TESTING
NVLAP LAB CODE 600118-0

SAR TEST REPORT

No. I21Z62674-SEM01

For

TCL Communication Ltd.

GSM/UMTS/LTE Mobile phone

Model Name: A509DL

with

Hardware Version: PIO

Software Version: vL7V

FCC ID: 2ACCJH131

Issued Date: 2022-2-15

Note:

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

Test Laboratory:

CTTL, Telecommunication Technology Labs, CAICT

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I21Z62674-SEM01	Rev.0	2022-2-15	Initial creation of test report

TABLE OF CONTENT

1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL(Shouxiang)
Address:	No. 51 Shouxiang Science Building, Xueyuan Road, Haidian District, Beijing, P. R. China100191

1.2 Testing Environment

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

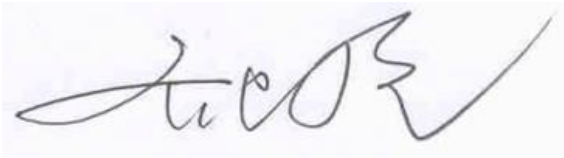
1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Lin Xiaojun
Testing Start Date:	January 7, 2021
Testing End Date:	January 22, 2021

1.4 Signature

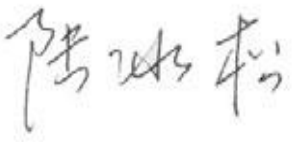
Lin Xiaojun

(Prepared this test report)



Qi Dianyuan

(Reviewed this test report)



Lu Bingsong

Deputy Director of the laboratory

(Approved this test report)

2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for TCL Communication Ltd. GSM/UMTS/LTE Mobile phone A509DL are as follows:

Table 2.1: Highest Reported SAR -Standalone(1g)

Mode		Highest Reported SAR (1g)			
		1g SAR Head	1g SAR Hotspot 10mm	1g SAR Body-worn 15mm	Product Specific 10-g SAR 0mm
GSM	GSM 850	0.26	0.33	0.33	/
	PCS 1900	0.17	0.42	0.50	/
WCDMA	UMTS FDD 2	0.36	0.66	0.46	/
	UMTS FDD 4	0.60	0.75	0.56	/
	UMTS FDD 5	0.31	0.45	0.45	/
LTE	LTE Band 12	0.20	0.42	0.42	/
	LTE Band 13	0.27	0.41	0.41	/
	LTE Band 25	0.27	0.49	0.40	/
	LTE Band 26	0.29	0.38	0.38	/
	LTE Band 41 PC3	0.16	0.57	0.47	/
	LTE Band 41 PC2	0.29	0.73	0.52	/
	LTE Band 66	0.53	0.85	0.60	1.22
	LTE Band 71	0.11	0.40	0.40	/
WLAN 2.4 GHz		0.27	0.35	0.35	0.63
BT		0.05	0.01	0.01	0.05

Note: The device have similar frequency in some LTE bands ： LTEB2/25, 4/66, 5/26, since the supported frequency spans for the smaller LTE bands are completely cover by the larger LTE bands and the channel bandwidth and other operating parameters for the smaller band be fully supported by the larger band, therefore, only larger LTE bands were required to be tested for SAR.

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

For body operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and which provides a minimum separation distance of 10 mm for hotspot and 15mm for body worn between this device and the body of the user. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

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

The measurement together with the test system set-up is described in annex C. A detailed description of the equipment under test can be found in chapter 4 of this test report. The highest reported SAR value is obtained at the case of **(Table 2.1),** and the values are**: 0.85 W/kg(1g).**

Table 2.2: The sum of reported SAR values for Main antenna and WiFi-2.45G

	Position	Cellular antenna	WiFi	Sum
Highest reported SAR value for Head	Right hand, Cheek (WCDMA1700)	0.60	0.25	**0.85**
Maximum reported SAR value for Body	Rear 10mm (LTE Band66)	0.85	0.35	**1.20**

Note1: we have evaluated and chose the highest value of body 10mm and 15mm in the above table.

Table 2.3: The sum of reported SAR values for Main antenna and +BT

	Band	Cellular antenna	BT	Sum
Highest reported SAR value for Head	Right hand, Cheek (WCDMA1700)	0.60	**0.05**	**0.65**
Maximum reported SAR value for Body	Rear 10mm (LTE Band66)	0.85	0.01	**0.86**

Note1: we have evaluated and chose the highest value of body 10mm and 15mm in the above table.

According to the above tables, the highest sum of reported SAR values is **1.20 W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 15.

3 Client Information

3.1 Applicant Information

Company Name:	TCL Communication Ltd.
Address/Post:	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong
Contact Person:	peter.yang
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Telephone:	0086-755-36645759
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3.2 Manufacturer Information

Company Name:	TCL Communication Ltd.
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Contact Person:	peter.yang
E-mail:	peter.yang@tcl.com
Telephone:	0086-755-36645759
Fax:	0086-755-36612000-81722

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

4.1 About EUT

Description:	GSM/UMTS/LTE Mobile phone
Model name:	A509DL
Operating mode(s):	GSM 850/900/1800/1900, WCDMA850/1700/1900, BT, Wi-Fi(2.4G) LTE Band 2/4/5/12/13/25/26/41/66/71
Tested Tx Frequency:	824 – 849 MHz (GSM 850)
	1850 – 1910 MHz (GSM 1900)
	824–849 MHz (WCDMA 850 Band V)
	1710 – 1755 MHz (WCDMA 1700 Band IV)
	1850–1910 MHz (WCDMA1900 Band II)
	699.7 – 711 MHz(LTE Band 12)
	779.5 – 782 MHz(LTE Band 13)
	1850.7–1905 MHz(LTE Band 25)
	814.7 – 841.5 MHz(LTE Band 26)
	2498.5 –2680 MHz (LTE Band 41)
	1710.7 – 1770MHz(LTE Band66)
	665.5 – 688MHz(LTE Band71)
	2412 – 2462 MHz (Wi-Fi 2.4G)
GPRS/EGPRS Multislot Class:	12
GPRS capability Class:	B
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Hotspot mode:	Support

4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI/SN	HW	SW Version
EUT1	015858000011803	PIO	vL7V
EUT2	015858000011670	PIO	vL7V
EUT3	015858000011829	PIO	vL7V
EUT4	015858000011662	PIO	vL7V
EUT5	015858000011696	PIO	vL7V

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

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

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	CAB2880000C7	/	VEKEN
AE2	Battery	CAB2880001C1	/	BYD

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

5 TEST METHODOLOGY

5.1 Applicable Limit Regulations

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

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

5.2 Applicable Measurement Standards

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

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

KDB648474 D04 Handset SAR v01r03: SAR Evaluation Considerations for Wireless Handsets.

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

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

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

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

KDB865664 D01SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz.

KDB865664 D02RF Exposure Reporting v01r02: RF Exposure Compliance Reporting and Documentation Considerations

6 Specific Absorption Rate (SAR)

6.1 Introduction

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

6.2 SAR Definition

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

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

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

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

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

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

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

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

7 Tissue Simulating Liquids

The temperature of the tissue-equivalent medium used during measurement must also be within 18 ºC to 25 ºC and within ± 2 ºC of the temperature when the tissue parameters are characterized. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3 – 4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

The dielectric constant (εr) and conductivity (σ) of typical tissue-equivalent media recipes are expected to be within ± 5% of the required target values; but for SAR measurement systems that have implemented the SAR error compensation algorithms documented in IEEE Std 1528-2013, to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, the tolerance for εr and σ may be relaxed to ± 10%. This is limited to frequencies ≤ 3 GHz.

7.1 Targets for tissue simulating liquid

Table 7.1: Targets for tissue simulating liquid

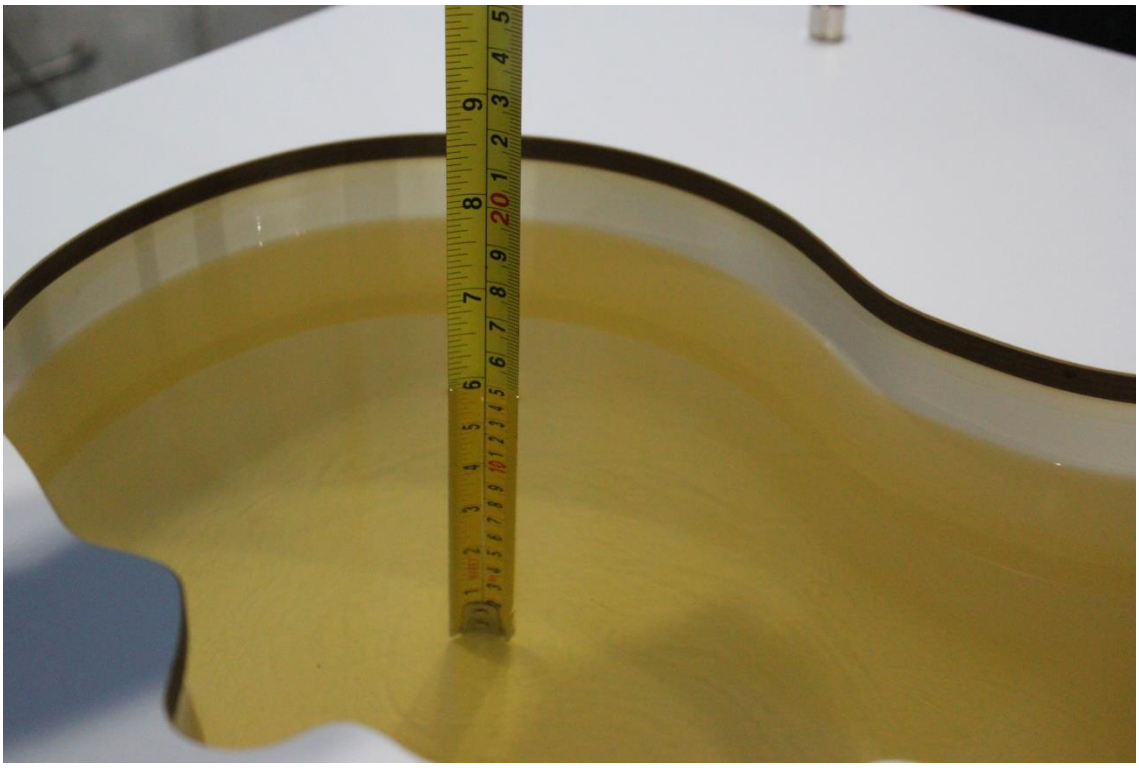
Frequency(MHz)	Liquid Type	Conductivity(σ)	±10% Range	Permittivity(ε)	± 10% Range
750	Head	0.89	0.80～0.98	41.94	37.75～46.13
835	Head	0.90	0.81～0.99	41.5	37.35～45.65
1750	Head	1.40	1.26～1.54	40.0	36～44
1900	Head	1.40	1.26～1.54	40.0	36～44
2450	Head	1.80	1.62～1.98	39.2	35.28～43.12
2600	Head	1.96	1.76～2.16	39.01	35.11～42.91

7.2 Dielectric Performance

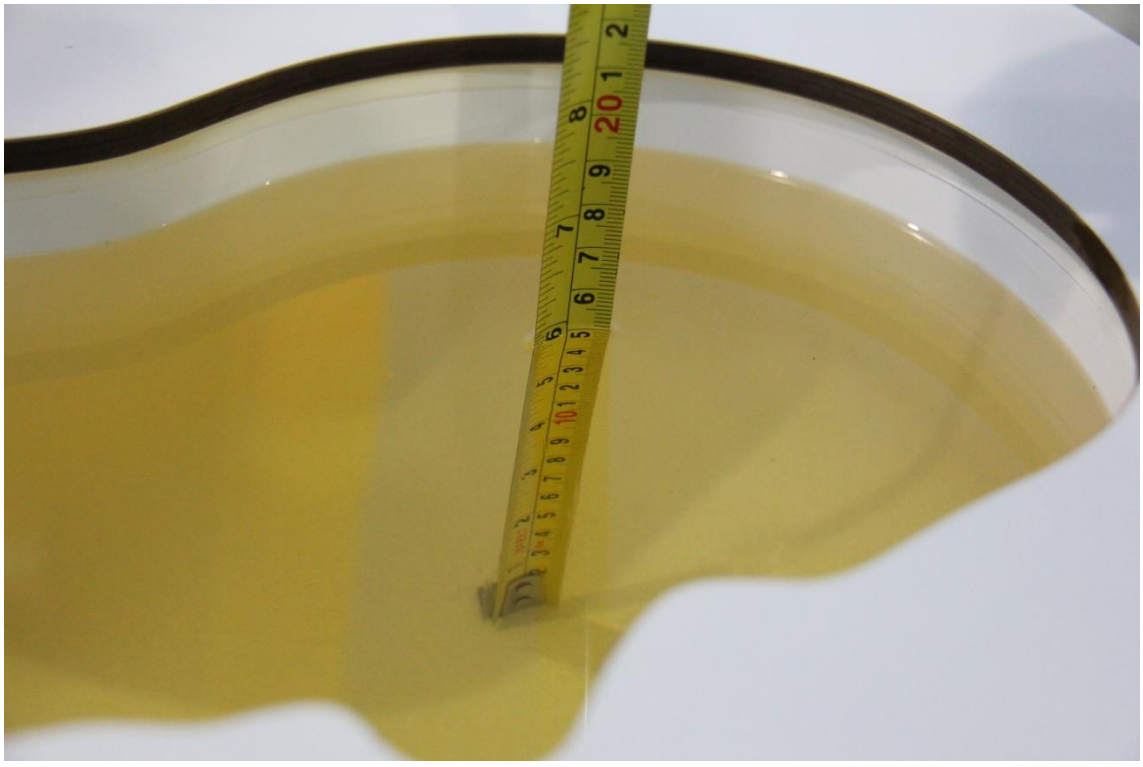
Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date yyyy/mm/dd	Frequency	Type	Permittivity ε	Drift (%)	Conductivity σ (S/m)	Drift (%)
2022/1/7	750MHz	Head	44.323	5.68	0.838	-5.84
2022/1/16	750MHz	Head	45.057	7.43	0.835	-6.18
2022/1/14	835 MHz	Head	45.109	8.70	0.854	-5.11
2022/1/20	835 MHz	Head	44.11	6.29	0.862	-4.22
2022/1/15	1750MHz	Head	42.7	6.54	1.38	0.73
2022/1/18	1900 MHz	Head	42.465	6.16	1.463	4.50
2022/1/22	2450 MHz	Head	40.99	4.57	1.895	5.28
2022/1/13	2600 MHz	Head	40.998	5.10	2.057	4.95

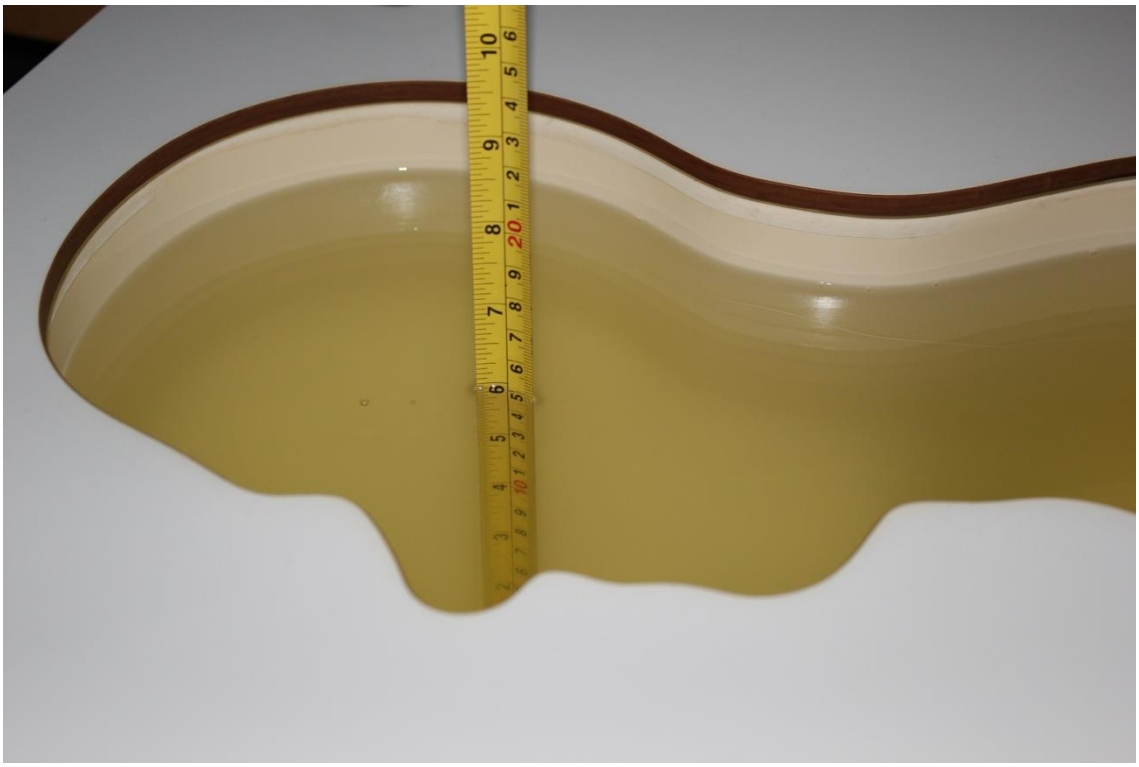
Note: The liquid temperature is (22.0 -23.0)ºC



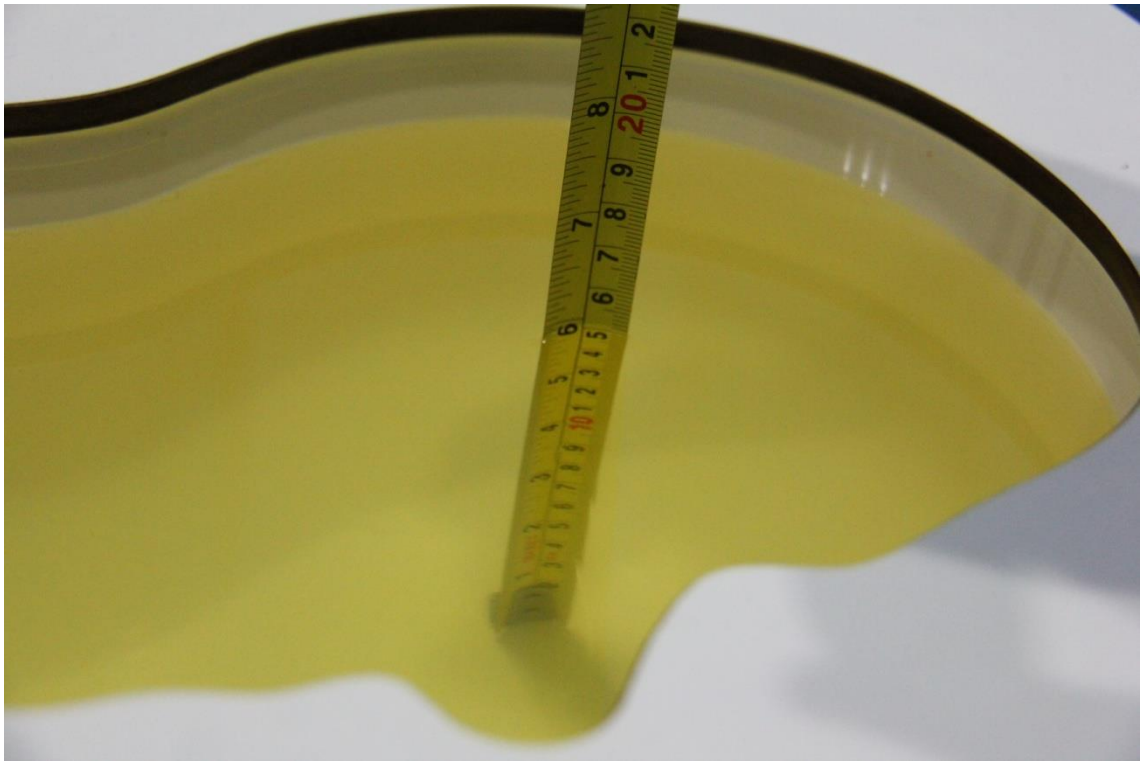
Picture 7-1 Liquid depth in the Head Phantom (750MHz)



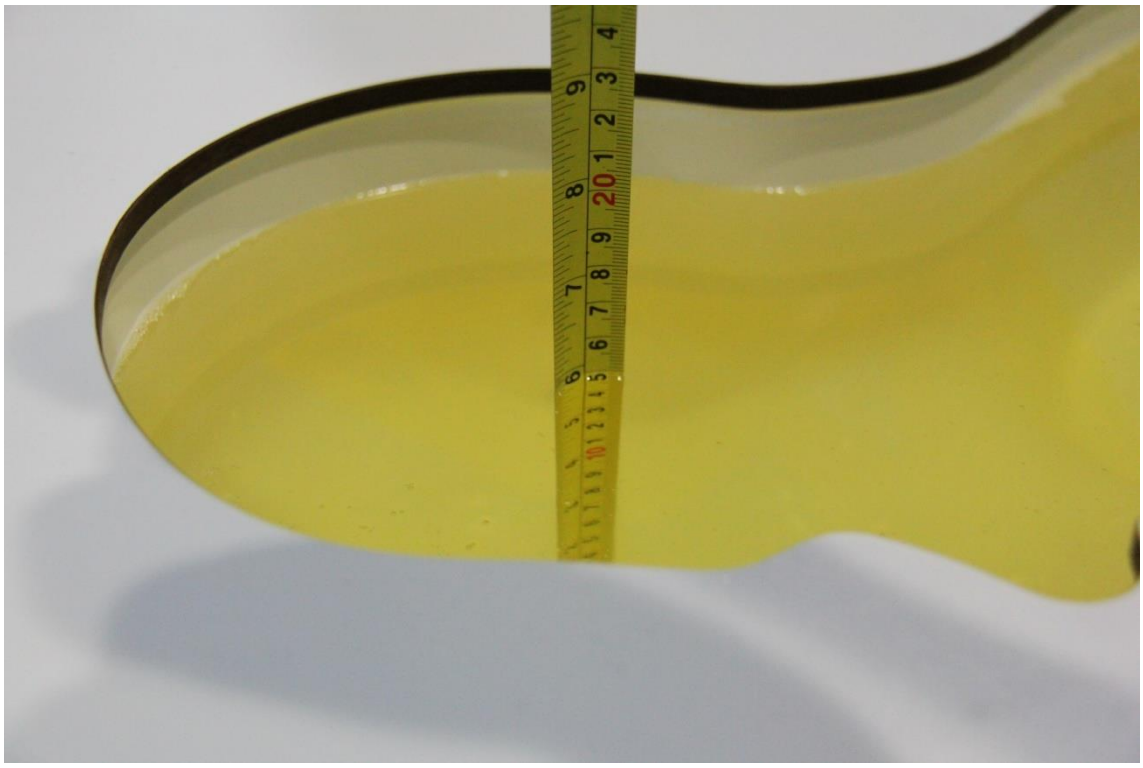
Picture 7-2 Liquid depth in the Head Phantom (835 MHz)



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



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



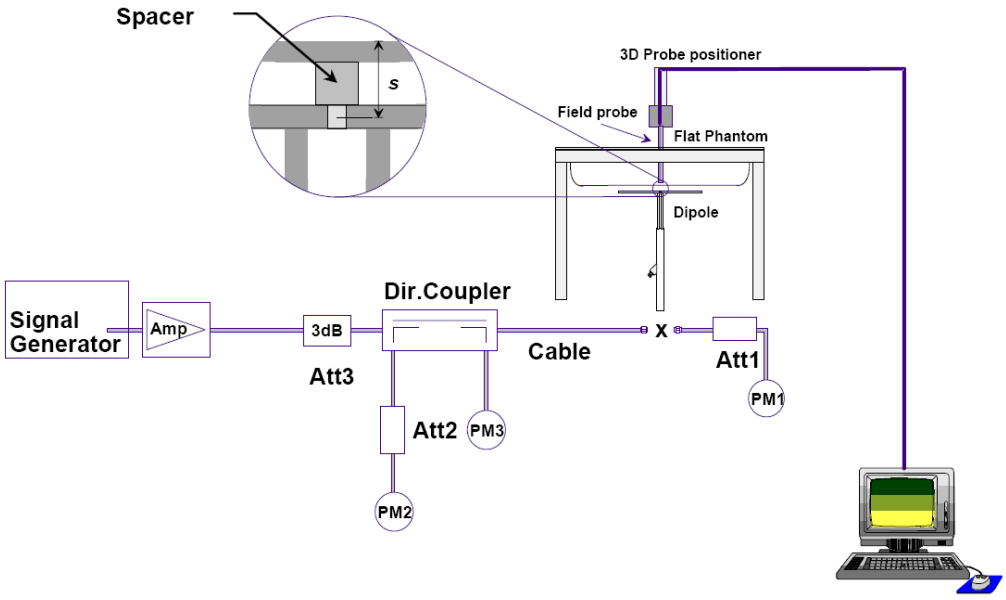
Picture 7-5 Liquid depth in the Head Phantom (2450MHz)

Picture 7-6 Liquid depth in the Head Phantom (2600 MHz)

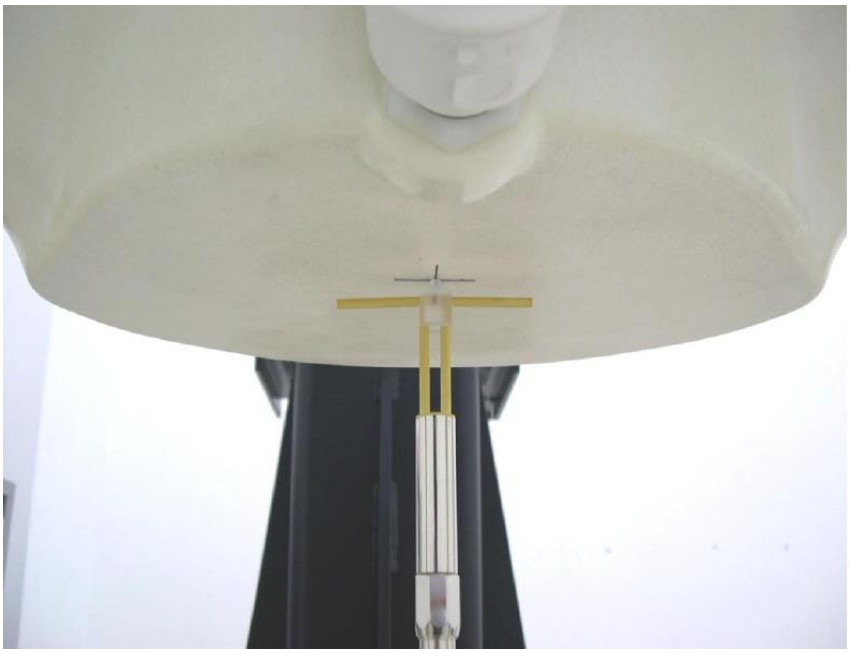
8 System verification

8.1 System Setup

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



Picture 8.1 System Setup for System Evaluation



Picture 8.2 Photo of Dipole Setup

8.2 System Verification

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

Table 8.1: System Verification of Head

Calibration Date	Frequency	Target value (W/kg)		Measured value (W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
2022/1/7	750 MHz	5.65	8.68	5.36	8.12	-5.13%	-6.45%
2022/1/16	750 MHz	5.65	8.68	5.80	8.72	2.65%	0.46%
2022/1/14	835 MHz	6.24	9.63	6.56	10.04	5.13%	4.26%
2022/1/20	835 MHz	6.24	9.63	6.24	9.44	0.00%	-1.97%
2022/1/15	1750 MHz	19.4	36.9	20.1	37.8	3.51%	2.44%
2022/1/18	1900 MHz	20.9	40.1	21.3	40.0	1.82%	-0.25%
2022/1/22	2450 MHz	24.9	53.3	24.4	53.6	-1.85%	0.56%
2022/1/13	2600 MHz	25.5	57.1	24.9	56.0	-2.43%	-1.93%

9 General Measurement Procedure

9.1 *Power Reference Measurement*

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

9.2 *Area Scan*

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0 is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.
Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}	≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
	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.	

9.3 *Zoom Scan*

Zoom Scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 g and 10g of simulated tissue. The Zoom Scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1 g and 10 g and displays these values next to the job's label.

Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

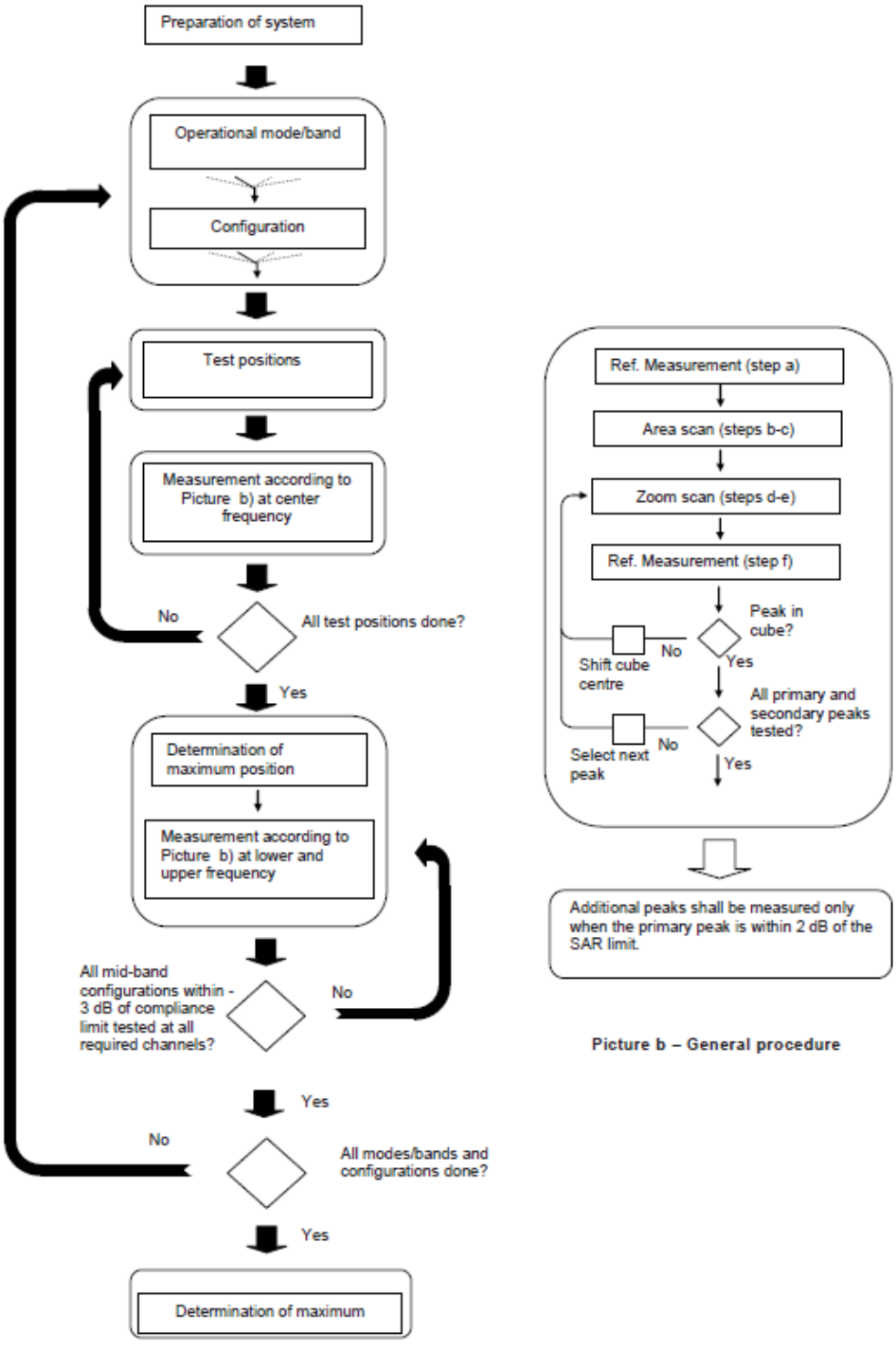
Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	≤ 1.5·$\Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm

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 *reported* 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.

9.4 *Power drift measurement*

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as 10.1.



Picture a – Tests to be performed

Picture b – General procedure

Picture 9.1Block diagram of the tests to be performed

9.5 *Area Scan Based 1-g SAR*

9.5-1 Requirement of KDB

According to the KDB447498 D01 v06, when the implementation is based the specific polynomial fit
algorithm as presented at the 29th Bioelectromagnetics Society meeting (2007) and the estimated 1-gSAR is ≤ 1.2 W/kg, a zoom scan measurement is not required provided it is also not needed for any other purpose; for example, if the peak SAR location required for simultaneous transmission SAR test exclusion can be determined accurately by the SAR system or manually to discriminate between distinctive peaks and scattered noisy SAR distributions from area scans.

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

9.5-2 Fast SAR Algorithms

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

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

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

Both algorithms are implemented in DASY software.

10 Measurement Procedure for different technologies

10.1 GSM/GPRS Measurement Procedures for SAR

GSM / GPRS / EDGE modes is determined by the source-based time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Other configurations of GSM / GPRS / EDGE are considered as secondary modes. The 3G SAR test reduction procedure is applied, when the maximum output power and tune-up tolerance specified for production units in a secondary mode is ≤ ¼ dB higher than the primary mode, SAR measurement is not required for the secondary mode.

10.2 WCDMA Measurement Procedures for SAR

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

For Release 5 HSDPA Data Devices:

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

For Release 6 HSPA Data Devices

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

							β_{ed2}:47/15						
4	2/15	15/15	64	2/15	4/15	4/15	56/75	4	1	1.5	1.5	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.5	1.5	21	81

Rel.7 Release 7 HSPA+ Data Devices

Table C.11.1.4: β values for transmitter characteristics tests with HS-DPCCH and E-DCH with 16QAM

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c.
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

Rel.8 DC-HSDPA (Cat 24)

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

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK

Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.

10.3 LTE Measurement Procedures for SAR

SAR tests for LTE are performed with a base station simulator, Rohde & Rchwarz CMW500 or . Anritsu MT8821C Closed loop power control was used so the UE transmits with maximum output power during SAR testing.

It is performed for conducted power and SAR based on the KDB941225 D05.

SAR is evaluated separately according to the following procedures for the different test positions in each exposure condition – head, body, body-worn accessories and other use conditions. The procedures in the following subsections are applied separately to test each LTE frequency band.

1) QPSK with 1 RB allocation

   Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is ≤ 0.8 W/kg, testing of the remaining RB offset configurations and required test channels is not required for 1 RB allocation; otherwise, SAR is required for the remaining required test channels and only for the RB offset configuration with the highest output power for that channel. When the reported SAR of a required test channel is > 1.45 W/kg, SAR is required for all three RB offset configurations for that required test channel.

2) QPSK with 50% RB allocation

   The procedures required for 1 RB allocation in 1) are applied to measure the SAR for QPSK with 50% RB allocation.

3) QPSK with 100% RB allocation

   For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation in 1) and 2) are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.

TDD test:

TDD testing is performed using guidance from FCC KDB 941225 D05 v02r05 and the SAR test guidance provided in April 2013 TCB works hop notes. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05 v02r05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211.

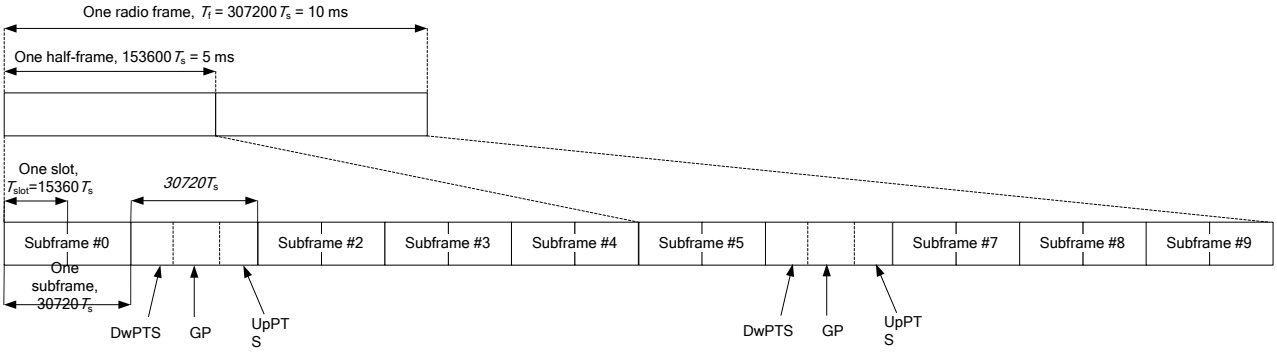


Figure 10.2: Frame structure type 2 (for 5 ms switch-point periodicity)

Table 10.1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

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

Table 10.2: Uplink-downlink configurations

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

Duty factor is calculated by:

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

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

= 0.633

According to the KDB 447498 D01, SAR should be evaluated at more than 3 frequencies for devices supporting transmit bands wider than 100MHz. Oct.2014 FCC-TCB conference notes (Dec. 2014 rev.) specifies the 5 test channels to use for 3GPP band 38/41 SAR evaluation.

10.4 Bluetooth & Wi-Fi Measurement Procedures for SAR

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

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

11 Conducted Output Power

For Main antenna, there are three sets of tune-up power, Normal power（Receiver on）for Head SAR, Low power (Receiver off and Hotspot off) of WCDMAB2, WCDMA B4, LTE B66, LTE B41, LTE B25 for Body SAR test,and Low power (Receiver off and Hotspot on) of GSM1900, WCDMA B2, WCDMA B4, LTE B25, LTE B66, LTE B41 for hotspot test.

Normal power	Low Power-Receiver off and Hotspot off	Low Power-Receiver off and Hotspot on
DSI1	DSI2	DSI3

11.1 GSM Measurement result

GSM850(DSI1)

GSM 850 Speech（GMSK）	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	**190**	**128**			**251**	**190**	**128**
1Txslot	31.76	31.69	31.68	33.3	-9.03	22.73	22.66	22.65
GSM 850 GPRS（GMSK）	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	251	**190**	**128**			**251**	**190**	**128**
1Txslot	31.71	31.64	31.61	33.3	-9.03	22.68	22.61	22.58
2Txslots	28.89	28.80	28.75	30	-6.02	22.87	22.78	22.73
3Txslots	27.95	27.84	27.78	29	-4.26	23.69	23.58	23.52
4Txslots	**26.84**	**26.73**	**26.68**	27.5	**-3.01**	**23.83**	**23.72**	**23.67**
GSM 850 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	251	**190**	**128**			**251**	**190**	**128**
1Txslot	31.68	31.63	31.60	33.3	-9.03	22.65	22.60	22.57
2Txslots	28.87	28.79	28.75	30	-6.02	22.85	22.77	22.73
3Txslots	27.93	27.83	27.77	29	-4.26	23.67	23.57	23.51
4Txslots	26.82	26.73	26.67	27.5	-3.01	23.81	23.72	23.66
GSM 850 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	251	**190**	**128**			**251**	**190**	**128**
1Txslot	25.94	26.52	26.37	27	-9.03	16.91	17.49	17.34
2Txslots	22.57	22.71	23.43	24.5	-6.02	16.55	16.69	17.41
3Txslots	22.14	22.34	22.17	24	-4.26	17.88	18.08	17.91
4Txslots	20.65	21.23	20.13	22.5	-3.01	17.64	18.22	17.12

GSM1900(DSI1/2)

GSM 1900 Speech （GMSK）	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	**661**	**512**			**810**	**661**	**512**
1Txslot	28.22	28.38	28.47	29.7	-9.03	19.19	19.35	19.44
GSM 1900 GPRS （GMSK）	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	**661**	**512**			**810**	**661**	**512**
1Txslot	28.44	28.57	28.66	29.7	-9.03	19.41	19.54	19.63
2Txslots	26.54	26.53	26.51	28.5	-6.02	20.52	20.51	20.49
3Txslots	**24.94**	**25.01**	**25.13**	26	**-4.26**	**20.68**	**20.75**	**20.87**
4Txslots	23.41	23.47	23.58	25	-3.01	20.40	20.46	20.57
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	810	**661**	**512**			**810**	**661**	**512**
1Txslot	28.36	28.49	28.57	29.7	-9.03	19.33	19.46	19.54
2Txslots	26.53	26.52	26.51	28.5	-6.02	20.51	20.50	20.49
3Txslots	24.86	24.94	25.03	26	-4.26	20.60	20.68	20.77
4Txslots	23.33	23.40	23.48	25	-3.01	20.32	20.39	20.47
GSM 1900 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	810	**661**	**512**			**810**	**661**	**512**
1Txslot	24.60	24.59	24.66	26	-9.03	15.57	15.56	15.63
2Txslots	21.13	21.04	21.27	23	-6.02	15.11	15.02	15.25
3Txslots	20.11	20.01	20.08	22	-4.26	15.85	15.75	15.82
4Txslots	19.07	19.21	19.24	21	-3.01	16.06	16.20	16.23

GSM1900(DSI3)

GSM 1900 GPRS （GMSK）	Measured timeslot-averaged output power (dBm)			Tune up	calculation	Source-based time-averaged output power (dBm)		
	810	**661**	**512**			**810**	**661**	**512**
1Txslot	26.49	26.62	26.69	26.7	-9.03	17.46	17.59	17.66
2Txslots	24.08	24.21	24.30	25.5	-6.02	18.06	18.19	18.28
3Txslots	**22.86**	**22.95**	**22.96**	**23**	**-4.26**	**18.60**	**18.69**	**18.70**
4Txslots	21.57	21.66	21.70	22	-3.01	18.56	18.65	18.69
GSM 1900 EGPRS (GMSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	810	**661**	**512**			**810**	**661**	**512**
1Txslot	26.46	26.62	26.68	26.7	-9.03	17.43	17.59	17.65
2Txslots	24.06	24.21	24.31	25.5	-6.02	18.04	18.19	18.29
3Txslots	22.85	22.94	22.96	23	-4.26	18.59	18.68	18.70
4Txslots	21.55	21.64	21.71	22	-3.01	18.54	18.63	18.70
GSM 1900 EGPRS(8PSK)	Measured timeslot-averaged output power (dBm)					Source-based time-averaged output power (dBm)		
	810	**661**	**512**			**810**	**661**	**512**
1Txslot	23.41	22.92	23.15	23.5	-9.03	14.38	13.89	14.12
2Txslots	19.90	19.96	19.79	21	-6.02	13.88	13.94	13.77
3Txslots	18.18	18.22	18.28	19.5	-4.26	13.92	13.96	14.02
4Txslots	16.56	16.61	16.54	18	-3.01	13.55	13.60	13.53

11.2 WCDMA Measurement result

WCDMA1900(DSI1)

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	22.88	23.01	23.05	24.5
HSUPA	1	20.47	20.45	20.58	22
	2	20.51	20.48	20.60	22
	3	21.54	21.50	21.63	22
	4	20.01	19.96	20.12	22
	5	21.49	21.48	21.61	22.5
HSPA+		21.93	21.85	22.21	23
DC-HSDPA	1	22.35	22.46	22.68	23.5
	2	22.34	22.42	22.62	23.5
	3	21.93	21.90	22.09	23.5
	4	21.97	22.01	22.12	23.5

WCDMA1900(DSI2)

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	21.88	21.94	21.98	23.5
HSUPA	1	19.58	19.56	19.68	21
	2	19.61	19.58	19.70	21
	3	20.6	20.56	20.68	22
	4	19.14	19.09	19.24	21
	5	20.55	20.54	20.67	22
HSPA+		21.17	21.09	21.24	23
DC-HSDPA	1	21.37	21.48	21.69	22.5
	2	21.36	21.44	21.63	22.5
	3	20.97	20.94	21.12	22.5
	4	21.01	21.05	21.15	22.5

WCDMA1900(DSI3)

Item	band	FDDII result			
	ARFCN	9538 (1907.6MHz)	9400 (1880MHz)	9262 (1852.4MHz)	Tune up
WCDMA	\	19.85	19.96	19.95	21.5
HSUPA	1	17.76	17.74	17.85	19.5
	2	17.79	17.77	17.87	19.5
	3	18.69	18.65	18.77	20
	4	17.36	17.32	17.46	19
	5	18.64	18.64	18.75	20
HSPA+		19.53	19.56	19.57	21.5
DC-HSDPA	1	19.69	19.79	19.68	21.5
	2	19.68	19.75	19.62	21.5
	3	19.03	19.00	19.16	20.5
	4	19.06	19.10	19.19	20.5

WCDMA1700(DSI1)

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	23.29	23.22	23.11	25
HSUPA	1	21.02	20.99	21.00	22
	2	21.04	21.02	21.03	22
	3	21.94	21.92	21.89	22
	4	20.51	20.54	20.47	21
	5	21.99	22.02	22.00	22.5
HSPA+		22.54	22.61	22.07	23
DC-HSDPA	1	22.95	22.99	22.92	23.5
	2	22.87	22.90	22.89	23.5
	3	22.36	22.42	22.38	23.5
	4	22.38	22.45	22.39	23.5

WCDMA1700(DSI2)

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	21.75	21.71	21.61	23.5
HSUPA	1	19.63	19.60	19.61	21
	2	19.65	19.63	19.64	21
	3	20.49	20.47	20.44	22
	4	19.15	19.18	19.12	21
	5	20.54	20.56	20.55	22
HSPA+		21.05	21.11	20.61	22
DC-HSDPA	1	21.43	21.47	21.40	22.5

	2	21.36	21.39	21.38	22.5
	3	20.88	20.94	20.90	22.5
	4	20.9	20.97	20.91	22.5

WCDMA1700(DSI3)

Item	band	FDDIV result			
	ARFCN	1513 (1752.6MHz)	1412 (1732.4MHz)	1312 (1712.4MHz)	Tune up
WCDMA	\	20.23	20.21	20.15	22
HSUPA	1	18.26	18.23	18.24	19.5
	2	18.28	18.26	18.27	19.5
	3	19.06	19.04	19.01	20
	4	17.82	17.84	17.78	20
	5	19.1	19.13	19.11	20
HSPA+		19.58	19.64	19.57	21.5
DC-HSDPA	1	19.93	19.97	19.91	21.5
	2	19.87	19.89	19.88	21.5
	3	19.54	19.57	19.54	21.5
	4	19.54	19.50	19.55	21.5

WCDMA850(DSI1)

Item	band	FDDV result			
	ARFCN	4233 (846.6MHz)	4183 (836.6MHz)	4132 (826.4MHz)	Tune up
WCDMA	\	24.08	24.09	24.10	25
HSUPA	1	20.69	20.65	20.74	21.5
	2	20.67	20.64	20.75	21.5
	3	21.44	21.46	21.47	22
	4	20.18	20.16	20.23	21
	5	21.46	21.44	21.47	22
HSPA+		22.33	22.33	22.28	23
DC-HSDPA	1	22.56	22.58	22.66	24
	2	22.54	22.55	22.62	24
	3	21.94	21.95	22.10	23
	4	21.93	21.97	22.15	23

11.3 LTE Measurement result

Table 13.3-1: Maximum Power Reduction (MPR) for LTE-DSI1/2

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

Table 13.3-2: Maximum Power Reduction (MPR) for LTE –DSI3

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

Table 11.3-3: The tune up for LTE – DSI1

Band	Tune up
LTE Band 12	25
LTE Band 13	25
LTE Band 25	24.5
LTE Band 26	25
LTE Band41(PC3)	24
LTE Band41(PC2)	27
LTE Band 66	25
LTE Band 71	25

Table 11.3-4: The tune up for LTE – DSI2

Band	Tune up
LTE Band 25	23.5
LTE Band41(PC3)	22
LTE Band41(PC2)	25
LTE Band 66	23.5

Table 11.3-5: The tune up for LTE –DSI3

Band	Tune up
LTE Band 25	21.5
LTE Band41(PC3)	20
LTE Band41(PC2)	23
LTE Band66	22

LTE Band12(DSI1)

1.4MHz	1RB-High (5)	715.3 (23173)	23.96	23.14
		707.5 (23095)	23.99	23.35
		699.7 (23017)	23.98	23.20
	1RB-Middle (3)	715.3 (23173)	24.08	23.28
		707.5 (23095)	24.07	23.31
		699.7 (23017)	24.09	23.25
	1RB-Low (0)	715.3 (23173)	23.96	23.24
		707.5 (23095)	23.94	23.27
		699.7 (23017)	23.94	23.17
	3RB-High (3)	715.3 (23173)	24.07	23.03
		707.5 (23095)	24.09	23.01
		699.7 (23017)	24.08	23.05
	3RB-Middle (1)	715.3 (23173)	24.14	23.03
		707.5 (23095)	24.09	23.09
		699.7 (23017)	24.11	23.07
	3RB-Low (0)	715.3 (23173)	24.07	23.06
		707.5 (23095)	24.06	23.08
		699.7 (23017)	24.05	23.01
	6RB (0)	715.3 (23173)	23.08	22.19
		707.5 (23095)	23.09	22.18
		699.7 (23017)	23.04	22.17
3MHz	1RB-High (14)	714.5 (23165)	23.99	23.23
		707.5 (23095)	24.00	23.26
		700.5 (23025)	23.99	23.18
	1RB-Middle (7)	714.5 (23165)	24.13	23.35
		707.5 (23095)	24.13	23.28
		700.5 (23025)	24.17	23.30
	1RB-Low (0)	714.5 (23165)	23.97	23.18
		707.5 (23095)	24.01	23.28
		700.5 (23025)	23.99	23.28
	8RB-High (7)	714.5 (23165)	23.04	22.09
		707.5 (23095)	23.05	22.11
		700.5 (23025)	23.02	22.10
	8RB-Middle (4)	714.5 (23165)	23.08	22.15
		707.5 (23095)	23.07	22.13
		700.5 (23025)	23.08	22.12
	8RB-Low (0)	714.5 (23165)	23.03	22.09
		707.5 (23095)	23.02	22.07
		700.5 (23025)	23.01	22.09
	15RB (0)	714.5 (23165)	23.02	22.02
		707.5 (23095)	23.05	22.08
		700.5 (23025)	23.04	22.04

5MHz	1RB-High (24)	713.5 (23155)	23.89	23.20
		707.5 (23095)	23.93	23.10
		701.5 (23035)	23.87	23.07
	1RB-Middle (12)	713.5 (23155)	24.11	23.34
		707.5 (23095)	24.12	23.43
		701.5 (23035)	24.12	23.46
	1RB-Low (0)	713.5 (23155)	23.91	23.26
		707.5 (23095)	23.92	23.25
		701.5 (23035)	23.90	23.11
	12RB-High (13)	713.5 (23155)	22.94	21.95
		707.5 (23095)	23.08	22.10
		701.5 (23035)	22.98	21.96
	12RB-Middle (6)	713.5 (23155)	23.06	22.06
		707.5 (23095)	23.09	22.11
		701.5 (23035)	23.08	22.04
	12RB-Low (0)	713.5 (23155)	23.03	22.03
		707.5 (23095)	23.03	22.03
		701.5 (23035)	23.05	22.02
	25RB (0)	713.5 (23155)	23.02	22.04
		707.5 (23095)	23.12	22.08
		701.5 (23035)	23.00	22.02
10MHz	1RB-High (49)	711 (23130)	23.97	23.00
		707.5 (23095)	23.97	23.12
		704 (23060)	24.03	23.04
	1RB-Middle (24)	711 (23130)	24.14	23.19
		707.5 (23095)	24.13	23.22
		704 (23060)	24.15	23.19
	1RB-Low (0)	711 (23130)	24.05	23.23
		707.5 (23095)	24.01	23.10
		704 (23060)	24.04	23.16
	25RB-High (25)	711 (23130)	23.06	22.07
		707.5 (23095)	23.21	22.19
		704 (23060)	23.12	22.09
	25RB-Middle (12)	711 (23130)	23.10	22.11
		707.5 (23095)	23.13	22.11
		704 (23060)	23.12	22.10
	25RB-Low (0)	711 (23130)	23.04	22.07
		707.5 (23095)	23.16	22.16
		704 (23060)	23.25	22.12
	50RB (0)	711 (23130)	23.10	22.02
		707.5 (23095)	23.20	22.19
		704 (23060)	23.16	22.14

LTE Band13(DSI1)

5MHz	1RB-High (24)	784.5 (23255)	23.67	22.94
		782 (23230)	23.65	23.00
		779.5 (23205)	23.69	22.87
	1RB-Middle (12)	784.5 (23255)	23.93	23.23
		782 (23230)	23.94	23.21
		779.5 (23205)	23.99	23.23
	1RB-Low (0)	784.5 (23255)	23.75	22.94
		782 (23230)	23.73	22.96
		779.5 (23205)	23.73	22.94
	12RB-High (13)	784.5 (23255)	22.92	21.87
		782 (23230)	22.85	21.80
		779.5 (23205)	22.87	21.86
	12RB-Middle (6)	784.5 (23255)	22.91	21.89
		782 (23230)	22.90	21.85
		779.5 (23205)	22.92	21.87
	12RB-Low (0)	784.5 (23255)	22.91	21.85
		782 (23230)	22.86	21.83
		779.5 (23205)	22.75	21.68
	25RB (0)	784.5 (23255)	22.91	21.90
		782 (23230)	22.83	21.83
		779.5 (23205)	22.83	21.82
10MHz	1RB-High (49)	782 (23230)	23.70	22.81
	1RB-Middle (24)	782 (23230)	23.94	22.87
	1RB-Low (0)	782 (23230)	23.87	22.80
	25RB-High (25)	782 (23230)	22.93	21.91
	25RB-Middle (12)	782 (23230)	22.94	21.86
	25RB-Low (0)	782 (23230)	22.79	21.74
	50RB (0)	782 (23230)	22.90	21.86

LTE Band25(DSI1)

1.4MHz	1RB-High (5)	1914.3 (26683)	23.20	22.50
		1882.5 (26365)	23.14	22.46
		1850.7 (26047)	23.18	22.53
	1RB-Middle (3)	1914.3 (26683)	23.37	22.56
		1882.5 (26365)	23.33	22.71
		1850.7 (26047)	23.33	22.75
	1RB-Low (0)	1914.3 (26683)	23.22	22.37
		1882.5 (26365)	23.15	22.54
		1850.7 (26047)	23.20	22.55
	3RB-High (3)	1914.3 (26683)	23.35	22.24
		1882.5 (26365)	23.26	22.26
		1850.7 (26047)	23.28	22.32
	3RB-Middle (1)	1914.3 (26683)	23.39	22.37
		1882.5 (26365)	23.29	22.34
		1850.7 (26047)	23.34	22.42
	3RB-Low (0)	1914.3 (26683)	23.34	22.31
		1882.5 (26365)	23.27	22.30
		1850.7 (26047)	23.29	22.36
	6RB (0)	1914.3 (26683)	22.39	21.46
		1882.5 (26365)	22.28	21.35
		1850.7 (26047)	22.29	21.42
3MHz	1RB-High (14)	1913.5 (26675)	23.25	22.43
		1882.5 (26365)	23.17	22.59
		1851.5 (26055)	23.20	22.57
	1RB-Middle (7)	1913.5 (26675)	23.41	22.53
		1882.5 (26365)	23.39	22.67
		1851.5 (26055)	23.44	22.72
	1RB-Low (0)	1913.5 (26675)	23.19	22.48
		1882.5 (26365)	23.19	22.57
		1851.5 (26055)	23.22	22.56
	8RB-High (7)	1913.5 (26675)	22.27	21.37
		1882.5 (26365)	22.24	21.33
		1851.5 (26055)	22.27	21.35
	8RB-Middle (4)	1913.5 (26675)	22.35	21.40
		1882.5 (26365)	22.29	21.36
		1851.5 (26055)	22.31	21.41
	8RB-Low (0)	1913.5 (26675)	22.31	21.40
		1882.5 (26365)	22.24	21.35
		1851.5 (26055)	22.27	21.35
	15RB (0)	1913.5 (26675)	22.32	21.35
		1882.5 (26365)	22.21	21.25
		1851.5 (26055)	22.25	21.28

5MHz	1RB-High (24)	1912.5 (26665)	23.10	22.36
		1882.5 (26365)	23.05	22.42
		1852.5 (26065)	23.09	22.35
	1RB-Middle (12)	1912.5 (26665)	23.32	22.73
		1882.5 (26365)	23.33	22.69
		1852.5 (26065)	23.33	22.81
	1RB-Low (0)	1912.5 (26665)	23.08	22.44
		1882.5 (26365)	23.07	22.46
		1852.5 (26065)	23.09	22.55
	12RB-High (13)	1912.5 (26665)	22.24	21.23
		1882.5 (26365)	22.21	21.25
		1852.5 (26065)	22.28	21.26
	12RB-Middle (6)	1912.5 (26665)	22.34	21.37
		1882.5 (26365)	22.31	21.33
		1852.5 (26065)	22.30	21.32
	12RB-Low (0)	1912.5 (26665)	22.36	21.39
		1882.5 (26365)	22.25	21.25
		1852.5 (26065)	22.25	21.24
	25RB (0)	1912.5 (26665)	22.31	21.30
		1882.5 (26365)	22.22	21.27
		1852.5 (26065)	22.24	21.26

10MHz	1RB-High (49)	1910 (26640)	23.22	22.43
		1882.5 (26365)	23.21	22.66
		1855 (26090)	23.15	22.56
	1RB-Middle (24)	1910 (26640)	23.30	22.55
		1882.5 (26365)	23.30	22.56
		1855 (26090)	23.32	22.67
	1RB-Low (0)	1910 (26640)	23.21	22.66
		1882.5 (26365)	23.21	22.51
		1855 (26090)	23.21	22.52
	25RB-High (25)	1910 (26640)	22.19	21.20
		1882.5 (26365)	22.28	21.34
		1855 (26090)	22.32	21.33
	25RB-Middle (12)	1910 (26640)	22.30	21.33
		1882.5 (26365)	22.27	21.31
		1855 (26090)	22.28	21.30
	25RB-Low (0)	1910 (26640)	22.37	21.39
		1882.5 (26365)	22.31	21.35
		1855 (26090)	22.22	21.27
	50RB (0)	1910 (26640)	22.29	21.32
		1882.5 (26365)	22.31	21.35
		1855 (26090)	22.29	21.31

15MHz	1RB-High (74)	1907.5 (26615)	23.21	22.47
		1882.5 (26365)	23.14	22.56
		1857.5 (26115)	23.15	22.38
	1RB-Middle (37)	1907.5 (26615)	23.27	22.60
		1882.5 (26365)	23.22	22.65
		1857.5 (26115)	23.26	22.63
	1RB-Low (0)	1907.5 (26615)	23.22	22.63
		1882.5 (26365)	23.18	22.63
		1857.5 (26115)	23.18	22.55
	36RB-High (38)	1907.5 (26615)	22.28	21.23
		1882.5 (26365)	22.29	21.29
		1857.5 (26115)	22.31	21.26
	36RB-Middle (19)	1907.5 (26615)	22.39	21.37
		1882.5 (26365)	22.33	21.34
		1857.5 (26115)	22.32	21.29
	36RB-Low (0)	1907.5 (26615)	22.35	21.36
		1882.5 (26365)	22.30	21.31
		1857.5 (26115)	22.26	21.27
	75RB (0)	1907.5 (26615)	22.30	21.32
		1882.5 (26365)	22.31	21.34
		1857.5 (26115)	22.27	21.26
20MHz	1RB-High (99)	1905 (26590)	23.31	22.60
		1882.5 (26365)	23.26	22.57
		1860 (26140)	23.22	22.60
	1RB-Middle (50)	1905 (26590)	23.53	22.94
		1882.5 (26365)	23.46	22.93
		1860 (26140)	23.49	22.89
	1RB-Low (0)	1905 (26590)	23.30	22.76
		1882.5 (26365)	23.30	22.73
		1860 (26140)	23.32	22.69
	50RB-High (50)	1905 (26590)	22.32	21.37
		1882.5 (26365)	22.45	21.47
		1860 (26140)	22.41	21.42
	50RB-Middle (25)	1905 (26590)	22.53	21.59
		1882.5 (26365)	22.52	21.55
		1860 (26140)	22.48	21.51
	50RB-Low (0)	1905 (26590)	22.51	21.53
		1882.5 (26365)	22.48	21.49
		1860 (26140)	22.39	21.38
	100RB (0)	1905 (26590)	22.44	21.45
		1882.5 (26365)	22.47	21.48
		1860 (26140)	22.39	21.43

LTE Band25(DSI2)

1.4MHz	1RB-High (5)	1914.3 (26683)	22.34	21.72
		1882.5 (26365)	22.34	21.61
		1850.7 (26047)	22.34	21.75
	1RB-Middle (3)	1914.3 (26683)	22.50	21.89
		1882.5 (26365)	22.44	21.77
		1850.7 (26047)	22.49	21.77
	1RB-Low (0)	1914.3 (26683)	22.34	21.70
		1882.5 (26365)	22.33	21.67
		1850.7 (26047)	22.36	21.74
	3RB-High (3)	1914.3 (26683)	22.47	21.44
		1882.5 (26365)	22.44	21.47
		1850.7 (26047)	22.43	21.50
	3RB-Middle (1)	1914.3 (26683)	22.51	21.52
		1882.5 (26365)	22.46	21.54
		1850.7 (26047)	22.51	21.49
	3RB-Low (0)	1914.3 (26683)	22.47	21.40
		1882.5 (26365)	22.41	21.45
		1850.7 (26047)	22.44	21.42
	6RB (0)	1914.3 (26683)	21.47	20.60
		1882.5 (26365)	21.37	20.54
		1850.7 (26047)	21.41	20.54
3MHz	1RB-High (14)	1913.5 (26675)	22.46	21.82
		1882.5 (26365)	22.47	21.84
		1851.5 (26055)	22.48	21.85
	1RB-Middle (7)	1913.5 (26675)	22.61	21.94
		1882.5 (26365)	22.59	21.96
		1851.5 (26055)	22.61	22.01
	1RB-Low (0)	1913.5 (26675)	22.46	21.73
		1882.5 (26365)	22.45	21.88
		1851.5 (26055)	22.46	21.92
	8RB-High (7)	1913.5 (26675)	21.51	20.63
		1882.5 (26365)	21.45	20.56
		1851.5 (26055)	21.46	20.57
	8RB-Middle (4)	1913.5 (26675)	21.56	20.67
		1882.5 (26365)	21.51	20.60
		1851.5 (26055)	21.52	20.58
	8RB-Low (0)	1913.5 (26675)	21.51	20.60
		1882.5 (26365)	21.43	20.58
		1851.5 (26055)	21.46	20.54
	15RB (0)	1913.5 (26675)	21.55	20.58
		1882.5 (26365)	21.40	20.46
		1851.5 (26055)	21.45	20.52

5MHz	1RB-High (24)	1912.5 (26665)	22.29	21.70
		1882.5 (26365)	22.23	21.64
		1852.5 (26065)	22.27	21.57
	1RB-Middle (12)	1912.5 (26665)	22.58	21.85
		1882.5 (26365)	22.50	21.87
		1852.5 (26065)	22.62	21.79
	1RB-Low (0)	1912.5 (26665)	22.23	21.58
		1882.5 (26365)	22.27	21.58
		1852.5 (26065)	22.28	21.56
	12RB-High (13)	1912.5 (26665)	21.35	20.41
		1882.5 (26365)	21.34	20.32
		1852.5 (26065)	21.41	20.43
	12RB-Middle (6)	1912.5 (26665)	21.46	20.53
		1882.5 (26365)	21.41	20.45
		1852.5 (26065)	21.44	20.47
	12RB-Low (0)	1912.5 (26665)	21.49	20.52
		1882.5 (26365)	21.39	20.39
		1852.5 (26065)	21.38	20.38
	25RB (0)	1912.5 (26665)	21.40	20.44
		1882.5 (26365)	21.35	20.37
		1852.5 (26065)	21.38	20.40

10MHz	1RB-High (49)	1910 (26640)	22.32	21.65
		1882.5 (26365)	22.30	21.62
		1855 (26090)	22.29	21.70
	1RB-Middle (24)	1910 (26640)	22.52	21.86
		1882.5 (26365)	22.45	21.81
		1855 (26090)	22.52	21.91
	1RB-Low (0)	1910 (26640)	22.34	21.70
		1882.5 (26365)	22.32	21.75
		1855 (26090)	22.34	21.64
	25RB-High (25)	1910 (26640)	21.28	20.32
		1882.5 (26365)	21.39	20.43
		1855 (26090)	21.42	20.45
	25RB-Middle (12)	1910 (26640)	21.47	20.52
		1882.5 (26365)	21.43	20.48
		1855 (26090)	21.46	20.49
	25RB-Low (0)	1910 (26640)	21.49	20.52
		1882.5 (26365)	21.45	20.47
		1855 (26090)	21.41	20.43
	50RB (0)	1910 (26640)	21.38	20.42
		1882.5 (26365)	21.44	20.47
		1855 (26090)	21.40	20.42

15MHz	1RB-High (74)	1907.5 (26615)	22.19	21.61
		1882.5 (26365)	22.18	21.60
		1857.5 (26115)	22.16	21.38
	1RB-Middle (37)	1907.5 (26615)	22.39	21.73
		1882.5 (26365)	22.39	21.74
		1857.5 (26115)	22.39	21.78
	1RB-Low (0)	1907.5 (26615)	22.23	21.57
		1882.5 (26365)	22.19	21.52
		1857.5 (26115)	22.22	21.54
	36RB-High (38)	1907.5 (26615)	21.27	20.30
		1882.5 (26365)	21.33	20.32
		1857.5 (26115)	21.32	20.31
	36RB-Middle (19)	1907.5 (26615)	21.42	20.43
		1882.5 (26365)	21.40	20.40
		1857.5 (26115)	21.39	20.39
	36RB-Low (0)	1907.5 (26615)	21.38	20.41
		1882.5 (26365)	21.34	20.35
		1857.5 (26115)	21.32	20.32
	75RB (0)	1907.5 (26615)	21.30	20.34
		1882.5 (26365)	21.34	20.36
		1857.5 (26115)	21.30	20.33
20MHz	1RB-High (99)	1905 (26590)	22.12	21.40
		1882.5 (26365)	22.06	21.50
		1860 (26140)	22.04	21.33
	1RB-Middle (50)	1905 (26590)	22.42	21.91
		1882.5 (26365)	22.39	21.81
		1860 (26140)	22.41	21.73
	1RB-Low (0)	1905 (26590)	22.06	21.46
		1882.5 (26365)	22.08	21.49
		1860 (26140)	22.08	21.55
	50RB-High (50)	1905 (26590)	21.11	20.15
		1882.5 (26365)	21.22	20.25
		1860 (26140)	21.18	20.22
	50RB-Middle (25)	1905 (26590)	21.39	20.43
		1882.5 (26365)	21.36	20.44
		1860 (26140)	21.33	20.36
	50RB-Low (0)	1905 (26590)	21.34	20.38
		1882.5 (26365)	21.34	20.37
		1860 (26140)	21.24	20.26
	100RB (0)	1905 (26590)	21.26	20.27
		1882.5 (26365)	21.30	20.29
		1860 (26140)	21.21	20.22

LTE Band25(DSI3)

1.4MHz	1RB-High (5)	1914.3 (26683)	20.34	20.60
		1882.5 (26365)	20.33	20.70
		1850.7 (26047)	20.30	20.73
	1RB-Middle (3)	1914.3 (26683)	20.45	20.95
		1882.5 (26365)	20.43	20.84
		1850.7 (26047)	20.42	20.74
	1RB-Low (0)	1914.3 (26683)	20.37	20.75
		1882.5 (26365)	20.24	20.70
		1850.7 (26047)	20.32	20.71
	3RB-High (3)	1914.3 (26683)	20.48	20.51
		1882.5 (26365)	20.42	20.43
		1850.7 (26047)	20.39	20.46
	3RB-Middle (1)	1914.3 (26683)	20.50	20.57
		1882.5 (26365)	20.42	20.44
		1850.7 (26047)	20.49	20.53
	3RB-Low (0)	1914.3 (26683)	20.47	20.47
		1882.5 (26365)	20.37	20.44
		1850.7 (26047)	20.42	20.36
	6RB (0)	1914.3 (26683)	20.45	20.64
		1882.5 (26365)	20.39	20.52
		1850.7 (26047)	20.40	20.49
3MHz	1RB-High (14)	1913.5 (26675)	20.39	20.73
		1882.5 (26365)	20.30	20.65
		1851.5 (26055)	20.29	20.75
	1RB-Middle (7)	1913.5 (26675)	20.50	20.90
		1882.5 (26365)	20.44	20.83
		1851.5 (26055)	20.52	20.78
	1RB-Low (0)	1913.5 (26675)	20.35	20.72
		1882.5 (26365)	20.31	20.67
		1851.5 (26055)	20.33	20.69
	8RB-High (7)	1913.5 (26675)	20.40	20.53
		1882.5 (26365)	20.32	20.48
		1851.5 (26055)	20.36	20.44
	8RB-Middle (4)	1913.5 (26675)	20.46	20.54
		1882.5 (26365)	20.35	20.47
		1851.5 (26055)	20.39	20.50
	8RB-Low (0)	1913.5 (26675)	20.41	20.50
		1882.5 (26365)	20.34	20.44
		1851.5 (26055)	20.37	20.47
	15RB (0)	1913.5 (26675)	20.42	20.48
		1882.5 (26365)	20.30	20.37
		1851.5 (26055)	20.32	20.38

5MHz	1RB-High (24)	1912.5 (26665)	20.33	20.63
		1882.5 (26365)	20.26	20.63
		1852.5 (26065)	20.25	20.50
	1RB-Middle (12)	1912.5 (26665)	20.65	20.92
		1882.5 (26365)	20.58	20.76
		1852.5 (26065)	20.54	20.81
	1RB-Low (0)	1912.5 (26665)	20.29	20.56
		1882.5 (26365)	20.29	20.66
		1852.5 (26065)	20.31	20.67
	12RB-High (13)	1912.5 (26665)	20.42	20.38
		1882.5 (26365)	20.37	20.32
		1852.5 (26065)	20.42	20.36
	12RB-Middle (6)	1912.5 (26665)	20.54	20.50
		1882.5 (26365)	20.44	20.39
		1852.5 (26065)	20.45	20.43
	12RB-Low (0)	1912.5 (26665)	20.54	20.49
		1882.5 (26365)	20.40	20.39
		1852.5 (26065)	20.40	20.34
	25RB (0)	1912.5 (26665)	20.47	20.44
		1882.5 (26365)	20.36	20.35
		1852.5 (26065)	20.41	20.37

10MHz	1RB-High (49)	1910 (26640)	20.43	20.69
		1882.5 (26365)	20.38	20.70
		1855 (26090)	20.36	20.78
	1RB-Middle (24)	1910 (26640)	20.53	20.80
		1882.5 (26365)	20.45	20.85
		1855 (26090)	20.48	20.86
	1RB-Low (0)	1910 (26640)	20.43	20.77
		1882.5 (26365)	20.38	20.81
		1855 (26090)	20.42	20.67
	25RB-High (25)	1910 (26640)	20.32	20.40
		1882.5 (26365)	20.42	20.47
		1855 (26090)	20.47	20.49
	25RB-Middle (12)	1910 (26640)	20.47	20.52
		1882.5 (26365)	20.42	20.47
		1855 (26090)	20.43	20.46
	25RB-Low (0)	1910 (26640)	20.53	20.59
		1882.5 (26365)	20.46	20.48
		1855 (26090)	20.37	20.44
	50RB (0)	1910 (26640)	20.43	20.48
		1882.5 (26365)	20.46	20.52
		1855 (26090)	20.41	20.45

15MHz	1RB-High (74)	1907.5 (26615)	20.45	20.73
		1882.5 (26365)	20.35	20.61
		1857.5 (26115)	20.33	20.56
	1RB-Middle (37)	1907.5 (26615)	20.49	20.86
		1882.5 (26365)	20.43	20.83
		1857.5 (26115)	20.42	20.80
	1RB-Low (0)	1907.5 (26615)	20.46	20.83
		1882.5 (26365)	20.36	20.78
		1857.5 (26115)	20.38	20.68
	36RB-High (38)	1907.5 (26615)	20.45	20.43
		1882.5 (26365)	20.47	20.47
		1857.5 (26115)	20.41	20.45
	36RB-Middle (19)	1907.5 (26615)	20.54	20.52
		1882.5 (26365)	20.49	20.49
		1857.5 (26115)	20.46	20.46
	36RB-Low (0)	1907.5 (26615)	20.52	20.50
		1882.5 (26365)	20.45	20.48
		1857.5 (26115)	20.42	20.42
	75RB (0)	1907.5 (26615)	20.45	20.45
		1882.5 (26365)	20.48	20.50
		1857.5 (26115)	20.42	20.45

20MHz	1RB-High (99)	1905 (26590)	20.33	20.63
		1882.5 (26365)	20.29	20.61
		1860 (26140)	20.28	20.68
	1RB-Middle (50)	1905 (26590)	20.61	20.68
		1882.5 (26365)	20.48	20.73
		1860 (26140)	20.49	20.68
	1RB-Low (0)	1905 (26590)	20.32	20.73
		1882.5 (26365)	20.29	20.68
		1860 (26140)	20.32	20.64
	50RB-High (50)	1905 (26590)	20.29	20.36
		1882.5 (26365)	20.42	20.44
		1860 (26140)	20.38	20.43
	50RB-Middle (25)	1905 (26590)	20.50	20.56
		1882.5 (26365)	20.47	20.53
		1860 (26140)	20.45	20.48
	50RB-Low (0)	1905 (26590)	20.46	20.53
		1882.5 (26365)	20.44	20.50
		1860 (26140)	20.35	20.39
	100RB (0)	1905 (26590)	20.39	20.45
		1882.5 (26365)	20.44	20.46
		1860 (26140)	20.36	20.41

LTE Band26(DSI1)

1.4MHz	1RB-High (5)	848.3 (27033)	23.62	22.83
		831.5 (26865)	23.55	22.77
		814.7 (26697)	23.61	22.89
	1RB-Middle (3)	848.3 (27033)	23.76	22.86
		831.5 (26865)	23.65	22.94
		814.7 (26697)	23.77	22.92
	1RB-Low (0)	848.3 (27033)	23.62	22.81
		831.5 (26865)	23.54	22.77
		814.7 (26697)	23.66	22.81
	3RB-High (3)	848.3 (27033)	23.74	22.58
		831.5 (26865)	23.64	22.64
		814.7 (26697)	23.73	22.58
	3RB-Middle (1)	848.3 (27033)	23.76	22.66
		831.5 (26865)	23.71	22.72
		814.7 (26697)	23.80	22.76
	3RB-Low (0)	848.3 (27033)	23.73	22.58
		831.5 (26865)	23.67	22.66
		814.7 (26697)	23.73	22.69
	6RB (0)	848.3 (27033)	22.77	21.85
		831.5 (26865)	22.74	21.78
		814.7 (26697)	22.81	21.86
3MHz	1RB-High (14)	847.5 (27025)	23.68	22.75
		831.5 (26865)	23.67	22.87
		815.5 (26705)	23.64	22.19
	1RB-Middle (7)	847.5 (27025)	23.89	22.99
		831.5 (26865)	23.79	23.12
		815.5 (26705)	23.05	22.44
	1RB-Low (0)	847.5 (27025)	23.71	22.84
		831.5 (26865)	23.63	22.89
		815.5 (26705)	23.09	22.24
	8RB-High (7)	847.5 (27025)	22.72	21.80
		831.5 (26865)	22.75	21.79
		815.5 (26705)	23.03	21.69
	8RB-Middle (4)	847.5 (27025)	22.79	21.87
		831.5 (26865)	22.73	21.78
		815.5 (26705)	22.63	21.06
	8RB-Low (0)	847.5 (27025)	22.76	21.85
		831.5 (26865)	22.72	21.80
		815.5 (26705)	22.83	21.86
	15RB (0)	847.5 (27025)	22.77	21.80
		831.5 (26865)	22.77	21.77
		815.5 (26705)	22.67	21.63

5MHz	1RB-High (24)	846.5 (27015)	23.64	22.76
		831.5 (26865)	23.57	22.90
		816.5 (26715)	23.59	22.88
	1RB-Middle (12)	846.5 (27015)	23.97	23.17
		831.5 (26865)	23.84	23.15
		816.5 (26715)	23.92	23.08
	1RB-Low (0)	846.5 (27015)	23.63	22.90
		831.5 (26865)	23.58	22.87
		816.5 (26715)	23.71	22.89
	12RB-High (13)	846.5 (27015)	22.76	21.74
		831.5 (26865)	22.81	21.78
		816.5 (26715)	22.83	21.82
	12RB-Middle (6)	846.5 (27015)	22.88	21.86
		831.5 (26865)	22.83	21.79
		816.5 (26715)	22.87	21.85
	12RB-Low (0)	846.5 (27015)	22.84	21.79
		831.5 (26865)	22.74	21.71
		816.5 (26715)	22.85	21.80
	25RB (0)	846.5 (27015)	22.82	21.84
		831.5 (26865)	22.81	21.78
		816.5 (26715)	22.89	21.86
10MHz	1RB-High (49)	844 (26990)	23.78	22.95
		831.5 (26865)	23.73	23.04
		820 (26750)	23.73	23.04
	1RB-Middle (24)	844 (26990)	23.88	23.22
		831.5 (26865)	23.83	23.10
		820 (26750)	23.90	23.19
	1RB-Low (0)	844 (26990)	23.81	23.03
		831.5 (26865)	23.77	23.06
		820 (26750)	23.79	23.06
	25RB-High (25)	844 (26990)	22.96	21.91
		831.5 (26865)	22.91	21.86
		820 (26750)	22.94	21.92
	25RB-Middle (12)	844 (26990)	22.94	21.93
		831.5 (26865)	22.86	21.84
		820 (26750)	22.92	21.90
	25RB-Low (0)	844 (26990)	23.03	21.99
		831.5 (26865)	22.84	21.82
		820 (26750)	22.90	21.86
	50RB (0)	844 (26990)	22.98	21.95
		831.5 (26865)	22.91	21.88
		820 (26750)	22.95	21.89

15MHz	1RB-High (74)	841.5 (26965)	23.85	22.95
		831.5 (26865)	23.78	23.11
		822.5 (26775)	23.76	23.01
	1RB-Middle (37)	841.5 (26965)	23.92	23.22
		831.5 (26865)	23.83	23.02
		822.5 (26775)	23.88	23.17
	1RB-Low (0)	841.5 (26965)	23.81	23.14
		831.5 (26865)	23.82	23.16
		822.5 (26775)	23.88	23.21
	36RB-High (38)	841.5 (26965)	23.04	22.01
		831.5 (26865)	22.98	21.94
		822.5 (26775)	22.97	21.92
	36RB-Middle (19)	841.5 (26965)	23.03	22.01
		831.5 (26865)	23.01	21.95
		822.5 (26775)	23.02	21.98
	36RB-Low (0)	841.5 (26965)	23.07	22.03
		831.5 (26865)	22.96	21.94
		822.5 (26775)	23.01	21.96
	75RB (0)	841.5 (26965)	23.07	22.05
		831.5 (26865)	22.96	21.94
		822.5 (26775)	23.00	21.96

LTE Band41 PC3(DSI1)

5MHz	1RB-High (24)	2687.5 (41565)	22.77	21.84
		2640.3(41093)	22.61	21.73
		2593 (40620)	22.74	21.90
		2545.8(40148)	22.55	21.69
		2498.5 (39675)	22.82	21.92
	1RB-Middle (12)	2687.5 (41565)	23.02	22.13
		2640.3(41093)	22.88	22.02
		2593 (40620)	23.00	22.18
		2545.8(40148)	22.89	21.99
		2498.5 (39675)	23.18	22.29
	1RB-Low (0)	2687.5 (41565)	22.78	21.89
		2640.3(41093)	22.69	21.83
		2593 (40620)	22.77	21.93
		2545.8(40148)	22.61	21.76
		2498.5 (39675)	22.79	21.91
	12RB-High (13)	2687.5 (41565)	21.82	20.85
		2640.3(41093)	21.73	20.77
		2593 (40620)	21.85	20.84
		2545.8(40148)	21.66	20.68
		2498.5 (39675)	21.88	20.91
	12RB-Middle (6)	2687.5 (41565)	21.88	20.89
		2640.3(41093)	21.79	20.78
		2593 (40620)	21.91	20.91
		2545.8(40148)	21.71	20.74
		2498.5 (39675)	21.96	20.97
	12RB-Low (0)	2687.5 (41565)	21.83	20.86
		2640.3(41093)	21.75	20.79
		2593 (40620)	21.86	20.88
		2545.8(40148)	21.66	20.70
		2498.5 (39675)	21.86	20.88
	25RB (0)	2687.5 (41565)	21.83	20.88
		2640.3(41093)	21.79	20.82
		2593 (40620)	21.85	20.93
		2545.8(40148)	21.73	20.77
		2498.5 (39675)	21.93	20.99
10MHz	1RB-High (49)	2685 (41540)	22.82	21.95
		2639(41080)	22.68	21.81
		2593 (40620)	22.82	21.97
		2547(40160)	22.64	21.79
		2501 (39700)	22.85	22.00
	1RB-Middle (24)	2685 (41540)	22.91	22.08
		2639(41080)	22.84	22.00
		2593 (40620)	22.92	22.16
		2547(40160)	22.73	21.88
		2501 (39700)	22.91	22.08
	1RB-Low (0)	2685 (41540)	22.86	22.01
		2639(41080)	22.78	21.96
		2593 (40620)	22.86	22.04
		2547(40160)	22.73	21.86
		2501 (39700)	22.86	22.02
	25RB-High (25)	2685 (41540)	21.87	20.95
		2639(41080)	21.71	20.84
		2593 (40620)	21.84	20.94
		2547(40160)	21.71	20.78
		2501 (39700)	21.88	20.99
	25RB-Middle (12)	2685 (41540)	21.94	20.98
		2639(41080)	21.83	20.90
		2593 (40620)	21.99	20.99
		2547(40160)	21.72	20.79
		2501 (39700)	21.95	21.02
	25RB-Low (0)	2685 (41540)	21.92	21.01
		2639(41080)	21.86	20.94
		2593 (40620)	21.94	21.03
		2547(40160)	21.74	20.88
		2501 (39700)	22.02	21.00
	50RB (0)	2685 (41540)	21.93	21.06
		2639(41080)	21.87	21.07
		2593 (40620)	22.01	21.16
		2547(40160)	21.85	20.95
		2501 (39700)	22.00	21.15

15MHz	1RB-High (74)	2682.5 (41515)	22.75	21.87
		2637.8(41068)	22.55	21.72
		2593 (40620)	22.72	21.91
		2548.3(40173)	22.56	21.69
		2503.5 (39725)	22.79	21.87
	1RB-Middle (37)	2682.5 (41515)	22.90	22.02
		2637.8(41068)	22.84	21.93
		2593 (40620)	22.88	22.05
		2548.3(40173)	22.71	21.85
		2503.5 (39725)	22.92	22.05
	1RB-Low (0)	2682.5 (41515)	22.80	21.93
		2637.8(41068)	22.79	21.93
		2593 (40620)	22.81	21.96
		2548.3(40173)	22.63	21.80
		2503.5 (39725)	22.79	21.94
	36RB-High (38)	2682.5 (41515)	21.90	20.90
		2637.8(41068)	21.73	20.73
		2593 (40620)	21.86	20.90
		2548.3(40173)	21.69	20.69
		2503.5 (39725)	21.92	20.91
	36RB-Middle (19)	2682.5 (41515)	21.88	20.90
		2637.8(41068)	21.82	20.86
		2593 (40620)	21.91	20.92
		2548.3(40173)	21.73	20.73
		2503.5 (39725)	21.95	20.96
	36RB-Low (0)	2682.5 (41515)	21.88	20.81
		2637.8(41068)	21.81	20.82
		2593 (40620)	21.92	20.91
		2548.3(40173)	21.65	20.72
		2503.5 (39725)	21.89	20.96
	75RB (0)	2682.5 (41515)	21.85	20.94
		2637.8(41068)	21.84	20.97
		2593 (40620)	21.95	21.01
		2548.3(40173)	21.72	20.81
		2503.5 (39725)	21.95	21.00

20MHz	1RB-High (99)	2680 (41490)	22.90	22.02
		2636.5(41055)	22.73	21.90
		2593 (40620)	22.90	22.07
		2549.5(40185)	22.67	21.87
		2506 (39750)	22.92	22.10
	1RB-Middle (50)	2680 (41490)	23.18	22.28
		2636.5(41055)	23.15	22.26
		2593 (40620)	23.23	22.38
		2549.5(40185)	22.99	22.16
		2506 (39750)	23.24	22.32
	1RB-Low (0)	2680 (41490)	22.95	22.11
		2636.5(41055)	23.00	22.14
		2593 (40620)	22.98	22.12
		2549.5(40185)	22.83	21.98
		2506 (39750)	22.97	22.12
	50RB-High (50)	2680 (41490)	22.16	21.29
		2636.5(41055)	22.12	21.22
		2593 (40620)	22.16	21.29
		2549.5(40185)	21.94	21.07
		2506 (39750)	22.16	21.30
	50RB-Middle (25)	2680 (41490)	22.27	21.31
		2636.5(41055)	22.16	21.33
		2593 (40620)	22.22	21.40
		2549.5(40185)	21.97	21.17
		2506 (39750)	22.26	21.37
	50RB-Low (0)	2680 (41490)	22.16	21.27
		2636.5(41055)	22.20	21.38
		2593 (40620)	22.26	21.37
		2549.5(40185)	22.05	21.15
		2506 (39750)	22.25	21.38
	100RB (0)	2680 (41490)	22.14	21.23
		2636.5(41055)	22.06	21.20
		2593 (40620)	22.15	21.28
		2549.5(40185)	21.95	21.02
		2506 (39750)	22.18	21.29

LTE Band41 PC3(DSI2)

5MHz	1RB-High (24)	2687.5 (41565)	20.63	19.76
		2640.3(41093)	20.49	19.64
		2593 (40620)	20.64	19.76
		2545.8(40148)	20.42	19.56
		2498.5 (39675)	20.67	19.82
	1RB-Middle (12)	2687.5 (41565)	20.82	19.90
		2640.3(41093)	20.80	19.93
		2593 (40620)	20.84	19.87
		2545.8(40148)	20.65	19.80
		2498.5 (39675)	20.93	20.03
	1RB-Low (0)	2687.5 (41565)	20.64	19.76
		2640.3(41093)	20.57	19.75
		2593 (40620)	20.66	19.77
		2545.8(40148)	20.49	19.64
		2498.5 (39675)	20.70	19.84
	12RB-High (13)	2687.5 (41565)	19.65	18.68
		2640.3(41093)	19.57	18.62
		2593 (40620)	19.65	18.65
		2545.8(40148)	19.47	18.45
		2498.5 (39675)	19.72	18.70
	12RB-Middle (6)	2687.5 (41565)	19.78	18.75
		2640.3(41093)	19.70	18.73
		2593 (40620)	19.77	18.80
		2545.8(40148)	19.57	18.55
		2498.5 (39675)	19.84	18.81
	12RB-Low (0)	2687.5 (41565)	19.70	18.70
		2640.3(41093)	19.65	18.68
		2593 (40620)	19.71	18.70
		2545.8(40148)	19.51	18.54
		2498.5 (39675)	19.70	18.72
	25RB (0)	2687.5 (41565)	19.73	18.80
		2640.3(41093)	19.69	18.73
		2593 (40620)	19.72	18.81
		2545.8(40148)	19.54	18.61
		2498.5 (39675)	19.74	18.83
10MHz	1RB-High (49)	2685 (41540)	20.58	19.73
		2639(41080)	20.50	19.64
		2593 (40620)	20.54	19.67
		2547(40160)	20.59	19.76
		2501 (39700)	20.50	19.62
	1RB-Middle (24)	2685 (41540)	20.84	19.95
		2639(41080)	20.74	19.89
		2593 (40620)	20.77	19.94
		2547(40160)	20.82	19.93
		2501 (39700)	20.72	19.87
	1RB-Low (0)	2685 (41540)	20.71	19.85
		2639(41080)	20.56	19.72
		2593 (40620)	20.66	19.78
		2547(40160)	20.61	19.74
		2501 (39700)	20.55	19.69
	25RB-High (25)	2685 (41540)	19.72	18.76
		2639(41080)	19.60	18.69
		2593 (40620)	19.60	18.70
		2547(40160)	19.68	18.74
		2501 (39700)	19.53	18.55
	25RB-Middle (12)	2685 (41540)	19.78	18.84
		2639(41080)	19.66	18.75
		2593 (40620)	19.73	18.80
		2547(40160)	19.74	18.82
		2501 (39700)	19.66	18.72
	25RB-Low (0)	2685 (41540)	19.80	18.89
		2639(41080)	19.71	18.77
		2593 (40620)	19.79	18.85
		2547(40160)	19.72	18.84
		2501 (39700)	19.66	18.74
	50RB (0)	2685 (41540)	19.78	18.89
		2639(41080)	19.72	18.80
		2593 (40620)	19.78	18.84
		2547(40160)	19.76	18.88
		2501 (39700)	19.66	18.71

15MHz	1RB-High (74)	2682.5 (41515)	20.40	19.53
		2637.8(41068)	20.31	19.47
		2593 (40620)	20.34	19.49
		2548.3(40173)	20.43	19.60
		2503.5 (39725)	20.30	19.34
	1RB-Middle (37)	2682.5 (41515)	20.71	19.82
		2637.8(41068)	20.56	19.73
		2593 (40620)	20.65	19.79
		2548.3(40173)	20.63	19.81
		2503.5 (39725)	20.54	19.69
	1RB-Low (0)	2682.5 (41515)	20.57	19.69
		2637.8(41068)	20.39	19.56
		2593 (40620)	20.55	19.67
		2548.3(40173)	20.43	19.27
		2503.5 (39725)	20.39	19.52
	36RB-High (38)	2682.5 (41515)	19.60	18.63
		2637.8(41068)	19.44	18.49
		2593 (40620)	19.48	18.53
		2548.3(40173)	19.53	18.54
		2503.5 (39725)	19.41	18.39
	36RB-Middle (19)	2682.5 (41515)	19.71	18.70
		2637.8(41068)	19.59	18.61
		2593 (40620)	19.63	18.61
		2548.3(40173)	19.66	18.62
		2503.5 (39725)	19.53	18.48
	36RB-Low (0)	2682.5 (41515)	19.68	18.70
		2637.8(41068)	19.52	18.60
		2593 (40620)	19.66	18.61
		2548.3(40173)	19.62	18.64
		2503.5 (39725)	19.49	18.54
	75RB (0)	2682.5 (41515)	19.67	18.74
		2637.8(41068)	19.63	18.66
		2593 (40620)	19.62	18.69
		2548.3(40173)	19.64	18.67
		2503.5 (39725)	19.52	18.53

20MHz	1RB-High (99)	2680 (41490)	20.38	19.48
		2636.5(41055)	20.23	19.36
		2593 (40620)	20.39	19.52
		2549.5(40185)	20.18	19.36
		2506 (39750)	20.45	19.12
	1RB-Middle (50)	2680 (41490)	20.84	19.90
		2636.5(41055)	20.71	19.87
		2593 (40620)	20.81	19.97
		2549.5(40185)	20.62	19.14
		2506 (39750)	20.86	19.99
	1RB-Low (0)	2680 (41490)	20.46	19.57
		2636.5(41055)	20.49	19.63
		2593 (40620)	20.45	19.59
		2549.5(40185)	20.29	19.13
		2506 (39750)	20.44	19.59
	50RB-High (50)	2680 (41490)	19.84	18.72
		2636.5(41055)	19.54	18.69
		2593 (40620)	19.65	18.74
		2549.5(40185)	19.40	18.48
		2506 (39750)	19.66	18.72
	50RB-Middle (25)	2680 (41490)	19.73	18.87
		2636.5(41055)	19.76	18.86
		2593 (40620)	19.81	18.91
		2549.5(40185)	19.59	18.64
		2506 (39750)	19.81	18.89
	50RB-Low (0)	2680 (41490)	19.76	18.86
		2636.5(41055)	19.81	18.97
		2593 (40620)	19.82	18.92
		2549.5(40185)	19.60	18.68
		2506 (39750)	19.83	18.90
	100RB (0)	2680 (41490)	19.67	18.77
		2636.5(41055)	19.61	18.71
		2593 (40620)	19.66	18.71
		2549.5(40185)	19.45	18.55
		2506 (39750)	19.70	18.79

LTE Band41 PC3(DSI3)

5MHz	1RB-High (24)	2687.5 (41565)	18.92	19.07
		2640.3(41093)	18.79	18.93
		2593 (40620)	18.95	19.10
		2545.8(40148)	18.75	18.91
		2498.5 (39675)	19.02	19.17
	1RB-Middle (12)	2687.5 (41565)	19.17	19.26
		2640.3(41093)	19.12	19.37
		2593 (40620)	19.25	19.37
		2545.8(40148)	18.99	19.11
		2498.5 (39675)	19.26	19.42
	1RB-Low (0)	2687.5 (41565)	18.94	19.08
		2640.3(41093)	18.88	19.03
		2593 (40620)	18.96	19.11
		2545.8(40148)	18.79	18.94
		2498.5 (39675)	19.04	19.16
	12RB-High (13)	2687.5 (41565)	18.97	18.97
		2640.3(41093)	18.93	18.88
		2593 (40620)	19.01	19.02
		2545.8(40148)	18.83	18.77
		2498.5 (39675)	19.08	19.07
	12RB-Middle (6)	2687.5 (41565)	19.10	19.01
		2640.3(41093)	19.00	18.96
		2593 (40620)	19.11	19.11
		2545.8(40148)	18.93	18.87
		2498.5 (39675)	19.14	19.09
	12RB-Low (0)	2687.5 (41565)	18.96	18.96
		2640.3(41093)	18.96	18.91
		2593 (40620)	19.04	19.01
		2545.8(40148)	18.85	18.81
		2498.5 (39675)	19.05	19.02
	25RB (0)	2687.5 (41565)	19.07	19.06
		2640.3(41093)	18.93	18.98
		2593 (40620)	19.09	19.13
		2545.8(40148)	18.89	18.92
		2498.5 (39675)	19.09	19.15
10MHz	1RB-High (49)	2685 (41540)	18.99	19.15
		2639(41080)	18.88	19.05
		2593 (40620)	19.03	19.19
		2547(40160)	18.84	18.99
		2501 (39700)	19.08	19.24
	1RB-Middle (24)	2685 (41540)	19.13	19.28
		2639(41080)	19.04	19.15
		2593 (40620)	19.16	19.34
		2547(40160)	18.98	19.17
		2501 (39700)	19.20	19.37
	1RB-Low (0)	2685 (41540)	19.06	19.22
		2639(41080)	19.01	19.20
		2593 (40620)	19.06	19.22
		2547(40160)	18.89	19.07
		2501 (39700)	19.09	19.24
	25RB-High (25)	2685 (41540)	19.09	19.10
		2639(41080)	18.94	19.05
		2593 (40620)	19.12	19.17
		2547(40160)	18.88	18.94
		2501 (39700)	19.12	19.19
	25RB-Middle (12)	2685 (41540)	19.15	19.18
		2639(41080)	19.00	19.02
		2593 (40620)	19.10	19.20
		2547(40160)	18.93	18.99
		2501 (39700)	19.15	19.23
	25RB-Low (0)	2685 (41540)	19.12	19.16
		2639(41080)	19.04	19.06
		2593 (40620)	19.16	19.18
		2547(40160)	18.98	19.02
		2501 (39700)	19.15	19.23
	50RB (0)	2685 (41540)	19.14	19.21
		2639(41080)	19.11	19.20
		2593 (40620)	19.21	19.25
		2547(40160)	18.98	19.07
		2501 (39700)	19.20	19.29

15MHz	1RB-High (74)	2682.5 (41515)	18.89	19.01
		2637.8(41068)	18.75	18.91
		2593 (40620)	18.94	19.10
		2548.3(40173)	18.70	18.89
		2503.5 (39725)	18.94	19.13
	1RB-Middle (37)	2682.5 (41515)	19.06	19.19
		2637.8(41068)	18.97	19.13
		2593 (40620)	19.08	19.21
		2548.3(40173)	18.89	19.02
		2503.5 (39725)	19.08	19.25
	1RB-Low (0)	2682.5 (41515)	18.96	19.06
		2637.8(41068)	18.98	19.10
		2593 (40620)	19.01	19.11
		2548.3(40173)	18.81	18.96
		2503.5 (39725)	18.98	19.16
	36RB-High (38)	2682.5 (41515)	19.02	19.01
		2637.8(41068)	18.96	18.92
		2593 (40620)	19.02	18.95
		2548.3(40173)	18.87	18.82
		2503.5 (39725)	19.03	19.09
	36RB-Middle (19)	2682.5 (41515)	19.09	18.95
		2637.8(41068)	19.03	18.96
		2593 (40620)	19.12	18.96
		2548.3(40173)	18.85	18.89
		2503.5 (39725)	19.08	19.12
	36RB-Low (0)	2682.5 (41515)	18.99	18.98
		2637.8(41068)	18.89	18.96
		2593 (40620)	19.04	19.07
		2548.3(40173)	18.89	18.84
		2503.5 (39725)	19.08	19.04
	75RB (0)	2682.5 (41515)	19.07	19.08
		2637.8(41068)	19.01	19.06
		2593 (40620)	19.10	19.15
		2548.3(40173)	18.89	18.91
		2503.5 (39725)	19.13	19.14

20MHz	1RB-High (99)	2680 (41490)	18.91	19.08
		2636.5(41055)	18.80	18.96
		2593 (40620)	18.95	19.11
		2549.5(40185)	18.75	18.91
		2506 (39750)	18.96	19.14
	1RB-Middle (50)	2680 (41490)	19.23	19.34
		2636.5(41055)	19.17	19.35
		2593 (40620)	19.26	19.42
		2549.5(40185)	19.05	19.26
		2506 (39750)	19.29	19.42
	1RB-Low (0)	2680 (41490)	18.99	19.13
		2636.5(41055)	19.01	19.19
		2593 (40620)	19.00	19.19
		2549.5(40185)	18.86	19.03
		2506 (39750)	19.01	19.16
	50RB-High (50)	2680 (41490)	19.29	19.22
		2636.5(41055)	19.10	19.20
		2593 (40620)	19.20	19.24
		2549.5(40185)	19.02	18.99
		2506 (39750)	19.20	19.23
	50RB-Middle (25)	2680 (41490)	19.23	19.26
		2636.5(41055)	19.20	19.28
		2593 (40620)	19.26	19.34
		2549.5(40185)	19.06	19.10
		2506 (39750)	19.28	19.34
	50RB-Low (0)	2680 (41490)	19.17	19.25
		2636.5(41055)	19.28	19.34
		2593 (40620)	19.27	19.31
		2549.5(40185)	19.07	19.08
		2506 (39750)	19.25	19.30
	100RB (0)	2680 (41490)	19.11	19.18
		2636.5(41055)	19.15	19.22
		2593 (40620)	19.21	19.19
		2549.5(40185)	18.94	18.97
		2506 (39750)	19.22	19.24

LTE Band41 PC2(DSI1)

5MHz	1RB-High (24)	2687.5 (41565)	25.87	25.10
		2640.3(41093)	25.70	24.89
		2593 (40620)	25.88	25.08
		2545.8(40148)	25.72	24.95
		2498.5 (39675)	25.96	25.12
	1RB-Middle (12)	2687.5 (41565)	26.02	25.25
		2640.3(41093)	25.89	25.07
		2593 (40620)	26.03	25.19
		2545.8(40148)	25.88	25.07
		2498.5 (39675)	26.09	25.23
	1RB-Low (0)	2687.5 (41565)	25.89	25.12
		2640.3(41093)	25.79	24.96
		2593 (40620)	25.90	25.10
		2545.8(40148)	25.75	24.98
		2498.5 (39675)	25.96	25.12
	12RB-High (13)	2687.5 (41565)	24.99	24.06
		2640.3(41093)	24.86	23.97
		2593 (40620)	25.01	24.09
		2545.8(40148)	24.83	23.93
		2498.5 (39675)	25.09	24.13
	12RB-Middle (6)	2687.5 (41565)	25.05	24.13
		2640.3(41093)	24.94	24.07
		2593 (40620)	25.10	24.17
		2545.8(40148)	24.91	23.98
		2498.5 (39675)	25.14	24.19
	12RB-Low (0)	2687.5 (41565)	24.98	24.06
		2640.3(41093)	24.90	23.99
		2593 (40620)	25.02	24.10
		2545.8(40148)	24.83	23.92
		2498.5 (39675)	25.04	24.12
	25RB (0)	2687.5 (41565)	25.00	24.11
		2640.3(41093)	24.89	24.01
		2593 (40620)	25.02	24.14
		2545.8(40148)	24.85	24.00
		2498.5 (39675)	25.04	24.17
10MHz	1RB-High (49)	2685 (41540)	25.92	25.18
		2639(41080)	25.74	25.00
		2593 (40620)	25.94	25.17
		2547(40160)	25.77	25.03
		2501 (39700)	26.01	25.22
	1RB-Middle (24)	2685 (41540)	26.06	25.29
		2639(41080)	25.95	25.15
		2593 (40620)	26.09	25.28
		2547(40160)	25.93	25.14
		2501 (39700)	26.14	25.31
	1RB-Low (0)	2685 (41540)	25.99	25.24
		2639(41080)	25.89	25.12
		2593 (40620)	25.99	25.21
		2547(40160)	25.85	25.10
		2501 (39700)	26.02	25.22
	25RB-High (25)	2685 (41540)	25.03	24.14
		2639(41080)	24.89	24.03
		2593 (40620)	25.05	24.17
		2547(40160)	24.90	24.01
		2501 (39700)	25.09	24.19
	25RB-Middle (12)	2685 (41540)	25.08	24.18
		2639(41080)	24.93	24.05
		2593 (40620)	25.08	24.19
		2547(40160)	24.90	24.02
		2501 (39700)	25.12	24.22
	25RB-Low (0)	2685 (41540)	25.08	24.18
		2639(41080)	24.98	24.10
		2593 (40620)	25.08	24.21
		2547(40160)	24.91	24.05
		2501 (39700)	25.11	24.24
	50RB (0)	2685 (41540)	25.05	24.17
		2639(41080)	24.95	24.07
		2593 (40620)	25.06	24.19
		2547(40160)	24.89	24.00
		2501 (39700)	25.11	24.25

15MHz	1RB-High (74)	2682.5 (41515)	25.85	25.07
		2637.8(41068)	25.65	24.88
		2593 (40620)	25.86	25.07
		2548.3(40173)	25.68	24.91
		2503.5 (39725)	25.88	25.07
	1RB-Middle (37)	2682.5 (41515)	26.01	25.23
		2637.8(41068)	25.88	25.09
		2593 (40620)	25.99	25.19
		2548.3(40173)	25.86	25.07
		2503.5 (39725)	26.04	25.22
	1RB-Low (0)	2682.5 (41515)	25.90	25.14
		2637.8(41068)	25.86	25.06
		2593 (40620)	25.91	25.13
		2548.3(40173)	25.76	25.02
		2503.5 (39725)	25.95	25.12
	36RB-High (38)	2682.5 (41515)	25.02	24.05
		2637.8(41068)	24.88	23.94
		2593 (40620)	25.01	24.07
		2548.3(40173)	24.83	23.86
		2503.5 (39725)	25.05	24.07
	36RB-Middle (19)	2682.5 (41515)	25.03	24.05
		2637.8(41068)	24.93	24.01
		2593 (40620)	25.05	24.08
		2548.3(40173)	24.88	23.90
		2503.5 (39725)	25.10	24.11
	36RB-Low (0)	2682.5 (41515)	25.00	24.02
		2637.8(41068)	24.97	24.01
		2593 (40620)	25.06	24.11
		2548.3(40173)	24.86	23.92
		2503.5 (39725)	25.08	24.10
	75RB (0)	2682.5 (41515)	25.00	24.08
		2637.8(41068)	24.95	24.02
		2593 (40620)	25.03	24.12
		2548.3(40173)	24.84	23.94
		2503.5 (39725)	25.07	24.14

20MHz	1RB-High (99)	2680 (41490)	25.82	25.05
		2636.5(41055)	25.65	24.85
		2593 (40620)	25.80	25.03
		2549.5(40185)	25.63	24.89
		2506 (39750)	25.86	25.07
	1RB-Middle (50)	2680 (41490)	26.17	25.36
		2636.5(41055)	26.02	25.22
		2593 (40620)	26.13	25.31
		2549.5(40185)	25.96	25.16
		2506 (39750)	26.16	25.33
	1RB-Low (0)	2680 (41490)	25.88	25.13
		2636.5(41055)	25.89	25.09
		2593 (40620)	25.87	25.10
		2549.5(40185)	25.77	25.02
		2506 (39750)	25.93	25.11
	50RB-High (50)	2680 (41490)	25.05	24.14
		2636.5(41055)	24.89	24.02
		2593 (40620)	25.00	24.12
		2549.5(40185)	24.79	23.92
		2506 (39750)	25.03	24.13
	50RB-Middle (25)	2680 (41490)	25.09	24.18
		2636.5(41055)	25.03	24.12
		2593 (40620)	25.07	24.18
		2549.5(40185)	24.89	24.00
		2506 (39750)	25.02	24.21
	50RB-Low (0)	2680 (41490)	25.01	24.12
		2636.5(41055)	25.06	24.17
		2593 (40620)	25.08	24.19
		2549.5(40185)	24.86	23.99
		2506 (39750)	25.10	24.20
	100RB (0)	2680 (41490)	25.04	24.14
		2636.5(41055)	25.01	24.09
		2593 (40620)	25.06	24.15
		2549.5(40185)	24.86	23.93
		2506 (39750)	25.10	24.14

LTE Band41 PC2(DSI2)

5MHz	1RB-High (24)	2687.5 (41565)	23.59	22.87
		2640.3(41093)	23.46	22.71
		2593 (40620)	23.61	22.87
		2545.8(40148)	23.44	22.69
		2498.5 (39675)	23.67	22.93
	1RB-Middle (12)	2687.5 (41565)	23.72	23.00
		2640.3(41093)	23.63	22.88
		2593 (40620)	23.74	23.00
		2545.8(40148)	23.56	22.90
		2498.5 (39675)	23.79	23.06
	1RB-Low (0)	2687.5 (41565)	23.61	22.85
		2640.3(41093)	23.55	22.80
		2593 (40620)	23.63	22.87
		2545.8(40148)	23.48	22.73
		2498.5 (39675)	23.66	22.92
	12RB-High (13)	2687.5 (41565)	22.64	21.70
		2640.3(41093)	22.54	21.62
		2593 (40620)	22.63	21.70
		2545.8(40148)	22.47	21.52
		2498.5 (39675)	22.71	21.77
	12RB-Middle (6)	2687.5 (41565)	22.74	21.78
		2640.3(41093)	22.62	21.72
		2593 (40620)	22.75	21.80
		2545.8(40148)	22.57	21.62
		2498.5 (39675)	22.78	21.85
	12RB-Low (0)	2687.5 (41565)	22.66	21.73
		2640.3(41093)	22.60	21.71
		2593 (40620)	22.70	21.76
		2545.8(40148)	22.50	21.57
		2498.5 (39675)	22.73	21.77
	25RB (0)	2687.5 (41565)	22.67	21.75
		2640.3(41093)	22.59	21.70
		2593 (40620)	22.69	21.81
		2545.8(40148)	22.51	21.59
		2498.5 (39675)	22.74	21.82
10MHz	1RB-High (49)	2685 (41540)	23.65	22.92
		2639(41080)	23.50	22.77
		2593 (40620)	23.67	22.94
		2547(40160)	23.48	22.76
		2501 (39700)	23.74	22.98
	1RB-Middle (24)	2685 (41540)	23.85	23.10
		2639(41080)	23.76	23.02
		2593 (40620)	23.85	23.14
		2547(40160)	23.69	22.97
		2501 (39700)	23.89	23.17
	1RB-Low (0)	2685 (41540)	23.69	22.98
		2639(41080)	23.63	22.91
		2593 (40620)	23.69	22.96
		2547(40160)	23.56	22.82
		2501 (39700)	23.74	22.99
	25RB-High (25)	2685 (41540)	22.72	21.78
		2639(41080)	22.61	21.69
		2593 (40620)	22.71	21.79
		2547(40160)	22.52	21.61
		2501 (39700)	22.76	21.85
	25RB-Middle (12)	2685 (41540)	22.80	21.88
		2639(41080)	22.70	21.81
		2593 (40620)	22.83	21.90
		2547(40160)	22.61	21.68
		2501 (39700)	22.85	21.92
	25RB-Low (0)	2685 (41540)	22.80	21.86
		2639(41080)	22.76	21.86
		2593 (40620)	22.86	21.91
		2547(40160)	22.64	21.70
		2501 (39700)	22.85	21.92
	50RB (0)	2685 (41540)	22.76	21.87
		2639(41080)	22.66	21.79
		2593 (40620)	22.75	21.86
		2547(40160)	22.55	21.68
		2501 (39700)	22.78	21.90

15MHz	1RB-High (74)	2682.5 (41515)	23.46	22.71
		2637.8(41068)	23.32	22.60
		2593 (40620)	23.47	22.75
		2548.3(40173)	23.28	22.54
		2503.5 (39725)	23.53	22.78
	1RB-Middle (37)	2682.5 (41515)	23.72	22.98
		2637.8(41068)	23.63	22.91
		2593 (40620)	23.72	22.99
		2548.3(40173)	23.55	22.80
		2503.5 (39725)	23.77	23.02
	1RB-Low (0)	2682.5 (41515)	23.52	22.77
		2637.8(41068)	23.52	22.78
		2593 (40620)	23.53	22.80
		2548.3(40173)	23.39	22.64
		2503.5 (39725)	23.57	22.82
	36RB-High (38)	2682.5 (41515)	22.60	21.62
		2637.8(41068)	22.50	21.54
		2593 (40620)	22.60	21.61
		2548.3(40173)	22.41	21.41
		2503.5 (39725)	22.65	21.64
	36RB-Middle (19)	2682.5 (41515)	22.69	21.70
		2637.8(41068)	22.62	21.66
		2593 (40620)	22.71	21.73
		2548.3(40173)	22.51	21.50
		2503.5 (39725)	22.74	21.74
	36RB-Low (0)	2682.5 (41515)	22.64	21.69
		2637.8(41068)	22.64	21.68
		2593 (40620)	22.67	21.70
		2548.3(40173)	22.49	21.51
		2503.5 (39725)	22.71	21.73
	75RB (0)	2682.5 (41515)	22.59	21.68
		2637.8(41068)	22.56	21.64
		2593 (40620)	22.65	21.67
		2548.3(40173)	22.46	21.50
		2503.5 (39725)	22.75	21.83

20MHz	1RB-High (99)	2680 (41490)	23.32	22.56
		2636.5(41055)	23.15	22.43
		2593 (40620)	23.32	22.59
		2549.5(40185)	23.16	22.43
		2506 (39750)	23.37	22.62
	1RB-Middle (50)	2680 (41490)	23.76	23.00
		2636.5(41055)	23.66	22.92
		2593 (40620)	23.73	22.99
		2549.5(40185)	23.58	22.84
		2506 (39750)	23.71	23.04
	1RB-Low (0)	2680 (41490)	23.39	22.64
		2636.5(41055)	23.40	22.67
		2593 (40620)	23.40	22.66
		2549.5(40185)	23.28	22.55
		2506 (39750)	23.39	22.66
	50RB-High (50)	2680 (41490)	22.50	21.60
		2636.5(41055)	22.40	21.50
		2593 (40620)	22.45	21.56
		2549.5(40185)	22.27	21.35
		2506 (39750)	22.50	21.61
	50RB-Middle (25)	2680 (41490)	22.73	21.75
		2636.5(41055)	22.58	21.70
		2593 (40620)	22.66	21.75
		2549.5(40185)	22.43	21.54
		2506 (39750)	22.70	21.80
	50RB-Low (0)	2680 (41490)	22.59	21.70
		2636.5(41055)	22.66	21.81
		2593 (40620)	22.65	21.78
		2549.5(40185)	22.46	21.58
		2506 (39750)	22.70	21.81
	100RB (0)	2680 (41490)	22.58	21.67
		2636.5(41055)	22.54	21.64
		2593 (40620)	22.59	21.70
		2549.5(40185)	22.36	21.48
		2506 (39750)	22.61	21.70

LTE Band41 PC2(DSI3)

5MHz	1RB-High (24)	2687.5 (41565)	21.94	22.20
		2640.3(41093)	21.82	22.08
		2593 (40620)	21.93	22.25
		2545.8(40148)	21.80	22.06
		2498.5 (39675)	22.04	22.29
	1RB-Middle (12)	2687.5 (41565)	22.06	22.32
		2640.3(41093)	21.97	22.22
		2593 (40620)	22.10	22.34
		2545.8(40148)	21.93	22.16
		2498.5 (39675)	22.12	22.33
	1RB-Low (0)	2687.5 (41565)	21.95	22.22
		2640.3(41093)	21.88	22.15
		2593 (40620)	21.99	22.25
		2545.8(40148)	21.82	22.04
		2498.5 (39675)	22.03	22.30
	12RB-High (13)	2687.5 (41565)	21.99	22.05
		2640.3(41093)	21.88	21.97
		2593 (40620)	22.00	22.07
		2545.8(40148)	21.81	21.93
		2498.5 (39675)	22.07	22.16
	12RB-Middle (6)	2687.5 (41565)	22.04	22.11
		2640.3(41093)	21.96	22.03
		2593 (40620)	22.05	22.14
		2545.8(40148)	21.87	21.96
		2498.5 (39675)	22.13	22.21
	12RB-Low (0)	2687.5 (41565)	21.99	22.05
		2640.3(41093)	21.91	22.01
		2593 (40620)	21.99	22.09
		2545.8(40148)	21.82	21.91
		2498.5 (39675)	22.06	22.11
	25RB (0)	2687.5 (41565)	22.00	22.09
		2640.3(41093)	21.94	22.03
		2593 (40620)	22.07	22.14
		2545.8(40148)	21.89	21.98
		2498.5 (39675)	22.11	22.20
10MHz	1RB-High (49)	2685 (41540)	22.02	22.30
		2639(41080)	21.86	22.16
		2593 (40620)	22.06	22.35
		2547(40160)	21.86	22.15
		2501 (39700)	22.10	22.39
	1RB-Middle (24)	2685 (41540)	22.12	22.39
		2639(41080)	22.09	22.37
		2593 (40620)	22.20	22.46
		2547(40160)	22.01	22.29
		2501 (39700)	22.21	22.51
	1RB-Low (0)	2685 (41540)	22.05	22.37
		2639(41080)	22.02	22.30
		2593 (40620)	22.10	22.38
		2547(40160)	21.94	22.22
		2501 (39700)	22.10	22.38
	25RB-High (25)	2685 (41540)	22.05	22.12
		2639(41080)	21.96	22.05
		2593 (40620)	22.07	22.20
		2547(40160)	21.92	21.97
		2501 (39700)	22.14	22.24
	25RB-Middle (12)	2685 (41540)	22.09	22.16
		2639(41080)	22.01	22.11
		2593 (40620)	22.12	22.22
		2547(40160)	21.94	22.03
		2501 (39700)	22.11	22.26
	25RB-Low (0)	2685 (41540)	22.09	22.15
		2639(41080)	22.04	22.15
		2593 (40620)	22.16	22.25
		2547(40160)	21.96	21.99
		2501 (39700)	22.16	22.25
	50RB (0)	2685 (41540)	22.06	22.13
		2639(41080)	21.97	22.08
		2593 (40620)	22.07	22.21
		2547(40160)	21.93	22.04
		2501 (39700)	22.10	22.24

15MHz	1RB-High (74)	2682.5 (41515)	21.93	22.20
		2637.8(41068)	21.81	22.05
		2593 (40620)	21.98	22.24
		2548.3(40173)	21.77	22.07
		2503.5 (39725)	21.99	22.28
	1RB-Middle (37)	2682.5 (41515)	22.09	22.35
		2637.8(41068)	21.99	22.28
		2593 (40620)	22.13	22.39
		2548.3(40173)	21.94	22.21
		2503.5 (39725)	22.10	22.40
	1RB-Low (0)	2682.5 (41515)	21.99	22.26
		2637.8(41068)	21.94	22.26
		2593 (40620)	22.04	22.30
		2548.3(40173)	21.89	22.15
		2503.5 (39725)	22.01	22.30
	36RB-High (38)	2682.5 (41515)	22.04	22.05
		2637.8(41068)	21.91	21.94
		2593 (40620)	22.04	22.06
		2548.3(40173)	21.84	21.86
		2503.5 (39725)	22.04	22.08
	36RB-Middle (19)	2682.5 (41515)	22.04	22.06
		2637.8(41068)	21.98	22.00
		2593 (40620)	22.07	22.09
		2548.3(40173)	21.89	21.90
		2503.5 (39725)	22.12	22.11
	36RB-Low (0)	2682.5 (41515)	22.01	22.02
		2637.8(41068)	21.99	22.02
		2593 (40620)	22.09	22.12
		2548.3(40173)	21.89	21.90
		2503.5 (39725)	22.08	22.11
	75RB (0)	2682.5 (41515)	22.00	22.08
		2637.8(41068)	22.00	22.08
		2593 (40620)	22.10	22.14
		2548.3(40173)	21.87	21.95
		2503.5 (39725)	22.11	22.17

20MHz	1RB-High (99)	2680 (41490)	21.93	22.23
		2636.5(41055)	21.81	22.10
		2593 (40620)	21.97	22.28
		2549.5(40185)	21.79	22.07
		2506 (39750)	22.01	22.28
	1RB-Middle (50)	2680 (41490)	22.27	22.32
		2636.5(41055)	22.19	22.28
		2593 (40620)	22.18	22.35
		2549.5(40185)	22.08	22.10
		2506 (39750)	22.21	22.36
	1RB-Low (0)	2680 (41490)	22.01	22.30
		2636.5(41055)	22.05	22.35
		2593 (40620)	22.05	22.33
		2549.5(40185)	21.91	22.19
		2506 (39750)	22.05	22.32
	50RB-High (50)	2680 (41490)	22.04	22.18
		2636.5(41055)	21.94	22.08
		2593 (40620)	22.01	22.16
		2549.5(40185)	21.84	21.96
		2506 (39750)	22.03	22.19
	50RB-Middle (25)	2680 (41490)	22.17	22.19
		2636.5(41055)	22.04	22.18
		2593 (40620)	22.12	22.24
		2549.5(40185)	21.94	22.05
		2506 (39750)	22.15	22.32
	50RB-Low (0)	2680 (41490)	22.01	22.15
		2636.5(41055)	22.09	22.21
		2593 (40620)	22.10	22.26
		2549.5(40185)	21.92	22.03
		2506 (39750)	22.14	22.25
	100RB (0)	2680 (41490)	22.06	22.16
		2636.5(41055)	22.02	22.12
		2593 (40620)	22.10	22.19
		2549.5(40185)	21.84	21.95
		2506 (39750)	22.09	22.18

LTE Band66(DSI1)

1.4MHz	1RB-High (5)	1779.3 (132665)	23.09	22.30
		1745 (132322)	23.10	22.35
		1710.7 (131979)	23.13	22.54
	1RB-Middle (3)	1779.3 (132665)	23.19	22.50
		1745 (132322)	23.21	22.56
		1710.7 (131979)	23.23	22.63
	1RB-Low (0)	1779.3 (132665)	23.07	22.39
		1745 (132322)	23.11	22.35
		1710.7 (131979)	23.13	22.52
	3RB-High (3)	1779.3 (132665)	23.17	22.26
		1745 (132322)	23.22	22.17
		1710.7 (131979)	23.22	22.24
	3RB-Middle (1)	1779.3 (132665)	23.22	22.27
		1745 (132322)	23.25	22.25
		1710.7 (131979)	23.28	22.34
	3RB-Low (0)	1779.3 (132665)	23.20	22.18
		1745 (132322)	23.22	22.22
		1710.7 (131979)	23.24	22.22
	6RB (0)	1779.3 (132665)	22.26	21.37
		1745 (132322)	22.24	21.36
		1710.7 (131979)	22.28	21.42
3MHz	1RB-High (14)	1778.5 (132657)	23.18	22.50
		1745 (132322)	23.20	22.50
		1711.5 (131987)	23.18	22.56
	1RB-Middle (7)	1778.5 (132657)	23.34	22.60
		1745 (132322)	23.33	22.68
		1711.5 (131987)	23.34	22.58
	1RB-Low (0)	1778.5 (132657)	23.18	22.56
		1745 (132322)	23.23	22.52
		1711.5 (131987)	23.23	22.48
	8RB-High (7)	1778.5 (132657)	22.24	21.31
		1745 (132322)	22.23	21.33
		1711.5 (131987)	22.28	21.37
	8RB-Middle (4)	1778.5 (132657)	22.27	21.37
		1745 (132322)	22.27	21.35
		1711.5 (131987)	22.32	21.43
	8RB-Low (0)	1778.5 (132657)	22.23	21.30
		1745 (132322)	22.24	21.32
		1711.5 (131987)	22.30	21.38
	15RB (0)	1778.5 (132657)	22.22	21.26
		1745 (132322)	22.25	21.28
		1711.5 (131987)	22.28	21.34

5MHz	1RB-High (24)	1777.5 (132647)	23.05	22.34
		1745 (132322)	23.06	22.39
		1712.5 (131997)	23.09	22.53
	1RB-Middle (12)	1777.5 (132647)	23.30	22.76
		1745 (132322)	23.37	22.75
		1712.5 (131997)	23.34	22.77
	1RB-Low (0)	1777.5 (132647)	23.07	22.44
		1745 (132322)	23.06	22.46
		1712.5 (131997)	23.12	22.46
	12RB-High (13)	1777.5 (132647)	22.25	21.25
		1745 (132322)	22.24	21.23
		1712.5 (131997)	22.29	21.33
	12RB-Middle (6)	1777.5 (132647)	22.31	21.35
		1745 (132322)	22.31	21.29
		1712.5 (131997)	22.34	21.36
	12RB-Low (0)	1777.5 (132647)	22.26	21.29
		1745 (132322)	22.23	21.26
		1712.5 (131997)	22.27	21.32
	25RB (0)	1777.5 (132647)	22.25	21.27
		1745 (132322)	22.25	21.28
		1712.5 (131997)	22.31	21.32
10MHz	1RB-High (49)	1775 (132622)	23.10	22.37
		1745 (132322)	23.16	22.46
		1715 (132022)	23.14	22.50
	1RB-Middle (24)	1775 (132622)	23.27	22.70
		1745 (132322)	23.27	22.53
		1715 (132022)	23.35	22.72
	1RB-Low (0)	1775 (132622)	23.19	22.62
		1745 (132322)	23.19	22.47
		1715 (132022)	23.18	22.58
	25RB-High (25)	1775 (132622)	22.28	21.33
		1745 (132322)	22.25	21.28
		1715 (132022)	22.31	21.36
	25RB-Middle (12)	1775 (132622)	22.34	21.38
		1745 (132322)	22.29	21.30
		1715 (132022)	22.33	21.36
	25RB-Low (0)	1775 (132622)	22.35	21.40
		1745 (132322)	22.30	21.31
		1715 (132022)	22.32	21.39
	50RB (0)	1775 (132622)	22.35	21.40
		1745 (132322)	22.29	21.31
		1715 (132022)	22.33	21.37

15MHz	1RB-High (74)	1772.5 (132597)	23.07	22.35
		1745 (132322)	23.08	22.47
		1717.5 (132047)	23.10	22.45
	1RB-Middle (37)	1772.5 (132597)	23.23	22.61
		1745 (132322)	23.23	22.59
		1717.5 (132047)	23.27	22.68
	1RB-Low (0)	1772.5 (132597)	23.13	22.50
		1745 (132322)	23.13	22.51
		1717.5 (132047)	23.16	22.52
	36RB-High (38)	1772.5 (132597)	22.30	21.31
		1745 (132322)	22.25	21.22
		1717.5 (132047)	22.31	21.35
	36RB-Middle (19)	1772.5 (132597)	22.35	21.36
		1745 (132322)	22.29	21.28
		1717.5 (132047)	22.35	21.35
	36RB-Low (0)	1772.5 (132597)	22.35	21.37
		1745 (132322)	22.29	21.28
		1717.5 (132047)	22.33	21.33
	75RB (0)	1772.5 (132597)	22.31	21.34
		1745 (132322)	22.27	21.27
		1717.5 (132047)	22.29	21.34
20MHz	1RB-High (99)	1770 (132572)	23.01	22.25
		1745 (132322)	23.02	22.26
		1720 (132072)	23.02	22.53
	1RB-Middle (50)	1770 (132572)	23.31	22.68
		1745 (132322)	23.30	22.60
		1720 (132072)	23.35	22.76
	1RB-Low (0)	1770 (132572)	23.05	22.37
		1745 (132322)	23.07	22.48
		1720 (132072)	23.07	22.50
	50RB-High (50)	1770 (132572)	22.24	21.28
		1745 (132322)	22.18	21.18
		1720 (132072)	22.30	21.36
	50RB-Middle (25)	1770 (132572)	22.34	21.40
		1745 (132322)	22.30	21.30
		1720 (132072)	22.28	21.36
	50RB-Low (0)	1770 (132572)	22.36	21.39
		1745 (132322)	22.27	21.28
		1720 (132072)	22.39	21.35
	100RB (0)	1770 (132572)	22.32	21.34
		1745 (132322)	22.21	21.20
		1720 (132072)	22.27	21.31

LTE Band66(DSI2)

1.4MHz	1RB-High (5)	1779.3 (132665)	22.23	21.54
		1745 (132322)	22.26	21.50
		1710.7 (131979)	22.30	21.64
	1RB-Middle (3)	1779.3 (132665)	22.36	21.72
		1745 (132322)	22.37	21.68
		1710.7 (131979)	22.40	21.84
	1RB-Low (0)	1779.3 (132665)	22.21	21.67
		1745 (132322)	22.26	21.51
		1710.7 (131979)	22.28	21.60
	3RB-High (3)	1779.3 (132665)	22.37	21.32
		1745 (132322)	22.36	21.35
		1710.7 (131979)	22.40	21.45
	3RB-Middle (1)	1779.3 (132665)	22.36	21.43
		1745 (132322)	22.39	21.40
		1710.7 (131979)	22.41	21.51
	3RB-Low (0)	1779.3 (132665)	22.35	21.40
		1745 (132322)	22.34	21.38
		1710.7 (131979)	22.38	21.40
	6RB (0)	1779.3 (132665)	21.36	20.44
		1745 (132322)	21.33	20.45
		1710.7 (131979)	21.39	20.54
3MHz	1RB-High (14)	1778.5 (132657)	22.39	21.74
		1745 (132322)	22.38	21.63
		1711.5 (131987)	22.41	21.81
	1RB-Middle (7)	1778.5 (132657)	22.47	21.89
		1745 (132322)	22.49	21.89
		1711.5 (131987)	22.61	21.99
	1RB-Low (0)	1778.5 (132657)	22.39	21.69
		1745 (132322)	22.35	21.77
		1711.5 (131987)	22.41	21.76
	8RB-High (7)	1778.5 (132657)	21.41	20.50
		1745 (132322)	21.41	20.46
		1711.5 (131987)	21.43	20.55
	8RB-Middle (4)	1778.5 (132657)	21.46	20.56
		1745 (132322)	21.45	20.53
		1711.5 (131987)	21.47	20.60
	8RB-Low (0)	1778.5 (132657)	21.41	20.52
		1745 (132322)	21.42	20.50
		1711.5 (131987)	21.45	20.56
	15RB (0)	1778.5 (132657)	21.42	20.43
		1745 (132322)	21.40	20.44
		1711.5 (131987)	21.41	20.50

5MHz	1RB-High (24)	1777.5 (132647)	22.21	21.46
		1745 (132322)	22.15	21.45
		1712.5 (131997)	22.20	21.64
	1RB-Middle (12)	1777.5 (132647)	22.49	21.67
		1745 (132322)	22.52	21.75
		1712.5 (131997)	22.50	21.85
	1RB-Low (0)	1777.5 (132647)	22.22	21.59
		1745 (132322)	22.17	21.48
		1712.5 (131997)	22.23	21.59
	12RB-High (13)	1777.5 (132647)	21.30	20.34
		1745 (132322)	21.27	20.27
		1712.5 (131997)	21.34	20.37
	12RB-Middle (6)	1777.5 (132647)	21.39	20.42
		1745 (132322)	21.39	20.38
		1712.5 (131997)	21.43	20.47
	12RB-Low (0)	1777.5 (132647)	21.36	20.38
		1745 (132322)	21.34	20.32
		1712.5 (131997)	21.36	20.41
	25RB (0)	1777.5 (132647)	21.34	20.39
		1745 (132322)	21.30	20.28
		1712.5 (131997)	21.34	20.37
10MHz	1RB-High (49)	1775 (132622)	22.22	21.61
		1745 (132322)	22.25	21.48
		1715 (132022)	22.25	21.68
	1RB-Middle (24)	1775 (132622)	22.49	21.81
		1745 (132322)	22.47	21.84
		1715 (132022)	22.49	21.92
	1RB-Low (0)	1775 (132622)	22.31	21.69
		1745 (132322)	22.27	21.65
		1715 (132022)	22.30	21.71
	25RB-High (25)	1775 (132622)	21.36	20.40
		1745 (132322)	21.32	20.33
		1715 (132022)	21.34	20.41
	25RB-Middle (12)	1775 (132622)	21.44	20.53
		1745 (132322)	21.41	20.42
		1715 (132022)	21.40	20.46
	25RB-Low (0)	1775 (132622)	21.44	20.48
		1745 (132322)	21.40	20.42
		1715 (132022)	21.40	20.44
	50RB (0)	1775 (132622)	21.42	20.47
		1745 (132322)	21.35	20.39
		1715 (132022)	21.36	20.42

15MHz	1RB-High (74)	1772.5 (132597)	22.09	21.41
		1745 (132322)	22.11	21.48
		1717.5 (132047)	22.15	21.61
	1RB-Middle (37)	1772.5 (132597)	22.37	21.74
		1745 (132322)	22.32	21.70
		1717.5 (132047)	22.30	21.74
	1RB-Low (0)	1772.5 (132597)	22.15	21.54
		1745 (132322)	22.17	21.58
		1717.5 (132047)	22.17	21.60
	36RB-High (38)	1772.5 (132597)	21.29	20.33
		1745 (132322)	21.25	20.22
		1717.5 (132047)	21.29	20.31
	36RB-Middle (19)	1772.5 (132597)	21.41	20.39
		1745 (132322)	21.39	20.30
		1717.5 (132047)	21.38	20.38
	36RB-Low (0)	1772.5 (132597)	21.38	20.38
		1745 (132322)	21.31	20.30
		1717.5 (132047)	21.32	20.32
	75RB (0)	1772.5 (132597)	21.32	20.37
		1745 (132322)	21.25	20.27
		1717.5 (132047)	21.29	20.32
20MHz	1RB-High (99)	1770 (132572)	21.94	21.38
		1745 (132322)	21.98	21.32
		1720 (132072)	22.00	21.33
	1RB-Middle (50)	1770 (132572)	22.44	21.80
		1745 (132322)	22.38	21.73
		1720 (132072)	22.46	21.76
	1RB-Low (0)	1770 (132572)	22.02	21.31
		1745 (132322)	22.03	21.43
		1720 (132072)	22.02	21.48
	50RB-High (50)	1770 (132572)	21.17	20.24
		1745 (132322)	21.12	20.13
		1720 (132072)	21.23	20.28
	50RB-Middle (25)	1770 (132572)	21.33	20.42
		1745 (132322)	21.31	20.33
		1720 (132072)	21.29	20.35
	50RB-Low (0)	1770 (132572)	21.31	20.42
		1745 (132322)	21.25	20.28
		1720 (132072)	21.35	20.33
	100RB (0)	1770 (132572)	21.28	20.33
		1745 (132322)	21.20	20.21
		1720 (132072)	21.26	20.29

LTE Band66(DSI3)

1.4MHz	1RB-High (5)	1779.3 (132665)	20.13	20.43
		1745 (132322)	20.16	20.40
		1710.7 (131979)	20.16	20.46
	1RB-Middle (3)	1779.3 (132665)	20.25	20.61
		1745 (132322)	20.24	20.53
		1710.7 (131979)	20.28	20.64
	1RB-Low (0)	1779.3 (132665)	20.12	20.44
		1745 (132322)	20.13	20.44
		1710.7 (131979)	20.16	20.48
	3RB-High (3)	1779.3 (132665)	20.21	20.30
		1745 (132322)	20.24	20.23
		1710.7 (131979)	20.30	20.33
	3RB-Middle (1)	1779.3 (132665)	20.25	20.30
		1745 (132322)	20.30	20.28
		1710.7 (131979)	20.33	20.39
	3RB-Low (0)	1779.3 (132665)	20.22	20.25
		1745 (132322)	20.23	20.25
		1710.7 (131979)	20.27	20.31
	6RB (0)	1779.3 (132665)	20.18	20.34
		1745 (132322)	20.20	20.33
		1710.7 (131979)	20.25	20.40
3MHz	1RB-High (14)	1778.5 (132657)	20.21	20.52
		1745 (132322)	20.21	20.59
		1711.5 (131987)	20.23	20.62
	1RB-Middle (7)	1778.5 (132657)	20.42	20.84
		1745 (132322)	20.40	20.80
		1711.5 (131987)	20.45	20.84
	1RB-Low (0)	1778.5 (132657)	20.22	20.64
		1745 (132322)	20.22	20.56
		1711.5 (131987)	20.28	20.70
	8RB-High (7)	1778.5 (132657)	20.24	20.38
		1745 (132322)	20.23	20.34
		1711.5 (131987)	20.29	20.38
	8RB-Middle (4)	1778.5 (132657)	20.26	20.37
		1745 (132322)	20.30	20.33
		1711.5 (131987)	20.31	20.43
	8RB-Low (0)	1778.5 (132657)	20.25	20.35
		1745 (132322)	20.25	20.34
		1711.5 (131987)	20.29	20.41
	15RB (0)	1778.5 (132657)	20.22	20.29
		1745 (132322)	20.20	20.25
		1711.5 (131987)	20.26	20.32

5MHz	1RB-High (24)	1777.5 (132647)	20.07	20.55
		1745 (132322)	20.09	21.92
		1712.5 (131997)	20.12	21.96
	1RB-Middle (12)	1777.5 (132647)	20.37	20.77
		1745 (132322)	20.36	20.88
		1712.5 (131997)	20.42	20.85
	1RB-Low (0)	1777.5 (132647)	20.13	20.54
		1745 (132322)	20.07	21.90
		1712.5 (131997)	20.12	21.95
	12RB-High (13)	1777.5 (132647)	20.23	20.27
		1745 (132322)	20.19	21.25
		1712.5 (131997)	20.27	21.34
	12RB-Middle (6)	1777.5 (132647)	20.28	20.32
		1745 (132322)	20.27	21.30
		1712.5 (131997)	20.31	21.38
	12RB-Low (0)	1777.5 (132647)	20.23	21.29
		1745 (132322)	20.22	21.23
		1712.5 (131997)	20.26	21.32
	25RB (0)	1777.5 (132647)	20.20	21.31
		1745 (132322)	20.20	21.25
		1712.5 (131997)	20.24	21.33
10MHz	1RB-High (49)	1775 (132622)	20.14	20.56
		1745 (132322)	20.14	20.37
		1715 (132022)	20.16	20.52
	1RB-Middle (24)	1775 (132622)	20.31	20.74
		1745 (132322)	20.31	20.65
		1715 (132022)	20.33	20.71
	1RB-Low (0)	1775 (132622)	20.21	20.64
		1745 (132322)	20.18	20.49
		1715 (132022)	20.23	20.57
	25RB-High (25)	1775 (132622)	20.24	20.30
		1745 (132322)	20.20	20.24
		1715 (132022)	20.26	20.33
	25RB-Middle (12)	1775 (132622)	20.29	20.37
		1745 (132322)	20.27	20.27
		1715 (132022)	20.25	20.32
	25RB-Low (0)	1775 (132622)	20.31	20.37
		1745 (132322)	20.26	20.28
		1715 (132022)	20.29	20.33
	50RB (0)	1775 (132622)	20.29	20.34
		1745 (132322)	20.26	20.27
		1715 (132022)	20.27	20.34

15MHz	1RB-High (74)	1772.5 (132597)	20.09	20.47
		1745 (132322)	20.12	20.43
		1717.5 (132047)	20.13	20.49
	1RB-Middle (37)	1772.5 (132597)	20.29	20.77
		1745 (132322)	20.24	20.57
		1717.5 (132047)	20.26	20.55
	1RB-Low (0)	1772.5 (132597)	20.15	20.62
		1745 (132322)	20.14	20.46
		1717.5 (132047)	20.19	20.55
	36RB-High (38)	1772.5 (132597)	20.27	20.26
		1745 (132322)	20.23	20.20
		1717.5 (132047)	20.27	20.30
	36RB-Middle (19)	1772.5 (132597)	20.31	20.32
		1745 (132322)	20.25	20.27
		1717.5 (132047)	20.27	20.29
	36RB-Low (0)	1772.5 (132597)	20.30	20.32
		1745 (132322)	20.27	20.25
		1717.5 (132047)	20.26	20.32
	75RB (0)	1772.5 (132597)	20.29	20.31
		1745 (132322)	20.25	20.24
		1717.5 (132047)	20.27	20.30
20MHz	1RB-High (99)	1770 (132572)	20.06	20.39
		1745 (132322)	20.06	20.39
		1720 (132072)	20.07	20.50
	1RB-Middle (50)	1770 (132572)	20.34	20.61
		1745 (132322)	20.35	20.40
		1720 (132072)	20.37	20.57
	1RB-Low (0)	1770 (132572)	20.11	20.48
		1745 (132322)	20.07	20.49
		1720 (132072)	20.12	20.55
	50RB-High (50)	1770 (132572)	20.21	20.28
		1745 (132322)	20.14	20.18
		1720 (132072)	20.27	20.34
	50RB-Middle (25)	1770 (132572)	20.29	20.37
		1745 (132322)	20.26	20.30
		1720 (132072)	20.35	20.31
	50RB-Low (0)	1770 (132572)	20.33	20.39
		1745 (132322)	20.22	20.27
		1720 (132072)	20.23	20.30
	100RB (0)	1770 (132572)	20.28	20.32
		1745 (132322)	20.21	20.20
		1720 (132072)	20.25	20.30

LTE Band71(DSI1)

5MHz	1RB-High (24)	695.5 (133447)	23.74	23.02
		680.5 (133297)	23.70	22.95
		665.5 (133147)	23.70	22.91
	1RB-Middle (12)	695.5 (133447)	23.95	23.17
		680.5 (133297)	23.96	23.24
		665.5 (133147)	23.91	23.13
	1RB-Low (0)	695.5 (133447)	23.69	23.00
		680.5 (133297)	23.69	22.93
		665.5 (133147)	23.68	22.91
	12RB-High (13)	695.5 (133447)	22.90	21.89
		680.5 (133297)	22.84	21.78
		665.5 (133147)	22.83	21.83
	12RB-Middle (6)	695.5 (133447)	22.88	21.89
		680.5 (133297)	22.88	21.84
		665.5 (133147)	22.82	21.85
	12RB-Low (0)	695.5 (133447)	22.81	21.74
		680.5 (133297)	22.79	21.77
		665.5 (133147)	22.74	21.71
	25RB (0)	695.5 (133447)	22.89	21.89
		680.5 (133297)	22.83	21.82
		665.5 (133147)	22.82	21.82
10MHz	1RB-High (49)	693 (132422)	23.21	22.59
		680.5 (133297)	23.71	22.89
		668 (133172)	23.73	23.04
	1RB-Middle (24)	693 (132422)	23.35	22.67
		680.5 (133297)	23.86	23.15
		668 (133172)	23.92	23.04
	1RB-Low (0)	693 (132422)	23.25	22.58
		680.5 (133297)	23.75	23.00
		668 (133172)	23.77	22.95
	25RB-High (25)	693 (132422)	23.25	21.80
		680.5 (133297)	22.88	21.86
		668 (133172)	22.92	21.92
	25RB-Middle (12)	693 (132422)	22.32	21.80
		680.5 (133297)	22.87	21.84
		668 (133172)	22.88	21.89
	25RB-Low (0)	693 (132422)	22.36	21.86
		680.5 (133297)	22.82	21.83
		668 (133172)	22.87	21.83
	50RB (0)	693 (132422)	22.33	21.85
		680.5 (133297)	22.87	21.83
		668 (133172)	22.89	21.89

15MHz	1RB-High (74)	690.5 (133397)	23.76	23.06
		680.5 (133297)	23.69	22.85
		670.5 (133197)	23.70	22.94
	1RB-Middle (37)	690.5 (133397)	23.78	22.97
		680.5 (133297)	23.82	23.12
		670.5 (133197)	23.83	23.11
	1RB-Low (0)	690.5 (133397)	23.75	23.02
		680.5 (133297)	23.75	23.01
		670.5 (133197)	23.76	23.00
	36RB-High (38)	690.5 (133397)	22.91	21.85
		680.5 (133297)	22.89	21.82
		670.5 (133197)	22.87	21.86
	36RB-Middle (19)	690.5 (133397)	22.92	21.86
		680.5 (133297)	22.87	21.83
		670.5 (133197)	22.88	21.83
	36RB-Low (0)	690.5 (133397)	22.89	21.85
		680.5 (133297)	22.80	21.78
		670.5 (133197)	22.86	21.84
	75RB (0)	690.5 (133397)	22.90	21.87
		680.5 (133297)	22.84	21.82
		670.5 (133197)	22.87	21.88
20MHz	1RB-High (99)	688 (133372)	23.88	23.02
		683 (133322)	23.80	22.99
		673 (133222)	23.81	23.09
	1RB-Middle (50)	688 (133372)	23.99	23.26
		683 (133322)	23.94	23.39
		673 (133222)	23.98	23.37
	1RB-Low (0)	688 (133372)	23.89	23.15
		683 (133322)	23.89	23.14
		673 (133222)	23.92	23.03
	50RB-High (50)	688 (133372)	23.10	22.05
		683 (133322)	22.99	21.96
		673 (133222)	23.09	22.07
	50RB-Middle (25)	688 (133372)	23.09	22.07
		683 (133322)	23.07	22.02
		673 (133222)	23.08	22.07
	50RB-Low (0)	688 (133372)	23.07	22.02
		683 (133322)	22.97	21.93
		673 (133222)	23.03	22.04
	100RB (0)	688 (133372)	23.06	22.02
		683 (133322)	22.94	21.93
		673 (133222)	23.01	22.04

11.4 Wi-Fi and BT Measurement result

The maximum output power of BT is 7.67dBm.
The maximum tune up of BT is 9dBm.

For WIFI Antenna there are two of tune-up power, Receiver off and Receiver on:

Receiver off

802.11b(dBm)	
Channel\data rate	1Mbps
11(2462MHz)	19.34
6(2437MHz)	19.49
1(2412MHz)	20.01
Tune up	21.00
802.11g(dBm)	
Channel\data rate	6Mbps
11(2462MHz)	18.35
6(2437MHz)	17.77
1(2412MHz)	18.30
Tune up	19.50
802.11n(dBm)-20MHz	
Channel\data rate	MCS0
11(2462MHz)	18.16
6(2437MHz)	18.18
1(2412MHz)	18.75
Tune up	19.50
802.11n(dBm)-40MHz	
Channel\data rate	MCS0
9(2452MHz)	17.52
6(2437MHz)	18.15
3(2422MHz)	18.49
Tune up	19.50

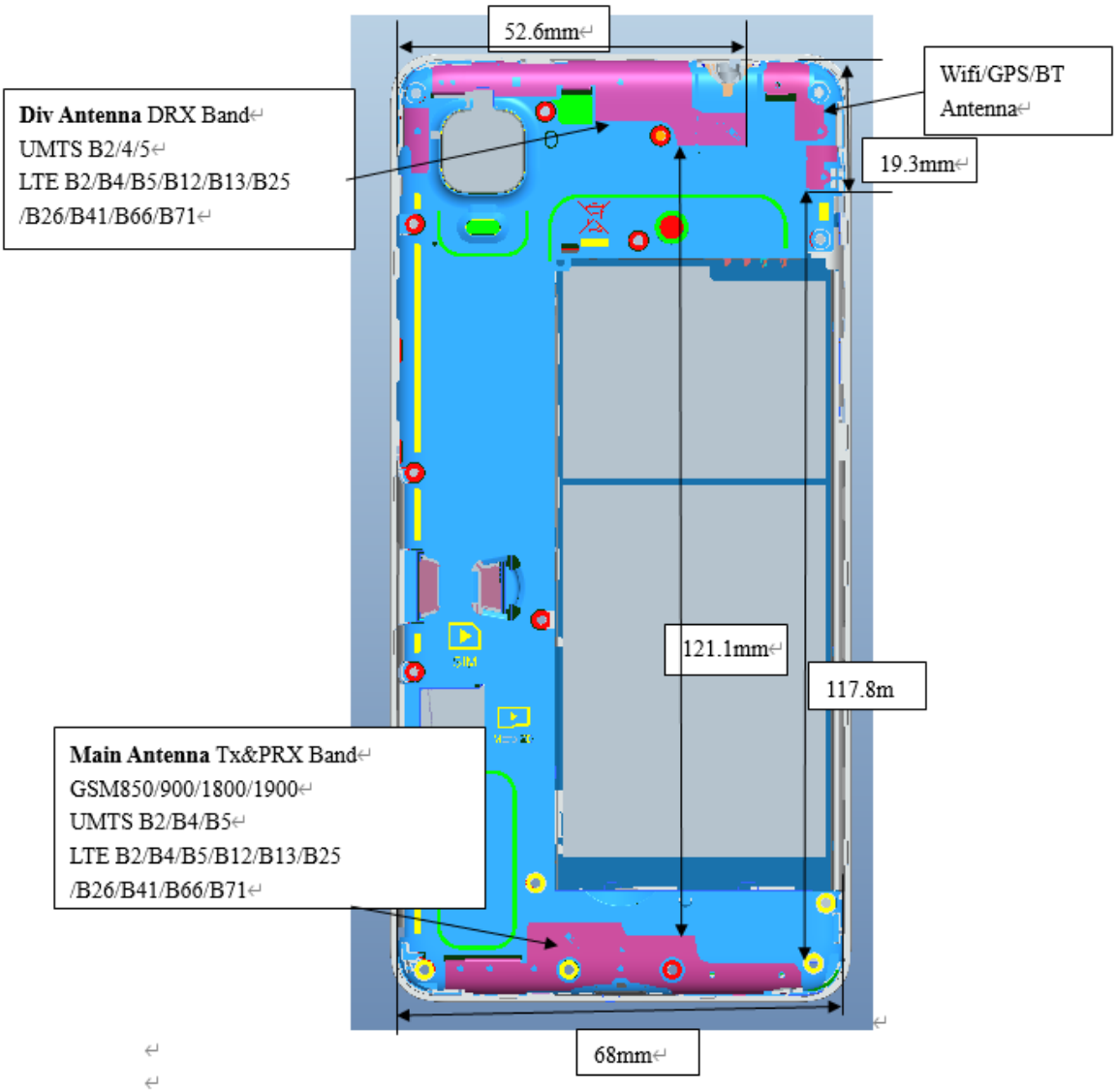
Receiver on

802.11b(dBm)	
Channel\data rate	1Mbps
11(2462MHz)	16.62
6(2437MHz)	16.61
1(2412MHz)	17.15
Tune up	18.00
802.11g(dBm)	
Channel\data rate	6Mbps
11(2462MHz)	16.66
6(2437MHz)	16.68
1(2412MHz)	17.25
Tune up	18.00
802.11n(dBm)-20MHz	
Channel\data rate	MCS0
11(2462MHz)	16.56
6(2437MHz)	16.54
1(2412MHz)	17.06
Tune up	18.00
802.11n(dBm)-40MHz	
Channel\data rate	MCS0
9(2452MHz)	16.02
6(2437MHz)	16.52
3(2422MHz)	16.88
Tune up	18.00

12 Antenna Location

12.1 Transmit Antenna Separation Distances

The location of the antennas inside mobile phone is shown below:



Picture 12.1 Antenna Locations

12.3 SAR Measurement Positions

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

SAR measurement positions						
Mode	Front	Rear	Left edge	Right edge	Top edge	Bottom edge
Main antenna	Yes	Yes	Yes	Yes	No	Yes
WLAN 2.4G	Yes	Yes	Yes	No	Yes	No

12.4 Standalone SAR Test Exclusion Considerations

Standalone 1-g head or body SAR evaluation by measurement or numerical simulation is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied. The 1-g SAR test exclusion threshold for 100 MHz to 6 GHz at test separation distances≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

Table 12.1: Standalone SAR test exclusion considerations

Band/Mode	F(GHz)	Position	SAR test exclusion threshold(mW)	RF output power		SAR test exclusion
				dBm	mW	
Bluetooth	2.441	Head	9.60	9	7.9	Yes
		Body	19.20	9	7.9	Yes
2.4GHz WLAN	2.45	Head	9.58	18	63.1	No
		Body	19.17	21	125.9	No

13 SAR Test Result

Note:

KDB 447498 D01 General RF Exposure Guidance:

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

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

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

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

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

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

KDB 648474 D04 Handset SAR:

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

KDB 941225 D01 SAR test for 3G devices:

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

KDB 941225 D05 SAR for LTE Devices:

SAR test reduction is applied using the following criteria:

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

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

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

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

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

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

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

KDB 941225 D06 Hot Spot SAR:

The hotspot mode and body-worn accessory SAR test configurations may overlap for handsets. When the same wireless mode transmission configurations for voice and data are required for SAR measurements, the more conservative configuration with a smaller separation distance should be tested for the overlapping SAR configurations. This typically applies to the back and front surfaces of a handset when SAR is required for both hotspot mode and body-worn accessory exposure conditions.

KDB 248227 D01 SAR meas for 802.11:

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

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

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

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

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

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

For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is $\leqslant$ 1.2 W/kg

or all required test channels are considered.

Duty Cycle

Mode	Duty Cycle
Speech for GSM	1:8.3
GPRS&EGPRS 1 Slot	1:8.3
GPRS&EGPRS 2 Slot	1:4
GPRS&EGPRS 3 Slot	1:2.67
GPRS&EGPRS 4 Slot	1:2
WCDMA&LTE FDD	1:1
TDD PC3	1:1.58
TDD PC2	1:2.309

Ambient Temperature: 21.5-23.5 ℃ Liquid Temperature: 21.5-23.5 ℃

Note

The **B1** is the battery of CAB2880000C7 by VEKEN

The **B2** is the battery of CAB2880001C1 by BYD

13.1 SAR results

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Head	GSM850	251	848.8	GSM	Cheek Left	0mm	FIG A.1	31.76	33.30	0.185	**0.26**	0.147	**0.21**	-0.18
Head	GSM850	190	836.6	GSM	Cheek Left	0mm	\	31.69	33.30	0.177	**0.26**	0.143	**0.21**	0.05
Head	GSM850	128	824.2	GSM	Cheek Left	0mm	\	31.68	33.30	0.143	**0.21**	0.114	**0.17**	0.10
Head	GSM850	190	836.6	GSM	Tilt Left	0mm	\	31.69	33.30	0.167	**0.24**	0.107	**0.16**	0.05
Head	GSM850	190	836.6	GSM	Cheek Right	0mm	\	31.69	33.30	0.146	**0.21**	0.119	**0.17**	0.19
Head	GSM850	190	836.6	GSM	Tilt Right	0mm	\	31.69	33.30	0.137	**0.20**	0.111	**0.16**	0.12
Body	GSM850	190	836.6	GPRS(4TX)	Front	10mm	\	26.73	27.50	0.148	**0.18**	0.086	**0.10**	0.13
Body	GSM850	251	848.8	GPRS(4TX)	Rear	10mm	\	26.84	27.50	0.252	**0.29**	0.147	**0.17**	-0.07
Body	GSM850	190	836.6	GPRS(4TX)	Rear	10mm	FIG A.2	26.73	27.50	0.279	**0.33**	0.163	**0.19**	0.10
Body	GSM850	128	824.2	GPRS(4TX)	Rear	10mm	\	26.68	27.50	0.236	**0.29**	0.137	**0.17**	-0.18
Body	GSM850	190	836.6	GPRS(4TX)	Left	10mm	\	26.73	27.50	0.064	**0.08**	0.035	**0.04**	-0.15
Body	GSM850	190	836.6	GPRS(4TX)	Right	10mm	\	26.73	27.50	0.057	**0.07**	0.030	**0.04**	0.11
Body	GSM850	190	836.6	GPRS(4TX)	Bottom	10mm	\	26.73	27.50	0.107	**0.13**	0.054	**0.06**	-0.17
Body	GSM850	190	836.6	EGPRS(4TX)	Rear	10mm	\	26.73	27.50	0.236	**0.28**	0.137	**0.16**	-0.11
Head	GSM1900	810	1909.8	GSM	Cheek Left	0mm	FIG A.3	28.22	29.70	0.121	**0.17**	0.079	**0.11**	0.19
Head	GSM1900	661	1880	GSM	Cheek Left	0mm	\	28.38	29.70	0.095	**0.13**	0.064	**0.09**	-0.15
Head	GSM1900	512	1850.2	GSM	Cheek Left	0mm	\	28.47	29.70	0.112	**0.15**	0.072	**0.10**	-0.13
Head	GSM1900	661	1880	GSM	Tilt Left	0mm	\	28.38	29.70	0.035	**0.05**	0.025	**0.03**	0.08
Head	GSM1900	661	1880	GSM	Cheek Right	0mm	\	28.38	29.70	0.086	**0.12**	0.058	**0.08**	0.16
Head	GSM1900	661	1880	GSM	Tilt Right	0mm	\	28.38	29.70	0.051	**0.07**	0.035	**0.05**	-0.11
Body	GSM1900	661	1880	GPRS(3TX)	Front	10mm	\	22.95	23.00	0.149	**0.15**	0.096	**0.10**	0.16
Body	GSM1900	810	1909.8	GPRS(3TX)	Rear	10mm	\	22.86	23.00	0.396	**0.41**	0.207	**0.21**	-0.03
Body	GSM1900	661	1880	GPRS(3TX)	Rear	10mm	FIG A.4	22.95	23.00	0.417	**0.42**	0.219	**0.22**	0.01
Body	GSM1900	512	1850.2	GPRS(3TX)	Rear	10mm	\	22.96	23.00	0.406	**0.41**	0.211	**0.21**	0.05
Body	GSM1900	661	1880	GPRS(3TX)	Left	10mm	\	22.95	23.00	0.026	**0.03**	0.011	**0.01**	0.11
Body	GSM1900	661	1880	GPRS(3TX)	Right	10mm	\	22.95	23.00	0.083	**0.08**	0.049	**0.05**	0.09
Body	GSM1900	661	1880	GPRS(3TX)	Bottom	10mm	\	22.95	23.00	0.270	**0.27**	0.149	**0.15**	-0.08
Body	GSM1900	661	1880	EGPRS(3TX)	Rear	10mm	\	22.94	23.00	0.324	**0.33**	0.173	**0.18**	0.12
Body	GSM1900	661	1880	GPRS(3TX)	Front	15mm	\	25.01	26.00	0.206	**0.26**	0.136	**0.17**	0.03
Body	GSM1900	810	1909.8	GPRS(3TX)	Rear	15mm	FIG A.5	24.94	26.00	0.392	**0.50**	0.235	**0.30**	0.02
Body	GSM1900	661	1880	GPRS(3TX)	Rear	15mm	\	25.01	26.00	0.381	**0.48**	0.232	**0.29**	-0.09
Body	GSM1900	512	1850.2	GPRS(3TX)	Rear	15mm	\	25.13	26.00	0.337	**0.41**	0.205	**0.25**	-0.06
Body	GSM1900	810	1909.8	EGPRS(3TX)	Rear	15mm	\	24.86	26.00	0.368	**0.48**	0.224	**0.29**	0.16

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Head	WCDMA 850	4233	846.6	RMC	Cheek Left	0mm	\	24.08	25.00	0.233	**0.29**	0.181	**0.22**	-0.16
Head	WCDMA 850	4183	836.6	RMC	Cheek Left	0mm	FIG A.6	24.09	25.00	0.249	**0.31**	0.194	**0.24**	-0.13
Head	WCDMA 850	4132	826.4	RMC	Cheek Left	0mm	\	24.10	25.00	0.236	**0.29**	0.185	**0.23**	0.13
Head	WCDMA 850	4183	836.6	RMC	Tilt Left	0mm	\	24.09	25.00	0.169	**0.21**	0.145	**0.18**	-0.05
Head	WCDMA 850	4183	836.6	RMC	Cheek Right	0mm	\	24.09	25.00	0.165	**0.20**	0.137	**0.17**	0.03
Head	WCDMA 850	4183	836.6	RMC	Tilt Right	0mm	\	24.09	25.00	0.162	**0.20**	0.131	**0.16**	-0.04
Body	WCDMA 850	4183	836.6	RMC	Front	10mm	\	24.09	25.00	0.185	**0.23**	0.104	**0.13**	0.09
Body	WCDMA 850	4233	846.6	RMC	Rear	10mm	\	24.08	25.00	0.329	**0.41**	0.181	**0.22**	-0.15
Body	WCDMA 850	4183	836.6	RMC	Rear	10mm	FIG A.7	24.09	25.00	0.361	**0.45**	0.197	**0.24**	-0.07
Body	WCDMA 850	4132	826.4	RMC	Rear	10mm	\	24.10	25.00	0.357	**0.44**	0.196	**0.24**	-0.05
Body	WCDMA 850	4183	836.6	RMC	Left	10mm	\	24.09	25.00	0.061	**0.08**	0.031	**0.04**	-0.02
Body	WCDMA 850	4183	836.6	RMC	Right	10mm	\	24.09	25.00	<0.01	**<0.01**	<0.01	**<0.01**	
Body	WCDMA 850	4183	836.6	RMC	Bottom	10mm	\	24.09	25.00	0.127	**0.16**	0.049	**0.06**	0.09
Head	WCDMA1700	1412	1732.4	RMC	Cheek Left	0mm	\	23.22	25.00	0.246	**0.37**	0.156	**0.24**	-0.05
Head	WCDMA1700	1412	1732.4	RMC	Tilt Left	0mm	\	23.22	25.00	0.088	**0.13**	0.057	**0.09**	0.03
Head	WCDMA1700	1513	1752.6	RMC	Cheek Right	0mm	\	23.29	25.00	0.330	**0.49**	0.211	**0.31**	-0.05
Head	WCDMA1700	1412	1732.4	RMC	Cheek Right	0mm	FIG A.8	23.22	25.00	0.399	**0.60**	0.253	**0.38**	0.19
Head	WCDMA1700	1312	1712.4	RMC	Cheek Right	0mm	\	23.11	25.00	0.324	**0.50**	0.208	**0.32**	0.07
Head	WCDMA1700	1412	1732.4	RMC	Tilt Right	0mm	\	23.22	25.00	0.106	**0.16**	0.071	**0.11**	0.03
Body	WCDMA1700	1412	1732.5	RMC	Front	10mm	\	20.21	22.00	0.251	**0.38**	0.158	**0.24**	0.02
Body	WCDMA1700	1513	1752.6	RMC	Rear	10mm	FIG A.9	20.23	22.00	0.500	**0.75**	0.272	**0.41**	0.10
Body	WCDMA1700	1412	1732.4	RMC	Rear	10mm	\	20.21	22.00	0.486	**0.73**	0.266	**0.40**	0.13
Body	WCDMA1700	1312	1712.4	RMC	Rear	10mm	\	20.15	22.00	0.464	**0.71**	0.257	**0.39**	0.03
Body	WCDMA1700	1412	1732.5	RMC	Left	10mm	\	20.21	22.00	0.047	**0.07**	0.027	**0.04**	-0.08
Body	WCDMA1700	1412	1732.5	RMC	Right	10mm	\	20.21	22.00	0.163	**0.25**	0.095	**0.14**	-0.13
Body	WCDMA1700	1412	1732.5	RMC	Bottom	10mm	\	20.21	22.00	0.312	**0.47**	0.177	**0.27**	0.02
Body	WCDMA1700	1412	1732.5	RMC	Front	15mm	\	21.71	23.50	0.246	**0.37**	0.167	**0.25**	0.17
Body	WCDMA1700	1513	1752.6	RMC	Rear	15mm	FIG A.10	21.75	23.50	0.376	**0.56**	0.223	**0.33**	-0.13
Body	WCDMA1700	1412	1732.5	RMC	Rear	15mm	\	21.71	23.50	0.350	**0.53**	0.208	**0.31**	0.06
Body	WCDMA1700	1312	1712.4	RMC	Rear	15mm	\	21.61	23.50	0.362	**0.56**	0.218	**0.34**	0.16
Head	WCDMA1900	9538	1907.6	RMC	Cheek Left	0mm	\	22.88	24.50	0.230	**0.33**	0.150	**0.22**	-0.19
Head	WCDMA1900	9400	1880	RMC	Cheek Left	0mm	FIG A.11	23.01	24.50	0.258	**0.36**	0.166	**0.23**	0.14
Head	WCDMA1900	9262	1852.4	RMC	Cheek Left	0mm	\	23.05	24.50	0.247	**0.34**	0.162	**0.23**	0.06
Head	WCDMA1900	9400	1880	RMC	Tilt Left	0mm	\	23.01	24.50	0.072	**0.10**	0.048	**0.07**	-0.04
Head	WCDMA1900	9400	1880	RMC	Cheek Right	0mm	\	23.01	24.50	0.207	**0.29**	0.141	**0.20**	0.14
Head	WCDMA1900	9400	1880	RMC	Tilt Right	0mm	\	23.01	24.50	0.105	**0.15**	0.068	**0.10**	-0.11
Body	WCDMA1900	9400	1880	RMC	Front	10mm	\	19.96	21.50	0.170	**0.24**	0.107	**0.15**	-0.08
Body	WCDMA1900	9538	1907.6	RMC	Rear	10mm	\	19.85	21.50	0.408	**0.60**	0.218	**0.32**	-0.11
Body	WCDMA1900	9400	1880	RMC	Rear	10mm	\	19.96	21.50	0.458	**0.65**	0.242	**0.34**	0.07
Body	WCDMA1900	9262	1852.4	RMC	Rear	10mm	FIG A.12	19.95	21.50	0.462	**0.66**	0.248	**0.35**	0.04
Body	WCDMA1900	9400	1880	RMC	Left	10mm	\	19.96	21.50	0.077	**0.11**	0.047	**0.07**	0.06
Body	WCDMA1900	9400	1880	RMC	Right	10mm	\	19.96	21.50	0.123	**0.18**	0.073	**0.10**	-0.09
Body	WCDMA1900	9400	1880	RMC	Bottom	10mm	\	19.96	21.50	0.293	**0.42**	0.153	**0.22**	0.19
Body	WCDMA1900	9400	1880	RMC	Front	15mm	\	21.94	23.50	0.160	**0.23**	0.102	**0.15**	-0.07
Body	WCDMA1900	9538	1907.6	RMC	Rear	15mm	\	21.88	23.50	0.282	**0.41**	0.165	**0.24**	0.07
Body	WCDMA1900	9400	1880	RMC	Rear	15mm	\	21.94	23.50	0.285	**0.41**	0.167	**0.24**	-0.10
Body	WCDMA1900	9262	1852.4	RMC	Rear	15mm	FIG A.13	21.98	23.50	0.322	**0.46**	0.187	**0.27**	-0.05

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Head	LTE Band12	23060	704	1RB-Mid	Cheek Left	0mm	FIG A.14	24.15	25.00	0.162	0.20	0.130	**0.16**	-0.10
Head	LTE Band12	23060	704	1RB-Mid	Tilt Left	0mm	\	24.15	25.00	0.071	**0.09**	0.058	**0.07**	0.00
Head	LTE Band12	23060	704	1RB-Mid	Cheek Right	0mm	\	24.15	25.00	0.083	**0.10**	0.066	**0.08**	-0.01
Head	LTE Band12	23060	704	1RB-Mid	Tilt Right	0mm	\	24.15	25.00	0.049	**0.06**	0.040	**0.05**	0.16
Head	LTE Band12	23060	704	25RB-Low	Cheek Left	0mm	\	23.25	24.00	0.089	**0.11**	0.071	**0.08**	-0.13
Head	LTE Band12	23060	704	25RB-Low	Tilt Left	0mm	\	23.25	24.00	0.056	**0.07**	0.045	**0.05**	0.12
Head	LTE Band12	23060	704	25RB-Low	Cheek Right	0mm	\	23.25	24.00	0.064	**0.08**	0.051	**0.06**	0.00
Head	LTE Band12	23060	704	25RB-Low	Tilt Right	0mm	\	23.25	24.00	0.037	**0.04**	0.030	**0.04**	0.03
Body	LTE Band12	23060	704	1RB-Mid	Front	10mm	\	24.15	25.00	0.164	**0.20**	0.128	**0.16**	0.19
Body	LTE Band12	23060	704	1RB-Mid	Rear	10mm	FIG A.15	24.15	25.00	0.349	0.42	0.269	**0.33**	-0.11
Body	LTE Band12	23060	704	1RB-Mid	Left	10mm	\	24.15	25.00	0.227	**0.28**	0.162	**0.20**	0.03
Body	LTE Band12	23060	704	1RB-Mid	Right	10mm	\	24.15	25.00	0.183	**0.22**	0.130	**0.16**	0.19
Body	LTE Band12	23060	704	1RB-Mid	Bottom	10mm	\	24.15	25.00	0.073	**0.09**	0.036	**0.04**	0.02
Body	LTE Band12	23060	704	25RB-Low	Front	10mm	\	23.25	24.00	0.126	**0.15**	0.098	**0.12**	0.07
Body	LTE Band12	23060	704	25RB-Low	Rear	10mm	\	23.25	24.00	0.254	**0.30**	0.196	**0.23**	-0.14
Body	LTE Band12	23060	704	25RB-Low	Left	10mm	\	23.25	24.00	0.155	**0.18**	0.112	**0.13**	0.00
Body	LTE Band12	23060	704	25RB-Low	Right	10mm	\	23.25	24.00	0.135	**0.16**	0.096	**0.11**	-0.06
Body	LTE Band12	23060	704	25RB-Low	Bottom	10mm	\	23.25	24.00	0.054	**0.06**	0.027	**0.03**	0.11
Head	LTE Band13	23230	782	1RB-Mid	Cheek Left	0mm	FIG A.16	23.94	25.00	0.210	0.27	0.164	**0.21**	0.12
Head	LTE Band13	23230	782	1RB-Mid	Tilt Left	0mm	\	23.94	25.00	0.126	**0.16**	0.102	**0.13**	-0.11
Head	LTE Band13	23230	782	1RB-Mid	Cheek Right	0mm	\	23.94	25.00	0.180	**0.23**	0.144	**0.18**	0.08
Head	LTE Band13	23230	782	1RB-Mid	Tilt Right	0mm	\	23.94	25.00	0.161	**0.21**	0.129	**0.16**	0.17
Head	LTE Band13	23230	782	25RB-Mid	Cheek Left	0mm	\	22.94	24.00	0.166	**0.21**	0.129	**0.16**	-0.12
Head	LTE Band13	23230	782	25RB-Mid	Tilt Left	0mm	\	22.94	24.00	0.100	**0.13**	0.081	**0.10**	-0.18
Head	LTE Band13	23230	782	25RB-Mid	Cheek Right	0mm	\	22.94	24.00	0.136	**0.17**	0.109	**0.14**	-0.08
Head	LTE Band13	23230	782	25RB-Mid	Tilt Right	0mm	\	22.94	24.00	0.127	**0.16**	0.101	**0.13**	-0.01
Body	LTE Band13	23230	782	1RB-Mid	Front	10mm	\	23.94	25.00	0.160	**0.20**	0.105	**0.13**	-0.18
Body	LTE Band13	23230	782	1RB-Mid	Rear	10mm	FIG A.17	23.94	25.00	0.324	0.41	0.192	**0.25**	0.10
Body	LTE Band13	23230	782	1RB-Mid	Left	10mm	\	23.94	25.00	0.214	**0.27**	0.119	**0.15**	-0.15
Body	LTE Band13	23230	782	1RB-Mid	Right	10mm	\	23.94	25.00	0.134	**0.17**	0.074	**0.09**	-0.14
Body	LTE Band13	23230	782	1RB-Mid	Bottom	10mm	\	23.94	25.00	0.114	**0.15**	0.043	**0.05**	-0.08
Body	LTE Band13	23230	782	25RB-Mid	Front	10mm	\	22.94	24.00	0.130	**0.17**	0.080	**0.10**	0.09
Body	LTE Band13	23230	782	25RB-Mid	Rear	10mm	\	22.94	24.00	0.263	**0.34**	0.156	**0.20**	-0.11
Body	LTE Band13	23230	782	25RB-Mid	Left	10mm	\	22.94	24.00	0.163	**0.21**	0.092	**0.12**	-0.13
Body	LTE Band13	23230	782	25RB-Mid	Right	10mm	\	22.94	24.00	0.109	**0.14**	0.061	**0.08**	-0.07
Body	LTE Band13	23230	782	25RB-Mid	Bottom	10mm	\	22.94	24.00	0.090	**0.11**	0.034	**0.04**	0.03

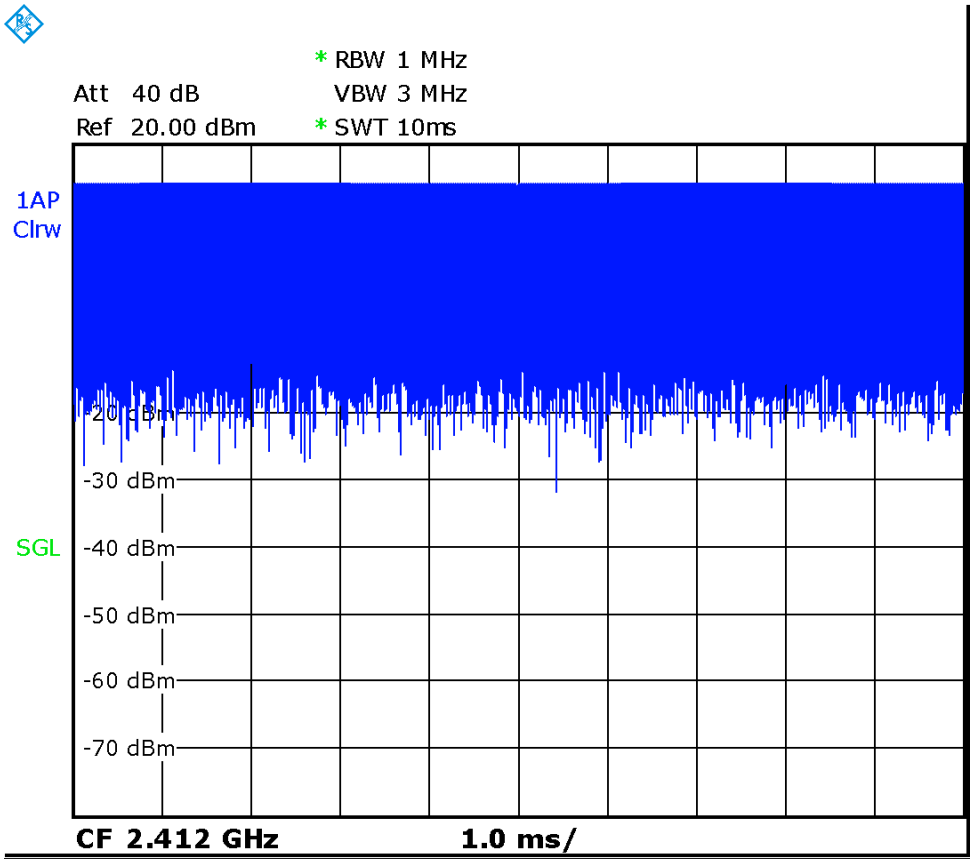
RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Head	LTE Band25	26590	1905	1RB-Mid	Cheek Left	0mm	\	23.53	24.50	0.183	**0.23**	0.103	**0.13**	0.14
Head	LTE Band25	26590	1905	1RB-Mid	Tilt Left	0mm	\	23.53	24.50	0.074	**0.09**	0.043	**0.05**	0.08
Head	LTE Band25	26590	1905	1RB-Mid	Cheek Right	0mm	FIG A.18	23.53	24.50	0.215	0.27	0.128	**0.16**	0.05
Head	LTE Band25	26590	1905	1RB-Mid	Tilt Right	0mm	\	23.53	24.50	0.099	**0.12**	0.057	**0.07**	0.14
Head	LTE Band25	26590	1905	50RB-Mid	Cheek Left	0mm	\	22.53	23.50	0.134	**0.17**	0.075	**0.09**	0.05
Head	LTE Band25	26590	1905	50RB-Mid	Tilt Left	0mm	\	22.53	23.50	0.054	**0.07**	0.032	**0.04**	0.02
Head	LTE Band25	26590	1905	50RB-Mid	Cheek Right	0mm	\	22.53	23.50	0.161	**0.20**	0.097	**0.12**	0.12
Head	LTE Band25	26590	1905	50RB-Mid	Tilt Right	0mm	\	22.53	23.50	0.075	**0.09**	0.045	**0.06**	-0.14
Body	LTE Band25	26590	1905	1RB-Mid	Front	10mm	\	20.61	21.50	0.157	**0.19**	0.100	**0.12**	0.16
Body	LTE Band25	26590	1905	1RB-Mid	Rear	10mm		20.61	21.50	0.374	**0.46**	0.206	**0.25**	-0.13
Body	LTE Band25	26590	1905	1RB-Mid	Left	10mm	\	20.61	21.50	<0.01	**<0.01**	<0.01	**<0.01**	
Body	LTE Band25	26590	1905	1RB-Mid	Right	10mm	\	20.61	21.50	0.090	**0.11**	0.053	**0.07**	0.06
Body	LTE Band25	26590	1905	1RB-Mid	Bottom	10mm	\	20.61	21.50	0.348	**0.43**	0.183	**0.22**	-0.02
Body	LTE Band25	26590	1905	50RB-Mid	Front	10mm	\	20.50	21.50	0.156	**0.20**	0.098	**0.12**	0.08
Body	LTE Band25	26590	1905	50RB-Mid	Rear	10mm	\	20.50	21.50	0.390	**0.49**	0.208	**0.26**	-0.09
Body	LTE Band25	26590	1905	50RB-Mid	Left	10mm	\	20.50	21.50	<0.01	**<0.01**	<0.01	**<0.01**	
Body	LTE Band25	26590	1905	50RB-Mid	Right	10mm	\	20.50	21.50	0.058	**0.07**	0.033	**0.04**	-0.14
Body	LTE Band25	26590	1905	50RB-Mid	Bottom	10mm	FIG A.19	20.50	21.50	0.392	0.49	0.210	**0.26**	0.11
Body	LTE Band25	26590	1905	1RB-Mid	Front	15mm	\	22.42	23.50	0.152	**0.19**	0.099	**0.13**	-0.15
Body	LTE Band25	26590	1905	1RB-Mid	Rear	15mm	FIG A.20	22.42	23.50	0.310	0.40	0.180	**0.23**	-0.10
Body	LTE Band25	26590	1905	50RB-Mid	Front	15mm	\	21.39	22.50	0.151	**0.19**	0.097	**0.13**	0.12
Body	LTE Band25	26590	1905	50RB-Mid	Rear	15mm	\	21.39	22.50	0.302	**0.39**	0.175	**0.23**	0.11
Head	LTE Band26	26965	841.5	1RB-Mid	Cheek Left	0mm	FIG A.21	23.92	25.00	0.224	0.29	0.177	**0.23**	-0.09
Head	LTE Band26	26965	841.5	1RB-Mid	Tilt Left	0mm	\	23.92	25.00	0.134	**0.17**	0.108	**0.14**	0.01
Head	LTE Band26	26965	841.5	1RB-Mid	Cheek Right	0mm	\	23.92	25.00	0.162	**0.21**	0.130	**0.17**	-0.03
Head	LTE Band26	26965	841.5	1RB-Mid	Tilt Right	0mm	\	23.92	25.00	0.138	**0.18**	0.110	**0.14**	0.02
Head	LTE Band26	26965	841.5	36RB-Low	Cheek Left	0mm	\	23.07	24.00	0.173	**0.21**	0.137	**0.17**	0.09
Head	LTE Band26	26965	841.5	36RB-Low	Tilt Left	0mm	\	23.07	24.00	0.102	**0.13**	0.083	**0.10**	0.01
Head	LTE Band26	26965	841.5	36RB-Low	Cheek Right	0mm	\	23.07	24.00	0.130	**0.16**	0.105	**0.13**	0.19
Head	LTE Band26	26965	841.5	36RB-Low	Tilt Right	0mm	\	23.07	24.00	0.110	**0.14**	0.087	**0.11**	0.10
Body	LTE Band26	26965	841.5	1RB-Mid	Front	10mm	\	23.92	25.00	0.173	**0.22**	0.097	**0.12**	-0.17
Body	LTE Band26	26965	841.5	1RB-Mid	Rear	10mm	FIG A.22	23.92	25.00	0.293	0.38	0.162	**0.21**	-0.06
Body	LTE Band26	26965	841.5	1RB-Mid	Left	10mm	\	23.92	25.00	0.201	**0.26**	0.103	**0.13**	0.12
Body	LTE Band26	26965	841.5	1RB-Mid	Right	10mm	\	23.92	25.00	0.122	**0.16**	0.063	**0.08**	0.06
Body	LTE Band26	26965	841.5	1RB-Mid	Bottom	10mm	\	23.92	25.00	0.111	**0.14**	0.040	**0.05**	-0.15
Body	LTE Band26	26965	841.5	36RB-Low	Front	10mm	\	23.07	24.00	0.132	**0.16**	0.074	**0.09**	0.19
Body	LTE Band26	26965	841.5	36RB-Low	Rear	10mm	\	23.07	24.00	0.232	**0.29**	0.128	**0.16**	-0.08
Body	LTE Band26	26965	841.5	36RB-Low	Left	10mm	\	23.07	24.00	0.156	**0.19**	0.080	**0.10**	-0.12
Body	LTE Band26	26965	841.5	36RB-Low	Right	10mm	\	23.07	24.00	0.096	**0.12**	0.049	**0.06**	0.06
Body	LTE Band26	26965	841.5	36RB-Low	Bottom	10mm	\	23.07	24.00	0.080	**0.10**	0.029	**0.04**	0.12

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Head	LTE Band41	39750	2506	1RB-Mid	Cheek Left	0mm	\	23.24	24.00	0.068	**0.08**	0.039	**0.05**	0.15
Head	LTE Band41	39750	2506	1RB-Mid	Tilt Left	0mm	\	23.24	24.00	0.047	**0.06**	0.026	**0.03**	0.11
Head	LTE Band41	39750	2506	1RB-Mid	Cheek Right	0mm	\	23.24	24.00	0.120	**0.14**	0.066	**0.08**	0.12
Head	LTE Band41	39750	2506	1RB-Mid	Tilt Right	0mm	\	23.24	24.00	0.046	**0.05**	0.026	**0.03**	-0.13
Head	LTE Band41	41490	2680	50RB-High	Cheek Left	0mm	\	22.27	23.00	0.086	**0.10**	0.045	**0.05**	0.07
Head	LTE Band41	41490	2680	50RB-High	Tilt Left	0mm	\	22.27	23.00	0.082	**0.10**	0.043	**0.05**	-0.13
Head	LTE Band41	41490	2680	50RB-High	Cheek Right	0mm	FIG A.23	22.27	23.00	0.132	**0.16**	0.070	**0.08**	0.08
Head	LTE Band41	41490	2680	50RB-High	Tilt Right	0mm	\	22.27	23.00	0.097	**0.11**	0.051	**0.06**	-0.06
Body	LTE Band41	39750	2506	1RB-Mid	Front	10mm	\	19.29	20.00	0.125	**0.15**	0.064	**0.08**	-0.10
Body	LTE Band41	39750	2506	1RB-Mid	Rear	10mm		19.29	20.00	0.444	**0.52**	0.200	**0.24**	-0.01
Body	LTE Band41	39750	2506	1RB-Mid	Left	10mm	\	19.29	20.00	<0.01	**<0.01**	<0.01	**<0.01**	
Body	LTE Band41	39750	2506	1RB-Mid	Right	10mm	\	19.29	20.00	0.068	**0.08**	0.035	**0.04**	-0.14
Body	LTE Band41	39750	2506	1RB-Mid	Bottom	10mm	\	19.29	20.00	0.424	**0.50**	0.205	**0.24**	0.19
Body	LTE Band41	41490	2680	50RB-High	Front	10mm	\	19.29	20.00	0.154	**0.18**	0.070	**0.08**	0.14
Body	LTE Band41	41490	2680	50RB-High	Rear	10mm	\	19.29	20.00	0.319	**0.38**	0.146	**0.17**	0.07
Body	LTE Band41	41490	2680	50RB-High	Left	10mm	\	19.29	20.00	0.029	**0.03**	0.014	**0.02**	0.16
Body	LTE Band41	41490	2680	50RB-High	Right	10mm	\	19.29	20.00	0.047	**0.06**	0.024	**0.03**	-0.17
Body	LTE Band41	41490	2680	50RB-High	Bottom	10mm	FIG A.24	19.29	20.00	0.483	**0.57**	0.215	**0.25**	0.06
Body	LTE Band41	39750	2506	1RB-Mid	Front	15mm	\	20.86	22.00	0.128	**0.17**	0.068	**0.09**	-0.15
Body	LTE Band41	39750	2506	1RB-Mid	Rear	15mm	FIG A.25	20.86	22.00	0.359	**0.47**	0.180	**0.23**	-0.14
Body	LTE Band41	41490	2680	50RB-High	Front	15mm	\	19.84	21.00	0.108	**0.14**	0.056	**0.07**	0.08
Body	LTE Band41	41490	2680	50RB-High	Rear	15mm	\	19.84	21.00	0.251	**0.33**	0.125	**0.16**	-0.14
Head	LTE Band41	41490	2680	1RB-Mid	Cheek Left	0mm	\	26.17	27.00	0.152	**0.18**	0.079	**0.10**	0.07
Head	LTE Band41	41490	2680	1RB-Mid	Tilt Left	0mm	\	26.17	27.00	0.147	**0.18**	0.080	**0.10**	-0.19
Head	LTE Band41	41490	2680	1RB-Mid	Cheek Right	0mm	FIG A.26	26.17	27.00	0.238	**0.29**	0.125	**0.15**	-0.07
Head	LTE Band41	41490	2680	1RB-Mid	Tilt Right	0mm	\	26.17	27.00	0.169	**0.20**	0.088	**0.11**	0.07
Head	LTE Band41	41490	2680	50RB-Mid	Cheek Left	0mm	\	25.09	26.00	0.132	**0.16**	0.067	**0.08**	0.01
Head	LTE Band41	41490	2680	50RB-Mid	Tilt Left	0mm	\	25.09	26.00	0.137	**0.17**	0.075	**0.09**	-0.08
Head	LTE Band41	41490	2680	50RB-Mid	Cheek Right	0mm	\	25.09	26.00	0.223	**0.27**	0.117	**0.14**	0.02
Head	LTE Band41	41490	2680	50RB-Mid	Tilt Right	0mm	\	25.09	26.00	0.152	**0.19**	0.080	**0.10**	0.18
Body	LTE Band41	41490	2680	1RB-Mid	Front	10mm	\	22.27	23.00	0.213	**0.25**	0.098	**0.12**	0.00
Body	LTE Band41	41490	2680	1RB-Mid	Rear	10mm		22.27	23.00	0.524	**0.62**	0.234	**0.28**	0.01
Body	LTE Band41	41490	2680	1RB-Mid	Left	10mm	\	22.27	23.00	<0.01	**<0.01**	<0.01	**<0.01**	
Body	LTE Band41	41490	2680	1RB-Mid	Right	10mm	\	22.27	23.00	0.040	**0.05**	0.020	**0.02**	-0.16
Body	LTE Band41	41490	2680	1RB-Mid	Bottom	10mm	\	22.27	23.00	0.346	**0.41**	0.155	**0.18**	0.10
Body	LTE Band41	41490	2680	50RB-Mid	Front	10mm	\	22.17	23.00	0.202	**0.24**	0.093	**0.11**	-0.08
Body	LTE Band41	41490	2680	50RB-Mid	Rear	10mm	\	22.17	23.00	0.505	**0.61**	0.225	**0.27**	0.04
Body	LTE Band41	41490	2680	50RB-Mid	Left	10mm	\	22.17	23.00	<0.01	**<0.01**	<0.01	**<0.01**	
Body	LTE Band41	41490	2680	50RB-Mid	Right	10mm	\	22.17	23.00	0.034	**0.04**	0.018	**0.02**	0.08
Body	LTE Band41	41490	2680	50RB-Mid	Bottom	10mm	FIG A.27	22.17	23.00	0.600	**0.73**	0.269	**0.33**	0.05
Body	LTE Band41	41490	2680	1RB-Mid	Front	15mm	\	23.76	25.00	0.126	**0.17**	0.078	**0.10**	0.12
Body	LTE Band41	41490	2680	1RB-Mid	Rear	15mm	FIG A.28	23.76	25.00	0.391	**0.52**	0.189	**0.25**	0.06
Body	LTE Band41	41490	2680	50RB-Mid	Front	15mm	\	22.73	24.00	0.121	**0.16**	0.075	**0.10**	-0.15
Body	LTE Band41	41490	2680	50RB-Mid	Rear	15mm	\	22.73	24.00	0.305	**0.41**	0.181	**0.24**	-0.18

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Head	LTE Band66	132072	1720	1RB-Mid	Cheek Left	0mm	FIG A.29	23.35	25.00	0.361	**0.53**	0.237	**0.35**	-0.17
Head	LTE Band66	132072	1720	1RB-Mid	Tilt Left	0mm	\	23.35	25.00	0.146	**0.21**	0.101	**0.15**	0.18
Head	LTE Band66	132072	1720	1RB-Mid	Cheek Right	0mm	\	23.35	25.00	0.342	**0.50**	0.239	**0.35**	0.17
Head	LTE Band66	132072	1720	1RB-Mid	Tilt Right	0mm	\	23.35	25.00	0.105	**0.15**	0.074	**0.11**	0.04
Head	LTE Band66	132072	1720	50RB-Low	Cheek Left	0mm	\	22.39	24.00	0.274	**0.40**	0.181	**0.26**	-0.02
Head	LTE Band66	132072	1720	50RB-Low	Tilt Left	0mm	\	22.39	24.00	0.114	**0.17**	0.080	**0.12**	-0.01
Head	LTE Band66	132072	1720	50RB-Low	Cheek Right	0mm	\	22.39	24.00	0.263	**0.38**	0.184	**0.27**	0.11
Head	LTE Band66	132072	1720	50RB-Low	Tilt Right	0mm	\	22.39	24.00	0.085	**0.12**	0.058	**0.08**	0.05
Body	LTE Band66	132072	1720	1RB-Mid	Front	10mm	\	20.37	22.00	0.330	**0.48**	0.214	**0.31**	0.19
Body	LTE Band66	132072	1720	1RB-Mid	Rear	10mm	FIG A.30	20.37	22.00	0.587	**0.85**	0.326	**0.47**	0.15
Body	LTE Band66	132072	1720	1RB-Mid	Left	10mm	\	20.37	22.00	<0.01	**<0.01**	<0.01	**<0.01**	
Body	LTE Band66	132072	1720	1RB-Mid	Right	10mm	\	20.37	22.00	0.157	**0.23**	0.092	**0.13**	0.05
Body	LTE Band66	132072	1720	1RB-Mid	Bottom	10mm	\	20.37	22.00	0.330	**0.48**	0.176	**0.26**	0.10
Body	LTE Band66	132072	1720	50RB-Low	Front	10mm	\	20.35	22.00	0.334	**0.49**	0.214	**0.31**	-0.06
Body	LTE Band66	132072	1720	50RB-Low	Rear	10mm	\	20.35	22.00	0.580	**0.85**	0.318	**0.46**	0.07
Body	LTE Band66	132072	1720	50RB-Low	Left	10mm	\	20.35	22.00	0.042	**0.06**	0.024	**0.04**	0.06
Body	LTE Band66	132072	1720	50RB-Low	Right	10mm	\	20.35	22.00	0.159	**0.23**	0.123	**0.18**	0.03
Body	LTE Band66	132072	1720	50RB-Low	Bottom	10mm	\	20.35	22.00	0.356	**0.52**	0.195	**0.29**	0.10
Body	LTE Band66	132072	1720	1RB-Mid	Rear	10mm	B	20.37	22.00	0.527	**0.77**	0.301	**0.44**	0.02
Body	LTE Band66	132072	1720	1RB-Mid	Front	15mm	\	22.46	23.50	0.328	**0.42**	0.217	**0.28**	-0.15
Body	LTE Band66	132072	1720	1RB-Mid	Rear	15mm	FIG A.31	22.46	23.50	0.476	**0.60**	0.290	**0.37**	0.13
Body	LTE Band66	132072	1720	50RB-Low	Front	15mm	\	21.35	22.50	0.318	**0.41**	0.210	**0.27**	-0.08
Body	LTE Band66	132072	1720	50RB-Low	Rear	15mm	\	21.35	22.50	0.461	**0.60**	0.280	**0.36**	0.03
Head	LTE Band71	133372	688	1RB-Mid	Cheek Left	0mm	\	23.99	25.00	0.067	**0.08**	0.052	**0.07**	0.14
Head	LTE Band71	133372	688	1RB-Mid	Tilt Left	0mm	\	23.99	25.00	0.037	**0.05**	0.029	**0.04**	-0.07
Head	LTE Band71	133372	688	1RB-Mid	Cheek Right	0mm	\	23.99	25.00	0.066	**0.08**	0.053	**0.07**	-0.15
Head	LTE Band71	133372	688	1RB-Mid	Tilt Right	0mm	FIG A.32	23.99	25.00	0.084	**0.11**	0.066	**0.08**	0.12
Head	LTE Band71	133372	688	50RB-High	Cheek Left	0mm	\	23.10	24.00	0.051	**0.06**	0.039	**0.05**	0.12
Head	LTE Band71	133372	688	50RB-High	Tilt Left	0mm	\	23.10	24.00	0.026	**0.03**	0.020	**0.02**	0.18
Head	LTE Band71	133372	688	50RB-High	Cheek Right	0mm	\	23.10	24.00	0.053	**0.07**	0.042	**0.05**	0.00
Head	LTE Band71	133372	688	50RB-High	Tilt Right	0mm	\	23.10	24.00	0.064	**0.08**	0.050	**0.06**	0.04
Body	LTE Band71	133372	688	1RB-Mid	Front	10mm	\	23.99	25.00	0.154	**0.19**	0.117	**0.15**	0.07
Body	LTE Band71	133372	688	1RB-Mid	Rear	10mm	FIG A.33	23.99	25.00	0.319	**0.40**	0.235	**0.30**	-0.06
Body	LTE Band71	133372	688	1RB-Mid	Left	10mm	\	23.99	25.00	0.174	**0.22**	0.122	**0.15**	-0.13
Body	LTE Band71	133372	688	1RB-Mid	Right	10mm	\	23.99	25.00	0.151	**0.19**	0.107	**0.14**	0.00
Body	LTE Band71	133372	688	1RB-Mid	Bottom	10mm	\	23.99	25.00	0.070	**0.09**	0.034	**0.04**	0.07
Body	LTE Band71	133372	688	50RB-High	Front	10mm	\	23.10	24.00	0.112	**0.14**	0.085	**0.10**	0.17
Body	LTE Band71	133372	688	50RB-High	Rear	10mm	\	23.10	24.00	0.231	**0.28**	0.170	**0.21**	-0.17
Body	LTE Band71	133372	688	50RB-High	Left	10mm	\	23.10	24.00	0.132	**0.16**	0.093	**0.11**	0.18
Body	LTE Band71	133372	688	50RB-High	Right	10mm	\	23.10	24.00	0.113	**0.14**	0.079	**0.10**	-0.14
Body	LTE Band71	133372	688	50RB-High	Bottom	10mm	\	23.10	24.00	0.050	**0.06**	0.025	**0.03**	-0.10
Head	WLAN	1	2412	1M	Cheek Left	0mm	\	17.15	18.00	0.109	**0.13**	0.064	**0.08**	-0.04
Head	WLAN	1	2412	1M	Tilt Left	0mm	\	17.15	18.00	0.136	**0.17**	0.069	**0.08**	-0.06
Head	WLAN	1	2412	1M	Cheek Right	0mm	\	17.15	18.00	0.209	**0.25**	0.103	**0.13**	0.09
Head	WLAN	1	2412	1M	Tilt Right	0mm	FIG A.34	17.15	18.00	0.223	**0.27**	0.104	**0.13**	0.07
Body	WLAN	1	2412	1M	Front	10mm	\	20.01	21.00	0.145	**0.18**	0.079	**0.10**	-0.17
Body	WLAN	1	2412	1M	Rear	10mm	FIG A.35	20.01	21.00	0.278	**0.35**	0.140	**0.18**	-0.11
Body	WLAN	1	2412	1M	Right	10mm	\	20.01	21.00	0.146	**0.18**	0.073	**0.09**	0.16
Body	WLAN	1	2412	1M	Top	10mm	\	20.01	21.00	0.195	**0.24**	0.101	**0.13**	-0.06

Head	BT	0	2402	GFSK	Cheek Left	0mm	\	7.67	9.00	<0.01	**<0.01**	<0.01	**<0.01**	/
Head	BT	0	2402	GFSK	Tilt Left	0mm	\	7.67	9.00	<0.01	**<0.01**	<0.01	**<0.01**	/
Head	BT	0	2402	GFSK	Cheek Right	0mm	FIG A.36	7.67	9.00	0.034	**0.05**	0.011	**0.01**	-0.11
Head	BT	0	2402	GFSK	Tilt Right	0mm	\	7.67	9.00	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	BT	0	2402	GFSK	Front	10mm	\	7.67	9.00	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	BT	0	2402	GFSK	Rear	10mm	FIG A.37	7.67	9.00	0.011	**0.01**	0.005	**0.01**	0.18
Body	BT	0	2402	GFSK	Right	10mm	\	7.67	9.00	<0.01	**<0.01**	<0.01	**<0.01**	/
Body	BT	0	2402	GFSK	Top	10mm	\	7.67	9.00	<0.01	**<0.01**	<0.01	**<0.01**	/

Duty factor plot



13.2 SAR results for Phablet

According to the KDB648474 D04, for smart phones, with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, that can provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets and support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance.

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB Publication 865664 D01 to address interactive hand use exposure conditions. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold. The normal tablet procedures in KDB Publication 616217 are required when the overall diagonal dimension of the device is > 20.0 cm. Hotspot mode SAR is not required when normal tablet procedures are applied. Extremity 10-g SAR is also not required for the front (top) surface of larger form factor full size tablets. The more conservative normal tablet SAR results can be used to support phablet mode 10-g extremity SAR.
3. The simultaneous transmission operating configurations applicable to voice and data transmissions for both phone and mini-tablet modes must be taken into consideration separately for 1-g and 10-g SAR to determine the simultaneous transmission SAR test exclusion and measurement requirements for the relevant wireless modes and exposure conditions

For the device of this project, the overall diagonal dimension is 162.17 cm (> 16.0 cm), so this device is a phone as “phablet”.

RF Exposure Conditions	Frequency Band	Channel Number	Frequency (MHz)	Mode/RB	Test setup	Distance	Figure No.	EUT Measured Power (dBm)	Tune up (dBm)	Measured SAR 1g (W/kg)	Calculated SAR 1g (W/kg)	Measured SAR 10g (W/kg)	Calculated SAR 10g (W/kg)	Power Drift
Body	LTE Band66	132072	1720	1RB-Mid	Rear	0mm	\	22.42	23.50	2.050	**2.63**	0.925	**1.19**	0.05
Body	LTE Band66	132072	1720	50RB-Low	Rear	0mm	\	21.39	22.50	2.110	**2.72**	0.944	**1.22**	0.13
Body	WLAN	1	2412	1M	Rear	0mm	\	20.01	21.00	1.380	**1.73**	0.502	**0.63**	0.10
Body	BT	0	2402	GFSK	Rear	0mm	\	7.67	9.00	0.099	**0.13**	0.037	**0.05**	0.13

Table 2.5: The sum of reported SAR values for main antenna and WiFi2.4G

Exposure Configuration	Main antenna	WiFi	Sum	Limit 10g (W/kg)
Highest reported SAR value for Limb	**1.22**	**0.63**	**1.87**	**4.0**

14 SAR Measurement Variability

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

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

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

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

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

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

15 Evaluation of Simultaneous

15.1 Introduction

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

15.1.1 Sum of SAR

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

15.1.2 SAR to Peak Location Ratio (SPLSR)

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

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

Where:

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

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

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

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

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

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

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

15.2 Simultaneous Transmission Capabilities

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

Capable Transmit Conf igurations	Head	Body-worn	Hotspot
WWAN+WLAN2.4G	Yes	Yes	Yes
WWAN+BT	Yes	Yes	Yes

Note:

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

15.3 SAR Simultaneous Transmission Analysis

Table 15.3-1: The sum of reported SAR values for Main antenna and WiFi-2.45G

	Position	Cellular antenna	WiFi	Sum
Highest reported SAR value for Head	Right hand, Cheek (WCDMA1700)	0.60	0.25	**0.85**
Maximum reported SAR value for Body	Rear 10mm (LTE Band66)	0.85	0.35	**1.20**

Note1: we have evaluated and chose the highest value of body 10mm and 15mm in the above table.

Table 15.3-2: The sum of reported SAR values for Main antenna and +BT

	Band	Cellular antenna	BT	Sum
Highest reported SAR value for Head	Right hand, Cheek (WCDMA1700)	0.60	**0.05**	**0.65**
Maximum reported SAR value for Body	Rear 10mm (LTE Band66)	0.85	0.01	**0.86**

Note1: we have evaluated and chose the highest value of body 10mm and 15mm in the above table.

15.4 Conclusion

According to the above tables, the highest simultaneous transmission reported SAR values is **1.20W/kg (1g).** The sum of reported SAR values is<1.6W/kg. So the simultaneous transmission SAR with volume scans is not required.

16 Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be ≤ 30%, for a confidence interval of k = 2. If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval.

Therefore, the measurement uncertainty is not required.

17 MAIN TEST INSTRUMENTS

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	N5239a	MY55491241	May 31, 2021	One year
02	Power meter	NRP2	106277	September 23，2021	One year
03	Power sensor	NRP8S	104291		
04	Signal Generator	E4438C	MY49070393	May 14, 2021	One Year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	CMW500	166370	June 25, 2021	One year
07	DAE	SPEAG DAE4	549	January 7, 2022	One year
	E-field Probe	SPEAG EX3DV4	7600	December 29，2022	One year
08	E-field Probe	SPEAG EX3DV4	7517	February 03，2021	One year
09	DAE	SPEAG DAE4	1525	September 1, 2021	One year
10	Dipole Validation Kit	SPEAG D750V3	1017	July 12,,2021	One year
11	Dipole Validation Kit	SPEAG D835V2	4d069	July 12,,2021	One year
12	Dipole Validation Kit	SPEAG D1750V2	1003	July 12, 2021	One year
13	Dipole Validation Kit	SPEAG D1900V2	5d101	July 15,2021	One year
14	Dipole Validation Kit	SPEAG D2450V2	853	July 26,2021	One year
15	Dipole Validation Kit	SPEAG D2600V2	1012	July 26,2021	One year

END OF REPORT BODY

ANNEX A Graph Results

GSM850 Head

Date: 1/20/2022

Electronics: DAE4 Sn549

Medium: H850

Medium parameters used (interpolated): f = 848.8 MHz; σ = 0.869 S/m; εr = 44.072; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: GSM 850 Frequency: 848.8 MHz Duty Cycle: 1:8.30042

Probe: EX3DV4 - SN7600 ConvF(10.74, 10.74, 10.74)

Area Scan (81x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.218 W/kg

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

Reference Value = 5.128 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.234 W/kg

SAR(1 g) = 0.185 W/kg; SAR(10 g) = 0.147 W/kg

Maximum value of SAR (measured) = 0.217 W/kg

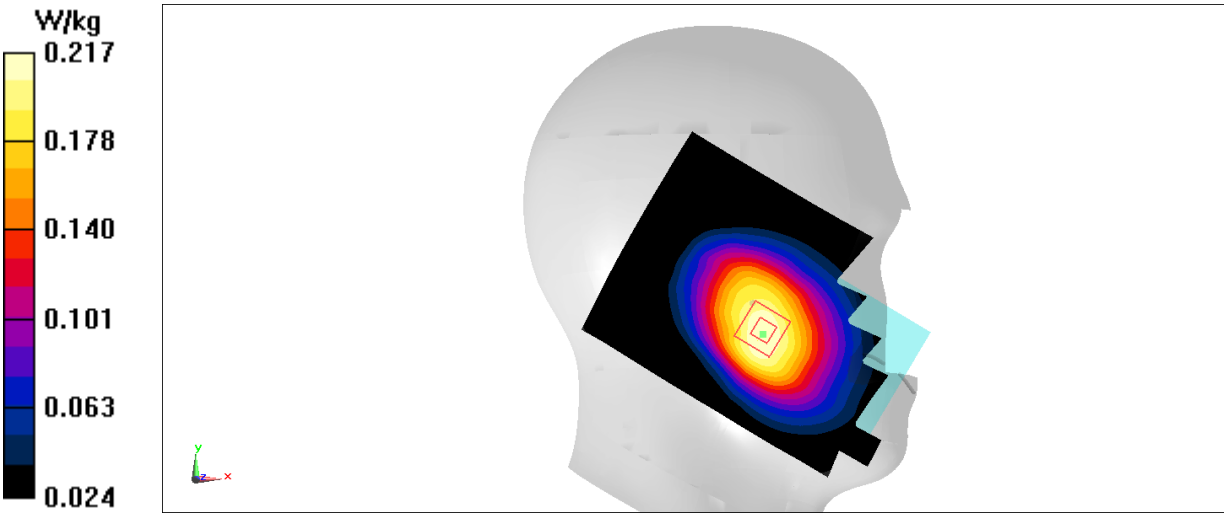


Fig A.1

GSM850 Body

Date: 1/20/2022

Electronics: DAE4 Sn549

Medium: H850

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.863 S/m; εr = 44.109; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: GSM 850 Frequency: 836.6 MHz Duty Cycle: 1:1.99986

Probe: EX3DV4 - SN7600 ConvF(10.74, 10.74, 10.74)

Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.434 W/kg

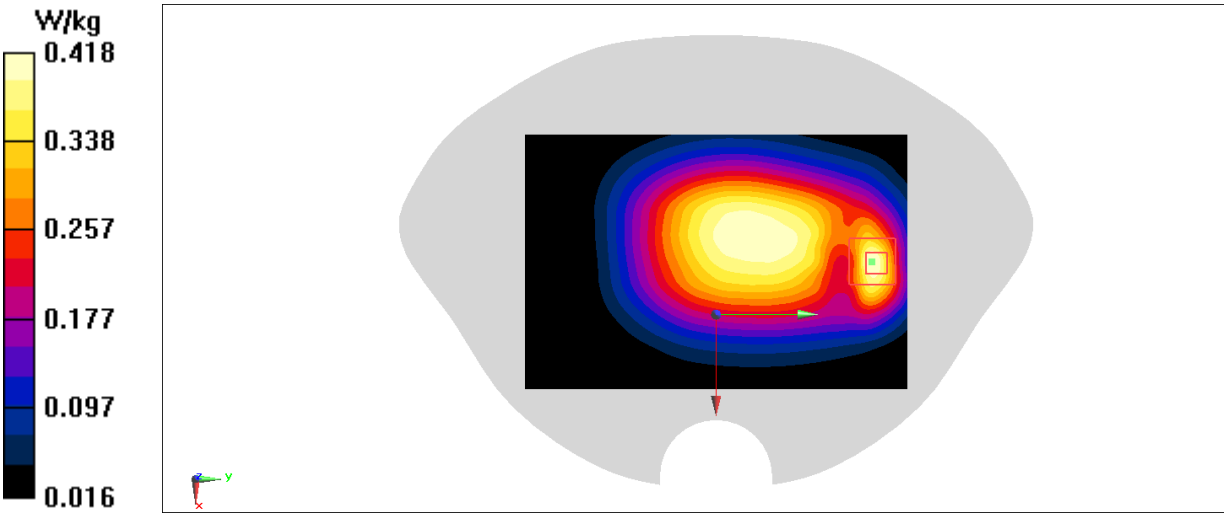
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.31 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.490 W/kg

SAR(1 g) = 0.279 W/kg; SAR(10 g) = 0.163 W/kg

Maximum value of SAR (measured) = 0.418 W/kg



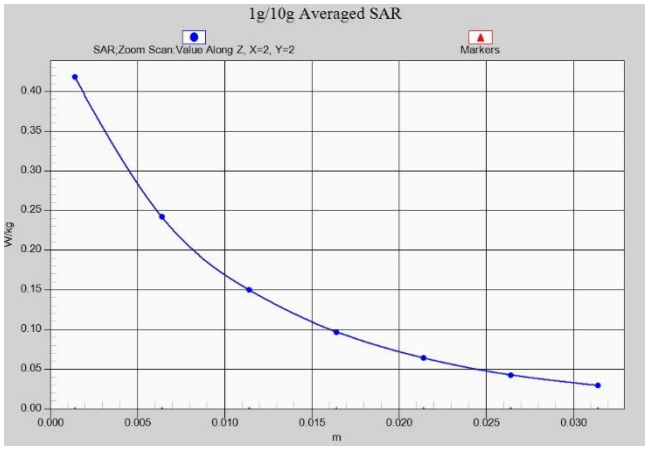


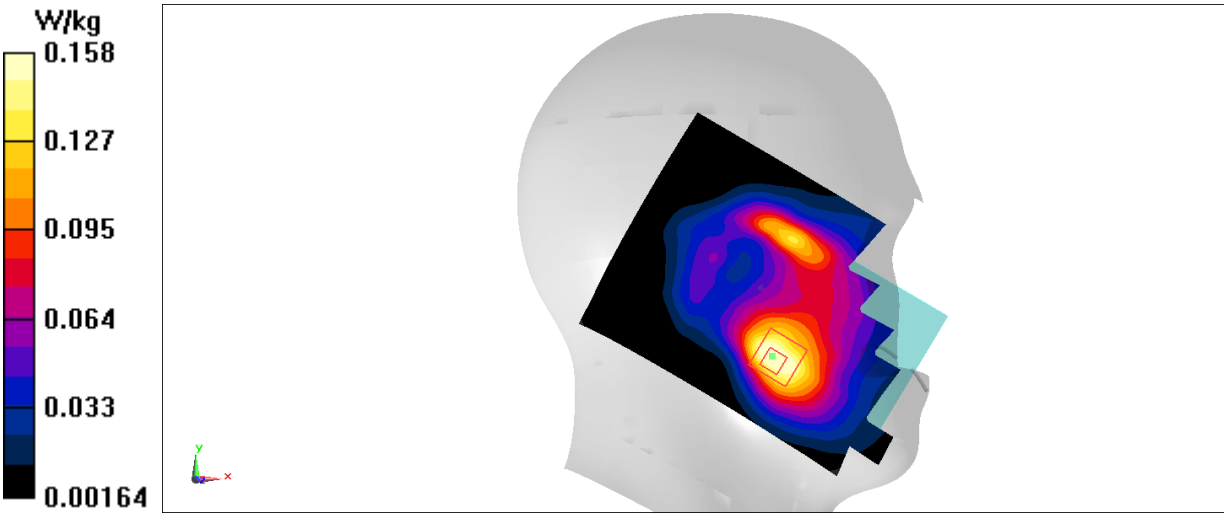
Fig A.2

GSM1900 Head

Date: 1/18/2022
Electronics: DAE4 Sn1525
Medium: h1900
Medium parameters used: f = 1910 MHz; σ = 1.469 S/m; εr = 42.47; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System:, GSM 1900 Frequency: 1909.8 MHz Duty Cycle: 1:8.30042
Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Left/Cheek/Area Scan (81x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.168 W/kg

Left/Cheek/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.424 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.179 W/kg
SAR(1 g) = 0.121 W/kg; SAR(10 g) = 0.079 W/kg
Maximum value of SAR (measured) = 0.158 W/kg



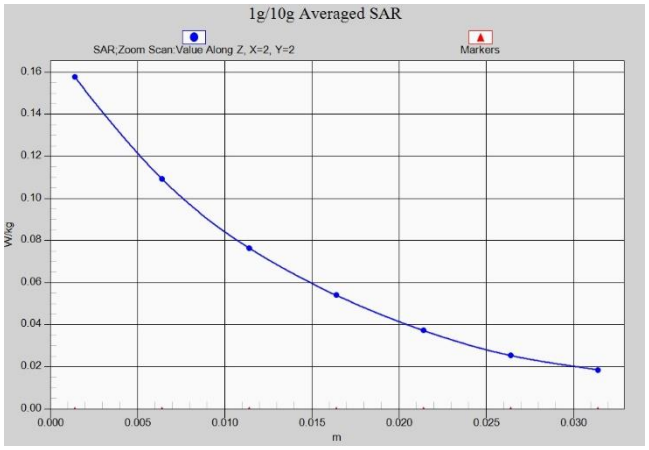


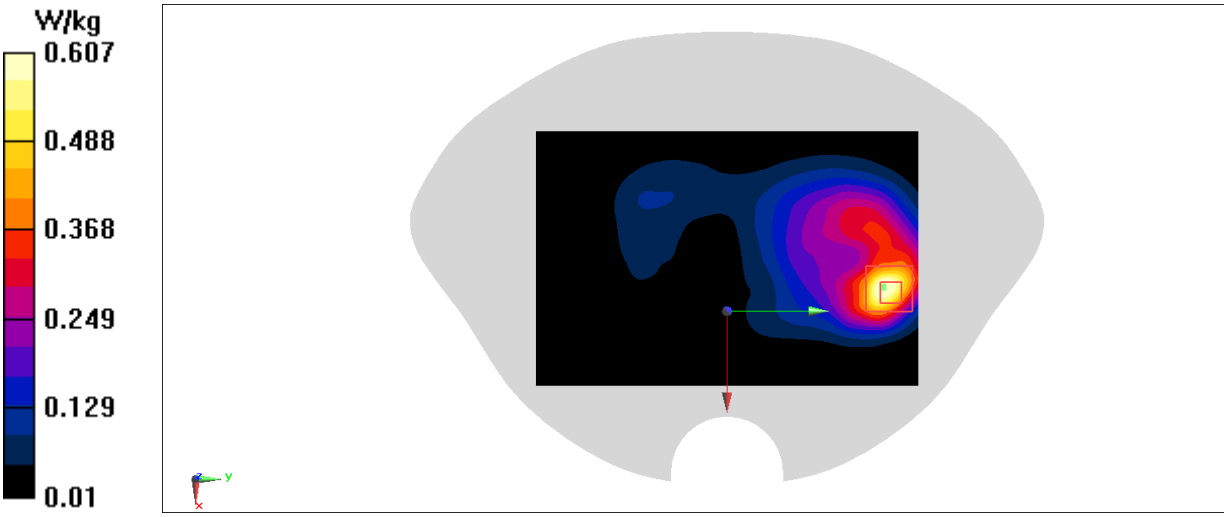
Fig A.3

GSM1900 Body

Date: 1/18/2022
Electronics: DAE4 Sn1525
Medium: h1900
Medium parameters used: f = 1880 MHz; σ = 1.452 S/m; εr = 42.478; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: GSM 1900 Frequency: 1880 MHz Duty Cycle: 1:2.67
Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.637 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.717 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.765 W/kg
SAR(1 g) = 0.417 W/kg; SAR(10 g) = 0.219 W/kg
Maximum value of SAR (measured) = 0.607 W/kg



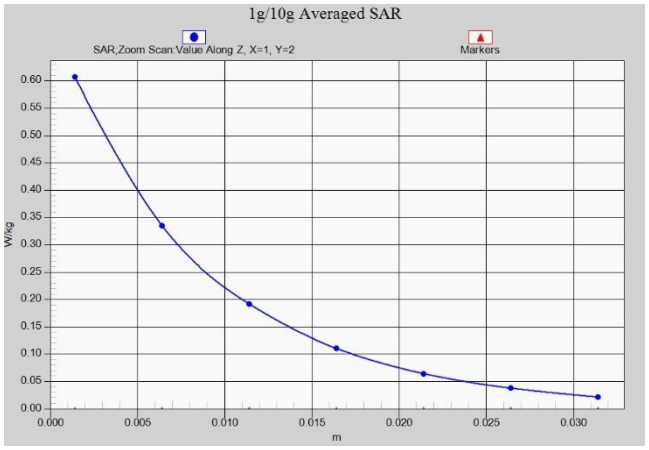


Fig A.4

GSM1900 Body

Date: 1/18/2022

Electronics: DAE4 Sn1525

Medium: H1900

Medium parameters used: f = 1910 MHz; σ = 1.469 S/m; εr = 42.47; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: GSM 1900 Frequency: 1909.8 MHz Duty Cycle: 1:2.67

Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.531 W/kg

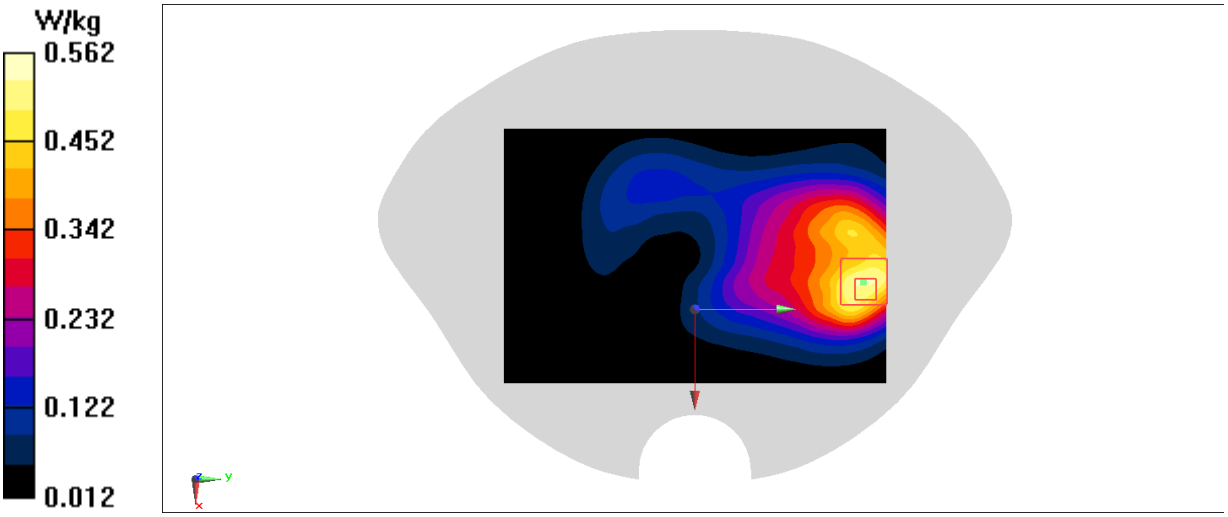
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.019 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.670 W/kg

SAR(1 g) = 0.392 W/kg; SAR(10 g) = 0.235 W/kg

Maximum value of SAR (measured) = 0.562 W/kg



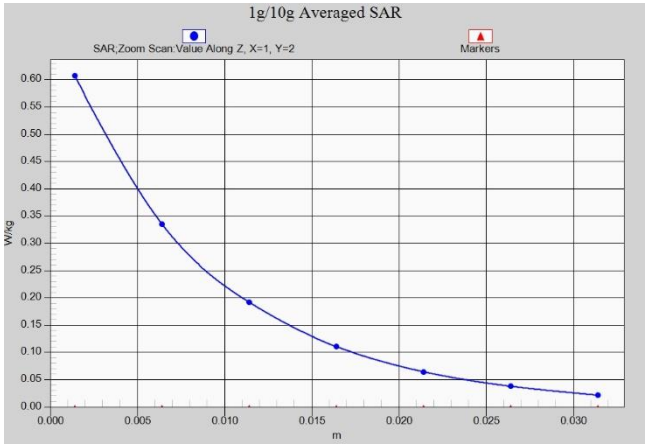


Fig A.5

WCDMA1900 Head

Date: 1/18/2022

Electronics: DAE4 Sn1525

Medium: h1900

Medium parameters used: f = 1880 MHz; σ = 1.452 S/m; εr = 42.478; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: WCDMA1900 Frequency: 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.361 W/kg

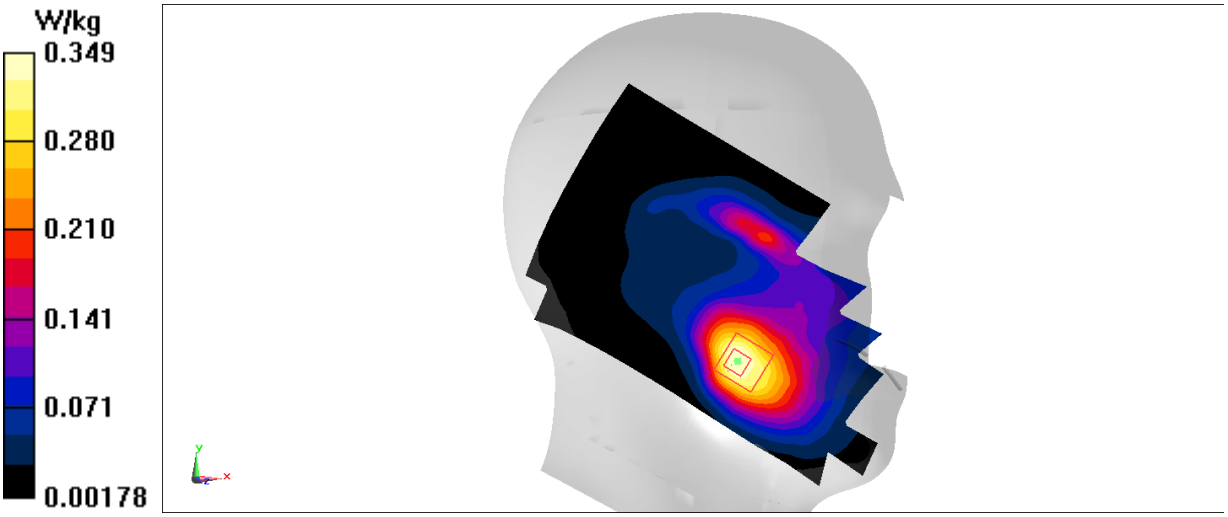
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.242 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.397 W/kg

SAR(1 g) = 0.258 W/kg; SAR(10 g) = 0.166 W/kg

Maximum value of SAR (measured) = 0.349 W/kg



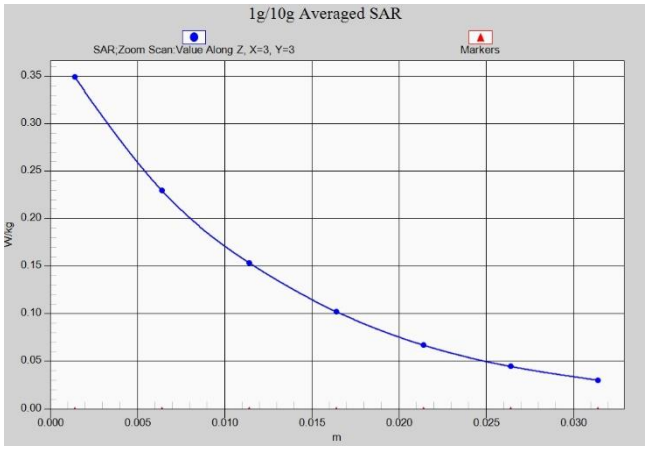


Fig A.6

WCDMA1900 Body

Date: 1/18/2022

Electronics: DAE4 Sn1525

Medium: h1900

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.439 S/m; εr = 42.497; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: WCDMA1900 Frequency: 1852.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.635 W/kg

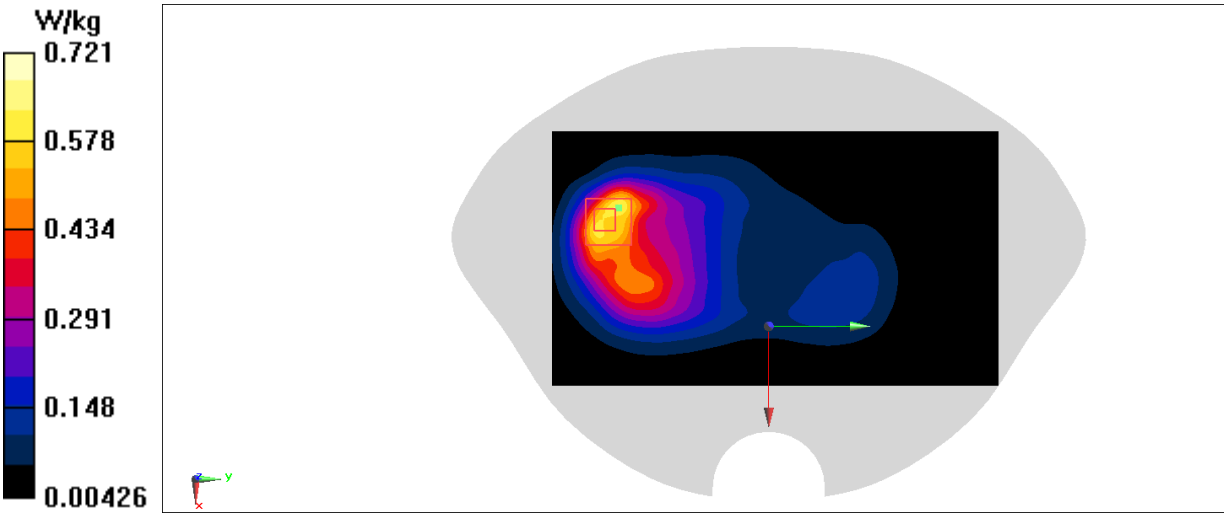
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.322 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.869 W/kg

SAR(1 g) = 0.462 W/kg; SAR(10 g) = 0.248 W/kg

Maximum value of SAR (measured) = 0.721 W/kg



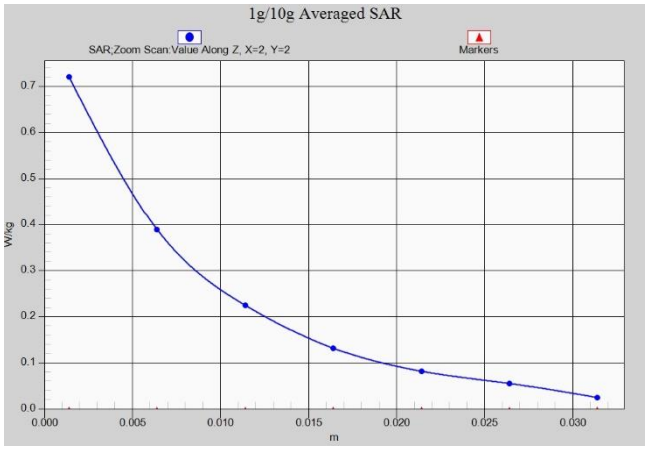


Fig A.7

WCDMA1900 Body

Date: 1/18/2022

Electronics: DAE4 Sn1525

Medium: h1900

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.439 S/m; εr = 42.497; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: WCDMA1900 Frequency: 1852.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.482 W/kg

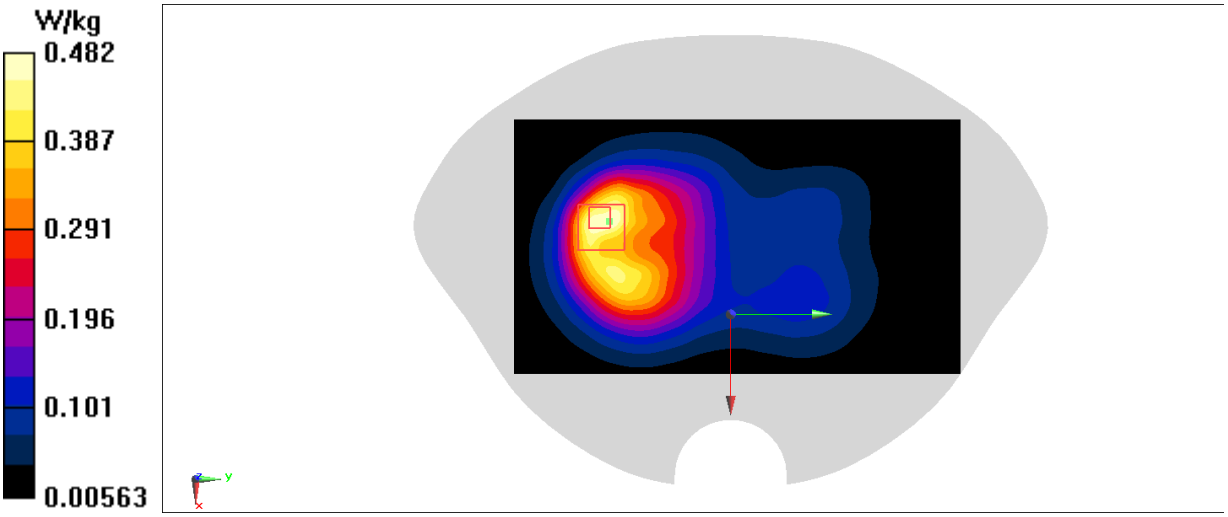
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.566 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.594 W/kg

SAR(1 g) = 0.322 W/kg; SAR(10 g) = 0.187 W/kg

Maximum value of SAR (measured) = 0.482 W/kg



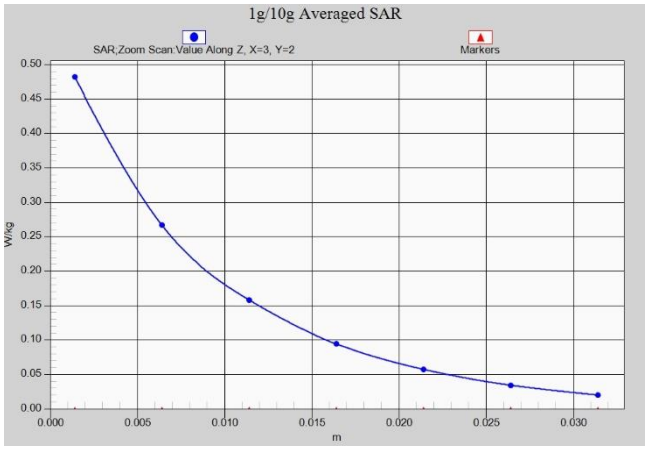


Fig A.8

WCDMA1700 Head

Date: 1/15/2022

Electronics: DAE4 Sn1525

Medium: h1750

Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.369 S/m; εr = 42.733; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: WCDMA1700 Frequency: 1732.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(8.22, 8.22, 8.22)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.520 W/kg

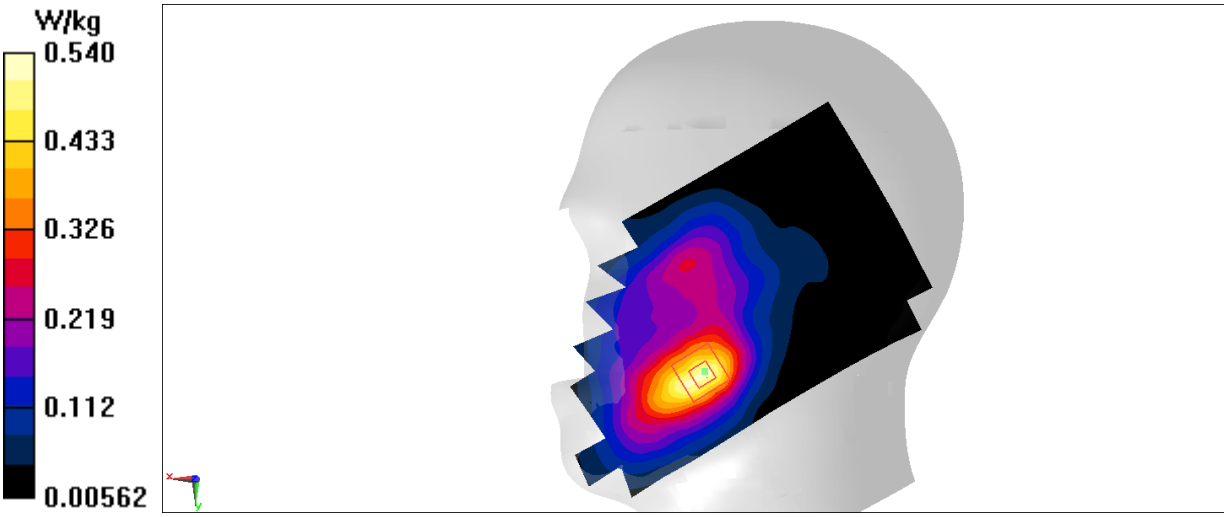
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.483 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 0.636 W/kg

SAR(1 g) = 0.399 W/kg; SAR(10 g) = 0.253 W/kg

Maximum value of SAR (measured) = 0.540 W/kg



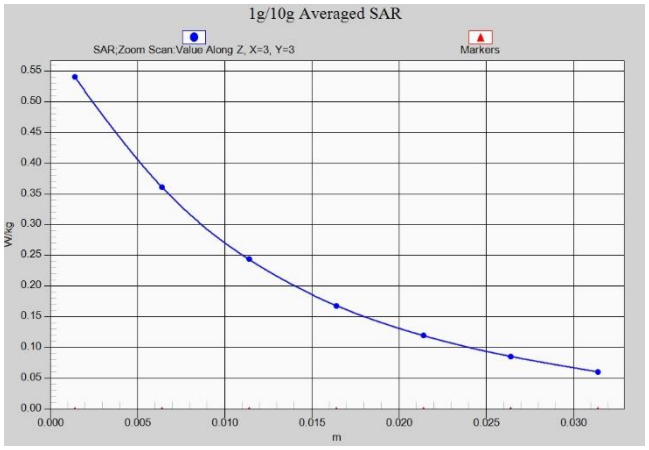


Fig A.9

WCDMA1700 Body

Date: 1/15/2022

Electronics: DAE4 Sn1525

Medium: h1750

Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.383 S/m; εr = 42.69; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: WCDMA1700 Frequency: 1752.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(8.22, 8.22, 8.22)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.808 W/kg

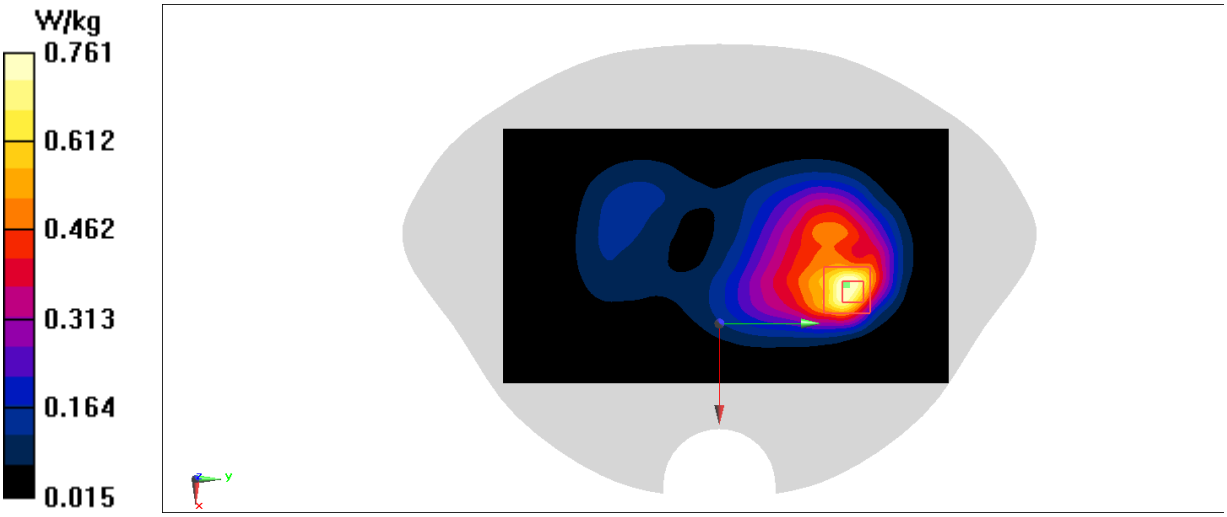
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.968 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.974 W/kg

SAR(1 g) = 0.500 W/kg; SAR(10 g) = 0.272 W/kg

Maximum value of SAR (measured) = 0.761 W/kg



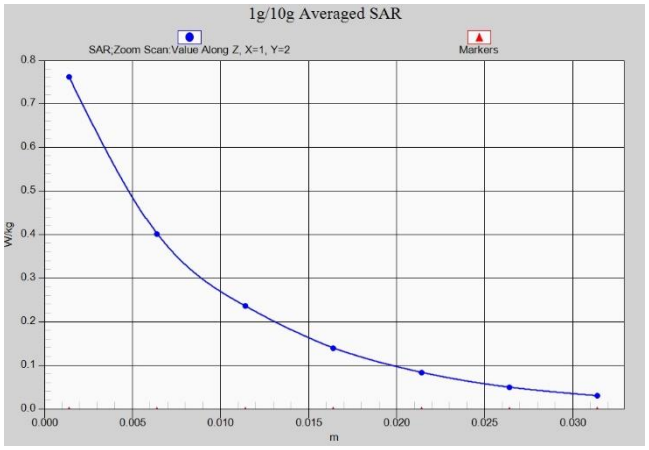


Fig A.10

WCDMA1700 Body

Date: 1/15/2022

Electronics: DAE4 Sn1525

Medium: h1750

Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.383 S/m; εr = 42.69; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: WCDMA1700 Frequency: 1752.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(8.22, 8.22, 8.22)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.548 W/kg

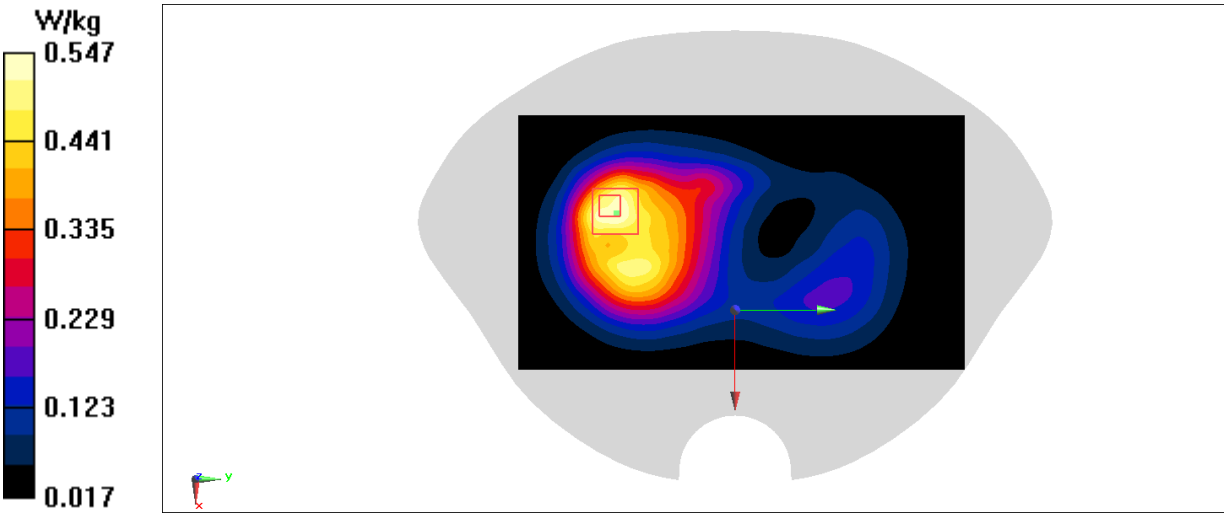
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.053 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.670 W/kg

SAR(1 g) = 0.376 W/kg; SAR(10 g) = 0.223 W/kg

Maximum value of SAR (measured) = 0.547 W/kg



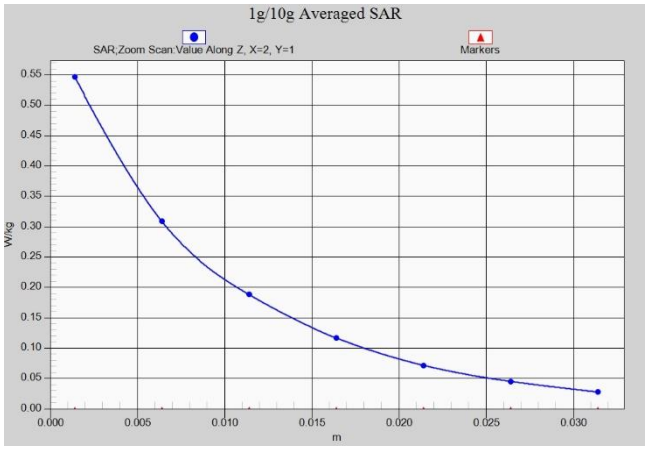


Fig A.11

WCDMA850 Head

Date: 1/14/2022

Electronics: DAE4 Sn1525

Medium: h850

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.855 S/m; εr = 45.107; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: WCDMA850 Frequency: 836.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.291 W/kg

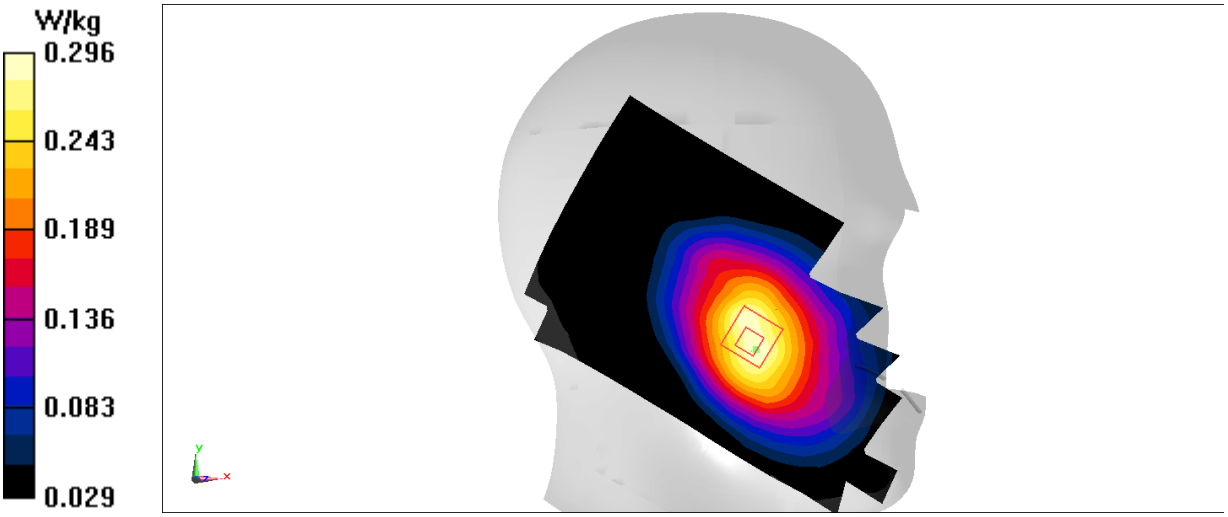
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.974 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.323 W/kg

SAR(1 g) = 0.249 W/kg; SAR(10 g) = 0.194 W/kg

Maximum value of SAR (measured) = 0.296 W/kg



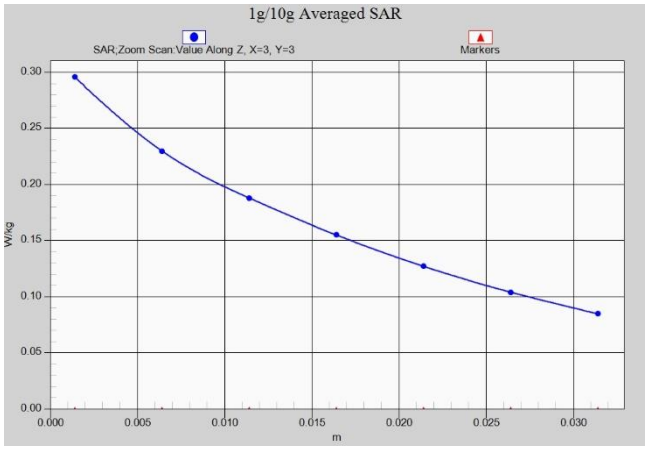


Fig A.12

WCDMA850 Body

Date: 1/14/2022

Electronics: DAE4 Sn1525

Medium: h850

Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.855 S/m; εr = 45.107; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: WCDMA850 Frequency: 836.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.532 W/kg

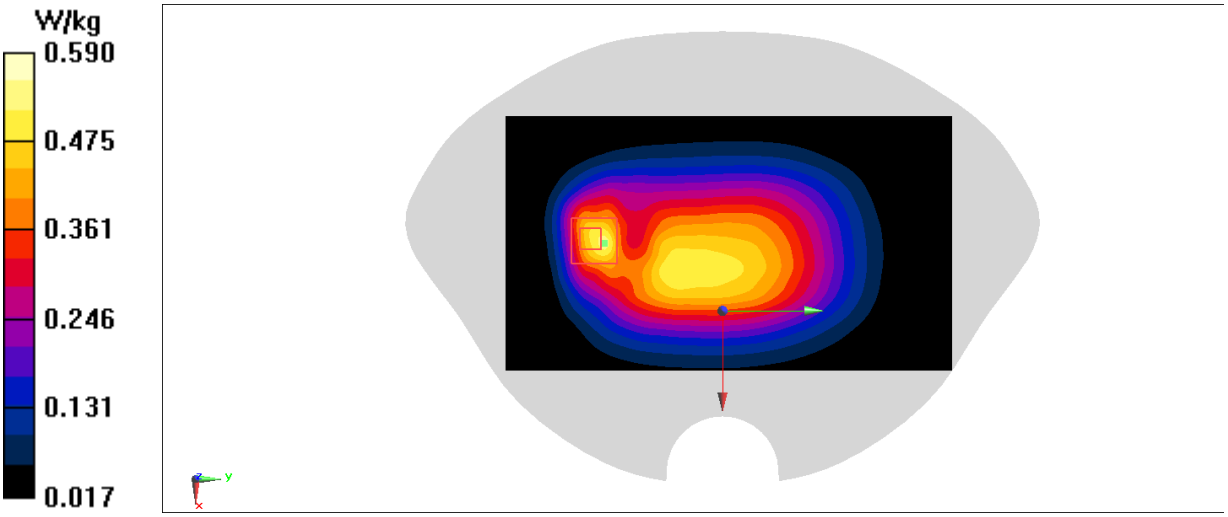
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.03 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.745 W/kg

SAR(1 g) = 0.361 W/kg; SAR(10 g) = 0.197 W/kg

Maximum value of SAR (measured) = 0.590 W/kg



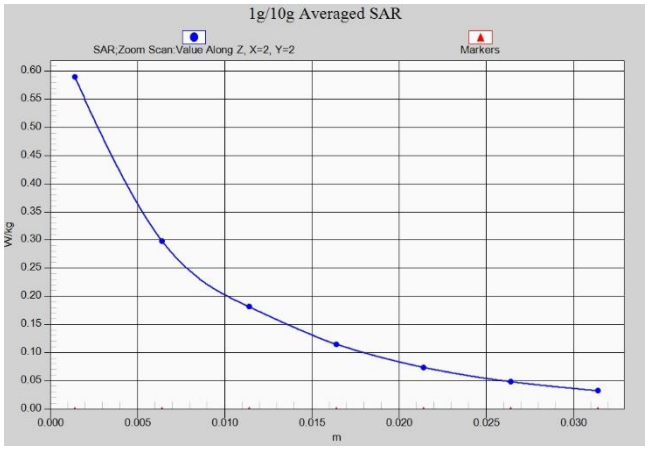


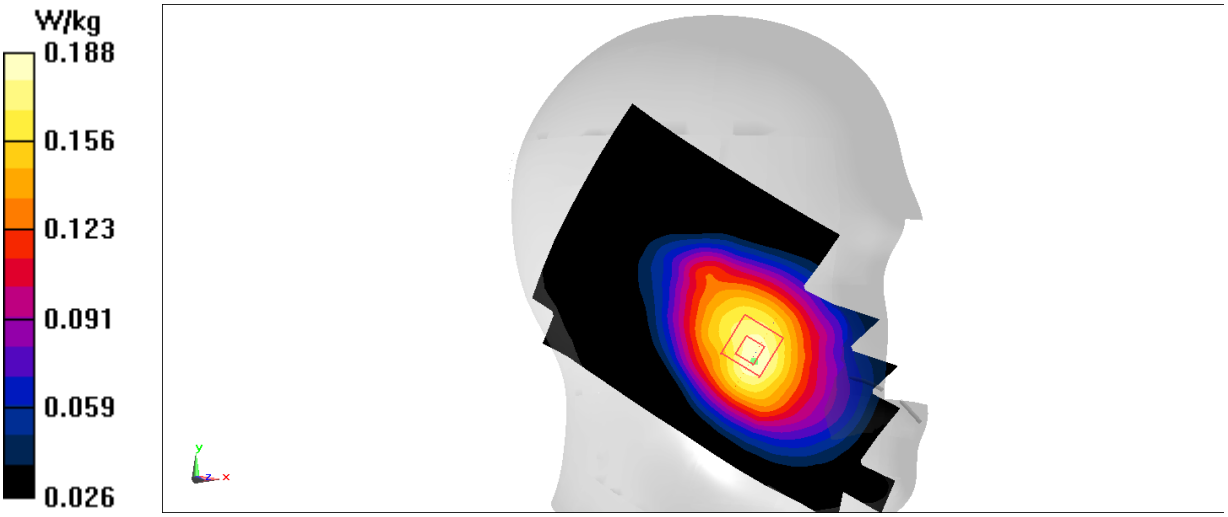
Fig A.13

LTE Band12 Head

Date: 1/16/2022
Electronics: DAE4 Sn1525
Medium: H750
Medium parameters used (interpolated): f = 704 MHz; σ = 0.817 S/m; εr = 44.504; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band12 Frequency: 704 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.187 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.854 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.203 W/kg
SAR(1 g) = 0.162 W/kg; SAR(10 g) = 0.130 W/kg
Maximum value of SAR (measured) = 0.188 W/kg



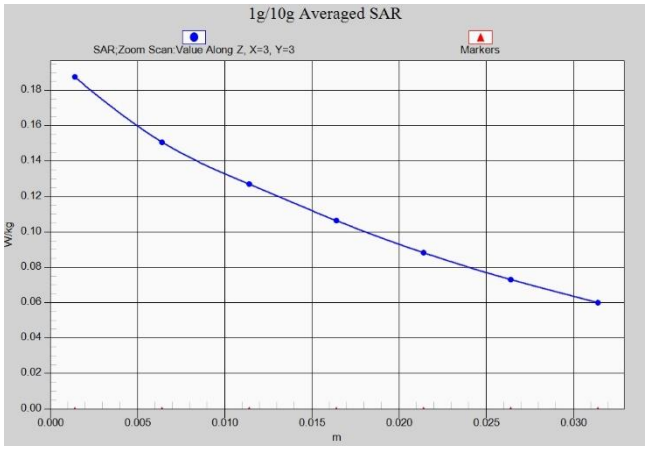


Fig A.14

LTE Band12 Body

Date: 1/16/2022

Electronics: DAE4 Sn1525

Medium: H750

Medium parameters used (interpolated): f = 704 MHz; σ = 0.817 S/m; εr = 44.504; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: LTE Band12 Frequency: 704 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.422 W/kg

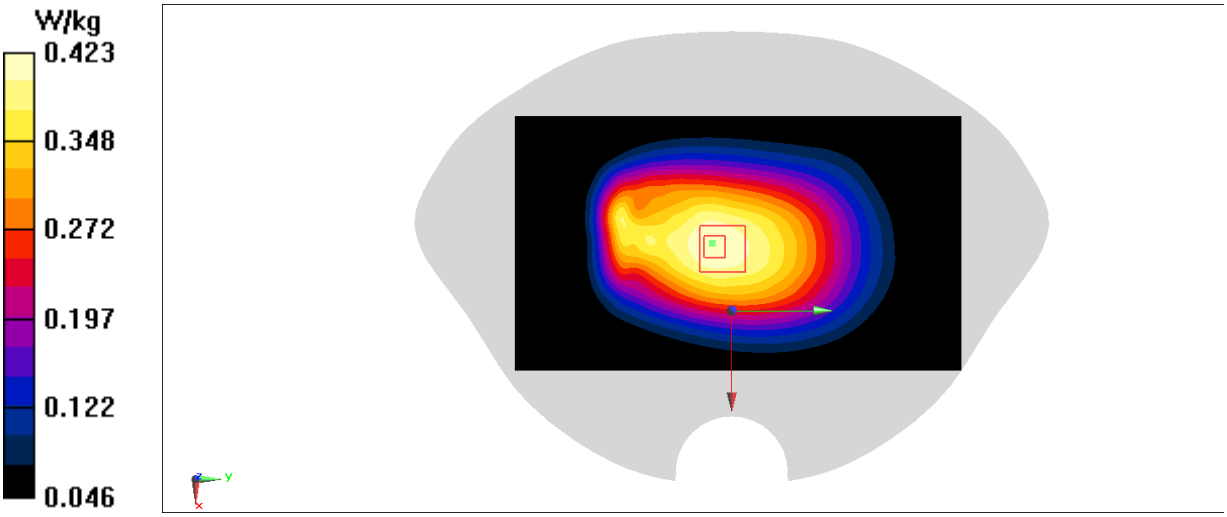
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.38 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.469 W/kg

SAR(1 g) = 0.349 W/kg; SAR(10 g) = 0.269 W/kg

Maximum value of SAR (measured) = 0.423 W/kg



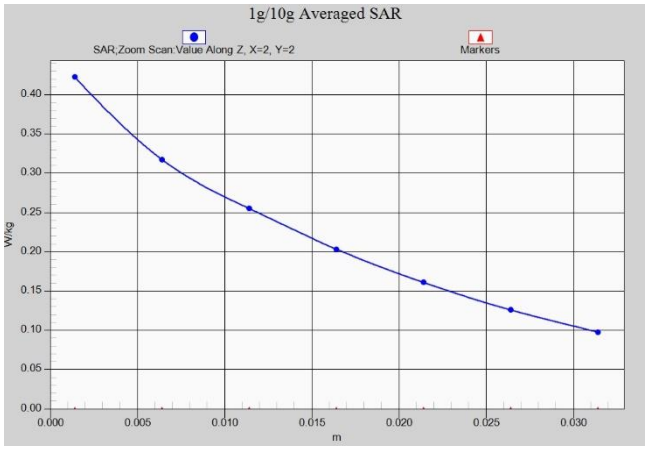


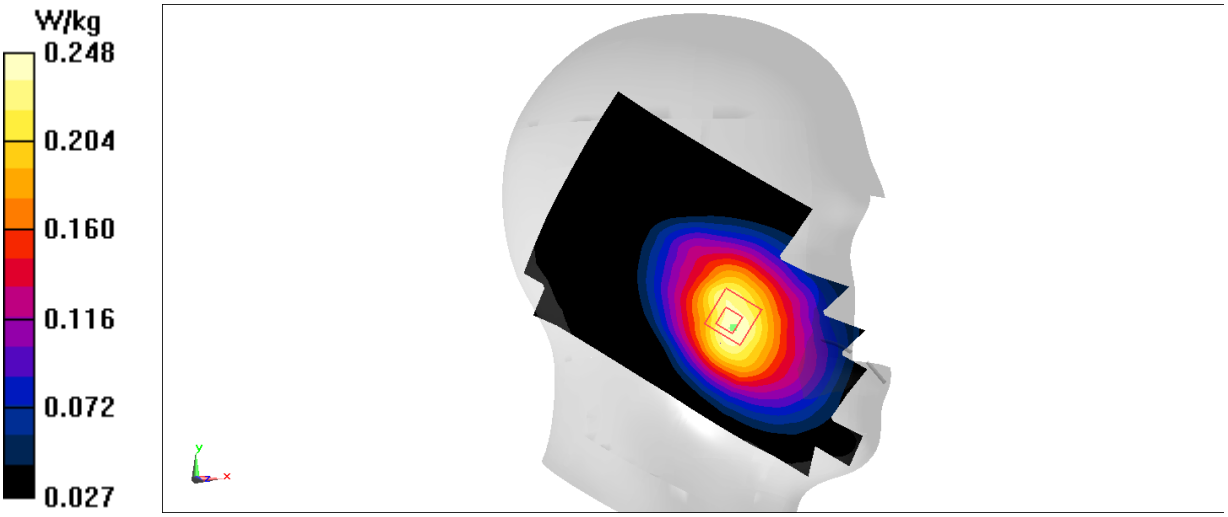
Fig A.15

LTE Band13 Head

Date: 1/16/2022
Electronics: DAE4 Sn1525
Medium: h750
Medium parameters used (interpolated): f = 782 MHz; σ = 0.831 S/m; εr = 45.336; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band13 Frequency: 782 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.251 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.523 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.275 W/kg
SAR(1 g) = 0.210 W/kg; SAR(10 g) = 0.164 W/kg
Maximum value of SAR (measured) = 0.248 W/kg



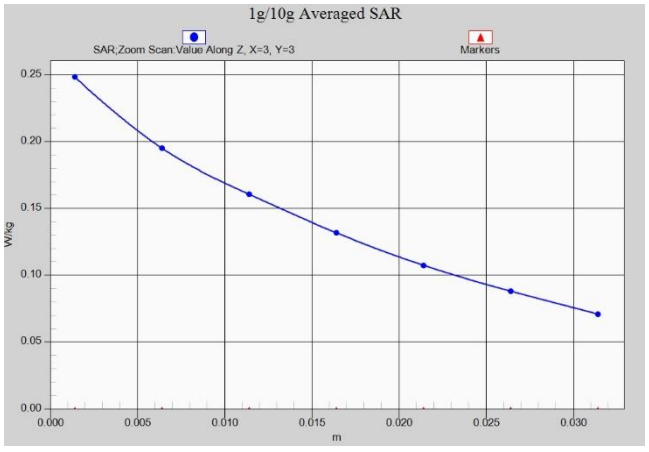


Fig A.16

LTE Band13 Body

Date: 1/16/2022

Electronics: DAE4 Sn1525

Medium: h750

Medium parameters used (interpolated): f = 782 MHz; σ = 0.831 S/m; εr = 45.336; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: LTE Band13 Frequency: 782 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.499 W/kg

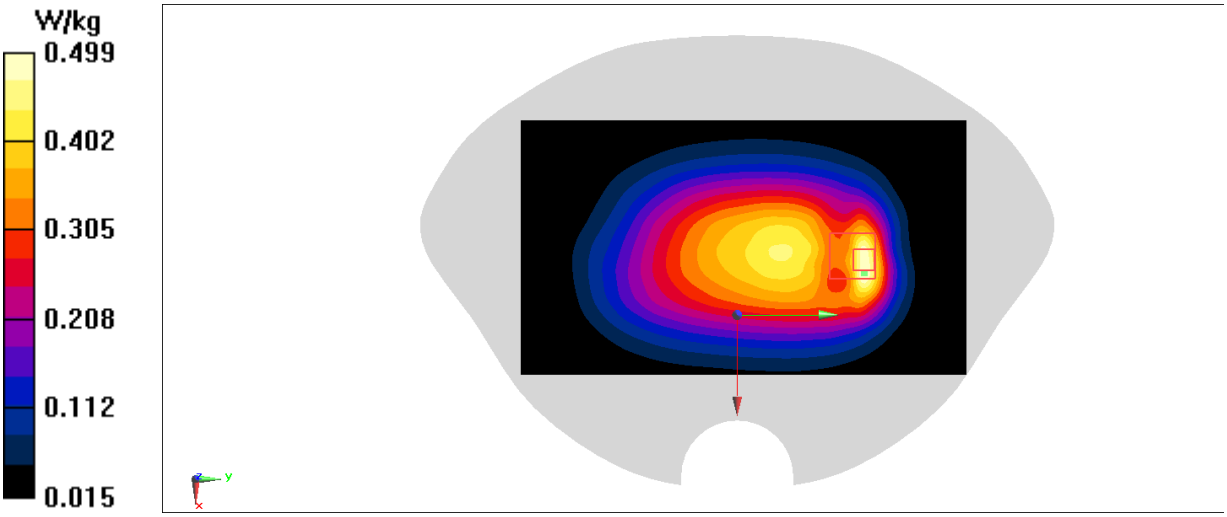
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.21 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.630 W/kg

SAR(1 g) = 0.324 W/kg; SAR(10 g) = 0.192 W/kg

Maximum value of SAR (measured) = 0.499 W/kg



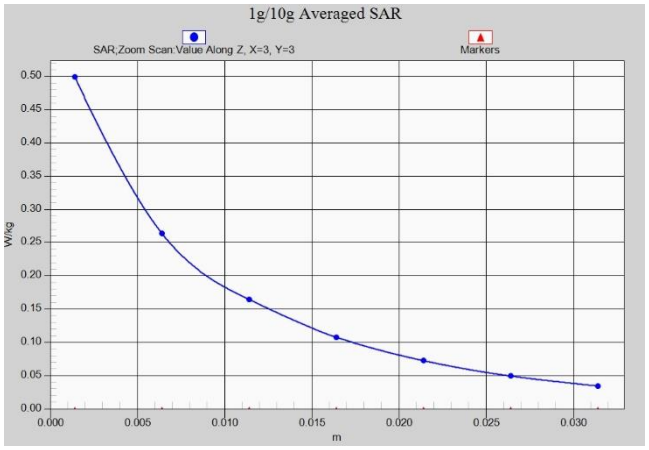


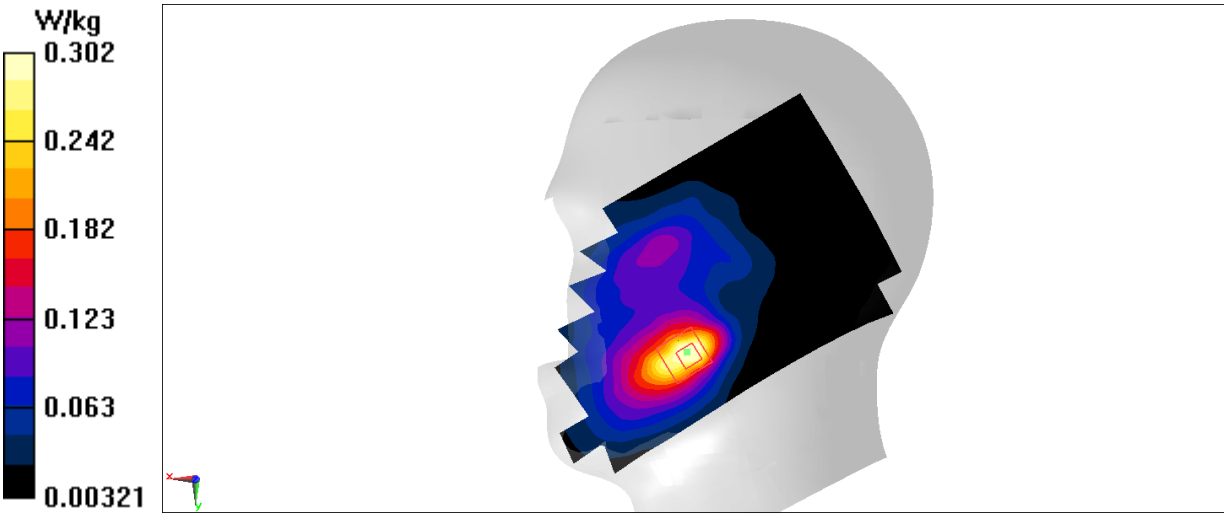
Fig A.17

LTE Band25 Head

Date: 1/18/2022
Electronics: DAE4 Sn1525
Medium: h1900
Medium parameters used: f = 1905 MHz; σ = 1.466 S/m; εr = 42.465; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band25 Frequency: 1905 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.336 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.968 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.398 W/kg
SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.128 W/kg
Maximum value of SAR (measured) = 0.302 W/kg



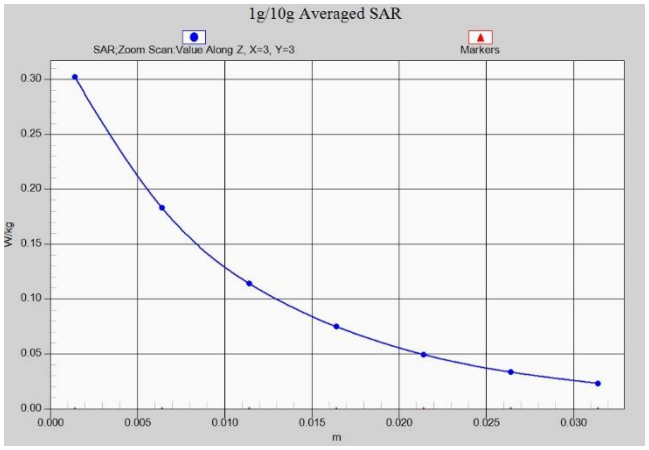


Fig A.18

LTE Band25 Body

Date: 1/18/2022

Electronics: DAE4 Sn1525

Medium: h1900

Medium parameters used: f = 1905 MHz; σ = 1.466 S/m; εr = 42.465; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: LTE Band25 Frequency: 1905 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.569 W/kg

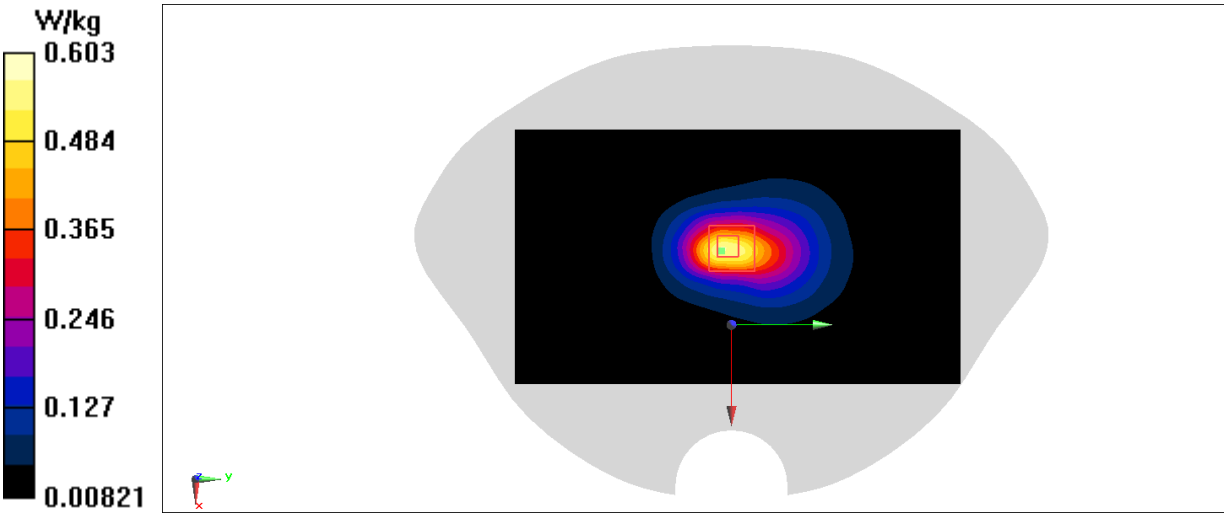
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.333 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.725 W/kg

SAR(1 g) = 0.392 W/kg; SAR(10 g) = 0.210 W/kg

Maximum value of SAR (measured) = 0.603 W/kg



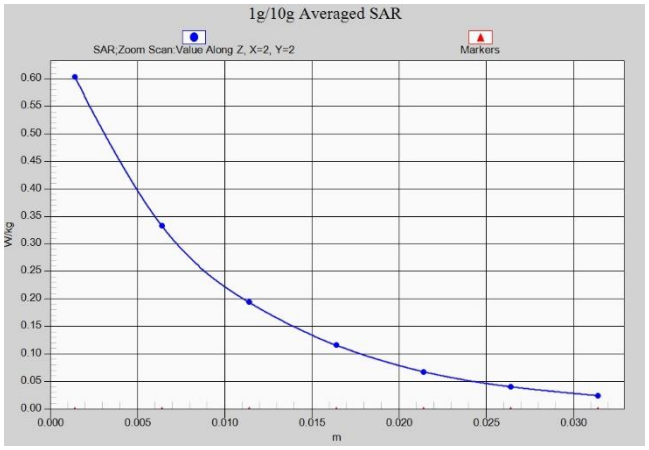


Fig A.19

LTE Band25 Body

Date: 1/18/2022

Electronics: DAE4 Sn1525

Medium: h1900

Medium parameters used: f = 1905 MHz; σ = 1.466 S/m; εr = 42.465; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: LTE Band25 Frequency: 1905 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.502 W/kg

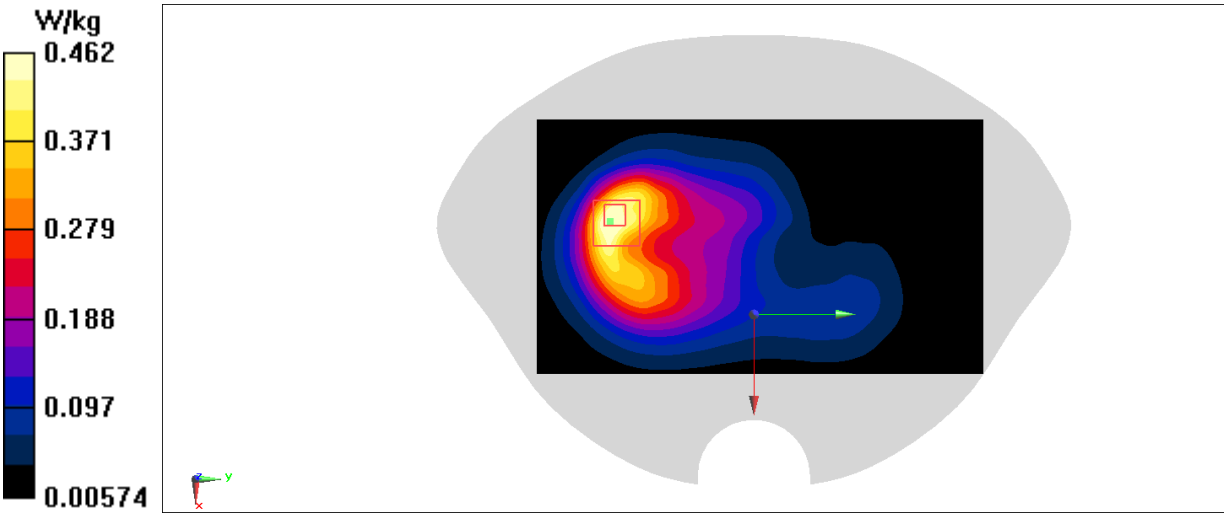
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.484 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.566 W/kg

SAR(1 g) = 0.310 W/kg; SAR(10 g) = 0.180 W/kg

Maximum value of SAR (measured) = 0.462 W/kg



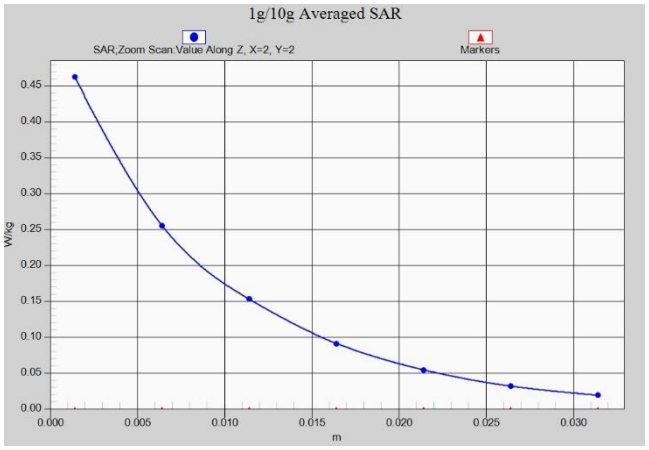


Fig A.20

LTE Band26 Head

Date: 1/14/2022

Electronics: DAE4 Sn1525

Medium: h850

Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.857 S/m; εr = 45.097; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: LTE Band26 Frequency: 841.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm.

Maximum value of SAR (interpolated) = 0.262 W/kg

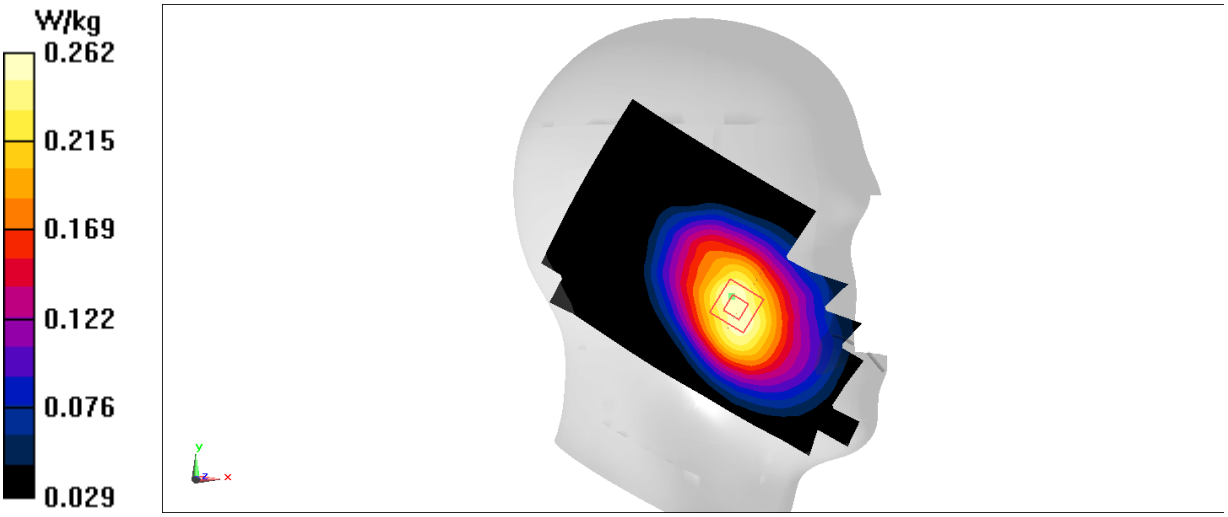
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.721 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.283 W/kg

SAR(1 g) = 0.224 W/kg; SAR(10 g) = 0.177 W/kg

Maximum value of SAR (measured) = 0.262 W/kg



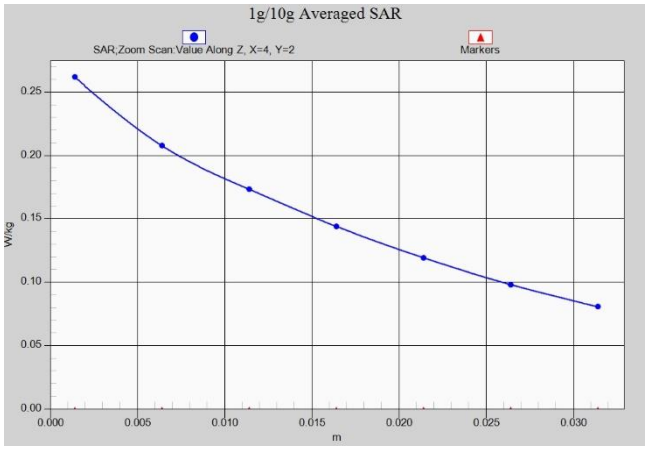


Fig A.21

LTE Band26 Body

Date: 1/14/2022

Electronics: DAE4 Sn1525

Medium: h850

Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.857 S/m; εr = 45.097; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: LTE Band26 Frequency: 841.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.433 W/kg

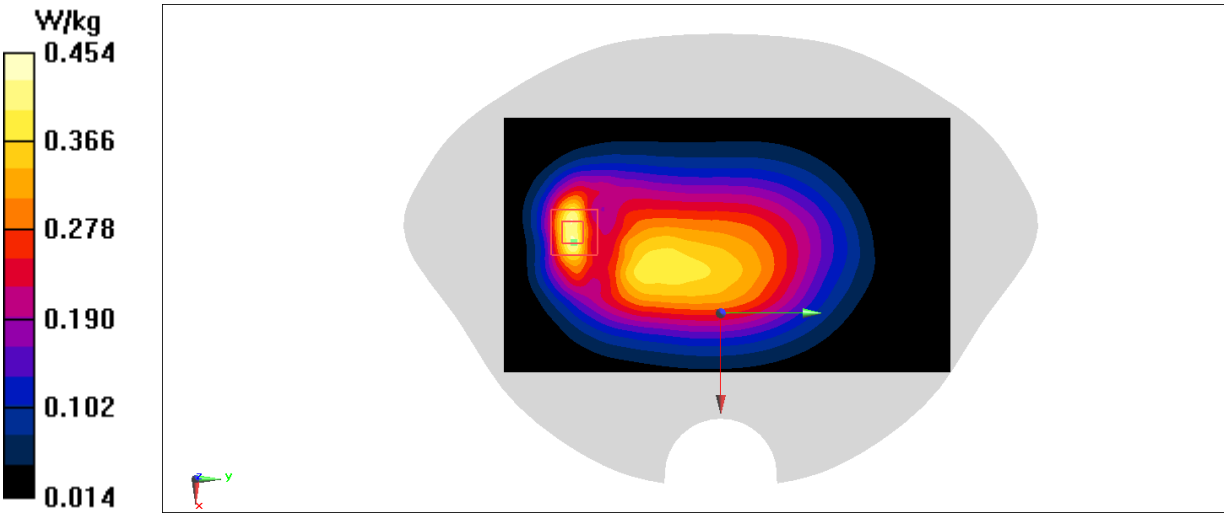
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.68 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.558 W/kg

SAR(1 g) = 0.293 W/kg; SAR(10 g) = 0.162 W/kg

Maximum value of SAR (measured) = 0.454 W/kg



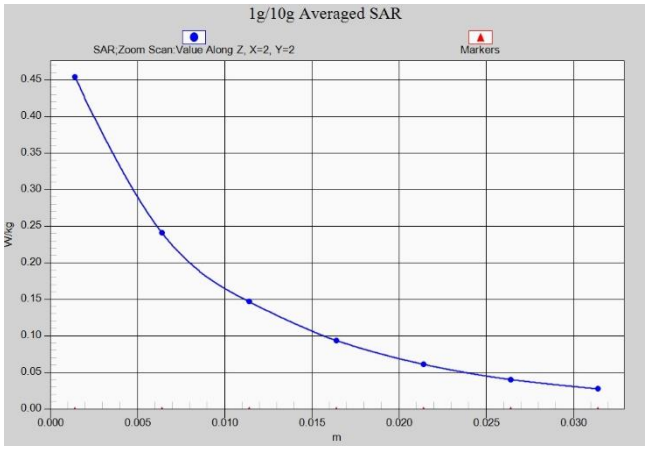


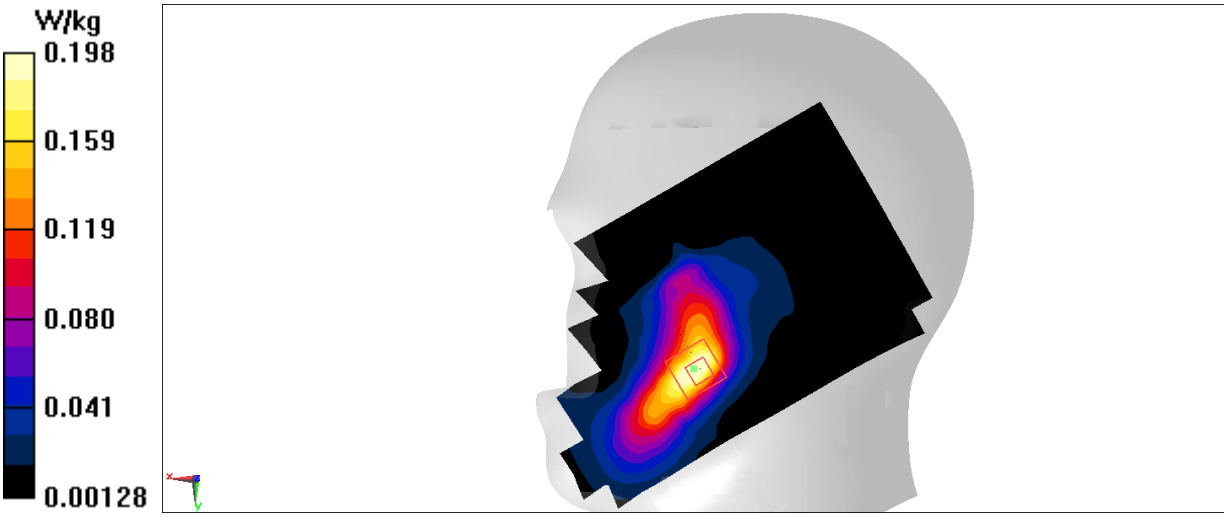
Fig A.22

LTE Band41 Head

Date: 1/13/2022
Electronics: DAE4 Sn1525
Medium: h2600
Medium parameters used: f = 2680 MHz; σ = 2.127 S/m; εr = 40.845; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band41 Frequency: 2680 MHz Duty Cycle: 1:1.5787
Probe: EX3DV4 - SN7517 ConvF(7.1, 7.1, 7.1)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.209 W/kg

Zoom Scan (9x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.422 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.247 W/kg
SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.070 W/kg
Maximum value of SAR (measured) = 0.198 W/kg



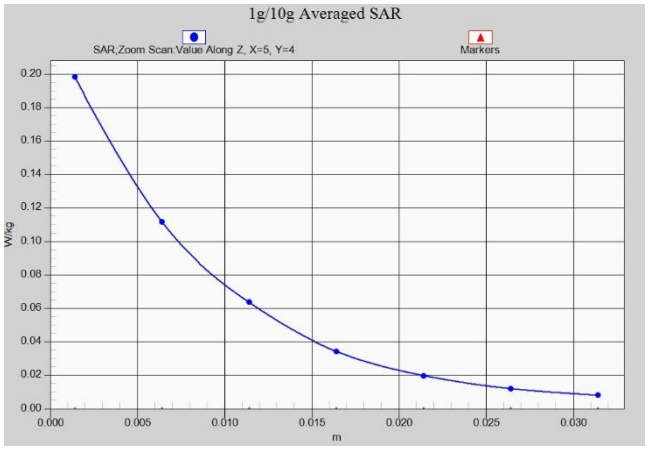


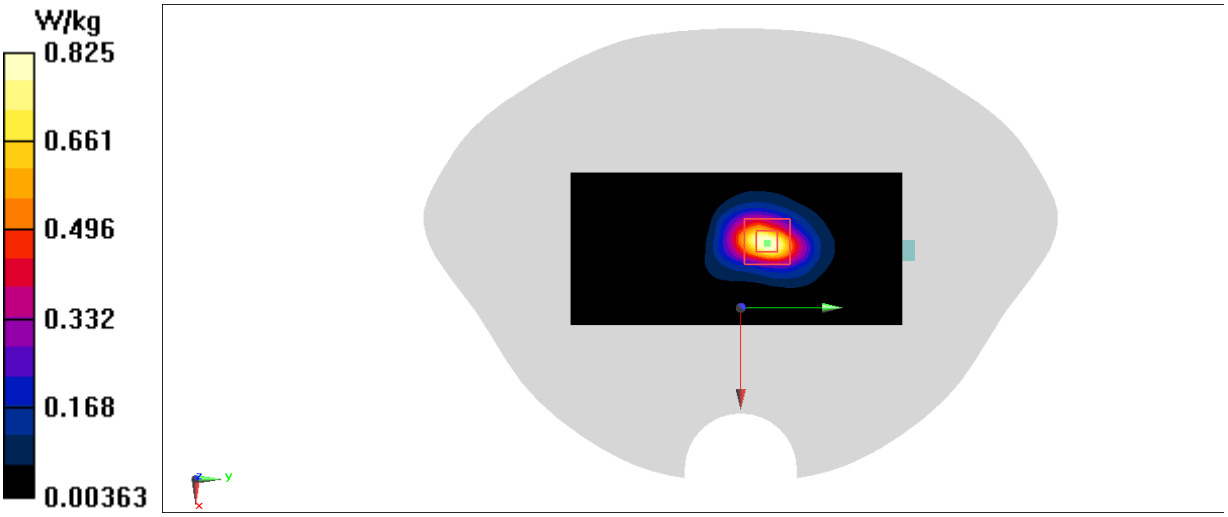
Fig A.23

LTE Band41 Body

Date: 1/13/2022
Electronics: DAE4 Sn1525
Medium: h2600
Medium parameters used: f = 2680 MHz; σ = 2.127 S/m; εr = 40.845; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band41 Frequency: 2680 MHz Duty Cycle: 1:1.5787
Probe: EX3DV4 - SN7517 ConvF(7.1, 7.1, 7.1)

Area Scan (61x131x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.874 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.948 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.04 W/kg
SAR(1 g) = 0.483 W/kg; SAR(10 g) = 0.215 W/kg
Maximum value of SAR (measured) = 0.825 W/kg



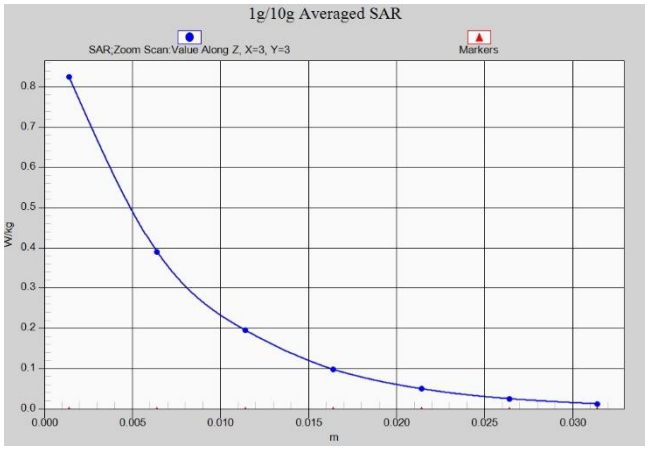


Fig A.24

LTE Band41 Body

Date: 1/13/2022

Electronics: DAE4 Sn1525

Medium: h2600

Medium parameters used (interpolated): f = 2506 MHz; σ = 1.972 S/m; εr = 41.178; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: LTE Band41 Frequency: 2506 MHz Duty Cycle: 1:1.5787

Probe: EX3DV4 - SN7517 ConvF(7.34, 7.34, 7.34)

Area Scan (101x181x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.598 W/kg

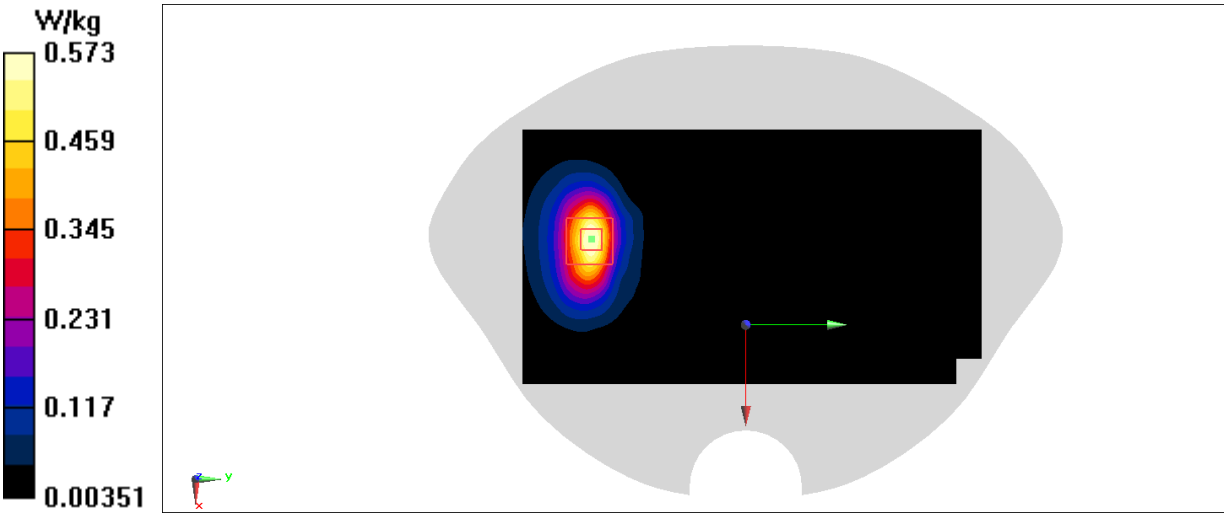
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.337 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.699 W/kg

SAR(1 g) = 0.359 W/kg; SAR(10 g) = 0.180 W/kg

Maximum value of SAR (measured) = 0.573 W/kg



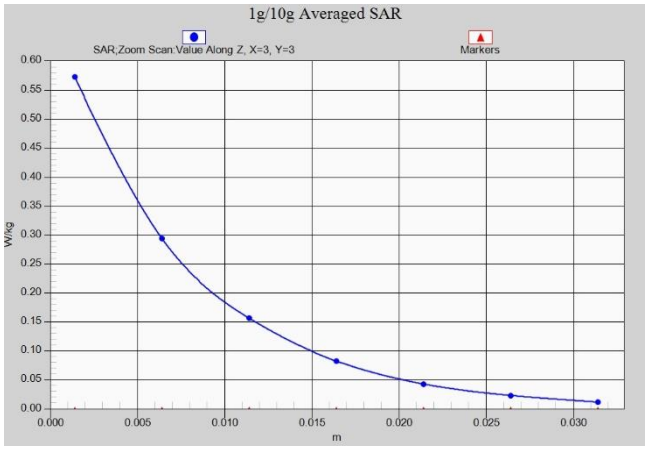


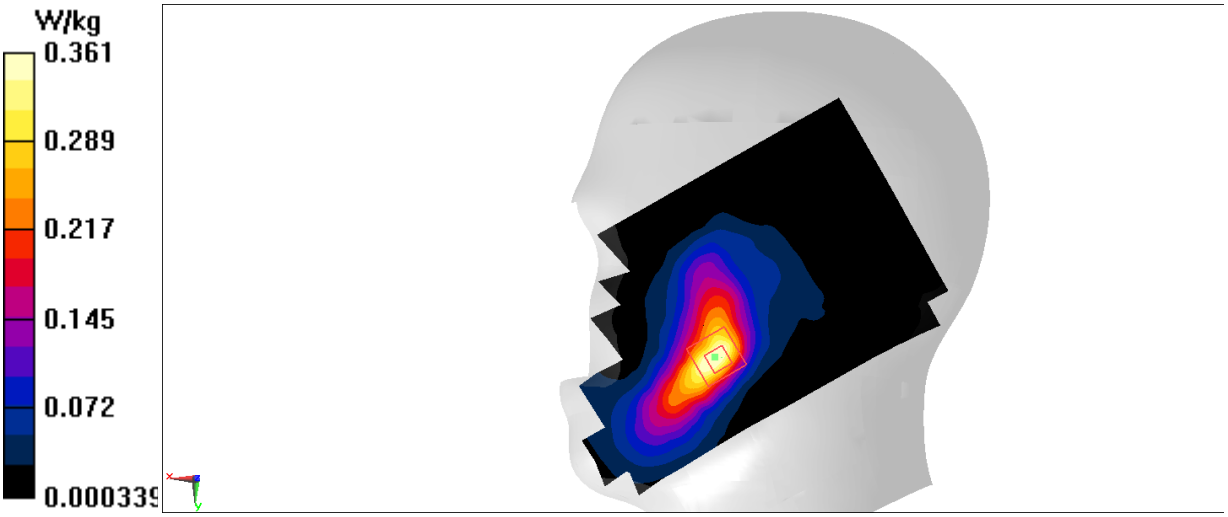
Fig A.25

LTE Band41 Head

Date: 1/13/2022
Electronics: DAE4 Sn1525
Medium: h2600
Medium parameters used: f = 2680 MHz; σ = 2.127 S/m; εr = 40.845; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band41 Frequency: 2680 MHz Duty Cycle: 1:2.309
Probe: EX3DV4 - SN7517 ConvF(7.1, 7.1, 7.1)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.373 W/kg

Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.385 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.438 W/kg
SAR(1 g) = 0.238 W/kg; SAR(10 g) = 0.125 W/kg
Maximum value of SAR (measured) = 0.361 W/kg



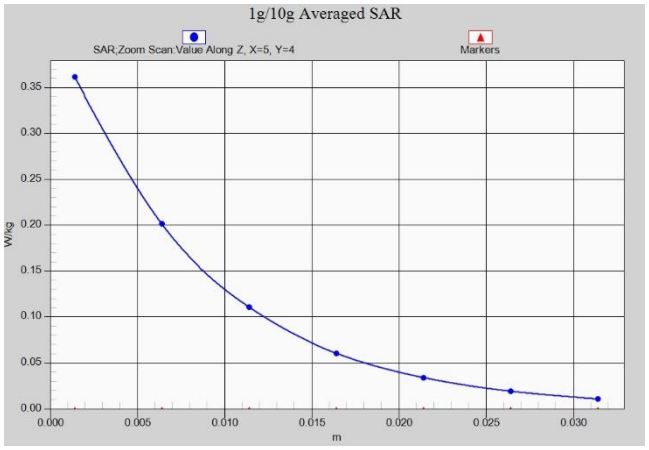


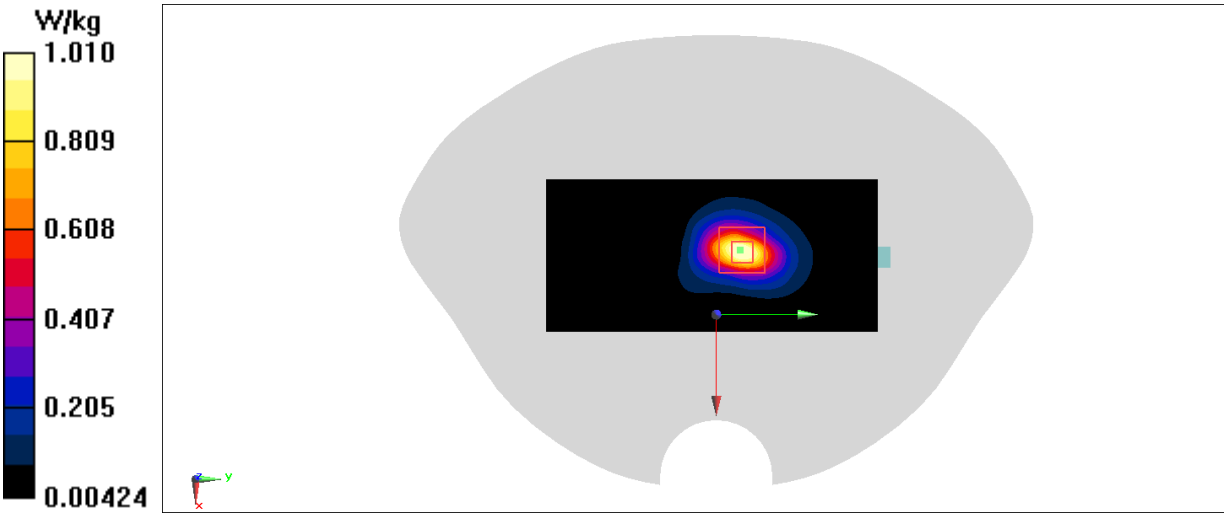
Fig A.26

LTE Band41 Body

Date: 1/13/2022
Electronics: DAE4 Sn1525
Medium: h2600
Medium parameters used: f = 2680 MHz; σ = 2.127 S/m; εr = 40.845; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band41 Frequency: 2680 MHz Duty Cycle: 1:2.309
Probe: EX3DV4 - SN7517 ConvF(7.1, 7.1, 7.1)

Area Scan (61x131x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.08 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.893 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.600 W/kg; SAR(10 g) = 0.269 W/kg
Maximum value of SAR (measured) = 1.01 W/kg



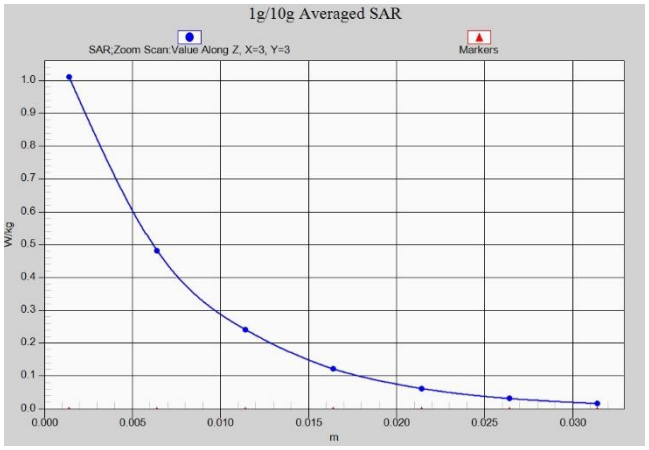


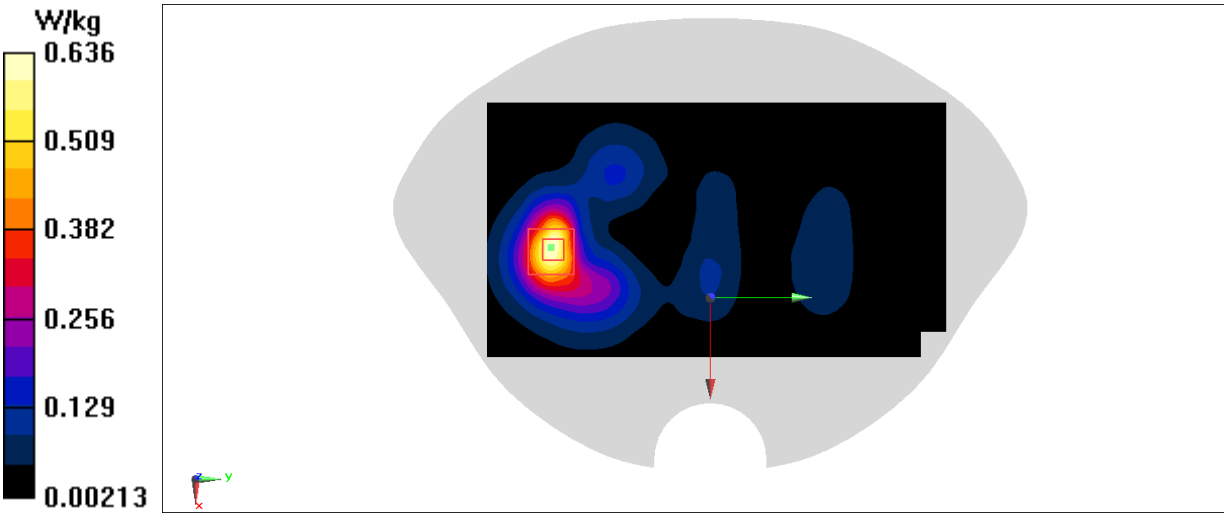
Fig A.27

LTE Band41 Body

Date: 1/13/2022
Electronics: DAE4 Sn1525
Medium: h2600
Medium parameters used: f = 2680 MHz; σ = 2.127 S/m; εr = 40.845; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band41 Frequency: 2680 MHz Duty Cycle: 1:2.309
Probe: EX3DV4 - SN7517 ConvF(7.1, 7.1, 7.1)

Area Scan (101x181x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.645 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.349 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.791 W/kg
SAR(1 g) = 0.391 W/kg; SAR(10 g) = 0.189 W/kg
Maximum value of SAR (measured) = 0.636 W/kg



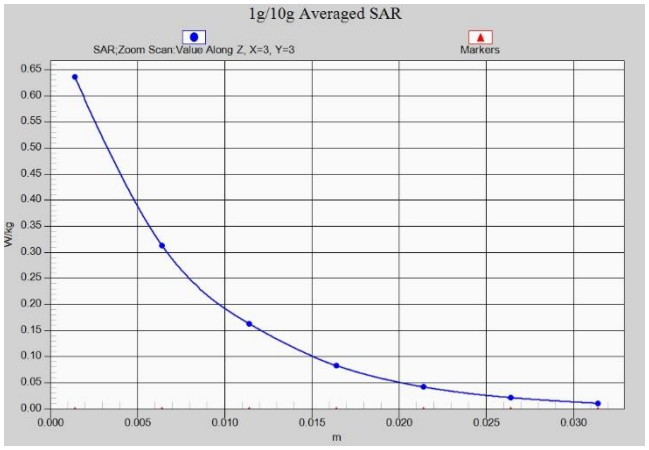


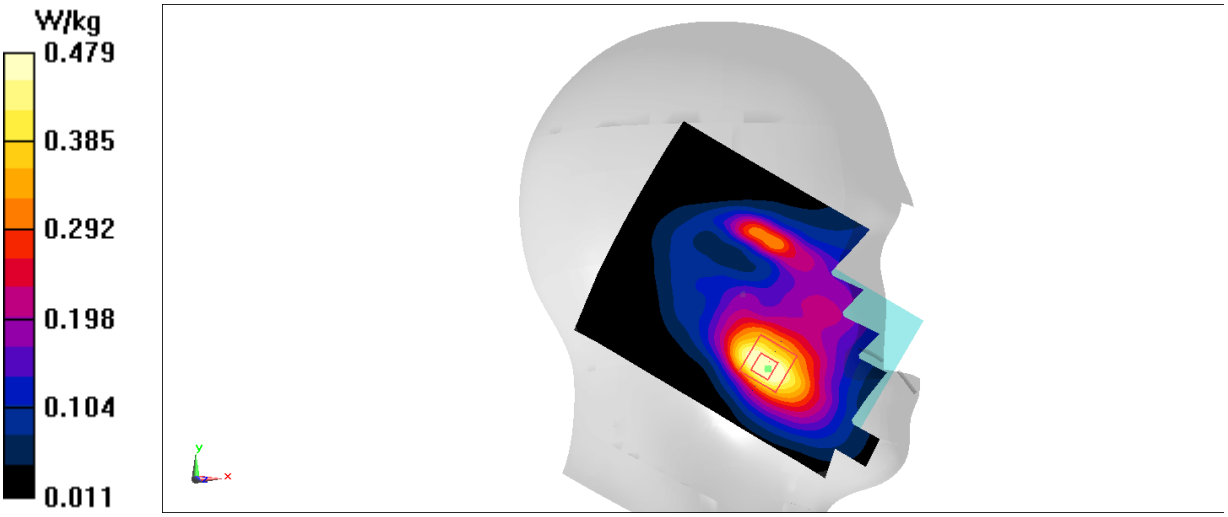
Fig A.28

LTE Band66 Head

Date: 1/15/2022
Electronics: DAE4 Sn1525
Medium: h1750
Medium parameters used: f = 1720 MHz; σ = 1.361 S/m; εr = 42.757; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band66 Frequency: 1720 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7517 ConvF(8.22, 8.22, 8.22)

Area Scan (81x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.511 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.458 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.542 W/kg
SAR(1 g) = 0.361 W/kg; SAR(10 g) = 0.237 W/kg
Maximum value of SAR (measured) = 0.479 W/kg



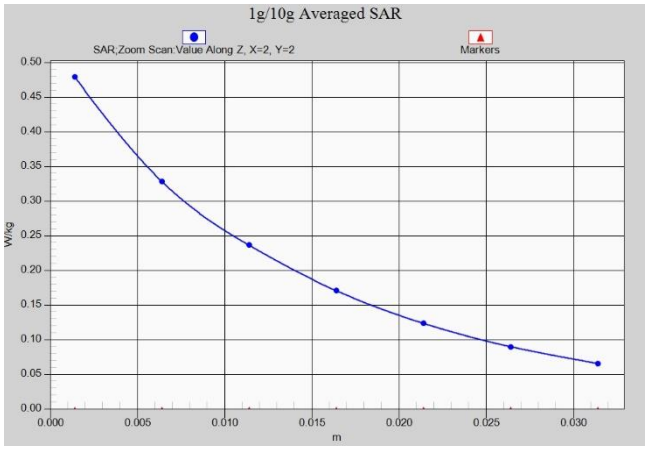


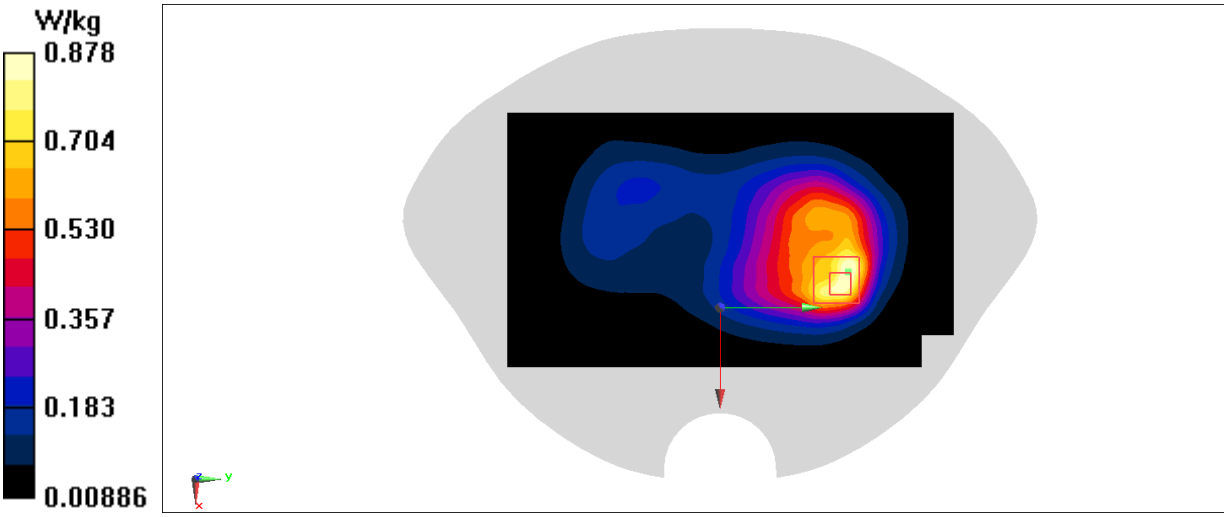
Fig A.29

LTE Band66 Body

Date: 1/15/2022
Electronics: DAE4 Sn1525
Medium: h1750
Medium parameters used: f = 1720 MHz; σ = 1.361 S/m; εr = 42.757; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band66 Frequency: 1720 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7517 ConvF(8.22, 8.22, 8.22)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.922 W/kg

Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.19 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.587 W/kg; SAR(10 g) = 0.326 W/kg
Maximum value of SAR (measured) = 0.878 W/kg



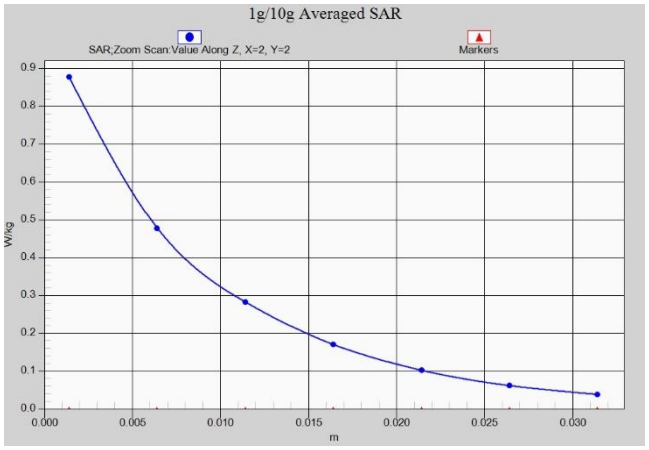


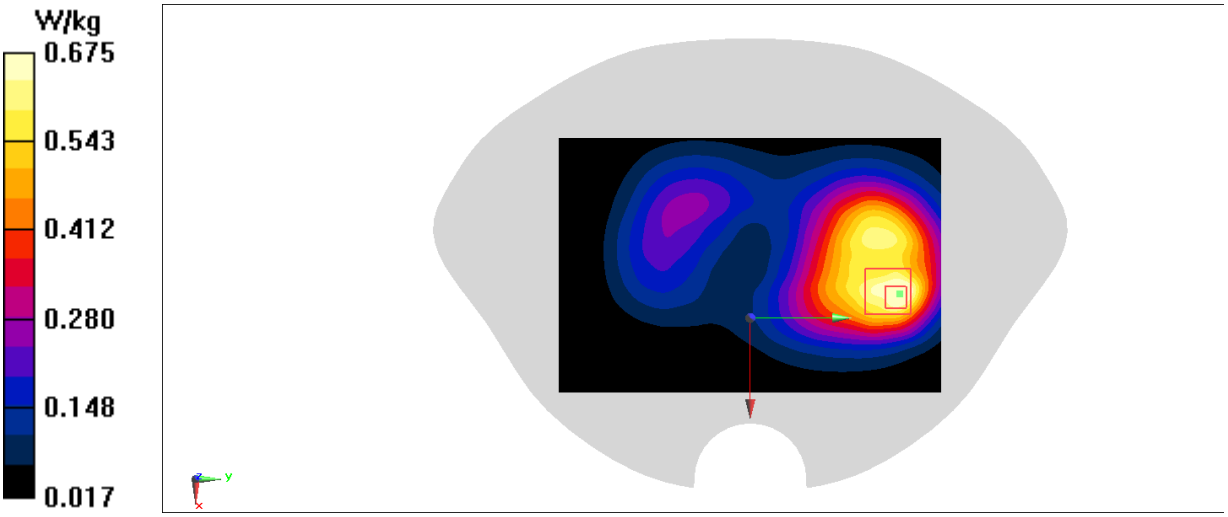
Fig A.30

LTE Band66 Body

Date: 1/15/2022
Electronics: DAE4 Sn1525
Medium: h1750
Medium parameters used: f = 1720 MHz; σ = 1.361 S/m; εr = 42.757; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: LTE Band66 Frequency: 1720 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7517 ConvF(8.22, 8.22, 8.22)

Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.731 W/kg

Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.792 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.810 W/kg
SAR(1 g) = 0.476 W/kg; SAR(10 g) = 0.290 W/kg
Maximum value of SAR (measured) = 0.675 W/kg



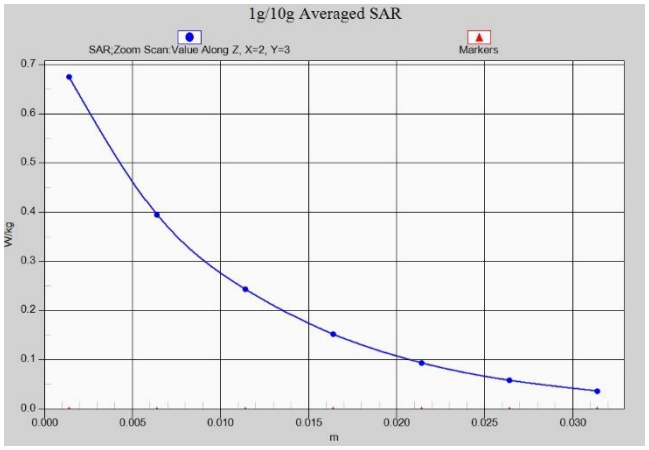


Fig A.31

LTE Band71 Head

Date: 1/7/2022

Electronics: DAE4 Sn549

Medium: h750

Medium parameters used (extrapolated): f = 688 MHz; σ = 0.808 S/m; εr = 45.256; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: LTE Band71 Frequency: 688 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(10.74, 10.74, 10.74)

Area Scan (81x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.102 W/kg

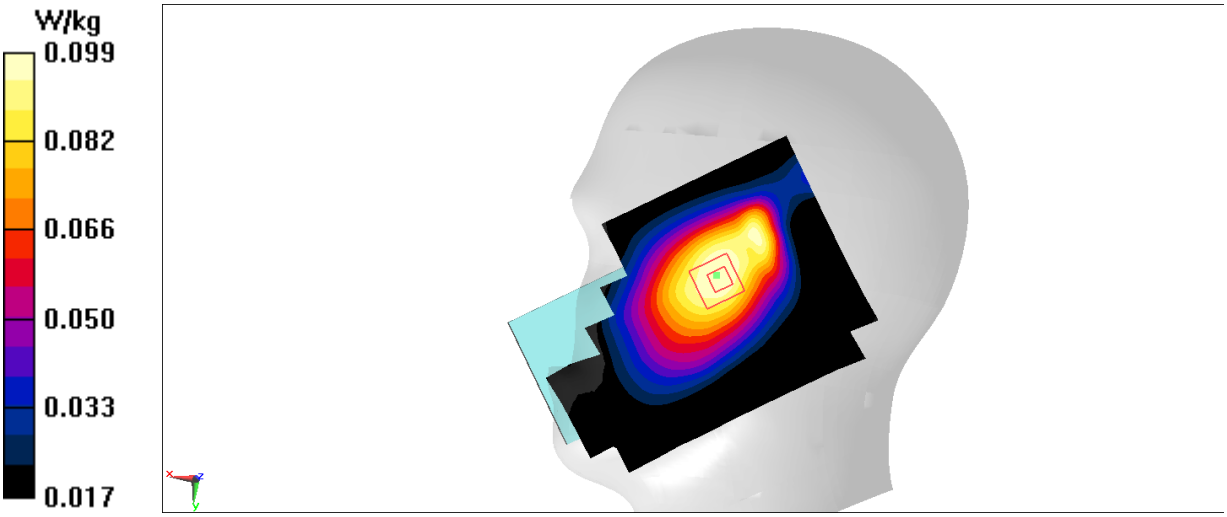
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.441 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.107 W/kg

SAR(1 g) = 0.084 W/kg; SAR(10 g) = 0.066 W/kg

Maximum value of SAR (measured) = 0.0986 W/kg



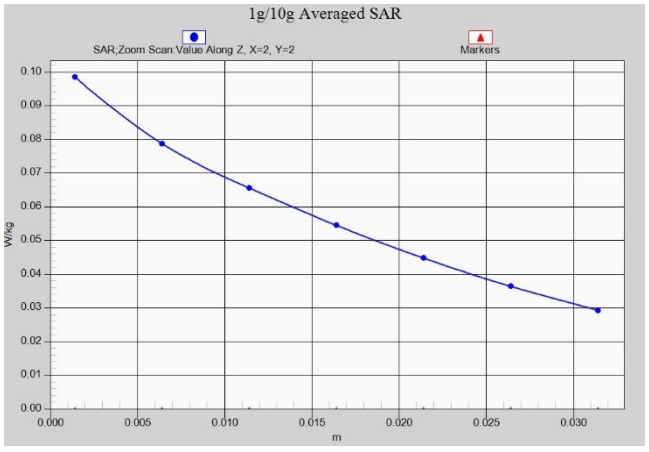


Fig A.32

LTE Band71 Body

Date: 1/7/2022

Electronics: DAE4 Sn549

Medium: h750

Medium parameters used (extrapolated): f = 688 MHz; σ = 0.808 S/m; εr = 45.256; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: LTE Band71 Frequency: 688 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(10.74, 10.74, 10.74)

Body/Rear 10mm/Area Scan (81x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.401 W/kg

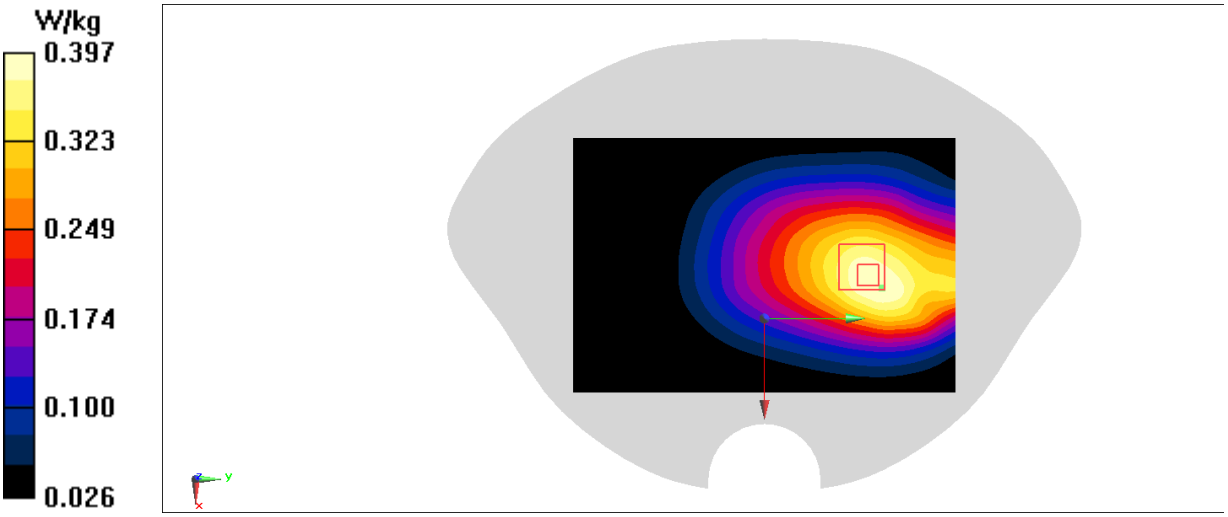
Body/Rear 10mm/Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.32 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.452 W/kg

SAR(1 g) = 0.319 W/kg; SAR(10 g) = 0.235 W/kg

Maximum value of SAR (measured) = 0.397 W/kg



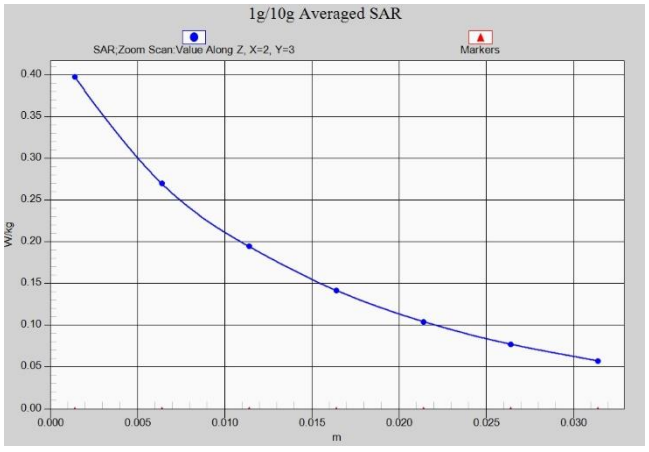


Fig A.33

WIFI2450 Head

Date: 1/22/2022

Electronics: DAE4 Sn549

Medium: h2450

Medium parameters used (interpolated): f = 2412 MHz; σ = 1.863 S/m; εr = 41.045; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: wifi 2450 Frequency: 2412 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.82, 7.82, 7.82)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.375 W/kg

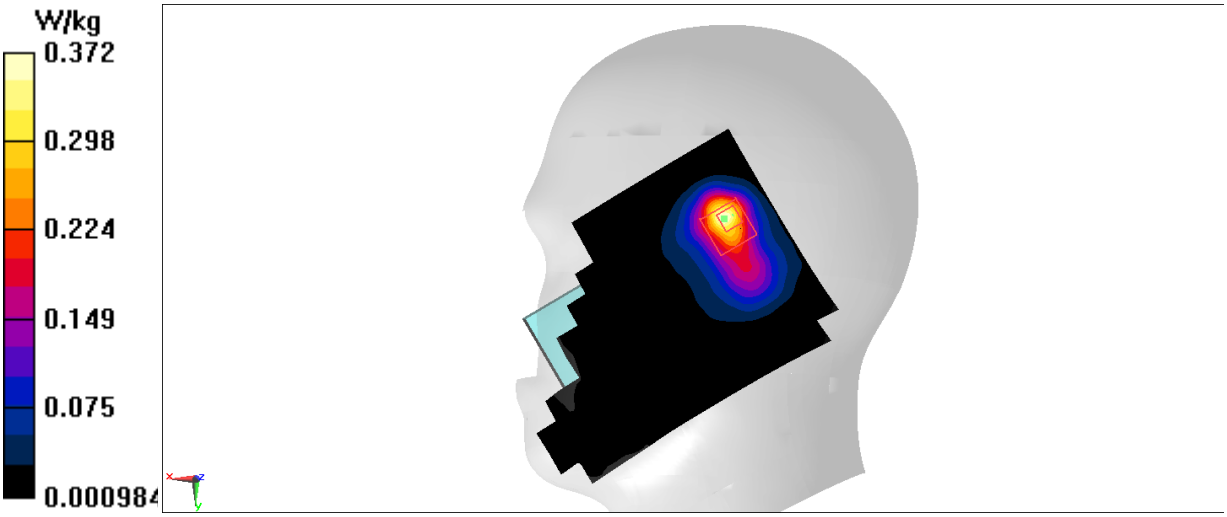
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.03 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.476 W/kg

SAR(1 g) = 0.223 W/kg; SAR(10 g) = 0.104 W/kg

Maximum value of SAR (measured) = 0.372 W/kg



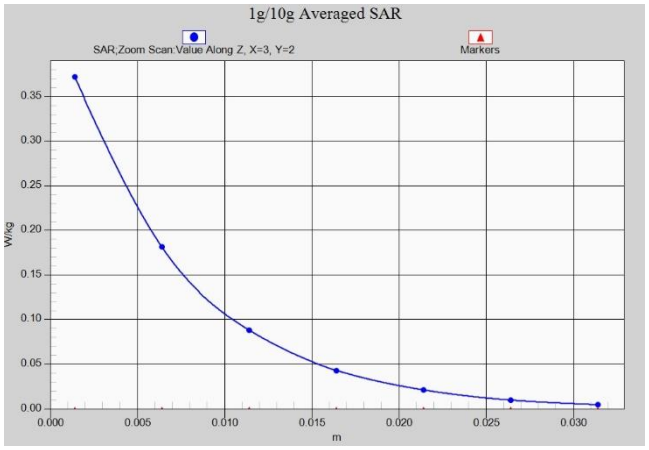


Fig A.34

WIFI2450 Body

Date: 1/22/2022

Electronics: DAE4 Sn549

Medium: h2450

Medium parameters used (interpolated): f = 2412 MHz; σ = 1.863 S/m; εr = 41.045; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: wifi 2450 Frequency: 2412 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.82, 7.82, 7.82)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.480 W/kg

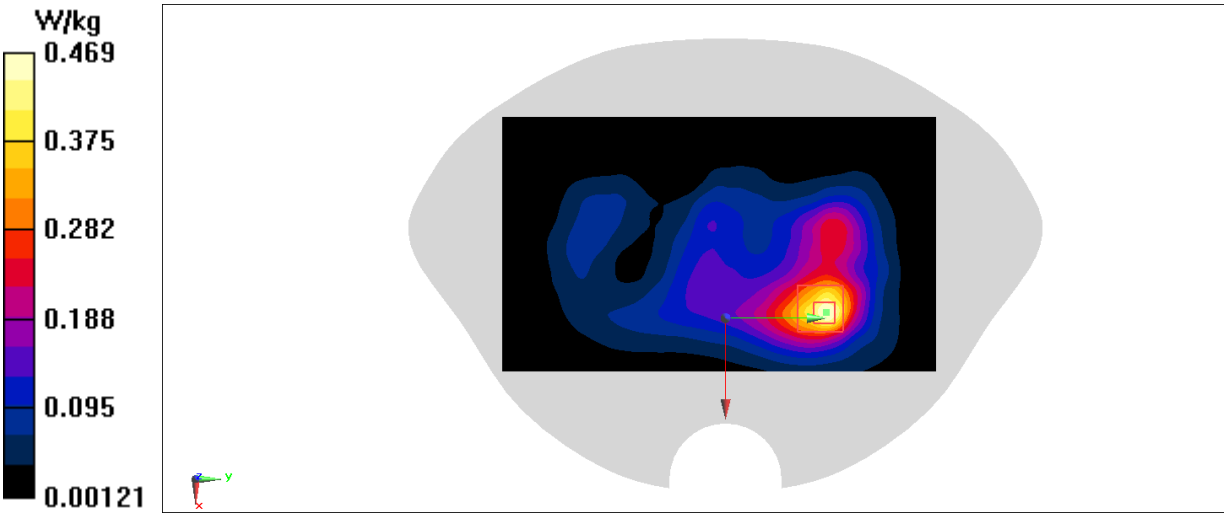
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.920 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.588 W/kg

SAR(1 g) = 0.278 W/kg; SAR(10 g) = 0.140 W/kg.

Maximum value of SAR (measured) = 0.469 W/kg



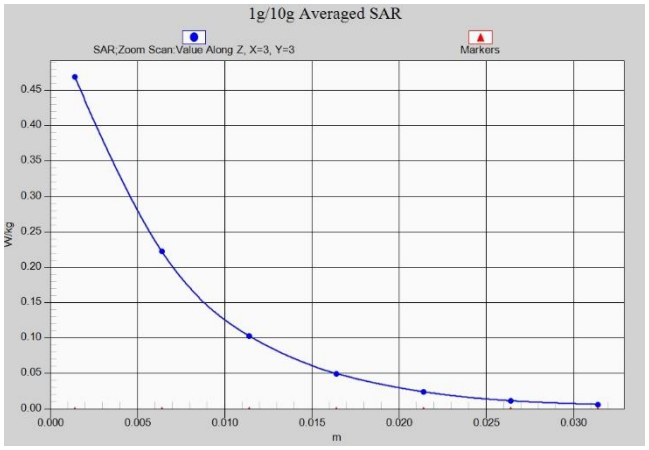


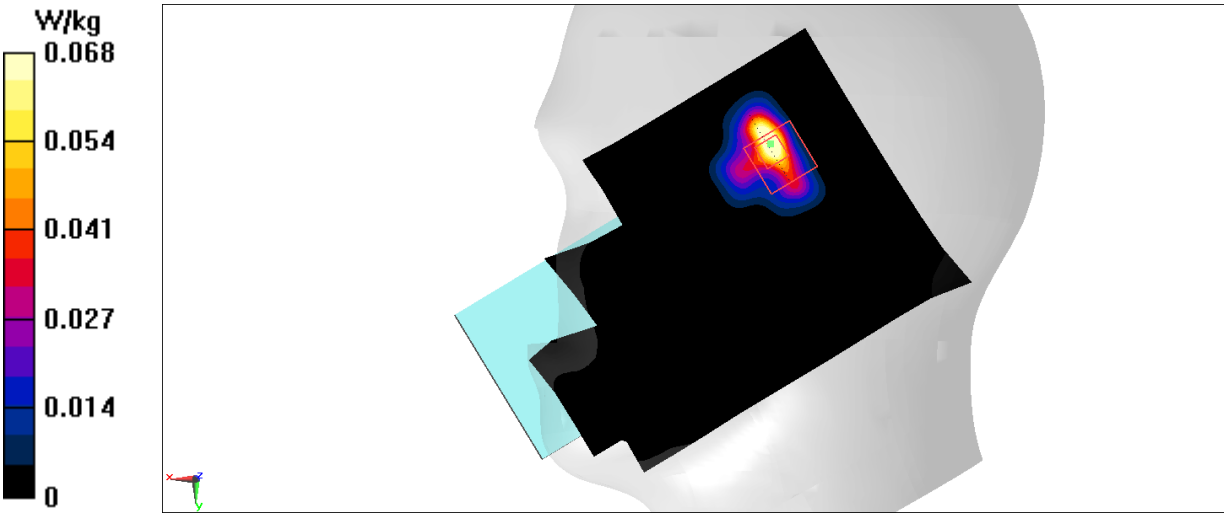
Fig A.35

BT Head

Date: 1/22/2022
Electronics: DAE4 Sn549
Medium: h2450
Medium parameters used (interpolated): f = 2402 MHz; σ = 1.856 S/m; εr = 41.06; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: Bluetooth Frequency: 2402 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(7.82, 7.82, 7.82)

Area Scan (81x141x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0871 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.708 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.143 W/kg
SAR(1 g) = 0.034 W/kg; SAR(10 g) = 0.011 W/kg
Maximum value of SAR (measured) = 0.0678 W/kg



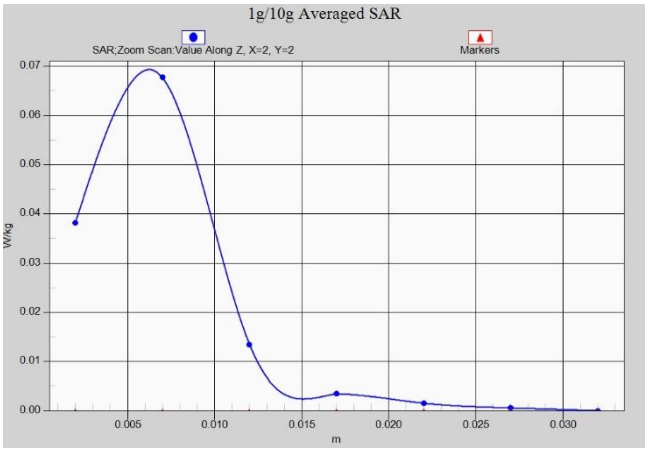


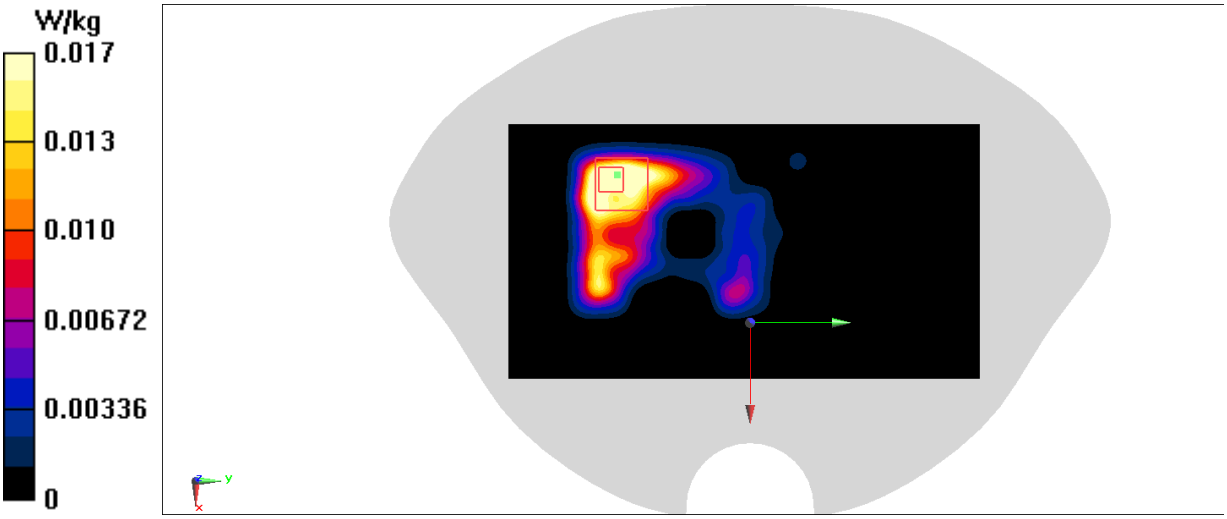
Fig A.36

BT Body

Date: 1/22/2022
Electronics: DAE4 Sn549
Medium: h2450
Medium parameters used (interpolated): f = 2402 MHz; σ = 1.856 S/m; εr = 41.06; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: Bluetooth Frequency: 2402 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7600 ConvF(7.82, 7.82, 7.82)

5MM/Rear 10mm/Area Scan (71x131x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0255 W/kg

5MM/Rear 10mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.9660 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.0240 W/kg
SAR(1 g) = 0.011 W/kg; SAR(10 g) = 0.0048 W/kg
Maximum value of SAR (measured) = 0.0168 W/kg



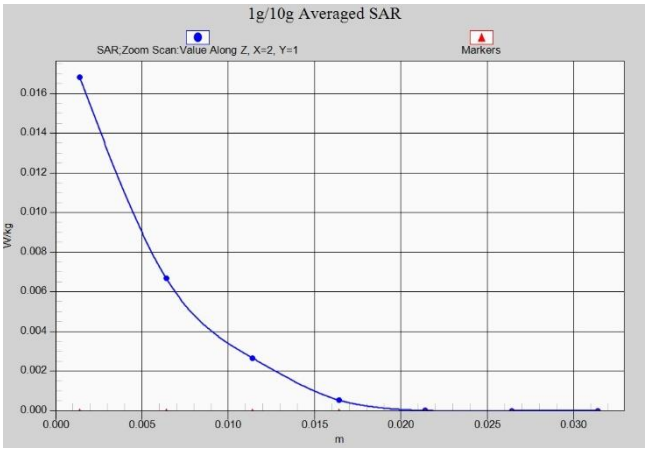


Fig A.37

ANNEX B System Verification Results

750 MHz

Date: 1/7/2022

Electronics: DAE4 Sn549

Medium: h750

Medium parameters used: f = 750 MHz; σ = 0.835 S/m; εr = 45.057; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

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

Probe: EX3DV4 - SN7600 ConvF(10.74, 10.74, 10.74)

Area Scan (51x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 54.32 V/m; Power Drift = 0.11 dB

Fast SAR: SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.38 W/kg

Maximum value of SAR (interpolated) = 2.71 W/kg

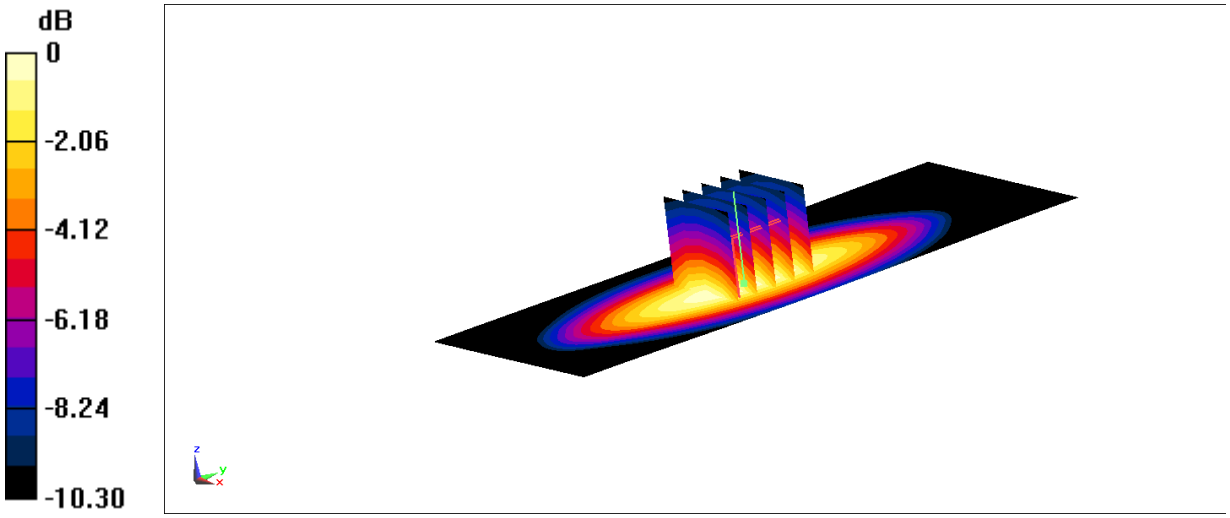
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.32 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 3.15 W/kg

SAR(1 g) = 2.03 W/kg; SAR(10 g) = 1.34 W/kg

Maximum value of SAR (measured) = 2.73 W/kg



0 dB = 2.73 W/kg = 4.36 dBW/kg

Fig.B.1 validation 750 MHz 250mW

750 MHz

Date: 1/16/2022

Electronics: DAE4 Sn1525

Medium: H750

Medium parameters used: f = 750 MHz; σ = 0.838 S/m; εr = 44.323; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

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

Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (51x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 45.09 V/m; Power Drift = 0.12 dB

Fast SAR: SAR(1 g) = 2.24 W/kg; SAR(10 g) = 1.49 W/kg

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

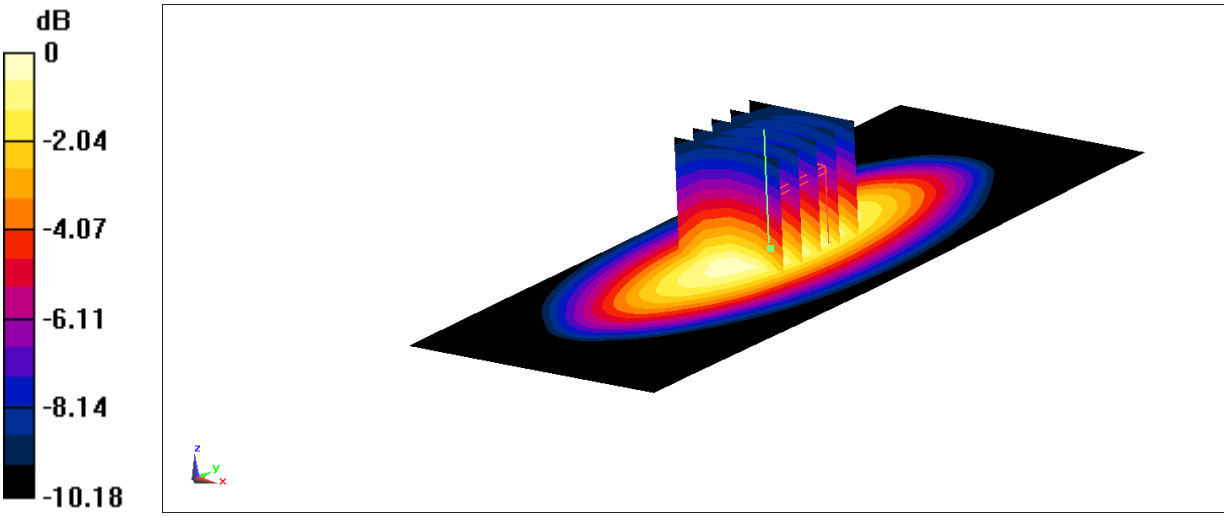
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 45.09 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 3.38 W/kg

SAR(1 g) = 2.18 W/kg; SAR(10 g) = 1.45 W/kg

Maximum value of SAR (measured) = 2.87 W/kg



0 dB = 2.87 W/kg = 4.58 dBW/kg

Fig.B.2 validation 750 MHz 250mW

835 MHz

Date: 1/14/2022

Electronics: DAE4 Sn1525

Medium: h850

Medium parameters used: f = 835 MHz; σ = 0.854 S/m; εr = 45.109; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(9.81, 9.81, 9.81)

Area Scan (51x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 60.17 V/m; Power Drift = 0.07 dB

Fast SAR: SAR(1 g) = 2.55 W/kg; SAR(10 g) = 1.62 W/kg

Maximum value of SAR (interpolated) = 3.34 W/kg

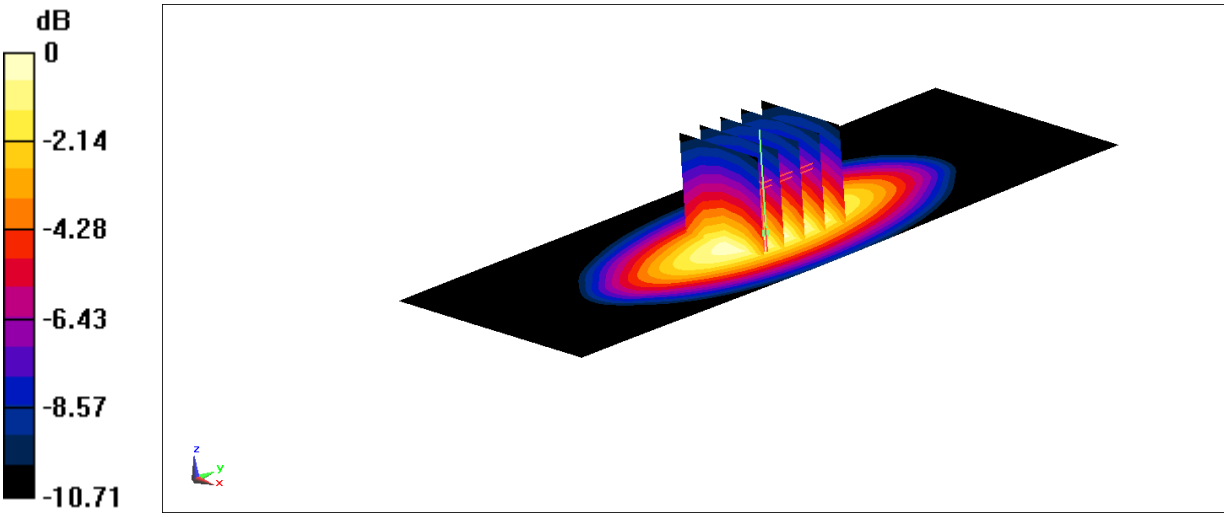
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 60.17 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 4.02 W/kg

SAR(1 g) = 2.51 W/kg; SAR(10 g) = 1.64 W/kg

Maximum value of SAR (measured) = 3.42 W/kg



0 dB = 3.42 W/kg = 5.34 dBW/kg

Fig.B.3 validation 835 MHz 250mW

835 MHz

Date: 1/20/2022

Electronics: DAE4 Sn549

Medium: H835

Medium parameters used: f = 835 MHz; σ = 0.862 S/m; εr = 44.113; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW Frequency: 835 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(10.74, 10.74, 10.74)

Area Scan (51x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 53.08 V/m; Power Drift = 0.12 dB

Fast SAR: SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.61 W/kg

Maximum value of SAR (interpolated) = 3.16 W/kg

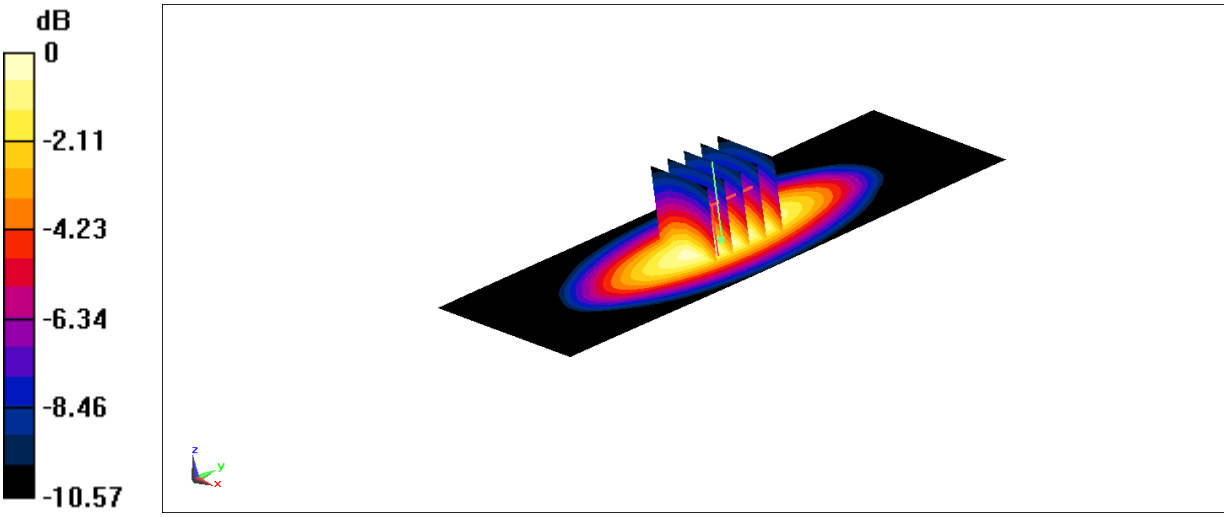
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 53.08 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.56 W/kg

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



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

Fig.B.4 validation 835 MHz 250mW

1750 MHz

Date: 1/15/2022

Electronics: DAE4 Sn1525

Medium: h1750

Medium parameters used: f = 1750 MHz; σ = 1.38 S/m; εr = 42.701; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW Frequency: 1750 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(8.22, 8.22, 8.22)

Area Scan (51x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 74.15 V/m; Power Drift = 0.14 dB

Fast SAR: SAR(1 g) = 9.69 W/kg; SAR(10 g) = 5.04 W/kg

Maximum value of SAR (interpolated) = 15.1 W/kg

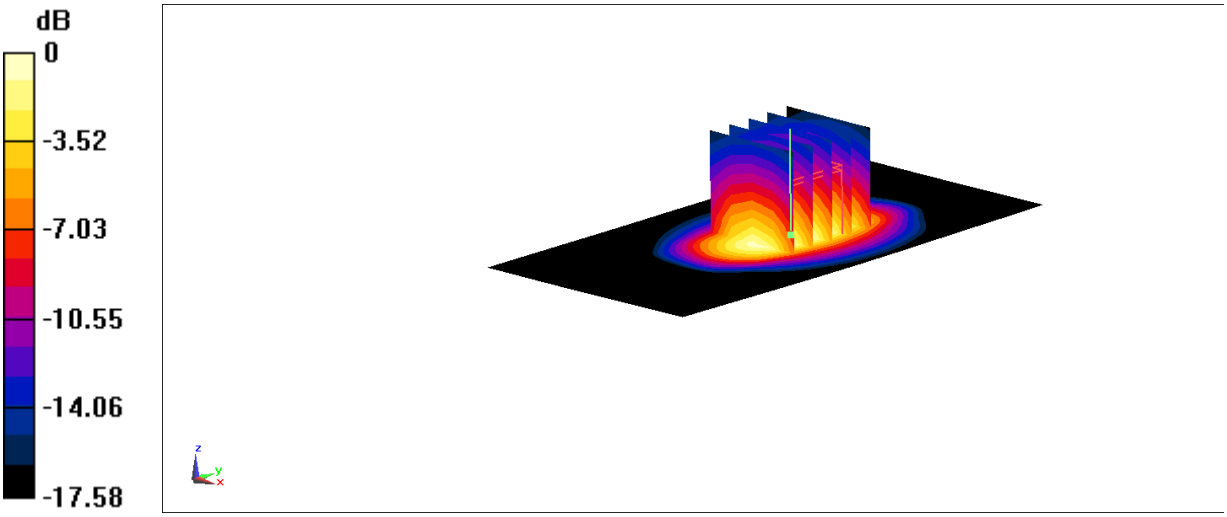
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 74.15 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 17.5 W/kg

SAR(1 g) = 9.45 W/kg; SAR(10 g) = 5.02 W/kg

Maximum value of SAR (measured) = 13.9 W/kg



0 dB = 13.9 W/kg = 11.43 dBW/kg

Fig.B.5 validation 1750 MHz 250mW

1900 MHz

Date: 1/18/2022

Electronics: DAE4 Sn1525

Medium: h1900

Medium parameters used: f = 1900 MHz; σ = 1.463 S/m; εr = 42.465; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7517 ConvF(7.81, 7.81, 7.81)

Area Scan (51x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Reference Value = 81.07 V/m; Power Drift = 0.15 dB

Fast SAR: SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.31 W/kg

Maximum value of SAR (interpolated) = 16.0 W/kg

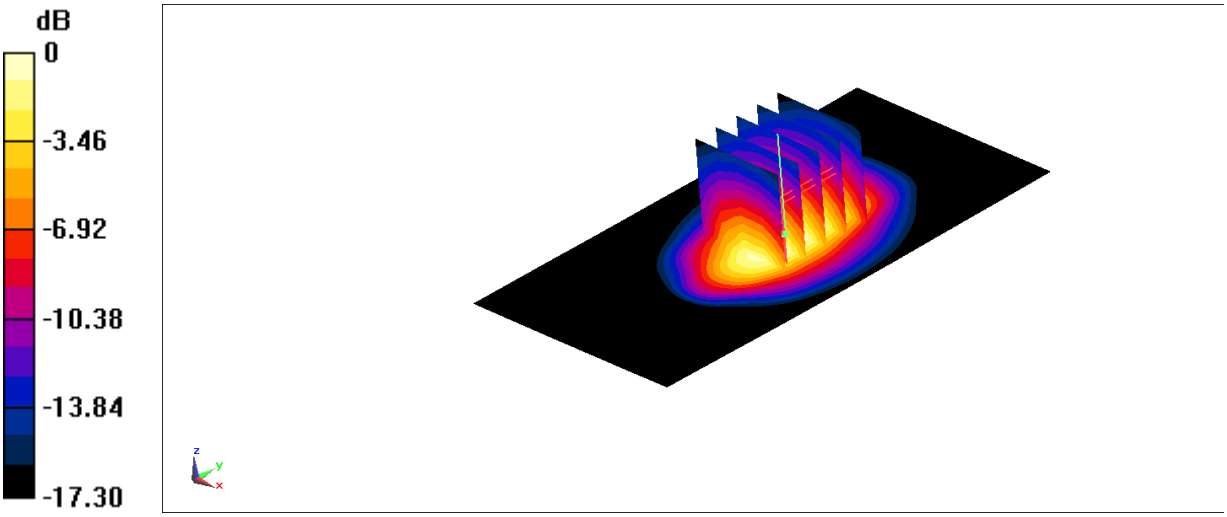
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 81.07 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 18.5 W/kg

SAR(1 g) = 10 W/kg; SAR(10 g) = 5.32 W/kg

Maximum value of SAR (measured) = 14.9 W/kg



0 dB = 14.9 W/kg = 11.73 dBW/kg

Fig.B.6 validation 1900 MHz 250mW

2450 MHz

Date: 1/20/2022

Electronics: DAE4 Sn549

Medium: h2450

Medium parameters used: f = 2450 MHz; σ = 1.895 S/m; εr = 40.989; ρ = 1000 kg/m3

Ambient Temperature:23.3oC Liquid Temperature: 22.5oC

Communication System: CW Frequency: 2450 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7600 ConvF(7.82, 7.82, 7.82)

Area Scan (61x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Reference Value = 102.1 V/m; Power Drift = 0.15 dB

Fast SAR: SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.28 W/kg

Maximum value of SAR (interpolated) = 23.2 W/kg

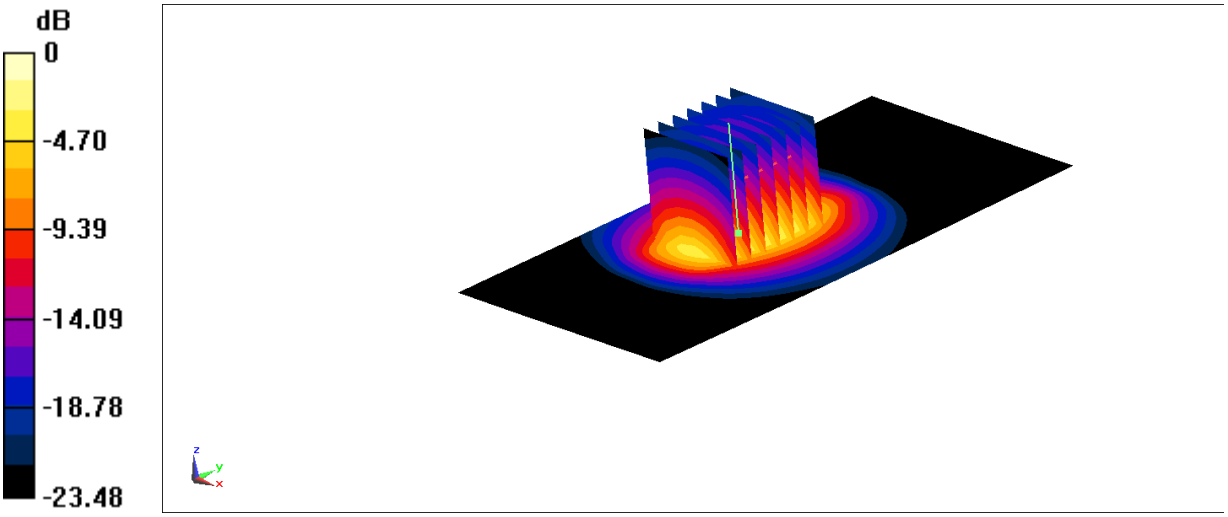
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 102.1 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 28.2 W/kg

SAR(1 g) = 13.4 W/kg; SAR(10 g) = 6.11 W/kg

Maximum value of SAR (measured) = 22.5 W/kg



0 dB = 22.5 W/kg = 13.52 dBW/kg

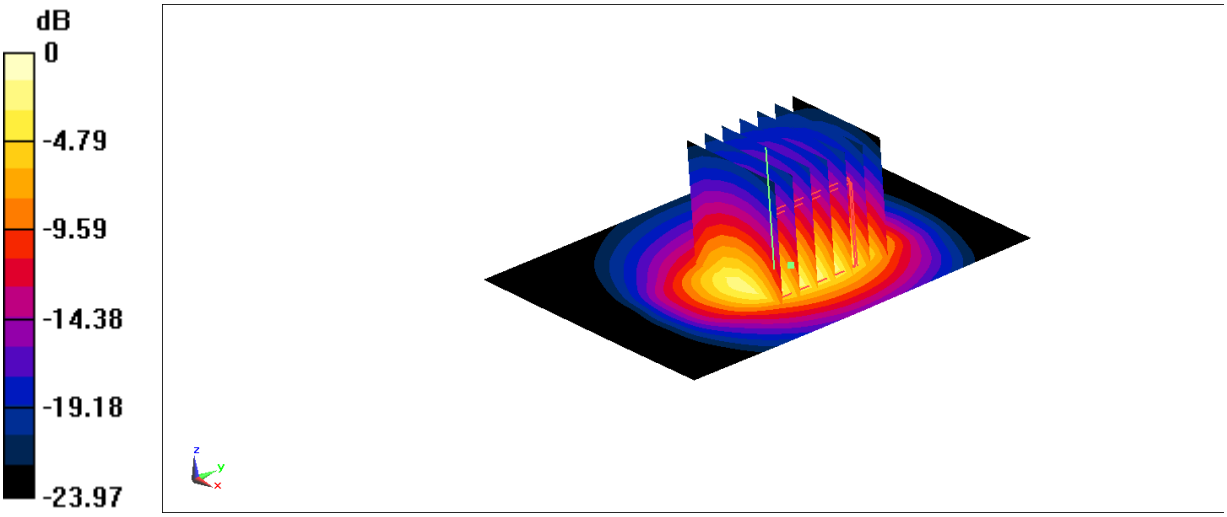
Fig.B.7 validation 2450 MHz 250mW

2600 MHz

Date: 1/13/2022
Electronics: DAE4 Sn1525
Medium: h2600
Medium parameters used: f = 2600 MHz; σ = 2.057 S/m; εr = 40.998; ρ = 1000 kg/m3
Ambient Temperature:23.3oC Liquid Temperature: 22.5oC
Communication System: CW Frequency: 2600 MHz Duty Cycle: 1:1
Probe: EX3DV4 - SN7517 ConvF(7.1, 7.1, 7.1)

Area Scan 3 (61x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Reference Value = 106.2 V/m; Power Drift = 0.11 dB
Fast SAR: SAR(1 g) = 14.4 W/kg; SAR(10 g) = 6.29 W/kg
Maximum value of SAR (interpolated) = 24.9 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 106.2 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 31.0 W/kg
SAR(1 g) = 14 W/kg; SAR(10 g) = 6.22 W/kg
Maximum value of SAR (measured) = 23.5 W/kg



0 dB = 23.5 W/kg = 13.71 dBW/kg

Fig.B.8 validation 2600 MHz 250mW

The SAR system verification must be required that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR.

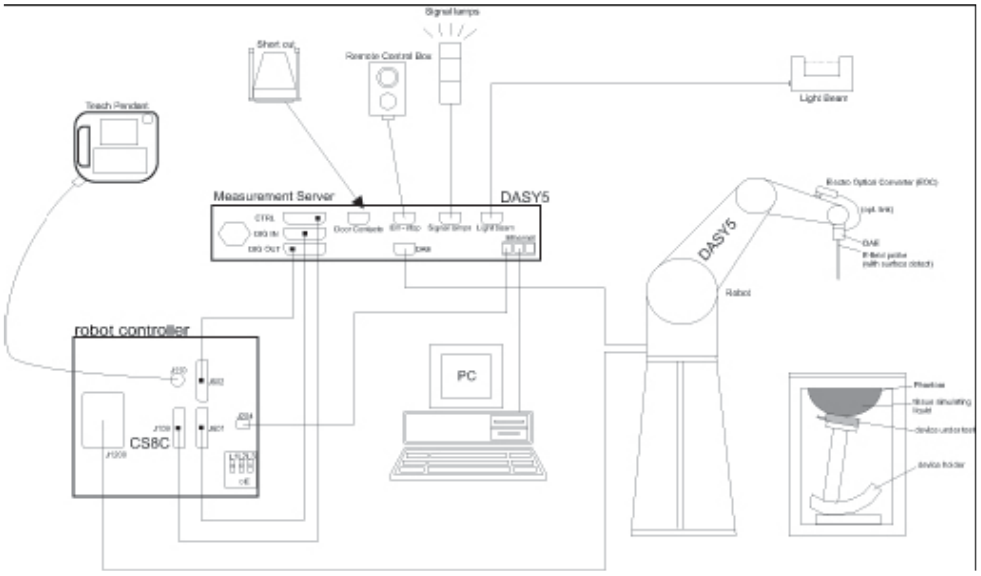
Table B.1 Comparison between area scan and zoom scan for system verification

Date	Band	Position	Area scan (1g)	Zoom scan (1g)	Drift (%)
2022/1/7	750 MHz	Head	2.09	2.03	2.96
2022/1/16	750 MHz	Head	2.24	2.18	2.75
2022/1/14	835 MHz	Head	2.55	2.51	1.59
2022/1/20	835 MHz	Head	2.41	2.36	2.12
2022/1/15	1750 MHz	Head	9.69	9.45	2.54
2022/1/18	1900 MHz	Head	10.2	10	2.00
2022/1/22	2450 MHz	Head	13.8	13.4	2.99
2022/1/13	2600 MHz	Head	14.4	14	2.86

ANNEX C SAR Measurement Setup

C.1 Measurement Set-up

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



Picture C.1SAR Lab Test Measurement Set-up

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

C.2 Dasy5 E-field Probe System

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

Probe Specifications:

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

Picture C.2Near-field Probe

Picture C.3E-field Probe

C.3 E-field Probe Calibration

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

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

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

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

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

Where:

Δt = Exposure time (30 seconds),

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

ΔT = Temperature increase due to RF exposure.

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

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m^3).

C.4 Other Test Equipment

C.4.1 Data Acquisition Electronics(DAE)

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

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

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

PictureC.4: DAE

C.4.2 Robot

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

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

Picture C.5 DASY 5

C.4.3 Measurement Server

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

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

Picture C.6 Server for DASY 5

C.4.4 Device Holder for Phantom

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

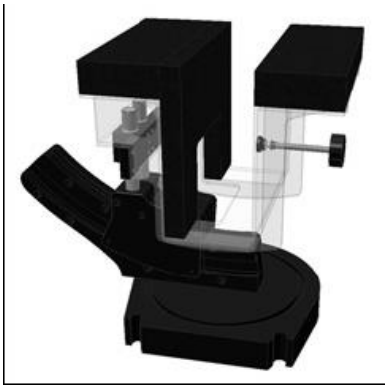
The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales are the ear reference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

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

<Laptop Extension Kit>

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

Picture C7-1: Device Holder



Picture C.7-2: Laptop Extension Kit

C.4.5 Phantom

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

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

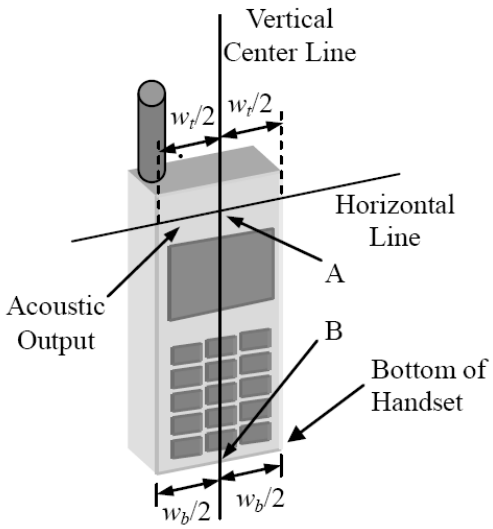
Shell Thickness:	2±0. 2 mm
Filling Volume:	Approx. 25 liters
Dimensions:	810 x l000 x 500 mm (H x L x W)
Available:	Special

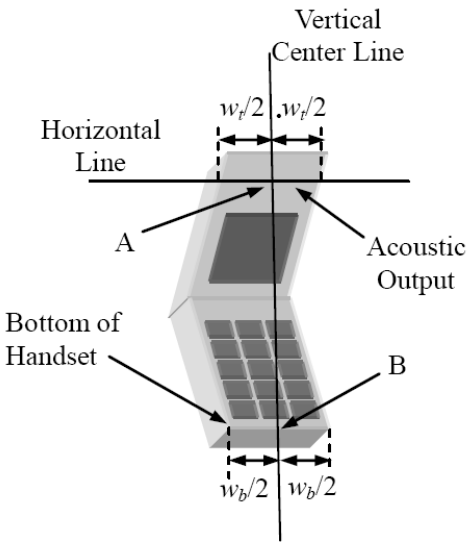
Picture C.8: SAM Twin Phantom

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

D.1 General considerations

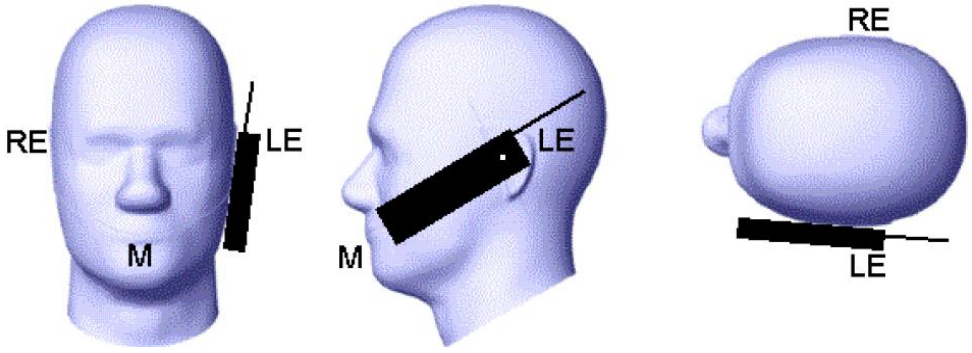
This standard specifies two handset test positions against the head phantom – the “cheek” position and the “tilt” position.



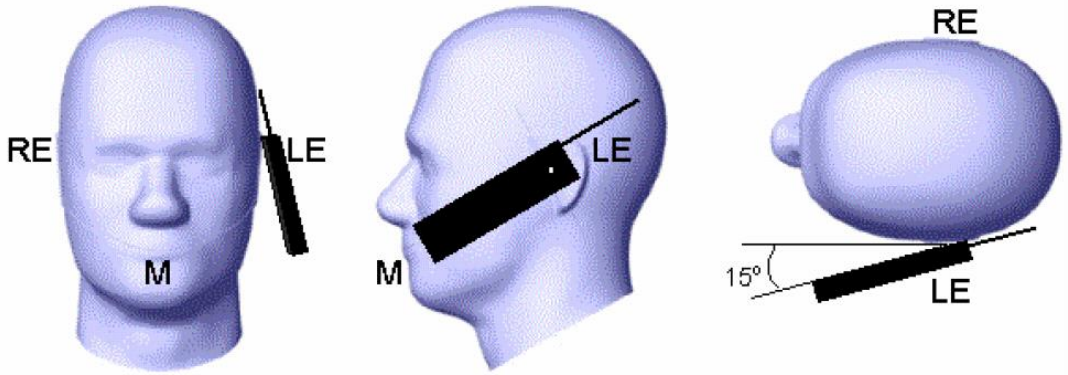


W_t	Width of the handset at the level of the acoustic
W_b	Width of the bottom of the handset
A	Midpoint of the width W_t of the handset at the level of the acoustic output
B	Midpoint of the width W_b of the bottom of the handset

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



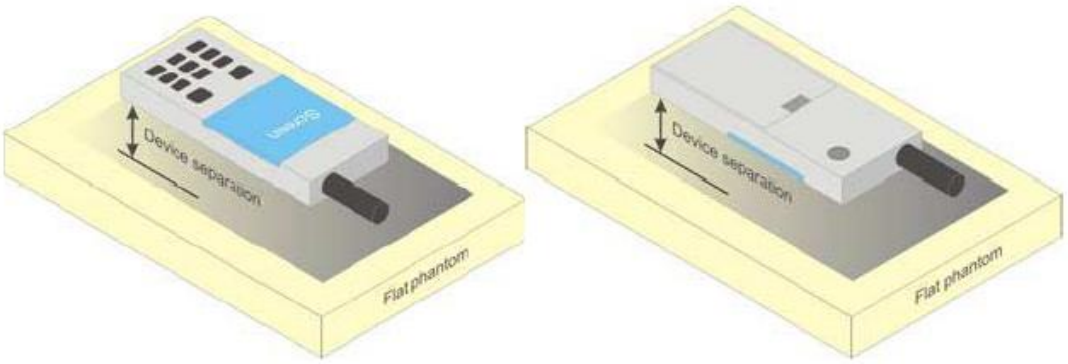
Picture D.2 Cheek position of the wireless device on the left side of SAM



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.

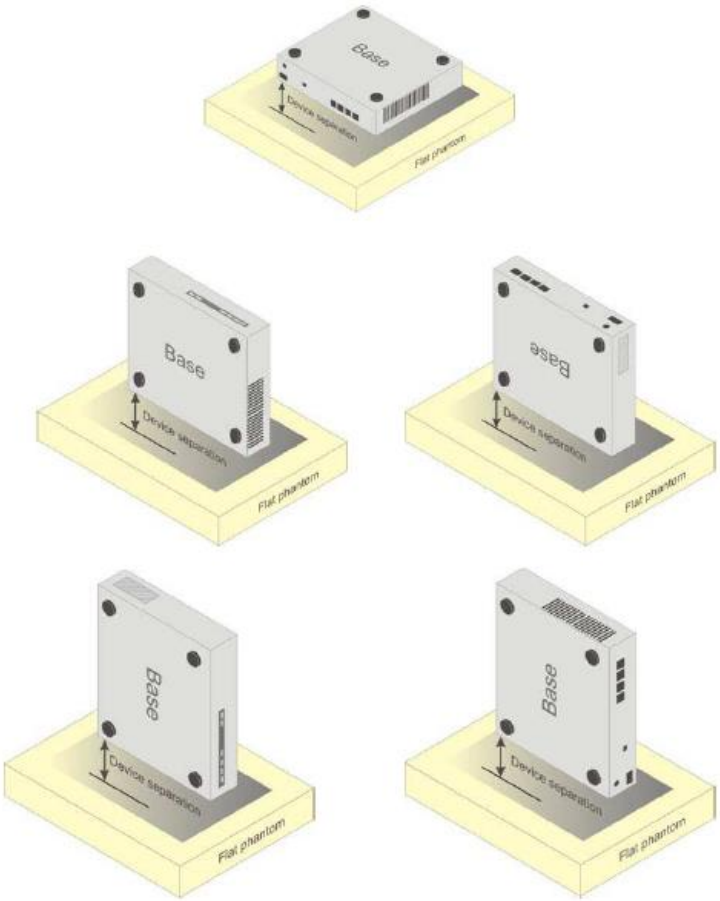


Picture D.4Test positions for body-worn devices

D.3 Desktop device

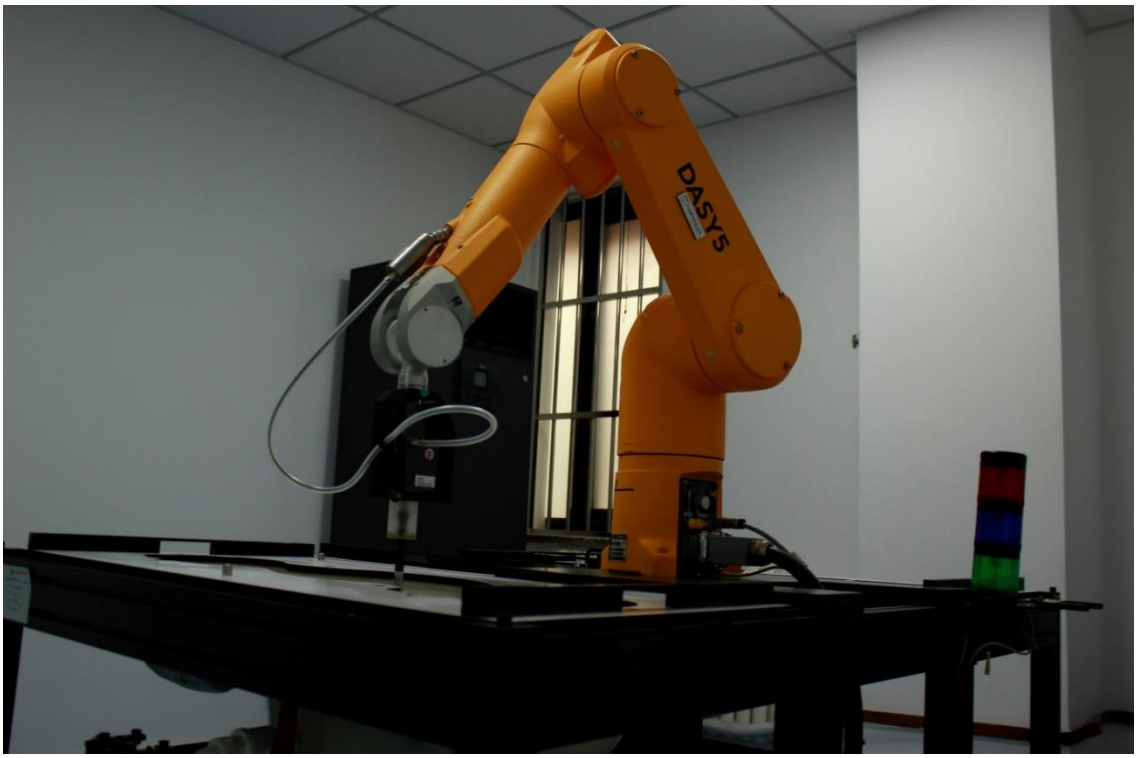
A typical example of a desktop device is a wireless enabled desktop computer placed on a table or desk when used.

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. Picture8.5 show positions for desktop device SAR tests. If the intended use is not specified, the device shall be tested directly against the flat phantom.



Picture D.5 Test positions for desktop devices

D.3 DUT Setup Photos



Picture D.6

ANNEX E Equivalent Media Recipes

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

TableE.1: Composition of the Tissue Equivalent Matter

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

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

ANNEX F System Validation

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

Table F.2: System Validation for 7517

Probe SN.	Liquid name	Validation date	Frequency point	Status (OK or Not)
7517	Head 750MHz	February 19，2021	750 MHz	OK
7517	Head 900MHz	February 19，2021	900 MHz	OK
7517	Head 1450MHz	February 20，2021	1450 MHz	OK
7517	Head 1640MHz	February 20，2021	1640 MHz	OK
7517	Head 1750MHz	February 21，2021	1750 MHz	OK
7517	Head 1900MHz	February 21，2021	1900 MHz	OK
7517	Head 2000MHz	February 22，2021	2000 MHz	OK
7517	Head 2300MHz	February 22，2021	2300 MHz	OK
7517	Head 2450MHz	February 22，2021	2450 MHz	OK
7517	Head 2600MHz	February 23，2021	2600 MHz	OK
7517	Head 3300MHz	February 23，2021	3300 MHz	OK
7517	Head 3500MHz	February 23，2021	3500 MHz	OK
7517	Head 3700MHz	February 24，2021	3700 MHz	OK
7517	Head 3900MHz	February 24，2021	3900 MHz	OK
7517	Head 4100MHz	February 25，2021	4100MHz	OK
7517	Head 4200MHz	February 25，2021	4200MHz	OK
7517	Head 4400MHz	February 25，2021	4400MHz	OK
7517	Head 4600MHz	February 26，2021	4600MHz	OK
7517	Head 4800MHz	February 26，2021	4800MHz	OK
7517	Head 4950MHz	February 26，2021	4950MHz	OK
7517	Head 5250MHz	February 27，2021	5250MHz	OK
7517	Head 5600MHz	February 27，2021	5600 MHz	OK
7517	Head 5750MHz	February 27，2021	5750 MHz	OK

Table F.1: System Validation for 7600

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

ANNEX G Probe Calibration Certificate

Probe 7517 Calibration Certificate

In Collaboration with
s p e a g
CALIBRATION LABORATORY
Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

中国认可
国际互认
校准
CALIBRATION
CNAS L0570

Client CTTL Certificate No: Z21-60001

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN : 7517
Calibration Procedure(s)	FF-Z11-004-02 Calibration Procedures for Dosimetric E-field Probes
Calibration date:	February 03, 2021

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Power sensor NRP-Z91	101547	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Power sensor NRP-Z91	101548	16-Jun-20(CTTL, No.J20X04344)	Jun-21
Reference 10dBAttenuator	18N50W-10dB	10-Feb-20(CTTL, No.J20X00525)	Feb-22
Reference 20dBAttenuator	18N50W-20dB	10-Feb-20(CTTL, No.J20X00526)	Feb-22
Reference Probe EX3DV4	SN 7307	29-May-20(SPEAG, No.EX3-7307_May20)	May-21
DAE4	SN 1556	4-Feb-20(SPEAG, No.DAE4-1556_Feb20)	Feb-21
DAE4	SN 1555	25-Aug-20(SPEAG, No.DAE4-1555_Aug20)	Aug-21
Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	23-Jun-20(CTTL, No.J20X04343)	Jun-21
Network Analyzer E5071C	MY46110673	10-Feb-20(CTTL, No.J20X00515)	Feb-21

	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 05, 2021

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

Certificate No: Z21-60001 Page 1 of 9