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NEAR-FIELD POWER DENSITY EVALUATION REPORT

Applicant Name: SAMSUNG Electronics Co., Ltd. 129, Samsung-ro, Yeongtong-gu, Suwon-Si, Gyeonggido, 16677 Rep. of Korea

Date of Issue: Aug.18, 2020 Test Report No.: HCT-SR-2007-FC003-R1 Test Site: HCT CO., LTD.

A3LSMT878U

FCC ID:

Equipment Type: Application Type FCC Rule Part(s): Model Name: Date of Test: Tablet Certification CFR §2.1093 SM-T878U Jul. 08, 2020 ~ Jul. 10, 2020

Band & Mode	Tx. Frequency	Measured psPD	Reported psPD
	MHz	mW/cm²	mW/cm²
5G NR - n261	27500 MHz - 28350 MHz	0.632	0.750
5G NR - n260 37000 Mtz - 40000 Mtz		0.493 0.750	
Total Exposure Ratio		0.9	88

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

Bong-Kyun Park Test Engineer SAR Team Certification Division

Reviewed By

Yun-jeang, Heo Technical Manager SAR Team Certification Division

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REVISION HISTORY

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

Revision No.	Date of Issue	Description	
0	Jul. 16, 2020	Initial Release	
R2	Aug.18,2020	Revised Sec.2.4	



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1. Test Location

1.1 Test Laboratory

Company Name	HCT Co., Ltd.
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Telephone	031-645-6300
Fax.	031-645-6401

1.2 Test Facilities

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

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



2. Information of the EUT

Model Name	SM-T878U
Equipment Type	Tablet
FCC ID	A3LSMT878U
Application Type	Certification
Applicant	SAMSUNG Electronics Co., Ltd.

2.1 Device Under Test Description

5G mmWave NR Device Overview

Item.		Description			
Fragueney Banga NR Band n261		27500 MHz - 28350 MHz			
Frequency Range		NR Band n260	37000 MHz - 40000 MHz		
Channel Bandwid	the	NR Band n261	50 MHz, 100 MHz		
Channel Bandwid	uns	NR Band n260	50 MHz, 100 MHz		
Ch. No.& Freq.(M	七)	Low		Mid	High
NR Band n261	50 MHz	27534.8 (207141	3)	27923.5 (2077891)	28319.5 (2084491)
	100 MHz	27559.3 (207182	1)	27923.5 (2077891)	28292.2 (2084035)
ND Bond p260	50 MHz	37027.3 (222962	1)	38449.9 (2253331)	39966.2 (2278603)
NR Band n260	100 MHz	37051.8 (223002	9)	38449.9 (2253331)	39949.9 (2278331)
	Subcarrier Spa	acing (kHz)			120
Total Numb	er of Supported l	Jplink CCs (SISO)	2		
Total Numbe	er of Supported L	Iplink CCs (MIMO)	2 (CP-OFDM only)		
Total Number of Supported DL CCs				4	
Modulations Supported in UL		DFT-S-OFDM: QPSK, 16QAM, 64QAM CP-OFDM: QPSK, 16QAM, 64QAM			
LT	E Anchor Bands	(n260)	LTE Band 2/4/5/12/13/30/66		
LTE Anchor Bands (n261)		LTE Band 2/4/5/12/13/30/66			
Duplex Type (mmWave)		TDD			
		R32N500KTRE The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics are within operational tolerances expected for production units.			



2.2 Time-Averaging Algorithm for RF Exposure Compliance

The equipment under test (EUT) contains:

This equipment contains the Qualcomm SM8250 modem supporting 2G/3G/4G technologies and SDX55 modem supporting mmW 5G NR bands. Both of these modems are enabled with Qualcomm SmartTransmit feature to control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is in compliance with the FCC requirement.

Refer to Compliance Summary document for detailed of Qualcomm® Smart Transmit feature (Part 2)

Note that WLAN operations are not enabled with Smart Transmit.

The Smart Transmit algorithm maintains the time-averaged transmit power, in turn, time-averaged RF exposure of *SAR_design_target* or *PD_design_target*, below the predefined time-averaged power limit (i.e., *Plimit* for sub-6 radio, and *input.power.limit* for 5G mmW NR),for each characterized technology and band (see Part 0 T SAR Test Report :, and Part 0 Power Density Char. Report:

Smart Transmit allows the device to transmit at higher power instantaneously when needed, but manages power limiting to maintain time-averaged transmit power to *input.power.limit* listed in Tables 5-1 to 5-4

The purpose of this report (Part 1 test) is to demonstrate that the EUT meets FCC PD limits when transmitting in static transmission scenario at maximum allowable time-averaged power level given by *input.power.limit.*

2.3 Test Regulations

November 2017, October 2018, April 2019, November 2019 TCBC Workshop Notes SPEAG DASY6 System Handbook (September 2019) IEC TR 63170:2018 FCC KDB 865664 D02 v01r04 FCC KDB 447498 D01 v02r01

2.4 DUT Antenna Locations

The device has 2 patch antenna arrays (K Patch(Module 0), L Patch(Module 1)). Table below indicates the surfaces evaluated for near field power density (part 1) evaluation.

Refer to Section 4 of the Part 0 Power Density Char. Report on justification of these worst-surfaces.

Band	Antenna	Rear(S2)	Front(S1)	Left(S3)	Right(S4)	Bottom	Top(S5)
5G NR Band n261	Module 0	No	Yes	No	Yes	No	No
	Module 1	Yes	No	No	Yes	No	No
5G NR Band n260	Module 0	No	Yes	No	Yes	No	No
	Module 1	Yes	No	No	Yes	No	No

Note:

1. All test configurations are based on front position view.

2. Additional surfaces were evaluated for simultaneous transmission analysis.



2.5 SAR Summation Scenario

According to FCC KDB Publication 447498 D01v06, transmitters are considered to be operating simultaneously when there is overlapping transmission, with the exception of transmissions during network hand-offs with maximum hand-off duration less than 30 seconds.

This device contains multiple transmitters that may operate simultaneously, and therefore requires a simultaneous transmission analysis according to FCC KDB Publication 447498 D01v06 4.3.2 procedures.

5G mmWave NR Simultaneous Transmission Scenarios			
Applicable Combination	Body		
LTE + 5G NR	Yes		
LTE + 2.4 GHz WI-FI + 5G NR	Yes		
LTE + 5 GHz WI-FI + 5G NR	Yes		
LTE + 2.4 GHz Bluetooth + 5G NR	Yes#		
LTE + 2.4 GHz Bluetooth +5 GHz WI-FI + 5G NR	Yes#		
LTE + 2.4 GHz Bluetooth +5 GHz WI-FI +2.4 GHz WI-FI+ 5G NR	Yes#		

- 1. 5G NR Operations are limited to Non-Standalone (EN-DC) operations only.
- 2. NR antenna arrays cannot transmit simultaneously.
- 3. Simultaneous 5G NR FR2 + LTE operations are possible only with LTE Band 2/4/5/12/13/30/66.
- 4 All non-5G NR licensed modes share the same antenna path and cannot transmit simultaneously.
- 5. 5G NR bands cannot transmit simultaneously.
- This device supports time averaging smart transmit algorithm in WWAN. Smart transmit adds directly the time-averaged RF exposure from 4G and time-averaged RF exposure from 5G mmW NR to ensure that the normalized RF exposure from both 4G and 5G mmW NR does not exceed FCC limit.
- 8. # Bluetooth Tethering is considered



3. Description of test equipment

3.1 MEASUREMENT SETUP

Peak spatially averaged power density (psPD) measurements for mmWave frequencies were performed using the DASY6 with cDASY6 5G module.

The DASY6 is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland and consists of a high precisi on robotics system (Staubli), robot controller, desktop computer, near- field probe, probe alignment sensor, and the 5G phantom. The robot is a six-axis industrial robot, performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF)

3.2 SPEAG EUmmWV3 Probe / E-Field 5G Probe

The EUmmWV3 probe consists of two dipoles optimally arranged to obtain pseudo-vector information.

Frequency Range	750 MHz – 110 GHz	
Dynamic Range	< 20 V/m – 10,000 V/m with PRE-10 (min < 50 V/m – 3,000 V/m)	
Position Precision	< 0.2 mm (cDASY6)	
Dimensions	Probe Overall Length: 320 mm Probe Body Diameter: 8 mm Probe Tip Length: 23 mm Probe Tip Diameter: Encapsulation 8 mm Distance from Probe Tip to Sensor X Calibration Point: 1.5 mm Distance from Probe Tip to Sensor Y Calibration Point: 1.5 mm	
Applications	E-field measurements of 5G devices and other mm-wave transmitters operating above 10 GHz in < 2 mm distance from device (free-space) Power density, H-field and far-field analysis using total field reconstruction	
Compatibility	cDASY6 + 5G-Module SW2.0.0.23	



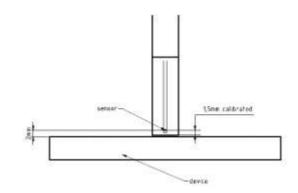


Figure 1. EUmmWV3 Probe



3.3 Peak Spatially Averaged Power Density Assessment Based on E-field Measurements

Within a short distance from the transmitting source, power density was determined based on both electric and magnetic fields. Generally, the magnitude and phase of two components of either the E-field or H-field were needed on a sufficiently large surface to fully characterize the total E-field and H-field distributions. Nevertheless, solutions based on direct measurement of E-field and H-field can be used to compute power density. The general measurement approach used for this device was:

a)The local E field on the measurement surface was measured at a reference location where the field is well above the noise level. This reference level was used at the end of this procedure to assess output power drift of the DUT during the measurement.

b)The electric field on the measurement surface was scanned. Measurements are conducted according to the instructions provided by the measurement system manufacturer. Measurement spatial resolution can depend on the measured field characteristic and measurement methodology used by the system. The planar scan step size was configured at $\lambda/4$.

c) For cDASY6, H-field was calculated from the measured E-field using a reconstruction algorithm. As the power density calculation requires knowledge of both amplitude and phase, reconstruction algorithms can also be used to obtain field information from the measured E-field data (e.g. the phase from the amplitude if only the amplitude is measured). H-field and phase data was reconstructed from repeated measurements (three per measurement point) on two measurement planes separated by $\lambda/4$.

d)The total Peak spatially averaged power density (psPD) distribution on the evaluation surface is determined per the below equation. The spatial averaging area, *A*, is specified by the applicable exposure limits or regulatory requirements. A circular shape was used.

$$psPD = \frac{1}{2A_{av}} \qquad \iint_{A_{av}} ||Re\{E \times H^*\}||dA$$

f) The local E field reference value, at the same location as step 2, was re-measured after the scan was complete to calculate the power drift. If the drift deviated by more than 5%, the power density test and drift measurements were repeated.

3.4 Reconstruction Algorithm

Computation of the power density in general requires measurement information from the both E-field and H-field amplitudes and phases in the plane of incidence. Reconstruction of these quantities from pseudo-vector E-field measurements is feasible according to the manufacturer, as they are determined via Maxwell's equations. As such, the SPEAG reconstruction approach was based on the Gerchberg-Saxton algorithm, which benefits from the availability of the E-field polarization ellipse information obtained with the EUmmWV3 probe.



4. RF Exposure Limits

Per 1.1310 (d)(3), the MPE limits are applied for frequencies above 6 GHz. Power Density is expressed in units of W/m² or mW/cm².

Peak Spatially Averaged Power Density was evaluated over a circular area of 4 cm² 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/መ²]	5.0	1.0
Average Time [Minutes]	6	30

NOTES: Note: 1.0 mW/cm² is 10 W/m²

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be mad fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e.as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.



5. Input Power Specifications All power density measurements for this device were performed at the input.power.limit given in below tables.

Table 5-1 5G NR n261 Module 0 input.power.limit

Antenna	Beam ID_1	Beam ID_2	Input.power.limit (dBm)
	0		8.6
	2		6.0
	3		5.5
	4		5.1
	8		5.6
	9		5.5
	12		2.7
	13		2.9
	14		2.4
	15		2.7
	16		2.0
	22		2.4
	23		3.0
	24		2.4
	25		2.7
	128		9.7
	130		5.7
	131		6.0
	132		7.4
	136		5.8
	137		6.1
	140		2.7
Module 0	141		3.6
Modulo 0	142		4.0
	143		4.1
	140		4.0
	150		3.1
	150		4.0
	151		2.5
	152		4.7
	0	128	5.5
	2	130	1.4
	3	131	1.4
	4	132	1.5
	8	136	1.1
	9	130	1.5
	12	140	-1.7
	12	140	-1.7
			-1.0
	<u> </u>	<u>142</u> 143	-1.3 -1.5
	10	143	-1.5
	16	144	-1.0 -1.7
	22	150	-1./
	23	151	-1.3
	24	152	-1.4
	25	153	-1.4



Antenna	Beam ID_1	Beam ID_2	Input.power.limit (dBm)
	1		11.0
	5		8.5
	6		7.8
	7		7.5
	10		8.3
	11		8.2
	17		5.3
	18		5.6
	19		4.7
	20		4.7
	21		4.6
	26		5.9
	27		5.3
	28		4.5
	29		4.2
	129		8.5
	133		5.3
	134		5.8
	135		5.5
	138		5.3
	139		5.5
	145		2.5
Module 1	146		3.3
	147		3.5
	148		4.4
	149		2.4
	154		3.1
	155		3.9
	156		4.0
	157		2.5
	1	129	5.8
	5	133	2.7
	6	134	2.8
	7	135	2.6
	10	138	2.8
	11	139	2.7
	17	145	-0.2
	18	146	0.5
	19	147	0.4
	20	148	-0.1
	21	149	-0.3
	26	154	0.1
	27	155	0.6
	28	156	0.6 0.5
	29	157	0.0

Table 5-2 5G NR n261 Module 1 input.power.limit



Table 5-3 5G NR n260 Module 0 input.power.limit

Antenna	Beam ID_1	Beam ID_2	Input.power.limit (dBm)
	0		9.8
	2		5.8
	3		7.1
	4		6.1
	8		6.5
	9		6.4
	12		3.5
	13		4.0
	14		4.9
	15		4.1
	16		3.5
	22		3.5
	23		4.1
	24		4.6
	25		3.8
	128		9.6
	130		6.0
	131		6.8
	132		5.3
	136		6.4
	137		6.2
	140		3.6
Module 0	141		4.0
	142		5.0
	143		4.3
	144		3.6
	150		3.7
	151		4.6
	152		4.8
	153		3.9
	0	128	7.6
	2	130	3.6
	3	131	3.4
	4	132	2.5
	8	136	2.9
	9	137	2.8
	12	140	0.0
	13	141	0.5
	14	142	1.2
	15	143	0.7
	16	144	0.1 0.3
	22	150	0.3
	23	151	0.8
	24	152	0.8
L	0	153	0.4



Table 5-4 5G NR n260 Module 1 input.power.limit

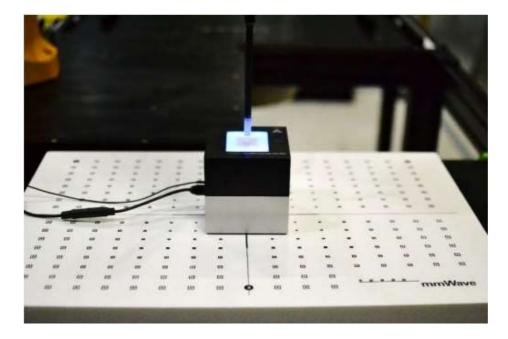
Antenna	Beam ID_1	Beam ID_2	Input.power.limit (dBm)
	1		10.9
	5		6.5
	6		7.9
	7		6.6
	10		7.3
	11		6.8
	17		3.9
	18		4.7
	19		6.3
	20		5.5
	21		4.0
	26		4.5
	27		4.8
	28		6.2
	29		4.3
	129		10.9
	133		7.1
	134		8.0
	135		6.4
	138		7.4
	139		6.9
	145		3.8
Module 1	146		4.8
	147		5.9
	148		4.9
	149		3.9
	154		4.0
	155		5.3
	156		5.6
	157		4.3
	1	129	6.5
	5	133	2.9
	6	134	4.0
	7	135	3.7
	10	138	4.0
	11	139	2.9
	17	145	0.5
	18	146	1.9
	19	147	2.4
	20	148	0.7
	21	149	0.5
	26	154	0.9
	27	155	2.6
	28	156	1.7
	29	157	0.4



6. System Verification

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.



6.1 System Check Results

	Freq.	Ant	Date	Probe (S/N)	Dipole (S/N)	Room Temp.	PD Averagin	Target Value	Measured PD	Deviation	Limit
						[°C]	g Size	[W/m²]	[W/ m²]	[dB]	[dB]
30	n261.n260	Module 0	07/08/2020	9486	1011	20.1	4 cm²	21.8	20.3	- 0.31	± 0.66
GHz	11201,11200	Module 1	07/09/2020	9382	1011	20.7	4 cm²	21.8	22.5	+ 0.14	± 0.66

Note: A **10 mm distance spacing** was used from the reference horn antenna aperture to the probe element. This includes 4.45 mm from the reference antenna horn aperture to the surface of the verification source plus5.55 mm from the surface to the probe. The SPEAG software requires a setting of "5.55 mm" for the correct set up.



7. Power Density Data Summary

7.1 Power Density Results

Power density measurements were performed with DUT transmitting at input.power.limit for one single beam for each polarization (H&V) and one beam pair, for each antenna on each worst surfaces

					Ν	NR Ba	Band n261					
Frequency		Ant.	Beam ID1	Beam ID2	Input.power.limit	Ant		Distance	Power Drift	Normal psPD	Total psPD	Plot
MHz	Ch.		V	Н	(dBm)		Position	(mm)	dB	(mW/cm²)	(mW/cm ²)	No.
27923.5	2077891		16	-	2	SISO	Front(S1)	2	-0.17	0.147	0.195	-
27559.3	2071821	Module 0	-	152	2.5	SISO	Front(S1)	2	-0.08	0.581	0.632	1
27559.3	2071821		22	150	-1.7	MIMO	Front(S1)	2	-0.12	0.435	0.555	-
27559.3	2071821		29	-	4.2	SISO	Rear(S2)	2	-0.12	0.234	0.360	-
27923.5	2077891	Module 1	-	149	2.4	SISO	Rear(S2)	2	-0.11	0.283	0.408	2
27559.3	2071821		21	149	-0.3	MIMO	Rear(S2)	2	-0.12	0.264	0.400	-
	Unco		Spatial P	AFETY LIN eak General Po			A	Power I 1 mW veraged o	•			

						NR Ba	and n260					
Frequency			Beam ID1	Beam ID2	Input power	Ant	Test	Distance	Power Drift	Normal psPD	Total psPD	Plot
MHz	Ch.	Ant.	V	Н	(dBm)		Position	(mm)	dB	(mW/cm²)	(mW/cm ²)	No.
38449.9	2253331		12	-	3.5	SISO	Front(S1)	2	0.14	0.384	0.553	-
38449.9 2253331 Module 0 - 144 3.6				SISO	Front(S1)	2	0.11	0.397	0.553	3		
38449.9	2253331		12	140	0.0	MIMO	Front(S1)	2	-0.06	0.356	0.425	-
39949.9	2278331		17	-	3.9	SISO	Rear(S2)	2	-0.06	0.312	0.493	4
39949.9	2278331	Module 1	-	145	3.8	SISO	Rear(S2)	2	-0.12	0.334	0.441	-
39949.9	2278331		29	157	0.4	MIMO	Rear(S2) 2 -0.17 0.274 0.339					
	47 CFR §1.1310 - SAFETY LIMIT Spatial Peak Uncontrolled Exposure/ General Population							A	Power D 1 mW	/cm²		



	5G mmWave NR Band n261 Additional surface											
Frequency MHz Ch.		Mode/ Ant.	Beam ID1	Beam ID2	Input power	Ant	Test Position	Distance	Normal psPD	Total psPD	Plot No.	
MHz	An.	V	Н	(dBm)		POSILION	(mm)	(mW/cm²)	(mW/cm ²)	INO.		
27923.5	2077891	Module 0	-	153	4.7	SISO	Right	2	0.269	0.275	5	
27923.5	2077891	Module 1	-	154	3.1	SISO	Right	2	0.171	0.174		
		47 CFR §1.1 Sj ontrolled Exp	patial Peak			1	wer Density mW/cm² ged over 4 cm	1 ²				

	5G mmWave NR Band n260 Additional surface											
Frequency		Mode/ Ant.	Beam ID1	Beam ID2	Input power	Ant	Test Position	Distance	Normal psPD	Total psPD	Plot No.	
MHz	Ch.	An.	V	Н	(dBm)		POSILION	(mm)	(mW/cm ²)	(mW/cm ²)	INO.	
38449.9	2253331	Module 0	-	152	4.8	SISO	Right	2	0.334	0.380	6	
38449.9	2253331	Module 1	-	157	4.3	SISO	Right	2	0.203	0.213		
	47 CFR §1.1 Sp ontrolled Exp	patial Peak			1	wer Density mW/cm² ged over 4 cm	1 ²					



7.2 Power density Test Notes

General Notes:

- 1. The manufacturer has confirmed that the devices 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 $\lambda/4$. Please see Section 3.3 for more details of the evaluation process.
- 4. DUT was configured to transmit with a manufacturer provided test software to control specific antenna(s), Beam ID(s), and signal type to ensure the test configurations constant for the entire evaluation.
- 5. This device utilizes power reduction for some WLAN wireless modes and technologies for simultaneous transmission compliance. These mechanisms are assessed in the Part 1 SAR Test Report.
- 6. Per FCC TCBC Workshop Notes Apr.2020, When the device is using the Qualcomm-based method already approved by FCC there is no need to submit a pre-submission (pre-TCB) KDB to have the test plan approved
- 7. PD_design_target of 0.6166 mW/cm² was used with mmW device design related uncertainty of 2.1 dB.
- 8. Input.power.limit parameter for 5G mmW NR radio was calculated in Part 0 Power Density Char. Report.
- 9. This device is enabled with Qualcomm[®] Smart Transmit feature to control and manage transmitting power in real time and to ensure that the time-averaged RF exposure from WWAN is in compliance with FCC requirements. Per FCC guidance for devices enabled with Qualcomm[®] Smart Transmit feature, 4G LTE and 5G mmW NR simultaneous transmission scenario does not need to be evaluated under Total Exposure Ratio (TER). The validation of the time-averaging algorithm and compliance under the Tx varying transmission scenario for WWAN technologies are reported in Part 2 report
- Per FCC guidance for devices enabled with Qualcomm[®] Smart Transmit feature, simultaneous transmission analysis is evaluated by combining the exposure from each WWAN and WLAN antenna. 5G mmW NR and WLAN simultaneous transmission scenario is evaluated under the Total Exposure Ratio (TER) in Section 8.
- 11. The Beam ID with one of the highest initial simulated power density for that surface and distance was selected for Part 1 Power Density measurements.
- 12. The device was configured to transmit CW wave signal for testing. Per FCC guidance for devices enabled with Qualcomm[®] Smart Transmit feature, additional testing was not required for different modulations (CP-OFDM QPSK, CP-OFDM 16QAM, CP-OFDM 64QAM, DFT-s-OFDM QPSK, DFT-s-OFDM 16QAM, DFT-s-OFDM 64QAM), RB configurations, component carriers, channel configurations (low channel, mid channel, high channel) since the smart transmit algorithm monitors powers on a per symbol basis, which is independent of these signal characteristics.
- 13. The device was configured to MIMO configuration with H and V polarization beams transmitting together, as indicated in Section 7.1.
- 13. In some cases, the simulation vs. measurement for some surfaces can exceed the device's total uncertainty. Therefore, some additional tests were performed to support simultaneous transmission analysis. See Section 8.



8. The Total Exposure Ratio

The Total Exposure Ratio (TER) is calculated by combining all SAR measurements and power density measurements after normalizing to their respective limits. The general expression is below.

$$TER = \sum_{a=1}^{A} \frac{SAR_a}{SAR_a, limit} + \sum_{b=1}^{B} \frac{SAPD_b}{SAPD_b, limit} < 1$$

The TER shall be less than unity to ensure compliance with the limits.

$$\sum_{n=1}^{N} \frac{4G SAR_n}{4G SAR_n, limit} + \sum_{m=1}^{M} \frac{5G mmW NR SAPD_m}{5G mmW NR SAPD_m, limit} + \sum_{p=1}^{P} \frac{WLAN SAR_p}{WLAN SAR_p, limit} < 1$$

Qualcomm[®] Smart Transmit algorithm for WWAN adds directly the time-averaged RF exposure from 4G and timeaveraged RFexposure from 5G mmW NR. Smart Transmit algorithm controls the total RF exposure from both 4G and 5G mmW NR to not exceed FCC limit. Therefore, per FCC guidance, TER does not need to be evaluated directly for the 4G and 5G simultaneous compliance via summation. The following equations are derived in this section.. The validation of the time-averaging algorithm and compliance under the Tx varying transmission scenario for WWAN technologies are reported in Part 2 report

$$\sum_{n=1}^{M} \frac{4G SAR_n}{4G SAR_n, limit} + \sum_{p=1}^{r} \frac{WLAN SAR_p}{WLAN SAR_p, limit} < 1$$

$$\sum_{m=1}^{M} \frac{5G mmW NR SAPD_m}{5G mmW NR SAPD_m, limit} + \sum_{n=1}^{P} \frac{WLAN SAR_p}{WLAN SAR_p, limit} < 1$$

For 5G mmW NR, since there is total design-related uncertainty arising from TxAGC and device-to-device variation, the worst-case RF exposure should be determined by accounting for this device uncertainty of 2.1 dB. Smart Transmit algorithm limits PD exposure to 75% of maximum to provide at least 25% margin allocated for 4G LTE anchor due to the 3 dB reserve power margin used in the device. Therefore, 5G mmW NR RF exposure for this DUT is evaluated by reported PSPD calculated as:

Note that since not all the beams supported by this EUT are measured, *reported_PSPD* cannot be computed based on limited *measured PSPD* data. Alternatively, since *measured PSPD* for all the beams will be \leq *PD_design_target* + 2.1dB uncertainty, *reported_PSPD* is computed based on this worst-case PSPD as shown above.

The compliance analysis for simultaneous transmission scenarios of WWAN (4G LTE & 5G mmW NR) with Smart Transmit and 4G & WLAN can be found in two reports indicated in the table below. This section demonstrates compliance for the 5G + WLAN scenarios.

Simultaneous Transmission Scenarios	Evaluation Report
4G LTE WWAN + WLAN	Part 1 SAR Test Report
4G LTE WWAN + 5G mmW NR WWAN	Part 2 RF Exposure Report



RF exposure compliance with 5G mmW NR WWAN+WLAN simultaneous transmission scenarios is demonstrated for various radio configurations below.

Note that the above *reported PSPD* applies to the worst-surface of the DUT at 2mm evaluation distance. For this DUT, the worst-surface(s) are listed in section 2.4

Worst-case PD on other surfaces of the DUT are calculated from simulated PD data (see Section 3.1 of Power Density Simulation Report Revision A) by multiplying reported PSPD with the highest proportion out of all beams and out of all three channels in each band, where the adjustment for each beam/channel is computed as the proportion of "simulated PD on desired surface" to "simulated PD on worst-surface". For example, to determine worst-case PD on front surface (needed for Head RF Exposure evaluation during simultaneous transmission), highest proportion of (simulated PD on front surface)/(simulated PD on worst surface) was determined out of all supported beams and out of all three channels by the DUT in each band.

Similarly, worst-case PD at other evaluation distances from the DUT are calculated from simulated PD data (see Section 3.1 of Power Density Simulation Report Revision A), by multiplying reported psPD with the highest proportion out of all beams and out of all three channels in each band.

The adjustment factor for each beam/channel is computed as proportion of "simulated PD on surface at desired evaluation distance" to "simulated PD on worst-surface at 2mm evaluation distance". For example, to determine worst-case PD at 10mm evaluation distance for Rear(S2)side (needed for Hotspot RF Exposure evaluation during simultaneous transmission), highest proportion of (simulated PD on back side at 10mm)/(simulated PD on worst-surface at 2mm) was determined out of all supported beams and out of all three channels by the DUT in each band.

In some cases, the simulation vs measurement for some surfaces can exceed the device's total uncertainty. In those cases, if the measured psPD > simulated adjusted psPD (assuming a linear congruency of the psPD across surfaces), then 75% of the measured value (based on the 3 dB reserve power margin) should be used towards the simultaneous TX analysis. Below Table lists the relevant worst-case reported psPD values based on the additional surfaces and evaluation distances needed to perform the TER analysis. The highest of the adjusted Reported_psPD and Measured Total psPD* 0.75 was chosen for TER analysis and the chosen values are indicated by bolded psPD values.

	5G mmW NR psPD											
NR Band	Surface	Evaluation Distance	Adjustment Factor due to Simulation	Adjusted Reported_psPD (mW/cm2)	Measured Total psPD (mW/cm2)	Reported Total psPD x 0.75 (mW/cm2)						
	Rear(S2)	2 mm	1	0.750	-	0.750						
n261	Right(S4)	2 mm	0.21	0.158	0.174	0.131						
	Rear (S2)	10 mm	0.66	0.495	-	0.495						
	Rear(S2)	2 mm	1	0.750	-	0.750						
n260	Right(S4)	2 mm	0.27	0.203	0.213	0.160						
	Rear(S2)	10 mm	0.55	0.413	-	0.413						



		5G mm	wave NR Re	ar Total Exp	osure Ratio (2m	m)	
	psPD	2.4 GHz WLAN Ant 1 Reported SAR	2.4 GHz WLAN Ant 2 Reported SAR	2.4 GHz WLAN MIMO Reported SAR	psPD + 2.4GHz WLAN Ant 1	psPD + 2.4GHz WLAN Ant 2	psPD + 2.4GHz WLAN MIMO
	mW/cm²	W/kg	W/kg	W/kg			
	1	2	3	4	1 + 2	1 + 3	1 + 4
Applicable Limit	1.0	1.6	1.6	1.6	1.0	1.0	1.0
psPD	0.75	0.224	0.236	0.249			
Ratio to Limit	0.750	0.140	0.148	0.156	0.890	0.898	0.906
		5 础 WLAN	5 GHz	5 GHz WLAN			

	psPD	Ant 1 Reported SAR	WLAN Ant 2 Reported SAR	MIMO Reported SAR	psPD + 5 ଖାଁ WLAN Ant 1	psPD + 5 ଖାଁ WLAN Ant 2	psPD + 5 储z WLAN MIMO
	mW/cm²	W/kg	W/kg	W/kg			
	1	2	3	4	1 + 2	1 + 3	1 + 4
Applicable Limit	1.0	1.6	1.6	1.6	1.0	1.0	1.0
psPD	0.75	0.230	0.268	0.197			
Ratio to Limit	0.750	0.144	0.168	0.123	0.894	0.918	0.873

	psPD	Bluetooth Reported SAR	5 6Hz WLAN Reported SAR	psPD + Bluetooth + 5 砒 WLAN
	mW/cm²	W/kg	W/kg	
	1	2	3	1 + 2 + 3
Applicable Limit	1.0	1.6	1.6	1.0
psPD	0.75	0.126	0.250	
Ratio to Limit	0.750	0.079	0.156	0.985

	psPD	Bluetooth Ant 1 Reported SAR	2.4 GHz WLAN Ant 2 Reported SAR	5 대고 WLAN Reported SAR	psPD + Bluetooth	psPD + Bluetooth + 2.4GHz WLAN
	mW/cm²	W/kg	W/kg	W/kg	Blueloolli	Ant 2 + 5 GHz WLAN
	1	2	3	4	1 + 2	1 +2+ 3 + 4
Applicable Limit	1.0	1.6	1.6	1.6	1.0	1.0
psPD	0.75	0.089	0.140	0.150		
Ratio to Limit	0.750	0.056	0.088	0.094	0.806	0.988



	5G mmwave NR Rear Side Total Exposure Ratio(10mm)								
	psPD	2.4 GHz WLAN Ant 1 Reported SAR	2.4 GHz WLAN Ant 2 Reported SAR	2.4 GHz WLAN MIMO Reported SAR	psPD + 2.4GHz WLAN Ant 1	psPD + 2.4GHz WLAN Ant 2	psPD + 2.4GHz WLAN MIMO		
	mW/cm²	W/kg	W/kg	W/kg					
	1	2	3	4	1 + 2	1 + 3	1 + 4		
Applicable Limit	1.0	1.6	1.6	1.6	1.0	1.0	1.0		
psPD	0.495	0.389	0.160	0.098					
Ratio to Limit	0.495	0.243	0.100	0.061	0.738	0.595	0.495		

5G mmwave NR Rear Side Total Exposure Ratio(10mm)

	psPD	5 (Hz WLAN Ant 1 Reported SAR	5 GHz WLAN Ant 2 Reported SAR	5 GHz WLAN MIMO Reported SAR	psPD + 5 ն ե WLAN Ant 1	psPD + 5 ն ե ւ WLAN Ant 2	psPD + 5 (Hz WLAN MIMO
	mW/cm²	W/kg	W/kg	W/kg			
	1	2	3	4	1 + 2	1 + 3	1 + 4
Applicable Limit	1.0	1.6	1.6	1.6	1.0	1.0	1.0
psPD	0.495	0.352	0.128	0.200			
Ratio to Limit	0.495	0.220	0.080	0.125	0.715	0.575	0.495

	psPD	Bluetooth Reported SAR	5 (#z WLAN Reported SAR	psPD + Bluetooth + 5 6łz WLAN
	mW/cm²	W/kg	W/kg	
	1	2	3	1 + 2 + 3
Applicable Limit	1.0	1.6	1.6	1.0
psPD	0.495	0.100	0.352	
Ratio to Limit	0.495	0.063	0.220	0.778

	psPD	Bluetooth Ant 1 Reported SAR	2.4 GHz WLAN Ant 2 Reported SAR	5 대 WLAN Reported SAR	psPD + Bluetooth	psPD + Bluetooth + 2.4GHz WLAN
	mW/cm²	W/kg	W/kg	W/kg	Bluetooth	Ant 2 + 5 GHz WLAN
	1	2	3	4	1 + 2	1 +2+ 3 + 4
Applicable Limit	1.0	1.6	1.6	1.6	1.0	1.0
psPD	0.495	0.100	0.142	0.161		
Ratio to Limit	0.495	0.063	0.089	0.101	0.558	0.647



5G mmwave NR Right Total Exposure Ratio (2mm)	
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	psPD	2.4 GHz WLAN Ant 1 Reported SAR	2.4 GHz WLAN MIMO Reported SAR	psPD + 2.4GHz WLAN Ant 1	psPD + 2.4GHz WLAN MIMO	
	mW/cm² 1	W/kg 2	W/kg 3	1 + 2	1+3	
Applicable Limit	1.0	1.6	1.6	1.0	1.0	
psPD	0.203	0.232	0.165			
Ratio to Limit	0.203	0.145	0.103	0.348	0.306	

	psPD	5 GHz WLAN Ant 1 Reported SAR	5 GHz WLAN MIMO Reported SAR	psPD + 5 6łłz WLAN Ant 1	psPD + 5 GHz WLAN MIMO
	mW/cm²	W/kg	W/kg	WE at var 1	
	1	2	3	1 + 2	1 + 3
Applicable Limit	1.0	1.6	1.6	1.0	1.0
psPD	0.203	0.644	0.528		
Ratio to Limit	0.203	0.403	0.330	0.606	0.533

	psPD	Bluetooth Ant 1 Reported SAR	2.4 GHz WLAN Ant 2 Reported SAR	5 GHz WLAN Reported SAR	psPD + Bluetooth	psPD + Bluetooth Ant 1 + 5 GHz WLAN	psPD + 2.4GHz WLAN Ant 2 + 5 (iłz WLAN	psPD + Bluetooth + 2.4GHz WLAN Ant 2 + 5 Głz WLAN
	mW/cm²	W/kg	W/kg	W/kg				
	1	2	3	4	1 + 2	1 + 2 + 4	1 + 3 + 4	1 + 2 + 3 + 4
Applicable Limit	1.0	1.6	1.6	1.6	1.0	1.0	1.0	1.0
psPD	0.203	0.135	0	0.325				
Ratio to Limit	0.203	0.084	0.000	0.203	0.287	0.49	0.406	0.49

Note:

1. Worst case Power density results for each test configuration among all antenna arrays(K patch, L patch)

2. For Rear side ,Right edge power density results at 2mm were considered as a more conservative evaluation for 10mm Maximum Power WLAN mode(grip sensor is inactive)

3. For Power density measurements, a test separation distance of 2mm was used for Body SAR (0mm)configuration due to mmWave probe restraints.

4. The worst-case between Adjusted_Reported_psPD and measured Total psPD x 0.75 was chosen for TER analysis.

The above numerical summed PD and SAR for all the worst case simultaneous transmission conditions were Total Exposure Ratio.

Therefore, the above analysis is sufficient to determine no further test cases are required and that simultaneous transmission is compliant to the FCC RF exposure limit.



11. Measurement Uncertainty

Measurement Uncerta	ainty for CI	DASY6 mm	Wave	modu	е	
а	b	С	d	е	f= bxe/d	g
Source of uncertainty	Uncertainty Value (± dB)	Probability distribution	Div.	Ci	Standard Uncertainty (± dB)	Vi
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	Ν	1	1	0.03	∞
Field Reconstruction	0.60	R	1.73	1	0.35	∞
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	∞
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	0.22	R	1.73	1	0.13	∞
Combined standard uncertainty (k = 1)		RSS			0.76	∞
Expanded uncertainty (95% confidence level)		k = 2			1.52	



12. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	Triple Modular Phantom	-	N/A	N/A	N/A
SPEAG	SAM Phantom	-	N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F12/5K9GA1/C/01	N/A	N/A	N/A
Staubli	TX90 XLspeag	F12/5K9GA1/A/01	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	S-1206 0513	N/A	N/A	N/A
SPEAG	DAE4	869	09/19/2019	Annual	09/19/2020
SPEAG	DAE4	648	05/25/2020	Annual	05/25/2021
SPEAG	E-Field Probe EUmmWV3	9382	07/25/2019	Annual	07/25/2020
SPEAG	E-Field Probe EUmmWV3	9486	04/14/2020	Annual	04/14/2021
SPEAG	Dipole 5G Verification Source 30 GHz	1011	07/17/2019	Annual	07/17/2020
Agilent	Power Meter E4419B	MY41291386	10/07/2019	Annual	10/07/2020
Agilent	Power Meter N1911A	MY45101406	09/10/2019	Annual	09/10/2020
Agilent	Power Sensor 8481A	SG1091286	10/07/2019	Annual	10/07/2020
Agilent	Power Sensor 8481A	MY41090873	10/07/2019	Annual	10/07/2020
Agilent	Power Sensor N1921A	MY55220026	09/06/2019	Annual	09/06/2020
SPEAG	DAKS 3.5	1038	03/24/2020	Annual	03/24/2021
SPEAG	Network Analyzer /8753ES	JP39240221	01/28/2020	Annual	01/28/2021
Agilent	11636B/Power Divider	58698	02/28/2020	Annual	02/28/2021
TESTO	175-H1/Thermometer	40331915309	01/29/2020	Annual	01/29/2021
EMPOWER	RF Power Amplifier	1084	07/23/2019	Annual	07/23/2020
EMPOWER	RF Power Amplifier	1011	10/08/2019	Annual	10/08/2020
MICRO LAB	LP Filter / LA-60N	32011	10/07/2019	Annual	10/07/2020
Apitech	Attenuator (3dB) 18B-03	1	06/04/2019	Annual	06/04/2020
Agilent	Attenuator (20dB) 33340C	1642	05/08/2020	Annual	05/08/2021
Agilent	Directional Bridge	3140A03878	06/12/2019	Annual	06/12/2020
Agilent	MXA Signal Analyzer N9020A	MY50510407	10/29/2019	Annual	10/29/2020
HP	Dual Directional Coupler	16072	10/07/2019	Annual	10/07/2020

* 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.



13. Conclusion

The power density measurements and total exposure ratio analysis indicate that the DUT complies with the RF radiation exposure limits of the FCC, with respect to all parameters subject to this test. These measurements were taken to simulate the RF effects of RF 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 RF Exposure 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.



14. References

[1] ANSI/IEEE C95.1-1992, American National Standard safety levels with respect to human exposure to radio frequency electromagnetic fields, 3kHz to 300GHz, New York: IEEE, Sept. 1992.

[2] IEC TR 63170:2018, Measurement Procedure for the Evaluation of Power Density Related to Human Exposure to Radiofrequency Fields from Wireless Communication Devices Operating between 6 GHz and 100 GHz.

[3] IEC TR 62630 : 2010, Guidance for Evaluating Exposure from Multiple Electromagnetic Sources

[4] K. Pokovic, T. Schmid, J. Frohlich, and N. Kuster. Novel Probes and Evaluation Procedures to Assess Field Magnitude and Polarization. IEEE Transactions on Electromagnetic Compatibility 42(2): 240 -244, 2000

[5] R. W. Gerchberg and W. O. Saxton. A Practical Algorithm for the Determination of Phase from Image and Diffraction Plane Pictures. Optik 35(2): 237 – 246, 1972.

[6] A. P. Anderson and S. Sali. New Possibilities for Phaseless Microwave Diagnostics. Part 1: Error Reduction Techniques. IEE Proceedings H – Microwaves, Antennas and Propagation 132(5): 290 – 298, 1985

[7] FCC KDB 865664 D02 v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz. Federal Communications Commission – Office of Engineering and Technology, Laboratory Division.

[8] FCC KDB 447498 D01 v02r01: RF Exposure Procedures and Equipment Authorization Policies for Mobile and Portable Devices. Federal Communications Commission – Office of Engineering and Technology, Laboratory Division.

[9] November 2017 Telecommunications Certification Body Council (TCBC) Workshop Notes

[10] October 2018 Telecommunications Certification Body Council (TCBC) Workshop Notes

[11] April 2019 Telecommunications Certification Body Council (TCBC) Workshop Notes

[12] November 2019 Telecommunications Certification Body Council (TCBC) Workshop Notes

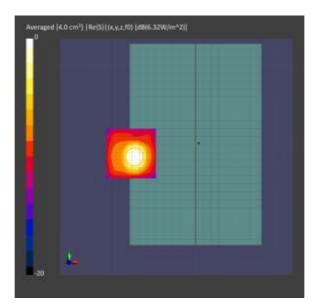
[13] SPEAG DASY6 System Handbook (September 2019)



Attachment 1. – Power Density Test Plots

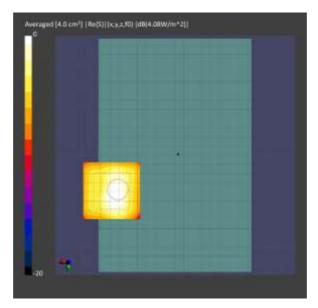


Test Laboratory: EUT Type: Room Temperature Test Date: Plot No.: Measurement Rej	HCT CO., LTD Tablet e: 20.1 ℃ 07/08/2020 1 port for Device, FROM	IT, Custom Band,	CW, Channel 2071	821(27559.3 MHz)
Device Under Tes Name, Manufactur Device,	-	Dimensions [mm] 254.0 x 166.0 x 7.	0	DUT Type Tablet
Section [r	ons Position, Test Distance mm] RONT, 2.00	Band Group, UID n261 CW, 0	Frequency [MHz], Number 27559.3, 2071821	Channel
Hardware Setup Phantom mmWave - xxxx	Medium Probe, Calib Air - EUmmWV4	oration Date - SN9486_F1-78G	Hz, 2020-04-14	DAE, Calibration Date DAE4 Sn869, 2019-09-19
Scans Setup Scan Type Grid Extents [mm] Grid Steps [lambd Sensor Surface [m Measurement Res Scan Type Date Avg. Area [cm ²] pStot avg [W/m ²] pSn avg [W/m ²] Epeak [V/m] Power Drift [dB]	a] nm]		5G Scan 60.0 x 60.0 0.25 x 0.25 2.0 5G Scan 2020-07-08 4.00 6.32 5.81 94.5 -0.08	



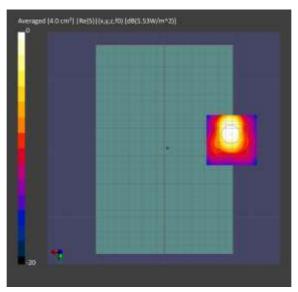


Test Laboratory: EUT Type: Room Temperature Test Date: Plot No.: Measurement Rep	07/09/20 2	020	ı Band,	CW, Channe	el 2077891 (27923.5 MHz)
Device Under Tes Name, Manufactur Device,	Dimensio 254.0 x ²	-	-	DUT Type Tablet	
Exposure Conditi Phantom Section 5G		est Distance [mm]		Group, UID CW, 0	Frequency [MHz], Channel Number 27923.5, 2077891
Hardware Setup Phantom mmWave - xxxx	Medium Air -	Probe, Calibration EUmmWV3 - SN9		19-07-25	DAE, Calibration Date DAE4 Sn648, 2020-05-25
Scans Setup Scan Type Grid Extents [mm] Grid Steps [lambd Sensor Surface [m Measurement Res Scan Type Date Avg. Area [cm ²] pS _{tot} avg [W/m ²] pS _n avg [W/m ²] E _{peak} [V/m] Power Drift [dB]	nm]			60	



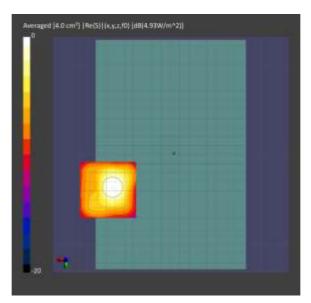


Test Laboratory: EUT Type: Room Temperate Test Date: Plot No.: Measurement R	ure:	HCT CO., LTD Tablet 20.1 ℃ 07/08/2020 3 čor Device, FRON	IT, Custom I	Band, C	W, Channel 22533	31 (38449.9 MHz)
Device Under Test Properties Name, Manufacturer Device,			Dimensions [mm] 254.0 x 166.0 x 7.0			DUT Type Tablet
Exposure Cond Phantom Section 5G	Positic [mm]	on, Test Distance T, 2.00	Band Gro UID n260 CW		Frequency [MHz], C 38449.9, 2253331	Channel Number
Hardware Setup Phantom mmWave - xxxx	Med	lium Probe, Calib EUmmWV4		1-78GH	łz, 2020-04-14	DAE, Calibration Date DAE4 Sn869, 2019-09- 19
Scans Setup Scan Type Grid Extents [mi Grid Steps [laml Sensor Surface Measurement R Scan Type Date Avg. Area [cm ²] pS _{tot} avg [W/m ²] pS _n avg [W/m ²] E _{peak} [V/m] Power Drift [dB]	bda] [mm] tesults				5G Scan 60.0 x 60.0 0.25 x 0.25 2.0 5G Scan 2020-07-08 4.00 5.53 3.97 101 0.11	



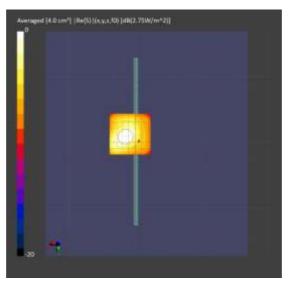


Test Laboratory: EUT Type: Room Temperat Test Date: Plot No.: Measurement F	ure:	HCT CC Tablet 20.7 ℃ 07/09/20 4 t for Devie)20	۲, Custom Ba	nd, C	W, Channel 22	78331 (39949.9 MHz)	
Device Under Test Properties Name, Manufacturer Device,			Dimensions [mm] 254.0 x 166.0 x 7.0			DUT Type Tablet		
Exposure Cond								
Phantom Section	Posi [mm	tion, Test	Distance	Band Grou UID	ıp,	Frequency [MF	Iz], Channel Number	
5G	-	K, 2.00		n260 CW,	0	39949.9, 22783	331	
Hardware Setu	р							
Phantom		Medium		Calibration Dat			DAE, Calibration Date	
mmWave - xxx	<	Air -	EUmmV	VV3 - SN9382	, 2019	9-07-25	DAE4 Sn648, 2020-05-25	
Scans Setup								
Scan Type				5G Scan				
Grid Extents [m	m]					60.0 x (60.0	
Grid Steps [lam	-			0.25 x 0.25			0.25	
Sensor Surface						2.0		
Measurement F	≀esult	ts				50.0		
Scan Type Date					5G Scan			
Avg. Area [cm ²]								
pStot avg [W/m ²	1							
pS _n avg [W/m ²]	-					3.12		
E _{peak} [V/m]						87.1		
Power Drift [dB]	I					-0.06		



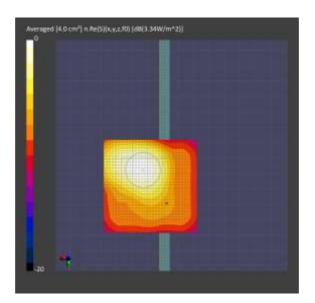


Test Laboratory: EUT Type: Room Temperat Test Date: Plot No.: Measurement F	ure:	HCT CO., LTD Tablet 20.7 ℃ 07/07/2020 5 for Device, EDGE	E RIGHT, Custom	Band, CW, Channel	2077891 (27923.5 MHz)	
Device Under T		operties				
Name, Manufac	cturer		Dimensions [mm	-	DUT Type	
Device,			254.0 x 166.0 x	7.0	Tablet	
Exposure Cond	ditions	5				
Phantom Section	Phantom Position, Test Distance			Frequency [MHz], (Number	Channel	
5G	EDG	E RIGHT, 2.00	n261 CW, 0	27923.5, 2077891		
Hardware SetupPhantomMediumProbe, CalibratmmWave - xxxxAir -EUmmWV4 - S			oration Date - SN9486_F1-780	GHz, 2020-04-14	DAE, Calibration Date DAE4 Sn869, 2019-09-19	
Scans Setup						
Scan Type	_		5G Scan			
Grid Extents [m	-			60.0 x 60.0		
Grid Steps [lam	-		0.25 x 0.25 2.0			
Sensor Surface [mm] Measurement Results				2.0		
Scan Type				5G Scan		
Date				2020-07-07		
Avg. Area [cm ²]				4.00		
pS _{tot} avg [W/m ²]				2.75		
pSn avg [W/m ²]				2.69		
E _{peak} [V/m]	1			45.5		
Power Drift [dB]	I			-0.01		





Test Laboratory: EUT Type: Room Temperatu Test Date: Plot No.: Measurement R	HCT CO., LTD Tablet ure: 20.8 ℃ 07/03/2020 6 eport for Device, EDGE	E RIGHT, Channel	2253331 (38449.9 N	ſHz)	
Device Under T e Name, Manufact Device,	-	Dimensions [mm] 254.0 x 166.0 x 7.	0	DUT Type Tablet	
Exposure Cond Phantom Section 5G	itions Position, Test Distance [mm] EDGE RIGHT, 2.00	Band Group, UID n260 CW, 0	Frequency [MHz], 38449.9, 2253331		
Hardware SetupDAE, Calibration DateDAE, Calibration DatePhantomMediumProbe, Calibration DateDAE, Calibration DatemmWave - xxxxAir -EUmmWV4 - SN9486F1-78GHz, 2020-04-14DAE4 Sn869, 2019-09-					
Scans Setup Scan Type Grid Extents [mr Grid Steps [lamb Sensor Surface Measurement R Scan Type Date Avg. Area [cm ²]	oda] [mm]		5G Scan 60.0 x 60.0 0.25 x 0.25 2.0 5G Scan 2020-07-03 4.00		
pS _{tot} avg [W/m ²] pS _n avg [W/m ²] E _{peak} [V/m] Power Drift [dB]			3.80 3.34 53.4 -0.01		

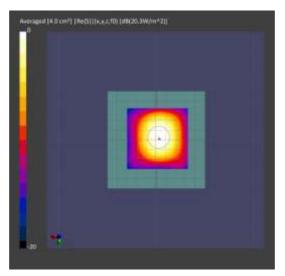




Attachment 2. – Power Density System Verification Plots

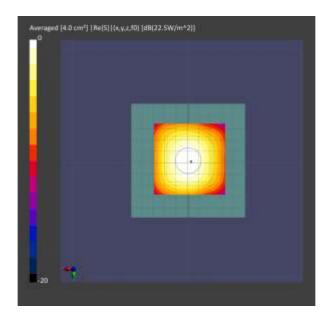


■ System Verification Data (n261, n260) Test Laboratory: HCT CO., LTD Input Power 0.05 W Liquid Temp: 20.1 °C Test Date: 07/08/2020 Measurement Report for Device, FRONT, Validation band, CW, Channel 30000 (30000.0 MHz)							
Device Under Name, Manufa	Test Properties	Dimensions [mml	DUT Type			
Device,		100.0 x 100.0	-		Verification source		
Exposure Cor							
Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MI	Iz], Channel Number		
5G	FRONT, 5.55	Validation band	CW, 0	30000.0, 3000	0		
Hardware Set	•						
Phantom mmWave - xx	Medium Probe, Ca xx Air - EUmmW\	libration Date /4 - SN9486_F	1-78GHz, 2	2020-04-14	DAE, Calibration Date DAE4 Sn869, 2019-09-19		
Scans Setup							
Scan Type							
Grid Extents [I Grid Steps [lar	-						
Sensor Surfac	-						
Measurement	Results						
Scan Type		5G Scan					
Date	21	2020-07-08 4.00					
Avg. Area [cm pStot avg [W/m	-		4.0 20.				
pSn avg [W/m ²	•		19.	-			
E _{peak} [V/m]	-		107	7			
Power Drift [dl	3]		-0.0	03			





Test Laborator Input Power Liquid Temp: Test Date: Measurement	-	HCT CO. 0.05 W 20.7 °C 07/09/202 ort for Devi	20	DNT, Validati	on band, C	W, Channel S	30000 (30000.0 MHz)	
Device Under Name, Manufa Device,		-		ensions [mm] .0 x 100.0 x 1		DUT ⁻ Verifio	Type cation source	
Exposure Con Phantom Section 5G	Posi [mm	tion, Test D	listance	Band Validation band	Group, UID CW, 0	Frequency Number 30000.0, 30	[MHz], Channel 0000	
Hardware Set Phantom mmWave - xx	•	Medium Air -		, Calibration ⊑ nWV3 - SN93		7-25	DAE, Calibration Date DAE4 Sn648, 2020-05-25	
Scans Setup Scan Type Grid Extents [I Grid Steps [Ia Sensor Surfac Measurement Scan Type Date Avg. Area [cm pStot avg [W/m pSn avg [W/m] Power Drift [d	mbda] ce [mm t Resu t ²] t ²] ²]	ן]			20 4. 22		60.0	



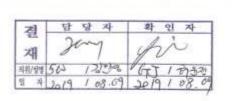


Attachment 3. – Probe Calibration Data



Schmid & Partner Engineering AG

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IMPORTANT NOTICE READ INSTRUCTIONS BEFORE USE

Usage and handling of EUmmWVx PROBES

CAUTION!

Never remove protective Rohacell® tip - it is part of the probe design and removal will cause permanent probe damage!

- •! Each EUmmWVx probe consists of a black PEEK probe body and a white Rohacell® tip.
- The white tip is part of the probe design and extremely fragile; make sure to handle the probe with utmost care; in particular, never flex or bend the probe tip.
- The probe is protected with a transparent sleeve; the sleeve must be removed before each measurement; after using the probe, carefully re-attach the sleeve.
- Probe usage is limited to free-space measurements; water, sugar-water solutions, nutrient solutions and glycol solutions will permanently damage the probe.
- •! When returning the probe to SPEAG, it must be sent with (1) the protective sleeve mounted to the probe and (2) inside the original packing; take extra care that the shipping box is sent with sufficient paddings.



For support please contact us at: support@speag.swiss



	ch, Switzerland	S S	Servizio svizzero di taratura Swiss Calibration Service
ccredited by the Swiss Accredit he Swiss Accreditation Servic fulfilateral Agreement for the	ce is one of the signatories t	to the EA	reditation No.: SCS 0108
illent HCT (Dymstee	5)	Certificate No:	EUmmWV3-9382_Jul1
CALIBRATION	CERTIFICATE		
Object	EUmmWV3 - SN:9	382	Contract Report
Calibration procedure(s)	PSP 250 COV Horse Strength Cover Strength and Cov	A CAL-25.v7, QA CAL-42.v2 ure for E-field probes optimized for	or close near field
Calibration date:	July 25, 2019		
All calibrations have been cond	ucted in the closed laboratory	facility: environment temperature (22 ± 3)°C a	and humidity < 70%.
		facility: environment temperature (22 \pm 3)°C a	and humidity < 70%.
All calibrations have been condu Calibration Equipment used (M8 Primary Standards		facility: environment temperature (22 ± 3)°C a Cal Date (Certificate No.)	nd humidity < 70%. Scheduled Calibration
Calibration Equipment used (M8	TE critical for calibration)		
Calibration Equipment used (M8 Primary Standards Power meter NRP	TE critical for calibration)	Cal Date (Certificate No.)	Scheduled Calibration
Calibration Equipment used (M8 Primary Standards	TE critical for calibration)	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893)	Scheduled Calibration Apr-20
Calibration Equipment used (M8 Primary Standards Power meter NRP Power sensor NRP-Z91	ID SN: 104778 SN: 103244	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892)	Scheduled Calibration Apr-20 Apr-20
Calibration Equipment used (M8 Primary Standards Power mater NRP Power sensor NRP-291 Power sensor NRP-291	ID SN: 104778 SN: 103244 SN: 103245	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893)	Scheduled Calibration Apr-20 Apr-20 Apr-20
Calibration Equipment used (M8 Primary Standards Power meter NRP Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator	TE critical for calibration) ID SN: 104778 SN: 103244 SN: 103245 SN: SS277 (20x)	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Apr-20
Calibration Equipment used (M8 Primary Standards Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ER3DV8	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 55277 (20x) SN: 2328	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 09-Oct-18 (No. ER3-2328_Oct18)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Oct-19 Aug-19 Scheduled Check
Calibration Equipment used (M8 Primary Standards Power sensor NRP Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ER3DV8 DAE4	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: S5277 (20x) SN: 2328 SN: 789	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 09-Oct-16 (No. ER3-2328_Oct18) 07-Aug-18 (No. DAE4-789_Aug18)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Apr-20 Oct-19 Aug-19
Calibration Equipment used (M8 Primary Standards Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ER3DV6 DAE4 Secondary Standards	ID SN: 104778 SN: 103244 SN: 103245 SN: SS277 (20x) SN: 2328 SN: 789 ID	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02882/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 09-Det-18 (No. DAE4-789_Aug18) 07-Aug-18 (No. DAE4-789_Aug18) Chack Date (In house) 06-Apr-16 (in house check Jun-18)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Oct-19 Aug-19 Scheduled Check In house check: Jun-20 In house check: Jun-20
Calibration Equipment used (M8 Primary Standards Power meter NRP Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ER3DV6 DAE4 Secondary Standards Power meter E44198 Power sensor E4412A	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 55277 (20x) SN: 2328 SN: 789 ID SN: GB41293874 SN: MY41498087 SN: 000110210	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 09-Oct-16 (No. ER3-2328_Oct18) 07-Aug-18 (No. DAE4-789_Aug18) Check Date (In house) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Oct-19 Aug-19 Scheduled Check In house check: Jun-20 In house check: Jun-20 In house check: Jun-20
Calibration Equipment used (M8 Primary Standards Power meter NRP Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ER3DV8 DAE4 Secondary Standards Power meter E44198 Power sensor E4412A RF generator HP 8648C	ID SN: 104778 SN: 103244 SN: 103245 SN: S5277 (20x) SN: 2328 SN: 789 ID SN: 0841293874 SN: W141498087 SN: US3642U01700	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 09-Oct-16 (No. ER3-2328_Oct18) 07-Aug-18 (No. DAE4-789_Aug18) Check Date (In house) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Oct-19 Aug-19 Scheduled Chack In house check: Jun-20 In house check: Jun-20 In house check: Jun-20 In house check: Jun-20
Calibration Equipment used (M8 Primary Standards Power meter NRP Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ER3DV6 DAE4 Secondary Standards Power meter E44198 Power sensor E4412A	ID SN: 104778 SN: 104778 SN: 103244 SN: 103245 SN: 55277 (20x) SN: 2328 SN: 789 ID SN: GB41293874 SN: MY41498087 SN: 000110210	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 09-Oct-16 (No. ER3-2328_Oct18) 07-Aug-18 (No. DAE4-789_Aug18) Check Date (In house) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Oct-19 Aug-19 Scheduled Check In house check: Jun-20 In house check: Jun-20 In house check: Jun-20
Calibration Equipment used (M8 Primary Standards Power meter NRP Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ER3DV8 DAE4 Secondary Standards Power meter E44198 Power sensor E4412A RF generator HP 8648C	ID SN: 104778 SN: 103244 SN: 103245 SN: S5277 (20x) SN: 2328 SN: 789 ID SN: 0841293874 SN: W141498087 SN: US3642U01700	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 09-Oct-16 (No. ER3-2328_Oct18) 07-Aug-18 (No. DAE4-789_Aug18) Check Date (In house) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Oct-19 Aug-19 Scheduled Chack In house check: Jun-20 In house check: Jun-20 In house check: Jun-20 In house check: Jun-20
Calibration Equipment used (M8 Primary Standards Power meter NRP Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ER3DV8 DAE4 Secondary Standards Power meter E44198 Power sensor E4412A RF generator HP 8648C	ID SN: 104778 SN: 103244 SN: 103245 SN: 103245 SN: 2328 SN: 2328 SN: 789 ID SN: GB41293874 SN: 00110210 SN: US3642U01700 SN: US37390595	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02892/02893) 03-Apr-19 (No. 217-02892) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 09-Oct-16 (No. ER3-2328_Oct18) 07-Aug-18 (No. DAE4-789_Aug18) Check Date (In house) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 04-Aug-99 (In house check Jun-18) 18-Oct-01 (In house check Jun-18)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Oct-19 Aug-19 Scheduled Check In house check: Jun-20 In house check: Jun-20
Calibration Equipment used (M8 Primary Standards Power mater NRP Power sensor NRP-291 Power sensor NRP-291 Reference 20 dB Attenuator Reference Probe ER3DV8 DAE4 Secondary Standards Power meter E44198 Power sensor E4412A Power sensor E4412A RF generator HP 8648C Network Analyzer HP 8763E	ID SN: 104778 SN: 103244 SN: 103245 SN: 103245 SN: 2328 SN: 2328 SN: 6841293874 SN: W41498087 SN: US3642U01700 SN: US37390585	Cal Date (Certificate No.) 03-Apr-19 (No. 217-02862/02893) 03-Apr-19 (No. 217-02862) 03-Apr-19 (No. 217-02893) 04-Apr-19 (No. 217-02894) 09-Oct-16 (No. ER3-2328_Oct18) 07-Aug-18 (No. DAE4-789_Aug18) Check Date (In house) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 06-Apr-16 (In house check Jun-18) 04-Aug-99 (In house check Jun-18) 18-Oct-01 (In house check Jun-18)	Scheduled Calibration Apr-20 Apr-20 Apr-20 Oct-19 Aug-19 Scheduled Check In house check: Jun-20 In house check: Jun-20

Certificate No: EUmmWV3-9382_Jul19

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



Schweizerischer Kalibrierdienst Service sulsse d'étalonnage Servizio svizzerò di taratura Swiss Calibration Service

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Accreditation No.: SCS 0108

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

Glossary:

NORMx,y,z DCP CF A, B, C, D Polarization @	sensitivity in free space diode compression point crest factor (1/duty_cycle) of the RF signal modulation dependent linearization parameters e rotation around probe axis
Polarization 9	9 rotation around an axis that is in the plane normal to probe axis (at measurement center),
Connector Angle Sensor Angles k	i.e., 3 = 0 is normal to probe axis information used in DASY system to align probe sensor X to the robot coordinate system sensor deviation from the probe axis, used to calculate the field orientation and polarization is the wave propagation direction

Calibration is Performed According to the Following Standards:

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

Methods Applied and Interpretation of Parameters:

- NORMx, y, z: Assessed for E-field polarization 8 = 0 for XY sensors and 8 = 90 for Z sensor (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). For frequencies > 6 GHz, the far field in front of waveguide horn antennas is measured for a set of frequencies in various waveguide bands up to 110 GHz.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- The frequency sensor model parameters are determined prior to calibration based on a frequency sweep (sensor model involving resistors R, R_p, inductance L and capacitors C, C_p).
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z; A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media, VR is the maximum calibration range expressed in RMS voltage across the diode.
- Sensor Offset: The sensor offset corresponds to the mechanical from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).
- Equivalent Sensor Angle: The two probe sensors are mounted in the same plane at different angles. The
 angles are assessed using the information gained by determining the NORMx (no uncertainty required).
- Spherical isotropy (3D deviation from isotropy): in a locally homogeneous field realized using an open waveguide / hom setup.

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July 25, 2019

DASY - Parameters of Probe: EUmmWV3 - SN:9382

Basic Calibration Parameters

	Sensor X	Sensor Y	Unc (k=2)
Norm (µV/(V/m) ²)	0.02123	0.02774	± 10.1 %
DCP (mV) ⁸	103.0	115.0	
Equivalent Sensor Angle	-56.7	28.2	

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	-0.29	0.33	± 0.43 dB
1.8	140.4	0.16	0.28	± 0.43 dB
2	133.0	0.08	0.13	± 0.43 dB
2.2	124.8	0.07	0.02	± 0.43 dB
2.5	123.0	-0.11	-0.23	± 0.43 dB
3.5	256.2	0.08	-0.25	± 0.43 dB
3.7	249.8	0.12	-0.25	± 0.43 dB
6.6	41.8	-0.20	0.02	± 0.98 dB
8	48.4	-0.47	-0.48	± 0.98 dB
10	54.4	-0.19	-0.10	± 0.98 dB
15	71.5	0.33	-0.23	± 0.98 dB
18	85.3	-0.21	0.11	± 0.98 dB
26.6	96.9	0.28	0.28	± 0.98 dB
30	92.6	0.39	0.19	± 0.98 dB
35	93.7	-0.26	-0.03	± 0.98 dB
40	91.5	-0.52	-0.47	± 0.98 dB
50	19.6	-0.55	-0.19	± 0.98 dB
55	22.4	0.17	0.03	± 0.98 dB
60	23.0	-0.53	-0.30	± 0.98 dB
65	27.4	-0.55	-0.34	± 0.98 dB
70	23.9	-0.17	-0.36	± 0.98 dB
75	20.0	-0.17	-0.33	± 0.98 dB
75	14.8	-0.21	-0.10	± 0.98 dB
80	22.5	0.07	0.31	± 0.98 dB
85	22.8	0.02	0.07	± 0.98 dB
90	23.8	0.17	0,15	± 0.98 dB
92	23.9	-0.31	-0.28	± 0.98 dB
95	20.5	-0.10	-0,35	± 0.98 dB
97	24.4	-0.24	-0.41	± 0.98 dB
100	22.6	-0.23	-0.41	± 0.98 dB
105	22.7	-0,74	-0.46	± 0.98 dB
110	19.7	-0.74	-0.30	± 0.98 dB

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%.

⁸ Numerical linearization parameter: uncertainty not required.

⁶ Uncertainty is determined using the max, deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

Certificate No: EUmmWV3-9382_Jul19

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July 25, 2019

DASY - Parameters of Probe: EUmmWV3 - SN:9382

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	c	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	100.7	±3.8 %	# 4.7 %
		Y	0.00	0.00	1.00		80.1		
10352-	Pulse Waveform (200Hz, 10%)	X	2.66	60.00	11.19	10.00	6.0	± 1.5.%	±9.6 %
AAA	ALEXAL CONSIGNATION ACCOUNTS / DOUG	Y	2.74	60.00	11.62	estoren e	6.0	and the second	0.00.00000
10353-	Pulse Waveform (200Hz, 20%)	X	1.38	60.00	10.56	6.99	12.0	±0.9 %	± 9.6 %
AAA		Y	1.37	60.00	11.17	Same 1	12.0		- summer
10354-	Pulse Waveform (200Hz, 40%)	X	0.66	60.00	9.75	3,98	23.0	±1.0 %	±9.6 %
AAA	A	Y	0.65	60.00	10.67		23.0		
10355-	Pulse Waveform (200Hz, 60%)	X	0.42	60.00	8.96	2.22	27.0	± 0.7 %	± 9.6 %
AAA	These which is a state of the second second second.	Y	0.44	60.00	10.09		27.0		
10387-	QPSK Waveform, 1 MHz	X	0.00	62.17	21.58	0.00	22.0	±1.1%	± 9.6 %
AAA		Y	0.00	110.42	2.36		22.0		
10388-	QPSK Waveform, 10 MHz	X	1.20	60.00	11.17	0.00	22.0	± 0.8 %	±9.69
AAA	CONTRACTOR AND ADDRESS AND ADDRESS ADDR	Y	1.15	60.00	11.71	133012.01	22.0	0.0010000010	
10396-	64-QAM Waveform, 100 kHz	X	1.70	60.00	13.55	3.01	17.0	±0.9%	±9.6 %
AAA		Y	1.59	60.00	13.77	NOT	17.0		
10399-	64-QAM Waveform, 40 MHz	X	2.07	60.00	12.02	0.00	19.0	±0.8 %	±9.6 %
AAA		Y	1.90	60.00	12.34		19.0		
10414-	WLAN CCDF, 64-QAM, 40MHz	X	3.00	60.00	12.45	0.00	12.0	±0.7 %	±9.6 %
AAA	CONTRACTOR MANAGEMENT	Y	2.74	60.00	12.76	1002012	12.0	C-040-222-	Contraction of

Note: For details on all calibrated UID parameters see Appendix

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	-0.14	0.02	± 0.2 dB
0.9	100.0	-0.15	0.04	± 0.2 dB
0.9	500.0	0.03	-0.03	± 0.2 dB
0.9 0.9 0.9	1000.0	0.05	0.00	± 0.2 dB
0.9	1500.0	0.04	0.00	± 0.2 dB
0.9	2000.0	0.01	0.00	± 0.2 dB

Sensor Frequency Model Parameters

	Sensor X	Sensor Y
R (Ω)	46.35	47.82
$R_p(\Omega)$	92.71	89.31
L (nH)	0.02984	0.03337
C (pF)	0.2892	0.2785
Cp (pF)	0.1255	0.1100

Sensor Model Parameters

	C1 fF	C2 fF	α V~1	T1 ms.V ⁻²	T2 ms.V ⁻¹	T3 ms	T4 V-*	T5 V-1	T6
Х	17.0	125.72	34.79	0.00	2.17	4.96	0.00	0.55	1.01
Y	19.2	130.78	30.31	0.92	1.99	4.96	0.00	0.57	1.01

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DASY - Parameters of Probe: EUmmWV3 - SN:9382

Other Probe Parameters

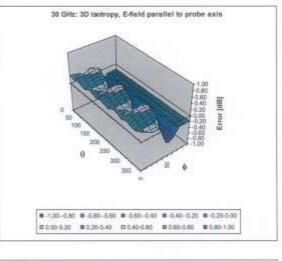
Sensor Arrangement	Rectangular
Connector Angle (*)	78.9
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	320 mm
Probe Body Diameter	8 mm
Tip Length	23 mm
Tip Diameter	8.0 mm
Probe Tip to Sensor X Calibration Point	1.5 mm
Probe Tip to Sensor Y Calibration Point	1.5 mm

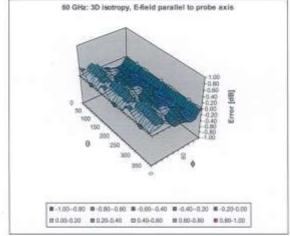
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Probe isotropy for E_{tot}: probe rotated $\varphi = 0^{\circ}$ to 360°, tilted from field propagation direction \overline{k} Parallel to the field propagation ($\psi = 0^{\circ} - 90^{\circ}$) at 30 GHz: deviation within ± 0.54 dB Parallel to the field propagation ($\psi = 0^{\circ} - 90^{\circ}$) at 60 GHz: deviation within ± 0.38 dB

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Appendix: Modulation Calibration Parameters

מוט	Rev	Communication System Name	Group	PAR (dB)	Unc ⁶ (k=2)
)		CW	CW	0.00	±4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10,00	± 9,6 %
0011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WIFi 2,4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	±9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	±9.6.9
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	±9.69
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	±9.6.9
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 9
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	19.69
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	± 9.6 9
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	± 9.6 9
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	# 9.6.9
10034	CAA	IEEE 802 15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6.9
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	±9.6 9
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 9
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	± 9.6 9
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	19.69
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	±9.63
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	±9.6 9
10042	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	19.69
a contract of the	CAA				
10048		DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	±9.69
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	±9.6 9
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	±9.6 9
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	±9.69
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	± 9.6 9
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	±9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	±9.6 %
10062	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	±9.6 %
10063	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	±9.6 %
10064	CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.8 %
10065	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAC	IEEE 802.11a/h WIFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10,12	±9.6 %
10068	CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	±9.6 %
10069	CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	± 9.6 %
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	±9.69
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	±9.6 %
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	±9.6 %
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	± 9.6 %
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	±9.6 %
10076	CAB	IEEE 802.11g WIFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	±9.6 %
10077	CAB	IEEE 802.11g WIFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	± 9.6.9
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	± 9.6 1
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	± 9.6 9
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	± 9.6 1
10097	CAB	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 1
10098	CAB	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6
10099	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 1
10100	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 5
10101	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	19.6 5
10102	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.69
10102	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 04-04W)	LTE-TDD	9.29	±9.6 9
10103	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TOD	9.29	±9.69
	CAG				
10105		LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	±9.6 9
10108	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	±9.65

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10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	±9.6 %
0110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
0111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	±9.6 %
0112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
0113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
0114	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	±9.6%
0115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
0116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
0117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	19.6%
10118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
10140	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10141	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10142	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9,6 %
10143	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	19.6 %
10151	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10153	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10154	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.48	19.6%
10167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	±9.6 %
10168	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 10-GAM)	LTE-FDD	6.79	± 9.6 %
10169	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	±9.6 %
10173	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	19.6 %
10175	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	±9.6 %
10176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD		
	CAU	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	6,52	± 9.6 %
10177	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, GPSK) LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD		±9.6 %
10179	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM) LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.52	
10179	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	±9.6%
10180	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	
	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 0PSR) LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	±9.6 %
10182	AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHZ, 16-QAM) LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.52	± 9.6 %
10183	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 04-QAM) LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)		5.73	
10185	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSR)	LTE-FDD		±9.6 %
10185	AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM) LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD LTE-FDD	6.51	± 9.6 %
	CAF				±9.6%
10187	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	±9.6%
10188	and the second second second	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	±9.6%
10189	AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	±9.6 %
10193	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	±9.6 %
10194	CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	±9.6%
10195	CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WEAN	8.21	±9.6%
10196	CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	±9.6 %
10197	CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	±9.6%
10198	CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 *

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10220	CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	±9.6%
0221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
0222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
0223	CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	19.6%
0224	CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	# 9.6 %
0225	CAB	UMTS-FDD (HSPA+)	WCDMA	5.97	±9.6 %
0226	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	±9.6 %
0227	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
0228	CAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
0229	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
0230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TOD	9,19	± 9.6 %
0232	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	19.6%
0233	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	±9.6%
10237	CAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	±9.6 %
10238	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	19.6 %
10240	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9,21	± 9.6 %
10240	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	19.6 %
10243	CAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	±9.6 %
10245	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)			
10245	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	±9.6 %
10246	CAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TOD	the function of the product of	± 9.6 %
10246	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, GPSK) LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TOD	9.30	
10248	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD LTE-TDD	9.91	±9.6 %
10240	CAF			10.09	± 9.6 %
10249	CAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK) LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TOD	9,29	±9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	9.81	±9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 04-0AW)	LTE-TDD LTE-TDD	10.17 9.24	± 9.6 %
	CAF			9.24	±9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TOD		± 9.6 %
		LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TOD	10.14	± 9.6 %
10255	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
		LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAA	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	±9.6 %
10260	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	±9.6 %
10261	CAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	±9.6 %
10262	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9,83	±9.69
10263	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	±9.6 %
10264	CAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	±9.6 %
10265	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	±9.6 9
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	± 9.6 %
10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	±9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TOD	10.06	±9.6 %
10269	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	±9.69
10270	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	±9.6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8 10)	WCDMA	4.87	±9.6 %
0275	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3,96	±9.6 %
10277	CAA	PHS (QPSK)	PHS	11.81	± 9.6 %
0278	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	±9.6.9
0279	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12,18	±9.6 %
10290	AAB	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	±9.6 %
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	±9.6%
10292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	±9.6 %
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	±9.6 %
10295	AAB	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12,49	±9.6 %
10297	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %

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10300	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	±9.6 %
0301	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WIMAX	12.03	± 9.6 %
10302	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3 CTRL symbols)	WIMAX	12.57	± 9.6 %
10303	AAA	IEEE 802.16e WIMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	12.52	±9.6 %
10304	AAA		and the second se		
		IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	11.86	±9.6 %
0305	AAA	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC, 15 symbols)	WIMAX	15.24	±9.6 %
10306	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC, 18 symbols)	WIMAX	14.67	±9.6 %
10307	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC, 18 symbols)	WIMAX	14.49	±9.6 %
10308	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WiMAX	14.46	± 9.6 %
10309	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3, 18 symbols)	WIMAX	14.58	± 9.6 9
10310	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3, 18 symbols)	WIMAX	14.57	±9.6 %
10311	AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	±9.63
10313	AAA	IDEN 1:3	IDEN	10.51	and the same strength and
					±9.6 %
0314	AAA	IDEN 1:6	IDEN	13.48	± 9.6 %
0315	AAB	IEEE 802.11b WIFI 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)	WLAN	1.71	± 9,6 9
10316	AAB	IEEE 802.11g WIFI 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	± 9,6 9
10317	AAC	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)	WLAN	8.36	±9.6 %
0352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 4
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 1
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 1
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6.9
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	19.6 1
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	±9.61
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	±9.6 9
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6:27	± 9.6 1
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 *
10400	AAD	IEEE 802.11ac WiFI (20MHz, 64-QAM, 99pc duty cycle)	WLAN	8.37	± 9.6 *
10401	AAD	IEEE 802.11ac WiFI (40MHz, 64-QAM, 99pc duty cycle)	WLAN	8.60	±9.6 %
10402	AAD	IEEE 802.11ac WIFI (80MHz, 64-QAM, 99pc duty cycle)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3,76	± 9.6 1
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 5
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	±9.6 1
10410	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9, Subframe Conf=4)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	±9.6 9
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
				and the second second second	
10417 10418	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc duty cycle) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle,	WLAN WLAN	8.23	±9.6 ±9.6
10419	AAA	Long preambule) IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc duty cycle,	WLAN	8.19	±9.6 °
		Short preambule)			
10422	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	±9.6 %
10423	AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 °
10425	AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	±9.6
10426	AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	± 9.6
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	± 9.6 °
10430	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	± 9.6
10431	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	± 9.6
10432	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6
	AAC				
10433		LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	±9.6
10434	AAA	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6
10435	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 °
	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	± 9.6
10447					
	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	± 9.6
10447 10448 10449		LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD LTE-FDD	7.53	± 9.6 4

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	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	±9.6 %
0456	AAB	IEEE 802.11ec WiFi (160MHz, 64-QAM, 99pc duty cycle)	WLAN	8.63	±9.6%
0457	AAA	UMTS-FDD (DC-HSDPA)	WCDMA.	6.62	± 9.6 %
0458	AAA	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	±9.6 %
0459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	±9.6 %
0460	AAA	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	± 9.6 %
0461	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
	11.2	Subframe=2,3,4,7,8,9)	the stores by the term	200100	
10462	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.30	± 9.6 %
10463	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.56	± 9.6 %
10464	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TOD	7.82	±9.6 %
10465	BAA	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10466	AAB	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Subframe=2,34,7,8,9)	LTE-TDD	8.57	± 9.6 %
10467	AAE	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
10468	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL	LTE-TDD	8.32	±9.6 %
10469	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL	LTE-TDD	8.56	±9.6 %
10470	AAE	Subframe=2,3,4,7,6,9) LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL	LTE-TDD	7.82	± 9.6 %
110000		Subframe=2,3,4,7,8,9)			
10471	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10472	AAE	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Subframe=2.3.4,7,8,9)	LTE-TDD	8.57	± 9.6 %
10473	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10474	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.32	±9.6 9
10475	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Subfame=2.3.4.7.8.9)	LTE-TDD	8.57	± 9.6 %
10477	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Subframe=2.3,4,7,8,9)	LTE-TDD	8.32	± 9.6 %
10478	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Subframe=2.3.4.7.8.9)	LTE-TDD	8.57	± 9.6 5
10479	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 9
10480	AAA	Subframe=2.3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL	LTE-TDD	8.18	± 9.6 %
10481	AAA	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL	LTE-TDD	8.45	±9.65
10482	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL	LTE-TDD	7.71	±9.6.9
10483	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, UL	LTE-TDD	8.39	±9.6 %
10484	AAB	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% R8, 3 MHz, 64-QAM, UL	LTE-TDD	8.47	± 9.6 9
		Subframe=2,3,4,7,8,9)			
10485	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.59	± 9.6 9
10486	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.38	± 9.6 %
10487	AAE	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Subframe=2,3,4,7,8,9)	LTE-TDD	8.60	± 9.6 %
10488	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Subframe=2,3,4,7,8,9)	LTE-TDD	7.70	± 9.6 %
10489	AAE	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL	LTE-TDD	8,31	± 9.6 1
10490	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL	LTE-TDD	8.54	± 9.6 %
10491	AAE	Subframe=2,3,4,7,8,9) LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL	LTE-TDD	7.74	± 9.6 *

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16-QAM, UL	LTE-TDD	8.41	± 9.6 %
64-QAM, UL	LTE-TDD	8,55	± 9.6 %
QPSK, UL	LTE-TDD	7.74	±9.6 %
16-QAM, UL	LTE-TDD	8.37	± 9.6 %
64-QAM, UL	LTE-TDD	8.54	± 9.6 %
z, QPSK, UL	LTE-TDD	7,67	± 9.6 %
A CONTRACTOR OF THE OWNER OWNER OWNER OF THE OWNER OWNE OWNER OWNE	LTE-TDD	8.40	± 9.6 %
z, 16-QAM, UL	a second second	1085022	1.312530.03
Iz, 64-QAM, UL	LTE-TOD	8.68	± 9.6 %
QPSK, UL	LTE-TDD	7.67	± 9.6 %
16-QAM, UL	LTE-TDD	8.44	±9.6 %
64-QAM, UL	LTE-TDD	8.52	±9.6%
QPSK, UL	LTE-TDD	7.72	± 9.6 %
18-QAM, UL	LTE-TDD	8.31	± 9.6 %
64-QAM, UL	LTE-TDD	8.54	± 9.6 %
z, QPSK, UL	LTE-TDD	7.74	± 9.6 %
z, 16-QAM, UL	LTE-TDO	8.36	± 9.6 %
z, 64-QAM, UL	LTE-TDD	8.55	± 9.6 %
- Share and the			
z, QPSK, UL	LTE-TDD	7.99	±9.6 %
z, 16-QAM, UL	LTE-TDD	8.49	± 9.6 %
z, 64-QAM, UL	LTE-TDD	8.51	± 9.6 %
z, QPSK, UL	LTE-TDD	7.74	± 9.6 %
z, 16-QAM, UL	LTE-TDD	8.42	± 9.6 %
z, 64-QAM, UL	LTE-TDD	8.45	± 9.6 %
lbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
Mbps, 99pc duty cycle)	WLAN	1.57	±9.6 %
Mbps, 99pc duty cycle)	WLAN	1.58	± 9.6 %
Abps, 99pc duty cycle)	WLAN	8,23	±9.6 %
Mbps, 99pc duty cycle)	WLAN	8.39	±9.6 %
Mbps, 99pc duty cycle)	WLAN	8.12	± 9.6 %
Mbps, 99pc duty cycle)	WLAN	7.97	± 9.6.9
Mbps, 99pc duty cycle)	WLAN	8.45	±9.69
Mbps, 99pc duty cycle)	WLAN	8.08	± 9.6 %
Mbps, 99pc duty cycle)	WLAN	8.27	± 9.6 9
pc duty cycle)	WLAN	8.36	± 9.6 %
pc duty cycle)	WLAN	8.42	± 9.6 %
pc duty cycle)	WLAN	8.21	± 9.6 9
pc duty cycle)	WLAN	8.36	± 9.6 %
pc duty cycle)	WLAN	8.36	±9.6 %
pc duty cycle)	WLAN	8.43	±9.6 %
pc duty cycle)	WLAN	8.29	± 9.6 %
			± 9.6 3
			± 9.6 9
í	c duty cycle) c duty cycle)	c duty cycle) WLAN	c duty cycle) WLAN 8.38

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10535	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10536	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc duty cycle)	WLAN	8.32	±9.6%
10537	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc duty cycle)	WLAN	8.44	±9.6 %
0538	AAB	IEEE 802.11ac WIFI (40MHz, MCS4, 99pc duty cycle)	WLAN	8.54	± 9.6 %
0540	AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc duty cycle)	WLAN	8.39	19.6 %
0541	AAB	IEEE 802.11ac WIFI (40MHz, MCS7, 99pc duty cycle)	WLAN	8.46	± 9.6 %
0542	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc duty cycle)	WLAN	8.65	±9.6 %
0543	AAB	IEEE 802 11ac WiFI (40MHz, MCS9, 99pc duty cycle)	WLAN	8.65	±9.6 %
0544	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	WLAN	8.47	±9.6 %
0545	AAB		WLAN	8.55	19.6 9
and the second se	AAB	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc duty cycle)	WLAN	8.35	
10546	a search and the second	IEEE 802 11ac WiFi (80MHz, MCS2, 99pc duty cycle)	WLAN		±9.6 9
10547	AAB	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc duty cycle)		8.49	± 9.6 %
0548	AAB	IEEE 802.11ac WIFI (80MHz, MCS4, 99pc duty cycle)	WLAN	8.37	±9.65
10550	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc duty cycle)	WLAN	8.38	±9.6 9
10551	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc duty cycle)	WLAN	8.50	± 9.6 %
0552	AAB	IEEE 802.11ac WIFI (80MHz, MCS8, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10553	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc duty cycle)	WLAN	8,45	± 9.6 %
0554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc duty cycle)	WLAN	8,48	±9.6 %
0555	AAC	IEEE 802.11ac WIFI (160MHz, MCS1, 99pc duty cycle)	WLAN	8.47	± 9.6 %
0556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc duty cycle)	WLAN	8.50	± 9.6 %
0557	AAC	IEEE 802.11ac WiFI (160MHz, MCS3, 99pc duty cycle)	WLAN	8.52	± 9.6 1
0558	AAC	IEEE 802.11ac WIFI (160MHz, MCS4, 99pc duty cycle)	WLAN	8.61	± 9,6 %
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc duty cycle)	WLAN	8.73	±9.6 %
10561	AAC	IEEE 802.11ac WIFI (160MHz, MCS7, 99pc duty cycle)	WLAN	8.56	±9.61
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc duty cycle)	WLAN	8.69	±9.6 %
10563	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc duty cycle)	WLAN	8.77	±9.61
10564	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc duty	WLAN	8.25	±9.6 9
	100	cycle)	14535	1922	10000
10565	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc duty cycle)	WLAN	8.45	± 9.6 %
10566	AAA	IEEE 602.11g WIFI 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc duty cycle)	WLAN	8.13	±9.6 9
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	±9.69
10569	AAA	IEEE 802,11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc duty cycle)	WLAN	8.10	±9.69
10570	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc duty cycle)	WLAN	8.30	±9.6 9
10571	AAA	IEEE 802.11b WIFI 2.4 GHz (DSSS, 1 Mbps, 90pc duty cycle)	WLAN	1.99	±9.69
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	±9.6.9
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 cvcle)	WLAN	8.70	±9.6 9
10578	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc duty cvcle)	WLAN	8.49	±9.6 %
10579	AAA	IÉEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc duty cvcle)	WEAN	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 cvcle)	WLAN	8.35	± 9.6 %
10582	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc duty cvcle)	WLAN	8.67	±9.6 9
	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc duty cycle)	WLAN	8.59	±9.6 °
0583	a standard .			8.60	±9.6 %
	640				
10583	AAB	IEEE 802.11a/h WIFI 5 GHz (OFDM, 9 Mbps, 90pc duty cycle)	WLAN	and the second se	and the second second second
	AAB AAB AAB	IEEE 802.11ah WiFI 5 GHz (OFDM, 9 Mbps, 90pc duty cycle) IEEE 802.11ah WiFI 5 GHz (OFDM, 12 Mbps, 90pc duty cycle) IEEE 802.11ah WiFI 5 GHz (OFDM, 18 Mbps, 90pc duty cycle)	WLAN WLAN	8.70	± 9.6 °

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88201	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc duty cycle)	WLAN	8.76	±9.6 %
0589	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc duty cycle)	WLAN	8.35	±9.6 %
0590	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc duty cycle)	WLAN	8.67	± 9.6 %
0591	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc duty cycle)	WLAN	8.63	±9.6%
0592	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc duty cycle)	WLAN	8.79	±9.6%
0593	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc duty cycle)	WLAN	8.64	±9.6 %
0594	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	±9.6 %
1595	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc duty cycle)	WLAN	8.74	± 9.6 %
0596	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS4, Solid day cycle)	WLAN	8.71	± 9.6 %
0597	AAB	IEEE 802,11n (HT Mixed, 20MHz, MCS6, 90pc duty cycle)	WLAN	8.72	± 9.6 %
0598	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, solid day cycle)	WLAN	8.50	± 9.6 %
	and the second division of the second divisio	IEEE 802.11n (HT Mixed, 20MHz, MCS7, avpc duty cycle)	WLAN	8.79	± 9.6 %
0599	AAB		WLAN	8.88	± 9.6 %
0600	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc duty cycle)	WLAN	8.82	± 9.6 %
0601	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc duty cycle)		8.94	± 9.6 %
0602	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc duty cycle)	WLAN		
0603	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc duty cycle)	WLAN	9.03	±9.6 %
0604	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc duty cycle)	WLAN	8.76	±9.6 %
0605	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc duty cycle)	WLAN	8.97	± 9.6 %
0606	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc duty cycle)	WLAN	8,82	±9.6 %
0607	AAB	IEEE 602.11ac WIFi (20MHz, MCS0, 90pc duty cycle)	WLAN	8.64	± 9.6 %
3608	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 90pc duty cycle)	WLAN	8.77	± 9.6 %
0609	AAB	IEEE 802.11ac WIFI (20MHz, MCS2, 90pc duty cycle)	WLAN	8.57	± 9.6 %
0610	AAB	IEEE 802.11ac WiFi (20MHz, MCS3, 90pc duty cycle)	WLAN	8.78	±9.6 %
0611	AAB	IEEE 802.11ac WIFI (20MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.6 %
0612	AAB	IEEE 802.11ac WiFi (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	±9.6 %
0613	AAB	IEEE 802.11ac WiFi (20MHz, MCS6, 90pc duty cycle)	WLAN	8.94	±9.6.%
0614	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc duty cycle)	WLAN	8.59	± 9.6 %
0615	AAB	IEEE 802.11ac WiFi (20MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
0616	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)	WLAN	8.82	± 9.6 %
0617	AAB	IEEE 802.11ac WIFI (40MHz, MCS1, 90pc duty cycle)	WLAN	8.81	±9.6 %
0618	AAB	IEEE 802.11ac WiFi (40MHz, MCS2, 90pc duty cycle)	WLAN	8.58	±9.6 %
0619	AAB	IEEE 802.11ac WiFi (40MHz, MCS3, 90pc duty cycle)	WLAN	8.86	±9.6 %
0620	AAB	IEEE 802.11ac WIFI (40MHz, MCS4, 90pc duty cycle)	WLAN	8.87	± 9.6 %
0621	AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
0622	AAB	IEEE 802.11ac WIFI (40MHz, MCS6, 90pc duty cycle)	WLAN	8.68	± 9.6 %
0623	AAB	IEEE 802.11ac WIFI (40MHz, MCS7, 90pc duty cycle)	WLAN	8.82	± 9.6 %
0624	AAB	IEEE 802.11ac WIFI (40MHz, MCS8, 90pc duty cycle)	WLAN	8.96	±9.6%
0625	AAB	IEEE 802.11ac WIFI (40MHz, MCS9, 90pc duty cycle)	WLAN	8.96	±9.6 %
0626	AAB	IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle)	WLAN	8.83	± 9.6 9
0627	AAB	IEEE 802.11ac WIFI (80MHz, MCS1, 90pc duty cycle)	WLAN	8.88	± 9.6 %
0628	AAB	IEEE 802.11ac WiFi (80MHz, MCS2, 90pc duty cycle)	WLAN	8.71	± 9.6 9
0629	AAB	IEEE 802.11ac WIFi (80MHz, MCS3, 90pc duty cycle)	WLAN	8.85	±9.6 %
0630	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 90pc duty cycle)	WLAN	8.72	± 9.6 %
0631	AAB	IEEE 802.11ac WiFi (80MHz, MCS5, 90pc duty cycle)	WLAN	8.81	± 9.6 %
0632	AAB	IEEE 802.11ac WiFi (60MHz, MCS6, 90pc duty cycle)	WLAN	8.74	19.6%
0633	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc duty cycle)	WLAN	8.83	19.6 %
0634	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 90pc duty cycle)	WLAN	8.80	±9.6 %
	AAB	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc duty cycle)	WLAN	8.81	19.6 %
0635		IEEE 802.11ac WIFI (80MHz, MCS9, 90pc duty cycle)	WLAN	8.83	19.6 9
0636	AAC		WEAN	8.79	
0637	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc duty cycle)	a dag sa		±9.6%
0638	AAG	IEEE 802.11ac WiFi (160MHz, MCS2, 90pc duty cycle)	WLAN	8.86	±9.6 %
0639	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 90pc duty cycle)	WLAN	8.85	±9.6 %
0640	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 90pc duty cycle)	WLAN	8.98	±9.6 %
0641	AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc duty cycle)	WLAN	9.06	±9.6 %
0642	AAC	IEEE 802.11ac WIFI (160MHz, MCS6, 90pc duty cycle)	WLAN	9.06	± 9.6 %
0643	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 90pc duty cycle)	WLAN	8.89	± 9.6 %
0644	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc duty cycle)	WLAN	9.05	± 9.6 %
0645	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 90pc duty cycle)	WLAN	9.11	± 9.6 7
0646	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	± 9.6 %
0647	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,7)	LTE-TDD	11.96	±9.69
0648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	±9.6 %
0652	AAD	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TOD	6.91	±9.6 %
0653	AAD	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TOD	7.42	±9.6 %
0654	AAD	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	±9.69

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10655	AAE	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	± 9.6 %
0658	AAA	Pulse Waveform (200Hz, 10%)	Test	10.00	±9.6 %
0659	AAA	Pulse Waveform (200Hz, 20%)	Test	6.99	±9.6 %
0660	AAA	Pulse Waveform (200Hz, 40%)	Test	3.98	±9.6 %
0661	AAA	Pulse Waveform (200Hz, 60%)	Test	2.22	±9.6%
0662	AAA	Pulse Waveform (200Hz, 80%)	Test	0.97	±9.6 %
0670	AAA	Bluetooth Low Energy	Bluetooth	2.19	± 9.6 %
0671	AAA	IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)	WLAN	9.09	± 9.6 %
0672	AAA	IEEE 802.11ax (20MHz, MCS1, 90pc duty cycle)	WLAN	8.57	± 9.6 %
0673	AAA	IEEE 802.11ax (20MHz, MCS2, 90pc duty cycle)	WLAN	8.78	±9.6%
0674	AAA	IEEE 802.11ax (20MHz, MCS3, 90pc duty cycle)	WLAN	8.74	± 9.6 %
0675	AAA	IEEE 802.11ax (20MHz, MCS4, 90pc duty cycle)	WLAN	8.90	± 9.6 %
0676	AAA	IEEE 802.11ax (20MHz, MCS5, 90pc duty cycle)	WLAN	8.77	± 9.6 %
0677	AAA	IEEE 802.11ax (20MHz, MCS6, 90pc duty cycle)	WLAN	8.73	± 9.6 %
10678	AAA	IEEE 802.11ax (20MHz, MCS7, 90pc duty cycle)	WLAN	8.78	± 9.6 %
10679	AAA	IEEE 802.11ax (20MHz, MCS8, 90pc duty cycle)	WLAN.	8.89	±9.6 %
10680	AAA	IEEE 802.11ax (20MHz, MCS9, 90pc duty cycle)	WLAN	8.80	±9.6 %
10681	AAA	IEEE 802 11ax (20MHz, MCS10, 90pc duty cycle)	WLAN	8.62	±9.6 %
10682	AAA	IEEE 802.11ax (20MHz, MCS11, 90pc duty cycle)	WLAN	8.83	± 9.6 %
10683	AAA	IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10684	AAA	IEEE 802.11ax (20MHz, MCS1, 99pc duty cycle)	WLAN	8.26	± 9.6 %
10685	AAA	IEEE 802.11ax (20MHz, MCS1, 350c duty cycle)	WLAN	8.33	19.6%
10686	AAA	IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle)	WLAN	8.28	± 9.6 %
10687	AAA	IEEE 802.11ax (20MHz, MCS3, 99pc duty cycle)	WLAN	8.45	±9.6 %
10688	AAA	IEEE 802.11ax (20MHz, MCS4, 39pc duty cycle)	WLAN	8.29	± 9.6 %
10689	AAA	IEEE 802.11ax (20MHz, MCS6, 99pc duty cycle)	WLAN	8.55	±9.6 %
	AAA	IEEE 802.11ax (20MHz, MCS0, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10690		IEEE 802.11ax (20MHz, MCS7, 99pc duty cycle)	WLAN	8.25	
10691	AAA		WLAN	8.29	± 9.6 %
10692	AAA	IEEE 802.11ax (20MHz, MCS9, 99pc duty cycle) IEEE 802.11ax (20MHz, MCS10, 99pc duty cycle)	WLAN	8.25	±9.6%
10693	AAA		WLAN	8.57	19.6%
		IEEE 802.11ax (20MHz, MCS11, 99pc duty cycle)	WLAN	8.78	±9.6 %
10695	AAA	IEEE 802.11ax (40MHz, MCS0, 90pc duty cycle)			
10696	AAA	IEEE 802.11ax (40MHz, MCS1, 90pc duty cycle)	WLAN	8.91	± 9.6 %
	AAA	IEEE 802.11ax (40MHz, MCS2, 90pc duty cycle)	WLAN	8.89	
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc duty cycle) IEEE 802.11ax (40MHz, MCS4, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10699					
10700	AAA	IEEE 802.11ax (40MHz, MCS5, 90pc duty cycle)	WLAN	8.73	±9.6%
10701	AAA	IEEE 802.11ax (40MHz, MCS6, 90pc duty cycle)			± 9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS7, 90pc duty cycle)	WLAN	8.70	± 9.6 %
10703	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc duty cycle)	WLAN	8.82	± 9.6 %
10704	AAA	IEEE 802.11ax (40MHz, MCS9, 90pc duty cycle)	WLAN	8.56	± 9.6 %
10705	AAA	IEEE 802.11ax (40MHz, MCS10, 90pc duty cycle)	WLAN	8.69	± 9.6 %
10706	AAA	IEEE 802.11ax (40MHz, MCS11, 90pc duty cycle)	WLAN	8.66	± 9.6 %
10707	AAA	IEEE 802.11ax (40MHz, MCS0, 99pc duty cycle)	WLAN	8.32	± 9.6 %
10708	AAA	IEEE 802.11ax (40MHz, MCS1, 99pc duty cycle)	WLAN	8.55	± 9.6 %
10709	AAA	IEEE 802.11ax (40MHz, MCS2, 99pc duty cycle)	WLAN	8.33	± 9.6.%
10710	AAA	IEEE 802.11ax (40MHz, MCS3, 99pc duty cycle)	WLAN	8.29	± 9.6 %
10711	AAA	IEEE 802.11ax (40MHz, MCS4, 99pc duty cycle)	WLAN	8,39	± 9.6 %
10712	AAA	IEEE 802.11ax (40MHz, MCS5, 99pc duty cycle)	WLAN	8.67	± 9.6 %
10713	AAA	IEEE 802.11ax (40MHz, MCS6, 99pc duty cycle)	WLAN	8.33	± 9.6 %
10714	AAA	IEEE 802.11ax (40MHz, MCS7, 99pc duty cycle)	WLAN	8.26	± 9.6 %
10715	AAA	IEEE 802.11ax (40MHz, MCS8, 99pc duty cycle)	WLAN	8,45	± 9.6 %
10716	AAA	IEEE 802.11ax (40MHz, MCS9, 99pc duty cycle)	WLAN	8.30	± 9.6 %
10717	AAA	IEEE 802.11ax (40MHz, MCS10, 99pc duty cycle)	WLAN	8,48	±9.6.9
10718	AAA	IEEE 802.11ax (40MHz, MCS11, 99pc duty cycle)	WLAN	8.24	± 9.6 %
10719	AAA	IEEE 802.11ax (80MHz, MCS0, 90pc duty cycle)	WLAN	8.81	± 9.6 %
10720	AAA	IEEE 802.11ax (80MHz, MCS1, 90pc duty cycle)	WLAN	8.87	± 9.6 9
10721	AAA	IEEE 802.11ax (80MHz, MCS2, 90pc duty cycle)	WLAN	8.76	± 9.6 %
10722	AAA.	IEEE 802.11ax (80MHz, MCS3, 90pc duty cycle)	WLAN	8.55	± 9.6 %
10723	AAA	IEEE 802.11ax (80MHz, MCS4, 90pc duty cycle)	WLAN	8.70	±9.69
10724	AAA	IEEE 802.11ax (80MHz, MCS5, 90pc duty cycle)	WLAN	8.90	± 9.6 %
10725	AAA	IEEE 802.11ax (80MHz, MCS6, 90pc duty cycle)	WLAN	8,74	± 9.6 %
10726	AAA	IEEE 802.11ax (80MHz, MCS7, 90pc duty cycle)	WLAN	8.72	±9.6 %
10727	AAA	IEEE 802.11ax (80MHz, MCS8, 90pc duty cycle)	WLAN	8.66	±9.6 %

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10728	AAA	IEEE 802.11ax (80MHz, MCS9, 90pc duty cycle)	WLAN	8.65	±9.6 %
10729	AAA	IEEE 802.11ax (80MHz, MCS10, 90pc duty cycle)	WLAN	8.64	± 9.6 %
10730	AAA	IEEE 802.11ax (80MHz, MCS11, 90pc duty cycle)	WLAN	8.67	±9.6 %
10731	AAA	IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10732	AAA	IEEE 802.11ax (80MHz, MCS1, 99pc duty cycle)	WLAN	8.46	±9.6 %
10733	AAA	IEEE 802.11ax (80MHz, MCS2, 99pc duty cycle)	WLAN	8.40	± 9.6 %
10734	AAA	IEEE 802.11ax (80MHz, MCS3, 99pc duty cycle)	WLAN	8.25	± 9.6 %
10735	AAA	IEEE 802.11ax (80MHz, MCS4, 99pc duty cycle)	WLAN	8.33	±9.6 %
10736	AAA	IEEE 802.11ax (80MHz, MCS5, 99pc duty cycle)	WLAN	8.27	± 9.6 %
10737	AAA	IEEE 802.11ax (80MHz, MCS6, 99pc duty cycle)	WLAN	8.36	± 9.6 %
10738	AAA	IEEE 802.11ax (80MHz, MCS7, 99pc duty cycle)	WLAN	8.42	± 9.6 %
10739	AAA	IEEE 802.11ax (80MHz, MCS8, 99pc duty cycle)	WLAN	8.29	±9.6 %
10740	AAA	IEEE 802.11ax (80MHz, MCS9, 99pc duty cycle)	WLAN	8.48	± 9.6 %
10741	AAA	IEEE 802.11ax (80MHz, MCS10, 99pc duty cycle)	WLAN	8.40	±9.6 %
10742	AAA	IEEE 802.11ax (80MHz, MCS11, 99pc duty cycle)	WLAN	8.43	± 9.6 %
10743	AAA	IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle)	WLAN	8.94	± 9.6 %
10744	AAA	IEEE 802.11ax (160MHz, MCS1, 90pc duty cycle)	WLAN	9.16	± 9.6 %
10745	AAA	IEEE 802.11ax (160MHz, MCS2, 90pc duty cycle)	WLAN	8,93	± 9.6 %
10746	AAA	IEEE 802 11ax (160MHz, MCS3, 90pc duty cycle)	WLAN	9,11	± 9.6.9
10747	AAA	IEEE 802.11ax (160MHz, MCS4, 90pc duty cycle)	WLAN	9.04	± 9.6 %
10748	AAA	IEEE 802.11ax (160MHz, MCS5, 90pc duty cycle)	WLAN	8.93	±9.6.9
10749	AAA	IEEE 802.11ax (160MHz, MCS6, 90pc duty cycle)	WLAN	8.90	±9.6 9
10750	AAA	IEEE 802.11ax (160MHz, MCS7, 90pc duty cycle)	WLAN	8.79	± 9.6 %
10751	AAA	IEEE 802.11ax (160MHz, MCS8, 90pc duty cycle)	WLAN	8.82	±9.6 %
10752	AAA	IEEE 802.11ax (160MHz, MCS9, 90pc duty cycle)	WLAN	8.81	±9.6 %
10753	AAA	IEEE 802.11ax (160MHz, MCS10, 90pc duty cycle)	WLAN	9,00	±9.6 %
10754	AAA	IEEE 802.11ax (160MHz, MCS11, 90pc duty cycle)	WLAN	8.94	±9.6.9
10755	AAA	IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle)	WLAN	8.64	±9.6 %
10756	AAA	IEEE 802.11ax (160MHz, MCS1, 99pc duty cycle)	WLAN	8.77	± 9.6 %
10757	AAA	IEEE 802.11ax (160MHz, MCS2, 99pc duty cycle)	WLAN	8.77	±9.63
10758	AAA	IEEE 802.11ax (160MHz, MCS3, 99pc duty cycle)	WLAN	8.69	±9.6 %
10759	AAA	IEEE 802.11ax (160MHz, MCS4, 99pc duty cycle)	WLAN	8.58	± 9.6 9
10760	AAA	IEEE 802.11ax (160MHz, MCS5, 99pc duty cycle)	WLAN	8,49	±9.6 %
10761	AAA	IEEE 802.11ax (160MHz, MCS6, 99pc duty cycle)	WLAN	8.58	± 9.6 %
10762	AAA	IEEE 802.11ax (160MHz, MCS7, 99pc duty cycle)	WLAN	8.49	± 9.6.9
10763	AAA	IEEE 802.11ax (160MHz, MCSB, 99pc duty cycle)	WLAN	8.53	±9.6 %
10764	AAA	IEEE 802.11ax (160MHz, MCS9, 99pc duty cycle)	WLAN	8.54	±9.6 %
10765	AAA	IEEE 802.11ax (160MHz, MCS10, 99pc duty cycle)	WLAN	8.54	±9.6 %
10766	AAA	IEEE 802.11ax (160MHz, MCS11, 99pc duty cycle)	WLAN	8.51	±9.6 9

² 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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Certificate No: EUmmWV4-9486_Apr20

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



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Accreditation No.: SCS 0108

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

Glossary:

NORMx,y,z DCP CF A, B, C, D Polarization o	sensitivity in free space diode compression point crest factor (1/duty_cycle) of the RF signal modulation dependent linearization parameters ϕ rotation around probe axis
Polarization 9	9 rotation around an axis that is in the plane normal to probe axis (at measurement center),
Connector Angle Sensor Angles k	i.e., 9 = 0 is normal to probe axis information used in DASY system to align probe sensor X to the robot coordinate system sensor deviation from the probe axis, used to calculate the field orientation and polarization is the wave propagation direction

Calibration is Performed According to the Following Standards:

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

Methods Applied and Interpretation of Parameters:

- NORMx,y,z: Assessed for E-field polarization 9 = 0 for XY sensors and 9 = 90 for Z sensor (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). For frequencies > 6 GHz, the far field in front of waveguide horm antennas is measured for a set of frequencies in various waveguide bands up to 110 GHz.
- DCPx,y,z: DCP are numerical linearization parameters assessed based on the data of power sweep with CW
 signal (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- The frequency sensor model parameters are determined prior to calibration based on a frequency sweep (sensor model involving resistors R, R_p, inductance L and capacitors C, C_p).
- Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z; A, B, C, D are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- Sensor Offset: The sensor offset corresponds to the mechanical from the probe tip (on probe axis). No tolerance required.
- Connector Angle: The angle is assessed using the information gained by determining the NORMx (no uncertainty required).
- Equivalent Sensor Angle: The two probe sensors are mounted in the same plane at different angles. The
 angles are assessed using the information gained by determining the NORMx (no uncertainty required).
- Spherical isotropy (3D deviation from isotropy): in a locally homogeneous field realized using an open waveguide / horn setup.

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DASY - Parameters of Probe: EUmmWV4 - SN:9486

Basic Calibration Parameters

	Sensor X	Sensor Y	Unc (k=2)
Norm (µV/(V/m) ²)	0.02160	0.02393	± 10.1 %
DCP (mV) ⁸	103.0	115.0	
Equivalent Sensor Angle	-59.8	34.3	

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	-0.06	-0.04	± 0.43 dB
1.8	140.4	0.10	0.10	± 0.43 dB
2	133.0	0.04	0.10	± 0.43 dB
2.2	124.8	0.02	0.03	± 0.43 dB
2.5	123.0	-0.05	-0.05	± 0.43 dB
3.5	256.2	0.16	0.07	± 0.43 dB
3.7	249.8	0.25	0.13	± 0.43 dB
6.6	41.8	-0.12	0.08	± 0.98 dB
8	48.4	-0.36	-0.31	± 0.98 dB
10	54.4	-0.03	0.02	± 0.98 dB
15	71.5	0.48	-0.32	± 0.98 dB
18	85.3	0.00	0.24	± 0.98 dB
26.6	96.9	0.28	0,17	± 0.98 dB
30	92.6	0.10	0.10	± 0.98 dB
35	93.7	-0.04	-0.02	± 0.98 dB
40	91.5	-0.51	-0.44	± 0.98 dB
50	19.6	-0.56	-0.49	± 0.98 dB
55	22.4	0.24	0.14	± 0.98 dB
60	23.0	0.01	-0.01	± 0.98 dB
65	27.4	-0.21	0.04	± 0.98 dB
70	23.9	0.15	0.08	± 0.98 dB
75	20.0	0.10	0.12	± 0.98 dB
75	14.8	-0.03	-0.06	± 0.98 dB
80	22.5	0.02	0.21	± 0.98 dB
85	22.8	-0.03	-0.05	± 0.98 dB
90	23.8	0.04	0.06	± 0.98 dB
92	23.9	-0.06	-0.16	± 0.98 dB
95	20.5	-0.24	+0.25	± 0.98 dB
97	24.4	0.04	-0.07	± 0.98 dB
100	22.6	0.04	-0.03	±0.98 dB
105	22.7	0.00	0.04	± 0.98 dB
110	19.7	0.02	0.12	± 0.98 dB

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%.

¹Numerical linearization parameter: uncertainty not required.

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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DASY - Parameters of Probe: EUmmWV4 - SN:9486

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dBõV	С	D dB	VR mV	Max dev.	Max Unc ^E (k=2)
0	CW	X	0.00	0.00	1.00	0.00	108.0	± 3.3 %	±4.7 %
		Y	0.00	0.00	1.00	Trumbs	90.5		2012.63
10352-	Pulse Waveform (200Hz, 10%)	X	2.20	60.00	12.88	10.00	6.0	11.4%	±9.6 %
AAA	Constitution particular and a second	Y	1.81	60.00	14.09	10000000	6.0		11.000.00
10353-	Pulse Waveform (200Hz, 20%)	X	12.00	78.00	17.00	5.99	12.0	±0.9 %	± 9.6 %
AAA		Y	1.17	60.00	13.19	3336230	12.0	Contraction of the local division of the loc	
10354-	Pulse Waveform (200Hz, 40%)	X	0.75	60.00	10.84	3.98	23.0	± 1.0 %	±9.6 %
AAA		Y	68.0	60.00	12.11		23.0		
10355-	Pulse Waveform (200Hz, 60%)	X	0.46	60.00	9.91	2.22	27.0	±0.7 %	± 9.6 %
AAA	A STREAM STREAM AND A	Y	0.45	60.00	11.19		27.0		1200000
10387-	QPSK Waveform, 1 MHz	X	0.90	60.00	10.88	1.00	22.0	#2.1%	± 9.6 %
AAA	the second se	Y	0.97	60.00	11.51	22.0			1.200
10388-	QPSK Waveform, 10 MHz	X	1.25	60.00	11.50	0.00	22.0	±0.8%	±9.6 %
AAA	Second Contractor Sector Associated	Y	1.22	60.00	11.77	120021	22.0		100.000000
10396-	64-QAM Waveform, 100 kHz	X	1.93	60.00	13.57	3.01	17.0	±0.7%	± 9.6 %
AAA		Y	1.99	60.26	13.70	200163	17.0	1.122227.0201	222.232
10399-	64-QAM Waveform, 40 MHz	X	2.11	60.00	12.16	0.00	19.0	±0.7 %	±9.6%
AAA		Y	2.00	60.00	12.33		19.0		
10414-	WLAN CCDF, 64-QAM, 40MHz	X	3.15	60.00	12.62	0.00	12.0	±0.9 %	± 9.6 %
AAA	Contractor established and the	Y	2.99	60.00	12.77	PLACEALOC:	12.0		10000

Note: For details on all calibrated UID parameters see Appendix

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	-0.04	0.04	± 0.2 dB
0.9	100.0	-0.07	-0.04	± 0.2 dB
0.9	500.0	0.02	0.01	± 0.2 dB
0.9 0.9 0.9	1000.0	0.04	0.01	± 0.2 dB
0.9	1500.0	0.03	0.01	± 0.2 dB
0.9	2000.0	-0.02	-0.01	± 0.2 dB

Sensor Frequency Model Parameters (750 MHz – 78 GHz)

	Sensor X	Sensor Y
R (Ω)	40.73	44.58
$R_p(\Omega)$	95.08	90.81
L (nH)	0.04151	0.04075
C (pF)	0.2157	0.2793
C _p (pF)	0.1205	0.1171

Sensor Frequency Model Parameters (55 GHz – 110 GHz)

	Sensor X	Sensor Y
R (Ω)	28.15	34.53
$R_p(\Omega)$	99.60	95.35
L (nH)	0.03606	0.03061
C (pF)	0.1583	0.2541
C _p (pF)	0.1349	0.1315

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DASY - Parameters of Probe: EUmmWV4 - SN:9486

Sensor Model Parameters

	C1 fF	C2 fF	α V ⁻¹	T1 ms.V ⁻²	T2 ms.V ¹	T3 ms	T4 V-2	T5 V ^{−1}	T6
X	26.5	197.75	35.20	0.92	3.42	4.98	0.00	1.13	1.01
Y	32.5	226.76	31.53	0.92	3.28	5.00	0.00	1.35	1.01

Other Probe Parameters

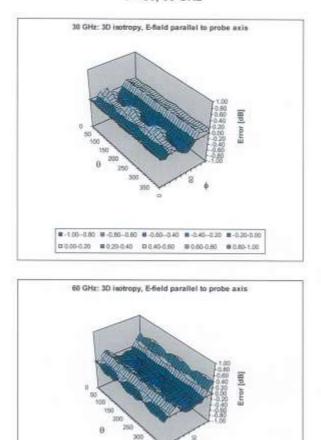
Sensor Arrangement	Rectangular
Connector Angle (°)	96.4
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	320 mm
Probe Body Diameter	8 mm
Tip Length	23 mm
Tip Diameter	8.0 mm
Probe Tip to Sensor X Calibration Point	1.5 mm
Probe Tip to Sensor Y Calibration Point	1.5 mm

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Deviation from Isotropy in Air f = 30, 60 GHz

Probe isotropy for E_{tet}: probe rotated $\varphi = 0^{\circ}$ to 360°, tilted from field propagation direction \vec{k} Parallel to the field propagation ($\psi = 0^{\circ} - 90^{\circ}$) at 30 GHz; deviation within \pm 0.33 dB Parallel to the field propagation ($\psi = 0^{\circ} - 90^{\circ}$) at 60 GHz; deviation within \pm 0.42 dB

■-1.00-0.80 ■-0.80-0.60 ■-0.80-0.40 ■-0.40-0.20 ■-0.20-0.00 ₩0.00-0.20 ■0.20-0.40 ₩0.40-0.60 ■0.80-0.80 ■0.10-1.00

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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR	Unc
3	-	CW	CW	(dB)	(k=2)
0010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	0.00	±4.7 %
0011	CAB	UMTS-FDD (WCDMA)	WCDMA	10.00	± 9.6 %
10012	CAB	IEEE 802.11b WIFI 2.4 GHz (DSSS, 1 Mbps)	WLAN	2.91	±9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	and the second s	± 9,6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.46	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM		± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	9.57	±9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	±9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	±9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM		19.6%
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	3.55	±9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	± 9.6 % ± 9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	
10032	CAA	IEEE 802 15.1 Bluetooth (GFSK, DH5)	Bluetooth		± 9.6 %
10033	CAA	IEEE 802 15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	1.16	±9.6 %
10034	CAA	IEEE 802 15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	the second se	
10036	CAA	IEEE 802 15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	3.83	±9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	8.01	±9.6%
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000		
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	4.57	±9.6%
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	7.78	±9.6 %
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	0.00	± 9.6 %
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	13.80	±9.6%
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mops)	TD-SCDMA	10.79	±9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	11.01 6.52	±9.6 %
10059	CAB	IEEE 802 11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN		± 9.6 %
10060	CAB	IEEE 802.11b WIFI 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.12	±9.6%
10081	CAB	IEEE 802.11b WIFI 2.4 GHz (DSSS, 11 Mbps)	WLAN		
10062	CAC	IEEE 802 11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	3.60	± 9.6 %
10063	CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 9 Mbps)	WLAN	8.68	±9.6%
10064	CAC	IEEE 802.11a/h WIFI 5 GHz (OFDM, 12 Mbps)	WLAN	8.63	±9.6%
10065	CAC	IEEE 802 11a/h WIFI 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	±9.6 %
10066	CAC	IEEE 802 11am Wirt's GHz (OFDM, 18 Mbps)	WLAN	9.00	±9.6 %
10067	CAC	IEEE 802 11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	9.38	± 9.6 %
10068	CAC	IEEE 802 11am WH 5 GHz (OFDM, 36 Mops)		10.12	± 9.6 %
10069	CAC	IEEE 802 11a/h WIFI 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	10.56	±9.6 %
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	±9.6 %
10073	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	± 9.6 %
10074	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 16 Mbps)	WLAN	9.94	±9.6 %
10075	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	±9.6 %
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10,77	±9.6 %
10077	CAB	IEEE 802.11g WIFI 2.4 GHz (DSSS/OFDM, 46 Mbps)		10.94	± 9.6 %
10081	CAB	CDMA2000 (1xRTT, RC3)	WLAN CODAASOOO	11.00	± 9.6 %
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, Pl/4-DQPSK, Fullrate)	CDMA2000 AMPS	3.97	± 9.6 %
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)		4.77	±9.6 %
10090	CAB	UMTS-FDD (FDDA)	GSM WCDMA	6.56	±9.6 %
10097	CAB	UMTS-FDD (HSUPA) UMTS-FDD (HSUPA, Subtest 2)		3.98	±9.6 %
10098	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	WCDMA	3.98	±9.6 %
0039	CAE		GSM	9.55	±9.6 %
10100	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDO	5.67	± 9.6 %
10101	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	±9.6 %
10102	CAE	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	±9.6 %
17.17.4	CAG	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM) LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD LTE-TDD	9.97	± 9.6 %
10105					± 9.6.%

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10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDO	6.43	± 9.6 %
0110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	±9.6 %
0111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FOD	6.44	± 9.6 %
0112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	±9.6 %
0113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FOD	6.62	±9.6 %
0114	CAC	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
0115	CAC	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
0116	CAC	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
0117	CAC	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
0118	CAC	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
0119	CAC	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
0140	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
0141	CAE	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
0142	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	±9.6 %
0143		LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
0144	CAE	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	±9.6 %
0145	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
0146	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
0147	CAF	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
0149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
0150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	±9.6 %
0151		LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
0153	CAG	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	±9.6 %
0154	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	±9.6 %
0155	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6,43	±9.6%
	the second second second	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	±9.6 %
0157	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	±9.6 %
0159	CAG	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM) LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
0159	CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM) LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	6.56	± 9.6 %
0160	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, GPSK)	LTE-FDD	5.82	± 9.6 %
0162	CAE	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD LTE-FDD	6.43	±9.6 %
0166	CAF	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-GAM)	LTE-FDD	6.58	± 9.6 %
0167	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)		5.46	±9.6 %
0168	CAF	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.21	±9.6 %
0169	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, OPSK)	LTE-FDD	6.79	±9.6 %
0170	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	5.73	± 9.6 %
0171	AAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.52	±9.6 %
0172	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	6.49	± 9.6 %
0173	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.21	±9.6%
0174	CAG	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 10-QAM)	LTE-TDD	10.25	±9.6%
0175	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	±9.6%
0176	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	±9.6 % ±9.6 %
0177	CAI	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, GPSK)	LTE-FDD	5.73	± 9.6 %
0178	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
0179	CAG	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	±9.6 %
0180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
0181	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
0182	CAE	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
0183	AAD	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
0184	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	19.6 %
0185	CAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
0186	AAE	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
0187	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
0188	CAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
0189	AAF	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 54-QAM)	LTE-FDD	6.50	± 9.6 %
0193	CAC	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
0194	CAC	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
0195	CAC	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
0196	CAC	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
0197	CAC	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
0198	CAC	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
0219	CAC	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %

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10220	CAC	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	±9.6 %
0221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
0222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
0223	CAC	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	±9.6 %
0224	CAC	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
0225	CAB	UMTS-FDD (HSPA+)	WCDMA	5.97	± 9.6 %
0226	CAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
0227	CAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
0228	CAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
0229	CAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	±9.6 %
0230	CAD	LTE-TDD (SC-FDMA, 1 R8, 3 MHz, 64-QAM)	LTE-TDD	10.25	±9.6 %
0231	CAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	±9.6 %
0232	CAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TOD	9.48	±9.6 %
0233	CAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	±9.6%
0234	CAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
0235	CAG	LTE-TDD (SC-FDMA, 1 R8, 10 MHz, 16-QAM)	LTE-TDD	9.48	±9.6 %
0236	CAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
0237	CAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
0238	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
0239	CAF	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
0240	CAF	LTE-TDD (SC-FDMA, 1 R8, 15 MHz, QPSK)	LTE-TDD	and the second se	
0241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.21	±9.6%
0242	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.82	±9.6%
0243	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)		9.86	± 9.6 %
0244	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	9.46	±9.6%
10245	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-GAM)	LTE-TDD	10.06	± 9.6 %
0246	CAD		LTE-TDD	10.06	±9.6 %
0240	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TOD	9.30	±9.6 %
0248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM) LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	9.91	± 9.6 %
0240	CAG		LTE-TDD	10.09	±9.6 %
0249		LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	±9.6 %
the second s	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	±9.6 %
0251	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	±9.6 %
		LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
0253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	±9.6 %
10254	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TOD	9.20	±9.6 %
10256		LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	±9.6 %
10258	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	±9.6 %
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
0260	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
0262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TOD	9.83	±9.6 %
10263	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TOD	9.92	± 9.6 %
10266	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	29.6%
10267	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TOO	10.06	± 9.6 %
10269	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	±9.6 %
10270	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TOD	9.58	± 9.6 %
0274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.6 %
0275	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
0277	CAA	PHS (QPSK)	PHS	11.81	± 9.6 %
0278	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
0279	CAA	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	±9.6 %
0290	BAA	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	AAB	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
0292	AAB	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	AAB	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	±9.6 %
10295	BAA	CDMA2000, RC1, SO3, 1/8th Rete 25 fr.	CDMA2000	12.49	± 9.6 %
10297	AAD	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	±9.6 %
10298	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	±9.6 %
10299	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %

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10300	AAD	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
0301	AAA	IEEE 802 16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WIMAX	12.03	± 9.6 %
0302	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)	WIMAX	12.57	± 9.6 %
0303	AAA	IEEE 602.16e WIMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	12.52	± 9.6 %
0304	AAA	IEEE 802.16e WIMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WIMAX	11.86	± 9.6 %
0305	AAA	IEEE 802.16e WIMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)	WIMAX	15.24	± 9.6 %
0306	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)	WIMAX	14.67	± 9.6 %
0307	AAA	IEEE 802 16e WIMAX (29:18, 10ms, 10MHz, QPSK, PUSC)	WIMAX	14,49	± 9.6 %
0308	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WIMAX	14,46	± 9.6 %
10309	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, 16QAM, AMC 2x3)	WIMAX	14.58	± 9.6 %
0310	AAA	IEEE 802.16e WIMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3	WIMAX	14.57	± 9.6 %
0311	AAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
0313	AAA	IDEN 1:3	IDEN	10.51	± 9.6 %
0314	AAA	IDEN 1:6	IDEN	13.48	± 9.6 %
0315	AAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc)	WLAN	1.71	± 9.6 %
0316	AAB	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
0317	AAC	IEEE 602.11a WiFI 5 GHz (OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
0352	AAA.	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
0353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
0354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 %
0355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
0356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	54-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)	WLAN	8.37	19.6 %
10401	AAD	IEEE 802.11ac WIFI (40MHz, 64-QAM, 99pc dc)	WLAN	8.60	± 9.6 %
0402	AAD	IEEE 802.11ac WiFI (80MHz, 64-QAM, 99pc dc)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	19.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAB	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	19.6 %
10410	AAG	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2.3.4.7.8.9)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	19.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)	WLAN	1.54	19.6%
10416	AAA	IEEE 802.11g WIFI 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10417	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	19.6%
10418	AAA	IEEE 802 11g WIFI 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 6 Mbps, 98pc, Short)	WLAN	8.19	
10422	AAB	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAB	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8,47	19.6 %
10424	AAB	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	29.6%
10425	AAB	IEEE 802.11n (HT Greenfield, 15 Mbps, 8PSK)	WLAN	8.41	19.6 %
10426	AAB	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	± 9.6 %
10430	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FOD	8.28	± 9.6 %
10431	AAD	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD		
10432	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.38	± 9.6 % ± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	±9.6 %
10434	AAA	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	and the second division of the second divisio	Concernant and the state of the second
10435	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	8.60	±9.6 %
10435	AAD	LTE-FDD (SC-FDMA, 1 RB, 20 MHZ, GFSR, 0L S00)	LTE-FDD	7.82	±9.6 %
10447	AAD	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.56	±9.6 %
10440	AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%) LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.53	±9.6%
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%) LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.51	±9.6 %
10450	AAA		WCDMA	7.48	±9.6%
10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)		7,59	±9.6%
10453	AAB	Validation (Square, 10ms, 1ms)	Test WLAN	10.00	±9.6 %
the second s		IEEE 802 11ac WiFi (160MHz, 64-QAM, 99pc dc)		8.63	±9.6%
10457	AAA	UMTS-FDD (DC-HSDPA)	WCDMA CDMA2000	8.62	±9.6 %
10458		CDMA2000 (1xEV-DO, Rev. B, 2 carriers)		6.55	±9.6 %
10459	AAA	CDMA2000 (1xEV-DO, Rev. B, 3 carriers) UMTS-FDD (WCDMA, AMR)	CDMA2000 WCDMA	8.25	± 9.6 %
and the second second second			1.100101110000		±9.6 %
10460	AAA	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6 %

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10463	AAB	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10464	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
0465	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	±9.6 %
0466	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	±9.6%
0467	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
0468	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10469	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10470	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6%
10471	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10472	AAF	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10473	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.82	±9.6 %
10474	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	±9.6 %
10475	AAE	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10477	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10478	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDO	8.57	± 9.6 %
10479	AAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.74	±9.6 %
10480	AAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDO	8.18	± 9.6 %
10481	AAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	±9.6 %
10482	AAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.71	± 9.6 %
10483	AAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub)	LTE-TDD	8.39	± 9.6 %
10484	AAC	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TOD	8.47	± 9.6 %
10485	AAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.59	± 9.6 %
10486	AAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.38	±9.6 %
10487	AAF	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.60	± 9.6 %
10488	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.70	± 9.6 %
10489	AAF	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	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7,74	± 9.6 %
10492	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.41	± 9.6 %
10493	AAE	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	±9.6 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10495	AAF	LTE-TDD (SC-FDMA, 50% R8, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.37	±9.6 %
10498	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	±9.6 %
10497	AAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10498	AAB	LTE-TDD (SC-FDMA, 100% RB, 1,4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.40	± 9.6 %
10499	AAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.68	±9.6 %
10500	AAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.67	19.6%
10501	AAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.44	±9.6 %
10502	AAC	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.52	± 9.6 %
10503	AAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.72	±9.6 %
10504	AAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	±9.6 %
10505	AAF	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	±9.6 %
10506	AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.74	±9.6 %
10507	AAF	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	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.99	± 9.6 %
10510	AAE	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 18-QAM, UL Sub)	LTE-TDD	8,49	±9.6 %
10511	AAE	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	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	±9.6 %
10515	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc)	WLAN.	1.58	±9.6 %
10516	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc)	WLAN	1.57	± 9.6 %
10517	AAA	IEEE 802 11b WIFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc)	WLAN	1,58	±9.6 %
0518	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc)	WLAN	8.23	±9.6 %
10519	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc)	WLAN	8.39	±9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc)	WLAN	8.12	±9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc)	WLAN	7.97	±9.6 %
10522	AAB.	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc)	WLAN	8.45	±9.6%
10523	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc)	WLAN	8.08	±9.6 %
10524	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc)	WLAN	8.27	±9.6 %
10525	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc dc)	WLAN	8.36	±9.6 %
10526	AAB	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc dc)	WLAN	8.42	±9.6 %
105:27	AAB	IEEE 802.11ac WIFI (20MHz, MCS2, 99pc dc)	WLAN	8.21	±9.6 %

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10528	AAB	IEEE 802.11ac WIFI (20MHz, MCS3, 99pc dc)	WLAN	8.36	± 9.6 %
10629	AAB	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc dc)	WLAN	8.36	± 9.6 %
10531	AAB	IEEE 802.11ac WIFI (20MHz, MCS6, 99pc dc)	WLAN	8.43	± 9.6 %
10532	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc dc)	WLAN	8.29	±9.6%
10533	AAB	IEEE 802.11ac WIFI (20MHz, MCS8, 99pc dc)	WLAN	8.38	19.6 %
10534	AAB	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc dc)	WLAN	8.45	± 9.6 %
10535	AAB	IEEE 802.11ac WIFI (40MHz, MCS1, 99pc dc)	WLAN	8.45	19.6%
10536	AAB	IEEE 802.11ac WIFi (40MHz, MCS2, 99pc dc)	WLAN	8.32	±9.6 %
10537	AAB	IEEE 802.11ac WIFI (40MHz, MCS3, 99pc dc)	WLAN	8.44	±9.6 %
10538	AAB	IEEE 802 11ac WIFI (40MHz, MCS4, 99pc dc)	WLAN	8.54	19.6 %
10540	AAB	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc dc)	WLAN	8.39	± 9.6 %
10541	AAB	IEEE 802.11ac WiFi (40MHz, MCS7, 99pg dc)	WLAN	8.46	19.6 %
10542	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc dc)	WLAN	8.65	
10543	AAB	IEEE 802.11ac WIFI (40MHz; MCS9, 99pc dc)	WLAN	8.65	± 9.6 %
10544	AAB	IEEE 802.11ac WIFI (80MHz, MCS0, 99pc dc)	WLAN	8.47	19.6%
10545	AAB	IEEE 802.11ac WIFI (80MHz, MCS1, 99pc dc)	WLAN	the second se	
10546	AAB	IEEE 802.11ac WIFI (B0MHz, MCS2, 99pc dc)	WLAN	8.55	± 9.6 %
10547	AAB	IEEE 802.11ac WIFI (BOMHz, MCS3, 99pc dc)	WLAN	8.35	±9.6 %
10548	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc dc)	WLAN		±9.6 %
10550	AAB	IEEE 802.11ac WIFI (BOMHz, MCS6, 99pc dc)	WLAN	8.37	± 9.6 %
10551	AAB	IEEE 802.11ac WiFI (80MHz, MCS7, 99pc dc)		8.38	±9.6%
10552	AAB	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc dc)	WLAN	8.50	± 9.6 %
10553	AAB	IEEE 802.11ac WiFI (80MHz, MCS8, 99pc dc)	WLAN WLAN	8.42	±9.6%
10554	AAC	IEEE 802.11ac WH (nomina, MCS9, sept dc)	and the second sec	8.45	±9.6%
10555	AAC		WLAN	8.48	± 9.6 %
10556	AAC	IEEE 802.11ac WIFI (160MHz, MCS1, 99pc dc)	WLAN	8.47	±9.6 %
10557	AAC	IEEE 802.11ac WIFI (160MHz, MCS2, 99pc dc)	WLAN	8:50	±9.6 %
10558	the second se	IEEE 802.11ac WIFI (160MHz, MCS3, 99pc dc)	WLAN	8.52	±9.6 %
10560	AAC	IEEE 802.11ac WIFI (160MHz, MCS4, 99pc dc)	WLAN	8.61	±9.6 %
1.01.00.00		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	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc dc)	WLAN	8.25	± 9.6 %
10565	AAA	IEEE 802.11g WIFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc dc)	WLAN	8.45	±9.6%
10566	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc dc)	WLAN	8.13	±9.6%
10567	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc dc)	WLAN	8.00	±9.6 %
10568	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc)	WLAN	8.37	±9.6 %
10569	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc dc)	WLAN	8,10	±9.6 %
10570	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc dc)	WLAN	8.30	± 9.6 %
10571	AAA	IEEE 802.11b WIFI 2.4 GHz (DSSS, 1 Mbps, 90pc dc)	WLAN	1.99	±9.6 %
10572	AAA	IEEE 802.11b WIFI 2.4 GHz (DSSS, 2 Mbps, 90pc dc)	WLAN	1.99	±9.6 %
10573	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc dc)	WLAN	1.98	±9.6 %
10574	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc dc)	WLAN	1.98	±9.6 %
10575	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc dc)	WLAN	8.59	±9.6 %
10576	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	±9.6 %
10577	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	±9.6 %
10578	AAA	IEEE 802.11g WiFI 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dc)	WLAN	8.49	± 9.6 %
10579	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
10580	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10581	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc dc)	WLAN	8.35	±9.6 %
10582	AAA	IEEE 802.11g WIFI 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc dc)	WLAN	8.67	± 9.6 %
10583	AAB	IEEE 802.11a/h WIFI 5 GHz (OFDM, 6 Mbps, 90pc dc)	WLAN	8.59	± 9.6 %
10584	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10585	AAB	IEEE 802.11a/h WIFI 5 GHz (OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	± 9.6 %
0588	AAB	IEEE 802.11am WIFI 5 GHz (OFDM, 18 Mbps, 90pc dc)	WLAN	8.49	± 9.6 %
10587	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
0588	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10589	AAB	IEEE 802.11a/h WIFI 5 GHz (OFDM, 48 Mbps, 90pc dc)	WLAN	8.35	± 9.6 %
10590	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc dc)	WLAN	8.67	19.6 %
10591	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc dc)	WLAN	8.63	± 9.6 %
10592	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc dc)	WLAN	8.79	19.6%
10593	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc)	WLAN	8.64	± 9.6 %
10594	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc)	WLAN	8.74	± 9.6 %
	1.	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc dc)	A REAL PROPERTY OF THE REAL PR	0.74	1 2 0.0 %

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10596	AAB	IEEE 802.11n (HT Moxed, 20MHz, MCS5, 90pc dc)	WLAN	8.71	± 9.6 %
10597	AAB	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc dc)	WLAN	8.72	\$ 9.6.%
0598	AAB	IEEE 802.11n (HT Moved, 20MHz, MCS7, 90pc dc)	WLAN	8.50	±9.6 %
0599	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc)	WLAN	8.79	19.6%
0600	AAB	IEEE 802.11n (HT Moxed, 40MHz, MCS1, 90pc dc)	WLAN	8.88	± 9.6 %
0601	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc)	WLAN	8.82	± 9.6 %
0602	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc dc)	WLAN	8.94	± 9.6 %
10603	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc dc)	WLAN	9.03	± 9.6 %
10604	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS5, 90pc dc)	WLAN	8.76	19.6 %
10605	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS6, 90pc dc)	WLAN	8.97	±9.6%
10606	AAB	IEEE 802.11n (HT Mixed, 40MHz, MCS7, 90pc dc)	WLAN	8.82	± 9.6 %
10607	AAB	IEEE 802.11ac WiFi (20MHz, MCS0, 90pc dc)	WLAN	8.64	± 9.6 %
10608	AAB	IEEE 802 11ac WiFi (20MHz, MCS1, 90pc dc)	WLAN	8.77	± 9.6 %
10609	AAB	IEEE 802 11ac WiFi (20MHz, MCS2, 90pc dc)	WLAN	8.57	19.6 %
10610	AAB	IEEE 802.11ac WIFI (20MHz, MCS3, 90pc dc)	WLAN	8.78	± 9.6 %
10611	AAB	IEEE 802.11ac WIFI (20MHz, MCS4, 90pc dc)	WLAN	8.70	± 9.6 %
10612	AAB	IEEE 802.11ac WIFI (20MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
10613	AAB	IEEE 802.11ac WIFI (20MHz, MCS6, 90pc dc)	WLAN	8.94	19.6%
10614	AAB	IEEE 802.11ac WiFi (20MHz, MCS7, 90pc dc)	WLAN	8.59	±9.6 %
10615	AAB	IEEE 802.11ac WIFI (20MHz, MCS8, 90pc dc)	WLAN	8.82	
10616	AAB	IEEE 802.11ac WIFI (40MHz, MCS0, 90pc dc)	WLAN		±9.6 %
10617	AAB	IEEE 802.11ac WiFi (40MHz, MCS1, 90pc dc)	WLAN	8.82	±9.6 % ±9.6 %
10618	AAB	IEEE 802.11ac WIFI (40MHz, MCS2, 90pc dc)	WLAN	the second se	
10619	AAB	IEEE 802.11ac WIFI (40MHz, MCS3, 90pc dc)	WLAN	8.58	±9.6 %
10620	AAB	IEEE 802.11ac WIFI (40MHz, MCS4, 90pc dc)	WLAN	8.86	±9.6 %
10621	AAB	IEEE 802.11ac WiFi (40MHz, MCS5, 90pc dc)	WLAN	8,87	±9.6 %
10622	AAB	IEEE 802.11ac WiFI (40MHz, MCS6, 90pc dc)	WLAN	8.77	± 9.6 %
10623	AAB	IEEE 802.11ac WFI (40MHz, MCS8, 90pc dc)	WLAN	8.68	±9.6 %
10624	AAB	IEEE 802.11ac WiFi (40MHz, MCS8, 90pc dc)	WLAN	8.82	±9.6 %
10625	AAB	IEEE 802 11ac WIFI (40MHz, MCS9, 90pc dc)	WLAN	8.96	±9.6 %
10626	AAB	IEEE 802.11ac WiFi (80MHz, MCS8, 80pc dc)	WLAN	8.96	±9.6 %
10627	AAB	IEEE 802 11ac WIFI (80MHz, MCS1, 90pc dc)	WLAN	8.83	±9.6 %
10628	AAB	IEEE 802 11ac WiFi (80MHz, MCS1, 90pc dc)		8.88	±9.6 %
10629	AAB	IEEE 802.11ac WiFI (80MHz, MCS3, 90pc dc)	WLAN	8.71	± 9.6 %
10630	AAB	IEEE 802.11ac WiFi (80MHz, WCS3, supe dc)	a second a second as	8,85	±9.6 %
10631	AAB	IEEE 802.11ac WiFi (80MHz, MCS4, 80pc dc)	WLAN	8.72	± 9.6 %
10632	AAB	IEEE 802 11ac WiFi (80MHz, MCS8, 90pc dc)	WLAN	8.81	± 9.6 %
10633	AAB	IEEE 802.11ac WiFi (80MHz, MCS6, 90pc dc)	WLAN	8.74	±9.6%
10634	AAB	IEEE 802.11ac WiFI (80MHz, MCS7, 90pc dc)	WLAN	8.83	±9.6 %
10635	AAB		WLAN	8.80	± 9.6 %
10636	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 90pc dc)	WLAN	8.81	±9.6 %
10630	AAC	IEEE 802.11ac WIFI (160MHz, MCS0, 90pc dc)	WLAN	8.83	±9.6 %
10638	and the second second second	IEEE 802.11ac WiFi (160MHz, MCS1, 90pc dc)	WLAN	8.79	±9.6 %
10636	AAC	IEEE 802.11ac WIFI (160MHz, MCS2, 90pc dc)	WLAN	8.86	±9.6 %
10639	AAC	IEEE 802.11ac WIFI (160MHz, MCS3, 90pc dc)	WLAN	8.85	±9.6 %
the state of the second second second		IEEE 802,11ac WiFi (160MHz, MCS4, 90pc dc)	WLAN	8.98	±9.6 %
10641	AAC	IEEE 802.11ac WiFi (160MHz, MCS5, 90pc dc)	WLAN	9.06	± 9.6 %
the second s	AAC	IEEE 802.11ac WIFI (160MHz, MCS6, 90pc dc)	WLAN	9,06	±9.6 %
10643	AAC	IEEE 802.11ac WIFI (160MHz, MCS7, 90pc dc)	WLAN	8.89	± 9.6 %
10644	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 90pc dc)	WLAN	9.05	± 9.6 %
10645	AAC	IEEE 802.11ac WIFI (160MHz, MCS9, 90pc dc)	WLAN	9.11	29.6%
10646	AAG	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub=2,7)	LTE-TDD	11.96	±9.6 %
10647	AAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, OPSK, UL Sub=2,7)	LTE-TDD	11,96	± 9.6 %
10648	AAA	CDMA2000 (1x Advanced)	CDMA2000	3.45	±9.6 %
10652	AAE	LTE-TDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.91	±9.6 %
10653	AAE	LTE-TDD (OFDMA, 10 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.42	± 9.6 %
10654	AAD	LTE-TDD (OFDMA, 15 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	6.96	± 9.6 %
10655	AAE	LTE-TDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-TDD	7.21	±9.6 %
10658	AAA	Pulse Waveform (200Hz, 10%)	Test	10.00	±9.6 %
10659	AAA	Pulse Waveform (200Hz, 20%)	Test	6.99	±9.6 %
10660	AAA	Pulse Waveform (200Hz, 40%)	Test	3.98	± 9.6 %
10661	AAA	Pulse Waveform (200Hz, 60%)	Test	2.22	±9.6 %
10662	AAA	Pulse Waveform (200Hz, 80%)	Test	0.97	±9.6 %
10670	AAA	Bluetooth Low Energy	Bluetooth	2.19	± 9.6 %
10671	AAA	IEEE 802.11ax (20MHz, MCS0, 90pc dc)	WLAN	9.09	±9.6%

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10672	AAA	IEEE 802.11ax (20MHz, MCS1, 90pc do)	WLAN	8.57	±9.6 %
10673	AAA.	IEEE 802.11ax (20MHz, MCS2, 90pc dc)	WLAN	8.78	± 9.6 %
0674	AAA	IEEE 802.11ax (20MHz, MCS3, 90pc dc)	WLAN	8.74	± 9.6 %
0675	AAA	IEEE 802.11ax (20MHz, MCS4, 90pc dc)	WLAN	8.90	± 9.6 %
0676	AAA	IEEE 802.11ax (20MHz, MCS5, 90pc dc)	WLAN	8.77	± 9.6 %
0677	AAA	IEEE 802.11ax (20MHz, MCS6, 90pc dc)	WLAN	8.73	± 9.6 %
0678	AAA	IEEE 802.11ax (20MHz, MCS7, 90pc dc)	WLAN	8.78	± 9.6 %
0679	AAA	IEEE 802.11ax (20MHz, MCS8, 90pc dc)	WLAN	8.89	± 9.6 %
0680	AAA	IEEE 802.11ax (20MHz, MCS9, 90pc dc)	WLAN	8.80	± 9.6 %
10681	AAA	IEEE 802.11ax (20MHz, MCS10, 90pc dc)	WLAN	8.62	± 9.6 %
0682	AAA	IEEE 802.11ax (20MHz, MCS11, 90pc dc)	WLAN	8.83	±9.6 %
10683	AAA	IEEE 802.11ax (20MHz, MCS0, 99pc dc)	WLAN	8.42	±9.6 %
10684	AAA	IEEE 802.11ax (20MHz, MCS1, 99pc dc)	WLAN	8.26	± 9.6 %
0685	AAA	IEEE 802.11ax (20MHz, MCS2, 99pc dc)	WLAN	8.33	±9.6 %
10686	AAA	IEEE 802.11ax (20MHz, MCS3, 99pc dc)	WLAN	8.28	± 9.6 %
10687	AAA	IEEE 802.11ax (20MHz, MCS4, 99pc dc)	WLAN	8.45	±9.6 %
10688	AAA	IEEE 802.11ax (20MHz, MCS5, 99pc dc)	WLAN	8.29	±9.6 %
10689	AAA	IEEE 802.11ax (20MHz, MCS6, 99pc dc)	WLAN	8.55	±9.6 %
10690	AAA	IEEE 802.11ax (20MHz, MCS7, 99pc dc)	WLAN	8.29	± 9.6 %
10691	AAA	IEEE 802.11ax (20MHz, MCS8, 99pc dc)	WLAN	8.25	± 9.6 %
10692	AAA	IEEE 802.11ax (20MHz, MCS9, 99pc dc)	WLAN	8.29	± 9.6 %
10693	AAA	IEEE 802.11ax (20MHz, MCS10, 99pc dc)	WLAN	8.25	± 9.6 %
10694	AAA	IEEE 802.11ax (20MHz, MCS11, 99pc dc)	WLAN	8.57	±9.6 %
10695	AAA	IEEE 802 11ax (40MHz, MCS0, 90pc dc)	WLAN	8.78	± 9.6 %
10696	AAA	IEEE 802.11ax (40MHz, MCS1, 90pc dc)	WLAN	8.91	±9.6 %
10697	AAA	IEEE 802 11ax (40MHz, MCS2, 90pc dc)	WLAN	8.61	±9.6 %
10698	AAA	IEEE 802.11ax (40MHz, MCS3, 90pc dc)	WLAN	8.89	± 9.6 %
10699	AAA	IEEE 602.11ax (40MHz, MCS4, 90pc dc)	WLAN	8.82	± 9.6 %
10700	AAA	IEEE 802.11ax (40MHz, MCS5, 90pc dc)	WLAN	8.73	± 9.6 %
10701	AAA	IEEE 802.11ax (40MHz, MCS6, 90pc dc)	WLAN	8.86	± 9.6 %
10702	AAA	IEEE 802.11ax (40MHz, MCS7, 90pc dc)	WLAN	8.70	±9,6 %
10703	AAA	IEEE 802.11ax (40MHz, MCS8, 90pc dc)	WLAN	8.82	±9.6 %
10704	AAA	IEEE 802.11ax (40MHz, MCS9, 90pc dc)	WLAN	8.56	±9.6 %
10705	AAA	IEEE 802.11ax (40MHz, MCS10, 90pc dc)	WLAN	8.69	±9.6 %
10706	AAA	IEEE 802.11ax (40MHz, MCS11, 90pc dc)	WLAN	8.66	±9.6 %
10707	AAA	IEEE 802.11ax (40MHz, MCS0, 99pc dc)	WLAN	8.32	± 9.6 %
10708	AAA	IEEE 802,11ax (40MHz, MCS1, 99pc dc)	WLAN	8.55	± 9.6 %
10709	AAA	IEEE 802.11ax (40MHz, MCS2, 99pc dc)	WLAN	8.33	±9.6 %
10710	AAA	IEEE 802.11ax (40MHz, MCS3, 99pc dc)	WLAN	8.29	±9.6 %
10711	AAA	IEEE 802.11ax (40MHz, MCS4, 99pc dc)	WLAN	8.39	± 9.6 %
10712	AAA	IEEE 802.11ax (40MHz, MCS5, 99pc dc)	WLAN	8.67	± 9.6 %
10713	AAA	IEEE 802.11ax (40MHz, MCS6, 99pc dc)	WLAN	8.33	± 9.6 %
10714	AAA	IEEE 802.11ax (40MHz, MCS7, 99pc dc)	WLAN	8.26	± 9.6 %
10715	AAA	IEEE 802.11ax (40MHz, MCS8, 99pc dc)	WLAN	8.45	± 9.6 %
10716	AAA	IEEE 802.11ax (40MHz, MCS9, 99pc dc)	WLAN	8.30	±9.6 %
10717	AAA	IEEE 802.11ax (40MHz, MCS10, 99pc dc)	WLAN	8.48	± 9.6 %
10718	AAA	IEEE 802.11ax (40MHz, MCS11, 99pc dc)	WLAN	8.24	±9.6 %
10719	AAA	IEEE 802.11ax (80MHz, MCS0, 90pc dc)	WLAN	8.81	± 9.6 %
10720	AAA	IEEE 802.11ax (80MHz, MCS1, 90pc dc)	WLAN	8.87	±9.6 %
10721	AAA	IEEE 802.11ax (80MHz, MCS2, 90pc dc)	WLAN	8.76	± 9.6 %
10722	AAA	IEEE 802.11ax (80MHz, MCS3, 90pc dc)	WLAN	8.55	± 9.6 %
10723	AAA	IEEE 802.11ax (80MHz, MCS4, 90pc dc)	WLAN	8.70	19.6 %
10724	AAA	IEEE 802 11ax (80MHz, MCS5, 90pc dc)	WLAN	8.90	± 9.6 %
10725	AAA	IEEE 802.11ax (80MHz, MCS6, 90pc dc)	WLAN	8,74	±9.6 %
10726	AAA	IEEE 802.11ax (80MHz, MCS7, 90pc dc)	WLAN	8.72	± 9.6 %
10727	AAA	IEEE 802 11ax (80MHz, MCSF, 80pc dc)	WLAN	8.66	± 9.6 %
10728	AAA	IEEE 802.11ax (80MHz, MCS9, 90pc dc)	WLAN	8.65	±9.6 %
10729	AAA	IEEE 802.11ax (80MHz, MCS10, 90pc dc)	WLAN	8.64	19.6 %
10730	AAA	IEEE 802.11ax (80MHz, MCS11, 90pc dc)	WLAN	8.67	19.6%
10731	AAA	IEEE 802.11ax (80MHz, MCS11, 90pc 60)	WLAN	8.42	± 9.6 %
10732	AAA	IEEE 802.11ax (80MHz, MCS0, 99pc dc)	WLAN	8,46	
10732	AAA	IEEE 802.11ax (80MHz, MCS1, 890c 0c)	WLAN	8.40	±9.6%
10734	AAA	IEEE 802.11ax (80MHz, MCS2, 99pc 6c)	WLAN	8.25	± 9.6 %
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10736	AAA	IEEE 802.11ax (80MHz, MCS5, 99pc dc)	WLAN	8.27	± 9.6 %
0737	AAA	IEEE 802.11ax (80MHz, MCS6, 99pc dc)	WLAN	8.36	± 9.6 %
0738	AAA	IEEE 802.11ax (B0MHz, MCS7, 99pc dc)	WLAN	8.42	± 9.6 %
0739	AAA	IEEE 802.11ax (80MHz, MCS8, 99pc dc)	WLAN	8.29	±9.6%
0740	AAA	IEEE 802.11ax (80MHz, MCS9, 99pc dc)	WLAN	8.48	±9.6 %
0741	AAA	IEEE 802,11ax (80MHz, MCS10, 99pc dc)	WLAN	8.40	± 9.6 %
0742	AAA	IEEE 802.11ax (80MHz, MCS11, 99pc dc)	WLAN	8.43	± 9.6 %
0743	AAA	IEEE 802.11ax (160MHz, MCS0, 90pc dc)	WLAN	8.94	± 9.6 %
0744	AAA	IEEE 802.11ax (160MHz, MCS1, 90pc dc)	WLAN	9.16	± 9.6 %
0745	AAA	IEEE 802,11ax (160MHz, MCS2, 90pc dc)	WLAN	8.93	± 9.6 %
0746	AAA	IEEE 802.11ax (160MHz, MCS3, 90pc dc)	WLAN	9.11	± 9.6 %
0747	AAA	IEEE 802.11ax (160MHz, MCS4, 90pc dc)	WLAN	9.04	±9.6 %
0748	AAA	IEEE 802.11ax (160MHz, MCS5, 90pc dc)	WLAN	8.93	± 9.6 %
0749	AAA	IEEE 802.11ax (160MHz, MCS6, 90pc dc)	WLAN	8.90	± 9.6 %
0750	AAA	IEEE 802.11ex (160MHz, MCS7, 90pc dc)	WLAN	8.79	± 9.6 %
0751	AAA	IEEE 802.11ax (160MHz, MCS8, 90pc dc)	WLAN	8.82	± 9.6 %
0752	AAA	IEEE 802.11ax (160MHz, MCS9, 90pc dc)	WLAN	8.81	± 9.6 %
0753	AAA	IEEE 802.11ax (160MHz, MCS10, 90pc dc)	WLAN	9.00	± 9.6 %
0754	AAA	IEEE 802.11ax (160MHz, MCS11, 90pc dc)	WLAN	8.94	± 9.6 %
0755	AAA	IEEE 802.11ax (160MHz, MCS0, 99pc dc)	WLAN	8.64	±9.6%
0756	AAA	IEEE 802.11ax (160MHz, MCS1, 99pc dc)	WLAN	8.77	± 9.6 %
0757	AAA	IEEE 802.11ax (160MHz, MCS2, 99pc dc)	WLAN	8.77	± 9.6 %
0758	AAA	IEEE 802.11ax (160MHz, MCS3, 99pc dc)	WLAN	8.69	± 9.6 %
10759	AAA	IEEE 802.11ax (160MHz, MCS4, 99pc dc)	WLAN	8.58	±9.6%
10760	AAA	IEEE 802.11ax (160MHz, MCS5, 99pc dc)	WLAN	8.49	±9.6 %
10761	AAA	IEEE 802.11ax (160MHz, MCS6, 99pc dc)	WLAN	8.58	± 9.6 %
0762	AAA	IEEE 802.11ax (160MHz, MCS7, 99pc dc)	WLAN	8.49	±9.6%
0763	AAA	IEEE 802.11ax (160MHz, MCS8, 99pc dc)	WLAN	8.53	±9.6%
10764	AAA	IEEE 802.11ax (160MHz, MCS9, 99pc dc)	WLAN	8.54	± 9.6 %
0765	AAA	IEEE 802.11ax (160MHz, MCS10, 99pc dc)	WLAN	8.54	± 9.6 %
0766	AAA	IEEE 802.11ax (160MHz, MCS11, 99pc dc)	WLAN	8.51	±9.6 %
0767	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 %
0770	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	AAB	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	AAB	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	± 9.6 %
0778	AAC	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.34	±9.6%
10779	AAB	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% R8, 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, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	19.6 %
10784	AAC	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	
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, 15 MHz, GPSK, 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	19.69
10788	AAC	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	± 9.6 %
0789	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	19.6 %
0790	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	19.6 %
0791	AAC	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	19.6 %
10792	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	± 9.6 %
10793	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, OPSK, 30 kHz)	5G NR FR1 TDD	7.92	
10794	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 KHz)	5G NR FR1 TDD		± 9.6 %
10795	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 KHz) 5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	
10796	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, GPSK, 30 KHz)	5G NR FR1 TDD	7.84	±9.6 %
10790	AAC	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 KHz)	the part of the pa	7.82	±9.6%
10798	AAC		5G NR FR1 TDD	8.01	±9.6 %
1571-020	19996	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	±9.6 %

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10801	AAC	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	± 9.6 %
0802	AAC	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	±9.6%
0803	AAC	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7,93	± 9.6 %
0805	AAC	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6 %
0806	AAC	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.37	± 9.6 %
0809	AAC	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6%
0810	AAC	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	8.34	±9.6 %
0812	AAC	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	8.35	±9.6 %
0817	AAC	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TOD	8.35	± 9.6 %
10618	AAC	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	±9.6 %
10819	AAC	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.33	± 9.6 %
10820	AAC	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	AAC	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, QP5K, 30 kHz)	5G NR FR1 TDD	8.36	±9.6 %
10824	AAC	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	±9.6%
10825	AAC	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	±9.6 %
10827	AAC	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 %
10829	AAC	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.40	±9.6 %
10830	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.63	± 9.6 %
10831	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	19.6 %
10832	AAC	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.74	±9.6 %
10633	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	
10834	AAC	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD		±9.6 %
10835	AAC	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	±9.6 %
10836	AAC	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6%
10837	AAC	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.66	±9.6 %
10839	AAC	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	±9.6 %
10840	AAC	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	±9.6 %
10841	AAC	5G NR (CP-OFDM, 1 R8, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	±9.6 %
10843	AAC	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.71	±9.6 %
10844	AAC	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	±9.6 %
10846	AAC	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6 %
10854	AAC	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	19.6%
10855	AAC	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	±9.6 %
10856	AAC	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6 %
10857	AAC	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	19.6%
10858	AAC	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD		±9.6 %
10859	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	±9.6%
10860	AAC	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6%
10861	AAC	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	±9.6 %
10863	AAC	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10864	AAC	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	±9.6%
10865	AAC	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	±9.6 %
10866	AAC	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6 %
10868	AAC	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	and the second se	±9.6 %
10869	AAD	5G NR (DFT-8-OFDM, 1 RB, 100 MHz, QPSK, 30 KHz)	5G NR FR2 TDD	5.89	±9.6%
10870	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 KHz)	5G NR FR2 TDD	5.75	±9.6 %
10871	AAD	5G NR (DFT-s-OFDM, 100% R8, 100 MHz, 16QAM, 120 KHz)	5G NR FR2 TDD	5.86	±9.6%
10872	AAD	5G NR (DFT-S-OFDM, 1785, 100 MHz, 160,000, 120 kHz) 5G NR (DFT-S-OFDM, 100% RB, 100 MHz, 160,000, 120 kHz)	5G NR FR2 TDD	5.75	±9.6 %
10873	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.52	±9.6 %
10874	AAD	5G NR (DFT-s-OFDM, 11HB, 100 MHz, 6402AM, 120 KHz) 5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 640AM, 120 kHz)	56 NR FR2 TDD	6.61	±9.6%
10875	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)		6.65	±9.6 %
10876	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz) 5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD 5G NR FR2 TDD	7.78	±9.6%
10877	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.39	±9.6 %
10878	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz) 5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	±9.6 %
10879	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 100 AM, 120 kHz)	5G NR FR2 TDD	8,41	±9.6%
10880	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)		8.12	±9.6%
10881	AAD		5G NR FR2 TDD	8.38	±9.6%
	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 TOD	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 %
10885	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	± 9.6 %
		5G NR (DFT-s-OFDM, 1 R8, 50 MHz, 84QAM, 120 kHz)	5G NR FR2 TOD	6.61	±9.6

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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 %
8880	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	±9.6 %
6880	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	±9.6 %
0890	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	± 9.6 %
0891	AAD.	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	± 9.6 %
0892	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8,41	± 9.6 %
0897	AAA	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.66	± 9.6 %
89801	AAA	5G NR (DFT-6-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 %
10899	AAA	5G NR (DFT-8-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	19.6 %
10900	AAA	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6 %
10901	AAA	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10902	AAA	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	±9.6 %
10903	AAA	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10904	AAA	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	19.6 %
10905	AAA	5G NR (DFT-6-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10906	AAA	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	19.6 %
10907	AAA	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	19.6 %
10908	AAA	5G NR (DFT-8-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	± 9.6 %
10909	AAA	5G NR (DFT-6-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD		and the second se
10910	AAA	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.96	19.6%
10911	AAA	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	±9.6 %
10912	AAA	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	± 9.6 %
10913	AAA	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	the second s	5.84	±9.6 %
10914	AAA		5G NR FR1 TDD	5.84	± 9.6 %
	and the second second second second	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.85	19.6 %
10915	AAA	5G NR (DFT-s-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	± 9.6 %
10918	AAA	5G NR (DFT-s-OFDM, 50% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	± 9.6 %
10917	AAA	5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	± 9.6 %
10918	AAA	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	± 9.6 %
10919	AAA	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	±9.6 5
10920	AAA	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	± 9.6 %
10921	AAA	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	19.6 %
10922	AAA	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.82	± 9.6 %
10923	AAA	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10924	AAA	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	±9.6 %
10925	AAA	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	±9.6 %
10926	AAA	5G NR (DFT-6-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9,6 %
10927	AAA	5G NR (DFT-6-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	±9.6 %
10928	AAA	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6 %
10929	AAA	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6 %
10930	AAA	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	±9.6 %
10931	AAA	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6 %
10932	AAA	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10933	AAA	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10934	AAA	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10935	AAA	5G NR (DFT-s-OFDM, 1 RB, 50 MHz; QPSK, 15 kHz)	5G NR FR1 FDD	5.51	±9.6 %
10938	AAA	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	± 9.6 %
10937	AAA	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.77	± 9.6 %
10938	AAA	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	19.6 %
10939	AAA	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.82	±9.6 %
10940	AAA	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.89	19.6 9
10941	AAA	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6 %
10942	AAA	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	19.6.9
10943	AAA	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	±9.6.9
10944	AAA	5G NR (DFT-9-OFDM, 100% R8, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	±9.6 %
10945	AAA	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	±9.6%
10946	AAA	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	±9.6%
10947	AAA	5G NR (DFT-9-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	±9.6%
10948	AAA	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 KHz)	5G NR FR1 FDD	5.94	19.6%
10949	AAA	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 KHz)	5G NR FR1 FDD	5.87	
10949	AAA	5G NR (DFT-8-OFDM, 100% RB, 40 MHz, QPSK, 15 KHz) 5G NR (DFT-8-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	-	±9.6.%
10950	AAA	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 KHz)	5G NR FR1 FDD	5.94	±9.6 %
10951	AAA	5G NR (DF1-8-OFDM, 100% RB, 50 MHZ, QPSK, 15 KHZ) 5G NR DL (CP-OFDM, TM 3.1, 5 MHZ, 64-QAM, 15 kHz)	the short we have a structure of a structure of the struc	5.92	±9.6 %
ACRESS 1	PAPA	30 HR GE (GF-OFOW, 1M 3.1, 0 MHZ, 04-GAM, 10 KHZ)	5G NR FR1 FDD	8.25	±9.6%

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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, 84-QAM, 30 kHz)	5G NR FR1 FDD	8.33	±9.6%
10960	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.32	± 9.6 %
10961	AAA	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.36	19.6 %
10962	AAA	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.40	± 9.6 %
10963	AAA	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 TDD	9.55	± 9.6 %
10964	AAA	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.29	± 9.6 %
10965	AAA	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.37	±9.6 %
10966	AAA	5G NR DL (CP-OFDM, TM 3.1; 15 MHz, 84-QAM, 30 kHz)	5G NR FR1 TDD	9.55	±9.6 %
10967	AAA	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.42	±9.6 %
10968	AAA	5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz)	5G NR FR1 TDD	9.49	±9.6%

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

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Attachment 4. – Verification Source Calibration Data



Calibration Laborator Schmid & Partner Engineering AG Joughausstrasse 43, 8004 Zurio	AU 200		Schweizerischer Kalibrierdienst Service suisse d'étalonnage Servizlo svizzero di taratura Swiss Calibration Service
ccredited by the Swiss Accredita he Swiss Accreditation Servic lultilatoral Agreement for the n	e is one of the signato	ries to the EA	ccreditation No.: SCS 0108
lient HCT (Dymstec			s 5G-Veri30-1011_Jul19
CALIBRATION	CERTIFICA	TE	
Object	5G Verification	Source 30 GHz - SN: 1011	
Calibration procedure(s)	QA CAL-45.v2 Calibration pro	cedure for sources in air above 6 G	GHz
Calibration date:	July 17, 2019		and the second
Calibration Equipment used (M& Primary Standards	TE critical for calibration	Cal Date (Certificate No.)	Scheduled Calibration
Reference Probe EUmmWV3 DAE4	SN: 9374 SN: 1215	31-Dec-18 (No. EUmmWV3-9374_Dec18) 22-Feb-19 (No. DAE4-1215_Feb19)	Dec-19 Feb-20
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
		전 단 당 자 재 개 월 자 2019 1 08 a	* 2 x x x x x x x x x x x x x
	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	Saf Illen
Approved by:	Katja Pokovic	Technical Manager	ally
			Issued: July 18, 2019
This calibration certificate shall n	ot be reproduced excep	t in full without written approval of the laboratory	

Certificate No: 5G-Veri30-1011_Jul19

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



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

Accreditation No.: SCS 0108

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

Glossary

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 forward power to the horn antenna is measured prior and after the measurement with a power sensor. During the measurements, the horn is directly connected to the cable and the antenna ohmic and mismatch losses are determined by far-field measurements. (2) 30, 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 + λ/4) with a vectorial E-field probe. The E-field value stated as calibration value represents the E-fieldmaxima and the averaged (1cm² and 4cm²) power density values at 10mm in front of the horn.
- Field polarization: Above the open horn, linear polarization of the field is expected. This is verified graphically in the field representation.

Calibrated Quantity

 Local peak E-field (V/m) and peak values of the total and normal component of the poynting vector [Re{S}] and n.Re{S} averaged over the surface area of 1 cm² (pStotavg1cm² and pSnavg1cm²) and 4cm² (pStotavg4cm² and pSnavg4cm²) at the nominal operational frequency of the verification source.

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

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Measurement Conditions

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

DASY Version	cDASY6 Module mmWave	V1.6
Phantom	5G Phantom	
Distance Horn Aperture - plane	10 mm	
XY Scan Resolution	dx, dy = 2.5 mm	
Number of measured planes	2 (10mm, 10mm + λ/4)	
Frequency	30 GHz ± 10 MHz	

Calibration Parameters, 30 GHz

Distance Horn Aperture to Measured Plane	Prad1 (mW)	Max E-field (V/m)	Uncertainty (k = 2)	Avg Power Density n.Re{S}, Re{S} (W/m2)		Uncertainty (k = 2)
				1 cm ²	4 cm ²	
10 mm	20.0	104	1.27 dB	24.5, 24.7	21.5, 21.8	1.28 dB

¹ derived from far-field data

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DASY Report

Measurement Report for 5G Verification Source 30 GHz, UID 0 -, Channel 30000 (30000.0MHz)

Name, Manufacturer	Dimensions (mm	1	IMEI	DUT Type	
G Verification Source 30 G	Hz 100.0 × 100.0 × 1	00.0	SN: 1011	-	
Exposure Conditions					
hantom Section	Position, Test Distance [mm]	Band	Group,	Frequency [MHz Channel Number	
G +	5.55 mm	Validation band	CW	30000.0, 30000	10
Hardware Setup					
hantom	Medium			Calibration Date	DAE, Calibration Date
nmWave Phantom - 1002	Air		EUmm	WV3 - 5N9374, 2018-12-31	DAE4 5n1215, 2019-02-22
ican Setup				urement Results	
		5G 5			5G Scan
Grid Extents [mm] Grid Steps [lambda] Sensor Surface [mm] MAIA		60.0 x 0.25 x MAIA not i	0.25 Аvg. / 5.55 р5ы а ised p5ь an	Area [cm ²] Jog [W/m ²] Ig [W/m ²]	2019-07-17, 16:48 1.00 24.7 24.5
			Epure Powe	v/m) r Drift [dB]	104
	Averaged II.	0 cm ²] He(5) [r.y. A	(10024.7W/m-22)		

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