11n (HT Mixed, 40 MHz, MCS7, 90pc duty cycle)	WLAN	8.82	±9.6
10607	AAD	IEEE 802.11ac WiFi (20 MHz, MCS0, 90pc duty cycle)	WLAN	8.64	±9.6
	AAD	IEEE 802.11ac WIFi (20 MHz, MCS1, 90pc duty cycle)	WLAN	8.77	±9.6

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UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E $k = 2$
10609	AAD	IEEE 802.11ac WiFi (20 MHz, MCS2, 90pc duty cycle)	WLAN	8.57	±9.6
10610	AAD	IEEE 802.11ac WiFI (20 MHz, MCS3, 90pc duty cycle)	WLAN	8.78	±9.6
10611	AAD	IEEE 802.11ac WiFi (20 MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.6
10612	AAD	IEEE 802.11ac WiFI (20 MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10613	AAD	IEEE 802.11ac WiFI (20 MHz, MCS6, 90pc duty cycle)	WLAN	8.94	±9.6
10614	AAD	IEEE 802.11ac WIFI (20 MHz, MCS7, 90pc duty cycle)	WLAN	8.59	±9.6
10615	AAD	IEEE 802.11ac WiFI (20 MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10616	AAD	IEEE 802.11ac WiFi (40 MHz, MCS0, 90pc duty cycle)	WLAN	8.82	±9.6
10617	AAD	IEEE 802.11ac WIFI (40 MHz, MCS1, 90pc duty cycle)	WLAN	8.81	±9.6
10618	AAD	IEEE 802.11ac WiFI (40 MHz, MCS2, 90pc duty cycle)	WLAN	8.58	±9.6
10619	AAD	IEEE 802.11ac WiFi (40 MHz, MCS3, 90pc duty cycle)	WLAN	8.86	±9.6
10620	AAD	IEEE 802.11ac WiFI (40 MHz, MCS4, 90pc duty cycle)	WLAN	8.87	±9.6
10621	AAD	IEEE 802.11ac WiFI (40 MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10622	AAD	IEEE 802.11ac WiFi (40 MHz, MCS6, 90pc duty cycle)	WLAN	8.68	±9.6
10623	AAD	IEEE 802.11ac WiFi (40 MHz, MCS7, 90pc duty cycle)	WLAN	8.82	±9.6
10624	AAD	IEEE 802.11ac WiFI (40 MHz, MCS8, 90pc duty cycle)	WLAN	8.96	±9.6
10625	AAD	IEEE 802.11ac WiFi (40 MHz, MCS9, 90pc duty cycle)	WLAN	8.96	±9.6
10626	AAD	IEEE 802.11ac WiFi (80 MHz, MCS0, 90pc duty cycle)	WLAN	8.83	±9.6
10627	AAD	IEEE 802.11ac WiFi (80 MHz, MCS1, 90pc duty cycle)	WLAN	8.88	±9.6
10628	AAD	IEEE 802.11ac WiFi (80 MHz, MCS2, 90pc duty cycle)	WLAN	8.71	±9.6
10629	AAD	IEEE 802.11ac WIFI (80 MHz, MCS3, 90pc duty cycle)	WLAN	8.85	±9.6
10630	AAD	IEEE 802.11ac WiFi (80 MHz, MCS4, 90pc duty cycle)	WLAN	8.72	±9.6
10631	AAD	IEEE 802.11ac WiFI (80 MHz, MCS5, 90pc duty cycle)	WLAN	8.81	±9.6
10632	AAD	IEEE 802.11ac WIFi (80 MHz, MCS6, 90pc duty cycle)	WLAN	8.74	±9.6
10633	AAD	IEEE 802.11ac WiFi (80 MHz, MCS7, 90pc duty cycle)	WLAN	8.83	±9.6
10634	AAD	IEEE 802.11ac WiFI (80 MHz, MCS8, 90pc duty cycle)	WLAN	8.80	±9.6
10635	AAD	IEEE 802.11ac WiFI (80 MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6
10636	AAE	IEEE 802.11ac WiFi (160 MHz, MCS0, 90pc duty cycle)	WLAN	8,83	±9.6
10637	AAE	IEEE 802.11ac WIFI (160 MHz, MCS1, 90pc duty cycle)	WLAN	8.79	±9.6
10638	AAE	IEEE 802.11ac WIFI (160 MHz, MCS2, 90pc duty cycle)	WLAN	8.86	±9.6
10639	AAE	IEEE 802.11ac WiFI (160 MHz, MCS3, 90pc duty cycle)	WLAN	8.85	±9.6
10640	AAE	IEEE 802.11ac WiFI (160 MHz, MCS4, 90pc duty cycle)	WLAN	8.98	±9.6
10641	AAE	IEEE 802.11ac WiFi (160 MHz, MCS5, 90pc duty cycle)	WLAN	9.06	±9.6
10642	AAE	IEEE 802.11ac WiFI (160 MHz, MCS6, 90pc duty cycle)	WLAN	9.06	±9.6
10643	AAE	IEEE 802.11ac WIFI (160 MHz, MCS7, 90pc duty cycle)	WLAN	8.89	±9.6
10644	AAE	IEEE 802.11ac WiFi (160 MHz, MCS8, 90pc duty cycle)	WLAN	9.05	±9.6
10645	AAE	IEEE 802.11ac WIFI (160 MHz, MCS9, 90pc duty cycle)	WLAN	9.11	±9.6
10646	AAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	±9.6
10647	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	±9.6
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	±9.6
10652	AAF	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	±9.6
10653	AAF		LTE-TDD	7,42	±9.6
10654	AAE	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)		6.96	±9.6
10655	AAF	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	±9.6
10658	AAB	Pulse Waveform (200Hz, 10%)	Test	10.00	±9.6
10659	AAB	Pulse Waveform (200Hz, 20%)	Test	6.99	±9.6
10660	AAB	Pulse Waveform (200Hz, 40%)	Test	3.98	±9.6
10661	AAB	Pulse Waveform (200Hz, 60%)	Test		±9.6
10662	AAB	Pulse Waveform (200Hz, 80%)	Test	0.97	±9.6
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	±9.6
10671	AAC	IEEE 802.11ax (20 MHz, MCS0, 90pc duty cycle)	WLAN MILAN	9.09	±9.6
10672	AAC	IEEE 802.11ax (20 MHz, MCS1, 90pc duty cycle) IEEE 802.11ax (20 MHz, MCS2, 90pc duty cycle)		8.57	±9.6
10673	AAC		WLAN	8.78 8.74	±9.6
10674	AAC	IEEE 802.11ax (20 MHz, MCS3, 90pc duty cycle)			±9.6
10675	AAC	IEEE 802.11ax (20 MHz, MCS4, 90pc duty cycle)	WLAN	8.90	±9.6
10676	AAC	IEEE 802.11ax (20 MHz, MCS5, 90pc duty cycle)	WLAN MILAN	8.77	±9.6
10677	AAC	IEEE 802.11ax (20 MHz, MCS6, 90pc duty cycle)	WLAN MI AN	8.73 8.78	±9.6
10678	AAC	IEEE 802.11ax (20 MHz, MCS7, 90pc duty cycle)	WLAN		±9.6
10679	AAC	IEEE 802.11ax (20 MHz, MCS8, 90pc duty cycle)	WLAN	8.89	±9.6
10680	AAC	IEEE 802.11ax (20 MHz, MCS9, 90pc duty cycle)	WLAN	8.80	±9.6
10681	AAC	IEEE 802.11ax (20 MHz, MCS10, 90pc duty cycle)	WLAN	8.62	±9.6
10682	AAC	IEEE 802.11ax (20 MHz, MCS11, 90pc duty cycle)		8.83	±9.6
10683	AAC	IEEE 802.11ax (20 MHz, MCS0, 99pc duty cycle)	WLAN	8.42	±9.6
10684	AAC	IEEE 802.11ax (20 MHz, MCS1, 99pc duty cycle)	WLAN	8.26	±9.6
10685	AAC	IEEE 802.11ax (20 MHz, MCS2, 99pc duty cycle)	WLAN	8.33	±9.6
10686	AAC	IEEE 802.11ax (20 MHz, MCS3, 99pc duty cycle)	WLAN	8.28	±9.6

UID	Rev	Communication System Name	Group	PAR (dB)	$Unc^{E} k = 2$
10687	AAC	IEEE 802.11ax (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.45	±9.6
10688	AAC	IEEE 802.11ax (20 MHz, MCS5, 99pc duty cycle)	WLAN	8.29	±9.6
10689	AAC	IEEE 802.11ax (20 MHz, MCS6, 99pc duty cycle)	WLAN	8.55	±9.6
10690	AAC	IEEE 802.11ax (20 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
10691	AAC	IEEE 802.11ax (20 MHz, MCS8, 99pc duty cycle)	WLAN	8.25	±9.6
10692	AAC	IEEE 802.11ax (20 MHz, MCS9, 99pc duty cycle)	WLAN	8.29	±9.6
10693	AAC	IEEE 802.11ax (20 MHz, MCS10, 99pc duty cycle)	WLAN	8.25	±9.6
10694	AAC	IEEE 802.11ax (20 MHz, MCS11, 99pc duty cycle)	WLAN	8.57	±9.6
10695	AAC	IEEE 802.11ax (40 MHz, MCS0, 90pc duty cycle)	WLAN	8.78	±9.6
10696	AAC	IEEE 802.11ax (40 MHz, MCS1, 90pc duty cycle)	WLAN	8.91	±9.6
10697	AAC	IEEE 802.11ax (40 MHz, MCS2, 90pc duty cycle)	WLAN	8.61	±9.6
10698	AAC	IEEE 802.11ax (40 MHz, MCS3, 90pc duty cycle)	WLAN	8.89	±9.6
10699	AAC	IEEE 802.11ax (40 MHz, MCS4, 90pc duty cycle)	WLAN	8.82	±9.6
10700	AAC	IEEE 802.11ax (40 MHz, MCS5, 90pc duty cycle)	WLAN	8.73	±9.6
10701	AAC	IEEE 802.11ax (40 MHz, MCS6, 90pc duty cycle)	WLAN	8.86	±9.6
10702	AAC	IEEE 802.11ax (40 MHz, MCS7, 90pc duty cycle)	WLAN	8.70	±9.6
10703	AAC	IEEE 802.11ax (40 MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10704	AAC	IEEE 802,11ax (40 MHz, MCS9, 90pc duty cycle)	WLAN	8.56	±9.6
10705	AAC	IEEE 802.11ax (40 MHz, MCS10, 90pc duty cycle)	WLAN	8.69	±9.6
10706	AAC	IEEE 802.11ax (40 MHz, MCS11, 90pc duty cycle)	WLAN	8.66	±9.6
10707	AAC	IEEE 802.11ax (40 MHz, MCS0, 99pc duty cycle)	WLAN	8.32	±9.6
10708	AAC	IEEE 802.11ax (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.55	±9.6
10709	AAC	EEE 802.11ax (40 MHz, MCS2, 99pc duty cycle)	WLAN	8.33	±9.6
10710	AAC	IEEE 802.11ax (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.29	±9.6
10711	AAC	IEEE 802.11ax (40 MHz, MCS4, 99pc duty cycle)	WLAN	8.39	±9.6
10712	AAC	IEEE 802.11ax (40 MHz, MCS5, 99pc duty cycle)	WLÄN	8.67	±9.6
10713	AAC	IEEE 802.11ax (40 MHz, MCS6, 99pc duty cycle)	WLAN	8.33	±9.6
10714	AAC	IEEE 802.11ax (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.26	±9.6
10715	AAC	IEEE 802.11ax (40 MHz, MCS8, 99pc duty cycle)	WLAN	8.45	±9.6
10716	AAC	IEEE 802.11ax (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.30	±9.6
10717	AAC	IEEE 802.11ax (40 MHz, MCS10, 99pc duty cycle)	WLAN	8.48	±9.6
10718	AAC	IEEE 802.11ax (40 MHz, MCS11, 99pc duty cycle)	WLAN	8.24	±9.6
10719	AAC	IEEE 802.11ax (80 MHz, MCS0, 90pc duty cycle)	WLAN	8.81	±9.6
10720	AAC	IEEE 802.11ax (80 MHz, MCS1, 90pc duty cycle)	WLAN	8.87	±9.6
10721	AAC	IEEE 802.11ax (80 MHz, MCS2, 90pc duty cycle)	WLAN	8.76	±9.6
10722	AAC	IEEE 802.11ax (80 MHz, MCS3, 90pc duty cycle)	WLAN	8.55	±9.6
10723	AAC	IEEE 802.11ax (80 MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.6
10724	AAC	IEEE 802.11ax (80 MHz, MCS5, 90pc duty cycle)	WLAN	8.90	±9.6
10725	AAC	IEEE 802.11ax (80 MHz, MCS6, 90pc duty cycle)	WLAN	8.74	±9.6
10726	AAC	IEEE 802.11ax (80 MHz, MCS7, 90pc duty cycle)	WLAN	8.72	±9.6
10727	AAC	IEEE 802.11ax (80 MHz, MCS8, 90pc duty cycle)	WLAN	8.66	±9.6
10728	AAC	IEEE 802.11ax (80 MHz, MCS9, 90pc duty cycle)	WLAN	8.65	±9.6
10729	AAC	IEEE 802.11ax (80 MHz, MCS10, 90pc duty cycle)	WLAN	8.64	<u>±9.6</u>
10730	AAC	IEEE 802.11ax (80 MHz, MCS11, 90pc duty cycle)	WLAN	8.67	±9.6
10731	AAC	IEEE 802.11ax (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.42	±9.6
10732	AAC	IEEE 802.11ax (80 MHz, MCS1, 99pc duty cycle)	WLAN	8.46	±9.6
10733	AAC	IEEE 802.11ax (80 MHz, MCS2, 99pc duty cycle)	WLAN	8.40	±9.6
10734	AAC	IEEE 802.11ax (80 MHz, MCS3, 99pc duty cycle)	WLAN	8.25	±9.6
10735	AAC	IEEE 802.11ax (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.33	±9.6
10736	AAC	IEEE 802.11ax (80 MHz, MCS5, 99pc duty cycle)	WLAN	8.27	±9.6
10737	AAC	IEEE 802.11ax (80 MHz, MCS6, 99pc duty cycle)	WLAN	8.36	±9.6
10738	AAC	IEEE 802.11ax (80 MHz, MCS7, 99pc duty cycle)	WLAN	8.42	±9.6
10739	AAC	IEEE 802.11ax (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.29	±9.6
10740	AAC	IEEE 802.11ax (80 MHz, MCS9, 99pc duty cycle)	WLAN	8.48	±9.6
10741	AAC	IEEE 802.11ax (80 MHz, MCS10, 99pc duty cycle)	WLAN	8.40	±9.6
10742	AAC	IEEE 802.11ax (80 MHz, MCS11, 99pc duty cycle)	WLAN	8.43	±9.6
10743	AAC	IEEE 802.11ax (160 MHz, MCS0, 90pc duty cycle)	WLAN	8.94	±9.6
10744	AAC	IEEE 802.11ax (160 MHz, MCS1, 90pc duty cycle)	WLAN	9.16	±9.6
10745	AAC	IEEE 802.11ax (160 MHz, MCS2, 90pc duty cycle)	WLAN	8.93	±9.6
10746	AAC	IEEE 802.11ax (160 MHz, MCS3, 90pc duty cycle)	WLAN	9.11	±9.6
10747	AAC	IEEE 802.11ax (160 MHz, MCS4, 90pc duty cycle)	WLAN	9.04	±9.6
10748	AAC	IEEE 802.11ax (160 MHz, MCS5, 90pc duty cycle)	WLAN	8.93	±9.6
10749	AAC	IEEE 802.11ax (160 MHz, MCS6, 90pc duty cycle)	WLAN	8.90	±9.6
10750	AAC	IEEE 802.11ax (160 MHz, MCS7, 90pc duty cycle)	WLAN	8.79	±9.6
10751	AAC	IEEE 802.11ax (160 MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10752	AAC	IEEE 802.11ax (160 MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6

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UID 10753	Rev AAC	Communication System Name IEEE 802.11ax (160 MHz, MCS10, 90pc duty cycle)	Group WLAN	PAR (dB) 9.00	± 9.6
10753	AAC	IEEE 802.11ax (160 MHz, MCS10, sope duty cycle)	WLAN	8.94	±9.6
10755	AAC	IEEE 802.11ax (160 MHz, MCS0, 99pc duty cycle)	WLAN	8.64	±9.6
10756	AAC	IEEE 802.11ax (160 MHz, MCS1, 99pc duty cycle)	WLAN	8.77	±9.6
10757	AAC	IEEE 802.11ax (160 MHz, MCS2, 99pc duty cycle)	WLAN	8.77	±0.0 ±9.6
10758	AAC	IEEE 802.11ax (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.69	±9.6
10759	AAC	IEEE 802.11ax (160 MHz, MCS4, 99pc duty cycle)	WLAN	8.58	±9.6
10760	AAC	IEEE 802.11ax (160 MHz, MCS5, 99pc duty cycle)	WLAN	8.49	±9.6
10761	AAC	IEEE 802.11ax (160 MHz, MCS6, 99pc duty cycle)	WLAN	8.58	±9.6
10762	AAC	IEEE 802.11ax (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.49	±9.6
10763	AAC	IEEE 802.11ax (160 MHz, MCS8, 99pc duty cycle)	WLAN	8.53	±9.6
10764	AAC	IEEE 802.11ax (160 MHz, MCS9, 99pc duty cycle)	WLAN	8.54	±9.6
10765	AAC	IEEE 802.11ax (160 MHz, MCS10, 99pc duty cycle)	WLAN	8.54	±9.6
10766	AAC	IEEE 802.11ax (160 MHz, MCS11, 99pc duty cycle)	WLAN	8.51	±9.6
10767	AAG	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	7.99	±9.6
10768	AAE	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	<u>+9.6</u>
10769	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	<u>+9.6</u>
10770	AAE	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	<u>±9.6</u>
10771	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10772	AAE	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.23	±9.6
10773	AAF	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.03	±9.6
10774	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
	AAF	5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
10776	AAE	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz) 5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
10778	AAC	5G NR (CP-OFDM, 50% RB, 15MHz, QPSK, 15KHz)	5G NR FR1 TDD 5G NR FR1 TDD	8.30 8.34	±9.6 ±9.6
10779	AAC	5G NR (CP-OFDM, 50% RB, 25MHz, QPSK, 15kHz)	5G NR FR1 TDD	8.42	±9.6
107780	AAE	5G NR (CP-OFDM, 50% RB, 30MHz, QPSK, 15kHz)	5G NR FR1 TDD	8.38	±9.6
10781	AAF	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15kHz)	5G NR FR1 TDD	8.38	±9.6
10782	AAE	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	±9.6
10783	AAG	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
10784	AAE	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	±9.6
10785	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.40	±9.6
10786	AAE	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	±9.6
10787	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	±9.6
10788	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
10789	AAF	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	±9.6
10790	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
10791	AAG	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	±9.6
10792	AAE	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	±9.6
10793	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	±9.6
10794	AAE	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10795	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.84	±9.6
10796	AAE	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10797	AAF	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	±9.6
10798	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
10799	AAF AAF	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz) 5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD 5G NR FR1 TDD	7.93 7.89	±9.6
10802	AAF	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 KHz)	5G NR FR1 TDD	7.89	±9.6 ±9.6
10802	AAF	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	±9.6
10805	AAE	50 NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 KHz)	5G NR FR1 TDD	8.34	±9.6
10806	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.37	±9.6
10809	AAE	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10810	AAF	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10812	AAF	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
10817	AAG	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
10818	AAE	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10819	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.33	±9.6
10820	AAE	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.30	±9.6
10821	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10822	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10823	AAF	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	±9.6
10824	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	±9.6
10825	AAF	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10827	AAF	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.42	±9.6
10828	AAE	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	±9.6

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	Rev	Communication System Name	Group	PAR (dB)	$Unc^{E} k = 2$
10829	AAF	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.40	±9.6
10830	AAE	5G NR (CP-OFDM, 1 RB, 10MHz, QPSK, 60kHz)	5G NR FR1 TDD	7.63	±9.6
10831	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	±9.6
10832	AAE	5G NR (CP-OFDM, 1 RB, 20MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.74	±9.6
10833	AAD	5G NR (CP-OFDM, 1 RB, 25MHz, QPSK, 60kHz)	5G NR FR1 TDD	7.70	±9.6
10834	AAE	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	±9.6
10835	AAF	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10836	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.66	±9.6
10837	AAF	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	±9.6
10839	AAF	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10840	AAE	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	±9.6
10841	AAF	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.71	±9.6
10843	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	±9.6
10844	AAE	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10846	AAE	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10854	AAE	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10855	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
10856	AAE	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10857	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	±9.6
10858	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
10859	AAF	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10860	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10861	AAF	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	±9.6
10863	AAF	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10864	AAE	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10865	AAF	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10866	AAF	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10868	AAF	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	±9.6
10889	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10870	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	±9.6
10871	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10872	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	±9.6
10873 10874	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10874	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65 7.78	±9.6
10875	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz) 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD 5G NR FR2 TDD	8.39	±9.6 ±9.6
10877	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	±9.6
10878	AAE	5G NR (CP-OFDM, 110% RB, 100 MHz, 16QAM, 120 KHz)	5G NR FR2 TDD	8.41	±9.6
10879	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	±9.6
10880	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.38	±9.6
10881	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10882	AAE		5G NR FR2 TDD	5.96	±9.6
10883	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	±9.6
10884	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	±9.6
10885	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10886	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10887	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
10888	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	±9.6
10889	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	±9.6
10890	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	±9.6
10891	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	±9.6
10892	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10897	AAE	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.66	±9.6
10898	AAC	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10899	AAB	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10900	AAC	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10901	AAB	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10902	AAC	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10903	AAD	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10904	AAC	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10905	AAD	5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10906	AAD	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10907	AAE	5G NR (DFT-s-OFDM, 50% RB, 5MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	±9.6
10908	AAC	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10909	AAB	5G NR (DFT-s-OFDM, 50% RB, 15MHz, QPSK, 30kHz)	5G NR FR1 TDD	5.96	±9.6
10910	AAC	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6

10911 AAS 64 RH (DFT-GOFMA SYR BS 20HL) ICO AN FFA TOD 549 495 10912 AC 65 RH (DFT-GOFMA, 65YR BS, 30HL) 65 RH FFH TOD 5.84 495 10913 AC 65 RH (DFT-GOFMA, 65YR BS, 30HL) 65 RH FFH TOD 5.84 495 10914 AC 65 RH (DFT-GOFMA, 65YR BS, 30HL) 65 RH FFH TOD 5.84 495 10915 AD 66 RH (DFT-GOFMA, 65YR BS, 30HL) 66 RH FFH TOD 5.87 4.85 10916 AD 66 RH (DFT-GOFMA, 65YR BS, 30HL) 66 RH FFH TOD 5.84 4.85 10917 AD 66 RH (DFT-GOFMA, 65YR BS, 10HL) 66 RH FFH TOD 5.84 4.85 10918 AC 66 RH (DFT-GOFMA, 105YR BS, 10HL) 66 RH FHT TOD 5.84 4.85 10918 AC 61 RH (DTT-GOFMA, 105YR BS, 10HL) 65 RH (DTT-GOFMA, 105YR BS, 10HL) 66 RH FHT TOD 5.84 4.94 10928 AC 61 RH (DTT-GOFMA, 105YR BS, 10HL) 66 RH FHT TOD 5.84 4.94 10928 AD 61 RH (DTTT-GOFMA, 10HL, 10HL, 10HL, 10HL) 65						$Unc^E k = 2$
10912 AAC 63 RH (PET-SOFEM, EWY, RE, 30MHz, OPSK, 30MHz) 63 Q NH FRI TOD 5.44 4.85 10918 AAC 66 RH (PET-SOFEM, 560%, RE, 30MHz, OPSK, 39MHz) 60 NH FRI TOD 5.44 4.85 10918 AAC 66 RH (PET-SOFEM, 560%, RE, 30MHz, OPSK, 39MHz) 60 NH FRI TOD 5.43 4.86 10918 AAD 66 RH (PET-SOFEM, 560%, RE, 30MHz, OPSK, 39MHz) 60 NH FRI TOD 5.44 4.86 10918 AAD 66 RH (PET-SOFEM, 100%, RE, 30MHz, OPSK, 39MHz) 66 RH RFI TOD 5.64 4.86 10919 AC 66 RH (PET-SOFEM, 100%, RE, 30MHz, OPSK, 30HHz) 66 RH RFI TOD 5.68 4.85 10919 AC 66 RH (PET-SOFEM, 100%, RE, 30MHz, OPSK, 30HHz) 66 RH RFI TOD 5.68 4.86 10918 AC 60 RH (PET-SOFEM, 100%, RE, 30MHz, OPSK, 30HHz) 66 RH RFI TOD 5.44 5.66 10918 AC 60 RH (PET-SOFEM, 100%, RE, 30MHz, OPSK, 30HHz) 66 RH (PET-TOD 5.48 5.66 4.86 10928 AAD 60 RH (PET-SOFEM, 100%, RE, 30HHz, OPSK, 30HHz) 66 RH (PET-TOD 5.58 4.96		Rev	Communication System Name	Group	PAR (dB)	
10951 ADD 169 RH (DFL-OFDM, SYR B, 40HHz, OPEK, 30HHz) 150 RH (DFL-OFDM, SYR B, 50HHz, OPEK, 30HHz) 150 RHZ (DFL-OFDM, SYR B, 50HHz, OPEK, 15HHz) 150 RHZ (DFL-OFDM, SYR B, 50HHz, OPE				-		
10914 AAC 63 RH (DFL-OFDM, 69% RB 50MHz, OPEK, 30HHz) 63 NH FFH TOD 5.84 4.92 10916 AAD 63 RH (DFL-OFDM, 69% RB 50MHz, OPEK, 30HHz) 65 NH FFH TOD 5.84 4.92 10916 AAD 63 RH (DFL-OFDM, 69% RB 50MHz, OPEK, 30HHz) 65 NH FFH TOD 5.94 4.96 10917 AD 63 RH (DFL-OFDM, 109% RB, 10MHz, OPEK, 30HHz) 65 NH FFH TOD 5.84 4.96 10918 AC 63 RH (DFL-OFDM, 109% RB, 10MHz, OPEK, 30HHz) 63 NH FFH TOD 5.84 4.96 10921 AAC 53 RH (DFL-OFDM, 100% RB, 10MHz, OPEK, 30HHz) 63 NH FFH TOD 5.84 4.96 10921 AAC 53 RH (DFL-OFDM, 100% RB, 20MHz, OPEK, 30HHz) 53 NH FHT TOD 5.84 4.96 10923 AC 53 RH (DFL-OFDM, 100% RB, 20MHz, OPEK, 30HHz) 53 NH FHT TOD 5.84 4.96 10923 AC 50 RH (DFL-OFDM, 100% RB, 20MHz, OPEK, 30HHz) 53 NHZ 4.96 4.96 10924 AD 50 RH (DFL-OFDM, 100% RB, 20MHz, OPEK, 100Hz) 53 NHZ 4.96 4.96 4.96 4.96 4.96						
10916 ADD 63 NR (DFF-CPDM, SOVE RB, 00MHz, OPSK, 300Hz) 50 NR PFH 17DD 5.87 4.86 10917 ADD 56 NR (DFF-CPDM, 50VE RB, 00MHz, OPSK, 300Hz) 50 NR PFH 17DD 5.84 4.86 10917 ALD 56 NR (DFF-CPDM, 50VE RB, 10MHz, OPSK, 300Hz) 50 NR PFH 17DD 5.86 4.80 10918 ALE 56 NR (DFF-CPDM, 100VE RB, 10MHz, OPSK, 300Hz) 50 NR PFH 17DD 5.86 4.80 10920 ALS 56 NR (DFF-CPDM, 100VE RB, 10MHz, OPSK, 300Hz) 50 NR PFH 17DD 5.84 4.80 10922 ALS 50 NR (DFF-CPDM, 100VE RB, 20MHz, OPSK, 300Hz) 50 NR PFH 17DD 5.84 4.80 10923 ALS 50 NR (DFF-CPDM, 100VF RB, 20MHz, OPSK, 300Hz) 50 NR PFH 17DD 5.84 4.80 10924 ALD 50 NR (DFF-CPDM, 100VF RB, 20MHz, OPSK, 30Hz) 50 NR PFH 17DD 5.84 4.80 10924 ALD 50 NR (DFF-CPDM, 100VF RB, 20MHz, OPSK, 30Hz) 50 NR PFH 17DD 5.84 4.80 10924 ALD 50 NR (DFF-CPDM, 100VF RB, 20MHz, OPSK, 15NHz) 50 NR PFH 17DD 5.84 4.80 1098					_	
10915 ADD EG NR 10FF4-0FDM, ESF RB, 2014F4, QPSK, 304H4) EG NR 1PF1 TDD 5.947 4.9.9 10917 ADD EG NR 10FF4-0FDM, 105V, RB, 5MH2, QPSK, 304H4) EG NR 1PF1 TDD 5.86 4.9.9 10918 AAC EG NR 10FF4-0FDM, 105V, RB, 15MH2, QPSK, 304H4) EG NR 1PF1 TDD 5.86 4.9.9 10921 AAC EG NR 10FF4-0FDM, 105V, RB, 15MH2, QPSK, 303H4) EG NR 1PF1 TDD 5.84 4.9.9 10922 AAC EG NR 10FF4-0FDM, 105V, RB, 25MH2, QPSK, 303H4) EG NR 1PF1 TDD 5.84 4.9.9 10923 AAC EG NR 10FF4-0FDM, 100V, RB, 25MH4, QPSK, 303H4) EG NR 1PF1 TDD 5.84 4.9.9 10922 AAD EG NR 10FF4-0FDM, 100V, RB, 20MH2, QPSK, 303H4) EG NR 1PF1 TDD 5.84 4.9.8 10922 AAD EG NR 10FF4-0FDM, 100V, RB, 20MH4, QPSK, 304H2) EG NR 1PF1 TDD 5.84 4.9.8 10924 AAD EG NR 10FF4-0FDM, 100V, RB, 20MH4, QPSK, 15MH2) EG NR 1PF1 TDD 5.84 4.9.8 10924 AAD EG NR 10FF4-0FDM, 100V, RB, 20MH4, QPSK, 15MH2) EG NR 1PF1 TDD 5.84 4.9.8 <						
10917 ADD 50 NR (DFF=07DM, 59%, RB, 100 MFL; QPSK, 300 Hz) 50 NR PFH TDD 5.66 4.9.0 10916 AAC 50 NR (DFF=07DM, 100% RB, 10ML; QPSK, 300 Hz) 50 NR PFH TDD 5.66 4.9.0 10928 AAD 50 NR (DFF=07DM, 100% RB, 10ML; QPSK, 300 Hz) 50 NR PFH TDD 5.86 4.9.0 10928 AAD 50 NR (DFF=07DM, 100% RB, 10ML; QPSK, 300 Hz) 50 NR PFH TDD 5.84 4.9.0 10928 AAD 50 NR (DFF=07DM, 100% RB, 20ML; QPSK, 300 Hz) 50 NR PFH TDD 5.84 4.9.0 10928 AAD 50 NR (DFF=07DM, 100% RB, 20ML; QPSK, 300 Hz) 50 NR PFH TDD 5.84 4.9.0 10928 AAD 50 NR (DFF=07DM, 100% RB, 20ML; QPSK, 300 Hz) 50 NR PFH TDD 5.84 4.9.0 10928 AAD 50 NR (DFF=07DM, 100% RB, 20ML; QPSK, 300 Hz) 50 NR PFH TDD 5.84 4.9.0 10928 AAD 50 NR (DFF=07DM, 100% RB, 30ML; QPSK, 300 Hz) 50 NR PFH TDD 5.84 4.9.0 10928 AAD 50 NR (DFF=07DM, 100, ABB, 30ML; QPSK, 15ML; 50 NR PFH TDD 5.84 4.9.0 50 NR (DFF=07DM, 100	-					
10016 AAE 50 NH (DFE-OPCM, 1009, HB, 34HL, OPSK, 30HL) 50 NH FR1 TDD 5.66 4.9.8. 10051 AAD 50 NH (DFE-OPCM, 1009, HB, 15MHL, OPSK, 30HL) 50 NH FR1 TDD 5.67 4.9.8. 100821 AAD 50 NH (DFE-OPCM, 1009, HB, 25MHL, OPSK, 30HL) 50 NH FR1 TDD 5.64 4.9.8. 100821 AAD 50 NH (DFE-OPCM, 1009, HB, 25MHL, OPSK, 30HL) 50 NH FR1 TDD 5.64 4.9.8. 100821 AAD 50 NH (DFE-OPCM, 1009, HB, 20MHL, OPSK, 30HH) 50 NH FR1 TDD 5.64 4.9.8. 109821 AAD 50 NH (DFE-OPCM, 1009, HB, 20MHL, OPSK, 30HH) 50 NH FR1 TDD 5.64 4.9.8. 109821 AAD 50 NH (DFE-OPCM, 1009, HB, 20MHL, OPSK, 150HL) 50 NH FR1 TDD 5.64 4.9.8. 109821 AAD 50 NH (DFE-OPCM, 1009, HB, 20MHL, OPSK, 150HL) 50 NH FR1 TDD 5.64 4.9.8. 109821 AAD 50 NH (DFE-OPCM, 1009, HB, 20MHL, OPSK, 150HL) 50 NH FR1 FDD 5.52 4.9.8. 109821 AAD 50 NH (DFE-OPCM, 1FB, 25HL, OPSK, 15HL) 50 NH FR1 FDD 5.52 4.9.8.						
10919 ACC 5G NR (DFT=OFDM, 100% RB, 10MHz, QPSK, 30Hz) 5G NR (PFT 1DD 5.86 49.8 10921 AAC 5G NR (DFT=OFDM, 100% RB, 10MHz, QPSK, 30Hz) 5G NR (PFT 1DD 5.84 29.8 10922 AAS 5G NR (DFT=OFDM, 100% RB, 20MHz, QPSK, 30Hz) 5G NR (PFT=1DD 5.84 29.8 10924 AAC 5G NR (DFT=OFDM, 100% RB, 20MHz, QPSK, 30Htz) 5G NR (PFT=1DD 5.84 29.8 10924 AAD 5G NR (DFT=OFDM, 100% RB, 20MHz, QPSK, 30Htz) 5G NR (PFT=OFDM, 100% RB, 20MHz, QPSK, 15Htz) 5G NR (PFT=OFDM, 100% SB, 20MHz, QPSK, 1						
TOBDE ARD EG NH (DFT-G/DML 105K, RB, 15MH2, QPEK, 30HH2) SQ NH FPH TOD 5.67 49.6 TOBDE AGE SQ NH (DFT-G/DML 105K, RB, 20HH2, QPEK, 30HH2) SQ NH FPH TOD 5.62 4.9.8 TOBDE AGE SQ NH FPH TOD 5.64 4.9.8 TOBDE AGE SQ NH FPH TOD 5.64 4.9.8 TOBDE AGE SQ NH FPH TOD 5.64 4.9.8 TOBDE AGE SQ NH CPT-S/OFDML 100K, RB, SOMH2, QPEK, 30HH2) SQ NH FPH TOD 5.64 4.9.8 TOBDE AGE SQ NH CPT-S/OFDML 100K, RB, SOMH2, QPEK, 30HH2) SG NH FPH TOD 5.64 4.9.8 TOBDE AGE SQ NH CPT-S/OFDML 107K, RB, SOMH2, QPEK, 30HH2) SG NH FPH TOD 5.52 4.9.8 TOBDE AGE SQ NH CPT-S/OFDML 118, 10MH2, QPEK, 15HH2) SQ NH FPH TOD 5.52 4.9.8 TOBDE AGE SQ NH CPT-S/OFDML 118, 20MH2, QPEK, 15HH2) SQ NH FPH TOD 5.51 4.9.5 TOBDE AGE SQ NH CPT-S/OFDML 118, 20MH2, QPEK, 15HH2) SQ NH FPH TOD 5.51 4.9.5						
Close AAC EG NH R DFT-GODM. 1005K. RB. 201Htz, OPEX. 301Htz) EG NH R FIN TOD 5.64 19.9. 10022 AAD EG NH R OFT-GODM. 1005K. RB. 201Htz, OPEX. 301Htz) EG NH R FIN TOD 5.64 1.9.9. 10024 AAD EG NH R OFT-GODM. 1005K. RB. 201Htz, OPEX. 301Htz) EG NH R FIN TOD 5.64 1.9.9. 10026 AAD EG NH R OFT-GODM. 1005K. RB. 201Htz, OPEX. 301Htz) EG NH R FIN TOD 5.94 4.9.9. 10026 AAD EG NH GOFT-GODM. 1005K. RB. 201Htz, OPEX. 301Htz) EG NH R FIN TOD 5.94 4.9.9. 10026 AAD EG NH GOFT-GODM. 1005K. RB. 201Htz, OPEX. (51Htz) EG NH FIN TOD 5.94 4.9.9. 10026 AAD EG NH GOFT-GODM. 1 RB. 501Htz, OPEX. (51Htz) EG NH FIN TEDD 5.51 4.9.9. 10026 AAD EG NH GOFT-GODM. 1 RB. 201Htz, OPEX. (51Htz) EG NH FIN TEDD 5.51 4.9.9. 10028 AAD EG NH GOFT-GODM. 1 RB. 201Htz, OPEX. (51Htz) EG NH FIN TEDD 5.51 4.9.9. 10038 AAC EG NH GOFT-GODM. 1 RB. 201Htz, OPEX. (51Htz) EG NH FIN TEDD 5.51 <td< td=""><td></td><td></td><td></td><td></td><td></td><td>·</td></td<>						·
10922 AAB 5G NR (DFT-GOTM, 100K, RB, 35MHz, OPSK, 30MHz) SG NN FFT 17DD 5.62 4.85 10924 AAD 5G NR (DFT-GOTM, 100K, RB, 30MHz, OPSK, 30MHz) SG NN FFT 17DD 5.64 4.86 10925 AAD 5G NR (DFT-GOTM, 100K, RB, 30MHz, OPSK, 30HHz) SG NR FFT 17DD 5.64 4.80 10926 AAD 5G NR (DFT-GOTM, 100K, RB, 50MHz, OPSK, 30HHz) SG NR FFT 17DD 5.54 4.98 10927 AAD 5G NR (DFT-GOTM, 100K, RB, 50MHz, OPSK, 15HHz) SG NR FFT 17DD 5.52 4.98 10926 AAD 5G NR (DFT-GOTM, 1 RB, 5MHz, OPSK, 15HHz) SG NR FFT 17DD 5.52 4.98 10928 AAD 5G NR (DFT-GOTM, 1 RB, 50MHz, OPSK, 15HHz) SG NR FFT 17DD 5.51 4.95 10931 AAC 5G NR (DFT-GOTM, 1 RB, 50MHz, OPSK, 15HHz) SG NR FFT 17DD 5.51 4.95 10932 AAC 5G NR (DFT-GOTM, 1 RB, 50MHz, OPSK, 15HHz) SG NR FFT 17DD 5.51 4.95 10933 AAC 5G NR (DFT-GOTM, 1 RB, 50MHz, OPSK, 15HHz) SG NR FFT 17DD 5.51 4.95 10934						
TOBDE AAC EG NR DFT-OCDM. LIODE RB. SOMHE, OPEK, SOMHE) EG NR FFI TOD 5.64 ±9.8 TOBDE AAC EG NR DFT-OCDM. LIODE RB. SOMHE, OPEK, SOMHE) EG NR FFI TDD 5.64 ±9.8 TOBDE AAC EG NR DFT-OCDM. LIODE RB. SOMHE, OPEK, SOMHE) EG NR FFI TDD 5.64 ±9.8 TOBDE AAD EG NR (DFT-OCDM. 100K RB. SOMHE, OPEK, SOMHE) EG NR FFI TDD 5.64 ±9.8 TOBDE AAD SG NR (DFT-OCDM. 100K RB. SOMHE, OPEK, SOMHE) EG NR FFI TDD 5.52 ±9.6 TOBDE AAD SG NR (DFT-OCDM. 178.100K HL, OPEK, ISH4P) EG NR FFI TDD 5.51 ±9.6 TOBDE AAC SG NR (DFT-OCDM. 178.20 MHL, OPEK, ISH4P) EG NR FFI TDD 5.51 ±9.6 TOBDE AAC SG NR (DFT-OCDM. 178.20 MHL, OPEK, ISH4P) EG NR FFI TDD 5.51 ±9.6 TOBDE AAC SG NR (DFT-OCDM. 178.20 MHL, OPEK, ISH4P) EG NR FFI TDD 5.51 ±9.8 TOBDE AAC SG NR (DFT-OCDM. 178.20 MHL, OPEK, ISH4P) EG NR FFI TDD 5.51 ±9.8 19.8 TOBDE						
10925 AAD 50 NR DFT-OPDM. 100X. RB. 40MHz, OPSK, 30MHz) 50 NR FPI TDD 5.64 ±9.8 10925 AAD 50 NR DFT-OPDM. 100X. RB. 50MHz, OPSK, 30HL2) 50 NR FPI TDD 5.64 ±9.8 10927 AAD 50 NR DFT-OPDM. 100X. RB. 50MHz, OPSK, 51ML2) 50 NR FPI TDD 5.64 ±9.8 10927 AAD 50 NR (DFT-OPDM. 100X. RB. 50MHz, OPSK, 51ML2) 50 NR FPI TDD 5.62 ±9.8 10928 AAD 50 NR (DFT-OPDM. 1 RB, 50MHz, OPSK, 15ML2) 50 NR FPI TDD 5.62 ±9.8 10928 AAD 50 NR (DFT-OPDM. 1 RB, 20MHz, OPSK, 15ML2) 50 NR FPI TDD 5.51 ±9.8 10931 AAC 50 NR (DFT-OPDM. 1 RB, 20MHz, OPSK, 15ML2) 50 NR FPI TDD 5.51 ±9.8 10932 AAC 50 NR (DFT-OPDM. 1 RB, 20MHz, OPSK, 15ML2) 50 NR FPI TDD 5.51 ±9.6 10934 AAC 50 NR (DFT-OPDM. 1 RB, 20MHz, OPSK, 15ML2) 50 NR FPI TDD 5.51 ±9.6 10935 AAC 50 NR (DFT-OPDM. 1 RB, 20MHz, OPSK, 15ML2) 50 NR FPI TDD 5.51 ±9.8 ±9.8 ±9.8 ±9.8<						
10322 AAC SG NR IDFT=-OFDM, 100K, RG, 20HHz, OPSK, 30HHz) 5G NR FRI TDD 5.84 49.9 10326 AAD SG NR IDFT=-OFDM, 100K, RG, 20HHz, OPSK, 30HHz) 5G NR FRI TDD 5.84 49.9 10327 AAD SG NR IDFT=-OFDM, 178, 5MHz, OPSK, 15MHz) 5G NR FRI FDD 5.82 4.9.5 10328 AAD SG NR [DFT=-OFDM, 178, 15MHz, OPSK, 15MHz) 5G NR FRI FDD 5.52 4.9.5 10330 AAC SG NR [DFT=-OFDM, 178, 15MHz, OPSK, 15MHz) 5G NR FRI FDD 5.51 4.8.6 10331 AAC SG NR [DFT=-OFDM, 178, 20HHz, OPSK, 15MHz) 5G NR FRI FDD 5.51 4.8.6 10332 AAC SG NR [DFT=-OFDM, 178, 20HHz, OPSK, 15HHz) 5G NR FRI FDD 5.51 4.8.6 10332 AAC SG NR [DFT=-OFDM, 178, 20HHz, OPSK, 15HHz) 5G NR FRI FDD 5.51 4.8.6 10333 AAC SG NR [DFT=-OFDM, 178, 20HHz, OPSK, 15HHz) 5G NR FRI FDD 5.51 4.8.6 10334 AAC SG NR [DFT=-OFDM, SHR, 20HHz, OPSK, 15HHz) 5G NR FRI FDD 5.57 4.8.6 10335 AAD						±9.6
10026 AAD SG NR IDFTs-OFDM, 100K RB, 30MHz, OPSK, 30HHz) 50 NR FR1 TDD 5.94 4.9.9. 10027 AAD SG NR (DFTs-OFDM, 100K RB, 30HHz, OPSK, 15MHz) 50 NR FR1 FDD 5.92 4.9.9. 10028 AAD SG NR (DFTs-OFDM, 1RB, 5MHz, OPSK, 15MHz) 50 NR FR1 FDD 5.52 4.9.9. 10028 AAD SG NR (DFTs-OFDM, 1RB, 5MHz, OPSK, 15MHz) 50 NR FR1 FDD 5.52 4.9.9. 10028 AAC SG NR (DFTs-OFDM, 1RB, 25MHz, OPSK, 15MHz) 50 NR FR1 FDD 5.51 4.9.8. 10028 AAC SG NR (DFTs-OFDM, 1RB, 25MHz, OPSK, 15MHz) 50 NR FR1 FDD 5.51 4.9.8. 10038 AAC SG NR (DFTs-OFDM, 1RB, 20MHz, OPSK, 15MHz) 50 NR FR1 FDD 5.51 4.9.8. 10038 AAD SG NR (DFTs-OFDM, 59K, RB, 15MHz, OPSK, 15MHz) 50 NR FR1 FDD 5.91 4.9.8. 10038 AAD SG NR (DFTs-OFDM, 59K, RB, 20MHz, OPSK, 15MHz) 50 NR FR1 FDD 5.90 4.9.8. 10038 AAD SG NR (DFTs-OFDM, 59K, RB, 20MHz, OPSK, 15HHz) 50 NR FR1 FDD 5.90 4.9.8. 10038				· ·	5.95	±9.6
1932 AD 56 NR (DFF-sOFDM, 198, SMHz, OPSK, 15Hz) 50 NR FRI FDD 5.94 29.8 1932 AD 56 NR (DFF-sOFDM, 188, SMHz, OPSK, 15Hz) 50 NR FRI FDD 5.92 29.8 1933 AC 56 NR (DFF-sOFDM, 188, SMHz, OPSK, 15Hz) 50 NR FRI FDD 5.81 29.8 1933 AC 56 NR (DFF-sOFDM, 188, 20MHz, OPSK, 15Hz) 50 NR FRI FDD 5.51 29.8 1933 AC 56 NR (DFF-sOFDM, 188, 20MHz, OPSK, 15Hz) 50 NR FRI FDD 5.51 29.8 1933 AC 56 NR (DFF-sOFDM, 188, 20MHz, OPSK, 15Hz) 56 NR FRI FDD 5.51 29.8 1933 AC 56 NR (DFF-sOFDM, 188, 20MHz, OPSK, 15Hz) 56 NR FRI FDD 5.51 29.8 1933 AC 56 NR (DFF-sOFDM, 188, 50 MHz, OPSK, 15Hz) 56 NR FRI FDD 5.91 29.8 1933 AC 56 NR (DFF-sOFDM, 188, 50 MHz, OPSK, 15Hz) 56 NR FRI FDD 5.90 2.85 1934 AC 56 NR (DFF-sOFDM, 59K RB, 20MHz, OPSK, 15Hz) 56 NR FRI FDD 5.81 2.86 1939 AC 56 NR (DFF-sOFDM, 59K RB, 20M					5.84	±9.6
10828 AD 6G NR (DFT-GOFDM, 1R), 5G MHz, OPSK, 15KHz) 5G MR PF1 FDD 5.52 19.8 10829 AD 5G NR (DFT-GOFDM, 1R), 15MHz, OPSK, 15KHz) 5G MR PF1 FDD 5.52 19.8 10831 ACC 5G NR (DFT-GOFDM, 1R), 20WHz, OPSK, 15KHz) 5G NR FF1 FDD 5.51 19.8 10831 ACC 5G NR (DFT-GOFDM, 1R), 20WHz, OPSK, 15KHz) 5G NR FF1 FDD 5.51 19.8 10832 AAC 5G NR (DFT-GOFDM, 1R), 20WHz, OPSK, 15KHz) 5G NR FF1 FDD 5.51 19.8 10834 AAC 5G NR (DFT-GOFDM, 1R), 60 WHz, OPSK, 15KHz) 5G NR FF1 FDD 5.51 19.8 10838 AAD 5G NR (DFT-GOFDM, 59R, 8R), 20SK, 15KHz) 5G NR FF1 FDD 5.77 49.6 10838 AAD 5G NR (DFT-SOFDM, 59R, 8R), 20MHz, OPSK, 15KHz) 5G NR FF1 FDD 5.82 19.8 10844 AAD 5G NR (DFT-SOFDM, 59R, 8R), 30 MHz, OPSK, 15KHz) 5G NR FF1 FDD 5.82 19.8 10845 AAD 5G NR (DFT-SOFDM, 59R, 8R), 30 MHz, OPSK, 15KHz) 5G NR FF1 FDD 5.82 19.8 10846 AAD </td <td></td> <td></td> <td></td> <td>5G NR FR1 TDD</td> <td>5.94</td> <td>±9.6</td>				5G NR FR1 TDD	5.94	±9.6
10020 AAD SG NR IDFTs-OFDM, 1 RB, 10MHz, OPSK, 15MHz) 5G NR FF1 FDD 5.52 ±3.8 10030 AAC SG NR IDFTs-OFDM, 1 RB, 20MHz, OPSK, 15MHz) SG NR FF1 FDD 5.51 ±3.8 10032 AAC SG NR IDFTs-OFDM, 1 RB, 20MHz, OPSK, 15MHz) SG NR FF1 FDD 5.51 ±3.8 10032 AAC SG NR IDFTs-OFDM, 1 RB, 20MHz, OPSK, 15MHz) SG NR FF1 FDD 5.51 ±3.6 10333 AAC SG NR IDFTs-OFDM, 1 RB, 20MHz, OPSK, 15MHz) SG NR FF1 FDD 5.51 ±3.6 10333 AAC SG NR IDFTs-OFDM, 10MHz, OPSK, 15MHz) SG NR FF1 FDD 5.51 ±3.6 10333 AAC SG NR IDFTs-OFDM, 50% RB, 50MHz, OPSK, 15MHz) SG NR FF1 FDD 5.50 ±3.6 10333 AAC SG NR IDFTs-OFDM, 50% RB, 20MHz, OPSK, 15MHz) SG NR FF1 FDD 5.79 ±3.6 10333 AAC SG NR IDFTs-OFDM, 50% RB, 20MHz, OPSK, 15MHz) SG NR FF1 FDD 5.89 ±3.6 10334 AAC SG NR IDFTs-OFDM, 50% RB, 20MHz, OPSK, 15MHz) SG NR FF1 FDD 5.82 ±3.6 10.6 10.6 10.6 </td <td></td> <td></td> <td></td> <td></td> <td>5.52</td> <td>±9.6</td>					5.52	±9.6
10303 AAC 5G NR IDFF-SOFDM, 1R 83, 50HHz, OPSK, 15HHz) 5G NR FR1 FDD 5.52 43.8 10331 AAC 5G NR IDFF-SOFDM, 1R 83, 20HHz, OPSK, 15HHz) 5G NR FR1 FDD 5.51 43.6 10332 AAC 5G NR IDFF-SOFDM, 1R 83, 00HHz, OPSK, 15HHz) 5G NR FR1 FDD 5.51 43.6 10333 AAC 5G NR IDFF-SOFDM, 1R 83, 00HHz, OPSK, 15HHz) 5G NR FR1 FDD 5.51 43.6 10333 AAC 5G NR IDFF-SOFDM, 1R 83, 00HHz, OPSK, 15HHz) 5G NR FR1 FDD 5.51 43.6 10333 AAD 5G NR IDFF-SOFDM, 50% RB, 50HLz, OPSK, 15HHz) 5G NR FR1 FDD 5.57 43.6 10333 AAD 5G NR IDFF-SOFDM, 50% RB, 20HHz, OPSK, 15HHz) 5G NR FR1 FDD 5.82 43.6 10333 AAC 5G NR IDFF-SOFDM, 50% RB, 20HHz, OPSK, 15HHz) 5G NR FR1 FDD 5.82 43.6 10334 AAC 5G NR IDFF-SOFDM, 50% RB, 20HHz, OPSK, 15HHz) 5G NR FR1 FDD 5.82 43.6 10344 AAC 5G NR IDFF-SOFDM, 50% RB, 20HHz, OPSK, 15HHz) 5G NR FR1 FDD 5.83 43.6 10.6 10.6					5.52	±9.6
10331 AAC 65 NR IDFT=OFDM, 188, 20HHz, OPSK, 15HHz) 56 NR PERT FDD 5.51 ±9.8 10392 AAC 56 NR IDFT=OFDM, 1 R8, 30HHz, OPSK, 15HHz) 56 NR PERT FDD 5.51 ±9.8 10393 AAC 56 NR IDFT=OFDM, 1 R8, 30HHz, OPSK, 15HHz) 56 NR PERT FDD 5.51 ±9.8 10393 AAC 56 NR IDFT=OFDM, 1 R8, 40HHz, OPSK, 15HHz) 56 NR FR1 FDD 5.51 ±9.8 10393 AAD 56 NR IDFT=OFDM, 590 R8, NHz, OPSK, 15HHz) 56 NR FR1 FDD 5.51 ±9.8 10393 AAD 56 NR IDFT=OFDM, 590 R8, 20HHz, OPSK, 15HHz) 56 NR FR1 FDD 5.70 ±9.8 10393 AAC 56 NR IDFT=OFDM, 590 R8, 20HHz, OPSK, 15HHz) 56 NR FR1 FDD 5.80 ±9.8 10394 AAC 56 NR IDFT=OFDM, 590 R8, 25MHz, OPSK, 15HHz) 50 NR FR1 FDD 5.89 ±9.8 10394 AAC 56 NR IDFT=OFDM, 590 R8, 30HHz, OPSK, 15HHz) 50 NR FR1 FDD 5.89 ±9.8 10394 AAC 56 NR IDFT=OFDM, 590 R8, 50HHz, OPSK, 15HHz) 56 NR FR1 FDD 5.81 ±9.8 ±9.8 10394 <td></td> <td></td> <td></td> <td>5G NR FR1 FDD</td> <td>5.52</td> <td>±9.6</td>				5G NR FR1 FDD	5.52	±9.6
10932 AAC 65 NR PRT FOD 5.51 ±9.6 10933 AAC 56 NR PRT FOD 1.53 ±9.6 10934 AAC 56 NR PRT FOD 5.51 ±9.6 10934 AAC 56 NR PRT FOD 5.51 ±9.6 10935 AAD 56 NR PRT FOD 5.51 ±9.6 10936 AAD 56 NR PRT FOD 5.51 ±9.6 10937 AAD 56 NR PRT FOD 5.30 ±9.6 10938 AAC 56 NR PRT FOD 5.90 ±9.6 10939 AAC 56 NR PRT FOD 5.90 ±9.6 10939 AAC 50 NR PRT FOD 5.90 ±9.6 10940 AAC 50 NR PRT FOD 5.90 ±9.6 10941 AAC 50 NR (DFT= OFDM, 50% RB, 20MH2, OPSK, 15 KH2) 50 NR PRT FOD 5.83 ±9.6 10944 AAD 50 NR (DFT= OFDM, 50% RB, 20MH2, OPSK, 15 KH2) 50 NR PRT FOD 5.85 ±9.6 10945 AAD 50 NR (DFT= OFDM, 100% RB, 50 MH2, OPSK, 15 KH2)		-		5G NR FR1 FDD	5.51	±9.6
10933 AAC 55 NR (DFT=OFDM, 1 RB, 30MHz, DPSK, 15 KHz) 50 NR FR1 FDD 5.51 ±9.6 10934 AAD 56 NR (DFT=OFDM, 1 RB, 50MHz, DPSK, 15 KHz) 50 NR FR1 FDD 5.51 ±9.6 10935 AAD 56 NR (DFT=OFDM, 1 RB, 50MHz, DPSK, 15 KHz) 50 NR FR1 FDD 5.571 ±9.6 10937 AAD 56 NR (DFT=OFDM, 50%, RB, 5MHz, QPSK, 15 KHz) 56 NR FR1 FDD 5.77 ±8.6 10939 AAC 56 NR (DFT=OFDM, 50%, RB, 15 MHz, QPSK, 15 KHz) 56 NR FR1 FDD 5.87 ±9.6 10939 AAC 56 NR (DFT=OFDM, 50%, RB, 25 MHz, QPSK, 15 KHz) 56 NR FR1 FDD 5.88 ±9.6 10941 AAC 56 NR (DFT=OFDM, 50%, RB, 25 MHz, QPSK, 15 KHz) 56 NR FR1 FDD 5.85 ±9.6 10942 AAC 56 NR (DFT=OFDM, 50%, RB, 50 MHz, QPSK, 15 KHz) 56 NR FR1 FDD 5.85 ±9.6 10944 AAD 56 NR (DFT=OFDM, 50%, RB, 50 MHz, QPSK, 15 KHz) 56 NR (DFT=0FDM, 50%, RB, 50 MHz, QPSK, 15 KHz) 56 NR (DFT=0FDM, 50%, RB, 50 MHz, QPSK, 15 KHz) 56 NR (DFT=0FDM, 50%, RB, 30 MHz, QPSK, 15 KHz) 56 NR (DFT=0FDM, 50%, SB, 30 MHz, QPSK, 15 KHz) 56 NR (DFT=0FDM, 50%, SB, 30 MHz, QPSK, 15				5G NR FR1 FDD	5.51	±9.6
1033 AAC 6G NR (DFT=O-FDM, 1 RB, 40 MHz, OPSK, 15 Htz) 5G NR FR1 FDD 5.51 ±9.6 10335 AAD 5G NR (DFT=O-FDM, 50%, RB, 5MHz, OPSK, 15 Htz) 5G NR FR1 FDD 5.51 ±9.6 10387 AAD 5G NR (DFT=O-FDM, 50%, RB, 5MHz, OPSK, 15 Htz) 5G NR FR1 FDD 5.77 ±9.6 10388 AAC 5G NR (DFT=O-FDM, 50%, RB, 10 MHz, QFSK, 15 Htz) 5G NR FR1 FDD 5.90 ±9.6 10389 AAC 5G NR (DFT=O-FDM, 50%, RB, 20 MHz, QFSK, 15 Htz) 5G NR FR1 FDD 5.42 ±9.6 10394 AAC 5G NR (DFT=O-FDM, 50%, RB, 20 MHz, QFSK, 15 Htz) 5G NR FR1 FDD 5.42 ±9.6 10340 AAC 5G NR (DFT=O-FDM, 50%, RB, 20 MHz, QFSK, 15 Htz) 5G NR FR1 FDD 5.42 ±9.6 10344 AAD 5G NR (DFT=O-FDM, 50%, RB, 30 MHz, QPSK, 15 Htz) 5G NR FR1 FDD 5.45 ±9.6 10445 AAD 5G NR (DFT=O-FDM, 100%, RB, 50 MHz, QPSK, 15 Htz) 5G NR FR1 FDD 5.85 ±9.6 10445 AAD 5G NR (DFT=O-FDM, 100%, RB, 20 MHz, QPSK, 15 Htz) 5G NR FR1 FDD 5.85 ±9.6				5G NR FR1 FDD	5.51	±9.6
10383 AD 5G NR (DFF-0CPDM, 1FB, 50 MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.51 ±9.6 10383 AAD 5G NR (DFF-0CPDM, 50% RB, 5MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.30 ±9.6 10383 AAD 5G NR (DFF-0CPDM, 50% RB, 10 MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.30 ±9.6 10383 AAC 5G NR (DFF-0CPDM, 50% RB, 20 MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.82 ±9.6 10384 ACC 5G NR (DFF-0CPDM, 50% RB, 20 MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.83 ±9.6 10341 AAC 5G NR (DFF-0CPDM, 50% RB, 30 MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.83 ±9.6 10342 AAC 5G NR (DFF-0CPDM, 50% RB, 50 MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.85 ±9.6 10344 AAD 5G NR (DFF-0CPDM, 100% RB, 50 MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.81 ±9.6 10344 AAD 5G NR (DFF-0CPM, 100% RB, 50 MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.83 ±9.6 10344 AAD 5G NR (DFF-0CPM, 100% RB, 20 MHz, QPSK, 15 Htz) 5G NR FRI FDD 5.87 ±9.6 <t< td=""><td></td><td></td><td></td><td>5G NR FR1 FDD</td><td>5.51</td><td>±9.6</td></t<>				5G NR FR1 FDD	5.51	±9.6
10337 AAD 5G NR (DFT=-OFDM, 50% RB, 10MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.77 ±9.6 10383 AAC 5G NR (DFT=-OFDM, 50% RB, 10MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.82 ±9.6 10393 AAC 5G NR (DFT=-OFDM, 50% RB, 20MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.82 ±9.6 1041 AAC 5G NR (DFT=-OFDM, 50% RB, 20MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.83 ±9.6 10424 AAC 5G NR (DFT=-OFDM, 50% RB, 30MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.85 ±9.8 10444 AAD 5G NR (DFT=-OFDM, 50% RB, 5MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.81 ±9.6 10444 AAD 5G NR (DFT=-OFDM, 100% RB, 5MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.83 ±9.6 10444 AAC 5G NR (DFT=-OFDM, 100% RB, 50MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.83 ±9.6 10444 AAC 5G NR (DFT=-OFDM, 100% RB, 20MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.83 ±9.6 10444 AAC 5G NR (DFT=-OFDM, 100% RB, 20MHz, QPSK, 15KHz) 5G NR FR1 FDD 5.83 ±9.6 10444 AAC 5G NR (DFT=-OFDM, 100% RB, 20MHz, QPSK, 15KHz) 5G NR FR1 FDD				5G NR FR1 FDD	5.51	±9.6
10337 AD 5G NR (DFTs-OFDM, 50% RB, 10MHz, QPSK, 15KHz) 5G NR FRI FDD 5.77 ±9.6 10388 AAC 5G NR (DFTs-OFDM, 50% RB, 20MHz, QPSK, 15KHz) 5G NR FRI FDD 5.82 ±9.6 10391 AAC 5G NR (DFTs-OFDM, 50% RB, 20MHz, QPSK, 15KHz) 5G NR FRI FDD 5.82 ±9.6 10391 AAC 5G NR (DFTs-OFDM, 50% RB, 20MHz, QPSK, 15KHz) 5G NR FRI FDD 5.83 ±9.6 10394 AAC 5G NR (DFTs-OFDM, 50% RB, 30MHz, QPSK, 15KHz) 5G NR FRI FDD 5.95 ±9.6 10342 AAC 5G NR (DFTs-OFDM, 50% RB, 50MHz, QPSK, 15KHz) 5G NR FRI FDD 5.95 ±9.6 10344 AAD 5G NR (DFTs-OFDM, 100% RB, 50MHz, QPSK, 15KHz) 5G NR FRI FDD 5.81 ±9.6 10344 AAC 5G NR (DFTs-OFDM, 100% RB, 50MHz, QPSK, 15KHz) 5G NR FRI FDD 5.83 ±9.6 10344 AAC 5G NR (DFTs-OFDM, 100% RB, 20MHz, QPSK, 15KHz) 5G NR FRI FDD 5.83 ±9.6 10346 AAC 5G NR (DFTs-OFDM, 100% RB, 20MHz, QPSK, 15KHz) 5G NR FRI FDD 5.87 ±9.6 10346				5G NR FR1 FDD	5.90	±9.6
10938 AAC 5G NR (DFT-s-OFDM, 50%, RB, 15MHz, OPSK, 15KHz) 5G NR FRI FDD 5.82 ±9.6 10930 AAC 5G NR (DFT-s-OFDM, 50%, RB, 25MHz, QPSK, 15KHz) 5G NR FRI FDD 5.82 ±9.6 10940 AAC 5G NR (DFT-s-OFDM, 50%, RB, 25MHz, QPSK, 15KHz) 5G NR RFI FDD 5.83 ±3.6 10941 AAC 5G NR (DFT-s-OFDM, 50%, RB, 20MHz, QPSK, 15KHz) 5G NR RFI FDD 5.83 ±3.6 10942 AAD 5G NR (DFT-s-OFDM, 50%, RB, 50MHz, QPSK, 15KHz) 5G NR FRI FDD 5.85 ±9.6 10944 AAD 5G NR (DFT-s-OFDM, 100%, RB, 10MHz, QPSK, 15KHz) 5G NR FRI FDD 5.81 ±9.6 10944 AAD 5G NR (DFT-s-OFDM, 100%, RB, 10MHz, QPSK, 15KHz) 5G NR FRI FDD 5.83 ±3.6 10944 AAC 5G NR (DFT-s-OFDM, 100%, RB, 20MHz, QPSK, 15KHz) 5G NR FRI FDD 5.84 ±9.6 10948 AAC 5G NR (DFT-s-OFDM, 100%, RB, 20MHz, QPSK, 15KHz) 5G NR FRI FDD 5.87 ±9.6 10944 AAC 5G NR (DFT-s-OFDM, 100%, RB, 20MHz, QPSK, 15KHz) 5G NR FRI FDD 5.87 ±9.6				5G NR FR1 FDD	5.77	±9.6
1039 AAC G NR (DFT-OFDM, 50% RB, 20MHz, QPSK, 15kHz) G NR FR1 FDD 5.82 49.8 10340 AAC SG NR (DFT-OFDM, 50% RB, 20MHz, QPSK, 15kHz) SG NR FR1 FDD 5.83 49.8 10341 AAC SG NR (DFT-OFDM, 50% RB, 30MHz, QPSK, 15kHz) SG NR FR1 FDD 5.85 49.8 10342 AAC SG NR (DFT-OFDM, 50% RB, 30MHz, QPSK, 15kHz) SG NR FR1 FDD 5.85 49.8 10343 AAD SG NR (DFT-OFDM, 100% RB, 50MHz, QPSK, 15kHz) SG NR FR1 FDD 5.85 49.8 10344 AAD SG NR (DFT-OFDM, 100% RB, 50MHz, QPSK, 15kHz) SG NR FR1 FDD 5.81 49.8 10344 AAD SG NR (DFT-OFDM, 100% RB, 50MHz, QPSK, 15kHz) SG NR FR1 FDD 5.81 49.8 10344 AAC SG NR (DFT-OFDM, 100% RB, 20MHz, QPSK, 15kHz) SG NR FR1 FDD 5.87 49.8 10344 AAC SG NR (DFT-OFDM, 100% RB, 20MHz, QPSK, 15kHz) SG NR FR1 FDD 5.87 49.8 10345 AAC SG NR (DFT-OFDM, 100% RB, 20MHz, QPSK, 15kHz) SG NR FR1 FDD 5.87 49.8 10345 <				5G NR FR1 FDD	5.90	±9.6
10941 AAC 5G NR (DFTs-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.83 19.8 10942 AAC 5G NR (DFTs-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.85 19.6 10943 AAD 5G NR (DFTs-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.81 19.6 10944 AAD 5G NR (DFTs-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.85 19.6 10945 AAD 5G NR (DFTs-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.85 19.6 10946 AAC 5G NR (DFTs-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.87 19.6 10947 AAC 5G NR (DFTs-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.97 19.6 10949 AAC 5G NR (DFTs-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.92 19.6 10949 AAC 5G NR DL (PT-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.92 19.6 10948 AAC 5G NR DL (PT-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.92 19.6 <	10939	AAC	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.82	±9.6
10342 AAC SG NR (DFT-s-OFDM, 50% RB, 40 MHz, OPSK, 15 kHz) 5G NR FR1 FDD 5.85 ±9.6 10943 AAD 5G NR (DFT-s-OFDM, 00% RB, 50 MHz, OPSK, 15 kHz) 5G NR FR1 FDD 5.35 ±9.6 10944 AAD 5G NR (DFT-s-OFDM, 100% RB, 10 MHz, OPSK, 15 kHz) 5G NR FR1 FDD 5.85 ±9.6 10945 AAD 5G NR (DFT-s-OFDM, 100% RB, 10 MHz, OPSK, 15 kHz) 5G NR FR1 FDD 5.83 ±9.6 10947 AAC 5G NR (DFT-s-OFDM, 100% RB, 20 MHz, OPSK, 15 kHz) 5G NR FR1 FDD 5.87 ±9.6 10948 AAC 5G NR (DFT-s-OFDM, 100% RB, 20 MHz, OPSK, 15 kHz) 5G NR FR1 FDD 5.94 ±9.6 10949 AAC 5G NR (DFT-s-OFDM, 100% RB, 30 MHz, OPSK, 15 kHz) 5G NR FR1 FDD 5.87 ±9.6 10950 AAC 5G NR DL (OP-OFDM, 100% RB, 50 MHz, OPSK, 15 kHz) 5G NR FR1 FDD 5.92 ±9.6 10952 AAA 5G NR DL (OP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.25 ±9.6 10954 AAA 5G NR DL (OP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.23 ±9.6	10940	ĀAC	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.89	±9.6
10943 AAD 5G NR (DFTs-OFDM, 50% RB, 50MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.95 ±9.6 10944 AAD 5G NR (DFTs-OFDM, 100% RB, 5MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.81 ±9.6 10945 AAD 5G NR (DFTs-OFDM, 100% RB, 10Hz, QPSK, 15kHz) 5G NR FR1 FDD 5.85 ±9.6 10946 AAC 5G NR (DFTs-OFDM, 100% RB, 20 MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.83 ±9.6 10947 AAC 5G NR (DFTs-OFDM, 100% RB, 20 MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.87 ±9.6 10948 AAC 5G NR (DFTs-OFDM, 100% RB, 20 MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.84 ±9.6 10949 AAC 5G NR (DFTs-OFDM, 100% RB, 20 MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.87 ±9.6 10951 AAD 5G NR (DFTs-OFDM, 100% RB, 20 MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.92 ±9.6 10952 AAA 5G NR CFTs-OFDM, 100% RB, 20 MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.82 ±9.6 10951 AAD 5G NR FR1 FDD 5.87 ±9.6 10955 AAA 5G NR TR1 FDD 8.25	10941	AAC	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6
10944 AAD 5G NR (DFTa-OFDM, 100% RB, 5MHz, QPSK, 15KHz) 5G NR FRI FDD 5.81 ±9.6 10945 AAD 5G NR (DFTa-OFDM, 100% RB, 10MHz, QPSK, 15KHz) 5G NR FRI FDD 5.85 ±9.6 10946 AAC 5G NR (DFTa-OFDM, 100% RB, 15MHz, QPSK, 15KHz) 5G NR FRI FDD 5.87 ±9.6 10947 AAC 5G NR (DFTa-OFDM, 100% RB, 20 MHz, QPSK, 15KHz) 5G NR FRI FDD 5.87 ±9.6 10948 AAC 5G NR (DFTa-OFDM, 100% RB, 20 MHz, QPSK, 15KHz) 5G NR FRI FDD 5.84 ±9.6 10949 AAC 5G NR (DFTa-OFDM, 100% RB, 30 MHz, QPSK, 15KHz) 5G NR FRI FDD 5.94 ±9.6 10951 AAD 5G NR (DFTa-OFDM, 100% RB, 30 MHz, QPSK, 15KHz) 5G NR FRI FDD 5.92 ±9.6 10952 AAA 5G NR DL (CP-OFDM, 100% RB, 40 MHz, QPSK, 15KHz) 5G NR FRI FDD 5.92 ±9.6 10952 AAA 5G NR CRI FDD 5.92 ±9.6 10955 4AA 5G NR FRI FDD 8.12 5G NR FRI FDD 8.22 ±9.6 10954 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15KHz)<	10942	AAC	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10945 AAD 5G NR RDFTs-OFDM, 100% RB, 10MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.85 ±9.6 10946 AAC 5G NR (DFTs-OFDM, 100% RB, 15MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.87 ±9.6 10947 AAC 5G NR (DFTs-OFDM, 100% RB, 20MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.87 ±9.6 10948 AAC 5G NR (DFTs-OFDM, 100% RB, 20MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.94 ±9.6 10949 AAC 5G NR (DFTs-OFDM, 100% RB, 20MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.94 ±9.6 10950 AAC 5G NR (DFTs-OFDM, 100% RB, 50MHz, QPSK, 15kHz) 5G NR FR1 FDD 5.92 ±9.6 10951 AAD 5G NR R0 (DFTs-OFDM, 100% RB, 50MHz, QPSK, 15kHz) 5G NR FR1 FDD 8.15 ±9.6 10952 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15kHz) 5G NR FR1 FDD 8.15 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15kHz) 5G NR FR1 FDD 8.14 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30kHz) 5G NR FR1 FDD 8.14 ±9.6 <	10943	AAD	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	±9.6
10946 AAC 5G NR (DFT=-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz) 5G NR FR1 FDD 5.83 ±9.6 10947 AAC 5G NR (DFT=-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) 5G NR FR1 FDD 5.94 ±9.6 10948 AAC 5G NR (DFT=-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz) 5G NR FR1 FDD 5.94 ±9.6 10949 AAC 5G NR (DFT=-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) 5G NR FR1 FDD 5.94 ±9.6 10950 AAC 5G NR (DFT=-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) 5G NR FR1 FDD 5.92 ±9.6 10951 AAD 5G NR (DFT=-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz) 5G NR FR1 FDD 8.25 ±9.6 10952 AAA 5G NR CH FR1 FDD 8.24 ±9.6 10953 AAA 5G NR TR1 FDD 8.23 ±9.6 10952 AAA 5G NR CH FR1 FDD 8.23 ±9.6 10956 AAA 5G NR FR1 FDD 8.23 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.44 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 5 M	10944	AAD	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	±9.6
10947 AAC 5G NR [DFTs-OFDM, 100% RB, 20MHz, QPSK, 15 KHz] 5G NR FR1 FDD 5.87 ±9.6 10948 AAC 5G NR [DFTs-OFDM, 100% RB, 25 MHz, QPSK, 15 KHz] 5G NR FR1 FDD 5.94 ±9.6 10949 AAC 5G NR (DFTs-OFDM, 100% RB, 30 MHz, QPSK, 15 KHz) 5G NR FR1 FDD 5.87 ±9.6 10950 AAC 5G NR (DFTs-OFDM, 100% RB, 40 MHz, QPSK, 15 KHz) 5G NR FR1 FDD 5.92 ±9.6 10951 AAD 5G NR (DFTs-OFDM, 100% RB, 40 MHz, QPSK, 15 KHz) 5G NR FR1 FDD 6.25 ±9.6 10952 AAA 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 KHz) 5G NR FR1 FDD 8.15 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 KHz) 5G NR FR1 FDD 8.42 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.14 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.31 ±9.6 </td <td>10945</td> <td>AAD</td> <td>5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)</td> <td>5G NR FR1 FDD</td> <td>5.85</td> <td>±9.6</td>	10945	AAD	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10948 AAC 5G NR (DFTs-OFDM, 100% RB, 25MHz, QPSK, 15 KHz) 5G NR FR1 FDD 5.94 ±9.6 10949 AAC 5G NR (DFTs-OFDM, 100% RB, 30 MHz, QPSK, 15 KHz) 5G NR FR1 FDD 5.87 ±9.6 10950 AAC 5G NR (DFTs-OFDM, 100% RB, 50 MHz, QPSK, 15 KHz) 5G NR FR1 FDD 5.94 ±9.6 10951 AAD 5G NR DL (DFTs-OFDM, 100% RB, 50 MHz, QPSK, 15 KHz) 5G NR FR1 FDD 6.25 ±9.6 10952 AAA 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 KHz) 5G NR FR1 FDD 8.25 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 KHz) 5G NR FR1 FDD 8.15 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.14 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.31 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.31 ±9.6	10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6
10949 AAC 5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.87 ±9.6 10950 AAC 5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.94 ±9.6 10951 AAD 5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 15 kHz) 5G NR FRI FDD 5.92 ±9.6 10952 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15 kHz) 5G NR FRI FDD 8.15 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR FRI FDD 8.23 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR FRI FDD 8.14 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR FRI FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30 kHz) 5G NR FRI FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30 kHz) 5G NR FRI FDD 8.31 ±9.6 10958 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30 kHz) 5G NR FRI FDD 8.33 ±9.6 <	10947	AAC	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10950 AAC 5G NR (DFTs-OFDM, 100% RB, 40 MHz, QPSK, 15 KHz) 5G NR FR1 FDD 5.94 ±9.6 10951 AAD 5G NR (DFTs-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz) 5G NR FR1 FDD 5.92 ±9.6 10952 AAA 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.25 ±9.6 10953 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.15 ±9.6 10954 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.23 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.42 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.31 ±9.6 10958 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.33 ±9.6 10959 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.33 ±9.6 10960 AAE 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QA	10948	AAC	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10951 AAD 5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 KHz) 5G NR FR1 FDD 5.92 ±9.6 10952 AAA 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 KHz) 5G NR FR1 FDD 8.25 ±9.6 10953 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 KHz) 5G NR FR1 FDD 8.15 ±9.6 10954 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 KHz) 5G NR FR1 FDD 8.23 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 KHz) 5G NR FR1 FDD 8.42 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.14 ±9.6 10958 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.31 ±9.6 10959 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 KHz) 5G NR FR1 FDD 8.33 ±9.6 10959 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 KHz) 5G NR FR1 TDD 9.32 ±9.6 10960 AAE 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64	10949	AAC	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)			
10952 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15kHz) 5G NR FR1 FDD 8.25 ±9.6 10953 AAA 5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15kHz) 5G NR FR1 FDD 8.15 ±9.6 10954 AAA 5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 15kHz) 5G NR FR1 FDD 8.42 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 35kHz) 5G NR FR1 FDD 8.14 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30kHz) 5G NR FR1 FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 30kHz) 5G NR FR1 FDD 8.31 ±9.6 10958 AAA 5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 30kHz) 5G NR FR1 FDD 8.61 ±9.6 10959 AAA 5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 30kHz) 5G NR FR1 FDD 9.32 ±9.6 10960 AAE 5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15kHz) 5G NR FR1 TDD 9.32 ±9.6 10961 AAC 5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15kHz) 5G NR FR1 TDD 9.40 ±9.6 <t< td=""><td>10950</td><td>AAC</td><td>5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)</td><td>5G NR FR1 FDD</td><td></td><td></td></t<>	10950	AAC	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD		
10953 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.15 ±9.6 10954 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.23 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.14 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.31 ±9.6 10958 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.31 ±9.6 10959 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.33 ±9.6 10960 AAE 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.32 ±9.6 10961 AAE 5G NR DL (CP-OFDM, TM 3.1, 10 HHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.32 ±9.6 10962 AAB 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.40 ±9.6 10964 AAE 5G NR DL (CP-OFDM, TM 3.1, 10 MHz,			5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)			
10954 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.23 ±9.6 10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.42 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.31 ±9.6 10958 AAA 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.31 ±9.6 10958 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.61 ±9.6 10959 AAA 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.32 ±9.6 10960 AAE 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.32 ±9.6 10961 AAC 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.36 ±9.6 10962 AAB 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR FR1 TDD 9.55 ±9.6<	10952	AAA			8.25	
10955 AAA 5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 15 kHz) 5G NR FR1 FDD 8.42 ±9.6 10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.31 ±9.6 10958 AAA 5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.61 ±9.6 10959 AAA 5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.33 ±9.6 10960 AAE 5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.32 ±9.6 10961 AAC 5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.32 ±9.6 10962 AAB 5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.36 ±9.6 10963 AAC 5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 30 kHz) 5G NR FR1 TDD 9.40 ±9.6 10964 AAE 5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 30 kHz) 5G NR FR1 TDD 9.37 ±9.6 <		AAA				
10956 AAA 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.14 ±9.6 10957 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.31 ±9.6 10958 AAA 5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.61 ±9.6 10959 AAA 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR FR1 FDD 8.33 ±9.6 10960 AAE 5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz) 5G NR FR1 TDD 9.32 ±9.6 10961 AAC 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.36 ±9.6 10962 AAB 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz) 5G NR FR1 TDD 9.40 ±9.6 10962 AAB 5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz) 5G NR FR1 TDD 9.40 ±9.6 10963 AAC 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR FR1 TDD 9.40 ±9.6 10964 AAE 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz) 5G NR FR1 TDD 9.29 ±9.6 10965 AAC 5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QA		AAA				
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10981 AAA ULLA HDRp4 ULLA 3.19 ±9.6						
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	10982	AAA	ULLA HDRp8	ULLA	3.43	±9.6

UID	Rev	Communication System Name	Group	PAR (dB)	$Unc^E k = 2$
10983	AAC	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.31	±9.6
10984	AAB	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.42	±9.6
10985	AAC	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.54	±9.6
10986	AAB	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.50	±9.6
10987	AAC	5G NR DL (CP-OFDM, TM 3.1, 60 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.53	±9.6
10988	AAB	5G NR DL (CP-OFDM, TM 3.1, 70 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.38	±9.6
10989	AAC	5G NR DL (CP-OFDM, TM 3.1, 80 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.33	±9.6
10990	AAB	5G NR DL (CP-OFDM, TM 3.1, 90 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.52	±9.6
11 003	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	10.24	±9.6
11004	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	10.73	±9.6
11005	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.70	±9.6
11006	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.55	±9.6
11007	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.46	±9.6
11008	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.51	±9.6
11009	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.76	±9.6
11010	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.95	±9.6
11011	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.96	±9.6
11012	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	6.68	±9.6
11013	AAB	IEEE 802.11be (320 MHz, MCS1, 99pc duty cycle)	WLAN	8.47	±9.6
11014	AAB	IEEE 802.11be (320 MHz, MCS2, 99pc duty cycle)	WLAN	8.45	±9.6
11015	AAB	IEEE 802.11be (320 MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6
11016	AAB	IEEE 802.11be (320 MHz, MCS4, 99pc duty cycle)	WLAN	8.44	±9.6
11017	AAB	IEEE 802.11be (320 MHz, MCS5, 99pc duty cycle)	WLAN	8.41	±9.6
11018	AAB	IEEE 802.11be (320 MHz, MCS6, 99pc duty cycle)	WLAN	8.40	±9.6
11019	AAB	IEEE 802.11be (320 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
11020	AAB	IEEE 802.11be (320 MHz, MCS8, 99pc duty cycle)	WLAN	8.27	±9.6
11021	AAB	IEEE 802.11be (320 MHz, MCS9, 99pc duty cycle)	WLAN	8.46	±9.6
11022	AAB	IEEE 802.11be (320 MHz, MCS10, 99pc duty cycle)	WLAN	8.36	±9.6
11023	AAB	IEEE 802.11be (320 MHz, MCS11, 99pc duty cycle)	WLAN	8.09	±9.6
11024	AAB	IEEE 802.11be (320 MHz, MCS12, 99pc duty cycle)	WLAN	8.42	±9.6
11025	AAB	IEEE 802.11be (320 MHz, MCS13, 99pc duty cycle)	WLAN	8.37	±9.6
11026	AAB	IEEE 802.11be (320 MHz, MCS0, 99pc duty cycle)	WLAN	8.39	±9.6

^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Calibration Laboratory of Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client Element Columbia, USA

Certificate No. 5G-Veri10-1004_Aug24

CALIBRATION CERTIFICATE

Object	5G Verification S	Source 10 GHz - SN: 1004	
	QA CAL-45.v5 Calibration proce	edure for sources in air above 6 Gł	Ηz
Calibration date:	August 06, 2024		
		ional standards, which realize the physical units probability are given on the following pages and	
All calibrations have been conducted	in the closed laborato	ry facility: environment temperature (22 ± 3)°C	and humidity < 70%.
Calibration Equipment used (M&TE o	critical for calibration)		
Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration
Reference Probe EUmmWV3	SN: 9374	04-Dec-23 (No. EUmm-9374_Dec23)	Dec-24
DAE4ip	SN: 1602	08-Nov-23 (No. DAE4ip-1602_Nov23)	Nov-24
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator R&S SMF100A	SN: 100184	29-Nov-23 (in house check Nov-23)	In house check: Nov-24
Power sensor R&S NRP18S-10	SN: 101258	29-Nov-23 (in house check Nov-23)	In house check: Nov-24
Network Analyzer Keysight E5063A	SN: MY54504221	31-Oct-19 (in house check Oct-22)	In house check: Oct-25
	Name	Function	Signature
Calibrated by:	Joanna Lleshaj	Laboratory Technician	Lulul leal
Approved by:	Sven Kühn	Technical Manager	C2-
This collibration contificate shall not be	- concoduced event in	full without written approval of the laboratory.	Issued: August 6, 2024



mm

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Accreditation No.: SCS 0108

Glossary

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CW

Continuous wave

Calibration is Performed According to the Following Standards

- Internal procedure QA CAL-45, Calibration procedure for sources in air above 6 GHz.
- IEC/IEEE 63195-1, "Assessment of power density of human exposure to radio frequency fields from wireless devices in close proximity to the head and body (frequency range of 6 GHz to 300 GHz)", May 2022

Methods Applied and Interpretation of Parameters

- Coordinate System: z-axis in the waveguide horn boresight, x-axis is in the direction of the E-field, y-axis normal to the others in the field scanning plane parallel to the horn flare and horn flange.
- Measurement Conditions: (1) 10 GHz: The radiated power is the forward power to the horn antenna minus ohmic and mismatch loss. The forward power is measured prior and after the measurement with a power sensor. During the measurements, the horn is directly connected to the cable and the antenna ohmic and mismatch losses are determined by farfield measurements. (2) 30, 45, 60 and 90 GHz: The verification sources are switched on for at least 30 minutes. Absorbers are used around the probe cub and at the ceiling to minimize reflections.
- Horn Positioning: The waveguide horn is mounted vertically on the flange of the waveguide source to allow vertical positioning of the EUmmW probe during the scan. The plane is parallel to the phantom surface. Probe distance is verified using mechanical gauges positioned on the flare of the horn.
- *E- field distribution:* E field is measured in two x-y-plane (10mm, 10mm + $\lambda/4$) with a vectorial E-field probe. The E-field value stated as calibration value represents the E-fieldmaxima and the averaged (1cm² and 4cm²) power density values at 10mm in front of the horn.
- Field polarization: Above the open horn, linear polarization of the field is expected. This is verified graphically in the field representation.

Calibrated Quantity

Local peak E-field (V/m) and average of peak spatial components of the poynting vector (W/m^2) averaged over the surface area of 1 cm² and 4cm² at the nominal operational frequency of the verification source. Both square and circular averaging results are listed.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY8 Module mmWave	V3.2
Phantom	5G Phantom	
Distance Horn Aperture - plane	10 mm	
Number of measured planes	2 (10mm, 10mm + λ/4)	
Frequency	10 GHz ± 10 MHz	

Calibration Parameters, 10 GHz

Circular Averaging

Distance Horn Aperture to Measured Plane	Prad ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density Avg (psPDn+, psPDtot+, psPDmod+) (W/m ²)		Uncertainty (k = 2)
				1 cm ²	4 cm ²	
10 mm	93.3	153	1.27 dB	60.9	56.9	1.28 dB

Distance Horn Aperture to Measured Plane	Prad ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Power Density psPDn+, psPDtot+, psPDmod+ (W/m²)		Uncertainty (k = 2)
				1 cm ²	4 cm ²	
10 mm	93.3	153	1.27 dB	60.8, 60.9, 61.1	56.7, 56.9, 57.1	1.28 dB

Square Averaging

Distance Horn Aperture to Measured Plane	Prad¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	y Avg Power Density Avg (psPDn+, psPDtot+, psPDmod+) (W/m ²)		Uncertainty (k = 2)
				1 cm ²	4 cm ²	
10 mm	93.3	153	1.27 dB	60.9	56.8	1.28 dB

Distance Horn Aperture to Measured Plane	Prad ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Power Density psPDn+, psPDtot+, psPDmod+ (W/m²)		Uncertainty (k = 2)
				1 cm ²	4 cm ²	
10 mm	93.3	153	1.27 dB	60.8, 60.9, 61.1	56.6, 56.8, 57.0	1.28 dB

Max Power Density

Distance Horn Aperture to Measured Plane	Prad ¹ (mW)	Max E-fleid (V/m)	Uncertainty (k = 2)	Max Power Density Sn, Stot, Stot (W/m²)	Uncertainty (k = 2)
10 mm	93.3	153	1.27 dB	62.4, 62.4, 62.6	1.28 dB

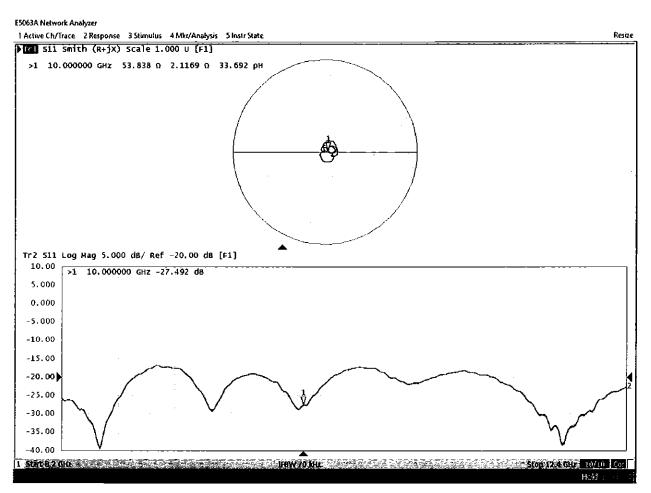
 $^{^{\}rm 1}$ Assessed onmic and mismatch loss plus numerical offset: 0.30 dB

Appendix (Additional assessments outside the scope of SCS 0108)

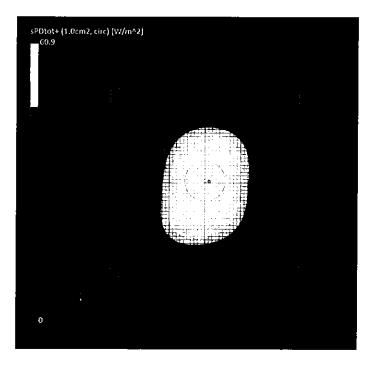
Antenna Parameters

Impedance, transformed to feed point	53.8 Ω + 2.1 jΩ
Return Loss	- 27.5 dB

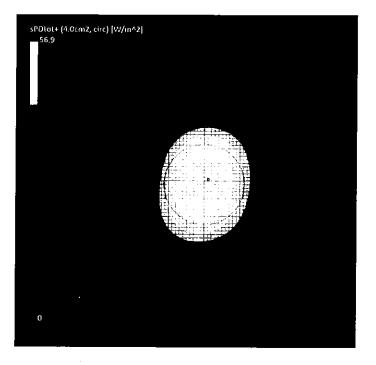
Impedance Measurement Plot



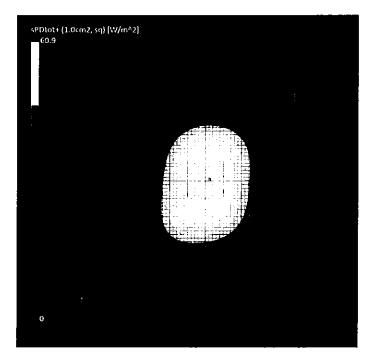
Device under Test Proj Name, Manufacturer 5G Verification Source 10 G		Dimensions (mm 100.0 x 100.0 x 1	•	IMEI SN: 10	04	DU T Typ e -	
Exposure Conditions Phantom Section	Positio	n, Test Distance	Band	Gro	oup,	Frequency (MHz),	Conversion Factor
	[mm]	-			.,	Channel Number	
5G -	10.0 mi	n	Validation band	cw		10000.0, 10000	1.0
Hardware Setup							
Phantom mmWave Phantom - 1002		Medium Air			Probe, Callbration Da EUmmWV3 - SN9374_ 2023-12-04		DAE, Calibration Date DAE4ip Sn1602, 2023-11-08
Scan Setup					Measurement Re	sults	
			5G S	Scan			5G Scan
Sensor Surface [mm]				10.0	Date		2024-08-06, 10:05
MAIA			MAIA not u	ised	Avg. Area [cm ²]		1.00
					Avg. Type psPDn+ (W/m²)		Circular Averaging 60.8
					psPDtot+ [W/m ²]		60.9
					psPDmod+ (W/m ²)		61.1
					Max(5n) [W/m ²]		62.4
					Max(Stot) [W/m ²]		62.4
					Max([Stot]) [W/m ²]		62.6
					E _{max} [V/m] Power Drift [dB]		153 -0.01



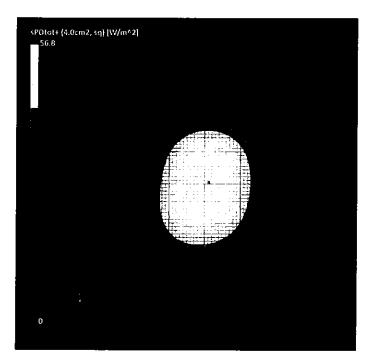
Device under Test Proj Name, Manufacturer 5G Verification Source 10 C		Dimensions (mm 100.0 x 100.0 x 1	-	IMEI SN: 10	004	DUT Type -	
Exposure Conditions	Position	, Test Distance	Band	Gro	oup,	Frequency [MHz],	Conversion Factor
	[mm]	,	54112		·~p)	Channel Number	
5 G -	10.0 mm	I	Validation band	cw		10000.0, 10000	1.0
Hardware Setup		.					
Phantom mmWave Phantom - 1002		Medium Air			Probe, Calibration Da EUmmWV3 - SN9374_ 2023-12-04		DAE, Callbration Date DAE4ip Sn1602, 2023-11-08
Scan Setup					Measurement Re	sults	
			5G S	Scan			5G Scan
Sensor Surface [mm]				10.0	Date		2024-08-06, 10:05
MAIA			MAIA not ι	ised	Avg. Area [cm²]		4.00
					Avg. Type psPDn+ (W/m²]		Circular Averaging 56.7
					psPDtot+ (W/m ²)		56.9
					psPDmod+ (W/m ²)		57.1
					Max(Sn) [W/m ²]		62.4
					Max(Stot) [W/m²]		62.4
					Max(Stot) [W/m ²]		62.6
					E _{max} [V/m] Rower Drift [dB]		153 -0.01
					Power Drift [dB]		-0.01



Device under Test Prop Name, Manufacturer 5G Verification Source 10 G	Dimensions (mr	-	IMEI SN: 100	04	DUT Type -	
Exposure Conditions Phantom Section	Position, Test Distance	Band	Gro	up,	Frequency (MHz),	Conversion Factor
	[mm]			-	Channel Number	
5G -	10.0 mm	Validation band	CW		10000.0, 10000	1.0
Hardware Setup						
Phantom mmWave Phantom - 1002	Medlu m Air			Probe, Calibration Da EUmmWV3 - SN9374_ 2023-12-04		DAE, Calibration Date DAE4ip Sn1602, 2023-11-08
Scan Setup				Measurement Re	sults	
		5G \$	ican			5G Scan
Sensor Surface [mm]			10.0	Date		2024-08-06, 10:05
MAIA		MAIA not u	ised	Avg. Area [cm²]		1.00
				Avg. Type psPDn+ [W/m²]		Square Averaging 60.8
				psPDtot+ (W/m ²)		60.9
				psPDmod+ [W/m ²]		61.1
				Max(Sn) [W/m ²]		62.4
				Max(Stot) [W/m ²]		62.4
				Max(Stot)[W/m²]		62.6
				E _{max} [V/m] Power Drift [dB]		153 -0.01



Device under Test Prop Name, Manufacturer 5G Verification Source 10 G		Dimensions [mm 100.0 x 100.0 x 1	-	IMEI SN: 10	04	DUT Type -	
Exposure Conditions							
Phantom Section	Positio [mm]	n, Test Distance	Band	Gro	up,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mi	m	Validation band	l cw		10000.0, 10000	1.0
Hardware Setup							
Phantom mmWave Phantom - 1002		Medium Air			Probe, Calibration Dat EUmmWV3 - SN9374_ 2023-12-04		DAE, Calibration Date DAE4ip Sn1602, 2023-11-08
Scan Setup					Measurement Re	sults	
				Scan			5G Scan
Sensor Surface [mm]				10.0	Date		2024-08-06, 10:05
MAIA			MAIA not u	used	Avg. Area [cm ²]		4.00
					Avg. Type		Square Averaging
					psPDn+ [W/m²] psPDtot+ [W/m²]		56.6 56.8
					psPDmod+ [W/m ²]		57.0
					Max(Sn) [W/m ²]		62.4
					Max(Stot) [W/m ²]		62.4
					Max(Stot) [W/m ²]		62.6
					E _{max} [V/m]		153
					Power Drift [dB]		-0.01



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Certificate No. D5GHzV2-1163_Jun24

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client Element Morgan Hill, USA

CALIBRATION CERTIFICATE					
Object	D5GHzV2 - SN:"	1163	V YW 6/25/7		
Calibration procedure(s)	QA CAL-22.v7 Calibration Proce	edure for SAR Validation Sourc	es between 3-10 GHz		
Calibration date:	June 12, 2024				
		onal standards, which realize the physical uncertain the physical of the physical of the standards of the st			
All calibrations have been conduct	ed in the closed laborator	ry facility: environment temperature (22 ± 3)°C and humidity < 70%.		
Calibration Equipment used (M&TE		, , , , , , , , , , , , , , , , , , ,	,, , , , , , , , , , , , , , , ,		
Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration		
Power meter NRP2	SN: 104778	26-Mar-24 (No. 217-04036/04037)	Mar-25		
Power sensor NRP-Z91	SN: 103244	26-Mar-24 (No. 217-04036)	Mar-25		
Power sensor NRP-Z91	SN: 103245	26-Mar-24 (No. 217-04037)	Mar-25		
Reference 20 dB Attenuator	SN: BH9394 (20k)	26-Mar-24 (No. 217-04046)	Mar-25		
Type-N mismatch combination	SN: 310982 / 06327	26-Mar-24 (No. 217-04047)	Mar-25		
Reference Probe EX3DV4	SN: 3503	07-Mar-24 (No. EX3-3503_Mar24)	Mar-25		
DAE4	SN: 601	22-May-24 (No. DAE4-601_May24)	May-25		
Secondary Standards	D#	Check Date (in house)	Scheduled Check		
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-22)	In house check: Oct-24		
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24		
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24		
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	In house check: Oct-24		
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24		
	Name	Function	Signature		
Calibrated by:	Paulo Pina	Laboratory Technician			
			TEACTER		
Approved by:	Sven Kühn	Technical Manager	Alestit		

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Issued: June 13, 2024

Calibration Laboratory of

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Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



Schweizerischer Kalibrierdienst

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Swiss Calibration Service

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Accreditation No.: SCS 0108

Glossary:	
TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- Electrical Delay: One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power. 8
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom V5.0	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	5250 MHz ± 1 MHz 5600 MHz ± 1 MHz 5750 MHz ± 1 MHz 5850 MHz ± 1 MHz	

Head TSL parameters at 5250 MHz The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.9	4.71 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	36.3 ± 6 %	4.60 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	•••••	

SAR result with Head TSL at 5250 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.95 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	79.6 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.26 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.6 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5600 MHz

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.5	5.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.6 ± 6 %	4.97 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5600 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.28 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	82.8 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.34 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.4 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5750 MHz The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.4	5.22 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.4 ± 6 %	5.14 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5750 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.12 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	81.1 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.30 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.0 W/kg ± 19.5 % (k=2)

Head TSL parameters at 5850 MHz The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	35.2	5.32 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.3 ± 6 %	5.24 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL at 5850 MHz

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.90 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	79.0 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.22 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	22.2 W/kg ± 19.5 % (k=2)

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Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL at 5250 MHz

Impedance, transformed to feed point	45.9 Ω - 5.0 jΩ
Return Loss	- 23.4 dB

Antenna Parameters with Head TSL at 5600 MHz

Impeda	ance, transformed to feed point	48.8 Ω + 2.7 jΩ
Return	Loss	- 30.6 dB

Antenna Parameters with Head TSL at 5750 MHz

Impedance, transformed to feed point	56.4 Ω - 1.5 jΩ
Return Loss	- 24.2 dB

Antenna Parameters with Head TSL at 5850 MHz

Impedance, transformed to feed point	59.5 Ω + 1.4 jΩ
Return Loss	- 21.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.165 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 12.06.2024

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1163

Communication System: UID 0 - CW; Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz, Frequency: 5850 MHz Medium parameters used: f = 5250 MHz; $\sigma = 4.6$ S/m; $\varepsilon_r = 36.3$; $\rho = 1000$ kg/m³ Medium parameters used: f = 5600 MHz; $\sigma = 4.97$ S/m; $\varepsilon_r = 35.6$; $\rho = 1000$ kg/m³ Medium parameters used: f = 5750 MHz; $\sigma = 5.14$ S/m; $\varepsilon_r = 35.4$; $\rho = 1000$ kg/m³ Medium parameters used: f = 5850 MHz; $\sigma = 5.24$ S/m; $\varepsilon_r = 35.3$; $\rho = 1000$ kg/m³ Medium parameters used: f = 5850 MHz; $\sigma = 5.24$ S/m; $\varepsilon_r = 35.3$; $\rho = 1000$ kg/m³ Medium parameters used: f = 5850 MHz; $\sigma = 5.24$ S/m; $\varepsilon_r = 35.3$; $\rho = 1000$ kg/m³

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(5.39, 5.39, 5.39) @ 5250 MHz, ConvF(5, 5, 5) @ 5600 MHz, ConvF(4.98, 4.98, 4.98) @ 5750 MHz, ConvF(4.89, 4.89, 4.89) @ 5850 MHz; Calibrated: 07.03.2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 22.05.2024
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5250 MHz/Zoom Scan,

dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 75.03 V/m; Power Drift = 0.03 dB Peak SAR (extrapolated) = 27.6 W/kg SAR(1 g) = 7.95 W/kg; SAR(10 g) = 2.26 W/kg Smallest distance from peaks to all points 3 dB below = 7.2 mm Ratio of SAR at M2 to SAR at M1 = 69.7% Maximum value of SAR (measured) = 17.9 W/kg

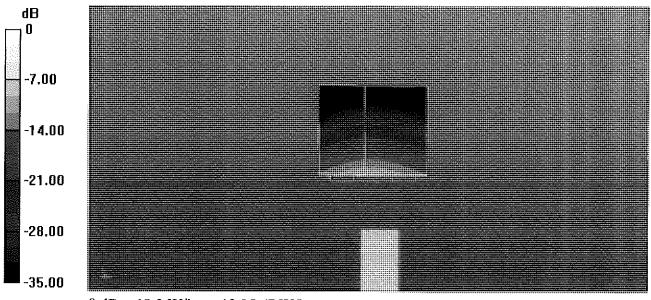
Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 74.93 V/m; Power Drift = 0.02 dB Peak SAR (extrapolated) = 31.5 W/kg SAR(1 g) = 8.28 W/kg; SAR(10 g) = 2.34 W/kg Smallest distance from peaks to all points 3 dB below = 7.2 mm Ratio of SAR at M2 to SAR at M1 = 66.9%

Maximum value of SAR (measured) = 19.3 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 72.50 V/m; Power Drift = 0.08 dB Peak SAR (extrapolated) = 32.1 W/kg SAR(1 g) = 8.12 W/kg; SAR(10 g) = 2.30 W/kg Smallest distance from peaks to all points 3 dB below = 7.2 mm Ratio of SAR at M2 to SAR at M1 = 65.4%Maximum value of SAR (measured) = 19.2 W/kg

Dipole Calibration for Head Tissue/Pin=100mW, dist=10mm, f=5850 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 71.84 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 32.3 W/kgSAR(1 g) = 7.90 W/kg; SAR(10 g) = 2.22 W/kgSmallest distance from peaks to all points 3 dB below = 7.2 mmRatio of SAR at M2 to SAR at M1 = 64.4%Maximum value of SAR (measured) = 18.8 W/kg



0 dB = 19.3 W/kg = 12.85 dBW/kg

Impedance Measurement Plot for Head TSL

<u>File Vie</u>	w <u>C</u> hannel Sw <u>e</u> ep	Calibration <u>Trace S</u> ca	le M <u>a</u> rker System	<u>W</u> indow <u>H</u> elp		
Eile Vier	w <u>Channel Sweep</u>	Calibration <u>Trace</u> <u>S</u> ca	le Marker System	<u>₩indow Help</u> 1: 2: 3: >4: R:	5.250000 GHz 6.0353 pF 5.600000 GHz 75.944 pH 5.750000 GHz 18.340 pF 5.850000 GHz 38.145 pH 5.500000 GHz	45.923 0 \$.0226 0 48.798 0 2.6722 0 56.366 0 -1.5092 0 59.507 0 1.4022 0 34.820 mU 105.71 *
10.00 5.00 0.00 -5.00	Ch 1 Avg = 20 Start 5,00000 GHz				\$tep 5.250000 GHz 5.700000 GHz 5.250000 GHz 5.350000 GHz	6.00000 GHz -23.434 dB -20.560 dB -24.222 dB -21.136 dB
-10.00 -15.00 -20.00 -25.00 -30.00 -35.00 -40.00 Ch1: 5	Ch 1 Avg = 20 Start 5.00000 GHz	1				6.00000 GHz

Calibration Laboratory of Schweizerischer Kalibrierdienst S Schmid & Partner Service suisse d'étalonnage С Engineering AG Servizio svizzero di taratura S Zeughausstrasse 43, 8004 Zurich, Switzerland Swiss Calibration Service Accreditation No.: SCS 0108 Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates Element Certificate No. D6.5GHzV2-1019 Oct24 Client Morgan Hill, USA CALIBRATION CERTIFICATE W 10/22/24 Object D6.5GHzV2 - SN:1019 Calibration procedure(s) na nai .77...7 Labrahan Pincolung in 1944 yangatan Perusa nakaan (-1016 October 10, 2024 Calibration date: This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate. All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%. Calibration Equipment used (M&TE critical for calibration) **Primary Standards** ID # Cal Date (Certificate No.) Scheduled Calibration SN: 100967 Power sensor R&S NRP33T 28-Mar-24 (No. 217-04038) Mar-25 Reference 20 dB Attenuator SN: BH9394 (20k) 26-Mar-24 (No. 217-04046) Mar-25 Mismatch combination SN: 84224 / 360D 28-Mar-24 (No. 217-04050) Mar-25 Reference Probe EX3DV4 SN: 7405 01-Jul-24 (No. EX3-7405_Jul24) Jul-25 DAE4 SN: 908 27-Mar-24 (No. DAE4-908 Mar24) Mar-25 Secondary Standards ID # Check Date (in house) Scheduled Check RF generator Anapico APSIN20G SN: 827 18-Dec-18 (in house check Jan-24) In house check: Jan-25 Power sensor NRP-Z23 SN: 100169 10-Jan-19 (in house check Jan-24) In house check: Jan-25 Power sensor NRP-18T SN: 100950 28-Sep-22 (in house check Jan-24) In house check: Jan-25 Network Analyzer Keysight E5063A SN:MY54504221 31-Oct-19 (in house check Sep-24) In house check: Sep-26

	Name	Function	Signature
Calibrated by:	Aidonia Georgiadou	Laboratory Technician	AT CONTRACT
			NE
Approved by:	Sven Kühn	Technical Manager	
		recimical manager	j.A. A. Kobal
			Issued: October 11, 2024
This calibration certificate sh	all not be reproduced except in full w	ithout written approval of the lab	pratory.

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range Of 4 MHz To 10 GHz)", October 2020.

Additional Documentation:

b) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power. 0
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.
- The absorbed power density (APD): The absorbed power density is evaluated according to Samaras T, Christ A, Kuster N, "Compliance assessment of the epithelial or absorbed power density above 6 GHz using SAR measurement systems", Bioelectromagnetics, 2021 (submitted). The additional evaluation uncertainty of 0.55 dB (rectangular distribution) is considered.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Accreditation No.: SCS 0108

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY6	V16.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	5 mm	with Spacer
Zoom Scan Resolution	dx, dy = 3.4 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	6500 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	34.5	6.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	34.5 ± 6 %	6.18 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	30.0 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	300 W/kg ± 24.7 % (k=2)

SAR averaged over 8 cm ³ (8 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.72 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	67.2 W/kg ± 24.4 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	5.51 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	55.1 W/kg ± 24.4 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	49.6 Ω - 5.5 jΩ
Return Loss	- 25.1 dB

APD (Absorbed Power Density)

APD averaged over 1 cm ²	Condition	
APD measured	100 mW input power	299 W/m ²
APD measured	normalized to 1W	2990 W/m² ± 29.2 % (k=2)

APD averaged over 4 cm ²	condition	
APD measured	100 mW input power	134 W/m²
APD measured	normalized to 1W	1340 W/m² ± 28.9 % (k=2)

*The reported APD values have been derived using the psSAR1g and psSAR8g.

General Antenna Parameters and Design

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

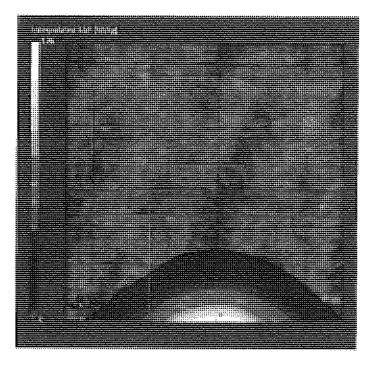
Additional EUT Data

Manufactured by	SPEAG

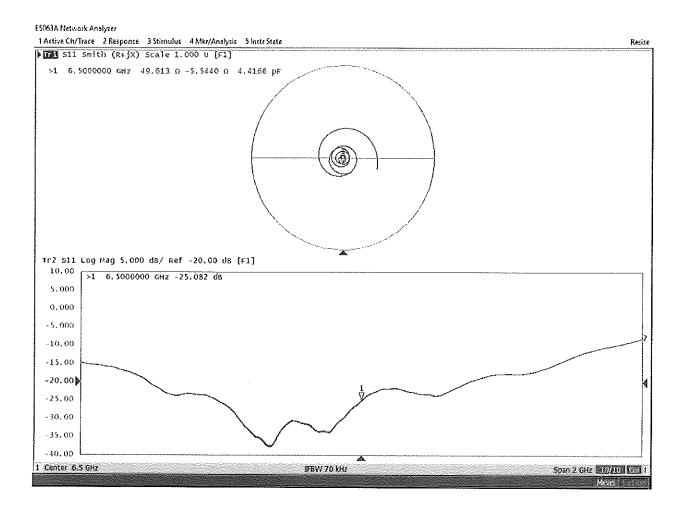
DASY6 Validation Report for Head TSL

Measurement Report for D6.5GHz-1019, UID 0 -, Channel 6500 (6500.0MHz)

Device under T	est Properties						
Name, Manufa	icturer Di	mensions	[mm] I	MEI	DUT Ty	pe	
D6.5GHz	1	6.0 x 6.0 x 3	300.0 S	N: 1019	-		
Exposure Cond	litions						
Phantom Section, TSL	Position, Test Distance	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Cond. [S/m]	TSL Permittivity
	[mm]		· · · · · · · · · · · · · · · ·				
Flat, HSL	5.00	Band	CW,	6500	5.14	6,18	34.5
Hardware Setu	p						
Phantom		SL		Probe, Call	bration Date	DAE, Calib	oration Date
MFP V8.0 Cente	er-1182 H	BBL600-10	000∨6	EX3DV4 - 51	N7405, 2024-07-01	. DAE4 Sn90	08, 2024-03-27
Scan Setup				Measureme	ent Results		
			Zoom Sca	n			Zoom Scan
Grid Extents (I	mm]		22.0 x 22.0 x 22.0	D Date		2	024-10-10, 12:55
Grid Steps [mi	m]		3.4 x 3.4 x 1.4	4 psSAR1g [\	W/Kg]		30.0
5ensor Surface	e (mm)		1.4	4 psSAR8g [\	W/Kg]		6.72
Graded Grid			Ye	s psSAR10g	[W/Kg]		5.51
Grading Rati o			1.4				0.00
MAIA			N//	A Power Sca	ling		Disabled
Surface Detec	tion		VM5 + 6	Scaling Fac	tor [dB]		
S c an Method			Measured	d TSL Correc	tion		No correction
				M2/M1 [%	5]		49.4
				Dist 3dB P	-		4.4



Impedance Measurement Plot for Head TSL



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Element

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- S Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Certificate No: D750V3-1057_May22

CALIBRATION CERTIFICATE

Object	D750V3 - SN:105	7	ATA
Calibration procedure(s)	QA CAL-05,v11		· · · · · · · · · · · · · · · · · · ·
		dure for SAR Validation Sources	between 0.7-3 GHz 6/1/22
Calibration date:	May 16, 2022		V YW 5/31/2024
			V YW 5/24/2023
This calibration certificate documen	its the traceability to natic	onal standards, which realize the physical unit	ts of measurements (SI).
The measurements and the uncerta	ainties with confidence pr	obability are given on the following pages and	d are part of the certificate.
		y facility: environment temperature (22 ± 3)°C	and humidity < 70%.
Calibration Equipment used (M&TE	critical for calibration)		
Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-22 (No. 217-03525/03524)	Apr-23
Power sensor NRP-Z91	SN: 103244	04-Apr-22 (No. 217-03524)	Apr-23
Power sensor NRP-Z91	SN: 103245	04-Apr-22 (No. 217-03525)	Арг-23
Reference 20 dB Attenuator	SN: BH9394 (20k)	04-Apr-22 (No. 217-03527)	Apr-23
Type-N mismatch combination	SN: 310982 / 06327	04-Apr-22 (No. 217-03528)	Apr-23
Reference Probe EX3DV4	SN: 7349	31-Dec-21 (No. EX3-7349_Dec21)	Dec-22
DAE4	SN: 601	02-May-22 (No. DAE4-601_May22)	May-23
Secondary Standards	ID#	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-20)	In house check; Oct-22
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-20)	In house check: Oct-22
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	
Network Analyzer Agriefit LoosoA	3N. 0341000477	Striviar 14 (in house check Oct-20)	In house check: Oct-22
	Name	Function	Signature
Calibrated by:	Aldonia Georgiadou	Laboratory Technician	
			May
Approved by:	Sven Kühn	Technical Manager	
			2. C
			Issued: May 17, 2022

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Accreditation No.: SCS 0108

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity	
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m	
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.9 ± 6 %	0.89 mho/m ± 6 %	
Head TSL temperature change during test	< 0.5 °C			

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.14 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.51 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.40 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.58 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity	
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m	
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.1 ± 6 %	0.95 mho/m ± 6 %	
Body TSL temperature change during test	< 0.5 °C			

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.19 W/kg
SAR for nominal Body TSL parameters	normalized to 1W [°]	8.80 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.45 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	5.80 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.7 Ω - 1.5 jΩ
Return Loss	- 30.4 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	48.3 Ω - 6.0 jΩ
Return Loss	- 23.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.038 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
	of EAG

DASY5 Validation Report for Head TSL

Date: 16.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1057

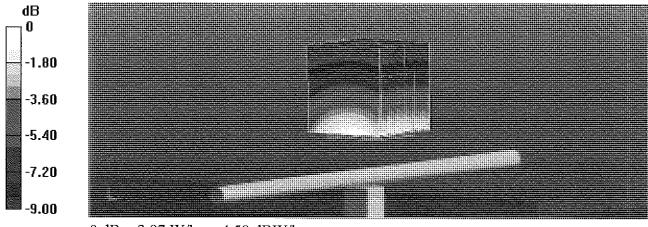
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.89$ S/m; $\varepsilon_r = 40.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.11, 10.11, 10.11) @ 750 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 59.41 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3.28 W/kg SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.4 W/kg Smallest distance from peaks to all points 3 dB below = 17 mm Ratio of SAR at M2 to SAR at M1 = 65.1% Maximum value of SAR (measured) = 2.87 W/kg



0 dB = 2.87 W/kg = 4.58 dBW/kg

Impedance Measurement Plot for Head TSL

File	Yiew	⊆hannel	Sw <u>e</u> ep C	alibration	[race <u>5</u> cale	e M <u>a</u> rker	System	<u>W</u> indow H	elp			1
		Ch 1.Avg ≃	20		A			A last	000000 M 139.64 000000 M	рF	52.722 -1.5197 30.345 m -28.320	Ω 1U
	Ch1: 9	tart 550.000 h	viHz				J				Stop 950.000 v	1Hz
10.0 5.0 0.0 -5.0	10 10)` <: 	: 750.	d00000 Iv	Hz	-30.358 (
-10.	.00											
-13. -20.	,00, «											oij
-30 -35 -40	.80 .80	Ch 1 Avg =	20				<i>µ</i>					
	Ch1: \$	tart 550,000 l									Stop 930,000 N	/Hz
Sta	atus	CH 1: 🕴	311] C	* 1 -Port		Avg=20 D	elay			LCL	eebeldmaa feberii al (eb

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DASY5 Validation Report for Body TSL

Date: 16.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1057

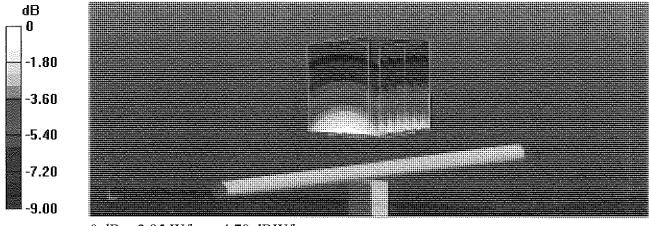
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.95$ S/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.23, 10.23, 10.23) @ 750 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 58.35 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 3.38 W/kg SAR(1 g) = 2.19 W/kg; SAR(10 g) = 1.45 W/kg Smallest distance from peaks to all points 3 dB below = 18.4 mm Ratio of SAR at M2 to SAR at M1 = 65.5% Maximum value of SAR (measured) = 2.95 W/kg



0 dB = 2.95 W/kg = 4.70 dBW/kg

Impedance Measurement Plot for Body TSL

<u>File View</u>	<u>C</u> hannel S	w <u>e</u> ep Calibration	<u>Irace</u> <u>S</u> cale	M <u>a</u> rker	System <u>V</u>	⊻indow ∐e	₃ p		
	Ch 1,4wg≈ 20					No.	100000 MHz 35.187 pF 100000 MHz	5 -6 63 :	8.277 Ω 3.0308 Ω .700 mU 102.43 °
	t 559.000 MH:	2						Stop :	950.000 MHz
5.00 - 0.00 - -5.00 -					>	750.0	00000 MHz	-2:	3.917 dB
-10.00									
-25.00 - -30.00 - -35.00 -									
40.00	Ch 1 Avg ≃ 20 ≿ 550.000 MHa			1	· ·			Stop \$	950.000 MHz
Status	CH 1: §11		C* 1-Port		Avg=20 De	elay.			LCL





Certification of Calibration

Object

D750V3 - SN: 1057

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

May 16, 2023

Extended Calibration date:

Description: SAR Validation Dipole at 750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number		
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/14/2022	Annual	6/14/2023	US39170118		
Agilent	E4438C	ESG Vector Signal Generator	11/17/2022	Annual	11/17/2023	MY45093852		
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972		
Rohde & Schwarz	NRX	Power Meter	1/11/2023	Annual	1/11/2024	102583		
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	5/19/2022	Annual	5/19/2023	106562		
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor						
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	5/11/2022	Biennial	5/11/2024	221514974		
Control Company	4353	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774685		
Agilent	85033E	3.5mm Standard Calibration Kit	6/21/2022	Annual	6/21/2023	MY53402352		
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A		
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406		
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A		
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A		
SPEAG	DAK-3.5	Dielectric Assessment Kit	8/15/2022	Annual	8/15/2023	1041		
SPEAG	EX3DV4	SAR Probe	2/13/2023	Annual	2/13/2024	7427		
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/15/2023	Annual	2/15/2024	1403		

Measurement Uncertainty = $\pm 23\%$ (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer I	AC
Approved By:	Greg Snyder	Executive VP of Operations	Lugo Mark

Object:	Date Issued:	Page 1 of 4
D750V3 – SN: 1057	05/16/2023	Page 1 of 4

DIPOLE CALIBRATION EXTENSION

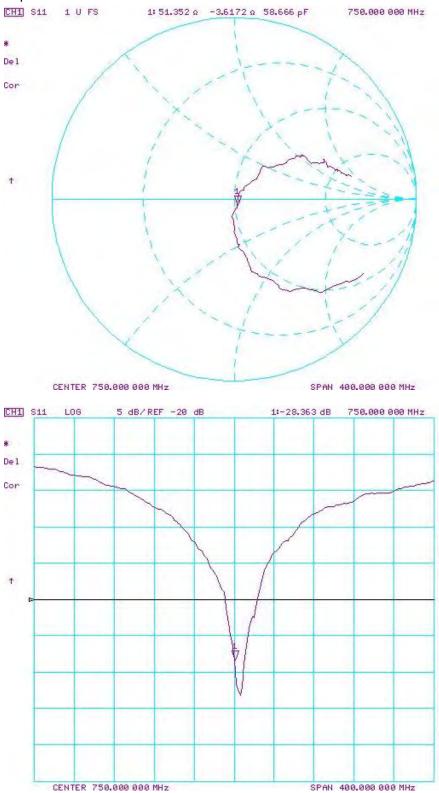
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 3-year calibration period from the calibration date:

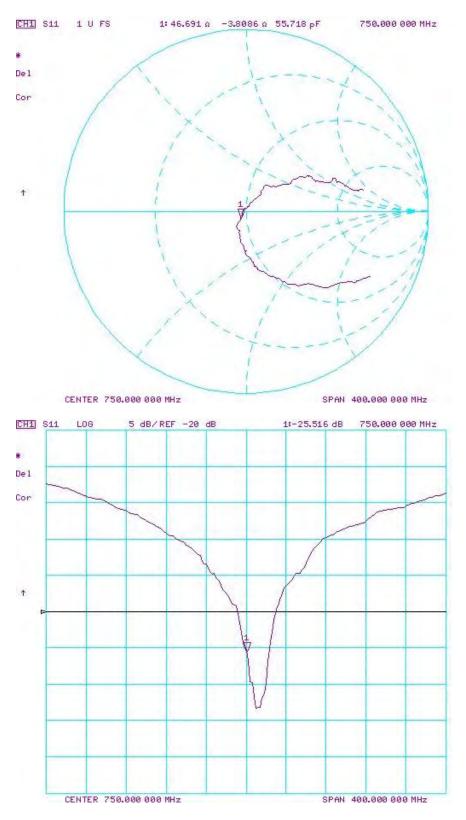
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 23.0 dBm	Measured Head SAR (1g) W/kg @ 23.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 23.0 dBm	Measured Head	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real		Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary		Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
5/16/2022	5/16/2023	1.038	1.702	1.59	-6.58%	1.12	1.05	-5.91%	52.7	51.4	1.3	-1.5	-3.6	2.1	-30.4	-28.4	6.70%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 23.0 dBm	Measured Body SAR (1g) W/kg @ 23.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 23.0 dBm	Measured Body SAR (10g) W/kg @ 23.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
5/16/2022	5/16/2023	1.038	1.76	1.66	-5.68%	1.16	1.13	-2.59%	48.3	46.7	1.6	-6	-3.8	2.2	-23.9	-25.5	-6.80%	PASS

Object:	Date Issued:	Dogo 2 of 4
D750V3 – SN: 1057	05/16/2023	Page 2 of 4



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Page 3 of 4		
D750V3 – SN: 1057	05/16/2023	Page 3 of 4		



Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Page 4 of 4
D750V3 – SN: 1057	05/16/2023	Page 4 of 4



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Certification of Calibration

Object

D750V3 – SN: 1057

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: May 16, 2024

Description:

SAR Validation Dipole at 750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/2/2023	Annual	6/12/2024	MY40003841
Agilent	E4438C	ESG Vector Signal Generator	11/15/2023	Annual	11/15/2024	MY45092078
Amplifier Research	15\$1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2496A	Power Meter	6/15/2023	Annual	6/15/2024	1138001
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	2018527
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	1827528
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310282
Control Company	4353	Ultra Long Stem Thermometer	10/24/2023	Annual	10/24/2024	200645916
Agilent	85033E	3.5mm Standard Calibration Kit	7/18/2023	Annual	7/18/2024	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2023	Annual	9/11/2024	1045
SPEAG	EX3DV4	SAR Probe	10/2/2023	Annual	10/2/2024	3949
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/12/2023	Annual	9/12/2024	1684

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AS
Approved By:	Greg Snyder	Executive VP of Operations	Lugo Miller

Object:	Date Issued:	Page 1 of 3
D750V3 – SN: 1057	05/16/2024	Fage 1015

DIPOLE CALIBRATION EXTENSION

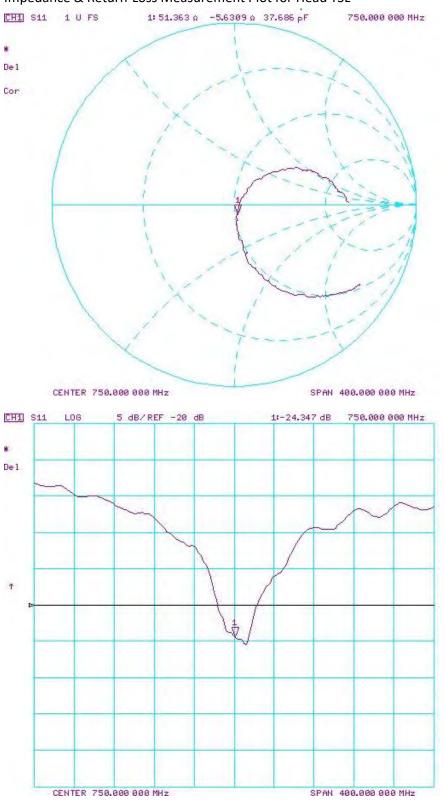
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

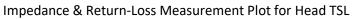
- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 3-year calibration period from the calibration date:

Calibration Date	Extension Date	Certificate Electrical Delay (ns)		Measured Head SAR (1g) W/kg @ 23.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 23.0 dBm	Measured Head SAR (10g) W/kg @ 23.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real		Certificate Impedance Head (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
5/16/2022	5/16/2024	1.038	1.7	1.75	2.82%	1.12	1.15	3.05%	52.7	51.4	1.3	-1.5	-5.6	4.1	-30.4	-24.3	19.90%

Object:	Date Issued:	Page 2 of 3
D750V3 – SN: 1057	05/16/2024	Page 2 of 3





Calibration Laboratory of

Schmid & Partner **Engineering AG** Zeughausstrasse 43, 8004 Zurich, Switzerland

CCRE

S

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Swiss Calibration Service

Certificate No. D750V3-1097_Sep23

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client Element

Morgan Hill, USA			
CALIBRATION C	ERTIFICATE		
Object	D750V3 - SN:109	97	VATM advance
Calibration procedure(s)	QA CAL-05.v12 Calibration Proce	dure for SAR Validation Source	$\sqrt{4171}$ 9/28/2023 es between 0.7-3 GHz VW 10/11/2024
Calibration date:	September 13, 20	023	an a
1	-	onal standards, which realize the physical u robability are given on the following pages a	· ·
All calibrations have been conducte	d in the closed laborator	y facility: environment temperature (22 \pm 3)	°C and humidity < 70%.
Calibration Equipment used (M&TE	critical for calibration)		
Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Mar-24
Power sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
Power sensor NRP-Z91	SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24
Reference 20 dB Attenuator	SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
Type-N mismatch combination	SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	Mar-24
Reference Probe EX3DV4	SN: 7349	10-Jan-23 (No. EX3-7349_Jan23)	Jan-24
DAE4	SN: 601	19-Dec-22 (No. DAE4-601_Dec22)	Dec-23
Sacandan (Standarda	ID #	Charly Data (in house)	Ontroductor d Ohne de
Secondary Standards Power meter E4419B	SN: GB39512475	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	SN: US37292783	30-Oct-14 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22) 07-Oct-15 (in house check Oct-22)	In house check: Oct-24 In house check: Oct-24
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	In house check: Oct-24
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24
Howeney indigion Loodon			In house check. Oct-24
	Name	Function	Signature
Calibrated by:	Paulo Pina	Laboratory Technician	
Approved by:	Sven Kühn	Technical Manager	N
This calibration certificate shall not	be reproduced except in	full without written approval of the laborator	Issued: September 14, 2023 ry.

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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- S Service suisse d'étalonnage С
 - Servizio svizzero di taratura
- S Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossarv:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the 0 center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	· · · · · · · · · · · · · · · · · · ·
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy , $dz = 5 mm$,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.4 ± 6 %	0.90 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.08 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.27 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.38 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.8 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.16 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	8.67 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.43 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	5.71 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	55.2 Ω + 2.5 jΩ
Return Loss	- 25.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	48.9 Ω - 3.2 jΩ
Return Loss	- 29.2 dB

General Antenna Parameters and Design

Electrical Delay (one direction) 1.038 ns	
	1.038 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG	

DASY5 Validation Report for Head TSL

Date: 13.09.2023

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1097

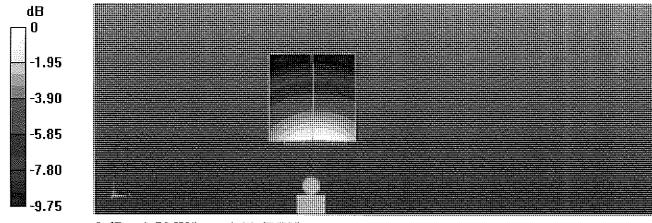
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; σ = 0.9 S/m; ϵ_r = 42.4; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.11, 10.11, 10.11) @ 750 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 19.12.2022
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 59.61 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 3.17 W/kg **SAR(1 g) = 2.08 W/kg; SAR(10 g) = 1.35 W/kg** Smallest distance from peaks to all points 3 dB below = 16.8 mm Ratio of SAR at M2 to SAR at M1 = 65.4% Maximum value of SAR (measured) = 2.78 W/kg



0 dB = 2.78 W/kg = 4.44 dBW/kg

Impedance Measurement Plot for Head TSL

<u>F</u> ile <u>V</u> iew	v <u>C</u> hannel Sw <u>e</u> ep I	Calibration <u>Trace</u> <u>S</u> ca	e M <u>a</u> rker System <u>)</u>	<u>W</u> indow <u>H</u> elp	
				: 750.00000 MHz 520.09 pH 50.000000 MHz	55.231 Ω 2.4509 Ω 54.883 mU 23.769 °
Ch1: S	Ch I Avg = 20 Start 550.000 MHz		~		Stop 958.000 MHz
10.00 5.00 0.00 -5.00 -10.00 -15.00 -25.00 -25.00 -30.00 -35.00 -40.00 Ch1: S	d8 s)1		> 1	750.00000 MHz	-25.211 dB
Status	CH 1: 511	C [×] 1-Port	Avg=20 D	elay	LCL

DASY5 Validation Report for Body TSL

Date: 05.09.2023

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1097

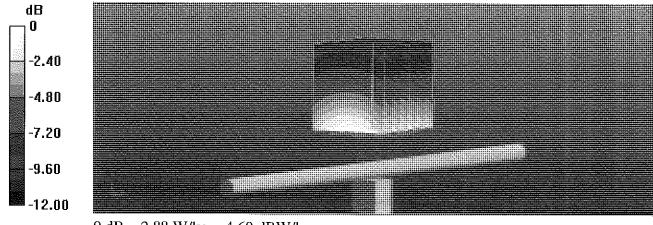
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.96$ S/m; $\epsilon_r = 55.8$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.23, 10.23, 10.23) @ 750 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 19.12.2022
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 58.05 V/m; Power Drift = 0.03 dB Peak SAR (extrapolated) = 3.25 W/kg **SAR(1 g) = 2.16 W/kg; SAR(10 g) = 1.43 W/kg** Smallest distance from peaks to all points 3 dB below = 20.5 mm Ratio of SAR at M2 to SAR at M1 = 66.6% Maximum value of SAR (measured) = 2.88 W/kg



0 dB = 2.88 W/kg = 4.60 dBW/kg

Impedance Measurement Plot for Body TSL

<u>File V</u> ie	w <u>C</u> hannel Sw	veep Calibration <u>T</u>	race <u>S</u> cale N	l <u>a</u> rker System <u>W</u>	<u>/indow H</u> elp	
	Ch 1 Avg ≃ 29				750.000000 MHz 65.404 pF 50.000000 MHz	48.854 Ω -3.2448 Ω 34.792 mU -107.58 °
Ch1;	Start 550.000 MHz	22200000005	-			Stop 850.000 MHz
	B S14				750.00000 MHz	-29.170 dB
Status	CH 1: 511	C*	1-Port	Avg=20 Del	ау	LCL



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(formerly PCTEST) 18855 Adams Ct, Morgan Hill, CA 95037 USA Tel. +1.408.538.5600 http://www.element.com



Certification of Calibration

Object

D750V3 – SN: 1097

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: September 13, 2024

Description: SAR Validation Dipole at 750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Hewlett Packard	8753E	RF Vector Network Analyzer	5/21/2024	Annual	5/21/2025	US38161081
Agilent	E4438C	ESG Vector Signal Generator	5/19/2024	Annual	5/19/2025	US41460739
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2496A	Power Meter	7/15/2024	Annual	7/15/2025	1138001
Anritsu	MA2411B	Pulse Power Sensor	7/10/2024	Annual	7/10/2025	1126066
Anritsu	MA2411B	Pulse Power Sensor	7/1/2024	Annual	7/1/2025	1911105
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	1/15/2024	Annual	1/15/2025	160574418
Control Company	4352	Ultra Long Stem Thermometer	1/15/2024	Annual	1/15/2025	160508097
Agilent	85033E	3.5mm Standard Calibration Kit	7/31/2024	Annual	7/31/2025	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/14/2024	Annual	5/14/2025	1070
SPEAG	EX3DV4	SAR Probe	2/9/2024	Annual	2/9/2025	7427
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/9/2024	Annual	2/9/2025	467

Measurement Uncertainty = $\pm 23\%$ (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AS
Approved By:	Greg Snyder	Executive VP of Operations	Lugg M. S.

DIPOLE CALIBRATION EXTENSION

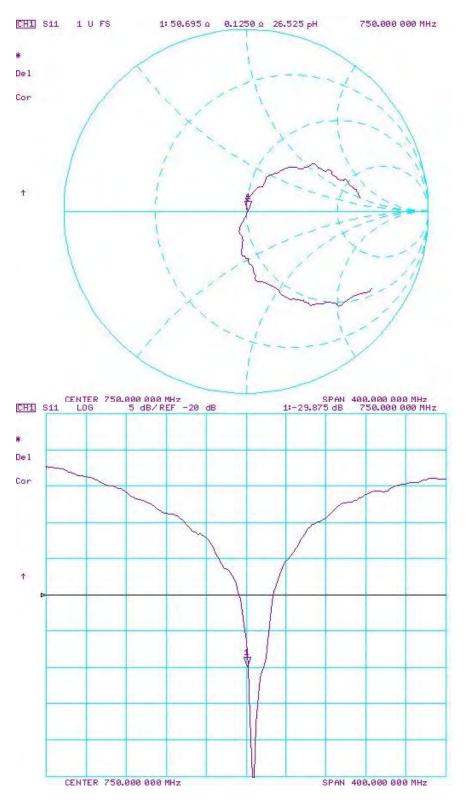
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

Calibratic Date	¹ Extension Date	Electrical	Certificate SAR Target Head (1g) W/kg @ 23.0 dBm	W/kg @ 23.0	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 23.0 dBm		Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real			Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
9/13/202	3 9/13/2024	1.038	1.65	1.72	3.99%	1.08	1.14	5.95%	55.2	50.7	4.5	2.5	0.1	2.4	-25.2	-29.9	-18.60%

Object:	Date Issued:	Page 2 of 3
D750V3 – SN: 1097	09/13/2024	Page 2 of 3



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Page 3 of 3
D750V3 – SN: 1097	09/13/2024	Page 3 of 3

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland

Element

Client



S Schweizerischer Kalibrierdienst

- Service suisse d'étalonnage
- C Servizio svizzero di taratura

Accreditation No.: SCS 0108

S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Certificate No: D835V2-460_May22

	D835V2 - SN:460)	VATIA
Calibration procedure(s)	QA CAL-05.v11 Calibration Proce	dure for SAR Validation Sources	
			6/1/22
Calibration date:	May 16, 2022		✓ YW 5/22/202
This calibration certificate documer	nts the traceability to natio	onal standards, which realize the physical unit	•
		obability are given on the following pages and	
All calibrations have been conducte	ed in the closed laborator	y facility: environment temperature (22 ± 3)°C	and humidity < 70%.
		, ,	,
Calibration Equipment used (M&TE	E critical for calibration)		
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-22 (No. 217-03525/03524)	Apr-23
	SN: 103244	04 4	
Power sensor NRP-Z91	SIN, 103244	04-Apr-22 (No. 217-03524)	Apr-23
	SN: 103244 SN: 103245	04-Apr-22 (No. 217-03524) 04-Apr-22 (No. 217-03525)	Apr-23 Apr-23
Power sensor NRP-Z91			
Power sensor NRP-Z91 Reference 20 dB Attenuator	SN: 103245	04-Apr-22 (No. 217-03525)	Apr-23
Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination	SN: 103245 SN: BH9394 (20k)	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527)	Apr-23 Apr-23
Power sensor NRP-Z91 Reference 20 dB Attenuator Fype-N mismatch combination Reference Probe EX3DV4	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528)	Apr-23 Apr-23 Apr-23
Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528) 31-Dec-21 (No. EX3-7349_Dec21)	Apr-23 Apr-23 Apr-23 Dec-22
Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349 SN: 601	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528) 31-Dec-21 (No. EX3-7349_Dec21) 02-May-22 (No. DAE4-601_May22)	Apr-23 Apr-23 Apr-23 Dec-22 May-23
Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349 SN: 601	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528) 31-Dec-21 (No. EX3-7349_Dec21) 02-May-22 (No. DAE4-601_May22) Check Date (in house)	Apr-23 Apr-23 Apr-23 Dec-22 May-23 Scheduled Check
Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528) 31-Dec-21 (No. EX3-7349_Dec21) 02-May-22 (No. DAE4-601_May22) Check Date (in house) 30-Oct-14 (in house check Oct-20)	Apr-23 Apr-23 Apr-23 Dec-22 May-23 Scheduled Check In house check: Oct-22
Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A Power sensor HP 8481A	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528) 31-Dec-21 (No. EX3-7349_Dec21) 02-May-22 (No. DAE4-601_May22) Check Date (in house) 30-Oct-14 (in house check Oct-20) 07-Oct-15 (in house check Oct-20)	Apr-23 Apr-23 Apr-23 Dec-22 May-23 Scheduled Check In house check: Oct-22 In house check: Oct-22
Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: MY41093315	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528) 31-Dec-21 (No. EX3-7349_Dec21) 02-May-22 (No. DAE4-601_May22) Check Date (in house) 30-Oct-14 (in house check Oct-20) 07-Oct-15 (in house check Oct-20) 07-Oct-15 (in house check Oct-20)	Apr-23 Apr-23 Apr-23 Dec-22 May-23 Scheduled Check In house check: Oct-22 In house check: Oct-22 In house check: Oct-22
Power sensor NRP-Z91 Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06 Network Analyzer Agilent E8358A	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: MY41093315 SN: 100972	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528) 31-Dec-21 (No. EX3-7349_Dec21) 02-May-22 (No. DAE4-601_May22) Check Date (in house) 30-Oct-14 (in house check Oct-20) 07-Oct-15 (in house check Oct-20) 07-Oct-15 (in house check Oct-20) 15-Jun-15 (in house check Oct-20)	Apr-23 Apr-23 Apr-23 Dec-22 May-23 Scheduled Check In house check: Oct-22 In house check: Oct-22 In house check: Oct-22 In house check: Oct-22
Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: MY41093315 SN: 100972 SN: US41080477	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528) 31-Dec-21 (No. EX3-7349_Dec21) 02-May-22 (No. DAE4-601_May22) Check Date (in house) 30-Oct-14 (in house check Oct-20) 07-Oct-15 (in house check Oct-20) 07-Oct-15 (in house check Oct-20) 15-Jun-15 (in house check Oct-20) 31-Mar-14 (in house check Oct-20)	Apr-23 Apr-23 Apr-23 Dec-22 May-23 Scheduled Check In house check: Oct-22 In house check: Oct-22 In house check: Oct-22 In house check: Oct-22 In house check: Oct-22 Signature
Power sensor NRP-Z91 Reference 20 dB Attenuator Type-N mismatch combination Reference Probe EX3DV4 DAE4 Secondary Standards Power meter E4419B Power sensor HP 8481A Power sensor HP 8481A RF generator R&S SMT-06 Network Analyzer Agilent E8358A	SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: MY41093315 SN: 100972 SN: US41080477 Name	04-Apr-22 (No. 217-03525) 04-Apr-22 (No. 217-03527) 04-Apr-22 (No. 217-03528) 31-Dec-21 (No. EX3-7349_Dec21) 02-May-22 (No. DAE4-601_May22) Check Date (in house) 30-Oct-14 (in house check Oct-20) 07-Oct-15 (in house check Oct-20) 07-Oct-15 (in house check Oct-20) 15-Jun-15 (in house check Oct-20) 31-Mar-14 (in house check Oct-20) Function	Apr-23 Apr-23 Apr-23 Dec-22 May-23 Scheduled Check In house check: Oct-22 In house check: Oct-22

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst

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Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossarv:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power. ۲
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Accreditation No.: SCS 0108

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	·······
Frequency	835 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.7 ± 6 %	0.92 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.48 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.72 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input powe r	1.61 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.34 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.9 7 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	53.9±6%	0.97 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.46 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	9.79 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW inp u t power	1.62 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	6.46 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.9 Ω - 0.3 jΩ
Return Loss	- 40.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.9 Ω - 5.2 jΩ
Return Loss	- 24.1 dB

General Antenna Parameters and Design

trical Delay (one direction)	1.381 ns
------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG	

DASY5 Validation Report for Head TSL

Date: 16.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:460

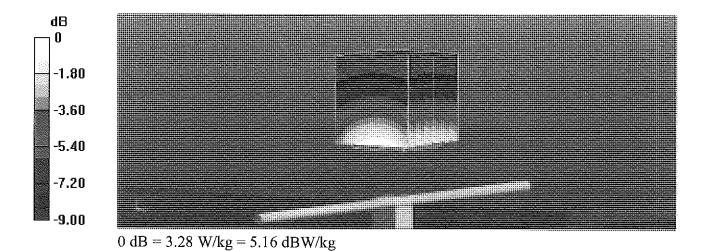
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.92$ S/m; $\epsilon_r = 40.7$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(9.69, 9.69, 9.69) @ 835 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 63.51 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3.77 W/kg SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.61 W/kg Smallest distance from peaks to all points 3 dB below = 17.1 mm Ratio of SAR at M2 to SAR at M1 = 65.7% Maximum value of SAR (measured) = 3.28 W/kg



Impedance Measurement Plot for Head TSL

File	⊻iew	⊆hannel	Sw <u>e</u> ep	Calibration	Irace	Scale	M <u>a</u> rker	System	<u>W</u> indow	Help			
									Δ	5.00000 548 5.00000	3.80 pF	-34) 9.2	i0.869 Ω 7.31 mΩ 1786 mU 21.583 °
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0.0 -5.0			· · · · · · · · · · · · · · · · · · ·										
-10. -15.	1					~	24 apr						
-20.	v							\square					****
-30.	00 -							/					
-35. -40.	00	<u>Ch 1 Avg =</u> rt 635,000 N	20 4Hz	Ph								Stop	1.03500 GHz
Sta	tus	CH 1: §	;11		C* 1-Po	t		Avg=20	Delay				LCL

DASY5 Validation Report for Body TSL

Date: 16.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:460

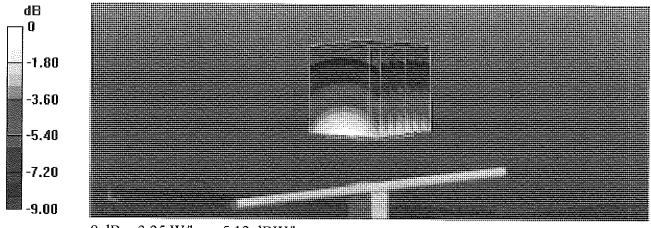
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.97$ S/m; $\varepsilon_r = 53.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(9.85, 9.85, 9.85) @ 835 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 58.16 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 3.62 W/kg SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.62 W/kg Smallest distance from peaks to all points 3 dB below = 15 mm Ratio of SAR at M2 to SAR at M1 = 67.9% Maximum value of SAR (measured) = 3.25 W/kg



0 dB = 3.25 W/kg = 5.12 dBW/kg

Impedance Measurement Plot for Body TSL

Eile	⊻iew	⊆hannel	Sw <u>e</u> ep	Calibration	Trace	<u>S</u> cale	M <u>a</u> rker	System	<u>W</u> indow	Help			
		Ch IAvg≃	20		(-				A	35.000000 36.9 35.000000	387 pF	-5 62.	6,881 Ω .1533 Ω 088 mU 118,14 °
	Ch1: Sta	art 635,000 l						<u>}</u>				Stop	1.03500 GHz
10.0 5.0 0.0 -5.0								>) MHz	-2.	. 140 dB
-15. -20. -25. -30.	00 (* 00 - 00 -												
	00 Ch1: Sta	<u>Ch 1 Avg =</u> rt 635,000 N	dHz —									Stop	1.03500 GHz
Sta	tus	CH 1: 5	511	· · · · [C* 1-Por	ł		Avg=20	Delay			المراجعة والمحافظ والمراجع	LCL





Certification of Calibration

Object

D835V2 - SN: 460

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extended Calibration date:

May 16, 2023

Description:

SAR Validation Dipole at 835 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/14/2022	Annual	6/14/2023	US39170118
Agilent	E4438C	ESG Vector Signal Generator	11/17/2022	Annual	11/17/2023	MY45093852
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Rohde & Schwarz	NRX	Power Meter	1/11/2023	Annual	1/11/2024	102583
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	5/19/2022	Annual	5/19/2023	106562
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	5/19/2022	Annual	5/19/2023	106559
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	5/11/2022	Biennial	5/11/2024	221514974
Control Company	4353	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774685
Agilent	85033E	3.5mm Standard Calibration Kit	6/21/2022	Annual	6/21/2023	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	8/15/2022	Annual	8/15/2023	1041
SPEAG	EX3DV4	SAR Probe	2/13/2023	Annual	2/13/2024	7427
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/15/2023	Annual	2/15/2024	1403

Measurement Uncertainty = $\pm 23\%$ (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer I	AC
Approved By:	Greg Snyder	Executive VP of Operations	Sugged Sol

Object:	Date Issued:	Page 1 of 4
D835V2 – SN: 460	05/16/2023	Page 1 of 4

DIPOLE CALIBRATION EXTENSION

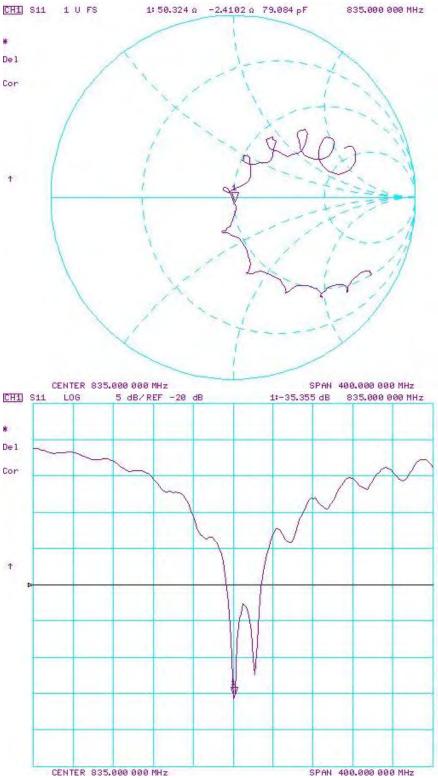
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

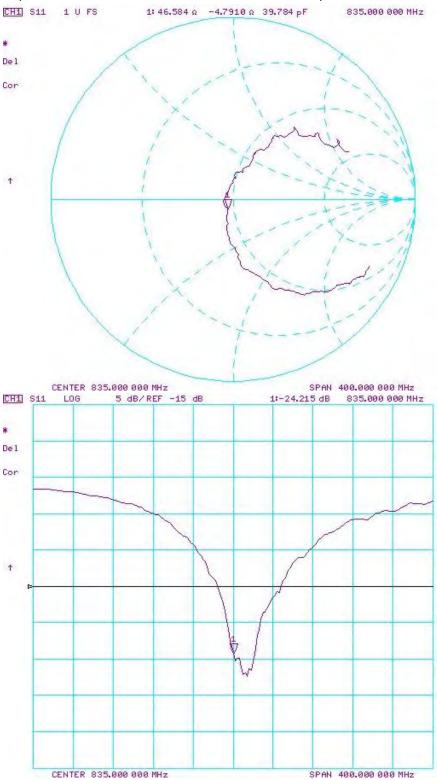
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 23.0 dBm	Measured Head SAR (1g) W/kg @ 23.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 23.0 dBm	Measured Head SAR (10g) W/kg @ 23.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary		Difference (Ohm) Imaginary	Return Loss	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
5/16/2022	5/16/2023	1.381	1.94	1.99	2.37%	1.27	1.31	3.31%	50.9	50.3	0.6	-0.3	-2.4	2.1	-40.7	-35.4	13.10%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 23.0 dBm	Measured Body SAR (1g) W/kg @ 23.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 23.0 dBm	Measured Body SAR (10g) W/kg @ 23.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
5/16/2022	5/16/2023	1.381	1.96	1.96	0.10%	1.29	1.33	2.94%	46.9	46.6	0.3	-5.2	-4.8	0.4	-24.1	-24.2	-0.50%	PASS

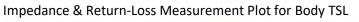
Object:	Date Issued:	Page 2 of 4
D835V2 – SN: 460	05/16/2023	Page 2 of 4



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Daga 2 of 4
D835V2 – SN: 460	05/16/2023	Page 3 of 4





Object:	Date Issued:	Page 4 of 4
D835V2 – SN: 460	05/16/2023	Fage 4 01 4



ELEMENT MATERIALS TECHNOLOGY

(formerly PCTEST) 18855 Adams Ct, Morgan Hill, CA 95037 USA Tel. +1.408.538.5600 http://www.element.com



Certification of Calibration

Object

D835V2 – SN: 460

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: May 16, 2024

Description:

SAR Validation Dipole at 835 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/2/2023	Annual	6/12/2024	MY40003841
Agilent	E4438C	ESG Vector Signal Generator	11/15/2023	Annual	11/15/2024	MY45092078
Amplifier Research	15\$1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2496A	Power Meter	6/15/2023	Annual	6/15/2024	1138001
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	2018527
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	1827528
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310282
Control Company	4353	Ultra Long Stem Thermometer	10/24/2023	Annual	10/24/2024	200645916
Agilent	85033E	3.5mm Standard Calibration Kit	7/18/2023	Annual	7/18/2024	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2023	Annual	9/11/2024	1045
SPEAG	EX3DV4	SAR Probe	8/10/2023	Annual	8/10/2024	7668
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/12/2023	Annual	9/12/2024	1681

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AS
Approved By:	Greg Snyder	Executive VP of Operations	Sugged Syl

Object:	Date Issued:	Page 1 of 3
D835V2 – SN: 460	05/16/2024	Fage 1015

DIPOLE CALIBRATION EXTENSION

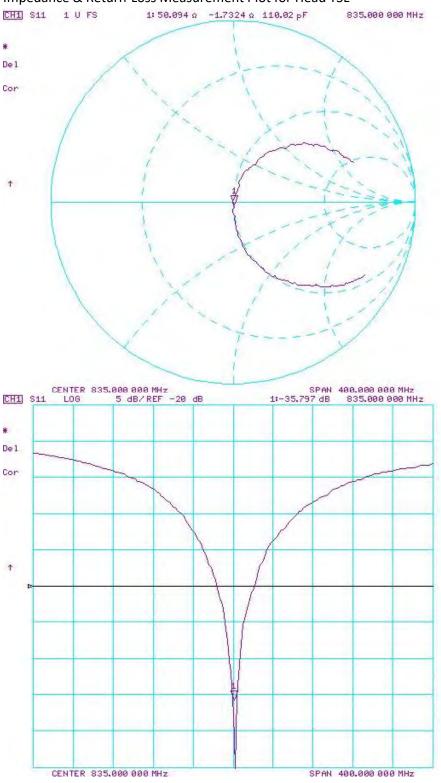
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 3-year calibration period from the calibration date:

Calibration Date	Extension Date	Electrical	Certificate SAR Target Head (1g) W/kg @ 23.0 dBm	W/kg @ 22.0	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 23.0 dBm		Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
5/16/2022	5/16/2024	1.381	1.94	2.05	5.45%	1.27	1.33	4.89%	50.9	50.1	0.8	-0.3	-1.7	1.4	-40.7	-35.8	12.00%

Object:	Date Issued:	Page 2 of 3
D835V2 – SN: 460	05/16/2024	rage 2 01 5



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Daga 2 of 2
D835V2 – SN: 460	05/16/2024	Page 3 of 3

Calibration Laboratory of Schmid & Partner **Engineering AG** Zeughausstrasse 43, 8004 Zurich, Switzerland

Element

Client



Schweizerischer Kallbrierdienst

Service suisse d'étalonnage

S

- С Servizio svizzero di taratura
- S **Swiss Calibration Service**

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Certificate No: D1750V2-1083_May22

CALIBRATION CERTIFICATE

Object	D1750V2 - SN:1()83	ATH					
Calibration procedure(s)	QA CAL-05.v11 Calibration Proce	edure for SAR Validation Sources	AT M 6///21 between 0.7-3 GHz					
			🗸 YW 5/31/2024					
Calibration date:	May 10, 2022							
			✓ YW 5/24/2023					
This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.								
All calibrations have been conducte	ed in the closed laborator	ry facility: environment temperature (22 \pm 3)°C	and humidity < 70%.					
Calibration Equipment used (M&TE	E critical for calibration)							
Primary Standards	ID#	Cal Date (Certificate No.)	Scheduled Calibration					
Power meter NRP	SN: 104778	04-Apr-22 (No. 217-03525/03524)	Apr-23					
Power sensor NRP-Z91	SN: 103244	04-Apr-22 (No. 217-03524)	Apr-23					
Power sensor NRP-Z91	SN: 103245	04-Apr-22 (No. 217-03525)	Apr-23					
Reference 20 dB Attenuator	SN: BH9394 (20k)	04-Apr-22 (No. 217-03527)	Apr-23					
Type-N mismatch combination	SN: 310982 / 06327	04-Apr-22 (No. 217-03528)	Apr-23					
Reference Probe EX3DV4	SN: 7349	31-Dec-21 (No. EX3-7349_Dec21)	Dec-22					
DAE4	SN: 601	02-May-22 (No. DAE4-601_May22)	May-23					
Secondary Standards	ID #	Check Date (in house)	Scheduled Check					
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-20)	In house check: Oct-22					
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-20)	In house check: Oct-22					
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-20)	In house check: Oct-22					
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-20)	In house check: Oct-22					
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-22					
	Name	Function	Signature					
Calibrated by:	Joanna Lleshaj	Laboratory Technician						
,			Affling					
Approved by:	Sven <u>K</u> ühn	Technical Manager	GL					
This calibration certificate shall not	be reproduced except in	full without written approval of the laboratory.	Issued: May 11, 2022					

Calibration Laboratory of

Closean

Schmid & Partner **Engineering AG** Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst

S Service suisse d'étalonnage С

Servizio svizzero di taratura

S **Swiss Calibration Service**

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA

Accreditation No.: SCS 0108

tissue simulating liquid
sensitivity in TSL / NORM x,y,z
not applicable or not measured

Multilateral Agreement for the recognition of calibration certificates

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna 0 connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

	, 15	
DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1750 MHz ± 1 MHz	,,

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.1	1.37 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.9 ± 6 %	1.34 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		<i>at 10</i> 7 7

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.07 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	36.5 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	4.79 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	19.2 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.4	1.49 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.5 ± 6 %	1.44 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.23 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	37.6 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	4.99 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.2 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	50.7 Ω - 0.2 jΩ
Return Loss	- 42.3 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	46.5 Ω - 0.9 jΩ
Return Loss	- 28.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.220 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SDEAC
	JF LAO

DASY5 Validation Report for Head TSL

Date: 10.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1083

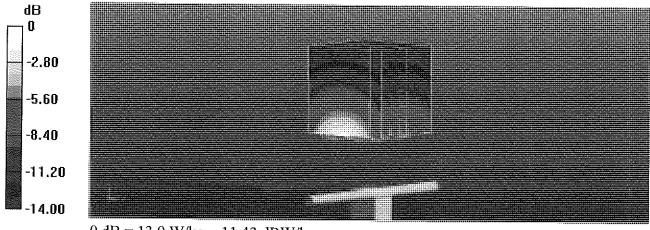
Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; $\sigma = 1.34$ S/m; $\epsilon_r = 38.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.67, 8.67, 8.67) @ 1750 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 106.7 V/m; Power Drift = 0.00 dB Peak SAR (extrapolated) = 16.8 W/kg SAR(1 g) = 9.07 W/kg; SAR(10 g) = 4.79 W/kg Smallest distance from peaks to all points 3 dB below = 10 mm Ratio of SAR at M2 to SAR at M1 = 54.5% Maximum value of SAR (measured) = 13.9 W/kg



0 dB = 13.9 W/kg = 11.43 dBW/kg

Impedance Measurement Plot for Head TSL

	1: 1.750000 GHz 479.43 pF 1.750000 GHz	-189.69 mΩ
Ch 1 Avg = 20 Ch 1: Start 1.55000 GHz	> 1: 1.750000 CHz	stop 1.95000 GHz -42.341 dB
5.00 -19.00 -15.00 -20.00		
-25.00	<u> </u>	

DASY5 Validation Report for Body TSL

Date: 10.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1083

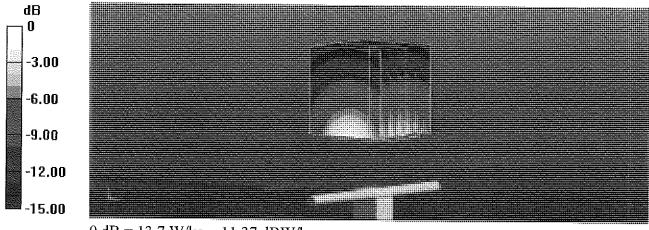
Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; $\sigma = 1.44$ S/m; $\epsilon_r = 52.5$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 102.3 V/m; Power Drift = -0.08 dB Peak SAR (extrapolated) = 16.5 W/kg SAR(1 g) = 9.23 W/kg; SAR(10 g) = 4.99 W/kg Smallest distance from peaks to all points 3 dB below = 10 mm Ratio of SAR at M2 to SAR at M1 = 56.9% Maximum value of SAR (measured) = 13.7 W/kg



0 dB = 13.7 W/kg = 11.37 dBW/kg

Impedance Measurement Plot for Body TSL

Ch1: Start 1.55000 GHz Stop 1.95000 GHz 10.00 10.00 5.00 1.750000 CHz -28.600 dE 0.00 - 5.00 - - 10.00 - - - 10.00 - - - 5.00 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - <th>Ch 1 Avg = 20</th> <th><u>Trace Scale Marker System Window Help</u> 1.750000 GHz 46.532 99.636 pF -912.78 r 1.750000 GHz 37.153 r -164.7</th> <th>nΩ nU</th>	Ch 1 Avg = 20	<u>Trace Scale Marker System Window Help</u> 1.750000 GHz 46.532 99.636 pF -912.78 r 1.750000 GHz 37.153 r -164.7	nΩ nU
5.00	Ch1: \$tart 1.55000 GH2		GHz
	5.00	> 1: 1.750000 CHz -28,600	dB
	······································		
35.00 35.00 <td< th=""><th>-15.00</th><th></th><th>—</th></td<>	-15.00		—



Element Materials Technology (formerly PCTEST) 18855 Adams Ct, Morgan Hill, CA 95037 USA Tel. +1.408.538.5600 http://www.element.com



Certification of Calibration

Object

D1750V2 – SN: 1083

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extended Calibration date: May 10, 2023

Description:

SAR Validation Dipole at 1750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/14/2022	Annual	6/14/2023	US39170118
Agilent	E4438C	ESG Vector Signal Generator	11/17/2022	Annual	11/17/2023	MY45093852
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Rohde & Schwarz	NRX	Power Meter	1/11/2023	Annual	1/11/2024	102583
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	5/19/2022	Annual	5/19/2023	106562
Rohde & Schwarz NRP-Z81		Wide Band Power Sensor	5/19/2022	Annual	5/19/2023	106559
Traceable 4040 90080-06		Therm./ Clock/ Humidity Monitor	5/11/2022	Biennial	5/11/2024	221514974
Control Company	4353	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774685
Agilent	85033E	3.5mm Standard Calibration Kit	6/21/2022	Annual	6/21/2023	MY53402352
Mini-Circuits VLF-6000+		Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda 4772-3		Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits ZHDC-16-63-S+		50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack NC-100		Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	8/15/2022	Annual	8/15/2023	1041
SPEAG	EX3DV4	SAR Probe	2/13/2023	Annual	2/13/2024	7427
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/15/2023	Annual	2/15/2024	1403

Measurement Uncertainty = $\pm 23\%$ (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer I	AC
Approved By:	Greg Snyder	Executive VP of Operations	Lugo Mal

Object:	Date Issued:	Page 1 of 4
D1750V2 – SN: 1083	05/10/2023	Fage 1014

DIPOLE CALIBRATION EXTENSION

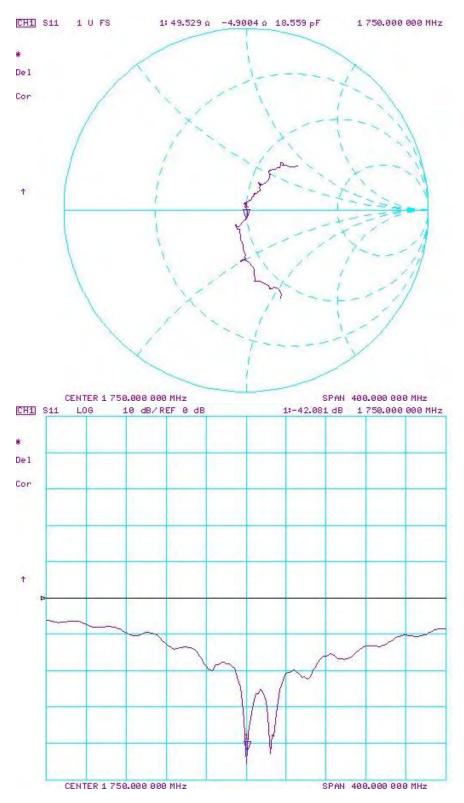
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

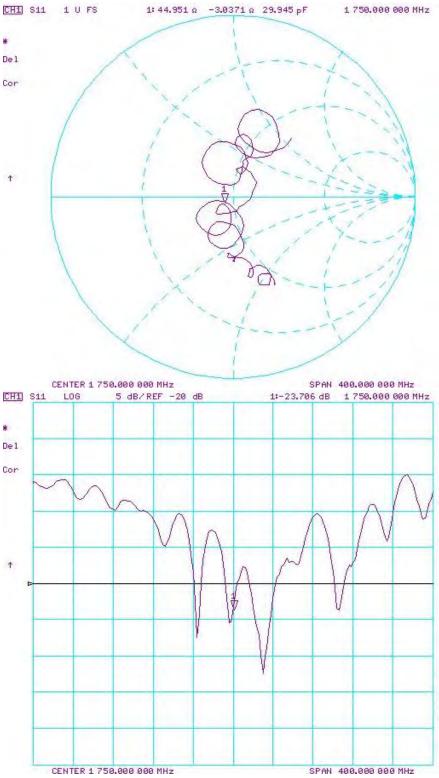
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	Measured Head SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm	Measured Head	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real		Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary		Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
5/10/2022	5/10/2023	1.22	3.65	3.71	1.64%	1.92	1.99	3.65%	50.7	49.5	1.2	-0.2	-4.9	4.7	-42.3	-42.1	0.50%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 20.0 dBm	Measured Body SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 20.0 dBm	Measured Body SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
5/10/2022	5/10/2023	1.22	3.76	3.88	3.19%	2.02	2.05	1.49%	46.5	45.0	1.5	-0.9	-3.0	2.1	-28.6	-23.7	17.10%	PASS

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Impedance & Return-Loss Measurement Plot for Head TSL

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Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Page 4 of 4
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Certification of Calibration

Object

D1750V2 – SN: 1083

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: May 10, 2024

Description:

SAR Validation Dipole at 1750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/2/2023	Annual	6/12/2024	MY40003841
Agilent	E4438C	ESG Vector Signal Generator	11/15/2023	Annual	11/15/2024	MY45092078
Amplifier Research	15\$1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2496A	Power Meter	6/15/2023	Annual	6/15/2024	1138001
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	2018527
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	1827528
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310282
Control Company	4353	Ultra Long Stem Thermometer	10/24/2023	Annual	10/24/2024	200645916
Agilent	85033E	3.5mm Standard Calibration Kit	7/18/2023	Annual	7/18/2024	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2023	Annual	9/11/2024	1045
SPEAG	EX3DV4	SAR Probe	3/11/2024	Annual	3/11/2025	7421
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/6/2024	Annual	3/6/2025	604

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AS
Approved By:	Greg Snyder	Executive VP of Operations	Lugo March

Object:	Date Issued:	Page 1 of 3
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DIPOLE CALIBRATION EXTENSION

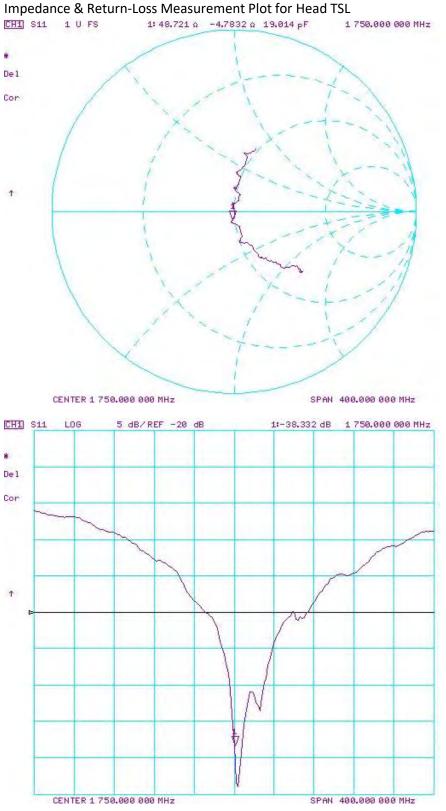
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 3-year calibration period from the calibration date:

Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	Measured Head SAR (1g) W/kg @ 20.0 dBm		Certificate SAR Target Head (10g) W/kg @ 20.0 dBm	Measured Head SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real			Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
5/10/2022	5/10/2024	1.22	3.65	3.82	4.66%	1.92	2.03	5.73%	50.7	48.7	2	-0.2	-4.8	4.6	-42.3	-38.3	9.40%

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Object:	Date Issued:	Page 3 of 3
D1750V2 – SN: 1083	05/10/2024	Fage 5 01 5

Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst

- Service suisse d'étalonnage
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С

S

Swiss Calibration Service

Certificate No. D1750V2-1104_Sep23

1

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

CALIBRATION CERTIFICATE

Client Element Morgan Hill, USA

Calibration procedure(s)

Calibration date:

Object

D1750V2-SN:1104	VATM
QA CAL-05.v12 Calibration Procedure for SAR Validation Sc	ources between 0.7-3 GHz
	9/2-8/2023
September 06, 2023	✓ Y₩ 10/11/2024

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

ID #	Cal Date (Certificate No.)	Scheduled Calibration
	30-Mar-23 (No. 217-03804/03805)	Mar-24
SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24
SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	Mar-24
SN: 7349	10-Jan-23 (No. EX3-7349_Jan23)	Jan-24
SN: 601	19-Dec-22 (No. DAE4-601_Dec22)	Dec-23
ID #	Check Date (in house)	Scheduled Check
SN: GB39512475		In house check: Oct-24
SN: US37292783		In house check: Oct-24
SN: MY41093315		In house check: Oct-24
SN: 100972		In house check: Oct-24
SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24
Name	Function	Signature /
Jeffrey Katzman	Laboratory Technician	Ciginature
		Or home
Sven Kühn	Technical Manager	
	SN: 104778 SN: 103244 SN: 103245 SN: BH9394 (20k) SN: 310982 / 06327 SN: 7349 SN: 601 ID # SN: GB39512475 SN: US37292783 SN: MY41093315 SN: 100972 SN: US41080477 Name	SN: 104778 30-Mar-23 (No. 217-03804/03805) SN: 103244 30-Mar-23 (No. 217-03804) SN: 103245 30-Mar-23 (No. 217-03805) SN: BH9394 (20k) 30-Mar-23 (No. 217-03809) SN: 310982 / 06327 30-Mar-23 (No. 217-03809) SN: 7349 10-Jan-23 (No. 217-03810) SN: 601 19-Dec-22 (No. DAE4-601_Dec22) ID # Check Date (in house) SN: GB39512475 30-Oct-14 (in house check Oct-22) SN: W37292783 07-Oct-15 (in house check Oct-22) SN: 100972 15-Jun-15 (in house check Oct-22) SN: 100972 15-Jun-15 (in house check Oct-22) SN: US41080477 31-Mar-14 (in house check Oct-22) Name Function

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S

Schweizerischer Kalibrierdienst

- C Service suisse d'étalonnage
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- S Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.1	1.37 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.5 ± 6 %	1.34 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	8.77 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	35.6 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	4.65 W/kg

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.4	1.49 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.0 ± 6 %	1.47 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.20 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	37.2 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	4.91 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	19.8 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	49.7 Ω - 1.6 jΩ
Return Loss	- 35.5 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	45.4 Ω - 1.2 jΩ
Return Loss	- 26.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.010
(one anotably	1.216 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
	JEAG I

DASY5 Validation Report for Head TSL

Date: 01.09.2023

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1104

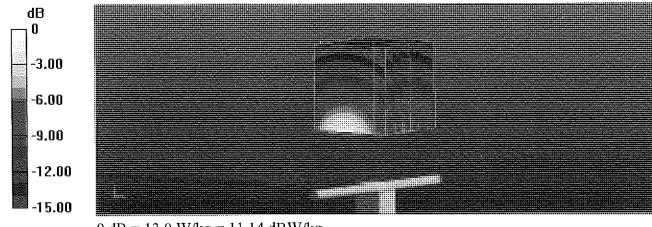
Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; $\sigma = 1.34$ S/m; $\epsilon_r = 40.5$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.67, 8.67, 8.67) @ 1750 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 19.12.2022
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 103.0 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 16.0 W/kg SAR(1 g) = 8.77 W/kg; SAR(10 g) = 4.65 W/kg Smallest distance from peaks to all points 3 dB below = 10 mm Ratio of SAR at M2 to SAR at M1 = 55.9% Maximum value of SAR (measured) = 13.0 W/kg



0 dB = 13.0 W/kg = 11.14 dBW/kg

Impedance Measurement Plot for Head TSL

<u>File V</u> iew) <u>C</u> hannel Si	w <u>e</u> ep Calibration	<u>Trace S</u> cale	M <u>a</u> rker S	ystem <u>W</u> ir	idow <u>H</u> e	lp			
							50000 G 55,438 50000 G	p₽	-1.6 16.7	673 Ω 1405 Ω 30 mU 10.32 °
Ch1:9	Ch 1 Avg = 20 Start 1.55000 GHz			·}					Stop 1.9	15000 GHz
10.00 5.00 0.00	WB \$1.0				> 1:	1.7	50000 G	Hz	-36.1	504 dB
-5.00 -10.00 -15.00 -20.00			~			and the same of th	and the second		Antonio della	
-25.00 -30.00										
-35.00 -40,00 	Ch 1 Avg = 20 Start 1.55000 GHz	2 4077007000		<u> </u>	71.				Stop 1.	95000 GH2
Status	CH 1: 511		C [×] 1-Port	Ą	vg=20 Dela	Ŷ				CL

DASY5 Validation Report for Body TSL

Date: 06.09.2023

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN:1104

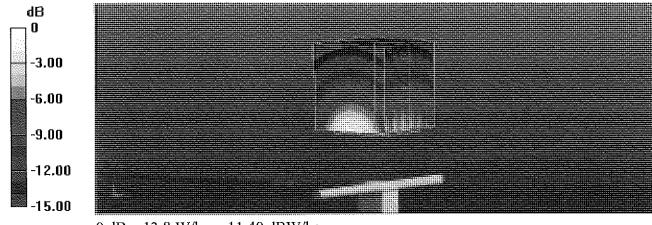
Communication System: UID 0 - CW; Frequency: 1750 MHz Medium parameters used: f = 1750 MHz; $\sigma = 1.47$ S/m; $\epsilon_r = 54$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.48, 8.48, 8.48) @ 1750 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 19.12.2022
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 101.8 V/m; Power Drift = -0.05 dB Peak SAR (extrapolated) = 16.3 W/kg **SAR(1 g) = 9.2 W/kg; SAR(10 g) = 4.91 W/kg** Smallest distance from peaks to all points 3 dB below = 10 mm Ratio of SAR at M2 to SAR at M1 = 57.4% Maximum value of SAR (measured) = 13.8 W/kg



0 dB = 13.8 W/kg = 11.40 dBW/kg

Impedance Measurement Plot for Body TSL

<u>File V</u> iew) <u>C</u> hannel Sw <u>e</u> e	p Calibration <u>1</u>	irace <u>S</u> cale	e M <u>a</u> rker	System <u>W</u>	<u>{indow</u> <u></u>	<u> 1</u> elp		
			A	XXX		$\langle \rangle$	750000 GH 78.350 p 750000 GH)F - Hz 49	45.437 Ω 1.1608 Ω 1.329 mU -165.03 °
Ch1:8	Ch 1 Avg = 20 Itart 1.55000 GHz -							\$toj	5 1.95000 GHz
10.00 5.00 0.00 -5.00 -10.00 -15.00 -20.00 -25.00 -30.00 -35.00 -40.00 Ch1: 8	Ch 1 Avg = 20 Start 1.55000 GHz				> 1:	1.			1.38 dB
Status	CH 1: \$11	I (* 1-Port		Avg=20 De	lay			LCL



ELEMENT MATERIALS TECHNOLOGY

(formerly PCTEST) 18855 Adams Ct, Morgan Hill, CA 95037 USA Tel. +1.408.538.5600 http://www.element.com



Certification of Calibration

Object

D1750V2 – SN: 1104

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: September 06, 2024

Description:

SAR Validation Dipole at 1750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Hewlett Packard	8753E	RF Vector Network Analyzer	5/21/2024	Annual	5/21/2025	US38161081
Agilent	E4438C	ESG Vector Signal Generator	5/19/2024	Annual	5/19/2025	US41460739
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2496A	Power Meter	7/15/2024	Annual	7/15/2025	1138001
Anritsu	MA2411B	Pulse Power Sensor	7/10/2024	Annual	7/10/2025	1126066
Anritsu	MA2411B	Pulse Power Sensor	7/1/2024	Annual	7/1/2025	1911105
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	1/15/2024	Annual	1/15/2025	160574418
Control Company	4352	Ultra Long Stem Thermometer	1/15/2024	Annual	1/15/2025	160508097
Agilent	85033E	3.5mm Standard Calibration Kit	7/31/2024	Annual	7/31/2025	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/14/2024	Annual	5/14/2025	1070
SPEAG	EX3DV4	SAR Probe	2/9/2024	Annual	2/9/2025	7308
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/6/2024	Annual	3/6/2025	534

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AC
Approved By:	Greg Snyder	Executive VP of Operations	Lugo M.S.

Object:	Date Issued:	Page 1 of 3
D1750V2 – SN: 1104	09/06/2024	Fage 1015

DIPOLE CALIBRATION EXTENSION

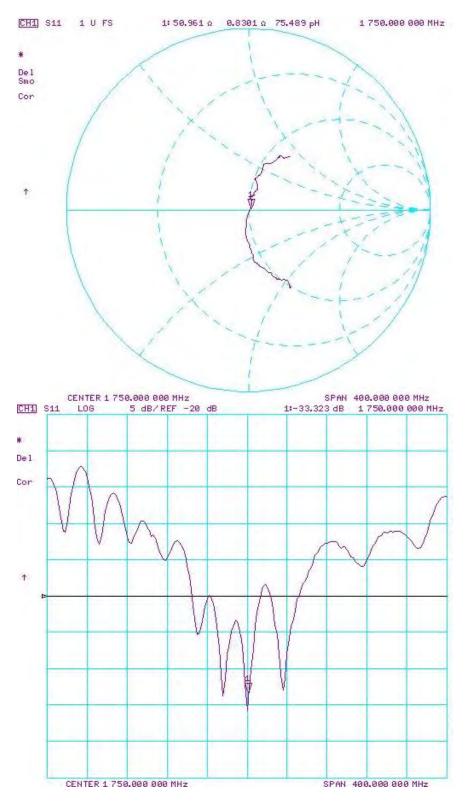
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

Calibration Date	Extension Date		Certificate SAR Target Head (1g) W/kg @ 20.0 dBm		Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm		Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
9/6/2023	9/6/2024	1.216	3.56	3.49	-1.97%	1.88	1.83	-2.66%	49.7	51.0	1.3	-1.6	0.8	2.4	-35.5	-33.3	6.20%

Object:	Date Issued:	Page 2 of 3
D1750V2 – SN: 1104	09/06/2024	raye 2 01 5



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Page 3 of 3
D1750V2 – SN: 1104	09/06/2024	Fage 5 01 5

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 Swiss Calibration Service

Certificate No. D1900V2-5d181_Sep23

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client Element Morgan Hill, USA

CALIBRATION C	ERTIFICAT		
Object	D1900V2 - SN:5	Atm	
Calibration procedure(s)	QA CAL-05.v12 Calibration Proc	edure for SAR Validation Source	9/38/2023 es between 0.7-3 GHz
			VW 10/11/2024
Calibration date:	September 07, 2		
The measurements and the uncert	ainties with confidence p ed in the closed laborato	onal standards, which realize the physical u robability are given on the following pages a ry facility: environment temperature (22 ± 3)°	nd are part of the certificate.
Primary Standards	ID #	Cal Date (Certificate No.)	Sebadulad Calibratian
Power meter NRP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Scheduled Calibration Mar-24
ower sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24 Mar-24
ower sensor NRP-Z91	SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24 Mar-24
eference 20 dB Attenuator	SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
ype-N mismatch combination	SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	Mar-24 Mar-24
eference Probe EX3DV4	SN: 7349	10-Jan-23 (No. EX3-7349_Jan23)	Jan-24
AE4	SN: 601	19-Dec-22 (No. DAE4-601_Dec22)	Dec-23
econdary Standards	ID #	Check Date (in house)	Scheduled Check
ower meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-22)	In house check: Oct-24
ower sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
ower sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
F generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	in house check: Oct-24
etwork Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24
	Name	Function	Signature
alibrated by:	Krešimir Franjić	Laboratory Technician	- Alexandre
pproved by:	Sven Kühn	Technical Manager	S.
nis calibration certificate shall not b	e reproduced except in t	ull without written approval of the laboratory	Issued: September 8, 2023

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Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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 - Servizio svizzero di taratura
- S Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end
 of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the center marking of the flat phantom.
- *Return Loss:* This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	nno
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.9 ± 6 %	1.40 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	9.98 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W	39.9 W/kg ± 17.0 % (k=2)	
	·····		
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	····	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	5.27 W/kg	

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	53.3	1.52 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	52.9 ± 6 %	1.51 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	-	

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	9.89 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	39.6 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	5.20 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	20.8 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.0 Ω + 5.2 jΩ
Return Loss	- 24.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.6 Ω + 5.0 jΩ
Return Loss	- 24.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.204 ns
	1.204 IIS

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
	J SFEAG

DASY5 Validation Report for Head TSL

Date: 07.09.2023

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d181

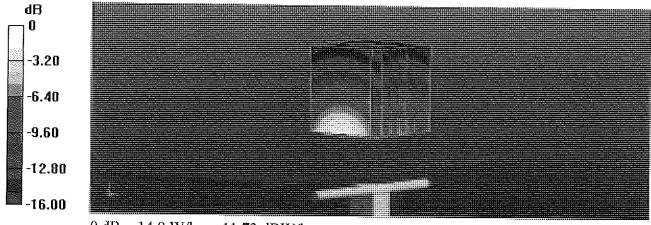
Communication System: UID 0 - CW; Frequency: 1900 MHz Medium parameters used: f = 1900 MHz; $\sigma = 1.4$ S/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.35, 8.35, 8.35) @ 1900 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 19.12.2022
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 109.7 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 18.1 W/kg **SAR(1 g) = 9.98 W/kg; SAR(10 g) = 5.27 W/kg** Smallest distance from peaks to all points 3 dB below = 10 mm Ratio of SAR at M2 to SAR at M1 = 56% Maximum value of SAR (measured) = 14.9 W/kg



0 dB = 14.9 W/kg = 11.73 dBW/kg

Impedance Measurement Plot for Head TSL

Eile Vie	ew <u>C</u> hannel Sw <u>e</u> ep	Calibration <u>Trace</u> <u>S</u> cale	Marker System <u>W</u> indo	w <u>H</u> elp	
	Ch 1.4vg ≈ 20	<u> </u>		1.900000 GHz 432.52 pH 1.900000 GHz	53.003 Ω 5.1634 Ω 57.919 mU 56.946 °
Ch1:	Start 1.70000 GHz				8top 2.10000 GHz
18.00 5.00 0.00 -5.00			> 1:	1.900000 GHz	-24.744 dB
5.00 0.00			> 1:	1.900000 GHz	-24.744 dB
5.00 0.00 -5.00 -10.00 -15.00				1.900000 GHz	-24.744 dB
5,00 0,00 -5,00 -10,00 -15,00 -20,00 -25,00 -35,00 -35,00 -40,00	Image: Second			1.900000 CHz	-24.744 dB

DASY5 Validation Report for Body TSL

Date: 07.09.2023

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d181

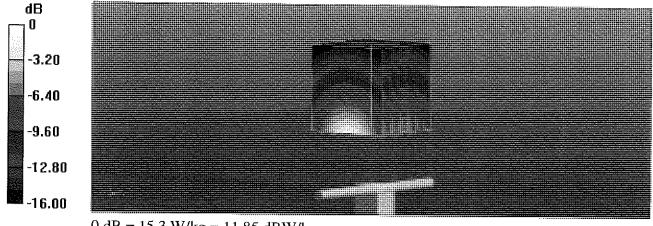
Communication System: UID 0 - CW; Frequency: 1900 MHz Medium parameters used: f = 1900 MHz; $\sigma = 1.51$ S/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.42, 8.42, 8.42) @ 1900 MHz; Calibrated: 10.01.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 19.12.2022
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 103.4 V/m; Power Drift = -0.05 dB Peak SAR (extrapolated) = 18.2 W/kg SAR(1 g) = 9.89 W/kg; SAR(10 g) = 5.2 W/kg Smallest distance from peaks to all points 3 dB below = 9 mm Ratio of SAR at M2 to SAR at M1 = 55.3% Maximum value of SAR (measured) = 15.3 W/kg



0 dB = 15.3 W/kg = 11.85 dBW/kg

Impedance Measurement Plot for Body TSL

<u>File V</u> ie	w <u>C</u> hannel 9	Sweep Calibration	n <u>T</u> race <u>S</u> ca	ale M <u>a</u> rker Syster	n <u>W</u> indow <u>H</u>	<u>l</u> elp	
Ch1:	Ch 1 Avg ≂ 20 Start 1.70000 GHa	1	A		\sum	900000 GHz 418.28 pH 900000 GHz	47.573 Ω 4.9932 Ω 56.826 mU 113.00 °
						14200400-0000000000000000000000000000000	
10.00	dB \$11				> 1: 1.8	00000 dHz	-2 4 ,909,481
10.00 5.00 0.00	dB \$11				> 1: 1.5	00000 GHz	-24.909 dB
5.00 0.00 -5.00						100000 GHz	-24.909 dB
5.00 0.00			22 -		> 1: 1.C	100000 GHz	-24.909 dB
5.00 0.00 -5.00 -10.00						00000 GHz	-24.909 dB
5.00 0.00 -5.00 -10.00 -15.00 -20.00					× 1: 1.0		-24.909 dB
5.00 0.00 -5.00 -10.00 -15.00 -20.00 -25.00 -30.00						00000 GHz	-24.909 dB
5.00 0.00 -5.00 -10.00 -25.00 -25.00 -30.00 -35.00 -40.00	Ch 1 Avg = 20						-24.909 dB
5.00 0.00 -5.00 -10.00 -25.00 -25.00 -30.00 -35.00 -40.00							-24.909 dB



ELEMENT MATERIALS TECHNOLOGY

(formerly PCTEST) 18855 Adams Ct, Morgan Hill, CA 95037 USA Tel. +1.408.538.5600 http://www.element.com



Certification of Calibration

Object

D1900V2 - SN: 5d181

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: September 07, 2024

Description:

SAR Validation Dipole at 1900 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Hewlett Packard	8753E	RF Vector Network Analyzer		Annual	5/21/2025	US38161081
Agilent	E4438C	ESG Vector Signal Generator		Annual	5/19/2025	US41460739
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2496A	Power Meter	7/15/2024	Annual	7/15/2025	1138001
Anritsu	MA2411B	Pulse Power Sensor	7/10/2024	Annual	7/10/2025	1126066
Anritsu	MA2411B	Pulse Power Sensor	7/1/2024	Annual	7/1/2025	1911105
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	1/15/2024	Annual	1/15/2025	160574418
Control Company	4352	Ultra Long Stem Thermometer	1/15/2024	Annual	1/15/2025	160508097
Agilent	85033E	3.5mm Standard Calibration Kit	7/31/2024	Annual	7/31/2025	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/14/2024	Annual	5/14/2025	1070
SPEAG	EX3DV4	SAR Probe	2/9/2024	Annual	2/9/2025	7308
SPEAG	DAE4	Dasy Data Acquisition Electronics	1/15/2024	Annual	1/15/2025	1465

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AG
Approved By:	Greg Snyder	Executive VP of Operations	Lugg M. S.

Object:	Date Issued:	Page 1 of 3
D1900V2 – SN: 5d181	09/07/2024	Page 1 of 3

DIPOLE CALIBRATION EXTENSION

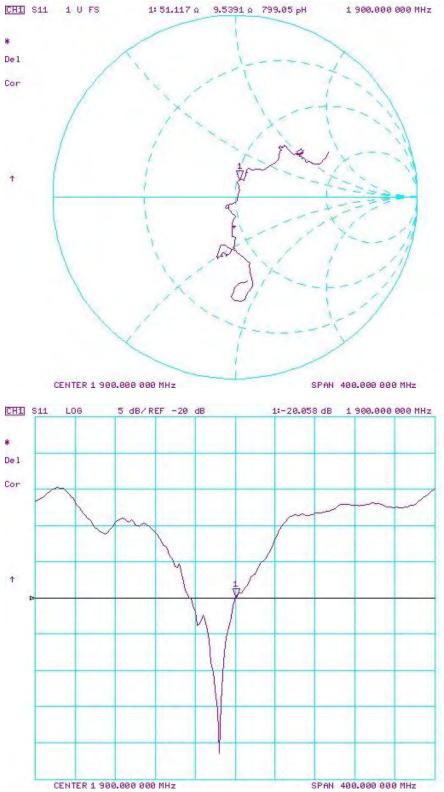
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

Calibration Date	Extension Date	Electrical	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	W/kg @ 20.0	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm	Head SAR (10a) W/ka @	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real				Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
9/7/2023	9/7/2024	1.204	3.99	3.79	-5.01%	2.11	1.97	-6.64%	53	51.1	1.9	5.2	9.5	4.3	-24.7	-20.1	18.80%

Object:	Date Issued:	Page 2 of 3
D1900V2 – SN: 5d181	09/07/2024	rage 2 01 5



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Page 3 of 3
D1900V2 – SN: 5d181	09/07/2024	rage 5 01 5

Calibration Laboratory of

Schmid & Partner **Engineering AG** Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst

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Swiss Calibration Service

Certificate No. D2300V2-1038_Mar24

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client Element Morgan Hill, USA

CALIBRATION CERTIFICATE

Object	D2300V2-SN:1038
Calibration procedure(s)	QA CAL-05.v12 Calibration Procedure for SAR Validation Sources between 0.7-3 GHz
Calibration date:	March 11, 2024
	ments the traceability to national standards, which realize the physical units of measurements (SI). certainties with confidence probability are given on the following pages and are part of the certificate.
All calibrations have been cond	ucted in the closed laboratory facility: environment temperature (22 \pm 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Mar-24
Power sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
Power sensor NRP-Z91	SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24
Reference 20 dB Attenuator	SN: BH9394 (20k)	30-Mar-23 (No. 217-03809)	Mar-24
Type-N mismatch combination	SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	Mar-24
Reference Probe EX3DV4	SN: 7349	03-Nov-23 (No. EX3-7349_Nov23)	Nov-24
DAE4	SN: 601	30-Jan-24 (No. DAE4-601_Jan24)	Jan-25
Secondary Standards	ID#	Check Date (in house)	Scheduled Check
Power meter E44198	SN: GB39512475	30-Oct-14 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	In house check: Oct-24
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24
	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	Sel Million
			- y i rup
Approved by:	Sven Kühn	Technical Manager	Se Z
			Issued: March 12, 2024
This calibration certificate shall not	be reproduced except in	full without written approval of the laboratory	

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Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Accreditation No.: SCS 0108

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Glossarv:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the • center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2300 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.5	1.67 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	39.0 ± 6 %	1.67 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	12.3 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	49.1 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	5.93 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	23.7 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	48.7 Ω - 4.5 jΩ
Return Loss	- 26.4 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.170 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	I SPEAG I

DASY5 Validation Report for Head TSL

Date: 11.03.2024

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: D2300V2 - SN:1038

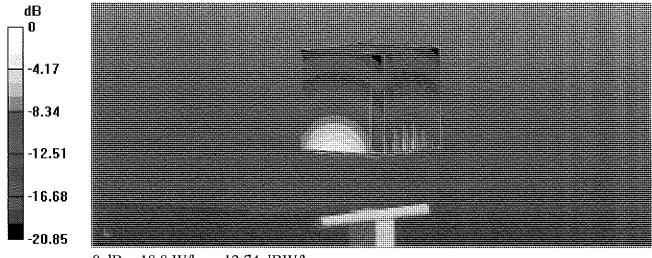
Communication System: UID 0 - CW; Frequency: 2300 MHz Medium parameters used: f = 2300 MHz; $\sigma = 1.67$ S/m; $\epsilon_r = 39$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(7.98, 7.98, 7.98) @ 2300 MHz; Calibrated: 03.11.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 30.01.2024
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 116.0 V/m; Power Drift = 0.08 dB Peak SAR (extrapolated) = 22.8 W/kg SAR(1 g) = 12.3 W/kg; SAR(10 g) = 5.93 W/kg Smallest distance from peaks to all points 3 dB below = 9 mm Ratio of SAR at M2 to SAR at M1 = 55.1% Maximum value of SAR (measured) = 18.8 W/kg



0 dB = 18.8 W/kg = 12.74 dBW/kg

Impedance Measurement Plot for Head TSL

<u>File View Channel Swe</u> e	p Calibration Ira	ce <u>S</u> cale M <u>a</u> rker	System <u>W</u> ind	ow <u>H</u> elp	
				2.300000 GHz 15.249 pF 2.300000 GHz	48.713 Ω -4.5378 Ω 47.732 mU -103.20 °
Ch 1 Avg = 20 Ch 1: Start 2.10000 GHz	100001111994	· · · · · · · · · · · · · · · · · · ·	1		Stop 2.50000 GHz
10.00 38.511 5.00					-26.424 dB
Ch1: Start 2.10000 GHz		Port	Avg=20 Delay		Stop 2,50000 GHz

Calibration Laboratory of Schmid & Partner **Engineering AG** Zeughausstrasse 43, 8004 Zurich, Switzerland



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Accreditation No.: SCS 0108

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Certificate No: D2450V2-750_May22

Element

Client

CALIBRATION CERTIFICATE				
Object	D2450V2 - SN:7	50	VATUR 611 (2)	
Calibration procedure(s)	QA CAL-05.v11 Calibration Proce	dure for SAR Validation Sources	עאן איז	
Calibration date:	Maγ 11, 2022		✓ YW 5/22/2023	
			VW 5/31/2024	
The measurements and the uncertain	ainties with confidence p ad in the closed laborator	onal standards, which realize the physical un robability are given on the following pages an y facility: environment temperature (22 ± 3)°(id are part of the certificate.	
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration	
Power meter NRP	SN: 104778	04-Apr-22 (No. 217-03525/03524)	Apr-23	
Power sensor NRP-Z91	SN: 103244	04-Apr-22 (No. 217-03524)	Арг-23	
Power sensor NRP-Z91	SN: 103245	04-Apr-22 (No. 217-03525)	Apr-23	
Reference 20 dB Attenuator	SN: BH9394 (20k)	04-Apr-22 (No. 217-03527)	Apr-23	
Type-N mismatch combination	SN: 310982 / 06327	04-Apr-22 (No. 217-03528)	Apr-23	
Reference Probe EX3DV4	SN: 7349	31-Dec-21 (No. EX3-7349 Dec21)	Dec-22	
DAE4	SN: 601	02-May-22 (No. DAE4-601_May22)	May-23	
Secondary Standards	ID #	Check Date (in house)	Scheduled Check	
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-20)	In house check: Oct-22	
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-20)	In house check: Oct-22	
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-20)	In house check: Oct-22	
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-20)	In house check: Oct-22	
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-22	
	Name	Function	Signature	
Calibrated by:	Aidonia Georgiadou	Laboratory Technician	MZ	
Approved by:	Sven Kühn	Technical Manager	SLF-	
This calibration certificate shall not	be reproduced except in	full without written approval of the laboratory	lssued: May 12, 2022	

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

wideed g	
TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)". October 2020,
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled 0 phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power. 0
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna 0 connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	***************************************
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.2 ± 6 %	1.85 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.4 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	52.6 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.20 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.5 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.5 ± 6 %	2.02 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.9 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	50.5 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.04 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	23.9 ₩/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.8 Ω + 8.1 jΩ
Return Loss	- 21.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	50.8 Ω + 8.7 jΩ
Return Loss	- 21.3 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.153 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
	J JFLAG

DASY5 Validation Report for Head TSL

Date: 11.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:750

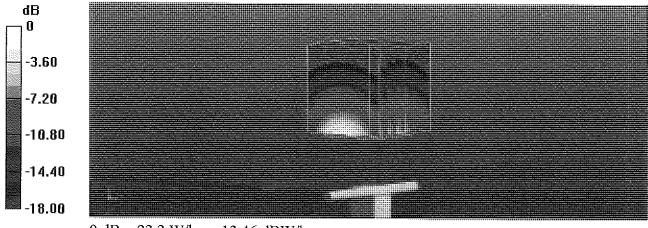
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; $\sigma = 1.85$ S/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(7.96, 7.96, 7.96) @ 2450 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 116.5 V/m; Power Drift = 0.04 dB Peak SAR (extrapolated) = 26.8 W/kg SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.2 W/kg Smallest distance from peaks to all points 3 dB below = 9 mm Ratio of SAR at M2 to SAR at M1 = 50% Maximum value of SAR (measured) = 22.2 W/kg



0 dB = 22.2 W/kg = 13.46 dBW/kg

Impedance Measurement Plot for Head TSL

<u>Eile View Channel Swe</u> ep Calibra	on <u>T</u> race <u>S</u> cale Marker System <u>W</u> indow <u>H</u> elp
Ch 1 Avg = 20	1: 2.450000 GHz 54.753 Ω 527.78 pH 8.1248 Ω 2.450000 GHz 89.589 mU 55.235 °
Ch1: Start 2,25000 GHz	Stop 2.65000 GHz
10.00 68 511 5.00 0.00 5.00	> 1: 2.450000 CHz -20.955 dB
10.00 15.00 20.00	
-25.00 30.00 -35.00	
40.00 Ch 1 Avg = 20 Ch 1: Start 2.25000 GHz	Stop 2.65000 GHz
Status CH 1: S11	C [*] 1-Poit Avg=20 Delay

DASY5 Validation Report for Body TSL

Date: 11.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:750

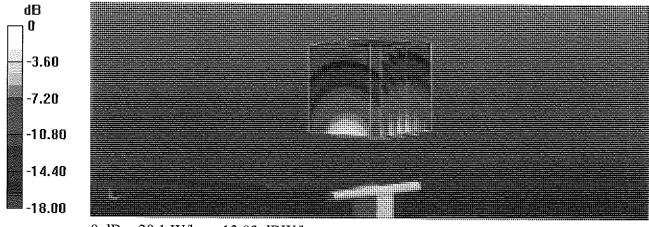
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; $\sigma = 2.02$ S/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.12, 8.12, 8.12) @ 2450 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 106.7 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 24.3 W/kg SAR(1 g) = 12.9 W/kg; SAR(10 g) = 6.04 W/kg Smallest distance from peaks to all points 3 dB below = 8.9 mm Ratio of SAR at M2 to SAR at M1 = 54% Maximum value of SAR (measured) = 20.1 W/kg



0 dB = 20.1 W/kg = 13.03 dBW/kg

Impedance Measurement Plot for Body TSL

		A	XXX		1	2.450000 562.1 2.450000	9 pH	85.	i0,764).6542 .904 m 80.04)
Ch 1 Avg = h1: Start 2.25000			·····					Stop	2.65000 0
	 			:> 1:	2	.450000 (<u>GHz</u>	-2	.320 c
)				> 1	2	450000 (-2	.320 (



Element Materials Technology Morgan Hill 18855 Adams Ct, Morgan Hill, CA 95037 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654 http://www.element.com



Certification of Calibration

Object

D2450V2 - SN: 750

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extended Calibration date:

May 11, 2023

Description:

SAR Validation Dipole at 2450 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/14/2022	Annual	6/14/2023	US39170118
Agilent	E4438C	ESG Vector Signal Generator	11/17/2022	Annual	11/17/2023	MY45093852
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Rohde & Schwarz	NRX	Power Meter	1/11/2023	Annual	1/11/2024	102583
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	5/19/2022	Annual	5/19/2023	106562
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	5/19/2022	Annual	5/19/2023	106559
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	5/11/2022	Biennial	5/11/2024	221514974
Control Company	4353	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774685
Agilent	85033E	3.5mm Standard Calibration Kit	6/21/2022	Annual	6/21/2023	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit		Annual	8/15/2023	1041
SPEAG	EX3DV4	SAR Probe		Annual	2/13/2024	7427
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/15/2023	Annual	2/15/2024	1403

Measurement Uncertainty = $\pm 23\%$ (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer I	AC
Approved By:	Greg Snyder	Executive VP of Operations	Lugo Mark

Object:	Date Issued:	Page 1 of 4
D2450V2 – SN: 750	05/11/2023	Page 1 of 4

DIPOLE CALIBRATION EXTENSION

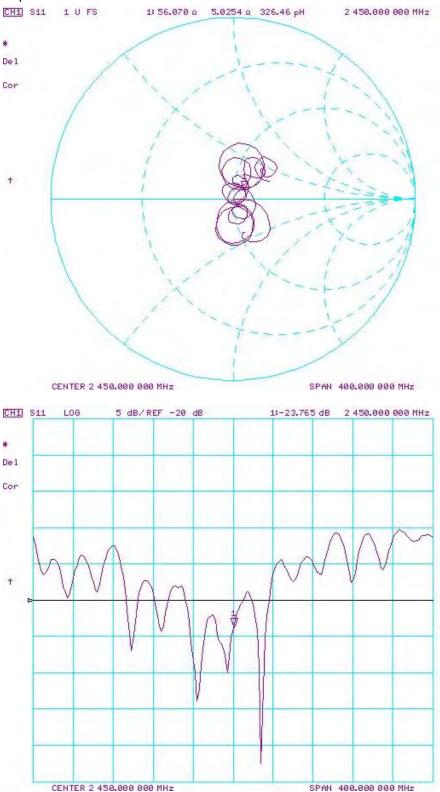
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

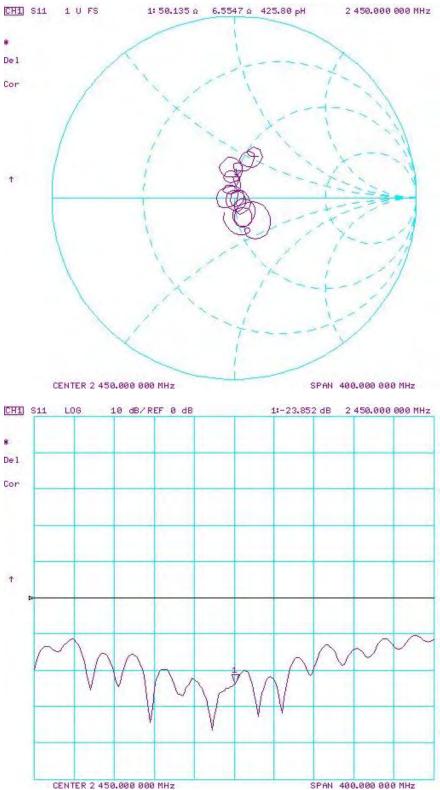
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	Measured Head SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm	Measured Head	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real		Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary		Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
5/11/2022	5/11/2023	1.153	5.26	4.89	-7.03%	2.45	2.28	-6.94%	54.8	56.1	1.3	8.1	5	3.1	-21	-23.8	-13.20%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 20.0 dBm	Measured Body SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 20.0 dBm	Measured Body SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
5/11/2022	5/11/2023	1.153	5.05	4.76	-5.74%	2.39	2.26	-5.44%	50.8	50.1	0.7	8.7	6.6	2.1	-21.3	-23.9	-12.00%	PASS

Object:	Date Issued:	Page 2 of 4
D2450V2 – SN: 750	05/11/2023	Page 2 of 4



Impedance	ce &	Retu	rn-Loss Measu	irement F	Plot for	Head TS	L
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Object:	Date Issued:	Page 3 of 4	
D2450V2 – SN: 750	05/11/2023	Page 3 of 4	



Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Dago 4 of 4	
D2450V2 – SN: 750	05/11/2023	Page 4 of 4	



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(formerly PCTEST) 18855 Adams Ct, Morgan Hill, CA 95037 USA Tel. +1.408.538.5600 http://www.element.com



Certification of Calibration

Object

D2450V2 – SN: 750

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: May 11, 2024

Description:

SAR Validation Dipole at 2450 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/2/2023	Annual	6/12/2024	MY40003841
Agilent	E4438C	ESG Vector Signal Generator	11/15/2023	Annual	11/15/2024	MY45092078
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2496A	Power Meter	6/15/2023	Annual	6/15/2024	1138001
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	2018527
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	1827528
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310282
Control Company	4353	Ultra Long Stem Thermometer	10/24/2023	Annual	10/24/2024	200645916
Agilent	85033E	3.5mm Standard Calibration Kit	7/18/2023	Annual	7/18/2024	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2023	Annual	9/11/2024	1045
SPEAG	EX3DV4	SAR Probe	3/11/2024	Annual	3/11/2025	7638
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/6/2024	Annual	3/6/2025	1408

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AS
Approved By:	Greg Snyder	Executive VP of Operations	Sugged Syl

Object:	Date Issued:	Page 1 of 3	
D2450V2 – SN: 750	05/11/2024	Page 1 of 3	

DIPOLE CALIBRATION EXTENSION

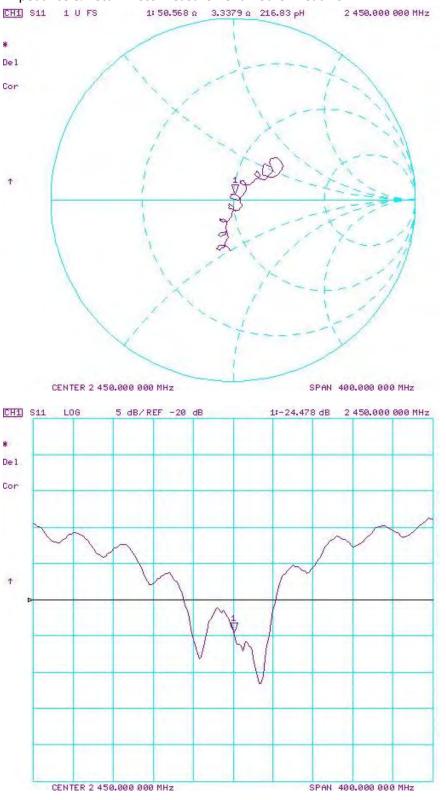
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 3-year calibration period from the calibration date:

Calibration Date	Extension Date		Certificate SAR Target Head (1g) W/kg @ 20.0 dBm		Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm		Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real		Certificate Impedance Head (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
5/11/2022	5/11/2024	1.153	5.26	5.19	-1.33%	2.45	2.33	-4.90%	54.8	50.6	4.2	8.1	3.3	4.8	-21	-24.5	-16.60%

Object:	Date Issued:	Page 2 of 3
D2450V2 – SN: 750	05/11/2024	rage 2 01 5



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Dogo 2 of 2
D2450V2 – SN: 750	05/11/2024	Page 3 of 3

Calibration Laboratory of Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst

- C Service suisse d'étaionnage
 - Servizio svizzero di taratura
- S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client Element

Certificate No: D2450V2-855_Nov22

CALIBRATION C	ERTIFICAT	Ε	
Object	D2450V2 - SN:8	55	ATM
Calibration procedure(s)	QA CAL-05.v11 Calibration Proce	edure for SAR Validation Sources	between 0.7-3 GHz
			12/6/22
Calibration date:	November 15, 20	D <u>22</u>	✓ YW 12/13/2023 ✓ YW 11/19/2024
This calibration certificate document The measurements and the uncert	nts the traceability to nati ainties with confidence p	ional standards, which realize the physical unit robability are given on the following pages and	s of measurements (SI).
All calibrations have been conduct	ed in the closed laborato	ry facility: environment temperature (22 \pm 3)°C	and humidity < 70%.
Calibration Equipment used (M&TE	E critical for calibration)		
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-22 (No. 217-03525/03524)	Apr-23
Power sensor NRP-Z91	SN: 103244	04-Apr-22 (No. 217-03524)	Apr-23
Power sensor NRP-Z91	SN: 103245	04-Apr-22 (No. 217-03525)	Apr-23
Reference 20 dB Attenuator	SN: BH9394 (20k)	04-Apr-22 (No. 217-03527)	Apr-23
Type-N mismatch combination	SN: 310982 / 06327	04-Apr-22 (No. 217-03528)	Apr-23
Reference Probe EX3DV4	SN: 7349	31-Dec-21 (No, EX3-7349_Dec21)	Dec-22
DAE4	SN: 601	31-Aug-22 (No. DAE4-601_Aug22)	Aug-23
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	In house check: Oct-24
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24
	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
			PUU
Approved by:	Sven Kühn	Technical Manager	

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Issued: November 16, 2022

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S

Schweizerischer Kalibrierdienst

C Service suisse d'étalonnage

Servizio svizzero di taratura

Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

 - - - - - - -	
TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end
 of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	nanti
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.4 ± 6 %	1.87 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	13.4 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W	52.4 W/kg ± 17.0 % (k=2)	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition		
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	6.24 W/kg	

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52. 7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.7 ± 6 %	2.01 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	· · · · · · · · · · · · · · · · · · ·
SAR measured	250 mW input power	12.8 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	50.2 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.03 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	23.8 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.5 Ω + 6.3 jΩ
Return Loss	- 23.6 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	48.9 Ω + 7.9 jΩ
Return Loss	- 21.9 dB

General Antenna Parameters and Design

- 1	Electrical Delay (one direction)	· · · · · · · · · · · · · · · · · ·
		1,157 ns
- 1	, , , ,	1.107 113

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 15.11.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:855

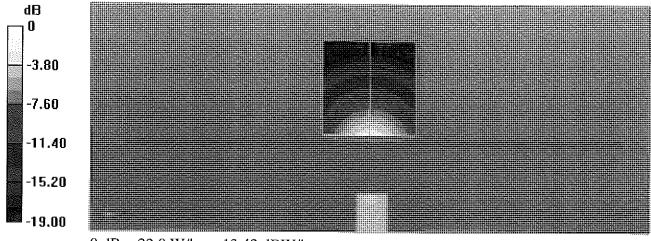
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; $\sigma = 1.87$ S/m; $\varepsilon_r = 38.4$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(7.96, 7.96, 7.96) @ 2450 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 31.08.2022
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 116.1 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 26.2 W/kg **SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.24 W/kg** Smallest distance from peaks to all points 3 dB below = 9 mm Ratio of SAR at M2 to SAR at M1 = 51.1% Maximum value of SAR (measured) = 22.0 W/kg



0 dB = 22.0 W/kg = 13.42 dBW/kg

Impedance Measurement Plot for Head TSL

File	<u>V</u> iew <u>(</u>	hannel	Sw <u>e</u> ep	Calibration	n <u>T</u> race	Scale	Marker	System	Window	Help				
		h1Avq≍	26							2.45000 407 2.45000	.99 pH	6 65.	2.487 (.2805 (787 mi 84.891))
c		2.25000 C					······································					Stop (2.65000 Gł	12
1														
10,01 5,00 0,00		\$11						>	- 1	2.45000	0 GHz	-21).637 df	3
5,00	· · · · · · · · · · · · · · · · · · ·	\$11						>		2.45000	0 GHz	-23).637 df	
5.00 0.00 -5.00	I II) II)									2.45000)		-2).637 dE	
5,00 0,00 -5,00 -10,0 -15,0 -20,0 -25,0 -25,0 -30,0	0	\$11								2.45000)		-2.).637 dE	
5.00 0.00 -5.00 -15.0 -25.0 -25.0 -25.0 -35.0 -35.0 -40.0		\$11 1 Avg = 2 25000 G	20 Hz							2.45000)			2.637 dE	

DASY5 Validation Report for Body TSL

Date: 15.11.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:855

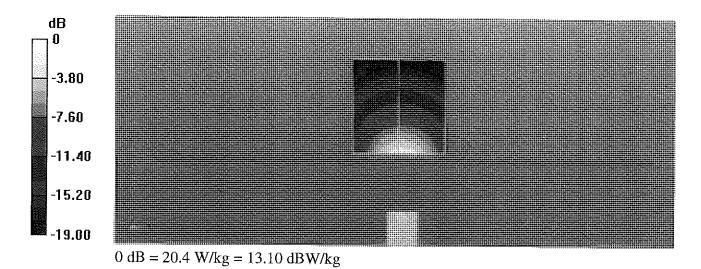
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; σ = 2.01 S/m; ϵ_r = 51.7; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.12, 8.12, 8.12) @ 2450 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 31.08.2022
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm 2/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 108.4 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 24.1 W/kg SAR(1 g) = 12.8 W/kg; SAR(10 g) = 6.03 W/kg Smallest distance from peaks to all points 3 dB below = 8.9 mm Ratio of SAR at M2 to SAR at M1 = 53.7% Maximum value of SAR (measured) = 20.4 W/kg



Impedance Measurement Plot for Body TSL

ile <u>V</u> iew	Channel		Calibration	Irace Scale	Marker	System		2.450000	'9 pH	7.87 80.140	15 Ω 83 Ω 3 mU 290 °
-	art 2.25000 : BB \$11						1	2.450000	CHz	Stop 2.850	00 GH2 2 dB
-5.00 -10.00 -15.00 -20.00			······································							۲۰۰٬۱۳۵٬۱۳۵ ۲۰۰٬۲۳۵	
25.00 30.00 35.00						Z					
40.00 (Ch1:St	<u>Ch 1 Avg =</u> an 2,25000 0	20 3Hz								Stop 2.650	00 GHz



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Certification of Calibration

Object

D2450V2 – SN: 855

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: November 15, 2023

Description: SAR Valid

SAR Validation Dipole at 2450 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/2/2023	Annual	6/12/2024	MY40003841
Agilent	E4438C	ESG Vector Signal Generator	4/25/2023	Annual	4/25/2024	US41460739
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Rohde & Schwarz	NRX	Power Meter	1/11/2023	Annual	1/11/2024	102583
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	1/19/2023	Annual	1/19/2024	106563
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	1/11/2023	Annual	1/11/2024	106564
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	5/11/2022	Biennial	5/11/2024	221514974
Control Company	4353	Ultra Long Stem Thermometer	10/24/2023	Annual	10/24/2024	200645916
Agilent	85033E	3.5mm Standard Calibration Kit	7/18/2023	Annual	7/18/2024	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/9/2023	Annual	5/9/2024	1070
SPEAG	EX3DV4	SAR Probe	11/9/2023	Annual	11/9/2024	7639
SPEAG	DAE4	Dasy Data Acquisition Electronics	11/14/2023	Annual	11/14/2024	1403

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AS
Approved By:	Greg Snyder	Executive VP of Operations	Lugg M. S.

Object:	Date Issued:	Page 1 of 3
D2450V2 – SN: 855	11/15/2023	Fage 1015

DIPOLE CALIBRATION EXTENSION

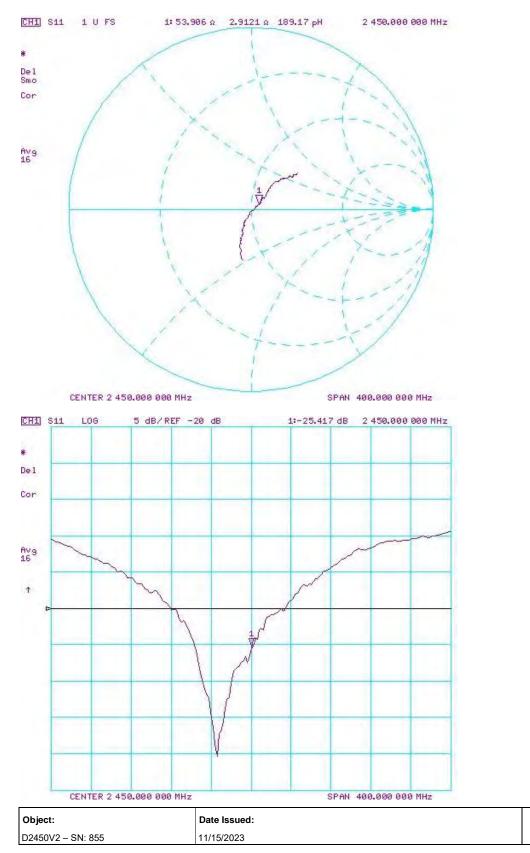
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	Measured Head SAR (1g) W/kg @ 20.0 dBm		Certificate SAR Target Head (10g) W/kg @ 20.0 dBm	Measured Head SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real		Certificate Impedance Head (Ohm) Imaginary			Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
11/15/2022	11/15/2023	1.157	5.24	5.13	-2.10%	2.46	2.38	-3.25%	52.5	53.9	1.4	6.3	2.9	3.4	-23.6	-25.4	-7.70%

Object:	Date Issued:	Page 2 of 3
D2450V2 – SN: 855	11/15/2023	rage 2 01 5



Impedance & Return-Loss Measurement Plot for Head TSL



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Certification of Calibration

Object

D2450V2 – SN: 855

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: November 15, 2024

Description: SAR Validation Dipole at 2450 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Hewlett Packard	8753E	RF Vector Network Analyzer	5/21/2024	Annual	5/21/2025	US38161081
Agilent	E4438C	ESG Vector Signal Generator	5/19/2024	Annual	5/19/2025	US41460739
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2496A	Power Meter	7/15/2024	Annual	7/15/2025	1138001
Anritsu	MA2411B	Pulse Power Sensor	7/10/2024	Annual	7/10/2025	1126066
Anritsu	MA2411B	Pulse Power Sensor	7/1/2024	Annual	7/1/2025	1911105
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	1/15/2024	Annual	1/15/2025	160574418
Control Company	4352	Ultra Long Stem Thermometer	1/15/2024	Annual	1/15/2025	160508097
Agilent	85033E	3.5mm Standard Calibration Kit	7/31/2024	Annual	7/31/2025	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/14/2024	Annual	5/14/2025	1070
SPEAG	EX3DV4	SAR Probe	9/9/2024	Annual	9/9/2025	7639
SPEAG	DAE4	Dasy Data Acquisition Electronics	9/4/2024	Annual	9/4/2025	1403

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AC
Approved By:	Greg Snyder	Executive VP of Operations	Lugg March

Object:	Date Issued:	Page 1 of 3
D2450V2 – SN: 855	11/15/2024	Fage 1015

DIPOLE CALIBRATION EXTENSION

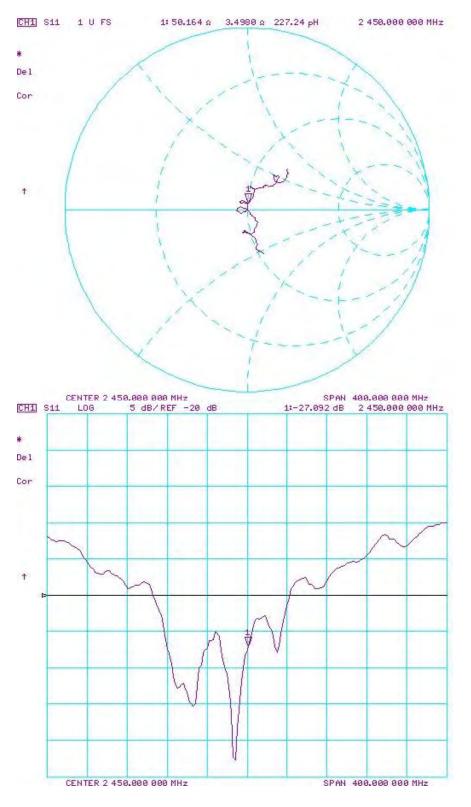
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 3-year calibration period from the calibration date:

Calibration Date	Extension Date	Electrical	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	W/kg @ 20.0	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm		Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
11/15/2022	11/15/2024	1.157	5.24	5.31	1.34%	2.46	2.49	1.22%	52.5	50.2	2.3	6.3	3.5	2.8	-23.6	-27.1	-14.80%

Object:	Date Issued:	Page 2 of 3
D2450V2 – SN: 855	11/15/2024	rage 2 01 5



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Page 3 of 3
D2450V2 – SN: 855	11/15/2024	Fage 5 01 5

Calibration Laboratory of Schmid & Partner **Engineering AG** Zeughausstrasse 43, 8004 Zurich, Switzerland

Element

Client



Schweizerischer Kalibrierdienst S

- Service suisse d'étalonnage
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- S Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Certificate No: D2600V2-1042_May22

ALIBRATION CERTIFICATE C

Object	D2600V2 - SN:10	VATM						
Calibration procedure(s)	QA CAL-05.v11 Calibration Proce	edure for SAR Validation Sources	between 0.7-3 GHz					
Calibration date:	May 11, 2022		✓ YW 5/22/2023✓ YW 6/11/2024					
	This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.							
All calibrations have been conducte	ed in the closed laborator	y facility: environment temperature (22 ± 3)°C	C and humidity < 70%.					
Calibration Equipment used (M&TE	critical for calibration)							
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration					
Power meter NRP	SN: 104778	04-Apr-22 (No. 217-03525/03524)	Apr-23					
Power sensor NRP-Z91	SN: 103244	04-Apr-22 (No. 217-03524)	Apr-23					
Power sensor NRP-Z91	SN: 103245	04-Apr-22 (No. 217-03525)	Apr-23					
Reference 20 dB Attenuator	SN: BH9394 (20k)	04-Apr-22 (No. 217-03527)	Apr-23					
Type-N mismatch combination	SN: 310982 / 06327	04-Apr-22 (No. 217-03528)	Apr-23					
Reference Probe EX3DV4	SN: 7349	31-Dec-21 (No. EX3-7349_Dec21)	Dec-22					
DAE4	SN: 601	02-May-22 (No. DAE4-601_May22)	May-23					
		- · · · · · · · · · · · · · · · · · · ·	-					
Secondary Standards	ID #	Check Date (in house)	Scheduled Check					
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-20)	In house check: Oct-22					
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-20)	In house check: Oct-22					
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-20)	In house check: Oct-22					
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-20)	In house check: Oct-22					
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-22					
	Name	Function	Signature					
Calibrated by:	Aldonia Georgiadou	Laboratory Technician	AIZ					
Approved by:	Sven Kühn	Technical Manager	Ser					
This calibration certificate shall not	be reproduced except in	full without written approval of the laboratory.	Issued: May 12, 2022					

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





Schweizerischer Kalibrierdienst

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S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossarv:

tissue simulating liquid
sensitivity in TSL / NORM x,y,z
not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled 8 phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power. 0
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Accreditation No.: SCS 0108

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2600 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.0	1.96 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.6 ± 6 %	2.02 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm 3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	14.2 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	55.8 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.30 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.9 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.5	2.16 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.1 ± 6 %	2.20 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.6 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	53.7 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.04 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	24.0 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	47.5 Ω - 8.9 jΩ
Return Loss	- 20.5 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	44.2 Ω - 7.2 jΩ
Return Loss	- 20.2 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.150 ns
----------------------------------	----------

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 11.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1042

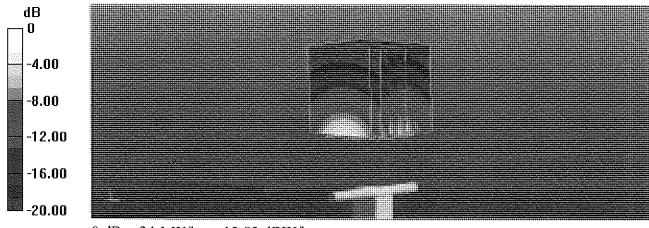
Communication System: UID 0 - CW; Frequency: 2600 MHz Medium parameters used: f = 2600 MHz; $\sigma = 2.02$ S/m; $\epsilon_r = 37.6$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(7.84, 7.84, 7.84) @ 2600 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 117.1 V/m; Power Drift = 0.00 dB Peak SAR (extrapolated) = 28.9 W/kg **SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.3 W/kg** Smallest distance from peaks to all points 3 dB below = 9 mm Ratio of SAR at M2 to SAR at M1 = 49.3% Maximum value of SAR (measured) = 24.1 W/kg



0 dB = 24.1 W/kg = 13.83 dBW/kg

Impedance Measurement Plot for Head TSL

File	<u>⊻</u> iew	⊆hannel	Sweep	Calibration	<u>Trace</u> 5	cale	M <u>a</u> rker	S <u>y</u> stem	<u>W</u> indow (<u>t</u> elp				
		Ch 1 Avg =	20		K				A	.600000 (6.911) .600000 (3 pF	-8. 94.0	7.483 Ω 8584 Ω 362 mU 00.67 °	
	Ch1: Sta	at 2.40000						.j				Stop 2	.80000 GHa	2
10.(5.0 -5.0 -5.0 -10. -15. -20. -25.	0 - 0 - 10 - 00 - 00 -							>	1: 2			-20.	532 dB	Sector Sect
-30. -35. -40	.00 .09 .00	<u>Ch 1 Avg =</u> nt 2.48000 (20 3Hz									Stop 2	.80000 GHz	
Sta	itus	CH 1: §	311		C* 1-Port		and the second	Avg=20	Delay				LCL	<u>البريمينييني</u>

DASY5 Validation Report for Body TSL

Date: 11.05.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: D2600V2 - SN:1042

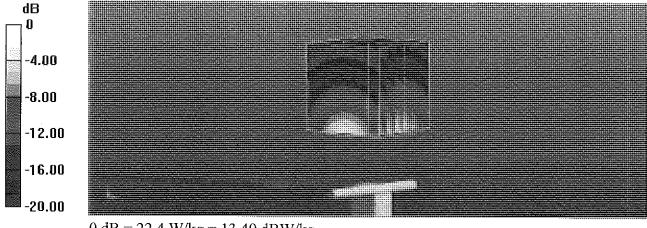
Communication System: UID 0 - CW; Frequency: 2600 MHz Medium parameters used: f = 2600 MHz; $\sigma = 2.2$ S/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(7.91, 7.91, 7.91) @ 2600 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 02.05.2022
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 107.5 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 27.0 W/kg SAR(1 g) = 13.6 W/kg; SAR(10 g) = 6.04 W/kg Smallest distance from peaks to all points 3 dB below = 8.5 mm Ratio of SAR at M2 to SAR at M1 = 50.9% Maximum value of SAR (measured) = 22.4 W/kg



0 dB = 22.4 W/kg = 13.49 dBW/kg

Impedance Measurement Plot for Body TSL

<u>File Yiew</u>	<u>⊂</u> hannel	Sw <u>e</u> ep C	ajibration]	[race <u>S</u> cale	e M <u>a</u> rker	System <u>W</u>	indow <u>H</u> e	elp		
					XXX			600000 G 8.4441 600000 G	рF	44.240 Ω -7.2493 Ω 7.962 mU -124.07 °
Ch1:S	Ch 1 Avg ≈ tart 2.40000 0				~~~ <u>~</u>		-		Sto	op 2,80000 GHz
10.00 5.00 0.00	dB \$11					>	2.6	00000 G	Hz -	20.179 dB
-5.00 -10.00 -15.00 -20.00			w						1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	
-25.00 -30.00										
35.00 40.00 Ch1: \$	Ch 1 Avg = tart 2.40000 C						~		Ste	p 2.80000 GHz
Status	CH 1: [5	11	C	* 1-Port		Avg=20 Del	ay			LCL



Element Materials Technology Morgan Hill 18855 Adams Ct, Morgan Hill, CA 95037 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654 http://www.element.com



Certification of Calibration

Object

D2600V2 - SN: 1042

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

May 11, 2023

Extended Calibration date:

Description: SAR Validation Dipole at 2600 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/14/2022	Annual	6/14/2023	US39170118
Agilent	E4438C	ESG Vector Signal Generator	11/17/2022	Annual	11/17/2023	MY45093852
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Rohde & Schwarz	NRX	Power Meter	1/11/2023	Annual	1/11/2024	102583
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	5/19/2022	Annual	5/19/2023	106562
Rohde & Schwarz	NRP-Z81	Wide Band Power Sensor	5/19/2022	Annual	5/19/2023	106559
Traceable	4040 90080-06	Therm./ Clock/ Humidity Monitor	5/11/2022	Biennial	5/11/2024	221514974
Control Company	4353	Long Stem Thermometer	9/10/2021	Biennial	9/10/2023	210774685
Agilent	85033E	3.5mm Standard Calibration Kit	6/21/2022	Annual	6/21/2023	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	8/15/2022	Annual	8/15/2023	1041
SPEAG	EX3DV4	SAR Probe	2/13/2023	Annual	2/13/2024	7427
SPEAG	DAE4	Dasy Data Acquisition Electronics	2/15/2023	Annual	2/15/2024	1403

Measurement Uncertainty = $\pm 23\%$ (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer I	AC
Approved By:	Greg Snyder	Executive VP of Operations	Sugged Sol

Object:	Date Issued:	Dage 1 of 4
D2600V2 – SN: 1042	05/11/2023	Page 1 of 4

DIPOLE CALIBRATION EXTENSION

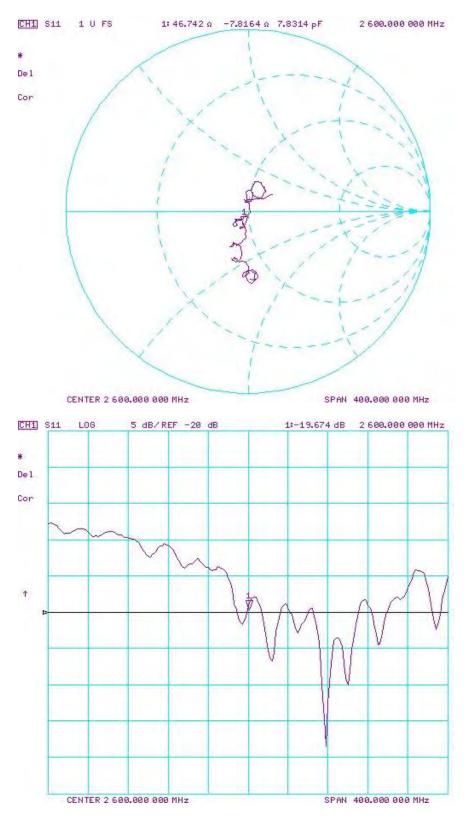
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 2-year calibration period from the calibration date:

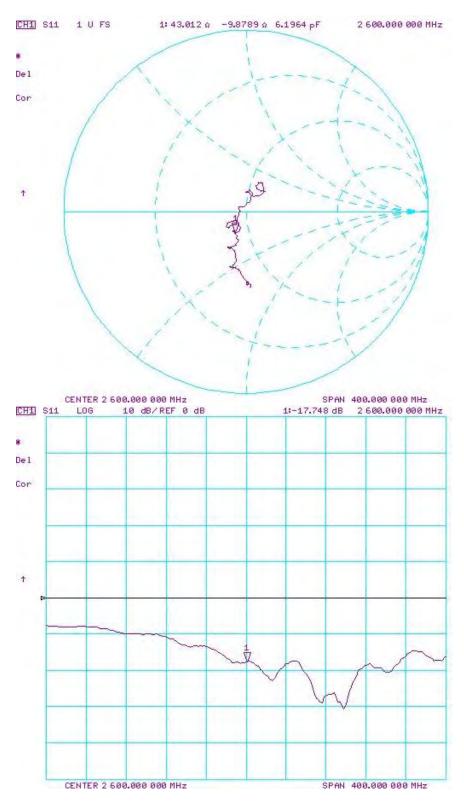
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	Measured Head SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm	Measured Head SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
5/11/2022	5/11/2023	1.15	5.58	5.63	0.90%	2.49	2.52	1.20%	47.5	46.7	0.8	-8.9	-7.8	1.1	-20.5	-19.7	4.00%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 20.0 dBm	Measured Body SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Body (10g) W/kg @ 20.0 dBm	Measured Body SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
5/11/2022	5/11/2023	1.15	5.37	5.53	2.98%	2.4	2.54	5.83%	44.2	43	1.2	-7.2	-9.9	2.7	-20.2	-17.7	12.10%	PASS

Object:	Date Issued:	Page 2 of 4
D2600V2 – SN: 1042	05/11/2023	raye z 014



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Page 3 of 4
D2600V2 – SN: 1042	05/11/2023	Page 5 01 4



Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Daga 4 of 4
D2600V2 – SN: 1042	05/11/2023	Page 4 of 4



ELEMENT MATERIALS TECHNOLOGY

(formerly PCTEST) 18855 Adams Ct, Morgan Hill, CA 95037 USA Tel. +1.408.538.5600 http://www.element.com



Certification of Calibration

Object

D2600V2 – SN: 1042

Calibration procedure(s) Procedure for Calibration Extension for SAR Dipoles.

Extension Calibration date: May 11, 2024

Description: SAR Validation Dipole at 2600 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Vector Network Analyzer	6/2/2023	Annual	6/12/2024	MY40003841
Agilent	E4438C	ESG Vector Signal Generator	11/15/2023	Annual	11/15/2024	MY45092078
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	343972
Anritsu	ML2496A	Power Meter	6/15/2023	Annual	6/15/2024	1138001
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	2018527
Anritsu	MA24106A	USB Power Sensor	4/15/2024	Annual	4/15/2025	1827528
Control Company	4040	Therm./ Clock/ Humidity Monitor	4/15/2024	Biennial	4/15/2026	240310282
Control Company	4353	Ultra Long Stem Thermometer	10/24/2023	Annual	10/24/2024	200645916
Agilent	85033E	3.5mm Standard Calibration Kit	7/18/2023	Annual	7/18/2024	MY53402352
Mini-Circuits	VLF-6000+	Low Pass Filter DC to 6000 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Mini-Circuits	ZHDC-16-63-S+	50-6000MHz Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	NC-100	Torque Wrench	12/5/2022	Biennial	12/5/2024	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit		Annual	9/11/2024	1045
SPEAG	EX3DV4	SAR Probe	3/11/2024	Annual	3/11/2025	7638
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/6/2024	Annual	3/6/2025	1408

Measurement Uncertainty = ±23% (k=2)

	Name	Function	Signature
Calibrated By:	Arturo Oliveros	Compliance Engineer	AS
Approved By:	Greg Snyder	Executive VP of Operations	Sugged Syl

Object:	Date Issued:	Page 1 of 3
D2600V2 – SN: 1042	05/11/2024	Page 1 of 3

DIPOLE CALIBRATION EXTENSION

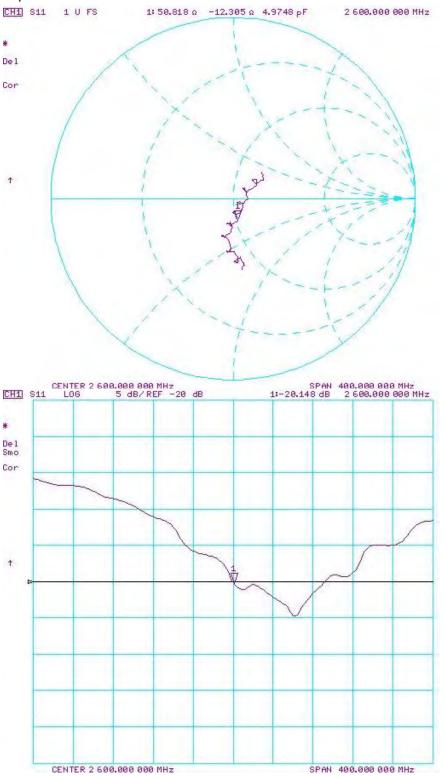
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

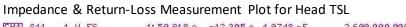
- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

The following dipole was checked to pass the above 3 requirements to have 3-year calibration period from the calibration date:

Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	Measured Head SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm	Measured Head SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)
5/11/2022	5/11/2024	1.15	5.58	5.61	0.54%	2.49	2.55	2.41%	47.5	50.8	3.3	-8.9	-12.3	3.4	-20.5	-20.1	1.70%

Object:	Date Issued:	Page 2 of 3
D2600V2 - SN: 1042	05/11/2024	Page 2 of 3





Object:	Date Issued:	Daga 2 of 2
D2600V2 – SN: 1042	05/11/2024	Page 3 of 3

Calibration Laboratory of Schmid & Partner

Morgan Hill, USA

Client Element

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates



1C=M

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- Swiss Calibration Service

Certificate No. D3500V2-1126_Jun24

Accreditation No.: SCS 0108

CALIBRATION C			in an
Object	D3500V2 - SN:1	26 ##########	6/25/
Calibration procedure(s)	QA CAL-22.v7 Calibration Proce	edure for SAR Validation Source	s between 3-10 GHz
Calibration date:	June 10, 2024		
The measurements and the uncert	ainties with confidence pa	onal standards, which realize the physical ur robability are given on the following pages a y facility: environment temperature (22 \pm 3)°	nd are part of the certificate.
Calibration Equipment used (M&TE	E critical for calibration)		
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	26-Mar-24 (No. 217-04036/04037)	Mar-25
ower sensor NRP-Z91	SN: 103244	26-Mar-24 (No. 217-04036)	Mar-25
ower sensor NRP-Z91	SN: 103245	26-Mar-24 (No. 217-04037)	Mar-25
Reference 20 dB Attenuator	SN: BH9394 (20k)	26-Mar-24 (No. 217-04046)	Mar-25
ype-N mismatch combination	SN: 310982 / 06327	26-Mar-24 (No. 217-04047)	Mar-25
Reference Probe EX3DV4 DAE4	SN: 3503 SN: 601	07-Mar-24 (No. EX3-3503_Mar24) 22-May-24 (No. DAE4-601_May24)	Mar-25 May-25
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
ower meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-22)	In house check: Oct-24
ower sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
ower sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	In house check: Oct-24
letwork Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24
	Name	Function	Signature
Calibrated by:	Leif Klysnər	Laboratory Technician	Seif My
Approved by:	Sven Kühn	Technical Manager	A. A. Jertel
			Issued: June 10, 2024

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	3500 MHz ± 1 MHz	

Head TSL parameters The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	37.9	2.91 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.6 ± 6 %	2.94 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.61 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	66.2 W/kg ± 19.9 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.49 W/kg

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.1 Ω - 1.6 jΩ
Return Loss	- 31.8 dB

General Antenna Parameters and Design

Electrical Delay (and direction)	1 100
Electrical Delay (one direction)	1.133 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 10.06.2024

Test Laboratory: SPEAG, Zurich, Switzerland

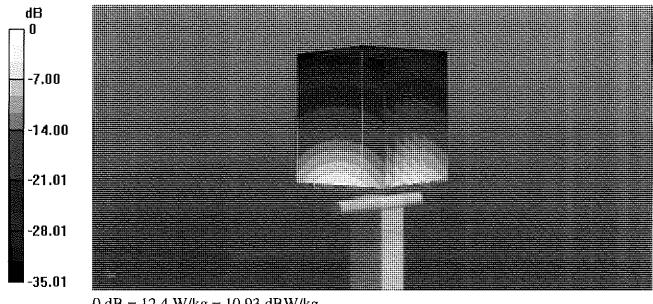
DUT: Dipole 3500 MHz; Type: D3500V2; Serial: D3500V2 - SN:1126

Communication System: UID 0 - CW; Frequency: 3500 MHz Medium parameters used: f = 3500 MHz; $\sigma = 2.94 \text{ S/m}$; $\varepsilon_r = 38.6$; $\rho = 1000 \text{ kg/m}^3$ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(7.63, 7.63, 7.63) @ 3500 MHz; Calibrated: 07.03.2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection) •
- Electronics: DAE4 Sn601; Calibrated: 22.05.2024 •
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001 .
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=100 mW, d=10mm, f=3500MHz/Zoom Scan, dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 68.84 V/m; Power Drift = 0.02 dBPeak SAR (extrapolated) = 18.0 W/kgSAR(1 g) = 6.61 W/kg; SAR(10 g) = 2.49 W/kgSmallest distance from peaks to all points 3 dB below = 8 mmRatio of SAR at M2 to SAR at M1 = 74.3%Maximum value of SAR (measured) = 12.4 W/kg



0 dB = 12.4 W/kg = 10.93 dBW/kg

Impedance Measurement Plot for Head TSL

<u>File Vi</u>	ew <u>C</u> hannel	Sw <u>e</u> ep	Calibration	<u>Trace Sc</u>	ale M <u>a</u> rker	System	Window	<u>H</u> elp			
Ch1	Ch 1 Avg = : Stan: 3.30000 C						A	.500000 (28.47: .500000 (3 pF	-1.1 25.6 -3	2.073 Ω 5971 Ω i36 mU 6.711 °
								<u>in an an</u>		ain photoinine.	
10.00 5.00	dB \$11						1: 3.	.900000 C	Hz	-31.	823 dB
5.00 0.00	4B \$11		·			> 1	1 3.	<u>500000 C</u>	<u>3Hz</u>	-2.	823 dB
5.00	4B S11					> 1	1: 3.		3Hz	-21.	823 dB
5.00 0.00 -5.00 -10.00 -15.00			· ·			> 1	[<u>3</u> .		3H2	-3.	823 dB
5.00 0.00 -5.00 -10.00 -15.00 -20.00	P					> 1	3.		Hz	-3.	823 dB
5.00 0.00 -5.00 -10.00 -15.00	P						3.		Hz	-3.	823 dB
5.00 0.00 -5.00 -10.00 -15.00 -20.00 -25.00 -30.60 -35.00	P	20				> 1	3.		Hz	-3.	823 dB
5.00 0.00 -5.00 -10.00 -15.00 -20.00 -25.00 -30.00 -35.00 -40.00	Ch 1 Avg = Start 3,30000 G	20 Hz					3.		Hz		823 dB

Calibration Laboratory of Schmid & Partner **Engineering AG**

Zeughausstrasse 43, 8004 Zurich, Switzerland



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Accreditation No.: SCS 0108

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Client Element Morgan Hill, USA

Certificate No. D3700V2-1097_Jun24

S

CALIBRATION C	ERTIFICAT		
Object	D3700V2 - SN:1	097	J m 6/25/24
Calibration procedure(s)	QA CAL-22.v7 Calibration Proce	edure for SAR Validation Sour	rces between 3-10 GHz
Calibration date:	June 10, 2024		
The measurements and the uncerta	ainties with c onfidence p	ional standards, which realize the physica robability are given on the following page ry facility: environment temperature (22 ±	es and are part of the certificate.
Calibration Equipment used (M&TE		y lacility, environment temperature (22 ±	. 3)°C and humidity < 70%.
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	26-Mar-24 (No. 217-04036/04037)	Mar-25
Power sensor NRP-Z91	SN: 103244	26-Mar-24 (No. 217-04036)	Mar-25
Power sensor NRP-Z91	SN: 103245	26-Mar-24 (No. 217-04037)	Mar-25
Reference 20 dB Attenuator	SN: BH9394 (20k)	26-Mar-24 (No. 217-04046)	Mar-25
Type-N mismatch combination	SN: 310982 / 06327	26-Mar-24 (No. 217-04047)	Mar-25
Reference Probe EX3DV4	SN: 3503	07-Mar-24 (No. EX3-3503_Mar24)	Mar-25
DAE4	SN: 601	22-May-24 (No. DAE4-601_May24)	May-25
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	In house check: Oct-24
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24
	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	PT LAL
Approved by:	Svən Kühn	Technical Manager	A. A. Mark
This calibration certificate shall not '	be reproduced except in	full without written approval of the labora	Issued: June 10, 2024

Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





S

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Swiss Calibration Service

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- Feed Point Impedance and Return Loss: These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	3700 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	37.7	3.12 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.4 ± 6 %	3.10 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.75 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	67.9 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.46 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.7 W/kg ± 19.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	45.8 Ω + 0.6 jΩ
Return Loss	- 27.0 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.130 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 10.06.2024

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: D3700V2 - SN:1097

Communication System: UID 0 - CW; Frequency: 3700 MHz Medium parameters used: f = 3700 MHz; $\sigma = 3.1$ S/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

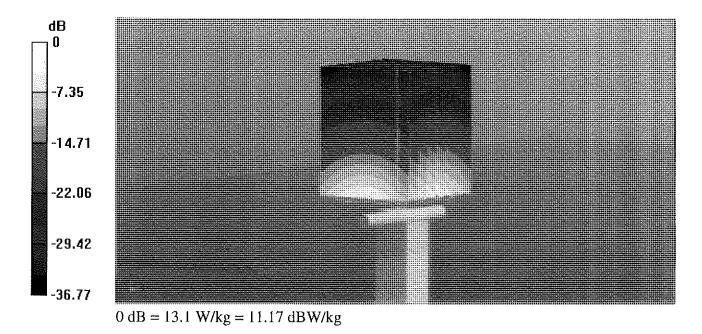
- Probe: EX3DV4 SN3503; ConvF(7.35, 7.35, 7.35) @ 3700 MHz; Calibrated: 07.03.2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 22.05.2024
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=100 mW, d=10mm, f=3700MHz/Zoom Scan,

dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 69.14 V/m; Power Drift = 0.03 dB Peak SAR (extrapolated) = 19.2 W/kg SAR(1 g) = 6.75 W/kg; SAR(10 g) = 2.46 W/kg Smallest distance from peaks to all points 3 dB below = 8.2 mm

Ratio of SAR at M2 to SAR at M1 = 73.5%

Maximum value of SAR (measured) = 13.1 W/kg



Impedance Measurement Plot for Head TSL

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Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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- Swiss Calibration Service

Certificate No. D3900V2-1062_Dec23

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Client Element

Morgan Hill, USA

CALIBRATION CERTIFICATE

Object

D3900V2 - SN:1062

Calibration procedure(s)

QA CAL-22.v7 Calibration Procedure for SAR Validation Sources between 3-10 GHz

Calibration date:

December 21, 2023

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	D#	Cal Date (Certiflcate No.)	Scheduled Calibration
Power meter NBP2	SN: 104778	30-Mar-23 (No. 217-03804/03805)	Mar-24
Power sensor NRP-Z91	SN: 103244	30-Mar-23 (No. 217-03804)	Mar-24
Power sensor NRP-Z91	SN: 103245	30-Mar-23 (No. 217-03805)	Mar-24
Reference 20 dB Attenuator		30-Mar-23 (No. 217-03803) 30-Mar-23 (No. 217-03809)	Mar-24
	SN: BH9394 (20k)	•	Mar-24 Mar-24
Type-N mismatch combination	SN: 310982 / 06327	30-Mar-23 (No. 217-03810)	
Reference Probe EX3DV4	SN: 3503	07-Mar-23 (No. EX3-3503_Mar23)	Mar-24
DAE4	SN: 601	03-Oct-23 (No. DAE4-601_Oct23)	Oct-24
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-22)	In house check: Oct-24
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-22)	In house check: Oct-24
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-22)	In house check: Oct-24
	Name	Function	Signaturg
Calibrated by:	Krešimir Franjić	Laboratory Technician	ing
Approved by:	Sven Kühn	Technical Manager	Sin

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Calibration Laboratory of

Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurlch, Switzerland





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Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the center marking of the flat phantom.
- *Return Loss:* This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy = 4 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	3900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	37.5	3.32 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.0 ± 6 %	3.24 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.84 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	68.9 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	2.40 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.1 W/kg ± 19.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	50.8	3.78 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.4 ± 6 %	3.70 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	100 mW input power	6.34 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	63.8 W/kg ± 19.9 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	100 mW input power	2.19 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	22.0 W/kg ± 19.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	46.3 Ω - 6.5 jΩ
Return Loss	- 22.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	45.3 Ω - 5.8 jΩ
Return Loss	- 22.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.102 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 21.12.2023

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 3900 MHz; Type: D3900V2; Serial: D3900V2 - SN:1062

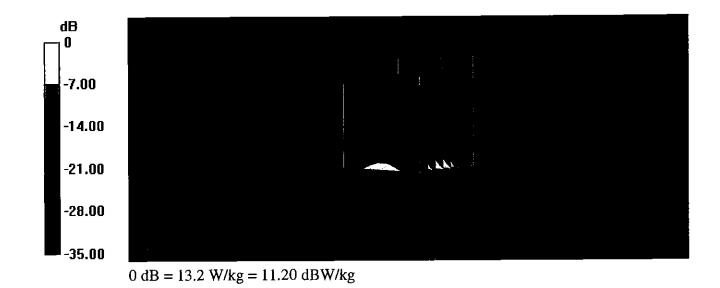
Communication System: UID 0 - CW; Frequency: 3900 MHz Medium parameters used: f = 3900 MHz; $\sigma = 3.24$ S/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(7.39, 7.39, 7.39) @ 3900 MHz; Calibrated: 07.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 03.10.2023
- Phantom: Flat Phantom 5.0 (front); Type: QD000P50AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=100 mW, d=10mm, f=3900MHz/Zoom Scan,

dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 70.13 V/m; Power Drift = -0.02 dBPeak SAR (extrapolated) = 19.1 W/kg SAR(1 g) = 6.84 W/kg; SAR(10 g) = 2.40 W/kg Smallest distance from peaks to all points 3 dB below = 8 mm Ratio of SAR at M2 to SAR at M1 = 74.8% Maximum value of SAR (measured) = 13.2 W/kg



Impedance Measurement Plot for Head TSL

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DASY5 Validation Report for Body TSL

Date: 21.12.2023

Test Laboratory: SPEAG, Zurich, Switzerland

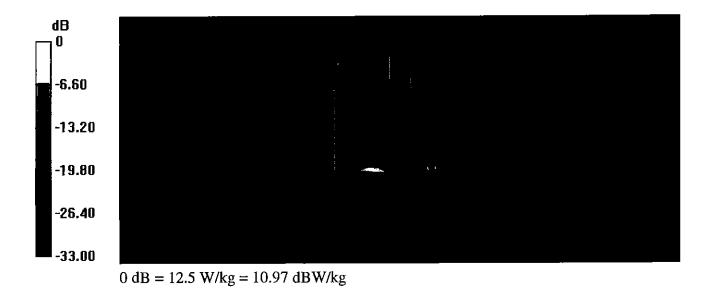
DUT: Dipole 3900 MHz; Type: D3900V2; Serial: D3900V2 - SN:1062

Communication System: UID 0 - CW; Frequency: 3900 MHz Medium parameters used: f = 3900 MHz; $\sigma = 3.7$ S/m; $\epsilon_r = 51.4$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN3503; ConvF(7.18, 7.18, 7.18) @ 3900 MHz; Calibrated: 07.03.2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 03.10.2023
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Body Tissue/Pin=100 mW, d=10mm, f=3900MHz/Zoom Scan , dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 61.85 V/m; Power Drift = -0.06 dB Peak SAR (extrapolated) = 18.1 W/kg SAR(1 g) = 6.34 W/kg; SAR(10 g) = 2.19 W/kg Smallest distance from peaks to all points 3 dB below = 7.9 mm Ratio of SAR at M2 to SAR at M1 = 74.3% Maximum value of SAR (measured) = 12.5 W/kg



Impedance Measurement Plot for Body TSL

File	<u>V</u> iew	<u>C</u> hannel	Sw <u>e</u> ep	Calibration	<u>Trace</u> <u>S</u> cale	Marker	System	<u>W</u> indow	<u>H</u> elp			
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Accreditation No.: SCS 0108

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Client Element

Morgan Hill, USA

Certificate No. CLA13-1004_Nov24

CALIBRATION CERTIFICATE

CLA13 - SN: 1004

Calibration procedure(s)

QA CAL-15.v11 Calibration Procedure for SAR Validation Sources below 700 MHz

Calibration date:

November 11, 2024

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP2	SN: 104778	26-Mar-24 (No. 217-04036/04037)	Mar-25
Power sensor NRP-Z91	SN: 103244	26-Mar-24 (No. 217-04036)	-Mar-25
Power sensor NRP-Z91	SN: 103245	26-Mar-24 (No. 217-04037)	Mar-25
Reference 20 dB Attenuator	SN: CC2552 (20x)	26-Mar-24 (No. 217-04046)	Mar-25
Type-N mismatch combination	SN: 310982 / 06327	26-Mar-24 (No. 217-04047)	Mar-25
Reference Probe EX3DV4	SN: 3877	10-Jan-24 (No. EX3-3877_Jan24)	Jan-25
DAE4	SN: 654	18-Oct-24 (No. DAE4-654_Oct24)	Oct-25
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter NRP2	SN: 107193	08-Nov-21 (in house check Dec-22)	In house check: Dec-24
Power sensor NRP-Z91	SN: 100922	15-Dec-09 (In house check Dec-22)	in house check; Dec-24
Power sensor NRP-Z91	SN: 100418	01-Jan-04 (in house check Dec-22)	In house check: Dec-24
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-24)	In house check: Jun-26
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Sep-24)	In house check: Sep-26
	Name	Function	Signature
Calibrated by:	Krešimir Franjić	Laboratory Technician	
Approved by:	Sven Kühn	Technical Manager	
			Issued' November 11, 2024

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

issued: November 11, 2024

Calibration Laboratory of

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Schmid & Partner Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland





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Accredited by the Swiss Accreditation Service (SAS) The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Glossary:	
TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020,
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

c) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions: Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL: The source is mounted in a touch configuration below the • center marking of the flat phantom.
- Return Loss: This parameter is measured with the source positioned under the liquid filled • phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured: SAR measured at the stated antenna input power.
- SAR normalized: SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters: The measured TSL parameters are used to calculate the • nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	ELI4 Flat Phantom	Shell thickness: 2 ± 0.2 mm
EUT Positioning	Touch Position	
Zoom Scan Resolution	dx, dy = 4.0 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	13 MHz ± 1 MHz	

Head TSL parameters The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	55.0	0.75 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	53.1 ± 6 %	0.72 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	1 W input power	0.561 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	0.575 W/kg ± 18.4 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	1 W input power	0.346 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	0.355 W/kg ± 18.0 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	56.5 Ω - 0.6 jΩ
Return Loss	- 24.3 dB

Additional EUT Data

Manufactured by		
Manuactured by SPEAG	Manufactured by	SPEAG

DASY5 Validation Report for Head TSL

Date: 11.11.2024

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: CLA13; Type: CLA13; Serial: CLA13 - SN: 1004

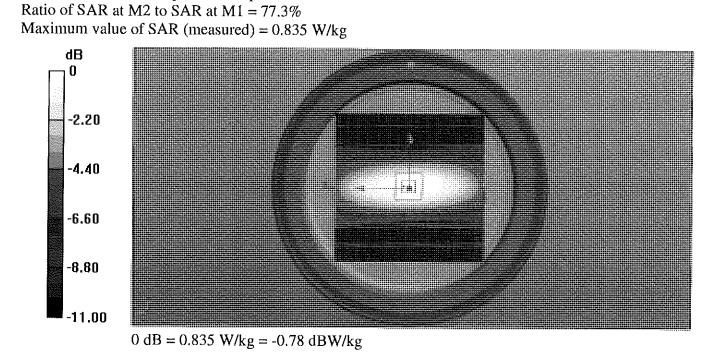
Communication System: UID 0 - CW; Frequency: 13 MHz Medium parameters used: f = 13 MHz; $\sigma = 0.72$ S/m; $\varepsilon_r = 53.1$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: EX3DV4 SN3877; ConvF(15.33, 15.33, 15.33) @ 13 MHz; Calibrated: 10.01.2024
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn654; Calibrated: 18.10.2024
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: TP:2034
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

CLA Calibration for HSL-LF Tissue/CLA-13, touch configuration, Pin=1W/Zoom Scan,

dist=1.4mm (8x10x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Reference Value = 31.58 V/m; Power Drift = 0.00 dB Peak SAR (extrapolated) = 1.18 W/kg SAR(1 g) = 0.561 W/kg; SAR(10 g) = 0.346 W/kg Smallest distance from peaks to all points 3 dB below = 16.5 mm



Impedance Measurement Plot for Head TSL

<u>File</u>	<u>/</u> iew <u>C</u> hannel :	Sweep Calibration	<u>Trace S</u> cale M <u>a</u>	irkei System <u>W</u>	(indow <u>H</u> elp		
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