



SAR TEST REPORT

Applicant Honor Device Co., Ltd.
FCC ID 2AYGCVNE-LX1
Product Smart Phone
Model VNE-LX1
Report No. R2208A0708-S1
Issue Date August 10, 2022

TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **IEEE 1528-2013, ANSI C95.1: 1992, IEEE C95.1: 1991**. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **TA technology (shanghai) co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein .Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

A2LA (Certificate Number: 3857.01)

TA Technology (Shanghai) Co., Ltd. has been listed by American Association for Laboratory Accreditation to perform measurement.

1.3 Testing Location

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1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25 °C
Relative humidity	Min. = 30%, Max. = 70%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	



2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for the EUT are as follows:

Table 1: Highest Reported SAR

Mode	Highest Reported SAR (W/kg)			
	1g SAR Head	1g SAR Body-worn (Separation 15mm)	1g SAR Hotspot (Separation 10mm)	Product Specific 10-g SAR (Separation 0mm)
GSM 850	0.53	0.25	0.41	NA
GSM 1900	0.60	0.21	0.51	NA
WCDMA Band II	0.85	0.45	0.73	2.10
WCDMA Band V	0.50	0.31	0.54	NA
LTE FDD 5	0.60	0.36	0.64	NA
LTE FDD 7	0.59	0.27	0.41	NA
Wi-Fi (2.4G)	0.60	0.58	0.84	NA
Wi-Fi (5G)	0.39	0.41	0.44	1.19
BT	0.26	0.26	0.26	NA
Date of Testing: (Original) July 7, 2022 ~ July 28, 2022 (Variant) August 3, 2022~ August 5, 2022 Date of Sample Received: (Original) July 5, 2022 (Variant) August 1, 2022				
Note: 1. The device is in compliance with SAR for Uncontrolled Environment /General Population exposure limits (1.6 W/kg and 4.0 W/kg) specified in ANSI C95.1: 1992/IEEE C95.1: 1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013. 2. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.				



Note: 1) The highest Reported SAR are as follows:

Head (W/kg)	Body-worn (W/kg)	Hotspot (W/kg)	Product Specific 10-g SAR (W/kg)	Simultaneous Transmission Exposure Conditions (W/kg)
0.85	0.58	0.84	2.10	1.52 for SAR _{1g} 2.10 for SAR _{10g}

2) For body worn operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and that positions the handset a minimum of 15mm from the body. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

The device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits according to the FCC rule § 2.1093, the ANSI C95.1: 1992/IEEE C95.1: 1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013.

VNE-LX1 (Report No.: R2208A0708-S1) is a variant model of VNE-LX3 (Report No.: R2207A0619-S1V2).

The difference between model VNE-LX3 and VNE-LX1 is show in below table:

/	Model	VNE-LX3	VNE-LX1
Licensed Frequency	LTE Band	B2/B4/B5/B7/B13/B26/B38/B66	B5/B7
	UMTS Band	B2/B4/B5	B2/B5
Unlicensed Frequency	NFC	Not support	Support
Software	Version	2.1.0.34(SP02C900E5R1P1)	2.1.0.57(SP03C900E5R1P1)
RF	RF circuit	The RF circuit of the same frequency is the same.	The RF circuit of the same frequency is the same. The different frequency changed by hardware and some RF parameters. Changes are followed: DeleteWB4/LTEB2/B4/B13/B66/B38 SAWS and RF matching.
	Tune-up	The tune-up of the same frequency are the same.	The tune-up of the same frequency are the same.
Others		The same	The same

The detailed product change description please refers to the *Difference Declaration Letter*.

Tested band refer to the following table.

Band	Original	Variant
GSM 850	Pass	Only tested with worst case of Original
GSM 1900	Pass	Only tested with worst case of Original
WCDMA Band II	Pass	Only tested with worst case of Original
WCDMA Band V	Pass	Only tested with worst case of Original
LTE FDD 5	Pass	Only tested with worst case of Original
LTE FDD 7	Pass	Only tested with worst case of Original
Wi-Fi (2.4G)	Pass	Only tested with worst case of Original
Wi-Fi (5G)	Pass	Only tested with worst case of Original
BT	Pass	Only tested with worst case of Original

3 Description of Equipment under Test

Client Information

Applicant	Honor Device Co., Ltd.
Applicant address	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China
Manufacturer	Honor Device Co., Ltd.
Manufacturer address	Shum Yip Sky Park, No. 8089, Hongli West Road, Shenzhen, China

General Technologies

Application Purpose	Class II Permissive Change
EUT Stage	Identical Prototype
Model	VNE-LX1
SN	A96BNU2625200516
Hardware Version	HL1VNEM
Software Version	2.1.0.57(SP03C900E5R1P1)
Antenna Type	Internal Antenna
Device Class	B
Wi-Fi Hotspot	Wi-Fi 2.4G Wi-Fi 5G U-NII-1&U-NII-3
Power Class	GSM 850: 4 GSM 1900: 1 UMTS Band II/V: 3 LTE FDD 5/7: 3
Power Level	GSM 850: level 5 GSM 1900: level 0 UMTS Band II/V: all up bits LTE FDD5/7: max power

EUT Accessory

Accessory	Model	Manufacture	No.
Adapter	HW-050200E02	Honor Device Co., Ltd. (Manufacturer: Huntkey)	1
		Honor Device Co., Ltd. (Manufacturer: BYD)	2
	HW-050200B02	Honor Device Co., Ltd. (Manufacturer: Huntkey)	3
		Honor Device Co., Ltd. (Manufacturer: BYD)	4
	HW-050200U02	Honor Device Co., Ltd. (Manufacturer: Huntkey)	5
		Honor Device Co., Ltd. (Manufacturer: BYD)	6



Battery	HB496590EFW	Honor Device Co., Ltd. (Manufacturer: SCUD)	1
		Honor Device Co., Ltd. (Manufacturer: NVT)	2
	HB496590EFW-F	Honor Device Co., Ltd. (Manufacturer: SCUD)	3
		Honor Device Co., Ltd. (Manufacturer: NVT)	4
Data Cable	RY0002	NingBo Broad Telecommunication Co., Ltd.	1
	AU2-CRO013HF	Freeport Resources Enterprises Corp.	2
	2120-00001-0	MING JI ELECTRONICS CO., LTD.	3
	L125UC007-CS-H	LUXSHARE PRECISION INDUSTRY CO., LTD.	4
	CUDU01B-HC451-EH	FOXCONN INTERCONNECT TECHNOLOGY LIMITED	5
Earphone	MEND1532B528C00	Jiangxi Lianchuang Hongsheng Electronic Co., LTD.	1
	1293-3283-3.5MM-339	BOLUO COUNTY QUANCHENG ELECTRONIC CO.,LTD.	2

Note: The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.

Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)
GSM	850	Voice(GMSK) GPRS(GMSK) EGPRS(GMSK,8PSK)	<input type="checkbox"/> Multi-slot Class:8-1UP <input type="checkbox"/> Multi-slot Class:10-2UP <input checked="" type="checkbox"/> Multi-slot Class:12-4UP <input type="checkbox"/> Multi-slot Class:33-4UP	824 ~ 849
	1900			1850 ~ 1910
Does this device support DTM (Dual Transfer Mode)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
UMTS	Band II	QPSK, 16QAM	HSDPA UE Category:14 HSUPA UE Category:7 DC-HSDPA UE Category:24 HSPA+ Category:24	1850 ~ 1910
	Band V			824 ~ 849
LTE	FDD 5	QPSK, 16QAM (Uplink) QPSK, 16QAM 64QAM (Downlink)	Rel.10 /Category 4	824 ~ 849
	FDD 7			2500 ~ 2570
Does this device support Carrier Aggregation (CA) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
Does this device support SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
BT	2.4G	Version 5.1 BR/EDR + LE		2402 ~2480
Wi-Fi	2.4G	DSSS, OFDM	802.11b/g/n HT20	2412 ~ 2462
		OFDM	802.11n HT40	2422 ~ 2452
	5G	OFDM	802.11a/n HT20/ HT40/ ac VHT20/ VHT40/ VHT80	5150 ~ 5350 5470 ~ 5850
Does this device support MIMO <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				

4 Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE 1528- 2013, ANSI C95.1: 1992, IEEE C95.1: 1991, the following FCC Published RF exposure KDB procedures:

Reference Standards

KDB 248227 D01 802.11Wi-Fi SAR v02r02

KDB 447498 D01 General RF Exposure Guidance v06

KDB 648474 D04 Handset SAR v01r03

KDB 690783 D01 SAR Listings on Grants v01r03

KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04

KDB 865664 D02 RF Exposure Reporting v01r02

KDB 941225 D01 3G SAR Procedures v03r01

KDB 941225 D05 SAR for LTE Devices v02r05

KDB 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02

KDB 941225 D06 Hotspot Mode v02r01

5 Operational Conditions during Test

5.1 Test Positions

5.1.1 Against Phantom Head

Measurements were made in “cheek” and “tilt” positions on both the left hand and right hand sides of the phantom.

The positions used in the measurements were according to IEEE 1528 - 2013 "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques".

5.1.2 Body Worn Configuration

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations.

Per FCC KDB Publication 648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a 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.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that do contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with the device with each accessory. If multiple accessories share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used. Test position spacing was documented. Transmitters that are designed to operate in front of a person's face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom in head fluid. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessories, including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

5.1.3 Phablet SAR test considerations

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.

- a) The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
- b) 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 product specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB Publication 865664 D01 to address interactive hand use exposure conditions. The 1-g SAR at 5 mm for UMPC mini-tablets is not required. When hotspot mode applies, product specific 10-g 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. Product specific 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 product specific 10-g SAR.
- c) 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.

5.2 Measurement Variability

Per FCC KDB Publication 865664 D01, SAR measurement variability was assessed for each frequency band, which was determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media were required for SAR measurements in a frequency band, the variability measurement procedures were applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. These additional measurements were repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device was returned to ambient conditions (normal room temperature) with the battery fully charged before it was re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement Variability was assessed using the following procedures for each frequency band:

- 1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
- 2) A second repeated measurement was performed only if the ratio of largest to smallest SAR for the original and first repeated measurements was > 1.20 or when the original or repeated measurement was ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
- 3) A third repeated measurement was performed only if the original, first or second repeated measurement was ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .
- 4) Repeated measurements are not required when the original highest measured SAR is < 0.80 W/kg

The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

5.3 Test Configuration

5.3.1 GSM Test Configuration

According to specification 3GPP TS 51.010, the maximum power of the GSM can do the power reduction for the multi-slot. The allowed power reduction in the multi-slot configuration is as following:

Output power of reductions:

Table 2: The allowed power reduction in the multi-slot configuration

Number of timeslots in uplink assignment	Permissible nominal reduction of maximum output power (dB)
1	0
2	0 to 3,0
3	1,8 to 4,8
4	3,0 to 6,0

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data 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. GSM voice and GPRS data use GMSK, which is a constant amplitude modulation with minimal peak to average power difference within the time-slot burst. For EDGE, GMSK is used for MCS 1 – MCS 4 and 8-PSK is used for MCS 5 – MCS 9; where 8-PSK has an inherently higher peak-to-average power ratio. The GMSK and 8-PSK EDGE configurations are considered separately for SAR compliance. The GMSK EDGE configurations are grouped with GPRS and considered with respect to time-averaged maximum output power to determine compliance. The 3G SAR test reduction procedure is applied to 8-PSK EDGE with GMSK GPRS/EDGE as the primary mode.

5.3.2 UMTS Test Configuration

5.3.2.1 3G SAR Test Reduction Procedure

The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations modes according to output power, exposure conditions and device operating capabilities. Maximum output power is verified by applying the applicable versions of 3GPP TS 34.121.

5.3.2.2 Head SAR

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for 12.2 kbps AMR in 3.4 kbps SRB (signaling radio bearer) using the highest SAR configuration in 12.2 kbps RMC for head exposure.

5.3.2.3 Body-worn accessory SAR

SAR for body-worn accessory configurations is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”. The 3G SAR test reduction procedure is applied to other spreading codes and multiple DPDCHn configurations supported by the EUT with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured using an applicable RMC configuration with the corresponding spreading code or DPDCHn, for the highest reported body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When more than 2 DPDCHn are supported by the EUT, it may be necessary to configure additional DPDCHn using FTM (Factory Test Mode) or other chipset based test approaches with parameters similar to those used in 384 kbps and 768 kbps RMC

5.3.2.4 Release 5 HSDPA Test Configuration

The 3G SAR test reduction procedure is applied to HSDPA body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSDPA using the HSDPA body SAR procedures in the “Release 5 HSDPA Data Devices” section of this document, for the highest SAR body-worn accessory exposure configuration in 12.2 kbps RMC. EUT with both HSDPA and HSUPA are tested according to Release 6 HSPA test procedures.

HSDPA should be configured according to the UE category of a test device. The number of HSDSCH/HS-PDSCHs, HARQ processes, minimum inter-TTI interval, transport block sizes and RV coding sequence are defined by the H-set. To maintain a consistent test configuration and stable transmission conditions, QPSK is used in the H-set for SAR testing. HS-DPCCH should be configured with a CQI feedback cycle of 4 ms with a CQI repetition factor of 2 to maintain a constant rate of active CQI slots. DPCCH and DPDCH gain factors (β_c , β_d), and HS-DPCCH power offset parameters (Δ_{ACK} , Δ_{NACK} , Δ_{CQI}) should be set according to values indicated in the Table below. The CQI value is determined by the UE category, transport block size, number of HS-PDSCHs and modulation used in the H-set.

Table 3: Subtests for UMTS Release 5 HSDPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{hs} (note 1, note 2)	CM(dB) (note 3)	MPR(dB)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (note 4)	15/15 (note 4)	64	12/15 (note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1: Δ_{ACK} , Δ_{NACK} and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$
 Note 2: CM=1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$.
 Note 3: For subtest 2 the β_c/β_d ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TFC1, TF1) to $\beta_c = 11/15$ and $\beta_d = 15/15$.

5.3.2.5 Release 6 HSUPA Test Configuration

The 3G SAR test reduction procedure is applied to HSPA (HSUPA/HSDPA with RMC) body-worn accessory configurations with 12.2 kbps RMC as the primary mode. Otherwise, SAR is measured for HSPA using the HSPA body SAR procedures in the “Release 6 HSPA Data Devices” section of this document, for the highest body-worn accessory exposure SAR configuration in 12.2 kbps RMC. When VOIP is applicable for next to the ear head exposure in HSPA, the 3G SAR test reduction procedure is applied to HSPA with 12.2 kbps RMC as the primary mode; otherwise, the same HSPA configuration used for body-worn accessory measurements is tested for next to the ear head exposure.

Due to inner loop power control requirements in HSPA, a communication test set is required for output power and SAR tests. The 12.2 kbps RMC, FRC H-set 1 and E-DCH configurations for HSPA are configured according to the β values indicated in Table 2 and other applicable procedures described in the ‘WCDMA EUT’ and ‘Release 5 HSDPA Data Devices’ sections of this document

Table 4: Sub-Test 5 Setup for Release 6 HSUPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	$\beta_{hs}^{(1)}$	β_{ec}	β_{ed}	β_{ed} (SF)	β_{ed} (codes)	CM ⁽²⁾ (dB)	MPR (dB)	AG ⁽⁴⁾ Index	E-TFCI
1	11/15 ⁽³⁾	15/15 ⁽³⁾	64	11/15 ⁽³⁾	22/15	209/225	1039/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	β_{ed1} : 47/15 β_{ed2} : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 ⁽⁴⁾	15/15 ⁽⁴⁾	64	15/15 ⁽⁴⁾	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1: $\Delta_{ACK}, \Delta_{NACK}$ and $\Delta_{CQI} = 8 \Leftrightarrow A_{hs} = \beta_{hs}/\beta_c = 30/15 \Leftrightarrow \beta_{hs} = 30/15 * \beta_c$.

Note 2: CM = 1 for $\beta_c/\beta_d = 12/15, \beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.

Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 10/15$ and $\beta_d = 15/15$.

Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to $\beta_c = 14/15$ and $\beta_d = 15/15$.

Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Figure 5.1g.

Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

Table 5: HSUPA UE category

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCHTTI (ms)	Minimum Spreading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592



4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	2	2 SF2 & 2	11484	5.76
	4	4	10	SF4	20000	2.00
7 (No DPDCH)	4	8	2	2 SF2 & 2 SF4	22996	?
	4	4	10		20000	?

NOTE: When 4 codes are transmitted in parallel, two codes shall be transmitted with SF2 and two with SF4.
 UE Categories 1 to 6 supports QPSK only. UE Category 7 supports QPSK and 16QAM.
 (TS25.306-7.3.0)

5.3.2.6 HSPA, HSPA+ and DC-HSDPA Test Configuration

SAR test exclusion may apply to 3GPP Rel. 6 HSPA and Rel. 8 DC-HSDPA. When SAR measurement is required for HSPA or DC-HSDPA, a KDB inquiry is required to confirm that the wireless mode configurations in the test setup have remained stable throughout the SAR measurements. Without prior KDB confirmation to determine the SAR results are acceptable, a PAG is required for equipment approval.

SAR test exclusion for HSPA, HSPA+ and DC-HSDPA is determined according to the following:

1) The HSPA procedures are applied to configure 3GPP Rel. 6 HSPA devices in the required sub-test mode(s) to determine SAR test exclusion.

2) SAR is required for Rel. 7 HSPA+ when SAR is required for Rel. 6 HSPA; otherwise, the 3G SAR test reduction procedure is applied to (uplink) HSPA+ with 12.2 kbps RMC as the primary mode. Power is measured for HSPA+ that supports uplink 16 QAM according to configurations in Table C.11.1.4 of 3GPP TS 34.121-1 to determine SAR test reduction.

3) SAR is required for Rel. 8 DC-HSDPA when SAR is required for Rel. 5 HSDPA; otherwise, the 3G SAR test reduction procedure is applied to DC-HSDPA with 12.2 kbps RMC as the primary mode. Power is measured for DC-HSDPA according to the H-Set 12, FRC configuration in Table C.8.1.12 of 3GPP TS 34.121-1 to determine SAR test reduction. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to be acceptable.

4) Regardless of whether a PBA is required, the following information must be verified and included in the SAR report for devices supporting HSPA, HSPA+ or DC-HSDPA:

a) The output power measurement results and applicable release version(s) of 3GPP TS 34.121. Power measurement difficulties due to test equipment setup or availability must be resolved between the grantee and its test lab.

b) The power measurement results are in agreement with the individual device implementation and specifications. When Enhanced MPR (E-MPR) applies, the normal MPR targets may be modified according to the Cubic Metric (CM) measured by the device, which must be taken into consideration.

c) The UE category, operating parameters, such as the β and Δ values used to configure the device for testing, power setback procedures described in 3GPP TS 34.121 for the power measurements, and HSPA/HSPA+ channel conditions (active and stable) for the entire duration of the measurement according to the required E-TFCI and AG index values.

5) When SAR measurement is required, the test configurations, procedures and power measurement

results must be clearly described to confirm that the required test parameters are used, including E-TFCI and AG index stability and output power conditions.

Table 6: HS-DSCH UE category

HS-DSCH category	Maximum number of HS-DSCH codes received	Minimum inter-TTI interval	Maximum number of bits of an HS-DSCH transport block received within an HS-DSCH TTI NOTE 1	Total number of soft channel bits	Supported modulations without MIMO operation or dual cell operation	Supported modulations with MIMO operation and without dual cell operation	Supported modulations with dual cell operation	
Category 1	5	3	7298	19200	QPSK, 16QAM	Not applicable (MIMO not supported)	Not applicable (dual cell operation not supported)	
Category 2	5	3	7298	28800				
Category 3	5	2	7298	28800				
Category 4	5	2	7298	38400				
Category 5	5	1	7298	57600				
Category 6	5	1	7298	67200				
Category 7	10	1	14411	115200				
Category 8	10	1	14411	134400				
Category 9	15	1	20251	172800				
Category 10	15	1	27952	172800				
Category 11	5	2	3630	14400				QPSK
Category 12	5	1	3630	28800	QPSK, 16QAM, 64QAM			
Category 13	15	1	35280	259200				
Category 14	15	1	42192	259200	QPSK, 16QAM			
Category 15	15	1	23370	345600				
Category 16	15	1	27952	345600	QPSK, 16QAM, 64QAM	-		
Category 17 NOTE 2	15	1	35280	259200			-	QPSK, 16QAM
			23370	345600			-	QPSK, 16QAM
Category 18 NOTE 3	15	1	42192	259200	QPSK, 16QAM, 64QAM	-		
			27952	345600	-	QPSK, 16QAM		
Category 19	15	1	35280	518400	QPSK, 16QAM, 64QAM			
Category 20	15	1	42192	518400				
Category 21	15	1	23370	345600	-	-	QPSK, 16QAM	
Category 22	15	1	27952	345600				
Category 23	15	1	35280	518400				
Category 24	15	1	42192	518400			QPSK, 16QAM, 64QAM	

5.3.3 LTE Test Configuration

LTE modes were tested according to FCC KDB 941225 D05 publication. Please see notes after the tabulated SAR data for required test configurations. Establishing connections with base station simulators ensure a consistent means for testing SAR and are recommended for evaluating SAR. The R&S CMW500 was used for LTE output power measurements and SAR testing. Max power control was used so the UE transmits with maximum output power during SAR testing. SAR must be measured with the maximum TTI (transmit time interval) supported by the device in each LTE configuration.

A) Spectrum Plots for RB Configurations

A properly configured base station simulator was used for SAR tests and power measurements. Therefore, spectrum plots for RB configurations were not required to be included in this report.

B) MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer

target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

C) A-MPR

A-MPR (Additional MPR) has been disabled for all SAR tests by setting NS=01 on the base station simulator.

D) Largest channel bandwidth standalone SAR test requirements

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 for 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.

4) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is $> \frac{1}{2}$ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

E) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is $> \frac{1}{2}$ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

5.3.4 Additional requirements for TDD LTE specification

For Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.

TDD LTE Band supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table: Uplink-downlink configurations for uplink-downlink configurations and Table: Configuration of special

subframe (lengths of DwPTS/GP/UpPTS) for Special subframe configurations.

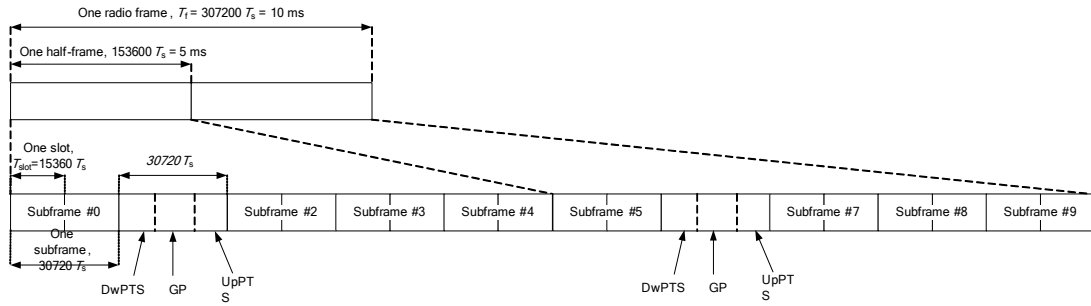


Figure 1: Frame structure type 2

Table 7: 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	$6592 \cdot T_s$	$20480 \cdot T_s$				
6	$19760 \cdot T_s$	$23040 \cdot T_s$				
7	$21952 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$12800 \cdot T_s$	-	-
8	$24144 \cdot T_s$					
9	$13168 \cdot T_s$					

Table 8: 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

According to Figure 1, one radio frame is configured by 10 subframes, which consist of Uplink-subframe, Downlink-subframe and Special subframe. For TDD-LTE, the Duty Cycle should be calculated on Uplink-subframes and Special subframes, due to Special subframe containing both Uplink transmissions. So for one radio frame, Duty Cycle can be calculated with formula as below. The count of Uplink subframes are according to Table: Uplink-downlink configurations:

$$\text{Duty cycle} = (30720\text{Ts} \cdot \text{Ups} + \text{Uplink Component} \cdot \text{Specials}) / (307200\text{Ts})$$

About the uplink component of Special subframes, we can figure out by Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS):

$$\text{Uplink Component} = \text{UpPTS}$$

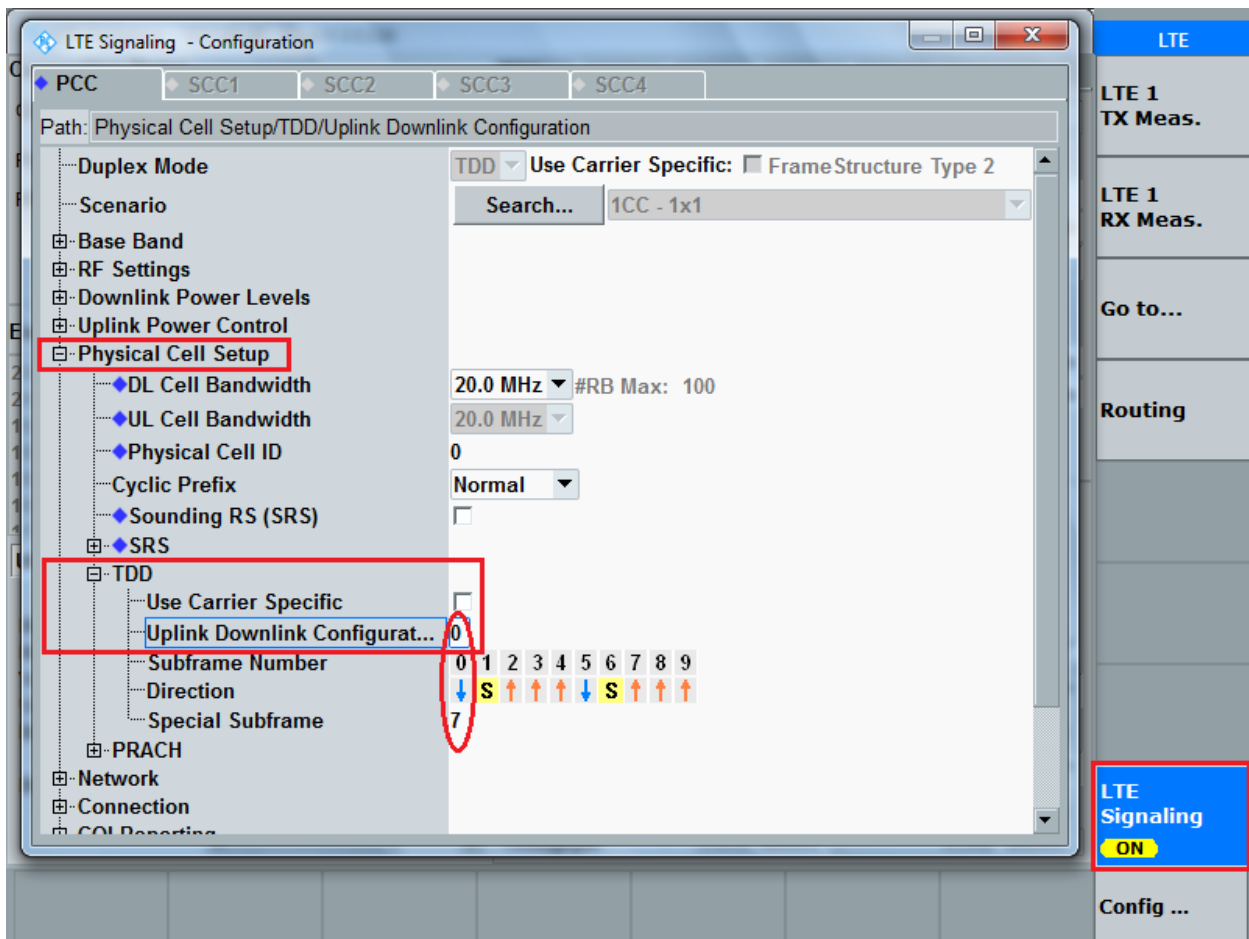
In conclusion, for the TDD LTE Band, Duty Cycle can be calculated with formula as below. All these sets are ok when we test, or we can set as below.

$$\text{Duty cycle} = [(30720\text{Ts} \cdot \text{Ups}) + \text{UpPTS} \cdot \text{Specials}] / (307200\text{Ts})$$

And we can get different Duty cycles under different configurations:

Uplink-downlink configuration	Subframe number			Configuration of special subframe							
				Normal cyclic prefix in downlink				Extended cyclic prefix in downlink			
	D	S	U	Normal cyclic prefix in uplink		Extended cyclic prefix in uplink		Normal cyclic prefix in uplink		Extended cyclic prefix in uplink	
				configuration 0~4	configuration 5~9	configuration 0~4	configuration 5~9	configuration 0~3	configuration 4~7	configuration 0~3	configuration 4~7
0	2	2	6	61.43%	62.85%	61.67%	63.33%	61.43%	62.85%	61.67%	63.33%
1	4	2	4	41.43%	42.85%	41.67%	43.33%	41.43%	42.85%	41.67%	43.33%
2	6	2	2	21.43%	22.85%	21.67%	23.33%	21.43%	22.85%	21.67%	23.33%
3	6	1	3	30.71%	31.43%	30.83%	31.67%	30.71%	31.43%	30.83%	31.67%
4	7	1	2	20.71%	21.43%	20.83%	21.67%	20.71%	21.43%	20.83%	21.67%
5	8	1	1	10.71%	11.43%	10.83%	11.67%	10.71%	11.43%	10.83%	11.67%
6	3	2	5	51.43%	52.85%	51.67%	53.33%	51.43%	52.85%	51.67%	53.33%

SAR test Plan: For TDD LTE, SAR should be tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7 for Frame structure type



5.3.5 Wi-Fi Test Configuration

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.

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

- ≤ 0.4 W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- 0.4 W/kg, SAR is repeated using the same wireless mode test configuration tested in the *initial test position* to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the *reported SAR* is ≤ 0.8 W/kg or all required test positions are tested.
 - ◇ For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
 - ◇ When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the *initial test position* and subsequent test positions, when the *reported SAR* is > 0.8 W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the *reported SAR* is ≤ 1.2 W/kg or all required test channels are considered.
 - ◇ The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.

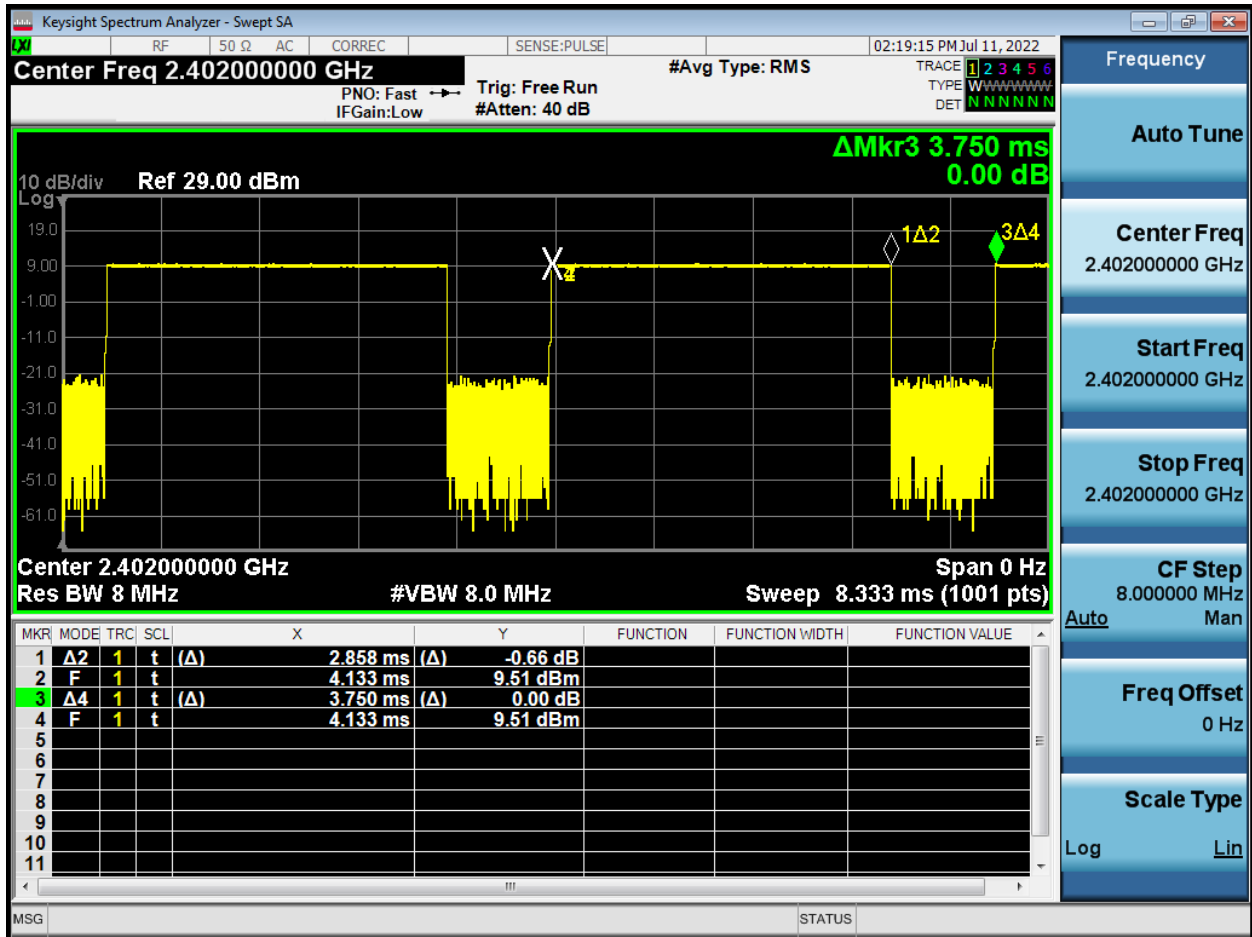
To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

A Wi-Fi device must be configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools for SAR measurement.

5.3.6 BT Test Configuration

For BT SAR testing, BT engineering testing software installed on the EUT can provide continuous transmitting RF signal with maximum output power. And the CBT control the EUT operating with hopping off and data rate set for DH5.

The SAR measurement takes full account of the BT duty cycle and is reflected in the report, and the duty factor of the device is as follow:



Note: Duty factor= Ton (ms)/ T (on+off) (ms)=2.858/3.750*100%=76 %

**5.3.7 SAR detection mechanism specification**

This device support the receiver and hotspot detection mechanism, the main purpose is to minimize triggering associated with power reduction scenarios by receiver and hotspot detection mechanisms and provide enhanced user experience.

More details information followings:

Main Antenna		Power Reduction Level Amount (dB)					
Power Reduction Scenario	Receiver	GSM850	GSM1900	UMTS B2	UMTS B5	LTE B5	LTE B7
Full power		34.00	31.00	24.50	25.10	25.00	24.50
Standalone	on	0.00	3.00	5.00	0.00	0.00	6.50
	off	0.00	0.00	1.50	0.00	0.00	4.00

Second Antenna		Power Reduction Level Amount (dB)					
Power Reduction Scenario	Receiver	GSM850	GSM1900	UMTS B2	UMTS B5	LTE B5	LTE B7
Full power		33.50	30.50	24.50	24.60	24.00	24.50
Standalone	on	0.00	0.50	3.00	0.00	0.00	6.50
	off	0.00	0.00	1.50	0.00	0.00	4.50

Wi-Fi Antenna		Power Reduction Level Amount (dB)					
Power Reduction Scenario	Receiver	WiFi 2.4G 11b	WiFi 2.4G 11g	WiFi 2.4G 11n HT20	WiFi 5G 11a	WiFi 5G 802.11ac-VHT20	WiFi 5G 802.11ac-VHT40
Full power		17.00	16.00	17.00	16.50	15.50	15.50
Standalone	on	7.00	6.00	7.00	6.50	5.50	5.50
	off	0.00	0.00	0.00	0.00	0.00	0.00

SAR test Plan**Summary of Receiver detection mechanism**

Antenna	Receiver on (head scenario)	Receiver off (Body/other scenario)
2G&3G&4G second ant	Power Level A1	Power Level B1
2G&3G&4G main ant	Power Level A2	Power Level B2
Wi-Fi Ant	Power Level A3	Power Level B3

Based on the Summary table of Receiver detection mechanism above,

For Head SAR test,

- 1) Standalone Head SAR of 2G&3G&4G second ant is evaluated at power level A1 (Receiver on);
- 2) Standalone Head SAR of 2G&3G&4G Main ant is evaluated at power level A2 (Receiver on);
- 3) Standalone Head SAR of Wi-Fi ant is evaluated at power level A3 (Receiver on);

For Body SAR test,

- 1) Standalone Body SAR of 2G&3G&4G second ant is evaluated at power level B1 (Receiver off);
- 2) Standalone Body SAR of 2G&3G&4G Main ant is evaluated at power level B2 (Receiver off);
- 3) Standalone Body SAR of Wi-Fi ant is evaluated at power level B3 (Receiver off);

5.3.8 Country code detection mechanism

The device uses the mobile country code (MCC) to indicate whether the users in CE countries or FCC countries. The selection between CE countries and FCC countries power levels is based on the country code detection mechanism. It can determine the countries where users are and set the relevant power level for Wi-Fi antennas accordingly.

Table: Summary of country code detection mechanism

Antenna	MCC OF CE COUNTRY	MCC OF FCC COUNTRY	MCC OF France country
	(CE standard) power reduce(dB)	(FCC standard) power reduce(dB)	France power reduce(dB)
LTE B7 ant4	power level A1	power level B1	power level C1
WB2 ant2	power level A2	power level B2	power level C2
WB2 ant0	power level A9	power level B9	power level C9
GSM1900 ant2	power level A11	power level B11	power level C11
2.4G Wi-Fi	power level A14	power level B14	power level C14
5G Wi-Fi	power level A15	power level B15	power level C15

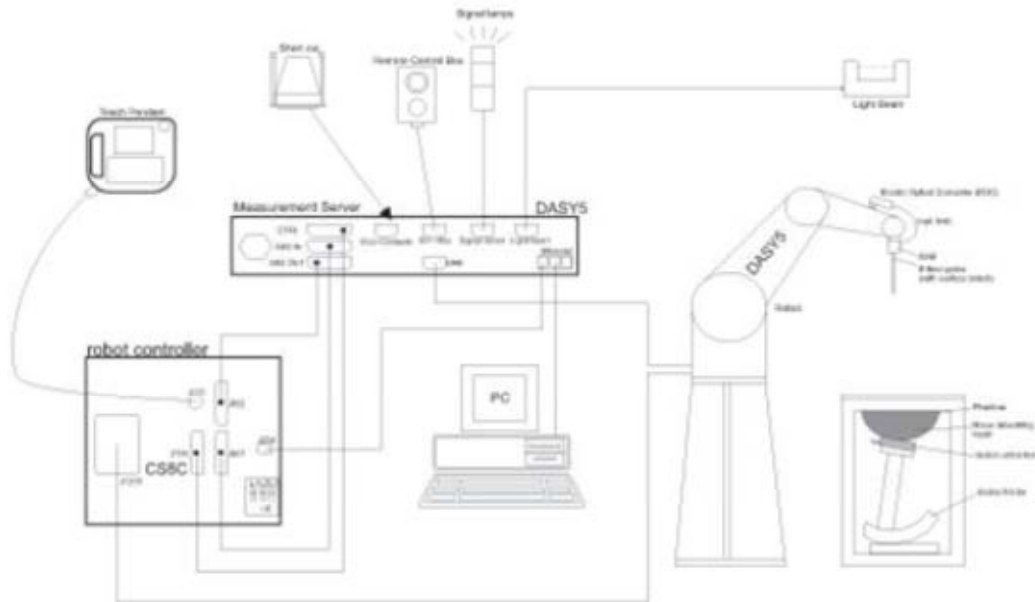
Table: Bands supporting country code detection mechanism

Antenna	scene	MCC OF CE COUNTRY	MCC OF FCC COUNTRY	MCC OF France country
		(CE standard) power reduce(dB)	(FCC standard) power reduce(dB)	France power reduce(dB)
LTE B7 ant4	receiver on limb	2.5	7	7
WB2 ant0	receiver on limb	0	0	1.5
GSM1900 ant2	receiver on limb	1.5	1.5	1.5
2.4G Wi-Fi	receiver on limb	3.5	5.5	3.5
5G Wi-Fi	receiver on limb	2.2	4.2	2.2

6 SAR Measurements System Configuration

6.1 SAR Measurement Set-up

The DASY system for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot 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 or Win7 and the DASY 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.

6.2 DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe EX3DV4 (manufactured by SPEAG), designed in the classical triangular configuration and optimized for dosimetric evaluation.

EX3DV4 Probe Specification

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 μ W/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)
Dimensions	Overall length: 330 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure Scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 6 GHz with precision of better 30%.



E-field Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with accuracy better than $\pm 10\%$. The spherical isotropy was evaluated and found to be better than ± 0.25 dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe are tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies below 1 GHz, and in a wave guide 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.

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

$$SAR = C \Delta T / \Delta t$$

Where: Δt = Exposure time (30 seconds),
 C = Heat capacity of tissue (brain or muscle),
 ΔT = Temperature increase due to RF exposure.

Or

$$SAR = |E|^2 \sigma / \rho$$

Where: σ = Simulated tissue conductivity,
 ρ = Tissue density (kg/m^3).

6.3 SAR Measurement Procedure

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.

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 dB) 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 D01 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: ΔxArea, ΔyArea	≤ 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.	

Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram 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 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

			≤3GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{zoom} \Delta y_{zoom}$			≤2GHz: ≤8mm 2 – 3GHz: ≤5mm*	3 – 4GHz: ≤5mm* 4 – 6GHz: ≤4mm*
Maximum zoom scan spatial resolution, normal to phantom surface	Uniform grid: $\Delta z_{zoom}(n)$		≤5mm	3 – 4GHz: ≤4mm 4 – 5GHz: ≤3mm 5 – 6GHz: ≤2mm
	Graded grid	$\Delta z_{zoom}(1)$: between 1 st two points closest to phantom surface	≤4mm	3 – 4GHz: ≤3mm 4 – 5GHz: ≤2.5mm 5 – 6GHz: ≤2mm
		$\Delta z_{zoom}(n > 1)$: between subsequent points	≤1.5 • $\Delta z_{zoom}(n-1)$	
Minimum zoom scan volume	X, y, z		≥30mm	3 – 4GHz: ≥28mm 4 – 5GHz: ≥25mm 5 – 6GHz: ≥22mm
<p>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.</p> <p>* When zoom scan is required and the <u>reported</u> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4W/kg, ≤8mm, ≤7mm and ≤5mm zoom scan resolution may be applied, respectively, for 2GHz to 3GHz, 3GHz to 4GHz and 4GHz to 6GHz.</p>				

Volume Scan Procedures

The volume scan is used to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASYS measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

7 Main Test Equipment

Name of Equipment	Manufacturer	Type/Model	Serial Number	Last Cal.	Cal. Due Date
Network analyzer	Agilent	E5071B	MY42404014	2022-05-14	2023-05-13
Dielectric Probe Kit	Agilent	85070E	US44020115	/	/
Power meter	Agilent	E4417A	GB41291714	2022-05-14	2023-05-13
Power sensor	Agilent	N8481H	MY50350004	2022-05-14	2023-05-13
Power sensor	Agilent	E9327A	US40441622	2022-05-14	2023-05-13
Power sensor	Agilent	NRP18S	101955	2022-05-14	2023-05-13
Signal Generator	Agilent	N5181A	MY50140143	2022-05-14	2023-05-13
Dual directional coupler	UCL	UCL-DDC0 56G-S	20010600118	/	/
Amplifier	INDEXSAR	TPA-005060 G01	13030502	2022-05-14	2023-05-13
Wireless communication tester	Anritsu	MT8820C	6201342015	2021-12-12	2022-12-11
Wireless communication tester	R&S	CMW 500	146734	2022-05-14	2023-05-13
E-field Probe	SPEAG	EX3DV4	3677	2021-08-12	2022-08-11
DAE	SPEAG	DAE4	1692	2021-10-04	2022-10-03
Validation Kit 835MHz	SPEAG	D835V2	4d020	2020-08-28	2023-08-27
Validation Kit 1900MHz	SPEAG	D1900V2	5d060	2020-08-27	2023-08-26
Validation Kit 2450MHz	SPEAG	D2450V2	786	2020-08-27	2023-08-26
Validation Kit 2600MHz	SPEAG	D2600V2	1025	2021-04-23	2024-04-22
Validation Kit 5GHz	SPEAG	D5GHzV2	1151	2020-02-27	2023-02-26
Software for Tissue	Agilent	85070	/	/	/
Temperature Probe	Tianjin jinming	JM222	381	2022-05-14	2023-05-13
Twin SAM Phantom	SPEAG	SAM1	1667	/	/
Twin SAM Phantom	SPEAG	SAM2	1666	/	/
Hygrothermograph	Anymetr	HTC - 1	TY2020A003	2022-05-14	2023-05-13
TX90 XL	SPEAG	Staubli TX90 XL	/	/	/
Software for Test	SPEAG	DASY52	52.10.4.1527	/	/

8 Tissue Dielectric Parameter Measurements & System Verification

8.1 Tissue Verification

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ 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 24 hours of use; or earlier if the dielectric parameters can become out of tolerance.

Target values

Frequency (MHz)	ϵ_r	$\sigma(\text{s/m})$
835	41.5	0.90
1900	40.0	1.40
2450	39.2	1.80
2600	39.0	1.96
5250	35.9	4.71
5600	35.5	5.07
5750	35.4	5.22

Measurements results

Original

Frequency (MHz)	Test Date	Temp °C	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within ±5%)	
			ϵ_r	σ (s/m)	ϵ_r	σ (s/m)	Dev ϵ_r (%)	Dev σ (%)
835	2022/7/18	21.5	41.4	0.88	41.5	0.90	-0.24	-2.22
	2022/7/19	21.5	41.3	0.87	41.5	0.90	-0.48	-3.33
	2022/7/20	21.5	41.4	0.92	41.5	0.90	-0.24	2.22
	2022/7/21	21.5	41.3	0.89	41.5	0.90	-0.48	-1.11
1900	2022/7/22	21.5	40.1	1.41	40.0	1.40	0.25	0.71
	2022/7/23	21.5	40.2	1.43	40.0	1.40	0.50	2.14
	2022/7/24	21.5	40.0	1.40	40.0	1.40	0.00	0.00
	2022/7/25	21.5	40.5	1.34	40.0	1.40	1.25	-4.29
2450	2022/7/12	21.5	38.6	1.81	39.2	1.80	-1.53	0.56
2600	2022/7/8	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
	2022/7/9	21.5	38.4	1.94	39.0	1.96	-1.54	-1.02
	2022/7/10	21.5	38.3	1.99	39.0	1.96	-1.79	1.53
	2022/7/11	21.5	38.5	1.95	39.0	1.96	-1.28	-0.51
5250	2022/7/26	21.5	35.5	4.80	35.9	4.71	-1.11	1.91
5600	2022/7/27	21.5	34.2	5.21	35.5	5.07	-3.66	2.76
5750	2022/7/7	21.5	34.9	5.21	35.4	5.22	-1.41	-0.19

Note: The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 cm for measurements > 3 GHz.

Variant

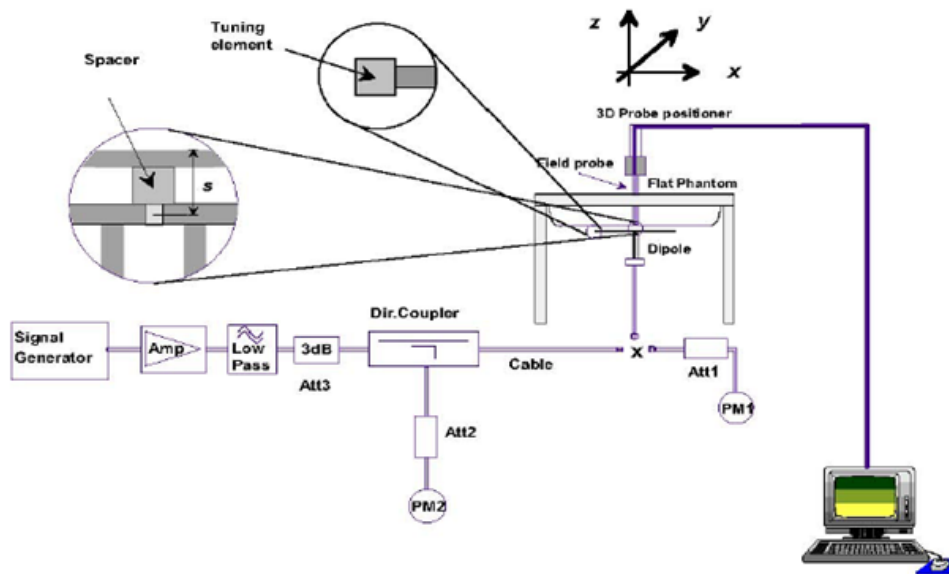
Frequency (MHz)	Test Date	Temp °C	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within ±5%)	
			ϵ_r	σ (s/m)	ϵ_r	σ (s/m)	Dev ϵ_r (%)	Dev σ (%)
835	2022/08/3	21.5	41.4	0.88	41.5	0.90	-0.24	-2.22
1900	2022/08/3	21.5	40.1	1.41	40.0	1.40	0.25	0.71
2450	2022/08/3	21.5	38.5	1.84	39.2	1.80	-1.79	2.22
2600	2022/08/4	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
5250	2022/08/4	21.5	35.5	4.80	35.9	4.71	-1.11	1.91
5600	2022/08/5	21.5	34.2	5.21	35.5	5.07	-3.66	2.76
5750	2022/08/5	21.5	34.9	5.21	35.4	5.22	-1.41	-0.19

Note: The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 cm for measurements > 3 GHz.

8.2 System Performance Check

The manufacturer calibrates the probes annually. Dielectric parameters of the tissue simulates were measured using the dielectric probe kit and the network analyzer. A system check measurement for every day was made following the determination of the dielectric parameters of the Tissue simulates, using the dipole validation kit. The dipole antenna was placed under the flat section of the twin SAM phantom.

System check is performed regularly on all frequency bands where tests are performed with the DASY system.



Picture 1 System Performance Check setup



Picture 2 Setup Photo

**Justification for Extended SAR Dipole Calibrations**

Usage of SAR dipoles calibrated less than 3 years ago but more than 1 year ago were confirmed in maintaining return loss (< -20 dB, within 20% of prior calibration) and impedance (within 5 ohm from prior calibration) requirements per extended calibrations in KDB 865664 D01:

Dipole		Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$
Dipole D835V2 SN: 4d020	Head	8/28/2020	-26.2	/	54.8	/
	Liquid	8/27/2021	-26.5	1.1	55.2	0.4
Dipole D1900V2 SN: 5d060	Head	8/27/2020	-23.3	/	52.5	/
	Liquid	8/26/2021	-23.0	-1.3	51.9	-0.6
Dipole D2450V2 SN: 786	Head	8/27/2020	-26.9	/	54.5	/
	Liquid	8/26/2021	-27.1	0.7	53.8	-0.7
Dipole D5GHzV2 SN: 1151 (5250MHz)	Head Liquid	2/27/2020	-23.4	/	52.4	/
		2/26/2021	-23.8	1.7	50.0	-2.4
		2/25/2022	-23.9	0.4	49.3	-0.7
Dipole D5GHzV2 SN: 1151 (5600MHz)	Head Liquid	2/27/2020	-22.6	/	52.4	/
		2/26/2021	-21.5	-4.9	50.0	-2.4
		2/25/2022	-20.9	-2.8	49.3	-0.7
Dipole D5GHzV2 SN: 1151 (5750MHz)	Head Liquid	2/27/2020	-25.0	/	55.9	/
		2/26/2021	-26.8	-1.8	52.5	-3.4
		2/25/2022	-27.1	1.1	52.1	-0.4

**System Check results****Original**

Frequency (MHz)	Test Date	Temp °C	250mW /100mW Measured SAR _{1g} (W/kg)	1W Normalized SAR _{1g} (W/kg)	1W Target SAR _{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
835	2022/7/18	21.5	2.44	9.76	9.65	1.14	1
	2022/7/19	21.5	2.46	9.84	9.65	1.97	2
	2022/7/20	21.5	2.43	9.72	9.65	0.73	3
	2022/7/21	21.5	2.51	10.04	9.65	4.04	4
1900	2022/7/22	21.5	9.88	39.52	39.50	0.05	5
	2022/7/23	21.5	9.85	39.40	39.50	-0.25	6
	2022/7/24	21.5	9.55	38.20	39.50	-3.29	7
	2022/7/25	21.5	9.60	38.40	39.50	-2.78	8
2450	2022/7/12	21.5	13.70	54.80	52.30	4.78	9
2600	2022/7/8	21.5	13.90	55.60	56.10	-0.89	10
	2022/7/9	21.5	13.88	55.52	56.10	-1.03	11
	2022/7/10	21.5	13.94	55.76	56.10	-0.61	12
	2022/7/11	21.5	13.9	55.60	56.10	-0.89	13
5250	2022/7/26	21.5	7.87	78.70	78.00	0.90	14
5600	2022/7/27	21.5	7.67	76.70	80.50	-4.72	15
5750	2022/7/7	21.5	7.66	76.60	77.40	-1.03	16

Note: Target Values used derive from the calibration certificate Data Storage and Evaluation.

Variant

Frequency (MHz)	Test Date	Temp °C	250mW /100mW Measured SAR _{1g} (W/kg)	1W Normalized SAR _{1g} (W/kg)	1W Target SAR _{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
835	2022/08/3	21.5	2.44	9.76	9.65	1.14	17
1900	2022/08/3	21.5	9.88	39.52	39.50	0.05	18
2450	2022/08/3	21.5	13.64	54.56	52.30	4.32	19
2600	2022/08/4	21.5	13.90	55.60	56.10	-0.89	20
5250	2022/08/4	21.5	7.87	78.70	78.00	0.90	21
5600	2022/08/5	21.5	7.67	76.70	80.50	-4.72	22
5750	2022/08/5	21.5	7.66	76.60	77.40	-1.03	23

Note: Target Values used derive from the calibration certificate Data Storage and Evaluation.

8.3 SAR System Validation

Per FCC KDB 865664 D02v01, SAR system verification is required to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles are used with the required tissue-equivalent media for system validation, according to the procedures outlined in FCC KDB 865664 D01 and IEEE 1528-2013. Since SAR probe calibrations are frequency dependent, each probe calibration point must be validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.

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

Frequency [MHz]	Date	Probe SN	Probe Type	Probe Cal Point		PERM (Er)	COND (Σ)	CW Validation		
								Sensitivity	Probe Linearity	Probe Isotropy
835	2021/8/12	3677	EX3DV4	835	Head	41.5	0.90	PASS	PASS	PASS
1900	2021/8/12	3677	EX3DV4	1900	Head	40.0	1.40	PASS	PASS	PASS
2450	2021/8/12	3677	EX3DV4	2450	Head	39.2	1.80	PASS	PASS	PASS
2600	2021/8/12	3677	EX3DV4	2600	Head	39.0	1.96	PASS	PASS	PASS
5250	2021/8/12	3677	EX3DV4	5250	Head	35.9	4.71	PASS	PASS	PASS
5600	2021/8/12	3677	EX3DV4	5600	Head	35.5	5.07	PASS	PASS	PASS
5750	2021/8/12	3677	EX3DV4	5750	Head	35.4	5.22	PASS	PASS	PASS

NOTE: While the probes have been calibrated for both CW and modulated signals, all measurements were performed using communication systems calibrated for CW signals only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664D01v01 for scenarios when CW probe calibrations are used with other signal types. SAR systems were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5dB), such as OFDM according to KDB 865664.

9 Normal and Maximum Output Power

KDB 447498 D01 at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit.

9.1 GSM Mode

Main- Antenna

GSM 850 Receiver on&Body SAR&Hotspot on--Main Ant		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	128 /824.2	190 /836.6	251 /848.8		MAX	128 /824.2	190 /836.6	251 /848.8
GSM	CS	33.70	32.83	32.90	32.86	9.03	24.67	23.80	23.87	23.83
GPRS/ EGPRS (GMSK)	1 Tx Slot	33.70	32.82	32.88	32.84	9.03	24.67	23.79	23.85	23.81
	2 Tx Slots	30.70	30.15	30.23	30.19	6.02	24.68	24.13	24.21	24.17
	3 Tx Slots	28.60	28.35	28.40	28.42	4.26	24.34	24.09	24.14	24.16
	4 Tx Slots	27.00	26.87	26.92	26.90	3.01	23.99	23.86	23.91	23.89
EGPRS (8PSK)	1 Tx Slot	27.70	25.96	26.23	26.26	9.03	18.67	16.93	17.20	17.23
	2 Tx Slots	24.70	22.92	23.20	23.15	6.02	18.68	16.90	17.18	17.13
	3 Tx Slots	22.90	20.99	21.18	21.24	4.26	18.64	16.73	16.92	16.98
	4 Tx Slots	21.70	19.71	19.77	19.72	3.01	18.69	16.70	16.76	16.71

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 850 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above.

GSM 1900 Receiver on&Body SAR&Hotspot on--Main Ant		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	512 /1850.2	661 /1880	810 /1909.8		MAX	512 /1850.2	661 /1880	810 /1909.8
GSM	CS	30.80	29.70	29.79	29.86	9.03	21.77	20.67	20.76	20.83
GPRS/ EGPRS (GMSK)	1 Tx Slot	30.80	29.67	29.79	29.83	9.03	21.77	20.64	20.76	20.80
	2 Tx Slots	27.80	26.96	27.06	27.16	6.02	21.78	20.94	21.04	21.14
	3 Tx Slots	25.60	25.23	25.30	25.40	4.26	21.34	20.97	21.04	21.14
	4 Tx Slots	24.20	23.92	23.98	24.07	3.01	21.19	20.91	20.97	21.06
EGPRS (8PSK)	1 Tx Slot	26.50	24.79	24.97	25.32	9.03	17.47	15.76	15.94	16.29
	2 Tx Slots	24.00	22.03	22.95	22.44	6.02	17.98	16.01	16.93	16.42
	3 Tx Slots	21.70	20.65	20.46	20.58	4.26	17.44	16.39	16.20	16.32
	4 Tx Slots	20.50	18.85	18.96	19.32	3.01	17.49	15.84	15.95	16.31

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 1900 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above..



Second – Antenna

GSM 850 Receiver on&Body SAR&Hotspot on--DIV Ant		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	128 /824.2	190 /836.6	251 /848.8		MAX	128 /824.2	190 /836.6	251 /848.8
GSM	CS	33.40	32.85	32.81	32.75	9.03	24.37	23.82	23.78	23.72
GPRS/ EGPRS (GMSK)	1 Tx Slot	33.40	32.84	32.83	32.70	9.03	24.37	23.81	23.80	23.67
	2 Tx Slots	30.40	30.21	30.17	30.09	6.02	24.38	24.19	24.15	24.07
	3 Tx Slots	28.60	28.39	28.40	28.31	4.26	24.34	24.13	24.14	24.05
	4 Tx Slots	27.00	26.79	26.86	26.90	3.01	23.99	23.78	23.85	23.89
EGPRS (8PSK)	1 Tx Slot	27.80	26.19	26.67	26.45	9.03	18.77	17.16	17.64	17.42
	2 Tx Slots	24.80	22.82	23.63	23.33	6.02	18.78	16.80	17.61	17.31
	3 Tx Slots	23.00	21.21	21.27	21.23	4.26	18.74	16.95	17.01	16.97
	4 Tx Slots	21.80	19.89	19.93	19.99	3.01	18.79	16.88	16.92	16.98

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 850 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above.

GSM 1900 Body SAR--DIV Ant		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	512 /1850.2	661 /1880	810 /1909.8		MAX	512 /1850.2	661 /1880	810 /1909.8
GSM	CS	28.50	28.01	27.94	27.95	9.03	19.47	18.98	18.91	18.92
GPRS/ EGPRS (GMSK)	1 Tx Slot	28.50	28.01	27.91	27.95	9.03	19.47	18.98	18.88	18.92
	2 Tx Slots	25.50	25.06	24.98	25.02	6.02	19.48	19.04	18.96	19.00
	3 Tx Slots	23.60	23.35	23.23	23.28	4.26	19.34	19.09	18.97	19.02
	4 Tx Slots	22.20	22.03	21.89	21.98	3.01	19.19	19.02	18.88	18.97
EGPRS (8PSK)	1 Tx Slot	24.50	22.92	22.90	23.40	9.03	15.47	13.89	13.87	14.37
	2 Tx Slots	22.00	20.04	20.04	20.35	6.02	15.98	14.02	14.02	14.33
	3 Tx Slots	19.70	18.25	18.27	18.59	4.26	15.44	13.99	14.01	14.33
	4 Tx Slots	18.50	16.83	16.92	17.23	3.01	15.49	13.82	13.91	14.22

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 1900 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above..



GSM 1900 Receiver on&Hotspot on--DIV Ant		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	512 /1850.2	661 /1880	810 /1909.8		MAX	512 /1850.2	661 /1880	810 /1909.8
GSM	CS	25.50	25.08	25.04	25.00	9.03	16.47	16.05	16.01	15.97
GPRS/ EGPRS (GMSK)	1 Tx Slot	25.50	25.07	25.00	25.02	9.03	16.47	16.04	15.97	15.99
	2 Tx Slots	22.50	22.05	21.92	21.95	6.02	16.48	16.03	15.90	15.93
	3 Tx Slots	20.60	20.36	20.21	20.27	4.26	16.34	16.10	15.95	16.01
	4 Tx Slots	19.20	19.16	19.09	19.06	3.01	16.19	16.15	16.08	16.05
EGPRS (8PSK)	1 Tx Slot	21.50	20.04	20.04	20.47	9.03	12.47	11.01	11.01	11.44
	2 Tx Slots	19.00	17.07	17.18	17.57	6.02	12.98	11.05	11.16	11.55
	3 Tx Slots	16.70	15.45	15.59	15.83	4.26	12.44	11.19	11.33	11.57
	4 Tx Slots	15.50	14.33	14.30	14.60	3.01	12.49	11.32	11.29	11.59

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:

1. Standalone: GSM 1900 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above..

9.2 WCDMA Mode

The following tests were completed according to the test requirements outlined in the 3GPP TS34.121 specification.

Main- Antenna

WCDMA Band II					
Receiver on--Main Ant		Maximum Output Power (dBm)			
		Channel/Frenqucy(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	23.67	23.90	23.82	25.00
AMR	12.2k	23.53	23.76	23.84	25.00
HSDPA	Subtest 1	22.13	22.06	21.98	23.30
	Subtest 2	21.99	22.34	22.08	23.30
	Subtest 3	21.59	21.66	21.50	22.80
	Subtest 4	21.49	21.78	21.78	22.80
HSUPA	Subtest 1	21.81	22.28	21.96	23.30
	Subtest 2	19.95	20.16	20.08	21.30
	Subtest 3	21.05	21.28	21.02	22.30
	Subtest 4	20.07	20.36	20.06	21.30
	Subtest 5	22.01	22.22	22.28	23.30
DC-HSDPA	Subtest 1	21.93	22.10	22.14	23.30
	Subtest 2	21.89	22.18	22.10	23.30
	Subtest 3	21.57	21.58	21.78	22.80
	Subtest 4	21.33	21.60	21.48	22.80
HSPA+	16QAM	20.31	20.86	20.48	21.80

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band II					
Body SAR--Main Ant		Maximum Output Power (dBm)			
		Channel/Frenqucy(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	22.08	22.24	22.20	23.50
AMR	12.2k	22.12	22.14	22.34	23.50
HSDPA	Subtest 1	20.42	20.60	20.52	21.80
	Subtest 2	20.32	20.62	20.38	21.80
	Subtest 3	19.76	19.92	19.90	21.30
	Subtest 4	19.92	20.02	19.88	21.30
HSUPA	Subtest 1	20.38	20.56	20.48	21.80
	Subtest 2	18.36	18.50	18.52	19.80
	Subtest 3	19.30	19.66	19.62	20.80



	Subtest 4	18.46	18.56	18.64	19.80
	Subtest 5	20.36	20.66	20.54	21.80
DC-HSDPA	Subtest 1	20.34	20.64	20.46	21.80
	Subtest 2	20.24	20.46	20.62	21.80
	Subtest 3	20.00	20.20	19.94	21.30
	Subtest 4	20.04	20.04	20.14	21.30
HSPA+	16QAM	18.78	19.18	19.14	20.30

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band II					
Hotspot on--Main Ant		Maximum Output Power (dBm)			
		Channel/Frenqucy(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	20.43	20.58	20.65	22.00
AMR	12.2k	20.43	20.56	20.79	22.00
HSDPA	Subtest 1	18.79	18.74	18.87	20.30
	Subtest 2	18.87	18.82	18.79	20.30
	Subtest 3	18.09	18.32	18.55	19.80
	Subtest 4	18.37	18.28	18.55	19.80
HSUPA	Subtest 1	18.79	18.78	18.89	20.30
	Subtest 2	16.83	17.04	16.79	18.30
	Subtest 3	17.75	17.82	17.85	19.30
	Subtest 4	16.83	17.00	16.93	18.30
	Subtest 5	18.57	18.88	18.79	20.30
DC-HSDPA	Subtest 1	18.81	19.00	18.95	20.30
	Subtest 2	18.61	19.04	18.95	20.30
	Subtest 3	18.39	18.46	18.49	19.80
	Subtest 4	18.33	18.28	18.43	19.80
HSPA+	16QAM	17.39	17.40	17.43	18.80

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band V					
Receiver on&Body SAR&Hotspot on--Main Ant		Maximum Output Power (dBm)			
		Channel/Frenqucy(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	24.02	24.10	24.05	25.00
AMR	12.2k	24.04	24.10	24.21	25.00
HSDPA	Subtest 1	23.66	23.52	23.69	24.50
	Subtest 2	23.38	23.64	23.59	24.50
	Subtest 3	23.06	23.20	23.05	24.00
	Subtest 4	23.10	23.16	22.99	24.00



HSUPA	Subtest 1	23.00	23.00	22.97	24.00
	Subtest 2	21.46	21.66	21.59	22.50
	Subtest 3	22.32	22.44	22.19	23.30
	Subtest 4	21.88	21.76	21.93	22.80
	Subtest 5	23.50	23.56	23.77	24.60
DC-HSDPA	Subtest 1	23.42	23.76	23.51	24.50
	Subtest 2	23.54	23.58	23.59	24.50
	Subtest 3	23.12	23.14	23.01	24.00
	Subtest 4	23.02	23.02	22.91	24.00
HSPA+	16QAM	20.68	21.06	20.93	21.80

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

**Second – Antenna**

WCDMA Band II					
Body SAR--DIV Ant		Maximum Output Power (dBm)			
		Channel/Frenqucy(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	18.63	18.59	18.67	19.70
AMR	12.2k	18.61	18.43	18.71	19.70
HSDPA	Subtest 1	17.01	17.03	17.09	18.10
	Subtest 2	17.05	17.01	16.93	18.10
	Subtest 3	16.41	16.35	16.63	17.60
	Subtest 4	16.53	16.65	16.73	17.60
HSUPA	Subtest 1	16.87	16.99	17.19	18.10
	Subtest 2	14.93	15.07	15.21	16.10
	Subtest 3	15.93	16.05	16.15	17.10
	Subtest 4	14.97	15.05	15.11	16.10
	Subtest 5	16.91	17.03	17.15	18.10
DC-HSDPA	Subtest 1	17.17	16.97	17.11	18.10
	Subtest 2	16.95	17.15	17.09	18.10
	Subtest 3	16.59	16.45	16.73	17.60
	Subtest 4	16.37	16.51	16.65	17.60
HSPA+	16QAM	15.67	15.65	15.69	16.80

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band II					
Receiver on&Hotspot on--DIV Ant		Maximum Output Power (dBm)			
		Channel/Frenqucy(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	15.67	15.83	15.73	16.70
AMR	12.2k	15.73	15.91	15.77	16.70
HSDPA	Subtest 1	14.21	14.39	14.17	15.10
	Subtest 2	14.11	14.39	13.97	15.10
	Subtest 3	13.45	13.75	13.79	14.60
	Subtest 4	13.67	13.65	13.55	14.60
HSUPA	Subtest 1	14.21	14.25	13.99	15.10
	Subtest 2	12.13	12.25	12.29	13.10
	Subtest 3	13.05	13.33	13.09	14.10
	Subtest 4	11.95	12.19	12.27	13.10
	Subtest 5	14.21	14.19	14.25	15.10
DC-HSDPA	Subtest 1	14.09	14.09	14.29	15.10
	Subtest 2	14.09	14.37	13.99	15.10
	Subtest 3	13.63	13.89	13.71	14.60
	Subtest 4	13.67	13.79	13.67	14.60



HSPA+	16QAM	12.85	12.89	12.97	13.80
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Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band V					
Body SAR--DIV Ant		Maximum Output Power (dBm)			
		Channel/Frenqucy(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	24.02	24.06	24.03	24.70
AMR	12.2k	23.98	24.12	24.01	24.70
HSDPA	Subtest 1	23.90	23.84	23.71	24.50
	Subtest 2	23.92	23.82	23.87	24.50
	Subtest 3	23.32	23.46	23.33	24.00
	Subtest 4	23.44	23.48	23.49	24.00
HSUPA	Subtest 1	23.24	23.34	23.29	24.00
	Subtest 2	21.84	22.02	21.85	22.50
	Subtest 3	22.74	22.80	22.53	23.30
	Subtest 4	22.12	22.24	22.13	22.80
	Subtest 5	24.02	24.12	23.83	24.60
DC-HSDPA	Subtest 1	23.86	23.82	23.87	24.50
	Subtest 2	23.98	23.92	23.67	24.50
	Subtest 3	23.22	23.38	23.29	24.00
	Subtest 4	23.36	23.30	23.41	24.00
HSPA+	16QAM	21.02	21.10	21.21	21.80

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band V					
Receiver on--DIV Ant		Maximum Output Power (dBm)			
		Channel/Frenqucy(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	22.49	22.65	22.53	23.20
AMR	12.2k	22.43	22.51	22.51	23.20
HSDPA	Subtest 1	22.43	22.45	22.45	23.00
	Subtest 2	22.27	22.39	22.37	23.00
	Subtest 3	21.81	21.83	21.67	22.50
	Subtest 4	21.87	22.11	21.85	22.50
HSUPA	Subtest 1	21.63	21.83	21.71	22.50
	Subtest 2	20.21	20.57	20.39	21.00
	Subtest 3	20.95	21.29	21.05	21.80
	Subtest 4	20.73	20.63	20.71	21.30
	Subtest 5	22.41	22.55	22.37	23.10
DC-HSDPA	Subtest 1	22.13	22.39	22.25	23.00



	Subtest 2	22.37	22.29	22.47	23.00
	Subtest 3	21.63	21.79	21.91	22.50
	Subtest 4	21.95	22.11	21.81	22.50
HSPA+	16QAM	19.63	19.73	19.59	20.30

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

WCDMA Band V					
Hotspot on--DIV Ant		Maximum Output Power (dBm)			
		Channel/Frenqucy(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	22.08	22.11	22.07	22.70
AMR	12.2k	22.18	22.07	22.15	22.70
HSDPA	Subtest 1	22.02	21.85	21.79	22.50
	Subtest 2	21.76	21.99	21.97	22.50
	Subtest 3	21.24	21.53	21.37	22.00
	Subtest 4	21.42	21.47	21.33	22.00
HSUPA	Subtest 1	21.44	21.57	21.35	22.00
	Subtest 2	19.94	19.99	19.99	20.50
	Subtest 3	20.82	20.83	20.71	21.30
	Subtest 4	20.26	20.19	20.23	20.80
	Subtest 5	22.12	22.03	21.93	22.60
DC-HSDPA	Subtest 1	21.90	21.81	21.79	22.50
	Subtest 2	21.72	22.05	21.93	22.50
	Subtest 3	21.42	21.55	21.43	22.00
	Subtest 4	21.46	21.45	21.41	22.00
HSPA+	16QAM	19.14	19.27	19.11	19.80

Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".

9.3 LTE Mode

UE Power Class: 3 (23 +/- 2dBm). The allowed Maximum Power Reduction (MPR) for the maximum output power due to higher order modulation and transmit bandwidth configuration (resource blocks) is specified in Table 6.2.3-1 of the 3GPP TS36.101.

Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 3

Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)
	1.4 MHz	3.0 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

Main- Antenna

LTE Band5							
Receiver on& Body SAR& Hotspot on --Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	23.57	23.63	23.67	25.00
		1	2	23.70	23.62	23.61	25.00
		1	5	23.63	23.59	23.59	25.00
		3	0	23.59	23.78	23.61	25.00
		3	2	23.59	23.74	23.56	25.00
		3	3	23.62	23.64	23.56	25.00
		6	0	22.62	22.80	22.70	24.00
	16QAM	1	0	22.85	22.86	22.96	24.00
		1	2	22.95	22.96	22.95	24.00
		1	5	22.92	22.96	22.77	24.00
		3	0	22.65	22.71	22.66	24.00
		3	2	22.68	22.73	22.64	24.00
		3	3	22.66	22.74	22.56	24.00
		6	0	21.67	21.81	21.76	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	23.53	23.54	23.62	25.00
		1	7	23.64	23.60	23.58	25.00
		1	14	23.57	23.52	23.51	25.00
		8	0	22.62	22.77	22.64	24.00
		8	4	22.64	22.71	22.56	24.00
		8	7	22.63	22.66	22.55	24.00
		15	0	22.59	22.72	22.61	24.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
	16QAM	1	0	22.82	22.79	22.89	24.00
		1	7	22.92	22.90	22.91	24.00
		1	14	22.87	22.89	22.71	24.00
		8	0	21.68	21.77	21.70	23.00
		8	4	21.69	21.73	21.64	23.00
		8	7	21.69	21.73	21.59	23.00
		15	0	21.63	21.72	21.67	23.00
5MHz	QPSK	1	0	23.54	23.58	23.64	25.00
		1	13	23.66	23.61	23.61	25.00
		1	24	23.60	23.57	23.55	25.00
		12	0	22.64	22.81	22.67	24.00
		12	6	22.67	22.76	22.60	24.00
		12	13	22.66	22.69	22.59	24.00
		25	0	22.61	22.76	22.66	24.00
	16QAM	1	0	22.84	22.81	22.91	24.00
		1	13	22.94	22.93	22.93	24.00
		1	24	22.89	22.93	22.74	24.00
		12	0	21.71	21.79	21.73	23.00
		12	6	21.72	21.78	21.68	23.00
		12	13	21.71	21.77	21.62	23.00
		25	0	21.66	21.77	21.71	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	QPSK	1	0	23.50	23.50	23.59	25.00
		1	25	23.63	23.56	23.56	25.00
		1	49	23.55	23.51	23.48	25.00
		25	0	22.59	22.72	22.60	24.00
		25	13	22.62	22.67	22.53	24.00
		25	25	22.60	22.61	22.51	24.00
		50	0	22.56	22.67	22.57	24.00
	16QAM	1	0	22.79	22.75	22.84	24.00
		1	25	22.89	22.88	22.87	24.00
		1	49	22.84	22.86	22.69	24.00
		25	0	21.65	21.73	21.67	23.00
		25	13	21.66	21.71	21.61	23.00
		25	25	21.66	21.68	21.55	23.00
		50	0	21.61	21.68	21.64	23.00



LTE Band7							
Receiver on--Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	22.05	22.04	22.10	23.90
		1	13	22.31	22.39	22.53	23.90
		1	24	22.16	22.14	22.45	23.90
		12	0	21.33	21.24	21.53	22.90
		12	6	21.38	21.42	21.61	22.90
		12	13	21.40	21.38	21.71	22.90
		25	0	21.31	21.32	21.60	22.90
	16QAM	1	0	21.26	21.30	21.40	22.90
		1	13	21.51	21.59	21.91	22.90
		1	24	21.39	21.39	21.75	22.90
		12	0	20.32	20.20	20.51	21.90
		12	6	20.28	20.33	20.51	21.90
		12	13	20.26	20.34	20.61	21.90
		25	0	20.21	20.24	20.54	21.90
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	22.04	22.03	22.09	23.90
		1	25	22.32	22.40	22.54	23.90
		1	49	22.15	22.13	22.44	23.90
		25	0	21.33	21.24	21.53	22.90
		25	13	21.39	21.43	21.60	22.90
		25	25	21.40	21.40	21.72	22.90
		50	0	21.35	21.33	21.62	22.90
	16QAM	1	0	21.30	21.29	21.39	22.90
		1	25	21.55	21.61	21.91	22.90
		1	49	21.39	21.39	21.74	22.90
		25	0	20.33	20.21	20.52	21.90
		25	13	20.27	20.32	20.50	21.90
		25	25	20.26	20.34	20.61	21.90
		50	0	20.22	20.25	20.53	21.90
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	22.03	21.99	22.07	23.90
		1	38	22.30	22.39	22.51	23.90
		1	74	22.12	22.08	22.40	23.90
		36	0	21.31	21.20	21.50	22.90
		36	18	21.36	21.38	21.56	22.90
		36	39	21.37	21.37	21.68	22.90



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
	16QAM	75	0	21.33	21.29	21.57	22.90
		1	0	21.28	21.27	21.37	22.90
		1	38	21.53	21.58	21.89	22.90
		1	74	21.37	21.35	21.71	22.90
		36	0	20.30	20.19	20.49	21.90
		36	18	20.24	20.27	20.46	21.90
		36	39	20.24	20.30	20.58	21.90
		75	0	20.19	20.20	20.49	21.90
20MHz	QPSK	1	0	22.00	21.95	22.04	23.90
		1	50	22.29	22.35	22.49	23.90
		1	99	22.10	22.07	22.37	23.90
		50	0	21.28	21.15	21.46	22.90
		50	25	21.34	21.34	21.53	22.90
		50	50	21.34	21.32	21.64	22.90
		100	0	21.30	21.24	21.53	22.90
	16QAM	1	0	21.25	21.23	21.32	22.90
		1	50	21.50	21.56	21.85	22.90
		1	99	21.34	21.32	21.69	22.90
		50	0	20.27	20.15	20.46	21.90
		50	25	20.21	20.25	20.43	21.90
		50	50	20.21	20.25	20.54	21.90
		100	0	20.17	20.16	20.46	21.90

LTE Band7							
Body SAR--Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	20.81	20.83	20.86	22.40
		1	13	21.17	21.18	21.34	22.40
		1	24	20.86	20.92	21.23	22.40
		12	0	21.16	21.06	21.27	22.40
		12	6	21.22	21.23	21.40	22.40
		12	13	21.20	21.18	21.47	22.40
		25	0	21.13	21.15	21.38	22.40
	16QAM	1	0	21.08	21.15	21.08	22.40
		1	13	21.47	21.44	21.59	22.40
		1	24	21.19	21.21	21.43	22.40
		12	0	20.67	20.52	20.75	21.90
		12	6	20.76	20.73	20.90	21.90
		12	13	20.67	20.72	20.94	21.90
		25	0	20.65	20.67	20.87	21.90



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	20.78	20.81	20.82	22.40
		1	25	21.15	21.14	21.31	22.40
		1	49	20.83	20.87	21.19	22.40
		25	0	21.13	21.01	21.23	22.40
		25	13	21.20	21.19	21.35	22.40
		25	25	21.18	21.16	21.43	22.40
		50	0	21.13	21.14	21.36	22.40
	16QAM	1	0	21.08	21.11	21.05	22.40
		1	25	21.47	21.42	21.56	22.40
		1	49	21.16	21.19	21.39	22.40
		25	0	20.65	20.48	20.72	21.90
		25	13	20.73	20.68	20.86	21.90
		25	25	20.64	20.67	20.90	21.90
		50	0	20.63	20.63	20.82	21.90
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	20.76	20.74	20.80	22.40
		1	38	21.15	21.14	21.30	22.40
		1	74	20.80	20.85	21.15	22.40
		36	0	21.11	20.97	21.20	22.40
		36	18	21.18	21.15	21.32	22.40
		36	39	21.14	21.12	21.40	22.40
		75	0	21.12	21.07	21.31	22.40
	16QAM	1	0	21.07	21.08	21.00	22.40
		1	38	21.46	21.41	21.53	22.40
		1	74	21.14	21.14	21.37	22.40
		36	0	20.62	20.47	20.70	21.90
		36	18	20.69	20.65	20.82	21.90
		36	39	20.62	20.63	20.87	21.90
		75	0	20.61	20.59	20.79	21.90
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	20.72	20.66	20.75	22.40
		1	50	21.12	21.09	21.25	22.40
		1	99	20.75	20.79	21.08	22.40
		50	0	21.06	20.88	21.13	22.40
		50	25	21.13	21.06	21.25	22.40
		50	50	21.08	21.04	21.32	22.40
		100	0	21.07	20.98	21.22	22.40
	16QAM	1	0	21.02	21.02	20.93	22.40
		1	50	21.41	21.36	21.47	22.40



		1	99	21.09	21.07	21.32	22.40
		50	0	20.56	20.41	20.64	21.90
		50	25	20.63	20.58	20.75	21.90
		50	50	20.57	20.54	20.80	21.90
		100	0	20.56	20.50	20.72	21.90

LTE Band7							
Hotspot on--Main Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	18.80	18.72	18.77	20.40
		1	13	19.15	19.11	19.27	20.40
		1	24	18.83	18.84	19.13	20.40
		12	0	19.09	18.93	19.22	20.40
		12	6	19.13	19.13	19.31	20.40
		12	13	19.08	19.08	19.38	20.40
		25	0	19.09	19.01	19.28	20.40
	16QAM	1	0	19.01	19.12	19.17	20.40
		1	13	19.44	19.45	19.63	20.40
		1	24	19.16	19.25	19.44	20.40
		12	0	19.14	18.93	19.23	20.40
		12	6	19.20	19.16	19.32	20.40
		12	13	19.11	19.15	19.37	20.40
		25	0	19.13	19.05	19.33	20.40
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	18.79	18.71	18.76	20.40
		1	25	19.16	19.12	19.28	20.40
		1	49	18.82	18.83	19.12	20.40
		25	0	19.09	18.93	19.22	20.40
		25	13	19.14	19.14	19.30	20.40
		25	25	19.08	19.10	19.39	20.40
		50	0	19.13	19.02	19.30	20.40
	16QAM	1	0	19.05	19.11	19.16	20.40
		1	25	19.48	19.47	19.63	20.40
		1	49	19.16	19.25	19.43	20.40
		25	0	19.15	18.94	19.24	20.40
		25	13	19.19	19.15	19.31	20.40
		25	25	19.11	19.15	19.37	20.40
		50	0	19.14	19.06	19.32	20.40
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	18.78	18.67	18.74	20.40



		1	38	19.14	19.11	19.25	20.40
		1	74	18.79	18.78	19.08	20.40
		36	0	19.07	18.89	19.19	20.40
		36	18	19.11	19.09	19.26	20.40
		36	39	19.05	19.07	19.35	20.40
		75	0	19.11	18.98	19.25	20.40
	16QAM	1	0	19.03	19.09	19.14	20.40
		1	38	19.46	19.44	19.61	20.40
		1	74	19.14	19.21	19.40	20.40
		36	0	19.12	18.92	19.21	20.40
		36	18	19.16	19.10	19.27	20.40
		36	39	19.09	19.11	19.34	20.40
		75	0	19.11	19.01	19.28	20.40
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	18.75	18.63	18.71	20.40
		1	50	19.13	19.07	19.23	20.40
		1	99	18.77	18.77	19.05	20.40
		50	0	19.04	18.84	19.15	20.40
		50	25	19.09	19.05	19.23	20.40
		50	50	19.02	19.02	19.31	20.40
		100	0	19.08	18.93	19.21	20.40
	16QAM	1	0	19.00	19.05	19.09	20.40
		1	50	19.43	19.42	19.57	20.40
		1	99	19.11	19.18	19.38	20.40
		50	0	19.09	18.88	19.18	20.40
		50	25	19.13	19.08	19.24	20.40
		50	50	19.06	19.06	19.30	20.40
		100	0	19.09	18.97	19.25	20.40



Second Antenna

LTE Band5							
Body SAR--DIV Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	23.35	23.33	23.31	24.70
		1	2	23.45	23.45	23.32	24.70
		1	5	23.33	23.32	23.30	24.70
		3	0	23.43	23.47	23.34	24.70
		3	2	23.37	23.46	23.33	24.70
		3	3	23.39	23.43	23.28	24.70
		6	0	22.45	22.49	22.40	23.70
	16QAM	1	0	22.67	22.65	22.63	23.70
		1	2	22.73	22.76	22.69	23.70
		1	5	22.61	22.66	22.53	23.70
		3	0	22.38	22.37	22.35	23.70
		3	2	22.43	22.41	22.39	23.70
		3	3	22.38	22.42	22.29	23.70
		6	0	21.46	21.50	21.41	22.70
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	23.34	23.35	23.30	24.70
		1	7	23.41	23.44	23.33	24.70
		1	14	23.33	23.32	23.30	24.70
		8	0	22.50	22.54	22.43	23.70
		8	4	22.47	22.52	22.40	23.70
		8	7	22.47	22.52	22.34	23.70
		15	0	22.45	22.52	22.41	23.70
	16QAM	1	0	22.67	22.63	22.63	23.70
		1	7	22.73	22.74	22.70	23.70
		1	14	22.60	22.68	22.52	23.70
		8	0	21.47	21.46	21.44	22.70
		8	4	21.51	21.49	21.47	22.70
		8	7	21.45	21.49	21.38	22.70
		15	0	21.47	21.50	21.39	22.70
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	23.35	23.32	23.31	24.70
		1	13	23.42	23.48	23.34	24.70
		1	24	23.32	23.31	23.29	24.70
		12	0	22.51	22.55	22.44	23.70
		12	6	22.47	22.52	22.40	23.70
		12	13	22.46	22.53	22.35	23.70



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	16QAM	25	0	22.47	22.50	22.40	23.70
		1	0	22.69	22.64	22.63	23.70
		1	13	22.75	22.75	22.71	23.70
		1	24	22.61	22.66	22.52	23.70
		12	0	21.47	21.49	21.45	22.70
		12	6	21.50	21.48	21.46	22.70
		12	13	21.46	21.50	21.39	22.70
		25	0	21.47	21.50	21.39	22.70
	QPSK	1	0	23.32	23.28	23.28	24.70
		1	25	23.41	23.44	23.32	24.70
		1	49	23.30	23.30	23.26	24.70
		25	0	22.48	22.50	22.40	23.70
		25	13	22.45	22.48	22.37	23.70
		25	25	22.43	22.48	22.31	23.70
16QAM	50	0	22.44	22.45	22.36	23.70	
	1	0	22.66	22.60	22.58	23.70	
	1	25	22.72	22.73	22.67	23.70	
	1	49	22.58	22.63	22.50	23.70	
	25	0	21.44	21.45	21.42	22.70	
	25	13	21.47	21.46	21.43	22.70	
	25	25	21.43	21.45	21.35	22.70	
	50	0	21.45	21.46	21.36	22.70	

LTE Band5							
Receiver on--DIV Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	22.10	22.07	22.12	23.20
		1	2	22.14	22.16	22.08	23.20
		1	5	22.10	22.13	22.03	23.20
		3	0	22.21	22.29	22.20	23.20
		3	2	22.23	22.27	22.16	23.20
		3	3	22.20	22.21	22.13	23.20
		6	0	22.11	22.22	22.14	23.20
	16QAM	1	0	22.34	22.37	22.43	23.20
		1	2	22.47	22.41	22.40	23.20
		1	5	22.35	22.41	22.29	23.20
		3	0	22.56	22.61	22.57	23.20
		3	2	22.62	22.58	22.52	23.20
		3	3	22.54	22.62	22.42	23.20
		6	0	21.63	21.70	21.62	22.70



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	22.10	22.06	22.12	23.20
		1	7	22.11	22.19	22.10	23.20
		1	14	22.09	22.12	22.02	23.20
		8	0	22.15	22.23	22.16	23.20
		8	4	22.19	22.19	22.09	23.20
		8	7	22.13	22.17	22.06	23.20
		15	0	22.13	22.23	22.14	23.20
	16QAM	1	0	22.36	22.36	22.43	23.20
		1	7	22.49	22.40	22.42	23.20
		1	14	22.35	22.41	22.28	23.20
		8	0	21.65	21.73	21.67	22.70
		8	4	21.69	21.65	21.59	22.70
		8	7	21.62	21.70	21.52	22.70
		15	0	21.64	21.70	21.60	22.70
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	22.12	22.11	22.15	23.20
		1	13	22.12	22.19	22.12	23.20
		1	24	22.13	22.18	22.07	23.20
		12	0	22.17	22.27	22.19	23.20
		12	6	22.21	22.23	22.14	23.20
		12	13	22.16	22.18	22.09	23.20
		25	0	22.11	22.26	22.17	23.20
	16QAM	1	0	22.34	22.39	22.46	23.20
		1	13	22.47	22.41	22.44	23.20
		1	24	22.37	22.45	22.32	23.20
		12	0	21.67	21.74	21.69	22.70
		12	6	21.73	21.71	21.64	22.70
		12	13	21.64	21.74	21.55	22.70
		25	0	21.66	21.74	21.65	22.70
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	QPSK	1	0	22.07	22.02	22.09	23.20
		1	25	22.10	22.15	22.08	23.20
		1	49	22.07	22.11	21.99	23.20
		25	0	22.12	22.18	22.12	23.20
		25	13	22.17	22.15	22.06	23.20
		25	25	22.10	22.12	22.02	23.20
		50	0	22.10	22.18	22.10	23.20
	16QAM	1	0	22.33	22.32	22.38	23.20
		1	25	22.46	22.38	22.38	23.20



		1	49	22.32	22.38	22.26	23.20
		25	0	21.62	21.69	21.64	22.70
		25	13	21.66	21.63	21.56	22.70
		25	25	21.59	21.65	21.48	22.70
		50	0	21.62	21.66	21.57	22.70

LTE Band5							
Hotspot on--DIV Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	21.65	21.68	21.66	22.70
		1	2	21.69	21.77	21.69	22.70
		1	5	21.65	21.65	21.63	22.70
		3	0	21.72	21.82	21.75	22.70
		3	2	21.72	21.77	21.68	22.70
		3	3	21.73	21.75	21.65	22.70
		6	0	21.65	21.80	21.70	22.70
	16QAM	1	0	21.98	22.01	22.02	22.70
		1	2	22.09	22.03	22.09	22.70
		1	5	21.97	22.08	21.86	22.70
		3	0	21.74	21.78	21.75	22.70
		3	2	21.79	21.74	21.72	22.70
		3	3	21.68	21.81	21.68	22.70
		6	0	21.66	21.80	21.70	22.70
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	21.60	21.59	21.60	22.70
		1	7	21.67	21.73	21.65	22.70
		1	14	21.59	21.58	21.55	22.70
		8	0	21.67	21.73	21.68	22.70
		8	4	21.68	21.69	21.60	22.70
		8	7	21.67	21.69	21.58	22.70
		15	0	21.64	21.72	21.63	22.70
	16QAM	1	0	21.97	21.94	21.94	22.70
		1	7	22.08	22.00	22.03	22.70
		1	14	21.92	22.01	21.80	22.70
		8	0	21.69	21.73	21.70	22.70
		8	4	21.72	21.66	21.64	22.70
		8	7	21.63	21.72	21.61	22.70
		15	0	21.62	21.72	21.62	22.70
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	21.62	21.64	21.63	22.70



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	16QAM	1	13	21.68	21.73	21.67	22.70
		1	24	21.63	21.64	21.60	22.70
		12	0	21.69	21.77	21.71	22.70
		12	6	21.70	21.73	21.65	22.70
		12	13	21.70	21.70	21.61	22.70
		25	0	21.62	21.75	21.66	22.70
		25	0	21.95	21.97	21.97	22.70
	QPSK	1	0	21.95	21.97	21.97	22.70
		1	13	22.06	22.01	22.05	22.70
		1	24	21.94	22.05	21.84	22.70
		12	0	21.71	21.74	21.72	22.70
		12	6	21.76	21.72	21.69	22.70
		12	13	21.65	21.76	21.64	22.70
		25	0	21.64	21.76	21.67	22.70
10MHz	16QAM	1	0	21.57	21.55	21.57	22.70
		1	25	21.66	21.69	21.63	22.70
		1	49	21.57	21.57	21.52	22.70
		25	0	21.64	21.68	21.64	22.70
		25	13	21.66	21.65	21.57	22.70
		25	25	21.64	21.64	21.54	22.70
		50	0	21.61	21.67	21.59	22.70
	QPSK	1	0	21.94	21.90	21.89	22.70
		1	25	22.05	21.98	21.99	22.70
		1	49	21.89	21.98	21.78	22.70
		25	0	21.66	21.69	21.67	22.70
		25	13	21.69	21.64	21.61	22.70
		25	25	21.60	21.67	21.57	22.70
		50	0	21.60	21.68	21.59	22.70

LTE Band7							
Receiver on--DIV Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	18.30	18.25	18.26	19.60
		1	13	18.63	18.55	18.79	19.60
		1	24	18.31	18.36	18.56	19.60
		12	0	18.63	18.50	18.62	19.60
		12	6	18.64	18.57	18.75	19.60
		12	13	18.72	18.56	18.89	19.60
		25	0	18.66	18.54	18.79	19.60
	16QAM	1	0	18.62	18.62	18.58	19.60
		1	13	18.94	18.94	19.14	19.60



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
		1	24	18.65	18.69	18.85	19.60
		12	0	18.61	18.47	18.61	19.60
		12	6	18.67	18.60	18.81	19.60
		12	13	18.67	18.54	18.89	19.60
		25	0	18.66	18.52	18.76	19.60
10MHz	QPSK	1	0	18.32	18.26	18.29	19.60
		1	25	18.66	18.60	18.83	19.60
1		49	18.33	18.40	18.59	19.60	
25		0	18.66	18.55	18.66	19.60	
25		13	18.67	18.62	18.79	19.60	
25		25	18.74	18.60	18.94	19.60	
50		0	18.70	18.56	18.83	19.60	
10MHz	16QAM	1	0	18.66	18.65	18.60	19.60
		1	25	18.98	18.98	19.17	19.60
		1	49	18.68	18.71	18.88	19.60
		25	0	18.64	18.52	18.65	19.60
		25	13	18.69	18.64	18.84	19.60
		25	25	18.70	18.59	18.93	19.60
		50	0	18.69	18.57	18.80	19.60
15MHz	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	18.31	18.22	18.27	19.60
		1	38	18.64	18.59	18.80	19.60
		1	74	18.30	18.35	18.55	19.60
		36	0	18.64	18.51	18.63	19.60
		36	18	18.64	18.57	18.75	19.60
		36	39	18.71	18.57	18.90	19.60
		75	0	18.68	18.52	18.78	19.60
	16QAM	1	0	18.64	18.63	18.58	19.60
		1	38	18.96	18.95	19.15	19.60
		1	74	18.66	18.67	18.85	19.60
		36	0	18.61	18.50	18.62	19.60
		36	18	18.66	18.59	18.80	19.60
		36	39	18.68	18.55	18.90	19.60
		75	0	18.66	18.52	18.76	19.60
20MHz	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	18.28	18.18	18.24	19.60
		1	50	18.63	18.55	18.78	19.60
		1	99	18.28	18.34	18.52	19.60
		50	0	18.61	18.46	18.59	19.60



		50	25	18.62	18.53	18.72	19.60
		50	50	18.68	18.52	18.86	19.60
		100	0	18.65	18.47	18.74	19.60
	16QAM	1	0	18.61	18.59	18.53	19.60
		1	50	18.93	18.93	19.11	19.60
		1	99	18.63	18.64	18.83	19.60
		50	0	18.58	18.46	18.59	19.60
		50	25	18.63	18.57	18.77	19.60
		50	50	18.65	18.50	18.86	19.60
		100	0	18.64	18.48	18.73	19.60

LTE Band7							
Body SAR--DIV Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	17.39	17.36	17.36	18.60
		1	13	17.77	17.71	17.88	18.60
		1	24	17.47	17.48	17.74	18.60
		12	0	17.72	17.64	17.74	18.60
		12	6	17.76	17.73	17.91	18.60
		12	13	17.80	17.65	17.99	18.60
		25	0	17.74	17.63	17.87	18.60
	16QAM	1	0	17.71	17.69	17.72	18.60
		1	13	18.03	17.96	18.22	18.60
		1	24	17.82	17.75	18.02	18.60
		12	0	17.72	17.64	17.73	18.60
		12	6	17.81	17.78	17.88	18.60
		12	13	17.80	17.70	18.00	18.60
		25	0	17.75	17.69	17.90	18.60
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	17.38	17.35	17.35	18.60
		1	25	17.78	17.72	17.89	18.60
		1	49	17.46	17.47	17.73	18.60
		25	0	17.72	17.64	17.74	18.60
		25	13	17.77	17.74	17.90	18.60
		25	25	17.80	17.67	18.00	18.60
		50	0	17.78	17.64	17.89	18.60
	16QAM	1	0	17.75	17.68	17.71	18.60
		1	25	18.07	17.98	18.22	18.60
		1	49	17.82	17.75	18.01	18.60
		25	0	17.73	17.65	17.74	18.60
		25	13	17.80	17.77	17.87	18.60



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
		25	25	17.80	17.70	18.00	18.60
		50	0	17.76	17.70	17.89	18.60
15MHz	QPSK	1	0	17.37	17.31	17.33	18.60
		1	38	17.76	17.71	17.86	18.60
		1	74	17.43	17.42	17.69	18.60
		36	0	17.70	17.60	17.71	18.60
		36	18	17.74	17.69	17.86	18.60
		36	39	17.77	17.64	17.96	18.60
		75	0	17.76	17.60	17.84	18.60
	16QAM	1	0	17.73	17.66	17.69	18.60
		1	38	18.05	17.95	18.20	18.60
		1	74	17.80	17.71	17.98	18.60
		36	0	17.70	17.63	17.71	18.60
		36	18	17.77	17.72	17.83	18.60
		36	39	17.78	17.66	17.97	18.60
		75	0	17.73	17.65	17.85	18.60
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	17.34	17.27	17.30	18.60
		1	50	17.75	17.67	17.84	18.60
		1	99	17.41	17.41	17.66	18.60
		50	0	17.67	17.55	17.67	18.60
		50	25	17.72	17.65	17.83	18.60
		50	50	17.74	17.59	17.92	18.60
		100	0	17.73	17.55	17.80	18.60
	16QAM	1	0	17.70	17.62	17.64	18.60
		1	50	18.02	17.93	18.16	18.60
		1	99	17.77	17.68	17.96	18.60
		50	0	17.67	17.59	17.68	18.60
		50	25	17.74	17.70	17.80	18.60
		50	50	17.75	17.61	17.93	18.60
		100	0	17.71	17.61	17.82	18.60



LTE Band7							
Hotspot on--DIV Ant				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	16.91	16.90	16.94	18.10
		1	13	17.27	17.24	17.43	18.10
		1	24	16.98	16.97	17.22	18.10
		12	0	17.28	17.21	17.29	18.10
		12	6	17.29	17.25	17.44	18.10
		12	13	17.39	17.20	17.59	18.10
		25	0	17.29	17.25	17.44	18.10
	16QAM	1	0	17.22	17.27	17.35	18.10
		1	13	17.65	17.64	17.78	18.10
		1	24	17.33	17.39	17.60	18.10
		12	0	17.28	17.18	17.26	18.10
		12	6	17.37	17.30	17.47	18.10
		12	13	17.35	17.27	17.57	18.10
		25	0	17.31	17.24	17.45	18.10
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	16.88	16.86	16.91	18.10
		1	25	17.26	17.20	17.41	18.10
		1	49	16.96	16.96	17.19	18.10
		25	0	17.25	17.16	17.25	18.10
		25	13	17.27	17.21	17.41	18.10
		25	25	17.36	17.15	17.55	18.10
		50	0	17.26	17.20	17.40	18.10
	16QAM	1	0	17.19	17.23	17.30	18.10
		1	25	17.62	17.62	17.74	18.10
		1	49	17.30	17.36	17.58	18.10
		25	0	17.25	17.14	17.23	18.10
		25	13	17.34	17.28	17.44	18.10
		25	25	17.32	17.22	17.53	18.10
		50	0	17.29	17.20	17.42	18.10
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	16.87	16.85	16.90	18.10
		1	38	17.27	17.21	17.42	18.10
		1	74	16.95	16.95	17.18	18.10
		36	0	17.25	17.16	17.25	18.10
		36	18	17.28	17.22	17.40	18.10
		36	39	17.36	17.17	17.56	18.10
		75	0	17.30	17.21	17.42	18.10



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
	16QAM	1	0	17.23	17.22	17.29	18.10
		1	38	17.66	17.64	17.74	18.10
		1	74	17.30	17.36	17.57	18.10
		36	0	17.26	17.15	17.24	18.10
		36	18	17.33	17.27	17.43	18.10
		36	39	17.32	17.22	17.53	18.10
		75	0	17.30	17.21	17.41	18.10
20MHz	QPSK	1	0	16.83	16.77	16.85	18.10
		1	50	17.24	17.16	17.37	18.10
		1	99	16.90	16.89	17.11	18.10
		50	0	17.20	17.07	17.18	18.10
		50	25	17.23	17.13	17.33	18.10
		50	50	17.30	17.09	17.48	18.10
		100	0	17.25	17.12	17.33	18.10
	16QAM	1	0	17.18	17.16	17.22	18.10
		1	50	17.61	17.59	17.68	18.10
		1	99	17.25	17.29	17.52	18.10
		50	0	17.20	17.09	17.18	18.10
		50	25	17.27	17.20	17.36	18.10
		50	50	17.27	17.13	17.46	18.10
		100	0	17.25	17.12	17.34	18.10

9.4 WLAN Mode

2.4GHz Wi-Fi Ant7-Receiver off Mode	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	19.00	17.58
	6/2437	19.00	17.48
	11/2462	19.00	17.48
802.11g (6M)	1/2412	13.50	11.86
	2/2417	15.50	13.89
	4/2427	18.00	16.36
	5/2432	19.00	17.37
	6/2437	19.00	17.23
	7/2442	18.50	16.70
	8/2447	17.50	15.75
	9/2452	15.50	13.87
	11/2462	12.00	10.26
802.11n (HT20,800ns) (MCS0)	1/2412	13.50	11.82
	2/2417	15.50	13.80
	4/2427	18.00	16.36
	5/2432	19.00	17.27
	6/2437	19.00	17.01
	7/2442	18.50	16.64
	8/2447	17.50	15.64
	9/2452	15.50	13.63
	11/2462	12.00	10.07
802.11n (HT40,400ns) (MCS0)	3/2422	9.00	7.37
	5/2432	12.00	10.34
	6/2437	13.00	11.31
	7/2432	11.50	9.81
	9/2452	9.00	7.32

Note: Initial test configuration is 802.11b mode.



2.4GHz Wi-Fi Ant7-Receiver on Mode	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	16.00	14.62
	6/2437	16.00	14.32
	11/2462	16.00	14.40
802.11g (6M)	1/2412	13.50	11.86
	2/2417	15.50	13.89
	4/2427	16.00	14.52
	6/2437	16.00	14.33
	8/2447	16.00	14.34
	9/2452	15.50	13.87
	11/2462	12.00	10.26
802.11n (HT20,800ns) (MCS0)	1/2412	13.50	11.82
	2/2417	15.50	13.80
	4/2427	16.00	14.25
	6/2437	16.00	14.27
	8/2447	16.00	14.21
	9/2452	15.50	13.63
	11/2462	12.00	10.07
802.11n (HT40,400ns) (MCS0)	3/2422	9.00	7.37
	5/2432	12.00	10.34
	6/2437	13.00	11.31
	7/2432	11.50	9.81
	9/2452	9.00	7.32

Note: Initial test configuration is 802.11b mode.



2.4GHz Wi-Fi Ant7-Hotspot on Mode	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	18.00	16.61
	6/2437	18.00	16.34
	11/2462	18.00	16.40
802.11g (6M)	1/2412	13.50	11.86
	2/2417	15.50	13.89
	4/2427	18.00	16.43
	6/2437	18.00	16.23
	7/2442	18.00	16.10
	8/2447	17.50	15.60
	9/2452	15.50	13.87
	11/2462	12.00	10.26
802.11n (HT20,800ns) (MCS0)	1/2412	13.50	11.82
	2/2417	15.50	13.80
	4/2427	18.00	16.36
	6/2437	18.00	16.03
	7/2442	18.00	16.16
	8/2447	17.50	16.00
	9/2452	15.50	13.63
	11/2462	12.00	10.07
802.11n (HT40,400ns) (MCS0)	3/2422	9.00	7.37
	5/2432	12.00	10.34
	6/2437	13.00	11.31
	7/2432	11.50	9.81
	9/2452	9.00	7.32

Note: Initial test configuration is 802.11b mode.



5GHz Wi-Fi U-NII-1 Ant8-Receiver off	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	14.50	12.82
	40/5200	17.50	15.93
	44/5220	19.00	17.55
	48/5240	19.00	17.43
802.11nHT20(MCS0)	36/5180	14.50	12.62
	40/5200	17.50	16.23
	44/5220	19.00	17.72
	48/5240	19.00	17.70
802.11nHT40(MCS0)	38/5190	11.50	9.23
	46/5230	17.00	15.15
802.11ac-VHT20(MCS0)	36/5180	14.50	13.15
	40/5200	17.50	16.36
	44/5220	18.50	17.55
	48/5240	18.50	16.32
802.11ac-VHT40(MCS0)	38/5190	11.50	10.01
	46/5230	17.00	15.70
802.11ac-VHT80(MCS0)	42/5210	11.50	9.56

Note. Initial test configuration is 802.11nHT20 mode, since the highest maximum output power.



5GHz Wi-Fi (U-NII-2A) Ant8-Receiver off	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	52/5260	19.00	17.59
	56/5280	19.00	17.02
	60/5300	17.00	15.53
	64/5320	14.50	12.34
802.11nHT20(MCS0)	52/5260	19.00	17.24
	56/5280	19.00	16.92
	60/5300	17.00	14.74
	64/5320	14.50	12.18
802.11nHT40(MCS0)	54/5270	16.50	14.30
	62/5310	12.50	10.19
802.11ac-VHT20(MCS0)	52/5260	18.50	16.60
	56/5280	18.50	16.82
	60/5300	17.00	15.12
	64/5320	14.50	12.57
802.11ac-VHT40(MCS0)	54/5270	16.50	14.56
	62/5310	12.50	10.27
802.11ac-VHT80(MCS0)	58/5290	11.50	9.16

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.



5GHz Wi-Fi U-NII-2C Ant8-Receiver off	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	16.00	13.90
	104/5520	18.50	17.31
	116/5580	19.00	17.64
	132/5660	19.00	17.45
	140/5700	19.00	17.38
802.11nHT20 (MCS0)	100/5500	16.00	14.53
	104/5520	18.50	17.30
	116/5580	19.00	17.63
	132/5660	19.00	16.90
	140/5700	19.00	17.01
802.11nHT40 (MCS0)	102/5510	15.00	13.23
	110/5550	18.00	16.40
	118/5590	18.00	16.33
	134/5670	18.00	16.23
802.11ac-VHT20 (MCS0)	100/5500	16.00	14.53
	116/5580	18.50	17.01
	132/5660	18.50	16.46
	140/5700	12.00	9.60
802.11ac-VHT40 (MCS0)	102/5510	15.00	13.33
	110/5550	18.00	16.43
	118/5590	18.00	16.41
	134/5670	14.50	12.75
802.11ac-VHT80 (MCS0)	106/5530	13.50	11.53
	122/5610	16.50	14.73

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.



5GHz Wi-Fi U-NII-3 Ant8-Receiver off	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	149/5745	19.00	17.11
	157/5785	19.00	17.08
	165/5825	19.00	17.05
802.11nHT20(MCS0)	149/5745	19.00	16.96
	157/5785	19.00	16.95
	165/5825	19.00	16.82
802.11nHT40(MCS0)	151/5755	18.00	16.18
	159/5795	18.00	15.62
802.11ac-VHT20(MCS0)	149/5745	18.50	16.45
	157/5785	18.50	16.45
	165/5825	18.50	16.79
802.11ac-VHT40(MCS0)	151/5755	18.00	15.63
	159/5795	18.00	15.50
802.11ac-VHT80(MCS0)	155/5775	17.50	14.91

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.



5GHz Wi-Fi U-NII-1 Ant8-Receiver on	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	14.50	12.83
	40/5200	15.00	13.27
	44/5220	15.00	13.18
	48/5240	15.00	13.43
802.11nHT20(MCS0)	36/5180	14.50	12.62
	40/5200	15.00	13.52
	44/5220	15.00	13.65
	48/5240	15.00	13.77
802.11nHT40(MCS0)	38/5190	11.50	9.21
	46/5230	15.00	13.14
802.11ac-VHT20(MCS0)	36/5180	14.50	13.12
	40/5200	15.00	13.72
	44/5220	15.00	13.04
	48/5240	15.00	13.71
802.11ac-VHT40(MCS0)	38/5190	11.50	9.93
	46/5230	15.00	13.60
802.11ac-VHT80(MCS0)	42/5210	11.50	9.56

Note. Initial test configuration is 802.11nHT20 mode, since the highest maximum output power.

5GHz Wi-Fi (U-NII-2A) Ant8-Receiver on	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	52/5260	15.00	13.39
	56/5280	15.00	13.02
	60/5300	15.00	13.22
	64/5320	14.50	12.34
802.11nHT20(MCS0)	52/5260	15.00	13.11
	56/5280	15.00	12.49
	60/5300	15.00	12.48
	64/5320	14.50	12.18
802.11nHT40(MCS0)	54/5270	15.00	12.93
	62/5310	12.50	10.19
802.11ac-VHT20(MCS0)	52/5260	15.00	13.02
	56/5280	15.00	13.11
	60/5300	15.00	12.81
	64/5320	14.50	12.55
802.11ac-VHT40(MCS0)	54/5270	15.00	12.95
	62/5310	12.50	10.51
802.11ac-VHT80(MCS0)	58/5290	11.50	9.16

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.



5GHz Wi-Fi U-NII-2C Ant8-Receiver on	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	15.00	12.81
	116/5580	15.00	13.40
	132/5660	15.00	13.50
	140/5700	15.00	13.41
802.11nHT20 (MCS0)	100/5500	15.00	13.40
	116/5580	15.00	13.37
	132/5660	15.00	13.11
	140/5700	15.00	12.75
802.11nHT40 (MCS0)	102/5510	15.00	13.23
	110/5550	15.00	13.30
	118/5590	15.00	13.32
	134/5670	15.00	13.10
802.11ac-VHT20 (MCS0)	100/5500	15.00	13.37
	116/5580	15.00	13.49
	132/5660	15.00	13.31
	140/5700	12.00	9.60
802.11ac-VHT40 (MCS0)	102/5510	15.00	13.33
	110/5550	15.00	13.30
	118/5590	15.00	13.35
	134/5670	14.50	12.75
802.11ac-VHT80 (MCS0)	106/5530	13.50	11.41
	122/5610	15.00	13.15

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.



5GHz Wi-Fi U-NII-3 Ant8-Receiver on	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	149/5745	15.00	13.40
	157/5785	15.00	13.09
	165/5825	15.00	13.02
802.11nHT20(MCS0)	149/5745	15.00	12.71
	157/5785	15.00	12.81
	165/5825	15.00	12.63
802.11nHT40(MCS0)	151/5755	15.00	13.15
	159/5795	15.00	13.10
802.11ac-VHT20(MCS0)	149/5745	15.00	12.60
	157/5785	15.00	12.73
	165/5825	15.00	13.31
802.11ac-VHT40(MCS0)	151/5755	15.00	13.11
	159/5795	15.00	12.52
802.11ac-VHT80(MCS0)	155/5775	15.00	12.33

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.



5GHz Wi-Fi U-NII-1 Ant8-Hotspot on	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	36/5180	14.50	12.83
	40/5200	17.00	15.35
	44/5220	17.00	15.28
	48/5240	17.00	15.53
802.11nHT20(MCS0)	36/5180	14.50	12.62
	40/5200	17.00	15.80
	44/5220	17.00	15.93
	48/5240	17.00	15.80
802.11nHT40(MCS0)	38/5190	11.50	9.16
	46/5230	17.00	15.20
802.11ac-VHT20(MCS0)	36/5180	14.50	13.15
	40/5200	17.00	15.73
	44/5220	17.00	15.92
	48/5240	17.00	15.91
802.11ac-VHT40(MCS0)	38/5190	11.50	9.91
	46/5230	17.00	15.70
802.11ac-VHT80(MCS0)	42/5210	11.50	9.56

Note. Initial test configuration is 802.11nHT20 mode, since the highest maximum output power.



5GHz Wi-Fi (U-NII-2A) Ant8-Hotspot on	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	52/5260	17.00	15.37
	56/5280	17.00	15.02
	60/5300	17.00	15.53
	64/5320	14.50	12.34
802.11nHT20(MCS0)	52/5260	17.00	15.11
	56/5280	17.00	15.20
	60/5300	17.00	14.74
	64/5320	14.50	12.18
802.11nHT40(MCS0)	54/5270	16.50	14.30
	62/5310	12.50	10.19
802.11ac-VHT20(MCS0)	52/5260	17.00	15.17
	56/5280	17.00	15.30
	60/5300	17.00	15.12
	64/5320	14.50	12.54
802.11ac-VHT40(MCS0)	54/5270	16.50	14.56
	62/5310	12.50	10.51
802.11ac-VHT80(MCS0)	58/5290	11.50	9.16

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.



5GHz Wi-Fi U-NII-2C Ant8-Hotspot on	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	16.00	13.91
	116/5580	17.00	15.60
	132/5660	17.00	15.50
	140/5700	17.00	15.52
802.11nHT20 (MCS0)	100/5500	16.00	14.56
	116/5580	17.00	15.59
	132/5660	17.00	14.90
	140/5700	17.00	15.00
802.11nHT40 (MCS0)	102/5510	15.00	13.23
	110/5550	17.00	15.41
	118/5590	17.00	15.42
	134/5670	17.00	15.31
802.11ac-VHT20 (MCS0)	100/5500	16.00	14.52
	116/5580	17.00	15.57
	132/5660	17.00	14.93
	140/5700	12.00	9.60
802.11ac-VHT40 (MCS0)	102/5510	15.00	13.33
	110/5550	17.00	15.47
	118/5590	17.00	15.43
	134/5670	14.50	12.75
802.11ac-VHT80 (MCS0)	106/5530	13.50	11.53
	122/5610	16.50	14.73

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.



5GHz Wi-Fi U-NII-3 Ant8-Hotspot on	Channel /Freq.(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a(6M)	149/5745	17.00	15.33
	157/5785	17.00	15.12
	165/5825	17.00	15.10
802.11nHT20(MCS0)	149/5745	17.00	14.90
	157/5785	17.00	14.81
	165/5825	17.00	14.79
802.11nHT40(MCS0)	151/5755	17.00	15.30
	159/5795	17.00	14.66
802.11ac-VHT20(MCS0)	149/5745	17.00	14.87
	157/5785	17.00	14.97
	165/5825	17.00	15.27
802.11ac-VHT40(MCS0)	151/5755	17.00	14.68
	159/5795	17.00	14.50
802.11ac-VHT80(MCS0)	155/5775	17.00	14.43

Note. Initial test configuration is 802.11a mode, since the highest maximum output power.

9.5 Bluetooth Mode

BT	Conducted Power(dBm)			Tune-up Limit (dBm)
	Channel/Frequency(MHz)			
	Ch 0/2402 MHz	Ch 39/2441 MHz	Ch 78/2480 MHz	
GFSK	10.70	10.73	10.34	12.00
$\pi/4$ DQPSK	10.04	9.71	10.15	11.00
8DPSK	10.03	9.71	10.16	11.00
BLE	Ch 0/2402 MHz	Ch 19/2440 MHz	Ch 39/2480 MHz	Tune-up Limit (dBm)
GFSK(1M)	6.34	6.90	6.06	8.50
GFSK(2M)	6.35	6.85	6.04	8.50

10 Measured and Reported (Scaled) SAR Results

10.1 EUT Antenna Locations

The Detailed Antenna Locations refer to *Antenna Locations*.

Overall (Length x Width): 163.66 mm x 75.13 mm						
Overall Diagonal: 160.6 mm						
Distance of the Antenna to the EUT surface/edge						
Antenna	Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Main-Ant 0	<25mm	<25mm	<25mm	>25mm	>25mm	<25mm
Main-Ant 1	<25mm	<25mm	>25mm	<25mm	>25mm	<25mm
Div-Ant 2	<25mm	<25mm	<25mm	>25mm	<25mm	>25mm
BT/Wi-Fi 2.4G-Ant 7	<25mm	<25mm	>25mm	<25mm	<25mm	>25mm
BT/Wi-Fi 5G-Ant 8	<25mm	<25mm	>25mm	<25mm	<25mm	>25mm
Hotspot mode, Positions for SAR tests						
Mode	Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Main-Ant 0	Yes	Yes	Yes	N/A	N/A	Yes
Main-Ant 1	Yes	Yes	N/A	Yes	N/A	Yes
Div-Ant 2	Yes	Yes	Yes	N/A	Yes	N/A
BT/Wi-Fi 2.4G-Ant 7	Yes	Yes	N/A	Yes	Yes	N/A
BT/Wi-Fi 5G-Ant 8	Yes	Yes	N/A	Yes	Yes	N/A

Note: 1. Per KDB 941225 D06, when the overall device length and width are $\geq 9\text{cm} \times 5\text{cm}$, the test distance is 10mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.

2. For smart phones with an overall diagonal dimension is 160.6mm. Per KDB 648474 D04, for smart phones with a display diagonal dimension $> 15.0\text{ cm}$ or an overall diagonal dimension $> 16.0\text{ cm}$, product specific 10-g SAR must be tested as a phablet to determine SAR compliance. For Phablet, Since hotspot mode 1-g *reported SAR* $< 1.2\text{ W/kg}$, product specific 10-g SAR is no required.

3. Per FCC KDB 447498 D01, for each exposure position, 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:

- $\leq 0.8\text{ W/kg}$ or 2.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\leq 100\text{MHz}$
- $\leq 0.6\text{ W/kg}$ or 1.5 W/kg , for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
- $\leq 0.4\text{ W/kg}$ or 1.0 W/kg , for 1-g or 10-g respectively, when the transmission band is $\geq 200\text{ MHz}$.

4. When the original highest measured SAR is $\geq 0.80\text{ W/kg}$, the measurement was repeated once.

5. Per FCC KDB Publication 648474 D04, SAR was evaluated without a headset connected to the device. Since the reported SAR was $\leq 1.2\text{ W/kg}$, no additional SAR evaluations using a headset cable were required.



10.2 Measured SAR Results

Note: 1.The value with blue color is the maximum SAR Value of each test band.

2. For GSM, when multiple slots are used, SAR should be tested to account for the maximum source-based time-averaged output power.

3. For WCDMA, When the maximum output power and tune-up tolerance specified for production units in a secondary mode is $\leq \frac{1}{4}$ 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.

4. For LTE, QPSK with 100% RB allocation, SAR is required when and the highest reported SAR for 1 RB and 50% RB allocation in are $\geq 50\%$ limit (1g)

Head SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
GSM 850 (Original)	Main	Left cheek	0	GSM	Receiver on	-	-	190/836.6	33.70	32.90	0.129	0.000	1.20	0.155	/
		Left Tilt	0	GSM	Receiver on	-	-	190/836.6	33.70	32.90	0.055	-0.020	1.20	0.066	/
		Right cheek	0	GSM	Receiver on	-	-	190/836.6	33.70	32.90	0.114	0.080	1.20	0.137	/
		Right Tilt	0	GSM	Receiver on	-	-	190/836.6	33.70	32.90	0.052	0.020	1.20	0.063	/
	DIV	Left cheek	0	GSM	Receiver on	-	-	190/836.6	33.40	32.81	0.390	-0.030	1.15	0.447	/
		Left Tilt	0	GSM	Receiver on	-	-	190/836.6	33.40	32.81	0.296	-0.020	1.15	0.339	/
		Right cheek	0	GSM	Receiver on	-	-	190/836.6	33.40	32.81	0.445	0.040	1.15	0.510	/
		Right Tilt	0	GSM	Receiver on	-	-	190/836.6	33.40	32.81	0.372	0.000	1.15	0.426	/
	DIV	Right cheek Battery2	0	GSM	Receiver on	-	-	190/836.6	33.40	32.81	0.462	0.010	1.15	0.529	24
		Right cheek Battery3	0	GSM	Receiver on	-	-	190/836.6	33.40	32.81	0.432	-0.032	1.15	0.495	/
		Right cheek Battery4	0	GSM	Receiver on	-	-	190/836.6	33.40	32.81	0.395	0.018	1.15	0.452	/
	GSM 850 (Variant)	Main	Left cheek	0	GSM	Receiver on	-	-	190/836.6	33.70	32.90	0.168	-0.045	1.20	0.202
DIV		Right cheek	0	GSM	Receiver on	-	-	190/836.6	33.40	32.81	0.444	-0.040	1.15	0.509	/
GSM 1900 (Original)	Main	Left cheek	0	GSM	Receiver on	-	-	661/1880	30.80	29.79	0.057	-0.020	1.26	0.072	/
		Left Tilt	0	GSM	Receiver on	-	-	661/1880	30.80	29.79	0.024	0.020	1.26	0.030	/
		Right cheek	0	GSM	Receiver on	-	-	661/1880	30.80	29.79	0.049	0.010	1.26	0.062	/
		Right Tilt	0	GSM	Receiver on	-	-	661/1880	30.80	29.79	0.048	-0.040	1.26	0.061	/
	DIV	Left cheek	0	GSM	Receiver on	-	-	661/1880	25.50	25.04	0.301	0.021	1.11	0.335	/
		Left Tilt	0	GSM	Receiver on	-	-	661/1880	25.50	25.04	0.423	-0.030	1.11	0.470	/
		Right cheek	0	GSM	Receiver on	-	-	661/1880	25.50	25.04	0.404	-0.030	1.11	0.449	/
		Right Tilt	0	GSM	Receiver on	-	-	661/1880	25.50	25.04	0.535	-0.032	1.11	0.595	25
	DIV	Right Tilt Battery2	0	GSM	Receiver on	-	-	661/1880	25.50	25.04	0.506	0.000	1.11	0.563	/
		Right Tilt	0	GSM	Receiver on	-	-	661/1880	25.50	25.04	0.495	0.060	1.11	0.550	/



		Battery3													
		Right Tilt Battery4	0	GSM	Receiver on	-	-	661/1880	25.50	25.04	0.511	0.017	1.11	0.568	/
GSM 1900 (Variant)	Main	Left cheek	0	GSM	Receiver on	-	-	661/1880	30.80	29.79	0.064	0.010	1.26	0.081	/
	DIV	Right Tilt	0	GSM	Receiver on	-	-	661/1880	25.50	25.04	0.517	-0.034	1.11	0.575	/
WCDMA II (Original)	Main	Left cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	25.00	23.90	0.130	0.100	1.29	0.167	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	25.00	23.90	0.094	0.030	1.29	0.121	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	25.00	23.90	0.123	0.051	1.29	0.158	/
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	25.00	23.90	0.109	0.150	1.29	0.140	/
	DIV	Left cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	16.70	15.83	0.309	0.030	1.22	0.378	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	16.70	15.83	0.421	0.050	1.22	0.514	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	16.70	15.83	0.507	-0.040	1.22	0.619	/
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	16.70	15.83	0.645	0.090	1.22	0.788	/
	DIV	Right Tilt Battery2	0	RMC 12.2K	Receiver on	-	-	9400/1880	16.70	15.83	0.694	0.011	1.22	0.848	26
		Right Tilt Battery3	0	RMC 12.2K	Receiver on	-	-	9400/1880	16.70	15.83	0.623	-0.031	1.22	0.761	/
		Right Tilt Battery4	0	RMC 12.2K	Receiver on	-	-	9400/1880	16.70	15.83	0.618	0.028	1.22	0.755	/
	WCDMA II (Variant)	Main	Left cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	25.00	23.90	0.164	0.032	1.29	0.211
DIV		Right Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	16.70	15.83	0.514	0.020	1.22	0.628	/
WCDMA V (Original)	Main	Left cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	25.00	24.10	0.196	0.056	1.23	0.241	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	25.00	24.10	0.075	0.070	1.23	0.092	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	25.00	24.10	0.158	0.015	1.23	0.194	/
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	25.00	24.10	0.062	0.016	1.23	0.076	/
	DIV	Left cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	23.20	22.65	0.301	0.000	1.14	0.342	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	23.20	22.65	0.235	0.020	1.14	0.267	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	23.20	22.65	0.440	-0.030	1.14	0.499	27
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	23.20	22.65	0.325	0.020	1.14	0.369	/
	DIV	Right cheek Battery2	0	RMC 12.2K	Receiver on	-	-	4183/836.6	23.20	22.65	0.428	0.017	1.14	0.486	/
		Right cheek Battery3	0	RMC 12.2K	Receiver on	-	-	4183/836.6	23.20	22.65	0.386	0.029	1.14	0.438	/
		Right cheek Battery4	0	RMC 12.2K	Receiver on	-	-	4183/836.6	23.20	22.65	0.412	-0.044	1.14	0.468	/
	WCDMA V (Variant)	Main	Left cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	25.00	24.10	0.167	-0.070	1.23	0.205
DIV		Right cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	23.20	22.65	0.309	-0.010	1.14	0.351	/
LTE 5 (Original)	Main	Left cheek	0	QPSK	Receiver on	1	25	20450/829	25.00	23.63	0.171	0.040	1.37	0.234	/
			0	QPSK	Receiver on	50%	0	20525/836.5	24.00	22.72	0.134	0.010	1.34	0.180	/
		Left Tilt	0	QPSK	Receiver on	1	25	20450/829	25.00	23.63	0.069	0.010	1.37	0.095	/
			0	QPSK	Receiver on	50%	0	20525/836.5	24.00	22.72	0.054	0.019	1.34	0.073	/



		Right cheek	0	QPSK	Receiver on	1	25	20450/829	25.00	23.63	0.153	-0.066	1.37	0.210	/	
			0	QPSK	Receiver on	50%	0	20525/836.5	24.00	22.72	0.100	0.023	1.34	0.134	/	
		Right Tilt	0	QPSK	Receiver on	1	25	20450/829	25.00	23.63	0.052	0.024	1.37	0.071	/	
			0	QPSK	Receiver on	50%	0	20525/836.5	24.00	22.72	0.043	0.018	1.34	0.057	/	
	DIV	Left cheek	0	QPSK	Receiver on	1	25	20525/836.5	23.20	22.15	0.203	0.050	1.27	0.259	/	
			0	QPSK	Receiver on	50%	0	20525/836.5	23.20	22.18	0.197	-0.020	1.26	0.249	/	
		Left Tilt	0	QPSK	Receiver on	1	25	20525/836.5	23.20	22.15	0.185	0.010	1.27	0.236	/	
			0	QPSK	Receiver on	50%	0	20525/836.5	23.20	22.18	0.182	0.030	1.26	0.230	/	
		Right cheek	0	QPSK	Receiver on	1	25	20525/836.5	23.20	22.15	0.407	-0.050	1.27	0.518	/	
			0	QPSK	Receiver on	50%	0	20525/836.5	23.20	22.18	0.390	0.020	1.26	0.493	/	
		Right Tilt	0	QPSK	Receiver on	1	25	20525/836.5	23.20	22.15	0.339	0.050	1.27	0.432	/	
			0	QPSK	Receiver on	50%	0	20525/836.5	23.20	22.18	0.328	0.040	1.26	0.415	/	
	DIV	Right cheek Battery2	0	QPSK	Receiver on	1	25	20525/836.5	23.20	22.15	0.468	0.026	1.27	0.596	28	
		Right cheek Battery3	0	QPSK	Receiver on	1	25	20525/836.5	23.20	22.15	0.385	-0.013	1.27	0.490	/	
		Right cheek Battery4	0	QPSK	Receiver on	1	25	20525/836.5	23.20	22.15	0.421	0.100	1.27	0.536	/	
	LTE 5 (Variant)	Main	Left cheek	0	QPSK	Receiver on	1	25	20450/829	25.00	23.63	0.155	-0.040	1.37	0.212	/
		DIV	Right cheek	0	QPSK	Receiver on	1	25	20525/836.5	23.20	22.15	0.292	-0.040	1.27	0.372	/
	LTE 7 (Original)	Main	Left cheek	0	QPSK	Receiver on	1	50	21350/2560	23.90	22.49	0.109	0.157	1.38	0.151	/
0				QPSK	Receiver on	50%	50	21350/2560	22.90	21.64	0.087	0.037	1.34	0.116	/	
Left Tilt			0	QPSK	Receiver on	1	50	21350/2560	23.90	22.49	0.090	0.026	1.38	0.125	/	
			0	QPSK	Receiver on	50%	50	21350/2560	22.90	21.64	0.080	0.077	1.34	0.107	/	
Right cheek			0	QPSK	Receiver on	1	50	21350/2560	23.90	22.49	0.165	0.011	1.38	0.228	/	
			0	QPSK	Receiver on	50%	50	21350/2560	22.90	21.64	0.136	0.120	1.34	0.182	/	
Right Tilt			0	QPSK	Receiver on	1	50	21350/2560	23.90	22.49	0.074	0.067	1.38	0.102	/	
			0	QPSK	Receiver on	50%	50	21350/2560	22.90	21.64	0.064	0.070	1.34	0.086	/	
DIV		Left cheek	0	QPSK	Receiver on	1	50	21350/2560	19.60	18.78	0.396	-0.050	1.21	0.478	/	
			0	QPSK	Receiver on	50%	50	21350/2560	19.60	18.86	0.383	0.010	1.19	0.454	/	
		Left Tilt	0	QPSK	Receiver on	1	50	21350/2560	19.60	18.78	0.410	0.100	1.21	0.495	/	
			0	QPSK	Receiver on	50%	50	21350/2560	19.60	18.86	0.408	0.130	1.19	0.484	/	
		Right cheek	0	QPSK	Receiver on	1	50	21350/2560	19.60	18.78	0.287	-0.048	1.21	0.347	/	
			0	QPSK	Receiver on	50%	50	21350/2560	19.60	18.86	0.390	0.190	1.19	0.462	/	
		Right Tilt	0	QPSK	Receiver on	1	50	21350/2560	19.60	18.78	0.467	0.023	1.21	0.564	/	
			0	QPSK	Receiver on	50%	50	21350/2560	19.60	18.86	0.463	0.100	1.19	0.549	/	
DIV		Right Tilt Battery2	0	QPSK	Receiver on	1	50	21350/2560	19.60	18.78	0.385	0.032	1.21	0.465	/	
		Right Tilt Battery3	0	QPSK	Receiver on	1	50	21350/2560	19.60	18.78	0.415	0.014	1.21	0.501	/	
	Right Tilt Battery4	0	QPSK	Receiver on	1	50	21350/2560	19.60	18.78	0.432	-0.040	1.21	0.522	/		



LTE 7 (Variant)	Main	Right cheek	0	QPSK	Receiver on	1	50	21350/2560	23.90	22.49	0.209	0.050	1.38	0.289	/
	DIV	Right Tilt	0	QPSK	Receiver on	1	50	21350/2560	19.60	18.78	0.484	-0.010	1.21	0.585	29

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
2.4G (Original)	ANT7	Left cheek	0	802.11b	98.0%	Receiver on	1/2412	16.00	13.42	0.292	0.020	1.85	0.540	/
		Left Tilt	0	802.11b	98.0%	Receiver on	1/2412	16.00	13.42	0.152	-0.034	1.85	0.281	/
		Right cheek	0	802.11b	98.0%	Receiver on	1/2412	16.00	13.42	0.095	0.170	1.85	0.175	/
		Right Tilt	0	802.11b	98.0%	Receiver on	1/2412	16.00	13.42	0.082	0.070	1.85	0.152	/
		Left cheek Battery2	0	802.11b	98.0%	Receiver on	1/2412	16.00	13.42	0.325	0.010	1.85	0.601	30
		Left cheek Battery3	0	802.11b	98.0%	Receiver on	1/2412	16.00	13.42	0.268	0.042	1.85	0.495	/
		Left cheek Battery4	0	802.11b	98.0%	Receiver on	1/2412	16.00	13.42	0.314	0.016	1.85	0.580	/
2.4G (Variant)	ANT7	Left cheek	0	802.11b	98.0%	Receiver on	1/2412	16.00	13.42	0.283	-0.030	1.85	0.523	/
U-NII-1 (Original)	ANT8	Left cheek	0	802.11nHT20	100.0%	Receiver on	48/5240	15.00	13.77	0.253	0.177	1.33	0.336	/
		Left Tilt	0	802.11nHT20	100.0%	Receiver on	48/5240	15.00	13.77	0.118	0.021	1.33	0.157	/
		Right cheek	0	802.11nHT20	100.0%	Receiver on	48/5240	15.00	13.77	0.253	0.177	1.33	0.336	/
		Right Tilt	0	802.11nHT20	100.0%	Receiver on	48/5240	15.00	13.77	0.069	0.102	1.33	0.091	/
		Left cheek Battery2	0	802.11nHT20	100.0%	Receiver on	48/5240	15.00	13.77	0.238	0.046	1.33	0.316	/
		Left cheek Battery3	0	802.11nHT20	100.0%	Receiver on	48/5240	15.00	13.77	0.294	0.015	1.33	0.390	31
		Left cheek Battery4	0	802.11nHT20	100.0%	Receiver on	48/5240	15.00	13.77	0.275	0.038	1.33	0.365	/
U-NII-1 (Variant)	ANT8	Left cheek	0	802.11nHT20	100.0%	Receiver on	48/5240	15.00	13.77	0.231	0.021	1.33	0.307	/
U-NII-2A (Original)	ANT8	Left cheek	0	802.11a	100.0%	Receiver on	52/5260	15.00	13.39	0.214	-0.029	1.45	0.310	/
		Left Tilt	0	802.11a	100.0%	Receiver on	52/5260	15.00	13.39	0.256	0.035	1.45	0.371	/
		Right cheek	0	802.11a	100.0%	Receiver on	52/5260	15.00	13.39	0.074	0.043	1.45	0.106	/
		Right Tilt	0	802.11a	100.0%	Receiver on	52/5260	15.00	13.39	0.091	0.184	1.45	0.132	/
		Left Tilt Battery2	0	802.11a	100.0%	Receiver on	52/5260	15.00	13.39	0.238	-0.100	1.45	0.345	/
		Left Tilt Battery3	0	802.11a	100.0%	Receiver on	52/5260	15.00	13.39	0.186	0.022	1.45	0.269	/
		Left Tilt Battery4	0	802.11a	100.0%	Receiver on	52/5260	15.00	13.39	0.224	0.028	1.45	0.325	/
U-NII-2A (Variant)	ANT8	Left Tilt	0	802.11a	100.0%	Receiver on	52/5260	15.00	13.39	0.179	0.110	1.45	0.259	/
U-NII-2C	ANT8	Left cheek	0	802.11a	100.0%	Receiver on	132/5660	15.00	13.50	0.245	-0.030	1.41	0.346	/



(Original)		Left Tilt	0	802.11a	100.0%	Receiver on	132/5660	15.00	13.50	0.239	0.030	1.41	0.338	/
		Right cheek	0	802.11a	100.0%	Receiver on	132/5660	15.00	13.50	0.092	0.060	1.41	0.131	/
		Right Tilt	0	802.11a	100.0%	Receiver on	132/5660	15.00	13.50	0.064	0.169	1.41	0.090	/
		Left cheek Battery2	0	802.11a	100.0%	Receiver on	132/5660	15.00	13.50	0.226	0.031	1.41	0.319	/
		Left cheek Battery3	0	802.11a	100.0%	Receiver on	132/5660	15.00	13.50	0.242	0.029	1.41	0.342	/
		Left cheek Battery4	0	802.11a	100.0%	Receiver on	132/5660	15.00	13.50	0.215	0.044	1.41	0.304	/
U-NII-2C (Variant)	ANT8	Left cheek	0	802.11a	100.0%	Receiver on	132/5660	15.00	13.50	0.232	0.130	1.41	0.328	/
U-NII-3 (Original)	ANT8	Left cheek	0	802.11a	100.0%	Receiver on	149/5745	15.00	13.40	0.222	0.120	1.45	0.321	/
		Left Tilt	0	802.11a	100.0%	Receiver on	149/5745	15.00	13.40	0.224	0.026	1.45	0.324	/
		Right cheek	0	802.11a	100.0%	Receiver on	149/5745	15.00	13.40	0.124	-0.060	1.45	0.179	/
		Right Tilt	0	802.11a	100.0%	Receiver on	149/5745	15.00	13.40	0.105	0.163	1.45	0.152	/
		Left Tilt Battery2	0	802.11a	100.0%	Receiver on	149/5745	15.00	13.40	0.195	0.090	1.45	0.282	/
		Left Tilt Battery3	0	802.11a	100.0%	Receiver on	149/5745	15.00	13.40	0.186	0.032	1.45	0.269	/
U-NII-3 (Variant)	ANT8	Left Tilt	0	802.11a	100.0%	Receiver on	149/5745	15.00	13.40	0.151	-0.090	1.45	0.218	/
Bluetooth (Original)	ANT7	Left cheek	0	DH5	76.0%	Full power	39/2441	12.00	10.73	0.117	0.104	1.76	0.206	/
		Left Tilt	0	DH5	76.0%	Full power	39/2441	12.00	10.73	0.051	0.086	1.76	0.091	/
		Right cheek	0	DH5	76.0%	Full power	39/2441	12.00	10.73	0.032	0.045	1.76	0.056	/
		Right Tilt	0	DH5	76.0%	Full power	39/2441	12.00	10.73	0.028	0.074	1.76	0.050	/
		Left cheek Battery2	0	DH5	76.0%	Full power	39/2441	12.00	10.73	0.085	0.023	1.76	0.150	/
		Left cheek Battery3	0	DH5	76.0%	Full power	39/2441	12.00	10.73	0.112	-0.019	1.76	0.197	/
Bluetooth (Variant)	ANT7	Left cheek	0	DH5	76.0%	Full power	39/2441	12.00	10.73	0.150	-0.170	1.76	0.264	32



Body-worn SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
GSM 850 (Original)	Main	Back Side	15	GSM	Body SAR	-	-	190/836.6	33.70	32.90	0.205	0.010	1.20	0.246	33
		Front Side	15	GSM	Body SAR	-	-	190/836.6	33.70	32.90	0.168	0.012	1.20	0.202	/
	DIV	Back Side	15	GSM	Body SAR	-	-	190/836.6	33.40	32.81	0.105	0.050	1.15	0.120	/
		Front Side	15	GSM	Body SAR	-	-	190/836.6	33.40	32.81	0.089	0.024	1.15	0.102	/
	Main	Back Side Battery2	15	GSM	Body SAR	-	-	190/836.6	33.70	32.90	0.165	0.017	1.20	0.198	/
		Back Side Battery3	15	GSM	Body SAR	-	-	190/836.6	33.70	32.90	0.194	-0.030	1.20	0.233	/
Back Side Battery4		15	GSM	Body SAR	-	-	190/836.6	33.70	32.90	0.203	0.024	1.20	0.244	/	
GSM 850 (Variant)	Main	Back Side	15	GSM	Body SAR	-	-	190/836.6	33.70	32.90	0.178	0.020	1.20	0.214	/
	DIV	Back Side	15	GSM	Body SAR	-	-	190/836.6	33.40	32.81	0.084	0.090	1.15	0.096	/
GSM 1900 (Original)	Main	Back Side	15	GSM	Body SAR	-	-	661/1880	30.80	29.79	0.134	0.012	1.26	0.169	/
		Front Side	15	GSM	Body SAR	-	-	661/1880	30.80	29.79	0.086	0.030	1.26	0.109	/
	DIV	Back Side	15	GSM	Body SAR	-	-	661/1880	28.50	27.94	0.087	0.048	1.14	0.099	/
		Front Side	15	GSM	Body SAR	-	-	661/1880	28.50	27.94	0.052	-0.010	1.14	0.059	/
	Main	Back Side Battery2	15	GSM	Body SAR	-	-	661/1880	30.80	29.79	0.164	0.033	1.26	0.207	34
		Back Side Battery3	15	GSM	Body SAR	-	-	661/1880	30.80	29.79	0.128	0.018	1.26	0.162	/
Back Side Battery4		15	GSM	Body SAR	-	-	661/1880	30.80	29.79	0.142	-0.033	1.26	0.179	/	
GSM 1900 (Variant)	Main	Back Side	15	GSM	Body SAR	-	-	661/1880	30.80	29.79	0.126	0.084	1.26	0.159	/
	DIV	Back Side	15	GSM	Body SAR	-	-	661/1880	28.50	27.94	0.094	-0.184	1.14	0.107	/
WCDMA II (Original)	Main	Back Side	15	RMC	Body SAR	-	-	9400/1880	23.50	22.24	0.310	0.023	1.34	0.414	/
		Front Side	15	RMC	Body SAR	-	-	9400/1880	23.50	22.24	0.189	0.081	1.34	0.253	/
	DIV	Back Side	15	RMC	Body SAR	-	-	9400/1880	19.70	18.59	0.272	0.042	1.29	0.351	/
		Front Side	15	RMC	Body SAR	-	-	9400/1880	19.70	18.59	0.176	-0.026	1.29	0.227	/
	Main	Back Side Battery2	15	RMC	Body SAR	-	-	9400/1880	23.50	22.24	0.268	0.013	1.34	0.358	/
		Back Side Battery3	15	RMC	Body SAR	-	-	9400/1880	23.50	22.24	0.247	0.032	1.34	0.330	/
		Back Side Battery4	15	RMC	Body SAR	-	-	9400/1880	23.50	22.24	0.294	-0.020	1.34	0.393	/
		Back Side SIM2	15	RMC	Body SAR	-	-	9400/1880	23.50	22.24	0.286	0.024	1.34	0.382	/
WCDMA II	Main	Back Side	15	RMC	Body SAR	-	-	9400/1880	23.50	22.24	0.340	0.000	1.34	0.454	35
	DIV	Back Side	15	RMC	Body SAR	-	-	9400/1880	19.70	18.59	0.225	0.024	1.29	0.291	/



(Variant)															
WCDMA V (Original)	Main	Back Side	15	RMC	Body SAR	-	-	4183/836.6	25.00	24.10	0.251	-0.010	1.23	0.309	36
		Front Side	15	RMC	Body SAR	-	-	4183/836.6	25.00	24.10	0.212	0.023	1.23	0.261	/
	DIV	Back Side	15	RMC	Body SAR	-	-	4183/836.6	24.70	24.06	0.156	-0.028	1.16	0.181	/
		Front Side	15	RMC	Body SAR	-	-	4183/836.6	24.70	24.06	0.116	0.070	1.16	0.134	/
	Main	Back Side Battery2	15	RMC	Body SAR	-	-	4183/836.6	25.00	24.10	0.216	0.040	1.23	0.266	/
		Back Side Battery3	15	RMC	Body SAR	-	-	4183/836.6	25.00	24.10	0.235	-0.022	1.23	0.289	/
Back Side Battery4		15	RMC	Body SAR	-	-	4183/836.6	25.00	24.10	0.219	0.021	1.23	0.269	/	
WCDMA V (Variant)	Main	Back Side	15	RMC	Body SAR	-	-	4183/836.6	25.00	24.10	0.218	-0.020	1.23	0.268	/
	DIV	Back Side	15	RMC	Body SAR	-	-	4183/836.6	24.70	24.06	0.072	0.020	1.16	0.083	/
LTE 5 (Original)	Main	Back Side	15	QPSK	Body SAR	1	25	20450/829	25.00	23.63	0.260	-0.190	1.37	0.356	37
			15	QPSK	Body SAR	50%	0	20525/836.5	24.00	22.72	0.208	0.070	1.34	0.279	/
		Front Side	15	QPSK	Body SAR	1	25	20450/829	25.00	23.63	0.226	0.014	1.37	0.310	/
			15	QPSK	Body SAR	50%	0	20525/836.5	24.00	22.72	0.176	-0.034	1.34	0.236	/
	DIV	Back Side	15	QPSK	Body SAR	1	25	20525/836.5	23.70	23.44	0.156	0.032	1.06	0.166	/
			15	QPSK	Body SAR	50%	0	20525/836.5	23.70	22.50	0.118	0.011	1.32	0.156	/
		Front Side	15	QPSK	Body SAR	1	25	20525/836.5	23.70	23.44	0.105	-0.013	1.06	0.111	/
			15	QPSK	Body SAR	50%	0	20525/836.5	23.70	22.50	0.083	0.020	1.32	0.109	/
	Main	Back Side Battery2	15	QPSK	Body SAR	1	25	20450/829	25.00	23.63	0.252	0.047	1.37	0.345	/
		Back Side Battery3	15	QPSK	Body SAR	1	25	20450/829	25.00	23.63	0.238	0.026	1.37	0.326	/
		Back Side Battery4	15	QPSK	Body SAR	1	25	20450/829	25.00	23.63	0.237	0.011	1.37	0.325	/
	LTE 5 (Variant)	Main	Back Side	15	QPSK	Body SAR	1	25	20450/829	25.00	23.63	0.192	-0.040	1.37	0.263
DIV		Back Side	15	QPSK	Body SAR	1	25	20525/836.5	23.70	23.44	0.078	-0.020	1.06	0.083	
LTE 7 (Original)	Main	Back Side	15	QPSK	Body SAR	1	50	21350/2560	22.40	21.25	0.178	0.044	1.30	0.232	/
			15	QPSK	Body SAR	50%	50	21350/2560	22.40	21.32	0.152	0.190	1.28	0.195	/
		Front Side	15	QPSK	Body SAR	1	50	21350/2560	22.40	21.25	0.126	-0.017	1.30	0.164	/
			15	QPSK	Body SAR	50%	50	21350/2560	22.40	21.32	0.105	0.025	1.28	0.135	/
	DIV	Back Side	15	QPSK	Body SAR	1	50	21350/2560	18.60	17.84	0.152	0.016	1.19	0.181	/
			15	QPSK	Body SAR	50%	50	21350/2560	18.60	17.92	0.150	0.034	1.17	0.175	/
		Front Side	15	QPSK	Body SAR	1	50	21350/2560	18.60	17.84	0.046	0.011	1.19	0.055	/
			15	QPSK	Body SAR	50%	50	21350/2560	18.60	17.92	0.048	0.035	1.17	0.056	/
	Main	Back Side Battery2	15	QPSK	Body SAR	1	50	21350/2560	22.40	21.25	0.153	0.022	1.30	0.199	/
		Back Side Battery3	15	QPSK	Body SAR	1	50	21350/2560	22.40	21.25	0.203	-0.048	1.30	0.265	38
		Back Side	15	QPSK	Body SAR	1	50	21350/2560	22.40	21.25	0.175	0.060	1.30	0.228	/



		Battery4													
LTE 7 (Variant)	Main	Back Side	15	QPSK	Body SAR	1	50	21350/2560	22.40	21.25	0.113	0.049	1.30	0.147	/
	DIV	Back Side	15	QPSK	Body SAR	1	50	21350/2560	18.60	17.84	0.154	0.036	1.19	0.183	/

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
2.4G (Original)	ANT7	Back Side	15	802.11b	98.0%	Receiver off	1/2412	19.00	17.58	0.407	0.062	1.42	0.576	/
		Front Side	15	802.11b	98.0%	Receiver off	1/2412	19.00	17.58	0.203	0.011	1.42	0.287	/
		Back Side Battery2	15	802.11b	98.0%	Receiver off	1/2412	19.00	17.58	0.326	0.029	1.42	0.461	/
		Back Side Battery3	15	802.11b	98.0%	Receiver off	1/2412	19.00	17.58	0.375	0.020	1.42	0.531	/
		Back Side Battery4	15	802.11b	98.0%	Receiver off	1/2412	19.00	17.58	0.413	-0.010	1.42	0.584	39
2.4G (Variant)	ANT7	Back Side	15	802.11b	98.0%	Receiver off	1/2412	19.00	17.58	0.269	0.040	1.42	0.381	/
U-NII-1 (Original)	ANT8	Back Side	15	802.11nHT20(MCS0)	100.0%	Receiver off	44/5220	19.00	17.72	0.196	0.040	1.34	0.263	/
		Front Side	15	802.11nHT20(MCS0)	100.0%	Receiver off	44/5220	19.00	17.72	0.091	0.035	1.34	0.122	/
		Back Side Battery2	15	802.11nHT20(MCS0)	100.0%	Receiver off	44/5220	19.00	17.72	0.169	0.026	1.34	0.227	/
		Back Side Battery3	15	802.11nHT20(MCS0)	100.0%	Receiver off	44/5220	19.00	17.72	0.164	0.050	1.34	0.220	/
		Back Side Battery4	15	802.11nHT20(MCS0)	100.0%	Receiver off	44/5220	19.00	17.72	0.175	0.018	1.34	0.235	/
U-NII-1 (Variant)	ANT8	Back Side	15	802.11nHT20(MCS0)	100.0%	Receiver off	44/5220	19.00	17.72	0.222	-0.160	1.34	0.298	/
U-NII-2A (Original)	ANT8	Back Side	15	802.11a	100.0%	Receiver off	52/5260	19.00	17.59	0.208	-0.038	1.38	0.263	/
		Front Side	15	802.11a	100.0%	Receiver off	52/5260	19.00	17.59	0.097	0.017	1.38	0.122	/
		Back Side Battery2	15	802.11a	100.0%	Receiver off	52/5260	19.00	17.59	0.184	0.000	1.38	0.255	/
		Back Side Battery3	15	802.11a	100.0%	Receiver off	52/5260	19.00	17.59	0.175	0.040	1.38	0.242	/
		Back Side Battery4	15	802.11a	100.0%	Receiver off	52/5260	19.00	17.59	0.194	0.069	1.38	0.268	/
U-NII-2A (Variant)	ANT8	Back Side	15	802.11a	100.0%	Receiver off	52/5260	19.00	17.59	0.159	0.010	1.38	0.220	/
U-NII-2C (Original)	ANT8	Back Side	15	802.11a	100.0%	Receiver off	116/5580	19.00	17.64	0.246	0.015	1.37	0.336	/
		Front Side	15	802.11a	100.0%	Receiver off	116/5580	19.00	17.64	0.121	0.013	1.37	0.165	/
		Back Side Battery2	15	802.11a	100.0%	Receiver off	116/5580	19.00	17.64	0.263	0.032	1.37	0.360	/
		Back Side Battery3	15	802.11a	100.0%	Receiver off	116/5580	19.00	17.64	0.298	0.064	1.37	0.408	40



		Back Side Battery4	15	802.11a	100.0%	Receiver off	116/5580	19.00	17.64	0.258	0.010	1.37	0.353	/
U-NII-2C (Variant)	ANT8	Back Side	15	802.11a	100.0%	Receiver off	116/5580	19.00	17.64	0.202	-0.070	1.37	0.276	/
U-NII-3 (Original)	ANT8	Back Side	15	802.11a	100.0%	Receiver off	149/5745	19.00	17.11	0.246	0.064	1.55	0.380	/
		Front Side	15	802.11a	100.0%	Receiver off	149/5745	19.00	17.11	0.108	-0.020	1.55	0.167	/
		Back Side Battery2	15	802.11a	100.0%	Receiver off	149/5745	19.00	17.11	0.220	0.037	1.55	0.340	/
		Back Side Battery3	15	802.11a	100.0%	Receiver off	149/5745	19.00	17.11	0.186	-0.042	1.55	0.287	/
		Back Side Battery4	15	802.11a	100.0%	Receiver off	149/5745	19.00	17.11	0.214	0.016	1.55	0.331	/
U-NII-3 (Variant)	ANT8	Back Side	15	802.11a	100.0%	Receiver off	149/5745	19.00	17.11	0.221	-0.059	1.55	0.342	/



Hotspot SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
GSM850 (Original)	Main	Back Side	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.70	30.23	0.371	-0.070	1.11	0.413	41
		Front Side	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.70	30.23	0.284	0.047	1.11	0.316	/
		Left Edge	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.70	30.23	0.197	0.025	1.11	0.220	/
		Right Edge	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.70	30.23	0.000	0.000	1.11	0.000	/
		Top Edge	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.70	30.23	0.081	0.013	1.11	0.090	/
	DIV	Back Side	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.40	30.17	0.232	0.024	1.05	0.245	/
		Front Side	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.40	30.17	0.109	0.015	1.05	0.115	/
		Left Edge	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.4	30.17	0.000	0.000	1.05	0.000	/
		Right Edge	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.40	30.17	0.075	-0.030	1.05	0.079	/
		Top Edge	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.40	30.17	0.139	0.018	1.05	0.147	/
		Bottom Edge	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	N/A	N/A	N/A	N/A	N/A	N/A	/
	Main	Back Side Battery2	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.70	30.23	0.325	0.049	1.11	0.362	/
		Back Side Battery3	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.70	30.23	0.368	-0.032	1.11	0.410	/
		Back Side Battery4	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.70	30.23	0.288	0.010	1.11	0.321	/
GSM850 (Variant)	Main	Back Side	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.70	30.23	0.338	-0.030	1.11	0.377	
	DIV	Back Side	10	GPRS 2TX Slots	Hotspot on	-	-	190/836.6	30.40	30.17	0.156	-0.018	1.05	0.164	
GSM1900 (Original)	Main	Back Side	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	27.80	27.06	0.271	0.022	1.19	0.321	/
		Front Side	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	27.80	27.06	0.145	-0.035	1.19	0.172	/
		Left Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	27.80	27.06	0.000	0.018	1.19	0.000	/
		Right Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	27.80	27.06	0.084	0.022	1.19	0.100	/
		Top Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	N/A	N/A	N/A	N/A	N/A	N/A	/
		Bottom Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	27.80	27.06	0.297	0.020	1.19	0.352	/
	DIV	Back Side	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	22.50	21.92	0.161	0.032	1.14	0.184	/
		Front Side	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	22.50	21.92	0.104	-0.016	1.14	0.119	/
		Left Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	22.50	21.92	0.000	0.000	1.14	0.000	/
		Right Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	22.50	21.92	0.000	0.000	1.14	0.000	/
		Top Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	22.50	21.92	0.254	0.020	1.14	0.290	/
		Bottom Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	N/A	N/A	N/A	N/A	N/A	N/A	/
	Main	Bottom Edge Battery2	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	27.80	27.06	0.352	0.032	1.19	0.417	/
		Bottom Edge Battery3	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	27.80	27.06	0.342	-0.011	1.19	0.406	/
		Bottom Edge Battery4	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	27.80	27.06	0.305	0.024	1.19	0.362	/
GSM1900	Main	Bottom Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	27.80	27.06	0.429	0.000	1.19	0.509	42



(Variant)	DIV	Top Edge	10	GPRS 2TX Slots	Hotspot on	-	-	661/1880	22.50	21.92	0.170	0.085	1.14	0.194	/	
WCDMA II (Original)	Main	Back Side	10	RMC	Hotspot on	-	-	9400/1880	22.00	20.58	0.493	0.065	1.39	0.684	/	
		Front Side	10	RMC	Hotspot on	-	-	9400/1880	22.00	20.58	0.259	-0.019	1.39	0.359	/	
		Left Edge	10	RMC	Hotspot on	-	-	9400/1880	22.00	20.58	0.000	0.000	1.39	0.000	/	
		Right Edge	10	RMC	Hotspot on	-	-	9400/1880	22.00	20.58	0.198	0.038	1.39	0.275	/	
		Top Edge	10	RMC	Hotspot on	-	-	9400/1880	N/A	N/A	N/A	N/A	N/A	N/A	/	
		Bottom Edge	10	RMC	Hotspot on	-	-	9400/1880	22.00	20.58	0.505	-0.040	1.39	0.700	/	
	DIV	Back Side	10	RMC	Hotspot on	-	-	9400/1880	16.70	15.83	0.203	0.012	1.22	0.248	/	
		Front Side	10	RMC	Hotspot on	-	-	9400/1880	16.70	15.83	0.128	0.110	1.22	0.156	/	
		Left Edge	10	RMC	Hotspot on	-	-	9400/1880	16.70	15.83	0.032	0.028	1.22	0.039	/	
		Right Edge	10	RMC	Hotspot on	-	-	9400/1880	16.70	15.83	0.000	0.000	1.22	0.000	/	
		Top Edge	10	RMC	Hotspot on	-	-	9400/1880	16.70	15.83	0.369	0.024	1.22	0.451	/	
		Bottom Edge	10	RMC	Hotspot on	-	-	9400/1880	N/A	N/A	N/A	N/A	N/A	N/A	/	
	Main	Bottom Edge Battery2	10	RMC	Hotspot on	-	-	9400/1880	22.00	20.58	0.468	-0.011	1.39	0.649	/	
		Bottom Edge Battery3	10	RMC	Hotspot on	-	-	9400/1880	22.00	20.58	0.492	0.038	1.39	0.682	/	
		Bottom Edge Battery4	10	RMC	Hotspot on	-	-	9400/1880	22.00	20.58	0.524	0.021	1.39	0.727	43	
	WCDMA II (Variant)	Main	Bottom Edge	10	RMC	Hotspot on	-	-	9400/1880	22.00	20.58	0.443	0.054	1.39	0.614	/
		DIV	Top Edge	10	RMC	Hotspot on	-	-	9400/1880	16.70	15.83	0.385	0.070	1.22	0.470	/
	WCDMA V (Original)	Main	Back Side	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.10	0.435	-0.160	1.23	0.535	44
Front Side			10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.10	0.348	0.048	1.23	0.428	/	
Left Edge			10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.10	0.234	0.026	1.23	0.288	/	
Right Edge			10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.10	0.000	0.000	1.23	0.000	/	
Top Edge			10	RMC	Hotspot on	-	-	4183/836.6	N/A	N/A	N/A	N/A	N/A	N/A	/	
Bottom Edge			10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.10	0.125	0.034	1.23	0.154	/	
DIV		Back Side	10	RMC	Hotspot on	-	-	4183/836.6	22.70	22.11	0.178	-0.018	1.15	0.204	/	
		Front Side	10	RMC	Hotspot on	-	-	4183/836.6	22.70	22.11	0.128	0.045	1.15	0.147	/	
		Left Edge	10	RMC	Hotspot on	-	-	4183/836.6	22.70	22.11	0.000	0.000	1.15	0.000	/	
		Right Edge	10	RMC	Hotspot on	-	-	4183/836.6	22.70	22.11	0.091	0.015	1.15	0.104	/	
		Top Edge	10	RMC	Hotspot on	-	-	4183/836.6	22.70	22.11	0.113	0.023	1.15	0.129	/	
		Bottom Edge	10	RMC	Hotspot on	-	-	4183/836.6	N/A	N/A	N/A	N/A	N/A	N/A	/	
Main		Back Side Battery2	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.10	0.362	0.039	1.23	0.445	/	
		Back Side Battery3	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.10	0.338	0.048	1.23	0.416	/	
		Back Side Battery4	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.10	0.405	-0.062	1.23	0.498	/	
WCDMA V (Variant)	Main	Back Side	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.10	0.362	0.000	1.23	0.445	/	
	DIV	Back Side	10	RMC	Hotspot on	-	-	4183/836.6	22.70	22.11	0.109	0.040	1.15	0.125	/	
LTE 5 (Original)	Main	Back Side	10	QPSK	Hotspot on	1	25	20450/829	25.00	23.63	0.430	-0.030	1.37	0.589	/	
			10	QPSK	Hotspot on	50%	0	20525/836.5	24.00	22.72	0.365	0.110	1.34	0.490	/	



	DIV	Front Side	10	QPSK	Hotspot on	1	25	20450/829	25.00	23.63	0.311	0.026	1.37	0.426	/	
			10	QPSK	Hotspot on	50%	0	20525/836.5	24.00	22.72	0.279	-0.160	1.34	0.375	/	
		Left Edge	10	QPSK	Hotspot on	1	25	20450/829	25.00	23.63	0.279	0.017	1.37	0.382	/	
			10	QPSK	Hotspot on	50%	0	20525/836.5	24.00	22.72	0.141	0.046	1.34	0.189	/	
		Right Edge	10	QPSK	Hotspot on	1	25	20450/829	25.00	23.63	0.147	-0.049	1.37	0.202	/	
			10	QPSK	Hotspot on	50%	0	20525/836.5	24.00	22.72	0.081	-0.031	1.34	0.109	/	
		Top Edge	10	QPSK	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
			10	QPSK	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
		Bottom Edge	10	QPSK	Hotspot on	1	25	20450/829	25.00	23.63	0.192	0.058	1.37	0.263	/	
			10	QPSK	Hotspot on	50%	0	20525/836.5	24.00	22.72	0.105	0.040	1.34	0.141	/	
		Main	Back Side	10	QPSK	Hotspot on	1	25	20525/836.5	22.70	21.69	0.164	0.026	1.26	0.207	/
				10	QPSK	Hotspot on	50%	0	20525/836.5	22.70	21.68	0.138	0.018	1.26	0.175	/
			Front Side	10	QPSK	Hotspot on	1	25	20525/836.5	22.70	21.69	0.103	0.032	1.26	0.130	/
				10	QPSK	Hotspot on	50%	0	20525/836.5	22.70	21.68	0.086	0.011	1.26	0.109	/
	Left Edge		10	QPSK	Hotspot on	1	25	20525/836.5	22.70	21.69	0.000	0.000	1.26	0.000	/	
			10	QPSK	Hotspot on	50%	0	20525/836.5	22.70	21.68	0.000	0.000	1.26	0.000	/	
	Right Edge		10	QPSK	Hotspot on	1	25	20525/836.5	22.70	21.69	0.057	-0.040	1.26	0.072	/	
			10	QPSK	Hotspot on	50%	0	20525/836.5	22.70	21.68	0.048	0.019	1.26	0.061	/	
	Top Edge		10	QPSK	Hotspot on	1	25	20525/836.5	22.70	21.69	0.104	0.030	1.26	0.131	/	
			10	QPSK	Hotspot on	50%	0	20525/836.5	22.70	21.68	0.097	0.024	1.26	0.123	/	
Bottom Edge	10	QPSK	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/			
	10	QPSK	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/			
Main	Back Side Battery2	10	QPSK	Hotspot on	1	25	20450/829	25.00	23.63	0.468	0.060	1.37	0.642	45		
	Back Side Battery3	10	QPSK	Hotspot on	1	25	20450/829	25.00	23.63	0.411	0.039	1.37	0.563	/		
	Back Side Battery4	10	QPSK	Hotspot on	1	25	20450/829	25.00	23.63	0.375	-0.044	1.37	0.514	/		
LTE 5 (Variant)	Main	Back Side	10	QPSK	Hotspot on	1	25	20450/829	25.00	23.63	0.372	-0.010	1.37	0.510	/	
	DIV	Back Side	10	QPSK	Hotspot on	1	25	20525/836.5	22.70	21.69	0.136	0.047	1.26	0.172	/	
LTE 7 (Original)	Main	Back Side	10	QPSK	Hotspot on	1	50	21350/2560	20.40	19.23	0.305	0.010	1.31	0.399	/	
			10	QPSK	Hotspot on	50%	50	21350/2560	20.40	19.31	0.257	0.024	1.29	0.330	/	
		Front Side	10	QPSK	Hotspot on	1	50	21350/2560	20.40	19.23	0.205	0.019	1.31	0.268	/	
			10	QPSK	Hotspot on	50%	50	21350/2560	20.40	19.31	0.171	-0.022	1.29	0.220	/	
		Left Edge	10	QPSK	Hotspot on	1	50	21350/2560	20.40	19.23	0.000	0.000	1.31	0.000	/	
			10	QPSK	Hotspot on	50%	50	21350/2560	20.40	19.31	0.000	0.000	1.29	0.000	/	
		Right Edge	10	QPSK	Hotspot on	1	50	21350/2560	20.40	19.23	0.227	0.023	1.31	0.297	/	
			10	QPSK	Hotspot on	50%	50	21350/2560	20.40	19.31	0.213	0.048	1.29	0.274	/	
		Top Edge	10	QPSK	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
			10	QPSK	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/	
		Bottom Edge	10	QPSK	Hotspot on	1	50	21350/2560	20.40	19.23	0.215	0.015	1.31	0.281	/	
			10	QPSK	Hotspot on	50%	50	21350/2560	20.40	19.31	0.173	0.032	1.29	0.222	/	
	DIV	Back Side	10	QPSK	Hotspot on	1	50	21350/2560	18.10	17.37	0.252	0.060	1.18	0.298	/	



		Front Side	10	QPSK	Hotspot on	50%	50	21350/2560	18.10	17.48	0.255	0.011	1.15	0.294	/	
			10	QPSK	Hotspot on	1	50	21350/2560	18.10	17.37	0.069	0.027	1.18	0.082	/	
		Left Edge	10	QPSK	Hotspot on	50%	50	21350/2560	18.10	17.48	0.078	0.013	1.15	0.090	/	
			10	QPSK	Hotspot on	1	50	21350/2560	18.10	17.37	0.241	-0.080	1.18	0.285	/	
		Right Edge	10	QPSK	Hotspot on	50%	50	21350/2560	18.10	17.48	0.231	0.021	1.15	0.266	/	
			10	QPSK	Hotspot on	1	50	21350/2560	18.10	17.37	0.000	0.000	1.18	0.000	/	
		Top Edge	10	QPSK	Hotspot on	50%	50	21350/2560	18.10	17.48	0.000	0.000	1.15	0.000	/	
			10	QPSK	Hotspot on	1	50	21350/2560	18.10	17.37	0.144	0.027	1.18	0.170	/	
		Bottom Edge	10	QPSK	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
			10	QPSK	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Main	Back Side Battery2	10	QPSK	Hotspot on	1	50	21350/2560	20.40	19.23	0.265	0.011	1.31	0.347	/		
	Back Side Battery3	10	QPSK	Hotspot on	1	50	21350/2560	20.40	19.23	0.252	0.048	1.31	0.330	/		
	Back Side Battery4	10	QPSK	Hotspot on	1	50	21350/2560	20.40	19.23	0.312	0.092	1.31	0.408	46		
LTE 7 (Variant)	Main	Back Side	10	QPSK	Hotspot on	1	50	21350/2560	20.40	19.23	0.183	-0.129	1.31	0.240	/	
	DIV	Back Side	10	QPSK	Hotspot on	1	50	21350/2560	18.10	17.37	0.226	0.160	1.18	0.267	/	

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
2.4G (Original)	ANT7	Back Side	10	802.11b	98.0%	Hotspot on	1/2412	18.00	16.61	0.568	0.170	1.41	0.798	/
		Front Side	10	802.11b	98.0%	Hotspot on	1/2412	18.00	16.61	0.234	0.016	1.41	0.329	/
		Left Edge	10	802.11b	98.0%	Hotspot on	1/2412	18.00	16.61	0.000	0.000	1.41	0.000	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Top Edge	10	802.11b	98.0%	Hotspot on	1/2412	18.00	16.61	0.046	0.025	1.41	0.065	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Back Side Battery2	10	802.11b	98.0%	Hotspot on	1/2412	18.00	16.61	0.532	-0.012	1.41	0.748	/
		Back Side Battery3	10	802.11b	98.0%	Hotspot on	1/2412	18.00	16.61	0.508	-0.049	1.41	0.714	/
		Back Side Battery4	10	802.11b	98.0%	Hotspot on	1/2412	18.00	16.61	0.595	0.038	1.41	0.836	47
2.4G (Variant)	ANT7	Back Side	10	802.11b	98.0%	Hotspot on	1/2412	18.00	16.61	0.462	0.070	1.41	0.649	
U-NII-1 (Original)	ANT8	Back Side	10	802.11nHT20(MCS0)	100.0%	Hotspot on	44/5220	17.00	15.93	0.284	0.028	1.28	0.363	/
		Front Side	10	802.11nHT20(MCS0)	100.0%	Hotspot on	44/5220	17.00	15.93	0.179	0.020	1.28	0.229	/
		Left Edge	10	802.11nHT20(MCS0)	100.0%	Hotspot on	44/5220	17.00	15.93	0.068	-0.032	1.28	0.087	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Top Edge	10	802.11nHT20(MCS0)	100.0%	Hotspot on	44/5220	17.00	15.92	0.202	0.010	1.28	0.259	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/



		Back Side Battery2	10	802.11nHT20(MCS0)	100.0%	Hotspot on	44/5220	17.00	15.93	0.165	0.045	1.28	0.211	/
		Back Side Battery3	10	802.11nHT20(MCS0)	100.0%	Hotspot on	44/5220	17.00	15.93	0.197	0.100	1.28	0.252	/
		Back Side Battery4	10	802.11nHT20(MCS0)	100.0%	Hotspot on	44/5220	17.00	15.93	0.243	0.000	1.28	0.311	/
U-NII-1 (Variant)	ANT8	Back Side	10	802.11nHT20(MCS0)	100.0%	Hotspot on	44/5220	17.00	15.93	0.198	-0.013	1.28	0.253	
U-NII-3 (Original)	ANT8	Back Side	10	802.11a	100.0%	Hotspot on	149/5745	17.00	15.33	0.228	0.023	1.47	0.335	/
		Front Side	10	802.11a	100.0%	Hotspot on	149/5745	17.00	15.33	0.109	0.018	1.47	0.160	/
		Left Edge	10	802.11a	100.0%	Hotspot on	149/5745	17.00	15.33	0.079	0.032	1.47	0.116	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Top Edge	10	802.11a	100.0%	Hotspot on	149/5745	17.00	15.33	0.169	0.011	1.47	0.248	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Back Side Battery2	10	802.11a	100.0%	Hotspot on	149/5745	17.00	15.33	0.284	0.038	1.47	0.417	/
		Back Side Battery3	10	802.11a	100.0%	Hotspot on	149/5745	17.00	15.33	0.302	0.024	1.47	0.444	48
		Back Side Battery4	10	802.11a	100.0%	Hotspot on	149/5745	17.00	15.33	0.253	0.049	1.47	0.372	/
U-NII-3 (Variant)	ANT8	Back Side	10	802.11a	100.0%	Hotspot on	149/5745	17.00	15.33	0.238	-0.020	1.47	0.350	
Bluetooth (Original)	ANT7	Back Side	10	DH5	76.0%	Full power	39/2441	12.00	10.73	0.146	0.100	1.76	0.257	49
		Front Side	10	DH5	76.0%	Full power	39/2441	12.00	10.73	0.042	0.020	1.76	0.074	/
		Left Edge	10	DH5	76.0%	Full power	39/2441	12.00	10.73	0.000	0.000	1.76	0.000	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Top Edge	10	DH5	76.0%	Full power	39/2441	12.00	10.73	0.000	0.000	1.76	0.000	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Back Side Battery2	10	DH5	76.0%	Full power	39/2441	12.00	10.73	0.112	0.013	1.76	0.197	/
		Back Side Battery3	10	DH5	76.0%	Full power	39/2441	12.00	10.73	0.106	0.048	1.76	0.187	/
		Back Side Battery4	10	DH5	76.0%	Full power	39/2441	12.00	10.73	0.118	0.024	1.76	0.208	/
Bluetooth (Variant)	ANT7	Back Side	10	DH5	76.0%	Full power	39/2441	12.00	10.73	0.073	-0.039	1.76	0.129	/



Product-specific 10g SAR Evaluation

Band	Antenna	Test Position	Mode	Power Reduction	RB	offset	Channel Frequency (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Scaling Factor	Report SAR1g	0mm SAR	
GSM 1900 (Original)	DIV	Back Side	10	GPRS 2TX Slots	Full power	-	-	661/1880	25.50	0.184	2.00	0.367	NO	
		Front Side	10	GPRS 2TX Slots	Full power	-	-	661/1880	25.50	0.119	2.00	0.237	NO	
		Left Edge	10	GPRS 2TX Slots	Full power	-	-	661/1880	25.50	0.000	2.00	0.000	NO	
		Right Edge	10	GPRS 2TX Slots	Full power	-	-	661/1880	25.50	0.000	2.00	0.000	NO	
		Top Edge	10	GPRS 2TX Slots	Full power	-	-	661/1880	25.50	0.290	2.00	0.579	NO	
		Bottom Edge	10	GPRS 2TX Slots	Full power	-	-	661/1880	N/A	N/A	N/A	N/A	N/A	NO
WCDMA II (Original)	Main	Back Side	10	RMC	Full power	-	-	9400/1880	23.50	0.684	1.41	0.966	NO	
		Front Side	10	RMC	Full power	-	-	9400/1880	23.50	0.359	1.41	0.507	NO	
		Left Edge	10	RMC	Full power	-	-	9400/1880	23.50	0.000	1.41	0.000	NO	
		Right Edge	10	RMC	Full power	-	-	9400/1880	23.50	0.275	1.41	0.388	NO	
		Top Edge	10	RMC	Full power	-	-	9400/1880	N/A	N/A	N/A	N/A	NO	
		Bottom Edge	10	RMC	Full power	-	-	9400/1880	23.50	0.943	1.41	1.332	Yes	
	DIV	Back Side	10	RMC	Full power	-	-	9400/1880	19.70	0.248	2.00	0.495	NO	
		Front Side	10	RMC	Full power	-	-	9400/1880	19.70	0.156	2.00	0.312	NO	
		Left Edge	10	RMC	Full power	-	-	9400/1880	19.70	0.039	2.00	0.078	NO	
		Right Edge	10	RMC	Full power	-	-	9400/1880	19.70	0.000	2.00	0.000	NO	
		Top Edge	10	RMC	Full power	-	-	9400/1880	19.70	0.451	2.00	0.900	NO	
		Bottom Edge	10	RMC	Full power	-	-	9400/1880	N/A	N/A	N/A	N/A	NO	
WCDMA V (Original)	DIV	Back Side	10	RMC	Full power	-	-	4183/836.6	24.70	0.204	1.58	0.323	NO	
		Front Side	10	RMC	Full power	-	-	4183/836.6	24.70	0.147	1.58	0.232	NO	
		Left Edge	10	RMC	Full power	-	-	4183/836.6	24.70	0.000	1.58	0.000	NO	
		Right Edge	10	RMC	Full power	-	-	4183/836.6	24.70	0.104	1.58	0.165	NO	
		Top Edge	10	RMC	Full power	-	-	4183/836.6	24.70	0.129	1.58	0.205	NO	
		Bottom Edge	10	RMC	Full power	-	-	4183/836.6	N/A	N/A	N/A	N/A	NO	
LTE 5 (Original)	DIV	Back Side	10	QPSK	Full power	1	25	20525/836.5	23.70	0.207	1.26	0.261	NO	
			10	QPSK	Full power	50%	0	20525/836.5	23.70	0.175	1.26	0.220	NO	
		Front Side	10	QPSK	Full power	1	25	20525/836.5	23.70	0.130	1.26	0.164	NO	
			10	QPSK	Full power	50%	0	20525/836.5	23.70	0.109	1.26	0.137	NO	
		Left Edge	10	QPSK	Full power	1	25	20525/836.5	23.70	0.000	1.26	0.000	NO	
			10	QPSK	Full power	50%	0	20525/836.5	23.70	0.000	1.26	0.000	NO	
		Right Edge	10	QPSK	Full power	1	25	20525/836.5	23.70	0.072	1.26	0.091	NO	
			10	QPSK	Full power	50%	0	20525/836.5	23.70	0.061	1.26	0.076	NO	
		Top Edge	10	QPSK	Full power	1	25	20525/836.5	23.70	0.131	1.26	0.165	NO	
			10	QPSK	Full power	50%	0	20525/836.5	23.70	0.123	1.26	0.154	NO	
		Bottom Edge	10	QPSK	Full power	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO
			10	QPSK	Full power	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO
LTE 7 (Original)	Main	Back Side	10	QPSK	Full power	1	50	21350/2560	22.40	0.399	1.58	0.633	NO	
			10	QPSK	Full power	50%	50	21350/2560	22.40	0.330	1.58	0.524	NO	
		Front Side	10	QPSK	Full power	1	50	21350/2560	22.40	0.268	1.58	0.425	NO	



DIV		10	QPSK	Full power	50%	50	21350/2560	22.40	0.220	1.58	0.348	NO		
		Left Edge	10	QPSK	Full power	1	50	21350/2560	22.40	0.000	1.58	0.000	NO	
			10	QPSK	Full power	50%	50	21350/2560	22.40	0.000	1.58	0.000	NO	
		Right Edge	10	QPSK	Full power	1	50	21350/2560	22.40	0.297	1.58	0.471	NO	
			10	QPSK	Full power	50%	50	21350/2560	22.40	0.274	1.58	0.434	NO	
		Top Edge	10	QPSK	Full power	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO
			10	QPSK	Full power	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO
		Bottom Edge	10	QPSK	Full power	1	50	21350/2560	22.40	0.281	1.58	0.446	NO	
			10	QPSK	Full power	50%	50	21350/2560	22.40	0.222	1.58	0.352	NO	
			Back Side	10	QPSK	Full power	1	50	21350/2560	18.60	0.298	1.12	0.335	NO
				10	QPSK	Full power	50%	50	21350/2560	18.60	0.294	1.12	0.330	NO
			Front Side	10	QPSK	Full power	1	50	21350/2560	18.60	0.082	1.12	0.092	NO
				10	QPSK	Full power	50%	50	21350/2560	18.60	0.090	1.12	0.101	NO
			Left Edge	10	QPSK	Full power	1	50	21350/2560	18.60	0.285	1.12	0.320	NO
	10			QPSK	Full power	50%	50	21350/2560	18.60	0.266	1.12	0.299	NO	
	Right Edge		10	QPSK	Full power	1	50	21350/2560	18.60	0.000	1.12	0.000	NO	
			10	QPSK	Full power	50%	50	21350/2560	18.60	0.000	1.12	0.000	NO	
	Top Edge		10	QPSK	Full power	1	50	21350/2560	18.60	0.170	1.12	0.191	NO	
			10	QPSK	Full power	50%	50	21350/2560	18.60	0.190	1.12	0.214	NO	
	Bottom Edge	10	QPSK	Full power	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO	
		10	QPSK	Full power	50%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NO	



Product-specific 10g SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR10g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR10g (W/kg)	Plot No.
WCDMA II (Original)	Main	Bottom Edge	0	RMC	Body SAR	-	-	9400/1880	23.50	22.24	1.430	0.021	1.34	1.911	/
	Main	Bottom Edge Battery2	0	RMC	Body SAR	-	-	9400/1880	23.50	22.24	1.460	0.018	1.34	1.951	/
	Main	Bottom Edge Battery3	0	RMC	Body SAR	-	-	9400/1880	23.50	22.24	1.520	-0.010	1.34	2.032	/
	Main	Bottom Edge Battery4	0	RMC	Body SAR	-	-	9400/1880	23.50	22.24	1.380	0.000	1.34	1.845	/
WCDMA II (Variant)	Main	Bottom Edge	0	RMC	Body SAR	-	-	9400/1880	23.50	22.24	1.570	0.030	1.34	2.098	50

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR10g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR10g (W/kg)	Plot No.
U-NII-2A (Original)	ANT8	Back Side	0	802.11a	100.0%	Receiver off	-	-	52/5260	19.00	17.59	0.688	-0.020	1.38	0.952	/
		Front Side	0	802.11a	100.0%	Receiver off	-	-	52/5260	19.00	17.59	0.448	-0.026	1.38	0.620	/
		Left Edge	0	802.11a	100.0%	Receiver off	-	-	52/5260	19.00	17.59	0.021	-0.035	1.38	0.029	/
		Right Edge	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Top Edge	0	802.11a	100.0%	Receiver off	-	-	52/5260	19.00	17.59	0.389	0.025	1.38	0.538	/
		Bottom Edge	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Back Side Battery2	0	802.11a	100.0%	Receiver off	-	-	52/5260	19.00	17.59	0.738	-0.020	1.38	1.021	/
		Back Side Battery3	0	802.11a	100.0%	Receiver off	-	-	52/5260	19.00	17.59	0.635	0.048	1.38	0.879	/
		Back Side Battery4	0	802.11a	100.0%	Receiver off	-	-	52/5260	19.00	17.59	0.648	-0.100	1.38	0.897	/
U-NII-2A (Variant)	ANT8	Back Side	0	802.11a	100.0%	Receiver off	-	-	52/5260	19.00	17.59	0.583	4.470	1.38	0.807	/
U-NII-2C (Original)	ANT8	Back Side	0	802.11a	100.0%	Receiver off	-	-	116/5580	19.00	17.64	0.872	0.150	1.37	1.193	51
		Front Side	0	802.11a	100.0%	Receiver off	-	-	116/5580	19.00	17.64	0.406	0.012	1.37	0.555	/
		Left Edge	0	802.11a	100.0%	Receiver off	-	-	116/5580	19.00	17.64	0.027	-0.001	1.37	0.037	/
		Right Edge	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Top Edge	0	802.11a	100.0%	Receiver off	-	-	116/5580	19.00	17.64	0.317	0.012	1.37	0.434	/
		Bottom Edge	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Back Side Battery2	0	802.11a	100.0%	Receiver off	-	-	116/5580	19.00	17.64	0.832	0.030	1.37	1.138	/
		Back Side Battery3	0	802.11a	100.0%	Receiver off	-	-	116/5580	19.00	17.64	0.785	0.049	1.37	1.074	/
		Back Side Battery4	0	802.11a	100.0%	Receiver off	-	-	116/5580	19.00	17.64	0.816	-0.011	1.37	1.116	/



U-NII-2C (Variant)	ANT8	Back Side	0	802.11a	100.0%	Receiver off	-	-	116/5580	19.00	17.64	0.808	0.051	1.37	1.105	/
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10.3 Simultaneous Transmission Analysis

Simultaneous Transmission Configurations	Head	Body-worn	Hotspot	Product Specific 10-g SAR
Main Antenna + Wi-Fi 2.4G	Yes	Yes	Yes	Yes
Main Antenna + Wi-Fi 5G	Yes	Yes	Yes	Yes
Main Antenna + Bluetooth	Yes	Yes	Yes	Yes
Main Antenna + Wi-Fi 5G + Bluetooth	Yes	Yes	Yes	Yes
Div Antenna + Wi-Fi 2.4G	Yes	Yes	Yes	Yes
Div Antenna + Wi-Fi 5G	Yes	Yes	Yes	Yes
Div Antenna + Bluetooth	Yes	Yes	Yes	Yes
Div Antenna + Wi-Fi 5G + Bluetooth	Yes	Yes	Yes	Yes
Wi-Fi 2.4G + Bluetooth	NA	NA	NA	NA
Wi-Fi 2.4G + Wi-Fi 5G	NA	NA	NA	NA
Main Antenna + Div Antenna	NA	NA	NA	NA

General Note:

1. The Scaled SAR summation is calculated based on the same configuration and test position.
2. Per KDB 447498 D01, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1.6W/kg, simultaneously transmission SAR measurement is not necessary.
 - ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - iii) If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.

The maximum SAR_{1g/10g} Value for Main-Antenna

SAR _{1g/10g} (W/kg)		GSM 850	GSM 1900	WCDMA Band II	WCDMA Band V	LTE 5	LTE 7	MAX. SAR _{1g/10g}
Test Position								
Head	Left Cheek	0.202	0.081	0.211	0.241	0.234	0.151	0.241
	Left Tilt	0.066	0.030	0.121	0.092	0.095	0.125	0.125
	Right Cheek	0.137	0.062	0.158	0.194	0.210	0.289	0.289
	Right Tilt	0.063	0.061	0.140	0.076	0.057	0.086	0.140
Body worn	Back Side	0.246	0.207	0.454	0.309	0.356	0.265	0.454
	Front Side	0.202	0.109	0.253	0.261	0.310	0.164	0.310
Hotspot	Back Side	0.413	0.321	0.684	0.535	0.642	0.408	0.684
	Front Side	0.316	0.172	0.359	0.428	0.426	0.268	0.428
	Left Edge	0.220	0.000	0.000	0.288	0.382	0.000	0.382
	Right Edge	0.000	0.100	0.275	0.000	0.202	0.297	0.297
	Top Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom Edge	0.090	0.509	0.727	0.154	0.263	0.281	0.727
Product Specific 10-g SAR	Back Side	NA	NA	NA	NA	NA	NA	N/A
	Front Side	NA	NA	NA	NA	NA	NA	N/A
	Left Edge	NA	NA	NA	NA	NA	NA	N/A
	Right Edge	NA	NA	NA	NA	NA	NA	N/A
	Top Edge	NA	NA	NA	NA	NA	NA	N/A
	Bottom Edge	NA	NA	2.098	NA	NA	NA	2.098

The maximum SAR_{1g/10g} Value for Div-Antenna

SAR _{1g/10g} (W/kg)		GSM 850	GSM 1900	WCDMA Band II	WCDMA Band V	LTE 5	LTE 7	MAX. SAR _{1g/10g}
Test Position								
Head	Left Cheek	0.447	0.335	0.378	0.342	0.259	0.478	0.478
	Left Tilt	0.339	0.470	0.514	0.267	0.236	0.495	0.514
	Right Cheek	0.529	0.449	0.619	0.499	0.596	0.462	0.619
	Right Tilt	0.426	0.595	0.848	0.369	0.415	0.585	0.848
Body worn	Back Side	0.120	0.107	0.351	0.181	0.166	0.183	0.351
	Front Side	0.102	0.059	0.227	0.134	0.111	0.056	0.227
Hotspot	Back Side	0.245	0.184	0.248	0.204	0.207	0.298	0.298
	Front Side	0.115	0.119	0.156	0.147	0.130	0.090	0.156
	Left Edge	0.000	0.000	0.039	0.000	0.000	0.285	0.285
	Right Edge	0.079	0.000	0.000	0.104	0.072	0.000	0.104
	Top Edge	0.147	0.290	0.470	0.129	0.131	0.190	0.470
	Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Product Specific 10-g SAR	Back Side	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Front Side	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Left Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Right Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Top Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A



About Wi-Fi2.4G Antenna and WWAN Antenna

SAR _{1g/10g} (W/kg)		Main antenna	Div Antenna	Wi-Fi 2.4G	MAX. ΣSAR _{1g/10g}
Head	Left Cheek	0.241	0.478	0.601	1.079
	Left Tilt	0.125	0.514	0.281	0.795
	Right Cheek	0.289	0.619	0.175	0.794
	Right Tilt	0.140	0.848	0.152	1.000
Body worn	Back Side	0.454	0.351	0.584	1.038
	Front Side	0.310	0.227	0.287	0.597
Hotspot	Back Side	0.684	0.298	0.836	1.520
	Front Side	0.428	0.156	0.329	0.757
	Left Edge	0.382	0.285	0.000	0.382
	Right Edge	0.297	0.104	N/A	0.297
	Top Edge	N/A	0.470	0.065	0.535
	Bottom Edge	0.727	N/A	N/A	0.727
Product Specific 10-g SAR	Back Side	N/A	N/A	N/A	N/A
	Front Side	N/A	N/A	N/A	N/A
	Left Edge	N/A	N/A	N/A	N/A
	Right Edge	N/A	N/A	N/A	N/A
	Top Edge	N/A	N/A	N/A	N/A
	Bottom Edge	2.098	N/A	N/A	2.098

Note: 1. The value with blue color is the maximum ΣSAR_{1g/10g} Value.
 2. MAX. ΣSAR_{1g/10g} = Unlicensed SAR_{MAX} + Licensed SAR_{MAX}

About BT and Wi-Fi 5G Antennas and WWAN Antenna

SAR _{1g/10g} (W/kg)		Main antenna	Div Antenna	Wi-Fi 5G				Bluetooth	MAX. ΣSAR _{1g/10g}
				U-NII-1	U-NII-2A	U-NII-2C	U-NII-3		
Test Position									
Head	Left Cheek	0.241	0.478	0.390	0.310	0.346	0.321	0.264	1.132
	Left Tilt	0.125	0.514	0.157	0.371	0.338	0.324	0.091	0.976
	Right Cheek	0.289	0.619	0.336	0.106	0.131	0.179	0.056	1.011
	Right Tilt	0.140	0.848	0.091	0.132	0.090	0.152	0.050	1.050
Body worn	Back Side	0.454	0.351	0.298	0.263	0.408	0.380	0.257	1.119
	Front Side	0.310	0.227	0.122	0.122	0.165	0.167	0.074	0.551
Hotspot	Back Side	0.684	0.298	0.363	N/A	N/A	0.444	0.257	1.385
	Front Side	0.428	0.156	0.229	N/A	N/A	0.160	0.074	0.731
	Left Edge	0.382	0.285	0.087	N/A	N/A	0.116	0.000	0.498
	Right Edge	0.297	0.104	N/A	N/A	N/A	N/A	N/A	0.297
	Top Edge	N/A	0.470	0.259	N/A	N/A	0.248	0.000	0.729
	Bottom Edge	0.727	N/A	N/A	N/A	N/A	N/A	N/A	0.727
Product Specific	Back Side	N/A	N/A	N/A	1.021	1.193	N/A	N/A	1.193
	Front Side	N/A	N/A	N/A	0.620	0.555	N/A	N/A	0.620



10-g SAR	Left Edge	N/A	N/A	N/A	0.029	0.037	N/A	N/A	0.037
	Right Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Top Edge	N/A	N/A	N/A	0.538	0.434	N/A	N/A	0.538
	Bottom Edge	2.098	N/A	N/A	N/A	N/A	N/A	N/A	2.098

Note: 1. The value with blue color is the maximum $\Sigma SAR_{1g/10g}$ Value.

2. MAX. $\Sigma SAR_{1g/10g} = \text{Unlicensed } SAR_{MAX} + \text{Licensed } SAR_{MAX}$

MAX. $\Sigma SAR_{1g} = 1.520 \text{ W/kg} < 1.6 \text{ W/kg}$, MAX. $SAR_{10g} = 2.098 \text{ W/kg} < 4 \text{ W/kg}$ so the Simultaneous transmission SAR with volum scan are not required for BT/ Wi-Fi Antenna and Main Antenna/Div Antenna.

Conclusion:

According to the KDB 690783 D01 section 1) d) i), when the sum of 1-g SAR applies for simultaneous transmission SAR test exclusion, the highest sum of 1-g SAR according to the highest reported stand-alone SAR values is used, and the highest Reported SAR for simultaneous transmission exposure conditions is 1.520W/kg



11 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, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528- 2013 is not required in SAR reports submitted for equipment approval. This also applies to the 10-g SAR required for phablets in KDB Publication 648474.

*******END OF REPORT *******

ANNEX A: Test Layout

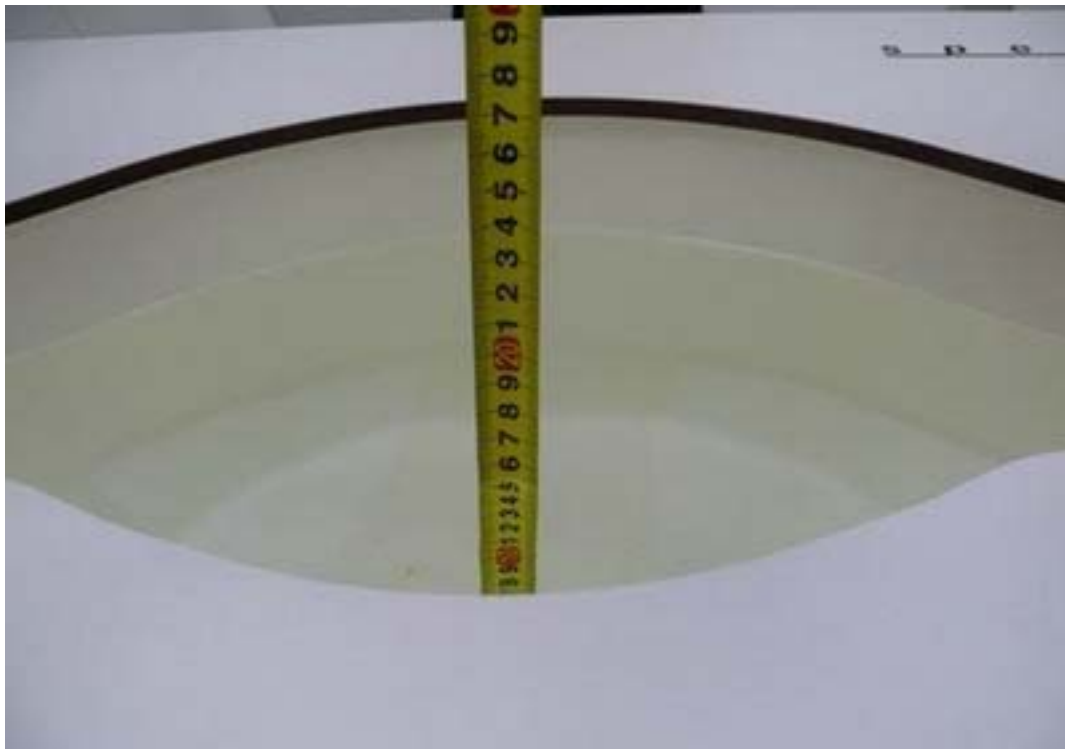


Tissue Simulating Liquids

For the measurement of the field distribution inside the flat phantom with DASy, the phantom must be filled with around 25 liters of homogeneous body tissue simulating liquid. For Head and Body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm, which is shown in Picture 3 and Picture 4.



Picture 3: liquid depth in the head Phantom



Picture 4: Liquid depth in the flat Phantom

ANNEX B: System Check Results

Original

Plot 1 System Performance Check at 835 MHz TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d020

Date: 2022/7/18

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.88 \text{ S/m}$; $\epsilon_r = 41.4$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.64 mW/g

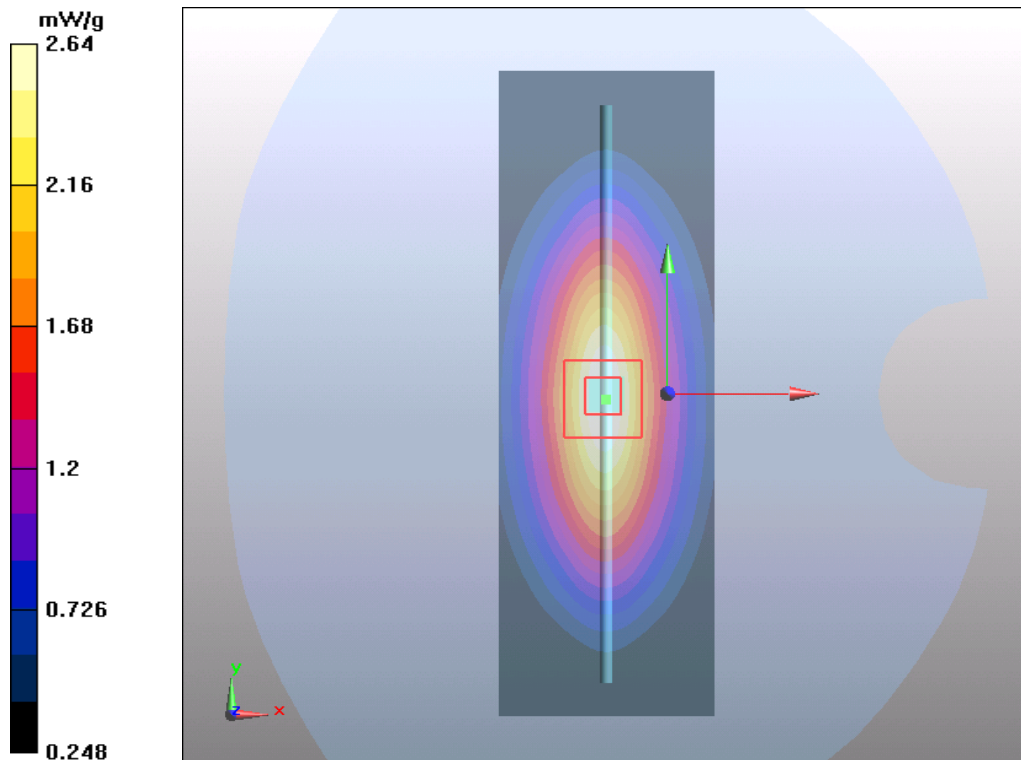
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.4 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 2.64 mW/g



Plot 2 System Performance Check at 835 MHz TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d020

Date: 2022/7/19

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.87 \text{ S/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.59 mW/g

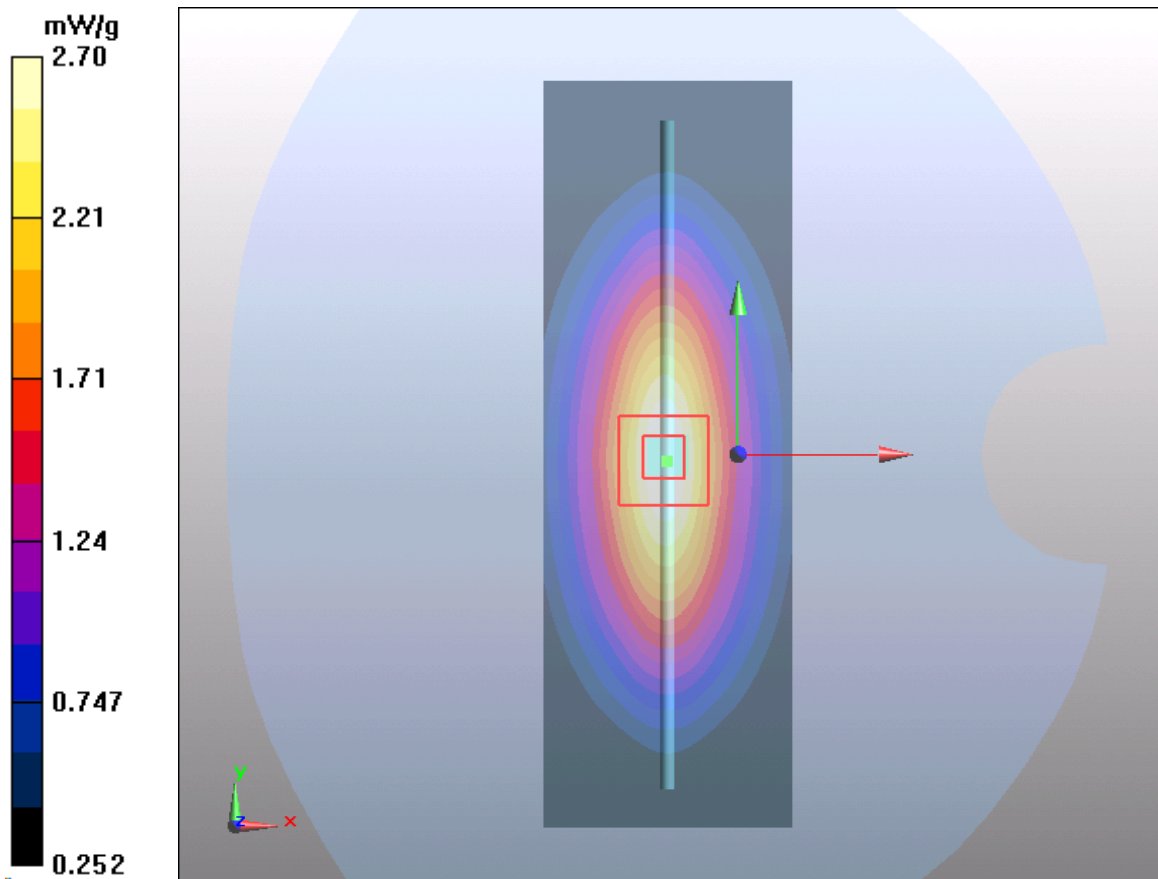
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.3 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.46 mW/g; SAR(10 g) = 1.65 mW/g

Maximum value of SAR (measured) = 2.70 mW/g



Plot 3 System Performance Check at 835 MHz TSL**DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d020**

Date: 2022/7/20

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.92 \text{ S/m}$; $\epsilon_r = 41.4$; $\rho = 1000 \text{ kg/m}^3$ Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.64 mW/g

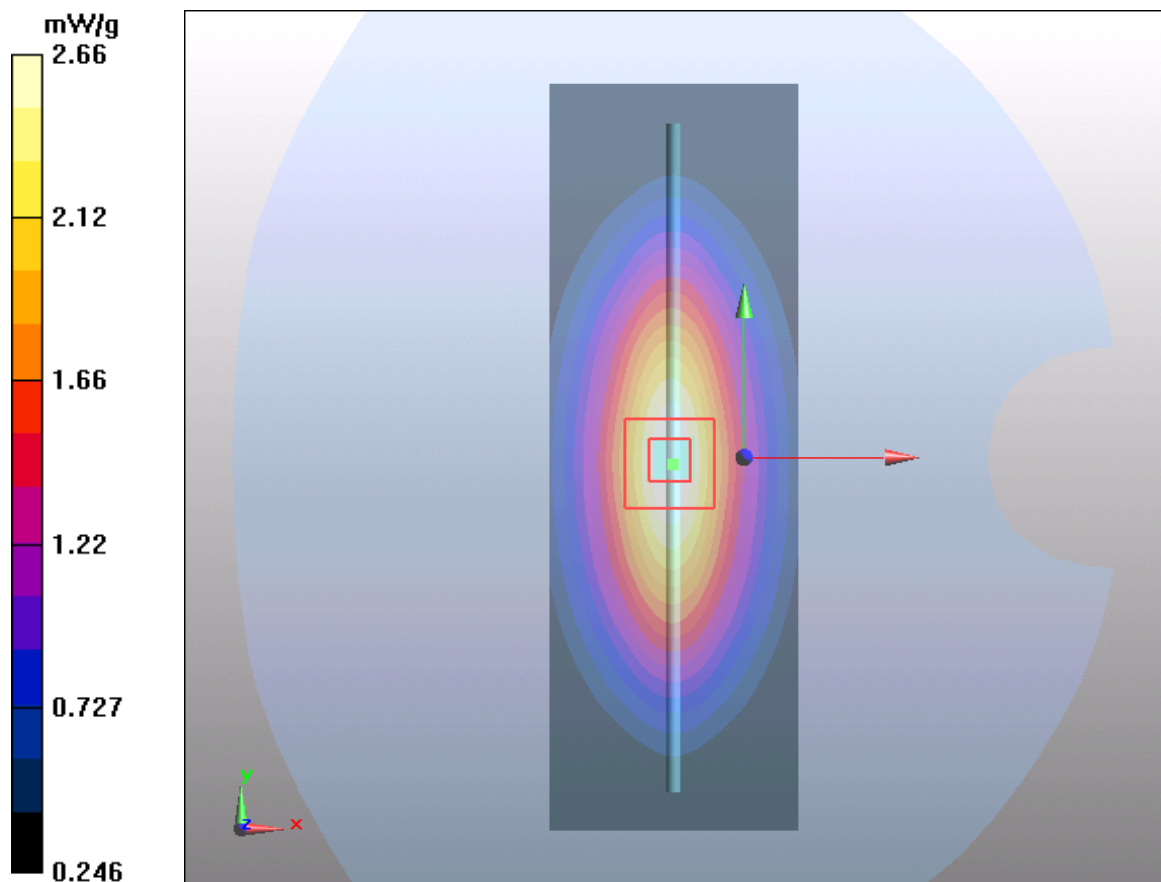
d=15mm, Pin=250mW/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.4 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.43 mW/g; SAR(10 g) = 1.61 mW/g

Maximum value of SAR (measured) = 2.66 mW/g



Plot 4 System Performance Check at 835 MHz TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d020

Date: 2022/7/21

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.89 \text{ S/m}$; $\epsilon_r = 41.3$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 2.71 mW/g

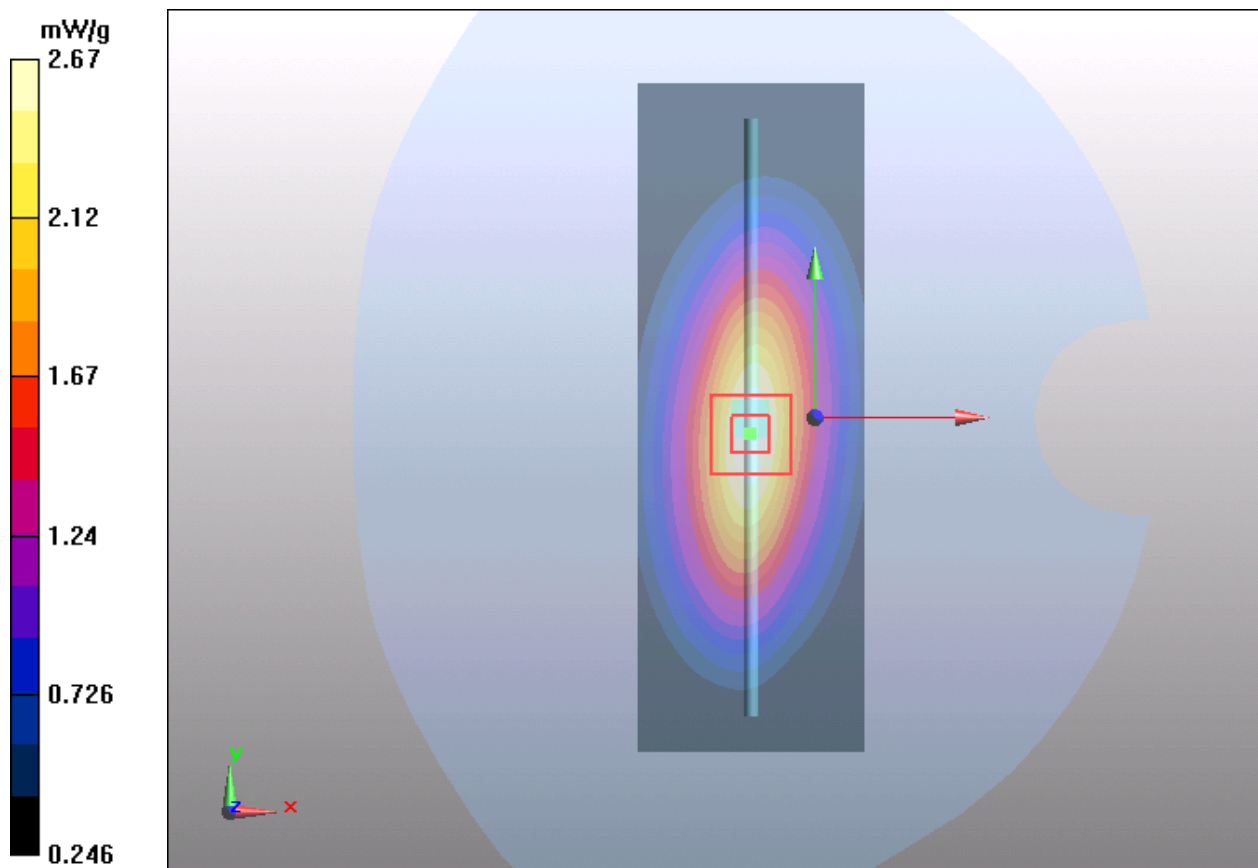
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.2 V/m; Power Drift = -0.021 dB

Peak SAR (extrapolated) = 3.79 W/kg

SAR(1 g) = 2.51 mW/g; SAR(10 g) = 1.54 mW/g

Maximum value of SAR (measured) = 2.67 mW/g



Plot 5 System Performance Check at 1900 MHz TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d060

Date: 2022/7/22

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

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.41 \text{ S/m}$; $\epsilon_r = 40.1$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.3 mW/g

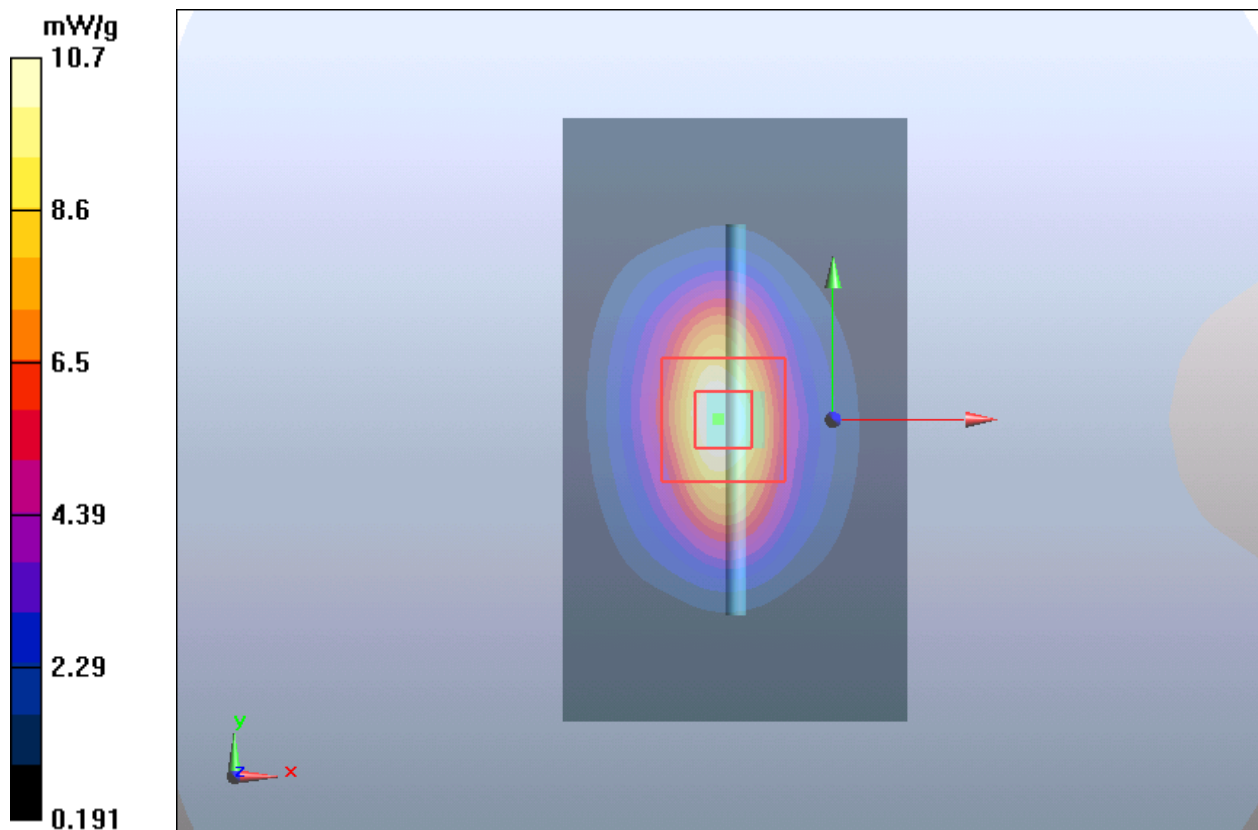
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 85.5 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.88 mW/g; SAR(10 g) = 4.9 mW/g

Maximum value of SAR (measured) = 10.7 mW/g



Plot 6 System Performance Check at 1900 MHz TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d060

Date: 2022/7/23

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.43$ S/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.23 mW/g

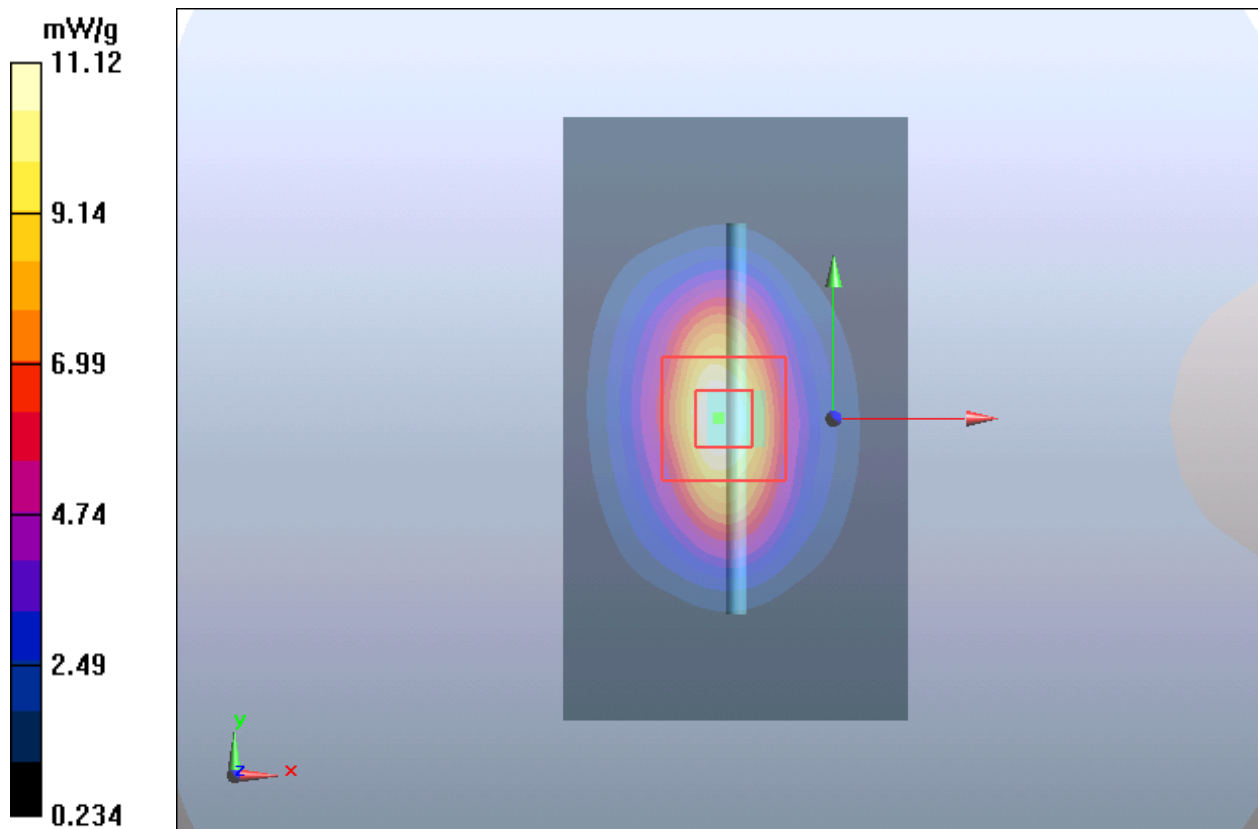
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 85.0 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.85 mW/g; SAR(10 g) = 4.93 mW/g

Maximum value of SAR (measured) = 11.12 mW/g



Plot 7 System Performance Check at 1900 MHz

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d060

Date: 2022/7/24

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

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.40 \text{ S/m}$; $\epsilon_r = 40.0$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 12.9 mW/g

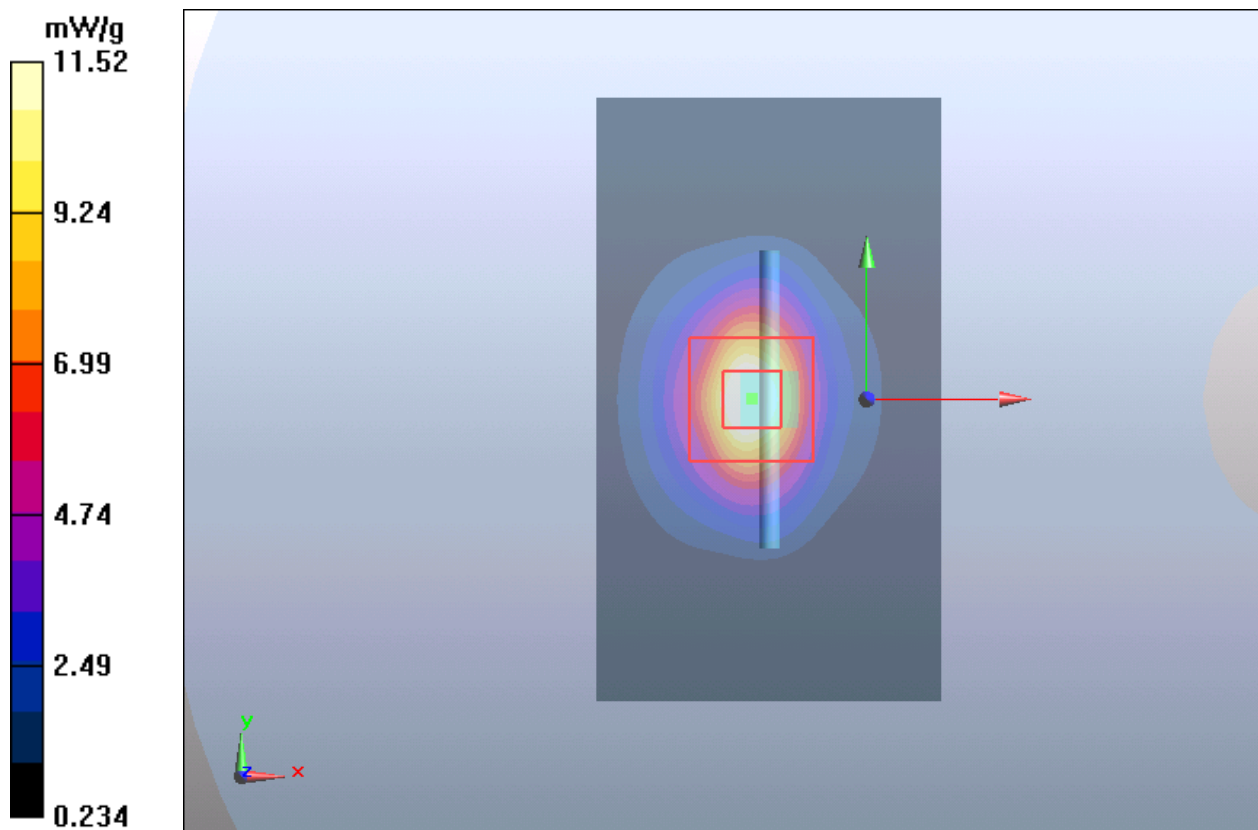
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 87.8 V/m; Power Drift = 0.030 dB

Peak SAR (extrapolated) = 20.1 W/kg

SAR(1 g) = 9.55 mW/g; SAR(10 g) = 4.99 mW/g

Maximum value of SAR (measured) = 11.52 mW/g



Plot 8 System Performance Check at 1900 MHz

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d060

Date: 2022/7/25

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

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.34 \text{ S/m}$; $\epsilon_r = 40.5$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 12.74 mW/g

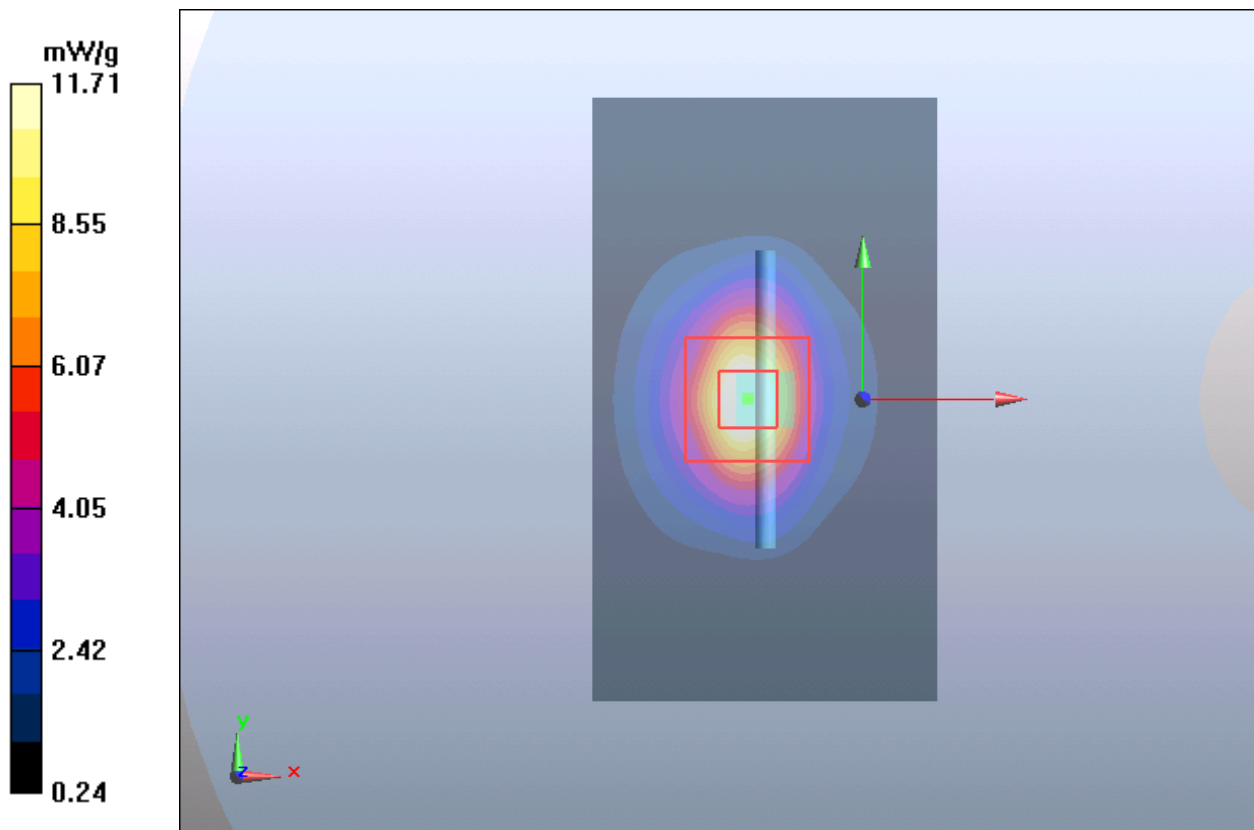
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 87.5 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 20.0 W/kg

SAR(1 g) = 9.60 mW/g; SAR(10 g) = 4.98 mW/g

Maximum value of SAR (measured) = 11.71 mW/g



Plot 9 System Performance Check at 2450 MHz TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 786

Date: 2022/7/12

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.81$ S/m; $\epsilon_r = 38.6$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 18.2 mW/g

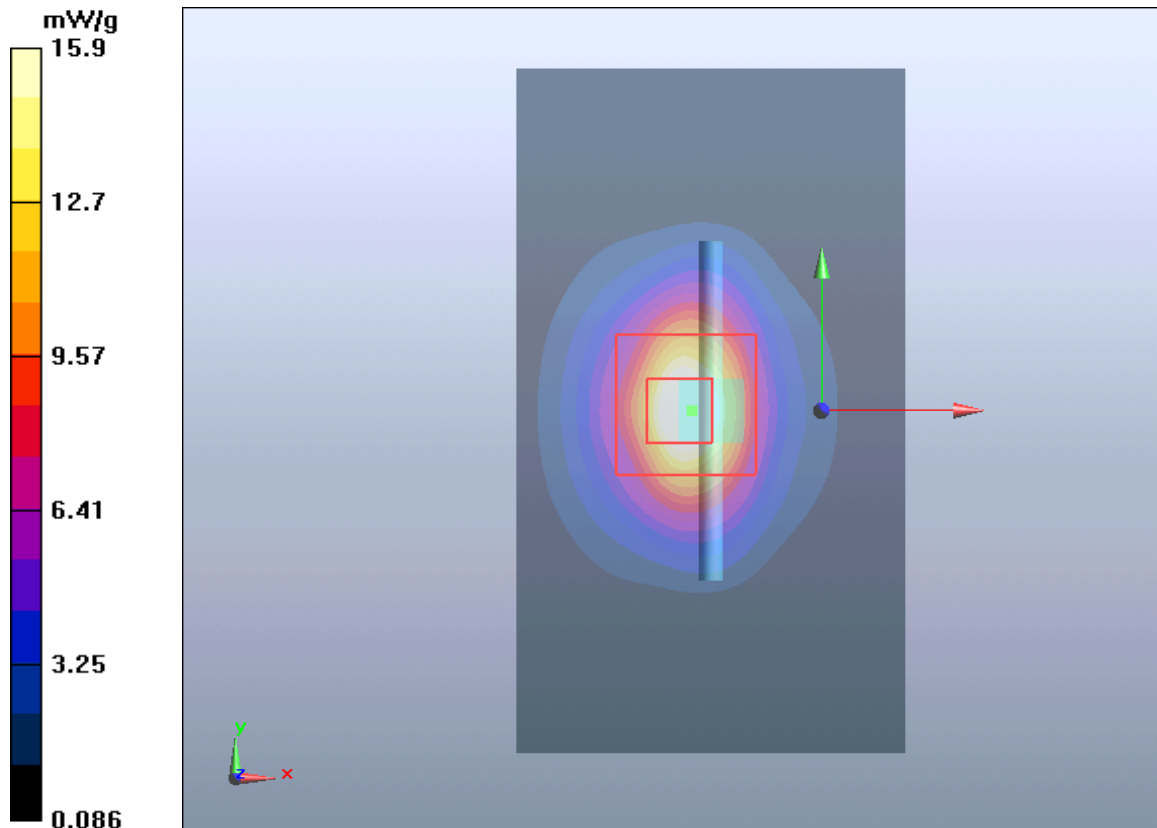
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 88.8 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 30 W/kg

SAR(1 g) = 13.7 mW/g; SAR(10 g) = 6.22 mW/g

Maximum value of SAR (measured) = 15.9 mW/g



Plot 10 System Performance Check at 2600 MHz TSL

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025

Date: 2022/7/8

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.01$ S/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.439 mW/g

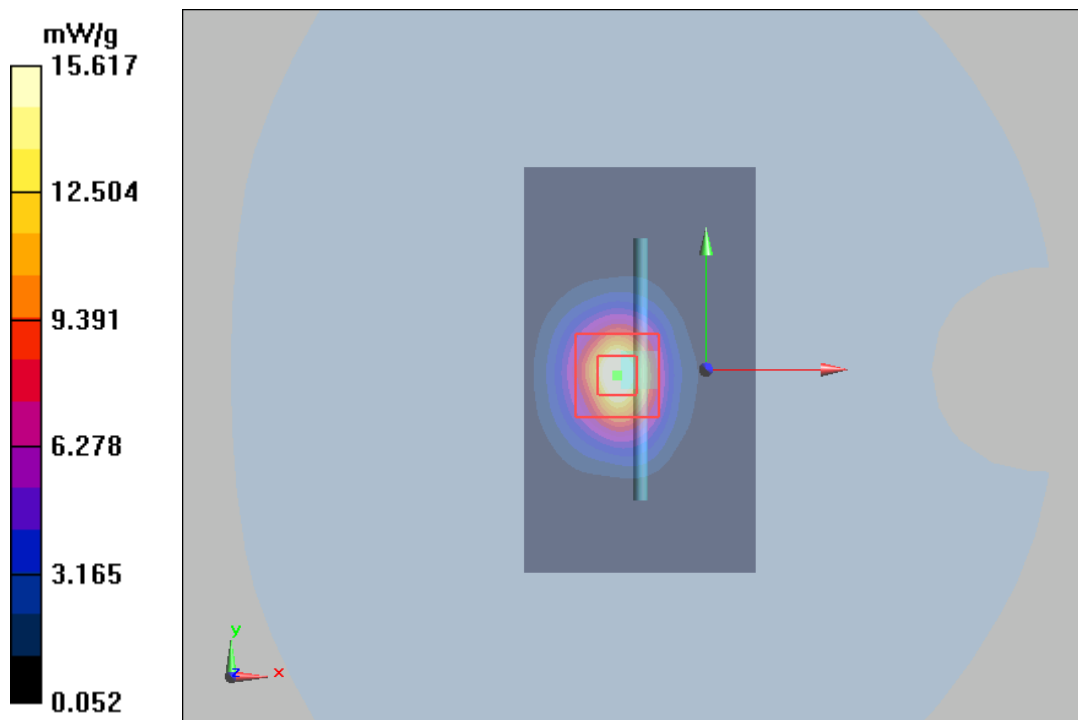
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.07 mW/g

Maximum value of SAR (measured) = 15.617 mW/g



Plot 11 System Performance Check at 2600 MHz TSL

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025

Date: 2022/7/9

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.94$ S/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.59 mW/g

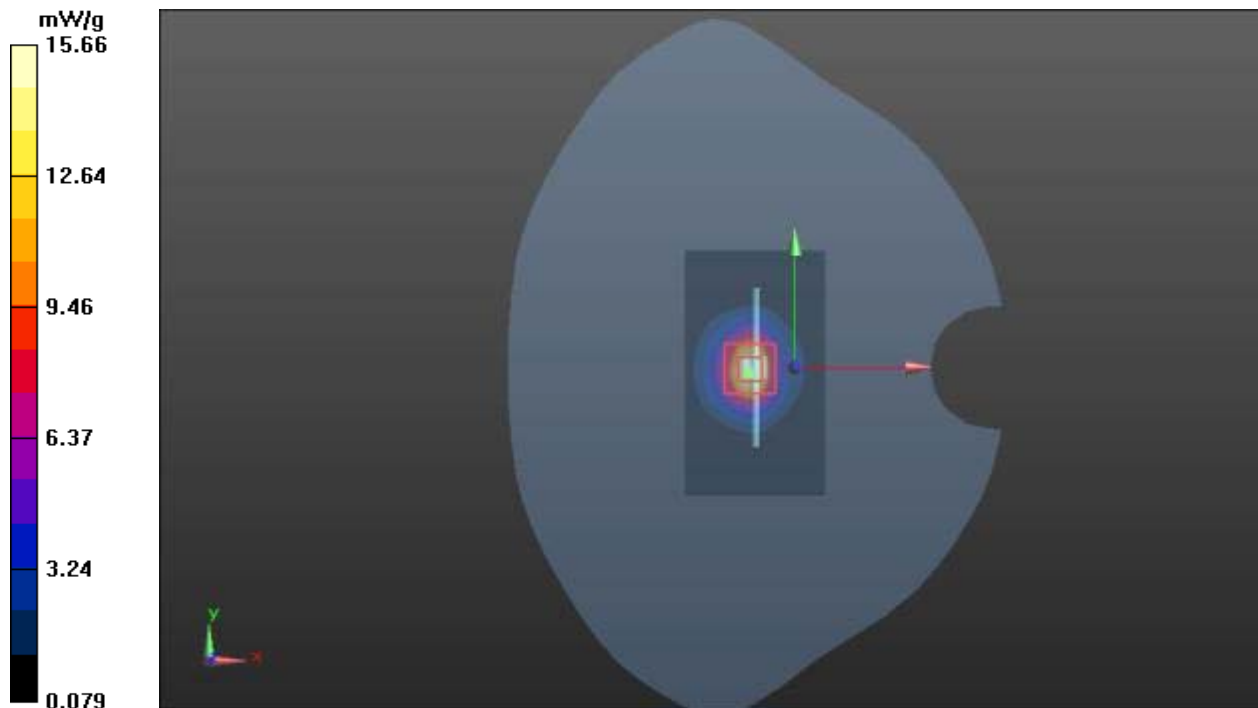
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

SAR(1 g) = 13.88 mW/g; SAR(10 g) = 6.09 mW/g

Maximum value of SAR (measured) = 15.66 mW/g



Plot 12 System Performance Check at 2600 MHz TSL

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025

Date: 2022/7/10

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.99$ S/m; $\epsilon_r = 38.3$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.32 mW/g

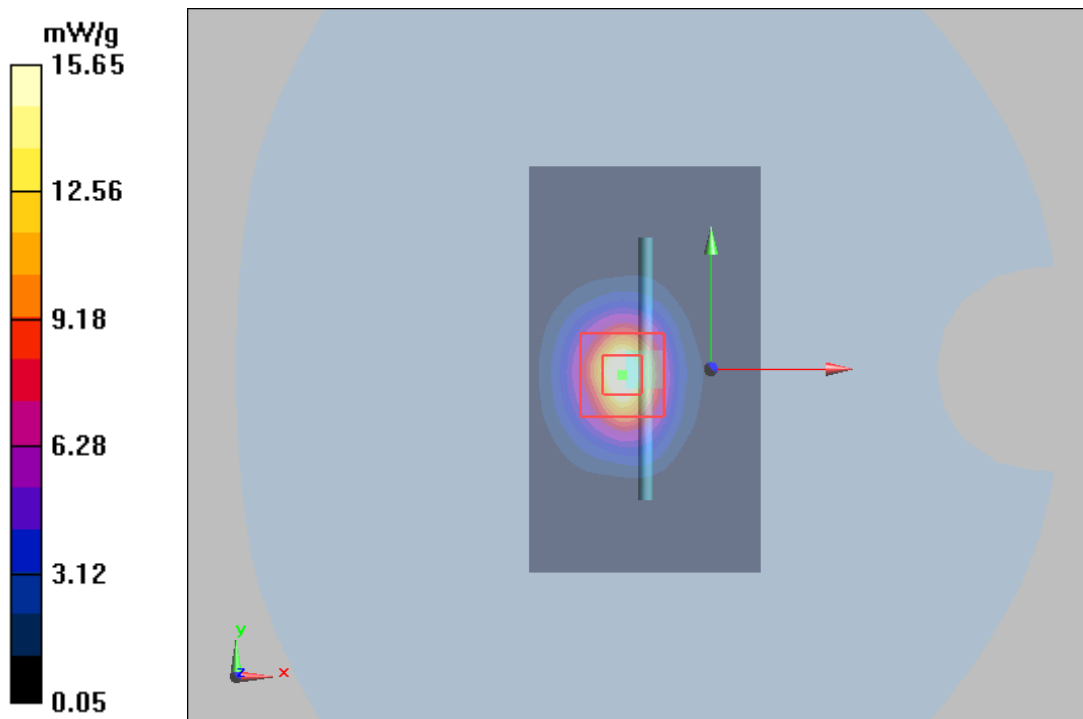
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.465 V/m; Power Drift = 0.146 dB

Peak SAR (extrapolated) = 31.85 W/kg

SAR(1 g) = 13.94 mW/g; SAR(10 g) = 6.11 mW/g

Maximum value of SAR (measured) = 15.65 mW/g



Plot 13 System Performance Check at 2600 MHz TSL

DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025

Date: 2022/7/11

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: $f = 2600$ MHz; $\sigma = 1.95$ S/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (6x10x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.59 mW/g

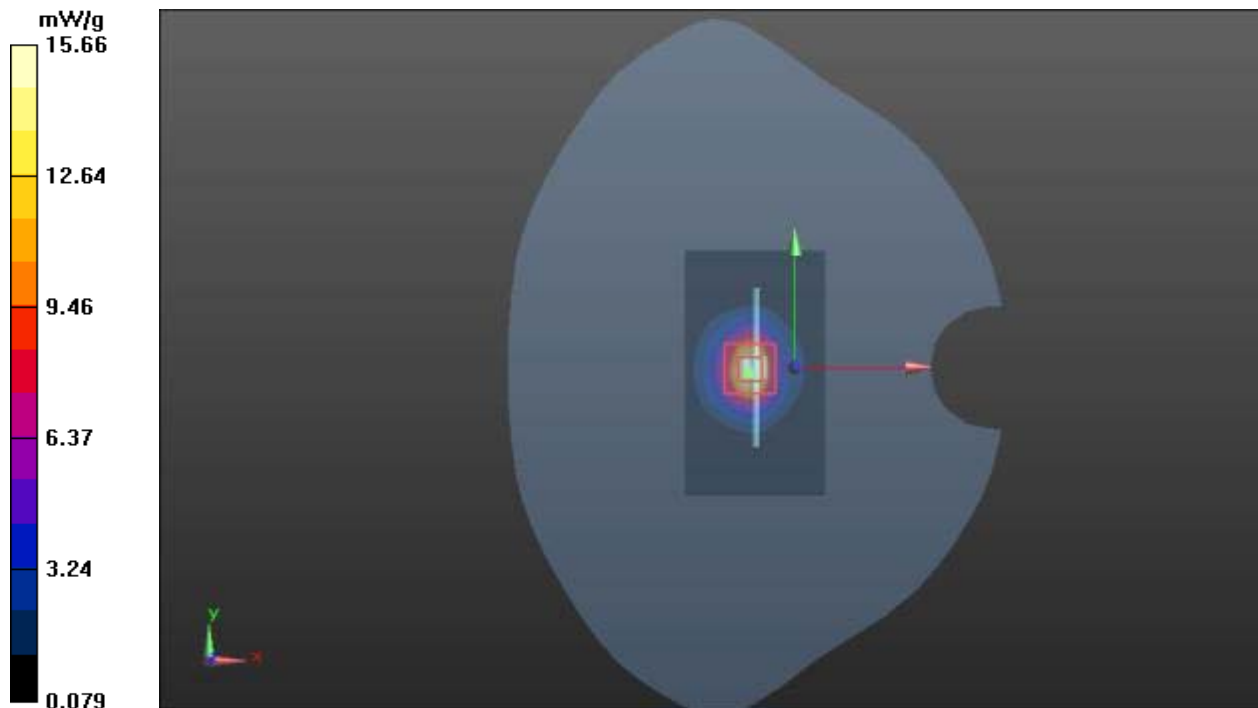
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.09 mW/g

Maximum value of SAR (measured) = 15.66 mW/g



Plot 14 System Performance Check at 5250 MHz TSL

DUT: Dipole 5250 MHz; Type: D5GHzV2; Serial: 1151

Date: 2022/7/26

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.80$ S/m; $\epsilon_r = 35.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.45, 5.45, 5.45); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 9.14 mW/g

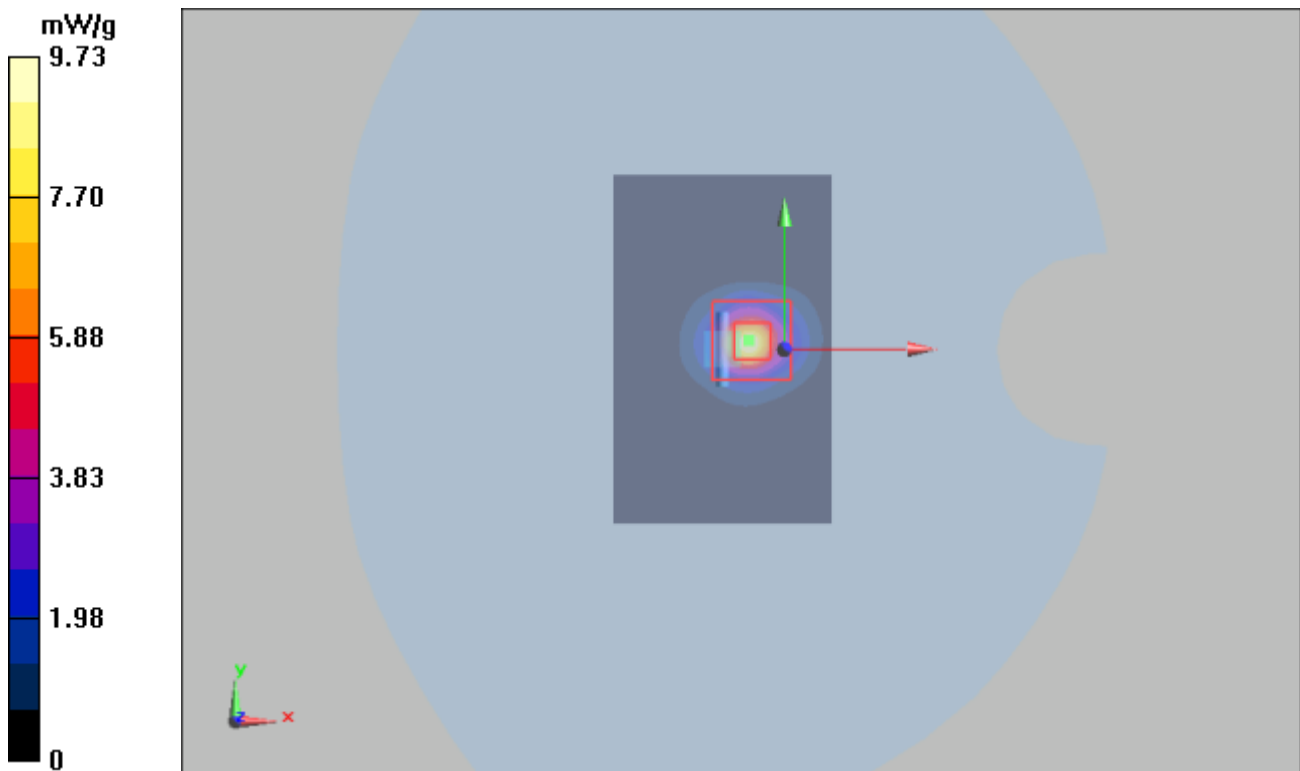
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 33.6 V/m; Power Drift = -0.095 dB

Peak SAR (extrapolated) = 52.2 W/kg

SAR(1 g) = 7.87 mW/g; SAR(10 g) = 2.25 mW/g

Maximum value of SAR (measured) = 9.73 mW/g



Plot 15 System Performance Check at 5600 MHz TSL

DUT: Dipole 5600 MHz; Type: D5GHzV2; Serial: 1151

Date: 2022/7/27

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.21$ S/m; $\epsilon_r = 34.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.25 mW/g

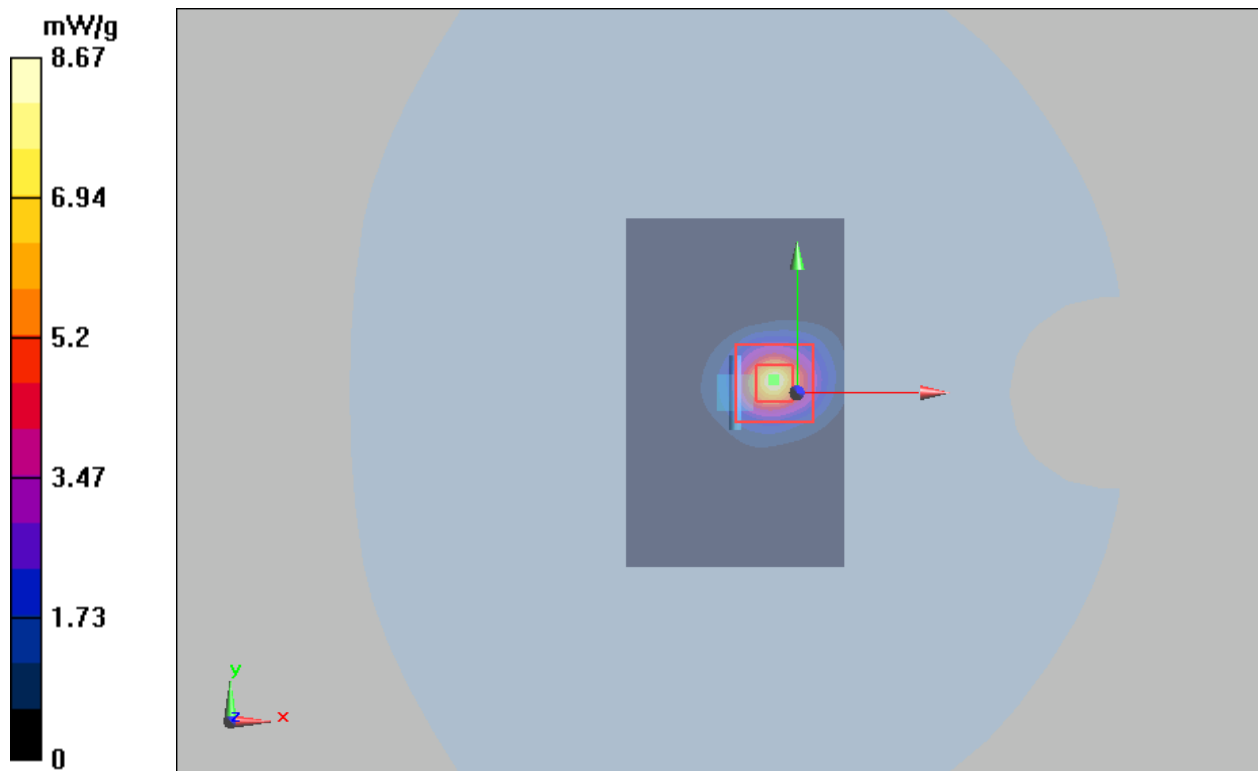
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 23.1 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 22.9 W/kg

SAR(1 g) = 7.67 mW/g; SAR(10 g) = 2.27 mW/g

Maximum value of SAR (measured) = 8.67 mW/g



Plot 16 System Performance Check at 5750 MHz TSL**DUT: Dipole 5750 MHz; Type: D5GHzV2; Serial: 1151**

Date: 2022/7/7

Communication System: CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.21$ S/m; $\epsilon_r = 34.9$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.04, 5.04, 5.04); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.31 mW/g

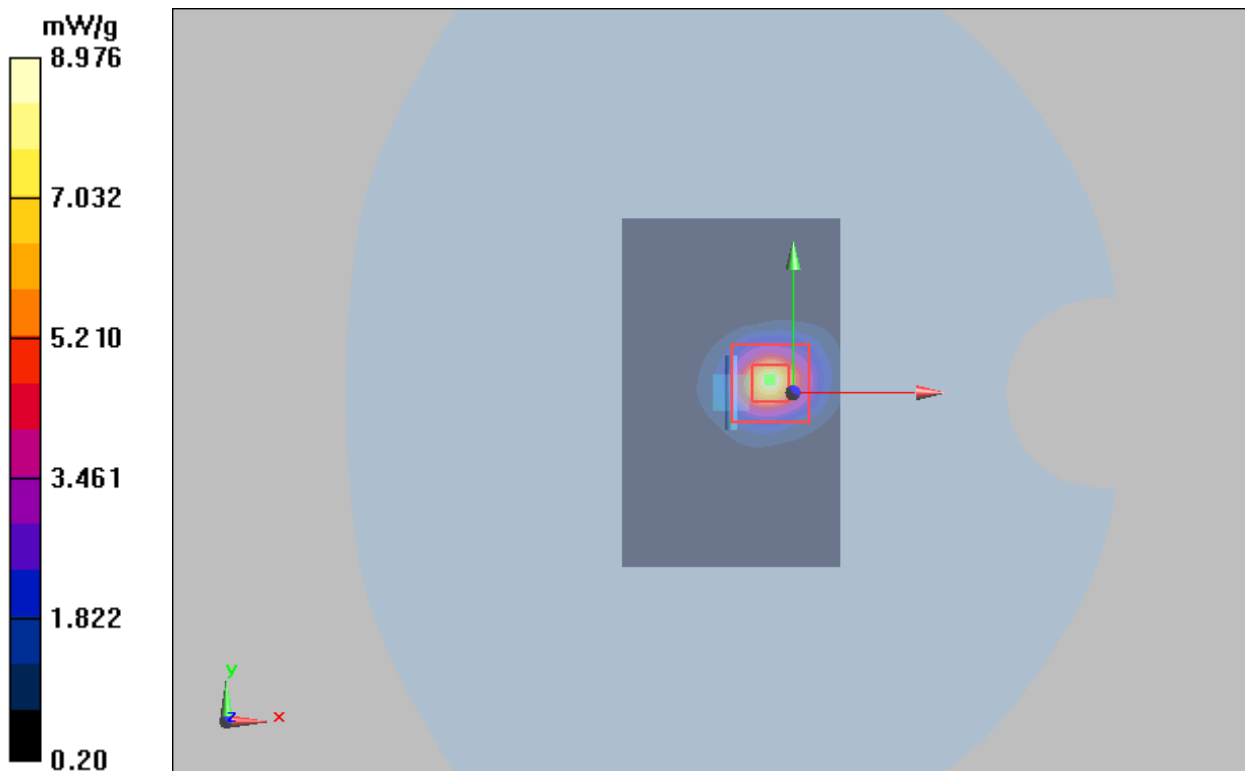
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 23.1 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 23.4 W/kg

SAR(1 g) = 7.66 mW/g; SAR(10 g) = 2.27 mW/g

Maximum value of SAR (measured) = 8.976 mW/g



Variant

Plot 17 System Performance Check at 835 MHz TSL

DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d020

Date: 2022/08/3

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.88 \text{ S/m}$; $\epsilon_r = 41.4$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=15mm, Pin=250mW/Area Scan (4x12x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.64 mW/g

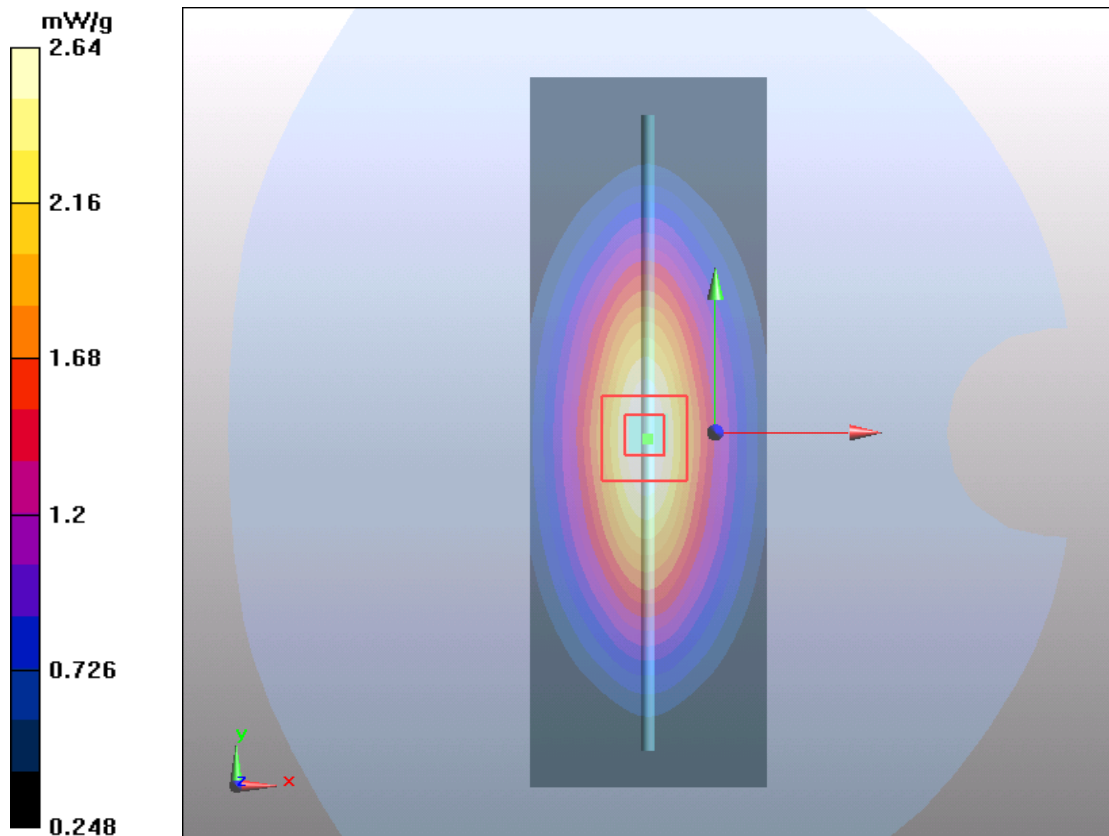
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.4 V/m; Power Drift = -0.076 dB

Peak SAR (extrapolated) = 3.67 W/kg

SAR(1 g) = 2.44 mW/g; SAR(10 g) = 1.6 mW/g

Maximum value of SAR (measured) = 2.64 mW/g



Plot 18 System Performance Check at 1900 MHz TSL

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d060

Date: 2022/08/3

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

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.41 \text{ S/m}$; $\epsilon_r = 40.1$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 11.3 mW/g

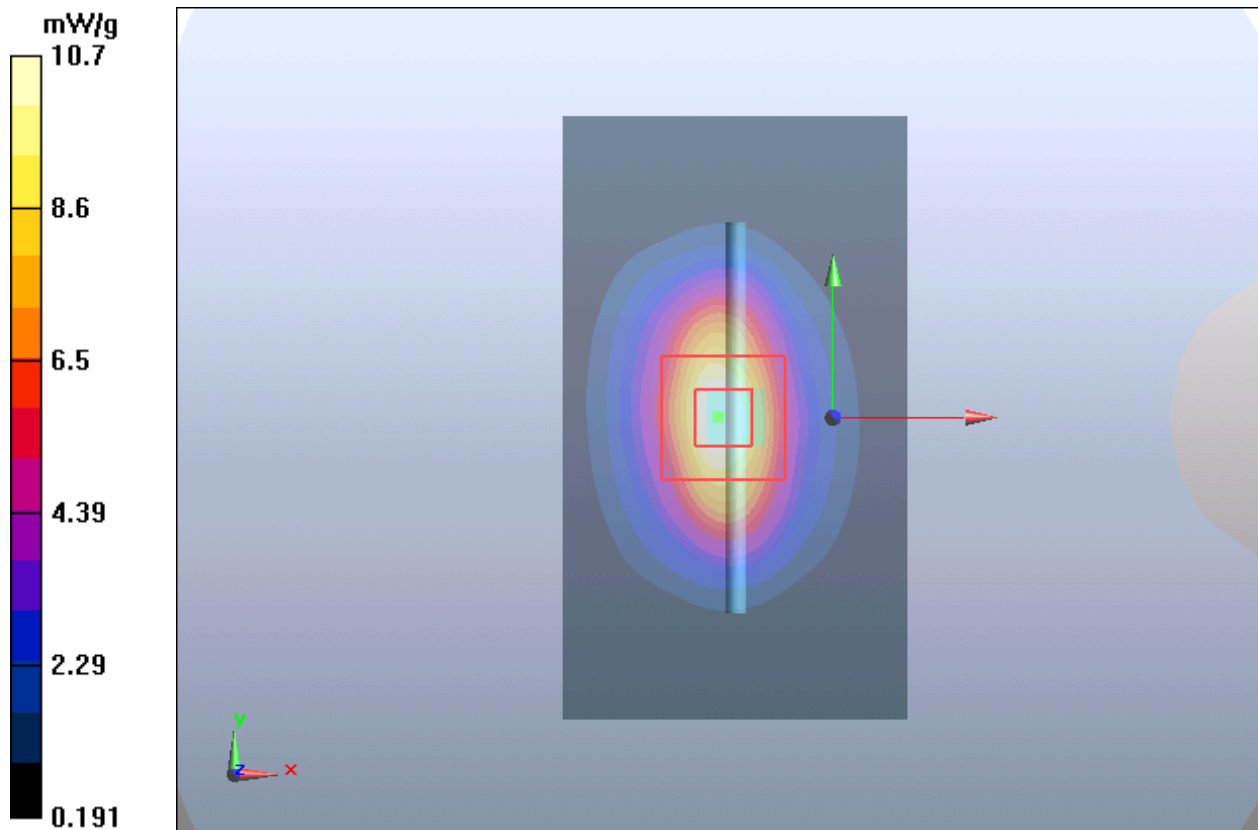
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 85.5 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 17.8 W/kg

SAR(1 g) = 9.88 mW/g; SAR(10 g) = 4.9 mW/g

Maximum value of SAR (measured) = 10.7 mW/g



Plot 19 System Performance Check at 2450 MHz TSL

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 786

Date: 2022/08/3

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

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.84$ S/m; $\epsilon_r = 38.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (interpolated) = 21.0 mW/g

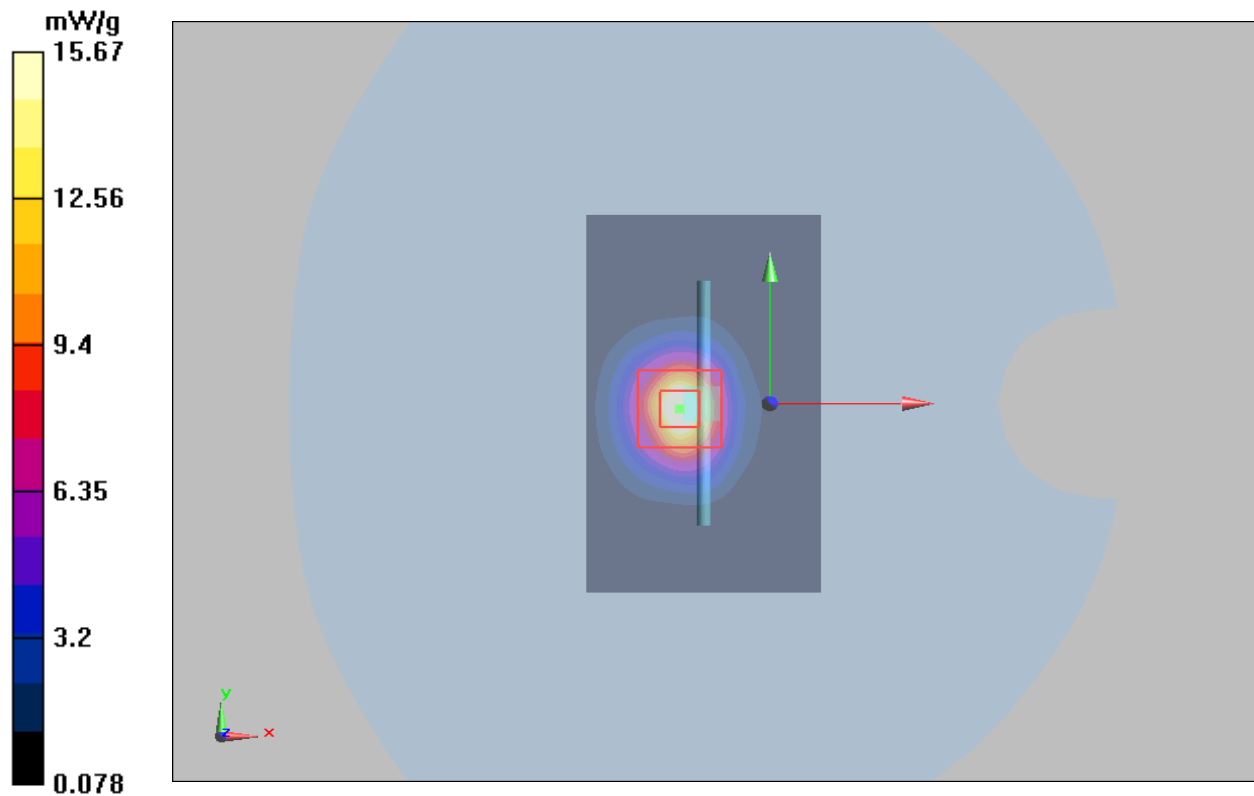
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 67.0 V/m; Power Drift = 0.104 dB

Peak SAR (extrapolated) = 28.0 W/kg

SAR(1 g) = 13.64 mW/g; SAR(10 g) = 6.15 mW/g

Maximum value of SAR (measured) = 15.67 mW/g



Plot 20 System Performance Check at 2600 MHz TSL**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025**

Date: 2022/08/3

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.01$ S/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=250mW/Area Scan (4x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 17.439 mW/g

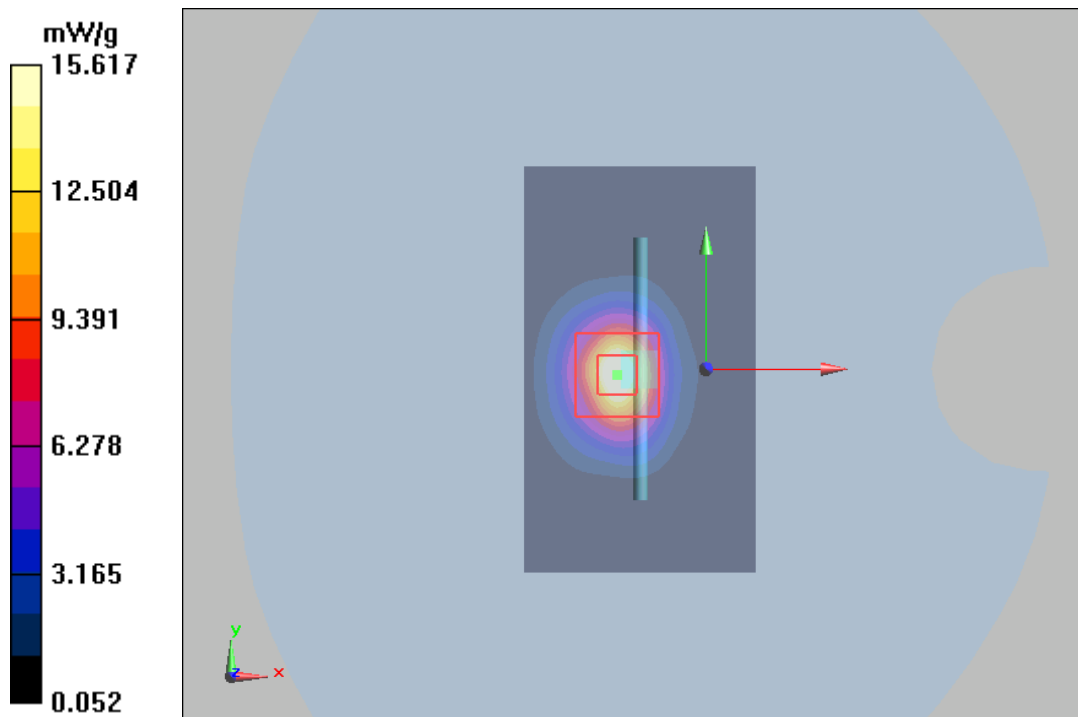
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 87.998 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 31.858 W/kg

SAR(1 g) = 13.9 mW/g; SAR(10 g) = 6.07 mW/g

Maximum value of SAR (measured) = 15.617 mW/g



Plot 21 System Performance Check at 5250 MHz TSL

DUT: Dipole 5250 MHz; Type: D5GHzV2; Serial: 1151

Date: 2022/08/4

Communication System: CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.80$ S/m; $\epsilon_r = 35.5$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.45, 5.45, 5.45); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 9.14 mW/g

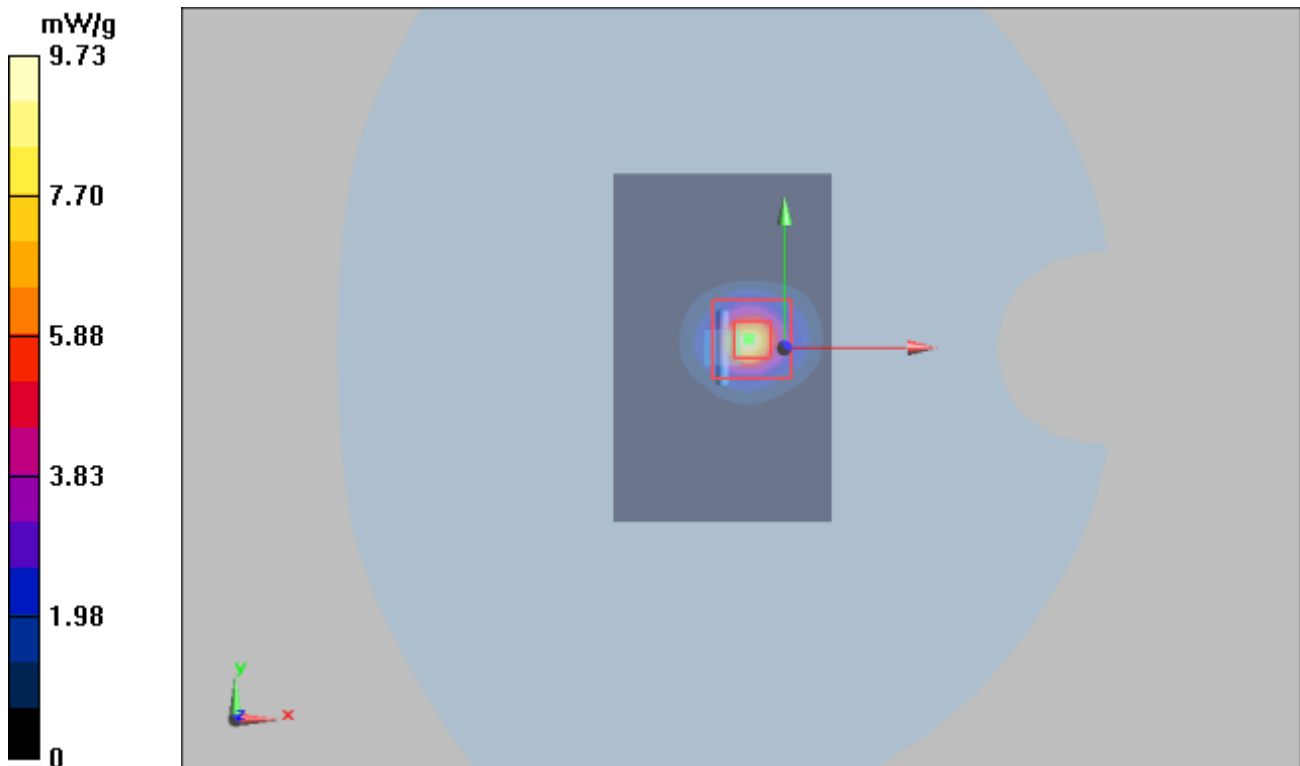
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 33.6 V/m; Power Drift = -0.095 dB

Peak SAR (extrapolated) = 52.2 W/kg

SAR(1 g) = 7.87 mW/g; SAR(10 g) = 2.25 mW/g

Maximum value of SAR (measured) = 9.73 mW/g



Plot 22 System Performance Check at 5600 MHz TSL

DUT: Dipole 5600 MHz; Type: D5GHzV2; Serial: 1151

Date: 2022/08/5

Communication System: CW; Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.21$ S/m; $\epsilon_r = 34.2$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.25 mW/g

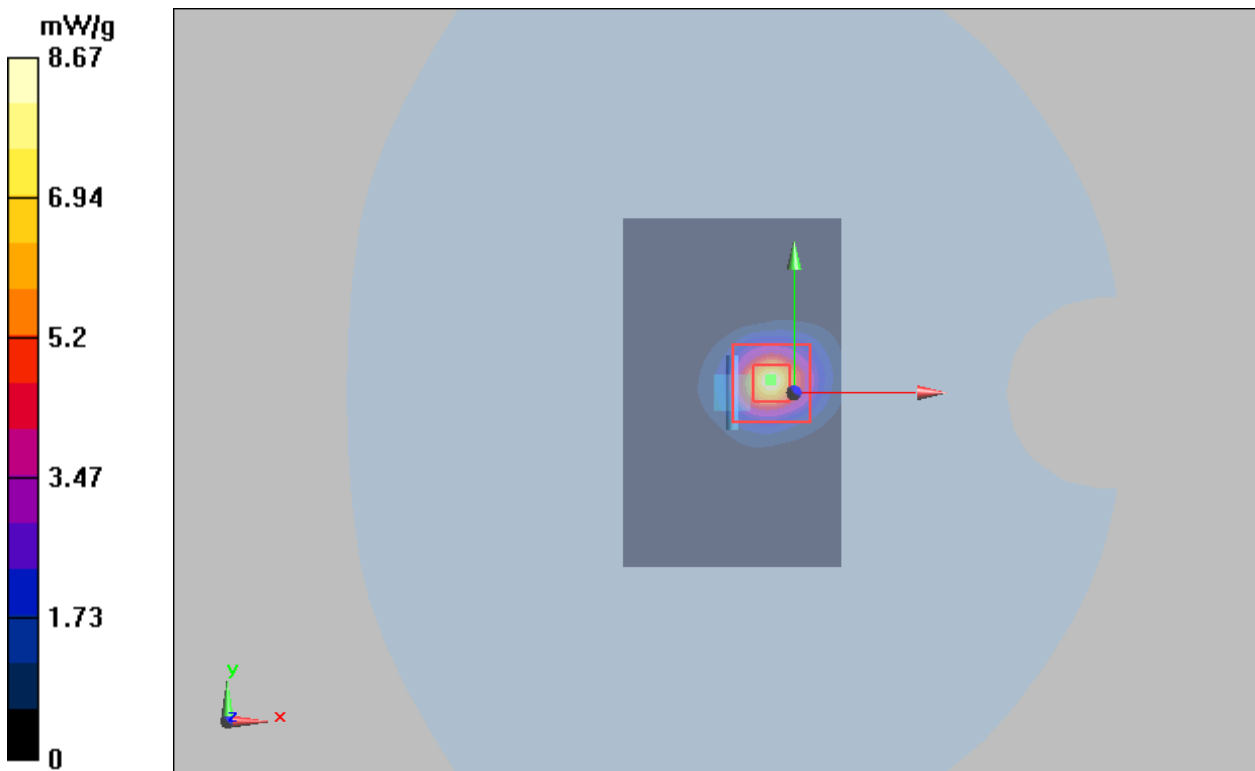
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 23.1 V/m; Power Drift = -0.028 dB

Peak SAR (extrapolated) = 22.9 W/kg

SAR(1 g) = 7.67 mW/g; SAR(10 g) = 2.27 mW/g

Maximum value of SAR (measured) = 8.67 mW/g



Plot 23 System Performance Check at 5750 MHz TSL

DUT: Dipole 5750 MHz; Type: D5GHzV2; Serial: 1151

Date: 2022/08/5

Communication System: CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5750 \text{ MHz}$; $\sigma = 5.21 \text{ S/m}$; $\epsilon_r = 34.9$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.04, 5.04, 5.04); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

d=10mm, Pin=100mW/Area Scan (6x10x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.31 mW/g

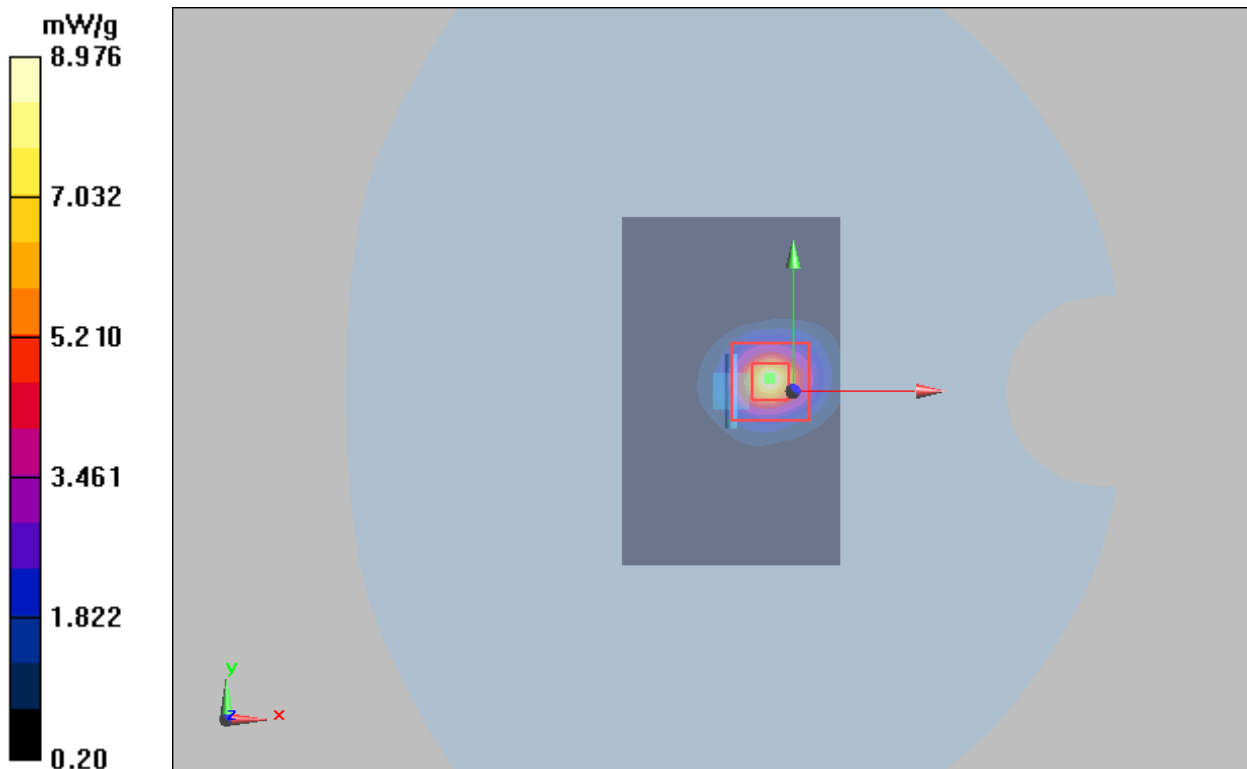
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 23.1 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 23.4 W/kg

SAR(1 g) = 7.66 mW/g; SAR(10 g) = 2.27 mW/g

Maximum value of SAR (measured) = 8.976 mW/g



ANNEX C: Highest Graph Results

Plot 24 GSM 850 Right Cheek Middle

Date: 2022/7/18

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.953 \text{ S/m}$; $\epsilon_r = 39.762$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Middle/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.474 W/kg

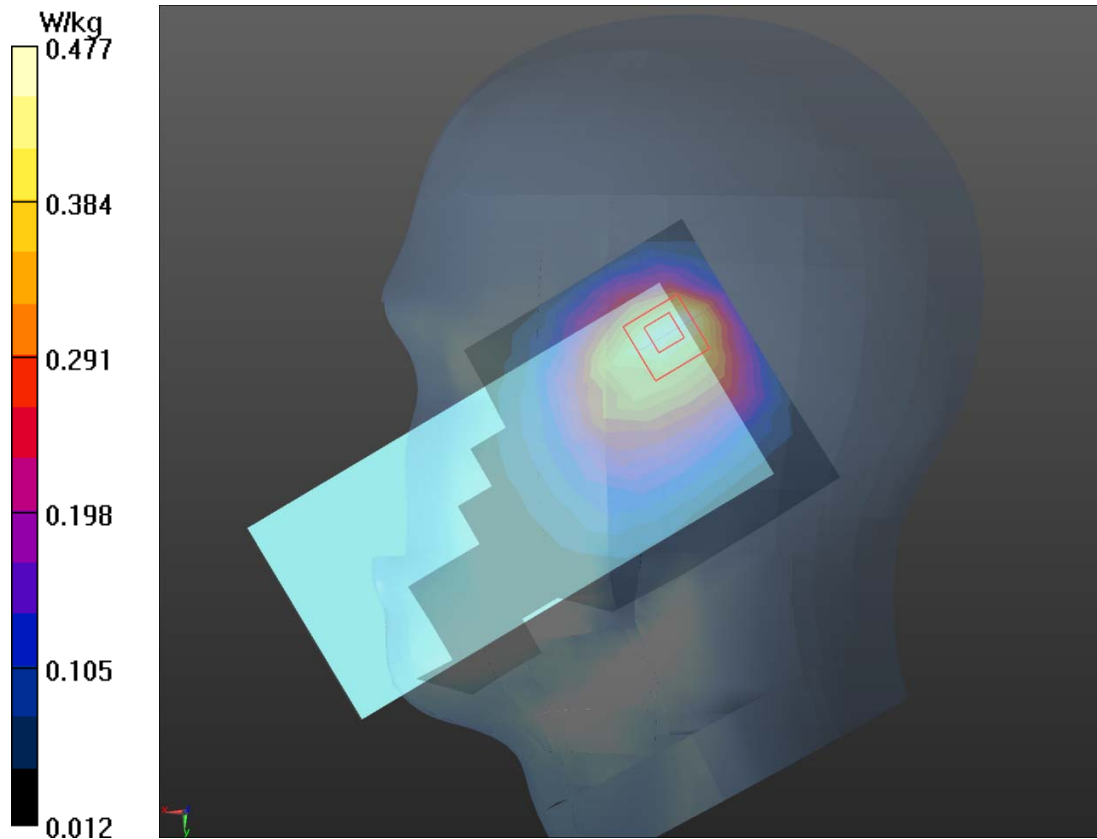
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.63 V/m ; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.775 W/kg

SAR(1 g) = 0.462 W/kg ; SAR(10 g) = 0.295 W/kg

Maximum value of SAR (measured) = 0.477 W/kg



Plot 25 GSM 1900 Right Tilt Middle

Date: 2022/7/22

Communication System: UID 0, GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.42 \text{ S/m}$; $\epsilon_r = 38.948$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Middle/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.543 W/kg

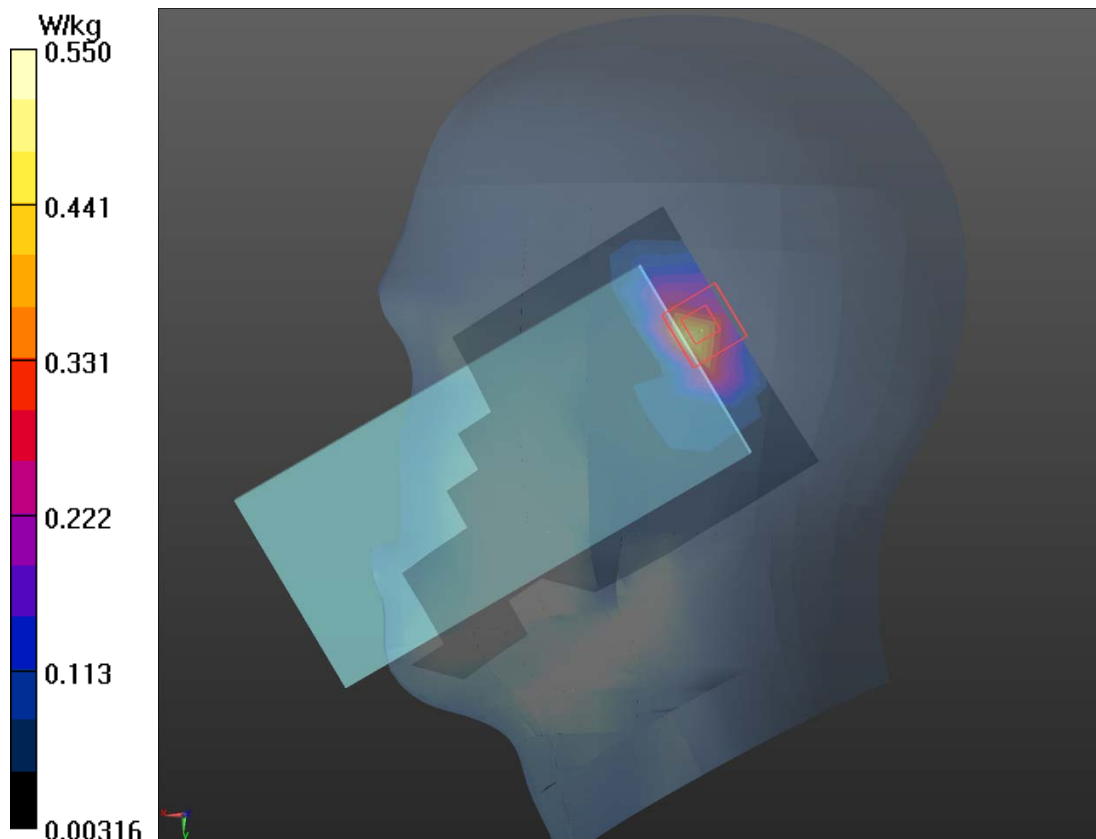
Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.71 V/m ; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.535 W/kg ; SAR(10 g) = 0.239 W/kg

Maximum value of SAR (measured) = 0.550 W/kg



Plot 26 UMTS Band II Right Tilt Middle

Date: 2022/7/22

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.704 W/kg

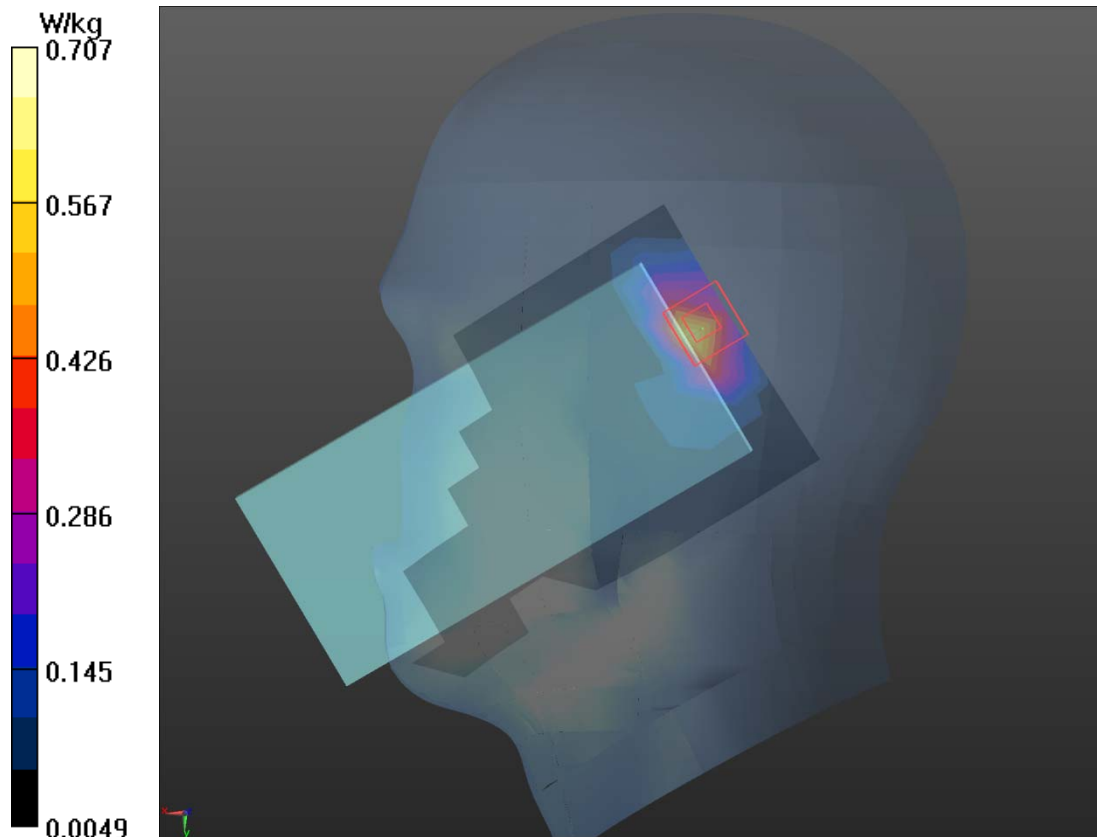
Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.17 V/m; Power Drift = 0.011 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.694 W/kg; SAR(10 g) = 0.302 W/kg

Maximum value of SAR (measured) = 0.707 W/kg



Plot 27 UMTS Band V Right Cheek Middle

Date: 2022/7/19

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.953 \text{ S/m}$; $\epsilon_r = 39.762$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Middle/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.456 W/kg

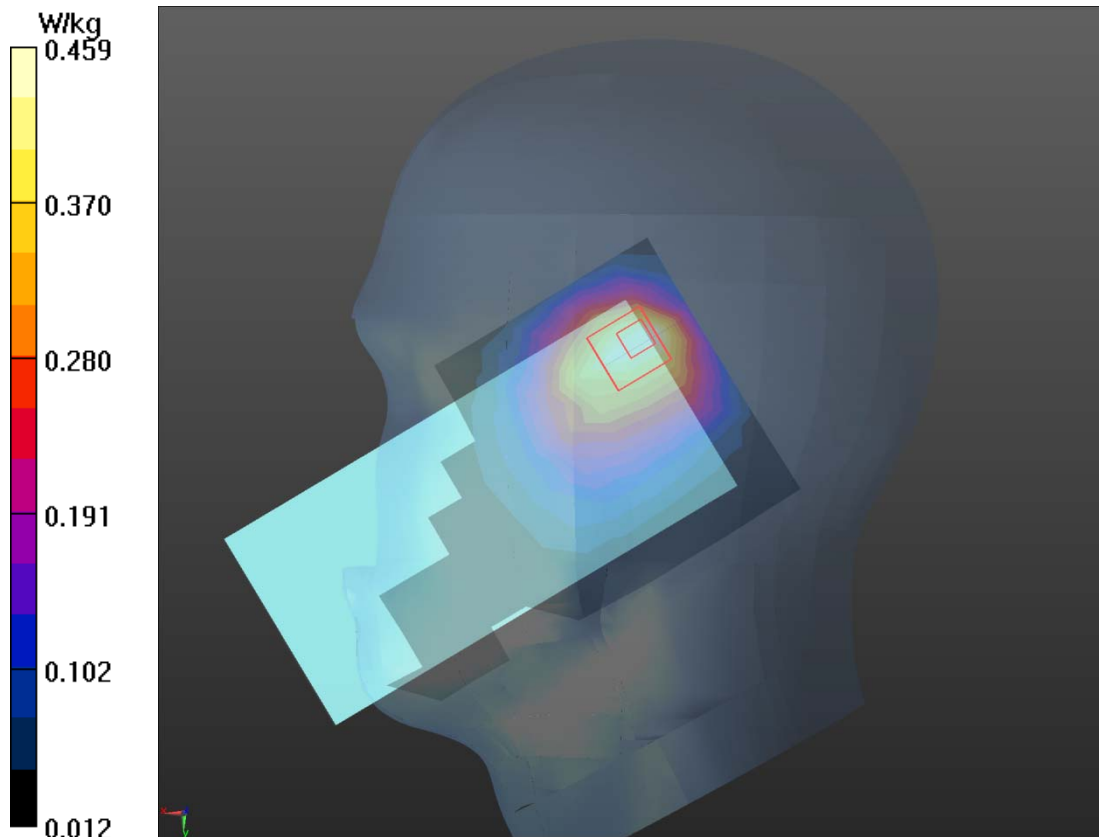
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.11 V/m ; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.796 W/kg

SAR(1 g) = 0.440 W/kg ; SAR(10 g) = 0.276 W/kg

Maximum value of SAR (measured) = 0.459 W/kg



Plot 28 LTE Band 5 1RB Right Cheek Middle

Date: 2022/7/20

Communication System: UID 0, LTE (0); Frequency: 836.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.953$ S/m; $\epsilon_r = 39.767$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Cheek Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.476 W/kg

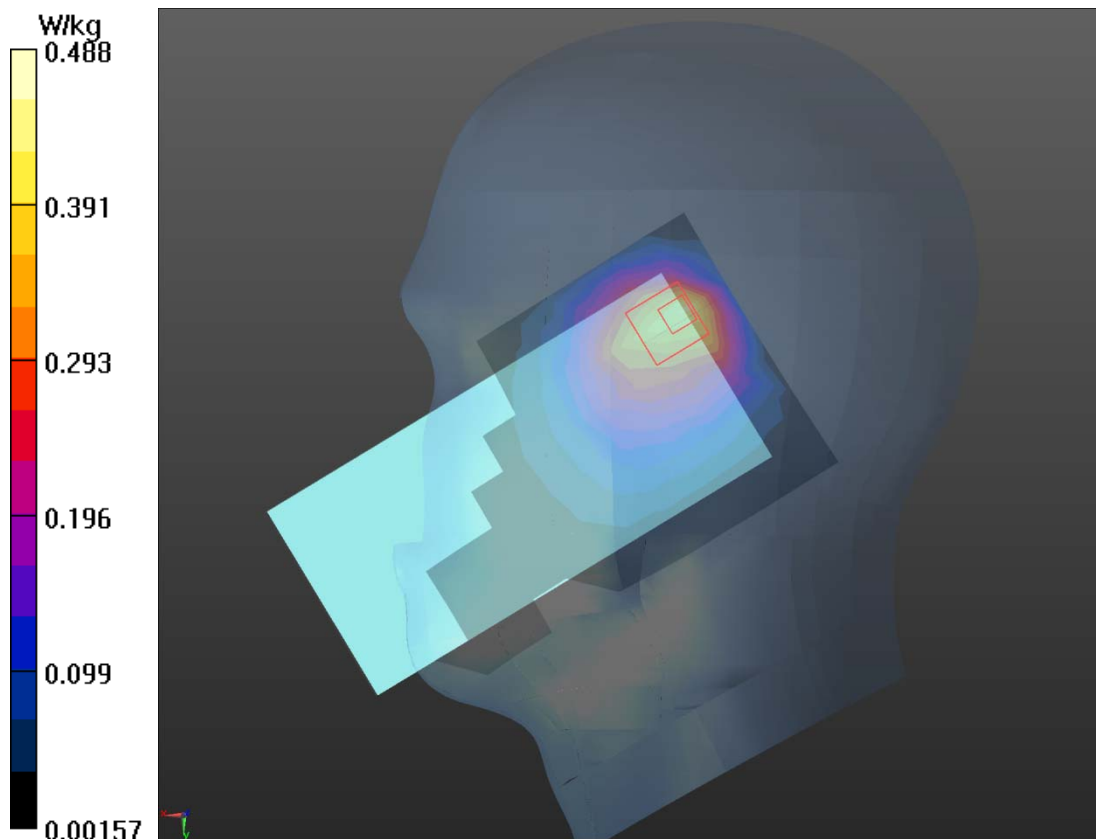
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.32 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.777 W/kg

SAR(1 g) = 0.468 W/kg; SAR(10 g) = 0.273 W/kg

Maximum value of SAR (measured) = 0.488 W/kg



Plot 29 LTE Band 7 1RB Right Tilt High

Date: 2022/08/3

Communication System: UID 0, LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.971$ S/m; $\epsilon_r = 37.231$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Right Tilt High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.509 W/kg

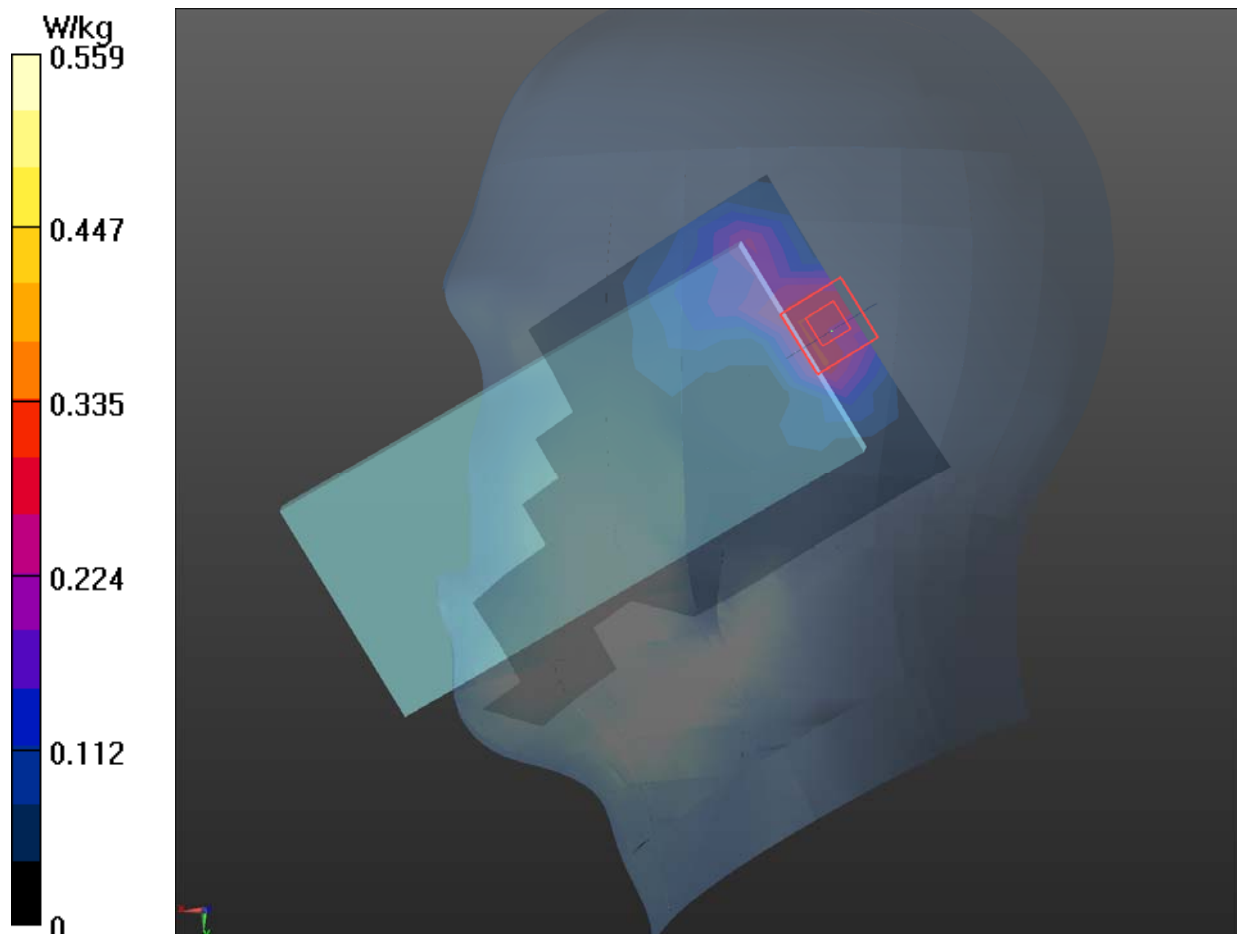
Right Tilt High/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.843 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.484 W/kg; SAR(10 g) = 0.199 W/kg

Maximum value of SAR (measured) = 0.559 W/kg



Plot 30 802.11b Left Cheek Low

Date: 2022/7/12

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz; Duty Cycle: 1:1.02

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.801$ S/m; $\epsilon_r = 37.737$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.346 W/kg

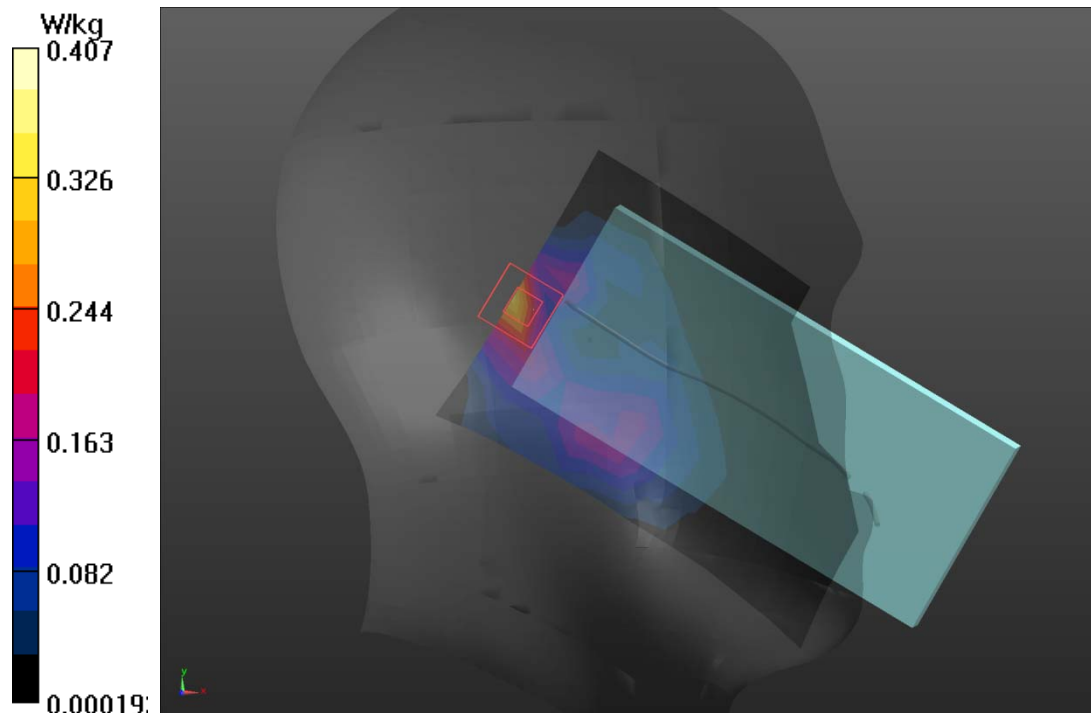
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.800 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.574 W/kg

SAR(1 g) = 0.325 W/kg; SAR(10 g) = 0.159 W/kg

Maximum value of SAR (measured) = 0.407 W/kg



Plot 31 802.11nHT20U-NII-1 Left Cheek High

D Date: 2022/7/26

Communication System: UID 0, 802.11n HT20 (0); Frequency: 5240 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5240$ MHz; $\sigma = 4.847$ S/m; $\epsilon_r = 36.872$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.45, 5.45, 5.45); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek High/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.348 W/kg

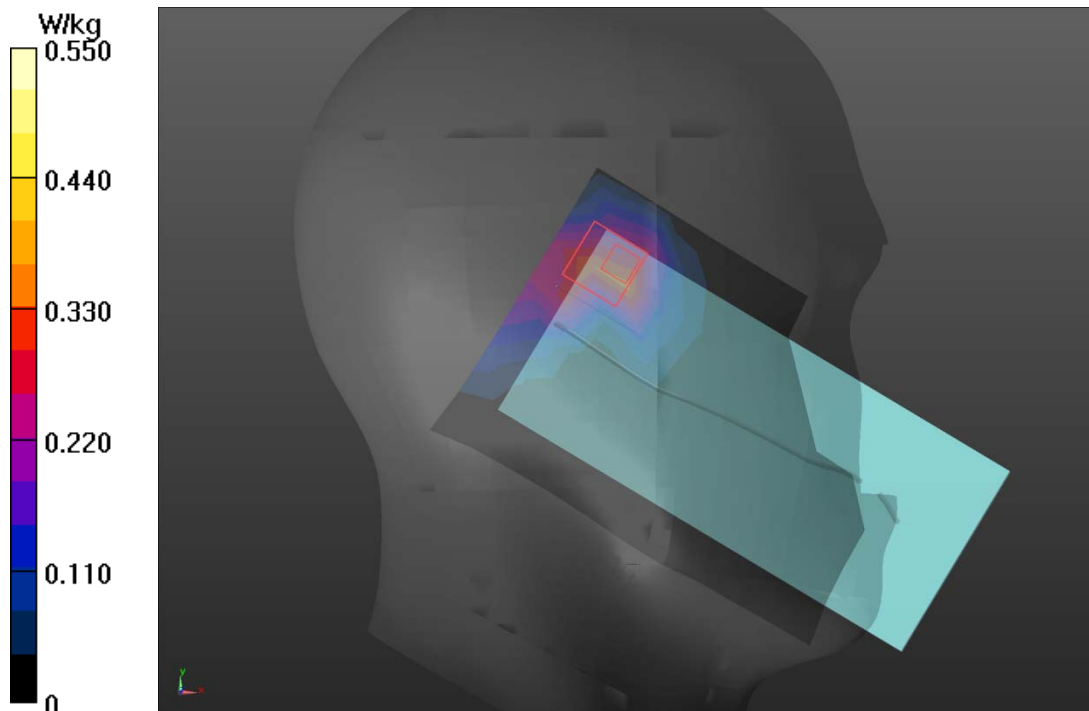
Left Cheek High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.708 V/m; Power Drift = 0.015 dB

Peak SAR (extrapolated) = 0.863 W/kg

SAR(1 g) = 0.294 W/kg; SAR(10 g) = 0.103 W/kg.

Maximum value of SAR (measured) = 0.550 W/kg



Plot 32 Bluetooth Left Cheek Middle

Date: 2022/08/3

Communication System: UID 0, BT (0); Frequency: 2441 MHz; Duty Cycle: 1:1.3

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.834$ S/m; $\epsilon_r = 37.585$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.255 W/kg

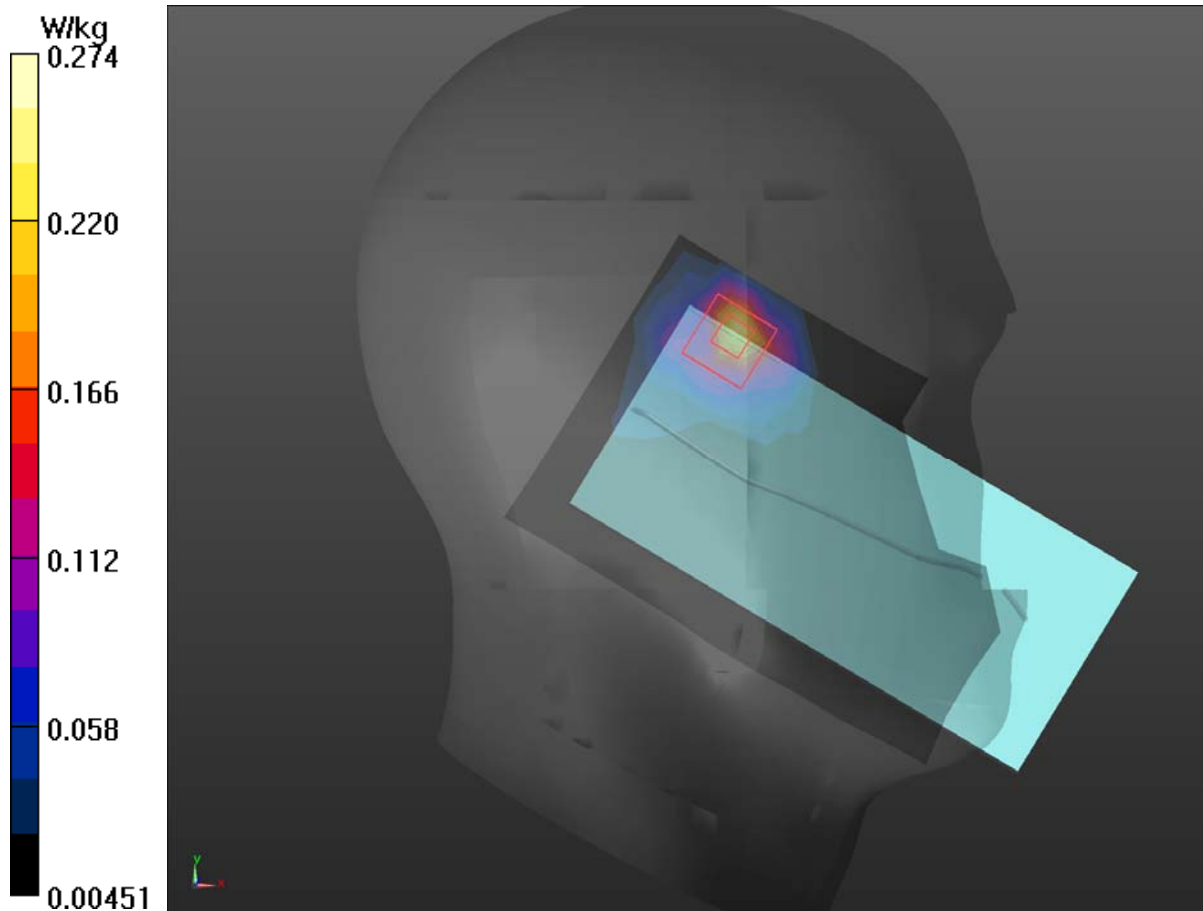
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.447 V/m; Power Drift = -0.170 dB

Peak SAR (extrapolated) = 0.347 W/kg

SAR(1 g) = 0.150 W/kg; SAR(10 g) = 0.071 W/kg

Maximum value of SAR (measured) = 0.274 W/kg



Plot 33 GSM 850 Back Side Middle (Distance 15mm)

Date: 2022/7/18

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.953 \text{ S/m}$; $\epsilon_r = 39.762$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.212 W/kg

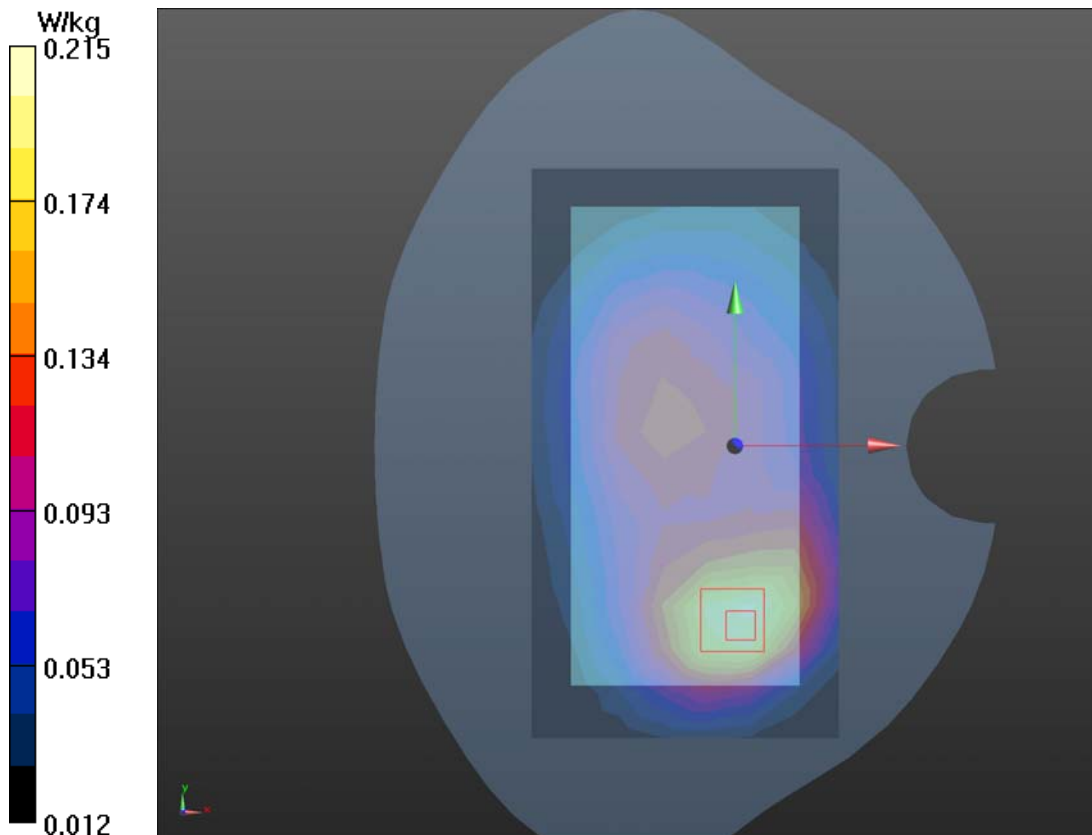
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.44 V/m ; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.307 W/kg

SAR(1 g) = 0.205 W/kg ; SAR(10 g) = 0.137 W/kg

Maximum value of SAR (measured) = 0.215 W/kg



Plot 34 GSM 1900 Back Side Middle (Distance 15mm)

Date: 2022/7/23

Communication System: UID 0, GSM (0); Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.175 W/kg

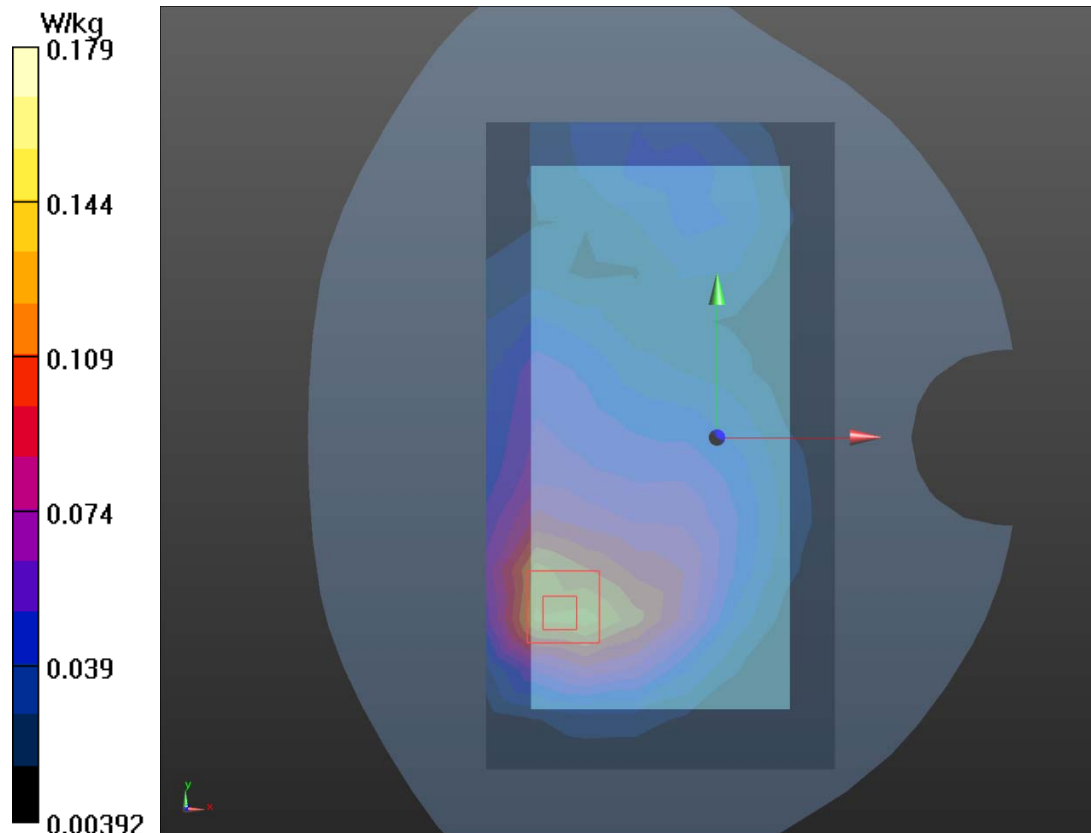
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.401 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 0.266 W/kg

SAR(1 g) = 0.164 W/kg; SAR(10 g) = 0.098 W/kg

Maximum value of SAR (measured) = 0.179 W/kg



Plot 35 UMTS Band II Back Side Middle (Distance 15mm)

Date: 2022/08/3

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.393$ S/m; $\epsilon_r = 38.344$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.360 W/kg

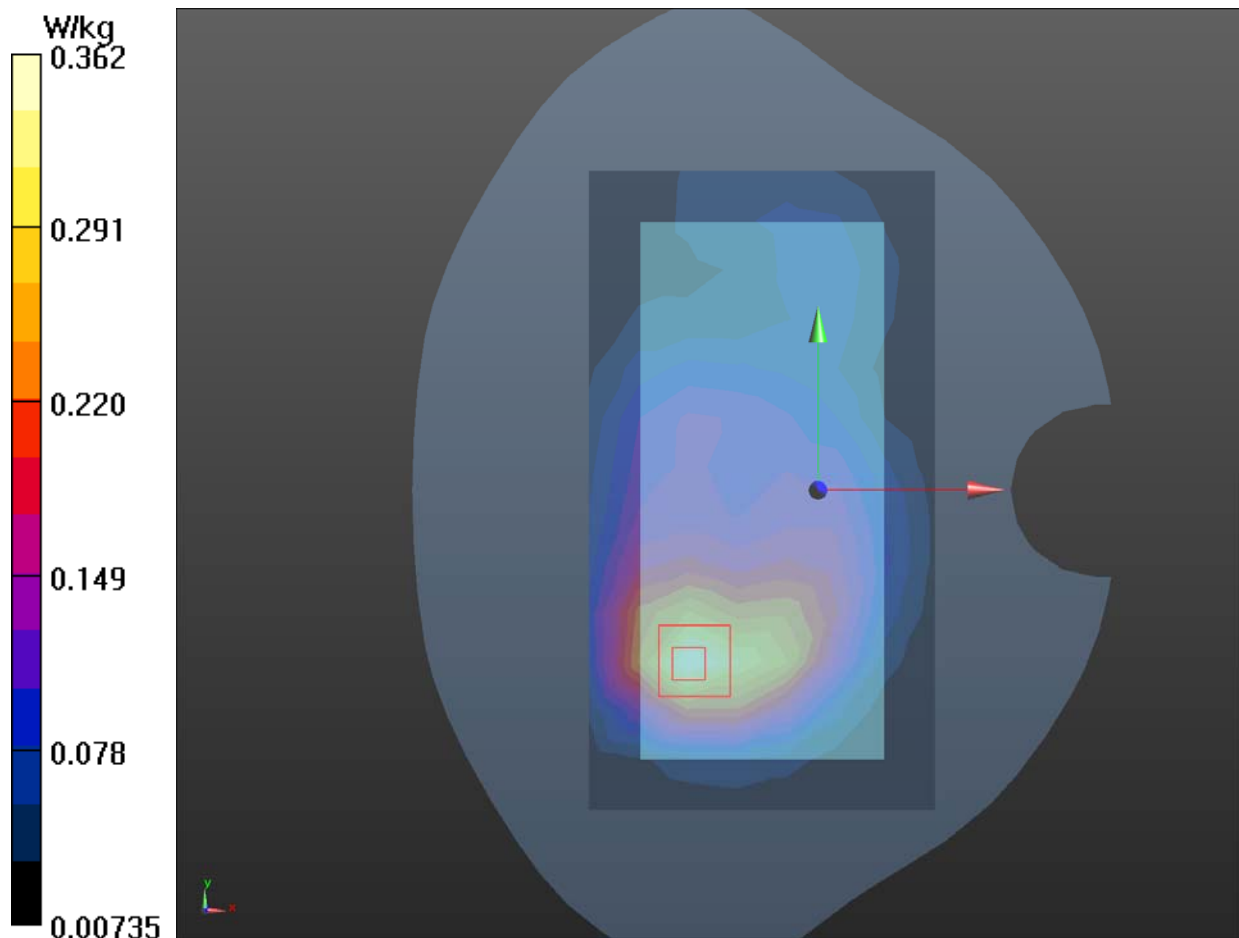
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.527 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.566 W/kg

SAR(1 g) = 0.340 W/kg; SAR(10 g) = 0.200 W/kg

Maximum value of SAR (measured) = 0.362 W/kg



Plot 36 UMTS Band V Back Side Middle (Distance 15mm)

Date: 2022/7/19

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.953 \text{ S/m}$; $\epsilon_r = 39.762$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.281 W/kg

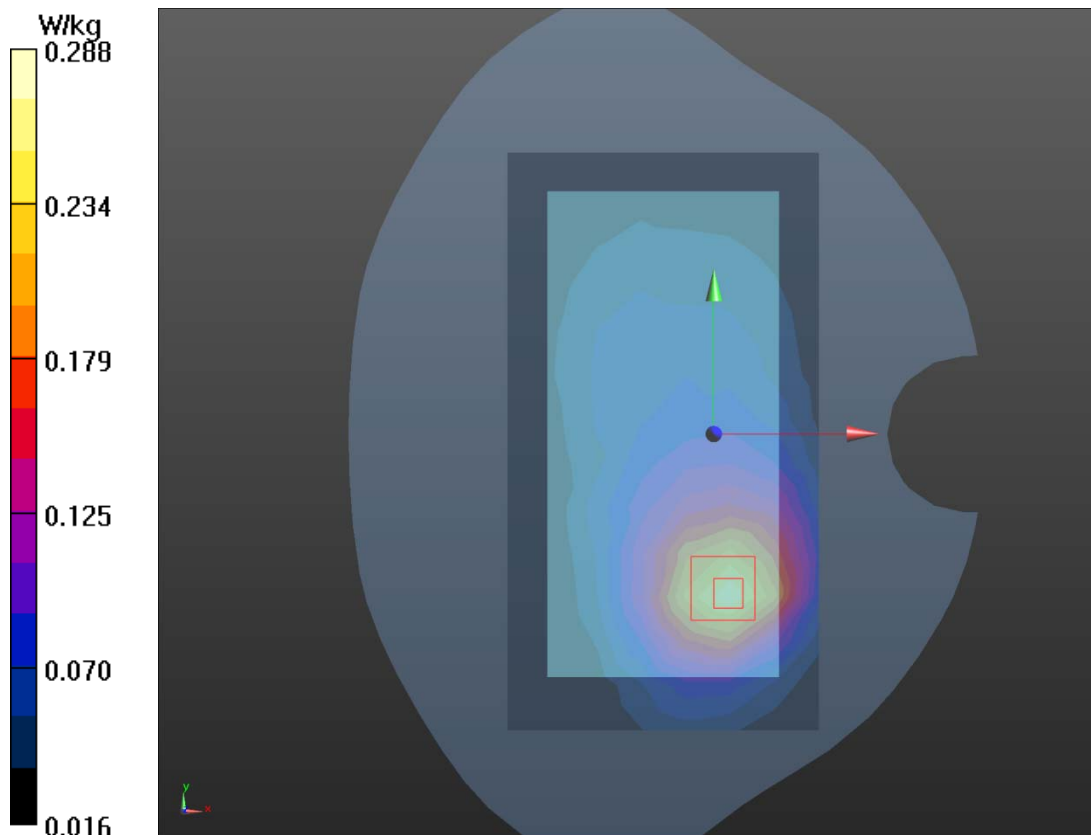
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.840 V/m ; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.372 W/kg

SAR(1 g) = 0.251 W/kg ; SAR(10 g) = 0.166 W/kg

Maximum value of SAR (measured) = 0.288 W/kg



Plot 37 LTE Band 5 1RB Back Side Low (Distance 15mm)

Date: 2022/7/20

Communication System: UID 0, LTE (0); Frequency: 829 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 829$ MHz; $\sigma = 0.946$ S/m; $\epsilon_r = 39.678$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.277 W/kg

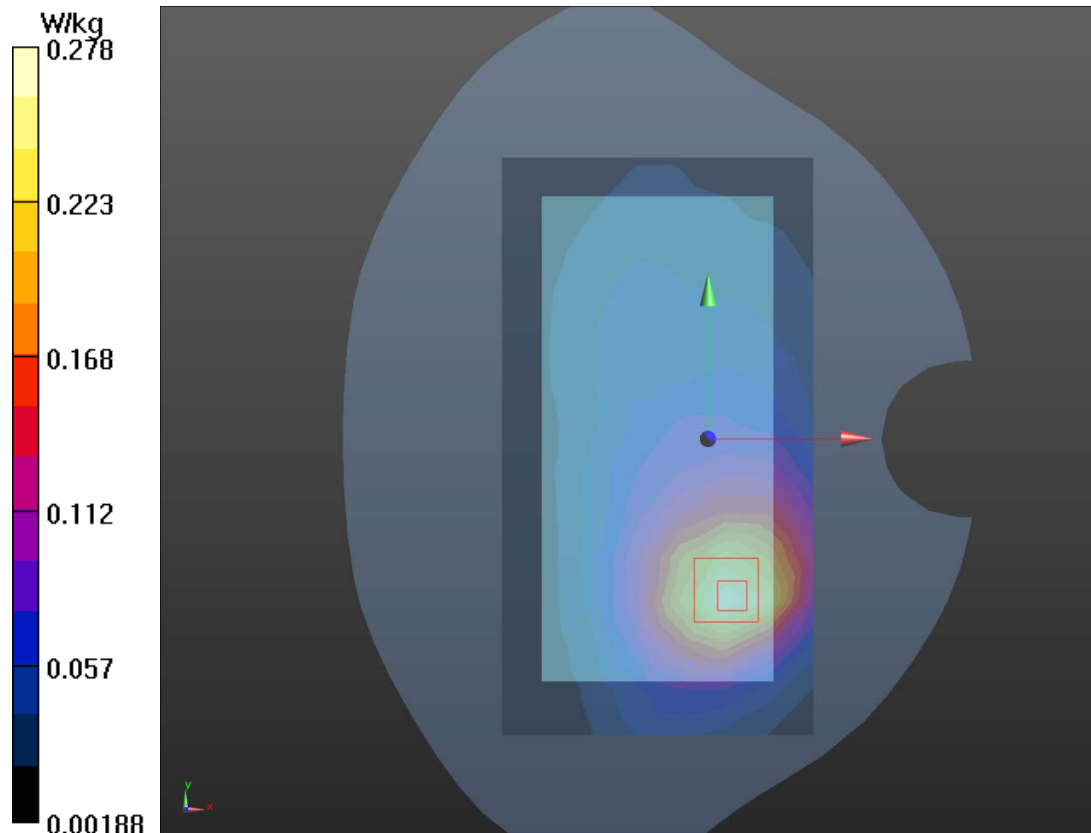
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.284 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 0.387 W/kg

SAR(1 g) = 0.260 W/kg; SAR(10 g) = 0.173 W/kg

Maximum value of SAR (measured) = 0.278 W/kg



Plot 38 LTE Band 7 1RB Back Side High (Distance 15mm)

Date: 2022/7/8

Communication System: UID 0, LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.971$ S/m; $\epsilon_r = 37.231$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.215 W/kg

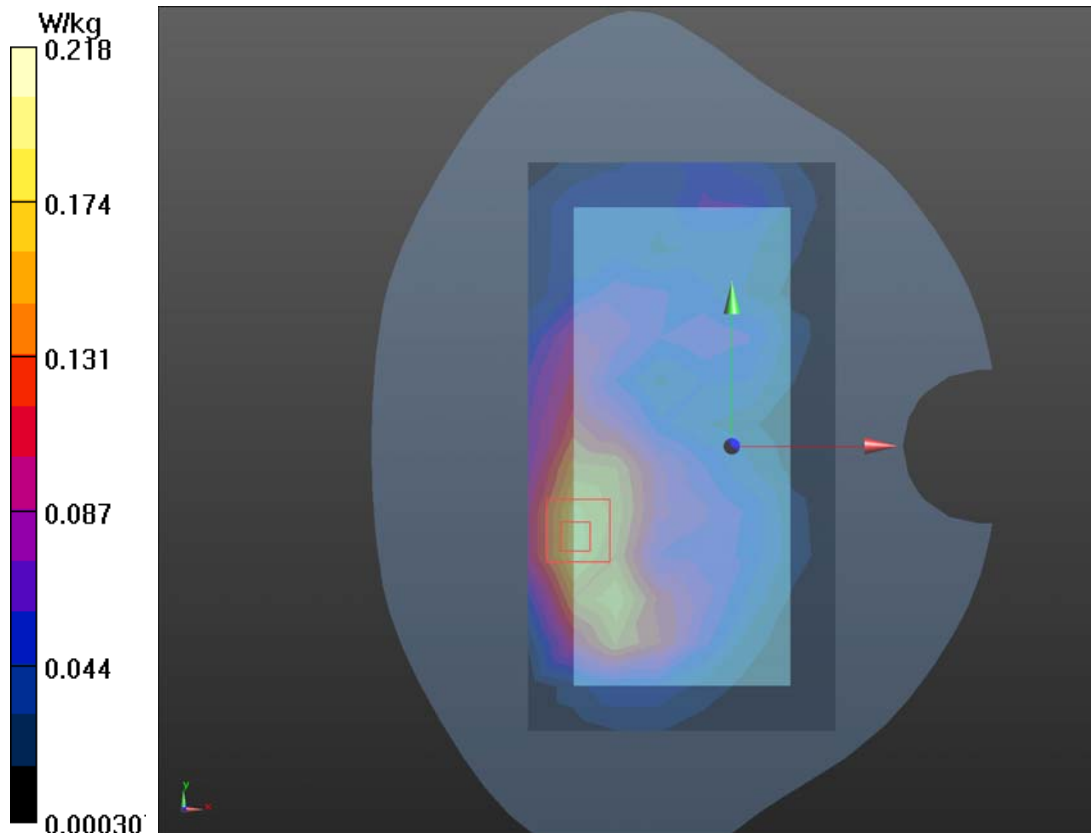
Back Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.137 V/m; Power Drift = -0.048 dB

Peak SAR (extrapolated) = 0.349 W/kg

SAR(1 g) = 0.203 W/kg; SAR(10 g) = 0.106 W/kg

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



Plot 39 802.11b Back Side Low (Distance 15mm)

Date: 2022/7/12

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz; Duty Cycle: 1:1.02

Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.801 \text{ S/m}$; $\epsilon_r = 37.737$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (10x18x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.473 W/kg

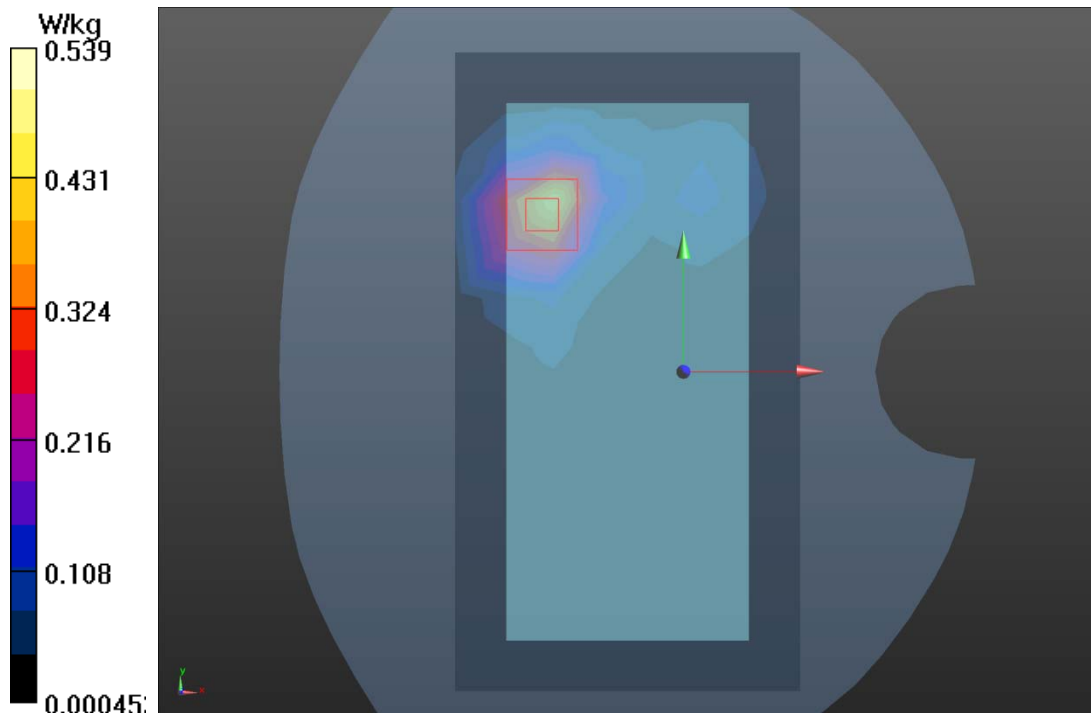
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.784 V/m ; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.968 W/kg

SAR(1 g) = 0.413 W/kg ; SAR(10 g) = 0.198 W/kg

Maximum value of SAR (measured) = 0.539 W/kg



Plot 40 802.11a U-NII-2C Back Side Middle (Distance 15mm)

Date: 2022/7/27

Communication System: UID 0, 802.11a (0); Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580$ MHz; $\sigma = 5.258$ S/m; $\epsilon_r = 35.664$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.301 W/kg

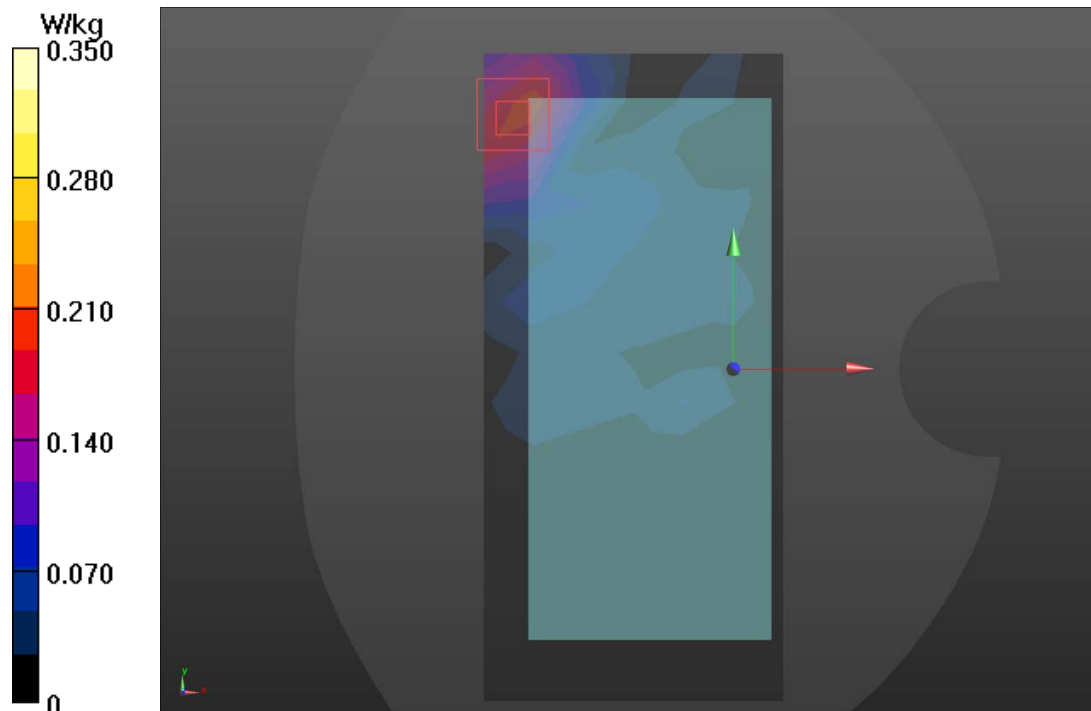
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.081 V/m; Power Drift = 0.064 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.298 W/kg; SAR(10 g) = 0.137 W/kg

Maximum value of SAR (measured) = 0.350 W/kg



Plot 41 GSM 850 GPRS (2Txslots) Back Side Middle (Distance 10mm)

Date: 2022/7/18

Communication System: UID 0, GPRS 2TX (0); Frequency: 836.6 MHz; Duty Cycle: 1:4.15

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.945$ S/m; $\epsilon_r = 39.833$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.386 W/kg

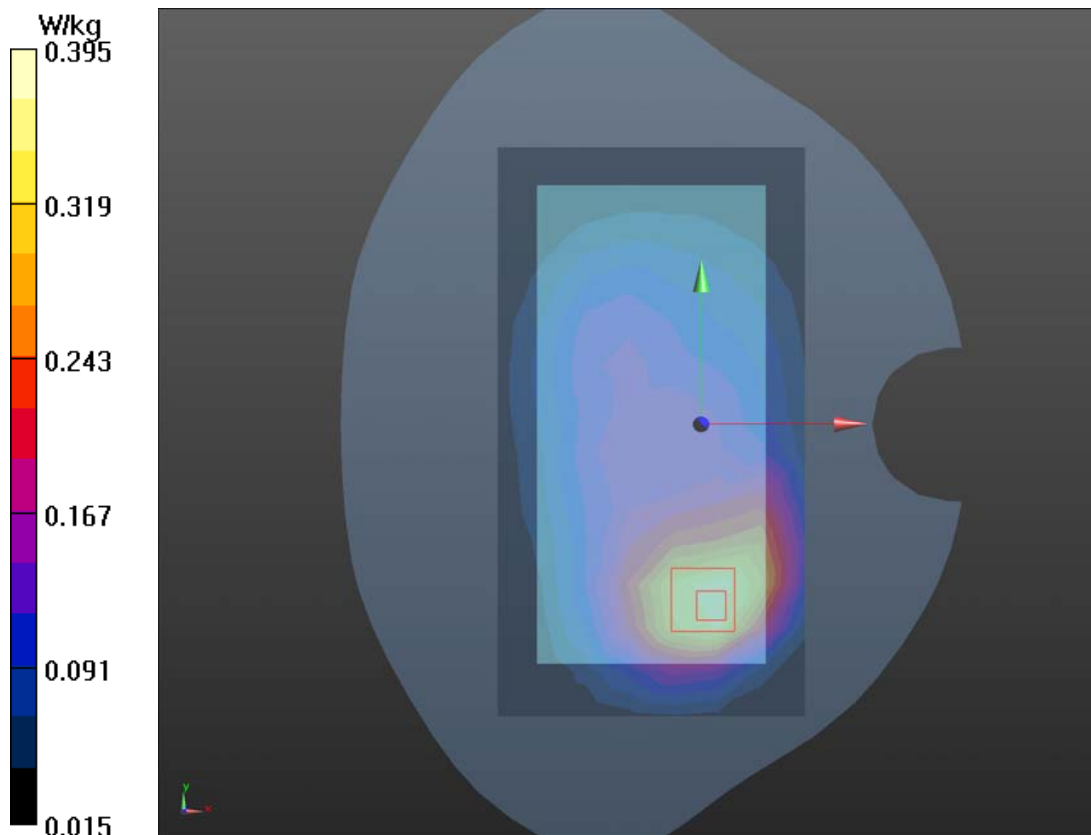
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.37 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.594 W/kg

SAR(1 g) = 0.371 W/kg; SAR(10 g) = 0.239 W/kg

Maximum value of SAR (measured) = 0.395 W/kg



Plot 42 GSM 1900 GPRS (2Txslots) Bottom Edge Middle (Distance 10mm)

Date: 2022/08/3

Communication System: UID 0, GPRS 2TX (0); Frequency: 1880 MHz; Duty Cycle: 1:4.15

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bottom Edge Middle/Area Scan (4x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.451 W/kg

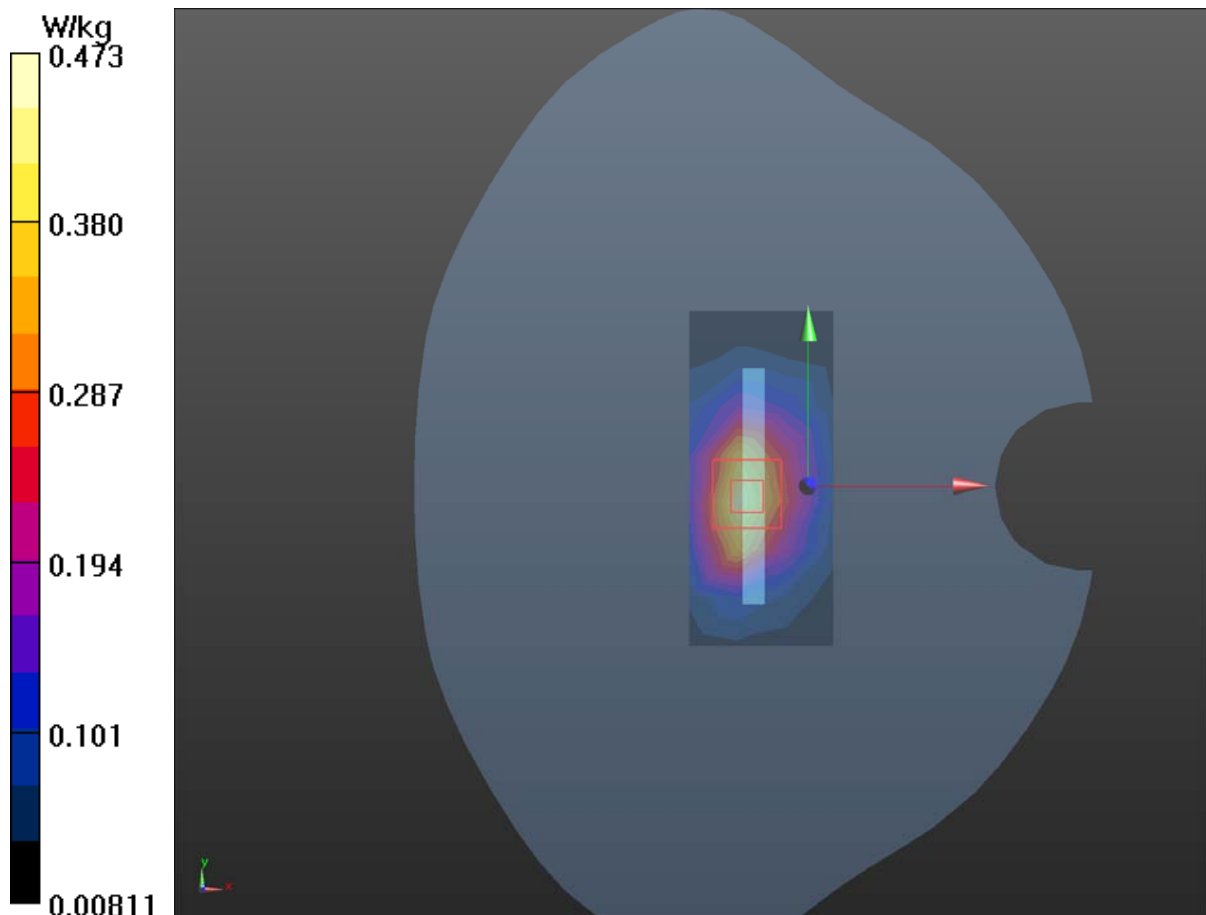
Bottom Edge Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.15 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.750 W/kg

SAR(1 g) = 0.429 W/kg; SAR(10 g) = 0.236 W/kg

Maximum value of SAR (measured) = 0.473 W/kg



Plot 43 UMTS Band II Bottom Edge Middle (Distance 10mm)

Date: 2022/7/25

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.413$ S/m; $\epsilon_r = 39.917$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bottom Edge Middle/Area Scan (4x8x1): Measurement grid: dx=15mm, dy=15mm

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

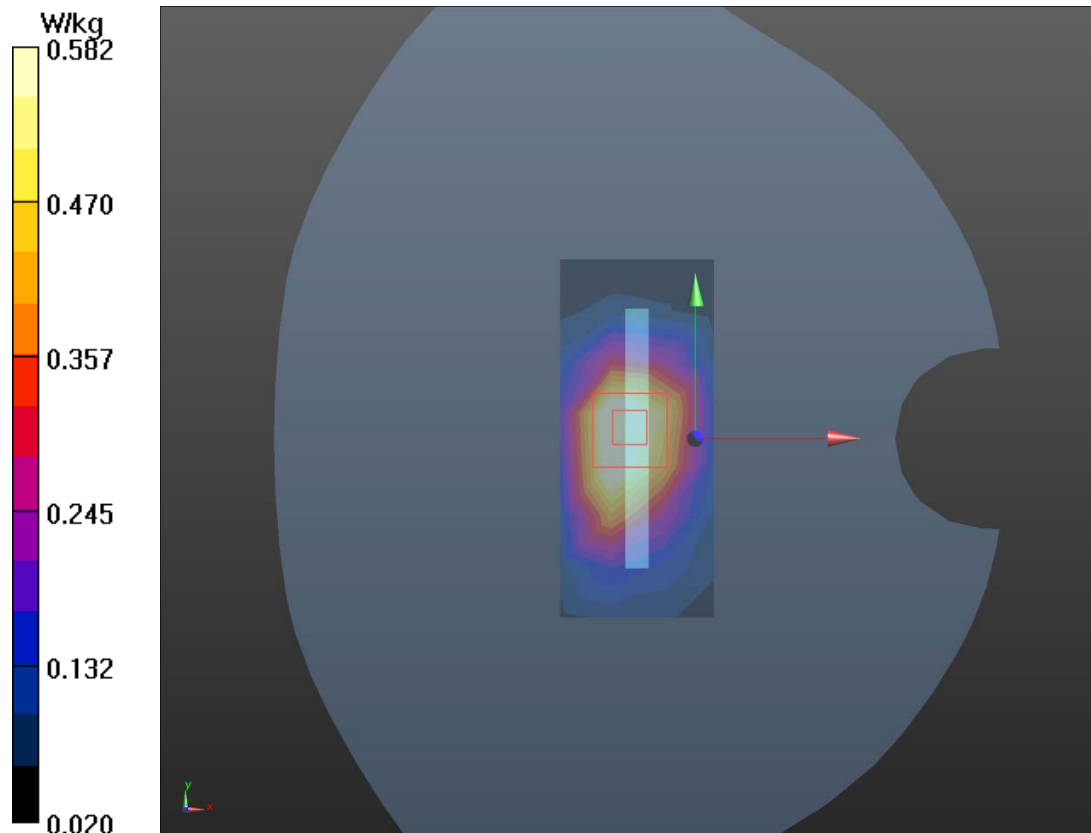
Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 27.48 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.524 W/kg; SAR(10 g) = 0.283 W/kg

Maximum value of SAR (measured) = 0.582 W/kg



Plot 44 UMTS Band V Back Side Middle (Distance 10mm)

Date: 2022/7/19

Communication System: UID 0, WCDMA (0); Frequency: 836.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.953 \text{ S/m}$; $\epsilon_r = 39.762$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.468 W/kg

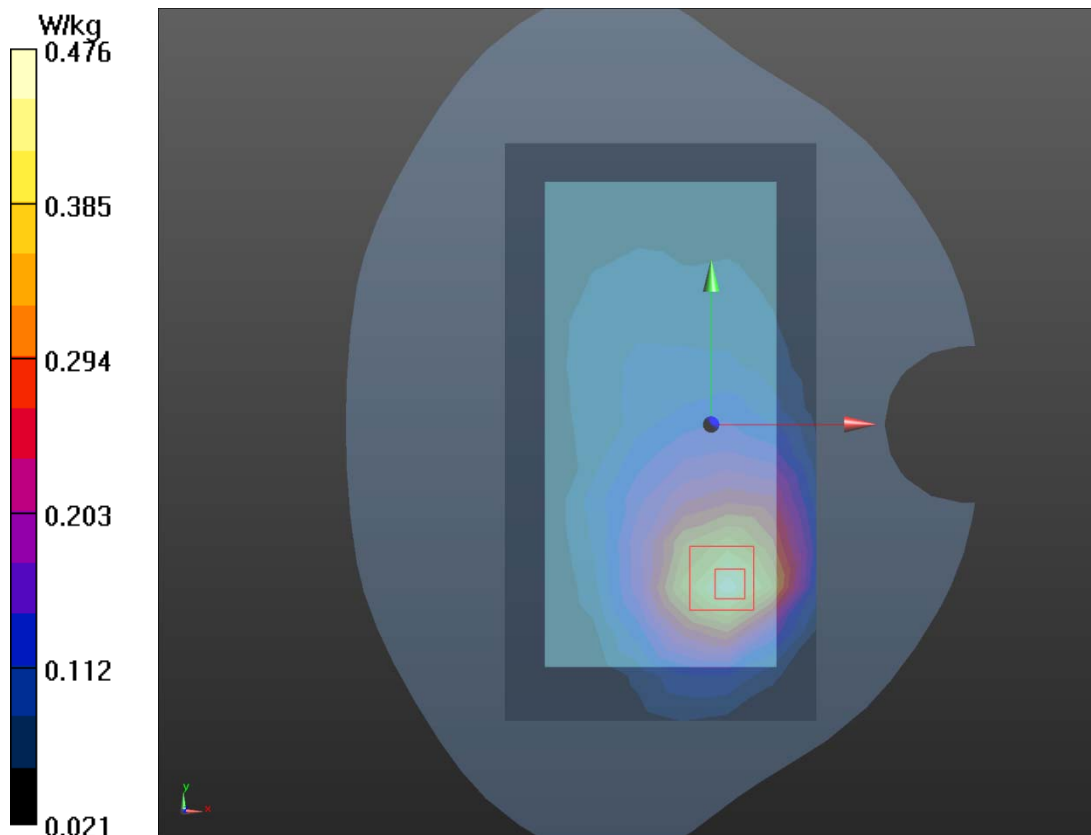
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.18 V/m ; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 0.683 W/kg

SAR(1 g) = 0.435 W/kg ; SAR(10 g) = 0.282 W/kg

Maximum value of SAR (measured) = 0.476 W/kg



Plot 45 LTE Band 5 1RB Back Side Low (Distance 10mm)

Date: 2022/7/20

Communication System: UID 0, LTE (0); Frequency: 829 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 829 \text{ MHz}$; $\sigma = 0.946 \text{ S/m}$; $\epsilon_r = 39.678$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.30, 9.30, 9.30); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.485 W/kg

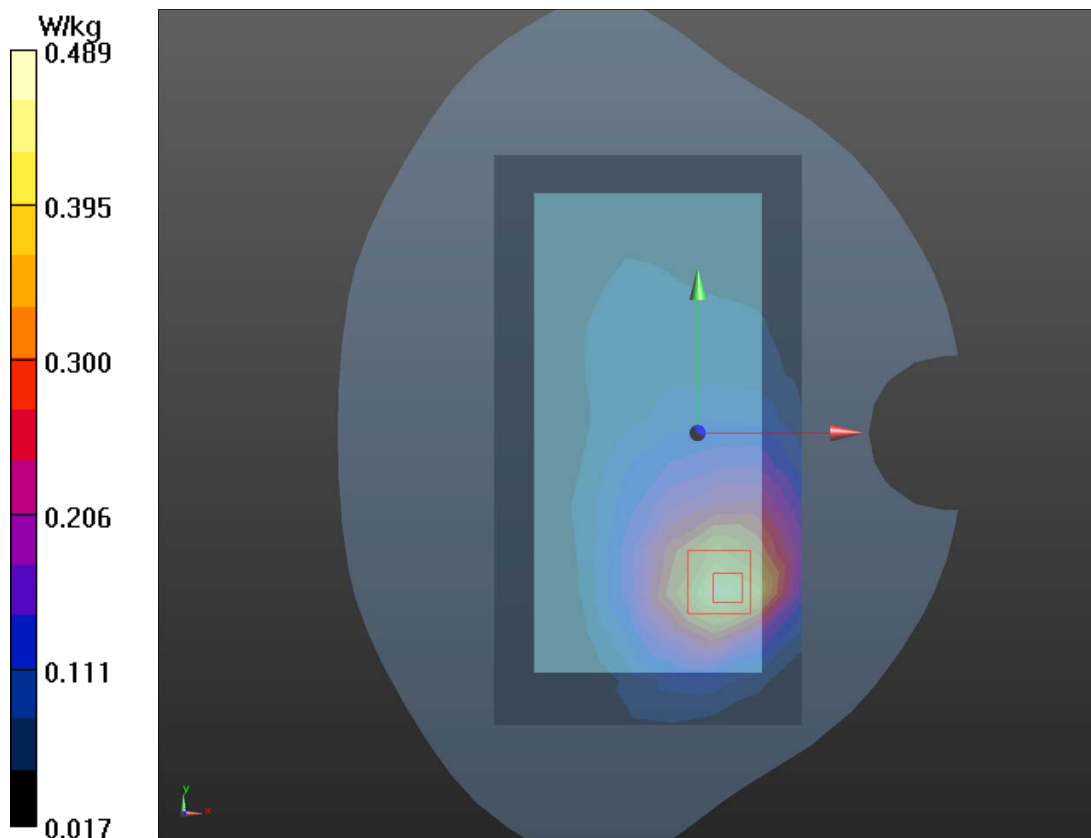
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.19 V/m ; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.671 W/kg

SAR(1 g) = 0.468 W/kg ; SAR(10 g) = 0.284 W/kg

Maximum value of SAR (measured) = 0.489 W/kg



Plot 46 LTE Band 7 1RB Back Side High (Distance 10mm)

Date: 2022/7/9

Communication System: UID 0, LTE (0); Frequency: 2560 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.971$ S/m; $\epsilon_r = 37.231$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.25, 7.25, 7.25); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.335 W/kg

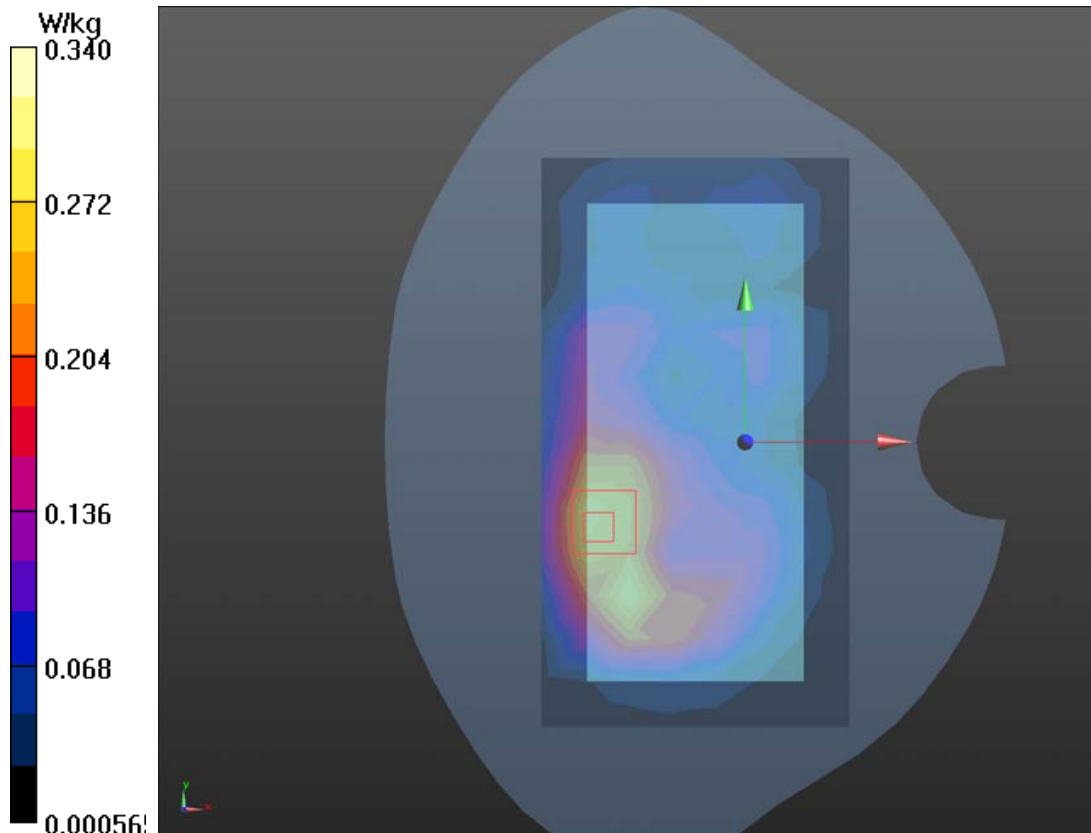
Back Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.173 V/m; Power Drift = 0.092 dB

Peak SAR (extrapolated) = 0.495 W/kg

SAR(1 g) = 0.312 W/kg; SAR(10 g) = 0.162 W/kg

Maximum value of SAR (measured) = 0.340 W/kg



Plot 47 802.11b Back Side Low (Distance 10mm)

Date: 2022/7/12

Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz; Duty Cycle: 1:1.02

Medium parameters used: $f = 2412 \text{ MHz}$; $\sigma = 1.801 \text{ S/m}$; $\epsilon_r = 37.737$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (9x18x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.610 W/kg

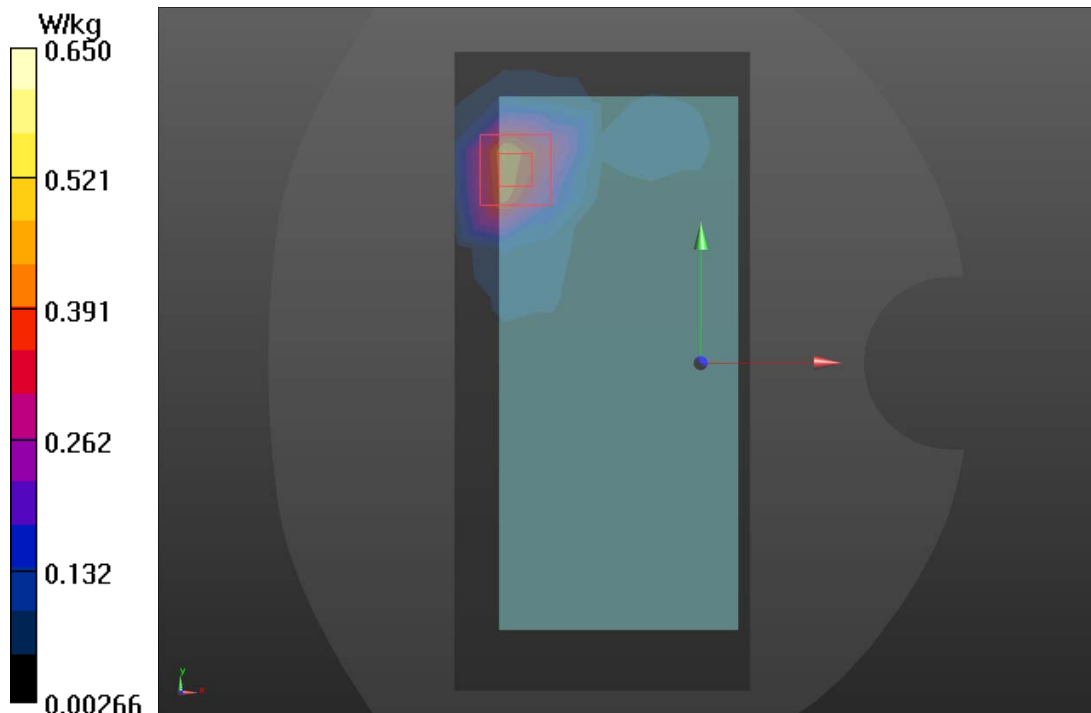
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.457 V/m ; Power Drift = 0.038 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.595 W/kg ; SAR(10 g) = 0.272 W/kg

Maximum value of SAR (measured) = 0.650 W/kg



Plot 48 802.11a U-NII-3 Back Side Low (Distance 10mm)

Date: 2022/7/7

Communication System: UID 0, 802.11a (0); Frequency: 5745 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5745$ MHz; $\sigma = 5.44$ S/m; $\epsilon_r = 35.27$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.04, 5.04, 5.04); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Low/Area Scan (11x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.312 W/kg

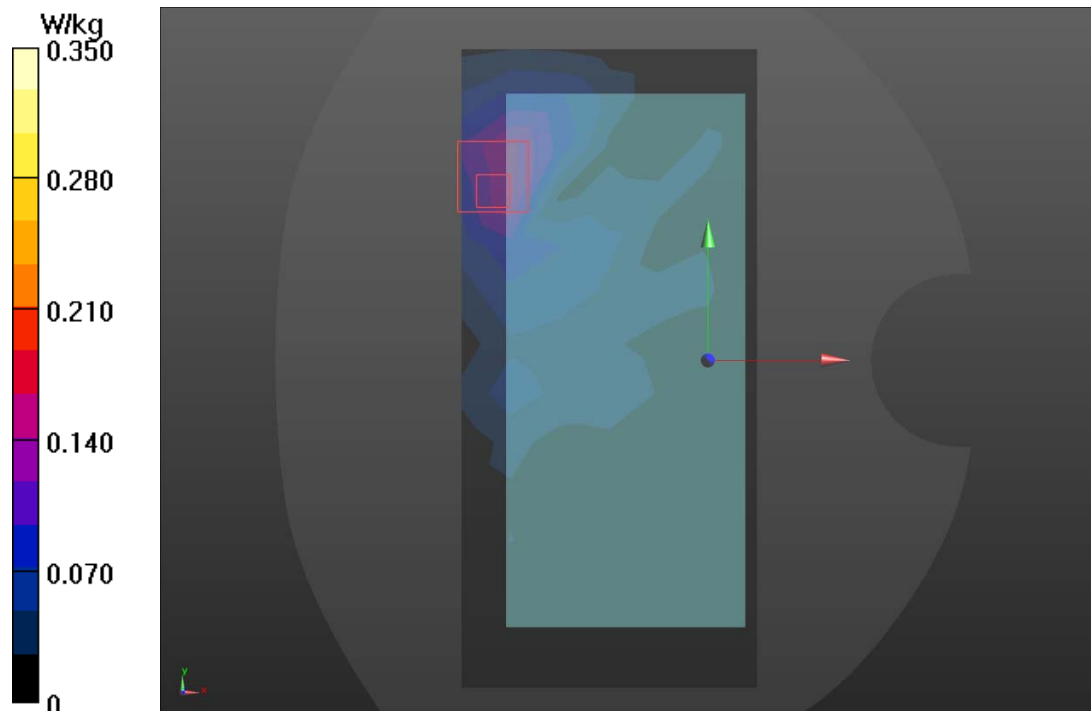
Back Side Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 2.398 V/m; Power Drift = 0.024 dB

Peak SAR (extrapolated) = 0.490 W/kg

SAR(1 g) = 0.302 W/kg; SAR(10 g) = 0.115 W/kg

Maximum value of SAR (measured) = 0.350 W/kg



Plot 49 Bluetooth Back Side Middle (Distance 10mm)

Date: 2022/7/12

Communication System: UID 0, BT (0); Frequency: 2441 MHz; Duty Cycle: 1:1.32

Medium parameters used: $f = 2441$ MHz; $\sigma = 1.834$ S/m; $\epsilon_r = 37.585$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.50, 7.50, 7.50); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.149 W/kg

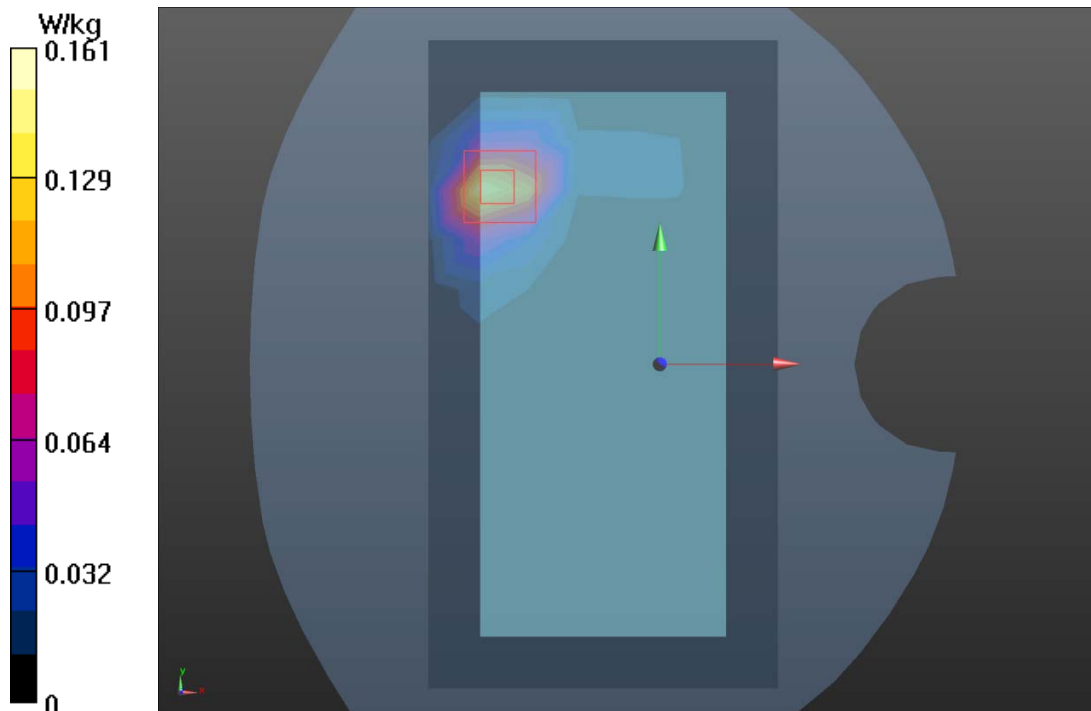
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 0.313 W/kg

SAR(1 g) = 0.146 W/kg; SAR(10 g) = 0.067 W/kg

Maximum value of SAR (measured) = 0.161 W/kg



Plot 50 UMTS Band II Bottom Edge Middle (Distance 0mm)

Date: 2022/08/3

Communication System: UID 0, WCDMA (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.42$ S/m; $\epsilon_r = 38.948$; $\rho = 1000$ kg/m³

Ambient Temperature: 22.3 °C Liquid Temperature: 21.5 °C

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.88, 7.88, 7.88); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP:1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bottom Edge Middle/Area Scan (4x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.46 W/kg

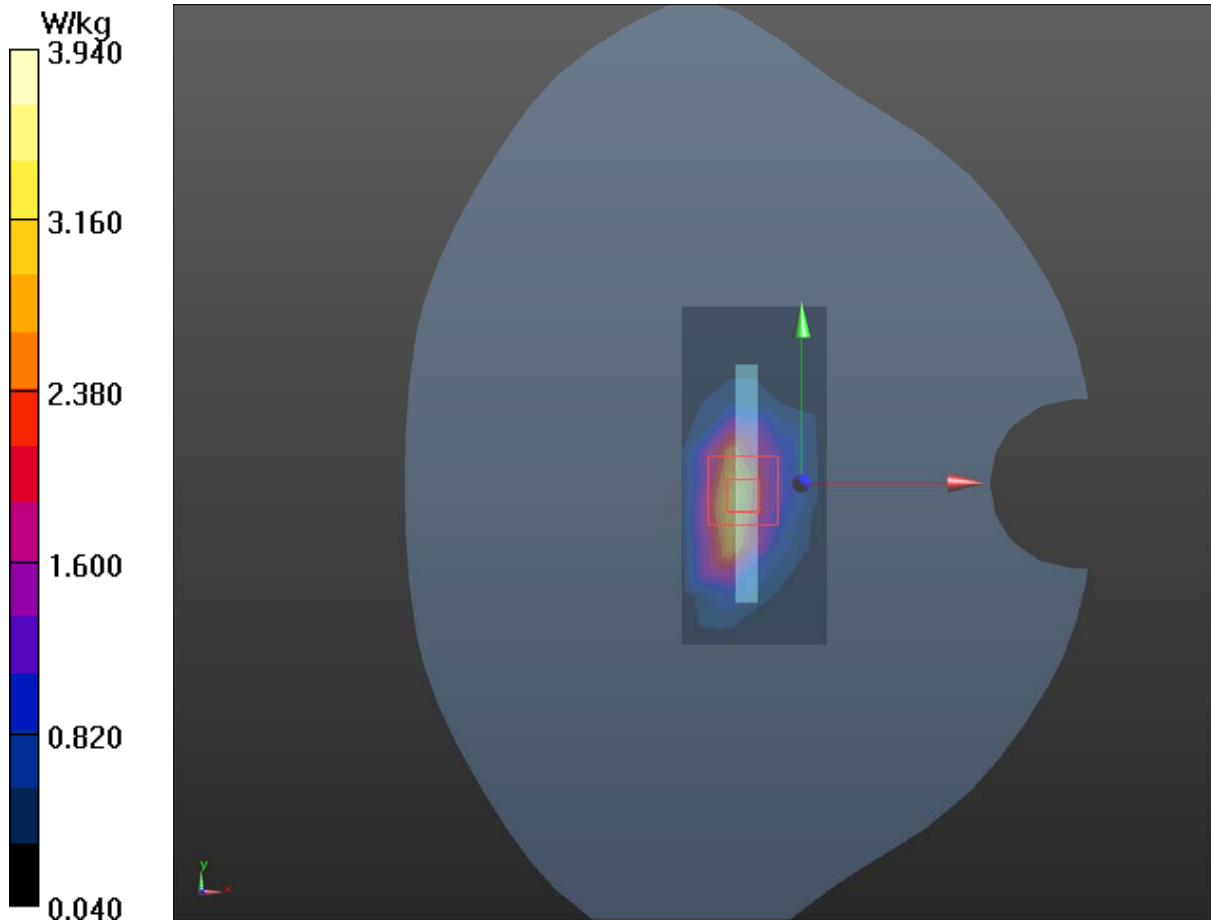
Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 52.44 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 8.07 W/kg

SAR(1 g) = 3.36 W/kg; SAR(10 g) = 1.57 W/kg

Maximum value of SAR (measured) = 3.940 W/kg



Plot 51 802.11a U-NII-2C Back Side Middle (Distance 0mm)

Date: 2022/7/7

Communication System: UID 0, 802.11a (0); Frequency: 5580 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5580 \text{ MHz}$; $\sigma = 5.258 \text{ S/m}$; $\epsilon_r = 35.664$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: $22.3 \text{ }^\circ\text{C}$ Liquid Temperature: $21.5 \text{ }^\circ\text{C}$

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(5.00, 5.00, 5.00); Calibrated: 2021/8/12

Electronics: DAE4 SN1692; Calibrated: 2021/10/4

Phantom: SAM 2; Type: QD000P40CD; Serial: TP: 1666

Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 3.03 W/kg

Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 3.477 V/m ; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 7.69 W/kg

SAR(1 g) = 2.86 W/kg ; SAR(10 g) = 0.872 W/kg

Maximum value of SAR (measured) = 3.43 W/kg

