SAR TEST REPORT

Applicant	ZTE Corporation
FCC ID	SRQ-ZTE7540NMX
Product	5G NR Multi model smart phone
Model	ZTE 7540N
Report No.	R2206A0499-S1
Issue Date	July 18, 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

Company:	TA Technology (Shanghai) Co., Ltd.
Address:	Building 3, No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
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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.	

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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	1g SAR Hotspot	Product Specific 10-g SAR
GSM 850	0.125	0.293	0.940	NA
GSM 1900	0.115	0.239	0.622	NA
WCDMA Band II	0.182	0.445	0.767	NA
WCDMA Band IV	0.219	0.546	0.978	NA
WCDMA Band V	0.151	0.335	0.486	NA
LTE FDD 2	0.187	0.428	0.796	NA
LTE FDD 5	0.159	0.320	0.544	NA
LTE FDD 7	0.911	0.518	**1.083**	NA
LTE FDD 12 (LTE FDD 17)	＜0.1	0.168	0.267	NA
LTE FDD 13	0.164	0.241	0.373	NA
LTE FDD 26	0.189	0.363	0.576	NA
LTE FDD 28	0.113	0.218	0.324	NA
LTE TDD 38	0.568	0.282	0.697	NA
LTE TDD 40	0.735	0.440	0.834	NA
LTE FDD 66 (LTE FDD 4)	0.202	0.454	1.008	NA
NR n2	0.295	0.627	1.055	NA
NR n7	0.781	**0.643**	0.791	NA
NR n28	0.153	0.253	0.473	NA
NR n40	0.335	0.230	0.273	NA
NR n66	0.277	0.429	0.705	NA
NR n78	0.671	0.129	0.366	NA
Wi-Fi (2.4G)	0.794	0.170	0.277	NA
Wi-Fi (5G)	**1.069**	0.252	0.684	NA
BT	0.177	＜0.1	＜0.1	NA
Date of Testing: June 13, 2022 ~ July 4, 2022 Date of Sample Received: June 10, 2022				

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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.

3) According to TCB workshop October, 2014 RF Exposure Procedures Update (Overlapping LTE Bands):

a)Main and Second Antenna SAR for LTE Band 17 (Frequency range: 704-716 MHz) is covered by LTE Band 12 (Frequency range 699-716 MHz); LTE Band 4 (Frequency range 1710-1755 MHz) is covered by LTE Band 66 (Frequency range: 1710-1780 MHz) due to similar frequency range, same maximum tune up limit and same channel bandwidth.

4) According to FCC Part 27:

Active antenna system= AAS

NR Band n78 does not cover the complete 3700-3980MHz frequency band.Part27 requires that device be capable of operating across the entire band so n78 must be disabled for the 27.50j band.

P: Partially covered by FCC/ISED rules

Table 2: Highest Simultaneous Transmission SAR

Exposure Configuration	1g SAR Head	1g SAR Body-worn	1g SAR Hotspot	Product Specific 10-g SAR
Highest Simultaneous Transmission SAR (W/kg)	1.513	0.895	1.401	NA
Note: The detail for simultaneous transmission consideration is described in chapter 10.3.				

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3 Description of Equipment under Test

Client Information

Applicant	ZTE Corporation
Applicant address	ZTE Plaza, #55 Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China
Manufacturer	ZTE Corporation
Manufacturer address	ZTE Plaza, #55 Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, China

General Technologies

Application Purpose	Original Grant
EUT Stage	Identical Prototype
Model	ZTE 7540N
SN	324225110229
Hardware Version	zs9A
Software Version	MyOS11.0.0_7540N_TEL
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/IV/V: 3 LTE FDD 2/4/5/7/12/13/17/26/28/66: 3 LTE TDD 38/40: 3 NR n2/n7/n28/n40/n66: 3 NR n78: 2
Power Level	GSM 850: level 5 GSM 1900: level 0 UMTS Band II/IV/V: all up bits LTE FDD 2/4/5/7/12/13/17/26/28/66: max power LTE TDD 38: max power NR n2/n7/n28/n40/n66/n78: max power
EUT Accessory	
Adapter 1	Manufacturer: Jiangsu Chenyang Electron Co.,Ltd. Model: STC-A520A-Z
Adapter 2	Manufacturer: Shenzhen Ruijing Industrial Co.,Ltd Model: STC-A520A-Z
Battery	Manufacturer: ZHONGSHAN TIANMAO BATTERY CO.LTD.

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	Model: Li3839T44P8h866445
USB Cable1	Manufacturer: Shenzhen Luxshare Precision Industry Co.,Ltd. Model: USB-TC20-W-70-M-L
USB Cable 2	Manufacturer: Dongguan Guojun Plastic Electronic Co.,Ltd Model: USB-TC20-W-70-M-L
Note: The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.	

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Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)
GSM	850	Voice(GMSK) GPRS(GMSK) EGPRS(GMSK,8PSK)	☐Multi-slot Class:8-1UP ☐Multi-slot Class:10-2UP ☒Multi-slot Class:12-4UP ☐Multi-slot Class:33-4UP	824 ~ 849
	1900			1850 ~ 1910
	Does this device support DTM (Dual Transfer Mode)? ☐Yes ☒No			
UMTS	Band II	QPSK, 16QAM	HSDPA UE Category:24 HSUPA UE Category:6	1850 ~ 1910
	Band IV			1710 ~ 1755
	Band V			824 ~ 849
LTE	FDD 2	QPSK, 16QAM, 64QAM	Rel.15	1850 ~ 1910
	FDD 4			1710 ~ 1755
	FDD 5			824 ~ 849
	FDD 7			2500 ~ 2570
	FDD 12			699 ~ 716
	FDD 13			777 ~ 787
	FDD 17			704 ~ 716
	FDD 26			814 ~ 849
	FDD 28 Subset 1			703 ~ 716
	FDD 28 Subset 2			728 ~ 746
	TDD 38			2570 ~ 2620
	TDD 40 Subset 1			2305 ~ 2315
	TDD 40 Subset 2			2350 ~ 2360
	FDD 66			1710 ~ 1780
	Does this device support Carrier Aggregation (CA) ☒Yes ☐No			
	Does this device support SV-LTE (1xRTT-LTE)? ☐Yes ☒No			
NR	NR n2	CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM; DFT-s OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	/	1850 ~ 1910
	NR n7			2500 ~ 2570
	NR n28 Subset 1			703 ~ 716
	NR n28 Subset 2			728 ~ 746
	NR n40 Subset 1			2305 ~ 2315
	NR n40 Subset 2			2350 ~ 2360
	NR n66			1710 ~ 1780
	NR n78 Subset 1			3450 ~ 3550

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EN-DC Band	DC_2A-n7A; DC_28A-n7A; DC_7A-n28A; DC_66A-n28A; DC_2A-n66A; DC_7A-n66A; DC_66A-n66A; DC_28A-n66A; DC_2A-n78A; DC_5A-n78A; DC_7A-n78A; DC_28A-n78A; DC_66A- n78A			
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 ~ 5250 5725 ~ 5850
	Does this device support MIMO ☐Yes☒No			

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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

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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.

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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.

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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 preformed 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.

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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 3: 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.

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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 (βc, βd), and HS-DPCCH power offset parameters (ΔACK, ΔNACK, ΔCQI) 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 4: 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 Δ_{CQI}= 8⇔A_{hs} = β_{hs}/β_c=30/15⇔β_{hs}=30/15*β_c

Note 2: CM=1 for β_c/β_d =12/15, β_{hs}/β_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 β_c=11/15 and β_d=15/15.

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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 5: Sub-Test 5 Setup for Release 6 HSUPA

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	β_{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: Δ_{ACK}, ΔNACK and Δ_{CQI} = 8 ⇔ $A_{hs} = \underline{\beta}_{hs}/\underline{\beta}_c$ = 30/15 ⇔β_{hs}= 30/15 *β_c.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_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 β_c = 10/15 and β_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 β_c = 14/15 and β_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 6: 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 Subset 2its	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

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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 SF4	11484	5.76
	4	4	10		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+ 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

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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 7: 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			
Category 13	15	1	35280	259200	QPSK, 16QAM, 64QAM		
Category 14	15	1	42192	259200			
Category 15	15	1	23370	345600	QPSK, 16QAM		
Category 16	15	1	27952	345600			
Category 17 NOTE 2	15	1	35280	259200	QPSK, 16QAM, 64QAM	–	
			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			QPSK, 16QAM, 64QAM
Category 24	15	1	42192	518400			

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.

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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 > ½ 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 > ½ 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.

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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.

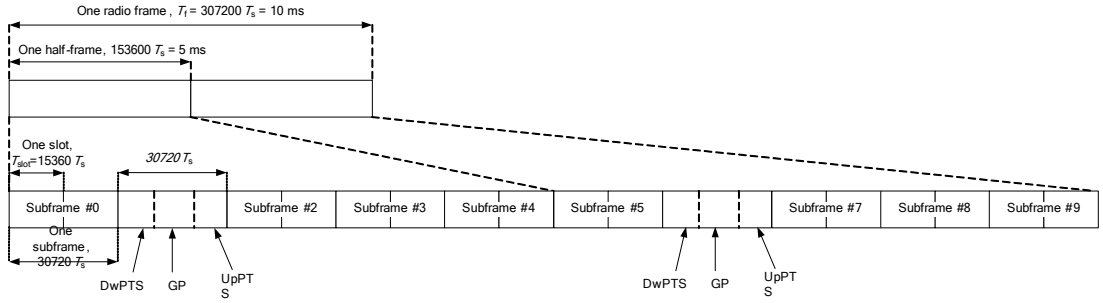

Figure 1: Frame structure type 2

Table 8: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

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

Table 9: 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

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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:

Duty cycle = (30720Ts*Ups + Uplink Component*Specials)/(307200Ts)

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

Uplink Component = UpPTS

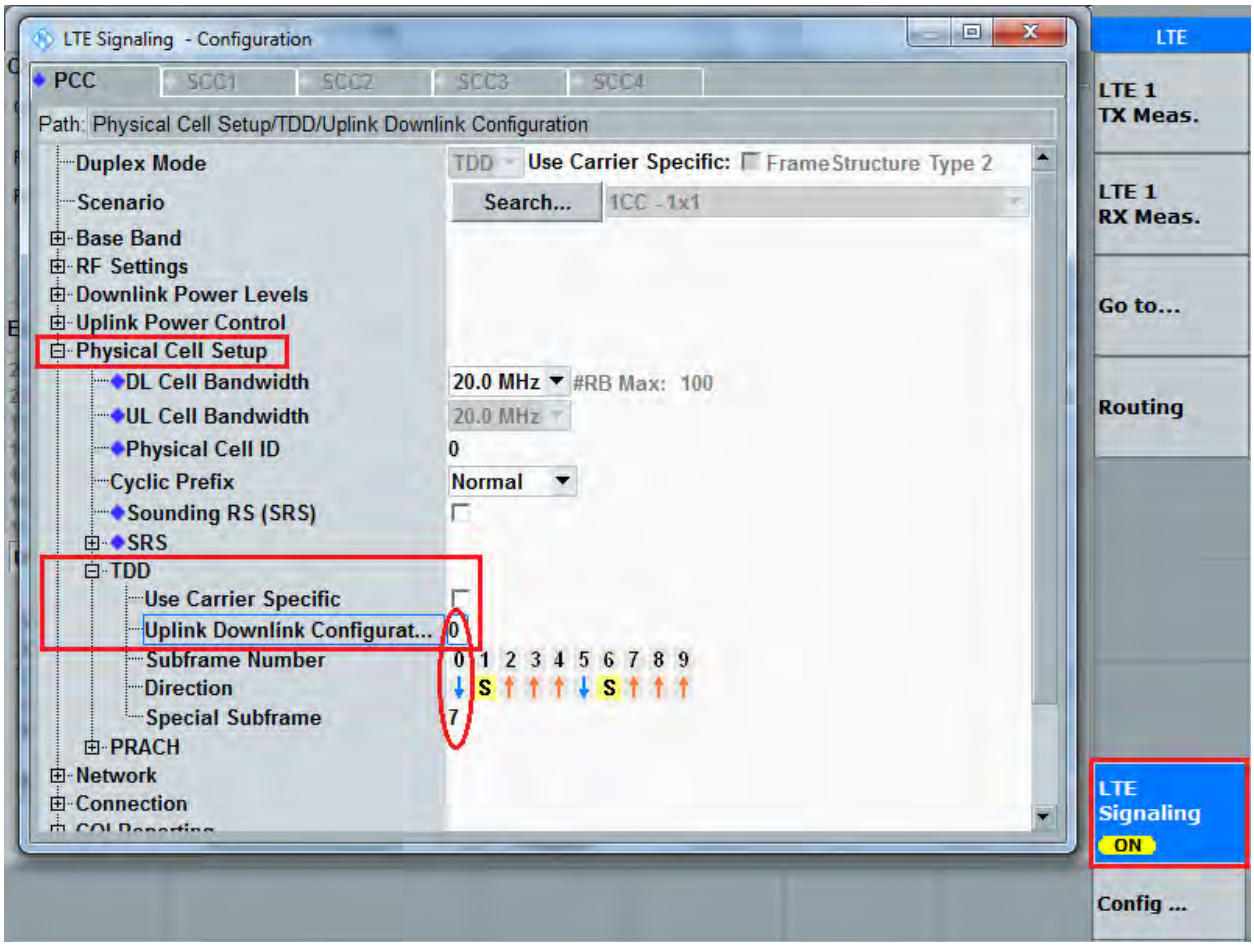
In conclusion, for the TDD LTE Band, Duty Cycle can be calculated with formula as below. All these sets are ok when we test, or we can set as below.

Duty cycle = [(30720Ts*Ups) + UpPTS *Specials]/(307200Ts)

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			
				Normal cyclic prefix in uplink		Extended cyclic prefix in uplink		Normal cyclic prefix in uplink		Extended cyclic prefix in uplink	
	D	S	U	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



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5.3.5 5G NR Test Configuration

For 5G NR SAR testing, due to test setup limitations, SAR testing for NR was performed using factory test mode software to establish the connection and perform SAR with 100% transmission.

The DFT-s-OFDM and CP-OFDM waveforms were investigated, and DFT-s-OFDM was found to be the worst case.
The worst-case scenario for all measurements is based on an engineering evaluation and QPSK was observed as the worst one and set for all conducted and radiated. Output power measurements were measured on QPSK, 16QAM, 64QAM, 256QAM, and BPSK, modulations.

The non-signaling test is performed at 100% duty cycle, but the maximum duty cycle of this product is 25%, so the final SAR value is calculated from SAR at 100% duty cycle to 25% duty cycle.

For EN-DC SAR, as the existing SAR test system can not test the multiple different frequency bands simultaneous Transmission SAR at the same time , we suggest that the conservative "max tune-up + max 10dBm tune-up" for hotspot multi-Tx and SAR scaling method can be used to evaluate the inter-band Uplink EN-DC SAR from standalone SAR test results of each LTE and NR EN-DC component band and the conservative "max tune-up + max 10dBm tune-up" for hotspot multi-Tx method to combine the scaled SAR value from each EN-DC component band as the inter-band Uplink EN-DC SAR. All Simultaneous Transmission Scenarios will be evaluated independently in the final SAR report.

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5.3.6 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.

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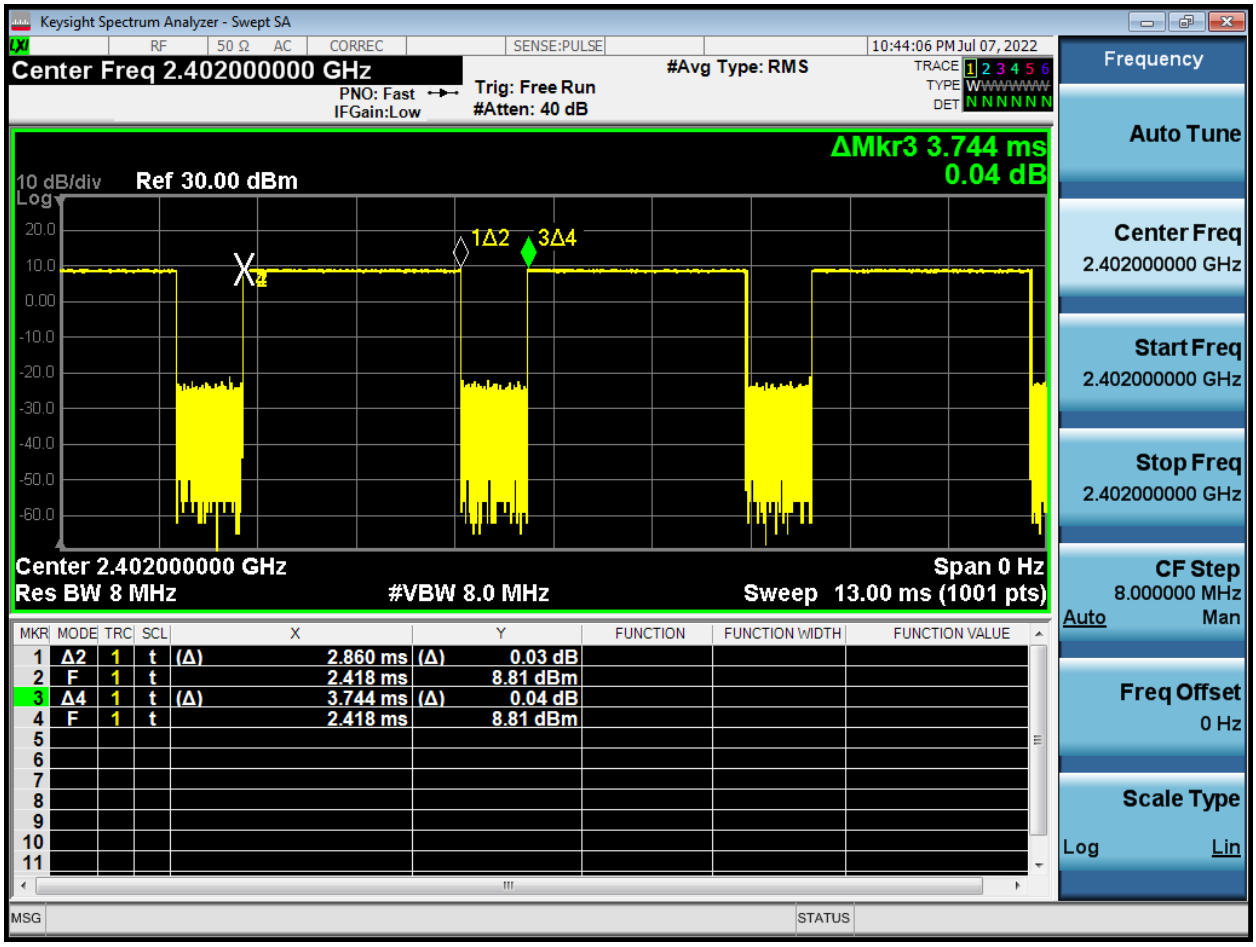
5.3.7 BT Test Configuration

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 hoping off and data rate set for DH5.



Note: Duty factor= Ton (ms)/ T(on+off) (ms)=2.860/3.744*100%=76%

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5.3.8 CA specification

The device supports LTE advanced Rel. 15, Carrier Aggregation (CA) is supported for Intra band only, more details information is provided in tables below:

1) CA Intra band contiguous

E-UTRA CA configuration / Bandwidth combination set								
E-UTRA CA configuration	Uplink CA configurations	Component carriers in order of increasing carrier frequency					Maximum aggregated bandwidth [MHz]	Bandwidth combination set
		Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]	Channel bandwidths for carrier [MHz]		
CA_7C	CA_7C	15	15				40	0
		20	20					
		10	20				40	1
		15	15, 20					
		20	10, 15, 20					
		15	10, 15				40	2
		20	15, 20					

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5.3.9 Receiver detection mechanism specification

This device support the receiver detection mechanism, the main purpose is to minimize triggering associated with power reduction scenarios by receiver detection mechanisms and provide enhanced user experience. It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 3G&4G&5G and Wi-Fi antennas accordingly.

More details information followings:

1. When there is a voice call (including VOIP) and the modem chip detects that the Headset is unconnected and speaker is off, then the receiver is triggered and it is considered as Held to ear scenario (Head). The power level receiver on is applied.
2. When there is a voice call, but the headset is connected or speaker mode is on, the receiver will not work. It is considered as other scenarios (Body etc.). The power level receiver off and receiver off+hotspot on is applied.
3. When there is data service only(No voice call, including VOIP), the receiver will not work too. It is considered as other scenarios (Body etc.).The power level receiver off and receiver off+hotspot on is applied.

Note: The power level receiver on and receiver off and receiver off+hotspot on can be set to the same or different.

a. Power Level Table

WWAN

Antenna	Position	Receiver State	Hotspot State	Transmitting conditions
ANT0	Head	On	N/A	WWAN Only
		On	N/A	WWAN+WLAN2.4G/5G
	Body Worn /Product-specific 10g SAR	Off	N/A	WWAN Only
		Off	N/A	WWAN+WLAN2.4G/5G
	Hotspot	Off	On	WWAN+WLAN2.4G/5G
ANT4	Head	On	N/A	WWAN Only
		On	N/A	WWAN+WLAN2.4G/5G
	Body Worn /Product-specific 10g SAR	Off	N/A	WWAN Only
		Off	N/A	WWAN+WLAN2.4G/5G
	Hotspot	Off	On	WWAN+WLAN2.4G/5G
ANT5	Head	On	N/A	WWAN Only
		On	N/A	WWAN+WLAN2.4G/5G
	Body Worn /Product-specific 10g SAR	Off	N/A	WWAN Only
		Off	N/A	WWAN+WLAN2.4G/5G
	Hotspot	Off	On	WWAN+WLAN2.4G/5G
ANT6	Head	On	N/A	WWAN Only
		On	N/A	WWAN+WLAN2.4G/5G
	Body Worn /Product-specific 10g SAR	Off	N/A	WWAN Only

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		Off	N/A	WWAN+WLAN2.4G/5G
	Hotspot	Off	On	WWAN+WLAN2.4G/5G
ANT7	Head	On	N/A	WWAN Only
		On	N/A	WWAN+WLAN2.4G/5G
	Body Worn /Product-specific 10g SAR	Off	N/A	WWAN Only
		Off	N/A	WWAN+WLAN2.4G/5G
	Hotspot	Off	On	WWAN+WLAN2.4G/5G

WLAN

Antenna	Position	Receiver State	Transmitting conditions
ANT2	Head	On	WLAN Only
		On	WWAN+WLAN2.4G/5G
	Body Worn/Hotspot/Product-specific 10g SAR	Off	WLAN Only
		Off	WWAN+WLAN2.4G/5G

b. Power Reduced Table

WWAN

Mode	Band	Full power (Tune up)	Antenna	Head(Receiver on)			Body Worn(Receiver off)			Hotspot(Receiver off+Hotspot on)		
				Standalone	Simultaneous transmission		Standalone	Simultaneous transmission		Standalone	Simultaneous transmission	
					WWAN+ 2.4G WLAN	WWAN+ 5G WLAN		WWAN+ 2.4G WLAN	WWAN+ 5G WLAN		WWAN+ 2.4G WLAN	WWAN+ 5G WLAN
GSM (CS)	GSM 850	33.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GSM (CS)	GSM 1900	30.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.2kbps RMC	WCDMA B2	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.2kbps RMC	WCDMA B4	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.2kbps RMC	WCDMA B5	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LTE Bands	LTE B2	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B4	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B5	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B7	23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		23.0	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B12	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B13	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B17	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B26	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B28A	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B28B	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B38	23.5	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B40A	23.5	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B40B	23.5	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B66	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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		23.0	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SA Bands	n 2	23.0	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 7	23.0	Ant.6	1.5	1.5	1.5	0.0	0.0	0.0	1.5	1.5	1.5
		23.5	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 28A	23.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 28B	23.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 40A	23.5	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 40B	23.5	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 66	23.0	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
		23.5	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 78A	26.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Mode	Band	Full power (Tune up)	Antenna	Head(Receiver on)			Body Worn(Receiver off)			Hotspot(Receiver off+Hotspot on)		
				Standalone	Simultaneous transmission		Standalone	Simultaneous transmission		Standalone	Simultaneous transmission	
					WWAN+ 2.4G WLAN	WWAN+ 5G WLAN		WWAN+ 2.4G WLAN	WWAN+ 5G WLAN		WWAN+ 2.4G WLAN	WWAN+ 5G WLAN
EN-DC	LTE B2	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B2+N7）	n 7	23.5	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B28	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B28+N7）	n 7	23.5	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B7	23.0	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B7+N28）	n 28	23.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B66	23.0	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B66+N28）	n 28	23.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B2	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B2+N66）	n 66	23.5	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B7	23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B7+N66）	n 66	23.5	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B66	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B66+N66）	n 66	23.5	Ant.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B2	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B2+N78）	n 78	26.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B5	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B5+N78）	n 78	26.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B7	23.0	Ant.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B7+N78）	n 78	26.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B28	24.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B28+N78）	n 78	26.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B66	23.5	Ant.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
（B66+N78）	n 78	26.0	Ant.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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WLAN

Mode	Band	Full power (Tune up)	Antenna	Head(Receiver on)		Body Worn//Product Specific (Receiver off)		Hotspot (Receiver off)
				Standalone	Simultaneous transmission WWAN+ 2.4/5G WLAN	Standalone	Simultaneous transmission WWAN+ 2.4/5G WLAN	Simultaneous transmission WWAN+ 2.4/5G WLAN
2.4G	802.11b CH1-11	18.5	Ant.2	0.0	0.0	0.0	0.0	0.0
	802.11g CH1-11	15.5		0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH1-11	15.5		0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH3-9	15.5		0.0	0.0	0.0	0.0	0.0
5G U-NII-1	802.11a CH36-48	17.0	Ant.2	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH36-48	17.0		0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH38-46	17.0		0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH36-48	13.0		0.0	0.0	0.0	0.0	0.0
	802.11acVHT40 CH38-46	13.0		0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH42	13.0		0.0	0.0	0.0	0.0	0.0
5G U-NII-3	802.11a CH149-165	17.5	Ant.2	0.0	0.0	0.0	0.0	0.0
	802.11nHT20 CH149-165	17.5		0.0	0.0	0.0	0.0	0.0
	802.11nHT40 CH151-159	17.5		0.0	0.0	0.0	0.0	0.0
	802.11acVHT20 CH149-165	13.5		0.0	0.0	0.0	0.0	0.0
	802.11acVHT40 CH151-159	13.5		0.0	0.0	0.0	0.0	0.0
	802.11acVHT80 CH155	13.5		0.0	0.0	0.0	0.0	0.0

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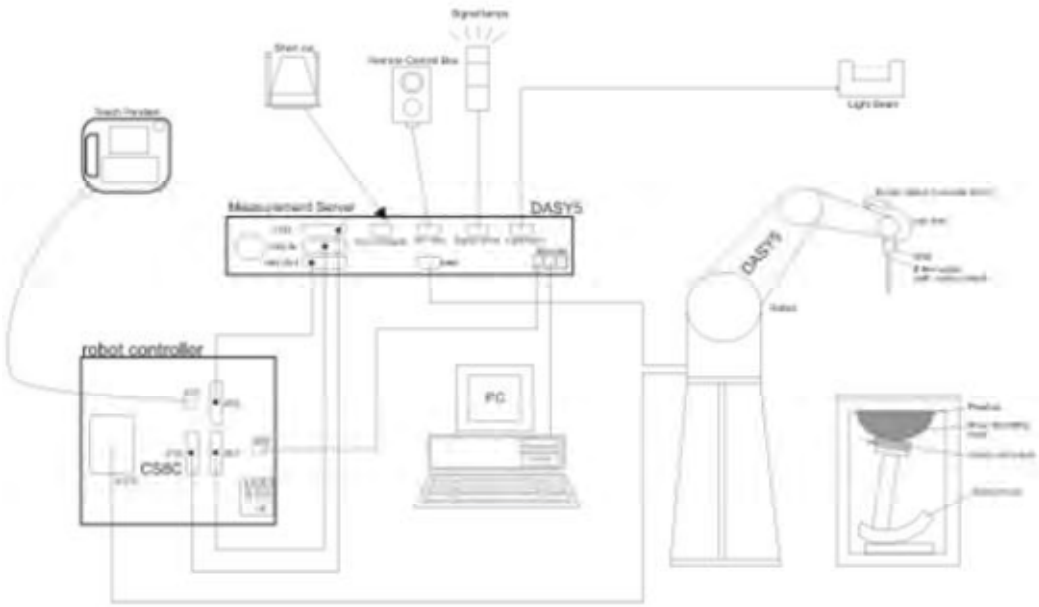
6 SAR Measurements System Configuration

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.

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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 µW/g to > 100 mW/g Linearity: ± 0.2dB (noise: typically < 1 µW/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 ± 10%. The spherical isotropy was evaluated and found to be better than ± 0.25dB. 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 bellow 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.

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

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.	

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Zoom Scan

Zoom scans are used 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 shoes 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: $\triangle x_{zoom} \triangle y_{zoom}$			≤2GHz: ≤8mm 2 – 3GHz: ≤5mm*	3 – 4GHz: ≤5mm* 4 – 6GHz: ≤4mm*
Maximum zoom scan spatial resolution, normal to phantom surface	Uniform grid: $\triangle z_{zoom}(n)$		≤5mm	3 – 4GHz: ≤4mm 4 – 5GHz: ≤3mm 5 – 6GHz: ≤2mm
	Graded grid	$\triangle z_{zoom}(1)$: between 1st two points closest to phantom surface	≤4mm	3 – 4GHz: ≤3mm 4 – 5GHz: ≤2.5mm 5 – 6GHz: ≤2mm
		$\triangle z_{zoom}(n>1)$: between subsequent points	$\leq 1.5 \bullet \triangle z_{zoom}(n-1)$	
Minimum zoom scan volume	X, y, z		≥30mm	3 – 4GHz: ≥28mm 4 – 5GHz: ≥25mm 5 – 6GHz: ≥22mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the *reported* SAR from the *area scan based 1-g SAR estimation* procedures of KDB 447498 is ≤ 1.4W/kg, ≤8mm, ≤7mm and ≤5mm zoom scan resolution may be applied, respectively, for 2GHz to 3GHz, 3GHz to 4GHz and 4GHz to 6GHz.				

Volume Scan Procedures

The volume scan is used for 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 DASY 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.

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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-DDC056G-S	20010600118	/	/
Amplifier	INDEXSAR	TPA-005060G01	13030502	2022-05-14	2023-05-13
Wireless communication tester	Anritsu	MT8820C	6201342015	2021-12-12	2022-12-11
Wireless communication tester	Key sight	E5515C	MY48360988	2021-12-12	2022-12-11
Wireless communication tester	Starpoint	SP9500	20440	2021-12-12	2022-12-11
Wireless communication tester	Anritsu	MT8000A	6261844783	2022-05-14	2023-05-13
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 750MHz	SPEAG	D750V3	1045	2020-08-28	2023-08-27
Validation Kit 835MHz	SPEAG	D835V2	4d020	2020-08-28	2023-08-27
Validation Kit 1750MHz	SPEAG	D1750V2	1033	2020-02-25	2023-02-24
Validation Kit 1900MHz	SPEAG	D1900V2	5d060	2020-08-27	2023-08-26
Validation Kit 2300MHz	SPEAG	D2300V2	1110	2020-09-28	2023-09-27
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 3500MHz	SPEAG	D3500V2	1083	2019-08-20	2022-08-19

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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
SAR Lab 1					
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	/	/

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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 ± 2°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	σ(s/m)
750	41.9	0.89
835	41.5	0.90
1750	40.1	1.37
1900	40.0	1.40
2300	39.5	1.67
2450	39.2	1.80
2600	39.0	1.96
3500	37.9	2.91
5250	35.9	4.71
5750	35.4	5.22

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Measurements results

Frequency (MHz)	Test Date	Temp ℃	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within ±5%)	
			ε_r	σ(s/m)	ε_r	σ(s/m)	Dev ε_r(%)	Dev σ(%)
750	2022/6/14	21.5	42.3	0.88	41.9	0.89	0.95	-1.12
	2022/6/16	21.5	42.0	0.87	41.9	0.89	0.24	-2.25
835	2022/6/13	21.5	41.4	0.88	41.5	0.90	-0.24	-2.22
	2022/6/17	21.5	41.3	0.87	41.5	0.90	-0.48	-3.33
1750	2022/6/15	21.5	40.2	1.34	40.1	1.37	0.25	-2.19
	2022/7/2	21.5	40.1	1.34	40.1	1.37	0.00	-2.19
	2022/7/4	21.5	40.2	1.36	40.1	1.37	0.25	-0.73
1900	2022/6/18	21.5	40.1	1.41	40.0	1.40	0.25	0.71
	2022/6/21	21.5	40.2	1.43	40.0	1.40	0.50	2.14
2300	2022/6/17	21.5	40.0	1.65	39.5	1.67	1.27	-1.20
	2022/6/22	21.5	40.1	1.64	39.5	1.67	1.52	-1.80
2450	2022/6/27	21.5	38.6	1.81	39.2	1.80	-1.53	0.56
2600	2022/6/20	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
	2022/6/25	21.5	38.4	1.94	39.0	1.96	-1.54	-1.02
	2022/6/26	21.5	38.3	1.99	39.0	1.96	-1.79	1.53
	2022/7/1	21.5	38.5	1.95	39.0	1.96	-1.28	-0.51
3500	2022/6/24	21.5	37.1	2.83	37.9	2.91	-2.11	-2.75
5250	2022/6/23	21.5	35.5	4.80	35.9	4.71	-1.11	1.91
5750	2022/6/27	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.								

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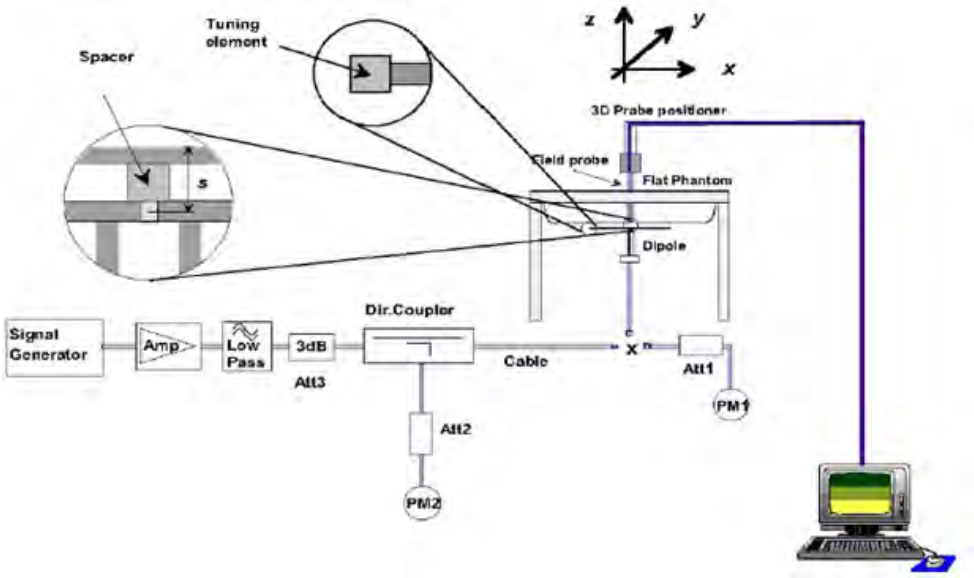
8.2 System Performance Check

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 1System Performance Check setup

Picture 2 Setup Photo

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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)	ΔΩ
Dipole D750V3 SN: 1045	Head Liquid	8/28/2020	-26.6	/	54.3	/
		8/27/2021	-26.2	-1.5	53.9	-0.4
Dipole D835V2 SN: 4d020	Head Liquid	8/28/2020	-26.2	/	54.8	/
		8/27/2021	-26.5	1.1	55.2	0.4
Dipole D1750V2 SN: 1033	Head Liquid	2/25/2020	-38.3	/	48.8	/
		2/24/2021	-40.0	4.4	49.9	1.1
		2/23/2022	-40.6	1.5	51.1	1.2
Dipole D1900V2 SN: 5d060	Head Liquid	8/27/2020	-23.3	/	52.5	/
		8/26/2021	-23.0	-1.3	51.9	-0.6
Dipole D2450V2 SN: 786	Head Liquid	8/27/2020	-26.9	/	54.5	/
		8/26/2021	-27.1	0.7	53.8	-0.7
Dipole D3500V2 SN: 1083 (3500MHz)	Head Liquid	9/20/2019	-31.4	/	52.3	/
		9/19/2020	-31.1	-1.0	52.2	-0.1
		9/18/2021	-31.0	-0.3	51.9	-0.3
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 (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

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System Check results

Frequency (MHz)	Test Date	Temp ℃	250mW Measured SAR_{1g} (W/kg)	1W Normalized SAR_{1g} (W/kg)	1W Target SAR_{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
750	2022/6/14	21.5	2.13	8.52	8.37	1.79	1
	2022/6/16	21.5	2.10	8.40	8.37	0.36	2
835	2022/6/13	21.5	2.44	9.76	9.65	1.14	3
	2022/6/17	21.5	2.46	9.84	9.65	1.97	4
1750	2022/6/15	21.5	8.95	35.80	35.90	-0.28	5
	2022/7/2	21.5	9.11	36.44	35.90	1.50	6
	2022/7/4	21.5	8.96	35.84	35.90	-0.17	7
1900	2022/6/18	21.5	9.88	39.52	39.50	0.05	8
	2022/6/21	21.5	9.85	39.40	39.50	-0.25	9
2300	2022/6/17	21.5	12.36	49.44	47.70	3.65	10
	2022/6/22	21.5	12.32	49.28	47.70	3.31	11
2450	2022/6/27	21.5	13.70	54.80	52.30	4.78	12
2600	2022/6/20	21.5	13.9	55.60	56.10	-0.89	13
	2022/6/25	21.5	13.88	55.52	56.10	-1.03	14
	2022/6/26	21.5	13.94	55.76	56.10	-0.61	15
	2022/7/1	21.5	13.9	55.60	56.10	-0.89	16
Frequency (MHz)	**Test Date**	**Temp ℃**	**100mW Measured SAR_{1g} (W/kg)**	**1W Normalized SAR_{1g} (W/kg)**	**1W Target SAR_{1g} (W/kg)**	**Δ % (Limit ±10%)**	**Plot No.**
3500	2022/6/24	21.5	6.57	65.70	67.10	-2.09	17
5250	2022/6/23	21.5	7.87	78.70	78.00	0.90	18
5750	2022/6/27	21.5	7.66	76.60	77.40	-1.03	19
Note: Target Values used derive from the calibration certificate Data Storage and Evaluation.							

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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
750	2021/8/12	3677	EX3DV4	750	Head	41.9	0.89	PASS	PASS	PASS
835	2021/8/12	3677	EX3DV4	835	Head	41.5	0.90	PASS	PASS	PASS
1750	2021/8/12	3677	EX3DV4	1750	Head	40.1	1.37	PASS	PASS	PASS
1900	2021/8/12	3677	EX3DV4	1900	Head	40.0	1.40	PASS	PASS	PASS
2300	2021/8/12	3677	EX3DV4	2300	Head	39.5	1.67	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
3500	2021/8/12	3677	EX3DV4	3500	Head	37.9	2.91	PASS	PASS	PASS
5250	2021/8/12	3677	EX3DV4	5250	Head	35.9	4.71	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.

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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

GSM 850										
Full Power & Receiver on & Receiver off & Hotspot on--Main Ant0		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	33.00	32.37	32.40	32.26	9.03	23.97	23.34	23.37	23.23
GPRS/EGPRS (GMSK)	1 Tx Slot	33.00	32.33	32.40	32.21	9.03	23.97	23.30	23.37	23.18
	2 Tx Slots	32.50	31.90	31.89	31.77	6.02	26.48	25.88	25.87	25.75
	3 Tx Slots	31.50	30.53	30.52	30.37	4.26	27.24	26.27	26.26	26.11
	4 Tx Slots	30.50	29.52	29.52	29.33	3.01	**27.49**	26.51	26.51	26.32
EGPRS (8PSK)	1 Tx Slot	27.50	26.66	26.52	26.14	9.03	18.47	17.63	17.49	17.11
	2 Tx Slots	26.50	25.55	25.10	25.22	6.02	20.48	19.53	19.08	19.20
	3 Tx Slots	24.00	23.26	23.25	22.96	4.26	19.74	19.00	18.99	18.70
	4 Tx Slots	23.00	22.18	22.15	21.95	3.01	19.99	19.17	19.14	18.94
GSM 1900										
Full Power & Receiver on & Receiver off & Hotspot on--Main Ant7		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	30.50	30.06	29.85	29.55	9.03	21.47	21.03	20.82	20.52
GPRS/EGPRS (GMSK)	1 Tx Slot	30.50	30.03	29.86	29.52	9.03	21.47	21.00	20.83	20.49
	2 Tx Slots	29.50	29.10	29.05	28.51	6.02	23.48	23.08	23.03	22.49
	3 Tx Slots	27.50	27.06	26.74	26.39	4.26	23.24	22.80	22.48	22.13
	4 Tx Slots	26.50	25.97	25.88	25.31	3.01	**23.49**	22.96	22.87	22.30
EGPRS (8PSK)	1 Tx Slot	24.50	24.15	23.76	23.34	9.03	15.47	15.12	14.73	14.31
	2 Tx Slots	23.50	23.06	22.32	22.16	6.02	17.48	17.04	16.30	16.14
	3 Tx Slots	21.00	20.56	20.15	19.92	4.26	16.74	16.30	15.89	15.66
	4 Tx Slots	20.00	19.25	18.58	18.56	3.01	16.99	16.24	15.57	15.55
Notes: The worst-case configuration and mode for SAR testing is determined to be as follows: 1. Standalone: GSM 850 GMSK (GPRS) mode with 4 time slots for Max power, GSM 1900 GMSK (GPRS) mode with 4 time slots for Max power, based on the output power measurements above..										

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9.2 WCDMA Mode

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

WCDMA Band II					
Full Power & Receiver on & Receiver off & Hotspot on--Main Ant7		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	23.06	**23.13**	22.97	23.50
AMR	12.2k	23.18	23.01	23.13	23.50
HSDPA	Subtest 1	21.96	22.13	22.01	22.50
	Subtest 2	22.00	22.07	21.85	22.50
	Subtest 3	21.62	21.75	21.31	22.00
	Subtest 4	21.64	21.47	21.63	22.00
HSUPA	Subtest 1	21.58	21.81	21.73	22.50
	Subtest 2	20.16	20.13	19.99	20.50
	Subtest 3	21.04	21.19	21.01	21.50
	Subtest 4	20.12	20.05	19.95	20.50
	Subtest 5	21.66	21.89	21.57	22.50
HSPA+	16QAM	20.87	20.78	20.82	21.00
WCDMA Band IV					
Full Power & Receiver on & Receiver off & Hotspot on--Main Ant7		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	23.02	**23.05**	23.03	23.50
AMR	12.2k	22.88	23.19	23.05	23.50
HSDPA	Subtest 1	22.06	22.03	22.17	22.50
	Subtest 2	21.88	22.11	22.17	22.50
	Subtest 3	21.46	21.61	21.69	22.00
	Subtest 4	21.36	21.43	21.65	22.00
HSUPA	Subtest 1	21.76	21.59	21.59	22.50
	Subtest 2	20.06	20.05	20.17	20.50
	Subtest 3	20.98	20.99	21.05	21.50
	Subtest 4	19.94	19.89	20.19	20.50
	Subtest 5	21.54	21.57	21.87	22.50
HSPA+	16QAM	20.65	20.86	20.64	21.00
WCDMA Band V					
Full Power & Receiver on & Receiver off & Hotspot on--Main Ant0		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	23.33	**23.36**	23.35	24.00
AMR	12.2k	23.43	23.26	23.25	24.00

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HSDPA	Subtest 1	22.39	22.46	22.25	23.00
	Subtest 2	22.27	22.50	22.41	23.00
	Subtest 3	21.99	21.74	21.71	22.50
	Subtest 4	21.75	21.86	21.69	22.50
HSUPA	Subtest 1	21.85	22.18	21.97	23.00
	Subtest 2	20.17	20.52	20.39	21.00
	Subtest 3	21.27	21.52	21.39	22.00
	Subtest 4	20.19	20.38	20.31	21.00
	Subtest 5	22.09	22.12	22.07	23.00
HSPA+	16QAM	21.24	21.07	20.98	21.50
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”.					

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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

LTE Band 2							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant7				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	22.89	22.89	22.72	23.50
		1	2	23.03	22.93	22.83	23.50
		1	5	22.72	22.75	22.67	23.50
		3	0	22.90	22.72	22.85	23.50
		3	2	22.77	22.82	22.74	23.50
		3	3	22.75	22.73	22.74	23.50
		6	0	21.92	21.83	21.90	22.50
	16QAM	1	0	22.25	22.21	22.26	22.50
		1	2	22.04	22.28	22.30	22.50
		1	5	22.09	22.05	22.07	22.50
		3	0	21.70	21.63	21.66	22.50
		3	2	21.83	21.76	21.81	22.50
		3	3	21.76	21.72	21.72	22.50
		6	0	20.78	20.75	20.79	21.50
	64QAM	1	0	21.23	21.15	21.20	21.50
		1	2	21.11	21.05	21.09	21.50
		1	5	21.07	21.07	21.04	21.50
		3	0	20.71	20.60	20.67	21.50
		3	2	20.86	20.78	20.83	21.50
		3	3	20.79	20.75	20.75	21.50
		6	0	19.81	19.79	19.83	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	22.91	22.93	22.75	23.50

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		1	7	23.01	22.96	22.87	23.50
		1	14	22.75	22.80	22.71	23.50
		8	0	22.00	21.84	21.98	22.50
		8	4	21.89	21.92	21.86	22.50
		8	7	21.85	21.84	21.84	22.50
		15	0	21.92	21.87	21.93	22.50
	16QAM	1	0	22.25	22.23	22.29	22.50
		1	7	22.04	22.28	22.34	22.50
		1	14	22.11	22.09	22.10	22.50
		8	0	20.81	20.76	20.78	21.50
		8	4	20.94	20.89	20.93	21.50
		8	7	20.86	20.84	20.85	21.50
		15	0	20.81	20.79	20.82	21.50
	64QAM	1	0	21.26	21.17	21.23	21.50
		1	7	21.14	21.05	21.11	21.50
		1	14	21.09	21.06	21.07	21.50
		8	0	19.82	19.73	19.79	20.50
		8	4	19.97	19.91	19.95	20.50
		8	7	19.89	19.87	19.88	20.50
		15	0	19.84	19.83	19.86	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	22.88	22.91	22.71	23.50
		1	13	22.99	22.92	22.84	23.50
		1	24	22.72	22.75	22.67	23.50
		12	0	21.97	21.79	21.94	22.50
		12	6	21.87	21.88	21.81	22.50
		12	13	21.83	21.82	21.80	22.50
		25	0	21.92	21.86	21.91	22.50
	16QAM	1	0	22.25	22.19	22.26	22.50
		1	13	22.04	22.26	22.31	22.50
		1	24	22.08	22.07	22.06	22.50
		12	0	20.79	20.72	20.75	21.50
		12	6	20.91	20.84	20.89	21.50
		12	13	20.83	20.79	20.81	21.50
		25	0	20.79	20.75	20.77	21.50
	64QAM	1	0	21.23	21.17	21.20	21.50
		1	13	21.11	21.07	21.08	21.50
		1	24	21.10	21.04	21.03	21.50
		12	0	19.80	19.69	19.80	20.50
		12	6	19.94	19.86	19.91	20.50
		12	13	19.86	19.82	19.84	20.50
		25	0	19.82	19.79	19.81	20.50

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	22.90	22.92	22.74	23.50
		1	25	23.02	22.97	22.88	23.50
		1	49	22.74	22.79	22.70	23.50
		25	0	22.00	21.84	21.98	22.50
		25	13	21.90	21.93	21.85	22.50
		25	25	21.85	21.86	21.85	22.50
		50	0	21.96	21.88	21.95	22.50
	16QAM	1	0	22.29	22.22	22.28	22.50
		1	25	22.08	22.30	22.34	22.50
		1	49	22.11	22.09	22.09	22.50
		25	0	20.82	20.77	20.79	21.50
		25	13	20.93	20.88	20.92	21.50
		25	25	20.86	20.84	20.85	21.50
		50	0	20.82	20.80	20.81	21.50
	64QAM	1	0	21.25	21.16	21.22	21.50
		1	25	21.14	21.07	21.11	21.50
		1	49	21.09	21.06	21.06	21.50
		25	0	19.83	19.74	19.80	20.50
		25	13	19.96	19.90	19.94	20.50
		25	25	19.89	19.87	19.88	20.50
		50	0	19.85	19.84	19.85	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	22.89	22.88	22.72	23.50
		1	38	23.00	22.96	22.85	23.50
		1	74	22.71	22.74	22.66	23.50
		36	0	21.98	21.80	21.95	22.50
		36	18	21.87	21.88	21.81	22.50
		36	39	21.82	21.83	21.81	22.50
		75	0	21.94	21.84	21.90	22.50
	16QAM	1	0	22.27	22.20	22.26	22.50
		1	38	22.06	22.27	22.32	22.50
		1	74	22.09	22.05	22.06	22.50
		36	0	20.79	20.75	20.76	21.50
		36	18	20.90	20.83	20.88	21.50
		36	39	20.84	20.80	20.82	21.50
		75	0	20.79	20.75	20.77	21.50
	64QAM	1	0	21.20	21.14	21.20	21.50
		1	38	21.12	21.04	21.09	21.50
		1	74	21.10	21.05	21.07	21.50
		36	0	19.82	19.76	19.81	20.50

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		36	18	19.94	19.87	19.93	20.50
		36	39	19.87	19.83	19.85	20.50
		75	0	19.82	19.79	19.81	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	22.86	22.84	22.69	23.50
		1	50	**22.99**	**22.92**	**22.83**	23.50
		1	99	22.69	22.73	22.63	23.50
		50	0	**21.95**	21.75	**21.91**	22.50
		50	25	21.85	**21.84**	21.78	22.50
		50	50	21.79	21.78	21.77	22.50
		100	0	**21.91**	21.79	21.86	22.50
	16QAM	1	0	22.24	22.16	22.21	22.50
		1	50	22.03	22.25	22.28	22.50
		1	99	22.06	22.02	22.04	22.50
		50	0	20.76	20.71	20.73	21.50
		50	25	20.87	20.81	20.85	21.50
		50	50	20.81	20.75	20.78	21.50
		100	0	20.77	20.71	20.74	21.50
	64QAM	1	0	21.18	21.10	21.15	21.50
		1	50	21.08	21.02	21.05	21.50
		1	99	21.04	20.99	21.01	21.50
		50	0	19.77	19.68	19.74	20.50
		50	25	19.90	19.83	19.87	20.50
		50	50	19.84	19.78	19.81	20.50
		100	0	19.80	19.75	19.78	20.50

LTE Band 4							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant7				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	22.85	22.75	22.71	23.50
		1	2	22.84	22.78	22.84	23.50
		1	5	22.65	22.58	22.64	23.50
		3	0	22.80	22.75	22.75	23.50
		3	2	22.71	22.72	22.76	23.50
		3	3	22.71	22.65	22.68	23.50
		6	0	21.79	21.74	21.82	22.50
	16QAM	1	0	22.20	22.15	22.19	22.50
		1	2	22.12	22.07	22.08	22.50
		1	5	22.02	21.92	21.95	22.50
		3	0	21.74	21.61	21.66	22.50

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		3	2	21.82	21.72	21.75	22.50
		3	3	21.76	21.65	21.67	22.50
		6	0	20.78	20.68	20.73	21.50
	64QAM	1	0	21.20	21.09	21.13	21.50
		1	2	21.05	20.97	21.00	21.50
		1	5	20.74	20.68	20.69	21.50
		3	0	20.77	20.61	20.70	21.50
		3	2	20.85	20.73	20.78	21.50
		3	3	20.73	20.63	20.65	21.50
		6	0	19.78	19.70	19.75	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	22.87	22.79	22.74	23.50
		1	7	22.82	22.81	22.88	23.50
		1	14	22.68	22.63	22.68	23.50
		8	0	21.90	21.87	21.88	22.50
		8	4	21.83	21.82	21.88	22.50
		8	7	21.81	21.76	21.78	22.50
		15	0	21.79	21.78	21.85	22.50
	16QAM	1	0	22.20	22.17	22.22	22.50
		1	7	22.12	22.07	22.12	22.50
		1	14	22.04	21.96	21.98	22.50
		8	0	20.85	20.74	20.78	21.50
		8	4	20.93	20.85	20.87	21.50
		8	7	20.86	20.77	20.80	21.50
		15	0	20.81	20.72	20.76	21.50
	64QAM	1	0	21.23	21.11	21.16	21.50
		1	7	21.08	20.97	21.02	21.50
		1	14	20.76	20.67	20.72	21.50
		8	0	19.88	19.74	19.82	20.50
		8	4	19.96	19.86	19.90	20.50
		8	7	19.83	19.75	19.78	20.50
		15	0	19.81	19.74	19.78	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19975/1712.5	20175/1732.5	20375/1752.5	
5MHz	QPSK	1	0	22.84	22.77	22.70	23.50
		1	13	22.80	22.77	22.85	23.50
		1	24	22.65	22.58	22.64	23.50
		12	0	21.87	21.82	21.84	22.50
		12	6	21.81	21.78	21.83	22.50
		12	13	21.79	21.74	21.74	22.50
		25	0	21.79	21.77	21.83	22.50
	16QAM	1	0	22.20	22.13	22.19	22.50

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		1	13	22.12	22.05	22.09	22.50
		1	24	22.01	21.94	21.94	22.50
		12	0	20.83	20.70	20.75	21.50
		12	6	20.90	20.80	20.83	21.50
		12	13	20.83	20.72	20.76	21.50
		25	0	20.79	20.68	20.71	21.50
	64QAM	1	0	21.20	21.11	21.13	21.50
		1	13	21.05	20.99	20.99	21.50
		1	24	20.77	20.65	20.68	21.50
		12	0	19.86	19.70	19.83	20.50
		12	6	19.93	19.81	19.86	20.50
		12	13	19.80	19.70	19.74	20.50
		25	0	19.79	19.70	19.73	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	22.86	22.78	22.73	23.50
		1	25	22.83	22.82	22.89	23.50
		1	49	22.67	22.62	22.67	23.50
		25	0	21.90	21.87	21.88	22.50
		25	13	21.84	21.83	21.87	22.50
		25	25	21.81	21.78	21.79	22.50
		50	0	21.83	21.79	21.87	22.50
	16QAM	1	0	22.24	22.16	22.21	22.50
		1	25	22.16	22.09	22.12	22.50
		1	49	22.04	21.96	21.97	22.50
		25	0	20.86	20.75	20.79	21.50
		25	13	20.92	20.84	20.86	21.50
		25	25	20.86	20.77	20.80	21.50
		50	0	20.82	20.73	20.75	21.50
	64QAM	1	0	21.22	21.10	21.15	21.50
		1	25	21.08	20.99	21.02	21.50
		1	49	20.76	20.67	20.71	21.50
		25	0	19.89	19.75	19.83	20.50
		25	13	19.95	19.85	19.89	20.50
		25	25	19.83	19.75	19.78	20.50
		50	0	19.82	19.75	19.77	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	22.85	22.74	22.71	23.50
		1	38	22.81	22.81	22.86	23.50
		1	74	22.64	22.57	22.63	23.50
		36	0	21.88	21.83	21.85	22.50
		36	18	21.81	21.78	21.83	22.50

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		36	39	21.78	21.75	21.75	22.50
		75	0	21.81	21.75	21.82	22.50
	16QAM	1	0	22.22	22.14	22.19	22.50
		1	38	22.14	22.06	22.10	22.50
		1	74	22.02	21.92	21.94	22.50
		36	0	20.83	20.73	20.76	21.50
		36	18	20.89	20.79	20.82	21.50
		36	39	20.84	20.73	20.77	21.50
		75	0	20.79	20.68	20.71	21.50
	64QAM	1	0	21.17	21.08	21.13	21.50
		1	38	21.06	20.96	21.00	21.50
		1	74	20.77	20.66	20.72	21.50
		36	0	19.88	19.77	19.84	20.50
		36	18	19.93	19.82	19.88	20.50
		36	39	19.81	19.71	19.75	20.50
		75	0	19.79	19.70	19.73	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	1	0	**22.82**	22.70	22.68	23.50
		1	50	22.80	**22.77**	**22.84**	23.50
		1	99	22.62	22.56	22.60	23.50
		50	0	**21.85**	**21.78**	**21.81**	22.50
		50	25	21.79	21.74	21.80	22.50
		50	50	21.75	21.70	21.71	22.50
		100	0	**21.78**	21.70	**21.78**	22.50
	16QAM	1	0	22.19	22.10	22.14	22.50
		1	50	22.11	22.04	22.06	22.50
		1	99	21.99	21.89	21.92	22.50
		50	0	20.80	20.69	20.73	21.50
		50	25	20.86	20.77	20.79	21.50
		50	50	20.81	20.68	20.73	21.50
		100	0	20.77	20.64	20.68	21.50
	64QAM	1	0	21.15	21.04	21.08	21.50
		1	50	21.02	20.94	20.96	21.50
		1	99	20.71	20.60	20.66	21.50
		50	0	19.83	19.69	19.77	20.50
		50	25	19.89	19.78	19.82	20.50
		50	50	19.78	19.66	19.71	20.50
		100	0	19.77	19.66	19.70	20.50

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LTE Band 5							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant0				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	23.14	23.23	23.11	24.00
		1	2	23.21	23.10	23.01	24.00
		1	5	23.17	23.05	23.13	24.00
		3	0	22.98	23.04	22.98	24.00
		3	2	22.96	23.02	22.97	24.00
		3	3	23.14	22.95	22.99	24.00
		6	0	22.13	22.13	22.08	23.00
	16QAM	1	0	22.44	22.45	22.54	23.00
		1	2	22.19	22.20	22.24	23.00
		1	5	22.65	22.63	22.73	23.00
		3	0	22.00	21.95	22.06	23.00
		3	2	22.11	22.08	22.19	23.00
		3	3	22.05	22.04	22.11	23.00
		6	0	21.07	21.07	21.18	22.00
	64QAM	1	0	21.51	21.48	21.59	22.00
		1	2	21.56	21.53	21.63	22.00
		1	5	21.46	21.48	21.52	22.00
		3	0	21.07	21.02	21.11	22.00
		3	2	21.03	20.99	21.11	22.00
		3	3	21.01	21.00	21.07	22.00
		6	0	20.11	20.12	20.23	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	23.16	23.27	23.14	24.00
		1	7	23.19	23.13	23.05	24.00
		1	14	23.20	23.10	23.17	24.00
		8	0	22.08	22.16	22.11	23.00
		8	4	22.08	22.12	22.09	23.00
		8	7	22.24	22.06	22.09	23.00
		15	0	22.13	22.17	22.11	23.00
	16QAM	1	0	22.44	22.47	22.57	23.00
		1	7	22.19	22.20	22.28	23.00
		1	14	22.67	22.67	22.76	23.00
		8	0	21.11	21.08	21.18	22.00
		8	4	21.22	21.21	21.31	22.00
		8	7	21.15	21.16	21.24	22.00
		15	0	21.10	21.11	21.21	22.00

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	64QAM	1	0	21.54	21.50	21.62	22.00
		1	7	21.59	21.53	21.65	22.00
		1	14	21.48	21.47	21.55	22.00
		8	0	20.18	20.15	20.23	21.00
		8	4	20.14	20.12	20.23	21.00
		8	7	20.11	20.12	20.20	21.00
		15	0	20.14	20.16	20.26	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	23.14	23.22	23.11	24.00
		1	13	23.18	23.13	23.03	24.00
		1	24	23.16	23.04	23.12	24.00
		12	0	22.06	22.12	22.08	23.00
		12	6	22.06	22.08	22.04	23.00
		12	13	22.21	22.05	22.06	23.00
		25	0	22.15	22.14	22.08	23.00
	16QAM	1	0	22.46	22.44	22.54	23.00
		1	13	22.21	22.19	22.26	23.00
		1	24	22.65	22.63	22.72	23.00
		12	0	21.09	21.07	21.16	22.00
		12	6	21.18	21.15	21.26	22.00
		12	13	21.13	21.12	21.21	22.00
		25	0	21.08	21.07	21.16	22.00
	64QAM	1	0	21.48	21.47	21.59	22.00
		1	13	21.57	21.52	21.63	22.00
		1	24	21.49	21.46	21.55	22.00
		12	0	20.18	20.18	20.25	21.00
		12	6	20.11	20.08	20.21	21.00
		12	13	20.09	20.08	20.17	21.00
		25	0	20.12	20.12	20.21	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	QPSK	1	0	23.11	**23.18**	23.08	24.00
		1	25	**23.17**	23.09	23.01	24.00
		1	49	23.14	23.03	**23.09**	24.00
		25	0	22.03	**22.07**	**22.04**	23.00
		25	13	22.04	22.04	22.01	23.00
		25	25	**22.18**	22.00	22.02	23.00
		50	0	**22.12**	22.09	22.04	23.00
	16QAM	1	0	22.43	22.40	22.49	23.00
		1	25	22.18	22.17	22.22	23.00
		1	49	22.62	22.60	22.70	23.00
		25	0	21.06	21.03	21.13	22.00

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		25	13	21.15	21.13	21.23	22.00
		25	25	21.10	21.07	21.17	22.00
		50	0	21.06	21.03	21.13	22.00
	64QAM	1	0	21.46	21.43	21.54	22.00
		1	25	21.53	21.50	21.59	22.00
		1	49	21.43	21.40	21.49	22.00
		25	0	20.13	20.10	20.18	21.00
		25	13	20.07	20.04	20.15	21.00
		25	25	20.06	20.03	20.13	21.00
		50	0	20.10	20.08	20.18	21.00

LTE Band 7							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant6				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	22.30	22.31	22.33	23.00
		1	13	22.42	22.42	22.44	23.00
		1	24	22.39	22.43	22.50	23.00
		12	0	21.51	21.56	21.57	22.00
		12	6	21.55	21.63	21.61	22.00
		12	13	21.54	21.62	21.60	22.00
		25	0	21.61	21.56	21.59	22.00
	16QAM	1	0	21.86	21.86	21.85	22.00
		1	13	21.82	21.84	21.89	22.00
		1	24	21.89	21.91	21.90	22.00
		12	0	20.58	20.54	20.62	21.00
		12	6	20.69	20.66	20.73	21.00
		12	13	20.57	20.55	20.64	21.00
		25	0	20.56	20.57	20.58	21.00
	64QAM	1	0	20.72	20.73	20.73	21.00
		1	13	20.77	20.78	20.78	21.00
		1	24	20.73	20.70	20.74	21.00
		12	0	19.54	19.49	19.62	20.00
		12	6	19.58	19.53	19.65	20.00
		12	13	19.62	19.62	19.68	20.00
		25	0	19.55	19.55	19.60	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	22.32	22.32	22.36	23.00
		1	25	22.45	22.47	22.48	23.00
		1	49	22.41	22.47	22.53	23.00
		25	0	21.54	21.61	21.61	22.00

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		25	13	21.58	21.68	21.65	22.00
		25	25	21.56	21.66	21.65	22.00
		50	0	21.65	21.58	21.63	22.00
	16QAM	1	0	21.93	21.90	21.92	22.00
		1	25	21.90	21.88	21.86	22.00
		1	49	21.95	21.78	21.79	22.00
		25	0	20.61	20.59	20.66	21.00
		25	13	20.71	20.70	20.76	21.00
		25	25	20.60	20.60	20.68	21.00
		50	0	20.59	20.62	20.62	21.00
	64QAM	1	0	20.74	20.72	20.75	21.00
		1	25	20.80	20.78	20.81	21.00
		1	49	20.72	20.72	20.77	21.00
		25	0	19.57	19.54	19.62	20.00
		25	13	19.60	19.57	19.68	20.00
		25	25	19.65	19.67	19.72	20.00
		50	0	19.58	19.60	19.64	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	22.31	22.28	22.34	23.00
		1	38	22.43	22.46	22.45	23.00
		1	74	22.38	22.42	22.49	23.00
		36	0	21.52	21.57	21.58	22.00
		36	18	21.55	21.63	21.61	22.00
		36	39	21.53	21.63	21.61	22.00
		75	0	21.63	21.54	21.58	22.00
	16QAM	1	0	21.92	21.78	21.86	22.00
		1	38	21.88	21.92	21.90	22.00
		1	74	21.85	21.87	21.85	22.00
		36	0	20.58	20.57	20.63	21.00
		36	18	20.68	20.65	20.72	21.00
		36	39	20.58	20.56	20.65	21.00
		75	0	20.56	20.57	20.58	21.00
	64QAM	1	0	20.69	20.70	20.73	21.00
		1	38	20.78	20.75	20.79	21.00
		1	74	20.73	20.71	20.78	21.00
		36	0	19.56	19.56	19.63	20.00
		36	18	19.58	19.54	19.67	20.00
		36	39	19.63	19.63	19.69	20.00
		75	0	19.55	19.55	19.60	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	22.28	22.24	22.31	23.00

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		1	50	**22.42**	**22.42**	22.43	23.00
		1	99	22.36	22.41	**22.56**	23.00
		50	0	21.49	21.52	21.54	22.00
		50	25	**21.53**	**21.59**	**21.58**	22.00
		50	50	21.50	21.58	21.57	22.00
		100	0	**21.60**	21.49	21.54	22.00
	16QAM	1	0	21.86	21.82	21.75	22.00
		1	50	21.85	21.94	21.86	22.00
		1	99	21.84	21.75	21.77	22.00
		50	0	20.55	20.53	20.60	21.00
		50	25	20.65	20.63	20.69	21.00
		50	50	20.55	20.51	20.61	21.00
		100	0	20.54	20.53	20.55	21.00
	64QAM	1	0	20.67	20.66	20.68	21.00
		1	50	20.74	20.73	20.75	21.00
		1	99	20.67	20.65	20.72	21.00
		50	0	19.51	19.48	19.56	20.00
		50	25	19.54	19.50	19.61	20.00
		50	50	19.60	19.58	19.65	20.00
		100	0	19.53	19.51	19.57	20.00

LTE Band 7							
Full Power & Receiver on & Receiver off & Hotspot on-Div Ant4				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	22.33	22.43	22.07	23.00
		1	13	22.32	22.34	22.00	23.00
		1	24	22.29	22.39	22.14	23.00
		12	0	22.12	22.40	22.16	23.00
		12	6	22.07	22.39	22.09	23.00
		12	13	22.07	22.38	22.11	23.00
		25	0	22.09	22.44	22.15	23.00
	16QAM	1	0	22.12	22.37	22.15	23.00
		1	13	22.33	22.38	22.24	23.00
		1	24	22.04	22.16	22.07	23.00
		12	0	22.19	22.24	22.10	23.00
		12	6	22.15	22.29	22.17	23.00
		12	13	22.15	22.26	22.05	23.00
		25	0	22.07	22.27	22.19	23.00
	64QAM	1	0	22.14	22.30	22.00	23.00
		1	13	22.15	22.28	22.01	23.00
		1	24	22.36	22.31	22.12	23.00

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		12	0	22.21	22.27	22.09	23.00
		12	6	22.06	22.27	22.19	23.00
		12	13	21.94	22.31	22.14	23.00
		25	0	22.13	22.28	22.09	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	22.35	22.44	22.10	23.00
		1	25	22.35	22.39	22.04	23.00
		1	49	22.31	22.43	22.17	23.00
		25	0	22.15	22.45	22.20	23.00
		25	13	22.10	22.44	22.13	23.00
		25	25	22.09	22.42	22.16	23.00
		50	0	22.13	22.46	22.19	23.00
	16QAM	1	0	22.16	22.40	22.17	23.00
		1	25	22.37	22.42	22.27	23.00
		1	49	22.07	22.18	22.10	23.00
		25	0	22.22	22.29	22.14	23.00
		25	13	22.17	22.33	22.20	23.00
		25	25	22.18	22.31	22.09	23.00
		50	0	22.10	22.32	22.23	23.00
	64QAM	1	0	22.16	22.29	22.02	23.00
		1	25	22.18	22.28	22.04	23.00
		1	49	22.35	22.33	22.15	23.00
		25	0	22.24	22.32	22.09	23.00
		25	13	22.08	22.31	22.22	23.00
		25	25	21.97	22.36	22.18	23.00
		50	0	22.16	22.33	22.13	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	22.34	22.40	22.08	23.00
		1	38	22.33	22.38	22.01	23.00
		1	74	22.28	22.38	22.13	23.00
		36	0	22.13	22.41	22.17	23.00
		36	18	22.07	22.39	22.09	23.00
		36	39	22.06	22.39	22.12	23.00
		75	0	22.11	22.42	22.14	23.00
	16QAM	1	0	22.14	22.38	22.15	23.00
		1	38	22.35	22.39	22.25	23.00
		1	74	22.05	22.14	22.07	23.00
		36	0	22.19	22.27	22.11	23.00
		36	18	22.14	22.28	22.16	23.00
		36	39	22.16	22.27	22.06	23.00
		75	0	22.07	22.27	22.19	23.00

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	64QAM	1	0	22.11	22.27	22.00	23.00
		1	38	22.16	22.25	22.02	23.00
		1	74	22.36	22.32	22.16	23.00
		36	0	22.23	22.34	22.10	23.00
		36	18	22.06	22.28	22.21	23.00
		36	39	21.95	22.32	22.15	23.00
		75	0	22.13	22.28	22.09	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	22.31	22.36	22.05	23.00
		1	50	**22.32**	22.34	21.99	23.00
		1	99	22.26	**22.37**	**22.10**	23.00
		50	0	**22.10**	**22.36**	**22.13**	23.00
		50	25	22.05	22.35	22.06	23.00
		50	50	22.03	22.34	22.08	23.00
		100	0	22.08	**22.37**	22.10	23.00
	16QAM	1	0	22.11	22.34	22.10	23.00
		1	50	22.32	22.37	22.21	23.00
		1	99	22.02	22.11	22.05	23.00
		50	0	22.16	22.23	22.08	23.00
		50	25	22.11	22.26	22.13	23.00
		50	50	22.13	22.22	22.02	23.00
		100	0	22.05	22.23	22.16	23.00
	64QAM	1	0	22.09	22.23	21.95	23.00
		1	50	22.12	22.23	21.98	23.00
		1	99	22.30	22.26	22.10	23.00
		50	0	22.18	22.26	22.03	23.00
		50	25	22.02	22.24	22.15	23.00
		50	50	21.92	22.27	22.11	23.00
		100	0	22.11	22.24	22.06	23.00

LTE Band 12							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				23017/699.7	23095/707.5	23173/715.3	
1.4MHz	QPSK	1	0	23.06	23.12	23.13	24.00
		1	2	23.32	23.18	23.05	24.00
		1	5	23.20	23.18	23.14	24.00
		3	0	23.27	23.10	22.89	24.00
		3	2	23.05	23.14	23.04	24.00
		3	3	23.23	23.11	22.93	24.00
		6	0	22.35	22.17	22.31	23.00

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	16QAM	1	0	22.58	22.48	22.55	23.00
		1	2	22.73	22.66	22.68	23.00
		1	5	22.42	22.30	22.37	23.00
		3	0	22.24	22.11	22.17	23.00
		3	2	22.32	22.16	22.25	23.00
		3	3	22.35	22.21	22.27	23.00
		6	0	21.27	21.15	21.24	22.00
	64QAM	1	0	21.43	21.29	21.36	22.00
		1	2	21.12	21.03	21.07	22.00
		1	5	21.27	21.20	21.22	22.00
		3	0	21.07	20.94	21.00	22.00
		3	2	21.25	21.09	21.18	22.00
		3	3	21.24	21.10	21.16	22.00
		6	0	20.30	20.18	20.27	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23025/700.5	23095/707.5	23165/714.5	
3MHz	QPSK	1	0	23.06	23.11	23.13	24.00
		1	7	23.29	23.21	23.07	24.00
		1	14	23.19	23.17	23.13	24.00
		8	0	22.35	22.18	21.99	23.00
		8	4	22.15	22.20	22.11	23.00
		8	7	22.30	22.21	22.00	23.00
		15	0	22.37	22.18	22.31	23.00
	16QAM	1	0	22.60	22.47	22.55	23.00
		1	7	22.75	22.65	22.70	23.00
		1	14	22.42	22.30	22.36	23.00
		8	0	21.33	21.23	21.27	22.00
		8	4	21.39	21.23	21.32	22.00
		8	7	21.43	21.29	21.37	22.00
		15	0	21.28	21.15	21.22	22.00
	64QAM	1	0	21.40	21.28	21.36	22.00
		1	7	21.13	21.02	21.07	22.00
		1	14	21.30	21.18	21.25	22.00
		8	0	20.18	20.10	20.14	21.00
		8	4	20.33	20.18	20.28	21.00
		8	7	20.32	20.18	20.26	21.00
		15	0	20.31	20.18	20.25	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23035/701.5	23095/707.5	23155/713.5	
5MHz	QPSK	1	0	23.05	23.14	23.12	24.00
		1	13	23.28	23.17	23.06	24.00
		1	24	23.20	23.18	23.14	24.00
		12	0	22.34	22.17	21.98	23.00

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		12	6	22.15	22.20	22.11	23.00
		12	13	22.31	22.20	21.99	23.00
		25	0	22.35	22.20	22.32	23.00
	16QAM	1	0	22.58	22.46	22.55	23.00
		1	13	22.73	22.64	22.69	23.00
		1	24	22.41	22.32	22.36	23.00
		12	0	21.33	21.20	21.26	22.00
		12	6	21.40	21.24	21.33	22.00
		12	13	21.42	21.28	21.36	22.00
		25	0	21.28	21.15	21.22	22.00
	64QAM	1	0	21.43	21.31	21.36	22.00
		1	13	21.12	21.05	21.06	22.00
		1	24	21.30	21.17	21.21	22.00
		12	0	20.16	20.03	20.13	21.00
		12	6	20.33	20.17	20.26	21.00
		12	13	20.31	20.17	20.25	21.00
		25	0	20.31	20.18	20.25	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23060/704	23095/707.5	23130/711	
10MHz	QPSK	1	0	23.03	23.07	**23.10**	24.00
		1	25	**23.28**	**23.17**	23.05	24.00
		1	49	23.17	23.16	**23.10**	24.00
		25	0	**22.32**	22.13	21.95	23.00
		25	13	22.13	**22.16**	**22.08**	23.00
		25	25	22.27	**22.16**	21.96	23.00
		50	0	**22.34**	22.13	22.27	23.00
	16QAM	1	0	22.57	22.43	22.50	23.00
		1	25	22.72	22.63	22.66	23.00
		1	49	22.39	22.27	22.34	23.00
		25	0	21.30	21.19	21.24	22.00
		25	13	21.36	21.21	21.29	22.00
		25	25	21.40	21.24	21.33	22.00
		50	0	21.26	21.11	21.19	22.00
	64QAM	1	0	21.38	21.24	21.31	22.00
		1	25	21.09	21.00	21.03	22.00
		1	49	21.24	21.12	21.19	22.00
		25	0	20.13	20.02	20.07	21.00
		25	13	20.29	20.14	20.22	21.00
		25	25	20.29	20.13	20.22	21.00
		50	0	20.29	20.14	20.22	21.00

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LTE Band 13							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				23205/779.5	23230/782	23255/784.5	
5MHz	QPSK	1	0	23.18	23.14	23.07	24.00
		1	13	23.15	23.12	23.12	24.00
		1	24	23.18	23.13	23.11	24.00
		12	0	22.22	22.17	22.13	23.00
		12	6	22.23	22.18	22.14	23.00
		12	13	22.20	22.14	22.10	23.00
		25	0	22.28	22.23	22.16	23.00
	16QAM	1	0	22.65	22.60	22.57	23.00
		1	13	22.60	22.55	22.54	23.00
		1	24	22.15	22.10	22.05	23.00
		12	0	21.20	21.14	21.13	22.00
		12	6	21.18	21.12	21.09	22.00
		12	13	21.24	21.19	21.15	22.00
		25	0	21.21	21.16	21.12	22.00
	64QAM	1	0	21.44	21.37	21.30	22.00
		1	13	21.67	21.61	21.56	22.00
		1	24	21.31	21.26	21.21	22.00
		12	0	20.21	20.15	20.14	21.00
		12	6	20.27	20.21	20.18	21.00
		12	13	20.18	20.13	20.09	21.00
		25	0	20.19	20.14	20.10	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	23230/782	/	
10MHz	QPSK	1	0	/	23.04	/	24.00
		1	25	/	**23.10**	/	24.00
		1	49	/	23.08	/	24.00
		25	0	/	22.09	/	23.00
		25	13	/	**22.11**	/	23.00
		25	25	/	22.06	/	23.00
		50	0	/	**22.12**	/	23.00
	16QAM	1	0	/	22.52	/	23.00
		1	25	/	22.50	/	23.00
		1	49	/	22.03	/	23.00
		25	0	/	21.10	/	22.00
		25	13	/	21.06	/	22.00
		25	25	/	21.11	/	22.00
		50	0	/	21.09	/	22.00

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	64QAM	1	0	/	21.25	/	22.00
		1	25	/	21.52	/	22.00
		1	49	/	21.15	/	22.00
		25	0	/	20.07	/	21.00
		25	13	/	20.12	/	21.00
		25	25	/	20.05	/	21.00
		50	0	/	20.07	/	21.00

LTE Band 17							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				23755/706.5	23790/710	23825/713.5	
5MHz	QPSK	1	0	22.51	22.70	22.61	24.00
		1	13	22.59	22.70	22.69	24.00
		1	24	22.60	22.68	22.77	24.00
		12	0	21.52	21.46	21.44	23.00
		12	6	21.57	21.61	21.60	23.00
		12	13	21.54	21.15	21.56	23.00
		25	0	21.53	21.60	21.50	23.00
	16QAM	1	0	21.92	21.93	22.07	23.00
		1	13	21.95	21.94	22.06	23.00
		1	24	22.15	22.13	22.30	23.00
		12	0	20.57	20.50	20.70	22.00
		12	6	20.68	20.60	20.83	22.00
		12	13	20.53	20.50	20.69	22.00
		25	0	20.50	20.48	20.67	22.00
	64QAM	1	0	20.92	20.86	21.07	22.00
		1	13	20.92	20.88	21.04	22.00
		1	24	20.96	20.90	21.03	22.00
		12	0	19.71	19.64	19.85	21.00
		12	6	19.62	19.54	19.77	21.00
		12	13	19.48	19.45	19.63	21.00
		25	0	19.52	19.50	19.68	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				23780/709	23790/710	23800/711	
10MHz	QPSK	1	0	22.49	22.63	22.59	24.00
		1	25	**22.59**	**22.70**	22.68	24.00
		1	49	22.57	22.66	**22.73**	24.00
		25	0	21.50	21.42	21.41	23.00
		25	13	**21.55**	**21.57**	**21.57**	23.00
		25	25	21.50	21.11	21.53	23.00
		50	0	21.52	**21.53**	21.45	23.00

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	16QAM	1	0	21.91	21.90	22.02	23.00
		1	25	21.94	21.93	22.03	23.00
		1	49	22.13	22.08	22.28	23.00
		25	0	20.54	20.49	20.68	22.00
		25	13	20.64	20.57	20.79	22.00
		25	25	20.51	20.46	20.66	22.00
		50	0	20.48	20.44	20.64	22.00
	64QAM	1	0	20.87	20.79	21.02	22.00
		1	25	20.89	20.83	21.01	22.00
		1	49	20.90	20.85	21.01	22.00
		25	0	19.68	19.63	19.79	21.00
		25	13	19.58	19.51	19.73	21.00
		25	25	19.46	19.41	19.60	21.00
		50	0	19.50	19.46	19.65	21.00

LTE Band 26							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				26697/814.7	26865/831.5	27033/848.3	
1.4MHz	QPSK	1	0	23.00	23.00	22.96	24.00
		1	2	23.07	23.09	23.11	24.00
		1	5	23.02	23.09	23.04	24.00
		3	0	22.91	22.89	22.97	24.00
		3	2	23.02	23.58	23.00	24.00
		3	3	22.99	23.01	22.94	24.00
		6	0	22.05	22.03	22.06	23.00
	16QAM	1	0	22.48	22.47	22.54	23.00
		1	2	22.53	22.52	22.55	23.00
		1	5	22.61	22.56	22.65	23.00
		3	0	21.92	21.83	21.94	23.00
		3	2	21.99	21.92	22.02	23.00
		3	3	22.06	22.01	22.08	23.00
		6	0	21.06	21.03	21.15	22.00
	64QAM	1	0	21.27	21.18	21.32	22.00
		1	2	21.32	21.27	21.36	22.00
		1	5	21.36	21.29	21.38	22.00
		3	0	21.02	20.89	21.03	22.00
		3	2	21.05	20.96	21.09	22.00
		3	3	21.01	20.96	21.03	22.00
		6	0	20.05	20.02	20.12	21.00

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				26705/815.5	26865/831.5	27025/847.5	
3MHz	QPSK	1	0	23.02	23.04	22.99	24.00
		1	7	23.05	23.12	23.15	24.00
		1	14	23.05	23.14	23.08	24.00
		8	0	22.01	22.01	22.10	23.00
		8	4	22.14	22.68	22.12	23.00
		8	7	22.09	22.12	22.04	23.00
		15	0	22.05	22.07	22.09	23.00
	16QAM	1	0	22.48	22.49	22.57	23.00
		1	7	22.53	22.52	22.59	23.00
		1	14	22.63	22.60	22.68	23.00
		8	0	21.03	20.96	21.06	22.00
		8	4	21.10	21.05	21.14	22.00
		8	7	21.16	21.13	21.21	22.00
		15	0	21.09	21.07	21.18	22.00
	64QAM	1	0	21.30	21.20	21.35	22.00
		1	7	21.35	21.27	21.38	22.00
		1	14	21.38	21.28	21.41	22.00
		8	0	20.13	20.02	20.15	21.00
		8	4	20.16	20.09	20.21	21.00
		8	7	20.11	20.08	20.16	21.00
		15	0	20.08	20.06	20.15	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				26715/816.5	26865/831.5	27015/846.5	
5MHz	QPSK	1	0	22.99	23.02	22.95	24.00
		1	13	23.03	23.08	23.12	24.00
		1	24	23.02	23.09	23.04	24.00
		12	0	21.98	21.96	22.06	23.00
		12	6	22.12	22.64	22.07	23.00
		12	13	22.07	22.10	22.00	23.00
		25	0	22.05	22.06	22.07	23.00
	16QAM	1	0	22.48	22.45	22.54	23.00
		1	13	22.53	22.50	22.56	23.00
		1	24	22.60	22.58	22.64	23.00
		12	0	21.01	20.92	21.03	22.00
		12	6	21.07	21.00	21.10	22.00
		12	13	21.13	21.08	21.17	22.00
		25	0	21.07	21.03	21.13	22.00
	64QAM	1	0	21.27	21.20	21.32	22.00
		1	13	21.32	21.29	21.35	22.00
		1	24	21.39	21.26	21.37	22.00
		12	0	20.11	19.98	20.16	21.00

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		12	6	20.13	20.04	20.17	21.00
		12	13	20.08	20.03	20.12	21.00
		25	0	20.06	20.02	20.10	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				26740/819	26865/831.5	26990/844	
10MHz	QPSK	1	0	23.01	23.03	22.98	24.00
		1	25	23.06	23.13	23.16	24.00
		1	49	23.04	23.13	23.07	24.00
		25	0	22.01	22.01	22.10	23.00
		25	13	22.15	22.69	22.11	23.00
		25	25	22.09	22.14	22.05	23.00
		50	0	22.09	22.08	22.11	23.00
	16QAM	1	0	22.52	22.48	22.56	23.00
		1	25	22.57	22.54	22.59	23.00
		1	49	22.63	22.60	22.67	23.00
		25	0	21.04	20.97	21.07	22.00
		25	13	21.09	21.04	21.13	22.00
		25	25	21.16	21.13	21.21	22.00
		50	0	21.10	21.08	21.17	22.00
	64QAM	1	0	21.29	21.19	21.34	22.00
		1	25	21.35	21.29	21.38	22.00
		1	49	21.38	21.28	21.40	22.00
		25	0	20.14	20.03	20.16	21.00
		25	13	20.15	20.08	20.20	21.00
		25	25	20.11	20.08	20.16	21.00
		50	0	20.09	20.07	20.14	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				26765/821.5	26865/831.5	26965/841.5	
15MHz	QPSK	1	0	22.97	22.95	22.93	24.00
		1	38	**23.03**	**23.08**	**23.11**	24.00
		1	74	22.99	23.07	23.00	24.00
		36	0	21.96	21.92	22.03	23.00
		36	18	**22.10**	**22.60**	**22.04**	23.00
		36	39	22.03	22.06	21.97	23.00
		75	0	**22.04**	21.99	22.02	23.00
	16QAM	1	0	22.47	22.42	22.49	23.00
		1	38	22.52	22.49	22.53	23.00
		1	74	22.58	22.53	22.62	23.00
		36	0	20.98	20.91	21.01	22.00
		36	18	21.03	20.97	21.06	22.00
		36	39	21.11	21.04	21.14	22.00
		75	0	21.05	20.99	21.10	22.00
	64QAM	1	0	21.22	21.13	21.27	22.00

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		1	38	21.29	21.24	21.32	22.00
		1	74	21.33	21.21	21.35	22.00
		36	0	20.08	19.97	20.10	21.00
		36	18	20.09	20.01	20.13	21.00
		36	39	20.06	19.99	20.09	21.00
		75	0	20.04	19.98	20.07	21.00

LTE Band 28 Subset 1							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				27225/704.5	27275/709.5	27325/714.5	
3MHz	QPSK	1	0	23.17	23.13	23.16	24.00
		1	7	23.01	23.19	23.09	24.00
		1	14	23.18	23.27	23.26	24.00
		8	0	22.02	22.26	22.26	23.00
		8	4	22.17	22.24	22.20	23.00
		8	7	22.11	22.13	22.20	23.00
		15	0	22.06	22.22	22.24	23.00
	16QAM	1	0	22.40	22.41	22.49	23.00
		1	7	22.62	22.59	22.67	23.00
		1	14	22.72	22.67	22.76	23.00
		8	0	21.31	21.24	21.33	22.00
		8	4	21.29	21.23	21.32	22.00
		8	7	21.17	21.13	21.23	22.00
		15	0	21.21	21.16	21.26	22.00
	64QAM	1	0	21.54	21.46	21.55	22.00
		1	7	21.41	21.32	21.42	22.00
		1	14	21.58	21.55	21.61	22.00
		8	0	20.24	20.18	20.27	21.00
		8	4	20.36	20.30	20.41	21.00
		8	7	20.17	20.14	20.21	21.00
		15	0	20.19	20.16	20.25	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27235/705.5	27275/709.5	27315/713.5	
5MHz	QPSK	1	0	23.14	23.11	23.12	24.00
		1	13	22.99	23.15	23.06	24.00
		1	24	23.15	23.22	23.22	24.00
		12	0	21.99	22.21	22.22	23.00
		12	6	22.15	22.20	22.15	23.00
		12	13	22.09	22.11	22.16	23.00
		25	0	22.06	22.21	22.22	23.00
	16QAM	1	0	22.40	22.37	22.46	23.00

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		1	13	22.62	22.57	22.64	23.00
		1	24	22.69	22.65	22.72	23.00
		12	0	21.29	21.20	21.30	22.00
		12	6	21.26	21.18	21.28	22.00
		12	13	21.14	21.08	21.19	22.00
		25	0	21.19	21.12	21.21	22.00
	64QAM	1	0	21.51	21.46	21.52	22.00
		1	13	21.38	21.34	21.39	22.00
		1	24	21.59	21.53	21.57	22.00
		12	0	20.22	20.14	20.28	21.00
		12	6	20.33	20.25	20.37	21.00
		12	13	20.14	20.09	20.17	21.00
		25	0	20.17	20.12	20.20	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27260/708	27275/709.5	27290/711	
10MHz	QPSK	1	0	**23.12**	23.04	23.10	24.00
		1	25	22.99	23.15	23.05	24.00
		1	49	**23.12**	**23.20**	**23.18**	24.00
		25	0	21.97	**22.17**	**22.19**	23.00
		25	13	**22.13**	22.16	22.12	23.00
		25	25	22.05	22.07	22.13	23.00
		50	0	22.05	22.14	**22.17**	23.00
	16QAM	1	0	22.39	22.34	22.41	23.00
		1	25	22.61	22.56	22.61	23.00
		1	49	22.67	22.60	22.70	23.00
		25	0	21.26	21.19	21.28	22.00
		25	13	21.22	21.15	21.24	22.00
		25	25	21.12	21.04	21.16	22.00
		50	0	21.17	21.08	21.18	22.00
	64QAM	1	0	21.46	21.39	21.47	22.00
		1	25	21.35	21.29	21.36	22.00
		1	49	21.53	21.48	21.55	22.00
		25	0	20.19	20.13	20.22	21.00
		25	13	20.29	20.22	20.33	21.00
		25	25	20.12	20.05	20.14	21.00
		50	0	20.15	20.08	20.17	21.00

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LTE Band 28 Subset 2							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				27475/729.5	27550/737	27625/744.5	
3MHz	QPSK	1	0	23.02	22.99	23.00	24.00
		1	7	23.16	23.03	23.12	24.00
		1	14	23.12	23.07	23.08	24.00
		8	0	22.06	22.04	22.03	23.00
		8	4	22.04	22.12	22.11	23.00
		8	7	22.13	22.02	22.04	23.00
		15	0	22.03	22.12	22.08	23.00
	16QAM	1	0	22.52	22.51	22.62	23.00
		1	7	22.47	22.46	22.53	23.00
		1	14	22.47	22.45	22.55	23.00
		8	0	21.00	20.97	21.06	22.00
		8	4	21.12	21.08	21.20	22.00
		8	7	21.10	21.08	21.18	22.00
		15	0	21.04	21.02	21.12	22.00
	64QAM	1	0	21.29	21.24	21.37	22.00
		1	7	21.37	21.34	21.43	22.00
		1	14	21.22	21.16	21.24	22.00
		8	0	19.97	19.94	20.05	21.00
		8	4	20.05	20.01	20.13	21.00
		8	7	20.07	20.05	20.15	21.00
		15	0	20.06	20.04	20.15	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27485/730.5	27550/737	27615/743.5	
5MHz	QPSK	1	0	23.04	23.00	23.03	24.00
		1	13	23.19	23.08	23.16	24.00
		1	24	23.14	23.11	23.11	24.00
		12	0	22.09	22.09	22.07	23.00
		12	6	22.07	22.17	22.15	23.00
		12	13	22.15	22.06	22.09	23.00
		25	0	22.07	22.14	22.12	23.00
	16QAM	1	0	22.56	22.54	22.64	23.00
		1	13	22.51	22.50	22.56	23.00
		1	24	22.50	22.47	22.58	23.00
		12	0	21.03	21.02	21.10	22.00
		12	6	21.14	21.12	21.23	22.00
		12	13	21.13	21.13	21.22	22.00
		25	0	21.07	21.07	21.16	22.00

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	64QAM	1	0	21.31	21.23	21.39	22.00
		1	13	21.40	21.34	21.46	22.00
		1	24	21.21	21.18	21.27	22.00
		12	0	20.00	19.99	20.05	21.00
		12	6	20.07	20.05	20.16	21.00
		12	13	20.10	20.10	20.19	21.00
		25	0	20.09	20.09	20.19	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27510/733	27550/737	27590/741	
10MHz	QPSK	1	0	23.03	22.96	23.01	24.00
		1	25	23.17	23.07	23.13	24.00
		1	49	23.11	23.06	23.07	24.00
		25	0	22.07	22.05	22.04	23.00
		25	13	22.04	22.12	22.11	23.00
		25	25	22.12	22.03	22.05	23.00
		50	0	22.05	22.10	22.07	23.00
	16QAM	1	0	22.54	22.52	22.62	23.00
		1	25	22.49	22.47	22.54	23.00
		1	49	22.48	22.43	22.55	23.00
		25	0	21.00	21.00	21.07	22.00
		25	13	21.11	21.07	21.19	22.00
		25	25	21.11	21.09	21.19	22.00
		50	0	21.04	21.02	21.12	22.00
	64QAM	1	0	21.26	21.21	21.37	22.00
		1	25	21.38	21.31	21.44	22.00
		1	49	21.22	21.17	21.28	22.00
		25	0	19.99	20.01	20.06	21.00
		25	13	20.05	20.02	20.15	21.00
		25	25	20.08	20.06	20.16	21.00
		50	0	20.06	20.04	20.15	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				27535/735.5	27550/737	27565/738.5	
15MHz	QPSK	1	0	23.00	22.92	22.98	24.00
		1	38	**23.26**	23.03	**23.11**	24.00
		1	74	23.09	**23.05**	23.04	24.00
		36	0	22.04	22.00	22.00	23.00
		36	18	22.02	**22.08**	**22.08**	23.00
		36	39	**22.09**	21.98	22.01	23.00
		75	0	22.02	**22.05**	22.03	23.00
	16QAM	1	0	22.51	22.48	22.57	23.00
		1	38	22.46	22.45	22.50	23.00
		1	74	22.45	22.40	22.53	23.00
		36	0	20.97	20.96	21.04	22.00

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		36	18	21.08	21.05	21.16	22.00
		36	39	21.08	21.04	21.15	22.00
		75	0	21.02	20.98	21.09	22.00
	64QAM	1	0	21.24	21.17	21.32	22.00
		1	38	21.34	21.29	21.40	22.00
		1	74	21.16	21.11	21.22	22.00
		36	0	19.94	19.93	19.99	21.00
		36	18	20.01	19.98	20.09	21.00
		36	39	20.05	20.01	20.12	21.00
		75	0	20.04	20.00	20.12	21.00

LTE Band 66							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant7				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	22.76	22.78	22.73	23.50
		1	2	22.81	22.83	22.72	23.50
		1	5	22.60	22.51	22.63	23.50
		3	0	22.78	22.76	22.75	23.50
		3	2	22.68	22.80	22.78	23.50
		3	3	22.65	22.81	22.69	23.50
		6	0	21.78	21.81	21.78	22.50
	16QAM	1	0	22.09	22.08	22.15	22.50
		1	2	22.11	22.08	22.12	22.50
		1	5	22.24	22.17	22.27	22.50
		3	0	21.83	21.74	21.84	22.50
		3	2	21.76	21.68	21.78	22.50
		3	3	21.65	21.59	21.68	22.50
		6	0	20.85	20.79	20.90	21.50
	64QAM	1	0	20.81	20.74	20.82	21.50
		1	2	21.08	21.02	21.10	21.50
		1	5	20.88	20.88	20.90	21.50
		3	0	20.82	20.74	20.84	21.50
		3	2	20.74	20.66	20.78	21.50
		3	3	20.66	20.61	20.67	21.50
		6	0	19.75	19.71	19.81	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	22.78	22.82	22.76	23.50
		1	7	22.79	22.86	22.76	23.50

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		1	14	22.63	22.56	22.67	23.50
		8	0	21.88	21.88	21.88	22.50
		8	4	21.80	21.90	21.90	22.50
		8	7	21.75	21.92	21.79	22.50
		15	0	21.78	21.85	21.81	22.50
	16QAM	1	0	22.09	22.10	22.18	22.50
		1	7	22.11	22.08	22.16	22.50
		1	14	22.26	22.21	22.30	22.50
		8	0	20.94	20.87	20.96	21.50
		8	4	20.87	20.81	20.90	21.50
		8	7	20.75	20.71	20.81	21.50
		15	0	20.88	20.83	20.93	21.50
	64QAM	1	0	20.84	20.76	20.85	21.50
		1	7	21.11	21.02	21.12	21.50
		1	14	20.90	20.87	20.93	21.50
		8	0	19.93	19.87	19.96	20.50
		8	4	19.85	19.79	19.90	20.50
		8	7	19.76	19.73	19.80	20.50
		15	0	19.78	19.75	19.84	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	22.75	22.80	22.72	23.50
		1	13	22.77	22.82	22.73	23.50
		1	24	22.60	22.51	22.63	23.50
		12	0	21.85	21.83	21.84	22.50
		12	6	21.78	21.86	21.85	22.50
		12	13	21.73	21.90	21.75	22.50
		25	0	21.78	21.84	21.79	22.50
	16QAM	1	0	22.09	22.06	22.15	22.50
		1	13	22.11	22.06	22.13	22.50
		1	24	22.23	22.19	22.26	22.50
		12	0	20.92	20.83	20.93	21.50
		12	6	20.84	20.76	20.86	21.50
		12	13	20.72	20.66	20.77	21.50
		25	0	20.86	20.79	20.88	21.50
	64QAM	1	0	20.81	20.76	20.82	21.50
		1	13	21.08	21.04	21.09	21.50
		1	24	20.91	20.85	20.89	21.50
		12	0	19.91	19.83	19.97	20.50
		12	6	19.82	19.74	19.86	20.50
		12	13	19.73	19.68	19.76	20.50
		25	0	19.76	19.71	19.79	20.50

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132022/1715	132322/1745	132622/1775	
10MHz	QPSK	1	0	22.77	22.81	22.75	23.50
		1	25	22.80	22.87	22.77	23.50
		1	49	22.62	22.55	22.66	23.50
		25	0	21.88	21.88	21.88	22.50
		25	13	21.81	21.91	21.89	22.50
		25	25	21.75	21.94	21.80	22.50
		50	0	21.82	21.86	21.83	22.50
	16QAM	1	0	22.13	22.09	22.17	22.50
		1	25	22.15	22.10	22.16	22.50
		1	49	22.26	22.21	22.29	22.50
		25	0	20.95	20.88	20.97	21.50
		25	13	20.86	20.80	20.89	21.50
		25	25	20.75	20.71	20.81	21.50
		50	0	20.89	20.84	20.92	21.50
	64QAM	1	0	20.83	20.75	20.84	21.50
		1	25	21.11	21.04	21.12	21.50
		1	49	20.90	20.87	20.92	21.50
		25	0	19.94	19.88	19.97	20.50
		25	13	19.84	19.78	19.89	20.50
		25	25	19.76	19.73	19.80	20.50
		50	0	19.79	19.76	19.83	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	22.76	22.77	22.73	23.50
		1	38	22.78	22.86	22.74	23.50
		1	74	22.59	22.50	22.62	23.50
		36	0	21.86	21.84	21.85	22.50
		36	18	21.78	21.86	21.85	22.50
		36	39	21.72	21.91	21.76	22.50
		75	0	21.80	21.82	21.78	22.50
	16QAM	1	0	22.11	22.07	22.15	22.50
		1	38	22.13	22.07	22.14	22.50
		1	74	22.24	22.17	22.26	22.50
		36	0	20.92	20.86	20.94	21.50
		36	18	20.83	20.75	20.85	21.50
		36	39	20.73	20.67	20.78	21.50
		75	0	20.86	20.79	20.88	21.50
	64QAM	1	0	20.78	20.73	20.82	21.50
		1	38	21.09	21.01	21.10	21.50

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		1	74	20.91	20.86	20.93	21.50
		36	0	19.93	19.90	19.98	20.50
		36	18	19.82	19.75	19.88	20.50
		36	39	19.74	19.69	19.77	20.50
		75	0	19.76	19.71	19.79	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	22.73	22.73	22.70	23.50
		1	50	**22.77**	**22.82**	**22.72**	23.50
		1	99	22.57	22.49	22.59	23.50
		50	0	**21.83**	21.79	21.81	22.50
		50	25	21.76	21.82	**21.82**	22.50
		50	50	21.69	**21.86**	21.72	22.50
		100	0	**21.77**	**21.77**	21.74	22.50
	16QAM	1	0	22.08	22.03	22.10	22.50
		1	50	22.10	22.05	22.10	22.50
		1	99	22.21	22.14	22.24	22.50
		50	0	20.89	20.82	20.91	21.50
		50	25	20.80	20.73	20.82	21.50
		50	50	20.70	20.62	20.74	21.50
		100	0	20.84	20.75	20.85	21.50
	64QAM	1	0	20.76	20.69	20.77	21.50
		1	50	21.05	20.99	21.06	21.50
		1	99	20.85	20.80	20.87	21.50
		50	0	19.88	19.82	19.91	20.50
		50	25	19.78	19.71	19.82	20.50
		50	50	19.71	19.64	19.73	20.50
		100	0	19.74	19.67	19.76	20.50

LTE Band 38							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	22.69	22.76	22.77	23.50
		1	13	22.88	23.00	22.96	23.50
		1	24	22.85	22.85	22.93	23.50
		12	0	21.80	21.80	21.85	22.50
		12	6	21.82	21.84	21.87	22.50
		12	13	21.85	21.81	21.89	22.50
		25	0	21.29	21.85	21.89	22.50
	16QAM	1	0	22.01	21.86	21.96	22.50

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		1	13	22.05	21.95	22.03	22.50
		1	24	22.04	21.94	21.97	22.50
		12	0	21.11	20.95	21.01	21.50
		12	6	21.19	21.02	21.11	21.50
		12	13	21.10	20.99	21.05	21.50
		25	0	21.20	21.06	21.13	21.50
	64QAM	1	0	21.32	21.19	21.25	21.50
		1	13	21.28	21.21	21.25	21.50
		1	24	21.39	21.25	21.28	21.50
		12	0	20.06	19.94	20.04	20.50
		12	6	20.20	20.03	20.12	20.50
		12	13	20.08	19.94	20.00	20.50
		25	0	20.07	19.93	20.00	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	22.71	22.77	22.80	23.50
		1	25	22.91	23.05	23.00	23.50
		1	49	22.87	22.89	22.96	23.50
		25	0	21.83	21.85	21.89	22.50
		25	13	21.85	21.89	21.91	22.50
		25	25	21.87	21.85	21.94	22.50
		50	0	21.33	21.87	21.93	22.50
	16QAM	1	0	22.05	21.89	21.98	22.50
		1	25	22.09	21.99	22.06	22.50
		1	49	22.07	21.96	22.00	22.50
		25	0	21.14	21.00	21.05	21.50
		25	13	21.21	21.06	21.14	21.50
		25	25	21.13	21.04	21.09	21.50
		50	0	21.23	21.11	21.17	21.50
	64QAM	1	0	21.34	21.18	21.27	21.50
		1	25	21.31	21.21	21.28	21.50
		1	49	21.38	21.27	21.31	21.50
		25	0	20.09	19.99	20.04	20.50
		25	13	20.22	20.07	20.15	20.50
		25	25	20.11	19.99	20.04	20.50
		50	0	20.10	19.98	20.04	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	22.70	22.73	22.78	23.50
		1	38	22.89	23.04	22.97	23.50
		1	74	22.84	22.84	22.92	23.50
		36	0	21.81	21.81	21.86	22.50
		36	18	21.82	21.84	21.87	22.50

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		36	39	21.84	21.82	21.90	22.50
		75	0	21.31	21.83	21.88	22.50
	16QAM	1	0	22.03	21.87	21.96	22.50
		1	38	22.07	21.96	22.04	22.50
		1	74	22.05	21.92	21.97	22.50
		36	0	21.11	20.98	21.02	21.50
		36	18	21.18	21.01	21.10	21.50
		36	39	21.11	21.00	21.06	21.50
		75	0	21.20	21.06	21.13	21.50
	64QAM	1	0	21.29	21.16	21.25	21.50
		1	38	21.29	21.18	21.26	21.50
		1	74	21.39	21.26	21.32	21.50
		36	0	20.08	20.01	20.05	20.50
		36	18	20.20	20.04	20.14	20.50
		36	39	20.09	19.95	20.01	20.50
		75	0	20.07	19.93	20.00	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37850/2580	38000/2595	38150/2610	
20MHz	QPSK	1	0	22.67	22.69	22.75	23.50
		1	50	**22.88**	**23.00**	**22.95**	23.50
		1	99	22.82	22.83	22.89	23.50
		50	0	21.78	21.76	21.82	22.50
		50	25	21.80	**21.80**	21.84	22.50
		50	50	**21.81**	21.77	**21.86**	22.50
		100	0	21.28	21.78	**21.84**	22.50
	16QAM	1	0	22.00	21.83	21.91	22.50
		1	50	22.04	21.94	22.00	22.50
		1	99	22.02	21.89	21.95	22.50
		50	0	21.08	20.94	20.99	21.50
		50	25	21.15	20.99	21.07	21.50
		50	50	21.08	20.95	21.02	21.50
		100	0	21.18	21.02	21.10	21.50
	64QAM	1	0	21.27	21.12	21.20	21.50
		1	50	21.25	21.16	21.22	21.50
		1	99	21.33	21.20	21.26	21.50
		50	0	20.03	19.93	19.98	20.50
		50	25	20.16	20.00	20.08	20.50
		50	50	20.06	19.90	19.97	20.50
		100	0	20.05	19.89	19.97	20.50

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LTE Band 40 Subset 1							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				38725/2307.5	38750/2310.0	38775/2312.5	
5MHz	QPSK	1	0	22.89	22.98	22.87	23.50
		1	13	22.88	22.92	22.88	23.50
		1	24	22.85	22.92	22.82	23.50
		12	0	21.78	21.87	21.76	22.50
		12	6	21.86	21.94	21.84	22.50
		12	13	21.93	21.99	21.89	22.50
		25	0	21.86	21.94	21.85	22.50
	16QAM	1	0	21.99	22.06	21.98	22.50
		1	13	22.04	22.07	22.03	22.50
		1	24	21.99	22.06	21.97	22.50
		12	0	20.99	21.04	20.96	21.50
		12	6	21.11	21.19	21.07	21.50
		12	13	21.07	21.16	21.05	21.50
		25	0	21.02	21.10	21.00	21.50
	64QAM	1	0	21.41	21.32	21.36	21.50
		1	13	21.39	21.16	21.36	21.50
		1	24	21.35	21.20	21.29	21.50
		12	0	19.99	20.04	19.96	20.50
		12	6	20.05	20.13	20.01	20.50
		12	13	20.02	20.11	20.00	20.50
		25	0	20.00	20.08	19.98	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	38750/2310.0	/	
10MHz	QPSK	1	0	/	22.82	/	23.50
		1	25	/	**22.83**	/	23.50
		1	49	/	22.75	/	23.50
		25	0	/	21.69	/	22.50
		25	13	/	21.77	/	22.50
		25	25	/	**21.81**	/	22.50
		50	0	/	**21.76**	/	22.50
	16QAM	1	0	/	21.91	/	22.50
		1	25	/	21.97	/	22.50
		1	49	/	21.92	/	22.50
		25	0	/	20.90	/	21.50
		25	13	/	21.00	/	21.50

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		25	25	/	20.98	/	21.50
		50	0	/	20.93	/	21.50
	64QAM	1	0	/	21.29	/	21.50
		1	25	/	21.30	/	21.50
		1	49	/	21.24	/	21.50
		25	0	/	19.90	/	20.50
		25	13	/	19.94	/	20.50
		25	25	/	19.93	/	20.50
		50	0	/	19.91	/	20.50

LTE Band 40 Subset 2							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				39175/2352.5	39200/2355.0	39225/2357.5	
5MHz	QPSK	1	0	22.91	22.89	22.96	23.50
		1	13	22.95	22.95	23.00	23.50
		1	24	22.94	22.91	23.01	23.50
		12	0	21.88	21.86	21.95	22.50
		12	6	21.86	21.84	21.93	22.50
		12	13	21.94	21.90	22.02	22.50
		25	0	21.92	21.91	22.01	22.50
	16QAM	1	0	22.06	22.05	22.13	22.50
		1	13	22.03	22.02	22.09	22.50
		1	24	22.03	22.01	22.08	22.50
		12	0	21.11	21.08	21.17	21.50
		12	6	21.14	21.10	21.21	21.50
		12	13	21.18	21.16	21.25	21.50
		25	0	21.09	21.07	21.16	21.50
	64QAM	1	0	21.19	21.37	21.20	21.50
		1	13	21.30	21.26	21.36	21.50
		1	24	21.25	21.37	21.22	21.50
		12	0	20.15	20.12	20.21	20.50
		12	6	20.13	20.09	20.20	20.50
		12	13	20.11	20.09	20.18	20.50
		25	0	20.08	20.06	20.15	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	39200/2355.0	/	
10MHz	QPSK	1	0	/	22.72	/	23.50
		1	25	/	**22.73**	/	23.50
		1	49	/	22.70	/	23.50

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		25	0	/	21.82	/	22.50
		25	13	/	21.81	/	22.50
		25	25	/	**21.86**	/	22.50
		50	0	/	**21.87**	/	22.50
	16QAM	1	0	/	22.00	/	22.50
		1	25	/	21.98	/	22.50
		1	49	/	21.99	/	22.50
		25	0	/	21.05	/	21.50
		25	13	/	21.07	/	21.50
		25	25	/	21.12	/	21.50
		50	0	/	21.04	/	21.50
	64QAM	1	0	/	21.32	/	21.50
		1	25	/	21.37	/	21.50
		1	49	/	21.31	/	21.50
		25	0	/	20.05	/	20.50
		25	13	/	20.03	/	20.50
		25	25	/	20.05	/	20.50
		50	0	/	20.03	/	20.50

LTE Band 66							
Full Power & Receiver on & Receiver off & Hotspot on-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	22.30	22.63	22.29	23.00
		1	2	22.27	22.63	22.42	23.00
		1	5	22.17	22.61	22.55	23.00
		3	0	22.13	22.65	22.39	23.00
		3	2	22.20	22.63	22.45	23.00
		3	3	22.37	22.62	22.43	23.00
		6	0	22.36	22.64	22.29	23.00
	16QAM	1	0	22.21	22.61	22.47	23.00
		1	2	22.36	22.54	22.41	23.00
		1	5	22.29	22.61	22.44	23.00
		3	0	22.35	22.58	22.26	23.00
		3	2	22.44	22.61	22.55	23.00
		3	3	22.18	22.64	22.32	23.00
		6	0	22.34	22.62	22.41	23.00
	64QAM	1	0	22.34	22.59	22.40	23.00
		1	2	22.44	22.55	22.28	23.00
		1	5	22.24	22.61	22.21	23.00
		3	0	22.43	22.57	22.16	23.00
		3	2	22.66	22.62	22.65	23.00

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		3	3	22.29	22.63	22.46	23.00
		6	0	22.33	22.58	22.43	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	22.26	22.55	22.24	23.00
		1	7	22.24	22.58	22.37	23.00
		1	14	22.12	22.55	22.48	23.00
		8	0	22.08	22.56	22.32	23.00
		8	4	22.15	22.54	22.38	23.00
		8	7	22.31	22.54	22.35	23.00
		15	0	22.31	22.55	22.20	23.00
	16QAM	1	0	22.16	22.55	22.40	23.00
		1	7	22.31	22.49	22.35	23.00
		1	14	22.24	22.54	22.39	23.00
		8	0	22.29	22.52	22.20	23.00
		8	4	22.38	22.54	22.48	23.00
		8	7	22.13	22.55	22.25	23.00
		15	0	22.29	22.53	22.34	23.00
	64QAM	1	0	22.27	22.53	22.33	23.00
		1	7	22.38	22.50	22.22	23.00
		1	14	22.19	22.54	22.16	23.00
		8	0	22.37	22.51	22.10	23.00
		8	4	22.60	22.55	22.58	23.00
		8	7	22.24	22.54	22.39	23.00
		15	0	22.28	22.49	22.36	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	22.23	22.53	22.20	23.00
		1	13	22.22	22.54	22.34	23.00
		1	24	22.09	22.50	22.44	23.00
		12	0	22.05	22.51	22.28	23.00
		12	6	22.13	22.50	22.33	23.00
		12	13	22.29	22.52	22.31	23.00
		25	0	22.31	22.54	22.18	23.00
	16QAM	1	0	22.16	22.51	22.37	23.00
		1	13	22.31	22.47	22.32	23.00
		1	24	22.21	22.52	22.35	23.00
		12	0	22.27	22.48	22.17	23.00
		12	6	22.35	22.49	22.44	23.00
		12	13	22.10	22.50	22.21	23.00
		25	0	22.27	22.49	22.29	23.00
	64QAM	1	0	22.24	22.53	22.30	23.00
		1	13	22.35	22.52	22.19	23.00

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		1	24	22.20	22.52	22.12	23.00
		12	0	22.35	22.47	22.11	23.00
		12	6	22.57	22.50	22.54	23.00
		12	13	22.21	22.49	22.35	23.00
		25	0	22.26	22.45	22.31	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132022/1715	132322/1745	132622/1775	
10MHz	QPSK	1	0	22.25	22.54	22.23	23.00
		1	25	22.25	22.59	22.38	23.00
		1	49	22.11	22.54	22.47	23.00
		25	0	22.08	22.56	22.32	23.00
		25	13	22.16	22.55	22.37	23.00
		25	25	22.31	22.56	22.36	23.00
		50	0	22.35	22.56	22.22	23.00
	16QAM	1	0	22.20	22.54	22.39	23.00
		1	25	22.35	22.51	22.35	23.00
		1	49	22.24	22.54	22.38	23.00
		25	0	22.30	22.53	22.21	23.00
		25	13	22.37	22.53	22.47	23.00
		25	25	22.13	22.55	22.25	23.00
		50	0	22.30	22.54	22.33	23.00
	64QAM	1	0	22.26	22.52	22.32	23.00
		1	25	22.38	22.52	22.22	23.00
		1	49	22.19	22.54	22.15	23.00
		25	0	22.38	22.52	22.11	23.00
		25	13	22.59	22.54	22.57	23.00
		25	25	22.24	22.54	22.39	23.00
		50	0	22.29	22.50	22.35	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	22.24	22.50	22.21	23.00
		1	38	22.23	22.58	22.35	23.00
		1	74	22.08	22.49	22.43	23.00
		36	0	22.06	22.52	22.29	23.00
		36	18	22.13	22.50	22.33	23.00
		36	39	22.28	22.53	22.32	23.00
		75	0	22.33	22.52	22.17	23.00
	16QAM	1	0	22.18	22.52	22.37	23.00
		1	38	22.33	22.48	22.33	23.00
		1	74	22.22	22.50	22.35	23.00
		36	0	22.27	22.51	22.18	23.00
		36	18	22.34	22.48	22.43	23.00
		36	39	22.11	22.51	22.22	23.00

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		75	0	22.27	22.49	22.29	23.00
	64QAM	1	0	22.21	22.50	22.30	23.00
		1	38	22.36	22.49	22.20	23.00
		1	74	22.20	22.53	22.16	23.00
		36	0	22.37	22.54	22.12	23.00
		36	18	22.57	22.51	22.56	23.00
		36	39	22.22	22.50	22.36	23.00
		75	0	22.26	22.45	22.31	23.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	22.21	22.46	22.18	23.00
		1	50	**22.22**	**22.54**	22.33	23.00
		1	99	22.06	22.48	**22.40**	23.00
		50	0	22.03	22.47	22.25	23.00
		50	25	22.11	22.46	**22.30**	23.00
		50	50	**22.25**	**22.48**	22.28	23.00
		100	0	22.30	**22.47**	22.13	23.00
	16QAM	1	0	22.15	22.48	22.32	23.00
		1	50	22.30	22.46	22.29	23.00
		1	99	22.19	22.47	22.33	23.00
		50	0	22.24	22.47	22.15	23.00
		50	25	22.31	22.46	22.40	23.00
		50	50	22.08	22.46	22.18	23.00
		100	0	22.25	22.45	22.26	23.00
	64QAM	1	0	22.19	22.46	22.25	23.00
		1	50	22.32	22.47	22.16	23.00
		1	99	22.14	22.47	22.10	23.00
		50	0	22.32	22.46	22.05	23.00
		50	25	22.53	22.47	22.50	23.00
		50	50	22.19	22.45	22.32	23.00
		100	0	22.24	22.41	22.28	23.00

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9.4 NR Mode

The following tests were conducted according to the test requirements outlined in section 6.2 of the 3GPP TS 138.521-1 specification.

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 TS138.521-1.

Table 6.2.2.3-1: Maximum Power Reduction (MPR) for Power 3

Modulation	MPR (dB)		
	Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM PI/2 BPSK	≤ 3.5[1]	≤ 1.2[1]	≤ 0.2[1]
	≤ 0.5[2]		0[2]
DFT-s-OFDM QPSK	≤ 1		0
DFT-s-OFDM 16 QAM	≤ 2		≤ 1
DFT-s-OFDM 64 QAM	≤ 2.5		
DFT-s-OFDM 256 QAM	≤ 4.5		
CP-OFDM QPSK	≤ 3		≤ 1.5
CP-OFDM 16 QAM	≤ 3		≤ 2
CP-OFDM 64 QAM	≤ 3.5		
CP-OFDM 256 QAM	≤ 6.5		

NOTE 1: Applicable for UE operating in TDD mode with PI/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0dB MPR is 26dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40% of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

The allowed A-MPR values specified below in Table 6.2.3.3.1-1 of 3GPP TS138.521-1 are in addition to the allowed MPR requirements. All the measurements below were performed with A-MPR disabled, by using Network Signaling Value of “NS_ 01”

Table 6.2.3.3.1-1: Additional maximum power reduction (A-MPR)

Network Signalling label	Requirements (subclause)	NR Band	Channel bandwidth (MHz)	Resources Blocks (N_{RB})	A-MPR (dB)
NS_01		Table 5.2-1	5, 10, 15, 20, 25, 30, 40, 50, 60, 80, 90, 100	Table 5.3.2-1	N/A

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EN-DC Antenna Configuration

EN-DC Configurations	E-UTRA	NR	Antenna Configurations				
	Band	Band	mode	1	2	3	4
2A+n7A	LTE Band2	n7	LTE	7	/	/	/
			NR	4	/	/	/
28A+n7A	LTE Band28		LTE	0	/	/	/
			NR	4	/	/	/
7A+n28A	LTE Band7	n28	LTE	4	/	/	/
			NR	0	/	/	/
66A+n28A	LTE Band66		LTE	4	/	/	/
			NR	0	/	/	/
2A+n66A	LTE Band2	n66	LTE	7	/	/	/
			NR	4	/	/	/
7A+n66A	LTE Band7		LTE	6	/	/	/
			NR	4	/	/	/
66A+n66A	LTE Band66		LTE	7	/	/	/
			NR	4	/	/	/
28A+n66A	LTE Band28		LTE	0	/	/	/
			NR	4	/	/	/
2A+n78A	LTE Band2	n78	LTE	7	/	/	/
			NR	5	/	/	/
5A+n78A	LTE Band5		LTE	0	/	/	/
			NR	5	/	/	/
28A+n78A	LTE Band28		LTE	0	/	/	/
			NR	5	/	/	/
7A+n78A	LTE Band7		LTE	6	/	/	/
			NR	5	/	/	/
66A+n78A	LTE Band66		LTE	7	/	/	/
			NR	5	/	/	/

NR n2							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant7				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				370500/1852.5	376000/1880	381500/1907.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.85	21.90	21.71	23.00
		1	23	21.86	21.72	21.70	23.00
		12	6	21.97	21.92	21.95	23.00
		25	0	21.53	21.39	21.46	23.00
	DFT-s-OFDM QPSK	1	1	21.89	21.86	21.71	23.00
		1	23	21.85	21.69	21.70	23.00
		12	6	22.01	22.02	21.96	23.00
		25	0	21.35	21.23	21.37	23.00

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	DFT-s-OFDM 16QAM	1	1	20.64	20.60	20.82	22.50
		1	23	20.60	20.85	20.67	22.50
		12	6	21.04	21.02	20.94	22.50
	DFT-s-OFDM 64QAM	1	1	19.20	19.15	20.91	21.00
		1	23	19.43	19.39	19.34	21.00
		12	6	19.47	19.47	19.42	21.00
	DFT-s-OFDM 256QAM	1	1	17.77	17.77	17.57	19.50
		1	23	17.68	17.56	17.56	19.50
		12	6	17.84	17.83	17.71	19.50
	CP-OFDM QPSK	1	1	20.41	20.35	20.28	22.00
	CP-OFDM 16QAM	1	1	20.20	20.13	21.02	21.50
	CP-OFDM 64QAM	1	1	18.47	18.47	18.31	20.00
	CP-OFDM 256QAM	1	1	15.31	15.27	15.19	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				371000/1855	376000/1880	381000/1905	
10MHz	DFT-s-OFDM BPSK	1	1	21.87	21.91	21.74	23.00
		1	50	21.89	21.77	21.74	23.00
		25	12	21.99	21.96	21.98	23.00
		50	0	21.56	21.44	21.50	23.00
	DFT-s-OFDM QPSK	1	1	21.92	21.91	21.75	23.00
		1	50	21.87	21.73	21.75	23.00
		25	12	22.05	22.04	22.00	23.00
		50	0	21.39	21.26	21.39	23.00
	DFT-s-OFDM 16QAM	1	1	20.68	20.64	20.85	22.50
		1	50	20.63	20.87	20.70	22.50
		25	12	21.07	21.07	20.98	22.50
	DFT-s-OFDM 64QAM	1	1	19.22	19.19	20.94	21.00
		1	50	19.46	19.44	19.38	21.00
		25	12	19.50	19.52	19.46	21.00
	DFT-s-OFDM 256QAM	1	1	17.79	17.76	17.59	19.50
		1	50	17.71	17.56	17.59	19.50
		25	12	17.83	17.85	17.74	19.50
	CP-OFDM QPSK	1	1	20.44	20.40	20.28	22.00
	CP-OFDM 16QAM	1	1	20.22	20.17	21.05	21.50
	CP-OFDM 64QAM	1	1	18.50	18.52	18.35	20.00
	CP-OFDM	1	1	15.34	15.32	15.23	17.00

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	256QAM						
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				371500/1857.5	376000/1880	380500/1902.5	
15MHz	DFT-s-OFDM BPSK	1	1	21.86	21.87	21.72	23.00
		1	77	21.87	21.76	21.71	23.00
		36	18	21.96	21.91	21.94	23.00
		75	0	21.54	21.40	21.47	23.00
	DFT-s-OFDM QPSK	1	1	21.89	21.86	21.71	23.00
		1	77	21.84	21.70	21.71	23.00
		36	18	22.03	22.00	21.95	23.00
		75	0	21.37	21.24	21.37	23.00
	DFT-s-OFDM 16QAM	1	1	20.66	20.61	20.83	22.50
		1	77	20.61	20.83	20.67	22.50
		36	18	21.04	21.05	20.95	22.50
	DFT-s-OFDM 64QAM	1	1	19.19	19.14	20.90	21.00
		1	77	19.44	19.40	19.35	21.00
		36	18	19.47	19.47	19.42	21.00
	DFT-s-OFDM 256QAM	1	1	17.74	17.74	17.57	19.50
		1	77	17.69	17.53	17.57	19.50
		36	18	17.84	17.84	17.75	19.50
	CP-OFDM QPSK	1	1	20.43	20.42	20.29	22.00
	CP-OFDM 16QAM	1	1	20.20	20.14	21.04	21.50
	CP-OFDM 64QAM	1	1	18.48	18.48	18.32	20.00
	CP-OFDM 256QAM	1	1	15.31	15.27	15.19	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				372000/1860	376000/1880	380000/1900	
20MHz	DFT-s-OFDM BPSK	1	1	21.83	21.83	21.69	23.00
		1	104	21.86	21.72	21.69	23.00
		50	25	21.94	21.90	21.91	23.00
		100	0	21.51	21.35	21.43	23.00
	DFT-s-OFDM QPSK	1	1	**21.87**	**21.82**	**21.68**	23.00
		1	104	21.81	21.65	21.67	23.00
		50	25	**22.00**	21.95	21.91	23.00
		100	0	**21.34**	21.20	21.32	23.00
	DFT-s-OFDM 16QAM	1	1	20.63	20.59	20.79	22.50
		1	104	20.58	20.80	20.65	22.50
		50	25	21.01	21.01	20.92	22.50
	DFT-s-OFDM 64QAM	1	1	19.16	19.12	20.87	21.00
		1	104	19.41	19.35	19.31	21.00

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		50	25	19.45	19.43	19.39	21.00
	DFT-s-OFDM 256QAM	1	1	17.72	17.70	17.52	19.50
		1	104	17.65	17.51	17.53	19.50
		50	25	17.78	17.78	17.69	19.50
	CP-OFDM QPSK	1	1	20.38	20.34	20.22	22.00
	CP-OFDM 16QAM	1	1	20.16	20.10	20.98	21.50
	CP-OFDM 64QAM	1	1	18.45	18.43	18.28	20.00
	CP-OFDM 256QAM	1	1	15.29	15.23	15.16	17.00

NR n7							
Full Power & Receiver off-Main Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				500500/2502.5	507000/2535	513500/2567.5	
5MHz	DFT-s-OFDM BPSK	1	1	22.40	22.30	22.22	23.00
		1	23	22.30	22.20	22.14	23.00
		12	6	22.50	22.42	22.36	23.00
		25	0	21.94	22.02	21.84	23.00
	DFT-s-OFDM QPSK	1	1	22.30	22.24	22.24	23.00
		1	23	22.29	22.22	22.16	23.00
		12	6	22.46	22.49	22.40	23.00
		25	0	21.43	21.62	21.57	23.00
	DFT-s-OFDM 16QAM	1	1	21.05	21.13	21.18	22.50
		1	23	21.20	21.20	21.07	22.50
		12	6	21.47	21.59	21.54	22.50
	DFT-s-OFDM 64QAM	1	1	19.84	19.70	19.72	21.00
		1	23	19.75	19.73	19.67	21.00
		12	6	20.14	20.10	20.05	21.00
	DFT-s-OFDM 256QAM	1	1	18.37	18.30	18.26	19.50
		1	23	18.33	18.29	18.20	19.50
		12	6	18.25	18.25	18.34	19.50
	CP-OFDM QPSK	1	1	21.05	20.91	20.95	22.00
	CP-OFDM 16QAM	1	1	20.36	20.70	20.69	21.50
	CP-OFDM 64QAM	1	1	19.11	19.02	19.00	20.00
	CP-OFDM 256QAM	1	1	15.75	15.67	15.65	17.00

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				501000/2505	507000/2535	513000/2565	
10MHz	DFT-s-OFDM BPSK	1	1	22.42	22.31	22.25	23.00
		1	50	22.33	22.25	22.18	23.00
		25	12	22.52	22.46	22.39	23.00
		50	0	21.97	22.07	21.88	23.00
	DFT-s-OFDM QPSK	1	1	22.33	22.29	22.28	23.00
		1	50	22.31	22.26	22.21	23.00
		25	12	22.50	22.51	22.44	23.00
		50	0	21.47	21.65	21.59	23.00
	DFT-s-OFDM 16QAM	1	1	21.09	21.17	21.21	22.50
		1	50	21.23	21.22	21.10	22.50
		25	12	21.50	21.64	21.58	22.50
	DFT-s-OFDM 64QAM	1	1	19.86	19.74	19.75	21.00
		1	50	19.78	19.78	19.71	21.00
		25	12	20.17	20.15	20.09	21.00
	DFT-s-OFDM 256QAM	1	1	18.39	18.29	18.28	19.50
		1	50	18.36	18.29	18.23	19.50
		25	12	18.24	18.27	18.37	19.50
	CP-OFDM QPSK	1	1	21.08	20.96	20.95	22.00
	CP-OFDM 16QAM	1	1	20.38	20.74	20.72	21.50
	CP-OFDM 64QAM	1	1	19.14	19.07	19.04	20.00
	CP-OFDM 256QAM	1	1	15.78	15.72	15.69	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				501500/2507.5	507000/2535	512500/2562.5	
15MHz	DFT-s-OFDM BPSK	1	1	22.41	22.27	22.23	23.00
		1	77	22.31	22.24	22.15	23.00
		36	18	22.49	22.41	22.35	23.00
		75	0	21.95	22.03	21.85	23.00
	DFT-s-OFDM QPSK	1	1	22.30	22.24	22.24	23.00
		1	77	22.28	22.23	22.17	23.00
		36	18	22.48	22.47	22.39	23.00
		75	0	21.45	21.63	21.57	23.00
	DFT-s-OFDM 16QAM	1	1	21.07	21.14	21.19	22.50
		1	77	21.21	21.18	21.07	22.50
		36	18	21.47	21.62	21.55	22.50
	DFT-s-OFDM 64QAM	1	1	19.83	19.69	19.71	21.00
		1	77	19.76	19.74	19.68	21.00
		36	18	20.14	20.10	20.05	21.00

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	DFT-s-OFDM 256QAM	1	1	18.34	18.27	18.26	19.50
		1	77	18.34	18.26	18.21	19.50
		36	18	18.25	18.26	18.38	19.50
	CP-OFDM QPSK	1	1	21.07	20.98	20.96	22.00
	CP-OFDM 16QAM	1	1	20.36	20.71	20.71	21.50
	CP-OFDM 64QAM	1	1	19.12	19.03	19.01	20.00
	CP-OFDM 256QAM	1	1	15.75	15.67	15.65	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				502000/2510	507000/2535	512000/2560	
20MHz	DFT-s-OFDM BPSK	1	1	22.38	22.23	22.20	23.00
		1	104	22.30	22.20	22.13	23.00
		50	25	22.47	22.40	22.32	23.00
		100	0	21.92	21.98	21.81	23.00
	DFT-s-OFDM QPSK	1	1	**22.28**	**22.20**	**22.21**	23.00
		1	104	22.25	22.18	22.13	23.00
		50	25	**22.45**	22.42	22.35	23.00
		100	0	21.42	**21.59**	21.52	23.00
	DFT-s-OFDM 16QAM	1	1	21.04	21.12	21.15	22.50
		1	104	21.18	21.15	21.05	22.50
		50	25	21.44	21.58	21.52	22.50
	DFT-s-OFDM 64QAM	1	1	19.80	19.67	19.68	21.00
		1	104	19.73	19.69	19.64	21.00
		50	25	20.12	20.06	20.02	21.00
	DFT-s-OFDM 256QAM	1	1	18.32	18.23	18.21	19.50
		1	104	18.30	18.24	18.17	19.50
		50	25	18.19	18.20	18.32	19.50
	CP-OFDM QPSK	1	1	21.02	20.90	20.89	22.00
	CP-OFDM 16QAM	1	1	20.32	20.67	20.65	21.50
	CP-OFDM 64QAM	1	1	19.09	18.98	18.97	20.00
	CP-OFDM 256QAM	1	1	15.73	15.63	15.62	17.00

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NR n7							
Receiver on & Hotspot on-Main Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				500500/2502.5	507000/2535	513500/2567.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.08	21.13	21.18	21.50
		1	23	21.03	21.11	21.02	21.50
		12	6	21.29	21.28	21.26	21.50
		25	0	21.25	21.33	21.26	21.50
	DFT-s-OFDM QPSK	1	1	21.16	21.16	21.14	21.50
		1	23	21.06	21.14	21.00	21.50
		12	6	21.25	21.27	21.28	21.50
		25	0	21.25	21.34	21.31	21.50
	DFT-s-OFDM 16QAM	1	1	20.59	20.63	20.74	21.00
		1	23	20.57	20.66	20.56	21.00
		12	6	20.75	20.77	20.73	21.00
	DFT-s-OFDM 64QAM	1	1	20.40	20.42	20.51	21.50
		1	23	20.35	20.47	20.32	21.50
		12	6	20.75	20.81	20.78	21.50
	DFT-s-OFDM 256QAM	1	1	18.97	19.01	19.07	19.50
		1	23	18.94	18.99	18.87	19.50
		12	6	18.78	18.81	18.70	19.50
	CP-OFDM QPSK	1	1	21.12	21.13	21.26	21.50
	CP-OFDM 16QAM	1	1	21.21	21.22	21.31	21.50
	CP-OFDM 64QAM	1	1	19.66	19.72	19.77	20.00
	CP-OFDM 256QAM	1	1	16.37	16.39	16.48	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				501000/2505	507000/2535	513000/2565	
10MHz	DFT-s-OFDM BPSK	1	1	21.09	21.10	21.19	21.50
		1	50	21.04	21.15	21.03	21.50
		25	12	21.28	21.27	21.25	21.50
		50	0	21.26	21.34	21.27	21.50
	DFT-s-OFDM QPSK	1	1	21.16	21.16	21.14	21.50
		1	50	21.05	21.15	21.01	21.50
		25	12	21.27	21.25	21.27	21.50
		50	0	21.27	21.35	21.31	21.50
	DFT-s-OFDM 16QAM	1	1	20.61	20.64	20.75	21.00
		1	50	20.58	20.64	20.56	21.00
		25	12	20.75	20.80	20.74	21.00

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	DFT-s-OFDM 64QAM	1	1	20.39	20.41	20.50	21.50
		1	50	20.36	20.48	20.33	21.50
		25	12	20.75	20.81	20.78	21.50
	DFT-s-OFDM 256QAM	1	1	18.94	18.98	19.07	19.50
		1	50	18.95	18.96	18.88	19.50
		25	12	18.78	18.82	18.74	19.50
	CP-OFDM QPSK	1	1	21.14	21.20	21.27	21.50
	CP-OFDM 16QAM	1	1	21.21	21.23	21.33	21.50
	CP-OFDM 64QAM	1	1	19.67	19.73	19.78	20.00
	CP-OFDM 256QAM	1	1	16.37	16.39	16.48	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				501500/2507.5	507000/2535	512500/2562.5	
15MHz	DFT-s-OFDM BPSK	1	1	21.10	21.14	21.21	21.50
		1	77	21.06	21.16	21.06	21.50
		36	18	21.31	21.32	21.29	21.50
		75	0	21.28	21.38	21.30	21.50
	DFT-s-OFDM QPSK	1	1	21.19	21.21	21.18	21.50
		1	77	21.08	21.18	21.05	21.50
		36	18	21.29	21.29	21.32	21.50
		75	0	21.29	21.37	21.33	21.50
	DFT-s-OFDM 16QAM	1	1	20.63	20.67	20.77	21.00
		1	77	20.60	20.68	20.59	21.00
		36	18	20.78	20.82	20.77	21.00
	DFT-s-OFDM 64QAM	1	1	20.42	20.46	20.54	21.50
		1	77	20.38	20.52	20.36	21.50
		36	18	20.78	20.86	20.82	21.50
	DFT-s-OFDM 256QAM	1	1	18.99	19.00	19.09	19.50
		1	77	18.97	18.99	18.90	19.50
		36	18	18.77	18.83	18.73	19.50
	CP-OFDM QPSK	1	1	21.15	21.18	21.26	21.50
	CP-OFDM 16QAM	1	1	21.23	21.26	21.34	21.50
	CP-OFDM 64QAM	1	1	19.69	19.77	19.81	20.00
	CP-OFDM 256QAM	1	1	16.40	16.44	16.52	17.00

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				502000/2510	507000/2535	512000/2560	
20MHz	DFT-s-OFDM BPSK	1	1	21.06	21.06	21.16	21.50
		1	104	21.03	21.11	21.01	21.50
		50	25	21.26	21.26	21.22	21.50
		100	0	21.23	21.29	21.23	21.50
	DFT-s-OFDM QPSK	1	1	**21.14**	**21.12**	**21.11**	21.50
		1	104	21.02	21.10	20.97	21.50
		50	25	**21.24**	21.20	21.23	21.50
		100	0	21.24	**21.31**	21.26	21.50
	DFT-s-OFDM 16QAM	1	1	20.58	20.62	20.71	21.00
		1	104	20.55	20.61	20.54	21.00
		50	25	20.72	20.76	20.71	21.00
	DFT-s-OFDM 64QAM	1	1	20.36	20.39	20.47	21.50
		1	104	20.33	20.43	20.29	21.50
		50	25	20.73	20.77	20.75	21.50
	DFT-s-OFDM 256QAM	1	1	18.92	18.94	19.02	19.50
		1	104	18.91	18.94	18.84	19.50
		50	25	18.72	18.76	18.68	19.50
	CP-OFDM QPSK	1	1	21.09	21.12	21.20	21.50
	CP-OFDM 16QAM	1	1	21.17	21.19	21.27	21.50
	CP-OFDM 64QAM	1	1	19.64	19.68	19.74	20.00
	CP-OFDM 256QAM	1	1	16.35	16.35	16.45	17.00

NR n7							
Full Power & Receiver on & Receiver off & Hotspot on-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				500500/2502.5	507000/2535	513500/2567.5	
5MHz	DFT-s-OFDM BPSK	1	1	22.83	22.77	22.95	23.50
		1	23	22.86	22.91	22.82	23.50
		12	6	22.96	23.11	22.87	23.50
		25	0	21.86	22.15	22.49	23.50
	DFT-s-OFDM QPSK	1	1	22.81	22.86	23.14	23.50
		1	23	22.91	22.99	23.16	23.50
		12	6	22.87	23.16	23.21	23.50
		25	0	21.81	22.12	22.46	23.50
	DFT-s-OFDM 16QAM	1	1	21.88	21.60	22.34	23.00
		1	23	21.69	21.92	22.56	23.00

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		12	6	21.90	22.02	22.40	23.00
	DFT-s-OFDM 64QAM	1	1	20.30	20.65	20.97	21.50
		1	23	20.44	20.93	20.90	21.50
		12	6	20.32	20.60	20.92	21.50
	DFT-s-OFDM 256QAM	1	1	18.15	18.10	18.46	19.50
		1	23	18.11	18.20	18.67	19.50
		12	6	18.51	18.60	18.88	19.50
	CP-OFDM QPSK	1	1	22.60	22.48	22.69	23.00
	CP-OFDM 16QAM	1	1	21.71	21.43	21.82	22.50
	CP-OFDM 64QAM	1	1	19.78	19.91	19.90	21.00
	CP-OFDM 256QAM	1	1	17.28	17.52	17.30	18.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				501000/2505	507000/2535	513000/2565	
10MHz	DFT-s-OFDM BPSK	1	1	22.79	22.72	22.91	23.50
		1	50	22.86	22.88	22.81	23.50
		25	12	22.93	23.09	22.83	23.50
		50	0	21.83	22.10	22.45	23.50
	DFT-s-OFDM QPSK	1	1	22.80	22.83	23.10	23.50
		1	50	22.88	22.96	23.13	23.50
		25	12	22.88	23.12	23.19	23.50
		50	0	21.82	22.07	22.40	23.50
	DFT-s-OFDM 16QAM	1	1	21.89	21.60	22.30	23.00
		1	50	21.66	21.89	22.53	23.00
		25	12	21.88	21.99	22.38	23.00
	DFT-s-OFDM 64QAM	1	1	20.26	20.62	20.93	21.50
		1	50	20.41	20.88	20.86	21.50
		25	12	20.31	20.57	20.88	21.50
	DFT-s-OFDM 256QAM	1	1	18.12	18.05	18.40	19.50
		1	50	18.07	18.20	18.63	19.50
		25	12	18.45	18.54	18.81	19.50
	CP-OFDM QPSK	1	1	22.56	22.41	22.63	23.00
	CP-OFDM 16QAM	1	1	21.66	21.38	21.75	22.50
	CP-OFDM 64QAM	1	1	19.75	19.86	19.86	21.00
	CP-OFDM 256QAM	1	1	17.27	17.49	17.26	18.00

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				501500/2507.5	507000/2535	512500/2562.5	
15MHz	DFT-s-OFDM BPSK	1	1	22.78	22.68	22.89	23.50
		1	77	22.84	22.87	22.78	23.50
		36	18	22.90	23.04	22.79	23.50
		75	0	21.81	22.06	22.42	23.50
	DFT-s-OFDM QPSK	1	1	22.77	22.78	23.06	23.50
		1	77	22.85	22.93	23.09	23.50
		36	18	22.86	23.08	23.14	23.50
		75	0	21.80	22.05	22.38	23.50
	DFT-s-OFDM 16QAM	1	1	21.87	21.57	22.28	23.00
		1	77	21.64	21.85	22.50	23.00
		36	18	21.85	21.97	22.35	23.00
	DFT-s-OFDM 64QAM	1	1	20.23	20.57	20.89	21.50
		1	77	20.39	20.84	20.83	21.50
		36	18	20.28	20.52	20.84	21.50
	DFT-s-OFDM 256QAM	1	1	18.07	18.03	18.38	19.50
		1	77	18.05	18.17	18.61	19.50
		36	18	18.46	18.53	18.82	19.50
	CP-OFDM QPSK	1	1	22.55	22.43	22.64	23.00
	CP-OFDM 16QAM	1	1	21.64	21.35	21.74	22.50
	CP-OFDM 64QAM	1	1	19.73	19.82	19.83	21.00
	CP-OFDM 256QAM	1	1	17.24	17.44	17.22	18.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				502000/2510	507000/2535	512000/2560	
20MHz	DFT-s-OFDM BPSK	1	1	22.75	22.64	22.86	23.50
		1	104	22.83	22.83	22.76	23.50
		50	25	22.88	23.03	22.76	23.50
		100	0	21.78	22.01	22.38	23.50
	DFT-s-OFDM QPSK	1	1	22.75	22.74	23.03	23.50
		1	104	**22.82**	**23.06**	**23.05**	23.50
		50	25	22.83	**23.03**	23.01	23.50
		100	0	21.77	**22.26**	22.22	23.50
	DFT-s-OFDM 16QAM	1	1	21.84	21.55	22.24	23.00
		1	104	21.61	21.82	22.48	23.00
		50	25	21.82	21.93	22.32	23.00
	DFT-s-OFDM 64QAM	1	1	20.20	20.55	20.86	21.50
		1	104	20.36	20.79	20.79	21.50
		50	25	20.26	20.48	20.81	21.50

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	DFT-s-OFDM 256QAM	1	1	18.05	17.99	18.33	19.50
		1	104	18.01	18.15	18.57	19.50
		50	25	18.40	18.47	18.76	19.50
	CP-OFDM QPSK	1	1	22.50	22.35	22.57	23.00
	CP-OFDM 16QAM	1	1	21.60	21.31	21.68	22.50
	CP-OFDM 64QAM	1	1	19.70	19.77	19.79	21.00
	CP-OFDM 256QAM	1	1	17.22	17.40	17.19	18.00

NR n28 Subset 1							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				141100/705.5	141900/709.5	142700/713.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.85	22.00	21.91	23.00
		1	23	21.88	21.93	21.91	23.00
		12	6	21.84	21.96	21.99	23.00
		25	0	21.45	21.53	21.52	23.00
	DFT-s-OFDM QPSK	1	1	21.78	21.90	21.92	23.00
		1	23	21.92	21.92	21.97	23.00
		12	6	22.04	22.01	21.98	23.00
		25	0	21.29	21.43	21.40	23.00
	DFT-s-OFDM 16QAM	1	1	20.92	20.58	20.64	22.50
		1	23	20.60	20.62	20.63	22.50
		12	6	21.06	20.98	21.00	22.50
	DFT-s-OFDM 64QAM	1	1	19.11	19.19	19.19	21.00
		1	23	19.13	19.17	19.16	21.00
		12	6	19.42	19.43	19.36	21.00
	DFT-s-OFDM 256QAM	1	1	17.76	17.89	17.91	19.50
		1	23	17.87	17.85	17.88	19.50
		12	6	17.70	17.66	17.64	19.50
	CP-OFDM QPSK	1	1	20.33	20.46	20.47	22.00
	CP-OFDM 16QAM	1	1	20.07	20.18	20.22	21.50
	CP-OFDM 64QAM	1	1	18.35	18.49	18.48	20.00
	CP-OFDM 256QAM	1	1	15.18	15.36	15.32	17.00

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				141600/708	141900/709.5	142200/711	
10MHz	DFT-s-OFDM BPSK	1	1	21.82	21.96	21.88	23.00
		1	50	21.87	21.89	21.89	23.00
		25	12	21.82	21.95	21.96	23.00
		50	0	21.42	21.48	21.48	23.00
	DFT-s-OFDM QPSK	1	1	21.76	21.86	21.89	23.00
		1	50	**21.89**	**21.87**	**21.93**	23.00
		25	12	**22.01**	21.96	21.94	23.00
		50	0	21.26	**21.39**	21.35	23.00
	DFT-s-OFDM 16QAM	1	1	20.89	20.56	20.60	22.50
		1	50	20.57	20.59	20.61	22.50
		25	12	21.03	20.94	20.97	22.50
	DFT-s-OFDM 64QAM	1	1	19.08	19.17	19.16	21.00
		1	50	19.10	19.12	19.12	21.00
		25	12	19.40	19.39	19.33	21.00
	DFT-s-OFDM 256QAM	1	1	17.74	17.85	17.86	19.50
		1	50	17.83	17.83	17.84	19.50
		25	12	17.64	17.60	17.58	19.50
	CP-OFDM QPSK	1	1	20.28	20.38	20.40	22.00
	CP-OFDM 16QAM	1	1	20.03	20.14	20.16	21.50
	CP-OFDM 64QAM	1	1	18.32	18.44	18.44	20.00
	CP-OFDM 256QAM	1	1	15.16	15.32	15.29	17.00

NR n28 Subset 2							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				140700/730.5	147400/737	148700/743.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.96	21.97	21.96	23.00
		1	23	21.91	21.94	21.96	23.00
		12	6	22.09	22.03	22.13	23.00
		25	0	21.49	21.49	21.52	23.00
	DFT-s-OFDM QPSK	1	1	21.93	22.00	21.96	23.00
		1	23	21.88	21.91	21.93	23.00
		12	6	22.06	22.11	22.12	23.00
		25	0	21.41	21.42	21.43	23.00
	DFT-s-OFDM 16QAM	1	1	20.70	20.71	20.67	22.50
		1	23	20.59	20.63	20.66	22.50

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		12	6	21.00	20.97	21.04	22.50
	DFT-s-OFDM 64QAM	1	1	19.22	19.18	19.22	21.00
		1	23	19.11	19.21	19.16	21.00
		12	6	19.52	19.51	19.50	21.00
	DFT-s-OFDM 256QAM	1	1	17.94	17.94	17.96	19.50
		1	23	17.68	17.67	17.69	19.50
		12	6	17.65	17.69	17.69	19.50
	CP-OFDM QPSK	1	1	20.45	20.44	20.44	22.00
	CP-OFDM 16QAM	1	1	20.24	20.23	20.25	21.50
	CP-OFDM 64QAM	1	1	18.50	18.51	18.51	20.00
	CP-OFDM 256QAM	1	1	15.37	15.39	15.39	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				146600/733	147400/737	148200/741	
10MHz	DFT-s-OFDM BPSK	1	1	21.95	21.93	21.94	23.00
		1	50	21.89	21.93	21.93	23.00
		25	12	22.06	21.98	22.09	23.00
		50	0	21.47	21.45	21.49	23.00
	DFT-s-OFDM QPSK	1	1	21.90	21.95	21.92	23.00
		1	50	21.85	21.88	21.89	23.00
		25	12	22.04	22.07	22.07	23.00
		50	0	21.39	21.40	21.41	23.00
	DFT-s-OFDM 16QAM	1	1	20.68	20.68	20.65	22.50
		1	50	20.57	20.59	20.63	22.50
		25	12	20.97	20.95	21.01	22.50
	DFT-s-OFDM 64QAM	1	1	19.19	19.13	19.18	21.00
		1	50	19.09	19.17	19.13	21.00
		25	12	19.49	19.46	19.46	21.00
	DFT-s-OFDM 256QAM	1	1	17.89	17.92	17.94	19.50
		1	50	17.66	17.64	17.67	19.50
		25	12	17.66	17.68	17.70	19.50
	CP-OFDM QPSK	1	1	20.44	20.46	20.45	22.00
	CP-OFDM 16QAM	1	1	20.22	20.20	20.24	21.50
	CP-OFDM 64QAM	1	1	18.48	18.47	18.48	20.00
	CP-OFDM 256QAM	1	1	15.34	15.34	15.35	17.00

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				147100/735.5	147400/737	147700/738.5	
15MHz	DFT-s-OFDM BPSK	1	1	21.92	21.89	21.91	23.00
		1	77	21.88	21.89	21.91	23.00
		36	18	22.04	21.97	22.06	23.00
		75	0	21.44	21.40	21.45	23.00
	DFT-s-OFDM QPSK	1	1	**21.88**	**21.93**	**21.89**	23.00
		1	77	21.82	21.83	21.85	23.00
		36	18	22.01	22.02	**22.03**	23.00
		75	0	**21.36**	**21.36**	**21.36**	23.00
	DFT-s-OFDM 16QAM	1	1	20.65	20.66	20.61	22.50
		1	77	20.54	20.56	20.61	22.50
		36	18	20.94	20.91	20.98	22.50
	DFT-s-OFDM 64QAM	1	1	19.16	19.11	19.15	21.00
		1	77	19.06	19.12	19.09	21.00
		36	18	19.47	19.42	19.43	21.00
	DFT-s-OFDM 256QAM	1	1	17.87	17.88	17.89	19.50
		1	77	17.62	17.62	17.63	19.50
		36	18	17.60	17.62	17.64	19.50
	CP-OFDM QPSK	1	1	20.39	20.38	20.38	22.00
	CP-OFDM 16QAM	1	1	20.18	20.16	20.18	21.50
	CP-OFDM 64QAM	1	1	18.45	18.42	18.44	20.00
	CP-OFDM 256QAM	1	1	15.32	15.30	15.32	17.00

NR n40 Subset 1							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				/	462000/2310	/	
10MHz	DFT-s-OFDM BPSK	1	1	/	22.77	/	23.50
		1	50	/	22.83	/	23.50
		25	12	/	22.94	/	23.50
		50	0	/	22.35	/	23.50
	DFT-s-OFDM QPSK	1	1	/	22.73	/	23.50
		1	50	/	**22.84**	/	23.50
		25	12	/	**22.95**	/	23.50
		50	0	/	**21.82**	/	23.50
	DFT-s-OFDM 16QAM	1	1	/	21.48	/	22.50
		1	50	/	21.53	/	22.50

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		25	12	/	21.84	/	22.50
	DFT-s-OFDM 64QAM	1	1	/	20.12	/	21.00
		1	50	/	20.26	/	21.00
		25	12	/	20.46	/	21.00
	DFT-s-OFDM 256QAM	1	1	/	18.69	/	19.50
		1	50	/	18.80	/	19.50
		25	12	/	18.49	/	19.50
	CP-OFDM QPSK	1	1	/	21.63	/	22.00
	CP-OFDM 16QAM	1	1	/	21.17	/	21.50
	CP-OFDM 64QAM	1	1	/	19.50	/	20.00
	CP-OFDM 256QAM	1	1	/	16.20	/	17.00

NR n40 Subset 2							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant6				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				/	471000/2355	/	
10MHz	DFT-s-OFDM BPSK	1	1	/	22.85	/	23.50
		1	50	/	23.31	/	23.50
		25	12	/	23.17	/	23.50
		50	0	/	22.67	/	23.50
	DFT-s-OFDM QPSK	1	1	/	22.80	/	23.50
		1	50	/	**23.24**	/	23.50
		25	12	/	**23.20**	/	23.50
		50	0	/	**22.13**	/	23.50
	DFT-s-OFDM 16QAM	1	1	/	21.56	/	22.50
		1	50	/	21.98	/	22.50
		25	12	/	22.15	/	22.50
	DFT-s-OFDM 64QAM	1	1	/	20.23	/	21.00
		1	50	/	20.60	/	21.00
		25	12	/	20.71	/	21.00
	DFT-s-OFDM 256QAM	1	1	/	18.87	/	19.50
		1	50	/	19.26	/	19.50
		25	12	/	18.78	/	19.50
	CP-OFDM QPSK	1	1	/	21.52	/	22.00
	CP-OFDM 16QAM	1	1	/	21.31	/	21.50
	CP-OFDM	1	1	/	19.63	/	20.00

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	64QAM						
	CP-OFDM 256QAM	1	1	/	16.36	/	17.00

NR n66							
Full Power & Receiver on & Receiver off-Main Ant7				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.56	21.72	21.39	23.00
		1	23	21.40	21.51	21.36	23.00
		12	6	22.16	22.19	22.20	23.00
		25	0	21.47	21.64	21.42	23.00
	DFT-s-OFDM QPSK	1	1	21.49	21.83	21.43	23.00
		1	23	21.52	21.57	21.48	23.00
		12	6	22.07	22.32	22.18	23.00
		25	0	21.35	21.51	21.42	23.00
	DFT-s-OFDM 16QAM	1	1	20.66	20.70	20.74	22.50
		1	23	20.69	20.84	20.85	22.50
		12	6	21.60	21.75	21.60	22.50
	DFT-s-OFDM 64QAM	1	1	19.38	19.40	19.29	21.00
		1	23	19.31	19.45	19.26	21.00
		12	6	20.08	20.21	20.18	21.00
	DFT-s-OFDM 256QAM	1	1	18.16	18.14	18.01	19.50
		1	23	18.05	17.98	17.91	19.50
		12	6	18.22	18.23	18.20	19.50
	CP-OFDM QPSK	1	1	20.57	20.55	20.47	22.00
	CP-OFDM 16QAM	1	1	20.41	20.43	20.29	21.50
	CP-OFDM 64QAM	1	1	18.68	18.80	18.58	20.00
	CP-OFDM 256QAM	1	1	15.26	15.55	15.40	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	21.54	21.67	21.36	23.00
		1	50	21.39	21.51	21.34	23.00
		25	12	22.12	22.13	22.15	23.00
		50	0	21.45	21.60	21.39	23.00
	DFT-s-OFDM QPSK	1	1	21.47	21.79	21.38	23.00
		1	50	21.49	21.56	21.45	23.00
		25	12	22.09	22.29	22.15	23.00

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		50	0	21.37	21.48	21.39	23.00
	DFT-s-OFDM 16QAM	1	1	20.68	20.69	20.72	22.50
		1	50	20.67	20.80	20.81	22.50
		25	12	21.58	21.74	21.58	22.50
	DFT-s-OFDM 64QAM	1	1	19.34	19.34	19.24	21.00
		1	50	19.29	19.41	19.23	21.00
		25	12	20.06	20.17	20.13	21.00
	DFT-s-OFDM 256QAM	1	1	18.10	18.11	17.98	19.50
		1	50	18.03	17.97	17.89	19.50
		25	12	18.23	18.22	18.20	19.50
	CP-OFDM QPSK	1	1	20.57	20.58	20.49	22.00
	CP-OFDM 16QAM	1	1	20.38	20.39	20.27	21.50
	CP-OFDM 64QAM	1	1	18.66	18.76	18.55	20.00
	CP-OFDM 256QAM	1	1	15.24	15.51	15.35	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	21.51	21.63	21.33	23.00
		1	77	21.38	21.47	21.32	23.00
		36	18	22.10	22.12	22.12	23.00
		75	0	21.42	21.55	21.35	23.00
	DFT-s-OFDM QPSK	1	1	21.45	21.75	21.35	23.00
		1	77	21.46	21.51	21.41	23.00
		36	18	22.06	22.24	22.11	23.00
		75	0	21.34	21.44	21.34	23.00
	DFT-s-OFDM 16QAM	1	1	20.65	20.67	20.68	22.50
		1	77	20.64	20.77	20.79	22.50
		36	18	21.55	21.70	21.55	22.50
	DFT-s-OFDM 64QAM	1	1	19.31	19.32	19.21	21.00
		1	77	19.26	19.36	19.19	21.00
		36	18	20.04	20.13	20.10	21.00
	DFT-s-OFDM 256QAM	1	1	18.08	18.07	17.93	19.50
		1	77	17.99	17.95	17.85	19.50
		36	18	18.17	18.16	18.14	19.50
	CP-OFDM QPSK	1	1	20.52	20.50	20.42	22.00
	CP-OFDM 16QAM	1	1	20.34	20.35	20.21	21.50
	CP-OFDM 64QAM	1	1	18.63	18.71	18.51	20.00

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	CP-OFDM 256QAM	1	1	15.22	15.47	15.32	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	21.46	21.54	21.27	23.00
		1	104	21.36	21.43	21.28	23.00
		50	25	22.04	22.05	22.04	23.00
		100	0	21.37	21.46	21.28	23.00
	DFT-s-OFDM QPSK	1	1	21.41	21.67	21.27	23.00
		1	104	21.40	21.45	21.34	23.00
		50	25	22.05	22.16	22.04	23.00
		100	0	21.33	21.37	21.26	23.00
	DFT-s-OFDM 16QAM	1	1	20.64	20.64	20.62	22.50
		1	104	20.59	20.70	20.73	22.50
		50	25	21.50	21.65	21.50	22.50
	DFT-s-OFDM 64QAM	1	1	19.24	19.24	19.13	21.00
		1	104	19.21	19.27	19.12	21.00
		50	25	20.00	20.05	20.02	21.00
	DFT-s-OFDM 256QAM	1	1	18.00	18.00	17.85	19.50
		1	104	17.93	17.92	17.79	19.50
		50	25	18.12	18.09	18.08	19.50
	CP-OFDM QPSK	1	1	20.47	20.45	20.37	22.00
	CP-OFDM 16QAM	1	1	20.27	20.27	20.13	21.50
	CP-OFDM 64QAM	1	1	18.58	18.62	18.44	20.00
	CP-OFDM 256QAM	1	1	15.18	15.39	15.24	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344500/1722.5	349000/1745	353500/1767.5	
25MHz	DFT-s-OFDM BPSK	1	1	21.49	21.58	21.30	23.00
		1	131	21.37	21.47	21.30	23.00
		64	32	22.06	22.06	22.07	23.00
		128	0	21.40	21.51	21.32	23.00
	DFT-s-OFDM QPSK	1	1	21.43	21.71	21.30	23.00
		1	131	21.43	21.50	21.38	23.00
		64	32	22.08	22.21	22.08	23.00
		128	0	21.36	21.41	21.31	23.00
	DFT-s-OFDM 16QAM	1	1	20.67	20.66	20.66	22.50
		1	131	20.62	20.73	20.75	22.50
		64	32	21.53	21.69	21.53	22.50
	DFT-s-OFDM	1	1	19.27	19.26	19.16	21.00

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	64QAM	1	131	19.24	19.32	19.16	21.00
		64	32	20.02	20.09	20.05	21.00
	DFT-s-OFDM 256QAM	1	1	18.02	18.04	17.90	19.50
		1	131	17.97	17.94	17.83	19.50
		64	32	18.18	18.15	18.14	19.50
	CP-OFDM QPSK	1	1	20.52	20.53	20.44	22.00
	CP-OFDM 16QAM	1	1	20.31	20.31	20.19	21.50
	CP-OFDM 64QAM	1	1	18.61	18.67	18.48	20.00
	CP-OFDM 256QAM	1	1	15.20	15.43	15.27	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	21.42	21.46	21.22	23.00
		1	158	21.33	21.38	21.23	23.00
		80	40	21.99	21.99	21.97	23.00
		160	0	21.32	21.37	21.21	23.00
	DFT-s-OFDM QPSK	1	1	21.36	21.58	21.20	23.00
		1	158	21.34	21.37	21.26	23.00
		80	40	22.00	22.07	21.95	23.00
		160	0	21.28	21.31	21.19	23.00
	DFT-s-OFDM 16QAM	1	1	20.59	20.59	20.56	22.50
		1	158	20.54	20.63	20.68	22.50
		80	40	21.44	21.59	21.44	22.50
	DFT-s-OFDM 64QAM	1	1	19.18	19.17	19.06	21.00
		1	158	19.16	19.18	19.05	21.00
		80	40	19.95	19.96	19.95	21.00
	DFT-s-OFDM 256QAM	1	1	17.93	17.94	17.78	19.50
		1	158	17.87	17.87	17.73	19.50
		80	40	18.07	18.02	18.03	19.50
	CP-OFDM QPSK	1	1	20.41	20.39	20.31	22.00
	CP-OFDM 16QAM	1	1	20.21	20.20	20.06	21.50
	CP-OFDM 64QAM	1	1	18.53	18.53	18.37	20.00
	CP-OFDM 256QAM	1	1	15.13	15.30	15.17	17.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				346000/1730	349000/1745	352000/1760	
40MHz	DFT-s-OFDM	1	1	21.40	21.39	21.20	23.00

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	BPSK	1	214	21.33	21.38	21.22	23.00
		108	54	21.96	21.97	21.93	23.00
		216	0	21.30	21.33	21.18	23.00
	DFT-s-OFDM QPSK	1	1	**21.34**	**21.54**	21.17	23.00
		1	214	21.30	21.33	**21.23**	23.00
		108	54	21.99	**22.00**	21.90	23.00
		216	0	21.27	**21.28**	21.14	23.00
	DFT-s-OFDM 16QAM	1	1	20.58	20.58	20.53	22.50
		1	214	20.52	20.58	20.66	22.50
		108	54	21.41	21.58	21.42	22.50
	DFT-s-OFDM 64QAM	1	1	19.14	19.14	19.02	21.00
		1	214	19.14	19.14	19.02	21.00
		108	54	19.93	19.92	19.92	21.00
	DFT-s-OFDM 256QAM	1	1	17.88	17.87	17.73	19.50
		1	214	17.84	17.82	17.70	19.50
		108	54	18.01	17.97	18.01	19.50
	CP-OFDM QPSK	1	1	20.38	20.38	20.25	22.00
	CP-OFDM 16QAM	1	1	20.17	20.17	20.02	21.50
	CP-OFDM 64QAM	1	1	18.51	18.49	18.34	20.00
	CP-OFDM 256QAM	1	1	15.11	15.26	15.14	17.00

NR n66							
Hotspot on-Main Ant7				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	19.20	19.31	19.25	21.00
		1	23	19.13	19.13	19.17	21.00
		12	6	19.93	19.86	19.87	21.00
		25	0	19.69	19.83	19.75	21.00
	DFT-s-OFDM QPSK	1	1	19.23	19.46	19.28	21.00
		1	23	19.42	19.40	19.36	21.00
		12	6	19.78	19.92	19.86	21.00
		25	0	19.63	19.76	19.69	21.00
	DFT-s-OFDM 16QAM	1	1	18.91	18.57	19.02	20.50
		1	23	18.97	18.98	19.00	20.50
		12	6	19.90	19.84	19.82	20.50
	DFT-s-OFDM 64QAM	1	1	18.59	18.64	18.64	20.00
		1	23	18.54	18.59	18.61	20.00
		12	6	18.95	18.93	18.94	20.00

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	DFT-s-OFDM 256QAM	1	1	17.36	17.37	17.37	18.50
		1	23	17.32	17.19	17.35	18.50
		12	6	17.51	17.50	17.46	18.50
	CP-OFDM QPSK	1	1	19.28	19.30	19.29	21.00
	CP-OFDM 16QAM	1	1	19.58	19.62	19.62	20.50
	CP-OFDM 64QAM	1	1	17.87	17.96	17.91	19.00
	CP-OFDM 256QAM	1	1	14.72	14.80	14.78	16.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	19.18	19.26	19.22	21.00
		1	50	19.12	19.13	19.15	21.00
		25	12	19.89	19.80	19.82	21.00
		50	0	19.67	19.79	19.72	21.00
	DFT-s-OFDM QPSK	1	1	19.21	19.42	19.23	21.00
		1	50	19.39	19.39	19.33	21.00
		25	12	19.80	19.89	19.83	21.00
		50	0	19.65	19.73	19.66	21.00
	DFT-s-OFDM 16QAM	1	1	18.93	18.56	19.00	20.50
		1	50	18.95	18.94	18.96	20.50
		25	12	19.88	19.83	19.80	20.50
	DFT-s-OFDM 64QAM	1	1	18.55	18.58	18.59	20.00
		1	50	18.52	18.55	18.58	20.00
		25	12	18.93	18.89	18.89	20.00
	DFT-s-OFDM 256QAM	1	1	17.30	17.34	17.34	18.50
		1	50	17.30	17.18	17.33	18.50
		25	12	17.52	17.49	17.46	18.50
	CP-OFDM QPSK	1	1	19.28	19.33	19.31	21.00
	CP-OFDM 16QAM	1	1	19.55	19.58	19.60	20.50
	CP-OFDM 64QAM	1	1	17.85	17.92	17.88	19.00
	CP-OFDM 256QAM	1	1	14.70	14.76	14.73	16.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	19.15	19.22	19.19	21.00
		1	77	19.11	19.09	19.13	21.00
		36	18	19.87	19.79	19.79	21.00

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		75	0	19.64	19.74	19.68	21.00
	DFT-s-OFDM QPSK	1	1	19.19	19.38	19.20	21.00
		1	77	19.36	19.34	19.29	21.00
		36	18	19.77	19.84	19.79	21.00
		75	0	19.62	19.69	19.61	21.00
	DFT-s-OFDM 16QAM	1	1	18.90	18.54	18.96	20.50
		1	77	18.92	18.91	18.94	20.50
		36	18	19.85	19.79	19.77	20.50
	DFT-s-OFDM 64QAM	1	1	18.52	18.56	18.56	20.00
		1	77	18.49	18.50	18.54	20.00
		36	18	18.91	18.85	18.86	20.00
	DFT-s-OFDM 256QAM	1	1	17.28	17.30	17.29	18.50
		1	77	17.26	17.16	17.29	18.50
		36	18	17.46	17.43	17.40	18.50
	CP-OFDM QPSK	1	1	19.23	19.25	19.24	21.00
	CP-OFDM 16QAM	1	1	19.51	19.54	19.54	20.50
	CP-OFDM 64QAM	1	1	17.82	17.87	17.84	19.00
	CP-OFDM 256QAM	1	1	14.68	14.72	14.70	16.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	19.12	19.20	19.15	21.00
		1	104	19.09	19.05	19.10	21.00
		50	25	19.84	19.74	19.75	21.00
		100	0	19.61	19.69	19.64	21.00
	DFT-s-OFDM QPSK	1	1	19.17	19.34	19.15	21.00
		1	104	19.34	19.32	19.25	21.00
		50	25	19.77	19.83	19.77	21.00
		100	0	19.62	19.65	19.58	21.00
	DFT-s-OFDM 16QAM	1	1	18.90	18.52	18.93	20.50
		1	104	18.89	18.89	18.90	20.50
		50	25	19.83	19.75	19.74	20.50
	DFT-s-OFDM 64QAM	1	1	18.49	18.51	18.52	20.00
		1	104	18.46	18.45	18.50	20.00
		50	25	18.89	18.81	18.81	20.00
	DFT-s-OFDM 256QAM	1	1	17.25	17.30	17.26	18.50
		1	104	17.23	17.18	17.26	18.50
		50	25	17.47	17.41	17.36	18.50
	CP-OFDM QPSK	1	1	19.21	19.21	19.25	21.00

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	CP-OFDM 16QAM	1	1	19.48	19.49	19.50	20.50
	CP-OFDM 64QAM	1	1	17.79	17.82	17.80	19.00
	CP-OFDM 256QAM	1	1	14.66	14.68	14.65	16.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344500/1722.5	349000/1745	353500/1767.5	
25MHz	DFT-s-OFDM BPSK	1	1	19.14	19.21	19.18	21.00
		1	131	19.12	19.10	19.14	21.00
		64	32	19.86	19.78	19.78	21.00
		128	0	19.64	19.74	19.68	21.00
	DFT-s-OFDM QPSK	1	1	19.20	19.39	19.19	21.00
		1	131	19.36	19.36	19.30	21.00
		64	32	19.81	19.85	19.81	21.00
		128	0	19.66	19.68	19.60	21.00
	DFT-s-OFDM 16QAM	1	1	18.94	18.56	18.96	20.50
		1	131	18.92	18.91	18.93	20.50
		64	32	19.86	19.80	19.78	20.50
	DFT-s-OFDM 64QAM	1	1	18.51	18.55	18.55	20.00
		1	131	18.49	18.50	18.54	20.00
		64	32	18.92	18.86	18.85	20.00
	DFT-s-OFDM 256QAM	1	1	17.27	17.29	17.28	18.50
		1	131	17.26	17.18	17.29	18.50
		64	32	17.46	17.43	17.39	18.50
	CP-OFDM QPSK	1	1	19.24	19.26	19.25	21.00
	CP-OFDM 16QAM	1	1	19.50	19.53	19.53	20.50
	CP-OFDM 64QAM	1	1	17.82	17.87	17.84	19.00
	CP-OFDM 256QAM	1	1	14.69	14.73	14.69	16.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	19.13	19.17	19.16	21.00
		1	158	19.10	19.09	19.11	21.00
		80	40	19.83	19.73	19.74	21.00
		160	0	19.62	19.70	19.65	21.00
	DFT-s-OFDM QPSK	1	1	19.17	19.34	19.15	21.00
		1	158	19.33	19.33	19.26	21.00
		80	40	19.79	19.81	19.76	21.00
		160	0	19.64	19.66	19.58	21.00

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	DFT-s-OFDM 16QAM	1	1	18.92	18.53	18.94	20.50
		1	158	18.90	18.87	18.90	20.50
		80	40	19.83	19.78	19.75	20.50
	DFT-s-OFDM 64QAM	1	1	18.48	18.50	18.51	20.00
		1	158	18.47	18.46	18.51	20.00
		80	40	18.89	18.81	18.81	20.00
	DFT-s-OFDM 256QAM	1	1	17.22	17.27	17.26	18.50
		1	158	17.24	17.15	17.27	18.50
		80	40	17.47	17.42	17.40	18.50
	CP-OFDM QPSK	1	1	19.23	19.28	19.26	21.00
	CP-OFDM 16QAM	1	1	19.48	19.50	19.52	20.50
	CP-OFDM 64QAM	1	1	17.80	17.83	17.81	19.00
	CP-OFDM 256QAM	1	1	14.66	14.68	14.65	16.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				346000/1730	349000/1745	352000/1760	
40MHz	DFT-s-OFDM BPSK	1	1	19.10	19.13	19.13	21.00
		1	214	19.09	19.05	19.09	21.00
		108	54	19.81	19.72	19.71	21.00
		216	0	19.59	19.65	19.61	21.00
	DFT-s-OFDM QPSK	1	1	19.15	**19.30**	19.12	21.00
		1	214	**19.30**	19.28	**19.22**	21.00
		108	54	**19.76**	**19.76**	19.72	21.00
		216	0	19.61	**19.62**	19.53	21.00
	DFT-s-OFDM 16QAM	1	1	18.89	18.51	18.90	20.50
		1	214	18.87	18.84	18.88	20.50
		108	54	19.80	19.74	19.72	20.50
	DFT-s-OFDM 64QAM	1	1	18.45	18.48	18.48	20.00
		1	214	18.44	18.41	18.47	20.00
		108	54	18.87	18.77	18.78	20.00
	DFT-s-OFDM 256QAM	1	1	17.20	17.23	17.21	18.50
		1	214	17.20	17.13	17.23	18.50
		108	54	17.41	17.36	17.34	18.50
	CP-OFDM QPSK	1	1	19.18	19.20	19.19	21.00
	CP-OFDM 16QAM	1	1	19.44	19.46	19.46	20.50
	CP-OFDM 64QAM	1	1	17.77	17.78	17.77	19.00
	CP-OFDM	1	1	14.64	14.64	14.62	16.00

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	256QAM						

NR n66							
Full Power & Receiver on & Receiver off & Hotspot on-Div Ant4				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	22.56	22.86	22.85	23.50
		1	23	22.80	22.80	22.73	23.50
		12	6	22.93	23.13	23.42	23.50
		25	0	22.34	22.23	22.66	23.50
	DFT-s-OFDM QPSK	1	1	22.60	22.81	22.90	23.50
		1	23	22.78	22.91	22.85	23.50
		12	6	22.93	23.30	23.45	23.50
		25	0	22.30	22.06	22.71	23.50
	DFT-s-OFDM 16QAM	1	1	21.80	21.60	22.00	23.00
		1	23	21.93	21.65	21.72	23.00
		12	6	21.90	22.05	22.30	23.00
	DFT-s-OFDM 64QAM	1	1	21.36	20.38	21.48	22.00
		1	23	21.06	20.63	21.27	22.00
		12	6	21.64	21.12	21.90	22.00
	DFT-s-OFDM 256QAM	1	1	19.65	18.86	19.89	20.50
		1	23	19.23	18.81	19.31	20.50
		12	6	20.47	19.23	20.15	20.50
	CP-OFDM QPSK	1	1	22.84	22.91	22.75	23.00
	CP-OFDM 16QAM	1	1	21.91	21.95	22.23	22.50
	CP-OFDM 64QAM	1	1	20.34	20.44	20.56	21.00
	CP-OFDM 256QAM	1	1	18.32	18.43	18.26	18.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	22.55	22.82	22.83	23.50
		1	50	22.78	22.79	22.70	23.50
		25	12	22.90	23.08	23.38	23.50
		50	0	22.32	22.19	22.63	23.50
	DFT-s-OFDM QPSK	1	1	22.57	22.76	22.86	23.50
		1	50	22.75	22.88	22.81	23.50
		25	12	22.91	23.26	23.40	23.50
		50	0	22.28	22.04	22.69	23.50
	DFT-s-OFDM	1	1	21.78	21.57	21.98	23.00

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	16QAM	1	50	21.91	21.61	21.69	23.00
		25	12	21.87	22.03	22.27	23.00
	DFT-s-OFDM 64QAM	1	1	21.33	20.33	21.44	22.00
		1	50	21.04	20.59	21.24	22.00
		25	12	21.61	21.07	21.86	22.00
	DFT-s-OFDM 256QAM	1	1	19.60	18.84	19.87	20.50
		1	50	19.21	18.78	19.29	20.50
		25	12	20.48	19.22	20.16	20.50
	CP-OFDM QPSK	1	1	22.83	22.88	22.76	23.00
	CP-OFDM 16QAM	1	1	21.89	21.92	22.22	22.50
	CP-OFDM 64QAM	1	1	20.32	20.40	20.53	21.00
	CP-OFDM 256QAM	1	1	18.29	18.38	18.22	18.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	22.52	22.78	22.80	23.50
		1	77	22.77	22.75	22.68	23.50
		36	18	22.88	23.07	23.35	23.50
		75	0	22.29	22.14	22.59	23.50
	DFT-s-OFDM QPSK	1	1	22.55	22.72	22.83	23.50
		1	77	22.72	22.83	22.77	23.50
		36	18	22.88	23.21	23.36	23.50
		75	0	22.25	22.00	22.64	23.50
	DFT-s-OFDM 16QAM	1	1	21.75	21.55	21.94	23.00
		1	77	21.88	21.58	21.67	23.00
		36	18	21.84	21.99	22.24	23.00
	DFT-s-OFDM 64QAM	1	1	21.30	20.31	21.41	22.00
		1	77	21.01	20.54	21.20	22.00
		36	18	21.59	21.03	21.83	22.00
	DFT-s-OFDM 256QAM	1	1	19.58	18.80	19.82	20.50
		1	77	19.17	18.76	19.25	20.50
		36	18	20.42	19.16	20.10	20.50
	CP-OFDM QPSK	1	1	22.78	22.85	22.69	23.00
	CP-OFDM 16QAM	1	1	21.85	21.88	22.16	22.50
	CP-OFDM 64QAM	1	1	20.29	20.35	20.49	21.00
	CP-OFDM 256QAM	1	1	18.27	18.34	18.19	18.50

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	22.51	22.74	22.78	23.50
		1	104	22.75	22.74	22.65	23.50
		50	25	22.85	23.02	23.31	23.50
		100	0	22.27	22.10	22.56	23.50
	DFT-s-OFDM QPSK	1	1	22.52	22.67	22.79	23.50
		1	104	22.69	22.80	22.73	23.50
		50	25	22.86	23.17	23.31	23.50
		100	0	22.23	21.98	22.62	23.50
	DFT-s-OFDM 16QAM	1	1	21.73	21.52	21.92	23.00
		1	104	21.86	21.54	21.64	23.00
		50	25	21.81	21.97	22.21	23.00
	DFT-s-OFDM 64QAM	1	1	21.27	20.26	21.37	22.00
		1	104	20.99	20.50	21.17	22.00
		50	25	21.56	20.98	21.79	22.00
	DFT-s-OFDM 256QAM	1	1	19.53	18.78	19.80	20.50
		1	104	19.15	18.73	19.23	20.50
		50	25	20.43	19.15	20.11	20.50
	CP-OFDM QPSK	1	1	22.77	22.86	22.70	23.00
	CP-OFDM 16QAM	1	1	21.83	21.85	22.15	22.50
	CP-OFDM 64QAM	1	1	20.27	20.31	20.46	21.00
	CP-OFDM 256QAM	1	1	18.24	18.29	18.15	18.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				344500/1722.5	349000/1745	353500/1767.5	
25MHz	DFT-s-OFDM BPSK	1	1	22.46	22.65	22.72	23.50
		1	131	22.73	22.70	22.61	23.50
		64	32	22.79	22.95	23.23	23.50
		128	0	22.22	22.01	22.49	23.50
	DFT-s-OFDM QPSK	1	1	22.48	22.59	22.71	23.50
		1	131	22.63	22.74	22.66	23.50
		64	32	22.85	23.09	23.24	23.50
		128	0	22.22	21.91	22.54	23.50
	DFT-s-OFDM 16QAM	1	1	21.72	21.49	21.86	23.00
		1	131	21.81	21.47	21.58	23.00
		64	32	21.76	21.92	22.16	23.00
	DFT-s-OFDM 64QAM	1	1	21.20	20.18	21.29	22.00
		1	131	20.94	20.41	21.10	22.00
		64	32	21.52	20.90	21.71	22.00

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	DFT-s-OFDM 256QAM	1	1	19.45	18.71	19.72	20.50
		1	131	19.09	18.70	19.17	20.50
		64	32	20.38	19.08	20.05	20.50
	CP-OFDM QPSK	1	1	22.72	22.90	22.65	23.00
	CP-OFDM 16QAM	1	1	21.76	21.77	22.07	22.50
	CP-OFDM 64QAM	1	1	20.22	20.22	20.39	21.00
	CP-OFDM 256QAM	1	1	18.20	18.21	18.07	18.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				345000/1725	349000/1745	353000/1765	
30MHz	DFT-s-OFDM BPSK	1	1	22.48	22.70	22.75	23.50
		1	158	22.74	22.70	22.63	23.50
		80	40	22.83	23.01	23.28	23.50
		160	0	22.24	22.05	22.52	23.50
	DFT-s-OFDM QPSK	1	1	22.50	22.63	22.76	23.50
		1	158	22.66	22.75	22.69	23.50
		80	40	22.83	23.12	23.27	23.50
		160	0	22.20	21.94	22.57	23.50
	DFT-s-OFDM 16QAM	1	1	21.70	21.50	21.88	23.00
		1	158	21.83	21.51	21.62	23.00
		80	40	21.78	21.93	22.18	23.00
	DFT-s-OFDM 64QAM	1	1	21.24	20.24	21.34	22.00
		1	158	20.96	20.45	21.13	22.00
		80	40	21.54	20.94	21.76	22.00
	DFT-s-OFDM 256QAM	1	1	19.51	18.74	19.75	20.50
		1	158	19.11	18.71	19.19	20.50
		80	40	20.37	19.09	20.05	20.50
	CP-OFDM QPSK	1	1	22.72	22.93	22.63	23.00
	CP-OFDM 16QAM	1	1	21.79	21.81	22.09	22.50
	CP-OFDM 64QAM	1	1	20.24	20.26	20.42	21.00
	CP-OFDM 256QAM	1	1	18.22	18.25	18.12	18.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				346000/1730	349000/1745	352000/1760	
40MHz	DFT-s-OFDM BPSK	1	1	22.43	22.61	22.69	23.50
		1	214	22.72	22.66	22.59	23.50
		108	54	22.77	22.94	23.20	23.50

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		216	0	22.19	21.96	22.45	23.50
	DFT-s-OFDM QPSK	1	1	22.46	**22.65**	22.60	23.50
		1	214	**22.60**	22.61	**22.62**	23.50
		108	54	22.82	**23.14**	23.11	23.50
		216	0	22.19	21.87	**22.49**	23.50
	DFT-s-OFDM 16QAM	1	1	21.69	21.47	21.82	23.00
		1	214	21.78	21.44	21.56	23.00
		108	54	21.73	21.88	22.13	23.00
	DFT-s-OFDM 64QAM	1	1	21.17	20.16	21.26	22.00
		1	214	20.91	20.36	21.06	22.00
		108	54	21.50	20.86	21.68	22.00
	DFT-s-OFDM 256QAM	1	1	19.43	18.67	19.67	20.50
		1	214	19.05	18.68	19.13	20.50
		108	54	20.32	19.02	19.99	20.50
	CP-OFDM QPSK	1	1	22.67	22.88	22.58	23.00
	CP-OFDM 16QAM	1	1	21.72	21.73	22.01	22.50
	CP-OFDM 64QAM	1	1	20.19	20.17	20.35	21.00
	CP-OFDM 256QAM	1	1	18.18	18.17	18.04	18.50

NR n78							
Full Power & Receiver on & Receiver off & Hotspot on-Main Ant5				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				630334/3455.01	633332/3500	636332/3544.98	
10MHz	DFT-s-OFDM BPSK	1	1	25.46	25.48	25.30	26.00
		1	50	24.96	24.97	24.92	26.00
		25	12	25.57	25.47	25.45	26.00
		50	0	25.49	25.48	25.35	26.00
	DFT-s-OFDM QPSK	1	1	24.71	24.72	24.62	26.00
		1	50	24.70	24.62	24.55	26.00
		25	12	25.57	25.67	25.55	26.00
		50	0	25.28	25.31	25.28	26.00
	DFT-s-OFDM 16QAM	1	1	23.70	23.66	23.70	25.00
		1	50	24.02	24.00	23.88	25.00
		25	12	24.80	24.85	24.94	25.00
	DFT-s-OFDM 64QAM	1	1	22.41	22.30	22.24	24.00
		1	50	22.61	22.60	22.47	24.00
		25	12	23.84	23.87	23.83	24.00
	DFT-s-OFDM	1	1	21.45	21.35	21.28	22.50

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	256QAM	1	50	21.52	21.39	21.39	22.50
		25	12	22.33	22.23	22.12	22.50
	CP-OFDM QPSK	1	1	23.63	23.52	23.51	24.50
	CP-OFDM 16QAM	1	1	23.40	23.27	23.22	24.00
	CP-OFDM 64QAM	1	1	21.60	21.59	21.46	22.50
	CP-OFDM 256QAM	1	1	18.75	18.76	18.66	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				630500/3457.5	633332/3500	636166/3542.49	
15MHz	DFT-s-OFDM BPSK	1	1	25.48	25.49	25.33	26.00
		1	77	24.99	25.02	24.96	26.00
		36	18	25.59	25.51	25.48	26.00
		75	0	25.52	25.53	25.39	26.00
	DFT-s-OFDM QPSK	1	1	24.74	24.77	24.66	26.00
		1	77	24.72	24.66	24.60	26.00
		36	18	25.61	25.69	25.59	26.00
		75	0	25.32	25.34	25.30	26.00
	DFT-s-OFDM 16QAM	1	1	23.74	23.70	23.73	25.00
		1	77	24.05	24.02	23.91	25.00
		36	18	24.95	24.90	24.98	25.00
	DFT-s-OFDM 64QAM	1	1	22.43	22.34	22.27	24.00
		1	77	22.64	22.65	22.51	24.00
		36	18	23.87	23.86	23.87	24.00
	DFT-s-OFDM 256QAM	1	1	21.47	21.34	21.30	22.50
		1	77	21.55	21.39	21.42	22.50
		36	18	22.32	22.25	22.15	22.50
	CP-OFDM QPSK	1	1	23.66	23.57	23.51	24.50
	CP-OFDM 16QAM	1	1	23.42	23.31	23.25	24.00
	CP-OFDM 64QAM	1	1	21.63	21.64	21.50	22.50
	CP-OFDM 256QAM	1	1	18.78	18.81	18.70	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				630666/3460	633332/3500	635998/3540	
20MHz	DFT-s-OFDM BPSK	1	1	25.47	25.45	25.31	26.00
		1	49	24.97	25.01	24.93	26.00
		25	12	25.56	25.46	25.44	26.00
		50	0	25.50	25.49	25.36	26.00

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	DFT-s-OFDM QPSK	1	1	24.71	24.72	24.62	26.00
		1	49	24.69	24.63	24.56	26.00
		25	12	25.59	25.65	25.54	26.00
		50	0	25.30	25.32	25.28	26.00
	DFT-s-OFDM 16QAM	1	1	23.72	23.67	23.71	25.00
		1	49	24.03	23.98	23.88	25.00
		25	12	24.97	24.88	24.95	25.00
	DFT-s-OFDM 64QAM	1	1	22.40	22.29	22.23	24.00
		1	49	22.62	22.61	22.48	24.00
		25	12	23.84	23.87	23.83	24.00
	DFT-s-OFDM 256QAM	1	1	21.42	21.32	21.28	22.50
		1	49	21.53	21.36	21.40	22.50
		25	12	22.33	22.24	22.16	22.50
	CP-OFDM QPSK	1	1	23.65	23.59	23.52	24.50
	CP-OFDM 16QAM	1	1	23.40	23.28	23.24	24.00
	CP-OFDM 64QAM	1	1	21.61	21.60	21.47	22.50
	CP-OFDM 256QAM	1	1	18.75	18.76	18.66	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631332/3470	633332/3500	635332/3530	
40MHz	DFT-s-OFDM BPSK	1	1	25.44	25.41	25.28	26.00
		1	104	24.96	24.97	24.91	26.00
		50	25	25.54	25.45	25.41	26.00
		100	0	25.47	25.44	25.32	26.00
	DFT-s-OFDM QPSK	1	1	24.69	24.68	24.59	26.00
		1	104	24.66	24.58	24.52	26.00
		50	25	25.56	25.60	25.50	26.00
		100	0	25.27	25.28	25.23	26.00
	DFT-s-OFDM 16QAM	1	1	23.69	23.65	23.67	25.00
		1	104	24.00	23.95	23.86	25.00
		50	25	24.94	24.84	24.92	25.00
	DFT-s-OFDM 64QAM	1	1	22.37	22.27	22.20	24.00
		1	104	22.59	22.56	22.44	24.00
		50	25	23.82	23.95	23.80	24.00
	DFT-s-OFDM 256QAM	1	1	21.40	21.28	21.23	22.50
		1	104	21.49	21.34	21.36	22.50
		50	25	22.27	22.18	22.10	22.50
	CP-OFDM QPSK	1	1	23.60	23.51	23.45	24.50
	CP-OFDM	1	1	23.36	23.24	23.18	24.00

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	16QAM						
	CP-OFDM 64QAM	1	1	21.58	21.55	21.43	22.50
	CP-OFDM 256QAM	1	1	18.73	18.72	18.63	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				631667/3475	633332/3500	634998/3525	
50MHz	DFT-s-OFDM BPSK	1	1	25.41	25.37	25.25	26.00
		1	131	24.95	24.93	24.89	26.00
		64	32	25.52	25.44	25.38	26.00
		128	0	25.44	25.39	25.28	26.00
	DFT-s-OFDM QPSK	1	1	24.67	24.64	24.56	26.00
		1	131	24.63	24.53	24.48	26.00
		64	32	25.53	25.55	25.46	26.00
		128	0	25.24	25.24	25.18	26.00
	DFT-s-OFDM 16QAM	1	1	23.66	23.63	23.63	25.00
		1	131	23.97	23.92	23.84	25.00
		64	32	24.91	24.80	24.95	25.00
	DFT-s-OFDM 64QAM	1	1	22.34	22.25	22.17	24.00
		1	131	22.56	22.51	22.40	24.00
		64	32	23.80	23.97	23.96	24.00
	DFT-s-OFDM 256QAM	1	1	21.38	21.24	21.18	22.50
		1	131	21.45	21.32	21.32	22.50
		64	32	22.21	22.12	22.04	22.50
	CP-OFDM QPSK	1	1	23.55	23.43	23.38	24.50
	CP-OFDM 16QAM	1	1	23.32	23.20	23.12	24.00
	CP-OFDM 64QAM	1	1	21.55	21.50	21.39	22.50
	CP-OFDM 256QAM	1	1	18.71	18.68	18.60	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632000/3480	633332/3500	634666/3520	
60MHz	DFT-s-OFDM BPSK	1	1	25.38	25.35	25.21	26.00
		1	160	24.93	24.89	24.86	26.00
		81	40	25.49	25.39	25.34	26.00
		162	0	25.41	25.34	25.24	26.00
	DFT-s-OFDM QPSK	1	1	24.65	24.60	24.51	26.00
		1	160	24.61	24.51	24.44	26.00
		81	40	25.53	25.54	25.44	26.00
		162	0	25.24	25.20	25.15	26.00
	DFT-s-OFDM	1	1	23.66	23.61	23.60	25.00

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	16QAM	1	160	23.94	23.90	23.80	25.00
		81	40	24.89	24.76	24.92	25.00
	DFT-s-OFDM 64QAM	1	1	22.31	22.20	22.13	24.00
		1	160	22.53	22.46	22.36	24.00
		81	40	23.78	23.93	23.91	24.00
	DFT-s-OFDM 256QAM	1	1	21.35	21.24	21.15	22.50
		1	160	21.42	21.34	21.29	22.50
		81	40	22.22	22.10	22.00	22.50
	CP-OFDM QPSK	1	1	23.53	23.39	23.39	24.50
	CP-OFDM 16QAM	1	1	23.29	23.15	23.08	24.00
	CP-OFDM 64QAM	1	1	21.52	21.45	21.35	22.50
	CP-OFDM 256QAM	1	1	18.69	18.64	18.55	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632333/3485	633332/3500	634333/3515	
70MHz	DFT-s-OFDM BPSK	1	1	25.40	25.36	25.24	26.00
		1	187	24.96	24.94	24.90	26.00
		92	45	25.51	25.43	25.37	26.00
		180	0	25.44	25.39	25.28	26.00
	DFT-s-OFDM QPSK	1	1	24.68	24.65	24.55	26.00
		1	187	24.63	24.55	24.49	26.00
		92	45	25.57	25.56	25.48	26.00
		180	0	25.28	25.23	25.17	26.00
	DFT-s-OFDM 16QAM	1	1	23.70	23.65	23.63	25.00
		1	187	23.97	23.92	23.83	25.00
		92	46	24.92	24.81	24.96	25.00
	DFT-s-OFDM 64QAM	1	1	22.33	22.24	22.16	24.00
		1	187	22.56	22.51	22.40	24.00
		92	46	23.81	23.98	23.95	24.00
	DFT-s-OFDM 256QAM	1	1	21.37	21.23	21.17	22.50
		1	187	21.45	21.34	21.32	22.50
		92	46	22.21	22.12	22.03	22.50
	CP-OFDM QPSK	1	1	23.56	23.44	23.39	24.50
	CP-OFDM 16QAM	1	1	23.31	23.19	23.11	24.00
	CP-OFDM 64QAM	1	1	21.55	21.50	21.39	22.50
	CP-OFDM 256QAM	1	1	18.72	18.69	18.59	19.50

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Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				632666/3490	633332/3500	633998/3510	
80MHz	DFT-s-OFDM BPSK	1	1	25.39	25.32	25.22	26.00
		1	215	24.94	24.93	24.87	26.00
		108	54	25.48	25.38	25.33	26.00
		216	0	25.42	25.35	25.25	26.00
	DFT-s-OFDM QPSK	1	1	24.65	24.60	24.51	26.00
		1	215	24.60	24.52	24.45	26.00
		108	54	25.55	25.52	25.43	26.00
		216	0	25.26	25.21	25.15	26.00
	DFT-s-OFDM 16QAM	1	1	23.68	23.62	23.61	25.00
		1	215	23.95	23.88	23.80	25.00
		108	54	24.89	24.79	24.93	25.00
	DFT-s-OFDM 64QAM	1	1	22.30	22.19	22.12	24.00
		1	215	22.54	22.47	22.37	24.00
		108	54	23.78	23.93	23.91	24.00
	DFT-s-OFDM 256QAM	1	1	21.32	21.21	21.15	22.50
		1	215	21.43	21.31	21.30	22.50
		108	54	22.22	22.11	22.04	22.50
	CP-OFDM QPSK	1	1	23.55	23.46	23.40	24.50
	CP-OFDM 16QAM	1	1	23.29	23.16	23.10	24.00
	CP-OFDM 64QAM	1	1	21.53	21.46	21.36	22.50
	CP-OFDM 256QAM	1	1	18.69	18.64	18.55	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				633000/3495	633332/3500	633666/3505	
90MHz	DFT-s-OFDM BPSK	1	1	25.36	25.28	25.19	26.00
		1	243	24.93	24.89	24.85	26.00
		120	60	25.46	25.37	25.30	26.00
		243	0	25.39	25.30	25.21	26.00
	DFT-s-OFDM QPSK	1	1	24.63	24.56	24.48	26.00
		1	243	24.57	24.47	24.41	26.00
		120	60	25.52	25.47	25.39	26.00
		243	0	25.23	25.17	25.10	26.00
	DFT-s-OFDM 16QAM	1	1	23.65	23.60	23.57	25.00
		1	243	23.92	23.85	23.78	25.00
		120	60	24.86	24.75	24.90	25.00
	DFT-s-OFDM 64QAM	1	1	22.27	22.17	22.09	24.00
		1	243	22.51	22.42	22.33	24.00
		120	60	23.76	23.89	23.88	24.00

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	DFT-s-OFDM 256QAM	1	1	21.30	21.17	21.10	22.50
		1	243	21.39	21.29	21.26	22.50
		120	60	22.16	22.05	21.98	22.50
	CP-OFDM QPSK	1	1	23.50	23.38	23.33	24.50
	CP-OFDM 16QAM	1	1	23.25	23.12	23.04	24.00
	CP-OFDM 64QAM	1	1	21.50	21.41	21.32	22.50
	CP-OFDM 256QAM	1	1	18.67	18.60	18.52	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				/	633332/3500	/	
100MHz	DFT-s-OFDM BPSK	1	1	/	25.14	/	26.00
		1	271	/	24.80	/	26.00
		135	67	/	25.23	/	26.00
		270	0	/	25.14	/	26.00
	DFT-s-OFDM QPSK	1	1	/	**24.41**	/	26.00
		1	271	/	24.33	/	26.00
		135	67	/	**25.30**	/	26.00
		270	0	/	**25.03**	/	26.00
	DFT-s-OFDM 16QAM	1	1	/	23.51	/	25.00
		1	271	/	23.73	/	25.00
		135	67	/	24.90	/	25.00
	DFT-s-OFDM 64QAM	1	1	/	22.02	/	24.00
		1	271	/	22.26	/	24.00
		135	67	/	23.88	/	24.00
	DFT-s-OFDM 256QAM	1	1	/	21.03	/	22.50
		1	271	/	21.20	/	22.50
		135	67	/	21.93	/	22.50
	CP-OFDM QPSK	1	1	/	23.27	/	24.50
	CP-OFDM 16QAM	1	1	/	22.97	/	24.00
	CP-OFDM 64QAM	1	1	/	21.25	/	22.50
	CP-OFDM 256QAM	1	1	/	18.45	/	19.50

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9.5 CA Mode

CA Combanation	Test Scenario	Modulation	PCC							SCC						output power	
			PCC Band	PCC Bandwidth (MHz)	PCC UL RB size	PCC UL RB offset	PCC UL Channel	f_{UL} [MHz]	PCC DL Channel	SCC Band	SCC Bandwidth (MHz)	SCC UL Channel	f_{UL} [MHz]	SCC UL RB size	SCC UL RB offset	conducted power (dbm)	Tune up (dbm)
CA_7C ANT6 MAIN	Full Power & Receiver on & Receiver off & Hotspot on	QPSK	7	20	1	99	20850	2510	2850	7	20	21048	2529.8	1	0	22.32	23
		QPSK	7	20	1	99	21001	2525.1	3001	7	20	21199	2544.9	1	0	22.29	23
		QPSK	7	20	1	0	21350	2560	3350	7	20	21152	2540.2	1	99	22.28	23

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9.6 WLAN Mode

Wi-Fi 2.4G Full Power & Receiver on & Receiver off-ANT2 Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	18.50	16.70
	6/2437	18.50	**17.04**
	11/2462	18.50	16.88
802.11g (6M)	1/2412	15.50	14.04
	6/2437	15.50	13.95
	11/2462	15.50	13.84
802.11n-HT20 (MCS0)	1/2412	15.50	13.93
	6/2437	15.50	13.79
	11/2462	15.50	13.64
802.11n-HT40 (MCS0)	3/2422	15.50	13.86
	6/2437	15.50	13.88
	9/2452	15.50	13.84
Note: Initial test configuration is 802.11b mode.			

Wi-Fi 5G (U-NII-1) Full Power & Receiver on & Receiver off-ANT2 Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	17.00	15.84
	40/5200	17.00	16.18
	44/5220	17.00	**16.23**
	48/5240	17.00	16.22
802.11n-HT20 (MCS0)	36/5180	17.00	15.82
	40/5200	17.00	15.92
	44/5220	17.00	15.94
	48/5240	17.00	15.96
802.11n-HT40 (MCS0)	38/5190	17.00	15.78
	46/5230	17.00	16.18
802.11ac-VHT20 (MCS0)	36/5180	13.00	11.79
	40/5200	13.00	11.84
	44/5220	13.00	11.89
	48/5240	13.00	11.90
802.11ac-VHT40	38/5190	13.00	11.79

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(MCS0)	46/5230	13.00	11.84
802.11ac-VHT80 (MCS0)	42/5210	13.00	11.60
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

Wi-Fi 5G (U-NII-3) Full Power & Receiver on & Receiver off-ANT2	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
Mode		Tune-up	Meas.
802.11a (6M)	149/5745	17.50	16.66
	157/5785	17.50	**16.70**
	165/5825	17.50	16.61
802.11n-HT20 (MCS0)	149/5745	17.50	16.44
	157/5785	17.50	16.45
	165/5825	17.50	16.36
802.11n-HT40 (MCS0)	151/5755	17.50	16.34
	159/5795	17.50	16.26
802.11ac-VHT20 (MCS0)	149/5745	13.50	11.85
	157/5785	13.50	11.96
	165/5825	13.50	12.01
802.11ac-VHT40 (MCS0)	151/5755	13.50	12.11
	159/5795	13.50	12.10
802.11ac-VHT80 (MCS0)	155/5775	13.50	11.86
Note. Initial test configuration is 802.11a mode, since the highest maximum output power.			

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9.7 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	8.04	9.03	9.75	10.00
π/4DQPSK	5.54	6.80	6.74	7.50
8DPSK	5.59	6.84	6.81	7.50
BLE	Ch 0/2402 MHz	Ch 19/2440 MHz	Ch 39/2480 MHz	Tune-up Limit (dBm)
GFSK	3.76	4.60	4.61	6.00

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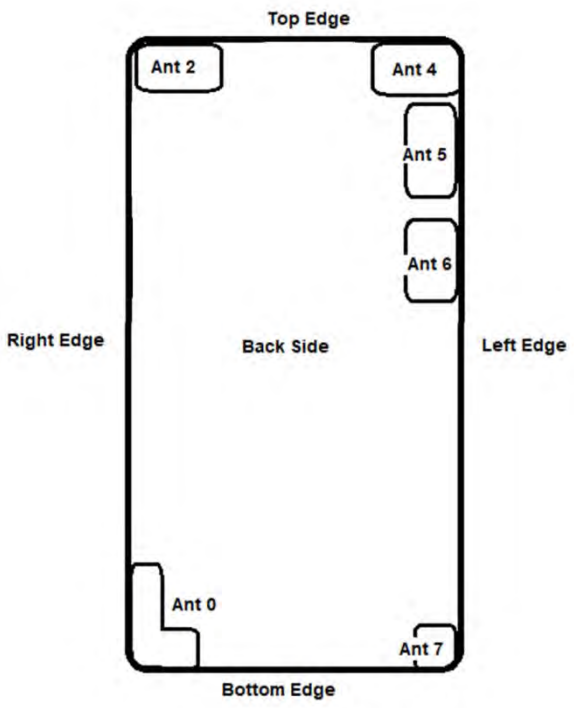
10 Measured and Reported (Scaled) SAR Results

10.1 EUT Antenna Locations



Antenna	**Band**
Ant 0	GSM 850/WCDMA V/LTE Band 5/12/13/17/26/28/ NR Band n28
Ant 2	Wi-Fi 2.4G /Wi-Fi 5G / Bluetooth
Ant 4	LTE Band 7/66/NR Band n7/ n66
Ant 5	NR Band n78
Ant 6	LTE Band 7/38/40/NR Band n7/ n40
Ant 7	GSM 1900/WCDMA II/IV/LTE Band 2/4/66/NR Band n2/ n66

Overall (Length x Width): 162 mm x 75 mm Overall Diagonal: 170mm/Display Diagonal: 165mm						
Distance of the Antenna to the EUT surface/edge						
Antenna	Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Ant 0	＜25mm	＜25mm	＞25mm	＜25mm	＞25mm	＜25mm
Ant 2	＜25mm	＜25mm	＞25mm	＜25mm	＜25mm	＞25mm
Ant 4	＜25mm	＜25mm	＜25mm	＞25mm	＜25mm	＞25mm
Ant 5	＜25mm	＜25mm	＜25mm	＞25mm	＜25mm	＞25mm
Ant 6	＜25mm	＜25mm	＜25mm	＞25mm	＞25mm	＞25mm
Ant 7	＜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
Ant 0	Yes	Yes	N/A	Yes	N/A	Yes
Ant 2	Yes	Yes	N/A	Yes	Yes	N/A
Ant 4	Yes	Yes	Yes	N/A	Yes	N/A
Ant 5	Yes	Yes	Yes	N/A	Yes	N/A

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Ant 6	Yes	Yes	Yes	N/A	N/A	N/A
Ant 7	Yes	Yes	Yes	N/A	N/A	Yes

Note: 1. Per KDB 941225 D06, when the overall device length and width are ≥ 9cm*5cm, 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 170mm. Per KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 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 W/kg, product specific 10-g SAR is no required.

3. Per FCC KDB 447498 D01,
for each exposure position, testing of other requised 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:
a) ≤0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100MHz
b) ≤0.6 W/kg or 1.5 W/kg, for1-g or 10-g
respectively, when the transmission band is between 100 MHz and 200 MHz.
c) ≤ 0.4 W/kg or 1.0 Wkg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz.

4. When the original highest measured SAR is ≥ 0.80 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 ≤ 1.2 W/kg, no additional SAR evaluations using a headset cable were required.

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

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≥ 50% limit(1g).

Head

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	Main (ANT0)	Left cheek	0	GSM	Receiver on	-	-	190/836.6	33.00	32.40	0.098	0.010	1.15	0.112	/
		Left Tilt	0	GSM	Receiver on	-	-	190/836.6	33.00	32.40	0.049	0.130	1.15	0.056	/
		Right cheek	0	GSM	Receiver on	-	-	190/836.6	33.00	32.40	0.109	0.032	1.15	0.125	20
		Right Tilt	0	GSM	Receiver on	-	-	190/836.6	33.00	32.40	0.058	0.010	1.15	0.066	/
GSM 1900	Main (ANT7)	Left cheek	0	GSM	Receiver on	-	-	661/1880	30.50	29.85	0.099	-0.053	1.16	0.115	21
		Left Tilt	0	GSM	Receiver on	-	-	661/1880	30.50	29.85	0.034	0.023	1.16	0.039	/
		Right cheek	0	GSM	Receiver on	-	-	661/1880	30.50	29.85	0.074	0.000	1.16	0.086	/
		Right Tilt	0	GSM	Receiver on	-	-	661/1880	30.50	29.85	0.022	0.026	1.16	0.026	/
WCDMA II	Main (ANT7)	Left cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	23.50	23.13	0.108	0.031	1.09	0.118	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	23.50	23.13	0.084	0.024	1.09	0.092	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	23.50	23.13	0.167	0.060	1.09	0.182	22
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	23.50	23.13	0.057	0.050	1.09	0.063	/
WCDMA IV	Main (ANT7)	Left cheek	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.50	23.05	0.146	0.029	1.11	0.162	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.50	23.05	0.109	0.160	1.11	0.121	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.50	23.05	0.197	0.050	1.11	0.219	23
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.50	23.05	0.083	0.110	1.11	0.092	/
WCDMA V	Main (ANT0)	Left cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.00	23.36	0.124	0.039	1.16	0.144	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.00	23.36	0.059	0.023	1.16	0.068	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.00	23.36	0.130	0.130	1.16	0.151	24
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.00	23.36	0.069	0.029	1.16	0.079	/
LTE 2	Main (ANT7)	Left cheek	0	QPSK	Receiver on	1	50	18700/1860	23.50	22.99	0.166	0.070	1.12	0.187	25
			0	QPSK	Receiver on	50%	0	18700/1860	22.50	21.95	0.133	0.026	1.14	0.151	/
		Left Tilt	0	QPSK	Receiver on	1	50	18700/1860	23.50	22.99	0.070	0.020	1.12	0.079	/
			0	QPSK	Receiver on	50%	0	18700/1860	22.50	21.95	0.060	0.035	1.14	0.068	/
		Right cheek	0	QPSK	Receiver on	1	50	18700/1860	23.50	22.99	0.083	0.086	1.12	0.094	/
			0	QPSK	Receiver on	50%	0	18700/1860	22.50	21.95	0.078	0.124	1.14	0.088	/
		Right Tilt	0	QPSK	Receiver on	1	50	18700/1860	23.50	22.99	0.050	-0.170	1.12	0.057	/
			0	QPSK	Receiver on	50%	0	18700/1860	22.50	21.95	0.049	0.070	1.14	0.056	/

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LTE 5	Main (ANT0)	Left cheek	0	QPSK	Receiver on	1	0	20525/836.5	24.00	23.18	0.116	0.160	1.21	0.140	/
			0	QPSK	Receiver on	50%	25	20450/829	23.00	22.18	0.091	0.029	1.21	0.110	/
		Left Tilt	0	QPSK	Receiver on	1	0	20525/836.5	24.00	23.18	0.058	0.024	1.21	0.070	/
			0	QPSK	Receiver on	50%	25	20450/829	23.00	22.18	0.045	0.031	1.21	0.054	/
		Right cheek	0	QPSK	Receiver on	1	0	20525/836.5	24.00	23.18	0.132	-0.037	1.21	0.159	26
			0	QPSK	Receiver on	50%	25	20450/829	23.00	22.18	0.099	0.056	1.21	0.120	/
		Right Tilt	0	QPSK	Receiver on	1	0	20525/836.5	24.00	23.18	0.062	0.070	1.21	0.075	/
			0	QPSK	Receiver on	50%	25	20450/829	23.00	22.18	0.052	0.047	1.21	0.063	/
LTE 7	Main (ANT6)	Left cheek	0	QPSK	Receiver on	1	99	21350/2560	23.00	22.56	0.637	0.031	1.11	0.705	/
			0	QPSK	Receiver on	50%	25	21100/2535	22.00	21.59	0.620	0.090	1.10	0.681	/
		Left Tilt	0	QPSK	Receiver on	1	99	21350/2560	23.00	22.56	0.163	0.020	1.11	0.180	/
			0	QPSK	Receiver on	50%	25	21100/2535	22.00	21.59	0.163	0.026	1.10	0.179	/
		Right cheek	0	QPSK	Receiver on	1	99	21350/2560	23.00	22.56	0.691	0.088	1.11	0.765	/
			0	QPSK	Receiver on	50%	25	21100/2535	22.00	21.59	0.829	0.028	1.10	0.911	27
			0	QPSK	Receiver on	50%	25	20850/2510	22.00	21.53	0.775	-0.021	1.11	0.864	/
			0	QPSK	Receiver on	50%	25	21350/2560	22.00	21.58	0.736	0.090	1.10	0.811	/
			0	QPSK	Receiver on	100%	0	20850/2510	22.00	21.60	0.662	0.040	1.10	0.726	/
		Right Tilt	0	QPSK	Receiver on	1	99	21350/2560	23.00	22.56	0.348	0.150	1.11	0.385	/
			0	QPSK	Receiver on	50%	25	21100/2535	22.00	21.59	0.343	0.150	1.10	0.377	/
	DIV (ANT4)	Left cheek	0	QPSK	Receiver on	1	99	21100/2535	23.00	22.37	0.015	0.011	1.16	0.017	/
			0	QPSK	Receiver on	50%	0	21100/2535	23.00	22.36	0.021	0.060	1.16	0.024	/
		Left Tilt	0	QPSK	Receiver on	1	99	21100/2535	23.00	22.37	0.014	0.030	1.16	0.016	/
			0	QPSK	Receiver on	50%	0	21100/2535	23.00	22.36	0.013	0.010	1.16	0.015	/
		Right cheek	0	QPSK	Receiver on	1	99	21100/2535	23.00	22.37	0.004	-0.030	1.16	0.005	/
			0	QPSK	Receiver on	50%	0	21100/2535	23.00	22.36	0.004	0.000	1.16	0.005	/
		Right Tilt	0	QPSK	Receiver on	1	99	21100/2535	23.00	22.37	0.003	0.020	1.16	0.003	/
			0	QPSK	Receiver on	50%	0	21100/2535	23.00	22.36	0.004	-0.080	1.16	0.005	/
	Main (ANT6)	Right cheek	0	QPSK	Receiver on	1	99	20850/2510	23.00	22.32	0.652	0.021	1.17	0.763	/
						1	0	21048/2529.8							/
LTE 12	Main (ANT0)	Left cheek	0	QPSK	Receiver on	1	25	23060/704	24.00	23.28	0.075	0.052	1.18	0.089	/
			0	QPSK	Receiver on	50%	0	23060/704	23.00	22.32	0.070	0.041	1.17	0.082	/
		Left Tilt	0	QPSK	Receiver on	1	25	23060/704	24.00	23.28	0.035	-0.010	1.18	0.041	/
			0	QPSK	Receiver on	50%	0	23060/704	23.00	22.32	0.033	0.039	1.17	0.038	/
		Right cheek	0	QPSK	Receiver on	1	25	23060/704	24.00	23.28	0.049	0.032	1.18	0.058	/
			0	QPSK	Receiver on	50%	0	23060/704	23.00	22.32	0.077	0.072	1.17	0.090	28
		Right Tilt	0	QPSK	Receiver on	1	25	23060/704	24.00	23.28	0.049	0.032	1.18	0.058	/
			0	QPSK	Receiver on	50%	0	23060/704	23.00	22.32	0.038	0.038	1.17	0.044	/
LTE 13	Main (ANT0)	Left cheek	0	QPSK	Receiver on	1	25	23230/782	24.00	23.10	0.127	-0.031	1.23	0.156	/
			0	QPSK	Receiver on	50%	13	23230/782	23.00	22.11	0.100	0.047	1.23	0.123	/
		Left Tilt	0	QPSK	Receiver on	1	25	23230/782	24.00	23.10	0.056	0.160	1.23	0.069	/
			0	QPSK	Receiver on	50%	13	23230/782	23.00	22.11	0.043	0.029	1.23	0.053	/
		Right cheek	0	QPSK	Receiver on	1	25	23230/782	24.00	23.10	0.133	0.047	1.23	0.164	29
			0	QPSK	Receiver on	50%	13	23230/782	23.00	22.11	0.104	0.175	1.23	0.128	/

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		Right Tilt	0	QPSK	Receiver on	1	25	23230/782	24.00	23.10	0.072	0.190	1.23	0.089	/
			0	QPSK	Receiver on	50%	13	23230/782	23.00	22.11	0.057	0.024	1.23	0.070	/
LTE 26	Main (ANT0)	Left cheek	0	QPSK	Receiver on	1	38	26965/841.5	24.00	23.11	0.119	-0.080	1.23	0.146	/
			0	QPSK	Receiver on	50%	18	26865/831.5	23.00	22.60	0.096	0.104	1.10	0.105	/
		Left Tilt	0	QPSK	Receiver on	1	38	26965/841.5	24.00	23.11	0.058	0.020	1.23	0.071	/
			0	QPSK	Receiver on	50%	18	26865/831.5	23.00	22.60	0.041	0.025	1.10	0.045	/
		Right cheek	0	QPSK	Receiver on	1	38	26965/841.5	24.00	23.11	0.154	0.031	1.23	0.189	30
			0	QPSK	Receiver on	50%	18	26865/831.5	23.00	22.60	0.111	0.052	1.10	0.122	/
		Right Tilt	0	QPSK	Receiver on	1	38	26965/841.5	24.00	23.11	0.086	0.150	1.23	0.105	/
			0	QPSK	Receiver on	50%	18	26865/831.5	23.00	22.60	0.061	0.025	1.10	0.067	/
LTE 28	Main (ANT0)	Left cheek	0	QPSK	Receiver on	1	38	27535/735.5	24.00	23.26	0.082	0.080	1.19	0.097	/
			0	QPSK	Receiver on	50%	39	27535/735.5	23.00	22.09	0.060	0.016	1.23	0.074	/
		Left Tilt	0	QPSK	Receiver on	1	38	27535/735.5	24.00	23.26	0.043	0.032	1.19	0.051	/
			0	QPSK	Receiver on	50%	39	27535/735.5	23.00	22.09	0.032	0.130	1.23	0.040	
		Right cheek	0	QPSK	Receiver on	1	38	27535/735.5	24.00	23.26	0.096	0.130	1.19	0.113	31
			0	QPSK	Receiver on	50%	39	27535/735.5	23.00	22.09	0.073	0.105	1.23	0.090	/
		Right Tilt	0	QPSK	Receiver on	1	38	27535/735.5	24.00	23.26	0.049	-0.060	1.19	0.058	/
			0	QPSK	Receiver on	50%	39	27535/735.5	23.00	22.09	0.038	-0.120	1.23	0.047	/
		Right cheek	0	QPSK	Receiver on	1	49	27275/709.5	24.00	23.20	0.092	0.030	1.20	0.111	/
			0	QPSK	Receiver on	50%	0	27290/711	23.00	22.19	0.069	0.000	1.21	0.083	/
LTE 38	Main (ANT6)	Left cheek	0	QPSK	Receiver on	1	50	38000/2595	23.50	23.00	0.375	-0.120	1.12	0.421	/
			0	QPSK	Receiver on	50%	50	38150/2610	22.50	21.86	0.272	-0.160	1.16	0.315	/
		Left Tilt	0	QPSK	Receiver on	1	50	38000/2595	23.50	23.00	0.100	0.028	1.12	0.112	/
			0	QPSK	Receiver on	50%	50	38150/2610	22.50	21.86	0.080	0.049	1.16	0.093	/
		Right cheek	0	QPSK	Receiver on	1	50	38000/2595	23.50	23.00	0.506	0.144	1.12	0.568	32
			0	QPSK	Receiver on	50%	50	38150/2610	22.50	21.86	0.372	0.154	1.16	0.431	/
		Right Tilt	0	QPSK	Receiver on	1	50	38000/2595	23.50	23.00	0.212	0.033	1.12	0.238	/
			0	QPSK	Receiver on	50%	50	38150/2610	22.50	21.86	0.163	-0.033	1.16	0.189	/
LTE 40	Main (ANT6)	Left cheek	0	QPSK	Receiver on	1	25	38750/2310.0	23.50	22.83	0.244	-0.010	1.17	0.285	/
			0	QPSK	Receiver on	50%	25	38750/2310.0	22.50	21.81	0.191	0.019	1.17	0.224	/
		Left Tilt	0	QPSK	Receiver on	1	25	38750/2310.0	23.50	22.83	0.067	0.020	1.17	0.079	/
			0	QPSK	Receiver on	50%	25	38750/2310.0	22.50	21.81	0.059	0.023	1.17	0.069	/
		Right cheek	0	QPSK	Receiver on	1	25	38750/2310.0	23.50	22.83	0.630	0.050	1.17	0.735	33
			0	QPSK	Receiver on	50%	25	38750/2310.0	22.50	21.81	0.490	0.104	1.17	0.574	/
		Right Tilt	0	QPSK	Receiver on	1	25	38750/2310.0	23.50	22.83	0.288	0.070	1.17	0.336	/
			0	QPSK	Receiver on	50%	25	38750/2310.0	22.50	21.81	0.220	0.104	1.17	0.258	/
		Right cheek	0	QPSK	Receiver on	1	25	39200/2355.0	23.50	22.93	0.594	0.020	1.14	0.677	/
			0	QPSK	Receiver on	50%	25	39200/2355.0	22.50	21.86	0.347	0.017	1.16	0.402	/
LTE 66	Main (ANT7)	Left cheek	0	QPSK	Receiver on	1	50	132322/1745	23.50	22.82	0.128	0.170	1.17	0.150	/
			0	QPSK	Receiver on	50%	50	132322/1745	22.50	21.86	0.101	0.084	1.16	0.117	/
		Left Tilt	0	QPSK	Receiver on	1	50	132322/1745	23.50	22.82	0.107	0.022	1.17	0.125	/
			0	QPSK	Receiver on	50%	50	132322/1745	22.50	21.86	0.081	0.024	1.16	0.094	/
		Right cheek	0	QPSK	Receiver on	1	50	132322/1745	23.50	22.82	0.173	-0.040	1.17	0.202	34

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			0	QPSK	Receiver on	50%	50	132322/1745	22.50	21.86	0.136	0.068	1.16	0.158	/
		Right Tilt	0	QPSK	Receiver on	1	50	132322/1745	23.50	22.82	0.068	0.160	1.17	0.079	/
			0	QPSK	Receiver on	50%	50	132322/1745	22.50	21.86	0.052	0.021	1.16	0.060	/
	DIV (ANT4)	Left cheek	0	QPSK	Receiver on	1	50	132322/1745	23.00	22.54	0.010	0.080	1.11	0.011	/
			0	QPSK	Receiver on	50%	50	132322/1745	23.00	22.48	0.008	0.010	1.13	0.009	/
		Left Tilt	0	QPSK	Receiver on	1	50	132322/1745	23.00	22.54	0.011	0.010	1.11	0.012	/
			0	QPSK	Receiver on	50%	50	132322/1745	23.00	22.48	0.011	0.045	1.13	0.012	/
		Right cheek	0	QPSK	Receiver on	1	50	132322/1745	23.00	22.54	0.011	0.010	1.11	0.012	/
			0	QPSK	Receiver on	50%	50	132322/1745	23.00	22.48	0.010	0.055	1.13	0.011	/
		Right Tilt	0	QPSK	Receiver on	1	50	132322/1745	23.00	22.54	0.015	0.000	1.11	0.017	/
			0	QPSK	Receiver on	50%	50	132322/1745	23.00	22.48	0.013	0.050	1.13	0.015	/

Band	Antenna	Test Position	Dist. (mm)	Type	Mode	Duty Cycle	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.
n2	Main ANT7	Left cheek	0	SA	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	372000/1860	23.00	21.87	0.182	0.011	1.30	0.236	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	372000/1860	23.00	22.00	0.234	-0.020	1.26	0.295	35
		Left Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	372000/1860	23.00	21.87	0.088	-0.010	1.30	0.114	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	372000/1860	23.00	22.00	0.087	0.021	1.26	0.110	/
		Right cheek	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	372000/1860	23.00	21.87	0.060	0.009	1.30	0.078	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	372000/1860	23.00	22.00	0.130	0.023	1.26	0.164	/
		Right Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	372000/1860	23.00	21.87	0.054	-0.021	1.30	0.070	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	372000/1860	23.00	22.00	0.059	0.010	1.26	0.074	/
n7	Main ANT6	Left cheek	0	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	502000/2510	21.50	21.14	0.220	0.033	1.09	0.239	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	502000/2510	21.50	21.24	0.230	-0.056	1.06	0.244	/
		Left Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	502000/2510	21.50	21.14	0.120	0.052	1.09	0.130	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	502000/2510	21.50	21.24	0.150	0.028	1.06	0.159	/
		Right cheek	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	502000/2510	21.50	21.14	0.719	0.022	1.09	0.781	36
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	502000/2510	21.50	21.24	0.682	0.058	1.06	0.724	/
		Right Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	502000/2510	21.50	21.14	0.228	-0.033	1.09	0.248	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	502000/2510	21.50	21.24	0.240	0.011	1.06	0.255	/
	Div ANT4	Left cheek	0	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver on	1	104	507000/2535	23.50	23.06	0.021	0.150	1.11	0.023	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	507000/2535	23.50	23.03	0.027	0.045	1.11	0.030	/
		Left Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	104	507000/2535	23.50	23.06	0.030	0.077	1.11	0.033	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	507000/2535	23.50	23.03	0.036	0.085	1.11	0.040	/
		Right cheek	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	104	507000/2535	23.50	23.06	0.057	0.011	1.11	0.063	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	507000/2535	23.50	23.03	0.072	0.045	1.11	0.080	/
		Right Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	104	507000/2535	23.50	23.06	0.061	0.108	1.11	0.068	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	507000/2535	23.50	23.03	0.075	0.025	1.11	0.084	/
	Main ANT6	Right cheek	0	SA & NSA	CP-OFDM QPSK	100.0%	Receiver on	1	1	512000/2560	21.50	21.20	0.706	0.015	1.07	0.756	/
n28	Main ANT0	Left cheek	0	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	147400/737	23.00	21.93	0.043	0.011	1.28	0.055	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	18	147700/738.5	23.00	22.03	0.060	0.021	1.25	0.075	/

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		Left Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	147400/737	23.00	21.93	0.034	-0.020	1.28	0.043	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	18	147700/738.5	23.00	22.03	0.041	0.021	1.25	0.051	/
		Right cheek	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	147400/737	23.00	21.93	0.102	0.023	1.28	0.130	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	18	147700/738.5	23.00	22.03	0.122	0.047	1.25	0.153	37
		Right Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	147400/737	23.00	21.93	0.051	-0.010	1.28	0.065	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	18	147700/738.5	23.00	22.03	0.064	0.010	1.25	0.080	/
		Right cheek	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	142200/711	23.00	21.93	0.092	0.014	1.28	0.118	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	12	141600/708	23.00	22.01	0.108	0.070	1.26	0.136	/
n40	Main ANT6	Left cheek	0	SA	DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	471000/2355	23.50	23.24	0.312	0.024	0.27	0.083	/
			0		DFT-s-OFDM QPSK	25.0%	Receiver on	50%	12	471000/2355	23.50	23.20	0.418	-0.022	0.27	0.112	/
		Left Tilt	0		DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	471000/2355	23.50	23.24	0.149	0.016	0.27	0.040	/
			0		DFT-s-OFDM QPSK	25.0%	Receiver on	50%	12	471000/2355	23.50	23.20	0.204	0.019	0.27	0.055	/
		Right cheek	0		DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	471000/2355	23.50	23.24	1.020	0.022	0.27	0.271	/
			0		DFT-s-OFDM QPSK	25.0%	Receiver on	50%	12	471000/2355	23.50	23.20	1.250	0.036	0.27	0.335	38
		Right Tilt	0		DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	471000/2355	23.50	23.24	0.293	0.037	0.27	0.078	/
			0		DFT-s-OFDM QPSK	25.0%	Receiver on	50%	12	471000/2355	23.50	23.20	0.396	0.100	0.27	0.106	/
		Right cheek	0		DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	462000/2310	23.50	22.84	0.665	-0.055	0.29	0.194	/
			0		DFT-s-OFDM QPSK	25.0%	Receiver on	50%	12	462000/2310	23.50	22.95	0.891	0.027	0.28	0.253	/
n66	Main ANT7	Left cheek	0	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	23.00	21.54	0.198	0.009	1.40	0.277	39
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	23.00	22.00	0.186	0.010	1.26	0.234	/
		Left Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	23.00	21.54	0.086	-0.010	1.40	0.120	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	23.00	22.00	0.089	-0.015	1.26	0.112	/
		Right cheek	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	23.00	21.54	0.090	0.012	1.40	0.126	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	23.00	22.00	0.102	-0.020	1.26	0.128	/
		Right Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	23.00	21.54	0.054	0.011	1.40	0.076	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	23.00	22.00	0.061	-0.023	1.26	0.077	/
	Div ANT4	Left cheek	0	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	23.50	22.65	0.045	0.123	1.22	0.055	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	23.50	23.14	0.072	0.025	1.09	0.078	/
		Left Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	23.50	22.65	0.055	0.058	1.22	0.067	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	23.50	23.14	0.089	0.028	1.09	0.097	/
		Right cheek	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	23.50	22.65	0.069	0.056	1.22	0.084	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	23.50	23.14	0.112	0.102	1.09	0.122	/
		Right Tilt	0		DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	23.50	22.65	0.078	0.025	1.22	0.095	/
			0		DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	23.50	23.14	0.126	0.106	1.09	0.137	/
n78	Main ANT5	Left cheek	0	SA & NSA	DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	633332/3500	26.00	24.41	0.650	0.027	0.36	0.234	/
			0		DFT-s-OFDM QPSK	25.0%	Receiver on	50%	67	633332/3500	26.00	25.30	0.753	0.060	0.29	0.221	/
		Left Tilt	0		DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	633332/3500	26.00	24.41	0.415	-0.011	0.36	0.150	/
			0		DFT-s-OFDM QPSK	25.0%	Receiver on	50%	67	633332/3500	26.00	25.30	0.514	0.025	0.29	0.151	/
		Right cheek	0		DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	633332/3500	26.00	24.41	1.860	0.018	0.36	0.671	/
			0		DFT-s-OFDM QPSK	25.0%	Receiver on	50%	67	633332/3500	26.00	25.30	2.060	0.100	0.29	0.605	40
		Right Tilt	0		DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	633332/3500	26.00	24.41	1.360	-0.033	0.36	0.490	/
			0		DFT-s-OFDM QPSK	25.0%	Receiver on	50%	67	633332/3500	26.00	25.30	1.550	0.060	0.29	0.455	/

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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.
Wi-Fi 2.4G	ANT 2	Left cheek	0	802.11b	98.0%	Receiver on	6/2437	18.50	17.04	0.428	0.050	1.43	0.611	/
		Left Tilt	0	802.11b	98.0%	Receiver on	6/2437	18.50	17.04	0.556	-0.021	1.43	0.794	41
		Right cheek	0	802.11b	98.0%	Receiver on	6/2437	18.50	17.04	0.185	0.080	1.43	0.264	/
		Right Tilt	0	802.11b	98.0%	Receiver on	6/2437	18.50	17.04	0.223	0.020	1.43	0.318	/
Wi-Fi 5G U-NII-1	ANT 2	Left cheek	0	802.11a	100.0%	Receiver on	44/5220	17.00	16.23	0.652	0.044	1.19	0.778	/
		Left Tilt	0	802.11a	100.0%	Receiver on	44/5220	17.00	16.23	0.895	0.032	1.19	1.069	42
		Left Tilt	0	802.11a	100.0%	Receiver on	40/5200	17.00	16.18	0.803	0.080	1.21	0.970	/
		Left Tilt	0	802.11a	100.0%	Receiver on	48/5240	17.00	16.22	0.824	0.050	1.20	0.986	/
		Left Tilt repeat	0	802.11a	100.0%	Receiver on	44/5220	17.00	16.23	0.879	-0.010	1.19	1.050	/
		Right cheek	0	802.11a	100.0%	Receiver on	44/5220	17.00	16.23	0.472	0.062	1.19	0.564	/
		Right Tilt	0	802.11a	100.0%	Receiver on	44/5220	17.00	16.23	0.603	-0.120	1.19	0.720	/
Wi-Fi 5G U-NII-3	ANT 2	Left cheek	0	802.11a	100.0%	Receiver on	157/5785	17.50	16.70	0.626	0.030	1.20	0.753	/
		Left Tilt	0	802.11a	100.0%	Receiver on	157/5785	17.50	16.70	0.794	0.050	1.20	0.955	/
		Left Tilt	0	802.11a	100.0%	Receiver on	149/5745	17.50	16.66	0.702	0.020	1.21	0.852	/
		Left Tilt	0	802.11a	100.0%	Receiver on	165/5825	17.50	16.61	0.844	0.066	1.23	1.036	/
		Left Tilt repeat	0	802.11a	100.0%	Receiver on	165/5825	17.50	16.61	0.835	0.018	1.23	1.025	/
		Right cheek	0	802.11a	100.0%	Receiver on	157/5785	17.50	16.70	0.475	0.020	1.20	0.571	/
		Right Tilt	0	802.11a	100.0%	Receiver on	157/5785	17.50	16.70	0.785	-0.024	1.20	0.944	/
		Right Tilt	0	802.11a	100.0%	Receiver on	149/5745	17.50	16.66	0.823	0.011	1.21	0.999	/
		Right Tilt	0	802.11a	100.0%	Receiver on	165/5825	17.50	16.61	0.769	0.068	1.23	0.944	/
Bluetooth	ANT 2	Left cheek	0	DH5	76.0%	Full power	78/2480	10.00	9.75	0.127	0.010	1.39	0.177	43
		Left Tilt	0	DH5	76.0%	Full power	78/2480	10.00	9.75	0.096	0.011	1.39	0.134	/
		Right cheek	0	DH5	76.0%	Full power	78/2480	10.00	9.75	0.055	-0.020	1.39	0.077	/
		Right Tilt	0	DH5	76.0%	Full power	78/2480	10.00	9.75	0.042	0.023	1.39	0.059	/

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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	Main (ANT0)	Back Side	15	GSM	Receiver off	-	-	190/836.6	33.00	32.40	0.255	-0.180	1.15	0.293	44
		Front Side	15	GSM	Receiver off	-	-	190/836.6	33.00	32.40	0.143	0.020	1.15	0.164	/
GSM 1900	Main (ANT7)	Back Side	15	GSM	Receiver off	-	-	661/1880	30.50	29.85	0.206	0.048	1.16	0.239	45
		Front Side	15	GSM	Receiver off	-	-	661/1880	30.50	29.85	0.113	0.000	1.16	0.131	/
WCDMA II	Main (ANT7)	Back Side	15	RMC	Receiver off	-	-	9400/1880	23.50	23.13	0.409	-0.010	1.09	0.445	46
		Front Side	15	RMC	Receiver off	-	-	9400/1880	23.50	23.13	0.231	0.014	1.09	0.252	/
WCDMA IV	Main (ANT7)	Back Side	15	RMC	Receiver off	-	-	1413/1732.6	23.50	23.05	0.492	0.080	1.11	0.546	47
		Front Side	15	RMC	Receiver off	-	-	1413/1732.6	23.50	23.05	0.278	0.032	1.11	0.308	/
WCDMA V	Main (ANT0)	Back Side	15	RMC	Receiver off	-	-	4183/836.6	24.00	23.36	0.289	-0.080	1.16	0.335	48
		Front Side	15	RMC	Receiver off	-	-	4183/836.6	24.00	23.36	0.227	0.046	1.16	0.263	/
LTE 2	Main (ANT7)	Back Side	15	QPSK	Receiver off	1	50	18700/1860	23.50	22.99	0.381	-0.070	1.12	0.428	49
			15	QPSK	Receiver off	50%	0	18700/1860	22.50	21.95	0.313	0.030	1.14	0.355	/
		Front Side	15	QPSK	Receiver off	1	50	18700/1860	23.50	22.99	0.184	0.028	1.12	0.207	/
			15	QPSK	Receiver off	50%	0	18700/1860	22.50	21.95	0.155	-0.016	1.14	0.176	/
LTE 5	Main (ANT0)	Back Side	15	QPSK	Receiver off	1	0	20525/836.5	24.00	23.18	0.265	0.020	1.21	0.320	50
			15	QPSK	Receiver off	50%	25	20450/829	23.00	22.18	0.201	0.033	1.21	0.243	/
		Front Side	15	QPSK	Receiver off	1	0	20525/836.5	24.00	23.18	0.139	0.000	1.21	0.168	/
			15	QPSK	Receiver off	50%	25	20450/829	23.00	22.18	0.104	-0.080	1.21	0.126	/
LTE 7	Main (ANT6)	Back Side	15	QPSK	Receiver off	1	99	21350/2560	23.00	22.56	0.452	0.072	1.11	0.500	/
			15	QPSK	Receiver off	50%	25	21100/2535	22.00	21.59	0.471	-0.040	1.10	0.518	51
		Front Side	15	QPSK	Receiver off	1	99	21350/2560	23.00	22.56	0.174	-0.021	1.11	0.193	/
			15	QPSK	Receiver off	50%	25	21100/2535	22.00	21.59	0.178	0.019	1.10	0.196	/
	DIV (ANT4)	Back Side	15	QPSK	Receiver off	1	99	21100/2535	23.00	22.37	0.094	-0.026	1.16	0.109	/
			15	QPSK	Receiver off	50%	0	21100/2535	23.00	22.36	0.095	0.100	1.16	0.110	/
		Front Side	15	QPSK	Receiver off	1	99	21100/2535	23.00	22.37	0.019	0.032	1.16	0.022	/
			15	QPSK	Receiver off	50%	0	21100/2535	23.00	22.36	0.020	0.080	1.16	0.023	/
	Main (ANT6)	Back Side	15	QPSK	Receiver off	1	99	20850/2510	23.00	22.32	0.405	-0.038	1.17	0.474	/
						1	0	21048/2529.8							
LTE 12	Main (ANT0)	Back Side	15	QPSK	Receiver off	1	25	23060/704	24.00	23.28	0.142	0.030	1.18	0.168	52
			15	QPSK	Receiver off	50%	0	23060/704	23.00	22.32	0.125	-0.090	1.17	0.146	/
		Front Side	15	QPSK	Receiver off	1	25	23060/704	24.00	23.28	0.097	0.035	1.18	0.114	/
			15	QPSK	Receiver off	50%	0	23060/704	23.00	22.32	0.087	0.011	1.17	0.102	/
LTE 13	Main (ANT0)	Back Side	15	QPSK	Receiver off	1	25	23230/782	24.00	23.10	0.196	0.090	1.23	0.241	53
			15	QPSK	Receiver off	50%	13	23230/782	23.00	22.11	0.145	0.060	1.23	0.178	/
		Front Side	15	QPSK	Receiver off	1	25	23230/782	24.00	23.10	0.107	0.018	1.23	0.132	/
			15	QPSK	Receiver off	50%	13	23230/782	23.00	22.11	0.091	-0.050	1.23	0.112	/
LTE 26	Main (ANT0)	Back Side	15	QPSK	Receiver off	1	38	26965/841.5	24.00	23.11	0.296	-0.010	1.23	0.363	54
			15	QPSK	Receiver off	50%	18	26865/831.5	23.00	22.60	0.215	0.021	1.10	0.236	/
		Front Side	15	QPSK	Receiver off	1	38	26965/841.5	24.00	23.11	0.175	0.016	1.23	0.215	/

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			15	QPSK	Receiver off	50%	18	26865/831.5	23.00	22.60	0.117	0.038	1.10	0.128	/
LTE 28	Main (ANT0)	Back Side	15	QPSK	Receiver off	1	38	27535/735.5	24.00	23.26	0.184	0.020	1.19	0.218	55
			15	QPSK	Receiver off	50%	39	27535/735.5	23.00	22.09	0.115	0.014	1.23	0.142	/
		Back Side	15	QPSK	Receiver off	1	49	27275/709.5	24.00	23.20	0.159	0.011	1.20	0.191	/
			15	QPSK	Receiver off	50%	0	27290/711	23.00	22.19	0.127	0.037	1.21	0.153	/
		Front Side	15	QPSK	Receiver off	1	38	27535/735.5	24.00	23.26	0.091	-0.080	1.19	0.108	/
			15	QPSK	Receiver off	50%	39	27535/735.5	23.00	22.09	0.092	0.044	1.23	0.113	/
LTE 38	Main (ANT6)	Back Side	15	QPSK	Receiver off	1	50	38000/2595	23.50	23.00	0.251	-0.030	1.12	0.282	56
			15	QPSK	Receiver off	50%	50	38150/2610	22.50	21.86	0.196	0.024	1.16	0.227	/
		Front Side	15	QPSK	Receiver off	1	50	38000/2595	23.50	23.00	0.114	0.011	1.12	0.128	/
			15	QPSK	Receiver off	50%	50	38150/2610	22.50	21.86	0.087	-0.090	1.16	0.101	/
LTE 40	Main (ANT6)	Back Side	15	QPSK	Receiver off	1	25	38750/2310.0	23.50	22.83	0.377	0.056	1.17	0.440	57
			15	QPSK	Receiver off	50%	25	38750/2310.0	22.50	21.81	0.277	0.016	1.17	0.325	/
		Front Side	15	QPSK	Receiver off	1	25	38750/2310.0	23.50	22.83	0.138	0.046	1.17	0.161	/
			15	QPSK	Receiver off	50%	25	38750/2310.0	22.50	21.81	0.115	-0.041	1.17	0.135	/
		Back Side	15	QPSK	Receiver off	1	25	39200/2355.0	23.50	22.93	0.361	0.013	1.14	0.412	/
			15	QPSK	Receiver off	50%	25	39200/2355.0	22.50	21.86	0.295	0.046	1.16	0.342	/
LTE 66	Main (ANT7)	Back Side	15	QPSK	Receiver off	1	50	132322/1745	23.50	22.82	0.388	-0.050	1.17	0.454	58
			15	QPSK	Receiver off	50%	50	132322/1745	22.50	21.86	0.305	0.020	1.16	0.353	/
		Front Side	15	QPSK	Receiver off	1	50	132322/1745	23.50	22.82	0.223	-0.020	1.17	0.261	/
			15	QPSK	Receiver off	50%	50	132322/1745	22.50	21.86	0.171	0.140	1.16	0.198	/
	DIV (ANT4)	Back Side	15	QPSK	Receiver off	1	50	132322/1745	23.00	22.54	0.021	0.012	1.11	0.023	/
			15	QPSK	Receiver off	50%	50	132322/1745	23.00	22.48	0.022	0.010	1.13	0.025	/
		Front Side	15	QPSK	Receiver off	1	50	132322/1745	23.00	22.54	0.004	0.001	1.11	0.004	/
			15	QPSK	Receiver off	50%	50	132322/1745	23.00	22.48	0.006	0.011	1.13	0.007	/

Band	Antenna	Test Position	Dist. (mm)	Type	Mode	Duty Cycle	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.
n2	Main ANT7	Back Side	15	SA	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	372000/1860	23.00	21.87	0.465	0.017	1.30	0.603	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	372000/1860	23.00	22.00	0.498	-0.010	1.26	0.627	59
		Front Side	15		DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	372000/1860	23.00	21.87	0.282	-0.040	1.30	0.366	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	372000/1860	23.00	22.00	0.263	0.013	1.26	0.331	/
n7	Main ANT6	Back Side	15	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	502000/2510	23.00	22.28	0.545	-0.055	1.18	0.643	60
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	502000/2510	23.00	22.45	0.498	0.038	1.14	0.565	/
		Front Side	15		DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	502000/2510	23.00	22.28	0.215	-0.015	1.18	0.254	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	502000/2510	23.00	22.45	0.234	0.047	1.14	0.266	/
		Back Side	15		DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	502000/2510	23.00	22.28	0.486	-0.011	1.18	0.574	/
	Div ANT4	Back Side	15	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver off	1	104	507000/2535	23.50	23.06	0.080	0.035	1.11	0.089	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	507000/2535	23.50	23.03	0.091	0.012	1.11	0.101	/
		Front Side	15		DFT-s-OFDM QPSK	100.0%	Receiver off	1	104	507000/2535	23.50	23.06	0.000	0.000	1.11	0.000	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	507000/2535	23.50	23.03	0.000	0.000	1.11	0.000	/
	Main	Back Side	15	SA &	CP-OFDM QPSK	100.0%	Receiver off	1	1	502000/2510	22.00	21.02	0.503	0.041	1.25	0.630	/

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	ANT6			NSA														
n28	Main ANT0	Back Side	15	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	147400/737	23.00	21.93	0.194	0.038	1.28	0.248	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	18	147700/738.5	23.00	22.03	0.202	0.080	1.25	0.253	61
		Front Side	15		DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	147400/737	23.00	21.93	0.128	0.026	1.28	0.164	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	18	147700/738.5	23.00	22.03	0.159	-0.033	1.25	0.199	/
		Back Side	15		DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	142200/711	23.00	21.93	0.178	0.015	1.28	0.228	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	12	141600/708	23.00	22.01	0.189	0.020	1.26	0.237	/
n40	Main ANT6	Back Side	15	SA	DFT-s-OFDM QPSK	25.0%	Receiver off	1	1	471000/2355	23.50	23.24	0.691	0.037	0.27	0.183	/
			15		DFT-s-OFDM QPSK	25.0%	Receiver off	50%	12	471000/2355	23.50	23.20	0.859	0.110	0.27	0.230	62
		Front Side	15		DFT-s-OFDM QPSK	25.0%	Receiver off	1	1	471000/2355	23.50	23.24	0.225	0.035	0.27	0.060	/
			15		DFT-s-OFDM QPSK	25.0%	Receiver off	50%	12	471000/2355	23.50	23.20	0.284	-0.015	0.27	0.076	/
		Back Side	15		DFT-s-OFDM QPSK	25.0%	Receiver off	1	1	462000/2310	23.50	22.84	0.462	0.011	0.29	0.134	/
			15		DFT-s-OFDM QPSK	25.0%	Receiver off	50%	12	462000/2310	23.50	22.95	0.522	0.060	0.28	0.148	/
n66	Main ANT7	Back Side	15	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	349000/1745	23.00	21.54	0.305	0.018	1.40	0.427	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	54	349000/1745	23.00	22.00	0.341	0.020	1.26	0.429	63
		Front Side	15		DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	349000/1745	23.00	21.54	0.178	-0.060	1.40	0.249	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	54	349000/1745	23.00	22.00	0.204	0.027	1.26	0.257	/
	Div ANT4	Back Side	15	SA & NSA	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	349000/1745	23.50	22.65	0.000	0.000	1.22	0.000	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	54	349000/1745	23.50	23.14	0.000	0.000	1.09	0.000	/
		Front Side	15		DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	349000/1745	23.50	22.65	0.000	0.000	1.22	0.000	/
			15		DFT-s-OFDM QPSK	100.0%	Receiver off	50%	54	349000/1745	23.50	23.14	0.000	0.000	1.09	0.000	/
n78	Main ANT5	Back Side	15	SA & NSA	DFT-s-OFDM QPSK	25.0%	Receiver off	1	271	633332/3500	24.50	23.25	0.278	0.039	0.33	0.093	/
			15		DFT-s-OFDM QPSK	25.0%	Receiver off	50%	67	633332/3500	24.50	24.15	0.433	0.015	0.27	0.117	/
		Front Side	15		DFT-s-OFDM QPSK	25.0%	Receiver off	1	271	633332/3500	24.50	23.25	0.373	-0.070	0.33	0.124	/
			15		DFT-s-OFDM QPSK	25.0%	Receiver off	50%	67	633332/3500	24.50	24.15	0.476	0.050	0.27	0.129	64

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.
Wi-Fi 2.4G	ANT 2	Back Side	15	802.11b	98.0%	Receiver off	6/2437	18.50	17.04	0.119	0.023	1.43	0.170	65
		Front Side	15	802.11b	98.0%	Receiver off	6/2437	18.50	17.04	0.062	0.060	1.43	0.089	/
Wi-Fi 5G U-NII-1	ANT 2	Back Side	15	802.11b	100.0%	Receiver off	44/5220	17.00	16.23	0.143	0.015	1.19	0.171	/
		Front Side	15	802.11b	100.0%	Receiver off	44/5220	17.00	16.23	0.074	0.011	1.19	0.088	/
Wi-Fi 5G U-NII-3	ANT 2	Back Side	15	802.11b	100.0%	Receiver off	157/5785	17.50	16.70	0.210	-0.050	1.20	0.252	66
		Front Side	15	802.11b	100.0%	Receiver off	157/5785	17.50	16.70	0.094	0.027	1.20	0.113	/

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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.
GSM 850	Main (ANT0)	Back Side	10	GPRS 4TX Slots	Hotspot on	-	-	190/836.6	30.50	29.52	0.750	-0.011	1.25	0.940	67
			10	GPRS 4TX Slots	Hotspot on	-	-	128/824.2	30.50	29.52	0.724	-0.080	1.25	0.907	/
			10	GPRS 4TX Slots	Hotspot on	-	-	251/848.8	30.50	29.33	0.712	0.034	1.31	0.932	/
		Front Side	10	GPRS 4TX Slots	Hotspot on	-	-	190/836.6	30.50	29.52	0.433	0.060	1.25	0.543	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	63
		Right Edge	10	GPRS 4TX Slots	Hotspot on	-	-	190/836.6	30.50	29.52	0.079	0.024	1.25	0.099	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	GPRS 4TX Slots	Hotspot on	-	-	190/836.6	30.50	29.52	0.237	0.039	1.25	0.297	/
GSM 1900	Main (ANT7)	Back Side	10	GPRS 4TX Slots	Hotspot on	-	-	661/1880	26.50	25.88	0.539	-0.110	1.15	0.622	68
		Front Side	10	GPRS 4TX Slots	Hotspot on	-	-	661/1880	26.50	25.88	0.255	0.013	1.15	0.294	/
		Left Edge	10	GPRS 4TX Slots	Hotspot on	-	-	661/1880	26.50	25.88	0.106	0.060	1.15	0.122	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	GPRS 4TX Slots	Hotspot on	-	-	661/1880	26.50	25.88	0.407	0.048	1.15	0.469	/
WCDMA II	Main (ANT7)	Back Side	10	RMC	Hotspot on	-	-	9400/1880	23.50	23.13	0.704	0.110	1.09	0.767	69
		Front Side	10	RMC	Hotspot on	-	-	9400/1880	23.50	23.13	0.326	0.040	1.09	0.355	/
		Left Edge	10	RMC	Hotspot on	-	-	9400/1880	23.50	23.13	0.165	0.031	1.09	0.180	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	RMC	Hotspot on	-	-	9400/1880	23.50	23.13	0.629	0.017	1.09	0.685	/
WCDMA IV	Main (ANT7)	Back Side	10	RMC	Hotspot on	-	-	1413/1732.6	23.50	23.05	0.825	0.060	1.11	0.915	/
			10	RMC	Hotspot on	-	-	1312/1712.4	23.50	23.05	0.849	-0.060	1.11	0.942	/
			10	RMC	Hotspot on	-	-	1513/1752.6	23.50	23.05	0.792	0.010	1.11	0.878	/
		Front Side	10	RMC	Hotspot on	-	-	1413/1732.6	23.50	23.05	0.386	0.014	1.11	0.428	/
		Left Edge	10	RMC	Hotspot on	-	-	1413/1732.6	23.50	23.05	0.252	0.072	1.11	0.280	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	RMC	Hotspot on	-	-	1413/1732.6	23.50	23.05	0.876	0.170	1.11	0.972	/
			10	RMC	Hotspot on	-	-	1312/1712.4	23.50	23.05	0.848	-0.120	1.11	0.941	/
			10	RMC	Hotspot on	-	-	1513/1752.6	23.50	23.05	0.835	-0.060	1.11	0.926	/
		Bottom Edge repeat	10	RMC	Hotspot on	-	-	1413/1732.6	23.50	23.05	0.882	0.032	1.11	0.978	70
WCDMA V	Main (ANT0)	Back Side	10	RMC	Hotspot on	-	-	4183/836.6	24.00	23.36	0.419	-0.070	1.16	0.486	71
		Front Side	10	RMC	Hotspot on	-	-	4183/836.6	24.00	23.36	0.268	0.081	1.16	0.311	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Right Edge	10	RMC	Hotspot on	-	-	4183/836.6	24.00	23.36	0.135	0.024	1.16	0.156	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	RMC	Hotspot on	-	-	4183/836.6	24.00	23.36	0.195	-0.022	1.16	0.226	/
LTE 2	Main	Back Side	10	QPSK	Hotspot on	1	50	18700/1860	23.50	22.99	0.708	0.090	1.12	0.796	72

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	(ANT7)		10	QPSK	Hotspot on	50%	0	18700/1860	22.50	21.95	0.557	0.016	1.14	0.632	/
		Front Side	10	QPSK	Hotspot on	1	50	18700/1860	23.50	22.99	0.326	0.027	1.12	0.367	/
			10	QPSK	Hotspot on	50%	0	18700/1860	22.50	21.95	0.264	-0.080	1.14	0.300	/
		Left Edge	10	QPSK	Hotspot on	1	50	18700/1860	23.50	22.99	0.222	0.040	1.12	0.250	/
			10	QPSK	Hotspot on	50%	0	18700/1860	22.50	21.95	0.175	0.033	1.14	0.199	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	QPSK	Hotspot on	1	50	18700/1860	23.50	22.99	0.607	0.010	1.12	0.683	/
			10	QPSK	Hotspot on	50%	0	18700/1860	22.50	21.95	0.549	-0.090	1.14	0.623	/
LTE 5	Main (ANT0)	Back Side	10	QPSK	Hotspot on	1	0	20525/836.5	24.00	23.18	0.450	0.000	1.21	0.544	73
			10	QPSK	Hotspot on	50%	25	20450/829	23.00	22.18	0.356	-0.019	1.21	0.430	/
		Front Side	10	QPSK	Hotspot on	1	0	20525/836.5	24.00	23.18	0.338	0.070	1.21	0.408	/
			10	QPSK	Hotspot on	50%	25	20450/829	23.00	22.18	0.279	0.014	1.21	0.337	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Right Edge	10	QPSK	Hotspot on	1	0	20525/836.5	24.00	23.18	0.084	-0.013	1.21	0.101	/
			10	QPSK	Hotspot on	50%	25	20450/829	23.00	22.18	0.072	-0.110	1.21	0.087	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	QPSK	Hotspot on	1	0	20525/836.5	24.00	23.18	0.217	0.024	1.21	0.262	/
			10	QPSK	Hotspot on	50%	25	20450/829	23.00	22.18	0.168	0.041	1.21	0.203	/
LTE 7	Main (ANT6)	Back Side	10	QPSK	Hotspot on	1	99	21350/2560	23.00	22.56	0.821	0.013	1.11	0.909	/
			10	QPSK	Hotspot on	1	50	20850/2510	23.00	22.42	0.865	-0.03	1.14	0.989	/
			10	QPSK	Hotspot on	1	50	21100/2535	23.00	22.42	0.838	-0.021	1.14	0.958	/
			10	QPSK	Hotspot on	50%	25	21100/2535	22.00	21.59	0.815	-0.090	1.10	0.896	/
			10	QPSK	Hotspot on	50%	25	20850/2510	22.00	21.53	0.874	-0.026	1.11	0.974	/
			10	QPSK	Hotspot on	50%	25	21350/2560	22.00	21.58	0.822	0.100	1.10	0.905	/
		Front Side	10	QPSK	Hotspot on	1	99	21350/2560	23.00	22.56	0.294	0.032	1.11	0.325	/
			10	QPSK	Hotspot on	50%	25	21100/2535	22.00	21.59	0.245	0.080	1.10	0.269	/
		Left Edge	10	QPSK	Hotspot on	1	99	21350/2560	23.00	22.56	0.979	0.021	1.11	1.083	74
			10	QPSK	Hotspot on	1	50	20850/2510	23.00	22.42	0.923	0.015	1.14	1.055	/
			10	QPSK	Hotspot on	1	50	21100/2535	23.00	22.42	0.928	0.038	1.14	1.061	/
			10	QPSK	Hotspot on	50%	25	21100/2535	22.00	21.59	0.855	0.075	1.10	0.940	/
			10	QPSK	Hotspot on	50%	25	20850/2510	22.00	21.53	0.792	-0.09	1.11	0.883	/
			10	QPSK	Hotspot on	50%	25	21350/2560	22.00	21.58	0.785	0.038	1.10	0.865	/
			10	QPSK	Hotspot on	100%	0	20850/2510	22.00	21.60	0.812	0.100	1.10	0.890	/
			10	QPSK	Hotspot on	100%	0	21100/2535	22.00	21.49	0.835	0.070	1.12	0.939	/
			10	QPSK	Hotspot on	100%	0	21350/2560	22.00	21.54	0.819	0.029	1.11	0.911	/
		Left Edge repeat	10	QPSK	Hotspot on	1	99	21350/2560	23.00	22.56	0.962	0.014	1.11	1.065	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/

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			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Top Edge	10	QPSK	Hotspot on	1	99	21350/2560	23.00	22.56	0.087	-0.027	1.11	0.096	/
			10	QPSK	Hotspot on	50%	25	21100/2535	22.00	21.59	0.061	-0.028	1.10	0.067	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	DIV (ANT4)	Back Side	10	QPSK	Hotspot on	1	99	21100/2535	23.00	22.37	0.275	0.029	1.16	0.318	/
			10	QPSK	Hotspot on	50%	0	21100/2535	23.00	22.36	0.279	0.070	1.16	0.323	/
		Front Side	10	QPSK	Hotspot on	1	99	21100/2535	23.00	22.37	0.049	0.026	1.16	0.057	/
			10	QPSK	Hotspot on	50%	0	21100/2535	23.00	22.36	0.049	0.020	1.16	0.057	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Right Edge	10	QPSK	Hotspot on	1	99	21100/2535	23.00	22.37	0.007	-0.023	1.16	0.008	/
			10	QPSK	Hotspot on	50%	0	21100/2535	23.00	22.36	0.006	-0.021	1.16	0.007	/
		Top Edge	10	QPSK	Hotspot on	1	99	21100/2535	23.00	22.37	0.100	0.090	1.16	0.116	/
			10	QPSK	Hotspot on	50%	0	21100/2535	23.00	22.36	0.095	0.040	1.16	0.110	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
	Main (ANT6)	Back Side	10	QPSK	Hotspot on	1	99	20850/2510	23.00	22.32	0.882	0.100	1.17	1.031	/
						1	0	21048/2529.8							
LTE 12	Main (ANT0)	Back Side	10	QPSK	Hotspot on	1	25	23060/704	24.00	23.28	0.226	-0.038	1.18	0.267	75
			10	QPSK	Hotspot on	50%	0	23060/704	23.00	22.32	0.195	0.015	1.17	0.228	/
		Front Side	10	QPSK	Hotspot on	1	25	23060/704	24.00	23.28	0.114	0.060	1.18	0.135	/
			10	QPSK	Hotspot on	50%	0	23060/704	23.00	22.32	0.104	-0.011	1.17	0.122	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Right Edge	10	QPSK	Hotspot on	1	25	23060/704	24.00	23.28	0.223	0.032	1.18	0.263	/
			10	QPSK	Hotspot on	50%	0	23060/704	23.00	22.32	0.177	-0.060	1.17	0.207	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	QPSK	Hotspot on	1	25	23060/704	24.00	23.28	0.060	0.120	1.18	0.071	/
			10	QPSK	Hotspot on	50%	0	23060/704	23.00	22.32	0.052	0.027	1.17	0.061	/
LTE 13	Main (ANT0)	Back Side	10	QPSK	Hotspot on	1	25	23230/782	24.00	23.10	0.303	0.010	1.23	0.373	76
			10	QPSK	Hotspot on	50%	13	23230/782	23.00	22.11	0.223	0.035	1.23	0.274	/
		Front Side	10	QPSK	Hotspot on	1	25	23230/782	24.00	23.10	0.164	0.011	1.23	0.202	/
			10	QPSK	Hotspot on	50%	13	23230/782	23.00	22.11	0.120	-0.020	1.23	0.147	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Right Edge	10	QPSK	Hotspot on	1	25	23230/782	24.00	23.10	0.183	0.000	1.23	0.225	/
			10	QPSK	Hotspot on	50%	13	23230/782	23.00	22.11	0.156	0.018	1.23	0.191	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	QPSK	Hotspot on	1	25	23230/782	24.00	23.10	0.044	-0.047	1.23	0.054	/
			10	QPSK	Hotspot on	50%	13	23230/782	23.00	22.11	0.045	0.021	1.23	0.055	/

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LTE 26	Main (ANT0)	Back Side	10	QPSK	Hotspot on	1	38	26965/841.5	24.00	23.11	0.469	-0.060	1.23	0.576	77
			10	QPSK	Hotspot on	50%	18	26865/831.5	23.00	22.60	0.342	0.018	1.10	0.375	/
		Front Side	10	QPSK	Hotspot on	1	38	26965/841.5	24.00	23.11	0.286	-0.034	1.23	0.351	/
			10	QPSK	Hotspot on	50%	18	26865/831.5	23.00	22.60	0.194	0.025	1.10	0.213	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Right Edge	10	QPSK	Hotspot on	1	38	26965/841.5	24.00	23.11	0.142	-0.044	1.23	0.174	/
			10	QPSK	Hotspot on	50%	18	26865/831.5	23.00	22.60	0.128	0.019	1.10	0.140	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	QPSK	Hotspot on	1	38	26965/841.5	24.00	23.11	0.085	0.029	1.23	0.104	/
			10	QPSK	Hotspot on	50%	18	26865/831.5	23.00	22.60	0.053	0.050	1.10	0.058	/
LTE 28	Main (ANT0)	Back Side	10	QPSK	Hotspot on	1	38	27535/735.5	24.00	23.26	0.273	-0.030	1.19	0.324	78
			10	QPSK	Hotspot on	50%	39	27535/735.5	23.00	22.09	0.203	0.011	1.23	0.250	/
		Back Side	10	QPSK	Hotspot on	1	49	27275/709.5	24.00	23.20	0.264	0.028	1.20	0.317	/
			10	QPSK	Hotspot on	50%	0	27290/711	23.00	22.19	0.193	-0.090	1.21	0.233	/
		Front Side	10	QPSK	Hotspot on	1	38	27535/735.5	24.00	23.26	0.142	0.000	1.19	0.168	/
			10	QPSK	Hotspot on	50%	39	27535/735.5	23.00	22.09	0.103	0.024	1.23	0.127	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Right Edge	10	QPSK	Hotspot on	1	38	27535/735.5	24.00	23.26	0.216	0.017	1.19	0.256	/
			10	QPSK	Hotspot on	50%	39	27535/735.5	23.00	22.09	0.173	0.033	1.23	0.213	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	QPSK	Hotspot on	1	38	27535/735.5	24.00	23.26	0.081	-0.050	1.19	0.096	/
			10	QPSK	Hotspot on	50%	39	27535/735.5	23.00	22.09	0.044	0.027	1.23	0.054	/
		Back Side	10	QPSK	Hotspot on	1	49	27275/709.5	24.00	23.20	0.264	0.060	1.20	0.317	/
			10	QPSK	Hotspot on	50%	0	27290/711	23.00	22.19	0.193	0.041	1.21	0.233	/
LTE 38 TDD	Main (ANT6)	Back Side	10	QPSK	Hotspot on	1	50	38000/2595	23.50	23.00	0.553	-0.077	1.12	0.620	/
			10	QPSK	Hotspot on	50%	50	38150/2610	22.50	21.86	0.401	0.016	1.16	0.465	/
		Front Side	10	QPSK	Hotspot on	1	50	38000/2595	23.50	23.00	0.217	0.031	1.12	0.243	/
			10	QPSK	Hotspot on	50%	50	38150/2610	22.50	21.86	0.165	0.081	1.16	0.191	/
		Left Edge	10	QPSK	Hotspot on	1	50	38000/2595	23.50	23.00	0.621	0.017	1.12	0.697	79
			10	QPSK	Hotspot on	50%	50	38150/2610	22.50	21.86	0.498	0.038	1.16	0.577	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Top Edge	10	QPSK	Hotspot on	1	50	38000/2595	23.50	23.00	0.088	0.06	1.12	0.099	/
			10	QPSK	Hotspot on	50%	50	38150/2610	22.50	21.86	0.074	0.015	1.16	0.086	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
LTE 40 TDD	Main (ANT6)	Back Side	10	QPSK	Hotspot on	1	25	38750/2310.0	23.50	22.83	0.635	0.014	1.17	0.741	/
			10	QPSK	Hotspot on	50%	25	38750/2310.0	22.50	21.81	0.519	-0.036	1.17	0.608	/
		Front Side	10	QPSK	Hotspot on	1	25	38750/2310.0	23.50	22.83	0.246	0.023	1.17	0.287	/

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			10	QPSK	Hotspot on	50%	25	38750/2310.0	22.50	21.81	0.183	-0.024	1.17	0.215	/
		Left Edge	10	QPSK	Hotspot on	1	25	38750/2310.0	23.50	22.83	0.684	0.034	1.17	0.798	/
			10	QPSK	Hotspot on	50%	25	38750/2310.0	22.50	21.81	0.495	-0.014	1.17	0.580	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Top Edge	10	QPSK	Hotspot on	1	25	38750/2310.0	23.50	22.83	0.123	0.019	1.17	0.144	/
			10	QPSK	Hotspot on	50%	25	38750/2310.0	22.50	21.81	0.104	0.011	1.17	0.122	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Left Edge	10	QPSK	Hotspot on	1	25	39200/2355.0	23.50	22.93	0.731	0.023	1.14	0.834	80
			10	QPSK	Hotspot on	50%	25	39200/2355.0	22.50	21.86	0.589	-0.036	1.16	0.683	/
			10	QPSK	Hotspot on	100%	0	39200/2355.0	22.50	21.87	0.623	0.020	1.16	0.720	/
LTE 66	Main (ANT7)	Back Side	10	QPSK	Hotspot on	1	50	132322/1745	23.50	22.82	0.817	0.027	1.17	0.955	/
			10	QPSK	Hotspot on	1	50	132072/1720	23.50	22.77	0.832	0.019	1.18	0.984	/
			10	QPSK	Hotspot on	1	50	132572/1770	23.50	22.72	0.774	-0.080	1.20	0.926	/
			10	QPSK	Hotspot on	50%	50	132322/1745	22.50	21.86	0.655	0.049	1.16	0.759	/
		Front Side	10	QPSK	Hotspot on	1	50	132322/1745	23.50	22.82	0.416	0.015	1.17	0.487	/
			10	QPSK	Hotspot on	50%	50	132322/1745	22.50	21.86	0.369	-0.033	1.16	0.428	/
		Left Edge	10	QPSK	Hotspot on	1	50	132322/1745	23.50	22.82	0.233	0.000	1.17	0.272	/
			10	QPSK	Hotspot on	50%	50	132322/1745	22.50	21.86	0.220	0.100	1.16	0.255	/
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Bottom Edge	10	QPSK	Hotspot on	1	50	132322/1745	23.50	22.82	0.862	-0.040	1.17	1.008	81
			10	QPSK	Hotspot on	1	50	132072/1720	23.50	22.77	0.805	0.010	1.18	0.952	/
			10	QPSK	Hotspot on	1	50	132572/1770	23.50	22.72	0.829	-0.035	1.20	0.992	/
			10	QPSK	Hotspot on	50%	50	132322/1745	22.50	21.86	0.585	0.015	1.16	0.678	/
			10	QPSK	Hotspot on	100%	0	132322/1745	22.50	21.77	0.632	0.180	1.18	0.748	/
		Bottom Edge repeat	10	QPSK	Hotspot on	1	50	132322/1745	23.50	22.82	0.857	0.050	1.17	1.002	/
	DIV (ANT4)	Back Side	10	QPSK	Hotspot on	1	50	132322/1745	23.00	22.54	0.041	0.023	1.11	0.046	/
			10	QPSK	Hotspot on	50%	50	132322/1745	23.00	22.48	0.037	0.010	1.13	0.042	/
		Front Side	10	QPSK	Hotspot on	1	50	132322/1745	23.00	22.54	0.007	0.012	1.11	0.008	/
			10	QPSK	Hotspot on	50%	50	132322/1745	23.00	22.48	0.005	0.013	1.13	0.006	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
		Right Edge	10	QPSK	Hotspot on	1	50	132322/1745	23.00	22.54	0.007	0.01	1.11	0.008	/
			10	QPSK	Hotspot on	50%	50	132322/1745	23.00	22.48	0.007	0.012	1.13	0.008	/
		Top Edge	10	QPSK	Hotspot on	1	50	132322/1745	23.00	22.54	0.001	0.011	1.11	0.001	/
			10	QPSK	Hotspot on	50%	50	132322/1745	23.00	22.48	0.000	0.00	1.13	0.000	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/

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			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/

Band	Antenna	Test Position	Dist. (mm)	Type	Mode	Duty Cycle	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.
n2	Main ANT7	Back Side	10	SA	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	372000/1860	23.00	21.87	0.652	0.068	1.30	0.846	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	376000/1880	23.00	21.82	0.694	-0.020	1.31	0.911	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	380000/1900	23.00	21.68	0.642	0.032	1.36	0.870	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	372000/1860	23.00	22.00	0.668	-0.015	1.26	0.841	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	376000/1880	23.00	21.95	0.637	0.022	1.27	0.811	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	380000/1900	23.00	21.91	0.695	-0.090	1.29	0.893	/
		Front Side	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	372000/1860	23.00	21.87	0.329	0.028	1.30	0.427	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	372000/1860	23.00	22.00	0.378	0.030	1.26	0.476	/
		Left Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	372000/1860	23.00	21.87	0.225	0.027	1.30	0.292	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	372000/1860	23.00	22.00	0.202	-0.014	1.26	0.254	/
		Right Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	372000/1860	23.00	21.87	0.046	0.036	1.30	0.060	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	372000/1860	23.00	22.00	0.048	0.000	1.26	0.060	/
		Top Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	372000/1860	23.00	21.87	0.034	0.020	1.30	0.044	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	372000/1860	23.00	22.00	0.029	0.012	1.26	0.037	/
		Bottom Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	372000/1860	23.00	21.87	0.738	0.038	1.30	0.957	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	376000/1880	23.00	21.82	0.765	0.033	1.31	1.004	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	380000/1900	23.00	21.68	0.684	-0.021	1.36	0.927	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	372000/1860	23.00	22.00	0.823	0.140	1.26	1.036	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	376000/1880	23.00	21.95	0.752	-0.016	1.27	0.958	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	380000/1900	23.00	21.91	0.779	0.028	1.29	1.001	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	100%	0	372000/1860	23.00	22.00	0.768	-0.075	1.26	0.967	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	100%	0	376000/1880	23.00	21.20	0.685	0.033	1.51	1.037	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	100%	0	380000/1900	23.00	21.32	0.692	0.080	1.47	1.019	/
		Bottom Edge repeat	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	372000/1860	23.00	22.00	0.838	0.020	1.26	1.055	82
		Bottom Edge	10		CP-OFDM QPSK	100.0%	Hotspot on	1	1	372000/1860	22.00	20.38	0.725	-0.035	1.45	1.053	/
n7	Main ANT6	Back Side	10	SA & NSA	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	502000/2510	21.50	21.14	0.682	0.052	1.09	0.741	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	502000/2510	21.50	21.24	0.745	-0.030	1.06	0.791	83
		Front Side	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	502000/2510	21.50	21.14	0.158	0.045	1.09	0.172	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	502000/2510	21.50	21.24	0.162	0.019	1.06	0.172	/
		Left Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	502000/2510	21.50	21.14	0.452	0.000	1.09	0.491	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	502000/2510	21.50	21.24	0.481	-0.097	1.06	0.511	/
		Right Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
		Top Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	502000/2510	21.50	21.14	0.049	0.066	1.09	0.053	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	502000/2510	21.50	21.24	0.047	0.160	1.06	0.050	/
		Bottom Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/

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	Div ANT4	Back Side	10	SA & NSA	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	104	507000/2535	23.50	23.06	0.140	0.012	1.11	0.155	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	507000/2535	23.50	23.03	0.187	-0.070	1.11	0.208	/
		Front Side	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	104	507000/2535	23.50	23.06	0.000	0.000	1.11	0.000	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	507000/2535	23.50	23.03	0.000	0.000	1.11	0.000	/
		Left Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	104	507000/2535	23.50	23.06	0.045	0.023	1.11	0.050	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	507000/2535	23.50	23.03	0.049	0.080	1.11	0.055	/
		Right Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
		Top Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	104	507000/2535	23.50	23.06	0.099	0.091	1.11	0.110	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	507000/2535	23.50	23.03	0.102	0.025	1.11	0.114	/
		Bottom Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
n28	Main ANT0	Back Side	10	SA & NSA	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	23.00	21.93	0.359	0.023	1.28	0.459	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	23.00	22.03	0.378	0.040	1.25	0.473	84
		Front Side	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	23.00	21.93	0.195	0.018	1.28	0.249	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	23.00	22.03	0.236	-0.090	1.25	0.295	/
		Left Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	23.00	21.93	0.000	0.000	1.28	0.000	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	23.00	22.03	0.000	0.000	1.25	0.000	/
		Right Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	23.00	21.93	0.273	0.025	1.28	0.349	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	23.00	22.03	0.259	-0.069	1.25	0.324	/
		Top Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
		Bottom Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	23.00	21.93	0.094	0.034	1.28	0.120	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	23.00	22.03	0.085	0.018	1.25	0.106	/
		Back Side	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	142200/711	23.00	21.93	0.342	-0.012	1.28	0.438	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	12	141600/708	23.00	22.01	0.364	0.024	1.26	0.457	/
n40	Main ANT6	Back Side	10	SA	DFT-s-OFDM QPSK	25.0%	Hotspot on	1	50	471000/2355	23.50	23.24	0.765	0.010	0.27	0.203	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	12	471000/2355	23.50	23.20	0.965	0.028	0.27	0.259	/
		Front Side	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	50	471000/2355	23.50	23.24	0.249	0.015	0.27	0.066	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	12	471000/2355	23.50	23.20	0.326	-0.060	0.27	0.087	/
		Left Edge	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	50	471000/2355	23.50	23.24	0.868	0.037	0.27	0.230	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	12	471000/2355	23.50	23.20	1.020	0.021	0.27	0.273	85
		Right Edge	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
		Top Edge	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	50	471000/2355	23.50	23.24	0.062	0.015	0.27	0.016	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	12	471000/2355	23.50	23.20	0.042	0.060	0.27	0.011	/
		Bottom Edge	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
		Left Edge	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	50	462000/2310	23.50	22.84	0.842	-0.024	0.29	0.245	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	12	462000/2310	23.50	22.95	0.961	0.080	0.28	0.273	/
n66	Main ANT7	Back Side	10	SA & NSA	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	21.00	19.30	0.331	0.021	1.48	0.490	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	21.00	19.76	0.359	0.030	1.33	0.478	/
		Front Side	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	21.00	19.30	0.150	0.019	1.48	0.222	/

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			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	21.00	19.76	0.186	0.000	1.33	0.247	/
		Left Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	21.00	19.30	0.105	-0.020	1.48	0.155	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	21.00	19.76	0.149	0.038	1.33	0.198	/
		Right Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
		Top Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
		Bottom Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	21.00	19.30	0.434	0.040	1.48	0.642	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	21.00	19.76	0.530	-0.160	1.33	0.705	86
	Div ANT4	Back Side	10	SA & NSA	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	23.50	22.65	0.069	-0.024	1.22	0.084	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	23.50	23.14	0.089	0.012	1.09	0.097	/
		Front Side	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	23.50	22.65	0.000	0.000	1.22	0.000	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	23.50	23.14	0.000	0.000	1.09	0.000	/
		Left Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	23.50	22.65	0.000	0.000	1.22	0.000	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	23.50	23.14	0.000	0.000	1.09	0.000	/
		Right Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
		Top Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	23.50	22.65	0.072	0.025	1.22	0.088	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	23.50	23.14	0.060	0.070	1.09	0.065	/
		Bottom Edge	10		DFT-s-OFDM QPSK	100.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
n78	Main ANT5	Back Side	10	SA & NSA	DFT-s-OFDM QPSK	25.0%	Hotspot on	1	271	633332/3500	24.50	23.25	1.060	0.010	0.33	0.353	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	67	633332/3500	24.50	24.15	1.350	0.020	0.27	0.366	87
		Front Side	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	271	633332/3500	24.50	23.25	0.616	0.017	0.33	0.205	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	67	633332/3500	24.50	24.15	0.734	0.022	0.27	0.199	/
		Left Edge	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	271	633332/3500	24.50	23.25	0.707	0.012	0.33	0.236	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	67	633332/3500	24.50	24.15	1.040	-0.020	0.27	0.282	/
		Right Edge	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
		Top Edge	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	271	633332/3500	24.50	23.25	0.156	0.090	0.33	0.052	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	67	633332/3500	24.50	24.15	0.209	0.035	0.27	0.057	/
		Bottom Edge	10		DFT-s-OFDM QPSK	25.0%	Hotspot on	1	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/
			10		DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	N/A	N/A	N/A	N/A	N/A	NA	NA	N/A	/

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.
Wi-Fi 2.4G	ANT 2	Back Side	10	802.11b	98.0%	Receiver off	6/2437	18.50	17.04	0.194	-0.035	1.43	0.277	88
		Front Side	10	802.11b	98.0%	Receiver off	6/2437	18.50	17.04	0.125	-0.090	1.43	0.179	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Right Edge	10	802.11b	98.0%	Receiver off	6/2437	18.50	17.04	0.129	0.100	1.43	0.184	/
		Top Edge	10	802.11b	98.0%	Receiver off	6/2437	18.50	17.04	0.153	0.023	1.43	0.219	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/

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Wi-Fi 5G U-NII-1	ANT 2	Back Side	10	802.11a	100.0%	Receiver off	44/5220	17.00	16.23	0.213	0.080	1.19	0.254	/
		Front Side	10	802.11a	100.0%	Receiver off	44/5220	17.00	16.23	0.158	0.015	1.19	0.189	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Right Edge	10	802.11a	100.0%	Receiver off	44/5220	17.00	16.23	0.310	0.070	1.19	0.370	/
		Top Edge	10	802.11a	100.0%	Receiver off	44/5220	17.00	16.23	0.573	0.130	1.19	0.684	89
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Wi-Fi 5G U-NII-3	ANT 2	Back Side	10	802.11a	100.0%	Receiver off	157/5785	17.50	16.70	0.339	0.040	1.20	0.408	/
		Front Side	10	802.11a	100.0%	Receiver off	157/5785	17.50	16.70	0.164	-0.190	1.20	0.197	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Right Edge	10	802.11a	100.0%	Receiver off	157/5785	17.50	16.70	0.402	0.080	1.20	0.483	/
		Top Edge	10	802.11a	100.0%	Receiver off	157/5785	17.50	16.70	0.475	0.039	1.20	0.571	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Bluetooth	ANT 2	Back Side	10	DH5	76.0%	Full power	78/2480	10.00	9.75	0.036	0.012	1.39	0.050	90
		Front Side	10	DH5	76.0%	Full power	78/2480	10.00	9.75	0.032	-0.021	1.39	0.045	/
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Right Edge	10	DH5	76.0%	Full power	78/2480	10.00	9.75	0.030	0.021	1.39	0.042	/
		Top Edge	10	DH5	76.0%	Full power	78/2480	10.00	9.75	0.033	0.010	1.39	0.046	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/

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Product-specific 10g SAR Evaluation

Band	Antenna	Test Position	Type	Mode	Duty Cycle	Power Reduction	RB	offset	Channel Frequency(MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Scaling Factor	Report SAR1g	0mm SAR
n7	Main ANT6	Back Side	SA & NSA	DFT-s-OFDM QPSK	100.0%	Full Power	1	1	502000/2510	23.00	21.50	0.741	1.41	1.047	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	25	502000/2510	23.00	21.50	0.798	1.41	1.128	NO
		Front Side		DFT-s-OFDM QPSK	100.0%	Full Power	1	1	502000/2510	23.00	21.50	0.172	1.41	0.242	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	25	502000/2510	23.00	21.50	0.172	1.41	0.243	NO
		Left Edge		DFT-s-OFDM QPSK	100.0%	Full Power	1	1	502000/2510	23.00	21.50	0.491	1.41	0.694	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	25	502000/2510	23.00	21.50	0.511	1.41	0.721	NO
		Right Edge		DFT-s-OFDM QPSK	100.0%	Full Power	1	N/A	N/A	N/A	N/A	N/A	NA	N/A	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	N/A	N/A	N/A	N/A	N/A	NA	N/A	NO
		Top Edge		DFT-s-OFDM QPSK	100.0%	Full Power	1	1	502000/2510	23.00	21.50	0.053	1.41	0.075	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	25	502000/2510	23.00	21.50	0.050	1.41	0.070	NO
		Bottom Edge		DFT-s-OFDM QPSK	100.0%	Full Power	1	N/A	N/A	N/A	N/A	N/A	NA	N/A	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	N/A	N/A	N/A	N/A	N/A	NA	N/A	NO
n66	Main ANT7	Back Side	SA & NSA	DFT-s-OFDM QPSK	100.0%	Full Power	1	1	349000/1745	23.00	21.00	0.490	1.58	0.776	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	54	349000/1745	23.00	21.00	0.478	1.58	0.757	NO
		Front Side		DFT-s-OFDM QPSK	100.0%	Full Power	1	1	349000/1745	23.00	21.00	0.222	1.58	0.352	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	54	349000/1745	23.00	21.00	0.247	1.58	0.392	NO
		Left Edge		DFT-s-OFDM QPSK	100.0%	Full Power	1	1	349000/1745	23.00	21.00	0.155	1.58	0.246	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	54	349000/1745	23.00	21.00	0.198	1.58	0.314	NO
		Right Edge		DFT-s-OFDM QPSK	100.0%	Full Power	1	N/A	N/A	N/A	N/A	N/A	NA	N/A	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	N/A	N/A	N/A	N/A	N/A	NA	N/A	NO
		Top Edge		DFT-s-OFDM QPSK	100.0%	Full Power	1	N/A	N/A	N/A	N/A	N/A	NA	N/A	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	N/A	N/A	N/A	N/A	N/A	NA	N/A	NO
		Bottom Edge		DFT-s-OFDM QPSK	100.0%	Full Power	1	1	349000/1745	23.00	21.00	0.642	1.58	1.017	NO
				DFT-s-OFDM QPSK	100.0%	Full Power	50%	54	349000/1745	23.00	21.00	0.705	1.58	1.118	NO

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10dBm SAR Evaluation

Head SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Scaling Factor	Report SAR1g (W/kg)
LTE 2	Main (ANT7)	Left cheek	0	QPSK	-	Receiver on	1	50	18700/1860	10.00	23.50	0.187	0.04	0.008
			0	QPSK	-	Receiver on	50%	0	18700/1860	10.00	22.50	0.151	0.06	0.008
		Left Tilt	0	QPSK	-	Receiver on	1	50	18700/1860	10.00	23.50	0.079	0.04	0.004
			0	QPSK	-	Receiver on	50%	0	18700/1860	10.00	22.50	0.068	0.06	0.004
		Right cheek	0	QPSK	-	Receiver on	1	50	18700/1860	10.00	23.50	0.094	0.04	0.004
			0	QPSK	-	Receiver on	50%	0	18700/1860	10.00	22.50	0.088	0.06	0.005
		Right Tilt	0	QPSK	-	Receiver on	1	50	18700/1860	10.00	23.50	0.057	0.04	0.003
			0	QPSK	-	Receiver on	50%	0	18700/1860	10.00	22.50	0.056	0.06	0.003
LTE 5	Main (ANT0)	Left cheek	0	QPSK	-	Receiver on	1	0	20525/836.5	10.00	24.00	0.140	0.04	0.006
			0	QPSK	-	Receiver on	50%	25	20450/829	10.00	23.00	0.110	0.05	0.006
		Left Tilt	0	QPSK	-	Receiver on	1	0	20525/836.5	10.00	24.00	0.070	0.04	0.003
			0	QPSK	-	Receiver on	50%	25	20450/829	10.00	23.00	0.054	0.05	0.003
		Right cheek	0	QPSK	-	Receiver on	1	0	20525/836.5	10.00	24.00	0.159	0.04	0.006
			0	QPSK	-	Receiver on	50%	25	20450/829	10.00	23.00	0.120	0.05	0.006
		Right Tilt	0	QPSK	-	Receiver on	1	0	20525/836.5	10.00	24.00	0.075	0.04	0.003
			0	QPSK	-	Receiver on	50%	25	20450/829	10.00	23.00	0.063	0.05	0.003
LTE 7	Main (ANT6)	Left cheek	0	QPSK	-	Receiver on	1	99	21350/2560	10.00	23.00	0.705	0.05	0.035
			0	QPSK	-	Receiver on	50%	25	21100/2535	10.00	22.00	0.681	0.06	0.043
		Left Tilt	0	QPSK	-	Receiver on	1	99	21350/2560	10.00	23.00	0.180	0.05	0.009
			0	QPSK	-	Receiver on	50%	25	21100/2535	10.00	22.00	0.179	0.06	0.011
		Right cheek	0	QPSK	-	Receiver on	1	99	21350/2560	10.00	23.00	0.765	0.05	0.038
			0	QPSK	-	Receiver on	50%	25	21100/2535	10.00	22.00	0.873	0.06	0.055
			0	QPSK	-	Receiver on	50%	25	20850/2510	10.00	22.00	0.864	0.06	0.054
			0	QPSK	-	Receiver on	50%	25	21350/2560	10.00	22.00	0.811	0.06	0.051
			0	QPSK	-	Receiver on	100%	0	20850/2510	10.00	22.00	0.726	0.06	0.046
		Right cheek SIM2	0	QPSK	-	Receiver on	50%	25	21100/2535	10.00	22.00	0.911	0.06	0.057
		Right Tilt	0	QPSK	-	Receiver on	1	99	21350/2560	10.00	23.00	0.385	0.05	0.019
			0	QPSK	-	Receiver on	50%	25	21100/2535	10.00	22.00	0.377	0.06	0.024
	DIV (ANT4)	Left cheek	0	QPSK	-	Receiver on	1	99	21100/2535	10.00	23.00	0.017	0.05	0.001
			0	QPSK	-	Receiver on	50%	0	21100/2535	10.00	23.00	0.024	0.05	0.001
		Left Tilt	0	QPSK	-	Receiver on	1	99	21100/2535	10.00	23.00	0.016	0.05	0.001
			0	QPSK	-	Receiver on	50%	0	21100/2535	10.00	23.00	0.015	0.05	0.001
		Right cheek	0	QPSK	-	Receiver on	1	99	21100/2535	10.00	23.00	0.005	0.05	0.000
			0	QPSK	-	Receiver on	50%	0	21100/2535	10.00	23.00	0.005	0.05	0.000
		Right Tilt	0	QPSK	-	Receiver on	1	99	21100/2535	10.00	23.00	0.003	0.05	0.000
			0	QPSK	-	Receiver on	50%	0	21100/2535	10.00	23.00	0.005	0.05	0.000
	Main	Right cheek	0	QPSK	-	Receiver on	1	99	20850/2510	10.00	23.00	0.763	0.05	0.038

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	(ANT6)						1	0	21048/2529.8					
LTE 28	Main (ANT0)	Left cheek	0	QPSK	-	Receiver on	1	38	27535/735.5	10.00	24.00	0.097	0.04	0.004
			0	QPSK	-	Receiver on	50%	39	27535/735.5	10.00	23.00	0.074	0.05	0.004
		Left Tilt	0	QPSK	-	Receiver on	1	38	27535/735.5	10.00	24.00	0.051	0.04	0.002
			0	QPSK	-	Receiver on	50%	39	27535/735.5	10.00	23.00	0.040	0.05	0.002
		Right cheek	0	QPSK	-	Receiver on	1	38	27535/735.5	10.00	24.00	0.113	0.04	0.005
			0	QPSK	-	Receiver on	50%	39	27535/735.5	10.00	23.00	0.090	0.05	0.005
		Right Tilt	0	QPSK	-	Receiver on	1	38	27535/735.5	10.00	24.00	0.058	0.04	0.002
			0	QPSK	-	Receiver on	50%	39	27535/735.5	10.00	23.00	0.047	0.05	0.002
		Right cheek	0	QPSK	-	Receiver on	1	49	27275/709.5	10.00	24.00	0.111	0.04	0.004
			0	QPSK	-	Receiver on	50%	0	27290/711	10.00	23.00	0.083	0.05	0.004
LTE 66	Main (ANT7)	Left cheek	0	QPSK	-	Receiver on	1	50	132322/1745	10.00	23.50	0.150	0.04	0.007
			0	QPSK	-	Receiver on	50%	50	132322/1745	10.00	22.50	0.117	0.06	0.007
		Left Tilt	0	QPSK	-	Receiver on	1	50	132322/1745	10.00	23.50	0.125	0.04	0.006
			0	QPSK	-	Receiver on	50%	50	132322/1745	10.00	22.50	0.094	0.06	0.005
		Right cheek	0	QPSK	-	Receiver on	1	50	132322/1745	10.00	23.50	0.202	0.04	0.009
			0	QPSK	-	Receiver on	50%	50	132322/1745	10.00	22.50	0.158	0.06	0.009
		Right Tilt	0	QPSK	-	Receiver on	1	50	132322/1745	10.00	23.50	0.079	0.04	0.004
			0	QPSK	-	Receiver on	50%	50	132322/1745	10.00	22.50	0.060	0.06	0.003
	DIV (ANT4)	Left cheek	0	QPSK	-	Receiver on	1	50	132322/1745	10.00	23.00	0.011	0.05	0.001
			0	QPSK	-	Receiver on	50%	50	132322/1745	10.00	23.00	0.009	0.05	0.000
		Left Tilt	0	QPSK	-	Receiver on	1	50	132322/1745	10.00	23.00	0.012	0.05	0.001
			0	QPSK	-	Receiver on	50%	50	132322/1745	10.00	23.00	0.012	0.05	0.001
		Right cheek	0	QPSK	-	Receiver on	1	50	132322/1745	10.00	23.00	0.012	0.05	0.001
			0	QPSK	-	Receiver on	50%	50	132322/1745	10.00	23.00	0.011	0.05	0.001
		Right Tilt	0	QPSK	-	Receiver on	1	50	132322/1745	10.00	23.00	0.017	0.05	0.001
			0	QPSK	-	Receiver on	50%	50	132322/1745	10.00	23.00	0.015	0.05	0.001
n7	Main ANT6	Left cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	502000/2510	10.00	21.50	0.239	0.07	0.017
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	502000/2510	10.00	21.50	0.244	0.07	0.017
		Left Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	502000/2510	10.00	21.50	0.130	0.07	0.009
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	502000/2510	10.00	21.50	0.159	0.07	0.011
		Right cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	502000/2510	10.00	21.50	0.781	0.07	0.055
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	502000/2510	10.00	21.50	0.724	0.07	0.051
		Right Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	502000/2510	10.00	21.50	0.248	0.07	0.018
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	502000/2510	10.00	21.50	0.255	0.07	0.018
	Div ANT4	Left cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	104	507000/2535	10.00	23.50	0.023	0.04	0.001
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	507000/2535	10.00	23.50	0.030	0.04	0.001
		Left Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	104	507000/2535	10.00	23.50	0.033	0.04	0.001
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	507000/2535	10.00	23.50	0.040	0.04	0.002
		Right cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	104	507000/2535	10.00	23.50	0.063	0.04	0.003
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	507000/2535	10.00	23.50	0.080	0.04	0.004
		Right Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	104	507000/2535	10.00	23.50	0.068	0.04	0.003
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	25	507000/2535	10.00	23.50	0.084	0.04	0.004

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	Main ANT6	Right cheek	0	CP-OFDM QPSK	100.0%	Receiver on	1	1	512000/2560	10.00	21.50	0.756	0.07	0.054
n28	Main ANT0	Left cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	147400/737	10.00	23.00	0.055	0.05	0.003
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	18	147700/738.5	10.00	23.00	0.075	0.05	0.004
		Left Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	147400/737	10.00	23.00	0.043	0.05	0.002
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	18	147700/738.5	10.00	23.00	0.051	0.05	0.003
		Right cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	147400/737	10.00	23.00	0.130	0.05	0.007
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	18	147700/738.5	10.00	23.00	0.153	0.05	0.008
		Right Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	147400/737	10.00	23.00	0.065	0.05	0.003
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	18	147700/738.5	10.00	23.00	0.080	0.05	0.004
		Right cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	142200/711	10.00	23.00	0.118	0.05	0.006
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	12	141600/708	10.00	23.00	0.136	0.05	0.007
n66	Main ANT7	Left cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	10.00	23.00	0.277	0.05	0.014
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	10.00	23.00	0.234	0.05	0.012
		Left Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	10.00	23.00	0.120	0.05	0.006
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	10.00	23.00	0.112	0.05	0.006
		Right cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	10.00	23.00	0.126	0.05	0.006
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	10.00	23.00	0.128	0.05	0.006
		Right Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	10.00	23.00	0.076	0.05	0.004
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	10.00	23.00	0.077	0.05	0.004
	Div ANT4	Left cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	10.00	23.50	0.055	0.04	0.002
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	10.00	23.50	0.078	0.04	0.003
		Left Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	10.00	23.50	0.067	0.04	0.003
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	10.00	23.50	0.097	0.04	0.004
		Right cheek	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	10.00	23.50	0.084	0.04	0.004
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	10.00	23.50	0.122	0.04	0.005
		Right Tilt	0	DFT-s-OFDM QPSK	100.0%	Receiver on	1	1	349000/1745	10.00	23.50	0.095	0.04	0.004
			0	DFT-s-OFDM QPSK	100.0%	Receiver on	50%	54	349000/1745	10.00	23.50	0.137	0.04	0.006
n78	Main ANT5	Left cheek	0	DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	633332/3500	10.00	26.00	0.234	0.01	0.001
			0	DFT-s-OFDM QPSK	25.0%	Receiver on	50%	67	633332/3500	10.00	26.00	0.221	0.01	0.001
		Left Tilt	0	DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	633332/3500	10.00	26.00	0.150	0.01	0.001
			0	DFT-s-OFDM QPSK	25.0%	Receiver on	50%	67	633332/3500	10.00	26.00	0.151	0.01	0.001
		Right cheek	0	DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	633332/3500	10.00	26.00	0.671	0.01	0.004
			0	DFT-s-OFDM QPSK	25.0%	Receiver on	50%	67	633332/3500	10.00	26.00	0.605	0.01	0.004
		Right Tilt	0	DFT-s-OFDM QPSK	25.0%	Receiver on	1	1	633332/3500	10.00	26.00	0.490	0.01	0.003
			0	DFT-s-OFDM QPSK	25.0%	Receiver on	50%	67	633332/3500	10.00	26.00	0.455	0.01	0.003

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Body-worn SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g（W/kg）	Scaling Factor	Report SAR1g（W/kg）
LTE 2	Main (ANT7)	Back Side	15	QPSK	-	Receiver off	1	50	18700/1860	10.00	23.50	0.428	0.04	0.019
			15	QPSK	-	Receiver off	50%	0	18700/1860	10.00	22.50	0.355	0.06	0.020
		Front Side	15	QPSK	-	Receiver off	1	50	18700/1860	10.00	23.50	0.207	0.04	0.009
			15	QPSK	-	Receiver off	50%	0	18700/1860	10.00	22.50	0.176	0.06	0.010
LTE 5	Main (ANT0)	Back Side	15	QPSK	-	Receiver off	1	0	20525/836.5	10.00	24.00	0.320	0.04	0.013
			15	QPSK	-	Receiver off	50%	25	20450/829	10.00	23.00	0.243	0.05	0.012
		Front Side	15	QPSK	-	Receiver off	1	0	20525/836.5	10.00	24.00	0.168	0.04	0.007
			15	QPSK	-	Receiver off	50%	25	20450/829	10.00	23.00	0.126	0.05	0.006
LTE 7	Main (ANT6)	Back Side	15	QPSK	-	Receiver off	1	99	21350/2560	10.00	23.50	0.500	0.04	0.022
			15	QPSK	-	Receiver off	50%	25	21100/2535	10.00	22.50	0.518	0.06	0.029
		Front Side	15	QPSK	-	Receiver off	1	99	21350/2560	10.00	23.50	0.193	0.04	0.009
			15	QPSK	-	Receiver off	50%	25	21100/2535	10.00	22.50	0.196	0.06	0.011
	DIV (ANT4)	Back Side	15	QPSK	-	Receiver off	1	99	21100/2535	10.00	23.00	0.109	0.05	0.005
			15	QPSK	-	Receiver off	50%	0	21100/2535	10.00	23.00	0.110	0.05	0.006
		Front Side	15	QPSK	-	Receiver off	1	99	21100/2535	10.00	23.00	0.022	0.05	0.001
			15	QPSK	-	Receiver off	50%	0	21100/2535	10.00	23.00	0.023	0.05	0.001
	Main (ANT6)	Back Side	15	QPSK	-	Receiver off	1	99	20850/2510	10.00	23.00	0.474	0.05	0.024
							1	0	21048/2529.8					
LTE 28	Main (ANT0)	Back Side	15	QPSK	-	Receiver off	1	38	27535/735.5	10.00	24.00	0.218	0.04	0.009
			15	QPSK	-	Receiver off	50%	39	27535/735.5	10.00	23.00	0.142	0.05	0.007
		Back Side	15	QPSK	-	Receiver off	1	49	27275/709.5	10.00	24.00	0.191	0.04	0.008
			15	QPSK	-	Receiver off	50%	0	27290/711	10.00	23.00	0.153	0.05	0.008
		Front Side	15	QPSK	-	Receiver off	1	38	27535/735.5	10.00	24.00	0.108	0.04	0.004
			15	QPSK	-	Receiver off	50%	39	27535/735.5	10.00	23.00	0.113	0.05	0.006
LTE 66	Main (ANT7)	Back Side	15	QPSK	-	Receiver off	1	50	132322/1745	10.00	23.50	0.454	0.04	0.020
			15	QPSK	-	Receiver off	50%	50	132322/1745	10.00	22.50	0.353	0.06	0.020
		Front Side	15	QPSK	-	Receiver off	1	50	132322/1745	10.00	23.50	0.261	0.04	0.012
			15	QPSK	-	Receiver off	50%	50	132322/1745	10.00	22.50	0.198	0.06	0.011
	DIV (ANT4)	Back Side	15	QPSK	-	Receiver off	1	50	132322/1745	10.00	23.00	0.023	0.05	0.001
			15	QPSK	-	Receiver off	50%	50	132322/1745	10.00	23.00	0.025	0.05	0.001
		Front Side	15	QPSK	-	Receiver off	1	50	132322/1745	10.00	23.00	0.004	0.05	0.000
			15	QPSK	-	Receiver off	50%	50	132322/1745	10.00	23.00	0.007	0.05	0.000
n7	Main ANT6	Back Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	502000/2510	10.00	23.00	0.643	0.05	0.032
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	502000/2510	10.00	23.00	0.565	0.05	0.028
		Front Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	502000/2510	10.00	23.00	0.254	0.05	0.013
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	502000/2510	10.00	23.00	0.266	0.05	0.013
		Back Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	502000/2510	10.00	23.00	0.574	0.05	0.029
	Div ANT4	Back Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	104	507000/2535	10.00	23.50	0.089	0.04	0.004
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	507000/2535	10.00	23.50	0.101	0.04	0.005

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		Front Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	104	507000/2535	10.00	23.50	0.000	0.04	0.000
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	25	507000/2535	10.00	23.50	0.000	0.04	0.000
	Main ANT6	Back Side	15	CP-OFDM QPSK	100.0%	Receiver off	1	1	502000/2510	10.00	22.00	0.630	0.06	0.040
n28	Main ANT0	Back Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	147400/737	10.00	23.00	0.248	0.05	0.012
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	18	147700/738.5	10.00	23.00	0.253	0.05	0.013
		Front Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	147400/737	10.00	23.00	0.164	0.05	0.008
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	18	147700/738.5	10.00	23.00	0.199	0.05	0.010
		Back Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	142200/711	10.00	23.00	0.228	0.05	0.011
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	12	141600/708	10.00	23.00	0.237	0.05	0.012
n66	Main ANT7	Back Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	349000/1745	10.00	23.00	0.427	0.05	0.021
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	54	349000/1745	10.00	23.00	0.429	0.05	0.022
		Front Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	349000/1745	10.00	23.00	0.249	0.05	0.012
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	54	349000/1745	10.00	23.00	0.257	0.05	0.013
	Div ANT4	Back Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	349000/1745	10.00	23.50	0.000	0.04	0.000
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	54	349000/1745	10.00	23.50	0.000	0.04	0.000
		Front Side	15	DFT-s-OFDM QPSK	100.0%	Receiver off	1	1	349000/1745	10.00	23.50	0.000	0.04	0.000
			15	DFT-s-OFDM QPSK	100.0%	Receiver off	50%	54	349000/1745	10.00	23.50	0.000	0.04	0.000
n78	Main ANT5	Back Side	15	DFT-s-OFDM QPSK	25.0%	Receiver off	1	271	633332/3500	10.00	24.50	0.093	0.01	0.001
			15	DFT-s-OFDM QPSK	25.0%	Receiver off	135%	67	633332/3500	10.00	24.50	0.117	0.01	0.001
		Front Side	15	DFT-s-OFDM QPSK	25.0%	Receiver off	1	271	633332/3500	10.00	24.50	0.124	0.01	0.001
			15	DFT-s-OFDM QPSK	25.0%	Receiver off	135%	67	633332/3500	10.00	24.50	0.129	0.01	0.001

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Hotspot SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g （W/kg）	Scaling Factor	Report SAR1g （W/kg）
LTE 2	Main (ANT7)	Back Side	10	QPSK	-	Hotspot on	1	50	18700/1860	10.00	23.50	0.796	0.04	0.036
			10	QPSK	-	Hotspot on	50%	0	18700/1860	10.00	22.50	0.632	0.06	0.036
		Front Side	10	QPSK	-	Hotspot on	1	50	18700/1860	10.00	23.50	0.367	0.04	0.016
			10	QPSK	-	Hotspot on	50%	0	18700/1860	10.00	22.50	0.300	0.06	0.017
		Left Edge	10	QPSK	-	Hotspot on	1	50	18700/1860	10.00	23.50	0.250	0.04	0.011
			10	QPSK	-	Hotspot on	50%	0	18700/1860	10.00	22.50	0.199	0.06	0.011
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Bottom Edge	10	QPSK	-	Hotspot on	1	50	18700/1860	10.00	23.50	0.683	0.04	0.030
			10	QPSK	-	Hotspot on	50%	0	18700/1860	10.00	22.50	0.623	0.06	0.035
LTE 5	Main (ANT0)	Back Side	10	QPSK	-	Hotspot on	1	0	20525/836.5	10.00	24.00	0.544	0.04	0.022
			10	QPSK	-	Hotspot on	50%	25	20450/829	10.00	23.00	0.430	0.05	0.022
		Front Side	10	QPSK	-	Hotspot on	1	0	20525/836.5	10.00	24.00	0.408	0.04	0.016
			10	QPSK	-	Hotspot on	50%	25	20450/829	10.00	23.00	0.337	0.05	0.017
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Right Edge	10	QPSK	-	Hotspot on	1	0	20525/836.5	10.00	24.00	0.101	0.04	0.004
			10	QPSK	-	Hotspot on	50%	25	20450/829	10.00	23.00	0.087	0.05	0.004
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Bottom Edge	10	QPSK	-	Hotspot on	1	0	20525/836.5	10.00	24.00	0.262	0.04	0.010
			10	QPSK	-	Hotspot on	50%	25	20450/829	10.00	23.00	0.203	0.05	0.010
LTE 7	Main (ANT6)	Back Side	10	QPSK	-	Hotspot on	1	99	21350/2560	10.00	23.00	0.909	0.05	0.046
			10	QPSK	-	Hotspot on	1	50	20850/2510	10.00	23.00	0.989	0.05	0.050
			10	QPSK	-	Hotspot on	1	50	21100/2535	10.00	23.00	0.958	0.05	0.048
			10	QPSK	-	Hotspot on	50%	25	21100/2535	10.00	22.00	0.896	0.06	0.057
			10	QPSK	-	Hotspot on	50%	25	20850/2510	10.00	22.00	0.974	0.06	0.061
			10	QPSK	-	Hotspot on	50%	25	21350/2560	10.00	22.00	0.905	0.06	0.057
		Front Side	10	QPSK	-	Hotspot on	1	99	21350/2560	10.00	23.00	0.325	0.05	0.016
			10	QPSK	-	Hotspot on	50%	25	21100/2535	10.00	22.00	0.269	0.06	0.017
		Left Edge	10	QPSK	-	Hotspot on	1	99	21350/2560	10.00	23.00	1.083	0.05	0.054
			10	QPSK	-	Hotspot on	1	50	20850/2510	10.00	23.00	1.055	0.05	0.053
			10	QPSK	-	Hotspot on	1	50	21100/2535	10.00	23.00	1.061	0.05	0.053
			10	QPSK	-	Hotspot on	50%	25	21100/2535	10.00	22.00	0.940	0.06	0.059
			10	QPSK	-	Hotspot on	50%	25	20850/2510	10.00	22.00	0.883	0.06	0.056
			10	QPSK	-	Hotspot on	50%	25	21350/2560	10.00	22.00	0.865	0.06	0.055
			10	QPSK	-	Hotspot on	100%	0	20850/2510	10.00	22.00	0.890	0.06	0.056

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			10	QPSK	-	Hotspot on	100%	0	21100/2535	10.00	22.00	0.939	0.06	0.059
			10	QPSK	-	Hotspot on	100%	0	21350/2560	10.00	22.00	0.911	0.06	0.057
		Left Edge repeat	10	QPSK	-	Hotspot on	1	99	21350/2560	10.00	23.00	1.065	0.05	0.053
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Top Edge	10	QPSK	-	Hotspot on	1	99	21350/2560	10.00	23.00	0.096	0.05	0.005
			10	QPSK	-	Hotspot on	50%	25	21100/2535	10.00	22.00	0.067	0.06	0.004
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	DIV (ANT4)	Back Side	10	QPSK	-	Hotspot on	1	99	21100/2535	10.00	23.00	0.318	0.05	0.016
			10	QPSK	-	Hotspot on	50%	0	21100/2535	10.00	23.00	0.323	0.05	0.016
		Front Side	10	QPSK	-	Hotspot on	1	99	21100/2535	10.00	23.00	0.057	0.05	0.003
			10	QPSK	-	Hotspot on	50%	0	21100/2535	10.00	23.00	0.057	0.05	0.003
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Right Edge	10	N/A	-	Hotspot on	1	99	21100/2535	10.00	23.00	0.008	0.05	0.000
			10	N/A	-	Hotspot on	50%	0	21100/2535	10.00	23.00	0.007	0.05	0.000
		Top Edge	10	QPSK	-	Hotspot on	1	99	21100/2535	10.00	23.00	0.116	0.05	0.006
			10	QPSK	-	Hotspot on	50%	0	21100/2535	10.00	23.00	0.110	0.05	0.006
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Main (ANT6)	Back Side	10	QPSK		Hotspot on	1	99	20850/2510	10.00	23.00	1.031	0.05	0.052
							1	0	21048/2529.8					
LTE 28	Main (ANT0)	Back Side	10	QPSK	-	Hotspot on	1	38	27535/735.5	10.00	24.00	0.324	0.04	0.013
			10	QPSK	-	Hotspot on	50%	39	27535/735.5	10.00	23.00	0.250	0.05	0.013
		Back Side	10	QPSK	-	Hotspot on	1	49	27275/709.5	10.00	24.00	0.317	0.04	0.013
			10	QPSK	-	Hotspot on	50%	0	27290/711	10.00	23.00	0.233	0.05	0.012
		Front Side	10	QPSK	-	Hotspot on	1	38	27535/735.5	10.00	24.00	0.168	0.04	0.007
			10	QPSK	-	Hotspot on	50%	39	27535/735.5	10.00	23.00	0.127	0.05	0.006
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Right Edge	10	QPSK	-	Hotspot on	1	38	27535/735.5	10.00	24.00	0.256	0.04	0.010
			10	QPSK	-	Hotspot on	50%	39	27535/735.5	10.00	23.00	0.213	0.05	0.011
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Bottom Edge	10	QPSK	-	Hotspot on	1	38	27535/735.5	10.00	24.00	0.096	0.04	0.004
			10	QPSK	-	Hotspot on	50%	39	27535/735.5	10.00	23.00	0.054	0.05	0.003
		Back Side	10	QPSK	-	Hotspot on	1	49	27275/709.5	10.00	24.00	0.317	0.04	0.013
			10	QPSK	-	Hotspot on	50%	0	27290/711	10.00	23.00	0.233	0.05	0.012
LTE 66	Main (ANT7)	Back Side	10	QPSK	-	Hotspot on	1	50	132322/1745	10.00	23.50	0.955	0.04	0.043
			10	QPSK	-	Hotspot on	1	50	132072/1720	10.00	23.50	0.984	0.04	0.044
			10	QPSK	-	Hotspot on	1	50	132572/1770	10.00	23.50	0.926	0.04	0.041

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			10	QPSK	-	Hotspot on	50%	50	132322/1745	10.00	22.50	0.759	0.06	0.043
		Front Side	10	QPSK	-	Hotspot on	1	50	132322/1745	10.00	23.50	0.487	0.04	0.022
			10	QPSK	-	Hotspot on	50%	50	132322/1745	10.00	22.50	0.428	0.06	0.024
		Left Edge	10	QPSK	-	Hotspot on	1	50	132322/1745	10.00	23.50	0.272	0.04	0.012
			10	QPSK	-	Hotspot on	50%	50	132322/1745	10.00	22.50	0.255	0.06	0.014
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Bottom Edge	10	QPSK	-	Hotspot on	1	50	132322/1745	10.00	23.50	1.008	0.04	0.045
			10	QPSK	-	Hotspot on	1	50	132072/1720	10.00	23.50	0.952	0.04	0.043
			10	QPSK	-	Hotspot on	1	50	132572/1770	10.00	23.50	0.992	0.04	0.044
			10	QPSK	-	Hotspot on	50%	50	132322/1745	10.00	22.50	0.678	0.06	0.038
			10	QPSK	-	Hotspot on	100%	0	132322/1745	10.00	22.50	0.748	0.06	0.042
		Bottom Edge repeat	10	QPSK	-	Hotspot on	1	50	132322/1745	10.00	23.50	1.002	0.04	0.045
	DIV (ANT4)	Back Side	10	QPSK	-	Hotspot on	1	50	132322/1745	10.00	23.00	0.046	0.05	0.002
			10	QPSK	-	Hotspot on	50%	50	132322/1745	10.00	23.00	0.042	0.05	0.002
		Front Side	10	QPSK	-	Hotspot on	1	50	132322/1745	10.00	23.00	0.008	0.05	0.000
			10	QPSK	-	Hotspot on	50%	50	132322/1745	10.00	23.00	0.006	0.05	0.000
		Left Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Right Edge	10	N/A	-	Hotspot on	1	50	132322/1745	10.00	23.00	0.008	0.05	0.000
			10	N/A	-	Hotspot on	50%	50	132322/1745	10.00	23.00	0.008	0.05	0.000
		Top Edge	10	QPSK	-	Hotspot on	1	50	132322/1745	10.00	23.00	0.001	0.05	0.000
			10	QPSK	-	Hotspot on	50%	50	132322/1745	10.00	23.00	0.000	0.05	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	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
n7	Main ANT6	Back Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	502000/2510	10.00	21.50	0.741	0.07	0.052
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	502000/2510	10.00	21.50	0.798	0.07	0.057
		Front Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	502000/2510	10.00	21.50	0.172	0.07	0.012
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	502000/2510	10.00	21.50	0.172	0.07	0.012
		Left Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	502000/2510	10.00	21.50	0.491	0.07	0.035
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	502000/2510	10.00	21.50	0.511	0.07	0.036
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
		Top Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	502000/2510	10.00	21.50	0.053	0.07	0.004
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	502000/2510	10.00	21.50	0.050	0.07	0.004
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
	Div ANT4	Back Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	104	507000/2535	10.00	23.50	0.155	0.04	0.007
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	507000/2535	10.00	23.50	0.208	0.04	0.009
		Front Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	104	507000/2535	10.00	23.50	0.000	0.04	0.000

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			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	507000/2535	10.00	23.50	0.000	0.04	0.000
		Left Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	104	507000/2535	10.00	23.50	0.050	0.04	0.002
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	507000/2535	10.00	23.50	0.055	0.04	0.002
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
		Top Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	104	507000/2535	10.00	23.50	0.110	0.04	0.005
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	25	507000/2535	10.00	23.50	0.114	0.04	0.005
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
n28	Main ANT0	Back Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	10.00	23.00	0.359	0.05	0.018
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	10.00	23.00	0.378	0.05	0.019
		Front Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	10.00	23.00	0.195	0.05	0.010
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	10.00	23.00	0.236	0.05	0.012
		Left Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	10.00	23.00	0.000	0.05	0.000
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	10.00	23.00	0.000	0.05	0.000
		Right Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	10.00	23.00	0.273	0.05	0.014
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	10.00	23.00	0.259	0.05	0.013
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
		Bottom Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	147400/737	10.00	23.00	0.094	0.05	0.005
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	18	147700/738.5	10.00	23.00	0.085	0.05	0.004
		Back Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	142200/711	10.00	23.00	0.342	0.05	0.017
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	12	141600/708	10.00	23.00	0.364	0.05	0.018
n66	Main ANT7	Back Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	10.00	21.00	0.490	0.08	0.039
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	10.00	21.00	0.478	0.08	0.038
		Front Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	10.00	21.00	0.222	0.08	0.018
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	10.00	21.00	0.247	0.08	0.020
		Left Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	10.00	21.00	0.155	0.08	0.012
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	10.00	21.00	0.198	0.08	0.016
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
		Top Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
		Bottom Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	10.00	21.00	0.642	0.08	0.051
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	10.00	21.00	0.705	0.08	0.056
	Div ANT4	Back Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	10.00	23.50	0.084	0.04	0.004
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	10.00	23.50	0.097	0.04	0.004
		Front Side	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	10.00	23.50	0.000	0.04	0.000
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	10.00	23.50	0.000	0.04	0.000
		Left Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	10.00	23.50	0.000	0.04	0.000
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	10.00	23.50	0.000	0.04	0.000
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A

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		Top Edge	10	DFT-s-OFDM QPSK	100.0%	Hotspot on	1	1	349000/1745	10.00	23.50	0.088	0.04	0.004
			10	DFT-s-OFDM QPSK	100.0%	Hotspot on	50%	54	349000/1745	10.00	23.50	0.065	0.04	0.003
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
n78	Main ANT5	Back Side	10	DFT-s-OFDM QPSK	25.0%	Hotspot on	1	271	633332/3500	10.00	24.50	0.353	0.01	0.003
			10	DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	67	633332/3500	10.00	24.50	0.366	0.01	0.003
		Front Side	10	DFT-s-OFDM QPSK	25.0%	Hotspot on	1	271	633332/3500	10.00	24.50	0.205	0.01	0.002
			10	DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	67	633332/3500	10.00	24.50	0.199	0.01	0.002
		Left Edge	10	DFT-s-OFDM QPSK	25.0%	Hotspot on	1	271	633332/3500	10.00	24.50	0.236	0.01	0.002
			10	DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	67	633332/3500	10.00	24.50	0.282	0.01	0.002
		Right Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
		Top Edge	10	DFT-s-OFDM QPSK	25.0%	Hotspot on	1	271	633332/3500	10.00	24.50	0.052	0.01	0.000
			10	DFT-s-OFDM QPSK	25.0%	Hotspot on	50%	67	633332/3500	10.00	24.50	0.057	0.01	0.001
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A
			10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A

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10.3 Simultaneous Transmission Analysis

Simultaneous Transmission Configurations	Head	Body-worn	Hotspot	Product Specific 10-g SAR
GSM / WCDMA / LTE / NR + Bluetooth	Yes	Yes	Yes	Yes
GSM / WCDMA / LTE / NR + Wi-Fi 2.4GHz	Yes	Yes	Yes	Yes
GSM / WCDMA / LTE / NR + Wi-Fi 5GHz	Yes	Yes	Yes	Yes
Wi-Fi 2.4GHz + Wi-Fi 5GHz	N/A	N/A	N/A	N/A
GSM / WCDMA / LTE/ NR + Wi-Fi 2.4GHz + Wi-Fi 5GHz	N/A	N/A	N/A	N/A
Wi-Fi 2.4GHz + Bluetooth	N/A	N/A	N/A	N/A
Wi-Fi 5GHz + Bluetooth	N/A	N/A	N/A	N/A
Main Antenna + DIV Antenna	N/A	N/A	N/A	N/A

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 = $(SAR1 + SAR2)^{1.5}$ / (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 ≤ 0.04, simultaneously transmission SAR measurement is not necessary.

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The maximum SAR_{1g} Value for GSM / WCDMA / LTE/ NR

Test Position \ SAR_{1g}(W/kg)		GSM 850	GSM 1900	WCDMA Band II	WCDMA Band IV	WCDMA Band V	LTE Band 2	LTE Band 5	LTE Band 7		LTE Band 12	LTE Band 13	LTE Band 26	MAX. SAR_{1g}
		Ant 0	Ant 7	Ant 7	Ant 7	Ant 0	Ant 7	Ant 0	Ant 6	Ant 4	Ant 0	Ant 0	Ant 20	
Head	Left Cheek	0.112	0.115	0.118	0.162	0.144	0.187	0.140	0.705	0.024	0.089	0.156	0.146	0.705
	Left Tilt	0.056	0.039	0.092	0.121	0.068	0.079	0.070	0.180	0.016	0.041	0.069	0.071	0.180
	Right Cheek	0.125	0.086	0.182	0.219	0.151	0.094	0.159	0.911	0.005	0.090	0.164	0.189	0.911
	Right Tilt	0.066	0.026	0.063	0.092	0.079	0.057	0.075	0.385	0.005	0.058	0.089	0.105	0.385
Body worn	Back Side	0.293	0.239	0.445	0.546	0.335	0.428	0.320	0.518	0.110	0.168	0.241	0.363	0.546
	Front Side	0.164	0.131	0.252	0.308	0.263	0.207	0.168	0.196	0.023	0.114	0.132	0.215	0.308
Hotspot	Back Side	0.940	0.622	0.767	0.942	0.486	0.796	0.544	0.989	0.323	0.267	0.373	0.576	0.989
	Front Side	0.543	0.294	0.355	0.428	0.311	0.367	0.408	0.325	0.057	0.135	0.202	0.351	0.543
	Left Edge	N/A	0.122	0.180	0.280	N/A	0.250	N/A	1.083	N/A	N/A	N/A	N/A	1.083
	Right Edge	0.099	N/A	N/A	N/A	0.156	N/A	0.101	N/A	0.008	0.263	0.225	0.174	0.263
	Top Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.096	0.116	N/A	N/A	N/A	0.116
	Bottom Edge	0.297	0.469	0.685	0.978	0.226	0.683	0.262	N/A	N/A	0.071	0.055	0.104	0.978

Test Position \ SAR_{1g}(W/kg)		LTE Band 28	LTE Band 38	LTE Band 40	LTE Band 66		NR n2	NR n7		NR n28	NR n40	NR n66		NR n78	MAX. SAR_{1g}
		Ant 0	Ant 6	Ant 6	Ant 7	Ant 4	Ant 7	Ant 6	Ant 4	Ant 0	Ant 6	Ant 7	Ant 4	Ant 5	
Head	Left Cheek	0.097	0.421	0.285	0.150	0.011	0.295	0.244	0.030	0.075	0.112	0.277	0.078	0.234	0.421
	Left Tilt	0.051	0.112	0.079	0.125	0.012	0.114	0.159	0.040	0.051	0.055	0.120	0.097	0.151	0.159
	Right Cheek	0.113	0.568	0.735	0.202	0.012	0.164	0.781	0.080	0.153	0.335	0.128	0.122	0.671	0.781
	Right Tilt	0.058	0.238	0.336	0.079	0.017	0.074	0.255	0.084	0.080	0.106	0.077	0.137	0.490	0.490
Body worn	Back Side	0.218	0.282	0.440	0.454	0.025	0.627	0.643	0.101	0.253	0.230	0.429	0.000	0.117	0.643
	Front Side	0.113	0.128	0.161	0.261	0.007	0.366	0.266	0.000	0.199	0.076	0.257	0.000	0.129	0.366
Hotspot	Back Side	0.324	0.620	0.741	0.984	0.046	0.911	0.791	0.208	0.473	0.259	0.490	0.097	0.366	0.984
	Front Side	0.168	0.243	0.287	0.487	0.008	0.476	0.172	0.000	0.295	0.087	0.247	0.000	0.205	0.487
	Left Edge	N/A	0.697	0.834	0.272	N/A	0.292	0.511	0.055	0.000	0.273	0.198	0.000	0.282	0.834
	Right Edge	0.256	N/A	N/A	N/A	0.008	0.060	N/A	N/A	0.349	N/A	N/A	N/A	N/A	0.349
	Top Edge	N/A	0.099	0.144	N/A	0.001	0.044	0.053	0.114	N/A	0.016	N/A	0.088	0.057	0.144
	Bottom Edge	0.096	N/A	N/A	1.008	N/A	1.055	N/A	N/A	0.120	N/A	0.705	N/A	N/A	1.055

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10dBm SAR Evaluation

Test Position \ SAR_{1g}(W/kg)		LTE Band 2	LTE Band 5	LTE Band 7		LTE Band 28	LTE Band 66		NR n7		NR n28	NR n66		NR n78
		Ant 7	Ant 0	Ant 6	Ant 4	Ant 0	Ant 7	Ant 4	Ant 6	Ant 4	Ant 0	Ant 7	Ant 4	Ant 5
Head	Left Cheek	0.008	0.006	0.043	0.001	0.004	0.007	0.001	0.017	0.001	0.004	0.014	0.003	0.001
	Left Tilt	0.004	0.003	0.011	0.001	0.002	0.006	0.001	0.011	0.002	0.003	0.006	0.004	0.001
	Right Cheek	0.005	0.006	0.057	0.000	0.005	0.009	0.001	0.055	0.004	0.008	0.006	0.005	0.004
	Right Tilt	0.003	0.003	0.024	0.000	0.002	0.004	0.001	0.018	0.004	0.004	0.004	0.006	0.003
Body worn	Back Side	0.020	0.013	0.029	0.006	0.009	0.020	0.001	0.040	0.005	0.013	0.022	0.000	0.001
	Front Side	0.010	0.007	0.011	0.001	0.006	0.012	0.000	0.013	0.000	0.010	0.013	0.000	0.001
Hotspot	Back Side	0.036	0.022	0.061	0.016	0.013	0.044	0.002	0.057	0.009	0.019	0.039	0.004	0.003
	Front Side	0.017	0.017	0.017	0.003	0.007	0.024	0.000	0.012	0.000	0.012	0.02	0.000	0.002
	Left Edge	0.011	N/A	0.059	N/A	0.000	0.014	N/A	0.036	0.002	0.000	0.016	0.000	0.002
	Right Edge	N/A	0.004	N/A	0.000	N/A	N/A	0.000	N/A	N/A	0.014	N/A	N/A	N/A
	Top Edge	N/A	N/A	0.005	0.006	0.000	N/A	0.000	0.004	0.005	N/A	N/A	0.004	0.001
	Bottom Edge	0.035	0.01	N/A	N/A	N/A	0.045	N/A	N/A	N/A	0.005	0.056	N/A	N/A

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LTE Full Power, NR 10 dBm															
Band		DC_2A-n7A	DC_28A-n7A	DC_7A-n28A	DC_66A-n28A	DC_2A-n66A	DC_7A-n66A	DC_66A-n66A	DC_28A-n66A	DC_2A-n78A	DC_5A-n78A	DC_7A-n78A	DC_28A-n78A	DC_66A-n78A	EN-DC MAX SAR_{1g}
		Ant 7+ Ant 4	Ant 0+ Ant 4	Ant 4 +Ant 0	Ant 4 +Ant 0	Ant 7+ Ant 4	Ant 6+ Ant 4	Ant 7+ Ant 4	Ant 0+ Ant 4	Ant 7+ Ant 5	Ant 0+ Ant 5	Ant 6+ Ant 5	Ant 0+ Ant 5	Ant 7+ Ant 5	
Head	Left cheek	0.188	0.098	0.028	0.015	0.190	0.708	0.153	0.100	0.188	0.141	0.706	0.098	0.151	0.708
	Left Tilt	0.081	0.053	0.019	0.015	0.083	0.184	0.129	0.055	0.080	0.071	0.181	0.052	0.126	0.184
	Right cheek	0.098	0.117	0.013	0.020	0.099	0.916	0.207	0.118	0.098	0.163	0.915	0.117	0.206	0.916
	Right Tilt	0.061	0.062	0.009	0.021	0.063	0.391	0.085	0.064	0.060	0.078	0.388	0.061	0.082	0.391
Body worn	Back Side	0.433	0.223	0.123	0.038	0.428	0.518	0.454	0.218	0.429	0.321	0.519	0.219	0.455	0.519
	Front Side	0.207	0.113	0.033	0.017	0.207	0.196	0.261	0.113	0.208	0.169	0.197	0.114	0.262	0.262
Hotspot	Back Side	0.805	0.333	0.342	0.065	0.800	0.993	0.988	0.328	0.799	0.547	0.992	0.327	0.987	0.993
	Front Side	0.367	0.168	0.069	0.020	0.367	0.325	0.487	0.168	0.369	0.410	0.327	0.170	0.489	0.489
	Left Edge	0.252	0.002	0.000	0.000	0.250	1.083	0.272	0.000	0.252	0.002	1.085	0.002	0.274	1.085
	Right Edge	N/A	0.256	0.022	0.022	N/A	N/A	N/A	0.256	N/A	0.101	N/A	0.256	N/A	0.256
	Top Edge	0.005	0.005	0.116	0.001	0.004	0.100	0.004	0.004	0.001	0.001	0.097	0.001	0.001	0.116
	Bottom Edge	0.683	0.096	0.005	0.005	0.683	N/A	1.008	0.096	0.683	0.262	N/A	0.096	1.008	1.008

LTE 10 dBm, NR Full Power															
Band		DC_2A-n7A	DC_28A-n7A	DC_7A-n28A	DC_66A-n28A	DC_2A-n66A	DC_7A-n66A	DC_66A-n66A	DC_28A-n66A	DC_2A-n78A	DC_5A-n78A	DC_7A-n78A	DC_28A-n78A	DC_66A-n78A	EN-DC MAX $SAR_{1g/10g}$
		Ant 7+ Ant 4	Ant 0+ Ant 4	Ant 4+ Ant 0	Ant 4+ Ant 0	Ant 7+ Ant 4	Ant 6+ Ant 4	Ant 7+ Ant 4	Ant 0+ Ant 4	Ant 7+ Ant 5	Ant 0+ Ant 5	Ant 6+ Ant 5	Ant 0+ Ant 5	Ant 7+ Ant 5	
Head	Left cheek	0.038	0.034	0.076	0.076	0.086	0.121	0.085	0.082	0.242	0.240	0.277	0.238	0.241	0.277
	Left Tilt	0.044	0.042	0.052	0.052	0.101	0.108	0.103	0.099	0.155	0.154	0.162	0.153	0.157	0.162
	Right cheek	0.085	0.085	0.153	0.154	0.127	0.179	0.131	0.127	0.676	0.677	0.728	0.676	0.680	0.728
	Right Tilt	0.087	0.086	0.080	0.081	0.140	0.161	0.141	0.139	0.493	0.493	0.514	0.492	0.494	0.514
Body worn	Back Side	0.121	0.110	0.259	0.254	0.020	0.029	0.020	0.009	0.137	0.130	0.146	0.126	0.137	0.259
	Front Side	0.010	0.006	0.200	0.199	0.010	0.011	0.012	0.006	0.139	0.136	0.140	0.135	0.141	0.200
Hotspot	Back Side	0.244	0.221	0.489	0.475	0.133	0.158	0.141	0.110	0.402	0.388	0.427	0.379	0.410	0.489
	Front Side	0.017	0.007	0.298	0.295	0.017	0.017	0.024	0.007	0.222	0.222	0.222	0.212	0.229	0.298
	Left Edge	0.066	0.055	0.000	0.000	0.011	0.059	0.014	0.000	0.293	0.282	0.341	0.282	0.296	0.341
	Right Edge	N/A	N/A	0.349	0.349	N/A	N/A	N/A	N/A	N/A	0.004	N/A	N/A	N/A	0.349
	Top Edge	0.114	0.114	0.006	0.000	0.088	0.093	0.088	0.088	0.057	0.057	0.062	0.057	0.057	0.114
	Bottom Edge	0.035	N/A	0.120	0.120	0.035	N/A	0.045	N/A	0.035	0.010	N/A	N/A	0.045	0.120

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About Wi-Fi/ Bluetooth and WWAN-Antenna

Test Position \ SAR_{1g}(W/kg)		WWAN-Antenna				Wi-Fi Antenna			Bluetooth	Wi-Fi/ Bluetooth + WWAN MAX. ΣSAR_{1g}
		GSM/WCDMA/LTE/NR MAX SAR_{1g}		EN-DC MAX SAR_{1g}		Wi-Fi 2.4G	Wi-Fi 5G U-NII-1	Wi-Fi 5G U-NII-3		
Head	Left Cheek	0.705	0.421	**0.708**	0.277	0.611	**0.778**	0.753	0.177	1.486
	Left Tilt	0.180	0.159	**0.184**	0.162	0.794	**1.069**	1.036	0.134	1.253
	Right Cheek	0.911	0.781	**0.916**	0.728	0.264	0.564	**0.571**	0.077	1.487
	Right Tilt	0.385	0.490	0.391	**0.514**	0.318	0.720	**0.999**	0.059	1.513
Body worn	Back Side	0.546	**0.643**	0.519	0.259	0.170	0.171	**0.252**	0.050	0.895
	Front Side	0.308	**0.366**	0.262	0.200	0.089	0.088	**0.113**	0.045	0.479
Hotspot	Back Side	0.989	0.984	**0.993**	0.489	0.277	0.254	**0.408**	0.050	1.401
	Front Side	**0.543**	0.487	0.489	0.298	0.179	0.189	**0.197**	0.045	0.740
	Left Edge	**1.083**	0.834	1.085	0.341	N/A	N/A	N/A	N/A	1.085
	Right Edge	0.263	**0.349**	0.256	0.349	0.184	0.370	**0.483**	0.042	0.832
	Top Edge	0.116	**0.144**	0.116	0.114	0.219	**0.684**	0.571	0.046	0.828
	Bottom Edge	0.978	**1.055**	1.008	0.120	N/A	N/A	N/A	N/A	1.055

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

2.MAX. ΣSAR_{1g} =Unlicensed SAR_{MAX} +Licensed SAR_{MAX}

MAX. ΣSAR_{1g} = 1.513W/kg<1.6W/kg, So the Simultaneous transimition SAR with volum scan are not required for Wi-Fi /Bluetooth and WWAN-Antenna.

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11 Measurement Uncertainty

Per KDB865664 D01:
SAR measurement uncertainty analysis is required in SAR reports only when the highest measured SAR in a frequency band is ≥ 1.5 W/kg for 1-g SAR. The equivalent ratio (1.5/1.6) should be applied to extremity and occupational exposure conditions. The procedures described in IEEE Std 1528-2013 should be applied.

No.	Source	Evaluation Method	Uncertainty Component a_i (%)	Probability Distribution	Coverage Factor k	Weight c_i	Standard Uncertainty u_i' (%)	(Equivalent) Degree of Freedom V_{eff} or v_i
1	Measurement repeatability	A	0.5	Normal	1	1	0.5	9
	Measuring device							
2	- Probe calibration	B	6.6	Normal	1	1	6.6	∞
3	- Axial isotropy of probe	B	4.7	Rectangular	$\sqrt{3}$	$\sqrt{0.5}$	1.9	∞
4	- Spherical isotropy of probe	B	9.4	Rectangular	$\sqrt{3}$	$\sqrt{0.5}$	3.9	∞
5	- Boundary effect	B	1.9	Rectangular	$\sqrt{3}$	1	1.1	∞
6	- Linearity of probe	B	4.7	Rectangular	$\sqrt{3}$	1	2.7	∞
7	- Detection limit	B	1.0	Rectangular	$\sqrt{3}$	1	0.6	∞
8	- Electronic reading	B	1.0	Normal	1	1	1.0	∞
9	- Response time	B	0	Rectangular	$\sqrt{3}$	1	0	∞
10	- Integration time	B	4.32	Rectangular	$\sqrt{3}$	1	2.5	∞
11	- Noise	B	0	Rectangular	$\sqrt{3}$	1	0	∞
12	- Reflection	B	3	Rectangular	$\sqrt{3}$	1	1.73	∞
13	- Mechanical positioning of probe	B	0.4	Rectangular	$\sqrt{3}$	1	0.2	∞
14	- Probe and human body model positioning	B	2.9	Rectangular	$\sqrt{3}$	1	1.7	∞
15	- SAR extrapolation and interpolation	B	3.9	Rectangular	$\sqrt{3}$	1	2.3	∞
	Uncertainties related to DUT							
16	- DUT location	A	2.9	Normal	1	1	4.92	71

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17	- DUT fixture	A	4.1	Normal	1	1	4.1	5
18	- Output power drift	B	5.0	Rectangular	$\sqrt{3}$	1	2.9	∞
	Physical parameters							
18	- Shell of human body model	B	4.0	Rectangular	$\sqrt{3}$	1	2.3	∞
19	- Liquid conductivity (deviation from target value)	B	5.0	Rectangular	$\sqrt{3}$	0.64	1.8	∞
20	- Liquid conductivity (measurement error)	B	0.77	Normal	1	0.64	0.493	9
21	- Liquid dielectric constant (deviation from target value)	B	5.0	Rectangular	$\sqrt{3}$	0.6	1.7	∞
22	- Liquid dielectric constant (measurement error)	B	0.29	Normal	1	0.6	0.174	9
Combined standard uncertainty		$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$					11.36	
Expanded uncertainty (95% confidence interval)		$u_e = 2u_c$		Normal	k=2		22.72	

Therefore, the combined relative standard uncertainty is

$$u_c^{'} = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^{'2}}$$

= 11.36%

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

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ANNEX A: Test Layout

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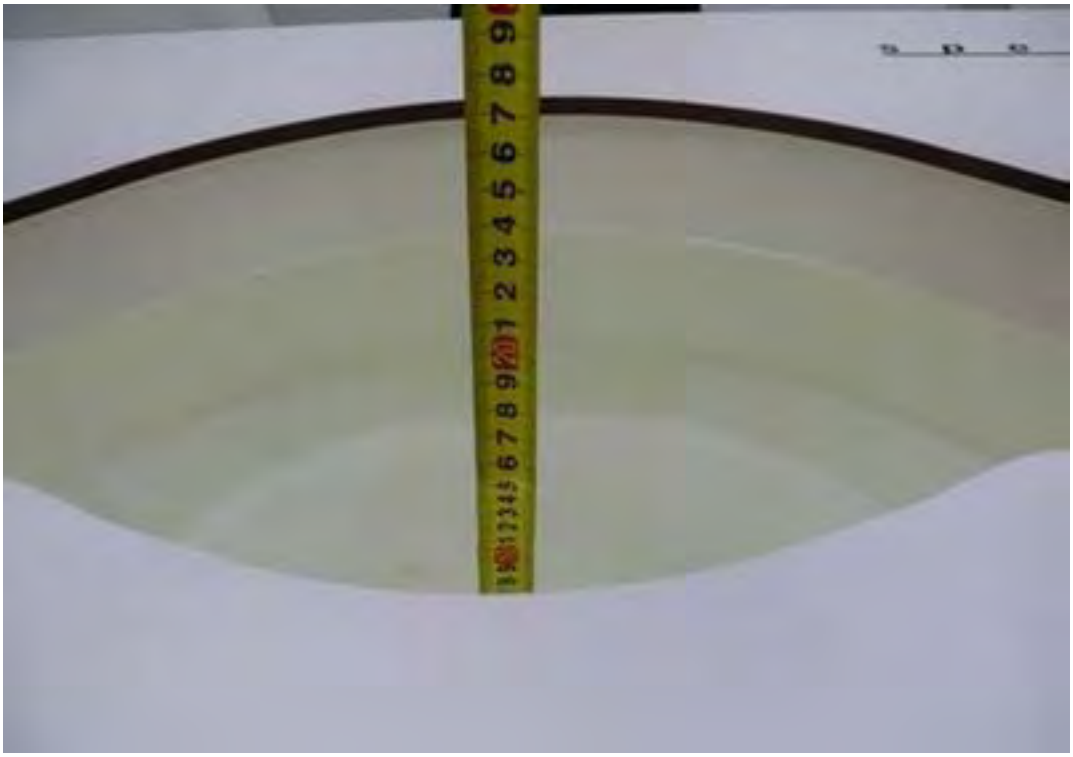
Tissue Simulating Liquids

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

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ANNEX B: System Check Results

Plot 1 System Performance Check at 750 MHz TSL

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1045

Date: 2022/6/14

Communication System:CW (0); Frequency: 750 MHz;Duty Cycle: 1:1

Medium parameters used: f = 750 MHz; σ = 0.88 S/m; ε_r = 42.3; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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) = 2.29 W/kg

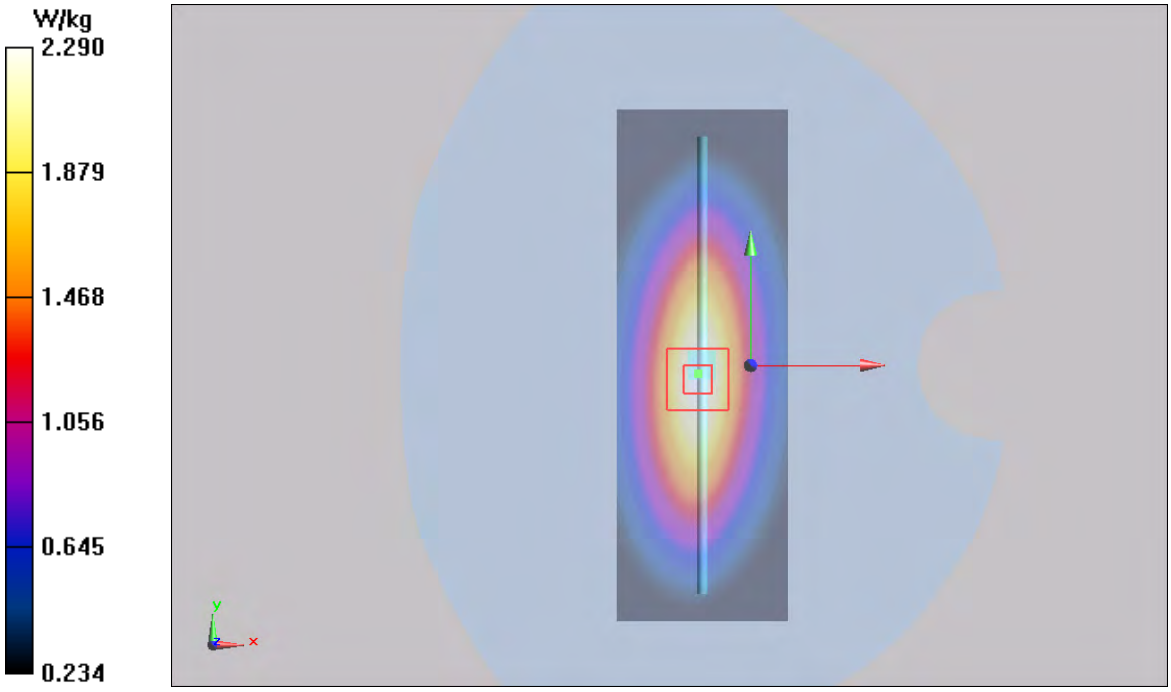
d=15mm,Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.653 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 3.16 W/kg

SAR(1 g) = 2.13 W/kg; SAR(10 g) = 1.41 W/kg

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



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Plot 2 System Performance Check at 750 MHz TSL

DUT: Dipole 750 MHz; Type: D750V3; Serial: 1045

Date: 2022/6/16

Communication System:CW (0); Frequency: 750 MHz;Duty Cycle: 1:1

Medium parameters used: f = 750 MHz; σ = 0.87 S/m; ε_r = 42.0; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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) = 2.31 W/kg

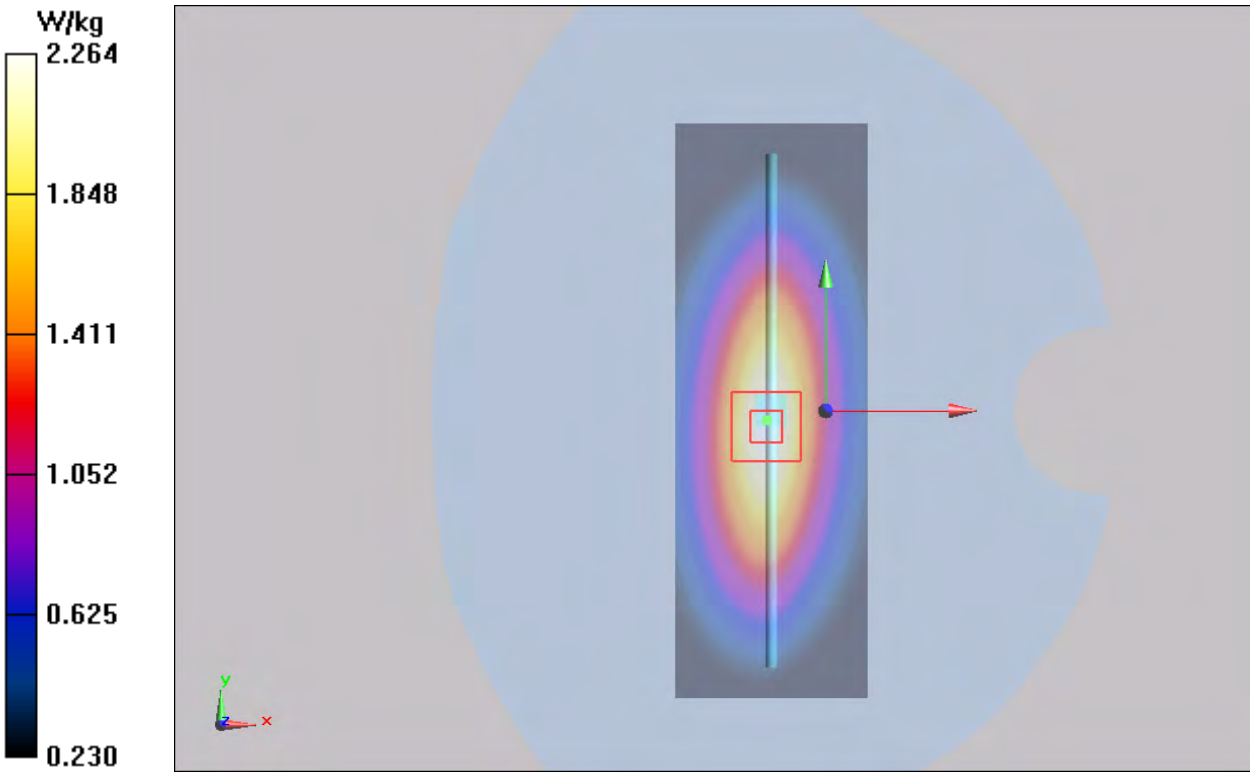
d=15mm,Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.557 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 3.14 W/kg

SAR(1 g) = 2.10 W/kg; SAR(10 g) = 1.37 W/kg

Maximum value of SAR (measured) = 2.264 W/kg



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Plot 3 System Performance Check at 835 MHz TSL

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

Date: 2022/6/13

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

Medium parameters used: f = 835 MHz; σ = 0.88 S/m; ε_r = 41.4; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

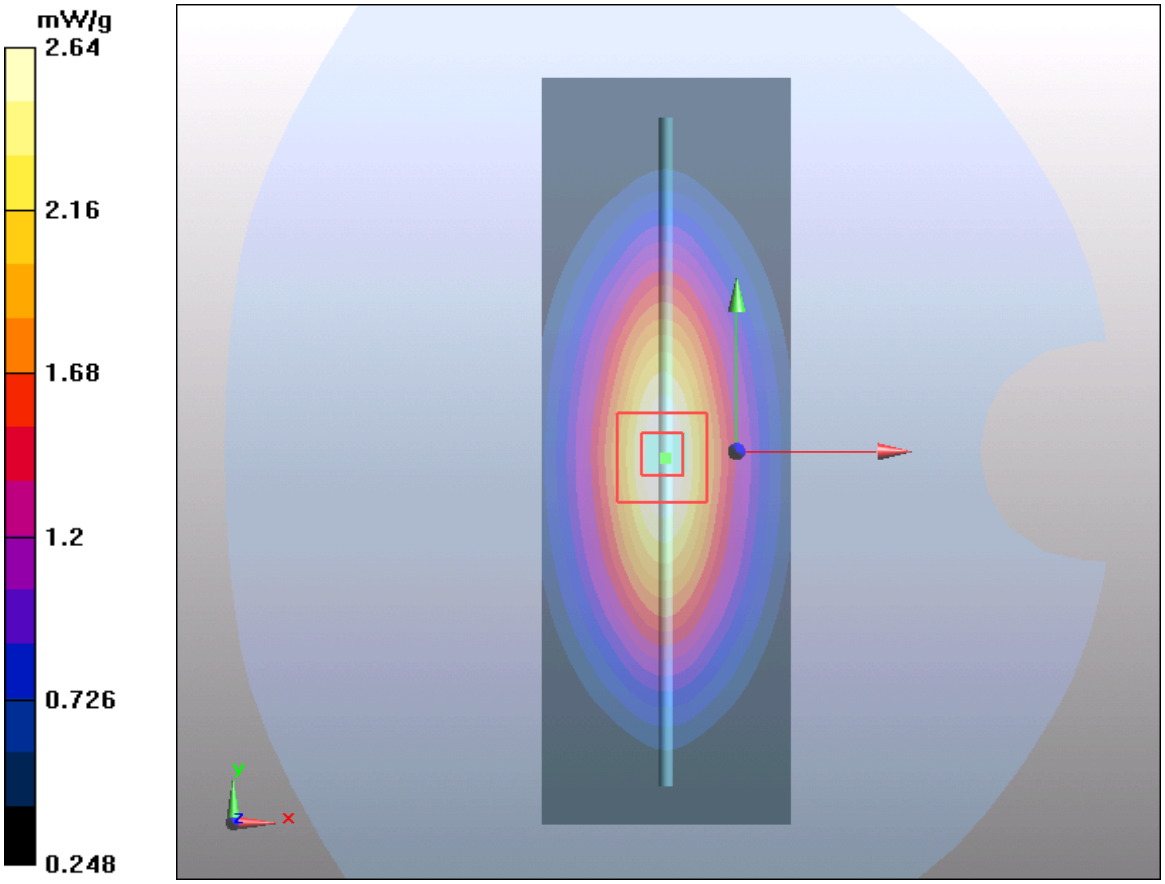
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



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Plot 4 System Performance Check at 835 MHz TSL

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

Date: 2022/6/17

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

Medium parameters used: f = 835 MHz; σ =0.87 S/m; ε_r = 41.3; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

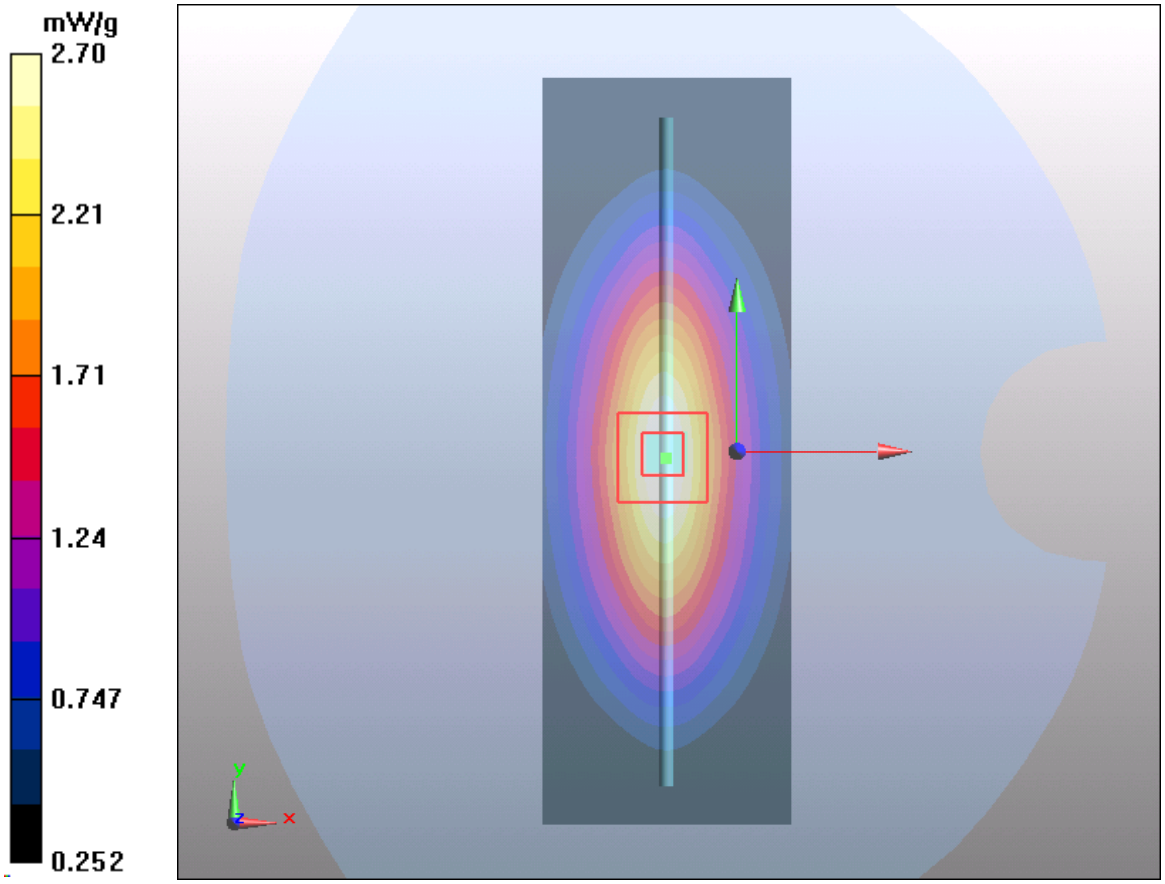
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



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Plot 5 System Performance Check at 1750 MHz TSL

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1033

Date: 2022/6/15

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

Medium parameters used: f = 1750 MHz; σ = 1.34 S/m; ε_r = 40.2; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); 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 (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.78 mW/g

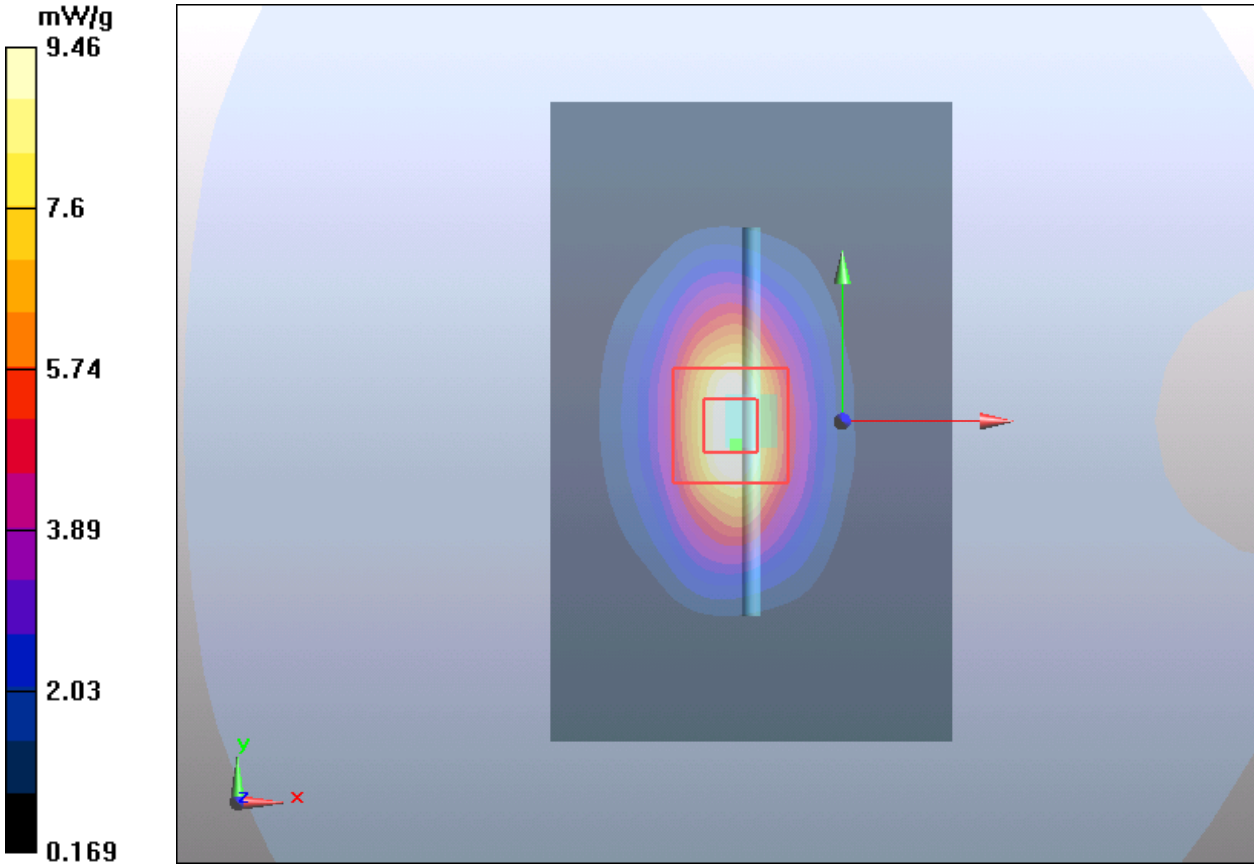
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 80 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 15.5 W/kg

SAR(1 g) = 8.95 mW/g; SAR(10 g) = 4.5 mW/g

Maximum value of SAR (measured) = 9.46 mW/g



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Plot 6 System Performance Check at 1750 MHz TSL

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1033

Date: 2022/7/2

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

Medium parameters used: f = 1750 MHz; σ = 1.34 S/m; ε_r = 40.1; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); 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 (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.77 mW/g

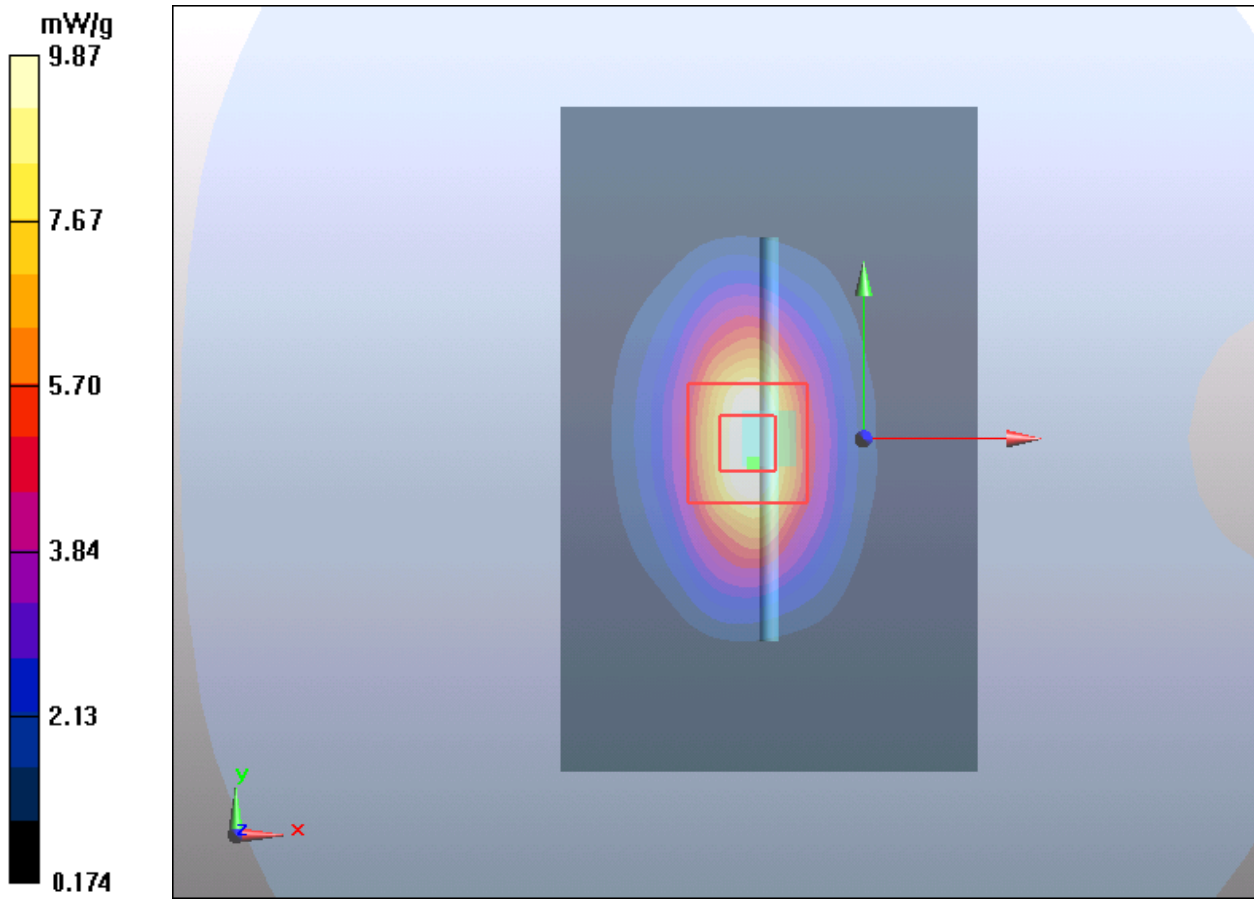
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 80 V/m; Power Drift = 0.055 dB

Peak SAR (extrapolated) = 15.51 W/kg

SAR(1 g) = 9.11 mW/g; SAR(10 g) = 4.77 mW/g

Maximum value of SAR (measured) = 9.87 mW/g



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Plot 7 System Performance Check at 1750 MHz TSL

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: 1033

Date: 2022/7/4

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

Medium parameters used: f = 1750 MHz; σ = 1.36 S/m; ε_r = 40.2; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); 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 (5x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.11 mW/g

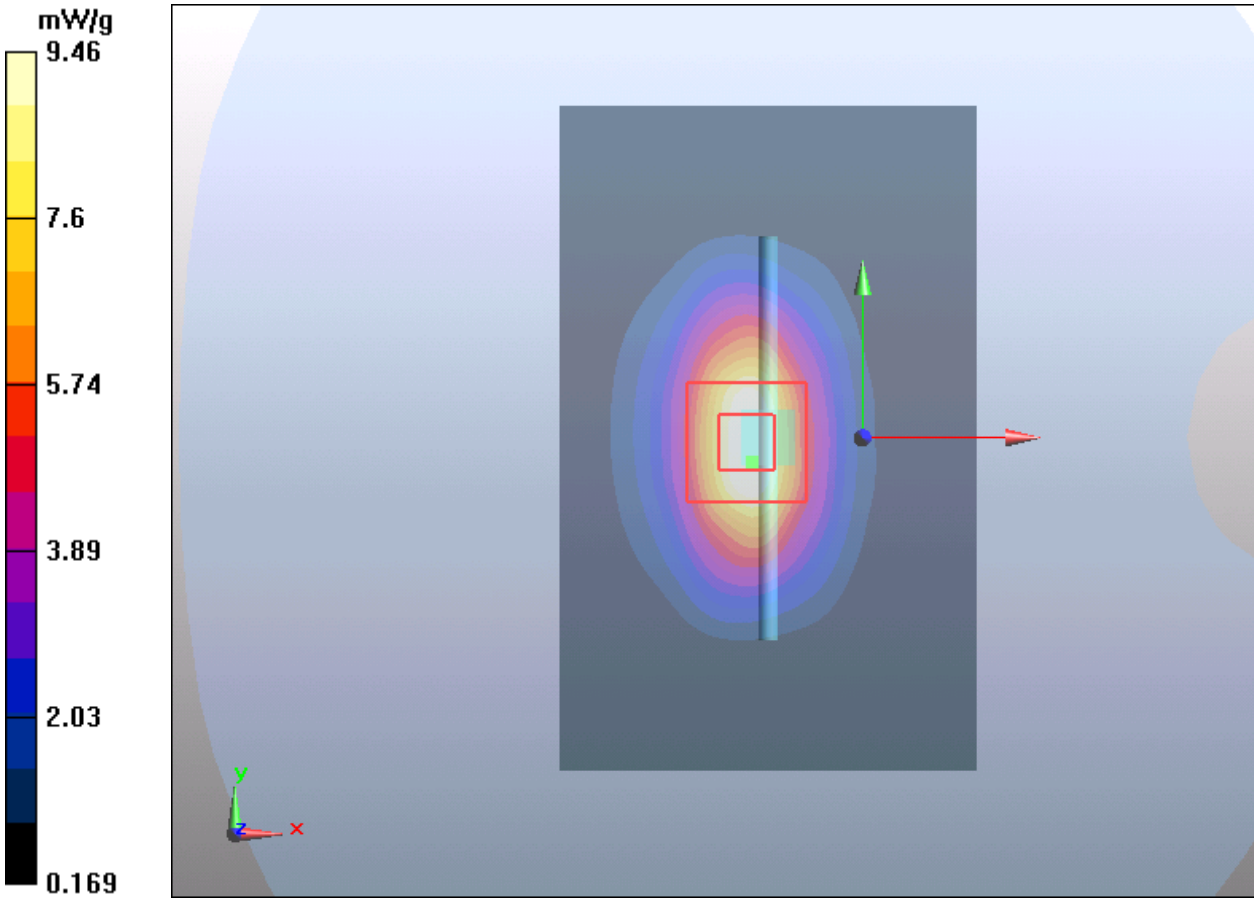
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 80 V/m; Power Drift = 0.075 dB

Peak SAR (extrapolated) = 15.47 W/kg

SAR(1 g) = 8.96 mW/g; SAR(10 g) = 4.75 mW/g

Maximum value of SAR (measured) = 9.46 mW/g



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Plot 8 System Performance Check at 1900 MHz TSL

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

Date: 2022/6/18

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

Medium parameters used: f = 1900 MHz; σ = 1.41 S/m; ε_r = 40.1; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

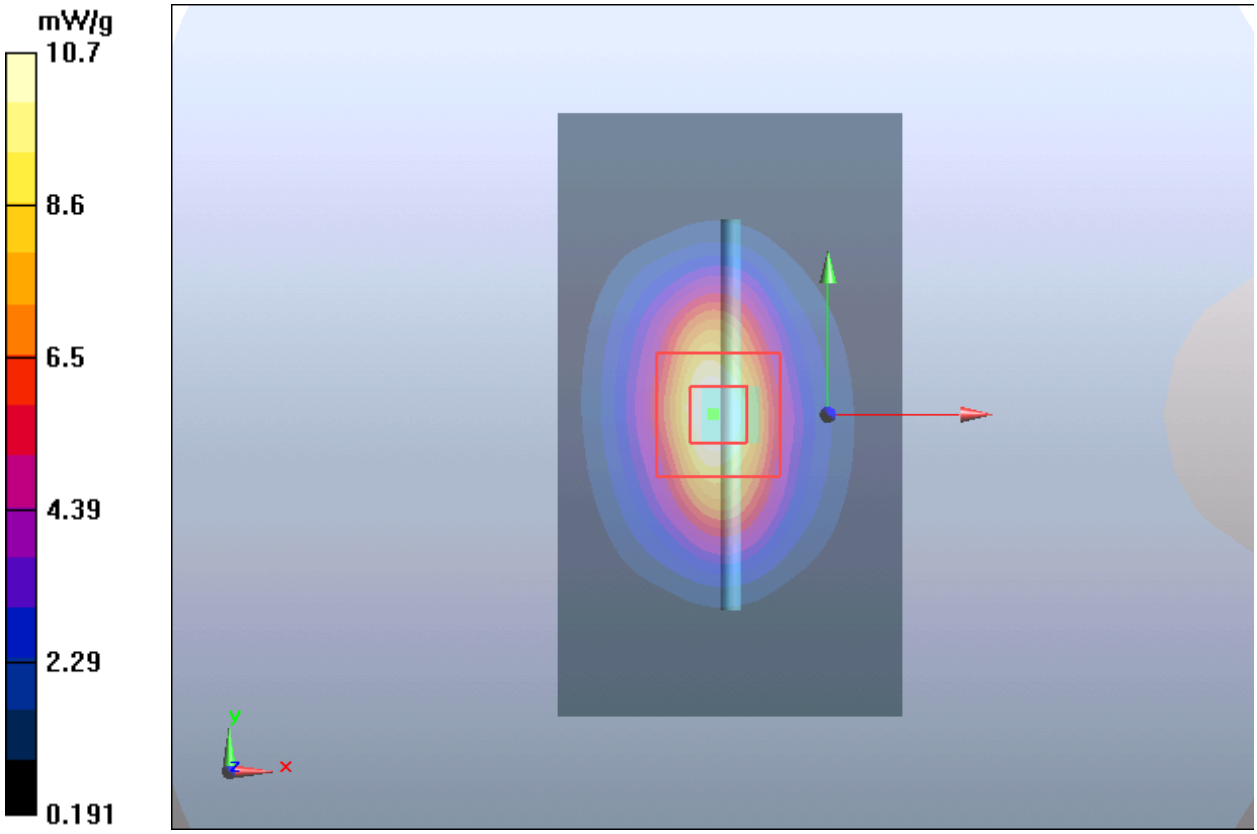
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



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Plot 9 System Performance Check at 1900 MHz TSL

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

Date: 2022/6/21

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

Medium parameters used: f = 1900 MHz; σ = 1.43 S/m; ε_r = 40.2; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

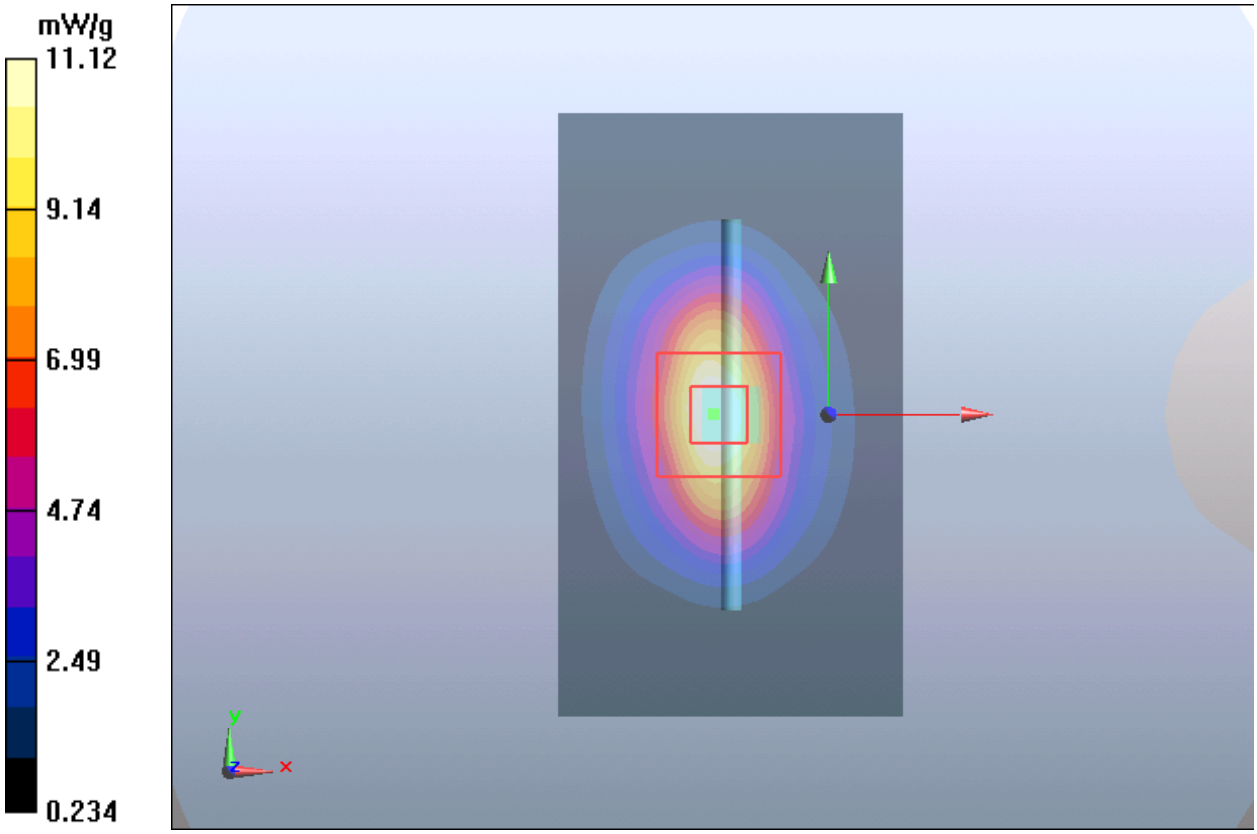
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



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Plot 10 System Performance Check at 2300 MHz TSL

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: 1110

Date: 2022/6/17

Communication System: CW Frequency: 2300 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2300 MHz; σ = 1.65 S/m; ε_r = 40.0; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.67, 7.67, 7.67); 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) = 16.0 W/kg

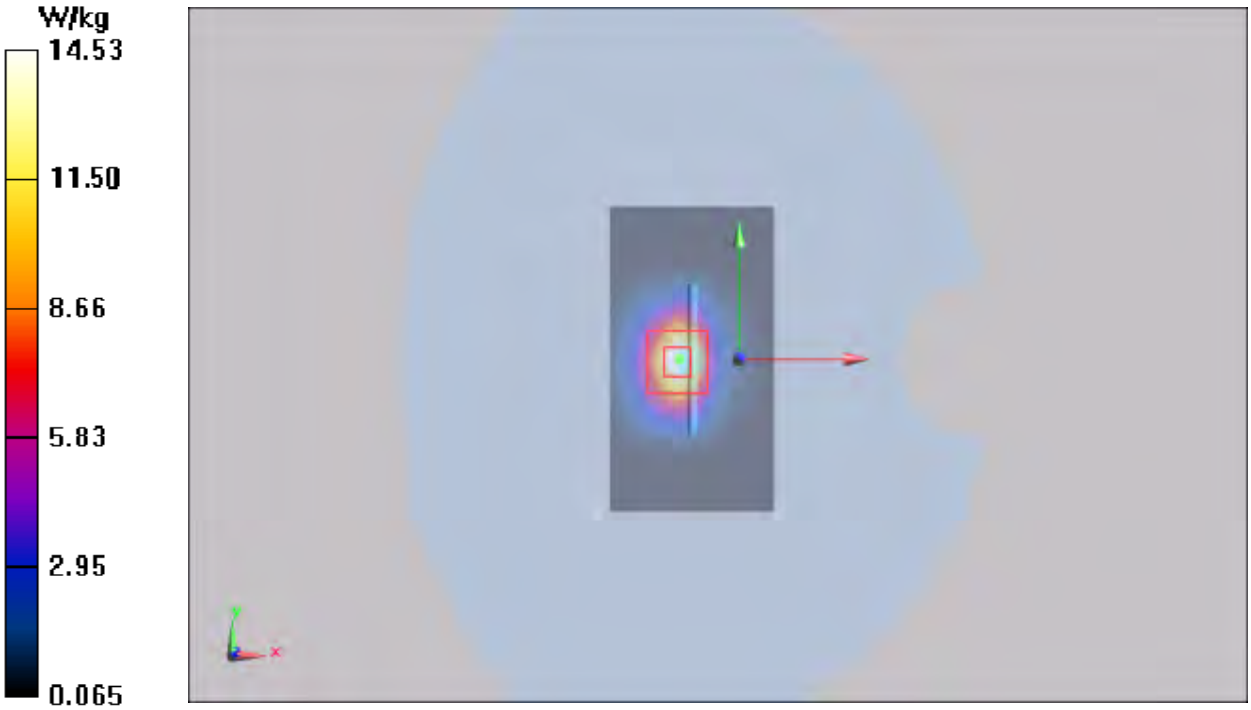
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 85.188 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 26.4 W/kg

SAR(1 g) = 12.36 W/kg; SAR(10 g) = 5.80 W/kg

Maximum value of SAR (measured) = 14.53 W/kg



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Plot 11 System Performance Check at 2300 MHz TSL

DUT: Dipole 2300 MHz; Type: D2300V2; Serial: D2300V2 - SN: 1018

Date: 2022/6/22

Communication System: CW Frequency: 2300 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2300 MHz; σ = 1.64 S/m; ε_r = 40.1; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.67, 7.67, 7.67); 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 (interpolated) = 16.6 W/kg

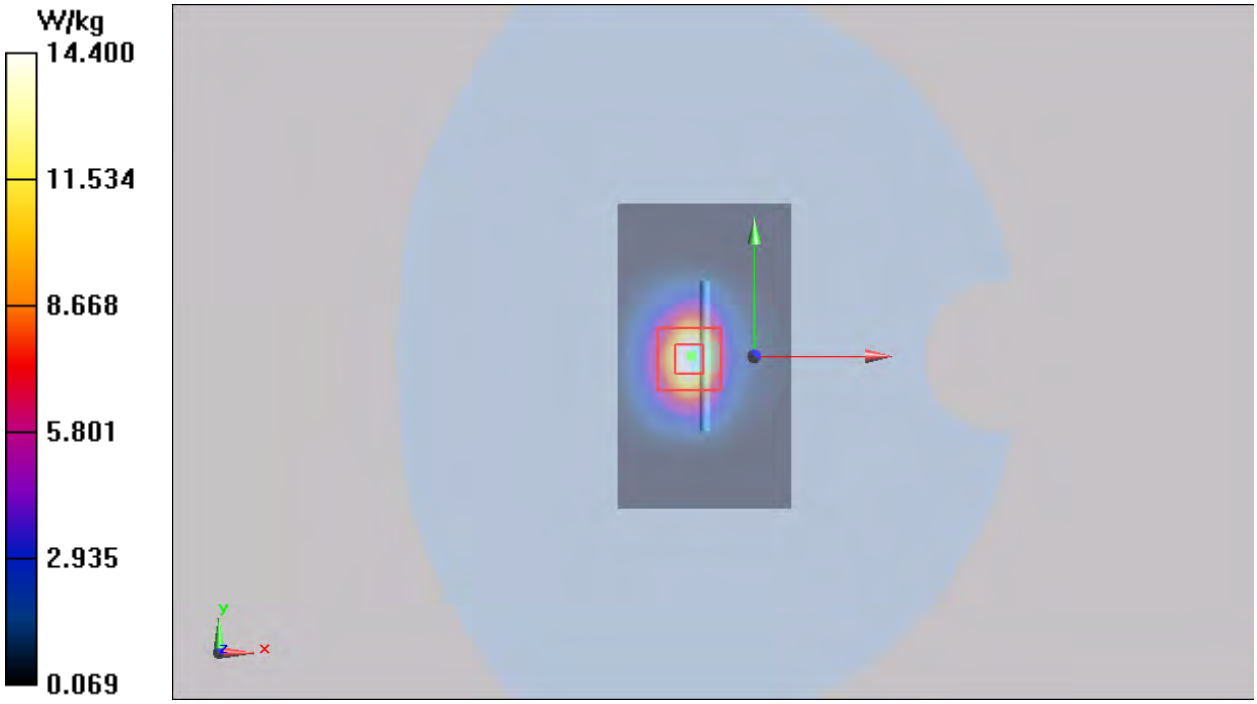
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 85.188 V/m; Power Drift = 0.29 dB

Peak SAR (extrapolated) = 26.4 W/kg

SAR(1 g) = 12.32 W/kg; SAR(10 g) = 5.79 W/kg

Maximum value of SAR (measured) = 14.40W/kg



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Plot 12 System Performance Check at 2450 MHz TSL

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

Date: 2022/6/27

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

Medium parameters used: f = 2450 MHz; σ = 1.81 S/m; ε_r = 38.6; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

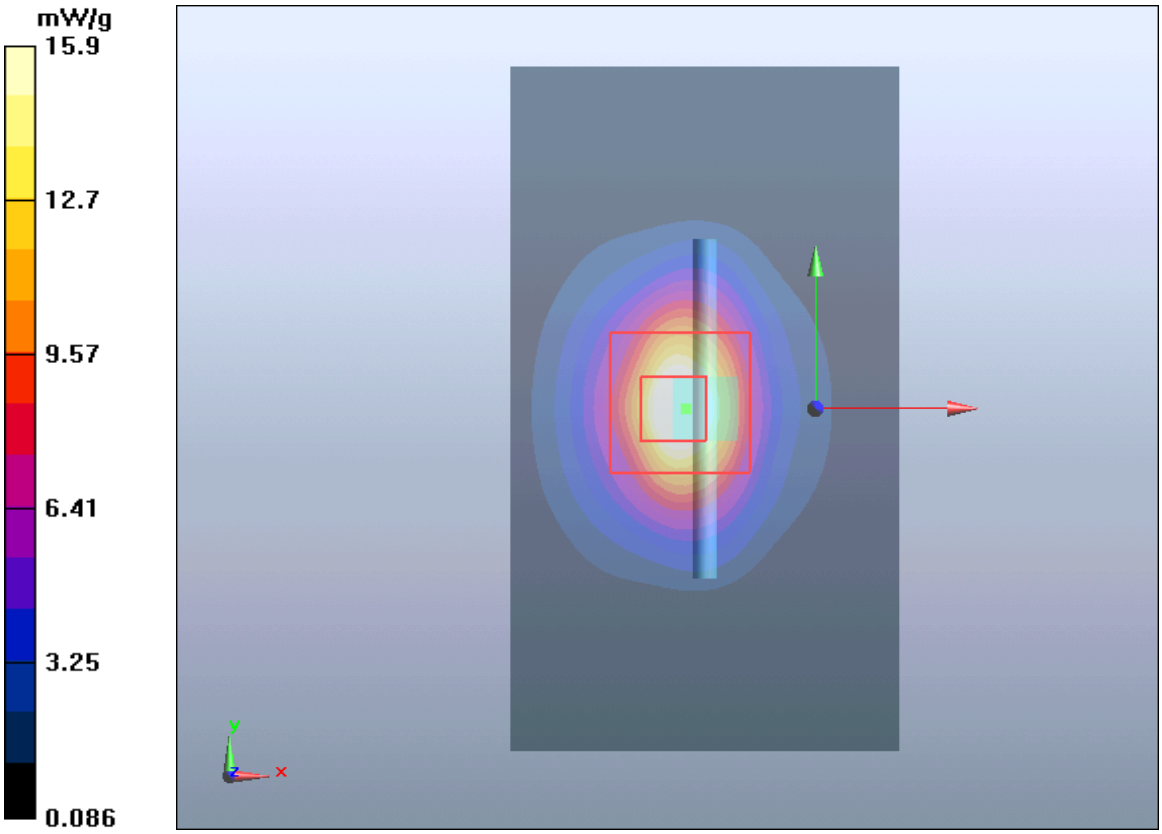
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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



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Plot 13 System Performance Check at 2600 MHz TSL

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

Date: 2022/6/20

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz; σ = 2.01 S/m; ε_r = 38.2; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

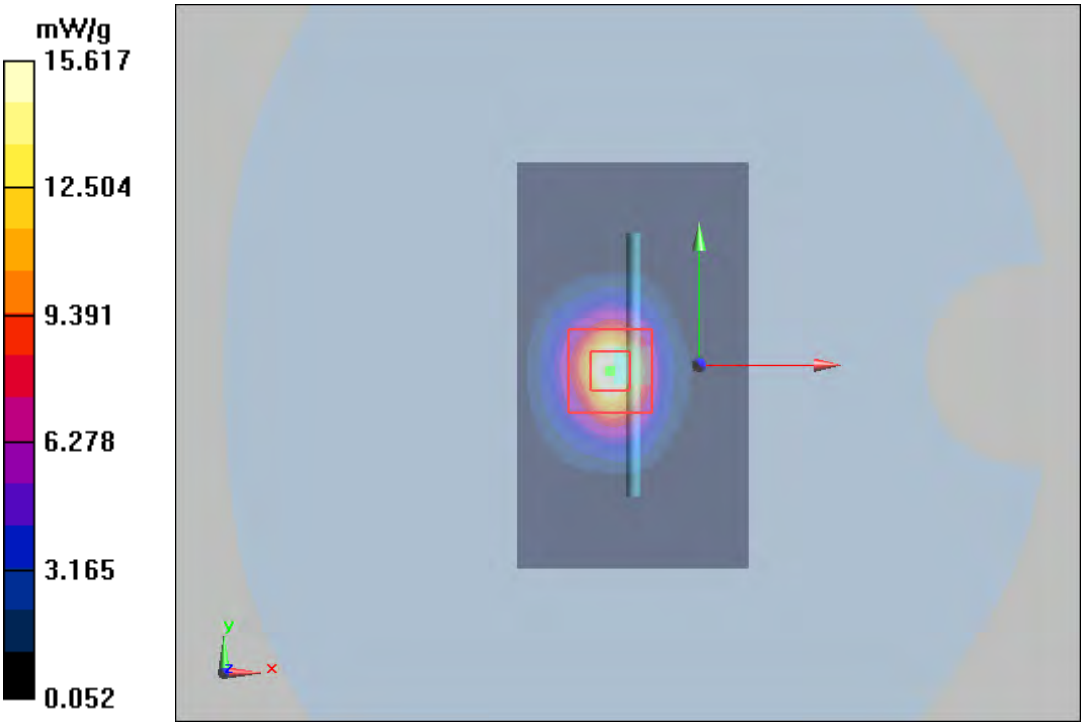
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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



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Plot 14 System Performance Check at 2600 MHz TSL

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

Date: 2022/6/25

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz; σ =1.94S/m; ε_r = 38.4; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

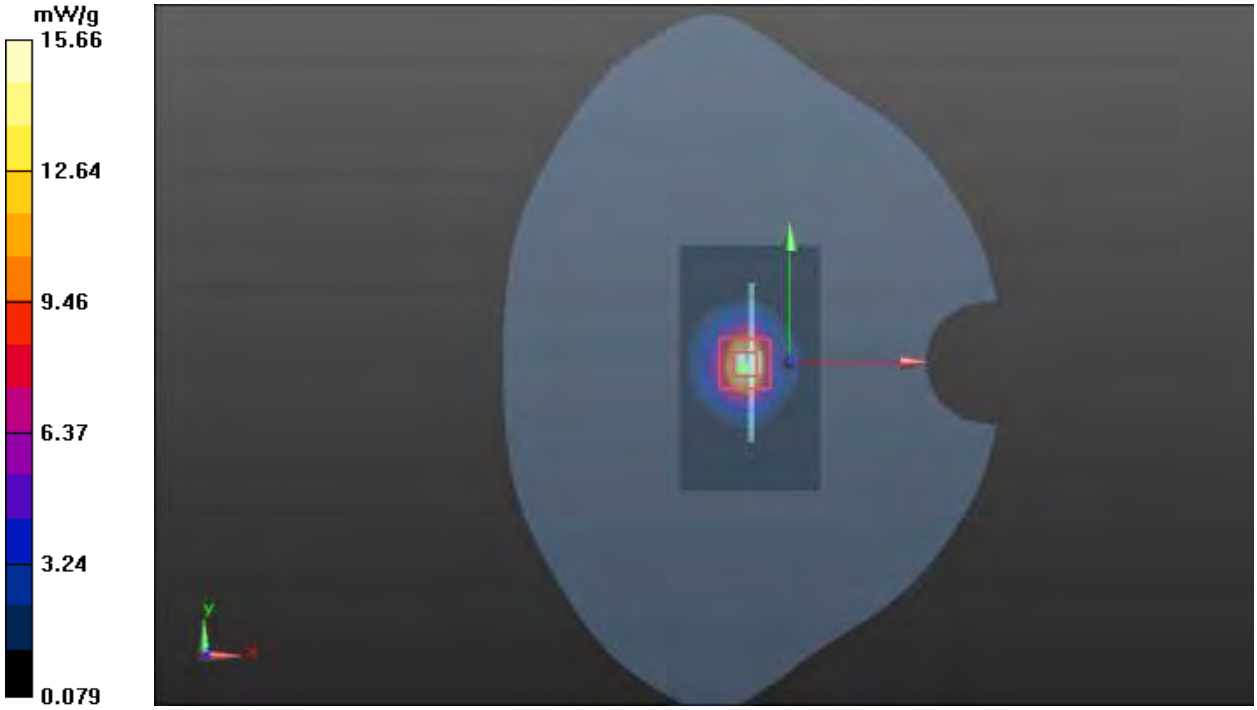
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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



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Plot 15 System Performance Check at 2600 MHz TSL

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

Date: 2022/6/26

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz; σ = 1.99 S/m; ε_r = 38.3; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

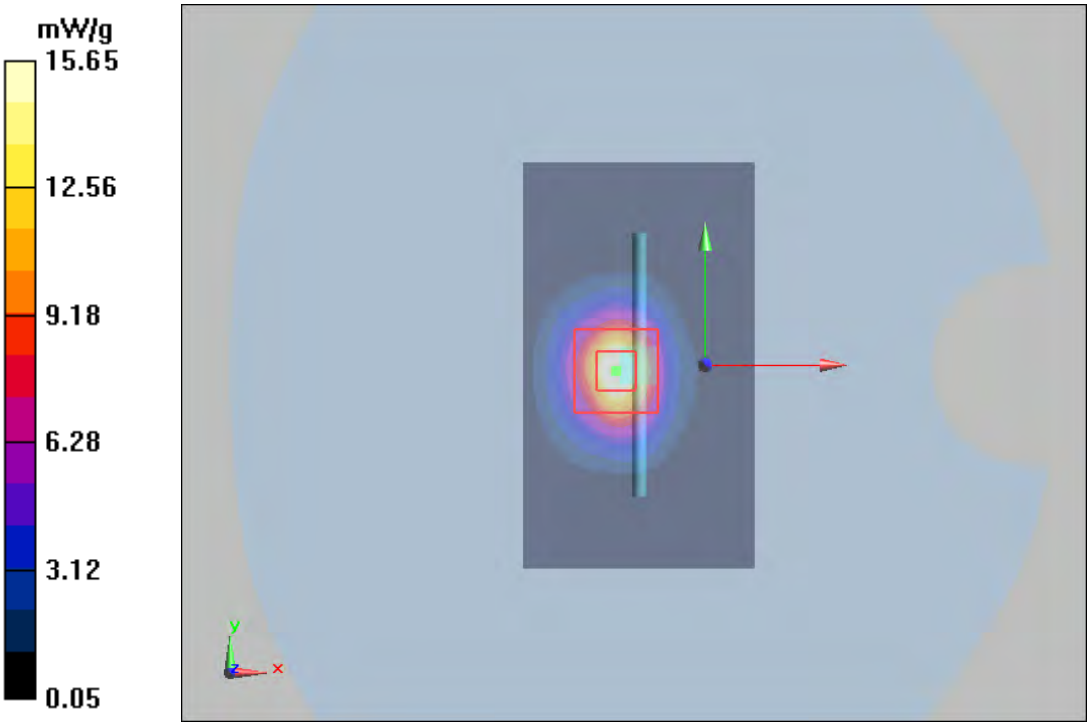
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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



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Plot 16 System Performance Check at 2600 MHz TSL

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

Date: 2022/7/1

Communication System: CW; Frequency: 2600 MHz

Medium parameters used: f = 2600 MHz; σ =1.95S/m; ε_r = 38.5; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

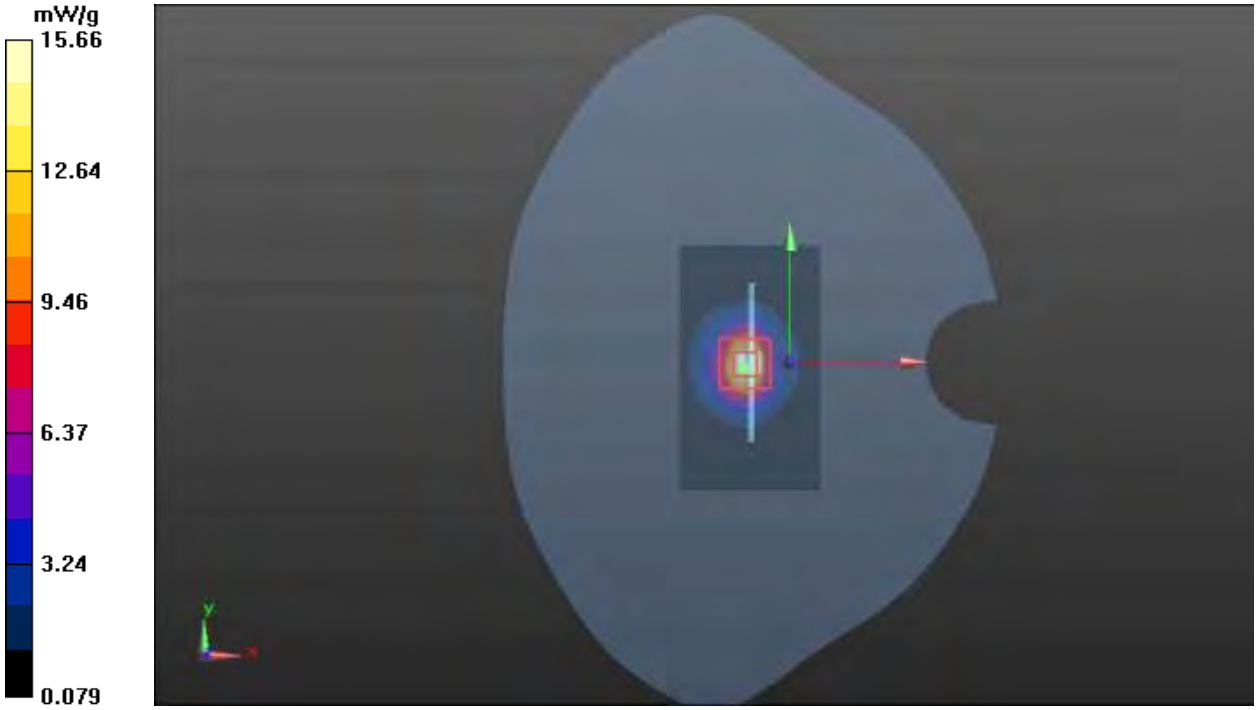
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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



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Plot 17 System Performance Check at 3500 MHz TSL

DUT: Dipole 3500 MHz; Type: D3500V2; Serial: D3500V2

Date: 2022/6/24

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

Medium parameters used: f = 3500 MHz; σ = 2.83 S/m; ε_r = 37.1; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.92, 6.92, 6.92); 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) = 13.6 W/kg

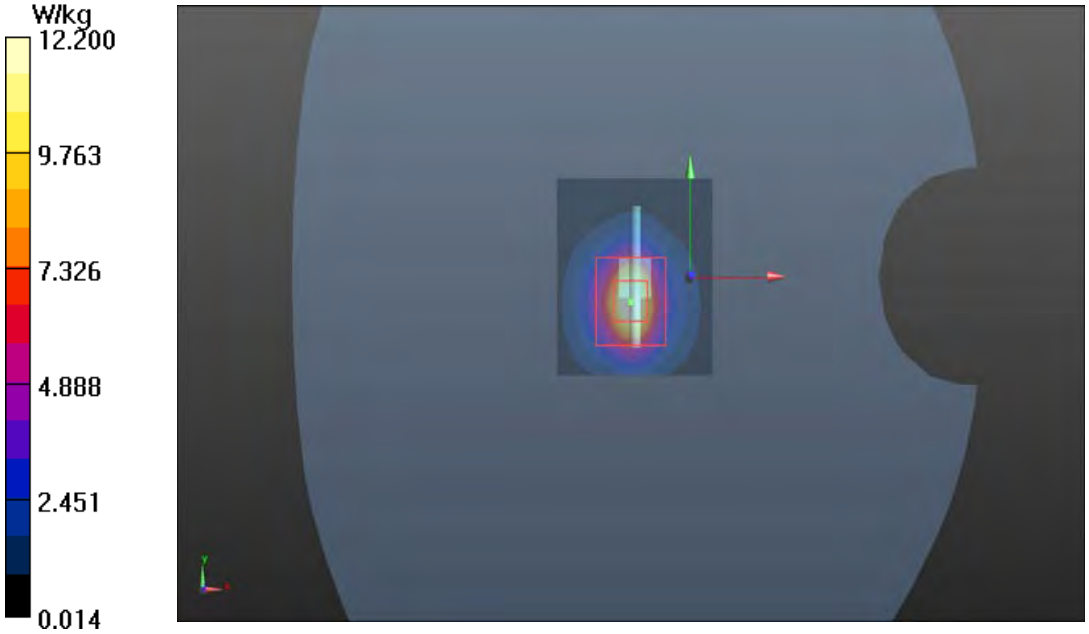
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 46.00 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 18.2 W/kg

SAR(1 g) = 6.57W/kg; SAR(10 g) = 2.52 W/kg

Maximum value of SAR (measured) = 12.2 W/kg



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Plot 18 System Performance Check at 5250 MHz TSL

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

Date: 2022/6/23

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

Medium parameters used: f = 5250 MHz; σ = 4.80 S/m; ε_r = 35.5; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

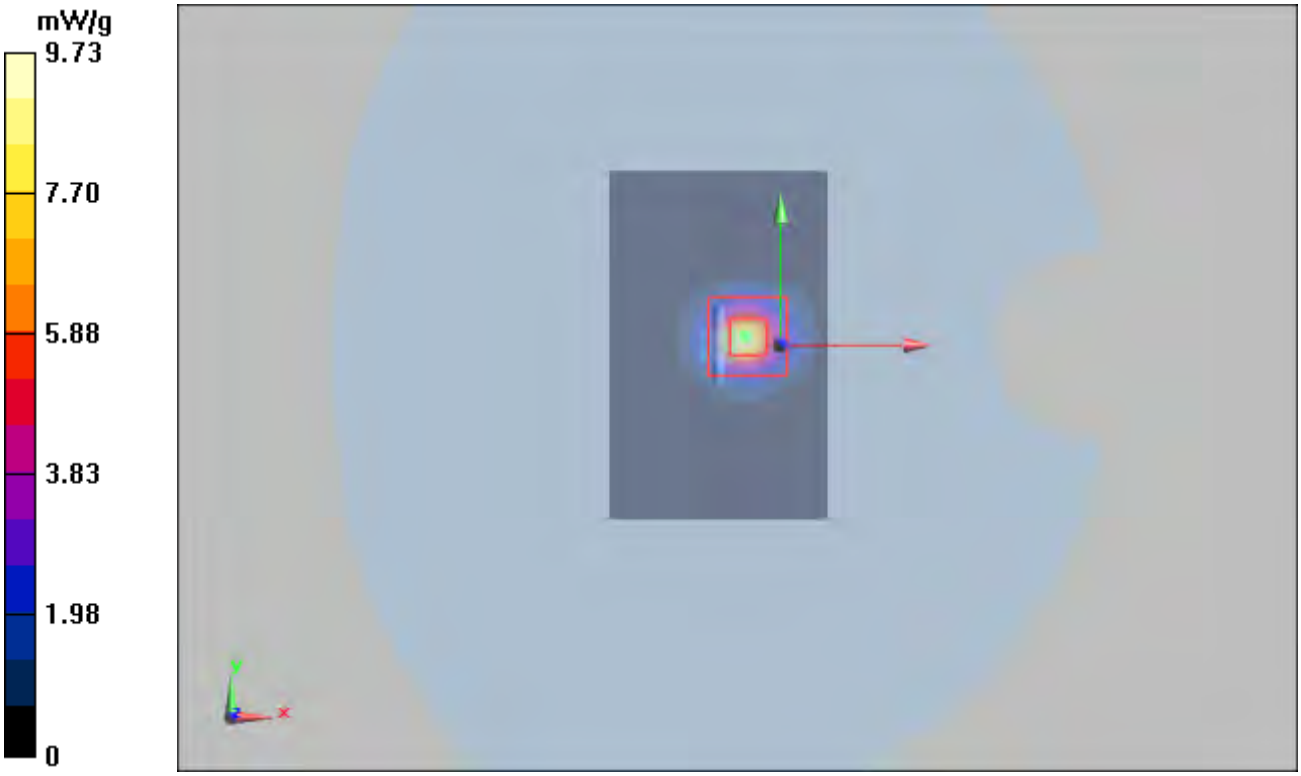
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

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



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Plot 19 System Performance Check at 5750 MHz TSL

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

Date: 2022/6/27

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

Medium parameters used: f = 5750 MHz; σ = 5.21 S/m; ε_r = 34.9; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

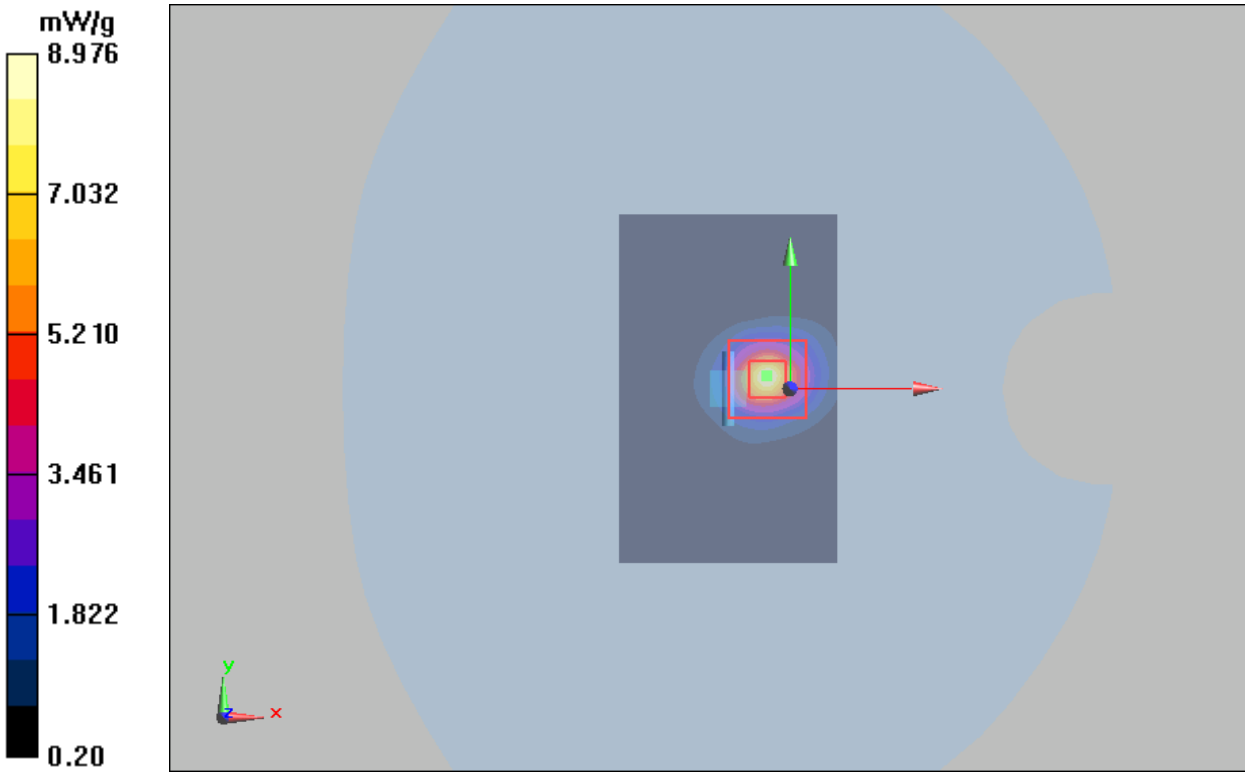
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

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



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ANNEX C: Highest Graph Results

Plot 20 GSM 850 Right Cheek Middle

Date: 2022/6/13

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz;Duty Cycle: 1:8.30

Medium parameters used: f = 836.6 MHz; σ = 0.953 S/m; ε_r = 39.762; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.111 W/kg

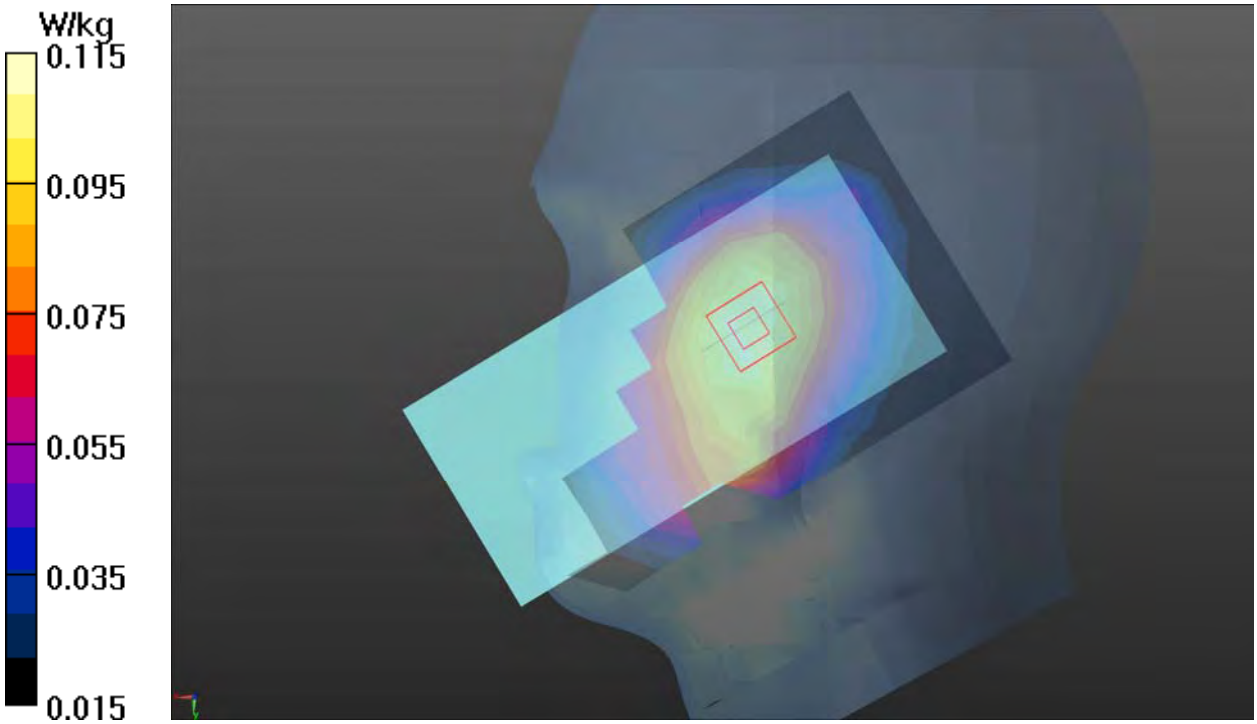
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.399 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 0.134 W/kg

SAR(1 g) = 0.109 W/kg; SAR(10 g) = 0.084 W/kg

Maximum value of SAR (measured) = 0.115 W/kg



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Plot 21 GSM 1900 Left Cheek Middle

Date: 2022/6/18

Communication System: UID 0, GSM (0); Frequency: 1880 MHz;Duty Cycle: 1:8.30

Medium parameters used: f = 1880 MHz; σ = 1.42 S/m; ε_r = 38.948; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Left 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)

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

Maximum value of SAR (measured) = 0.118 W/kg

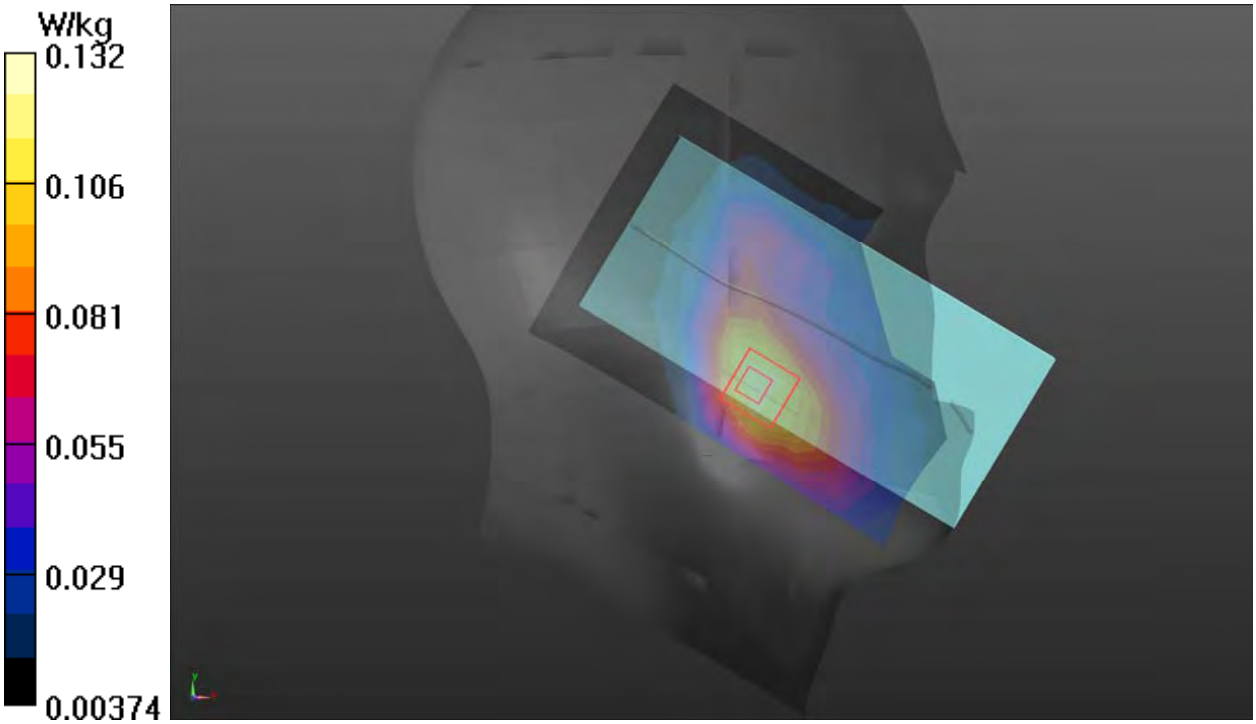
Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.758 V/m; Power Drift = -0.053 dB

Peak SAR (extrapolated) = 0.155 W/kg

SAR(1 g) = 0.099 W/kg; SAR(10 g) = 0.064 W/kg

Maximum value of SAR (measured) = 0.132 W/kg



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Plot 22 UMTS Band II Right Cheek Middle

Date: 2022/6/21

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

Medium parameters used: f = 1880 MHz; σ = 1.393 S/m; ε_r = 38.344; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.211 W/kg

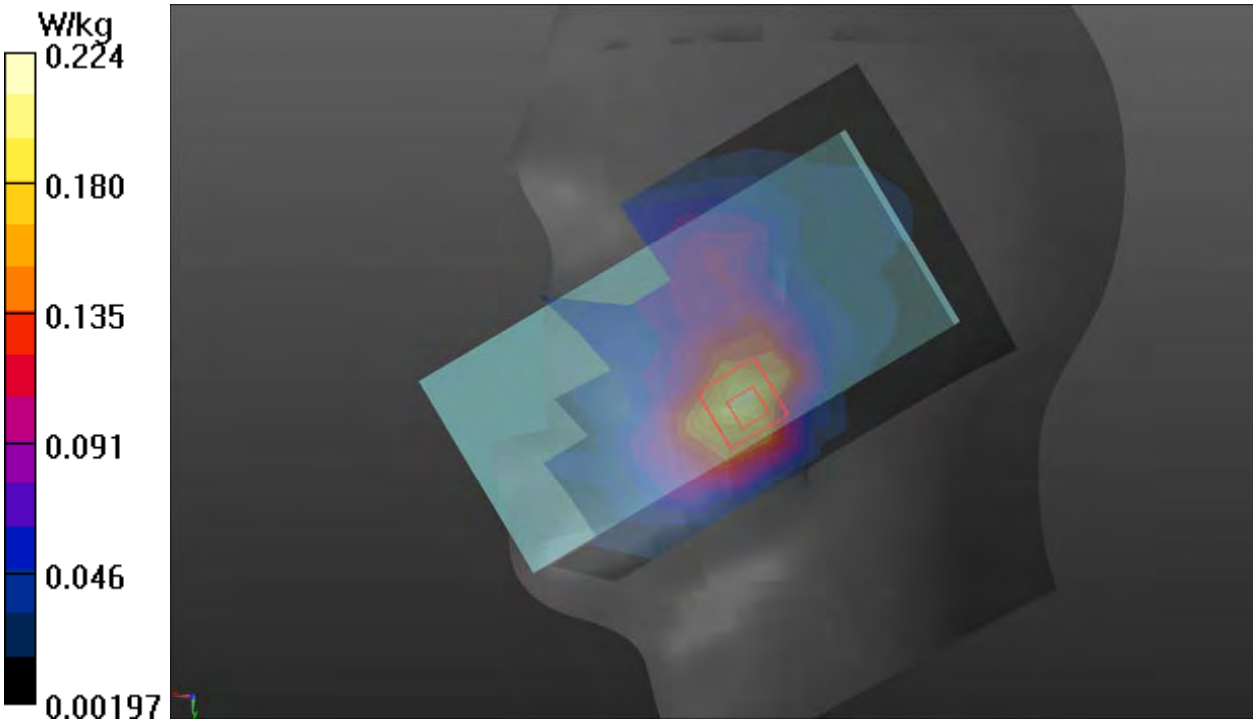
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.905 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.258 W/kg

SAR(1 g) = 0.167 W/kg; SAR(10 g) = 0.104 W/kg

Maximum value of SAR (measured) = 0.224 W/kg



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Plot 23 UMTS Band IV Right Cheek Middle

Date: 2022/6/15

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1732.6 MHz; σ = 1.293 S/m; ε_r = 38.782; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); 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) = 0.258 W/kg

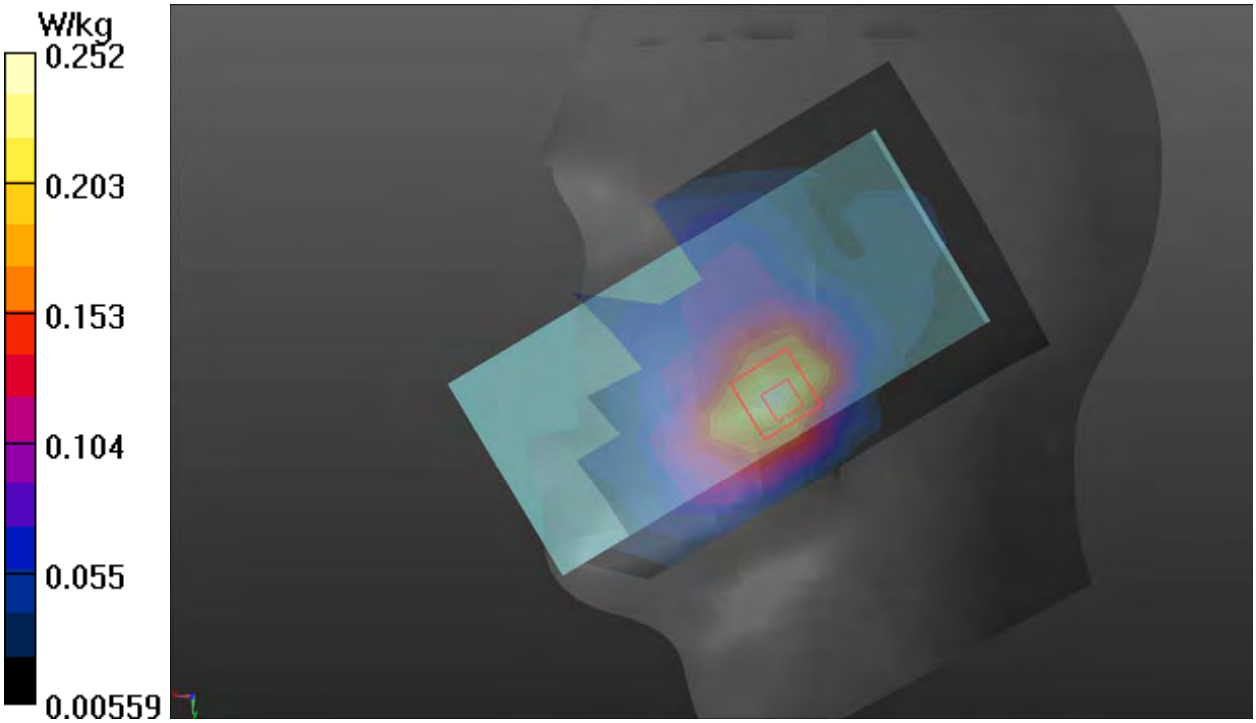
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.077 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.309 W/kg

SAR(1 g) = 0.197 W/kg; SAR(10 g) = 0.126 W/kg

Maximum value of SAR (measured) = 0.252 W/kg



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Plot 24 UMTS Band V Right Cheek Middle

Date: 2022/6/13

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

Medium parameters used: f = 836.6 MHz; σ = 0.953 S/m; ε_r = 39.762; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.133 W/kg

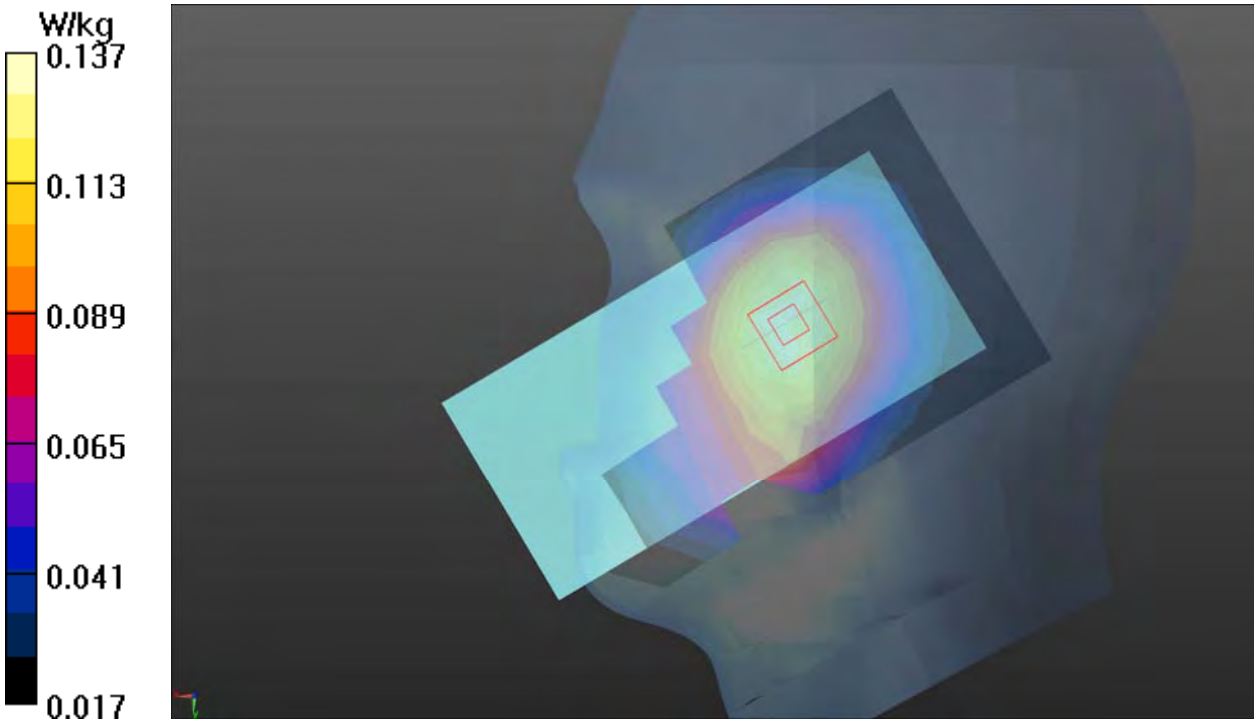
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.021 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.158 W/kg

SAR(1 g) = 0.130 W/kg; SAR(10 g) = 0.102 W/kg

Maximum value of SAR (measured) = 0.137 W/kg



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Plot 25 LTE Band 2 1RB Left Cheek Low

Date: 2022/6/21

Communication System: UID 0, LTE (0); Frequency: 1860 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1860 MHz; σ = 1.407 S/m; ε_r = 39.071; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Left 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)

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

Maximum value of SAR (measured) = 0.203 W/kg

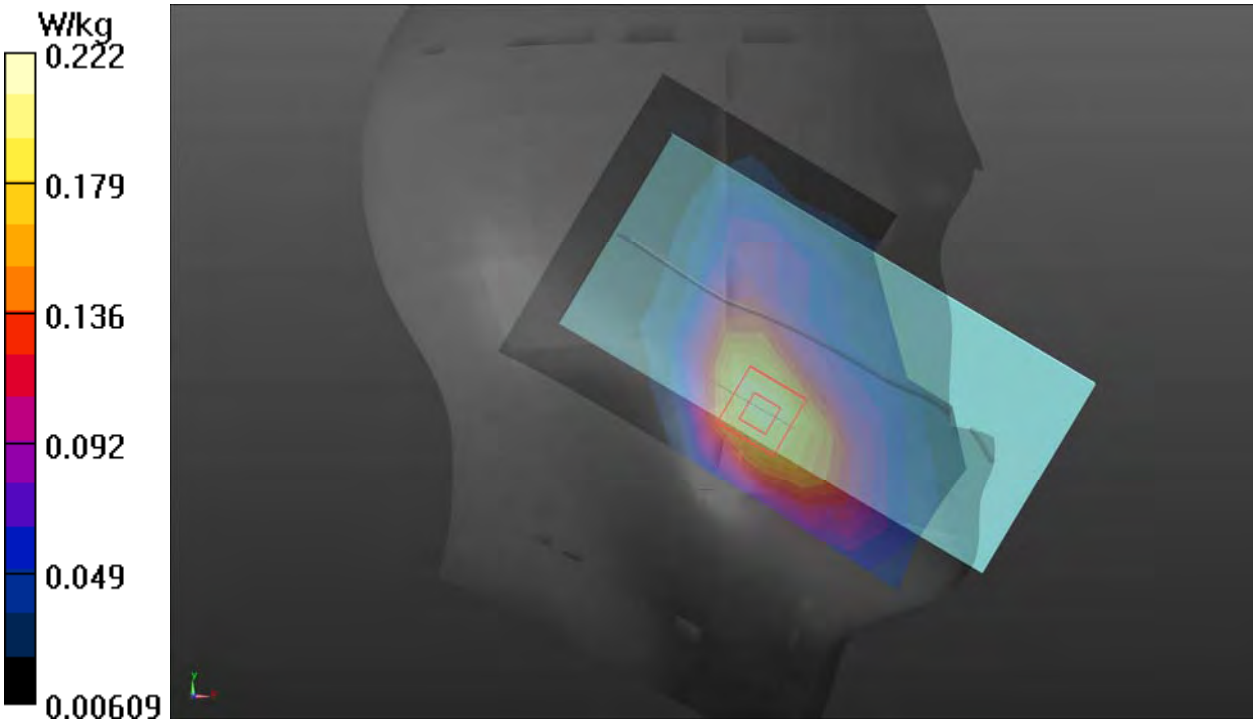
Left Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.241 V/m; Power Drift = 0.070 dB

Peak SAR (extrapolated) = 0.256 W/kg

SAR(1 g) = 0.166 W/kg; SAR(10 g) = 0.109 W/kg

Maximum value of SAR (measured) = 0.222 W/kg



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Plot 26 LTE Band 5 1RB Right Cheek Middle

Date: 2022/6/13

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

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.953 S/m; ε_r = 39.767; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.137 W/kg

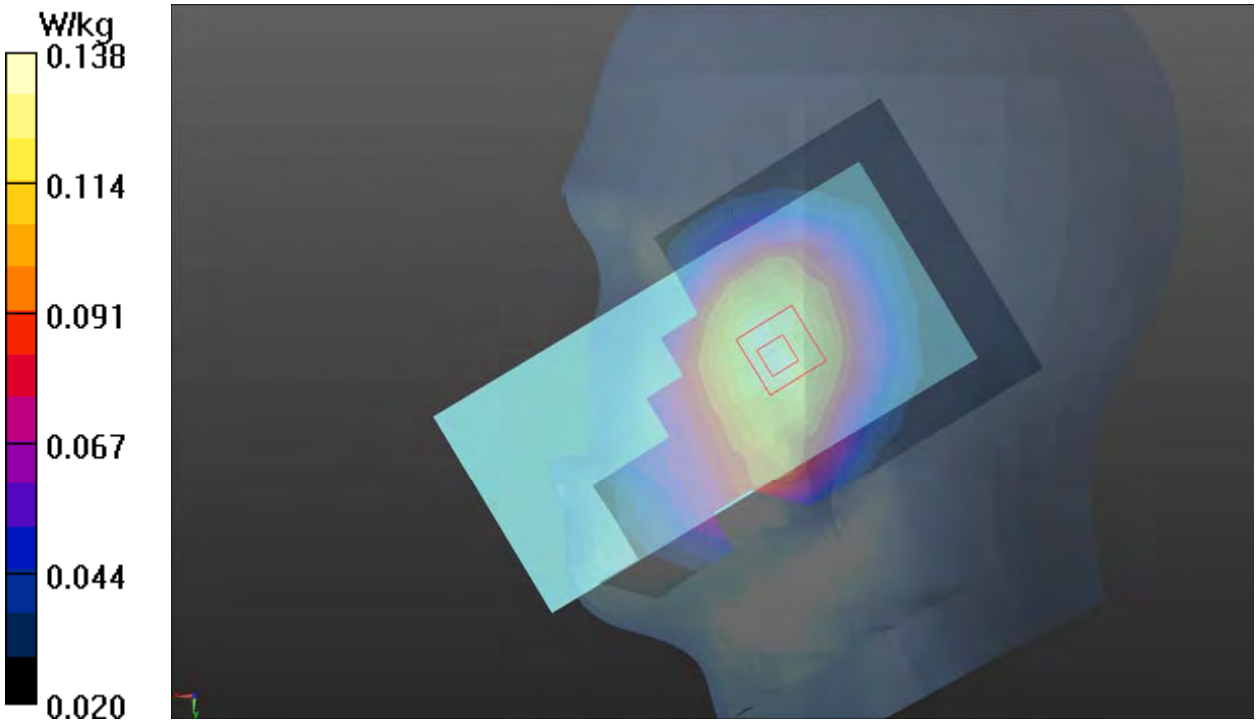
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.076 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.162 W/kg

SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.103 W/kg

Maximum value of SAR (measured) = 0.138 W/kg



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Plot 27 LTE Band 7 50%RB Right Cheek Middle (SIM 2)

Date: 2022/6/20

Communication System: UID 0, LTE (0); Frequency: 2535 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2535 MHz; σ = 1.94 S/m; ε_r = 37.31; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 1.22 W/kg

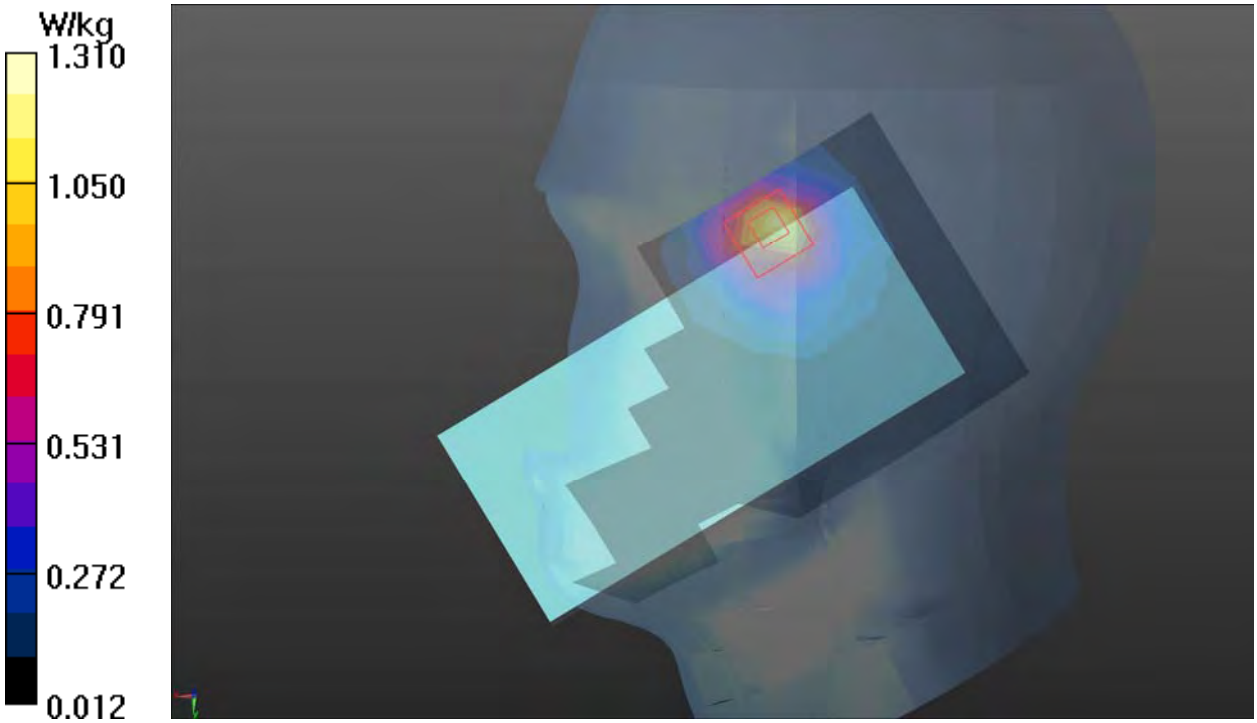
Right Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.625 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 0.829 W/kg; SAR(10 g) = 0.405 W/kg

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



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Plot 28 LTE Band 12 50%RB Right Cheek Low

Date: 2022/6/14

Communication System: UID 0, LTE (0); Frequency: 704 MHz;Duty Cycle: 1:1

Medium parameters used: f = 704 MHz; σ = 0.867 S/m; ε_r = 40.747; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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 Low/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.079 W/kg

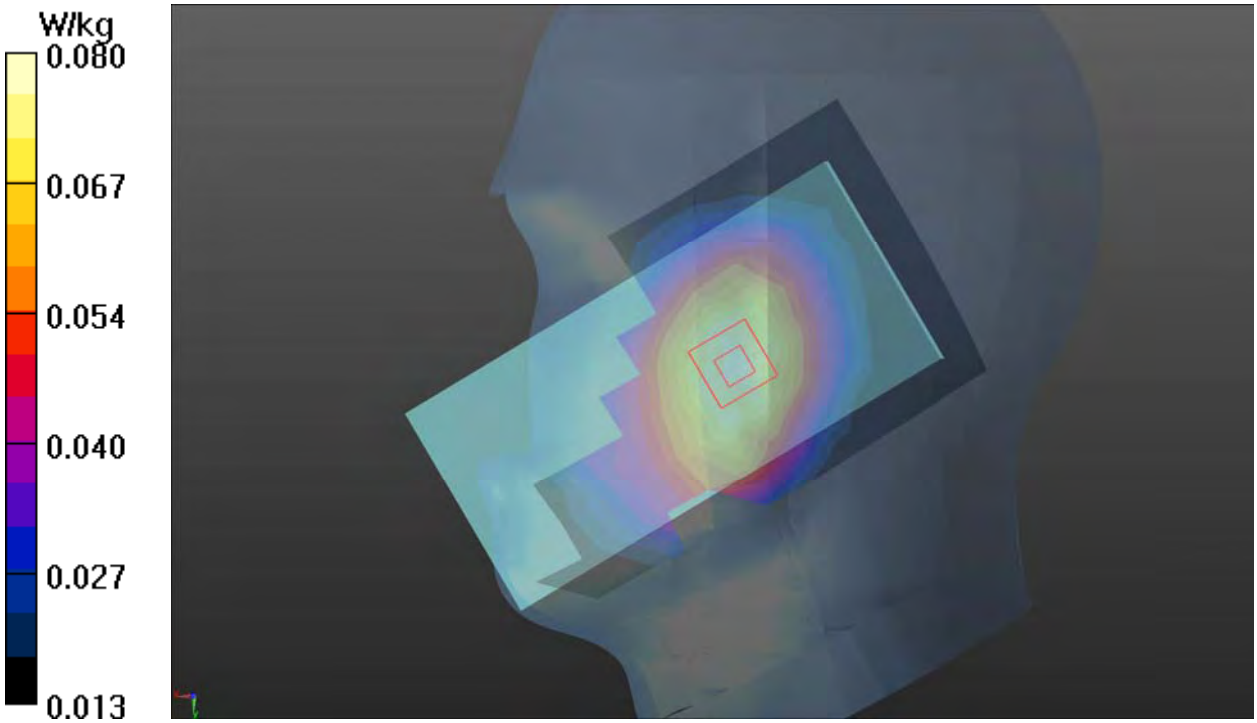
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.126 V/m; Power Drift = 0.072 dB

Peak SAR (extrapolated) = 0.092 W/kg

SAR(1 g) = 0.077 W/kg; SAR(10 g) = 0.062 W/kg

Maximum value of SAR (measured) = 0.080 W/kg



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Plot 29 LTE Band 13 1RB Right Cheek Middle

Date: 2022/6/16

Communication System: UID 0, LTE (0); Frequency: 782 MHz;Duty Cycle: 1:1

Medium parameters used: f = 782 MHz; σ = 0.917 S/m; ε_r = 40.132; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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) = 0.137 W/kg

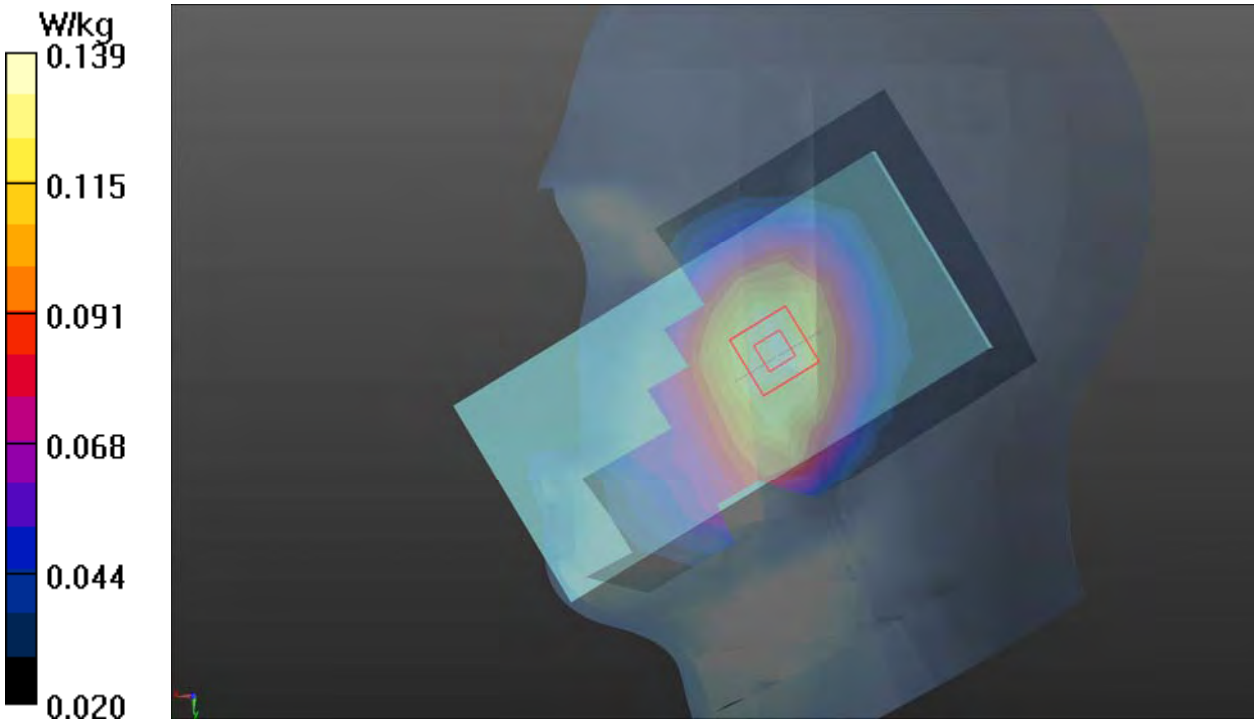
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.828 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 0.161 W/kg

SAR(1 g) = 0.133 W/kg; SAR(10 g) = 0.104 W/kg

Maximum value of SAR (measured) = 0.139 W/kg



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Plot 30 LTE Band 26 1RB Right Cheek High

Date: 2022/6/17

Communication System: UID 0, LTE (0); Frequency: 841.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.957 S/m; ε_r = 39.746; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.157 W/kg

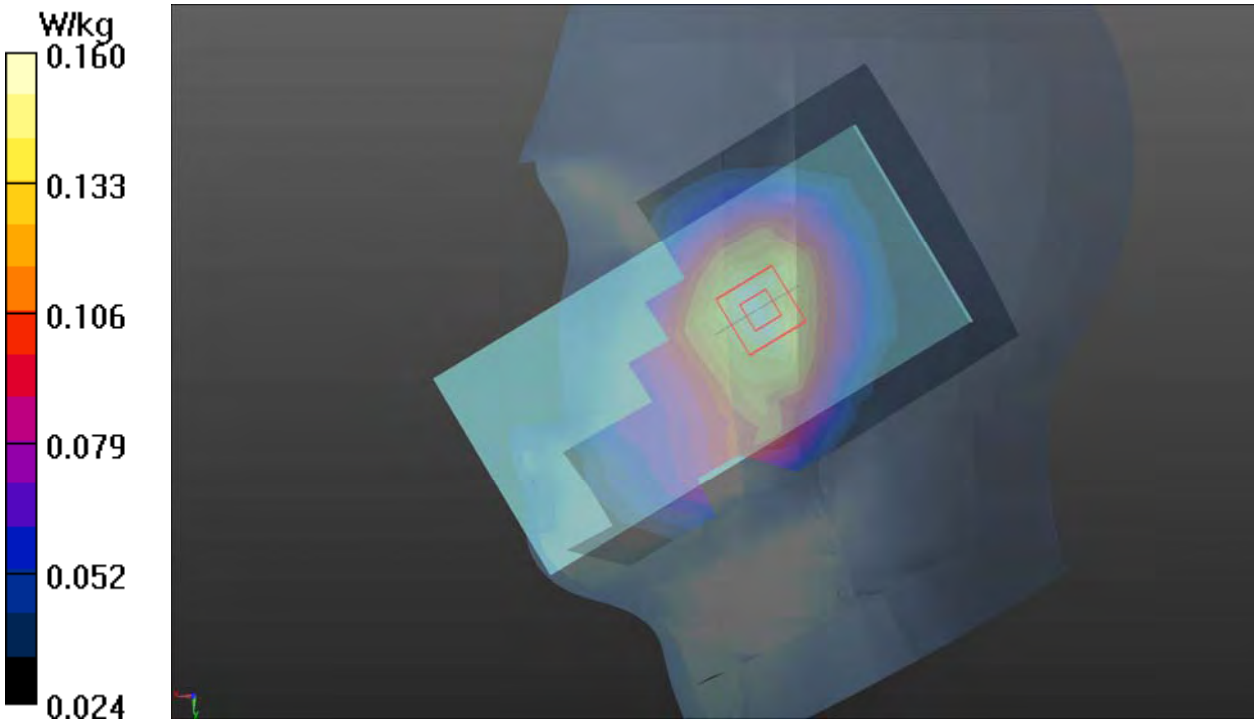
Right Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.891 V/m; Power Drift = 0.031 dB

Peak SAR (extrapolated) = 0.189 W/kg

SAR(1 g) = 0.154 W/kg; SAR(10 g) = 0.119 W/kg

Maximum value of SAR (measured) = 0.160 W/kg



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Plot 31 LTE Band 28 1RB Right Cheek Low

Date: 2022/6/16

Communication System: UID 0, LTE (0); Frequency: 735.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 735.5 MHz; σ = 0.887 S/m; ε_r = 40.552; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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 Low/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.115 W/kg

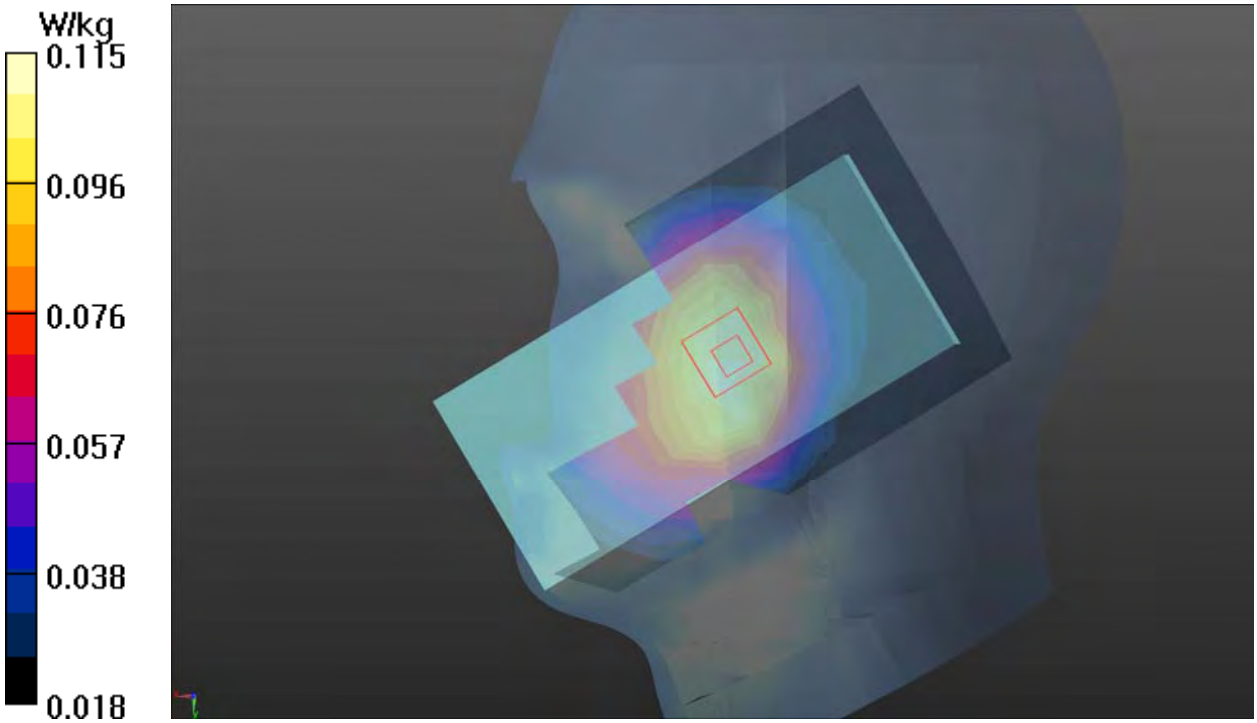
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.914 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.127 W/kg

SAR(1 g) = 0.096 W/kg; SAR(10 g) = 0.075 W/kg

Maximum value of SAR (measured) = 0.115 W/kg



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Plot 32 LTE Band 38 1RB Right Cheek Middle

Date: 2022/6/25

Communication System: UID 0, LTE (0); Frequency: 2595 MHz;Duty Cycle: 1:1.58

Medium parameters used: f = 2595 MHz; σ = 2.011 S/m; ε_r = 37.134; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.737 W/kg

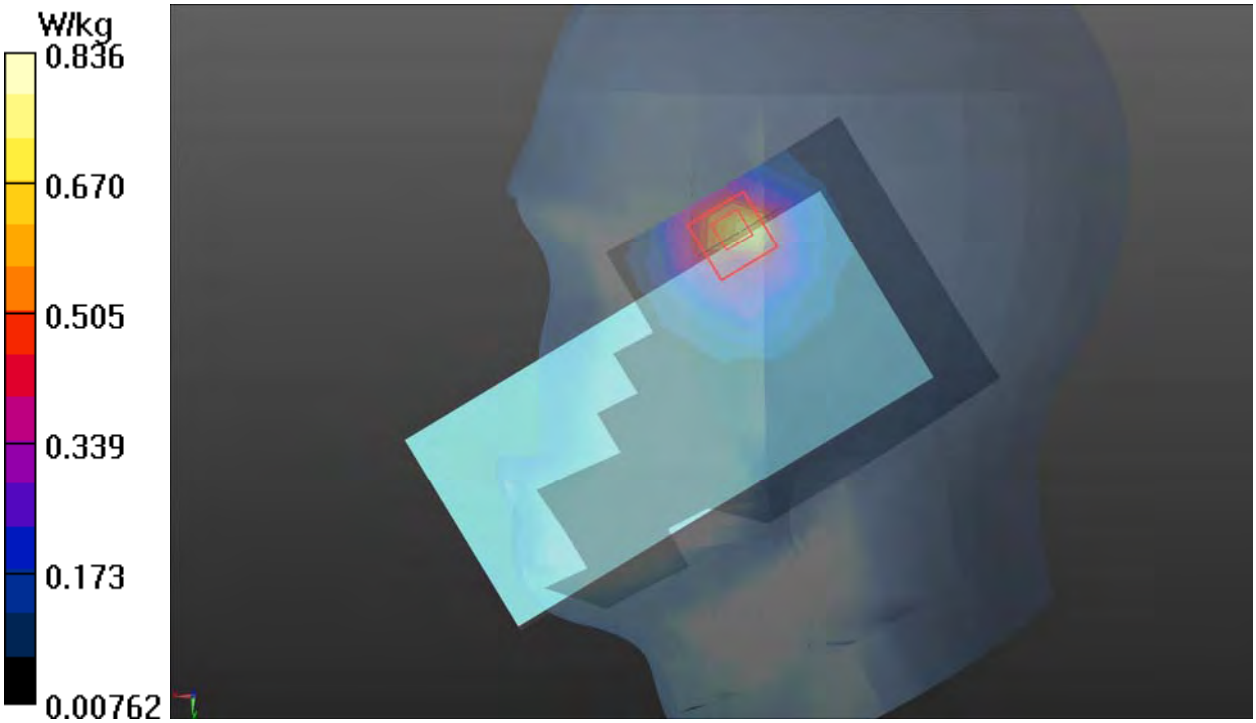
Right Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.193 V/m; Power Drift = 0.144 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.506 W/kg; SAR(10 g) = 0.244 W/kg

Maximum value of SAR (measured) = 0.836 W/kg



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Plot 33 LTE Band 40 1RB Right Cheek Low

Date: 2022/6/22

Communication System: UID 0, LTE (0); Frequency: 2310 MHz;Duty Cycle: 1:1.58

Medium parameters used: f = 2310 MHz; σ = 1.693 S/m; ε_r = 38.105; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.67, 7.67, 7.67); 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 Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.665 W/kg

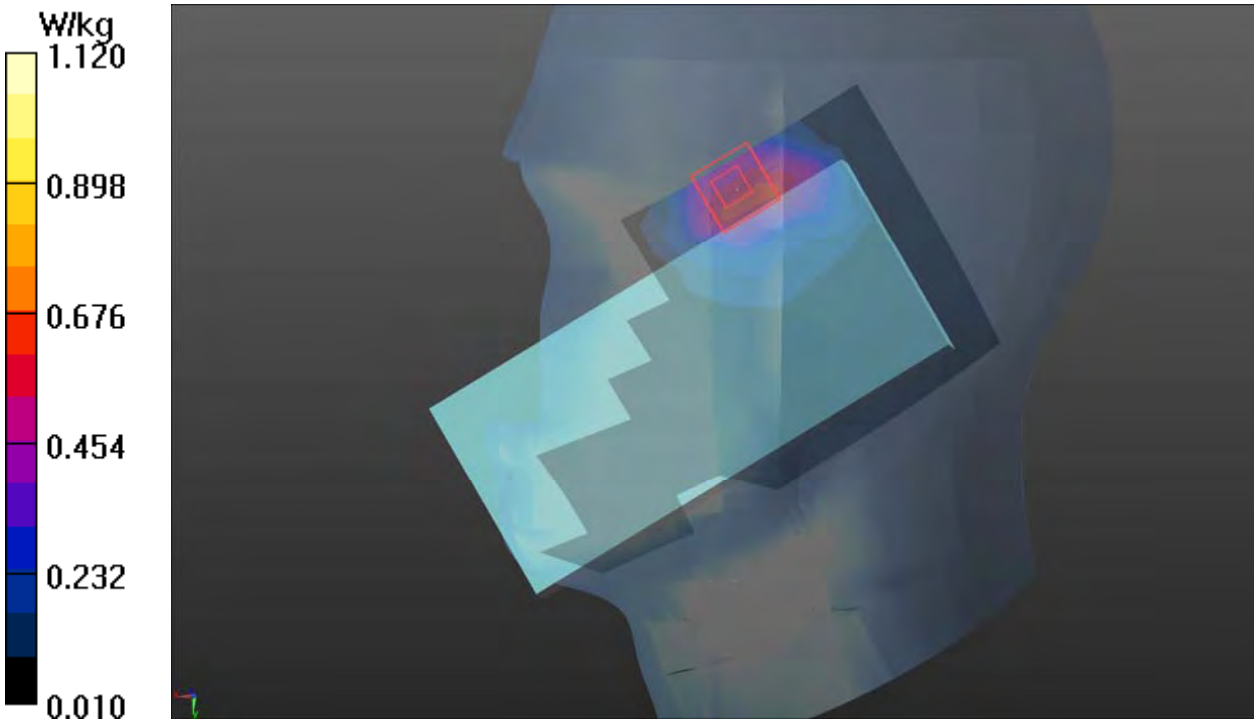
Right Cheek Low/Zoom Scan (7x7x5)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.572 V/m; Power Drift = 0.050 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.630 W/kg; SAR(10 g) = 0.288 W/kg

Maximum value of SAR (measured) = 1.12 W/kg



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Plot 34 LTE Band 66 1RB Right Cheek Middle

Date: 2022/7/4

Communication System: UID 0, LTE (0); Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1745 MHz; σ = 1.301 S/m; ε_r = 38.753; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); 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) = 0.221 W/kg

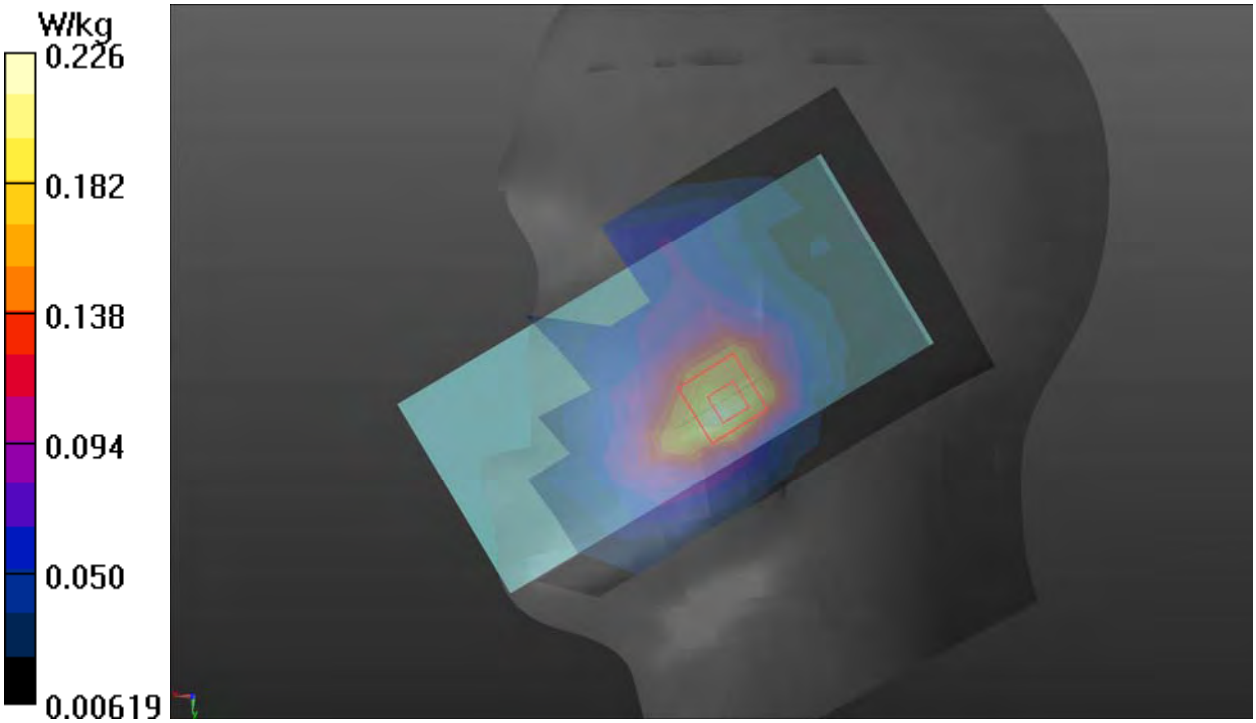
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.605 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.269 W/kg

SAR(1 g) = 0.173 W/kg; SAR(10 g) = 0.108 W/kg

Maximum value of SAR (measured) = 0.226 W/kg



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Plot 35 NR n2 50%RB Left Cheek Low

Date: 2022/6/21

Communication System: UID 0, 5G NR (0); Frequency: 1860 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1860 MHz; σ = 1.379 S/m; ε_r = 38.4; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Left 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)

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

Maximum value of SAR (measured) = 0.243 W/kg

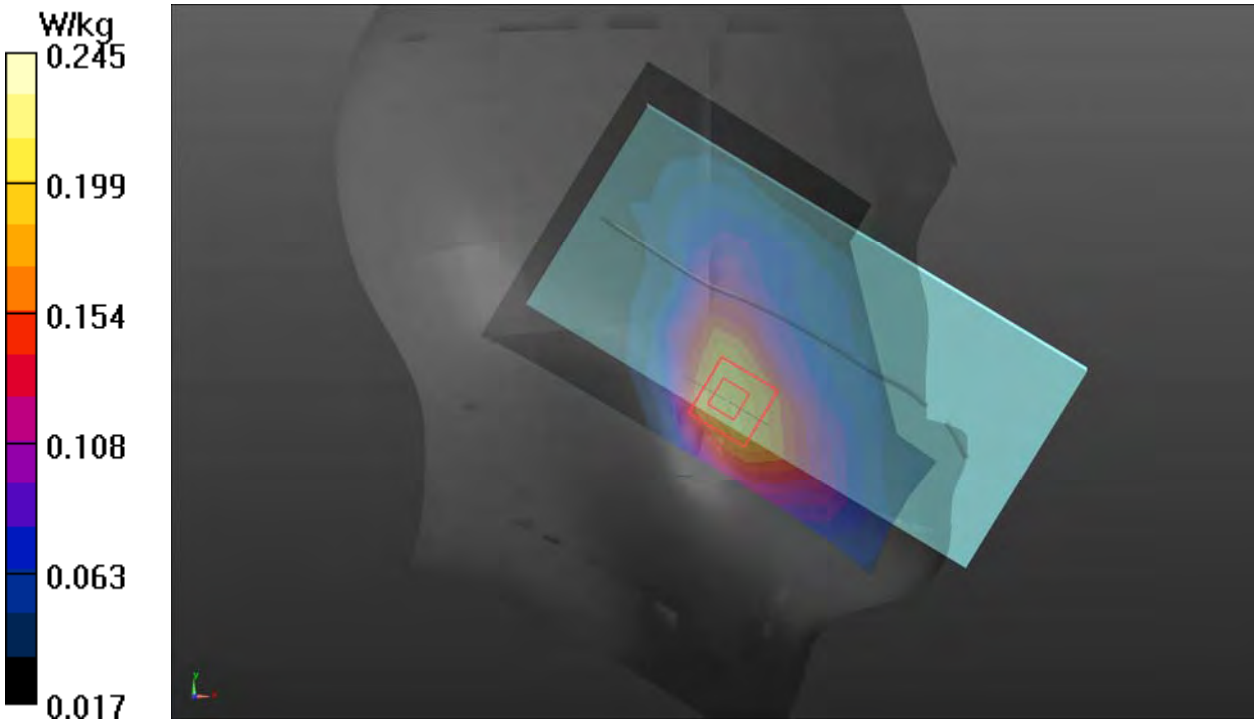
Left Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.174 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.391 W/kg

SAR(1 g) = 0.234 W/kg; SAR(10 g) = 0.137 W/kg

Maximum value of SAR (measured) = 0.245 W/kg



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Plot 36 NR n7 1RB Right Cheek Low

Date: 2022/6/25

Communication System: UID 0, 5G NR (0); Frequency: 2510 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2510 MHz; σ = 1.91 S/m; ε_r = 37.398; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 1.20 W/kg

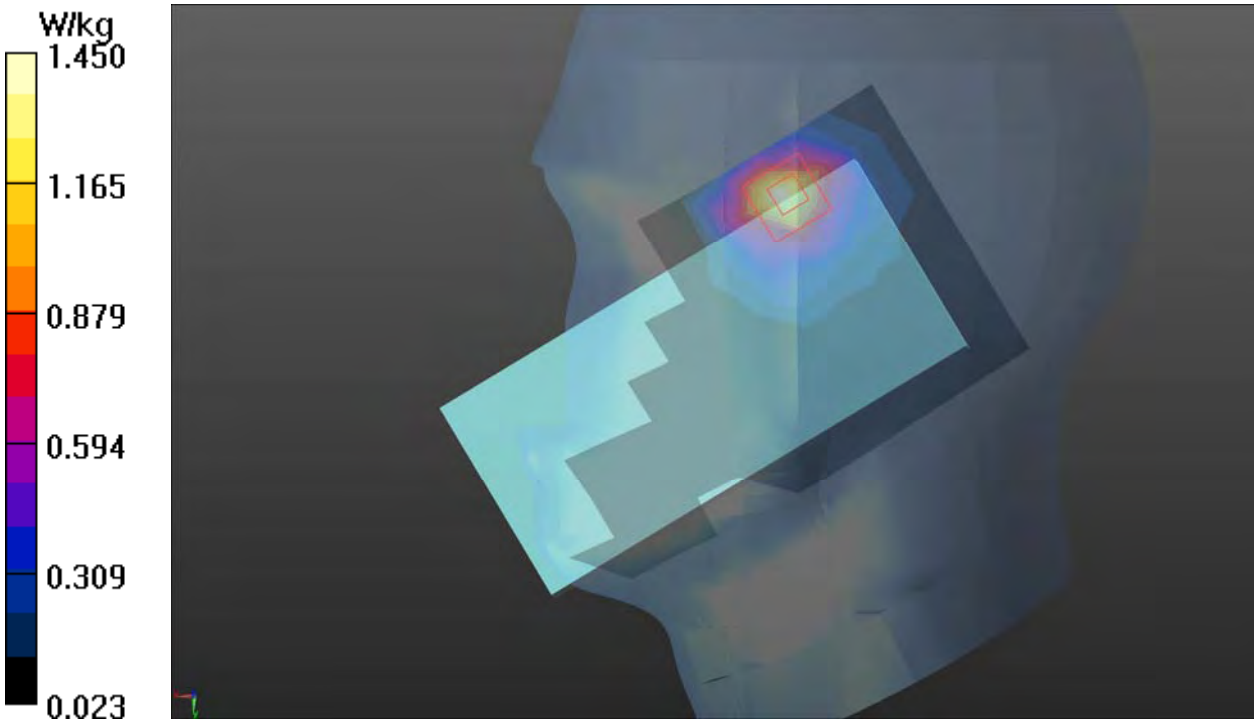
Right Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.847 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 1.81 W/kg

SAR(1 g) = 0.719 W/kg; SAR(10 g) = 0.345 W/kg

Maximum value of SAR (measured) = 1.45 W/kg



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Plot 37 NR n28 50%RB Right Cheek High

Date: 2022/6/14

Communication System: UID 0, 5G NR (0); Frequency: 738.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 738.5 MHz; σ = 0.889 S/m; ε_r = 40.522; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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 High/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.145 W/kg

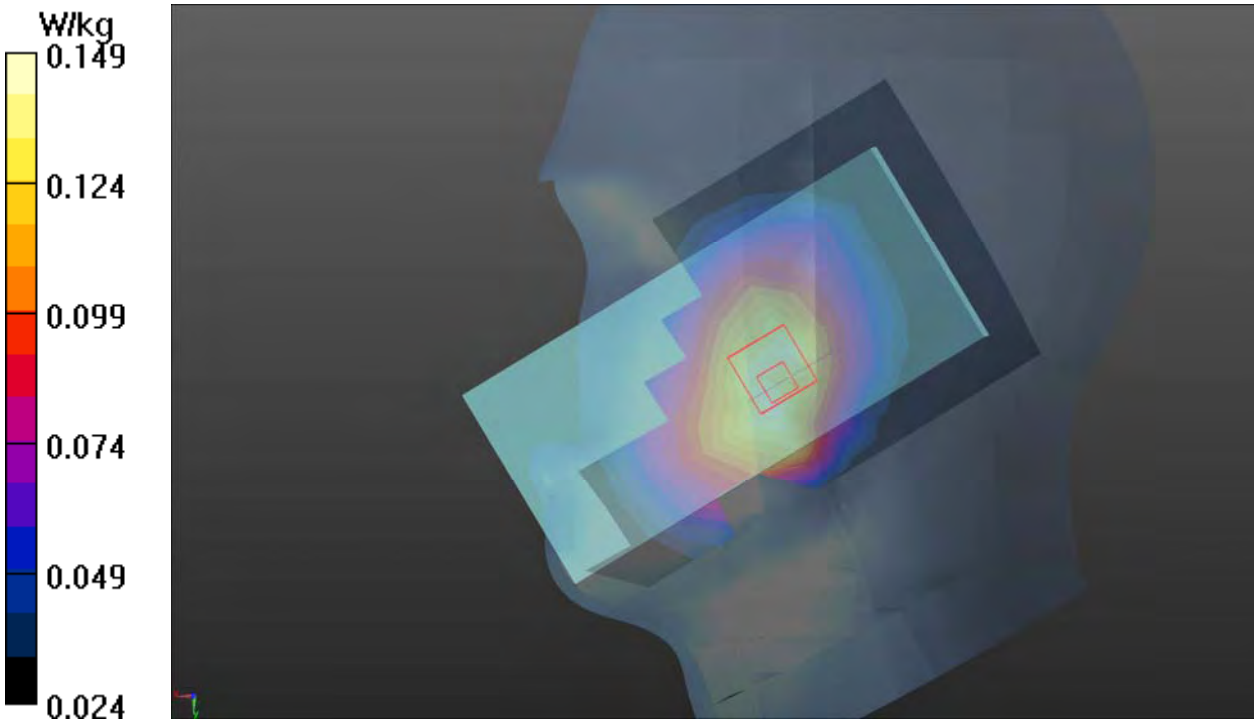
Right Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.403 V/m; Power Drift = 0.047 dB

Peak SAR (extrapolated) = 0.166 W/kg

SAR(1 g) = 0.122 W/kg; SAR(10 g) = 0.094 W/kg

Maximum value of SAR (measured) = 0.149 W/kg



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Plot 38 NR n40 50%RB Right Cheek Middle

Date: 2022/6/22

Communication System: UID 0, 5G NR (0); Frequency: 2355 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2355 MHz; σ = 1.738 S/m; ε_r = 37.936; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.67, 7.67, 7.67); 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 (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.37 W/kg

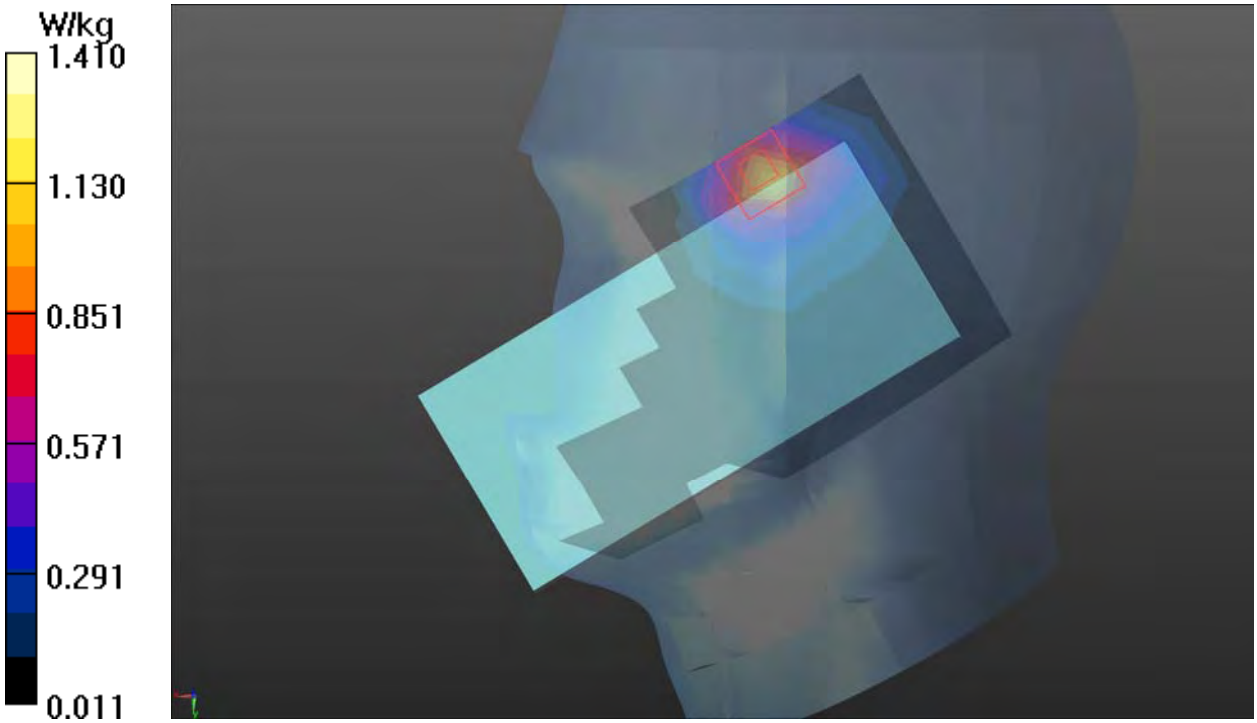
Right Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.650 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 2.64 W/kg

SAR(1 g) = 1.25 W/kg; SAR(10 g) = 0.574 W/kg

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



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Plot 39 NR n66 1RB Left Cheek Middle

Date: 2022/7/4

Communication System: UID 0, 5G NR (0); Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1745 MHz; σ = 1.301 S/m; ε_r = 38.753; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); 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 Middle/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.205 W/kg

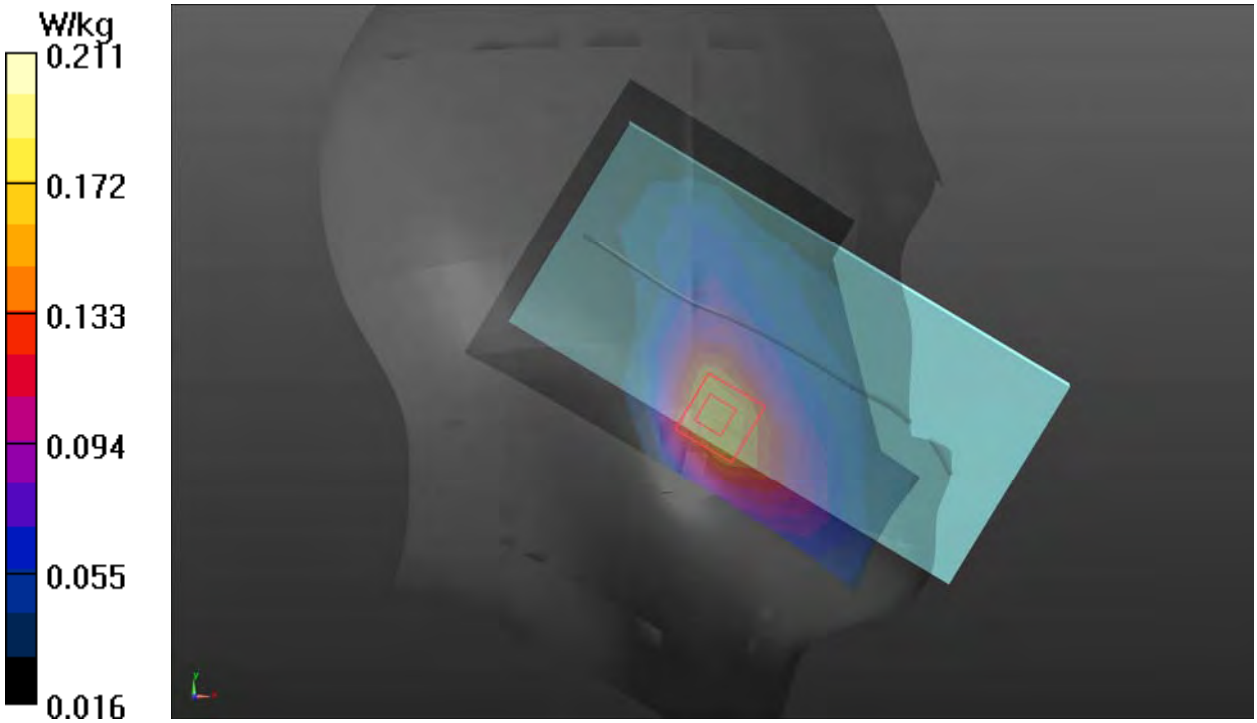
Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.674 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 0.287 W/kg

SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.117 W/kg

Maximum value of SAR (measured) = 0.211 W/kg



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Plot 40 NR n78 50%RB Right Cheek Middle

Date: 2022/6/24

Communication System: UID 0, 5G NR (0); Frequency: 3500 MHz;Duty Cycle: 1:1

Medium parameters used: f = 3500 MHz; σ = 2.807 S/m; ε_r = 38.115; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.92, 6.92, 6.92); 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 (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 2.96 W/kg

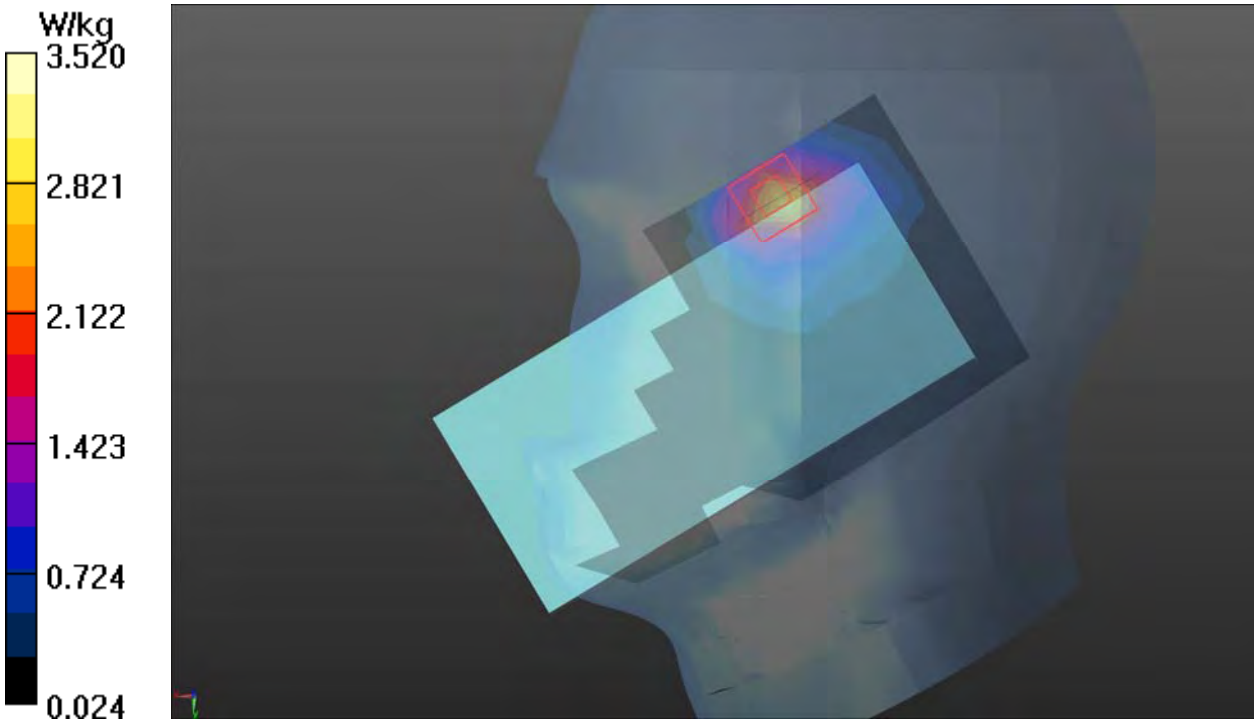
Right Cheek Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 9.456 V/m; Power Drift = 0.1 dB

Peak SAR (extrapolated) = 6.75 W/kg

SAR(1 g) = 2.06 W/kg; SAR(10 g) = 0.951 W/kg

Maximum value of SAR (measured) = 3.52 W/kg



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Plot 41 802.11b Left Tilt Middle

Date: 2022/6/27

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz;Duty Cycle: 1:1.02

Medium parameters used: f = 2437 MHz; σ = 1.831 S/m; ε_r = 37.663; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.685 W/kg

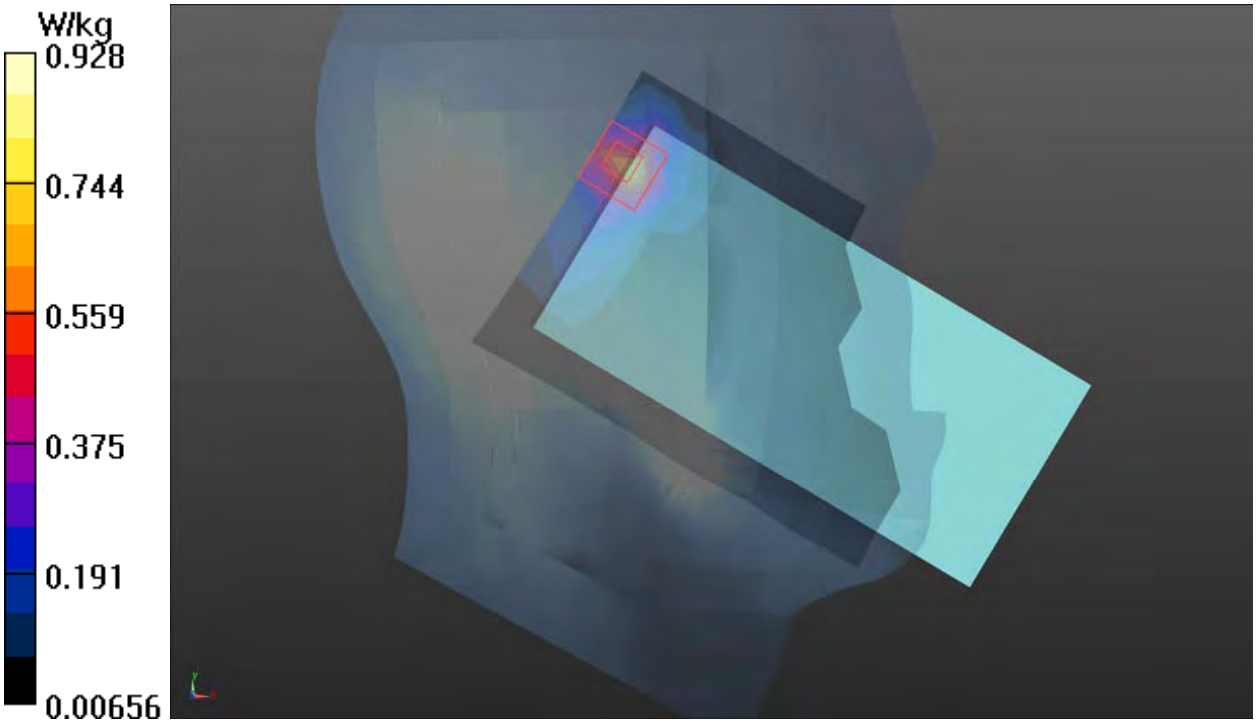
Left Tilt Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.856 V/m; Power Drift = -0.021 dB

Peak SAR (extrapolated) = 1.24 W/kg

SAR(1 g) = 0.556 W/kg; SAR(10 g) = 0.241 W/kg

Maximum value of SAR (measured) = 0.928 W/kg



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Plot 42 802.11a U-NII-1 Left Tilt Middle

Date: 2022/6/23

Communication System: UID 0, 802.11a (0); Frequency: 5220 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5220 MHz; σ = 4.86 S/m; ε_r = 36.763; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 Tilt Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.59 W/kg

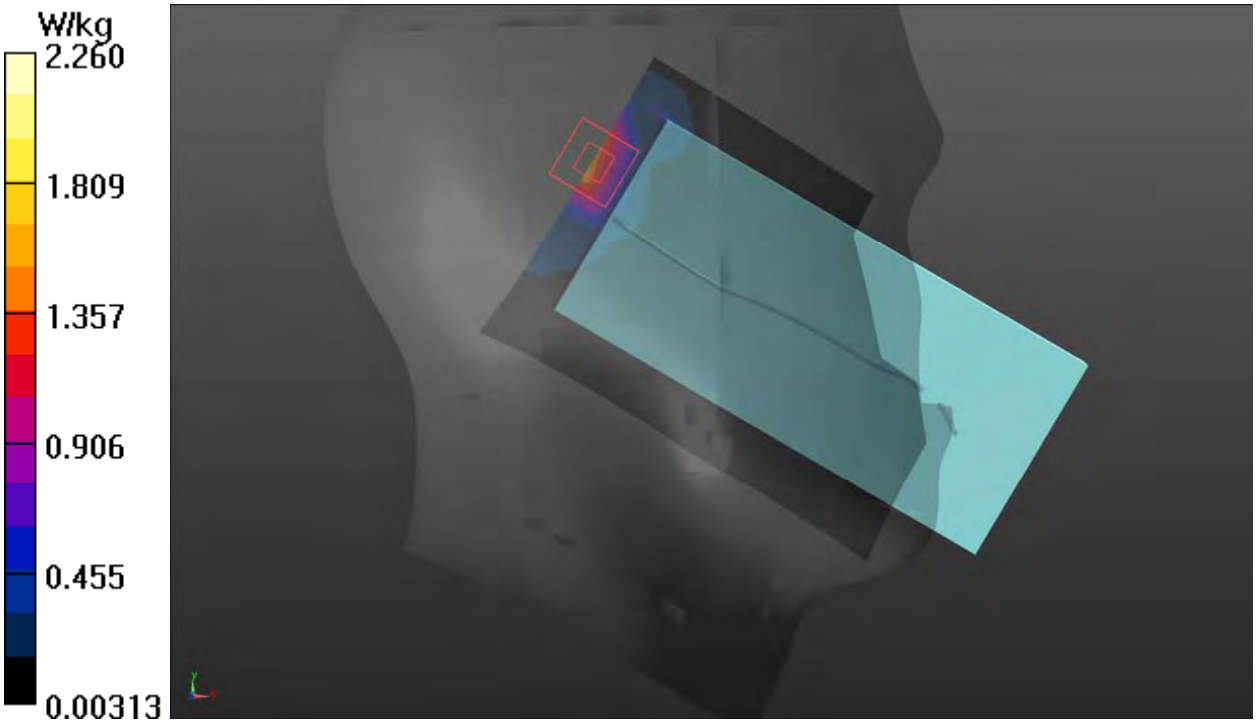
Left Tilt Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.472 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 3.79 W/kg

SAR(1 g) = 0.895 W/kg; SAR(10 g) = 0.272 W/kg

Maximum value of SAR (measured) = 2.26 W/kg



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Plot 43 Bluetooth Left Cheek High

Date: 2022/6/27

Communication System: UID 0, BT (0); Frequency: 2480 MHz;Duty Cycle: 1:1.32

Medium parameters used: f = 2480 MHz; σ = 1.878 S/m; ε_r = 37.511; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.129 W/kg

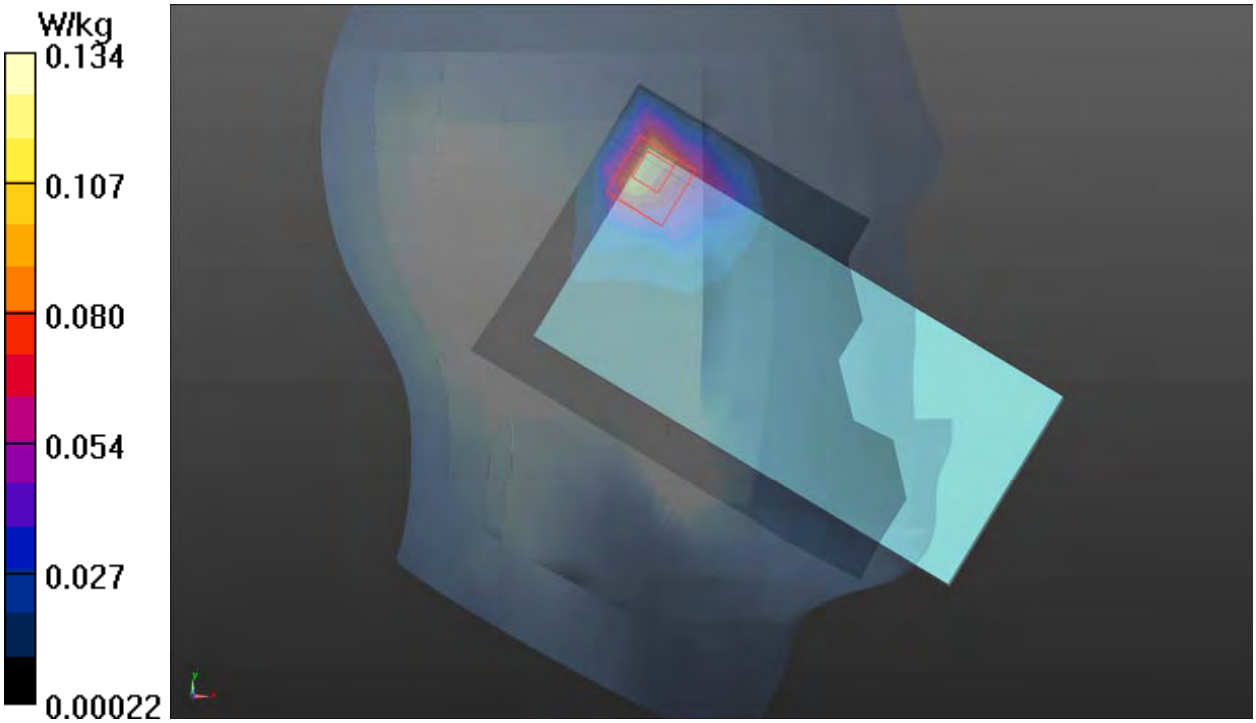
Left Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.811 V/m; Power Drift = 0.01K dB

Peak SAR (extrapolated) = 0.287 W/kg

SAR(1 g) = 0.127 W/kg; SAR(10 g) = 0.059 W/kg

Maximum value of SAR (measured) = 0.134 W/kg



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Plot 44 GSM 850 Back Side Middle (Distance 15mm)

Date: 2022/6/13

Communication System: UID 0, GSM (0); Frequency: 836.6 MHz;Duty Cycle: 1:8.30

Medium parameters used: f = 836.6 MHz; σ = 0.953 S/m; ε_r = 39.762; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.258 W/kg

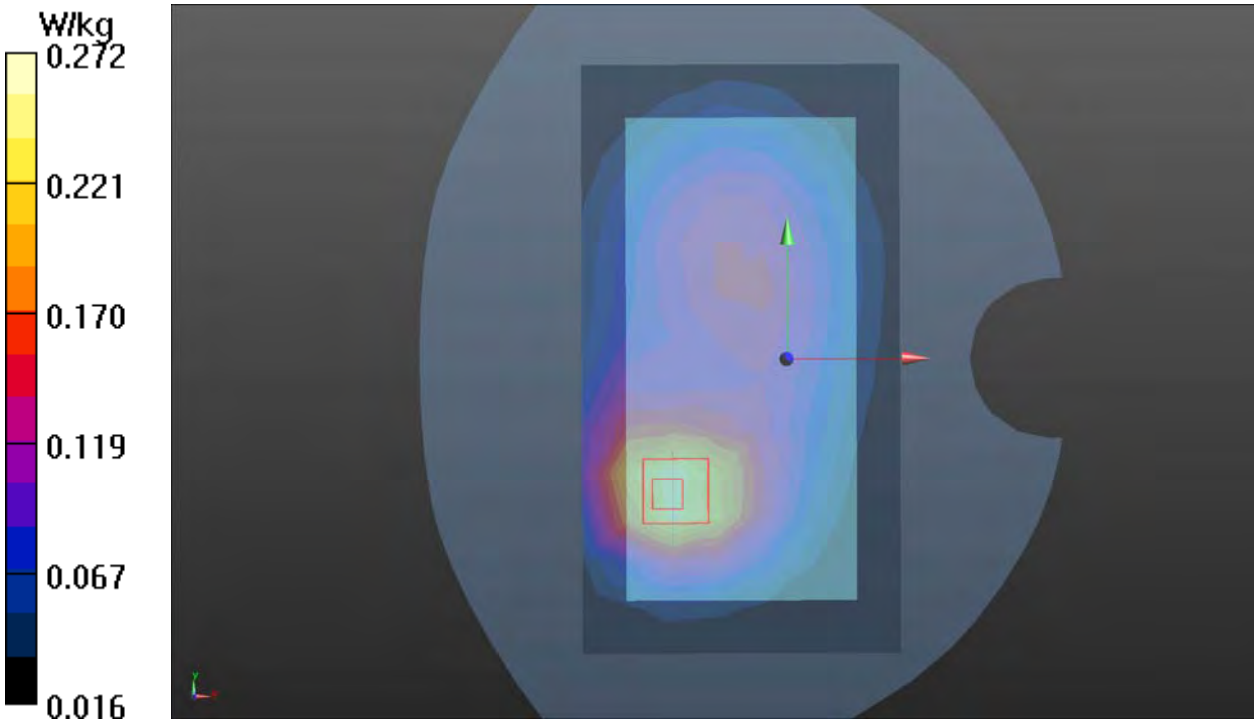
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.45 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.385 W/kg

SAR(1 g) = 0.255 W/kg; SAR(10 g) = 0.169 W/kg

Maximum value of SAR (measured) = 0.272 W/kg



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Plot 45 GSM 1900 Back Side Middle (Distance 15mm)

Date: 2022/6/18

Communication System: UID 0, GSM (0); Frequency: 1880 MHz;Duty Cycle: 1:8.30

Medium parameters used: f = 1880 MHz; σ = 1.42 S/m; ε_r = 38.948; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.213 W/kg

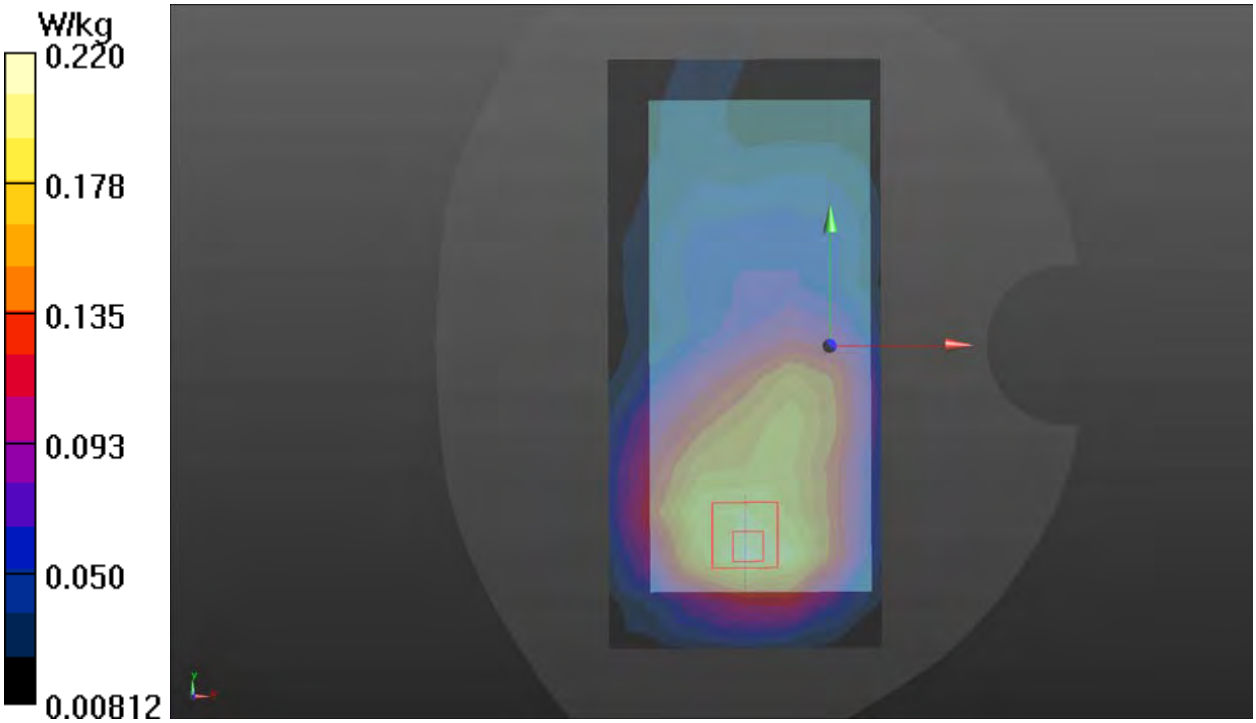
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.503 V/m; Power Drift = 0.048 dB

Peak SAR (extrapolated) = 0.326 W/kg

SAR(1 g) = 0.206 W/kg; SAR(10 g) = 0.129 W/kg

Maximum value of SAR (measured) = 0.220 W/kg



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Plot 46 UMTS Band II Back Side Middle (Distance 15mm)

Date: 2022/6/21

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

Medium parameters used: f = 1880 MHz; σ = 1.42 S/m; ε_r = 38.948; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 (7x14x1): Measurement grid: dx=15mm, dy=15mm

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

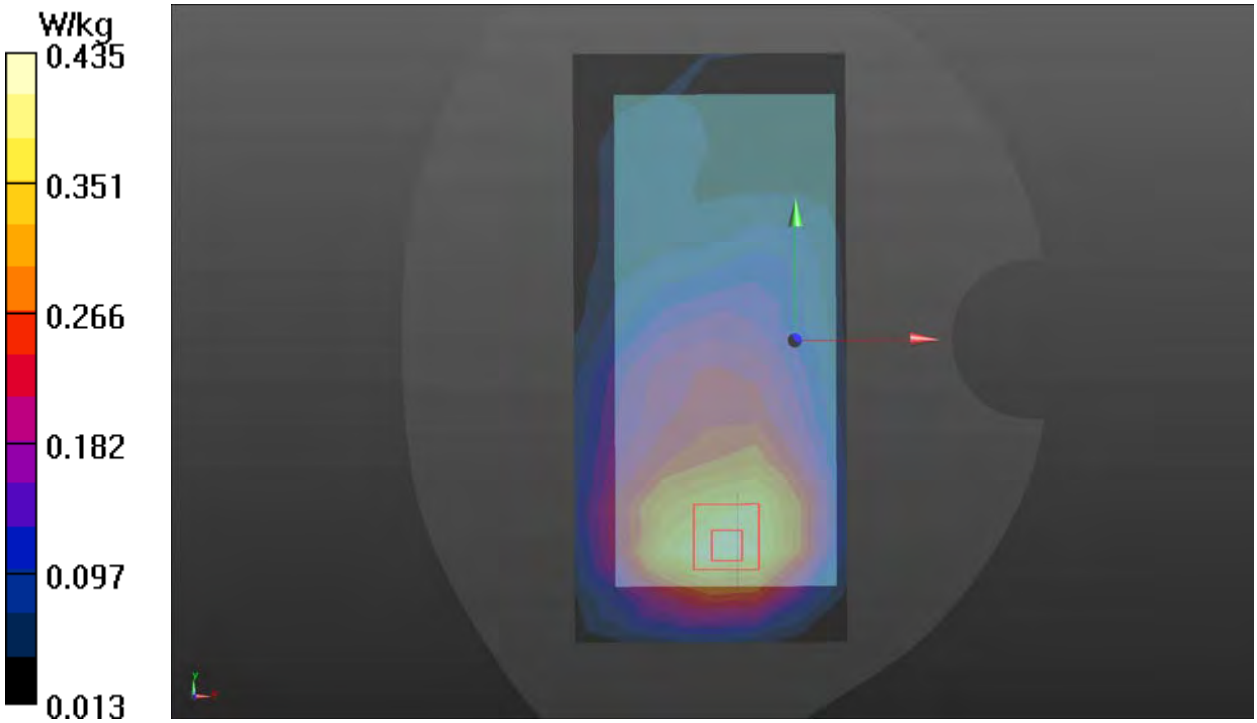
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.42 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.642 W/kg

SAR(1 g) = 0.409 W/kg; SAR(10 g) = 0.260 W/kg

Maximum value of SAR (measured) = 0.435 W/kg



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Plot 47 UMTS Band IV Back Side Middle (Distance 15mm)

Date: 2022/6/15

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1732.6 MHz; σ = 1.312 S/m; ε_r = 39.365; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 (7x14x1): Measurement grid: dx=15mm, dy=15mm

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

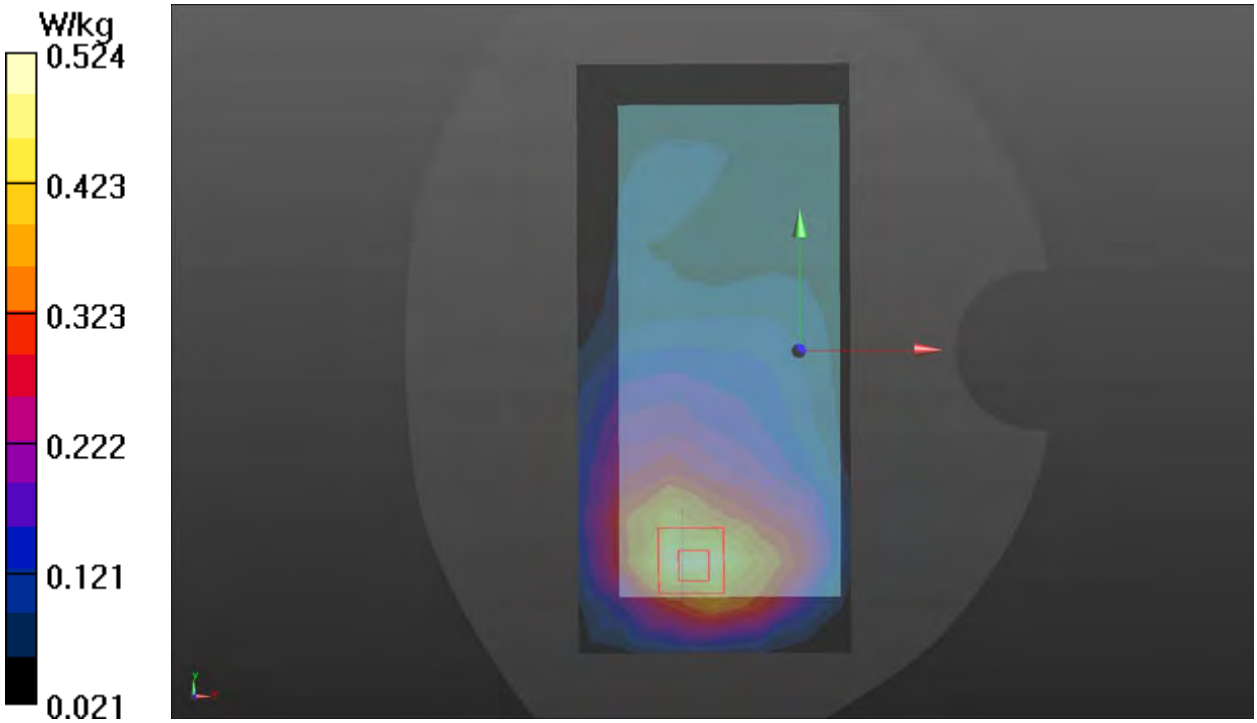
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.623 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.758 W/kg

SAR(1 g) = 0.492 W/kg; SAR(10 g) = 0.308 W/kg

Maximum value of SAR (measured) = 0.524 W/kg



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Plot 48 UMTS Band V Back Side Middle (Distance 15mm)

Date: 2022/6/17

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

Medium parameters used: f = 836.6 MHz; σ = 0.953 S/m; ε_r = 39.762; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.311 W/kg

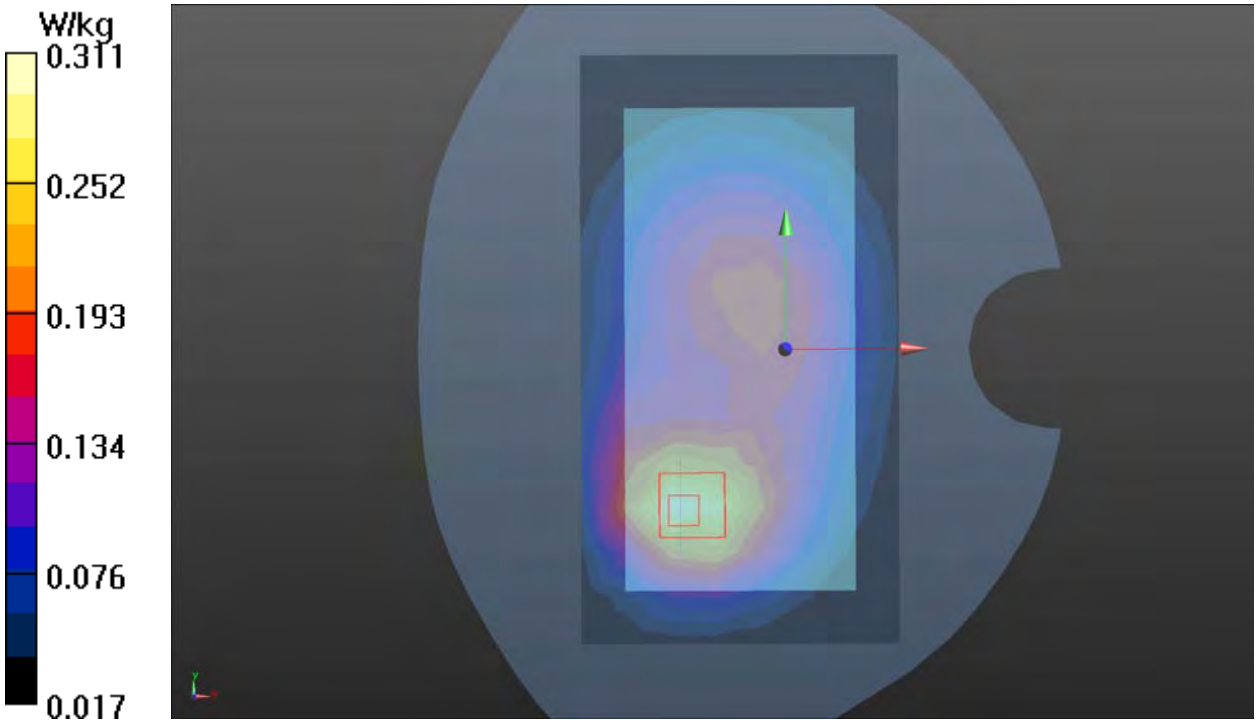
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.40 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.438 W/kg

SAR(1 g) = 0.289 W/kg; SAR(10 g) = 0.192 W/kg

Maximum value of SAR (measured) = 0.311 W/kg



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Plot 49 LTE Band 2 1RB Back Side Low (Distance 15mm)

Date: 2022/6/21

Communication System: UID 0, LTE (0); Frequency: 1860 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1860 MHz; σ = 1.407 S/m; ε_r = 39.071; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 Low/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.398 W/kg

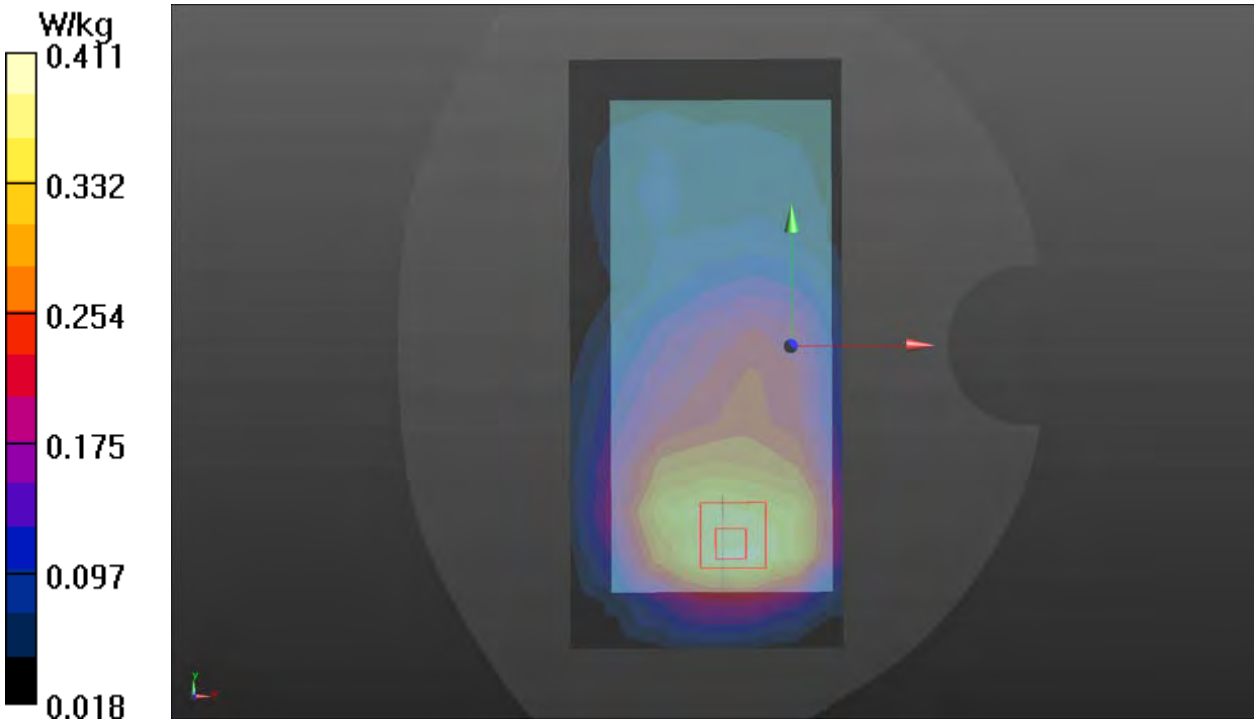
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.09 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.605 W/kg

SAR(1 g) = 0.381 W/kg; SAR(10 g) = 0.243 W/kg

Maximum value of SAR (measured) = 0.411 W/kg



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Plot 50 LTE Band 5 1RB Back Side Middle (Distance 15mm)

Date: 2022/6/13

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

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.953 S/m; ε_r = 39.767; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.273 W/kg

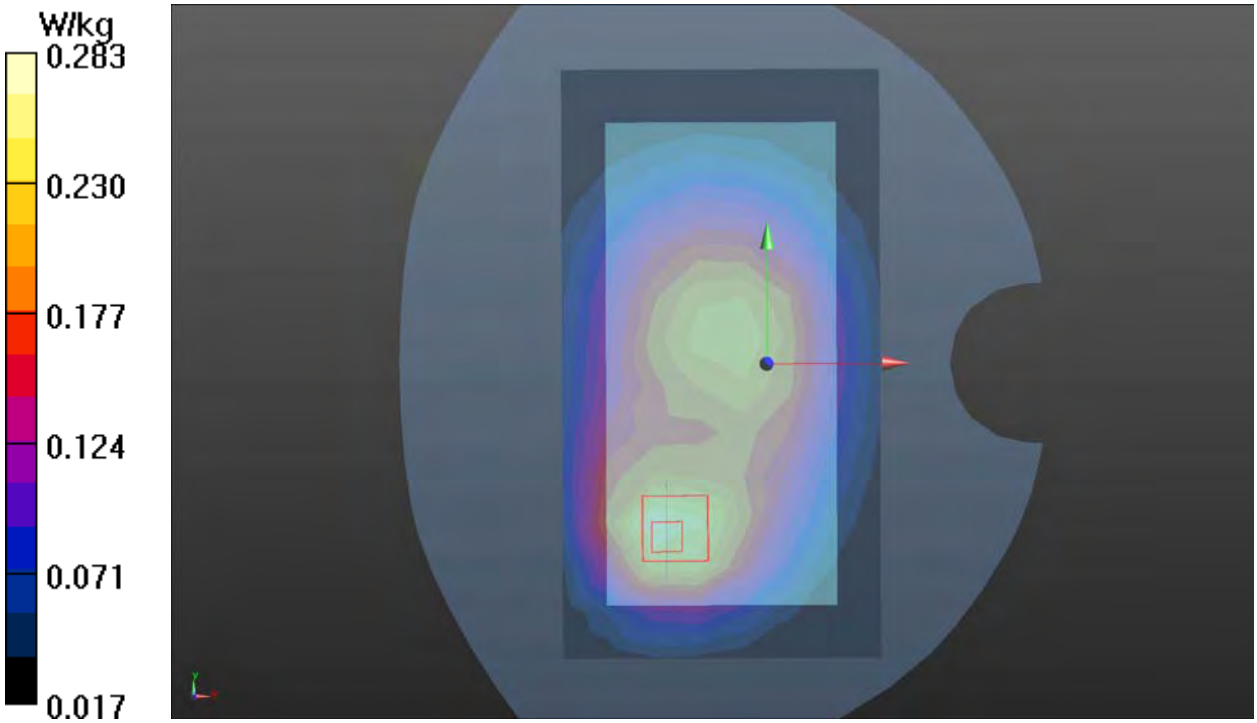
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.24 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.398 W/kg

SAR(1 g) = 0.265 W/kg; SAR(10 g) = 0.178 W/kg

Maximum value of SAR (measured) = 0.283 W/kg



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Plot 51 LTE Band 7 50%RB Back Side Middle (Distance 15mm)

Date: 2022/6/20

Communication System: UID 0, LTE (0); Frequency: 2535 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2535 MHz; σ = 1.94 S/m; ε_r = 37.31; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.514 W/kg

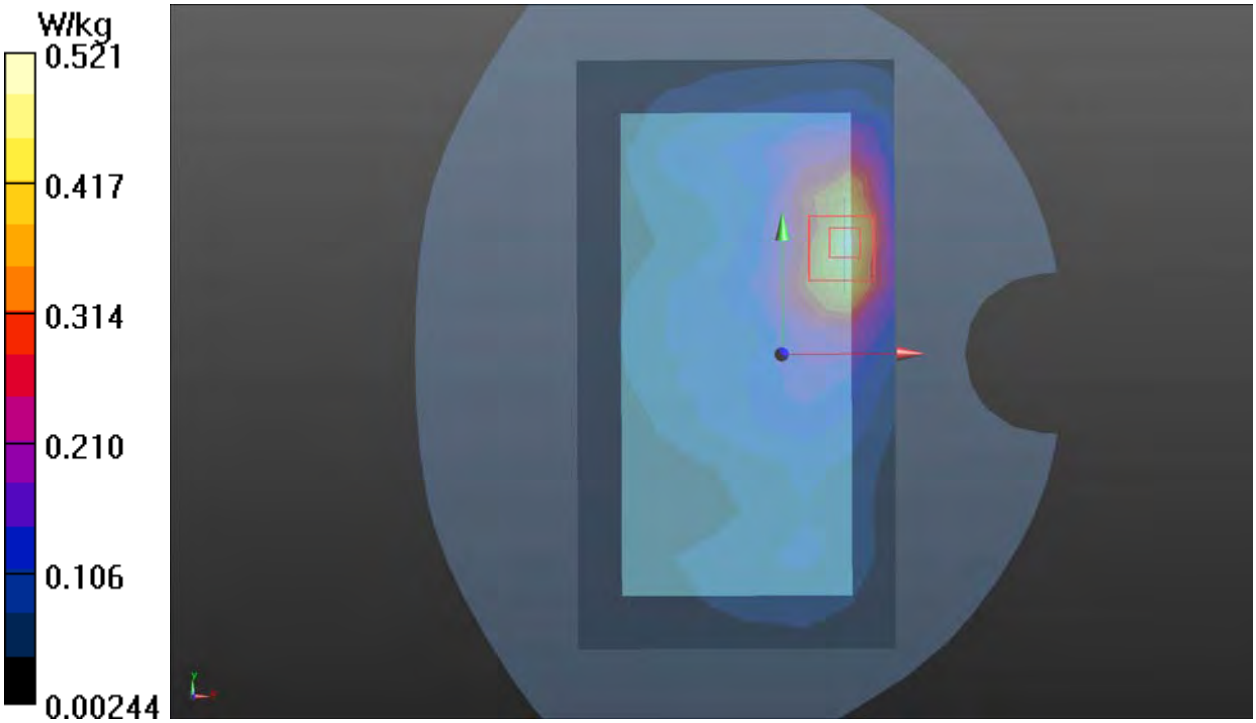
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.004 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.931 W/kg

SAR(1 g) = 0.471 W/kg; SAR(10 g) = 0.243 W/kg

Maximum value of SAR (measured) = 0.521 W/kg



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Plot 52 LTE Band 12 1RB Back Side Low (Distance 15mm)

Date: 2022/6/14

Communication System: UID 0, LTE (0); Frequency: 704 MHz;Duty Cycle: 1:1

Medium parameters used: f = 704 MHz; σ = 0.867 S/m; ε_r = 40.747; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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) = 0.147 W/kg

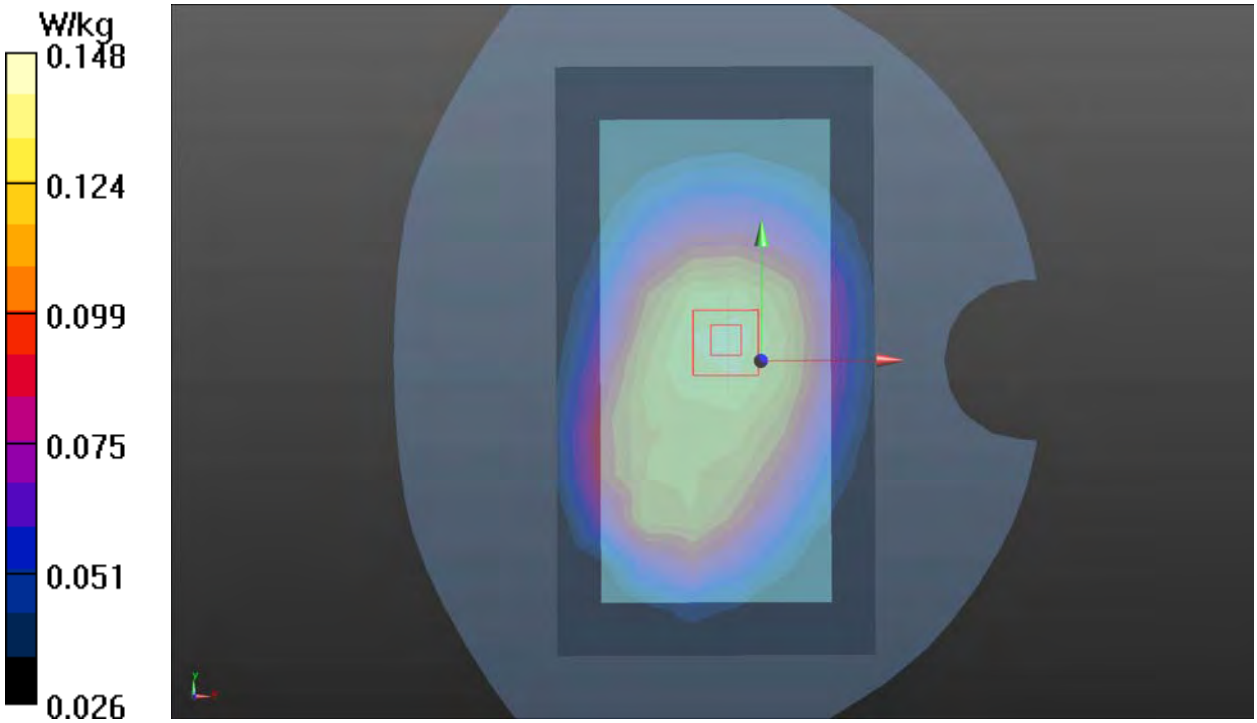
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.51 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.164 W/kg

SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.095 W/kg

Maximum value of SAR (measured) = 0.148 W/kg



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Plot 53 LTE Band 13 1RB Back Side Middle (Distance 15mm)

Date: 2022/6/14

Communication System: UID 0, LTE (0); Frequency: 782 MHz;Duty Cycle: 1:1

Medium parameters used: f = 782 MHz; σ = 0.917 S/m; ε_r = 40.132; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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) = 0.206 W/kg

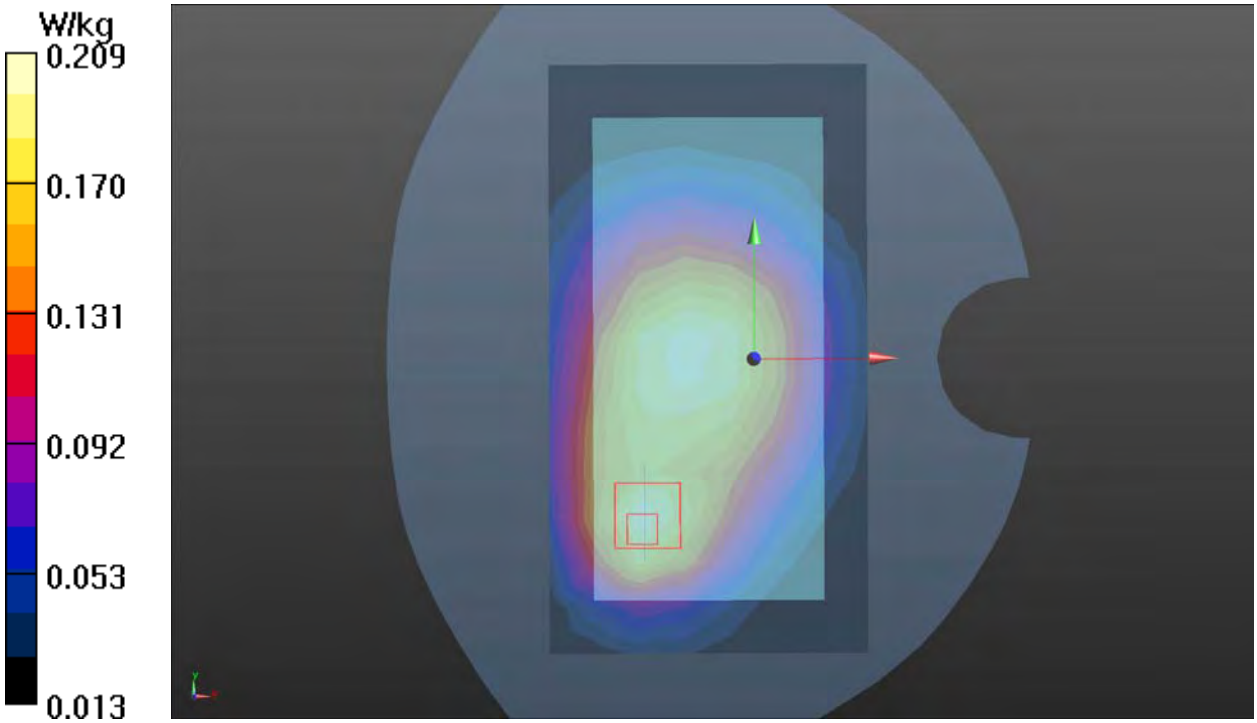
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.80 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.290 W/kg

SAR(1 g) = 0.196 W/kg; SAR(10 g) = 0.133 W/kg

Maximum value of SAR (measured) = 0.209 W/kg



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Plot 54 LTE Band 26 1RB Back Side High (Distance 15mm)

Date: 2022/6/17

Communication System: UID 0, LTE (0); Frequency: 841.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.957 S/m; ε_r = 39.746; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.304 W/kg

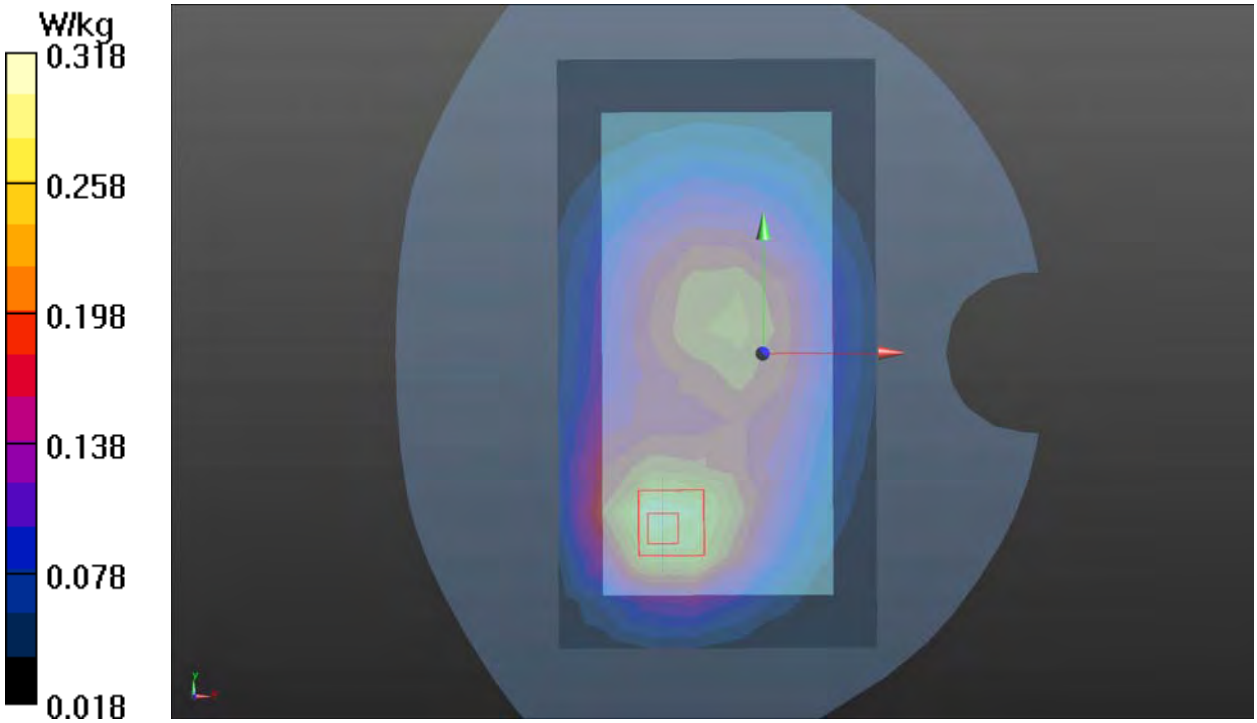
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.97 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.444 W/kg

SAR(1 g) = 0.296 W/kg; SAR(10 g) = 0.197 W/kg

Maximum value of SAR (measured) = 0.318 W/kg



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Plot 55 LTE Band 28 1RB Back Side Low (Distance 15mm)

Date: 2022/6/16

Communication System: UID 0, LTE (0); Frequency: 735.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 735.5 MHz; σ = 0.887 S/m; ε_r = 40.552; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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) = 0.195 W/kg

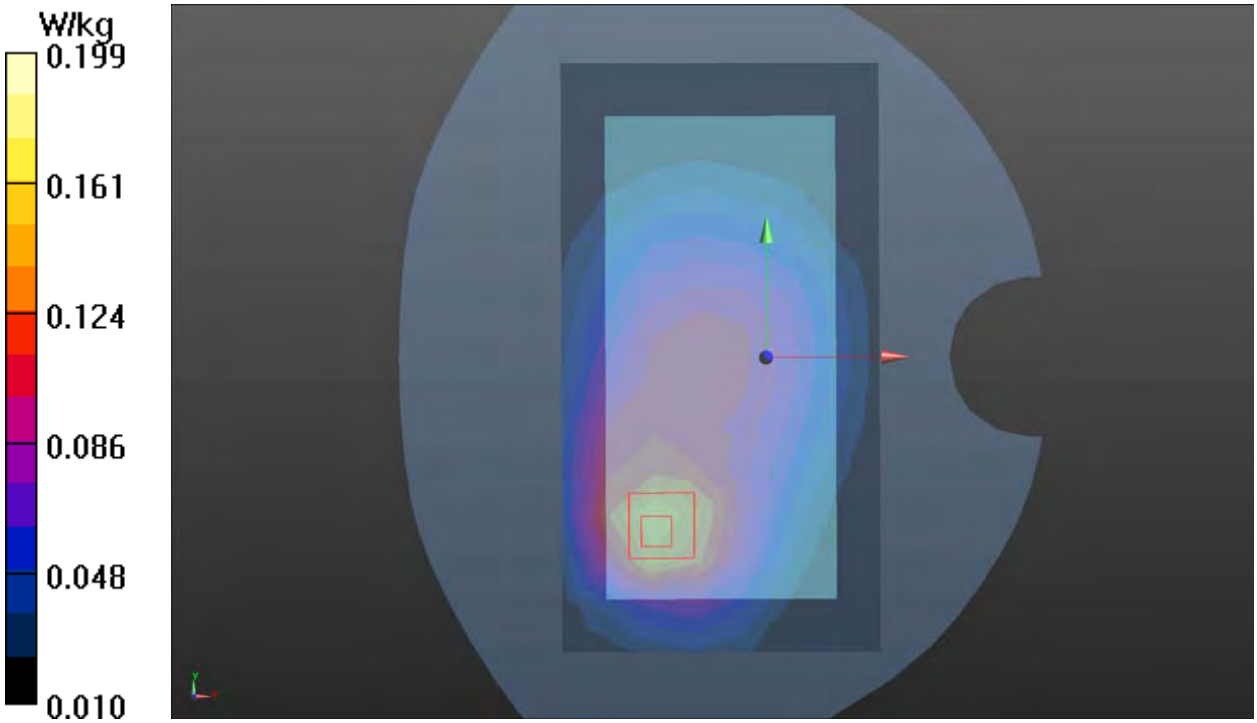
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.07 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.237 W/kg

SAR(1 g) = 0.184 W/kg; SAR(10 g) = 0.122 W/kg

Maximum value of SAR (measured) = 0.199 W/kg



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Plot 56 LTE Band 38 1RB Back Side Middle (Distance 15mm)

Date: 2022/7/1

Communication System: UID 0, LTE (0); Frequency: 2595 MHz;Duty Cycle: 1:1.58

Medium parameters used: f = 2595 MHz; σ = 2.011 S/m; ε_r = 37.134; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.260 W/kg

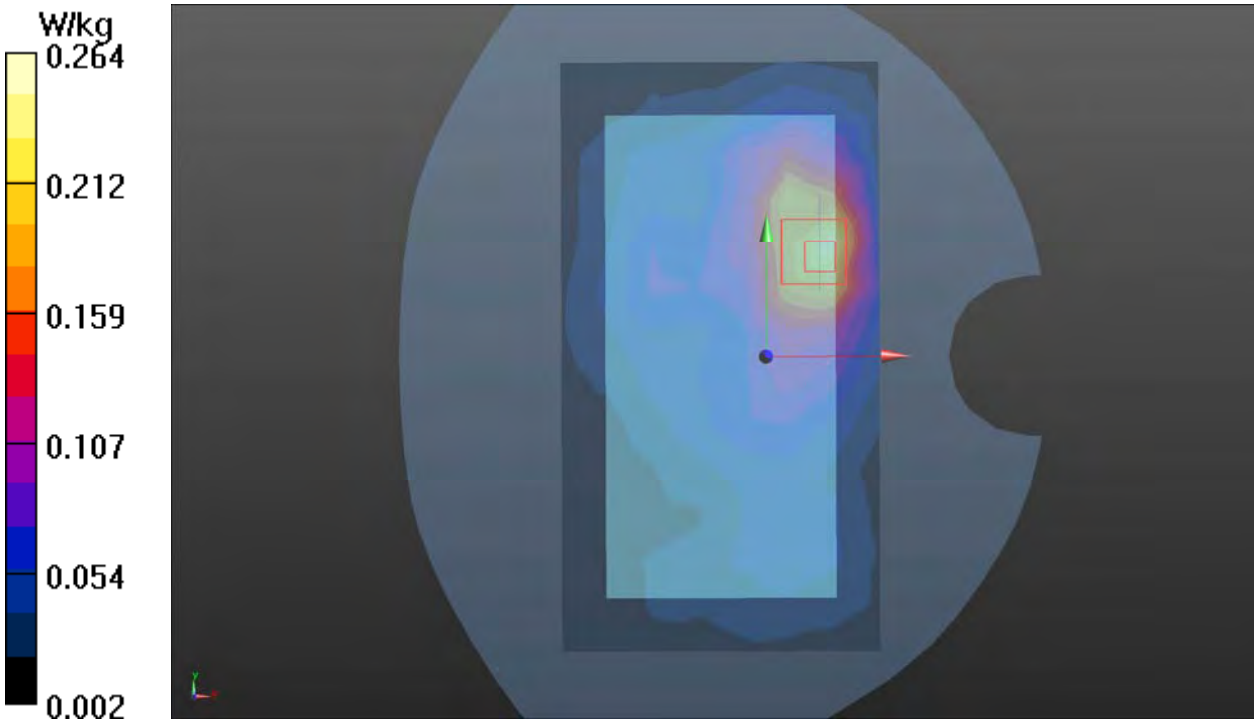
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.536 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.493 W/kg

SAR(1 g) = 0.251 W/kg; SAR(10 g) = 0.128 W/kg

Maximum value of SAR (measured) = 0.264 W/kg



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Plot 57 LTE Band 40 1RB Back Side Middle (Distance 15mm)

Date: 2022/6/22

Communication System: UID 0, LTE (0); Frequency: 2310 MHz;Duty Cycle: 1:1.58

Medium parameters used: f = 2310 MHz; σ = 1.693 S/m; ε_r = 38.105; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.67, 7.67, 7.67); 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) = 0.389 W/kg

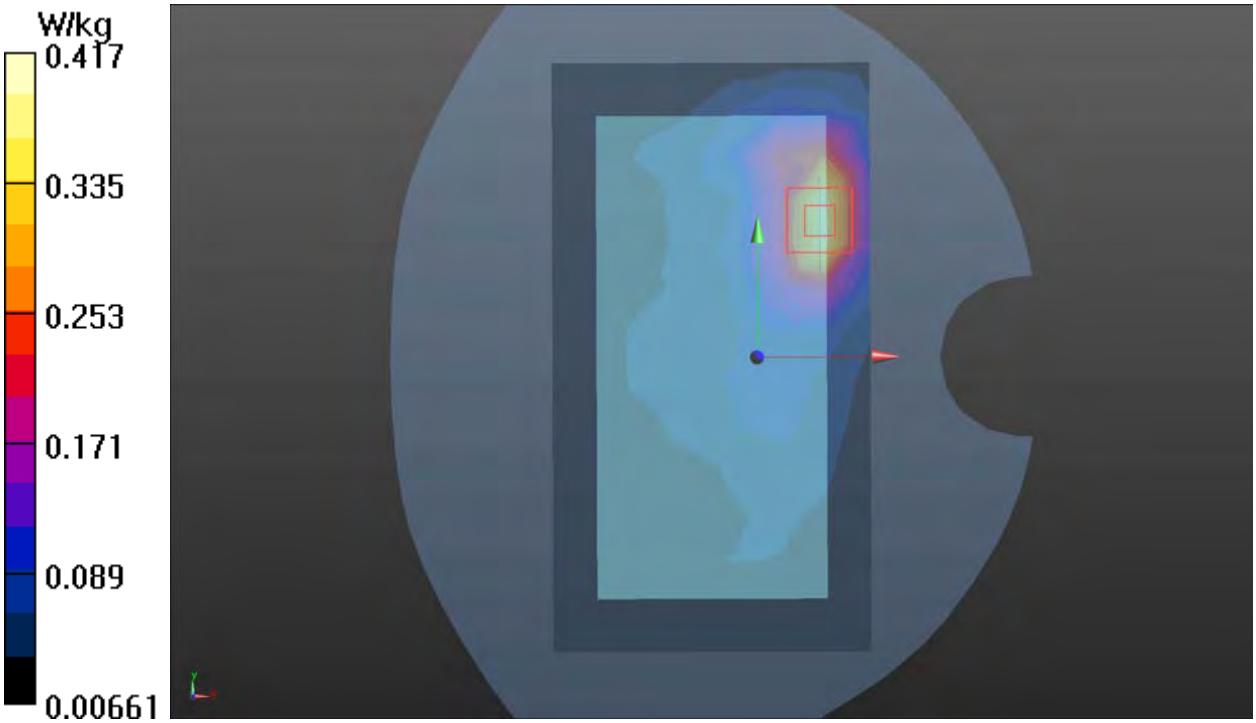
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.709 V/m; Power Drift = 0.056 dB

Peak SAR (extrapolated) = 0.699 W/kg

SAR(1 g) = 0.377 W/kg; SAR(10 g) = 0.199 W/kg

Maximum value of SAR (measured) = 0.417 W/kg



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Plot 58 LTE Band 66 1RB Back Side Middle (Distance 15mm)

Date: 2022/7/2

Communication System: UID 0, LTE (0); Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1745 MHz; σ = 1.301 S/m; ε_r = 38.753; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.408 W/kg

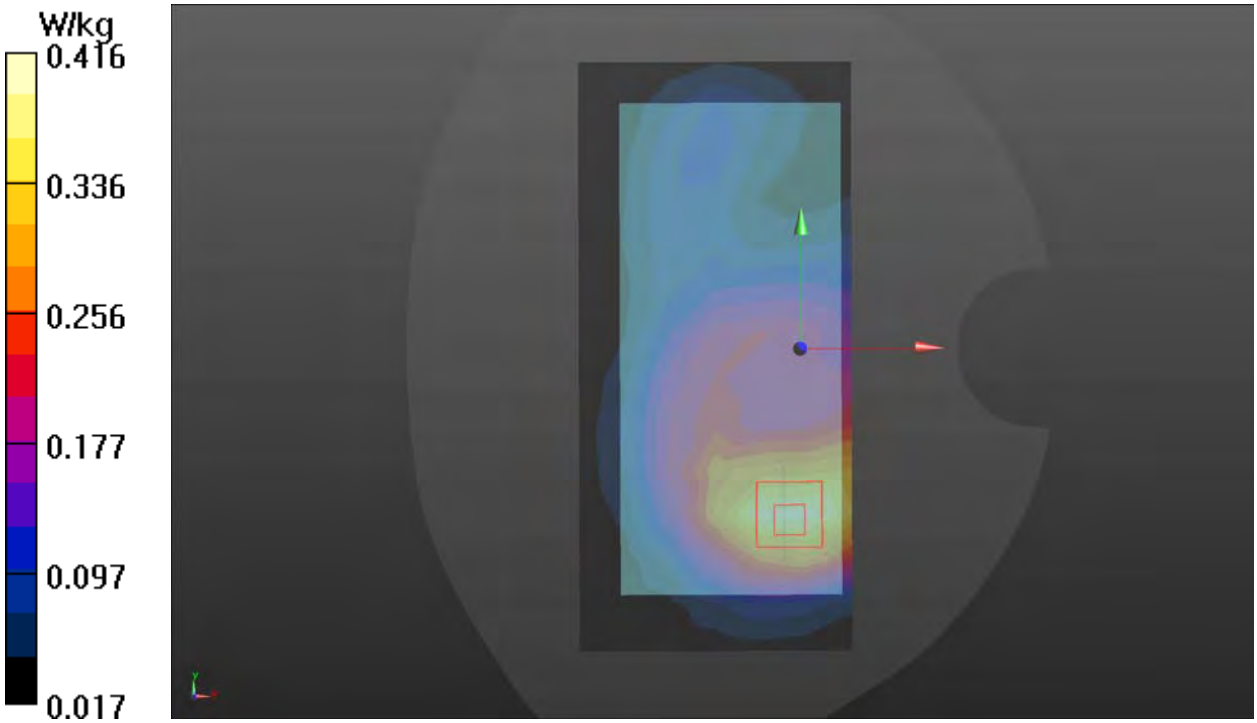
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.72 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.590 W/kg

SAR(1 g) = 0.388 W/kg; SAR(10 g) = 0.245 W/kg

Maximum value of SAR (measured) = 0.416 W/kg



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Plot 59 NR n2 50%RB Back Side Low (Distance 15mm)

Date: 2022/6/21

Communication System: UID 0, 5G NR (0); Frequency: 1860 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1860 MHz; σ = 1.379 S/m; ε_r = 38.4; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 Low/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.511 W/kg

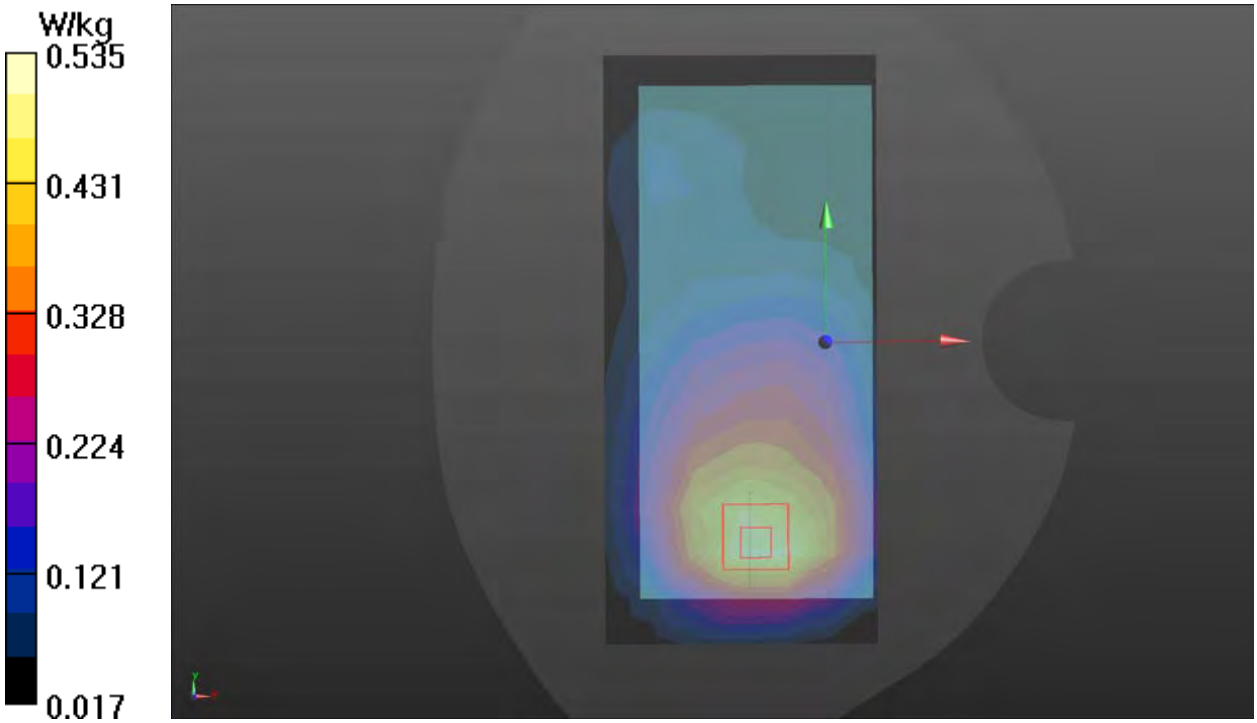
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.84 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.782 W/kg

SAR(1 g) = 0.498 W/kg; SAR(10 g) = 0.313 W/kg

Maximum value of SAR (measured) = 0.535 W/kg



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Plot 60 NR n7 1RB Back Side Low (Distance 15mm)

Date: 2022/6/26

Communication System: UID 0, 5G NR (0); Frequency: 2510 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2510 MHz; σ = 1.91 S/m; ε_r = 37.398; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

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

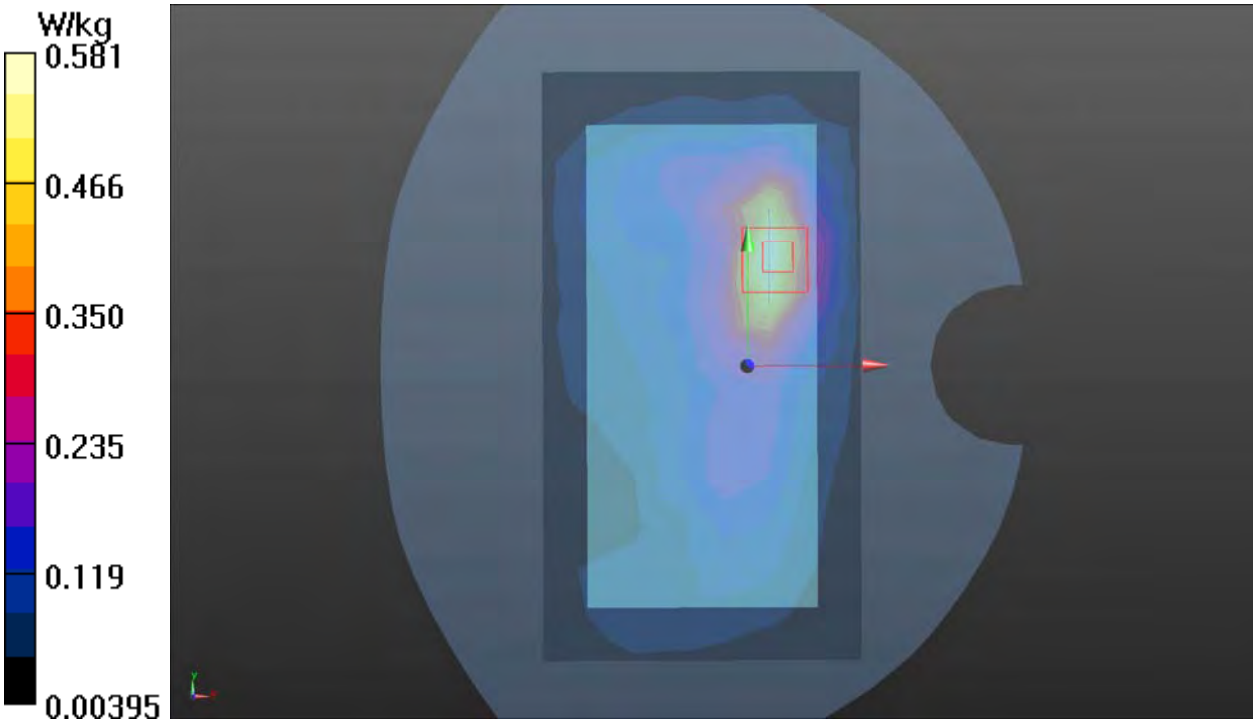
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.627 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.545 W/kg; SAR(10 g) = 0.272 W/kg

Maximum value of SAR (measured) = 0.581 W/kg



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Plot 61 NR n28 50%RB Back Side High (Distance 15mm)

Date: 2022/6/14

Communication System: UID 0, 5G NR (0); Frequency: 738.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 738.5 MHz; σ = 0.889 S/m; ε_r = 40.522; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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 (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.214 W/kg

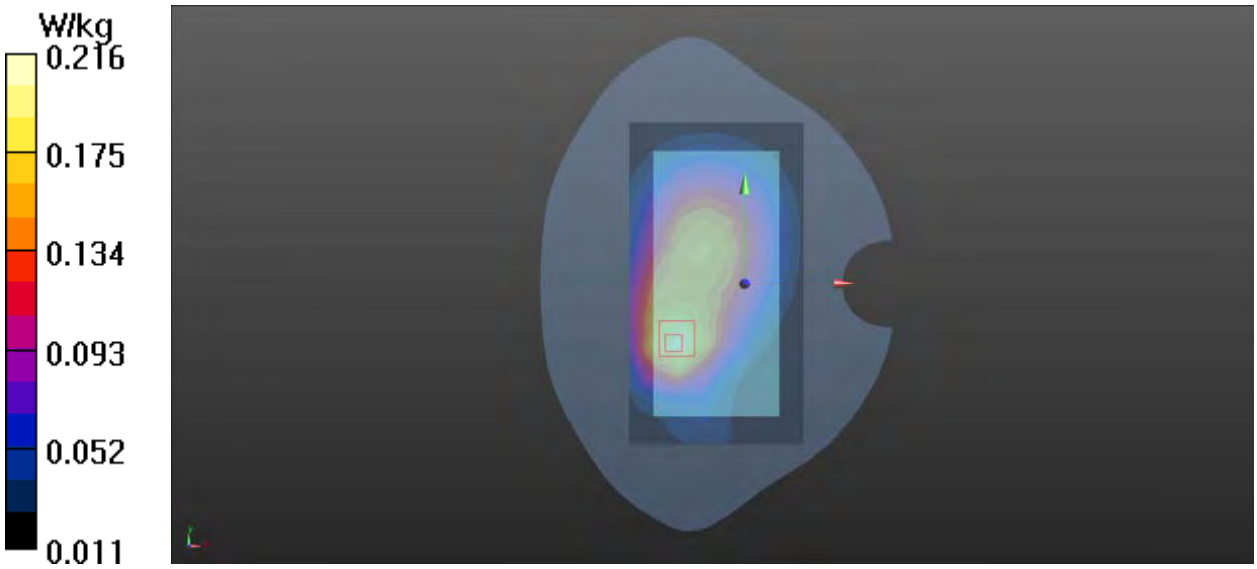
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.84 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.295 W/kg

SAR(1 g) = 0.202 W/kg; SAR(10 g) = 0.138 W/kg

Maximum value of SAR (measured) = 0.216 W/kg



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Plot 62 NR n40 50%RB Back Side Middle (Distance 15mm)

Date: 2022/6/22

Communication System: UID 0, 5G NR (0); Frequency: 2355 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2355 MHz; σ = 1.738 S/m; ε_r = 37.936; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.67, 7.67, 7.67); 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) = 0.745 W/kg

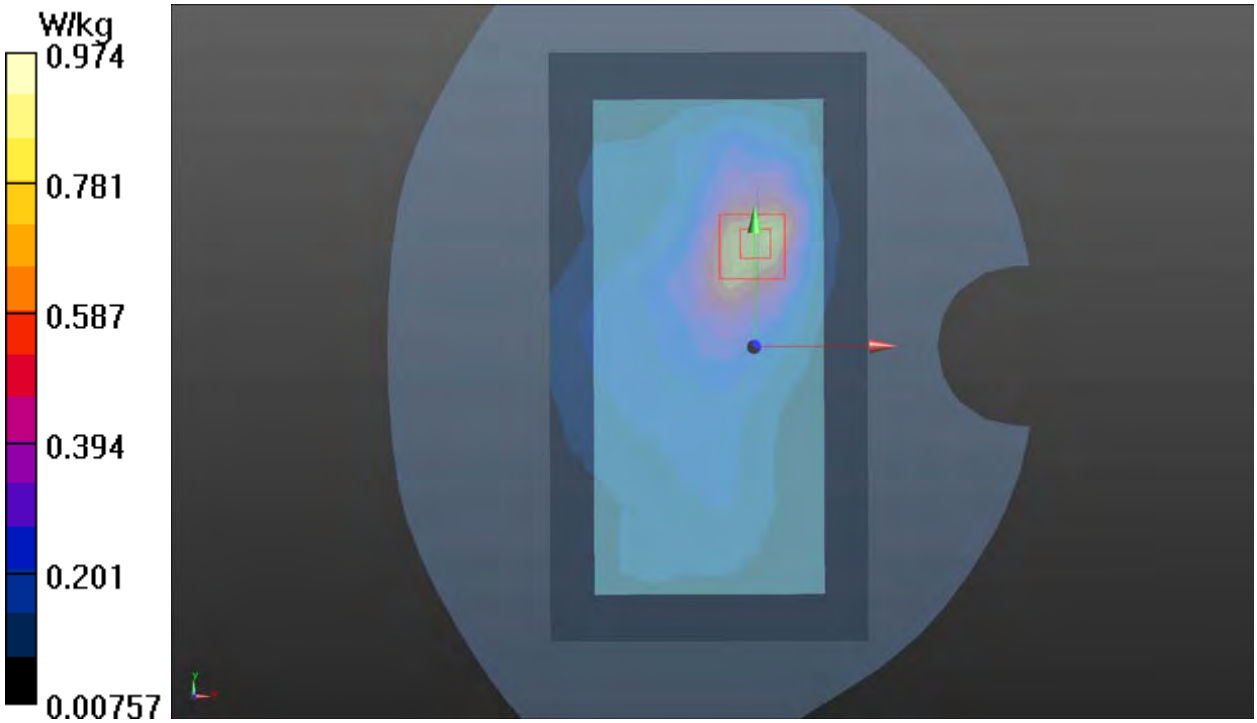
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.98 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 0.859 W/kg; SAR(10 g) = 0.429 W/kg

Maximum value of SAR (measured) = 0.974 W/kg



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Plot 63 NR n66 50%RB Back Side Middle (Distance 15mm)

Date: 2022/7/2

Communication System: UID 0, 5G NR (0); Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1745 MHz; σ = 1.301 S/m; ε_r = 38.753; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.353 W/kg

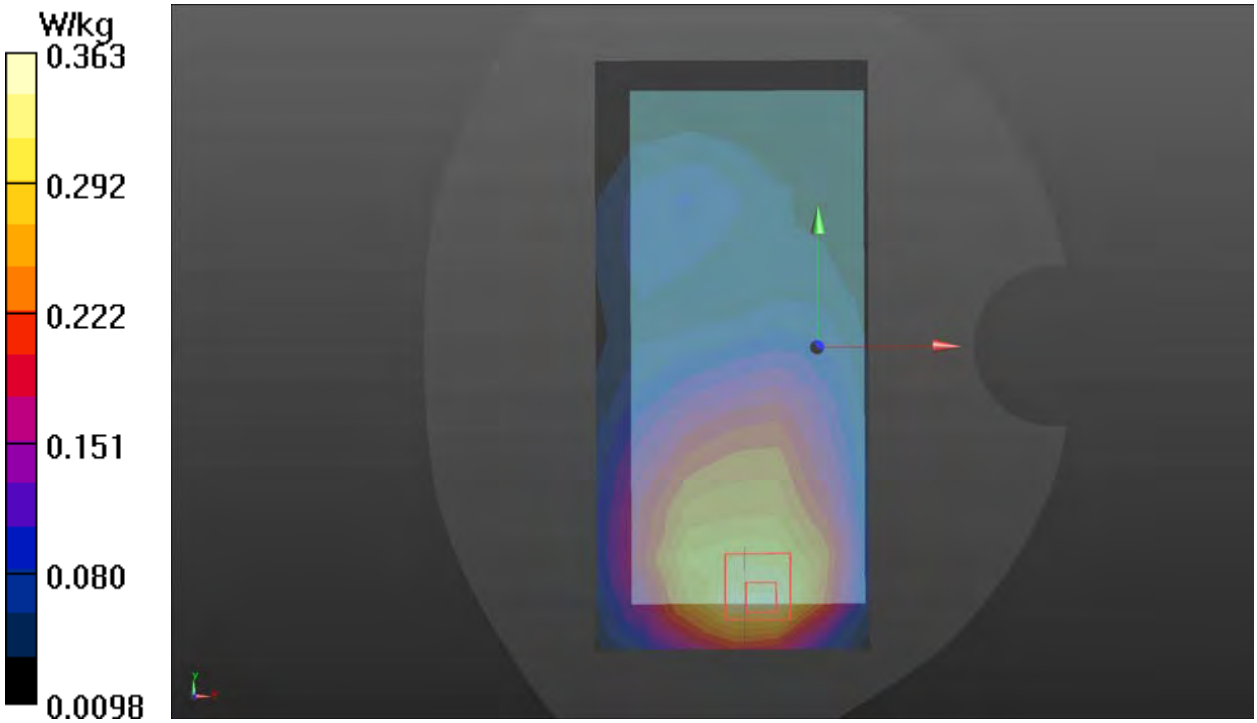
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.349 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.534 W/kg

SAR(1 g) = 0.341 W/kg; SAR(10 g) = 0.217 W/kg

Maximum value of SAR (measured) = 0.363 W/kg



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Plot 64 NR n78 50%RB Front Side Middle (Distance 15mm)

Date: 2022/6/24

Communication System: UID 0, 5G NR (0); Frequency: 3500 MHz;Duty Cycle: 1:1

Medium parameters used: f = 3500 MHz; σ = 2.807 S/m; ε_r = 38.115; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.92, 6.92, 6.92); 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)

Front Side Middle/Area Scan (12x21x1): Measurement grid: dx=10mm, dy=10mm

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

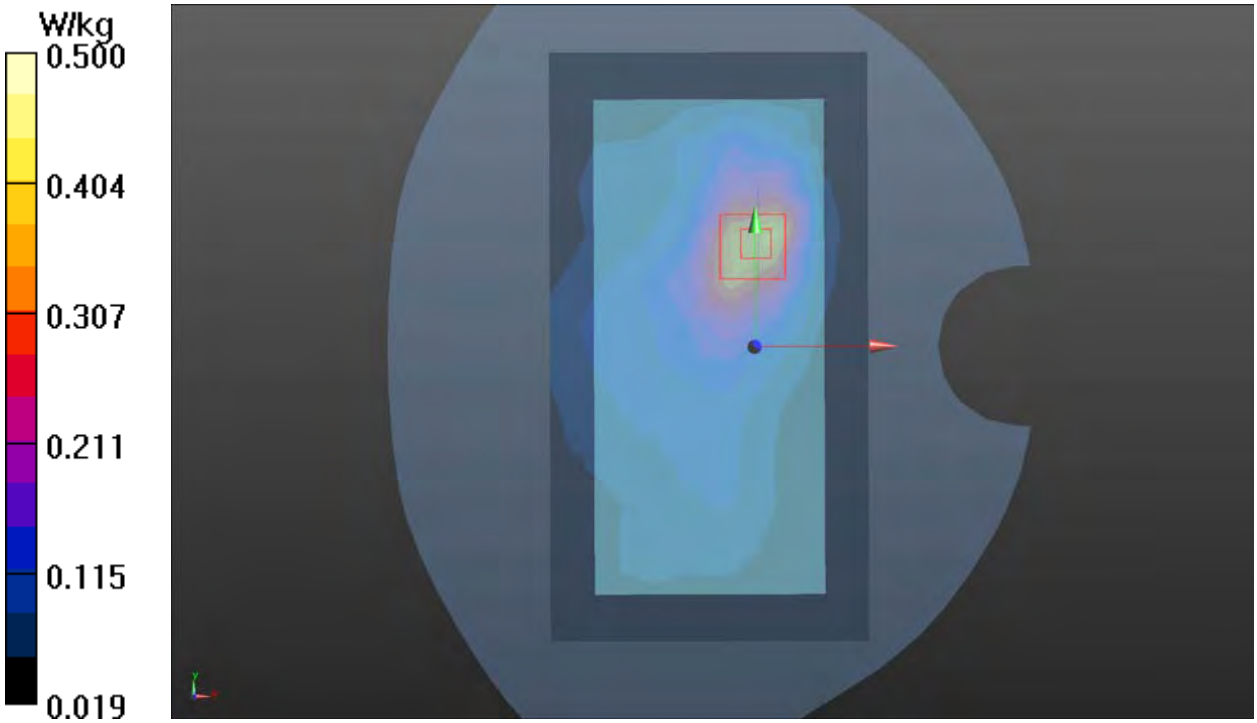
Front Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 16.89 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.854 W/kg

SAR(1 g) = 0.476 W/kg; SAR(10 g) = 0.233 W/kg

Maximum value of SAR (measured) = 0.500 W/kg



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Plot 65 802.11b Back Side Middle (Distance 15mm)

Date: 2022/6/27

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz;Duty Cycle: 1:1.02

Medium parameters used: f = 2437 MHz; σ = 1.831 S/m; ε_r = 37.663; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.207 W/kg

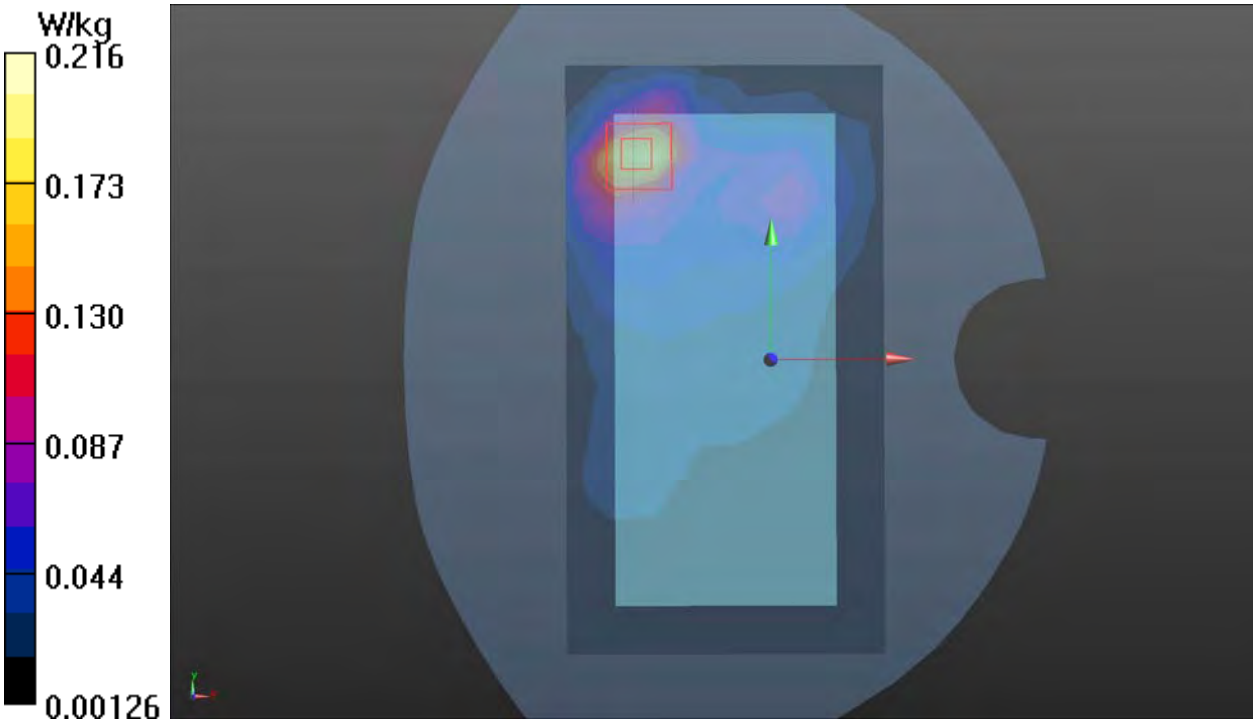
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.667 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 0.376 W/kg

SAR(1 g) = 0.119 W/kg; SAR(10 g) = 0.06 W/kg

Maximum value of SAR (measured) = 0.216 W/kg



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Plot 66 802.11a U-NII-3 Back Side Middle (Distance 15mm)

Date: 2022/6/27

Communication System: UID 0, 802.11a (0); Frequency: 5785 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5785 MHz; σ = 5.48 S/m; ε_r = 35.343; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 Middle/Area Scan (11x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.221 W/kg

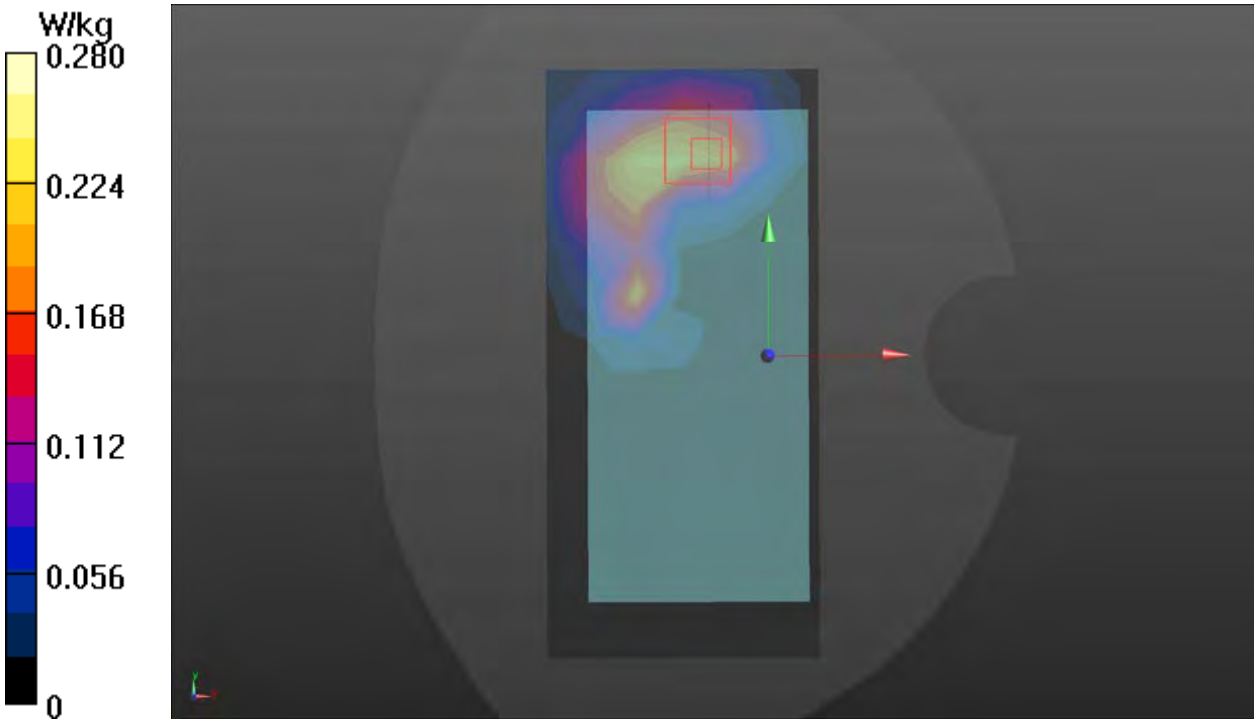
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.994 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.450 W/kg

SAR(1 g) = 0.210 W/kg; SAR(10 g) = 0.089 W/kg

Maximum value of SAR (measured) = 0.280 W/kg



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Plot 67 GSM 850 GPRS (4Txslots) Back Side Middle (Distance 10mm)

Date: 2022/6/13

Communication System: UID 0, GPRS 4TX (0); Frequency: 836.6 MHz;Duty Cycle: 1:2.075

Medium parameters used: f = 836.6 MHz; σ = 0.953 S/m; ε_r = 39.762; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.761 W/kg

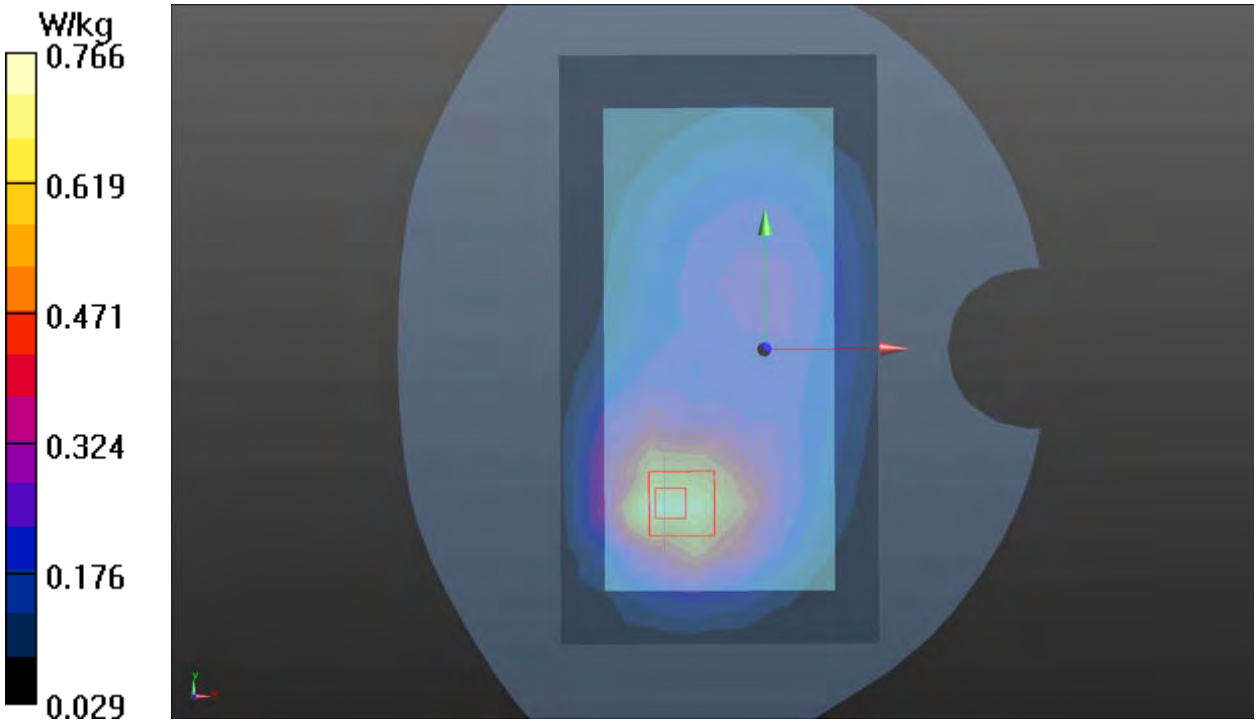
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 16.05 V/m; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.750 W/kg; SAR(10 g) = 0.469 W/kg

Maximum value of SAR (measured) = 0.766 W/kg



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Plot 68 GSM 1900 GPRS (4Txslots) Back Side Middle (Distance 10mm)

Date: 2022/6/18

Communication System: UID 0, GPRS 4TX (0); Frequency: 1880 MHz;Duty Cycle: 1:2.075

Medium parameters used: f = 1880 MHz; σ = 1.42 S/m; ε_r = 38.948; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.612 W/kg

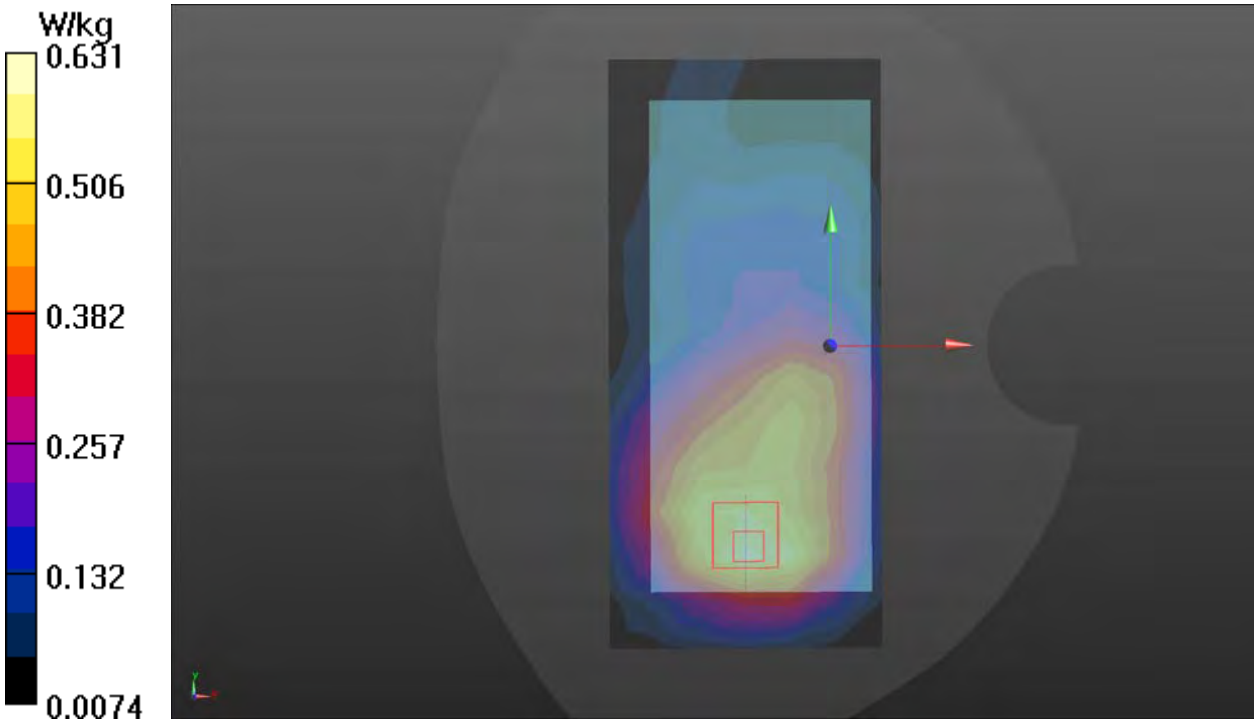
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.202 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.883 W/kg

SAR(1 g) = 0.539 W/kg; SAR(10 g) = 0.339 W/kg

Maximum value of SAR (measured) = 0.631 W/kg



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Plot 69 UMTS Band II Back Side Middle (Distance 10mm)

Date: 2022/6/18

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

Medium parameters used: f = 1880 MHz; σ = 1.42 S/m; ε_r = 38.948; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.680 W/kg

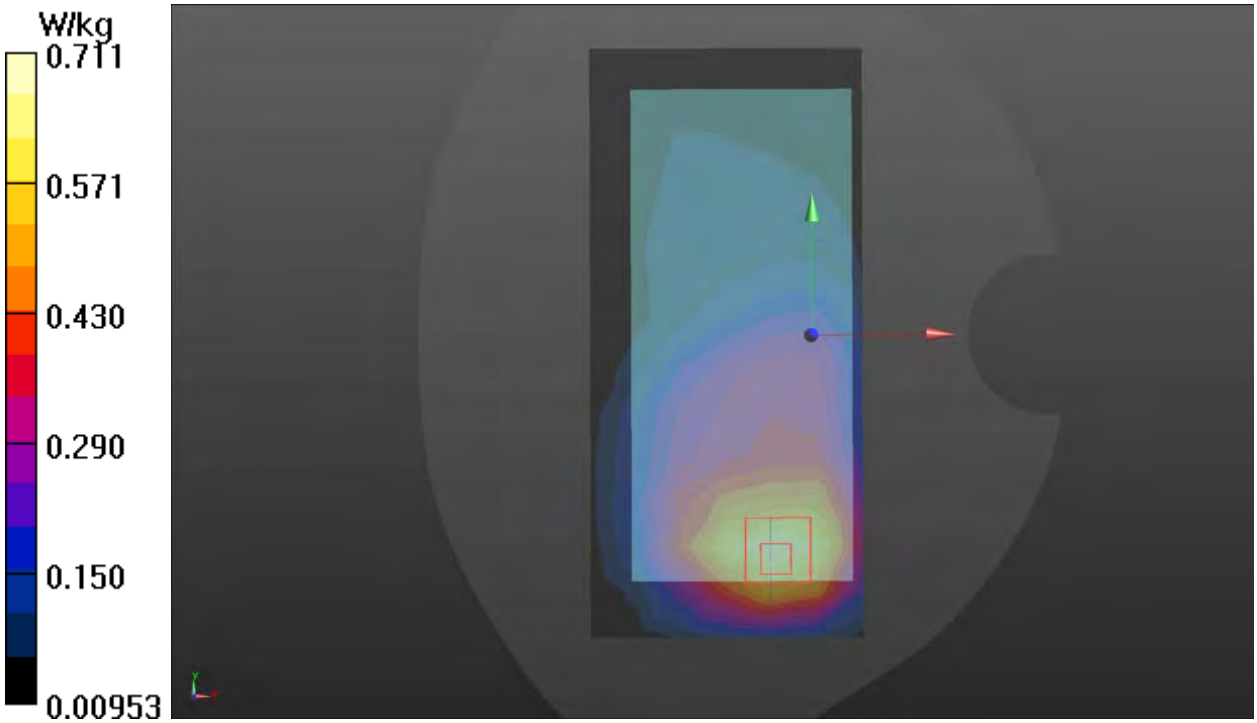
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.23 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.704 W/kg; SAR(10 g) = 0.423 W/kg

Maximum value of SAR (measured) = 0.711 W/kg



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Plot 70 UMTS Band IV Bottom Edge Middle (Distance 10mm)

Date: 2022/6/15

Communication System: UID 0, WCDMA (0); Frequency: 1732.6 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1732.6 MHz; σ = 1.312 S/m; ε_r = 39.365; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); 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 (4x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.796 W/kg

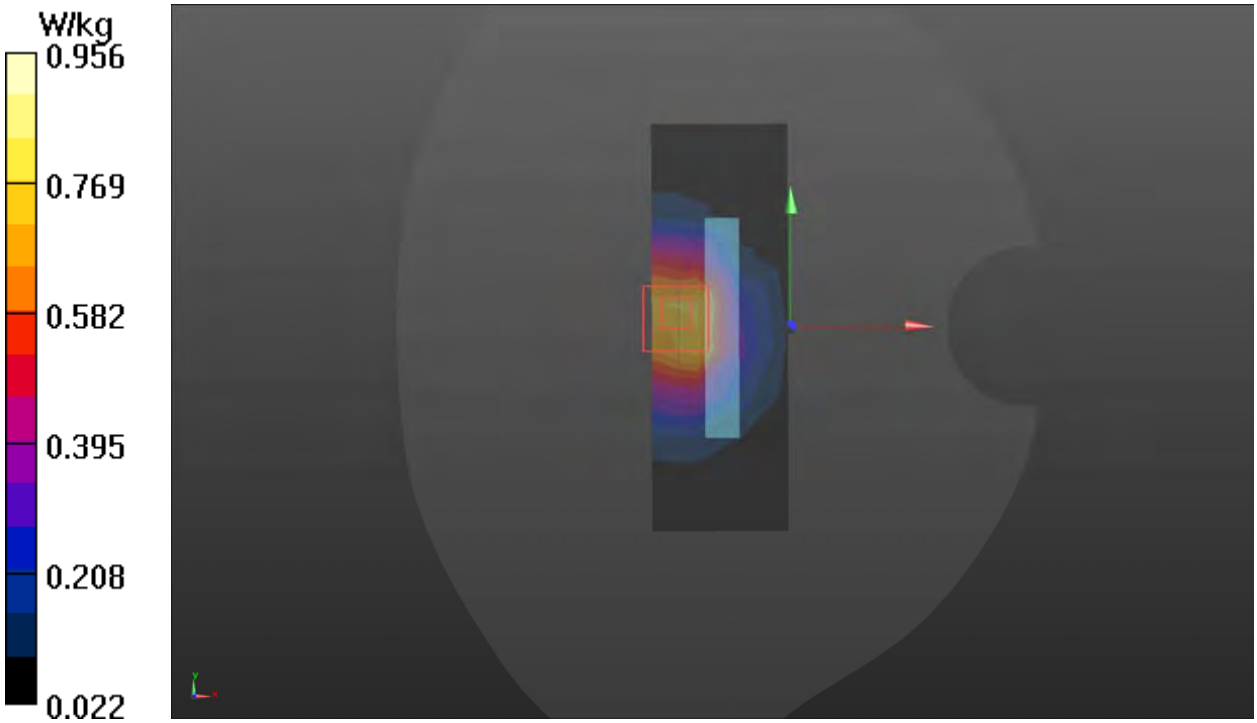
Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.27 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 1.43 W/kg

SAR(1 g) = 0.882 W/kg; SAR(10 g) = 0.517 W/kg

Maximum value of SAR (measured) = 0.956 W/kg



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Plot 71 UMTS Band V Back Side Middle (Distance 10mm)

Date: 2022/6/13

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

Medium parameters used: f = 836.6 MHz; σ = 0.953 S/m; ε_r = 39.762; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.436 W/kg

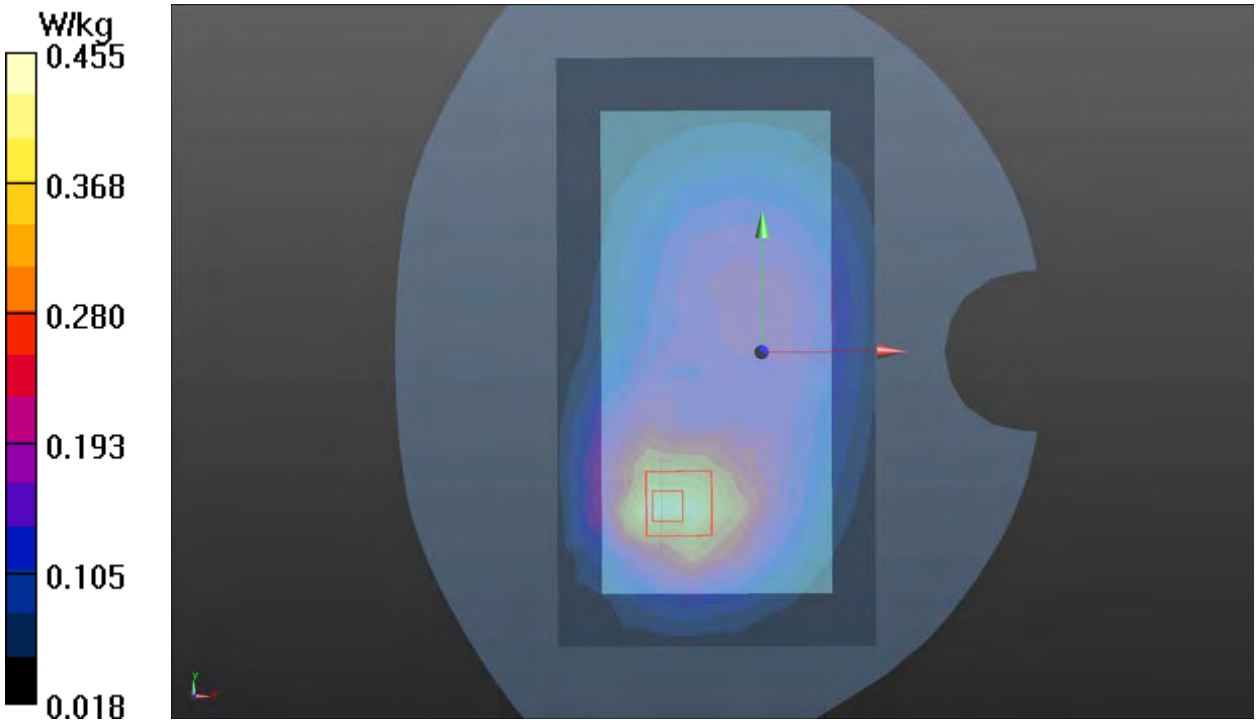
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.76 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.674 W/kg

SAR(1 g) = 0.419 W/kg; SAR(10 g) = 0.268 W/kg

Maximum value of SAR (measured) = 0.455 W/kg



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Plot 72 LTE Band 2 1RB Back Side Low (Distance 10mm)

Date: 2022/6/18

Communication System: UID 0, LTE (0); Frequency: 1860 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1860 MHz; σ = 1.407 S/m; ε_r = 39.071; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 Low/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.711 W/kg

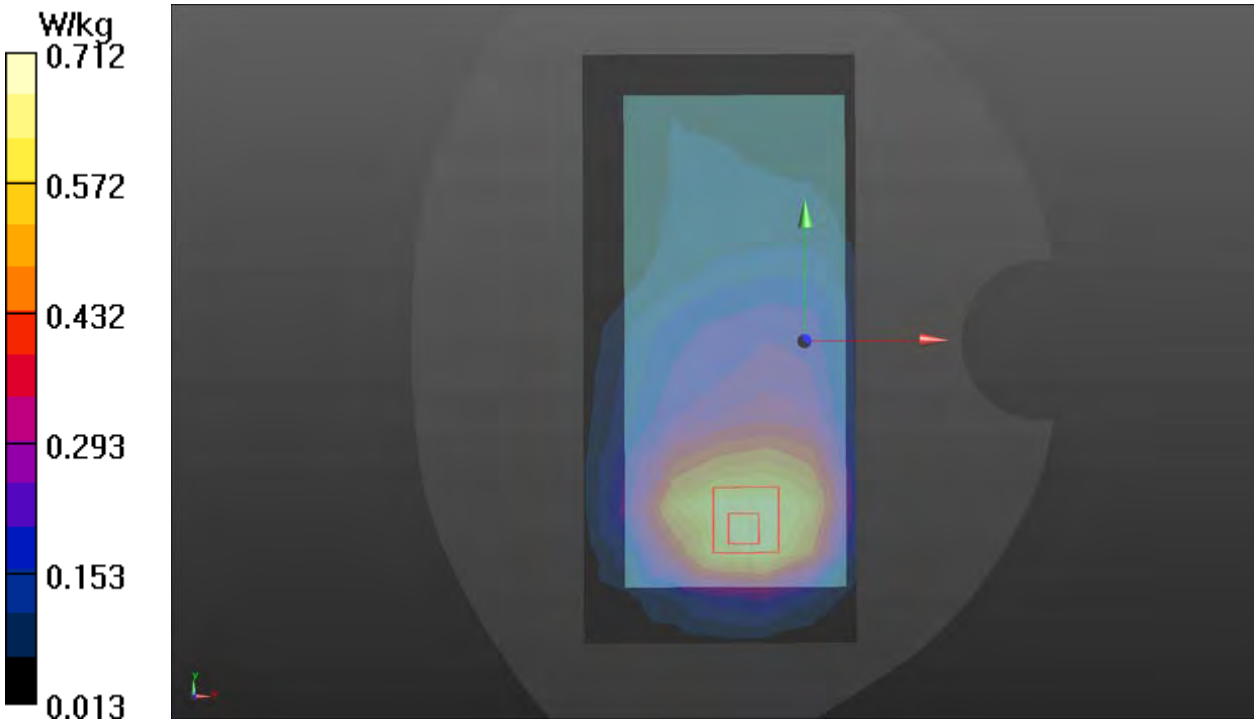
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.80 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.708 W/kg; SAR(10 g) = 0.439 W/kg

Maximum value of SAR (measured) = 0.712 W/kg



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Plot 73 LTE Band 5 1RB Back Side Middle (Distance 10mm)

Date: 2022/6/13

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

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.953 S/m; ε_r = 39.767; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.472 W/kg

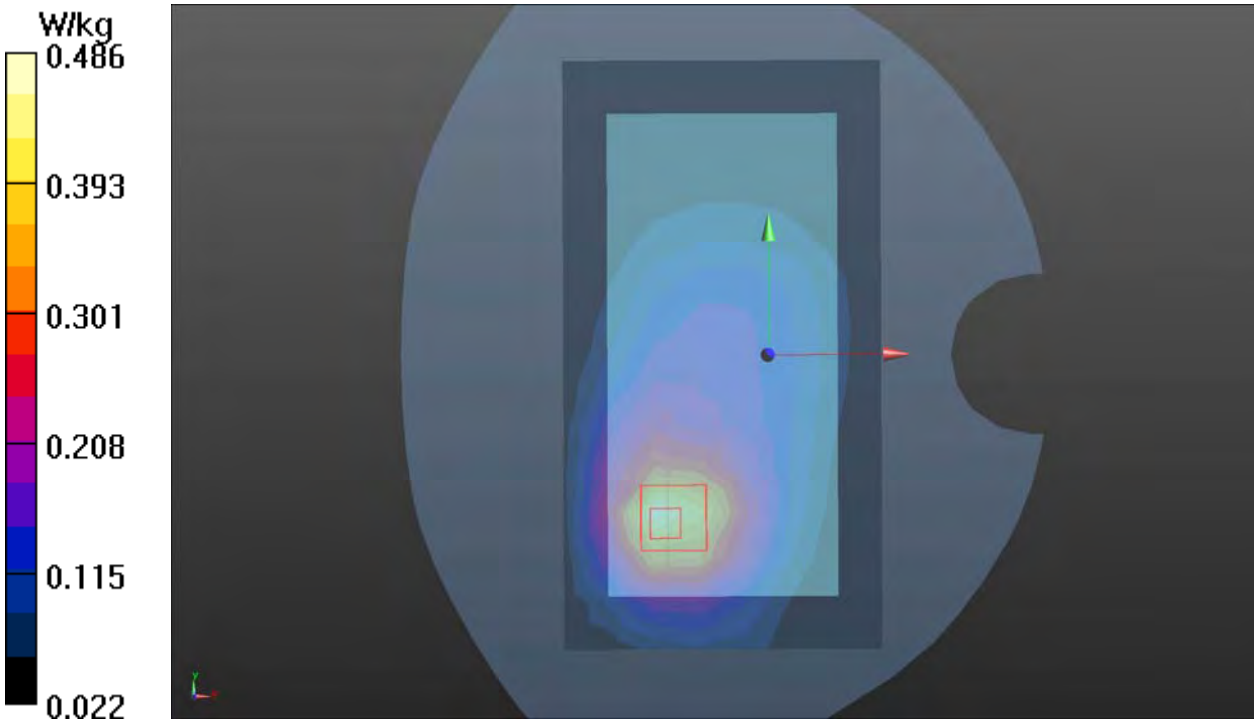
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.21 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.730 W/kg

SAR(1 g) = 0.450 W/kg; SAR(10 g) = 0.281 W/kg

Maximum value of SAR (measured) = 0.486 W/kg



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Plot 74 LTE Band 7 1RB Left Edge High (Distance 10mm)

Date: 2022/6/20

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

Medium parameters used: f = 2560 MHz; σ = 1.971 S/m; ε_r = 37.231; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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)

Left Edge High/Area Scan (4x16x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.968 W/kg

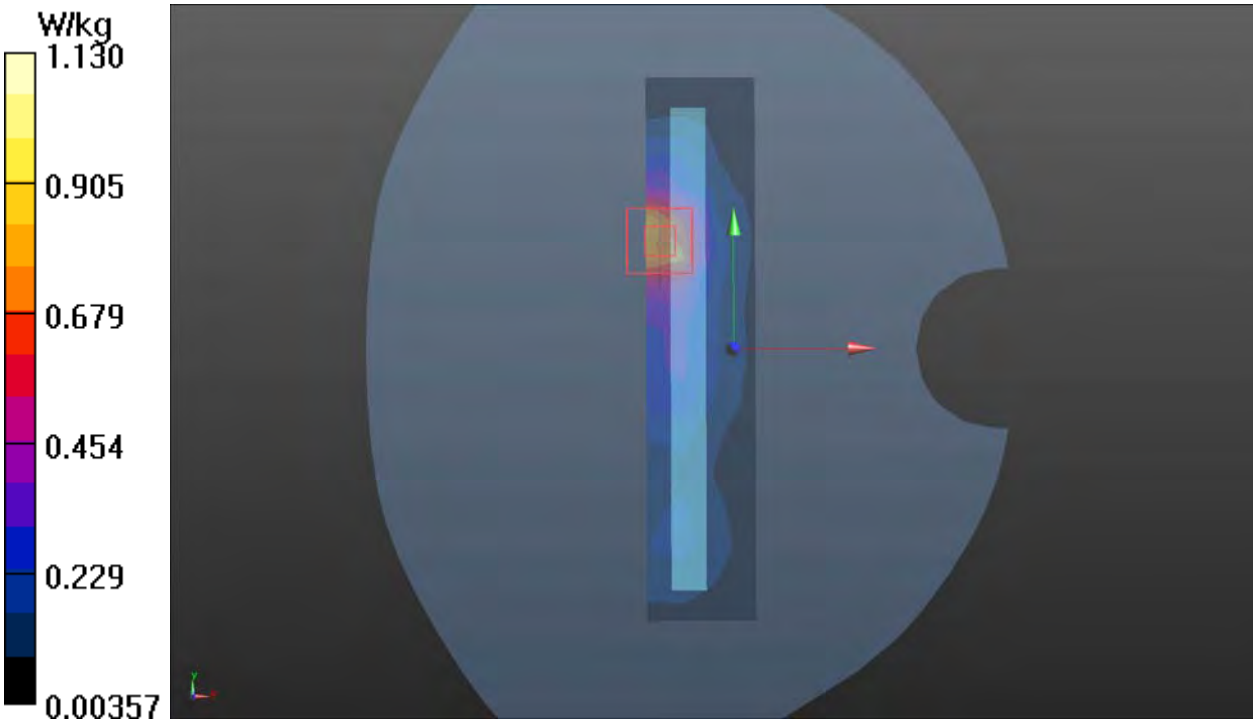
Left Edge High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.71 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 2.14 W/kg

SAR(1 g) = 0.979 W/kg; SAR(10 g) = 0.425 W/kg

Maximum value of SAR (measured) = 1.13 W/kg



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Plot 75 LTE Band 12 1RB Back Side Low (Distance 10mm)

Date: 2022/6/16

Communication System: UID 0, LTE (0); Frequency: 704 MHz;Duty Cycle: 1:1

Medium parameters used: f = 704 MHz; σ = 0.867 S/m; ε_r = 40.747; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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) = 0.237 W/kg

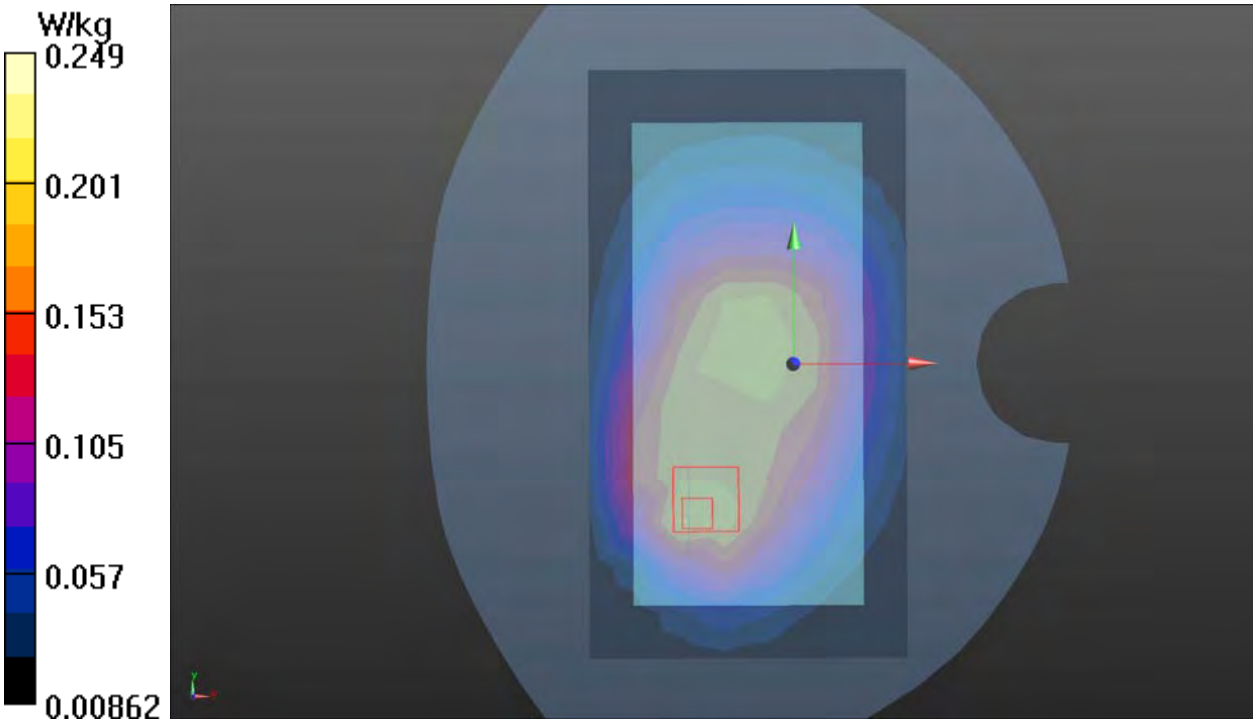
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.59 V/m; Power Drift = -0.038 dB

Peak SAR (extrapolated) = 0.448 W/kg

SAR(1 g) = 0.226 W/kg; SAR(10 g) = 0.144 W/kg

Maximum value of SAR (measured) = 0.249 W/kg



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Plot 76 LTE Band 13 1RB Back Side Middle (Distance 10mm)

Date: 2022/6/16

Communication System: UID 0, LTE (0); Frequency: 782 MHz;Duty Cycle: 1:1

Medium parameters used: f = 782 MHz; σ = 0.917 S/m; ε_r = 40.132; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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) = 0.311 W/kg

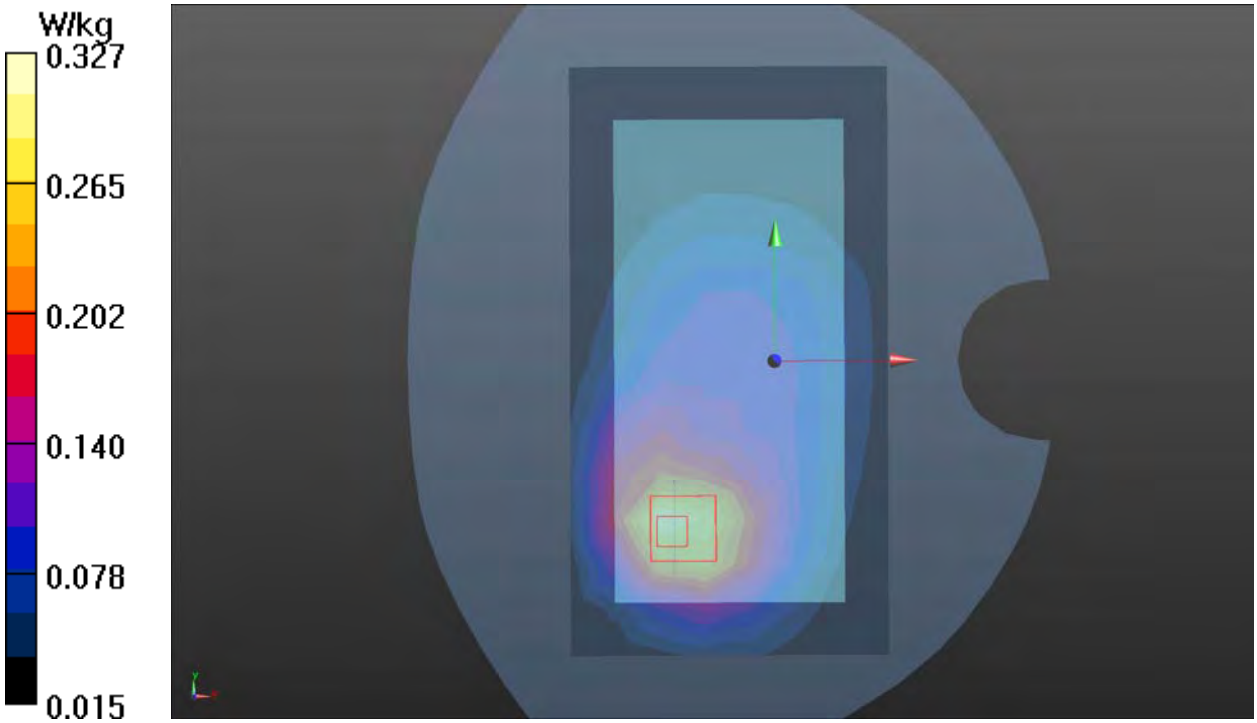
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.30 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.484 W/kg

SAR(1 g) = 0.303 W/kg; SAR(10 g) = 0.194 W/kg

Maximum value of SAR (measured) = 0.327 W/kg



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Plot 77 LTE Band 26 1RB Back Side High (Distance 10mm)

Date: 2022/6/13

Communication System: UID 0, LTE (0); Frequency: 841.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 841.5 MHz; σ = 0.957 S/m; ε_r = 39.746; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.487 W/kg

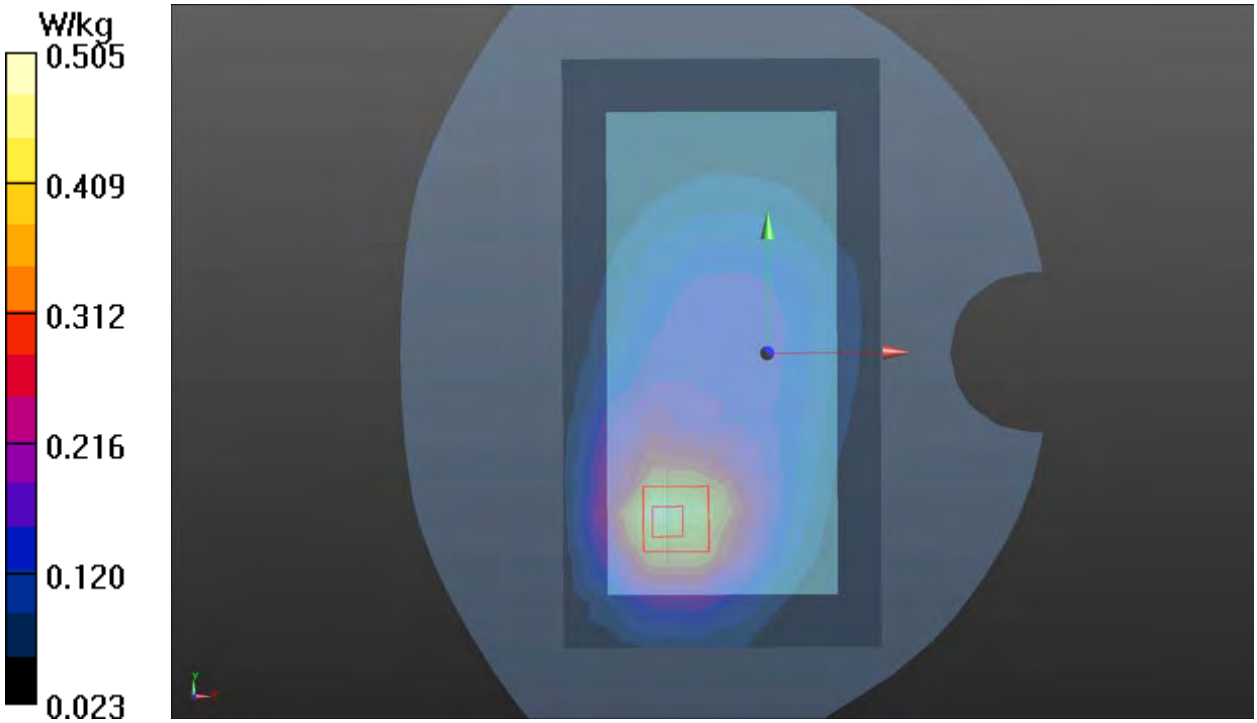
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.80 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.759 W/kg

SAR(1 g) = 0.469 W/kg; SAR(10 g) = 0.294 W/kg

Maximum value of SAR (measured) = 0.505 W/kg



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Plot 78 LTE Band 28 1RB Back Side Low (Distance 10mm)

Date: 2022/6/16

Communication System: UID 0, LTE (0); Frequency: 735.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 735.5 MHz; σ = 0.887 S/m; ε_r = 40.552; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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) = 0.268 W/kg

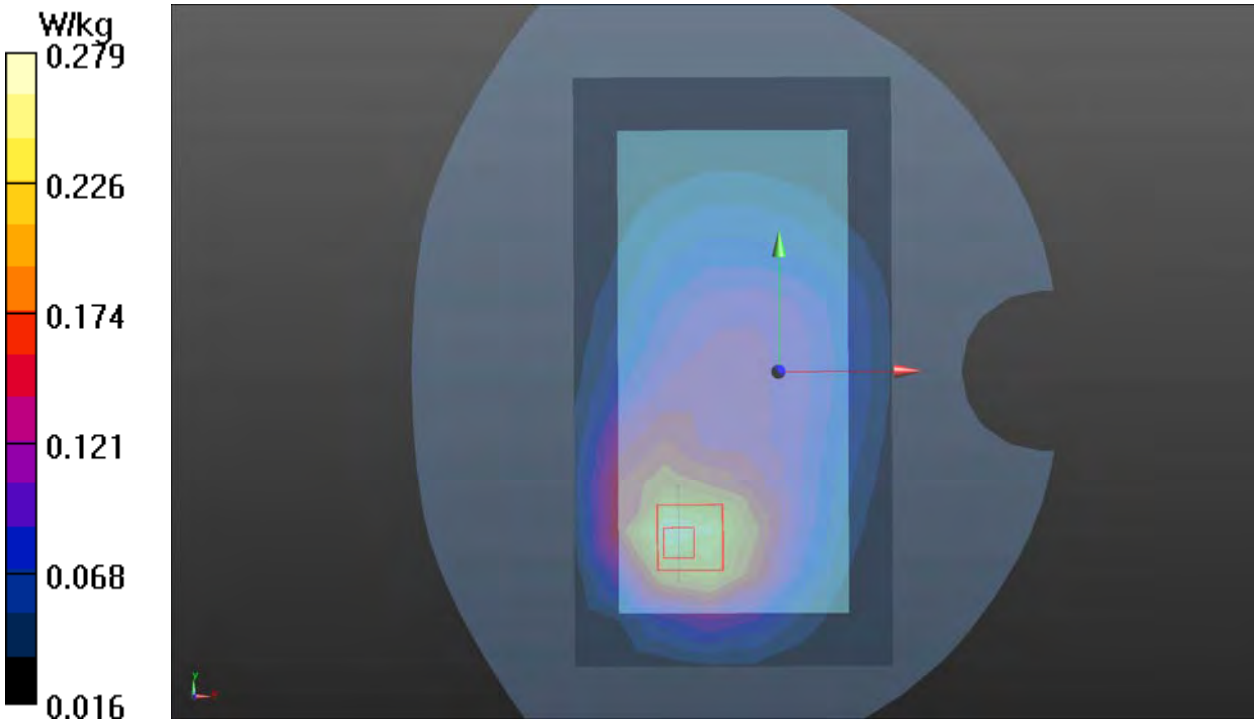
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.09 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.403 W/kg

SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.169 W/kg

Maximum value of SAR (measured) = 0.279 W/kg



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Plot 79 LTE Band 38 1RB Left Edge Middle (Distance 10mm)

Date: 2022/7/1

Communication System: UID 0, LTE (0); Frequency: 2595 MHz;Duty Cycle: 1:1.58

Medium parameters used: f = 2595 MHz; σ = 2.011 S/m; ε_r = 37.134; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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)

Left Edge Middle/Area Scan (4x16x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.643 W/kg

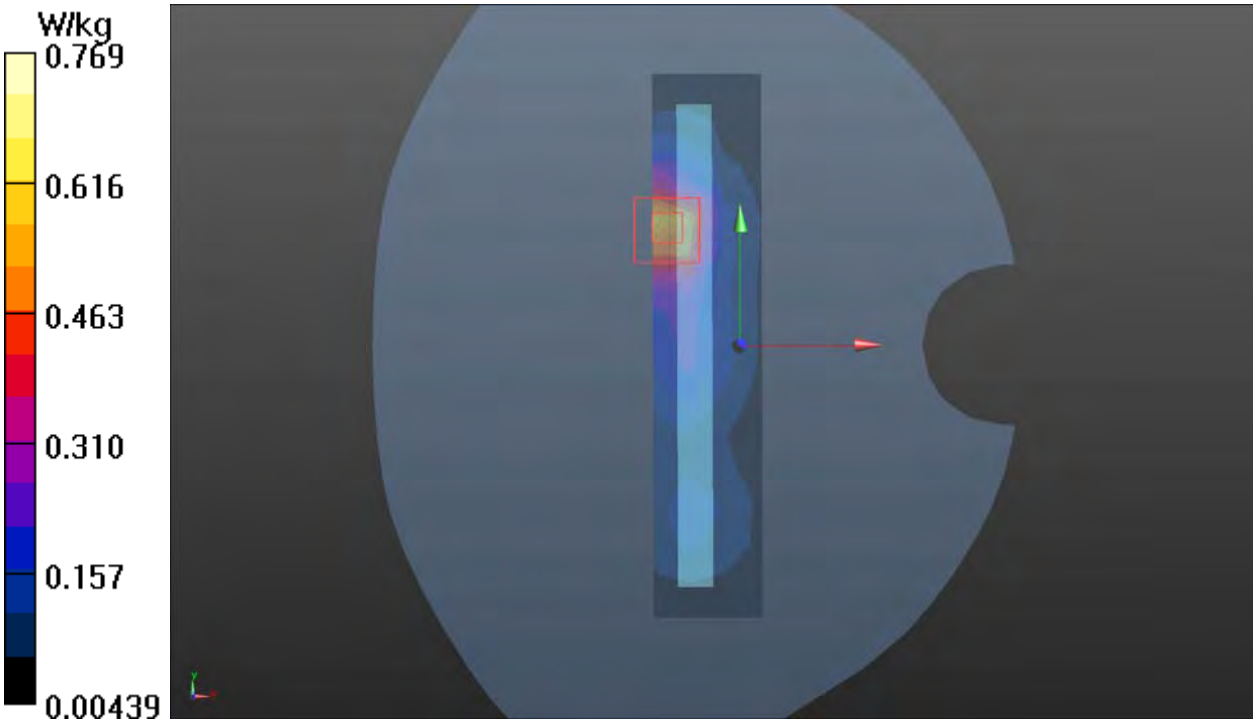
Left Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.71 V/m; Power Drift = 0.017 dB

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.302 W/kg

Maximum value of SAR (measured) = 0.769 W/kg



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Plot 80 LTE Band 40 1RB Left Edge Middle (Distance 10mm)

Date: 2022/6/17

Communication System: UID 0, LTE (0); Frequency: 2355 MHz;Duty Cycle: 1:1.58

Medium parameters used: f = 2355 MHz; σ = 1.738 S/m; ε_r = 37.936; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.67, 7.67, 7.67); 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 Edge Middle/Area Scan (4x16x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.759 W/kg

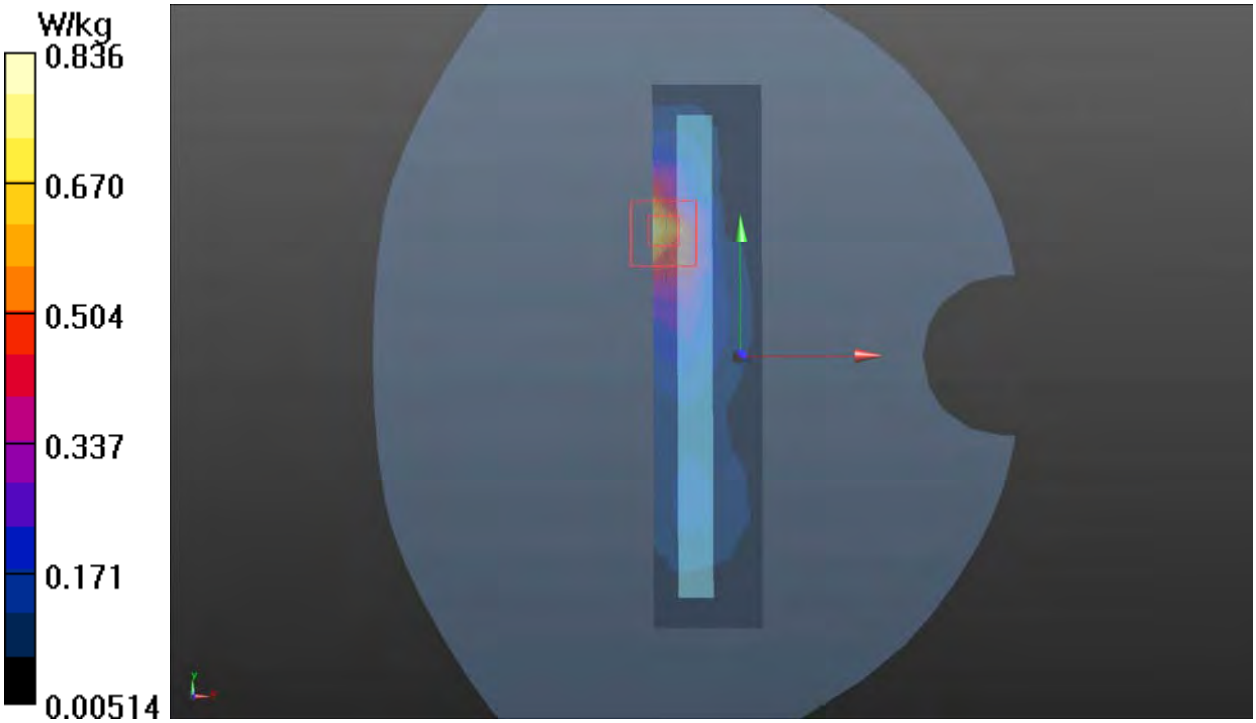
Left Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.77 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 1.50 W/kg

SAR(1 g) = 0.731 W/kg; SAR(10 g) = 0.332 W/kg

Maximum value of SAR (measured) = 0.836 W/kg



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Plot 81 LTE Band 66 1RB Bottom Edge Middle (Distance 10mm)

Date: 2022/7/2

Communication System: UID 0, LTE (0); Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1745 MHz; σ = 1.323 S/m; ε_r = 39.378; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); 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 (4x10x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.880 W/kg

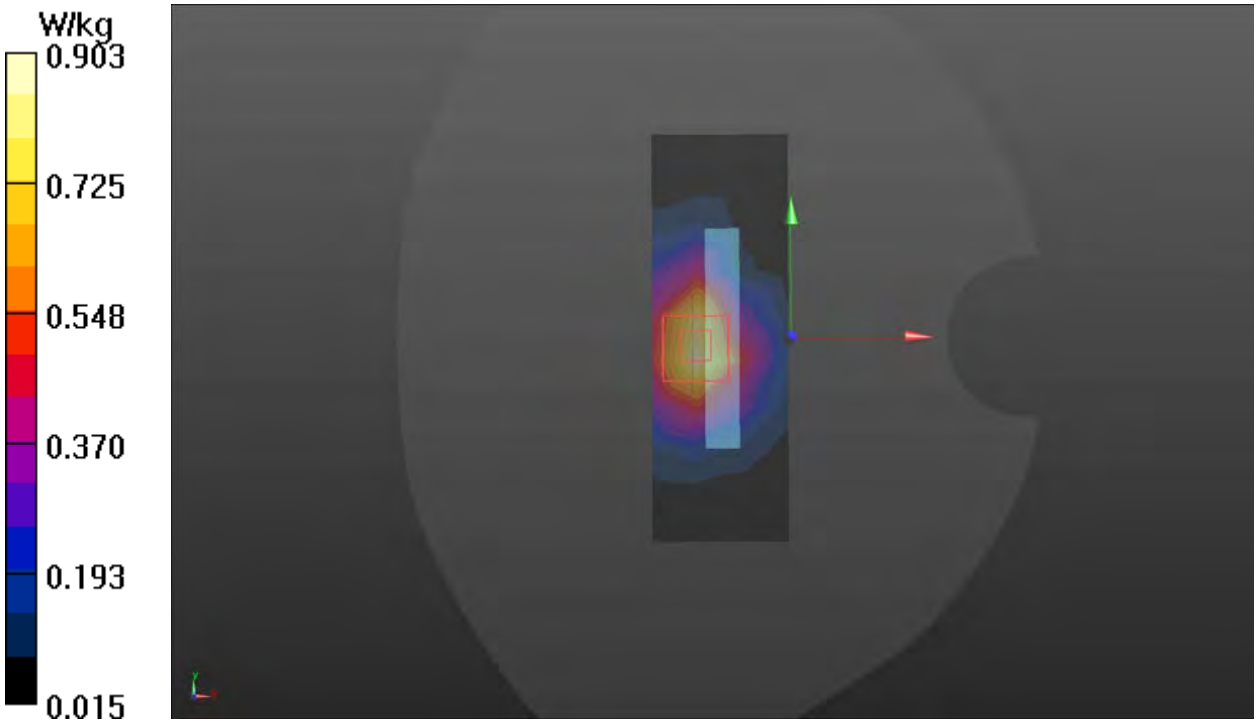
Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.34 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.862 W/kg; SAR(10 g) = 0.498 W/kg

Maximum value of SAR (measured) = 0.903 W/kg



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Plot 82 NR n2 50%RB Bottom Edge Low (Repeat, Distance 10mm)

Date: 2022/6/18

Communication System: UID 0, 5G NR (0); Frequency: 1860 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1860 MHz; σ = 1.407 S/m; ε_r = 39.071; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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 Low/Area Scan (4x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.864 W/kg

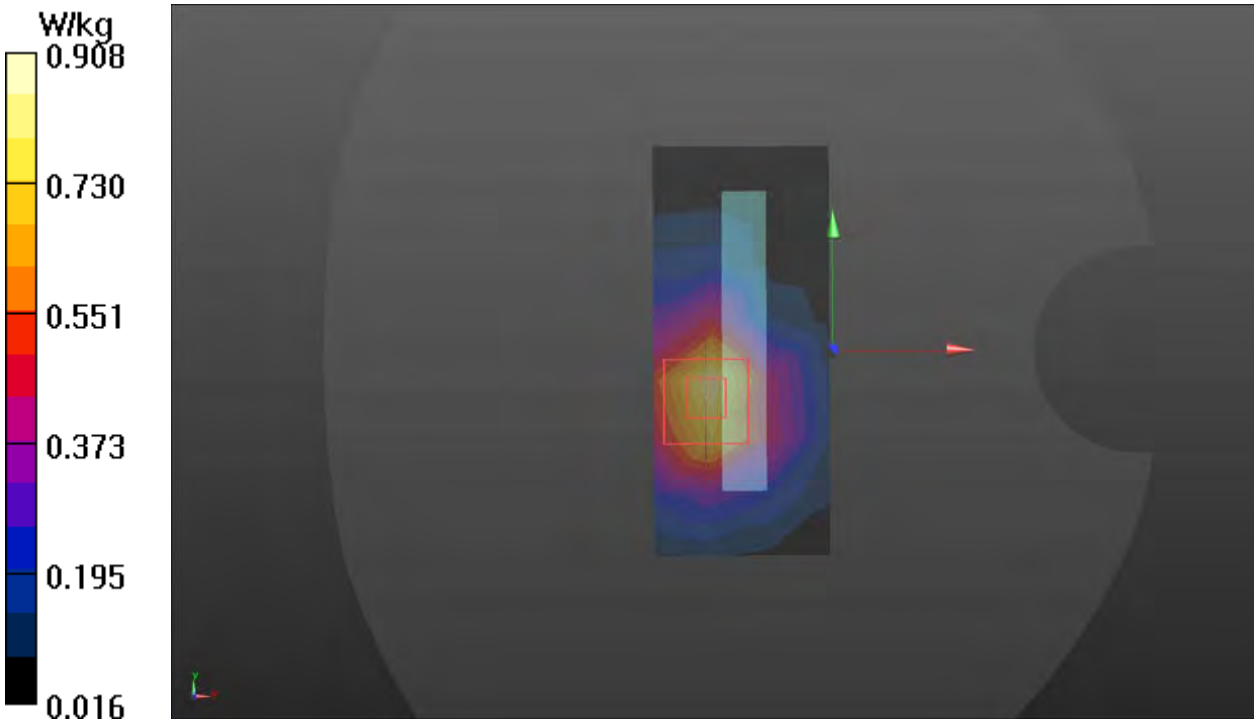
Bottom Edge Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.13 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.838 W/kg; SAR(10 g) = 0.482 W/kg

Maximum value of SAR (measured) = 0.908 W/kg



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Plot 83 NR n7 50%RB Back Side Low (Distance 10mm)

Date: 2022/6/26

Communication System: UID 0, 5G NR (0); Frequency: 2510 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2510 MHz; σ = 1.91 S/m; ε_r = 37.398; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.760 W/kg

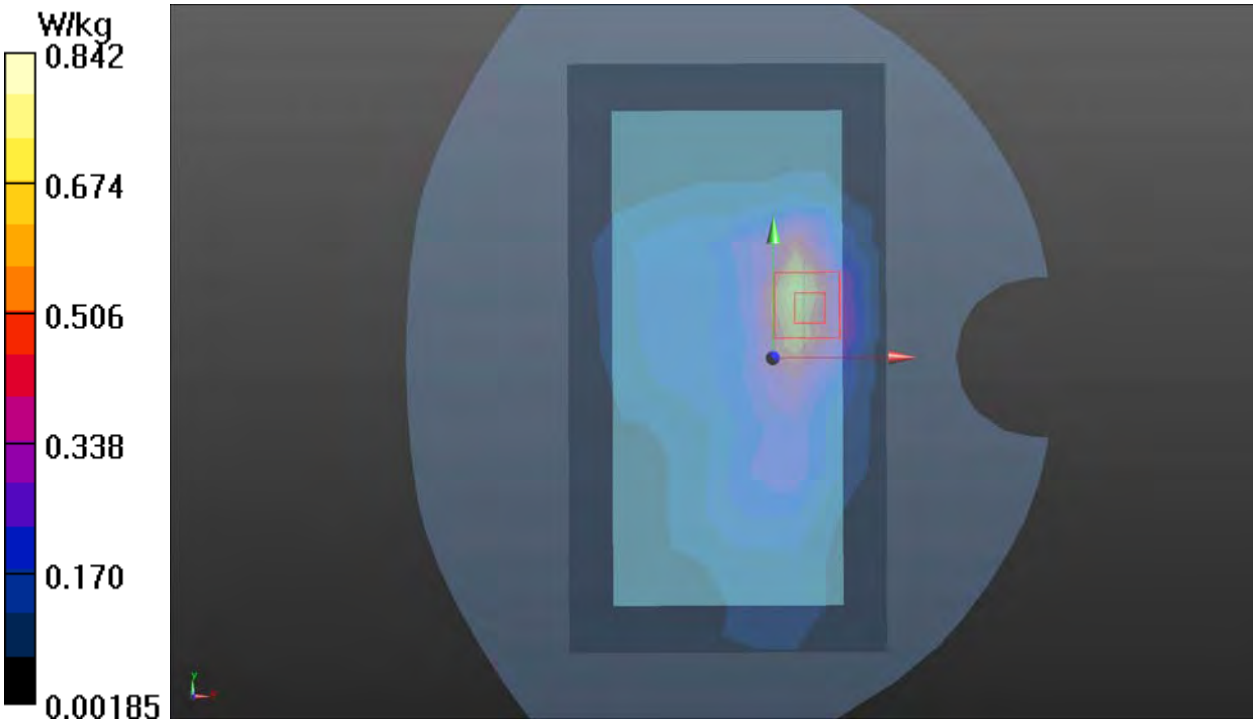
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.32 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 1.61 W/kg

SAR(1 g) = 0.745 W/kg; SAR(10 g) = 0.335 W/kg

Maximum value of SAR (measured) = 0.842 W/kg



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Plot 84 NR n28 50%RB Back Side High (Distance 10mm)

Date: 2022/6/14

Communication System: UID 0, 5G NR (0); Frequency: 738.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 738.5 MHz; σ = 0.889 S/m; ε_r = 40.522; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); 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 (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.384 W/kg

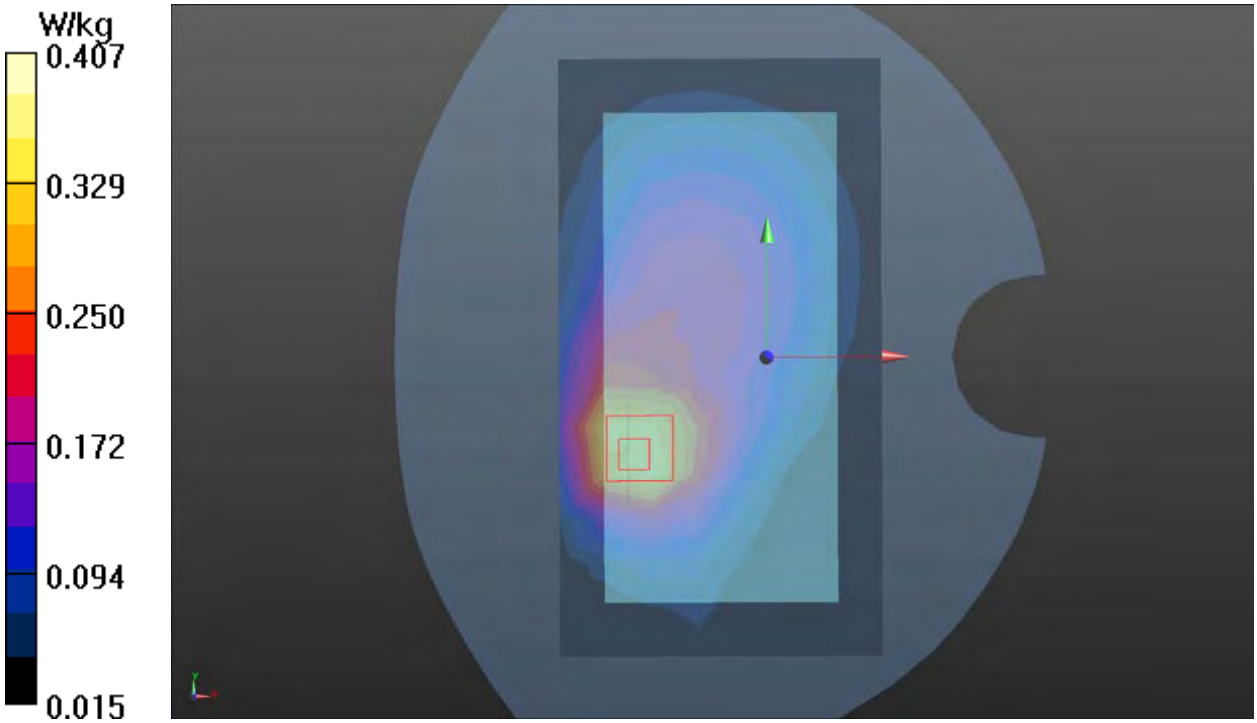
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.29 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.607 W/kg

SAR(1 g) = 0.378 W/kg; SAR(10 g) = 0.241 W/kg

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



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Plot 85 NR n40 50%RB Left Edge Middle (Distance 10mm)

Date: 2022/6/17

Communication System: UID 0, 5G NR (0); Frequency: 2355 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2355 MHz; σ = 1.738 S/m; ε_r = 37.936; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(7.67, 7.67, 7.67); 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 Edge Middle/Area Scan (5x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.11 W/kg

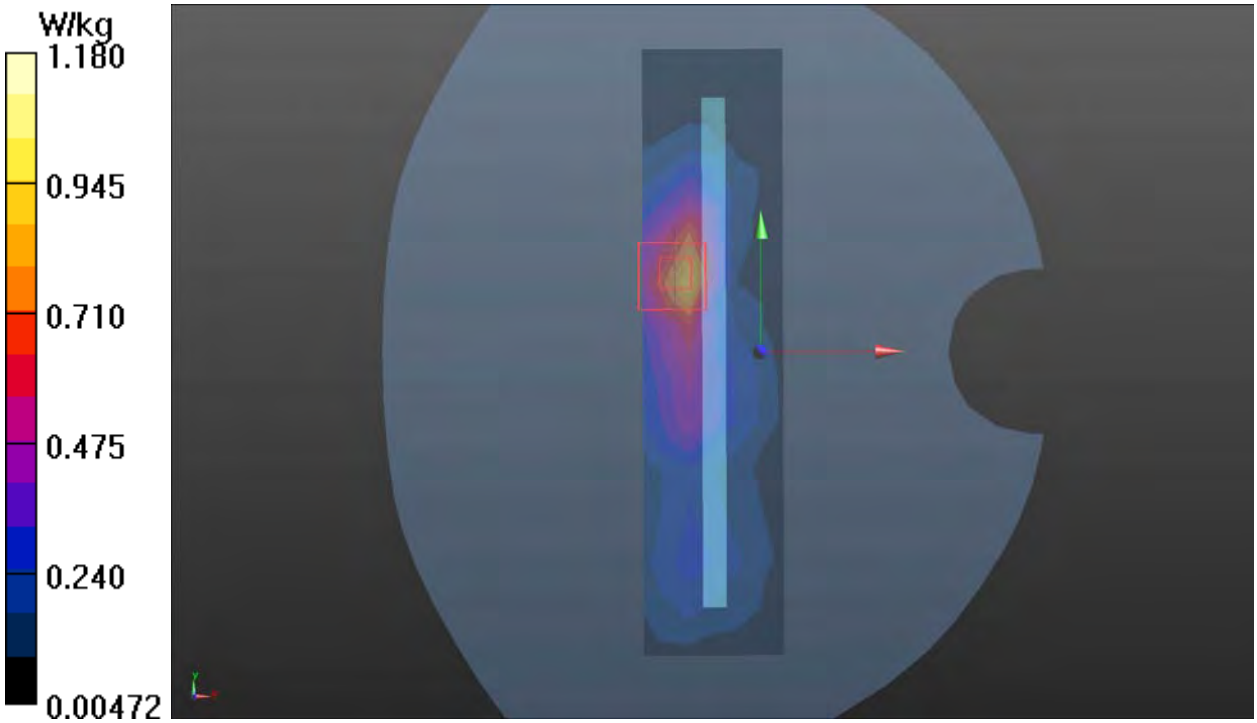
Left Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.08 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 2.09 W/kg

SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.471 W/kg

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



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Plot 86 NR n66 50%RB Bottom Edge Middle (Distance 10mm)

Date: 2022/7/2

Communication System: UID 0, 5G NR (0); Frequency: 1745 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1745 MHz; σ = 1.323 S/m; ε_r = 39.378; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); 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) = 0.553 W/kg

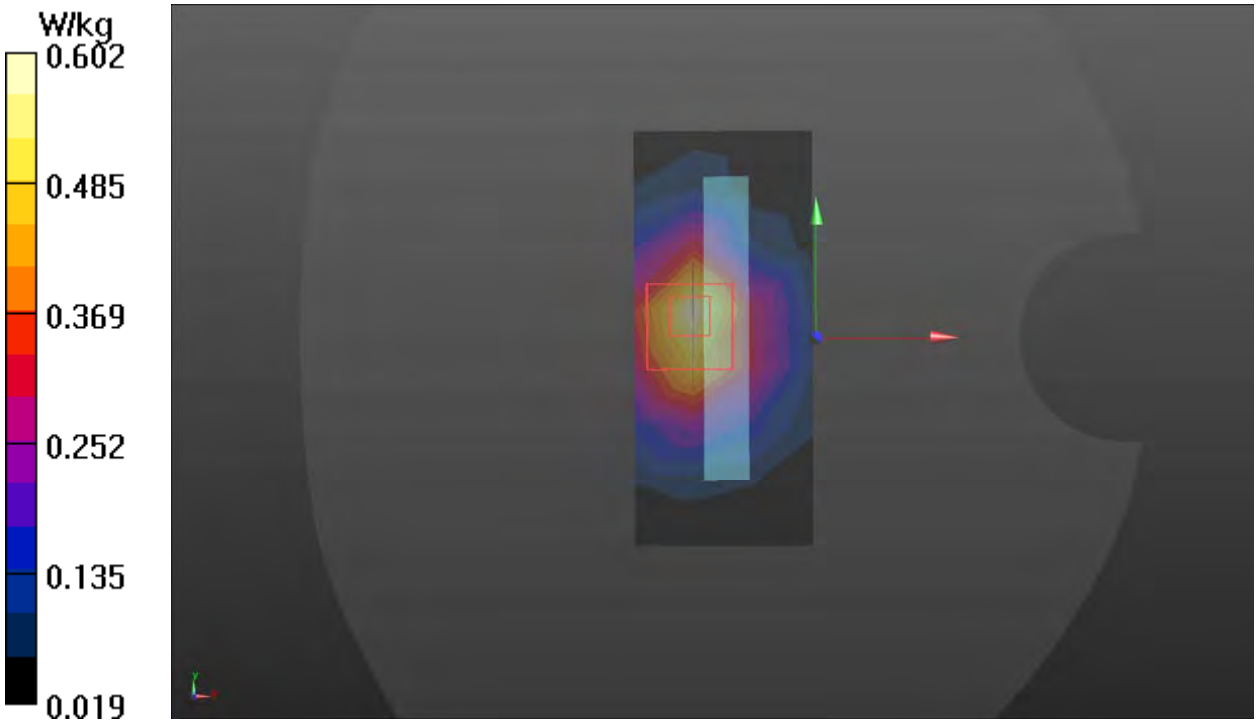
Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.67 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.530 W/kg; SAR(10 g) = 0.303 W/kg

Maximum value of SAR (measured) = 0.602 W/kg



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Plot 87 NR n78 50%RB Back Side Middle (Distance 10mm)

Date: 2022/6/24

Communication System: UID 0, 5G NR (0); Frequency: 3500 MHz;Duty Cycle: 1:1

Medium parameters used: f = 3500 MHz; σ = 2.807 S/m; ε_r = 38.115; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(6.92, 6.92, 6.92); 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 (12x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 1.42 W/kg

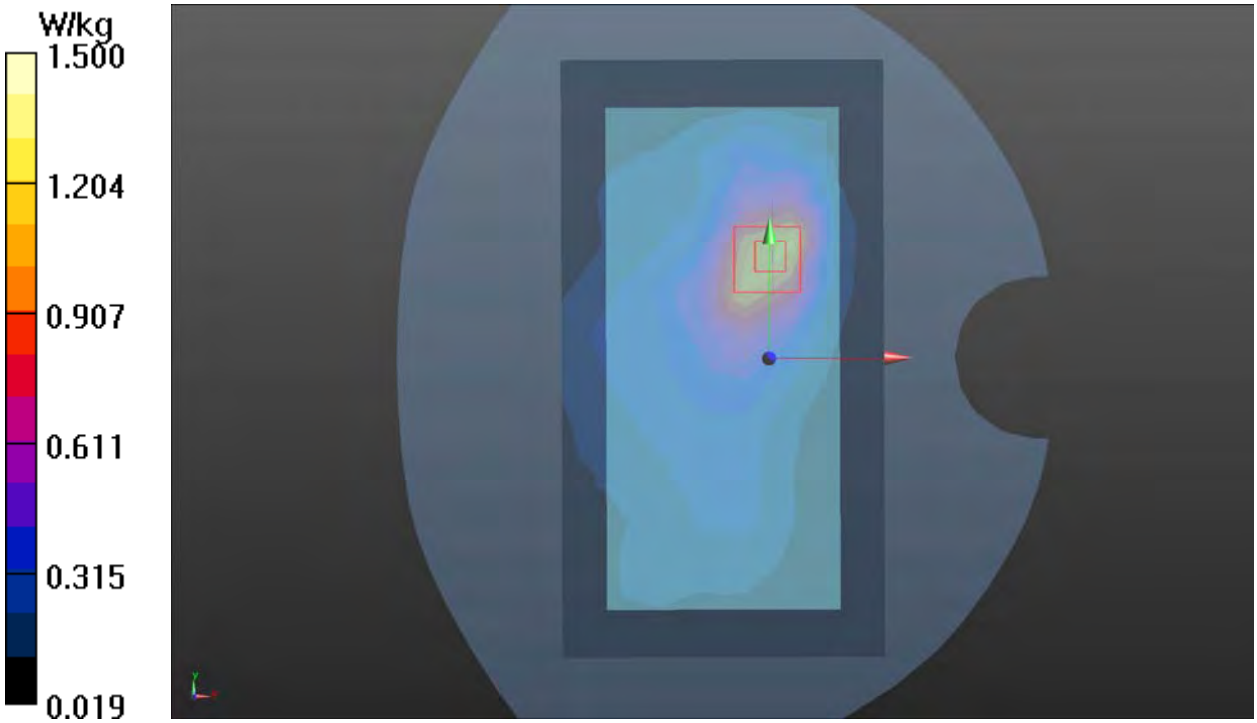
Back Side Middle/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 16.89 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.54 W/kg

SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.628 W/kg

Maximum value of SAR (measured) = 1.50 W/kg



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Plot 88 802.11b Back Side Middle (Distance 10mm)

Date: 2022/6/27

Communication System: UID 0, 802.11b (0); Frequency: 2437 MHz;Duty Cycle: 1:1.02

Medium parameters used: f = 2437 MHz; σ = 1.831 S/m; ε_r = 37.663; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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) = 0.267 W/kg

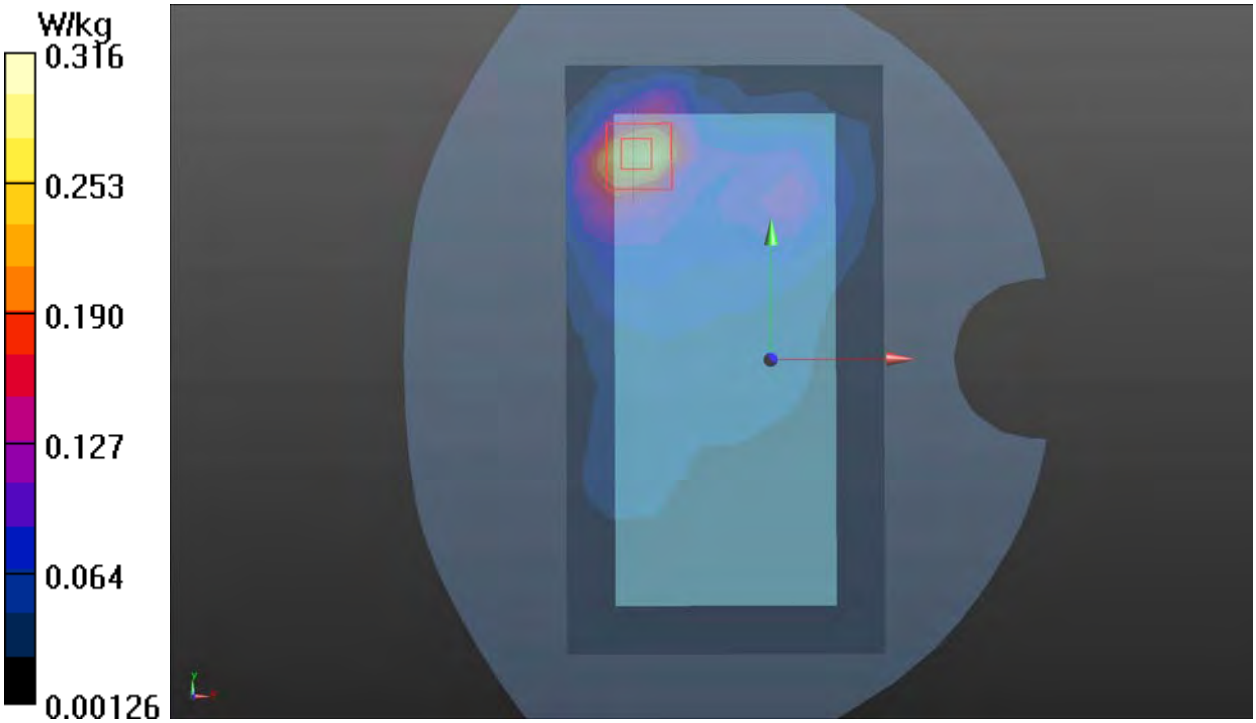
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.667 V/m; Power Drift = -0.035 dB

Peak SAR (extrapolated) = 0.576 W/kg

SAR(1 g) = 0.194 W/kg; SAR(10 g) = 0.093 W/kg

Maximum value of SAR (measured) = 0.316 W/kg



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Plot 89 802.11a U-NII-1 Top Edge Middle (Distance 10mm)

Date: 2022/6/23

Communication System: UID 0, 802.11a (0); Frequency: 5220 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5220 MHz; σ = 4.86 S/m; ε_r = 36.763; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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)

Top Edge Middle/Area Scan (6x15x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.576 W/kg

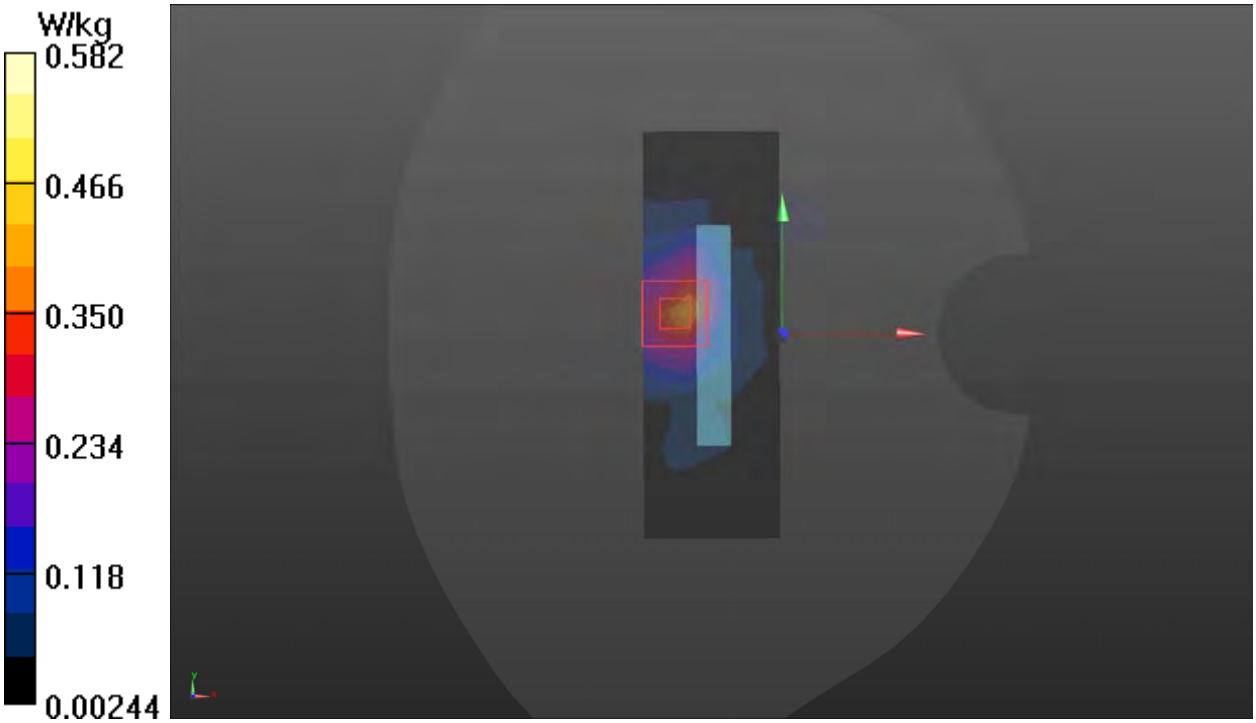
Top Edge Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.559 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 3.06 W/kg

SAR(1 g) = 0.573 W/kg; SAR(10 g) = 0.221 W/kg

Maximum value of SAR (measured) = 0.582 W/kg



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Plot 90 Bluetooth Back Side High (Distance 10mm)

Date: 2022/6/27

Communication System: UID 0, BT (0); Frequency: 2480 MHz;Duty Cycle: 1:1.32

Medium parameters used: f = 2480 MHz; σ = 1.878 S/m; ε_r = 37.511; ρ = 1000 kg/m^3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

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

Maximum value of SAR (measured) = 0.041 W/kg

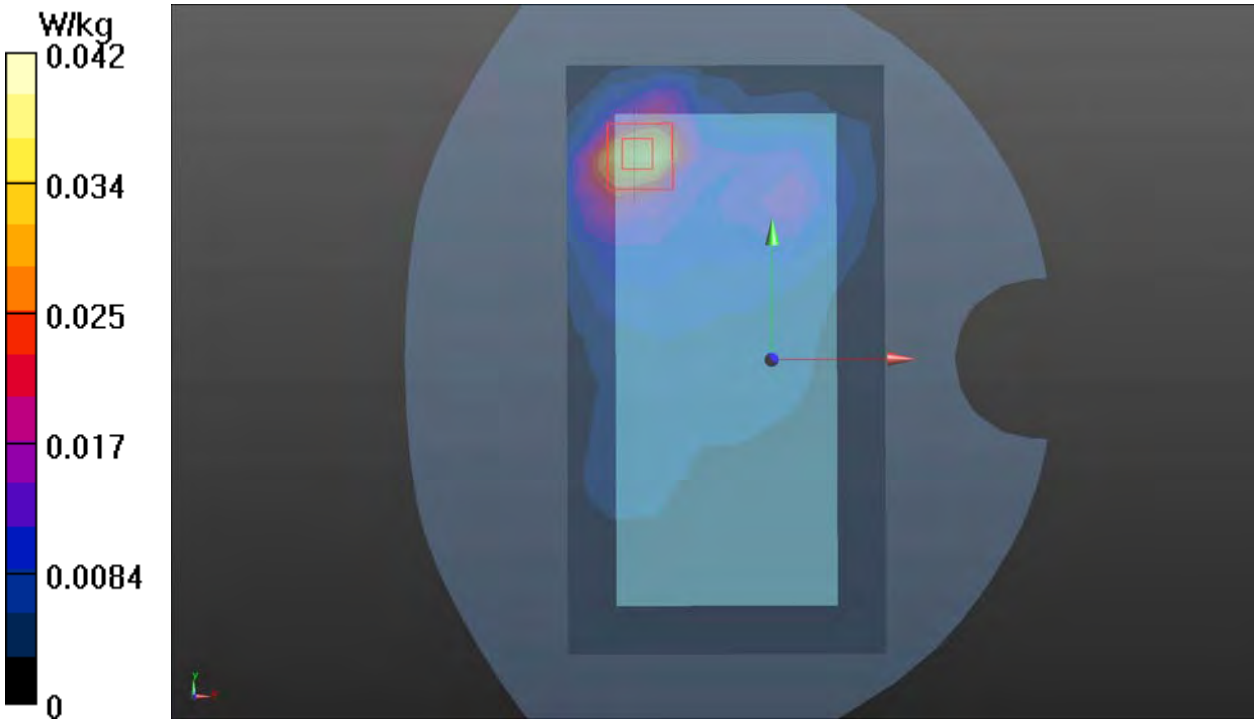
Back Side High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 0.4200 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.052 W/kg

SAR(1 g) = 0.036 W/kg; SAR(10 g) = 0.018 W/kg

Maximum value of SAR (measured) = 0.042 W/kg



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ANNEX D: Probe Calibration Certificate

In Collaboration with
s p e a g
CALIBRATION LABORATORY
Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

中国认可
国际互认
校准
CALIBRATION
CNAS L0570

Client TA(Shanghai) Certificate No: Z21-60285

CALIBRATION CERTIFICATE

Object	EX3DV4 - SN : 3677
Calibration Procedure(s)	FF-Z11-004-02 Calibration Procedures for Dosimetric E-field Probes
Calibration date:	August 12, 2021

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	101919	15-Jun-21(CTTL, No.J21X04466)	Jun-22
Power sensor NRP-Z91	101547	15-Jun-21(CTTL, No.J21X04466)	Jun-22
Power sensor NRP-Z91	101548	15-Jun-21(CTTL, No.J21X04466)	Jun-22
Reference 10dBAttenuator	18N50W-10dB	10-Feb-20(CTTL, No.J20X00525)	Feb-22
Reference 20dBAttenuator	18N50W-20dB	10-Feb-20(CTTL, No.J20X00526)	Feb-22
Reference Probe EX3DV4	SN 3617	27-Jan-21(SPEAG, No.EX3-3617_Jan21)	Jan-22
DAE4	SN 1556	15-Jan-21(SPEAG, No.DAE4-1556_Jan21)	Jan-22

Secondary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
SignalGenerator MG3700A	6201052605	16-Jun-21(CTTL, No.J21X04467)	Jun-22
Network Analyzer E5071C	MY46110673	21-Jan-21(CTTL, No.J20X00515)	Jan-22

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

Issued: August 14, 2021

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Certificate No: Z21-60285 Page 1 of 9

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In Collaboration with
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CALIBRATION LABORATORY
Add: No.52 HuaYuanBei Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

Glossary:

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

Calibration is Performed According to the Following Standards:

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

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

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

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

Methods Applied and Interpretation of Parameters:

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

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:3677

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (*k*=2)
Norm(μV/(V/m)²)[A]	0.41	0.46	0.40	±10.0%
DCP(mV)[B]	99.3	101.9	101.5	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (*k*=2)
0	CW	X	0.0	0.0	1.0	0.00	158.2	±2.0%
		Y	0.0	0.0	1.0		170.4	
		Z	0.0	0.0	1.0		156.9	

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

[A] The uncertainties of Norm X, Y, Z do not affect the E^2-field uncertainty inside TSL (see Page 4).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainly is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:3677

Calibration Parameter Determined in Head Tissue Simulating Media

f [MHz][C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha[G]	Depth[G] (mm)	Unct. (k=2)
750	41.9	0.89	9.64	9.64	9.64	0.40	0.80	±12.1%
835	41.5	0.90	9.30	9.30	9.30	0.16	1.29	±12.1%
1750	40.1	1.37	8.22	8.22	8.22	0.24	1.00	±12.1%
1900	40.0	1.40	7.88	7.88	7.88	0.24	1.10	±12.1%
2000	40.0	1.40	7.96	7.96	7.96	0.21	1.17	±12.1%
2300	39.5	1.67	7.67	7.67	7.67	0.66	0.68	±12.1%
2450	39.2	1.80	7.50	7.50	7.50	0.66	0.70	±12.1%
2600	39.0	1.96	7.25	7.25	7.25	0.62	0.73	±12.1%
3300	38.2	2.71	7.00	7.00	7.00	0.45	0.94	±13.3%
3500	37.9	2.91	6.92	6.92	6.92	0.45	0.98	±13.3%
3700	37.7	3.12	6.71	6.71	6.71	0.45	1.04	±13.3%
3900	37.5	3.32	6.62	6.62	6.62	0.40	1.25	±13.3%
4100	37.2	3.53	6.66	6.66	6.66	0.30	1.38	±13.3%
4400	36.9	3.84	6.43	6.43	6.43	0.35	1.35	±13.3%
4600	36.7	4.04	6.35	6.35	6.35	0.50	1.13	±13.3%
4800	36.4	4.25	6.30	6.30	6.30	0.45	1.25	±13.3%
4950	36.3	4.40	6.13	6.13	6.13	0.45	1.25	±13.3%
5250	35.9	4.71	5.45	5.45	5.45	0.50	1.30	±13.3%
5600	35.5	5.07	5.00	5.00	5.00	0.60	1.15	±13.3%
5750	35.4	5.22	5.04	5.04	5.04	0.55	1.26	±13.3%

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

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

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

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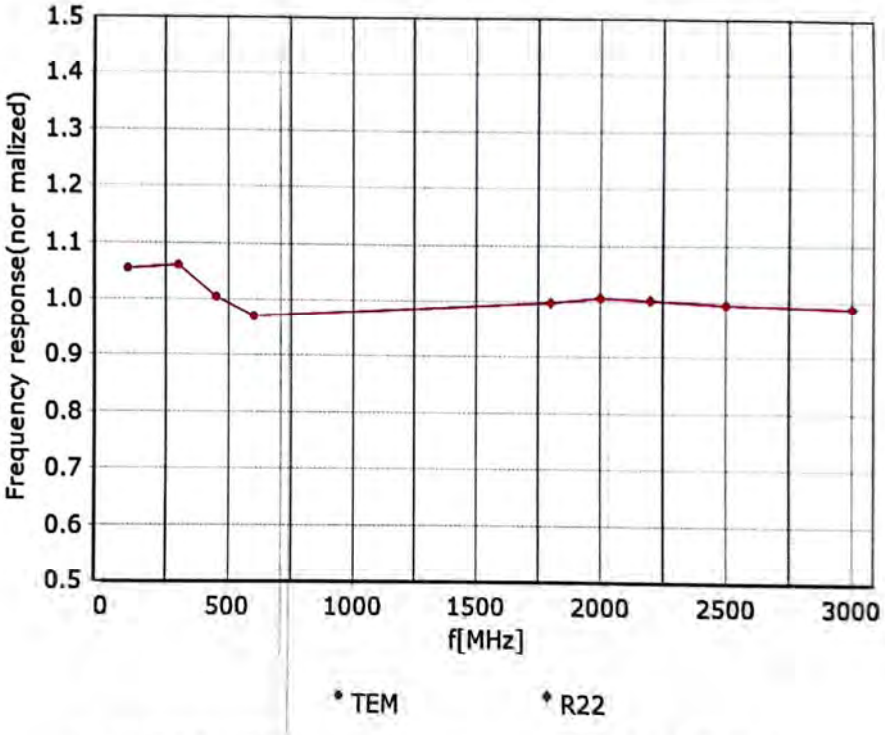
Frequency Response of E-Field
(TEM-Cell: ifi110 EXX, Waveguide: R22)



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

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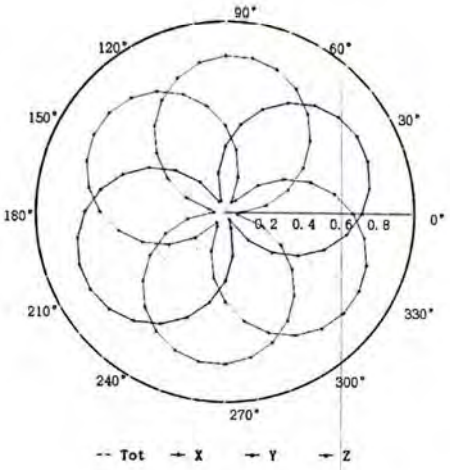
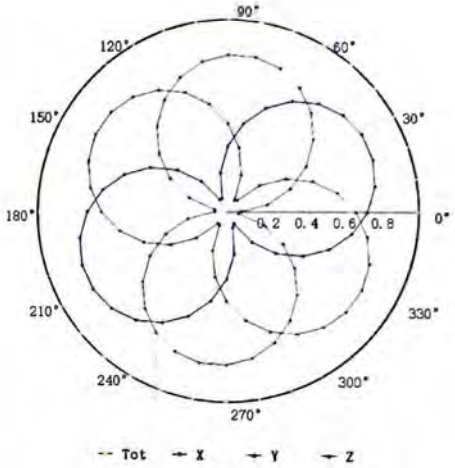
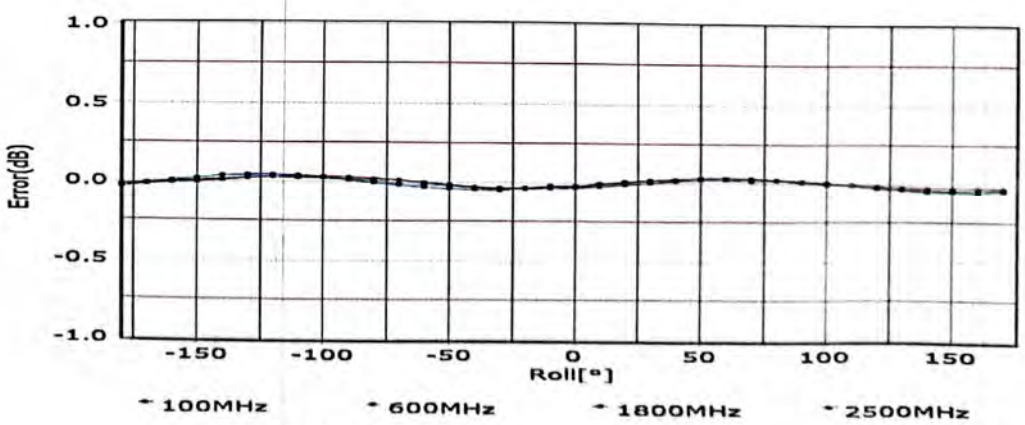
Receiving Pattern (Φ), θ=0°

f=600 MHz, TEM



f=1800 MHz, R22





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

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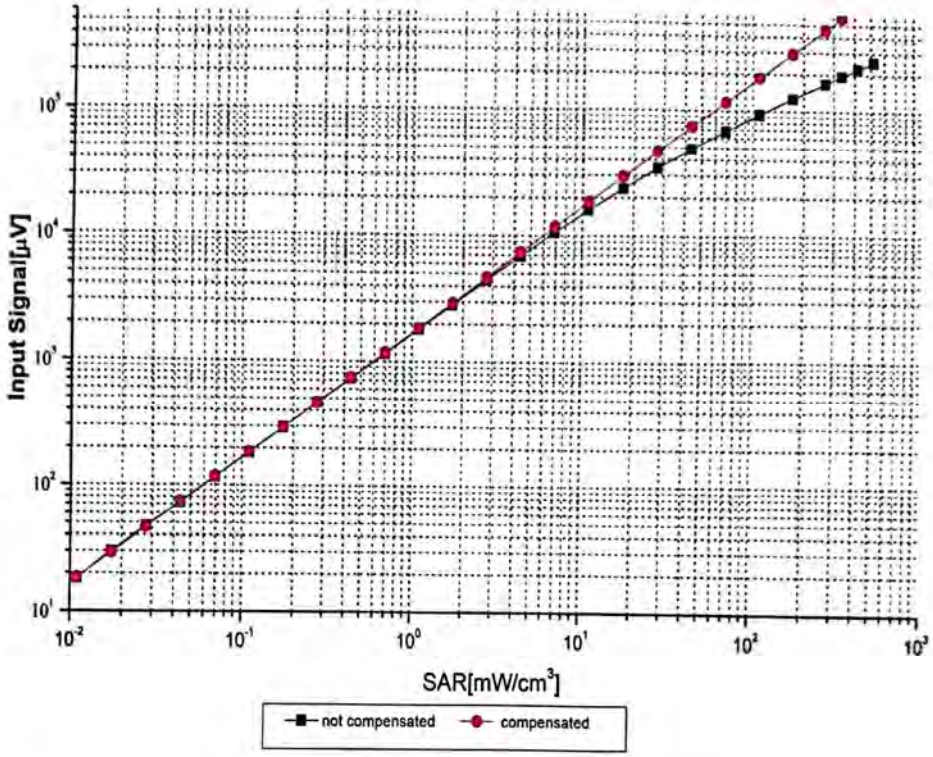
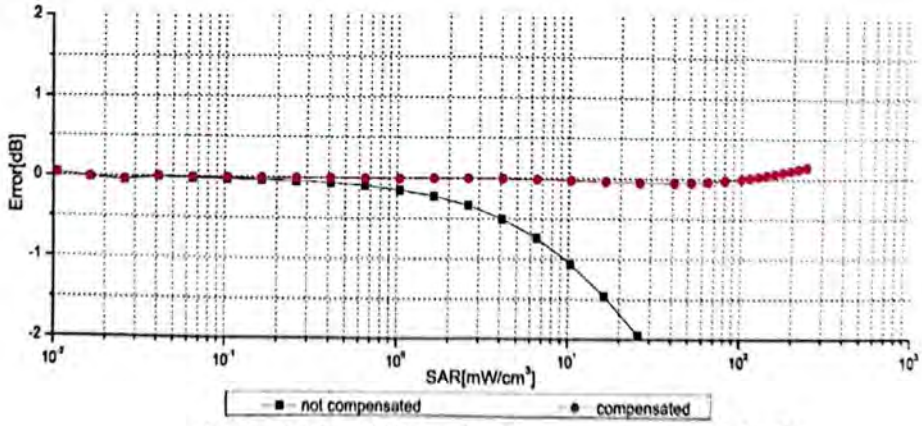
Dynamic Range f(SAR_{head})
(TEM cell, f = 900 MHz)





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

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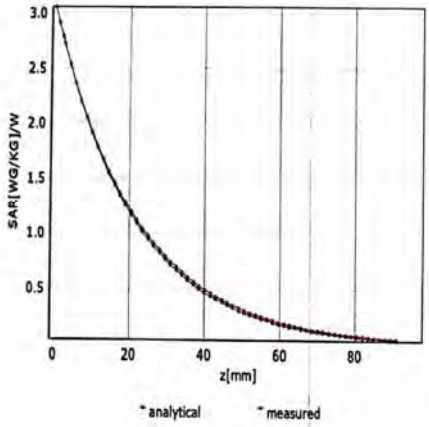
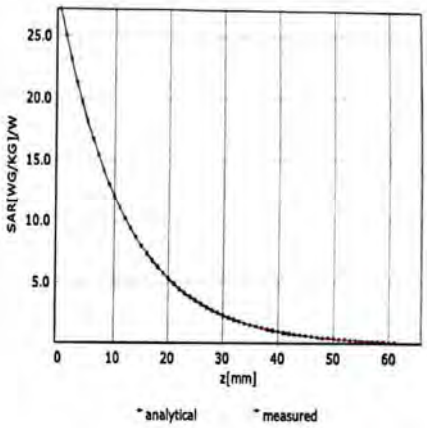
Conversion Factor Assessment

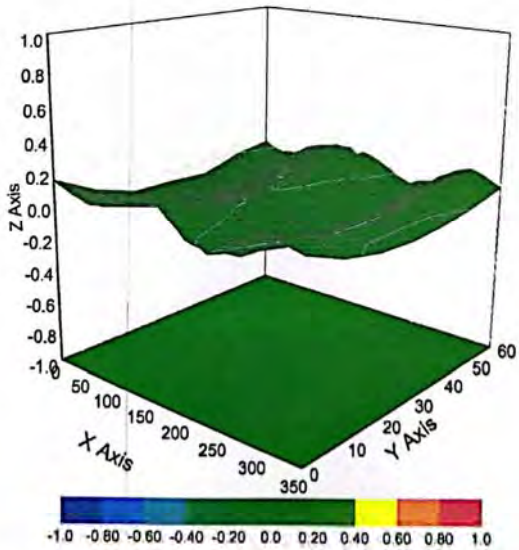
f=750 MHz,WGLS R9(H_convF)



f=1750 MHz,WGLS R22(H_convF)



Deviation from Isotropy in Liquid



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

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DASY/EASY – Parameters of Probe: EX3DV4 – SN:3677

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	117.4
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disable
Probe Overall Length	337mm
Probe Body Diameter	10mm
Tip Length	9mm
Tip Diameter	2.5mm
Probe Tip to Sensor X Calibration Point	1mm
Probe Tip to Sensor Y Calibration Point	1mm
Probe Tip to Sensor Z Calibration Point	1mm
Recommended Measurement Distance from Surface	1.4mm

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ANNEX E: D750V3 Dipole Calibration Certificate

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中国认可
国际互认
校准
CALIBRATION
CNAS L0570

Client TA(Shanghai) Certificate No: Z20-60299

CALIBRATION CERTIFICATE

Object	D750V3 - SN: 1045
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	August 28, 2020

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106276	12-May-20 (CTTL, No.J20X02965)	May-21
Power sensor NRP6A	101369	12-May-20 (CTTL, No.J20X02965)	May-21
Reference Probe EX3DV4	SN 3617	30-Jan-20(SPEAG,No.EX3-3617_Jan20)	Jan-21
DAE4	SN 771	10-Feb-20(CTTL-SPEAG,No.Z20-60017)	Feb-21
Secondary Standards	**ID #**	**Cal Date(Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Feb-20 (CTTL, No.J20X00516)	Feb-21
NetworkAnalyzer E5071C	MY46110673	10-Feb-20 (CTTL, No.J20X00515)	Feb-21

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

Issued: September 3, 2020

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Certificate No: Z20-60299 Page 1 of 8

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

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

b) IEC 62209-1, "Measurement procedure for assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices- Part 1: Device used next to the ear (Frequency range of 300MHz to 6GHz)", July 2016

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

d) KDB865664, SAR Measurement Requirements for 100 MHz to 6 GHz

Additional Documentation:

e) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

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

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Measurement Conditions

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

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.3 ± 6 %	0.87 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	—	—

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.07 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**8.37 W/kg ± 18.8 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.38 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**5.57 W/kg ± 18.7 % (*k*=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	54.4 ± 6 %	0.94 mho/m ± 6 %
Body TSL temperature change during test	<1.0 °C	—	—

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.12 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**8.58 W/kg ± 18.8 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Body TSL	Condition	
SAR measured	250 mW input power	1.41 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**5.70 W/kg ±18.7 % (*k*=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.3Ω- 2.29jΩ
Return Loss	- 26.6dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	47.7Ω- 4.58jΩ
Return Loss	- 25.6dB

General Antenna Parameters and Design

Electrical Delay (one direction)	0.900 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG

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DASY5 Validation Report for Head TSL Date: 08.28.2020

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1045

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used: f = 750 MHz; σ = 0.873 S/m; ε_r = 41.28; ρ = 1000 kg/m^3

Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(10.07, 10.07, 10.07) @ 750 MHz; Calibrated: 2020-01-30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn771; Calibrated: 2020-02-10
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Reference Value = 54.97 V/m; Power Drift = -0.02 dB

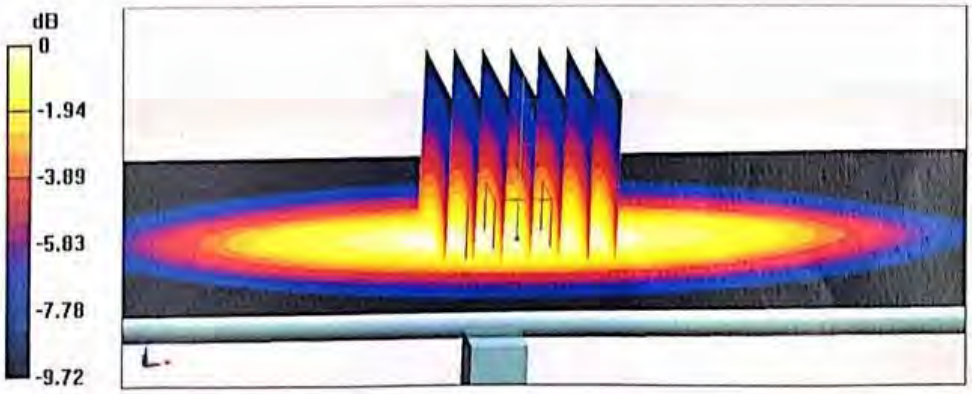
Peak SAR (extrapolated) = 3.00 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.38 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 68.7%

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



0 dB = 2.71 W/kg = 4.33 dBW/kg

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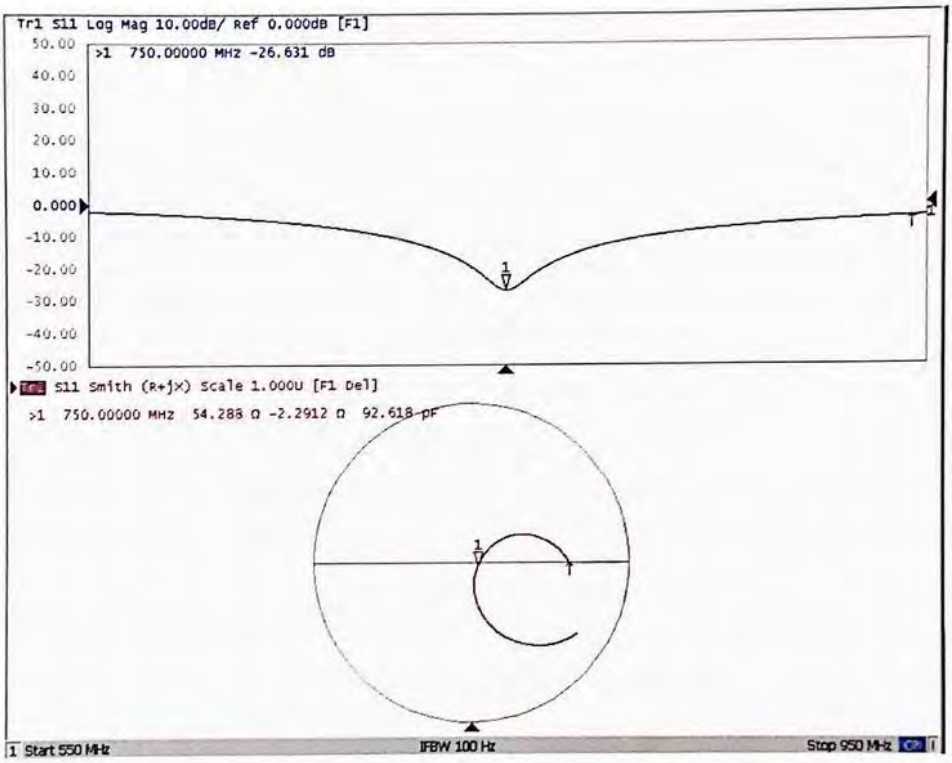
Impedance Measurement Plot for Head TSL



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s p e a g
CALIBRATION LABORATORY

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DASY5 Validation Report for Body TSL Date: 08.28.2020

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1045

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used: f = 750 MHz; σ = 0.94 S/m; ε_r = 54.36; ρ = 1000 kg/m^3

Phantom section: Center Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3617; ConvF(9.8, 9.8, 9.8) @ 750 MHz; Calibrated: 2020-01-30
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn771; Calibrated: 2020-02-10
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

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

Reference Value = 53.84 V/m; Power Drift = -0.02 dB

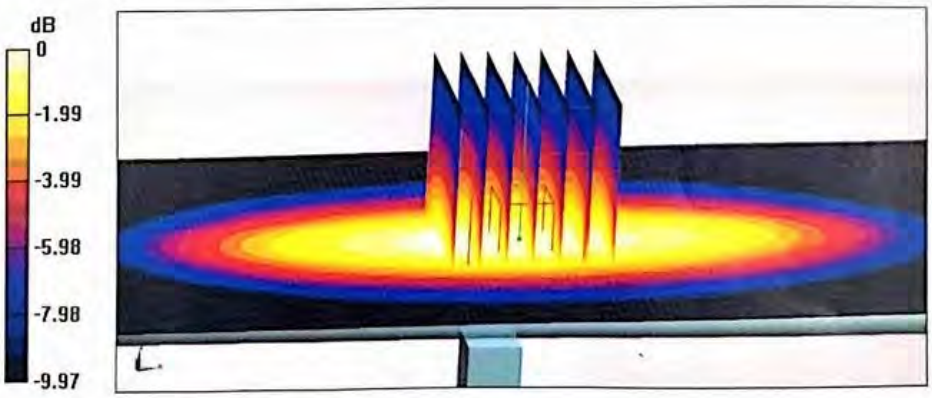
Peak SAR (extrapolated) = 3.14 W/kg

SAR(1 g) = 2.12 W/kg; SAR(10 g) = 1.41 W/kg

Smallest distance from peaks to all points 3 dB below = 18.4 mm

Ratio of SAR at M2 to SAR at M1 = 67.9%

Maximum value of SAR (measured) = 2.80 W/kg



0 dB = 2.80 W/kg = 4.47 dBW/kg

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