TEST REPORT

No. I23N00836-SAR

For

Shanghai Sunmi Technology Co.,Ltd.

Smart POS Terminal

Model Name: T6721

With

Hardware Version: Bgf6d

Software Version: SP6611A_V003_20230409_sunmi_CS

FCC ID: 2AH25P3MIX

Issued Date: 2023-07-26

Designation Number: CN1210

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 SAICT.

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REPORT HISTORY

Report Number	Revision	Description	Issue Date
I23N00836-SAR	Rev.0	1st edition	2023-07-26

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1. Summary of Test Report

1.1. Test Items

Description:	Smart POS Terminal
Model Name:	T6721
Applicant's Name:	Shanghai Sunmi Technology Co.,Ltd.
Manufacturer's Name:	Shanghai Sunmi Technology Co.,Ltd.

1.2. Test Standards

ANSI C95.1:1992, IEEE 1528:2013

1.3. Test Result

Pass. Please refer to "13. Summary of Test Results"

1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China

1.5. Project Data

Testing Start Date: 2023-06-16 Testing End Date: 2023-07-12

1.6. Signature

Li Yongfu
(Prepared this test report)

Liu Jian
(Reviewed this test report)

Cao Junfei
(Approved this test report)

2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for Shanghai Sunmi Technology Co.,Ltd. Smart POS Terminal T6721 are as follows:

Table 2.1: Highest Reported SAR (1g)

Equipment Class	Frequency Bands	Body (Separation Distance 0 mm)
PCB	GSM 850	1.02
	WCDMA Band 2	1.23
	WCDMA Band 4	1.22
	WCDMA Band 5	1.09
	LTE Band 7	**1.38**
	LTE Band 12/17	1.16
	LTE Band 13	0.83
	LTE Band 14	1.07
	LTE Band 25/2	1.17
	LTE Band 26/5	1.26
	LTE Band 30	1.11
	LTE Band 66/4	1.30
	LTE Band 71	1.29
	LTE Band 41/38	1.16
DSS	Bluetooth	<0.01
DTS	WLAN 2.4GHz	0.06
NII	WLAN 5GHz	0.18

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.

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)**, body value is **1.38 W/kg (1g)**.

Table 2.2: Maximum Simultaneous Transmission SAR

/	Position	Sum (W/kg)
Highest reported SAR value for Body	Rear Side (LTE Band 7 + WLAN 5GHz, LTE Band 7 + WLAN 5GHz + Bluetooth)	**1.56**

Note: the test positions of above tables are for the worse case that has been evaluated.

According to the above tables, the highest sum of reported SAR values is **1.56 W/kg (1g)**.

The detail for simultaneous transmission consideration is described in chapter 12.

3. Client Information

3.1. Applicant Information

Company Name:	Shanghai Sunmi Technology Co.,Ltd.
Address:	Room 505,No.388,Song Hu Road, Yang Pu District, Shanghai, China
City:	Shanghai
Country:	China
Telephone:	+86 18501703215

3.2. Manufacturer Information

Company Name:	Shanghai Sunmi Technology Co.,Ltd.
Address:	Room 505,No.388,Song Hu Road, Yang Pu District, Shanghai, China
City:	Shanghai
Country:	China
Telephone:	+86 18501703215

4. Equipment under Test (EUT) and Ancillary Equipment (AE)

4.1. About EUT

Description:	Smart POS Terminal
Model Name:	T6721
Condition of EUT as received:	No obvious damage in appearance
Frequency Bands:	GSM 850, WCDMA Band 2/4/5, LTE Band 2/4/5/7/12/13/14/17/25/26/30/38/41/66/71, Bluetooth, WLAN 2.4GHz/5GHz
Tested Tx Frequency:	824 – 849MHz (GSM850)
	1850 – 1910MHz (WCDMA Band 2)
	1710 – 1755MHz (WCDMA Band 4)
	824 – 849MHz (WCDMA Band 5)
	1850 – 1910MHz (LTE Band 2)
	1710 – 1755MHz (LTE Band 4)
	824 – 849MHz (LTE Band 5)
	2500 – 2570MHz (LTE Band 7)
	696 – 716MHz (LTE Band 12)
	777 – 787MHz (LTE Band 13)
	788 – 798MHz (LTE Band 14)
	704 – 716MHz (LTE Band 17)
	1850 – 1915MHz (LTE Band 25)
	814 – 849MHz (LTE Band 26)
	2305 – 2315MHz (LTE Band 30)
	2570 – 2620MHz (LTE Band 38)
	2496 – 2690MHz (LTE Band 41)
	1710 – 1780MHz (LTE Band 66)
	663 – 698MHz (LTE Band 71)
	2402 – 2480MHz (Bluetooth)
	2412 – 2462MHz (WLAN 2.4GHz)
	5150 – 5850MHz (WLAN 5GHz)
GPRS / EDGE Multislot Class:	12
GPRS capability Class:	B
Dual Transfer Mode (DTM)	Not support
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Product Dimensions:	Long 229.7mm;Wide 245.8mm;Overall Diagonal 288.37mm

4.2. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version	Receipt Date
UT02aa	868189060008580	Bgf6d	SP6611A_V003_20230409_sunmi_CS	2023-05-25
UT10aa	868189060008465	Bgf6d	SP6611A_V003_20230409_sunmi_CS	2023-05-25
UT11aa	868189060008606	Bgf6d	SP6611A_V003_20230409_sunmi_CS	2023-05-25
UT13aa	868189060011600	Bgf6d	SP6611A_V003_20230409_sunmi_CS	2023-05-25
UT14aa	868189060010867	Bgf6d	SP6611A_V003_20230409_sunmi_CS	2023-05-25

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

Note: It is performed to test SAR with the UT10aa & UT11aa & UT13aa & UT14aa, and conducted power with the UT02aa.

4.3. Internal Identification of AE used during the test

AE ID*	Description	Model	Manufacturer
AE1	Battery	LKPA	Guangdong Pow-Tech New Power Co., Ltd.
AE2	Battery	CR2032	POWER GLORY BATTERY TECH(HK) CO LTD
AE3	Battery	CR2032	JHIH HONG TECHNOLOGY CO LTD

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

4.4. General Description

According to “Justification Letter” provided by applicant, model T6721 the detail differences description as below, others are the same.

Product Name	Model	Configuration		Type	Printer
Smart POS Terminal	T6721	1	P58	financial	58mm tip
		2	P58	financial	58mm fine workmanship
		3	P80	financial	80mm tip

We’ll perform the SAR measurement with configuration 3 and Spot check test with configuration 1/2.

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: Experimental Techniques

KDB 447498 D01 General RF Exposure Guidance v06 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

KDB 616217 D04 SAR for laptop and tablets v01r02 SAR Evaluation Considerations for Laptop, Notebook, Notebook and Tablet Computers

KDB 941225 D01 SAR test for 3G devices v03r01 SAR Measurement Procedures for 3G Devices

KDB 941225 D05 SAR for LTE Devices v02r05 SAR Evaluation Considerations for LTE Devices

KDB 248227 D01 802.11 Wi-Fi SAR v02r02 SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters

KDB 865664 D01SAR measurement 100 MHz to 6 GHz v01r04 SAR Measurement Requirements for 100 MHz to 6 GHz

KDB 865664 D02 RF Exposure Reporting v01r02 RF Exposure Compliance Reporting and Documentation Considerations

TCB workshop April 2019; RF Exposure Procedures (Tissue Simulating Liquids)

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

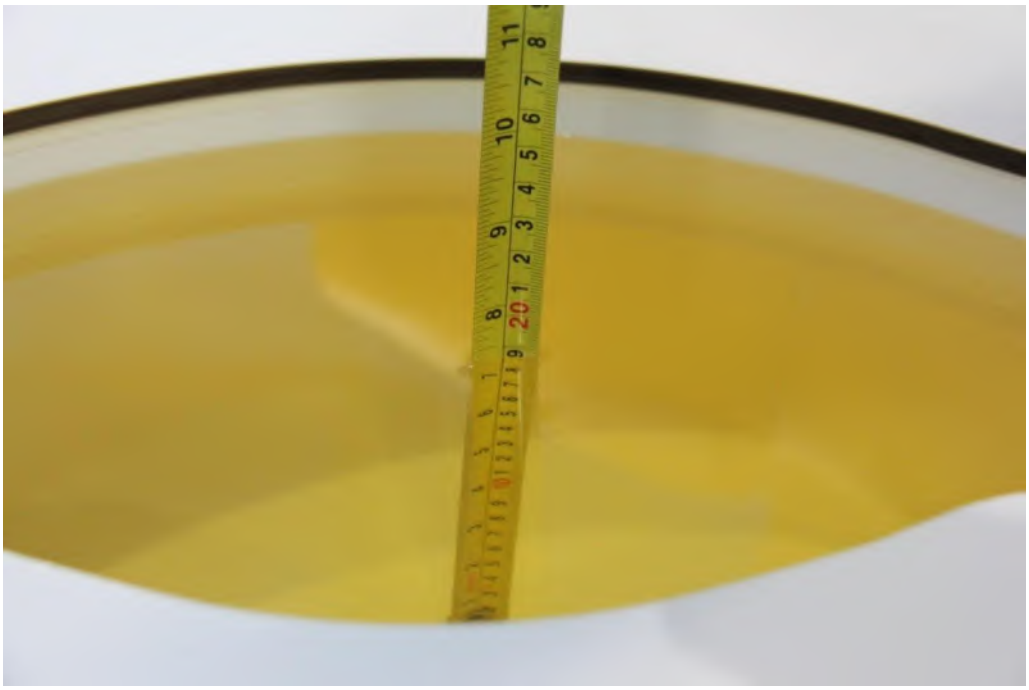
Frequency (MHz)	Liquid Type	Conductivity (σ)	± 5% Range	Permittivity (ε)	± 5% Range
750	Head	0.89	0.85～0.93	41.9	39.8～44.0
835	Head	0.90	0.86～0.95	41.5	39.4～43.6
1750	Head	1.37	1.30～1.44	40.1	38.1～42.1
1900	Head	1.40	1.33～1.47	40.0	38.0～42.0
2300	Head	1.67	1.57～1.75	39.5	37.5～41.4
2450	Head	1.80	1.71～1.89	39.2	37.2～41.2
2550	Head	1.91	1.81～2.01	39.1	37.1～41.0
5250	Head	4.71	4.47～4.95	35.9	34.1～37.7
5600	Head	5.07	4.82～5.32	35.5	33.8～37.3
5750	Head	5.22	4.96～5.48	35.4	33.6～37.1

7.2. Dielectric Performance

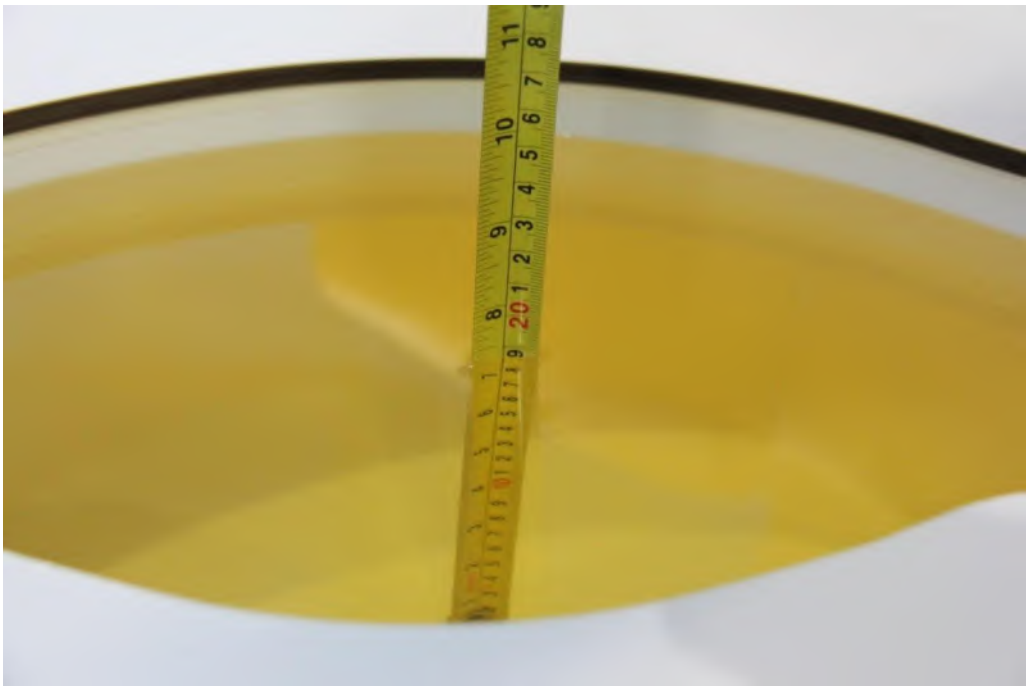
Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency (MHz)	Conductivity σ (S/m)	Drift (%)	Permittivity ε	Drift (%)
2023-06-19	750	Head	0.913	2.58	40.89	-2.41
2023-06-16	835	Head	0.928	3.11	40.74	-1.83
2023-06-18	1750	Head	1.359	-0.80	40.57	1.17
2023-06-20	1900	Head	1.382	-1.29	39.23	-1.93
2023-06-22	2300	Head	1.648	-1.32	39.92	1.06
2023-07-12	2450	Head	1.849	2.72	38.37	-2.12
2023-06-26	2550	Head	1.941	1.62	38.53	-1.46
2023-07-10	5250	Head	4.796	1.83	35.17	-2.03
2023-07-10	5600	Head	5.014	-1.10	36.06	1.58
2023-07-10	5750	Head	5.137	-1.59	35.81	1.16

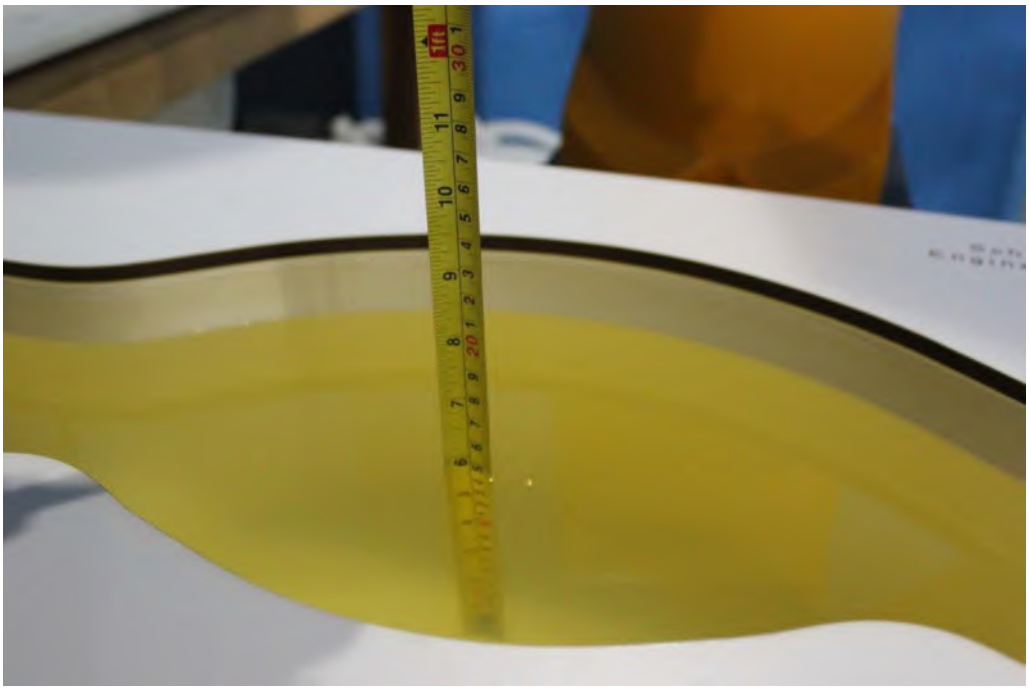
Note: The liquid temperature is 22.0°C.



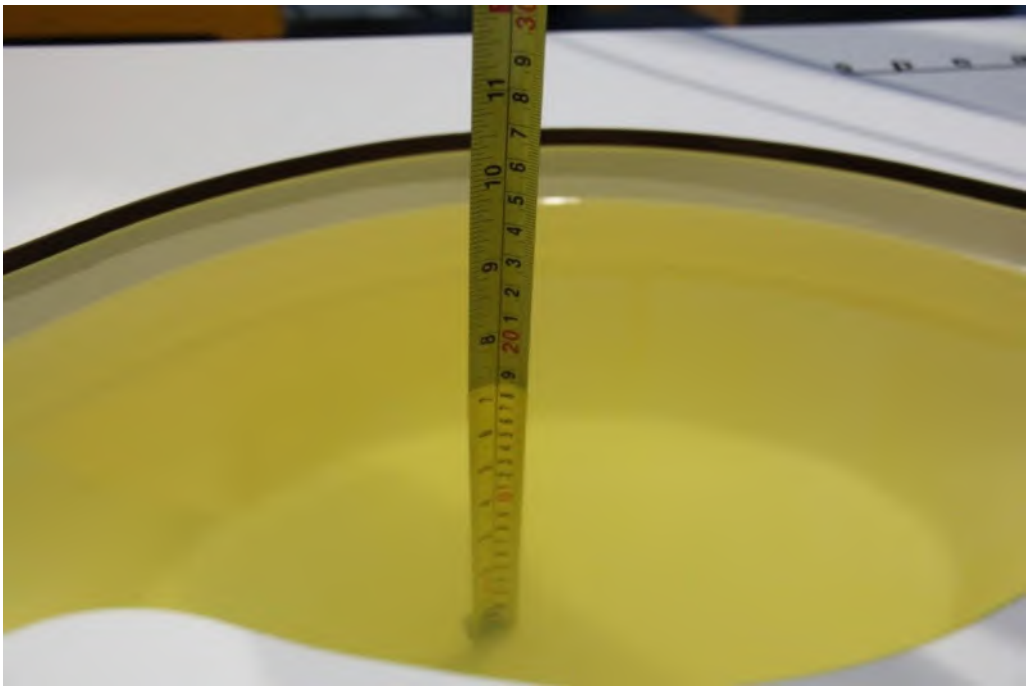
Picture 7-1: Liquid depth in the Flat Phantom (750MHz)



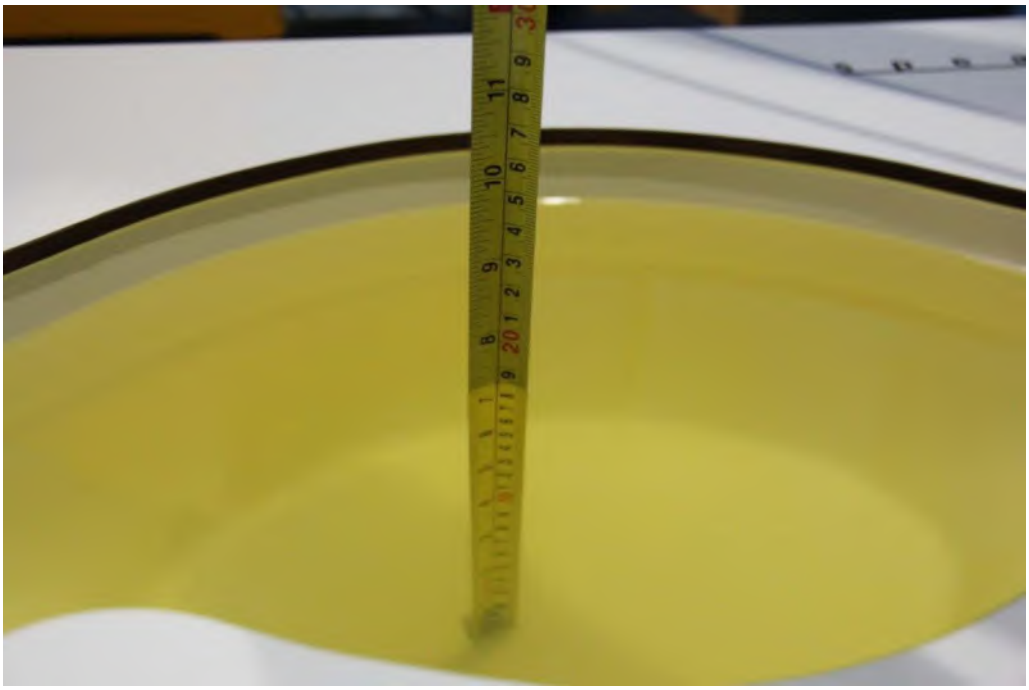
Picture 7-2: Liquid depth in the Flat Phantom (835MHz)



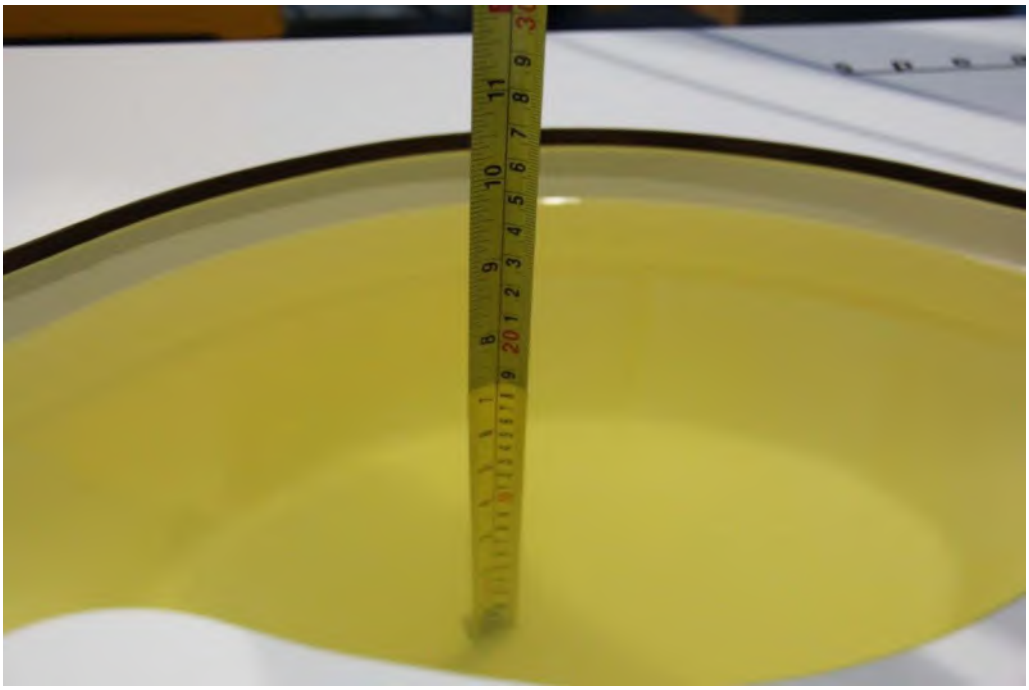
Picture 7-3: Liquid depth in the Flat Phantom (1750MHz)



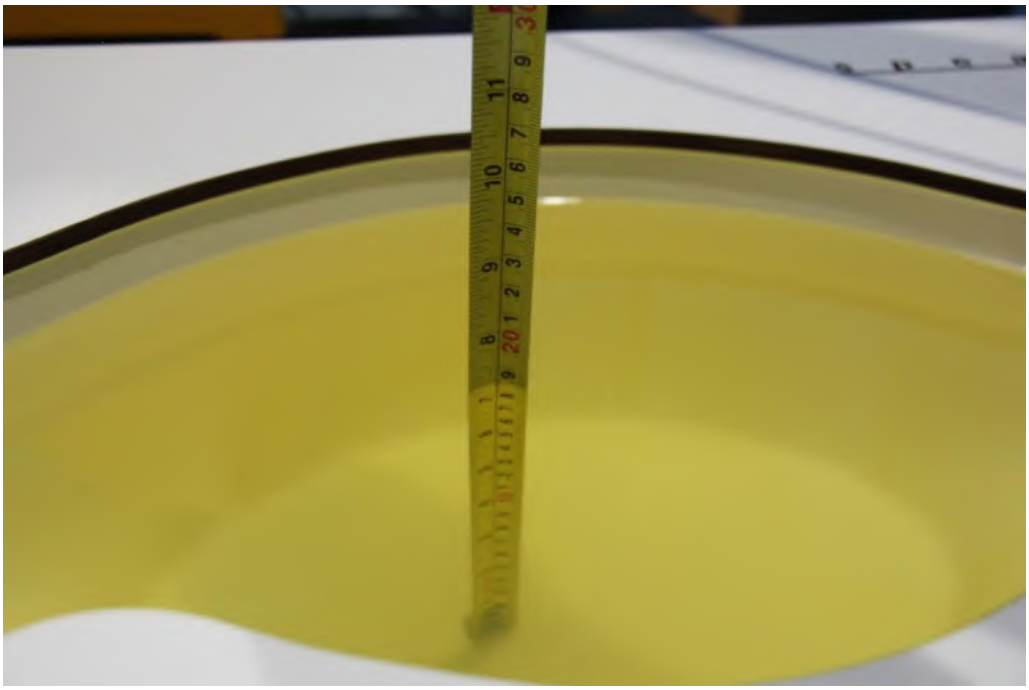
Picture 7-4: Liquid depth in the Flat Phantom (1900MHz)



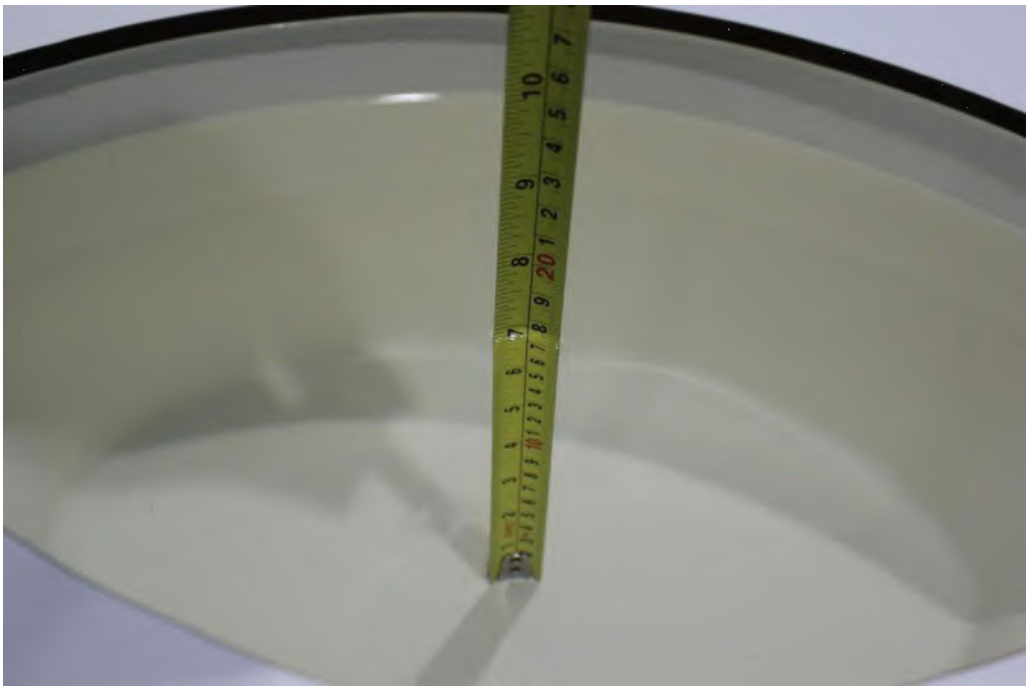
Picture 7-5: Liquid depth in the Flat Phantom (2300MHz)



Picture 7-6: Liquid depth in the Flat Phantom (2450MHz)



Picture 7-7: Liquid depth in the Flat Phantom (2550MHz)

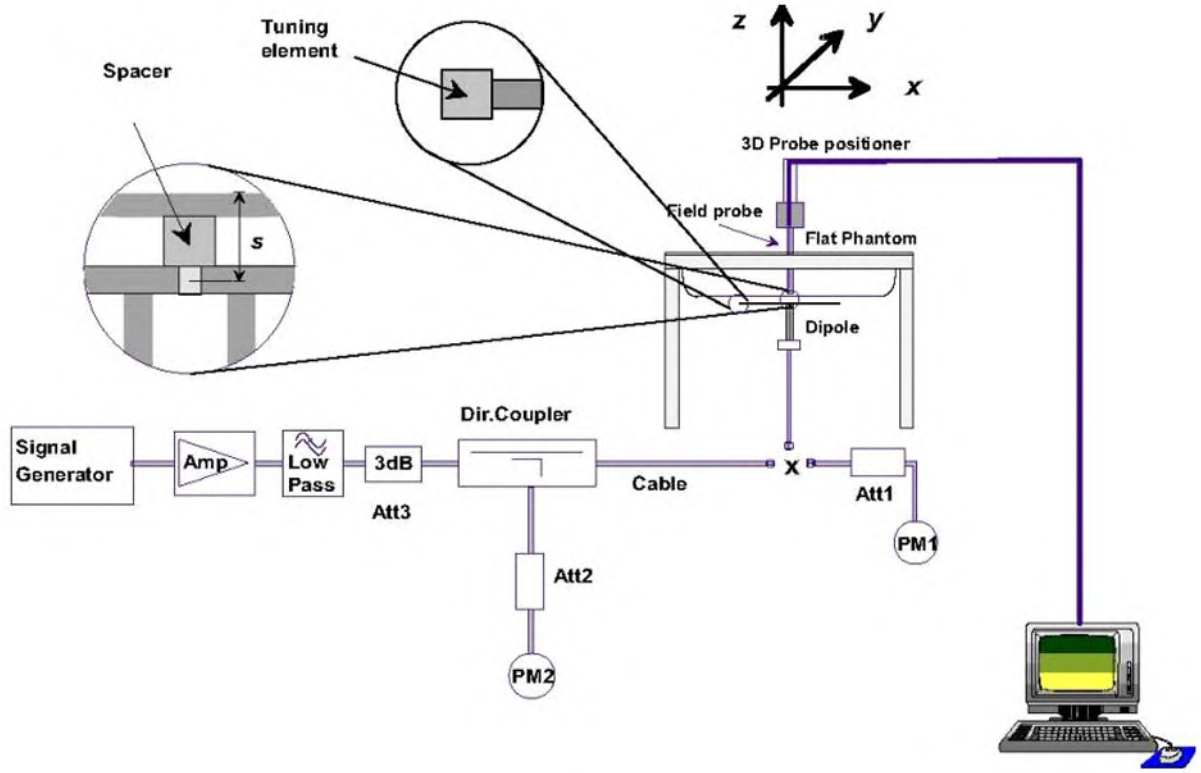


Picture 7-8: Liquid depth in the Flat Phantom (5GHz)

8. System verification

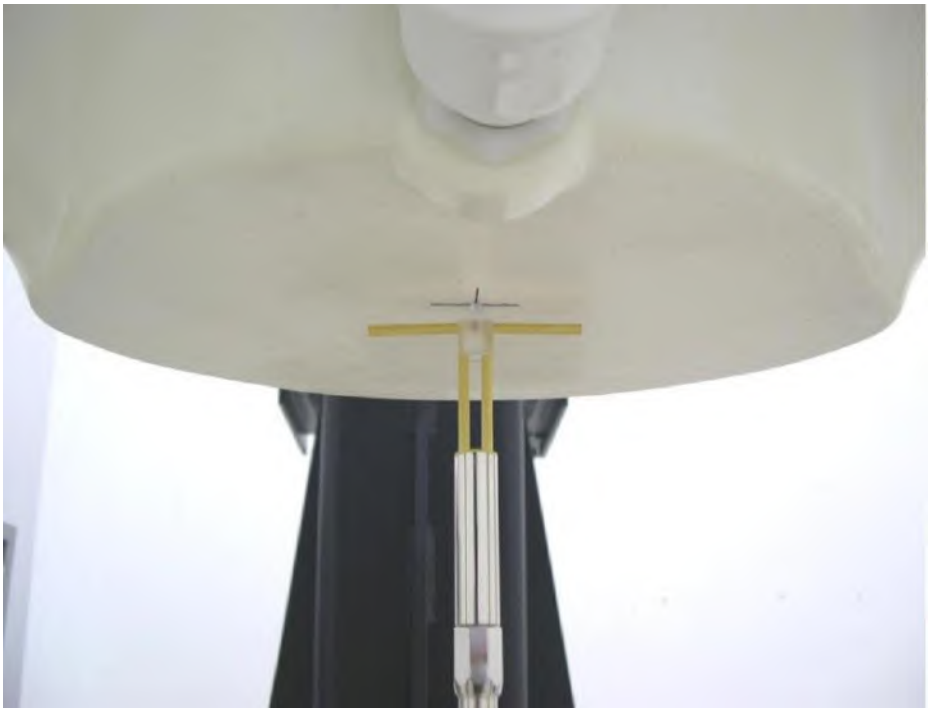
8.1. System Setup

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

For the dipole below 3GHz, the output power on dipole port must be calibrated to 24 dBm (250mW) before dipole is connected.
For the dipole above 3GHz, the output power on dipole port must be calibrated to 20 dBm (100mW) before dipole is connected.



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.

Table 8.1: System Verification of Head

Measurement Date	Frequency (MHz)	Target value (W/kg)		Measured value (W/kg)				Deviation (%)	
				/		Normalize to 1W			
		10 g	1 g	10 g	1 g	10 g	1 g	10 g	1 g
2023-06-19	750	5.62	8.48	1.46	2.22	5.84	8.88	3.91	4.72
2023-06-16	835	6.29	9.64	1.63	2.52	6.52	10.08	3.66	4.56
2023-06-18	1750	19.60	36.30	4.82	8.84	19.28	35.36	-1.63	-2.59
2023-06-20	1900	20.50	40.20	5.05	9.77	20.20	39.08	-1.46	-2.79
2023-06-22	2300	22.70	48.30	5.54	11.6	22.16	46.40	-2.38	-3.93
2023-07-12	2450	24.20	53.20	6.16	13.8	24.64	55.20	1.82	3.76
2023-06-26	2550	25.20	55.90	6.40	14.4	25.60	57.60	1.59	3.04
2023-07-10	5250	22.80	79.70	2.33	8.25	23.30	82.50	2.19	3.51
2023-07-10	5600	23.60	82.60	2.32	7.98	23.20	79.80	-1.69	-3.39
2023-07-10	5750	22.10	78.50	2.15	7.51	21.50	75.10	-2.71	-4.33

9. Measurement Procedures

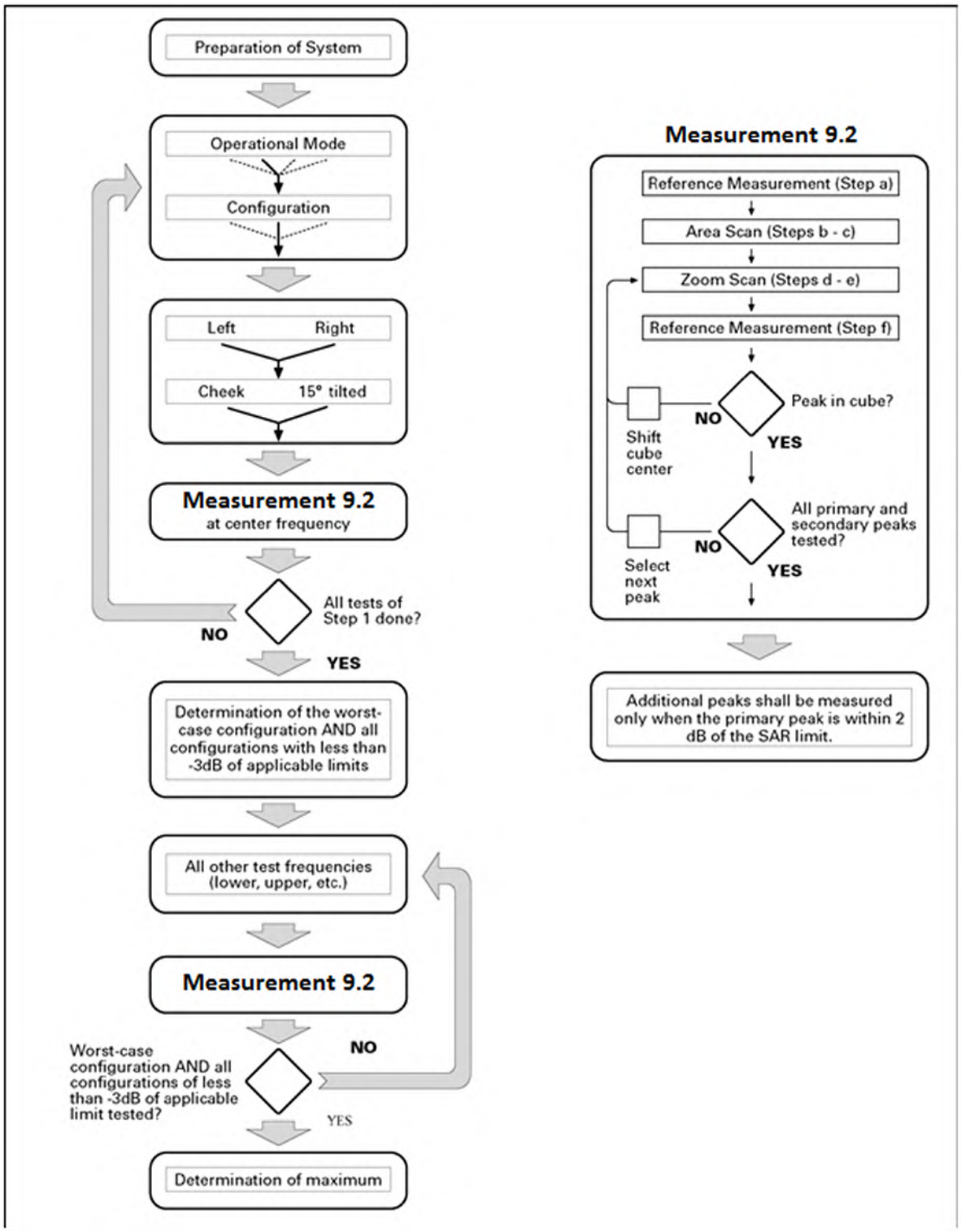
9.1. Tests to be performed

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 center 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 within 3 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 9.1 Block 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 1528-2013. 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>Minimum zoom scan volume</td><td colspan="2">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	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	12/15	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1}:47/15 β_{ed2}:47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	4/15	56/75	4	1	3.0	2.0	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.0	0.0	21	81

9.4. SAR Measurement for LTE

SAR tests for LTE are performed with a base station simulator, Anristu MT8820C. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. All powers were measured with the Anristu MT8820C.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.

9.5. LTE (TDD) Considerations

According to KDB 941225 D05 SAR for LTE Devices, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.
SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.
LTE TDD Band 38/41 support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

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	$13168 \cdot T_s$			-	-	-

Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

Calculated Duty Cycle

Calculated Duty Cycle = Extended cyclic prefix in uplink x (Ts) x # of S + # of U
Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:
Calculated Duty Cycle = 5120 x [1/(15000 x 2048)] x 2 + 6 ms = 63.33%
Where
Ts = 1/(15000 x 2048) seconds

9.6. Bluetooth & WLAN 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.

9.7. 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 Section 14 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

9.8. Proximity Sensor Considerations

This device uses a proximity sensor that share the same metallic electrode as the transmitting antenna to facilitate triggering in typical user interactivity with the device. Due to the operating configurations and exposure conditions required by the device, the proximity sensor is used to indicate when the tablet is held close to a user’s body exposure condition. It utilizes the proximity sensor to reduce the output power in specific wireless and operating modes to ensure SAR compliance for the following scenarios: To reduce the output power of main antennas during body operating configurations. . It is also set an output power leveled to the lowest one to make sure that in any case of SAR sensor hardware failure the SAR requirements can still be satisfied.

Sensor triggering distance summary data is included in Appendix K.

10. Conducted Output Power

For WWAN antenna, frequency bands GSM850, WCDMA Band 2/4/5, LTE Band 2/4/5/7/12/17/25/26/30/38/41/66/71 support proximity sensor triggering power reduce function.

Summary of power level – WWAN antenna

Sensor off (Body)	Sensor off (Body)
Power Level B1	**Power Level C1**

10.1. GSM Measurement result

Table 10.1: The conducted power measurement results for GPRS/EDGE

Power Level B1								
GPRS850/ EDGE850 (GMSK)	Tune up	Measured timeslot-Averaged output Power (dBm)			calculation	Source-based time-Averaged output Power (dBm)		
		Ch.251	Ch.190	Ch.128		Ch.251	Ch.190	Ch.128
1Tx-slot	33.5	32.42	32.31	32.21	-9.03	23.39	23.28	23.18
2Tx-slots	32.5	31.43	31.38	31.34	-6.02	25.41	25.36	25.32
3Tx-slots	31.0	**30.09**	**29.97**	**30.01**	-4.26	**25.83**	**25.71**	**25.75**
4Tx-slots	28.5	27.69	27.73	27.82	-3.01	24.68	24.72	24.81
EDGE850 (8PSK)	/	Measured timeslot-Averaged output Power (dBm)			calculation	Source-based time-Averaged output Power (dBm)		
		Ch.251	Ch.190	Ch.128		Ch.251	Ch.190	Ch.128
1Tx-slot	27.0	25.97	25.96	26.06	-9.03	16.94	16.93	17.03
2Tx-slots	27.0	25.93	25.92	26.01	-6.02	19.91	19.90	19.99
3Tx-slots	26.5	25.87	25.79	25.82	-4.26	21.61	21.53	21.56
4Tx-slots	26.5	25.66	25.59	25.63	-3.01	22.65	22.58	22.62
Power Level C1								
GPRS850/ EDGE850 (GMSK)	Tune up	Measured timeslot-Averaged output Power (dBm)			calculation	Source-based time-Averaged output Power (dBm)		
		Ch.251	Ch.190	Ch.128		Ch.251	Ch.190	Ch.128
1Tx-slot	28.5	27.81	27.84	27.76	-9.03	18.78	18.81	18.73
2Tx-slots	27.5	26.71	26.77	26.66	-6.02	20.69	20.75	20.64
3Tx-slots	26.0	**25.86**	**25.88**	**25.69**	-4.26	**21.60**	**21.62**	**21.43**
4Tx-slots	24.5	23.76	23.79	23.66	-3.01	20.75	20.78	20.65
EDGE850 (8PSK)	/	Measured timeslot-Averaged output Power (dBm)			calculation	Source-based time-Averaged output Power (dBm)		
		Ch.251	Ch.190	Ch.128		Ch.251	Ch.190	Ch.128
1Tx-slot	27.0	26.26	26.31	26.22	-9.03	17.23	17.28	17.19
2Tx-slots	27.0	26.07	26.09	26.06	-6.02	20.05	20.07	20.04
3Tx-slots	25.5	24.88	24.91	24.88	-4.26	20.62	20.65	20.62
4Tx-slots	23.5	22.77	22.79	22.79	-3.01	19.76	19.78	19.78

10.2. WCDMA Measurement result

Table 10.2: The conducted power measurement results WCDMA

Power Level B1					
Item	Band	WCDMA Band 2 Result			
	ARFCN	Tune up	Ch.9538 (1907.6MHz)	Ch.9400 (1880MHz)	Ch.9262 (1852.4MHz)
WCDMA	12.2kbps RMC	24.5	**23.34**	**23.39**	**23.24**
HSUPA	1	22.5	21.57	21.63	21.60
	2	22.5	21.69	21.69	21.66
	3	22.5	21.78	21.84	21.79
	4	20.5	19.59	19.57	19.56
	5	23.0	21.67	21.72	21.69
HSDPA	1	23.0	21.72	21.71	21.67
	2	23.0	21.77	21.78	21.78
	3	22.5	21.34	21.29	21.29
	4	22.5	21.27	21.29	21.32
Power Level C1					
Item	Band	WCDMA Band 2 Result			
	ARFCN	Tune up	Ch.9538 (1907.6MHz)	Ch.9400 (1880MHz)	Ch.9262 (1852.4MHz)
WCDMA	12.2kbps RMC	18.5	**17.55**	**17.57**	**17.49**
HSUPA	1	16.0	14.80	14.82	14.83
	2	16.0	14.93	14.90	14.92
	3	16.0	14.62	14.58	14.56
	4	15.0	13.51	13.47	13.54
	5	17.0	15.81	15.82	15.77
HSDPA	1	17.0	15.82	15.81	15.84
	2	17.0	15.88	15.89	15.92
	3	16.5	15.40	15.41	15.43
	4	16.5	15.40	15.42	15.41

Power Level B1					
Item	Band	WCDMA Band 4 Result			
	ARFCN	Tune up	Ch.1513 (1752.6MHz)	Ch.1413 (1732.6MHz)	Ch.1312 (1712.4MHz)
WCDMA	12.2kbps RMC	24.5	**23.71**	**23.86**	**23.97**
HSUPA	1	22.5	21.32	21.32	21.33
	2	22.5	21.39	21.40	21.38
	3	21.5	20.69	20.71	20.71
	4	20.5	19.49	19.49	19.51
	5	23.0	21.68	21.68	21.73
HSDPA	1	23.0	21.69	21.66	21.66
	2	23.0	21.82	21.80	21.78
	3	22.5	21.10	21.08	21.06
	4	22.5	21.19	21.21	21.18
Power Level C1					
Item	Band	WCDMA Band 4 Result			
	ARFCN	Tune up	Ch.1513 (1752.6MHz)	Ch.1413 (1732.6MHz)	Ch.1312 (1712.4MHz)
WCDMA	12.2kbps RMC	18.5	**17.45**	**17.49**	**17.38**
HSUPA	1	15.0	13.91	13.94	13.92
	2	15.0	14.02	13.99	13.99
	3	15.0	13.70	13.66	13.68
	4	14.0	13.27	13.31	13.27
	5	16.5	15.53	15.47	15.46
HSDPA	1	16.5	15.64	15.64	15.61
	2	16.5	15.74	15.72	15.66
	3	16.0	15.14	15.12	15.09
	4	16.0	15.09	15.11	15.12

Power Level B1					
Item	Band	WCDMA Band 5 Result			
	ARFCN	Tune up	Ch.4233 (846.6MHz)	Ch.4183 (836.6MHz)	Ch.4132 (826.4MHz)
WCDMA	12.2kbps RMC	24.5	**23.28**	**23.38**	**23.22**
HSUPA	1	21.5	20.52	20.47	20.50
	2	21.5	20.62	20.63	20.59
	3	21.5	20.66	20.69	20.68
	4	20.5	19.50	19.53	19.49
	5	22.5	21.46	21.49	21.52
HSDPA	1	22.5	21.49	21.51	21.50
	2	22.5	21.63	21.62	21.62
	3	22.0	21.06	21.12	21.09
	4	22.0	21.09	21.12	21.11
Power Level C1					
Item	Band	WCDMA Band 5 Result			
	ARFCN	Tune up	Ch.4233 (846.6MHz)	Ch.4183 (836.6MHz)	Ch.4132 (826.4MHz)
WCDMA	12.2kbps RMC	22.5	**21.73**	**21.82**	**21.90**
HSUPA	1	19.5	18.99	18.97	19.02
	2	19.5	19.08	19.12	19.06
	3	19.5	18.81	18.77	18.81
	4	18.5	17.53	17.52	17.50
	5	20.5	19.59	19.63	19.61
HSDPA	1	20.5	19.57	19.61	19.60
	2	20.5	19.66	19.69	19.73
	3	20.0	19.07	19.12	19.13
	4	20.0	19.08	19.14	19.09

10.3. LTE Measurement result

According to April 2015 TCB workshop, SAR Test exclusion can be applied for testing overlapping LTE Bands as follows:

a) The maximum out power, including tolerance, for the smaller band must be ≤ the larger band to qualify for SAR test exclusion.

b) The channel bandwidth and other operating parameters for the smaller band must be fully supported by the larger band.

LTE Band 2 (1850-1910MHz) is covered by LTE Band 25 (1850-1915MHz)
LTE Band 4 (1710-1755MHz) is covered by LTE Band 66 (1710-1780MHz)
LTE Band 5 (824-849MHz) is covered by LTE Band 26 (814-849MHz)
LTE Band 17 (704-716MHz) is covered by LTE Band 12 (696-716MHz)
LTE Band 38 (2570-2620MHz) is covered by LTE Band 41 (2496-2690MHz)

Table 10.3: The conducted power measurement results for GLTE

Power Level B1								
LTE Band 7			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2567.5	23.38	22.15	21.59	**24.5**	**23.5**	**22.5**
		2535.0	23.57	22.60	21.95			
		2502.5	23.56	22.42	21.85			
	1RB_12	2567.5	23.13	22.77	21.92			
		2535.0	23.19	22.94	21.81			
		2502.5	23.41	22.65	21.51			
	1RB_0	2567.5	23.21	22.18	21.34			
		2535.0	23.03	22.29	21.23			
		2502.5	23.25	22.30	21.26			
	12RB_13	2567.5	22.67	21.83	20.92	**23.5**	**22.5**	**21.5**
		2535.0	22.58	21.54	20.75			
		2502.5	22.73	21.40	20.41			
	12RB_6	2567.5	22.57	21.56	20.74			
		2535.0	22.41	21.43	20.47			
		2502.5	22.50	21.48	20.44			
	12RB_0	2567.5	22.70	21.69	20.60			
		2535.0	22.47	21.22	20.29			
		2502.5	22.37	21.38	20.42			
	25RB_0	2567.5	22.48	21.86	21.02			
		2535.0	22.42	21.51	20.55			
		2502.5	22.44	21.35	20.51			

Power Level B1								
LTE Band 7			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2565.0	23.31	22.19	21.59	**24.5**	**23.5**	**22.5**
		2535.0	23.55	22.55	21.89			
		2505.0	23.62	22.41	21.87			
	1RB_24	2565.0	23.13	22.75	21.87			
		2535.0	23.22	22.90	21.81			
		2505.0	23.38	22.68	21.49			
	1RB_0	2565.0	23.17	22.15	21.36			
		2535.0	23.03	22.25	21.31			
		2505.0	23.25	22.23	21.29			
	25RB_25	2565.0	22.69	21.82	20.89	**23.5**	**22.5**	**21.5**
		2535.0	22.55	21.59	20.75			
		2505.0	22.77	21.45	20.42			
	25RB_12	2565.0	22.56	21.52	20.71			
		2535.0	22.44	21.45	20.51			
		2505.0	22.52	21.52	20.49			
	25RB_0	2565.0	22.68	21.73	20.56			
		2535.0	22.43	21.21	20.32			
		2505.0	22.41	21.35	20.45			
	50RB_0	2565.0	22.51	21.86	20.99			
		2535.0	22.41	21.49	20.55			
		2505.0	22.51	21.30	20.51			

Power Level B1								
LTE Band 7			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2562.5	23.32	22.18	21.57	**24.5**	**23.5**	**22.5**
		2535.0	23.58	22.54	21.90			
		2507.5	23.58	22.40	21.84			
	1RB_37	2562.5	23.11	22.75	21.91			
		2535.0	23.20	22.94	21.76			
		2507.5	23.40	22.64	21.49			
	1RB_0	2562.5	23.20	22.23	21.35			
		2535.0	23.03	22.26	21.23			
		2507.5	23.24	22.29	21.27			
	36RB_38	2562.5	22.69	21.80	20.88	**23.5**	**22.5**	**21.5**
		2535.0	22.58	21.60	20.75			
		2507.5	22.76	21.41	20.44			
	36RB_19	2562.5	22.55	21.52	20.73			
		2535.0	22.42	21.50	20.51			
		2507.5	22.54	21.45	20.46			
	36RB_0	2562.5	22.69	21.70	20.55			
		2535.0	22.43	21.25	20.30			
		2507.5	22.39	21.39	20.47			
	75RB_0	2562.5	22.43	21.82	21.02			
		2535.0	22.39	21.47	20.54			
		2507.5	22.49	21.35	20.49			

Power Level B1								
LTE Band 7			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2560.0	23.35	22.16	21.56	**24.5**	**23.5**	**22.5**
		2535.0	23.58	22.57	21.91			
		2510.0	**23.59**	22.40	21.85			
	1RB_50	2560.0	23.14	22.75	21.90			
		2535.0	23.23	22.94	21.78			
		2510.0	23.41	22.64	21.49			
	1RB_0	2560.0	23.17	22.19	21.35			
		2535.0	23.06	22.27	21.27			
		2510.0	23.25	22.26	21.26			
	50RB_50	2560.0	22.69	21.83	20.89	**23.5**	**22.5**	**21.5**
		2535.0	22.55	21.57	20.77			
		2510.0	**22.74**	21.43	20.42			
	50RB_25	2560.0	22.55	21.55	20.71			
		2535.0	22.42	21.47	20.50			
		2510.0	22.54	21.49	20.47			
	50RB_0	2560.0	22.68	21.72	20.58			
		2535.0	22.45	21.23	20.31			
		2510.0	22.40	21.38	20.44			
	100RB_0	2560.0	22.47	21.86	20.99			
		2535.0	22.40	21.48	20.55			
		2510.0	22.48	21.32	20.48			

Power Level C1								
LTE Band 7			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2567.5	15.51	14.65	13.83	**16.5**	**15.5**	**14.5**
		2535.0	15.47	14.54	13.57			
		2502.5	15.49	14.52	13.81			
	1RB_12	2567.5	15.43	14.68	13.68			
		2535.0	15.24	14.68	13.88			
		2502.5	15.27	14.62	13.71			
	1RB_0	2567.5	15.30	14.62	13.65			
		2535.0	15.17	14.29	13.72			
		2502.5	14.81	14.21	13.36			
	12RB_13	2567.5	14.49	13.26	12.17	**15.5**	**14.5**	**13.5**
		2535.0	14.40	13.18	12.09			
		2502.5	14.51	13.12	12.11			
	12RB_6	2567.5	14.43	13.38	12.32			
		2535.0	14.24	13.38	12.34			
		2502.5	14.31	13.32	12.06			
	12RB_0	2567.5	14.38	13.12	12.01			
		2535.0	14.27	13.14	12.14			
		2502.5	14.25	13.09	12.02			
	25RB_0	2567.5	14.50	13.14	12.09			
		2535.0	14.27	13.14	12.07			
		2502.5	14.53	13.15	12.03			

Power Level C1								
LTE Band 7			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2565.0	15.43	14.61	13.85	**16.5**	**15.5**	**14.5**
		2535.0	15.51	14.51	13.55			
		2505.0	15.46	14.56	13.88			
	1RB_24	2565.0	15.45	14.72	13.71			
		2535.0	15.29	14.67	13.87			
		2505.0	15.25	14.64	13.70			
	1RB_0	2565.0	15.26	14.64	13.66			
		2535.0	15.16	14.30	13.68			
		2505.0	14.83	14.25	13.36			
	25RB_25	2565.0	14.46	13.26	12.20	**15.5**	**14.5**	**13.5**
		2535.0	14.37	13.13	12.08			
		2505.0	14.44	13.13	12.11			
	25RB_12	2565.0	14.41	13.42	12.31			
		2535.0	14.26	13.34	12.31			
		2505.0	14.30	13.39	12.11			
	25RB_0	2565.0	14.38	13.09	12.02			
		2535.0	14.30	13.12	12.15			
		2505.0	14.18	13.04	12.05			
	50RB_0	2565.0	14.47	13.09	12.06			
		2535.0	14.26	13.13	12.05			
		2505.0	14.55	13.16	12.07			

Power Level C1								
LTE Band 7			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2562.5	15.51	14.64	13.82	**16.5**	**15.5**	**14.5**
		2535.0	15.47	14.56	13.56			
		2507.5	15.51	14.57	13.86			
	1RB_37	2562.5	15.48	14.73	13.75			
		2535.0	15.23	14.72	13.84			
		2507.5	15.31	14.64	13.67			
	1RB_0	2562.5	15.31	14.61	13.68			
		2535.0	15.15	14.28	13.69			
		2507.5	14.82	14.26	13.35			
	36RB_38	2562.5	14.42	13.27	12.23	**15.5**	**14.5**	**13.5**
		2535.0	14.37	13.16	12.12			
		2507.5	14.50	13.17	12.06			
	36RB_19	2562.5	14.43	13.43	12.35			
		2535.0	14.21	13.37	12.33			
		2507.5	14.26	13.35	12.11			
	36RB_0	2562.5	14.41	13.12	12.04			
		2535.0	14.29	13.16	12.14			
		2507.5	14.25	13.05	12.01			
	75RB_0	2562.5	14.48	13.10	12.11			
		2535.0	14.24	13.13	12.03			
		2507.5	14.48	13.17	12.01			

Power Level C1								
LTE Band 7			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2560.0	15.47	14.64	13.84	**16.5**	**15.5**	**14.5**
		2535.0	15.48	14.54	13.57			
		2510.0	**15.49**	14.54	13.85			
	1RB_50	2560.0	15.46	14.72	13.72			
		2535.0	15.25	14.71	13.87			
		2510.0	15.28	14.65	13.71			
	1RB_0	2560.0	15.29	14.62	13.64			
		2535.0	15.17	14.27	13.69			
		2510.0	14.85	14.24	13.33			
	50RB_50	2560.0	14.46	13.24	12.20	**15.5**	**14.5**	**13.5**
		2535.0	14.38	13.15	12.11			
		2510.0	**14.47**	13.14	12.09			
	50RB_25	2560.0	14.41	13.40	12.35			
		2535.0	14.23	13.38	12.33			
		2510.0	14.30	13.36	12.08			
	50RB_0	2560.0	14.38	13.10	12.04			
		2535.0	14.29	13.15	12.11			
		2510.0	14.21	13.05	12.02			
	100RB_0	2560.0	14.51	13.13	12.09			
		2535.0	14.24	13.10	12.05			
		2510.0	14.52	13.19	12.04			

Power Level B1								
LTE Band 12			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	715.3	23.58	22.53	21.57	24.5	23.5	22.5
		707.5	23.66	22.74	21.70			
		699.7	23.83	22.63	21.82			
	1RB_3	715.3	23.92	22.58	21.89			
		707.5	23.77	22.70	21.75			
		699.7	23.82	22.39	21.86			
	1RB_0	715.3	23.75	22.54	21.65			
		707.5	23.75	22.51	21.53			
		699.7	23.80	22.58	21.71			
	3RB_3	715.3	23.63	22.58	21.58			
		707.5	23.68	22.76	21.71			
		699.7	23.83	22.66	21.82			
	3RB_1	715.3	23.93	22.58	21.82			
		707.5	23.81	22.70	21.77			
		699.7	23.85	22.38	21.87			
	3RB_0	715.3	23.80	22.55	21.65			
		707.5	23.80	22.46	21.51			
		699.7	23.81	22.52	21.70			
	6RB_0	715.3	22.84	21.77	20.87	23.5	22.5	21.5
		707.5	22.74	21.65	20.98			
		699.7	22.76	21.65	20.61			

Power Level B1								
LTE Band 12			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	714.5	23.59	22.54	21.65	**24.5**	**23.5**	**22.5**
		707.5	23.66	22.75	21.68			
		700.5	23.79	22.67	21.80			
	1RB_7	714.5	23.92	22.63	21.84			
		707.5	23.77	22.66	21.78			
		700.5	23.80	22.40	21.86			
	1RB_0	714.5	23.75	22.57	21.70			
		707.5	23.80	22.50	21.52			
		700.5	23.82	22.51	21.68			
	8RB_7	714.5	22.82	21.75	20.76	**23.5**	**22.5**	**21.5**
		707.5	22.85	21.68	20.82			
		700.5	22.76	21.85	20.91			
	8RB_4	714.5	22.85	21.85	20.85			
		707.5	22.88	21.67	20.94			
		700.5	22.82	21.57	20.84			
	8RB_0	714.5	22.84	21.87	20.78			
		707.5	22.71	21.64	20.66			
		700.5	22.72	21.56	20.93			
	15RB_0	714.5	22.83	21.73	20.90			
		707.5	22.79	21.66	20.95			
		700.5	22.75	21.66	20.62			

Power Level B1								
LTE Band 12			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	713.5	23.58	22.52	21.62	**24.5**	**23.5**	**22.5**
		707.5	23.66	22.77	21.68			
		701.5	23.78	22.69	21.83			
	1RB_12	713.5	23.87	22.58	21.84			
		707.5	23.83	22.69	21.75			
		701.5	23.80	22.41	21.87			
	1RB_0	713.5	23.75	22.53	21.68			
		707.5	23.83	22.50	21.48			
		701.5	23.84	22.56	21.67			
	12RB_13	713.5	22.83	21.69	20.76	**23.5**	**22.5**	**21.5**
		707.5	22.85	21.66	20.87			
		701.5	22.81	21.86	20.87			
	12RB_6	713.5	22.87	21.86	20.85			
		707.5	22.88	21.67	20.95			
		701.5	22.82	21.56	20.81			
	12RB_0	713.5	22.85	21.80	20.79			
		707.5	22.66	21.64	20.62			
		701.5	22.77	21.56	20.91			
	25RB_0	713.5	22.86	21.74	20.86			
		707.5	22.81	21.67	20.95			
		701.5	22.73	21.64	20.64			

Power Level B1								
LTE Band 12			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	711.0	23.60	22.55	21.61	**24.5**	**23.5**	**22.5**
		707.5	23.68	22.74	21.69			
		704.0	23.80	22.65	21.83			
	1RB_24	711.0	**23.90**	22.59	21.86			
		707.5	23.80	22.67	21.75			
		704.0	23.83	22.40	21.83			
	1RB_0	711.0	23.77	22.55	21.69			
		707.5	23.79	22.50	21.51			
		704.0	23.82	22.55	21.71			
	25RB_25	711.0	22.82	21.71	20.78	**23.5**	**22.5**	**21.5**
		707.5	22.84	21.68	20.84			
		704.0	22.79	21.88	20.90			
	25RB_12	711.0	**22.87**	21.84	20.84			
		707.5	22.85	21.65	20.92			
		704.0	22.80	21.57	20.84			
	25RB_0	711.0	22.85	21.84	20.77			
		707.5	22.69	21.67	20.63			
		704.0	22.73	21.60	20.89			
	50RB_0	711.0	22.85	21.74	20.90			
		707.5	22.78	21.66	20.97			
		704.0	22.76	21.65	20.61			

Power Level C1								
LTE Band 12			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	715.3	22.39	21.84	20.65	23.5	22.5	21.5
		707.5	22.66	21.62	20.79			
		699.7	22.82	21.71	20.35			
	1RB_3	715.3	22.83	21.45	20.57			
		707.5	22.81	21.53	20.86			
		699.7	22.87	21.40	20.27			
	1RB_0	715.3	22.70	21.54	20.58			
		707.5	22.33	21.37	20.50			
		699.7	22.52	21.41	20.59			
	3RB_3	715.3	22.41	21.86	20.61			
		707.5	22.68	21.60	20.76			
		699.7	22.83	21.75	20.37			
	3RB_1	715.3	22.77	21.39	20.59			
		707.5	22.78	21.54	20.78			
		699.7	22.86	21.43	20.27			
	3RB_0	715.3	22.70	21.49	20.60			
		707.5	22.33	21.39	20.50			
		699.7	22.49	21.45	20.54			
	6RB_0	715.3	21.71	20.76	19.34	22.5	21.5	20.5
		707.5	21.73	20.86	19.88			
		699.7	21.77	20.63	19.43			

Power Level C1								
LTE Band 12			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	714.5	22.43	21.86	20.66	23.5	22.5	21.5
		707.5	22.68	21.61	20.80			
		700.5	22.87	21.71	20.33			
	1RB_7	714.5	22.81	21.45	20.58			
		707.5	22.80	21.51	20.79			
		700.5	22.82	21.43	20.25			
	1RB_0	714.5	22.73	21.51	20.61			
		707.5	22.34	21.43	20.52			
		700.5	22.48	21.42	20.58			
	8RB_7	714.5	21.64	20.80	19.78	22.5	21.5	20.5
		707.5	21.72	20.74	19.84			
		700.5	21.69	20.75	19.23			
	8RB_4	714.5	21.76	20.83	19.35			
		707.5	21.67	20.77	19.51			
		700.5	21.73	20.61	19.45			
	8RB_0	714.5	21.73	20.80	19.61			
		707.5	21.66	20.55	19.87			
		700.5	21.67	20.60	19.72			
	15RB_0	714.5	21.74	20.75	19.39			
		707.5	21.75	20.82	19.88			
		700.5	21.74	20.63	19.44			

Power Level C1								
LTE Band 12			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	713.5	22.39	21.85	20.61	**23.5**	**22.5**	**21.5**
		707.5	22.66	21.59	20.76			
		701.5	22.88	21.71	20.35			
	1RB_12	713.5	22.82	21.45	20.64			
		707.5	22.77	21.49	20.79			
		701.5	22.83	21.41	20.28			
	1RB_0	713.5	22.74	21.56	20.62			
		707.5	22.30	21.44	20.50			
		701.5	22.49	21.39	20.59			
	12RB_13	713.5	21.65	20.79	19.76	**22.5**	**21.5**	**20.5**
		707.5	21.71	20.72	19.87			
		701.5	21.67	20.70	19.27			
	12RB_6	713.5	21.73	20.89	19.42			
		707.5	21.72	20.72	19.52			
		701.5	21.72	20.64	19.46			
	12RB_0	713.5	21.69	20.83	19.61			
		707.5	21.60	20.49	19.87			
		701.5	21.65	20.61	19.70			
	25RB_0	713.5	21.76	20.71	19.34			
		707.5	21.75	20.82	19.86			
		701.5	21.78	20.66	19.46			

Power Level C1								
LTE Band 12			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	711.0	22.41	21.85	20.65	23.5	22.5	21.5
		707.5	22.66	21.63	20.79			
		704.0	22.74	21.74	20.33			
	1RB_24	711.0	**22.80**	21.42	20.60			
		707.5	22.79	21.53	20.82			
		704.0	22.77	21.43	20.29			
	1RB_0	711.0	22.73	21.52	20.61			
		707.5	22.32	21.41	20.53			
		704.0	22.49	21.43	20.55			
	25RB_25	711.0	21.67	20.80	19.77	22.5	21.5	20.5
		707.5	21.70	20.71	19.84			
		704.0	21.69	20.73	19.26			
	25RB_12	711.0	**21.74**	20.85	19.39			
		707.5	21.71	20.73	19.49			
		704.0	21.72	20.60	19.42			
	25RB_0	711.0	21.73	20.83	19.58			
		707.5	21.63	20.53	19.90			
		704.0	21.68	20.60	19.73			
	50RB_0	711.0	21.74	20.73	19.37			
		707.5	21.72	20.83	19.88			
		704.0	21.75	20.67	19.46			

Power Level B1								
LTE Band 13			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	784.5	23.98	22.83	21.86	**24.5**	**23.5**	**22.5**
		782.0	23.98	22.72	21.89			
		779.5	23.79	22.78	21.94			
	1RB_12	784.5	23.93	22.78	21.85			
		782.0	23.95	22.68	21.84			
		779.5	23.79	22.79	21.93			
	1RB_0	784.5	23.96	22.81	21.89			
		782.0	23.99	22.68	21.88			
		779.5	23.74	22.81	21.95			
	12RB_13	784.5	22.84	21.66	20.74	23.5	22.5	21.5
		782.0	22.88	21.81	20.93			
		779.5	22.87	21.62	20.88			
	12RB_6	784.5	22.84	21.69	20.77			
		782.0	22.88	21.77	20.89			
		779.5	22.89	21.64	20.90			
	12RB_0	784.5	22.84	21.70	20.78			
		782.0	22.90	21.75	20.93			
		779.5	22.88	21.58	20.85			
	25RB_0	784.5	22.85	21.64	20.78			
		782.0	22.87	21.80	20.92			
		779.5	22.84	21.57	20.85			

Power Level B1								
LTE Band 13			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	782.0	23.95	22.81	21.86	**24.5**	**23.5**	**22.5**
	1RB_24	782.0	**23.98**	22.70	21.87			
	1RB_0	782.0	23.77	22.81	21.94			
	25RB_25	782.0	22.82	21.68	20.76	**23.5**	**22.5**	**21.5**
	25RB_12	782.0	**22.87**	21.78	20.92			
	25RB_0	782.0	22.86	21.60	20.87			
	50RB_0	782.0	22.79	21.66	20.74			

Power Level B1								
LTE Band 14			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	795.5	23.64	22.60	21.55	**24.5**	**23.5**	**22.5**
		793.0	23.74	22.68	21.81			
		790.5	23.56	22.36	21.51			
	1RB_12	795.5	23.73	22.65	21.77			
		793.0	23.93	22.54	21.94			
		790.5	23.87	22.49	21.91			
	1RB_0	795.5	23.85	22.48	21.76			
		793.0	23.41	22.48	21.50			
		790.5	23.64	22.54	21.52			
	12RB_13	795.5	22.73	21.56	20.84	**23.5**	**22.5**	**21.5**
		793.0	22.73	21.75	20.82			
		790.5	22.72	21.82	20.87			
	12RB_6	795.5	22.59	21.79	20.62			
		793.0	22.68	21.73	20.63			
		790.5	22.64	21.65	20.82			
	12RB_0	795.5	22.69	21.65	20.92			
		793.0	22.57	21.58	20.61			
		790.5	22.70	21.47	20.87			
	25RB_0	795.5	22.74	21.72	20.81			
		793.0	22.66	21.54	20.92			
		790.5	22.73	21.70	20.64			

Power Level B1								
LTE Band 14			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	793.0	23.68	22.62	21.88	**24.5**	**23.5**	**22.5**
	1RB_24	793.0	**23.84**	22.70	21.91			
	1RB_0	793.0	23.73	22.69	21.55			
	25RB_25	793.0	**22.81**	21.64	20.81	**23.5**	**22.5**	**21.5**
	25RB_12	793.0	22.74	21.52	20.59			
	25RB_0	793.0	22.64	21.59	20.57			
	50RB_0	793.0	22.70	21.56	20.56			

Power Level B1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1914.3	22.82	21.75	20.78	**24.0**	**23.0**	**22.0**
		1882.5	22.98	21.54	20.91			
		1850.7	22.85	21.75	20.91			
	1RB_3	1914.3	22.82	21.88	20.99			
		1882.5	23.00	21.96	20.83			
		1850.7	22.67	21.81	20.92			
	1RB_0	1914.3	22.79	21.69	20.79			
		1882.5	22.96	21.72	20.93			
		1850.7	22.91	21.70	20.87			
	3RB_3	1914.3	22.81	21.72	20.78			
		1882.5	22.99	21.55	20.98			
		1850.7	22.83	21.73	20.91			
	3RB_1	1914.3	22.82	21.85	20.94			
		1882.5	23.01	21.95	20.85			
		1850.7	22.72	21.78	20.89			
	3RB_0	1914.3	22.79	21.70	20.75			
		1882.5	22.97	21.77	20.98			
		1850.7	22.90	21.74	20.86			
	6RB_0	1914.3	21.97	20.83	19.71	**23.0**	**22.0**	**21.0**
		1882.5	21.96	20.86	19.73			
		1850.7	21.83	20.83	19.80			

Power Level B1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1913.5	22.77	21.75	20.76	**24.0**	**23.0**	**22.0**
		1882.5	22.97	21.56	20.95			
		1851.5	22.89	21.69	20.90			
	1RB_7	1913.5	22.81	21.85	20.96			
		1882.5	22.97	21.98	20.85			
		1851.5	22.73	21.79	20.86			
	1RB_0	1913.5	22.81	21.74	20.76			
		1882.5	23.01	21.73	21.00			
		1851.5	22.94	21.70	20.90			
	8RB_7	1913.5	21.94	20.86	20.00	**23.0**	**22.0**	**21.0**
		1882.5	21.91	20.83	19.96			
		1851.5	21.87	20.69	19.96			
	8RB_4	1913.5	21.86	20.86	19.98			
		1882.5	21.85	20.88	19.98			
		1851.5	21.86	20.78	19.95			
	8RB_0	1913.5	21.96	20.95	19.83			
		1882.5	22.02	20.74	19.95			
		1851.5	21.93	20.74	19.86			
	15RB_0	1913.5	21.93	20.81	19.74			
		1882.5	21.98	20.91	19.73			
		1851.5	21.86	20.85	19.81			

Power Level B1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1912.5	22.79	21.75	20.77	**24.0**	**23.0**	**22.0**
		1882.5	22.96	21.58	20.98			
		1852.5	22.90	21.69	20.86			
	1RB_12	1912.5	22.82	21.84	21.00			
		1882.5	22.97	21.99	20.83			
		1852.5	22.71	21.77	20.87			
	1RB_0	1912.5	22.79	21.73	20.82			
		1882.5	23.01	21.78	20.96			
		1852.5	22.91	21.75	20.91			
	12RB_13	1912.5	21.94	20.92	19.96	**23.0**	**22.0**	**21.0**
		1882.5	21.94	20.82	19.91			
		1852.5	21.85	20.69	19.93			
	12RB_6	1912.5	21.85	20.88	19.96			
		1882.5	21.89	20.90	19.94			
		1852.5	21.85	20.81	19.92			
	12RB_0	1912.5	22.00	21.00	19.80			
		1882.5	22.03	20.79	19.87			
		1852.5	21.93	20.70	19.88			
	25RB_0	1912.5	21.92	20.76	19.74			
		1882.5	21.98	20.87	19.69			
		1852.5	21.88	20.79	19.83			

Power Level B1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1910.0	22.84	21.72	20.80	**24.0**	**23.0**	**22.0**
		1882.5	23.00	21.62	20.91			
		1855.0	22.85	21.74	20.91			
	1RB_24	1910.0	22.77	21.85	20.97			
		1882.5	22.95	21.93	20.84			
		1855.0	22.70	21.79	20.90			
	1RB_0	1910.0	22.81	21.72	20.82			
		1882.5	22.99	21.71	21.00			
		1855.0	22.97	21.73	20.90			
	25RB_25	1910.0	21.93	20.87	19.97	**23.0**	**22.0**	**21.0**
		1882.5	21.99	20.80	19.93			
		1855.0	21.89	20.68	19.94			
	25RB_12	1910.0	21.85	20.90	19.99			
		1882.5	21.85	20.92	19.99			
		1855.0	21.83	20.79	19.95			
	25RB_0	1910.0	21.99	20.97	19.82			
		1882.5	22.03	20.73	19.90			
		1855.0	21.93	20.75	19.80			
	50RB_0	1910.0	21.94	20.75	19.75			
		1882.5	21.97	20.85	19.74			
		1855.0	21.84	20.81	19.81			

Power Level B1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1907.5	22.78	21.74	20.77	**24.0**	**23.0**	**22.0**
		1882.5	22.93	21.61	20.94			
		1857.5	22.86	21.69	20.86			
	1RB_37	1907.5	22.82	21.82	20.93			
		1882.5	22.99	21.98	20.87			
		1857.5	22.74	21.79	20.90			
	1RB_0	1907.5	22.83	21.74	20.82			
		1882.5	22.96	21.76	20.98			
		1857.5	22.90	21.73	20.90			
	36RB_38	1907.5	21.95	20.91	19.99	**23.0**	**22.0**	**21.0**
		1882.5	21.97	20.84	19.90			
		1857.5	21.91	20.69	19.91			
	36RB_19	1907.5	21.85	20.88	19.99			
		1882.5	21.89	20.93	19.99			
		1857.5	21.83	20.83	19.95			
	36RB_0	1907.5	21.96	20.92	19.80			
		1882.5	22.02	20.79	19.91			
		1857.5	21.90	20.70	19.83			
	75RB_0	1907.5	21.91	20.77	19.75			
		1882.5	21.97	20.85	19.69			
		1857.5	21.87	20.81	19.84			

Power Level B1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1905.0	22.81	21.74	20.77	**24.0**	**23.0**	**22.0**
		1882.5	22.96	21.58	20.94			
		1860.0	22.86	21.73	20.90			
	1RB_50	1905.0	22.80	21.85	20.96			
		1882.5	22.97	21.96	20.85			
		1860.0	22.70	21.77	20.88			
	1RB_0	1905.0	22.82	21.71	20.79			
		1882.5	**22.98**	21.74	20.97			
		1860.0	22.93	21.73	20.88			
	50RB_50	1905.0	21.92	20.89	19.97	**23.0**	**22.0**	**21.0**
		1882.5	21.95	20.81	19.93			
		1860.0	21.88	20.71	19.95			
	50RB_25	1905.0	21.86	20.90	19.96			
		1882.5	21.88	20.91	19.97			
		1860.0	21.86	20.79	19.94			
	50RB_0	1905.0	21.97	20.96	19.82			
		1882.5	**22.03**	20.76	19.91			
		1860.0	21.89	20.72	19.84			
	100RB_0	1905.0	21.94	20.79	19.74			
		1882.5	21.96	20.87	19.73			
		1860.0	21.86	20.81	19.80			

Power Level C1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1914.3	16.65	15.75	14.84	**18.0**	**17.0**	**16.0**
		1882.5	16.83	15.82	14.79			
		1850.7	16.94	15.88	14.89			
	1RB_3	1914.3	17.03	15.91	14.80			
		1882.5	17.10	15.89	15.01			
		1850.7	16.80	15.86	14.75			
	1RB_0	1914.3	17.06	15.62	14.79			
		1882.5	17.08	15.72	14.99			
		1850.7	17.06	15.93	14.88			
	3RB_3	1914.3	16.70	15.67	14.83			
		1882.5	16.87	15.83	14.76			
		1850.7	16.87	15.81	14.88			
	3RB_1	1914.3	16.98	15.88	14.82			
		1882.5	17.07	15.86	15.02			
		1850.7	16.81	15.82	14.73			
	3RB_0	1914.3	17.01	15.61	14.79			
		1882.5	17.07	15.74	14.99			
		1850.7	17.00	15.94	14.83			
	6RB_0	1914.3	15.86	14.87	13.80	**17.0**	**16.0**	**15.0**
		1882.5	16.08	14.92	13.86			
		1850.7	16.04	14.85	13.86			

Power Level C1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1913.5	16.71	15.69	14.85	**18.0**	**17.0**	**16.0**
		1882.5	16.87	15.84	14.73			
		1851.5	16.93	15.84	14.92			
	1RB_7	1913.5	17.05	15.92	14.79			
		1882.5	17.03	15.88	14.95			
		1851.5	16.81	15.82	14.71			
	1RB_0	1913.5	16.99	15.66	14.84			
		1882.5	17.11	15.73	14.99			
		1851.5	17.03	15.93	14.82			
	8RB_7	1913.5	15.84	15.02	13.89	**17.0**	**16.0**	**15.0**
		1882.5	16.01	14.82	13.83			
		1851.5	15.97	14.94	13.78			
	8RB_4	1913.5	15.83	14.93	13.89			
		1882.5	16.01	14.95	13.97			
		1851.5	15.92	14.97	13.94			
	8RB_0	1913.5	15.86	14.88	13.91			
		1882.5	16.17	14.94	13.82			
		1851.5	15.95	14.78	13.91			
	15RB_0	1913.5	15.88	14.92	13.75			
		1882.5	16.09	14.90	13.86			
		1851.5	16.04	14.87	13.93			

Power Level C1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1912.5	16.66	15.70	14.87	**18.0**	**17.0**	**16.0**
		1882.5	16.81	15.78	14.72			
		1852.5	16.92	15.82	14.89			
	1RB_12	1912.5	17.02	15.88	14.82			
		1882.5	17.09	15.85	14.95			
		1852.5	16.84	15.85	14.76			
	1RB_0	1912.5	17.05	15.62	14.84			
		1882.5	17.08	15.73	14.95			
		1852.5	17.00	15.88	14.83			
	12RB_13	1912.5	15.86	14.97	13.88	**17.0**	**16.0**	**15.0**
		1882.5	16.02	14.82	13.86			
		1852.5	15.98	14.97	13.80			
	12RB_6	1912.5	15.85	14.89	13.90			
		1882.5	16.06	15.00	13.91			
		1852.5	15.90	14.97	13.90			
	12RB_0	1912.5	15.83	14.89	13.88			
		1882.5	16.13	14.93	13.80			
		1852.5	15.99	14.78	13.87			
	25RB_0	1912.5	15.87	14.90	13.76			
		1882.5	16.08	14.88	13.85			
		1852.5	16.06	14.82	13.86			

Power Level C1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1910.0	16.66	15.68	14.85	**18.0**	**17.0**	**16.0**
		1882.5	16.82	15.81	14.72			
		1855.0	16.94	15.85	14.87			
	1RB_24	1910.0	16.98	15.87	14.84			
		1882.5	17.06	15.88	14.98			
		1855.0	16.87	15.83	14.71			
	1RB_0	1910.0	17.06	15.64	14.80			
		1882.5	17.09	15.71	14.98			
		1855.0	17.05	15.89	14.83			
	25RB_25	1910.0	15.84	14.96	13.85	**17.0**	**16.0**	**15.0**
		1882.5	16.01	14.89	13.85			
		1855.0	15.97	14.94	13.79			
	25RB_12	1910.0	15.83	14.91	13.86			
		1882.5	16.01	15.00	13.94			
		1855.0	15.86	14.98	13.94			
	25RB_0	1910.0	15.85	14.91	13.93			
		1882.5	16.11	14.86	13.83			
		1855.0	15.97	14.82	13.93			
	50RB_0	1910.0	15.86	14.87	13.81			
		1882.5	16.08	14.95	13.83			
		1855.0	16.06	14.84	13.94			

Power Level C1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1907.5	16.67	15.73	14.83	**18.0**	**17.0**	**16.0**
		1882.5	16.80	15.78	14.74			
		1857.5	16.93	15.83	14.87			
	1RB_37	1907.5	17.03	15.87	14.81			
		1882.5	17.08	15.82	15.00			
		1857.5	16.86	15.83	14.71			
	1RB_0	1907.5	17.06	15.62	14.84			
		1882.5	17.10	15.71	14.97			
		1857.5	17.01	15.86	14.83			
	36RB_38	1907.5	15.85	15.00	13.90	**17.0**	**16.0**	**15.0**
		1882.5	16.03	14.87	13.88			
		1857.5	16.01	14.92	13.76			
	36RB_19	1907.5	15.84	14.91	13.85			
		1882.5	16.01	15.00	13.91			
		1857.5	15.93	14.93	13.96			
	36RB_0	1907.5	15.90	14.88	13.94			
		1882.5	16.10	14.93	13.82			
		1857.5	15.96	14.82	13.93			
	75RB_0	1907.5	15.86	14.85	13.82			
		1882.5	16.05	14.89	13.81			
		1857.5	16.11	14.84	13.87			

Power Level C1								
LTE Band 25			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1905.0	16.69	15.71	14.83	**18.0**	**17.0**	**16.0**
		1882.5	16.84	15.82	14.76			
		1860.0	16.91	15.84	14.91			
	1RB_50	1905.0	17.01	15.90	14.82			
		1882.5	17.07	15.86	14.98			
		1860.0	16.83	15.85	14.73			
	1RB_0	1905.0	17.02	15.62	14.82			
		1882.5	**17.08**	15.71	14.96			
		1860.0	17.02	15.90	14.85			
	50RB_50	1905.0	15.85	14.98	13.88	**17.0**	**16.0**	**15.0**
		1882.5	16.02	14.85	13.86			
		1860.0	15.97	14.95	13.77			
	50RB_25	1905.0	15.83	14.91	13.87			
		1882.5	16.02	14.97	13.94			
		1860.0	15.89	14.94	13.92			
	50RB_0	1905.0	15.86	14.88	13.91			
		1882.5	**16.13**	14.90	13.82			
		1860.0	15.98	14.80	13.89			
	100RB_0	1905.0	15.90	14.88	13.79			
		1882.5	16.06	14.91	13.85			
		1860.0	16.07	14.84	13.90			

Power Level B1								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	848.3	23.03	22.05	21.01	24.0	23.0	22.0
		831.5	23.08	22.12	21.19			
		814.7	23.01	22.09	21.19			
	1RB_3	848.3	22.92	22.11	21.22			
		831.5	23.03	22.16	21.37			
		814.7	23.07	22.22	21.22			
	1RB_0	848.3	23.12	22.05	21.26			
		831.5	23.04	22.01	21.16			
		814.7	23.13	22.08	21.15			
	3RB_3	848.3	23.03	22.05	21.04			
		831.5	23.09	22.15	21.16			
		814.7	23.02	22.08	21.23			
	3RB_1	848.3	23.00	22.10	21.26			
		831.5	22.95	22.17	21.34			
		814.7	23.12	22.24	21.25			
	3RB_0	848.3	23.15	22.07	21.24			
		831.5	23.07	22.00	21.17			
		814.7	23.08	22.11	21.12			
	6RB_0	848.3	22.03	21.03	20.11	23.0	22.0	21.0
		831.5	22.08	21.10	20.12			
		814.7	22.05	21.08	20.08			

Power Level B1								
LTE Band 26			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	847.5	23.00	22.03	21.01	**24.0**	**23.0**	**22.0**
		831.5	23.10	22.18	21.20			
		815.5	23.05	22.12	21.21			
	1RB_7	847.5	22.93	22.10	21.28			
		831.5	23.02	22.14	21.37			
		815.5	23.12	22.20	21.26			
	1RB_0	847.5	23.10	22.02	21.23			
		831.5	23.05	22.00	21.16			
		815.5	23.13	22.07	21.14			
	8RB_7	847.5	22.24	21.04	20.10	**23.0**	**22.0**	**21.0**
		831.5	22.17	21.10	20.17			
		815.5	22.21	21.14	20.12			
	8RB_4	847.5	22.05	21.01	20.07			
		831.5	22.15	21.13	20.14			
		815.5	21.99	21.23	20.18			
	8RB_0	847.5	22.10	21.08	20.06			
		831.5	21.99	21.04	20.06			
		815.5	22.19	21.19	20.13			
	15RB_0	847.5	22.08	21.02	20.14			
		831.5	22.03	21.10	20.10			
		815.5	22.03	21.06	20.07			

Power Level B1								
LTE Band 26			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	846.5	23.03	22.06	21.00	**24.0**	**23.0**	**22.0**
		831.5	23.10	22.16	21.16			
		816.5	22.99	22.08	21.19			
	1RB_12	846.5	22.95	22.10	21.22			
		831.5	23.01	22.12	21.38			
		816.5	23.10	22.25	21.25			
	1RB_0	846.5	23.11	22.02	21.27			
		831.5	23.10	21.97	21.16			
		816.5	23.11	22.14	21.12			
	12RB_13	846.5	22.27	21.00	20.17	**23.0**	**22.0**	**21.0**
		831.5	22.20	21.15	20.11			
		816.5	22.19	21.10	20.10			
	12RB_6	846.5	22.05	20.97	20.13			
		831.5	22.09	21.09	20.18			
		816.5	22.04	21.24	20.21			
	12RB_0	846.5	22.13	21.09	20.06			
		831.5	22.05	21.01	20.12			
		816.5	22.19	21.14	20.19			
	25RB_0	846.5	22.06	21.06	20.11			
		831.5	22.08	21.14	20.13			
		816.5	22.06	21.03	20.10			

Power Level B1								
LTE Band 26			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	844.0	23.07	22.05	21.01	**24.0**	**23.0**	**22.0**
		831.5	23.03	22.13	21.19			
		819.0	23.05	22.10	21.22			
	1RB_24	844.0	22.95	22.11	21.24			
		831.5	23.01	22.17	21.35			
		819.0	23.10	22.19	21.25			
	1RB_0	844.0	23.13	22.08	21.23			
		831.5	23.05	22.02	21.16			
		819.0	23.15	22.12	21.14			
	25RB_25	844.0	22.22	21.04	20.11	**23.0**	**22.0**	**21.0**
		831.5	22.18	21.11	20.15			
		819.0	22.24	21.12	20.11			
	25RB_12	844.0	22.04	21.01	20.12			
		831.5	22.10	21.12	20.15			
		819.0	21.97	21.19	20.24			
	25RB_0	844.0	22.12	21.11	20.07			
		831.5	21.99	21.01	20.10			
		819.0	22.19	21.18	20.14			
	50RB_0	844.0	22.08	21.04	20.11			
		831.5	22.08	21.09	20.11			
		819.0	22.07	21.01	20.10			

Power Level B1								
LTE Band 26			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	841.5	23.04	22.04	21.04	**24.0**	**23.0**	**22.0**
		831.5	23.07	22.15	21.17			
		821.5	23.03	22.12	21.22			
	1RB_37	841.5	22.96	22.08	21.25			
		831.5	22.99	22.14	21.34			
		821.5	23.10	22.21	21.23			
	1RB_0	841.5	**23.14**	22.06	21.25			
		831.5	23.07	22.00	21.18			
		821.5	23.12	22.11	21.15			
	36RB_38	841.5	**22.23**	21.03	20.13	**23.0**	**22.0**	**21.0**
		831.5	22.17	21.13	20.14			
		821.5	22.22	21.11	20.13			
	36RB_19	841.5	22.04	21.00	20.11			
		831.5	22.12	21.10	20.16			
		821.5	22.00	21.22	20.22			
	36RB_0	841.5	22.11	21.09	20.06			
		831.5	22.02	21.04	20.10			
		821.5	22.17	21.15	20.17			
	75RB_0	841.5	22.04	21.03	20.11			
		831.5	22.05	21.12	20.14			
		821.5	22.06	21.05	20.09			

Power Level C1								
LTE Band 26			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	848.3	22.23	21.07	20.25	**23.0**	**22.0**	**21.0**
		831.5	22.25	21.06	20.30			
		814.7	22.27	21.16	20.25			
	1RB_3	848.3	22.06	21.15	20.23			
		831.5	22.16	21.06	20.15			
		814.7	22.18	21.06	20.29			
	1RB_0	848.3	22.30	21.10	20.16			
		831.5	22.26	21.06	20.07			
		814.7	22.30	21.27	20.31			
	3RB_3	848.3	22.21	21.08	20.27			
		831.5	22.24	21.04	20.33			
		814.7	22.27	21.15	20.29			
	3RB_1	848.3	22.04	21.08	20.27			
		831.5	22.16	21.06	20.18			
		814.7	22.22	21.10	20.32			
	3RB_0	848.3	22.28	21.05	20.14			
		831.5	22.26	21.06	20.13			
		814.7	22.34	21.22	20.30			
	6RB_0	848.3	21.20	20.03	19.21	**22.0**	**21.0**	**20.0**
		831.5	21.19	20.09	19.22			
		814.7	21.17	20.09	19.21			

Power Level C1								
LTE Band 26			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	847.5	22.24	21.04	20.26	**23.0**	**22.0**	**21.0**
		831.5	22.25	21.08	20.33			
		815.5	22.31	21.15	20.26			
	1RB_7	847.5	22.02	21.14	20.22			
		831.5	22.18	21.01	20.16			
		815.5	22.19	21.05	20.33			
	1RB_0	847.5	22.28	21.09	20.13			
		831.5	22.21	20.99	20.08			
		815.5	22.32	21.27	20.32			
	8RB_7	847.5	21.29	20.25	19.14	**22.0**	**21.0**	**20.0**
		831.5	21.27	20.29	19.16			
		815.5	21.31	20.08	19.14			
	8RB_4	847.5	21.16	20.04	19.13			
		831.5	21.20	20.21	19.27			
		815.5	21.26	20.25	19.29			
	8RB_0	847.5	21.14	20.07	19.21			
		831.5	21.07	20.05	19.19			
		815.5	21.17	20.06	19.34			
	15RB_0	847.5	21.19	20.02	19.25			
		831.5	21.17	20.06	19.18			
		815.5	21.22	20.03	19.21			

Power Level C1								
LTE Band 26			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	846.5	22.27	21.02	20.26	**23.0**	**22.0**	**21.0**
		831.5	22.22	21.07	20.34			
		816.5	22.30	21.13	20.28			
	1RB_12	846.5	22.03	21.08	20.25			
		831.5	22.20	21.02	20.20			
		816.5	22.24	21.08	20.28			
	1RB_0	846.5	22.31	21.10	20.19			
		831.5	22.18	21.02	20.07			
		816.5	22.33	21.21	20.30			
	12RB_13	846.5	21.27	20.20	19.14	**22.0**	**21.0**	**20.0**
		831.5	21.24	20.23	19.17			
		816.5	21.29	20.03	19.13			
	12RB_6	846.5	21.17	20.09	19.16			
		831.5	21.20	20.22	19.28			
		816.5	21.29	20.23	19.23			
	12RB_0	846.5	21.18	20.06	19.20			
		831.5	21.05	20.03	19.19			
		816.5	21.17	20.02	19.35			
	25RB_0	846.5	21.22	20.01	19.22			
		831.5	21.20	20.07	19.24			
		816.5	21.15	20.10	19.21			

Power Level C1								
LTE Band 26			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	844.0	22.21	21.07	20.22	**23.0**	**22.0**	**21.0**
		831.5	22.24	21.11	20.32			
		819.0	22.30	21.14	20.24			
	1RB_24	844.0	22.03	21.08	20.23			
		831.5	22.20	21.03	20.22			
		819.0	22.23	21.03	20.25			
	1RB_0	844.0	22.31	21.05	20.14			
		831.5	22.19	21.00	20.06			
		819.0	22.31	21.26	20.30			
	25RB_25	844.0	21.33	20.25	19.14	**22.0**	**21.0**	**20.0**
		831.5	21.23	20.25	19.20			
		819.0	21.32	20.07	19.19			
	25RB_12	844.0	21.20	20.08	19.15			
		831.5	21.14	20.16	19.27			
		819.0	21.29	20.26	19.22			
	25RB_0	844.0	21.18	20.09	19.21			
		831.5	21.08	20.09	19.19			
		819.0	21.18	20.06	19.36			
	50RB_0	844.0	21.16	20.06	19.22			
		831.5	21.17	20.10	19.23			
		819.0	21.21	20.05	19.20			

Power Level C1								
LTE Band 26			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	841.5	22.25	21.04	20.25	**23.0**	**22.0**	**21.0**
		831.5	22.21	21.07	20.31			
		821.5	22.30	21.15	20.27			
	1RB_37	841.5	22.04	21.11	20.24			
		831.5	22.19	21.04	20.18			
		821.5	22.22	21.07	20.29			
	1RB_0	841.5	**22.32**	21.08	20.15			
		831.5	22.22	21.03	20.10			
		821.5	22.31	21.23	20.31			
	36RB_38	841.5	**21.30**	20.24	19.13	**22.0**	**21.0**	**20.0**
		831.5	21.24	20.26	19.18			
		821.5	21.29	20.06	19.17			
	36RB_19	841.5	21.18	20.06	19.15			
		831.5	21.17	20.18	19.29			
		821.5	21.28	20.23	19.26			
	36RB_0	841.5	21.16	20.08	19.18			
		831.5	21.05	20.05	19.17			
		821.5	21.20	20.04	19.33			
	75RB_0	841.5	21.20	20.03	19.21			
		831.5	21.21	20.09	19.20			
		821.5	21.18	20.06	19.17			

Power Level B1								
LTE Band 30			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2312.5	22.55	21.61	20.69	**23.5**	**22.5**	**21.5**
		2310.0	22.66	21.75	20.79			
		2307.5	22.66	21.67	20.83			
	1RB_12	2312.5	22.56	21.54	20.62			
		2310.0	22.66	21.71	20.85			
		2307.5	22.70	21.64	20.86			
	1RB_0	2312.5	22.51	21.56	20.67			
		2310.0	22.72	21.74	20.79			
		2307.5	22.71	21.65	20.86			
	12RB_13	2312.5	21.56	20.96	19.55	**22.5**	**21.5**	**20.5**
		2310.0	21.74	21.00	19.55			
		2307.5	21.76	20.89	19.49			
	12RB_6	2312.5	21.53	20.94	19.55			
		2310.0	21.76	20.96	19.53			
		2307.5	21.80	20.90	19.48			
	12RB_0	2312.5	21.58	20.91	19.57			
		2310.0	21.69	20.98	19.55			
		2307.5	21.79	20.90	19.53			
	25RB_0	2312.5	21.57	20.95	19.53			
		2310.0	21.73	20.93	19.57			
		2307.5	21.76	20.96	19.51			

Power Level B1								
LTE Band 30			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2310.0	22.53	21.58	20.65	**23.5**	**22.5**	**21.5**
	1RB_24	2310.0	**22.69**	21.75	20.81			
	1RB_0	2310.0	22.68	21.65	20.83			
	25RB_25	2310.0	21.56	20.94	19.55	**22.5**	**21.5**	**20.5**
	25RB_12	2310.0	21.73	20.96	19.54			
	25RB_0	2310.0	**21.76**	20.92	19.51			
	50RB_0	2310.0	21.90	20.80	19.62			

Power Level C1								
LTE Band 30			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2312.5	15.61	14.37	13.30	**16.5**	**15.5**	**14.5**
		2310.0	15.80	14.51	13.22			
		2307.5	15.80	14.51	13.49			
	1RB_12	2312.5	15.63	14.32	13.26			
		2310.0	15.81	14.50	13.22			
		2307.5	15.79	14.50	13.50			
	1RB_0	2312.5	15.66	14.31	13.31			
		2310.0	15.78	14.46	13.26			
		2307.5	15.75	14.55	13.51			
	12RB_13	2312.5	14.49	13.55	12.71	**15.5**	**14.5**	**13.5**
		2310.0	14.53	13.56	12.69			
		2307.5	14.53	13.62	12.68			
	12RB_6	2312.5	14.50	13.49	12.74			
		2310.0	14.47	13.57	12.63			
		2307.5	14.57	13.59	12.73			
	12RB_0	2312.5	14.51	13.51	12.74			
		2310.0	14.47	13.56	12.65			
		2307.5	14.54	13.61	12.74			
	25RB_0	2312.5	14.50	13.52	12.77			
		2310.0	14.47	13.58	12.68			
		2307.5	14.57	13.63	12.72			

Power Level C1								
LTE Band 30			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2310.0	15.63	14.33	13.30	**16.5**	**15.5**	**14.5**
	1RB_24	2310.0	**15.78**	14.49	13.24			
	1RB_0	2310.0	15.78	14.54	13.48			
	25RB_25	2310.0	14.49	13.52	12.73	**15.5**	**14.5**	**13.5**
	25RB_12	2310.0	14.50	13.57	12.67			
	25RB_0	2310.0	**14.55**	13.62	12.72			
	50RB_0	2310.0	14.50	13.64	12.66			

Power Level B1								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1779.3	23.37	22.41	21.55	24.5	23.5	22.5
		1745.0	23.61	22.49	21.86			
		1710.7	23.51	22.30	21.52			
	1RB_3	1779.3	23.33	22.67	21.71			
		1745.0	23.56	22.67	21.73			
		1710.7	23.60	22.90	21.80			
	1RB_0	1779.3	23.78	22.68	21.55			
		1745.0	23.82	22.79	21.73			
		1710.7	23.72	22.50	21.52			
	3RB_3	1779.3	23.30	22.36	21.59			
		1745.0	23.60	22.50	21.92			
		1710.7	23.50	22.37	21.51			
	3RB_1	1779.3	23.35	22.68	21.71			
		1745.0	23.51	22.64	21.73			
		1710.7	23.62	22.90	21.84			
	3RB_0	1779.3	23.77	22.64	21.55			
		1745.0	23.81	22.80	21.76			
		1710.7	23.70	22.46	21.55			
	6RB_0	1779.3	22.68	21.85	20.56	23.5	22.5	21.5
		1745.0	22.62	21.58	20.70			
		1710.7	22.75	21.67	20.70			

Power Level B1								
LTE Band 66			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1778.5	23.32	22.40	21.59	**24.5**	**23.5**	**22.5**
		1745.0	23.63	22.53	21.91			
		1711.5	23.50	22.33	21.47			
	1RB_7	1778.5	23.32	22.62	21.74			
		1745.0	23.53	22.67	21.75			
		1711.5	23.62	22.91	21.78			
	1RB_0	1778.5	23.80	22.66	21.53			
		1745.0	23.78	22.82	21.77			
		1711.5	23.68	22.50	21.58			
	8RB_7	1778.5	22.48	21.57	20.73	**23.5**	**22.5**	**21.5**
		1745.0	22.62	21.60	20.72			
		1711.5	22.65	21.62	20.60			
	8RB_4	1778.5	22.63	21.68	20.64			
		1745.0	22.58	21.65	20.62			
		1711.5	22.67	21.78	20.73			
	8RB_0	1778.5	22.72	21.65	20.70			
		1745.0	22.59	21.73	20.72			
		1711.5	22.68	21.83	20.64			
	15RB_0	1778.5	22.71	21.79	20.55			
		1745.0	22.67	21.52	20.69			
		1711.5	22.79	21.67	20.71			

Power Level B1								
LTE Band 66			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1777.5	23.33	22.37	21.54	**24.5**	**23.5**	**22.5**
		1745.0	23.64	22.49	21.86			
		1712.5	23.43	22.34	21.47			
	1RB_12	1777.5	23.32	22.65	21.73			
		1745.0	23.55	22.64	21.72			
		1712.5	23.64	22.91	21.83			
	1RB_0	1777.5	23.79	22.63	21.50			
		1745.0	23.76	22.77	21.73			
		1712.5	23.70	22.45	21.57			
	12RB_13	1777.5	22.52	21.57	20.72	**23.5**	**22.5**	**21.5**
		1745.0	22.68	21.62	20.70			
		1712.5	22.61	21.59	20.65			
	12RB_6	1777.5	22.66	21.74	20.61			
		1745.0	22.59	21.66	20.68			
		1712.5	22.65	21.78	20.76			
	12RB_0	1777.5	22.64	21.66	20.73			
		1745.0	22.53	21.76	20.74			
		1712.5	22.63	21.79	20.71			
	25RB_0	1777.5	22.66	21.83	20.56			
		1745.0	22.61	21.58	20.68			
		1712.5	22.74	21.68	20.68			

Power Level B1								
LTE Band 66			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1775.0	23.33	22.37	21.53	**24.5**	**23.5**	**22.5**
		1745.0	23.64	22.49	21.91			
		1715.0	23.46	22.32	21.48			
	1RB_24	1775.0	23.31	22.63	21.75			
		1745.0	23.56	22.65	21.71			
		1715.0	23.61	22.90	21.81			
	1RB_0	1775.0	23.84	22.67	21.54			
		1745.0	23.81	22.80	21.72			
		1715.0	23.72	22.50	21.58			
	25RB_25	1775.0	22.52	21.56	20.71	**23.5**	**22.5**	**21.5**
		1745.0	22.63	21.59	20.73			
		1715.0	22.64	21.64	20.60			
	25RB_12	1775.0	22.64	21.74	20.65			
		1745.0	22.64	21.70	20.66			
		1715.0	22.61	21.78	20.78			
	25RB_0	1775.0	22.71	21.67	20.67			
		1745.0	22.58	21.79	20.71			
		1715.0	22.70	21.81	20.65			
	50RB_0	1775.0	22.66	21.84	20.60			
		1745.0	22.61	21.59	20.72			
		1715.0	22.73	21.67	20.74			

Power Level B1								
LTE Band 66			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1772.5	23.34	22.41	21.58	**24.5**	**23.5**	**22.5**
		1745.0	23.62	22.53	21.87			
		1717.5	23.46	22.35	21.53			
	1RB_37	1772.5	23.30	22.65	21.75			
		1745.0	23.50	22.62	21.71			
		1717.5	23.62	22.83	21.82			
	1RB_0	1772.5	23.83	22.65	21.52			
		1745.0	23.82	22.78	21.76			
		1717.5	23.66	22.49	21.52			
	36RB_38	1772.5	22.54	21.55	20.67	**23.5**	**22.5**	**21.5**
		1745.0	22.68	21.64	20.73			
		1717.5	22.66	21.64	20.60			
	36RB_19	1772.5	22.68	21.76	20.68			
		1745.0	22.60	21.69	20.70			
		1717.5	22.61	21.78	20.70			
	36RB_0	1772.5	22.70	21.67	20.69			
		1745.0	22.56	21.78	20.75			
		1717.5	22.70	21.79	20.66			
	75RB_0	1772.5	22.72	21.81	20.55			
		1745.0	22.61	21.55	20.69			
		1717.5	22.77	21.63	20.69			

Power Level B1								
LTE Band 66			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1770.0	23.34	22.37	21.56	**24.5**	**23.5**	**22.5**
		1745.0	23.61	22.49	21.88			
		1720.0	23.47	22.34	21.49			
	1RB_50	1770.0	23.34	22.65	21.74			
		1745.0	23.53	22.65	21.72			
		1720.0	23.63	22.87	21.82			
	1RB_0	1770.0	**23.80**	22.64	21.52			
		1745.0	23.79	22.79	21.74			
		1720.0	23.69	22.48	21.55			
	50RB_50	1770.0	22.52	21.55	20.70	**23.5**	**22.5**	**21.5**
		1745.0	22.64	21.62	20.70			
		1720.0	22.63	21.61	20.63			
	50RB_25	1770.0	22.66	21.72	20.64			
		1745.0	22.60	21.69	20.66			
		1720.0	22.65	21.78	20.74			
	50RB_0	1770.0	**22.68**	21.67	20.71			
		1745.0	22.56	21.75	20.72			
		1720.0	22.67	21.82	20.68			
	100RB_0	1770.0	22.68	21.83	20.56			
		1745.0	22.64	21.56	20.71			
		1720.0	22.75	21.65	20.70			

Power Level C1								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1779.3	18.26	17.57	16.42	19.5	18.5	17.5
		1745.0	18.41	17.23	16.34			
		1710.7	18.39	17.19	16.12			
	1RB_3	1779.3	18.31	17.05	16.05			
		1745.0	18.56	17.54	16.45			
		1710.7	18.40	17.52	16.49			
	1RB_0	1779.3	18.75	17.29	16.23			
		1745.0	18.70	17.60	16.43			
		1710.7	18.66	17.42	16.56			
	3RB_3	1779.3	18.24	17.52	16.42			
		1745.0	18.42	17.26	16.38			
		1710.7	18.46	17.20	16.14			
	3RB_1	1779.3	18.32	17.05	16.06			
		1745.0	18.57	17.56	16.47			
		1710.7	18.38	17.48	16.46			
	3RB_0	1779.3	18.75	17.29	16.29			
		1745.0	18.73	17.58	16.48			
		1710.7	18.67	17.42	16.59			
	6RB_0	1779.3	17.47	16.44	15.37	18.5	17.5	16.5
		1745.0	17.58	16.41	15.50			
		1710.7	17.65	16.50	15.43			

Power Level C1								
LTE Band 66			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1778.5	18.31	17.58	16.41	19.5	18.5	17.5
		1745.0	18.43	17.24	16.37			
		1711.5	18.45	17.13	16.13			
	1RB_7	1778.5	18.29	17.05	15.99			
		1745.0	18.56	17.57	16.48			
		1711.5	18.41	17.50	16.48			
	1RB_0	1778.5	18.73	17.33	16.29			
		1745.0	18.74	17.59	16.47			
		1711.5	18.63	17.41	16.56			
	8RB_7	1778.5	17.33	16.36	15.34	18.5	17.5	16.5
		1745.0	17.41	16.38	15.48			
		1711.5	17.50	16.45	15.60			
	8RB_4	1778.5	17.45	16.42	15.48			
		1745.0	17.49	16.45	15.81			
		1711.5	17.51	16.63	15.58			
	8RB_0	1778.5	17.54	16.37	15.65			
		1745.0	17.44	16.49	15.78			
		1711.5	17.54	16.48	15.96			
	15RB_0	1778.5	17.51	16.45	15.42			
		1745.0	17.63	16.43	15.48			
		1711.5	17.61	16.48	15.41			

Power Level C1								
LTE Band 66			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1777.5	18.30	17.52	16.42	**19.5**	**18.5**	**17.5**
		1745.0	18.44	17.24	16.36			
		1712.5	18.41	17.19	16.14			
	1RB_12	1777.5	18.27	17.07	16.05			
		1745.0	18.58	17.54	16.45			
		1712.5	18.40	17.47	16.46			
	1RB_0	1777.5	18.76	17.26	16.26			
		1745.0	18.72	17.63	16.43			
		1712.5	18.69	17.42	16.58			
	12RB_13	1777.5	17.28	16.40	15.37	**18.5**	**17.5**	**16.5**
		1745.0	17.47	16.37	15.43			
		1712.5	17.49	16.48	15.59			
	12RB_6	1777.5	17.46	16.46	15.48			
		1745.0	17.47	16.43	15.77			
		1712.5	17.49	16.62	15.55			
	12RB_0	1777.5	17.53	16.35	15.65			
		1745.0	17.47	16.57	15.76			
		1712.5	17.47	16.49	15.98			
	25RB_0	1777.5	17.55	16.42	15.44			
		1745.0	17.61	16.44	15.52			
		1712.5	17.60	16.48	15.40			

Power Level C1								
LTE Band 66			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1775.0	18.24	17.57	16.40	**19.5**	**18.5**	**17.5**
		1745.0	18.38	17.24	16.38			
		1715.0	18.42	17.13	16.16			
	1RB_24	1775.0	18.28	17.08	15.98			
		1745.0	18.56	17.52	16.50			
		1715.0	18.37	17.50	16.46			
	1RB_0	1775.0	18.77	17.32	16.27			
		1745.0	18.74	17.64	16.49			
		1715.0	18.67	17.44	16.58			
	25RB_25	1775.0	17.33	16.39	15.33	**18.5**	**17.5**	**16.5**
		1745.0	17.48	16.42	15.45			
		1715.0	17.46	16.41	15.57			
	25RB_12	1775.0	17.45	16.45	15.47			
		1745.0	17.48	16.43	15.80			
		1715.0	17.51	16.67	15.58			
	25RB_0	1775.0	17.52	16.39	15.65			
		1745.0	17.47	16.49	15.80			
		1715.0	17.51	16.54	16.00			
	50RB_0	1775.0	17.51	16.44	15.41			
		1745.0	17.66	16.41	15.49			
		1715.0	17.57	16.53	15.38			

Power Level C1								
LTE Band 66			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1772.5	18.32	17.55	16.40	**19.5**	**18.5**	**17.5**
		1745.0	18.42	17.23	16.39			
		1717.5	18.45	17.18	16.14			
	1RB_37	1772.5	18.28	17.07	16.01			
		1745.0	18.52	17.52	16.49			
		1717.5	18.41	17.49	16.53			
	1RB_0	1772.5	18.71	17.26	16.24			
		1745.0	18.69	17.63	16.47			
		1717.5	18.64	17.41	16.54			
	36RB_38	1772.5	17.33	16.38	15.35	**18.5**	**17.5**	**16.5**
		1745.0	17.40	16.38	15.46			
		1717.5	17.44	16.40	15.57			
	36RB_19	1772.5	17.42	16.42	15.53			
		1745.0	17.51	16.40	15.75			
		1717.5	17.49	16.63	15.57			
	36RB_0	1772.5	17.50	16.32	15.65			
		1745.0	17.47	16.50	15.80			
		1717.5	17.47	16.48	15.99			
	75RB_0	1772.5	17.52	16.39	15.42			
		1745.0	17.61	16.44	15.48			
		1717.5	17.57	16.55	15.44			

Power Level C1								
LTE Band 66			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1770.0	18.28	17.55	16.39	**19.5**	**18.5**	**17.5**
		1745.0	18.40	17.26	16.36			
		1720.0	18.43	17.17	16.16			
	1RB_50	1770.0	18.30	17.08	16.02			
		1745.0	18.56	17.55	16.48			
		1720.0	18.41	17.48	16.50			
	1RB_0	1770.0	**18.74**	17.30	16.27			
		1745.0	18.73	17.60	16.46			
		1720.0	18.65	17.42	16.57			
	50RB_50	1770.0	17.32	16.38	15.36	**18.5**	**17.5**	**16.5**
		1745.0	17.44	16.40	15.45			
		1720.0	17.46	16.44	15.57			
	50RB_25	1770.0	17.43	16.42	15.50			
		1745.0	17.45	16.43	15.79			
		1720.0	17.49	16.64	15.58			
	50RB_0	1770.0	**17.52**	16.36	15.61			
		1745.0	17.47	16.53	15.79			
		1720.0	17.50	16.51	15.97			
	100RB_0	1770.0	17.51	16.41	15.40			
		1745.0	17.62	16.41	15.51			
		1720.0	17.61	16.51	15.40			

Power Level B1								
LTE Band 71			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	695.5	23.79	22.83	21.92	**25.0**	**24.0**	**23.0**
		680.5	23.92	22.94	21.77			
		665.5	23.74	23.01	21.89			
	1RB_12	695.5	23.96	22.86	21.84			
		680.5	23.97	22.88	21.92			
		665.5	23.70	22.76	21.91			
	1RB_0	695.5	23.71	22.95	21.85			
		680.5	23.60	22.68	21.96			
		665.5	23.67	22.86	21.91			
	12RB_13	695.5	22.88	21.89	20.92	**24.0**	**23.0**	**22.0**
		680.5	22.89	21.95	20.82			
		665.5	22.85	21.91	20.93			
	12RB_6	695.5	22.93	21.91	20.94			
		680.5	22.88	21.81	20.88			
		665.5	22.83	21.91	20.92			
	12RB_0	695.5	22.79	21.82	20.86			
		680.5	22.90	21.90	20.92			
		665.5	22.75	21.73	20.74			
	25RB_0	695.5	22.84	21.91	20.80			
		680.5	22.87	21.78	20.92			
		665.5	22.97	21.83	20.80			

Power Level B1								
LTE Band 71			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	693.0	23.81	22.85	21.95	**25.0**	**24.0**	**23.0**
		680.5	23.91	22.95	21.84			
		668.0	23.75	22.97	21.92			
	1RB_24	693.0	23.97	22.88	21.88			
		680.5	23.92	22.88	21.90			
		668.0	23.73	22.80	21.88			
	1RB_0	693.0	23.72	22.89	21.80			
		680.5	23.57	22.72	21.98			
		668.0	23.72	22.83	21.84			
	25RB_25	693.0	22.86	21.87	20.88	**24.0**	**23.0**	**22.0**
		680.5	22.86	21.94	20.81			
		668.0	22.83	21.91	20.93			
	25RB_12	693.0	22.87	21.85	21.00			
		680.5	22.93	21.81	20.92			
		668.0	22.84	21.87	21.00			
	25RB_0	693.0	22.80	21.85	20.85			
		680.5	22.90	21.85	20.88			
		668.0	22.71	21.72	20.72			
	50RB_0	693.0	22.81	21.91	20.81			
		680.5	22.91	21.79	20.90			
		668.0	22.93	21.84	20.77			

Power Level B1								
LTE Band 71			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	690.5	23.77	22.84	21.99	**25.0**	**24.0**	**23.0**
		680.5	23.94	22.97	21.84			
		670.5	23.74	22.98	21.87			
	1RB_37	690.5	23.94	22.90	21.85			
		680.5	23.92	22.91	21.85			
		670.5	23.69	22.82	21.91			
	1RB_0	690.5	23.76	22.95	21.78			
		680.5	23.59	22.67	21.96			
		670.5	23.72	22.85	21.87			
	36RB_38	690.5	22.90	21.89	20.90	**24.0**	**23.0**	**22.0**
		680.5	22.87	21.95	20.78			
		670.5	22.88	21.93	20.95			
	36RB_19	690.5	22.92	21.87	21.00			
		680.5	22.89	21.86	20.87			
		670.5	22.83	21.90	20.92			
	36RB_0	690.5	22.79	21.83	20.85			
		680.5	22.85	21.89	20.94			
		670.5	22.72	21.72	20.70			
	75RB_0	690.5	22.82	21.93	20.77			
		680.5	22.88	21.80	20.89			
		670.5	22.99	21.85	20.79			

Power Level B1								
LTE Band 71			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	688.0	23.81	22.82	21.96	25.0	24.0	23.0
		683.0	23.92	22.94	21.81			
		673.0	23.71	22.98	21.91			
	1RB_50	688.0	**23.97**	22.87	21.84			
		683.0	23.96	22.91	21.88			
		673.0	23.71	22.79	21.90			
	1RB_0	688.0	23.73	22.91	21.81			
		683.0	23.57	22.70	21.95			
		673.0	23.69	22.83	21.88			
	50RB_50	688.0	22.87	21.87	20.90	24.0	23.0	22.0
		683.0	22.88	21.95	20.81			
		673.0	22.85	21.95	20.93			
	50RB_25	688.0	**22.91**	21.88	20.98			
		683.0	22.89	21.83	20.89			
		673.0	22.86	21.90	20.96			
	50RB_0	688.0	22.77	21.82	20.88			
		683.0	22.88	21.86	20.91			
		673.0	22.74	21.75	20.72			
	100RB_0	688.0	22.83	21.91	20.81			
		683.0	22.89	21.81	20.91			
		673.0	22.97	21.87	20.79			

Power Level C1								
LTE Band 71			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	695.5	22.75	21.64	20.90	**24.0**	**23.0**	**22.0**
		680.5	22.85	21.46	20.77			
		665.5	22.90	21.55	20.78			
	1RB_12	695.5	22.96	21.79	20.87			
		680.5	23.01	21.88	20.87			
		665.5	22.91	21.83	20.94			
	1RB_0	695.5	22.54	21.76	20.95			
		680.5	22.62	21.49	20.72			
		665.5	22.66	21.60	20.66			
	12RB_13	695.5	21.90	20.92	19.78	**23.0**	**22.0**	**21.0**
		680.5	21.81	20.92	19.88			
		665.5	21.90	20.76	19.83			
	12RB_6	695.5	21.96	20.99	19.78			
		680.5	21.87	20.95	19.91			
		665.5	21.92	20.75	19.86			
	12RB_0	695.5	21.78	20.72	19.85			
		680.5	21.87	20.68	19.77			
		665.5	21.70	20.61	19.64			
	25RB_0	695.5	21.91	20.85	19.77			
		680.5	21.84	20.91	19.96			
		665.5	21.84	20.71	19.81			

Power Level C1								
LTE Band 71			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	693.0	22.69	21.63	20.89	**24.0**	**23.0**	**22.0**
		680.5	22.90	21.47	20.76			
		668.0	22.89	21.52	20.73			
	1RB_24	693.0	22.99	21.74	20.86			
		680.5	22.97	21.92	20.85			
		668.0	22.87	21.79	20.96			
	1RB_0	693.0	22.60	21.76	20.97			
		680.5	22.62	21.52	20.76			
		668.0	22.66	21.58	20.71			
	25RB_25	693.0	21.89	20.91	19.79	**23.0**	**22.0**	**21.0**
		680.5	21.82	20.94	19.83			
		668.0	21.93	20.75	19.86			
	25RB_12	693.0	21.93	20.95	19.81			
		680.5	21.84	20.96	19.92			
		668.0	21.95	20.75	19.85			
	25RB_0	693.0	21.78	20.71	19.78			
		680.5	21.83	20.66	19.77			
		668.0	21.72	20.60	19.69			
	50RB_0	693.0	21.84	20.85	19.73			
		680.5	21.89	20.91	19.96			
		668.0	21.80	20.74	19.83			

Power Level C1								
LTE Band 71			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	690.5	22.70	21.67	20.91	**24.0**	**23.0**	**22.0**
		680.5	22.87	21.51	20.76			
		670.5	22.88	21.55	20.76			
	1RB_37	690.5	22.97	21.77	20.83			
		680.5	22.96	21.90	20.92			
		670.5	22.88	21.83	20.98			
	1RB_0	690.5	22.56	21.69	20.96			
		680.5	22.63	21.46	20.72			
		670.5	22.65	21.55	20.72			
	36RB_38	690.5	21.82	20.89	19.78	**23.0**	**22.0**	**21.0**
		680.5	21.79	20.93	19.85			
		670.5	21.91	20.77	19.87			
	36RB_19	690.5	21.95	21.02	19.75			
		680.5	21.82	20.93	19.91			
		670.5	21.94	20.73	19.83			
	36RB_0	690.5	21.82	20.73	19.78			
		680.5	21.83	20.66	19.80			
		670.5	21.77	20.65	19.70			
	75RB_0	690.5	21.87	20.89	19.78			
		680.5	21.85	20.97	20.00			
		670.5	21.86	20.72	19.82			

Power Level C1								
LTE Band 71			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	688.0	22.72	21.64	20.87	24.0	23.0	22.0
		683.0	22.86	21.50	20.80			
		673.0	22.90	21.54	20.76			
	1RB_50	688.0	**22.98**	21.77	20.86			
		683.0	22.97	21.91	20.88			
		673.0	22.91	21.81	20.95			
	1RB_0	688.0	22.57	21.73	20.98			
		683.0	22.59	21.49	20.74			
		673.0	22.63	21.56	20.69			
	50RB_50	688.0	21.86	20.88	19.75	23.0	22.0	21.0
		683.0	21.82	20.92	19.86			
		673.0	21.90	20.78	19.87			
	50RB_25	688.0	**21.93**	20.98	19.78			
		683.0	21.85	20.95	19.91			
		673.0	21.91	20.76	19.82			
	50RB_0	688.0	21.79	20.71	19.82			
		683.0	21.84	20.67	19.79			
		673.0	21.73	20.61	19.66			
	100RB_0	688.0	21.87	20.86	19.76			
		683.0	21.86	20.94	19.98			
		673.0	21.82	20.74	19.81			

Power Level B1								
LTE Band 41			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2687.5	22.20	21.21	20.43	**24.0**	**23.0**	**22.0**
		2640.3	22.57	21.32	20.54			
		2593.0	22.71	21.98	20.23			
		2545.8	22.68	21.38	20.12			
		2498.5	22.29	21.36	20.46			
	1RB_12	2687.5	22.53	21.33	20.56			
		2640.3	22.70	21.51	20.72			
		2593.0	22.82	21.98	20.45			
		2545.8	23.01	21.22	20.24			
		2498.5	23.03	21.31	20.31			
	1RB_0	2687.5	22.51	21.22	20.39			
		2640.3	22.64	21.30	20.27			
		2593.0	22.55	21.37	20.23			
		2545.8	22.50	21.63	20.24			
		2498.5	22.21	21.39	20.41			
	12RB_13	2687.5	21.26	20.29	19.41	**23.0**	**22.0**	**21.0**
		2640.3	21.49	20.53	19.43			
		2593.0	21.87	20.80	19.88			
		2545.8	21.63	20.65	19.61			
		2498.5	21.26	20.27	19.21			
	12RB_6	2687.5	21.34	20.34	19.36			
		2640.3	21.53	20.62	19.50			
		2593.0	21.92	20.82	19.85			
		2545.8	21.60	20.70	19.60			
		2498.5	21.32	20.18	19.20			
	12RB_0	2687.5	21.38	20.46	19.40			
		2640.3	21.69	20.79	19.63			
		2593.0	21.91	20.77	19.84			
		2545.8	21.65	20.71	19.69			
		2498.5	21.92	20.18	19.16			
	25RB_0	2687.5	21.32	20.33	19.20			
		2640.3	21.61	20.69	19.49			
		2593.0	21.85	20.81	19.87			
		2545.8	21.58	20.62	19.58			
		2498.5	21.27	20.24	19.31			

Power Level B1								
LTE Band 41			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2685.0	22.25	21.24	20.43	**24.0**	**23.0**	**22.0**
		2639.0	22.60	21.31	20.52			
		2593.0	22.70	21.95	20.26			
		2547.0	22.70	21.35	20.09			
		2501.0	22.27	21.36	20.45			
	1RB_24	2685.0	22.52	21.34	20.54			
		2639.0	22.73	21.48	20.73			
		2593.0	22.81	21.98	20.42			
		2547.0	23.02	21.23	20.28			
		2501.0	23.06	21.29	20.29			
	1RB_0	2685.0	22.55	21.21	20.36			
		2639.0	22.68	21.27	20.25			
		2593.0	22.56	21.38	20.23			
		2547.0	22.52	21.67	20.24			
		2501.0	22.23	21.38	20.45			
	25RB_25	2685.0	21.23	20.31	19.39	**23.0**	**22.0**	**21.0**
		2639.0	21.45	20.49	19.46			
		2593.0	21.88	20.79	19.87			
		2547.0	21.64	20.63	19.63			
		2501.0	21.27	20.27	19.19			
	25RB_12	2685.0	21.33	20.34	19.36			
		2639.0	21.53	20.62	19.50			
		2593.0	21.89	20.78	19.83			
		2547.0	21.64	20.67	19.58			
		2501.0	21.30	20.21	19.19			
	25RB_0	2685.0	21.39	20.50	19.36			
		2639.0	21.72	20.78	19.64			
		2593.0	21.94	20.78	19.88			
		2547.0	21.66	20.68	19.73			
		2501.0	21.92	20.16	19.13			
	50RB_0	2685.0	21.31	20.31	19.23			
		2639.0	21.63	20.65	19.47			
		2593.0	21.87	20.77	19.85			
		2547.0	21.54	20.58	19.59			
		2501.0	21.25	20.28	19.32			

Power Level B1								
LTE Band 41			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2682.5	22.27	21.22	20.41	**24.0**	**23.0**	**22.0**
		2637.8	22.57	21.31	20.53			
		2593.0	22.73	21.98	20.26			
		2548.3	22.67	21.39	20.11			
		2503.5	22.31	21.32	20.47			
	1RB_37	2682.5	22.54	21.35	20.55			
		2637.8	22.72	21.54	20.69			
		2593.0	22.85	21.98	20.47			
		2548.3	22.99	21.23	20.22			
		2503.5	23.05	21.32	20.32			
	1RB_0	2682.5	22.53	21.23	20.42			
		2637.8	22.62	21.28	20.28			
		2593.0	22.59	21.38	20.20			
		2548.3	22.53	21.64	20.21			
		2503.5	22.24	21.43	20.41			
	36RB_38	2682.5	21.29	20.30	19.43	**23.0**	**22.0**	**21.0**
		2637.8	21.46	20.55	19.42			
		2593.0	21.89	20.83	19.89			
		2548.3	21.65	20.68	19.60			
		2503.5	21.30	20.24	19.20			
	36RB_19	2682.5	21.31	20.33	19.33			
		2637.8	21.53	20.62	19.50			
		2593.0	21.91	20.79	19.81			
		2548.3	21.57	20.70	19.63			
		2503.5	21.28	20.14	19.19			
	36RB_0	2682.5	21.40	20.44	19.41			
		2637.8	21.73	20.77	19.60			
		2593.0	21.89	20.73	19.83			
		2548.3	21.66	20.67	19.71			
		2503.5	21.94	20.17	19.17			
	75RB_0	2682.5	21.30	20.32	19.20			
		2637.8	21.59	20.72	19.52			
		2593.0	21.82	20.79	19.89			
		2548.3	21.62	20.59	19.55			
		2503.5	21.24	20.22	19.28			

Power Level B1								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2680.0	22.21	21.25	20.42	24.0	23.0	22.0
		2636.5	22.55	21.32	20.53			
		2593.0	22.70	21.96	20.23			
		2549.5	22.68	21.38	20.13			
		2506.0	22.32	21.39	20.45			
	1RB_50	2680.0	22.50	21.35	20.56			
		2636.5	22.66	21.48	20.73			
		2593.0	22.83	22.00	20.46			
		2549.5	23.02	21.25	20.24			
		2506.0	**23.03**	21.32	20.31			
	1RB_0	2680.0	22.48	21.25	20.37			
		2636.5	22.65	21.33	20.25			
		2593.0	22.55	21.36	20.21			
		2549.5	22.49	21.65	20.27			
		2506.0	22.21	21.39	20.42			
	50RB_50	2680.0	21.29	20.31	19.41	23.0	22.0	21.0
		2636.5	21.49	20.54	19.47			
		2593.0	21.89	20.81	19.91			
		2549.5	21.60	20.64	19.62			
		2506.0	21.28	20.31	19.22			
	50RB_25	2680.0	21.34	20.34	19.34			
		2636.5	21.53	20.62	19.50			
		2593.0	21.93	20.84	19.85			
		2549.5	21.61	20.70	19.62			
		2506.0	21.28	20.22	19.21			
	50RB_0	2680.0	21.35	20.43	19.42			
		2636.5	21.67	20.76	19.64			
		2593.0	21.94	20.75	19.82			
		2549.5	21.62	20.68	19.69			
		2506.0	**21.95**	20.20	19.20			
	100RB_0	2680.0	21.34	20.33	19.22			
		2636.5	21.62	20.70	19.49			
		2593.0	21.84	20.84	19.83			
		2549.5	21.61	20.61	19.62			
		2506.0	21.29	20.22	19.32			

Power Level C1								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2687.5	16.38	15.41	14.33	18.0	17.0	16.0
		2640.3	16.97	15.77	14.84			
		2593.0	16.99	15.92	14.36			
		2545.8	16.82	15.87	14.35			
		2498.5	16.43	15.43	14.19			
	1RB_12	2687.5	16.66	15.48	14.34			
		2640.3	17.16	15.78	14.38			
		2593.0	17.23	15.92	14.70			
		2545.8	17.05	15.88	14.40			
		2498.5	17.36	15.46	14.29			
	1RB_0	2687.5	16.65	15.34	14.20			
		2640.3	16.63	15.71	14.52			
		2593.0	16.62	15.57	14.41			
		2545.8	16.50	15.19	14.21			
		2498.5	16.28	15.19	14.42			
	12RB_13	2687.5	15.69	14.50	13.60	17.0	16.0	15.0
		2640.3	15.87	14.85	13.67			
		2593.0	15.93	14.94	13.70			
		2545.8	15.84	14.80	13.89			
		2498.5	15.57	14.52	13.58			
	12RB_6	2687.5	15.56	14.48	13.59			
		2640.3	16.04	14.89	13.76			
		2593.0	16.07	14.89	13.87			
		2545.8	15.83	14.88	13.96			
		2498.5	15.56	14.49	13.49			
	12RB_0	2687.5	15.66	14.59	13.62			
		2640.3	16.07	14.89	13.97			
		2593.0	16.15	14.82	13.89			
		2545.8	15.99	14.83	13.96			
		2498.5	16.11	14.45	13.53			
	25RB_0	2687.5	15.62	14.53	13.49			
		2640.3	15.99	14.90	13.79			
		2593.0	16.00	14.86	13.94			
		2545.8	16.00	14.87	13.99			
		2498.5	15.51	14.56	13.60			

Power Level C1								
LTE Band 41			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2685.0	16.46	15.45	14.34	**18.0**	**17.0**	**16.0**
		2639.0	16.90	15.70	14.81			
		2593.0	16.95	15.97	14.37			
		2547.0	16.83	15.89	14.38			
		2501.0	16.42	15.43	14.20			
	1RB_24	2685.0	16.65	15.50	14.36			
		2639.0	17.23	15.79	14.35			
		2593.0	17.22	15.99	14.74			
		2547.0	17.04	15.90	14.41			
		2501.0	17.34	15.44	14.29			
	1RB_0	2685.0	16.66	15.38	14.16			
		2639.0	16.64	15.65	14.53			
		2593.0	16.60	15.54	14.45			
		2547.0	16.44	15.18	14.21			
		2501.0	16.23	15.19	14.43			
	25RB_25	2685.0	15.64	14.55	13.61	**17.0**	**16.0**	**15.0**
		2639.0	15.84	14.85	13.72			
		2593.0	15.95	14.97	13.75			
		2547.0	15.86	14.78	13.91			
		2501.0	15.63	14.51	13.66			
	25RB_12	2685.0	15.50	14.47	13.56			
		2639.0	16.04	14.89	13.76			
		2593.0	16.08	14.82	13.87			
		2547.0	15.79	14.83	13.94			
		2501.0	15.57	14.56	13.47			
	25RB_0	2685.0	15.63	14.61	13.55			
		2639.0	16.07	14.87	13.96			
		2593.0	16.15	14.79	13.89			
		2547.0	15.99	14.82	13.98			
		2501.0	16.17	14.39	13.47			
	50RB_0	2685.0	15.62	14.54	13.48			
		2639.0	16.02	14.94	13.79			
		2593.0	15.99	14.90	13.96			
		2547.0	15.99	14.91	13.96			
		2501.0	15.52	14.58	13.59			

Power Level C1								
LTE Band 41			Actual output Power (dBm)			**Tune up**		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2682.5	16.51	15.40	14.35	**18.0**	**17.0**	**16.0**
		2637.8	16.94	15.69	14.85			
		2593.0	16.94	15.97	14.33			
		2548.3	16.88	15.86	14.36			
		2503.5	16.45	15.46	14.24			
	1RB_37	2682.5	16.62	15.47	14.39			
		2637.8	17.23	15.77	14.40			
		2593.0	17.21	15.96	14.68			
		2548.3	17.06	15.89	14.43			
		2503.5	17.35	15.50	14.29			
	1RB_0	2682.5	16.64	15.37	14.18			
		2637.8	16.68	15.72	14.50			
		2593.0	16.56	15.54	14.42			
		2548.3	16.49	15.21	14.22			
		2503.5	16.27	15.18	14.42			
	36RB_38	2682.5	15.64	14.55	13.61	**17.0**	**16.0**	**15.0**
		2637.8	15.82	14.87	13.72			
		2593.0	15.97	14.94	13.74			
		2548.3	15.86	14.81	13.92			
		2503.5	15.56	14.50	13.63			
	36RB_19	2682.5	15.56	14.52	13.59			
		2637.8	16.04	14.89	13.76			
		2593.0	16.13	14.87	13.88			
		2548.3	15.80	14.87	13.92			
		2503.5	15.57	14.53	13.48			
	36RB_0	2682.5	15.63	14.62	13.61			
		2637.8	16.06	14.88	13.99			
		2593.0	16.14	14.80	13.87			
		2548.3	16.01	14.82	13.96			
		2503.5	16.11	14.44	13.51			
	75RB_0	2682.5	15.59	14.48	13.49			
		2637.8	15.98	14.93	13.80			
		2593.0	16.00	14.89	13.99			
		2548.3	15.99	14.88	13.97			
		2503.5	15.51	14.60	13.60			

Power Level C1								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2680.0	16.34	15.44	14.35	24.0	23.0	22.0
		2636.5	16.93	15.73	14.84			
		2593.0	16.96	15.95	14.36			
		2549.5	16.85	15.87	14.37			
		2506.0	16.41	15.45	14.22			
	1RB_50	2680.0	16.63	15.49	14.35			
		2636.5	17.19	15.80	14.39			
		2593.0	17.21	15.95	14.72			
		2549.5	17.16	15.88	14.43			
		2506.0	**17.34**	15.47	14.27			
	1RB_0	2680.0	16.62	15.37	14.20			
		2636.5	16.66	15.68	14.53			
		2593.0	16.59	15.56	14.44			
		2549.5	16.47	15.22	14.24			
		2506.0	16.25	15.20	14.40			
	50RB_50	2680.0	15.60	14.53	13.61	23.0	22.0	21.0
		2636.5	15.84	14.87	13.69			
		2593.0	15.96	14.96	13.73			
		2549.5	15.86	14.81	13.90			
		2506.0	15.59	14.54	13.62			
	50RB_25	2680.0	15.54	14.50	13.59			
		2636.5	16.04	14.89	13.76			
		2593.0	16.11	14.86	13.87			
		2549.5	15.79	14.86	13.94			
		2506.0	15.56	14.52	13.50			
	50RB_0	2680.0	15.63	14.61	13.59			
		2636.5	16.05	14.88	13.95			
		2593.0	16.12	14.83	13.87			
		2549.5	16.00	14.85	13.94			
		2506.0	**16.13**	14.42	13.49			
	100RB_0	2680.0	15.62	14.52	13.51			
		2636.5	16.00	14.94	13.81			
		2593.0	16.01	14.89	13.96			
		2549.5	16.02	14.88	13.98			
		2506.0	15.53	14.59	13.57			

10.4. Bluetooth and WLAN Measurement result

Table 10.4: The conducted Power measurement results for Bluetooth

Averaged Power (dBm)				
Mode	**Tune up**	Ch.0 (2402MHz)	Ch.39 (2441MHz)	Ch.78 (2480MHz)
GFSK	**11.5**	10.05	9.85	**10.52**
EDR2M-4_DQPSK	**10.0**	9.02	8.89	8.52
EDR3M-8DPSK	**10.0**	9.39	9.26	8.87
/	**/**	Ch.0 (2402MHz)	Ch.19 (2440MHz)	Ch.39 (2480MHz)
BLE(1M)	**6.0**	4.83	5.06	4.80

Table 10.5: The conducted Power measurement results for WLAN 2.4GHz

Averaged Power (dBm) Duty Cycle: **100%**				
Mode	**Tune up**	Ch.1 (2412MHz)	Ch.6 (2437MHz)	Ch.11 (2462MHz)
802.11b	**16.5**	15.47	15.68	**15.76**
802.11g	**16.0**	14.85	15.21	15.24
802.11n(20MHz)	**15.0**	13.64	14.03	14.01
/	**/**	Ch.3 (2422MHz)	Ch.6 (2437MHz)	Ch.9 (2452MHz)
802.11n(40MHz)	**15.0**	13.83	14.04	13.65

Table 10.6: The conducted Power measurement results for WLAN 5GHz

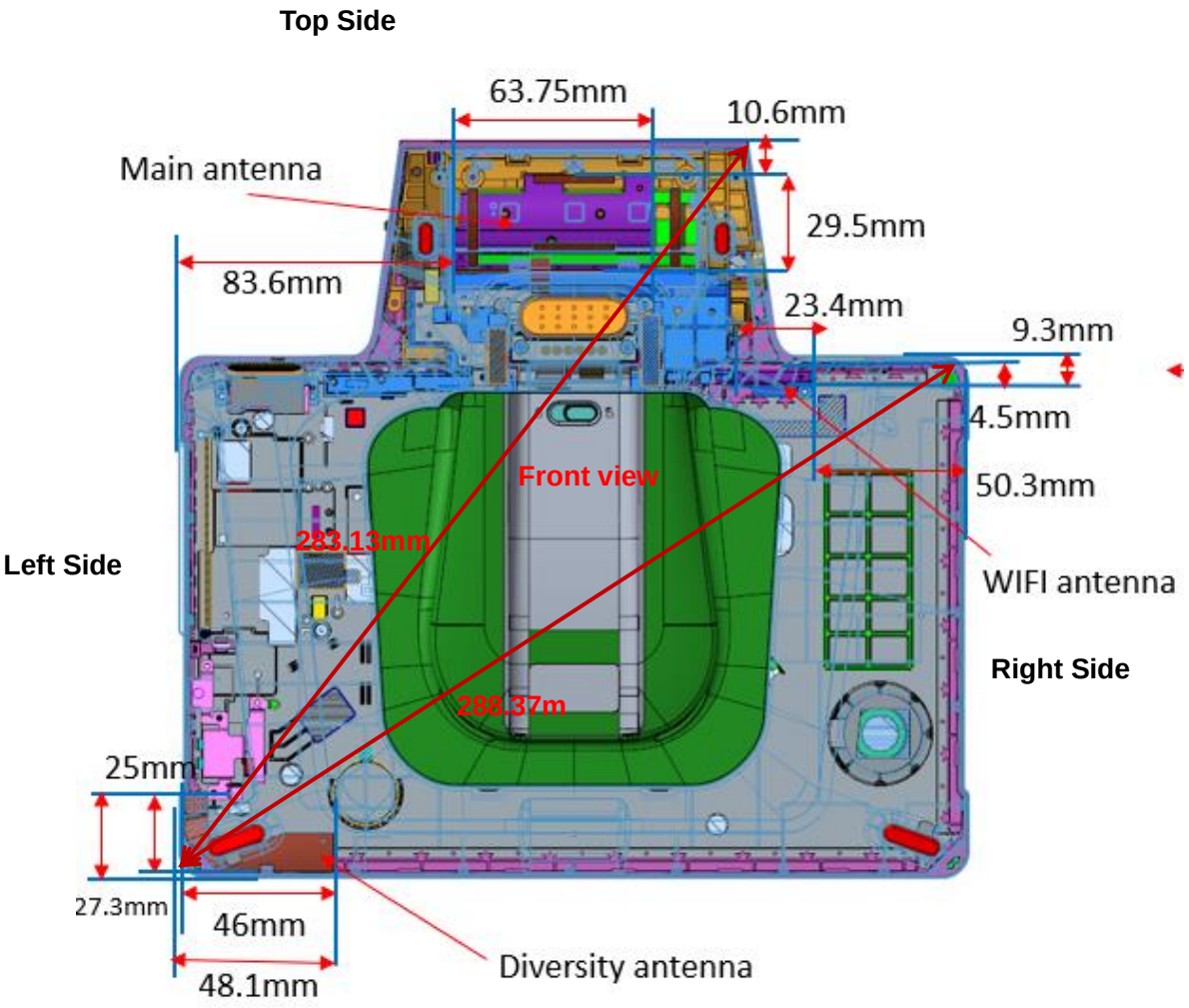
Averaged Power (dBm) Duty Cycle: **100%**								
Mode	802.11a	802.11n -20MHz	802.11ac -20MHz	Mode	802.11n -40MHz	802.11ac -40MHz	Mode	802.11ac -80MHz
Channel	6Mbps	MCS0	MCS0	Channel	MCS0	MCS0	Channel	MCS0
<U-NII-1>								
Tune up	**15.0**	**14.0**	**14.0**	**/**	**14.0**	**12.5**	**/**	**11.5**
36(5180MHz)	14.16	13.22	13.14	38(5190MHz)	13.14	11.42	42(5210MHz)	10.42
40(5200MHz)	14.31	13.23	13.26	46(5230MHz)	13.23	11.45	/	/
44(5220MHz)	14.19	13.37	13.32	/	/	/	/	/
48(5240MHz)	13.89	13.08	13.11	/	/	/	/	/
<U-NII-2A>								
Tune up	**15.0**	**14.0**	**14.0**	**/**	**14.0**	**12.5**	**/**	**11.5**
52(5260MHz)	13.97	13.14	13.17	54(5270MHz)	12.99	11.19	58(5290MHz)	10.16
56(5280MHz)	13.93	13.12	13.13	62(5310MHz)	12.94	11.20	/	/
60(5300MHz)	13.91	13.03	13.06	/	/	/	/	/
64(5320MHz)	**14.01**	13.19	13.19	/	/	/	/	/
<U-NII-2C>								
Tune up	**16.0**	**15.0**	**15.0**	/	**15.0**	**13.5**	/	**12.5**
100(5500MHz)	**14.85**	14.02	13.99	102(5510MHz)	13.96	12.18	106(5530MHz)	11.20
116(5580MHz)	14.71	13.89	13.87	110(5550MHz)	13.93	12.21	122(5610MHz)	10.99
124(5620MHz)	14.58	13.75	13.78	126(5630MHz)	13.73	12.02	138(5690MHz)	10.91
132(5660MHz)	14.67	13.80	13.83	134(5670MHz)	13.75	12.00	/	/
140(5700MHz)	14.74	13.93	13.86	142(5710MHz)	13.83	12.06	/	/
144(5720MHz)	14.69	13.87	13.81	/	/	/	/	/
<U-NII-3>								
Tune up	**11.0**	**11.0**	**11.0**	/	**11.0**	**11.0**	/	**11.0**
149(5745MHz)	10.09	9.98	10.02	151(5755MHz)	9.95	9.84	155(5775MHz)	**9.84**
157(5785MHz)	10.12	10.01	10.05	159(5795MHz)	9.41	9.37	/	/
165(5825MHz)	9.45	9.38	9.39	/	/	/	/	/

11. Simultaneous TX SAR Considerations

11.1. 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 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter.
For this device, the Bluetooth and WLAN can transmit simultaneous with other transmitters.

11.2. Transmit Antenna Separation Distances



Picture 11.1 Antenna Locations (Front View)

12. Evaluation of Simultaneous

No.	Simultaneous Transmission Configuration
1	WWAN + Bluetooth
2	WWAN + WLAN 2.4GHz
3	WWAN + WLAN 5GHz
4	Bluetooth + WLAN 5GHz
5	WWAN + Bluetooth + WLAN 5GHz

Table 12.6: Maximum Simultaneous Transmission SAR

/	Position	Sum (W/kg)
Highest SAR value for Body	Rear Side (LTE Band 7 + WLAN 5GHz, LTE Band 7 + WLAN 5GHz + Bluetooth)	**1.56**

Note: the test positions of above tables are for the worse case that has been evaluated.

Conclusion:

According to the above tables, the sum of reported SAR values is less than limit. So the simultaneous transmission SAR with volume scans is not required.

13. Summary of Test Results

According to the client's decision rule in the test registration form, which is "based on the measurement results as the basis of the conformity statement", the test conclusion of this report meets the limit requirements.

The calculated SAR is obtained by the following formula:

$$\text{Reported SAR} = \text{Measured SAR} \times 10^{(P_{Target} - P_{Measured})/10}$$

Where P_{Target} is the power of manufacturing upper limit;

$P_{Measured}$ is the measured power in chapter 10.

Note:

Configuration 1: C1

Configuration 2: C2

Duty Cycle

Mode	Duty Cycle
GPRS	1:2.67
WCDMA	1:1
FDD_LTE	1:1
TDD_LTE	1:1.58
Bluetooth	1:1
WLAN	1:1

13.1. Testing Environment

Temperature:	18°C~25°C
Relative humidity:	30%~70%
Ambient noise & Reflection:	< 0.012 W/kg

13.2. SAR results

Table 13.1: GSM 850 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	GSM850	190	836.6	GPRS(3TX)	Front	0mm	\	\	29.97	31.0	0.045	**0.06**	0.029	**0.04**	0.03
B1	Body	GSM850	190	836.6	GPRS(3TX)	Front-printer	0mm	\	\	29.97	31.0	0.141	**0.18**	0.081	**0.10**	0.05
C1	Body	GSM850	190	836.6	GPRS(3TX)	Rear	0mm	\	\	25.88	26.0	0.858	**0.88**	0.530	**0.54**	0.19
B1	Body	GSM850	190	836.6	GPRS(3TX)	Left	0mm	\	\	29.97	31.0	0.085	**0.11**	0.055	**0.07**	0.02
B1	Body	GSM850	190	836.6	GPRS(3TX)	Right	0mm	\	\	29.97	31.0	0.063	**0.08**	0.045	**0.06**	0.05
C1	Body	GSM850	190	836.6	GPRS(3TX)	Top	0mm	\	\	25.88	26.0	0.159	**0.16**	0.111	**0.11**	0.11
B1	Body	GSM850	190	836.6	GPRS(3TX)	Bottom	0mm	\	\	29.97	31.0	0.018	**0.02**	0.011	**0.01**	0.01
C1	Body	GSM850	251	848.8	GPRS(3TX)	Rear	0mm	\	**1**	25.86	26.0	**0.983**	1.02	0.587	**0.61**	0.07
C1	Body	GSM850	128	824.2	GPRS(3TX)	Rear	0mm	\	\	25.69	26.0	0.730	**0.78**	0.472	**0.51**	0.17
B1	Body	GSM850	190	836.6	GPRS(3TX)	Rear	24mm	\	\	29.97	31.0	0.136	**0.17**	0.091	**0.12**	0.04
B1	Body	GSM850	190	836.6	GPRS(3TX)	Top	19mm	\	\	29.97	31.0	0.097	**0.12**	0.067	**0.09**	0.08
C1	Body	GSM850	251	848.8	GPRS(3TX)	Rear	0mm	C1	\	25.86	26.0	0.921	**0.95**	0.496	**0.51**	0.01
C1	Body	GSM850	251	848.8	GPRS(3TX)	Rear	0mm	C2	\	25.86	26.0	0.893	**0.92**	0.481	**0.50**	0.06

Table 13.2: WCDMA Band 2 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	WCDMA Band 2	9400	1880.0	RMC	Front	0mm	\	\	23.39	24.5	0.016	**0.02**	0.009	**0.01**	0.08
B1	Body	WCDMA Band 2	9400	1880.0	RMC	Front-printer	0mm	\	\	23.39	24.5	0.056	**0.07**	0.033	**0.04**	0.05
C1	Body	WCDMA Band 2	9400	1880.0	RMC	Rear	0mm	\	**2**	17.57	18.5	**0.991**	1.23	0.562	**0.70**	0.01
B1	Body	WCDMA Band 2	9400	1880.0	RMC	Left	0mm	\	\	23.39	24.5	0.013	**0.02**	0.007	**0.01**	0.03
B1	Body	WCDMA Band 2	9400	1880.0	RMC	Right	0mm	\	\	23.39	24.5	0.082	**0.11**	0.049	**0.06**	0.01
C1	Body	WCDMA Band 2	9400	1880.0	RMC	Top	0mm	\	\	17.57	18.5	0.070	**0.09**	0.042	**0.05**	0.02
B1	Body	WCDMA Band 2	9400	1880.0	RMC	Bottom	0mm	\	\	23.39	24.5	0.014	**0.02**	0.009	**0.01**	0.06
C1	Body	WCDMA Band 2	9538	1908.0	RMC	Rear	0mm	\	\	17.55	18.5	0.893	**1.11**	0.506	**0.63**	-0.06
C1	Body	WCDMA Band 2	9262	1852.4	RMC	Rear	0mm	\	\	17.49	18.5	0.978	**1.23**	0.559	**0.71**	-0.08
B1	Body	WCDMA Band 2	9400	1880.0	RMC	Rear	24mm	\	\	23.39	24.5	0.470	**0.61**	0.301	**0.39**	0.06
B1	Body	WCDMA Band 2	9400	1880.0	RMC	Top	19mm	\	\	23.39	24.5	0.128	**0.17**	0.083	**0.11**	0.02
C1	Body	WCDMA Band 2	9400	1880.0	RMC	Rear	0mm	C1	\	17.57	18.5	0.938	**1.16**	0.468	**0.58**	0.04
C1	Body	WCDMA Band 2	9400	1880.0	RMC	Rear	0mm	C2	\	17.57	18.5	0.926	**1.15**	0.492	**0.61**	0.06

Table 13.3: WCDMA Band 4 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	WCDMA Band 4	1413	1732.6	RMC	Front	0mm	\	\	23.86	24.5	0.011	**0.01**	0.006	**0.01**	0.03
B1	Body	WCDMA Band 4	1413	1732.6	RMC	Front-printer	0mm	\	\	23.86	24.5	0.026	**0.03**	0.016	**0.02**	0.01
C1	Body	WCDMA Band 4	1413	1732.6	RMC	Rear	0mm	\	\	17.49	18.5	0.848	**1.07**	0.466	**0.59**	0.05
B1	Body	WCDMA Band 4	1413	1732.6	RMC	Left	0mm	\	\	23.86	24.5	0.010	**0.01**	0.006	**0.01**	0.02
B1	Body	WCDMA Band 4	1413	1732.6	RMC	Right	0mm	\	\	23.86	24.5	0.070	**0.08**	0.041	**0.05**	0.06
C1	Body	WCDMA Band 4	1413	1732.6	RMC	Top	0mm	\	\	17.49	18.5	0.069	**0.09**	0.041	**0.05**	0.09
B1	Body	WCDMA Band 4	1413	1732.6	RMC	Bottom	0mm	\	\	23.86	24.5	0.026	**0.03**	0.016	**0.02**	0.02
C1	Body	WCDMA Band 4	1513	1752.6	RMC	Rear	0mm	\	**3**	17.45	18.5	**0.956**	1.22	0.504	**0.64**	0.05
C1	Body	WCDMA Band 4	1312	1712.4	RMC	Rear	0mm	\	\	17.38	18.5	0.840	**1.09**	0.461	**0.60**	-0.12
B1	Body	WCDMA Band 4	1413	1732.6	RMC	Rear	24mm	\	\	23.86	24.5	0.406	**0.47**	0.263	**0.30**	0.11
B1	Body	WCDMA Band 4	1413	1732.6	RMC	Top	19mm	\	\	23.86	24.5	0.097	**0.11**	0.062	**0.07**	0.08
C1	Body	WCDMA Band 4	1513	1752.6	RMC	Rear	0mm	C1	\	17.45	18.5	0.923	**1.18**	0.479	**0.61**	0.07
C1	Body	WCDMA Band 4	1513	1752.6	RMC	Rear	0mm	C2	\	17.45	18.5	0.826	**1.05**	0.439	**0.56**	-0.05

Table 13.4: WCDMA Band 5 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	WCDMA Band 5	4183	836.6	RMC	Front	0mm	\	\	23.38	24.5	0.059	**0.08**	0.038	**0.05**	0.11
B1	Body	WCDMA Band 5	4183	836.6	RMC	Front-printer	0mm	\	\	23.38	24.5	0.139	**0.18**	0.093	**0.12**	0.02
C1	Body	WCDMA Band 5	4183	836.6	RMC	Rear	0mm	\	\	21.82	22.5	0.903	**1.06**	0.537	**0.63**	-0.09
B1	Body	WCDMA Band 5	4183	836.6	RMC	Left	0mm	\	\	23.38	24.5	0.027	**0.03**	0.017	**0.02**	0.01
B1	Body	WCDMA Band 5	4183	836.6	RMC	Right	0mm	\	\	23.38	24.5	0.021	**0.03**	0.014	**0.02**	0.02
C1	Body	WCDMA Band 5	4183	836.6	RMC	Top	0mm	\	\	21.82	22.5	0.112	**0.13**	0.078	**0.09**	0.03
B1	Body	WCDMA Band 5	4183	836.6	RMC	Bottom	0mm	\	\	23.38	24.5	0.015	**0.02**	0.011	**0.01**	0.07
C1	Body	WCDMA Band 5	4233	846.6	RMC	Rear	0mm	\	**4**	21.73	22.5	**0.916**	1.09	0.546	**0.65**	0.09
C1	Body	WCDMA Band 5	4132	826.4	RMC	Rear	0mm	\	\	21.90	22.5	0.816	**0.94**	0.481	**0.55**	0.09
B1	Body	WCDMA Band 5	4183	836.6	RMC	Rear	24mm	\	\	23.38	24.5	0.078	**0.10**	0.054	**0.07**	-0.02
B1	Body	WCDMA Band 5	4183	836.6	RMC	Top	19mm	\	\	23.38	24.5	0.063	**0.08**	0.043	**0.06**	0.11
C1	Body	WCDMA Band 5	4233	846.6	RMC	Rear	0mm	C1	\	21.73	22.5	0.828	**0.99**	0.456	**0.54**	0.17
C1	Body	WCDMA Band 5	4233	846.6	RMC	Rear	0mm	C2	\	21.73	22.5	0.906	**1.08**	0.520	**0.62**	0.14

Table 13.5: LTE Band 7 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 7	20850	2510.0	1RB99	Front	0mm	\	\	23.59	24.5	0.034	**0.04**	0.019	**0.02**	0.08
B1	Body	LTE Band 7	20850	2510.0	50RB50	Front	0mm	\	\	22.74	23.5	0.026	**0.03**	0.016	**0.02**	0.05
B1	Body	LTE Band 7	20850	2510.0	1RB99	Front-printer	0mm	\	\	23.59	24.5	0.180	**0.22**	0.104	**0.13**	0.13
B1	Body	LTE Band 7	20850	2510.0	50RB50	Front-printer	0mm	\	\	22.74	23.5	0.201	**0.24**	0.094	**0.11**	0.06
C1	Body	LTE Band 7	20850	2510.0	1RB99	Rear	0mm	\	\	15.49	16.5	1.060	**1.34**	0.536	**0.68**	0.05
C1	Body	LTE Band 7	20850	2510.0	50RB50	Rear	0mm	\	\	14.47	15.5	0.747	**0.95**	0.361	**0.46**	0.04
B1	Body	LTE Band 7	20850	2510.0	1RB99	Left	0mm	\	\	23.59	24.5	0.033	**0.04**	0.020	**0.02**	0.09
B1	Body	LTE Band 7	20850	2510.0	50RB50	Left	0mm	\	\	22.74	23.5	0.024	**0.03**	0.014	**0.02**	0.02
B1	Body	LTE Band 7	20850	2510.0	1RB99	Right	0mm	\	\	23.59	24.5	0.027	**0.03**	0.014	**0.02**	0.02
B1	Body	LTE Band 7	20850	2510.0	50RB50	Right	0mm	\	\	22.74	23.5	0.026	**0.03**	0.015	**0.02**	0.01
C1	Body	LTE Band 7	20850	2510.0	1RB99	Top	0mm	\	\	15.49	16.5	0.214	**0.27**	0.162	**0.20**	-0.18
C1	Body	LTE Band 7	20850	2510.0	50RB50	Top	0mm	\	\	14.47	15.5	0.167	**0.21**	0.085	**0.11**	0.07
B1	Body	LTE Band 7	20850	2510.0	1RB99	Bottom	0mm	\	\	23.59	24.5	0.012	**0.01**	0.007	**0.01**	0.06
B1	Body	LTE Band 7	20850	2510.0	50RB50	Bottom	0mm	\	\	22.74	23.5	0.008	**0.01**	0.005	**0.01**	0.01
C1	Body	LTE Band 7	21350	2560.0	1RB99	Rear	0mm	\	\	15.47	16.5	0.876	**1.11**	0.415	**0.53**	-0.10
C1	Body	LTE Band 7	21100	2535.0	1RB99	Rear	0mm	\	\	15.48	16.5	0.921	**1.16**	0.437	**0.55**	0.01
C1	Body	LTE Band 7	21350	2560.0	50RB50	Rear	0mm	\	\	14.46	15.5	0.697	**0.89**	0.333	**0.42**	0.03
C1	Body	LTE Band 7	21100	2535.0	50RB50	Rear	0mm	\	\	14.38	15.5	0.739	**0.96**	0.353	**0.46**	0.11
C1	Body	LTE Band 7	20850	2510.0	100RB	Rear	0mm	\	\	14.52	15.5	0.746	**0.93**	0.363	**0.45**	0.05
B1	Body	LTE Band 7	20850	2510.0	1RB99	Rear	24mm	\	\	23.59	24.5	0.690	**0.85**	0.389	**0.48**	0.01
B1	Body	LTE Band 7	20850	2510.0	50RB50	Rear	24mm	\	\	22.74	23.5	0.616	**0.73**	0.345	**0.41**	0.07
B1	Body	LTE Band 7	20850	2510.0	1RB99	Top	19mm	\	\	23.59	24.5	0.415	**0.51**	0.242	**0.30**	0.01
B1	Body	LTE Band 7	20850	2510.0	50RB50	Top	19mm	\	\	22.74	23.5	0.344	**0.41**	0.203	**0.24**	0.18
C1	Body	LTE Band 7	20850	2510.0	1RB99	Rear	0mm	C1	**5**	15.49	16.5	**1.090**	1.38	0.516	**0.65**	-0.06
C1	Body	LTE Band 7	20850	2510.0	1RB99	Rear	0mm	C2	\	15.49	16.5	1.070	**1.35**	0.508	**0.64**	-0.07

Table 13.6: LTE Band 12 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 12	23130	711.0	1RB24	Front	0mm	\	\	23.90	24.5	0.283	**0.32**	0.185	**0.21**	0.07
B1	Body	LTE Band 12	23130	711.0	25RB12	Front	0mm	\	\	22.87	23.5	0.225	**0.26**	0.148	**0.17**	0.03
B1	Body	LTE Band 12	23130	711.0	1RB24	Front-printer	0mm	\	\	23.90	24.5	0.677	**0.78**	0.399	**0.46**	0.11
B1	Body	LTE Band 12	23130	711.0	25RB12	Front-printer	0mm	\	\	22.87	23.5	0.547	**0.63**	0.324	**0.37**	0.03
C1	Body	LTE Band 12	23130	711.0	1RB24	Rear	0mm	\	\	22.80	23.5	0.930	**1.09**	0.583	**0.68**	0.09
C1	Body	LTE Band 12	23130	711.0	25RB12	Rear	0mm	\	\	21.74	22.5	0.643	**0.77**	0.427	**0.51**	0.06
B1	Body	LTE Band 12	23130	711.0	1RB24	Left	0mm	\	\	23.90	24.5	0.010	**0.01**	0.008	**0.01**	0.05
B1	Body	LTE Band 12	23130	711.0	25RB12	Left	0mm	\	\	22.87	23.5	0.008	**0.01**	0.005	**0.01**	0.09
B1	Body	LTE Band 12	23130	711.0	1RB24	Right	0mm	\	\	23.90	24.5	0.034	**0.04**	0.024	**0.03**	0.03
B1	Body	LTE Band 12	23130	711.0	25RB12	Right	0mm	\	\	22.87	23.5	0.033	**0.04**	0.023	**0.03**	0.13
C1	Body	LTE Band 12	23130	711.0	1RB24	Top	0mm	\	\	22.80	23.5	0.146	**0.17**	0.101	**0.12**	0.16
C1	Body	LTE Band 12	23130	711.0	25RB12	Top	0mm	\	\	21.74	22.5	0.117	**0.14**	0.080	**0.10**	0.17
B1	Body	LTE Band 12	23130	711.0	1RB24	Bottom	0mm	\	\	23.90	24.5	0.011	**0.01**	0.008	**0.01**	0.06
B1	Body	LTE Band 12	23130	711.0	25RB12	Bottom	0mm	\	\	22.87	23.5	0.009	**0.01**	0.006	**0.01**	0.08
C1	Body	LTE Band 12	23095	707.5	1RB24	Rear	0mm	\	**6**	22.79	23.5	**0.983**	1.16	0.615	**0.72**	0.02
C1	Body	LTE Band 12	23060	704.0	1RB24	Rear	0mm	\	\	22.77	23.5	0.923	**1.09**	0.579	**0.68**	-0.11
C1	Body	LTE Band 12	23095	707.5	25RB12	Rear	0mm	\	\	21.71	22.5	0.682	**0.82**	0.460	**0.55**	-0.08
C1	Body	LTE Band 12	23060	704.0	25RB12	Rear	0mm	\	\	21.72	22.5	0.716	**0.86**	0.488	**0.58**	-0.01
C1	Body	LTE Band 12	23060	704.0	50RB	Rear	0mm	\	\	21.75	22.5	0.733	**0.87**	0.480	**0.57**	0.08
B1	Body	LTE Band 12	23130	711.0	1RB24	Rear	24mm	\	\	23.90	24.5	0.131	**0.15**	0.087	**0.10**	0.02
B1	Body	LTE Band 12	23130	711.0	25RB12	Rear	24mm	\	\	22.87	23.5	0.105	**0.12**	0.070	**0.08**	0.05
B1	Body	LTE Band 12	23130	711.0	1RB24	Top	19mm	\	\	23.90	24.5	0.103	**0.12**	0.071	**0.08**	0.02
B1	Body	LTE Band 12	23130	711.0	25RB12	Top	19mm	\	\	22.87	23.5	0.083	**0.10**	0.057	**0.07**	0.15
C1	Body	LTE Band 12	23095	707.5	1RB24	Rear	0mm	C1	\	22.79	23.5	0.491	**0.58**	0.236	**0.28**	0.16
C1	Body	LTE Band 12	23095	707.5	1RB24	Rear	0mm	C2	\	22.79	23.5	0.394	**0.46**	0.220	**0.26**	0.04

Note: SAR for LTE Band 17 is covered by LTE Band 12 due to similar frequency range, same maximum tune-up limit and same channel bandwidth.

Table 13.7: LTE Band 13 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 13	23230	782.0	1RB24	Front	0mm	\	\	23.98	24.5	0.144	**0.16**	0.097	**0.11**	0.03
B1	Body	LTE Band 13	23230	782.0	25RB12	Front	0mm	\	\	22.87	23.5	0.111	**0.13**	0.075	**0.09**	0.11
B1	Body	LTE Band 13	23230	782.0	1RB24	Front-printer	0mm	\	\	23.98	24.5	0.331	**0.37**	0.198	**0.22**	0.02
B1	Body	LTE Band 13	23230	782.0	25RB12	Front-printer	0mm	\	\	22.87	23.5	0.223	**0.26**	0.142	**0.16**	0.08
B1	Body	LTE Band 13	23230	782.0	1RB24	Rear	0mm	\	**7**	23.98	24.5	**0.739**	**0.83**	0.455	**0.51**	0.19
B1	Body	LTE Band 13	23230	782.0	25RB12	Rear	0mm	\	\	22.87	23.5	0.506	**0.58**	0.340	**0.39**	-0.07
B1	Body	LTE Band 13	23230	782.0	1RB24	Left	0mm	\	\	23.98	24.5	0.005	**0.01**	0.003	**0.00**	0.02
B1	Body	LTE Band 13	23230	782.0	25RB12	Left	0mm	\	\	22.87	23.5	0.004	**0.00**	0.002	**0.00**	0.06
B1	Body	LTE Band 13	23230	782.0	1RB24	Right	0mm	\	\	23.98	24.5	0.012	**0.01**	0.007	**0.01**	0.06
B1	Body	LTE Band 13	23230	782.0	25RB12	Right	0mm	\	\	22.87	23.5	0.008	**0.01**	0.006	**0.01**	0.01
B1	Body	LTE Band 13	23230	782.0	1RB24	Top	0mm	\	\	23.98	24.5	0.198	**0.22**	0.132	**0.15**	-0.11
B1	Body	LTE Band 13	23230	782.0	25RB12	Top	0mm	\	\	22.87	23.5	0.153	**0.18**	0.103	**0.12**	0.08
B1	Body	LTE Band 13	23230	782.0	1RB24	Bottom	0mm	\	\	23.98	24.5	0.012	**0.01**	0.008	**0.01**	0.12
B1	Body	LTE Band 13	23230	782.0	25RB12	Bottom	0mm	\	\	22.87	23.5	0.009	**0.01**	0.005	**0.01**	0.04
B1	Body	LTE Band 13	23230	782.0	50RB0	Rear	0mm	\	\	22.79	23.5	0.513	**0.60**	0.339	**0.40**	-0.14
B1	Body	LTE Band 13	23230	782.0	1RB24	Rear	0mm	C1	\	23.98	24.5	0.597	**0.67**	0.352	**0.40**	0.04
B1	Body	LTE Band 13	23230	782.0	1RB24	Rear	0mm	C2	\	23.98	24.5	0.502	**0.57**	0.291	**0.33**	0.08

Table 13.8: LTE Band 14 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 14	23330	793.0	1RB24	Front	0mm	\	\	23.84	24.5	0.208	**0.24**	0.122	**0.14**	-0.14
B1	Body	LTE Band 14	23330	793.0	25RB25	Front	0mm	\	\	22.81	23.5	0.169	**0.20**	0.100	**0.12**	0.19
B1	Body	LTE Band 14	23330	793.0	1RB24	Front-printer	0mm	\	\	23.84	24.5	0.480	**0.56**	0.197	**0.23**	-0.17
B1	Body	LTE Band 14	23330	793.0	25RB25	Front-printer	0mm	\	\	22.81	23.5	0.279	**0.33**	0.156	**0.18**	0.13
B1	Body	LTE Band 14	23330	793.0	1RB24	Rear	0mm	\	**8**	23.84	24.5	**0.919**	**1.07**	0.529	**0.62**	0.19
B1	Body	LTE Band 14	23330	793.0	25RB25	Rear	0mm	\	\	22.81	23.5	0.751	**0.88**	0.434	**0.51**	0.17
B1	Body	LTE Band 14	23330	793.0	1RB24	Left	0mm	\	\	23.84	24.5	0.007	**0.01**	0.004	**0.00**	0.10
B1	Body	LTE Band 14	23330	793.0	25RB25	Left	0mm	\	\	22.81	23.5	0.005	**0.01**	0.003	**0.00**	-0.15
B1	Body	LTE Band 14	23330	793.0	1RB24	Right	0mm	\	\	23.84	24.5	0.014	**0.02**	0.009	**0.01**	-0.13
B1	Body	LTE Band 14	23330	793.0	25RB25	Right	0mm	\	\	22.81	23.5	0.010	**0.01**	0.006	**0.01**	-0.06
B1	Body	LTE Band 14	23330	793.0	1RB24	Top	0mm	\	\	23.84	24.5	0.275	**0.32**	0.171	**0.20**	-0.06
B1	Body	LTE Band 14	23330	793.0	25RB25	Top	0mm	\	\	22.81	23.5	0.212	**0.25**	0.131	**0.15**	-0.14
B1	Body	LTE Band 14	23330	793.0	1RB24	Bottom	0mm	\	\	23.84	24.5	0.015	**0.02**	0.009	**0.01**	-0.01
B1	Body	LTE Band 14	23330	793.0	25RB25	Bottom	0mm	\	\	22.81	23.5	0.011	**0.01**	0.006	**0.01**	0.15
B1	Body	LTE Band 14	23330	793.0	50RB0	Rear	0mm	\	\	23.84	24.5	0.659	**0.77**	0.410	**0.48**	0.06
B1	Body	LTE Band 14	23330	793.0	1RB24	Rear	0mm	C1	\	23.84	24.5	0.789	**0.92**	0.444	**0.52**	0.03
B1	Body	LTE Band 14	23330	793.0	1RB24	Rear	0mm	C2	\	23.84	24.5	0.716	**0.83**	0.411	**0.48**	0.01

Table 13.9: LTE Band 25 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 25	26365	1882.5	1RB0	Front	0mm	\	\	22.98	24.0	0.057	**0.07**	0.035	**0.04**	0.05
B1	Body	LTE Band 25	26365	1882.5	50RB0	Front	0mm	\	\	22.03	23.0	0.054	**0.07**	0.033	**0.04**	0.01
B1	Body	LTE Band 25	26365	1882.5	1RB0	Front-printer	0mm	\	\	22.98	24.0	0.254	**0.32**	0.149	**0.19**	0.01
B1	Body	LTE Band 25	26365	1882.5	50RB0	Front-printer	0mm	\	\	22.03	23.0	0.205	**0.26**	0.120	**0.15**	0.09
C1	Body	LTE Band 25	26365	1882.5	1RB0	Rear	0mm	\	\	17.08	18.0	0.922	**1.14**	0.528	**0.65**	-0.09
C1	Body	LTE Band 25	26365	1882.5	50RB0	Rear	0mm	\	\	16.13	17.0	0.625	**0.76**	0.356	**0.43**	-0.03
B1	Body	LTE Band 25	26365	1882.5	1RB0	Left	0mm	\	\	22.98	24.0	0.017	**0.02**	0.010	**0.01**	0.01
B1	Body	LTE Band 25	26365	1882.5	50RB0	Left	0mm	\	\	22.03	23.0	0.012	**0.02**	0.007	**0.01**	0.11
B1	Body	LTE Band 25	26365	1882.5	1RB0	Right	0mm	\	\	22.98	24.0	0.074	**0.09**	0.044	**0.06**	0.02
B1	Body	LTE Band 25	26365	1882.5	50RB0	Right	0mm	\	\	22.03	23.0	0.060	**0.08**	0.036	**0.04**	0.08
C1	Body	LTE Band 25	26365	1882.5	1RB0	Top	0mm	\	\	17.08	18.0	0.073	**0.09**	0.044	**0.05**	-0.06
C1	Body	LTE Band 25	26365	1882.5	50RB0	Top	0mm	\	\	16.13	17.0	0.057	**0.07**	0.034	**0.04**	0.06
B1	Body	LTE Band 25	26365	1882.5	1RB0	Bottom	0mm	\	\	22.98	24.0	0.033	**0.04**	0.021	**0.03**	0.07
B1	Body	LTE Band 25	26365	1882.5	50RB0	Bottom	0mm	\	\	22.03	23.0	0.026	**0.03**	0.016	**0.02**	0.02
C1	Body	LTE Band 25	26590	1905.0	1RB0	Rear	0mm	\	\	17.02	18.0	0.893	**1.12**	0.510	**0.64**	-0.08
C1	Body	LTE Band 25	26140	1860.0	1RB0	Rear	0mm	\	**9**	17.02	18.0	**0.937**	**1.17**	0.539	**0.68**	0.01
C1	Body	LTE Band 25	26590	1905.0	50RB0	Rear	0mm	\	\	15.86	17.0	0.617	**0.80**	0.348	**0.45**	0.07
C1	Body	LTE Band 25	26140	1860.0	50RB0	Rear	0mm	\	\	15.98	17.0	0.644	**0.81**	0.363	**0.46**	0.04
C1	Body	LTE Band 25	26140	1860.0	100RB	Rear	0mm	\	\	16.07	17.0	0.637	**0.79**	0.361	**0.45**	-0.18
B1	Body	LTE Band 25	26365	1882.5	1RB0	Rear	24mm	\	\	22.98	24.0	0.491	**0.62**	0.313	**0.40**	0.15
B1	Body	LTE Band 25	26365	1882.5	50RB0	Rear	24mm	\	\	22.03	23.0	0.384	**0.48**	0.243	**0.30**	0.07
B1	Body	LTE Band 25	26365	1882.5	1RB0	Top	19mm	\	\	22.98	24.0	0.121	**0.15**	0.078	**0.10**	0.06
B1	Body	LTE Band 25	26365	1882.5	50RB0	Top	19mm	\	\	22.03	23.0	0.092	**0.12**	0.060	**0.07**	0.14
C1	Body	LTE Band 25	26140	1860.0	1RB0	Rear	0mm	C1	\	17.02	18.0	0.934	**1.17**	0.478	**0.60**	0.13
C1	Body	LTE Band 25	26140	1860.0	1RB0	Rear	0mm	C2	\	17.02	18.0	0.873	**1.09**	0.440	**0.55**	0.07

Note: SAR for LTE Band 2 is covered by LTE Band 25 due to similar frequency range, same maximum tune-up limit and same channel bandwidth.

Table 13.10: LTE Band 26 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 26	26965	841.5	1RB0	Front	0mm	\	\	23.14	24.0	0.071	**0.09**	0.044	**0.05**	0.08
B1	Body	LTE Band 26	26965	841.5	36RB38	Front	0mm	\	\	22.23	23.0	0.051	**0.06**	0.032	**0.04**	0.04
B1	Body	LTE Band 26	26965	841.5	1RB0	Front-printer	0mm	\	\	23.14	24.0	0.184	**0.22**	0.118	**0.14**	0.05
B1	Body	LTE Band 26	26965	841.5	36RB38	Front-printer	0mm	\	\	22.23	23.0	0.159	**0.19**	0.095	**0.11**	0.02
C1	Body	LTE Band 26	26965	841.5	1RB0	Rear	0mm	\	**10**	22.32	23.0	**1.080**	**1.26**	0.652	**0.76**	0.04
C1	Body	LTE Band 26	26965	841.5	36RB38	Rear	0mm	\	\	21.30	22.0	0.797	**0.94**	0.511	**0.60**	0.06
B1	Body	LTE Band 26	26965	841.5	1RB0	Left	0mm	\	\	23.14	24.0	0.025	**0.03**	0.016	**0.02**	0.03
B1	Body	LTE Band 26	26965	841.5	36RB38	Left	0mm	\	\	22.23	23.0	0.022	**0.03**	0.015	**0.02**	0.08
B1	Body	LTE Band 26	26965	841.5	1RB0	Right	0mm	\	\	23.14	24.0	0.022	**0.03**	0.015	**0.02**	0.07
B1	Body	LTE Band 26	26965	841.5	36RB38	Right	0mm	\	\	22.23	23.0	0.021	**0.02**	0.014	**0.02**	0.11
C1	Body	LTE Band 26	26965	841.5	1RB0	Top	0mm	\	\	22.32	23.0	0.106	**0.12**	0.073	**0.09**	0.11
C1	Body	LTE Band 26	26965	841.5	36RB38	Top	0mm	\	\	21.30	22.0	0.096	**0.11**	0.067	**0.08**	-0.10
B1	Body	LTE Band 26	26965	841.5	1RB0	Bottom	0mm	\	\	23.14	24.0	0.014	**0.02**	0.008	**0.01**	0.05
B1	Body	LTE Band 26	26965	841.5	36RB38	Bottom	0mm	\	\	22.23	23.0	0.011	**0.01**	0.007	**0.01**	0.02
C1	Body	LTE Band 26	26865	831.5	1RB0	Rear	0mm	\	\	22.22	23.0	1.010	**1.21**	0.591	**0.71**	-0.19
C1	Body	LTE Band 26	26765	821.5	1RB0	Rear	0mm	\	\	22.31	23.0	0.923	**1.08**	0.543	**0.64**	-0.04
C1	Body	LTE Band 26	26865	831.5	36RB38	Rear	0mm	\	\	21.24	22.0	0.759	**0.90**	0.485	**0.58**	-0.04
C1	Body	LTE Band 26	26765	821.5	36RB38	Rear	0mm	\	\	21.29	22.0	0.689	**0.81**	0.433	**0.51**	0.05
C1	Body	LTE Band 26	26865	831.5	100RB	Rear	0mm	\	\	21.21	22.0	0.698	**0.84**	0.460	**0.55**	0.18
B1	Body	LTE Band 26	26965	841.5	1RB0	Rear	24mm	\	\	23.14	24.0	0.072	**0.09**	0.048	**0.06**	0.08
B1	Body	LTE Band 26	26965	841.5	36RB38	Rear	24mm	\	\	22.23	23.0	0.064	**0.08**	0.043	**0.05**	0.13
B1	Body	LTE Band 26	26965	841.5	1RB0	Top	19mm	\	\	23.14	24.0	0.059	**0.07**	0.036	**0.04**	0.04
B1	Body	LTE Band 26	26965	841.5	36RB38	Top	19mm	\	\	22.23	23.0	0.054	**0.06**	0.036	**0.04**	0.11
C1	Body	LTE Band 26	26965	841.5	1RB0	Rear	0mm	C1	\	22.32	23.0	0.949	**1.11**	0.534	**0.62**	0.03
C1	Body	LTE Band 26	26965	841.5	1RB0	Rear	0mm	C2	\	22.32	23.0	0.993	**1.16**	0.557	**0.65**	0.04

Note: SAR for LTE Band 5 is covered by LTE Band 26 due to similar frequency range, same maximum tune-up limit and same channel bandwidth.

Table 13.11: LTE Band 30 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 30	27710	2310.0	1RB24	Front	0mm	\	\	22.69	23.5	0.008	**0.01**	0.005	**0.01**	0.05
B1	Body	LTE Band 30	27710	2310.0	25RB0	Front	0mm	\	\	21.76	22.5	0.007	**0.01**	0.044	**0.05**	0.09
B1	Body	LTE Band 30	27710	2310.0	1RB24	Front-printer	0mm	\	\	22.69	23.5	0.032	**0.04**	0.020	**0.02**	0.08
B1	Body	LTE Band 30	27710	2310.0	25RB0	Front-printer	0mm	\	\	21.76	22.5	0.024	**0.03**	0.013	**0.02**	0.03
C1	Body	LTE Band 30	27710	2310.0	1RB24	Rear	0mm	\	**11**	15.78	16.5	**0.938**	**1.11**	0.510	**0.60**	0.07
C1	Body	LTE Band 30	27710	2310.0	25RB0	Rear	0mm	\	\	14.55	15.5	0.642	**0.80**	0.337	**0.42**	0.03
B1	Body	LTE Band 30	27710	2310.0	1RB24	Left	0mm	\	\	22.69	23.5	0.009	**0.01**	0.004	**0.00**	0.05
B1	Body	LTE Band 30	27710	2310.0	25RB0	Left	0mm	\	\	21.76	22.5	0.002	**0.00**	0.001	**0.00**	0.07
B1	Body	LTE Band 30	27710	2310.0	1RB24	Right	0mm	\	\	22.69	23.5	0.008	**0.01**	0.005	**0.01**	0.03
B1	Body	LTE Band 30	27710	2310.0	25RB0	Right	0mm	\	\	21.76	22.5	0.006	**0.01**	0.004	**0.00**	0.15
C1	Body	LTE Band 30	27710	2310.0	1RB24	Top	0mm	\	\	15.78	16.5	0.157	**0.19**	0.084	**0.10**	-0.12
C1	Body	LTE Band 30	27710	2310.0	25RB0	Top	0mm	\	\	14.55	15.5	0.117	**0.15**	0.062	**0.08**	0.19
B1	Body	LTE Band 30	27710	2310.0	1RB24	Bottom	0mm	\	\	22.69	23.5	0.004	**0.00**	0.003	**0.00**	0.12
B1	Body	LTE Band 30	27710	2310.0	25RB0	Bottom	0mm	\	\	21.76	22.5	0.003	**0.00**	0.001	**0.00**	0.06
C1	Body	LTE Band 30	27710	2310.0	50RB	Rear	0mm	\	\	14.50	15.5	0.642	**0.81**	0.337	**0.42**	-0.09
B1	Body	LTE Band 30	27710	2310.0	1RB24	Rear	24mm	\	\	22.69	23.5	0.435	**0.52**	0.254	**0.31**	0.07
B1	Body	LTE Band 30	27710	2310.0	25RB0	Rear	24mm	\	\	21.76	22.5	0.343	**0.41**	0.199	**0.24**	0.02
B1	Body	LTE Band 30	27710	2310.0	1RB24	Top	19mm	\	\	22.69	23.5	0.335	**0.40**	0.203	**0.24**	0.01
B1	Body	LTE Band 30	27710	2310.0	25RB0	Top	19mm	\	\	21.76	22.5	0.269	**0.32**	0.162	**0.19**	0.07
C1	Body	LTE Band 30	27710	2310.0	1RB24	Rear	0mm	C1	\	15.78	16.5	0.858	**1.01**	0.429	**0.51**	0.02
C1	Body	LTE Band 30	27710	2310.0	1RB24	Rear	0mm	C2	\	15.78	16.5	0.853	**1.01**	0.420	**0.50**	0.10

Table 13.12: LTE Band 66 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 66	132572	1770.0	1RB0	Front	0mm	\	\	23.80	24.5	0.074	**0.09**	0.042	**0.05**	0.06
B1	Body	LTE Band 66	132572	1770.0	50RB0	Front	0mm	\	\	22.68	23.5	0.053	**0.06**	0.034	**0.04**	0.09
B1	Body	LTE Band 66	132572	1770.0	1RB0	Front-printer	0mm	\	\	23.80	24.5	0.150	**0.18**	0.883	**1.04**	0.06
B1	Body	LTE Band 66	132572	1770.0	50RB0	Front-printer	0mm	\	\	22.68	23.5	0.123	**0.15**	0.073	**0.09**	0.04
C1	Body	LTE Band 66	132572	1770.0	1RB0	Rear	0mm	\	\	18.74	19.5	1.010	**1.20**	0.537	**0.64**	0.13
C1	Body	LTE Band 66	132572	1770.0	50RB0	Rear	0mm	\	\	17.52	18.5	0.657	**0.82**	0.386	**0.48**	-0.14
B1	Body	LTE Band 66	132572	1770.0	1RB0	Left	0mm	\	\	23.80	24.5	0.028	**0.03**	0.016	**0.02**	0.06
B1	Body	LTE Band 66	132572	1770.0	50RB0	Left	0mm	\	\	22.68	23.5	0.022	**0.03**	0.013	**0.02**	0.02
B1	Body	LTE Band 66	132572	1770.0	1RB0	Right	0mm	\	\	23.80	24.5	0.053	**0.06**	0.033	**0.04**	0.01
B1	Body	LTE Band 66	132572	1770.0	50RB0	Right	0mm	\	\	22.68	23.5	0.040	**0.05**	0.024	**0.03**	0.06
C1	Body	LTE Band 66	132572	1770.0	1RB0	Top	0mm	\	\	18.74	19.5	0.061	**0.07**	0.038	**0.04**	0.05
C1	Body	LTE Band 66	132572	1770.0	50RB0	Top	0mm	\	\	17.52	18.5	0.048	**0.06**	0.030	**0.04**	-0.07
B1	Body	LTE Band 66	132572	1770.0	1RB0	Bottom	0mm	\	\	23.80	24.5	0.029	**0.03**	0.018	**0.02**	0.03
B1	Body	LTE Band 66	132572	1770.0	50RB0	Bottom	0mm	\	\	22.68	23.5	0.021	**0.03**	0.014	**0.02**	0.09
C1	Body	LTE Band 66	132322	1745.0	1RB0	Rear	0mm	\	**12**	18.73	19.5	**1.090**	**1.30**	0.580	**0.69**	0.01
C1	Body	LTE Band 66	132072	1720.0	1RB0	Rear	0mm	\	\	18.65	19.5	0.944	**1.15**	0.508	**0.62**	0.07
C1	Body	LTE Band 66	132322	1745.0	50RB0	Rear	0mm	\	\	17.47	18.5	0.722	**0.92**	0.393	**0.50**	0.09
C1	Body	LTE Band 66	132072	1720.0	50RB0	Rear	0mm	\	\	17.50	18.5	0.664	**0.84**	0.370	**0.47**	-0.06
C1	Body	LTE Band 66	132322	1745.0	100RB	Rear	0mm	\	\	17.62	18.5	0.695	**0.85**	0.387	**0.47**	-0.05
B1	Body	LTE Band 66	132572	1770.0	1RB0	Rear	24mm	\	\	23.80	24.5	0.365	**0.43**	0.235	**0.28**	0.17
B1	Body	LTE Band 66	132572	1770.0	50RB0	Rear	24mm	\	\	22.68	23.5	0.310	**0.37**	0.198	**0.24**	0.04
B1	Body	LTE Band 66	132572	1770.0	1RB0	Top	19mm	\	\	23.80	24.5	0.084	**0.10**	0.054	**0.06**	0.06
B1	Body	LTE Band 66	132572	1770.0	50RB0	Top	19mm	\	\	22.68	23.5	0.069	**0.08**	0.047	**0.06**	0.08
C1	Body	LTE Band 66	132322	1745.0	1RB0	Rear	0mm	C1	\	18.73	19.5	0.967	**1.15**	0.506	**0.60**	0.00
C1	Body	LTE Band 66	132322	1745.0	1RB0	Rear	0mm	C2	\	18.73	19.5	0.892	**1.07**	0.480	**0.57**	-0.11

Note: SAR for LTE Band 4 is covered by LTE Band 66 due to similar frequency range, same maximum tune-up limit and same channel bandwidth.

Table 13.13: LTE Band 71 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 71	133372	688.0	1RB50	Front	0mm	\	\	23.97	25.0	0.163	**0.21**	0.111	**0.14**	0.02
B1	Body	LTE Band 71	133372	688.0	50RB25	Front	0mm	\	\	22.91	24.0	0.202	**0.26**	0.134	**0.17**	0.07
B1	Body	LTE Band 71	133372	688.0	1RB50	Front-printer	0mm	\	\	23.97	25.0	0.957	**1.21**	0.552	**0.70**	0.03
B1	Body	LTE Band 71	133372	688.0	50RB25	Front-printer	0mm	\	\	22.91	24.0	0.762	**0.98**	0.422	**0.54**	0.12
C1	Body	LTE Band 71	133372	688.0	1RB50	Rear	0mm	\	**13**	22.98	24.0	**1.020**	**1.29**	0.623	**0.79**	0.08
C1	Body	LTE Band 71	133372	688.0	50RB25	Rear	0mm	\	\	21.93	23.0	0.719	**0.92**	0.487	**0.62**	-0.15
B1	Body	LTE Band 71	133372	688.0	1RB50	Left	0mm	\	\	23.97	25.0	0.008	**0.01**	0.005	**0.01**	0.08
B1	Body	LTE Band 71	133372	688.0	50RB25	Left	0mm	\	\	22.91	24.0	0.006	**0.01**	0.004	**0.01**	0.01
B1	Body	LTE Band 71	133372	688.0	1RB50	Right	0mm	\	\	23.97	25.0	0.015	**0.02**	0.012	**0.01**	0.04
B1	Body	LTE Band 71	133372	688.0	50RB25	Right	0mm	\	\	22.91	24.0	0.017	**0.02**	0.012	**0.01**	0.03
C1	Body	LTE Band 71	133372	688.0	1RB50	Top	0mm	\	\	22.98	24.0	0.159	**0.20**	0.109	**0.14**	0.07
C1	Body	LTE Band 71	133372	688.0	50RB25	Top	0mm	\	\	21.93	23.0	0.124	**0.16**	0.085	**0.11**	0.02
B1	Body	LTE Band 71	133372	688.0	1RB50	Bottom	0mm	\	\	23.97	25.0	0.008	**0.01**	0.006	**0.01**	0.02
B1	Body	LTE Band 71	133372	688.0	50RB25	Bottom	0mm	\	\	22.91	24.0	0.007	**0.01**	0.005	**0.01**	0.11
C1	Body	LTE Band 71	133322	680.5	1RB50	Rear	0mm	\	\	22.97	24.0	0.981	**1.24**	0.592	**0.75**	-0.18
C1	Body	LTE Band 71	133222	673.0	1RB50	Rear	0mm	\	\	22.91	24.0	0.840	**1.08**	0.501	**0.64**	-0.16
C1	Body	LTE Band 71	133322	680.5	50RB25	Rear	0mm	\	\	21.85	23.0	0.732	**0.95**	0.481	**0.63**	-0.10
C1	Body	LTE Band 71	133222	673.0	50RB25	Rear	0mm	\	\	21.91	23.0	0.594	**0.76**	0.401	**0.52**	0.08
C1	Body	LTE Band 71	133372	688.0	100RB	Rear	0mm	\	\	21.87	23.0	0.755	**0.98**	0.497	**0.64**	-0.07
B1	Body	LTE Band 71	133372	688.0	1RB50	Rear	24mm	\	\	23.97	25.0	0.120	**0.15**	0.080	**0.10**	0.08
B1	Body	LTE Band 71	133372	688.0	50RB25	Rear	24mm	\	\	22.91	24.0	0.093	**0.12**	0.061	**0.08**	0.11
B1	Body	LTE Band 71	133372	688.0	1RB50	Top	19mm	\	\	23.97	25.0	0.081	**0.10**	0.054	**0.07**	0.07
B1	Body	LTE Band 71	133372	688.0	50RB25	Top	19mm	\	\	22.91	24.0	0.069	**0.09**	0.047	**0.06**	0.06
C1	Body	LTE Band 71	133372	688.0	1RB50	Rear	0mm	C1	\	22.98	24.0	0.589	**0.74**	0.317	**0.40**	0.07
C1	Body	LTE Band 71	133372	688.0	1RB50	Rear	0mm	C2	\	22.98	24.0	0.353	**0.45**	0.196	**0.25**	0.13

Table 13.14: LTE Band 41 SAR Values

Power Level	RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
B1	Body	LTE Band 41	39750	2506.0	1RB50	Front	0mm	\	\	23.03	24.0	0.020	**0.02**	0.115	**0.14**	0.03
B1	Body	LTE Band 41	39750	2506.0	50RB0	Front	0mm	\	\	21.95	23.0	0.015	**0.02**	0.009	**0.01**	0.12
B1	Body	LTE Band 41	39750	2506.0	1RB50	Front-printer	0mm	\	\	23.03	24.0	0.129	**0.16**	0.061	**0.08**	0.03
B1	Body	LTE Band 41	39750	2506.0	50RB0	Front-printer	0mm	\	\	21.95	23.0	0.113	**0.14**	0.053	**0.07**	0.07
C1	Body	LTE Band 41	39750	2506.0	1RB50	Rear	0mm	\	\	17.34	18.0	0.894	**1.04**	0.449	**0.52**	0.06
C1	Body	LTE Band 41	39750	2506.0	50RB0	Rear	0mm	\	\	16.13	17.0	0.427	**0.52**	0.207	**0.25**	0.14
B1	Body	LTE Band 41	39750	2506.0	1RB50	Left	0mm	\	\	23.03	24.0	0.014	**0.02**	0.009	**0.01**	0.04
B1	Body	LTE Band 41	39750	2506.0	50RB0	Left	0mm	\	\	21.95	23.0	0.012	**0.02**	0.006	**0.01**	0.03
B1	Body	LTE Band 41	39750	2506.0	1RB50	Right	0mm	\	\	23.03	24.0	0.017	**0.02**	0.010	**0.01**	0.06
B1	Body	LTE Band 41	39750	2506.0	50RB0	Right	0mm	\	\	21.95	23.0	0.011	**0.01**	0.007	**0.01**	0.09
C1	Body	LTE Band 41	39750	2506.0	1RB50	Top	0mm	\	\	17.34	18.0	0.182	**0.21**	0.093	**0.11**	0.08
C1	Body	LTE Band 41	39750	2506.0	50RB0	Top	0mm	\	\	16.13	17.0	0.143	**0.17**	0.072	**0.09**	-0.06
B1	Body	LTE Band 41	39750	2506.0	1RB50	Bottom	0mm	\	\	23.03	24.0	0.006	**0.01**	0.003	**0.00**	0.07
B1	Body	LTE Band 41	39750	2506.0	50RB0	Bottom	0mm	\	\	21.95	23.0	0.004	**0.01**	0.003	**0.00**	0.02
C1	Body	LTE Band 41	41490	2680.0	1RB50	Rear	0mm	\	\	16.63	18.0	0.733	**1.00**	0.359	**0.49**	-0.11
C1	Body	LTE Band 41	41055	2636.5	1RB50	Rear	0mm	\	\	17.19	18.0	0.790	**0.95**	0.394	**0.47**	0.05
C1	Body	LTE Band 41	40620	2593.0	1RB50	Rear	0mm	\	\	17.21	18.0	0.910	**1.09**	0.454	**0.54**	-0.13
C1	Body	LTE Band 41	40185	2549.5	1RB50	Rear	0mm	\	\	17.16	18.0	0.896	**1.09**	0.446	**0.54**	0.17
C1	Body	LTE Band 41	41490	2680.0	50RB0	Rear	0mm	\	\	15.63	17.0	0.483	**0.66**	0.233	**0.32**	0.03
C1	Body	LTE Band 41	41055	2636.5	50RB0	Rear	0mm	\	\	16.05	17.0	0.562	**0.70**	0.271	**0.34**	0.09
C1	Body	LTE Band 41	40620	2593.0	50RB0	Rear	0mm	\	\	16.12	17.0	0.635	**0.78**	0.305	**0.37**	-0.14
C1	Body	LTE Band 41	40185	2549.5	50RB0	Rear	0mm	\	\	16.00	17.0	0.658	**0.83**	0.314	**0.40**	0.14
C1	Body	LTE Band 41	40185	2549.5	100RB	Rear	0mm	\	\	16.02	17.0	0.672	**0.84**	0.324	**0.41**	-0.17
B1	Body	LTE Band 41	39750	2506.0	1RB50	Rear	24mm	\	\	23.03	24.0	0.392	**0.49**	0.223	**0.28**	0.02
B1	Body	LTE Band 41	39750	2506.0	50RB0	Rear	24mm	\	\	21.95	23.0	0.307	**0.39**	0.174	**0.22**	0.08
B1	Body	LTE Band 41	39750	2506.0	1RB50	Top	19mm	\	\	23.03	24.0	0.234	**0.29**	0.137	**0.17**	0.09
B1	Body	LTE Band 41	39750	2506.0	50RB0	Top	19mm	\	\	21.95	23.0	0.183	**0.23**	0.107	**0.14**	0.04
C1	Body	LTE Band 41	40620	2593.0	1RB50	Rear	0mm	C1	**14**	17.21	18.0	**0.966**	**1.16**	0.462	**0.55**	-0.07
C1	Body	LTE Band 41	40620	2593.0	1RB50	Rear	0mm	C2	\	17.21	18.0	0.883	**1.06**	0.422	**0.51**	-0.02

Note: SAR for LTE Band 38 is covered by LTE Band 41 due to similar frequency range, same maximum tune-up limit and same channel bandwidth.

Table 13.15: Bluetooth SAR Values

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
Body	Bluetooth	78	2480.0	GFSK	Front	0mm	\	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	Bluetooth	78	2480.0	GFSK	Front-printer	0mm	\	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	Bluetooth	78	2480.0	GFSK	Rear	0mm	\	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	Bluetooth	78	2480.0	GFSK	Left	0mm	\	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	Bluetooth	78	2480.0	GFSK	Right	0mm	\	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	Bluetooth	78	2480.0	GFSK	Bottom	0mm	\	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	Bluetooth	78	2480.0	GFSK	Top	0mm	\	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	Bluetooth	78	2480.0	GFSK	Bottom	0mm	\	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	Bluetooth	78	2480.0	GFSK	Rear	0mm	C1	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	Bluetooth	78	2480.0	GFSK	Rear	0mm	C2	\	10.52	11.5	<0.01	**<0.01**	<0.01	**<0.01**	/

13.3. WLAN Evaluation for 2.4GHz

According to the KDB248227 D01, SAR is measured for 2.4GHz 802.11b DSSS using the initial test position procedure.

Table 13.16: WLAN 2.4GHz SAR Values

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
Body	WLAN 2.4GHz	11	2462.0	802.11b	Front	0mm	\	\	15.76	16.5	0.047	**0.06**	0.022	**0.03**	0.13
Body	WLAN 2.4GHz	11	2462.0	802.11b	Front-printer	0mm	\	\	15.76	16.5	0.044	**0.05**	0.022	**0.03**	0.05
Body	WLAN 2.4GHz	11	2462.0	802.11b	Rear	0mm	\	**15**	15.76	16.5	**0.048**	0.06	0.023	**0.03**	0.06
Body	WLAN 2.4GHz	11	2462.0	802.11b	Left	0mm	\	\	15.76	16.5	0.047	**0.06**	0.021	**0.03**	0.08
Body	WLAN 2.4GHz	11	2462.0	802.11b	Right	0mm	\	\	15.76	16.5	0.006	**0.01**	0.004	**0.00**	0.02
Body	WLAN 2.4GHz	11	2462.0	802.11b	Top	0mm	\	\	15.76	16.5	0.036	**0.04**	0.017	**0.02**	0.04
Body	WLAN 2.4GHz	11	2462.0	802.11b	Bottom	0mm	\	\	15.76	16.5	0.001	**0.00**	0.001	**0.00**	0.07
Body	WLAN 2.4GHz	11	2462.0	802.11b	Rear	0mm	C1	\	15.76	16.5	0.036	**0.04**	0.020	**0.02**	-0.03
Body	WLAN 2.4GHz	11	2462.0	802.11b	Rear	0mm	C2	\	15.76	16.5	0.036	**0.04**	0.020	**0.02**	0.16

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

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

WLAN 2.4GHzSAR Values - 802.11b (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
Ch.	MHz					
11	2462.0	Rear	100%	100%	0.06	**0.06**

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.

13.4. WLAN Evaluation for 5GHz

Table 13.17: WLAN 5GHz SAR Values

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test Position	Distance	Note	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
Body	U-NII-2A	64	5320.0	802.11a	Front	0mm	\	\	14.01	15.0	0.039	**0.05**	0.015	**0.02**	0.03
Body	U-NII-2A	64	5320.0	802.11a	Front-printer	0mm	\	\	14.01	15.0	0.038	**0.05**	0.014	**0.02**	-0.05
Body	U-NII-2A	64	5320.0	802.11a	Rear	0mm	\	**16**	14.01	15.0	**0.142**	**0.18**	0.064	**0.08**	0.03
Body	U-NII-2A	64	5320.0	802.11a	Left	0mm	\	\	14.01	15.0	0.031	**0.04**	0.012	**0.01**	0.07
Body	U-NII-2A	64	5320.0	802.11a	Right	0mm	\	\	14.01	15.0	0.005	**0.01**	0.001	**0.00**	0.05
Body	U-NII-2A	64	5320.0	802.11a	Top	0mm	\	\	14.01	15.0	0.004	**0.01**	0.001	**0.00**	0.08
Body	U-NII-2A	64	5320.0	802.11a	Bottom	0mm	\	\	14.01	15.0	0.016	**0.02**	0.006	**0.01**	0.09
Body	U-NII-2A	64	5320.0	802.11a	Rear	0mm	C1	\	14.01	15.0	0.140	**0.18**	0.057	**0.07**	-0.06
Body	U-NII-2A	64	5320.0	802.11a	Rear	0mm	C2	\	14.01	15.0	0.082	**0.10**	0.030	**0.04**	0.08
Body	U-NII-2C	100	5500.0	802.11a	Front	0mm	\	\	14.85	16.0	0.026	**0.03**	0.010	**0.01**	0.04
Body	U-NII-2C	100	5500.0	802.11a	Front-printer	0mm	\	\	14.85	16.0	0.027	**0.04**	0.018	**0.02**	0.06
Body	U-NII-2C	100	5500.0	802.11a	Rear	0mm	\	\	14.85	16.0	0.120	**0.16**	0.054	**0.07**	-0.12
Body	U-NII-2C	100	5500.0	802.11a	Left	0mm	\	\	14.85	16.0	0.045	**0.06**	0.017	**0.02**	0.03
Body	U-NII-2C	100	5500.0	802.11a	Right	0mm	\	\	14.85	16.0	0.008	**0.01**	0.003	**0.00**	0.04
Body	U-NII-2C	100	5500.0	802.11a	Top	0mm	\	\	14.85	16.0	0.006	**0.01**	0.003	**0.00**	0.09
Body	U-NII-2C	100	5500.0	802.11a	Bottom	0mm	\	\	14.85	16.0	0.015	**0.02**	0.006	**0.01**	0.05
Body	U-NII-3	155	5775.0	802.11ac80	Front	0mm	\	\	9.84	11.0	0.016	**0.02**	0.006	**0.01**	0.01
Body	U-NII-3	155	5775.0	802.11ac80	Front-printer	0mm	\	\	9.84	11.0	0.015	**0.02**	0.006	**0.01**	-0.18
Body	U-NII-3	155	5775.0	802.11ac80	Rear	0mm	\	\	9.84	11.0	0.033	**0.04**	0.015	**0.02**	0.01
Body	U-NII-3	155	5775.0	802.11ac80	Left	0mm	\	\	9.84	11.0	0.026	**0.03**	0.009	**0.01**	0.03
Body	U-NII-3	155	5775.0	802.11ac80	Right	0mm	\	\	9.84	11.0	0.009	**0.01**	0.005	**0.01**	0.06
Body	U-NII-3	155	5775.0	802.11ac80	Top	0mm	\	\	9.84	11.0	0.008	**0.01**	0.002	**0.00**	0.08
Body	U-NII-3	155	5775.0	802.11ac80	Bottom	0mm	\	\	9.84	11.0	0.004	**0.01**	0.002	**0.00**	0.02

Note:

1. U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is ≤ 1.2W/kg, SAR is not required for U-NII-1 band.
2. For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

WLAN 5GHz SAR Values - 802.11a (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
Ch.	MHz					
64	5320.0	Rear	100%	100%	0.18	**0.18**

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; steps 2) 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 ≥ 1.45 W/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 - GSM850

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
251	848.8	Rear	0.983	0.964	1.02	/

Table 14.2: SAR Measurement Variability for Body - WCDMA Band 2

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
9400	1880.0	Rear	0.991	0.957	1.04	/

Table 14.3: SAR Measurement Variability for Body - WCDMA Band 4

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
1513	1752.6	Rear	0.956	0.929	1.03	/

Table 14.4: SAR Measurement Variability for Body - WCDMA Band 5

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
4233	846.6	Rear	0.916	0.878	1.04	/

Table 14.5: SAR Measurement Variability for Body - LTE Band 7

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
20850	2510.0	Rear	1.090	1.030	1.06	/

Table 14.6: SAR Measurement Variability for Body - LTE Band 12

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
23095	707.5	Rear	0.983	0.945	1.04	/

Table 14.7: SAR Measurement Variability for Body - LTE Band 14

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
23330	793.0	Rear	0.919	0.884	1.04	/

Table 14.8: SAR Measurement Variability for Body - LTE Band 25

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
26140	1860.0	Rear	0.937	0.913	1.03	/

Table 14.9: SAR Measurement Variability for Body - LTE Band 26

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
26965	841.5	Rear	1.080	1.040	1.04	/

Table 14.10: SAR Measurement Variability for Body - LTE Band 30

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
27710	2310.0	Rear	0.938	0.921	1.02	/

Table 14.11: SAR Measurement Variability for Body - LTE Band 66

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
132322	1745.0	Rear	1.090	1.080	1.01	/

Table 14.12: SAR Measurement Variability for Body - LTE Band 71

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
133372	688.0	Rear	1.020	0.992	1.03	/

Table 14.13: SAR Measurement Variability for Body - LTE Band 41

Frequency		Test Position	Original	1st Repeated	Ratio	2nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
40620	2593.0	Rear	0.966	0.948	1.02	/

15. Measurement Uncertainty

15.1. 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	12.7	N	2	1	1	6.35	6.35	∞
2	Axial isotropy	B	4.7	R	$\sqrt{3}$	√0.5	√0.5	4.3	4.3	∞
3	Hemispherical isotropy	B	9.6	R	$\sqrt{3}$	1	1	4.8	4.8	∞
4	Boundary effect	B	1.1	R	$\sqrt{3}$	1	1	0.6	0.6	∞
5	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
6	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
7	Modulation response	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
8	Readout electronics	B	1.0	N	1	1	1	1.0	1.0	∞
9	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
10	Integration time	B	1.7	R	$\sqrt{3}$	1	1	1.0	1.0	∞
11	RF ambient conditions-noise	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
12	RF ambient conditions-reflection	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Probe positioned mech. restrictions	B	0.35	R	$\sqrt{3}$	1	1	0.2	0.2	∞
14	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
15	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
16	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	5
17	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
18	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
19	Phantom uncertainty	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
20	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
21	Liquid conductivity (meas.)	A	1.3	N	1	0.64	0.43	0.83	0.56	9
22	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
23	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	0.96	0.78	9
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{23} c_i^2 u_i^2}$						11.5	11.4	95.5
Expanded uncertainty (Confidence interval of 95 %)		$u_e = 2u_c$						23.0	22.8	

15.2. Measurement Uncertainty for Normal SAR Tests (3GHz~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	13.9	N	2	1	1	6.95	6.95	∞
2	Axial isotropy	B	4.7	R	$\sqrt{3}$	√0.5	√0.5	4.3	4.3	∞
3	Hemispherical isotropy	B	9.6	R	$\sqrt{3}$	1	1	4.8	4.8	∞
4	Boundary effect	B	1.1	R	$\sqrt{3}$	1	1	0.6	0.6	∞
5	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
6	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
7	modulation response	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
8	Readout electronics	B	1.0	N	1	1	1	1.0	1.0	∞
9	Response time	B	0.0	R	$\sqrt{3}$	1	1	0.0	0.0	∞
10	Integration time	B	1.7	R	$\sqrt{3}$	1	1	1.0	1.0	∞
11	RF ambient conditions-noise	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
12	RF ambient conditions-reflection	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Probe positioned mech. Restrictions	B	0.35	R	$\sqrt{3}$	1	1	0.2	0.2	∞
14	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
15	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
16	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	5
17	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
18	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
19	Phantom uncertainty	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
20	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
21	Liquid conductivity (meas.)	A	1.3	N	1	0.64	0.43	0.83	0.56	43
22	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
23	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	0.96	0.78	521
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						11.8	11.7	257
Expanded uncertainty (Confidence interval of 95 %)		$u_e = 2u_c$						23.6	23.4	

16. Main Test Instruments

Table 16.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46103759	2022-11-14	One year
02	Dielectric probe	85070E	MY44300317	/	/
03	Power meter	E4418B	MY50000366	2022-12-11	One year
04	Power sensor	E9304A	MY50000188	2022-12-11	One year
05	Power meter	NRP	102603	2022-12-29	One year
06	Power sensor	NRP-Z51	102211	2022-12-29	One year
07	Signal Generator	E8257D	MY47461211	2023-01-13	One year
08	Amplifier	VTL5400	0404	/	/
09	E-field Probe	EX3DV4	7683	2023-02-16	One year
10	DAE	DAE4	786	2022-09-29	One year
11	Dipole Validation Kit	D750V3	1163	2022-08-22	Three years
12	Dipole Validation Kit	D835V2	4d057	2021-10-18	Three years
13	Dipole Validation Kit	D1750V2	1152	2022-08-22	Three years
14	Dipole Validation Kit	D1900V2	5d088	2021-10-18	Three years
15	Dipole Validation Kit	D2300V2	1059	2021-09-22	Three years
16	Dipole Validation Kit	D2450V2	873	2021-10-21	Three years
17	Dipole Validation Kit	D2550V2	1010	2021-05-21	Three years
18	Dipole Validation Kit	D5GHzV2	1238	2022-08-17	Three years
19	BTS	E5515C	GB46110722	2023-01-13	One year
20	BTS	MT8820C	6201341853	2023-03-23	One year
21	BTS	CMW500	152499	2022-07-15	One year
22	Thermometer	51II	99250045	2022-11-23	One year
23	Software	DASY5	/	/	/

ANNEX A: Graph Results

GSM 850 Body

Date: 2023-6-16

Electronics: DAE4 Sn786

Medium: Head 835MHz

Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.941 S/m; ε_r = 40.57; ρ = 1000 kg/m^3

Communication System: UID 0, 3 slot GPRS (0) Frequency: 848.8 MHz Duty Cycle: 1:2.67

Probe: EX3DV4 - SN7683 ConvF (10.75, 10.75, 10.75)

Rear Side High/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.41 W/kg

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

Reference Value = 5.025 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.71 W/kg

SAR(1 g) = 0.983 W/kg; SAR(10 g) = 0.587 W/kg

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

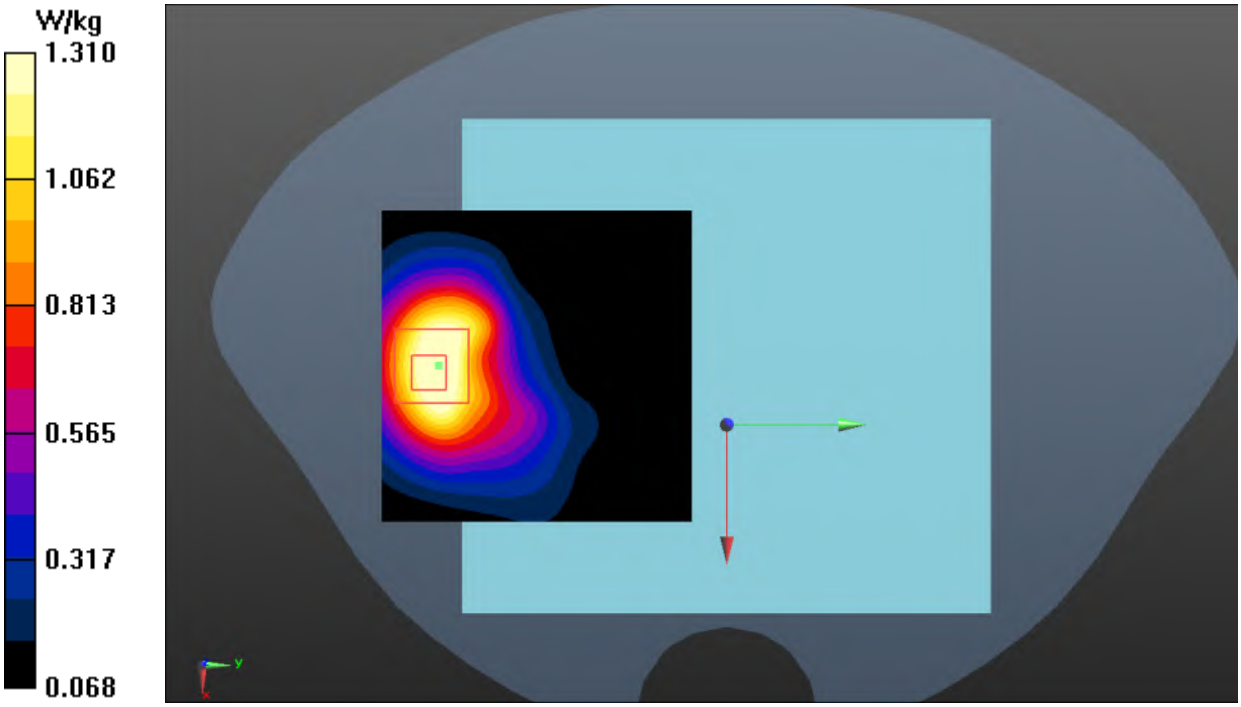


Fig. 1 GSM 850 Body

WCDMA Band 2 Body
Date: 2023-6-20
Electronics: DAE4 Sn786
Medium: Head 1900MHz
Medium parameters used: f = 1880 MHz; σ = 1.364 S/m; ε_r = 39.312; ρ = 1000 kg/m^3
Communication System: UID 0, WCDMA (0) Frequency: 1880 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.55, 8.55, 8.55)

Rear Side Middle/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.55 W/kg

Rear Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.505 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.77 W/kg
SAR(1 g) = 0.991 W/kg; SAR(10 g) = 0.562 W/kg
Maximum value of SAR (measured) = 1.32 W/kg

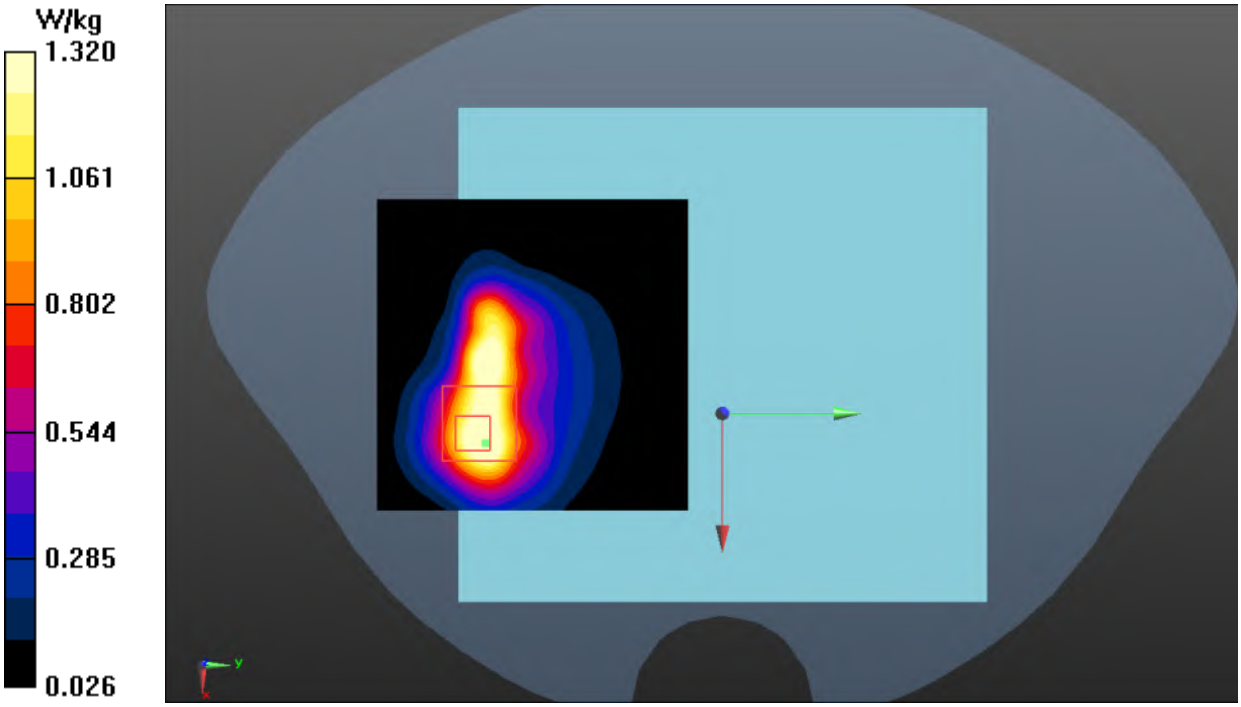


Fig. 2 WCDMA Band 2 Body

WCDMA Band 4 Body

Date: 2023-6-18

Electronics: DAE4 Sn786

Medium: Head 1750MHz

Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.361 S/m; ε_r = 40.563; ρ = 1000 kg/m^3

Communication System: UID 0, WCDMA (0) Frequency: 1752.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7683 ConvF (8.81, 8.81, 8.81)

Rear Side High/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.40 W/kg

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

Reference Value = 3.958 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.76 W/kg

SAR(1 g) = 0.956 W/kg; SAR(10 g) = 0.504 W/kg

Maximum value of SAR (measured) = 1.35 W/kg

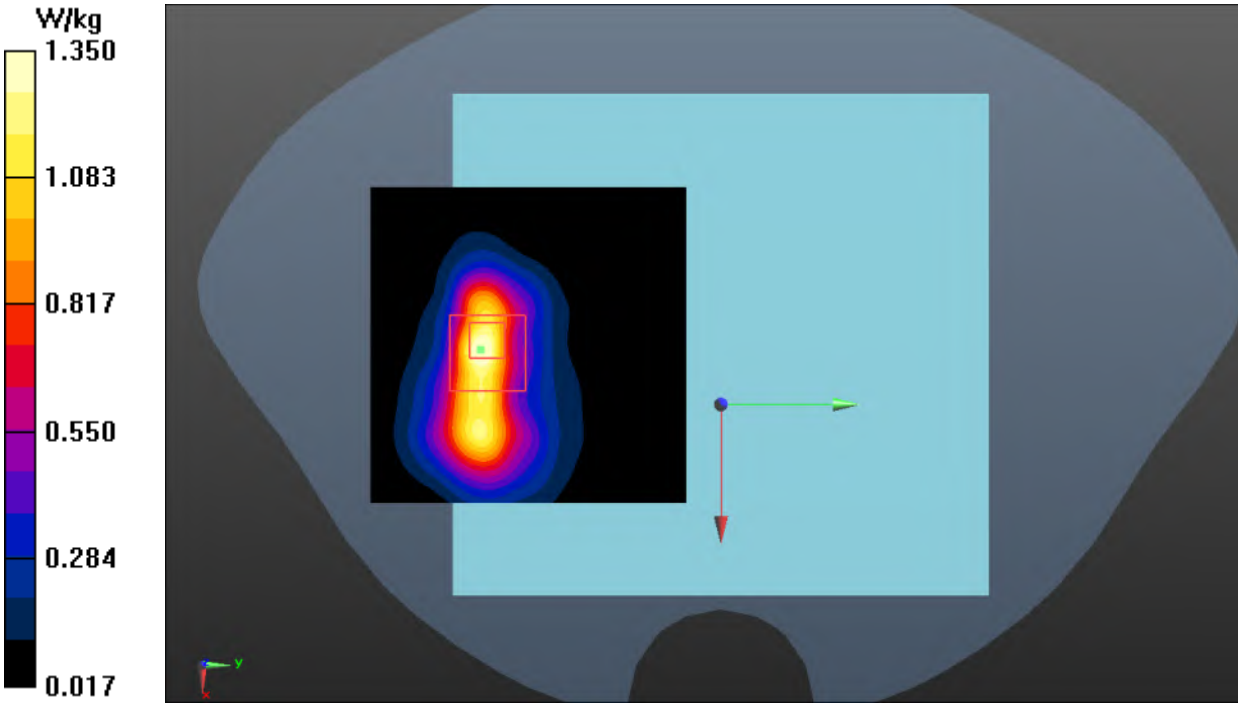


Fig. 3 WCDMA Band 4 Body

WCDMA Band 5 Body
Date: 2023-6-16
Electronics: DAE4 Sn786
Medium: Head 835MHz
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.939 S/m; ε_r = 40.597; ρ = 1000 kg/m^3
Communication System: UID 0, WCDMA (0) Frequency: 846.6 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (10.75, 10.75, 10.75)

Rear Side High/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.35 W/kg

Rear Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.914 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 0.916 W/kg; SAR(10 g) = 0.546 W/kg
Maximum value of SAR (measured) = 1.26 W/kg

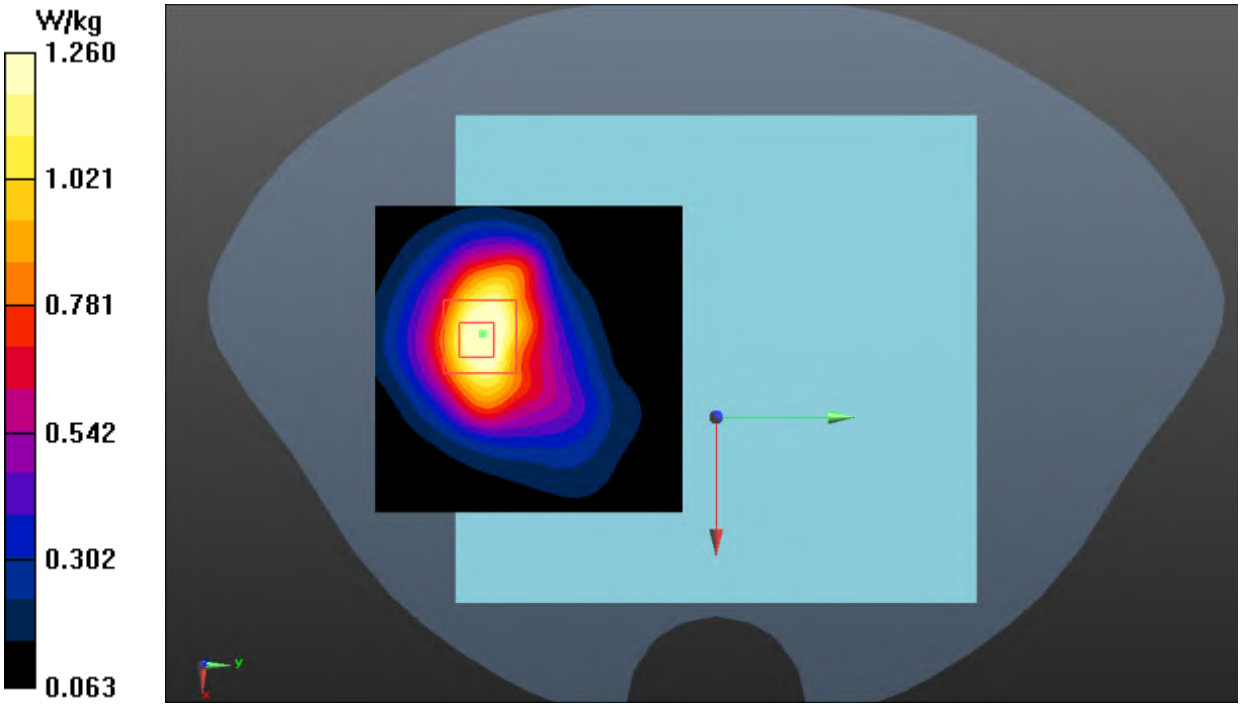


Fig. 4 WCDMA Band 5 Body

LTE Band 7 Body
Date: 2023-6-26
Electronics: DAE4 Sn786
Medium: Head 2550MHz
Medium parameters used: f = 2510 MHz; σ = 1.894 S/m; ε_r = 38.659; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_FDD (0) Frequency: 2510 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.02, 8.02, 8.02)

Rear Side Low 1RB99/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.60 W/kg

Rear Side Low 1RB99/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.6270 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.95 W/kg
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.516 W/kg
Maximum value of SAR (measured) = 1.44 W/kg

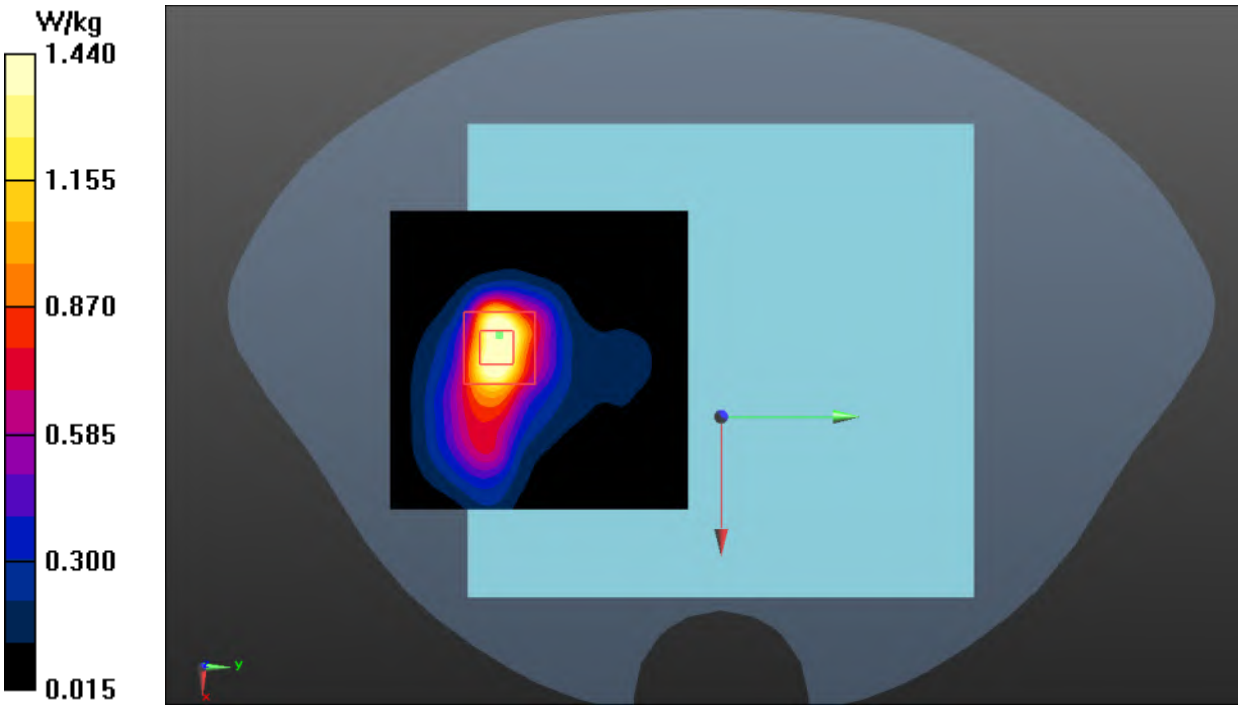


Fig. 5 LTE Band 7 Body

LTE Band 12 Body
Date: 2023-6-19
Electronics: DAE4 Sn786
Medium: Head 750MHz
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.886 S/m; ε_r = 41.395; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_FDD (0) Frequency: 707.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (10.75, 10.75, 10.75)

Rear Side Middle 1RB24/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.43 W/kg

Rear Side Middle 1RB24/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.775 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.00 W/kg
SAR(1 g) = 0.983 W/kg; SAR(10 g) = 0.615 W/kg
Maximum value of SAR (measured) = 1.51 W/kg

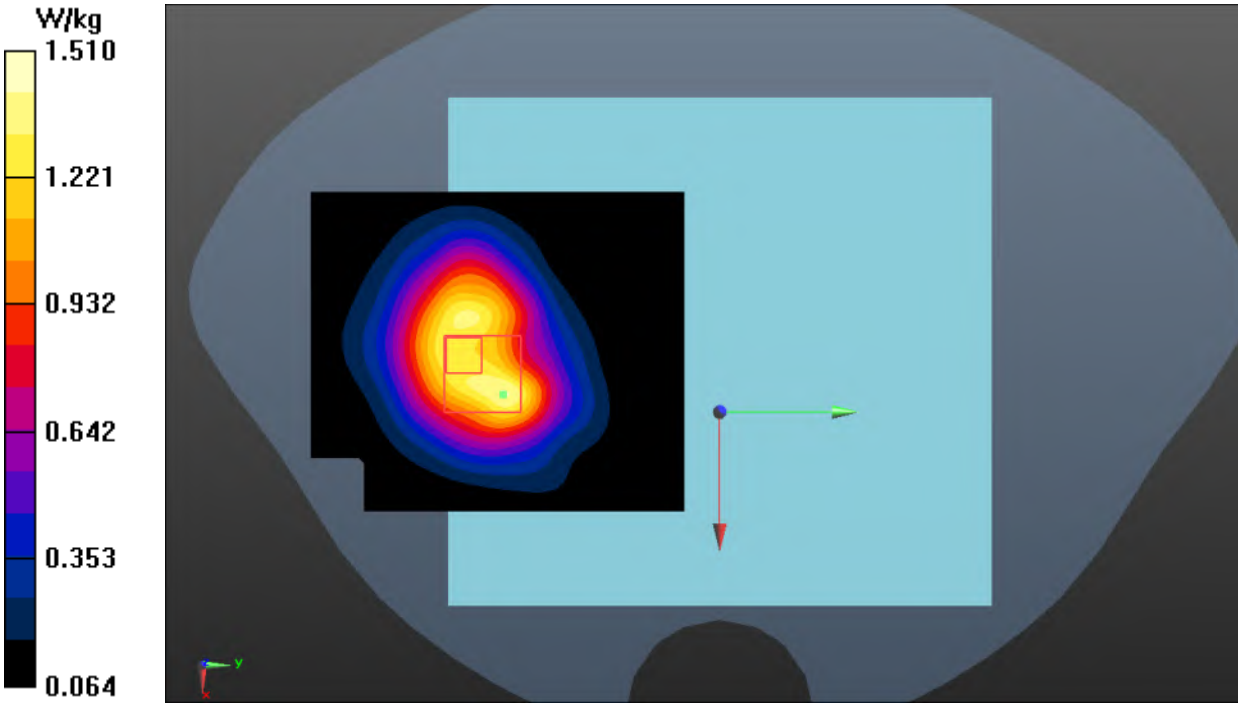


Fig. 6 LTE Band 12 Body

LTE Band 13 Body
Date: 2023-6-19
Electronics: DAE4 Sn786
Medium: Head 750MHz
Medium parameters used: f = 782 MHz; σ = 0.923 S/m; ε_r = 40.501; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_FDD (0) Frequency: 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (10.75, 10.75, 10.75)

Rear Side Middle 1RB24/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.946 W/kg

Rear Side Middle 1RB24/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.711 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.739 W/kg; SAR(10 g) = 0.455 W/kg
Maximum value of SAR (measured) = 0.977 W/kg

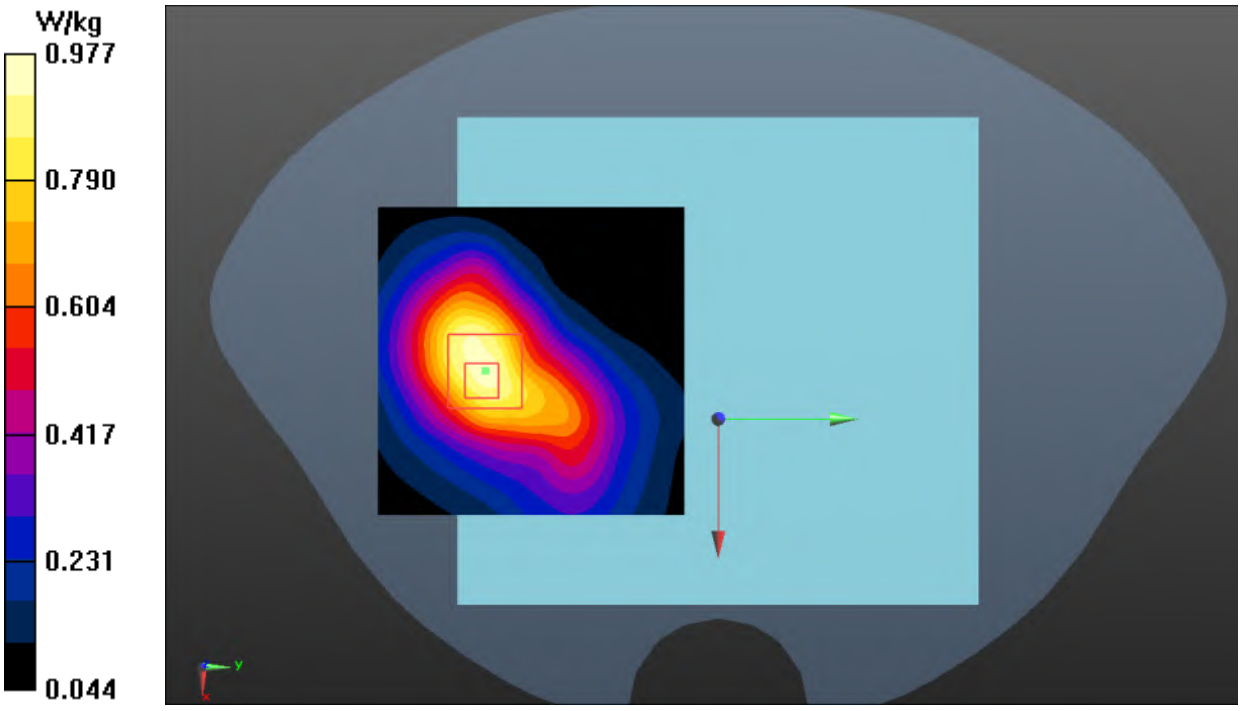


Fig. 7 LTE Band 13 Body

LTE Band 14 Body
Date: 2023-6-19
Electronics: DAE4 Sn786
Medium: Head 750MHz
Medium parameters used (interpolated): f = 793 MHz; σ = 0.928 S/m; ε_r = 40.369; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_FDD (0) Frequency: 793 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (10.75, 10.75, 10.75)

Rear Side Middle 1RB24/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.37 W/kg

Rear Side Middle 1RB24/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.930 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 1.75 W/kg
SAR(1 g) = 0.919 W/kg; SAR(10 g) = 0.529 W/kg
Maximum value of SAR (measured) = 1.27 W/kg

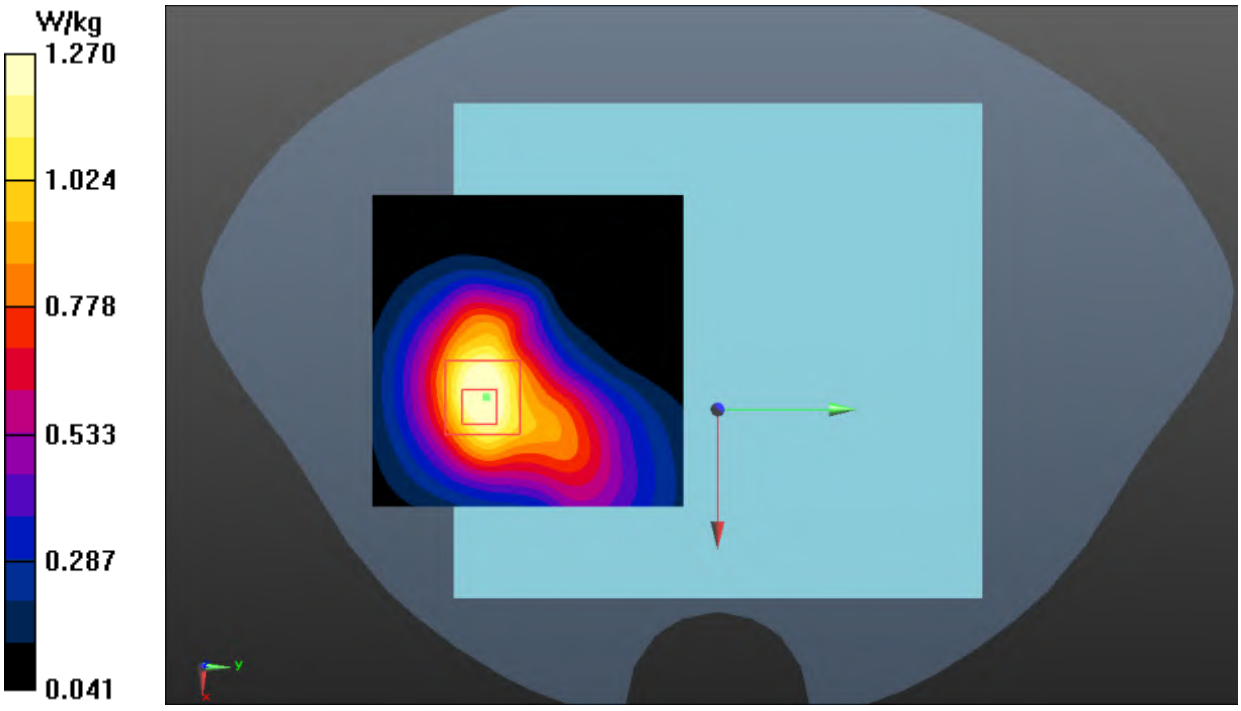


Fig. 8 LTE Band 14 Body

LTE Band 25 Body
Date: 2023-6-20
Electronics: DAE4 Sn786
Medium: Head 1900MHz
Medium parameters used: f = 1860 MHz; σ = 1.347 S/m; ε_r = 39.391; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_FDD (0) Frequency: 1860 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.55, 8.55, 8.55)

Rear Side Low 1RB0/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.48 W/kg

Rear Side Low 1RB0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.282 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.66 W/kg
SAR(1 g) = 0.937 W/kg; SAR(10 g) = 0.539 W/kg
Maximum value of SAR (measured) = 1.34 W/kg

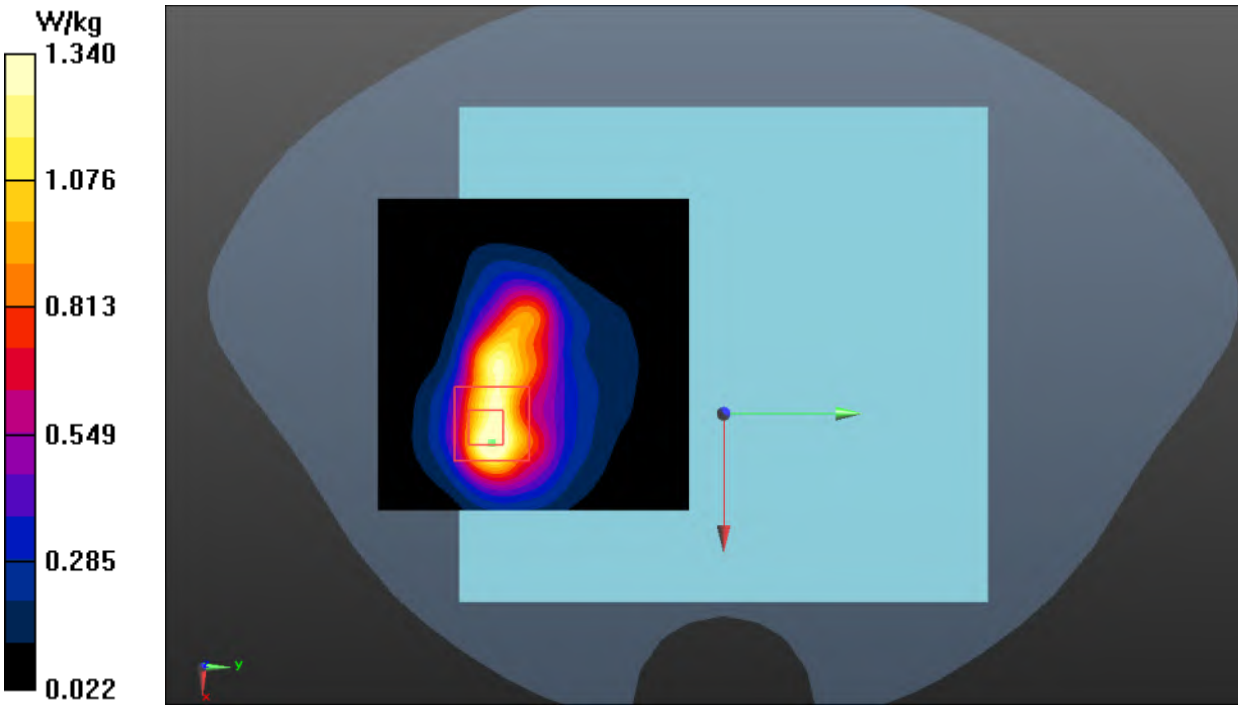


Fig. 9 LTE Band 25 Body

LTE Band 26 Body
Date: 2023-6-16
Electronics: DAE4 Sn786
Medium: Head 835MHz
Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.934 S/m; ε_r = 40.658; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_FDD (0) Frequency: 841.5 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (10.75, 10.75, 10.75)

Rear Side High 1RB0/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.39 W/kg

Rear Side High 1RB0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.325 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.86 W/kg
SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.652 W/kg
Maximum value of SAR (measured) = 1.41 W/kg

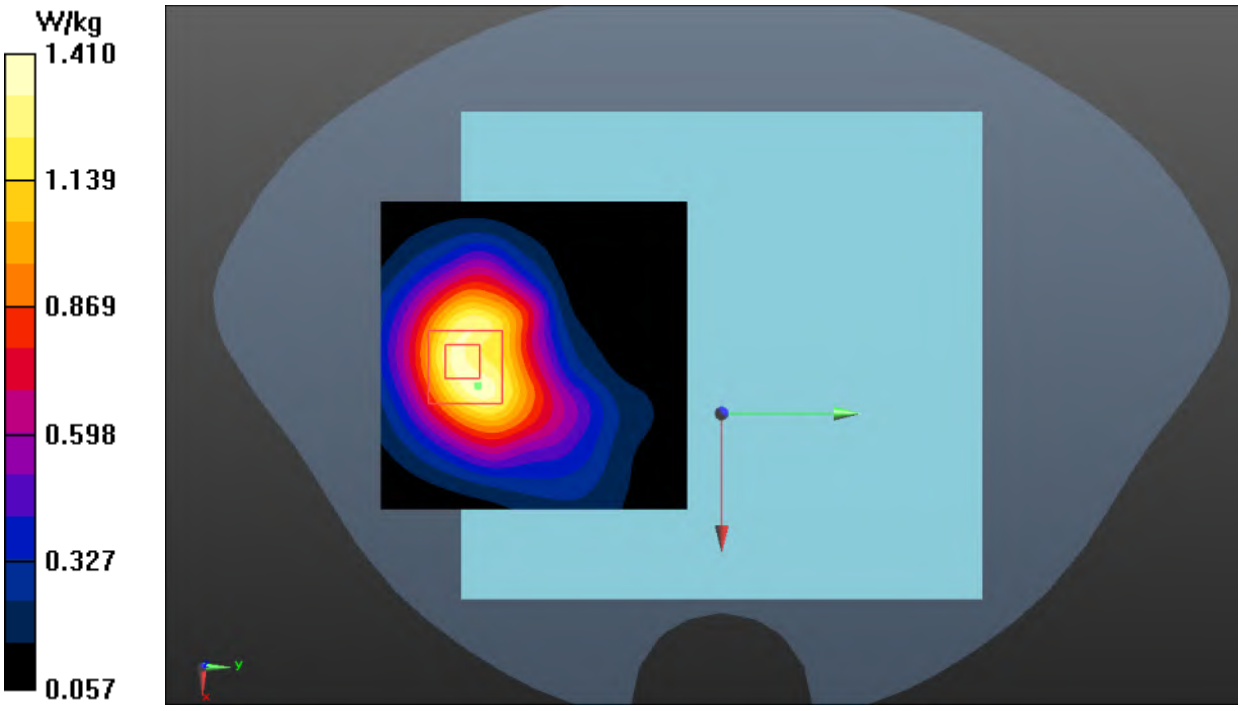


Fig. 10 LTE Band 26 Body

LTE Band 30 Body
Date: 2023-6-22
Electronics: DAE4 Sn786
Medium: Head 2300MHz
Medium parameters used: f = 2310 MHz; σ = 1.66 S/m; ε_r = 39.882; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_FDD (0) Frequency: 2310 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.30, 8.30, 8.30)

Rear Side Middle 1RB24/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.41 W/kg

Rear Side Middle 1RB24/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.026 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 1.79 W/kg
SAR(1 g) = 0.938 W/kg; SAR(10 g) = 0.510 W/kg
Maximum value of SAR (measured) = 1.31 W/kg

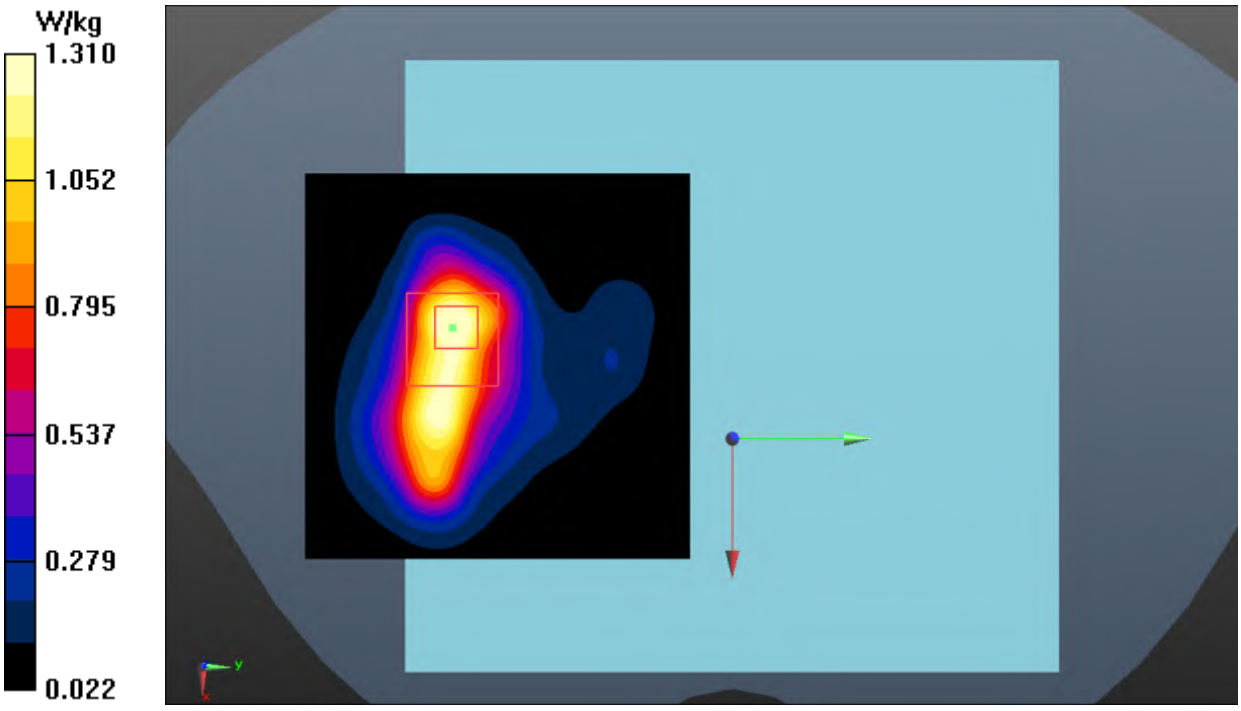


Fig. 11 LTE Band 30 Body

LTE Band 66 Body
Date: 2023-6-18
Electronics: DAE4 Sn786
Medium: Head 1750MHz
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.355 S/m; ε_r = 40.593; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_FDD (0) Frequency: 1745 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.81, 8.81, 8.81)

Rear Side Middle 1RB0/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.51 W/kg

Rear Side Middle 1RB0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.821 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.02 W/kg
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.580 W/kg
Maximum value of SAR (measured) = 1.55 W/kg

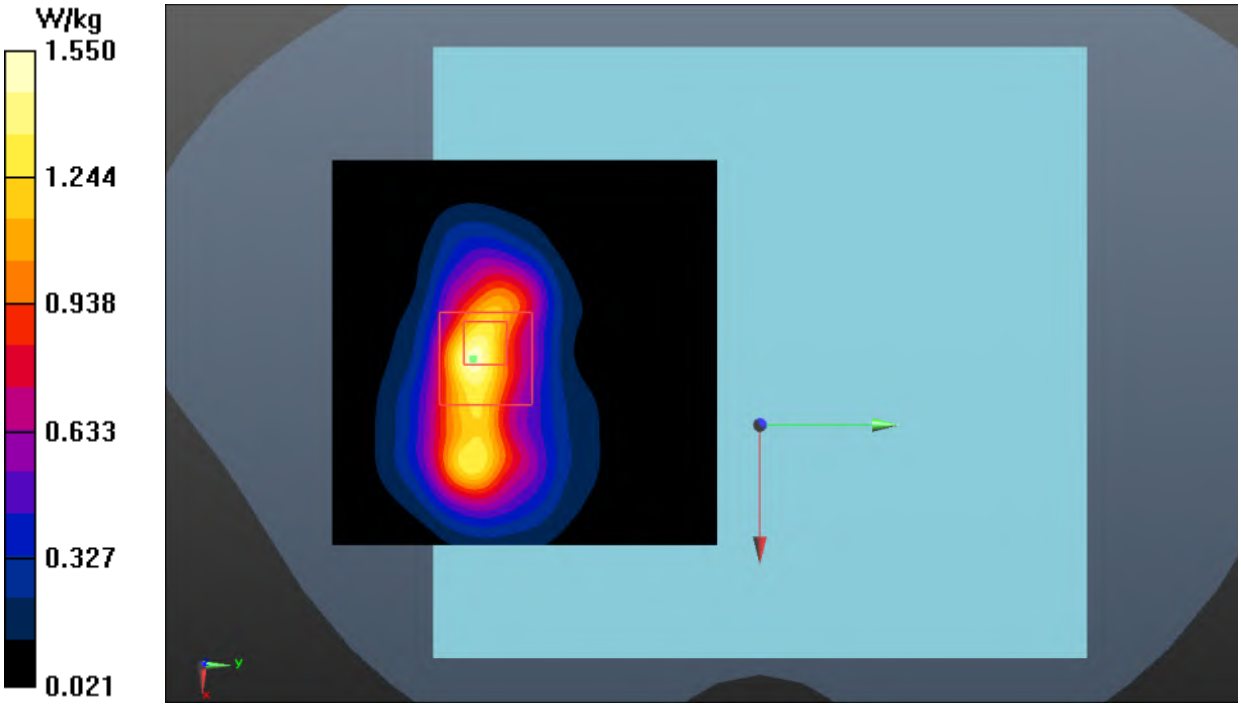


Fig. 12 LTE Band 66 Body

LTE Band 71 Body
Date: 2023-6-19
Electronics: DAE4 Sn786
Medium: Head 750MHz
Medium parameters used: f = 688 MHz; σ = 0.873 S/m; ε_r = 41.629; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_FDD (0) Frequency: 688 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (10.75, 10.75, 10.75)

Rear Side High 1RB50/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.25 W/kg

Rear Side High 1RB50/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.040 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.75 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.623 W/kg
Maximum value of SAR (measured) = 1.34 W/kg

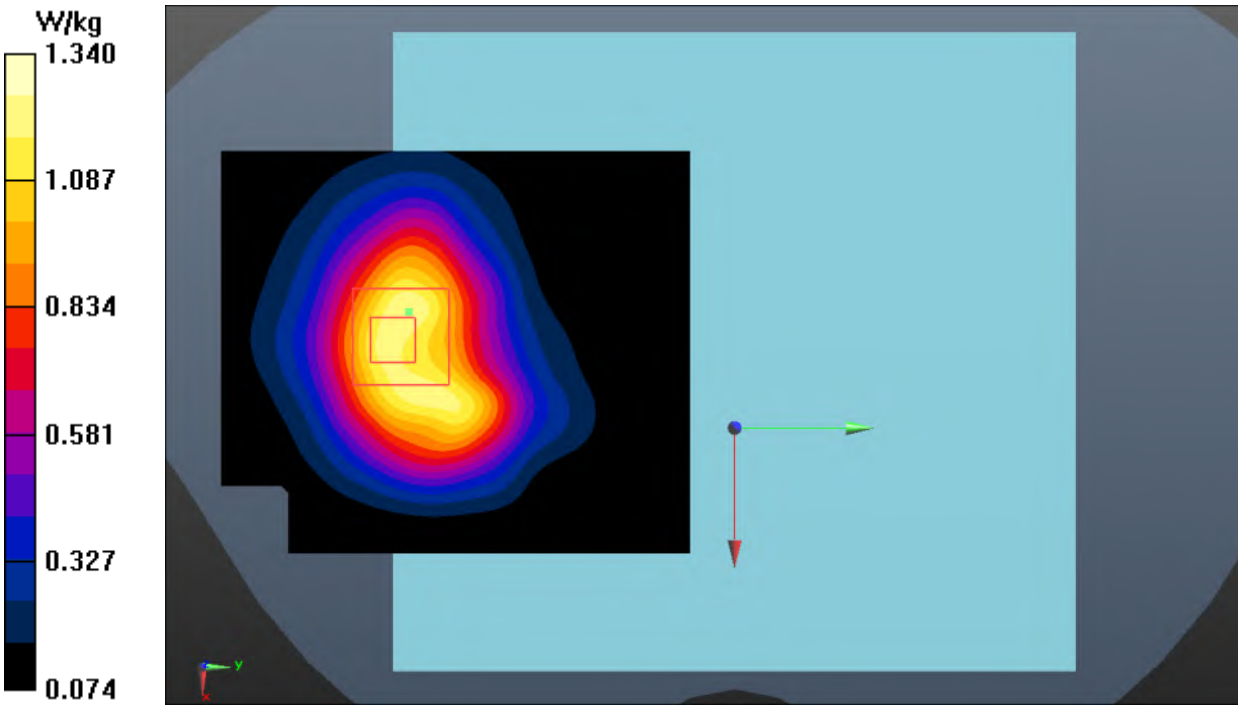


Fig. 13 LTE Band 71 Body

LTE Band 41 Body
Date: 2023-6-26
Electronics: DAE4 Sn786
Medium: Head 2550MHz
Medium parameters used (interpolated): f = 2593 MHz; σ = 1.992 S/m; ε_r = 38.385; ρ = 1000 kg/m^3
Communication System: UID 0, LTE_TDD (0) Frequency: 2593 MHz Duty Cycle: 1:1.58
Probe: EX3DV4 - SN7683 ConvF (7.76, 7.76, 7.76)

Rear Side Middle 1RB50/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.49 W/kg

Rear Side Middle 1RB50/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.287 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 0.966 W/kg; SAR(10 g) = 0.462 W/kg
Maximum value of SAR (measured) = 1.27 W/kg

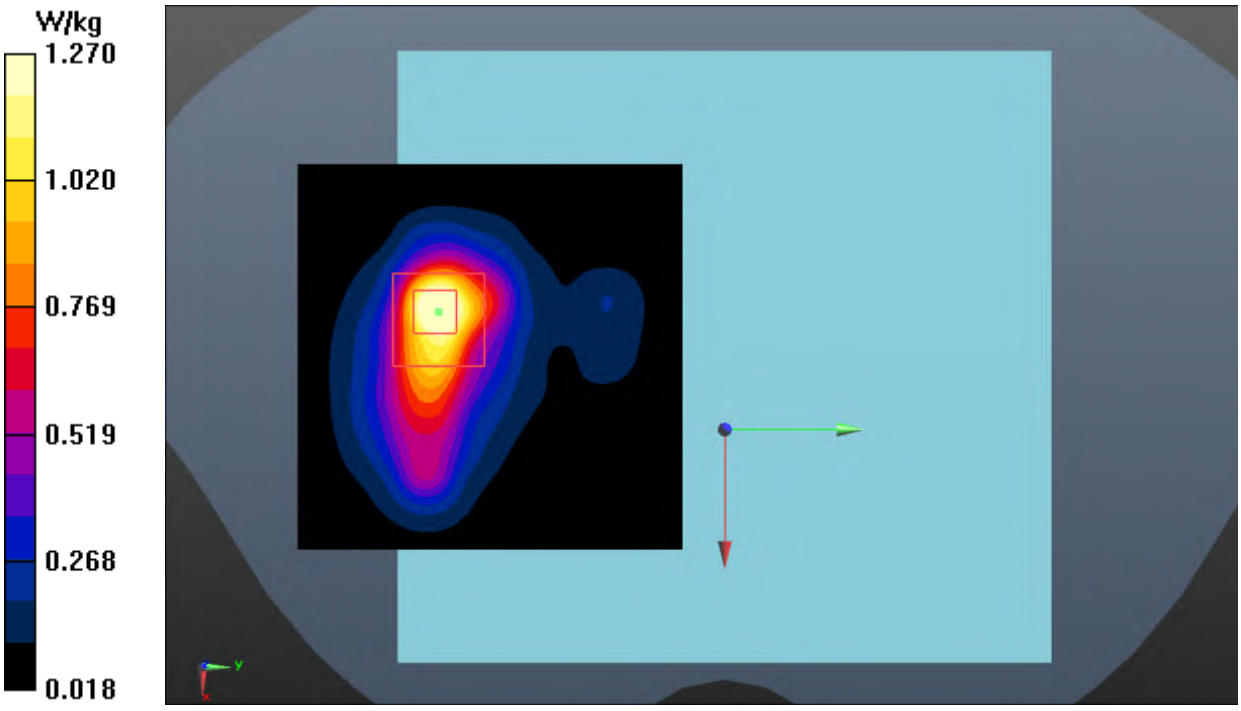


Fig. 14 LTE Band 41 Body

WLAN 2.4GHz Body

Date: 2023-7-12

Electronics: DAE4 Sn786

Medium: Head 2450MHz

Medium parameters used: f = 2462 MHz; σ = 1.863 S/m; ε_r = 38.332; ρ = 1000 kg/m^3

Communication System: UID 0, WLAN (0) Frequency: 2462 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7683 ConvF (8.02, 8.02, 8.02)

Rear Side Ch.11/Area Scan (111x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0713 W/kg

Rear Side Ch.11/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.141 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.104 W/kg

SAR(1 g) = 0.048 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.0704 W/kg

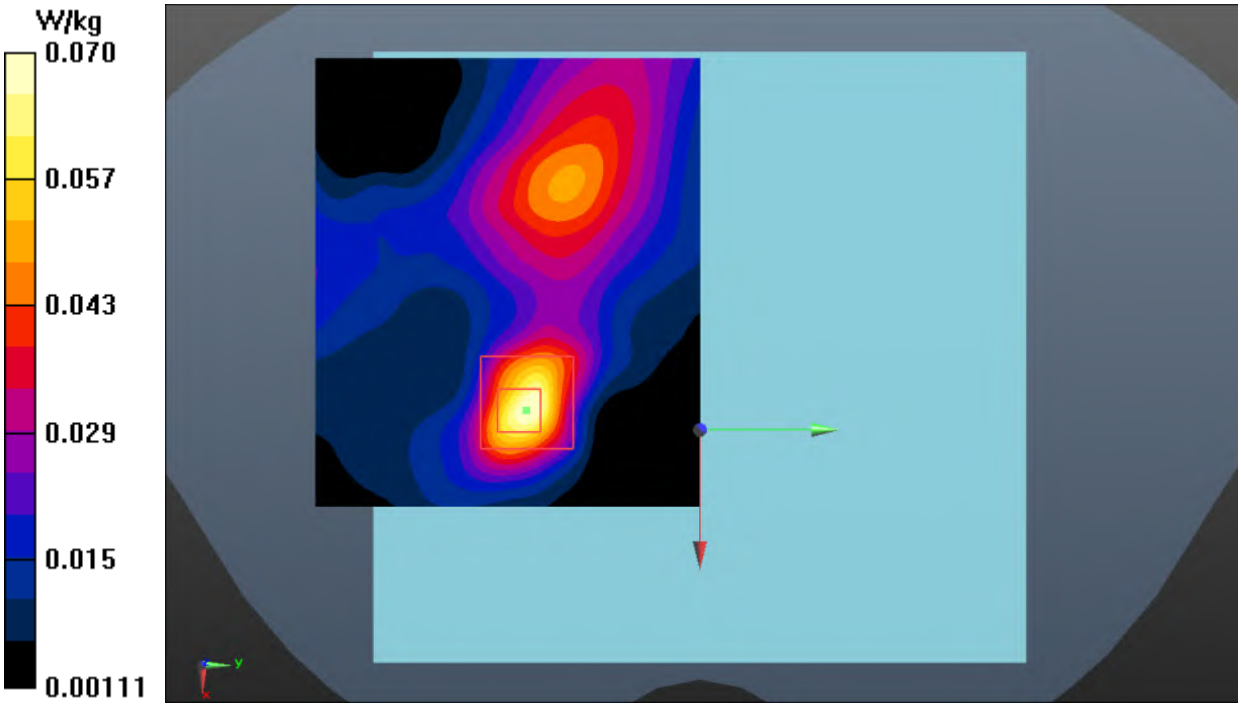


Fig. 15 WLAN 2.4GHz Body

WLAN 5GHz Body
Date: 2023-7-10
Electronics: DAE4 Sn786
Medium: Head 5250MHz
Medium parameters used: f = 5320 MHz; σ = 4.891 S/m; ε_r = 34.985; ρ = 1000 kg/m^3
Communication System: UID 0, WLAN 5G (0) Frequency: 5320 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (5.72, 5.72, 5.72)

Rear Side Ch.64/Area Scan (111x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.273 W/kg

Rear Side Ch.64/Zoom Scan (8x8x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.388 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.735 W/kg
SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.064 W/kg
Maximum value of SAR (measured) = 0.266 W/kg

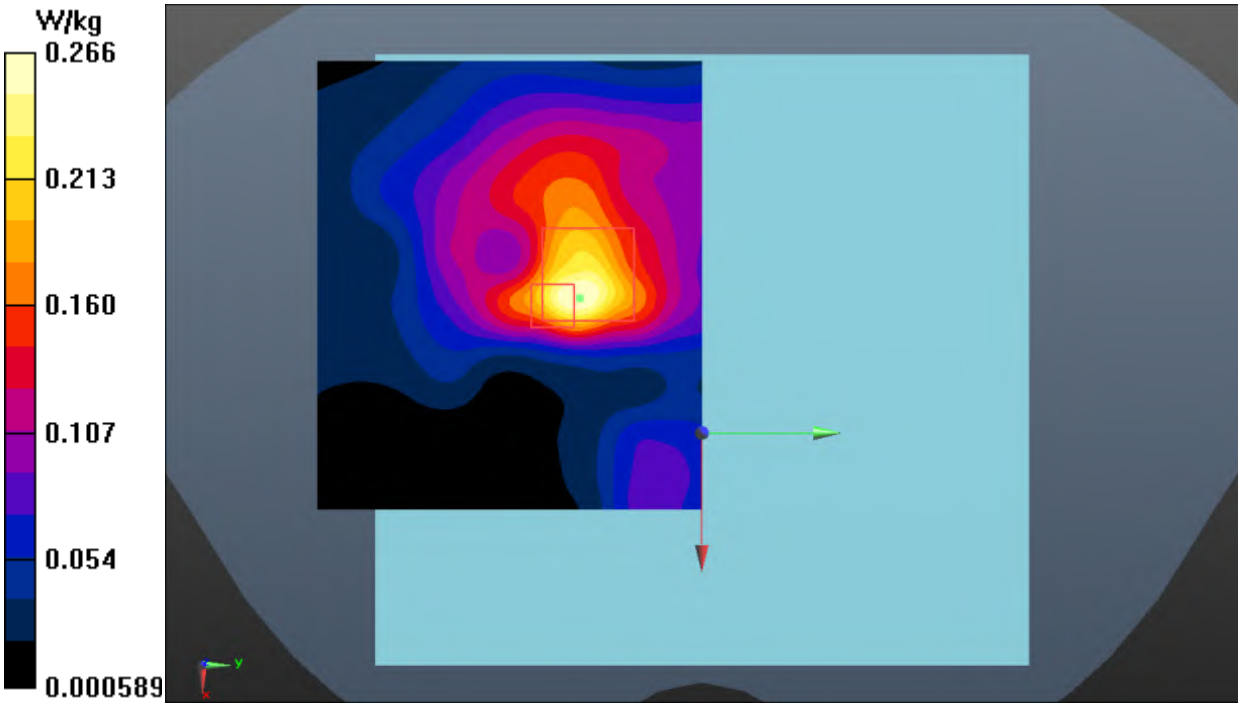


Fig. 16 WLAN 5GHz Body

ANNEX B: SystemVerification Results

750MHz

Date: 2023-6-19

Electronics: DAE4 Sn786

Medium: Head 750MHz

Medium parameters used: f = 750 MHz; σ = 0.913 S/m; ε_r = 40.885; ρ = 1000 kg/m^3

Communication System: CW Frequency: 750 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7683 ConvF (10.75, 10.75, 10.75)

System Validation/Area Scan (81x161x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 63.527 V/m; Power Drift = 0.03 dB

SAR(1 g) = 2.18 W/kg; SAR(10 g) = 1.44 W/kg

Maximum value of SAR (interpolated) = 2.85 W/kg

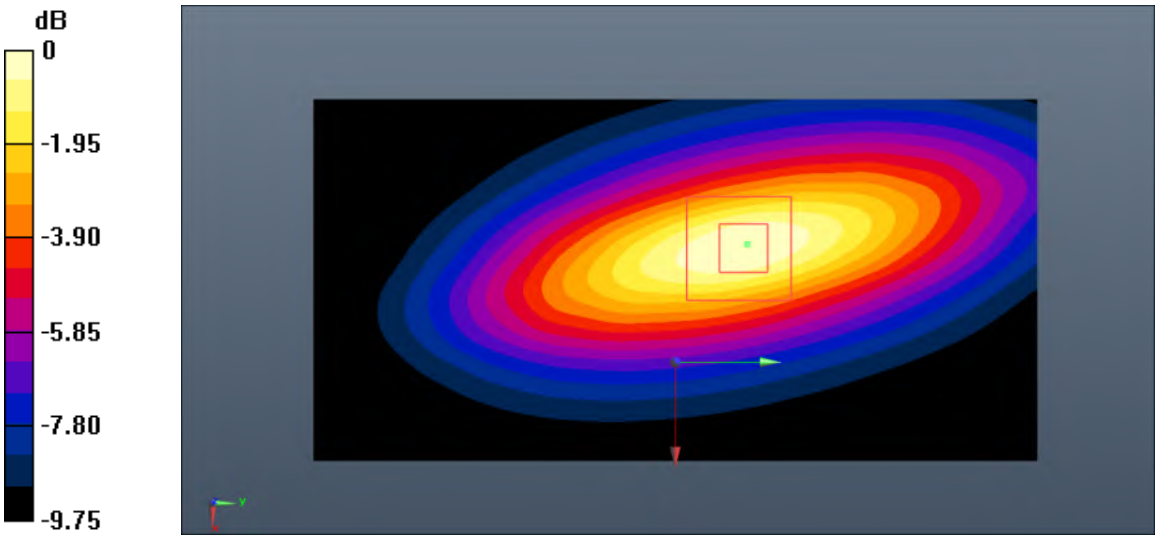
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 63.527 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.52 W/kg

SAR(1 g) = 2.22 W/kg; SAR(10 g) = 1.46 W/kg

Maximum value of SAR (measured) = 2.89 W/kg



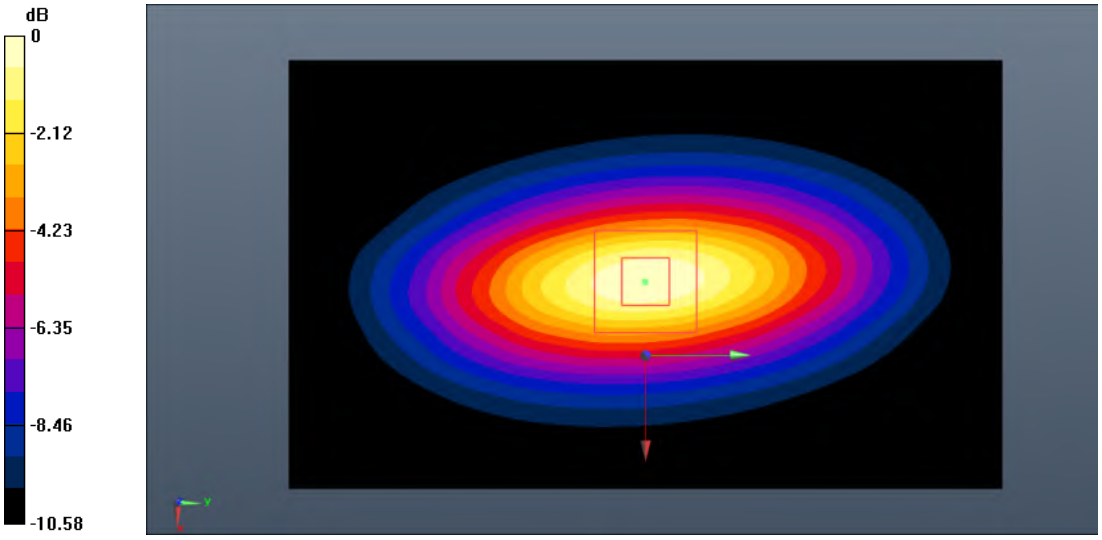
0 dB = 2.89 W/kg = 4.61 dB W/kg

Fig.B.1. Validation 750MHz 250mW

835MHz
Date: 2023-6-16
Electronics: DAE4 Sn786
Medium: Head 835MHz
Medium parameters used: f = 835 MHz; σ = 0.928 S/m; εr = 40.736; ρ = 1000 kg/m^3
Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (10.75, 10.75, 10.75)

System Validation/Area Scan (91x161x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 63.745 V/m; Power Drift = 0.06 dB
SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.60 W/kg
Maximum value of SAR (interpolated) = 3.66 W/kg

System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 63.745 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 4.39 W/kg
SAR(1 g) = 2.52 W/kg; SAR(10 g) = 1.63 W/kg
Maximum value of SAR (measured) = 3.69 W/kg



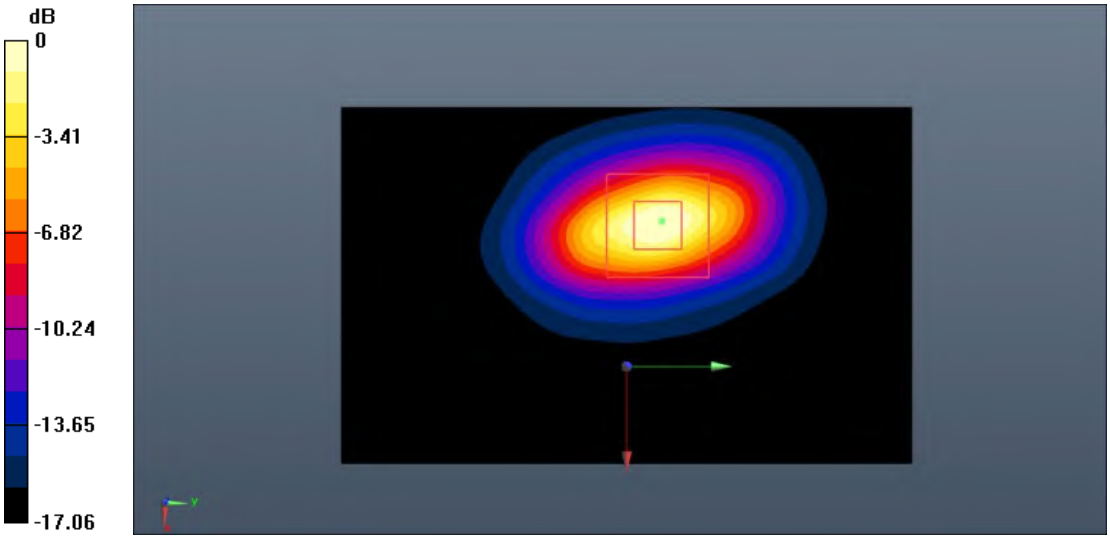
0 dB = 3.69 W/kg = 5.67 dB W/kg

Fig.B.2. Validation 835MHz 250mW

1750MHz
Date: 2023-6-18
Electronics: DAE4 Sn786
Medium: Head 1750MHz
Medium parameters used: f = 1750 MHz; σ = 1.359 S/m; ε_r = 40.573; ρ = 1000 kg/m^3
Communication System: CW Frequency: 1750 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.81, 8.81, 8.81)

System Validation/Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 78.669 V/m; Power Drift = -0.06 dB
SAR(1 g) = 9.10 W/kg; SAR(10 g) = 4.94 W/kg
Maximum value of SAR (interpolated) = 13.0 W/kg

System Validation/Zoom Scan (7x7x7)/Cube0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 78.669 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 17.6 W/kg
SAR(1 g) = 8.84 W/kg; SAR(10 g) = 4.82 W/kg
Maximum value of SAR (measured) = 12.8 W/kg



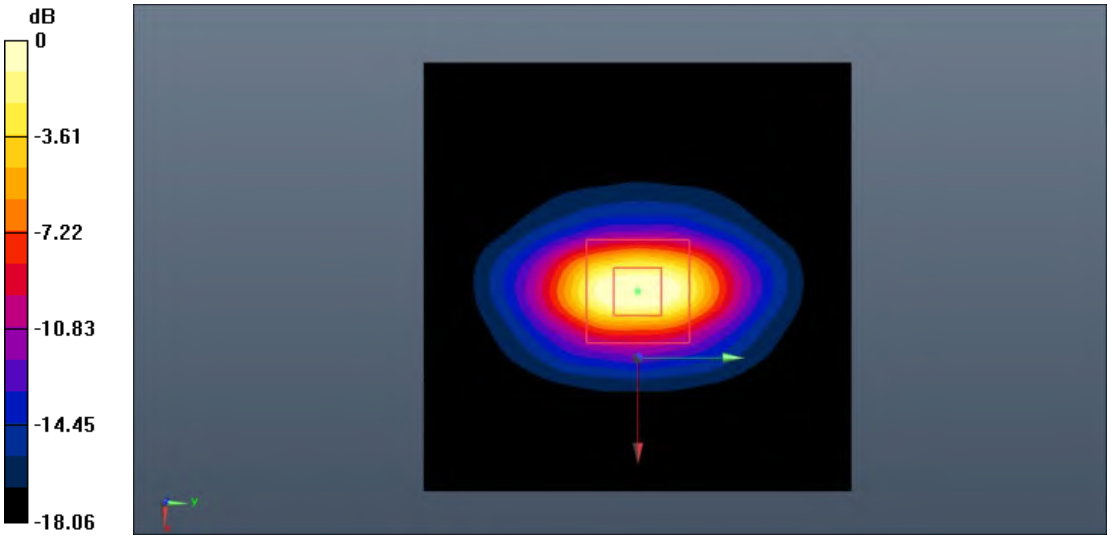
0 dB = 12.8 W/kg = 11.07 dB W/kg

Fig.B.3. Validation 1750MHz 250mW

1900MHz
Date: 2023-6-20
Electronics: DAE4 Sn786
Medium: Head 1900MHz
Medium parameters used: f = 1900 MHz; σ = 1.382 S/m; ε_r = 39.234; ρ = 1000 kg/m^3
Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.55, 8.55, 8.55)

System Validation/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 85.123 V/m; Power Drift = -0.11 dB
SAR(1 g) = 9.92 W/kg; SAR(10 g) = 5.14 W/kg
Maximum value of SAR (interpolated) = 15.8 W/kg

System Validation/Zoom Scan (7x7x7)/Cube0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 85.123 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 19.2 W/kg
SAR(1 g) = 9.77 W/kg; SAR(10 g) = 5.05 W/kg
Maximum value of SAR (measured) = 15.5 W/kg



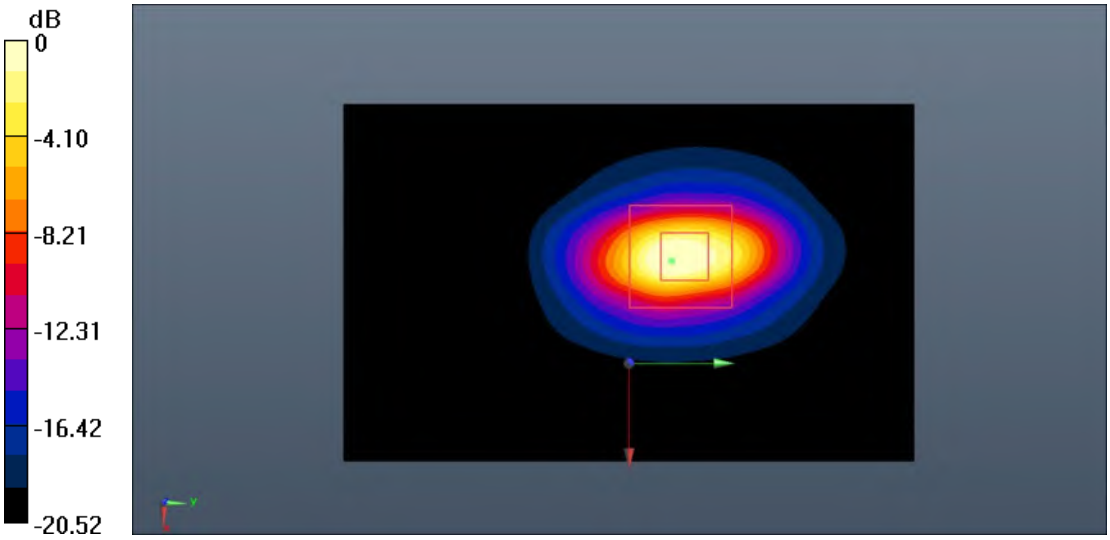
0 dB = 15.5 W/kg = 10.61 dB W/kg

Fig.B.4. Validation 1900MHz 250mW

2300MHz
Date: 2023-6-22
Electronics: DAE4 Sn786
Medium: Head 2300MHz
Medium parameters used: f = 2300 MHz; σ = 1.648 S/m; ε_r = 39.916; ρ = 1000 kg/m^3
Communication System: CW Frequency: 2300 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.30, 8.30, 8.30)

System Validation/Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 90.556 V/m; Power Drift = -0.05 dB
SAR(1 g) = 11.9 W/kg; SAR(10 g) = 5.67 W/kg
Maximum value of SAR (interpolated) = 20.1 W/kg

System Validation/Zoom Scan (7x7x7)/Cube0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 90.556 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 26.2 W/kg
SAR(1 g) = 11.6 W/kg; SAR(10 g) = 5.54 W/kg
Maximum value of SAR (measured) = 19.8 W/kg



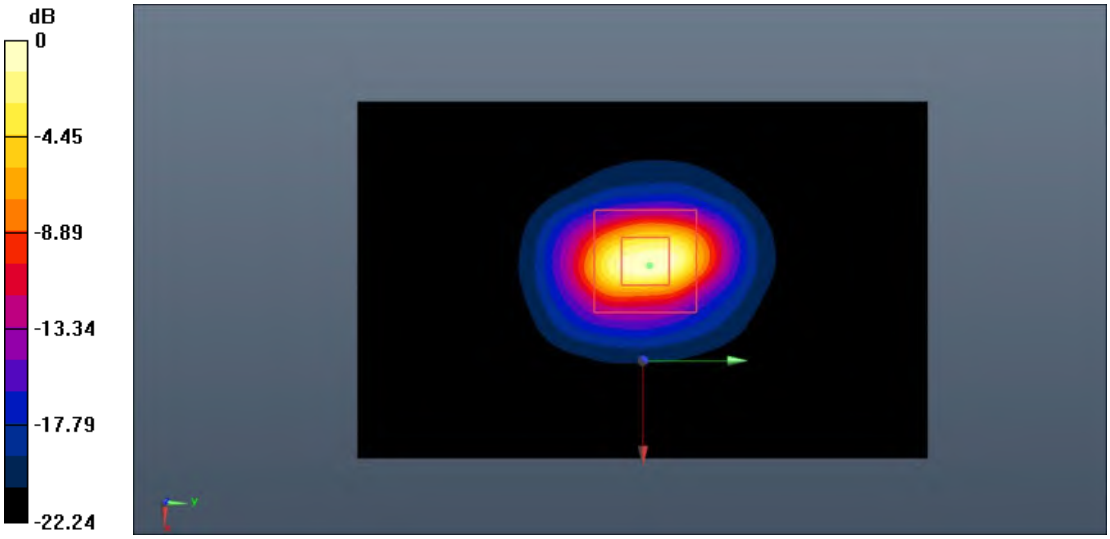
0 dB = 19.8 W/kg = 12.97 dB W/kg

Fig.B.5. Validation 2300MHz 250mW

2450MHz
Date: 2023-7-12
Electronics: DAE4 Sn786
Medium: Head 2450MHz
Medium parameters used: f = 2450 MHz; σ = 1.849 S/m; ε_r = 38.372; ρ = 1000 kg/m^3
Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.02, 8.02, 8.02)

System Validation/Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 97.065 V/m; Power Drift = 0.12 dB
SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.07 W/kg
Maximum value of SAR (interpolated) = 22.5 W/kg

System Validation/Zoom Scan (7x7x7)/Cube0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 97.065 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 30.3 W/kg
SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.16 W/kg
Maximum value of SAR (measured) = 22.2 W/kg



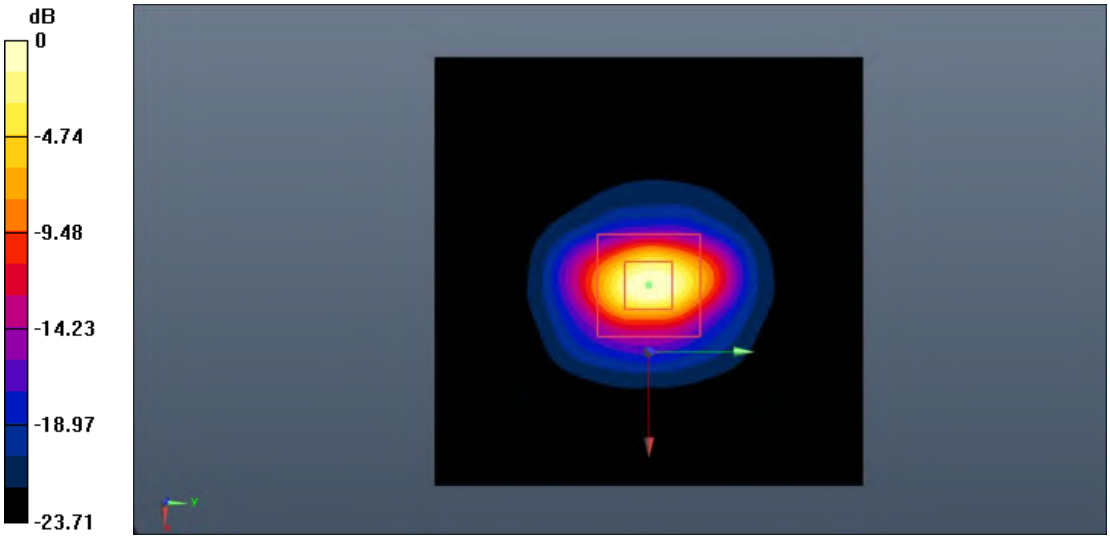
0 dB = 22.2 W/kg = 13.46 dB W/kg

Fig.B.6. Validation 2450MHz 250mW

2550MHz
Date: 2023-6-26
Electronics: DAE4 Sn786
Medium: Head 2550MHz
Medium parameters used: f = 2550 MHz; σ = 1.941 S/m; ε_r = 38.527; ρ = 1000 kg/m^3
Communication System: CW Frequency: 2550 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (8.02, 8.02, 8.02)

System Validation/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 96.745 V/m; Power Drift = 0.03 dB
SAR(1 g) = 14.2 W/kg; SAR(10 g) = 6.33 W/kg
Maximum value of SAR (interpolated) = 22.5 W/kg

System Validation/Zoom Scan (7x7x7)/Cube0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.745 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 31.2 W/kg
SAR(1 g) = 14.4 W/kg; SAR(10 g) = 6.40 W/kg
Maximum value of SAR (measured) = 22.8 W/kg



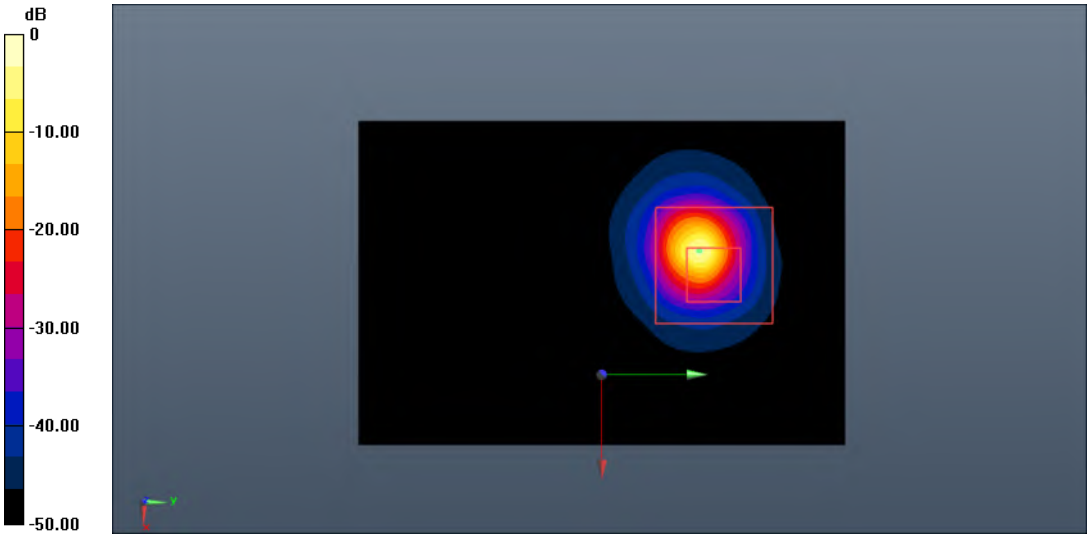
0 dB = 22.8 W/kg = 13.58 dB W/kg

Fig.B.7. Validation 2550MHz 250mW

5250MHz
Date: 2023-7-10
Electronics: DAE4 Sn786
Medium: Head 5250MHz
Medium parameters used: f = 5250 MHz; σ = 4.796 S/m; ε_r = 35.174; ρ = 1000 kg/m^3
Communication System: CW Frequency: 5250 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (5.72, 5.72, 5.72)

System Validation/Area Scan (61x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 68.128 V/m; Power Drift = 0.13 dB
SAR(1 g) = 8.07 W/kg; SAR(10 g) = 2.29 W/kg
Maximum value of SAR (interpolated) = 19.3 W/kg

System Validation/Zoom Scan (8x8x21)/Cube0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 68.128 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 35.5 W/kg
SAR(1 g) = 8.25 W/kg; SAR(10 g) = 2.33 W/kg
Maximum value of SAR (measured) = 19.5 W/kg



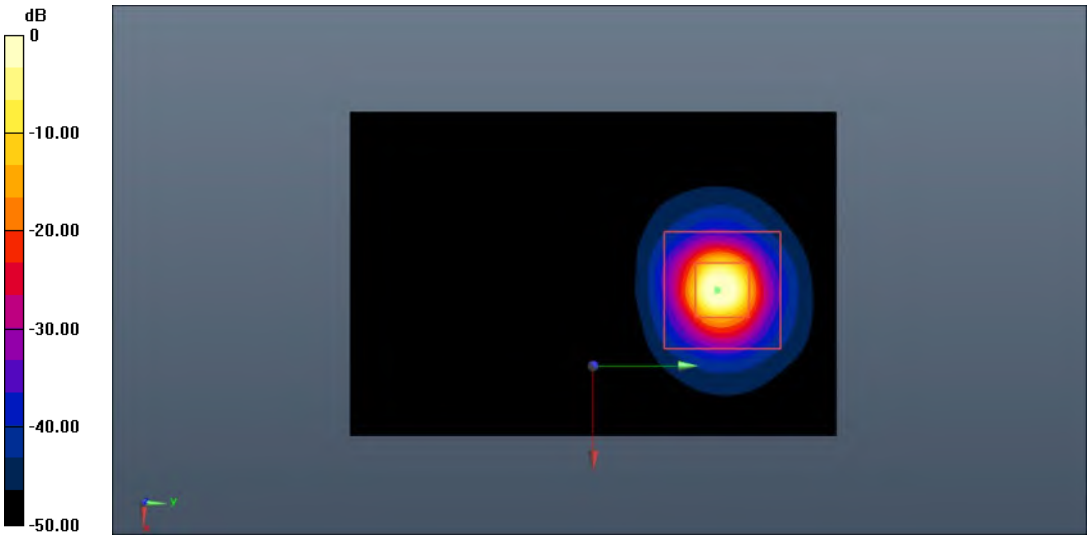
0 dB = 19.5 W/kg = 12.90 dB W/kg

Fig.B.8. Validation 5250MHz 100mW

5600MHz
Date: 2023-7-10
Electronics: DAE4 Sn786
Medium: Head 5600MHz
Medium parameters used: f = 5600 MHz; σ = 5.014 S/m; ε_r = 36.058; ρ = 1000 kg/m^3
Communication System: CW Frequency: 5600 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (5.13, 5.13, 5.13)

System Validation/Area Scan (61x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 67.265 V/m; Power Drift = -0.08 dB
SAR(1 g) = 8.11 W/kg; SAR(10 g) = 2.35 W/kg
Maximum value of SAR (interpolated) = 19.4 W/kg

System Validation/Zoom Scan (8x8x21)/Cube0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 67.265 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 31.3 W/kg
SAR(1 g) = 7.98 W/kg; SAR(10 g) = 2.32 W/kg
Maximum value of SAR (measured) = 19.1 W/kg



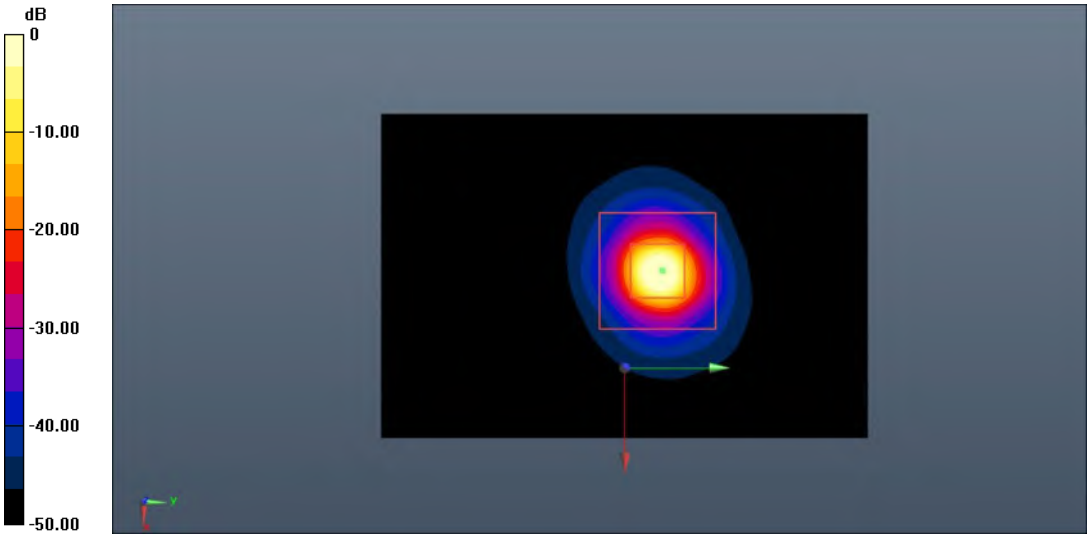
b) 0 dB = 19.1 W/kg = 12.81 dB W/kg

Fig.B.9. Validation 5600MHz 100mW

5750MHz
Date: 2023-7-10
Electronics: DAE4 Sn786
Medium: Head 5750 MHz
Medium parameters used: f = 5750 MHz; σ = 5.137 S/m; ε_r = 35.805; ρ = 1000 kg/m^3
Communication System: CW Frequency: 5750 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7683 ConvF (5.23, 5.23, 5.23)

System Validation/Area Scan (61x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Reference Value = 64.244 V/m; Power Drift = -0.10 dB
SAR(1 g) = 7.74 W/kg; SAR(10 g) = 2.18 W/kg
Maximum value of SAR (interpolated) = 17.8 W/kg

System Validation/Zoom Scan (8x8x21)/Cube0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 64.244 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 28.6 W/kg
SAR(1 g) = 7.51 W/kg; SAR(10 g) = 2.15 W/kg
Maximum value of SAR (measured) = 17.5 W/kg



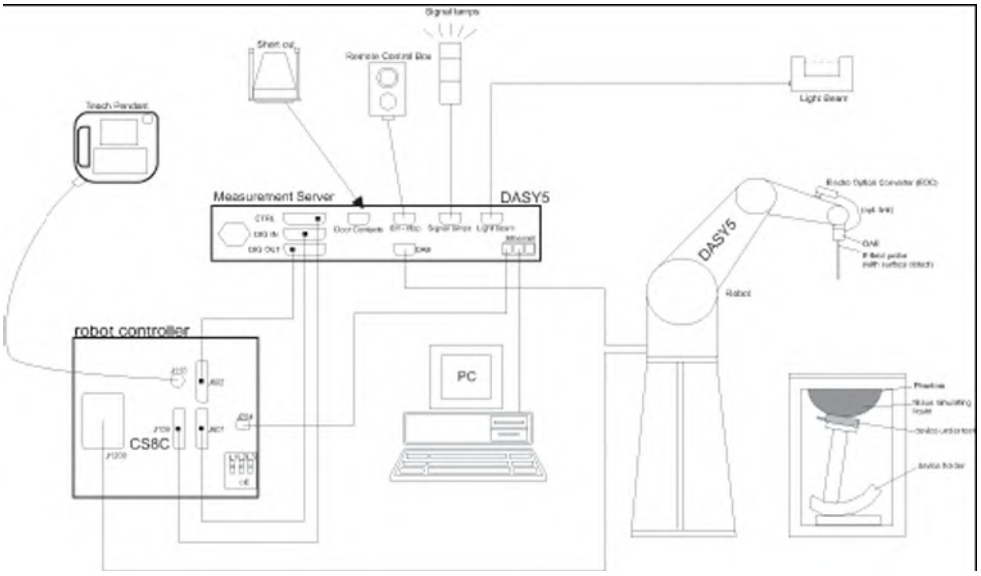
0 dB = 17.5 W/kg = 12.43 dB W/kg

Fig.B.10. Validation 5750MHz 100mW

ANNEX C: SAR Measurement Setup

C.1. Measurement Set-up

DASY5 system for performing compliance tests is illustrated above graphically. This system consists of the following items:



Picture C.1 SAR Lab Test Measurement Set-up

- A standard high precision 6-axis robot (Stäubli TX=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 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 software reads the reflection durning a software approach and looks for the maximum using 2ndord 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
Dynamic Range: 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 of mobile phones
Dosimetry in strong gradient fields

Picture C.2 Near-field Probe

Picture C.3 E-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 is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The DASY device holder is constructed of low-loss

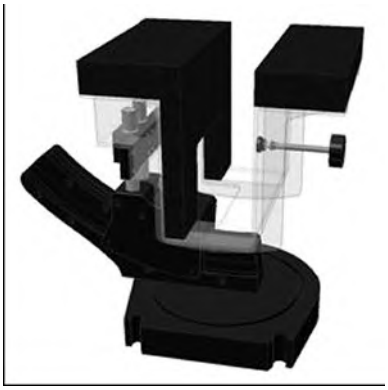
POM material having the following dielectric

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 C.7-1: Device Holder

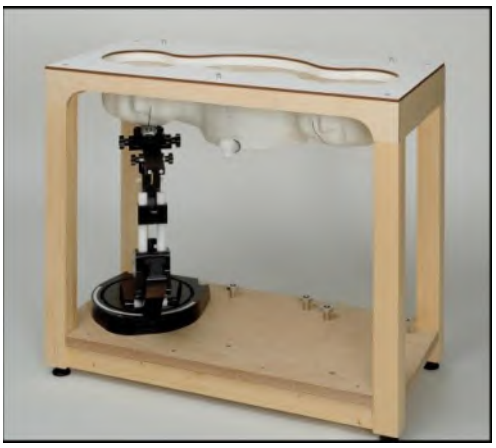


Picture C.7-2: Laptop Extension Kit

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

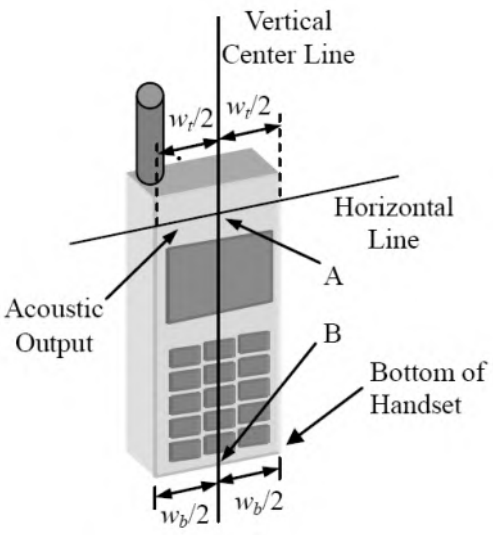


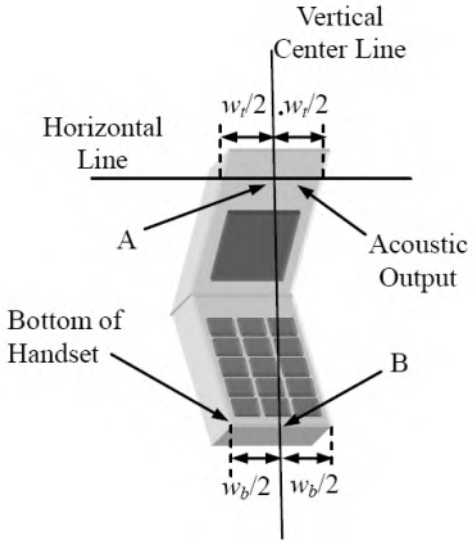
Picture C.8: SAM Twin Phantom

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

D.1. General considerations

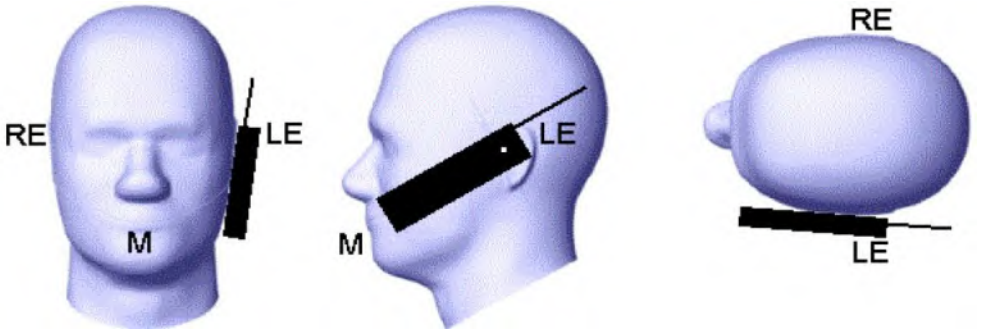
This standard specifies two handset test positions against the head phantom – the “cheek” position and the “tilt” position.



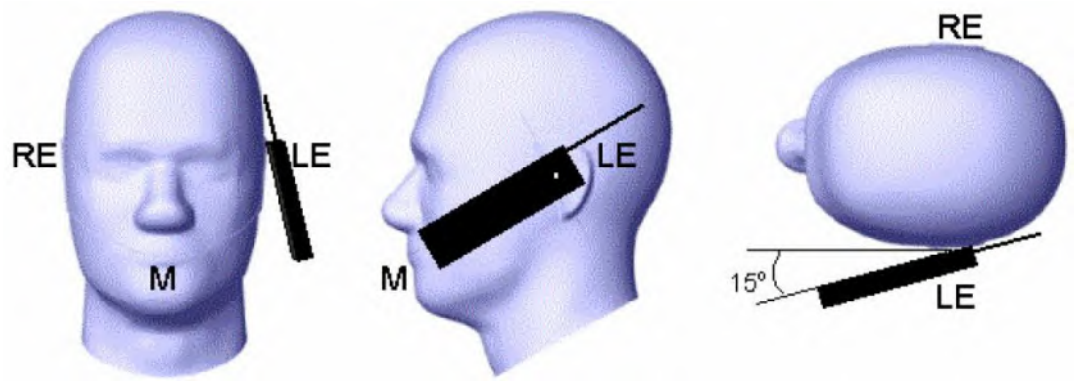


w_t	Width of the handset at the level of the acoustic
w_b	Width of the bottom of the handset
A	Midpoint of the width w_t of the handset at the level of the acoustic output
B	Midpoint of the width w_b of the bottom of the handset

Picture D.1-a Typical “fixed” case handset **Picture D.1-b Typical “clam-shell” case handset**



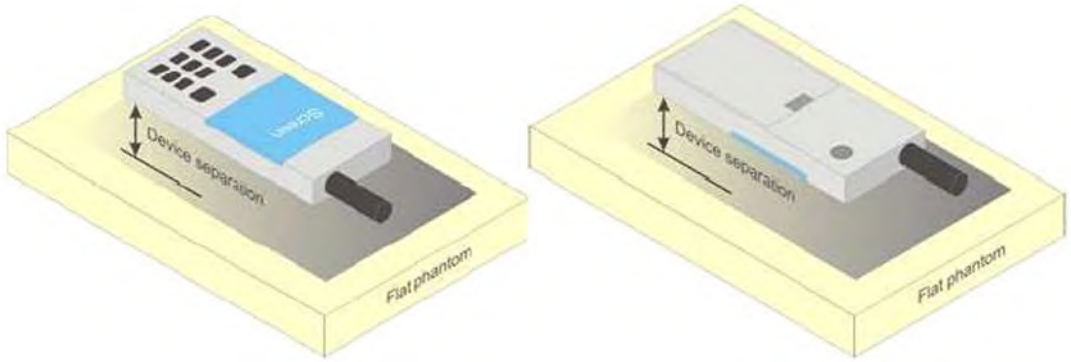
Picture D.2 Cheek position of the wireless device on the left side of SAM



Picture D.3 Tilt position of the wireless device on the left side of SAM

D.2. 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.

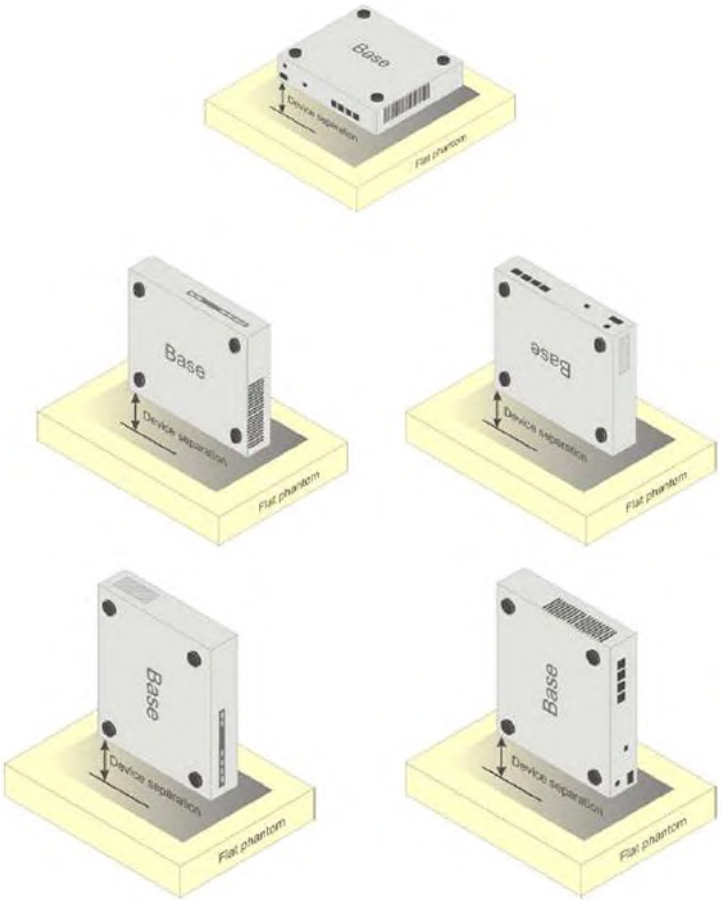


Picture D.4 Test positions for body-worn devices

D.3. 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. Picture 8.5 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.5 Test positions for desktop devices

D.4. DUT Setup Photos

Picture D.6

ANNEX E: Equivalent Media Recipes

The liquid used for the frequency range of 700-6000 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.

Table E.1: Composition of the Tissue Equivalent Matter

Frequency (MHz)	835	1750	1900	2450	2600	5200	5800
Water	41.45	55.242	55.242	58.79	58.79	65.53	66.10
Sugar	56.0	/	/	/	/	/	/
Salt	1.45	0.306	0.306	0.06	0.06		
Preventol	0.1	/	/	/	/	17.24	16.95
Cellulose	1.0	/	/	/	/	17.24	16.95
Glycol Monobutyl	/	44.452	44.452	41.15	41.15	/	/
Diethylenglycol monohexylether	/	/	/	/	/	/	/
Triton X-100	/	/	/	/	/	/	/
Dielectric Parameters Target Value	ε=41.5 σ=0.90	ε=40.08 σ=1.37	ε=40.0 σ=1.40	ε=39.20 σ=1.80	ε=39.01 σ=1.96	ε=35.99 σ=4.66	ε=35.30 σ=5.27

Note: There is a little adjustment respectively for 750, 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

Probe SN.	Liquid name (MHz)	Validation date	Frequency point	CW Validation	Modulation Signal Validation		
					Modulation Type	Duty Factor	PAR
7683	Head 750	2023-02-20	750MHz	Pass	N/A	N/A	N/A
7683	Head 835	2023-02-20	835MHz	Pass	GMSK	Pass	N/A
7683	Head 1750	2023-02-20	1750MHz	Pass	N/A	N/A	N/A
7683	Head 1900	2023-02-20	1900MHz	Pass	GMSK	Pass	N/A
7683	Head 2300	2023-02-20	2550MHz	Pass	N/A	N/A	N/A
7683	Head 2450	2023-02-22	2450MHz	Pass	OFDM/TDD	Pass	Pass
7683	Head 2550	2023-02-20	2550MHz	Pass	TDD	Pass	N/A
7683	Head 3500	2023-02-21	3500MHz	Pass	TDD	Pass	N/A
7683	Head 3700	2023-02-21	3700MHz	Pass	TDD	Pass	N/A
7683	Head 3900	2023-02-21	3900MHz	Pass	TDD	Pass	N/A
7683	Head 5250	2023-02-22	5250MHz	Pass	OFDM	N/A	Pass
7683	Head 5600	2023-02-22	5600MHz	Pass	OFDM	N/A	Pass
7683	Head 5750	2023-02-22	5750MHz	Pass	OFDM	N/A	Pass

ANNEX G: DAE Calibration Certificate

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CNAS CALIBRATION CNAS L0570

Client : SAICT Certificate No: Z22-60439

CALIBRATION CERTIFICATE

Object	DAE4 - SN: 786
Calibration Procedure(s)	FF-Z11-002-01 Calibration Procedure for the Data Acquisition Electronics (DAEx)
Calibration date:	September 29, 2022

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Process Calibrator 753	1971018	14-Jun-22 (CTTL, No.J22X04180)	Jun-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: October 02, 2022

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

Certificate No: Z22-60439 Page 1 of 3

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Glossary:

DAE	data acquisition electronics
Connector angle	information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters:

- *DC Voltage Measurement*: Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle*: The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The report provide only calibration results for DAE, it does not contain other performance test results.

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DC Voltage Measurement

A/D - Converter Resolution nominal

High Range: 1LSB = 6.1μV , full range = -100...+300 mV
Low Range: 1LSB = 61nV , full range = -1.....+3mV

DASY measurement parameters: Auto Zero Time: 3 sec; Measuring time: 3 sec

Calibration Factors	X	Y	Z
High Range	404.121 ± 0.15% (k=2)	404.267 ± 0.15% (k=2)	404.668 ± 0.15% (k=2)
Low Range	3.97160 ± 0.7% (k=2)	3.97314 ± 0.7% (k=2)	3.95725 ± 0.7% (k=2)

Connector Angle

Connector Angle to be used in DASY system	228.5° ± 1 °

ANNEX H: Probe Calibration Certificate

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CNAS CALIBRATION CNAS L0570

Client SAICT Certificate No: Z23-60028

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN : 7683
Calibration Procedure(s)	FF-Z11-004-02 Calibration Procedures for Dosimetric E-field Probes
Calibration date:	February 16, 2023

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

All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)℃ 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	14-Jun-22(CTTL, No.J22X04181)	Jun-23
Power sensor NRP-Z91	101547	14-Jun-22(CTTL, No.J22X04181)	Jun-23
Power sensor NRP-Z91	101548	14-Jun-22(CTTL, No.J22X04181)	Jun-23
Reference 10dBAttenuator	18N50W-10dB	19-Jan-23(CTTL, No.J23X00212)	Jan-25
Reference 20dBAttenuator	18N50W-20dB	19-Jan-23(CTTL, No.J23X00211)	Jan-25
Reference Probe EX3DV4	SN 3846	20-May-22(SPEAG, No.EX3-3846_May22)	May-23
DAE4	SN 771	20-Jan-22(SPEAG, No.DAE4-771_Jan22)	Jan-23
DAE4	SN 1555	25-Aug-22(SPEAG, No.DAE4-1555_Aug22)	Aug-23
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	14-Jun-22(CTTL, No.J22X04182)	Jun-23
Network Analyzer E5071C	MY46110673	10-Jan-23(CTTL, No.J23X00104)	Jan-24

	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: February 21, 2023

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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: 7683

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²)[A]	0.63	0.63	0.62	±10.0%
DCP(mV)[B]	103.7	104.8	104.6	

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	207.3	±2.1%	±4.7%
		Y	0.0	0.0	1.0		206.5		
		Z	0.0	0.0	1.0		208.9		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	1.41	60.00	5.76		60	±2.1%	±9.6%
		Y	1.40	60.00	5.71	10.00	60		
		Z	1.40	60.00	5.74		60		
10353-AAA	Pulse Waveform (200Hz, 20%)	X	6.00	68.00	7.00		80	±2.7%	±9.6%
		Y	6.00	68.00	7.00	6.99	80		
		Z	0.80	60.00	4.57		80		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	0.17	139.32	0.54		95	±2.3%	±9.6%
		Y	0.18	142.45	0.34	3.98	95		
		Z	0.39	152.48	0.68		95		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	8.34	159.94	4.53		120	±1.3%	±9.6%
		Y	6.71	159.96	17.92	2.22	120		
		Z	9.39	159.08	22.96		120		
10387-AAA	QPSK Waveform, 1 MHz	X	0.54	62.14	10.35		150	±4.5%	±9.6%
		Y	0.69	64.27	11.73	1.00	150		
		Z	0.65	64.12	11.72		150		
10388-AAA	QPSK Waveform, 10 MHz	X	1.29	64.42	12.76		150	±1.5%	±9.6%
		Y	1.44	65.67	13.79	0.00	150		
		Z	1.42	65.70	13.74		150		
10396-AAA	64-QAM Waveform, 100 kHz	X	1.75	65.11	16.63		150	±1.1%	±9.6%
		Y	1.85	66.39	17.86	3.01	150		
		Z	1.81	65.99	17.68		150		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X	3.99	66.17	15.25		150	±4.7%	±9.6%
		Y	4.14	66.41	15.55	0.00	150		
		Z	4.12	66.53	15.58		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: 7683

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	11.17	81.84	33.99	2.45	0.00	4.90	0.33	0.00	1.01
Y	12.84	94.42	34.34	2.69	0.00	4.90	0.30	0.00	1.02
Z	12.01	88.21	34.28	3.18	0.00	4.90	0.21	0.00	1.02

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	156.2
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:7683

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	10.75	10.75	10.75	0.11	1.60	±12.7%
900	41.5	0.97	10.28	10.28	10.28	0.17	1.26	±12.7%
1640	40.3	1.29	9.01	9.01	9.01	0.19	1.12	±12.7%
1750	40.1	1.37	8.81	8.81	8.81	0.18	1.18	±12.7%
1900	40.0	1.40	8.55	8.55	8.55	0.24	1.02	±12.7%
2100	39.8	1.49	8.65	8.65	8.65	0.21	1.08	±12.7%
2300	39.5	1.67	8.30	8.30	8.30	0.66	0.67	±12.7%
2450	39.2	1.80	8.02	8.02	8.02	0.66	0.68	±12.7%
2600	39.0	1.96	7.76	7.76	7.76	0.55	0.75	±12.7%
3300	38.2	2.71	7.49	7.49	7.49	0.30	1.03	±13.9%
3500	37.9	2.91	7.34	7.34	7.34	0.31	1.04	±13.9%
3700	37.7	3.12	7.09	7.09	7.09	0.30	1.06	±13.9%
3900	37.5	3.32	6.95	6.95	6.95	0.30	1.45	±13.9%
4100	37.2	3.53	6.91	6.91	6.91	0.30	1.40	±13.9%
4400	36.9	3.84	6.74	6.74	6.74	0.30	1.50	±13.9%
4600	36.7	4.04	6.66	6.66	6.66	0.40	1.33	±13.9%
4800	36.4	4.25	6.58	6.58	6.58	0.40	1.38	±13.9%
4950	36.3	4.40	6.36	6.36	6.36	0.40	1.35	±13.9%
5250	35.9	4.71	5.72	5.72	5.72	0.45	1.32	±13.9%
5600	35.5	5.07	5.13	5.13	5.13	0.40	1.60	±13.9%
5750	35.4	5.22	5.23	5.23	5.23	0.45	1.40	±13.9%

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

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

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

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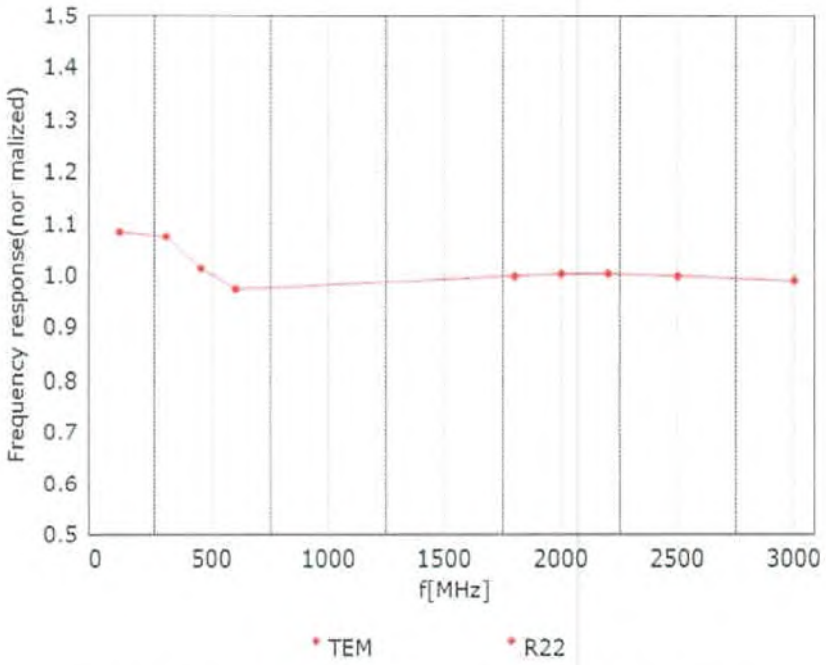
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



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

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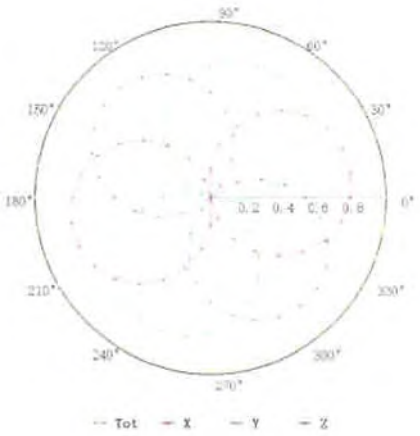
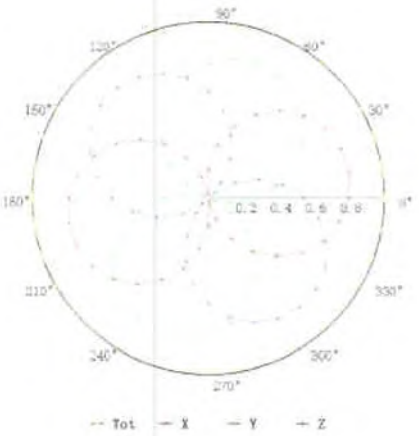
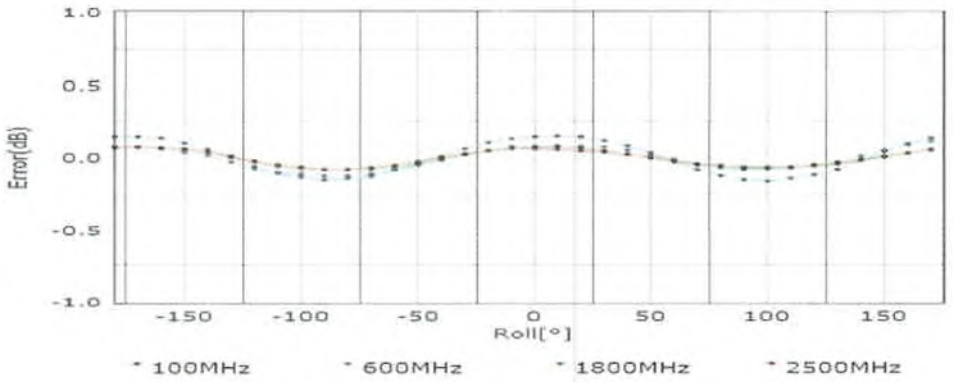
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





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