SAR TEST REPORT

No. I22Z61294-SEM01

For

TCL Communication Ltd.

Tablet PC

Model Name: 9183G

with

Hardware Version: 05

Software Version: 9H5D

FCC ID: 2ACCJB185

Issued Date: 2022-09-04

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of CTTL.

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I22Z61294-SEM01	Rev.0	2022-08-23	Initial creation of test report
I22Z61294-SEM01	Rev.1	2022-09-04	Update the information on section 4.1. Update the information on section 5.2. Update the information on page 70. Update the information for n78.

TABLE OF CONTENT

1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL(Shouxiang)
Address:	No. 51, Xueyuan Road, Haidian District, Beijing, P. R. China 100191.

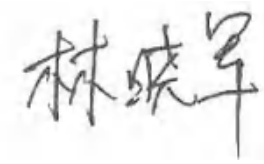
1.2 Testing Environment

Temperature:	18°C~25°C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω
Ambient noise & Reflection:	< 0.012 W/kg

1.3 Project Data

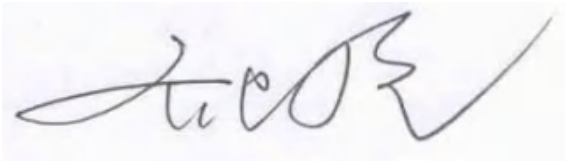
Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	July 26, 2022
Testing End Date:	September 4, 2022

1.4 Signature



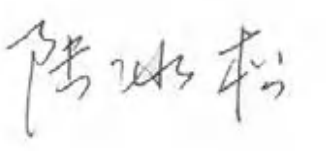
Yao Juming

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory

(Approved this test report)

2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for TCL Communication Ltd. Tablet PC 9183G are as follows:

Table 2.1: Highest Reported SAR (1g)

Technology Band	Body SAR 1g (W/kg)	Equipment Class
GSM850	0.96	PCT
GSM1900	1.14	
WCDMA1900	**1.33**	
WCDMA 850	0.99	
LTE Band5	0.95	
LTE Band7-ANT0	1.30	
LTE Band7-ANT5	0.58	
LTE Band41-PC2	1.03	
LTE Band41-PC3	0.70	
N41	0.97	
N78	0.97	
WLAN 2.4GHz	1.12	DTS
WLAN 5GHz	1.08	NII
Bluetooth	0.45	DSS

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/kg as averaged over any 1g tissue according to the ANSI C95.1-1992.

For body operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and which provides a minimum separation distance of 0mm/14mm/17mm/19mm between this device and the body of the user. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output.

The measurement together with the test system set-up is described in annex C of this test report. A detailed description of the equipment under test can be found in chapter 4 of this test report. The highest reported SAR value is obtained at the case of **(Table 2.1),** and the values are**:**

Body: 1.33 W/kg(1g)

Table 2.2: The sum of SAR values for Main antenna + WiFi-2.4G

	Position	Main antenna	WiFi-2.4G	Sum
Highest SAR value for Body	Top 0mm (GSM1900)	1.00	0.42	**1.42**

Table 2.4: The sum of SAR values for Main antenna + WiFi-5G + BT

	Position	Main antenna	WiFi-5G	BT	Sum
Highest SAR value for Body	Top 0mm (LTE B5)	0.27	1.08	0.20	**1.55**
	Rear 19mm (LTE B41_PC2)	0.64	0.46	0.45	**1.55**

According to the above tables, the highest sum of reported SAR values is **1.55 W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 15.

Conclusion:

According to the above tables, the sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

3 Client Information

3.1 Applicant Information

Company Name:	TCL Communication Ltd.
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3.2 Manufacturer Information

Company Name:	TCL Communication Ltd.
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E-mail:	peter.yang@tcl.com
Telephone:	+86 755 3664 5759
Fax:	+86 755 3661 2000-81722

4 Equipment Under Test (EUT) and Ancillary Equipment (AE)

4.1 About EUT

Description:	Tablet PC
Model name:	9183G
Operating mode(s):	GSM850/900/1800/1900, WCDMA850/900/1900/2100 LTEBand1/3/5/7/8/20/28/38/40/41,n1/3/7/8/28/41/78 BT, Wi-Fi(2.4G&5G)
Tested Tx Frequency:	824 – 849 MHz (GSM 850)
	1850 – 1910 MHz (GSM 1900)
	824 – 849 MHz (WCDMA 850 Band V)
	1850–1910 MHz (WCDMA1900 Band II)
	824.7 – 848.3 MHz (LTE Band 5)
	2500 – 2570 MHz (LTE Band 7)
	2498.5 – 2687.5 MHz (LTE Band41)
	2496 – 2690 MHz (n41)
	3450 – 3550 MHz (n78)
	2412 – 2462 MHz (Wi-Fi 2.4G)
	2400 – 2483.5 MHz (Bluetooth)
	5150 – 5250 MHz (U-NII-1)
	5250 – 5350 MHz (U-NII-2A)
	5500 – 5720 MHz (U-NII-2C)
	5725 – 5850 MHz (U-NII-3)
GPRS/EGPRS Multislot Class:	12
Test device production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Hotspot mode:	Support

4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI/SN	HW Version	SW Version
EUT1	352506670201797	05	9H5D
EUT2	352506670201771	05	9H5D
EUT3	352506670201730	05	9H5D
EUT4	352506670201722	05	9H5D

*EUT ID: is used to identify the test sample in the lab internally.

Note: It is performed to test SAR with the EUT1-2 and conducted power with the EUT3-4.

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	TLp078C1	/	BYD

*AE ID: is used to identify the test sample in the lab internally.

5 TEST METHODOLOGY

5.1 Applicable Limit Regulations

ANSI C95.1–1992:IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

5.2 Applicable Measurement Standards

IEEE 1528–2013: Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

KDB447498 D01: General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

KDB616217 D04 SAR for laptop and tablets v01r02 SAR Evaluation Considerations for Laptop, Notebook, Notebook and Tablet Computers.

KDB941225 D01 SAR test for 3G devices v03r01: SAR Measurement Procedures for 3G Devices

KDB941225 D05 SAR for LTE Devices v02r05: SAR Evaluation Considerations for LTE Devices

KDB941225 D06 Hotspot Mode SAR v02r01: SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities

KDB248227 D01 802.11 Wi-Fi SAR v02r02: SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS

KDB865664 D01 SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz.

KDB865664 D02 RF Exposure Reporting v01r02: RF Exposure Compliance Reporting and Documentation Considerations

6 Specific Absorption Rate (SAR)

6.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

6.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ) . The equation description is as below:

$$SAR = \frac{d}{dt}\left(\frac{dW}{dm}\right) = \frac{d}{dt}\left(\frac{dW}{\rho dv}\right)$$

SAR is expressed in units of Watts per kilogram (W/kg)
SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = c\left(\frac{\delta T}{\delta t}\right)$$

Where: C is the specific head capacity, δT is the temperature rise and δt is the exposure duration, or related to the electrical field in the tissue by

$$SAR = \frac{\sigma |E|^2}{\rho}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

7 Tissue Simulating Liquids

7.1 Targets for tissue simulating liquid

Table 7.1: Targets for tissue simulating liquid

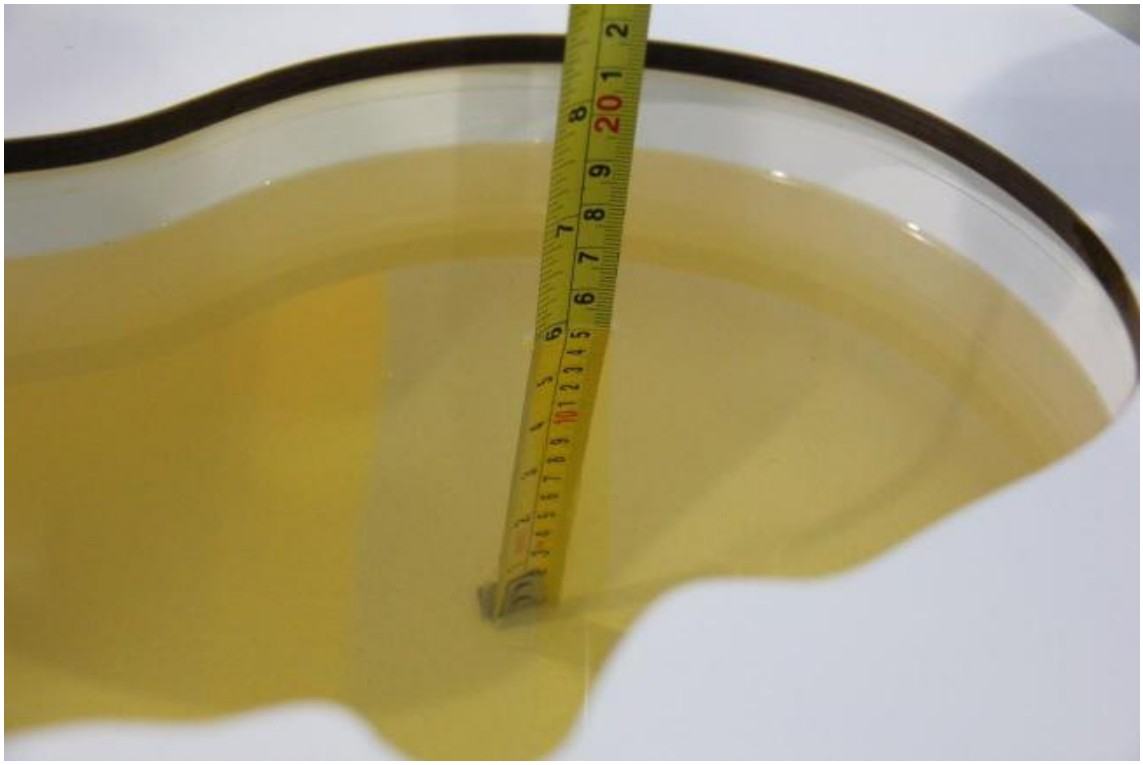
Frequency(MHz)	Liquid Type	Conductivity(σ)	± 5% Range	Permittivity(ε)	± 5% Range
835	Head	0.90	0.86～0.95	41.5	39.4～43.6
1900	Head	1.40	1.33～1.47	40.0	38.0～42.0
2450	Head	1.67	1.59～1.75	39.47	37.5～41.4
2600	Head	1.96	1.86～2.06	39.01	37.1～41.0
5250	Head	4.71	4.47～4.95	35.93	34.13～37.73
5600	Head	5.07	4.82～5.32	35.53	33.8～37.3
5750	Head	5.22	4.96～5.48	35.36	33.59～37.13

7.2 Dielectric Performance

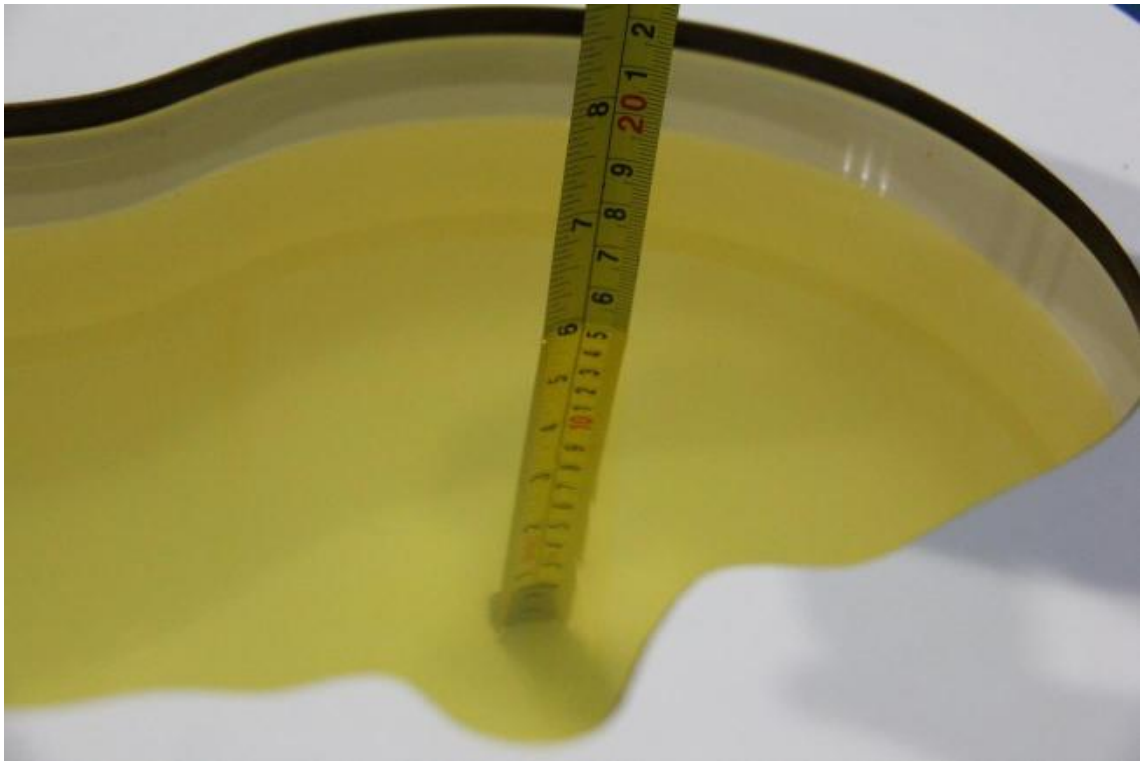
Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ε	Drift (%)	Conductivity σ (S/m)	Drift (%)
2022-7-28	Head	835 MHz	42.96	3.52	0.927	3.00
2022-7-29	Head	1900 MHz	41.7	4.25	1.372	-2.00
2022-7-26	Head	2450 MHz	40.91	4.36	1.809	0.50
2022-8-18	Head	2600 MHz	40.95	4.97	1.907	-2.70
2022-9-4	Head	3500 MHz	39.23	3.43	2.866	-1.51
2022-8-10	Head	5250 MHz	37.47	4.29	4.752	0.89
2022-8-10	Head	5600 MHz	36.93	3.94	5.308	4.69
2022-8-10	Head	5750 MHz	36.93	4.44	5.402	3.49

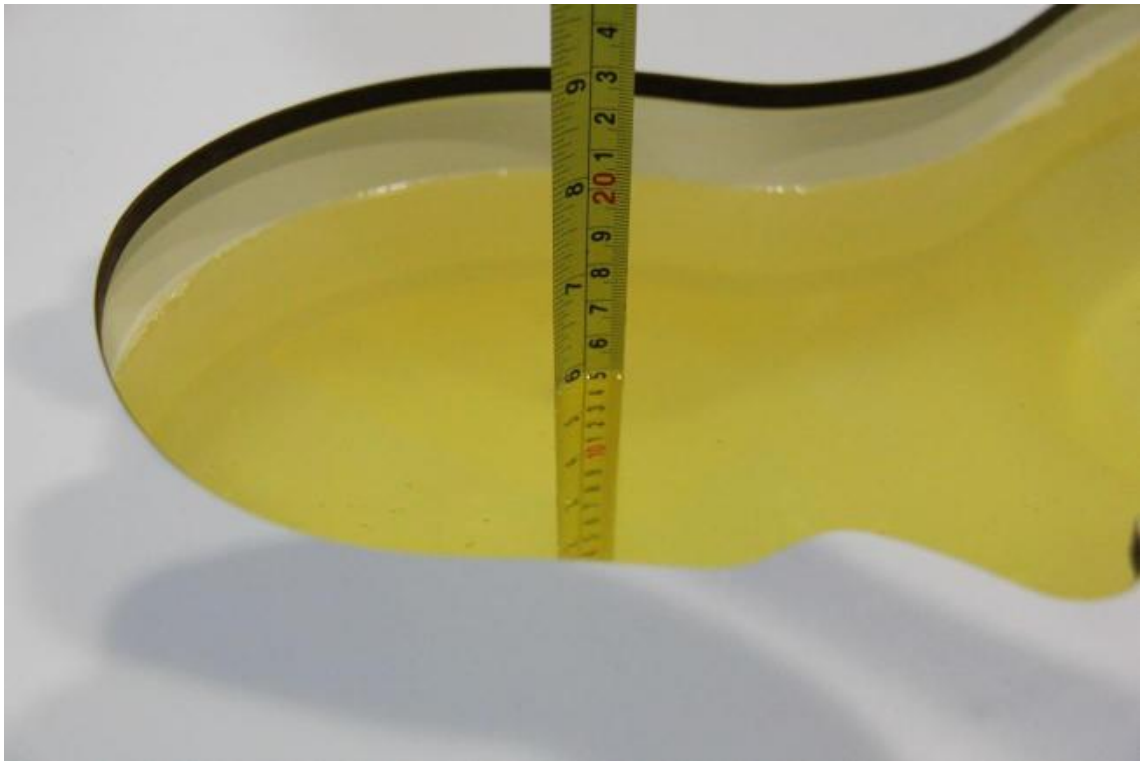
Note: The liquid temperature is 22.0℃



Picture 7-1 Liquid depth in the Head Phantom (835 MHz)

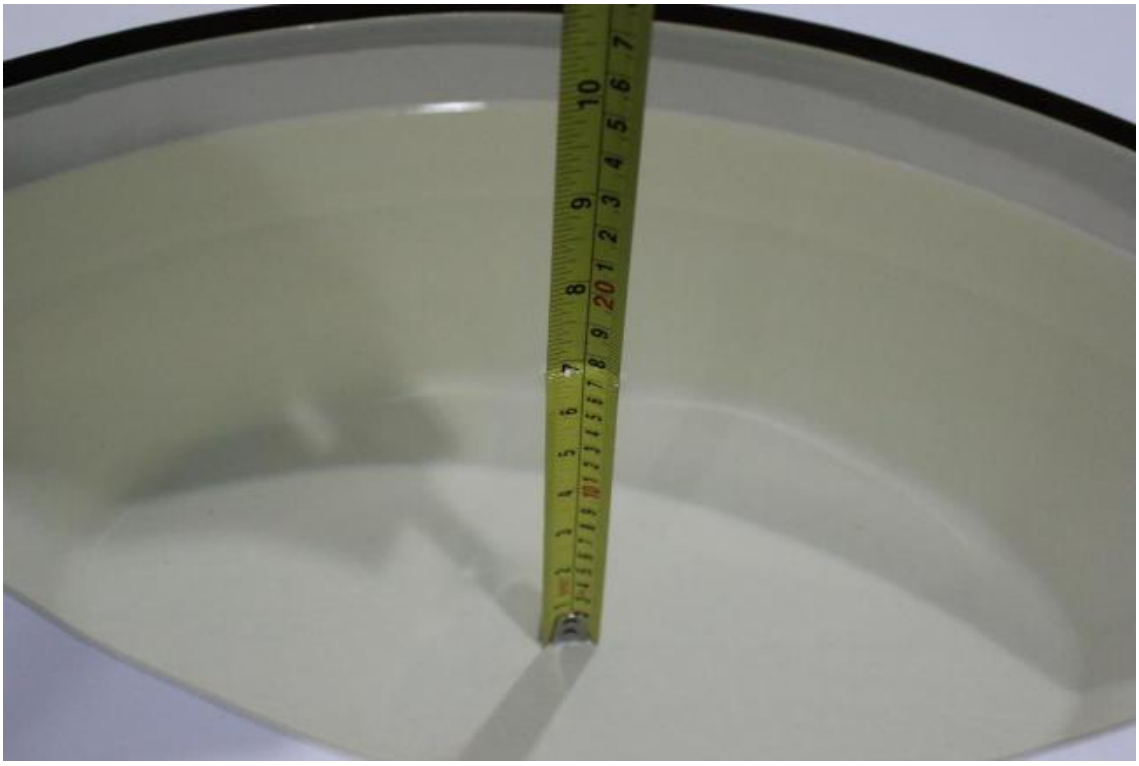


Picture 7-2 Liquid depth in the Head Phantom (1900 MHz)



Picture 7-3 Liquid depth in the Head Phantom (2450MHz)

Picture 7-4 Liquid depth in the Head Phantom (2600 MHz)



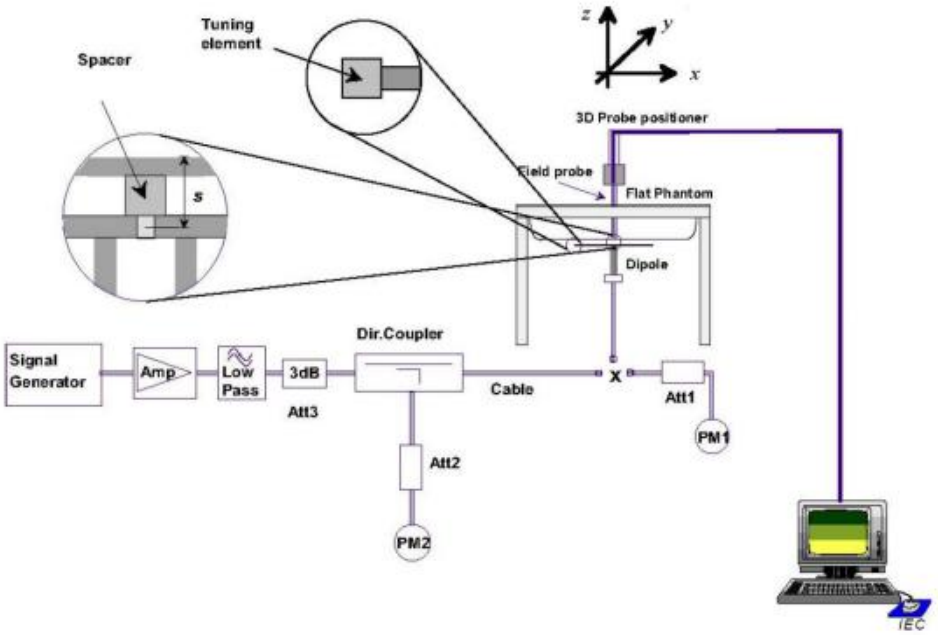
Picture 7-5 Liquid depth in the Head Phantom (3GHz)

Picture 7-6 Liquid depth in the Head Phantom (5GHz)

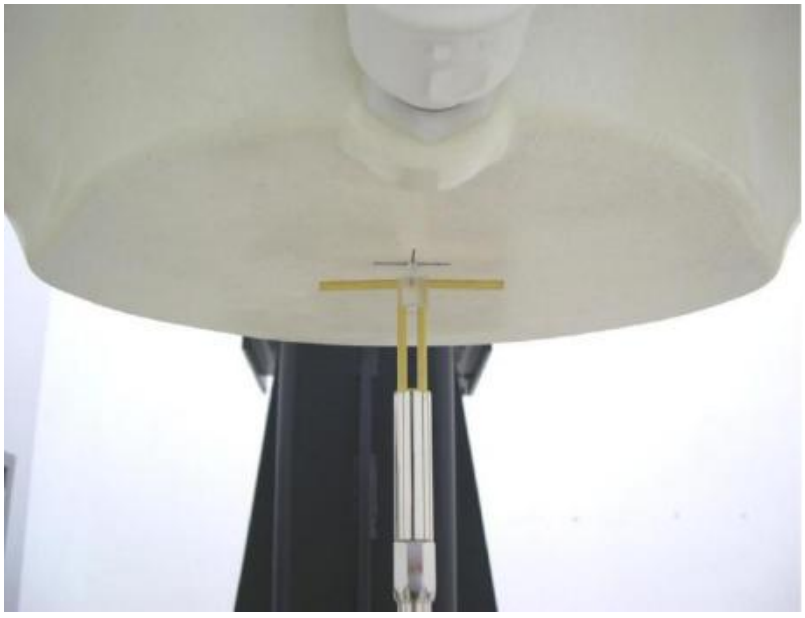
8 System verification

8.1 System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



Picture 8.1 System Setup for System Evaluation



Picture 8.2 Photo of Dipole Setup

8.2 System Verification

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device.

The system verification results are required that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR. The details are presented in annex B.

Table 8.1: System Verification of Head

Measurement Date (yyyy-mm-dd)	Frequency	Target value (W/kg)		Measured value(W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
2022-7-28	835 MHz	6.21	9.65	6.36	9.64	2.42%	-0.10%
2022-7-29	1900 MHz	20.6	39.9	20.6	40.0	0.00%	0.15%
2022-7-26	2450 MHz	24.9	53.3	24.5	53.2	-1.53%	-0.19%
2022-8-18	2600 MHz	25.0	65.3	25.2	56.8	0.64%	-13.02%
2022-9-4	3500 MHz	25.3	67.5	25.2	66.1	-0.40%	-2.07%
2022-8-10	5250 MHz	22.3	78.1	22.1	78.4	-0.90%	0.38%
2022-8-10	5600 MHz	23.7	83.2	22.7	80.8	-4.22%	-2.88%
2022-8-10	5750 MHz	22.8	80.4	21.7	77.7	-4.82%	-3.36%

9 Measurement Procedures

9.1 Tests to be performed

In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in picture 9.1.

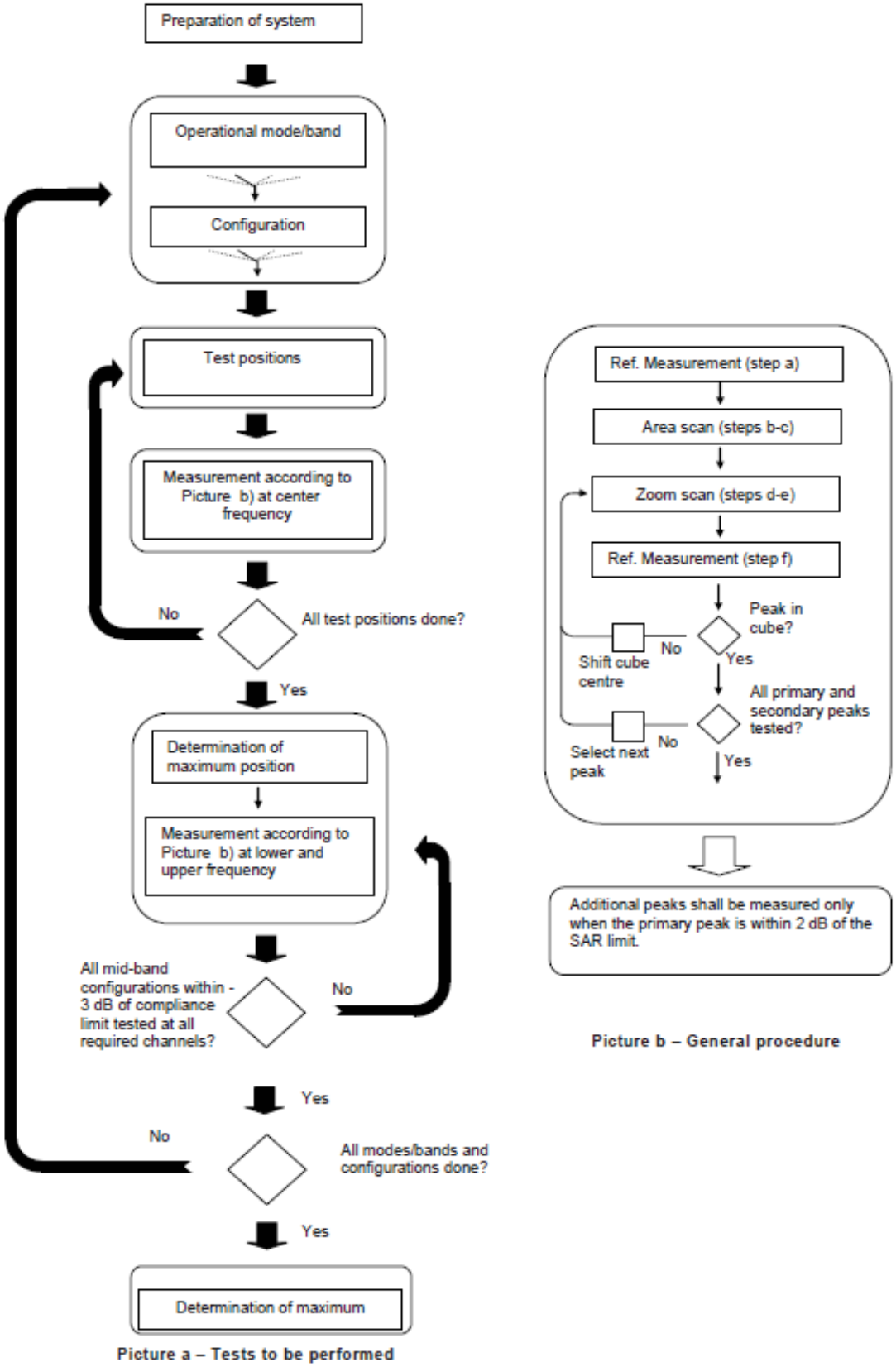
Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:

a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in annex D),
b) all configurations for each device position in a), e.g., antenna extended and retracted, and
c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., $N_c > 3$), then all frequencies, configurations and modes shall be tested for all of the above test conditions.

Step 2: For the condition providing highest peak spatial-average SAR determined in Step 1,perform all tests described in 9.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

Step 3: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.



Picture 9.1Block diagram of the tests to be performed

9.2 General Measurement Procedure

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements and fully documented in SAR reports to qualify for TCB approval. Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2003. The results should be documented as part of the system validation records and may be requested to support test results when all the measurement parameters in the following table are not satisfied.

<table>
<tr><td colspan="3"></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}</td><td>≤ 2 GHz: ≤ 8 mm
2 – 3 GHz: ≤ 5 mm*</td><td>3 – 4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{Zoom}(n)$</td><td>≤ 5 mm</td><td>3 – 4 GHz: ≤ 4 mm
4 – 5 GHz: ≤ 3 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface</td><td>≤ 4 mm</td><td>3 – 4 GHz: ≤ 3 mm
4 – 5 GHz: ≤ 2.5 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td>$\Delta z_{Zoom}(n>1)$: between subsequent points</td><td colspan="2">≤ 1.5·$\Delta z_{Zoom}(n-1)$</td></tr>
<tr><td colspan="2">Minimum zoom scan volume</td><td>x, y, z</td><td>≥ 30 mm</td><td>3 – 4 GHz: ≥ 28 mm
4 – 5 GHz: ≥ 25 mm
5 – 6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
* When zoom scan is required and the <u>reported</u> SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

9.3 WCDMA Measurement Procedures for SAR

The following procedures are applicable to WCDMA handsets operating under 3GPP Release99, Release 5 and Release 6. The default test configuration is to measure SAR with an established radio link between the DUT and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations (DPCCH & $DPDCH_n$), HSDPA and HSPA (HSUPA/HSDPA) modes according to output power, exposure conditions and device operating capabilities. Both uplink and downlink should be configured with the same RMC or AMR, when required. SAR for Release 5 HSDPA and Release 6 HSPA are measured using the applicable FRC (fixed reference channel) and E-DCH reference channel configurations. Maximum output power is verified according to applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. When Maximum Power Reduction (MPR) is not implemented according to Cubic Metric (CM) requirements for Release 6 HSPA, the following procedures do not apply.

For Release 5 HSDPA Data Devices:

Sub-test	β_c	β_d	β_d （SF）	β_c/β_d	β_{hs}	CM/dB
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15	15/15	64	12/15	24/25	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

For Release 6 HSPA Data Devices

Sub-test	β_c	β_d	β_d （SF）	β_c/β_d	β_{hs}	β_{ec}	β_{ed}	β_{ed} （SF）	β_{ed} （codes）	CM (dB)	MPR (dB)	AG Index	E-TFCI
1	11/15	15/15	64	11/15	22/15	209/225	1039/225	4	1	1.5	1.5	20	75
2	6/15	15/15	64	6/15	12/15	12/15	12/15	4	1	1.5	1.5	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}:47/15 β_{ed2}:47/15	4	2	1.5	1.5	15	92
4	2/15	15/15	64	2/15	4/15	4/15	56/75	4	1	1.5	1.5	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.5	1.5	21	81

Rel.8 DC-HSDPA (Cat 24)

SAR test exclusion for Rel.8 DC-HSDPA must satisfy the SAR test exclusion requirements of Rel.5 HSDPA. SAR test exclusion for DC-HSDPA devices is determined by power measurements according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to qualify for SAR test exclusion.

9.4 SAR Measurement for LTE

SAR tests for LTE are performed with a base station simulator, Rohde & Rchwarz CMW500. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. All powers were measured with the CMW 500.
It is performed for conducted power and SAR based on the KDB941225 D05.
SAR is evaluated separately according to the following procedures for the different test positions in each exposure condition – head, body, body-worn accessories and other use conditions. The procedures in the following subsections are applied separately to test each LTE frequency band.

1) QPSK with 1 RB allocation
   Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.
2) QPSK with 50% RB allocation
   The procedures required for 1 RB allocation in 1) are applied to measure the SAR for QPSK with 50% RB allocation.
3) QPSK with 100% RB allocation
   For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

TDD test:

TDD testing is performed using guidance from FCC KDB 941225 D05 and the SAR test guidance provided in April 2013 TCB works hop notes. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211.

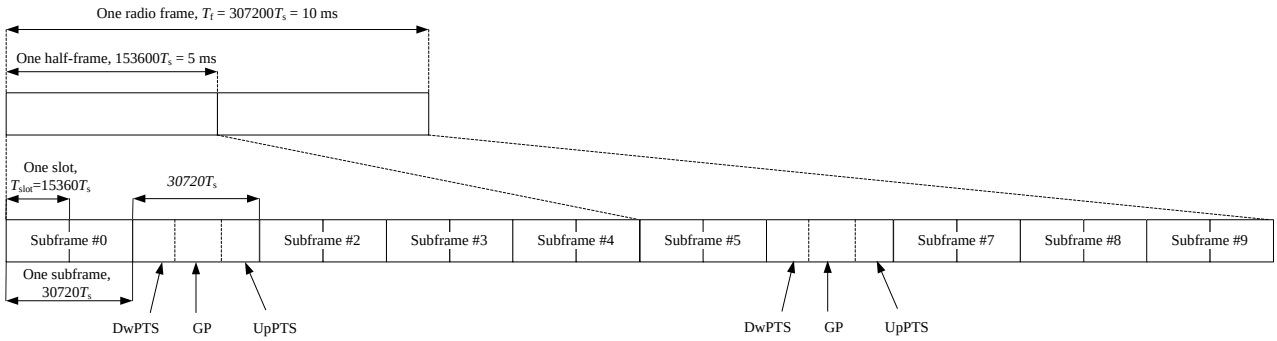


Figure 9.2: Frame structure type 2 (for 5 ms switch-point periodicity)

Table 9.1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592\cdot T_s$	$2192\cdot T_s$	$2560\cdot T_s$	$7680\cdot T_s$	$2192\cdot T_s$	$2560\cdot T_s$
1	$19760\cdot T_s$			$20480\cdot T_s$		
2	$21952\cdot T_s$			$23040\cdot T_s$		
3	$24144\cdot T_s$			$25600\cdot T_s$		
4	$26336\cdot T_s$			$7680\cdot T_s$	$4384\cdot T_s$	$5120\cdot T_s$
5	$6592\cdot T_s$	$4384\cdot T_s$	$5120\cdot T_s$	$20480\cdot T_s$		
6	$19760\cdot T_s$			$23040\cdot T_s$		
7	$21952\cdot T_s$			$12800\cdot T_s$		
8	$24144\cdot T_s$			-	-	-
9	$13168\cdot T_s$			-	-	-

Table 9.2: Uplink-downlink configurations

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Duty factor is calculated by:

Duty factor = uplink frame*6+UpPTS*2/one frame length

= (30720.T_s * 6+5120. T_s*2)/307200.T_s

= 0.633

9.5 Bluetooth & Wi-Fi Measurement Procedures for SAR

Normal network operating configurations are not suitable for measuring the SAR of 802.11 transmitters in general. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure that the results are consistent and reliable.

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in a test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

9.6 Power Drift

To control the output power stability during the SAR test, DASY5 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in section14 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

10 Area Scan Based 1-g SAR

10.1 Requirement of KDB

According to the KDB447498 D01, when the implementation is based the specific polynomial fit algorithm as presented at the 29th Bioelectromagnetics Society meeting (2007) and the estimated 1-gSAR is ≤ 1.2 W/kg, a zoom scan measurement is not required provided it is also not needed for any other purpose; for example, if the peak SAR location required for simultaneous transmission SAR test exclusion can be determined accurately by the SAR system or manually to discriminate between distinctive peaks and scattered noisy SAR distributions from area scans.

There must not be any warning or alert messages due to various measurement concerns identified by the SAR system; for example, noise in measurements, peaks too close to scan boundary, peaks are too sharp, spatial resolution and uncertainty issues etc. The SAR system verification must also demonstrate that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR (See Annex B). When all the SAR results for each exposure condition in a frequency band and wireless mode are based on estimated 1-g SAR, the 1-g SAR for the highest SAR configuration must be determined by a zoom scan.

10.2 Fast SAR Algorithms

The approach is based on the area scan measurement applying a frequency dependent attenuation parameter. This attenuation parameter was empirically determined by analyzing a large number of phones. The MOTOROLA FAST SAR was developed and validated by the MOTOROLA Research Group in Ft. Lauderdale.

In the initial study, an approximation algorithm based on Linear fit was developed. The accuracy of the algorithm has been demonstrated across a broad frequency range (136-2450 MHz)and for both 1- and 10-g averaged SAR using a sample of 264 SAR measurements from 55wireless handsets. For the sample size studied, the root-mean-squared errors of the algorithm mare 1.2% and 5.8% for 1- and 10-g averaged SAR, respectively. The paper describing the algorithm in detail is expected to be published in August 2004 within the Special Issue of Transactions on MTT.

In the second step, the same research group optimized the fitting algorithm to an Polynomial fit whereby the frequency validity was extended to cover the range 30-6000MHz. Details of this study can be found in the BEMS 2007 Proceedings.

Both algorithms are implemented in DASY software.

11 Conducted Output Power

There are two sets of tune-up power, Normal power and Low power, for all bands by proximity sensor. The detail of proximity sensor is presented in Annex I.

11.1 GSM Measurement result

Table 11.1-1: The conducted power for GSM – Normal power

GSM 850	Measured Power (dBm)			**Tune up**	calculation	Averaged Power (dBm)		
GPRS (GMSK)	251	190	128			251	190	128
1 Txslot	31.93	31.73	31.87	33.00	-9.03	22.90	22.70	22.84
2 Txslots	31.44	31.21	31.37	32.50	-6.02	25.42	25.19	25.35
3 Txslots	**29.92**	**29.61**	**29.81**	**31.00**	**-4.26**	**25.66**	**25.35**	**25.55**
4 Txslots	28.62	28.33	28.51	29.50	-3.01	25.61	25.32	25.50
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	251	190	128			251	190	128
1 Txslot	31.93	31.74	31.87	33.00	-9.03	22.90	22.71	22.84
2 Txslots	31.45	31.22	31.37	32.50	-6.02	25.43	25.20	25.35
3 Txslots	**29.94**	**29.62**	**29.82**	**31.00**	**-4.26**	**25.68**	**25.36**	**25.56**
4 Txslots	28.64	28.35	28.52	29.50	-3.01	25.63	25.34	25.51
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	251	190	128			251	190	128
1 Txslot	25.93	26.83	25.90	27.00	-9.03	16.90	17.80	16.87
2 Txslots	24.99	24.84	25.04	26.00	-6.02	18.97	18.82	19.02
3Txslots	24.52	23.69	23.78	25.50	-4.26	20.26	19.43	19.52
4 Txslots	22.06	21.70	21.91	23.00	-3.01	19.05	18.69	18.90
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	810	661	512			810	661	512
1 Txslot	29.38	29.34	29.20	30.50	-9.03	20.35	20.31	20.17
2 Txslots	29.07	28.86	28.48	30.00	-6.02	23.05	22.84	22.46
3 Txslots	**28.00**	**27.34**	**26.97**	**28.50**	**-4.26**	**23.74**	**23.08**	**22.71**
4 Txslots	26.74	26.07	25.42	27.00	-3.01	23.73	23.06	22.41
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	810	661	512			810	661	512
1 Txslot	29.24	29.25	29.13	30.50	-9.03	20.21	20.22	20.10
2 Txslots	28.94	28.78	28.41	30.00	-6.02	22.92	22.76	22.39
3Txslots	**27.88**	**27.26**	**29.91**	**28.50**	**-4.26**	**23.62**	**23.00**	**25.65**
4 Txslots	26.62	26.00	25.35	27.00	-3.01	23.61	22.99	22.34
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	810	661	512			810	661	512
1 Txslot	25.39	25.35	25.15	26.50	-9.03	16.36	16.32	16.12
2 Txslots	24.59	24.49	24.32	25.50	-6.02	18.57	18.47	18.30

3Txslots	22.82	22.69	22.23	24.00	-4.26	18.56	18.43	17.97
4 Txslots	21.69	21.52	21.94	23.00	-3.01	18.68	18.51	18.93

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

According to the conducted power as above, the body measurements are performed with 3Txslots for GSM850/1900.

Table 11.1-2: The conducted power for GSM – Low power

GSM 850	Measured Power (dBm)			**Tune up**	calculation	Averaged Power (dBm)		
GPRS (GMSK)	251	190	128			251	190	128
1 Txslot	26.49	26.02	26.40	27.00	-9.03	17.46	16.99	17.37
2 Txslots	**25.29**	**24.84**	**25.31**	**26.50**	**-6.02**	**19.27**	**18.82**	**19.29**
3 Txslots	23.22	22.77	23.33	24.50	-4.26	18.96	18.51	19.07
4 Txslots	21.24	20.75	21.31	22.00	-3.01	18.23	17.74	18.30
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	251	190	128			251	190	128
1 Txslot	26.46	26.00	26.38	27.00	-9.03	17.43	16.97	17.35
2 Txslots	25.26	24.81	25.29	26.50	-6.02	19.24	18.79	19.27
3 Txslots	23.20	22.74	23.32	24.50	-4.26	18.94	18.48	19.06
4 Txslots	21.24	20.73	21.30	22.00	-3.01	18.23	17.72	18.29
GSM 850	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	251	190	128			251	190	128
1 Txslot	21.82	21.48	21.48	22.00	-9.03	12.79	12.45	12.45
2 Txslots	20.36	20.14	20.43	21.00	-6.02	14.34	14.12	14.41
3Txslots	18.23	17.87	18.16	19.00	-4.26	13.97	13.61	13.90
4 Txslots	16.00	15.84	16.16	17.00	-3.01	12.99	12.83	13.15
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
GPRS (GMSK)	810	661	512			810	661	512
1 Txslot	20.81	20.53	20.20	21.50	-9.03	11.78	11.50	11.17
2 Txslots	**19.77**	**19.50**	**19.30**	**20.00**	**-6.02**	**13.75**	**13.48**	**13.28**
3 Txslots	17.77	17.50	17.12	18.50	-4.26	13.51	13.24	12.86
4 Txslots	15.73	15.46	15.13	17.00	-3.01	12.72	12.45	12.12
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (GMSK)	810	661	512			810	661	512
1 Txslot	20.73	20.50	20.18	21.50	-9.03	11.70	11.47	11.15

2 Txslots	19.71	19.47	19.29	20.00	-6.02	13.69	13.45	13.27
3Txslots	17.72	17.48	17.10	18.50	-4.26	13.46	13.22	12.84
4 Txslots	15.69	15.44	15.11	17.00	-3.01	12.68	12.43	12.10
PCS1900	Measured Power (dBm)				calculation	Averaged Power (dBm)		
EGPRS (8PSK)	810	661	512			810	661	512
1 Txslot	16.02	15.60	15.19	16.50	-9.03	6.99	6.57	6.16
2 Txslots	14.75	14.45	14.10	15.50	-6.02	8.73	8.43	8.08
3Txslots	12.56	12.33	12.33	14.00	-4.26	8.30	8.07	8.07
4 Txslots	10.46	10.17	9.89	11.00	-3.01	7.45	7.16	6.88

NOTES:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

According to the conducted power as above, the body measurements are performed with 2Txslot for GSM850/1900.

11.2 WCDMA Measurement result

Table 11.2-1: The conducted Power for WCDMA – Normal power

WCDMA850	**FDDV result (dBm)**			**Tune up**
	4233/4458	**4183/4408**	**4132/4357**	
	(846.6MHz)	**(836.6MHz)**	**(826.4MHz)**	
	23.18	23.24	23.31	24.50
HSUPA	20.85	20.86	20.47	22.00
	20.34	20.35	20.46	21.50
	20.56	20.59	20.67	22.50
	19.86	19.89	19.99	21.50
	21.34	21.35	21.44	22.50
HSPA+	22	21.99	22.03	23.00
DC-HSDPA	21.67	21.67	21.83	23.50
	21.66	21.66	21.73	23.50
	21.01	21.05	21.14	23.00
	21.05	21.09	21.12	23.00
WCDMA1900	**FDDII result (dBm)**			**Tune up**
	9538/9938	**9400/9800**	**9262/9662**	
	(1907.6MHz)	**(1880MHz)**	**(1852.4MHz)**	
	22.46	22.28	22.39	23.00
HSUPA	20.7	20.70	20.73	22.00
	20.3	20.29	20.26	21.50
	20.58	20.57	20.57	21.50
	19.78	19.76	20.73	21.00
	21.13	21.11	21.10	22.50
HSPA+	21.78	21.67	21.64	23.00
DC-HSDPA	21.55	21.58	21.60	23.00
	21.59	21.51	21.63	23.00
	21.09	21.12	21.16	22.50
	21.11	21.11	21.12	22.50

Table 11.2-2: The conducted Power for WCDMA – Low power

WCDMA850	**FDDV result (dBm)**			**Tune up**
	4233/4458	**4183/4408**	**4132/4357**	
	(846.6MHz)	**(836.6MHz)**	**(826.4MHz)**	
	16.56	16.57	16.59	17.50
HSUPA	14.07	14.19	14.23	15.00
	13.63	13.71	13.78	14.50
	13.64	14.68	14.73	15.50
	13.18	13.28	13.33	14.50
	14.53	14.65	14.71	15.50
HSPA+	15.14	15.34	15.29	16.00
DC-HSDPA	15.52	15.89	15.96	16.50
	15.31	15.54	15.49	16.50
	15.01	15.15	15.18	16.00
	14.96	15.11	15.14	16.00
WCDMA1900	**FDDII result (dBm)**			**Tune up**
	9538/9938	**9400/9800**	**9262/9662**	
	(1907.6MHz)	**(1880MHz)**	**(1852.4MHz)**	
	10.39	10.37	10.35	12.00
HSUPA	8.83	8.83	8.82	10.00
	8.42	8.41	8.40	9.50
	8.43	8.41	8.40	9.50
	7.93	7.94	7.93	9.00
	9.33	9.30	9.29	10.50
HSPA+	10.02	9.98	10.03	11.00
DC-HSDPA	10.29	10.51	10.48	11.00
	10.27	10.23	10.41	11.00
	9.91	9.89	9.87	10.50
	9.86	9.85	9.83	10.50

11.3 LTE Measurement result

Table 11.3-1: Maximum Power Reduction (MPR) for LTE- Normal power

Modulation	Channel bandwidth / Transmission bandwidth configuration [RB]						MPR (dB)
	1.4	3	5	10	15	20	
	MHz	MHz	MHz	MHz	MHz	MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	3

Table 11.3-2: Maximum Power Reduction (MPR) for LTE-Low power

Modulation	Channel bandwidth / Transmission bandwidth configuration [RB]						MPR (dB)
	1.4	3	5	10	15	20	
	MHz	MHz	MHz	MHz	MHz	MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	0
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	0
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	0
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	0
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	0

Table 11.3-3: The tune up for LTE

Band	Tune up	
	Normal power	Low power
LTE Band 5-Standalone	24	20
LTE Band 5-ENDC	24	16
LTE Band 7-ANT0	24.5	15.5
LTE Band 7-ANT5	24	14
LTE Band 41-PC2	27	13
LTE Band 41-PC3	24	10

LTE Band5-Standalone/ENDC Normal Power

1.4MHz	1RB-High (5)	848.3 (20643)	23.52	22.68	21.61
		836.5 (20525)	23.57	22.80	21.65
		824.7 (20407)	23.62	22.82	21.69
	1RB-Middle (3)	848.3 (20643)	23.53	22.63	21.68
		836.5 (20525)	23.61	22.80	21.68
		824.7 (20407)	23.60	22.73	21.66
	1RB-Low (0)	848.3 (20643)	23.52	22.75	21.65
		836.5 (20525)	23.58	22.82	21.68
		824.7 (20407)	23.57	22.78	21.64
	3RB-High (3)	848.3 (20643)	23.55	22.48	21.56
		836.5 (20525)	23.58	22.62	21.65
		824.7 (20407)	23.67	22.53	21.68
	3RB-Middle (1)	848.3 (20643)	23.55	22.53	21.64
		836.5 (20525)	23.56	22.57	21.60
		824.7 (20407)	23.62	22.60	21.69
	3RB-Low (0)	848.3 (20643)	23.54	22.58	21.60
		836.5 (20525)	23.58	22.61	21.64
		824.7 (20407)	23.60	22.60	21.65
	6RB (0)	848.3 (20643)	22.56	21.61	20.48
		836.5 (20525)	22.58	21.63	20.51
		824.7 (20407)	22.62	21.64	20.52
3MHz	1RB-High (14)	847.5 (20635)	23.53	22.67	21.63
		836.5 (20525)	23.57	22.80	21.70
		825.5 (20415)	23.59	22.82	21.71
	1RB-Middle (7)	847.5 (20635)	23.49	22.67	21.60
		836.5 (20525)	23.63	22.78	21.70
		825.5 (20415)	23.64	22.69	21.73
	1RB-Low (0)	847.5 (20635)	23.54	22.75	21.61
		836.5 (20525)	23.52	22.67	21.68
		825.5 (20415)	23.60	22.85	21.65
	8RB-High (7)	847.5 (20635)	22.51	21.57	20.52
		836.5 (20525)	22.56	21.63	20.58
		825.5 (20415)	22.54	21.57	20.58
	8RB-Middle (4)	847.5 (20635)	22.50	21.58	20.55
		836.5 (20525)	22.58	21.62	20.56
		825.5 (20415)	22.55	21.67	20.57
	8RB-Low (0)	847.5 (20635)	22.56	21.62	20.52
		836.5 (20525)	22.49	21.56	20.55
		825.5 (20415)	22.59	21.64	20.61
	15RB (0)	847.5 (20635)	22.50	21.56	20.50
		836.5 (20525)	22.54	21.58	20.51
		825.5 (20415)	22.54	21.58	20.53

5MHz	1RB-High (24)	846.5 (20625)	23.57	22.64	21.62
		836.5 (20525)	23.61	22.70	21.67
		826.5 (20425)	23.62	22.90	21.73
	1RB-Middle (12)	846.5 (20625)	23.62	22.72	21.68
		836.5 (20525)	23.67	22.78	21.75
		826.5 (20425)	23.60	22.73	21.71
	1RB-Low (0)	846.5 (20625)	23.60	22.75	21.69
		836.5 (20525)	23.68	22.80	21.76
		826.5 (20425)	23.64	22.77	21.68
	12RB-High (13)	846.5 (20625)	22.53	21.51	20.55
		836.5 (20525)	22.52	21.49	20.50
		826.5 (20425)	22.60	21.54	20.61
	12RB-Middle (6)	846.5 (20625)	22.52	21.54	20.55
		836.5 (20525)	22.56	21.59	20.58
		826.5 (20425)	22.63	21.59	20.60
	12RB-Low (0)	846.5 (20625)	22.60	21.61	20.63
		836.5 (20525)	22.57	21.58	20.60
		826.5 (20425)	22.59	21.58	20.59
	25RB (0)	846.5 (20625)	22.55	21.55	20.54
		836.5 (20525)	22.60	21.61	20.60
		826.5 (20425)	22.56	21.59	20.56

10MHz	1RB-High (49)	844 (20600)	23.61	22.69	21.63
		836.5 (20525)	23.61	22.68	21.63
		829 (20450)	23.61	22.76	21.68
	1RB-Middle (24)	844 (20600)	23.60	22.69	21.72
		836.5 (20525)	23.71	22.82	21.78
		829 (20450)	23.69	22.90	21.76
	1RB-Low (0)	844 (20600)	23.64	22.86	21.63
		836.5 (20525)	23.67	22.83	21.75
		829 (20450)	23.65	22.83	21.73
	25RB-High (25)	844 (20600)	22.56	21.58	20.52
		836.5 (20525)	22.58	21.58	20.55
		829 (20450)	22.63	21.61	20.55
	25RB-Middle (12)	844 (20600)	22.64	21.62	20.61
		836.5 (20525)	22.59	21.59	20.55
		829 (20450)	22.61	21.61	20.58
	25RB-Low (0)	844 (20600)	22.65	21.71	20.63
		836.5 (20525)	22.65	21.64	20.62
		829 (20450)	22.56	21.59	20.52
	50RB (0)	844 (20600)	22.61	21.63	20.58
		836.5 (20525)	22.62	21.61	20.63
		829 (20450)	22.61	21.55	20.57

LTE Band5-Standalone Low Power

1.4MHz	1RB-High (5)	848.3 (20643)	19.34	19.63	19.49
		836.5 (20525)	19.40	19.65	19.51
		824.7 (20407)	19.44	19.72	19.58
	1RB-Middle (3)	848.3 (20643)	19.34	19.60	19.45
		836.5 (20525)	19.46	19.58	19.51
		824.7 (20407)	19.46	19.71	19.55
	1RB-Low (0)	848.3 (20643)	19.36	19.68	19.55
		836.5 (20525)	19.45	19.62	19.58
		824.7 (20407)	19.44	19.61	19.53
	3RB-High (3)	848.3 (20643)	19.35	19.42	19.47
		836.5 (20525)	19.44	19.42	19.52
		824.7 (20407)	19.45	19.45	19.52
	3RB-Middle (1)	848.3 (20643)	19.39	19.44	19.45
		836.5 (20525)	19.43	19.42	19.49
		824.7 (20407)	19.43	19.42	19.51
	3RB-Low (0)	848.3 (20643)	19.40	19.33	19.41
		836.5 (20525)	19.45	19.46	19.53
		824.7 (20407)	19.48	19.49	19.54
	6RB (0)	848.3 (20643)	19.41	19.46	19.37
		836.5 (20525)	19.42	19.54	19.37
		824.7 (20407)	19.48	19.54	19.40
3MHz	1RB-High (14)	847.5 (20635)	19.36	19.63	19.53
		836.5 (20525)	19.41	19.61	19.56
		825.5 (20415)	19.43	19.72	19.51
	1RB-Middle (7)	847.5 (20635)	19.34	19.50	19.53
		836.5 (20525)	19.44	19.74	19.67
		825.5 (20415)	19.45	19.70	19.63
	1RB-Low (0)	847.5 (20635)	19.42	19.64	19.60
		836.5 (20525)	19.38	19.52	19.54
		825.5 (20415)	19.42	19.62	19.60
	8RB-High (7)	847.5 (20635)	19.39	19.45	19.47
		836.5 (20525)	19.44	19.51	19.49
		825.5 (20415)	19.44	19.49	19.48
	8RB-Middle (4)	847.5 (20635)	19.39	19.49	19.47
		836.5 (20525)	19.45	19.52	19.52
		825.5 (20415)	19.43	19.52	19.50
	8RB-Low (0)	847.5 (20635)	19.38	19.48	19.46
		836.5 (20525)	19.40	19.45	19.42
		825.5 (20415)	19.43	19.48	19.47
	15RB (0)	847.5 (20635)	19.38	19.44	19.42
		836.5 (20525)	19.43	19.46	19.42
		825.5 (20415)	19.43	19.46	19.46

5MHz	1RB-High (24)	846.5 (20625)	19.43	19.68	19.51
		836.5 (20525)	19.50	19.67	19.55
		826.5 (20425)	19.49	19.80	19.64
	1RB-Middle (12)	846.5 (20625)	19.49	19.59	19.53
		836.5 (20525)	19.53	19.74	19.73
		826.5 (20425)	19.46	19.74	19.60
	1RB-Low (0)	846.5 (20625)	19.49	19.62	19.58
		836.5 (20525)	19.52	19.74	19.63
		826.5 (20425)	19.49	19.69	19.60
	12RB-High (13)	846.5 (20625)	19.40	19.39	19.47
		836.5 (20525)	19.43	19.39	19.49
		826.5 (20425)	19.46	19.44	19.53
	12RB-Middle (6)	846.5 (20625)	19.41	19.42	19.46
		836.5 (20525)	19.46	19.45	19.46
		826.5 (20425)	19.44	19.47	19.49
	12RB-Low (0)	846.5 (20625)	19.50	19.50	19.56
		836.5 (20525)	19.47	19.49	19.49
		826.5 (20425)	19.48	19.46	19.48
	25RB (0)	846.5 (20625)	19.42	19.48	19.43
		836.5 (20525)	19.48	19.48	19.46
		826.5 (20425)	19.47	19.49	19.48

10MHz	1RB-High (49)	844 (20600)	19.40	19.58	19.56
		836.5 (20525)	19.44	19.68	19.56
		829 (20450)	19.44	19.71	19.54
	1RB-Middle (24)	844 (20600)	19.43	19.73	19.57
		836.5 (20525)	19.57	19.73	19.67
		829 (20450)	19.54	19.67	19.70
	1RB-Low (0)	844 (20600)	19.48	19.71	19.59
		836.5 (20525)	19.55	19.78	19.67
		829 (20450)	19.50	19.77	19.66
	25RB-High (25)	844 (20600)	19.39	19.44	19.46
		836.5 (20525)	19.48	19.44	19.49
		829 (20450)	19.50	19.56	19.55
	25RB-Middle (12)	844 (20600)	19.49	19.52	19.50
		836.5 (20525)	19.43	19.50	19.50
		829 (20450)	19.53	19.51	19.51
	25RB-Low (0)	844 (20600)	19.53	19.54	19.56
		836.5 (20525)	19.54	19.53	19.55
		829 (20450)	19.42	19.51	19.50
	50RB (0)	844 (20600)	19.44	19.47	19.51
		836.5 (20525)	19.50	19.52	19.51
		829 (20450)	19.48	19.46	19.47

LTE Band5- ENDC Low Power

1.4MHz	1RB-High (5)	848.3 (20643)	15.51	15.78	15.61
		836.5 (20525)	15.55	15.78	15.71
		824.7 (20407)	15.61	15.78	15.70
	1RB-Middle (3)	848.3 (20643)	15.54	15.79	15.70
		836.5 (20525)	15.62	15.82	15.74
		824.7 (20407)	15.60	15.78	15.66
	1RB-Low (0)	848.3 (20643)	15.49	15.73	15.63
		836.5 (20525)	15.57	15.76	15.79
		824.7 (20407)	15.60	15.72	15.72
	3RB-High (3)	848.3 (20643)	15.57	15.59	15.61
		836.5 (20525)	15.61	15.63	15.61
		824.7 (20407)	15.60	15.65	15.68
	3RB-Middle (1)	848.3 (20643)	15.54	15.61	15.65
		836.5 (20525)	15.61	15.60	15.69
		824.7 (20407)	15.65	15.61	15.69
	3RB-Low (0)	848.3 (20643)	15.56	15.62	15.65
		836.5 (20525)	15.63	15.65	15.66
		824.7 (20407)	15.66	15.57	15.73
	6RB (0)	848.3 (20643)	15.60	15.62	15.54
		836.5 (20525)	15.59	15.64	15.54
		824.7 (20407)	15.64	15.71	15.60
3MHz	1RB-High (14)	847.5 (20635)	15.52	15.64	15.60
		836.5 (20525)	15.56	15.82	15.68
		825.5 (20415)	15.57	15.82	15.71
	1RB-Middle (7)	847.5 (20635)	15.54	15.71	15.73
		836.5 (20525)	15.64	15.84	15.82
		825.5 (20415)	15.63	15.83	15.83
	1RB-Low (0)	847.5 (20635)	15.54	15.74	15.72
		836.5 (20525)	15.55	15.77	15.65
		825.5 (20415)	15.59	15.85	15.74
	8RB-High (7)	847.5 (20635)	15.52	15.64	15.58
		836.5 (20525)	15.61	15.66	15.63
		825.5 (20415)	15.58	15.66	15.68
	8RB-Middle (4)	847.5 (20635)	15.54	15.64	15.58
		836.5 (20525)	15.60	15.67	15.63
		825.5 (20415)	15.56	15.65	15.64
	8RB-Low (0)	847.5 (20635)	15.54	15.67	15.62
		836.5 (20525)	15.53	15.64	15.60
		825.5 (20415)	15.56	15.69	15.67
	15RB (0)	847.5 (20635)	15.51	15.60	15.58
		836.5 (20525)	15.58	15.60	15.57
		825.5 (20415)	15.58	15.61	15.60

5MHz	1RB-High (24)	846.5 (20625)	15.62	15.76	15.69
		836.5 (20525)	15.64	15.77	15.75
		826.5 (20425)	15.65	15.92	15.83
	1RB-Middle (12)	846.5 (20625)	15.61	15.76	15.76
		836.5 (20525)	15.68	15.88	15.82
		826.5 (20425)	15.61	15.85	15.73
	1RB-Low (0)	846.5 (20625)	15.62	15.89	15.75
		836.5 (20525)	15.65	15.79	15.74
		826.5 (20425)	15.66	15.81	15.72
	12RB-High (13)	846.5 (20625)	15.58	15.55	15.61
		836.5 (20525)	15.56	15.57	15.60
		826.5 (20425)	15.62	15.63	15.68
	12RB-Middle (6)	846.5 (20625)	15.54	15.56	15.60
		836.5 (20525)	15.58	15.63	15.62
		826.5 (20425)	15.57	15.58	15.62
	12RB-Low (0)	846.5 (20625)	15.63	15.64	15.69
		836.5 (20525)	15.62	15.61	15.65
		826.5 (20425)	15.58	15.62	15.65
	25RB (0)	846.5 (20625)	15.55	15.56	15.59
		836.5 (20525)	15.61	15.64	15.61
		826.5 (20425)	15.59	15.65	15.59

10MHz	1RB-High (49)	844 (20600)	15.56	15.77	15.70
		836.5 (20525)	15.54	15.85	15.76
		829 (20450)	15.58	15.85	15.70
	1RB-Middle (24)	844 (20600)	15.54	15.77	15.72
		836.5 (20525)	15.69	15.76	15.80
		829 (20450)	15.63	15.85	15.75
	1RB-Low (0)	844 (20600)	15.70	15.84	15.78
		836.5 (20525)	15.66	15.81	15.80
		829 (20450)	15.65	15.88	15.79
	25RB-High (25)	844 (20600)	15.55	15.56	15.59
		836.5 (20525)	15.57	15.56	15.57
		829 (20450)	15.62	15.64	15.63
	25RB-Middle (12)	844 (20600)	15.63	15.63	15.60
		836.5 (20525)	15.56	15.58	15.57
		829 (20450)	15.57	15.63	15.61
	25RB-Low (0)	844 (20600)	15.64	15.69	15.64
		836.5 (20525)	15.68	15.64	15.62
		829 (20450)	15.56	15.58	15.57
	50RB (0)	844 (20600)	15.62	15.62	15.63
		836.5 (20525)	15.62	15.62	15.59
		829 (20450)	15.61	15.59	15.60

LTE Band7- ANT0 Normal Power

5MHz	1RB-High (24)	2567.5 (21425)	23.79	23.06	21.98
		2535 (21100)	23.71	22.86	21.96
		2502.5 (20775)	23.68	22.86	21.90
	1RB-Middle (12)	2567.5 (21425)	23.79	22.97	22.05
		2535 (21100)	23.72	23.05	21.92
		2502.5 (20775)	23.64	22.98	21.96
	1RB-Low (0)	2567.5 (21425)	23.84	23.07	22.17
		2535 (21100)	23.70	22.93	21.95
		2502.5 (20775)	23.64	22.81	21.92
	12RB-High (13)	2567.5 (21425)	22.67	21.80	20.82
		2535 (21100)	22.59	21.71	20.73
		2502.5 (20775)	22.62	21.72	20.73
	12RB-Middle (6)	2567.5 (21425)	22.73	21.86	20.90
		2535 (21100)	22.64	21.76	20.77
		2502.5 (20775)	22.64	21.75	20.74
	12RB-Low (0)	2567.5 (21425)	22.80	21.96	20.96
		2535 (21100)	22.67	21.85	20.80
		2502.5 (20775)	22.61	21.73	20.75
	25RB (0)	2567.5 (21425)	22.78	21.91	20.89
		2535 (21100)	22.63	21.79	20.74
		2502.5 (20775)	22.64	21.77	20.75
10MHz	1RB-High (49)	2565 (21400)	23.71	22.99	21.98
		2535 (21100)	23.72	22.97	21.95
		2505 (20800)	23.65	22.77	21.83
	1RB-Middle (24)	2565 (21400)	23.79	22.95	22.05
		2535 (21100)	23.63	22.86	21.93
		2505 (20800)	23.63	22.77	21.81
	1RB-Low (0)	2565 (21400)	23.85	23.08	22.08
		2535 (21100)	23.68	22.98	21.87
		2505 (20800)	23.65	22.88	21.79
	25RB-High (25)	2565 (21400)	22.65	21.80	20.75
		2535 (21100)	22.60	21.74	20.69
		2505 (20800)	22.61	21.77	20.71
	25RB-Middle (12)	2565 (21400)	22.79	21.98	20.92
		2535 (21100)	22.60	21.78	20.74
		2505 (20800)	22.63	21.77	20.68
	25RB-Low (0)	2565 (21400)	22.84	22.03	20.99
		2535 (21100)	22.67	21.79	20.78
		2505 (20800)	22.63	21.78	20.75
	50RB (0)	2565 (21400)	22.73	21.88	20.84
		2535 (21100)	22.64	21.75	20.69
		2505 (20800)	22.62	21.69	20.67

15MHz	1RB-High (74)	2562.5 (21375)	23.62	22.91	21.88
		2535 (21100)	23.55	22.88	21.83
		2507.5 (20825)	23.53	22.76	21.82
	1RB-Middle (37)	2562.5 (21375)	23.73	22.91	22.02
		2535 (21100)	23.59	22.89	21.86
		2507.5 (20825)	23.57	22.72	21.86
	1RB-Low (0)	2562.5 (21375)	23.72	22.98	21.98
		2535 (21100)	23.60	22.82	21.86
		2507.5 (20825)	23.53	22.73	21.76
	36RB-High (38)	2562.5 (21375)	22.63	21.76	20.82
		2535 (21100)	22.51	21.64	20.66
		2507.5 (20825)	22.59	21.74	20.72
	36RB-Middle (19)	2562.5 (21375)	22.68	21.85	20.86
		2535 (21100)	22.58	21.71	20.76
		2507.5 (20825)	22.56	21.64	20.65
	36RB-Low (0)	2562.5 (21375)	22.70	21.85	20.85
		2535 (21100)	22.61	21.73	20.72
		2507.5 (20825)	22.57	21.66	20.66
	75RB (0)	2562.5 (21375)	22.73	21.80	20.80
		2535 (21100)	22.57	21.72	20.64
		2507.5 (20825)	22.60	21.67	20.64

20MHz	1RB-High (99)	2560 (21350)	23.58	22.80	21.93
		2535 (21100)	23.51	22.82	21.76
		2510 (20850)	23.51	22.71	21.81
	1RB-Middle (50)	2560 (21350)	23.72	23.03	21.92
		2535 (21100)	23.56	22.74	21.81
		2510 (20850)	23.51	22.64	21.83
	1RB-Low (0)	2560 (21350)	23.68	22.94	21.93
		2535 (21100)	23.53	22.88	21.84
		2510 (20850)	23.58	22.62	21.73
	50RB-High (50)	2560 (21350)	22.56	21.72	20.70
		2535 (21100)	22.48	21.61	20.60
		2510 (20850)	22.55	21.72	20.69
	50RB-Middle (25)	2560 (21350)	22.75	21.88	20.86
		2535 (21100)	22.62	21.76	20.69
		2510 (20850)	22.55	21.68	20.68
	50RB-Low (0)	2560 (21350)	22.74	21.88	20.88
		2535 (21100)	22.63	21.75	20.74
		2510 (20850)	22.56	21.74	20.66
	100RB (0)	2560 (21350)	22.63	21.73	20.75
		2535 (21100)	22.54	21.66	20.61
		2510 (20850)	22.69	21.67	20.72

LTE Band7- ANT0 Low Power

5MHz	1RB-High (24)	2567.5 (21425)	14.57	14.77	14.76
		2535 (21100)	14.49	14.66	14.72
		2502.5 (20775)	14.45	14.71	14.60
	1RB-Middle (12)	2567.5 (21425)	14.63	14.77	14.73
		2535 (21100)	14.55	14.70	14.73
		2502.5 (20775)	14.46	14.68	14.60
	1RB-Low (0)	2567.5 (21425)	14.65	14.90	14.78
		2535 (21100)	14.53	14.72	14.68
		2502.5 (20775)	14.42	14.69	14.57
	12RB-High (13)	2567.5 (21425)	14.53	14.55	14.59
		2535 (21100)	14.44	14.43	14.49
		2502.5 (20775)	14.45	14.44	14.48
	12RB-Middle (6)	2567.5 (21425)	14.58	14.56	14.64
		2535 (21100)	14.51	14.50	14.52
		2502.5 (20775)	14.48	14.47	14.53
	12RB-Low (0)	2567.5 (21425)	14.65	14.67	14.68
		2535 (21100)	14.56	14.54	14.60
		2502.5 (20775)	14.45	14.46	14.51
	25RB (0)	2567.5 (21425)	14.59	14.64	14.64
		2535 (21100)	14.47	14.48	14.50
		2502.5 (20775)	14.50	14.51	14.53
10MHz	1RB-High (49)	2565 (21400)	14.59	14.80	14.74
		2535 (21100)	14.49	14.76	14.57
		2505 (20800)	14.42	14.76	14.53
	1RB-Middle (24)	2565 (21400)	14.66	14.93	14.84
		2535 (21100)	14.51	14.73	14.67
		2505 (20800)	14.49	14.71	14.60
	1RB-Low (0)	2565 (21400)	14.63	14.89	14.82
		2535 (21100)	14.49	14.75	14.68
		2505 (20800)	14.40	14.69	14.56
	25RB-High (25)	2565 (21400)	14.51	14.49	14.54
		2535 (21100)	14.50	14.49	14.46
		2505 (20800)	14.44	14.49	14.48
	25RB-Middle (12)	2565 (21400)	14.68	14.68	14.67
		2535 (21100)	14.52	14.52	14.56
		2505 (20800)	14.44	14.50	14.45
	25RB-Low (0)	2565 (21400)	14.72	14.76	14.70
		2535 (21100)	14.53	14.57	14.60
		2505 (20800)	14.47	14.54	14.51
	50RB (0)	2565 (21400)	14.54	14.62	14.63
		2535 (21100)	14.53	14.50	14.52
		2505 (20800)	14.45	14.47	14.47

15MHz	1RB-High (74)	2562.5 (21375)	14.50	14.74	14.73
		2535 (21100)	14.43	14.71	14.62
		2507.5 (20825)	14.39	14.71	14.50
	1RB-Middle (37)	2562.5 (21375)	14.60	14.78	14.77
		2535 (21100)	14.48	14.78	14.61
		2507.5 (20825)	14.41	14.66	14.66
	1RB-Low (0)	2562.5 (21375)	14.54	14.76	14.74
		2535 (21100)	14.39	14.62	14.56
		2507.5 (20825)	14.34	14.69	14.55
	36RB-High (38)	2562.5 (21375)	14.49	14.55	14.54
		2535 (21100)	14.44	14.45	14.42
		2507.5 (20825)	14.42	14.47	14.51
	36RB-Middle (19)	2562.5 (21375)	14.61	14.59	14.62
		2535 (21100)	14.50	14.53	14.49
		2507.5 (20825)	14.42	14.42	14.45
	36RB-Low (0)	2562.5 (21375)	14.60	14.59	14.67
		2535 (21100)	14.50	14.55	14.54
		2507.5 (20825)	14.40	14.43	14.50
	75RB (0)	2562.5 (21375)	14.53	14.59	14.60
		2535 (21100)	14.46	14.49	14.44
		2507.5 (20825)	14.47	14.48	14.41

20MHz	1RB-High (99)	2560 (21350)	14.46	14.76	14.66
		2535 (21100)	14.53	14.72	14.60
		2510 (20850)	14.44	14.59	14.53
	1RB-Middle (50)	2560 (21350)	14.62	14.90	14.68
		2535 (21100)	14.51	14.80	14.72
		2510 (20850)	14.38	14.62	14.55
	1RB-Low (0)	2560 (21350)	14.65	14.79	14.70
		2535 (21100)	14.38	14.60	14.47
		2510 (20850)	14.31	14.62	14.60
	50RB-High (50)	2560 (21350)	14.45	14.48	14.49
		2535 (21100)	14.41	14.37	14.38
		2510 (20850)	14.57	14.53	14.49
	50RB-Middle (25)	2560 (21350)	14.65	14.66	14.66
		2535 (21100)	14.50	14.53	14.52
		2510 (20850)	14.39	14.39	14.48
	50RB-Low (0)	2560 (21350)	14.62	14.60	14.62
		2535 (21100)	14.52	14.56	14.59
		2510 (20850)	14.49	14.47	14.52
	100RB (0)	2560 (21350)	14.48	14.53	14.54
		2535 (21100)	14.44	14.42	14.47
		2510 (20850)	14.49	14.45	14.47

LTE Band7- ANT5 Normal Power

5MHz	1RB-High (24)	2567.5 (21425)	23.69	22.66	21.73
		2535 (21100)	23.61	22.76	21.62
		2502.5 (20775)	23.54	22.72	21.55
	1RB-Middle (12)	2567.5 (21425)	23.69	22.68	21.61
		2535 (21100)	23.57	22.62	21.62
		2502.5 (20775)	23.56	22.60	21.58
	1RB-Low (0)	2567.5 (21425)	23.72	22.88	21.76
		2535 (21100)	23.62	22.68	21.59
		2502.5 (20775)	23.55	22.62	21.61
	12RB-High (13)	2567.5 (21425)	22.64	21.55	20.66
		2535 (21100)	22.53	21.44	20.53
		2502.5 (20775)	22.56	21.42	20.57
	12RB-Middle (6)	2567.5 (21425)	22.65	21.64	20.74
		2535 (21100)	22.58	21.51	20.61
		2502.5 (20775)	22.58	21.46	20.61
	12RB-Low (0)	2567.5 (21425)	22.77	21.65	20.80
		2535 (21100)	22.63	21.52	20.66
		2502.5 (20775)	22.58	21.48	20.64
	25RB (0)	2567.5 (21425)	22.70	21.70	20.72
		2535 (21100)	22.54	21.50	20.54
		2502.5 (20775)	22.54	21.50	20.58
10MHz	1RB-High (49)	2565 (21400)	23.67	22.74	21.64
		2535 (21100)	23.56	22.65	21.54
		2505 (20800)	23.53	22.63	21.55
	1RB-Middle (24)	2565 (21400)	23.70	22.87	21.68
		2535 (21100)	23.55	22.68	21.56
		2505 (20800)	23.56	22.63	21.55
	1RB-Low (0)	2565 (21400)	23.72	22.80	21.77
		2535 (21100)	23.57	22.61	21.51
		2505 (20800)	23.49	22.66	21.55
	25RB-High (25)	2565 (21400)	22.58	21.52	20.59
		2535 (21100)	22.51	21.47	20.57
		2505 (20800)	22.58	21.50	20.59
	25RB-Middle (12)	2565 (21400)	22.69	21.68	20.74
		2535 (21100)	22.58	21.52	20.57
		2505 (20800)	22.58	21.51	20.60
	25RB-Low (0)	2565 (21400)	22.80	21.75	20.81
		2535 (21100)	22.64	21.53	20.59
		2505 (20800)	22.57	21.52	20.56
	50RB (0)	2565 (21400)	22.65	21.60	20.68
		2535 (21100)	22.56	21.50	20.61
		2505 (20800)	22.57	21.48	20.57

15MHz	1RB-High (74)	2562.5 (21375)	23.54	22.61	21.56
		2535 (21100)	23.45	22.61	21.52
		2507.5 (20825)	23.44	22.57	21.46
	1RB-Middle (37)	2562.5 (21375)	23.64	22.72	21.62
		2535 (21100)	23.53	22.59	21.50
		2507.5 (20825)	23.45	22.61	21.46
	1RB-Low (0)	2562.5 (21375)	23.61	22.68	21.63
		2535 (21100)	23.49	22.50	21.41
		2507.5 (20825)	23.43	22.53	21.46
	36RB-High (38)	2562.5 (21375)	22.53	21.51	20.61
		2535 (21100)	22.45	21.38	20.50
		2507.5 (20825)	22.54	21.47	20.56
	36RB-Middle (19)	2562.5 (21375)	22.63	21.57	20.70
		2535 (21100)	22.53	21.42	20.55
		2507.5 (20825)	22.49	21.42	20.55
	36RB-Low (0)	2562.5 (21375)	22.65	21.58	20.73
		2535 (21100)	22.53	21.46	20.61
		2507.5 (20825)	22.48	21.43	20.53
	75RB (0)	2562.5 (21375)	22.66	21.57	20.65
		2535 (21100)	22.48	21.48	20.53
		2507.5 (20825)	22.53	21.42	20.53

20MHz	1RB-High (99)	2560 (21350)	23.61	22.72	21.59
		2535 (21100)	23.61	22.55	21.55
		2510 (20850)	23.55	22.65	21.49
	1RB-Middle (50)	2560 (21350)	23.68	22.74	21.62
		2535 (21100)	23.65	22.58	21.55
		2510 (20850)	23.62	22.65	21.55
	1RB-Low (0)	2560 (21350)	23.69	22.68	21.56
		2535 (21100)	23.57	22.55	21.51
		2510 (20850)	23.59	22.53	21.42
	50RB-High (50)	2560 (21350)	22.63	21.48	20.56
		2535 (21100)	22.69	21.43	20.51
		2510 (20850)	22.53	21.57	20.66
	50RB-Middle (25)	2560 (21350)	22.67	21.65	20.75
		2535 (21100)	22.68	21.52	20.65
		2510 (20850)	22.62	21.52	20.63
	50RB-Low (0)	2560 (21350)	22.78	21.65	20.70
		2535 (21100)	22.71	21.58	20.69
		2510 (20850)	22.47	21.57	20.66
	100RB (0)	2560 (21350)	22.68	21.53	20.60
		2535 (21100)	22.69	21.48	20.55
		2510 (20850)	22.46	21.55	20.62

LTE Band7- ANT5 Low Power

5MHz	1RB-High (24)	2567.5 (21425)	13.39	13.61	13.58
		2535 (21100)	13.32	13.51	13.54
		2502.5 (20775)	13.28	13.56	13.43
	1RB-Middle (12)	2567.5 (21425)	13.45	13.61	13.55
		2535 (21100)	13.38	13.55	13.55
		2502.5 (20775)	13.29	13.53	13.43
	1RB-Low (0)	2567.5 (21425)	13.47	13.73	13.60
		2535 (21100)	13.36	13.57	13.50
		2502.5 (20775)	13.26	13.54	13.40
	12RB-High (13)	2567.5 (21425)	13.36	13.41	13.42
		2535 (21100)	13.27	13.30	13.33
		2502.5 (20775)	13.28	13.31	13.32
	12RB-Middle (6)	2567.5 (21425)	13.40	13.42	13.47
		2535 (21100)	13.34	13.37	13.36
		2502.5 (20775)	13.31	13.34	13.37
	12RB-Low (0)	2567.5 (21425)	13.47	13.52	13.50
		2535 (21100)	13.38	13.40	13.43
		2502.5 (20775)	13.28	13.33	13.35
	25RB (0)	2567.5 (21425)	13.41	13.50	13.47
		2535 (21100)	13.30	13.35	13.34
		2502.5 (20775)	13.33	13.38	13.37
10MHz	1RB-High (49)	2565 (21400)	13.41	13.64	13.56
		2535 (21100)	13.32	13.61	13.40
		2505 (20800)	13.26	13.61	13.37
	1RB-Middle (24)	2565 (21400)	13.48	13.76	13.65
		2535 (21100)	13.34	13.58	13.49
		2505 (20800)	13.32	13.56	13.43
	1RB-Low (0)	2565 (21400)	13.45	13.73	13.63
		2535 (21100)	13.32	13.60	13.50
		2505 (20800)	13.24	13.54	13.39
	25RB-High (25)	2565 (21400)	13.34	13.36	13.37
		2535 (21100)	13.33	13.36	13.30
		2505 (20800)	13.27	13.36	13.32
	25RB-Middle (12)	2565 (21400)	13.49	13.53	13.49
		2535 (21100)	13.35	13.38	13.39
		2505 (20800)	13.27	13.37	13.29
	25RB-Low (0)	2565 (21400)	13.53	13.61	13.52
		2535 (21100)	13.36	13.43	13.43
		2505 (20800)	13.30	13.40	13.35
	50RB (0)	2565 (21400)	13.37	13.48	13.46
		2535 (21100)	13.36	13.37	13.36
		2505 (20800)	13.28	13.34	13.31

15MHz	1RB-High (74)	2562.5 (21375)	13.33	13.59	13.55
		2535 (21100)	13.26	13.56	13.45
		2507.5 (20825)	13.23	13.56	13.34
	1RB-Middle (37)	2562.5 (21375)	13.42	13.62	13.59
		2535 (21100)	13.31	13.62	13.44
		2507.5 (20825)	13.25	13.51	13.48
	1RB-Low (0)	2562.5 (21375)	13.37	13.61	13.56
		2535 (21100)	13.23	13.48	13.39
		2507.5 (20825)	13.18	13.54	13.38
	36RB-High (38)	2562.5 (21375)	13.32	13.41	13.37
		2535 (21100)	13.27	13.32	13.26
		2507.5 (20825)	13.26	13.34	13.35
	36RB-Middle (19)	2562.5 (21375)	13.43	13.45	13.45
		2535 (21100)	13.33	13.39	13.33
		2507.5 (20825)	13.26	13.29	13.29
	36RB-Low (0)	2562.5 (21375)	13.42	13.45	13.49
		2535 (21100)	13.33	13.41	13.37
		2507.5 (20825)	13.24	13.30	13.34
	75RB (0)	2562.5 (21375)	13.36	13.45	13.43
		2535 (21100)	13.29	13.36	13.28
		2507.5 (20825)	13.30	13.35	13.25

20MHz	1RB-High (99)	2560 (21350)	13.28	13.61	13.48
		2535 (21100)	13.27	13.57	13.43
		2510 (20850)	13.24	13.45	13.37
	1RB-Middle (50)	2560 (21350)	13.37	13.73	13.50
		2535 (21100)	13.39	13.64	13.54
		2510 (20850)	13.31	13.48	13.38
	1RB-Low (0)	2560 (21350)	13.29	13.63	13.52
		2535 (21100)	13.22	13.46	13.31
		2510 (20850)	13.30	13.48	13.43
	50RB-High (50)	2560 (21350)	13.31	13.35	13.33
		2535 (21100)	13.35	13.25	13.23
		2510 (20850)	13.34	13.39	13.33
	50RB-Middle (25)	2560 (21350)	13.41	13.51	13.48
		2535 (21100)	13.38	13.39	13.36
		2510 (20850)	13.35	13.26	13.32
	50RB-Low (0)	2560 (21350)	13.49	13.46	13.45
		2535 (21100)	13.46	13.42	13.42
		2510 (20850)	13.36	13.34	13.36
	100RB (0)	2560 (21350)	13.41	13.39	13.37
		2535 (21100)	13.40	13.29	13.31
		2510 (20850)	13.32	13.32	13.31

LTE Band41 PC2 Normal Power

5MHz	1RB-High (24)	2687.5 (41565)	26.62	25.67	24.45
		2640.3(41093)	26.67	25.73	24.51
		2593 (40620)	26.78	25.85	24.63
		2545.8(40148)	26.61	25.65	24.49
		2498.5 (39675)	26.65	25.72	24.49
	1RB-Middle (12)	2687.5 (41565)	26.52	25.68	24.50
		2640.3(41093)	26.68	25.70	24.53
		2593 (40620)	26.78	25.86	24.69
		2545.8(40148)	26.70	25.70	24.51
		2498.5 (39675)	26.68	25.68	24.50
	1RB-Low (0)	2687.5 (41565)	26.59	25.71	24.51
		2640.3(41093)	26.67	25.72	24.52
		2593 (40620)	26.85	25.87	24.67
		2545.8(40148)	26.62	25.66	24.46
		2498.5 (39675)	26.66	25.69	24.48
	12RB-High (13)	2687.5 (41565)	25.55	24.57	23.57
		2640.3(41093)	25.59	24.58	23.61
		2593 (40620)	25.68	24.66	23.69
		2545.8(40148)	25.55	24.53	23.57
		2498.5 (39675)	25.55	24.54	23.56
	12RB-Middle (6)	2687.5 (41565)	25.57	24.60	23.60
		2640.3(41093)	25.58	24.56	23.57
		2593 (40620)	25.70	24.69	23.72
		2545.8(40148)	25.55	24.55	23.58
		2498.5 (39675)	25.55	24.55	23.57
	12RB-Low (0)	2687.5 (41565)	25.63	24.65	23.66
		2640.3(41093)	25.60	24.61	23.61
		2593 (40620)	25.74	24.73	23.76
		2545.8(40148)	25.56	24.53	23.57
		2498.5 (39675)	25.58	24.58	23.58
	25RB (0)	2687.5 (41565)	25.58	24.65	23.61
		2640.3(41093)	25.61	24.65	23.64
		2593 (40620)	25.69	24.75	23.73
		2545.8(40148)	25.52	24.57	23.57
		2498.5 (39675)	25.56	24.60	23.61

10MHz	1RB-High (49)	2685 (41540)	26.65	25.61	24.40
		2639(41080)	26.62	25.69	24.47
		2593 (40620)	26.72	25.81	24.55
		2547(40160)	26.60	25.69	24.45
		2501 (39700)	26.58	25.70	24.46
	1RB-Middle (24)	2685 (41540)	26.63	25.70	24.47
		2639(41080)	26.61	25.69	24.47
		2593 (40620)	26.76	25.86	24.63
		2547(40160)	26.60	25.67	24.45
		2501 (39700)	26.58	25.68	24.43
	1RB-Low (0)	2685 (41540)	26.64	25.71	24.49
		2639(41080)	26.67	25.74	24.51
		2593 (40620)	26.76	25.85	24.58
		2547(40160)	26.57	25.66	24.44
		2501 (39700)	26.62	25.67	24.44
	25RB-High (25)	2685 (41540)	25.53	24.59	23.59
		2639(41080)	25.57	24.63	23.63
		2593 (40620)	25.63	24.70	23.71
		2547(40160)	25.52	24.56	23.57
		2501 (39700)	25.57	24.59	23.60
	25RB-Middle (12)	2685 (41540)	25.57	24.64	23.64
		2639(41080)	25.55	24.59	23.59
		2593 (40620)	25.65	24.68	23.72
		2547(40160)	25.53	24.58	23.59
		2501 (39700)	25.52	24.59	23.57
	25RB-Low (0)	2685 (41540)	25.62	24.70	23.68
		2639(41080)	25.55	24.61	23.61
		2593 (40620)	25.69	24.75	23.73
		2547(40160)	25.52	24.57	23.57
		2501 (39700)	25.50	24.56	23.56
	50RB (0)	2685 (41540)	25.63	24.66	23.60
		2639(41080)	25.62	24.64	23.58
		2593 (40620)	25.68	24.71	23.65
		2547(40160)	25.57	24.58	23.55
		2501 (39700)	25.58	24.57	23.53

15MHz	1RB-High (74)	2682.5 (41515)	26.48	25.56	24.34
		2637.8(41068)	26.53	25.65	24.39
		2593 (40620)	26.64	25.73	24.50
		2548.3(40173)	26.52	25.64	24.41
		2503.5 (39725)	26.48	25.60	24.38
	1RB-Middle (37)	2682.5 (41515)	26.59	25.64	24.43
		2637.8(41068)	26.59	25.69	24.46
		2593 (40620)	26.75	25.83	24.61
		2548.3(40173)	26.60	25.66	24.45
		2503.5 (39725)	26.57	25.67	24.46
	1RB-Low (0)	2682.5 (41515)	26.58	25.67	24.46
		2637.8(41068)	26.59	25.71	24.48
		2593 (40620)	26.69	25.81	24.55
		2548.3(40173)	26.51	25.61	24.41
		2503.5 (39725)	26.53	25.60	24.38
	36RB-High (38)	2682.5 (41515)	25.51	24.51	23.50
		2637.8(41068)	25.54	24.54	23.51
		2593 (40620)	25.60	24.60	23.62
		2548.3(40173)	25.51	24.49	23.51
		2503.5 (39725)	25.50	24.50	23.50
	36RB-Middle (19)	2682.5 (41515)	25.56	24.57	23.55
		2637.8(41068)	25.54	24.52	23.51
		2593 (40620)	25.63	24.61	23.61
		2548.3(40173)	25.50	24.49	23.49
		2503.5 (39725)	25.49	24.48	23.45
	36RB-Low (0)	2682.5 (41515)	25.60	24.59	23.59
		2637.8(41068)	25.57	24.55	23.54
		2593 (40620)	25.67	24.64	23.64
		2548.3(40173)	25.49	24.47	23.49
		2503.5 (39725)	25.49	24.46	23.46
	75RB (0)	2682.5 (41515)	25.60	24.61	23.58
		2637.8(41068)	25.60	24.58	23.56
		2593 (40620)	25.68	24.67	23.65
		2548.3(40173)	25.53	24.54	23.51
		2503.5 (39725)	25.53	24.52	23.47

20MHz	1RB-High (99)	2680 (41490)	26.47	25.53	24.34
		2636.5(41055)	26.55	25.66	24.40
		2593 (40620)	26.67	25.74	24.52
		2549.5(40185)	26.52	25.61	24.38
		2506 (39750)	26.55	25.65	24.41
	1RB-Middle (50)	2680 (41490)	26.57	25.65	24.43
		2636.5(41055)	26.67	25.74	24.54
		2593 (40620)	26.77	25.88	24.64
		2549.5(40185)	26.64	25.70	24.49
		2506 (39750)	26.66	25.74	24.51
	1RB-Low (0)	2680 (41490)	26.59	25.65	24.44
		2636.5(41055)	26.66	25.76	24.54
		2593 (40620)	26.68	25.76	24.54
		2549.5(40185)	26.58	25.65	24.42
		2506 (39750)	26.59	25.63	24.42
	50RB-High (50)	2680 (41490)	25.53	24.56	23.51
		2636.5(41055)	25.65	24.68	23.62
		2593 (40620)	25.70	24.74	23.69
		2549.5(40185)	25.58	24.60	23.52
		2506 (39750)	25.63	24.64	23.60
	50RB-Middle (25)	2680 (41490)	25.62	24.68	23.63
		2636.5(41055)	25.67	24.69	23.64
		2593 (40620)	25.73	24.75	23.70
		2549.5(40185)	25.61	24.62	23.56
		2506 (39750)	25.62	24.64	23.58
	50RB-Low (0)	2680 (41490)	25.70	24.72	23.66
		2636.5(41055)	25.71	24.73	23.67
		2593 (40620)	25.79	24.81	23.74
		2549.5(40185)	25.61	24.65	23.59
		2506 (39750)	25.59	24.60	23.54
	100RB (0)	2680 (41490)	25.61	24.63	23.60
		2636.5(41055)	25.68	24.69	23.67
		2593 (40620)	25.74	24.75	23.72
		2549.5(40185)	25.57	24.58	23.55
		2506 (39750)	25.60	24.59	23.56

LTE Band41 PC2 Low Power

5MHz	1RB-High (24)	2687.5 (41565)	12.46	12.61	12.37
		2640.3(41093)	12.76	12.92	12.67
		2593 (40620)	12.76	12.92	12.68
		2545.8(40148)	12.69	12.86	12.61
		2498.5 (39675)	12.63	12.79	12.55
	1RB-Middle (12)	2687.5 (41565)	12.52	12.68	12.43
		2640.3(41093)	12.79	12.89	12.67
		2593 (40620)	12.83	12.95	12.76
		2545.8(40148)	12.75	12.89	12.68
		2498.5 (39675)	12.66	12.80	12.57
	1RB-Low (0)	2687.5 (41565)	12.55	12.67	12.46
		2640.3(41093)	12.73	12.89	12.67
		2593 (40620)	12.83	12.97	12.74
		2545.8(40148)	12.68	12.82	12.59
		2498.5 (39675)	12.65	12.80	12.56
	12RB-High (13)	2687.5 (41565)	12.39	12.40	12.49
		2640.3(41093)	12.66	12.72	12.76
		2593 (40620)	12.67	12.68	12.75
		2545.8(40148)	12.59	12.63	12.71
		2498.5 (39675)	12.57	12.57	12.66
	12RB-Middle (6)	2687.5 (41565)	12.39	12.43	12.51
		2640.3(41093)	12.65	12.67	12.73
		2593 (40620)	12.67	12.70	12.75
		2545.8(40148)	12.62	12.63	12.71
		2498.5 (39675)	12.56	12.57	12.62
	12RB-Low (0)	2687.5 (41565)	12.46	12.51	12.57
		2640.3(41093)	12.69	12.70	12.75
		2593 (40620)	12.72	12.74	12.80
		2545.8(40148)	12.60	12.63	12.69
		2498.5 (39675)	12.57	12.59	12.64
	25RB (0)	2687.5 (41565)	12.46	12.48	12.50
		2640.3(41093)	12.69	12.75	12.77
		2593 (40620)	12.70	12.74	12.77
		2545.8(40148)	12.62	12.66	12.68
		2498.5 (39675)	12.58	12.62	12.65

10MHz	1RB-High (49)	2685 (41540)	12.60	12.69	12.41
		2639(41080)	12.74	12.95	12.69
		2593 (40620)	12.75	12.93	12.68
		2547(40160)	12.73	12.93	12.69
		2501 (39700)	12.64	12.88	12.60
	1RB-Middle (24)	2685 (41540)	12.51	12.67	12.41
		2639(41080)	12.68	12.89	12.63
		2593 (40620)	12.76	12.92	12.70
		2547(40160)	12.67	12.87	12.59
		2501 (39700)	12.58	12.80	12.52
	1RB-Low (0)	2685 (41540)	12.60	12.78	12.52
		2639(41080)	12.77	12.95	12.68
		2593 (40620)	12.81	12.99	12.74
		2547(40160)	12.69	12.87	12.63
		2501 (39700)	12.64	12.84	12.61
	25RB-High (25)	2685 (41540)	12.39	12.44	12.49
		2639(41080)	12.68	12.71	12.78
		2593 (40620)	12.66	12.69	12.73
		2547(40160)	12.61	12.67	12.69
		2501 (39700)	12.55	12.61	12.65
	25RB-Middle (12)	2685 (41540)	12.47	12.51	12.57
		2639(41080)	12.66	12.70	12.74
		2593 (40620)	12.66	12.70	12.74
		2547(40160)	12.63	12.68	12.72
		2501 (39700)	12.53	12.58	12.63
	25RB-Low (0)	2685 (41540)	12.54	12.61	12.62
		2639(41080)	12.64	12.73	12.74
		2593 (40620)	12.70	12.76	12.77
		2547(40160)	12.61	12.67	12.70
		2501 (39700)	12.51	12.58	12.61
	50RB (0)	2685 (41540)	12.49	12.54	12.50
		2639(41080)	12.72	12.75	12.71
		2593 (40620)	12.69	12.73	12.71
		2547(40160)	12.64	12.70	12.69
		2501 (39700)	12.56	12.60	12.60

15MHz	1RB-High (74)	2682.5 (41515)	12.57	12.57	12.30
		2637.8(41068)	12.66	12.85	12.60
		2593 (40620)	12.63	12.84	12.58
		2548.3(40173)	12.65	12.85	12.61
		2503.5 (39725)	12.52	12.70	12.44
	1RB-Middle (37)	2682.5 (41515)	12.47	12.67	12.41
		2637.8(41068)	12.67	12.87	12.61
		2593 (40620)	12.74	12.91	12.66
		2548.3(40173)	12.64	12.82	12.60
		2503.5 (39725)	12.58	12.77	12.53
	1RB-Low (0)	2682.5 (41515)	12.55	12.76	12.52
		2637.8(41068)	12.69	12.89	12.63
		2593 (40620)	12.73	12.92	12.67
		2548.3(40173)	12.62	12.80	12.56
		2503.5 (39725)	12.54	12.74	12.52
	36RB-High (38)	2682.5 (41515)	12.40	12.38	12.42
		2637.8(41068)	12.67	12.68	12.71
		2593 (40620)	12.64	12.62	12.65
		2548.3(40173)	12.63	12.64	12.66
		2503.5 (39725)	12.51	12.53	12.55
	36RB-Middle (19)	2682.5 (41515)	12.49	12.48	12.51
		2637.8(41068)	12.63	12.65	12.67
		2593 (40620)	12.64	12.64	12.67
		2548.3(40173)	12.59	12.60	12.65
		2503.5 (39725)	12.48	12.52	12.53
	36RB-Low (0)	2682.5 (41515)	12.53	12.56	12.55
		2637.8(41068)	12.66	12.66	12.70
		2593 (40620)	12.70	12.70	12.73
		2548.3(40173)	12.60	12.62	12.64
		2503.5 (39725)	12.50	12.50	12.53
	75RB (0)	2682.5 (41515)	12.50	12.53	12.51
		2637.8(41068)	12.69	12.71	12.71
		2593 (40620)	12.70	12.73	12.72
		2548.3(40173)	12.62	12.65	12.68
		2503.5 (39725)	12.53	12.55	12.55

20MHz	1RB-High (99)	2680 (41490)	12.46	12.60	12.35
		2636.5(41055)	12.72	12.91	12.64
		2593 (40620)	12.66	12.85	12.57
		2549.5(40185)	12.70	12.89	12.63
		2506 (39750)	12.54	12.74	12.48
	1RB-Middle (50)	2680 (41490)	12.69	12.71	12.42
		2636.5(41055)	12.75	12.90	12.61
		2593 (40620)	12.80	12.95	12.66
		2549.5(40185)	12.73	12.88	12.59
		2506 (39750)	12.63	12.77	12.51
	1RB-Low (0)	2680 (41490)	12.60	12.87	12.58
		2636.5(41055)	12.74	12.93	12.65
		2593 (40620)	12.76	12.97	12.67
		2549.5(40185)	12.66	12.85	12.59
		2506 (39750)	12.62	12.73	12.52
	50RB-High (50)	2680 (41490)	12.44	12.44	12.42
		2636.5(41055)	12.74	12.75	12.72
		2593 (40620)	12.70	12.74	12.68
		2549.5(40185)	12.66	12.69	12.66
		2506 (39750)	12.59	12.61	12.58
	50RB-Middle (25)	2680 (41490)	12.56	12.63	12.58
		2636.5(41055)	12.73	12.77	12.74
		2593 (40620)	12.71	12.75	12.72
		2549.5(40185)	12.68	12.73	12.70
		2506 (39750)	12.56	12.60	12.59
	50RB-Low (0)	2680 (41490)	12.67	12.73	12.67
		2636.5(41055)	12.75	12.78	12.74
		2593 (40620)	12.78	12.83	12.79
		2549.5(40185)	12.69	12.76	12.72
		2506 (39750)	12.62	12.58	12.53
	100RB (0)	2680 (41490)	12.77	12.59	12.55
		2636.5(41055)	12.73	12.74	12.73
		2593 (40620)	12.73	12.75	12.73
		2549.5(40185)	12.65	12.68	12.66
		2506 (39750)	12.55	12.56	12.55

LTE Band41 PC3 Normal Power

5MHz	1RB-High (24)	2687.5 (41565)	23.79	22.72	21.29
		2640.3(41093)	23.74	22.76	21.30
		2593 (40620)	23.88	22.89	21.44
		2545.8(40148)	23.73	22.73	21.28
		2498.5 (39675)	23.73	22.74	21.28
	1RB-Middle (12)	2687.5 (41565)	23.78	22.73	21.33
		2640.3(41093)	23.74	22.72	21.31
		2593 (40620)	23.92	22.89	21.46
		2545.8(40148)	23.77	22.72	21.30
		2498.5 (39675)	23.76	22.73	21.30
	1RB-Low (0)	2687.5 (41565)	23.79	22.77	21.35
		2640.3(41093)	23.75	22.75	21.33
		2593 (40620)	23.93	22.92	21.49
		2545.8(40148)	23.71	22.71	21.28
		2498.5 (39675)	23.75	22.74	21.31
	12RB-High (13)	2687.5 (41565)	22.62	21.52	20.60
		2640.3(41093)	22.64	21.56	20.65
		2593 (40620)	22.74	21.67	20.74
		2545.8(40148)	22.61	21.54	20.60
		2498.5 (39675)	22.63	21.56	20.61
	12RB-Middle (6)	2687.5 (41565)	22.64	21.56	20.65
		2640.3(41093)	22.62	21.58	20.64
		2593 (40620)	22.74	21.70	20.75
		2545.8(40148)	22.63	21.56	20.63
		2498.5 (39675)	22.64	21.57	20.61
	12RB-Low (0)	2687.5 (41565)	22.70	21.61	20.69
		2640.3(41093)	22.66	21.61	20.65
		2593 (40620)	22.80	21.73	20.80
		2545.8(40148)	22.62	21.55	20.62
		2498.5 (39675)	22.65	21.58	20.63
	25RB (0)	2687.5 (41565)	22.67	21.68	20.70
		2640.3(41093)	22.67	21.65	20.71
		2593 (40620)	22.79	21.75	20.79
		2545.8(40148)	22.62	21.61	20.63
		2498.5 (39675)	22.67	21.66	20.64

10MHz	1RB-High (49)	2685 (41540)	23.74	22.68	21.23
		2639(41080)	23.70	22.73	21.27
		2593 (40620)	23.82	22.84	21.40
		2547(40160)	23.71	22.72	21.29
		2501 (39700)	23.70	22.73	21.26
	1RB-Middle (24)	2685 (41540)	23.75	22.71	21.31
		2639(41080)	23.69	22.71	21.27
		2593 (40620)	23.86	22.87	21.43
		2547(40160)	23.69	22.69	21.27
		2501 (39700)	23.69	22.69	21.25
	1RB-Low (0)	2685 (41540)	23.76	22.75	21.33
		2639(41080)	23.73	22.76	21.30
		2593 (40620)	23.85	22.86	21.43
		2547(40160)	23.69	22.71	21.26
		2501 (39700)	23.69	22.69	21.27
	25RB-High (25)	2685 (41540)	22.62	21.58	20.65
		2639(41080)	22.64	21.67	20.70
		2593 (40620)	22.73	21.74	20.74
		2547(40160)	22.59	21.60	20.63
		2501 (39700)	22.64	21.65	20.67
	25RB-Middle (12)	2685 (41540)	22.64	21.64	20.70
		2639(41080)	22.63	21.61	20.67
		2593 (40620)	22.74	21.74	20.76
		2547(40160)	22.62	21.62	20.65
		2501 (39700)	22.61	21.61	20.64
	25RB-Low (0)	2685 (41540)	22.71	21.70	20.75
		2639(41080)	22.64	21.62	20.65
		2593 (40620)	22.77	21.77	20.78
		2547(40160)	22.61	21.61	20.63
		2501 (39700)	22.58	21.61	20.61
	50RB (0)	2685 (41540)	22.68	21.70	20.64
		2639(41080)	22.69	21.70	20.65
		2593 (40620)	22.75	21.78	20.71
		2547(40160)	22.66	21.64	20.62
		2501 (39700)	22.66	21.64	20.58

15MHz	1RB-High (74)	2682.5 (41515)	23.63	22.63	21.20
		2637.8(41068)	23.64	22.67	21.21
		2593 (40620)	23.76	22.77	21.35
		2548.3(40173)	23.65	22.66	21.22
		2503.5 (39725)	23.59	22.64	21.18
	1RB-Middle (37)	2682.5 (41515)	23.71	22.70	21.29
		2637.8(41068)	23.70	22.72	21.28
		2593 (40620)	23.86	22.88	21.44
		2548.3(40173)	23.71	22.71	21.26
		2503.5 (39725)	23.68	22.71	21.27
	1RB-Low (0)	2682.5 (41515)	23.74	22.72	21.30
		2637.8(41068)	23.74	22.73	21.29
		2593 (40620)	23.81	22.83	21.38
		2548.3(40173)	23.64	22.67	21.22
		2503.5 (39725)	23.64	22.63	21.20
	36RB-High (38)	2682.5 (41515)	22.58	21.55	20.55
		2637.8(41068)	22.65	21.62	20.62
		2593 (40620)	22.71	21.69	20.67
		2548.3(40173)	22.61	21.58	20.60
		2503.5 (39725)	22.60	21.55	20.55
	36RB-Middle (19)	2682.5 (41515)	22.66	21.63	20.63
		2637.8(41068)	22.61	21.58	20.58
		2593 (40620)	22.73	21.68	20.67
		2548.3(40173)	22.60	21.55	20.58
		2503.5 (39725)	22.59	21.54	20.55
	36RB-Low (0)	2682.5 (41515)	22.69	21.66	20.65
		2637.8(41068)	22.66	21.61	20.60
		2593 (40620)	22.76	21.73	20.70
		2548.3(40173)	22.59	21.54	20.57
		2503.5 (39725)	22.57	21.53	20.53
	75RB (0)	2682.5 (41515)	22.70	21.70	20.67
		2637.8(41068)	22.70	21.70	20.66
		2593 (40620)	22.79	21.78	20.75
		2548.3(40173)	22.63	21.61	20.61
		2503.5 (39725)	22.62	21.61	20.58

20MHz	1RB-High (99)	2680 (41490)	23.50	22.50	21.09
		2636.5(41055)	23.54	22.57	21.14
		2593 (40620)	23.68	22.70	21.26
		2549.5(40185)	23.54	22.57	21.11
		2506 (39750)	23.55	22.58	21.12
	1RB-Middle (50)	2680 (41490)	23.62	22.62	21.20
		2636.5(41055)	23.68	22.69	21.27
		2593 (40620)	23.80	22.82	21.39
		2549.5(40185)	23.65	22.69	21.23
		2506 (39750)	23.67	22.69	21.25
	1RB-Low (0)	2680 (41490)	23.63	22.61	21.18
		2636.5(41055)	23.68	22.71	21.28
		2593 (40620)	23.69	22.70	21.29
		2549.5(40185)	23.58	22.62	21.18
		2506 (39750)	23.58	22.60	21.14
	50RB-High (50)	2680 (41490)	22.49	21.53	20.48
		2636.5(41055)	22.63	21.65	20.61
		2593 (40620)	22.69	21.72	20.69
		2549.5(40185)	22.57	21.60	20.54
		2506 (39750)	22.63	21.65	20.62
	50RB-Middle (25)	2680 (41490)	22.59	21.62	20.60
		2636.5(41055)	22.64	21.65	20.63
		2593 (40620)	22.70	21.74	20.71
		2549.5(40185)	22.59	21.62	20.56
		2506 (39750)	22.62	21.62	20.59
	50RB-Low (0)	2680 (41490)	22.67	21.68	20.62
		2636.5(41055)	22.68	21.72	20.66
		2593 (40620)	22.75	21.79	20.74
		2549.5(40185)	22.61	21.63	20.60
		2506 (39750)	22.56	21.58	20.53
	100RB (0)	2680 (41490)	22.60	21.63	20.60
		2636.5(41055)	22.67	21.67	20.65
		2593 (40620)	22.74	21.72	20.70
		2549.5(40185)	22.57	21.59	20.56
		2506 (39750)	22.57	21.59	20.58

LTE Band41 PC3 Low Power

5MHz	1RB-High (24)	2687.5 (41565)	9.49	9.39	9.08
		2640.3(41093)	9.70	9.70	9.39
		2593 (40620)	9.71	9.71	9.40
		2545.8(40148)	9.65	9.67	9.37
		2498.5 (39675)	9.60	9.61	9.28
	1RB-Middle (12)	2687.5 (41565)	9.48	9.46	9.16
		2640.3(41093)	9.75	9.70	9.40
		2593 (40620)	9.81	9.76	9.42
		2545.8(40148)	9.73	9.72	9.42
		2498.5 (39675)	9.68	9.65	9.32
	1RB-Low (0)	2687.5 (41565)	9.49	9.46	9.16
		2640.3(41093)	9.72	9.69	9.38
		2593 (40620)	9.79	9.77	9.45
		2545.8(40148)	9.65	9.64	9.35
		2498.5 (39675)	9.61	9.62	9.30
	12RB-High (13)	2687.5 (41565)	9.38	9.33	9.41
		2640.3(41093)	9.69	9.64	9.73
		2593 (40620)	9.71	9.66	9.75
		2545.8(40148)	9.63	9.58	9.68
		2498.5 (39675)	9.61	9.55	9.65
	12RB-Middle (6)	2687.5 (41565)	9.41	9.38	9.46
		2640.3(41093)	9.66	9.58	9.70
		2593 (40620)	9.69	9.69	9.79
		2545.8(40148)	9.63	9.60	9.69
		2498.5 (39675)	9.65	9.55	9.63
	12RB-Low (0)	2687.5 (41565)	9.45	9.41	9.52
		2640.3(41093)	9.67	9.61	9.73
		2593 (40620)	9.79	9.72	9.81
		2545.8(40148)	9.64	9.59	9.69
		2498.5 (39675)	9.59	9.53	9.65
	25RB (0)	2687.5 (41565)	9.44	9.46	9.47
		2640.3(41093)	9.71	9.73	9.75
		2593 (40620)	9.73	9.78	9.78
		2545.8(40148)	9.61	9.66	9.67
		2498.5 (39675)	9.63	9.62	9.63

10MHz	1RB-High (49)	2685 (41540)	9.50	9.37	9.06
		2639(41080)	9.66	9.66	9.35
		2593 (40620)	9.66	9.68	9.36
		2547(40160)	9.66	9.69	9.40
		2501 (39700)	9.58	9.59	9.26
	1RB-Middle (24)	2685 (41540)	9.47	9.49	9.17
		2639(41080)	9.67	9.69	9.36
		2593 (40620)	9.73	9.75	9.44
		2547(40160)	9.67	9.70	9.41
		2501 (39700)	9.58	9.60	9.26
	1RB-Low (0)	2685 (41540)	9.50	9.52	9.19
		2639(41080)	9.68	9.68	9.38
		2593 (40620)	9.73	9.72	9.42
		2547(40160)	9.63	9.65	9.34
		2501 (39700)	9.59	9.59	9.26
	25RB-High (25)	2685 (41540)	9.38	9.42	9.44
		2639(41080)	9.69	9.69	9.75
		2593 (40620)	9.68	9.72	9.76
		2547(40160)	9.61	9.64	9.68
		2501 (39700)	9.58	9.67	9.68
	25RB-Middle (12)	2685 (41540)	9.45	9.47	9.51
		2639(41080)	9.67	9.68	9.73
		2593 (40620)	9.70	9.73	9.75
		2547(40160)	9.64	9.69	9.70
		2501 (39700)	9.58	9.60	9.66
	25RB-Low (0)	2685 (41540)	9.52	9.57	9.57
		2639(41080)	9.67	9.71	9.73
		2593 (40620)	9.71	9.79	9.77
		2547(40160)	9.65	9.67	9.68
		2501 (39700)	9.57	9.59	9.62
	50RB (0)	2685 (41540)	9.47	9.53	9.50
		2639(41080)	9.72	9.73	9.74
		2593 (40620)	9.72	9.74	9.73
		2547(40160)	9.67	9.71	9.68
		2501 (39700)	9.61	9.64	9.64

15MHz	1RB-High (74)	2682.5 (41515)	9.32	9.34	9.03
		2637.8(41068)	9.62	9.64	9.32
		2593 (40620)	9.59	9.62	9.30
		2548.3(40173)	9.62	9.64	9.45
		2503.5 (39725)	9.48	9.52	9.19
	1RB-Middle (37)	2682.5 (41515)	9.45	9.47	9.16
		2637.8(41068)	9.66	9.68	9.36
		2593 (40620)	9.72	9.74	9.43
		2548.3(40173)	9.64	9.71	9.37
		2503.5 (39725)	9.58	9.61	9.28
	1RB-Low (0)	2682.5 (41515)	9.50	9.51	9.21
		2637.8(41068)	9.64	9.67	9.34
		2593 (40620)	9.70	9.71	9.40
		2548.3(40173)	9.60	9.62	9.31
		2503.5 (39725)	9.52	9.56	9.23
	36RB-High (38)	2682.5 (41515)	9.37	9.36	9.40
		2637.8(41068)	9.66	9.65	9.68
		2593 (40620)	9.63	9.62	9.66
		2548.3(40173)	9.62	9.62	9.64
		2503.5 (39725)	9.55	9.55	9.57
	36RB-Middle (19)	2682.5 (41515)	9.45	9.46	9.49
		2637.8(41068)	9.65	9.64	9.65
		2593 (40620)	9.63	9.63	9.68
		2548.3(40173)	9.62	9.62	9.64
		2503.5 (39725)	9.57	9.52	9.57
	36RB-Low (0)	2682.5 (41515)	9.51	9.49	9.52
		2637.8(41068)	9.65	9.65	9.68
		2593 (40620)	9.67	9.67	9.74
		2548.3(40173)	9.61	9.59	9.62
		2503.5 (39725)	9.53	9.54	9.55
	75RB (0)	2682.5 (41515)	9.48	9.50	9.51
		2637.8(41068)	9.70	9.71	9.73
		2593 (40620)	9.71	9.72	9.75
		2548.3(40173)	9.65	9.66	9.67
		2503.5 (39725)	9.61	9.58	9.60

20MHz	1RB-High (99)	2680 (41490)	9.31	9.29	8.99
		2636.5(41055)	9.59	9.61	9.28
		2593 (40620)	9.56	9.56	9.24
		2549.5(40185)	9.60	9.64	9.32
		2506 (39750)	9.47	9.46	9.16
	1RB-Middle (50)	2680 (41490)	9.81	9.49	9.17
		2636.5(41055)	9.69	9.69	9.36
		2593 (40620)	9.73	9.74	9.40
		2549.5(40185)	9.70	9.74	9.37
		2506 (39750)	9.59	9.61	9.25
	1RB-Low (0)	2680 (41490)	9.58	9.56	9.23
		2636.5(41055)	9.62	9.61	9.29
		2593 (40620)	9.68	9.68	9.36
		2549.5(40185)	9.58	9.59	9.30
		2506 (39750)	9.52	9.53	9.20
	50RB-High (50)	2680 (41490)	9.37	9.41	9.40
		2636.5(41055)	9.69	9.73	9.72
		2593 (40620)	9.71	9.71	9.69
		2549.5(40185)	9.64	9.63	9.59
		2506 (39750)	9.61	9.66	9.63
	50RB-Middle (25)	2680 (41490)	9.53	9.56	9.57
		2636.5(41055)	9.70	9.74	9.74
		2593 (40620)	9.74	9.75	9.71
		2549.5(40185)	9.66	9.71	9.70
		2506 (39750)	9.61	9.63	9.61
	50RB-Low (0)	2680 (41490)	9.84	9.67	9.66
		2636.5(41055)	9.71	9.75	9.72
		2593 (40620)	9.78	9.80	9.79
		2549.5(40185)	9.68	9.75	9.73
		2506 (39750)	9.63	9.57	9.55
	100RB (0)	2680 (41490)	9.73	9.56	9.55
		2636.5(41055)	9.71	9.73	9.73
		2593 (40620)	9.71	9.74	9.74
		2549.5(40185)	9.65	9.69	9.67
		2506 (39750)	9.57	9.58	9.56

LTE Carrier Aggregation Conducted Power (Uplink)

Normal Power										
UL LTE CA Class	PCC					SCC				Power
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA_7C	20M	20850	2850	1	99	20M	3048	1	0	22.65
CA_7C	20M	20850	2850	1	99	15M	3021	1	0	22.70
CA_7C	20M	20850	2850	1	99	10M	2994	1	0	22.60
CA_7C	15M	20825	2825	1	74	15M	2975	1	0	22.84
CA_7C	15M	20825	2825	1	74	10M	2945	1	0	22.80
CA_7C	20M	21350	3350	1	0	20M	3152	1	99	22.82
CA_7C	20M	21350	3350	1	0	15M	3179	1	74	22.79
CA_7C	20M	21350	3350	1	0	10M	3206	1	49	22.54
CA_7C	15M	21375	3375	1	0	15M	3225	1	74	22.93

Low Power										
UL LTE CA Class	PCC					SCC				Power
	PCC Bandwidth	UL channel	DL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	conducted power (dBm)
CA_7C	20M	20850	2850	1	99	20M	3048	1	0	13.64
CA_7C	20M	20850	2850	1	99	15M	3021	1	0	13.66
CA_7C	20M	20850	2850	1	99	10M	2994	1	0	13.59
CA_7C	15M	20825	2825	1	74	15M	2975	1	0	13.80
CA_7C	15M	20825	2825	1	74	10M	2945	1	0	13.73
CA_7C	20M	21350	3350	1	0	20M	3152	1	99	13.77
CA_7C	20M	21350	3350	1	0	15M	3179	1	74	13.78
CA_7C	20M	21350	3350	1	0	10M	3206	1	49	13.74
CA_7C	15M	21375	3375	1	0	15M	3225	1	74	13.90
CA_7C	15M	20825	2825	1	0	10M	2945	1	49	13.53

11.4 Wi-Fi and BT Measurement result

The maximum output power of BT is 4.43dBm.
The maximum tune up of BT is 6dBm.

The average conducted power of Wi-Fi for normal power is as following:

802.11b	Channel\data	1Mbps
WLAN2450	11(2462MHz)	17.71
	6(2437(MHz)	17.88
	1(2412MHz)	17.94
Tune up		18.00
802.11g	Channel\data	6Mbps
WLAN2450	11(2462MHz)	17.21
	6(2437(MHz)	17.39
	1(2412MHz)	17.47
Tune up		18.00
802.11n-20MHz	Channel\data	MCS0
WLAN2450	11(2462MHz)	16.09
	6(2437(MHz)	16.22
	1(2412MHz)	16.36
Tune up		17.00
802.11n-40MHz	Channel\data	MCS0
WLAN2450	9(2452MHz)	15.19
	6(2437MHz)	15.26
	3(2422MHz)	15.62
Tune up		16.00

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	16.75
40(5200 MHz)	16.81
44(5220 MHz)	16.77
48(5240 MHz)	16.64
52(5260 MHz)	16.56
56(5280 MHz)	16.59
60(5300 MHz)	16.76
64(5320 MHz)	**16.89**
100(5500 MHz)	16.67
104(5520 MHz)	16.58
108(5540 MHz)	16.80
112(5560 MHz)	17.07
116(5580 MHz)	17.60
120(5600 MHz)	17.12
124(5620 MHz)	17.22
128(5640 MHz)	**17.77**
132(5660 MHz)	17.32
136(5680 MHz)	17.51
Tune up	18.00
140(5700 MHz)	15.59
144(5720 MHz)	15.61
Tune up	16.00
149(5745 MHz)	11.35
153(5765 MHz)	11.34
157(5785 MHz)	**11.42**
161(5805 MHz)	11.34
165(5825 MHz)	11.27
Tune up	13.00

The average conducted power of Wi-Fi for Low power is as following:

802.11b	Channel\data	1Mbps
WLAN2450	11(2462MHz)	14.07
	6(2437(MHz)	14.40
	1(2412MHz)	14.61
Tune up		15.00
802.11g	Channel\data	6Mbps
WLAN2450	11(2462MHz)	13.96
	6(2437(MHz)	14.22
	1(2412MHz)	14.47
Tune up		15.00
802.11n-20MHz	Channel\data	MCS0
WLAN2450	11(2462MHz)	12.81
	6(2437(MHz)	13.04
	1(2412MHz)	13.20
Tune up		14.00
802.11n-40MHz	Channel\data	MCS0
WLAN2450	9(2452MHz)	12.09
	6(2437MHz)	12.27
	3(2422MHz)	12.76
Tune up		13.00

802.11a(dBm)	
Channel\data rate	6Mbps
36(5180 MHz)	9.17
40(5200 MHz)	9.31
44(5220 MHz)	9.19
48(5240 MHz)	9.05
52(5260 MHz)	9.10
56(5280 MHz)	9.16
60(5300 MHz)	9.20
64(5320 MHz)	**9.29**
100(5500 MHz)	9.63
104(5520 MHz)	9.68
108(5540 MHz)	9.65
112(5560 MHz)	9.85
116(5580 MHz)	9.93
120(5600 MHz)	9.95
124(5620 MHz)	10.05
128(5640 MHz)	**10.10**
132(5660 MHz)	10.00
136(5680 MHz)	10.05
140(5700 MHz)	10.08
144(5720 MHz)	10.08
149(5745 MHz)	10.06
153(5765 MHz)	9.86
157(5785 MHz)	**10.16**
161(5805 MHz)	10.00
165(5825 MHz)	10.04
Tune up	10.50

11.5 NR 5G Measurement result

N41 Normal Power

No.	Test Freq Description	5G-n41								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n41
1	High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2685	537000	25	24.62
2	Middle1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2639	527799	25	24.74
3	Middle2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2592.99	518598	25	24.67
4	Middle3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2455.02	509406	25	24.70
5	Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2501.01	500205	25	24.67
6	High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2640	528000	25	24.61
7	Middle1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2616.495	523299	25	24.58
8	Middle2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2592.99	518598	25	24.59
9	Middle3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2569.5	513900	25	24.55
10	Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2546.01	509202	25	24.53

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n41								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n41
1	Middle1	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	2639	527799	25	24.73
2	Middle1	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	2639	527799	24	23.86
3	Middle1	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	2639	527799	22.5	22.21
4	Middle1	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	2639	527799	20.5	20.24
5	Middle1	30	10	CP-OFDM QPSK	Inner_Full	12_6	2639	527799	23.5	23.15
6	Middle1	30	10	CP-OFDM 16QAM	Inner_Full	12_6	2639	527799	23	22.83
7	Middle1	30	10	CP-OFDM 64QAM	Inner_Full	12_6	2639	527799	21.5	21.20
8	Middle1	30	10	CP-OFDM 256QAM	Inner_Full	12_6	2639	527799	18.5	18.13
9	Middle1	30	10	DFT-s-OFDM QPSK	Edge_Full_Right	2_22	2639	527799	21.5	21.13
10	Middle1	30	10	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	2639	527799	21.5	21.12
11	Middle1	30	10	DFT-s-OFDM QPSK	Edge_1RB_Right	1_23	2639	527799	21.5	21.14
12	Middle1	30	10	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	2639	527799	21.5	21.10
13	Middle1	30	10	DFT-s-OFDM QPSK	Inner_1RB_Right	1_22	2639	527799	25	24.61
14	Middle1	30	10	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	2639	527799	25	24.60
15	Middle1	30	10	DFT-s-OFDM QPSK	Outer_Full	24_0	2639	527799	24	23.67
16	Middle1	30	15	DFT-s-OFDM QPSK	Inner_Full	18_9	2592.99	518598	25	24.70
17	Middle1	30	20	DFT-s-OFDM QPSK	Inner_Full	25_12	2592.99	518598	25	24.67
19	Middle1	30	40	DFT-s-OFDM QPSK	Inner_Full	50_25	2592.99	518598	25	24.67
20	Middle1	30	50	DFT-s-OFDM QPSK	Inner_Full	64_32	2592.99	518598	25	24.66
21	Middle1	30	60	DFT-s-OFDM QPSK	Inner_Full	81_40	2592.99	518598	25	24.60
23	Middle1	30	80	DFT-s-OFDM QPSK	Inner_Full	108_54	2592.99	518598	25	24.64
24	Middle1	30	90	DFT-s-OFDM QPSK	Inner_Full	120_60	2592.99	518598	25	24.61

N41 Low Power

No.	Test Freq Description	5G-n41								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n41
1	High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2685	537000	14	13.73
2	Middle1	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2639	527799	14	13.81
3	Middle2	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2592.99	518598	14	13.74
4	Middle3	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2555.02	509406	14	13.66
5	Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	2501.01	500205	14	13.59
6	High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2640	528000	14	13.71
7	Middle1	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2616.495	523299	14	13.69
8	Middle2	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2592.99	518598	14	13.66
9	Middle3	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2569.5	513900	14	13.63
10	Low	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	2546.01	509202	14	13.57

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n41								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n41
1	Middle1	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	2639	527799	14	13.79
2	Middle1	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	2639	527799	14	13.80
3	Middle1	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	2639	527799	14	13.78
4	Middle1	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	2639	527799	14	13.80
5	Middle1	30	10	CP-OFDM QPSK	Inner_Full	12_6	2639	527799	14	13.73
6	Middle1	30	10	CP-OFDM 16QAM	Inner_Full	12_6	2639	527799	14	13.80
7	Middle1	30	10	CP-OFDM 64QAM	Inner_Full	12_6	2639	527799	14	13.74
8	Middle1	30	10	CP-OFDM 256QAM	Inner_Full	12_6	2639	527799	14	13.80
9	Middle1	30	10	DFT-s-OFDM QPSK	Edge_Full_Right	2_22	2639	527799	14	13.76
10	Middle1	30	10	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	2639	527799	14	13.80
11	Middle1	30	10	DFT-s-OFDM QPSK	Edge_1RB_Right	1_23	2639	527799	14	13.74
12	Middle1	30	10	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	2639	527799	14	13.79
13	Middle1	30	10	DFT-s-OFDM QPSK	Inner_1RB_Right	1_22	2639	527799	14	13.77
14	Middle1	30	10	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	2639	527799	14	13.73
15	Middle1	30	10	DFT-s-OFDM QPSK	Outer_Full	24_0	2639	527799	14	13.78
16	Middle1	30	15	DFT-s-OFDM QPSK	Inner_Full	18_9	2592.99	518598	14	13.68
17	Middle1	30	20	DFT-s-OFDM QPSK	Inner_Full	25_12	2592.99	518598	14	13.68
19	Middle1	30	40	DFT-s-OFDM QPSK	Inner_Full	50_25	2592.99	518598	14	13.68
20	Middle1	30	50	DFT-s-OFDM QPSK	Inner_Full	64_32	2592.99	518598	14	13.67
21	Middle1	30	60	DFT-s-OFDM QPSK	Inner_Full	81_40	2592.99	518598	14	13.64
23	Middle1	30	80	DFT-s-OFDM QPSK	Inner_Full	108_54	2592.99	518598	14	13.66
24	Middle1	30	90	DFT-s-OFDM QPSK	Inner_Full	120_60	2592.99	518598	14	13.64

N78_ Standalone Normal Power

No.	Test Freq Description	5G-n77							Power Results (dBm)	
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3544.98	636332	25.00	24.69
2	Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	25.00	24.48
6	Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455.01	630334	25.00	24.39
7	High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	25.00	23.44
8	Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	25.00	23.42
According to the table above, the maximum power configuration is selected as the default test configuration										

No.	Test Freq Description	5G-n77							Power Results (dBm)	
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	Middle	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3544.98	636332	25.00	24.64
2	Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3544.98	636332	24.00	23.69
3	Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3544.98	636332	22.50	22.16
4	Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3544.98	636332	20.50	20.15
5	Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3544.98	636332	23.50	23.13
6	Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3544.98	636332	23.00	22.73
7	Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3544.98	636332	21.50	21.17
8	Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3544.98	636332	18.50	18.20
1	Middle	30	10	DFT-s-OFDM QPSK	Edge_1RB_Right	1_23	3544.98	636332	21.50	21.03
6	Middle	30	10	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	3544.98	636332	21.50	21.00
9	Middle	30	10	DFT-s-OFDM QPSK	Edge_Full_Right	2_22	3544.98	636332	21.50	21.11
10	Middle	30	10	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	3544.98	636332	21.50	21.08
11	Middle	30	10	DFT-s-OFDM QPSK	Inner_1RB_Right	1_22	3544.98	636332	25.00	24.55
12	Middle	30	10	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	3544.98	636332	25.00	24.53
13	Middle	30	10	DFT-s-OFDM QPSK	Outer_Full	24_0	3544.98	636332	24.00	23.66
17	Middle-5	30	15	DFT-s-OFDM QPSK	Inner_Full	18_9	3500.01	633334	25.00	24.54
2	Middle	30	20	DFT-s-OFDM QPSK	Inner_Full	25_12	3500.01	633334	25.00	24.48
18	Middle-5	30	40	DFT-s-OFDM QPSK	Inner_Full	50_25	3500.01	633334	25.00	24.47
19	Middle-5	30	50	DFT-s-OFDM QPSK	Inner_Full	64_32	3500.01	633334	25.00	24.52
20	Middle-5	30	60	DFT-s-OFDM QPSK	Inner_Full	81_40	3500.01	633334	25.00	24.44
22	Middle-5	30	80	DFT-s-OFDM QPSK	Inner_Full	108_54	3500.01	633334	25.00	24.45
23	Middle-5	30	90	DFT-s-OFDM QPSK	Inner_Full	120_60	3500.01	633334	25.00	24.50

N78_ Standalone Low Power

No.	Test Freq Description	5G-n77								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3544.98	636332	10.50	10.10
2	Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	10.50	10.02
6	Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455.01	630334	10.50	9.99
7	High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	10.50	9.89
8	Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	10.50	9.85

According to the table above, the maximum power configuration is selected as the default test configuration

No.	Test Freq Description	5G-n77								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	Middle	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3544.98	636332	10.50	10.01
2	Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3544.98	636332	10.50	10.05
3	Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3544.98	636332	10.50	9.99
4	Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3544.98	636332	10.50	10.04
5	Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3544.98	636332	10.50	10.01
6	Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3544.98	636332	10.50	10.07
7	Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3544.98	636332	10.50	10.03
8	Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3544.98	636332	10.50	10.00
1	Middle	30	10	DFT-s-OFDM QPSK	Edge_1RB_Right	1_23	3544.98	636332	10.50	9.95
6	Middle	30	10	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	3544.98	636332	10.50	9.89
9	Middle	30	10	DFT-s-OFDM QPSK	Edge_Full_Right	2_22	3544.98	636332	10.50	9.97
10	Middle	30	10	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	3544.98	636332	10.50	9.95
11	Middle	30	10	DFT-s-OFDM QPSK	Inner_1RB_Right	1_22	3544.98	636332	10.50	9.93
12	Middle	30	10	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	3544.98	636332	10.50	9.87
13	Middle	30	10	DFT-s-OFDM QPSK	Outer_Full	24_0	3544.98	636332	10.50	10.01
17	Middle-5	30	15	DFT-s-OFDM QPSK	Inner_Full	18_9	3500.01	633334	10.50	9.85
2	Middle	30	20	DFT-s-OFDM QPSK	Inner_Full	25_12	3500.01	633334	10.50	9.83
18	Middle-5	30	40	DFT-s-OFDM QPSK	Inner_Full	50_25	3500.01	633334	10.50	9.82
19	Middle-5	30	50	DFT-s-OFDM QPSK	Inner_Full	64_32	3500.01	633334	10.50	9.84
20	Middle-5	30	60	DFT-s-OFDM QPSK	Inner_Full	81_40	3500.01	633334	10.50	9.81
22	Middle-5	30	80	DFT-s-OFDM QPSK	Inner_Full	108_54	3500.01	633334	10.50	9.79
23	Middle-5	30	90	DFT-s-OFDM QPSK	Inner_Full	120_60	3500.01	633334	10.50	9.83

N78_ENDC Normal Power

No.	Test Freq Description	5G-n77							Power Results (dBm)	
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3544.98	636332	23.00	21.77
2	Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	23.00	21.46
6	Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455.01	630334	23.00	21.43
7	High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	23.00	21.47
8	Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	23.00	21.44
According to the table above, the maximum power configuration is selected as the default test configuration										

No.	Test Freq Description	5G-n77							Power Results (dBm)	
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	Middle	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3544.98	636332	23.00	21.59
2	Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3544.98	636332	23.00	21.58
3	Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3544.98	636332	22.50	21.62
4	Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3544.98	636332	20.50	20.18
5	Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3544.98	636332	23.00	21.63
6	Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3544.98	636332	23.00	21.74
7	Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3544.98	636332	21.50	21.19
8	Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3544.98	636332	18.50	18.27
1	Middle	30	10	DFT-s-OFDM QPSK	Edge_1RB_Right	1_23	3544.98	636332	21.50	21.10
6	Middle	30	10	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	3544.98	636332	21.50	21.03
9	Middle	30	10	DFT-s-OFDM QPSK	Edge_Full_Right	2_22	3544.98	636332	21.50	21.14
10	Middle	30	10	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	3544.98	636332	21.50	21.09
11	Middle	30	10	DFT-s-OFDM QPSK	Inner_1RB_Right	1_22	3544.98	636332	23.00	21.57
12	Middle	30	10	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	3544.98	636332	23.00	21.54
13	Middle	30	10	DFT-s-OFDM QPSK	Outer_Full	24_0	3544.98	636332	23.00	21.59
17	Middle-5	30	15	DFT-s-OFDM QPSK	Inner_Full	18_9	3500.01	633334	23.00	21.45
2	Middle	30	20	DFT-s-OFDM QPSK	Inner_Full	25_12	3500.01	633334	23.00	21.40
18	Middle-5	30	40	DFT-s-OFDM QPSK	Inner_Full	50_25	3500.01	633334	23.00	21.38
19	Middle-5	30	50	DFT-s-OFDM QPSK	Inner_Full	64_32	3500.01	633334	23.00	21.43
20	Middle-5	30	60	DFT-s-OFDM QPSK	Inner_Full	81_40	3500.01	633334	23.00	21.35
22	Middle-5	30	80	DFT-s-OFDM QPSK	Inner_Full	108_54	3500.01	633334	23.00	21.30
23	Middle-5	30	90	DFT-s-OFDM QPSK	Inner_Full	120_60	3500.01	633334	23.00	21.40

N78_ENDC Low Power

No.	Test Freq Description	5G-n77								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	High	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3544.98	636332	10.50	9.19
2	Middle	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3500.01	633334	10.50	9.12
6	Low	30	10	DFT-s-OFDM QPSK	Inner_Full	12_6	3455.01	630334	10.50	9.09
7	High	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3499.98	633332	10.50	9.00
8	Middle	30	100	DFT-s-OFDM QPSK	Inner_Full	135_67	3500.01	633334	10.50	8.97
According to the table above, the maximum power configuration is selected as the default test configuration										

No.	Test Freq Description	5G-n77								Power Results (dBm)
		SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	n77
1	Middle	30	10	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	3544.98	636332	10.50	9.11
2	Middle	30	10	DFT-s-OFDM 16QAM	Inner_Full	12_6	3544.98	636332	10.50	9.15
3	Middle	30	10	DFT-s-OFDM 64QAM	Inner_Full	12_6	3544.98	636332	10.50	9.09
4	Middle	30	10	DFT-s-OFDM 256QAM	Inner_Full	12_6	3544.98	636332	10.50	9.14
5	Middle	30	10	CP-OFDM QPSK	Inner_Full	12_6	3544.98	636332	10.50	9.11
6	Middle	30	10	CP-OFDM 16QAM	Inner_Full	12_6	3544.98	636332	10.50	9.16
7	Middle	30	10	CP-OFDM 64QAM	Inner_Full	12_6	3544.98	636332	10.50	9.13
8	Middle	30	10	CP-OFDM 256QAM	Inner_Full	12_6	3544.98	636332	10.50	9.10
1	Middle	30	10	DFT-s-OFDM QPSK	Edge_1RB_Right	1_23	3544.98	636332	10.50	9.06
6	Middle	30	10	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	3544.98	636332	10.50	9.00
9	Middle	30	10	DFT-s-OFDM QPSK	Edge_Full_Right	2_22	3544.98	636332	10.50	9.07
10	Middle	30	10	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	3544.98	636332	10.50	9.06
11	Middle	30	10	DFT-s-OFDM QPSK	Inner_1RB_Right	1_22	3544.98	636332	10.50	9.04
12	Middle	30	10	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	3544.98	636332	10.50	8.99
13	Middle	30	10	DFT-s-OFDM QPSK	Outer_Full	24_0	3544.98	636332	10.50	9.11
17	Middle-5	30	15	DFT-s-OFDM QPSK	Inner_Full	18_9	3500.01	633334	10.50	8.97
2	Middle	30	20	DFT-s-OFDM QPSK	Inner_Full	25_12	3500.01	633334	10.50	8.95
18	Middle-5	30	40	DFT-s-OFDM QPSK	Inner_Full	50_25	3500.01	633334	10.50	8.94
19	Middle-5	30	50	DFT-s-OFDM QPSK	Inner_Full	64_32	3500.01	633334	10.50	8.96
20	Middle-5	30	60	DFT-s-OFDM QPSK	Inner_Full	81_40	3500.01	633334	10.50	8.93
22	Middle-5	30	80	DFT-s-OFDM QPSK	Inner_Full	108_54	3500.01	633334	10.50	8.91
23	Middle-5	30	90	DFT-s-OFDM QPSK	Inner_Full	120_60	3500.01	633334	10.50	8.95

12 Antenna Location

12.1 Transmit Antenna Separation Distances

The detail for transmit antenna separation distance is described in the additional document:
Appendix to test report No.I22Z61294-SEM01
The photos of SAR test

12.2 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR v01, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

SAR measurement positions						
Mode	Front	Rear	Left edge	Right edge	Top edge	Bottom edge
ANT0	No	Yes	No	Yes	Yes	No
ANT3	No	Yes	No	No	Yes	No
ANT5	No	Yes	No	Yes	No	No
ANT6	No	Yes	No	No	Yes	No

13 SAR Test Result

Note:

KDB 447498 D01 General RF Exposure Guidance:

For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor

For BT/WLAN: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz

≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz

≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz

KDB 648474 D04 Handset SAR:

With headset attached, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

KDB 941225 D01 SAR test for 3G devices:

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel.

When the reported SAR is > 0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.

Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low,Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.

Testing for 16-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.

Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is <1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

For LTE bands that do not support at least three non-overlapping channels in certain channel bandwidths, test the available non-overlapping channels instead. When a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the

group of overlapping channels should be selected for testing; therefore, the requirement for H, M and L channels may not fully apply.

KDB 248227 D01 SAR meas for 802.11:

SAR test reduction for 802.11 Wi-Fi transmission mode configurations are considered separately for DSSS and OFDM. An initial test position is determined to reduce the number of tests required for certain exposure configurations with multiple test positions.An initial test configuration is determined for each frequency band and aggregated band according to maximum output power, channel bandwidth, wireless mode configurations and other operating parameters to streamline the measurement requirements. For 2.4 GHz DSSS, either the initial test position or DSSS procedure is applied to reduce the number of SAR tests; these are mutually exclusive. For OFDM, an initial test position is only applicable to next to the ear, UMPC mini-tablet and hotspot mode configurations, which is tested using the initial test configuration to facilitate test reduction. For other exposure conditions with a fixed test position, SAR test reduction is determined using only the initial test configuration.

To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

The multiple test positions require SAR measurements in head, hotspot mode or UMPC mini-tablet configurations may be reduced according to the highest reported SAR determined using the initial test position(s) by applying the DSSS or OFDM SAR measurement procedures in the required wireless mode test configuration(s). The initial test position(s) is measured using the highest measured maximum output power channel in the required wireless mode test configuration(s).

When the reported SAR for the initial test position is:

≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.

> 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the reported SAR is ≤ 0.8 W/kg or all required test positions are tested.

- For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
- When it is unclear, all equivalent conditions must be tested.

For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required test channels are considered.

- The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.

When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is ≤ 1.2 W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.

When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is ≤ 1.2 W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.

Table 13.1: Duty Cycle

Mode	Duty Cycle
GPRS/EGPRS 850/1900	1:2.67 or 1:4
WCDMA&LTE FDD	1:1
LTE TDD_PC3	1:1.58
LTE TDD_PC2	1:2.309

13.1 SAR results for 2G/3G/4G

ANT	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
0	Body	GSM850	251	848.8	GPRS(2TX)	Rear	0mm	FIG A.1	25.29	26.50	0.728	**0.96**	0.267	**0.35**	0.16
0	Body	GSM850	190	836.6	GPRS(2TX)	Rear	0mm	/	24.84	26.50	0.615	**0.90**	0.248	**0.36**	0.11
0	Body	GSM850	128	824.2	GPRS(2TX)	Rear	0mm	/	25.31	26.50	0.692	**0.91**	0.272	**0.36**	-0.08
0	Body	GSM850	190	836.6	GPRS(2TX)	Top	0mm	/	24.84	26.50	0.256	**0.38**	0.097	**0.14**	-0.05
0	Body	GSM850	251	848.8	EGPRS(2TX)	Rear	0mm	/	25.26	26.50	0.599	**0.80**	0.254	**0.34**	-0.04
0	Body	GSM850	190	836.6	GPRS(3TX)	Rear	19mm	/	29.61	31.00	0.348	**0.48**	0.247	**0.34**	0.03
0	Body	GSM850	128	824.2	GPRS(3TX)	Right	0mm	/	29.61	31.00	0.514	**0.71**	0.230	**0.32**	0.16
0	Body	GSM850	190	836.6	GPRS(3TX)	Top	19mm	/	29.61	31.00	0.251	**0.35**	0.123	**0.17**	0.18
0	Body	GSM1900	810	1909.8	GPRS(2TX)	Rear	0mm	/	19.77	20.00	1.070	**1.13**	0.440	**0.46**	0.16
0	Body	GSM1900	661	1880	GPRS(2TX)	Rear	0mm	/	19.50	20.00	0.690	**0.77**	0.276	**0.31**	-0.08
0	Body	GSM1900	512	1850.2	GPRS(2TX)	Rear	0mm	/	19.30	20.00	0.481	**0.57**	0.203	**0.24**	0.09
0	Body	GSM1900	810	1909.8	GPRS(2TX)	Top	0mm	/	19.77	20.00	0.946	**1.00**	0.369	**0.39**	-0.05
0	Body	GSM1900	661	1880	GPRS(2TX)	Top	0mm	/	19.50	20.00	0.775	**0.87**	0.298	**0.33**	0.02
0	Body	GSM1900	512	1850.2	GPRS(2TX)	Top	0mm	/	19.30	20.00	0.477	**0.56**	0.200	**0.23**	0.08
0	Body	GSM1900	810	1909.8	EGPRS(2TX)	Rear	0mm	/	19.71	20.00	1.010	**1.08**	0.421	**0.45**	-0.04
0	Body	GSM1900	810	1909.8	GPRS(3TX)	Rear	19mm	/	28.00	28.50	0.458	**0.51**	0.266	**0.30**	0.09
0	Body	GSM1900	810	1909.8	GPRS(3TX)	Right	0mm	/	28.00	28.50	0.759	**0.85**	0.387	**0.43**	0.15
0	Body	GSM1900	661	1880	GPRS(3TX)	Right	0mm	/	27.34	28.50	0.748	**0.98**	0.379	**0.50**	0.09
0	Body	GSM1900	512	1850.2	GPRS(3TX)	Right	0mm	FIG A.2	26.97	28.50	0.801	**1.14**	0.391	**0.56**	-0.18
0	Body	GSM1900	810	1909.8	GPRS(3TX)	Top	19mm	/	28.00	28.50	0.503	**0.56**	0.285	**0.32**	0.17
0	Body	WCDMA 850	4233	846.6	RMC	Rear	0mm	/	16.56	17.50	0.762	**0.95**	0.291	**0.36**	0.03
0	Body	WCDMA 850	4183	836.6	RMC	Rear	0mm	/	16.57	17.50	0.777	**0.96**	0.298	**0.37**	0.06
0	Body	WCDMA 850	4132	826.4	RMC	Rear	0mm	FIG A.3	16.59	17.50	0.806	**0.99**	0.305	**0.38**	0.12
0	Body	WCDMA 850	4183	836.6	RMC	Top	0mm	/	16.57	17.50	0.371	**0.46**	0.145	**0.18**	-0.12
0	Body	WCDMA 850	4183	836.6	RMC	Rear	19mm	/	23.24	24.50	0.212	**0.28**	0.151	**0.20**	0.16
0	Body	WCDMA 850	4183	836.6	RMC	Right	0mm	/	23.24	24.50	0.579	**0.77**	0.269	**0.36**	0.13
0	Body	WCDMA 850	4183	836.6	RMC	Top	19mm	/	23.24	24.50	0.161	**0.22**	0.095	**0.13**	-0.06
0	Body	WCDMA1900	9538	1907.6	RMC	Rear	0mm	FIG A.4	10.39	12.00	0.915	**1.33**	0.377	**0.55**	0.05
0	Body	WCDMA1900	9400	1880	RMC	Rear	0mm	/	10.37	12.00	0.679	**0.99**	0.291	**0.42**	0.06
0	Body	WCDMA1900	9262	1852.4	RMC	Rear	0mm	/	10.35	12.00	0.760	**1.11**	0.304	**0.44**	0.15
0	Body	WCDMA1900	9538	1907.6	RMC	Top	0mm	/	10.39	12.00	0.570	**0.83**	0.253	**0.37**	0.09
0	Body	WCDMA1900	9400	1880	RMC	Top	0mm	/	10.37	12.00	0.596	**0.87**	0.229	**0.33**	-0.11
0	Body	WCDMA1900	9262	1852.4	RMC	Top	0mm	/	10.35	12.00	0.547	**0.80**	0.207	**0.30**	0.14
0	Body	WCDMA1900	9400	1880	RMC	Rear	19mm	/	22.28	23.00	0.453	**0.53**	0.252	**0.30**	0.07
0	Body	WCDMA1900	9538	1907.6	RMC	Right	0mm	/	22.46	23.00	1.040	**1.18**	0.527	**0.60**	0.06
0	Body	WCDMA1900	9400	1880	RMC	Right	0mm	/	22.28	23.00	1.050	**1.24**	0.528	**0.62**	0.05
0	Body	WCDMA1900	9262	1852.4	RMC	Right	0mm	/	22.39	23.00	1.010	**1.16**	0.521	**0.60**	0.09
0	Body	WCDMA1900	9400	1880	RMC	Top	19mm	/	22.28	23.00	0.241	**0.28**	0.140	**0.17**	0.16
0	Body	LTE Band5	20600	844	1RB_Low	Rear	0mm	/	19.48	20.00	0.827	**0.93**	0.305	**0.34**	0.05
0	Body	LTE Band5	20525	836.5	1RB_Middle	Rear	0mm	/	19.57	20.00	0.709	**0.78**	0.271	**0.30**	-0.12
0	Body	LTE Band5	20450	829	1RB_Middle	Rear	0mm	FIG A.5	19.54	20.00	0.853	**0.95**	0.313	**0.35**	0.06
0	Body	LTE Band5	20525	836.5	1RB_Middle	Top	0mm	/	19.57	20.00	0.241	**0.27**	0.101	**0.11**	-0.13
0	Body	LTE Band5	20600	844	25RB_Low	Rear	0mm	/	19.53	20.00	0.806	**0.90**	0.298	**0.33**	-0.15
0	Body	LTE Band5	20525	836.5	25RB_Low	Rear	0mm	/	19.54	20.00	0.696	**0.77**	0.262	**0.29**	0.04
0	Body	LTE Band5	20450	829	25RB_Middle	Rear	0mm	/	19.53	20.00	0.842	**0.94**	0.311	**0.35**	0.06
0	Body	LTE Band5	20525	836.5	25RB_Low	Top	0mm	/	19.54	20.00	0.235	**0.26**	0.096	**0.11**	0.05
0	Body	LTE Band5	20525	836.5	100RB	Rear	0mm	/	19.54	20.00	0.845	**0.94**	0.312	**0.35**	-0.07
0	Body	LTE Band5	20525	836.5	1RB_Middle	Rear	19mm	/	23.71	24.00	0.218	**0.23**	0.149	**0.16**	-0.05
0	Body	LTE Band5	20525	836.5	1RB_Middle	Right	0mm	/	23.71	24.00	0.503	**0.54**	0.246	**0.26**	0.17
0	Body	LTE Band5	20525	836.5	1RB_Middle	Top	19mm	/	23.71	24.00	0.176	**0.19**	0.102	**0.11**	-0.08
0	Body	LTE Band5	20525	836.5	25RB_Low	Rear	19mm	/	22.65	23.00	0.185	**0.20**	0.119	**0.13**	0.16
0	Body	LTE Band5	20525	836.5	25RB_Low	Right	0mm	/	22.65	23.00	0.345	**0.37**	0.176	**0.19**	-0.09
0	Body	LTE Band5	20525	836.5	25RB_Low	Top	19mm	/	22.65	23.00	0.152	**0.16**	0.087	**0.09**	0.05
0	Body	LTE Band5	20525	836.5	1RB_Middle	Rear	0mm	ENDC	15.69	16.00	0.539	**0.58**	0.218	**0.23**	0.19
0	Body	LTE Band5	20525	836.5	1RB_Middle	Top	0mm	ENDC	15.69	16.00	0.350	**0.38**	0.145	**0.16**	-0.14
0	Body	LTE Band5	20525	836.5	25RB_Low	Rear	0mm	ENDC	15.68	16.00	0.538	**0.58**	0.224	**0.24**	0.12
0	Body	LTE Band5	20525	836.5	25RB_Low	Top	0mm	ENDC	15.68	16.00	0.179	**0.19**	0.077	**0.08**	-0.09

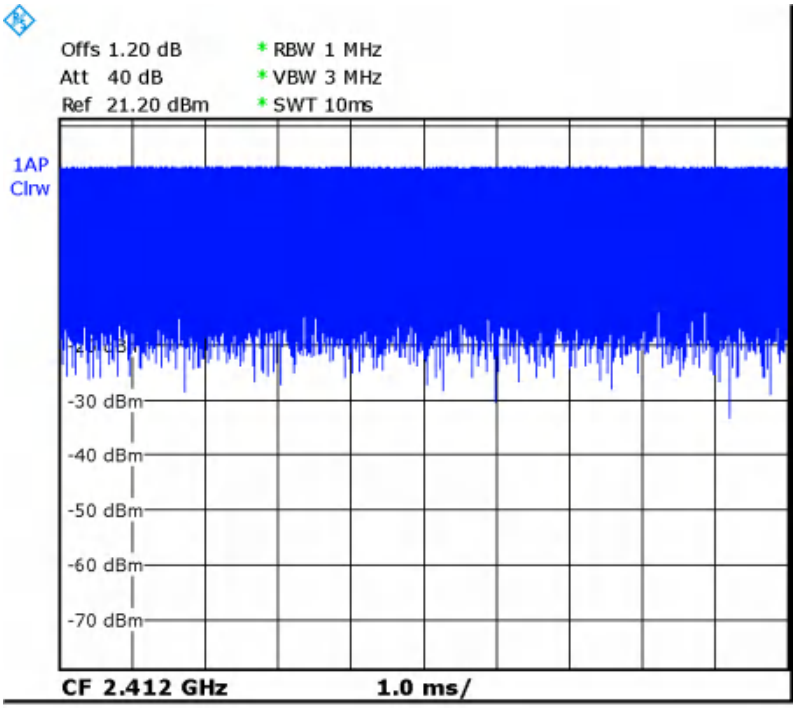
ANT	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
0	Body	LTE Band7	21350	2560	1RB_Low	Rear	0mm	/	14.62	15.50	0.760	**0.93**	0.216	**0.26**	0.09
0	Body	LTE Band7	21100	2535	1RB_High	Rear	0mm	/	14.53	15.50	0.683	**0.85**	0.228	**0.29**	0.00
0	Body	LTE Band7	20850	2510	1RB_High	Rear	0mm	/	14.44	15.50	0.683	**0.87**	0.210	**0.27**	0.00
0	Body	LTE Band7	21350	2560	1RB_Low	Top	0mm	/	14.62	15.50	0.326	**0.40**	0.110	**0.13**	0.10
0	Body	LTE Band7	21350	2560	50RB_Low	Rear	0mm	/	14.62	15.50	0.753	**0.92**	0.205	**0.25**	0.16
0	Body	LTE Band7	21100	2535	50RB_Low	Rear	0mm	/	14.52	15.50	0.671	**0.84**	0.204	**0.26**	0.08
0	Body	LTE Band7	20850	2510	50RB_High	Rear	0mm	/	14.57	15.50	0.659	**0.82**	0.196	**0.24**	-0.02
0	Body	LTE Band7	21350	2560	50RB_Low	Top	0mm	/	14.62	15.50	0.322	**0.39**	0.108	**0.13**	0.06
0	Body	LTE Band7	20850	2510	100RB	Rear	0mm	/	14.49	15.50	0.714	**0.90**	0.220	**0.28**	0.18
0	Body	LTE Band7	21350	2560	1RB_Middle	Rear	19mm	/	23.72	24.50	0.789	**0.94**	0.404	**0.48**	0.01
0	Body	LTE Band7	21100	2535	1RB_Middle	Rear	19mm	/	23.56	24.50	0.928	**1.15**	0.478	**0.59**	-0.08
0	Body	LTE Band7	20850	2510	1RB_Low	Rear	19mm	/	23.58	24.50	0.806	**1.00**	0.392	**0.48**	0.18
0	Body	LTE Band7	21350	2560	1RB_Middle	Right	0mm	FIG A.6	23.72	24.50	1.090	**1.30**	0.443	**0.53**	-0.17
0	Body	LTE Band7	21100	2535	1RB_Middle	Right	0mm	/	23.56	24.50	1.020	**1.27**	0.419	**0.52**	0.06
0	Body	LTE Band7	20850	2510	1RB_Low	Right	0mm	/	23.58	24.50	0.755	**0.93**	0.308	**0.38**	-0.09
0	Body	LTE Band7	21350	2560	1RB_Middle	Top	19mm	/	23.72	24.50	0.838	**1.00**	0.435	**0.52**	-0.15
0	Body	LTE Band7	21100	2535	1RB_Middle	Top	19mm	/	23.56	24.50	0.964	**1.20**	0.501	**0.62**	0.17
0	Body	LTE Band7	20850	2510	1RB_Low	Top	19mm	/	23.58	24.50	0.862	**1.07**	0.428	**0.53**	-0.09
0	Body	LTE Band7	21350	2560	50RB_Low	Rear	19mm	/	22.74	23.50	0.625	**0.74**	0.321	**0.38**	0.04
0	Body	LTE Band7	21350	2560	50RB_Low	Right	0mm	/	22.74	23.50	0.996	**1.19**	0.406	**0.48**	0.05
0	Body	LTE Band7	21100	2535	50RB_Low	Right	0mm	/	22.63	23.50	0.783	**0.96**	0.317	**0.39**	0.11
0	Body	LTE Band7	20850	2510	50RB_Low	Right	0mm	/	22.56	23.50	0.564	**0.70**	0.231	**0.29**	-0.16
0	Body	LTE Band7	21350	2560	50RB_Low	Top	19mm	/	22.74	23.50	0.687	**0.82**	0.356	**0.42**	-0.16
0	Body	LTE Band7	21100	2535	50RB_Low	Top	19mm	/	22.63	23.50	0.790	**0.97**	0.410	**0.50**	0.06
0	Body	LTE Band7	20850	2510	50RB_Low	Top	19mm	/	22.56	23.50	0.707	**0.88**	0.350	**0.43**	0.07
0	Body	LTE Band7	20850	2510	100RB	Right	0mm	/	22.69	23.50	0.613	**0.74**	0.251	**0.30**	0.09
0	Body	LTE Band7	20850	2510	100RB	Top	19mm	/	22.69	23.50	0.671	**0.81**	0.351	**0.42**	-0.09
0	Body	LTE Band7	21375	2562.5	1_Low	Right	0mm	ULCA	22.93	24.50	0.711	**1.02**	0.283	**0.41**	0.11
5	Body	LTE Band7	21100	2535	1RB_Middle	Rear	0mm	ENDC	13.39	14.00	0.487	**0.56**	0.176	**0.20**	0.13
5	Body	LTE Band7	21100	2535	1RB_Middle	Right	0mm	ENDC	13.39	14.00	0.265	**0.30**	0.095	**0.11**	0.14
5	Body	LTE Band7	21350	2560	50RB_Low	Rear	0mm	ENDC	13.49	14.00	0.482	**0.54**	0.166	**0.19**	0.09
5	Body	LTE Band7	21350	2560	50RB_Low	Right	0mm	ENDC	13.49	14.00	0.261	**0.29**	0.092	**0.10**	0.18
5	Body	LTE Band7	21350	2560	1RB_Middle	Rear	14mm	FIG A.7	23.69	24.00	0.541	**0.58**	0.271	**0.29**	0.02
5	Body	LTE Band7	21350	2560	1RB_Middle	Right	14mm	ENDC	23.69	24.00	0.352	**0.38**	0.186	**0.20**	0.08
5	Body	LTE Band7	21350	2560	50RB_Low	Rear	14mm	ENDC	22.78	23.00	0.414	**0.44**	0.221	**0.23**	-0.15
5	Body	LTE Band7	21350	2560	50RB_Low	Right	14mm	ENDC	22.78	23.00	0.334	**0.35**	0.171	**0.18**	0.01
5	Body	LTE Band41_PC3	41490	2680	1RB_Middle	Rear	0mm	FIG A.8	9.81	10.00	0.673	**0.70**	0.203	**0.21**	-0.14
5	Body	LTE Band41_PC3	41490	2680	1RB_Middle	Right	0mm	/	9.81	10.00	0.592	**0.62**	0.180	**0.19**	-0.11
5	Body	LTE Band41_PC3	41490	2680	50RB_Low	Rear	0mm	/	9.84	10.00	0.669	**0.69**	0.198	**0.21**	0.12
5	Body	LTE Band41_PC3	41490	2680	50RB_Low	Right	0mm	/	9.84	10.00	0.587	**0.61**	0.172	**0.18**	0.15
5	Body	LTE Band41_PC3	40620	2593	1RB_Middle	Rear	14mm	/	23.80	24.00	0.368	**0.39**	0.188	**0.20**	0.04
5	Body	LTE Band41_PC3	40620	2593	1RB_Middle	Right	14mm	/	23.80	24.00	0.287	**0.30**	0.143	**0.15**	-0.13
5	Body	LTE Band41_PC3	40620	2593	50RB_Low	Rear	14mm	/	22.75	23.00	0.283	**0.30**	0.145	**0.15**	0.04
5	Body	LTE Band41_PC3	40620	2593	50RB_Low	Right	14mm	/	22.75	23.00	0.226	**0.24**	0.113	**0.12**	-0.05
5	Body	LTE Band41_PC2	41490	2680	1RB_Middle	Rear	0mm	/	12.69	13.00	0.899	**0.97**	0.278	**0.30**	0.09
5	Body	LTE Band41_PC2	41055	2636.5	1RB_Middle	Rear	0mm	/	12.75	13.00	0.845	**0.90**	0.261	**0.28**	-0.08
5	Body	LTE Band41_PC2	40620	2593	1RB_Middle	Rear	0mm	/	12.80	13.00	0.777	**0.81**	0.240	**0.25**	-0.02
5	Body	LTE Band41_PC2	40185	2549.5	1RB_Middle	Rear	0mm	/	12.73	13.00	0.742	**0.79**	0.230	**0.24**	-0.05
5	Body	LTE Band41_PC2	39750	2506	1RB_Middle	Rear	0mm	/	12.63	13.00	0.755	**0.82**	0.233	**0.25**	0.13
5	Body	LTE Band41_PC2	41490	2680	1RB_Middle	Right	0mm	FIG A.9	12.69	13.00	0.958	**1.03**	0.318	**0.34**	0.04
5	Body	LTE Band41_PC2	41055	2636.5	1RB_Middle	Right	0mm	/	12.75	13.00	0.852	**0.90**	0.282	**0.30**	0.00
5	Body	LTE Band41_PC2	40620	2593	1RB_Middle	Right	0mm	/	12.80	13.00	0.647	**0.68**	0.224	**0.23**	-0.06
5	Body	LTE Band41_PC2	40185	2549.5	1RB_Middle	Right	0mm	/	12.73	13.00	0.694	**0.74**	0.230	**0.24**	0.04
5	Body	LTE Band41_PC2	39750	2506	1RB_Middle	Right	0mm	/	12.63	13.00	0.705	**0.77**	0.234	**0.25**	0.13
5	Body	LTE Band41_PC2	41490	2680	50RB_Low	Rear	0mm	/	12.67	13.00	0.886	**0.96**	0.271	**0.29**	0.02
5	Body	LTE Band41_PC2	41055	2636.5	50RB_Low	Rear	0mm	/	12.75	13.00	0.840	**0.89**	0.259	**0.27**	-0.10
5	Body	LTE Band41_PC2	40620	2593	50RB_Low	Rear	0mm	/	12.78	13.00	0.785	**0.83**	0.242	**0.25**	0.05
5	Body	LTE Band41_PC2	40185	2549.5	50RB_Low	Rear	0mm	/	12.69	13.00	0.746	**0.80**	0.229	**0.25**	-0.11
5	Body	LTE Band41_PC2	39750	2506	50RB_Low	Rear	0mm	/	12.62	13.00	0.742	**0.81**	0.228	**0.25**	0.15
5	Body	LTE Band41_PC2	41490	2680	50RB_Low	Right	0mm	/	12.67	13.00	0.847	**0.91**	0.258	**0.28**	-0.16
5	Body	LTE Band41_PC2	41055	2636.5	50RB_Low	Right	0mm	/	12.75	13.00	0.730	**0.77**	0.222	**0.24**	0.05
5	Body	LTE Band41_PC2	40620	2593	50RB_Low	Right	0mm	/	12.78	13.00	0.602	**0.63**	0.190	**0.20**	0.11
5	Body	LTE Band41_PC2	40185	2549.5	50RB_Low	Right	0mm	/	12.69	13.00	0.607	**0.65**	0.185	**0.20**	-0.08
5	Body	LTE Band41_PC2	39750	2506	50RB_Low	Right	0mm	/	12.62	13.00	0.597	**0.65**	0.182	**0.20**	-0.05
5	Body	LTE Band41_PC2	41490	2680	100RB	Rear	0mm	/	12.77	13.00	0.739	**0.78**	0.225	**0.24**	0.11
5	Body	LTE Band41_PC2	41490	2680	100RB	Right	0mm	/	12.77	13.00	0.701	**0.74**	0.209	**0.22**	-0.03
5	Body	LTE Band41_PC2	40620	2593	1RB_Middle	Rear	14mm	/	26.77	27.00	0.606	**0.64**	0.303	**0.32**	-0.11
5	Body	LTE Band41_PC2	40620	2593	1RB_Middle	Right	14mm	/	26.77	27.00	0.382	**0.40**	0.193	**0.20**	-0.14
5	Body	LTE Band41_PC2	40620	2593	50RB_Low	Rear	14mm	/	25.79	26.00	0.485	**0.51**	0.241	**0.25**	-0.12
5	Body	LTE Band41_PC2	40620	2593	50RB_Low	Right	14mm	/	25.79	26.00	0.306	**0.32**	0.154	**0.16**	-0.09

13.2 SAR results for WLAN

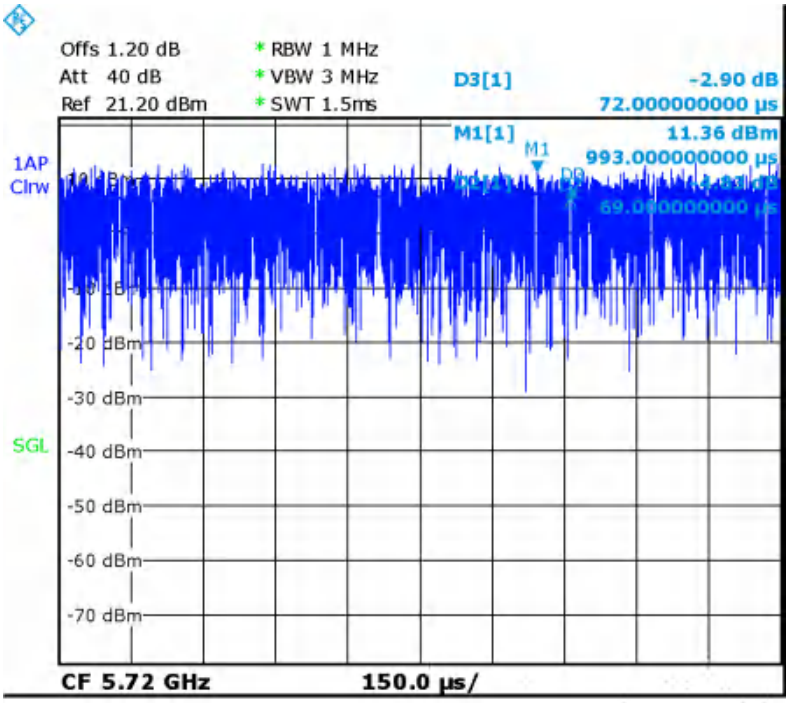
The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.
When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.
SAR Test reduction was applied from KDB 248227 guidance, when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

Duty factor plot

CH1



CH144



ANT	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Duty Cycle	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
6	Body	WLAN2.4G	11	2462	11b	Rear	0mm	/	14.07	15.00	100.00%	0.885	**1.10**	0.362	**0.45**	0.17
6	Body	WLAN2.4G	6	2437	11b	Rear	0mm	/	14.40	15.00	100.00%	0.976	**1.12**	0.404	**0.46**	-0.11
6	Body	WLAN2.4G	1	2412	11b	Rear	0mm	FIG A.12	14.61	15.00	100.00%	1.020	**1.12**	0.409	**0.45**	0.09
6	Body	WLAN2.4G	1	2412	11b	Top	0mm	/	14.61	15.00	100.00%	0.380	**0.42**	0.167	**0.18**	0.08
6	Body	WLAN2.4G	1	2412	11b	Rear	17mm	/	17.94	18.00	100.00%	0.108	**0.11**	0.062	**0.06**	0.03
6	Body	WLAN2.4G	1	2412	11b	Top	17mm	/	17.94	18.00	100.00%	0.093	**0.09**	0.052	**0.05**	0.19
6	Body	WLAN5G	64	5320	11a	Rear	0mm	/	9.29	10.50	95.83%	0.418	**0.58**	0.113	**0.15**	0.11
6	Body	WLAN5G	64	5320	11a	Top	0mm	/	9.29	10.50	95.83%	0.564	**0.78**	0.136	**0.18**	0.03
6	Body	WLAN5G	128	5640	11a	Rear	0mm	/	10.10	10.50	95.83%	0.814	**0.93**	0.150	**0.16**	0.12
6	Body	WLAN5G	140	5700	11a	Rear	0mm	/	10.08	10.50	95.83%	0.863	**0.99**	0.174	**0.19**	0.00
6	Body	WLAN5G	144	5720	11a	Rear	0mm	/	10.08	10.50	95.83%	0.933	**1.07**	0.173	**0.19**	0.00
6	Body	WLAN5G	128	5640	11a	Top	0mm	/	10.10	10.50	95.83%	0.807	**0.92**	0.081	**0.09**	0.15
6	Body	WLAN5G	140	5700	11a	Top	0mm	/	10.08	10.50	95.83%	0.843	**0.97**	0.184	**0.20**	0.07
6	Body	WLAN5G	144	5720	11a	Top	0mm	FIG A.13	10.08	10.50	95.83%	0.938	**1.08**	0.197	**0.22**	0.10
6	Body	WLAN5G	149	5745	11a	Rear	0mm	/	10.06	10.50	95.83%	0.866	**1.00**	0.168	**0.19**	0.14
6	Body	WLAN5G	157	5785	11a	Rear	0mm	/	10.16	10.50	95.83%	0.911	**1.03**	0.149	**0.16**	0.12
6	Body	WLAN5G	149	5745	11a	Top	0mm	/	10.06	10.50	95.83%	0.724	**0.84**	0.152	**0.17**	-0.12
6	Body	WLAN5G	157	5785	11a	Top	0mm	/	10.16	10.50	95.83%	0.783	**0.88**	0.169	**0.18**	0.16
6	Body	WLAN5G	64	5320	11a	Rear	17mm	/	16.89	18.00	95.83%	0.286	**0.39**	0.103	**0.13**	0.07
6	Body	WLAN5G	64	5320	11a	Top	17mm	/	16.89	18.00	95.83%	0.174	**0.23**	0.069	**0.09**	0.16
6	Body	WLAN5G	128	5640	11a	Rear	17mm	/	17.77	18.00	95.83%	0.415	**0.46**	0.149	**0.16**	0.04
6	Body	WLAN5G	128	5640	11a	Top	17mm	/	17.77	18.00	95.83%	0.216	**0.24**	0.089	**0.09**	0.17
6	Body	WLAN5G	157	5785	11a	Rear	17mm	/	11.42	13.00	95.83%	0.220	**0.33**	0.074	**0.11**	0.14
6	Body	WLAN5G	157	5785	11a	Top	17mm	/	11.42	13.00	95.83%	0.079	**0.12**	0.033	**0.05**	-0.01

13.3 SAR results for BT

ANT	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
6	Body	BT	39	2441	GFSK	Rear	0mm	FIG A.14	4.43	6.00	0.316	**0.45**	0.119	**0.17**	0.00
6	Body	BT	39	2441	GFSK	Top	0mm	/	4.43	6.00	0.138	**0.20**	0.045	**0.06**	-0.13

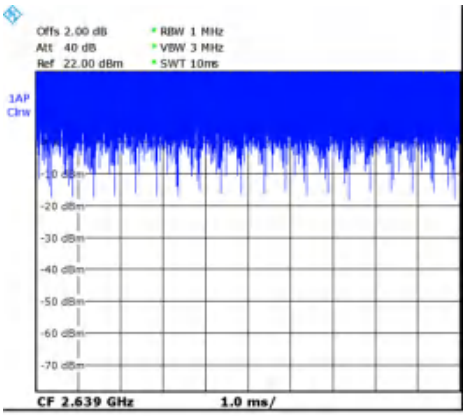
13.4 SAR results for NR

ANT	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Duty Cycle	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
5	Body	n41	537000	2685	30K 10M DFT QPSK 12-6	Rear	0mm	/	13.73	14.00	100.00%	0.871	**0.93**	0.274	**0.29**	-0.02
5	Body	n41	527799	2639	30K 10M DFT QPSK 12-6	Rear	0mm	FIG A.10	13.81	14.00	100.00%	0.931	**0.97**	0.303	**0.32**	0.01
5	Body	n41	518598	2592.99	30K 10M DFT QPSK 12-6	Rear	0mm	/	13.74	14.00	100.00%	0.905	**0.96**	0.295	**0.31**	0.01
5	Body	n41	509406	2455.02	30K 10M DFT QPSK 12-6	Rear	0mm	/	13.66	14.00	100.00%	0.888	**0.96**	0.285	**0.31**	-0.02
5	Body	n41	500205	2501.01	30K 10M DFT QPSK 12-6	Rear	0mm	/	13.59	14.00	100.00%	0.871	**0.96**	0.277	**0.30**	0.00
5	Body	n41	537000	2685	30K 10M DFT QPSK 12-6	Right	0mm	/	13.73	14.00	100.00%	0.748	**0.80**	0.235	**0.25**	-0.09
5	Body	n41	527799	2639	30K 10M DFT QPSK 12-6	Right	0mm	/	13.81	14.00	100.00%	0.775	**0.81**	0.258	**0.27**	0.16
5	Body	n41	518598	2592.99	30K 10M DFT QPSK 12-6	Right	0mm	/	13.74	14.00	100.00%	0.768	**0.82**	0.248	**0.26**	0.04
5	Body	n41	509406	2455.02	30K 10M DFT QPSK 12-6	Right	0mm	/	13.66	14.00	100.00%	0.753	**0.81**	0.239	**0.26**	0.05
5	Body	n41	500205	2501.01	30K 10M DFT QPSK 12-6	Right	0mm	/	13.59	14.00	100.00%	0.738	**0.81**	0.233	**0.26**	-0.13
5	Body	n41	537000	2685	30K 10M DFT QPSK 12-6	Rear	14mm	/	24.62	25.00	100.00%	0.868	**0.95**	0.415	**0.45**	-0.18
5	Body	n41	527799	2639	30K 10M DFT QPSK 12-6	Rear	14mm	/	24.74	25.00	100.00%	0.783	**0.83**	0.373	**0.40**	-0.14
5	Body	n41	518598	2592.99	30K 10M DFT QPSK 12-6	Rear	14mm	/	24.67	25.00	100.00%	0.693	**0.75**	0.337	**0.36**	-0.03
5	Body	n41	509406	2455.02	30K 10M DFT QPSK 12-6	Rear	14mm	/	24.70	25.00	100.00%	0.649	**0.70**	0.316	**0.34**	-0.08
5	Body	n41	500205	2501.01	30K 10M DFT QPSK 12-6	Rear	14mm	/	24.67	25.00	100.00%	0.665	**0.72**	0.324	**0.35**	0.05
5	Body	n41	527799	2639	30K 10M DFT QPSK 12-6	Right	14mm	/	24.74	25.00	100.00%	0.502	**0.53**	0.253	**0.27**	0.10
3	Body	n78	636332	3544.98	30K 10M DFT QPSK 12-6	Rear	0mm	/	10.10	10.50	85.71%	0.586	**0.75**	0.183	**0.20**	0.18
3	Body	n78	633334	3500.01	30K 10M DFT QPSK 12-6	Rear	0mm	FIG A.11	10.02	10.50	85.71%	0.743	**0.97**	0.230	**0.26**	0.18
3	Body	n78	630334	3455.01	30K 10M DFT QPSK 12-6	Rear	0mm	/	9.99	10.50	85.71%	0.601	**0.79**	0.190	**0.21**	0.03
3	Body	n78	636332	3544.98	30K 10M DFT QPSK 12-6	Top	0mm	/	9.55	10.50	85.71%	0.500	**0.73**	0.174	**0.22**	-0.15
3	Body	n78	636332	3544.98	30K 10M DFT QPSK 12-6	Rear	19mm	/	24.69	25.00	85.71%	0.558	**0.70**	0.278	**0.30**	-0.14
3	Body	n78	636332	3544.98	30K 10M DFT QPSK 12-6	Top	19mm		24.69	25.00	85.71%	0.494	**0.62**	0.233	**0.25**	-0.12
3	Body	n78	636332	3544.98	30K 10M DFT QPSK 12-6	Rear	0mm	ENDC	9.19	10.50	85.71%	0.495	**0.78**	0.161	**0.22**	0.12
3	Body	n78	636332	3544.98	30K 10M DFT QPSK 12-6	Top	0mm	ENDC	9.19	10.50	85.71%	0.397	**0.63**	0.136	**0.18**	-0.15
3	Body	n78	636332	3544.98	30K 10M DFT QPSK 12-6	Rear	19mm	ENDC	21.77	23.00	85.71%	0.269	**0.42**	0.134	**0.18**	-0.18
3	Body	n78	636332	3544.98	30K 10M DFT QPSK 12-6	Top	19mm	ENDC	21.77	23.00	85.71%	0.269	**0.42**	0.127	**0.17**	-0.15

Note：The maximum duty cycle of PC3 and PC2 is the same. The tune up of PC2 was higher, so only PC2 was tested.

Duty factor plot

CH527799



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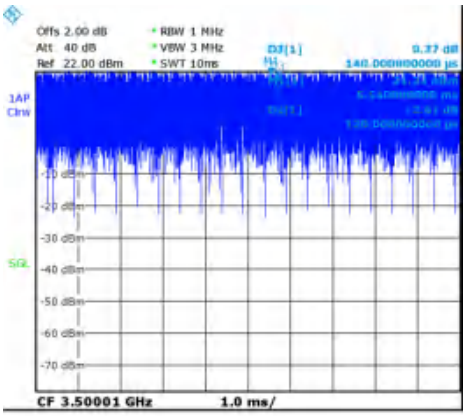


14 SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg; steps2) through 4) do not apply.

2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45W/kg (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20

Table 14.1: SAR Measurement Variability for Body (1g)

Band	Frequency		Mode	Test Position	Spacing (mm)	Original SAR (W/kg)	First Repeated SAR (W/kg)	The Ratio	Second Repeated SAR (W/kg)
	Ch.	MHz							
GSM1900	810	1909.8	GPRS(2)	Rear	0	1.07	0.996	1.07	/
GSM1900	512	1850.2	GPRS(3)	Right	0	0.801	0.783	1.02	/
WCDMA850	4132	826.4	RMC	Rear	0	0.806	0.771	1.05	/
WCDMA1900	9538	1907.6	RMC	Rear	0	0.915	0.907	1.01	
WCDMA1900	9400	1880	RMC	Right	0	1.05	0.993	1.06	/
LTE B5	20450	829	1RB-Mid	Rear	0	0.853	0.832	1.03	/
LTE B7	21100	2535	1RB-Mid	Rear	19	0.928	0.911	1.02	/
LTE B7	21350	2560	1RB-Mid	Right	0	1.09	1.02	1.07	/
LTE B7	21100	2535	1RB-Mid	Top	19	0.964	0.952	1.01	/
LTE B41_PC2	41490	2680	1RB-Mid	Rear	0	0.899	0.876	1.03	/
LTE B41_PC2	41490	2680	1RB-Mid	Right	0	0.958	0.925	1.04	/
N41	527799	2639	30K 10M 12-6	Rear	0	0.931	0.917	1.02	/
N41	537000	2685	30K 10M 12-6	Rear	14	0.868	0.842	1.03	/
WLAN2.4G	1	2412	11b	Rear	0	1.02	0.986	1.03	/

WLAN5G	144	5720	11a	Rear	0	0.933	0.919	1.02	/
WLAN5G	144	5720	11a	Top	0	0.938	0.915	1.03	/

15 Evaluation of Simultaneous

15.1 Introduction

The following procedures adopted from “FCC SAR Considerations for Cell Phones with Multiple Transmitters” are applicable to handsets with built-in unlicensed transmitters such as WLAN and Bluetooth devices which may simultaneously transmit with the licensed transmitter. KDB 447498 D01 provides two procedures for determining simultaneous transmission SAR test exclusion: Sum of SAR and SAR to Peak Location Ratio (SPLSR)

15.1.1 Sum of SAR

To qualify for simultaneous transmission SAR test exclusion based upon Sum of SAR the sum of the reported standalone SARs for all simultaneously transmitting antennas shall be below the applicable standalone SAR limit. If the sum of the SARs is above the applicable limit then simultaneous transmission SAR test exclusion may still apply if the requirements of the SAR to Peak Location Ratio (SPLSR) evaluation are met.

15.1.2 SAR to Peak Location Ratio (SPLSR)

KDB 447498 D01 General RF Exposure Guidance explains how to calculate the SAR to Peak Location Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$SPLSR = (SAR1 + SAR2)^{1.5} / Ri$

Where:

SAR1 is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition.

SAR2 is the highest reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first .

Ri is the separation distance between the pair of simultaneous transmitting antennas. When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of

$[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$

In order for a pair of simultaneous transmitting antennas with the sum of 1-g SAR > 1.6 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$(SAR1 + SAR2)^{1.5} / Ri \leqslant 0.04$

When an individual antenna transmits at on two bands simultaneously, the sum of the highest reported SAR for the frequency bands should be used to determine SAR1 or SAR2. When SPLSR is necessary, the smallest distance between the peak SAR locations for the antenna pair with respect to the peaks from each antenna should be used.

15.2 Simultaneous Transmission Capabilities

The simultaneous transmission possibilities for this device are listed as below:

NO	If support: WWAN*1TX and WLAN*1TX	Y or N
1	WWAN + WLAN 2.4GHz	Y
2	WWAN + WLAN 2.4GHz +BT	N
3	WWAN + WLAN 5GHz	Y
4	WWAN + WLAN 5GHz +BT	Y

Note:

1. The reported SAR summation is calculated based on the same configuration and test position.
2. For the devices edges with antennas more than 2.5 cm from edge are not required to be evaluated for SAR, we determined the SAR of this edges were less than 0.01. For the convenience of simultaneous transmission calculation, all SAR values less than or equal to 0.01 are uniformly written as 0.00

15.3 Evaluation of Simultaneous

Position	WWAN (W/kg)		WLAN2.4G (W/kg)	Sum (W/kg)	SPLSR
Rear (0mm)	GSM850	0.96	1.16	2.12	Yes
	GSM1900	1.13	1.16	2.29	Yes
	WCDMA850	0.99	1.16	2.15	Yes
	WCDMA1900	1.33	1.16	2.49	Yes
	LTE B5	0.95	1.16	2.11	Yes
	LTE B7	0.93	1.16	2.09	Yes
	LTE B41(PC2)	0.97	1.16	2.13	Yes
	LTE B41(PC3)	0.70	1.16	1.86	Yes
	n41	0.97	1.16	2.13	Yes
	n78	0.97	1.16	2.13	Yes
Top (0mm)	GSM850	0.38	0.42	0.80	/
	GSM1900	1.00	0.42	1.42	/
	WCDMA850	0.46	0.42	0.88	/
	WCDMA1900	0.87	0.42	1.29	/
	LTE B5	0.27	0.42	0.69	/
	LTE B7	0.40	0.42	0.82	/
	n78	0.73	0.42	1.15	/

Position	WWAN (W/kg)		WLAN5G (W/kg)	BT (W/kg)	Sum (W/kg)	SPLSR
Rear (0mm)	GSM850	0.96	1.07	0.45	2.48	Yes
	GSM1900	1.13	1.07	0.45	2.65	Yes
	WCDMA850	0.99	1.07	0.45	2.51	Yes
	WCDMA1900	1.33	1.07	0.45	2.85	Yes
	LTE B5	0.95	1.07	0.45	2.47	Yes
	LTE B7	0.93	1.07	0.45	2.45	Yes
	LTE B41(PC2)	0.97	1.07	0.45	2.49	Yes
	LTE B41(PC3)	0.70	1.07	0.45	2.22	Yes
	n41	0.97	1.07	0.45	2.49	Yes
	n78	0.97	1.07	0.45	2.49	Yes
Top	GSM850	0.38	1.08	0.20	1.66	Yes
	GSM1900	1.00	1.08	0.20	2.28	Yes
	WCDMA850	0.46	1.08	0.20	1.74	Yes
	WCDMA1900	0.87	1.08	0.20	2.15	Yes
	LTE B5	0.27	1.08	0.20	1.55	/
	LTE B7	0.40	1.08	0.20	1.68	Yes
	n78	0.73	1.08	0.20	2.01	Yes

Position	WWAN (W/kg)		WLAN2.4G (W/kg)	Sum (W/kg)	SPLSR
Rear (19mm)	GSM850	0.48	0.11	0.59	/
	GSM1900	0.51	0.11	0.62	/
	WCDMA850	0.28	0.11	0.39	/
	WCDMA1900	0.53	0.11	0.64	/
	LTE B5	0.23	0.11	0.34	/
	LTE B7	1.15	0.11	1.26	/
	LTE B41(PC2)	0.64	0.11	0.75	/
	LTE B41(PC3)	0.39	0.11	0.50	/
	n41	0.95	0.11	1.06	/
	n78	0.70	0.11	0.81	/
Top (19mm)	GSM850	0.35	0.09	0.44	/
	GSM1900	0.56	0.09	0.65	/
	WCDMA850	0.22	0.09	0.31	/
	WCDMA1900	0.28	0.09	0.37	/
	LTE B5	0.19	0.09	0.28	/
	LTE B7	1.20	0.09	1.29	/
	n78	0.62	0.09	0.71	/

Position	WWAN (W/kg)		WLAN5G (W/kg)	BT (W/kg)	Sum (W/kg)	SPLSR
Rear (19mm)	GSM850	0.48	0.46	0.45	1.39	/
	GSM1900	0.51	0.46	0.45	1.42	/
	WCDMA850	0.28	0.46	0.45	1.19	/
	WCDMA1900	0.53	0.46	0.45	1.44	/
	LTE B5	0.23	0.46	0.45	1.14	/
	LTE B7	1.15	0.46	0.45	2.06	Yes
	LTE B41(PC2)	0.64	0.46	0.45	1.55	/
	LTE B41(PC3)	0.39	0.46	0.45	1.30	/
	n41	0.95	0.46	0.45	1.86	Yes
	n78	0.70	0.46	0.45	1.61	Yes
Top (19mm)	GSM850	0.35	0.24	0.20	0.79	/
	GSM1900	0.56	0.24	0.20	1.00	/
	WCDMA850	0.22	0.24	0.20	0.66	/
	WCDMA1900	0.28	0.24	0.20	0.72	/
	LTE B5	0.19	0.24	0.20	0.63	/
	LTE B7	1.20	0.24	0.20	1.64	Yes
	n78	0.60	0.24	0.20	1.04	/

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
GSM850	Rear 0mm	0.96	107.62	2.12	0.029	Not required
WLAN 2.4G		1.16				
GSM1900	Rear 0mm	1.13	158.73	2.29	0.022	Not required
WLAN 2.4G		1.16				
WCDMA850	Rear 0mm	1.13	110.63	2.29	0.031	Not required
WLAN 2.4G		1.16				
WCDMA1900	Rear 0mm	1.33	159.33	2.49	0.025	Not required
WLAN 2.4G		1.16				
LTE B5	Rear 0mm	0.95	115.1	2.11	0.027	Not required
WLAN 2.4G		1.16				
LTE B7	Rear 0mm	0.93	160.86	2.09	0.019	Not required
WLAN 2.4G		1.16				
LTE B41(PC2)	Rear 0mm	0.97	184.96	2.13	0.017	Not required
WLAN 2.4G		1.16				
LTE B41(PC3)	Rear 0mm	0.70	184.96	1.86	0.014	Not required
WLAN 2.4G		1.16				
n41	Rear 0mm	0.97	199.04	2.13	0.016	Not required
WLAN 2.4G		1.16				
n78	Rear 0mm	0.97	102.25	2.13	0.030	Not required
WLAN 2.4G		1.16				

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
GSM850	Rear 0mm	0.96	114.31	2.48	0.034	Not required
WLAN 5G		1.52				
GSM1900	Rear 0mm	1.13	160.86	2.65	0.027	Not required
WLAN 5G		1.52				
WCDMA850	Rear 0mm	0.99	106.13	2.51	0.037	Not required
WLAN 5G		1.52				
WCDMA1900	Rear 0mm	1.33	161.78	2.85	0.030	Not required
WLAN 5G		1.52				
LTE B5	Rear 0mm	0.95	116.47	2.47	0.033	Not required
WLAN 5G		1.52				
LTE B7	Rear 0mm	0.93	162.23	2.45	0.024	Not required
WLAN 5G		1.52				
LTE B41(PC2)	Rear 0mm	0.97	181.17	2.49	0.022	Not required
WLAN 5G		1.52				
LTE B41(PC3)	Rear 0mm	0.70	181.17	2.22	0.018	Not required
WLAN 5G		1.52				
n41	Rear 0mm	0.97	188.52	2.49	0.021	Not required
WLAN 5G		1.52				
n78	Rear 0mm	0.97	107.29	2.49	0.037	Not required
WLAN 5G		1.52				
GSM850	Top 0mm	0.38	104.55	1.66	0.020	Not required
WLAN 5G		1.28				
GSM1900	Top 0mm	0.40	160.47	1.68	0.014	Not required
WLAN 5G		1.28				
WCDMA850	Top 0mm	0.52	107.64	1.8	0.022	Not required
WLAN 5G		1.28				
WCDMA1900	Top 0mm	0.87	161.97	2.15	0.019	Not required
WLAN 5G		1.28				
LTE B5	Top 0mm	0.27	98.94	1.55	0.020	Not required
WLAN 5G		1.28				
LTE B7	Top 0mm	0.40	168.41	1.68	0.013	Not required
WLAN 5G		1.28				
n78	Top 0mm	0.73	73.63	2.01	0.039	Not required
WLAN 5G		1.28				

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
GSM850	Rear 0mm	0.96	109.91	2.48	0.036	Not required
BT		1.52				
GSM1900	Rear 0mm	1.13	161.14	2.65	0.027	Not required
BT		1.52				
WCDMA850	Rear 0mm	0.99	113.02	2.51	0.035	Not required
BT		1.52				
WCDMA1900	Rear 0mm	1.33	161.72	2.85	0.030	Not required
BT		1.52				
LTE B5	Rear 0mm	0.95	117.61	2.47	0.033	Not required
BT		1.52				
LTE B7	Rear 0mm	0.93	163.3	2.45	0.023	Not required
BT		1.52				
LTE B41(PC2)	Rear 0mm	0.97	187.77	2.49	0.021	Not required
BT		1.52				
LTE B41(PC3)	Rear 0mm	0.70	187.77	2.22	0.018	Not required
BT		1.52				
n41	Rear 0mm	0.97	201.84	2.49	0.019	Not required
BT		1.52				
n78	Rear 0mm	0.97	104.63	2.49	0.038	Not required
BT		1.52				
GSM850	Top 0mm	0.38	106.78	1.66	0.020	Not required
BT		1.28				
GSM1900	Top 0mm	0.40	162.05	1.68	0.013	Not required
BT		1.28				
WCDMA850	Top 0mm	0.52	109.01	1.8	0.022	Not required
BT		1.28				
WCDMA1900	Top 0mm	0.87	163.55	2.15	0.019	Not required
BT		1.28				
LTE B5	Top 0mm	0.27	100.68	1.55	0.019	Not required
BT		1.28				
LTE B7	Top 0mm	0.40	166.98	1.68	0.013	Not required
BT		1.28				
n78	Top 0mm	0.73	76.24	2.01	0.037	Not required
BT		1.28				

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
LTE B7	Rear 19mm	1.15	117.18	2.06	0.025	Not required
WLAN 5G		0.91				
LTE B41(PC2)	Rear 19mm	0.64	193.89	1.55	0.010	Not required
WLAN 5G		0.91				
n41	Rear 19mm	0.95	181.11	1.86	0.014	Not required
WLAN 5G		0.91				
n78	Rear 19mm	0.70	70.64	1.61	0.029	Not required
WLAN 5G		0.91				
LTE B7	Top 19mm	1.2	119.94	1.64	0.018	Not required
WLAN 5G		0.44				

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
LTE B7	Rear 19mm	1.15	128.44	2.06	0.023	Not required
BT		0.91				
LTE B41(PC2)	Rear 19mm	0.64	201.32	1.55	0.010	Not required
BT		0.91				
n41	Rear 19mm	0.95	191.33	1.86	0.013	Not required
BT		0.91				
n78	Rear 19mm	0.70	88.7	1.61	0.023	Not required
BT		0.91				
LTE B7	Top 19mm	1.2	120.13	1.64	0.017	Not required
BT		0.44				

Position	WWAN (W/kg)		WLAN2.4G (W/kg)	Sum (W/kg)	SPLSR
Rear (0mm)	DC_5A_n78A	1.36	1.16	2.52	Yes
	DC_7A_n78A	1.34	1.16	2.50	Yes
Top (0mm)	DC_5A_n78A	0.83	0.42	1.25	/

Position	WWAN (W/kg)		WLAN2.4G (W/kg)	Sum (W/kg)	SPLSR
Rear (19mm)	DC_5A_n78A	0.65	0.11	0.76	/
	DC_7A_n78A	0.95	0.11	1.06	/
Top (19mm)	DC_5A_n78A	0.61	0.09	0.70	/

Position	WWAN (W/kg)		WLAN5G (W/kg)	BT (W/kg)	Sum (W/kg)	SPLSR
Rear (0mm)	DC_5A_n78A	1.36	1.07	0.45	2.88	Yes
	DC_7A_n78A	1.34	1.07	0.45	2.86	Yes
Top (0mm)	DC_5A_n78A	0.83	1.08	0.20	2.11	Yes

Position	WWAN (W/kg)		WLAN5G (W/kg)	BT (W/kg)	Sum (W/kg)	SPLSR
Rear (19mm)	DC_5A_n78A	0.65	0.46	0.45	1.56	/
	DC_7A_n78A	0.95	0.46	0.45	1.86	Yes
Top (19mm)	DC_5A_n78A	0.61	0.24	0.20	1.05	/

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
LTE B5	Rear 0mm	0.58	113.99	1.74	0.020	Not required
WLAN 2.4G		1.16				
NR n78		0.78	103.56	1.94	0.026	Not required
WLAN 2.4G		1.16				
LTE B7	Rear 0mm	0.56	206.43	1.72	0.011	Not required
WLAN 2.4G		1.16				
NR n78		0.78	103.56	1.94	0.026	Not required
WLAN 2.4G		1.16				

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
LTE B5	Rear 0mm	0.58	109.46	2.1	0.028	Not required
WLAN 5G		1.52				
NR n78		0.78	99.12	2.3	0.035	Not required
WLAN 5G		1.52				
LTE B7	Rear 0mm	0.56	98.29	2.08	0.031	Not required
WLAN 5G		1.52				
NR n78		0.78	99.12	2.3	0.035	Not required
WLAN 5G		1.52				
LTE B5	Top 0mm	0.20	107.41	1.48	0.017	Not required
WLAN 5G		1.28				
NR n78		0.63	78.21	1.91	0.034	Not required
WLAN 5G		1.28				

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
LTE B5	Rear 0mm	0.58	116.36	2.1	0.026	Not required
BT		1.52				
NR n78		0.78	106.02	2.3	0.033	Not required
BT		1.52				
LTE B7	Rear 0mm	0.56	97.58	2.08	0.031	Not required
BT		1.52				
NR n78		0.78	106.02	2.3	0.033	Not required
BT		1.52				
LTE B5	Top 0mm	0.20	109.23	1.48	0.016	Not required
BT		1.28				
NR n78		0.63	76.64	1.91	0.034	Not required
BT		1.28				

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
LTE B7	Rear 19mm	0.53	192.57	0.99	0.005	Not required
WLAN 5G		0.46				
NR n78		0.42	70.64	0.88	0.012	Not required
WLAN 5G		0.46				

Band	Position	SAR(W/kg)	distance	Pair SAR sum(W/kg)	SPLSR	Simultaneous SAR
LTE B7	Rear 19mm	0.53	199.46	0.98	0.005	Not required
BT		0.45				
NR n78		0.42	83.12	0.87	0.010	Not required
BT		0.45				

15.4 Conclusion

According to the above tables, the highest simultaneous transmission reported SAR values is **1.55W/kg (10g).** The sum of reported SAR values is < 1.6W/kg.

16 Measurement Uncertainty

16.1 Measurement Uncertainty for Normal SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	N	1	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521

Combined standard uncertainty	$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					9.55	9.43	257
Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$					19.1	18.9	

16.2 Measurement Uncertainty for Normal SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	√3	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	√3	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	√3	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	√3	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	√3	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	√3	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	√3	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	√3	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	√3	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.8	R	√3	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	√3	1	1	3.9	3.9	∞
13	Post-processing	B	4.0	R	√3	1	1	2.3	2.3	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	√3	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	4.0	R	√3	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	√3	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
20	Liquid permittivity (target)	B	5.0	R	√3	0.6	0.49	1.7	1.4	∞

21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.7	10.6	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						21.4	21.1	

16.3 Measurement Uncertainty for Fast SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.4	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	7.0	R	$\sqrt{3}$	1	1	4.0	4.0	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞

20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.4	10.3	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						20.8	20.6	

16.4 Measurement Uncertainty for Fast SAR Tests (3~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	14.0	R	$\sqrt{3}$	1	1	8.1	8.1	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5

17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	1.0	0.8	521
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						13.5	13.4	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						27.0	26.8	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 14, 2022	One year
02	Power sensor	NRP110T	101139	January 13, 2022	One year
03	Power sensor	NRP110T	101159		
04	Signal Generator	E4438C	MY49071430	January 13, 2022	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	CMW500	159890	January 24, 2022	One year
07	E-field Probe	SPEAG EX3DV4	7600	December 29，2021	One year
08	DAE	SPEAG DAE4	777	January 07, 2022	One year
09	E-field Probe	SPEAG EX3DV4	3617	March 11，2022	One year
10	DAE	SPEAG DAE4	1588	September 01,2021	One year
11	Dipole Validation Kit	SPEAG D835V2	4d062	July 5,2022	One year
12	Dipole Validation Kit	SPEAG D1900V2	5d142	July 6,2022	One year
13	Dipole Validation Kit	SPEAG D2450V2	853	July 26,2021	Three year
14	Dipole Validation Kit	SPEAG D2600V2	1012	July 20,2022	One year
15	Dipole Validation Kit	SPEAG D3500V2	1016	July 01,2022	One year
16	Dipole Validation Kit	SPEAG D5GHzV2	1060	July 05,2022	One year

END OF REPORT BODY

ANNEX A Graph Results

GSM850 Rear 0mm

Date: 7/28/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.932 S/m; εr = 42.99; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: GSM850 2TX (0) Frequency: 848.8 MHz Duty Cycle: 1:4.00037

Probe: EX3DV4 - SN3617 ConvF(9.91, 9.91, 9.91)

Area Scan (171x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.02 W/kg

Zoom Scan (6x6x5)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.751 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 3.71 W/kg

SAR(1 g) = 0.728 W/kg; SAR(10 g) = 0.267 W/kg

Maximum value of SAR (measured) = 1.75 W/kg

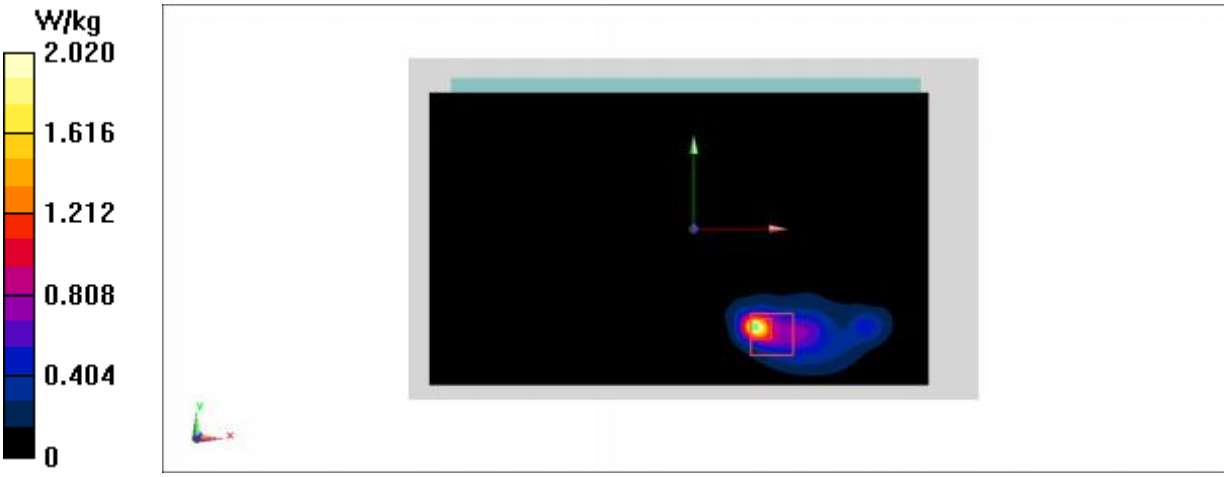


Fig A.1

PCS1900 Rear 0mm

Date: 7/29/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.317 S/m; εr = 41.653; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: GSM1900 3TX (0) Frequency: 1850.2 MHz Duty Cycle: 1:2.66993

Probe: EX3DV4 - SN3617 ConvF(8.08, 8.08, 8.08)

Area Scan (181x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.31 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.80 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 0.801 W/kg; SAR(10 g) = 0.391 W/kg

Maximum value of SAR (measured) = 1.18 W/kg

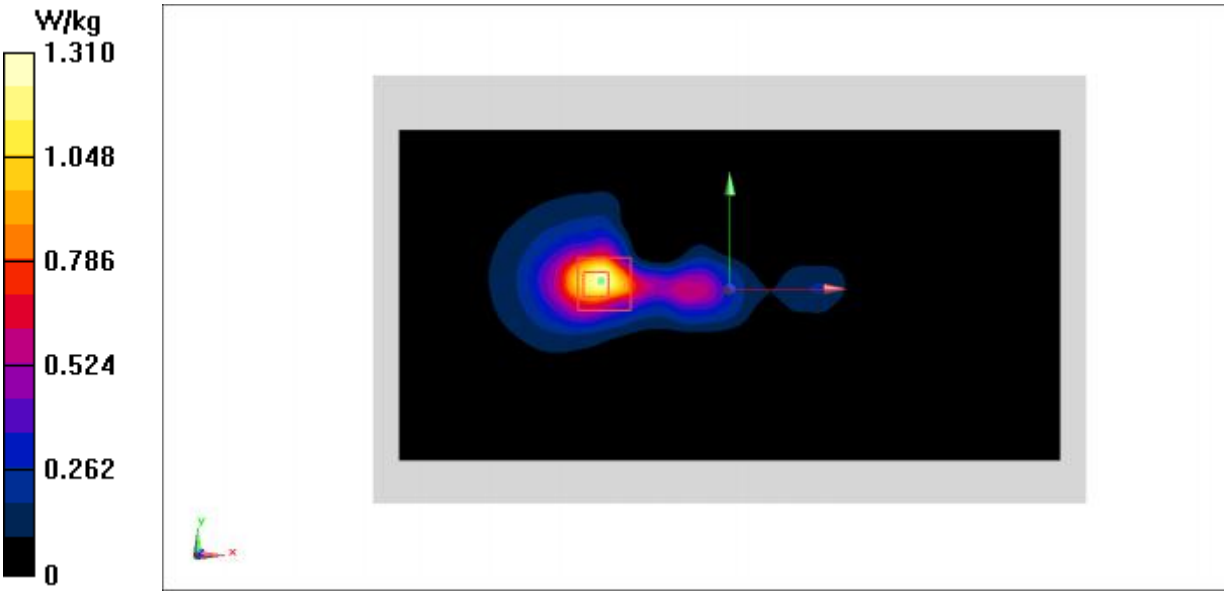


Fig A.2

WCDMA1900 Rear 0mm

Date: 7/29/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.3756 S/m; εr = 41.71; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: WCDMA1900(B2) (0) Frequency: 1907.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(8.08, 8.08, 8.08)

Area Scan (171x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.85 W/kg

Zoom Scan (7x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.632 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 2.47 W/kg

SAR(1 g) = 0.915 W/kg; SAR(10 g) = 0.377 W/kg

Maximum value of SAR (measured) = 1.95 W/kg

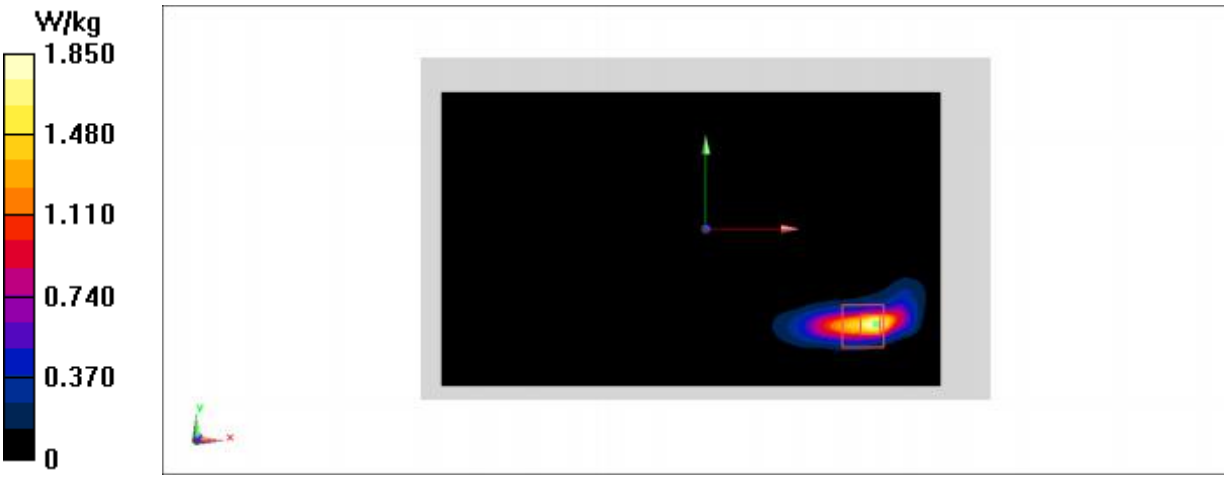


Fig A.3

WCDMA850 Rear 0mm

Date: 7/28/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.92 S/m; εr = 42.919; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: WCDMA850(B5) (0) Frequency: 826.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(9.91, 9.91, 9.91)

Area Scan (181x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.29 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.274 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 3.95 W/kg

SAR(1 g) = 0.806 W/kg; SAR(10 g) = 0.305 W/kg

Maximum value of SAR (measured) = 2.24 W/kg

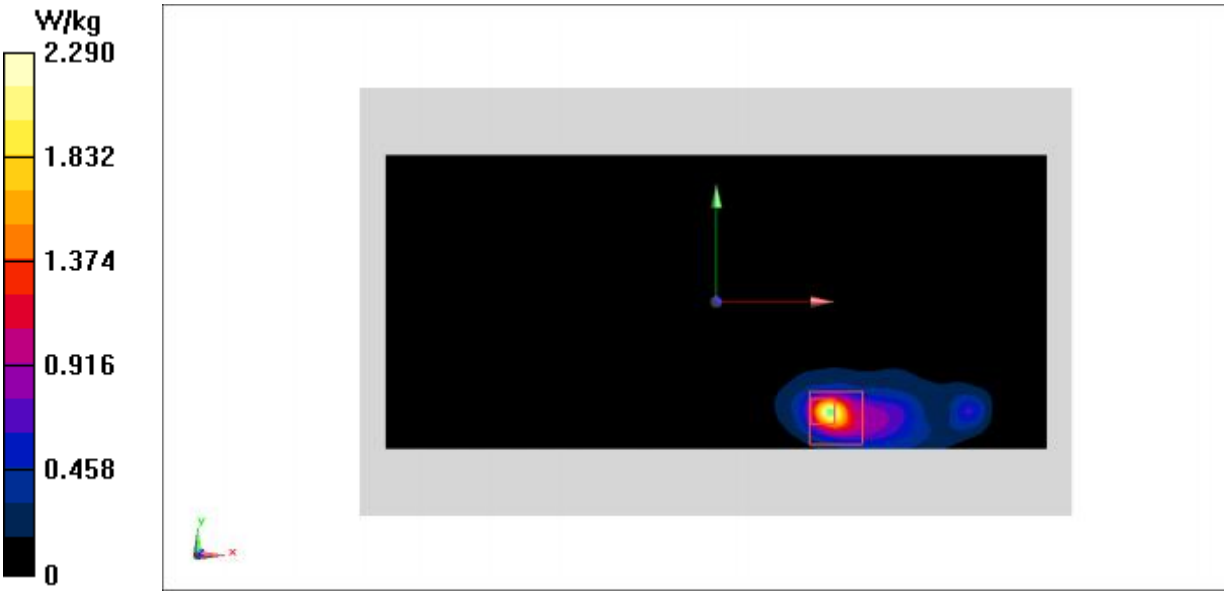


Fig A.4

LTE B5 Rear 0mm

Date: 7/28/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used (interpolated): f = 829 MHz; σ = 0.923 S/m; εr = 42.94; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: LTE Band5 (0) Frequency: 829 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(9.91, 9.91, 9.91)

Area Scan (181x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.13 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.678 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 3.81 W/kg

SAR(1 g) = 0.853 W/kg; SAR(10 g) = 0.313 W/kg

Maximum value of SAR (measured) = 1.62 W/kg

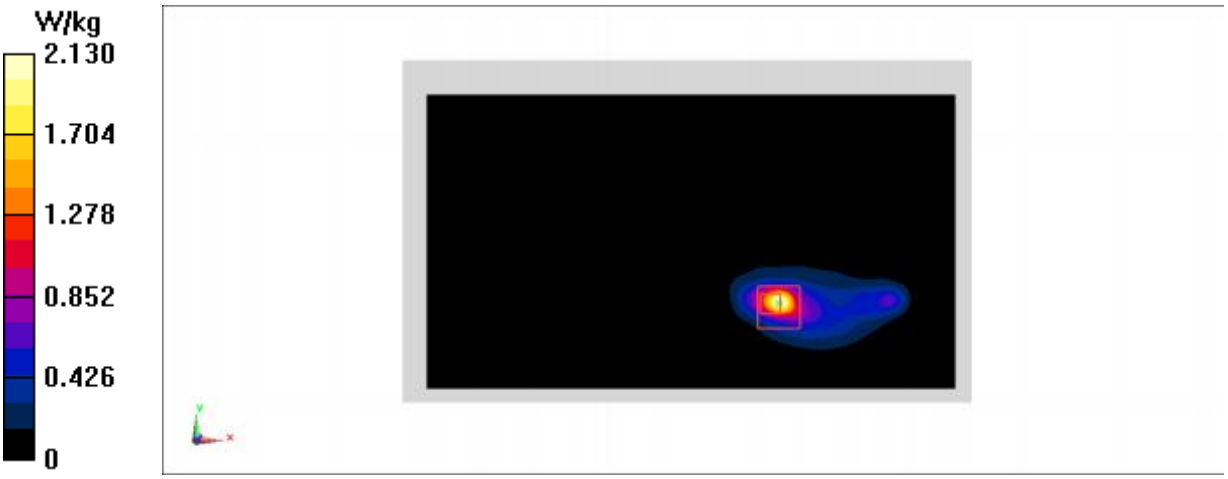


Fig A.5

LTE B7 ANT0 Right 0mm

Date: 8/18/2022

Electronics: DAE4 Sn777

Medium: H650-7000M

Medium parameters used: f = 2560 MHz; σ = 1.877 S/m; εr = 40.98; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: LTE Band7 (0) Frequency: 2560 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.62, 7.62, 7.62)

Area Scan (181x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.39 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.225 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 2.53 W/kg

SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.443 W/kg

Maximum value of SAR (measured) = 2.01 W/kg

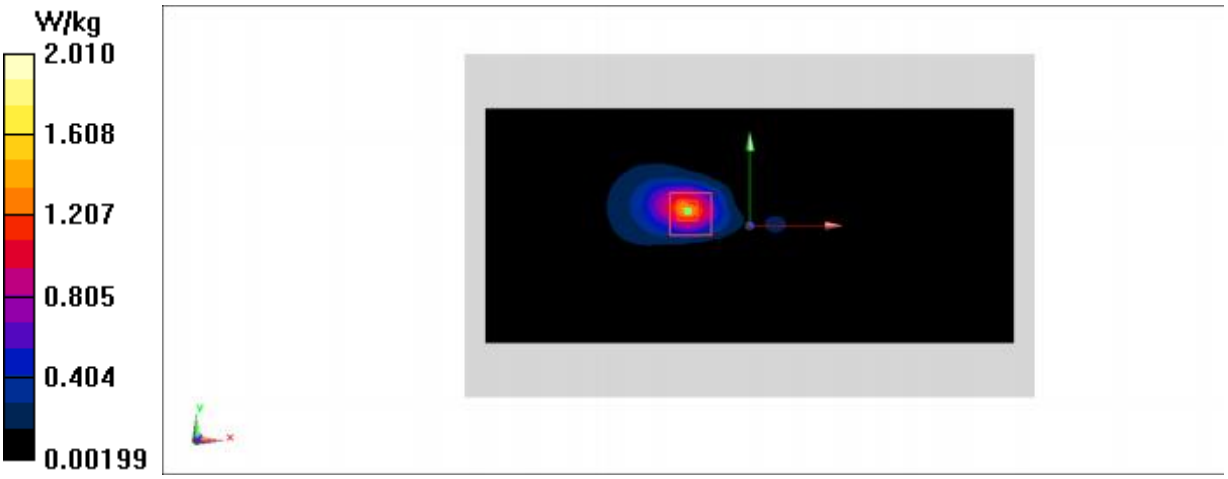


Fig A.6

LTE B7 ANT5 Rear 14mm

Date: 8/18/2022

Electronics: DAE4 Sn777

Medium: H650-7000M

Medium parameters used: f = 2560 MHz; σ = 1.877 S/m; εr = 40.98; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: LTE Band7 (0) Frequency: 2560 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.62, 7.62, 7.62)

Area Scan (181x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.742 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.348 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.541 W/kg; SAR(10 g) = 0.271 W/kg

Maximum value of SAR (measured) = 0.840 W/kg

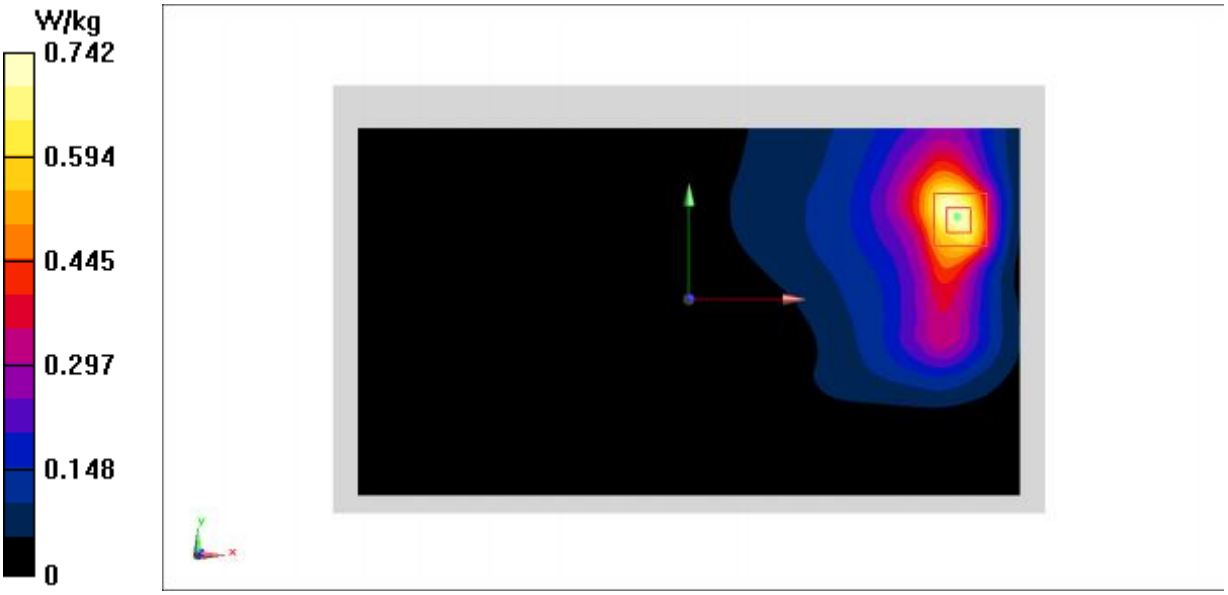


Fig A.7

LTE B41 PC3 Rear 0mm

Date: 8/18/2022

Electronics: DAE4 Sn777

Medium: H650-7000M

Medium parameters used: f = 2680 MHz; σ = 1.963 S/m; εr = 41.02; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: LTE Band41 (0) Frequency: 2680 MHz Duty Cycle: 1:1.5787

Probe: EX3DV4 – SN7600 ConvF(7.62, 7.62, 7.62)

Area Scan (181x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.72 W/kg

Zoom Scan (6x6x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.222 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 2.19 W/kg

SAR(1 g) = 0.673 W/kg; SAR(10 g) = 0.203 W/kg

Maximum value of SAR (measured) = 1.39 W/kg

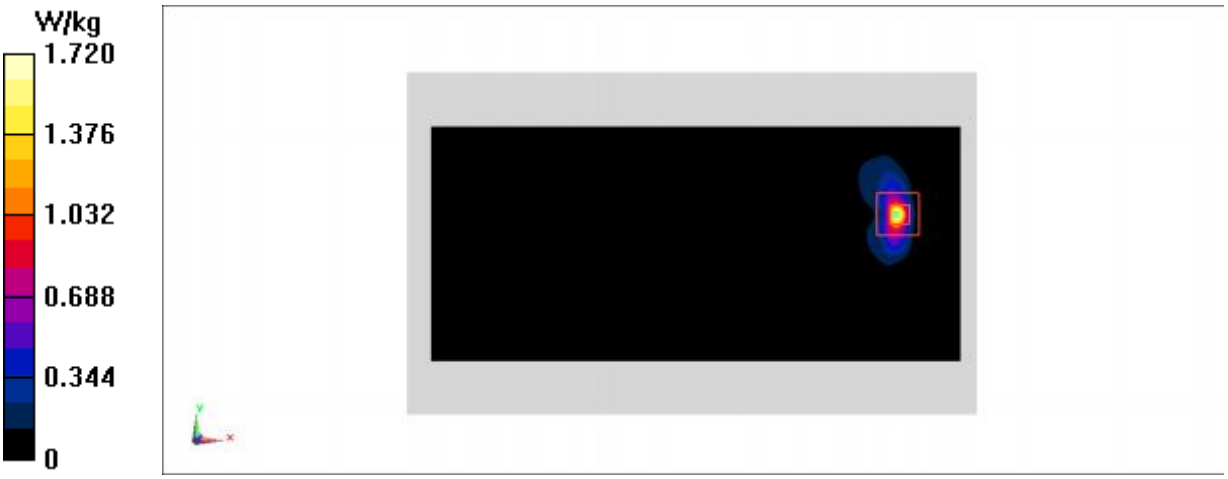


Fig A.8

LTE B41 PC2 Right 0mm

Date: 8/18/2022

Electronics: DAE4 Sn777

Medium: H650-7000M

Medium parameters used: f = 2680 MHz; σ = 1.963 S/m; εr = 41.02; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: LTE Band41 (0) Frequency: 2680 MHz Duty Cycle: 1:2.309

Probe: EX3DV4 – SN7600 ConvF(7.62, 7.62, 7.62)

Area Scan (231x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.70 W/kg

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

Reference Value = 4.805 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 2.82 W/kg

SAR(1 g) = 0.958 W/kg; SAR(10 g) = 0.318 W/kg

Maximum value of SAR (measured) = 2.06 W/kg

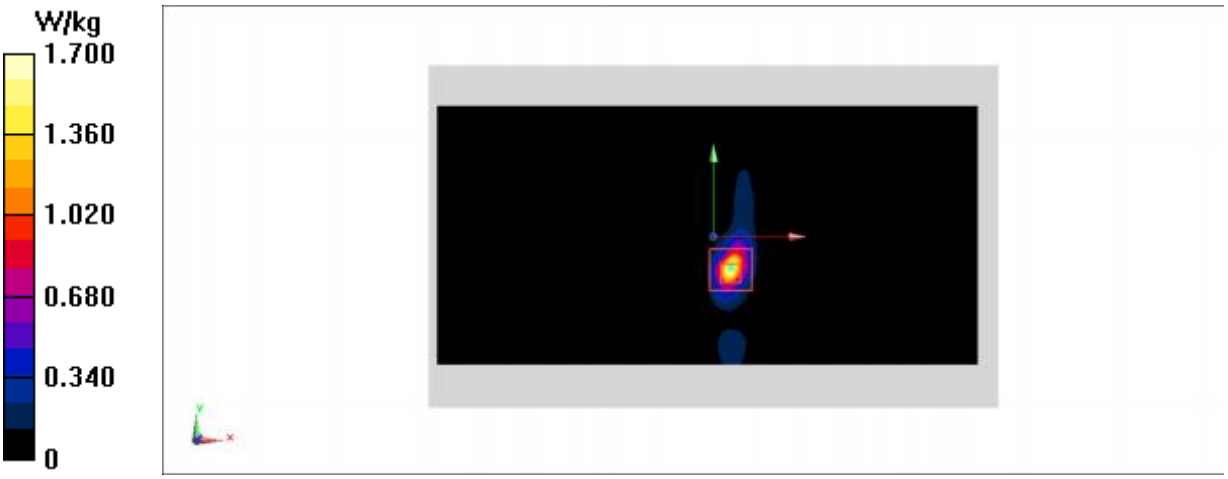


Fig A.9

5G N41 Rear 0mm

Date: 8/18/2022

Electronics: DAE4 Sn777

Medium: H650-7000M

Medium parameters used (interpolated): f = 2639 MHz; σ = 1.959 S/m; εr = 40.96; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: 5G N41 (0) Frequency: 2639 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7600 ConvF(7.62, 7.62, 7.62)

Area Scan (231x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.66 W/kg

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

Reference Value = 2.539 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.97 W/kg

SAR(1 g) = 0.931 W/kg; SAR(10 g) = 0.303 W/kg

Maximum value of SAR (measured) = 1.98 W/kg

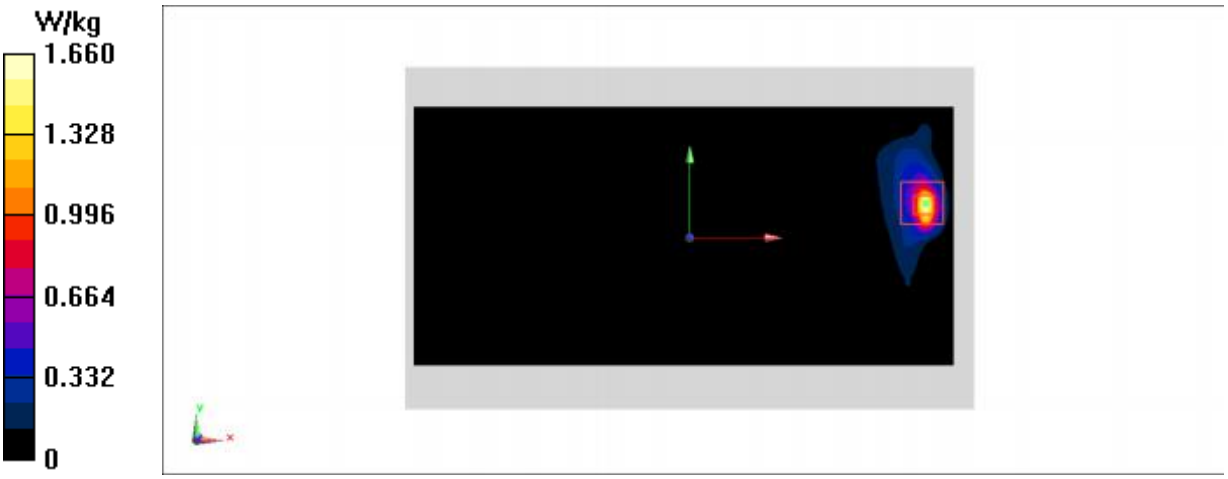


Fig A.10

5G N78 Top 19mm

Date: 9/4/2022

Electronics: DAE4 Sn777

Medium: H700-6000

Medium parameters used: f = 3500.01 MHz; σ = 2.866 S/m; εr = 39.23; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: UID 0, N77 3500.01 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.05, 7.05, 7.05)

Area Scan (181x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 1.06 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 1.368 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 2.90 W/kg

SAR(1 g) = 0.743 W/kg; SAR(10 g) = 0.230 W/kg

Maximum value of SAR (measured) = 1.97 W/kg

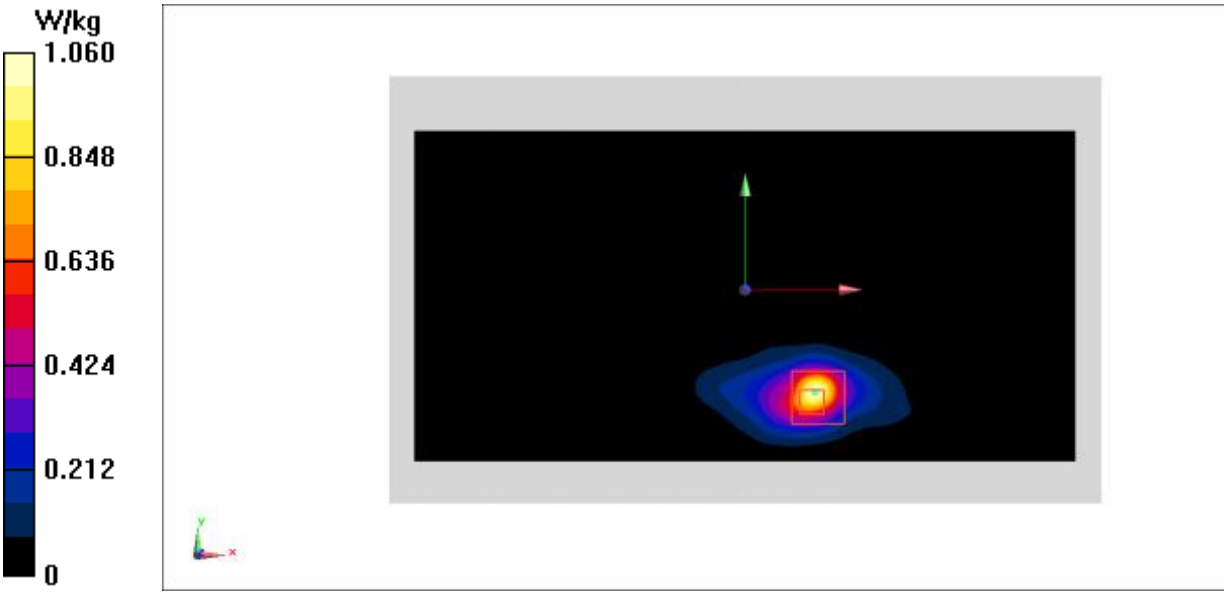


Fig A.11

WLAN2450 Rear 0mm

Date: 7/26/2022

Electronics: DAE4 Sn1588

Medium: H700-6000M

Medium parameters used (interpolated): f = 2412 MHz; σ = 1.806 S/m; εr = 40.88; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: WIFI 2450 (0) Frequency: 2412 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(7.55, 7.55, 7.55)

Area Scan (171x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 2.42 W/kg

Zoom Scan (8x6x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.697 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.79 W/kg

SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.409 W/kg

Maximum value of SAR (measured) = 1.94 W/kg

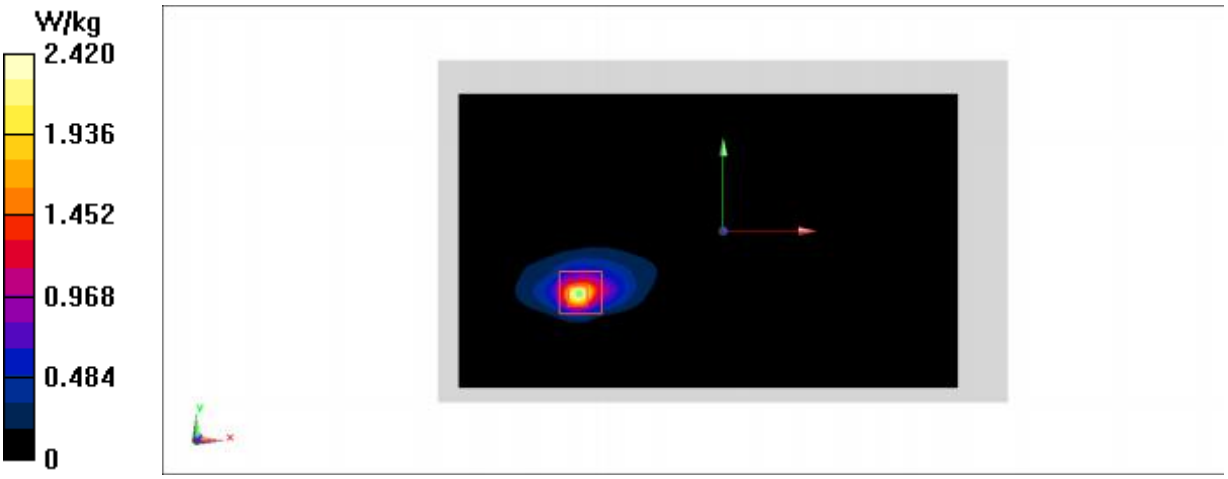


Fig A.12

WLAN5G Top 0mm

Date: 8/10/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used: f = 5720 MHz; σ = 5.478 S/m; εr = 36.83; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: WLan 11a (0) Frequency: 5720 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(5.2, 5.2, 5.2)

Area Scan (91x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 2.50 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 4.843 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 7.77 W/kg

SAR(1 g) = 0.938 W/kg; SAR(10 g) = 0.197 W/kg

Maximum value of SAR (measured) = 1.83 W/kg

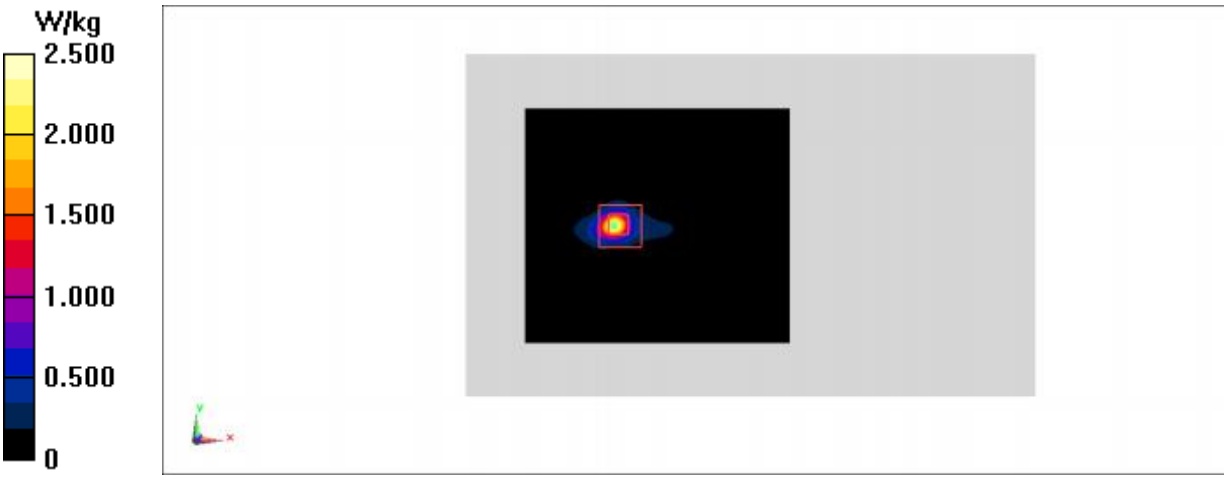


Fig A.13

BT Rear 0mm

Date: 7/26/2022

Electronics: DAE4 Sn1588

Medium: H700-6000M

Medium parameters used: f = 2441 MHz; σ = 1.812 S/m; εr = 40.89; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: Bluetooth (0) Frequency: 2441 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(7.55, 7.55, 7.55)

Area Scan (101x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.443 W/kg

Zoom Scan (5x5x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.161 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.893 W/kg

SAR(1 g) = 0.316 W/kg; SAR(10 g) = 0.119 W/kg

Maximum value of SAR (measured) = 0.570 W/kg

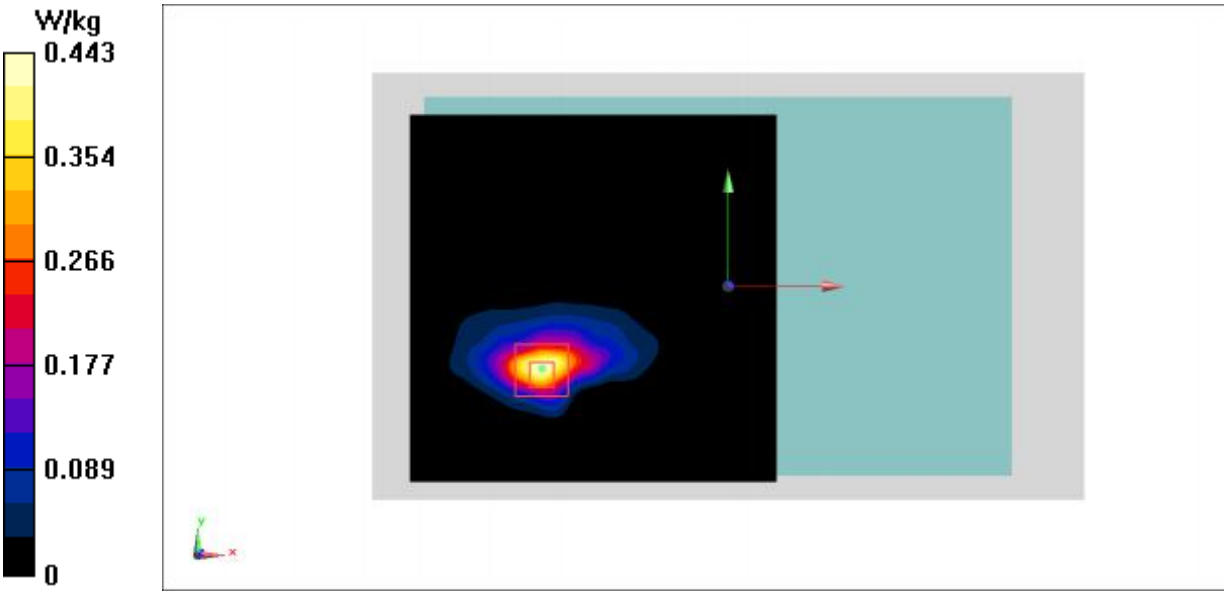
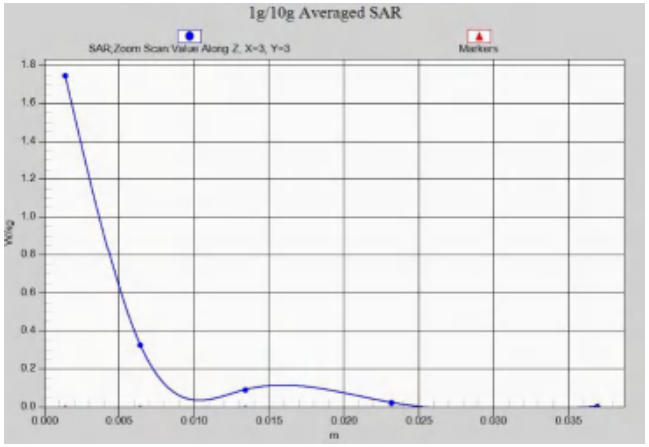
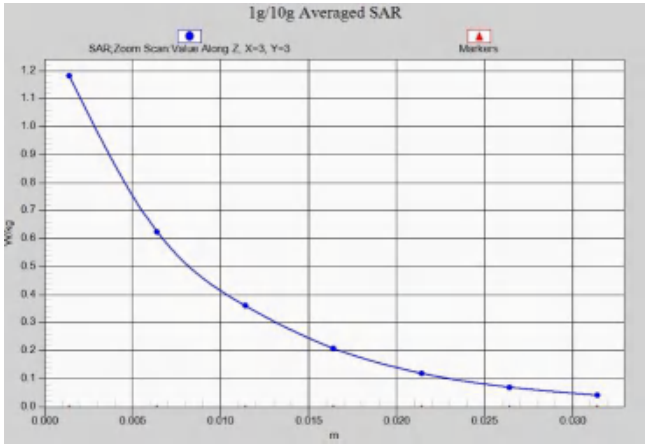


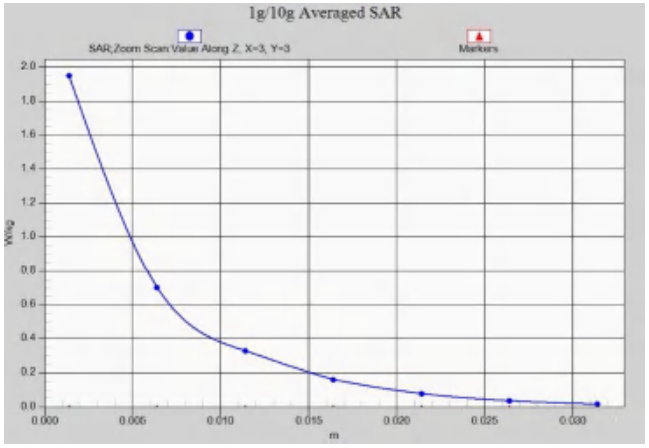
Fig A.14



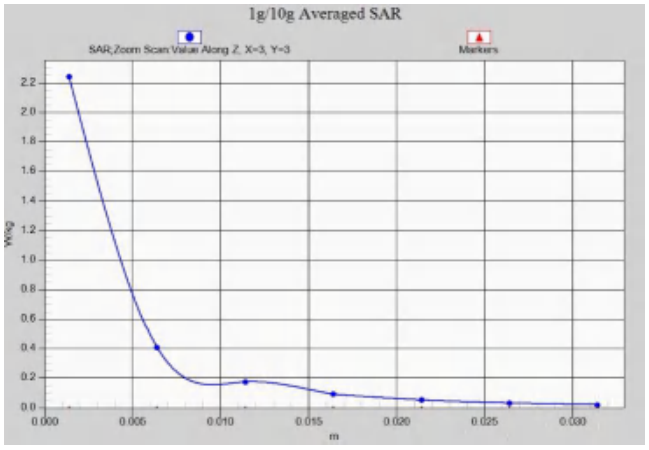
Z-Scan at power reference point (GSM850)



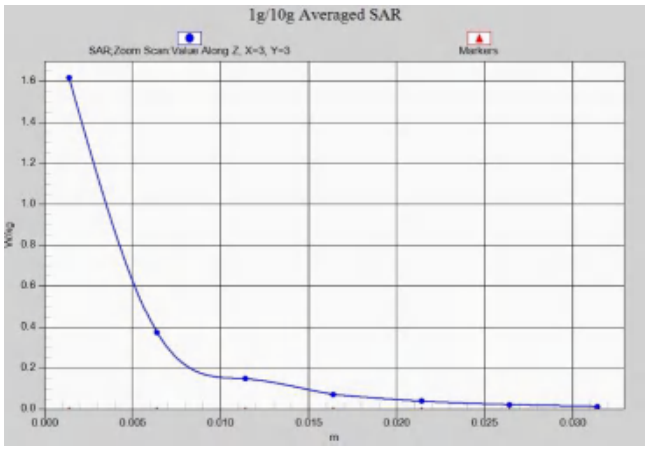
Z-Scan at power reference point (GSM1900)



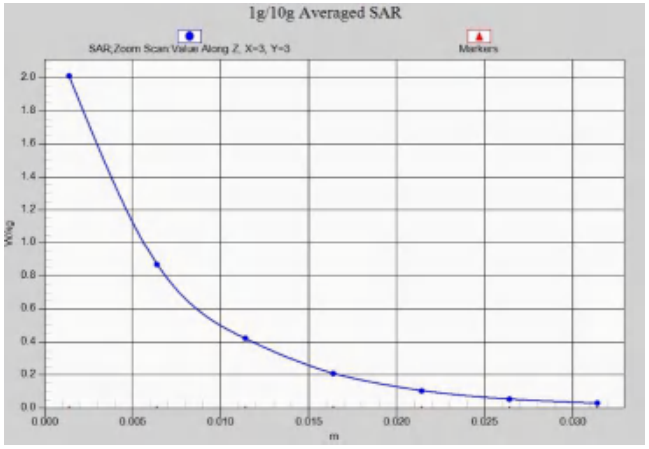
Z-Scan at power reference point (WCDMA1900)



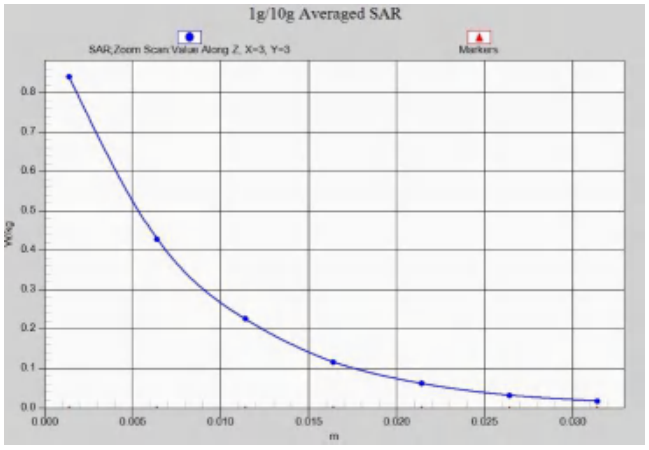
Z-Scan at power reference point (WCDMA850)



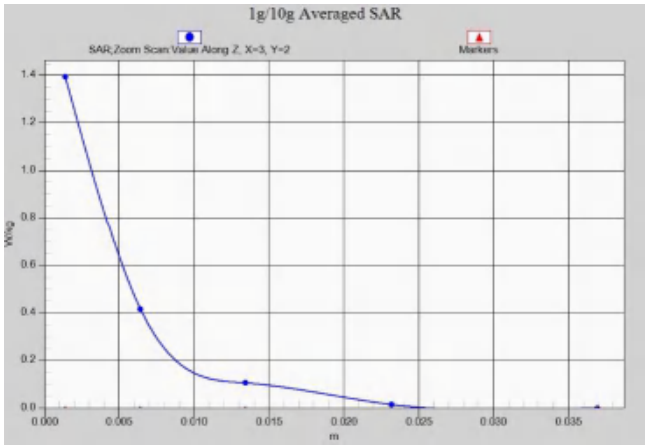
Z-Scan at power reference point (LTEB5)



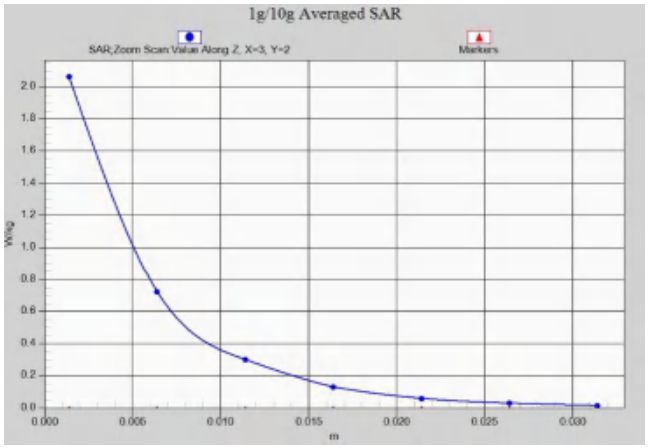
Z-Scan at power reference point (LTEB7)



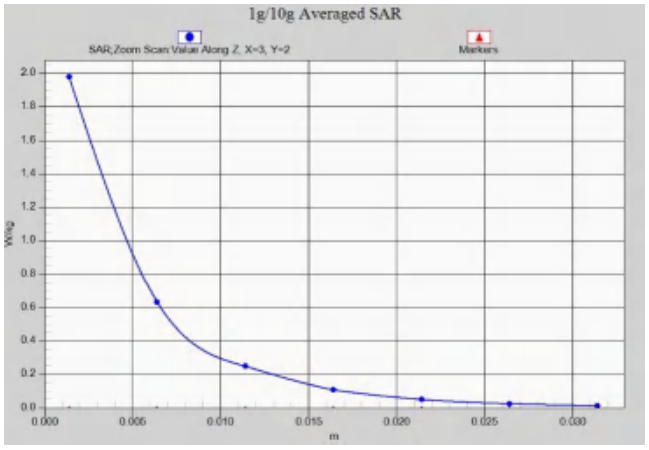
Z-Scan at power reference point (LTEB7)



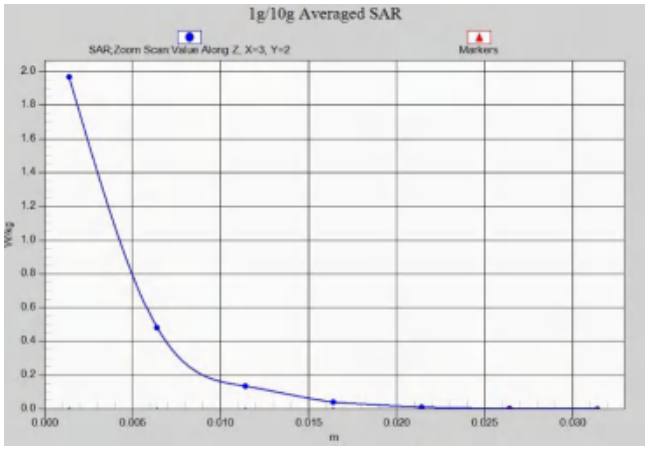
Z-Scan at power reference point (LTEB41PC3)



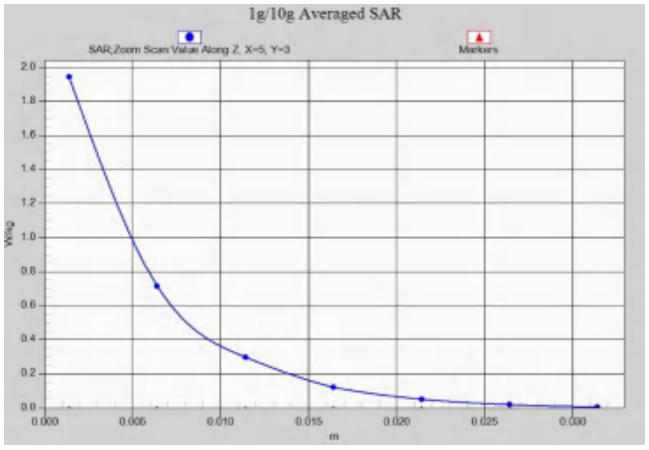
Z-Scan at power reference point (LTEB41PC2)



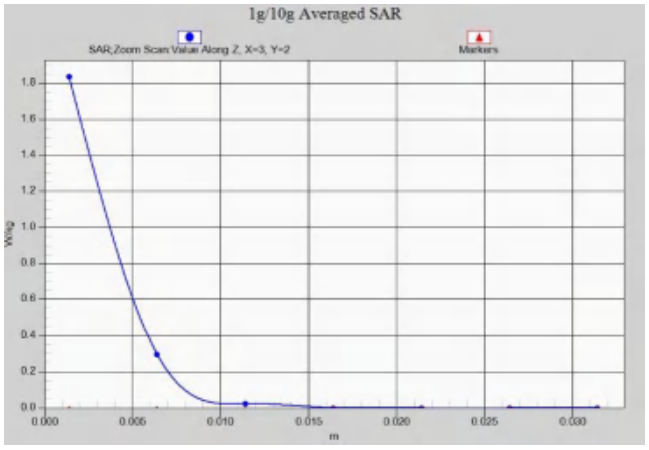
Z-Scan at power reference point (5G N41)



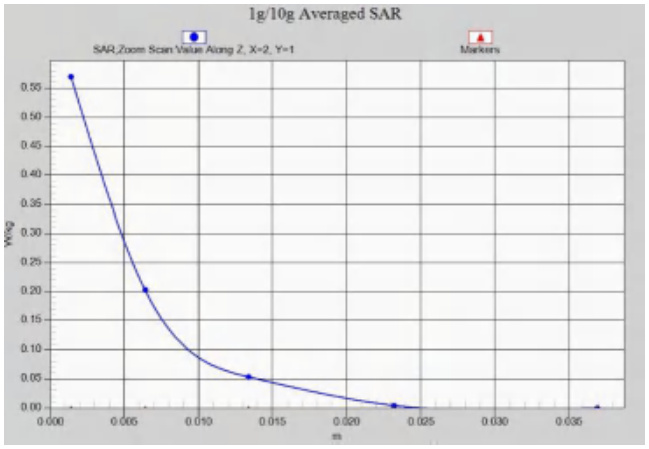
Z-Scan at power reference point (5G N78)



Z-Scan at power reference point (WIFI2.4G)



Z-Scan at power reference point (WIFI5G)



Z-Scan at power reference point (BT)

ANNEX B System Verification Results

835 MHz

Date: 7/28/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used: f = 835 MHz; σ = 0.927 S/m; εr = 42.96; ρ = 1000 kg/m3

Ambient Temperature:23.3℃ Liquid Temperature: 22.5℃

Communication System: CW (0) Frequency: 835 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(9.91, 9.91, 9.91)

Area Scan (131x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.20 W/kg

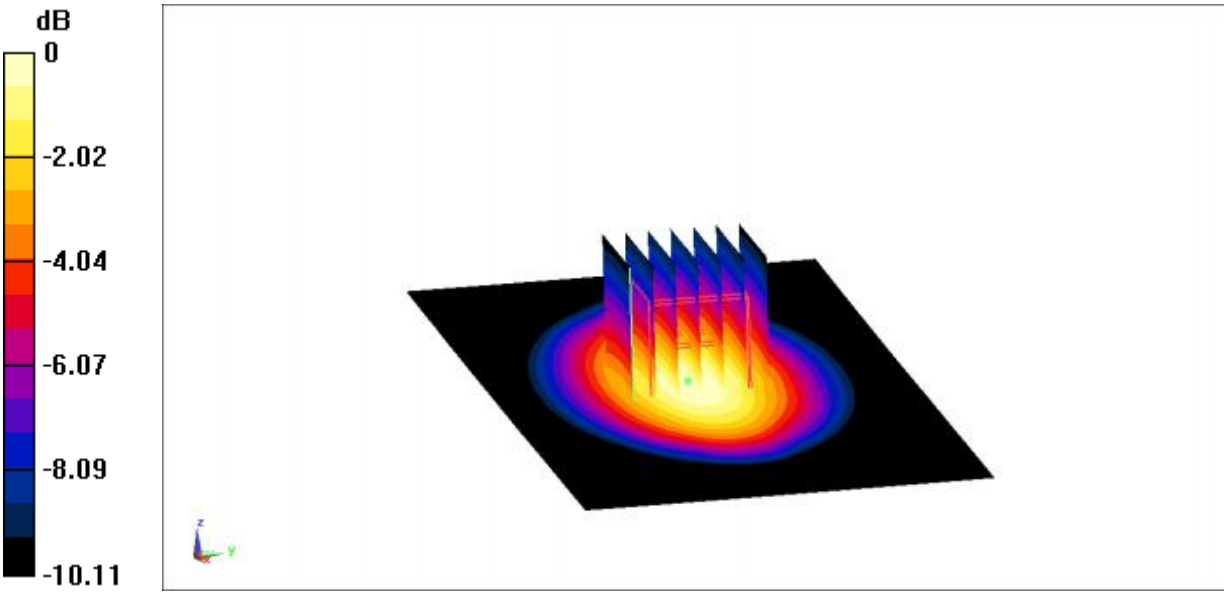
Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 59.03 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.60 W/kg

SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.59 W/kg

Maximum value of SAR (measured) = 3.20 W/kg



0 dB = 3.20 W/kg = 5.05 dBW/kg

1900MHz

Date: 7/29/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used: f = 1900 MHz; σ = 1.372 S/m; εr = 41.7; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW (0) Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(8.08, 8.08, 8.08)

Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 16.2 W/kg

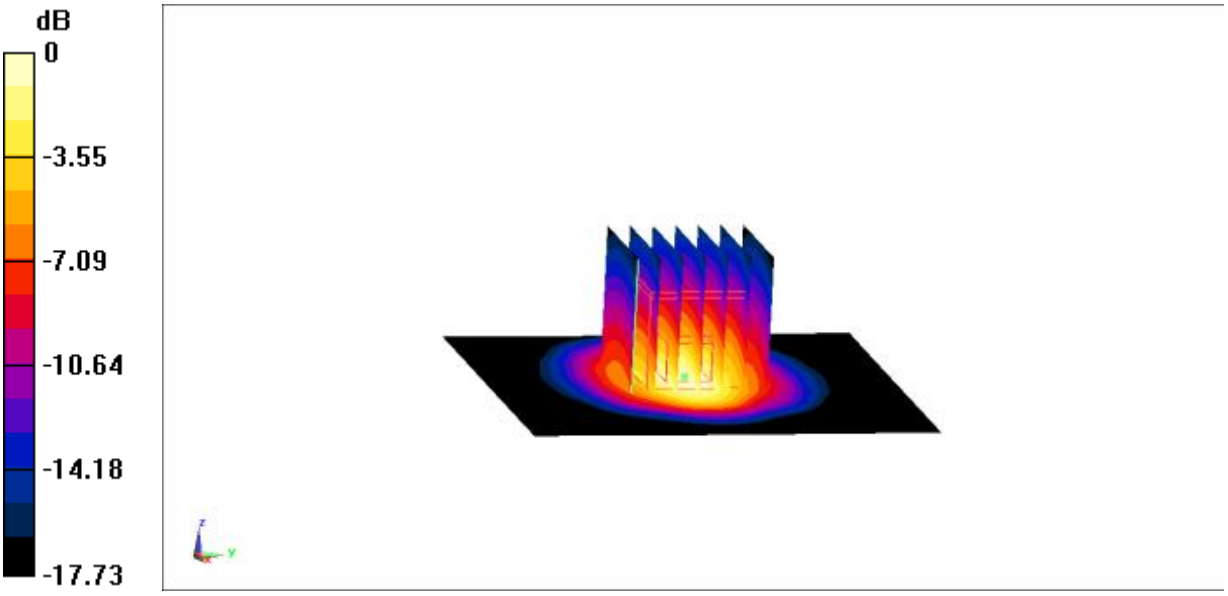
Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.5 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 19.2 W/kg

SAR(1 g) = 9.99 W/kg; SAR(10 g) = 5.15 W/kg

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



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

2450MHz

Date: 7/26/2022

Electronics: DAE4 Sn1588

Medium: H700-6000M

Medium parameters used: f = 2450 MHz; σ = 1.809 S/m; εr = 40.91; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW (0) Frequency: 2450 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(7.55, 7.55, 7.55)

Area Scan (61x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 22.6 W/kg

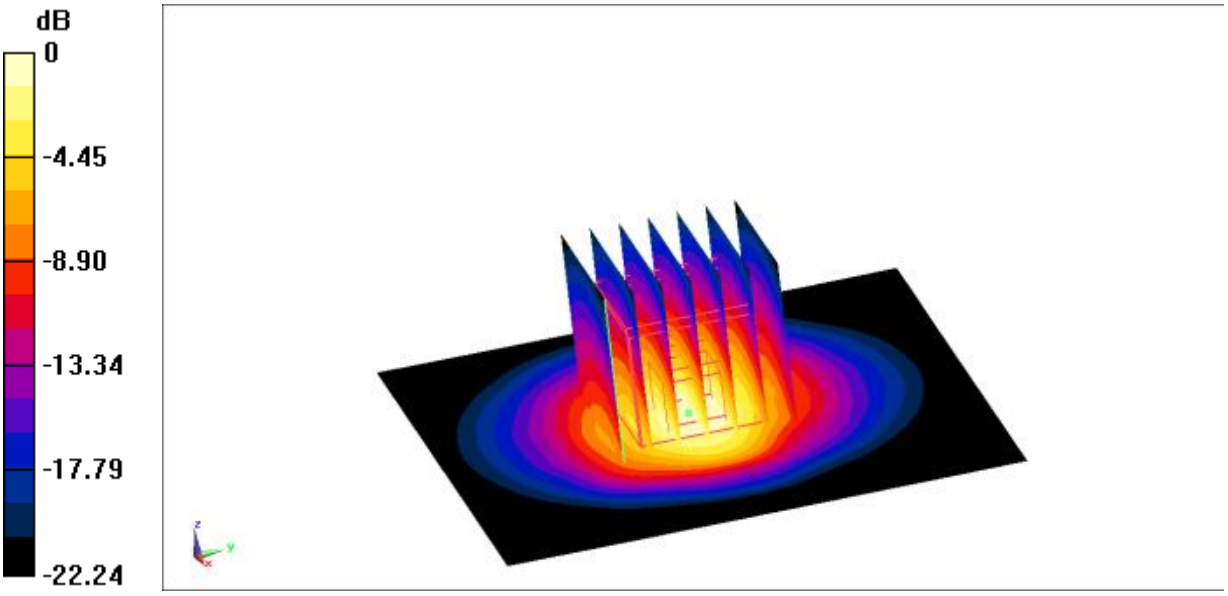
Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 107.3 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 28.1 W/kg

SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.13 W/kg

Maximum value of SAR (measured) = 22.7 W/kg



0 dB = 22.7 W/kg = 13.56 dBW/kg

2600MHz

Date: 8/18/2022

Electronics: DAE4 Sn777

Medium: H650-7000M

Medium parameters used: f = 2600 MHz; σ = 1.907 S/m; εr = 40.95; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW (0) Frequency: 2600 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.62, 7.62, 7.62)

Area Scan (61x61x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 24.3 W/kg

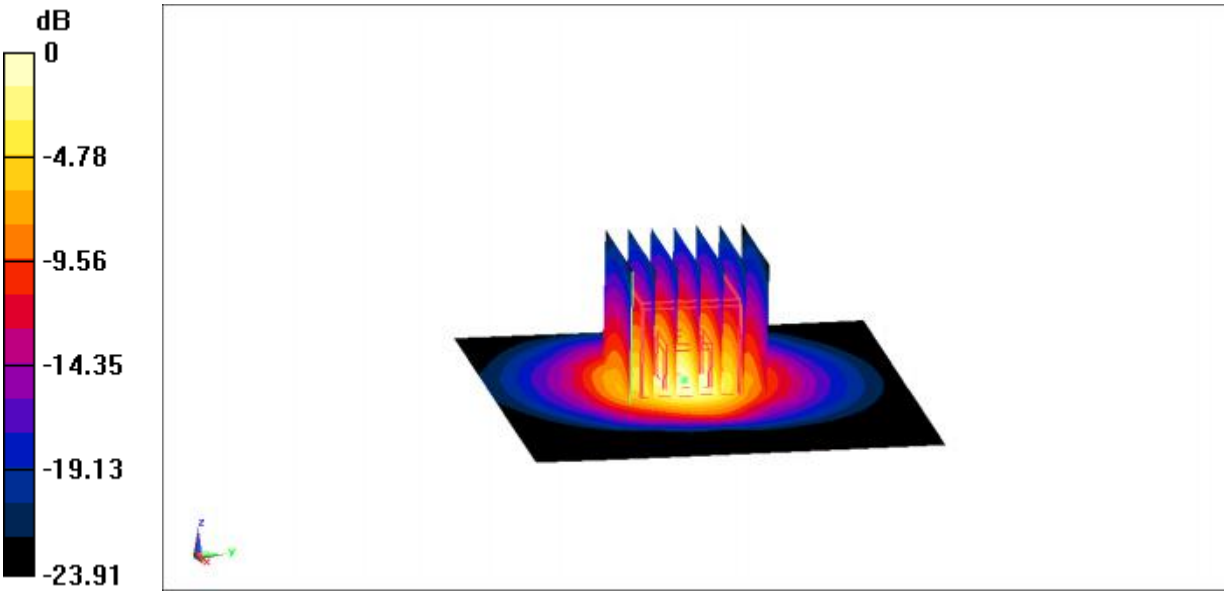
Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 103.8 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 30.9 W/kg

SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.29 W/kg

Maximum value of SAR (measured) = 24.4 W/kg



0 dB = 24.4 W/kg = 13.87 dBW/kg

3500MHz

Date: 9/4/2022

Electronics: DAE4 Sn777

Medium: H700-6000

Medium parameters used: f = 3500 MHz; σ = 2.866 S/m; εr = 39.23; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW (0) Frequency: 3500 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.05, 7.05, 7.05)

Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 12.5 W/kg

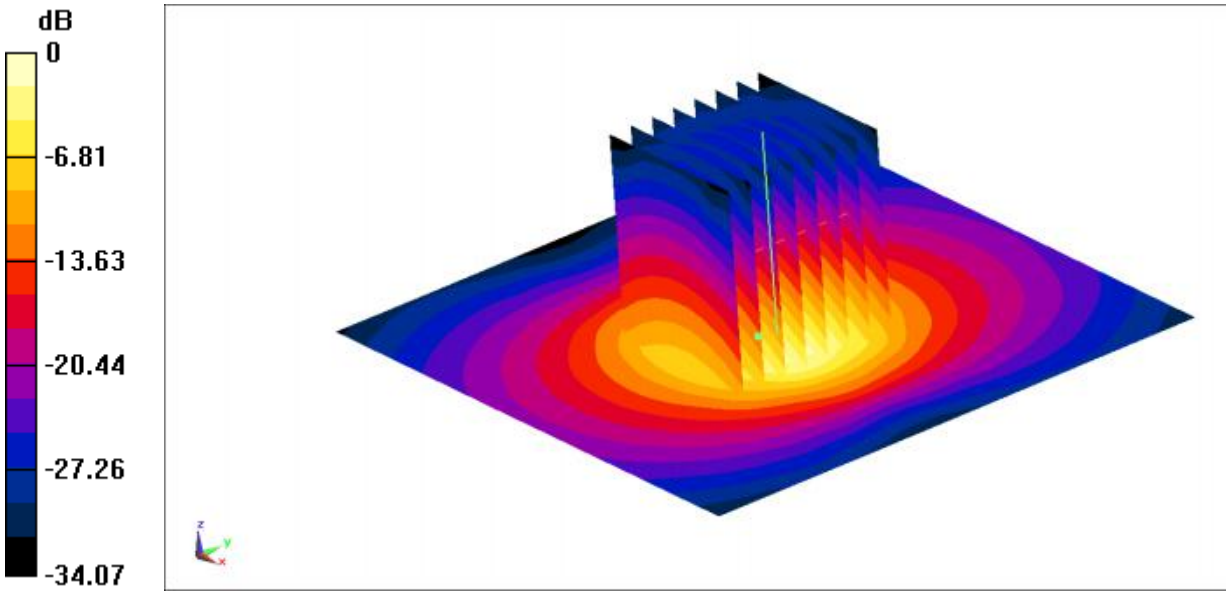
Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.98 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 6.61 W/kg; SAR(10 g) = 2.52 W/kg

Maximum value of SAR (measured) = 12.3 W/kg



0 dB = 12.3 W/kg = 10.90 dBW/kg

5250 MHz

Date: 8/10/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used: f = 5250 MHz; σ = 4.752 S/m; εr = 37.47; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW (0) Frequency: 5250 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(5.53, 5.53, 5.53)

Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 19.1 W/kg

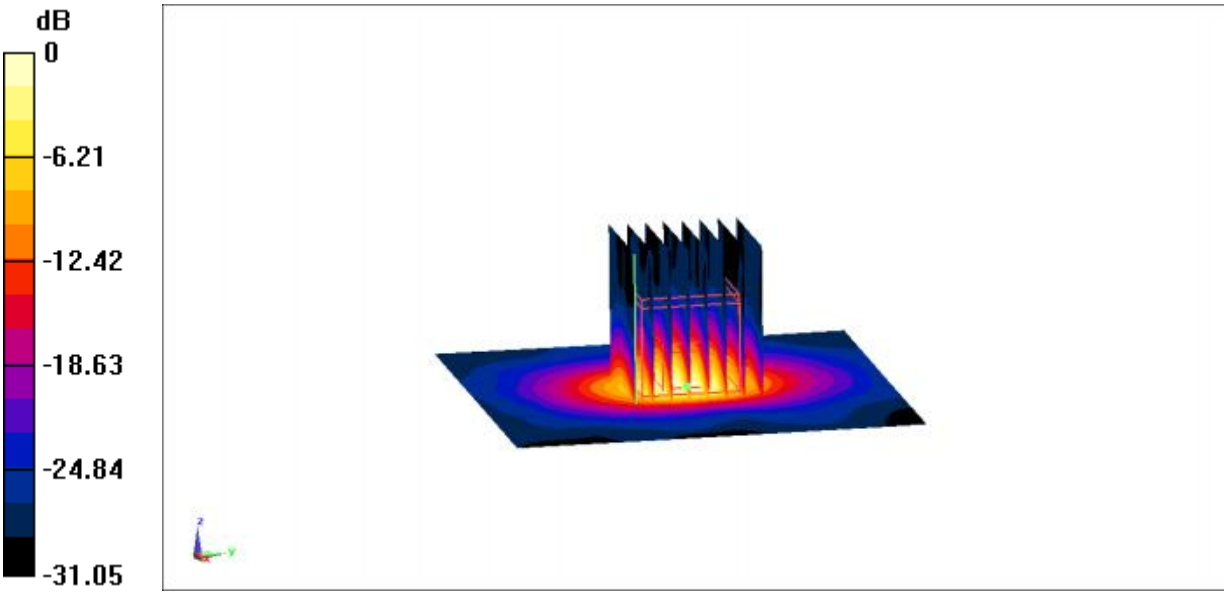
Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.95 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 32.3 W/kg

SAR(1 g) = 7.84 W/kg; SAR(10 g) = 2.21 W/kg

Maximum value of SAR (measured) = 19.5 W/kg



0 dB = 19.5 W/kg = 12.90 dBW/kg

5600 MHz

Date: 8/10/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used: f = 5600 MHz; σ = 5.308 S/m; εr = 36.93; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW (0) Frequency: 5600 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(5.11, 5.11, 5.11)

Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 20.5 W/kg

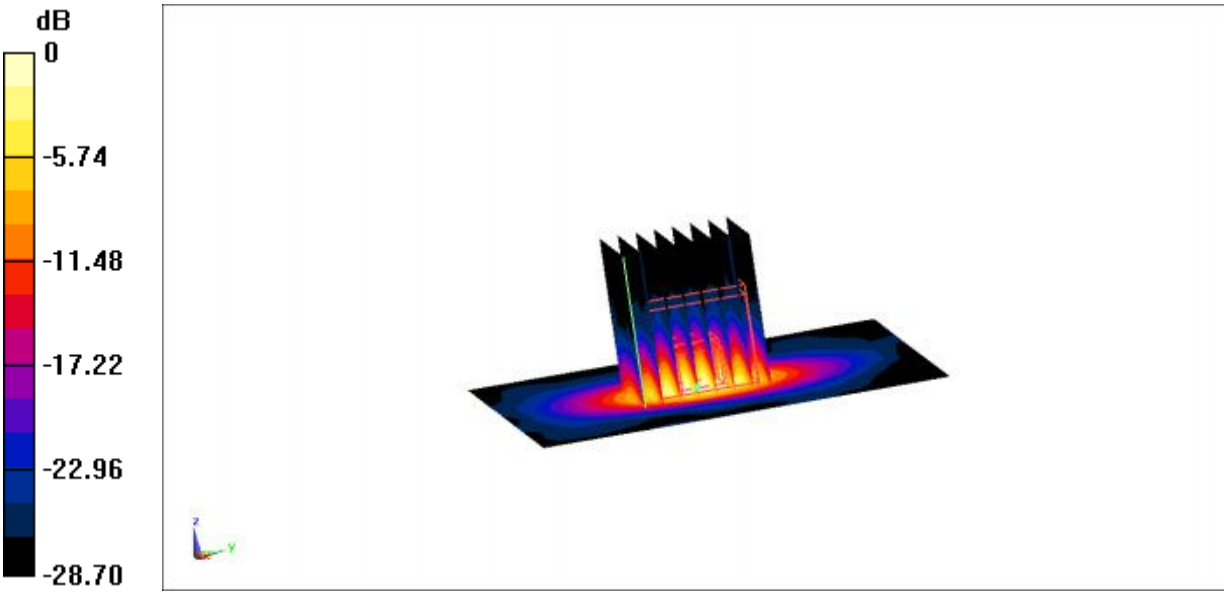
Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 68.03 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 36.2 W/kg

SAR(1 g) = 8.08 W/kg; SAR(10 g) = 2.27 W/kg

Maximum value of SAR (measured) = 20.2 W/kg



0 dB = 20.2 W/kg = 13.05 dBW/kg

5750 MHz

Date: 8/10/2022

Electronics: DAE4 Sn1588

Medium: H700-6000

Medium parameters used: f = 5750 MHz; σ = 5.402 S/m; εr = 36.93; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW (0) Frequency: 5750 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN3617 ConvF(5.2, 5.2, 5.2)

Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 19.8 W/kg

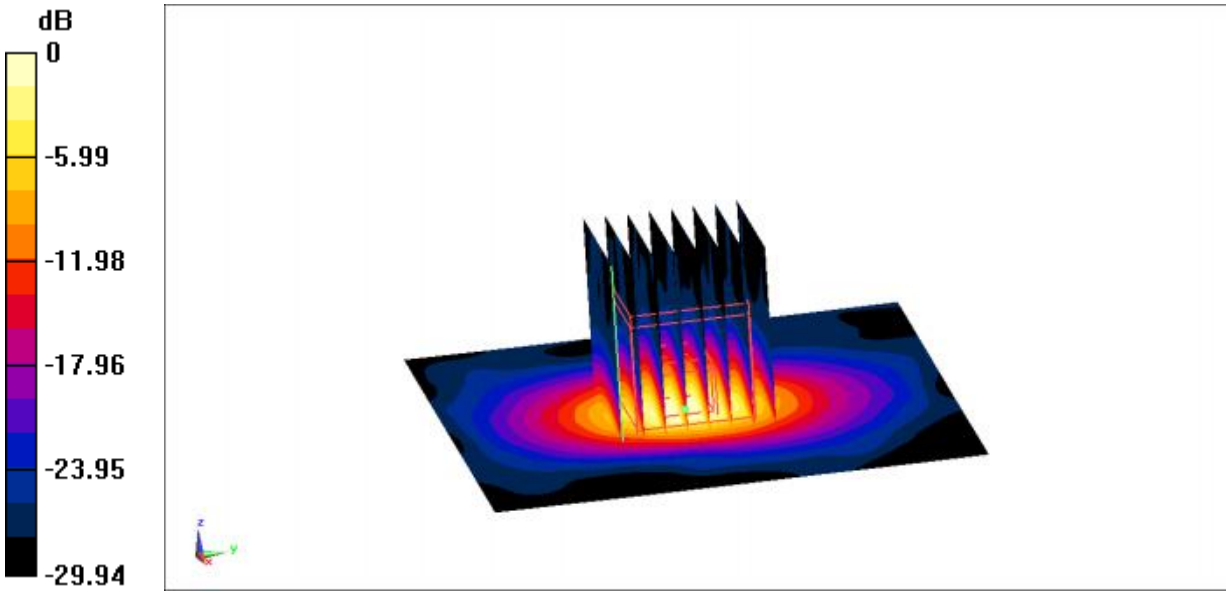
Zoom Scan (4x4x1.4mm, graded), dist=1.4mm (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 68.50 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 36.2 W/kg

SAR(1 g) = 7.77 W/kg; SAR(10 g) = 2.17 W/kg

Maximum value of SAR (measured) = 19.1 W/kg

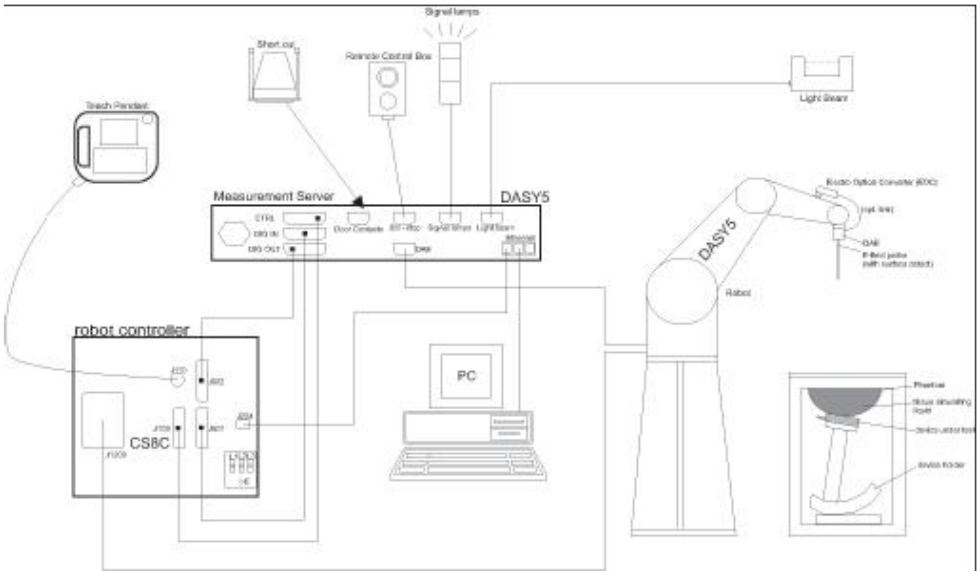


0 dB = 19.1 W/kg = 12.81 dBW/kg

ANNEX C SAR Measurement Setup

C.1 Measurement Set-up

The Dasy5 or DASY6 system for performing compliance tests is illustrated above graphically. This system consists of the following items:



Picture C.1SAR Lab Test Measurement Set-up

- A standard high precision 6-axis robot (StäubliTX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY5 or DASY6 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as
- warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

C.2 Dasy5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY5 or DASY6 software reads the reflection durning a software approach and looks for the maximum using 2nd ord curve fitting. The approach is stopped at reaching the maximum.

Probe Specifications:

Model: ES3DV3, EX3DV4
Frequency 10MHz — 6.0GHz(EX3DV4)
Range: 10MHz — 4GHz(ES3DV3)
Calibration: In head and body simulating tissue at Frequencies from 835 up to 5800MHz
Linearity: ± 0.2 dB(30 MHz to 6 GHz) for EX3DV4
± 0.2 dB(30 MHz to 4 GHz) for ES3DV3
DynamicRange: 10 mW/kg — 100W/kg
Probe Length: 330 mm
Probe Tip
Length: 20 mm
Body Diameter: 12 mm
Tip Diameter: 2.5 mm (3.9 mm for ES3DV3)
Tip-Center: 1 mm (2.0mm for ES3DV3)
Application: SAR Dosimetry Testing
Compliance tests ofmobile phones
Dosimetry in strong gradient fields

Picture C.2Near-field Probe

Picture C.3E-field Probe

C.3 E-field Probe Calibration

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm^2) using an RF Signal generator, TEM cell, and RF Power Meter.

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and inn a waveguide or

other methodologies above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees until the three channels show the maximum reading. The power density readings equates to 1 mW/cm^2.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The E-field in the medium correlates with the temperature rise in the dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C\frac{\Delta T}{\Delta t}$$

Where:

Δt = Exposure time (30 seconds),

C = Heat capacity of tissue (brain or muscle),

ΔT = Temperature increase due to RF exposure.

$$SAR = \frac{|E|^2 \cdot \sigma}{\rho}$$

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

C.4 Other Test Equipment

C.4.1 Data Acquisition Electronics(DAE)

The data acquisition electronics consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

PictureC.4: DAE

C.4.2 Robot

The SPEAG DASY system uses the high precision robots (DASY5: RX160L) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchron motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

Picture C.5 DASY 5

C.4.3 Measurement Server

The Measurement server is based on a PC/104 CPU broad with CPU (DASY5: 400 MHz, Intel Celeron), chipdisk (DASY5: 128MB), RAM DASY5: 128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O broad, which is directly connected to the PC/104 bus of the CPU broad.

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.

Picture C.6 Server for DASY 5

C.4.4 Device Holder for Phantom

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5mm distance, a positioning uncertainty of ±0.5mm would produce a SAR uncertainty of ±20%. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

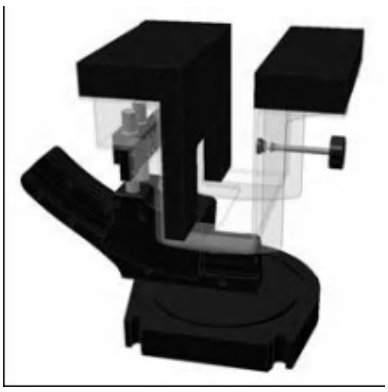
The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales are the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The DASY device holder is constructed of low-loss POM material having the following dielectric parameters: relative permittivity ε=3 and loss tangent δ=0.02. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

<Laptop Extension Kit>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin-SAM and ELI phantoms.

Picture C7-1: Device Holder



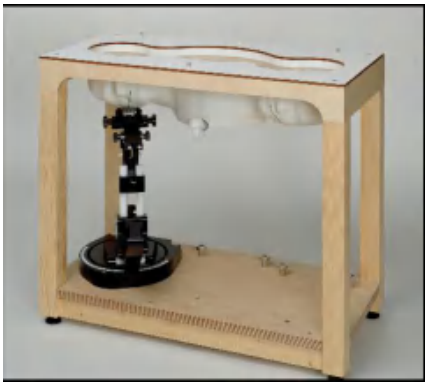
Picture C.7-2: Laptop Extension Kit

C.4.5 Phantom

The SAM Twin Phantom V4.0 is constructed of a fiberglass shell integrated in a table. The shape of the shell is based on data from an anatomical study designed to

Represent the 90th percentile of the population. The phantom enables the dissymmetric evaluation of SAR for both left and right handed handset usage, as well as body-worn usage using the flat phantom region. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. The shell phantom has a 2mm shell thickness (except the ear region where shell thickness increases to 6 mm).

Shell Thickness: 2±0. 2 mm
Filling Volume: Approx. 25 liters
Dimensions: 810 x l000 x 500 mm (H x L x W)
Available: Special

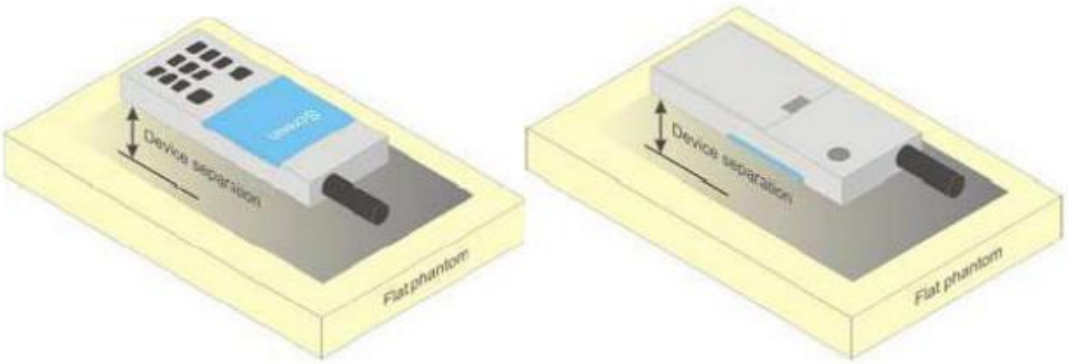


Picture C.8: SAM Twin Phantom

ANNEX D Position of the wireless device in relation to the phantom

D.1 Body-worn device

A typical example of a body-worn device is a mobile phone, wireless enabled PDA or other battery operated wireless device with the ability to transmit while mounted on a person's body using a carry accessory approved by the wireless device manufacturer.

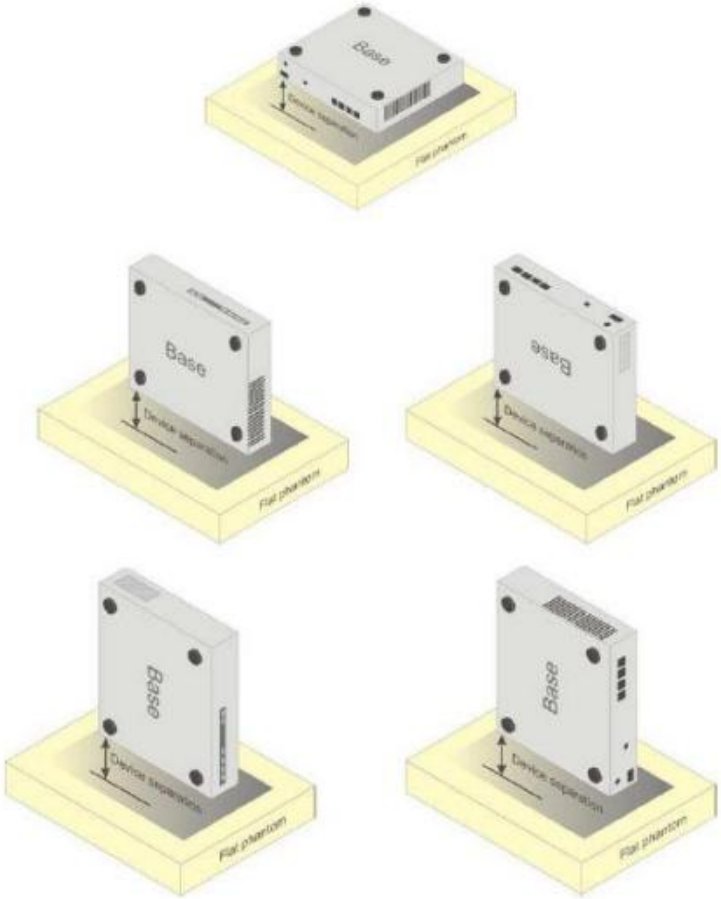


Picture D.1 Test positions for body-worn devices

D.2 Desktop device

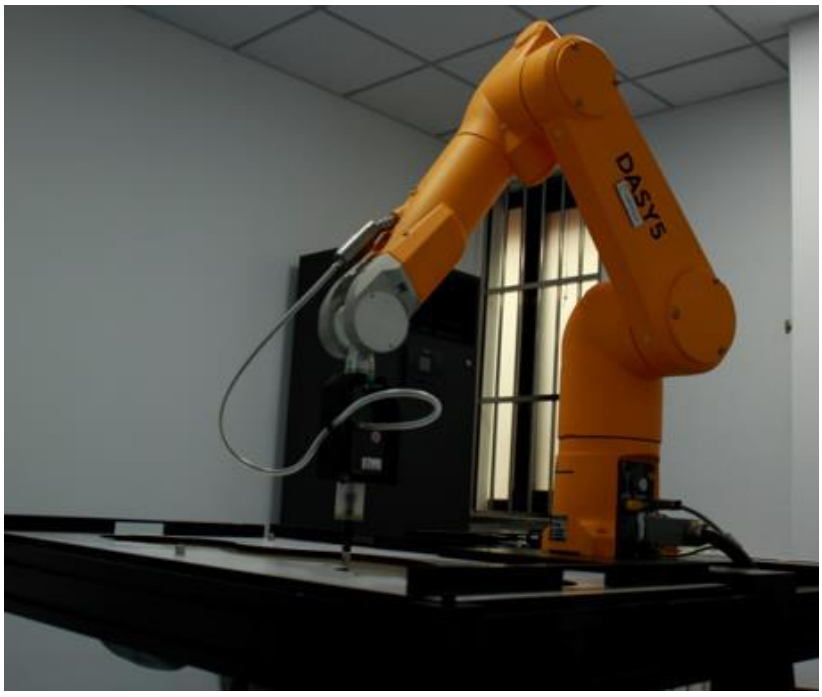
A typical example of a desktop device is a wireless enabled desktop computer placed on a table or desk when used.

The DUT shall be positioned at the distance and in the orientation to the phantom that corresponds to the intended use as specified by the manufacturer in the user instructions. For devices that employ an external antenna with variable positions, tests shall be performed for all antenna positions specified. Picture8.5 show positions for desktop device SAR tests. If the intended use is not specified, the device shall be tested directly against the flat phantom.



Picture D.2 Test positions for desktop devices

D.3 DUT Setup Photos



Picture D.3

ANNEX E Equivalent Media Recipes

The liquid used for the frequency range of 800-3000 MHz consisted of water, sugar, salt, preventol, glycol monobutyl and Cellulose. The liquid has been previously proven to be suited for worst-case. The Table E.1 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528 and IEC 62209.

TableE.1: Composition of the Tissue Equivalent Matter

Frequency (MHz)	835Head	835Body	1900 Head	1900 Body	2450 Head	2450 Body	5800 Head	5800 Body
Ingredients (% by weight)								
Water	41.45	52.5	55.242	69.91	58.79	72.60	65.53	65.53
Sugar	56.0	45.0	\	\	\	\	\	\
Salt	1.45	1.4	0.306	0.13	0.06	0.18	\	\
Preventol	0.1	0.1	\	\	\	\	\	\
Cellulose	1.0	1.0	\	\	\	\	\	\
Glycol Monobutyl	\	\	44.452	29.96	41.15	27.22	\	\
Diethylenglycol monohexylether	\	\	\	\	\	\	17.24	17.24
Triton X-100	\	\	\	\	\	\	17.24	17.24
Dielectric Parameters Target Value	ε=41.5 σ=0.90	ε=55.2 σ=0.97	ε=40.0 σ=1.40	ε=53.3 σ=1.52	ε=39.2 σ=1.80	ε=52.7 σ=1.95	ε=35.3 σ=5.27	ε=48.2 σ=6.00

Note: There are a little adjustment respectively for 750, 1750, 2600, 5200, 5300 and 5600 based on the recipe of closest frequency in table E.1.

ANNEX F System Validation

The SAR system must be validated against its performance specifications before it is deployed. When SAR probes, system components or software are changed, upgraded or recalibrated, these must be validated with the SAR system(s) that operates with such components.

Table F.1: System Validation for 7600

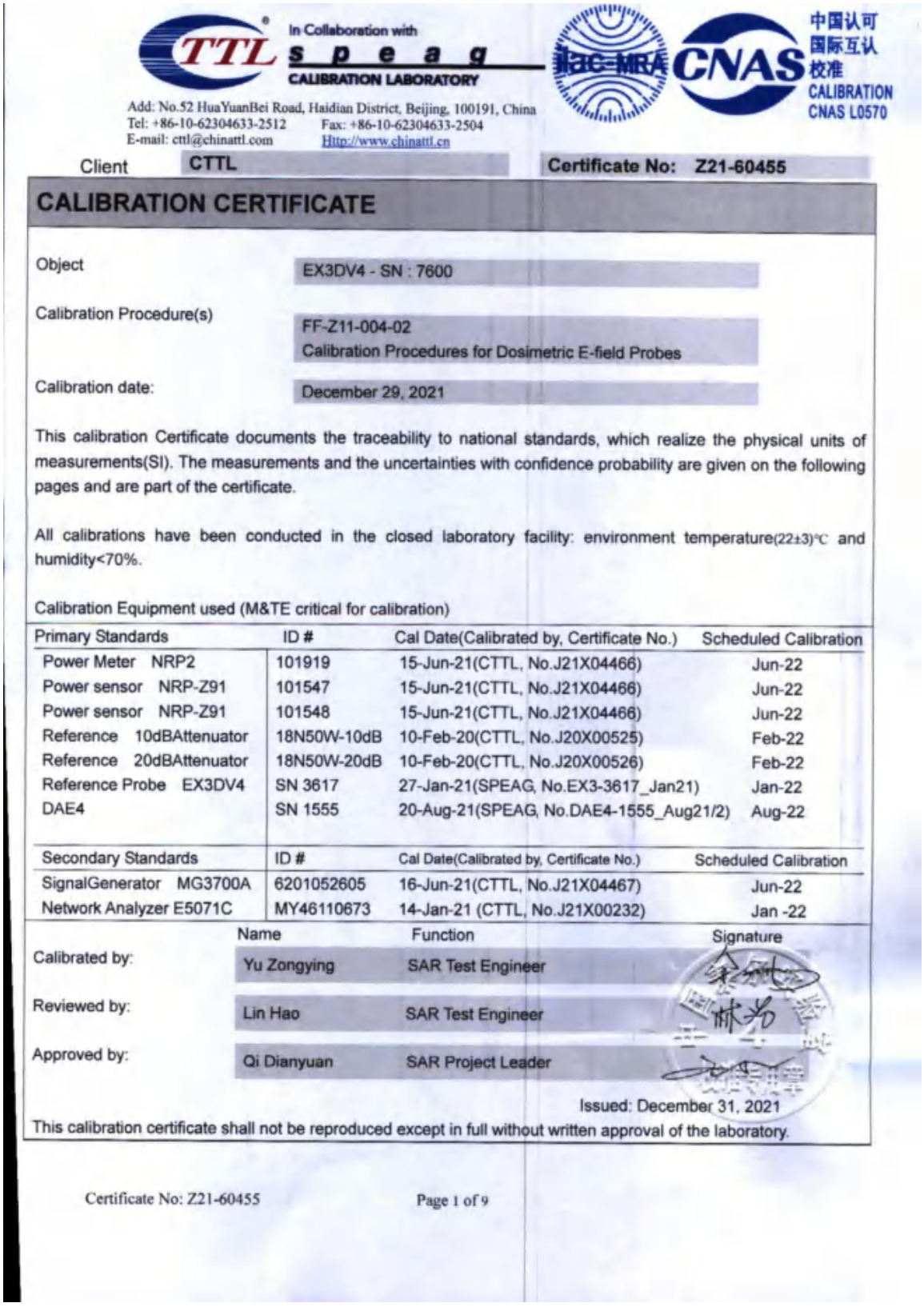
Probe SN.	Liquid name	Validation date	Frequency point	Status (OK or Not)
7600	Head 750MHz	January 2，2022	750 MHz	OK
7600	Head 900MHz	January 2，2022	900 MHz	OK
7600	Head 1450MHz	January 3，2022	1450 MHz	OK
7600	Head 1750MHz	January 3，2022	1750 MHz	OK
7600	Head 1900MHz	January 4，2022	1900 MHz	OK
7600	Head 2100MHz	January 4，2022	2000 MHz	OK
7600	Head 2300MHz	January 4，2022	2300 MHz	OK
7600	Head 2450MHz	January 5，2022	2450 MHz	OK
7600	Head 2600MHz	January 5，2022	2600 MHz	OK
7600	Head 3300MHz	January 6，2022	3300 MHz	OK
7600	Head 3500MHz	January 6，2022	3500 MHz	OK
7600	Head 3700MHz	January 6，2022	3700 MHz	OK
7600	Head 3900MHz	January 7，2022	3900 MHz	OK
7600	Head 4100MHz	January 7，2022	4100MHz	OK
7600	Head 4200MHz	January 7，2022	4200MHz	OK
7600	Head 4400MHz	January 8，2022	4400MHz	OK
7600	Head 4600MHz	January 8，2022	4600MHz	OK
7600	Head 4800MHz	January 8，2022	4800MHz	OK
7600	Head 4950MHz	January 9，2022	4950MHz	OK
7600	Head 5250MHz	January 9，2022	5250MHz	OK
7600	Head 5600MHz	January 9，2022	5600 MHz	OK
7600	Head 5750MHz	January 9，2022	5750 MHz	OK

Table F.2: System Validation for 3617

Probe SN.	Liquid name	Validation date	Frequency point	Status (OK or Not)
7600	Head 750MHz	March 24，2022	750 MHz	OK
7600	Head 900MHz	March 24，2022	900 MHz	OK
7600	Head 1450MHz	March 24，2022	1450 MHz	OK
7600	Head 1750MHz	March 24，2022	1750 MHz	OK
7600	Head 1900MHz	March 24，2022	1900 MHz	OK
7600	Head 2000MHz	March 25，2022	2000 MHz	OK
7600	Head 2300MHz	March 25，2022	2300 MHz	OK
7600	Head 2450MHz	March 25，2022	2450 MHz	OK
7600	Head 2600MHz	March 25，2022	2600 MHz	OK
7600	Head 3300MHz	March 26，2022	3300 MHz	OK
7600	Head 3500MHz	March 26，2022	3500 MHz	OK
7600	Head 3700MHz	March 26，2022	3700 MHz	OK
7600	Head 3900MHz	March 26，2022	3900 MHz	OK
7600	Head 4100MHz	March 26，2022	4100MHz	OK
7600	Head 4200MHz	March 26，2022	4200MHz	OK
7600	Head 4400MHz	March 26，2022	4400MHz	OK
7600	Head 4600MHz	March 27，2022	4600MHz	OK
7600	Head 4800MHz	March 27，2022	4800MHz	OK
7600	Head 4950MHz	March 27，2022	4950MHz	OK
7600	Head 5250MHz	March 27，2022	5250MHz	OK
7600	Head 5600MHz	March 27，2022	5600 MHz	OK
7600	Head 5750MHz	March 27，2022	5750 MHz	OK

ANNEX G Probe Calibration Certificate

Probe 7600 Calibration Certificate



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Client CTTL Certificate No: Z21-60455

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN : 7600
Calibration Procedure(s)	FF-Z11-004-02 Calibration Procedures for Dosimetric E-field Probes
Calibration date:	December 29, 2021

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	15-Jun-21(CTTL, No.J21X04466)	Jun-22
Power sensor NRP-Z91	101547	15-Jun-21(CTTL, No.J21X04466)	Jun-22
Power sensor NRP-Z91	101548	15-Jun-21(CTTL, No.J21X04466)	Jun-22
Reference 10dBAttenuator	18N50W-10dB	10-Feb-20(CTTL, No.J20X00525)	Feb-22
Reference 20dBAttenuator	18N50W-20dB	10-Feb-20(CTTL, No.J20X00526)	Feb-22
Reference Probe EX3DV4	SN 3617	27-Jan-21(SPEAG, No.EX3-3617_Jan21)	Jan-22
DAE4	SN 1555	20-Aug-21(SPEAG, No.DAE4-1555_Aug21/2)	Aug-22

Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	16-Jun-21(CTTL, No.J21X04467)	Jun-22
Network Analyzer E5071C	MY46110673	14-Jan-21 (CTTL, No.J21X00232)	Jan -22

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

Issued: December 31, 2021

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Certificate No: Z21-60455 Page 1 of 9

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Glossary:

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

Calibration is Performed According to the Following Standards:

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

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

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

d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z*: Assessed for E-field polarization θ=0 (f≤900MHz in TEM-cell; f>1800MHz: waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not effect the E^2-field uncertainty inside TSL (see below ConvF).
- *NORM(f)x,y,z = NORMx,y,z* frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of ConvF.
- *DCPx,y,z*: DCP are numerical linearization parameters assessed based on the data of power sweep (no uncertainty required). DCP does not depend on frequency nor media.
- PAR: PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics.
- *Ax,y,z; Bx,y,z; Cx,y,z; VRx,y,z*:A,B,C are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. VR is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters*: Assessed in flat phantom using E-field (or Temperature Transfer Standard for f≤800MHz) and inside waveguide using analytical field distributions based on power measurements for f >800MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty valued are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to NORMx,y,z* ConvF whereby the uncertainty corresponds to that given for ConvF. A frequency dependent ConvF is used in DASY version 4.4 and higher which allows extending the validity from±50MHz to±100MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle*: The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7600

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²)[A]	0.69	0.66	0.68	±10.0%
DCP(mV)[B]	109.3	109.7	110.7	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (*k*=2)
0	CW	X	0.0	0.0	1.0	0.00	212.0	±2.1%
		Y	0.0	0.0	1.0		204.3	
		Z	0.0	0.0	1.0		208.9	

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

[A] The uncertainties of Norm X, Y, Z do not affect the E²-field uncertainty inside TSL (see Page 4).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7600

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (*k*=2)
750	41.9	0.89	10.74	10.74	10.74	0.16	1.27	±12.1%
900	41.5	0.97	10.27	10.27	10.27	0.15	1.43	±12.1%
1450	40.5	1.20	9.18	9.18	9.18	0.18	1.09	±12.1%
1750	40.1	1.37	8.93	8.93	8.93	0.20	0.95	±12.1%
1900	40.0	1.40	8.54	8.54	8.54	0.25	1.06	±12.1%
2100	39.8	1.49	8.44	8.44	8.44	0.22	1.18	±12.1%
2300	39.5	1.67	8.14	8.14	8.14	0.59	0.72	±12.1%
2450	39.2	1.80	7.82	7.82	7.82	0.47	0.82	±12.1%
2600	39.0	1.96	7.62	7.62	7.62	0.50	0.81	±12.1%
3300	38.2	2.71	7.34	7.34	7.34	0.37	1.04	±13.3%
3500	37.9	2.91	7.05	7.05	7.05	0.39	1.00	±13.3%
3700	37.7	3.12	6.78	6.78	6.78	0.40	1.00	±13.3%
3900	37.5	3.32	6.68	6.68	6.68	0.40	1.25	±13.3%
4100	37.2	3.53	6.71	6.71	6.71	0.40	1.15	±13.3%
4200	37.1	3.63	6.61	6.61	6.61	0.35	1.35	±13.3%
4400	36.9	3.84	6.50	6.50	6.50	0.35	1.35	±13.3%
4600	36.7	4.04	6.40	6.40	6.40	0.40	1.30	±13.3%
4800	36.4	4.25	6.33	6.33	6.33	0.40	1.30	±13.3%
4950	36.3	4.40	6.09	6.09	6.09	0.40	1.35	±13.3%
5250	35.9	4.71	5.59	5.59	5.59	0.40	1.47	±13.3%
5600	35.5	5.07	5.13	5.13	5.13	0.50	1.25	±13.3%
5750	35.4	5.22	5.16	5.16	5.16	0.55	1.15	±13.3%

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

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

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

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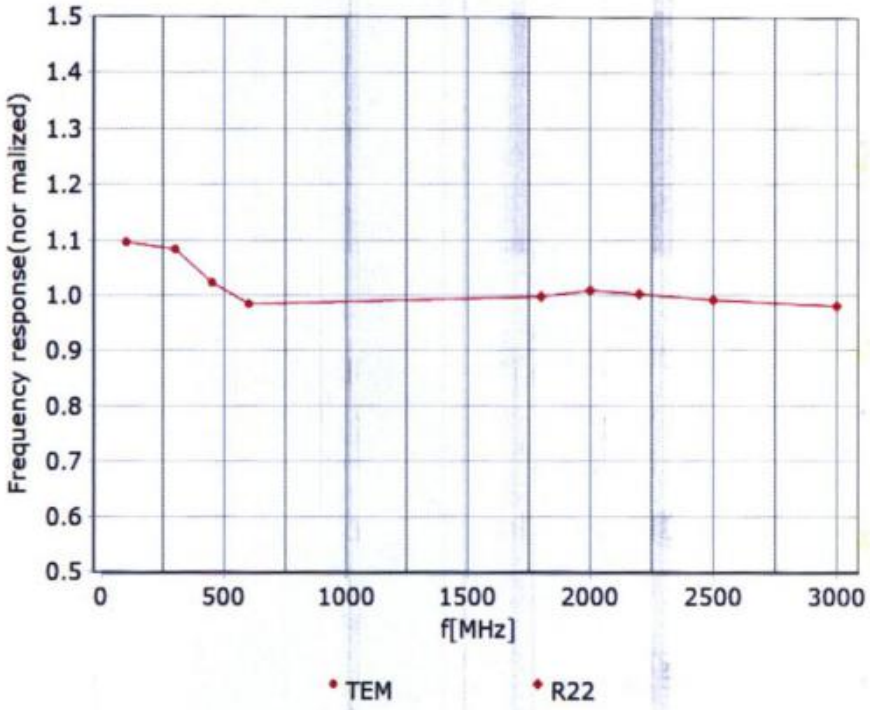
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



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

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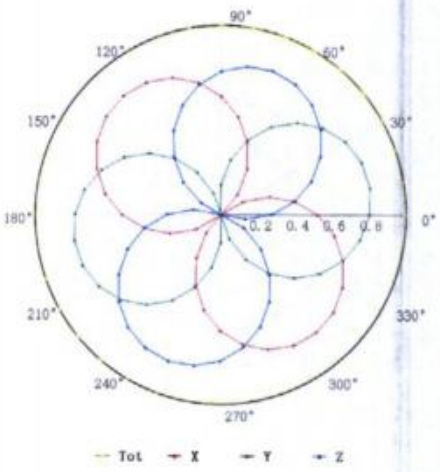
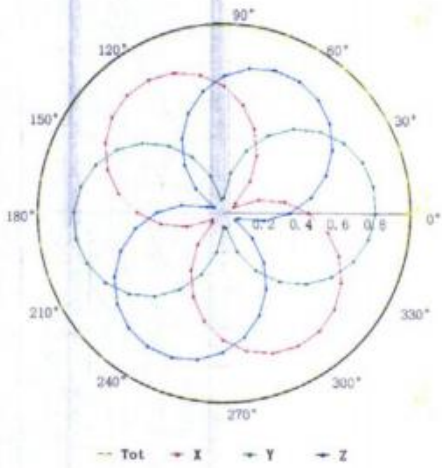
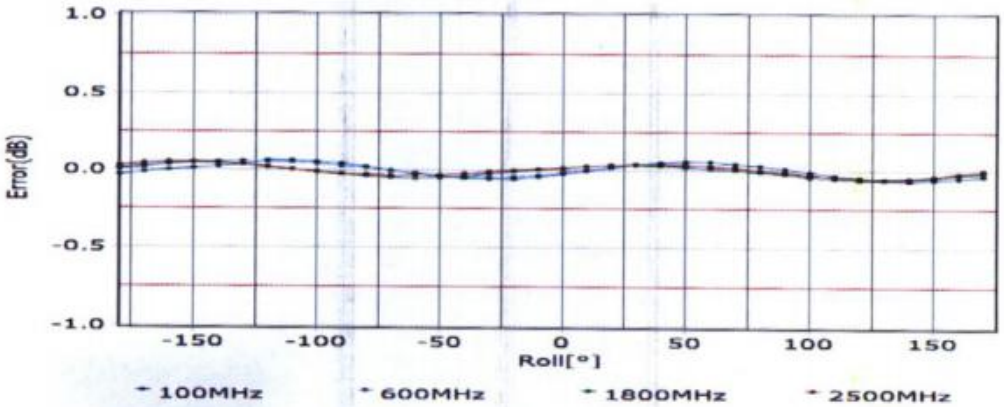
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





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

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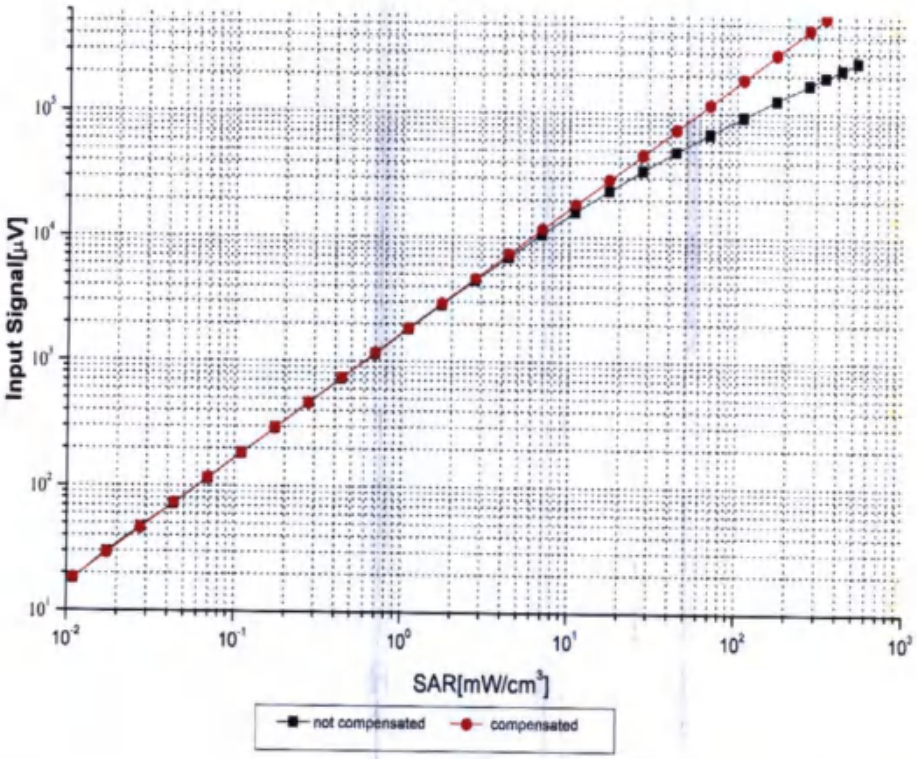
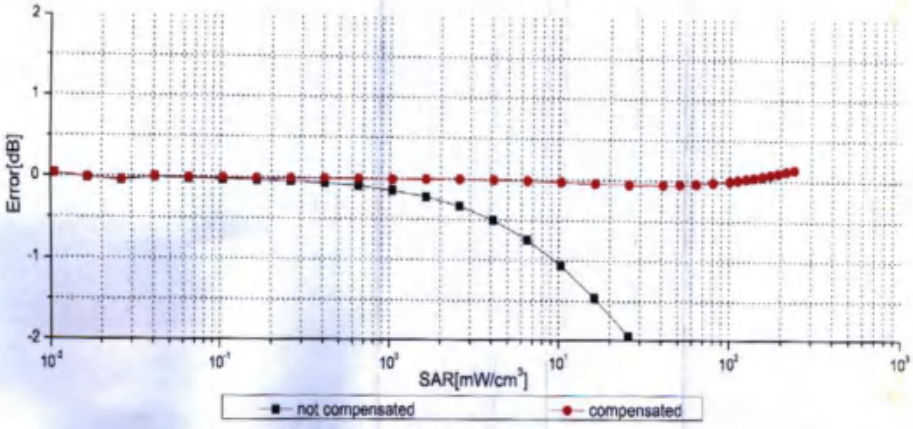
Dynamic Range f(SAR$_{head}$)
(TEM cell, f = 900 MHz)





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

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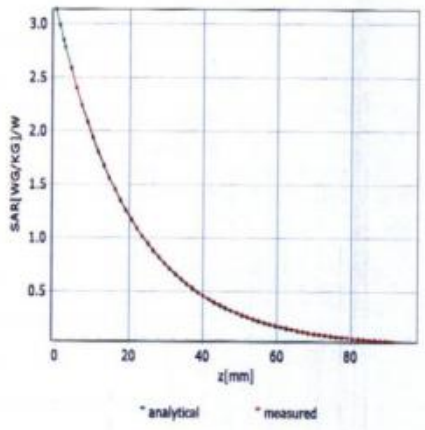
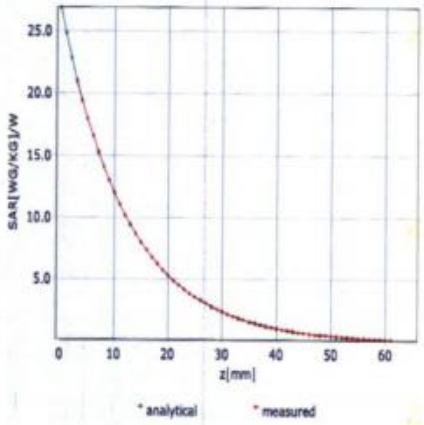
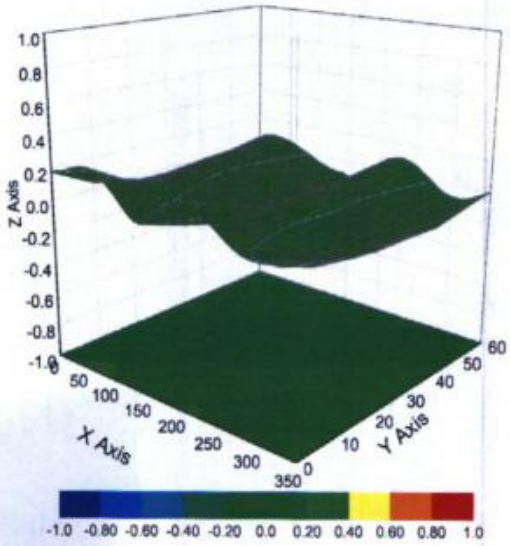
Conversion Factor Assessment

f=750 MHz,WGLS R9(H_convF) **f=1750 MHz,WGLS R22(H_convF)**





Deviation from Isotropy in Liquid



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

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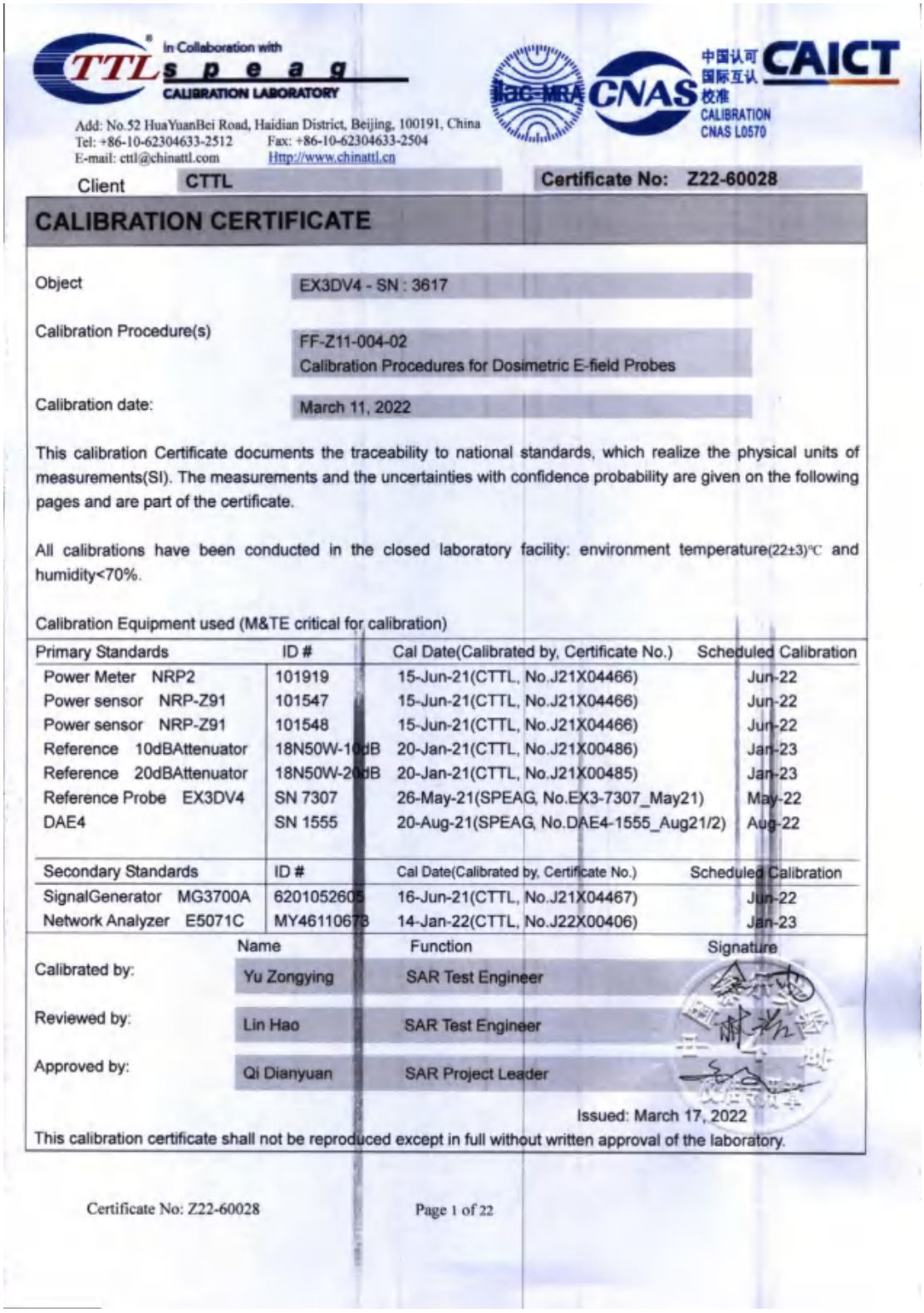
DASY/EASY – Parameters of Probe: EX3DV4 – SN:7600

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	40.7
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

Probe 3617 Calibration Certificate



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Client CTTL Certificate No: Z22-60028

CALIBRATION CERTIFICATE

Object EX3DV4 - SN : 3617

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

Calibration date: March 11, 2022

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Reference 20dBAttenuator	18N50W-20dB	20-Jan-21(CTTL, No.J21X00485)	Jan-23
Reference Probe EX3DV4	SN 7307	26-May-21(SPEAG, No.EX3-7307_May21)	May-22
DAE4	SN 1555	20-Aug-21(SPEAG, No.DAE4-1555_Aug21/2)	Aug-22
Secondary Standards	**ID #**	**Cal Date(Calibrated by, Certificate No.)**	**Scheduled Calibration**
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Network Analyzer E5071C	MY46110673	14-Jan-22(CTTL, No.J22X00406)	Jan-23

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

Issued: March 17, 2022

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Certificate No: Z22-60028 Page 1 of 22

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- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3617

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²)[A]	0.34	0.22	0.34	±10.0%
DCP(mV)[B]	102.7	98.3	98.7	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max Dev.	Max Unc[E] (*k*=2)
0	CW	X	0.0	0.0	1.0	0.00	140.9	±2.3%	±4.7%
		Y	0.0	0.0	1.0		101.3		
		Z	0.0	0.0	1.0		138.5		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	4.68	73.78	15.64		60	±3.2%	±9.6%
		Y	20.00	100.32	26.29	10.00	60		
		Z	20.00	95.47	23.48		60		
10353-AAA	Pulse Waveform (200Hz, 20%)	X	5.54	77.25	15.64		80	±1.9%	±9.6%
		Y	20.00	101.90	25.86	6.99	80		
		Z	20.00	95.46	22.12		80		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	9.09	84.14	16.60		95	±1.2%	±9.6%
		Y	20.00	106.63	26.76	3.98	95		
		Z	20.00	98.05	21.85		95		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	20.00	94.35	18.77		120	±1.1%	±9.6%
		Y	20.00	113.90	29.05	2.22	120		
		Z	20.00	101.22	22.06		120		
10387-AAA	QPSK Waveform, 1 MHz	X	1.78	66.21	15.14		150	±1.2%	±9.6%
		Y	1.98	66.25	15.69	1.00	150		
		Z	1.78	66.17	15.19		150		
10388-AAA	QPSK Waveform, 10 MHz	X	2.35	68.41	15.87		150	±2.5%	±9.6%
		Y	2.49	68.22	16.09	0.00	150		
		Z	2.38	68.42	15.93		150		
10396-AAA	64-QAM Waveform, 100 kHz	X	3.32	71.56	18.90		150	±1.0%	±9.6%
		Y	3.39	71.34	19.37	3.01	150		
		Z	3.34	71.53	19.17		150		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X	5.19	66.74	16.07		150	±4.9%	±9.6%
		Y	5.00	65.30	15.47	0.00	150		
		Z	5.22	66.70	16.15		150		

Note: For details on UID parameters see Appendix

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

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

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DASY/EASY – Parameters of Probe: EX3DV4 – SN: 3617

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	48.86	355.95	34.02	12.06	0.10	4.96	1.32	0.31	1.00
Y	57.20	428.55	35.77	12.39	0.05	5.03	1.11	0.33	1.01
Z	50.11	374.56	35.59	11.54	0.08	5.02	1.10	0.36	1.01

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	10.7
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:3617

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (k=2)
750	41.9	0.89	9.91	9.91	9.91	0.12	1.38	±12.1%
900	41.5	0.97	9.49	9.49	9.49	0.30	0.94	±12.1%
1450	40.5	1.20	8.60	8.60	8.60	0.11	1.31	±12.1%
1750	40.1	1.37	8.21	8.21	8.21	0.19	1.06	±12.1%
1900	40.0	1.40	8.08	8.08	8.08	0.22	1.17	±12.1%
2000	40.0	1.40	8.05	8.05	8.05	0.20	1.22	±12.1%
2300	39.5	1.67	7.89	7.89	7.89	0.53	0.73	±12.1%
2450	39.2	1.80	7.55	7.55	7.55	0.41	0.88	±12.1%
2600	39.0	1.96	7.40	7.40	7.40	0.43	0.88	±12.1%
3300	38.2	2.71	7.12	7.12	7.12	0.40	0.94	±13.3%
3500	37.9	2.91	6.85	6.85	6.85	0.41	1.00	±13.3%
3700	37.7	3.12	6.70	6.70	6.70	0.44	1.00	±13.3%
3900	37.5	3.32	6.61	6.61	6.61	0.35	1.35	±13.3%
4100	37.2	3.53	6.67	6.67	6.67	0.40	1.15	±13.3%
4200	37.1	3.63	6.55	6.55	6.55	0.35	1.35	±13.3%
4400	36.9	3.84	6.46	6.46	6.46	0.35	1.35	±13.3%
4600	36.7	4.04	6.36	6.36	6.36	0.45	1.25	±13.3%
4800	36.4	4.25	6.28	6.28	6.28	0.45	1.28	±13.3%
4950	36.3	4.40	6.05	6.05	6.05	0.45	1.30	±13.3%
5250	35.9	4.71	5.53	5.53	5.53	0.55	1.22	±13.3%
5600	35.5	5.07	5.11	5.11	5.11	0.55	1.20	±13.3%
5750	35.4	5.22	5.20	5.20	5.20	0.55	1.20	±13.3%

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

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

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

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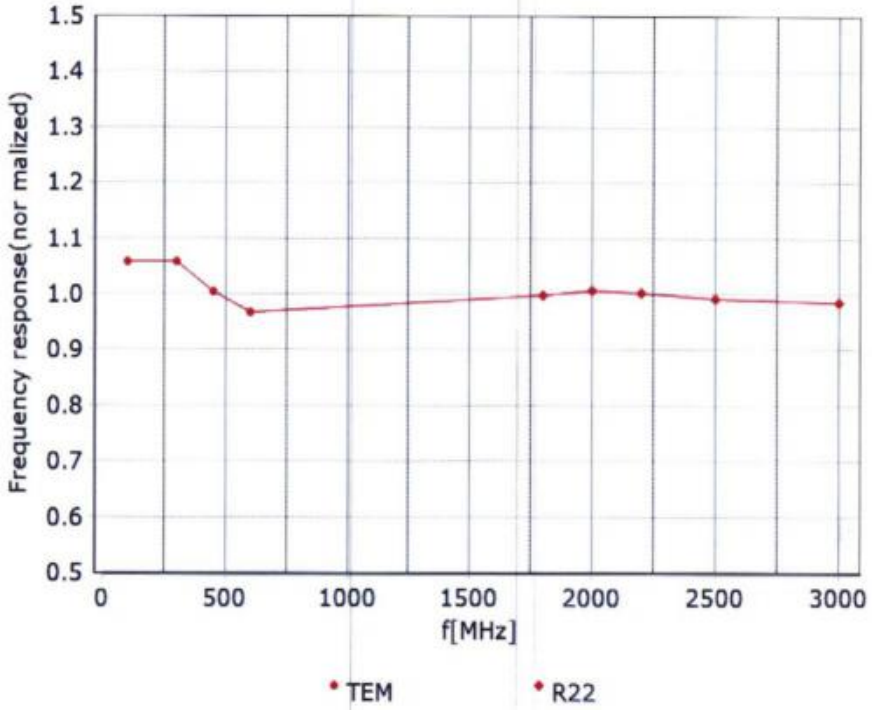
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



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

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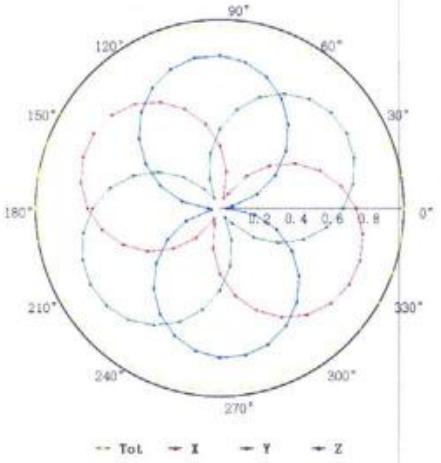
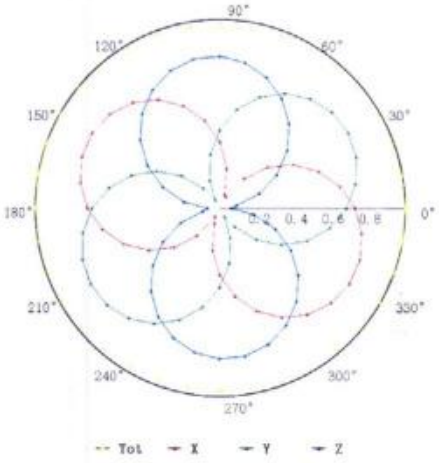
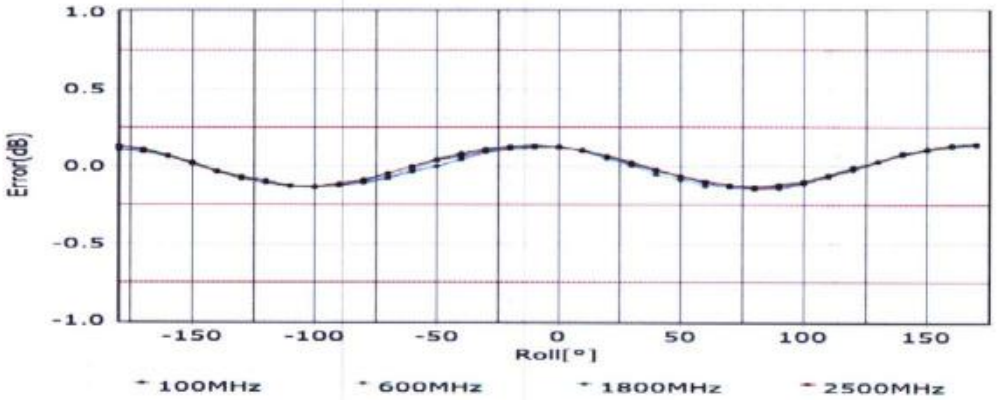
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





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

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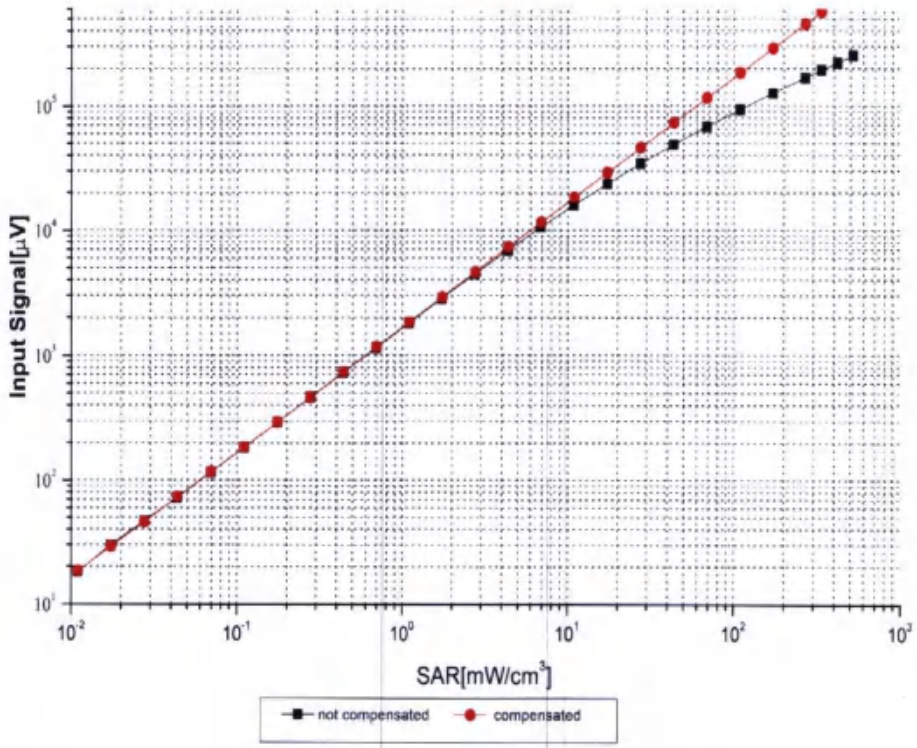
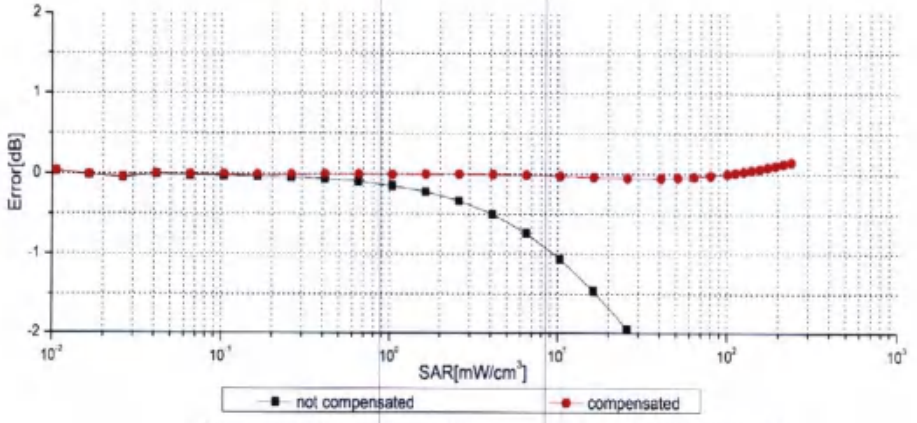
Dynamic Range f(SAR$_{head}$)
(TEM cell, f = 900 MHz)





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

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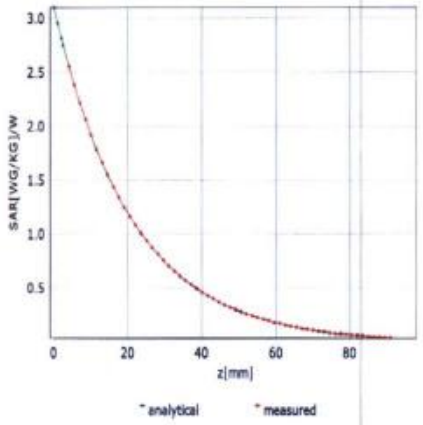
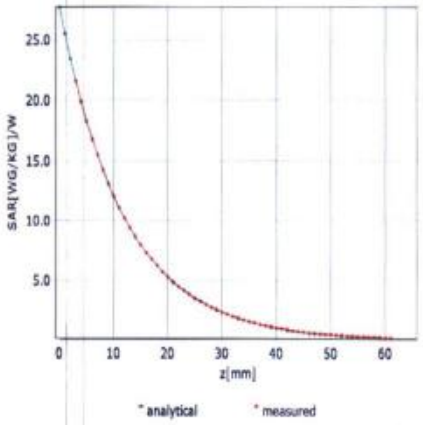
Conversion Factor Assessment

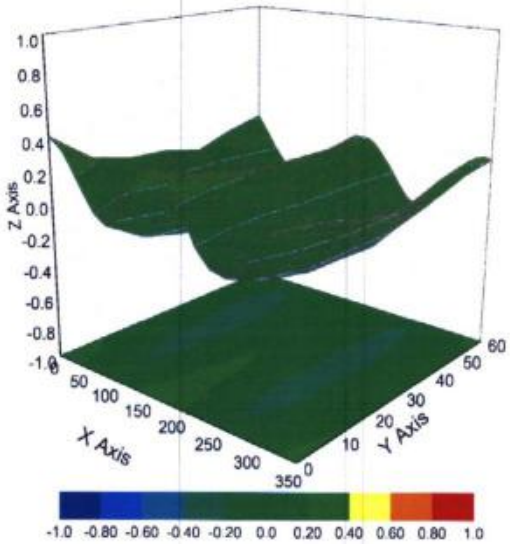
f=750 MHz,WGLS R9(H_convF)



f=1750 MHz,WGLS R22(H_convF)



Deviation from Isotropy in Liquid



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

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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	UncE (k=2)
0		CW	CW	0.00	± 4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	± 9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	± 9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	± 9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	± 9.6 %
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	± 9.6 %
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	± 9.6 %
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	± 9.6 %
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 %
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	± 9.6 %
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	± 9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	± 9.6 %
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	± 9.6 %
10062	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10065	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	± 9.6 %
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	± 9.6 %
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	± 9.6 %
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	± 9.6 %
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	± 9.6 %
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	± 9.6 %
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	± 9.6 %
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	± 9.6 %
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	± 9.6 %
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	± 9.6 %
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	± 9.6 %
10097	CAC	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 %
10098	DAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %
10099	CAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %

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10102	CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	DAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10104	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10105	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
10108	CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %
10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	± 9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10114	CAG	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10115	CAG	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAG	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAG	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAD	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAD	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
10140	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10141	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10142	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10143	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10151	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10153	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10154	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10169	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	AAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10181	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAI	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %

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10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10189	CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	AAD	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAE	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197	AAE	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10198	CAF	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAF	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %
10220	AAF	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
10223	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
10225	CAD	UMTS-FDD (HSPA+)	WCDMA	5.97	± 9.6 %
10226	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
10228	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
10229	DAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	± 9.6 %
10232	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10233	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10237	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10238	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10240	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	± 9.6 %
10244	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10245	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	± 9.6 %
10246	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10247	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	± 9.6 %
10248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	± 9.6 %
10249	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10250	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	± 9.6 %
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	± 9.6 %
10254	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %
10260	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	± 9.6 %
10263	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	± 9.6 %
10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %

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10269	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
10270	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	± 9.6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.6 %
10275	CAD	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277	CAD	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAD	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAG	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	CAG	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	CAG	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10292	CAG	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	CAG	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	± 9.6 %
10295	CAG	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10297	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %
10300	CAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	CAC	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WiMAX	12.03	± 9.6 %
10302	CAB	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)	WiMAX	12.57	± 9.6 %
10303	CAB	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	± 9.6 %
10304	CAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	11.86	± 9.6 %
10305	CAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)	WiMAX	15.24	± 9.6 %
10306	CAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)	WiMAX	14.67	± 9.6 %
10307	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC)	WiMAX	14.49	± 9.6 %
10308	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WiMAX	14.46	± 9.6 %
10309	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM,AMC 2x3)	WiMAX	14.58	± 9.6 %
10310	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3	WiMAX	14.57	± 9.6 %
10311	AAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
10313	AAD	iDEN 1:3	iDEN	10.51	± 9.6 %
10314	AAD	iDEN 1:6	iDEN	13.48	± 9.6 %
10315	AAD	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc)	WLAN	1.71	± 9.6 %
10316	AAD	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
10317	AAA	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 %
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)	WLAN	8.37	± 9.6 %
10401	AAA	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc)	WLAN	8.60	± 9.6 %
10402	AAA	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAD	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %
10410	AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	± 9.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)	WLAN	1.54	± 9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10417	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short)	WLAN	8.19	± 9.6 %
10422	AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAE	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAE	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %
10426	AAE	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	± 9.6 %

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

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

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

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

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

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10755	AAC	IEEE 802.11ax (160MHz, MCS0, 99pc dc)	WLAN	8.64	± 9.6 %
10756	AAC	IEEE 802.11ax (160MHz, MCS1, 99pc dc)	WLAN	8.77	± 9.6 %
10757	AAC	IEEE 802.11ax (160MHz, MCS2, 99pc dc)	WLAN	8.77	± 9.6 %
10758	AAC	IEEE 802.11ax (160MHz, MCS3, 99pc dc)	WLAN	8.69	± 9.6 %
10759	AAC	IEEE 802.11ax (160MHz, MCS4, 99pc dc)	WLAN	8.58	± 9.6 %
10760	AAC	IEEE 802.11ax (160MHz, MCS5, 99pc dc)	WLAN	8.49	± 9.6 %
10761	AAC	IEEE 802.11ax (160MHz, MCS6, 99pc dc)	WLAN	8.58	± 9.6 %
10762	AAC	IEEE 802.11ax (160MHz, MCS7, 99pc dc)	WLAN	8.49	± 9.6 %
10763	AAC	IEEE 802.11ax (160MHz, MCS8, 99pc dc)	WLAN	8.53	± 9.6 %
10764	AAC	IEEE 802.11ax (160MHz, MCS9, 99pc dc)	WLAN	8.54	± 9.6 %
10765	AAC	IEEE 802.11ax (160MHz, MCS10, 99pc dc)	WLAN	8.54	± 9.6 %
10766	AAC	IEEE 802.11ax (160MHz, MCS11, 99pc dc)	WLAN	8.51	± 9.6 %
10767	AAC	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	7.99	± 9.6 %
10768	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	± 9.6 %
10769	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.01	± 9.6 %
10770	AAC	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	± 9.6 %
10771	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	± 9.6 %
10772	AAC	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.23	± 9.6 %
10773	AAC	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.03	± 9.6 %
10774	AAC	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.02	± 9.6 %
10775	AAC	5G NR (CP-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	± 9.6 %
10776	AAC	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	± 9.6 %
10777	AAC	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.30	± 9.6 %
10778	AAC	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10779	AAC	5G NR (CP-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.42	± 9.6 %
10780	AAC	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	± 9.6 %
10781	AAC	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.38	± 9.6 %
10782	AAC	5G NR (CP-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.43	± 9.6 %
10783	AAC	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.31	± 9.6 %
10784	AAC	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.29	± 9.6 %
10785	AAC	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.40	± 9.6 %
10786	AAC	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10787	AAC	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.44	± 9.6 %
10788	AAC	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	± 9.6 %
10789	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.37	± 9.6 %
10790	AAC	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 TDD	8.39	± 9.6 %
10791	AAC	5G NR (CP-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.83	± 9.6 %
10792	AAC	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.92	± 9.6 %
10793	AAC	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.95	± 9.6 %
10794	AAC	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	± 9.6 %
10795	AAC	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.84	± 9.6 %
10796	AAC	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.82	± 9.6 %
10797	AAC	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.01	± 9.6 %
10798	AAC	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	± 9.6 %
10799	AAC	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	± 9.6 %
10801	AAC	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.89	± 9.6 %
10802	AAC	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.87	± 9.6 %
10803	AAE	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	7.93	± 9.6 %
10805	AAD	5G NR (CP-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10806	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.37	± 9.6 %
10809	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10810	AAD	5G NR (CP-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10812	AAD	5G NR (CP-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10817	AAD	5G NR (CP-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10818	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10819	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.33	± 9.6 %
10820	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.30	± 9.6 %
10821	AAC	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10822	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	± 9.6 %

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10823	AAC	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.36	± 9.6 %
10824	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.39	± 9.6 %
10825	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10827	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.42	± 9.6 %
10828	AAE	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.43	± 9.6 %
10829	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	8.40	± 9.6 %
10830	AAD	5G NR (CP-OFDM, 1 RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.63	± 9.6 %
10831	AAD	5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.73	± 9.6 %
10832	AAD	5G NR (CP-OFDM, 1 RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.74	± 9.6 %
10833	AAD	5G NR (CP-OFDM, 1 RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	± 9.6 %
10834	AAD	5G NR (CP-OFDM, 1 RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.75	± 9.6 %
10835	AAD	5G NR (CP-OFDM, 1 RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	± 9.6 %
10836	AAE	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.66	± 9.6 %
10837	AAD	5G NR (CP-OFDM, 1 RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.68	± 9.6 %
10839	AAD	5G NR (CP-OFDM, 1 RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.70	± 9.6 %
10840	AAD	5G NR (CP-OFDM, 1 RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.67	± 9.6 %
10841	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	7.71	± 9.6 %
10843	AAD	5G NR (CP-OFDM, 50% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.49	± 9.6 %
10844	AAD	5G NR (CP-OFDM, 50% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10846	AAD	5G NR (CP-OFDM, 50% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10854	AAD	5G NR (CP-OFDM, 100% RB, 10 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10855	AAD	5G NR (CP-OFDM, 100% RB, 15 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	± 9.6 %
10856	AAD	5G NR (CP-OFDM, 100% RB, 20 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	± 9.6 %
10857	AAD	5G NR (CP-OFDM, 100% RB, 25 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.35	± 9.6 %
10858	AAD	5G NR (CP-OFDM, 100% RB, 30 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.36	± 9.6 %
10859	AAD	5G NR (CP-OFDM, 100% RB, 40 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.34	± 9.6 %
10860	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10861	AAD	5G NR (CP-OFDM, 100% RB, 60 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.40	± 9.6 %
10863	AAD	5G NR (CP-OFDM, 100% RB, 80 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10864	AAE	5G NR (CP-OFDM, 100% RB, 90 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.37	± 9.6 %
10865	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 60 kHz)	5G NR FR1 TDD	8.41	± 9.6 %
10866	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10868	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.89	± 9.6 %
10869	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10870	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.86	± 9.6 %
10871	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10872	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.52	± 9.6 %
10873	AAD	5G NR (DFT-s-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	± 9.6 %
10874	AAD	5G NR (DFT-s-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	± 9.6 %
10875	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	± 9.6 %
10876	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.39	± 9.6 %
10877	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	7.95	± 9.6 %
10878	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.41	± 9.6 %
10879	AAD	5G NR (CP-OFDM, 1 RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.12	± 9.6 %
10880	AAD	5G NR (CP-OFDM, 100% RB, 100 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.38	± 9.6 %
10881	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.75	± 9.6 %
10882	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	5.96	± 9.6 %
10883	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.57	± 9.6 %
10884	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	6.53	± 9.6 %
10885	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.61	± 9.6 %
10886	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	6.65	± 9.6 %
10887	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	7.78	± 9.6 %
10888	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, QPSK, 120 kHz)	5G NR FR2 TDD	8.35	± 9.6 %
10889	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.02	± 9.6 %
10890	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 16QAM, 120 kHz)	5G NR FR2 TDD	8.40	± 9.6 %
10891	AAD	5G NR (CP-OFDM, 1 RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.13	± 9.6 %
10892	AAD	5G NR (CP-OFDM, 100% RB, 50 MHz, 64QAM, 120 kHz)	5G NR FR2 TDD	8.41	± 9.6 %
10897	AAD	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.66	± 9.6 %
10898	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 %

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10899	AAD	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.67	± 9.6 %
10900	AAD	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10901	AAD	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10902	AAD	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10903	AAD	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10904	AAD	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10905	AAD	5G NR (DFT-s-OFDM, 1 RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10906	AAD	5G NR (DFT-s-OFDM, 1 RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.68	± 9.6 %
10907	AAD	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.78	± 9.6 %
10908	AAD	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	± 9.6 %
10909	AAD	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.96	± 9.6 %
10910	AAD	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	± 9.6 %
10911	AAD	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.93	± 9.6 %
10912	AAD	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10913	AAD	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10914	AAD	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.85	± 9.6 %
10915	AAD	5G NR (DFT-s-OFDM, 50% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.83	± 9.6 %
10916	AAD	5G NR (DFT-s-OFDM, 50% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	± 9.6 %
10917	AAD	5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	± 9.6 %
10918	AAD	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	± 9.6 %
10919	AAD	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.86	± 9.6 %
10920	AAD	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.87	± 9.6 %
10921	AAD	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10922	AAD	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.82	± 9.6 %
10923	AAD	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10924	AAD	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10925	AAD	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.95	± 9.6 %
10926	AAD	5G NR (DFT-s-OFDM, 100% RB, 60 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.84	± 9.6 %
10927	AAD	5G NR (DFT-s-OFDM, 100% RB, 80 MHz, QPSK, 30 kHz)	5G NR FR1 TDD	5.94	± 9.6 %
10928	AAD	5G NR (DFT-s-OFDM, 1 RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	± 9.6 %
10929	AAD	5G NR (DFT-s-OFDM, 1 RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	± 9.6 %
10930	AAD	5G NR (DFT-s-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.52	± 9.6 %
10931	AAD	5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10932	AAB	5G NR (DFT-s-OFDM, 1 RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10933	AAA	5G NR (DFT-s-OFDM, 1 RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10934	AAA	5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10935	AAA	5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.51	± 9.6 %
10936	AAC	5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	± 9.6 %
10937	AAB	5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.77	± 9.6 %
10938	AAB	5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.90	± 9.6 %
10939	AAB	5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.82	± 9.6 %
10940	AAB	5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.89	± 9.6 %
10941	AAB	5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	± 9.6 %
10942	AAB	5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	± 9.6 %
10943	AAB	5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.95	± 9.6 %
10944	AAB	5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.81	± 9.6 %
10945	AAB	5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.85	± 9.6 %
10946	AAC	5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.83	± 9.6 %
10947	AAB	5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	± 9.6 %
10948	AAB	5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	± 9.6 %
10949	AAB	5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.87	± 9.6 %
10950	AAB	5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.94	± 9.6 %
10951	AAB	5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)	5G NR FR1 FDD	5.92	± 9.6 %
10952	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.25	± 9.6 %
10953	AAB	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.15	± 9.6 %
10954	AAB	5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.23	± 9.6 %
10955	AAB	5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)	5G NR FR1 FDD	8.42	± 9.6 %
10956	AAB	5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.14	± 9.6 %
10957	AAC	5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)	5G NR FR1 FDD	8.31	± 9.6 %

