DASY5 Validation Report for Body TSL

Date: 21.02.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d148

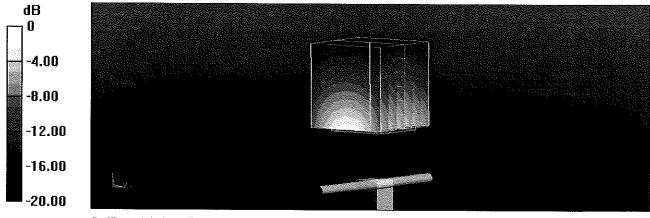
Communication System: UID 0 - CW; Frequency: 1900 MHz Medium parameters used: f = 1900 MHz; $\sigma = 1.47$ S/m; $\epsilon_r = 53.6$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.23, 8.23, 8.23) @ 1900 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 103.7 V/m; Power Drift = -0.03 dB Peak SAR (extrapolated) = 17.0 W/kg SAR(1 g) = 9.56 W/kg; SAR(10 g) = 5.05 W/kg Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kg = 11.58 dBW/kg

Impedance Measurement Plot for Body TSL

File	⊻iew	<u>C</u> hannel	Sweep	Calibration	<u>Trace</u> <u>S</u> cal	e M <u>a</u> rker	System	Window	<u>H</u> elp	
		Ch 1 Avg = nt 1.70000 (A				1.900000 GHz 652.32 pH 1.900000 GHz	7.7874 Ω
10.0 5.04 -5.0 -10. -15. -25. -25. -25. -30. -35. -40. -		Ch 1 Awg = rt 1.70000 c	200 3 Hz						1.900000 GHz	-21.894 dB
Sta	tus	сн 1: §	11		C* 1-Port		Avg=20	Delay		LCL

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





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Schweizerischer Kallbrlerdienst Service sulsse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 0108

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

Multilateral Agreement for the recognition of calibration certificates

PC Test Client

Certificate No: D2450V2-797_Sep17

CALIBRATION CERTIFICATE Object D2450V2 - SN:797 Calibration procedure(s) QA CAL-05.v9

700 MHz 30017 10/03/2017 Extended PNV J/20/2018 Calibration procedure for dipole validation kits above 700 MHz

Calibration date:

September 11, 2017

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	1D #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Reference Probe EX3DV4	SN: 7349	31-May-17 (No. EX3-7349_May17)	May-18
DAE4	SN: 601	28-Mar-17 (No. DAE4-601_Mar17)	Mar-18
Secondary Standards	ID#	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-16)	In house check: Oct-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-16)	In house check: Oct-17
	Name	Function	Signature
Calibrated by:	Michael Weber	Laboratory Technician	MULL
		· · · · · · ·	(1) (CK)
Approved by:	Katja Pokovic	Technical Manager	00/11

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

Issued: September 11, 2017

Calibration Laboratory of

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





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- Service suisse d'étalonnage
- C Servizio svizzero di taratura
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Multilateral Agreement for the recognition of calibration certificates

Glossary:

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

Calibration is Performed According to the Following Standards:

- a) 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"

Additional Documentation:

e) 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%.

Accreditation No.: SCS 0108

Measurement Conditions

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

DASY Version	DASY5	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy , $dz = 5 mm$	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.8 ± 6 %	1.86 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	52.7 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	6.28 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.8 W/kg ± 16.5 % (k=2)

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Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	. 1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.9 ± 6 %	2.04 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	13.1 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	51.1 W/kg ± 17.0 % (k≃2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.14 W/kg
SAR for nominal Body 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	53.8 Ω + 7.4 jΩ
Return Loss	- 21.9 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.7 Ω + 9.1 jΩ
Return Loss	- 20.9 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.152 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
Manufactured on	January 24, 2006

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DASY5 Validation Report for Head TSL

Date: 11.09.2017

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 797

Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; σ = 1.86 S/m; ϵ_r = 37.8; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.12, 8.12, 8.12); Calibrated: 31.05.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 28.03.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

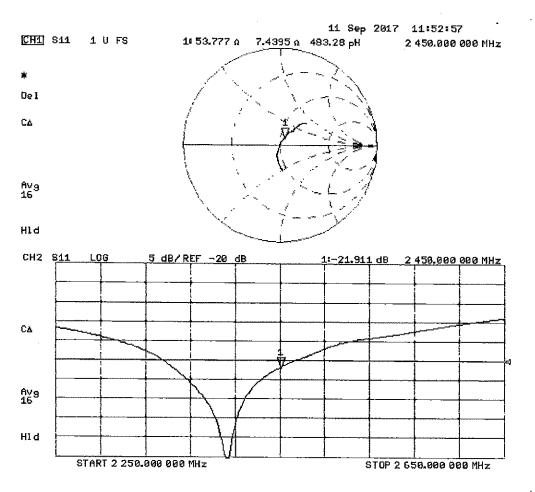
Dipole Calibration for Head Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 113.5 V/m; Power Drift = -0.08 dB Peak SAR (extrapolated) = 26.9 W/kg SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.28 W/kg Maximum value of SAR (measured) = 21.6 W/kg



0 dB = 21.6 W/kg = 13.34 dBW/kg

Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL

Date: 11.09.2017

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 797

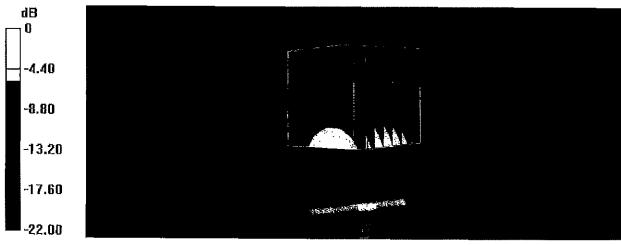
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; σ = 2.04 S/m; ϵ_r = 51.9; ρ = 1000 kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.1, 8.1, 8.1); Calibrated: 31.05.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 28.03.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

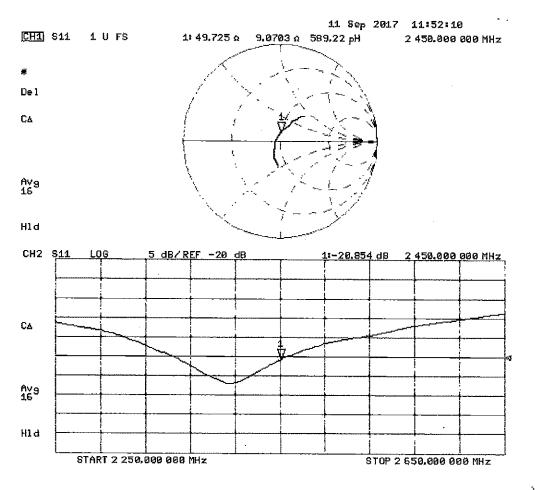
Dipole Calibration for Body Tissue/Pin=250 mW, d=10mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 105.4 V/m; Power Drift = -0.08 dB Peak SAR (extrapolated) = 25.6 W/kg SAR(1 g) = 13.1 W/kg; SAR(10 g) = 6.14 W/kg Maximum value of SAR (measured) = 20.3 W/kg



 $0 \, dB = 20.3 \, W/kg = 13.07 \, dBW/kg$

Impedance Measurement Plot for Body TSL



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PCTEST ENGINEERING LABORATORY, INC.

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



Certification of Calibration

Object

D2450V2 - SN: 797

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

Extended Calibration date: September 11, 2018

Description:

PCTEST

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SAR Validation Dipole at 2450 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Control Company	4040	Therm./Clock/Humidity Monitor	3/31/2017	Biennial	3/31/2019	170232394
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330156
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Keysight	7720	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annuai	6/4/2019	MY53401181
Agilent	8753ES	S-Parameter Vector Network Analyzer	8/30/2018	Annual	8/30/2019	MY40003841
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
SPEAG	DAK-3.5	Dielectric Assessment Kit	5/15/2018	Annual	5/15/2019	1070
SPEAG	EX3DV4	SAR Probe	7/20/2018	Agnual	7/20/2019	7410
SPEAG	DAE4	Dasy Data Acquisition Electronics	7/11/2018	Annual	7/11/2019	1322
SPEAG	ES3DV3	SAR Probe	3/13/2018	Annual	3/13/2019	3319
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/7/2018	Annual	3/7/2019	1368
Anritsu	MA2411B	Puise Power Sensor	3/2/2018	Annual	3/2/2019	1207364
Anritsu	MA2411B	Puise Power Sensor	3/2/2018	Annual	3/2/2019	1339018
Anritsu	ML2495A	Power Meter	10/22/2017	Annual	10/22/2018	1328004
Aglient	N5182A	MXG Vector Signal Generator	4/18/2018	Annual	4/18/2019	MY47420800
Seekonk	NC-100	Torque Wrench	7/11/2018	Annual	7/11/2019	N/A
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Narda	4014C-6	4 - 8 GHz SMA 6 dB Directional Coupler	CBT	N/A	СВТ	N/A

Note: CBT (Calibrated Before Testing). Prior to testing, the measurement paths containing a cable, amplifier, attenuator, coupler or filter were connected to a calibrated source (i.e. a signal generator) to determine the losses of the measurement path.

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

	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Team Lead Engineer	BRODIE HALBFOSTER
Approved By:	Kaitlin O'Keefe	Senior Technical Manager	3KOK-

Object:	Date Issued:	Page 1 of 4
D2450V2 – SN: 797	09/11/2018	

DIPOLE CALIBRATION EXTENSION

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

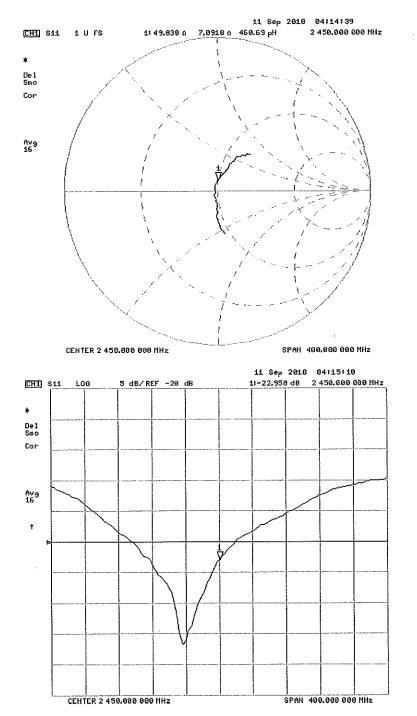
- 1. The measured SAR does not deviate more than 10% from the target on the calibration certificate.
- 2. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20dB minimum return-loss requirement.
- 3. The measurement of real or imaginary parts of impedance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

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

Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 20.0 dBm	Measured Head SAR (1g) W/kg @ 20.0 dBm	Deviation 1g (%)	Certificate SAR Target Head (10g) W/kg @ 20.0 dBm	Measured Head SAR (10g) W/kg @ 20.0 dBm	Deviation 10g (%)			Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Impedance	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
9/11/2017	9/11/2018	1.152	5.27	5.52	4.74%	2.48	2.54	2.42%	53.8	49.8	4	7.4	7.1	0.3	-21.9	-23	-4.80%	PASS

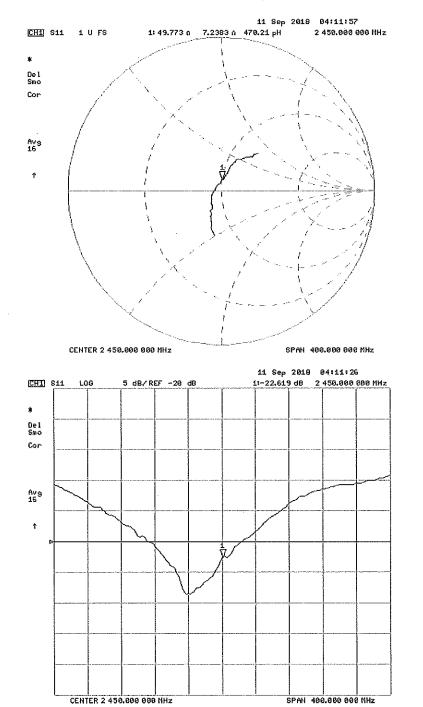
Calibration Date	Extension Date		Certificate SAR Target Body (1g) W/kg @ 20.0 dBm			Certificate SAR Target Body (10g) W/kg @ 20.0 dBm	(10a) W/ka @	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real		Certificate Impedance Body (Ohm) Imaginary		Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
9/11/2017	9/11/2018	1.152	5.11	5.17	1.17%	2.42	2.37	-2.07%	49.7	49.8	0.1	9.1	7.2	1.9	-20.9	-22.6	-8.20%	PASS

Object:	Date Issued:	Dogo 2 of 4
D2450V2 – SN: 797	09/11/2018	Page 2 of 4



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Page 3 of 4
D2450V2 SN: 797	09/11/2018	Page 3 of 4



Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Page 4 of 4
D2450V2 - SN: 797	09/11/2018	

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PC Test

Client



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Swiss Calibration Service

Accreditation No.: SCS 0108

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新学会。1995年1月1日,王书·西方中部合林

Certificate No: D2450V2-719 Aug17

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CALIBRATION CERTIFICATE D2450V2 - SN:719 Object Calibration procedure(s) QA CAL-05.v9 Calibration procedure for dipole validation kits above 700 MHz Extended August 17, 2017 (1998) (1998) (1998) Calibration date: This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate. All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%. Calibration Equipment used (M&TE critical for calibration) Primary Standards lD # Cal Date (Certificate No.) Scheduled Calibration Power meter NRP SN: 104778 04-Apr-17 (No. 217-02521/02522) Apr-18 Power sensor NRP-Z91 SN: 103244 04-Apr-17 (No. 217-02521) Apr-18 Power sensor NRP-Z91 SN: 103245 04-Apr-17 (No. 217-02522) Apr-18 Reference 20 dB Attenuator SN: 5058 (20k) 07-Apr-17 (No. 217-02528) Apr-18 Type-N mismatch combination SN: 5047.2 / 06327 07-Apr-17 (No. 217-02529) Apr-18 Reference Probe EX3DV4 SN: 7349 31-May-17 (No. EX3-7349_May17) May-18 DAE4 SN: 601 28-Mar-17 (No. DAE4-601_Mar17) Mar-18 Secondary Standards 1D # Check Date (in house) Scheduled Check Power meter EPM-442A SN: GB37480704 07-Oct-15 (in house check Oct-16) In house check: Oct-18 Power sensor HP 8481A SN: US37292783 07-Oct-15 (in house check Oct-16) In house check: Oct-18 Power sensor HP 8481A SN: MY41092317 07-Oct-15 (in house check Oct-16) In house check: Oct-18 RF generator R&S SMT-06 SN: 100972 15-Jun-15 (in house check Oct-16) In house check: Oct-18 Network Analyzer HP 8753E SN: US37390585 18-Oct-01 (in house check Oct-16) In house check: Oct-17 Name Function Signature Calibrated by: Michael Weber Laboratory Technician Approved by: Katja Pokovic Technical Manager Issued: August 17, 2017 This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Certificate No: D2450V2-719_Aug17

Calibration Laboratory of

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





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S Swiss Calibration Service

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

Glossarv:

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

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"

Additional Documentation:

e) 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%.

Accreditation No.: SCS 0108

Measurement Conditions

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

DASY Version	DASY5	V52.10.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	2450 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	39.2	1.80 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	37.8 ± 6 %	1.86 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	13.3 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	51.9 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 15 W/kg

SAR measured	250 mW input power	6.15 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	24.3 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	52.7	1.95 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	51.9 ± 6 %	2.03 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	12.8 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	50.1 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	6.00 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	23.7 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	55.7 Ω + 7.0 jΩ
Return Loss	- 21.4 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	51.4 Ω + 8.1 jΩ
Return Loss	- 21.8 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.150 ns

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

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

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

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	September 10, 2002

DASY5 Validation Report for Head TSL

Date: 17.08.2017

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 719

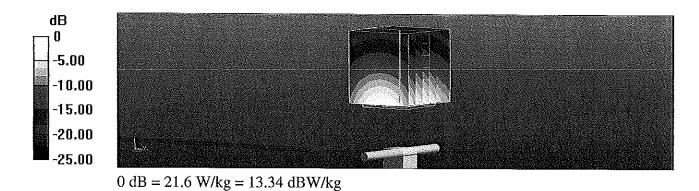
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; $\sigma = 1.86$ S/m; $\epsilon_r = 37.8$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

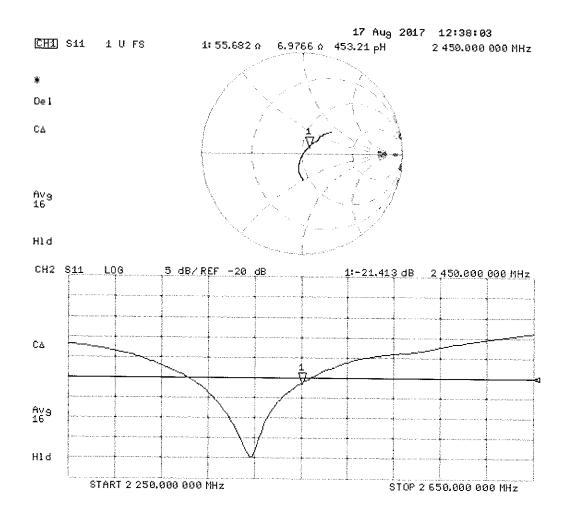
DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(8.12, 8.12, 8.12); Calibrated: 31.05.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 28.03.2017
- Phantom: Flat Phantom 5.0 (front); Type: QD 000 P50 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 112.8 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 26.9 W/kg **SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.15 W/kg** Maximum value of SAR (measured) = 21.6 W/kg





DASY5 Validation Report for Body TSL

Date: 17.08.2017

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 719

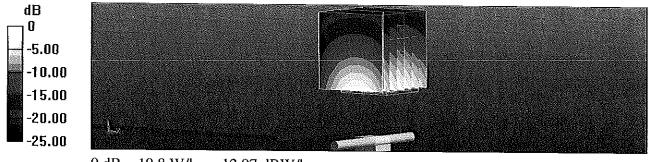
Communication System: UID 0 - CW; Frequency: 2450 MHz Medium parameters used: f = 2450 MHz; $\sigma = 2.03$ S/m; $\varepsilon_r = 51.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

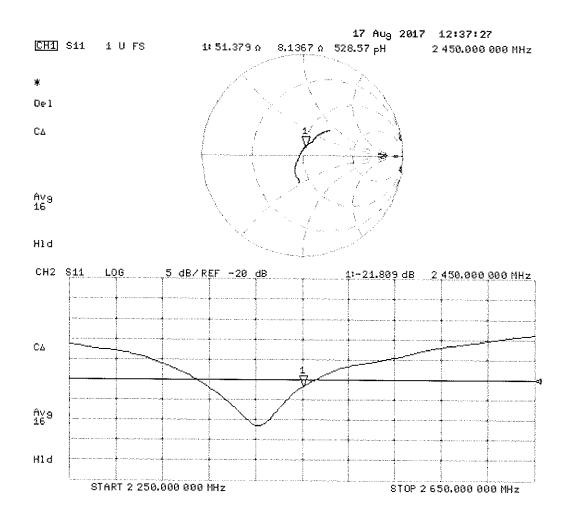
- Probe: EX3DV4 SN7349; ConvF(8.1, 8.1, 8.1); Calibrated: 31.05.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 28.03.2017
- Phantom: Flat Phantom 5.0 (back); Type: QD 000 P50 AA; Serial: 1002
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 103.0 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 25.2 W/kg SAR(1 g) = 12.8 W/kg; SAR(10 g) = 6 W/kg Maximum value of SAR (measured) = 19.8 W/kg



0 dB = 19.8 W/kg = 12.97 dBW/kg





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http://www.pctest.com



Certification of Calibration

Object

D2450V2 - SN: 719

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

07/18/2018

Extended Calibration date:

Description:

SAR Validation Dipole at 2450 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	E4438C	ESG Vector Signal Generator	3/24/2017	Biennial	3/24/2019	MY42082385
Agilent	8753ES	S-Parameter Network Analyzer	9/14/2017	Annual	9/14/2018	US39170118
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Anritsu	ML2495A	Power Meter	11/28/2017	Annual	11/28/2018	1039008
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1207364
Anritsu	MA2411B	Pulse Power Sensor	11/15/2017	Annual	11/15/2018	1339007
Control Company	4040	Therm./Clock/Humidity Monitor	3/31/2017	Biennial	3/31/2019	170232394
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330156
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annual	6/4/2019	MY53401181
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Mini-Circuits	NLP-2950+	Low Pass Filter DC to 2700 MHz	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2209-10	Bidirectional Coupler	CBT	N/A	CBT	N/A
Pasternack	PE5011-1	Torque Wrench	7/19/2017	Biennial	7/19/2019	N/A
SPEAG	DAE4	Dasy Data Acquisition Electronics	3/7/2018	Annual	3/7/2019	1368
SPEAG	DAE4	Dasy Data Acquisition Electronics	8/9/2017	Annual	8/9/2018	1323
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/12/2017	Annual	9/12/2018	1091
SPEAG	ES3DV3	SAR Probe	3/13/2018	Annual	3/13/2019	3319
SPEAG	ES3DV3	SAR Probe	8/14/2017	Annual	8/14/2018	3332

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

	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Test Engineer	BRODIE HALBFOSTER
Approved By:	Kaitlin O'Keefe	Senior Technical Manager	XOK

Object:	Date Issued:	Dogo 1 of 4
D2450V2 – SN: 719	07/18/2018	Page 1 of 4

DIPOLE CALIBRATION EXTENSION

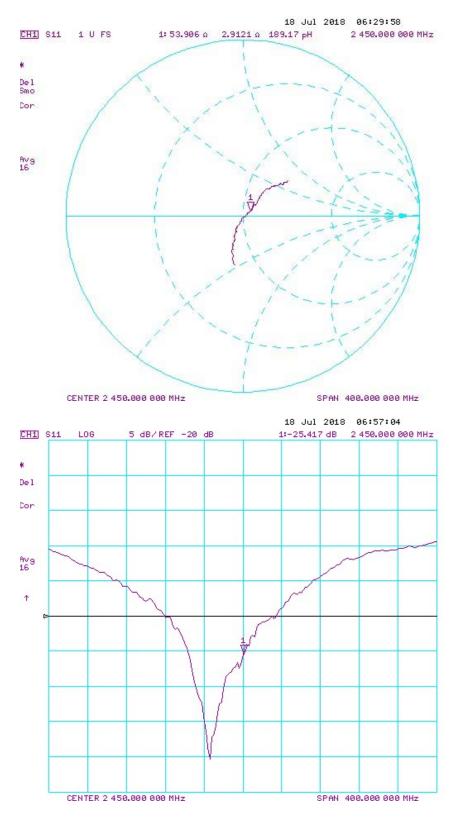
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

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

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

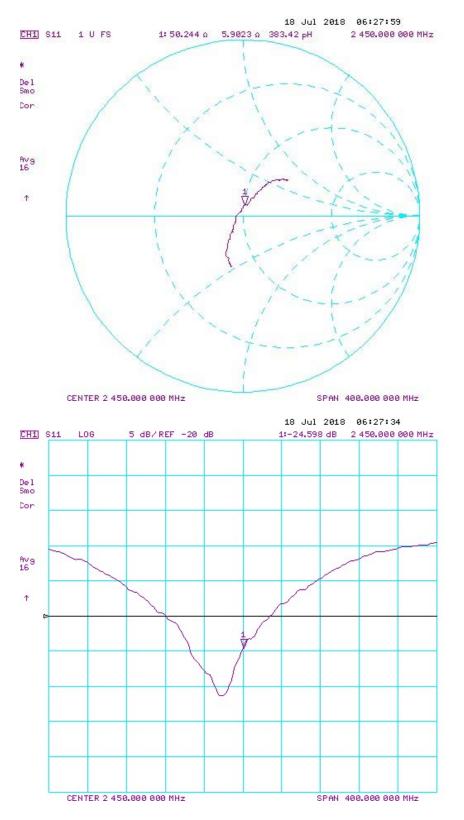
Date	Extension Date	Certificate Electrical Delay (ns)	W/kg @ 20.0 dBm	dBm	(%)	w/kg @ 20.0 dBm	(10a) W/ka @		Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Head (dB)	Deviation (%)	
8/17/2017	7/18/2018	1.150	5.19	5.46	5.20%	2.43	2.51	3.29%	55.7	53.9	1.8	7.0	2.9	4.1	-21.4	-25.4	-18.70%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Body (1g) W/kg @ 20.0 dBm	Measured Body SAR (1g) W/kg @ 20.0 dBm	(0/)	Certificate SAR Target Body (10g) W/kg @ 20.0 dBm	(40-) Million (2)	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary	Measured Impedance Body (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
8/17/2017	7/18/2018	1.150	5.01	5.19	3.59%	2.37	2.38	0.42%	51.4	50.2	1.2	8.1	5.9	2.2	-21.8	-24.6	-12.80%	PASS

Object:	Date Issued:	Daga 2 of 4
D2450V2 – SN: 719	07/18/2018	Page 2 of 4



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Dogo 2 of 4
D2450V2 – SN: 719	07/18/2018	Page 3 of 4



Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Daga 4 of 4
D2450V2 – SN: 719	07/18/2018	Page 4 of 4

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

PC Test

Client



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Accreditation No.: SCS 0108

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

Certificate No: D750V3-1161_Oct18

CALIBRATION CERTIFICATE

Object	D750V3 - SN:116	51	
Calibration procedure(s)	QA CAL-05.v10 Calibration proce	dure for dipole validation kits abo	ve 700 MHz
Calibration date:	October 19, 2018	1	BN 10-30-2018
	-	onal standards, which realize the physical uni robability are given on the following pages and	ts of measurements (SI).
All calibrations have been conducte	ed in the closed laborator	ry facility: environment temperature (22 \pm 3)°C	and humidity < 70%.
Calibration Equipment used (M&TE	critical for calibration)		
Primary Standards	1D #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19
Papandan, Standarda		Charle Data (in basis)	
Secondary Standards		Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19
	Name	Function	Signature
Calibrated by:	Manu Seitz	Laboratory Technician	
		la l	
Approved by:	Katja Pokovic	Technical Manager	fills
This calibration certificate shall not	be reproduced except in	full without written approval of the laboratory	Issued: October 22, 2018

Calibration Laboratory of

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





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

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) 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"

Additional Documentation:

e) 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%.

Accreditation No.: SCS 0108

Measurement Conditions

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

DASY Version	DASY5	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.8 ± 6 %	0.89 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	11.00	

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.02 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.03 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	1.32 W/kg

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.1 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.11 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	8.43 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.39 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	5.55 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	55.6 Ω - 1.9 jΩ
Return Loss	- 25.0 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	50.6 Ω - 4.2 jΩ
Return Loss	- 27.6 dB

General Antenna Parameters and Design

Electrical Delay (one direction) 1.032 ns		
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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
Manufactured on	November 19, 2015

DASY5 Validation Report for Head TSL

Date: 19.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1161

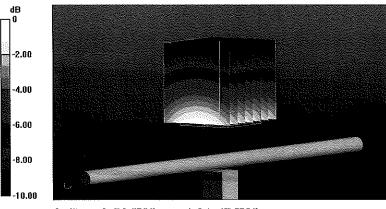
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.89$ S/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.22, 10.22, 10.22) @ 750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 58.51 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 3.04 W/kg SAR(1 g) = 2.02 W/kg; SAR(10 g) = 1.32 W/kg Maximum value of SAR (measured) = 2.70 W/kg



0 dB = 2.70 W/kg = 4.31 dBW/kg

E le <u>V</u>iew <u>C</u>hannel Sw<u>e</u>ep Ca	Ibration <u>Trace Scale Marker</u>	1: 750.000000 MHz 112.30 pF 2: 750.000000 MHz	1.8896 Ω
Ch1: Start 550.000 MHz		nning franzezza. 1999 - Alexandro Martinezza, antikar alexandro de Alexandro de Alexandro de Alexandro de Alexandro de Alexandro	Stop 950.000 MHz
10.00 10.00 5.00		> 1; 750.00000 MHz	z -2\$.015 dB
-15.00 -20.00 -25.00 -30.00 -35.00 -40.00 Ch 1 Avg = 20 Ch 1: Start 550.000 MHz			Stop 950.000 MHz

DASY5 Validation Report for Body TSL

Date: 19.10.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1161

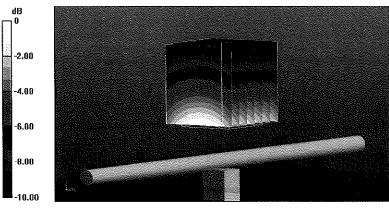
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.96$ S/m; $\varepsilon_r = 55.1$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.19, 10.19, 10.19) @ 750 MHz; Calibrated: 30.12.2017
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 57.57 V/m; Power Drift = -0.02 dB Peak SAR (extrapolated) = 3.18 W/kg SAR(1 g) = 2.11 W/kg; SAR(10 g) = 1.39 W/kg Maximum value of SAR (measured) = 2.83 W/kg



0 dB = 2.83 W/kg = 4.52 dBW/kg

Impedance Measurement Plot for Body TSL

Elle View Channel Sweep C	alibration Trace Scale Mark	er System Window Help 1: 750.000000 MHz 51.109 pF 2: 50.000000 MHz	-4.1521 Ω 2 41.709 mU -78.869 °
10.00 19 211		> 1: 750.00000 MH;	8top 950.000 MHz z -27.595 dB
5.00			
-10.00 -15.00 -20.00 p			
30.00 35.00			
40.00 Ch 1 Avg = [20 Ch 1: Start 550.000 MHz	 C* 1:Port		Stop 950.000 MHz

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Accreditation No.: SCS 0108

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PC Test Client

Certificate No: D750V3-1003_Jan18

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CALIBRATION CERTIFI	CATE	Ē

Object	D750V3 - SN:10	03	
Calibration procedure(s)	QA CAL-05.v9 Calibration proce	edure for dipole validation kits abo	ove 700 MHz
Calibration date:	January 15, 201	3	BN 01-25-2018 with of measurements (SI). and are part of the certificate. BN 01-25-2018
This calibration certificate docume	ents the traceability to nat	ional standards, which realize the physical un	lits of measurements (SI).
The measurements and the unce	rtainties with confidence p	probability are given on the following pages ar	nd are part of the certificate.
All calibrations have been conduc	ted in the closed inherete	ry facility: environment temperature (22 \pm 3)°	
		Ty facility: environment temperature $(22 \pm 3)^{\circ}$	C and humidity < 70%.
Calibration Equipment used (M&T	E critical for calibration)		
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02522)	Apr-18
Reference 20 dB Attenuator	SN: 5058 (20k)	07-Apr-17 (No. 217-02528)	Apr-18
Type-N mismatch combination	SN: 5047.2 / 06327	07-Apr-17 (No. 217-02529)	Apr-18
Reference Probe EX3DV4	SN: 7349	30-Dec-17 (No. EX3-7349_Dec17)	Dec-18
DAE4	SN: 601	26-Oct-17 (No. DAE4-601_Oct17)	Oct-18
Secondary Standards	ID#	Check Date (in house)	
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-16)	Scheduled Check
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-16)	In house check: Oct-18
RF generator R&S SMT-06	SN: 100972		in house check: Oct-18
Nelwork Analyzer HP 8753E	SN: US37390585	15-Jun-15 (in house check Oct-16)	In house check: Oci-18
,		18-Oct-01 (in house check Oct-17)	In house check: Oct-18
	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	Seef The
Approved by:	Katja Pokovic	Technical Manager	flag
This calibration certificate shall no	l be reproduced except in	full without written approval of the laboratory	issued: January 15, 2018

Certificate No: D750V3-1003_Jan18

Page 1 of 11

Calibration Laboratory of

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





Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

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

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) 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"

Additional Documentation:

e) 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%.

Measurement Conditions

_

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

DASY Version	DASY5	
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5.0 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.9 ± 6 %	0.90 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.10 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.28 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.37 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.42 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.0 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.15 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	8.58 W/kg ± 17.0 % (k=2)

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

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	53.8 Ω - 2.1 jΩ
Return Loss	- 27.6 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.2 Ω - 6.2 jΩ
Return Loss	- 24.0 dB

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 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
Manufactured on	January 21, 2009

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions

DASY system configuration, as far as not given on page 1 and 3.

Phantom

SAM Head Phantom

For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.98 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	7.94 W/kg ± 17.5 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.33 W/kg

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.05 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.22 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.38 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.52 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.01 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.06 W/kg ± 17.5 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
the second secon		
SAR measured	250 mW input power	1.38 W/kg

SAR result with SAM Head (Ear)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.67 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.70 W/kg ± 17.5 % (k=2)
	<u></u>	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	1.15 W/kg

DASY5 Validation Report for Head TSL

Date: 12.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1003

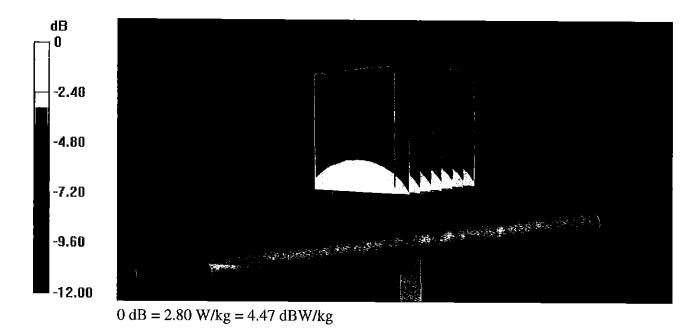
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.9$ S/m; $\epsilon_r = 40.9$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

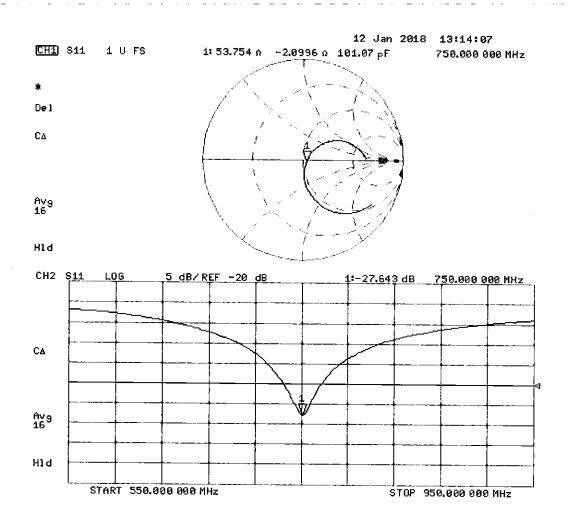
- Probe: EX3DV4 SN7349; ConvF(10.22, 10.22, 10.22); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

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

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 59.11 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 3.15 W/kg SAR(1 g) = 2.1 W/kg; SAR(10 g) = 1.37 W/kg Maximum value of SAR (measured) = 2.80 W/kg



Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 12.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1003

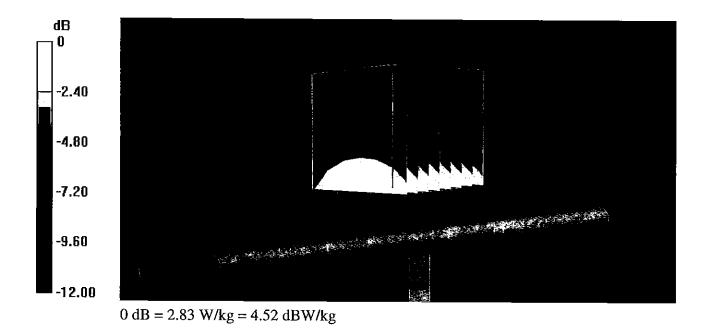
Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.96$ S/m; $\epsilon_r = 55$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

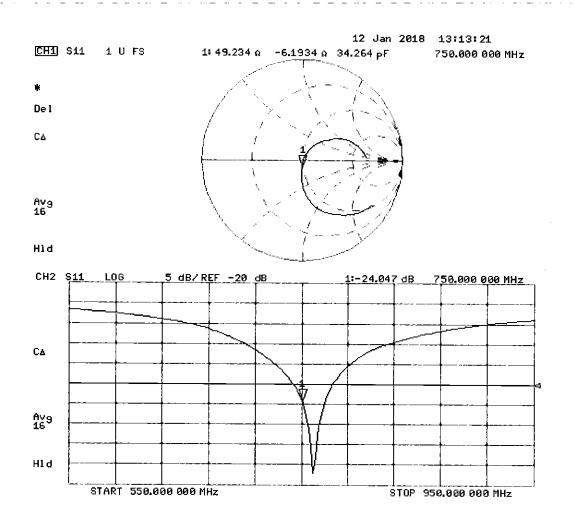
- Probe: EX3DV4 SN7349; ConvF(10.19, 10.19, 10.19); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x8x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 57.31 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 3.17 W/kg SAR(1 g) = 2.15 W/kg; SAR(10 g) = 1.43 W/kg Maximum value of SAR (measured) = 2.83 W/kg



Impedance Measurement Plot for Body TSL



Date: 15.01.2018

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1003

Communication System: UID 0 - CW; Frequency: 750 MHz Medium parameters used: f = 750 MHz; $\sigma = 0.9$ S/m; $\varepsilon_r = 44.2$; $\rho = 1000$ kg/m³ Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

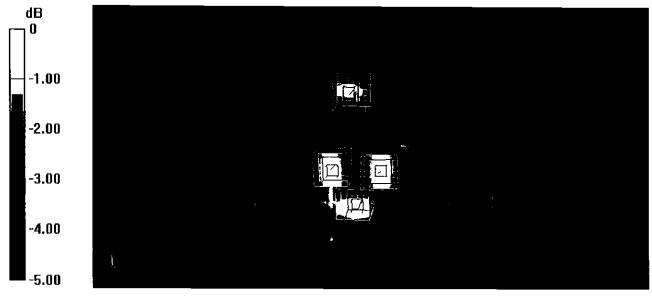
- Probe: EX3DV4 SN7349; ConvF(10.22, 10.22, 10.22); Calibrated: 30.12.2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 26.10.2017
- Phantom: SAM Head
- DASY52 52.10.0(1446); SEMCAD X 14.6.10(7417)

SAM Head/Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.79 V/m; Power Drift = -0.01 dB Peak SAR (extrapolated) = 2.89 W/kg SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.33 W/kg Maximum value of SAR (measured) = 2.58 W/kg

SAM Head/Mouth/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.85 V/m; Power Drift = -0.06 dB Peak SAR (extrapolated) = 2.94 W/kg SAR(1 g) = 2.05 W/kg; SAR(10 g) = 1.38 W/kg Maximum value of SAR (measured) = 2.62 W/kg

SAM Head/Neck/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 56.29 V/m; Power Drift = 0.04 dB Peak SAR (extrapolated) = 2.78 W/kg SAR(1 g) = 2.01 W/kg; SAR(10 g) = 1.38 W/kg Maximum value of SAR (measured) = 2.56 W/kg

SAM Head/Ear/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 51.01 V/m; Power Drift = 0.02 dB Peak SAR (extrapolated) = 2.31 W/kg SAR(1 g) = 1.67 W/kg; SAR(10 g) = 1.15 W/kg Maximum value of SAR (measured) = 2.11 W/kg



0 dB = 2.58 W/kg = 4.12 dBW/kg



PCTEST ENGINEERING LABORATORY, INC. 7185 Oakland Mills Road, Columbia, MD 21046 USA Tel. +1.410.290.6652 / Fax +1.410.290.6654

http://www.pctest.com



Certification of Calibration

Object

D750V3 - SN: 1003

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

1/15/2019

Extension Calibration date:

Description:

SAR Validation Dipole at 750 MHz.

Calibration Equipment used:

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
Agilent	8753ES	S-Parameter Network Analyzer	2/8/2018	Annual	2/8/2019	US39170122
Agilent	N5182A	MXG Vector Signal Generator	4/18/2018	Annual	4/18/2019	MY47420800
Amplifier Research	15S1G6	Amplifier	CBT	N/A	CBT	433971
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1207364
Anritsu	MA2411B	Pulse Power Sensor	3/2/2018	Annual	3/2/2019	1339018
Anritsu	ML2495A	Power Meter	10/21/2018	Annual	10/21/2019	941001
Control Company	4040	Therm./Clock/Humidity Monitor	3/31/2017	Biennial	3/31/2019	170232394
Control Company	4352	Ultra Long Stem Thermometer	5/2/2017	Biennial	5/2/2019	170330156
Keysight	772D	Dual Directional Coupler	CBT	N/A	CBT	MY52180215
Keysight Technologies	85033E	Standard Mechanical Calibration Kit (DC to 9GHz, 3.5mm)	6/4/2018	Annual	6/4/2019	MY53401181
MiniCircuits	VLF-6000+	Low Pass Filter	CBT	N/A	CBT	N/A
Mini-Circuits	BW-N20W5+	DC to 18 GHz Precision Fixed 20 dB Attenuator	CBT	N/A	CBT	N/A
Narda	4772-3	Attenuator (3dB)	CBT	N/A	CBT	9406
Pasternack	PE2208-6	Bidirectional Coupler	CBT	N/A	CBT	N/A
Seekonk	NC-100	Torque Wrench	7/11/2018	Annual	7/11/2019	N/A
SPEAG	DAE4	Dasy Data Acquisition Electronics	10/3/2018	Annual	10/3/2019	1558
SPEAG	DAE4	Dasy Data Acquisition Electronics	6/18/2018	Annual	6/18/2019	1334
SPEAG	DAK-3.5	Dielectric Assessment Kit	9/11/2018	Annual	9/11/2019	1091
SPEAG	EX3DV4	SAR Probe	8/23/2018	Annual	8/23/2019	7308
SPEAG	EX3DV4	SAR Probe	6/25/2018	Annual	6/25/2019	7409

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

	Name	Function	Signature
Calibrated By:	Brodie Halbfoster	Test Engineer	BRODIE HALBFOSTER
Approved By:	Kaitlin O'Keefe	Senior Technical Manager	XOK

Object:	Date Issued:	Page 1 of 4
D750V3 – SN: 1003	01/15/2019	Faye 1014

DIPOLE CALIBRATION EXTENSION

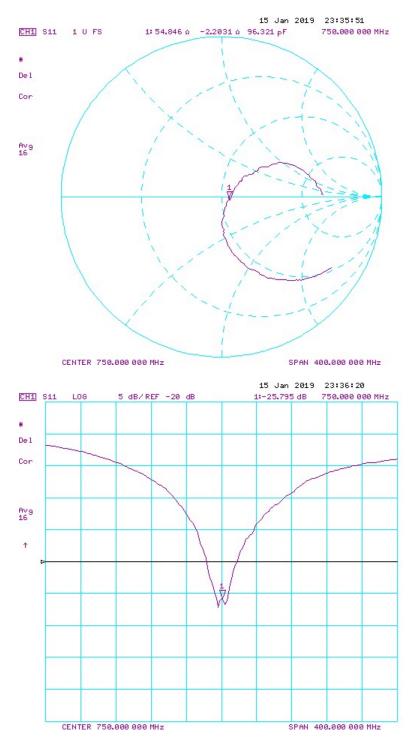
Per KDB 865664 D01, calibration intervals of up to three years may be considered for reference dipoles when it is demonstrated that the SAR target, impedance and return loss of a dipole have remained stable according to the following requirements:

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

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

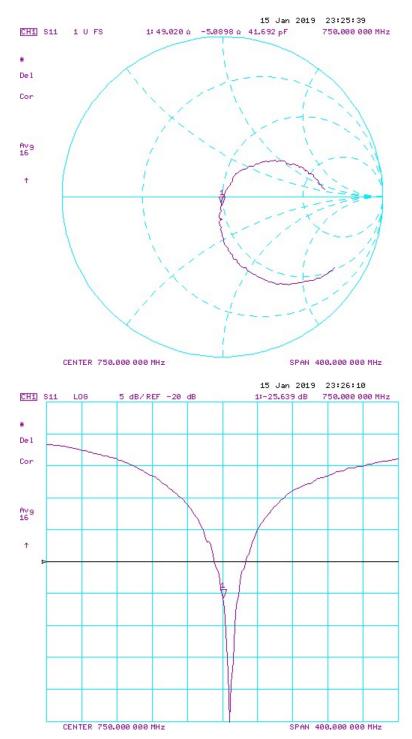
Calibration Date	Extension Date	Certificate Electrical Delay (ns)	Certificate SAR Target Head (1g) W/kg @ 23.0 dBm	Measured Head SAR (1g) W/kg @ 23.0 dBm		Certificate SAR Target Head (10g) W/kg @ 23.0 dBm	(40-) 10/0	Deviation 10g (%)	Certificate Impedance Head (Ohm) Real	Measured Impedance Head (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Head (Ohm) Imaginary	Measured Impedance Head (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Head (dB)	Measured Return Loss Head (dB)	Deviation (%)	PASS/FAIL
1/15/2018	1/15/2019	1.043	1.656	1.75	5.68%	1.08	1.15	6.09%	53.8	54.8	1	-2.1	-2.2	0.1	-27.6	-25.8	6.50%	PASS
Calibration Date	Extension Date	Certificate Electrical Delay (ns)		Measured Body SAR (1g) W/kg @ 23.0 dBm			(10a) W/ka	Deviation 10g (%)	Certificate Impedance Body (Ohm) Real	Measured Impedance Body (Ohm) Real	Difference (Ohm) Real	Certificate Impedance Body (Ohm) Imaginary	Measured Impedance Body (Ohm) Imaginary	Difference (Ohm) Imaginary	Certificate Return Loss Body (dB)	Measured Return Loss Body (dB)	Deviation (%)	PASS/FAIL
1/15/2018	1/15/2019	1.043	1.716	1.84	7.23%	1.14	1.23	7.71%	49.2	49	0.2	-6.2	-5.1	1.1	-24	-25.6	-6.80%	PASS

Object:	Date Issued:	Page 2 of 4
D750V3 – SN: 1003	01/15/2019	Page 2 of 4



Impedance & Return-Loss Measurement Plot for Head TSL

Object:	Date Issued:	Dogo 2 of 4
D750V3 – SN: 1003	01/15/2019	Page 3 of 4



Impedance & Return-Loss Measurement Plot for Body TSL

Object:	Date Issued:	Dage 4 of 4
D750V3 – SN: 1003	01/15/2019	Page 4 of 4

Calibration Laboratory of

PC Test

Client

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

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

Certificate No: D835V2-4d132_Jan19

CALIBRATION CERTIFICATE

Object	D835V2 - SN:4d	132	
			222
			BN V 02/06/2019
Calibration procedure(s)	QA CAL-05.v11		02/06/2019
	Calibration Proce	dure for SAR Validation Sources	between 0.7-3 GHz
			성경 2018년 2018년 1월 2019년 1월 2018년 1월 2019년 1월 201 2월 2019년 1월 2
	an a		an an an an an an a' a' a' a' an an an a'
Calibration date:			
Calibration date:	January 22, 2019		an an tha an
8		onal standards, which realize the physical un	
The measurements and the uncertain	ainties with confidence p	robability are given on the following pages an	d are part of the certificate.
All calibrations have been conducte	ed in the closed laborato	ry facility: environment temperature (22 ± 3)°0	C and humidity < 70%.
Calibration Equipment used (M&TE	E critical for calibration)		
	,		
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-18 (No. 217-02682)	Apr-19
Type-N mismatch combination	SN: 5047.2 / 06327	04-Apr-18 (No. 217-02683)	Apr-19
Reference Probe EX3DV4	SN: 7349	31-Dec-18 (No. EX3-7349_Dec18)	Dec-19
DAE4	SN: 601	04-Oct-18 (No. DAE4-601_Oct18)	Oct-19
Secondary Standards	D#	Check Date (in house)	Scheduled Check
Power meter EPM-442A	SN: GB37480704	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
Power sensor HP 8481A	SN: MY41092317	07-Oct-15 (in house check Oct-18)	In house check: Oct-20
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-18)	In house check: Oct-20
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19
	1		
	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	enter total and bound the terms are the second
			Sel Them
	ana ang ang ang ang ang ang ang ang ang	na kana da sa kasa ka sa ka sa ka	needed of the product of the second
Approved by:	Katja Pokovic	Technical Manager	and the second
	naya runuvic	тестинса маладег	A LIES-
			Issued: January 22, 2019
This calibration certificate shall not	be reproduced except in	full without written approval of the laboratory	<u>.</u>



S Schweizerischer Kalibrierdienst

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

Accreditation No.: SCS 0108

S Swiss Calibration Service

Calibration Laboratory of

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





Schweizerischer Kalibrierdienst

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

Accreditation No.: SCS 0108

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

Glossary:

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

Calibration is Performed According to the Following Standards:

- a) 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"

Additional Documentation:

e) 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%.

Measurement Conditions

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

DASY Version	DASY5	V52.10.2
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5.0 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	41.3 ± 6 %	0.92 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C		

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.44 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.59 W/kg ± 17.0 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.58 W/kg

SAR measured	250 mW input power	1.58 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.23 W/kg ± 16.5 % (k=2)

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.2	0.97 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.6 ± 6 %	0.99 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C		

SAR result with Body TSL

SAR averaged over 1 cm ³ (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.46 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	9.67 W/kg ± 17.0 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.61 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	6.35 W/kg ± 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	49.6 Ω - 3.6 jΩ
Return Loss	- 28.7 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.4 Ω - 6.2 jΩ
Return Loss	- 23.2 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.387 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

Appendix (Additional assessments outside the scope of SCS 0108)

Measurement Conditions

DASY system configuration, as far as not given on page 1 and 3.

Phantom

SAM Head Phantom

For usage with cSAR3DV2-R/L

SAR result with SAM Head (Top)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.35 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.38 W/kg ± 17.5 % (k=2)
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR averaged over 10 cm ³ (10 g) of Head TSL SAR measured	condition 250 mW input power	1.57 W/kg

SAR result with SAM Head (Mouth)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.47 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.86 W/kg ± 17.5 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.65 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.58 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Neck)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.36 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.42 W/kg ± 17.5 % (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	6.38 W/kg ± 16.9 % (k=2)

SAR result with SAM Head (Ear)

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition		
SAR measured	250 mW input power	2.02 W/kg	
SAR for nominal Head TSL parameters	normalized to 1W	8.06 W/kg ± 17.5 % (k=2)	
SAR averaged over 10 cm ³ (10 g) of Head TSL	condition		
SAR measured	250 mW input power	1.36 W/kg	
	200 million mpar power	1.00 Wing	

DASY5 Validation Report for Head TSL

Date: 17.01.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d132

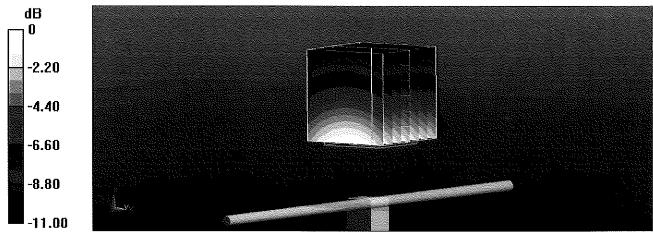
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.92$ S/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10, 10, 10) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

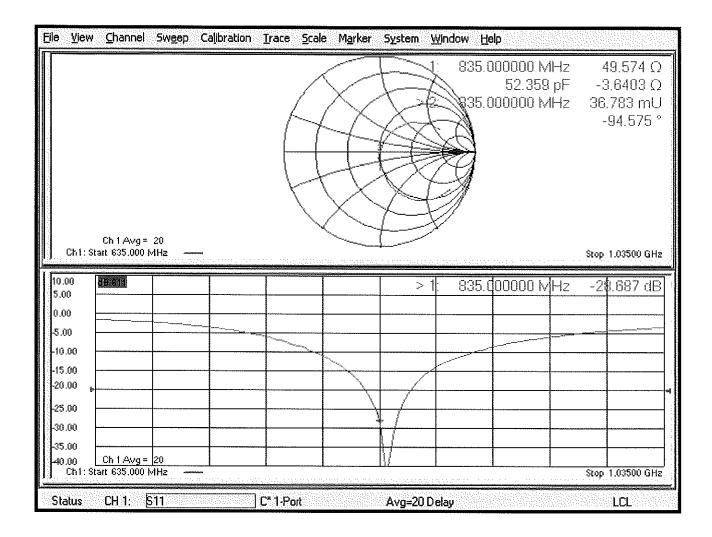
Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 34.24 V/m; Power Drift = -0.00 dB Peak SAR (extrapolated) = 3.73 W/kg SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.58 W/kg Maximum value of SAR (measured) = 3.28 W/kg



0 dB = 3.28 W/kg = 5.16 dBW/kg

Impedance Measurement Plot for Head TSL



DASY5 Validation Report for Body TSL

Date: 17.01.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d132

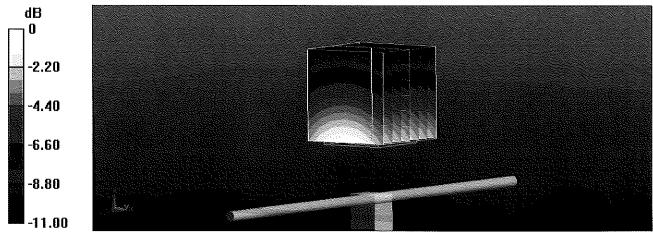
Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.99$ S/m; $\epsilon_r = 54.6$; $\rho = 1000$ kg/m³ Phantom section: Flat Section Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 SN7349; ConvF(10.15, 10.15, 10.15) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: Flat Phantom 4.9 (Back); Type: QD 00R P49 AA; Serial: 1005
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

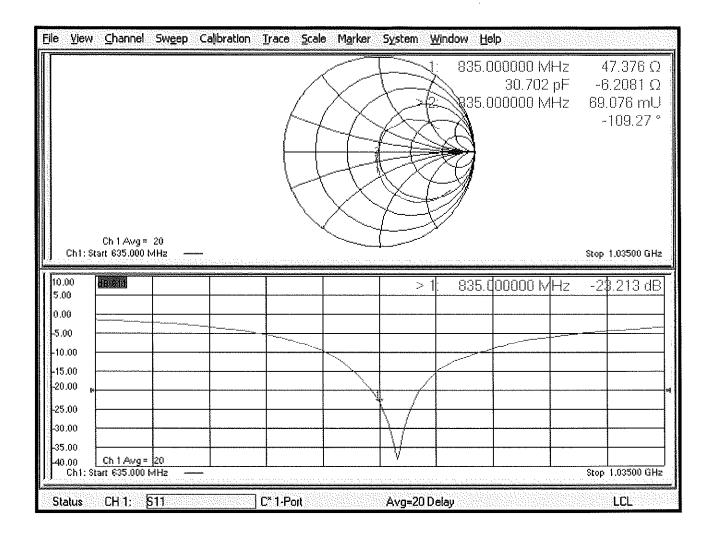
Dipole Calibration for Body Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mmReference Value = 63.32 V/m; Power Drift = -0.07 dB Peak SAR (extrapolated) = 3.64 W/kg **SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.61 W/kg** Maximum value of SAR (measured) = 3.26 W/kg



0 dB = 3.26 W/kg = 5.13 dBW/kg

Impedance Measurement Plot for Body TSL



DASY5 Validation Report for SAM Head

Date: 22.01.2019

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:4d132

Communication System: UID 0 - CW; Frequency: 835 MHz Medium parameters used: f = 835 MHz; $\sigma = 0.92$ S/m; $\varepsilon_r = 44.4$; $\rho = 1000$ kg/m³ Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

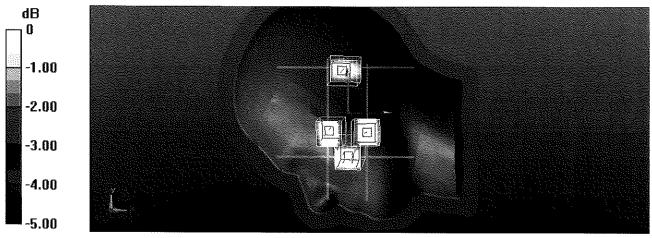
- Probe: EX3DV4 SN7349; ConvF(10, 10, 10) @ 835 MHz; Calibrated: 31.12.2018
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.10.2018
- Phantom: SAM Head
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

SAM/Head/Top/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 61.32 V/m; Power Drift = -0.04 dB Peak SAR (extrapolated) = 3.51 W/kg SAR(1 g) = 2.35 W/kg; SAR(10 g) = 1.57 W/kg Maximum value of SAR (measured) = 3.12 W/kg

SAM/Head/Mouth/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 62.25 V/m; Power Drift = 0.01 dB Peak SAR (extrapolated) = 3.67 W/kg SAR(1 g) = 2.47 W/kg; SAR(10 g) = 1.65 W/kg Maximum value of SAR (measured) = 3.24 W/kg

SAM/Head/Neck/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 60.69 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 3.43 W/kg SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.6 W/kg Maximum value of SAR (measured) = 3.08 W/kg

SAM/Head/Ear/Zoom Scan (8x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 55.79 V/m; Power Drift = 0.05 dB Peak SAR (extrapolated) = 2.94 W/kg SAR(1 g) = 2.02 W/kg; SAR(10 g) = 1.36 W/kg Maximum value of SAR (measured) = 2.62 W/kg



0 dB = 2.62 W/kg = 4.18 dBW/kg

Calibration Laboratory of

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





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PC Test Client

Certificate No: EX3-3914_Feb19

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:3914
Calibration procedure(s)	GA CAL-01 v9, QA DAL-12 v9, QA GAL-14 v5, QA GAL-23 v5, GA CAL-25 v7 Galbration procedure for dosimetric Eriteic probes
Calibration date:	February 19, 2019 02-26-2019
This calibration certificate docume	nts 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-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
DAE4	SN: 660	19-Dec-18 (No. DAE4-660_Dec18)	Dec-19
Reference Probe ES3DV2	SN: 3013	31-Dec-18 (No. ES3-3013_Dec18)	Dec-19
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
		<u> </u>	- tee-
Approved by:	Katja Pokovic	Technical Manager	alle
			Issued: February 20, 2019
This calibration certificate	e shall not be reproduced except in	full without written approval of the labora	atory.

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



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Glossary: tissue simulating liquid TSL sensitivity in free space NORMx,y,z sensitivity in TSL / NORMx,y,z ConvF diode compression point DCP crest factor (1/duty_cycle) of the RF signal CF A, B, C, D modulation dependent linearization parameters φ rotation around probe axis Polarization ϕ 9 rotation around an axis that is in the plane normal to probe axis (at measurement center), Polarization 9 i.e., $\vartheta = 0$ is normal to probe axis

Connector Angle information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) 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 handheld 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 9 = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (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*; *Dx,y,z*; *VRx,y,z*: *A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm $(\mu V/(V/m)^2)^A$	0.46	0.41	0.44	± 10.1 %
DCP (mV) ^B	98.0	104.4	100.8	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	С	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	135.8	± 3.3 %	± 4.7 %
		Y	0.00	0.00	1.00		149.1		
		Z	0.00	0.00	1.00		130.4		
10352-	Pulse Waveform (200Hz, 10%)	X	11.50	82.25	17.46	10.00	60.0	±2.9 %	± 9.6 %
AAA		Y	13.06	84.85	18.88		60.0		
		Z	15.00	85.74	19.04		60.0		
10353-	Pulse Waveform (200Hz, 20%)	X	15.00	85.61	17.12	6.99	80.0	± 1.7 %	± 9.6 %
AAA		Y	15.00	87.20	18.40		80.0		
		Z	15.00	86.88	18.11		80.0		
10354-	Pulse Waveform (200Hz, 40%)	X	15.00	85.07	15.18	3.98	95.0	± 1.1 %	±9.6 %
AAA		Y	15.00	89.57	18.09		95.0		
		Z	15.00	87.22	16.52		95.0		
10355-	Pulse Waveform (200Hz, 60%)	X	0.82	65.05	7.38	2.22	120.0	± 1.2 %	± 9.6 %
AAA		Y	15.00	94.17	19.03		120.0		
		Z	15.00	84.14	13.59		120.0		
10387-	QPSK Waveform, 1 MHz	Х	0.56	60.35	7.26	0.00	150.0	± 2.8 %	± 9.6 %
AAA		Y	0.80	64.04	10.54		150.0]	
		Z	0.51	60.00	6.79		150.0		
10388-	QPSK Waveform, 10 MHz	Х	2.18	68.24	15.67	0.00	150.0	± 1.2 %	± 9.6 %
AAA		Y	2.41	70.06	16.91		150.0		
		Z	2.04	67.38	15.28		150.0		
10396-	64-QAM Waveform, 100 kHz	X	2.71	69.05	18.06	3.01	150.0	± 0.7 %	± 9.6 %
AAA		Y	3.50	74.05	20.22		150.0		
		Z	2.76	69.32	18.16		150.0		
10399-	64-QAM Waveform, 40 MHz	X	3.50	67.38	15.86	0.00	150.0	± 2.2 %	± 9.6 %
AAA		Υ	3.57	67.89	16.25		150.0]	
		Z	3.38	66.82	15.58		150.0		
10414-	WLAN CCDF, 64-QAM, 40MHz	X	4.87	65.94	15.72	0.00	150.0	± 4.2 %	± 9.6 %
AAA		Y	4.84	65.99	15.74		150.0	1	
		Z	4.71	65.47	15.46		150.0		

Note: For details on UID parameters see Appendix

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

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6). ^B Numerical linearization parameter: uncertainty not required. ^E Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Sensor Model Parameters

	C1 fF	C2 fF	α V ⁻¹	T1 ms.V ⁻²	T2 ms.V⁻¹	T3 ms	T4 V⁻²	T5 V ⁻¹	Т6
Х	42.5	324.17	36.82	9.95	0.55	5.06	0.00	0.49	1.01
Y	42.9	310.45	33.81	12.34	0.63	5.02	2.00	0.15	1.01
Z	39.7	301.66	36.55	9.75	0.75	5.05	0.45	0.44	1.01

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	0.5
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm
	1

f (MHz) ^c	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
6	55.5	0.75	21.24	21.24	21.24	0.00	1.00	± 13.3 %
13	55.5	0.75	18.06	18.06	18.06	0.00	1.00	± 13.3 %
750	41.9	0.89	10.00	10.00	10.00	0.54	0.82	± 12.0 %
835	41.5	0.90	9.50	9.50	9.50	0.50	0.86	± 12.0 %
1750	40.1	1.37	8.16	8.16	8.16	0.41	0.80	± 12.0 %
1900	40.0	1.40	7.80	7.80	7.80	0.40	0.84	± 12.0 %
2300	39.5	1.67	7.44	7.44	7.44	0.37	0.84	± 12.0 %
2450	39.2	1.80	7.13	7.13	7.13	0.39	0.86	± 12.0 %
2600	39.0	1.96	7.11	7.11	7.11	0.39	0.89	± 12.0 %
3500	37.9	2.91	6.99	6.99	6.99	0.25	1.20	± 13.1 %
3700	37.7	3.12	6.75	6.75	6.75	0.25	1.20	± 13.1 %
5250	35.9	4.71	5.19	5.19	5.19	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.73	4.73	4.73	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.90	4.90	4.90	0.40	1.80	± 13.1 %

Calibration Parameter Determined in Head Tissue Simulating Media

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

^F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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

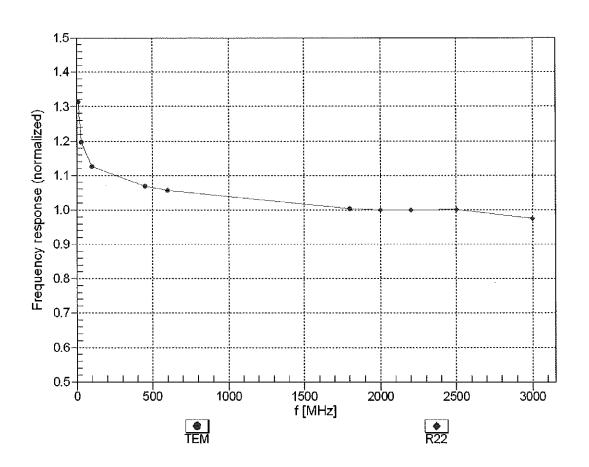
f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	9.73	9.73	9.73	0.54	0.84	± 12.0 %
835	55.2	0.97	9.46	9.46	9.46	0.50	0.80	± 12.0 %
1750	53.4	1.49	7.89	7.89	7.89	0.38	0.84	± 12.0 %
1900	53.3	1.52	7.60	7.60	7.60	0.29	1.03	± 12.0 %
2300	52.9	1.81	7.43	7.43	7.43	0.38	0.84	± 12.0 %
2450	52.7	1.95	7.34	7.34	7.34	0.33	0.87	± 12.0 %
2600	52.5	2.16	7.15	7.15	7.15	0.26	0.97	± 12.0 %
3500	51.3	3.31	6.88	6.88	6.88	0.25	1.15	± 13.1 %
3700	51.0	3.55	6.58	6.58	6.58	0.30	1.15	± 13.1 %
5250	48.9	5.36	4.61	4.61	4.61	0.50	1,90	± 13.1 %
5600	48.5	5.77	3.92	3.92	3.92	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.05	4.05	4.05	0.50	1,90	± 13.1 %

Calibration Parameter Determined in Body Tissue Simulating Media

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

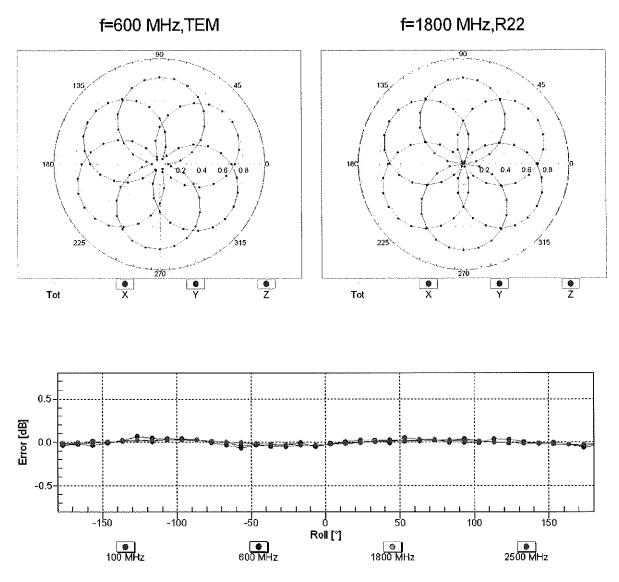
^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to \pm 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to \pm 5%. The uncertainty is the RSS of the ConvF 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

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



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

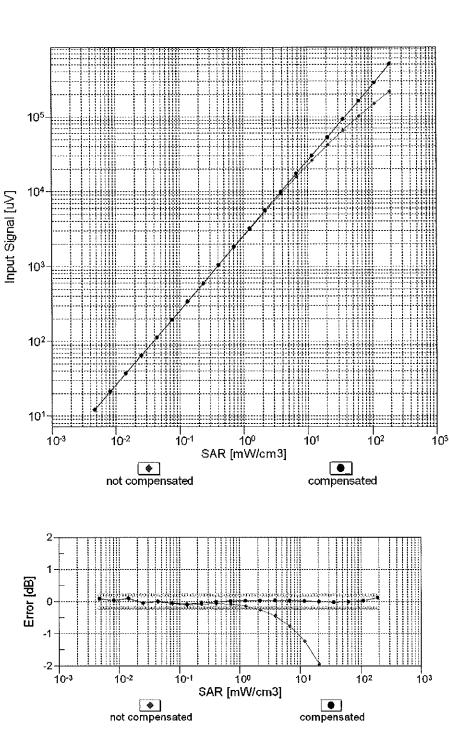
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)



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

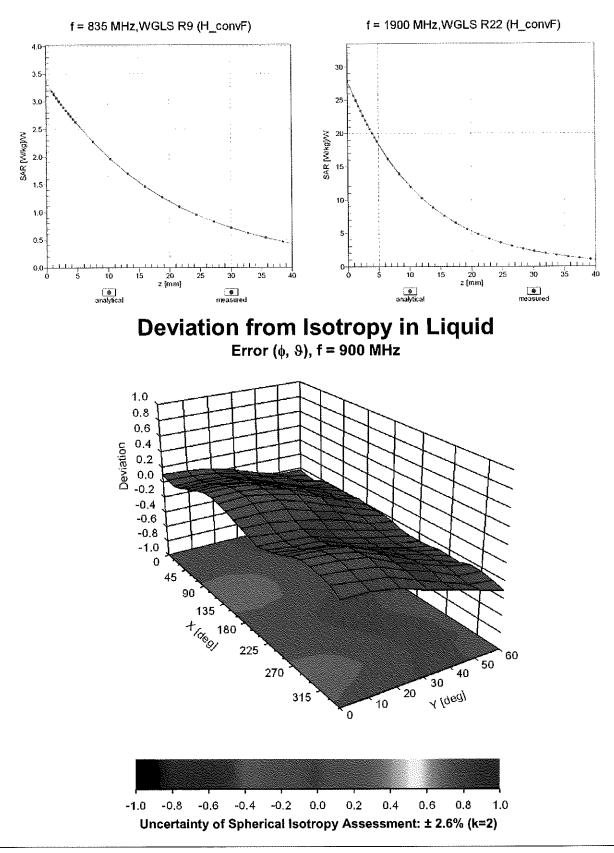
Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

February 19, 2019



Dynamic Range f(SAR_{head}) (TEM cell , f_{eval}= 1900 MHz)

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



Conversion Factor Assessment

EX3DV4-SN:3914

Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^E (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	$\pm 9.6\%$
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.10	± 9.6 %
10000	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10042	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	$\pm 9.6\%$
10044	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 %
10048		DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	± 9.6 %
10049		UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	$\pm 9.6\%$
10058	DAC				
10058		EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM WLAN	6.52	±9.6%
10059		IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)		2.12	± 9.6 %
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	±9.6%
10062	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	±9.6%
10063	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	±9.6%
10064	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6 %
10065	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	±9.6 %
10066	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	±9.6 %
10068	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAC	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	CAB	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9,6 %
10098	CAB	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	±9.6 %
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10102	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	±9.6 %
10104	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
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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	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	±9.6%
10115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	±9.6%
10116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	±9.6 %
10117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	±9.6 %
10118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	±9.6 %
10119	CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	±9.6 %
10140	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	±9.6 %
10141	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	±9.6 %
10142	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6 %
10143	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	±9.6 %
10144	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	±9.6%
10145	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAF	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	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	±9.6 %
10153	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	±9.6 %
10154	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAG	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	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	±9.6 %
10161	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	±9.6%
10167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	±9.6 %
10168	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	±9.6 %
10169	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	±9.6 %
10172	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAG		LTE-FDD	5.72	±9.6 %
10176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	±9.6 %
10177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	±9.6 %
10178	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	CAG	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	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	±9.6 %
10183	AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10187	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	±9.6 %
10188	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10189	AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10193	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197	CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10198	CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %
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10220	CAC	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	CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	±9.6 %
10225	CAB	UMTS-FDD (HSPA+)	WCDMA	5.97	±9.6 %
10226	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	±9.6 %
10227	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	±9.6 %
10228	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	±9.6 %
10229	CAC	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	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	±9.6 %
10233	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	±9.6 %
10234	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	±9.6%
10235	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	±9.6 %
10236	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	±9.6 %
10237	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	±9.6 %
10238	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	±9.6 %
10239	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10240	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	±9.6 %
10241		LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242		LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	±9.6 %
10243		LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	± 9.6 %
10244	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	±9.6 %
10245	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	±9.6 %
10246	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	±9.6 %
10247	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	±9.6 %
10248	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	±9.6 %
10249	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	±9.6 %
10250	CAF	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 CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10253		LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	±9.6 %
10255	CAF CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAA	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.20	± 9.6 %
10257	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 10-QAM)	LTE-TDD	9.96	±9.6 % ±9.6 %
10257	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD LTE-TDD	10.08 9.34	± 9.6 % ± 9.6 %
10259	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.94	$\pm 9.6\%$ $\pm 9.6\%$
10255	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.96	±9.6 %
10260	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.97	$\pm 9.6\%$
10261	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD		
10202	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83 10.16	±9.6 % ±9.6 %
10264	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	$\pm 9.6\%$
10265	CAF	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 %
10269	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.00	± 9.6 %
10270	CAF	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	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277	CAA	PHS (QPSK)	PHS	11.81	±9.6 %
10278	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	±9.6 %
10295	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10297	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %

10300	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	±9.6 %
10301	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WIMAX	12.03	±9.6 %
10302	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	WIMAX	12.57	± 9.6 %
10303	ААА	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	12.52	± 9.6 %
10304	AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	11.86	± 9.6 %
10305	AAA	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	WiMAX	15.24	± 9.6 %
10306	ААА	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	WIMAX	14.67	± 9.6 %
10307	ААА	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	WIMAX	14.49	± 9.6 %
10308	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WIMAX	14.46	± 9.6 %
10309	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	WIMAX	14.58	± 9.6 %
10310	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	WIMAX	14.57	± 9.6 %
10311	AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	±9.6 %
10313	AAA	IDEN 1:3	IDEN	10.51	± 9.6 %
10314	AAA	iDEN 1:6	IDEN	13.48	±9.6%
10315	AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	WLAN	1.71	±9.6 %
10316	AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	± 9.6 %
10317	AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	±9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 %
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	±9.6 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	±9.6 %
10401	AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	± 9.6 %
10402	AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	± 9.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	1.54	± 9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10417	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	WLAN	8.19	± 9.6 %
10422	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %
10426		IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	± 9.6 %
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)		8.41 8.28	$\pm 9.6\%$
10430	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD		± 9.6 % ± 9.6 %
10431	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38 8.34	± 9.6 %
10432 10433	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
	AAC	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 %
10434 10435	AAA AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10447	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	± 9.6 %
10448	AAD	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	AAC	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 %
10456	AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	± 9.6 %
10457	AAA	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	± 9.6 %
10458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	± 9.6 %
<u>10459</u> 10460		CDMA2000 (1xEV-DO, Rev. B, 3 carriers) UMTS-FDD (WCDMA, AMR)	CDMA2000	8.25	± 9.6 %
10460	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL	UCDMA	2.39 7.82	± 9.6 %
10401		Subframe=2,3,4,7,8,9)	LIE-IDD	1.02	± 9.6 %
10462	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL	LTE-TDD	8.30	± 9.6 %
10463	AAA	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.56	± 9.6 %
10464	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
10465	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL	LTE-TDD	8.32	± 9.6 %
10466	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL	LTE-TDD	8.57	± 9.6 %
10467	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10468	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10469	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	±9.6 %
10470	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10471	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10472	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10473	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10474	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10475	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL	LTE-TDD	8.57	± 9.6 %
10477	AAF	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,2,4,7,8,0)	LTE-TDD	8.32	± 9.6 %
10478	AAF	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,2,4,7,8,0)	LTE-TDD	8.57	± 9.6 %
10479	AAA	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
10480	AAA	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL	LTE-TDD	8.18	± 9.6 %
10481	AAA	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.45	± 9.6 %
10482	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL	LTE-TDD	7.71	± 9.6 %
10483	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL	LTE-TDD	8.39	± 9.6 %
10484	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL	LTE-TDD	8.47	± 9.6 %
10485	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL	LTE-TDD	7.59	± 9.6 %
		Subframe=2,3,4,7,8,9)			
10486	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	± 9.6 %
10487	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	± 9.6 %
10488	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	± 9.6 %
10489	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	± 9.6 %
10490	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	± 9.6 %
10491	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
		Subframe=2,3,4,7,8,9)		L	

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10492	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.41	±9.6 %
10493	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	± 9.6 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
10495	AAF	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL	LTE-TDD	8.37	± 9.6 %
10496	AAF	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL	LTE-TDD	8.54	± 9.6 %
10497	AAA	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL	LTE-TDD	7.67	± 9.6 %
10498	ААА	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL	LTE-TDD	8.40	± 9.6 %
10499	AAA	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.68	± 9.6 %
10500	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL	LTE-TDD	7.67	± 9.6 %
10501	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL	LTE-TDD	8.44	±9.6 %
10502	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL	LTE-TDD	8.52	±9.6 %
10503	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL	LTE-TDD	7.72	±9.6 %
10504	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL	LTE-TDD	8.31	± 9.6 %
10505	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL	LTE-TDD	8.54	± 9.6 %
10506	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 %
10507	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL	LTE-TDD	8.36	±9.6 %
10508	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL	LTE-TDD	8.55	± 9.6 %
10509	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,2,4,7,8,9)	LTE-TDD	7.99	± 9.6 %
10510	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.49	±9.6 %
10511	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.51	±9.6 %
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	± 9.6 %
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.42	± 9.6 %
10514	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±9.6 %
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.57	± 9.6 %
10517	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
10518	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 %
10519	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.12	± 9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	7.97	± 9.6 %
10522	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8,45	± 9.6 %
10523	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.08	± 9.6 %
10524	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10525	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10526	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10527	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	WLAN	8.21	± 9.6 %
10528	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10529	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10531	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	WLAN	8.43	± 9.6 %
10532	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10533	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	WLAN	8.38	± 9.6 %
10534	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	WLAN	8.45	± 9.6 %

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10535	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	WLAN	8.45	±9.6%
10536	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	WLAN	8.32	±9.6 %
10537	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6 %
10538	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	WLAN	8.54	±9.6 %
10540	AAB	IEEE 802.11ac WiFI (40MHz, MCS6, 99pc duty cycle)	WLAN	8.39	± 9.6 %
10541	AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	WLAN	8.46	± 9.6 %
10542	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	WLAN	8.65	±9.6 %
10543	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	WLAN	8.65	±9.6 %
10544	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	WLAN	8.47	± 9.6 %
10545	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10546	AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	WLAN	8.35	
10547	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	WLAN	******	±9.6%
10548	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)		8.49	±9.6%
10550	AAB		WLAN	8.37	± 9.6 %
		IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	WLAN	8.38	± 9.6 %
10551	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	WLAN	8.50	±96%
10552	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10553	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	WLAN	8.48	±9.6 %
10555	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	WLAN	8.47	±9.6 %
10556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	WLAN	8.50	± 9.6 %
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	WLAN	8.52	± 9.6 %
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc duty cycle)	WLAN	8.61	±9.6 %
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	WLAN	8.73	± 9.6 %
10561	AAC	IEEE 802.11ac WIFI (160MHz, MCS7, 99pc duty cycle)	WLAN	8.56	± 9.6 %
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	WLAN	8.69	± 9.6 %
10563	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	WLAN	8.77	± 9.6 %
10564	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty	WLAN	8.25	± 9.6 %
10004	1001		W LAIN	0.25	1.9.0 %
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty	WLAN	0.45	+0.6.9/
10000		cvcle)	WLAN	8.45	±9.6 %
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty	WLAN	0.42	
10500			WLAN	8.13	± 9.6 %
10567			34/1 441		
10007	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty	WLAN	8.00	± 9.6 %
40500					
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty	WLAN	8.37	± 9.6 %
40700		cycle)			
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty	WLAN	8.10	± 9.6 %
		cycle)			
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty	WLAN	8.30	±9.6 %
		cycle)			
10571	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6 %
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6 %
10573	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN	1.98	±9.6 %
10574	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	WLAN	1.98	±9.6 %
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty	WLAN	8.59	±9.6 %
	1	cycle)			
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty	WLAN	8.60	±96%
-		cycle)			
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty	WLAN	8.70	± 9.6 %
		cycle)	y a best bit 1		0.0 /0
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty	WLAN	8.49	± 9.6 %
			116/11	0.40	± 0.0 /0
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty	WLAN	8.36	± 9.6 %
10010	1,004	cvcle)		0.30	
10580	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty	WLAN	8.76	± 9.6 %
10000	1.0.01	cvcle)	VVL/N	0.70	± 9.0 %
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty	WLAN	8.35	± 9.6 %
10001	10004		WLAN	0.30	19.0 %
10500		Cycle)	10/1 0.8.1		1000
10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty	WLAN	8.67	± 9.6 %
40500	+				
10583	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10584	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	±9.6 %
	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10585					
10585 10586 10587	AAB AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle) IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	WLAN WLAN	8.49	± 9.6 % ± 9.6 %

10588	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	±9.6 %
10589	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6 %
10590	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	±9.6 %
10591	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	WLAN	8.63	± 9.6 %
10592	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10593	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	WLAN	8.64	±9.6 %
10594	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	±9.6 %
10595	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	WLAN	8.74	<u>± 9.6 %</u>
10596	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc duty cycle)	WLAN	8.71	± 9.6 %
10597	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10598	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc duty cycle)	WLAN	8.50	± 9.6 %
10599	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10600	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	WLAN	8.88	±9.6 %
10601	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)	WLAN	8.82	±9.6 %
10602	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	WLAN	8.94	±9.6 %
10603	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	WLAN	9.03	±9.6 %
10604	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10605	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	WLAN	8.97	± 9.6 %
10606	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10607	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)	WLAN	8.64	±9.6 %
10608	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	WLAN	8.77	±9.6 %
10609	AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	WLAN	8.57	± 9.6 %
10610	AAB	IEEE 802.11ac WIFI (20MHz, MCS3, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10611	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10612	AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10613	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10614	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	WLAN	8.59	± 9.6 %
10615	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10616	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10617	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10618	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	WLAN	8.58	± 9.6 %
10619	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10610	AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	WLAN	8.87	± 9.6 %
10621	AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
10622	AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	WLAN	8.68	± 9.6 %
10623	AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10624	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	WLAN	8.96	± 9.6 %
10625	AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	WLAN	8.96	± 9.6 %
10626	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10627	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	WLAN	8.88	± 9.6 %
10628	AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	WLAN	8.71	± 9.6 %
10629	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	WLAN	8.85	± 9.6 %
10630	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	WLAN	8.72	± 9.6 %
10631	AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10632	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	± 9.6 %
10633	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10633	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.80	± 9.6 %
10635	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10635	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10636	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10637	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	WLAN	8.86	± 9.6 %
10638	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	WLAN	8.85	± 9.6 %
10639		IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	WLAN	8.98	± 9.6 %
	AAC	IEEE 802.11ac WiFI (160MHz, MCS4, 90pc duty cycle)	WLAN	9.06	$\pm 9.6\%$
10641	AAC AAC	IEEE 802.11ac WiFI (160MHz, MCS6, 90pc duty cycle)	WLAN	9.06	± 9.6 %
		IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	8.89	± 9.6 %
10643	AAC		WLAN	9.05	$\pm 9.6\%$
10644	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	9.05	$\pm 9.6\%$
10645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)			
10646	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	± 9.6 %
10647	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	$\pm 9.6\%$
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	$\pm 9.6\%$
10652	AAD	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	$\pm 9.6\%$
10653	AAD	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	$\pm 9.6\%$
10654	AAD	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6,96	± 9.6 %

February 19, 2019

10655			LTE-TDD	7.21	± 9.6 %
10658	AAA Pulse Waveform (200Hz, 10%)		Test	10.00	± 9.6 %
10659	AAA	Pulse Waveform (200Hz, 20%)	Test	6.99	± 9.6 %
10660	AAA	Pulse Waveform (200Hz, 40%)	Test	3.98	± 9.6 %
10661	AAA	Pulse Waveform (200Hz, 60%)	Test	2.22	± 9.6 %
10662	AAA	Pulse Waveform (200Hz, 80%)	Test	0.97	± 9.6 %
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	± 9.6 %

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

Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland

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

Client PC Test

Certificate No: EX3-7409_Jun18

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN:7409	
Calibration procedure(s)	QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6 Calibration procedure for dosimetric E-field probes	3
	BIN 07/16/2018	Ş
Calibration date:	June 25, 2018	
	ments the traceability to national standards, which realize the physical units of measurements (SI). certainties with confidence probability are given on the following pages and are part of the certificate.	

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	lD	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
Reference Probe ES3DV2	SN: 3013	30-Dec-17 (No. ES3-3013_Dec17)	Dec-18
DAE4	SN: 660	21-Dec-17 (No. DAE4-660_Dec17)	Dec-18
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-17)	In house check: Oct-18

	Name	Function	Signature	
Calibrated by:	Claudio Leubler	Laboratory Technician)
				2
Approved by:	Katja Pokovic	Technical Manager	Jol Hy	4
			issued: June	26, 2018

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



Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizio svizzero di taratura Swiss Calibration Service

Accreditation No.: SCS 0108

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Calibration Laboratory of Schmid & Partner

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst

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

Accreditation No.: SCS 0108

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
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 9	9 rotation around an axis that is in the plane normal to probe axis (at measurement center),
	i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

- a) 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 handheld 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 9 = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx, y, z are only intermediate values, i.e., the uncertainties of NORMx, y, z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is
 implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included
 in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (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; Dx,y,z; VRx,y,z: A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx, y, z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Probe EX3DV4

SN:7409

Manufactured: Calibrated:

November 24, 2015 June 25, 2018

Calibrated for DASY/EASY Systems (Note: non-compatible with DASY2 system!)

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (μV/(V/m) ²) ^A	0.38	0.33	0.38	± 10.1 %
DCP (mV) ⁸	100.8	102.3	97.7	

Modulation Calibration Parameters

UID	Communication System Name		Α	В	C	D	VR	Unc [≞]
			dB	dB√μV		dB	mV	(k=2)
0	CW	X	0.0	0.0	1.0	0.00	157.1	±2.2 %
		Y	0.0	0.0	1.0		172.6	
		Z	0.0	0.0	1.0		175.7	

Note: For details on UID parameters see Appendix.

Sensor Model Parameters

	C1	C2	α	T1	T2	T3	T4	T5	T6
	fF	fF	V-1	ms.V⁻²	ms.V⁻¹	ms	V-2	V ^{~1}	
X	15.40	116.5	36.38	2.655	0.140	4.978	0.000	0.017	1.008
Y	27.94	206.6	35.20	4.338	0.095	4.989	1.642	0.000	1.004
Z	31.47	244.0	37.99	3.819	0.313	5.030	0.103	0.363	1.006

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

^A The uncertainties of Norm X,Y,Z do not affect the E²-field uncertainty inside TSL (see Pages 5 and 6). ^B Numerical linearization parameter: uncertainty not required.

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

f (MHz) ^c	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	41.9	0.89	9.91	9.91	9.91	0.44	0.90	± 12.0 %
835	41.5	0.90	9.67	9.67	9.67	0.46	0.85	± 12.0 %
1750	40.1	1.37	8.43	8.43	8.43	0.38	0.80	± 12.0 %
1900	40.0	1.40	8.05	8.05	8.05	0.38	0.84	± 12.0 %
2300	39.5	1.67	7.57	7.57	7.57	0.32	0.80	± 12.0 %
2450	39.2	1.80	7.23	7.23	7.23	0.34	0.86	± 12.0 %
2600	39.0	1.96	6.98	6.98	6.98	0.39	0.86	± 12.0 %
5250	35.9	4.71	5.20	5.20	5.20	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.77	4.77	4.77	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.82	4.82	4.82	0.40	1.80	± 13.1 %

Calibration Parameter Determined in Head Tissue Simulating Media

^c Frequency validity above 300 MHz of \pm 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to \pm 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is \pm 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 \pm 110 MHz.

^F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to \pm 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to \pm 5%. 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 frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

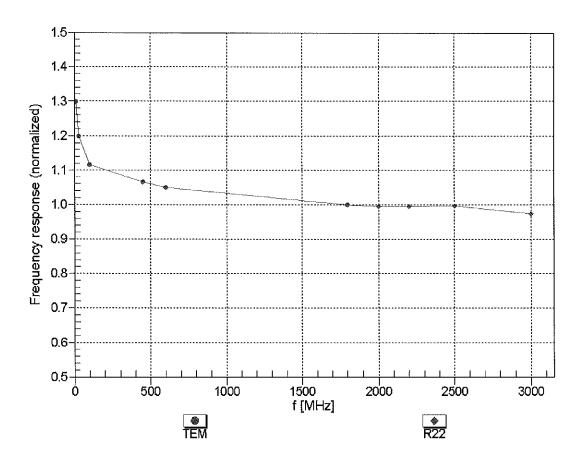
			-					
f (MHz) ^C	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	9.82	9.82	9.82	0.52	0.84	± 12.0 %
835	55.2	0.97	9.63	9.63	9.63	0.48	0.80	± 12.0 %
1750	53.4	1.49	7.91	7.91	7.91	0.36	0.93	± 12.0 %
1900	53.3	1.52	7.60	7.60	7.60	0.44	0.80	± 12.0 %
2300	52.9	1.81	7.36	7.36	7.36	0.38	0.88	± 12.0 %
2450	52.7	1.95	7.24	7.24	7.24	0.33	0.89	± 12.0 %
2600	52.5	2.16	7.07	7.07	7.07	0.32	0.96	± 12.0 %
5250	48.9	5.36	4.67	4.67	4.67	0.50	1.90	± 13.1 %
5600	48.5	5.77	4.25	4.25	4.25	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.32	4.32	4.32	0.50	1.90	± 13.1 %

Calibration Parameter Determined in Body Tissue Simulating Media

^C Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to \pm 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is \pm 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 \pm 110 MHz.

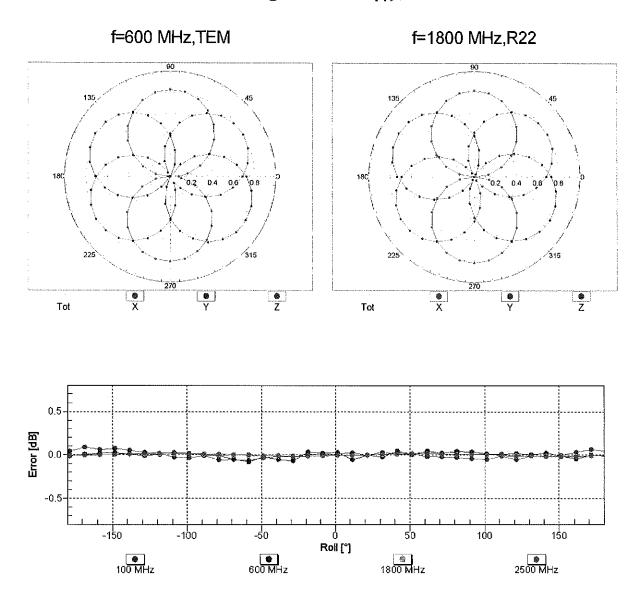
^F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty 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 frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.



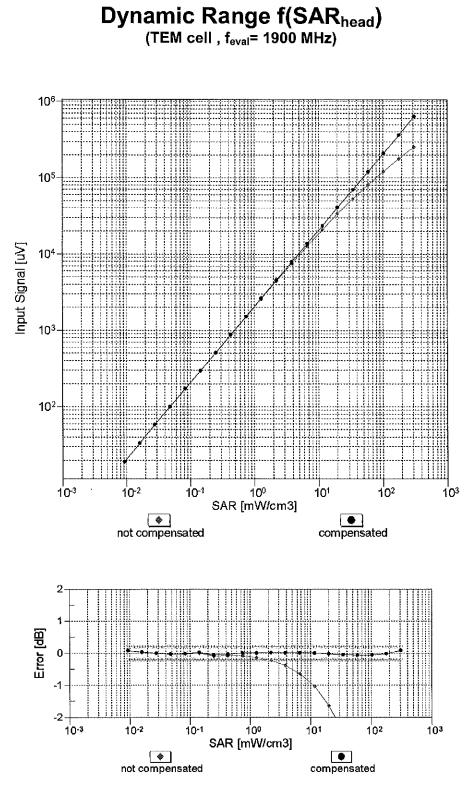
Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)

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

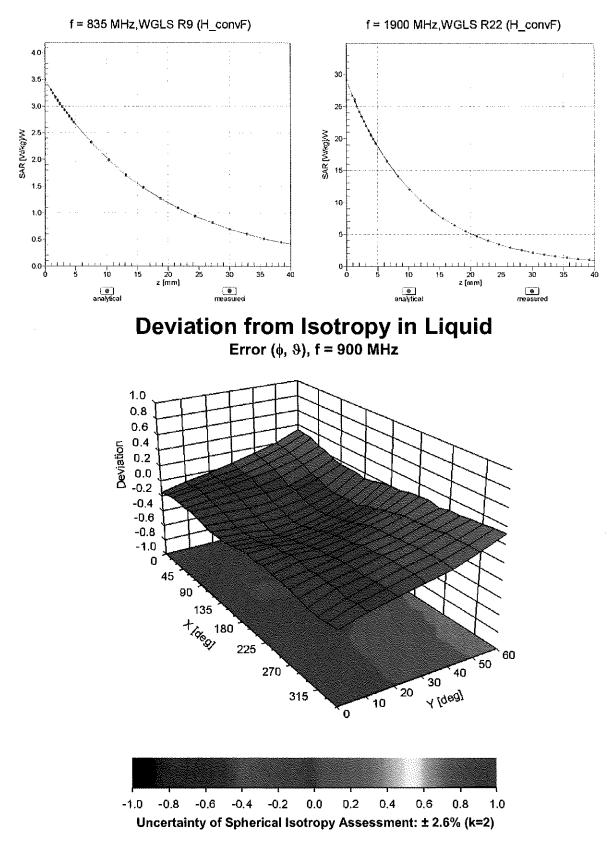


Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

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



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



Conversion Factor Assessment

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	41.5
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Appendix: Modulation Calibration Parameters

UID	Communication System Name		A dB	B dBõV	C	D dB	VR mV	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	157.1	± 2.2 %
		Y	0.00	0.00	1.00		172.6	
10010		Z	0.00	0.00	1.00		175.7	
10010- CAA	SAR Validation (Square, 100ms, 10ms)	X	1.25	60.42	5.97	10.00	20.0	±9.6 %
		Y	1.37	61.35	6.72		20.0	
40044		Z	1.46	61.54	7.06		20.0	
10011- CAB	UMTS-FDD (WCDMA)	×	0.71	66.47	12.38	0.00	150.0	± 9.6 %
		Y	1.49	76.31	19.52		150.0	
10012-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1	Z	0.80	65.38	13.27		150.0	
CAB	Mbps)	X	0.97	63.61	14.22	0.41	150.0	± 9.6 %
		Y Z	<u>1.14</u> 1.01	65.32 62.66	16.39		150.0	
10013-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	3.98	66.92	14.20 16.39	1.46	150.0 150.0	± 9.6 %
CAB	OFDM, 6 Mbps)		4.54	07.00				
		Y	4.51	67.09	17.14		150.0	
10021-	GSM-FDD (TDMA, GMSK)	Z X	4.51 2.93	66.48 68.02	16.81 10.47	9.39	150.0 50.0	± 9.6 %
DAC	-							
****		<u> </u>	5.30	74.12	13.20		50.0	
10023-	GPRS-FDD (TDMA, GMSK, TN 0)	Z	8.30	79.26	15.55		50.0	
DAC	GERS-FDD (TDWA, GWSK, TNU)	X	2.04	64.26	8.75	9.57	50.0	± 9.6 %
		Y Z	3.75 5.18	70.52	11.87		50.0	
10024- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	X	0.77	74.16 60.84	13.81 5.97	6.56	50.0 60.0	± 9.6 %
		Y	100.00	98.81	18.33		60.0	
		Z	7.39	79.44	14,17		60.0	
10025- DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	X	2.92	62.32	21.25	12.57	50.0	± 9.6 %
		Y	3.79	70.21	26.28		50.0	
10026-		Z	3.08	62.64	21.59		50.0	
DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	X	4.19	76.79	26.73	9.56	60.0	± 9.6 %
		Y Z	5.08 4.89	81.51	29.10		60.0	
10027- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	X	0.43	79.35 60.00	27.91 4.84	4.80	60.0 80.0	± 9.6 %
		Y	100.00	98.82	17.61		80.0	
		Ż	99,96	97.90	17.31		80.0	
10028- DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	X	0.29	60.00	4.20	3.55	100.0	± 9.6 %
		Y	100.00	100.72	17.79		100.0	
10029-		Z	0.57	63.31	6.83		100.0	
10029- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	X	3.08	70.55	22.84	7.80	80.0	± 9.6 %
		Y Z	3.50	73.17	24.28		80.0	
10030- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	X	3.45 0.52	72.07 60.00	23.57 4.79	5.30	80.0 70.0	± 9.6 %
		Y	1.54	67.33	9.06		70.0	
		Ż	1.17	65.26	8.49		70.0	
10031- CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	X	0.04	196.26	30.81	1.88	100.0	± 9.6 %
		Y	0.17	60.00	4.10		100.0	
		Z	15.90	60.96	1.69		100.0	

10032-	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Х	0.00	86.08	35.43	1.17	100.0	± 9.6 %
CAA		Y	99.99	344.89	100.44		100.0	
·		Υ Ζ	<u>99.99</u> 1.14	<u>344.89</u> 132.41	100.44		100.0	
10033- CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	X	0.95	60.75	6.54	5.30	70.0	± 9.6 %
		Y	4.98	80.79	18.23		70.0	
		Ζ	3.25	75.39	16.74		70.0	
10034- CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Х	3.04	65.72	5.34	1.88	100.0	± 9.6 %
		Y	1.68	70.56	12.82	····	100.0	
40005		Z	0.99	64.34	10.07	4 47	100.0	
10035- CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	X	24.75	218.80	26.78 12.15	1.17	100.0	± 9.6 %
		Y Z	1.37	69.43		,	100.0	
10036-	UTTT 902 15 1 Plusteeth (9 DDSV DU1)		0.77 0.94	62.85 60.83	8.95 6.63	5.30	70.0	± 9.6 %
CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Y	7.23	85.73	19.90	5.30	70.0	± 9.0 %
		Z	3.94	78.17	17.83		70.0	
10037-	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	X	<u> </u>	63.61	4.82	1.88	100.0	± 9.6 %
CAA	IEEE 802.15.1 Blueloo(II (8-DPSK, DH3)	^ Y	1.41	68.85	12.14	1.00	100.0	± 9.0 %
		r Z	0.93	63.88	9.84		100.0	
10038-	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	X	26.17	217.46	9.04 26.16	1.17	100.0	± 9.6 %
CAA		^ Y	1.45	70.29	12.67	1.17	100.0	1 9.0 %
		Z	0.78	63.02	9.17		100.0	
10039-	CDMA2000 (1xRTT, RC1)	X	21.96	306.20	30.49	0.00	150.0	± 9.6 %
CAB		Y	1.63			0.00	150.0	± 9.0 %
		Z	0.63	72.13 61.62	12.95 7.75		150.0	
10042- CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4- DQPSK, Halfrate)	X	1.01	60.95	6.26	7.78	50.0	± 9.6 %
		Y	1.74	65.58	9.03		50.0	· ·
		Z	1.74	65.58	9.34		50.0	
10044- CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	X	0.10	124.30	3.45	0.00	150.0	± 9.6 %
		Y	0.01	119.74	2.99		150.0	
		Z	0.14	123.41	9.03		150.0	
10048- CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	X	2.82	62.25	9.34	13.80	25.0	±9.6 %
		Y	3.46	64.98	10.90		25.0	
		Z	4.35	67.54	12.61		25.0	
10049- CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	X	2.47	64.28	8.96	10.79	40.0	± 9.6 %
		Y	3,27	67.55	10.82		40.0	
		Z	4.02	69.88	12.36		40.0	
10056- CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	×	2.81	66.64	10.78	9.03	50.0	± 9.6 %
		Y	11.82	86.24	20.09		50.0	
		Z	9.59	84.12	20.02		50.0	
10058- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	×	2.65	68.11	20.96	6.55	100.0	± 9.6 %
		Y	2.94	70.05	22.07		100.0	
		Z	2.91	69.15	21.44		100,0	
10059- CAB	IEEE 802.11b WIFI 2.4 GHz (DSSS, 2 Mbps)	X	0.95	64.02	14.39	0.61	110.0	± 9.6 %
		Y	1.14	66.10	16.82		110.0	
1		Z	1.00	63.23	14.55		110.0	
10060- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	X	1.76	81.26	19.48	1.30	110.0	± 9.6 %
		Y	100.00	150.16	40.00		110.0	
		Z	1.90	81.85	20.27		110.0	

10061- CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	X	1.18	69.71	16.58	2.04	110.0	± 9.6 %
		Y	1.94	78.32	21.99		110.0	
		Z	1.40	71.35	18.33		110.0	
10062- CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	X	3.80	66.99	15.87	0.49	100.0	± 9.6 %
		Y	4.35	67.21	16.69		100.0	
		Z	4.31	66.43	16.23		100.0	
10063- CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	X	3.81	67.06	15.96	0.72	100.0	± 9.6 %
		Y	4.36	67.29	16.77		100.0	
		Z	4.32	66.52	16.32		100.0	
10064- CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	X	3.97	67.23	16.12	0.86	100.0	± 9.6 %
		Y	4.56	67.40	16.91		100.0	
		Z	4.55	66.72	16.52		100.0	
10065- CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	X	3.85	66.82	16.06	1.21	100.0	± 9.6 %
		Y	4.42	67.15	16.92		100.0	
40000		Z	4.42	66.52	16.58		100.0	
10066- CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	X	3.83	66.65	16.06	1.46	100.0	± 9.6 %
		Y	4.41	67.05	17.01		100.0	
		Z	4.42	66.49	16.71		100.0	
10067- CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 36 Mbps)	X	4.01	66.66	16.35	2.04	100.0	± 9.6 %
		Y	4.65	67.23	17.40		100.0	
		Z	4.70	66.78	17.19		100.0	
10068- CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	Х	4.12	66.97	16.78	2.55	100.0	± 9.6 %
		Y	4.69	67.14	17.56		100.0	
		Z	4.73	66.69	17.36		100.0	
10069- CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	X	4.11	66.73	16.77	2.67	100.0	± 9.6 %
		Y	4.72	67.08	17.69		100.0	
		Z	4.78	66.70	17.53		100.0	
10071- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	X	4.07	66.96	16.68	1.99	100.0	± 9.6 %
		Y	4.59	67.07	17.37		100.0	
		Z	4.60	66.53	17.10	1	100.0	
10072- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	X	3.98	66.89	16.71	2.30	100.0	± 9.6 %
		Y	4.51	67.19	17.50		100.0	
		Z	4.54	66.70	17.26		100.0	
10073- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	X	4.03	67.09	17.06	2.83	100.0	± 9.6 %
		Y	4.56	67.35	17.81		100.0	
		Z	4.59	66.87	17.58		100.0	
10074- CAB	IEEE 802.11g WIFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	X	4.11	67.36	17.40	3.30	100.0	± 9.6 %
		Y	4.57	67.31	17.95		100.0	
		Z	4.60	66.82	17.73		100.0	
10075- CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	X	4.18	67.58	17.73	3.82	90.0	± 9.6 %
		Y	4.58	67.25	18.15		90.0	
		Z	4.61	66.79	17.96		90.0	
10076- CAB	IEEE 802.11g WIFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	X	4.24	67.48	17.91	4.15	90.0	± 9.6 %
		Y	4.61	67.08	18.28		90.0	
		Z	4.65	66.67	18.13		90.0	
10077- CAB	IEEE 802.11g WIFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	X	4.28	67.60	18.06	4.30	90.0	± 9.6 %
		Y	4.64	67.18	18.41		90.0	
		Z	4.68	66.76	18.25	I	90.0	[

10081- CAB	CDMA2000 (1xRTT, RC3)	X	7.85	258.95	40.09	0.00	150.0	± 9.6 %
		Y	0.57	64.50	9.19		150.0	
		Z	0.37	60.00	6.09		150.0	
10082- CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4- DQPSK, Fullrate)	X	72.13	59.07	0.77	4.77	80,0	± 9.6 %
		Y	7.02	60.09	1.53		80.0	
		Z	7.63	60.12	1.53		80.0	
10090- DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	X	0.78	60.88	6.00	6.56	60.0	± 9.6 %
		Y	100.00	98.83	18.35		60.0	
10097- CAB	UMTS-FDD (HSDPA)	Z X	8.66 1.12	80.77 65.69	14.58 11.46	0.00	60.0 150.0	±9.6 %
=		Y	2.39	74.48	18.29		150.0	
		Ż	1.58	66.95	14.31		150.0	
10098- CAB	UMTS-FDD (HSUPA, Subtest 2)	X	1.11	65.81	11.55	0.00	150.0	± 9.6 %
		Y	2.34	74.47	18.31		150.0	
		Z	1.54	66.88	14.28		150.0	
10099- DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	X	4.22	76.90	26.77	9.56	60.0	±9.6 %
		Y	5.12	81.66	29.15		60.0	
		Z	4.92	79.46	27.95		60.0	
10100- CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	X	2.39	69.31	16.37	0.00	150.0	± 9.6 %
		Y	3.20	72.58	18.18		150.0	
10101		Z	2.69	68.81	15.94		150.0	
10101- CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	X	2.61	67.07	15.44	0.00	150.0	± 9.6 %
		Y	3.12	68.53	16.66		150.0	
		Z	2.91	66.65	15.40		150.0	
10102- CAD	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	×	2.71	67.23	15.58	0.00	150.0	± 9.6 %
		Y	3.22	68.53	16.74		150.0	
10103-	LTE-TDD (SC-FDMA, 100% RB, 20	Z X	3.02 3.72	66.72 71.26	15.54 18.49	3.98	150.0 65.0	± 9.6 %
CAD	MHz, QPSK)	<u> </u>	·					
		Y	4.70	73.63	19.84		65.0	
10/01		Z	4.41	71.81	18.98		65.0	
10104- CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	×	3.95	69.27	17.90	3.98	65.0	± 9.6 %
		Y	4.71	71.04	19.29	ļ	65.0	
40405		Z	4.63	70.10	18.86		65.0	
10105- CAD	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	X	3.78	68.25	17.72	3.98	65.0	± 9.6 %
		Y	4.47	69.73	18.97		65.0	
10108- CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	Z X	4.37 1.98	68.68 69.15	18.48 15.95	0.00	65.0 150.0	± 9.6 %
		tγ	2.77	72.39	18.20		150.0	
		Ż	2.29	68.22	15.72		150.0	
10109- CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	2.19	67.24	14.70	0.00	150.0	± 9.6 %
		Y	2.80	69.06	16.71		150.0	
		Z	2.54	66.58	15.14		150.0	
10110- CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	1.35	66.94	13.41	0.00	150.0	± 9.6 %
		Y	2.32	72.63	18.00		150.0	
		Z	1.78	67.28	14.92		150.0	
10111- CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	1.58	65.90	12.12	0.00	150.0	± 9.6 %
		Y	2.81	72.30	17.60		150.0	
		Z	2.22	67.49	14.99		150.0	

10112- CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	2.30	67.45	14.81	0.00	150.0	± 9.6 %
		Y	2.93	69.12	16.76		150.0	
		Z	2.66	66.72	15.26		150.0	
10113- CAE	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	1.64	65.77	12.05	0.00	150.0	± 9.6 %
		Y	2.95	72.32	17.65		150.0	
		Z	2.37	67.73	15.17		150.0	
10114- CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	X	4.34	66.99	16.28	0.00	150.0	± 9.6 %
	· · · · · · · · · · · · · · · · · · ·	Y	4.86	67.57	16.78		150.0	
		Z	4.82	66.90	16.32		150.0	
10115- CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	X	4.58	67.29	16.33	0.00	150.0	±9.6 %
		Y	5.08	67.61	16.77		150.0	
		Z	5.06	66.98	16.35		150.0	
10116- CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	Х	4.40	67.26	16.31	0.00	150.0	± 9.6 %
		Y	4.93	67.75	16.79		150.0	
	· · · · · · · · · · · · · · · · · · ·	Z	4.89	67.04	16.31		150.0	
10117- CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	X	4.33	66.90	16.26	0.00	150.0	± 9.6 %
		Y	4.84	67.46	16.74		150.0	
		Z	4.79	66.75	16.26		150.0	[
10118- CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16- QAM)	X	4.58	67.24	16.31	0.00	150.0	±9.6 %
		Y	5.15	67.78	16.86		150.0	
		Z	5.14	67.21	16.48		150.0	
10119- CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64- QAM)	X	4.39	67.16	16.27	0.00	150.0	± 9.6 %
		Y	4.94	67.78	16.81		150.0	
		Z	4.90	67.08	16.34		150.0	
10140- CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	2.65	67.18	15.35	0.00	150.0	±9.6 %
		Y	3.23	68.57	16.65		150.0	
		Z	3.03	66.74	15.44		150.0	
10141- CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	2.80	67.68	15.68	0.00	150.0	± 9.6 %
		Y	3.37	68.79	16.86		150.0	
		Z	3.16	66.97	15.67		150.0	
10142- CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	0.71	61.44	8.06	0.00	150.0	± 9.6 %
		Y	2.27	74.06	17.56		150.0	
		Z	1.48	66.51	13.59		150.0	1
10143- CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	0.73	60.00	6.15	0.00	150.0	± 9.6 %
		Y	2.80	73.44	16.54		150.0	
		Z	1.85	66.55	13.15		150.0	
10144- CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	0.73	60.00	5.65	0.00	150.0	±9.6 %
		Y	1.85	66.75	12.85		150.0	
		Z	1.61	64.01	11.28		150.0	
10145- CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	5.16	385.51	36.59	0.00	150.0	± 9.6 %
		Y	0.54	60.00	5.91		150.0	
		Z	0.58	60.00	5.88		150.0	
10146- CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	0.00	60.00	0.00	0.00	150.0	± 9.6 %
		Y	0.74	60.00	4.95		150.0	
		Z	0.80	60.00	5.53		150.0	
10147- CAE	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	0.00	60.00	0.00	0.00	150.0	± 9.6 %
		Y	0.60	58.26	3.86		150.0	
		Z	0,82	60.00	5.58		150.0	

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10149- CAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	2.21	67.36	14.78	0.00	150.0	± 9.6 %
		Y	2.81	69.16	16.77		150.0	
		Z	2.55	66.65	15.19		150.0	
10150- CAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	2.32	67.56	14.88	0.00	150.0	± 9.6 %
		Y	2.94	69.22	16.82		150.0	
		Z	2.67	66.78	15.30		150.0	
10151- CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	3.66	73.29	18.78	3.98	65.0	± 9.6 %
		Y	4.98	76.80	21.12		65.0	
		Z	4.55	74.40	20.06		65.0	
10152- CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	X	3.31	68.29	16.15	3.98	65.0	± 9.6 %
		Y	4.23	70.96	18.67		65.0	
		Z	4.14	69.89	18.22		65.0	
10153- CAD	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	X	3.64	69.78	17.29	3.98	65.0	± 9.6 %
		Y	4.61	72.30	19.68		65.0	
		Z	4.49	71.11	19.19		65.0	
10154- CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	1.38	67.29	13.63	0.00	150.0	± 9.6 %
		Y	2.40	73.30	18.35		150.0	
		Z	1.82	67.63	15.14		150.0	
10155- CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	1.60	66.02	12.20	0.00	150.0	± 9.6 %
		Y	2.83	72.40	17.66		150.0	
		Z	2.23	67.54	15.03		150.0	
10156- CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	0.51	60.00	5.91	0.00	150.0	± 9.6 %
		Y	2.15	74.23	16.90		150.0	
		Z	1.25	65.50	12.43		150.0	
10157- CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	0.57	60.00	4.69	0.00	150.0	± 9.6 %
		Y	1.61	66.51	12.13		150.0	
		Z	1.35	63.41	10.38		150.0	
10158- CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	X	1.65	65.90	12.13	0.00	150.0	±9.6 %
		Y	2.98	72.51	17.74		150.0	
		Z	2.38	67.83	15.24		150.0	[
10159- CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	Х	0.59	60.00	4.69	0.00	150.0	± 9.6 %
		Y	1.68	66.77	12.27		150.0	
		Z	1.39	63.54	10.48		150.0	
10160- CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	X	1.93	68.16	15.00	0.00	150.0	± 9.6 %
		Y	2.76	71.39	17.74		150.0	
		Ζ	2.38	67.93	15.64		150.0	
10161- CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	2.12	67,05	14.02	0.00	150.0	±9.6 %
		Y	2.84	69.35	16.71		150.0	
		Z	2.55	66.69	15.09		150.0	
10162- CAD	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	2.21	67.37	14.17	0.00	150.0	± 9.6 %
		Y	2.96	69.65	16.87		150.0	
~		Z	2.66	66.96	15.26		150.0	
10166- CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	2.13	65.17	17.70	3.01	150.0	± 9.6 %
		Y	3.00	69.75	19.60		150.0	
		Z	2.90	67.96	18.43		150.0	
10167- CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	Х	1.98	65.92	17.43	3.01	150.0	± 9.6 %
		Y	3.74	74.17	20.63		150.0	

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10168- CAE	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	x	2.18	68.43	19,32	3.01	150.0	± 9.6 %
		Y	4.55	78.58	22.96		150.0	
		Z	3.73	73.08	20.34	· ·····	150.0	
10169- CAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	1.87	64.00	17.04	3.01	150.0	± 9.6 %
		Y	2.53	68.75	19.16		150.0	1
		Z	2.36	66.10	17.52	1	150.0	
10170- CAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	1.85	66.74	18.73	3.01	150.0	± 9.6 %
		Y	3.84	78.32	23.19		150.0	
		Z	2.87	70.66	19.54		150.0	
10171- AAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	1.59	63.66	15.82	3.01	150.0	± 9.6 %
		Y	2.83	71.75	19.17		150.0	
10100		Z	2.39	66.90	16.66		150.0	
10172- CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	X	1.63	66.94	19.47	6.02	65.0	± 9.6 %
		Υ	2.64	75.18	23.09		65.0	
10173-		Z	2.68	72.94	21.86		65.0	
10173- CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	X	1.75	70.70	19.61	6.02	65.0	± 9.6 %
		Y	6.55	90.87	26.66		65.0	
		Z	4.15	79.90	22.82		65.0	
10174- CAD	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	X	1.33	66.12	16.85	6.02	65.0	±9.6 %
		Y	3.87	81.08	22.62		65.0	1
		Z	2.77	72.65	19.43		65.0	
10175- CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	X	1.85	63.78	16.81	3.01	150.0	± 9.6 %
		Y	2.49	68.40	18.88		150.0	
		Z	2,33	65.83	17.28	•••••	150.0	
10176- CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	1.86	66.75	18.74	3.01	150.0	±9.6 %
		Y	3.85	78.36	23.20		150.0	
		Z	2.87	70.68	19.55		150.0	
10177- CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	1.86	63.82	16.84	3.01	150.0	±9.6 %
		Y	2.51	68.53	18.95		150.0	
		Z	2.34	65.93	17.35		150.0	
10178- CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16- QAM)	X	1.85	66.70	18.70	3.01	150.0	± 9.6 %
		Y	3.81	78.15	23.10		150.0	
		Z	2.85	70.55	19.47		150.0	
10179- CAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	1.70	65.12	17.16	3.01	150.0	± 9.6 %
		Y	3.27	74.82	21.01		150.0	
		Z	2.59	68.61	17.93		150.0	
10180- CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64- QAM)	X	1.59	63.66	15.82	3.01	150.0	± 9.6 %
		Υ	2.82	71.71	19.14		150.0	·
		Z	2.39	66.88	16.63		150.0	
10181- CAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	X	1.86	63.82	16.84	3.01	150.0	± 9.6 %
		Y	2.50	68.51	18.95		150.0	
		Z	2.34	65.92	17.34		150.0	
10182- CAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	1.85	66.68	18.69	3.01	150.0	± 9.6 %
		Y	3.80	78.11	23.08		150.0	
		Z	2.85	70.52	19.45		150.0	
10183- AAC	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	1.59	63.65	15.80	3.01	150.0	± 9.6 %
		Y	2.82	71.68	19,12	<u> </u>	150.0	
		Z	2.38	66.86	16.62			

10184- CAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	1,86	63.84	16.85	3.01	150.0	± 9.6 %
	··· ~· · ·	Y	2.51	68.55	18.97		150.0	
		z	2.35	65.96	17.36		150.0	
10185- CAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16- QAM)	X	1.86	66.74	18.73	3.01	150.0	± 9.6 %
		Y	3.83	78.22	23.13		150.0	
		Z	2.86	70.59	19.49		150.0	
10186- AAD	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64- QAM)	×	1.59	63.69	15.83	3.01	150.0	±9.6 %
		Y	2.83	71.76	19.16		150.0	
······		Z	2.39	66.91	16.65		150.0	
10187- CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	Х	1,87	63.97	16.99	3.01	150.0	± 9.6 %
		Y	2.53	68.67	19.08		150.0	
		Ζ	2.36	66.04	17.45		150.0	
10188- CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	1.89	67.14	19.05	3.01	150.0	± 9.6 %
		Y	4.00	79.20	23.64		150.0	
		Z	2.94	71.15	19.86		150.0	
10189- AAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	1.61	63.93	16.07	3.01	150.0	± 9.6 %
		Y	2.91	72.32	19.52		150.0	
		Z	2.43	67.24	16.90		150.0	
10193- CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	X	3.74	67.40	15.79	0.00	150.0	± 9.6 %
		Y	4.29	67.57	16.55		150.0	
		Z	4.20	66.51	15.90		150.0	
10194- CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	X	3.82	67.41	15.90	0.00	150.0	± 9.6 %
		Y	4.40	67.71	16.67		150.0	
		Z	4.32	66.72	16.05		150.0	
10195- CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	X	3.83	67.37	15.89	0.00	150.0	± 9.6 %
		Y	4.42	67.68	16.66		150.0	
		Z	4.35	66.72	16.06		150.0	
10196- CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	X	3.72	67.37	15.75	0.00	150.0	± 9.6 %
		Y	4.26	67.52	16.51		150.0	
		Z	4.17	66.48	15.88		150.0	
10197- CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16- QAM)	X	3.82	67.41	15.91	0.00	150.0	±9.6%
		Y	4.41	67.70	16.67		150.0	
		Z	4.33	66.72	16.05		150.0	
10198- CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64- QAM)	X	3.82	67.36	15,88	0.00	150.0	± 9.6 %
		Y	4.41	67.66	16.65		150.0	
		Z	4.34	66.71	16.05		150.0	
10219- CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	X	3.68	67,48	15.78	0.00	150.0	±9.6 %
		Y	4.22	67.61	16.52		150.0	
		Z	4.13	66.53	15.85		150.0	
10220- CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16- QAM)	X	3.82	67.41	15.91	0.00	150.0	± 9.6 %
		Y	4.40	67.66	16.65		150.0	
		Ζ	4.32	66.68	16.04		150.0	
10221- CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64- QAM)	X	3.85	67.40	15.91	0.00	150.0	± 9.6 %
		Υ	4.43	67.62	16.64		150.0	
		Z	4.36	66.67	16.05	I	150.0	
10222- CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	X	4.34	66.97	16.27	0.00	150.0	± 9.6 %
		Y	4.82	67.47	16.73		150.0	

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10223- CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16- QAM)	X	4.49	67.10	16.25	0.00	150.0	± 9.6 %
		Y	5.02	67.50	16.74	l	150.0	
		Ż	5.01	66.90	16.33		150.0	
10224- CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64- QAM)	X	4.35	67.14	16.26	0.00	150.0	± 9.6 %
		Y	4.86	67.63	16.73		150.0	
		Z	4.81	66.90	16.25		150.0	
10225- CAB	UMTS-FDD (HSPA+)	X	1.60	62.87	10.00	0.00	150.0	± 9.6 %
		Y	2.64	67.73	15.37		150.0	
		Z	2.42	65.46	14.06		150.0	
10226- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	X	1.83	71.58	20.13	6.02	65.0	± 9.6 %
		Y	7.36	93.10	27.50		65.0	
10007		Z	4.39	80.98	23.33		65.0	
10227- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	X	1.73	70.59	18.93	6.02	65.0	± 9.6 %
		Y	7.00	90.72	25.86		65.0	
10000		Z	4.34	79.99	22.28		65.0	
10228- CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	X	1.83	69.36	20.71	6.02	65.0	± 9.6 %
		Y	3.28	79.62	24.97		65.0	
		Z	3.15	76.53	23.48		65.0	
10229- CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16- QAM)	X	1.76	70.79	19.64	6.02	65.0	± 9.6 %
		Y	6.63	91.03	26.72		65.0	
		Z	4.18	80.00	22.86		65.0	
10230- CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64- QAM)	X	1.65	69.73	18,45	6.02	65.0	± 9.6 %
		Y	6.22	88.63	25.09		65.0	
		Z	4.10	78.96	21.82		65.0	
10231- CAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	X	1.79	68.81	20.33	6.02	65.0	± 9.6 %
		Y	3.15	78.74	24.52		65.0	
		Z	3.06	75.85	23.10		65.0	
10232- CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16- QAM)	Х	1.76	70.77	19.64	6.02	65.0	± 9.6 %
		Y	6.61	91.00	26.71		65.0	
		Z	4.18	79.98	22.86		65.0	
10233- CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64- QAM)	X	1.65	69.70	18.44	6.02	65.0	± 9.6 %
		Y	6.19	88.57	25.08		65.0	
••••••••••		Z	4.09	78.93	21.81		65.0	
10234- CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	X	1.76	68.43	20.02	6.02	65.0	± 9.6 %
		Y	3.07	78.12	24.14		65.0	
		Z	2.98	75.33	22.76		65.0	
10235- CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	X	1.76	70.76	19.64	6.02	65.0	± 9.6 %
		Y	6.61	91.04	26.73		65.0	
		Z	4.18	80.00	22.87		65.0	
10236- CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	X	1.66	69.79	18.48	6.02	65.0	±9.6 %
		Y	6.30	88.80	25.14		65.0	
10237-	LTE-TDD (SC-FDMA, 1 RB, 10 MHz,	Z X	4.13 1.78	79.05 68.76	21.85 20.32	6.02	65.0 65.0	± 9.6 %
CAD	QPSK)							
		Υ	3.15	78.74	24.53		65.0	
		Z	3.05	75.85	23.11		65.0	
10238- CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	X	1.76	70.75	19.64	6.02	65.0	± 9.6 %
		Y	6.59	90.97	26.70		65.0	
		Z	4.17	79.95	22.85		65.0	

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10239- CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	X	1.65	69.67	18.43	6.02	65.0	± 9.6 %
		Y	6.16	88.50	25.06		65.0	
		z	4.07	78.89	21.79		65.0	
10240- CAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	x	1.78	68.77	20.32	6.02	65.0	± 9.6 %
		Y	3.14	78.73	24.52		65.0	
		Z	3.05	75.83	23.10		65.0	
10241- CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	X	3.09	71.04	21.81	6.98	65.0	± 9.6 %
		Y	5.84	80.29	25.20		65.0	
		Z	5.54	77.13	23.79		65.0	
10242- CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	X	2.70	68,41	20.47	6.98	65.0	±9.6 %
		Y	4.94	76.94	23.76		65.0	
		Z	4.89	74.64	22.64		65.0	
10243- CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	X	2.78	67.24	20.54	6.98	65.0	± 9.6 %
		Y	4.14	72.94	22.88		65.0	
		Z	4.22	71.72	22.18		65.0	
10244- CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	0.80	57.73	3.36	3.98	65.0	± 9.6 %
		Y	2.15	64.01	10.18		65.0	
		Z	2.44	64.99	11.42		65.0	
10245- CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	0.82	57.61	3.20	3.98	65.0	± 9.6 %
		Y	2.13	63.69	9.96		65.0	
		Z	2.42	64.65	11.19		65.0	
10246- CAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	0.87	60.00	5.50	3.98	65.0	± 9.6 %
		Y	2.12	67.09	12.65		65.0	
		Z	2.17	66.84	12.89		65.0	
10247- CAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	X	1.26	60.00	6,38	3.98	65.0	± 9.6 %
		Y	2.78	67.32	13.60		65.0	
		Z	2.82	66.99	13.82		65.0	
10248- CAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	X	1.30	60,00	6.40	3.98	65.0	± 9.6 %
		Υ	2.73	66.64	13.26		65.0	
		Z	2.81	66.52	13.58		65.0	
10249- CAD	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	X	1.24	61.72	8.36	3.98	65.0	± 9.6 %
		Y	3.85	75.74	18.20		65.0	
		Z	3.35	73.06	17.32		65.0	
10250- CAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	X	2.74	67.58	14.25	3.98	65.0	± 9.6 %
		Y	4.25	73.58	19.37		65.0	
		Z	4.02	71.93	18.78		65.0	
10251- CAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	×	2.46	65.14	12.48	3.98	65.0	± 9.6 %
		Y	3.86	70.68	17.56		65.0	
		Z	3.78	69.64	17.25		65.0	
10252- CAD	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	X	2.82	71.28	16.40	3.98	65.0	± 9.6 %
		Υ	4.98	79.52	21.77		65.0	
		Z	4.29	76.11	20.42		65.0	
10253- CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	X	3.12	67.32	15.07	3,98	65.0	± 9.6 %
		Y	4.18	70.66	18.33		65.0	
		Z	4.10	69.61	17.93		65.0	
10254- CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	X	3.39	68.52	15,96	3.98	65.0	± 9.6 %
		Y	4.50	71.75	19.15		65.0	
		Z	4.39	70.63	18.74		65.0	

10255- CAD	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	×	3.40	72.07	17.90	3.98	65.0	± 9.6 %
		Y	4.72	76.03	20.86		65.0	
		Z	4.36	73.79	19.90		65.0	
10256- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	X	0.74	56.57	1.48	3.98	65.0	± 9.6 %
		Y	1.50	60.83	7.03		65.0	
		Z	1.77	61.73	8.31		65.0	
10257- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	X	0.63	56.72	1.58	3.98	65.0	± 9.6 %
		Y	1.50	60.62	6.80		65.0	
		Z	1.77	61.47	8.06		65.0	
10258- CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	X	0.75	60.00	4.13	3.98	65.0	± 9.6 %
		Y	1.38	61.96	8.52		65.0	
		Z	1.52	62.42	9.24		65.0	
10259- CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	X	1.62	61.68	8.48	3.98	65.0	± 9.6 %
		Y	3.35	69.89	15.82		65.0	
		Z	3.28	68.97	15.69		65.0	
10260- CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	X	1.65	61.61	8.42	3.98	65.0	± 9.6 %
		Y	3.36	69.55	15.64		65.0	
		Z	3.31	68.75	15.57		65.0	
10261- CAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	X	1.63	64.06	10.69	3.98	65.0	± 9.6 %
		Y	4.19	76.83	19.42		65.0	
		Z	3.63	73.87	18.36		65.0	
10262- CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	X	2.73	67.47	14.17	3.98	65.0	± 9.6 %
		Y	4.22	73.47	19.30		65.0	
		Z	4.00	71.83	18.72		65.0	
10263- CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	X	2.46	65.13	12.47	3.98	65.0	± 9.6 %
		Y	3.85	70.66	17.56	****	65.0	
		Z	3.77	69.62	17.25	····	65.0	1
10264- CAD	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	X	2.78	71.03	16.25	3.98	65.0	± 9.6 %
		Y	4.91	79.23	21.63		65.0	
		Z	4.25	75.88	20.29		65.0	
10265- CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	X	3.31	68.31	16.16	3.98	65.0	± 9.6 %
		Y	4.23	70.96	18.67		65.0	
		Z	4.14	69.89	18.23		65.0	
10266- CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	X	3.64	69.75	17.27	3.98	65.0	±9.6 %
		Y	4.61	72.28	19.66		65.0	
		Z	4.48	71.09	19.18		65.0	
10267- CAD	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	X	3.65	73.23	18.74	3.98	65.0	± 9.6 %
		Y	4.96	76.74	21.09		65.0	[
		Z	4.55	74.35	20.04		65.0	[
10268- CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	X	4.08	69.60	17.97	3.98	65.0	± 9.6 %
		Y	4.89	71.20	19.41		65.0	
		Z	4.81	70.25	18.99		65.0	
10269- CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	X	4.15	69.51	17.90	3.98	65.0	± 9.6 %
		Y	4.93	70.92	19.29		65.0	
		Z	4.85	69.98	18.89		65.0	
10270- CAD	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	4.11	72.44	19.03	3.98	65.0	± 9.6 %
		Y	5.01	74.05	20.18		65.0	
		Z	4.76	72.38	19.41		65.0	1

10274- CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	X	1.45	63.39	10.22	0.00	150.0	± 9.6 %
		Y	2.58	68.99	15.79		150.0	
		Z	2.36	65.99	14.08		150.0	
10275- CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	X	1.00	66.09	12.05	0.00	150.0	± 9.6 %
		Y	1.98	74.04	18.23		150.0	
		Z	1.30	66.38	13.95		150.0	
10277- CAA	PHS (QPSK)	X	4.43	65.00	5.66	9.03	50.0	± 9.6 %
		Y	1.25	57.54	2.57		50.0	
		Z	1.34	58.35	3.69		50.0	
10278- CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	X	1.39	58.79	4.19	9.03	50.0	± 9.6 %
		Y	2.00	62.01	7.70		50.0	
		Z	2.27	62.99	8.81		50.0	
10279- CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	×	1.42	58.87	4.28	9.03	50.0	± 9.6 %
		Y	2.04	62.14	7.84		50.0	
		Z	2.32	63.16	8.96		50.0	
10290- AAB	CDMA2000, RC1, SO55, Full Rate	X	24.89	264.54	21.43	0.00	150.0	± 9.6 %
		Y	0.75	64.32	9.28		150.0	
		Z	0.55	60.53	6.84		150.0	
10291- AAB	CDMA2000, RC3, SO55, Full Rate	X	8.17	257.05	37.61	0.00	150.0	± 9.6 %
		Y	0.54	64.12	8.98		150.0	
		Z	0.37	60.00	6.07		150.0	
10292- AAB	CDMA2000, RC3, SO32, Full Rate	X	2.31	326.58	8.83	0.00	150.0	± 9.6 %
·		Y	100.00	114.29	23.68		150.0	
		Ζ	0.37	60.29	6.50		150.0	
10293- AAB	CDMA2000, RC3, SO3, Full Rate	×	2.41	304.08	37.98	0.00	150.0	± 9.6 %
		Y	100.00	121.87	26.96		150.0	
		Z	0.47	62.33	8.10		150.0	
10295- AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	X	11.16	76.14	13.68	9.03	50.0	± 9.6 %
		Y	24.30	94.04	23.00		50.0	
		Z	21.29	93.19	23.41		50.0	
10297- AAC	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	X	2.00	69.33	16.06	0.00	150.0	± 9.6 %
		Y	2.80	72.57	18.31		150.0	
100		Z	2.31	68,33	15.80		150.0	
10298- AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	X	8.49	243.95	30.00	0.00	150.0	± 9.6 %
		Y	0.98	64.80	10.42		150.0	
40000		Z	0.78	61.52	8.38		150.0	
10299- AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	X	12.17	331.10	45.12	0.00	150.0	± 9.6 %
		Y	0.99	61.11	7.01	ļ	150.0	
40000		Z	1.06	61.03	7.46		150.0	
10300- AAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	X	10.15	348.38	28.30	0.00	150.0	± 9.6 %
		Y	0.82	59.43	5.36		150.0	
40004		Z	0.95	60.00	6.23		150.0	
10301- AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	X	3.30	64.31	15.03	4.17	50.0	± 9.6 %
		Y	4.07	65.29	17.00	Į	50.0	
10052		Z	4.16	64.88	16.72		50.0	
10302- AAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	X	3.81	65.12	15.99	4.96	50.0	± 9.6 %
		Y	4.52	65.76	17.66		50.0	
		Z	4.66	65.71	17.60		50.0	

10303- AAA	IEEE 802.16e WIMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	X	3.64	65.07	15.71	4,96	50.0	± 9.6 %
		Y	4.29	65.44	17.44		50.0	
10304-	IEEE 802.16e WiMAX (29:18, 5ms,	Z X	4.42	65.39	17.39	4 4 7	50.0	
AAA	10MHz, 64QAM, PUSC)		3.46	64.98	15.29	4.17	50.0	± 9.6 %
		Y	4.15	65.58	17.11		50.0	
		Z	4.21	64.95	16.68		50.0	
10305- AAA	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	X	2.52	62.00	12.12	6.02	35.0	± 9.6 %
		Y	3.52	65.78	17.45		35.0	
		Z	3.76	66.23	17.67		35.0	
10306- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	X	3.12	63.64	14.29	6.02	35.0	± 9.6 %
		Y	3.94	65.53	17.75		35.0	
		Z	4.14	65.73	17.85		35.0	
10307- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	X	3.01	63.42	14.02	6.02	35.0	± 9.6 %
		Y	3.81	65.44	17.59		35.0	
		Z	4.01	65.68	17.70		35.0	
10308- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	X	3.02	63.75	14.28	6,02	35.0	± 9.6 %
		Y	3.78	65.60	17.74		35.0	
		Z	3.98	65.86	17.83	[35.0	
10309- AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	X	3.17	63,94	14.58	6.02	35.0	± 9.6 %
		Y	3.94	65.55	17.83		35.0	
		Z	4.14	65.77	17.93		35.0	
10310- AAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	X	3.11	63.82	14.42	6.02	35.0	± 9.6 %
	· · · · · · · · · · · · · · · · · · ·	Y	3.89	65.58	17.76		35.0	
		Z	4.09	65.78	17.84		35.0	
10311- AAC	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	X	2.31	68.15	15.92	0.00	150.0	± 9.6 %
		Y	3.15	71.23	17.71		150.0	
	Man	Ż	2.66	67.57	15.55		150.0	
10313- AAA	IDEN 1:3	X	1.67	67.67	13.40	6.99	70.0	± 9.6 %
		Y	2.25	71.10	15.22		70.0	
		Z	1.73	67.06	13.24		70.0	
10314- AAA	iDEN 1:6	X	6.12	86.17	23.14	10.00	30.0	±9.6 %
		Y	7.14	89.19	24.60		30.0	
	n	Z	3.49	76.84	20.05		30.0	
10315- AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	X	0.91	63.92	14.34	0.17	150.0	± 9.6 %
		Y	1.09	65.84	16.70	l .	150.0	1
		Z	0.93	62.70	14.16		150.0	1
10316- AAB	IEEE 802.11g WiFi 2.4 GHz (ERP- OFDM, 6 Mbps, 96pc duty cycle)	X	3.71	66.95	15.64	0.17	150.0	± 9.6 %
		Y	4.26	67.26	16.51		150.0	
		Z	4.21	66.40	15.98		150.0	
10317- AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	X	3.71	66.95	15.64	0.17	150.0	± 9.6 %
		Y	4.26	67.26	16.51		150.0	
		Z	4.21	66.40	15.98		150.0	
10400- AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	X	3.67	66.95	15.61	0.00	150.0	± 9.6 %
		Y	4.32	67.59	16.58		150.0	
		Z	4.27	66.67	15.99		150.0	
10401- AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	X	4.49	66.84	16.09	0.00	150.0	± 9.6 %
MAD								
MAD		Y	5.01	67.23	16.55		150.0	

10402- AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	X	4.90	67.23	16.33	0.00	150.0	±9.6 %
		Y	5.37	67.75	16.72		150.0	
		Z	5.33	67.10	16.30		150.0	
10403- AAB	CDMA2000 (1xEV-DO, Rev. 0)	X	24.89	264.54	21.43	0.00	115.0	± 9.6 %
		Y	0.75	64.32	9.28		115.0	
		Z	0.55	60.53	6.84		115.0	
10404- AAB	CDMA2000 (1xEV-DO, Rev. A)	X	24.89	264.54	21.43	0.00	115.0	± 9.6 %
		Υ	0.75	64.32	9.28		115.0	
		Z	0.55	60.53	6.84		115.0	
10406- AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	X	0.25	60.00	3.04	0.00	100.0	± 9.6 %
		Y	100.00	107.14	22.27		100.0	
		Z	35.03	104.04	23.84		100.0	
10410- AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	X	1.11	74.02	16.29	3.23	80.0	± 9.6 %
		Y	100.00	123.32	29.06		80.0	
		Z	3.02	80.23	18.57		80.0	
10415- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	X	0.88	63.60	14.08	0.00	150.0	± 9.6 %
		Y	1.05	65.44	16.40		150.0	
		Z	0.90	62.27	13.77		150.0	
10416- AAA	IEEE 802.11g WiFi 2.4 GHz (ERP- OFDM, 6 Mbps, 99pc duty cycle)	X	3.72	67.22	15.78	0.00	150.0	± 9.6 %
		Y	4.26	67.46	16.59		150.0	
		Z	4.18	66.47	15.97		150.0	
10417- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	X	3.72	67.22	15.78	0.00	150.0	± 9.6 %
		Υ	4.26	67.46	16.59		150.0	
		Z	4.18	66.47	15.97		150.0	
10418- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 99pc duty cycle, Long preambule)	X	3.67	67.37	15.86	0.00	150.0	± 9.6 %
		Y	4.26	67.73	16.69		150.0	
		Z	4.18	66.68	16.03		150.0	
10419- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 6 Mbps, 99pc duty cycle, Short preambule)	X	3.70	67.32	15.83	0.00	150.0	± 9.6 %
		Y	4.28	67.63	16.66		150.0	
		Z	4.19	66.61	16.02		150.0	
10422- AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	X	3.79	67.23	15.85	0.00	150.0	±9.6 %
		Y	4.37	67.55	16.64		150.0	
·		Z	4.30	66.59	16.04		150.0	
10423- AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	X	3.85	67.43	15.91	0.00	150.0	± 9.6 %
		Y	4.48	67.79	16.72		150.0	
		Z	4.41	66.83	16.12		150.0	
10424- AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	X	3.80	67.32	15.87	0.00	150.0	± 9.6 %
		Y	4.41	67.73	16.70		150.0	
10425-	IEEE 802.11n (HT Greenfield, 15 Mbps,	Z X	4,34 4.52	66.77 67.29	16.09 16.36	0.00	150.0 150.0	± 9.6 %
AAB	BPSK)	Υ	E 04	67.00	40.77		4000	
••••			5.01	67.60	16.77		150.0	
10400		Z	5.00	66.98	16.36		150.0	
10426- AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	X	4.54	67.39	16.40	0.00	150.0	± 9.6 %
		Y	5.06	67.79	16.86		150.0	
		Z	5.04	67.17	16.45		150.0	

10427- ААВ	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	X	4.54	67.34	16,38	0.00	150.0	± 9.6 %
		Y	5.02	67.56	16.74		150.0	
		Z	4.99	66.89	16.30		150.0	
10430- AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	X	2.54	67.86	12.99	0.00	150.0	± 9.6 %
		Y	5.20	77.46	20.26		150.0	
		Z	4.04	72.15	17.87		150.0	
10431- AAB	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	X	3.04	66.93	14.37	0.00	150.0	±9.6 %
		Y	3.88	68.36	16.49		150.0	
		Ζ	3.75	66.95	15.66		150.0	
10432- AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	×	3.52	67.40	15.50	0.00	150.0	± 9.6 %
		Y	4.19	67.98	16.66		150.0	
		Z	4.09	66.85	15.96		150.0	
10433- AAB	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	X	3.82	67.39	15.92	0.00	150.0	± 9.6 %
		Y	4.43	67.78	16.72		150.0	
10101		Z	4.36	66.81	16.12		150.0	ļ
10434- 	W-CDMA (BS Test Model 1, 64 DPCH)	X	1.61	62.74	9.15	0.00	150.0	± 9.6 %
		Y	5.68	78.98	20.05		150.0	
1015-		Z	3.98	72.24	17.17		150.0	
10435- AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.04	73.03	15.81	3.23	80.0	±9.6 %
····		Y	100.00	122.83	28.83		80.0	
		Z	2.85	79.40	18.23		80.0	
10447- AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	1.63	62.08	8.98	0.00	150.0	± 9.6 %
		Y	3.10	68.15	14.99		150.0	
		Ζ	2.89	66.18	13.94		150.0	
10448- AAB	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	X	2.97	66.84	14.33	0.00	150.0	± 9.6 %
		Y	3.76	68.19	16.40		150.0	
		Ζ	3.63	66.75	15.54		150.0	
10449- AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	X	3.43	67.31	15.47	0.00	150.0	± 9.6 %
		Y	4.05	67.84	16.58		150.0	
		Z	3.95	66.68	15.86		150.0	
10450- AAB	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	3.70	67.17	15.79	0.00	150.0	± 9.6 %
		Y	4.26	67.58	16.60		150.0	
	· · · · · · · · · · · · · · · · · · ·	Z	4.17	66.58	15.96		150.0	
10451- AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	X	1.22	60.20	6.79	0.00	150.0	±9.6 %
		Y	2.78	67.25	13.76		150.0	
		Ζ	2.61	65.48	12.83		150.0	
10456- AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	Х	5.60	67.64	16.61	0.00	150.0	± 9.6 %
		Y	6.26	68.94	17.34		150.0	
		Ζ	6.00	67.69	16.64		150.0	
10457- AAA	UMTS-FDD (DC-HSDPA)	X	3.27	66.46	15.58	0.00	150.0	± 9.6 %
		Y	3.68	66.34	16.37		150.0	
		Ζ	3.59	65.30	15.71		150.0	
10458- AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	X	1.12	60.00	5.83	0.00	150.0	±9.6 %
		Y	3.56	71.73	16.05		150.0	
		Ζ	3.03	68.42	14.58		150.0	1
10459- AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	х	2.37	61.19	9.10	0.00	150.0	± 9.6 %
		Y	4.86	70,51	17.92		150.0	
		Ζ	4.63	68.94	17.35		150.0	

10460-	UMTS-FDD (WCDMA, AMR)	Х	0.77	69.97	14.37	0.00	150.0	± 9.6 %
AAA		Y	1.81	83.33	22.94		150.0	
		Z	0.70	66.15	13.99		150.0	
10461- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.10	74.88	17.91	3.29	80.0	± 9.6 %
		Y	100.00	130.63	32.41		80.0	
		Z	2.28	78.08	18.84		80.0	
10462- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	5.93	230.19	29.26	3.23	80.0	± 9.6 %
		Y	0.59	60.00	5.55		80.0	
		Z	0.64	60.00	7.06		80.0	
10463- AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	3.96	233.23	22.29	3.23	80.0	±9.6 %
		Y Z	23.26 0.66	230.85 60.00	21.52 6.36		80.0 80.0	
10464- AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.60	67.04	13.62	3.23	80.0	± 9.6 %
·		Y	100.00	124.51	29.50		80.0	
		Z	1.46	72.00	15.83		80.0	
10465- AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	Х	6.88	228.32	21.10	3.23	80.0	±9.6 %
		Y	0.24	55.14	2.95		80.0	
40400		Z	0.64	60.00	7.00	0.00	80.0	
10466- AAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	X	4.90	230.59	11.80	3.23	80.0	± 9.6 %
		Ý	24,92	227.37	29.84		80.0	
10467- AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Z X	0.66 0.65	60.00 68.17	6.32 14.23	3.23	80.0 80.0	± 9.6 %
1010		Y	100.00	125.25	29.82		80.0	
		Z	1.58	73.06	16.29		80.0	
10468- AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	6.75	228.62	22.92	3.23	80.0	±9.6 %
		Y	0.24	55.19	3.02		80.0	
		Z	0.64	60.00	7.02		80.0	
10469- AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	×	4,89	230.67	12.36	3.23	80.0	± 9,6 %
		Y	24.62	227.52	30.16		80.0	
40470		Z	0.66	60.00	6.32		80.0	
10470- AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.65	68.21	14.25	3.23	80,0	± 9.6 %
		Y 7	100.00	125.26	29.81		80.0	
10471- AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	1.58 6.71	73.08 228.68	<u>16.29</u> 22.79	3.23	80.0 80.0	± 9.6 %
		Y	0.24	55.16	2.98		80.0	
		Z	0.64	60.00	7.01		80.0	
10472- AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	X	4.83	230.72	12.16	3.23	80.0	± 9.6 %
		Y	24.39	227.78	30.29		80.0	
10/72	LTE-TDD (SC-FDMA, 1 RB, 15 MHz,	Z	0.66	60.00	6.30		80.0	
10473- AAC	QPSK, UL Subframe=2,3,4,7,8,9)	X	0.65	68,12	14.21	3.23	80.0	± 9.6 %
······································		Y Z	100.00 1.57	125.20 73.01	29.78 16.25		80.0 80.0	
10474- AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	6.67	228.73	22.56	3.23	80.0	± 9.6 %
	<u> </u>	Y	0.59	60.00	5.48		80.0	
		Z	0.64	60.00	7.01		80.0	1
10475- AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	X	4.82	230.67	11.80	3.23	80.0	± 9.6 %
		Y	24.34	227.67	30.21		80.0	
		Z	0.66	60.00	6.30		80.0	

10477- AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16- QAM, UL Subframe=2,3,4,7,8,9)	X	6.74	228.54	21.21	3.23	80.0	± 9.6 %
		Y	0.23	55.08	2.89		80.0	
		Z	0.64	60.00	6.98		80.0	
10478- AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64- QAM, UL Subframe=2,3,4,7,8,9)	X	4.84	230.57	11.22	3.23	80.0	± 9.6 %
		Y	24.37	227.68	30.04		80.0	
10.170		Z	0.66	60.00	6.29		80.0	
10479- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	3.02	84.98	21.47	3.23	80.0	±9.6 %
		Y Z	100.00	125.48	31.72		80.0	
10480- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	5.02 0.47	83.00 60.00	20.76 6.63	3.23	80.0 80.0	± 9.6 %
		Y	1.92	67.54	11.86		80.0	
		Z	1.73	65.44	11.67		80.0	
10481- AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	0.22	55.04	3.12	3.23	80.0	± 9.6 %
		Y	1.09	61.90	8.89		80.0	
40400		Z	1.31	62.31	9.77	L	80.0	
10482- AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	53.67	208.87	10.65	2,23	80.0	± 9.6 %
		Y	1.05	62.14	9.95		80.0	
10483-	LTE-TDD (SC-FDMA, 50% RB, 3 MHz,	Z X	0.98 64.01	60.56 327.64	9.26 15.81	2.23	80.0 80.0	± 9.6 %
AAA	16-QAM, UL Subframe=2,3,4,7,8,9)	Y Y	1.10	60.00	7.60	2.23		± 9.6 %
		Z	1.10	60.00	8.23		80.0 80.0	
10484- AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	72.15	316.72	7.23	2.23	80.0	± 9.6 %
		Y	1.13	60.00	7.59		80.0	<u> </u>
		Z	1.24	60.00	8.22		80.0	
10485- AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.75	60.00	6.88	2.23	80.0	± 9.6 %
		Y	2.48	72.41	16.54	1	80.0	
		Z	1.64	65.93	13.71		80.0	
10486- AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	×	1.01	60.00	5.53	2.23	80.0	± 9.6 %
		Y	1.68	63.79	11.57		80.0	
		Z	1.58	62.22	10.94		80.0	
10487- AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	×	1.04	60.00	5.50	2.23	80.0	± 9.6 %
		Y	1.66	63.28	11.27		80.0	
10488- AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Z X	1.59 1.44	61.98 64.72	10.79 13.06	2.23	80.0 80.0	± 9.6 %
		Y	2.82	72.60	18.56		80.0	
		Z	2.27	68.12	16.38		80.0	
10489- AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.47	61.87	10.73	2.23	80.0	± 9.6 %
		Y	2.82	68.91	16.54		80.0	
10100		Z	2.48	66.05	15.16		80.0	
10490- AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.47	61.55	10.50	2.23	80.0	± 9.6 %
		Y	2.86	68.61	16.37		80.0	
10491- AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	Z X	2.55 1.98	65.97 66.25	15.11 14.91	2.23	80.0 80.0	± 9.6 %
		Y	2.98	70.44	18.02		80.0	
		z	2.64	67.54	16.51		80.0	
10492- AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	x	2.19	64.63	13.64	2.23	80.0	± 9.6 %
		Y	3.11	67,88	16.76	 	80.0	
		Z	2.90	65.95	15.77		80.0	

10100								
10493- AAC	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.21	64.43	13.47	2.23	80.0	± 9.6 %
		Y	3.16	67.71	16.66		80.0	
		Z	2.96	65.87	15.72		80.0	
10494- AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.11	67.23	15.74	2.23	80.0	± 9.6 %
		Y	3.21	71.79	18.57		80.0	
		Z	2.78	68.52	16.88		80.0	
10495- AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.35	65.50	14.66	2.23	80.0	± 9.6 %
		Y	3.14	68.07	17.04		80.0	
		Z	2.93	66.16	16.02		80.0	
10496- AAC	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.42	65.39	14.61	2.23	80.0	± 9.6 %
····		Y	3.21	67.85	16.95		80.0	
		Z	3.02	66.06	16.01		80.0	
10497- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	4.50	220.48	26.76	2.23	80.0	± 9.6 %
		Y	0.82	60.00	6.90		80.0	
		Z	0.88	60.00	7.23		80.0	
10498- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	×	0.00	60.00	0.00	2.23	80.0	± 9.6 %
		Y	1.06	60.00	5.49		80.0	
		Z	1.08	60.00	6.01		80.0	
10499- AAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	×	0.00	60.00	0.00	2.23	80.0	± 9.6 %
		Y	1.10	60.00	5.30		80.0	
		Z	1.11	60.00	5.84		80.0	
10500- AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	0.83	60.00	8.23	2.23	80.0	± 9.6 %
		Y	2.68	72.91	17.52		80.0	
		Z	1.91	67.05	14.90		80.0	
10501- AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	Х	1.03	60.00	6.96	2.23	80.0	± 9.6 %
		Y	2.26	66.74	13.90		80.0	
		Z	1.97	64.14	12.76		80.0	
10502- AAA	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.05	60.00	6.86	2.23	80.0	± 9.6 %
		Y	2.24	66.31	13.60		80.0	<u> </u>
		Z	1.99	63.95	12.58		80.0	
10503- AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	1.42	64.51	12.94	2.23	80.0	± 9.6 %
		Y	2.78	72.32	18.42		80.0	
		Z	2.24	67.93	16.27		80.0	
10504- AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	1.45	61.75	10.65	2.23	80.0	± 9.6 %
		Y	2.79	68.76	16.45		80.0	
	· · · · · · · · · · · · · · · · · · ·	Z	2.46	65.95	15.09		80.0	
10505- AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	1.46	61.45	10.42	2.23	80.0	± 9.6 %
		Y	2.84	68.47	16.29		80.0	
		Z	2.53	65.87	15.05		80.0	l
10506- AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.09	67.08	15.65	2.23	80.0	± 9.6 %
	· · · · · · · · · · · · · · · · · · ·	Y	3.18	71.61	18.48		80.0	
		Z	2.76	68.39	16.81		80.0	
10507- AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.34	65.41	14.60	2.23	80.0	± 9.6 %
		Y	3.12	67,99	16.99		80.0	
			2.92	66.10	15.98			

10508- AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.40	65.29	14.54	2.23	80.0	±9.6 %
		Y	3.20	67.76	16.90		80.0	
		Z	3.01	65.99	15.96		80.0	
10509- AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.58	67.03	16.09	2.23	80.0	±9.6 %
		Y	3.55	70.28	17.97		80.0	
10510		Z	3.24	67.94	16.71		80.0	
10510- AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.84	65.59	15.48	2.23	80.0	± 9.6 %
		Y	3.55	67.42	17.00		80.0	
10511		Z	3.41	66.05	16.23		80.0	
10511- AAC	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.92	65.56	15.46	2.23	80.0	± 9.6 %
		Y	3.62	67.28	16.95		80.0	
107/-		Z	3.49	65.96	16.22		80.0	
10512- AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	X	2.57	67.43	16.22	2.23	80.0	± 9.6 %
		Y	3.65	71.51	18.37	.	80.0	
10513-		Z	3.23	68.73	16.92		80.0	1002
AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	X	2.79	65.51	15.59	2.23	80.0	± 9.6 %
		Y	3.45	67.50	17.07		80.0	
40544		Z	3.30	66.08	16.26		80.0	
10514- AAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	X	2.87	65.41	15.56	2.23	80.0	± 9.6 %
		Y	3.50	67.18	16.96		80.0	
		Z	3.36	65.86	16.21		80.0	
10515- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	X	0.84	63.77	14.11	0.00	150.0	± 9.6 %
		Y	1.02	65.86	16.61		150.0	
40540		Z	0.85	62.40	13.77		150.0	
10516- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	X	0.62	73.89	17.55	0.00	150.0	±9.6 %
		Y	4.44	111.45	33.24		150.0	
10517-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11	Z X	0.45	67.70 65.50	14.48 14.61	0.00	150.0	
AAA	Mbps, 99pc duty cycle)	Ŷ	0.88		14.01	0.00	150.0 150.0	± 9.6 %
		Z	0.68	70.28 63.72	13.93		150.0	
10518- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	X	3.70	67.39	15.82	0.00	150.0	± 9.6 %
		Y	4.26	67.62	16.61		150.0	
		Z	4.17	66.58	15.96		150.0	
10519- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	X	3.79	67.51	15.88	0,00	150.0	± 9.6 %
		Y	4.38	67.73	16.67		150.0	
40500		Z	4.31	66.74	16.05	0.00	150.0	
10520- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	X	3.65	67.31	15.75	0.00	150.0	± 9.6 %
		Y Z	4.25 4.16	67.68 66.65	16.61 15.95		150.0 150.0	
10521- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	X	3.59	67.16	15.66	0.00	150.0	± 9.6 %
		Y	4.18	67.62	16.58		150.0	1
		Z	4.10	66.58	15.92		150.0	
10522- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	X	3.61	67.21	15.68	0.00	150.0	± 9.6 %
		Y	4.20	67.65	16.61		150.0	
		Z	4.13	66.67	15.99		150.0	

10523- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	X	3.58	67.41	15.78	0.00	150.0	± 9.6 %
		Y	4.19	67.90	16.68		150.0	
		Z	4.09	66.77	15.97		150.0	
10524- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	X	3.55	67.17	15.73	0.00	150.0	± 9.6 %
		Y	4.18	67.74	16.69		150.0	
		Z	4.09	66.69	16.02		150.0	
10525- AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc duty cycle)	X	3.68	66.62	15.57	0.00	150.0	± 9.6 %
		Y	4.25	66.93	16.35		150.0	
		Z	4.15	65.82	15.66		150.0	
10526- AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc duty cycle)	X	3.72	66.70	15.62	0.00	150.0	± 9.6 %
		Y	4.34	67.14	16.44		150.0	
40507		Z	4.25	66.06	15.76		150.0	
10527- AAB	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc duty cycle)	X	3.68	66.74	15.58	0.00	150.0	± 9.6 %
		Y	4.29	67.16	16.40		150.0	
10500		Z	4.18	66.03	15.70		150.0	
10528- AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc duty cycle)	X	3.67	66.65	15.55	0.00	150.0	± 9.6 %
		Y	4.30	67.15	16.42		150.0	
40500		Z	4.20	66.04	15.73		150.0	
10529- AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc duty cycle)	X	3.67	66.65	15.55	0.00	150.0	± 9.6 %
		Y	4.30	67.15	16.42		150.0	
40504		Z	4.20	66.04	15.73		150.0	
10531- AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc duty cycle)	X	3.64	66.66	15.53	0.00	150.0	± 9.6 %
		Y	4.25	67.14	16.38		150.0	
		Z	4.15	66.02	15.69		150.0	
10532- AAB	IEEE 802.11ac WIFi (20MHz, MCS7, 99pc duty cycle)	X	3.57	66.55	15.48	0.00	150.0	± 9.6 %
		Y	4.15	67.03	16.34		150.0	
		Z	4.04	65.89	15.62		150.0	
10533- AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc duty cycle)	X	3.68	66.88	15.62	0.00	150.0	± 9.6 %
		Y	4.30	67.28	16.44		150.0	
		Z	4.20	66.13	15.73		150.0	
10534- AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc duty cycle)	X	4.34	66.44	15.93	0.00	150.0	± 9,6 %
		Y	4.85	66.86	16.39		150.0	
•		Z	4.79	66.06	15.87		150.0	
10535- AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	X	4.34	66.46	15.95	0.00	150.0	± 9.6 %
		Y	4.87	66.95	16.44		150.0	
10553		Z	4.82	66.17	15.93		150.0	
10536- AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	X	4.25	66.45	15.91	0.00	150.0	± 9.6 %
		Y	4.78	66.98	16.43		150.0	
1000-		Z	4.71	66.14	15.89		150.0	
10537- AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	X	4.35	66.61	16.01	0.00	150.0	± 9.6 %
		Y	4.86	67.05	16.47		150.0	
10		Z	4.80	66.24	15.94		150.0	
10538- AAB	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc duty cycle)	X	4.37	66.44	15.94	0.00	150.0	± 9.6 %
		Y	4.89	66.89	16,42		150.0	
		Z	4.84	66.13	15.93		150.0	
10540- AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	X	4.31	66.35	15.93	0.00	150.0	± 9.6 %
		Y	4.83	66.86	16.43		150.0	
		Z	4.77	66.08	15.92		150.0	

10541- AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc duty cycle)	X	4.33	66.41	15.92	0.00	150.0	± 9.6 %
		Y	4.83	66.00	40.00		450.0	<u> </u>
		Z		66.83	16.39	·····	150.0	ļ
10542-	IEEE 802.11ac WiFI (40MHz, MCS8,	X	4.77	66.02 66.54	15.87	0.00	150.0	
AAB	99pc duty cycle)				16.01	0.00	150.0	± 9.6 %
	·····	Y	4.97	66.88	16.43		150.0	
40540		Z	4.91	66.12	15.94		150.0	
10543- AAB	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc duty cycle)	X	4.48	66.49	16.02	0.00	150.0	± 9.6 %
		Y	5.04	66.97	16.50		150.0	
40544		Z	5.01	66.28	16.06		150.0	
10544- AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle)	X	4.77	66.20	15.88	0.00	150.0	± 9.6 %
		Y	5.21	66.81	16.32		150.0	
10515		Z	5.15	66.11	15.87		150.0	
10545- AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	Х	4.82	66.41	15.96	0.00	150.0	± 9.6 %
		Y	5.37	67.24	16.50		150.0	
		Z	5.34	66.63	16.10		150.0	
10546- AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc duty cycle)	X	4.77	66.27	15.89	0.00	150.0	± 9.6 %
		Y	5.24	66.91	16.35		150.0	
		Z	5.18	66.22	15.90		150.0	
10547- AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)	X	4.83	66.38	15.95	0.00	150.0	± 9.6 %
		Y	5.36	67.18	16.48		150.0	
******		Z	5.31	66.51	16.04		150.0	
10548- AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc duty cycle)	X	4.82	66.54	16.01	0.00	150.0	± 9.6 %
		Y	5.39	67.48	16.61		150.0	
		Z	5.39	66.96	16.24		150.0	
10550- AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	X	4.79	66.46	16.00	0.00	150.0	± 9.6 %
		Y	5.34	67.29	16.55		150.0	
		Z	5.30	66.62	16.12		150.0	
10551- AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	X	4.75	66.25	15.87	0.00	150.0	± 9.6 %
		Y	5.21	66.84	16.29		150.0	
		Ż	5.16	66.14	15.84		150.0	
10552- AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc duty cycle)	X	4.78	66.50	15.97	0.00	150.0	± 9.6 %
		Y	5.22	66.98	16.36		150.0	
		Z	5.16	66.23	15.88		150.0	
10553- AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	X	4.79	66.33	15.90	0.00	150.0	± 9.6 %
		Y	5.26	66.86	16.32		150.0	
		Z	5.20	66.16	15.87		150.0	
10554- AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	×	5.25	66,42	15.95	0.00	150.0	± 9.6 %
	- Contraction	Y	5.65	67.07	16.36		150.0	
		Ż	5.60	66.46	15.97		150.0	
10555- AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc duty cycle)	X	5.31	66.63	16.05	0.00	150.0	± 9.6 %
		Y	5.71	67.24	16.43		150.0	
		Z	5.68	66.67	16.06		150.0	
10556- AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	X	5.32	66.65	16.05	0.00	150.0	± 9.6 %
		Y	5.77	67.42	16.51		150.0	
		Z	5.74	66.86	16.15		150.0	
10557- AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc duty cycle)	×	5.28	66.55	16.01	0.00	150.0	± 9.6 %
		Y	5.72	67.25	16.45		150.0	

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10558-	IEEE 802.11ac WiFi (160MHz, MCS4,	X	5.24	66.46	15.98	0.00	150.0	± 9.6 %
AAC	99pc duty cycle)	<u> </u>	E 00	07.00	40.41		450.0	
		Y	5.69	67.20	16.44		150.0	
40500		Z	5.65	66.61	16.06	0.00	150.0	100%
10560-	IEEE 802.11ac WiFi (160MHz, MCS6,	X	5.28	66.44	16.00	0.00	150.0	± 9.6 %
AAC	99pc duty cycle)		5 70	67.40	46.47		150.0	
······		Y 7	5.72	67.18	16.47		150.0	
40504		Z	5.68	66.60	16.09	0.00	150.0	1069/
10561- AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc duty cycle)	X	5.21	66.38	15.99	0.00	150.0	± 9.6 %
AAC		Y	5.66	67.17	16.49		150.0	
		Z	5.63	66.59	16.12		150.0	
10562-	IEEE 802.11ac WiFi (160MHz, MCS8,	X	5.30	66.67	16.13	0.00	150.0	± 9.6 %
AAC	99pc duty cycle)		0.00	00.01		0.00	100.0	
		Y	5.70	67.29	16.55		150.0	
· · · ·		Z	5.66	66.70	16.17		150.0	<u>.</u>
10563-	IEEE 802.11ac WiFi (160MHz, MCS9,	X	5.57	67.31	16.43	0.00	150.0	± 9.6 %
AAC	99pc duty cycle)							
		Y	5.83	67.40	16.57		150.0	
		Z	5.78	66.77	16.18		150.0	
10564-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	3.98	67.19	15.91	0.46	150.0	±9.6 %
AAA	OFDM, 9 Mbps, 99pc duty cycle)			Į				L
		Y	4.54	67.45	16.63		150.0	
		Z	4.49	66.59	16.10		150.0	
10565-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	4.14	67.73	16.32	0.46	150.0	± 9.6 %
AAA	OFDM, 12 Mbps, 99pc duty cycle)		. = =			j	170.0	
		Υ	4.73	67.88	16.97		150.0	
40700		Z	4.67	67.02	16.44		150.0	
10566- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 18 Mbps, 99pc duty cycle)	X	3.97	67.32	16.02	0.46	150.0	± 9.6 %
		Y	4.56	67.66	16.76		150.0	
		Z	4.51	66.79	16.21		150.0	
10567- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 24 Mbps, 99pc duty cycle)	X	4.06	67.96	16.56	0.46	150.0	± 9.6 %
		Y	4.62	68.16	17.21		150.0	
		Z	4.55	67.23	16.63		150.0	-
10568- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 36 Mbps, 99pc duty cycle)	X	3.80	66.64	15.45	0.46	150.0	± 9.6 %
		Y	4.41	67.18	16.36		150.0	
		Z	4.38	66.42	15.88		150.0	1
10569- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 48 Mbps, 99pc duty cycle)	×	4.07	68.35	16.82	0.46	150.0	± 9.6 %
		Y	4.63	68.53	17.43		150.0	<u> </u>
		Z	4.55	67.52	16.81		150.0	
10570- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 54 Mbps, 99pc duty cycle)	X	3.99	67.81	16.52	0.46	150.0	± 9.6 %
		Y	4.60	68.17	17.24		150.0	
		Z	4.53	67.25	16.66		150.0	
10571- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	X	0.93	63.68	14.15	0.46	130.0	± 9.6 %
		Y	1.11	65.62	16.53		130.0	
		z	0.97	62.81	14.25		130.0	
10572- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	X	0.94	64.27	14.56	0.46	130.0	± 9.6 %
		Y	1.13	66.40	17.03		130.0	
		Z	0.97	63.27	14.57		130.0	
10573- AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	X	1.10	79.41	19.97	0.46	130.0	± 9.6 %
/ / / /		Y	29.09	140.84	40.18		130.0	
		Z	0.81	73.52	17.65		130.0	
10574-	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11	$\frac{2}{X}$	1.00	70.10	17.80	0.46	130.0	±9.6 %
AAA	Mbps, 90pc duty cycle)					0.40		- 3.0 %
		Y	1.40	75.63	21.83		130.0	
	L	Z	0.96	67.63	16.92	1	130.0	1

10575-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	X	3.74	66.83	15.70	0.46	130.0	± 9.6 %
AAA	OFDM, 6 Mbps, 90pc duty cycle)	-						
		Y	4.30	67.12	16.57		130.0	
10576-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	ZX	4.26	66.31	16.08		130.0	
AAA	OFDM, 9 Mbps, 90pc duty cycle)		3.78	67.20	15.91	0.46	130.0	± 9.6 %
		Y	4.34	67.41	16.71	ļ	130.0	-
10577-		Z	4.29	66.55	16.18		130.0	
AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 12 Mbps, 90pc duty cycle)	X	3.89	67.42	16.06	0.46	130.0	± 9.6 %
		<u>Y</u>	4.48	67.61	16.83		130.0	
10578-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	Z	4.44	66.77	16.33		130.0	
AAA	OFDM, 18 Mbps, 90pc duty cycle)	X	3.83	67.60	16.23	0.46	130.0	± 9.6 %
		Y	4.40	67.82	17.00	ļ	130.0	
10579-	IEEE 802.11g WiFi 2.4 GHz (DSSS-	Z	4.35	66.92	16.45		130.0	
AAA	OFDM, 24 Mbps, 90pc duty cycle)	X	3.51	66.09	15.01	0.46	130.0	±9.6 %
	······	Y	4.12	66.74	16.08		130.0	
10580-		Z	4.09	65.97	15.60		130.0	
AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 36 Mbps, 90pc duty cycle)	X	3.49	65.97	14.89	0.46	130.0	±9.6 %
		Y	4.12	66.69	16.03		130.0	
10581-		Z	4.11	65.99	15.59		130.0	
AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 48 Mbps, 90pc duty cycle)	X	3.74	67.63	16.20	0.46	130.0	± 9.6 %
		Y	4.33	67.99	17.02		130.0	
40500		Z	4.26	67.01	16.43		130.0	
10582- AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS- OFDM, 54 Mbps, 90pc duty cycle)	X	3.37	65.61	14.64	0.46	130.0	± 9.6 %
		Y	4.03	66.45	15.82		130.0	
		Z	4.01	65.72	15.36		130.0	
10583- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	X	3.74	66.83	15,70	0.46	130.0	± 9.6 %
		Y	4.30	67.12	16.57		130.0	
	· · · · · · · · · · · · · · · · · · ·	Z	4.26	66.31	16.08		130.0	·
10584- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	X	3.78	67.20	15.91	0.46	130.0	± 9.6 %
		Y	4.34	67.41	16.71		130.0	
		Z	4.29	66.55	16.18		130.0	
10585- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	X	3.89	67.42	16.06	0.46	130.0	± 9.6 %
	· · · · · · · · · · · · · · · · · · ·	Y	4.48	67.61	16.83		130.0	
		Z	4.44	66.77	16.33		130.0	
10586- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	X	3.83	67.60	16.23	0.46	130.0	±9.6 %
		Y	4.40	67.82	17.00		130.0	
		Z	4.35	66.92	16.45		130.0	
10587- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	X	3.51	66.09	15.01	0.46	130.0	±9.6 %
		Y	4.12	66.74	16.08		130.0	
		Z	4.09	65.97	15.60		130.0	
10588- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	X	3.49	65.97	14.89	0.46	130.0	± 9.6 %
		Y	4.12	66.69	16.03		130.0	
10500		Z	4.11	65.99	15.59		130.0	
10589- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	X	3.74	67.63	16.20	0.46	130.0	± 9.6 %
		Y	4.33	67.99	17.02		130.0	
40500		Z	4.26	67.01	16.43		130.0	
10590- AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	X	3.37	65.61	14.64	0.46	130.0	±9.6 %
		Y	4.03	66.45	15.82		130.0	
		Z	4.01	65.72	15.36		130.0	

					(100.0	
10591- AAB	IEEE 802.11n (HT Mixed, 20MHz,	X	3.91	67.05	15.98	0.46	130.0	± 9.6 %
AAD	MCS0, 90pc duty cycle)	Y	4.46	67.24	16.72		130.0	
	······································	Z	4.42	66.45	16.24		130.0	
10592-	IEEE 802.11n (HT Mixed, 20MHz,	X	3.96	67.20	16.07	0.46	130.0	± 9.6 %
AAB	MCS1, 90pc duty cycle)							
		Y	4.56	67.49	16.83		130.0	
		Z	4.52	66.71	16.36		130.0	
10593-	IEEE 802.11n (HT Mixed, 20MHz,	X	3.89	67.09	15.91	0.46	130.0	± 9.6 %
AAB	MCS2, 90pc duty cycle)							
		Y	4.48	67.36	16.68		130.0	
		Z	4.44	66.57	16.20		130.0	
10594-	IEEE 802.11n (HT Mixed, 20MHz,	X	3.93	67.20	16.06	0.46	130.0	± 9.6 %
AAB	MCS3, 90pc duty cycle)							
		Y	4.53	67.56	16.87		130.0	
10505		Z	4.50	66.76	16.38	0.40	130.0	
10595-	IEEE 802.11n (HT Mixed, 20MHz,	X	3.88	67.15	15.95	0.46	130.0	± 9.6 %
AAB	MCS4, 90pc duty cycle)	Y	4.50	67.54	16.78		130.0	
			4.50	66.73	16.70		130.0	
10596-	IEEE 802.11n (HT Mixed, 20MHz,		<u> 4.40 </u> 3.78	66.88	15.82	0.46	130.0	± 9.6 %
AAB	MCS5, 90pc duty cycle)		0.10	00.00	10.02	0.40	130.0	± 3.0 %
		Y	4.41	67.44	16.74		130.0	
		Ż	4.38	66.66	16.26		130.0	
10597-	IEEE 802.11n (HT Mixed, 20MHz,	$-\bar{x}$	3.79	66.92	15.72	0,46	130.0	±9.6 %
AAB	MCS6, 90pc duty cycle)							
		Y	4.37	67.31	16.57		130.0	
		Z	4.34	66.51	16.09		130.0	
10598-	IEEE 802.11n (HT Mixed, 20MHz,	X	3.85	67.45	16.19	0.46	130.0	± 9.6 %
AAB	MCS7, 90pc duty cycle)							
		Y	4.40	67.66	16.93		130.0	
		Z	4.34	66.79	16.40		130.0	
10599-	IEEE 802.11n (HT Mixed, 40MHz,	X	4.79	67.73	16.77	0.46	130.0	±9.6 %
AAB	MCS0, 90pc duty cycle)							
		Y	5.21	67.73	17.04	***	130.0	
40000		Z	5.16	67.02	16.62	0.40	130.0	
10600-	IEEE 802.11n (HT Mixed, 40MHz,	X	4.68	67.39	16.57	0.46	130.0	± 9.6 %
AAB	MCS1, 90pc duty cycle)	Y	5.21	07.70	17.04		130.0	
		Z	5.26	67.78 67.42	16.79		130.0	}
10601-	IEEE 802.11n (HT Mixed, 40MHz,		4.64	67.32	16.79	0.46	130.0	± 9.6 %
AAB	MCS2, 90pc duty cycle)		4.04	01.52	10.00	0.40	130.0	1 29.0 %
		Y	5.18	67.81	17.08		130.0	
		Z	5.18	67.25	16.73		130.0	
10602-	IEEE 802.11n (HT Mixed, 40MHz,	X	4.63	67.06	16.35	0.46	130.0	± 9.6 %
AAB	MCS3, 90pc duty cycle)		1.00	01.00	10.00	0.40	100.0	20.0 %
		Y	5.19	67.55	16.86		130.0	
		Z	5,23	67.15	16.59	1	130.0	
10603-	IEEE 802.11n (HT Mixed, 40MHz,	X	4.68	67.32	16.65	0.46	130.0	±9.6 %
AAB	MCS4, 90pc duty cycle)							
		Y	5.23	67.74	17.10		130.0	
		Z	5.27	67.35	16.84		130.0	
10604-	IEEE 802.11n (HT Mixed, 40MHz,	X	4.64	67.04	16.46	0.46	130.0	± 9.6 %
AAB	MCS5, 90pc duty cycle)							
		Y	5.12	67.34	16.87		130.0	
		Z	5.13	66.84	16.55		130.0	
10605-	IEEE 802.11n (HT Mixed, 40MHz,	X	4.61	67.01	16.45	0.46	130.0	± 9.6 %
AAB	MCS6, 90pc duty cycle)							
		<u>Y</u>	5.17	67.54	16.97		130.0	<u> </u>
		Z	5.21	67.15	16.70		130.0	
10606-	IEEE 802.11n (HT Mixed, 40MHz,	X	4.52	66.73	16.13	0.46	130.0	±9.6 %
AAB	MCS7, 90pc duty cycle)		E 0.1	07.00	40.05		400.0	
		Y	5.04	67.22	16.65	ļ	130.0	.
		Z	5.04	66.71	16.33	1	130.0	1

AAB Stype duty cycle) Y 4.33 66,69 16.43 130.0 10600e IEEE 802.11ac WiFI (20MHz, MCS1, SAP X 382 66,58 15.58 130.0 ± 9.60 AAB SQpc duty cycle) Y 4.44 66.98 15.55 130.0 ± 9.60 10609- IEEE 802.11ac WiFI (20MHz, MCS2, AAB X 3.73 66.35 15.52 0.46 130.0 ± 9.60 10610- IEEE 802.11ac WiFI (20MHz, MCS2, AAB X 3.73 66.57 15.81 130.0 ± 9.60 10610- IEEE 802.11ac WiFI (20MHz, MCS3, AAB X 3.76 66.57 15.81 130.0 ± 9.60 10611- IEEE 802.11ac WiFI (20MHz, MCS4, AAB X 3.70 66.30 15.52 0.46 130.0 ± 9.60 10612- IEEE 802.11ac WiFI (20MHz, MCS4, AAB X 3.70 66.30 15.52 0.46 130.0 ± 9.60 10612- IEEE 802.11ac WiFI (20MHz, MCS5, AB X 3.61 66.07 16.30 130.0	40007					·····			
IEEE 802.11ac WiFi (20MHz, MCS1, X 3.82 66.54 15.73 0.46 130.0 ± 9.0 AAB 80pc duty cycle) Y 4.44 66.56 16.73 0.46 130.0 ± 9.0 IOB09- IEEE 802.11ac WiFi (20MHz, MCS2, X 3.73 66.35 15.52 0.46 130.0 ± 9.6 AAB 690pc duty cycle) Y 4.34 66.78 15.52 0.46 130.0 ± 9.6 AAB 690pc duty cycle) Y 4.34 66.78 15.81 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.57 15.62 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.40 66.69 15.52 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.30 66.73 16.37 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.73 16.37 0.46 130.0 ± 9.6		IEEE 802.11ac WiFi (20MHz, MCS0, 90pc duty cycle)		3.77	66.40	15.66	0.46	130.0	± 9.6 %
IdeGeP IEEE 802.11ac WiFi (20MHz, MCS1, 80pc duty cycle) X 3.82 66.54 15.73 0.46 130.0 ± 9.06 IDEGeP IEEE 802.11ac WiFi (20MHz, MCS2, AAB X 3.73 66.35 16.52 0.46 130.0 ± 9.06 IDEGP IEEE 802.11ac WiFi (20MHz, MCS2, AAB X 3.73 66.35 15.52 0.46 130.0 ± 9.06 IDEGP Y 4.34 66.78 16.32 0.46 130.0 ± 9.06 IDEG10 IEEE 802.11ac WiFi (20MHz, MCS3, AAB X 3.76 66.57 15.81 130.0 ± 9.06 IDEG10 IEEE 802.11ac WiFi (20MHz, MCS4, AB X 3.70 66.30 15.52 0.46 130.0 ± 9.06 IDEG11 IEEE 802.11ac WiFi (20MHz, MCS4, AB X 3.70 66.33 15.82 130.0 ± 9.06 IDEG2 Y 4.30 66.73 16.37 0.46 130.0 ± 9.06 IDEG2 Y 4.27 66.79 15.33 130.0 ± 9.06 <td></td> <td></td> <td>Y</td> <td>4.33</td> <td>66.69</td> <td>16.43</td> <td>1</td> <td>130.0</td> <td></td>			Y	4.33	66.69	16.43	1	130.0	
1600- AB IEEE 802.11ac WIFI (20MHz, MCS1, AB X 3.82 66.54 15.73 0.46 130.0 ± 9.6 1000- AB B0pc duly cycle) Y 4.44 66.56 16.65 130.0 130.0 1000- AB B0pc duly cycle) Y 4.43 66.60 16.01 130.0 ± 9.6 1010- 10610- IEEE 802.11ac WIFI (20MHz, MCS3, 300c duly cycle) X 3.73 66.52 15.70 0.46 130.0 ± 9.6 10610- IEEE 802.11ac WIFI (20MHz, MCS3, AAB X 3.78 66.52 15.70 0.46 130.0 ± 9.6 10611- IEEE 802.11ac WIFI (20MHz, MCS4, AAB X 3.70 66.30 15.52 0.46 130.0 ± 9.6 10612- IEE 802.11ac WIFI (20MHz, MCS5, AAB Y 4.30 66.73 16.37 0.46 130.0 ± 9.6 10614- IEEE 802.11ac WIFI (20MHz, MCS6, X 3.61 66.03 15.27 0.46 130.0 ± 9.6 10644- IEEE 802.11ac WIFI (20MHz, MCS7, X 3.70			Z						
10609- AAB IEEE 802 11ac WIF1 (20MHz, MCS2, 90pc duty cycle) X 3.73 66.35 15.52 0.46 130.0 ± 9.6 10610- AAB IEEE 802 11ac WIF1 (20MHz, MCS3, AAB X 3.73 66.35 15.52 0.46 130.0 ± 9.8 10610- AAB IEEE 802 11ac WIF1 (20MHz, MCS3, AAB X 3.79 66.52 15.70 0.46 130.0 ± 9.6 0011 IEEE 802 11ac WIF1 (20MHz, MCS4, AAB X 3.70 66.50 15.52 0.46 130.0 ± 9.6 001611- IEEE 802 11ac WIF1 (20MHz, MCS5, AAB X 3.70 66.33 15.62 146 130.0 ± 9.6 001612- IEEE 802 11ac WIF1 (20MHz, MCS5, AAB X 3.61 66.09 15.32 0.46 130.0 ± 9.6 001613- IEEE 802 11ac WIF1 (20MHz, MCS6, AAB X 3.64 66.03 15.27 0.46 130.0 ± 9.6 10614- IEEE 802 11ac WIF1 (20MHz, MCS6, AB X 3.64 66.03 15.27 0.46 130.0 ± 9.6	-						0.46		± 9.6 %
10609- AAB IEEE 802.11ac WIFI (20MHz, MCS2, 3.73 2 4.34 66.35 15.52 0.46 130.0 ± 9.6 01610- AAB IEEE 802.11ac WIFI (20MHz, MCS3, 90pc duty cycle) X 3.73 66.35 15.52 0.46 130.0 ± 9.6 01610- AAB IEEE 802.11ac WIFI (20MHz, MCS3, 90pc duty cycle) X 3.78 66.52 15.70 0.46 130.0 ± 9.6 01611- 01611- 90pc duty cycle) Y 4.40 66.09 16.56 130.0 ± 9.6 01611- 01612- 10612- 10613- 10613- 10613- 10613- 1644 IEEE 802.11ac WIFI (20MHz, MCS5, X 3.61 66.09 15.52 0.46 130.0 ± 9.6 01614- 10613- 10613- 10613- 10614- 10613- 10614- 164 IEEE 802.11ac WIFI (20MHz, MCS6, X 3.64 66.03 15.27 0.46 130.0 ± 9.6 10614- 10613- 10614- 10614- 10614- 10614- 10614- 10614- 164 IEEE 802.11ac WIFI (20MHz, MCS6, X 3.64 66.03 15.27 0.46 130.0 ± 9.6 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 10614- 1000- 10616+ 1EEE 802.11ac WIFI (40MHz, MCS8, X			Y	4.44	66.96	16.55		130.0	
16609 IEEE 802.11ac WIFI (20MHz, MCS2, X 3.73 66.35 15.52 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.34 66.78 16.36 130.0 130.0 10610- IEEE 802.11ac WIFI (20MHz, MCS3, X 3.78 66.52 15.70 0.46 130.0 19.6 10611- IEEE 802.11ac WIFI (20MHz, MCS4, X 3.70 66.50 15.52 0.46 130.0 19.6 10611- IEEE 802.11ac WIFI (20MHz, MCS6, X 3.70 66.73 16.37 130.0 19.6 10612- IEEE 802.11ac WIFI (20MHz, MCS6, X 3.61 66.99 15.37 0.46 130.0 19.6 10613- IEEE 802.11ac WIFI (20MHz, MCS6, X 3.61 66.59 16.20 130.0 19.0 10614- IEEE 802.11ac WIFI (20MHz, MCS7, X 3.70 66.56 15.77 0.46 130.0 19.0 10614- IEEE 802.11ac WIFI (20MHz, MCS7, X 3.70 66.56 15.77 0.46 130.0 19.0 10615-			Z	4.38					
10610 IEEE 802.11ac WIFI (20MHz, MCS3, 90pc duty cycle) X 3.78 66.52 15.70 0.46 130.0 ± 9.6 0611- 10611- 90pc duty cycle) Y 4.40 66.99 16.56 130.0 ± 9.6 0611- 90pc duty cycle) Y 4.40 66.07 16.00 130.0 ± 9.6 10611- 90pc duty cycle) Y 4.30 66.73 16.52 0.46 130.0 ± 9.6 10612- 10612- 10613- 10613- 10614- 90pc duty cycle) Y 4.20 66.79 16.38 130.0 ± 9.6 10614- 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 10613- 10614- 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 10614- 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 10615- 10615- 1615 IEEE 802.11ac WIFI (20MHz, MCS7, 4.22 56.57 15.67 130.0 ± 9.6 10616- 10616- 10616 IEEE 802.11ac WIFI (20MHz, MCS0, 4.45 66.44 15.56 130.0<		IEEE 802.11ac WiFi (20MHz, MCS2, 90pc duty cycle)	X				0.46		± 9.6 %
IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle) X 3.78 66.52 15.70 0.46 130.0 AAB 90pc duty cycle) Y 4.40 66.97 16.66 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.40 66.73 16.67 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.30 66.73 16.37 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.20 66.73 16.37 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.22 66.73 16.37 0.46 130.0 ± 9.6 10612- IEEE 802.11ac WIFI (20MHz, MCS5, X 3.64 66.03 15.27 0.46 130.0 ± 9.6 4.89 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 4.89 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 10614- IEEE 802.11ac WIFI (20MHz, MCS6, X	····			4.34	66.78	16.36		130.0	
10610- AAB IEEE 802.11ac WIFI (20MHz, MCS3, pop duty cycle) X 3.78 66.52 15.70 0.46 130.0 ± 9.6 10611- 10611- 10611- 10612- AAB 12EE 802.11ac WIFI (20MHz, MCS4, 90pc duty cycle) Y 4.40 66.99 16.66 130.0 ± 9.6 10612- 010612- 10612- AAB 12EE 802.11ac WIFI (20MHz, MCS5, 90pc duty cycle) X 3.61 66.09 15.52 0.46 130.0 ± 9.6 10612- 010613- 90pc duty cycle) Y 4.27 66.79 16.38 130.0 ± 9.6 10614- 90pc duty cycle) Y 4.27 66.59 15.27 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.22 65.72 15.84 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 16.30 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 15.67 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 15.61 130.0 ±					65.87	15.81		130.0	
IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) Z 4.34 66.07 16.02 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.30 66.73 16.37 130.0 ± 9.6 10612- IEEE 802.11ac WiFi (20MHz, MCS5, AAB X 3.61 66.73 16.37 130.0 ± 9.6 10613- IEEE 802.11ac WiFi (20MHz, MCS5, AAB X 3.61 66.09 15.37 0.46 130.0 ± 9.6 10613- IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 10614- IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) X 3.70 66.56 15.73 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 65.64 15.76 130.0 ± 9.6 <tr< td=""><td></td><td>IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)</td><td></td><td></td><td>66.52</td><td></td><td>0.46</td><td></td><td>± 9.6 %</td></tr<>		IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)			66.52		0.46		± 9.6 %
10611- 90pc duty cycle) IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle) X 3.70 66.30 15.52 0.46 130.0 ± 9.6 10612- AAB IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) Y 4.30 66.73 16.37 130.0 ± 9.6 Y 4.27 66.73 16.38 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.79 16.38 130.0 10613- 01613- 80pc duty cycle) Y 4.27 66.59 15.27 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.95 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.71					66.99			130.0	
AAB 90pc duty cycle) Y 4.30 66.73 16.37 130.0 10612- IEEE 802.11ac WiFi (20MHz, MCS5, AAB X 3.61 66.73 16.37 130.0 ± 9.6 10613- IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) Y 4.27 66.79 16.38 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.79 16.38 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 15.27 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.56 15.73 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.56 15.73 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.56 15.73 0.46 130.0 ± 9.6 10615- IEEE 802.11ac WiFI (20MHz, MCS8, X 3.64 65.99 15.16 0.46 130.0 ± 9.6					66.07	16.00		130.0	
Z 4.25 65.83 15.82 130.0 AAB 90pc duty cycle) Y 4.27 66.09 15.37 0.46 130.0 ±9.6 AAB 90pc duty cycle) Y 4.27 66.79 16.38 130.0 ±9.6 10613- IEEE 802.11ac WiFi (20MHz, MCS6, X 3.64 66.03 15.27 0.46 130.0 ±9.6 AAB 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ±9.6 AAB 90pc duty cycle) Y 4.27 66.56 15.73 0.46 130.0 ±9.6 AAB 90pc duty cycle) Y 4.27 66.56 15.73 0.46 130.0 ±9.6 AAB 90pc duty cycle) Y 4.27 66.56 15.76 130.0 ±9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ±9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0		IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)					0.46	130.0	± 9.6 %
10612- AAB IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) X 3.61 66.09 15.37 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.79 16.38 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 15.84 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.57 15.67 130.0 ± 9.6 10614- IEEE 802.11ac WIFI (20MHz, MCS7, AAB X 3.70 66.56 15.73 0.46 130.0 ± 9.6 10615- AAB 90pc duty cycle) Y 4.28 66.52 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 AAB 90pc duty cycle)	·	_				16.37		130.0	
10612- AAB IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle) X 3.61 66.09 15.37 0.46 130.0 ± 9.6 10613- AAB 90pc duty cycle) Y 4.27 66.79 16.38 130.0 ± 9.6 10613- AAB 90pc duty cycle) Y 4.27 66.59 15.84 130.0 ± 9.6 10614- AAB IEEE 802.11ac WiFi (20MHz, MCS7, AAB X 3.64 66.59 16.20 130.0 ± 9.6 10614- AAB IEEE 802.11ac WiFi (20MHz, MCS7, Sopc duty cycle) X 3.70 66.59 15.64 130.0 ± 9.6 10615- AAB 90pc duty cycle) Y 4.27 66.60 15.96 130.0 ± 9.6 10615- AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 10616- 10616- 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.93 66.71 16.53 130.0 ± 9.6 AAB				4.25					
Z 4.22 65.92 15.84 130.0 AAB 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ±9.6 10614- AAB 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ±9.6 10614- AAB 1EEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) X 3.70 66.56 15.73 0.46 130.0 ±9.6 AAB 90pc duty cycle) Y 4.27 66.95 16.54 130.0 ±9.6 AAB 90pc duty cycle) Y 4.27 66.95 16.64 130.0 ±9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 10615- IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) X 4.45 66.34 16.09 130.0 ±9.6 AAB 90pc duty cycle) Y 4.95 66.71 16.53 130.0 ±9.6 AAB 90pc duty cycle) Y 4.97 66.78 16.54 130.0 <t< td=""><td></td><td>IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)</td><td></td><td></td><td>66.09</td><td>15.37</td><td>0.46</td><td></td><td>± 9.6 %</td></t<>		IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)			66.09	15.37	0.46		± 9.6 %
10613- AAB IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) X 3.64 66.03 15.27 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 AAB 90pc duty cycle) X 3.70 66.56 15.73 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.95 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.95 16.54 130.0 ± 9.6 10615- IEEE 802.11ac WiFi (20MHz, MCS8, X 3.64 65.99 15.16 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 10616- IEEE 802.11ac WiFi (40MHz, MCS0, X 4.45 66.31 16.66 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.93 66.07 16.13 130.0 ± 9.6 AAB								130.0	
10613- AAB IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle) X 3.64 66.03 15.27 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.59 16.20 130.0 ± 9.6 AAB 90pc duty cycle) X 3.70 66.56 15.73 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.95 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.95 15.46 130.0 ± 9.6 10615- IEEE 802.11ac WiFi (20MHz, MCS8, X 3.64 65.99 15.16 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.95 66.74 16.68 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.97 66.78 16.54 130.0 ± 9.6 AAB 90pc duty cycl									
Z 4.22 65.72 15.67 130.0 10614- AAB JEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) X 3.70 66.56 15.73 0.46 130.0 ± 9.6 10615- AAB JOB c duty cycle) Y 4.27 66.95 16.54 130.0 ± 9.6 10615- AAB JOP c duty cycle) X 3.64 65.99 15.16 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 AAB 90pc duty cycle) Z 4.23 66.54 15.56 130.0 ± 9.6 AAB 90pc duty cycle) X 4.45 66.34 16.08 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.95 66.71 16.53 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.97 66.78 16.54 130.0 ± 9.6 AB 90pc duty cycle) Y 4.97 66.78 <t< td=""><td></td><td>IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)</td><td></td><td></td><td>66.03</td><td>15.27</td><td>0.46</td><td>130.0</td><td>± 9.6 %</td></t<>		IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)			66.03	15.27	0.46	130.0	± 9.6 %
10614- AAB IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle) X 3.70 66.56 15.73 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.27 66.95 16.54 130.0 ± 9.6 AB 90pc duty cycle) Y 4.22 66.90 15.96 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 AB 90pc duty cycle) Y 4.28 66.54 15.66 130.0 ± 9.6 10616- AAB 90pc duty cycle) Y 4.23 66.71 16.53 130.0 ± 9.6 10617- BAB IEEE 802.11ac WiFi (40MHz, MCS1, X 4.43 66.27 18.03 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.93 66.78 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.96 66.18 16.11 0.46 130.0 ± 9.6 AAB 90pc				4.27		16.20		130.0	
AAB 90pc duty cycle) Y 4.27 66.95 16.73 0.40 1000 1.3.0 10615- AAB 1EEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) X 3.64 65.99 15.16 0.46 130.0 ± 9.6 10615- AAB 90pc duty cycle) Y 4.22 66.52 16.09 130.0 ± 9.6 10616- AAB 1EEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) X 4.45 66.34 16.08 0.46 130.0 ± 9.6 10616- AAB 1EEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) X 4.45 66.71 16.53 130.0 ± 9.6 10617- AAB 90pc duty cycle) Y 4.95 66.71 16.53 130.0 ± 9.6 10617- AAB 90pc duty cycle) Y 4.95 66.71 16.33 130.0 ± 9.6 10618- AAB 90pc duty cycle) Y 4.96 66.18 16.61 130.0 ± 9.6 10619- AAB 90pc duty cycle) Y 4.96 66.19 16.10 130.0				4.22	65.72	15.67		130.0	
Z 4.20 66.00 15.96 130.0 10615- AAB IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) X 3.64 65.99 15.16 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.23 65.64 15.56 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.95 66.71 16.53 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.95 66.71 16.53 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.93 66.78 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.97 66.78 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.97 66.78 16.61 130.0 ± 9.6		IEEE 802.11ac WiFl (20MHz, MCS7, 90pc duty cycle)	X	3.70			0.46		± 9.6 %
Z 4.20 66.00 15.96 130.0 10615- AAB JDE duty cycle) Y 3.64 65.99 15.16 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.28 66.52 16.09 130.0 ± 9.6 10616- AAB IEEE 802.11ac WiFi (40MHz, MCS0, AAB X 4.45 66.34 16.08 0.46 130.0 ± 9.6 10617- AAB IEEE 802.11ac WiFi (40MHz, MCS1, AAB Y 4.95 66.71 16.53 130.0 ± 9.6 10617- AAB JDe duty cycle) Y 4.95 66.71 16.03 0.46 130.0 ± 9.6 10617- AAB JDe duty cycle) Y 4.93 66.27 16.03 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.93 66.27 16.13 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.93 66.39 16.11 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y			Y	4.27	66.95	16.54		130.0	
10615- AAB IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle) X 3.64 65.99 15.16 0.46 130.0 ± 9.6 10616- AAB Y 4.28 66.52 16.09 130.0 130.0 10616- AAB IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) X 4.45 66.34 16.08 0.46 130.0 ± 9.6 10617- AAB IEEE 802.11ac WiFi (40MHz, MCS1, AAB X 4.45 66.71 16.13 130.0 ± 9.6 10617- AAB IEEE 802.11ac WiFi (40MHz, MCS1, AAB X 4.43 66.27 16.03 0.46 130.0 ± 9.6 10618- AAB 90pc duty cycle) Y 4.97 66.78 16.54 130.0 ± 9.6 10618- AAB IEEE 802.11ac WiFi (40MHz, MCS2, AAB X 4.437 66.39 16.11 0.46 130.0 ± 9.6 10619- AAB 90pc duty cycle) Y 4.90 66.88 16.61 130.0 ± 9.6 10619- AAB 90pc duty cycle) Y 4.93 66.18 16.1			Z	4.20	66.00	15.96			
Z 4.23 65.64 15.56 130.0 10616- AAB 90pc duty cycle) X 4.45 66.34 16.08 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.95 66.71 16.53 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.95 66.71 16.53 130.0 ± 9.6 10617- AAB IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) X 4.43 66.27 16.03 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.97 66.78 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.97 66.78 16.11 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.90 66.88 16.61 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.90 66.88 16.61 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.94 66.79 16.49<							0.46		±9.6 %
Z 4.23 65.64 15.56 130.0 10616- AAB IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) X 4.45 66.34 16.08 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.95 66.71 16.53 130.0 ± 9.6 10617- AAB IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle) X 4.43 66.27 16.03 0.46 130.0 ± 9.6 10617- AAB IEEE 802.11ac WiFi (40MHz, MCS1, AAB X 4.43 66.27 16.03 0.46 130.0 ± 9.6 10618- AAB 90pc duty cycle) Y 4.97 66.78 16.54 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.97 66.39 16.11 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.90 66.88 16.61 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.94 66.79 16.49 130.0 ± 9.6 AAB 90pc duty cycle			Y	4,28	66.52	16.09		130.0	
10616- AAB IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle) X 4.45 66.34 16.08 0.46 130.0 ± 9.6 Y 4.95 66.71 16.53 130.0 130.0 130.0 130.0 130.0 10617- AAB 90pc duty cycle) Z 4.93 66.07 16.13 130.0 130.0 19.6 10617- AAB 90pc duty cycle) Y 4.97 66.78 16.54 130.0 19.6 10618- AAB 90pc duty cycle) Y 4.97 66.78 16.54 130.0 19.6 10618- AAB 1EEE 802.11ac WiFi (40MHz, MCS2, AAB X 4.37 66.39 16.11 0.46 130.0 19.6 10619- AAB 90pc duty cycle) Y 4.90 66.88 16.61 130.0 19.6 10619- AAB 90pc duty cycle) Y 4.94 66.79 16.49 130.0 19.6 10620- AAB 90pc duty cycle) Y 4.94 66.13 15.93 0.46 130.0			Z						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)					0.46		± 9.6 %
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			Y	4.95	66.71	16.53		130.0	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)					0.46		±9.6 %
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			Y	4.97	66.78	16.54		130.0	
10618- AAB IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle) X 4.37 66.39 16.11 0.46 130.0 ± 9.6 Y 4.90 66.88 16.61 130.0 ± 9.6 Y 4.90 66.88 16.61 130.0 ± 9.6 I0619- AAB IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle) X 4.42 66.32 16.00 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.94 66.79 16.49 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.93 66.18 16.10 130.0 ± 9.6 10620- AAB IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle) X 4.43 66.13 15.93 0.46 130.0 ± 9.6 10621- AAB 90pc duty cycle) Y 4.96 66.62 16.45 130.0 ± 9.6 Y 4.96 66.62 16.45 130.0 ± 9.6 AAB 90pc duty cycle) Y 5.00 66.48 16.27									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			X				0.46		± 9.6 %
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			Y	4.90	66.88	16.61		130.0	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $									
$\begin{array}{c c c c c c c c c c c c c c c c c c c $						16.00	0.46		± 9.6 %
$\begin{array}{c c c c c c c c c c c c c c c c c c c $									
AAB 90pc duty cycle) Y 4.96 66.62 16.45 130.0 10621- IEEE 802.11ac WiFi (40MHz, MCS5, AAB Y 4.96 66.05 16.09 130.0 10621- IEEE 802.11ac WiFi (40MHz, MCS5, AAB Y 4.50 66.48 16.27 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 5.00 66.84 16.69 130.0 ± 9.6 10622- IEEE 802.11ac WiFi (40MHz, MCS6, AAB Y 4.46 66.43 16.25 0.46 130.0 ± 9.6 10622- IEEE 802.11ac WiFi (40MHz, MCS6, AAB Y 4.46 66.43 16.25 0.46 130.0 ± 9.6 AAB 90pc duty cycle) Y 4.98 66.91 16.73 130.0			Z						
Z 4.96 66.05 16.09 130.0 10621- AAB IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) X 4.50 66.48 16.27 0.46 130.0 ± 9.6 Y 5.00 66.84 16.69 130.0 ± 9.6 Z 4.97 66.18 16.29 130.0 10622- AAB IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) X 4.46 66.43 16.25 0.46 130.0 ± 9.6 Y 4.98 66.91 16.73 130.0 ± 9.6		IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	X	4.43		15.93	0.46	130.0	± 9.6 %
10621- AAB IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle) X 4.50 66.48 16.27 0.46 130.0 ± 9.6 Y 5.00 66.84 16.69 130.0 ± 9.6 Z 4.97 66.18 16.29 130.0 10622- AAB IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) X 4.46 66.43 16.25 0.46 130.0 ± 9.6 Y 4.98 66.91 16.73 130.0 ± 9.6	~~~~								
AAB 90pc duty cycle) Y 5.00 66.84 16.69 130.0 Image: Constraint of the system o						•			
Z 4.97 66.18 16.29 130.0 10622- AAB IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) X 4.46 66.43 16.25 0.46 130.0 ± 9.6 Y 4.98 66.91 16.73 130.0 ± 9.6							0.46		± 9.6 %
10622- AAB IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) X 4.46 66.43 16.25 0.46 130.0 ± 9.6 Y 4.98 66.91 16.73 130.0 ± 9.6									
10622- AAB IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle) X 4.46 66.43 16.25 0.46 130.0 ± 9.6 Y 4.98 66.91 16.73 130.0 ± 9.6						16.29			
							0.46		± 9.6 %
					66.91	16.73	-	130.0	
			Z	4.96	66.27	16.33		130.0	

10623- AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	X	4.39	66.10	15.89	0.46	130.0	± 9.6 %
		Y	4.89	66.49	16.36		130.0	
		Ż	4.86	65.84	15.96		130.0	·····
10624- AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	X	4.54	66.35	16.10	0.46	130.0	± 9.6 %
		Y	5.06	66.70	16.53		130.0	
		Z	5.05	66.11	16.17		130.0	
10625-	IEEE 802.11ac WiFi (40MHz, MCS9,	X	4.65	66.63	16.32	0.46	130.0	± 9.6 %
AAB	90pc duty cycle)	Y	5.15	66.88	16.69		130.0	_ 0.0 %
		Z	5.16	66.34	16.36		130.0	
10626-	IEEE 802.11ac WiFi (80MHz, MCS0,	X	4.87	66.09	16.03	0.46	130.0	± 9.6 %
AAB	90pc duty cycle)					0.40		1 3.0 %
		Y	5.31	66.64	16.44		130.0	
		Z	5.28	66.07	16.09	~ / ~	130.0	
10627- AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	X	4.96	66.39	16.17	0.46	130.0	± 9.6 %
		Y	5.52	67.25	16.73		130.0	
		Z	5.53	66.80	16.43		130.0	
10628- AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	X	4.83	65.96	15.85	0.46	130.0	±9.6 %
		Y	5.28	66.56	16.30		130.0	
		Z	5.27	66.03	15.96		130.0	
10629- AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	X	4.89	66.11	15.93	0.46	130.0	± 9.6 %
		Y	5.45	66.99	16.52		130.0	
		Ż	5.45	66.49	16.20		130.0	
10630-	IEEE 802.11ac WiFi (80MHz, MCS4,	X	4.94	66.47	16.13	0.46	130.0	± 9.6 %
AAB	90pc duty cycle)					0.40		1.0.0 %
		Y	5.52	67.40	16.73		130.0	
		Z	5.58	67.09	16.50		130.0	
10631- AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	X	5.04	67.01	16.63	0.46	130.0	± 9.6 %
		Y	5.56	67.66	17.07		130.0	
		Z	5.56	67.16	16.74		130.0	
10632- AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	×	5.02	66.85	16.55	0.46	130.0	± 9.6 %
		Y	5.59	67.70	17.10		130.0	
		Z	5.59	67.18	16.77		130.0	
10633- AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	×	4.86	66.17	16.01	0.46	130.0	± 9.6 %
		Y	5.30	66.64	16.39		130.0	
		Z	5.27	66.07	16.03		130.0	
10634- AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	X	4.95	66.64	16.30	0.46	130.0	± 9.6 %
·····	land the second s	Y	5.35	66.92	16.58	İ	130.0	
		Z	5.32	66.32	16.21		130.0	1
10635- AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	X	4.70	65.44	15.34	0.46	130.0	± 9.6 %
		Y	5.17	66.01	15.82	†	130.0	
**********		Z	5.16	65.50	15.50		130.0	l – – – – – – – – – – – – – – – – – – –
10636- AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	X	5.37	66.35	16.11	0.46	130.0	± 9.6 %
70.0		Y	5.75	66.94	16.50		130.0	
		Z	5.74	66.45	16.20	+	130.0	
10637- AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	X	5.47	66.68	16.28	0.46	130.0	± 9.6 %
7010		Y	5.84	67.17	16.61		130.0	
		Z			16.34			
10638-	IEEE 802.11ac WiFi (160MHz, MCS2,		5.85	66.75		0.40	130.0	+00%
AAC	90pc duty cycle)		5.45	66.60	16.21	0.46	130.0	± 9.6 %
i.		Y Z	5.91 5.90	67.37 66.89	16.68	ļ	130.0 130.0	

10639- AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	X	5.40	66.48	16.20	0.46	130.0	± 9.6 %
		Y	5.83	07.45	40.04		402.0	
			<u> </u>	67.15	16.61		130.0	
10640-	IEEE 802.11ac WiFi (160MHz, MCS4,	$\frac{2}{X}$	5.32	66.67 66.22	16.32	0.40	130.0	1000
AAC	90pc duty cycle)				15.99	0.46	130.0	± 9.6 %
	·····	<u>Y</u>	5.75	66.89	16.42		130.0	
40044		Z	5.75	66.45	16.15		130.0	
10641- AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	X	5.45	66.45	16.13	0.46	130.0	± 9.6 %
		Y	5.88	67.07	16.54		130.0	
10010		Z	5.90	66.70	16.30		130.0	
10642- AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	X	5.46	66.60	16.39	0.46	130.0	± 9.6 %
		Y	5.90	67.28	16.81		130.0	
		Z	5.89	66.80	16.53		130.0	
10643- AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	X	5.28	66.13	16.00	0.46	130.0	± 9.6 %
		Y	5.73	66.91	16.51		130.0	
		Z	5.74	66.48	16.24		130.0	
10644- AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	X	5.42	66.58	16.26	0.46	130.0	± 9.6 %
		Y	5.78	67.08	16.62		130.0	
		Z	5.78	66.62	16.33		130.0	
10645- AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	Х	5.81	67.58	16.73	0.46	130.0	±9.6 %
		Y	5.91	67.16	16.62		130.0	
		Z	5.93	66.77	16.38		130.0	
10646- AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	X	2.64	72.38	24.11	9.30	60.0	± 9.6 %
		Y	4.60	84.41	29.31		60.0	
		Z	4.84	83.41	28.63		60.0	
10647- AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	X	2.46	71.01	23.55	9.30	60.0	± 9.6 %
		Y	4.04	81.81	28.38		60.0	
		Z	4.35	81.42	27.96		60.0	
10648- AAA	CDMA2000 (1x Advanced)	X	2.44	155.88	0.83	0.00	150.0	± 9.6 %
		Y	0.35	60.28	6.28		150.0	
		Z	0.35	60.00	5.54		150.0	
10652- AAB	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	X	2.08	63.49	12.30	2.23	80.0	± 9.6 %
		Y	3.15	67.39	16.19		80.0	
		Z	2.91	65.29	15.14		80.0	
10653- AAB	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	X	3.02	65.17	14.89	2.23	80.0	± 9.6 %
		Y	3.64	66.22	16.46	·····	80.0	
		Z	3.52	64.96	15.78		80.0	
10654- AAB	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	X	3.20	64.95	15.39	2.23	80.0	± 9.6 %
		Y	3.67	65.70	16.49	w	80.0	
		Z	3.57	64.61	15.88		80.0	
10655- AAB	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	X	3.35	64.77	15.59	2.23	80.0	± 9.6 %
		Y	3.76	65.50	16.51		80.0	
		Z	3.66	64.52	15.94		80.0	
10658- AAA	Pulse Waveform (200Hz, 10%)	Х	2.01	62.76	7.94	10.00	50.0	± 9.6 %
		Y	2.58	65.57	9.73		50.0	
		Z	3.05	67.26	11.01		50.0	
10659- AAA	Pulse Waveform (200Hz, 20%)	X	0.84	60.00	5.36	6.99	60.0	± 9.6 %
		Y	1.33	63.54	7.82		60.0	

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10660- AAA	Pulse Waveform (200Hz, 40%)	X	0.39	60.00	3.98	3.98	80.0	± 9.6 %
		Y	0.54	61.57	5.88		80.0	
		Z	0.45	60.00	5.04		80.0	
10661- AAA	Pulse Waveform (200Hz, 60%)	X	17.64	60.43	1.44	2.22	100.0	± 9.6 %
		Y	0.23	60.00	4.28		100.0	
······································		Z	0.25	60.00	3.48		100.0	
10662- AAA	Pulse Waveform (200Hz, 80%)	X	0.00	84.91	40.93	0.97	120.0	± 9.6 %
************		Y	49.30	1078.61	357.44		120.0	
		Z	0.03	139.18	4.12		120.0	

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

Calibration Laboratory of

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

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Schweizerischer Kalibrierdienst

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

Accreditation No.: SCS 0108

Certificate No: EX3-3589_Jan19

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Object	EX3DV4 - SN:3589
Calibration procedure(s)	QA CAL-01.v9, QA CAL-14.v5, QA CAL-23.v5, QA CAL-25.v7 Calibration procedure for dosimetric E-field probes
Calibration date:	January 25, 2019
This calibration certificate docume The measurements and the uncert	nts the traceability to national standards, which realize the physical units of measurements (SI). tainties with confidence probability are given on the following pages and are part of the certificate.
All calibrations have been conduct	ted in the closed laboratory facility; environment temperature (22 \pm 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Арг-19
DAE4	SN: 660	19-Dec-18 (No. DAE4-660_Dec18)	Dec-19
Reference Probe ES3DV2	SN: 3013	31-Dec-18 (No. ES3-3013_Dec18)	Dec-19
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-18)	in house check: Jun-20
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	GZ L
Approved by:	Katja Pokovic	Technical Manager	OUL
			Issued: January 29, 2019
This calibration certificat	e shall not be reproduced except in ful	l without written approval of the lab	oratory.

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Accreditation No.: SCS 0108

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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 9	9 rotation around an axis that is in the plane normal to probe axis (at measurement center),
	i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Connector Angle

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 handheld and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
- IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices C) 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 $\vartheta = 0$ (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx, y, z are only intermediate values, i.e., the uncertainties of NORMx, y, z does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)x,y,z = NORMx,y,z * frequency_response (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (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; Dx,y,z; VRx,y,z: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- ConvF and Boundary Effect Parameters: Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx, y, z * ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- Spherical isotropy (3D deviation from isotropy): in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- Sensor Offset: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm (µV/(V/m) ²) ^A	0.44	0.40	0.39	± 10.1 %
$DCP (mV)^{B}$	104.1	102.3	101.6	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	С	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	161.0	± 2.2 %	±4.7 %
0		Y	0.00	0.00	1.00		172.8		
		Z	0.00	0.00	1.00		161.9		
10352-	Pulse Waveform (200Hz, 10%)	X	15.00	89.05	22.73	10.00	60.0	± 1.8 %	± 9.6 %
AAA		Y	15.00	87.03	21.09		60.0		
		Z	15.00	88.89	22.24		60.0		
10353-	Pulse Waveform (200Hz, 20%)	X	15.00	89.55	21.62	6.99	80.0	±0.9 %	± 9.6 %
AAA		Y	15.00	87.28	19.70]	80.0		
		Z	15.00	89.25	21.07		80.0		
10354-	Pulse Waveform (200Hz, 40%)	X	15.00	91.62	21.02	3.98	95.0	± 0.9 %	± 9.6 %
AAA		Y	15.00	87.00	17.73		95.0		
,		Z	15.00	91.02	20.33		95.0		
10355-	Pulse Waveform (200Hz, 60%)	X	15.00	97.72	22.56	2.22	120.0	± 1.3 %	± 9.6 %
AAA		Y	15.00	85.70	15.52		120.0		
		Z	15.00	94.39	20.55		120.0		
10387-	QPSK Waveform, 1 MHz	X	0.93	64.13	11.59	0.00	150.0	± 3.0 %	± 9.6 %
AAA		Y	0.57	60.00	7.45		150.0	-	
		Z	0.83	63.49	10.36		150.0		
10388-	QPSK Waveform, 10 MHz	X	2.36	68.76	16.09	0.00	150.0	± 1.5 %	± 9.6 %
AAA		Y	1.95	66.09	14.43		150.0	1	
		Z	2.37	69.14	16.27		150.0		
10396-	64-QAM Waveform, 100 kHz	X	3.76	72.95	19.72	3.01	150.0	± 0.7 %	± 9.6 %
AAA		Y	3.11	69.51	18.06		150.0	4	
		Z	4.24	75.35	20.59		150.0		
10399-	64-QAM Waveform, 40 MHz	X	3.57	67.40	15.92	0.00	150.0	± 2.7 %	± 9.6 %
AAA		Υ	3.33	66.26	15.18		150.0	4	1
		Z	3.47	67.09	15.77		150.0		
10414-	WLAN CCDF, 64-QAM, 40MHz	Х	4.95	65.72	15.56	0.00	150.0	± 4.8 %	± 9.6 %
ÀAA		Y	4.74	65.16	15.23		150.0	-	
		Z	4.81	65.57	15.48	1	150.0	1	ļ

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%.

^B Numerical linearization parameter: uncertainty not required.

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

^A The uncertainties of Norm X,Y,Z do not affect the E^2 -field uncertainty inside TSL (see Pages 5 and 6).

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	Т6
X	55.3	407.97	34.85	27.50	1.34	5.10	1.23	0.50	1.01
 	46.7	357.99	37.12	21.71	1.59	5.07	0.00	0.73	1.01
7	46.1	339.04	34.64	23.94	1.27	5.07	1.73	0.40	1.01

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-30.3
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

f (MHz) ^c	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	41.9	0.89	8.67	8.67	8.67	0.70	0.80	± 12.0 %
835	41.5	0.90	8.39	8.39	8.39	0.63	0.81	± 12.0 %
1750	40.1	1.37	7.31	7.31	7.31	0.40	0.80	± 12.0 %
1900	40.0	1.40	7.08	7.08	7.08	0.39	0.80	± 12.0 %
2300	39.5	1.67	6.77	6.77	6.77	0.31	0.85	± 12.0 %
2450	39.2	1.80	6.46	6.46	6.46	0.30	0.85	± 12.0 %
2600	39.0	1.96	6.25	6.25	6.25	0.40	0.83	± 12.0 %
3500	37.9	2.91	6.16	6.16	6.16	0.26	1.20	± 13.1 %
3700	37.7	3.12	6.02	6.02	6.02	0.26	1.20	± 13.1 %

Calibration Parameter Determined in Head Tissue Simulating Media

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

^F At frequencies below 3 GHz, the validity of tissue parameters (ϵ and σ) can be relaxed to \pm 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ϵ and σ) is restricted to \pm 5%. 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 frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

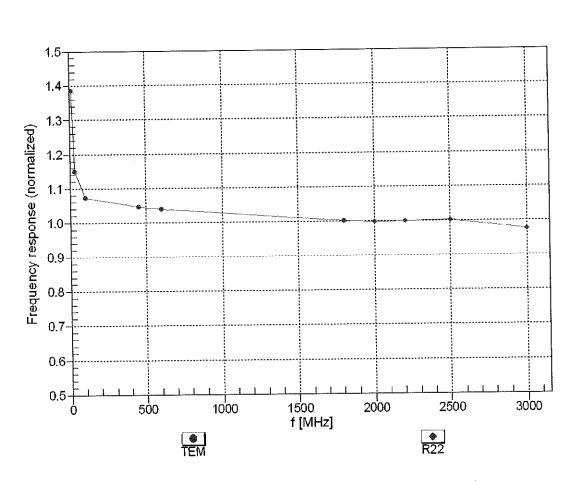
f (MHz) ^c	Relative Permittivity ^F	Conductivity (S/m) ^F	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k=2)
750	55.5	0.96	8.34	8.34	8.34	0.42	0.84	± 12.0 %
835	55.2	0.97	8.29	8.29	8.29	0.41	0.84	± 12.0 %
1750	53.4	1.49	6.82	6.82	6.82	0.43	0.80	± 12.0 %
1900	53.3	1.52	6.75	6.75	6.75	0.35	0.85	± 12.0 %
2300	52.9	1.81	6.71	6.71	6.71	0.36	0.87	± 12.0 %
2450	52.7	1.95	6.66	6.66	6.66	0.34	0.88	± 12.0 %
2600	52.5	2.16	6.47	6.47	6.47	0.28	0.95	± 12.0 %
3500	51.3	3.31	6.21	6.21	6.21	0.25	1.25	± 13.1 %
3700	51.0	3.55	6.13	6.13	6.13	0.20	1.25	± 13.1 %

Calibration Parameter Determined in Body Tissue Simulating Media

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

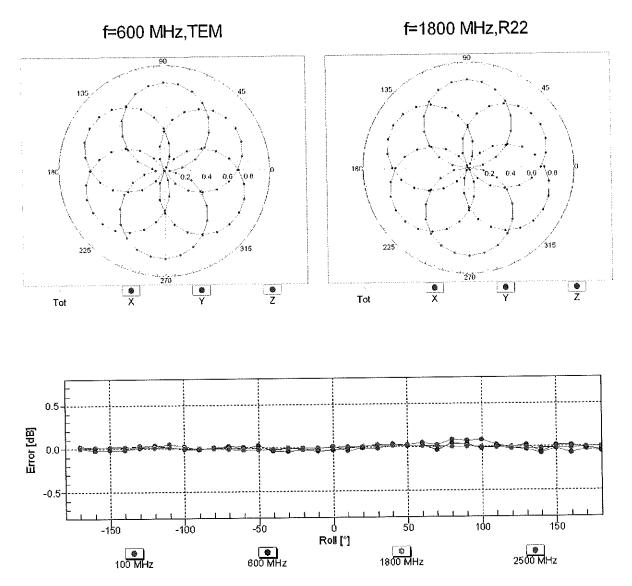
^F At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to \pm 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to \pm 5%. The uncertainty is the RSS of the ConvF 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

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



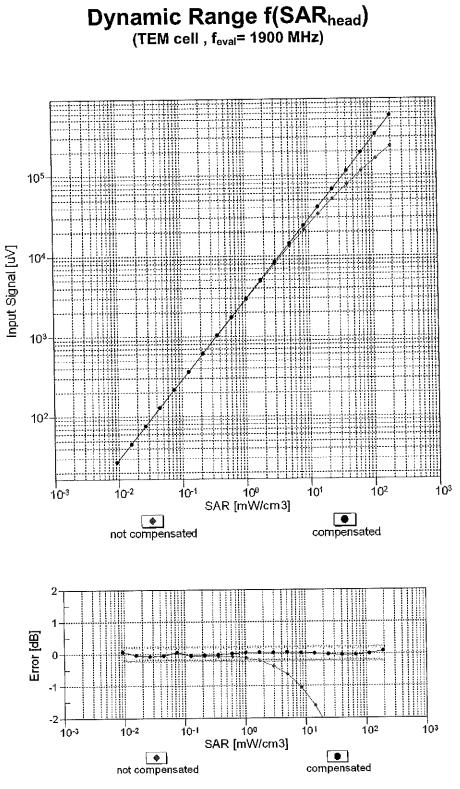
Frequency Response of E-Field (TEM-Cell:ifi110 EXX, Waveguide: R22)

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

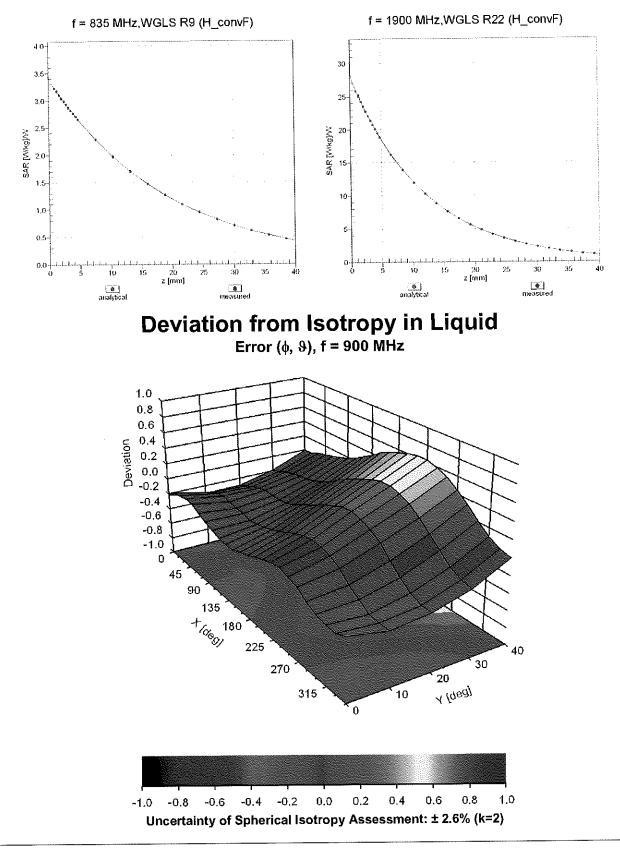


Receiving Pattern (ϕ), $\vartheta = 0^{\circ}$

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



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



Conversion Factor Assessment

Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR	Unc ^E
0		011		(dB)	(k=2)
0		CW	CW	0.00	± 4.7 %
<u>10010</u> 10011		SAR Validation (Square, 100ms, 10ms)	Test	10.00	±9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012		IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
	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		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		IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	±9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.6%
10042		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	±96%
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	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	±9.6 %
10063	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6%
10065	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	±9.6 %
10066	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAC	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	CAB	UMTS-FDD (HSDPA)	WCDMA	3.98	±9.6%
10098	CAB	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10102	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6%
10103	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10104	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10105	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
10108	CAG	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	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	±9.6 %
10115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	±9.6 %
10116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	±9.6%
10140	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	±9.6 %
10141	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	±9.6 %
10142	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10143	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	±9.6 %
10144	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	±9.6 %
10146	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	±9.6 %
10147	CAF	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 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10150	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10151	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10152	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10153	CAG	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 04-04M)	LTE-FDD	5.75	$\pm 9.6\%$
	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10155			LTE-FDD	5.79	± 9.6 %
10156	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	6.49	± 9.6 %
10157	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.62	$\pm 9.6\%$
10158	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6,56	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	5.82	± 9.6 %
10160	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)		6.43	± 9.6 %
10161	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.58	± 9.6 %
10162	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD		
10166	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
10167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10169	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	CAG	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	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10187	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	±9.6 %
10188		LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10189	AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10189	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10193	CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10194	CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
		IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10196		IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10197	CAC	IEEE 802.11n (HT Mixed, 59 Mbps, 16-QAM)	WLAN	8,27	± 9.6 %
10198	CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.03	± 9.6 %
10219	CAC		AA TANA	0.00	

19220 CAG IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM) WLAN 8.27 ± 96.5% 19221 CAG IEEE 802.11n (HT Mixed, 15 Mbps, 16-QAM) WLAN 8.27 ± 96.5% 19222 CAG IEEE 802.11n (HT Mixed, 160 Mbps, 66-QAM) WLAN 8.48 ± 96.5% 19224 CAG IEEE 802.11n (HT Mixed, 160 Mbps, 66-QAM) WLAN 8.48 ± 96.5% 19225 CAA LITE-TDD (SC-FDMA, 1 R8, 1.4 MHz, 16-QAM) ITE-TDD 9.42 ± 96.5% 19226 CAA LITE-TDD (SC-FDMA, 1 R8, 1.4 MHz, 16-QAM) ITE-TDD 9.42 ± 96.5% 19226 CAA LITE-TDD (SC-FDMA, 1 R8, 1.4 MHz, 0F-GAM) ITE-TDD 9.42 ± 96.5% 19236 CAC LITE-TDD (SC-FDMA, 1 R8, 1.4 MHz, 0F-GAM) ITE-TDD 9.42 ± 96.5% 19236 CAC LITE-TDD (SC-FDMA, 1 R8, 1.4 MHz, 0F-GAM) ITE-TDD 9.42 ± 96.5% 19236 CAC LITE-TDD (SC-FDMA, 1 R8, 1.4 MHz, 0F-GAM) ITE-TDD 9.42 ± 96.5% 19236 CAC LITE-TDD (SC-FDMA, 1 R8, 1.4 MHz, 0F-GAM) ITE-TDD 9.42 ± 96.5% 10231 <			and the second			
10222 CAC IEEE B02.11n (HT Mixed, 15 Mips, BE-QAM) WUAN 8.40 1.96 % 10224 CAC IEEE B02.11n (HT Mixed, 150 Mips, 64-CAM) WUAN 8.40 1.96 % 10224 CAC IEEE B02.11n (HT Mixed, 150 Mips, 64-CAM) WUAN 8.40 1.96 % 10225 CAA LTE-TDD (SC-FDMA, 1 RB, 1.4 Miz, 16-CAM) LTE-TDD 9.4 1.96 % 10226 CAA LTE-TDD (SC-FDMA, 1 RB, 1.4 Miz, 40-CAM) LTE-TDD 9.26 % 1.96 % 10228 CAA LTE-TDD (SC-FDMA, 1 RB, 3 Miz, 16-CAM) LTE-TDD 9.42 1.96 % 10229 CAC LTE-TDD (SC-FDMA, 1 RB, 3 Miz, 0PSK) LTE-TDD 9.48 1.96 % 10231 CAC LTE-TDD (SC-FDMA, 1 RB, 5 Miz, 16-CAM) LTE-TDD 9.21 4.96 % 10232 CAF LTE-TDD (SC-FDMA, 1 RB, 5 Miz, 64-CAM) LTE-TDD 9.21 4.96 % 10232 CAF LTE-TDD (SC-FDMA, 1 RB, 10 Miz, 64-CAM) LTE-TDD 9.24 4.96 % 10233 CAF LTE-TDD (SC-FDMA, 1 RB, 15 Miz, 44-CAM) LTE-TDD 9.24 4.96 % 10234 CAF	10220	CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	±9.6 %
10223 CAC LEEE 802.11n (HT Mixed, 30 Mbps, 16-QAM) WLAN 8.68 1.926 10224 CAC LEEE 802.11n (HT Mixed, 10 Mbps, 16-QAM) WLCDMA 6.79 1.96 % 10226 CAB UTF=TDD (SC-FDMA, 1.78, 1.4 MHz, 64-QAM) LTE=TDD 9.49 1.96 % 10227 CAA LTE=TDD (SC-FDMA, 1.78, 1.4 MHz, 64-QAM) LTE=TDD 9.20 1.96 % 10228 CAA LTE=TDD (SC-FDMA, 1.78, 1.4 MHz, 64-QAM) LTE=TDD 9.22 1.96 % 10228 CAA LTE=TDD (SC-FDMA, 1.78, 3 MHz, 16-QAM) LTE=TDD 9.42 1.96 % 10230 CAC LTE=TDD (SC-FDMA, 1.78, 5 MHz, 16-QAM) LTE=TDD 9.12 % 1.96 % 10232 CAF LTE=TDD (SC-FDMA, 1.78, 5 MHz, 04-QAM) LTE=TDD 9.21 * 9.6 % 10234 CAF LTE=TDD (SC-FDMA, 1.78, 1.0 MHz, 16-QAM) LTE=TDD 9.21 * 9.6 % 10234 CAF LTE=TDD (SC-FDMA, 1.78, 1.0 MHz, 26-QAM) LTE=TDD 9.21 * 9.6 % 10234 CAF LTE=TDD (SC-FDMA, 1.78, 1.0 MHz, 26-QAM) LTE=TDD 9.21 * 9.6 % 1			IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	±9.6 %
19224 CAC IEEE R02.110 (HT MWed, 150 Mbps, 24-QAM) WUAN 5.07 1.96 % 19226 CAA LTE-TDD (SC-FDMA, 1R, 1.4 MHz, 16-QAM) LTE-TDD 1.94 % 1.96 % 19227 CAA LTE-TDD (SC-FDMA, 1R, 1.4 MHz, 16-QAM) LTE-TDD 9.46 % 19228 CAA LTE-TDD (SC-FDMA, 1R, 1.4 MHz, QPSK) LTE-TDD 9.46 % 19229 CAC LTE-TDD (SC-FDMA, 1R, 1.4 MHz, QPSK) LTE-TDD 9.46 % 19230 CAC LTE-TDD (SC-FDMA, 1R, 1.4 MHz, QPSK) LTE-TDD 9.46 % 19231 CAC LTE-TDD (SC-FDMA, 1R, 1R, MHz, QPSK) LTE-TDD 9.47 % 9.86 % 19233 CAF LTE-TDD (SC-FDMA, 1R, MHz, 0FSK) LTE-TDD 9.21 % 9.8 % 19234 CAF LTE-TDD (SC-FDMA, 1R, 1MHz, 0FSK) LTE-TDD 9.21 % 9.8 % 19235 CAF LTE-TDD (SC-FDMA, 1R, 1MHz, 0FSK) LTE-TDD 9.21 % 9.8 % 19236 CAF LTE-TDD (SC-FDMA, 1R, 1MHz, 0FSK) LTE-TDD 9.21 % 9.8 % 19236 CAF <td< td=""><td></td><td></td><td></td><td>WLAN</td><td>8.06</td><td>±9.6 %</td></td<>				WLAN	8.06	±9.6 %
10225 CAB UMES-FDD (HSPA+) WCDMA 507 5.96 5.97 10226 CAA LTE-TDD (SC+FDMA, 1 RB, 1.4 MHz, 64-CAM) LTE-TDD 9.48 9.68 10227 CAA LTE-TDD (SC+FDMA, 1 RB, 1.4 MHz, 64-CAM) LTE-TDD 9.22 9.65 10228 CAC LTE-TDD (SC+FDMA, 1 RB, 3. MHz, 16-CAM) LTE-TDD 9.48 9.65 10230 CAC LTE-TDD (SC+FDMA, 1 RB, 3. MHz, 04-CAM) LTE-TDD 9.48 9.65 10231 CAC LTE-TDD (SC+FDMA, 1 RB, 5. MHz, 0PSK) LTE-TDD 9.48 9.65 10232 CAF LTE-TDD (SC+FDMA, 1 RB, 5. MHz, 0PSK) LTE-TDD 9.47 9.65 10234 CAF LTE-TDD (SC+FDMA, 1 RB, 15 MHz, 16-CAM) LTE-TDD 9.21 9.65 10235 CAF LTE-TDD (SC+FDMA, 1 RB, 15 MHz, 20-PSK) LTE-TDD 9.22 9.65 10236 CAF LTE-TDD (SC+FDMA, 1 RB, 15 MHz, 20-PSK) LTE-TDD 9.21 9.65 10237 CAF LTE-TDD (SC+FDMA, 1 RB, 15 MHz, 20-PSK) LTE-TDD 9.65			IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
1922E CAA LTE-TDD CSC-FDMA 1 RE 1 A HHz, 2 (P-CAM) LTE-TDD 1 0 22 2 A B 5 B			IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
19227 CAA LTE-TDD 1028 CAA 19228 CAA LTE-TDD CoCFDMA, 1RB, 3 MH2, 18-OAM) LTE-TDD 9.42 9.86 % 19230 CAC LTE-TDD CSC-FDMA, 1RB, 3 MH2, 18-OAM) LTE-TDD 9.48 9.86 % 19230 CAC LTE-TDD CSC-FDMA, 1RB, 3 MH2, 0PSK) LTE-TDD 9.48 9.86 % 19231 CAC LTE-TDD CSC-FDMA, 1RB, 3 MH2, 0PSK) LTE-TDD 9.48 9.86 % 19232 CAF LTE-TDD ISC-FDMA, 1RB, 5 MH2, 0PSK) LTE-TDD 9.48 9.86 % 19234 CAF LTE-TDD ISC-FDMA, 1RB, 10 MH2, 0PSK) LTE-TDD 9.21 9.86 % 19236 CAF LTE-TDD ISC-FDMA, 1RB, 10 MH2, 0PSK) LTE-TDD 9.21 9.86 % 19236 CAF LTE-TDD ISC-FDMA, 1RB, 10 MH2, 0PSK) LTE-TDD 9.24 9.86 % 19236 CAF LTE-TDD ISC-FDMA, 1RB, 10 MH2, 0PSK) LTE-TDD 9.24 9.86 % 19236 CAF LTE-TDD ISC-FDMA, 1RB, 10 MH2, 0PSK) LTE-TDD 9.84			UMTS-FDD (HSPA+)	WCDMA	5.97	±9.6 %
19228 CAA LTE-TDD S22 ± 98 S23 S22 CAC LTE-TDD S22 ± 98 S23 S23 CAC LTE-TDD S2 ± 98 S3 S32 CAC LTE-TDD S22 ± 98 S3 S32 CAC LTE-TDD S2 ± 98 S3 S32 CAC LTE-TDD S22 ± 98 S3 S32 CAC LTE-TDD S22 ± 98 S3 S32 CAC LTE-TDD S32 L 98 S3 S32 CAC LTE-TDD S32 L 98 S32 S32 S33 S32 S33 S33 S33			LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
19229 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-OAM) LTE-TDD 9.48 9.68 19230 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 0PSO) LTE-TDD 9.49 9.68 19231 CAC LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 0PSO) LTE-TDD 9.48 9.68 19232 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 04-OAM) LTE-TDD 9.48 9.68 19234 CAF LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 04-OAM) LTE-TDD 9.48 9.68 19236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 04-OAM) LTE-TDD 9.48 9.68 19236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 04-OAM) LTE-TDD 9.48 9.68 19238 CAF LTE-TDD (SC-FDMA, 1 RB, 16 MHz, 04-OAM) LTE-TDD 9.48 9.68 19238 CAF LTE-TDD (SC-FDMA, 1 RB, 16 MHz, 04-OAM) LTE-TDD 9.48 9.68 19248 CAF LTE-TDD (SC-FDMA, 1 RB, 16 MHz, 07-SK) LTE-TDD 9.48 9.68 19248 CAF LTE-TDD (SC-FDMA, 50%, RB, 14 MHz, 04-OAM) LTE-TDD 9.48				LTE-TDD	10.26	±9.6 %
10230 CAC LTE-TDD 10:26 ± 0.6 % 10231 CAC LTE-TDD 10:26 ± 0.6 % 10232 CAF LTE-TDD 9.16 ± 9.6 % 10232 CAF LTE-TDD 10:26 ± 9.6 % 10233 CAF LTE-TDD 10:26 ± 9.6 % 10234 CAF LTE-TDD 10:26 ± 9.6 % 10235 CAF LTE-TDD 10:26 ± 9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1R8, 10 MHz, dP-OAW) LTE-TDD 9.48 ± 9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1R8, 10 MHz, dP-OAW) LTE-TDD 9.48 ± 9.6 % 10237 CAF LTE-TDD (SC-FDMA, 1R8, 10 MHz, dP-OAW) LTE-TDD 9.48 ± 9.6 % 10240 CAF LTE-TDD (SC-FDMA, 1R8, 10 MHz, dP-OAW) LTE-TDD 9.24 ± 9.6 % 10241 CAA LTE-TDD (SC-FDMA, 69% RB, 14 MHz, dF-OAM) LTE-TDD 9.26 ± 9.6 % 10242 CAA LTE-TDD (SC-FDMA, 69% RB, 15 MHz, dF-OAM) LTE-TDD <td></td> <td></td> <td></td> <td>LTE-TDD</td> <td>9.22</td> <td>±9.6 %</td>				LTE-TDD	9.22	±9.6 %
10231 CAC LTE-TOD SC-FDMA, 1 RB, 3 MHz, 46-OAM) LTE-TOD 9.48 ±9.6 % 10232 CAF LTE-TOD (SC-FDMA, 1 RB, 5 MHz, 46-OAM) LTE-TOD 9.25 ±9.6 % 10233 CAF LTE-TOD (SC-FDMA, 1 RB, 5 MHz, 46-OAM) LTE-TOD 9.25 ±9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-OAM) LTE-TOD 9.24 ±9.6 % 10236 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-OAM) LTE-TOD 9.21 ±9.6 % 10237 CAF LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-OAM) LTE-TDD 9.22 ±9.6 % 10238 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 46-OAM) LTE-TDD 9.21 ±9.6 % 10242 CAA LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 46-OAM) LTE-TDD 9.86 ±9.6 % 10242 CAA LTE-TDD (SC-FDMA, 50% RB, 1 A HHz, 40-OAM) LTE-TDD 9.86 ±9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 40-OAM) LTE-TDD 9.06 ±9.6 % 10244 CAF LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 40-OAM)			LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	
10231 CAC LTE-TDD 9.19 ± 9.6 % 10232 CAF LTE-TDD 9.46 ± 9.6 % 10233 CAF LTE-TDD 10.25 ± 9.6 % 10234 CAF LTE-TDD 10.26 ± 9.6 % 10235 CAF LTE-TDD 10.26 ± 9.6 % 10236 CAF LTE-TDD 10.26 ± 9.6 % 10236 CAF LTE-TDD 10.26 ± 9.6 % 10237 CAF LTE-TDD 10.27 ± 9.6 % 10238 CAF LTE-TDD (SC-FDMA, 18R, 10 MHz, 0-CAM) LTE-TDD 9.48 ± 9.6 % 10240 CAF LTE-TDD (SC-FDMA, 18R, 10 MHz, 0+CAM) LTE-TDD 9.42 ± 9.6 % 10241 CAA LTE-TDD (SC-FDMA, 18R, 10 MHz, 0+CAM) LTE-TDD 9.42 ± 9.6 % 10242 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 0+CAM) LTE-TDD 9.46 ± 9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 0+CAM) LTE-TDD 9.46 ± 9.6 %				LTE-TDD	10.25	±9.6 %
19232 CAF LTE-TOD 9.48 ± 9.6 % 19233 CAF LTE-TOD 10.25 ± 9.6 % 19234 CAF LTE-TOD 10.25 ± 9.6 % 19235 CAF LTE-TOD 10.25 ± 9.6 % 19236 CAF LTE-TOD 10.25 ± 9.6 % 19237 CAF LTE-TOD 10.26 ± 9.6 % 19238 CAF LTE-TOD 10.26 ± 9.6 % 19238 CAF LTE-TOD 10.26 ± 9.6 % 19239 CAF LTE-TOD 10.26 ± 9.6 % 19240 CAA LTE-TOD 10.26 ± 9.6 % 19241 CAA LTE-TDD (SC-FDMA, 198 15 MHz, 64-OAM) LTE-TDD 9.46 ± 9.6 % 19242 CAA LTE-TDD (SC-FDMA, 69% RB, 14 MHz, 0FSK) LTE-TDD 9.46 ± 9.6 % 19244 CAC LTE-TDD (SC-FDMA, 69% RB, 3 MHz, 64-OAM) LTE-TDD 10.06 ± 9.6 % 19245 CAC LTE-TDD (SC-FDMA, 69% RB, 3 MHz, 0FSK)				LTE-TDD	9.19	
10233 CAF LTE-TOD 10.25 ± 9.6 % 10234 CAF LTE-TOD 9.26 ± 9.6 % 117570 9.26 ± 9.6 % 10235 CAF LTE-TOD 10.67 ± 9.6 % 117570 9.48 ± 9.6 % 10236 CAF LTE-TOD 10.67 ± 9.6 % 117570 9.21 ± 9.6 % 10237 CAF LTE-TOD 10.67 ± 9.0 % 117570 9.48 ± 9.6 % 10238 CAF LTE-TOD 10.57 ± 9.0 % 117570 9.48 ± 9.6 % 10240 CAF LTE-TDD (SC-FDMA, 188, 15 MHz, 16-0AM) LTE-TDD 9.46 ± 9.6 % 10241 CAA LTE-TDD (SC-FDMA, 06% RB, 1.4 MHz, 46-0AM) LTE-TDD 9.86 ± 9.6 % 10242 CAA LTE-TDD (SC-FDMA, 06% RB, 1.4 MHz, 46-0AM) LTE-TDD 9.86 ± 9.6 % 10242 CAA LTE-TDD (SC-FDMA, 06% RB, 1.4 MHz, 46-0AM) LTE-TDD 9.86 ± 9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 46-0AM) LTE-TDD 9.06 ± 9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 46-0AM) LTE-TDD 9.04 ± 9.6 %			LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	±9.6 %
10236 CAF LIE-TDD 9.21 ±9.6 % 10236 CAF LIE-TDD 10.26 ±9.6 % 10236 CAF LIE-TDD 10.26 ±9.6 % 10237 CAF LIE-TDD 10.26 ±9.6 % 10238 CAF LIE-TDD 10.25 ±9.6 % 10239 CAF LIE-TDD 10.25 ±9.6 % 10240 CAF LIE-TDD 10.25 ±9.6 % 10240 CAF LIE-TDD 10.25 ±9.6 % 10241 CAA LIE-TDD 10.25 ±9.6 % 10242 CAA LIE-TDD 10.26 ±9.6 % 10242 CAA LIE-TDD 10.62 ±9.6 % 10243 CAA LIE-TDD 10.62 ±9.6 % 10244 CAC LIE-TDD 10.62 ±9.6 % 10245 CAC LIE-TDD 10.62 ±9.6 % 10246 CAC LIE-TDD 10.62 ±9.6 % 10246 CAF LIE-TDD 10.62 ±9.6 % 10244			LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	
10236 CAF LTE-TDD 9.48 ± 9.6 % 10236 CAF LTE-TDD 10.25 ± 9.6 % 10237 CAF LTE-TDD 10.25 ± 9.6 % 10238 CAF LTE-TDD 10.25 ± 9.6 % 10239 CAF LTE-TDD 10.25 ± 9.6 % 10239 CAF LTE-TDD 10.25 ± 9.6 % 10240 CAF LTE-TDD 10.25 ± 9.6 % 10241 CAA LTE-TDD 10.25 ± 9.6 % 10242 CAA LTE-TDD 10.26 ± 9.6 % 10242 CAA LTE-TDD 10.26 ± 9.6 % 10244 CAC LTE-TDD 10.26 ± 9.6 % 10244 CAC LTE-TDD 10.06 ± 9.6 % 10244 CAC LTE-TDD 10.06 ± 9.6 % 10245 CAC LTE-TDD 10.06 ± 9.6 % 10246 CAF LTE-TDD 10.06 ± 9.6 % 10246 CAF LTE-TDD 10.07 ± 9.6 %		CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)			
10236 CAF LIE-TDD 10.25 ± 9.6 % 10237 CAF LITE-TDD (SC-FDMA, 1 RB, 10 MHz, 0PSK) LITE-TDD 9.48 ± 9.6 % 10238 CAF LITE-TDD (SC-FDMA, 1 RB, 15 MHz, 0PSK) LITE-TDD 9.48 ± 9.6 % 10240 CAF LITE-TDD (SC-FDMA, 1 RB, 15 MHz, 0F-OAM) LITE-TDD 9.21 ± 9.6 % 10241 CAA LITE-TDD (SC-FDMA, 50% RB, 14 MHz, 0F-OAM) LITE-TDD 9.82 ± 9.8 % 10242 CAA LITE-TDD (SC-FDMA, 50% RB, 14 MHz, 0F-OAM) LITE-TDD 9.86 ± 9.8 % 10243 CAA LITE-TDD (SC-FDMA, 50% RB, 3 MHz, 0F-OAM) LITE-TDD 10.06 ± 9.8 % 10246 CAC LITE-TDD (SC-FDMA, 50% RB, 5 MHz, 0F-OAM) LITE-TDD 10.06 ± 9.6 % 10246 CAC LITE-TDD (SC-FDMA, 50% RB, 5 MHz, 0F-OAM) LITE-TDD 10.09 ± 9.6 % 10246 CAF LITE-TDD (SC-FDMA, 50% RB, 5 MHz, 0F-OAM) LITE-TDD 9.01 ± 9.6 %	10235	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)			
10237 CAF LIE-TDD 9.21 1 9.6 % 10238 CAF LITE-TDD (SC-FDMA, 1 RB, 15 MHz, 41-0AM) LITE-TDD 10.25 ± 9.6 % 10240 CAF LITE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-0AM) LITE-TDD 9.21 ± 9.6 % 10241 CAA LITE-TDD (SC-FDMA, 50% RB, 14 MHz, 64-0AM) LITE-TDD 9.82 ± 9.6 % 10242 CAA LITE-TDD (SC-FDMA, 50% RB, 14 MHz, 64-0AM) LITE-TDD 9.46 ± 9.6 % 10243 CAA LITE-TDD (SC-FDMA, 50% RB, 31 MLz, QPSK) LITE-TDD 10.06 ± 9.6 % 10244 CAC LITE-TDD (SC-FDMA, 50% RB, 31 MLz, QPSK) LITE-TDD 10.06 ± 9.6 % 10245 CAC LITE-TDD (SC-FDMA, 50% RB, 51 MHz, QPSK) LITE-TDD 9.01 ± 9.6 % 10247 CAF LITE-TDD (SC-FDMA, 50% RB, 51 MHz, QPSK) LITE-TDD 9.01 ± 9.6 % 10250 CAF LITE-TDD (SC-FDMA, 50% RB, 10 MHz, GA-QAM) LITE-TDD 9.02 ± 9.6 %		CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)			
10238 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, G4-QAM) LTE-TDD 9.48 ± 9.6 % 10240 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, G4-QAM) LTE-TDD 9.21 ± 9.6 % 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-TDD 9.82 ± 9.6 % 10242 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 64-QAM) LTE-TDD 9.86 ± 9.8 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 31 MHz, 16-QAM) LTE-TDD 9.46 ± 9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 31 MHz, 16-QAM) LTE-TDD 10.06 ± 9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 31 MHz, 0FSK) LTE-TDD 9.30 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 51 MHz, 0FSK) LTE-TDD 9.30 ± 9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0FOAM) LTE-TDD 9.30 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0FOAM) LTE-TDD 9.21 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0FOAM) LTE-TDD 9.24 ± 9.6 % 10250 CA	10237	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)			
19239 CAF LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM) LTE-TDD 19.25 ± 9.6 % 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-TDD 9.82 ± 9.6 % 10242 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-TDD 9.86 ± 9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, QFSK) LTE-TDD 9.46 ± 9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 31 MHz, QFSK) LTE-TDD 10.06 ± 9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 31 MHz, QFSK) LTE-TDD 9.30 ± 9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 51 MHz, QFSK) LTE-TDD 9.91 ± 0.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 51 MHz, 0+CAM) LTE-TDD 9.91 ± 0.6 % 10246 CAF LTE-TDD (SC-FDMA, 50% RB, 51 MHz, 0+CAM) LTE-TDD 9.91 ± 0.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 51 MHz, 0+CAM) LTE-TDD 9.92 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0+CAM) LTE-TDD 9.20 ± 9.6 % 10250 CAF<	10238	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)			
10240 CAF LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 0PSK) LTE-TDD 9.21 ±9.6 % 10241 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-TDD 9.86 ±9.6 % 10242 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, 16-QAM) LTE-TDD 9.46 ±9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 0PSK) LTE-TDD 9.30 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 0PSK) LTE-TDD 9.31 ±9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 0PSK) LTE-TDD 9.91 ±9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0FOAM) LTE-TDD 9.29 ±9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0FOAM) LTE-TDD 9.24 ±9.6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 0FOAM) LTE-TDD 9.24 ±9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 16 MHz, 0FOAM) LTE-T	10239	CAF				
10241 CAA LTE-TDD 9.82 ± 9.6 % 10242 CAA LTE-TDD 9.86 ± 9.6 % 10243 CAA LTE-TDD (SC-FDMA, 50% RB, 14 MHz, G4-OAM) LTE-TDD 9.46 ± 9.6 % 10244 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-OAM) LTE-TDD 10.06 ± 9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-OAM) LTE-TDD 9.30 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-OAM) LTE-TDD 9.30 ± 9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 6 MHz, 64-OAM) LTE-TDD 9.01 ± 9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-OAM) LTE-TDD 9.29 ± 9.6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-OAM) LTE-TDD 9.24 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-OAM) LTE-TDD 9.24 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-OAM) LTE-TDD 9.24 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-OAM) LTE-TDD 9.06 % <td></td> <td>CAF</td> <td></td> <td></td> <td></td> <td></td>		CAF				
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10243 CAA LTE-TDD (SC-FDMA, 50%, RB, 14, MHz, OPSK) LTE-TDD 9.46 49.6 % 10244 CAC LTE-TDD (SC-FDMA, 50%, RB, 3 MHz, G4-QAM) LTE-TDD 10.06 ±9.6 % 10245 CAC LTE-TDD (SC-FDMA, 50%, RB, 3 MHz, G4-QAM) LTE-TDD 9.30 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50%, RB, 5 MHz, G4-QAM) LTE-TDD 9.30 ±9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50%, RB, 5 MHz, G4-QAM) LTE-TDD 9.29 ±9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50%, RB, 10 MHz, G4-QAM) LTE-TDD 9.24 ±9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50%, RB, 10 MHz, QPSK) LTE-TDD 9.24 ±9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50%, RB, 10 MHz, QPSK) LTE-TDD 9.24 ±9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50%, RB, 15 MHz, 16-QAM) LTE-TDD 9.04 ±9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50%, RB, 15 MHz, 16-QAM) LTE-TDD 9.06 % 19.6 % 1025		CAA			r	
10244 CAC LTE-TDD 0.00 ±0.36 10245 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, (4-QAM) LTE-TDD 10.06 ±9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, (4-QAM) LTE-TDD 9.01 ±9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, (4-QAM) LTE-TDD 9.91 ±9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, (4-QAM) LTE-TDD 9.91 ±9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, (4-QAM) LTE-TDD 9.29 ±9.6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, (4-QAM) LTE-TDD 9.24 ±9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 0FSK) LTE-TDD 9.04 ±9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 0FSK) LTE-TDD 9.04 ±9.6 % 10255 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0FSK) LTE-TDD 9.04 ±9.6 % 10256 CAF LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 0FSK) LTE-TDD 9.06 ±9.6 %					1	
10245 CAC LTE-TDD 102.6 10.66 ± 9.6 % 10246 CAC LTE-TDD (SC-FDMA, 50% RB, 3 MHz, CPSK) LTE-TDD 9.30 ± 9.6 % 10247 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.09 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-TDD 9.29 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 6 MHz, QPSK) LTE-TDD 9.29 ± 9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.21 ± 9.6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-TDD 9.01 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-TDD 9.01 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 76-QAM) LTE-TDD 9.02 ± 9.6 % 10255 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.04 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 40-QAM) LTE-TDD 9.04 ± 9.6 % 10257						
10246 CAC LTE-TDD 10:00 <th< td=""><td></td><td></td><td>LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)</td><td></td><td></td><td></td></th<>			LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)			
10247 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-TDD 9.91 ± 9.6 % 10248 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 26-QAM) LTE-TDD 10.09 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 26-QAM) LTE-TDD 9.29 ± 9.6 % 10250 CAF 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, QPSK) LTE-TDD 9.24 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.01 ± 9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.01 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.02 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9.06 ± 9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 46-QAM) LTE-TDD 9.84 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 46-QAM)				**************************************		
10248 CAF LTE-TDD Solver Stress LTE-TDD 10.09 ± 9.6 % 10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-TDD 9.29 ± 9.6 % 10250 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.21 ± 9.6 % 10251 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM) LTE-TDD 9.24 ± 9.6 % 10253 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 9.24 ± 9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 46-QAM) LTE-TDD 9.01 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.01 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 46-QAM) LTE-TDD 9.08 ± 9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 10.08 ± 9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 46-QAM) LTE-TDD 9.34 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 46-QAM) <td< td=""><td>10247</td><td></td><td></td><td></td><td></td><td></td></td<>	10247					
10249 CAF LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-TDD 9.03 ± 9.6 % 10250 CAF 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, QPSK) LTE-TDD 9.24 ± 9.6 % 10252 CAF LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK) LTE-TDD 9.01 ± 9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 46-QAM) LTE-TDD 9.01 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, G4-QAM) LTE-TDD 9.20 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, G4-QAM) LTE-TDD 9.36 ± 9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-TDD 9.38 ± 9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.38 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.38 ± 9.6 % 10262 CAF LTE-TDD (SC-FDM			LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)		· · · · · · · · · · · · · · · · · · ·	
10250 CAF 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, QPSK) LTE-TDD 9.24 ± 9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.0 ± 9.6 % 10255 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.96 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, QPSK) LTE-TDD 9.96 ± 9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.98 ± 9.6 % 10258 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.93 ± 9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.24 ± 9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)			LTE-TDD (SC-FDMA, 50% RB, 5 MHz, OPSK)			
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 9.00 ±9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 0FSK) LTE-TDD 9.20 ±9.6 % 10255 CAA LTE-TDD (SC-FDMA, 100% RB, 14 MHz, 16-QAM) LTE-TDD 9.20 ±9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.96 ±9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.34 ±9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.34 ±9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 0PSK) LTE-TDD 9.24 ±9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 0PSK) LTE-TDD 9.24 ±9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 0PSK) LTE-TDD 9.23 ±9.6 % 10264 CAF <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
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 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 04-QAM) LTE-TDD 9.20 ±9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 04-QAM) LTE-TDD 9.20 ±9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.96 ±9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9.96 ±9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.93 ±9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.97 ±9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.24 ±9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ±9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ±9.6 % 10265 CAF		-				
10253 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM) LTE-TDD 9.90 ± 9.6 % 10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-TDD 10.14 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-TDD 9.20 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-TDD 9.96 ± 9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.34 ± 9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.98 ± 9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.98 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 0PSK) LTE-TDD 9.97 ± 9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.83 ± 9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM) LTE-TDD 9.83 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.23 ± 9.6 % 10266 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
10254 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM) LTE-TDD 10.14 ± 9.6 % 10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.20 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.96 ± 9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.94 ± 9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 3.4 MHz, QPSK) LTE-TDD 9.34 ± 9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3.4 MHz, G4-QAM) LTE-TDD 9.97 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 5.4 MHz, G4-QAM) LTE-TDD 9.97 ± 9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 5.4 MHz, G4-QAM) LTE-TDD 9.24 ± 9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5.4 MHz, G4-QAM) LTE-TDD 9.33 ± 9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, G4-QAM) LTE-TDD 9.23 ± 9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, G4-QAM) LTE-TDD 9.30 ± 9.6 %						
10255 CAF LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK) LTE-TDD 9.20 ± 9.6 % 10256 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM) LTE-TDD 9.96 ± 9.6 % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-TDD 9.96 ± 9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-TDD 9.38 ± 9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.97 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.97 ± 9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 0PSK) LTE-TDD 9.24 ± 9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 0PSK) LTE-TDD 9.23 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-TDD 9.23 ± 9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.02 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.02 ± 9.6 % 10266						
10256 CAA LTE-TDD SSC FDN % 10257 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM) LTE-TDD 10.08 ± 9.6 % 10258 CAA LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9.34 ± 9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.34 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.97 ± 9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, G4-QAM) LTE-TDD 9.24 ± 9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, G4-QAM) LTE-TDD 9.24 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, G4-QAM) LTE-TDD 9.23 ± 9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, G4-QAM) LTE-TDD 9.92 ± 9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, G4-QAM) LTE-TDD 9.02 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, G4-QAM) LTE-TDD 10.06						
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10258 CAA LTE-TDD SC-FDMA, 100% RB, 1.4 MHz, QPSK) LTE-TDD 9.34 ± 9.6 % 10259 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM) LTE-TDD 9.98 ± 9.6 % 10260 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM) LTE-TDD 9.97 ± 9.6 % 10261 CAC LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK) LTE-TDD 9.24 ± 9.6 % 10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, G4-QAM) LTE-TDD 9.23 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, G4-QAM) LTE-TDD 9.83 ± 9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, G4-QAM) LTE-TDD 9.23 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, G4-QAM) LTE-TDD 10.07 ± 9.6 % 10267 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, G4-QAM) LTE-TDD 10.07 ± 9.6 % 10268 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, G4-QAM) LTE-TDD 10.06 ± 9.6 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, G4-QAM) LTE-TDD 10.06 ± 9.6 %						
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10262 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM) LTE-TDD 9.83 ± 9.6 % 10263 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 44-QAM) LTE-TDD 10.16 ± 9.6 % 10264 CAF LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK) LTE-TDD 9.23 ± 9.6 % 10265 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.23 ± 9.6 % 10266 CAF LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM) LTE-TDD 9.30 ± 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 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 0PSK) LTE-TDD 10.13 ± 9.6 % 10270 CAF 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 3.96 ± 9.6 % 10275 CAB UMTS-F						
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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 % 10269 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 10.13 ± 9.6 % 10270 CAF LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM) LTE-TDD 9.58 ± 9.6 % 10274 CAB UMTS-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK) LTE-TDD 9.58 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 %						
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10270 CAF 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 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10293 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 %						
10274 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10) WCDMA 4.87 ± 9.6 % 10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAB CDMA2000, RC1, SO% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 %						
10275 CAB UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4) WCDMA 3.96 ± 9.6 % 10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAB CDMA2000, RC1, SO% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 102						
10277 CAA PHS (QPSK) PHS 11.81 ± 9.6 % 10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
10278 CAA PHS (QPSK, BW 884MHz, Rolloff 0.5) PHS 11.81 ± 9.6 % 10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
10279 CAA PHS (QPSK, BW 884MHz, Rolloff 0.38) PHS 12.18 ± 9.6 % 10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
10290 AAB CDMA2000, RC1, SO55, Full Rate CDMA2000 3.91 ± 9.6 % 10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
10291 AAB CDMA2000, RC3, SO55, Full Rate CDMA2000 3.46 ± 9.6 % 10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
10292 AAB CDMA2000, RC3, SO32, Full Rate CDMA2000 3.39 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
10293 AAB CDMA2000, RC3, SO3, Full Rate CDMA2000 3.50 ± 9.6 % 10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
10295 AAB CDMA2000, RC1, SO3, 1/8th Rate 25 fr. CDMA2000 12.49 ± 9.6 % 10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
10297 AAD LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) LTE-FDD 5.81 ± 9.6 % 10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
10298 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK) LTE-FDD 5.72 ± 9.6 %						
10299 AAD LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM) LTE-FDD 6.39 ± 9.6 %						
	10299	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	±9.6 %

10300	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WIMAX	12.03	±9.6 %
10302	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	WIMAX	12.57	± 9.6 %
0303	AAA	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	12.52	±9.6 %
10304	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	11.86	±9.6 %
0304	AAA	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15	WIMAX	15.24	±9.6 %
10000		symbols)			
10306	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	WiMAX	14.67	± 9.6 %
10307	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	WIMAX	14.49	± 9.6 %
10308	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WIMAX	14.46	±9.6 %
10309	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18	WiMAX	14.58	± 9.6 %
10310	ΑΑΑ	symbols) IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18	WIMAX	14.57	± 9.6 %
		symbols)		6.06	± 9.6 %
10311	AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	
10313	AAA	IDEN 1:3	IDEN	10.51 13.48	± 9.6 % ± 9.6 %
10314	AAA	IDEN 1:6	IDEN		$\pm 9.6\%$
0315	AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	WLAN	1.71	$\pm 9.6\%$ $\pm 9.6\%$
10316	AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	$\pm 9.6\%$ $\pm 9.6\%$
10317	AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	$\pm 9.6\%$
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	
0353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 %
0355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
0356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
0387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
0388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
0396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
0400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	± 9.6 %
10401	AAD	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	± 9.6 %
0402	AAD	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	LTE-TDD	7.82	± 9.6 %
10111			Generic	8.54	± 9.6 9
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	WLAN	1.54	± 9.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	8,23	± 9.6 9
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	± 9.6 °
<u>10417</u> 10418	AAB AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle,	WLAN	8.14	± 9.6 °
10419	AAA	Long preambule) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle,	WLAN	8.19	± 9.6 °
		Short preambule)	WLAN	8.32	± 9.6 9
40400	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.47	± 9.6 °
				0.91	
10423	AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)		Q / O	
10423 10424	AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	
10423 10424 10425	AAB AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN WLAN	8.41	± 9.6 '
10423 10424 10425 10426	AAB AAB AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN WLAN WLAN	8.41 8.45	± 9.6
10423 10424 10425 10426 10427	AAB AAB AAB AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN WLAN WLAN WLAN	8.41 8.45 8.41	± 9.6 ± 9.6 ± 9.6
10423 10424 10425 10426 10427 10430	AAB AAB AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	WLAN WLAN WLAN WLAN LTE-FDD	8.41 8.45 8.41 8.28	± 9.6 ± 9.6 ± 9.6 ± 9.6
10423 10424 10425 10426 10427 10430	AAB AAB AAB AAB AAD AAD	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	WLAN WLAN WLAN WLAN LTE-FDD LTE-FDD	8.41 8.45 8.41 8.28 8.38	± 9.6 ± 9.6 ± 9.6 ± 9.6 ± 9.6
10423 10424 10425 10426 10427 10430	AAB AAB AAB AAB AAD	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) LTE-FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD	8.41 8.45 8.41 8.28 8.38 8.34	$ \begin{array}{r} \pm 9.6 \\ \end{array} $
10423 10424 10425 10426 10427 10430 10431	AAB AAB AAB AAB AAD AAD	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD	8.41 8.45 8.41 8.28 8.38 8.34 8.34	$\begin{array}{r} \pm 9.6 \\ \pm 9.6 \end{array}$
10423 10424 10425 10426 10427 10430 10431 10432	AAB AAB AAB AAB AAD AAD AAC	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK) IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM) IEEF FDD (OFDMA, 5 MHz, E-TM 3.1) LTE-FDD (OFDMA, 10 MHz, E-TM 3.1) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1) W-CDMA (BS Test Model 1, 64 DPCH)	WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD WCDMA	8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60	$\begin{array}{c} \pm 9.6 \\ \pm 9.6 \end{array}$
10423 10424 10425 10426 10427 10430 10431 10432 10433	AAB AAB AAB AAB AAD AAD AAC AAC	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)LTE-FDD (OFDMA, 17 MHz, E-TM 3.1)LTE-FDD (OFDMA, 18 Mbz, E-TM 3.1)LTE-FDD (OFDMA, 17 Mbz, E-TM 3.1)LTE-FDD (OFDMA, 17 Mbz, E-TM 3.1)LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL	WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD	8.41 8.45 8.41 8.28 8.38 8.34 8.34	$\begin{array}{c} \pm 9.6 \\ \pm 9.6 \end{array}$
10423 10424 10425 10426 10427 10430 10431 10432 10433 10433	AAB AAB AAB AAD AAD AAD AAC AAC AAA AAF	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK, ULSubframe=2,3,4,7,8,9)	WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD	8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60	$\begin{array}{c} \pm 9.6 \\ \end{array}$
10427 10430 10431 10432 10433 10434 10435 10447	AAB AAB AAB AAD AAD AAD AAC AAC AAA AAF AAD	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK, ULSubframe=2,3,4,7,8,9)LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD LTE-FDD LTE-FDD WCDMA	8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.34 8.60 7.82	$\begin{array}{c} \pm 9.6\% \\ \pm 9.6$
10423 10424 10425 10426 10427 10430 10431 10432 10433 10433	AAB AAB AAB AAD AAD AAD AAC AAC AAA AAF	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK, ULSubframe=2,3,4,7,8,9)	WLAN WLAN WLAN LTE-FDD LTE-FDD LTE-FDD WCDMA LTE-TDD LTE-FDD	8.41 8.45 8.41 8.28 8.38 8.34 8.34 8.60 7.82 7.56	$\begin{array}{c} \pm 9.6 \\ \end{array}$

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10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	± 9.6 %
10456	AAB	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	± 9.6 %
10457	AAA	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	± 9.6 %
10458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	± 9.6 %
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	± 9.6 %
10460	AAA	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	±9.6 %
10461	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10462	ΑΛΑ	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	± 9.6 %
10463	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	± 9.6 %
10464	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10465	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10466	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±9.6 %
10467	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6 %
10468	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10469	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	± 9.6 %
10470	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10471	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10472	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10473	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6 %
10474	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6 %
10475	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10477	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10478	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10479	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6 %
10480	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	±9.6 %
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±9.6 %
10482	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.71	±9.6 %
10483	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	± 9.6 %
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	± 9.6 %
10485	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2.3.4.7.8.9)	LTE-TDD	7.59	± 9.6 %
10486	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	± 9.6 %
10487	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	± 9.6 %
10488	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2.3,4,7,8,9)	LTE-TDD	7.70	±9.6 %
10489	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±9.6 %
10490	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±9.6 %
10491	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±9.6 %