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WIFI 6 GHz RF Exposure Report

Applicant Name: SAMSUNG Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggi-do, 16677 Rep. of Korea	Date of Issue: May 16, 2023 Test Report No.: HCT-SR-2305-FC009 Test Site: HCT CO., LTD.
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FCC ID:

A3LSMX810

Equipment Type:	Tablet
Application Type	Certification
FCC Rule Part(s):	CFR §2.1093
Model Name:	SM-X810
Date of Test:	Apr. 13. 2023 ~ Apr. 25. 2023

Band	Tx. Frequency	Equipment Class	SAR	APD	PD
			1g Body (W/kg)	Body (mW/cm ²)	psPD (mW/cm ²)
WIFI 6 GHz	5 935 MHz ~ 7 115 MHz	6CD	0.900	0.363	0.531

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Tested By

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REVISION HISTORY

The revision history for this test report is shown in table.

Revision No.	Date of Issue	Description
0	May 16, 2023	Initial Release

This test results were applied only to the test methods required by the standard.

The above Test Report is not related to the accredited test result by (KS Q) ISO/IEC 17025 and KOLAS (Korea Laboratory Accreditation Scheme), which signed the ILAC-MRA.

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1. Test Regulations

FCC RF Exposure evaluation of U-NII 6 -7 GHz Band of this device were measured by referring to the interim procedures in TCB Workshop document of Oct 2020, IEC/IEEE 62209-1528:2020 and also the Application Note of SPEAG, the manufacturer of measuring equipment.

SAR Testing was performed using 6.5 GHz SAR Probe calibration factor according to FCC TCBC Document.

November 2017, October 2018, April 2019, November 2019, October 2020, April 2021 TCBC Workshop Notes.

SPEAG DASY6 System Handbook

SPEAG DASY6 Application Note (Interim Procedures for Operating at 6 -10 GHz) (June 2021)

IEEE 1528-2013

IEC TR 63170:2018

IEC 62479:2010

FCC KDB Publication 865664 D02 SAR Reporting v01r02

FCC KDB Publication 616217 D04 SAR Tablets v01r02

FCC KDB Publication 248227 D01 802.11 Wi-Fi SAR v02r02

FCC KDB Publication 447498 D04 Interim General RF Exposure Guidance v01

FCC KDB Publication 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04

FCC KDB 648474 D04 Handset SAR v01r03

2. Test Location

2.1 Test Laboratory

Company Name	HCT Co., Ltd.
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2.2 Test Facilities

Our laboratories are accredited and approved by the following approval agencies according to ISO/IEC 17025.

Korea	National Radio Research Agency (Designation No. KR0032)
	KOLAS (Teting No. KT197)

3. Information of the EUT

3.1 General Information of the EUT

Model Name	SM-X810
Equipment Type	Tablet
FCC ID	A3LSMX810
Application Type	Certification
Applicant	SAMSUNG Electronics Co., Ltd.

4. Device Under Test Description

4.1 DUT specification

Band &Mode	Operating Mode	Tx Frequency
U-NII-5	Data	5 935 MHz – 6 415 MHz
U-NII-6	Data	6 435 MHz – 6 525 MHz
U-NII-7	Data	6 535 MHz – 6 875 MHz
U-NII-8	Data	6 875 MHz – 7 115 MHz

4.2 Nominal and Maximum Output Power Specifications

SAR values were scaled to the maximum allowed power to determine compliance per KDB publication 447498 D04v01.

4.2.1 Maximum 6 GHz WIFI output power () : power for 6E dual client.

Mode	MIMO			
	802.11a		802.11 ax(SU)	
	Nominal	Maximum	Nominal	Maximum
U-NII 6-7 GHz (20 MHz BW)	12.0	13.0	12.0 (12.0)	13 (13.0)
U-NII 6-7 GHz (40 MHz BW)			12.0 (12.0)	13 (13.0)
U-NII 6-7 GHz (80 MHz BW)			12.0 (12.0)	13 (13.0)
U-NII 6-7 GHz (160 MHz BW)			12.0 (12.0)	13 (13.0)

(Upper Tolerance: target ~ +1.0 dB)

4.2.2 Reduced Power 6 GHz WIFI output power - Grip Active.

Mode	MIMO			
	802.11a		802.11 Ax(SU)	
	Nominal	Maximum	Nominal	Maximum
U-NII 6-7 GHz (20 MHz BW)	11.0	12.0	11.0	12.0
U-NII 6-7 GHz (40 MHz BW)			10.5	11.5
U-NII 6-7 GHz (80 MHz BW)			10.5	11.5
U-NII 6-7 GHz (160 MHz BW)			10.5	11.5

(Upper Tolerance: target ~ +1.0 dB)

4.2.3 Reduced Power 6 GHz WIFI output power - RSDB Active.

Mode	MIMO			
	802.11a		802.11 Ax(SU)	
	Nominal	Maximum	Nominal	Maximum
U-NII 6-7 GHz (20 MHz BW)	9.0	10.0	9	10
U-NII 6-7 GHz (40 MHz BW)			8.5	9.5
U-NII 6-7 GHz (80 MHz BW)			8.5	9.5
U-NII 6-7 GHz (160 MHz BW)			8.5	9.5

(Upper Tolerance: target ~ +1.0 dB)

4.2.4 Maximum 6 GHz 802.11ax RU Power

Tones	MIMO			
	6G/20 MHz	6G/40 MHz	6G/80 MHz	6G/160 MHz
26T	3.0 (12.0) 2ch : 0 (0)	3.0 (12.0)	3.0 (12.0)	3.0 (12.0)
52T	6.0 (12.0) 2ch : 3.0 (3.0)	6.0 (12.0)	6.0 (12.0)	6.0 (12.0)
106T	9.0 (12.0) 2ch : 5.0 (5.0)	9.0 (12.0)	9.0 (12.0)	9.0 (12.0)
242T	12.0 (12.0) 2ch : 8.0 (8.0)	11.5 (12.0)	11.5 (12.0)	11.5 (12.0)
484T		11.5 (12.0)	11.5 (12.0)	11.5 (12.0)
996T			11.5 (12.0)	11.5 (12.0)
996T*2				11.5 (12.0)

(Upper Tolerance: target ~ +1.0 dB)

4.2.5 Reduced Power 6 GHz 802.11ax RU Power- Grip Active.

Tones	MIMO			
	6G/20 MHz	6G/40 MHz	6G/80 MHz	6G/160 MHz
26T	3.0	3.0	3.0	3.0
52T	6.0	6.0	6.0	6.0
106T	9.0	9.0	9.0	9.0
242T	11.0	10.5	10.5	10.5
484T		10.5	10.5	10.5
996T			10.5	10.5
996T*2				10.5

(Upper Tolerance: target ~ +1.0 dB)

4.2.6 Reduced Power 6 GHz 802.11ax RU Power- RSDB Active.

Tones	MIMO			
	6G/20 MHz	6G/40 MHz	6G/80 MHz	6G/160 MHz
26T	3.0	3.0	3.0	3.0
52T	6.0	6.0	6.0	6.0
106T	9.0	8.5	8.5	8.5
242T	9.0	8.5	8.5	8.5
484T		8.5	8.5	8.5
996T			8.5	8.5
996T*2				8.5

(Upper Tolerance: target ~ +1.0 dB)

4.3 DUT Antenna Locations

The dimensions and separation distances of this model are shown in the Technical Descriptions.

Antenna	Band	Freq.	Max. Power		Separation Distances (mm)					Device Configurations for SAR Testing				
		[MHz]	dBm	mW	Rear	Top	Left	Right	Bottom	Rear	Top	Left	Right	Bottom
WIFI 1 Ant	WIFI 6G	7115	13.0	20.0	0	0	132	0	271	Yes	Yes	No	Yes	No
WIFI 2 Ant	WIFI 6G	7115	13.0	20.0	0	0	0	132	271	Yes	Yes	Yes	No	No

The distance between the transmit antennas and the edges of the device are included in the filing.
 - Note: All test configurations are based on front view position.

4.4 Test Considerations

SAR was performed using 6.5 GHz SAR Probe calibration factors. FCC KDB 616217 D04 v01r02 and KDB 248227 D01 v02r02 were followed for test positions, distances, and modes.

Per Oct. 2020 and April 2021 TCBC Workshop notes:

Portable devices transmitting at frequencies > 6 GHz, including U-NII 6-7 GHz band, are subject to MPE incident power density (PD, or IPD) limits

MPE limit is 1 mW/cm² (10 W/m²) plane-wave-equivalent PD, averaged over 4 cm², evaluation distance emulating normal use conditions

1. SAR testing

The Probe Factor for SAR Testing were used 6.5 GHz SAR Probe calibration factor

For the SAR measurement test, five channels were selected according to the criteria of FCC KDB 248227 according to the notes of FCC Oct, 2020 TCBC Workshop.

Absorbed Power density(APD) using a 4cm² Averaging area is reported based on SAR measurements.

2. Power density measurement

Incident PD

Incident Power density is evaluated at 2mm ensuring that the resolution is sufficient such that integrated Power density(iPD) ratio between d=2 and d=λ/5 is ≥-1dB per equipment manufacture guidance.

Power density results are scaled up for uncertainty above 30%.

3. Simultaneous transmission analysis

6 GHz WIFI SAR results are used for simultaneous transmission analysis with the other transmitters and total exposure ratio(TER)

WLAN Note

1. WIFI 6 GHz operations are limited to MIMO operations only. Per FCC KDB publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB publication 447498 D04v01 by making a SAR measurement with both antennas transmitting simultaneously.

5. Additional Test Positions due to Proximity Conditions

This device uses a sensor to reduce output powers in extremity use conditions.

When the sensor detects a user is touching the device on or near to the antenna the device reduces the maximum allowed output power. However, the proximity sensor is not active when the device is moved beyond the sensor triggering distance and the maximum output power is no longer limited. Therefore, an additional exposure condition is needed in the vicinity of the triggering distance to ensure SAR is compliant when the device is allowed to operate at a non-reduced output power level.

FCC KDB 616217 D04 v01r02 Section 6 was used as a guideline for selecting SAR test distances for this device at these additional exposure conditions. The smallest separation distance determined by the sensor triggering and sensor coverage for each applicable edge, minus 1 mm, was used as the test separation distance for SAR testing. Sensor triggering distance summary data is included in below table.

Wireless technologies	Position	§6.2 Triggering Distance	§6.3 Coverage	§6.4 Tilt Angle	Worst case distance for Body SAR
6 GHz WIF MIMO	Rear	20 mm	N/A	N/A	19 mm
	Top	18 mm	N/A	N/A	17 mm
	Right Side	10 mm	N/A	N/A	9 mm
	Left Side	10 mm	N/A	N/A	9 mm

In the MIMO operation state of the 6 GHz WIFI mode, the SAR was measured by applying the worst case separation distance.

6. Limits

RF Exposure Limits for Frequencies Below 6 GHz

HUMAN EXPOSURE	UNCONTROLLED ENVIRONMENT General Population (W/kg)	CONTROLLED ENVIRONMENT Occupational (W/kg)
SPATIAL PEAK SAR * (Partial Body)	1.6	8.0
SPATIAL AVERAGE SAR ** (Whole Body)	0.08	0.4
SPATIAL PEAK SAR *** (Hands / Feet / Ankle / Wrist)	4.0	20.0

NOTES:

* The Spatial Peak value of the SAR averaged over any 1 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

** The Spatial Average value of the SAR averaged over the whole-body.

*** The Spatial Peak value of the SAR averaged over any 10 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

RF Exposure Limits for Frequencies Above 6 GHz

Per §1.1310 (d)(3), the MPE limits are applied for frequencies above 6 GHz. Power Density is expressed in units of mW/cm^2 or W/m^2 .

Peak Spatially Averaged Power Density was evaluated over a circular area of 4 cm^2 per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes.

HUMAN EXPOSURE	Limits For Occupational / Controlled Environments	Limits For General Population / Uncontrolled Environments
Frequency Range[MHz]	1,500 – 100,000	1,500 – 100,000
Power Density[mW/cm²]	5.0	1.0
Average Time[Minutes]	6	30

NOTES: 1.0 mW/cm^2 is 10 W/m^2

7. RF Conducted Powers

7.1 IEEE 802.11a (6 GHz) Maximum Conducted Power

Frequency [MHz]	Channel	IEEE 802.11a (20 MHz BW) (6 GHz) Average RF Conducted Power [dBm]		
		WIFI Ant 1	WIFI Ant 2	WIFI MIMO
5 935	2	8.92	8.63	11.79
6 075	25	8.23	8.62	11.44
6 175	45	9.74	8.79	12.30
6 275	65	9.67	9.28	12.49
6 415	93	9.74	9.34	12.55
6 435	97	9.18	9.09	12.14
6 475	105	9.22	9.23	12.23
6 515	113	9.49	9.38	12.44
6 535	117	9.37	9.30	12.34
6 675	145	9.52	8.94	12.25
6 695	149	9.13	8.98	12.06
6 875	185	9.16	9.15	12.16
6 895	189	8.93	9.10	12.02
6 995	209	9.43	9.39	12.42
7 115	233	8.68	9.11	11.91

7.2 IEEE 802.11a (6 GHz) Reduced Conducted Power_Grip

Frequency [MHz]	Channel	IEEE 802.11a (20 MHz BW) (6 GHz) Average RF Conducted Power [dBm]		
		WIFI Ant 1	WIFI Ant 2	WIFI MIMO
5 935	2	7.90	8.02	10.97
6 075	25	8.29	8.69	11.50
6 175	45	8.41	8.17	11.30
6 275	65	9.02	8.25	11.66
6 415	93	8.18	8.36	11.28
6 435	97	8.13	7.60	10.88
6 475	105	8.21	7.85	11.04
6 515	113	8.56	8.13	11.36
6 535	117	8.45	8.15	11.31
6 675	145	8.47	8.32	11.40
6 695	149	8.33	8.27	11.31
6 875	185	8.23	8.24	11.24
6 895	189	8.02	8.22	11.13
6 995	209	8.71	8.33	11.53
7 115	233	7.77	7.89	10.84

7.3 IEEE 802.11a (6 GHz) Reduced Conducted Power_RSDB

Frequency [MHz]	Channel	IEEE 802.11a (20 MHz BW)		
		(6 GHz) Average RF Conducted Power [dBm]		
		WIFI Ant 1	WIFI Ant 2	WIFI MIMO
5 935	2	6.51	6.17	9.35
6 075	25	6.91	6.86	9.89
6 175	45	6.98	6.73	9.87
6 275	65	6.72	6.53	9.63
6 415	93	6.25	6.46	9.37
6 435	97	6.13	5.87	9.01
6 475	105	6.24	6.09	9.17
6 515	113	6.57	6.29	9.44
6 535	117	6.50	6.24	9.38
6 675	145	6.55	6.45	9.51
6 695	149	6.37	6.44	9.41
6 875	185	5.91	6.53	9.24
6 895	189	5.73	6.47	9.12
6 995	209	6.81	6.44	9.64
7 115	233	6.14	6.34	9.25

7.4 IEEE 802.11ax (6 GHz) Maximum Conducted Power

Frequency [MHz]	Channel	IEEE 802.11ax (6 GHz) 80MHz RF Conducted Power [dBm]		
		WIFI Ant 1	WIFI Ant 2	WIFI MIMO
5985	7	8.69	9.52	12.14
6065	23	9.25	9.71	12.50
6145	39	9.99	9.17	12.61
6305	71	9.22	9.57	12.41
6385	87	9.37	9.46	12.43
6465	103	9.27	8.92	12.11
6545	119	9.71	8.88	12.33
6705	151	8.75	8.89	11.83
6785	167	9.24	8.97	12.12
6865	183	8.98	8.63	11.82
6945	199	8.88	8.65	11.78
7025	215	8.91	8.90	11.92

7.5 IEEE 802.11ax (6 GHz) Reduced Conducted Power_Grip

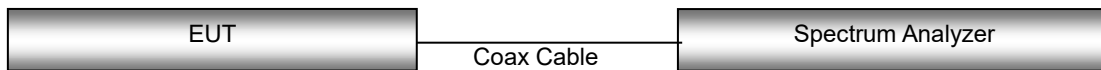
Frequency [MHz]	Channel	IEEE 802.11ax (6 GHz) 20MHz RF Conducted Power [dBm]		
		WIFI Ant 1	WIFI Ant 2	WIFI MIMO
5 935	2	8.00	8.05	11.04
6 075	25	8.34	8.61	11.49
6 175	45	8.50	8.24	11.38
6 275	65	8.97	8.30	11.66
6 415	93	8.20	8.43	11.33
6 435	97	8.12	7.71	10.93
6 475	105	8.18	7.89	11.05
6 515	113	8.52	8.20	11.38
6 535	117	8.42	8.21	11.33
6 675	145	8.43	8.40	11.43
6 695	149	8.30	8.26	11.29
6 875	185	8.19	8.16	11.19
6 895	189	8.02	8.14	11.09
6 995	209	8.71	8.19	11.47
7 115	233	7.77	7.76	10.78

7.6 IEEE 802.11ax (6 GHz) Reduced Conducted Power_RSDB

Frequency [MHz]	Channel	IEEE 802.11ax (6 GHz) 20MHz RF Conducted Power [dBm]		
		WIFI Ant 1	WIFI Ant 2	WIFI MIMO
5 935	2	6.42	6.21	9.33
6 075	25	6.35	6.44	9.41
6 175	45	6.53	6.38	9.47
6 275	65	6.71	6.44	9.59
6 415	93	6.24	6.42	9.34
6 435	97	6.07	5.85	8.97
6 475	105	6.20	6.04	9.13
6 515	113	6.52	6.32	9.43
6 535	117	6.45	6.26	9.37
6 675	145	6.53	6.42	9.49
6 695	149	6.34	6.41	9.39
6 875	185	5.85	6.43	9.16
6 895	189	5.67	6.38	9.05
6 995	209	6.82	6.30	9.58
7 115	233	6.93	6.67	9.81

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission mode with the same maximum output power specification, powers were measured for the largest channel bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-band channels, due to an even number of channels, both channels were measured.

Test Configuration

8. System Verification

8.1 Tissue Verification

The Head simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity.

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ϵ	Target Conductivity σ (S/m)	Target Dielectric Constant, ϵ	% dev σ	% dev ϵ
04/13/2023	21.0	6.5 GHz Head	6000	5.387	34.894	5.480	35.100	-1.70	-0.59
			6065	5.490	34.910	5.557	35.022	-1.21	-0.32
			6305	5.788	34.460	5.840	34.734	-0.89	-0.79
			6485	6.033	34.439	6.052	34.518	-0.31	-0.23
			6500	6.040	34.400	6.070	34.500	-0.49	-0.29
			6545	6.066	34.174	6.122	34.446	-0.91	-0.79
			6785	6.416	33.854	6.400	34.158	0.25	-0.89
			7000	6.628	33.393	6.650	33.900	-0.33	-1.50
			7025	6.666	33.376	6.680	33.870	-0.21	-1.46
			7500	7.250	32.857	7.240	33.300	0.14	-1.33

The above measured tissue parameters were used in the DASY software. The DASY software was used to perform interpolation to determine the dielectric parameters at the SAR test device frequencies(per KDB publication IEC/IEEE 62209-1528). The tissue parameters listed in the SAR test plots may slightly differ from the table above due to significant digit rounding in the software.

The SAR measurement system have implemented the SAR error compensation algorithms documented in IEC 62209-2 to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters for all frequencies. The test lab has verified that the required SAR error compensation algorithm has been correctly applied to only scale up the measured SAR, not downward.

8.2 System Verification Procedure

For SAR Measurement

SAR measurement was prior to assessment, the system is verified to the $\pm 10\%$ of the specifications at each frequency band by using the system verification kit. (Graphic Plots Attached)

- Cabling the system, using the verification kit equipment.
- Generate about 50 mW Input level from the signal generator to the Dipole Antenna.
- Dipole antenna was placed below the flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.
- The results are normalized to 1 W input power.

Note;

SAR Verification was performed according to the FCC KDB 865664 D01v01r04.

For Power Density Measurement

The system was verified to be within ± 0.66 dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check.

The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially(shape) and numerically (level) from the distribution provided by the manufacturer, per November 2017 TCBC Workshop Notes.

8.2.1.SAR System Verification for 6.5 GHz

Input Power: 10 mW

Freq. [MHz]	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp. [°C]	Liquid Temp. [°C]	1 W Target SAR _{1g} (SPEAG) [W/kg]	10mW Measured SAR _{1g} [W/kg]	1 W Normalized SAR _{1g} [W/kg]	Deviation [%]	Limit [%]
6500	04/13/2023	7654	1012	Head	21.1	21.0	289	3.11	311	7.61	± 10

8.2.2 Power Density Verification for 10 GHz

Input Power: 10 mW

Freq. (GHz)	Date	Probe SN	Dipole S/N	Normal psPD (W/m ² over 4 cm ²)		Deviation (dB)	Total psPD (W/m ² over 4 cm ²)		Deviation (dB)
				Measured	Target		Measured	Target	
10	04/24/2023	9528	1027	5.24	48.8	+ 0.31	5.26	48.8	+ 0.33
10	04/25/2023	9528		4.75	48.8	- 0.12	4.83	48.8	- 0.04

9. SAR Test Data Summary

9.1 SAR Measurement Results

6 GHz WLAN Body SAR																
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.															
6 065	23	802.11ax	80	MCS0	13.0	12.50	-0.01	Rear	MIMO	99.7	19	0.008	1.189	1.003	0.010	-
6 065	23	802.11ax	80	MCS0	13.0	12.50	0.06	Left	MIMO	99.7	9	0.042	1.189	1.003	0.050	-
6 065	23	802.11ax	80	MCS0	13.0	12.50	-0.16	Right	MIMO	99.7	9	0.036	1.189	1.003	0.043	-
6 065	23	802.11ax	80	MCS0	13.0	12.50	-0.15	Top	MIMO	99.7	17	0.004	1.189	1.003	0.005	-
6 275	65	802.11ax	20	MCS0	12.0	11.66	0.14	Rear	MIMO	99.7	0	0.764	1.175	1.003	0.900	1
6 275	65	802.11ax	20	MCS0	12.0	11.66	0.02	Left	MIMO	99.7	0	0.290	1.175	1.003	0.342	-
6 275	65	802.11ax	20	MCS0	12.0	11.66	0.06	Right	MIMO	99.7	0	0.212	1.175	1.003	0.250	-
6 275	65	802.11ax	20	MCS0	12.0	11.66	-0.16	Top	MIMO	99.7	0	0.023	1.175	1.003	0.027	-
6 075	25	802.11ax	20	MCS0	12.0	11.49	0.11	Rear	MIMO	99.7	0	0.635	1.164	1.003	0.741	-
6 475	105	802.11ax	20	MCS0	12.0	11.05	-0.12	Rear	MIMO	99.7	0	0.535	1.291	1.003	0.693	-
6 675	145	802.11ax	20	MCS0	12.0	11.43	-0.10	Rear	MIMO	99.7	0	0.204	1.148	1.003	0.235	-
6 995	209	802.11ax	20	MCS0	12.0	11.47	-0.19	Rear	MIMO	99.7	0	0.345	1.205	1.003	0.417	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram				

6 GHz WLAN Body SAR - RSDB																
Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Duty Cycle	Distance (mm)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.															
6 275.	65	802.11ax	20	MCS0	10.0	9.59	0.10	Rear	MIMO	99.7	0	0.463	1.138	1.003	0.528	2
6 275.	65	802.11ax	20	MCS0	10.0	9.59	-0.16	Left	MIMO	99.7	0	0.164	1.138	1.003	0.187	
6 275.	65	802.11ax	20	MCS0	10.0	9.59	0.11	Right	MIMO	99.7	0	0.109	1.138	1.003	0.124	
6 275.	65	802.11ax	20	MCS0	10.0	9.59	0.09	Top	MIMO	99.7	0	0.010	1.138	1.003	0.011	
6 075	25	802.11ax	20	MCS0	10.0	9.41	-0.11	Rear	MIMO	99.7	0	0.369	1.161	1.003	0.430	
6 475	105	802.11ax	20	MCS0	10.0	9.13	-0.13	Rear	MIMO	99.7	0	0.351	1.247	1.003	0.439	
6 675	145	802.11ax	20	MCS0	10.0	9.49	-0.14	Rear	MIMO	99.7	0	0.187	1.143	1.003	0.214	
6 995	209	802.11ax	20	MCS0	10.0	9.58	-0.04	Rear	MIMO	99.7	0	0.226	1.175	1.003	0.266	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population												Body 1.6 W/kg Averaged over 1 gram				

9.2 Absorbed Power Density Results

6 GHz WLAN Absorbed Power Density Body

Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Duty Cycle	Distance (mm)	Meas. APD mW/cm ² (4 cm ²)	Plot No.
MHz	Ch.												
6 065	23	802.11ax	80	MCS0	13.0	12.50	-0.01	Rear	MIMO	99.7	19	0.0076	-
6 065	23	802.11ax	80	MCS0	13.0	12.50	0.06	Left	MIMO	99.7	9	0.0351	-
6 065	23	802.11ax	80	MCS0	13.0	12.50	-0.16	Right	MIMO	99.7	9	0.0298	-
6 065	23	802.11ax	80	MCS0	13.0	12.50	-0.15	Top	MIMO	99.7	17	0.0034	-
6 475	105	802.11ax	20	MCS0	12.0	11.66	0.14	Rear	MIMO	99.7	0	0.363	-
6 475	105	802.11ax	20	MCS0	12.0	11.66	0.02	Left	MIMO	99.7	0	0.157	-
6 475	105	802.11ax	20	MCS0	12.0	11.66	0.06	Right	MIMO	99.7	0	0.115	-
6 475	105	802.11ax	20	MCS0	12.0	11.66	-0.16	Top	MIMO	99.7	0	0.0093	-
6 075	25	802.11ax	20	MCS0	12.0	11.49	0.11	Rear	MIMO	99.7	0	0.322	-
6 275	65	802.11ax	20	MCS0	12.0	11.05	-0.12	Rear	MIMO	99.7	0	0.258	-
6 675	145	802.11ax	20	MCS0	12.0	11.43	-0.10	Rear	MIMO	99.7	0	0.0882	-
6 995	209	802.11ax	20	MCS0	12.0	11.47	-0.19	Rear	MIMO	99.7	0	0.157	-

6 GHz WLAN Absorbed Power Density - RSDB

Frequency		Mode	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Ant Config.	Duty Cycle	Distance (mm)	Meas. APD mW/cm ² (4 cm ²)	Plot No.
MHz	Ch.												
6 275	65	802.11ax	20	MCS0	10.0	9.59	0.10	Rear	MIMO	99.7	0	0.223	-
6 275	65	802.11ax	20	MCS0	10.0	9.59	-0.16	Left	MIMO	99.7	0	0.0868	-
6 275	65	802.11ax	20	MCS0	10.0	9.59	0.11	Right	MIMO	99.7	0	0.0607	-
6 275	65	802.11ax	20	MCS0	10.0	9.59	0.09	Top	MIMO	99.7	0	0.0024	-
6 075	25	802.11ax	20	MCS0	10.0	9.41	-0.11	Rear	MIMO	99.7	0	0.188	-
6 475	105	802.11ax	20	MCS0	10.0	9.13	-0.13	Rear	MIMO	99.7	0	0.167	-
6 675	145	802.11ax	20	MCS0	10.0	9.49	-0.14	Rear	MIMO	99.7	0	0.0841	-
6 995	209	802.11ax	20	MCS0	10.0	9.58	-0.04	Rear	MIMO	99.7	0	0.0972	-

9.3 Power Density Results

6 GHz WLAN Power Density Grip																				
Frequency	Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Peak No.	Distance	Test Position	Ant Config.	Duty Cycle	Grid Step	lpd	Scaling Factor for Measurement	Normal psPD	Scaled Normal psPD	Total psPD	Reported 4 cm ² psPD	Plot No.	
MHz	Ch.	(MHz)	(Mbps)	(dBm)	(dBm)	(dB)		(mm)				(λ)	(mW/cm ²)	Uncertainty per IEC 62479	(mW/cm ²)	(mW/cm ²)	(mW/cm ²)	(mW/cm ²)		
6 275	65	802.11ax	20	MCS0	12.0	11.66	0.10	2	2	Rear	MIMO	99.7	0.05	7.63	1.554	0.330	0.513	0.342	0.531	3
6 275	65	802.11ax	20	MCS0	12.0	11.66	0.17	2	2	Left	MIMO	99.7	0.05	N/A	1.554	0.0909	0.141	0.103	0.160	-
6 275	65	802.11ax	20	MCS0	12.0	11.66	-0.12	2	2	Right	MIMO	99.7	0.05	N/A	1.554	0.0756	0.117	0.0834	0.130	-
6 275	65	802.11ax	20	MCS0	12.0	11.66	0.10	2	2	Top	MIMO	99.7	0.05	N/A	1.554	0.105	0.163	0.106	0.165	-
6 275	65	802.11ax	20	MCS0	12.0	11.66	-0.19	1	2	Rear	MIMO	99.7	0.05	N/A	1.554	0.119	0.185	0.122	0.190	-
6 275	65	802.11ax	20	MCS0	12.0	11.66	0.18	1	2	Top	MIMO	99.7	0.05	N/A	1.554	0.042	0.065	0.0426	0.066	-
6 075	25	802.11ax	20	MCS0	12.0	11.49	0.10	2	2	Rear	MIMO	99.7	0.05	N/A	1.554	0.239	0.371	0.249	0.387	-
6 475	105	802.11ax	20	MCS0	12.0	11.05	-0.05	2	2	Rear	MIMO	99.7	0.05	N/A	1.554	0.268	0.416	0.280	0.435	-
6 675	145	802.11ax	20	MCS0	12.0	11.43	-0.17	2	2	Rear	MIMO	99.7	0.05	N/A	1.554	0.186	0.289	0.191	0.297	-
6 995	209	802.11ax	20	MCS0	12.0	11.47	-0.11	2	2	Rear	MIMO	99.7	0.05	N/A	1.554	0.207	0.322	0.219	0.340	-
6 275	65	802.11ax	20	MCS0	12.0	11.66	-0.10	2	9.56	Rear	MIMO	99.7	0.05	6.39	1.554	0.187	0.291	0.190	0.295	-
47 CFR §1.1310 – Safety Limit Spatial Average Uncontrolled Exposure/ General Population															Power Density 1 mW/cm ² Averaged over 4 cm ²					

6 GHz WLAN Power Density RSDB																				
Frequency	Mode	Band width	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Peak No.	Distance	Test Position	Ant Config.	Duty Cycle	Grid Step	lpd	Scaling Factor for Measurement	Normal psPD	Scaled Normal psPD	Total psPD	Reported 4 cm ² psPD	Plot No.	
MHz	Ch.	(MHz)	(Mbps)	(dBm)	(dBm)	(dB)		(mm)				(λ)	(mW/cm ²)	Uncertainty per IEC 62479	(mW/cm ²)	(mW/cm ²)	(mW/cm ²)	(mW/cm ²)		
6 275	65	802.11ax	20	MCS0	10.0	9.59	0.14	2	2	Rear	MIMO	99.7	0.05	1.554	0.142	0.221	0.147	0.228	-	
6 275	65	802.11ax	20	MCS0	10.0	9.59	-0.08	2	2	Left	MIMO	99.7	0.05	1.554	0.0731	0.114	0.0771	0.120	-	
6 275	65	802.11ax	20	MCS0	10.0	9.59	0.19	2	2	Right	MIMO	99.7	0.05	1.554	0.0545	0.085	0.0609	0.095	-	
6 275	65	802.11ax	20	MCS0	10.0	9.59	0.16	2	2	Top	MIMO	99.7	0.05	1.554	0.0476	0.074	0.0497	0.077	-	
6 275	65	802.11ax	20	MCS0	10.0	9.59	0.18	1	2	Rear	MIMO	99.7	0.05	1.554	0.137	0.213	0.138	0.214	-	
6 275	65	802.11ax	20	MCS0	10.0	9.59	-0.11	1	2	Top	MIMO	99.7	0.05	1.554	0.0913	0.142	0.0918	0.143	-	
6 075	25	802.11ax	20	MCS0	10.0	9.41	-0.13	2	2	Rear	MIMO	99.7	0.05	1.554	0.194	0.301	0.198	0.308	-	
6 475	105	802.11ax	20	MCS0	10.0	9.13	0.03	2	2	Rear	MIMO	99.7	0.05	1.554	0.173	0.269	0.177	0.275	-	
6 675	145	802.11ax	20	MCS0	10.0	9.49	-0.14	2	2	Rear	MIMO	99.7	0.05	1.554	0.183	0.284	0.187	0.291	-	
6 995	209	802.11ax	20	MCS0	10.0	9.58	-0.16	2	2	Rear	MIMO	99.7	0.05	1.554	0.235	0.365	0.247	0.384	4	
47 CFR §1.1310 – Safety Limit Spatial Average Uncontrolled Exposure/ General Population															Power Density 1 mW/cm ² Averaged over 4 cm ²					

9.4 SAR and Absorbed Power Density Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Publication 447498 D04v01.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D04v01.
6. This device utilizes power reduction for some wireless mode and technologies, as outlined in sec. 4.2 The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous scenarios.
7. FCC KDB Publication 616217 D04v01r02 Section 4.3, SAR tests are required for the back surface and edges of the tablet with the tablet touching the phantom. The SAR Exclusion Threshold in FCC KDB 447498 D04v01 was applied to determine SAR test exclusion for adjacent edge configurations.
8. Per FCC guidance SAR was performed using 6.5 GHz SAR probe calibration factors. Per October 2020 TCB Workshop notes, 5 channels were tested. Absorbed power density (APD) using a 4 cm² averaging area is reported based on SAR measurements.
9. For Simultaneous transmission analysis including WLAN6E, is shown in the section 14 of SAR Report.

WLAN Notes:

1. WIFI 6 GHz operations are limited to MIMO operations only (does not support stand-alone mode). Per KDB Publication 248227 D01v02r02, SAR for MIMO was evaluated by following the simultaneous SAR provisions from KDB Publication 447498 D04v01 by making a SAR measurement with both antennas transmitting simultaneously.
2. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.

9.5 Power Density General Notes

1. The manufacturer has confirmed that the device tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
2. Batteries are fully charged at the beginning of the measurements. The DUT was connected to a wall charger for some measurements due to the test duration. It was confirmed that the charger plugged into this DUT did not impact the near-field PD test results.
3. Power density was calculated by repeated E-field measurements on two measurement planes separated by $\lambda/4$.
4. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools.
5. Per FCC guidance and equipment manufacturer guidance, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty $>30\%$. Total expanded uncertainty of 2.68 dB(85.4%) was used to determine the psPD measurement scaling factor.
6. Per equipment manufacturer guidance, power density was measured at $d=2$ mm and $d= \lambda /5$ mm using the same grid size and grid step size for some frequencies and surfaces. The integrated power density (iPD) was calculated based on these measurements. Since iPD ratio between the two distances is <1 dB, the grid step was sufficient for determining compliance at $d=2$ mm.
7. WIFI 6 GHz operations are limited to MIMO operations only (does not support stand-alone mode). psPD for MIMO was evaluated by making a measurement with both antennas transmitting simultaneously.

10. Measurement Uncertainty

.For SAR Measurements

Measurement Uncertainty for handset SAR test According to IEC/IEEE 62209-1528 (6 - 10 GHz range)									
<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h = c x f / e</i>	<i>i = c x g / e</i>	<i>k</i>
Source of uncertainty	Description	Uncertainty ± %	Probability distribution	Div.	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	Standard Uncertainty ± % (1 g)	Standard Uncertainty ± % (10 g)	<i>v_i</i> or <i>v_{eff}</i>
Measurement system									
Probe calibration	CF	18.60	N	2	1	1	9.30	9.30	∞
Probe Calibration Drift	CFdrift	1.70	R	1.73	1.00	1.00	0.98	0.98	∞
Probe Linearity	LIN	4.70	R	1.73	1.00	1.00	2.71	2.71	∞
Broadband Signal	BBS	2.80	R	1.73	1	1	1.62	1.62	∞
Probe Isotropy	ISO	7.60	R	1.73	1	1	4.39	4.39	∞
Data Acquisition	DAE	0.30	N	1.00	1	1	0.30	0.30	∞
RF Ambient	AMB	1.80	N	1.00	1	1	1.80	1.80	∞
Probe Positioning	Δ _{sys}	0.01	N	1	0.5	0.5	0.25	0.25	∞
Data Processing	DAT	3.50	N	1	1	1	3.50	3.50	∞
Phantom and Device Errors									
Conductivity (meas.)DAK	LIQ(σ)	2.50	N	1.00	0.78	0.71	1.95	1.78	∞
Conductivity (temp.)BB	LIQ(Tσ)	2.40	R	1.73	0.78	0.71	1.08	0.98	∞
Phantom Permittivity	EPS	14.00	R	1.73	0.5	0.5	4.04	4.04	∞
Distance DUT - TSL	DIS	2.00	N	1.00	2	2	4.00	4.00	∞
Device Positioning	D _{xyz}	1.00	N	1.00	1	1	1.00	1.00	∞
Device Holder	H	3.60	N	1.00	1	1	3.60	3.60	∞
DUT Modulation	MOD	2.40	R	1.73	1	1	1.39	1.39	47
Time-average SAR	TAS	0.00	R	1.73	1	1	0.00	0.00	5
DUT drift	RFdrift	2.50	N	1.00	1	1	2.50	2.50	∞
Val Antenna Unc.val	VAL	0.00	N	1.00	1	1	0.00	0.00	∞
Unc. Input Powerval	RFin	0.00	N	1.00	1	1	0.00	0.00	∞
Correction to the SAR results									
Phantom uDeviation to Target	C(ε, σ)	1.90	N	1.00	1	0.84	1.90	1.60	∞
SAR scalingp	C(R)	0.00	R	1	1	1	0.00	0.00	∞
Combined Uncertainty	u(ΔSAR)		RSS				13.98	13.91	0
Expanded uncertainty (95% confidence interval)			<i>k</i> = 2				27.96	27.82	

For Power Density Measurements:

Measurement Uncertainty for CDASY6 Power density module						
a	b	c	d	e	f = b x e / d	g
Source of uncertainty	Uncertainty Value	Probability distribution	Div.	c_i	Standard Uncertainty	v_i
	(± dB)					
Probe calibration	0.49	N	1	1	0.49	∞
Probe correction	0.00	R	1.73	1	0.00	∞
Frequency Response(BW ≤ 1GHz)	0.20	R	1.73	1	0.12	∞
Sensor cross coupling	0.00	R	1.73	1	0.00	∞
Istropy	0.50	R	1.73	1	0.29	∞
Linearity	0.20	R	1.73	1	0.12	∞
Probe scattering	0.00	R	1.73	1	0.00	∞
Probe positioning offset	0.30	R	1.73	1	0.17	∞
Probe positioning Repeatability	0.04	R	1.73	1	0.02	∞
Probe spatial Resolution	0.00	R	1.73	1	0.00	∞
Field Impedence Dependence	0.00	R	1.73	1	0.00	∞
Sensor Mechanical Offset	0.00	R	1.73	1	0.00	∞
Amplitude and Phase drift	0.00	R	1.73	1	0.00	∞
Amplitude and Phase noise	0.04	R	1.73	1	0.02	∞
Measurement area truncation	0.00	R	1.73	1	0.00	∞
System Detection Limit	0.04	R	1.73	1	0.02	∞
Data acquisition	0.03	N	1	1	0.03	∞
Field Reconstruction	2.00	R	1.73	1	1.15	∞
Forward Transformation	0.00	R	1.73	1	0.00	∞
Power density Scailing	0.00	R	1.73	1	0.00	∞
Spatial Averaging	0.10	R	1.73	1	0.06	∞
System Detection Limit	0.04	R	1.73	1	0.02	∞
Test sample and Environmental Factors						
Probe coupling with DUT	0.00	R	1.73	1	0.00	∞
Modulation Response	0.40	R	1.73	1	0.23	∞
Integration time	0.00	R	1.73	1	0.00	∞
Response time	0.00	R	1.73	1	0.00	∞
Device holder influence	0.10	R	1.73	1	0.06	∞
DUT alignment	0.00	R	1.73	1	0.00	∞
RF Ambient Conditions	0.04	R	1.73	1	0.02	∞
RF ambient - reflections	0.04	R	1.73	1	0.02	∞
Immunity/Secondary Reception	0.00	R	1.73	1	0.00	∞
Power Drif of DUT	0.21	R	1.73	1	0.12	∞
Combined standard uncertainty (k = 1)		RSS			1.34	∞
Expanded uncertainty (95% confidence level)		k = 2			2.68	

11. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	ELI Phantom	-	N/A	N/A	N/A
SPEAG	cDASY6 5G Module Phantom		N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F17/ 59CHA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX60	F/20/0018446/C/001	N/A	N/A	N/A
Staubli	TX90 XLspeag	F17/ 59CHA1/ A/ 01	N/A	N/A	N/A
Staubli	TX60 Lspeag	F/20/0018446/A/001	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	010963	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	020885	N/A	N/A	N/A
SPEAG	DAE4	1254	06/15/2022	Annual	06/15/2023
SPEAG	DAE4	868	09/21/2022	Annual	09/21/2023
SPEAG	E-Field Probe EX3DV4	7654	05/31/2022	Annual	05/31/2023
SPEAG	E-Field Probe EUmmWV4	9528	03/21/2023	Annual	03/21/2024
SPEAG	Dipole D6.5 GHz V2	1012	09/20/2022	Annual	09/20/2023
SPEAG	5G Verification source 10 GHz	1027	07/18/2022	Annual	07/18/2023
TESTO	175-H1/Thermometer	44606559906	03/27/2023	Annual	03/27/2024
TESTO	175-H1/Thermometer	40331915309	12/29/2022	Annual	12/29/2023
Agilent	Power Meter E4419B	MY41291386	09/27/2022	Annual	09/27/2023
Agilent	Power Meter N1911A	MY45101406	06/27/2022	Annual	06/27/2023
Agilent	Power Sensor 8481A	SG1091286	09/27/2022	Annual	09/27/2023
Agilent	Power Sensor 8481A	MY41090675	09/27/2022	Annual	09/27/2023
HP	Attenuator (3dB) 33340A	02427	08/25/2022	Annual	08/25/2023
HP	Attenuator (20dB) 8493C	09271	08/25/2022	Annual	08/25/2023
Agilent	Directional Bridge 86205A	3140A04581	05/26/2022	Annual	05/26/2023
SPEAG	DAKS 3.5	1038	01/25/2023	Annual	01/25/2024
SPEAG	Vector Reflectometer	00141013	02/13/2023	Annual	02/13/2024
ROHDE&SCHWARZ	Signal Generator SMB100A	177633	07/05/2022	Annual	07/05/2023
Agilent	MXA Signal Analyzer N9020A	MY50510407	06/07/2022	Annual	06/07/2023

* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

12. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body are very complex phenomena that depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

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Appendix A. – DUT Ant. Information & SETUP PHOTO

Please refer to test DUT Ant. Information & setup photo file no. as follows:

Report No.
HCT-SR-2305-FC009-P

Appendix B. – SAR Test Plots

Test Laboratory: HCT CO., LTD
 EUT Type: Tablet
 Liquid Temperature: 21.0 °C
 Ambient Temperature: 21.1 °C
 Test Date: 04/13/2023
 Plot No.: 1

Measurement Report for Device, BACK, U-NII-5, IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle), Channel 65 (6275.0 MHz)
Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	285.0 x 185.0 x 6.0		Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-5	WLAN, 10683-AAC	6275.0, 65	6.0	5.72	34.5

Hardware Setup

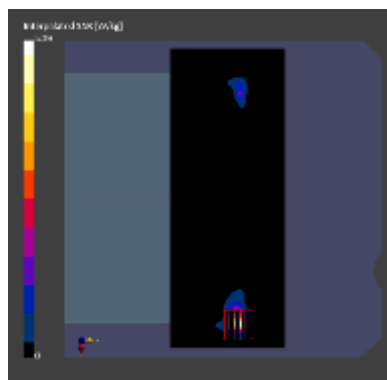
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V6.0 (20deg probe tilt)	EX3DV4 - SN7654, 2022-05-31	DAE4 Sn1254, 2022-06-15

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	221.0 x 85.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	2.2 x 2.2 x 1.2
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.2

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.572	0.764
psSAR10g [W/Kg]	0.128	0.148
psAPD (1.0cm2, sq) [W/m2]		7.64
psAPD (4.0cm2, sq) [W/m2]		3.63
Power Drift [dB]	0.17	0.14



Test Laboratory: HCT CO., LTD
 EUT Type: Tablet
 Liquid Temperature: 21.0 °C
 Ambient Temperature: 21.1 °C
 Test Date: 04/13/2023
 Plot No.: 2

Measurement Report for Device, BACK, U-NII-5, IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle), Channel 65 (6275.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	285.0 x 185.0 x 6.0		Tablet

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 0.00	U-NII-5	WLAN, 10683-AAC	6275.0, 65	6.0	5.72	34.5

Hardware Setup

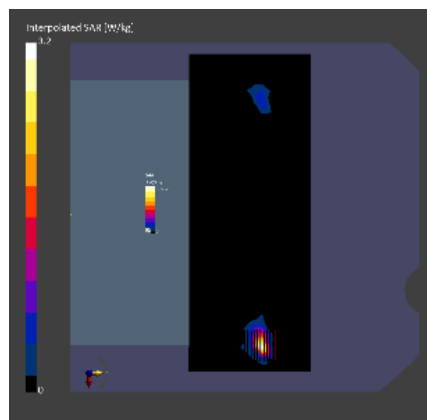
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V6.0 (20deg probe tilt) - xxxx	EX3DV4 - SN7654, 2022-05-31	DAE4 Sn1254, 2022-06-15

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	221.0 x 85.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	2.2 x 2.2 x 1.2
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.2

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.346	0.463
psSAR10g [W/Kg]	0.073	0.091
psAPD (1.0cm ² , sq) [W/m ²]		4.63
psAPD (4.0cm ² , sq) [W/m ²]		2.23
Power Drift [dB]	0.07	0.10



Test Laboratory: HCT CO., LTD
 EUT Type: Tablet
 Ambient Temperature: 19.6 °C
 Test Date: 04/24/2023
 Plot No.: 3

Measurement Report for Device, BACK, U-NII-5, IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle), Channel 65 (6275.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	285.0 x 185.0 x 6.0		Tablet

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	BACK, 2.00	U-NII-5	WLAN, 10683-AAC	6275.0, 65	1.0

Hardware Setup

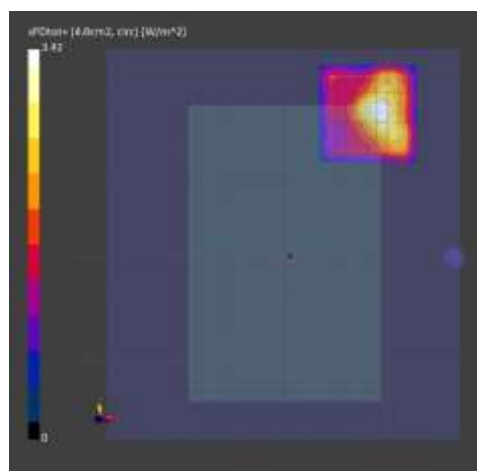
Phantom	Probe, Calibration Date	DAE, Calibration Date
mmWave - xxxx	EUmmWV4 - SN9528_F1-55GHz, 2023-03-21	DAE4 Sn868, 2022-09-21

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	90.0 x 90.0
Grid Steps [lambda]	0.05 x 0.05
Sensor Surface [mm]	2.0

Measurement Results

Scan Type	5G Scan
Avg. Area [cm2]	4.00
psPDn+ [W/m2]	3.30
psPDtot+ [W/m2]	3.42
psPDmod+ [W/m2]	3.58
E _{max} [V/m]	49.4
Power Drift [dB]	0.10



Test Laboratory: HCT CO., LTD
 EUT Type: Tablet
 Ambient Temperature: 20.1 °C
 Test Date: 04/25/2023
 Plot No.: 4

Measurement Report for Device, BACK, U-NII-8, IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle), Channel 209(6995.0 MHz)

Device Under Test Properties

Model, Manufacturer	Dimensions [mm]	IMEI	DUT Type
Device,	285.0 x 185.0 x 6.0		Tablet

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	BACK, 2.00	U-NII-8	WLAN, 10683-AAC	6995.0, 209	1.0

Hardware Setup

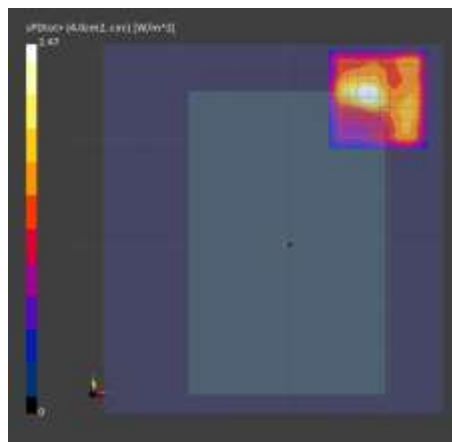
Phantom	Probe, Calibration Date	DAE, Calibration Date
mmWave - xxxx	EUmmWV4 - SN9528_F1-55GHz, 2023-03-21	DAE4 Sn868, 2022-09-21

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	90.0 x 90.0
Grid Steps [lambda]	0.05 x 0.05
Sensor Surface [mm]	2.0

Measurement Results

Scan Type	5G Scan
Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	2.35
psPDtot+ [W/m ²]	2.47
psPDmod+ [W/m ²]	2.68
E _{max} [V/m]	45.6
Power Drift [dB]	-0.16



Appendix C. – Dipole Verification Plots

■ **Verification Data (6 500 MHz)**

Test Laboratory: HCT CO., LTD
 Input Power 10 mW
 Liquid Temp: 21.0°C
 Test Date: 04/13/2023
Measurement Report for Device, , , CW, Channel 0 (6500.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	6500.0, 0	6.0	6.04	34.4

Hardware Setup

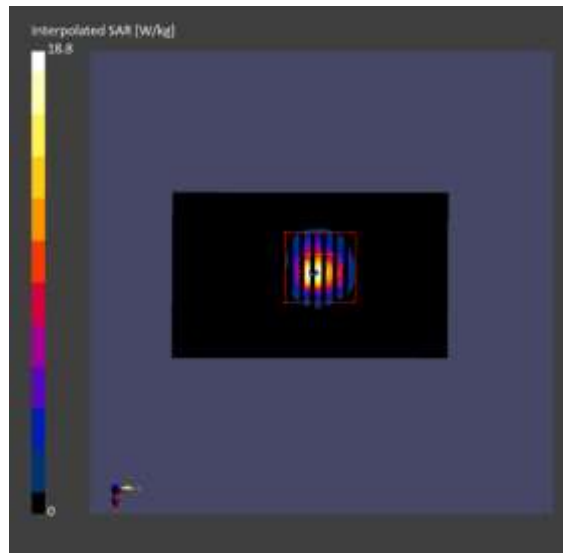
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V6.0 (20deg probe tilt) - xxxx	EX3DV4 - SN7654, 2022-05-31	DAE4 Sn1254, 2022-06-15

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 85.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Graded Grid	n/a	Yes
Grading Ratio	n/a	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.35	3.11
psSAR10g [W/Kg]	0.494	0.576
Power Drift [dB]	0.07	-0.03



■ **Verification Data (10 000 MHz)**

Test Laboratory: HCT CO., LTD
 Input Power 10 mW
 Ambient Temp: 19.6°C
 Test Date: 04/24/2023

Measurement Report for Device, FRONT, Validation band, CW, Channel 10000 (10000.0 MHz)

Device Under Test Properties

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	FRONT, 10.00	Validation band	CW, 0--	10000.0, 10000	1.0

Hardware Setup

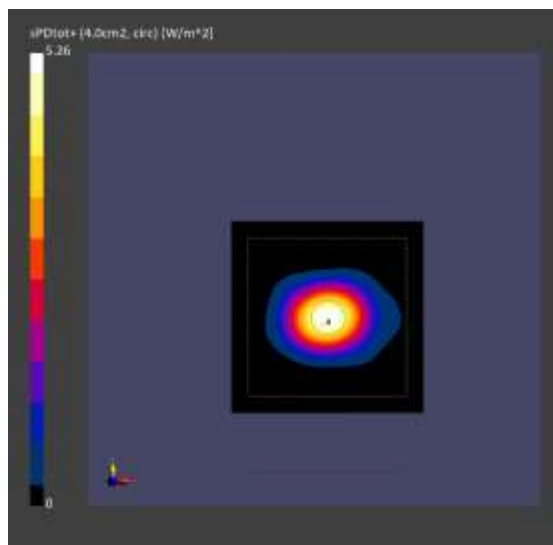
Phantom	Probe, Calibration Date	DAE, Calibration Date
mmWave - xxxx	EUmmWV4 - SN9528_F1-55GHz, 2023-03-21	DAE4 Sn868, 2022-09-21

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25

Measurement Results

Scan Type	5G Scan
Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	5.24
psPDtot+ [W/m ²]	5.26
psPDmod+ [W/m ²]	5.29
E _{max} [V/m]	47.3
Power Drift [dB]	-0.17



■ **Verification Data (10 000 MHz)**

Test Laboratory: HCT CO., LTD
 Input Power 10 mW
 Ambient Temp: 20.1°C
 Test Date: 04/25/2023

Measurement Report for Device, FRONT, Validation band, CW, Channel 10000 (10000.0 MHz)

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	FRONT, 10.00	Validation band	CW, 0--	10000.0, 10000	1.0

Hardware Setup

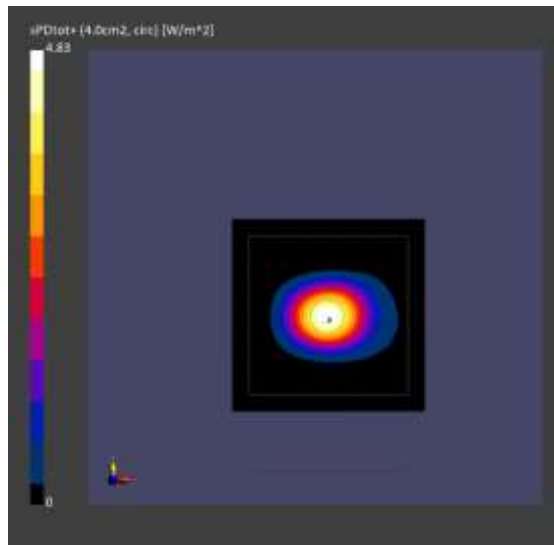
Phantom	Probe, Calibration Date	DAE, Calibration Date
mmWave - xxxx	EUmmWV4 - SN9528_F1-55GHz, 2023-03-21	DAE4 Sn868, 2022-09-21

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25

Measurement Results

Scan Type	5G Scan
Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	4.75
psPDtot+ [W/m ²]	4.83
psPDmod+ [W/m ²]	4.92
E _{max} [V/m]	46.4
Power Drift [dB]	0.19



Appendix D. – Probe Calibration Data

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



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

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

Accreditation No.: **SCS 0108**

Client: **HCT (Dymstec)** Certificate No: **EX-7654_May22**

CALIBRATION CERTIFICATE		결 담당사 확인자	
Object	EX3DV4 - SN:7654	재	김리훈 SW / 김리훈 2022.6.20
Calibration procedure(s)	QA CAL-01.v9, QA CAL-12.v9, QA GAL-14.v6, QA CAL-23.v5, QA CAL-25.v7 Calibration procedure for dosimetric E-field probes		
Calibration date	May 31, 2022		
<p>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.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3) °C and humidity < 70%.</p> <p>Calibration Equipment used (M&TE critical for calibration)</p>			

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-22 (No. 217-03525/03524)	Apr-23
Power sensor NRP-Z91	SN: 103244	04-Apr-22 (No. 217-03524)	Apr-23
OCP DAK-3.5 (weighted)	SN: 1249	20-Oct-21 (OCP-DAK3.5-1249_Oct21)	Oct-22
OCP DAK-12	SN: 1016	20-Oct-21 (OCP-DAK12-1016_Oct21)	Oct-22
Reference 20 dB Attenuator	SN: CC2552 (20x)	04-Apr-22 (No. 217-03527)	Apr-23
DAE4	SN: 660	13-Oct-21 (No. DAE4-660_Oct21)	Oct-22
Reference Probe ES3DV2	SN: 3013	27-Dec-21 (No. ES3-3013_Dec21)	Dec-22

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
RF generator HP 8648C	SN: US3642U01700	04-Aug-89 (in house check Jun-20)	In house check: Jun-22
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-22

	Name	Function	Signature
Calibrated by	Jeton Kastrati	Laboratory Technician	
Approved by	Sven Kühn	Technical Manager	

Issued: June 8, 2022

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

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



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 Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Glossary

TSL	tissue simulating liquid
NORM _{x,y,z}	sensitivity in free space
ConvF	sensitivity in TSL / NORM _{x,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 ψ	ψ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

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

Methods Applied and Interpretation of Parameters:

- NORM_{x,y,z}: Assessed for E-field polarization $\theta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORM_{x,y,z} are only intermediate values, i.e., the uncertainties of NORM_{x,y,z} does not affect the E²-field uncertainty inside TSL (see below ConvF).
- NORM(f)_{x,y,z} = NORM_{x,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.
- DCP_{x,y,z}: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal. DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- A_{x,y,z}; B_{x,y,z}; C_{x,y,z}; D_{x,y,z}; VR_{x,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 NORM_{x,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 NORM_x (no uncertainty required).

EX3DV4 - SN:7654

May 31, 2022

Parameters of Probe: EX3DV4 - SN:7654

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k = 2)
Norm ($\mu\text{V}/(\text{V}/\text{m})^2$) ^A	0.63	0.59	0.54	$\pm 10.1\%$
DCP (mV) ^B	107.6	103.6	106.3	$\pm 4.7\%$

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB $\sqrt{\mu\text{V}}$	C	D dB	VR mV	Max dev.	Max Unc ^F k = 2
0	CW	X	0.00	0.00	1.00	0.00	139.4	$\pm 3.3\%$	$\pm 4.7\%$
		Y	0.00	0.00	1.00		137.0		
		Z	0.00	0.00	1.00		145.0		
10352	Pulse Waveform (200Hz, 10%)	X	1.55	60.76	6.23	10.00	60.0	$\pm 0.7\%$	$\pm 9.6\%$
		Y	1.37	60.00	6.02		60.0		
		Z	1.60	61.08	6.63		60.0		
10353	Pulse Waveform (200Hz, 20%)	X	20.00	74.00	9.00	6.99	80.0	$\pm 0.4\%$	$\pm 9.6\%$
		Y	22.00	74.00	9.00		80.0		
		Z	0.81	60.00	4.93		80.0		
10354	Pulse Waveform (200Hz, 40%)	X	0.00	122.91	0.40	3.98	95.0	$\pm 0.6\%$	$\pm 9.6\%$
		Y	0.14	137.42	0.30		95.0		
		Z	0.00	123.24	0.25		95.0		
10355	Pulse Waveform (200Hz, 50%)	X	0.02	158.46	0.57	2.22	120.0	$\pm 0.7\%$	$\pm 9.6\%$
		Y	10.22	158.41	7.86		120.0		
		Z	2.90	160.00	3.74		120.0		
10387	QPSK Waveform, 1 MHz	X	0.63	62.82	11.47	1.00	150.0	$\pm 0.8\%$	$\pm 9.6\%$
		Y	0.71	65.40	12.95		150.0		
		Z	0.45	61.85	10.78		150.0		
10388	QPSK Waveform, 10 MHz	X	1.47	65.68	13.94	0.00	150.0	$\pm 0.8\%$	$\pm 9.6\%$
		Y	1.47	66.29	14.23		150.0		
		Z	1.20	64.43	12.98		150.0		
10396	64-QAM Waveform, 100 kHz	X	1.66	64.06	15.71	3.01	150.0	$\pm 0.7\%$	$\pm 9.6\%$
		Y	1.76	65.20	16.30		150.0		
		Z	1.63	64.15	15.84		150.0		
10399	64-QAM Waveform, 40 MHz	X	2.95	66.20	15.02	0.00	150.0	$\pm 0.7\%$	$\pm 9.6\%$
		Y	2.94	66.51	15.21		150.0		
		Z	2.69	65.53	14.63		150.0		
10414	WLAN CCDF, 64-QAM, 40 MHz	X	4.04	65.80	15.25	0.00	150.0	$\pm 0.7\%$	$\pm 9.6\%$
		Y	3.99	66.10	15.39		150.0		
		Z	3.83	66.02	15.23		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 Linearization parameter uncertainty for maximum specified field strength.

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

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Parameters of Probe: EX3DV4 - SN:7654

Sensor Model Parameters

	C1 fF	C2 fF	α V ⁻¹	T1 msV ⁻²	T2 msV ⁻¹	T3 ms	T4 V ⁻²	T5 V ⁻¹	T6
x	13.2	96.16	33.90	3.79	0.00	4.90	0.51	0.00	1.00
y	11.3	82.43	33.67	3.48	0.00	4.90	0.47	0.00	1.00
z	10.0	73.25	33.96	3.36	0.00	4.94	0.34	0.01	1.00

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle	160.5°
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

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

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Parameters of Probe: EX3DV4 - SN:7654

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) ^C	Relative Permittivity ^F	Conductivity ^F (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k = 2)
750	41.9	0.89	10.67	10.67	10.67	0.47	0.94	±12.0%
835	41.5	0.90	10.48	10.48	10.48	0.54	0.80	±12.0%
900	41.5	0.97	10.43	10.43	10.43	0.48	0.80	±12.0%
1750	40.1	1.37	9.48	9.48	9.48	0.31	0.80	±12.0%
1900	40.0	1.40	9.09	9.09	9.09	0.34	0.80	±12.0%
2300	39.5	1.67	8.82	8.82	8.82	0.34	0.80	±12.0%
2450	39.2	1.80	8.59	8.59	8.59	0.38	0.82	±12.0%
2600	39.0	1.96	8.32	8.32	8.32	0.40	0.80	±12.0%
3300	38.2	2.71	7.83	7.83	7.83	0.30	1.35	±13.1%
3500	37.9	2.91	7.75	7.75	7.75	0.30	1.35	±13.1%
3700	37.7	3.12	7.60	7.60	7.60	0.30	1.35	±13.1%
3900	37.5	3.32	7.22	7.22	7.22	0.40	1.60	±13.1%
4100	37.2	3.53	7.00	7.00	7.00	0.40	1.60	±13.1%
4400	36.9	3.84	6.83	6.83	6.83	0.40	1.70	±13.1%
4600	36.7	4.04	6.76	6.76	6.76	0.40	1.70	±13.1%
4800	36.4	4.25	6.75	6.75	6.75	0.40	1.80	±13.1%
4950	36.3	4.40	6.55	6.55	6.55	0.40	1.80	±13.1%
5250	35.9	4.71	6.18	6.18	6.18	0.40	1.80	±13.1%
5600	35.5	5.07	5.43	5.43	5.43	0.40	1.80	±13.1%
5750	35.4	5.22	5.40	5.40	5.40	0.40	1.80	±13.1%
5800	35.3	5.27	5.35	5.35	5.35	0.40	1.80	±13.1%

^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.

^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.

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Parameters of Probe: EX3DV4 - SN:7654**Calibration Parameter Determined in Head Tissue Simulating Media**

f (MHz) ^C	Relative Permittivity ^F	Conductivity ^F (S/m)	ConvF X	ConvF Y	ConvF Z	Alpha ^G	Depth ^G (mm)	Unc (k = 2)
6500	34.5	6.07	6.00	6.00	6.00	0.25	2.50	±18.6%
7000	33.9	6.65	5.90	5.90	5.90	0.30	2.70	±18.6%
8000	32.7	7.84	5.70	5.70	5.70	0.50	2.30	±18.6%
9000	31.6	9.08	5.65	5.65	5.65	0.50	2.40	±18.6%

^C Frequency validity at 6.5 GHz is -900 ± 700 MHz, and ± 700 MHz at or above 7 GHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.

^F At frequencies 6–10 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. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

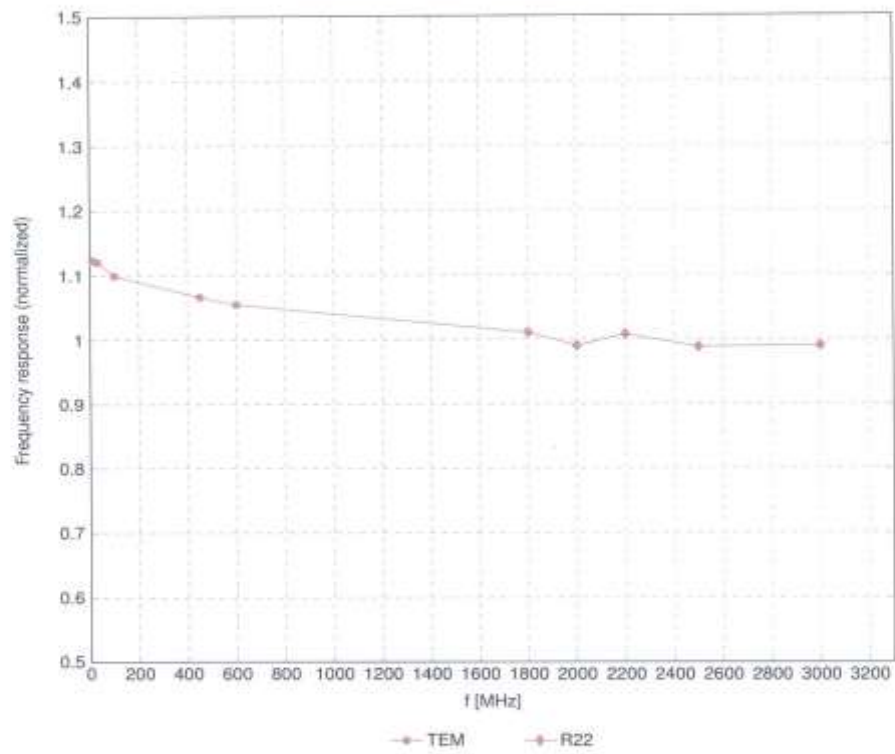
^G Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than $\pm 1\%$ for frequencies below 3 GHz; below $\pm 2\%$ for frequencies between 3–6 GHz; and below $\pm 4\%$ for frequencies between 6–10 GHz at any distance larger than half the probe tip diameter from the boundary.

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Frequency Response of E-Field

(TEM-Cell:ifi110 EXX, Waveguide:R22)

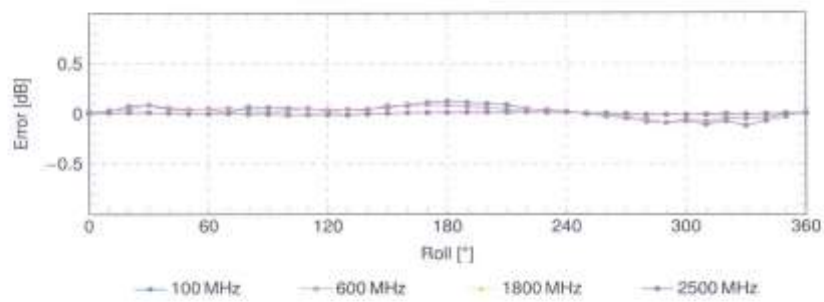
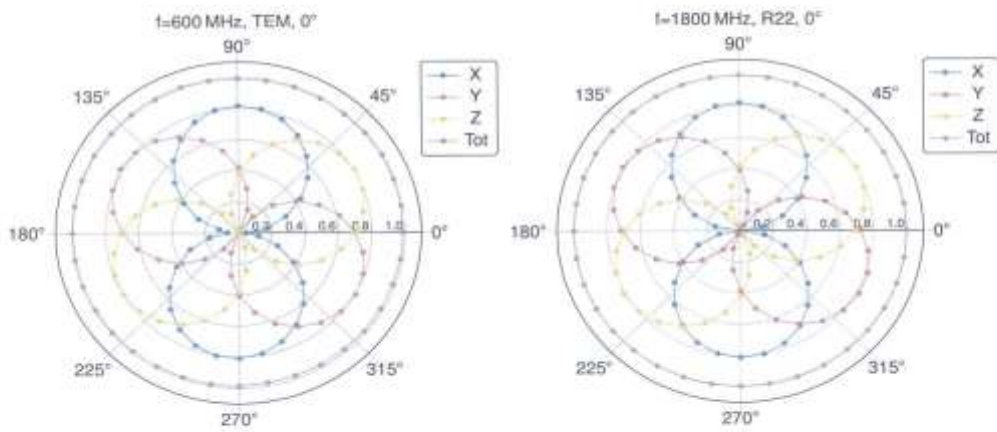


Uncertainty of Frequency Response of E-field: $\pm 6.3\%$ ($k=2$)

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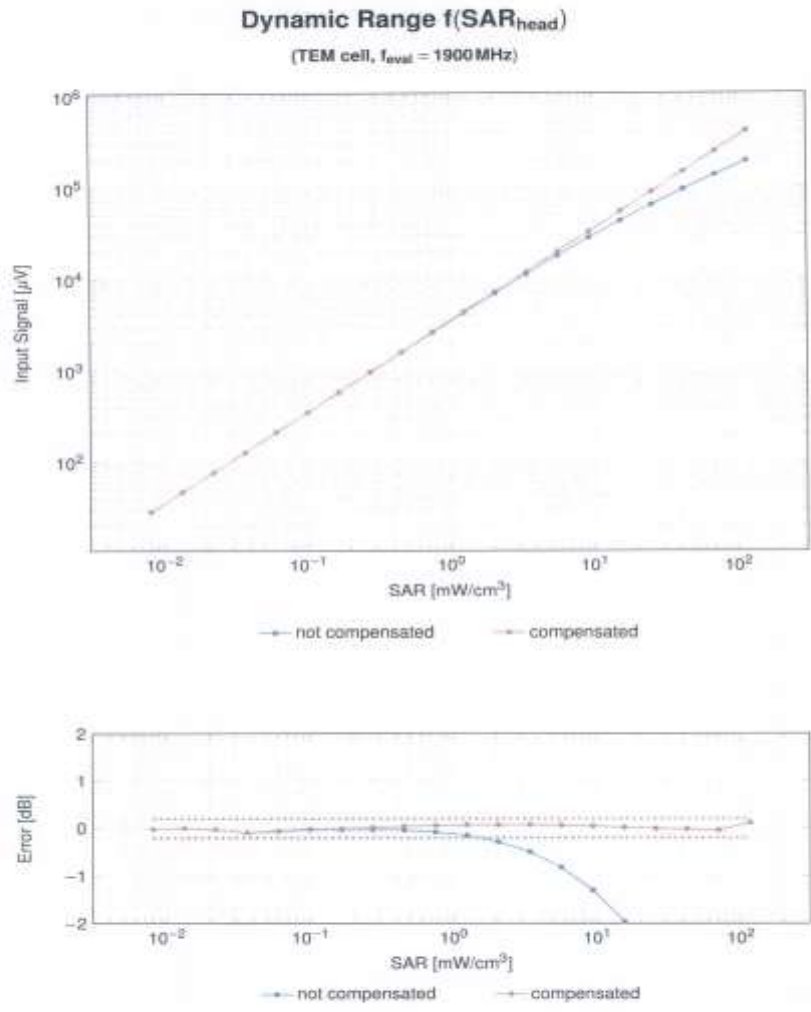
Receiving Pattern (ϕ), $\theta = 0^\circ$



Uncertainty of Axial Isotropy Assessment: $\pm 0.5\%$ ($k=2$)

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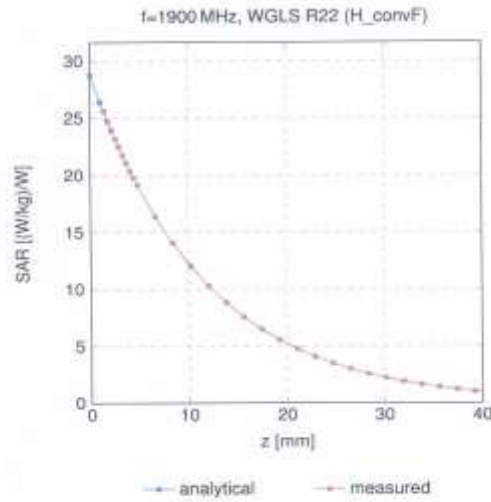


Uncertainty of Linearity Assessment: ±0.6% (k=2)

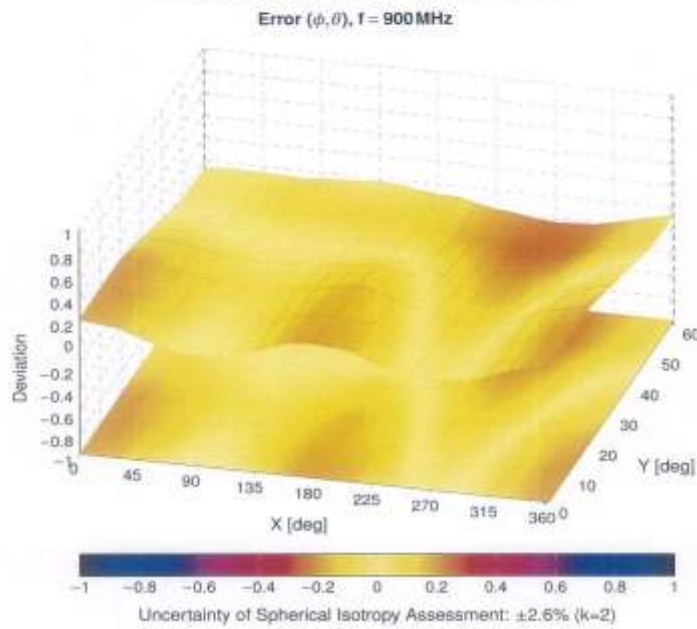
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Conversion Factor Assessment



Deviation from Isotropy in Liquid



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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^k = 2
0		CW	CW	0.00	±4.7
10010	CAA	SAR Validation (Square, 100 ms, 10 ms)	Test	10.00	±9.6
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	±9.6
10012	CAB	IEEE 802.11g 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	±9.5
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.20	±9.6
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	±9.8
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.76	±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	1.07	±9.6
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	±9.6
10033	CAA	IEEE 802.15.1 Bluetooth (PI4-DQPSK, DH1)	Bluetooth	7.74	±9.6
10034	CAA	IEEE 802.15.1 Bluetooth (PI4-DQPSK, DH3)	Bluetooth	4.53	±9.6
10035	CAA	IEEE 802.15.1 Bluetooth (PI4-DQPSK, DH5)	Bluetooth	3.83	±9.6
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	±9.6
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	±9.6
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	±9.6
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.6
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI4-DQPSK, Halfrate)	AMPS	7.76	±9.6
10044	CAA	IS-91/EIA/11A-553 FDD (FDMA, FM)	AMPS	0.00	±9.6
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.60	±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	2.93	±9.6
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	±9.6
10062	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	±9.6
10063	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	±9.6
10064	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6
10065	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	±9.6
10066	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	±9.6
10067	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	±9.6
10068	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	±9.6
10069	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	±9.6
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	±9.6
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	±9.6
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.84	±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, PI4-DQPSK, Fullrate)	AMPS	4.77	±9.6
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	±9.6
10097	CAC	UMTS-FDD (HSUPA)	WCDMA	3.98	±9.6
10098	DAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	±9.6
10099	CAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	±9.6
10100	CAC	LTE-FDD (SC-FDMA, 100% RB, 20MHz, QPSK)	LTE-FDD	5.67	±9.6
10101	CAB	LTE-FDD (SC-FDMA, 100% RB, 20MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10102	CAB	LTE-FDD (SC-FDMA, 100% RB, 20MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10103	DAC	LTE-TDD (SC-FDMA, 100% RB, 20MHz, QPSK)	LTE-TDD	9.29	±9.6
10104	CAE	LTE-TDD (SC-FDMA, 100% RB, 20MHz, 16-QAM)	LTE-TDD	9.97	±9.6
10105	CAE	LTE-TDD (SC-FDMA, 100% RB, 20MHz, 64-QAM)	LTE-TDD	10.01	±9.6
10108	CAE	LTE-FDD (SC-FDMA, 100% RB, 10MHz, QPSK)	LTE-FDD	5.80	±9.6
10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5MHz, QPSK)	LTE-FDD	5.75	±9.6
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5MHz, 16-QAM)	LTE-FDD	6.44	±9.6

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UID	Rev	Communication System Name	Group	PAR (dB)	Unc ^F k = 2
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	±9.6
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10114	CAG	IEEE 802.11n (HT Greenfield, 13.5Mbps, BPSK)	WLAN	6.10	±9.6
10115	CAG	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	6.46	±9.6
10116	CAG	IEEE 802.11n (HT Greenfield, 135Mbps, 64-QAM)	WLAN	6.15	±9.6
10117	CAG	IEEE 802.11n (HT Mixed, 13.5Mbps, BPSK)	WLAN	6.07	±9.6
10118	CAD	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	6.59	±9.6
10119	CAD	IEEE 802.11n (HT Mixed, 135Mbps, 64-QAM)	WLAN	6.13	±9.6
10140	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10141	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	±9.6
10142	CAD	LTE-FDD (SC-FDMA, 100% RB, 3MHz, QPSK)	LTE-FDD	5.73	±9.6
10143	CAD	LTE-FDD (SC-FDMA, 100% RB, 3MHz, 16-QAM)	LTE-FDD	6.35	±9.6
10144	CAC	LTE-FDD (SC-FDMA, 100% RB, 3MHz, 64-QAM)	LTE-FDD	6.65	±9.6
10145	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	±9.6
10146	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	±9.6
10147	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	±9.6
10148	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10151	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	±9.6
10152	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	±9.6
10153	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	±9.6
10154	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	±9.6
10155	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10156	CAF	LTE-FDD (SC-FDMA, 50% RB, 5MHz, QPSK)	LTE-FDD	5.79	±9.6
10157	CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10158	CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	±9.6
10160	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	±9.6
10161	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10162	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	±9.6
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	±9.6
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	±9.6
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	±9.6
10169	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	±9.6
10170	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10171	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	±9.6
10172	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	±9.6
10173	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10174	CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10175	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	±9.6
10176	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10177	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	±9.6
10178	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10179	AAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10181	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	±9.6
10182	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10183	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10184	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6
10185	CAI	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	±9.6
10186	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	±9.6
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10189	CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5Mbps, BPSK)	WLAN	6.09	±9.6
10194	AAE	IEEE 802.11n (HT Greenfield, 39Mbps, 16-QAM)	WLAN	6.12	±9.6
10195	CAE	IEEE 802.11n (HT Greenfield, 65Mbps, 64-QAM)	WLAN	6.21	±9.6
10196	CAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	6.10	±9.6
10197	AAE	IEEE 802.11n (HT Mixed, 39Mbps, 16-QAM)	WLAN	6.13	±9.6
10198	CAF	IEEE 802.11n (HT Mixed, 65Mbps, 64-QAM)	WLAN	6.27	±9.6
10219	CAF	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	6.03	±9.6
10220	AAF	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	6.13	±9.6
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	6.27	±9.6
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	6.06	±9.6
10223	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	6.48	±9.6
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	6.08	±9.6

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10225	CAD	UMTS-FDD (HSPA+)	WCDMA	5.97	+9.6
10226	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, 16-QAM)	LTE-TDD	9.49	+9.6
10227	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, 64-QAM)	LTE-TDD	10.26	+9.6
10228	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4MHz, QPSK)	LTE-TDD	9.22	+9.6
10229	CAD	LTE-TDD (SC-FDMA, 1 RB, 3MHz, 16-QAM)	LTE-TDD	9.48	+9.6
10230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3MHz, 64-QAM)	LTE-TDD	10.25	+9.6
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3MHz, QPSK)	LTE-TDD	9.19	+9.6
10232	CAD	LTE-TDD (SC-FDMA, 1 RB, 5MHz, 16-QAM)	LTE-TDD	9.48	+9.6
10233	CAD	LTE-TDD (SC-FDMA, 1 RB, 5MHz, 64-QAM)	LTE-TDD	10.25	+9.6
10234	CAD	LTE-TDD (SC-FDMA, 1 RB, 5MHz, QPSK)	LTE-TDD	9.21	+9.6
10235	CAD	LTE-TDD (SC-FDMA, 1 RB, 10MHz, 16-QAM)	LTE-TDD	9.48	+9.6
10236	CAD	LTE-TDD (SC-FDMA, 1 RB, 10MHz, 64-QAM)	LTE-TDD	10.25	+9.6
10237	CAD	LTE-TDD (SC-FDMA, 1 RB, 10MHz, QPSK)	LTE-TDD	9.21	+9.6
10238	CAB	LTE-TDD (SC-FDMA, 1 RB, 15MHz, 16-QAM)	LTE-TDD	9.48	+9.6
10239	CAB	LTE-TDD (SC-FDMA, 1 RB, 15MHz, 64-QAM)	LTE-TDD	10.25	+9.6
10240	CAB	LTE-TDD (SC-FDMA, 1 RB, 15MHz, QPSK)	LTE-TDD	9.21	+9.6
10241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4MHz, 16-QAM)	LTE-TDD	9.82	+9.6
10242	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4MHz, 64-QAM)	LTE-TDD	9.86	+9.6
10243	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4MHz, QPSK)	LTE-TDD	9.46	+9.6
10244	CAD	LTE-TDD (SC-FDMA, 50% RB, 3MHz, 16-QAM)	LTE-TDD	10.06	+9.6
10245	CAG	LTE-TDD (SC-FDMA, 50% RB, 3MHz, 64-QAM)	LTE-TDD	10.06	+9.6
10246	CAG	LTE-TDD (SC-FDMA, 50% RB, 3MHz, QPSK)	LTE-TDD	9.30	+9.6
10247	CAG	LTE-TDD (SC-FDMA, 50% RB, 5MHz, 16-QAM)	LTE-TDD	9.91	+9.6
10248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5MHz, 64-QAM)	LTE-TDD	10.09	+9.6
10249	CAG	LTE-TDD (SC-FDMA, 50% RB, 5MHz, QPSK)	LTE-TDD	9.29	+9.6
10250	CAG	LTE-TDD (SC-FDMA, 50% RB, 10MHz, 16-QAM)	LTE-TDD	9.81	+9.6
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10MHz, 64-QAM)	LTE-TDD	10.17	+9.6
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10MHz, QPSK)	LTE-TDD	9.24	+9.6
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15MHz, 16-QAM)	LTE-TDD	9.90	+9.6
10254	CAB	LTE-TDD (SC-FDMA, 50% RB, 15MHz, 64-QAM)	LTE-TDD	10.14	+9.6
10255	CAB	LTE-TDD (SC-FDMA, 50% RB, 15MHz, QPSK)	LTE-TDD	9.20	+9.6
10256	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4MHz, 16-QAM)	LTE-TDD	9.96	+9.6
10257	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4MHz, 64-QAM)	LTE-TDD	10.06	+9.6
10258	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4MHz, QPSK)	LTE-TDD	9.34	+9.6
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3MHz, 16-QAM)	LTE-TDD	9.98	+9.6
10260	CAG	LTE-TDD (SC-FDMA, 100% RB, 3MHz, 64-QAM)	LTE-TDD	9.97	+9.6
10261	CAG	LTE-TDD (SC-FDMA, 100% RB, 3MHz, QPSK)	LTE-TDD	9.24	+9.6
10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5MHz, 16-QAM)	LTE-TDD	9.83	+9.6
10263	CAG	LTE-TDD (SC-FDMA, 100% RB, 5MHz, 64-QAM)	LTE-TDD	10.16	+9.6
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5MHz, QPSK)	LTE-TDD	9.23	+9.6
10265	CAG	LTE-TDD (SC-FDMA, 100% RB, 10MHz, 16-QAM)	LTE-TDD	9.82	+9.6
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10MHz, 64-QAM)	LTE-TDD	10.07	+9.6
10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10MHz, QPSK)	LTE-TDD	9.30	+9.6
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15MHz, 16-QAM)	LTE-TDD	10.06	+9.6
10269	CAB	LTE-TDD (SC-FDMA, 100% RB, 15MHz, 64-QAM)	LTE-TDD	10.13	+9.6
10270	CAB	LTE-TDD (SC-FDMA, 100% RB, 15MHz, QPSK)	LTE-TDD	9.58	+9.6
10274	CAB	UMTS-FDD (HSUPA, Subnet 5, 3GPP RelB.10)	WCDMA	4.87	+9.6
10275	CAD	UMTS-FDD (HSUPA, Subnet 5, 3GPP RelB.4)	WCDMA	3.96	+9.6
10277	CAD	PHS (QPSK)	PHS	11.81	+9.6
10278	CAD	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	+9.6
10279	CAG	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	+9.6
10290	CAG	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	+9.6
10291	CAG	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	+9.6
10292	CAG	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	+9.6
10293	CAG	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	+9.6
10295	CAG	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.48	+9.6
10297	CAF	LTE-FDD (SC-FDMA, 50% RB, 20MHz, QPSK)	LTE-FDD	5.81	+9.6
10299	CAF	LTE-FDD (SC-FDMA, 50% RB, 3MHz, QPSK)	LTE-FDD	5.72	+9.6
10299	CAF	LTE-FDD (SC-FDMA, 50% RB, 3MHz, 16-QAM)	LTE-FDD	6.38	+9.6
10300	CAC	LTE-FDD (SC-FDMA, 50% RB, 3MHz, 64-QAM)	LTE-FDD	6.60	+9.6
10301	CAC	IEEE 802.16e WIMAX (29.18, 5ms, 10MHz, QPSK, PUSC)	WIMAX	12.03	+9.6
10302	CAB	IEEE 802.16e WIMAX (29.18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)	WIMAX	12.57	+9.6
10303	CAB	IEEE 802.16e WIMAX (31.15, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	12.52	+9.6
10304	CAA	IEEE 802.16e WIMAX (29.18, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	11.86	+9.6
10305	CAA	IEEE 802.16e WIMAX (31.15, 10ms, 10MHz, 64QAM, PUSC)	WIMAX	15.24	+9.6
10306	CAA	IEEE 802.16e WIMAX (29.18, 10ms, 10MHz, 64QAM, PUSC)	WIMAX	14.87	+9.6

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10307	AAB	IEEE 802.16e WIMAX (29.18, 10 ms, 10 MHz, QPSK, PUSC)	WIMAX	14.49	±9.6
10308	AAB	IEEE 802.16e WIMAX (29.18, 10 ms, 10 MHz, 16QAM, PUSC)	WIMAX	14.48	±9.6
10309	AAB	IEEE 802.16e WIMAX (29.18, 10 ms, 10 MHz, 16QAM, AMC 2x3)	WIMAX	14.58	±9.6
10310	AAB	IEEE 802.16e WIMAX (29.18, 10 ms, 10 MHz, QPSK, AMC 2x3)	WIMAX	14.57	±9.6
10311	AAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.08	±9.6
10313	AAD	IDEN 1:3	IDEN	10.51	±9.6
10314	AAD	IDEN 1:6	IDEN	13.48	±9.6
10315	AAD	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)	WLAN	1.71	±9.6
10316	AAD	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)	WLAN	6.36	±9.6
10317	AAA	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WLAN	6.36	±9.6
10352	AAA	Pulse Waveform (200 Hz, 10%)	Generic	10.00	±9.6
10353	AAA	Pulse Waveform (200 Hz, 20%)	Generic	6.99	±9.6
10354	AAA	Pulse Waveform (200 Hz, 40%)	Generic	3.98	±9.6
10355	AAA	Pulse Waveform (200 Hz, 60%)	Generic	2.22	±9.6
10356	AAA	Pulse Waveform (200 Hz, 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
10398	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	±9.6
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	±9.6
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)	WLAN	6.37	±9.6
10401	AAA	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc)	WLAN	6.60	±9.6
10402	AAA	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc)	WLAN	6.53	±9.6
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	±9.6
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	±9.6
10406	AAD	CDMA2000, RC3, SC32, SCH0, Full Rate	CDMA2000	5.22	±9.6
10410	AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10414	AAA	WLAN CCDF, 64-QAM, 40 MHz	Generic	6.54	±9.6
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)	WLAN	1.54	±9.6
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)	WLAN	6.23	±9.6
10417	AAA	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WLAN	6.23	±9.6
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	6.14	±9.6
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short)	WLAN	6.19	±9.6
10422	AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	6.32	±9.6
10423	AAA	IEEE 802.11n (HT Greenfield, 49.9 Mbps, 16-QAM)	WLAN	6.47	±9.6
10424	AAE	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	6.40	±9.6
10425	AAE	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	6.41	±9.6
10426	AAE	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	6.45	±9.6
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	6.41	±9.6
10430	AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	6.28	±9.6
10431	AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	6.38	±9.6
10432	AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	6.34	±9.6
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	6.34	±9.6
10434	AAG	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	6.60	±9.6
10435	AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6
10447	AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	±9.6
10448	AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.53	±9.6
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.51	±9.6
10450	AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	±9.6
10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	±9.6
10453	AAC	Validation (Square, 10 ms, 1 ms)	Test	10.00	±9.6
10456	AAC	IEEE 802.11ac WiFi (160 MHz, 64-QAM, 99pc dc)	WLAN	6.63	±9.6
10457	AAC	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	±9.6
10458	AAC	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	±9.6
10459	AAC	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	6.25	±9.6
10460	AAC	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	±9.6
10461	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	6.30	±9.6
10463	AAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	6.56	±9.6
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6
10465	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	6.32	±9.6
10466	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	6.57	±9.6
10467	AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6
10468	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	6.32	±9.6
10469	AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	6.56	±9.6
10470	AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6
10471	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	6.32	±9.6

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10472	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	±9.6
10473	AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6
10474	AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	±9.6
10475	AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	±9.6
10477	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	±9.6
10478	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	±9.6
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.74	±9.6
10480	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.18	±9.6
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	±9.6
10482	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.71	±9.6
10483	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub)	LTE-TDD	8.39	±9.6
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.47	±9.6
10485	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.59	±9.6
10486	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.38	±9.6
10487	AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.60	±9.6
10488	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.70	±9.6
10489	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	±9.6
10490	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	±9.6
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.74	±9.6
10492	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.41	±9.6
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.65	±9.6
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	±9.6
10495	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.37	±9.6
10496	AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	±9.6
10497	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.67	±9.6
10498	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.40	±9.6
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.68	±9.6
10500	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.67	±9.6
10501	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.44	±9.6
10502	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.52	±9.6
10503	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.72	±9.6
10504	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	±9.6
10505	AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	±9.6
10506	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.74	±9.6
10507	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.36	±9.6
10508	AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	±9.6
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.99	±9.6
10510	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.49	±9.6
10511	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.51	±9.6
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	±9.6
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.42	±9.6
10514	AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	±9.6
10515	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc)	WLAN	1.58	±9.6
10516	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc)	WLAN	1.57	±9.6
10517	AAF	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc)	WLAN	1.58	±9.6
10518	AAF	IEEE 802.11a/n WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc)	WLAN	8.23	±9.6
10519	AAF	IEEE 802.11a/n WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc)	WLAN	8.39	±9.6
10520	AAB	IEEE 802.11a/n WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc)	WLAN	8.12	±9.6
10521	AAB	IEEE 802.11a/n WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc)	WLAN	7.97	±9.6
10522	AAB	IEEE 802.11a/n WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc)	WLAN	8.45	±9.6
10523	AAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc)	WLAN	8.08	±9.6
10524	AAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc)	WLAN	8.27	±9.6
10525	AAC	IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc dc)	WLAN	8.36	±9.6
10526	AAF	IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc dc)	WLAN	8.42	±9.6
10527	AAF	IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc dc)	WLAN	8.21	±9.6
10528	AAF	IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc dc)	WLAN	8.36	±9.6
10529	AAF	IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc dc)	WLAN	8.36	±9.6
10531	AAF	IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc dc)	WLAN	8.43	±9.6
10532	AAF	IEEE 802.11ac WiFi (20 MHz, MCS7, 99pc dc)	WLAN	8.29	±9.6
10533	AAE	IEEE 802.11ac WiFi (20 MHz, MCS8, 99pc dc)	WLAN	8.38	±9.6
10534	AAE	IEEE 802.11ac WiFi (40 MHz, MCS0, 99pc dc)	WLAN	8.45	±9.6
10535	AAE	IEEE 802.11ac WiFi (40 MHz, MCS1, 99pc dc)	WLAN	8.45	±9.6
10536	AAF	IEEE 802.11ac WiFi (40 MHz, MCS2, 99pc dc)	WLAN	8.32	±9.6
10537	AAF	IEEE 802.11ac WiFi (40 MHz, MCS3, 99pc dc)	WLAN	8.44	±9.6
10538	AAF	IEEE 802.11ac WiFi (40 MHz, MCS4, 99pc dc)	WLAN	8.54	±9.6
10540	AAA	IEEE 802.11ac WiFi (40 MHz, MCS8, 99pc dc)	WLAN	8.39	±9.6

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10541	AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc dc)	WLAN	8.46	±9.6
10542	AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc dc)	WLAN	8.65	±9.6
10543	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc dc)	WLAN	8.65	±9.6
10544	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc dc)	WLAN	8.47	±9.6
10545	AAC	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc dc)	WLAN	8.55	±9.6
10546	AAC	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc dc)	WLAN	8.35	±9.6
10547	AAC	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc dc)	WLAN	8.49	±9.6
10548	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc dc)	WLAN	8.37	±9.6
10550	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc dc)	WLAN	8.38	±9.6
10551	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc dc)	WLAN	8.50	±9.6
10552	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc dc)	WLAN	8.42	±9.6
10553	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc dc)	WLAN	8.45	±9.6
10554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc dc)	WLAN	8.48	±9.6
10555	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc dc)	WLAN	8.47	±9.6
10556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc dc)	WLAN	8.50	±9.6
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc dc)	WLAN	8.52	±9.6
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc dc)	WLAN	8.61	±9.6
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc dc)	WLAN	8.73	±9.6
10561	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc dc)	WLAN	8.56	±9.6
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc dc)	WLAN	8.69	±9.6
10563	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc dc)	WLAN	8.77	±9.6
10564	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9Mbps, 99pc dc)	WLAN	8.25	±9.6
10565	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12Mbps, 99pc dc)	WLAN	8.45	±9.6
10568	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18Mbps, 99pc dc)	WLAN	8.13	±9.6
10567	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24Mbps, 99pc dc)	WLAN	8.00	±9.6
10568	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36Mbps, 99pc dc)	WLAN	8.37	±9.6
10569	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48Mbps, 99pc dc)	WLAN	8.10	±9.6
10570	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54Mbps, 99pc dc)	WLAN	8.30	±9.6
10571	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1Mbps, 90pc dc)	WLAN	1.99	±9.6
10572	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2Mbps, 90pc dc)	WLAN	1.99	±9.6
10573	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5Mbps, 90pc dc)	WLAN	1.98	±9.6
10574	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11Mbps, 90pc dc)	WLAN	1.98	±9.6
10575	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6Mbps, 90pc dc)	WLAN	8.59	±9.6
10576	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9Mbps, 90pc dc)	WLAN	8.60	±9.6
10577	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12Mbps, 90pc dc)	WLAN	8.70	±9.6
10578	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18Mbps, 90pc dc)	WLAN	8.49	±9.6
10579	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24Mbps, 90pc dc)	WLAN	8.36	±9.6
10580	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36Mbps, 90pc dc)	WLAN	8.76	±9.6
10581	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48Mbps, 90pc dc)	WLAN	8.35	±9.6
10582	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54Mbps, 90pc dc)	WLAN	8.67	±9.6
10583	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6Mbps, 90pc dc)	WLAN	8.59	±9.6
10584	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9Mbps, 90pc dc)	WLAN	8.60	±9.6
10585	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12Mbps, 90pc dc)	WLAN	8.70	±9.6
10586	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18Mbps, 90pc dc)	WLAN	8.49	±9.6
10587	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24Mbps, 90pc dc)	WLAN	8.36	±9.6
10588	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36Mbps, 90pc dc)	WLAN	8.76	±9.6
10589	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48Mbps, 90pc dc)	WLAN	8.35	±9.6
10590	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54Mbps, 90pc dc)	WLAN	8.67	±9.6
10591	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc dc)	WLAN	8.63	±9.6
10592	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc dc)	WLAN	8.79	±9.6
10593	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc)	WLAN	8.64	±9.6
10594	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc)	WLAN	8.74	±9.6
10595	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc dc)	WLAN	8.74	±9.6
10596	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc dc)	WLAN	8.71	±9.6
10597	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc dc)	WLAN	8.72	±9.6
10598	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc dc)	WLAN	8.50	±9.6
10599	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc)	WLAN	8.79	±9.6
10600	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc dc)	WLAN	8.88	±9.6
10601	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc)	WLAN	8.82	±9.6
10602	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc dc)	WLAN	8.94	±9.6
10603	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc dc)	WLAN	9.03	±9.6
10604	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc dc)	WLAN	8.76	±9.6
10605	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc dc)	WLAN	8.97	±9.6
10606	AAC	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc dc)	WLAN	8.82	±9.6
10607	AAC	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc dc)	WLAN	8.64	±9.6
10608	AAC	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc dc)	WLAN	8.77	±9.6

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10609	AAC	IEEE 802.11ac WiFi (20 MHz, MCS2, 90pc dc)	WLAN	8.57	±9.6
10610	AAC	IEEE 802.11ac WiFi (20 MHz, MCS3, 90pc dc)	WLAN	8.78	±9.6
10611	AAC	IEEE 802.11ac WiFi (20 MHz, MCS4, 90pc dc)	WLAN	8.70	±9.6
10612	AAC	IEEE 802.11ac WiFi (20 MHz, MCS5, 90pc dc)	WLAN	8.77	±9.6
10613	AAC	IEEE 802.11ac WiFi (20 MHz, MCS6, 90pc dc)	WLAN	8.94	±9.6
10614	AAC	IEEE 802.11ac WiFi (20 MHz, MCS7, 90pc dc)	WLAN	8.59	±9.6
10615	AAC	IEEE 802.11ac WiFi (20 MHz, MCS8, 90pc dc)	WLAN	8.82	±9.6
10616	AAC	IEEE 802.11ac WiFi (40 MHz, MCS9, 90pc dc)	WLAN	8.82	±9.6
10617	AAC	IEEE 802.11ac WiFi (40 MHz, MCS10, 90pc dc)	WLAN	8.81	±9.6
10618	AAC	IEEE 802.11ac WiFi (40 MHz, MCS11, 90pc dc)	WLAN	8.58	±9.6
10619	AAC	IEEE 802.11ac WiFi (40 MHz, MCS12, 90pc dc)	WLAN	8.86	±9.6
10620	AAC	IEEE 802.11ac WiFi (40 MHz, MCS13, 90pc dc)	WLAN	8.87	±9.6
10621	AAC	IEEE 802.11ac WiFi (40 MHz, MCS14, 90pc dc)	WLAN	8.77	±9.6
10622	AAC	IEEE 802.11ac WiFi (40 MHz, MCS15, 90pc dc)	WLAN	8.98	±9.6
10623	AAC	IEEE 802.11ac WiFi (40 MHz, MCS16, 90pc dc)	WLAN	8.82	±9.6
10624	AAC	IEEE 802.11ac WiFi (40 MHz, MCS17, 90pc dc)	WLAN	8.86	±9.6
10625	AAC	IEEE 802.11ac WiFi (40 MHz, MCS18, 90pc dc)	WLAN	8.96	±9.6
10626	AAC	IEEE 802.11ac WiFi (80 MHz, MCS19, 90pc dc)	WLAN	8.83	±9.6
10627	AAC	IEEE 802.11ac WiFi (80 MHz, MCS20, 90pc dc)	WLAN	8.88	±9.6
10628	AAC	IEEE 802.11ac WiFi (80 MHz, MCS21, 90pc dc)	WLAN	8.71	±9.6
10629	AAC	IEEE 802.11ac WiFi (80 MHz, MCS22, 90pc dc)	WLAN	8.85	±9.6
10630	AAC	IEEE 802.11ac WiFi (80 MHz, MCS23, 90pc dc)	WLAN	8.72	±9.6
10631	AAC	IEEE 802.11ac WiFi (80 MHz, MCS24, 90pc dc)	WLAN	8.81	±9.6
10632	AAC	IEEE 802.11ac WiFi (80 MHz, MCS25, 90pc dc)	WLAN	8.74	±9.6
10633	AAC	IEEE 802.11ac WiFi (80 MHz, MCS26, 90pc dc)	WLAN	8.83	±9.6
10634	AAC	IEEE 802.11ac WiFi (80 MHz, MCS27, 90pc dc)	WLAN	8.80	±9.6
10635	AAC	IEEE 802.11ac WiFi (80 MHz, MCS28, 90pc dc)	WLAN	8.81	±9.6
10636	AAC	IEEE 802.11ac WiFi (160 MHz, MCS29, 90pc dc)	WLAN	8.83	±9.6
10637	AAC	IEEE 802.11ac WiFi (160 MHz, MCS30, 90pc dc)	WLAN	8.79	±9.6
10638	AAC	IEEE 802.11ac WiFi (160 MHz, MCS31, 90pc dc)	WLAN	8.86	±9.6
10639	AAC	IEEE 802.11ac WiFi (160 MHz, MCS32, 90pc dc)	WLAN	8.85	±9.6
10640	AAC	IEEE 802.11ac WiFi (160 MHz, MCS33, 90pc dc)	WLAN	8.98	±9.6
10641	AAC	IEEE 802.11ac WiFi (160 MHz, MCS34, 90pc dc)	WLAN	9.06	±9.6
10642	AAC	IEEE 802.11ac WiFi (160 MHz, MCS35, 90pc dc)	WLAN	9.08	±9.6
10643	AAC	IEEE 802.11ac WiFi (160 MHz, MCS36, 90pc dc)	WLAN	8.89	±9.6
10644	AAC	IEEE 802.11ac WiFi (160 MHz, MCS37, 90pc dc)	WLAN	9.05	±9.6
10645	AAC	IEEE 802.11ac WiFi (160 MHz, MCS38, 90pc dc)	WLAN	9.11	±9.6
10646	AAC	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub=2,7)	LTE-TDD	11.98	±9.6
10647	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub=2,7)	LTE-TDD	11.98	±9.6
10648	AAC	CDMA2000 (1x Advanced)	CDMA2000	3.45	±9.6
10652	AAC	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	±9.6
10653	AAC	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	±9.6
10654	AAC	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	±9.6
10655	AAC	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	±9.6
10658	AAC	Pulse Waveform (200 Hz, 10%)	Test	10.00	±9.6
10659	AAC	Pulse Waveform (200 Hz, 20%)	Test	6.99	±9.6
10660	AAC	Pulse Waveform (200 Hz, 40%)	Test	3.98	±9.6
10661	AAC	Pulse Waveform (200 Hz, 60%)	Test	2.22	±9.6
10662	AAC	Pulse Waveform (200 Hz, 80%)	Test	0.97	±9.6
10670	AAC	Bluetooth Low Energy	Bluetooth	2.19	±9.6
10671	AAD	IEEE 802.11ax (20 MHz, MCS0, 90pc dc)	WLAN	9.09	±9.6
10672	AAD	IEEE 802.11ax (20 MHz, MCS1, 90pc dc)	WLAN	8.57	±9.6
10673	AAD	IEEE 802.11ax (20 MHz, MCS2, 90pc dc)	WLAN	8.78	±9.6
10674	AAD	IEEE 802.11ax (20 MHz, MCS3, 90pc dc)	WLAN	8.74	±9.6
10675	AAD	IEEE 802.11ax (20 MHz, MCS4, 90pc dc)	WLAN	8.90	±9.6
10676	AAD	IEEE 802.11ax (20 MHz, MCS5, 90pc dc)	WLAN	8.77	±9.6
10677	AAD	IEEE 802.11ax (20 MHz, MCS6, 90pc dc)	WLAN	8.73	±9.6
10678	AAD	IEEE 802.11ax (20 MHz, MCS7, 90pc dc)	WLAN	8.78	±9.6
10679	AAD	IEEE 802.11ax (20 MHz, MCS8, 90pc dc)	WLAN	8.88	±9.6
10680	AAD	IEEE 802.11ax (20 MHz, MCS9, 90pc dc)	WLAN	8.80	±9.6
10681	AAG	IEEE 802.11ax (20 MHz, MCS10, 90pc dc)	WLAN	8.62	±9.6
10682	AAG	IEEE 802.11ax (20 MHz, MCS11, 90pc dc)	WLAN	8.83	±9.6
10683	AAA	IEEE 802.11ax (20 MHz, MCS0, 99pc dc)	WLAN	8.42	±9.6
10684	AAC	IEEE 802.11ax (20 MHz, MCS1, 99pc dc)	WLAN	8.26	±9.6
10685	AAC	IEEE 802.11ax (20 MHz, MCS2, 99pc dc)	WLAN	8.33	±9.6
10686	AAC	IEEE 802.11ax (20 MHz, MCS3, 99pc dc)	WLAN	8.28	±9.6

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10687	AAE	IEEE 802.11ax (20 MHz, MCS4, 99pc dc)	WLAN	8.45	±9.6
10688	AAE	IEEE 802.11ax (20 MHz, MCS5, 99pc dc)	WLAN	8.29	±9.6
10689	AAD	IEEE 802.11ax (20 MHz, MCS6, 99pc dc)	WLAN	8.55	±9.6
10690	AAE	IEEE 802.11ax (20 MHz, MCS7, 99pc dc)	WLAN	8.29	±9.6
10691	AAB	IEEE 802.11ax (20 MHz, MCS8, 99pc dc)	WLAN	8.25	±9.6
10692	AAA	IEEE 802.11ax (20 MHz, MCS9, 99pc dc)	WLAN	8.29	±9.6
10693	AAA	IEEE 802.11ax (20 MHz, MCS10, 99pc dc)	WLAN	8.25	±9.6
10694	AAA	IEEE 802.11ax (20 MHz, MCS11, 99pc dc)	WLAN	8.57	±9.6
10695	AAA	IEEE 802.11ax (40 MHz, MCS0, 90pc dc)	WLAN	8.78	±9.6
10696	AAA	IEEE 802.11ax (40 MHz, MCS1, 90pc dc)	WLAN	8.91	±9.6
10697	AAA	IEEE 802.11ax (40 MHz, MCS2, 90pc dc)	WLAN	8.61	±9.6
10698	AAA	IEEE 802.11ax (40 MHz, MCS3, 90pc dc)	WLAN	8.89	±9.6
10699	AAA	IEEE 802.11ax (40 MHz, MCS4, 90pc dc)	WLAN	8.82	±9.6
10700	AAA	IEEE 802.11ax (40 MHz, MCS5, 90pc dc)	WLAN	8.73	±9.6
10701	AAA	IEEE 802.11ax (40 MHz, MCS6, 90pc dc)	WLAN	8.66	±9.6
10702	AAA	IEEE 802.11ax (40 MHz, MCS7, 90pc dc)	WLAN	8.70	±9.6
10703	AAA	IEEE 802.11ax (40 MHz, MCS8, 90pc dc)	WLAN	8.62	±9.6
10704	AAA	IEEE 802.11ax (40 MHz, MCS9, 90pc dc)	WLAN	8.56	±9.6
10705	AAA	IEEE 802.11ax (40 MHz, MCS10, 90pc dc)	WLAN	8.69	±9.6
10706	AAC	IEEE 802.11ax (40 MHz, MCS11, 90pc dc)	WLAN	8.66	±9.6
10707	AAC	IEEE 802.11ax (40 MHz, MCS0, 99pc dc)	WLAN	8.32	±9.6
10708	AAC	IEEE 802.11ax (40 MHz, MCS1, 99pc dc)	WLAN	8.55	±9.6
10709	AAC	IEEE 802.11ax (40 MHz, MCS2, 99pc dc)	WLAN	8.33	±9.6
10710	AAC	IEEE 802.11ax (40 MHz, MCS3, 99pc dc)	WLAN	8.29	±9.6
10711	AAC	IEEE 802.11ax (40 MHz, MCS4, 99pc dc)	WLAN	8.39	±9.6
10712	AAC	IEEE 802.11ax (40 MHz, MCS5, 99pc dc)	WLAN	8.67	±9.6
10713	AAC	IEEE 802.11ax (40 MHz, MCS6, 99pc dc)	WLAN	8.33	±9.6
10714	AAC	IEEE 802.11ax (40 MHz, MCS7, 99pc dc)	WLAN	8.26	±9.6
10715	AAC	IEEE 802.11ax (40 MHz, MCS8, 99pc dc)	WLAN	8.45	±9.6
10716	AAC	IEEE 802.11ax (40 MHz, MCS9, 99pc dc)	WLAN	8.30	±9.6
10717	AAC	IEEE 802.11ax (40 MHz, MCS10, 99pc dc)	WLAN	8.48	±9.6
10718	AAC	IEEE 802.11ax (40 MHz, MCS11, 99pc dc)	WLAN	8.24	±9.6
10719	AAC	IEEE 802.11ax (80 MHz, MCS0, 90pc dc)	WLAN	8.61	±9.6
10720	AAC	IEEE 802.11ax (80 MHz, MCS1, 90pc dc)	WLAN	8.67	±9.6
10721	AAC	IEEE 802.11ax (80 MHz, MCS2, 90pc dc)	WLAN	8.76	±9.6
10722	AAC	IEEE 802.11ax (80 MHz, MCS3, 90pc dc)	WLAN	8.55	±9.6
10723	AAC	IEEE 802.11ax (80 MHz, MCS4, 90pc dc)	WLAN	8.70	±9.6
10724	AAC	IEEE 802.11ax (80 MHz, MCS5, 90pc dc)	WLAN	8.90	±9.6
10725	AAC	IEEE 802.11ax (80 MHz, MCS6, 90pc dc)	WLAN	8.74	±9.6
10726	AAC	IEEE 802.11ax (80 MHz, MCS7, 90pc dc)	WLAN	8.72	±9.6
10727	AAC	IEEE 802.11ax (80 MHz, MCS8, 90pc dc)	WLAN	8.66	±9.6
10728	AAC	IEEE 802.11ax (80 MHz, MCS9, 90pc dc)	WLAN	8.65	±9.6
10729	AAC	IEEE 802.11ax (80 MHz, MCS10, 90pc dc)	WLAN	8.64	±9.6
10730	AAC	IEEE 802.11ax (80 MHz, MCS11, 90pc dc)	WLAN	8.67	±9.6
10731	AAC	IEEE 802.11ax (80 MHz, MCS0, 99pc dc)	WLAN	8.42	±9.6
10732	AAC	IEEE 802.11ax (80 MHz, MCS1, 99pc dc)	WLAN	8.46	±9.6
10733	AAC	IEEE 802.11ax (80 MHz, MCS2, 99pc dc)	WLAN	8.40	±9.6
10734	AAC	IEEE 802.11ax (80 MHz, MCS3, 99pc dc)	WLAN	8.25	±9.6
10735	AAC	IEEE 802.11ax (80 MHz, MCS4, 99pc dc)	WLAN	8.33	±9.6
10736	AAC	IEEE 802.11ax (80 MHz, MCS5, 99pc dc)	WLAN	8.27	±9.6
10737	AAC	IEEE 802.11ax (80 MHz, MCS6, 99pc dc)	WLAN	8.36	±9.6
10738	AAC	IEEE 802.11ax (80 MHz, MCS7, 99pc dc)	WLAN	8.42	±9.6
10739	AAC	IEEE 802.11ax (80 MHz, MCS8, 99pc dc)	WLAN	8.29	±9.6
10740	AAC	IEEE 802.11ax (80 MHz, MCS9, 99pc dc)	WLAN	8.48	±9.6
10741	AAC	IEEE 802.11ax (80 MHz, MCS10, 99pc dc)	WLAN	8.40	±9.6
10742	AAC	IEEE 802.11ax (80 MHz, MCS11, 99pc dc)	WLAN	8.43	±9.6
10743	AAC	IEEE 802.11ax (160 MHz, MCS0, 90pc dc)	WLAN	8.94	±9.6
10744	AAC	IEEE 802.11ax (160 MHz, MCS1, 90pc dc)	WLAN	9.16	±9.6
10745	AAC	IEEE 802.11ax (160 MHz, MCS2, 90pc dc)	WLAN	8.93	±9.6
10746	AAC	IEEE 802.11ax (160 MHz, MCS3, 90pc dc)	WLAN	9.11	±9.6
10747	AAC	IEEE 802.11ax (160 MHz, MCS4, 90pc dc)	WLAN	9.04	±9.6
10748	AAC	IEEE 802.11ax (160 MHz, MCS5, 90pc dc)	WLAN	8.93	±9.6
10749	AAC	IEEE 802.11ax (160 MHz, MCS6, 90pc dc)	WLAN	8.90	±9.6
10750	AAC	IEEE 802.11ax (160 MHz, MCS7, 90pc dc)	WLAN	8.79	±9.6
10751	AAC	IEEE 802.11ax (160 MHz, MCS8, 90pc dc)	WLAN	8.82	±9.6
10752	AAC	IEEE 802.11ax (160 MHz, MCS9, 90pc dc)	WLAN	8.81	±9.6

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10753	AAC	IEEE 802.11ax (160MHz, MCS10, 99pc dc)	WLAN	8.00	±9.6
10754	AAC	IEEE 802.11ax (160MHz, MCS11, 99pc dc)	WLAN	8.94	±9.6
10755	AAC	IEEE 802.11ax (160MHz, MCS0, 99pc dc)	WLAN	8.64	±9.6
10756	AAC	IEEE 802.11ax (160MHz, MCS1, 99pc dc)	WLAN	8.77	±9.6
10757	AAC	IEEE 802.11ax (160MHz, MCS2, 99pc dc)	WLAN	8.77	±9.6
10758	AAC	IEEE 802.11ax (160MHz, MCS3, 99pc dc)	WLAN	8.69	±9.6
10759	AAC	IEEE 802.11ax (160MHz, MCS4, 99pc dc)	WLAN	8.58	±9.6
10760	AAC	IEEE 802.11ax (160MHz, MCS5, 99pc dc)	WLAN	8.49	±9.6
10761	AAC	IEEE 802.11ax (160MHz, MCS6, 99pc dc)	WLAN	8.58	±9.6
10762	AAC	IEEE 802.11ax (160MHz, MCS7, 99pc dc)	WLAN	8.49	±9.6
10763	AAC	IEEE 802.11ax (160MHz, MCS8, 99pc dc)	WLAN	8.53	±9.6
10764	AAC	IEEE 802.11ax (160MHz, MCS9, 99pc dc)	WLAN	8.54	±9.6
10765	AAC	IEEE 802.11ax (160MHz, MCS10, 99pc dc)	WLAN	8.54	±9.6
10766	AAC	IEEE 802.11ax (160MHz, MCS11, 99pc dc)	WLAN	8.51	±9.6
10767	AAC	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	7.99	±9.6
10768	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
10769	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
10770	AAC	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10771	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10772	AAC	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.23	±9.6
10773	AAC	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.03	±9.6
10774	AAC	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10775	AAC	5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
10776	AAC	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
10777	AAC	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
10778	AAC	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.34	±9.6
10779	AAC	5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.42	±9.6
10780	AAC	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	±9.6
10781	AAC	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	±9.6
10782	AAC	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	±9.6
10783	AAC	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
10784	AAC	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	±9.6
10785	AAC	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.40	±9.6
10786	AAC	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	±9.6
10787	AAC	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	±9.6
10788	AAC	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
10789	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	±9.6
10790	AAC	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
10791	AAC	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	±9.6
10792	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10793	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	±9.6
10794	AAC	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10795	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.84	±9.6
10796	AAC	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10797	AAC	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	±9.6
10798	AAC	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
10799	AAC	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	±9.6
10801	AAC	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
10802	AAC	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	±9.6
10803	AAC	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	±9.6
10805	AAD	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10806	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.37	±9.6
10809	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10810	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10812	AAD	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
10817	AAD	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
10818	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10819	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.33	±9.6
10820	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.30	±9.6
10821	AAC	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10822	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10823	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	±9.6
10824	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	±9.6
10825	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10827	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.42	±9.6
10828	AAC	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	±9.6

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10829	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	6.40	±9.6
10830	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.63	±9.6
10831	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.79	±9.6
10832	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.74	±9.6
10833	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10834	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	±9.6
10835	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10836	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.66	±9.6
10837	AAD	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	±9.6
10839	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10840	AAD	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	±9.6
10841	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.71	±9.6
10843	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	±9.6
10844	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10846	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10854	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10855	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
10856	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10857	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	±9.6
10858	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
10859	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10860	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10861	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	±9.6
10863	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10864	AAE	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10865	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10866	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.88	±9.6
10868	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	±9.6
10869	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10870	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	±9.6
10871	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10872	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	±9.6
10873	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10874	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10875	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
10876	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.39	±9.6
10877	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	±9.6
10878	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10879	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	±9.6
10880	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.36	±9.6
10881	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10882	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	±9.6
10883	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	±9.6
10884	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	±9.6
10885	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10886	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10887	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
10888	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	±9.6
10889	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	±9.6
10890	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	±9.6
10891	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	±9.6
10892	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10897	AAD	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10898	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10899	AAD	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10900	AAD	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10901	AAD	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10902	AAD	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10903	AAD	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10904	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10905	AAD	5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10906	AAD	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10907	AAD	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	±9.6
10908	AAE	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10909	AAD	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.96	±9.6
10910	AAD	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6

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10911	AAD	5G NR (DFT-s-OFDM, 50% RB, 25MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10912	AAD	5G NR (DFT-s-OFDM, 50% RB, 30MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10913	AAD	5G NR (DFT-s-OFDM, 50% RB, 40MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10914	AAD	5G NR (DFT-s-OFDM, 50% RB, 50MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.85	±9.6
10915	AAD	5G NR (DFT-s-OFDM, 50% RB, 60MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6
10916	AAD	5G NR (DFT-s-OFDM, 50% RB, 80MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±9.6
10917	AAD	5G NR (DFT-s-OFDM, 50% RB, 100MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
10918	AAD	5G NR (DFT-s-OFDM, 100% RB, 5MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10919	AAD	5G NR (DFT-s-OFDM, 100% RB, 10MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10920	AAD	5G NR (DFT-s-OFDM, 100% RB, 15MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±9.6
10921	AAD	5G NR (DFT-s-OFDM, 100% RB, 20MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10922	AAD	5G NR (DFT-s-OFDM, 100% RB, 25MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.82	±9.6
10923	AAD	5G NR (DFT-s-OFDM, 100% RB, 30MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10924	AAD	5G NR (DFT-s-OFDM, 100% RB, 40MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10925	AAD	5G NR (DFT-s-OFDM, 100% RB, 50MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	±9.6
10926	AAD	5G NR (DFT-s-OFDM, 100% RB, 60MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10927	AAD	5G NR (DFT-s-OFDM, 100% RB, 80MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
10928	AAD	5G NR (DFT-s-OFDM, 1 RB, 5MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10929	AAD	5G NR (DFT-s-OFDM, 1 RB, 10MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10930	AAD	5G NR (DFT-s-OFDM, 1 RB, 15MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10931	AAD	5G NR (DFT-s-OFDM, 1 RB, 20MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10932	AAB	5G NR (DFT-s-OFDM, 1 RB, 25MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10933	AAA	5G NR (DFT-s-OFDM, 1 RB, 30MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10934	AAA	5G NR (DFT-s-OFDM, 1 RB, 40MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10935	AAA	5G NR (DFT-s-OFDM, 1 RB, 50MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10936	AAC	5G NR (DFT-s-OFDM, 50% RB, 5MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	±9.6
10937	AAB	5G NR (DFT-s-OFDM, 50% RB, 10MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.77	±9.6
10938	AAB	5G NR (DFT-s-OFDM, 50% RB, 15MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	±9.6
10939	AAB	5G NR (DFT-s-OFDM, 50% RB, 20MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.82	±9.6
10940	AAB	5G NR (DFT-s-OFDM, 50% RB, 25MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.89	±9.6
10941	AAB	5G NR (DFT-s-OFDM, 50% RB, 30MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6
10942	AAB	5G NR (DFT-s-OFDM, 50% RB, 40MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10943	AAB	5G NR (DFT-s-OFDM, 50% RB, 50MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	±9.6
10944	AAB	5G NR (DFT-s-OFDM, 100% RB, 5MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	±9.6
10945	AAB	5G NR (DFT-s-OFDM, 100% RB, 10MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.93	±9.6
10947	AAB	5G NR (DFT-s-OFDM, 100% RB, 20MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10948	AAB	5G NR (DFT-s-OFDM, 100% RB, 25MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10949	AAB	5G NR (DFT-s-OFDM, 100% RB, 30MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10950	AAB	5G NR (DFT-s-OFDM, 100% RB, 40MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10951	AAB	5G NR (DFT-s-OFDM, 100% RB, 50MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.92	±9.6
10952	AAB	5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.25	±9.6
10953	AAB	5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.15	±9.6
10954	AAB	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.23	±9.6
10955	AAB	5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.42	±9.6
10956	AAB	5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.14	±9.6
10957	AAC	5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.31	±9.6
10958	AAB	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.61	±9.6
10959	AAB	5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.33	±9.6
10960	AAB	5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.32	±9.6
10961	AAB	5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.38	±9.6
10962	AAB	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.40	±9.6
10963	AAB	5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.55	±9.6
10964	AAB	5G NR DL (CP-OFDM, TM 3.1, 5MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.29	±9.6
10965	AAB	5G NR DL (CP-OFDM, TM 3.1, 10MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.37	±9.6
10966	AAB	5G NR DL (CP-OFDM, TM 3.1, 15MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.55	±9.6
10967	AAB	5G NR DL (CP-OFDM, TM 3.1, 20MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.42	±9.6
10968	AAB	5G NR DL (CP-OFDM, TM 3.1, 100MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.49	±9.6
10972	AAB	5G NR (CP-OFDM, 1 RB, 20MHz, QPSK, 15 kHz)	5G NR FR1 TDD	11.56	±9.6
10973	AAB	5G NR (DFT-s-OFDM, 1 RB, 100MHz, QPSK, 30 kHz)	5G NR FR1 TDD	9.06	±9.6
10974	AAB	5G NR (CP-OFDM, 100% RB, 100MHz, 256-QAM, 30 kHz)	5G NR FR1 TDD	10.28	±9.6
10978	AAA	ULLA BDR	ULLA	7.23	±9.6
10979	AAA	ULLA HDR4	ULLA	7.02	±9.6
10980	AAA	ULLA HDR8	ULLA	8.82	±9.6
10981	AAA	ULLA HDRp4	ULLA	1.50	±9.6
10982	AAA	ULLA HDRp8	ULLA	1.44	±9.6

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UID	Rev	Communication System Name	Group	PAR (dB)	Unc [¶] k = 2
10983	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.31	±9.6
10984	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.42	±9.6
10985	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.54	±9.6
10986	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.50	±9.6
10987	AAA	5G NR DL (CP-OFDM, TM 3.1, 60 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.53	±9.6
10988	AAA	5G NR DL (CP-OFDM, TM 3.1, 70 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.38	±9.6
10989	AAA	5G NR DL (CP-OFDM, TM 3.1, 80 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.33	±9.6
10990	AAA	5G NR DL (CP-OFDM, TM 3.1, 90 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.52	±9.6

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

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Accreditation No.: **SCS 0108**

Client **HCT**
 Gyeonggi-do, Republic of Korea

Certificate No. **EUmm-9528_Mar23**

CALIBRATION CERTIFICATE

Object **EUmmWV4 - SN:9528**

Calibration procedure(s) **QA CAL-02.v9, QA CAL-25.v8, QA CAL-42.v3
 Calibration procedure for E-field probes optimized for close near field
 evaluations in air**

Calibration date **March 21, 2023**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
 The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.
 All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3) °C and humidity < 70%.
 Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power sensor NRP110T	SN: 101244	14-Mar-22 (No. 20A1037915)	Mar-23
Spectrum analyzer FSV40	SN: 101832	23-Jan-23 (No. 4030-315005314)	Jan-24
Ref. Probe EUmmWV3	SN: 9374	03-Jan-23 (No. EUmmWV3-9374_Jan23)	Jan-24
DAE4	SN: 789	03-Jan-23 (No. DAE4-789_Jan23)	Jan-24

Secondary Standards	ID	Check Date (in house)	Scheduled Check
Generator APSIN26G	SN: 669	28-Mar-17 (in house check May-22)	In house check: May-23
Generator Agilent E8251A	SN: US41140111	28-Mar-17 (in house check May-22)	In house check: May-23

	Name	Function	Signature
Calibrated by	Leif Klysner	Laboratory Technician	<i>Leif Klysner</i>
Approved by	Sven Kühn	Technical Manager	<i>S. Kühn</i>

Issued: March 21, 2023

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

결재	담당자	확인자
	<i>JG</i>	<i>Ri</i>
직위/성명	DL / 박정호	CS / 최윤경
일시	2023 104/10	2023 104/10

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Glossary

NORM _{x,y}	sensitivity in free space
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization θ	θ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\theta = 0$ is normal to probe axis
Connector Angle	information used in DASy system to align probe sensor X to the robot coordinate system
Sensor Angles	sensor deviation from the probe axis, used to calculate the field orientation and polarization
\vec{k}	is the wave propagation direction

Calibration is Performed According to the Following Standards:

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

Methods Applied and Interpretation of Parameters:

- NORM_{x,y}**: Assessed for E-field polarization $\theta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). For frequencies > 6 GHz, the far field in front of waveguide horn antennas is measured for a set of frequencies in various waveguide bands up to 110 GHz.
- DCP_{x,y}**: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal. DCP does not depend on frequency nor media.
Note: As the field is measured with a diode detector sensor, it is warranted that the probe response is linear (E^2) below the documented lowest calibrated value.
- PAR**: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- The frequency sensor model parameters are determined prior to calibration based on a frequency sweep (sensor model involving resistors R, R_0 , inductance L and capacitors C, C_0).
- A_{x,y}; B_{x,y}; C_{x,y}; D_{x,y}; VR_{x,y}**: A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- Sensor Offset**: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- Connector Angle**: The angle is assessed using the information gained by determining the NORM_x (no uncertainty required).
- Equivalent Sensor Angle**: The two probe sensors are mounted in the same plane at different angles. The angles are assessed using the information gained by determining the NORM_x (no uncertainty required).
- Spherical isotropy (3D deviation from isotropy)**: in a locally homogeneous field realized using an open waveguide / horn setup.

EUmmWV4 - SN:9528

March 21, 2023

Parameters of Probe: EUmmWV4 - SN:9528

Basic Calibration Parameters

	Sensor X	Sensor Y	Unc (k = 2)
Norm ($\mu V/(V/m)^2$)	0.01797	0.02046	$\pm 10.1\%$
DCP (mV) ^B	105.0	105.0	$\pm 4.7\%$
Equivalent Sensor Angle	-61.2	35.5	

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

Frequency GHz	Target E-Field V/m	Deviation Sensor X dB	Deviation Sensor Y dB	Unc (k = 2) dB
0.75	77.2	-0.21	-0.34	± 0.43
1.8	140.4	-0.03	-0.05	± 0.43
2.0	133.0	0.12	0.15	± 0.43
2.2	124.8	-0.06	-0.01	± 0.43
2.5	123.0	0.11	0.17	± 0.43
3.5	256.2	-0.08	-0.03	± 0.43
3.7	249.8	0.16	0.19	± 0.43
6.6	76.1	0.16	-0.03	± 0.98
8.0	68.3	0.08	0.01	± 0.98
10.0	67.5	0.03	0.03	± 0.98
15.0	55.3	0.14	0.07	± 0.98
26.6	114.9	-0.46	-0.47	± 0.98
30.0	121.2	-0.42	-0.41	± 0.98
35.0	119.8	-0.22	-0.20	± 0.98
40.0	105.8	-0.05	-0.05	± 0.98
50.0	60.5	0.58	0.42	± 0.98
55.0	75.8	-0.10	-0.03	± 0.98
60.0	80.0	0.02	0.02	± 0.98
65.0	77.7	-0.11	-0.06	± 0.98
70.0	73.8	0.08	0.07	± 0.98
75.0	73.2	-0.17	-0.25	± 0.98
80.0	80.8	0.13	0.06	± 0.98
85.0	79.9	-0.53	-0.54	± 0.98
90.0	47.6	-0.68	-0.70	± 0.98
92.0	72.3	-0.38	-0.37	± 0.98
95.0	72.0	-0.25	-0.24	± 0.98
97.0	66.6	-0.21	-0.20	± 0.98
99.0	57.0	-0.18	-0.20	± 0.98
100.0	55.0	-0.22	-0.20	± 0.98
105.0	53.0	-0.21	-0.18	± 0.98
110.0	61.1	0.29	0.20	± 0.98

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

^B Linearization parameter uncertainty for maximum specified field strength.

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March 21, 2023

Parameters of Probe: EUmmWV4 - SN:9528

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB $\sqrt{\mu V}$	C	D dB	VR mV	Max dev.	Max Unc ^E k = 2
0	CW	X	0.00	0.00	1.00	0.00	121.7	±2.5%	±4.7%
		Y	0.00	0.00	1.00		66.0		
10352	Pulse Waveform (200Hz, 10%)	X	2.72	60.00	14.46	10.00	6.0	±1.3%	±9.6%
		Y	2.37	60.00	15.38		6.0		
10353	Pulse Waveform (200Hz, 20%)	X	1.88	60.00	13.28	6.99	12.0	±1.1%	±9.6%
		Y	1.62	60.00	14.38		12.0		
10354	Pulse Waveform (200Hz, 40%)	X	1.11	60.00	12.01	3.98	23.0	±1.6%	±9.6%
		Y	0.99	60.00	13.17		23.0		
10355	Pulse Waveform (200Hz, 60%)	X	0.65	60.00	11.30	2.22	27.0	±1.2%	±9.6%
		Y	0.69	60.00	12.08		27.0		
10387	QPSK Waveform, 1 MHz	X	1.18	60.00	12.07	1.00	22.0	±1.6%	±9.6%
		Y	1.28	60.00	11.90		22.0		
10388	QPSK Waveform, 10 MHz	X	1.27	60.00	11.89	0.00	22.0	±0.8%	±9.6%
		Y	1.47	60.00	11.71		22.0		
10396	64-QAM Waveform, 100 kHz	X	3.04	64.79	15.73	3.01	17.0	±0.7%	±9.6%
		Y	7.81	75.10	19.25		17.0		
10399	64-QAM Waveform, 40 MHz	X	2.07	60.00	12.39	0.00	19.0	±1.0%	±9.6%
		Y	2.22	60.00	12.33		19.0		
10414	WLAN CCDF, 64-QAM, 40 MHz	X	3.21	60.00	12.82	0.00	12.0	±0.9%	±9.6%
		Y	3.33	60.00	12.79		12.0		

Note: For details on UID parameters see Appendix

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

EUmmWV4 - SN:9528

March 21, 2023

Parameters of Probe: EUmmWV4 - SN:9528

Calibration Results for Linearity Response

Frequency GHz	Target E-Field V/m	Deviation Sensor X dB	Deviation Sensor Y dB	Unc (k = 2) dB
0.9	50.0	0.08	-0.07	±0.2
0.9	100.0	0.01	-0.06	±0.2
0.9	500.0	0.02	-0.02	±0.2
0.9	1000.0	0.04	0.00	±0.2
0.9	1500.0	0.03	0.00	±0.2
0.9	2100.0	-0.00	-0.00	±0.2

Sensor Frequency Model Parameters (750 MHz – 55 GHz)

	Sensor X	Sensor Y
R (Ω)	80.47	115.74
R _p (Ω)	85.26	119.79
L (nH)	0.09407	0.11915
C (pF)	0.3004	0.3066
C _p (pF)	0.0878	0.0681

Sensor Frequency Model Parameters (55 GHz – 110 GHz)

	Sensor X	Sensor Y
R (Ω)	39.79	34.61
R _p (Ω)	220.70	175.48
L (nH)	0.12355	0.09714
C (pF)	0.0326	0.0438
C _p (pF)	0.0354	0.0449

Sensor Model Parameters

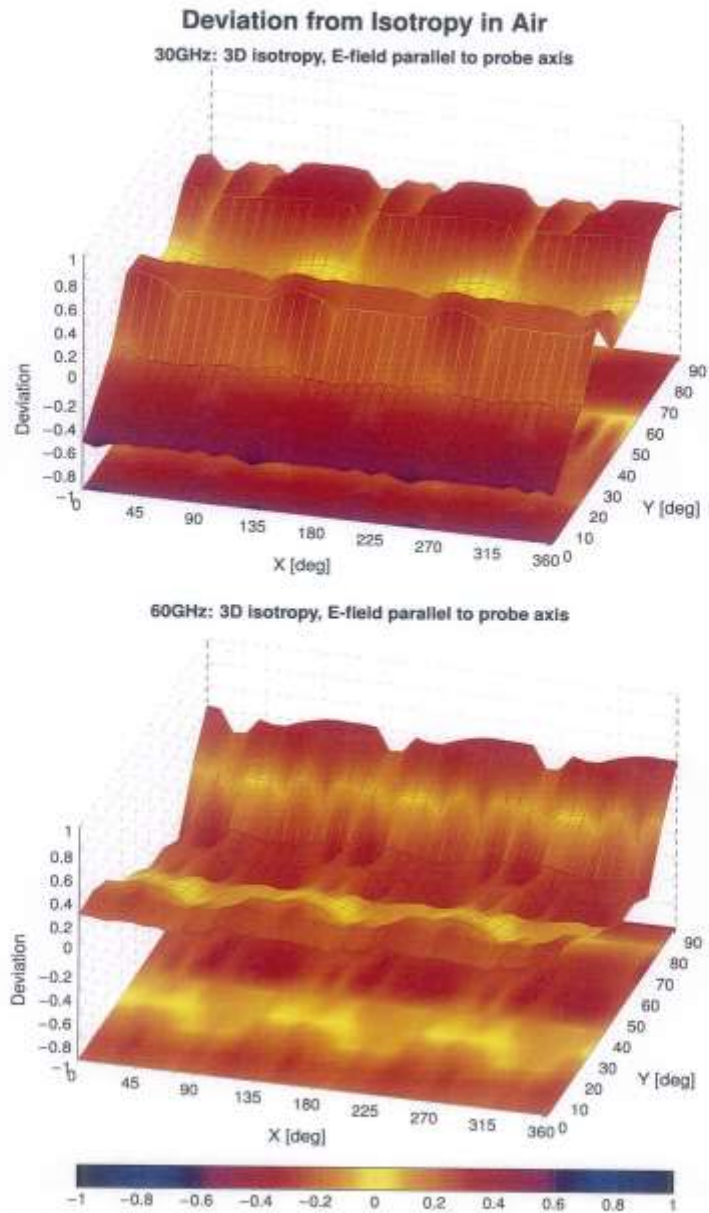
	C1 fF	C2 fF	α V ⁻¹	T1 msV ⁻²	T2 msV ⁻¹	T3 ms	T4 V ⁻²	T5 V ⁻¹	T6
x	52.0	375.62	33.36	0.92	6.62	4.99	0.00	1.57	1.01
y	46.6	334.32	33.01	2.66	6.05	5.02	0.00	1.84	1.01

Other Probe Parameters

Sensor Arrangement	Rectangular
Connector Angle	89.2°
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	320 mm
Probe Body Diameter	8 mm
Tip Length	23 mm
Tip Diameter	8.0 mm
Probe Tip to Sensor X Calibration Point	1.5 mm
Probe Tip to Sensor Y Calibration Point	1.5 mm

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Probe isotropy for E_{tot} : probe rotated $\phi = 0^\circ$ to 360° , tilted from field propagation direction \vec{k}
Parallel to the field propagation ($\psi = 0^\circ - 90^\circ$) at 30 GHz: deviation within ± 0.52 dB
Parallel to the field propagation ($\psi = 0^\circ - 90^\circ$) at 60 GHz: deviation within ± 0.44 dB

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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc ² k = 2
0		CW	CW	0.00	±4.7
10010	CAB	SAR Validation (Square, 100 ms, 10 ms)	Test	10.00	±9.6
10011	CAC	UMTS-FDD (WCDMA)	WCDMA	2.91	±9.6
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	±9.6
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	8.46	±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	8.55	±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 (PI4-QPSK, DH1)	Bluetooth	7.74	±9.6
10034	CAA	IEEE 802.15.1 Bluetooth (PI4-QPSK, DH3)	Bluetooth	4.53	±9.6
10035	CAA	IEEE 802.15.1 Bluetooth (PI4-QPSK, DH5)	Bluetooth	3.83	±9.6
10036	CAA	IEEE 802.15.1 Bluetooth (8-QPSK, DH1)	Bluetooth	8.01	±9.6
10037	CAA	IEEE 802.15.1 Bluetooth (8-QPSK, DH3)	Bluetooth	4.77	±9.6
10038	CAA	IEEE 802.15.1 Bluetooth (8-QPSK, DH5)	Bluetooth	4.10	±9.6
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.6
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI4-QPSK, Haltrate)	AMPS	7.78	±9.6
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	±9.6
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	±9.6
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	±9.6
10056	CAA	UMTS-FDD (TD-SCDMA, 1.28 Mbps)	TD-SCDMA	11.01	±9.6
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	±9.6
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	±9.6
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	±9.6
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	±9.6
10062	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	±9.6
10063	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	±9.6
10064	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6
10065	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	±9.6
10066	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	±9.6
10067	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	±9.6
10068	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	±9.6
10069	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	±9.6
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	±9.6
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.82	±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, PI4-QPSK, Fullrate)	AMPS	4.77	±9.6
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	±9.6
10097	DAC	UMTS-FDD (HSDPA)	WCDMA	3.98	±9.6
10098	CAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	±9.6
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	±9.6
10100	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	±9.6
10101	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10102	CAF	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	8.60	±9.6
10103	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	3.29	±9.6
10104	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	±9.6
10105	CAH	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	±9.6
10106	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.90	±9.6
10109	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10110	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	±9.6
10111	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	±9.6

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10112	CAH	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	±9.6
10113	CAH	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10114	CAD	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	±9.6
10115	CAD	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	±9.6
10116	CAD	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	±9.6
10117	CAD	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	±9.6
10118	CAD	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	±9.6
10119	CAD	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	±9.6
10140	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10141	CAF	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	±9.6
10142	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6
10143	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	±9.6
10144	CAF	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	±9.6
10145	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	±9.6
10146	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	±9.6
10147	CAG	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	±9.6
10149	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6
10150	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10151	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	±9.6
10152	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	±9.6
10153	CAH	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	±9.6
10154	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	±9.6
10155	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10156	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	±9.6
10157	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	±9.6
10158	CAH	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	±9.6
10159	CAH	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	±9.6
10160	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	±9.6
10161	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	±9.6
10162	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	±9.6
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	±9.6
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	±9.6
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	±9.6
10169	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	±9.6
10170	CAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10171	AAF	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	±9.6
10172	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	±9.6
10173	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10174	CAH	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10175	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	±9.6
10176	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10177	CAJ	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	±9.6
10178	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10179	CAH	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10180	CAH	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10181	CAF	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	±9.6
10182	CAF	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10183	AAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10184	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6
10185	CAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	±9.6
10186	AAF	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	±9.6
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6
10189	AAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	±9.6
10193	CAD	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	±9.6
10194	CAD	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	±9.6
10195	CAD	IEEE 802.11n (HT Greenfield, 85 Mbps, 64-QAM)	WLAN	8.21	±9.6
10196	CAD	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	±9.6
10197	CAD	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	±9.6
10198	CAD	IEEE 802.11n (HT Mixed, 85 Mbps, 64-QAM)	WLAN	8.27	±9.6
10219	CAD	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	±9.6
10220	CAD	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	±9.6
10221	CAD	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	±9.6
10222	CAD	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	±9.6
10223	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	±9.6
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	±9.6

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10225	CAC	UMTS-FDD (HSPA+)	WCDMA	5.97	±9.6
10226	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	±9.6
10227	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	±9.6
10228	CAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	±9.6
10229	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10230	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10231	CAE	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	±9.6
10232	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10233	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10234	CAH	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	±9.6
10235	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10236	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10237	CAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	±9.6
10238	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	±9.6
10239	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	±9.6
10240	CAG	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	±9.6
10241	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	±9.6
10242	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	±9.6
10243	CAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	±9.6
10244	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	±9.6
10245	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.08	±9.6
10246	CAE	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	±9.6
10247	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	±9.6
10248	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	±9.6
10249	CAH	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	±9.6
10250	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	±9.6
10251	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	±9.6
10252	CAH	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	±9.6
10253	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	±9.6
10254	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	±9.6
10255	CAG	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	±9.6
10256	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	±9.6
10257	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.06	±9.6
10258	CAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	±9.6
10259	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	±9.6
10260	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	±9.6
10261	CAE	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	±9.6
10262	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	±9.6
10263	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	±9.6
10264	CAH	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	±9.6
10265	CAH	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	±9.6
10266	CAH	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	±9.6
10267	CAH	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	±9.6
10268	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	±9.6
10269	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	±9.6
10270	CAG	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	±9.6
10274	CAC	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	±9.6
10275	CAC	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	±9.6
10277	CAA	PHS (QPSK)	PHS	11.81	±9.6
10278	CAA	PHS (QPSK, BW 884 MHz, Roll-off 0.5)	PHS	11.81	±9.6
10279	CAA	PHS (QPSK, BW 884 MHz, Roll-off 0.38)	PHS	12.18	±9.6
10280	AAB	CDMA2000, RC1, SCSS, Full Rate	CDMA2000	3.91	±9.6
10291	AAB	CDMA2000, RC3, SCSS, Full Rate	CDMA2000	3.46	±9.6
10292	AAB	CDMA2000, RC3, SC32, Full Rate	CDMA2000	3.39	±9.6
10293	AAB	CDMA2000, RC3, SC3, Full Rate	CDMA2000	3.50	±9.6
10295	AAB	CDMA2000, RC1, SC3, 1/8th Rate 25 fr.	CDMA2000	12.49	±9.6
10297	AAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	±9.6
10298	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	±9.6
10299	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	±9.6
10300	AAE	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	±9.6
10301	AAA	IEEE 802.16e WIMAX (20-18, 5 ms, 10 MHz, QPSK, PUSC)	WIMAX	12.00	±9.6
10302	AAA	IEEE 802.16e WIMAX (20-18, 5 ms, 10 MHz, QPSK, PUSC, 3 CTRL symbols)	WIMAX	12.57	±9.6
10303	AAA	IEEE 802.16e WIMAX (31-15, 5 ms, 10 MHz, 64QAM, PUSC)	WIMAX	12.52	±9.6
10304	AAA	IEEE 802.16e WIMAX (29-18, 5 ms, 10 MHz, 64QAM, PUSC)	WIMAX	11.86	±9.6
10305	AAA	IEEE 802.16e WIMAX (31-15, 10 ms, 10 MHz, 64QAM, PUSC, 15 symbols)	WIMAX	15.24	±9.6
10306	AAA	IEEE 802.16e WIMAX (29-18, 10 ms, 10 MHz, 64QAM, PUSC, 16 symbols)	WIMAX	14.67	±9.6

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10307	AAA	IEEE 802.16e WMAX (29:18, 10 ms, 10 MHz, QPSK, PUSC, 18 symbols)	WMAX	14.49	±9.6
10308	AAA	IEEE 802.16e WMAX (29:18, 10 ms, 10 MHz, 16QAM, PUSC)	WMAX	14.46	±9.6
10309	AAA	IEEE 802.16e WMAX (29:18, 10 ms, 10 MHz, 16QAM, AMC 2x3, 18 symbols)	WMAX	14.58	±9.6
10310	AAA	IEEE 802.16e WMAX (29:18, 10 ms, 10 MHz, QPSK, AMC 2x3, 18 symbols)	WMAX	14.57	±9.6
10311	AAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	8.09	±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, 99pc duty cycle)	WLAN	1.71	±9.6
10316	AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.36	±9.6
10317	AAD	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.38	±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
10398	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	±9.6
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	±9.6
10400	AAE	IEEE 802.11ac WiFi (20 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	±9.6
10401	AAE	IEEE 802.11ac WiFi (40 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	±9.6
10402	AAE	IEEE 802.11ac WiFi (80 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	±9.6
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	±9.6
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	±9.6
10406	AAB	CDMA2000, RC3, SC32, SCH0, Full Rate	CDMA2000	5.22	±9.6
10410	AAH	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Cont=4)	LTE-TDD	7.82	±9.6
10414	AAA	WLAN CCDF, 64-QAM, 40 MHz	Generic	8.54	±9.6
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle)	WLAN	1.54	±9.6
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc duty cycle)	WLAN	8.23	±9.6
10417	AAC	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 preamble)	WLAN	8.14	±9.6
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle, Short preamble)	WLAN	8.19	±9.6
10422	AAC	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	±9.6
10423	AAC	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	±9.6
10424	AAC	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	±9.6
10425	AAC	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	±9.6
10426	AAC	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	±9.6
10427	AAC	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	±9.6
10430	AAE	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	±9.6
10431	AAE	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	±9.6
10432	AAD	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	±9.6
10433	AAD	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	±9.6
10434	AAB	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	±9.6
10435	AAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10447	AAE	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	±9.6
10448	AAE	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.53	±9.6
10449	AAD	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.51	±9.6
10450	AAD	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	±9.6
10451	AAB	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	±9.6
10453	AAE	Validation (Squares, 10 ms, 1 ms)	Test	10.00	±9.6
10456	AAC	IEEE 802.11ac WiFi (160 MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	±9.6
10457	AAB	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	±9.6
10458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	±9.6
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	6.25	±9.6
10460	AAB	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	±9.6
10461	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	±9.6
10463	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	±9.6
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±9.6
10465	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6
10466	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	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

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10472	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±0.6
10473	AAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	±0.6
10474	AAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±0.6
10475	AAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±0.6
10477	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±0.6
10478	AAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.57	±0.6
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±0.6
10480	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.18	±0.6
10481	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±0.6
10482	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.71	±0.6
10483	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.39	±0.6
10484	AAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.47	±0.6
10485	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	±0.6
10486	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	±0.6
10487	AAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	±0.6
10488	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	±0.6
10489	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±0.6
10490	AAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±0.6
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±0.6
10492	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.41	±0.6
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	±0.6
10494	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±0.6
10495	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.37	±0.6
10496	AAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±0.6
10497	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±0.6
10498	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.40	±0.6
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.68	±0.6
10500	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.67	±0.6
10501	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.44	±0.6
10502	AAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.52	±0.6
10503	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.72	±0.6
10504	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.31	±0.6
10505	AAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.54	±0.6
10506	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±0.6
10507	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.36	±0.6
10508	AAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.55	±0.6
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.99	±0.6
10510	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.49	±0.6
10511	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.51	±0.6
10512	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.74	±0.6
10513	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.42	±0.6
10514	AAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.45	±0.6
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc duty cycle)	WLAN	1.58	±0.6
10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc duty cycle)	WLAN	1.57	±0.6
10517	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc duty cycle)	WLAN	1.58	±0.6
10518	AAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.23	±0.6
10519	AAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.39	±0.6
10520	AAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.12	±0.6
10521	AAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 24 Mbps, 99pc duty cycle)	WLAN	7.97	±0.6
10522	AAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.45	±0.6
10523	AAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.08	±0.6
10524	AAC	IEEE 802.11a/n WiFi 5 GHz (OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.27	±0.6
10525	AAC	IEEE 802.11ac WiFi (20 MHz, MCS0, 99pc duty cycle)	WLAN	8.36	±0.6
10526	AAC	IEEE 802.11ac WiFi (20 MHz, MCS1, 99pc duty cycle)	WLAN	8.42	±0.6
10527	AAC	IEEE 802.11ac WiFi (20 MHz, MCS2, 99pc duty cycle)	WLAN	8.21	±0.6
10528	AAC	IEEE 802.11ac WiFi (20 MHz, MCS3, 99pc duty cycle)	WLAN	8.36	±0.6
10529	AAC	IEEE 802.11ac WiFi (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.38	±0.6
10531	AAC	IEEE 802.11ac WiFi (20 MHz, MCS6, 99pc duty cycle)	WLAN	8.43	±0.6
10532	AAC	IEEE 802.11ac WiFi (20 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±0.6
10533	AAC	IEEE 802.11ac WiFi (20 MHz, MCS8, 99pc duty cycle)	WLAN	8.38	±0.6
10534	AAC	IEEE 802.11ac WiFi (40 MHz, MCS0, 99pc duty cycle)	WLAN	8.45	±0.6
10535	AAC	IEEE 802.11ac WiFi (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.45	±0.6
10536	AAC	IEEE 802.11ac WiFi (40 MHz, MCS2, 99pc duty cycle)	WLAN	8.32	±0.6
10537	AAC	IEEE 802.11ac WiFi (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±0.6
10538	AAC	IEEE 802.11ac WiFi (40 MHz, MCS4, 99pc duty cycle)	WLAN	8.54	±0.6
10540	AAC	IEEE 802.11ac WiFi (40 MHz, MCS6, 99pc duty cycle)	WLAN	8.38	±0.6

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10541	AAC	IEEE 802.11ac WiFi (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.46	±9.6
10542	AAC	IEEE 802.11ac WiFi (40 MHz, MCS8, 99pc duty cycle)	WLAN	8.65	±9.6
10543	AAC	IEEE 802.11ac WiFi (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.65	±9.6
10544	AAC	IEEE 802.11ac WiFi (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.47	±9.6
10545	AAC	IEEE 802.11ac WiFi (80 MHz, MCS1, 99pc duty cycle)	WLAN	8.55	±9.6
10546	AAC	IEEE 802.11ac WiFi (80 MHz, MCS2, 99pc duty cycle)	WLAN	8.35	±9.6
10547	AAC	IEEE 802.11ac WiFi (80 MHz, MCS3, 99pc duty cycle)	WLAN	8.49	±9.6
10548	AAC	IEEE 802.11ac WiFi (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.37	±9.6
10550	AAC	IEEE 802.11ac WiFi (80 MHz, MCS6, 99pc duty cycle)	WLAN	8.38	±9.6
10551	AAC	IEEE 802.11ac WiFi (80 MHz, MCS7, 99pc duty cycle)	WLAN	8.50	±9.6
10552	AAC	IEEE 802.11ac WiFi (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.42	±9.6
10553	AAC	IEEE 802.11ac WiFi (80 MHz, MCS9, 99pc duty cycle)	WLAN	8.45	±9.6
10554	AAD	IEEE 802.11ac WiFi (160 MHz, MCS0, 99pc duty cycle)	WLAN	8.48	±9.6
10555	AAD	IEEE 802.11ac WiFi (160 MHz, MCS1, 99pc duty cycle)	WLAN	8.47	±9.6
10556	AAD	IEEE 802.11ac WiFi (160 MHz, MCS2, 99pc duty cycle)	WLAN	8.50	±9.6
10557	AAD	IEEE 802.11ac WiFi (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.52	±9.6
10558	AAD	IEEE 802.11ac WiFi (160 MHz, MCS4, 99pc duty cycle)	WLAN	8.61	±9.6
10560	AAD	IEEE 802.11ac WiFi (160 MHz, MCS6, 99pc duty cycle)	WLAN	8.73	±9.6
10561	AAD	IEEE 802.11ac WiFi (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.56	±9.6
10562	AAD	IEEE 802.11ac WiFi (160 MHz, MCS8, 99pc duty cycle)	WLAN	8.69	±9.6
10563	AAD	IEEE 802.11ac WiFi (160 MHz, MCS9, 99pc duty cycle)	WLAN	8.77	±9.6
10564	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty cycle)	WLAN	8.25	±9.6
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.45	±9.6
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.13	±9.6
10567	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc duty cycle)	WLAN	8.00	±9.6
10568	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc duty cycle)	WLAN	8.37	±9.6
10569	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.10	±9.6
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.30	±9.6
10571	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6
10572	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc duty cycle)	WLAN	1.99	±9.6
10573	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc duty cycle)	WLAN	1.98	±9.6
10574	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc duty cycle)	WLAN	1.98	±9.6
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	±9.6
10576	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	±9.6
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	±9.6
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.48	±9.6
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	±9.6
10580	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	±9.6
10581	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6
10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	±9.6
10583	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	±9.6
10584	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN	8.60	±9.6
10585	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc duty cycle)	WLAN	8.70	±9.6
10586	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	WLAN	8.49	±9.6
10587	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc duty cycle)	WLAN	8.36	±9.6
10588	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.78	±9.6
10589	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6
10590	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	±9.6
10591	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS0, 90pc duty cycle)	WLAN	8.63	±9.6
10592	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS1, 90pc duty cycle)	WLAN	8.79	±9.6
10593	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS2, 90pc duty cycle)	WLAN	8.64	±9.6
10594	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS3, 90pc duty cycle)	WLAN	8.74	±9.6
10595	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS4, 90pc duty cycle)	WLAN	8.74	±9.6
10596	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS5, 90pc duty cycle)	WLAN	8.71	±9.6
10597	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS6, 90pc duty cycle)	WLAN	8.72	±9.6
10598	AAC	IEEE 802.11n (HT Mixed, 20 MHz, MCS7, 90pc duty cycle)	WLAN	8.50	±9.6
10599	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS0, 90pc duty cycle)	WLAN	8.79	±9.6
10600	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS1, 90pc duty cycle)	WLAN	8.88	±9.6
10601	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS2, 90pc duty cycle)	WLAN	8.82	±9.6
10602	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS3, 90pc duty cycle)	WLAN	8.94	±9.6
10603	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS4, 90pc duty cycle)	WLAN	9.03	±9.6
10604	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS5, 90pc duty cycle)	WLAN	8.76	±9.6
10605	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS6, 90pc duty cycle)	WLAN	8.97	±9.6
10606	AAC	IEEE 802.11n (HT Mixed, 40 MHz, MCS7, 90pc duty cycle)	WLAN	8.82	±9.6
10607	AAC	IEEE 802.11ac WiFi (20 MHz, MCS0, 90pc duty cycle)	WLAN	8.64	±9.6
10608	AAC	IEEE 802.11ac WiFi (20 MHz, MCS1, 90pc duty cycle)	WLAN	8.77	±9.6

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10609	AAC	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	WLAN	8.57	±9.6
10610	AAC	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	WLAN	8.78	±9.6
10611	AAC	IEEE 802.11ac WiFi (20MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.6
10612	AAC	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10613	AAC	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.94	±9.6
10614	AAC	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	WLAN	8.59	±9.6
10615	AAC	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10616	AAC	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	WLAN	8.82	±9.6
10617	AAC	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc duty cycle)	WLAN	8.81	±9.6
10618	AAC	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	WLAN	8.58	±9.6
10619	AAC	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	WLAN	8.86	±9.6
10620	AAC	IEEE 802.11ac WiFi (40MHz, MCS4, 90pc duty cycle)	WLAN	8.87	±9.6
10621	AAC	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10622	AAC	IEEE 802.11ac WiFi (40MHz, MCS6, 90pc duty cycle)	WLAN	8.68	±9.6
10623	AAC	IEEE 802.11ac WiFi (40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	±9.6
10624	AAC	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc duty cycle)	WLAN	8.96	±9.6
10625	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 90pc duty cycle)	WLAN	8.96	±9.6
10626	AAC	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	WLAN	8.83	±9.6
10627	AAC	IEEE 802.11ac WiFi (80MHz, MCS1, 90pc duty cycle)	WLAN	8.88	±9.6
10628	AAC	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	WLAN	8.71	±9.6
10629	AAC	IEEE 802.11ac WiFi (80MHz, MCS3, 90pc duty cycle)	WLAN	8.85	±9.6
10630	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	WLAN	8.72	±9.6
10631	AAC	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	WLAN	8.81	±9.6
10632	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN	8.74	±9.6
10633	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 90pc duty cycle)	WLAN	8.83	±9.6
10634	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.80	±9.6
10635	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6
10636	AAD	IEEE 802.11ac WiFi (160MHz, MCS0, 90pc duty cycle)	WLAN	8.83	±9.6
10637	AAD	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	WLAN	8.79	±9.6
10638	AAD	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	WLAN	8.86	±9.6
10639	AAD	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	WLAN	8.85	±9.6
10640	AAD	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	WLAN	8.98	±9.6
10641	AAD	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	WLAN	9.08	±9.6
10642	AAD	IEEE 802.11ac WiFi (160MHz, MCS6, 90pc duty cycle)	WLAN	9.06	±9.6
10643	AAD	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN	8.89	±9.6
10644	AAD	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	9.05	±9.6
10645	AAD	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	9.11	±9.6
10646	AAH	LTE-TDD (SC-FDMA, 1 RB, 5MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.98	±9.6
10647	AAG	LTE-TDD (SC-FDMA, 1 RB, 20MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.98	±9.6
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	±9.6
10652	AAF	LTE-TDD (OFDMA, 5MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	±9.6
10653	AAF	LTE-TDD (OFDMA, 10MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	±9.6
10654	AAE	LTE-TDD (OFDMA, 15MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	±9.6
10655	AAF	LTE-TDD (OFDMA, 20MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	±9.6
10658	AAB	Pulse Waveform (200Hz, 10%)	Test	10.00	±9.6
10659	AAB	Pulse Waveform (200Hz, 20%)	Test	6.99	±9.6
10660	AAB	Pulse Waveform (200Hz, 40%)	Test	3.98	±9.6
10661	AAB	Pulse Waveform (200Hz, 60%)	Test	2.22	±9.6
10662	AAB	Pulse Waveform (200Hz, 80%)	Test	0.97	±9.6
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	±9.6
10671	AAC	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	WLAN	8.09	±9.6
10672	AAC	IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle)	WLAN	8.57	±9.6
10673	AAC	IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle)	WLAN	8.78	±9.6
10674	AAC	IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	±9.6
10675	AAC	IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle)	WLAN	8.90	±9.6
10676	AAC	IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6
10677	AAC	IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle)	WLAN	8.73	±9.6
10678	AAC	IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle)	WLAN	8.78	±9.6
10679	AAC	IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle)	WLAN	8.89	±9.6
10680	AAC	IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle)	WLAN	8.80	±9.6
10681	AAC	IEEE 802.11ax (20MHz, MCS10, 90pc duty cycle)	WLAN	8.62	±9.6
10682	AAC	IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle)	WLAN	8.83	±9.6
10683	AAC	IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle)	WLAN	8.42	±9.6
10684	AAC	IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle)	WLAN	8.26	±9.6
10685	AAC	IEEE 802.11ax (20MHz, MCS2, 99pc duty cycle)	WLAN	8.33	±9.6
10686	AAC	IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle)	WLAN	8.28	±9.6

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10687	AAC	IEEE 802.11ax (20 MHz, MCS4, 99pc duty cycle)	WLAN	8.45	±9.6
10688	AAC	IEEE 802.11ax (20 MHz, MCS5, 99pc duty cycle)	WLAN	8.29	±9.6
10689	AAC	IEEE 802.11ax (20 MHz, MCS6, 99pc duty cycle)	WLAN	8.55	±9.6
10690	AAC	IEEE 802.11ax (20 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
10691	AAC	IEEE 802.11ax (20 MHz, MCS8, 99pc duty cycle)	WLAN	8.25	±9.6
10692	AAC	IEEE 802.11ax (20 MHz, MCS9, 99pc duty cycle)	WLAN	8.29	±9.6
10693	AAC	IEEE 802.11ax (20 MHz, MCS10, 99pc duty cycle)	WLAN	8.25	±9.6
10694	AAC	IEEE 802.11ax (20 MHz, MCS11, 99pc duty cycle)	WLAN	8.57	±9.6
10695	AAC	IEEE 802.11ax (40 MHz, MCS0, 90pc duty cycle)	WLAN	8.78	±9.6
10698	AAC	IEEE 802.11ax (40 MHz, MCS1, 90pc duty cycle)	WLAN	8.91	±9.6
10697	AAC	IEEE 802.11ax (40 MHz, MCS2, 90pc duty cycle)	WLAN	8.61	±9.6
10698	AAC	IEEE 802.11ax (40 MHz, MCS3, 90pc duty cycle)	WLAN	8.69	±9.6
10699	AAC	IEEE 802.11ax (40 MHz, MCS4, 90pc duty cycle)	WLAN	8.82	±9.6
10700	AAC	IEEE 802.11ax (40 MHz, MCS5, 90pc duty cycle)	WLAN	8.73	±9.6
10701	AAC	IEEE 802.11ax (40 MHz, MCS6, 90pc duty cycle)	WLAN	8.86	±9.6
10702	AAC	IEEE 802.11ax (40 MHz, MCS7, 90pc duty cycle)	WLAN	8.70	±9.6
10703	AAC	IEEE 802.11ax (40 MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10704	AAC	IEEE 802.11ax (40 MHz, MCS9, 90pc duty cycle)	WLAN	8.56	±9.6
10705	AAC	IEEE 802.11ax (40 MHz, MCS10, 90pc duty cycle)	WLAN	8.69	±9.6
10706	AAC	IEEE 802.11ax (40 MHz, MCS11, 90pc duty cycle)	WLAN	8.66	±9.6
10707	AAC	IEEE 802.11ax (40 MHz, MCS0, 99pc duty cycle)	WLAN	8.32	±9.6
10708	AAC	IEEE 802.11ax (40 MHz, MCS1, 99pc duty cycle)	WLAN	8.55	±9.6
10709	AAC	IEEE 802.11ax (40 MHz, MCS2, 99pc duty cycle)	WLAN	8.33	±9.6
10710	AAC	IEEE 802.11ax (40 MHz, MCS3, 99pc duty cycle)	WLAN	8.29	±9.6
10711	AAC	IEEE 802.11ax (40 MHz, MCS4, 99pc duty cycle)	WLAN	8.39	±9.6
10712	AAC	IEEE 802.11ax (40 MHz, MCS5, 99pc duty cycle)	WLAN	8.67	±9.6
10713	AAC	IEEE 802.11ax (40 MHz, MCS6, 99pc duty cycle)	WLAN	8.33	±9.6
10714	AAC	IEEE 802.11ax (40 MHz, MCS7, 99pc duty cycle)	WLAN	8.26	±9.6
10715	AAC	IEEE 802.11ax (40 MHz, MCS8, 99pc duty cycle)	WLAN	8.45	±9.6
10716	AAC	IEEE 802.11ax (40 MHz, MCS9, 99pc duty cycle)	WLAN	8.30	±9.6
10717	AAC	IEEE 802.11ax (40 MHz, MCS10, 99pc duty cycle)	WLAN	8.48	±9.6
10718	AAC	IEEE 802.11ax (40 MHz, MCS11, 99pc duty cycle)	WLAN	8.24	±9.6
10719	AAC	IEEE 802.11ax (80 MHz, MCS0, 90pc duty cycle)	WLAN	8.81	±9.6
10720	AAC	IEEE 802.11ax (80 MHz, MCS1, 90pc duty cycle)	WLAN	8.87	±9.6
10721	AAC	IEEE 802.11ax (80 MHz, MCS2, 90pc duty cycle)	WLAN	8.76	±9.6
10722	AAC	IEEE 802.11ax (80 MHz, MCS3, 90pc duty cycle)	WLAN	8.55	±9.6
10723	AAC	IEEE 802.11ax (80 MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.6
10724	AAC	IEEE 802.11ax (80 MHz, MCS5, 90pc duty cycle)	WLAN	8.90	±9.6
10725	AAC	IEEE 802.11ax (80 MHz, MCS6, 90pc duty cycle)	WLAN	8.74	±9.6
10726	AAC	IEEE 802.11ax (80 MHz, MCS7, 90pc duty cycle)	WLAN	8.72	±9.6
10727	AAC	IEEE 802.11ax (80 MHz, MCS8, 90pc duty cycle)	WLAN	8.66	±9.6
10728	AAC	IEEE 802.11ax (80 MHz, MCS9, 90pc duty cycle)	WLAN	8.65	±9.6
10729	AAC	IEEE 802.11ax (80 MHz, MCS10, 90pc duty cycle)	WLAN	8.54	±9.6
10730	AAC	IEEE 802.11ax (80 MHz, MCS11, 90pc duty cycle)	WLAN	8.67	±9.6
10731	AAC	IEEE 802.11ax (80 MHz, MCS0, 99pc duty cycle)	WLAN	8.42	±9.6
10732	AAC	IEEE 802.11ax (80 MHz, MCS1, 99pc duty cycle)	WLAN	8.46	±9.6
10733	AAC	IEEE 802.11ax (80 MHz, MCS2, 99pc duty cycle)	WLAN	8.40	±9.6
10734	AAC	IEEE 802.11ax (80 MHz, MCS3, 99pc duty cycle)	WLAN	8.25	±9.6
10735	AAC	IEEE 802.11ax (80 MHz, MCS4, 99pc duty cycle)	WLAN	8.33	±9.6
10736	AAC	IEEE 802.11ax (80 MHz, MCS5, 99pc duty cycle)	WLAN	8.27	±9.6
10737	AAC	IEEE 802.11ax (80 MHz, MCS6, 99pc duty cycle)	WLAN	8.36	±9.6
10738	AAC	IEEE 802.11ax (80 MHz, MCS7, 99pc duty cycle)	WLAN	8.42	±9.6
10739	AAC	IEEE 802.11ax (80 MHz, MCS8, 99pc duty cycle)	WLAN	8.29	±9.6
10740	AAC	IEEE 802.11ax (80 MHz, MCS9, 99pc duty cycle)	WLAN	8.48	±9.6
10741	AAC	IEEE 802.11ax (80 MHz, MCS10, 99pc duty cycle)	WLAN	8.40	±9.6
10742	AAC	IEEE 802.11ax (80 MHz, MCS11, 99pc duty cycle)	WLAN	8.43	±9.6
10743	AAC	IEEE 802.11ax (160 MHz, MCS0, 90pc duty cycle)	WLAN	8.94	±9.6
10744	AAC	IEEE 802.11ax (160 MHz, MCS1, 90pc duty cycle)	WLAN	9.16	±9.6
10745	AAC	IEEE 802.11ax (160 MHz, MCS2, 90pc duty cycle)	WLAN	8.93	±9.6
10746	AAC	IEEE 802.11ax (160 MHz, MCS3, 90pc duty cycle)	WLAN	9.11	±9.6
10747	AAC	IEEE 802.11ax (160 MHz, MCS4, 90pc duty cycle)	WLAN	9.04	±9.6
10748	AAC	IEEE 802.11ax (160 MHz, MCS5, 90pc duty cycle)	WLAN	8.93	±9.6
10749	AAC	IEEE 802.11ax (160 MHz, MCS6, 90pc duty cycle)	WLAN	8.90	±9.6
10750	AAC	IEEE 802.11ax (160 MHz, MCS7, 90pc duty cycle)	WLAN	8.79	±9.6
10751	AAC	IEEE 802.11ax (160 MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6
10752	AAC	IEEE 802.11ax (160 MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6

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10753	AAC	IEEE 802.11ax (160 MHz, MCS10, 90pc duty cycle)	WLAN	9.00	±9.6
10754	AAC	IEEE 802.11ax (160 MHz, MCS11, 90pc duty cycle)	WLAN	8.94	±9.6
10755	AAC	IEEE 802.11ax (160 MHz, MCS0, 99pc duty cycle)	WLAN	8.64	±9.6
10756	AAC	IEEE 802.11ax (160 MHz, MCS1, 99pc duty cycle)	WLAN	8.77	±9.6
10757	AAC	IEEE 802.11ax (160 MHz, MCS2, 99pc duty cycle)	WLAN	8.77	±9.6
10758	AAC	IEEE 802.11ax (160 MHz, MCS3, 99pc duty cycle)	WLAN	8.69	±9.6
10759	AAC	IEEE 802.11ax (160 MHz, MCS4, 99pc duty cycle)	WLAN	8.58	±9.6
10760	AAC	IEEE 802.11ax (160 MHz, MCS5, 99pc duty cycle)	WLAN	8.49	±9.6
10761	AAC	IEEE 802.11ax (160 MHz, MCS6, 99pc duty cycle)	WLAN	8.58	±9.6
10762	AAC	IEEE 802.11ax (160 MHz, MCS7, 99pc duty cycle)	WLAN	8.49	±9.6
10763	AAC	IEEE 802.11ax (160 MHz, MCS8, 99pc duty cycle)	WLAN	8.53	±9.6
10764	AAC	IEEE 802.11ax (160 MHz, MCS9, 99pc duty cycle)	WLAN	8.54	±9.6
10765	AAC	IEEE 802.11ax (160 MHz, MCS10, 99pc duty cycle)	WLAN	8.54	±9.6
10766	AAC	IEEE 802.11ax (160 MHz, MCS11, 99pc duty cycle)	WLAN	8.51	±9.6
10767	AAE	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	7.99	±9.6
10768	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
10769	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	±9.6
10770	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10771	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10772	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.23	±9.6
10773	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.03	±9.6
10774	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	±9.6
10775	AAD	5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
10776	AAD	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
10777	AAC	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	±9.6
10778	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.34	±9.6
10779	AAC	5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.42	±9.6
10780	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	±9.6
10781	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	±9.6
10782	AAD	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	±9.6
10783	AAE	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	±9.6
10784	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	±9.6
10785	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.40	±9.6
10786	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	±9.6
10787	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	±9.6
10788	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
10789	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	±9.6
10790	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	±9.6
10791	AAE	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	±9.6
10792	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	±9.6
10793	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	±9.6
10794	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10795	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.84	±9.6
10796	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	±9.6
10797	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	±9.6
10798	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
10799	AAD	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	±9.6
10800	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6
10801	AAD	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	±9.6
10802	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	±9.6
10803	AAD	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10804	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.37	±9.6
10805	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10806	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10807	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
10808	AAD	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	±9.6
10809	AAD	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6
10810	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.33	±9.6
10811	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.30	±9.6
10812	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10813	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10814	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	±9.6
10815	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	±9.6
10816	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6
10817	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.42	±9.6
10818	AAD	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	±9.6
10819	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	±9.6

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10829	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.40	±9.6
10830	AAE	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.63	±9.6
10831	AAE	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	±9.6
10832	AAE	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.74	±9.6
10833	AAE	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10834	AAE	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	±9.6
10835	AAE	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10836	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.66	±9.6
10837	AAE	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	±9.6
10839	AAE	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6
10840	AAE	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	±9.6
10841	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.71	±9.6
10843	AAE	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	±9.6
10844	AAE	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10846	AAE	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10854	AAE	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10855	AAE	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
10856	AAE	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10857	AAE	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	±9.6
10858	AAE	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6
10859	AAE	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6
10860	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10861	AAE	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	±9.6
10863	AAE	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10864	AAE	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6
10865	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6
10866	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10868	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	±9.6
10869	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10870	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	±9.6
10871	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10872	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	±9.6
10873	AAE	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10874	AAE	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10875	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
10876	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.39	±9.6
10877	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	±9.6
10878	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10879	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	±9.6
10880	AAE	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.38	±9.6
10881	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	±9.6
10882	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	±9.6
10883	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	±9.6
10884	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	±9.6
10885	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	±9.6
10886	AAE	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	±9.6
10887	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	±9.6
10888	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	±9.6
10889	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	±9.6
10890	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	±9.6
10891	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	±9.6
10892	AAE	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	±9.6
10897	AAE	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.66	±9.6
10898	AAE	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10899	AAE	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	±9.6
10900	AAE	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10901	AAE	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10902	AAE	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10903	AAE	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10904	AAE	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10905	AAE	5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10906	AAE	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6
10907	AAE	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	±9.6
10908	AAE	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6
10909	AAE	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10910	AAE	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6

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10911	AAB	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	±9.6
10912	AAB	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10913	AAB	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10914	AAB	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.85	±9.6
10915	AAB	5G NR (DFT-s-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6
10916	AAB	5G NR (DFT-s-OFDM, 50% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±9.6
10917	AAB	5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
10918	AAC	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10919	AAB	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6
10920	AAB	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	±9.6
10921	AAB	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10922	AAB	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.82	±9.6
10923	AAB	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10924	AAB	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10925	AAB	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	±9.6
10926	AAB	5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6
10927	AAB	5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6
10928	AAC	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10929	AAC	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10930	AAC	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6
10931	AAC	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10932	AAC	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10933	AAC	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10934	AAC	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10935	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6
10936	AAC	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	±9.6
10937	AAC	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.77	±9.6
10938	AAC	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	±9.6
10939	AAC	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.82	±9.6
10940	AAC	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.89	±9.6
10941	AAC	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6
10942	AAC	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10943	AAD	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	±9.6
10944	AAC	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	±9.6
10945	AAC	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6
10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6
10947	AAC	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10948	AAC	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10949	AAC	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6
10950	AAC	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	±9.6
10951	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.92	±9.6
10952	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.25	±9.6
10953	AAA	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.15	±9.6
10954	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.23	±9.6
10955	AAA	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.42	±9.6
10956	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.14	±9.6
10957	AAA	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.31	±9.6
10958	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.61	±9.6
10959	AAA	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.33	±9.6
10960	AAC	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.32	±9.6
10961	AAB	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.38	±9.6
10962	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.40	±9.6
10963	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.55	±9.6
10964	AAC	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.29	±9.6
10965	AAB	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.37	±9.6
10966	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.55	±9.6
10967	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.42	±9.6
10968	AAB	5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.49	±9.6
10972	AAB	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	11.59	±9.6
10973	AAB	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	9.08	±9.6
10974	AAB	5G NR (CP-OFDM, 100% RB, 100 MHz, 256-QAM, 30 kHz)	5G NR FR1 TDD	10.28	±9.6
10978	AAA	ULLA BDR	ULLA	1.16	±9.6
10979	AAA	ULLA HDR4	ULLA	8.58	±9.6
10980	AAA	ULLA HDR8	ULLA	10.32	±9.6
10981	AAA	ULLA HDRp4	ULLA	3.19	±9.6
10982	AAA	ULLA HDRp8	ULLA	3.43	±9.6

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10983	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.31	±9.6
10984	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.42	±9.6
10985	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.54	±9.6
10986	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.50	±9.6
10987	AAA	5G NR DL (CP-OFDM, TM 3.1, 60 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.53	±9.6
10988	AAA	5G NR DL (CP-OFDM, TM 3.1, 70 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.38	±9.6
10989	AAA	5G NR DL (CP-OFDM, TM 3.1, 80 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.33	±9.6
10990	AAA	5G NR DL (CP-OFDM, TM 3.1, 90 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.52	±9.6
11003	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	10.24	±9.6
11004	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	10.73	±9.6
11005	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.70	±9.6
11006	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.55	±9.6
11007	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.48	±9.6
11008	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.51	±9.6
11009	AAA	5G NR DL (CP-OFDM, TM 3.1, 25 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.78	±9.6
11010	AAA	5G NR DL (CP-OFDM, TM 3.1, 30 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.95	±9.6
11011	AAA	5G NR DL (CP-OFDM, TM 3.1, 40 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.96	±9.6
11012	AAA	5G NR DL (CP-OFDM, TM 3.1, 50 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.68	±9.6
11013	AAA	IEEE 802.11be (320 MHz, MCS1, 99pc duty cycle)	WLAN	8.47	±9.6
11014	AAA	IEEE 802.11be (320 MHz, MCS2, 99pc duty cycle)	WLAN	8.45	±9.6
11015	AAA	IEEE 802.11be (320 MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6
11016	AAA	IEEE 802.11be (320 MHz, MCS4, 99pc duty cycle)	WLAN	8.44	±9.6
11017	AAA	IEEE 802.11be (320 MHz, MCS5, 99pc duty cycle)	WLAN	8.41	±9.6
11018	AAA	IEEE 802.11be (320 MHz, MCS6, 99pc duty cycle)	WLAN	8.40	±9.6
11019	AAA	IEEE 802.11be (320 MHz, MCS7, 99pc duty cycle)	WLAN	8.29	±9.6
11020	AAA	IEEE 802.11be (320 MHz, MCS8, 99pc duty cycle)	WLAN	8.27	±9.6
11021	AAA	IEEE 802.11be (320 MHz, MCS9, 99pc duty cycle)	WLAN	8.46	±9.6
11022	AAA	IEEE 802.11be (320 MHz, MCS10, 99pc duty cycle)	WLAN	8.36	±9.6
11023	AAA	IEEE 802.11be (320 MHz, MCS11, 99pc duty cycle)	WLAN	8.09	±9.6
11024	AAA	IEEE 802.11be (320 MHz, MCS12, 99pc duty cycle)	WLAN	8.42	±9.6
11025	AAA	IEEE 802.11be (320 MHz, MCS13, 99pc duty cycle)	WLAN	8.37	±9.6
11026	AAA	IEEE 802.11be (320 MHz, MCS0, 99pc duty cycle)	WLAN	8.39	±9.6

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

Appendix E. – Dipole Calibration Data

**Calibration Laboratory of
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Zeughausstrasse 43, 8004 Zurich, Switzerland



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Accreditation No.: **SCS 0108**

Client **HCT (Dymstec)**

Certificate No: **D6.5GHzV2-1012_Sep22**

CALIBRATION CERTIFICATE

Object: **D6.5GHzV2 - SN:1012**

Calibration procedure(s): **QA CAL-22.v6
Calibration Procedure for SAR Validation Sources between 3-10 GHz**

Calibration date: **September 20, 2022**

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power sensor R&S NRP33T	SN: 100967	01-Apr-22 (No. 217-03526)	Apr-23
Reference 20 dB Attenuator	SN: BH9394 (20k)	04-Apr-22 (No. 217-03527)	Apr-23
Mismatch combination	SN: 84224 / 360D	26-Apr-21 (No. 217-03353)	Apr-24
Reference Probe EX3DV4	SN: 7405	02-Jun-22 (No. EX3-7405_Jun22)	Jun-23
DAE4	SN: 908	27-Jun-22 (No. DAE4-908_Jun22)	Jun-23

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator Anapico APSIN20G	SN: 827	18-Dec-18 (in house check Dec-21)	In house check: Dec-23
Network Analyzer Keysight E5063A	SN:MY54504221	31-Oct-19 (in house check Oct-19)	In house check: Oct-22

Calibrated by:	Name	Function	Signature
	Leif Klynsner	Laboratory Technician	
Approved by:	Sven Kühn	Technical Manager	

Issued: September 26, 2022

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

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Accreditation No.: **SCS 0108**

Glossary:

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

Calibration is Performed According to the Following Standards:

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

Additional Documentation:

- b) DASY System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The 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.
- *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 absorbed power density (APD):* The absorbed power density is evaluated according to Samaras T, Christ A, Kuster N, "Compliance assessment of the epithelial or absorbed power density above 6 GHz using SAR measurement systems", Bioelectromagnetics, 2021 (submitted). The additional evaluation uncertainty of 0.55 dB (rectangular distribution) is considered.

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

Measurement Conditions

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

DASY Version	DASY6	V16.0
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	5 mm	with Spacer
Zoom Scan Resolution	dx, dy = 3.4 mm, dz = 1.4 mm	Graded Ratio = 1.4 (Z direction)
Frequency	6500 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	34.5	6.07 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	35.2 ± 6 %	6.23 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	---	---

SAR result with Head TSL

SAR averaged over 1 cm ³ (1 g) of Head TSL	Condition	
SAR measured	100 mW input power	28.8 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	289 W/kg ± 24.7 % (k=2)

SAR averaged over 8 cm ³ (8 g) of Head TSL	Condition	
SAR measured	100 mW input power	6.43 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	64.6 W/kg ± 24.4 % (k=2)

SAR averaged over 10 cm ³ (10 g) of Head TSL	condition	
SAR measured	100 mW input power	5.26 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	52.9 W/kg ± 24.4 % (k=2)

Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	52.4 Ω - 8.2 jΩ
Return Loss	- 21.6 dB

APD (Absorbed Power Density)

APD averaged over 1 cm ²	Condition	
APD measured	100 mW input power	288 W/m ²
APD measured	normalized to 1W	2880 W/m² ± 29.2 % (k=2)

APD averaged over 4 cm ²	condition	
APD measured	100 mW input power	129 W/m ²
APD measured	normalized to 1W	1290 W/m² ± 28.9 % (k=2)

*The reported APD values have been derived using psSAR8g.

General Antenna Parameters and Design

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

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

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

Additional EUT Data

Manufactured by	SPEAG
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DASY6 Validation Report for Head TSL

Measurement Report for D6.5GHz-1012, UID 0 -, Channel 6500 (6500.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
D6.5GHz	16.0 x 6.0 x 300.0	SN: 1012	-

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Cond. [S/m]	TSL Permittivity
Flat, HSL	5.00	Band	CW,	6500	5.50	6.23	35.2

Hardware Setup

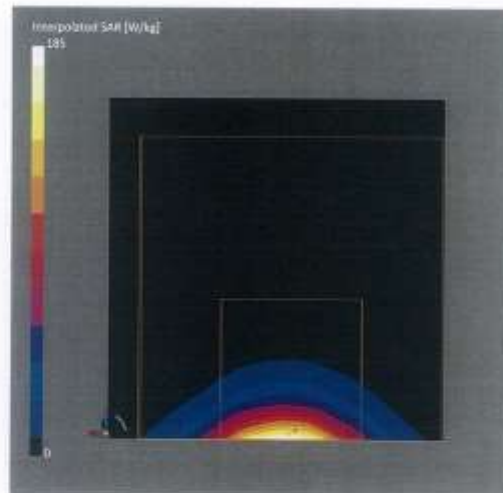
Phantom	TSL	Probe, Calibration Date	DAE, Calibration Date
MFP V8.0 Center - 1182	HBBL600-10000V6	EX3DV4 - SN7405, 2022-06-02	DAE4 Sn908, 2022-06-27

Scan Setup

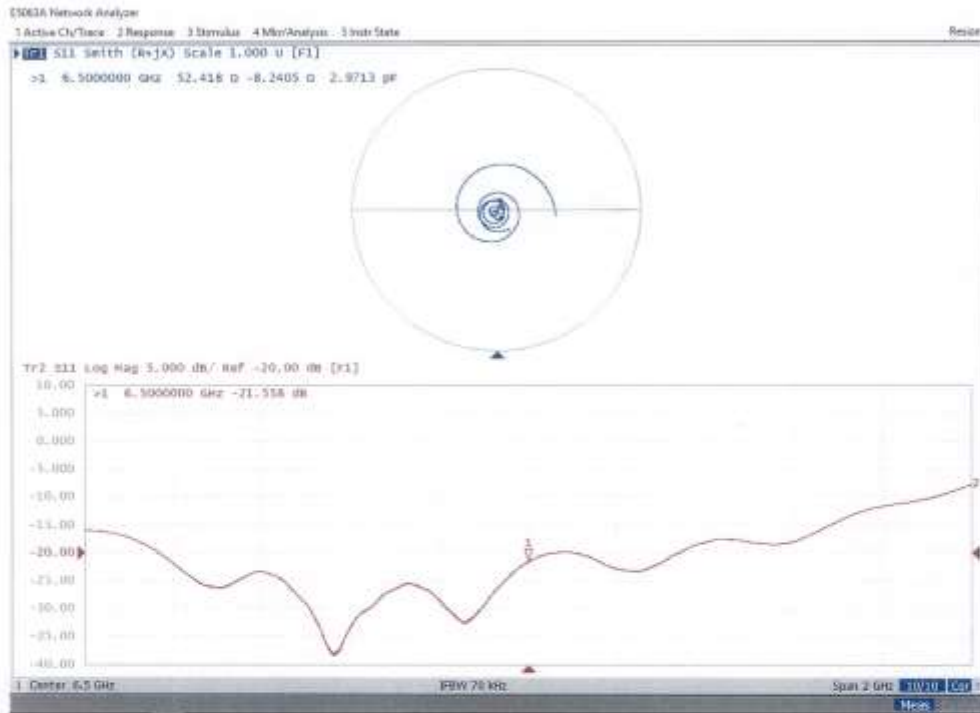
	Zoom Scan
Grid Extents [mm]	22.0 x 22.0 x 22.0
Grid Steps [mm]	3.4 x 3.4 x 1.4
Sensor Surface [mm]	1.4
Graded Grid	Yes
Grading Ratio	1.4
MAIA	N/A
Surface Detection	VMS + 6p
Scan Method	Measured

Measurement Results

	Zoom Scan
Date	2022-09-20, 13:46
psSAR1g [W/Kg]	28.8
psSAR8g [W/Kg]	6.43
psSAR10g [W/Kg]	5.26
Power Drift [dB]	0.01
Power Scaling	Disabled
Scaling Factor [dB]	
TSL Correction	No correction
M2/M1 [%]	50.8
Dist 3dB Peak [mm]	4.6



Impedance Measurement Plot for Head TSL



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Accreditation No.: **SCS 0108**

Client **Estech (Dymstec)**

Certificate No: **5G-Veri10-1027_Jul22**

CALIBRATION CERTIFICATE			
Object	5G Verification Source 10 GHz - SN: 1027		
Calibration procedure(s)	QA CAL-45.v3 Calibration procedure for sources in air above 6 GHz		
Calibration date:	July 18, 2022		
<p>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.</p> <p>All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.</p>			
Calibration Equipment used (M&TE critical for calibration)			
Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Reference Probe EUmWV3	SN: 9374	2021-12-21 (No. EUmWV3-9374_Dec21)	Dec-22
DAE4ip	SN: 1602	2022-06-27 (No. DAE4ip-1602_Jun22)	Jun-23
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator Anapico APSIN20G	SN: 827	18-Dec-18 (in house check Dec-21)	In house check: Dec-23
Calibrated by:	Name Leif Klysner	Function Laboratory Technician	Signature
Approved by:	Sven Kühn	Technical Manager	
			Issued: July 26, 2022
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Glossary

CW Continuous wave

Calibration is Performed According to the Following Standards

- Internal procedure QA CAL-45-5Gsources
- IEC TR 63170 ED1, "Measurement procedure for the evaluation of power density related to human exposure to radio frequency fields from wireless communication devices operating between 6 GHz and 100 GHz", January 2018

Methods Applied and Interpretation of Parameters

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

Calibrated Quantity

- Local peak E-field (V/m) and average of peak spatial components of the poynting vector (W/m²) averaged over the surface area of 1 cm² and 4cm² at the nominal operational frequency of the verification source. Both square and circular averaging results are listed.

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

Measurement Conditions

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

DASY Version	DASY8 Module mmWave	V3.0
Phantom	5G Phantom	
Distance Horn Aperture - plane	10 mm	
XY Scan Resolution	dx, dy = 7.5 mm	
Number of measured planes	2 (10mm, 10mm + $\lambda/4$)	
Frequency	10 GHz \pm 10 MHz	

Calibration Parameters, 10 GHz

Circular Averaging

Distance Horn Aperture to Measured Plane	<i>Prad</i> ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density (W/m ²)		Uncertainty (k = 2)
				1 cm ²	4 cm ²	
10 mm	86.1	144	1.27 dB	52.3	48.8	1.28 dB

Square Averaging

Distance Horn Aperture to Measured Plane	<i>Prad</i> ¹ (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density (W/m ²)		Uncertainty (k = 2)
				1 cm ²	4 cm ²	
10 mm	86.1	144	1.27 dB	52.5	48.7	1.28 dB

¹ Assessed ohmic and mismatch loss plus numerical offset: 0.55 dB

DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1027	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

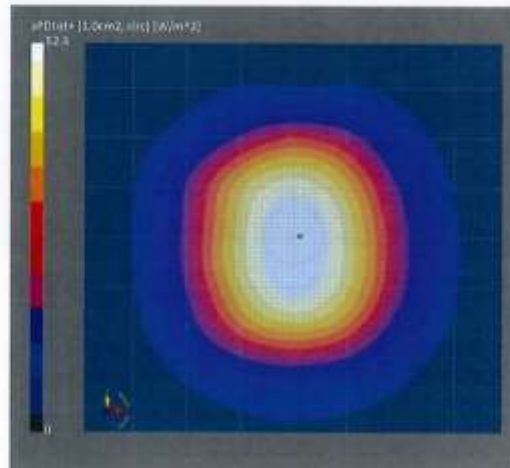
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV3 - SN9374_F1-55GHz, 2021-12-21	DAE4ip Sn1602, 2022-06-27

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAAA	MAAA not used

Measurement Results

	5G Scan
Date	2022-07-18, 12:17
Avg. Area [cm ²]	1.00
psPDn+ [W/m ²]	52.2
psPDtot+ [W/m ²]	52.3
psPDmod+ [W/m ²]	52.5
E _{max} [V/m]	144
Power Drift [dB]	-0.04



DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1027	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

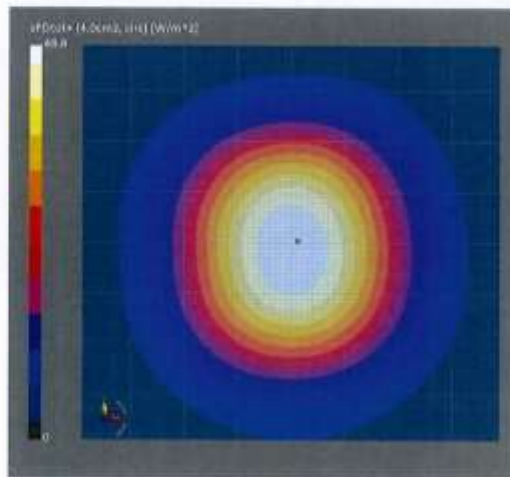
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmWV3 - SN9374_F1-55GHz, 2021-12-21	DAE4ip Sn1602, 2022-06-27

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-07-18, 12:17
Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	48.6
psPDtot+ [W/m ²]	48.8
psPDmod+ [W/m ²]	48.9
E _{max} [V/m]	144
Power Drift [dB]	-0.04



DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1027	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

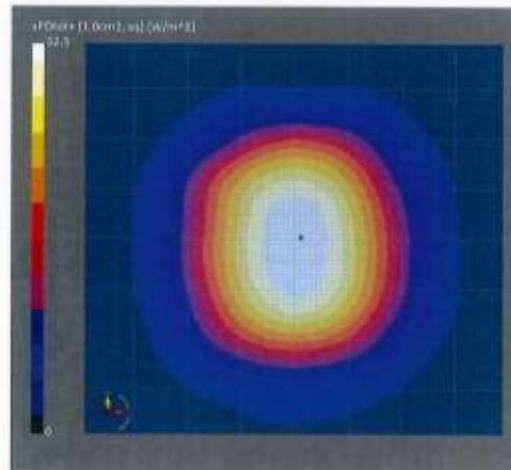
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUMmWV3 - SN9374_F3-55GHz, 2021-12-21	DAE4ip Sn1602, 2022-06-27

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-07-18, 12:17
Avg. Area [cm ²]	1.00
psPDin+ [W/m ²]	52.3
psPDtot+ [W/m ²]	52.5
psPDmod+ [W/m ²]	52.7
E _{max} [V/m]	144
Power Drift [dB]	-0.04



DASY Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1027	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

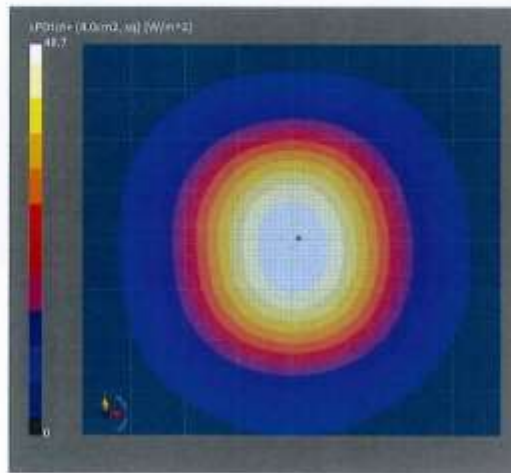
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUMmiWV3 - SN9374_F1-55GHz, 2021-12-21	DAE4ip Sn1602, 2022-06-27

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-07-18, 12:17
Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	48.5
psPDtot+ [W/m ²]	48.7
psPDmod+ [W/m ²]	48.9
E _{max} [V/m]	144
Power Drift [dB]	-0.04



Appendix: Source Evaluation for Relative System Check

Measurement Equipment

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

Item	ID#	Cal Date (Certificate No.)
Probe EUmmWV4	SN: 9423	July 18, 2022

Measurement Conditions

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

DASY Version	DASY8 Module mmWave	V3.0
Phantom	5G Phantom	
Distance Horn Aperture - plane	10 mm	
XY Scan Resolution	dx, dy = 7.5 mm	
Number of measured planes	2 (10mm, 10mm + $\lambda/4$)	
Frequency	10 GHz \pm 10 MHz	

Calibration Parameters, 10 GHz

Circular Averaging

Distance Horn Aperture to Measured Plane	P_{rad}^2 (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density (W/m ²)		Uncertainty (k = 2)
				Avg (ρ_{sPDn+} , $\rho_{sPDtot+}$, $\rho_{sPDmod+}$)		
				1 cm ²	4 cm ²	
10 mm	86.1	148	1.27 dB	55.6	51.0	1.28 dB

Square Averaging

Distance Horn Aperture to Measured Plane	P_{rad}^2 (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density (W/m ²)		Uncertainty (k = 2)
				Avg (ρ_{sPDn+} , $\rho_{sPDtot+}$, $\rho_{sPDmod+}$)		
				1 cm ²	4 cm ²	
10 mm	86.1	148	1.27 dB	55.7	50.9	1.28 dB

² Assessed ohmic and mismatch loss: 0.55 dB

Appendix: DASYS Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1027	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

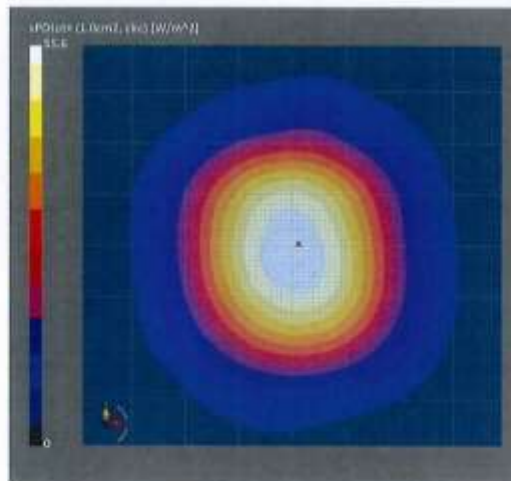
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV4 - SN9423_F1-55GHz, 2022-07-18	DAE4ip 5n1602, 2022-06-27

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-07-18, 15:11
Avg. Area [cm ²]	1.00
psPD _{av} [W/m ²]	55.5
psPD _{tot} [W/m ²]	55.6
psPD _{mod} [W/m ²]	55.8
E _{max} [V/m]	148
Power Drift [dB]	-0.06



Appendix: DASy Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	5N: 1027	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
5G -	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

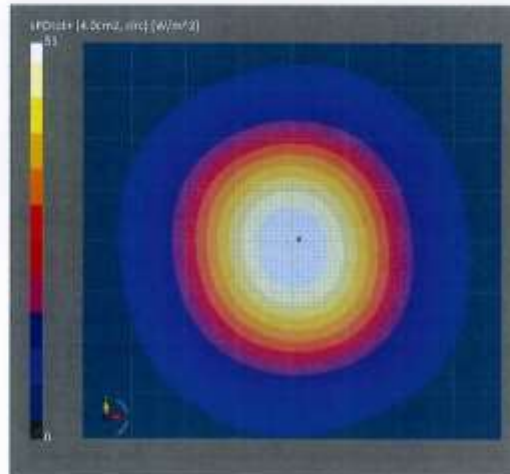
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmWV4 - 5N9423_F1-55GHz, 2022-07-18	DAE4ip 5n1602, 2022-06-27

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-07-18, 15:11
Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	50.8
psPDtot+ [W/m ²]	51.0
psPDresd+ [W/m ²]	51.2
E _{max} [V/m]	148
Power Drift [dB]	-0.06



Appendix: DASy Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1027	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz], Channel Number	Conversion Factor
SG-	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

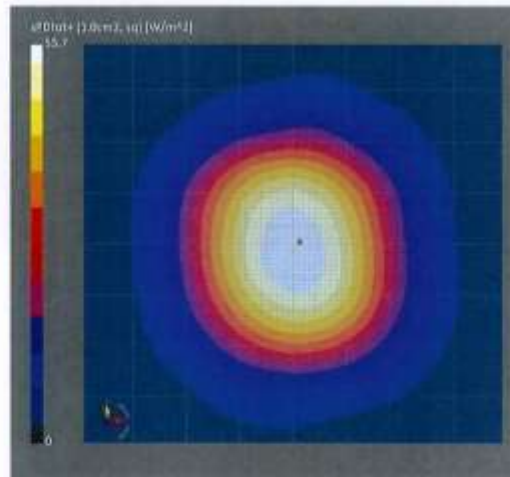
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUmmWV4 - SN9423_F1-55GHz, 2022-07-18	DAE4ip Sn1602, 2022-06-27

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-07-18, 15:11
Avg. Area [cm ²]	1.00
psPDr+ [W/m ²]	55.5
psPDtot+ [W/m ²]	55.7
psPDmod+ [W/m ²]	55.9
E _{max} [V/m]	148
Power Drift [dB]	-0.06



Appendix: DASYS Report

Measurement Report for 5G Verification Source 10 GHz, UID 0 -, Channel 10000 (10000.0MHz)

Device under Test Properties

Name, Manufacturer	Dimensions [mm]	IMEI	DUT Type
5G Verification Source 10 GHz	100.0 x 100.0 x 172.0	SN: 1027	-

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group	Frequency [MHz], Channel Number	Conversion Factor
5G-	10.0 mm	Validation band	CW	10000.0, 10000	1.0

Hardware Setup

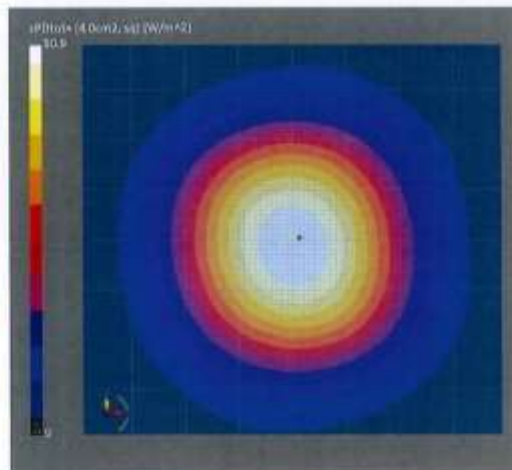
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave Phantom - 1002	Air	EUMm/WV4 - SNS423_F1-55GHz, 2022-07-18	DAE4ip 5n1602, 2022-06-27

Scan Setup

	5G Scan
Grid Extents [mm]	120.0 x 120.0
Grid Steps [lambda]	0.25 x 0.25
Sensor Surface [mm]	10.0
MAIA	MAIA not used

Measurement Results

	5G Scan
Date	2022-07-18, 15:11
Avg. Area [cm ²]	4.00
psPDn+ [W/m ²]	50.7
psPDtot+ [W/m ²]	50.9
psPDmod+ [W/m ²]	51.1
E _{max} [V/m]	148
Power Drift [dB]	-0.06



Appendix D. – SAR Tissue Characterization

The brain and muscle mixtures consist of a viscous gel using hydrox-ethyl cellulose (HEC) gelling agent and saline solution Preservation with a bacteriacide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue. The mixture characterizations used for the brain and muscle tissue simulating liquids are according to the data by C. Gabriel and G. Harts grove.

$$Y = \frac{j2\omega\epsilon_r\epsilon_0}{[\ln(b/a)]^2} \int_a^b \int_a^b \int_0^\pi \cos\phi' \frac{\exp[-j\omega r(\mu_0\epsilon_r'\epsilon_0)^{1/2}]}{r} d\phi' d\rho' d\rho$$

Where Y is the admittance of the probe in contact with the sample, the primed and unprimed coordinates refer to source and observation points, respectively, $r^2 = \rho^2 + \rho'^2 - 2\rho\rho' \cos\phi'$ ω is the angular frequency, and $j=(-1)^{1/2}$

3 Composition / Information on ingredients

3.2 Mixtures

Description: Aqueous solution with surfactants and inhibitors

Declarable, or hazardous components:

CAS: 107-21-1 EINECS: 203-473-3 Reg.nr.: 01-2119456816-28-0000	Ethenediol STOT RE 2, H373; Acute Tox. 4, H302	>1.0-4.9%
CAS: 68608-26-4 EINECS: 271-781-5 Reg.nr.: 01-2119527859-22-0000	Sodium petroleum sulfonate Eye Irrit. 2, H319	< 2.9%
CAS: 107-41-5 EINECS: 203-489-0 Reg.nr.: 01-2119539582-35-0000	Hexylene Glycol / 2-Methyl-pentane-2,4-diol Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 2.9%
CAS: 68920-66-1 NLP: 500-236-9 Reg.nr.: 01-2119489407-26-0000	Alkoxylated alcohol, > C₁₆ Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319	< 2.0%

Additional information:

For the wording of the listed risk phrases refer to section 16.

Not mentioned CAS-, EINECS- or registration numbers are to be regarded as Proprietary/Confidential.

The specific chemical identity and/or exact percentage concentration of proprietary components is withheld as a trade secret.

Liquid recipes are Proprietary SPEAG. Since the composition is approximate to the actual liquids utilized, the manufacture tissue-equivalent liquid data sheets are provided below

Schmid & Partner Engineering AG

s p e a g

Zeughausstrasse 43, 8004 Zurich, Switzerland
 Phone +41 44 245 9700, Fax +41 44 245 9779
 www.speag.swiss, info@speag.swiss

Measurement Certificate / Material Test

Item Name	Head Tissue Simulating Liquid (HBBL600-10000V6)
Product No.	SL AAH U16 BC (Batch: 210727-3)
Manufacturer	SPEAG

Measurement Method

TSL dielectric parameters measured using calibrated DAK probe.

Target Parameters

Target parameters as defined in the IEEE 1528 and IEC 62209 compliance standards.

Test Condition

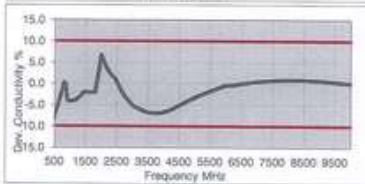
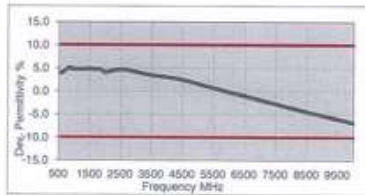
Ambient Condition: 22°C : 30% humidity
 TSL Temperature: 22°C
 Test Date: 29-Jul-21
 Operator: WM

Additional Information

TSL Density
 TSL Heat-capacity

Results

f [MHz]	Measured			Target		Diff to Target [%]	
	ϵ'	ϵ''	sigma	eps	sigma	$\Delta\epsilon$	$\Delta\sigma$
600	44.4	25.0	0.84	42.7	0.88	3.9	-4.7
750	43.9	21.2	0.80	41.9	0.89	4.7	-1.5
900	43.5	20.2	0.90	41.7	0.90	5.1	0.3
925	43.7	19.9	0.91	41.8	0.91	5.1	0.4
935	43.7	19.6	0.92	41.5	0.91	5.2	0.9
950	43.6	19.4	0.92	41.5	0.92	5.1	0.4
900	43.5	18.7	0.94	41.5	0.97	4.8	-3.1
1400	42.6	14.8	1.15	40.0	1.18	4.9	-2.5
1450	42.5	14.8	1.18	40.5	1.20	4.9	-1.7
1600	42.2	14.1	1.26	40.3	1.28	4.7	-1.9
1625	42.2	14.1	1.27	40.3	1.30	4.8	-2.2
1640	42.2	14.0	1.28	40.3	1.31	4.8	-2.0
1650	42.1	14.0	1.28	40.2	1.31	4.6	-2.5
1700	42.1	13.9	1.31	40.2	1.34	4.8	-2.4
1750	42.0	13.8	1.34	40.1	1.37	4.8	-2.3
1800	41.9	13.7	1.37	40.0	1.40	4.7	-2.1
1810	41.9	13.7	1.38	40.0	1.40	4.7	-1.4
1825	41.9	13.7	1.38	40.0	1.40	4.7	-0.7
1850	41.8	13.6	1.40	40.0	1.40	4.5	0.0
1900	41.8	13.6	1.43	40.0	1.40	4.5	2.1
1950	41.7	13.5	1.46	40.0	1.40	4.3	4.3
2000	41.6	13.4	1.49	40.0	1.40	4.0	6.4
2050	41.6	13.4	1.53	39.9	1.44	4.2	5.9
2100	41.5	13.4	1.56	39.8	1.49	4.2	4.8
2150	41.4	13.3	1.60	39.7	1.53	4.2	4.3
2200	41.4	13.3	1.63	39.6	1.58	4.4	3.9
2250	41.3	13.3	1.67	39.6	1.62	4.4	2.9
2300	41.3	13.3	1.70	39.5	1.67	4.6	2.0
2350	41.2	13.3	1.74	39.4	1.71	4.6	1.7
2400	41.1	13.3	1.78	39.3	1.76	4.6	1.4
2450	41.0	13.4	1.82	39.2	1.80	4.6	1.1
2500	41.0	13.4	1.86	39.1	1.85	4.8	0.3
2550	40.9	13.4	1.90	39.1	1.91	4.7	-0.5
2600	40.8	13.4	1.94	39.0	1.96	4.8	-1.2



3600	39.2	14.0	2.72	37.9	2.91	3.5	-6.7
3700	38.9	14.1	2.90	37.7	3.12	3.3	-7.0
3800	38.4	15.7	4.53	36.0	4.66	1.2	-2.6
3900	36.3	15.7	4.59	35.9	4.71	1.1	-2.5
5000	36.2	15.8	4.65	35.9	4.76	1.0	-2.3
5500	35.9	15.9	4.95	35.3	4.96	0.6	-1.7
5600	35.7	16.0	4.99	35.5	5.07	0.5	-1.4
5700	35.5	16.1	5.11	35.4	5.17	0.3	-1.2
5800	35.3	16.2	5.22	35.3	5.27	0.1	-0.9
6000	35.0	16.3	5.45	35.1	5.48	-0.2	-0.4
6500	34.1	16.8	6.07	34.5	6.07	-1.0	0.0
7000	33.2	17.2	6.68	33.9	6.65	-1.9	0.5
7500	32.4	17.8	7.30	33.3	7.24	-2.8	0.8
8000	31.5	17.8	7.91	32.7	7.84	-3.6	0.9
8500	30.7	18.0	8.53	32.1	8.45	-4.4	0.9
9000	29.9	18.3	9.14	31.5	9.08	-5.2	0.7
9500	29.1	18.4	9.75	31.0	9.71	-6.0	0.4
10000	28.3	18.6	10.38	30.4	10.36	-6.8	0.0

TSL Dielectric Parameters

Appendix E. – SAR System Validation

Per FCC KCB 865664 D02v01r02, SAR system validation status should be document to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue-equivalent media for system validation, according to the procedures outlined in IEEE 1528-2013 and FCC KDB 865664 D01v01r04. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

Probe	Probe Type	Probe Calibration Point	Dipole	Date	Dielectric Parameters		CW Validation			Modulation Validation		
					Measured Permittivity	Measured Conductivity	Sensitivity	Probe Linearity	Probe Isotropy	MOD. Type	Duty Factor	PAR
EX3DV4	7654	6500	1012	2022-05-31	34.2	6.06	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary 1g

Note;

All measurements were performed using probes calibrated for CW signal only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04. SAR system were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to KDB 865664 D01v01r04.