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CALIBRATION LABORATORY
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CALIBRATION
CNAS L0570

Client **7layers** **Certificate No: 24J02Z000050**

CALIBRATION CERTIFICATE

Object EX3DV4 - SN : 7612

Calibration Procedure(s) FF-Z11-004-02
Calibration Procedures for Dosimetric E-field Probes

Calibration date: March 20, 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)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	12-Jun-23(CTTL, No.J23X05435)	Jun-24
Power sensor NRP-Z91	101547	12-Jun-23(CTTL, No.J23X05435)	Jun-24
Power sensor NRP-Z91	101548	12-Jun-23(CTTL, No.J23X05435)	Jun-24
Reference 10dBAttenuator	18N50W-10dB	19-Jan-23(CTTL, No.J23X00212)	Jan-25
Reference 20dBAttenuator	18N50W-20dB	19-Jan-23(CTTL, No.J23X00211)	Jan-25
Reference Probe EX3DV4	SN 3846	31-May-23(SPEAG, No.EX-3846_May23)	May-24
DAE4	SN 1555	24-Aug-23(SPEAG, No.DAE4-1555_Aug23)	Aug-24
Secondary Standards	**ID #**	**Cal Date(Calibrated by, Certificate No.)**	**Scheduled Calibration**
SignalGenerator MG3700A	6201052605	12-Jun-23(CTTL, No.J23X05434)	Jun-24
Network Analyzer E5071C	MY46110673	25-Dec-23(CTTL, No.J23X13425)	Dec-24
Reference 10dBAttenuator	BT0520	11-May-23(CTTL, No.J23X04061)	May-25
Reference 20dBAttenuator	BT0267	11-May-23(CTTL, No.J23X04062)	May-25
OCP DAK-12	SN 1174	25-Oct-23(SPEAG, No.OCP-DAK12-1174_Oct23)	Oct-24

	Name	Function	Signature
Calibrated by:	Yu Zongying	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: March 24, 2024

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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 θ=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) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013

b) IEC 62209-1, "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016

c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010

d) 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 θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-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 (no uncertainty required). 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; VRx,y,z:* A,B,C 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≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued 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±50MHz to±100MHz.
- *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).

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 7612

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²)[A]	0.66	0.60	0.82	±10.0%
DCP(mV)[B]	112.4	101.5	114.0	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max Dev.	Max Unc[E] (*k*=2)
0	CW	X	0.0	0.0	1.0	0.00	225.6	±2.3%	±4.7%
		Y	0.0	0.0	1.0		204.0		
		Z	0.0	0.0	1.0		258.7		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	1.60	60.38	5.67		60	±4.8%	±9.6%
		Y	20.00	76.00	11.00	10.00	60		
		Z	1.64	60.00	5.81		60		
10353-AAA	Pulse Waveform (200Hz, 20%)	X	1.21	60.00	3.75		80	±4.0%	±9.6%
		Y	1.02	60.00	4.20	6.99	80		
		Z	1.05	60.00	4.68		80		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	0.01	131.90	0.68		95	±3.0%	±9.6%
		Y	28.00	68.00	5.00	3.98	95		
		Z	48.00	68.00	5.00		95		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	4.42	159.22	13.32		120	±2.3%	±9.6%
		Y	8.20	159.94	11.25	2.22	120		
		Z	14.69	153.05	3.41		120		
10387-AAA	QPSK Waveform, 1 MHz	X	0.58	61.20	9.38		150	±6.7%	±9.6%
		Y	0.51	61.65	8.32	1.00	150		
		Z	0.69	61.68	9.72		150		
10388-AAA	QPSK Waveform, 10 MHz	X	1.34	64.25	12.64		150	±1.4%	±9.6%
		Y	1.27	64.35	12.49	0.00	150		
		Z	1.32	63.42	12.33		150		
10396-AAA	64-QAM Waveform, 100 kHz	X	1.97	67.41	18.00		150	±2.6%	±9.6%
		Y	1.68	65.90	18.25	3.01	150		
		Z	2.04	68.00	18.28		150		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X	4.10	65.99	15.10		150	±5.8%	±9.6%
		Y	4.23	66.76	15.85	0.00	150		
		Z	4.22	65.91	15.12		150		

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 E^2-field uncertainty inside TSL (see Page 5).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 7612

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	14.71	104.78	32.36	1.99	0.00	4.90	0.61	0.00	1.02
Y	13.77	110.22	39.74	10.88	0.00	4.90	0.00	0.00	1.03
Z	17.75	127.06	32.61	7.96	0.00	4.90	0.71	0.00	1.02

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	16.2
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7612

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (*k*=2)
750	41.9	0.89	11.40	11.40	11.40	0.16	1.25	±12.7%
835	41.5	0.90	10.96	10.96	10.96	0.15	1.39	±12.7%
900	41.5	0.97	10.87	10.87	10.87	0.15	1.37	±12.7%
1450	40.5	1.20	9.72	9.72	9.72	0.38	0.80	±12.7%
1750	40.1	1.37	9.20	9.20	9.20	0.26	1.12	±12.7%
1900	40.0	1.40	8.83	8.83	8.83	0.27	1.05	±12.7%
2100	39.8	1.49	8.75	8.75	8.75	0.28	1.03	±12.7%
2300	39.5	1.67	8.46	8.46	8.46	0.67	0.67	±12.7%
2450	39.2	1.80	8.20	8.20	8.20	0.61	0.71	±12.7%
2600	39.0	1.96	8.01	8.01	8.01	0.67	0.70	±12.7%
3300	38.2	2.71	7.65	7.65	7.65	0.50	0.86	±13.9%
3500	37.9	2.91	7.45	7.45	7.45	0.43	1.05	±13.9%
3700	37.7	3.12	7.18	7.18	7.18	0.45	1.06	±13.9%
3900	37.5	3.32	6.90	6.90	6.90	0.40	1.46	±13.9%
4100	37.2	3.53	6.98	6.98	6.98	0.40	1.15	±13.9%
4200	37.1	3.63	6.88	6.88	6.88	0.35	1.35	±13.9%
4400	36.9	3.84	6.78	6.78	6.78	0.35	1.35	±13.9%
4600	36.7	4.04	6.68	6.68	6.68	0.45	1.20	±13.9%
4800	36.4	4.25	6.63	6.63	6.63	0.45	1.25	±13.9%
4950	36.3	4.40	6.43	6.43	6.43	0.45	1.25	±13.9%
5250	35.9	4.71	5.75	5.75	5.75	0.45	1.30	±13.9%
5600	35.5	5.07	5.06	5.06	5.06	0.55	1.20	±13.9%
5750	35.4	5.22	5.20	5.20	5.20	0.55	1.20	±13.9%

[C] Frequency validity above 300 MHz of ±100MHz only applies for DASY v4.4 and higher (Page 2), else it is restricted to ±50MHz. The uncertainty is the RSS of 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. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequency up to 6 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ±10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[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 the frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

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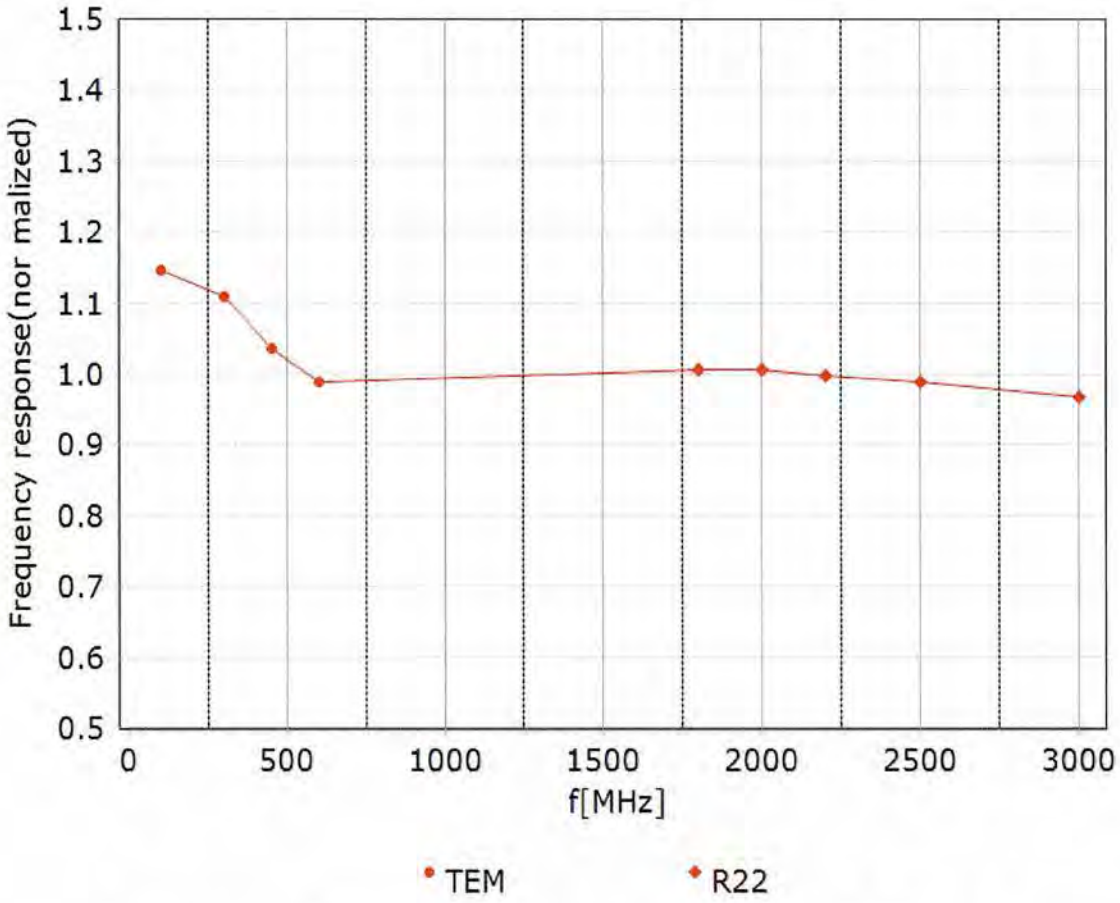
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ±7.4% (*k*=2)

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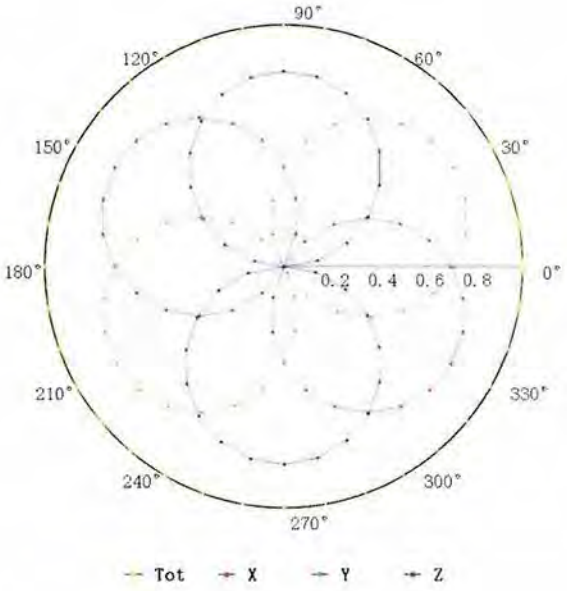
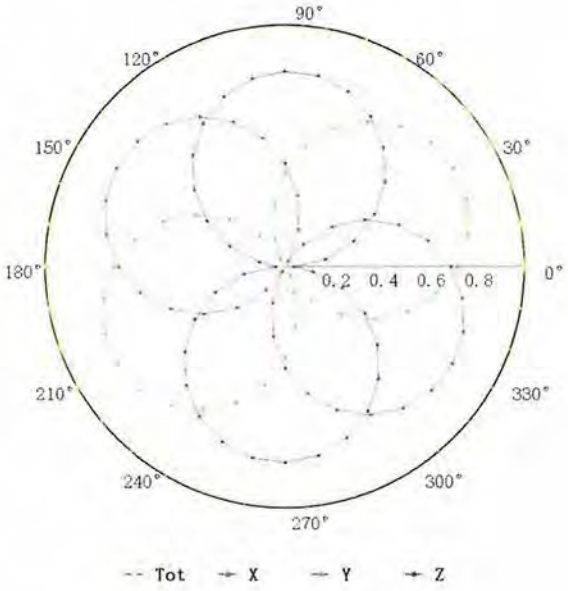
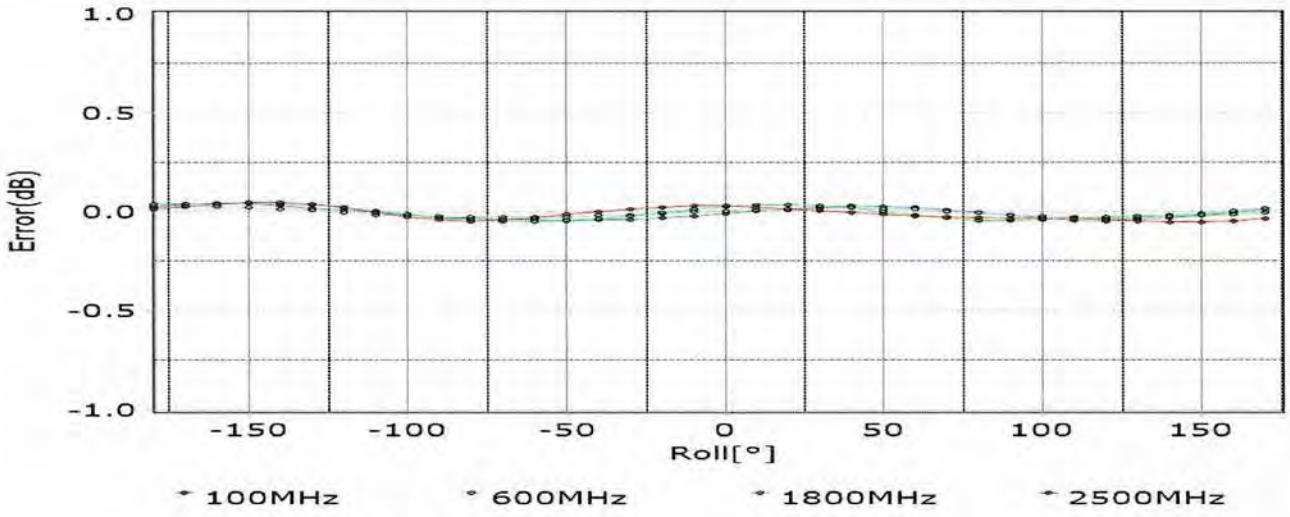
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





Uncertainty of Axial Isotropy Assessment: ±1.2% (*k*=2)

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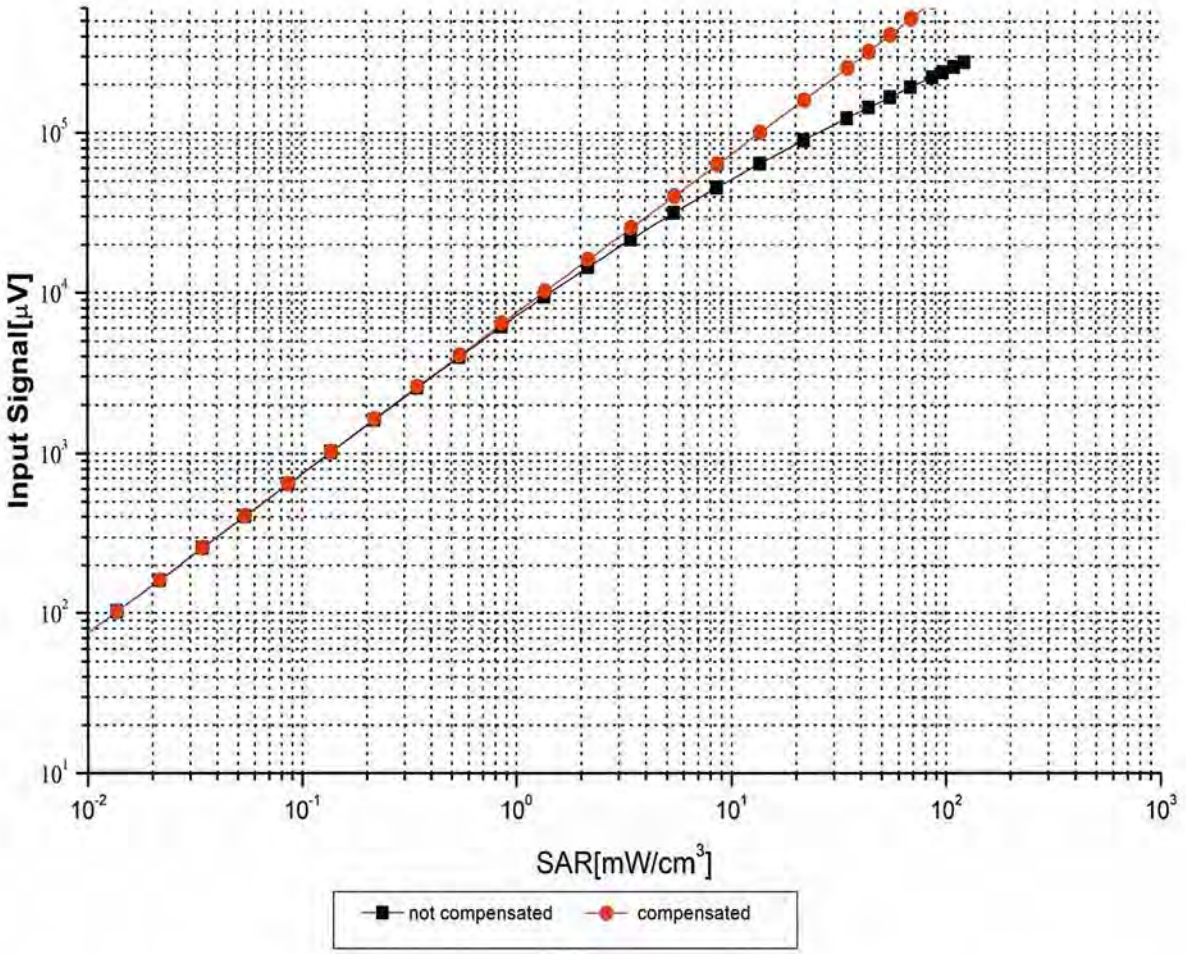
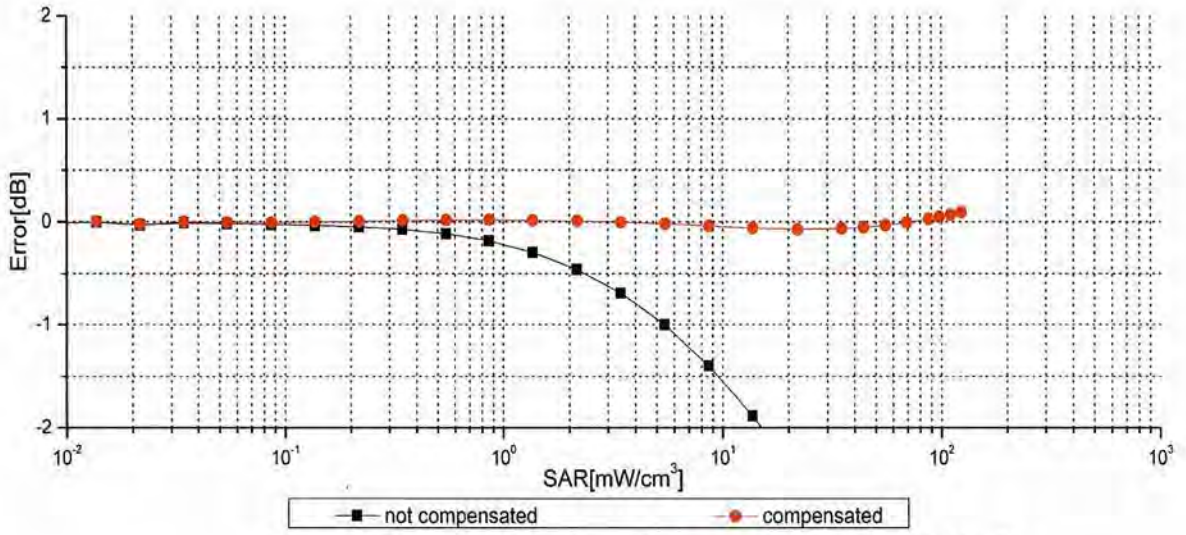
Dynamic Range f(SAR_{head})
(TEM cell, f = 900 MHz)





Uncertainty of Linearity Assessment: ±0.9% (*k*=2)

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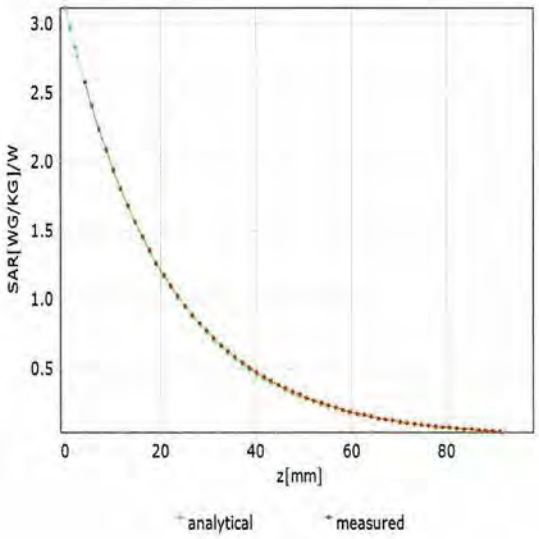
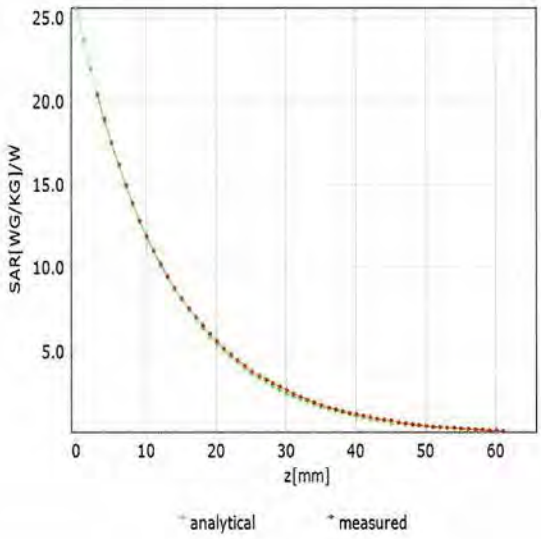
Conversion Factor Assessment

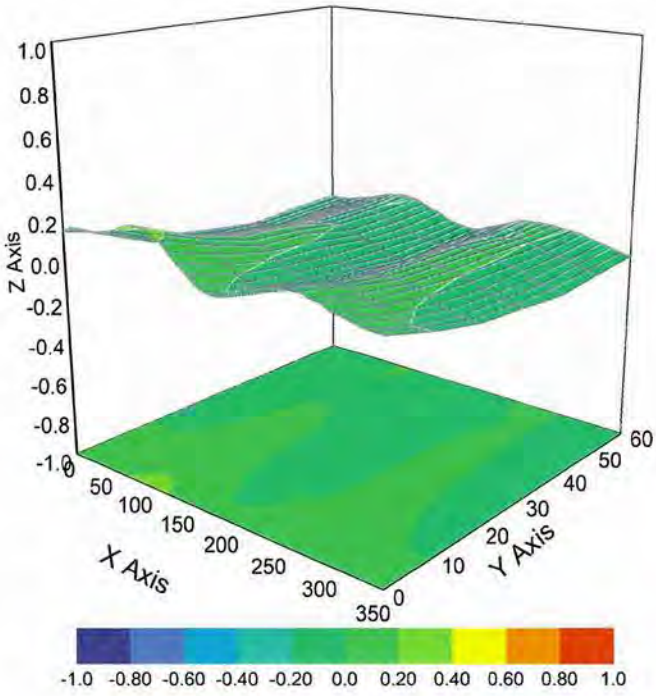
f=750 MHz,WGLS R9(H_convF)



f=1750 MHz,WGLS R22(H_convF)



Deviation from Isotropy in Liquid



Uncertainty of Spherical Isotropy Assessment: ±3.2% (*k*=2)

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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	UncE (*k*=2)
0		CW	CW	0.00	± 4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	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 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
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	± 9.6 %
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, 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	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10065	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAD	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	DAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %
10099	CAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %

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10102	CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	DAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10104	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10105	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
10108	CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %
10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	± 9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10114	CAG	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10115	CAG	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAG	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAG	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAD	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAD	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
10140	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10141	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10142	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10143	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10151	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10153	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10154	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAG	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	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	AAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10181	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAI	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %

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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	CAE	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 %
10194	AAD	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	AAE	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10198	CAF	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAF	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %
10220	AAF	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
10223	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
10225	CAD	UMTS-FDD (HSPA+)	WCDMA	5.97	± 9.6 %
10226	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
10228	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
10229	DAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	± 9.6 %
10232	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10233	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10237	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10238	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10240	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	± 9.6 %
10244	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10245	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	± 9.6 %
10246	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10247	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	± 9.6 %
10248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	± 9.6 %
10249	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10250	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	± 9.6 %
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	± 9.6 %
10254	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
10260	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	± 9.6 %
10263	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	± 9.6 %
10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %

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10269	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
10270	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	± 9.6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.6 %
10275	CAD	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277	CAD	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAD	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAG	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	CAG	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	CAG	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10292	CAG	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	CAG	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	± 9.6 %
10295	CAG	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10297	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %
10300	CAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	CAC	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WiMAX	12.03	± 9.6 %
10302	CAB	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)	WiMAX	12.57	± 9.6 %
10303	CAB	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	± 9.6 %
10304	CAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	11.86	± 9.6 %
10305	CAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)	WiMAX	15.24	± 9.6 %
10306	CAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)	WiMAX	14.67	± 9.6 %
10307	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC)	WiMAX	14.49	± 9.6 %
10308	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WiMAX	14.46	± 9.6 %
10309	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM,AMC 2x3)	WiMAX	14.58	± 9.6 %
10310	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3	WiMAX	14.57	± 9.6 %
10311	AAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
10313	AAD	iDEN 1:3	iDEN	10.51	± 9.6 %
10314	AAD	iDEN 1:6	iDEN	13.48	± 9.6 %
10315	AAD	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc)	WLAN	1.71	± 9.6 %
10316	AAD	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
10317	AAA	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc dc)	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	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)	WLAN	8.37	± 9.6 %
10401	AAA	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc)	WLAN	8.60	± 9.6 %
10402	AAA	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc)	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	AAD	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	± 9.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)	WLAN	1.54	± 9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10417	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short)	WLAN	8.19	± 9.6 %
10422	AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAE	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAE	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %
10426	AAE	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	± 9.6 %

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10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	± 9.6 %
10430	AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	± 9.6 %
10431	AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	± 9.6 %
10432	AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10434	AAG	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 %
10435	AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10447	AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	± 9.6 %
10448	AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	± 9.6 %
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.51	± 9.6 %
10450	AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	± 9.6 %
10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	± 9.6 %
10453	AAC	Validation (Square, 10ms, 1ms)	Test	10.00	± 9.6 %
10456	AAC	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc dc)	WLAN	8.63	± 9.6 %
10457	AAC	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	± 9.6 %
10458	AAC	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	± 9.6 %
10459	AAC	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	± 9.6 %
10460	AAC	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	± 9.6 %
10461	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.30	± 9.6 %
10463	AAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10465	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10466	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10467	AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10468	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10469	AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10470	AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10471	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10472	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10473	AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10474	AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10475	AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10477	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10478	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10480	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.18	± 9.6 %
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	± 9.6 %
10482	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.71	± 9.6 %
10483	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub)	LTE-TDD	8.39	± 9.6 %
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.47	± 9.6 %
10485	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.59	± 9.6 %
10486	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.38	± 9.6 %
10487	AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.60	± 9.6 %
10488	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.70	± 9.6 %
10489	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	± 9.6 %
10490	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10492	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.41	± 9.6 %
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	± 9.6 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10495	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.37	± 9.6 %
10496	AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10497	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10498	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.40	± 9.6 %
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.68	± 9.6 %
10500	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10501	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.44	± 9.6 %
10502	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.52	± 9.6 %

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10503	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.72	± 9.6 %
10504	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	± 9.6 %
10505	AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10506	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10507	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.36	± 9.6 %
10508	AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	± 9.6 %
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.99	± 9.6 %
10510	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.49	± 9.6 %
10511	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.51	± 9.6 %
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.42	± 9.6 %
10514	AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	± 9.6 %
10515	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc)	WLAN	1.58	± 9.6 %
10516	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc)	WLAN	1.57	± 9.6 %
10517	AAF	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc)	WLAN	1.58	± 9.6 %
10518	AAF	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10519	AAF	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc)	WLAN	8.39	± 9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc)	WLAN	8.12	± 9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc)	WLAN	7.97	± 9.6 %
10522	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc)	WLAN	8.45	± 9.6 %
10523	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc)	WLAN	8.08	± 9.6 %
10524	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc)	WLAN	8.27	± 9.6 %
10525	AAC	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc dc)	WLAN	8.36	± 9.6 %
10526	AAF	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc dc)	WLAN	8.42	± 9.6 %
10527	AAF	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc dc)	WLAN	8.21	± 9.6 %
10528	AAF	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc dc)	WLAN	8.36	± 9.6 %
10529	AAF	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc dc)	WLAN	8.36	± 9.6 %
10531	AAF	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc dc)	WLAN	8.43	± 9.6 %
10532	AAF	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc dc)	WLAN	8.29	± 9.6 %
10533	AAE	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc dc)	WLAN	8.38	± 9.6 %
10534	AAE	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc dc)	WLAN	8.45	± 9.6 %
10535	AAE	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc dc)	WLAN	8.45	± 9.6 %
10536	AAF	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc dc)	WLAN	8.32	± 9.6 %
10537	AAF	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc dc)	WLAN	8.44	± 9.6 %
10538	AAF	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc dc)	WLAN	8.54	± 9.6 %
10540	AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc dc)	WLAN	8.39	± 9.6 %
10541	AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc dc)	WLAN	8.46	± 9.6 %
10542	AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc dc)	WLAN	8.65	± 9.6 %
10543	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc dc)	WLAN	8.65	± 9.6 %
10544	AAC	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc dc)	WLAN	8.47	± 9.6 %
10545	AAC	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc dc)	WLAN	8.55	± 9.6 %
10546	AAC	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc dc)	WLAN	8.35	± 9.6 %
10547	AAC	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc dc)	WLAN	8.49	± 9.6 %
10548	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc dc)	WLAN	8.37	± 9.6 %
10550	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc dc)	WLAN	8.38	± 9.6 %
10551	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc dc)	WLAN	8.50	± 9.6 %
10552	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc dc)	WLAN	8.42	± 9.6 %
10553	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc dc)	WLAN	8.45	± 9.6 %
10554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc dc)	WLAN	8.48	± 9.6 %
10555	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc dc)	WLAN	8.47	± 9.6 %
10556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc dc)	WLAN	8.50	± 9.6 %
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc dc)	WLAN	8.52	± 9.6 %
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc dc)	WLAN	8.61	± 9.6 %
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc dc)	WLAN	8.73	± 9.6 %
10561	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc dc)	WLAN	8.56	± 9.6 %
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc dc)	WLAN	8.69	± 9.6 %
10563	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc dc)	WLAN	8.77	± 9.6 %
10564	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc dc)	WLAN	8.25	± 9.6 %
10565	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc dc)	WLAN	8.45	± 9.6 %

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10566	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc dc)	WLAN	8.13	± 9.6 %
10567	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc dc)	WLAN	8.00	± 9.6 %
10568	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc)	WLAN	8.37	± 9.6 %
10569	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc dc)	WLAN	8.10	± 9.6 %
10570	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc dc)	WLAN	8.30	± 9.6 %
10571	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc dc)	WLAN	1.99	± 9.6 %
10572	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc dc)	WLAN	1.99	± 9.6 %
10573	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc dc)	WLAN	1.98	± 9.6 %
10574	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc dc)	WLAN	1.98	± 9.6 %
10575	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc dc)	WLAN	8.59	± 9.6 %
10576	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10577	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	± 9.6 %
10578	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dc)	WLAN	8.49	± 9.6 %
10579	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
10580	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10581	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc dc)	WLAN	8.35	± 9.6 %
10582	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc dc)	WLAN	8.67	± 9.6 %
10583	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc dc)	WLAN	8.59	± 9.6 %
10584	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10585	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	± 9.6 %
10586	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc dc)	WLAN	8.49	± 9.6 %
10587	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
10588	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10589	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc dc)	WLAN	8.35	± 9.6 %
10590	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc dc)	WLAN	8.67	± 9.6 %
10591	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc dc)	WLAN	8.63	± 9.6 %
10592	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc dc)	WLAN	8.79	± 9.6 %
10593	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc)	WLAN	8.64	± 9.6 %
10594	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc)	WLAN	8.74	± 9.6 %
10595	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc dc)	WLAN	8.74	± 9.6 %
10596	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc dc)	WLAN	8.71	± 9.6 %
10597	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc dc)	WLAN	8.72	± 9.6 %
10598	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc dc)	WLAN	8.50	± 9.6 %
10599	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc)	WLAN	8.79	± 9.6 %
10600	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc dc)	WLAN	8.88	± 9.6 %
10601	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc)	WLAN	8.82	± 9.6 %
10602	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc dc)	WLAN	8.94	± 9.6 %
10603	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc dc)	WLAN	9.03	± 9.6 %
10604	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc dc)	WLAN	8.76	± 9.6 %
10605	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc dc)	WLAN	8.97	± 9.6 %
10606	AAC	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc dc)	WLAN	8.82	± 9.6 %
10607	AAC	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc dc)	WLAN	8.64	± 9.6 %
10608	AAC	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc dc)	WLAN	8.77	± 9.6 %
10609	AAC	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc dc)	WLAN	8.57	± 9.6 %
10610	AAC	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc dc)	WLAN	8.78	± 9.6 %
10611	AAC	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc dc)	WLAN	8.70	± 9.6 %
10612	AAC	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
10613	AAC	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc dc)	WLAN	8.94	± 9.6 %
10614	AAC	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc dc)	WLAN	8.59	± 9.6 %
10615	AAC	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc dc)	WLAN	8.82	± 9.6 %
10616	AAC	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc dc)	WLAN	8.82	± 9.6 %
10617	AAC	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc dc)	WLAN	8.81	± 9.6 %
10618	AAC	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc dc)	WLAN	8.58	± 9.6 %
10619	AAC	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc dc)	WLAN	8.86	± 9.6 %
10620	AAC	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc dc)	WLAN	8.87	± 9.6 %
10621	AAC	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
10622	AAC	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc dc)	WLAN	8.68	± 9.6 %
10623	AAC	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc dc)	WLAN	8.82	± 9.6 %
10624	AAC	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc dc)	WLAN	8.96	± 9.6 %

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10625	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc dc)	WLAN	8.96	± 9.6 %
10626	AAC	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc dc)	WLAN	8.83	± 9.6 %
10627	AAC	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc dc)	WLAN	8.88	± 9.6 %
10628	AAC	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc dc)	WLAN	8.71	± 9.6 %
10629	AAC	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc dc)	WLAN	8.85	± 9.6 %
10630	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc dc)	WLAN	8.72	± 9.6 %
10631	AAC	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc dc)	WLAN	8.81	± 9.6 %
10632	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc dc)	WLAN	8.74	± 9.6 %
10633	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc dc)	WLAN	8.83	± 9.6 %
10634	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc dc)	WLAN	8.80	± 9.6 %
10635	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc dc)	WLAN	8.81	± 9.6 %
10636	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc dc)	WLAN	8.83	± 9.6 %
10637	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc dc)	WLAN	8.79	± 9.6 %
10638	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc dc)	WLAN	8.86	± 9.6 %
10639	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc dc)	WLAN	8.85	± 9.6 %
10640	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc dc)	WLAN	8.98	± 9.6 %
10641	AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc dc)	WLAN	9.06	± 9.6 %
10642	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc dc)	WLAN	9.06	± 9.6 %
10643	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc dc)	WLAN	8.89	± 9.6 %
10644	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc dc)	WLAN	9.05	± 9.6 %
10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc dc)	WLAN	9.11	± 9.6 %
10646	AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub=2,7)	LTE-TDD	11.96	± 9.6 %
10647	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub=2,7)	LTE-TDD	11.96	± 9.6 %
10648	AAC	CDMA2000 (1x Advanced)	CDMA2000	3.45	± 9.6 %
10652	AAC	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	± 9.6 %
10653	AAC	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	± 9.6 %
10654	AAC	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	± 9.6 %
10655	AAC	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	± 9.6 %
10658	AAC	Pulse Waveform (200Hz, 10%)	Test	10.00	± 9.6 %
10659	AAC	Pulse Waveform (200Hz, 20%)	Test	6.99	± 9.6 %
10660	AAC	Pulse Waveform (200Hz, 40%)	Test	3.98	± 9.6 %
10661	AAC	Pulse Waveform (200Hz, 60%)	Test	2.22	± 9.6 %
10662	AAC	Pulse Waveform (200Hz, 80%)	Test	0.97	± 9.6 %
10670	AAC	Bluetooth Low Energy	Bluetooth	2.19	± 9.6 %
10671	AAD	IEEE 802.11ax (20MHz, MCS0, 90pc dc)	WLAN	9.09	± 9.6 %
10672	AAD	IEEE 802.11ax (20MHz, MCS1, 90pc dc)	WLAN	8.57	± 9.6 %
10673	AAD	IEEE 802.11ax (20MHz, MCS2, 90pc dc)	WLAN	8.78	± 9.6 %
10674	AAD	IEEE 802.11ax (20MHz, MCS3, 90pc dc)	WLAN	8.74	± 9.6 %
10675	AAD	IEEE 802.11ax (20MHz, MCS4, 90pc dc)	WLAN	8.90	± 9.6 %
10676	AAD	IEEE 802.11ax (20MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
10677	AAD	IEEE 802.11ax (20MHz, MCS6, 90pc dc)	WLAN	8.73	± 9.6 %
10678	AAD	IEEE 802.11ax (20MHz, MCS7, 90pc dc)	WLAN	8.78	± 9.6 %
10679	AAD	IEEE 802.11ax (20MHz, MCS8, 90pc dc)	WLAN	8.89	± 9.6 %
10680	AAD	IEEE 802.11ax (20MHz, MCS9, 90pc dc)	WLAN	8.80	± 9.6 %
10681	AAG	IEEE 802.11ax (20MHz, MCS10, 90pc dc)	WLAN	8.62	± 9.6 %
10682	AAF	IEEE 802.11ax (20MHz, MCS11, 90pc dc)	WLAN	8.83	± 9.6 %
10683	AAA	IEEE 802.11ax (20MHz, MCS0, 99pc dc)	WLAN	8.42	± 9.6 %
10684	AAC	IEEE 802.11ax (20MHz, MCS1, 99pc dc)	WLAN	8.26	± 9.6 %
10685	AAC	IEEE 802.11ax (20MHz, MCS2, 99pc dc)	WLAN	8.33	± 9.6 %
10686	AAC	IEEE 802.11ax (20MHz, MCS3, 99pc dc)	WLAN	8.28	± 9.6 %
10687	AAE	IEEE 802.11ax (20MHz, MCS4, 99pc dc)	WLAN	8.45	± 9.6 %
10688	AAE	IEEE 802.11ax (20MHz, MCS5, 99pc dc)	WLAN	8.29	± 9.6 %
10689	AAD	IEEE 802.11ax (20MHz, MCS6, 99pc dc)	WLAN	8.55	± 9.6 %
10690	AAE	IEEE 802.11ax (20MHz, MCS7, 99pc dc)	WLAN	8.29	± 9.6 %
10691	AAB	IEEE 802.11ax (20MHz, MCS8, 99pc dc)	WLAN	8.25	± 9.6 %
10692	AAA	IEEE 802.11ax (20MHz, MCS9, 99pc dc)	WLAN	8.29	± 9.6 %
10693	AAA	IEEE 802.11ax (20MHz, MCS10, 99pc dc)	WLAN	8.25	± 9.6 %
10694	AAA	IEEE 802.11ax (20MHz, MCS11, 99pc dc)	WLAN	8.57	± 9.6 %
10695	AAA	IEEE 802.11ax (40MHz, MCS0, 90pc dc)	WLAN	8.78	± 9.6 %

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10696	AAA	IEEE 802.11ax (40MHz, MCS1, 90pc dc)	WLAN	8.91	± 9.6 %
10697	AAA	IEEE 802.11ax (40MHz, MCS2, 90pc dc)	WLAN	8.61	± 9.6 %
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc dc)	WLAN	8.89	± 9.6 %
10699	AAA	IEEE 802.11ax (40MHz, MCS4, 90pc dc)	WLAN	8.82	± 9.6 %
10700	AAA	IEEE 802.11ax (40MHz, MCS5, 90pc dc)	WLAN	8.73	± 9.6 %
10701	AAA	IEEE 802.11ax (40MHz, MCS6, 90pc dc)	WLAN	8.86	± 9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS7, 90pc dc)	WLAN	8.70	± 9.6 %
10703	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc dc)	WLAN	8.82	± 9.6 %
10704	AAA	IEEE 802.11ax (40MHz, MCS9, 90pc dc)	WLAN	8.56	± 9.6 %
10705	AAA	IEEE 802.11ax (40MHz, MCS10, 90pc dc)	WLAN	8.69	± 9.6 %
10706	AAC	IEEE 802.11ax (40MHz, MCS11, 90pc dc)	WLAN	8.66	± 9.6 %
10707	AAC	IEEE 802.11ax (40MHz, MCS0, 99pc dc)	WLAN	8.32	± 9.6 %
10708	AAC	IEEE 802.11ax (40MHz, MCS1, 99pc dc)	WLAN	8.55	± 9.6 %
10709	AAC	IEEE 802.11ax (40MHz, MCS2, 99pc dc)	WLAN	8.33	± 9.6 %
10710	AAC	IEEE 802.11ax (40MHz, MCS3, 99pc dc)	WLAN	8.29	± 9.6 %
10711	AAC	IEEE 802.11ax (40MHz, MCS4, 99pc dc)	WLAN	8.39	± 9.6 %
10712	AAC	IEEE 802.11ax (40MHz, MCS5, 99pc dc)	WLAN	8.67	± 9.6 %
10713	AAC	IEEE 802.11ax (40MHz, MCS6, 99pc dc)	WLAN	8.33	± 9.6 %
10714	AAC	IEEE 802.11ax (40MHz, MCS7, 99pc dc)	WLAN	8.26	± 9.6 %
10715	AAC	IEEE 802.11ax (40MHz, MCS8, 99pc dc)	WLAN	8.45	± 9.6 %
10716	AAC	IEEE 802.11ax (40MHz, MCS9, 99pc dc)	WLAN	8.30	± 9.6 %
10717	AAC	IEEE 802.11ax (40MHz, MCS10, 99pc dc)	WLAN	8.48	± 9.6 %
10718	AAC	IEEE 802.11ax (40MHz, MCS11, 99pc dc)	WLAN	8.24	± 9.6 %
10719	AAC	IEEE 802.11ax (80MHz, MCS0, 90pc dc)	WLAN	8.81	± 9.6 %
10720	AAC	IEEE 802.11ax (80MHz, MCS1, 90pc dc)	WLAN	8.87	± 9.6 %
10721	AAC	IEEE 802.11ax (80MHz, MCS2, 90pc dc)	WLAN	8.76	± 9.6 %
10722	AAC	IEEE 802.11ax (80MHz, MCS3, 90pc dc)	WLAN	8.55	± 9.6 %
10723	AAC	IEEE 802.11ax (80MHz, MCS4, 90pc dc)	WLAN	8.70	± 9.6 %
10724	AAC	IEEE 802.11ax (80MHz, MCS5, 90pc dc)	WLAN	8.90	± 9.6 %
10725	AAC	IEEE 802.11ax (80MHz, MCS6, 90pc dc)	WLAN	8.74	± 9.6 %
10726	AAC	IEEE 802.11ax (80MHz, MCS7, 90pc dc)	WLAN	8.72	± 9.6 %
10727	AAC	IEEE 802.11ax (80MHz, MCS8, 90pc dc)	WLAN	8.66	± 9.6 %
10728	AAC	IEEE 802.11ax (80MHz, MCS9, 90pc dc)	WLAN	8.65	± 9.6 %
10729	AAC	IEEE 802.11ax (80MHz, MCS10, 90pc dc)	WLAN	8.64	± 9.6 %
10730	AAC	IEEE 802.11ax (80MHz, MCS11, 90pc dc)	WLAN	8.67	± 9.6 %
10731	AAC	IEEE 802.11ax (80MHz, MCS0, 99pc dc)	WLAN	8.42	± 9.6 %
10732	AAC	IEEE 802.11ax (80MHz, MCS1, 99pc dc)	WLAN	8.46	± 9.6 %
10733	AAC	IEEE 802.11ax (80MHz, MCS2, 99pc dc)	WLAN	8.40	± 9.6 %
10734	AAC	IEEE 802.11ax (80MHz, MCS3, 99pc dc)	WLAN	8.25	± 9.6 %
10735	AAC	IEEE 802.11ax (80MHz, MCS4, 99pc dc)	WLAN	8.33	± 9.6 %
10736	AAC	IEEE 802.11ax (80MHz, MCS5, 99pc dc)	WLAN	8.27	± 9.6 %
10737	AAC	IEEE 802.11ax (80MHz, MCS6, 99pc dc)	WLAN	8.36	± 9.6 %
10738	AAC	IEEE 802.11ax (80MHz, MCS7, 99pc dc)	WLAN	8.42	± 9.6 %
10739	AAC	IEEE 802.11ax (80MHz, MCS8, 99pc dc)	WLAN	8.29	± 9.6 %
10740	AAC	IEEE 802.11ax (80MHz, MCS9, 99pc dc)	WLAN	8.48	± 9.6 %
10741	AAC	IEEE 802.11ax (80MHz, MCS10, 99pc dc)	WLAN	8.40	± 9.6 %
10742	AAC	IEEE 802.11ax (80MHz, MCS11, 99pc dc)	WLAN	8.43	± 9.6 %
10743	AAC	IEEE 802.11ax (160MHz, MCS0, 90pc dc)	WLAN	8.94	± 9.6 %
10744	AAC	IEEE 802.11ax (160MHz, MCS1, 90pc dc)	WLAN	9.16	± 9.6 %
10745	AAC	IEEE 802.11ax (160MHz, MCS2, 90pc dc)	WLAN	8.93	± 9.6 %
10746	AAC	IEEE 802.11ax (160MHz, MCS3, 90pc dc)	WLAN	9.11	± 9.6 %
10747	AAC	IEEE 802.11ax (160MHz, MCS4, 90pc dc)	WLAN	9.04	± 9.6 %
10748	AAC	IEEE 802.11ax (160MHz, MCS5, 90pc dc)	WLAN	8.93	± 9.6 %
10749	AAC	IEEE 802.11ax (160MHz, MCS6, 90pc dc)	WLAN	8.90	± 9.6 %
10750	AAC	IEEE 802.11ax (160MHz, MCS7, 90pc dc)	WLAN	8.79	± 9.6 %
10751	AAC	IEEE 802.11ax (160MHz, MCS8, 90pc dc)	WLAN	8.82	± 9.6 %
10752	AAC	IEEE 802.11ax (160MHz, MCS9, 90pc dc)	WLAN	8.81	± 9.6 %
10753	AAC	IEEE 802.11ax (160MHz, MCS10, 90pc dc)	WLAN	9.00	± 9.6 %
10754	AAC	IEEE 802.11ax (160MHz, MCS11, 90pc dc)	WLAN	8.94	± 9.6 %

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10755	AAC	IEEE 802.11ax (160MHz, MCS0, 99pc dc)	WLAN	8.64	± 9.6 %
10756	AAC	IEEE 802.11ax (160MHz, MCS1, 99pc dc)	WLAN	8.77	± 9.6 %
10757	AAC	IEEE 802.11ax (160MHz, MCS2, 99pc dc)	WLAN	8.77	± 9.6 %
10758	AAC	IEEE 802.11ax (160MHz, MCS3, 99pc dc)	WLAN	8.69	± 9.6 %
10759	AAC	IEEE 802.11ax (160MHz, MCS4, 99pc dc)	WLAN	8.58	± 9.6 %
10760	AAC	IEEE 802.11ax (160MHz, MCS5, 99pc dc)	WLAN	8.49	± 9.6 %
10761	AAC	IEEE 802.11ax (160MHz, MCS6, 99pc dc)	WLAN	8.58	± 9.6 %
10762	AAC	IEEE 802.11ax (160MHz, MCS7, 99pc dc)	WLAN	8.49	± 9.6 %
10763	AAC	IEEE 802.11ax (160MHz, MCS8, 99pc dc)	WLAN	8.53	± 9.6 %
10764	AAC	IEEE 802.11ax (160MHz, MCS9, 99pc dc)	WLAN	8.54	± 9.6 %
10765	AAC	IEEE 802.11ax (160MHz, MCS10, 99pc dc)	WLAN	8.54	± 9.6 %
10766	AAC	IEEE 802.11ax (160MHz, MCS11, 99pc dc)	WLAN	8.51	± 9.6 %
10767	AAC	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	7.99	± 9.6 %
10768	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	± 9.6 %
10769	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	± 9.6 %
10770	AAC	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	± 9.6 %
10771	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	± 9.6 %
10772	AAC	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.23	± 9.6 %
10773	AAC	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.03	± 9.6 %
10774	AAC	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	± 9.6 %
10775	AAC	5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	± 9.6 %
10776	AAC	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	AAC	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	AAC	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	± 9.6 %
10781	AAC	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	± 9.6 %
10782	AAC	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	± 9.6 %
10783	AAC	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	± 9.6 %
10784	AAC	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	± 9.6 %
10785	AAC	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.40	± 9.6 %
10786	AAC	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10787	AAC	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	± 9.6 %
10788	AAC	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	± 9.6 %
10789	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	± 9.6 %
10790	AAC	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	± 9.6 %
10791	AAC	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	± 9.6 %
10792	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	± 9.6 %
10793	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	± 9.6 %
10794	AAC	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	± 9.6 %
10795	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.84	± 9.6 %
10796	AAC	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	± 9.6 %
10797	AAC	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	± 9.6 %
10798	AAC	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	± 9.6 %
10799	AAC	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	± 9.6 %
10801	AAC	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	± 9.6 %
10802	AAC	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	± 9.6 %
10803	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	± 9.6 %
10805	AAD	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	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10810	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10812	AAD	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10817	AAD	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10818	AAD	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	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.30	± 9.6 %
10821	AAC	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10822	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	± 9.6 %

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10823	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	± 9.6 %
10824	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	± 9.6 %
10825	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10827	AAD	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 %
10829	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.40	± 9.6 %
10830	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)	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	AAD	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	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	± 9.6 %
10835	AAD	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	AAD	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	± 9.6 %
10839	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	± 9.6 %
10840	AAD	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	± 9.6 %
10841	AAD	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	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10846	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10854	AAD	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	AAD	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	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	± 9.6 %
10859	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10860	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10861	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	± 9.6 %
10863	AAD	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	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10866	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10868	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	± 9.6 %
10869	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10870	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	± 9.6 %
10871	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10872	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	± 9.6 %
10873	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	± 9.6 %
10874	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	± 9.6 %
10875	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	± 9.6 %
10876	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.39	± 9.6 %
10877	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	± 9.6 %
10878	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	± 9.6 %
10879	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	± 9.6 %
10880	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.38	± 9.6 %
10881	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10882	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	± 9.6 %
10883	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	± 9.6 %
10884	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	± 9.6 %
10885	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	± 9.6 %
10886	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	± 9.6 %
10887	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	± 9.6 %
10888	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	± 9.6 %
10889	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	± 9.6 %
10890	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	± 9.6 %
10891	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	± 9.6 %
10892	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	± 9.6 %
10897	AAD	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.66	± 9.6 %
10898	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 %

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10899	AAD	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 %
10900	AAD	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10901	AAD	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10902	AAD	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	AAD	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	AAD	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	± 9.6 %
10908	AAD	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	± 9.6 %
10909	AAD	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.96	± 9.6 %
10910	AAD	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	± 9.6 %
10911	AAD	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	± 9.6 %
10912	AAD	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	AAD	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	AAD	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	± 9.6 %
10919	AAD	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	± 9.6 %
10920	AAD	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	± 9.6 %
10921	AAD	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10922	AAD	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.82	± 9.6 %
10923	AAD	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10924	AAD	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10925	AAD	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 FR1 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	AAD	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	± 9.6 %
10931	AAD	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10932	AAB	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10933	AAA	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10934	AAA	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10935	AAA	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10936	AAC	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	± 9.6 %
10937	AAB	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.77	± 9.6 %
10938	AAB	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	± 9.6 %
10939	AAB	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.82	± 9.6 %
10940	AAB	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.89	± 9.6 %
10941	AAB	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	± 9.6 %
10942	AAB	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	± 9.6 %
10943	AAB	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	± 9.6 %
10944	AAB	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	± 9.6 %
10945	AAB	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, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	± 9.6 %
10947	AAB	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	± 9.6 %
10948	AAB	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	± 9.6 %
10949	AAB	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	± 9.6 %
10950	AAB	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	± 9.6 %
10951	AAB	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.92	± 9.6 %
10952	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.25	± 9.6 %
10953	AAB	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.15	± 9.6 %
10954	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.23	± 9.6 %
10955	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.42	± 9.6 %
10956	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.14	± 9.6 %
10957	AAC	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.31	± 9.6 %

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10958	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.61	± 9.6 %
10959	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.33	± 9.6 %
10960	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.32	± 9.6 %
10961	AAB	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	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.55	± 9.6 %
10964	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.29	± 9.6 %
10965	AAB	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	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.42	± 9.6 %
10968	AAB	5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.49	± 9.6 %
10972	AAB	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	11.59	± 9.6 %
10973	AAB	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	9.06	± 9.6 %
10974	AAB	5G NR (CP-OFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz)	5G NR FR1 TDD	10.28	± 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 %
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	AAA	IEEE 802.11be (320MHz, MCS1, 99pc duty cycle)	WLAN	8.47	± 9.6 %
11014	AAA	IEEE 802.11be (320MHz, MCS2, 99pc duty cycle)	WLAN	8.45	± 9.6 %
11015	AAA	IEEE 802.11be (320MHz, MCS3, 99pc duty cycle)	WLAN	8.44	± 9.6 %
11016	AAA	IEEE 802.11be (320MHz, MCS4, 99pc duty cycle)	WLAN	8.44	± 9.6 %
11017	AAA	IEEE 802.11be (320MHz, MCS5, 99pc duty cycle)	WLAN	8.41	± 9.6 %
11018	AAA	IEEE 802.11be (320MHz, MCS6, 99pc duty cycle)	WLAN	8.40	± 9.6 %
11019	AAA	IEEE 802.11be (320MHz, MCS7, 99pc duty cycle)	WLAN	8.29	± 9.6 %
11020	AAA	IEEE 802.11be (320MHz, MCS8, 99pc duty cycle)	WLAN	8.27	± 9.6 %
11021	AAA	IEEE 802.11be (320MHz, MCS9, 99pc duty cycle)	WLAN	8.46	± 9.6 %
11022	AAA	IEEE 802.11be (320MHz, MCS10, 99pc duty cycle)	WLAN	8.36	± 9.6 %
11023	AAA	IEEE 802.11be (320MHz, MCS11, 99pc duty cycle)	WLAN	8.09	± 9.6 %
11024	AAA	IEEE 802.11be (320MHz, MCS12, 99pc duty cycle)	WLAN	8.42	± 9.6 %
11025	AAA	IEEE 802.11be (320MHz, MCS13, 99pc duty cycle)	WLAN	8.37	± 9.6 %
11026	AAA	IEEE 802.11be (320MHz, 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.

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CALIBRATION CERTIFICATE

Object	D750V3 - SN: 1200
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	November 7, 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 (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7517	21-Feb-24(CTTL-SPEAG, No. 24J02Z80008)	Feb-25
DAE4	SN 1588	13-Sep-24(CTTL-SPEAG, No. 24J02Z000713)	Sep-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: November 15, 2024

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Tel: +86-10-62304633-2117
E-mail: emf@caict.ac.cn http://www.caict.ac.cn

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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-mounted 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) DASY4/5 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%.

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Measurement Conditions

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

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
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	41.7 ± 6 %	0.90 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	-----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.13 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**8.42 W/kg ± 18.8 % (*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	**5.55 W/kg ± 18.7 % (*k*=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.5Ω- 5.04jΩ
Return Loss	- 25.2dB

General Antenna Parameters and Design

Electrical Delay (one direction)	0.939 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point 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 feed-point may be damaged.

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 2024-11-07

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1200

Communication System: UID 0, CW; Frequency: 750 MHz

Medium parameters used: f = 750 MHz; σ = 0.903 S/m; ε_r = 41.65; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(9.85, 9.85, 9.85) @ 750 MHz; Calibrated: 2024-02-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1588; Calibrated: 2024-09-13
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 54.97 V/m; Power Drift = -0.01 dB

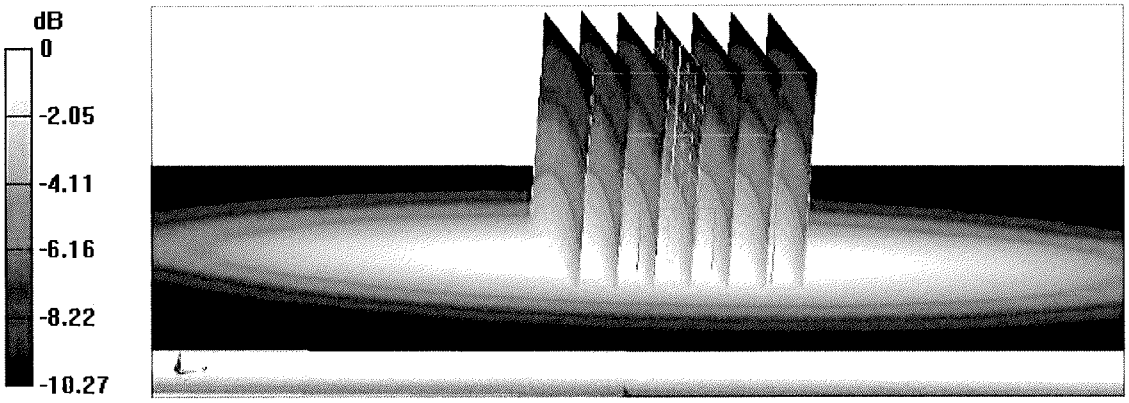
Peak SAR (extrapolated) = 3.39 W/kg

SAR(1 g) = 2.13 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 = 63.5%

Maximum value of SAR (measured) = 2.92 W/kg



0 dB = 2.92 W/kg = 4.65 dBW/kg

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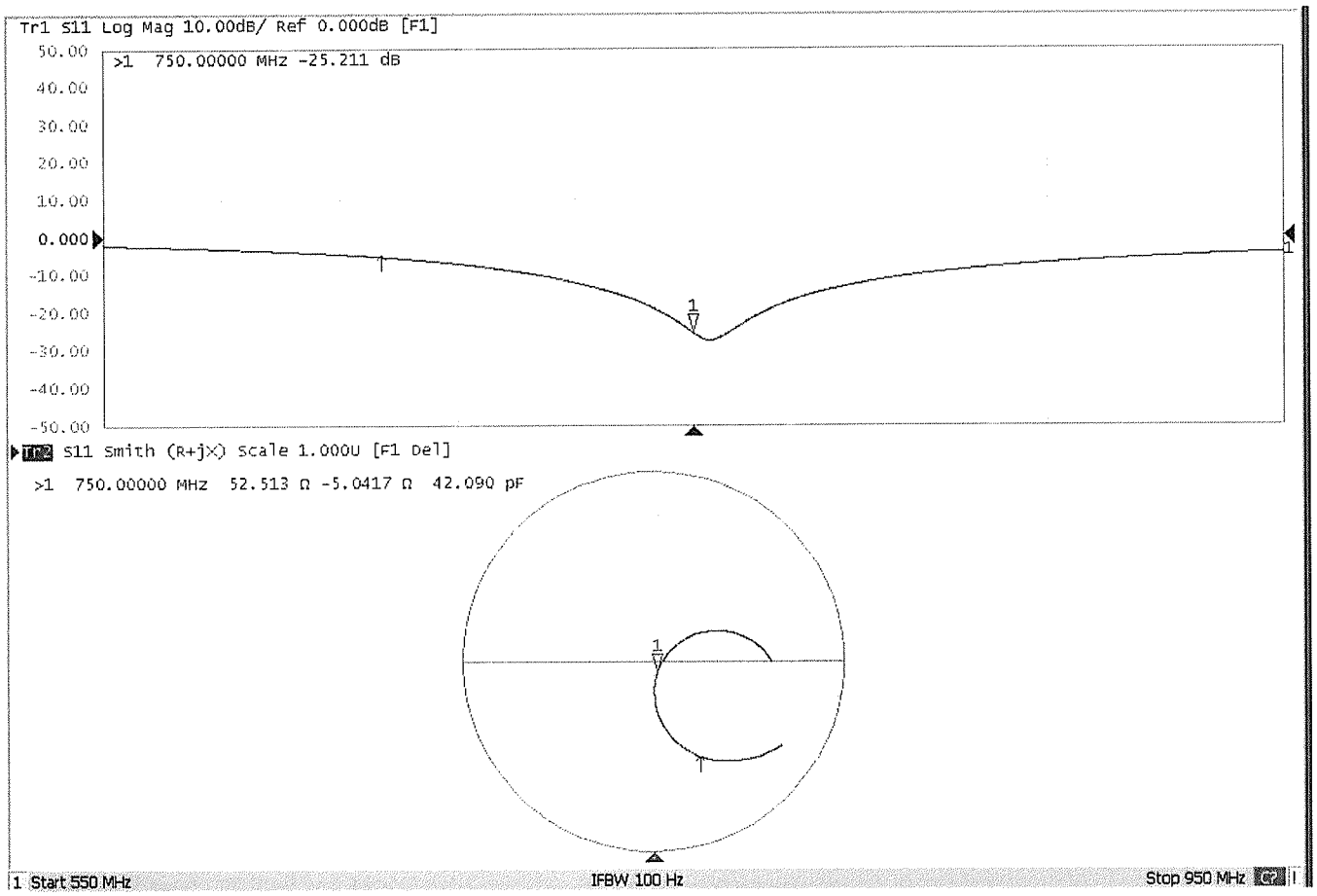
Impedance Measurement Plot for Head TSL



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CNAS L0570

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Client **7layers** **Certificate No: 24J02Z000854**

CALIBRATION CERTIFICATE

Object	D835V2 - SN: 4d265
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	November 4, 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 (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7517	21-Feb-24(CTTL-SPEAG, No. 24J02Z80008)	Feb-25
DAE4	SN 1588	13-Sep-24(CTTL-SPEAG, No. 24J02Z000713)	Sep-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: November 15, 2024

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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-mounted 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) DASY4/5 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%.

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Measurement Conditions

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

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
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	41.6 ± 6 %	0.92 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.44W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.63 W/kg ± 18.8 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.60 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.33 W/kg ± 18.7 % (*k*=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	48.4Ω- 1.88jΩ
Return Loss	- 32.1dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.304 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point 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 feed-point may be damaged.

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 2024-11-04

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d265

Communication System: UID 0, CW; Frequency: 835 MHz

Medium parameters used: f = 835 MHz; σ = 0.916 S/m; ε_r = 41.57; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(9.85, 9.85, 9.85) @ 835 MHz; Calibrated: 2024-02-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1588; Calibrated: 2024-09-13
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 58.33 V/m; Power Drift = -0.01 dB

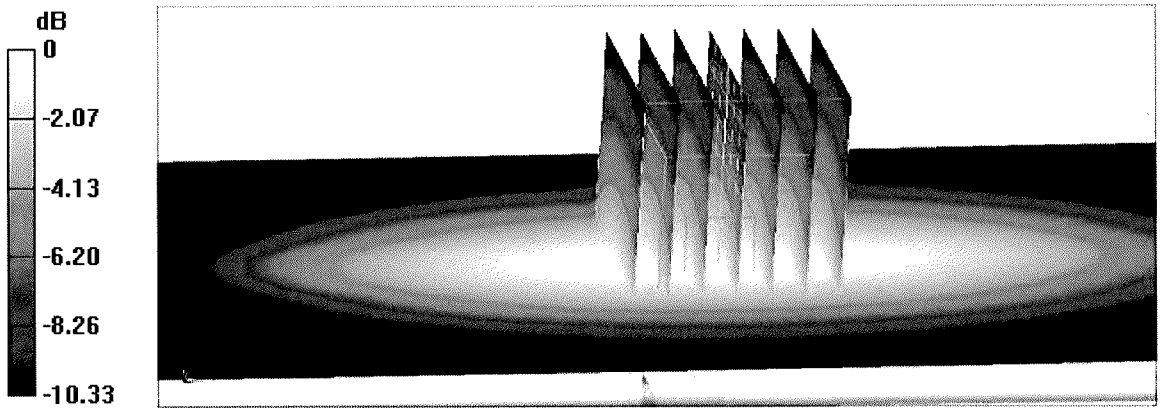
Peak SAR (extrapolated) = 3.87 W/kg

SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.6 W/kg

Smallest distance from peaks to all points 3 dB below = 17.5 mm

Ratio of SAR at M2 to SAR at M1 = 63.5%

Maximum value of SAR (measured) = 3.35 W/kg



0 dB = 3.35 W/kg = 5.25 dBW/kg

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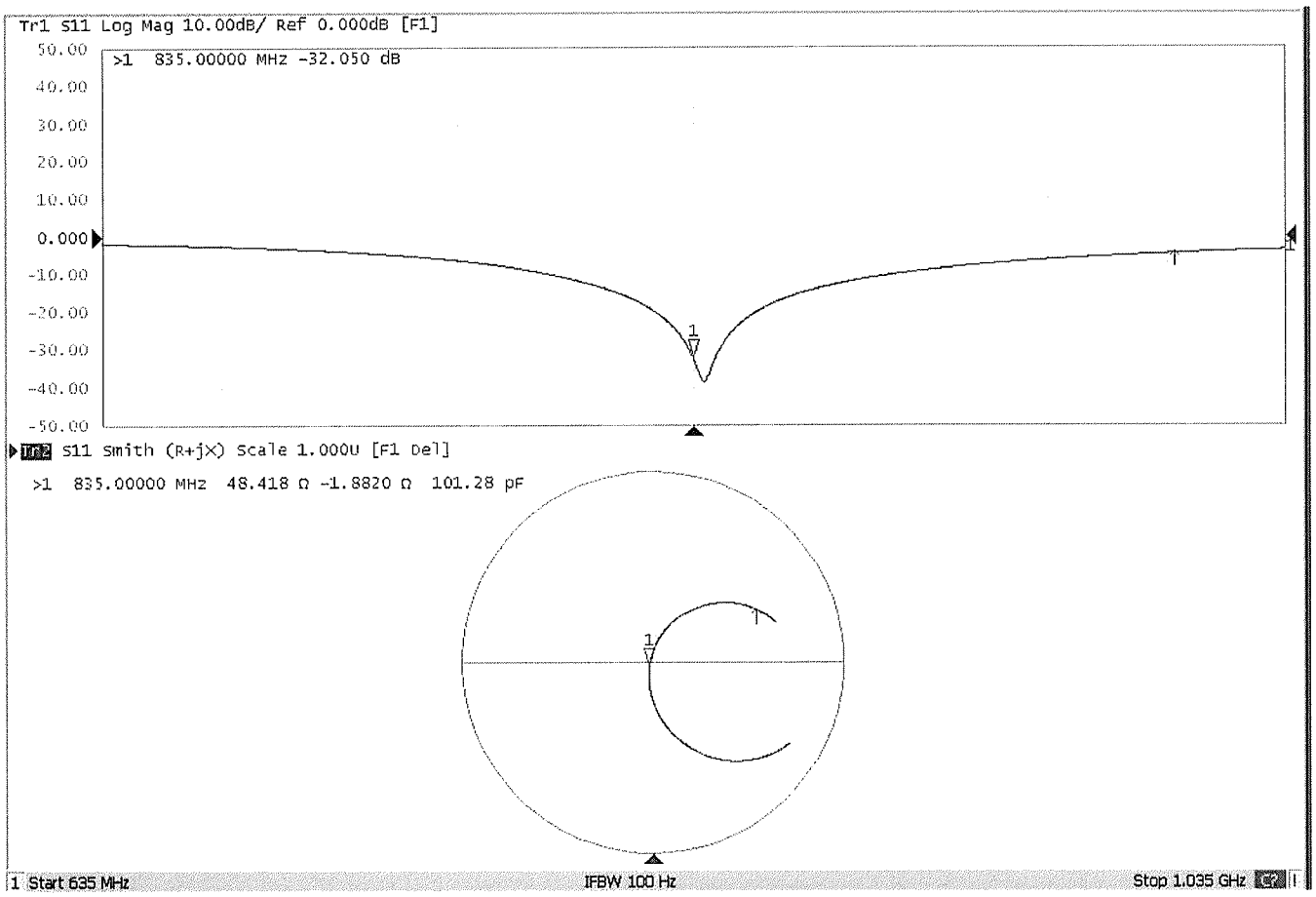
Impedance Measurement Plot for Head TSL



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CNAS L0570

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Client: 7layers **Certificate No: 24J02Z000857**

CALIBRATION CERTIFICATE

Object D1950V3 - SN: 1229

Calibration Procedure(s) FF-Z11-003-01
Calibration Procedures for dipole validation kits

Calibration date: November 7, 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 (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7517	21-Feb-24(CTTL-SPEAG, No. 24J02Z80008)	Feb-25
DAE4	SN 1588	13-Sep-24(CTTL-SPEAG, No. 24J02Z000713)	Sep-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: November 15, 2024

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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-mounted 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) DASY4/5 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%.

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Measurement Conditions

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

DASY Version	DASY52	52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1950 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	40.7 ± 6 %	1.39 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	10.1 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**40.8 W/kg ± 18.8 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	5.18 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**20.9 W/kg ± 18.7 % (k=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	47.3Ω+ 2.24jΩ
Return Loss	- 28.9dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.098 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point 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 feed-point may be damaged.

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 2024-11-07

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 1950 MHz; Type: D1950V2; Serial: D1950V2 - SN: 1229

Communication System: UID 0, CW; Frequency: 1950 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1950 MHz; σ = 1.385 S/m; ε_r = 40.68; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(7.95, 7.95, 7.95) @ 1950 MHz; Calibrated: 2024-02-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1588; Calibrated: 2024-09-13
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 103.1 V/m; Power Drift = 0.00 dB

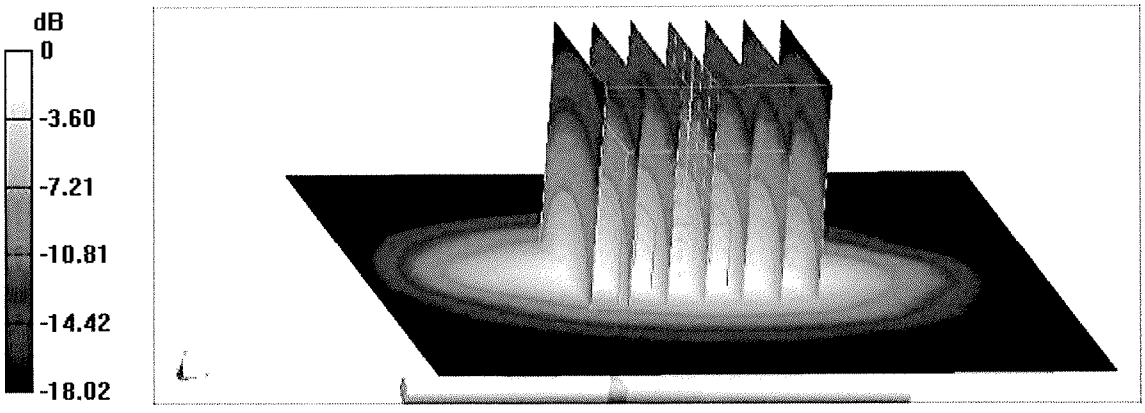
Peak SAR (extrapolated) = 19.3 W/kg

SAR(1 g) = 10.1 W/kg; SAR(10 g) = 5.18 W/kg

Smallest distance from peaks to all points 3 dB below = 9.1 mm

Ratio of SAR at M2 to SAR at M1 = 53.3%

Maximum value of SAR (measured) = 15.9 W/kg



0 dB = 15.9 W/kg = 12.01 dBW/kg

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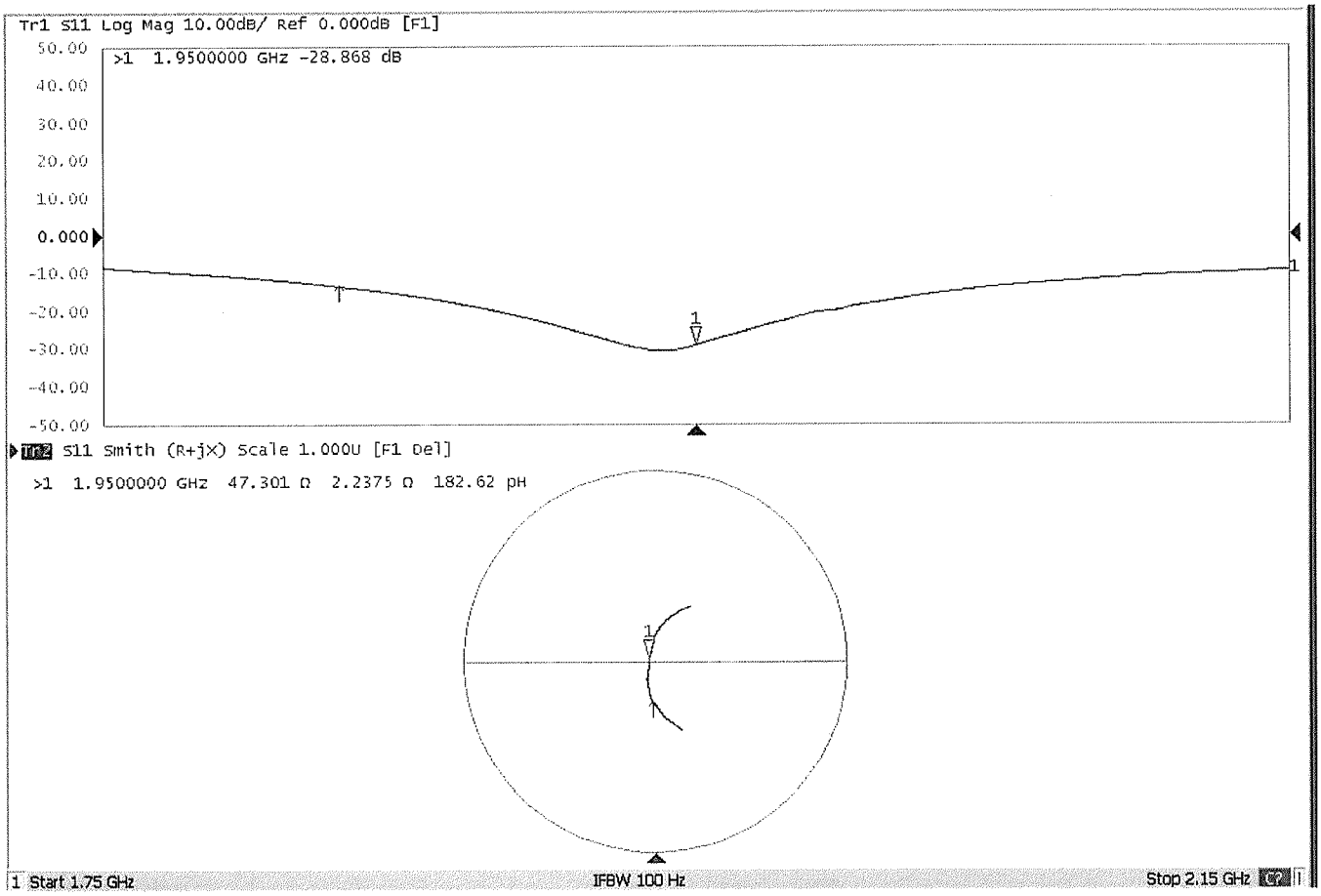
Impedance Measurement Plot for Head TSL



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Client **7layers** **Certificate No: 24J02Z000859**

CALIBRATION CERTIFICATE

Object	D2450V2 - SN: 1048
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	November 6, 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 (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7517	21-Feb-24(CTTL-SPEAG, No. 24J02Z80008)	Feb-25
DAE4	SN 1588	13-Sep-24(CTTL-SPEAG, No. 24J02Z000713)	Sep-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: November 15, 2024

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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-mounted 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) DASY4/5 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%.

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Measurement Conditions

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

DASY Version	DASY52	52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
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	40.1 ± 6 %	1.81 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	13.3 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**53.3 W/kg ± 18.8 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	6.14 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**24.6 W/kg ± 18.7 % (*k*=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	47.4Ω+ 9.16jΩ
Return Loss	- 20.2dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.059 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point 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 feed-point may be damaged.

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 2024-11-06

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 1048

Communication System: UID 0, CW; Frequency: 2450 MHz

Medium parameters used: f = 2450 MHz; σ = 1.809 S/m; ε_r = 40.08; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(7.37, 7.37, 7.37) @ 2450 MHz; Calibrated: 2024-02-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1588; Calibrated: 2024-09-13
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 107.2 V/m; Power Drift = 0.00 dB

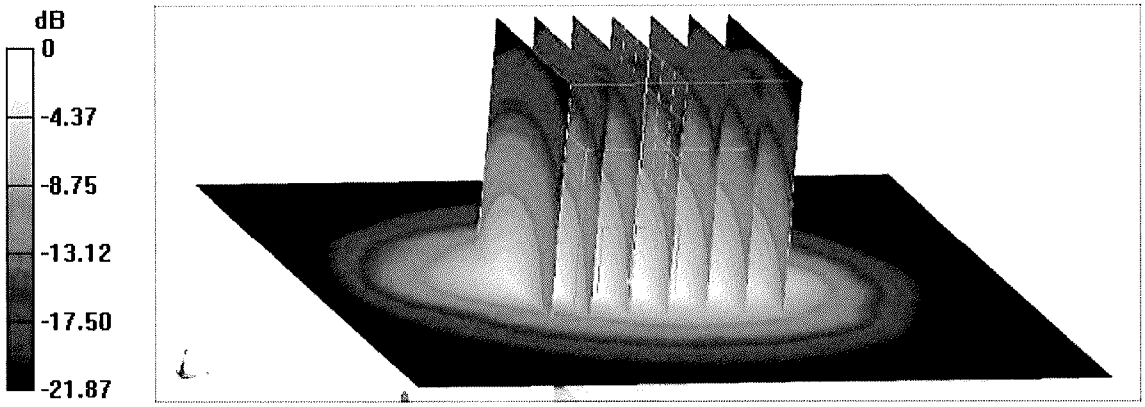
Peak SAR (extrapolated) = 27.1 W/kg

SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.14 W/kg

Smallest distance from peaks to all points 3 dB below = 8.5 mm

Ratio of SAR at M2 to SAR at M1 = 49.5%

Maximum value of SAR (measured) = 22.1 W/kg



0 dB = 22.1 W/kg = 13.44 dBW/kg

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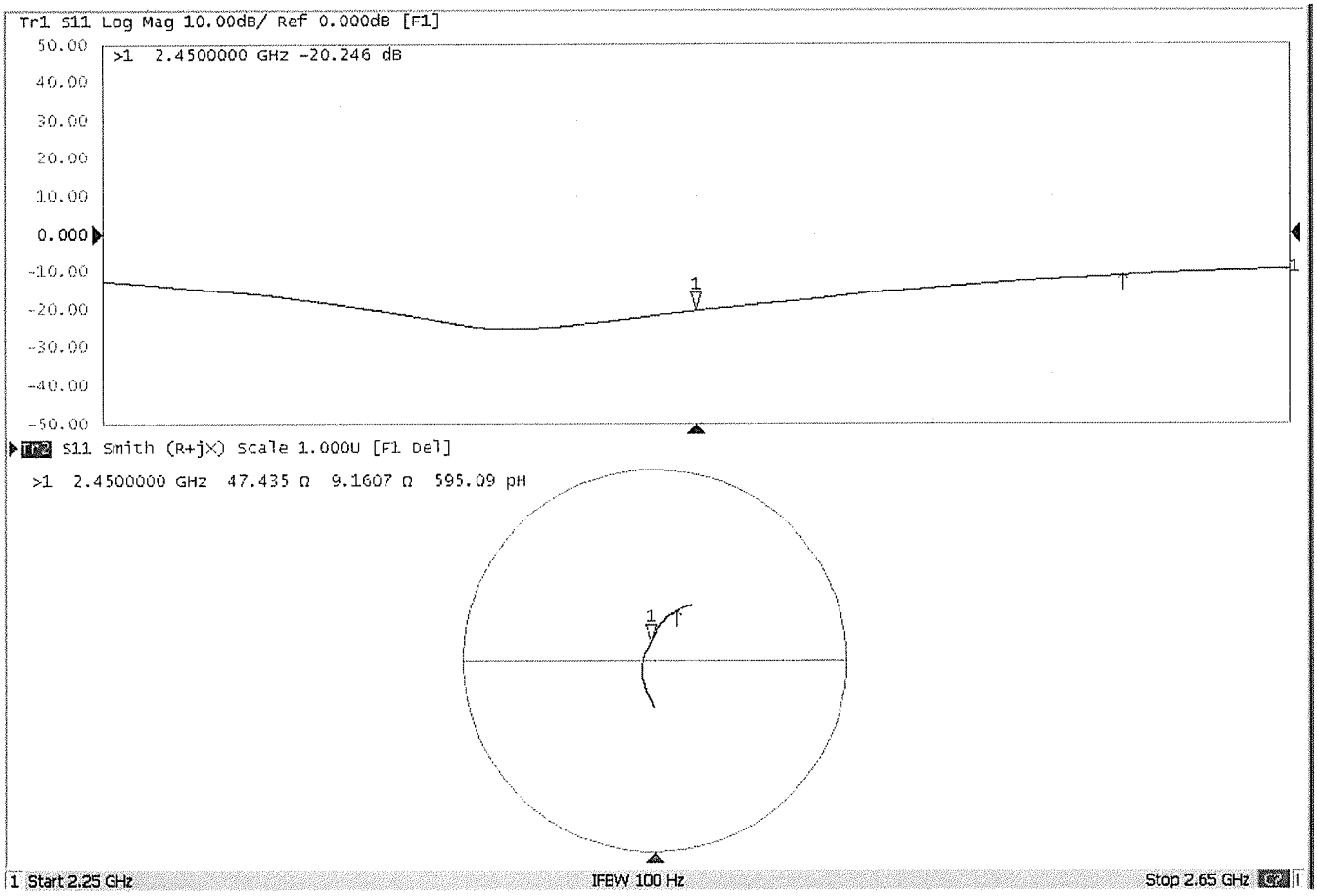
Impedance Measurement Plot for Head TSL



Calibration Laboratory of
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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

Client 7-Layers (Auden)

Certificate No: D2550V2-1022_Sep22

CALIBRATION CERTIFICATE

Object	D2550V2 - SN:1022
Calibration procedure(s)	QA CAL-05.v11 Calibration Procedure for SAR Validation Sources between 0.7-3 GHz
Calibration date:	September 22, 2022

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 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-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:	Jeton Kastrati	Laboratory Technician	
Approved by:	Sven Kühn	Technical Manager	

Issued: September 23, 2022

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	2550 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	39.1	1.91 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.4 ± 6 %	1.95 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	13.5 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**53.0 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.13 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**24.2 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	52.0 Ω - 4.0 jΩ
Return Loss	- 27.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.157 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: 22.09.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2550 MHz; Type: D2550V2; Serial: D2550V2 - SN:1022

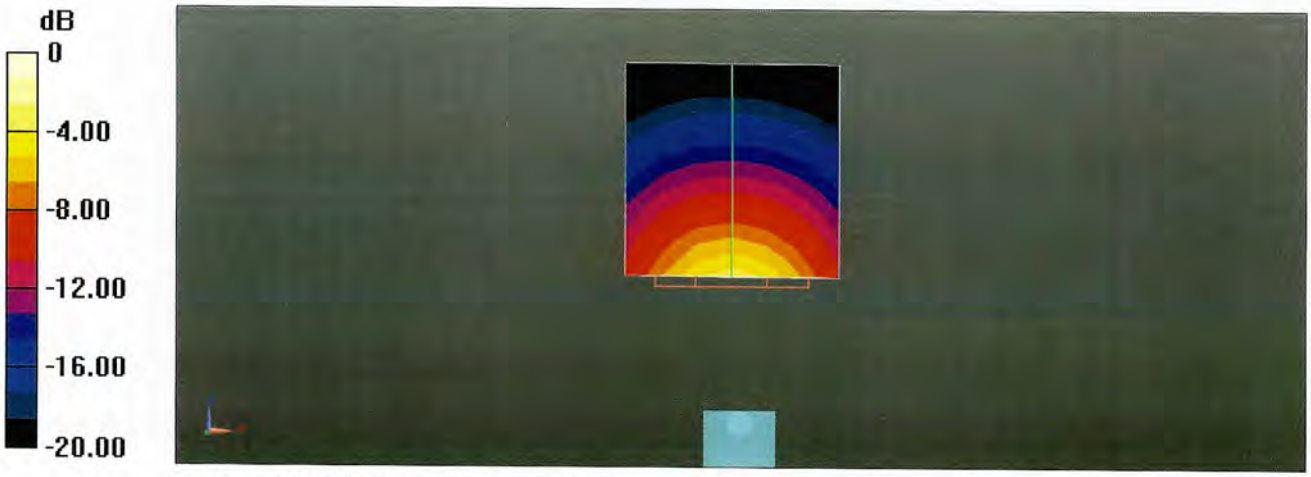
Communication System: UID 0 - CW; Frequency: 2550 MHz
Medium parameters used: f = 2550 MHz; σ = 1.95 S/m; ε_r = 37.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(7.85, 7.85, 7.85) @ 2550 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)

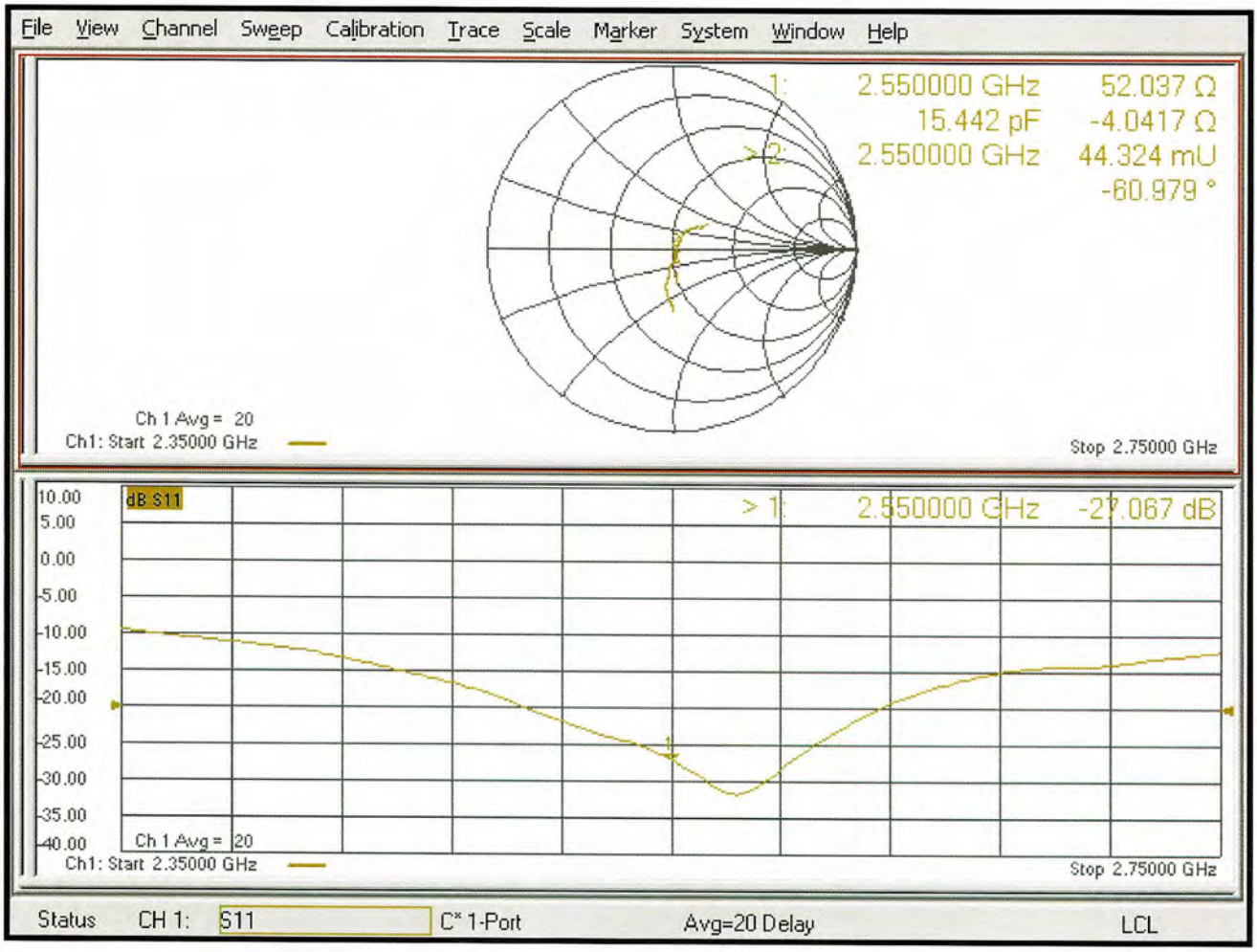
Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 113.1 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 27.5 W/kg
SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.13 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 49%
Maximum value of SAR (measured) = 22.6 W/kg



0 dB = 22.6 W/kg = 13.54 dBW/kg

Impedance Measurement Plot for Head TSL



D2550V2 - SN: 1022 Extended Dipole Calibrations

Referring to KDB 865664 D01, if dipoles are verified in return loss (<-20dB, within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

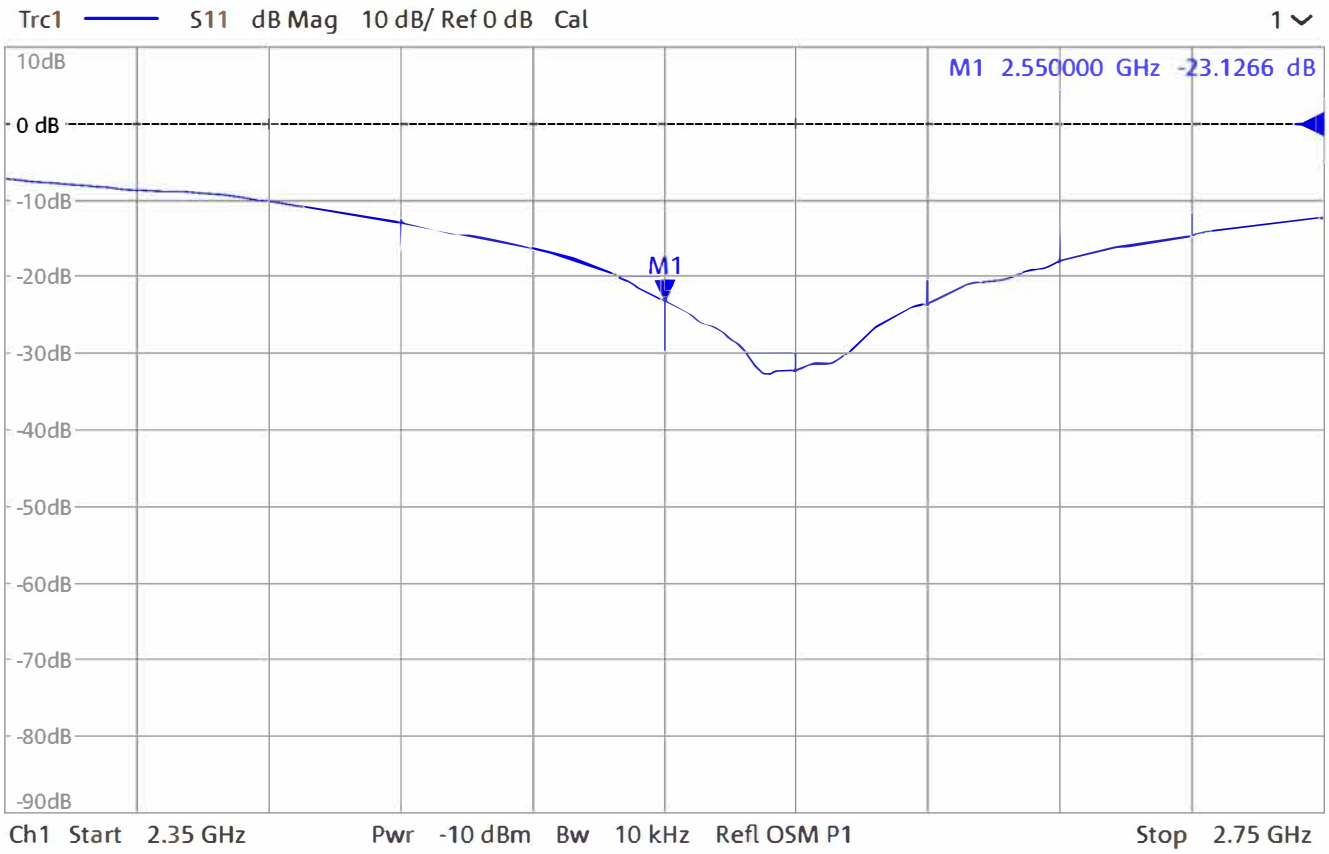
D2550V2 - SN: 1022						
2550MHz Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
9.22.2022	-27.1		52		-4	
9.21.2023	-23.13	-14.66	54.77	2.77	-5.52	-1.52

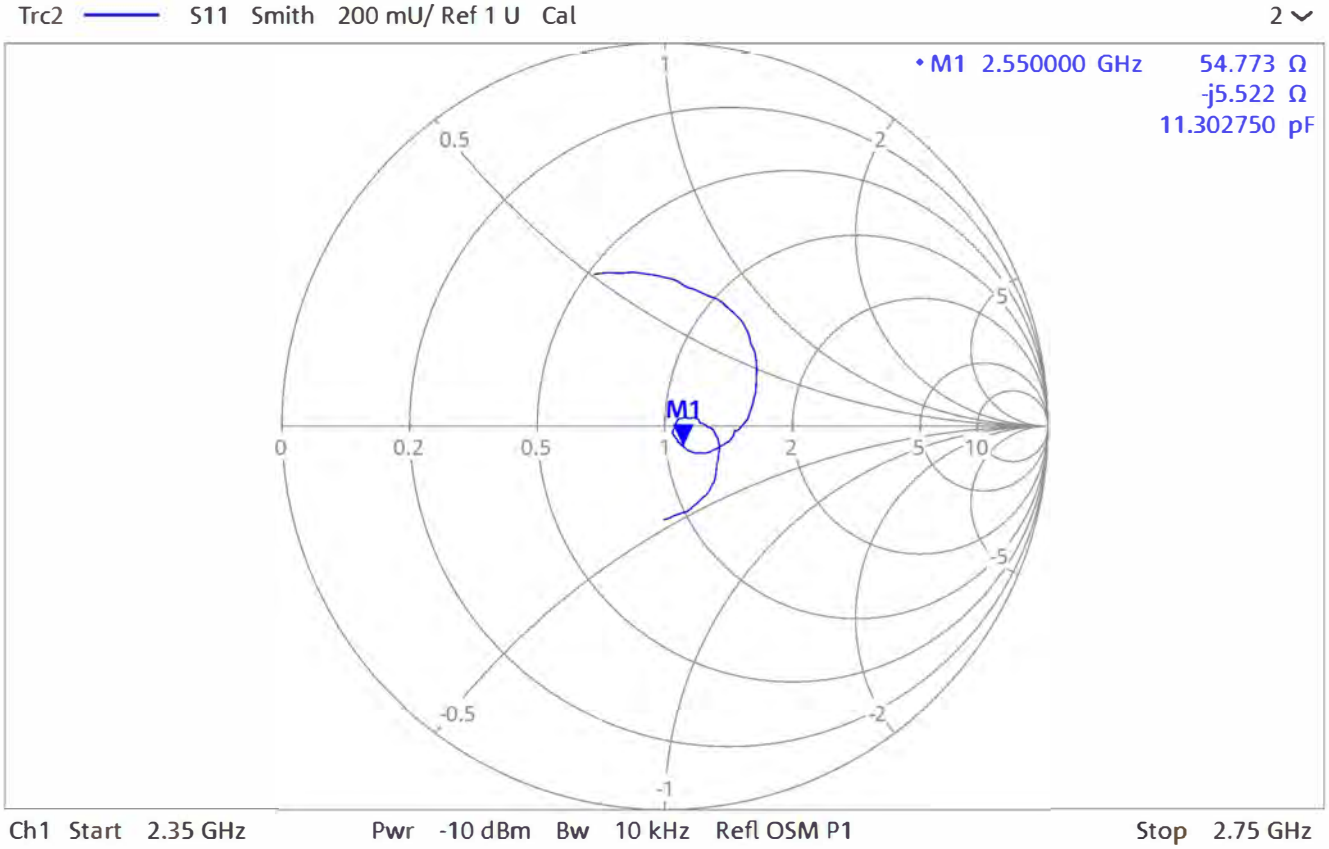
<Justification of the extended calibration>

The return loss is < -20dB, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

<Dipole Verification Data>

Head 2550MHz _2023.09.21





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Client 7layers **Certificate No: 24J02Z000860**

CALIBRATION CERTIFICATE

Object	D3500V2 - SN: 1111
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
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 (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7517	21-Feb-24(CTTL-SPEAG, No. 24J02Z80008)	Feb-25
DAE4	SN 1588	13-Sep-24(CTTL-SPEAG, No. 24J02Z000713)	Sep-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: November 15, 2024

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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-mounted 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) DASY4/5 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%.

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Measurement Conditions

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

DASY Version	DASY52	52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
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	3400 MHz ± 1 MHz 3500 MHz ± 1 MHz	

Head TSL parameters at 3400 MHz

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	38.0	2.81 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	38.0 ± 6 %	2.80 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 3400 MHz

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.74 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**67.5 W/kg ± 24.4 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.55 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**25.5 W/kg ± 24.2 % (*k*=2)**

Head TSL parameters at 3500 MHz

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	37.8 ± 6 %	2.92 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 3500 MHz

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.58 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**65.7 W/kg ± 24.4 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.48 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**24.8 W/kg ± 24.2 % (*k*=2)**

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL at 3400 MHz

Impedance, transformed to feed point	42.4Ω- 0.85jΩ
Return Loss	- 21.6dB

Antenna Parameters with Head TSL at 3500 MHz

Impedance, transformed to feed point	48.6Ω+ 3.70jΩ
Return Loss	- 27.9dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.043 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point 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 feed-point may be damaged.

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 2024-11-11

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 3500 MHz; Type: D3500V2; Serial: D3500V2 - SN: 1111

Communication System: CW; Frequency: 3400 MHz, CW; Frequency: 3500 MHz,
Medium parameters used: f = 3400 MHz; σ = 2.8 S/m; ε_r = 38.04; ρ = 1000 kg/m^3,
Medium parameters used: f = 3500 MHz; σ = 2.922 S/m; ε_r = 37.75; ρ = 1000 kg/m^3,
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(6.95, 6.95, 6.95) @ 3400 MHz; ConvF(6.72, 6.72, 6.72) @ 3500 MHz; Calibrated: 2024-02-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1588; Calibrated: 2024-09-13
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration /Pin=100mW, d=10mm, f=3400 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 57.90 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 17.0 W/kg
SAR(1 g) = 6.74 W/kg; SAR(10 g) = 2.55 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 77.3%
Maximum value of SAR (measured) = 12.2 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=3500 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 56.01 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 16.9 W/kg
SAR(1 g) = 6.58 W/kg; SAR(10 g) = 2.48 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 76.5%
Maximum value of SAR (measured) = 12.1 W/kg

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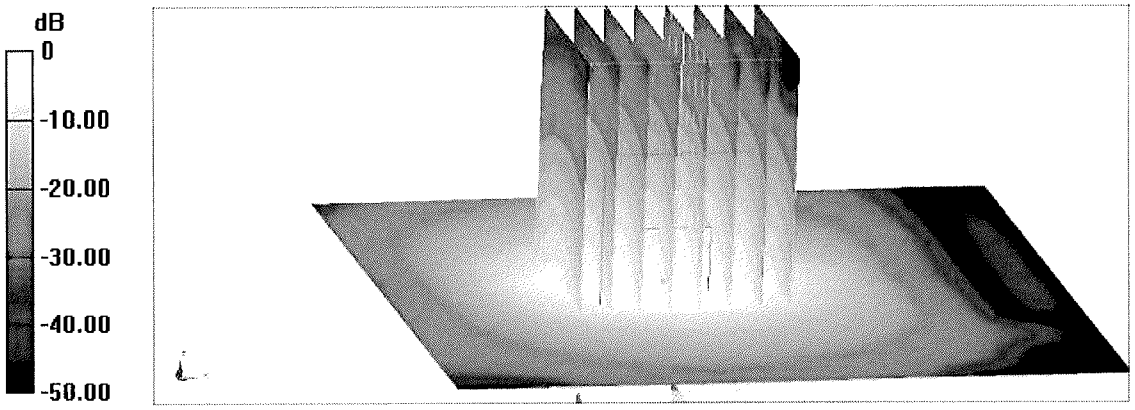

0 dB = 12.1 W/kg = 10.83 dBW/kg

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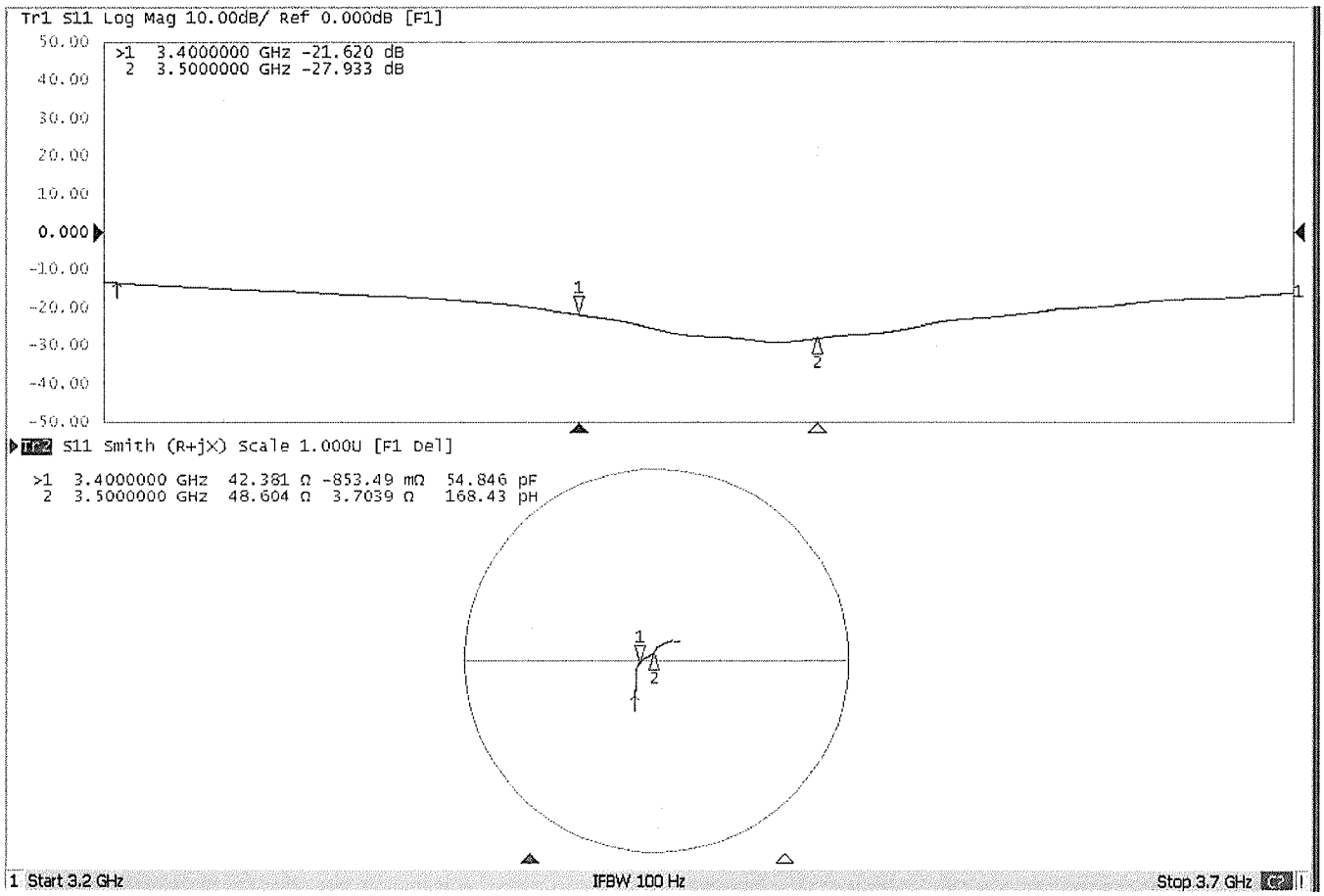
Impedance Measurement Plot for Head TSL



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CNAS L0570

Client 7layers **Certificate No: 24J02Z000861**

CALIBRATION CERTIFICATE

Object D3700V2 - SN: 1082

Calibration Procedure(s) FF-Z11-003-01
Calibration Procedures for dipole validation kits

Calibration date: November 8, 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)℃ and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7517	21-Feb-24(CTTL-SPEAG, No. 24J02Z80008)	Feb-25
DAE4	SN 1588	13-Sep-24(CTTL-SPEAG, No. 24J02Z000713)	Sep-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: November 15, 2024

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2117
E-mail: emf@caict.ac.cn http://www.caict.ac.cn

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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-mounted 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) DASY4/5 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%.

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Measurement Conditions

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

DASY Version	DASY52	52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
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 at 3700 MHz

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	37.0 ± 6 %	3.11 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 3700 MHz

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.68 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**66.6 W/kg ± 24.4 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.43 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**24.2 W/kg ± 24.2 % (*k*=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL at 3700 MHz

Impedance, transformed to feed point	44.6Ω+ 2.53jΩ
Return Loss	- 24.0dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.048 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point 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 feed-point may be damaged.

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 2024-11-08

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 3700 MHz; Type: D3700V2; Serial: D3700V2 - SN: 1082

Communication System: UID 0, CW; Frequency: 3700 MHz;

Medium parameters used: f = 3700 MHz; σ = 3.108 S/m; ε_r = 37.04; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(6.56, 6.56, 6.56) @ 3700 MHz; Calibrated: 2024-02-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1588; Calibrated: 2024-09-13
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration /Pin=100mW, d=10mm, f=3700 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 67.22 V/m; Power Drift = -0.02 dB

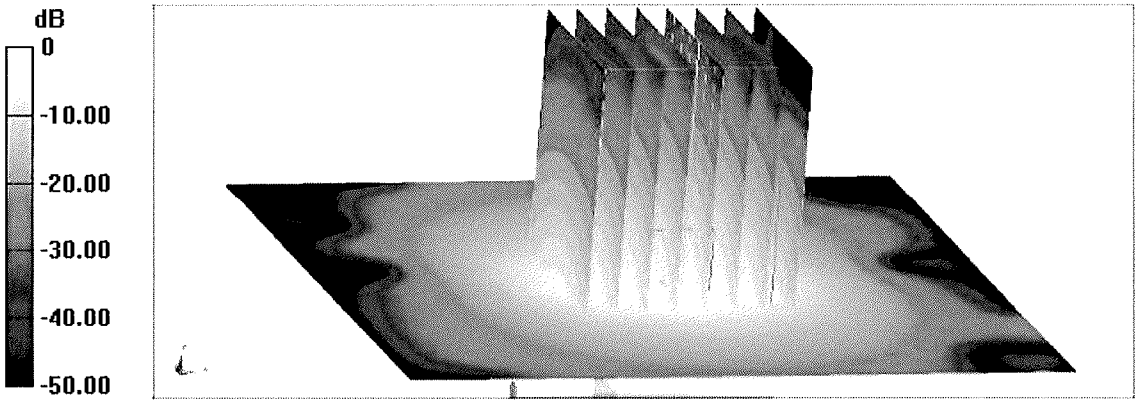
Peak SAR (extrapolated) = 18.1 W/kg

SAR(1 g) = 6.68 W/kg; SAR(10 g) = 2.43 W/kg

Smallest distance from peaks to all points 3 dB below = 7.9 mm

Ratio of SAR at M2 to SAR at M1 = 75.1%

Maximum value of SAR (measured) = 12.6 W/kg



0 dB = 12.6 W/kg = 11.00 dBW/kg

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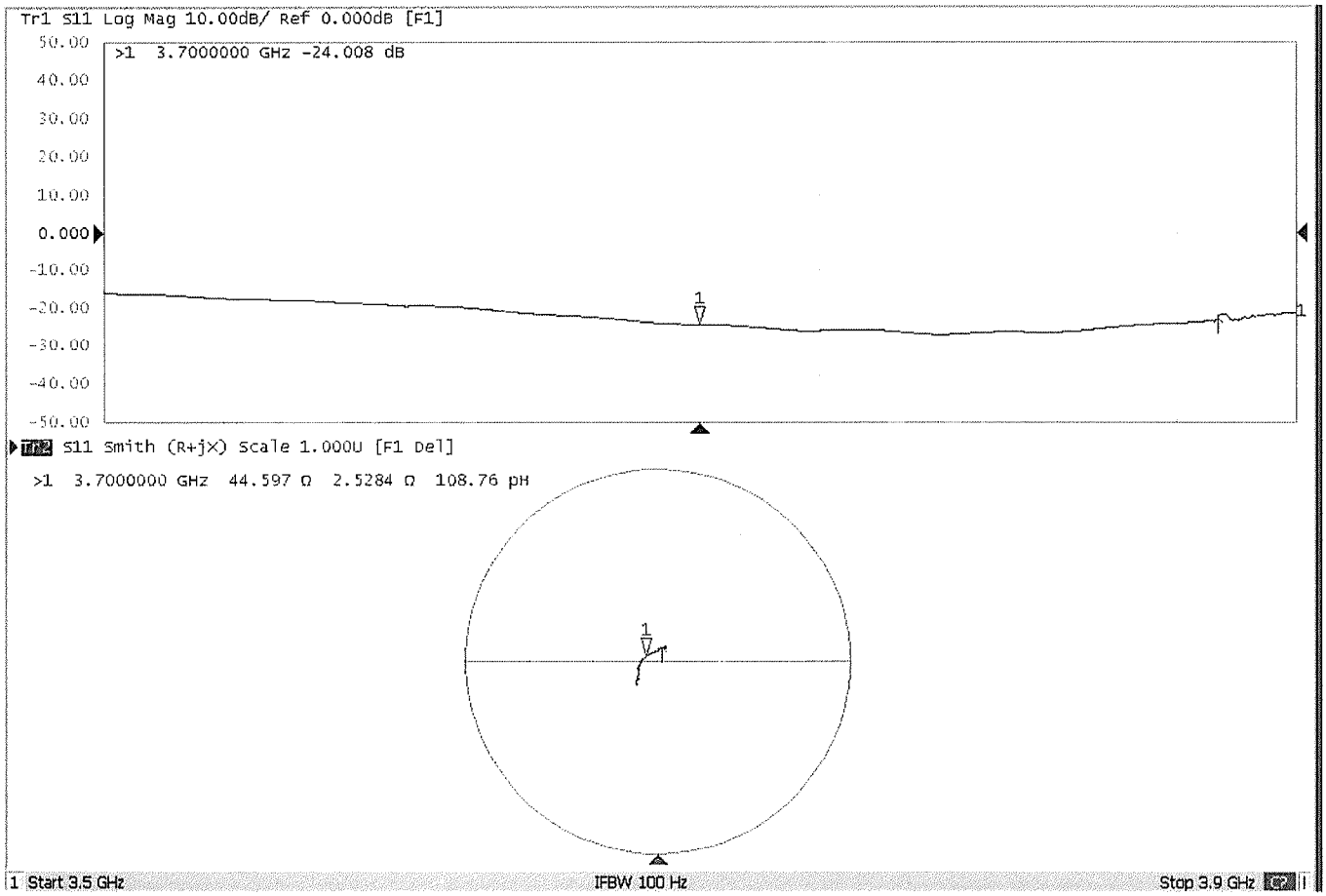
Impedance Measurement Plot for Head TSL



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CNAS L0570

CAICT

Client 7layers **Certificate No: 24J02Z000862**

CALIBRATION CERTIFICATE

Object	D3900V2 - SN: 1055
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	November 7, 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 (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7517	21-Feb-24(CTTL-SPEAG, No. 24J02Z80008)	Feb-25
DAE4	SN 1588	13-Sep-24(CTTL-SPEAG, No. 24J02Z000713)	Sep-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: November 15, 2024

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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-mounted 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) DASY4/5 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%.

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Measurement Conditions

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

DASY Version	DASY52	52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
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 4100 MHz ± 1 MHz	

Head TSL parameters at 3900MHz

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	37.3 ± 6 %	3.31 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 3900MHz

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.82 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**68.2 W/kg ± 24.4 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**23.5 W/kg ± 24.2 % (*k*=2)**

Head TSL parameters at 4100MHz

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	37.2	3.53 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	36.8 ± 6 %	3.50 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 4100MHz

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.81 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**68.0 W/kg ± 24.4 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.33 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**23.2 W/kg ± 24.2 % (*k*=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL at 3900MHz

Impedance, transformed to feed point	47.2Ω- 3.24jΩ
Return Loss	- 27.1dB

Antenna Parameters with Head TSL at 4100MHz

Impedance, transformed to feed point	59.7Ω+ 2.44jΩ
Return Loss	- 20.8dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.011 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point 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 feed-point may be damaged.

Additional EUT Data

Manufactured by	SPEAG

Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
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DASY5 Validation Report for Head TSL Date: 2024-11-07

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 3900 MHz; Type: D3900V2; Serial: D3900V2 - SN: 1055

Communication System: UID 0, CW; Frequency: 3900 MHz; Frequency: 4100 MHz;
Medium parameters used: f = 3900 MHz; σ = 3.309 S/m; ε_r = 37.28; ρ = 1000 kg/m^3
Medium parameters used: f = 4100 MHz; σ = 3.5 S/m; ε_r = 36.78; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(6.4, 6.4, 6.4) @ 3900 MHz; ConvF(6.43, 6.43, 6.43) @ 4100 MHz; Calibrated: 2024-02-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1588; Calibrated: 2024-09-13
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration /Pin=100mW, d=10mm, f=3900 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 63.07 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 20.0 W/kg
SAR(1 g) = 6.82 W/kg; SAR(10 g) = 2.35 W/kg
Smallest distance from peaks to all points 3 dB below = 7.6 mm
Ratio of SAR at M2 to SAR at M1 = 73.2%
Maximum value of SAR (measured) = 13.3 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=4100 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 62.04 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 20.6 W/kg
SAR(1 g) = 6.81 W/kg; SAR(10 g) = 2.33 W/kg
Smallest distance from peaks to all points 3 dB below = 7.6 mm
Ratio of SAR at M2 to SAR at M1 = 71.9%
Maximum value of SAR (measured) = 13.6 W/kg

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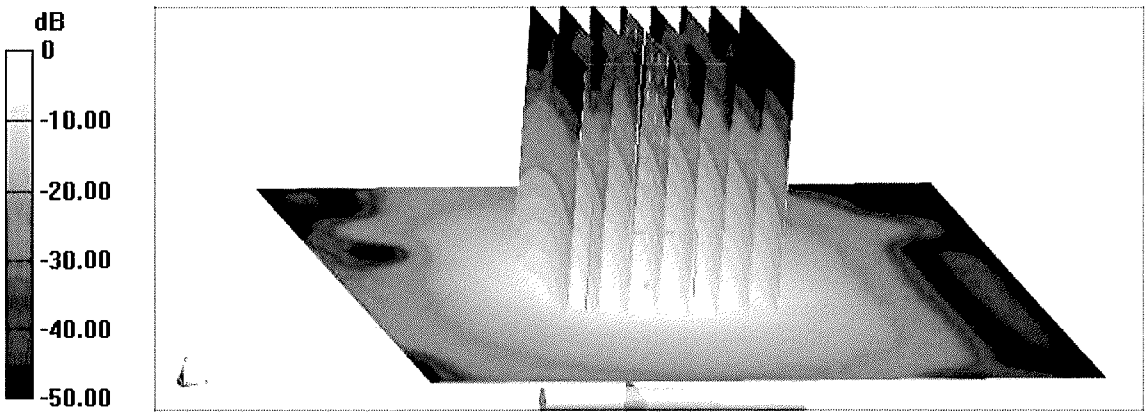

0 dB = 13.6 W/kg = 11.34 dBW/kg

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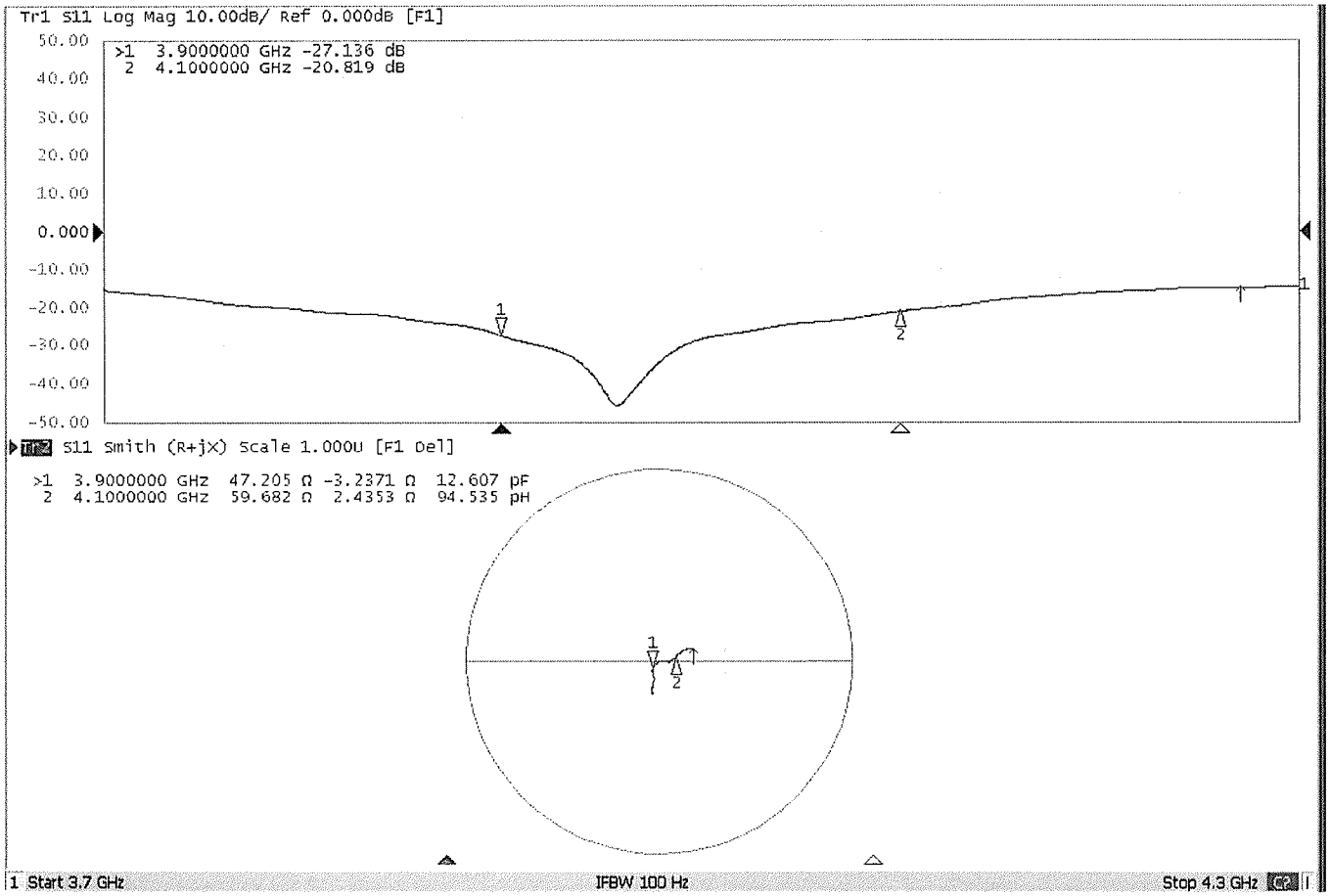
Impedance Measurement Plot for Head TSL



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Client **7layers** **Certificate No: 24J02Z000865**

CALIBRATION CERTIFICATE

Object	D5GHzV2 - SN: 1315
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	November 5, 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 (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7517	21-Feb-24(CTTL-SPEAG, No. 24J02Z80008)	Feb-25
DAE4	SN 1588	13-Sep-24(CTTL-SPEAG, No. 24J02Z000713)	Sep-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Jun	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: November 15, 2024

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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-mounted 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) DASY4/5 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%.

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Measurement Conditions

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

DASY Version	DASY52	52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
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	5250 MHz ± 1 MHz 5600 MHz ± 1 MHz 5750 MHz ± 1 MHz	

Head TSL parameters at 5250MHz

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	35.8 ± 6 %	4.70 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5250MHz

SAR averaged over 1 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.73 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**77.3 W/kg ± 24.4 % (*k*=2)**
SAR averaged over 10 (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.16 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**21.6 W/kg ± 24.2 % (*k*=2)**

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Head TSL parameters at 5600MHz

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	35.2 ± 6 %	5.08 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5600MHz

SAR averaged over 1 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	8.18 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**81.7 W/kg ± 24.4 % (*k*=2)**
SAR averaged over 10 (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.27 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**22.7 W/kg ± 24.2 % (*k*=2)**

Head TSL parameters at 5750MHz

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	35.0 ± 6 %	5.24 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL at 5750MHz

SAR averaged over 1 (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	7.73 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**77.1 W/kg ± 24.4 % (*k*=2)**
SAR averaged over 10 (10 g) of Head TSL	Condition	
SAR measured	100 mW input power	2.13 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**21.2 W/kg ± 24.2 % (*k*=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL at 5250MHz

Impedance, transformed to feed point	49.2Ω- 1.60jΩ
Return Loss	- 34.8dB

Antenna Parameters with Head TSL at 5600MHz

Impedance, transformed to feed point	53.2Ω+ 4.15jΩ
Return Loss	- 25.9dB

Antenna Parameters with Head TSL at 5750MHz

Impedance, transformed to feed point	49.3Ω+ 4.49jΩ
Return Loss	- 26.8dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.099 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point 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 feed-point may be damaged.

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 2024-11-05

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 5GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN: 1315

Communication System: CW; Frequency: 5250 MHz, Frequency: 5600 MHz, Frequency: 5750 MHz

Medium parameters used: f = 5250 MHz; σ = 4.698 S/m; ε_r = 35.84; ρ = 1000 kg/m^3

Medium parameters used: f = 5600 MHz; σ = 5.077 S/m; ε_r = 35.24; ρ = 1000 kg/m^3

Medium parameters used: f = 5750 MHz; σ = 5.241 S/m; ε_r = 35.02; ρ = 1000 kg/m^3

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7517; ConvF(5.43, 5.43, 5.43) @ 5250 MHz; ConvF(4.83, 4.83, 4.83) @ 5600 MHz; ConvF(4.95, 4.95, 4.95) @ 5750 MHz; Calibrated: 2024-02-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1588; Calibrated: 2024-09-13
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration /Pin=100mW, d=10mm, f=5250 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 61.02 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 32.1 W/kg
SAR(1 g) = 7.73 W/kg; SAR(10 g) = 2.16 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 64.4%
Maximum value of SAR (measured) = 18.7 W/kg

Dipole Calibration /Pin=100mW, d=10mm, f=5600 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 60.79 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 38.0 W/kg
SAR(1 g) = 8.18 W/kg; SAR(10 g) = 2.27 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 60.8%
Maximum value of SAR (measured) = 20.4 W/kg

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Dipole Calibration /Pin=100mW, d=10mm, f=5750 MHz/Zoom Scan, dist=1.4mm (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 59.50 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 37.3 W/kg
SAR(1 g) = 7.73 W/kg; SAR(10 g) = 2.13 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 59.4%
Maximum value of SAR (measured) = 19.7 W/kg

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Impedance Measurement Plot for Head TSL

Appendix D. Conducted Power Result

Full Power

Band	WCDMA II (Ant 2)			WCDMA II	WCDMA V (Ant0)			WCDMA V
TX Channel	9262	9400	9538	Max. Tune-up Power (dBm)	4132	4182	4233	Max. Tune-up Power (dBm)
Rx Channel	9662	9800	9938		4357	4407	4458	
Frequency (MHz)	1852.4	1880	1907.6		826.4	836.4	846.6	
RMC 12.2K	23.90	23.98	**24.08**	**24.50**	23.72	23.79	**23.95**	**24.50**
HSDPA Subtest-1	22.84	22.86	23.02	23.50	22.70	22.74	22.87	23.50
HSDPA Subtest-2	22.92	22.90	22.98	23.50	22.63	22.70	22.88	23.50
HSDPA Subtest-3	22.37	22.34	22.48	23.00	22.25	22.22	22.31	23.00
HSDPA Subtest-4	22.31	22.40	22.49	23.00	22.29	22.19	22.34	23.00
DC-HSDPA Subtest-1	22.81	22.87	22.95	23.50	22.69	22.77	22.86	23.50
DC-HSDPA Subtest-2	22.84	22.86	22.94	23.50	22.70	22.68	22.86	23.50
DC-HSDPA Subtest-3	22.30	22.28	22.34	23.00	22.21	22.18	22.36	23.00
DC-HSDPA Subtest-4	22.28	22.27	22.35	23.00	22.22	22.26	22.23	23.00
HSUPA Subtest-1	22.86	22.92	23.05	23.50	22.74	22.80	22.98	23.50
HSUPA Subtest-2	20.87	20.97	21.02	21.50	20.70	20.77	20.89	21.50
HSUPA Subtest-3	21.88	21.98	22.06	22.50	21.76	21.79	21.94	22.50
HSUPA Subtest-4	20.82	20.90	21.04	21.50	20.70	20.73	21.04	21.50
HSUPA Subtest-5	22.88	22.92	23.03	23.50	22.75	22.78	22.96	23.50

Reduce Power

Band	WCDMA II (Ant 2)			WCDMA II
TX Channel	9262	9400	9538	Max. Tune-up Power (dBm)
Rx Channel	9662	9800	9938	
Frequency (MHz)	1852.4	1880	1907.6	
RMC 12.2K	22.55	22.61	**22.66**	**23.00**
HSDPA Subtest-1	21.42	21.37	21.58	22.00
HSDPA Subtest-2	21.53	21.49	21.57	22.00
HSDPA Subtest-3	20.92	20.86	21.01	21.50
HSDPA Subtest-4	20.87	20.94	21.02	21.50
DC-HSDPA Subtest-1	21.28	21.37	21.50	22.00
DC-HSDPA Subtest-2	21.42	21.44	21.52	22.00
DC-HSDPA Subtest-3	20.84	20.85	20.81	21.50
DC-HSDPA Subtest-4	20.77	20.79	20.83	21.50
HSUPA Subtest-1	21.47	21.53	21.52	22.00
HSUPA Subtest-2	19.35	19.54	19.50	20.00
HSUPA Subtest-3	20.48	20.51	20.54	21.00
HSUPA Subtest-4	19.31	19.48	19.61	20.00
HSUPA Subtest-5	21.43	21.45	21.53	22.00

Full Power

LTE Band 5 (Ant0)

BW	Modulation	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		20450	20525	20600		
		Frequency (MHz)		829	836.5	844		
10M	QPSK	1	0	22.97	23.14	23.01	0	24.5
		1	24	**23.09**	**23.15**	**23.11**	0	24.5
		1	49	22.86	22.92	22.78	0	24.5
		25	0	22.01	22.14	21.95	1	23.5
		25	12	**22.06**	**22.19**	**22.15**	1	23.5
		25	25	21.91	22.12	22.01	1	23.5
		50	0	21.96	**22.16**	22.07	1	23.5
	16QAM	1	0	22.13	22.26	22.21	1	23.5
		1	24	22.13	22.32	22.23	1	23.5
		1	49	22.15	22.10	21.93	1	23.5
		25	0	21.06	21.15	21.18	2	22.5
		25	12	21.29	21.23	21.03	2	22.5
		25	25	21.18	21.12	20.85	2	22.5
		50	0	20.98	21.18	21.00	2	22.5
	64QAM	1	0	21.44	21.37	21.16	2	22.5
		1	24	21.29	21.40	21.45	2	22.5
		1	49	20.95	21.15	21.20	2	22.5
		25	0	20.23	20.16	20.21	3	21.5
		25	12	20.00	20.24	20.16	3	21.5
		25	25	19.99	20.13	20.07	3	21.5
		50	0	20.14	20.20	20.25	3	21.5
BW	Modulation	Channel		20425	20525	20625	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		826.5	836.5	846.5		
5M	QPSK	1	0	22.94	22.77	22.87	0	24.5
		1	12	23.08	22.84	23.12	0	24.5
		1	24	22.92	22.57	22.67	0	24.5
		12	0	22.05	21.88	22.08	1	23.5
		12	6	22.01	21.98	22.08	1	23.5
		12	13	21.71	21.84	22.11	1	23.5
		25	0	21.68	22.03	22.00	1	23.5
	16QAM	1	0	22.11	22.08	22.20	1	23.5
		1	12	22.15	22.30	22.20	1	23.5
		1	24	21.94	21.93	21.82	1	23.5
		12	0	20.85	21.19	20.90	2	22.5
		12	6	21.05	20.95	20.98	2	22.5
		12	13	21.17	20.87	21.17	2	22.5
		25	0	20.89	20.89	21.13	2	22.5
	64QAM	1	0	21.23	21.24	21.35	2	22.5
		1	12	21.10	21.45	21.26	2	22.5
		1	24	20.75	21.23	20.90	2	22.5
		12	0	20.05	20.17	20.15	3	21.5
		12	6	19.96	20.12	20.29	3	21.5
		12	13	20.04	19.85	20.15	3	21.5
		25	0	20.01	20.18	20.10	3	21.5
BW	Modulation	Channel		20415	20525	20635	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		825.5	836.5	847.5		
3M	QPSK	1	0	23.00	22.78	22.95	0	24.5
		1	7	22.93	23.06	23.11	0	24.5
		1	14	22.66	22.58	22.79	0	24.5
		8	0	21.73	21.98	22.02	1	23.5
		8	3	21.94	22.04	21.99	1	23.5
		8	7	21.77	21.78	22.12	1	23.5
		15	0	21.99	21.94	21.88	1	23.5
	16QAM	1	0	21.88	22.09	22.20	1	23.5
		1	7	22.18	22.11	22.31	1	23.5
		1	14	22.16	21.76	22.17	1	23.5
		8	0	20.90	21.11	21.10	2	22.5
		8	3	21.34	21.07	21.14	2	22.5
		8	7	20.91	20.84	20.91	2	22.5
		15	0	21.06	20.77	21.01	2	22.5
	64QAM	1	0	21.28	20.98	21.35	2	22.5
		1	7	21.13	21.42	21.19	2	22.5
		1	14	20.83	20.93	20.89	2	22.5
		8	0	20.26	20.08	19.89	3	21.5
		8	3	19.89	19.99	20.29	3	21.5
		8	7	19.83	20.15	19.86	3	21.5
		15	0	20.03	20.25	20.04	3	21.5
BW	Modulation	Channel		20407	20525	20643	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		824.7	836.5	848.3		
1.4M	QPSK	1	0	22.72	23.02	22.95	0	24.5
		1	2	23.13	23.07	23.10	0	24.5
		1	5	22.56	22.76	22.93	0	24.5
		3	0	22.71	22.74	23.13	0	24.5
		3	1	23.12	23.02	23.09	0	24.5
		3	3	22.76	22.83	23.05	0	24.5
		6	0	21.78	21.99	22.01	1	23.5
	16QAM	1	0	22.06	22.20	22.00	1	23.5
		1	2	21.86	22.27	22.15	1	23.5
		1	5	21.85	21.87	21.94	1	23.5
		3	0	21.91	21.96	22.08	1	23.5
		3	1	22.17	22.06	22.07	1	23.5
		3	3	21.97	21.71	22.03	1	23.5
		6	0	20.70	20.99	21.13	2	22.5
	64QAM	1	0	21.16	21.06	21.39	2	22.5
		1	2	21.01	21.30	21.26	2	22.5
		1	5	20.67	21.05	20.90	2	22.5
		3	0	21.08	20.96	21.22	2	22.5
		3	1	21.03	20.89	21.09	2	22.5
		3	3	20.88	21.01	20.87	2	22.5
		6	0	19.95	19.97	20.07	3	21.5

LTE Band 17 (Ant0)

BW	Modulation	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		23780	23790	23800		
		Frequency (MHz)		709	710	711		
10M	QPSK	1	0	22.87	22.90	22.89	0	24.5
		1	24	**22.92**	**22.96**	**22.94**	0	24.5
		1	49	22.83	22.93	22.85	0	24.5
		25	0	21.82	21.89	21.86	1	23.5
		25	12	**21.91**	**21.99**	**21.95**	1	23.5
		25	25	21.89	21.94	21.84	1	23.5
		50	0	21.73	**21.96**	21.95	1	23.5
	16QAM	1	0	21.95	22.02	21.94	1	23.5
		1	24	21.86	22.09	22.09	1	23.5
		1	49	21.94	22.08	22.14	1	23.5
		25	0	20.85	20.92	20.75	2	22.5
		25	12	20.96	20.95	20.78	2	22.5
		25	25	21.08	21.04	20.94	2	22.5
		50	0	20.94	20.94	20.75	2	22.5
	64QAM	1	0	20.85	21.03	20.77	2	22.5
		1	24	20.85	21.07	20.99	2	22.5
		1	49	20.89	21.12	21.18	2	22.5
		25	0	19.88	19.91	19.91	3	21.5
		25	12	19.88	19.96	19.79	3	21.5
		25	25	20.03	20.01	19.97	3	21.5
		50	0	19.79	19.92	19.70	3	21.5
BW	Modulation	Channel		23755	23790	23825	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		706.5	710	713.5		
5M	QPSK	1	0	22.65	22.95	22.74	0	24.5
		1	12	22.79	22.93	22.88	0	24.5
		1	24	22.69	22.73	22.57	0	24.5
		12	0	21.89	21.91	21.76	1	23.5
		12	6	21.86	21.73	21.78	1	23.5
		12	13	21.86	21.67	21.59	1	23.5
		25	0	21.72	21.85	21.73	1	23.5
	16QAM	1	0	21.79	21.92	21.76	1	23.5
		1	12	21.77	21.90	22.15	1	23.5
		1	24	21.70	22.16	22.13	1	23.5
		12	0	20.57	20.87	20.68	2	22.5
		12	6	20.71	20.70	20.59	2	22.5
		12	13	21.13	21.00	20.83	2	22.5
		25	0	20.81	20.92	20.66	2	22.5
	64QAM	1	0	20.70	20.86	20.60	2	22.5
		1	12	20.93	21.04	20.79	2	22.5
		1	24	20.70	21.09	21.07	2	22.5
		12	0	19.68	19.96	19.96	3	21.5
		12	6	19.76	19.89	19.63	3	21.5
		12	13	19.96	19.97	19.91	3	21.5
		25	0	19.78	19.84	19.65	3	21.5

LTE Band 41 (2545 ~ 2655MHz)_PC3 (Ant2)

BW	Modulation	RB Size	RB Offset	Low	Low Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40240	40690	41140		
		Frequency (MHz)		2555	2600	2645		
20M	QPSK	1	0	23.30	23.33	23.26	0	25
		1	50	23.25	23.29	23.22	0	25
		1	99	**23.31**	**23.41**	**23.32**	0	25
		50	0	22.25	22.29	22.25	1	24
		50	25	**22.27**	**22.37**	**22.28**	1	24
		50	50	22.26	22.36	22.25	1	24
		100	0	22.25	**22.34**	22.27	1	24
	16QAM	1	0	22.15	22.30	22.04	1	24
		1	50	22.06	22.35	22.31	1	24
		1	99	22.46	22.46	22.36	1	24
		50	0	21.17	21.38	21.36	2	23
		50	25	21.19	21.31	21.24	2	23
		50	50	21.36	21.43	21.25	2	23
		100	0	21.21	21.31	21.19	2	23
	64QAM	1	0	21.15	21.44	21.26	2	23
		1	50	21.53	21.51	21.53	2	23
		1	99	21.48	21.55	21.38	2	23
		50	0	20.36	20.36	20.47	3	22
		50	25	20.24	20.38	20.11	3	22
		50	50	20.17	20.38	20.14	3	22
		100	0	20.19	20.38	20.09	3	22
BW	Modulation	Channel		40215	40690	41165	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		2552.5	2600	2647.5		
15M	QPSK	1	0	23.27	23.25	23.27	0	25
		1	37	23.07	23.35	23.27	0	25
		1	74	23.06	23.37	23.19	0	25
		36	0	22.09	22.14	22.26	1	24
		36	19	22.35	22.43	22.13	1	24
		36	39	22.25	22.03	22.04	1	24
		75	0	22.33	22.34	22.03	1	24
	16QAM	1	0	22.07	22.20	22.04	1	24
		1	37	22.03	22.18	22.30	1	24
		1	74	22.41	22.21	22.16	1	24
		36	0	21.16	21.28	21.25	2	23
		36	19	21.25	21.08	21.23	2	23
		36	39	21.27	21.44	21.13	2	23
		75	0	21.12	21.34	21.02	2	23
	64QAM	1	0	21.18	21.17	21.08	2	23
		1	37	21.45	21.51	21.47	2	23
		1	74	21.41	21.32	21.18	2	23
		36	0	20.16	20.16	20.49	3	22
		36	19	20.04	20.20	20.03	3	22
		36	39	20.02	20.37	20.05	3	22
		75	0	20.23	20.36	20.04	3	22
BW	Modulation	Channel		40190	40690	41190	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		2550	2600	2650		
10M	QPSK	1	0	23.18	23.14	23.30	0	25
		1	24	23.15	23.38	23.16	0	25
		1	49	23.32	23.31	23.29	0	25
		25	0	22.10	22.25	22.07	1	24
		25	12	22.28	22.06	22.09	1	24
		25	25	22.09	22.34	22.03	1	24
		50	0	22.11	22.02	22.25	1	24
	16QAM	1	0	22.13	22.17	22.02	1	24
		1	24	22.03	22.06	22.07	1	24
		1	49	22.40	22.33	22.41	1	24
		25	0	21.10	21.15	21.13	2	23
		25	12	21.19	21.46	21.08	2	23
		25	25	21.30	21.33	21.04	2	23
		50	0	21.14	21.37	21.02	2	23
	64QAM	1	0	21.08	21.44	21.22	2	23
		1	24	21.33	21.50	21.44	2	23
		1	49	21.56	21.62	21.45	2	23
		25	0	20.23	20.39	20.23	3	22
		25	12	20.30	20.26	20.10	3	22
		25	25	20.24	20.10	20.05	3	22
		50	0	20.08	20.21	20.02	3	22
BW	Modulation	Channel		40165	40690	41215	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		2547.5	2600	2652.5		
5M	QPSK	1	0	23.22	23.13	23.15	0	25
		1	12	23.30	23.20	23.06	0	25
		1	24	23.36	23.28	23.36	0	25
		12	0	22.07	22.28	22.04	1	24
		12	6	22.09	22.40	22.04	1	24
		12	13	22.06	22.43	22.18	1	24
		25	0	22.07	22.30	22.27	1	24
	16QAM	1	0	22.19	22.11	22.10	1	24
		1	12	22.05	22.12	22.03	1	24
		1	24	22.20	22.48	22.31	1	24
		12	0	21.11	21.15	21.12	2	23
		12	6	21.16	21.42	21.14	2	23
		12	13	21.39	21.41	21.31	2	23
		25	0	21.11	21.16	21.06	2	23
	64QAM	1	0	21.22	21.29	21.10	2	23
		1	12	21.40	21.36	21.26	2	23
		1	24	21.28	21.70	21.44	2	23
		12	0	20.25	20.26	20.54	3	22
		12	6	20.17	20.23	20.12	3	22
		12	13	20.13	20.38	20.10	3	22
		25	0	20.27	20.25	20.01	3	22

Full Power

LTE Band 41 (2545 ~ 2655MHz)_PC2 (Ant2)

BW	Modulation	RB Size	RB Offset	Low	Low Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40240	40690	41140		
		Frequency (MHz)		2555	2600	2645		
20M	QPSK	1	0	25.34	25.41	25.33	0	27
		1	50	25.21	25.40	25.40	0	27
		1	99	**25.41**	**25.44**	**25.42**	0	27
		50	0	24.34	24.40	24.31	1	26
		50	25	**24.36**	**24.41**	**24.38**	1	26
		50	50	24.35	24.39	24.31	1	26
		100	0	24.32	**24.37**	24.35	1	26
	16QAM	1	0	24.29	24.44	24.61	1	26
		1	50	24.69	24.52	24.48	1	26
		1	99	24.34	24.64	24.35	1	26
		50	0	23.48	23.45	23.60	2	25
		50	25	23.27	23.59	23.38	2	25
		50	50	23.50	23.65	23.51	2	25
		100	0	23.36	23.58	23.58	2	25
	64QAM	1	0	23.65	23.79	23.32	2	25
		1	50	23.62	23.75	23.56	2	25
		1	99	23.40	23.64	23.37	2	25
		50	0	22.46	22.42	22.45	3	24
		50	25	22.60	22.62	22.42	3	24
		50	50	22.29	22.68	22.47	3	24
		100	0	22.57	22.41	22.48	3	24
BW	Modulation	RB Size	RB Offset	Low	Low Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40215	40690	41165		
		Frequency (MHz)		2552.5	2600	2647.5		
15M	QPSK	1	0	25.25	25.38	25.23	0	27
		1	37	25.23	25.32	25.24	0	27
		1	74	25.40	25.25	25.35	0	27
		36	0	24.14	24.24	24.20	1	26
		36	19	24.30	24.40	24.25	1	26
		36	39	24.31	24.20	24.21	1	26
		75	0	24.11	24.33	24.34	1	26
	16QAM	1	0	24.23	24.40	24.41	1	26
		1	37	24.61	24.35	24.41	1	26
		1	74	24.22	24.44	24.21	1	26
		36	0	23.47	23.40	23.40	2	25
		36	19	23.08	23.44	23.20	2	25
		36	39	23.44	23.50	23.50	2	25
		75	0	23.35	23.56	23.47	2	25
	64QAM	1	0	23.57	23.62	23.26	2	25
		1	37	23.49	23.73	23.49	2	25
		1	74	23.36	23.61	23.18	2	25
		36	0	22.30	22.25	22.33	3	24
		36	19	22.53	22.57	22.41	3	24
		36	39	22.28	22.63	22.40	3	24
		75	0	22.38	22.35	22.45	3	24
BW	Modulation	RB Size	RB Offset	Low	Low Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40190	40690	41190		
		Frequency (MHz)		2550	2600	2650		
10M	QPSK	1	0	25.20	25.25	25.16	0	27
		1	24	25.11	25.23	25.26	0	27
		1	49	25.30	25.42	25.29	0	27
		25	0	24.13	24.24	24.17	1	26
		25	12	24.33	24.35	24.29	1	26
		25	25	24.29	24.30	24.19	1	26
		50	0	24.30	24.24	24.20	1	26
	16QAM	1	0	24.19	24.41	24.46	1	26
		1	24	24.53	24.48	24.30	1	26
		1	49	24.30	24.53	24.33	1	26
		25	0	23.31	23.28	23.48	2	25
		25	12	23.22	23.41	23.31	2	25
		25	25	23.44	23.58	23.39	2	25
		50	0	23.31	23.38	23.52	2	25
	64QAM	1	0	23.61	23.61	23.14	2	25
		1	24	23.60	23.56	23.38	2	25
		1	49	23.33	23.49	23.33	2	25
		25	0	22.42	22.34	22.28	3	24
		25	12	22.51	22.45	22.25	3	24
		25	25	22.24	22.62	22.30	3	24
		50	0	22.46	22.24	22.45	3	24
BW	Modulation	RB Size	RB Offset	Low	Low Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40165	40690	41215		
		Frequency (MHz)		2547.5	2600	2652.5		
5M	QPSK	1	0	25.16	25.36	25.29	0	27
		1	12	25.03	25.20	25.24	0	27
		1	24	25.36	25.23	25.26	0	27
		12	0	24.29	24.20	24.14	1	26
		12	6	24.34	24.22	24.23	1	26
		12	13	24.27	24.28	24.11	1	26
		25	0	24.13	24.19	24.19	1	26
	16QAM	1	0	24.28	24.38	24.48	1	26
		1	12	24.56	24.40	24.40	1	26
		1	24	24.13	24.49	24.16	1	26
		12	0	23.37	23.29	23.45	2	25
		12	6	23.24	23.52	23.31	2	25
		12	13	23.33	23.53	23.41	2	25
		25	0	23.19	23.41	23.42	2	25
	64QAM	1	0	23.64	23.73	23.22	2	25
		1	12	23.44	23.64	23.47	2	25
		1	24	23.30	23.62	23.31	2	25
		12	0	22.34	22.36	22.30	3	24
		12	6	22.55	22.46	22.23	3	24
		12	13	22.11	22.59	22.39	3	24
		25	0	22.43	22.25	22.46	3	24

LTE Band 41 (2545 ~ 2655MHz)_PC3 For SAR (Ant2)

BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40240	40500	40770	41140		
		Frequency (MHz)		2555	2581	2608	2645		
20M	QPSK	1	0	23.30	23.32	23.30	23.26	0	25
		1	50	23.25	23.32	23.24	23.22	0	25
		1	99	**23.31**	**23.38**	**23.34**	**23.32**	0	25
		50	0	22.25	22.34	22.26	**22.28**	1	24
		50	25	**22.27**	**22.35**	**22.31**	**22.29**	1	24
		50	50	22.26	22.33	22.25	22.25	1	24
		100	0	22.25	**22.32**	22.28	22.27	1	24
	16QAM	1	0	22.15	22.31	22.23	22.04	1	24
		1	50	22.06	22.30	22.04	22.31	1	24
		1	99	22.46	22.41	22.25	22.36	1	24
		50	0	21.17	21.38	21.37	21.36	2	23
		50	25	21.19	21.36	21.35	21.24	2	23
		50	50	21.36	21.42	21.18	21.29	2	23
		100	0	21.21	21.35	21.16	21.19	2	23
	64QAM	1	0	21.15	21.40	21.25	21.26	2	23
		1	50	21.53	21.50	21.41	21.53	2	23
		1	99	21.48	21.60	21.60	21.38	2	23
		50	0	20.36	20.39	20.15	20.47	3	22
		50	25	20.24	20.35	20.26	20.11	3	22
		50	50	20.17	20.38	20.45	20.14	3	22
		100	0	20.19	20.37	20.27	20.09	3	22
BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40215	40485	40755	41165		
		Frequency (MHz)		2552.5	2580.5	2609.5	2647.5		
15M	QPSK	1	0	23.27	23.27	23.25	23.27	0	25
		1	37	23.07	23.35	23.28	23.27	0	25
		1	74	23.06	23.35	23.30	23.19	0	25
		36	0	22.09	22.17	22.15	22.26	1	24
		36	19	22.35	22.42	22.23	22.13	1	24
		36	39	22.25	22.07	22.16	22.04	1	24
		75	0	22.33	22.30	22.17	22.03	1	24
	16QAM	1	0	22.07	22.15	22.20	22.04	1	24
		1	37	22.03	22.23	22.09	22.30	1	24
		1	74	22.41	22.22	22.26	22.16	1	24
		36	0	21.16	21.29	21.41	21.25	2	23
		36	19	21.25	21.11	21.32	21.23	2	23
		36	39	21.27	21.44	21.03	21.13	2	23
		75	0	21.12	21.34	21.23	21.02	2	23
	64QAM	1	0	21.18	21.18	21.30	21.08	2	23
		1	37	21.45	21.49	21.28	21.47	2	23
		1	74	21.41	21.34	21.48	21.18	2	23
		36	0	20.16	20.12	20.21	20.49	3	22
		36	19	20.04	20.21	20.01	20.03	3	22
		36	39	20.02	20.37	20.41	20.05	3	22
		75	0	20.23	20.40	20.35	20.04	3	22
BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40190	40490	40790	41190		
		Frequency (MHz)		2550	2580	2610	2650		
10M	QPSK	1	0	23.18	23.14	23.26	23.30	0	25
		1	24	23.15	23.37	23.26	23.16	0	25
		1	49	23.32	23.33	23.07	23.29	0	25
		25	0	22.10	22.24	22.34	22.07	1	24
		25	12	22.28	22.07	22.18	22.09	1	24
		25	25	22.09	22.35	22.22	22.03	1	24
		50	0	22.11	22.06	22.27	22.25	1	24
	16QAM	1	0	22.13	22.17	22.06	22.02	1	24
		1	24	22.03	22.07	22.02	22.07	1	24
		1	49	22.40	22.30	22.19	22.41	1	24
		25	0	21.10	21.16	21.13	21.13	2	23
		25	12	21.19	21.41	21.21	21.08	2	23
		25	25	21.30	21.30	21.22	21.04	2	23
		50	0	21.14	21.34	21.07	21.02	2	23
	64QAM	1	0	21.08	21.43	21.03	21.22	2	23
		1	24	21.33	21.45	21.31	21.44	2	23
		1	49	21.56	21.63	21.36	21.45	2	23
		25	0	20.23	20.40	20.06	20.23	3	22
		25	12	20.30	20.31	20.12	20.10	3	22
		25	25	20.24	20.13	20.37	20.05	3	22
		50	0	20.08	20.26	20.29	20.02	3	22
BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40165	40485	40805	41215		
		Frequency (MHz)		2547.5	2579.5	2611.5	2652.5		
5M	QPSK	1	0	23.22	23.14	23.18	23.15	0	25
		1	12	23.30	23.24	23.27	23.06	0	25
		1	24	23.36	23.26	23.28	23.36	0	25
		12	0	22.07	22.27	22.16	22.04	1	24
		12	6	22.09	22.41	22.28	22.04	1	24
		12	13	22.06	22.38	22.03	22.18	1	24
		25	0	22.07	22.28	22.06	22.27	1	24
	16QAM	1	0	22.19	22.07	22.19	22.10	1	24
		1	12	22.05	22.08	22.04	22.03	1	24
		1	24	22.20	22.47	22.11	22.31	1	24
		12	0	21.11	21.18	21.38	21.12	2	23
		12	6	21.16	21.39	21.21	21.14	2	23
		12	13	21.39	21.43	21.17	21.31	2	23
		25	0	21.11	21.21	21.17	21.06	2	23
	64QAM	1	0	21.22	21.30	21.30	21.10	2	23
		1	12	21.40	21.31	21.32	21.26	2	23
		1	24	21.28	21.67	21.40	21.44	2	23
		12	0	20.25	20.23	20.19	20.54	3	22
		12	6	20.17	20.26	20.19	20.12	3	22
		12	13	20.13	20.37	20.23	20.10	3	22
		25	0	20.27	20.30	20.03	20.01	3	22

LTE Band 41 (2545 ~ 2655MHz)_PC2 For SAR (Ant2)

BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40240	40500	40770	41140		
		Frequency (MHz)		2555	2581	2608	2645		
20M	QPSK	1	0	25.08	25.16	25.16	25.28	0	27
		1	50	25.25	25.13	25.11	25.35	0	27
		1	99	**25.38**	**25.50**	**25.43**	**25.37**	0	27
		50	0	24.29	24.41	24.22	24.20	1	26
		50	25	**24.35**	**24.44**	**24.37**	**24.32**	1	26
		50	50	24.25	24.23	24.26	24.26	1	26
		100	0	24.39	**24.41**	24.32	24.13	1	26
	16QAM	1	0	24.01	24.56	24.16	24.42	1	26
		1	50	24.46	24.36	24.30	24.33	1	26
		1	99	24.22	24.46	24.24	24.32	1	26
		50	0	23.32	23.44	23.32	23.66	2	25
		50	25	23.29	23.49	23.08	23.10	2	25
		50	50	23.20	23.37	23.53	23.46	2	25
		100	0	23.32	23.26	23.51	23.36	2	25
	64QAM	1	0	23.31	23.40	23.44	23.45	2	25
		1	50	23.29	23.70	23.80	23.57	2	25
		1	99	23.38	23.70	23.49	23.18	2	25
		50	0	22.38	22.52	22.21	22.31	3	24
		50	25	22.26	22.46	22.20	22.05	3	24
		50	50	22.45	22.32	22.11	22.19	3	24
		100	0	22.26	22.34	22.61	22.21	3	24
BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40215	40485	40755	41165		
		Frequency (MHz)		2552.5	2580.5	2609.5	2647.5		
15M	QPSK	1	0	25.30	25.17	25.10	25.20	0	27
		1	37	25.33	25.21	25.24	25.10	0	27
		1	74	25.17	25.38	25.18	25.27	0	27
		36	0	24.23	24.53	24.13	24.17	1	26
		36	19	24.26	24.57	24.26	24.33	1	26
		36	39	24.23	24.36	24.14	24.21	1	26
		75	0	24.46	24.36	24.11	24.46	1	26
	16QAM	1	0	24.17	24.53	24.27	24.30	1	26
		1	37	24.64	24.37	24.28	24.38	1	26
		1	74	24.30	24.57	24.36	24.42	1	26
		36	0	23.18	23.47	23.39	23.40	2	25
		36	19	23.17	23.26	23.39	23.22	2	25
		36	39	23.46	23.49	23.55	23.33	2	25
		75	0	23.25	23.32	23.49	23.44	2	25
	64QAM	1	0	23.38	23.64	23.29	23.26	2	25
		1	37	23.18	23.81	23.67	23.38	2	25
		1	74	23.24	23.70	23.55	23.17	2	25
		36	0	22.35	22.57	22.11	22.04	3	24
		36	19	22.44	22.35	22.20	22.34	3	24
		36	39	22.47	22.61	22.14	22.25	3	24
		75	0	22.37	22.57	22.32	22.14	3	24
BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40190	40490	40790	41190		
		Frequency (MHz)		2550	2580	2610	2650		
10M	QPSK	1	0	25.34	25.41	25.37	25.36	0	27
		1	24	25.22	25.20	25.35	25.30	0	27
		1	49	25.37	25.43	25.34	25.25	0	27
		25	0	24.31	24.56	24.37	24.42	1	26
		25	12	24.54	24.57	24.23	24.42	1	26
		25	25	24.30	24.50	24.30	24.20	1	26
		50	0	24.41	24.48	24.16	24.18	1	26
	16QAM	1	0	24.04	24.26	24.33	24.27	1	26
		1	24	24.69	24.45	24.47	24.44	1	26
		1	49	24.43	24.48	24.40	24.31	1	26
		25	0	23.10	23.58	23.61	23.32	2	25
		25	12	23.15	23.35	23.23	23.14	2	25
		25	25	23.48	23.36	23.44	23.47	2	25
		50	0	23.16	23.36	23.42	23.28	2	25
	64QAM	1	0	23.36	23.46	23.18	23.40	2	25
		1	24	23.29	23.47	23.53	23.43	2	25
		1	49	23.39	23.69	23.35	23.22	2	25
		25	0	22.62	22.60	22.31	22.24	3	24
		25	12	22.49	22.51	22.21	22.17	3	24
		25	25	22.41	22.53	22.13	22.53	3	24
		50	0	22.36	22.48	22.54	22.15	3	24
BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40165	40485	40805	41215		
		Frequency (MHz)		2547.5	2579.5	2611.5	2652.5		
5M	QPSK	1	0	25.07	25.42	25.38	25.27	0	27
		1	12	25.04	25.25	25.37	25.33	0	27
		1	24	25.16	25.18	25.13	25.12	0	27
		12	0	24.32	24.49	24.25	24.27	1	26
		12	6	24.20	24.58	24.22	24.33	1	26
		12	13	24.36	24.34	24.46	24.37	1	26
		25	0	24.46	24.25	24.12	24.29	1	26
	16QAM	1	0	24.29	24.50	24.39	24.18	1	26
		1	12	24.40	24.45	24.25	24.28	1	26
		1	24	24.38	24.60	24.16	24.09	1	26
		12	0	23.28	23.30	23.28	23.56	2	25
		12	6	23.38	23.53	23.32	23.14	2	25
		12	13	23.20	23.44	23.59	23.36	2	25
		25	0	23.32	23.22	23.40	23.38	2	25
	64QAM	1	0	23.63	23.67	23.43	23.17	2	25
		1	12	23.41	23.70	23.57	23.49	2	25
		1	24	23.38	23.43	23.61	23.31	2	25
		12	0	22.50	22.36	22.02	22.11	3	24
		12	6	22.41	22.42	22.29	22.29	3	24
		12	13	22.30	22.38	22.28	22.48	3	24
		25	0	22.52	22.53	22.35	22.09	3	24

Reduce Power

LTE Band 41 (2545 ~ 2655MHz)_PC3 For SAR (Ant2)

BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40240	40500	40770	41140		
		Frequency (MHz)		2555	2581	2608	2645		
20M	QPSK	1	0	20.73	20.80	20.74	20.71	0	22.5
		1	50	20.75	20.81	20.75	20.67	0	22.5
		1	99	**20.77**	**20.83**	**20.79**	**20.77**	0	22.5
		50	0	19.69	19.77	19.71	19.65	1	21.5
		50	25	**19.75**	**19.79**	**19.74**	**19.66**	1	21.5
		50	50	19.66	19.74	19.68	19.58	1	21.5
		100	0	19.65	**19.80**	**19.73**	19.64	1	21.5
	16QAM	1	0	19.68	19.87	19.66	19.73	1	21.5
		1	50	19.77	19.92	19.76	19.74	1	21.5
		1	99	19.70	19.98	19.78	19.69	1	21.5
		50	0	18.74	18.79	18.81	18.76	2	20.5
		50	25	18.71	18.83	18.76	18.70	2	20.5
		50	50	18.68	18.75	18.69	18.67	2	20.5
		100	0	18.76	18.82	18.77	18.79	2	20.5
	64QAM	1	0	18.72	18.71	18.65	18.70	2	20.5
		1	50	18.68	18.72	18.63	18.75	2	20.5
		1	99	18.62	18.70	18.59	18.60	2	20.5
		50	0	17.81	17.78	17.79	17.66	3	19.5
		50	25	17.79	17.81	17.77	17.72	3	19.5
		50	50	17.66	17.73	17.72	17.60	3	19.5
		100	0	17.69	17.80	17.79	17.68	3	19.5
BW	Modulation	Channel		40215	40495	40785	41165	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		2552.5	2580.5	2609.5	2647.5		
15M	QPSK	1	0	20.71	20.74	20.69	20.61	0	22.5
		1	37	20.64	20.76	20.63	20.52	0	22.5
		1	74	20.75	20.81	20.73	20.68	0	22.5
		36	0	19.68	19.72	19.58	19.56	1	21.5
		36	19	19.67	19.64	19.60	19.61	1	21.5
		36	39	19.65	19.67	19.60	19.51	1	21.5
		75	0	19.61	19.70	19.66	19.59	1	21.5
	16QAM	1	0	19.66	19.83	19.58	19.58	1	21.5
		1	37	19.75	19.84	19.74	19.64	1	21.5
		1	74	19.63	19.89	19.63	19.58	1	21.5
		36	0	18.59	18.68	18.68	18.68	2	20.5
		36	19	18.56	18.72	18.61	18.67	2	20.5
		36	39	18.54	18.64	18.56	18.59	2	20.5
		75	0	18.72	18.71	18.71	18.74	2	20.5
	64QAM	1	0	18.63	18.66	18.51	18.61	2	20.5
		1	37	18.63	18.67	18.53	18.66	2	20.5
		1	74	18.53	18.59	18.52	18.51	2	20.5
		36	0	17.70	17.71	17.78	17.62	3	19.5
		36	19	17.74	17.78	17.73	17.62	3	19.5
		36	39	17.59	17.58	17.61	17.51	3	19.5
		75	0	17.58	17.70	17.68	17.59	3	19.5
BW	Modulation	Channel		40190	40490	40790	41190	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		2550	2580	2610	2650		
10M	QPSK	1	0	20.63	20.66	20.71	20.60	0	22.5
		1	24	20.70	20.66	20.62	20.62	0	22.5
		1	49	20.62	20.73	20.72	20.76	0	22.5
		25	0	19.65	19.72	19.57	19.59	1	21.5
		25	12	19.66	19.69	19.67	19.51	1	21.5
		25	25	19.64	19.63	19.66	19.57	1	21.5
		50	0	19.63	19.67	19.62	19.56	1	21.5
	16QAM	1	0	19.57	19.75	19.60	19.66	1	21.5
		1	24	19.70	19.77	19.71	19.59	1	21.5
		1	49	19.68	19.96	19.69	19.63	1	21.5
		25	0	18.73	18.73	18.73	18.65	2	20.5
		25	12	18.68	18.70	18.64	18.63	2	20.5
		25	25	18.64	18.61	18.64	18.61	2	20.5
		50	0	18.61	18.70	18.74	18.67	2	20.5
	64QAM	1	0	18.60	18.65	18.62	18.63	2	20.5
		1	24	18.61	18.69	18.62	18.70	2	20.5
		1	49	18.60	18.56	18.51	18.58	2	20.5
		25	0	17.76	17.74	17.68	17.53	3	19.5
		25	12	17.72	17.66	17.76	17.61	3	19.5
		25	25	17.62	17.68	17.68	17.56	3	19.5
		50	0	17.64	17.66	17.71	17.59	3	19.5
BW	Modulation	Channel		40165	40485	40805	41215	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		2547.5	2579.5	2611.5	2652.5		
5M	QPSK	1	0	20.60	20.76	20.60	20.59	0	22.5
		1	12	20.72	20.75	20.65	20.52	0	22.5
		1	24	20.76	20.68	20.77	20.70	0	22.5
		12	0	19.54	19.66	19.67	19.52	1	21.5
		12	6	19.70	19.73	19.69	19.61	1	21.5
		12	13	19.55	19.66	19.66	19.60	1	21.5
		25	0	19.64	19.78	19.62	19.55	1	21.5
	16QAM	1	0	19.64	19.77	19.63	19.66	1	21.5
		1	12	19.68	19.91	19.61	19.70	1	21.5
		1	24	19.68	19.94	19.75	19.64	1	21.5
		12	0	18.71	18.70	18.66	18.71	2	20.5
		12	6	18.68	18.76	18.67	18.64	2	20.5
		12	13	18.59	18.72	18.57	18.56	2	20.5
		25	0	18.67	18.77	18.73	18.74	2	20.5
	64QAM	1	0	18.57	18.68	18.57	18.58	2	20.5
		1	12	18.67	18.66	18.61	18.74	2	20.5
		1	24	18.54	18.69	18.56	18.55	2	20.5
		12	0	17.67	17.64	17.75	17.58	3	19.5
		12	6	17.69	17.68	17.64	17.71	3	19.5
		12	13	17.65	17.71	17.69	17.55	3	19.5
		25	0	17.57	17.72	17.77	17.64	3	19.5

LTE Band 41 (2545 ~ 2655MHz)_PC2 For SAR (Ant2)

BW	Modulation	RB Size	RB Offset	Low	Low Mid	High Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		40240	40500	40770	41140		
		Frequency (MHz)		2555	2581	2608	2645		
20M	QPSK	1	0	23.28	23.35	23.32	23.25	0	24.5
		1	50	23.31	23.37	23.30	23.31	0	24.5
		1	99	**23.33**	**23.43**	**23.41**	**23.36**	0	24.5
		50	0	22.37	22.38	22.31	22.28	1	23.5
		50	25	**22.39**	**22.42**	**22.38**	**22.31**	1	23.5
		50	50	22.31	22.37	22.32	22.23	1	23.5
		100	0	22.30	**22.37**	22.26	22.31	1	23.5
	16QAM	1	0	22.57	22.67	22.67	22.56	1	23.5
		1	50	22.54	22.71	22.63	22.61	1	23.5
		1	99	22.48	22.76	22.70	22.57	1	23.5
		50	0	21.37	21.46	21.40	21.34	2	22.5
		50	25	21.46	21.49	21.45	21.37	2	22.5
		50	50	21.36	21.42	21.37	21.30	2	22.5
		100	0	21.33	21.48	21.44	21.31	2	22.5
	64QAM	1	0	21.41	21.54	21.52	21.57	2	22.5
		1	50	21.42	21.46	21.54	21.51	2	22.5
		1	99	21.47	21.50	21.61	21.46	2	22.5
		50	0	20.43	20.45	20.44	20.37	3	21.5
		50	25	20.47	20.48	20.40	20.34	3	21.5
		50	50	20.36	20.42	20.38	20.29	3	21.5
		100	0	20.37	20.50	20.43	20.35	3	21.5
BW	Modulation	Channel		40215	40495	40785	41165	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		2552.5	2580.5	2609.5	2647.5		
15M	QPSK	1	0	23.13	23.27	23.28	23.12	0	24.5
		1	37	23.19	23.29	23.23	23.29	0	24.5
		1	74	23.31	23.31	23.32	23.28	0	24.5
		36	0	22.36	22.35	22.24	22.25	1	23.5
		36	19	22.30	22.39	22.27	22.25	1	23.5
		36	39	22.20	22.26	22.31	22.15	1	23.5
		75	0	22.18	22.32	22.19	22.26	1	23.5
	16QAM	1	0	22.56	22.65	22.53	22.43	1	23.5
		1	37	22.51	22.69	22.57	22.46	1	23.5
		1	74	22.47	22.65	22.66	22.46	1	23.5
		36	0	21.23	21.42	21.38	21.19	2	22.5
		36	19	21.37	21.42	21.40	21.32	2	22.5
		36	39	21.31	21.34	21.35	21.25	2	22.5
		75	0	21.25	21.33	21.39	21.28	2	22.5
	64QAM	1	0	21.35	21.52	21.50	21.51	2	22.5
		1	37	21.27	21.41	21.53	21.40	2	22.5
		1	74	21.45	21.40	21.59	21.41	2	22.5
		36	0	20.28	20.38	20.30	20.29	3	21.5
		36	19	20.33	20.41	20.36	20.30	3	21.5
		36	39	20.32	20.35	20.24	20.20	3	21.5
		75	0	20.28	20.41	20.28	20.21	3	21.5
BW	Modulation	Channel		40190	40490	40790	41190	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		2550	2580	2610	2650		
10M	QPSK	1	0	23.21	23.26	23.25	23.12	0	24.5
		1	24	23.25	23.31	23.25	23.24	0	24.5
		1	49	23.32	23.33	23.29	23.34	0	24.5
		25	0	22.28	22.37	22.30	22.17	1	23.5
		25	12	22.38	22.30	22.31	22.29	1	23.5
		25	25	22.16	22.28	22.22	22.20	1	23.5
		50	0	22.27	22.30	22.23	22.25	1	23.5
	16QAM	1	0	22.54	22.60	22.55	22.54	1	23.5
		1	24	22.43	22.64	22.57	22.47	1	23.5
		1	49	22.43	22.61	22.62	22.55	1	23.5
		25	0	21.31	21.39	21.34	21.25	2	22.5
		25	12	21.41	21.34	21.32	21.28	2	22.5
		25	25	21.25	21.36	21.36	21.20	2	22.5
		50	0	21.23	21.40	21.37	21.22	2	22.5
	64QAM	1	0	21.32	21.40	21.42	21.55	2	22.5
		1	24	21.28	21.35	21.51	21.43	2	22.5
		1	49	21.43	21.35	21.60	21.40	2	22.5
		25	0	20.40	20.40	20.39	20.36	3	21.5
		25	12	20.37	20.44	20.26	20.31	3	21.5
		25	25	20.30	20.35	20.33	20.26	3	21.5
		50	0	20.32	20.47	20.38	20.32	3	21.5
BW	Modulation	Channel		40165	40485	40805	41215	3GPP MPR (dB)	Max. Tune-up (dBm)
		Frequency (MHz)		2547.5	2579.5	2611.5	2652.5		
5M	QPSK	1	0	23.15	23.28	23.20	23.18	0	24.5
		1	12	23.22	23.36	23.24	23.26	0	24.5
		1	24	23.21	23.29	23.33	23.23	0	24.5
		12	0	22.34	22.30	22.20	22.27	1	23.5
		12	6	22.33	22.31	22.30	22.21	1	23.5
		12	13	22.29	22.35	22.25	22.11	1	23.5
		25	0	22.20	22.34	22.17	22.25	1	23.5
	16QAM	1	0	22.42	22.63	22.66	22.51	1	23.5
		1	12	22.50	22.64	22.62	22.53	1	23.5
		1	24	22.36	22.71	22.55	22.44	1	23.5
		12	0	21.22	21.39	21.37	21.31	2	22.5
		12	6	21.34	21.41	21.40	21.23	2	22.5
		12	13	21.23	21.35	21.31	21.20	2	22.5
		25	0	21.32	21.35	21.34	21.16	2	22.5
	64QAM	1	0	21.29	21.51	21.40	21.51	2	22.5
		1	12	21.37	21.40	21.53	21.42	2	22.5
		1	24	21.33	21.48	21.51	21.37	2	22.5
		12	0	20.33	20.31	20.31	20.31	3	21.5
		12	6	20.33	20.39	20.35	20.22	3	21.5
		12	13	20.34	20.39	20.27	20.22	3	21.5
		25	0	20.36	20.36	20.39	20.24	3	21.5

Full Power

CA_41C Ant2(2545 - 2655) Full Power

Combination 20MHz+20MHz (100RB+100RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40240	2555	40438	2574.8	QPSK	1	99	1	0	23.24	25.0
				16QAM	1	99	1	0	22.31	24.0
				64QAM	1	99	1	0	21.39	23.0
40591	2590.1	40789	2609.9	QPSK	1	99	1	0	**23.33**	25.0
				16QAM	1	99	1	0	22.46	24.0
				64QAM	1	99	1	0	21.44	23.0
40942	2625.2	41140	2645	QPSK	1	99	1	0	23.27	25.0
				16QAM	1	99	1	0	22.28	24.0
				64QAM	1	99	1	0	21.30	23.0

Combination 20MHz+15MHz (100RB+75RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40240	2555	40411	2572.1	QPSK	1	99	1	0	23.22	25.0
				16QAM	1	99	1	0	22.18	24.0
				64QAM	1	99	1	0	21.37	23.0
40616	2592.6	40787	2609.7	QPSK	1	99	1	0	23.27	25.0
				16QAM	1	99	1	0	22.31	24.0
				64QAM	1	99	1	0	21.40	23.0
40991	2630.1	41162	2647.2	QPSK	1	99	1	0	23.15	25.0
				16QAM	1	99	1	0	22.17	24.0
				64QAM	1	99	1	0	21.15	23.0

Combination 15MHz+20MHz (75RB+100RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40218	2552.8	40389	2569.9	QPSK	1	74	1	0	23.10	25.0
				16QAM	1	74	1	0	22.22	24.0
				64QAM	1	74	1	0	21.28	23.0
40593	2590.3	40764	2607.4	QPSK	1	74	1	0	23.32	25.0
				16QAM	1	74	1	0	22.44	24.0
				64QAM	1	74	1	0	21.42	23.0
40969	2627.9	41140	2645	QPSK	1	74	1	0	23.20	25.0
				16QAM	1	74	1	0	22.25	24.0
				64QAM	1	74	1	0	21.28	23.0

Combination 15MHz+15MHz (75RB+75RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40215	2552.5	40365	2567.5	QPSK	1	74	1	0	23.12	25.0
				16QAM	1	74	1	0	22.19	24.0
				64QAM	1	74	1	0	21.36	23.0
40615	2592.5	40765	2607.5	QPSK	1	74	1	0	23.23	25.0
				16QAM	1	74	1	0	22.44	24.0
				64QAM	1	74	1	0	21.40	23.0
41015	2632.5	41165	2647.5	QPSK	1	74	1	0	23.18	25.0
				16QAM	1	74	1	0	22.15	24.0
				64QAM	1	74	1	0	21.20	23.0

Combination 20MHz+10MHz (100RB+50RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40240	2555	40384	2569.4	QPSK	1	99	1	0	23.09	25.0
				16QAM	1	99	1	0	22.24	24.0
				64QAM	1	99	1	0	21.34	23.0
40641	2595.1	40785	2609.5	QPSK	1	99	1	0	23.26	25.0
				16QAM	1	99	1	0	22.33	24.0
				64QAM	1	99	1	0	21.36	23.0
41041	2635.1	41185	2649.5	QPSK	1	99	1	0	23.16	25.0
				16QAM	1	99	1	0	22.16	24.0
				64QAM	1	99	1	0	21.21	23.0

Combination 10MHz+20MHz (50RB+100RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40195	2550.5	40339	2564.9	QPSK	1	49	1	0	23.14	25.0
				16QAM	1	49	1	0	22.19	24.0
				64QAM	1	49	1	0	21.26	23.0
40596	2590.6	40740	2605	QPSK	1	49	1	0	23.29	25.0
				16QAM	1	49	1	0	22.39	24.0
				64QAM	1	49	1	0	21.32	23.0
40996	2630.6	41140	2645	QPSK	1	49	1	0	23.15	25.0
				16QAM	1	49	1	0	22.23	24.0
				64QAM	1	49	1	0	21.18	23.0

Combination 15MHz+10MHz (75RB+50RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40215	2552.5	40335	2564.5	QPSK	1	74	1	0	23.15	25.0
				16QAM	1	74	1	0	22.26	24.0
				64QAM	1	74	1	0	21.26	23.0
40641	2595.1	40761	2607.1	QPSK	1	74	1	0	23.20	25.0
				16QAM	1	74	1	0	22.31	24.0
				64QAM	1	74	1	0	21.43	23.0
41067	2637.7	41187	2649.7	QPSK	1	74	1	0	23.12	25.0
				16QAM	1	74	1	0	22.13	24.0
				64QAM	1	74	1	0	21.15	23.0

Combination 10MHz+15MHz (50RB+75RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40193	2550.3	40313	2562.3	QPSK	1	49	1	0	23.11	25.0
				16QAM	1	49	1	0	22.21	24.0
				64QAM	1	49	1	0	21.27	23.0
40619	2592.9	40739	2604.9	QPSK	1	49	1	0	23.30	25.0
				16QAM	1	49	1	0	22.43	24.0
				64QAM	1	49	1	0	21.40	23.0
41045	2635.5	41165	2647.5	QPSK	1	49	1	0	23.20	25.0
				16QAM	1	49	1	0	22.27	24.0
				64QAM	1	49	1	0	21.22	23.0

Combination 20MHz+5MHz (100RB+25RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40240	2555	40357	2566.7	QPSK	1	99	1	0	23.22	25.0
				16QAM	1	99	1	0	22.27	24.0
				64QAM	1	99	1	0	21.27	23.0
40665	2597.5	40782	2609.2	QPSK	1	99	1	0	23.30	25.0
				16QAM	1	99	1	0	22.34	24.0
				64QAM	1	99	1	0	21.43	23.0
41090	2640	41207	2651.7	QPSK	1	99	1	0	23.25	25.0
				16QAM	1	99	1	0	22.15	24.0
				64QAM	1	99	1	0	21.20	23.0

Combination 5MHz+20MHz (25RB+100RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40173	2548.3	40290	2560	QPSK	1	24	1	0	23.19	25.0
				16QAM	1	24	1	0	22.16	24.0
				64QAM	1	24	1	0	21.29	23.0
40598	2590.8	40715	2602.5	QPSK	1	24	1	0	23.27	25.0
				16QAM	1	24	1	0	22.42	24.0
				64QAM	1	24	1	0	21.30	23.0
41023	2633.3	41140	2645	QPSK	1	24	1	0	23.16	25.0
				16QAM	1	24	1	0	22.18	24.0
				64QAM	1	24	1	0	21.20	23.0

Reduce Power

CA_41C Ant2(2545 - 2655) Reduce Power

Combination 20MHz+20MHz (100RB+100RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40240	2555	40438	2574.8	QPSK	1	99	1	0	20.87	22.5
				16QAM	1	99	1	0	19.87	21.5
				64QAM	1	99	1	0	19.06	20.5
40591	2590.1	40789	2609.9	QPSK	1	99	1	0	**20.92**	22.5
				16QAM	1	99	1	0	20.02	21.5
				64QAM	1	99	1	0	19.04	20.5
40942	2625.2	41140	2645	QPSK	1	99	1	0	20.85	22.5
				16QAM	1	99	1	0	19.87	21.5
				64QAM	1	99	1	0	18.88	20.5

Combination 20MHz+15MHz (100RB+75RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40240	2555	40411	2572.1	QPSK	1	99	1	0	20.76	22.5
				16QAM	1	99	1	0	19.76	21.5
				64QAM	1	99	1	0	18.95	20.5
40616	2592.6	40787	2609.7	QPSK	1	99	1	0	20.84	22.5
				16QAM	1	99	1	0	20.00	21.5
				64QAM	1	99	1	0	19.03	20.5
40991	2630.1	41162	2647.2	QPSK	1	99	1	0	20.84	22.5
				16QAM	1	99	1	0	19.79	21.5
				64QAM	1	99	1	0	18.82	20.5

Combination 15MHz+20MHz (75RB+100RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40218	2552.8	40389	2569.9	QPSK	1	74	1	0	20.84	22.5
				16QAM	1	74	1	0	19.73	21.5
				64QAM	1	74	1	0	18.98	20.5
40593	2590.3	40764	2607.4	QPSK	1	74	1	0	20.79	22.5
				16QAM	1	74	1	0	19.87	21.5
				64QAM	1	74	1	0	18.91	20.5
40969	2627.9	41140	2645	QPSK	1	74	1	0	20.84	22.5
				16QAM	1	74	1	0	19.86	21.5
				64QAM	1	74	1	0	18.73	20.5

Combination 15MHz+15MHz (75RB+75RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40215	2552.5	40365	2567.5	QPSK	1	74	1	0	20.73	22.5
				16QAM	1	74	1	0	19.82	21.5
				64QAM	1	74	1	0	18.98	20.5
40615	2592.5	40765	2607.5	QPSK	1	74	1	0	20.82	22.5
				16QAM	1	74	1	0	19.91	21.5
				64QAM	1	74	1	0	18.98	20.5
41015	2632.5	41165	2647.5	QPSK	1	74	1	0	20.83	22.5
				16QAM	1	74	1	0	19.82	21.5
				64QAM	1	74	1	0	18.79	20.5

Combination 20MHz+10MHz (100RB+50RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40240	2555	40384	2569.4	QPSK	1	99	1	0	20.81	22.5
				16QAM	1	99	1	0	19.77	21.5
				64QAM	1	99	1	0	18.96	20.5
40641	2595.1	40785	2609.5	QPSK	1	99	1	0	20.83	22.5
				16QAM	1	99	1	0	19.99	21.5
				64QAM	1	99	1	0	19.00	20.5
41041	2635.1	41185	2649.5	QPSK	1	99	1	0	20.81	22.5
				16QAM	1	99	1	0	19.85	21.5
				64QAM	1	99	1	0	18.80	20.5

Combination 10MHz+20MHz (50RB+100RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40195	2550.5	40339	2564.9	QPSK	1	49	1	0	20.79	22.5
				16QAM	1	49	1	0	19.85	21.5
				64QAM	1	49	1	0	19.00	20.5
40596	2590.6	40740	2605	QPSK	1	49	1	0	20.78	22.5
				16QAM	1	49	1	0	19.97	21.5
				64QAM	1	49	1	0	18.96	20.5
40996	2630.6	41140	2645	QPSK	1	49	1	0	20.78	22.5
				16QAM	1	49	1	0	19.73	21.5
				64QAM	1	49	1	0	18.78	20.5

Combination 15MHz+10MHz (75RB+50RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40215	2552.5	40335	2564.5	QPSK	1	74	1	0	20.72	22.5
				16QAM	1	74	1	0	19.84	21.5
				64QAM	1	74	1	0	18.97	20.5
40641	2595.1	40761	2607.1	QPSK	1	74	1	0	20.82	22.5
				16QAM	1	74	1	0	20.01	21.5
				64QAM	1	74	1	0	19.01	20.5
41067	2637.7	41187	2649.7	QPSK	1	74	1	0	20.82	22.5
				16QAM	1	74	1	0	19.82	21.5
				64QAM	1	74	1	0	18.76	20.5

Combination 10MHz+15MHz (50RB+75RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40193	2550.3	40313	2562.3	QPSK	1	49	1	0	20.74	22.5
				16QAM	1	49	1	0	19.73	21.5
				64QAM	1	49	1	0	18.94	20.5
40619	2592.9	40739	2604.9	QPSK	1	49	1	0	20.87	22.5
				16QAM	1	49	1	0	19.87	21.5
				64QAM	1	49	1	0	19.00	20.5
41045	2635.5	41165	2647.5	QPSK	1	49	1	0	20.73	22.5
				16QAM	1	49	1	0	19.81	21.5
				64QAM	1	49	1	0	18.74	20.5

Combination 20MHz+5MHz (100RB+25RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40240	2555	40357	2566.7	QPSK	1	99	1	0	20.84	22.5
				16QAM	1	99	1	0	19.76	21.5
				64QAM	1	99	1	0	19.00	20.5
40665	2597.5	40782	2609.2	QPSK	1	99	1	0	20.89	22.5
				16QAM	1	99	1	0	19.95	21.5
				64QAM	1	99	1	0	18.96	20.5
41090	2640	41207	2651.7	QPSK	1	99	1	0	20.74	22.5
				16QAM	1	99	1	0	19.77	21.5
				64QAM	1	99	1	0	18.81	20.5

Combination 5MHz+20MHz (25RB+100RB)

PCC Channel	PCC Frequency (MHz)	SCC Channel	SCC Frequency (MHz)	Modulation	PCC RB Size	PCC RB offset	SCC RB Size	SCC RB offset	Measured Power (dBm)	Max Tune-up (dBm)
40173	2548.3	40290	2560	QPSK	1	24	1	0	20.80	22.5
				16QAM	1	24	1	0	19.75	21.5
				64QAM	1	24	1	0	19.05	20.5
40598	2590.8	40715	2602.5	QPSK	1	24	1	0	20.78	22.5
				16QAM	1	24	1	0	20.00	21.5
				64QAM	1	24	1	0	19.00	20.5
41023	2633.3	41140	2645	QPSK	1	24	1	0	20.84	22.5
				16QAM	1	24	1	0	19.79	21.5
				64QAM	1	24	1	0	18.80	20.5

Full Power

n41 (SCS 30 kHz) _2545MHz-2655MHz (Ant2)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		519000	520002	520996		
		Frequence (MHz)		2595	2600.01	2604.96		
100M	DFT-s-OFDM Pi/2 BPSK	1	1	23.43	23.38	23.50	0	24.5
		1	137	23.33	23.19	23.30	0	24.5
		1	271	23.28	23.37	23.33	0	24.5
		135	0	22.87	22.74	22.94	0.5	24.0
		135	69	23.19	23.36	23.31	0	24.5
		135	138	22.91	22.72	22.94	**0.5**	24.0
		270	0	22.68	22.74	22.93	0.5	24.0
	DFT-s-OFDM QPSK	1	1	**23.47**	**23.43**	**23.54**	0	24.5
		1	137	23.08	23.24	23.27	0	24.5
		1	271	23.02	23.12	23.21	0	24.5
		135	0	22.42	22.48	22.42	1	23.5
		135	69	**23.35**	**23.32**	**23.40**	0	24.5
		135	138	22.13	22.28	22.37	**1**	23.5
		270	0	22.32	22.30	**22.40**	1	23.5
	DFT-s-OFDM 16QAM	1	1	21.72	21.78	21.99	1	23.5
	DFT-s-OFDM 64QAM	1	1	20.68	20.76	20.90	**2.5**	22.0
	DFT-s-OFDM 256QAM	1	1	18.38	18.34	18.58	**4.5**	20.0
BW	MCS Index	Channel		518004	520002	522000	3GPP MPR	Max. Tune-up
		Frequence (MHz)		2590.02	2600.01	2610		
90M	DFT-s-OFDM QPSK	1	1	23.39	23.25	23.42	**0**	24.5
BW	MCS Index	Channel		517002	520002	522996	3GPP MPR	Max. Tune-up
		Frequence (MHz)		2585.01	2600.01	2614.96		
80M	DFT-s-OFDM QPSK	1	1	23.20	23.40	23.34	**0**	24.5
BW	MCS Index	Channel		516000	520002	523996	3GPP MPR	Max. Tune-up
		Frequence (MHz)		2580	2600.01	2619.99		
70M	DFT-s-OFDM QPSK	1	1	23.33	23.30	23.31	**0**	24.5
BW	MCS Index	Channel		515004	520002	525000	3GPP MPR	Max. Tune-up
		Frequence (MHz)		2575.02	2600.01	2625		
60M	DFT-s-OFDM QPSK	1	1	23.49	23.47	23.47	**0**	24.5
BW	MCS Index	Channel		514002	520002	525996	3GPP MPR	Max. Tune-up
		Frequence (MHz)		2570.01	2600.01	2629.98		
50M	DFT-s-OFDM QPSK	1	1	23.36	23.34	23.26	**0**	24.5
BW	MCS Index	Channel		513000	520002	526996	3GPP MPR	Max. Tune-up
		Frequence (MHz)		2565	2600.01	2634.99		
40M	DFT-s-OFDM QPSK	1	1	23.48	23.38	23.48	**0**	24.5
BW	MCS Index	Channel		510996	520002	528996	3GPP MPR	Max. Tune-up
		Frequence (MHz)		2554.98	2600.01	2644.98		
20M	DFT-s-OFDM QPSK	1	1	23.27	23.23	23.36	**0**	24.5
BW	MCS Index	Channel		510498	520002	529500	3GPP MPR	Max. Tune-up
		Frequence (MHz)		2552.49	2600.01	2647.5		
15M	DFT-s-OFDM QPSK	1	1	23.45	23.40	23.52	**0**	24.5
BW	MCS Index	Channel		510000	520002	529998	3GPP MPR	Max. Tune-up
		Frequence (MHz)		2550	2600.01	2649.99		
10M	DFT-s-OFDM QPSK	1	1	23.38	23.33	23.42	**0**	24.5

n77 (SCS 30 kHz)_3450MHz-3550MHz_(Ant2)

BW	MCS Index	RB Size	RB Offset		Mid		3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel			633334			
		Frequence (MHz)			3500.01			
100M	DFT-s-OFDM Pi/2 BPSK	1	1		23.50		**0**	24.5
		1	137		23.41		0	24.5
		1	271		23.24		0	24.5
		135	0		23.08		0.5	24.0
		135	69		23.44		0	24.5
		135	138		22.99		**0.5**	24.0
		270	0		22.98		0.5	24.0
	DFT-s-OFDM QPSK	1	1		**23.52**		**0**	24.5
		1	137		23.50		0	24.5
		1	271		23.41		0	24.5
		135	0		22.55		1	23.5
		135	69		**23.50**		0	24.5
		135	138		22.39		**1**	23.5
		270	0		**22.47**		1	23.5
	DFT-s-OFDM 16QAM	1	1		22.84		1	23.5
	DFT-s-OFDM 64QAM	1	1		21.10		**2.5**	22.0
	DFT-s-OFDM 256QAM	1	1		18.70		**4.5**	20.0
BW	MCS Index	Channel		633000	633334	633666	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3495	3500.01	3504.99		
90M	DFT-s-OFDM QPSK	1	1	23.43	23.46	23.36	**0**	24.5
BW	MCS Index	Channel		632668	633334	634000	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3490.02	3500.01	3510		
80M	DFT-s-OFDM QPSK	1	1	23.33	23.33	23.13	**0**	24.5
BW	MCS Index	Channel		632334	633334	634332	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3485.01	3500.01	3514.98		
70M	DFT-s-OFDM QPSK	1	1	23.21	23.48	23.32	**0**	24.5
BW	MCS Index	Channel		632000	633334	634666	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3480	3500.01	3519.99		
60M	DFT-s-OFDM QPSK	1	1	23.44	23.27	23.43	**0**	24.5
BW	MCS Index	Channel		631668	633334	635000	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3475.02	3500.01	3525		
50M	DFT-s-OFDM QPSK	1	1	23.46	23.50	23.23	**0**	24.5
BW	MCS Index	Channel		631334	633334	635332	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3470.01	3500.01	3529.98		
40M	DFT-s-OFDM QPSK	1	1	23.50	23.40	23.24	**0**	24.5
BW	MCS Index	Channel		631000	633334	635666	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3465	3500.01	3534.99		
30M	DFT-s-OFDM QPSK	1	1	23.40	23.33	23.09	**0**	24.5
BW	MCS Index	Channel		630668	633334	636000	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3460.02	3500.01	3540		
20M	DFT-s-OFDM QPSK	1	1	23.42	23.30	23.11	**0**	24.5
BW	MCS Index	Channel		630334	633334	636332	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3455.01	3500.01	3544.98		
10M	DFT-s-OFDM QPSK	1	1	23.43	23.33	23.10	**0**	24.5

n77 (SCS 30 kHz)_3700MHz-3980MHz_(Ant2)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	Max. Tune-up (dBm)
		Channel		650000	656000	662000		
		Frequence (MHz)		3750	3840	3930		
100M	DFT-s-OFDM Pi/2 BPSK	1	1	23.00	23.08	22.95	**0**	24.5
		1	137	22.82	23.01	22.91	0	24.5
		1	271	22.95	23.07	22.94	0	24.5
		135	0	22.57	22.59	22.67	0.5	24.0
		135	69	22.89	23.06	22.85	0	24.5
		135	138	22.60	22.55	22.57	**0.5**	24.0
		270	0	22.43	22.63	22.68	0.5	24.0
	DFT-s-OFDM QPSK	1	1	**23.01**	**23.16**	**22.98**	**0**	24.5
		1	137	22.99	22.95	22.90	0	24.5
		1	271	22.98	22.91	22.96	0	24.5
		135	0	22.17	22.16	22.08	1	23.5
		135	69	**22.93**	**23.09**	**22.90**	0	24.5
		135	138	22.04	22.03	21.86	**1**	23.5
		270	0	22.09	**22.12**	22.07	1	23.5
	DFT-s-OFDM 16QAM	1	1	21.86	22.10	21.95	1	23.5
	DFT-s-OFDM 64QAM	1	1	20.54	20.68	20.76	**2.5**	22.0
	DFT-s-OFDM 256QAM	1	1	18.36	18.50	18.30	**4.5**	20.0
BW	MCS Index	Channel		649668	656000	662332	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3745.02	3840	3934.98		
90M	DFT-s-OFDM QPSK	1	1	23.08	23.12	22.81	**0**	24.5
BW	MCS Index	Channel		649334	656000	662668	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3740.01	3840	3939.99		
80M	DFT-s-OFDM QPSK	1	1	22.89	23.15	22.85	**0**	24.5
BW	MCS Index	Channel		649000	656000	663000	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3735	3840	3945		
70M	DFT-s-OFDM QPSK	1	1	23.04	23.07	22.89	**0**	24.5
BW	MCS Index	Channel		648668	656000	663332	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3730.02	3840	3949.98		
60M	DFT-s-OFDM QPSK	1	1	22.82	22.95	22.92	**0**	24.5
BW	MCS Index	Channel		648334	656000	663666	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3725.01	3840	3954.99		
50M	DFT-s-OFDM QPSK	1	1	22.76	22.94	22.80	**0**	24.5
BW	MCS Index	Channel		648000	656000	664000	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3720	3840	3960		
40M	DFT-s-OFDM QPSK	1	1	23.09	23.00	22.81	**0**	24.5
BW	MCS Index	Channel		647668	656000	664332	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3715.02	3840	3964.98		
30M	DFT-s-OFDM QPSK	1	1	23.03	23.00	22.94	**0**	24.5
BW	MCS Index	Channel		647334	656000	664666	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3710.01	3840	3969.99		
20M	DFT-s-OFDM QPSK	1	1	22.80	23.11	22.95	**0**	24.5
BW	MCS Index	Channel		647000	656000	665000	3GPP MPR	Max. Tune-up
		Frequence (MHz)		3705	3840	3975		
10M	DFT-s-OFDM QPSK	1	1	22.83	23.04	23.06	**0**	24.5

Full Power

EN-DC_n77 (SCS 30 kHz)_3450MHz-3550MHz_(Ant4)

BW	MCS Index	RB Size	RB Offset	Channel / Frequency (MHz)			3GPP MPR (dB)	Max. Tune-up (dBm)
					Mid			
					633334			
					3500.01			
100M	DFT-s-OFDM PI/2 BPSK	1	1		22.77		0	24.5
		1	137		22.79		0	24.5
		1	271		22.74		0	24.5
		135	0		22.45		0.5	24.0
		135	69		22.77		0	24.5
		135	138		22.28		**0.5**	24.0
		270	0		22.38		0.5	24.0
	DFT-s-OFDM QPSK	1	1		**22.88**		**0**	24.5
		1	137		22.80		0	24.5
		1	271		22.79		0	24.5
		135	0		21.84		1	23.5
		135	69		**22.84**		0	24.5
		135	138		21.84		**1**	23.5
		270	0		**21.83**		1	23.5
	DFT-s-OFDM 16QAM	1	1		21.71		1	23.5
	DFT-s-OFDM 64QAM	1	1		20.23		**2.5**	22.0
	DFT-s-OFDM 256QAM	1	1		18.14		**4.5**	20.0
BW	MCS Index	Channel / Frequency (MHz)		633000	633334	633666	3GPP MPR	Max. Tune-up
				3495	3500.01	3504.99		
90M	DFT-s-OFDM QPSK	1	1	22.70	22.58	22.83	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		632668	633334	634000	3GPP MPR	Max. Tune-up
				3490.02	3500.01	3510		
80M	DFT-s-OFDM QPSK	1	1	22.84	22.86	22.62	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		632334	633334	634332	3GPP MPR	Max. Tune-up
				3485.01	3500.01	3514.98		
70M	DFT-s-OFDM QPSK	1	1	22.85	22.79	22.66	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		632000	633334	634666	3GPP MPR	Max. Tune-up
				3480	3500.01	3519.99		
60M	DFT-s-OFDM QPSK	1	1	22.84	22.67	22.59	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		631668	633334	635000	3GPP MPR	Max. Tune-up
				3475.02	3500.01	3525		
50M	DFT-s-OFDM QPSK	1	1	22.69	22.80	22.53	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		631334	633334	635332	3GPP MPR	Max. Tune-up
				3470.01	3500.01	3529.98		
40M	DFT-s-OFDM QPSK	1	1	22.85	22.69	22.56	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		631000	633334	635666	3GPP MPR	Max. Tune-up
				3465	3500.01	3534.99		
30M	DFT-s-OFDM QPSK	1	1	22.61	22.61	22.61	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		630668	633334	636000	3GPP MPR	Max. Tune-up
				3460.02	3500.01	3540		
20M	DFT-s-OFDM QPSK	1	1	22.60	22.76	22.82	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		630334	633334	636332	3GPP MPR	Max. Tune-up
				3455.01	3500.01	3544.98		
10M	DFT-s-OFDM QPSK	1	1	22.55	22.63	22.83	**0**	24.5

EN-DC_n77 (SCS 30 kHz)_3700MHz-3980MHz_(Ant4)

BW	MCS Index	RB Size	RB Offset	Channel / Frequency (MHz)			3GPP MPR (dB)	Max. Tune-up (dBm)
				Low	Mid	High		
				650000	656000	662000		
				3750	3840	3930		
100M	DFT-s-OFDM PI/2 BPSK	1	1	22.83	22.90	22.80	**0**	24.5
		1	137	22.81	22.88	22.71	0	24.5
		1	271	22.80	22.87	22.69	0	24.5
		135	0	22.57	22.51	22.45	0.5	24.0
		135	69	22.76	22.91	22.89	0	24.5
		135	138	22.51	22.45	22.48	**0.5**	24.0
		270	0	22.34	22.46	22.37	0.5	24.0
	DFT-s-OFDM QPSK	1	1	**22.85**	**22.99**	**22.89**	**0**	24.5
		1	137	22.82	22.97	22.83	0	24.5
		1	271	22.79	22.95	22.88	0	24.5
		135	0	21.91	21.98	21.96	1	23.5
		135	69	**22.83**	**22.93**	**22.85**	0	24.5
		135	138	21.88	21.96	21.90	**1**	23.5
		270	0	21.80	**21.92**	21.83	1	23.5
	DFT-s-OFDM 16QAM	1	1	21.56	21.58	21.54	1	23.5
	DFT-s-OFDM 64QAM	1	1	20.20	20.33	20.31	**2.5**	22.0
	DFT-s-OFDM 256QAM	1	1	18.06	18.11	18.02	**4.5**	20.0
BW	MCS Index	Channel / Frequency (MHz)		649668	656000	662332	3GPP MPR	Max. Tune-up
				3745.02	3840	3934.98		
90M	DFT-s-OFDM QPSK	1	1	22.84	22.79	22.89	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		649334	656000	662668	3GPP MPR	Max. Tune-up
				3740.01	3840	3939.99		
80M	DFT-s-OFDM QPSK	1	1	22.87	22.77	22.91	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		649000	656000	663000	3GPP MPR	Max. Tune-up
				3735	3840	3945		
70M	DFT-s-OFDM QPSK	1	1	22.87	22.94	22.70	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		648668	656000	663332	3GPP MPR	Max. Tune-up
				3730.02	3840	3949.98		
60M	DFT-s-OFDM QPSK	1	1	22.62	22.90	22.85	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		648334	656000	663666	3GPP MPR	Max. Tune-up
				3725.01	3840	3954.99		
50M	DFT-s-OFDM QPSK	1	1	22.74	22.88	22.65	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		648000	656000	664000	3GPP MPR	Max. Tune-up
				3720	3840	3960		
40M	DFT-s-OFDM QPSK	1	1	22.67	22.75	22.93	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		647668	656000	664332	3GPP MPR	Max. Tune-up
				3715.02	3840	3964.98		
30M	DFT-s-OFDM QPSK	1	1	22.79	22.71	22.78	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		647334	656000	664666	3GPP MPR	Max. Tune-up
				3710.01	3840	3969.99		
20M	DFT-s-OFDM QPSK	1	1	22.82	22.84	22.71	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		647000	656000	665000	3GPP MPR	Max. Tune-up
				3705	3840	3975		
10M	DFT-s-OFDM QPSK	1	1	22.83	22.98	22.97	**0**	24.5

n78 (SCS 30 kHz)_3450MHz-3550MHz_(Ant2)

BW	MCS Index	RB Size	RB Offset	Channel / Frequency (MHz)			3GPP MPR (dB)	Max. Tune-up (dBm)
					Mid			
					633334			
					3500.01			
100M	DFT-s-OFDM PI/2 BPSK	1	1		23.26		**0**	24.5
		1	137		23.21		0	24.5
		1	271		23.10		0	24.5
		135	0		22.89		0.5	24.0
		135	69		23.25		0	24.5
		135	138		22.81		**0.5**	24.0
		270	0		22.80		0.5	24.0
	DFT-s-OFDM QPSK	1	1		**23.31**		**0**	24.5
		1	137		23.14		0	24.5
		1	271		23.03		0	24.5
		135	0		22.44		1	23.5
		135	69		**23.29**		0	24.5
		135	138		22.20		**1**	23.5
		270	0		**22.27**		1	23.5
	DFT-s-OFDM 16QAM	1	1		22.36		1	23.5
	DFT-s-OFDM 64QAM	1	1		20.77		**2.5**	22.0
	DFT-s-OFDM 256QAM	1	1		18.36		**4.5**	20.0
BW	MCS Index	Channel / Frequency (MHz)		633000	633334	633666	3GPP MPR	Max. Tune-up
				3495	3500.01	3504.99		
90M	DFT-s-OFDM QPSK	1	1	23.15	23.24	23.03	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		632668	633334	634000	3GPP MPR	Max. Tune-up
				3490.02	3500.01	3510		
80M	DFT-s-OFDM QPSK	1	1	23.28	23.07	22.86	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		632334	633334	634332	3GPP MPR	Max. Tune-up
				3485.01	3500.01	3514.98		
70M	DFT-s-OFDM QPSK	1	1	23.04	23.22	23.04	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		632000	633334	634666	3GPP MPR	Max. Tune-up
				3480	3500.01	3519.99		
60M	DFT-s-OFDM QPSK	1	1	23.15	23.20	22.93	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		631668	633334	635000	3GPP MPR	Max. Tune-up
				3475.02	3500.01	3525		
50M	DFT-s-OFDM QPSK	1	1	23.14	23.24	23.12	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		631334	633334	635332	3GPP MPR	Max. Tune-up
				3470.01	3500.01	3529.98		
40M	DFT-s-OFDM QPSK	1	1	23.12	23.23	22.97	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		631000	633334	635666	3GPP MPR	Max. Tune-up
				3465	3500.01	3534.99		
30M	DFT-s-OFDM QPSK	1	1	23.15	23.25	23.10	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		630668	633334	636000	3GPP MPR	Max. Tune-up
				3460.02	3500.01	3540		
20M	DFT-s-OFDM QPSK	1	1	23.18	23.29	23.09	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		630334	633334	636332	3GPP MPR	Max. Tune-up
				3455.01	3500.01	3544.98		
10M	DFT-s-OFDM QPSK	1	1	23.01	23.18	22.97	**0**	24.5

n77 (SCS 30 kHz)_3450MHz-3550MHz_(UL MIMO)(Ant2+4)

BW	MCS Index	RB Size	RB Offset	Channel / Frequency (MHz)			3GPP MPR (dB)	Max. Tune-up (dBm)
					Mid			
					633334			
					3500.01			
100M	CP-OFDM PI/2 BPSK	NA	NA				**0**	24.5
		NA	NA				0	24.5
		NA	NA				0	24.5
		NA	NA				0.5	24.0
		NA	NA				0	24.5
		NA	NA				**0.5**	24.0
		NA	NA				0.5	24.0
	CP-OFDM QPSK	1	1		**22.98**		**0**	24.5
		1	137		22.83		0	24.5
		1	271		22.87		0	24.5
		137	0		20.96		2	22.5
		137	68		22.84		0	24.5
		137	136		20.82		**2**	22.5
		273	0		20.85		2	22.5
	CP-OFDM 16QAM	1	1		21.97		2	22.5
	CP-OFDM 64QAM	1	1		20.38		**3.5**	21.0
	CP-OFDM 256QAM	1	1		17.41		**6.5**	18.0
BW	MCS Index	Channel / Frequency (MHz)		633000	633334	633666	3GPP MPR	Max. Tune-up
				3495	3500.01	3504.99		
90M	CP-OFDM QPSK	1	1	22.88	22.92	22.84	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		632668	633334	634000	3GPP MPR	Max. Tune-up
				3490.02	3500.01	3510		
80M	CP-OFDM QPSK	1	1	22.92	22.89	22.82	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		632334	633334	634332	3GPP MPR	Max. Tune-up
				3485.01	3500.01	3514.98		
70M	CP-OFDM QPSK	1	1	22.85	22.87	22.93	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		632000	633334	634666	3GPP MPR	Max. Tune-up
				3480	3500.01	3519.99		
60M	CP-OFDM QPSK	1	1	22.81	22.94	22.87	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		631668	633334	635000	3GPP MPR	Max. Tune-up
				3475.02	3500.01	3525		
50M	CP-OFDM QPSK	1	1	22.94	22.92	22.91	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		631334	633334	635332	3GPP MPR	Max. Tune-up
				3470.01	3500.01	3529.98		
40M	CP-OFDM QPSK	1	1	22.89	22.87	22.85	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		631000	633334	635666	3GPP MPR	Max. Tune-up
				3465	3500.01	3534.99		
30M	CP-OFDM QPSK	1	1	22.83	22.91	22.87	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		630668	633334	636000	3GPP MPR	Max. Tune-up
				3460.02	3500.01	3540		
20M	CP-OFDM QPSK	1	1	22.82	22.84	22.92	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		630334	633334	636332	3GPP MPR	Max. Tune-up
				3455.01	3500.01	3544.98		
10M	CP-OFDM QPSK	1	1	22.91	22.85	22.88	**0**	24.5

n77 (SCS 30 kHz)_3700MHz-3980MHz_(UL MIMO)(Ant2+4)

BW	MCS Index	RB Size	RB Offset	Channel / Frequency (MHz)			3GPP MPR (dB)	Max. Tune-up (dBm)
				Low	Mid	High		
				650000	656000	662000		
				3750	3840	3930		
100M	CP-OFDM PI/2 BPSK	NA	NA				**0**	24.5
		NA	NA				0	24.5
		NA	NA				0	24.5
		NA	NA				0.5	24.0
		NA	NA				0	24.5
		NA	NA				**0.5**	24.0
		NA	NA				0.5	24.0
	CP-OFDM QPSK	1	1	22.87	**22.96**	22.89	**0**	24.5
		1	137	22.86	22.82	22.84	0	24.5
		1	271	22.81	22.88	22.83	0	24.5
		137	0	20.91	20.83	20.82	2	22.5
		137	68	22.81	22.86	22.85	0	24.5
		137	136	20.90	20.86	20.88	**2**	22.5
		273	0	20.85	20.99	20.87	2	22.5
	CP-OFDM 16QAM	1	1	21.99	21.85	21.91	2	22.5
	CP-OFDM 64QAM	1	1	20.24	20.08	20.10	**3.5**	21.0
	CP-OFDM 256QAM	1	1	17.32	17.30	17.26	**6.5**	18.0
BW	MCS Index	Channel / Frequency (MHz)		649668	656000	662332	3GPP MPR	Max. Tune-up
				3745.02	3840	3934.98		
90M	CP-OFDM QPSK	1	1	22.85	22.89	22.87	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		649334	656000	662668	3GPP MPR	Max. Tune-up
				3740.01	3840	3939.99		
80M	CP-OFDM QPSK	1	1	22.81	22.94	22.83	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		649000	656000	663000	3GPP MPR	Max. Tune-up
				3735	3840	3945		
70M	CP-OFDM QPSK	1	1	22.86	22.88	22.84	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		648668	656000	663332	3GPP MPR	Max. Tune-up
				3730.02	3840	3949.98		
60M	CP-OFDM QPSK	1	1	22.81	22.85	22.81	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		648334	656000	663666	3GPP MPR	Max. Tune-up
				3725.01	3840	3954.99		
50M	CP-OFDM QPSK	1	1	22.85	22.93	22.88	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		648000	656000	664000	3GPP MPR	Max. Tune-up
				3720	3840	3960		
40M	CP-OFDM QPSK	1	1	22.83	22.91	22.86	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		647668	656000	664332	3GPP MPR	Max. Tune-up
				3715.02	3840	3964.98		
30M	CP-OFDM QPSK	1	1	22.84	22.87	22.83	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		647334	656000	664666	3GPP MPR	Max. Tune-up
				3710.01	3840	3969.99		
20M	CP-OFDM QPSK	1	1	22.81	22.81	22.85	**0**	24.5
BW	MCS Index	Channel / Frequency (MHz)		647000	656000	665000	3GPP MPR	Max. Tune-up
				3705	3840	3975		
10M	CP-OFDM QPSK	1	1	22.85	22.89	22.86	**0**	24.5

Reduce Power

n41 (SCS 30 kHz)_2545MHz-2655MHz (Ant2)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	Max. Tune-up (dBm)
		Channel		519000	520002	520998	
		Frequence (MHz)		2595	2600.01	2604.99	
100M	DFT-s-OFDM PI/2 BPSK	1	1	22.46	22.45	22.55	23.5
		1	137	22.49	22.33	22.34	23.5
		1	271	22.41	22.46	22.40	23.5
		135	0	21.93	21.77	22.00	23.0
		135	69	22.21	22.51	22.45	23.5
		135	138	21.95	21.80	22.00	23.0
		270	0	21.82	21.77	22.06	23.0
	DFT-s-OFDM QPSK	1	1	**22.52**	**22.45**	**22.70**	23.5
		1	137	22.21	22.28	22.30	23.5
		1	271	22.04	22.14	22.36	23.5
		135	0	21.57	21.61	21.54	22.5
		135	69	**22.40**	**22.48**	**22.52**	23.5
		135	138	21.18	21.30	21.50	22.5
		270	0	21.39	21.44	**21.50**	22.5
	DFT-s-OFDM 16QAM	1	1	20.74	20.88	21.13	22.5
	DFT-s-OFDM 64QAM	1	1	19.71	19.85	19.94	21.0
	DFT-s-OFDM 256QAM	1	1	17.45	17.42	17.68	19.0
BW	MCS Index	Channel		518004	520002	522000	Max. Tune-up
		Frequence (MHz)		2590.02	2600.01	2610	
90M	DFT-s-OFDM QPSK	1	1	22.44	22.39	22.50	23.5
BW	MCS Index	Channel		517002	520002	522996	Max. Tune-up
		Frequence (MHz)		2585.01	2600.01	2614.98	
80M	DFT-s-OFDM QPSK	1	1	22.31	22.38	22.45	23.5
BW	MCS Index	Channel		516000	520002	523998	Max. Tune-up
		Frequence (MHz)		2580	2600.01	2619.99	
70M	DFT-s-OFDM QPSK	1	1	22.39	22.29	22.23	23.5
BW	MCS Index	Channel		515004	520002	525000	Max. Tune-up
		Frequence (MHz)		2575.02	2600.01	2625	
60M	DFT-s-OFDM QPSK	1	1	22.35	22.44	22.53	23.5
BW	MCS Index	Channel		514002	520002	525996	Max. Tune-up
		Frequence (MHz)		2570.01	2600.01	2629.98	
50M	DFT-s-OFDM QPSK	1	1	22.46	22.41	22.68	23.5
BW	MCS Index	Channel		513000	520002	526998	Max. Tune-up
		Frequence (MHz)		2565	2600.01	2634.99	
40M	DFT-s-OFDM QPSK	1	1	22.37	22.34	22.41	23.5
BW	MCS Index	Channel		510996	520002	528996	Max. Tune-up
		Frequence (MHz)		2554.98	2600.01	2644.98	
20M	DFT-s-OFDM QPSK	1	1	22.49	22.36	22.56	23.5
BW	MCS Index	Channel		510498	520002	529500	Max. Tune-up
		Frequence (MHz)		2552.49	2600.01	2647.5	
15M	DFT-s-OFDM QPSK	1	1	22.35	22.44	22.45	23.5
BW	MCS Index	Channel		510000	520002	529998	Max. Tune-up
		Frequence (MHz)		2550	2600.01	2649.99	
10M	DFT-s-OFDM QPSK	1	1	22.35	22.39	22.49	23.5

n77 (SCS 30 kHz)_3450MHz-3550MHz_(Ant2)

BW	MCS Index	RB Size	RB Offset		Mid		Max. Tune-up (dBm)
		Channel			633334		
		Frequence (MHz)			3500.01		
100M	DFT-s-OFDM PI/2 BPSK	1	1		20.75		21.5
		1	137		20.70		21.5
		1	271		20.47		21.5
		135	0		20.34		21.0
		135	69		20.64		21.5
		135	138		20.18		21.0
		270	0		20.20		21.0
	DFT-s-OFDM QPSK	1	1		**20.81**		21.5
		1	137		20.73		21.5
		1	271		20.66		21.5
		135	0		19.74		20.5
		135	69		**20.65**		21.5
		135	138		19.64		20.5
		270	0		**19.70**		20.5
	DFT-s-OFDM 16QAM	1	1		20.08		20.5
	DFT-s-OFDM 64QAM	1	1		18.30		19.0
	DFT-s-OFDM 256QAM	1	1		18.27		19.0
BW	MCS Index	Channel		633000	633334	633666	Max. Tune-up
		Frequence (MHz)		3495	3500.01	3504.99	
90M	DFT-s-OFDM QPSK	1	1	20.29	20.52	20.39	21.5
BW	MCS Index	Channel		632668	633334	634000	Max. Tune-up
		Frequence (MHz)		3490.02	3500.01	3510	
80M	DFT-s-OFDM QPSK	1	1	20.44	20.65	20.18	21.5
BW	MCS Index	Channel		632334	633334	634332	Max. Tune-up
		Frequence (MHz)		3485.01	3500.01	3514.98	
70M	DFT-s-OFDM QPSK	1	1	20.23	20.33	20.41	21.5
BW	MCS Index	Channel		632000	633334	634666	Max. Tune-up
		Frequence (MHz)		3480	3500.01	3519.99	
60M	DFT-s-OFDM QPSK	1	1	20.41	20.67	20.62	21.5
BW	MCS Index	Channel		631668	633334	635000	Max. Tune-up
		Frequence (MHz)		3475.02	3500.01	3525	
50M	DFT-s-OFDM QPSK	1	1	20.41	20.63	20.43	21.5
BW	MCS Index	Channel		631334	633334	635332	Max. Tune-up
		Frequence (MHz)		3470.01	3500.01	3529.98	
40M	DFT-s-OFDM QPSK	1	1	20.51	20.55	20.34	21.5
BW	MCS Index	Channel		631000	633334	635666	Max. Tune-up
		Frequence (MHz)		3465	3500.01	3534.99	
30M	DFT-s-OFDM QPSK	1	1	20.42	20.39	20.55	21.5
BW	MCS Index	Channel		630668	633334	636000	Max. Tune-up
		Frequence (MHz)		3460.02	3500.01	3540	
20M	DFT-s-OFDM QPSK	1	1	20.36	20.53	20.36	21.5
BW	MCS Index	Channel		630334	633334	636332	Max. Tune-up
		Frequence (MHz)		3455.01	3500.01	3544.98	
10M	DFT-s-OFDM QPSK	1	1	20.42	20.45	20.58	21.5

n77 (SCS 30 kHz)_3700MHz-3980MHz_(Ant2)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	Max. Tune-up (dBm)
		Channel		650000	656000	662000	
		Frequence (MHz)		3750	3840	3930	
100M	DFT-s-OFDM PI/2 BPSK	1	1	20.13	20.33	19.88	21.5
		1	137	20.00	20.25	20.02	21.5
		1	271	20.21	20.23	20.01	21.5
		135	0	19.68	19.63	19.96	21.0
		135	69	19.92	20.02	20.04	21.5
		135	138	19.70	19.59	19.72	21.0
		270	0	19.59	19.75	19.79	21.0
	DFT-s-OFDM QPSK	1	1	**20.10**	**20.34**	**20.23**	21.5
		1	137	20.05	20.11	20.17	21.5
		1	271	20.09	19.98	20.05	21.5
		135	0	19.33	19.32	19.07	20.5
		135	69	**19.99**	**20.18**	**19.99**	21.5
		135	138	19.03	19.10	19.02	20.5
		270	0	19.13	**19.17**	19.13	20.5
	DFT-s-OFDM 16QAM	1	1	18.91	19.21	19.10	20.5
	DFT-s-OFDM 64QAM	1	1	17.57	17.85	17.95	19.0
	DFT-s-OFDM 256QAM	1	1	17.45	17.66	17.63	19.0
BW	MCS Index	Channel		649668	656000	662332	Max. Tune-up
		Frequence (MHz)		3745.02	3840	3934.98	
90M	DFT-s-OFDM QPSK	1	1	19.99	20.11	20.00	21.5
BW	MCS Index	Channel		649334	656000	662666	Max. Tune-up
		Frequence (MHz)		3740.01	3840	3939.99	
80M	DFT-s-OFDM QPSK	1	1	20.19	20.20	19.96	21.5
BW	MCS Index	Channel		649000	656000	663000	Max. Tune-up
		Frequence (MHz)		3735	3840	3945	
70M	DFT-s-OFDM QPSK	1	1	19.97	20.10	20.14	21.5
BW	MCS Index	Channel		648668	656000	663332	Max. Tune-up
		Frequence (MHz)		3730.02	3840	3949.98	
60M	DFT-s-OFDM QPSK	1	1	20.20	20.12	19.88	21.5
BW	MCS Index	Channel		648334	656000	663666	Max. Tune-up
		Frequence (MHz)		3725.01	3840	3954.99	
50M	DFT-s-OFDM QPSK	1	1	20.09	20.18	19.74	21.5
BW	MCS Index	Channel		648000	656000	664000	Max. Tune-up
		Frequence (MHz)		3720	3840	3960	
40M	DFT-s-OFDM QPSK	1	1	19.92	20.06	20.14	21.5
BW	MCS Index	Channel		647668	656000	664332	Max. Tune-up
		Frequence (MHz)		3715.02	3840	3964.98	
30M	DFT-s-OFDM QPSK	1	1	20.10	20.24	19.73	21.5
BW	MCS Index	Channel		647334	656000	664666	Max. Tune-up
		Frequence (MHz)		3710.01	3840	3969.99	
20M	DFT-s-OFDM QPSK	1	1	20.11	20.14	19.99	21.5
BW	MCS Index	Channel		647000	656000	665000	Max. Tune-up
		Frequence (MHz)		3705	3840	3975	
10M	DFT-s-OFDM QPSK	1	1	20.04	19.97	20.14	21.5

Reduce Power

EN-DC_n77 (SCS 30 kHz)_3450MHz-3550MHz_(Ant4)

BW	MCS Index	RB Size	RB Offset		Mid		Max. Tune-up (dBm)
		Channel			633334		
		Frequence (MHz)			3500.01		
100M	DFT-s-OFDM PI/2 BPSK	1	1		20.99		22.5
		1	137		20.99		22.5
		1	271		20.86		22.5
		135	0		20.56		22.0
		135	69		20.88		22.5
		135	138		20.47		22.0
		270	0		20.56		22.0
	DFT-s-OFDM QPSK	1	1		**21.07**		22.5
		1	137		20.94		22.5
		1	271		20.89		22.5
		135	0		20.02		21.5
		135	69		**21.03**		22.5
		135	138		20.03		21.5
		270	0		**19.96**		21.5
	DFT-s-OFDM 16QAM	1	1		19.85		21.5
	DFT-s-OFDM 64QAM	1	1		18.40		20.0
	DFT-s-OFDM 256QAM	1	1		18.35		20.0
BW	MCS Index	Channel			633000	633334	633666	Max. Tune-up
		Frequence (MHz)			3495	3500.01	3504.99	
90M	DFT-s-OFDM QPSK	1	1		20.89	21.01	20.96	22.5
BW	MCS Index	Channel			632668	633334	634000	Max. Tune-up
		Frequence (MHz)			3490.02	3500.01	3510	
80M	DFT-s-OFDM QPSK	1	1		20.76	21.03	20.73	22.5
BW	MCS Index	Channel			632334	633334	634332	Max. Tune-up
		Frequence (MHz)			3485.01	3500.01	3514.98	
70M	DFT-s-OFDM QPSK	1	1		20.72	20.84	20.90	22.5
BW	MCS Index	Channel			632000	633334	634666	Max. Tune-up
		Frequence (MHz)			3480	3500.01	3519.99	
60M	DFT-s-OFDM QPSK	1	1		20.75	21.00	20.82	22.5
BW	MCS Index	Channel			631668	633334	635000	Max. Tune-up
		Frequence (MHz)			3475.02	3500.01	3525	
50M	DFT-s-OFDM QPSK	1	1		20.75	20.91	20.90	22.5
BW	MCS Index	Channel			631334	633334	635332	Max. Tune-up
		Frequence (MHz)			3470.01	3500.01	3529.98	
40M	DFT-s-OFDM QPSK	1	1		20.79	21.05	20.82	22.5
BW	MCS Index	Channel			631000	633334	635666	Max. Tune-up
		Frequence (MHz)			3465	3500.01	3534.99	
30M	DFT-s-OFDM QPSK	1	1		20.79	20.90	20.77	22.5
BW	MCS Index	Channel			630668	633334	636000	Max. Tune-up
		Frequence (MHz)			3460.02	3500.01	3540	
20M	DFT-s-OFDM QPSK	1	1		20.78	21.00	20.65	22.5
BW	MCS Index	Channel			630334	633334	636332	Max. Tune-up
		Frequence (MHz)			3455.01	3500.01	3544.98	
10M	DFT-s-OFDM QPSK	1	1		20.68	20.94	20.82	22.5

EN-DC_n77 (SCS 30 kHz)_3700MHz-3980MHz_(Ant4)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	Max. Tune-up (dBm)
		Channel		650000	656000	662000	
		Frequence (MHz)		3750	3840	3930	
100M	DFT-s-OFDM PI/2 BPSK	1	1	20.94	21.05	20.84	22.5
		1	137	20.87	21.04	20.74	22.5
		1	271	20.82	21.02	20.77	22.5
		135	0	20.70	20.64	20.60	22.0
		135	69	20.78	20.98	20.93	22.5
		135	138	20.59	20.61	20.63	22.0
		270	0	20.46	20.54	20.48	22.0
	DFT-s-OFDM QPSK	1	1	**20.96**	**21.12**	**20.97**	22.5
		1	137	20.85	21.09	20.89	22.5
		1	271	20.93	21.00	20.95	22.5
		135	0	19.96	20.00	20.12	21.5
		135	69	**20.88**	**21.06**	**20.94**	22.5
		135	138	19.90	20.11	19.98	21.5
		270	0	19.90	**20.02**	19.95	21.5
	DFT-s-OFDM 16QAM	1	1	19.65	19.64	19.68	21.5
	DFT-s-OFDM 64QAM	1	1	18.33	18.42	18.40	20.0
	DFT-s-OFDM 256QAM	1	1	18.46	18.37	18.42	20.0
BW	MCS Index	Channel		649668	656000	662332	Max. Tune-up
		Frequence (MHz)		3745.02	3840	3934.98	
90M	DFT-s-OFDM QPSK	1	1	20.93	20.96	20.91	22.5
BW	MCS Index	Channel		649334	656000	662666	Max. Tune-up
		Frequence (MHz)		3740.01	3840	3939.99	
80M	DFT-s-OFDM QPSK	1	1	20.81	20.94	20.83	22.5
BW	MCS Index	Channel		649000	656000	663000	Max. Tune-up
		Frequence (MHz)		3735	3840	3945	
70M	DFT-s-OFDM QPSK	1	1	20.76	21.01	20.78	22.5
BW	MCS Index	Channel		648668	656000	663332	Max. Tune-up
		Frequence (MHz)		3730.02	3840	3949.98	
60M	DFT-s-OFDM QPSK	1	1	20.79	20.94	20.78	22.5
BW	MCS Index	Channel		648334	656000	663666	Max. Tune-up
		Frequence (MHz)		3725.01	3840	3954.99	
50M	DFT-s-OFDM QPSK	1	1	20.82	21.01	20.59	22.5
BW	MCS Index	Channel		648000	656000	664000	Max. Tune-up
		Frequence (MHz)		3720	3840	3960	
40M	DFT-s-OFDM QPSK	1	1	20.87	21.04	20.90	22.5
BW	MCS Index	Channel		647668	656000	664332	Max. Tune-up
		Frequence (MHz)		3715.02	3840	3964.98	
30M	DFT-s-OFDM QPSK	1	1	20.67	20.98	20.64	22.5
BW	MCS Index	Channel		647334	656000	664666	Max. Tune-up
		Frequence (MHz)		3710.01	3840	3969.99	
20M	DFT-s-OFDM QPSK	1	1	20.85	21.05	20.93	22.5
BW	MCS Index	Channel		647000	656000	665000	Max. Tune-up
		Frequence (MHz)		3705	3840	3975	
10M	DFT-s-OFDM QPSK	1	1	20.78	20.94	20.93	22.5

n78 (SCS 30 kHz)_3450MHz-3550MHz_(Ant2)

BW	MCS Index	RB Size	RB Offset		Mid		Max. Tune-up (dBm)
		Channel			633334		
		Frequence (MHz)			3500.01		
100M	DFT-s-OFDM PI/2 BPSK	1	1		20.16		21.5
		1	137		20.22		21.5
		1	271		20.10		21.5
		135	0		19.98		21.0
		135	69		20.35		21.5
		135	138		19.78		21.0
		270	0		19.89		21.0
	DFT-s-OFDM QPSK	1	1		**20.38**		21.5
		1	137		20.26		21.5
		1	271		20.14		21.5
		135	0		19.47		20.5
		135	69		**20.32**		21.5
		135	138		19.31		20.5
		270	0		**19.30**		20.5
	DFT-s-OFDM 16QAM	1	1		19.44		20.5
	DFT-s-OFDM 64QAM	1	1		17.84		19.0
	DFT-s-OFDM 256QAM	1	1		17.56		19.0
BW	MCS Index	Channel		633000	633334	633668	Max. Tune-up
		Frequence (MHz)		3495	3500.01	3504.99	
90M	DFT-s-OFDM QPSK	1	1	20.29	20.12	20.22	21.5
BW	MCS Index	Channel		632668	633334	634000	Max. Tune-up
		Frequence (MHz)		3490.02	3500.01	3510	
80M	DFT-s-OFDM QPSK	1	1	20.23	20.31	20.26	21.5
BW	MCS Index	Channel		632334	633334	634332	Max. Tune-up
		Frequence (MHz)		3485.01	3500.01	3514.98	
70M	DFT-s-OFDM QPSK	1	1	20.14	20.25	20.12	21.5
BW	MCS Index	Channel		632000	633334	634666	Max. Tune-up
		Frequence (MHz)		3480	3500.01	3519.99	
60M	DFT-s-OFDM QPSK	1	1	20.13	20.28	20.23	21.5
BW	MCS Index	Channel		631668	633334	635000	Max. Tune-up
		Frequence (MHz)		3475.02	3500.01	3525	
50M	DFT-s-OFDM QPSK	1	1	20.24	20.27	20.20	21.5
BW	MCS Index	Channel		631334	633334	635332	Max. Tune-up
		Frequence (MHz)		3470.01	3500.01	3529.98	
40M	DFT-s-OFDM QPSK	1	1	20.13	20.30	20.14	21.5
BW	MCS Index	Channel		631000	633334	635666	Max. Tune-up
		Frequence (MHz)		3465	3500.01	3534.99	
30M	DFT-s-OFDM QPSK	1	1	20.05	20.25	20.12	21.5
BW	MCS Index	Channel		630668	633334	636000	Max. Tune-up
		Frequence (MHz)		3460.02	3500.01	3540	
20M	DFT-s-OFDM QPSK	1	1	20.32	20.21	20.26	21.5
BW	MCS Index	Channel		630334	633334	636332	Max. Tune-up
		Frequence (MHz)		3455.01	3500.01	3544.98	
10M	DFT-s-OFDM QPSK	1	1	20.27	20.23	20.18	21.5

n77 (SCS 30 kHz)_3450MHz-3550MHz_(UL MIMO)(Ant2+4)

BW	MCS Index	RB Size	RB Offset		Mid		Max. Tune-up (dBm)
		Channel			633334		
		Frequence (MHz)			3500.01		
100M	CP-OFDM PI/2 BPSK	NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
	CP-OFDM QPSK	1	1		**17.82**		19.0
		1	137		17.70		19.0
		1	271		17.73		19.0
		137	0		17.69		19.0
		137	68		**17.76**		19.0
		137	136		17.71		19.0
		273	0		**17.54**		19.0
	CP-OFDM 16QAM	1	1		17.65		19.0
	CP-OFDM 64QAM	1	1		17.47		19.0
	CP-OFDM 256QAM	1	1		17.81		19.0
BW	MCS Index	Channel			633000	633334	633666	Max. Tune-up
		Frequence (MHz)			3495	3500.01	3504.99	
90M	CP-OFDM QPSK	1	1		17.55	17.75	17.60	19.0
BW	MCS Index	Channel			632668	633334	634000	Max. Tune-up
		Frequence (MHz)			3490.02	3500.01	3510	
80M	CP-OFDM QPSK	1	1		17.63	17.65	17.60	19.0
BW	MCS Index	Channel			632334	633334	634332	Max. Tune-up
		Frequence (MHz)			3485.01	3500.01	3514.98	
70M	CP-OFDM QPSK	1	1		17.74	17.74	17.79	19.0
BW	MCS Index	Channel			632000	633334	634666	Max. Tune-up
		Frequence (MHz)			3480	3500.01	3519.99	
60M	CP-OFDM QPSK	1	1		17.65	17.79	17.72	19.0
BW	MCS Index	Channel			631668	633334	635000	Max. Tune-up
		Frequence (MHz)			3475.02	3500.01	3525	
50M	CP-OFDM QPSK	1	1		17.72	17.66	17.71	19.0
BW	MCS Index	Channel			631334	633334	635332	Max. Tune-up
		Frequence (MHz)			3470.01	3500.01	3529.98	
40M	CP-OFDM QPSK	1	1		17.50	17.80	17.52	19.0
BW	MCS Index	Channel			631000	633334	635666	Max. Tune-up
		Frequence (MHz)			3465	3500.01	3534.99	
30M	CP-OFDM QPSK	1	1		17.67	17.76	17.79	19.0
BW	MCS Index	Channel			630668	633334	636000	Max. Tune-up
		Frequence (MHz)			3460.02	3500.01	3540	
20M	CP-OFDM QPSK	1	1		17.62	17.71	17.65	19.0
BW	MCS Index	Channel			630334	633334	636332	Max. Tune-up
		Frequence (MHz)			3455.01	3500.01	3544.98	
10M	CP-OFDM QPSK	1	1		17.78	17.75	17.79	19.0

n77 (SCS 30 kHz)_3700MHz-3980MHz_(UL MIMO)(Ant2+4)

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	Max. Tune-up (dBm)
		Channel		650000	656000	662000	
		Frequence (MHz)		3750	3840	3930	
100M	CP-OFDM PI/2 BPSK	NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
		NA	NA				19.0
	CP-OFDM QPSK	1	1	17.51	**17.54**	17.49	19.0
		1	137	17.40	17.38	17.45	19.0
		1	271	17.33	17.53	17.42	19.0
		137	0	17.34	17.28	17.31	19.0
		137	68	17.42	17.52	17.39	19.0
		137	136	17.35	17.26	17.29	19.0
		273	0	17.19	17.35	17.22	19.0
	CP-OFDM 16QAM	1	1	17.18	17.23	17.37	19.0
	CP-OFDM 64QAM	1	1	17.19	17.41	17.25	19.0
	CP-OFDM 256QAM	1	1	17.13	17.29	17.36	19.0
BW	MCS Index	Channel		649668	656000	662332	Max. Tune-up
		Frequence (MHz)		3745.02	3840	3934.98	
90M	CP-OFDM QPSK	1	1	17.40	17.38	17.50	19.0
BW	MCS Index	Channel		649334	656000	662666	Max. Tune-up
		Frequence (MHz)		3740.01	3840	3939.99	
80M	CP-OFDM QPSK	1	1	17.42	17.52	17.39	19.0
BW	MCS Index	Channel		649000	656000	663000	Max. Tune-up
		Frequence (MHz)		3735	3840	3945	
70M	CP-OFDM QPSK	1	1	17.29	17.28	17.39	19.0
BW	MCS Index	Channel		648668	656000	663332	Max. Tune-up
		Frequence (MHz)		3730.02	3840	3949.98	
60M	CP-OFDM QPSK	1	1	17.33	17.47	17.35	19.0
BW	MCS Index	Channel		648334	656000	663666	Max. Tune-up
		Frequence (MHz)		3725.01	3840	3954.99	
50M	CP-OFDM QPSK	1	1	17.49	17.40	17.42	19.0
BW	MCS Index	Channel		648000	656000	664000	Max. Tune-up
		Frequence (MHz)		3720	3840	3960	
40M	CP-OFDM QPSK	1	1	17.30	17.44	17.34	19.0
BW	MCS Index	Channel		647668	656000	664332	Max. Tune-up
		Frequence (MHz)		3715.02	3840	3964.98	
30M	CP-OFDM QPSK	1	1	17.35	17.23	17.42	19.0
BW	MCS Index	Channel		647334	656000	664666	Max. Tune-up
		Frequence (MHz)		3710.01	3840	3969.99	
20M	CP-OFDM QPSK	1	1	17.27	17.47	17.31	19.0
BW	MCS Index	Channel		647000	656000	665000	Max. Tune-up
		Frequence (MHz)		3705	3840	3975	
10M	CP-OFDM QPSK	1	1	17.23	17.43	17.33	19.0

Conducted Power

2.4GHz WLAN	Ant1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
2.4GHz WLAN	802.11b 1Mbps	1	2412	**17.22**	19.00	16.00
		6	2437	17.01	19.00	16.00
		11	2462	17.03	19.00	16.00
	802.11g 6Mbps	1	2412	15.30	17.00	14.00
		6	2437	15.14	17.00	14.00
		11	2462	15.07	17.00	14.00
	802.11n-HT20 MCS0	1	2412	14.06	16.00	13.00
		6	2437	13.59	16.00	13.00
		11	2462	13.62	16.00	13.00
	802.11n-HT40 MCS0	3	2422	10.19	16.00	9.00
		7	2442	14.04	16.00	12.50
		11	2462	13.90	16.00	12.50
	802.11ax-HE20 MCS0	1	2412	13.94	16.00	13.00
		7	2442	13.67	16.00	13.00
		13	2472	13.74	16.00	13.00
	802.11ax-HE40 MCS0	3	2422	10.04	16.00	9.00
		7	2442	13.74	16.00	12.50
		11	2462	13.55	16.00	12.50
	802.11ax-HE20 MCS0_RU26	1	2412	8.45	16.00	7.00
		7	2442	9.21	16.00	9.00
		13	2472	8.35	16.00	7.00
	802.11ax-HE20 MCS0_RU52	1	2412	10.92	16.00	10.00
		7	2442	10.42	16.00	10.00
		13	2472	10.72	16.00	10.00
	802.11ax-HE20 MCS0_RU106	1	2412	14.19	16.00	13.00
		7	2442	13.94	16.00	13.00
		13	2472	13.97	16.00	13.00

2.4GHz WLAN	Ant2					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
2.4GHz WLAN	802.11b 1Mbps	1	2412	17.16	19.00	16.00
		6	2437	**17.41**	19.00	16.00
		11	2462	17.15	19.00	16.00
	802.11g 6Mbps	1	2412	15.80	17.00	14.00
		6	2437	15.55	17.00	14.00
		11	2462	15.66	17.00	14.00
	802.11n-HT20 MCS0	1	2412	14.09	16.00	13.00
		6	2437	13.84	16.00	13.00
		11	2462	13.88	16.00	13.00
	802.11n-HT40 MCS0	3	2422	10.89	16.00	9.00
		7	2442	14.44	16.00	12.50
		11	2462	14.45	16.00	12.50
	802.11ax-HE20 MCS0	1	2412	14.33	16.00	13.00
		7	2442	13.98	16.00	13.00
		13	2472	14.19	16.00	13.00
	802.11ax-HE40 MCS0	3	2422	10.61	16.00	9.00
		7	2442	14.01	16.00	12.50
		11	2462	14.13	16.00	12.50
	802.11ax-HE20 MCS0_RU26	1	2412	8.97	16.00	7.00
		7	2442	10.25	16.00	9.00
		13	2472	9.24	16.00	7.00
	802.11ax-HE20 MCS0_RU52	1	2412	11.80	16.00	10.00
		7	2442	11.42	16.00	10.00
		13	2472	11.84	16.00	10.00
	802.11ax-HE20 MCS0_RU106	1	2412	14.89	16.00	13.00
		7	2442	14.02	16.00	13.00
		13	2472	14.95	16.00	13.00

2.4GHz WLAN	Ant1+2					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
2.4GHz WLAN	802.11b 1Mbps	1	2412			
		6	2437			
		11	2462			
	802.11g 6Mbps	1	2412			
		6	2437			
		11	2462			
	802.11n-HT20 MCS0	1	2412	17.09	19.00	13.00
		6	2437	17.03	19.00	13.00
		11	2462	17.01	19.00	13.00
	802.11n-HT40 MCS0	3	2422	13.56	19.00	9.00
		7	2442	17.25	19.00	12.50
		11	2462	17.19	19.00	12.50
	802.11ax-HE20 MCS0	1	2412	17.15	19.00	13.00
		7	2442	16.84	19.00	13.00
		13	2472	16.98	19.00	13.00
	802.11ax-HE40 MCS0	3	2422	13.34	19.00	9.00
		7	2442	16.89	19.00	12.50
		11	2462	16.86	19.00	12.50
	802.11ax-HE20 MCS0_RU26	1	2412	11.73	19.00	7.00
		7	2442	12.77	19.00	7.00
		13	2472	11.83	19.00	7.00
	802.11ax-HE20 MCS0_RU52	1	2412	14.39	19.00	10.00
		7	2442	13.96	19.00	10.00
		13	2472	14.33	19.00	10.00
	802.11ax-HE20 MCS0_RU106	1	2412	**17.56**	19.00	13.00
		7	2442	16.99	19.00	11.00
		13	2472	17.50	19.00	13.00

5GHz WLAN	Ant1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
5.2GHz WLAN	802.11a 6Mbps	36	5180	**16.22**	18.00	14.50
		40	5200	16.01	18.00	14.50
		44	5220	16.08	18.00	14.50
		48	5240	16.12	18.00	15.00
	802.11n-HT20 MCS0	36	5180	13.16	15.00	12.00
		40	5200	13.07	15.00	12.00
		44	5220	12.97	15.00	12.00
		48	5240	12.80	15.00	12.00
	802.11n-HT40 MCS0	38	5190	13.50	15.00	11.00
		46	5230	13.41	15.00	11.00
	802.11ac-VHT20 MCS0	36	5180	13.14	15.00	12.00
		40	5200	13.07	15.00	12.00
		44	5220	12.83	15.00	12.00
		48	5240	12.77	15.00	12.00
	802.11ac-VHT40 MCS0	38	5190	13.35	15.00	11.00
		46	5230	13.37	15.00	11.00
	802.11ac-VHT80 MCS0	42	5210	12.89	15.00	11.00
	802.11ax-HE20 MCS0	36	5180	13.27	15.00	12.00
		40	5200	13.21	15.00	12.00
		44	5220	13.07	15.00	12.00
		48	5240	12.93	15.00	12.00
	802.11ax-HE40 MCS0	38	5190	12.99	15.00	11.00
		46	5230	12.91	15.00	11.00
	802.11ax-HE80 MCS0	42	5210	12.79	15.00	11.00
	802.11ax-HE20 MCS0_RU26	36	5180	8.37	15.00	6.50
		40	5200	9.39	15.00	7.50
		44	5220	8.55	15.00	7.00
		48	5240	7.99	15.00	6.00
	802.11ax-HE20 MCS0_RU52	36	5180	10.92	15.00	9.00
		40	5200	10.83	15.00	9.00
		44	5220	10.49	15.00	8.50
		48	5240	10.23	15.00	8.50
	802.11ax-HE20 MCS0_RU106	36	5180	12.45	15.00	11.00
		40	5200	12.48	15.00	11.00
		44	5220	12.32	15.00	11.00
		48	5240	12.24	15.00	11.00

5GHz WLAN	Ant2					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
5.2GHz WLAN	802.11a 6Mbps	36	5180	16.17	18.00	14.50
		40	5200	16.14	18.00	14.50
		44	5220	16.08	18.00	14.50
		48	5240	**16.83**	18.00	15.00
	802.11n-HT20 MCS0	36	5180	12.98	15.00	12.00
		40	5200	12.95	15.00	12.00
		44	5220	13.12	15.00	12.00
		48	5240	13.37	15.00	12.00
	802.11n-HT40 MCS0	38	5190	13.10	15.00	11.00
		46	5230	13.68	15.00	11.00
	802.11ac-VHT20 MCS0	36	5180	12.98	15.00	12.00
		40	5200	12.96	15.00	12.00
		44	5220	13.15	15.00	12.00
		48	5240	13.37	15.00	12.00
	802.11ac-VHT40 MCS0	38	5190	12.92	15.00	11.00
		46	5230	13.63	15.00	11.00
	802.11ac-VHT80 MCS0	42	5210	13.30	15.00	11.00
	802.11ax-HE20 MCS0	36	5180	13.12	15.00	12.00
		40	5200	13.10	15.00	12.00
		44	5220	13.21	15.00	12.00
		48	5240	13.53	15.00	12.00
	802.11ax-HE40 MCS0	38	5190	12.55	15.00	11.00
		46	5230	13.15	15.00	11.00
	802.11ax-HE80 MCS0	42	5210	13.15	15.00	11.00
	802.11ax-HE20 MCS0_RU26	36	5180	8.06	15.00	6.50
		40	5200	8.70	15.00	7.50
		44	5220	8.51	15.00	7.00
		48	5240	8.44	15.00	6.00
	802.11ax-HE20 MCS0_RU52	36	5180	10.39	15.00	9.00
		40	5200	10.37	15.00	9.00
		44	5220	10.40	15.00	8.50
		48	5240	10.46	15.00	8.50
	802.11ax-HE20 MCS0_RU106	36	5180	12.25	15.00	11.00
		40	5200	12.34	15.00	11.00
		44	5220	12.43	15.00	11.00
		48	5240	12.78	15.00	11.00

5GHz WLAN	Ant1+2					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
5.2GHz WLAN	802.11a 6Mbps	36	5180			
		40	5200			
		44	5220			
		48	5240			
	802.11n-HT20 MCS0	36	5180	16.08	18.00	12.00
		40	5200	16.02	18.00	12.00
		44	5220	16.05	18.00	12.00
		48	5240	16.10	18.00	12.00
	802.11n-HT40 MCS0	38	5190	16.31	18.00	11.00
		46	5230	**16.56**	18.00	11.00
	802.11ac-VHT20 MCS0	36	5180	16.07	18.00	12.00
		40	5200	16.03	18.00	12.00
		44	5220	16.11	18.00	12.00
		48	5240	16.09	18.00	12.00
	802.11ac-VHT40 MCS0	38	5190	16.15	18.00	11.00
		46	5230	16.51	18.00	11.00
	802.11ac-VHT80 MCS0	42	5210	16.11	18.00	11.00
	802.11ax-HE20 MCS0	36	5180	16.21	18.00	12.00
		40	5200	16.17	18.00	12.00
		44	5220	16.20	18.00	12.00
		48	5240	16.25	18.00	12.00
	802.11ax-HE40 MCS0	38	5190	15.79	18.00	11.00
		46	5230	16.04	18.00	11.00
	802.11ax-HE80 MCS0	42	5210	15.98	18.00	11.00
	802.11ax-HE20 MCS0_RU26	36	5180	11.23	18.00	6.50
		40	5200	12.07	18.00	7.50
		44	5220	11.64	18.00	7.00
		48	5240	11.23	18.00	6.00
	802.11ax-HE20 MCS0_RU52	36	5180	13.67	18.00	9.00
		40	5200	13.62	18.00	9.00
		44	5220	13.41	18.00	8.50
		48	5240	13.36	18.00	8.50
	802.11ax-HE20 MCS0_RU106	36	5180	15.36	18.00	11.00
		40	5200	15.42	18.00	11.00
		44	5220	15.28	18.00	11.00
		48	5240	15.53	18.00	11.00

5GHz WLAN	Ant1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
5.3GHz WLAN	802.11a 6Mbps	52	5260	16.29	18.00	15.00
		56	5280	16.21	18.00	15.00
		60	5300	16.11	18.00	15.00
		64	5320	**16.34**	18.00	15.00
	802.11n-HT20 MCS0	52	5260	12.91	15.00	12.00
		56	5280	13.04	15.00	12.00
		60	5300	13.18	15.00	12.00
		64	5320	13.39	15.00	12.00
	802.11n-HT40 MCS0	54	5270	13.40	15.00	11.00
		62	5310	13.60	15.00	11.00
	802.11ac-VHT20 MCS0	52	5260	12.90	15.00	12.00
		56	5280	13.07	15.00	12.00
		60	5300	13.16	15.00	12.00
		64	5320	13.39	15.00	12.00
	802.11ac-VHT40 MCS0	54	5270	13.28	15.00	11.00
		62	5310	13.57	15.00	11.00
	802.11ac-VHT80 MCS0	58	5290	13.13	15.00	11.00
	802.11ac-VHT160 MCS0	50	5250	10.54	15.00	11.00
	802.11ax-HE20 MCS0	52	5260	13.07	15.00	12.00
		56	5280	13.18	15.00	12.00
		60	5300	13.33	15.00	12.00
		64	5320	13.57	15.00	12.00
	802.11ax-HE40 MCS0	54	5270	12.92	15.00	11.00
		62	5310	13.23	15.00	11.00
	802.11ax-HE80 MCS0	58	5290	13.04	15.00	11.00
	802.11ax-HE160 MCS0	50	5250	10.56	15.00	11.00
	802.11ax-HE20 MCS0_RU26	52	5260	7.38	15.00	6.00
		56	5280	7.97	15.00	7.00
		60	5300	8.72	15.00	7.50
		64	5320	6.72	15.00	6.00
	802.11ax-HE20 MCS0_RU52	52	5260	9.41	15.00	8.00
		56	5280	9.76	15.00	8.00
		60	5300	10.15	15.00	9.00
		64	5320	10.59	15.00	9.00
	802.11ax-HE20 MCS0_RU106	52	5260	11.59	15.00	10.00
		56	5280	11.72	15.00	10.00
		60	5300	12.42	15.00	11.00
		64	5320	12.86	15.00	11.00

5GHz WLAN	Ant2					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
5.3GHz WLAN	802.11a 6Mbps	52	5260	**17.03**	18.00	15.00
		56	5280	16.63	18.00	15.00
		60	5300	16.51	18.00	15.00
		64	5320	16.59	18.00	15.00
	802.11n-HT20 MCS0	52	5260	13.55	15.00	12.00
		56	5280	13.42	15.00	12.00
		60	5300	13.33	15.00	12.00
		64	5320	13.39	15.00	12.00
	802.11n-HT40 MCS0	54	5270	13.59	15.00	11.00
		62	5310	13.22	15.00	11.00
	802.11ac-VHT20 MCS0	52	5260	13.55	15.00	12.00
		56	5280	13.28	15.00	12.00
		60	5300	13.31	15.00	12.00
		64	5320	13.39	15.00	12.00
	802.11ac-VHT40 MCS0	54	5270	13.43	15.00	11.00
		62	5310	13.22	15.00	11.00
	802.11ac-VHT80 MCS0	58	5290	13.28	15.00	11.00
	802.11ac-VHT160 MCS0	50	5250	10.70	15.00	11.00
	802.11ax-HE20 MCS0	52	5260	13.71	15.00	12.00
		56	5280	13.55	15.00	12.00
		60	5300	13.50	15.00	12.00
		64	5320	13.59	15.00	12.00
	802.11ax-HE40 MCS0	54	5270	13.10	15.00	11.00
		62	5310	12.86	15.00	11.00
	802.11ax-HE80 MCS0	58	5290	13.18	15.00	11.00
	802.11ax-HE160 MCS0	50	5250	10.68	15.00	11.00
	802.11ax-HE20 MCS0_RU26	52	5260	8.23	15.00	6.00
		56	5280	8.41	15.00	7.00
		60	5300	9.04	15.00	7.50
		64	5320	7.08	15.00	6.00
	802.11ax-HE20 MCS0_RU52	52	5260	10.02	15.00	8.00
		56	5280	10.11	15.00	8.00
		60	5300	10.33	15.00	9.00
		64	5320	10.81	15.00	9.00
	802.11ax-HE20 MCS0_RU106	52	5260	11.75	15.00	10.00
		56	5280	11.51	15.00	10.00
		60	5300	12.54	15.00	11.00
		64	5320	12.67	15.00	11.00

5GHz WLAN	Ant1+2					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
5.3GHz WLAN	802.11a 6Mbps	52	5260			
		56	5280			
		60	5300			
		64	5320			
	802.11n-HT20 MCS0	52	5260	16.25	18.00	12.00
		56	5280	16.19	18.00	12.00
		60	5300	16.27	18.00	12.00
		64	5320	16.40	18.00	12.00
	802.11n-HT40 MCS0	54	5270	16.51	18.00	11.00
		62	5310	16.42	18.00	11.00
	802.11ac-VHT20 MCS0	52	5260	16.25	18.00	12.00
		56	5280	16.32	18.00	12.00
		60	5300	16.25	18.00	12.00
		64	5320	16.40	18.00	12.00
	802.11ac-VHT40 MCS0	54	5270	16.37	18.00	11.00
		62	5310	16.41	18.00	11.00
	802.11ac-VHT80 MCS0	58	5290	16.22	18.00	11.00
	802.11ac-VHT160 MCS0	50	5250	13.63	18.00	11.00
	802.11ax-HE20 MCS0	52	5260	16.41	18.00	12.00
		56	5280	16.34	18.00	12.00
		60	5300	16.43	18.00	12.00
		64	5320	**16.59**	18.00	12.00
	802.11ax-HE40 MCS0	54	5270	16.02	18.00	11.00
		62	5310	16.06	18.00	11.00
	802.11ax-HE80 MCS0	58	5290	16.12	18.00	11.00
	802.11ax-HE160 MCS0	50	5250	13.63	18.00	11.00
	802.11ax-HE20 MCS0_RU26	52	5260	10.84	18.00	6.00
		56	5280	11.13	18.00	7.00
		60	5300	11.89	18.00	7.50
		64	5320	9.91	18.00	6.00
	802.11ax-HE20 MCS0_RU52	52	5260	12.74	18.00	8.00
		56	5280	13.21	18.00	8.00
		60	5300	13.25	18.00	9.00
		64	5320	13.71	18.00	9.00
	802.11ax-HE20 MCS0_RU106	52	5260	14.68	18.00	10.00
		56	5280	14.98	18.00	10.00
		60	5300	15.49	18.00	11.00
		64	5320	15.78	18.00	11.00

5GHz WLAN	Ant1					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
5.5GHz WLAN	802.11a 6Mbps	100	5500	**17.40**	18.00	15.00
		116	5580	17.07	18.00	14.50
		124	5620	16.23	18.00	15.00
		132	5660	16.17	18.00	15.00
		140	5700	16.01	18.00	15.00
		144	5720	15.41	18.00	15.00
	802.11n-HT20 MCS0	100	5500	14.22	15.00	12.00
		116	5580	14.73	15.00	12.00
		124	5620	14.28	15.00	12.00
		132	5660	14.09	15.00	12.00
		140	5700	13.01	15.00	12.00
		144	5720	11.85	15.00	12.00
	802.11n-HT40 MCS0	102	5510	13.86	15.00	10.00
		110	5550	14.02	15.00	10.00
		126	5630	13.82	15.00	11.00
		134	5670	13.70	15.00	11.00
		142	5710	12.83	15.00	11.00
	802.11ac-VHT20 MCS0	100	5500	14.22	15.00	12.00
		116	5580	14.73	15.00	12.00
		124	5620	13.56	15.00	12.00
		132	5660	13.19	15.00	12.00
		140	5700	12.96	15.00	12.00
		144	5720	11.81	15.00	12.00
	802.11ac-VHT40 MCS0	102	5510	13.82	15.00	10.00
		110	5550	13.91	15.00	10.00
		126	5630	12.39	15.00	11.00
		134	5670	12.47	15.00	11.00
		142	5710	12.86	15.00	11.00
	802.11ac-VHT80 MCS0	106	5530	14.40	15.00	11.00
		122	5610	13.14	15.00	10.00
		138	5690	11.39	15.00	10.00
	802.11ac-VHT160 MCS0	114	5570	13.63	15.00	10.00
	802.11ax-HE20 MCS0	100	5500	14.37	15.00	12.00
		116	5580	14.83	15.00	12.00
		124	5620	13.76	15.00	12.00
		132	5660	13.29	15.00	12.00
		140	5700	13.06	15.00	12.00
		144	5720	11.94	15.00	12.00
	802.11ax-HE40 MCS0	102	5510	13.49	15.00	10.00
		110	5550	13.58	15.00	10.00
		126	5630	13.17	15.00	11.00
		134	5670	13.29	15.00	11.00
		142	5710	12.54	15.00	11.00
	802.11ax-HE80 MCS0	106	5530	13.42	15.00	10.00
		122	5610	13.01	15.00	10.00
		138	5690	12.38	15.00	10.00
	802.11ax-HE160 MCS0	114	5570	13.64	15.00	10.00
	802.11ax-HE20 MCS0_RU26	100	5500	8.42	15.00	6.50
		116	5580	9.58	15.00	7.50
		124	5620	6.79	15.00	6.00
		132	5660	6.83	15.00	6.00
		140	5700	6.37	15.00	6.00
		144	5720	6.74	15.00	6.00
	802.11ax-HE20 MCS0_RU52	100	5500	11.12	15.00	9.00
		116	5580	10.93	15.00	9.00
		124	5620	10.14	15.00	9.00
		132	5660	9.98	15.00	9.00
		140	5700	9.57	15.00	9.00
		144	5720	11.72	15.00	11.00
	802.11ax-HE20 MCS0_RU106	100	5500	13.56	15.00	11.00
		116	5580	13.79	15.00	11.00
		124	5620	13.27	15.00	11.00
		132	5660	12.88	15.00	11.00
		140	5700	12.20	15.00	11.00
		144	5720	9.39	15.00	11.00

5GHz WLAN	Ant2					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
5.5GHz WLAN	802.11a 6Mbps	100	5500	**16.46**	18.00	15.00
		116	5580	16.25	18.00	14.50
		124	5620	16.09	18.00	15.00
		132	5660	16.11	18.00	15.00
		140	5700	16.16	18.00	15.00
		144	5720	15.33	18.00	15.00
	802.11n-HT20 MCS0	100	5500	12.95	15.00	12.00
		116	5580	13.18	15.00	12.00
		124	5620	12.76	15.00	12.00
		132	5660	12.59	15.00	12.00
		140	5700	12.21	15.00	12.00
		144	5720	11.93	15.00	12.00
	802.11n-HT40 MCS0	102	5510	12.18	15.00	10.00
		110	5550	12.25	15.00	10.00
		126	5630	12.54	15.00	11.00
		134	5670	12.77	15.00	11.00
		142	5710	12.47	15.00	11.00
	802.11ac-VHT20 MCS0	100	5500	12.97	15.00	12.00
		116	5580	13.18	15.00	12.00
		124	5620	12.69	15.00	12.00
		132	5660	12.53	15.00	12.00
		140	5700	12.46	15.00	12.00
		144	5720	11.83	15.00	12.00
	802.11ac-VHT40 MCS0	102	5510	12.12	15.00	10.00
		110	5550	12.15	15.00	10.00
		126	5630	11.62	15.00	11.00
		134	5670	11.16	15.00	11.00
		142	5710	12.47	15.00	11.00
	802.11ac-VHT80 MCS0	106	5530	13.26	15.00	11.00
		122	5610	11.59	15.00	10.00
		138	5690	11.32	15.00	10.00
	802.11ac-VHT160 MCS0	114	5570	12.02	15.00	10.00
	802.11ax-HE20 MCS0	100	5500	13.13	15.00	12.00
		116	5580	13.32	15.00	12.00
		124	5620	12.96	15.00	12.00
		132	5660	12.85	15.00	12.00
		140	5700	12.57	15.00	12.00
		144	5720	12.01	15.00	12.00
	802.11ax-HE40 MCS0	102	5510	11.81	15.00	10.00
		110	5550	11.84	15.00	10.00
		126	5630	12.54	15.00	11.00
		134	5670	12.31	15.00	11.00
		142	5710	12.17	15.00	11.00
	802.11ax-HE80 MCS0	106	5530	11.88	15.00	10.00
		122	5610	11.44	15.00	10.00
		138	5690	11.99	15.00	10.00
	802.11ax-HE160 MCS0	114	5570	12.06	15.00	10.00
	802.11ax-HE20 MCS0_RU26	100	5500	8.16	15.00	6.50
		116	5580	9.18	15.00	7.50
		124	5620	6.31	15.00	6.00
		132	5660	6.15	15.00	6.00
		140	5700	5.69	15.00	6.00
		144	5720	5.90	15.00	6.00
	802.11ax-HE20 MCS0_RU52	100	5500	10.47	15.00	9.00
		116	5580	10.52	15.00	9.00
		124	5620	10.08	15.00	9.00
		132	5660	9.92	15.00	9.00
		140	5700	9.65	15.00	9.00
		144	5720	11.82	15.00	11.00
	802.11ax-HE20 MCS0_RU106	100	5500	12.34	15.00	11.00
		116	5580	12.70	15.00	11.00
		124	5620	12.13	15.00	11.00
		132	5660	12.27	15.00	11.00
		140	5700	11.90	15.00	11.00
		144	5720	9.51	15.00	11.00

5GHz WLAN	Ant1+2					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Power Setting
5.5GHz WLAN	802.11a 6Mbps	100	5500			
		116	5580			
		124	5620			
		132	5660			
		140	5700			
		144	5720			
	802.11n-HT20 MCS0	100	5500	16.64	18.00	12.00
		116	5580	17.03	18.00	12.00
		124	5620	16.57	18.00	12.00
		132	5660	16.02	18.00	12.00
		140	5700	16.04	18.00	12.00
		144	5720	16.00	18.00	12.00
	802.11n-HT40 MCS0	102	5510	16.11	18.00	10.00
		110	5550	16.23	18.00	10.00
		126	5630	16.18	18.00	11.00
		134	5670	16.27	18.00	11.00
		142	5710	15.91	18.00	11.00
	802.11ac-VHT20 MCS0	100	5500	16.65	18.00	12.00
		116	5580	17.03	18.00	12.00
		124	5620	16.39	18.00	12.00
		132	5660	16.12	18.00	12.00
		140	5700	15.73	18.00	12.00
		144	5720	15.58	18.00	12.00
	802.11ac-VHT40 MCS0	102	5510	16.06	18.00	10.00
		110	5550	16.13	18.00	10.00
		126	5630	15.36	18.00	11.00
		134	5670	14.87	18.00	11.00
		142	5710	15.94	18.00	11.00
	802.11ac-VHT80 MCS0	106	5530	16.88	18.00	11.00
		122	5610	15.44	18.00	10.00
		138	5690	14.46	18.00	10.00
	802.11ac-VHT160 MCS0	114	5570	15.91	18.00	10.00
	802.11ax-HE20 MCS0	100	5500	16.80	18.00	12.00
		116	5580	**17.15**	18.00	12.00
		124	5620	16.72	18.00	12.00
		132	5660	16.26	18.00	12.00
		140	5700	15.83	18.00	12.00
		144	5720	15.81	18.00	12.00
	802.11ax-HE40 MCS0	102	5510	15.74	18.00	10.00
		110	5550	15.81	18.00	10.00
		126	5630	15.89	18.00	11.00
		134	5670	15.84	18.00	11.00
		142	5710	15.67	18.00	11.00
	802.11ax-HE80 MCS0	106	5530	15.73	18.00	10.00
		122	5610	15.31	18.00	10.00
		138	5690	15.20	18.00	10.00
	802.11ax-HE160 MCS0	114	5570	15.93	18.00	10.00
	802.11ax-HE20 MCS0_RU26	100	5500	11.30	18.00	6.50
		116	5580	12.39	18.00	7.50
		124	5620	9.87	18.00	6.00
		132	5660	9.56	18.00	6.00
		140	5700	9.05	18.00	6.00
		144	5720	9.39	18.00	6.00
	802.11ax-HE20 MCS0_RU52	100	5500	13.82	18.00	9.00
		116	5580	13.74	18.00	9.00
		124	5620	13.21	18.00	9.00
		132	5660	12.94	18.00	9.00
		140	5700	12.62	18.00	9.00
		144	5720	14.85	18.00	11.00
	802.11ax-HE20 MCS0_RU106	100	5500	16.00	18.00	11.00
		116	5580	16.29	18.00	11.00
		124	5620	15.83	18.00	11.00
		132	5660	15.44	18.00	11.00
		140	5700	15.06	18.00	11.00
		144	5720	15.02	18.00	11.00

Appendix E. Simultaneous Multi-band Transmission Evaluation

The simultaneous transmission evaluation and analysis is shown as below.

< Body Worn Exposure Condition >(Single Band)

WWAN Band	Exposure Position (10mm)	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN_ANT1 1g SAR (W/kg)	3 2.4GHz WLAN_ANT2 1g SAR (W/kg)	4 2.4GHz WLAN_ANT1+2 1g SAR (W/kg)	5 5GHz WLAN_ANT1 1g SAR (W/kg)	6 5GHz WLAN_ANT2 1g SAR (W/kg)	7 5GHz WLAN_ANT1+2 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+3+5 Summed 1g SAR (W/kg)	1+4+7 Summed 1g SAR (W/kg)
WCDMA Band 2	Front	0.557	0.216	0.104	0.232	0.380	0.187	0.206	**0.960**	**1.041**	**0.995**
	Back	0.629	0.266	0.015	0.348	0.234	0.239	0.150	**1.134**	**0.878**	**1.127**
WCDMA Band 5	Front	0.375	0.216	0.104	0.232	0.380	0.187	0.206	**0.778**	**0.859**	**0.813**
	Back	1.062	0.266	0.015	0.348	0.234	0.239	0.150	**1.567**	**1.311**	**1.560**
LTE Band 5	Front	0.835	0.216	0.104	0.232	0.380	0.187	0.206	**1.238**	**1.319**	**1.273**
	Back	1.059	0.266	0.015	0.348	0.234	0.239	0.150	**1.564**	**1.308**	**1.557**
LTE Band 17	Front	0.861	0.216	0.104	0.232	0.380	0.187	0.206	**1.264**	**1.345**	**1.299**
	Back	1.021	0.266	0.015	0.348	0.234	0.239	0.150	**1.526**	**1.270**	**1.519**
LTE Band 41	Front	0.292	0.216	0.104	0.232	0.380	0.187	0.206	**0.695**	**0.776**	**0.730**
	Back	0.245	0.266	0.015	0.348	0.234	0.239	0.150	**0.750**	**0.494**	**0.743**
NR Band n41	Front	0.523	0.216	0.104	0.232	0.380	0.187	0.206	**0.926**	**1.007**	**0.961**
	Back	0.965	0.266	0.015	0.348	0.234	0.239	0.150	**1.470**	**1.214**	**1.463**
NR Band n77	Front	0.584	0.216	0.104	0.232	0.380	0.187	0.206	**0.987**	**1.068**	**1.022**
	Back	0.586	0.266	0.015	0.348	0.234	0.239	0.150	**1.091**	**0.835**	**1.084**

< Hotspot Exposure Condition >(Single Band)

WWAN Band	Exposure Position (10mm)	1 WWAN 1g SAR (W/kg)	2 2.4GHz WLAN_ANT1 1g SAR (W/kg)	3 2.4GHz WLAN_ANT2 1g SAR (W/kg)	4 2.4GHz WLAN_ANT1+2 1g SAR (W/kg)	5 5GHz WLAN_ANT1 1g SAR (W/kg)	6 5GHz WLAN_ANT2 1g SAR (W/kg)	7 5GHz WLAN_ANT1+2 1g SAR (W/kg)	1+2+6 Summed 1g SAR (W/kg)	1+3+5 Summed 1g SAR (W/kg)	1+4+7 Summed 1g SAR (W/kg)
WCDMA Band 2	Front	0.557	0.216	0.104	0.232	0.380	0.187	0.206	**0.960**	**1.041**	**0.995**
	Back	0.629	0.266	0.015	0.348	0.234	0.239	0.150	**1.134**	**0.878**	**1.127**
	Left side		0.090	0.073	0.085	0.304	0.120	0.161	**0.210**	**0.377**	**0.246**
	Right side	0.107							**0.107**	**0.107**	**0.107**
	Top side	1.032	0.038	0.138	0.204	0.148	0.188	0.169	**1.258**	**1.318**	**1.405**
	Bottom side		0.184	0.040	0.186	0.341	0.125	0.214	**0.309**	**0.381**	**0.400**
WCDMA Band 5	Front	0.375	0.216	0.104	0.232	0.380	0.187	0.206	**0.778**	**0.859**	**0.813**
	Back	1.062	0.266	0.015	0.348	0.234	0.239	0.150	**1.567**	**1.311**	**1.560**
	Left side		0.090	0.073	0.085	0.304	0.120	0.161	**0.210**	**0.377**	**0.246**
	Right side	0.127							**0.127**	**0.127**	**0.127**
	Top side	0.180	0.038	0.138	0.204	0.148	0.188	0.169	**0.406**	**0.466**	**0.553**
	Bottom side	0.126	0.184	0.040	0.186	0.341	0.125	0.214	**0.435**	**0.507**	**0.526**
LTE Band 5	Front	0.835	0.216	0.104	0.232	0.380	0.187	0.206	**1.238**	**1.319**	**1.273**
	Back	1.059	0.266	0.015	0.348	0.234	0.239	0.150	**1.564**	**1.308**	**1.557**
	Left side		0.090	0.073	0.085	0.304	0.120	0.161	**0.210**	**0.377**	**0.246**
	Right side	0.111							**0.111**	**0.111**	**0.111**
	Top side	0.138	0.038	0.138	0.204	0.148	0.188	0.169	**0.364**	**0.424**	**0.511**
	Bottom side	0.109	0.184	0.040	0.186	0.341	0.125	0.214	**0.418**	**0.490**	**0.509**
LTE Band 17	Front	0.861	0.216	0.104	0.232	0.380	0.187	0.206	**1.264**	**1.345**	**1.299**
	Back	1.021	0.266	0.015	0.348	0.234	0.239	0.150	**1.526**	**1.270**	**1.519**
	Left side		0.090	0.073	0.085	0.304	0.120	0.161	**0.210**	**0.377**	**0.246**
	Right side	0.110							**0.110**	**0.110**	**0.110**
	Top side	0.341	0.038	0.138	0.204	0.148	0.188	0.169	**0.567**	**0.627**	**0.714**
	Bottom side	0.321	0.184	0.040	0.186	0.341	0.125	0.214	**0.630**	**0.702**	**0.721**
LTE Band 41	Front	0.292	0.216	0.104	0.232	0.380	0.187	0.206	**0.695**	**0.776**	**0.730**
	Back	0.245	0.266	0.015	0.348	0.234	0.239	0.150	**0.750**	**0.494**	**0.743**
	Left side		0.090	0.073	0.085	0.304	0.120	0.161	**0.210**	**0.377**	**0.246**
	Right side	0.000							**0.000**	**0.000**	**0.000**
	Top side	0.368	0.038	0.138	0.204	0.148	0.188	0.169	**0.594**	**0.654**	**0.741**
	Bottom side		0.184	0.040	0.186	0.341	0.125	0.214	**0.309**	**0.381**	**0.400**
NR Band n41	Front	0.523	0.216	0.104	0.232	0.380	0.187	0.206	**0.926**	**1.007**	**0.961**
	Back	0.965	0.266	0.015	0.348	0.234	0.239	0.150	**1.470**	**1.214**	**1.463**
	Left side		0.090	0.073	0.085	0.304	0.120	0.161	**0.210**	**0.377**	**0.246**
	Right side	0.050							**0.050**	**0.050**	**0.050**
	Top side	0.972	0.038	0.138	0.204	0.148	0.188	0.169	**1.198**	**1.258**	**1.345**
	Bottom side		0.184	0.040	0.186	0.341	0.125	0.214	**0.309**	**0.381**	**0.400**
NR Band n77	Front	0.584	0.216	0.104	0.232	0.380	0.187	0.206	**0.987**	**1.068**	**1.022**
	Back	0.586	0.266	0.015	0.348	0.234	0.239	0.150	**1.091**	**0.835**	**1.084**
	Left side		0.090	0.073	0.085	0.304	0.120	0.161	**0.210**	**0.377**	**0.246**
	Right side	0.187							**0.187**	**0.187**	**0.187**
	Top side	1.088	0.038	0.138	0.204	0.148	0.188	0.169	**1.314**	**1.374**	**1.461**
	Bottom side	0.294	0.184	0.040	0.186	0.341	0.125	0.214	**0.603**	**0.675**	**0.694**

< Body Worn Exposure Condition > (ENDC)

WWAN Band (LTE)	WWAN Band (NR)	Exposure Position (10mm)	1 LTE 1g SAR (W/kg)	2 NR 1g SAR (W/kg)	3 2.4GHz WLAN_ANT1 1g SAR (W/kg)	4 2.4GHz WLAN_ANT2 1g SAR (W/kg)	5 2.4GHz WLAN_ANT1+2 1g SAR (W/kg)	6 5GHz WLAN_ANT1 1g SAR (W/kg)	7 5GHz WLAN_ANT2 1g SAR (W/kg)	8 5GHz WLAN_ANT1+2 1g SAR (W/kg)	1+2+3+7 Summed 1g SAR (W/kg)	1+2+4+6 Summed 1g SAR (W/kg)	1+2+5+8 Summed 1g SAR (W/kg)
LTE Band 41 (Ant2)	NR n77 (Ant4)	Front	0.292	0.556	0.216	0.104	0.232	0.380	0.187	0.206	**1.251**	**1.332**	**1.286**
		Back	0.245	0.458	0.266	0.015	0.348	0.234	0.239	0.150	**1.208**	**0.952**	**1.201**

< Hotspot Exposure Condition > (ENDC)

WWAN Band (LTE)	WWAN Band (NR)	Exposure Position (10mm)	1 LTE 1g SAR (W/kg)	2 NR 1g SAR (W/kg)	3 2.4GHz WLAN_ANT1 1g SAR (W/kg)	4 2.4GHz WLAN_ANT2 1g SAR (W/kg)	5 2.4GHz WLAN_ANT1+2 1g SAR (W/kg)	6 5GHz WLAN_ANT1 1g SAR (W/kg)	7 5GHz WLAN_ANT2 1g SAR (W/kg)	8 5GHz WLAN_ANT1+2 1g SAR (W/kg)	1+2+3+7 Summed 1g SAR (W/kg)	1+2+4+6 Summed 1g SAR (W/kg)	1+2+5+8 Summed 1g SAR (W/kg)
LTE Band 41 (Ant2)	NR n77 (Ant4)	Front	0.292	0.556	0.216	0.104	0.232	0.380	0.187	0.206	**1.251**	**1.332**	**1.286**
		Back	0.245	0.458	0.266	0.015	0.348	0.234	0.239	0.150	**1.208**	**0.952**	**1.201**
		Left side			0.090	0.073	0.085	0.304	0.120	0.161	**0.210**	**0.377**	**0.246**
		Right side	0.000								**0.000**	**0.000**	**0.000**
		Top side	0.368		0.038	0.138	0.204	0.148	0.188	0.169	**0.594**	**0.654**	**0.741**
		Bottom side		1.008	0.184	0.040	0.186	0.341	0.125	0.214	**1.317**	**1.389**	**1.408**