SAR TEST REPORT

Applicant	ZTE Corporation
FCC ID	SRQ-Z7540
Product	5G NR Multi-Mode Digital Mobile Phone
Brand	ZTE
Model	Z7540
Report No.	R2202A0144-S1V1
Issue Date	March 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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Version	Revision description	Issue Date
Rev.0	Initial issue of report.	March 18, 2022
Rev.1	Update description in Page 27.	March 18, 2022
Note: This revised report (Report No. R2202A0144-S1V1) supersedes and replaces the previously issued report (Report No. R2202A0144-S1). Please discard or destroy the previously issued report and dispose of it accordingly.		

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.
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1.4 Laboratory Environment

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

2 Statement of Compliance

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

Table 1: Highest Reported SAR

Mode	Highest Reported SAR (W/kg)			
	1g SAR Head	1g SAR Body-worn	1g SAR Hotspot	Product Specific 10-g SAR
WCDMA Band II	0.19	0.64	0.93	NA
WCDMA Band IV	0.19	**0.84**	0.89	NA
WCDMA Band V	0.29	0.73	**0.99**	NA
LTE FDD 2	0.23	0.65	0.91	NA
LTE FDD 5	0.28	0.64	0.96	NA
LTE FDD 12	0.19	0.49	0.64	NA
LTE TDD 41	**0.97**	0.43	0.80	NA
LTE FDD 66 (LTE FDD 4)	0.26	0.66	0.76	NA
LTE FDD 71	0.20	0.29	0.53	NA
NR n2	0.23	0.56	0.72	2.45
NR n5	0.34	0.56	0.68	NA
NR 25	0.38	0.52	0.53	NA
NR 41	0.65	0.43	0.68	**3.29**
NR 66	0.24	0.39	0.57	NA
NR 71	0.26	0.31	0.56	NA
Wi-Fi (2.4G)	0.70	0.25	0.44	NA
Wi-Fi (5G)	0.57	0.25	0.40	NA
Bluetooth	0.30	＜0.10	＜0.10	NA
Date of Testing: February 21, 2022 ~ March 15, 2022 Date of Sample Received: February 14, 2022				
Note: 1. The device is in compliance with SAR for Uncontrolled Environment /General Population exposure limits (1.6 W/kg and 4.0 W/kg) specified in ANSI C95.1: 1992/IEEE C95.1: 1991, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013. 2. All indications of Pass/Fail in this report are opinions expressed by TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.				

Note:

1) According to TCB workshop October, 2014 RF Exposure Procedures Update (Overlapping LTE

Bands):

a) 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.

Table 2: Highest Simultaneous Transmission SAR

Exposure Configuration	1g SAR Head	1g SAR Body-worn (Separation 15mm)	1g SAR Hotspot (Separation 10mm)	Product Specific 10-g SAR (Separation 0mm)
Highest Simultaneous Transmission SAR (W/kg)	1.39	1.47	1.59	3.29
Note: The detail for simultaneous transmission consideration is described in chapter 10.4.				

3 Description of Equipment under Test

Client Information

Applicant	ZTE Corporation
Applicant address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China
Manufacturer	ZTE Corporation
Manufacturer address	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, 518057, P.R.China

General Technologies

Application Purpose	Original Grant
EUT Stage	Identical Prototype
Model	Z7540
IMEI	866787060002587
Hardware Version	Z7540HW1.0
Software Version	Z7540_CCV1.0.0B02
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	WCDMA Band II/IV/V:3 LTE FDD Band 2/4/5/12/66/71:3 LTE TDD Band 41: 3 NR n2/n5/n25/n41/n66/n71: 3
Power Level	WCDMA Band II/IV/V: max power LTE FDD Band 2/4/5/12/66/71: max power LTE TDD Band 41:max power NR n2/n5/n25/n41/n66/n71:max power
EUT Accessory	
Battery	Manufacturer: SCUD (Fujian) Electronics Co., LTD. Model: Li3949T44P8h906450
Note: The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.	

Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)
WCDMA	Band II	QPSK	HSDPA UE Category:14 HSUPA UE Category7	1850 ~ 1910
	Band IV			1710 ~ 1755
	Band V			824 ~ 849
LTE	FDD 2	QPSK, 16QAM, 64QAM	Rel.15 /Category 13	1850 ~ 1910
	FDD 4			1710 ~ 1755
	FDD 5			824 ~ 849
	FDD 12			699 ~ 716
	TDD 41			2496 ~ 2690
	FDD 66			1710 ~ 1780
	FDD 71			663 ~ 698
	Does this device support Carrier Aggregation (CA) ☒Yes ☐No			
	Does this device support SV-LTE (1xRTT-LTE)? ☐Yes ☒No			
NR	FDD n2	CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM; DFT-s OFDM: PI/2 BPSK, QPSK, 16QAM, 64QAM, 256QAM	/	1850 ~ 1910
	FDD n5			824 ~ 849
	FDD n25			1850 ~ 1915
	TDD n41			2496 ~ 2690
	FDD n66			1710 ~ 1780
	FDD n71			663 ~ 698
EN-DC Band	DC_5A_n2A, DC_12A_n2A, DC_66A_n2A, DC_2A_n5A, DC_66A_n5A, DC_66A_n25A, DC_2A_n41A, DC_66A_n41A, DC_2A_n66A, DC_5A_n66A, DC_12A_n66A, DC_2A_n71A, DC_66A_n71A			
BT	2.4G	Version 5.0 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			

4 Test Specification, Methods and Procedures

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

Reference Standards

KDB 248227 D01 802.11Wi-Fi SAR v02r02
KDB 447498 D01 General RF Exposure Guidance v06
KDB 648474 D04 Handset SAR v01r03
KDB 690783 D01 SAR Listings on Grants v01r03
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02 RF Exposure Reporting v01r02
KDB 941225 D01 3G SAR Procedures v03r01
KDB 941225 D05 SAR for LTE Devices v02r05
KDB 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02
KDB 941225 D06 Hotspot Mode v02r01

5 Operational Conditions during Test

5.1 Test Positions

5.1.1 Against Phantom Head

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

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

5.1.2 Body Worn Configuration

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

Per FCC KDB Publication 648474 D04, Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in FCC KDB Publication 447498 D01 should be used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode, when applicable. When the reported SAR for a body-worn accessory, measured without a headset connected to the handset, is > 1.2 W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset.

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

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

5.1.3 Phablet SAR test considerations

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

a) The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.

b) The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for product specific 10-g SAR according to the body-equivalent tissue dielectric parameters in KDB Publication 865664 D01 to address interactive hand use exposure conditions. The 1-g SAR at 5 mm for UMPC mini-tablets is not required. When hotspot mode applies, product specific 10-g SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg; however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for phablet modes to compare with the 1.2 W/kg SAR test reduction threshold. The normal tablet procedures in KDB Publication 616217 are required when the overall diagonal dimension of the device is > 20.0 cm. Hotspot mode SAR is not required when normal tablet procedures are applied. Product specific 10-g SAR is also not required for the front (top) surface of larger form factor full size tablets. The more conservative normal tablet SAR results can be used to support phablet mode product specific 10-g SAR.

c) The simultaneous transmission operating configurations applicable to voice and data transmissions for both phone and mini-tablet modes must be taken into consideration separately for 1-g and 10-g SAR to determine the simultaneous transmission SAR test exclusion and measurement requirements for the relevant wireless modes and exposure conditions.

5.2 Measurement Variability

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

SAR Measurement Variability was assessed using the following procedures for each frequency band:
1) When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.
2) A second repeated measurement was 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.

5.3 Test Configuration

5.3.1 WCDMA Test Configuration

5.3.1.1 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.

5.3.1.2 Head SAR

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

5.3.1.3 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

5.3.1.4 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 3: Subtests for WCDMA 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$\Leftrightarrow$$A_{hs}$ = β_{hs}/β_c=30/15$\Leftrightarrow$$\beta_{hs}$=30/15*$\beta_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.

5.3.1.5 Release 6 HSUPA Test Configuration

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

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

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

Sub-set	β_c	β_d	β_d (SF)	β_c/β_d	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} = 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. 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 5: HSUPA UE category

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCHTTI (ms)	Minimum Spreading Factor	Maximum E-DCH Transport Block Bits	Max Rate (Mbps)
1	1	4	10	4	7110	0.7296
2	2	8	2	4	2798	1.4592
	2	4	10	4	14484	
3	2	4	10	4	14484	1.4592
4	2	8	2	2	5772	2.9185
	2	4	10	2	20000	2.00
5	2	4	10	2	20000	2.00
6 (No DPDCH)	4	8	2	2 SF2 & 2 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)

Table 6: HS-DSCH UE category

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

5.3.2 LTE Test Configuration

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

A) Spectrum Plots for RB Configurations

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

B) MPR

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to

3GPP TS36.101 Section 6.2.3 – 6.2.5 under Table 6.2.3-1.

C) A-MPR

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

D) Largest channel bandwidth standalone SAR test requirements

1) QPSK with 1 RB allocation

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

2) QPSK with 50% RB allocation

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

3) QPSK with 100% RB allocation

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

4) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > 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.

5.3.3 Additional requirements for TDD LTE specification

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

TDD LTE Band supports 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table: Uplink-downlink configurations for uplink-downlink configurations and Table: Configuration of special subframe (lengths of DwPTS/GP/UpPTS) for Special subframe configurations.

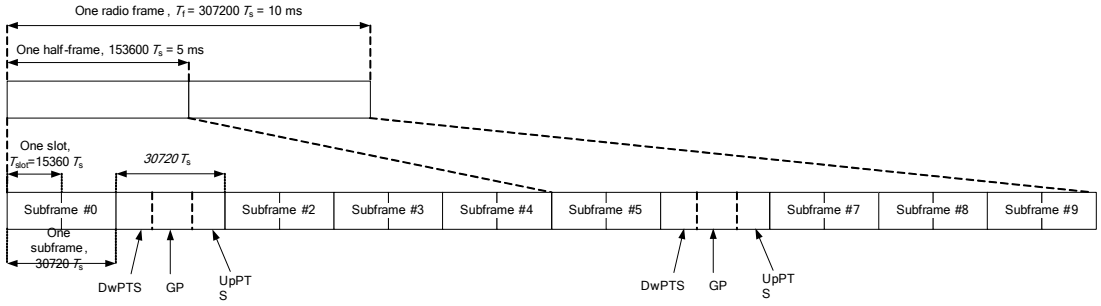


Figure 1: Frame structure type 2

Table 7: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

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

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

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

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

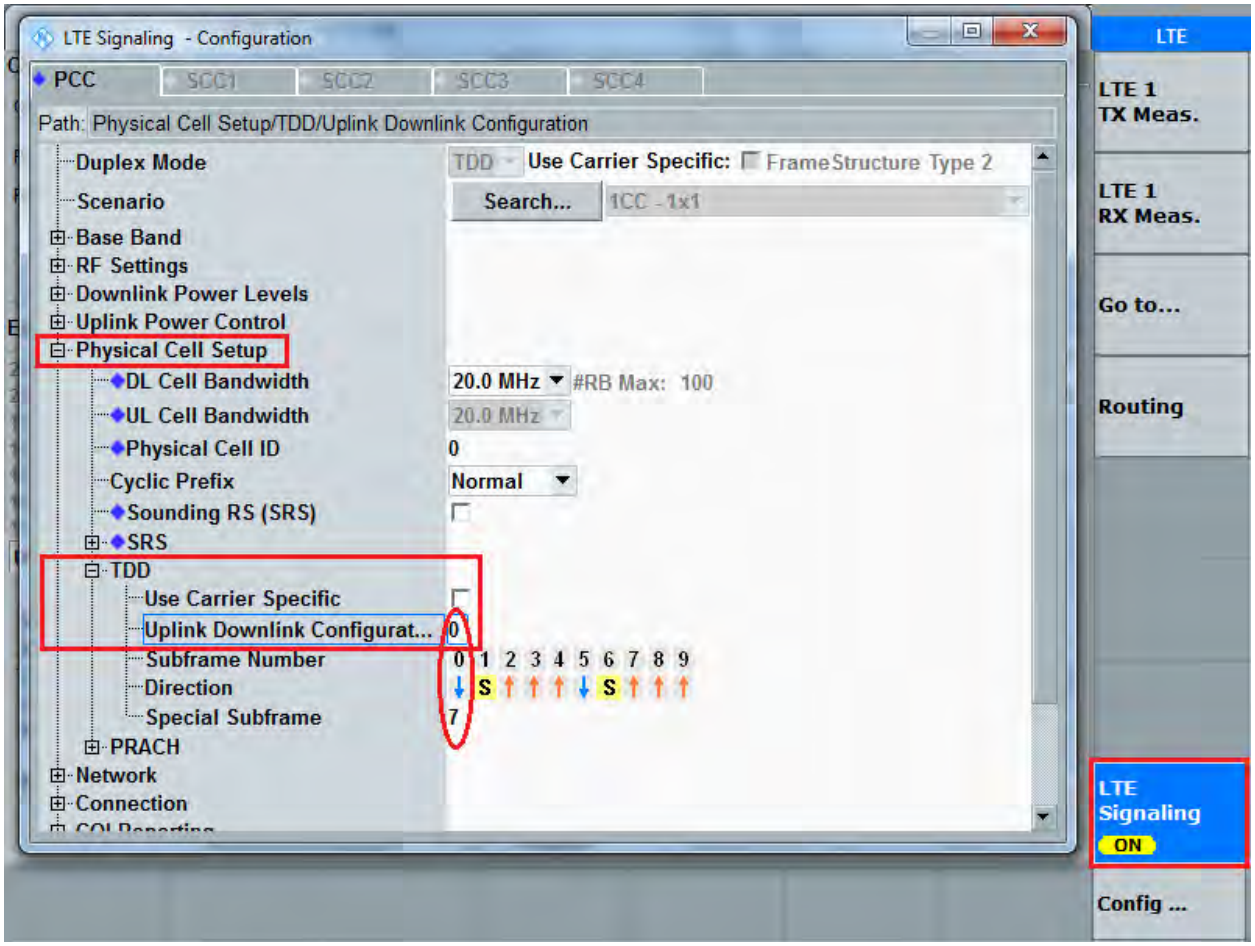
In conclusion, for the TDD LTE Band, Duty Cycle can be calculated with formula as below. All these sets are ok when we test, or we can set as below.

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



5.3.4 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.

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 16.5dBm 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 16.5dBm 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.

5.3.5 Wi-Fi Test Configuration

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

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

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

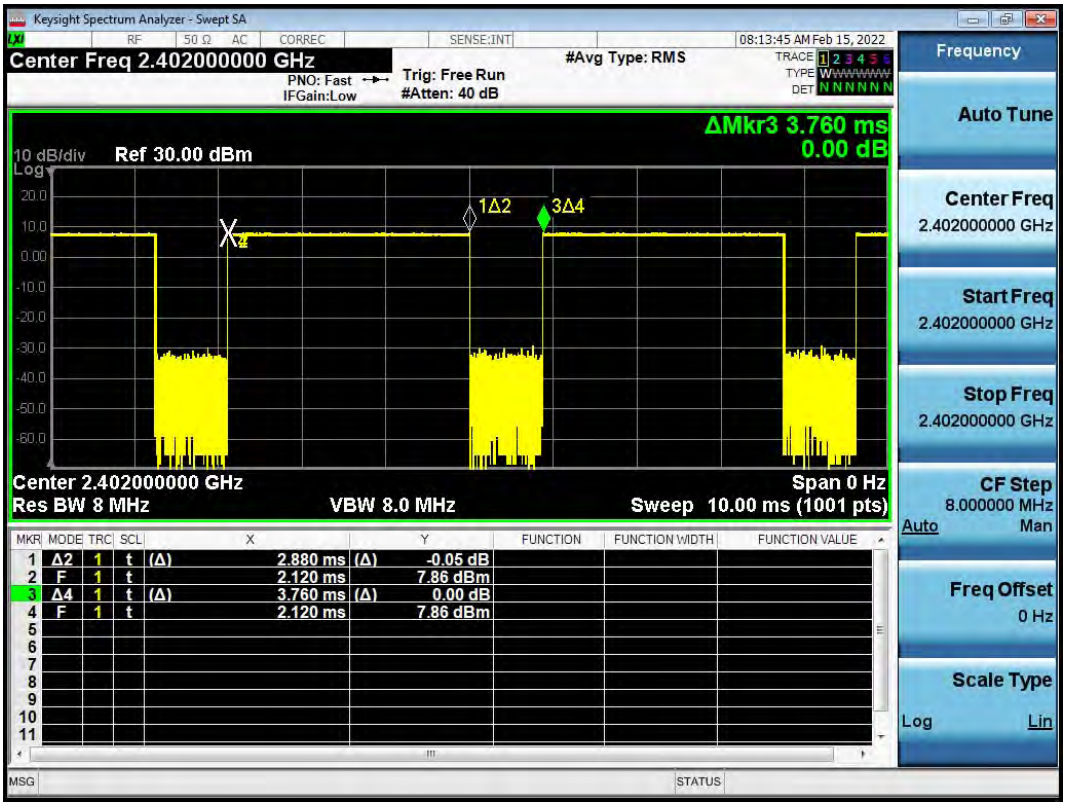
To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

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

5.3.6 BT Test Configuration

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

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



Note: Duty factor= Ton (ms)/ T(on+off) (ms)=2.880/3.760=76.6%

5.3.7 LTE 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 (NOTE 3)	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_41C	CA_41C	10	20				40	0
		15	15, 20					
		20	10, 15, 20					
		5, 10	20				40	1
		15	15, 20					
		20	5, 10, 15, 20					
		10	15, 20				40	2
		15	10, 15, 20					
		20	10, 15, 20					
		10	20				40	3
		20	20					

NOTE 1: The CA configuration refers to an operating band and a CA bandwidth class specified in Table 5.6A-1 (the indexing letter). Absence of a CA bandwidth class for an operating band implies support of all classes.

NOTE 2: For the supported CC bandwidth combinations, the CC downlink and uplink bandwidths are equal.

NOTE 3: Uplink CA configurations are the configurations supported by the present release of specifications.

NOTE 4: Restricted to E-UTRA operation when inter-band carrier aggregation is configured. The downlink operating band is paired with the uplink operating band (external) of the carrier aggregation configuration that is supporting the configured Pcell.

5.3.8 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.

WWAN Reduced power level table

Antenna	Position	Receiver State	Hotspot State	Transmitting conditions
ANT0	Head	On	N/A	WWAN Only
				WWAN+WLAN2.4G
				WWAN+WLAN5G
	Body Worn/Product Specific	Off	N/A	WWAN Only
	Hotspot	Off	On	WWAN+WLAN2.4G
				WWAN+WLAN5G
ANT1	Head	On	N/A	WWAN Only
				WWAN+WLAN2.4G
				WWAN+WLAN5G
	Body Worn/Product Specific	Off	N/A	WWAN Only
	Hotspot	Off	On	WWAN+WLAN2.4G
				WWAN+WLAN5G
ANT2	Head	On	N/A	WWAN Only
				WWAN+WLAN2.4G
				WWAN+WLAN5G
	Body Worn/Product Specific	Off	N/A	WWAN Only
	Hotspot	Off	On	WWAN+WLAN2.4G
				WWAN+WLAN5G
ANT3	Head	On	N/A	WWAN Only
				WWAN+WLAN2.4G

				WWAN+WLAN5G
	Body Worn/Product Specific	Off	N/A	WWAN Only
	Hotspot	Off	On	WWAN+WLAN2.4G
				WWAN+WLAN5G

WLAN Reduced power level table

Antenna	Position	Receiver State	Transmitting conditions
ANT8	Head	On	WLAN Only
			WWAN+WLAN2.4G
			WWAN+WLAN5G
	Body Worn/Hotspot/Product Specific	Off	WLAN Only
			WWAN+WLAN2.4G
			WWAN+WLAN5G

WWAN Reduced power level table

Mode	Band	MAX 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
12.2kbps RMC	WCDMA B2	24.5	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.2kbps RMC	WCDMA B4	23.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12.2kbps RMC	WCDMA B5	25.0	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LTE Bands	LTE B2	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B4	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
	LTE B5	24.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B12	24.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B41	24.5	Ant.3	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
	LTE B66	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
	LTE B71	24.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SA Bands	n 2	23.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
	n 5	23.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
	n 25	23.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 41	23.5	Ant.3	3.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0
	n 66	23.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
	n 71	23.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC (B5+N2)	LTE B5	24.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 2	23.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
EN-DC (B12+N2)	LTE B12	24.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n 2	23.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5

EN-DC	LTE B66	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
(B66+N2)	n 2	23.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
EN-DC	LTE B2	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(B2+N5)	n 5	23.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
EN-DC	LTE B66	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
(B66+N5)	n 5	23.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
EN-DC	LTE B66	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
(B66+N25)	n 25	23.5	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	3.0	3.0	3.0
EN-DC	LTE B2	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(B2+N41)	n 41	23.5	Ant.3	3.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0
EN-DC	LTE B66	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
(B66+N41)	n 41	23.5	Ant.3	3.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0
EN-DC	LTE B2	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(B2+N66)	n 66	23.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
EN-DC	LTE B5	24.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(B5+N66)	n 66	23.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
EN-DC	LTE B12	24.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(B12+N66)	n 66	23.0	Ant.1	0.0	0.0	0.0	0.0	0.0	0.0	2.5	2.5	2.5
EN-DC	LTE B2	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
(B2+N71)	n 71	23.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
EN-DC	LTE B66	24.0	Ant.2	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0	2.0
(B66+N71)	n 71	23.5	Ant.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

WLAN Reduced power level table

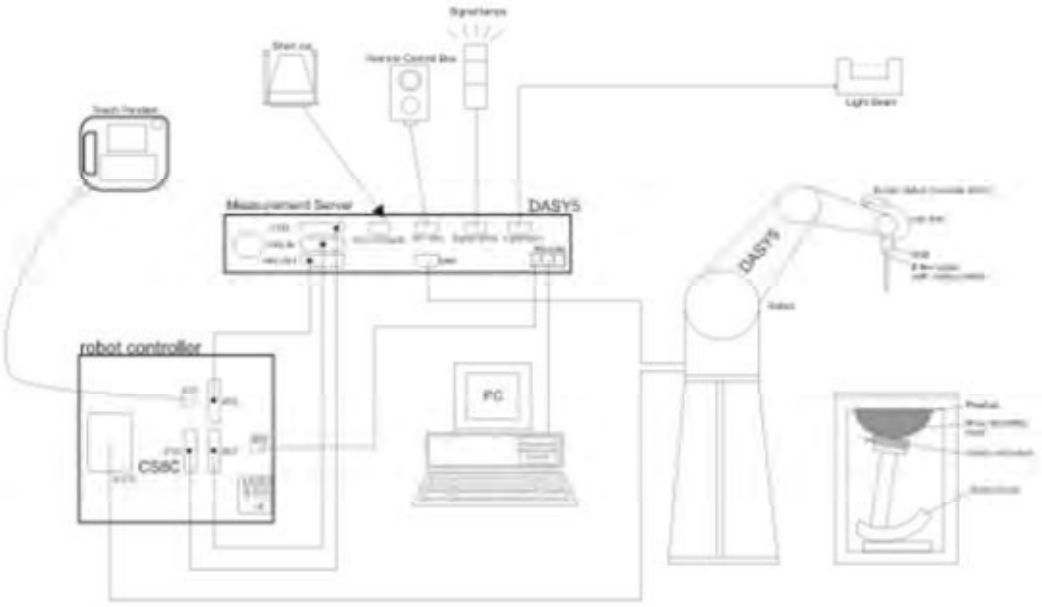
Mode	Band	MAX Tune up	Antenna	Head(Receiver on)		Body worn/Hotspot/Product Specific (Receiver off)	
				Standalone	Simultaneous transmission WWAN+ 2.4/5G WLAN	Standalone	Simultaneous transmission WWAN+ 2.4/5G WLAN
2.4G	802.11b CH1-13	17.0	Ant.8	0.0	0.0	0.0	0.0
	802.11g CH1-13	16.0		0.0	0.0	0.0	0.0
	802.11nHT20 CH1-13	16.0		0.0	0.0	0.0	0.0
	802.11nHT40 CH3-11	16.0		0.0	0.0	0.0	0.0
5G U-NII-1	802.11a CH36-48	16.5	Ant.8	0.0	0.0	0.0	0.0
	802.11nHT20 CH36-48	16.5		0.0	0.0	0.0	0.0
	802.11nHT40 CH38-46	16.5		0.0	0.0	0.0	0.0
	802.11acVHT20 CH36-48	12.5		0.0	0.0	0.0	0.0
	802.11acVHT40 CH38-46	12.5		0.0	0.0	0.0	0.0
	802.11acVHT80 CH42	12.5		0.0	0.0	0.0	0.0
5G U-NII-3	802.11a CH149-165	16.5	Ant.8	0.0	0.0	0.0	0.0
	802.11nHT20 CH149-165	16.5		0.0	0.0	0.0	0.0
	802.11nHT40 CH151-159	16.5		0.0	0.0	0.0	0.0

	802.11acVHT20 CH149-165	12.5		0.0	0.0	0.0	0.0
	802.11acVHT40 CH151-159	12.5		0.0	0.0	0.0	0.0
	802.11acVHT80 CH155	12.5		0.0	0.0	0.0	0.0

6 SAR Measurements System Configuration

6.1 SAR Measurement Set-up

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP or Win7 and the DASY software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

6.2 DASY5 E-field Probe System

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

EX3DV4 Probe Specification

Construction	Symmetrical design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in HSL (rotation around probe axis) ± 0.5 dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 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.

SAR=C∆T/∆t

Where: ∆t = Exposure time (30 seconds),

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

∆T = Temperature increase due to RF exposure.

Or

SAR=|E|^{2}σ/ρ

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.

<table>
<tr><td></td><td>≤3 GHz</td><td>> 3 GHz</td></tr>
<tr><td>Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td>Maximum probe angle from probe axis phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td rowspan="2">Maximum area scan spatial resolution: ΔxArea, ΔyArea</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.</td></tr>
</table>

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.

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

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.

7 Main Test Equipment

Name of Equipment	Manufacturer	Type/Model	Serial Number	Last Cal.	Cal. Due Date
Network analyzer	Agilent	E5071B	MY42404014	2021-05-15	2022-05-14
Dielectric Probe Kit	Agilent	85070E	US44020115	/	/
Power meter	Agilent	E4417A	GB41291714	2021-05-15	2022-05-14
Power sensor	Agilent	N8481H	MY50350004	2021-05-15	2022-05-14
Power sensor	Agilent	E9327A	US40441622	2021-05-15	2022-05-14
Dual directional coupler	UCL	UCL-DDC056G-S	20010600118	/	/
Amplifier	INDEXSAR	TPA-005060G01	13030502	2021-05-15	2022-05-14
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
Wideband radio communication tester	R&S	CMW 500	113645	2021-05-15	2022-05-14
Base Station Simulator	R&S	CMW270	100673	2021-05-15	2022-05-14
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 2450MHz	SPEAG	D2450V2	786	2020-08-27	2023-08-26
Validation Kit 2600MHz	SPEAG	D2600V2	1025	2021-04-23	2024-04-22
Validation Kit 5GHz	SPEAG	D5GHzV2	1151	2020-02-27	2023-02-26
Temperature Probe	Tianjin jinming	JM222	381	2021-05-15	2022-05-14
Hygrothermograph	Anymetr	HTC - 1	TY2020A001	2021-05-15	2022-05-14
Twin SAM Phantom	Speag	SAM2	1666	/	/
Software for Test	Speag	DASY52	/	/	/
Softwarefor Tissue	Agilent	85070	/	/	/

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
2450	39.2	1.80
2600	39.0	1.96
Frequency (MHz)	**ε_r**	**σ(s/m)**
5250	35.9	4.71
5750	35.4	5.22

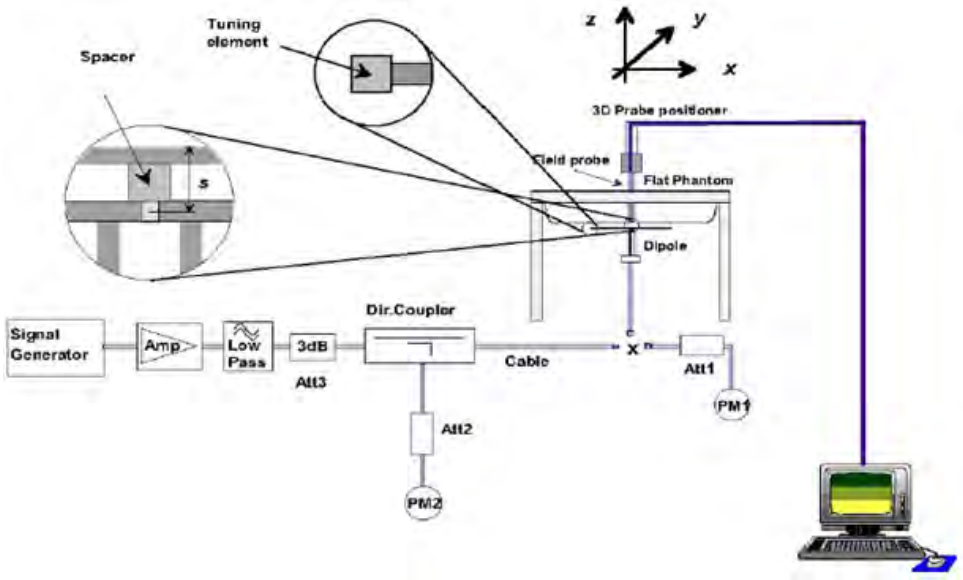
Measurements results

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	2022/2/21	21.5	42.3	0.88	41.9	0.89	0.95	-1.12
	2022/2/22	21.5	42.0	0.87	41.9	0.89	0.24	-2.25
835	2022/2/22	21.5	41.4	0.88	41.5	0.90	-0.24	-2.22
	2022/2/23	21.5	41.3	0.87	41.5	0.90	-0.48	-3.33
1750	2022/3/1	21.5	40.2	1.34	40.1	1.37	0.25	-2.19
1900	2022/2/25	21.5	40.1	1.41	40.0	1.40	0.25	0.71
	2022/2/26	21.5	40.2	1.43	40.0	1.40	0.50	2.14
2450	2022/3/10	21.5	38.6	1.81	39.2	1.80	-1.53	0.56
2600	2022/3/14	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
	2022/3/15	21.5	38.4	1.94	39.0	1.96	-1.54	-1.02
5250	2022/3/7	21.5	35.5	4.80	35.9	4.71	-1.11	1.91
5750	2022/3/7	21.5	34.9	5.21	35.4	5.22	-1.41	-0.19
Note: The depth of tissue-equivalent liquid in a phantom must be ≥ 15.0 cm for SAR measurements ≤ 3 GHz and ≥ 10.0 cm for measurements > 3 GHz.								

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

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	8/28/2020	-26.6	/	54.3	/
	Liquid	8/27/2021	-26.2	-1.5	53.9	-0.4
Dipole D835V2 SN: 4d020	Head	8/28/2020	-26.2	/	54.8	/
	Liquid	8/27/2021	-26.5	1.1	55.2	0.4
Dipole D1750V2 SN: 1033	Head	2/25/2020	-38.3	/	48.8	/
	Liquid	2/26/2021	-40.0	4.4	49.9	1.1
Dipole D1900V2 SN: 5d060	Head	8/27/2020	-23.3	/	52.5	/
	Liquid	8/26/2021	-23.0	-1.3	51.9	-0.6
Dipole D2450V2 SN: 786	Head	8/27/2020	-26.9	/	54.5	/
	Liquid	8/26/2021	-27.1	0.7	53.8	-0.7
Dipole D5GHzV2 SN: 1151 (5250MHz)	Head Liquid	2/27/2020	-23.4	/	52.4	/
		2/26/2021	-23.8	1.7	50.0	-2.4
		2/25/2022	-23.9	0.4	49.3	-0.7
Dipole D5GHzV2 SN: 1151 (5600MHz)	Head Liquid	2/27/2020	-22.6	/	52.4	/
		2/26/2021	-21.5	-4.9	50.0	-2.4
		2/25/2022	-20.9	-2.8	49.3	-0.7
Dipole D5GHzV2 SN: 1151 (5750MHz)	Head Liquid	2/27/2020	-25.0	/	55.9	/
		2/26/2021	-26.8	-1.8	52.5	-3.4
		2/25/2022	-27.1	1.1	52.1	-0.4

System Check results

Frequency (MHz)	Test Date	Temp ℃	250mW /100mW Measured SAR_{1g} (W/kg)	1W Normalized SAR_{1g} (W/kg)	1W Target SAR_{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
750	2022/2/21	21.5	2.13	8.52	8.37	1.79	1
	2022/2/22	21.5	2.10	8.40	8.37	0.36	2
835	2022/2/22	21.5	2.44	9.76	9.65	1.14	3
	2022/2/23	21.5	2.46	9.84	9.65	1.97	4
1750	2022/3/1	21.5	8.95	35.80	35.90	-0.28	5
1900	2022/2/25	21.5	9.88	39.52	39.50	0.05	6
	2022/2/26	21.5	9.85	39.40	39.50	-0.25	7
2450	2022/3/10	21.5	13.70	54.80	52.30	4.78	8
2600	2022/3/14	21.5	13.90	55.60	56.10	-0.89	9
	2022/3/15	21.5	13.88	55.52	56.10	-1.03	10
5250	2022/3/7	21.5	7.87	78.70	78.00	0.90	11
5750	2022/3/7	21.5	7.66	76.60	77.40	-1.03	12
Note: Target Values used derive from the calibration certificate Data Storage and Evaluation.							

8.3 SAR System Validation

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

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

Frequency [MHz]	Date	Probe SN	Probe Type	Probe Cal Point		PERM (Er)	COND (Σ)	CW Validation		
								Sensitivity	Probe Linearity	Probe Isotropy
750	8/12/2021	3677	EX3DV4	750	Head	42.81	0.85	PASS	PASS	PASS
835	8/12/2021	3677	EX3DV4	835	Head	42.22	0.90	PASS	PASS	PASS
1750	8/12/2021	3677	EX3DV4	1750	Head	39.91	1.32	PASS	PASS	PASS
1900	8/12/2021	3677	EX3DV4	1900	Head	39.43	1.42	PASS	PASS	PASS
2450	8/12/2021	3677	EX3DV4	2450	Head	38.19	1.83	PASS	PASS	PASS
2600	8/12/2021	3677	EX3DV4	2600	Head	37.60	1.99	PASS	PASS	PASS
5250	8/12/2021	3677	EX3DV4	5250	Head	35.36	4.83	PASS	PASS	PASS
5750	8/12/2021	3677	EX3DV4	5750	Head	34.07	5.47	PASS	PASS	PASS

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

9 Normal and Maximum Output Power

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

9.1 WCDMA Mode

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

WCDMA		Band II(dBm)				Band IV(dBm)				Band V(dBm)			
Tx Channel		9262	9400	9538	Tune-up Limit	1312	1413	1513	Tune-up Limit	4132	4183	4233	Tune-up Limit
Frequency(MHz)		1852.4	1880	1907.6		1712.4	1732.6	1752.6		826.4	836.6	846.6	
RMC	12.2kbps	**23.60**	23.52	23.58	24.50	21.23	21.27	**21.34**	23.00	**24.05**	24.00	24.03	25.00
AMR	12.2kbps	23.74	23.54	23.72	24.50	21.15	21.33	21.36	23.00	24.01	23.84	24.09	25.00
HSDPA	Sub 1	22.48	22.68	22.50	23.50	20.33	20.17	20.28	22.00	23.21	23.12	22.91	24.00
	Sub 2	22.76	22.46	22.66	23.50	20.37	20.25	20.42	22.00	23.11	23.04	23.05	24.00
	Sub 3	21.96	22.02	22.22	23.00	19.89	19.81	20.00	21.50	22.67	22.66	22.57	23.50
	Sub 4	22.04	21.90	22.18	23.00	19.57	19.93	19.84	21.50	22.47	22.56	22.39	23.50
HSUPA	Sub 1	21.20	21.06	20.92	22.00	18.85	18.89	18.78	20.50	21.41	21.62	21.57	22.50
	Sub 2	20.48	20.56	20.52	21.50	18.21	18.27	18.30	20.00	21.05	20.92	21.07	22.00
	Sub 3	21.56	21.56	21.60	22.50	19.17	19.15	19.36	21.00	22.05	21.96	22.09	23.00
	Sub 4	20.02	20.06	20.22	21.00	17.71	17.85	17.82	19.50	20.53	20.46	20.41	21.50
	Sub 5	21.64	21.58	21.50	22.50	19.13	19.23	19.44	21.00	21.99	22.16	22.03	23.00
Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”.													

9.2 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 FDD Band 2 Full Power & Receiver on & Receiver off & Hotspot on				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	23.22	23.20	23.15	24.00
		1	2	23.33	23.27	23.22	24.00
		1	5	23.16	23.09	23.16	24.00
		3	0	23.22	23.24	23.25	24.00
		3	2	23.17	23.26	23.26	24.00
		3	3	23.21	23.13	23.20	24.00
		6	0	22.27	22.29	22.33	23.00
	16QAM	1	0	22.55	22.45	22.43	23.00
		1	2	22.53	22.58	22.52	23.00
		1	5	22.43	22.40	22.40	23.00
		3	0	22.21	22.15	22.23	23.00
		3	2	22.19	22.20	22.25	23.00
		3	3	22.18	22.14	22.16	23.00
		6	0	21.26	21.23	21.28	22.00
	64QAM	1	0	21.28	21.37	21.35	22.00
		1	2	21.33	21.46	21.46	22.00
		1	5	21.20	21.33	21.23	22.00
		3	0	21.17	21.10	21.21	22.00
		3	2	21.21	21.18	21.23	22.00
		3	3	21.16	21.11	21.08	22.00
		6	0	20.24	20.23	20.28	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	23.24	23.24	23.18	24.00

		1	7	23.31	23.30	23.26	24.00
		1	14	23.19	23.14	23.20	24.00
		8	0	22.32	22.36	22.38	23.00
		8	4	22.29	22.36	22.38	23.00
		8	7	22.31	22.24	22.30	23.00
		15	0	22.27	22.33	22.36	23.00
	16QAM	1	0	22.58	22.47	22.46	23.00
		1	7	22.56	22.58	22.56	23.00
		1	14	22.45	22.44	22.43	23.00
		8	0	21.32	21.28	21.35	22.00
		8	4	21.30	21.33	21.37	22.00
		8	7	21.28	21.26	21.29	22.00
		15	0	21.29	21.27	21.31	22.00
	64QAM	1	0	21.31	21.39	21.38	22.00
		1	7	21.36	21.46	21.48	22.00
		1	14	21.22	21.32	21.26	22.00
		8	0	20.28	20.23	20.33	21.00
		8	4	20.32	20.31	20.35	21.00
		8	7	20.26	20.23	20.21	21.00
		15	0	20.27	20.27	20.31	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	23.21	23.22	23.14	24.00
		1	13	23.29	23.26	23.23	24.00
		1	24	23.16	23.09	23.16	24.00
		12	0	22.29	22.31	22.34	23.00
		12	6	22.27	22.32	22.33	23.00
		12	13	22.29	22.22	22.26	23.00
		25	0	22.27	22.32	22.34	23.00
	16QAM	1	0	22.55	22.43	22.43	23.00
		1	13	22.53	22.56	22.53	23.00
		1	24	22.42	22.42	22.39	23.00
		12	0	21.30	21.24	21.32	22.00
		12	6	21.27	21.28	21.33	22.00
		12	13	21.25	21.21	21.25	22.00
		25	0	21.27	21.23	21.26	22.00
	64QAM	1	0	21.28	21.39	21.35	22.00
		1	13	21.33	21.48	21.45	22.00
		1	24	21.23	21.30	21.22	22.00
		12	0	20.26	20.19	20.34	21.00
		12	6	20.29	20.26	20.31	21.00
		12	13	20.23	20.18	20.17	21.00
		25	0	20.25	20.23	20.26	21.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	23.23	23.23	23.17	24.00
		1	25	23.32	23.31	23.27	24.00
		1	49	23.18	23.13	23.19	24.00
		25	0	22.32	22.36	22.38	23.00
		25	13	22.30	22.37	22.37	23.00
		25	25	22.31	22.26	22.31	23.00
		50	0	22.31	22.34	22.38	23.00
	16QAM	1	0	22.57	22.46	22.45	23.00
		1	25	22.56	22.60	22.56	23.00
		1	49	22.45	22.44	22.42	23.00
		25	0	21.33	21.29	21.36	22.00
		25	13	21.29	21.32	21.36	22.00
		25	25	21.28	21.26	21.29	22.00
		50	0	21.30	21.28	21.30	22.00
	64QAM	1	0	21.30	21.38	21.37	22.00
		1	25	21.36	21.48	21.48	22.00
		1	49	21.22	21.32	21.25	22.00
		25	0	20.29	20.24	20.34	21.00
		25	13	20.31	20.30	20.34	21.00
		25	25	20.26	20.23	20.21	21.00
		50	0	20.28	20.28	20.30	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	23.22	23.19	23.15	24.00
		1	38	23.30	23.30	23.24	24.00
		1	74	23.15	23.08	23.15	24.00
		36	0	22.30	22.32	22.35	23.00
		36	18	22.27	22.32	22.33	23.00
		36	39	22.28	22.23	22.27	23.00
		75	0	22.29	22.30	22.33	23.00
	16QAM	1	0	22.52	22.44	22.43	23.00
		1	38	22.54	22.57	22.54	23.00
		1	74	22.42	22.40	22.39	23.00
		36	0	21.30	21.27	21.33	22.00
		36	18	21.26	21.27	21.32	22.00
		36	39	21.26	21.22	21.26	22.00
		75	0	21.27	21.23	21.26	22.00
	64QAM	1	0	21.25	21.36	21.35	22.00
		1	38	21.34	21.45	21.46	22.00
		1	74	21.23	21.31	21.26	22.00
		36	0	20.28	20.26	20.35	21.00

		36	18	20.29	20.27	20.33	21.00
		36	39	20.24	20.19	20.18	21.00
		75	0	20.25	20.23	20.26	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	23.19	23.15	23.12	24.00
		1	50	**23.29**	**23.26**	**23.22**	24.00
		1	99	23.13	23.07	23.12	24.00
		50	0	**22.27**	22.27	**22.31**	23.00
		50	25	22.25	**22.28**	22.30	23.00
		50	50	22.25	22.18	22.23	23.00
		100	0	22.26	22.25	**22.29**	23.00
	16QAM	1	0	22.44	22.40	22.38	23.00
		1	50	22.50	22.55	22.50	23.00
		1	99	22.40	22.37	22.37	23.00
		50	0	21.27	21.23	21.30	22.00
		50	25	21.23	21.25	21.29	22.00
		50	50	21.23	21.17	21.22	22.00
		100	0	21.25	21.19	21.23	22.00
	64QAM	1	0	21.23	21.32	21.30	22.00
		1	50	21.30	21.43	21.42	22.00
		1	99	21.17	21.25	21.20	22.00
		50	0	20.23	20.18	20.28	21.00
		50	25	20.25	20.23	20.27	21.00
		50	50	20.21	20.14	20.14	21.00
		100	0	20.23	20.19	20.23	21.00

LTE FDD Band 4 Full Power & Receiver on & Receiver off				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	23.16	23.19	23.20	24.00
		1	2	23.25	23.27	23.28	24.00
		1	5	23.12	23.07	23.12	24.00
		3	0	23.16	23.26	23.22	24.00
		3	2	23.18	23.20	23.24	24.00
		3	3	23.10	23.18	23.18	24.00
		6	0	22.16	22.26	22.28	23.00
	16QAM	1	0	22.61	22.50	22.49	23.00
		1	2	22.59	22.66	22.56	23.00
		1	5	22.45	22.41	22.39	23.00
		3	0	22.13	22.18	22.18	23.00
		3	2	22.19	22.17	22.21	23.00

		3	3	22.07	22.18	22.11	23.00
		6	0	21.15	21.25	21.22	22.00
	64QAM	1	0	21.37	21.25	21.35	22.00
		1	2	21.40	21.39	21.46	22.00
		1	5	21.26	21.19	21.23	22.00
		3	0	21.22	21.24	21.23	22.00
		3	2	21.23	21.22	21.26	22.00
		3	3	21.17	21.23	21.14	22.00
		6	0	20.24	20.36	20.31	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	23.18	23.23	23.23	24.00
		1	7	23.23	23.30	23.32	24.00
		1	14	23.15	23.12	23.16	24.00
		8	0	22.26	22.38	22.35	23.00
		8	4	22.30	22.30	22.36	23.00
		8	7	22.20	22.29	22.28	23.00
		15	0	22.16	22.30	22.31	23.00
	16QAM	1	0	22.64	22.52	22.52	23.00
		1	7	22.62	22.66	22.60	23.00
		1	14	22.47	22.45	22.42	23.00
		8	0	21.24	21.31	21.30	22.00
		8	4	21.30	21.30	21.33	22.00
		8	7	21.17	21.30	21.24	22.00
		15	0	21.18	21.29	21.25	22.00
	64QAM	1	0	21.40	21.27	21.38	22.00
		1	7	21.43	21.39	21.48	22.00
		1	14	21.28	21.18	21.26	22.00
		8	0	20.33	20.37	20.35	21.00
		8	4	20.34	20.35	20.38	21.00
		8	7	20.27	20.35	20.27	21.00
		15	0	20.27	20.40	20.34	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				19975/1712.5	20175/1732.5	20375/1752.5	
5MHz	QPSK	1	0	23.15	23.21	23.19	24.00
		1	13	23.21	23.26	23.29	24.00
		1	24	23.12	23.07	23.12	24.00
		12	0	22.23	22.33	22.31	23.00
		12	6	22.28	22.26	22.31	23.00
		12	13	22.18	22.27	22.24	23.00
		25	0	22.16	22.29	22.29	23.00
	16QAM	1	0	22.61	22.48	22.49	23.00
		1	13	22.59	22.64	22.57	23.00

		1	24	22.44	22.43	22.38	23.00
		12	0	21.22	21.27	21.27	22.00
		12	6	21.27	21.25	21.29	22.00
		12	13	21.14	21.25	21.20	22.00
		25	0	21.16	21.25	21.20	22.00
	64QAM	1	0	21.37	21.27	21.35	22.00
		1	13	21.40	21.41	21.45	22.00
		1	24	21.29	21.16	21.22	22.00
		12	0	20.31	20.33	20.36	21.00
		12	6	20.31	20.30	20.34	21.00
		12	13	20.24	20.30	20.23	21.00
		25	0	20.25	20.36	20.29	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	23.17	23.22	23.22	24.00
		1	25	23.24	23.31	23.33	24.00
		1	49	23.14	23.11	23.15	24.00
		25	0	22.26	22.38	22.35	23.00
		25	13	22.31	22.31	22.35	23.00
		25	25	22.20	22.31	22.29	23.00
		50	0	22.20	22.31	22.33	23.00
	16QAM	1	0	22.63	22.51	22.51	23.00
		1	25	22.62	22.68	22.60	23.00
		1	49	22.47	22.45	22.41	23.00
		25	0	21.25	21.32	21.31	22.00
		25	13	21.29	21.29	21.32	22.00
		25	25	21.17	21.30	21.24	22.00
		50	0	21.19	21.30	21.24	22.00
	64QAM	1	0	21.39	21.26	21.37	22.00
		1	25	21.43	21.41	21.48	22.00
		1	49	21.28	21.18	21.25	22.00
		25	0	20.34	20.38	20.36	21.00
		25	13	20.33	20.34	20.37	21.00
		25	25	20.27	20.35	20.27	21.00
		50	0	20.28	20.41	20.33	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	23.16	23.18	23.20	24.00
		1	38	23.22	23.30	23.30	24.00
		1	74	23.11	23.06	23.11	24.00
		36	0	22.24	22.34	22.32	23.00
		36	18	22.28	22.26	22.31	23.00
		36	39	22.17	22.28	22.25	23.00

		75	0	22.18	22.27	22.28	23.00
	16QAM	1	0	22.58	22.49	22.49	23.00
		1	38	22.60	22.65	22.58	23.00
		1	74	22.44	22.41	22.38	23.00
		36	0	21.22	21.30	21.28	22.00
		36	18	21.26	21.24	21.28	22.00
		36	39	21.15	21.26	21.21	22.00
		75	0	21.16	21.25	21.20	22.00
	64QAM	1	0	21.34	21.24	21.35	22.00
		1	38	21.41	21.38	21.46	22.00
		1	74	21.29	21.17	21.26	22.00
		36	0	20.33	20.40	20.37	21.00
		36	18	20.31	20.31	20.36	21.00
		36	39	20.25	20.31	20.24	21.00
		75	0	20.25	20.36	20.29	21.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	1	0	23.13	23.14	23.17	24.00
		1	50	**23.21**	**23.26**	**23.28**	24.00
		1	99	23.09	23.05	23.08	24.00
		50	0	22.21	**22.29**	**22.28**	23.00
		50	25	**22.26**	22.22	**22.28**	23.00
		50	50	22.14	22.23	22.21	23.00
		100	0	22.15	22.22	**22.24**	23.00
	16QAM	1	0	22.49	22.45	22.44	23.00
		1	50	22.56	22.63	22.54	23.00
		1	99	22.42	22.38	22.36	23.00
		50	0	21.19	21.26	21.25	22.00
		50	25	21.23	21.22	21.25	22.00
		50	50	21.12	21.21	21.17	22.00
		100	0	21.14	21.21	21.17	22.00
	64QAM	1	0	21.32	21.20	21.30	22.00
		1	50	21.37	21.36	21.42	22.00
		1	99	21.23	21.11	21.20	22.00
		50	0	20.28	20.32	20.30	21.00
		50	25	20.27	20.27	20.30	21.00
		50	50	20.22	20.26	20.20	21.00
		100	0	20.23	20.32	20.26	21.00

LTE FDD Band 4 Hotspot on				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	21.02	21.00	21.01	22.00
		1	2	21.12	21.25	21.09	22.00
		1	5	20.96	21.00	20.95	22.00
		3	0	21.14	21.18	21.19	22.00
		3	2	21.12	21.16	21.13	22.00
		3	3	21.09	21.17	21.02	22.00
		6	0	20.15	20.21	20.26	21.00
	16QAM	1	0	20.69	20.64	20.68	21.00
		1	2	20.53	20.49	20.50	21.00
		1	5	20.35	20.30	20.33	21.00
		3	0	20.30	20.21	20.26	21.00
		3	2	20.25	20.19	20.22	21.00
		3	3	20.29	20.22	20.24	21.00
		6	0	19.24	19.20	19.25	20.00
	64QAM	1	0	19.50	19.41	19.45	20.00
		1	2	19.54	19.48	19.51	20.00
		1	5	19.38	19.31	19.32	20.00
		3	0	19.32	19.15	19.24	20.00
		3	2	19.26	19.15	19.20	20.00
		3	3	19.17	19.10	19.12	20.00
		6	0	18.22	18.18	18.23	19.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	21.04	21.04	21.04	22.00
		1	7	21.10	21.28	21.13	22.00
		1	14	20.99	21.05	20.99	22.00
		8	0	20.24	20.30	20.32	21.00
		8	4	20.24	20.26	20.25	21.00
		8	7	20.19	20.28	20.12	21.00
		15	0	20.15	20.25	20.29	21.00
	16QAM	1	0	20.69	20.66	20.71	21.00
		1	7	20.53	20.49	20.54	21.00
		1	14	20.37	20.34	20.36	21.00
		8	0	19.41	19.34	19.38	20.00
		8	4	19.36	19.32	19.34	20.00
		8	7	19.39	19.34	19.37	20.00
		15	0	19.27	19.24	19.28	20.00
	64QAM	1	0	19.53	19.43	19.48	20.00

		1	7	19.57	19.48	19.53	20.00
		1	14	19.40	19.30	19.35	20.00
		8	0	18.43	18.28	18.36	19.00
		8	4	18.37	18.28	18.32	19.00
		8	7	18.27	18.22	18.25	19.00
		15	0	18.25	18.22	18.26	19.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				19975/1712.5	20175/1732.5	20375/1752.5	
5MHz	QPSK	1	0	21.01	21.02	21.00	22.00
		1	13	21.08	21.24	21.10	22.00
		1	24	20.96	21.00	20.95	22.00
		12	0	20.21	20.25	20.28	21.00
		12	6	20.22	20.22	20.20	21.00
		12	13	20.17	20.26	20.08	21.00
		25	0	20.15	20.24	20.27	21.00
	16QAM	1	0	20.69	20.62	20.68	21.00
		1	13	20.53	20.47	20.51	21.00
		1	24	20.34	20.32	20.32	21.00
		12	0	19.39	19.30	19.35	20.00
		12	6	19.33	19.27	19.30	20.00
		12	13	19.36	19.29	19.33	20.00
		25	0	19.25	19.20	19.23	20.00
	64QAM	1	0	19.50	19.43	19.45	20.00
		1	13	19.54	19.50	19.50	20.00
		1	24	19.41	19.28	19.31	20.00
		12	0	18.41	18.24	18.37	19.00
		12	6	18.34	18.23	18.28	19.00
		12	13	18.24	18.17	18.21	19.00
		25	0	18.23	18.18	18.21	19.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	21.03	21.03	21.03	22.00
		1	25	21.11	21.29	21.14	22.00
		1	49	20.98	21.04	20.98	22.00
		25	0	20.24	20.30	20.32	21.00
		25	13	20.25	20.27	20.24	21.00
		25	25	20.19	20.30	20.13	21.00
		50	0	20.19	20.26	20.31	21.00
	16QAM	1	0	20.73	20.65	20.70	21.00
		1	25	20.57	20.51	20.54	21.00
		1	49	20.37	20.34	20.35	21.00
		25	0	19.42	19.35	19.39	20.00
		25	13	19.35	19.31	19.33	20.00

		25	25	19.39	19.34	19.37	20.00
		50	0	19.28	19.25	19.27	20.00
	64QAM	1	0	19.52	19.42	19.47	20.00
		1	25	19.57	19.50	19.53	20.00
		1	49	19.40	19.30	19.34	20.00
		25	0	18.44	18.29	18.37	19.00
		25	13	18.36	18.27	18.31	19.00
		25	25	18.27	18.22	18.25	19.00
		50	0	18.26	18.23	18.25	19.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	21.02	20.99	21.01	22.00
		1	38	21.09	21.28	21.11	22.00
		1	74	20.95	20.99	20.94	22.00
		36	0	20.22	20.26	20.29	21.00
		36	18	20.22	20.22	20.20	21.00
		36	39	20.16	20.27	20.09	21.00
		75	0	20.17	20.22	20.26	21.00
	16QAM	1	0	20.71	20.63	20.68	21.00
		1	38	20.55	20.48	20.52	21.00
		1	74	20.35	20.30	20.32	21.00
		36	0	19.39	19.33	19.36	20.00
		36	18	19.32	19.26	19.29	20.00
		36	39	19.37	19.30	19.34	20.00
		75	0	19.25	19.20	19.23	20.00
	64QAM	1	0	19.47	19.40	19.45	20.00
		1	38	19.55	19.47	19.51	20.00
		1	74	19.41	19.29	19.35	20.00
		36	0	18.43	18.31	18.38	19.00
		36	18	18.34	18.24	18.30	19.00
		36	39	18.25	18.18	18.22	19.00
		75	0	18.23	18.18	18.21	19.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	1	0	20.99	20.95	20.98	22.00
		1	50	**21.08**	**21.24**	**21.09**	22.00
		1	99	20.93	20.98	20.91	22.00
		50	0	20.19	20.21	**20.25**	21.00
		50	25	**20.20**	20.18	20.17	21.00
		50	50	20.13	**20.22**	20.05	21.00
		100	0	20.14	20.17	**20.22**	21.00
	16QAM	1	0	20.68	20.59	20.63	21.00
		1	50	20.52	20.46	20.48	21.00

		1	99	20.32	20.27	20.30	21.00
		50	0	19.36	19.29	19.33	20.00
		50	25	19.29	19.24	19.26	20.00
		50	50	19.34	19.25	19.30	20.00
		100	0	19.23	19.16	19.20	20.00
	64QAM	1	0	19.45	19.36	19.40	20.00
		1	50	19.51	19.45	19.47	20.00
		1	99	19.35	19.23	19.29	20.00
		50	0	18.38	18.23	18.31	19.00
		50	25	18.30	18.20	18.24	19.00
		50	50	18.22	18.13	18.18	19.00
		100	0	18.21	18.14	18.18	19.00

LTE FDD Band 5 Full Power & Receiver on & Receiver off & Hotspot on				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	23.51	23.57	23.49	24.50
		1	2	23.59	23.50	23.46	24.50
		1	5	23.49	23.47	23.49	24.50
		3	0	23.42	23.39	23.50	24.50
		3	2	23.42	23.45	23.45	24.50
		3	3	23.55	23.42	23.39	24.50
		6	0	22.60	22.53	22.55	23.50
	16QAM	1	0	22.84	22.83	22.78	23.50
		1	2	22.82	22.77	22.72	23.50
		1	5	22.76	22.72	22.74	23.50
		3	0	22.39	22.37	22.49	23.50
		3	2	22.45	22.44	22.43	23.50
		3	3	22.52	22.41	22.40	23.50
		6	0	21.55	21.52	21.57	22.50
	64QAM	1	0	21.66	21.68	21.67	22.50
		1	2	21.72	21.63	21.64	22.50
		1	5	21.66	21.72	21.65	22.50
		3	0	21.40	21.35	21.45	22.50
		3	2	21.44	21.39	21.44	22.50
		3	3	21.50	21.43	21.37	22.50
		6	0	20.54	20.48	20.55	21.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20415/825.5	20525/836.5	20635/847.5	
3MHz	QPSK	1	0	23.52	23.60	23.51	24.50

		1	7	23.58	23.54	23.51	24.50
		1	14	23.51	23.51	23.52	24.50
		8	0	22.52	22.51	22.63	23.50
		8	4	22.55	22.56	22.56	23.50
		8	7	22.65	22.55	22.50	23.50
		15	0	22.64	22.58	22.60	23.50
	16QAM	1	0	22.86	22.84	22.80	23.50
		1	7	22.85	22.79	22.76	23.50
		1	14	22.78	22.76	22.76	23.50
		8	0	21.51	21.51	21.62	22.50
		8	4	21.55	21.56	21.54	22.50
		8	7	21.62	21.53	21.53	22.50
		15	0	21.59	21.57	21.59	22.50
	64QAM	1	0	21.68	21.69	21.69	22.50
		1	7	21.75	21.65	21.66	22.50
		1	14	21.68	21.71	21.67	22.50
		8	0	20.52	20.49	20.58	21.50
		8	4	20.54	20.51	20.55	21.50
		8	7	20.60	20.55	20.50	21.50
		15	0	20.58	20.53	20.57	21.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20425/826.5	20525/836.5	20625/846.5	
5MHz	QPSK	1	0	23.51	23.56	23.49	24.50
		1	13	23.56	23.53	23.48	24.50
		1	24	23.48	23.46	23.48	24.50
		12	0	22.50	22.47	22.60	23.50
		12	6	22.52	22.51	22.52	23.50
		12	13	22.62	22.52	22.46	23.50
		25	0	22.62	22.54	22.55	23.50
	16QAM	1	0	22.81	22.82	22.78	23.50
		1	13	22.83	22.76	22.74	23.50
		1	24	22.75	22.72	22.73	23.50
		12	0	21.48	21.49	21.59	22.50
		12	6	21.52	21.51	21.50	22.50
		12	13	21.60	21.49	21.50	22.50
		25	0	21.56	21.52	21.55	22.50
	64QAM	1	0	21.63	21.67	21.67	22.50
		1	13	21.73	21.62	21.64	22.50
		1	24	21.69	21.70	21.68	22.50
		12	0	20.51	20.51	20.59	21.50
		12	6	20.52	20.48	20.54	21.50
		12	13	20.58	20.51	20.47	21.50
		25	0	20.55	20.48	20.53	21.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20450/829	20525/836.5	20600/844	
10MHz	QPSK	1	0	23.48	**23.52**	**23.46**	24.50
		1	25	**23.70**	23.49	**23.46**	24.50
		1	49	23.46	23.45	23.45	24.50
		25	0	22.47	22.42	**22.56**	23.50
		25	13	22.50	**22.47**	22.49	23.50
		25	25	**22.59**	**22.47**	22.42	23.50
		50	0	**22.66**	22.49	22.51	23.50
	16QAM	1	0	22.72	22.78	22.73	23.50
		1	25	22.79	22.74	22.70	23.50
		1	49	22.73	22.69	22.71	23.50
		25	0	21.45	21.45	21.56	22.50
		25	13	21.49	21.49	21.47	22.50
		25	25	21.57	21.44	21.46	22.50
		50	0	21.54	21.48	21.52	22.50
	64QAM	1	0	21.61	21.63	21.62	22.50
		1	25	21.69	21.60	21.60	22.50
		1	49	21.63	21.64	21.62	22.50
		25	0	20.46	20.43	20.52	21.50
		25	13	20.48	20.44	20.48	21.50
		25	25	20.55	20.46	20.43	21.50
		50	0	20.53	20.44	20.50	21.50

LTE FDD Band 12 Full Power & Receiver on & Receiver off & Hotspot on				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				23017/699.7	23095/707.5	23173/715.3	
1.4MHz	QPSK	1	0	23.23	23.30	23.29	24.50
		1	2	23.39	23.35	23.29	24.50
		1	5	23.36	23.35	23.36	24.50
		3	0	23.31	23.07	23.38	24.50
		3	2	23.23	23.31	23.27	24.50
		3	3	23.47	23.04	23.28	24.50
		6	0	22.48	22.18	22.45	23.50
	16QAM	1	0	22.67	22.56	22.66	23.50
		1	2	22.65	22.63	22.66	23.50
		1	5	22.58	22.64	22.66	23.50
		3	0	22.29	22.02	22.35	23.50
		3	2	22.28	22.25	22.29	23.50
		3	3	22.49	22.07	22.25	23.50
		6	0	21.44	21.13	21.47	22.50

	64QAM	1	0	21.37	21.46	21.47	22.50
		1	2	21.48	21.52	21.43	22.50
		1	5	21.53	21.56	21.49	22.50
		3	0	21.31	21.01	21.30	22.50
		3	2	21.27	21.23	21.29	22.50
		3	3	21.46	21.06	21.22	22.50
		6	0	20.43	20.13	20.42	21.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				23025/700.5	23095/707.5	23165/714.5	
3MHz	QPSK	1	0	23.25	23.34	23.32	24.50
		1	7	23.37	23.38	23.33	24.50
		1	14	23.39	23.40	23.40	24.50
		8	0	22.41	22.19	22.51	23.50
		8	4	22.35	22.41	22.39	23.50
		8	7	22.57	22.15	22.38	23.50
		15	0	22.48	22.22	22.48	23.50
	16QAM	1	0	22.70	22.58	22.69	23.50
		1	7	22.68	22.63	22.70	23.50
		1	14	22.60	22.68	22.69	23.50
		8	0	21.40	21.15	21.47	22.50
		8	4	21.39	21.38	21.41	22.50
		8	7	21.59	21.19	21.38	22.50
		15	0	21.47	21.17	21.50	22.50
	64QAM	1	0	21.40	21.48	21.50	22.50
		1	7	21.51	21.52	21.45	22.50
		1	14	21.55	21.55	21.52	22.50
		8	0	20.42	20.14	20.42	21.50
		8	4	20.38	20.36	20.41	21.50
		8	7	20.56	20.18	20.35	21.50
		15	0	20.46	20.17	20.45	21.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				23035/701.5	23095/707.5	23155/713.5	
5MHz	QPSK	1	0	23.23	23.29	23.29	24.50
		1	13	23.36	23.38	23.31	24.50
		1	24	23.35	23.34	23.35	24.50
		12	0	22.39	22.15	22.48	23.50
		12	6	22.33	22.37	22.34	23.50
		12	13	22.54	22.14	22.35	23.50
		25	0	22.50	22.19	22.45	23.50
	16QAM	1	0	22.64	22.55	22.66	23.50
		1	13	22.66	22.62	22.68	23.50
		1	24	22.57	22.64	22.65	23.50
		12	0	21.38	21.14	21.45	22.50

		12	6	21.35	21.32	21.36	22.50
		12	13	21.57	21.15	21.35	22.50
		25	0	21.45	21.13	21.45	22.50
	64QAM	1	0	21.34	21.45	21.47	22.50
		1	13	21.49	21.51	21.43	22.50
		1	24	21.56	21.54	21.52	22.50
		12	0	20.42	20.17	20.44	21.50
		12	6	20.35	20.32	20.39	21.50
		12	13	20.54	20.14	20.32	21.50
		25	0	20.44	20.13	20.40	21.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				23060/704	23095/707.5	23130/711	
10MHz	QPSK	1	0	23.20	23.25	23.26	24.50
		1	25	**23.35**	**23.34**	23.29	24.50
		1	49	23.33	23.33	**23.32**	24.50
		25	0	22.36	22.10	**22.44**	23.50
		25	13	22.31	**22.33**	22.31	23.50
		25	25	**22.51**	22.09	22.31	23.50
		50	0	**22.47**	22.14	22.41	23.50
	16QAM	1	0	22.47	22.51	22.61	23.50
		1	25	22.62	22.60	22.64	23.50
		1	49	22.55	22.61	22.63	23.50
		25	0	21.35	21.10	21.42	22.50
		25	13	21.32	21.30	21.33	22.50
		25	25	21.54	21.10	21.31	22.50
		50	0	21.43	21.09	21.42	22.50
	64QAM	1	0	21.32	21.41	21.42	22.50
		1	25	21.45	21.49	21.39	22.50
		1	49	21.50	21.48	21.46	22.50
		25	0	20.37	20.09	20.37	21.50
		25	13	20.31	20.28	20.33	21.50
		25	25	20.51	20.09	20.28	21.50
		50	0	20.42	20.09	20.37	21.50

LTE TDD Band 41 Full Power &Receiver off & Hotspot on				Conducted Power(dBm)					Tune-up Limit
				Channel/Frequency (MHz)					
Bandwidth	Modulation	RB size	RB offset	39675/ 2498.5	40148/ 2545.8	40620/ 2593	41093/ 2640.3	41565/ 2687.5	
5MHz	QPSK	1	0	23.28	23.31	23.28	23.30	23.31	24.50
		1	13	23.36	23.41	23.47	23.44	23.43	24.50
		1	24	23.29	23.34	23.37	23.32	23.42	24.50
		12	0	22.34	22.38	22.46	22.42	22.42	23.50
		12	6	22.46	22.47	22.46	22.46	22.48	23.50
		12	13	22.46	22.46	22.43	22.46	22.41	23.50
		25	0	22.39	22.47	22.45	22.40	22.52	23.50
	16QAM	1	0	22.59	22.62	22.40	22.62	22.66	23.50
		1	13	22.57	22.58	22.56	22.60	22.60	23.50
		1	24	22.51	22.56	22.49	22.56	22.59	23.50
		12	0	21.51	21.52	21.47	21.57	21.56	22.50
		12	6	21.53	21.56	21.51	21.59	21.58	22.50
		12	13	21.48	21.52	21.46	21.51	21.57	22.50
		25	0	21.42	21.46	21.40	21.47	21.50	22.50
	64QAM	1	0	21.29	21.36	21.37	21.44	21.40	22.50
		1	13	21.29	21.34	21.25	21.28	21.36	22.50
		1	24	21.58	21.63	21.52	21.63	21.69	22.50
		12	0	20.64	20.65	20.64	20.66	20.73	21.50
		12	6	20.51	20.54	20.48	20.56	20.58	21.50
		12	13	20.66	20.70	20.64	20.72	20.75	21.50
		25	0	20.63	20.67	20.62	20.69	20.71	21.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)					Tune-up Limit
				39700/ 2501	40160/ 2547	40620/ 2593	41080/ 2639	41540/ 2685	
10MHz	QPSK	1	0	23.30	23.32	23.31	23.32	23.32	24.50
		1	25	23.39	23.46	23.51	23.47	23.48	24.50
		1	49	23.31	23.38	23.40	23.34	23.46	24.50
		25	0	22.37	22.43	22.50	22.45	22.47	23.50
		25	13	22.49	22.52	22.50	22.49	22.53	23.50
		25	25	22.48	22.50	22.48	22.48	22.45	23.50
		50	0	22.43	22.49	22.49	22.44	22.54	23.50
	16QAM	1	0	22.61	22.65	22.42	22.64	22.69	23.50
		1	25	22.60	22.62	22.59	22.63	22.64	23.50
		1	49	22.54	22.58	22.52	22.59	22.61	23.50
		25	0	21.54	21.57	21.51	21.60	21.61	22.50
		25	13	21.55	21.60	21.54	21.61	21.62	22.50
		25	25	21.51	21.57	21.50	21.54	21.62	22.50

		50	0	21.45	21.51	21.44	21.50	21.55	22.50
	64QAM	1	0	21.31	21.35	21.39	21.46	21.39	22.50
		1	25	21.32	21.34	21.28	21.31	21.36	22.50
		1	49	21.57	21.65	21.55	21.62	21.71	22.50
		25	0	20.67	20.70	20.64	20.69	20.78	21.50
		25	13	20.53	20.58	20.51	20.58	20.62	21.50
		25	25	20.69	20.75	20.68	20.75	20.80	21.50
		50	0	20.66	20.72	20.66	20.72	20.76	21.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)					Tune-up Limit
				39725/ 2503.5	40173/ 2548.3	40620/ 2593	41068/ 2637.8	41515/ 2682.5	
15MHz	QPSK	1	0	23.29	23.28	23.29	23.31	23.28	24.50
		1	38	23.37	23.45	23.48	23.45	23.47	24.50
		1	74	23.28	23.33	23.36	23.31	23.41	24.50
		36	0	22.35	22.39	22.47	22.43	22.43	23.50
		36	18	22.46	22.47	22.46	22.46	22.48	23.50
		36	39	22.45	22.47	22.44	22.45	22.42	23.50
		75	0	22.41	22.45	22.44	22.42	22.50	23.50
	16QAM	1	0	22.56	22.63	22.40	22.59	22.67	23.50
		1	38	22.58	22.59	22.57	22.61	22.61	23.50
		1	74	22.51	22.54	22.49	22.56	22.57	23.50
		36	0	21.51	21.55	21.48	21.57	21.59	22.50
		36	18	21.52	21.55	21.50	21.58	21.57	22.50
		36	39	21.49	21.53	21.47	21.52	21.58	22.50
		75	0	21.42	21.46	21.40	21.47	21.50	22.50
	64QAM	1	0	21.26	21.33	21.37	21.41	21.37	22.50
		1	38	21.30	21.31	21.26	21.29	21.33	22.50
		1	74	21.58	21.64	21.56	21.63	21.70	22.50
		36	0	20.66	20.72	20.65	20.68	20.80	21.50
		36	18	20.51	20.55	20.50	20.56	20.59	21.50
		36	39	20.67	20.71	20.65	20.73	20.76	21.50
		75	0	23.29	23.28	23.29	23.31	23.28	24.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)					Tune-up Limit
				39750/ 2506	40185/ 2549.5	40620/ 2593	41055/ 2636.5	41490/ 2680	
20MHz	QPSK	1	0	23.26	23.24	23.26	23.28	23.24	24.50
		1	50	**23.36**	**23.41**	**23.53**	**23.44**	**23.43**	24.50
		1	99	23.26	23.32	23.33	23.29	23.40	24.50
		50	0	22.32	22.34	**22.43**	22.40	22.38	23.50
		50	25	**22.44**	**22.43**	**22.43**	**22.44**	**22.44**	23.50
		50	50	22.42	22.42	22.40	22.42	22.37	23.50
		100	0	22.38	22.40	22.40	22.39	**22.45**	23.50
	16QAM	1	0	22.38	22.59	22.35	22.44	22.63	23.50

		1	50	22.54	22.57	22.53	22.57	22.59	23.50
		1	99	22.49	22.51	22.47	22.54	22.54	23.50
		50	0	21.48	21.51	21.45	21.54	21.55	22.50
		50	25	21.49	21.53	21.47	21.55	21.55	22.50
		50	50	21.46	21.48	21.43	21.49	21.53	22.50
		100	0	21.40	21.42	21.37	21.45	21.46	22.50
	64QAM	1	0	21.24	21.29	21.32	21.39	21.33	22.50
		1	50	21.26	21.29	21.22	21.25	21.31	22.50
		1	99	21.52	21.58	21.50	21.57	21.64	22.50
		50	0	20.61	20.64	20.58	20.63	20.72	21.50
		50	25	20.47	20.51	20.44	20.52	20.55	21.50
		50	50	20.64	20.66	20.61	20.70	20.71	21.50
		100	0	20.61	20.63	20.59	20.67	20.67	21.50

LTE TDD Band 41 Receiver on				Conducted Power(dBm)					Tune-up Limit
				Channel/Frequency (MHz)					
Bandwidth	Modulation	RB size	RB offset	39675/ 2498.5	40148/ 2545.8	40620/ 2593	41093/ 2640.3	41565/ 2687.5	
5MHz	QPSK	1	0	21.27	21.32	21.30	21.35	21.34	22.50
		1	13	21.40	21.43	21.47	21.51	21.42	22.50
		1	24	21.37	21.33	21.42	21.40	21.36	22.50
		12	0	20.37	20.59	20.72	20.76	20.65	21.50
		12	6	20.48	20.69	20.71	20.71	20.71	21.50
		12	13	20.54	20.66	20.65	20.66	20.73	21.50
		25	0	20.43	20.66	20.70	20.68	20.64	21.50
	16QAM	1	0	20.79	20.75	20.64	20.67	20.78	21.50
		1	13	20.81	20.79	20.77	20.75	20.80	21.50
		1	24	20.84	20.83	20.70	20.72	20.85	21.50
		12	0	19.88	19.80	19.70	19.75	19.83	20.50
		12	6	19.89	19.84	19.73	19.77	19.86	20.50
		12	13	19.99	19.95	19.83	19.86	19.98	20.50
		25	0	19.85	19.81	19.66	19.72	19.84	20.50
	64QAM	1	0	19.84	19.80	19.67	19.70	19.83	20.50
		1	13	19.75	19.71	19.62	19.63	19.74	20.50
		1	24	19.65	19.58	19.44	19.53	19.61	20.50
		12	0	18.87	18.79	18.78	18.76	18.82	19.50
		12	6	19.02	18.95	18.85	18.88	18.98	19.50
		12	13	18.77	18.73	18.61	18.64	18.76	19.50
		25	0	18.60	18.58	18.45	18.48	18.60	19.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)					Tune-up Limit
				39700/ 2501	40160/ 2547	40620/ 2593	41080/ 2639	41540/ 2685	
10MHz	QPSK	1	0	21.29	21.33	21.33	21.37	21.35	22.50
		1	25	21.43	21.48	21.51	21.54	21.47	22.50
		1	49	21.39	21.37	21.45	21.42	21.40	22.50
		25	0	20.40	20.64	20.76	20.79	20.70	21.50
		25	13	20.51	20.74	20.75	20.74	20.76	21.50
		25	25	20.56	20.70	20.70	20.68	20.77	21.50
		50	0	20.47	20.68	20.74	20.72	20.66	21.50
	16QAM	1	0	20.83	20.78	20.66	20.71	20.81	21.50
		1	25	20.85	20.83	20.80	20.79	20.84	21.50
		1	49	20.87	20.85	20.73	20.75	20.87	21.50
		25	0	19.91	19.85	19.74	19.78	19.88	20.50
		25	13	19.91	19.88	19.76	19.79	19.90	20.50
		25	25	20.02	20.00	19.87	19.89	20.03	20.50
		50	0	19.88	19.86	19.70	19.75	19.89	20.50
	64QAM	1	0	19.86	19.79	19.69	19.72	19.82	20.50
		1	25	19.78	19.71	19.65	19.66	19.74	20.50
		1	49	19.64	19.60	19.47	19.52	19.63	20.50
		25	0	18.90	18.84	18.78	18.79	18.87	19.50
		25	13	19.04	18.99	18.88	18.90	19.02	19.50
		25	25	18.80	18.78	18.65	18.67	18.81	19.50
		50	0	18.63	18.63	18.49	18.51	18.65	19.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)					Tune-up Limit
				39725/ 2503.5	40173/ 2548.3	40620/ 2593	41068/ 2637.8	41515/ 2682.5	
15MHz	QPSK	1	0	21.28	21.29	21.31	21.36	21.31	22.50
		1	38	21.41	21.47	21.48	21.52	21.46	22.50
		1	74	21.36	21.32	21.41	21.39	21.35	22.50
		36	0	20.38	20.60	20.73	20.77	20.66	21.50
		36	18	20.48	20.69	20.71	20.71	20.71	21.50
		36	39	20.53	20.67	20.66	20.65	20.74	21.50
		75	0	20.45	20.64	20.69	20.70	20.62	21.50
	16QAM	1	0	20.81	20.76	20.64	20.69	20.79	21.50
		1	38	20.83	20.80	20.78	20.77	20.81	21.50
		1	74	20.85	20.81	20.70	20.73	20.83	21.50
		36	0	19.88	19.83	19.71	19.75	19.86	20.50
		36	18	19.88	19.83	19.72	19.76	19.85	20.50
		36	39	20.00	19.96	19.84	19.87	19.99	20.50
		75	0	19.85	19.81	19.66	19.72	19.84	20.50
	64QAM	1	0	19.81	19.77	19.67	19.67	19.80	20.50
		1	38	19.76	19.68	19.63	19.64	19.71	20.50

		1	74	19.65	19.59	19.48	19.53	19.62	20.50
		36	0	18.89	18.86	18.79	18.78	18.89	19.50
		36	18	19.02	18.96	18.87	18.88	18.99	19.50
		36	39	18.78	18.74	18.62	18.65	18.77	19.50
		75	0	18.60	18.58	18.45	18.48	18.60	19.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)					Tune-up Limit
				39750/ 2506	40185/ 2549.5	40620/ 2593	41055/ 2636.5	41490/ 2680	
20MHz	QPSK	1	0	21.25	21.25	21.28	21.33	21.27	22.50
		1	50	**21.40**	**21.43**	**21.46**	**21.51**	**21.42**	22.50
		1	99	21.34	21.31	21.38	21.37	21.34	22.50
		50	0	20.35	20.55	**20.69**	**20.74**	20.61	21.50
		50	25	20.46	**20.65**	20.68	20.69	20.67	21.50
		50	50	**20.50**	20.62	20.62	20.62	20.69	21.50
		100	0	20.42	20.59	20.65	**20.67**	20.57	21.50
	16QAM	1	0	20.78	20.72	20.59	20.66	20.75	21.50
		1	50	20.80	20.78	20.74	20.74	20.79	21.50
		1	99	20.82	20.78	20.68	20.70	20.80	21.50
		50	0	19.85	19.79	19.68	19.72	19.82	20.50
		50	25	19.85	19.81	19.69	19.73	19.83	20.50
		50	50	19.97	19.91	19.80	19.84	19.94	20.50
		100	0	19.83	19.77	19.63	19.70	19.80	20.50
	64QAM	1	0	19.79	19.73	19.62	19.65	19.76	20.50
		1	50	19.72	19.66	19.59	19.60	19.69	20.50
		1	99	19.59	19.53	19.42	19.47	19.56	20.50
		50	0	18.84	18.78	18.72	18.73	18.81	19.50
		50	25	18.98	18.92	18.81	18.84	18.95	19.50
		50	50	18.75	18.69	18.58	18.62	18.72	19.50
		100	0	18.58	18.54	18.42	18.46	18.56	19.50

LTE TDD Band 66 Full Power & Receiver on & Receiver off				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	23.31	23.35	23.29	24.00
		1	2	23.38	23.39	23.26	24.00
		1	5	23.18	23.19	23.12	24.00
		3	0	23.23	23.36	23.26	24.00
		3	2	23.28	23.35	23.30	24.00
		3	3	23.21	23.22	23.19	24.00
		6	0	22.30	22.36	22.29	23.00
	16QAM	1	0	22.69	22.66	22.69	23.00

		1	2	22.67	22.64	22.65	23.00
		1	5	22.49	22.43	22.45	23.00
		3	0	22.17	22.27	22.23	23.00
		3	2	22.26	22.30	22.26	23.00
		3	3	22.18	22.20	22.14	23.00
		6	0	21.24	21.34	21.26	22.00
	64QAM	1	0	21.43	21.55	21.50	22.00
		1	2	21.63	21.59	21.49	22.00
		1	5	21.39	21.46	21.22	22.00
		3	0	21.32	21.33	21.28	22.00
		3	2	21.40	21.38	21.34	22.00
		3	3	21.27	21.29	21.20	22.00
		6	0	20.37	20.43	20.39	21.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	23.33	23.39	23.32	24.00
		1	7	23.36	23.42	23.30	24.00
		1	14	23.21	23.24	23.16	24.00
		8	0	22.33	22.48	22.39	23.00
		8	4	22.40	22.45	22.42	23.00
		8	7	22.31	22.33	22.29	23.00
		15	0	22.30	22.40	22.32	23.00
	16QAM	1	0	22.72	22.68	22.72	23.00
		1	7	22.70	22.64	22.69	23.00
		1	14	22.51	22.47	22.48	23.00
		8	0	21.28	21.40	21.35	22.00
		8	4	21.37	21.43	21.38	22.00
		8	7	21.28	21.32	21.27	22.00
		15	0	21.27	21.38	21.29	22.00
	64QAM	1	0	21.46	21.57	21.53	22.00
		1	7	21.66	21.59	21.51	22.00
		1	14	21.41	21.45	21.25	22.00
		8	0	20.43	20.46	20.40	21.00
		8	4	20.51	20.51	20.46	21.00
		8	7	20.37	20.41	20.33	21.00
		15	0	20.40	20.47	20.42	21.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	23.30	23.37	23.28	24.00
		1	13	23.34	23.38	23.27	24.00
		1	24	23.18	23.19	23.12	24.00

		12	0	22.30	22.43	22.35	23.00
		12	6	22.38	22.41	22.37	23.00
		12	13	22.29	22.31	22.25	23.00
		25	0	22.30	22.39	22.30	23.00
	16QAM	1	0	22.69	22.64	22.69	23.00
		1	13	22.67	22.62	22.66	23.00
		1	24	22.48	22.45	22.44	23.00
		12	0	21.26	21.36	21.32	22.00
		12	6	21.34	21.38	21.34	22.00
		12	13	21.25	21.27	21.23	22.00
		25	0	21.25	21.34	21.24	22.00
	64QAM	1	0	21.43	21.57	21.50	22.00
		1	13	21.63	21.61	21.48	22.00
		1	24	21.42	21.43	21.21	22.00
		12	0	20.41	20.42	20.41	21.00
		12	6	20.48	20.46	20.42	21.00
		12	13	20.34	20.36	20.29	21.00
		25	0	20.38	20.43	20.37	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				40240/2555	40690/2600	41140/2645	
10MHz	QPSK	1	0	23.32	23.38	23.31	24.00
		1	25	23.37	23.43	23.31	24.00
		1	49	23.20	23.23	23.15	24.00
		25	0	22.33	22.48	22.39	23.00
		25	13	22.41	22.46	22.41	23.00
		25	25	22.31	22.35	22.30	23.00
		50	0	22.34	22.41	22.34	23.00
	16QAM	1	0	22.71	22.67	22.71	23.00
		1	25	22.70	22.66	22.69	23.00
		1	49	22.51	22.47	22.47	23.00
		25	0	21.29	21.41	21.36	22.00
		25	13	21.36	21.42	21.37	22.00
		25	25	21.28	21.32	21.27	22.00
		50	0	21.28	21.39	21.28	22.00
	64QAM	1	0	21.45	21.56	21.52	22.00
		1	25	21.66	21.61	21.51	22.00
		1	49	21.41	21.45	21.24	22.00
		25	0	20.44	20.47	20.41	21.00
		25	13	20.50	20.50	20.45	21.00
		25	25	20.37	20.41	20.33	21.00
		50	0	20.41	20.48	20.41	21.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	23.31	23.34	23.29	24.00
		1	38	23.35	23.42	23.28	24.00
		1	74	23.17	23.18	23.11	24.00
		36	0	22.31	22.44	22.36	23.00
		36	18	22.38	22.41	22.37	23.00
		36	39	22.28	22.32	22.26	23.00
		75	0	22.32	22.37	22.29	23.00
	16QAM	1	0	22.66	22.65	22.69	23.00
		1	38	22.68	22.63	22.67	23.00
		1	74	22.48	22.43	22.44	23.00
		36	0	21.26	21.39	21.33	22.00
		36	18	21.33	21.37	21.33	22.00
		36	39	21.26	21.28	21.24	22.00
		75	0	21.25	21.34	21.24	22.00
	64QAM	1	0	21.40	21.54	21.50	22.00
		1	38	21.64	21.58	21.49	22.00
		1	74	21.42	21.44	21.25	22.00
		36	0	20.43	20.49	20.42	21.00
		36	18	20.48	20.47	20.44	21.00
		36	39	20.35	20.37	20.30	21.00
		75	0	20.38	20.43	20.37	21.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	23.28	23.30	**23.26**	24.00
		1	50	**23.34**	**23.38**	**23.26**	24.00
		1	99	23.15	23.17	23.08	24.00
		50	0	22.28	**22.39**	22.32	23.00
		50	25	**22.36**	22.37	**22.34**	23.00
		50	50	22.25	22.27	22.22	23.00
		100	0	22.29	**22.32**	22.25	23.00
	16QAM	1	0	22.58	22.61	22.64	23.00
		1	50	22.64	22.61	22.63	23.00
		1	99	22.46	22.40	22.42	23.00
		50	0	21.23	21.35	21.30	22.00
		50	25	21.30	21.35	21.30	22.00
		50	50	21.23	21.23	21.20	22.00
		100	0	21.23	21.30	21.21	22.00
	64QAM	1	0	21.38	21.50	21.45	22.00
		1	50	21.60	21.56	21.45	22.00

		1	99	21.36	21.38	21.19	22.00
		50	0	20.38	20.41	20.35	21.00
		50	25	20.44	20.43	20.38	21.00
		50	50	20.32	20.32	20.26	21.00
		100	0	20.36	20.39	20.34	21.00

LTE TDD Band 66 Receiver on				Conducted Power(dBm)			Tune-up Limit
				Channel/Frequency (MHz)			
Bandwidth	Modulation	RB size	RB offset	131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	21.17	21.19	21.11	22.00
		1	2	21.23	21.26	21.18	22.00
		1	5	21.00	21.07	21.10	22.00
		3	0	21.25	21.28	21.24	22.00
		3	2	21.28	21.28	21.37	22.00
		3	3	21.19	21.09	21.14	22.00
		6	0	20.28	20.26	20.22	21.00
	16QAM	1	0	20.56	20.46	20.47	21.00
		1	2	20.65	20.58	20.58	21.00
		1	5	20.42	20.29	20.34	21.00
		3	0	20.42	20.21	20.27	21.00
		3	2	20.43	20.23	20.31	21.00
		3	3	20.30	20.16	20.18	21.00
		6	0	19.40	19.26	19.31	20.00
	64QAM	1	0	19.52	19.33	19.41	20.00
		1	2	19.67	19.56	19.63	20.00
		1	5	19.61	19.51	19.51	20.00
		3	0	19.32	19.16	19.22	20.00
		3	2	19.44	19.26	19.34	20.00
		3	3	19.30	19.13	19.15	20.00
		6	0	18.39	18.26	18.31	19.00
				Channel/Frequency (MHz)			
Bandwidth	Modulation	RB size	RB offset	1319871711.5	132322/1745	132657/1778.5	Tune-up Limit
3MHz	QPSK	1	0	21.19	21.23	21.14	22.00
		1	7	21.21	21.29	21.22	22.00
		1	14	21.03	21.12	21.14	22.00
		8	0	20.35	20.40	20.37	21.00
		8	4	20.40	20.38	20.49	21.00
		8	7	20.29	20.20	20.24	21.00
		15	0	20.28	20.30	20.25	21.00
	16QAM	1	0	20.56	20.48	20.50	21.00

		1	7	20.65	20.58	20.62	21.00
		1	14	20.44	20.33	20.37	21.00
		8	0	19.53	19.34	19.39	20.00
		8	4	19.54	19.36	19.43	20.00
		8	7	19.40	19.28	19.31	20.00
		15	0	19.43	19.30	19.34	20.00
	64QAM	1	0	19.55	19.35	19.44	20.00
		1	7	19.70	19.56	19.65	20.00
		1	14	19.63	19.50	19.54	20.00
		8	0	18.43	18.29	18.34	19.00
		8	4	18.55	18.39	18.46	19.00
		8	7	18.40	18.25	18.28	19.00
		15	0	18.42	18.30	18.34	19.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	21.16	21.21	21.10	22.00
		1	13	21.19	21.25	21.19	22.00
		1	24	21.00	21.07	21.10	22.00
		12	0	20.32	20.35	20.33	21.00
		12	6	20.38	20.34	20.44	21.00
		12	13	20.27	20.18	20.20	21.00
		25	0	20.28	20.29	20.23	21.00
	16QAM	1	0	20.56	20.44	20.47	21.00
		1	13	20.65	20.56	20.59	21.00
		1	24	20.41	20.31	20.33	21.00
		12	0	19.51	19.30	19.36	20.00
		12	6	19.51	19.31	19.39	20.00
		12	13	19.37	19.23	19.27	20.00
		25	0	19.41	19.26	19.29	20.00
	64QAM	1	0	19.52	19.35	19.41	20.00
		1	13	19.67	19.58	19.62	20.00
		1	24	19.64	19.48	19.50	20.00
		12	0	18.41	18.25	18.35	19.00
		12	6	18.52	18.34	18.42	19.00
		12	13	18.37	18.20	18.24	19.00
		25	0	18.40	18.26	18.29	19.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				40240/2555	40690/2600	41140/2645	
10MHz	QPSK	1	0	21.18	21.22	21.13	22.00
		1	25	21.22	21.30	21.23	22.00
		1	49	21.02	21.11	21.13	22.00
		25	0	20.35	20.40	20.37	21.00

		25	13	20.41	20.39	20.48	21.00
		25	25	20.29	20.22	20.25	21.00
		50	0	20.32	20.31	20.27	21.00
	16QAM	1	0	20.60	20.47	20.49	21.00
		1	25	20.69	20.60	20.62	21.00
		1	49	20.44	20.33	20.36	21.00
		25	0	19.54	19.35	19.40	20.00
		25	13	19.53	19.35	19.42	20.00
		25	25	19.40	19.28	19.31	20.00
		50	0	19.44	19.31	19.33	20.00
	64QAM	1	0	19.54	19.34	19.43	20.00
		1	25	19.70	19.58	19.65	20.00
		1	49	19.63	19.50	19.53	20.00
		25	0	18.44	18.30	18.35	19.00
		25	13	18.54	18.38	18.45	19.00
		25	25	18.40	18.25	18.28	19.00
		50	0	18.43	18.31	18.33	19.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	21.17	21.18	21.11	22.00
		1	38	21.20	21.29	21.20	22.00
		1	74	20.99	21.06	21.09	22.00
		36	0	20.33	20.36	20.34	21.00
		36	18	20.38	20.34	20.44	21.00
		36	39	20.26	20.19	20.21	21.00
		75	0	20.30	20.27	20.22	21.00
	16QAM	1	0	20.58	20.45	20.47	21.00
		1	38	20.67	20.57	20.60	21.00
		1	74	20.42	20.29	20.33	21.00
		36	0	19.51	19.33	19.37	20.00
		36	18	19.50	19.30	19.38	20.00
		36	39	19.38	19.24	19.28	20.00
		75	0	19.41	19.26	19.29	20.00
	64QAM	1	0	19.49	19.32	19.41	20.00
		1	38	19.68	19.55	19.63	20.00
		1	74	19.64	19.49	19.54	20.00
		36	0	18.43	18.32	18.36	19.00
		36	18	18.52	18.35	18.44	19.00
		36	39	18.38	18.21	18.25	19.00
		75	0	18.40	18.26	18.29	19.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	21.14	21.14	21.08	22.00
		1	50	**21.19**	**21.26**	**21.18**	22.00
		1	99	20.97	21.05	21.06	22.00
		50	0	20.30	**20.42**	20.30	21.00
		50	25	**20.36**	20.30	**20.41**	21.00
		50	50	20.23	20.14	20.17	21.00
		100	0	**20.27**	20.22	20.18	21.00
	16QAM	1	0	20.55	20.41	20.42	21.00
		1	50	20.64	20.55	20.56	21.00
		1	99	20.39	20.26	20.31	21.00
		50	0	19.48	19.29	19.34	20.00
		50	25	19.47	19.28	19.35	20.00
		50	50	19.35	19.19	19.24	20.00
		100	0	19.39	19.22	19.26	20.00
	64QAM	1	0	19.47	19.28	19.36	20.00
		1	50	19.64	19.53	19.59	20.00
		1	99	19.58	19.43	19.48	20.00
		50	0	18.38	18.24	18.29	19.00
		50	25	18.48	18.31	18.38	19.00
		50	50	18.35	18.16	18.21	19.00
		100	0	18.38	18.22	18.26	19.00

LTE TDD Band 71 Full Power & Receiver on & Receiver off & Hotspot on				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				133147/665.5	133297/680.5	133447/695.5	
5MHz	QPSK	1	0	23.70	23.60	23.57	24.50
		1	13	23.72	23.70	23.68	24.50
		1	24	23.66	23.69	23.75	24.50
		12	0	22.58	22.65	22.70	23.50
		12	6	22.72	22.74	22.77	23.50
		12	13	22.81	22.78	22.72	23.50
		25	0	22.68	22.74	22.72	23.50
	16QAM	1	0	23.01	22.81	22.80	23.50
		1	13	22.99	22.92	22.96	23.50
		1	24	22.97	22.93	22.91	23.50
		12	0	21.59	21.60	21.67	22.50
		12	6	21.72	21.71	21.75	22.50

		12	13	21.76	21.77	21.74	22.50
		25	0	21.65	21.68	21.69	22.50
		1	0	21.95	21.75	21.77	22.50
		1	13	21.88	21.93	21.91	22.50
		1	24	21.89	21.96	21.93	22.50
	64QAM	12	0	20.57	20.60	20.69	21.50
		12	6	20.70	20.70	20.75	21.50
		12	13	20.74	20.73	20.67	21.50
		25	0	20.63	20.64	20.66	21.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				133172/668	133297/680.5	133422/693	
10MHz	QPSK	1	0	23.72	23.61	23.60	24.50
		1	25	23.75	23.75	23.72	24.50
		1	49	23.68	23.73	23.78	24.50
		25	0	22.61	22.70	22.74	23.50
		25	13	22.75	22.79	22.81	23.50
		25	25	22.83	22.82	22.77	23.50
		50	0	22.72	22.76	22.76	23.50
	16QAM	1	0	23.03	22.84	22.82	23.50
		1	25	23.02	22.96	22.99	23.50
		1	49	23.00	22.95	22.94	23.50
		25	0	21.62	21.65	21.71	22.50
		25	13	21.74	21.75	21.78	22.50
		25	25	21.79	21.82	21.78	22.50
		50	0	21.68	21.73	21.73	22.50
	64QAM	1	0	21.97	21.74	21.79	22.50
		1	13	21.91	21.93	21.94	22.50
		1	24	21.88	21.98	21.96	22.50
		12	0	20.60	20.65	20.69	21.50
		12	6	20.72	20.74	20.78	21.50
		12	13	20.77	20.78	20.71	21.50
		25	0	20.66	20.69	20.70	21.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				133197/670.5	133297/680.5	133397/690.5	
15MHz	QPSK	1	0	23.71	23.57	23.58	24.50
		1	38	23.73	23.74	23.69	24.50
		1	74	23.65	23.68	23.74	24.50
		36	0	22.59	22.66	22.71	23.50
		36	18	22.72	22.74	22.77	23.50
		36	39	22.80	22.79	22.73	23.50
		75	0	22.70	22.72	22.71	23.50

	16QAM	1	0	22.98	22.82	22.80	23.50
		1	38	23.00	22.93	22.97	23.50
		1	74	22.97	22.91	22.91	23.50
		36	0	21.59	21.63	21.68	22.50
		36	18	21.71	21.70	21.74	22.50
		36	39	21.77	21.78	21.75	22.50
		75	0	21.65	21.68	21.69	22.50
	64QAM	1	0	21.92	21.72	21.77	22.50
		1	13	21.89	21.90	21.92	22.50
		1	24	21.89	21.97	21.97	22.50
		12	0	20.59	20.67	20.70	21.50
		12	6	20.70	20.71	20.77	21.50
		12	13	20.75	20.74	20.68	21.50
		25	0	20.63	20.64	20.66	21.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				133222/673	133322/683	133372/688	
20MHz	QPSK	1	0	23.68	23.53	23.55	24.50
		1	50	**23.72**	**23.70**	23.67	24.50
		1	99	23.63	23.67	**23.71**	24.50
		50	0	22.56	22.61	22.67	23.50
		50	25	22.70	22.70	**22.74**	23.50
		50	50	**22.77**	**22.74**	22.69	23.50
		100	0	**22.67**	**22.67**	**22.67**	23.50
	16QAM	1	0	22.84	22.78	22.75	23.50
		1	50	22.96	22.91	22.93	23.50
		1	99	22.95	22.88	22.89	23.50
		50	0	21.56	21.59	21.65	22.50
		50	25	21.68	21.68	21.71	22.50
		50	50	21.74	21.73	21.71	22.50
		100	0	21.63	21.64	21.66	22.50
	64QAM	1	0	21.90	21.68	21.72	22.50
		1	13	21.85	21.88	21.88	22.50
		1	24	21.83	21.91	21.91	22.50
		12	0	20.54	20.59	20.63	21.50
		12	6	20.66	20.67	20.71	21.50
		12	13	20.72	20.69	20.64	21.50
		25	0	20.61	20.60	20.63	21.50

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_41C ANT3	Receiver on	QPSK	41	20	1	99	39750	2506	39750	41	20	39948	2525.8	1	0	21.39	22.50
		QPSK	41	20	1	99	40521	2583.1	40521	41	20	40719	2602.9	1	0	21.32	22.50
		QPSK	41	20	1	0	41490	2680	41490	41	20	41292	2660.2	1	99	21.28	22.50
CA_41C ANT3	Full Power&Receiver off&Hotspot on	QPSK	41	20	1	99	39750	2506	39750	41	20	39948	2525.8	1	0	23.28	24.50
		QPSK	41	20	1	99	40521	2583.1	40521	41	20	40719	2602.9	1	0	23.10	24.50
		QPSK	41	20	1	0	41490	2680	41490	41	20	41292	2660.2	1	99	23.14	24.50

9.3 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

EN-DC Antenna Configuration

EN-DC Band	LTE Band	NR Band	Mode	
			LTE	NR
DC_5A-n2A	LTE Band5	NR n2	Antenna 0	Antenna 1
DC_12A-n2A	LTE Band12		Antenna 0	Antenna 1
DC_66A-n2A	LTE Band66		Antenna 2	Antenna 1
DC_2A-n5A	LTE Band2	NR n5	Antenna 2	Antenna 0
DC_66A-n5A	LTE Band66		Antenna 2	Antenna 0
DC_66A-n25A	LTE Band66	NR n25	Antenna 2	Antenna 1
DC_2A-n41A	LTE Band2	NR n41	Antenna 2	Antenna 3
DC_66A-n41A	LTE Band66		Antenna 2	Antenna 3
DC_2A-n66A	LTE Band2	NR n66	Antenna 2	Antenna 1
DC_5A-n66A	LTE Band5		Antenna 0	Antenna 1
DC_12A-n66A	LTE Band12		Antenna 0	Antenna 1
DC_2A-n71A	LTE Band2	NR n71	Antenna 2	Antenna 0
DC_66A-n71A	LTE Band66		Antenna 2	Antenna 0
Note:1) The EN-DC mode maximum power for LTE are same as LTE standalone mode, so this section only list 5G NR conducted power.				

NR n2 Full Power & Receiver on & Receiver off				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				370500/1852.5	376000/1880	381500/1907.5	
5MHz	DFT-s-OFDM BPSK	1	1	22.53	22.57	22.60	23.50
		1	23	22.51	22.53	22.53	23.50
		12	6	22.76	22.80	22.86	23.50
		25	0	22.81	22.65	22.75	23.50
	DFT-s-OFDM QPSK	1	1	22.79	22.60	22.59	23.50
		1	23	22.53	22.65	22.57	23.50
		12	6	22.54	22.88	22.85	23.50
		25	0	22.18	22.65	22.66	23.50
	DFT-s-OFDM 16QAM	1	1	21.32	21.39	21.39	22.50
		1	23	21.80	21.38	21.39	22.50
		12	6	21.78	21.81	21.28	22.50
	DFT-s-OFDM 64QAM	1	1	19.92	19.92	19.90	21.00
		1	23	19.87	19.86	19.92	21.00
		12	6	20.34	20.31	20.37	21.00
	DFT-s-OFDM 256QAM	1	1	18.66	18.67	18.64	19.00
		1	23	18.65	18.66	18.67	19.00
		12	6	18.47	18.50	18.55	19.00
	CP-OFDM	1	1	21.14	21.14	21.15	22.00

	QPSK						
	CP-OFDM 16QAM	1	1	20.92	20.89	20.90	21.50
	CP-OFDM 64QAM	1	1	19.36	19.33	19.40	20.00
	CP-OFDM 256QAM	1	1	16.06	16.04	16.08	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				371000/1855	376000/1880	381000/1905	
10MHz	DFT-s-OFDM BPSK	1	1	22.55	22.58	22.63	23.50
		1	50	22.54	22.58	22.57	23.50
		25	12	22.78	22.84	22.89	23.50
		50	0	22.84	22.70	22.79	23.50
	DFT-s-OFDM QPSK	1	1	22.82	22.65	22.63	23.50
		1	50	22.55	22.69	22.62	23.50
		25	12	22.58	22.90	22.89	23.50
		50	0	22.20	22.68	22.68	23.50
	DFT-s-OFDM 16QAM	1	1	21.36	21.41	21.43	22.50
		1	50	21.82	21.41	21.41	22.50
		25	12	21.81	21.85	21.31	22.50
	DFT-s-OFDM 64QAM	1	1	19.95	19.94	19.93	21.00
		1	50	19.90	19.91	19.96	21.00
		25	12	20.36	20.35	20.40	21.00
	DFT-s-OFDM 256QAM	1	1	18.69	18.72	18.68	19.00
		1	50	18.68	18.71	18.71	19.00
		25	12	18.49	18.49	18.57	19.00
	CP-OFDM QPSK	1	1	21.17	21.14	21.18	22.00
	CP-OFDM 16QAM	1	1	20.91	20.91	20.93	21.50
	CP-OFDM 64QAM	1	1	19.39	19.38	19.40	20.00
	CP-OFDM 256QAM	1	1	16.08	16.08	16.11	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				371500/1857.5	376000/1880	380500/1902.5	
15MHz	DFT-s-OFDM BPSK	1	1	22.54	22.54	22.61	23.50
		1	77	22.52	22.57	22.54	23.50
		36	18	22.75	22.79	22.85	23.50
		75	0	22.82	22.66	22.76	23.50
	DFT-s-OFDM QPSK	1	1	22.79	22.60	22.59	23.50
		1	77	22.52	22.66	22.58	23.50
		36	18	22.56	22.86	22.84	23.50

		75	0	22.15	22.66	22.66	23.50
	DFT-s-OFDM 16QAM	1	1	21.34	21.37	21.38	22.50
		1	77	21.77	21.39	21.39	22.50
		36	18	21.79	21.82	21.29	22.50
	DFT-s-OFDM 64QAM	1	1	19.92	19.90	19.90	21.00
		1	77	19.87	19.89	19.93	21.00
		36	18	20.33	20.30	20.36	21.00
	DFT-s-OFDM 256QAM	1	1	18.67	18.68	18.65	19.00
		1	77	18.65	18.66	18.67	19.00
		36	18	18.44	18.47	18.55	19.00
	CP-OFDM QPSK	1	1	21.15	21.11	21.16	22.00
	CP-OFDM 16QAM	1	1	20.92	20.90	20.94	21.50
	CP-OFDM 64QAM	1	1	19.38	19.40	19.41	20.00
	CP-OFDM 256QAM	1	1	16.06	16.05	16.10	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				372000/1860	376000/1880	380000/1900	
20MHz	DFT-s-OFDM BPSK	1	1	22.51	22.50	22.58	23.50
		1	104	22.51	22.53	22.52	23.50
		50	25	22.73	22.78	22.82	23.50
		100	0	22.79	22.61	22.72	23.50
	DFT-s-OFDM QPSK	1	1	**22.77**	22.56	**22.56**	23.50
		1	104	22.49	**22.61**	22.54	23.50
		50	25	22.53	**22.81**	22.80	23.50
		100	0	22.48	**22.62**	22.61	23.50
	DFT-s-OFDM 16QAM	1	1	21.31	21.32	21.34	22.50
		1	104	21.37	21.35	21.34	22.50
		50	25	21.75	21.80	21.25	22.50
	DFT-s-OFDM 64QAM	1	1	19.90	19.87	19.88	21.00
		1	104	19.84	19.85	19.90	21.00
		50	25	20.30	20.28	20.33	21.00
	DFT-s-OFDM 256QAM	1	1	18.64	18.63	18.61	19.00
		1	104	18.63	18.62	18.64	19.00
		50	25	18.42	18.43	18.50	19.00
	CP-OFDM QPSK	1	1	21.11	21.09	21.12	22.00
	CP-OFDM 16QAM	1	1	20.86	20.84	20.88	21.50
	CP-OFDM 64QAM	1	1	19.33	19.32	19.34	20.00

	CP-OFDM 256QAM	1	1	16.02	16.01	16.04	17.00

NR n2 Hotspot on				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				370500/1852.5	376000/1880	381500/1907.5	
5MHz	DFT-s-OFDM BPSK	1	1	20.24	20.23	20.31	21.00
		1	23	20.14	20.13	20.17	21.00
		12	6	20.40	20.37	20.51	21.00
		25	0	20.52	20.32	20.41	21.00
	DFT-s-OFDM QPSK	1	1	20.52	20.04	20.07	21.00
		1	23	20.07	20.06	20.05	21.00
		12	6	20.26	20.37	20.33	21.00
		25	0	20.25	20.24	20.28	21.00
	DFT-s-OFDM 16QAM	1	1	18.99	19.01	19.05	20.00
		1	23	19.40	19.00	19.41	20.00
		12	6	19.40	18.86	19.43	20.00
	DFT-s-OFDM 64QAM	1	1	17.55	17.43	17.52	18.50
		1	23	17.48	17.47	17.46	18.50
		12	6	18.00	17.96	17.92	18.50
	DFT-s-OFDM 256QAM	1	1	16.30	16.22	16.22	16.50
		1	23	16.33	16.28	16.24	16.50
		12	6	16.17	16.16	16.02	16.50
	CP-OFDM QPSK	1	1	18.82	18.73	18.77	19.50
	CP-OFDM 16QAM	1	1	18.57	18.53	18.52	19.00
	CP-OFDM 64QAM	1	1	17.03	17.01	16.97	17.50
	CP-OFDM 256QAM	1	1	13.78	13.76	13.77	14.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				371000/1855	376000/1880	381000/1905	
10MHz	DFT-s-OFDM BPSK	1	1	20.26	20.24	20.34	21.00
		1	50	20.17	20.18	20.21	21.00
		25	12	20.42	20.41	20.54	21.00
		50	0	20.55	20.37	20.45	21.00
	DFT-s-OFDM QPSK	1	1	20.55	20.09	20.11	21.00
		1	50	20.09	20.10	20.10	21.00
		25	12	20.30	20.39	20.37	21.00
		50	0	20.29	20.27	20.30	21.00
	DFT-s-OF	1	1	19.03	19.05	19.08	20.00

	DM 16QAM	1	50	19.43	19.02	19.44	20.00
		25	12	19.43	18.91	19.47	20.00
	DFT-s-OFDM 64QAM	1	1	17.57	17.47	17.55	18.50
		1	50	17.51	17.52	17.50	18.50
		25	12	18.03	18.01	17.96	18.50
	DFT-s-OFDM 256QAM	1	1	16.32	16.21	16.24	16.50
		1	50	16.36	16.28	16.27	16.50
		25	12	16.16	16.18	16.05	16.50
	CP-OFDM QPSK	1	1	18.85	18.78	18.77	19.50
	CP-OFDM 16QAM	1	1	18.59	18.57	18.55	19.00
	CP-OFDM 64QAM	1	1	17.06	17.06	17.01	17.50
	CP-OFDM 256QAM	1	1	13.81	13.81	13.81	14.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				371500/1857.5	376000/1880	380500/1902.5	
15MHz	DFT-s-OFDM BPSK	1	1	20.25	20.20	20.32	21.00
		1	77	20.15	20.17	20.18	21.00
		36	18	20.39	20.36	20.50	21.00
		75	0	20.53	20.33	20.42	21.00
	DFT-s-OFDM QPSK	1	1	20.52	20.04	20.07	21.00
		1	77	20.06	20.07	20.06	21.00
		36	18	20.28	20.35	20.32	21.00
		75	0	20.27	20.25	20.28	21.00
	DFT-s-OFDM 16QAM	1	1	19.01	19.02	19.06	20.00
		1	77	19.41	18.98	19.41	20.00
		36	18	19.40	18.89	19.44	20.00
	DFT-s-OFDM 64QAM	1	1	17.54	17.42	17.51	18.50
		1	77	17.49	17.48	17.47	18.50
		36	18	18.00	17.96	17.92	18.50
	DFT-s-OFDM 256QAM	1	1	16.27	16.19	16.22	16.50
		1	77	16.34	16.25	16.25	16.50
		36	18	16.17	16.17	16.06	16.50
	CP-OFDM QPSK	1	1	18.84	18.80	18.78	19.50
	CP-OFDM 16QAM	1	1	18.57	18.54	18.54	19.00
	CP-OFDM 64QAM	1	1	17.04	17.02	16.98	17.50
	CP-OFDM 256QAM	1	1	13.78	13.76	13.77	14.50

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				372000/1860	376000/1880	380000/1900	
20MHz	DFT-s-OFDM BPSK	1	1	20.22	20.16	20.29	21.00
		1	104	20.14	20.13	20.16	21.00
		50	25	20.37	20.35	20.47	21.00
		100	0	20.50	20.28	20.38	21.00
	DFT-s-OFDM QPSK	1	1	**20.50**	20.00	**20.04**	21.00
		1	104	20.03	**20.02**	20.02	21.00
		50	25	20.25	**20.30**	20.28	21.00
		100	0	**20.24**	20.21	20.23	21.00
	DFT-s-OFDM 16QAM	1	1	18.98	19.00	19.02	20.00
		1	104	19.38	18.95	19.39	20.00
		50	25	19.37	18.85	19.41	20.00
	DFT-s-OFDM 64QAM	1	1	17.51	17.40	17.48	18.50
		1	104	17.46	17.43	17.43	18.50
		50	25	17.98	17.92	17.89	18.50
	DFT-s-OFDM 256QAM	1	1	16.25	16.15	16.17	16.50
		1	104	16.30	16.23	16.21	16.50
		50	25	16.11	16.11	16.00	16.50
	CP-OFDM QPSK	1	1	18.79	18.72	18.71	19.50
	CP-OFDM 16QAM	1	1	18.53	18.50	18.48	19.00
	CP-OFDM 64QAM	1	1	17.01	16.97	16.94	17.50
	CP-OFDM 256QAM	1	1	13.76	13.72	13.74	14.50

NR n5 Full Power & Receiver on & Receiver off				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				165300/826.5	167300/836.5	169300/846.5	
5MHz	DFT-s-OFDM BPSK	1	1	22.77	22.84	22.81	23.50
		1	23	22.72	22.76	22.68	23.50
		12	6	22.95	22.94	22.89	23.50
		25	0	22.74	22.64	22.83	23.50
	DFT-s-OFDM QPSK	1	1	22.74	22.79	22.73	23.50
		1	23	22.72	22.75	22.69	23.50
		12	6	22.88	22.97	22.93	23.50
		25	0	22.18	22.88	22.82	23.50
	DFT-s-OFDM 16QAM	1	1	21.49	21.54	21.56	22.50
		1	23	21.96	21.52	21.47	22.50
		12	6	21.94	21.86	21.86	22.50

	DFT-s-OFDM 64QAM	1	1	20.03	20.08	20.05	21.00
		1	23	20.03	20.02	19.97	21.00
		12	6	20.38	20.35	20.32	21.00
	DFT-s-OFDM 256QAM	1	1	18.57	18.60	18.59	19.00
		1	23	18.58	18.58	18.54	19.00
		12	6	18.41	18.43	18.35	19.00
	CP-OFDM QPSK	1	1	21.27	21.28	21.27	22.00
	CP-OFDM 16QAM	1	1	21.07	21.07	21.05	21.50
	CP-OFDM 64QAM	1	1	19.34	19.32	19.38	20.00
	CP-OFDM 256QAM	1	1	16.04	16.02	16.00	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				165800/829	167300/836.5	168800/844	
10MHz	DFT-s-OFDM BPSK	1	1	22.79	22.85	22.84	23.50
		1	50	22.75	22.81	22.72	23.50
		25	12	22.97	22.98	22.92	23.50
		50	0	22.77	22.69	22.87	23.50
	DFT-s-OFDM QPSK	1	1	22.77	22.84	22.77	23.50
		1	50	22.74	22.79	22.74	23.50
		25	12	22.92	22.99	22.97	23.50
		50	0	22.20	22.91	22.84	23.50
	DFT-s-OFDM 16QAM	1	1	21.53	21.56	21.60	22.50
		1	50	21.98	21.55	21.49	22.50
		25	12	21.97	21.90	21.89	22.50
	DFT-s-OFDM 64QAM	1	1	20.06	20.10	20.08	21.00
		1	50	20.06	20.07	20.01	21.00
		25	12	20.40	20.39	20.35	21.00
	DFT-s-OFDM 256QAM	1	1	18.60	18.65	18.63	19.00
		1	50	18.61	18.63	18.58	19.00
		25	12	18.43	18.42	18.37	19.00
	CP-OFDM QPSK	1	1	21.30	21.28	21.30	22.00
	CP-OFDM 16QAM	1	1	21.06	21.09	21.08	21.50
	CP-OFDM 64QAM	1	1	19.37	19.37	19.38	20.00
	CP-OFDM 256QAM	1	1	16.06	16.06	16.03	17.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				166300/831.5	167300/836.5	168300/841.5	
15MHz	DFT-s-OFDM BPSK	1	1	22.78	22.81	22.82	23.50
		1	77	22.73	22.80	22.69	23.50
		36	18	22.94	22.93	22.88	23.50
		75	0	22.75	22.65	22.84	23.50
	DFT-s-OFDM QPSK	1	1	22.74	22.79	22.73	23.50
		1	77	22.71	22.76	22.70	23.50
		36	18	22.90	22.95	22.92	23.50
		75	0	22.15	22.89	22.82	23.50
	DFT-s-OFDM 16QAM	1	1	21.51	21.52	21.55	22.50
		1	77	21.93	21.53	21.47	22.50
		36	18	21.95	21.87	21.87	22.50
	DFT-s-OFDM 64QAM	1	1	20.03	20.06	20.05	21.00
		1	77	20.03	20.05	19.98	21.00
		36	18	20.37	20.34	20.31	21.00
	DFT-s-OFDM 256QAM	1	1	18.58	18.61	18.60	19.00
		1	77	18.58	18.58	18.54	19.00
		36	18	18.38	18.40	18.35	19.00
	CP-OFDM QPSK	1	1	21.28	21.25	21.28	22.00
	CP-OFDM 16QAM	1	1	21.07	21.08	21.09	21.50
	CP-OFDM 64QAM	1	1	19.36	19.39	19.39	20.00
	CP-OFDM 256QAM	1	1	16.04	16.03	16.02	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				166800/834	167300/836.5	167800/839	
20MHz	DFT-s-OFDM BPSK	1	1	22.75	22.77	22.79	23.50
		1	104	22.72	22.76	22.67	23.50
		50	25	22.92	22.92	22.85	23.50
		100	0	22.72	22.60	22.80	23.50
	DFT-s-OFDM QPSK	1	1	**22.72**	**22.75**	**22.70**	23.50
		1	104	22.68	22.71	22.66	23.50
		50	25	22.87	**22.90**	22.88	23.50
		100	0	22.69	**22.85**	22.77	23.50
	DFT-s-OFDM 16QAM	1	1	21.48	21.47	21.51	22.50
		1	104	21.43	21.49	21.42	22.50
		50	25	21.91	21.85	21.83	22.50
	DFT-s-OFDM 64QAM	1	1	20.01	20.03	20.03	21.00
		1	104	20.00	20.01	19.95	21.00
		50	25	20.34	20.32	20.28	21.00

	DFT-s-OFDM 256QAM	1	1	18.55	18.56	18.56	19.00
		1	104	18.56	18.54	18.51	19.00
		50	25	18.36	18.36	18.30	19.00
	CP-OFDM QPSK	1	1	21.24	21.23	21.24	22.00
	CP-OFDM 16QAM	1	1	21.01	21.02	21.03	21.50
	CP-OFDM 64QAM	1	1	19.31	19.31	19.32	20.00
	CP-OFDM 256QAM	1	1	16.00	15.99	15.96	17.00

NR n5 Hotspot on				Conducted Power(dBm)			Tune-up Limit
				Channel/Frequency (MHz)			
Bandwidth	Modulation	RB size	RB offset	165300/826.5	167300/836.5	169300/846.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.26	21.38	21.41	22.50
		1	23	21.20	21.17	21.19	22.50
		12	6	21.45	21.37	21.40	22.50
		25	0	21.24	21.11	21.35	22.50
	DFT-s-OFDM QPSK	1	1	21.35	21.38	21.33	22.50
		1	23	21.34	21.35	21.30	22.50
		12	6	21.47	21.53	21.50	22.50
		25	0	21.56	21.49	21.43	22.50
	DFT-s-OFDM 16QAM	1	1	20.00	19.97	20.01	21.50
		1	23	20.00	19.89	19.93	21.50
		12	6	20.40	20.29	20.41	21.50
	DFT-s-OFDM 64QAM	1	1	18.61	18.47	18.52	20.00
		1	23	18.66	18.52	18.53	20.00
		12	6	18.96	18.86	18.86	20.00
	DFT-s-OFDM 256QAM	1	1	17.16	17.09	17.10	18.00
		1	23	17.16	17.00	17.09	18.00
		12	6	16.96	16.77	16.86	18.00
	CP-OFDM QPSK	1	1	19.78	19.70	19.78	21.00
	CP-OFDM 16QAM	1	1	19.60	19.51	19.52	20.50
	CP-OFDM 64QAM	1	1	17.96	17.93	17.84	19.00
	CP-OFDM 256QAM	1	1	14.63	14.57	14.52	16.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				165800/829	167300/836.5	168800/844	
10MHz	DFT-s-OFDM BPSK	1	1	21.28	21.39	21.44	22.50
		1	50	21.23	21.22	21.23	22.50
		25	12	21.47	21.41	21.43	22.50
		50	0	21.27	21.16	21.39	22.50
	DFT-s-OFDM QPSK	1	1	21.38	21.43	21.37	22.50
		1	50	21.36	21.39	21.35	22.50
		25	12	21.51	21.55	21.54	22.50
		50	0	21.60	21.52	21.45	22.50
	DFT-s-OFDM 16QAM	1	1	20.04	20.01	20.04	21.50
		1	50	20.03	19.91	19.96	21.50
		25	12	20.43	20.34	20.45	21.50
	DFT-s-OFDM 64QAM	1	1	18.63	18.51	18.55	20.00
		1	50	18.69	18.57	18.57	20.00
		25	12	18.99	18.91	18.90	20.00
	DFT-s-OFDM 256QAM	1	1	17.18	17.08	17.12	18.00
		1	50	17.19	17.00	17.12	18.00
		25	12	16.95	16.79	16.89	18.00
	CP-OFDM QPSK	1	1	19.81	19.75	19.78	21.00
	CP-OFDM 16QAM	1	1	19.62	19.55	19.55	20.50
	CP-OFDM 64QAM	1	1	17.99	17.98	17.88	19.00
	CP-OFDM 256QAM	1	1	14.66	14.62	14.56	16.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				166300/831.5	167300/836.5	168300/841.5	
15MHz	DFT-s-OFDM BPSK	1	1	21.27	21.35	21.42	22.50
		1	77	21.21	21.21	21.20	22.50
		36	18	21.44	21.36	21.39	22.50
		75	0	21.25	21.12	21.36	22.50
	DFT-s-OFDM QPSK	1	1	21.35	21.38	21.33	22.50
		1	77	21.33	21.36	21.31	22.50
		36	18	21.49	21.51	21.49	22.50
		75	0	21.58	21.50	21.43	22.50
	DFT-s-OFDM 16QAM	1	1	20.02	19.98	20.02	21.50
		1	77	20.01	19.87	19.93	21.50
		36	18	20.40	20.32	20.42	21.50
	DFT-s-OFDM 64QAM	1	1	18.60	18.46	18.51	20.00
		1	77	18.67	18.53	18.54	20.00
		36	18	18.96	18.86	18.86	20.00

	DFT-s-OFDM 256QAM	1	1	17.13	17.06	17.10	18.00
		1	77	17.17	16.97	17.10	18.00
		36	18	16.96	16.78	16.90	18.00
	CP-OFDM QPSK	1	1	19.80	19.77	19.79	21.00
	CP-OFDM 16QAM	1	1	19.60	19.52	19.54	20.50
	CP-OFDM 64QAM	1	1	17.97	17.94	17.85	19.00
	CP-OFDM 256QAM	1	1	14.63	14.57	14.52	16.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				166800/834	167300/836.5	167800/839	
20MHz	DFT-s-OFDM BPSK	1	1	21.24	21.31	21.39	22.50
		1	104	21.20	21.17	21.18	22.50
		50	25	21.42	21.35	21.36	22.50
		100	0	21.22	21.07	21.32	22.50
	DFT-s-OFDM QPSK	1	1	**21.33**	**21.34**	**21.30**	22.50
		1	104	21.30	21.31	21.27	22.50
		50	25	**21.46**	**21.46**	21.45	22.50
		100	0	**21.55**	21.46	21.38	22.50
	DFT-s-OFDM 16QAM	1	1	19.99	19.96	19.98	21.50
		1	104	19.98	19.84	19.91	21.50
		50	25	20.37	20.28	20.39	21.50
	DFT-s-OFDM 64QAM	1	1	18.57	18.44	18.48	20.00
		1	104	18.64	18.48	18.50	20.00
		50	25	18.94	18.82	18.83	20.00
	DFT-s-OFDM 256QAM	1	1	17.11	17.02	17.05	18.00
		1	104	17.13	16.95	17.06	18.00
		50	25	16.90	16.72	16.84	18.00
	CP-OFDM QPSK	1	1	19.75	19.69	19.72	21.00
	CP-OFDM 16QAM	1	1	19.56	19.48	19.48	20.50
	CP-OFDM 64QAM	1	1	17.94	17.89	17.81	19.00
	CP-OFDM 256QAM	1	1	14.61	14.53	14.49	16.00

NR n25 Full Power &Receiver on & Receiver off				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				370500/1852.5	376500/1882.5	382500/1912.5	
5MHz	DFT-s-OFDM BPSK	1	1	22.34	21.73	22.27	23.50
		1	23	22.27	22.26	22.25	23.50
		12	6	22.26	22.24	22.20	23.50
		25	0	22.08	22.18	22.23	23.50
	DFT-s-OFDM QPSK	1	1	22.17	21.75	22.29	23.50
		1	23	22.17	22.26	22.26	23.50
		12	6	22.33	22.23	22.28	23.50
		25	0	22.16	22.36	22.24	23.50
	DFT-s-OFDM 16QAM	1	1	21.10	20.70	21.09	22.50
		1	23	21.34	21.05	21.09	22.50
		12	6	21.32	21.22	21.26	22.50
	DFT-s-OFDM 64QAM	1	1	19.66	19.28	19.61	21.00
		1	23	19.66	19.59	19.61	21.00
		12	6	19.85	19.77	19.79	21.00
	DFT-s-OFDM 256QAM	1	1	18.39	17.81	18.39	19.00
		1	23	17.93	18.37	18.36	19.00
		12	6	17.94	17.88	17.88	19.00
	CP-OFDM QPSK	1	1	20.93	20.29	20.88	22.00
	CP-OFDM 16QAM	1	1	20.72	20.03	20.63	21.50
	CP-OFDM 64QAM	1	1	19.18	18.50	19.14	20.00
	CP-OFDM 256QAM	1	1	15.83	15.16	15.78	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				371000/1855	376500/1882.5	382000/1910	
10MHz	DFT-s-OFDM BPSK	1	1	22.36	21.74	22.30	23.50
		1	50	22.30	22.31	22.29	23.50
		25	12	22.28	22.28	22.23	23.50
		50	0	22.11	22.23	22.27	23.50
	DFT-s-OFDM QPSK	1	1	22.20	21.80	22.33	23.50
		1	50	22.19	22.30	22.31	23.50
		25	12	22.37	22.25	22.32	23.50
		50	0	22.20	22.39	22.26	23.50
	DFT-s-OFDM 16QAM	1	1	21.14	20.72	21.13	22.50
		1	50	21.36	21.08	21.11	22.50
		25	12	21.35	21.26	21.29	22.50

	DFT-s-OFDM 64QAM	1	1	19.69	19.30	19.64	21.00
		1	50	19.69	19.64	19.65	21.00
		25	12	19.87	19.81	19.82	21.00
	DFT-s-OFDM 256QAM	1	1	18.42	17.86	18.43	19.00
		1	50	17.96	18.42	18.40	19.00
		25	12	17.96	17.87	17.90	19.00
	CP-OFDM QPSK	1	1	20.96	20.29	20.91	22.00
	CP-OFDM 16QAM	1	1	20.71	20.05	20.66	21.50
	CP-OFDM 64QAM	1	1	19.21	18.55	19.14	20.00
	CP-OFDM 256QAM	1	1	15.85	15.20	15.81	17.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				371500/1857.5	376500/1882.5	38150/1907.5	
15MHz	DFT-s-OFDM BPSK	1	1	22.35	21.70	22.28	23.50
		1	77	22.28	22.30	22.26	23.50
		36	18	22.25	22.23	22.19	23.50
		75	0	22.09	22.19	22.24	23.50
	DFT-s-OFDM QPSK	1	1	22.17	21.75	22.29	23.50
		1	77	22.16	22.27	22.27	23.50
		36	18	22.35	22.21	22.27	23.50
		75	0	22.18	22.37	22.24	23.50
	DFT-s-OFDM 16QAM	1	1	21.12	20.68	21.08	22.50
		1	77	21.31	21.06	21.09	22.50
		36	18	21.33	21.23	21.27	22.50
	DFT-s-OFDM 64QAM	1	1	19.66	19.26	19.61	21.00
		1	77	19.66	19.62	19.62	21.00
		36	18	19.84	19.76	19.78	21.00
	DFT-s-OFDM 256QAM	1	1	18.40	17.82	18.40	19.00
		1	77	17.93	18.37	18.36	19.00
		36	18	17.91	17.85	17.88	19.00
	CP-OFDM QPSK	1	1	20.94	20.26	20.89	22.00
	CP-OFDM 16QAM	1	1	20.72	20.04	20.67	21.50
	CP-OFDM 64QAM	1	1	19.20	18.57	19.15	20.00
	CP-OFDM 256QAM	1	1	15.83	15.17	15.80	17.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				372000/1860	376500/1882.5	381000/1905	
20MHz	DFT-s-OFDM BPSK	1	1	22.32	21.66	22.25	23.50
		1	104	22.27	22.26	22.24	23.50
		50	25	22.23	22.22	22.16	23.50
		100	0	22.06	22.14	22.20	23.50
	DFT-s-OFDM QPSK	1	1	**22.15**	21.71	**22.26**	23.50
		1	104	22.13	**22.22**	22.23	23.50
		50	25	**22.32**	22.16	22.23	23.50
		100	0	22.15	**22.33**	22.19	23.50
	DFT-s-OFDM 16QAM	1	1	21.09	20.63	21.04	22.50
		1	104	21.06	21.02	21.04	22.50
		50	25	21.29	21.21	21.23	22.50
	DFT-s-OFDM 64QAM	1	1	19.64	19.23	19.59	21.00
		1	104	19.63	19.58	19.59	21.00
		50	25	19.81	19.74	19.75	21.00
	DFT-s-OFDM 256QAM	1	1	18.37	17.77	18.36	19.00
		1	104	17.91	18.33	18.33	19.00
		50	25	17.89	17.81	17.83	19.00
	CP-OFDM QPSK	1	1	20.90	20.24	20.85	22.00
	CP-OFDM 16QAM	1	1	20.66	19.98	20.61	21.50
	CP-OFDM 64QAM	1	1	19.15	18.49	19.08	20.00
	CP-OFDM 256QAM	1	1	15.79	15.13	15.74	17.00

NR n25 Hotspot on				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				370500/1852.5	376500/1882.5	382500/1912.5	
5MHz	DFT-s-OFDM BPSK	1	1	19.02	19.09	19.01	20.50
		1	23	18.93	18.90	18.93	20.50
		12	6	18.93	18.86	18.87	20.50
		25	0	18.80	18.89	18.92	20.50
	DFT-s-OFDM QPSK	1	1	19.34	19.34	19.36	20.50
		1	23	19.30	19.32	19.33	20.50
		12	6	19.59	19.61	19.57	20.50
		25	0	19.53	19.53	19.55	20.50
	DFT-s-OFDM 16QAM	1	1	17.81	17.81	17.75	19.50
		1	23	17.73	17.73	17.68	19.50
		12	6	17.96	17.95	17.91	19.50

	DFT-s-OFDM 64QAM	1	1	16.31	16.34	16.28	18.00
		1	23	16.29	16.33	16.28	18.00
		12	6	16.48	16.49	16.43	18.00
	DFT-s-OFDM 256QAM	1	1	15.11	15.10	15.06	16.00
		1	23	15.06	14.61	15.02	16.00
		12	6	14.59	14.59	14.53	16.00
	CP-OFDM QPSK	1	1	17.61	17.60	17.59	19.00
	CP-OFDM 16QAM	1	1	17.37	17.36	17.32	18.50
	CP-OFDM 64QAM	1	1	15.85	15.89	15.81	17.00
	CP-OFDM 256QAM	1	1	12.50	12.54	12.46	14.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				371000/1855	376500/1882.5	382000/1910	
10MHz	DFT-s-OFDM BPSK	1	1	19.04	19.10	19.04	20.50
		1	50	18.96	18.95	18.97	20.50
		25	12	18.95	18.90	18.90	20.50
		50	0	18.83	18.94	18.96	20.50
	DFT-s-OFDM QPSK	1	1	19.37	19.39	19.40	20.50
		1	50	19.32	19.36	19.38	20.50
		25	12	19.63	19.63	19.61	20.50
		50	0	19.57	19.56	19.57	20.50
	DFT-s-OFDM 16QAM	1	1	17.85	17.85	17.78	19.50
		1	50	17.76	17.75	17.71	19.50
		25	12	17.99	18.00	17.95	19.50
	DFT-s-OFDM 64QAM	1	1	16.33	16.38	16.31	18.00
		1	50	16.32	16.38	16.32	18.00
		25	12	16.51	16.54	16.47	18.00
	DFT-s-OFDM 256QAM	1	1	15.13	15.09	15.08	16.00
		1	50	15.09	14.61	15.05	16.00
		25	12	14.58	14.61	14.56	16.00
	CP-OFDM QPSK	1	1	17.64	17.65	17.59	19.00
	CP-OFDM 16QAM	1	1	17.39	17.40	17.35	18.50
	CP-OFDM 64QAM	1	1	15.88	15.94	15.85	17.00
	CP-OFDM 256QAM	1	1	12.53	12.59	12.50	14.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				371500/1857.5	376500/1882.5	38150/1907.5	
15MHz	DFT-s-OFDM BPSK	1	1	19.03	19.06	19.02	20.50
		1	77	18.94	18.94	18.94	20.50
		36	18	18.92	18.85	18.86	20.50
		75	0	18.81	18.90	18.93	20.50
	DFT-s-OFDM QPSK	1	1	19.34	19.34	19.36	20.50
		1	77	19.29	19.33	19.34	20.50
		36	18	19.61	19.59	19.56	20.50
		75	0	19.55	19.54	19.55	20.50
	DFT-s-OFDM 16QAM	1	1	17.83	17.82	17.76	19.50
		1	77	17.74	17.71	17.68	19.50
		36	18	17.96	17.98	17.92	19.50
	DFT-s-OFDM 64QAM	1	1	16.30	16.33	16.27	18.00
		1	77	16.30	16.34	16.29	18.00
		36	18	16.48	16.49	16.43	18.00
	DFT-s-OFDM 256QAM	1	1	15.08	15.07	15.06	16.00
		1	77	15.07	14.58	15.03	16.00
		36	18	14.59	14.60	14.57	16.00
	CP-OFDM QPSK	1	1	17.63	17.67	17.60	19.00
	CP-OFDM 16QAM	1	1	17.37	17.37	17.34	18.50
	CP-OFDM 64QAM	1	1	15.86	15.90	15.82	17.00
	CP-OFDM 256QAM	1	1	12.50	12.54	12.46	14.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				372000/1860	376500/1882.5	381000/1905	
20MHz	DFT-s-OFDM BPSK	1	1	19.00	19.02	18.99	20.50
		1	104	18.93	18.90	18.92	20.50
		50	25	18.90	18.84	18.83	20.50
		100	0	18.78	18.85	18.89	20.50
	DFT-s-OFDM QPSK	1	1	**19.32**	**19.30**	**19.33**	20.50
		1	104	19.26	19.28	19.30	20.50
		50	25	**19.58**	19.54	19.52	20.50
		100	0	**19.52**	19.50	19.50	20.50
	DFT-s-OFDM 16QAM	1	1	17.80	17.80	17.72	19.50
		1	104	17.71	17.68	17.66	19.50
		50	25	17.93	17.94	17.89	19.50
	DFT-s-OFDM 64QAM	1	1	16.27	16.31	16.24	18.00
		1	104	16.27	16.29	16.25	18.00
		50	25	16.46	16.45	16.40	18.00

	DFT-s-OFDM 256QAM	1	1	15.06	15.03	15.01	16.00
		1	104	15.03	14.56	14.99	16.00
		50	25	14.53	14.54	14.51	16.00
	CP-OFDM QPSK	1	1	17.58	17.59	17.53	19.00
	CP-OFDM 16QAM	1	1	17.33	17.33	17.28	18.50
	CP-OFDM 64QAM	1	1	15.83	15.85	15.78	17.00
	CP-OFDM 256QAM	1	1	12.48	12.50	12.43	14.00

NR n41 Full Power & Receiver off				Conducted Power(dBm)			Tune-up Limit
				Channel/Frequency (MHz)			
Bandwidth	Modulation	RB size	RB offset	500202/2501.01	5185.98/2592.99	537000/2685	
10MHz	DFT-s-OFDM BPSK	1	1	22.45	22.58	22.72	23.50
		1	22	22.67	22.70	22.66	23.50
		12	6	22.92	23.30	23.35	23.50
		24	0	23.02	23.17	22.94	23.50
	DFT-s-OFDM QPSK	1	1	22.44	22.59	22.77	23.50
		1	22	22.72	22.70	22.73	23.50
		12	6	23.21	23.41	23.32	23.50
		24	0	22.92	22.96	22.96	23.50
	DFT-s-OFDM 16QAM	1	1	21.09	21.32	21.52	22.50
		1	22	22.40	21.48	21.52	22.50
		12	6	22.38	22.28	22.33	22.50
	DFT-s-OFDM 64QAM	1	1	19.72	19.85	19.97	21.00
		1	22	20.03	19.96	19.95	21.00
		12	6	20.80	20.86	20.90	21.00
	DFT-s-OFDM 256QAM	1	1	18.69	18.64	18.98	19.00
		1	22	18.96	18.79	18.88	19.00
		12	6	18.92	18.82	18.79	19.00
	CP-OFDM QPSK	1	1	20.97	20.94	21.24	22.00
	CP-OFDM 16QAM	1	1	20.72	20.82	21.01	21.50
	CP-OFDM 64QAM	1	1	19.42	19.47	19.68	20.00
	CP-OFDM 256QAM	1	1	16.11	16.17	16.39	17.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				500700/2503.5	518598/2592.99	536496/2682.48	
15MHz	DFT-s-OFDM BPSK	1	1	22.42	22.56	22.68	23.50
		1	36	22.65	22.66	22.63	23.50
		18	9	22.89	23.25	23.31	23.50
		36	0	22.99	23.12	22.90	23.50
	DFT-s-OFDM QPSK	1	1	22.42	22.55	22.72	23.50
		1	36	22.70	22.68	22.69	23.50
		18	9	23.21	23.40	23.30	23.50
		36	0	22.92	22.92	22.93	23.50
	DFT-s-OFDM 16QAM	1	1	21.09	21.31	21.50	22.50
		1	36	22.37	21.44	21.49	22.50
		18	9	22.35	22.26	22.30	22.50
	DFT-s-OFDM 64QAM	1	1	19.69	19.83	19.93	21.00
		1	36	20.01	19.92	19.92	21.00
		18	9	20.77	20.91	20.86	21.00
	DFT-s-OFDM 256QAM	1	1	18.66	18.59	18.94	19.00
		1	36	18.94	18.75	18.83	19.00
		18	9	18.89	18.82	18.76	19.00
	CP-OFDM QPSK	1	1	20.94	20.96	21.21	22.00
	CP-OFDM 16QAM	1	1	20.73	20.80	20.97	21.50
	CP-OFDM 64QAM	1	1	19.40	19.43	19.69	20.00
	CP-OFDM 256QAM	1	1	16.08	16.12	16.35	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	22.44	22.57	22.71	23.50
		1	49	22.68	22.71	22.67	23.50
		25	12	22.91	23.29	23.34	23.50
		50	0	23.02	23.17	22.94	23.50
	DFT-s-OFDM QPSK	1	1	22.45	22.60	22.76	23.50
		1	49	22.72	22.72	22.74	23.50
		25	12	23.25	23.42	23.34	23.50
		50	0	22.96	22.95	22.95	23.50
	DFT-s-OFDM 16QAM	1	1	21.13	21.33	21.54	22.50
		1	49	22.39	21.47	21.51	22.50
		25	12	22.38	22.30	22.33	22.50
	DFT-s-OF	1	1	19.72	19.85	19.96	21.00

	DM 64QAM	1	49	20.04	19.97	19.96	21.00
		25	12	20.79	20.95	20.89	21.00
	DFT-s-OFDM 256QAM	1	1	18.69	18.64	18.98	19.00
		1	49	18.97	18.80	18.87	19.00
		25	12	18.91	18.81	18.78	19.00
	CP-OFDM QPSK	1	1	20.97	20.96	21.24	22.00
	CP-OFDM 16QAM	1	1	20.72	20.82	21.00	21.50
	CP-OFDM 64QAM	1	1	19.43	19.48	19.69	20.00
	CP-OFDM 256QAM	1	1	16.10	16.16	16.38	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				503202/2516.01	518598/2592.99	534000/2670	
40MHz	DFT-s-OFDM BPSK	1	1	22.43	22.53	22.69	23.50
		1	104	22.66	22.70	22.64	23.50
		50	25	22.88	23.24	23.30	23.50
		100	0	23.00	23.13	22.91	23.50
	DFT-s-OFDM QPSK	1	1	22.42	22.55	22.72	23.50
		1	104	22.69	22.69	22.70	23.50
		50	25	23.23	23.38	23.29	23.50
		100	0	22.94	22.93	22.93	23.50
	DFT-s-OFDM 16QAM	1	1	21.11	21.29	21.49	22.50
		1	104	22.34	21.45	21.49	22.50
		50	25	22.36	22.27	22.31	22.50
	DFT-s-OFDM 64QAM	1	1	19.69	19.81	19.93	21.00
		1	104	20.01	19.95	19.93	21.00
		50	25	20.76	20.90	20.85	21.00
	DFT-s-OFDM 256QAM	1	1	18.67	18.60	18.95	19.00
		1	104	18.94	18.75	18.83	19.00
		50	25	18.86	18.79	18.76	19.00
	CP-OFDM QPSK	1	1	20.95	20.93	21.22	22.00
	CP-OFDM 16QAM	1	1	20.73	20.81	21.01	21.50
	CP-OFDM 64QAM	1	1	19.42	19.50	19.70	20.00
	CP-OFDM 256QAM	1	1	16.08	16.13	16.37	17.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				504204/2521.02	518598/2592.99	5329982665	
50MHz	DFT-s-OFDM BPSK	1	1	22.40	22.49	22.66	23.50
		1	131	22.65	22.66	22.62	23.50
		64	32	22.86	23.23	23.27	23.50
		128	0	22.97	23.08	22.87	23.50
	DFT-s-OFDM QPSK	1	1	22.40	22.51	22.69	23.50
		1	131	22.66	22.64	22.66	23.50
		64	32	23.20	23.33	23.25	23.50
		128	0	22.91	22.89	22.88	23.50
	DFT-s-OFDM 16QAM	1	1	21.08	21.24	21.45	22.50
		1	131	22.34	21.41	21.44	22.50
		64	32	22.32	22.25	22.27	22.50
	DFT-s-OFDM 64QAM	1	1	19.67	19.78	19.91	21.00
		1	131	19.98	19.91	19.90	21.00
		64	32	20.73	20.88	20.82	21.00
	DFT-s-OFDM 256QAM	1	1	18.64	18.55	18.91	19.00
		1	131	18.92	18.71	18.80	19.00
		64	32	18.84	18.75	18.71	19.00
	CP-OFDM QPSK	1	1	20.91	20.91	21.18	22.00
	CP-OFDM 16QAM	1	1	20.67	20.75	20.95	21.50
	CP-OFDM 64QAM	1	1	19.37	19.42	19.63	20.00
	CP-OFDM 256QAM	1	1	16.04	16.09	16.31	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				505200/2526	518598/2595.99	531996/2659.98	
60MHz	DFT-s-OFDM BPSK	1	1	22.37	22.47	22.62	23.50
		1	160	22.63	22.62	22.59	23.50
		81	40	22.83	23.18	23.23	23.50
		162	0	22.94	23.03	22.83	23.50
	DFT-s-OFDM QPSK	1	1	22.38	22.47	22.64	23.50
		1	160	22.64	22.62	22.62	23.50
		81	40	23.20	23.32	23.23	23.50
		162	0	22.91	22.85	22.85	23.50
	DFT-s-OFDM 16QAM	1	1	21.08	21.23	21.43	22.50
		1	160	22.31	21.37	21.41	22.50
		81	40	22.29	22.23	22.24	22.50
	DFT-s-OF	1	1	19.64	19.76	19.87	21.00

	DM 64QAM	1	160	19.96	19.87	19.87	21.00
		81	40	20.70	20.83	20.78	21.00
	DFT-s-OFDM 256QAM	1	1	18.61	18.50	18.87	19.00
		1	160	18.90	18.67	18.75	19.00
		81	40	18.81	18.75	18.68	19.00
	CP-OFDM QPSK	1	1	20.88	20.93	21.15	22.00
	CP-OFDM 16QAM	1	1	20.68	20.73	20.91	21.50
	CP-OFDM 64QAM	1	1	19.35	19.38	19.64	20.00
	CP-OFDM 256QAM	1	1	16.01	16.04	16.27	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				507204/2536.02	518598/2595.99	529998/2649.99	
80MHz	DFT-s-OFDM BPSK	1	1	22.39	22.48	22.65	23.50
		1	215	22.66	22.67	22.63	23.50
		108	54	22.85	23.22	23.26	23.50
		216	0	22.97	23.08	22.87	23.50
	DFT-s-OFDM QPSK	1	1	22.41	22.52	22.68	23.50
		1	215	22.66	22.66	22.67	23.50
		108	54	23.24	23.34	23.27	23.50
		216	0	22.95	22.88	22.87	23.50
	DFT-s-OFDM 16QAM	1	1	21.12	21.25	21.47	22.50
		1	215	22.33	21.40	21.43	22.50
		108	54	22.32	22.27	22.27	22.50
	DFT-s-OFDM 64QAM	1	1	19.67	19.78	19.90	21.00
		1	215	19.99	19.92	19.91	21.00
		108	54	20.72	20.87	20.81	21.00
	DFT-s-OFDM 256QAM	1	1	18.64	18.55	18.91	19.00
		1	215	18.93	18.72	18.79	19.00
		108	54	18.83	18.74	18.70	19.00
	CP-OFDM QPSK	1	1	20.91	20.93	21.18	22.00
	CP-OFDM 16QAM	1	1	20.67	20.75	20.94	21.50
	CP-OFDM 64QAM	1	1	19.38	19.43	19.64	20.00
	CP-OFDM 256QAM	1	1	16.03	16.08	16.30	17.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				508200/2541	518598/2595.99	528996/2644.98	
90MHz	DFT-s-OFDM BPSK	1	1	22.38	22.44	22.63	23.50
		1	243	22.64	22.66	22.60	23.50
		120	60	22.82	23.17	23.22	23.50
		243	0	22.95	23.04	22.84	23.50
	DFT-s-OFDM QPSK	1	1	22.38	22.47	22.64	23.50
		1	243	22.63	22.63	22.63	23.50
		120	60	23.22	23.30	23.22	23.50
		243	0	22.93	22.86	22.85	23.50
	DFT-s-OFDM 16QAM	1	1	21.10	21.21	21.42	22.50
		1	243	22.28	21.38	21.41	22.50
		120	60	22.30	22.24	22.25	22.50
	DFT-s-OFDM 64QAM	1	1	19.64	19.74	19.87	21.00
		1	243	19.96	19.90	19.88	21.00
		120	60	20.69	20.82	20.77	21.00
	DFT-s-OFDM 256QAM	1	1	18.62	18.51	18.88	19.00
		1	243	18.90	18.67	18.75	19.00
		120	60	18.78	18.72	18.68	19.00
	CP-OFDM QPSK	1	1	20.89	20.90	21.16	22.00
	CP-OFDM 16QAM	1	1	20.68	20.74	20.95	21.50
	CP-OFDM 64QAM	1	1	19.37	19.45	19.65	20.00
	CP-OFDM 256QAM	1	1	16.01	16.05	16.29	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				509202/2546.01	518598/2592.99	528000/2640	
100MHz	DFT-s-OFDM BPSK	1	1	22.35	22.40	22.60	23.50
		1	271	22.63	22.62	22.58	23.50
		135	67	22.80	23.16	23.19	23.50
		270	0	22.92	22.99	22.80	23.50
	DFT-s-OFDM QPSK	1	1	22.36	22.43	**22.61**	23.50
		1	271	**22.60**	**22.58**	22.59	23.50
		135	67	23.19	**23.25**	23.18	23.50
		270	0	**22.90**	22.82	22.80	23.50
	DFT-s-OFDM 16QAM	1	1	21.07	21.16	21.38	22.50
		1	271	21.39	21.34	21.36	22.50
		135	67	22.26	22.22	22.21	22.50
	DFT-s-OF	1	1	19.62	19.71	19.85	21.00

	DM 64QAM	1	271	19.93	19.86	19.85	21.00
		135	67	20.66	20.80	20.74	21.00
	DFT-s-OFDM 256QAM	1	1	18.59	18.46	18.84	19.00
		1	271	18.88	18.63	18.72	19.00
		135	67	18.76	18.68	18.63	19.00
	CP-OFDM QPSK	1	1	20.85	20.88	21.12	22.00
	CP-OFDM 16QAM	1	1	20.62	20.68	20.89	21.50
	CP-OFDM 64QAM	1	1	19.32	19.37	19.58	20.00
	CP-OFDM 256QAM	1	1	15.97	16.01	16.23	17.00

NR n41 Receiver on & Hotspot on				Conducted Power(dBm)			Tune-up Limit
				Channel/Frequency (MHz)			
Bandwidth	Modulation	RB size	RB offset	500202/2501.01	5185.98/2592.99	537000/2685	
10MHz	DFT-s-OFDM BPSK	1	1	19.08	19.30	19.42	20.50
		1	22	19.19	19.24	19.27	20.50
		12	6	19.51	19.89	20.03	20.50
		24	0	19.60	19.80	19.57	20.50
	DFT-s-OFDM QPSK	1	1	19.24	19.33	19.48	20.50
		1	22	19.41	19.32	19.36	20.50
		12	6	19.74	19.92	19.82	20.50
		24	0	19.81	19.90	19.86	20.50
	DFT-s-OFDM 16QAM	1	1	17.86	18.09	17.78	19.50
		1	22	18.05	18.10	18.94	19.50
		12	6	18.95	18.94	18.98	19.50
	DFT-s-OFDM 64QAM	1	1	16.51	16.66	16.37	18.00
		1	22	16.57	16.67	16.80	18.00
		12	6	17.53	17.46	17.48	18.00
	DFT-s-OFDM 256QAM	1	1	15.23	15.56	15.41	16.00
		1	22	15.36	15.35	15.66	16.00
		12	6	15.42	15.30	15.52	16.00
	CP-OFDM QPSK	1	1	17.64	17.79	17.61	19.00
	CP-OFDM 16QAM	1	1	17.48	17.66	17.51	18.50
	CP-OFDM 64QAM	1	1	16.11	16.40	16.15	17.00
	CP-OFDM	1	1	12.73	13.04	12.80	14.00

	256QAM						
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				500700/2503.5	518598/2592.99	536496/2682.48	
15MHz	DFT-s-OFDM BPSK	1	1	19.05	19.28	19.38	20.50
		1	36	19.17	19.20	19.24	20.50
		18	9	19.48	19.84	19.99	20.50
		36	0	19.57	19.75	19.53	20.50
	DFT-s-OFDM QPSK	1	1	19.22	19.29	19.43	20.50
		1	36	19.39	19.30	19.32	20.50
		18	9	19.74	19.91	19.80	20.50
		36	0	19.81	19.86	19.83	20.50
	DFT-s-OFDM 16QAM	1	1	17.86	18.07	17.75	19.50
		1	36	18.02	18.08	18.90	19.50
		18	9	18.93	18.90	18.95	19.50
	DFT-s-OFDM 64QAM	1	1	16.48	16.61	16.33	18.00
		1	36	16.54	16.62	16.76	18.00
		18	9	17.51	17.42	17.43	18.00
	DFT-s-OFDM 256QAM	1	1	15.20	15.56	15.38	16.00
		1	36	15.33	15.37	15.63	16.00
		18	9	15.43	15.28	15.48	16.00
	CP-OFDM QPSK	1	1	17.62	17.75	17.62	19.00
	CP-OFDM 16QAM	1	1	17.45	17.61	17.47	18.50
	CP-OFDM 64QAM	1	1	16.08	16.35	16.11	17.00
	CP-OFDM 256QAM	1	1	12.71	13.00	12.75	14.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				501204/2506.2	518598/2592.99	535998/2679.99	
20MHz	DFT-s-OFDM BPSK	1	1	19.07	19.29	19.41	20.50
		1	49	19.20	19.25	19.28	20.50
		25	12	19.50	19.88	20.02	20.50
		50	0	19.60	19.80	19.57	20.50
	DFT-s-OFDM QPSK	1	1	19.25	19.34	19.47	20.50
		1	49	19.41	19.34	19.37	20.50
		25	12	19.78	19.93	19.84	20.50
		50	0	19.85	19.89	19.85	20.50
	DFT-s-OFDM 16QAM	1	1	17.90	18.11	17.78	19.50
		1	49	18.05	18.10	18.93	19.50
		25	12	18.96	18.95	18.99	19.50

	DFT-s-OFDM 64QAM	1	1	16.50	16.65	16.36	18.00
		1	49	16.57	16.67	16.80	18.00
		25	12	17.54	17.47	17.47	18.00
	DFT-s-OFDM 256QAM	1	1	15.22	15.55	15.40	16.00
		1	49	15.36	15.37	15.66	16.00
		25	12	15.42	15.30	15.51	16.00
	CP-OFDM QPSK	1	1	17.65	17.80	17.62	19.00
	CP-OFDM 16QAM	1	1	17.47	17.65	17.50	18.50
	CP-OFDM 64QAM	1	1	16.11	16.40	16.15	17.00
	CP-OFDM 256QAM	1	1	12.74	13.05	12.79	14.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				503202/2516.01	518598/2592.99	534000/2670	
40MHz	DFT-s-OFDM BPSK	1	1	19.06	19.25	19.39	20.50
		1	104	19.18	19.24	19.25	20.50
		50	25	19.47	19.83	19.98	20.50
		100	0	19.58	19.76	19.54	20.50
	DFT-s-OFDM QPSK	1	1	19.22	19.29	19.43	20.50
		1	104	19.38	19.31	19.33	20.50
		50	25	19.76	19.89	19.79	20.50
		100	0	19.83	19.87	19.83	20.50
	DFT-s-OFDM 16QAM	1	1	17.88	18.08	17.76	19.50
		1	104	18.03	18.06	18.90	19.50
		50	25	18.93	18.93	18.96	19.50
	DFT-s-OFDM 64QAM	1	1	16.47	16.60	16.32	18.00
		1	104	16.55	16.63	16.77	18.00
		50	25	17.51	17.42	17.43	18.00
	DFT-s-OFDM 256QAM	1	1	15.17	15.53	15.38	16.00
		1	104	15.34	15.34	15.64	16.00
		50	25	15.43	15.29	15.52	16.00
	CP-OFDM QPSK	1	1	17.64	17.82	17.63	19.00
	CP-OFDM 16QAM	1	1	17.45	17.62	17.49	18.50
	CP-OFDM 64QAM	1	1	16.09	16.36	16.12	17.00
	CP-OFDM 256QAM	1	1	12.71	13.00	12.75	14.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				504204/2521.02	518598/2592.99	5329982665	
50MHz	DFT-s-OFDM BPSK	1	1	19.03	19.21	19.36	20.50
		1	131	19.17	19.20	19.23	20.50
		64	32	19.45	19.82	19.95	20.50
		128	0	19.55	19.71	19.50	20.50
	DFT-s-OFDM QPSK	1	1	19.20	19.25	19.40	20.50
		1	131	19.35	19.26	19.29	20.50
		64	32	19.73	19.84	19.75	20.50
		128	0	19.80	19.83	19.78	20.50
	DFT-s-OFDM 16QAM	1	1	17.85	18.06	17.72	19.50
		1	131	18.00	18.03	18.88	19.50
		64	32	18.90	18.89	18.93	19.50
	DFT-s-OFDM 64QAM	1	1	16.44	16.58	16.29	18.00
		1	131	16.52	16.58	16.73	18.00
		64	32	17.49	17.38	17.40	18.00
	DFT-s-OFDM 256QAM	1	1	15.15	15.49	15.33	16.00
		1	131	15.30	15.32	15.60	16.00
		64	32	15.37	15.23	15.46	16.00
	CP-OFDM QPSK	1	1	17.59	17.74	17.56	19.00
	CP-OFDM 16QAM	1	1	17.41	17.58	17.43	18.50
	CP-OFDM 64QAM	1	1	16.06	16.31	16.08	17.00
	CP-OFDM 256QAM	1	1	12.69	12.96	12.72	14.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				505200/2526	518598/2595.99	531996/2659.98	
60MHz	DFT-s-OFDM BPSK	1	1	19.00	19.19	19.32	20.50
		1	160	19.15	19.16	19.20	20.50
		81	40	19.42	19.77	19.91	20.50
		162	0	19.52	19.66	19.46	20.50
	DFT-s-OFDM QPSK	1	1	19.18	19.21	19.35	20.50
		1	160	19.33	19.24	19.25	20.50
		81	40	19.73	19.83	19.73	20.50
		162	0	19.80	19.79	19.75	20.50
	DFT-s-OFDM 16QAM	1	1	17.85	18.04	17.69	19.50
		1	160	17.97	18.01	18.84	19.50
		81	40	18.88	18.85	18.90	19.50
	DFT-s-OF	1	1	16.41	16.53	16.25	18.00

	DM 64QAM	1	160	16.49	16.53	16.69	18.00
		81	40	17.47	17.34	17.35	18.00
	DFT-s-OFDM 256QAM	1	1	15.12	15.49	15.30	16.00
		1	160	15.27	15.34	15.57	16.00
		81	40	15.38	15.21	15.42	16.00
	CP-OFDM QPSK	1	1	17.57	17.70	17.57	19.00
	CP-OFDM 16QAM	1	1	17.38	17.53	17.39	18.50
	CP-OFDM 64QAM	1	1	16.03	16.26	16.04	17.00
	CP-OFDM 256QAM	1	1	12.67	12.92	12.67	14.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				507204/2536.02	518598/2595.99	529998/2649.99	
80MHz	DFT-s-OFDM BPSK	1	1	19.02	19.20	19.35	20.50
		1	215	19.18	19.21	19.24	20.50
		108	54	19.44	19.81	19.94	20.50
		216	0	19.55	19.71	19.50	20.50
	DFT-s-OFDM QPSK	1	1	19.21	19.26	19.39	20.50
		1	215	19.35	19.28	19.30	20.50
		108	54	19.77	19.85	19.77	20.50
		216	0	19.84	19.82	19.77	20.50
	DFT-s-OFDM 16QAM	1	1	17.89	18.08	17.72	19.50
		1	215	18.00	18.03	18.87	19.50
		108	54	18.91	18.90	18.94	19.50
	DFT-s-OFDM 64QAM	1	1	16.43	16.57	16.28	18.00
		1	215	16.52	16.58	16.73	18.00
		108	54	17.50	17.39	17.39	18.00
	DFT-s-OFDM 256QAM	1	1	15.14	15.48	15.32	16.00
		1	215	15.30	15.34	15.60	16.00
		108	54	15.37	15.23	15.45	16.00
	CP-OFDM QPSK	1	1	17.60	17.75	17.57	19.00
	CP-OFDM 16QAM	1	1	17.40	17.57	17.42	18.50
	CP-OFDM 64QAM	1	1	16.06	16.31	16.08	17.00
	CP-OFDM 256QAM	1	1	12.70	12.97	12.71	14.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				508200/2541	518598/2595.99	528996/2644.98	
90MHz	DFT-s-OFDM BPSK	1	1	19.01	19.16	19.33	20.50
		1	243	19.16	19.20	19.21	20.50
		120	60	19.41	19.76	19.90	20.50
		243	0	19.53	19.67	19.47	20.50
	DFT-s-OFDM QPSK	1	1	19.18	19.21	19.35	20.50
		1	243	19.32	19.25	19.26	20.50
		120	60	19.75	19.81	19.72	20.50
		243	0	19.82	19.80	19.75	20.50
	DFT-s-OFDM 16QAM	1	1	17.87	18.05	17.70	19.50
		1	243	17.98	17.99	18.84	19.50
		120	60	18.88	18.88	18.91	19.50
	DFT-s-OFDM 64QAM	1	1	16.40	16.52	16.24	18.00
		1	243	16.50	16.54	16.70	18.00
		120	60	17.47	17.34	17.35	18.00
	DFT-s-OFDM 256QAM	1	1	15.09	15.46	15.30	16.00
		1	243	15.28	15.31	15.58	16.00
		120	60	15.38	15.22	15.46	16.00
	CP-OFDM QPSK	1	1	17.59	17.77	17.58	19.00
	CP-OFDM 16QAM	1	1	17.38	17.54	17.41	18.50
	CP-OFDM 64QAM	1	1	16.04	16.27	16.05	17.00
	CP-OFDM 256QAM	1	1	12.67	12.92	12.67	14.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				509202/2546.01	518598/2592.99	528000/2640	
100MHz	DFT-s-OFDM BPSK	1	1	18.98	19.12	19.30	20.50
		1	271	19.15	19.16	19.19	20.50
		135	67	19.39	19.75	19.87	20.50
		270	0	19.50	19.62	19.43	20.50
	DFT-s-OFDM QPSK	1	1	19.16	19.17	**19.32**	20.50
		1	271	**19.29**	**19.20**	19.22	20.50
		135	67	19.72	**19.76**	19.68	20.50
		270	0	**19.79**	19.76	19.70	20.50
	DFT-s-OFDM 16QAM	1	1	17.84	18.03	17.66	19.50
		1	271	17.95	17.96	18.82	19.50
		135	67	18.85	18.84	18.88	19.50
	DFT-s-OF	1	1	16.37	16.50	16.21	18.00

	DM 64QAM	1	271	16.47	16.49	16.66	18.00
		135	67	17.45	17.30	17.32	18.00
	DFT-s-OFDM 256QAM	1	1	15.07	15.42	15.25	16.00
		1	271	15.24	15.29	15.54	16.00
		135	67	15.32	15.16	15.40	16.00
	CP-OFDM QPSK	1	1	17.54	17.69	17.51	19.00
	CP-OFDM 16QAM	1	1	17.34	17.50	17.35	18.50
	CP-OFDM 64QAM	1	1	16.01	16.22	16.01	17.00
	CP-OFDM 256QAM	1	1	12.65	12.88	12.64	14.00

NR n66 Full Power & Receiver on & Receiver off				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	21.86	21.89	21.84	23.00
		1	23	21.84	21.87	21.74	23.00
		12	6	22.52	22.60	22.52	23.00
		25	0	22.08	22.30	22.18	23.00
	DFT-s-OFDM QPSK	1	1	21.81	21.88	21.86	23.00
		1	23	21.80	21.88	21.76	23.00
		12	6	22.49	22.58	22.49	23.00
		25	0	22.07	22.17	22.22	23.00
	DFT-s-OFDM 16QAM	1	1	20.59	20.62	20.59	22.00
		1	23	21.55	20.65	20.64	22.00
		12	6	21.53	21.45	21.50	22.00
	DFT-s-OFDM 64QAM	1	1	19.35	19.31	19.34	21.00
		1	23	19.28	19.39	19.30	21.00
		12	6	20.20	20.19	20.17	21.00
	DFT-s-OFDM 256QAM	1	1	17.89	17.97	17.93	19.00
		1	23	17.94	17.98	18.30	19.00
		12	6	18.09	18.15	18.12	19.00
	CP-OFDM QPSK	1	1	20.44	20.37	20.42	22.00
	CP-OFDM 16QAM	1	1	20.19	20.17	20.17	21.50
	CP-OFDM 64QAM	1	1	18.65	18.65	18.66	20.00
	CP-OFDM 256QAM	1	1	15.33	15.35	15.37	17.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	21.83	21.87	21.80	23.00
		1	50	21.82	21.83	21.71	23.00
		25	12	22.49	22.55	22.48	23.00
		50	0	22.05	22.25	22.14	23.00
	DFT-s-OFDM QPSK	1	1	21.79	21.84	21.81	23.00
		1	50	21.78	21.86	21.72	23.00
		25	12	22.49	22.57	22.47	23.00
		50	0	22.07	22.13	22.19	23.00
	DFT-s-OFDM 16QAM	1	1	20.59	20.61	20.57	22.00
		1	50	21.52	20.61	20.61	22.00
		25	12	21.50	21.43	21.47	22.00
	DFT-s-OFDM 64QAM	1	1	19.32	19.29	19.30	21.00
		1	50	19.26	19.35	19.27	21.00
		25	12	20.17	20.14	20.13	21.00
	DFT-s-OFDM 256QAM	1	1	17.86	17.92	17.89	19.00
		1	50	17.92	17.94	18.25	19.00
		25	12	18.06	18.15	18.09	19.00
	CP-OFDM QPSK	1	1	20.41	20.39	20.39	22.00
	CP-OFDM 16QAM	1	1	20.20	20.15	20.13	21.50
	CP-OFDM 64QAM	1	1	18.63	18.61	18.67	20.00
	CP-OFDM 256QAM	1	1	15.30	15.30	15.33	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	21.85	21.88	21.83	23.00
		1	77	21.85	21.88	21.75	23.00
		36	18	22.51	22.59	22.51	23.00
		75	0	22.08	22.30	22.18	23.00
	DFT-s-OFDM QPSK	1	1	21.82	21.89	21.85	23.00
		1	77	21.80	21.90	21.77	23.00
		36	18	22.53	22.59	22.51	23.00
		75	0	22.11	22.16	22.21	23.00
	DFT-s-OFDM 16QAM	1	1	20.63	20.63	20.61	22.00
		1	77	21.54	20.64	20.63	22.00
		36	18	21.53	21.47	21.50	22.00
	DFT-s-OFDM 64QAM	1	1	19.35	19.31	19.33	21.00
		1	77	19.29	19.40	19.31	21.00
		36	18	20.19	20.18	20.16	21.00

	DFT-s-OFDM 256QAM	1	1	17.89	17.97	17.93	19.00
		1	77	17.95	17.99	18.29	19.00
		36	18	18.08	18.14	18.11	19.00
	CP-OFDM QPSK	1	1	20.44	20.39	20.42	22.00
	CP-OFDM 16QAM	1	1	20.19	20.17	20.16	21.50
	CP-OFDM 64QAM	1	1	18.66	18.66	18.67	20.00
	CP-OFDM 256QAM	1	1	15.32	15.34	15.36	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	21.84	21.84	21.81	23.00
		1	104	21.83	21.87	21.72	23.00
		50	25	22.48	22.54	22.47	23.00
		100	0	22.06	22.26	22.15	23.00
	DFT-s-OFDM QPSK	1	1	21.79	21.84	21.81	23.00
		1	104	21.77	21.87	21.73	23.00
		50	25	22.51	22.55	22.46	23.00
		100	0	22.09	22.14	22.19	23.00
	DFT-s-OFDM 16QAM	1	1	20.61	20.59	20.56	22.00
		1	104	21.49	20.62	20.61	22.00
		50	25	21.51	21.44	21.48	22.00
	DFT-s-OFDM 64QAM	1	1	19.32	19.27	19.30	21.00
		1	104	19.26	19.38	19.28	21.00
		50	25	20.16	20.13	20.12	21.00
	DFT-s-OFDM 256QAM	1	1	17.87	17.93	17.90	19.00
		1	104	17.92	17.94	18.25	19.00
		50	25	18.03	18.12	18.09	19.00
	CP-OFDM QPSK	1	1	20.42	20.36	20.40	22.00
	CP-OFDM 16QAM	1	1	20.20	20.16	20.17	21.50
	CP-OFDM 64QAM	1	1	18.65	18.68	18.68	20.00
	CP-OFDM 256QAM	1	1	15.30	15.31	15.35	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				346000/1730	349000/1745	352000/1760	
40MHz	DFT-s-OFDM BPSK	1	1	21.81	21.80	21.78	23.00
		1	214	21.82	21.83	21.70	23.00
		108	54	22.46	22.53	22.44	23.00

		216	0	22.03	22.21	22.11	23.00
	DFT-s-OFDM QPSK	1	1	**21.77**	21.80	**21.78**	23.00
		1	214	21.74	**21.82**	21.69	23.00
		108	54	22.48	**22.50**	22.42	23.00
		216	0	22.06	22.10	**22.14**	23.00
	DFT-s-OFDM 16QAM	1	1	20.58	20.54	20.52	22.00
		1	214	20.54	20.58	20.56	22.00
		108	54	21.47	21.42	21.44	22.00
	DFT-s-OFDM 64QAM	1	1	19.30	19.24	19.28	21.00
		1	214	19.23	19.34	19.25	21.00
		108	54	20.13	20.11	20.09	21.00
	DFT-s-OFDM 256QAM	1	1	17.84	17.88	17.86	19.00
		1	214	17.90	17.90	18.22	19.00
		108	54	18.01	18.08	18.04	19.00
	CP-OFDM QPSK	1	1	20.38	20.34	20.36	22.00
	CP-OFDM 16QAM	1	1	20.14	20.10	20.11	21.50
	CP-OFDM 64QAM	1	1	18.60	18.60	18.61	20.00
	CP-OFDM 256QAM	1	1	15.26	15.27	15.29	17.00

NR n66 Hotspot on				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				342500/1712.5	349000/1745	355500/1777.5	
5MHz	DFT-s-OFDM BPSK	1	1	19.64	19.61	19.53	20.50
		1	23	19.51	19.46	19.43	20.50
		12	6	20.21	20.20	20.23	20.50
		25	0	19.77	19.93	19.89	20.50
	DFT-s-OFDM QPSK	1	1	19.45	19.44	19.44	20.50
		1	23	19.48	19.52	19.52	20.50
		12	6	20.01	20.14	20.10	20.50
		25	0	19.85	20.06	19.92	20.50
	DFT-s-OFDM 16QAM	1	1	18.26	18.38	18.48	19.50
		1	23	18.33	18.66	18.39	19.50
		12	6	19.21	18.71	19.23	19.50
	DFT-s-OFDM 64QAM	1	1	17.06	17.06	17.10	18.50
		1	23	17.01	17.01	17.18	18.50
		12	6	17.97	17.99	17.98	18.50
	DFT-s-OFDM	1	1	15.76	15.69	15.78	16.50
		1	23	16.00	15.58	15.66	16.50

	256QAM	12	6	15.83	15.74	15.80	16.50
	CP-OFDM QPSK	1	1	18.13	18.10	18.03	19.50
	CP-OFDM 16QAM	1	1	17.90	17.87	17.85	19.00
	CP-OFDM 64QAM	1	1	16.42	16.36	16.34	17.50
	CP-OFDM 256QAM	1	1	13.16	13.13	13.13	14.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				343000/1715	349000/1745	355000/1775	
10MHz	DFT-s-OFDM BPSK	1	1	19.61	19.59	19.49	20.50
		1	50	19.49	19.42	19.40	20.50
		25	12	20.18	20.15	20.19	20.50
		50	0	19.74	19.88	19.85	20.50
	DFT-s-OFDM QPSK	1	1	19.43	19.40	19.39	20.50
		1	50	19.46	19.50	19.48	20.50
		25	12	20.01	20.13	20.08	20.50
		50	0	19.85	20.02	19.89	20.50
	DFT-s-OFDM 16QAM	1	1	18.26	18.36	18.45	19.50
		1	50	18.30	18.64	18.35	19.50
		25	12	19.19	18.67	19.20	19.50
	DFT-s-OFDM 64QAM	1	1	17.03	17.01	17.06	18.50
		1	50	16.98	16.96	17.14	18.50
		25	12	17.95	17.95	17.93	18.50
	DFT-s-OFDM 256QAM	1	1	15.73	15.69	15.75	16.50
		1	50	15.97	15.60	15.63	16.50
		25	12	15.84	15.72	15.76	16.50
	CP-OFDM QPSK	1	1	18.11	18.06	18.04	19.50
	CP-OFDM 16QAM	1	1	17.87	17.82	17.81	19.00
	CP-OFDM 64QAM	1	1	16.39	16.31	16.30	17.50
	CP-OFDM 256QAM	1	1	13.14	13.09	13.08	14.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				343500/1717.5	349000/1745	354500/1772.5	
15MHz	DFT-s-OFDM BPSK	1	1	19.63	19.60	19.52	20.50
		1	77	19.52	19.47	19.44	20.50
		36	18	20.20	20.19	20.22	20.50
		75	0	19.77	19.93	19.89	20.50
	DFT-s-OF	1	1	19.46	19.45	19.43	20.50

	DM QPSK	1	77	19.48	19.54	19.53	20.50
		36	18	20.05	20.15	20.12	20.50
		75	0	19.89	20.05	19.91	20.50
	DFT-s-OFDM 16QAM	1	1	18.30	18.40	18.48	19.50
		1	77	18.33	18.66	18.38	19.50
		36	18	19.22	18.72	19.24	19.50
	DFT-s-OFDM 64QAM	1	1	17.05	17.05	17.09	18.50
		1	77	17.01	17.01	17.18	18.50
		36	18	17.98	18.00	17.97	18.50
	DFT-s-OFDM 256QAM	1	1	15.75	15.68	15.77	16.50
		1	77	16.00	15.60	15.66	16.50
		36	18	15.83	15.74	15.79	16.50
	CP-OFDM QPSK	1	1	18.14	18.11	18.04	19.50
	CP-OFDM 16QAM	1	1	17.89	17.86	17.84	19.00
	CP-OFDM 64QAM	1	1	16.42	16.36	16.34	17.50
	CP-OFDM 256QAM	1	1	13.17	13.14	13.12	14.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				344000/1720	349000/1745	354000/1770	
20MHz	DFT-s-OFDM BPSK	1	1	19.62	19.56	19.50	20.50
		1	104	19.50	19.46	19.41	20.50
		50	25	20.17	20.14	20.18	20.50
		100	0	19.75	19.89	19.86	20.50
	DFT-s-OFDM QPSK	1	1	19.43	19.40	19.39	20.50
		1	104	19.45	19.51	19.49	20.50
		50	25	20.03	20.11	20.07	20.50
		100	0	19.87	20.03	19.89	20.50
	DFT-s-OFDM 16QAM	1	1	18.28	18.37	18.46	19.50
		1	104	18.31	18.62	18.35	19.50
		50	25	19.19	18.70	19.21	19.50
	DFT-s-OFDM 64QAM	1	1	17.02	17.00	17.05	18.50
		1	104	16.99	16.97	17.15	18.50
		50	25	17.95	17.95	17.93	18.50
	DFT-s-OFDM 256QAM	1	1	15.70	15.66	15.75	16.50
		1	104	15.98	15.57	15.64	16.50
		50	25	15.84	15.73	15.80	16.50
	CP-OFDM QPSK	1	1	18.13	18.13	18.05	19.50
	CP-OFDM 16QAM	1	1	17.87	17.83	17.83	19.00

	CP-OFDM 64QAM	1	1	16.40	16.32	16.31	17.50
	CP-OFDM 256QAM	1	1	13.14	13.09	13.08	14.50
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				346000/1730	349000/1745	352000/1760	
40MHz	DFT-s-OFDM BPSK	1	1	19.59	19.52	19.47	20.50
		1	214	19.49	19.42	19.39	20.50
		108	54	20.15	20.13	20.15	20.50
		216	0	19.72	19.84	19.82	20.50
	DFT-s-OFDM QPSK	1	1	19.41	19.36	19.36	20.50
		1	214	**19.42**	**19.46**	**19.45**	20.50
		108	54	20.00	**20.06**	20.03	20.50
		216	0	19.84	**19.99**	19.84	20.50
	DFT-s-OFDM 16QAM	1	1	18.25	18.35	18.42	19.50
		1	214	18.28	18.59	18.33	19.50
		108	54	19.16	18.66	19.18	19.50
	DFT-s-OFDM 64QAM	1	1	16.99	16.98	17.02	18.50
		1	214	16.96	16.92	17.11	18.50
		108	54	17.93	17.91	17.90	18.50
	DFT-s-OFDM 256QAM	1	1	15.68	15.62	15.70	16.50
		1	214	15.94	15.55	15.60	16.50
		108	54	15.78	15.67	15.74	16.50
	CP-OFDM QPSK	1	1	18.08	18.05	17.98	19.50
	CP-OFDM 16QAM	1	1	17.83	17.79	17.77	19.00
	CP-OFDM 64QAM	1	1	16.37	16.27	16.27	17.50
	CP-OFDM 256QAM	1	1	13.12	13.05	13.05	14.50

NR n71 Full Power & Receiver on & Receiver off & Hotspot on				Conducted Power(dBm)			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				133100/665.5	136100/680.5	139100/695.5	
5MHz	DFT-s-OFDM BPSK	1	1	22.95	22.79	22.78	23.50
		1	23	22.80	22.80	22.85	23.50
		12	6	22.93	22.93	22.95	23.50
		25	0	22.81	22.78	22.85	23.50
	DFT-s-OFDM	1	1	22.89	22.74	22.76	23.50
		1	23	22.75	22.77	22.86	23.50

	QPSK	12	6	22.94	22.95	22.93	23.50
		25	0	22.52	22.71	22.70	23.50
	DFT-s-OFDM 16QAM	1	1	21.58	21.55	21.52	22.50
		1	23	21.91	21.52	21.47	22.50
		12	6	21.89	21.88	21.89	22.50
	DFT-s-OFDM 64QAM	1	1	20.09	20.07	20.06	21.00
		1	23	19.99	20.07	20.14	21.00
		12	6	20.38	20.38	20.42	21.00
	DFT-s-OFDM 256QAM	1	1	18.71	18.66	18.64	19.00
		1	23	18.63	18.66	18.72	19.00
		12	6	18.46	18.43	18.45	19.00
	CP-OFDM QPSK	1	1	21.39	21.32	21.31	22.00
	CP-OFDM 16QAM	1	1	21.19	21.08	21.05	21.50
	CP-OFDM 64QAM	1	1	19.45	19.35	19.42	20.00
	CP-OFDM 256QAM	1	1	16.10	16.01	16.03	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				133600/668	136100/680.5	138600/693	
10MHz	DFT-s-OFDM BPSK	1	1	22.97	22.80	22.81	23.50
		1	50	22.83	22.85	22.89	23.50
		25	12	22.95	22.97	22.98	23.50
		50	0	22.84	22.83	22.89	23.50
	DFT-s-OFDM QPSK	1	1	22.92	22.79	22.80	23.50
		1	50	22.77	22.81	22.91	23.50
		25	12	22.98	22.97	22.97	23.50
		50	0	22.56	22.74	22.72	23.50
	DFT-s-OFDM 16QAM	1	1	21.62	21.57	21.56	22.50
		1	50	21.93	21.55	21.49	22.50
		25	12	21.92	21.92	21.92	22.50
	DFT-s-OFDM 64QAM	1	1	20.12	20.09	20.09	21.00
		1	50	20.02	20.12	20.18	21.00
		25	12	20.40	20.42	20.45	21.00
	DFT-s-OFDM 256QAM	1	1	18.74	18.71	18.68	19.00
		1	50	18.66	18.71	18.76	19.00
		25	12	18.48	18.42	18.47	19.00
	CP-OFDM QPSK	1	1	21.42	21.32	21.34	22.00
	CP-OFDM 16QAM	1	1	21.18	21.10	21.08	21.50
	CP-OFDM	1	1	19.48	19.40	19.42	20.00

	64QAM						
	CP-OFDM 256QAM	1	1	16.12	16.05	16.06	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				134100/670.5	136100/680.5	138100/690.5	
15MHz	DFT-s-OFDM BPSK	1	1	22.96	22.76	22.79	23.50
		1	77	22.81	22.84	22.86	23.50
		36	18	22.92	22.92	22.94	23.50
		75	0	22.82	22.79	22.86	23.50
	DFT-s-OFDM QPSK	1	1	22.89	22.74	22.76	23.50
		1	77	22.74	22.78	22.87	23.50
		36	18	22.96	22.93	22.92	23.50
		75	0	22.54	22.72	22.70	23.50
	DFT-s-OFDM 16QAM	1	1	21.60	21.53	21.51	22.50
		1	77	21.88	21.53	21.47	22.50
		36	18	21.90	21.89	21.90	22.50
	DFT-s-OFDM 64QAM	1	1	20.09	20.05	20.06	21.00
		1	77	19.99	20.10	20.15	21.00
		36	18	20.37	20.37	20.41	21.00
	DFT-s-OFDM 256QAM	1	1	18.72	18.67	18.65	19.00
		1	77	18.63	18.66	18.72	19.00
		36	18	18.43	18.40	18.45	19.00
	CP-OFDM QPSK	1	1	21.40	21.29	21.32	22.00
	CP-OFDM 16QAM	1	1	21.19	21.09	21.09	21.50
	CP-OFDM 64QAM	1	1	19.47	19.42	19.43	20.00
	CP-OFDM 256QAM	1	1	16.10	16.02	16.05	17.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				134600/673	136100/680.5	137600/688	
20MHz	DFT-s-OFDM BPSK	1	1	22.93	22.72	22.76	23.50
		1	104	22.80	22.80	22.84	23.50
		50	25	22.90	22.91	22.91	23.50
		100	0	22.79	22.74	22.82	23.50
	DFT-s-OFDM QPSK	1	1	**22.87**	22.70	22.73	23.50
		1	104	22.71	**22.73**	**22.83**	23.50
		50	25	**22.93**	22.88	22.88	23.50
		100	0	22.51	**22.68**	22.65	23.50
	DFT-s-OFDM 16QAM	1	1	21.57	21.48	21.47	22.50
		1	104	21.51	21.49	21.42	22.50
		50	25	21.86	21.87	21.86	22.50

	DFT-s-OFDM 64QAM	1	1	20.07	20.02	20.04	21.00
		1	104	19.96	20.06	20.12	21.00
		50	25	20.34	20.35	20.38	21.00
	DFT-s-OFDM 256QAM	1	1	18.69	18.62	18.61	19.00
		1	104	18.61	18.62	18.69	19.00
		50	25	18.41	18.36	18.40	19.00
	CP-OFDM QPSK	1	1	21.36	21.27	21.28	22.00
	CP-OFDM 16QAM	1	1	21.13	21.03	21.03	21.50
	CP-OFDM 64QAM	1	1	19.42	19.34	19.36	20.00
	CP-OFDM 256QAM	1	1	16.06	15.98	15.99	17.00

9.4 WLAN Mode

Wi-Fi 2.4G Full Power & Receiver on & Receiver off Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	17.00	**15.72**
	6/2437	17.00	15.41
	11/2462	17.00	15.38
802.11g (6M)	1/2412	16.00	15.17
	6/2437	16.00	14.65
	11/2462	16.00	14.38
802.11n-HT20 (MCS0)	1/2412	16.00	15.08
	6/2437	16.00	14.47
	11/2462	16.00	14.24
802.11n-HT40 (MCS0)	3/2422	16.00	14.46
	6/2437	16.00	14.54
	9/2452	16.00	14.40
Note: Initial test configuration is 802.11b mode.			

Wi-Fi 5G (U-NII-1) Full Power & Receiver on & Receiver off Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	16.50	14.84
	40/5200	16.50	14.90
	44/5220	16.50	14.84
	48/5240	16.50	**14.97**
802.11n-HT20 (MCS0)	36/5180	16.50	14.73
	40/5200	16.50	14.76
	44/5220	16.50	14.75
	48/5240	16.50	14.71
802.11n-HT40 (MCS0)	38/5190	16.50	14.59
	46/5230	16.50	14.63
802.11ac-VHT20 (MCS0)	36/5180	12.50	10.51
	40/5200	12.50	10.58
	44/5220	12.50	10.63

	48/5240	12.50	10.64
802.11ac-VHT40 (MCS0)	38/5190	12.50	10.50
	46/5230	12.50	10.58
802.11ac-VHT80 (MCS0)	42/5210	12.50	10.17
Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.			

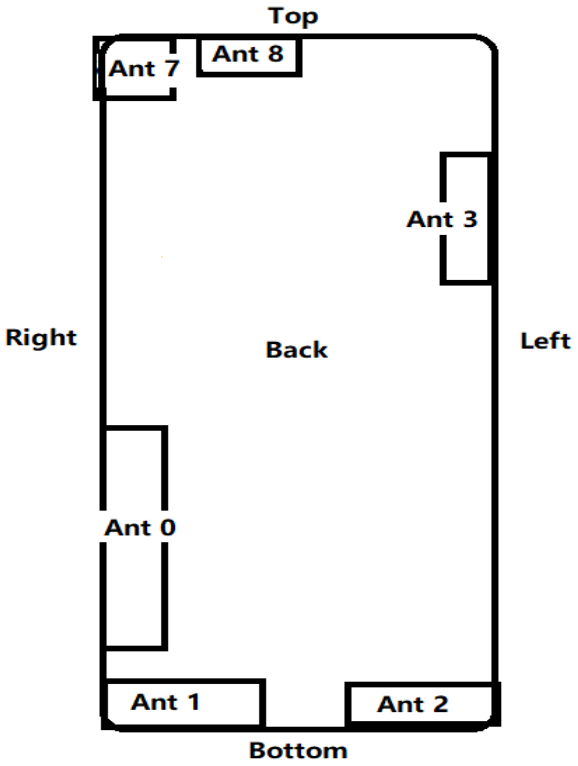
Wi-Fi 5G (U-NII-3) Full Power & Receiver on & Receiver off Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	149/5745	16.50	15.73
	157/5785	16.50	15.77
	165/5825	16.50	**15.78**
802.11n-HT20 (MCS0)	149/5745	16.50	15.61
	157/5785	16.50	15.65
	165/5825	16.50	15.66
802.11n-HT40 (MCS0)	151/5755	16.50	15.51
	159/5795	16.50	15.50
802.11ac-VHT20 (MCS0)	149/5745	12.50	11.42
	157/5785	12.50	11.50
	165/5825	12.50	11.53
802.11ac-VHT40 (MCS0)	151/5755	12.50	11.44
	159/5795	12.50	11.49
802.11ac-VHT80 (MCS0)	155/5775	12.50	10.98
Note. Initial test configuration is 802.11a mode, since the highest maximum output power, the largest channel bandwidth, and lowest order.			

9.5 Bluetooth Mode

BT	Conducted Power(dBm)			Tune-up Limit (dBm)
	Channel/Frequency(MHz)			
	Ch 0/2402 MHz	Ch 39/2441 MHz	Ch 78/2480 MHz	
GFSK	9.56	10.19	11.21	11.50
π/4DQPSK	7.09	8.01	9.15	9.50
8DPSK	7.00	7.91	9.10	9.50
BLE	Ch 0/2402 MHz	Ch 19/2440 MHz	Ch 39/2480 MHz	Tune-up Limit (dBm)
GFSK(1M)	4.85	5.47	5.53	7.50
GFSK(2M)	3.14	3.76	3.82	7.50

10 Measured and Reported (Scaled) SAR Results

10.1 EUT Antenna Locations



Ant 0	WCDMA Band V LTE Band 5/12/71 NR n5/n71
Ant 1	NR n2/n25/n66
Ant 2	WCDMA Band II/ IV LTE Band 2/4/66
Ant 3	LTE Band 41 NR n41
Ant 8	Bluetooth/Wi-Fi 2.4G/ Wi-Fi 5G

Overall (Length x Width): 170 mm x 76 mm Overall Diagonal: 180 mm/Display Diagonal: 167mm						
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 1	＜25mm	＜25mm	＞25mm	＜25mm	＞25mm	＜25mm
Ant 2	＜25mm	＜25mm	＜25mm	＞25mm	＞25mm	＜25mm
Ant 3	＜25mm	＜25mm	＜25mm	＞25mm	＞25mm	＞25mm
Ant 8	＜25mm	＜25mm	＞25mm	＜25mm	＜25mm	＞25mm
Hotspot mode, Positions for SAR tests						
Mode	Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Ant 0	Yes	Yes	N/A	Yes	N/A	Yes
Ant 1	Yes	Yes	N/A	Yes	N/A	Yes
Ant 2	Yes	Yes	Yes	N/A	N/A	Yes
Ant 3	Yes	Yes	Yes	N/A	N/A	N/A
Ant 8	Yes	Yes	N/A	Yes	Yes	N/A
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 167mm. 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.

10.2 Standalone SAR test exclusion considerations

Per KDB 447498 D01, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] ·[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for product specific 10-g SAR

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

Per KDB 447498 D01, when the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Bluetooth	Distance (mm)	MAXPower (dBm)	Frequency (MHz)	Ratio	Evaluation
Head	5	11.50	2480	4.45	Yes
Body-worn	15	11.50	2480	1.48	No
Hotspot	10	11.50	2480	2.22	No
Product Specific 10-g SAR	5	11.50	2480	4.45	No

10.3 Measured SAR Results

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

2. 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 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.
WCDMA II	ANT 2	Left cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	24.50	23.52	0.116	0.064	1.25	0.145	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	24.50	23.52	0.062	0.037	1.25	0.078	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	24.50	23.52	0.153	0.132	1.25	0.192	13
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	24.50	23.52	0.038	0.160	1.25	0.048	/
WCDMA IV	ANT 2	Left cheek	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.00	21.27	0.076	0.100	1.49	0.113	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.00	21.27	0.124	0.034	1.49	0.185	14
		Right cheek	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.00	21.27	0.014	0.015	1.49	0.021	/
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.00	21.27	0.082	0.190	1.49	0.122	/
WCDMA V	ANT 0	Left cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	25.00	24.00	0.140	0.054	1.26	0.176	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	25.00	24.00	0.087	0.029	1.26	0.110	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	25.00	24.00	0.227	0.000	1.26	0.286	15
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	25.00	24.00	0.112	0.080	1.26	0.141	/
LTE 2	ANT 2	Left cheek	0	QPSK	Receiver on	1	50	18700/1860	24.00	23.29	0.136	0.021	1.18	0.160	/
			0	QPSK	Receiver on	50%	0	19100/1900	23.00	22.31	0.119	0.039	1.17	0.139	/
		Left Tilt	0	QPSK	Receiver on	1	50	18700/1860	24.00	23.29	0.084	0.170	1.18	0.099	/
			0	QPSK	Receiver on	50%	0	19100/1900	23.00	22.31	0.068	0.190	1.17	0.080	/
		Right cheek	0	QPSK	Receiver on	1	50	18700/1860	24.00	23.29	0.191	-0.034	1.18	0.225	16
			0	QPSK	Receiver on	50%	0	19100/1900	23.00	22.31	0.153	0.066	1.17	0.179	/
		Right Tilt	0	QPSK	Receiver on	1	50	18700/1860	24.00	23.29	0.059	0.021	1.18	0.070	/
			0	QPSK	Receiver on	50%	0	19100/1900	23.00	22.31	0.044	-0.010	1.17	0.051	/
LTE 5	ANT 0	Left cheek	0	QPSK	Receiver on	1	25	20450/829	24.50	23.70	0.165	-0.050	1.20	0.198	/
			0	QPSK	Receiver on	50%	25	20450/829	23.50	22.59	0.127	0.093	1.23	0.157	/
		Left Tilt	0	QPSK	Receiver on	1	25	20450/829	24.50	23.70	0.079	0.027	1.20	0.094	/
			0	QPSK	Receiver on	50%	25	20450/829	23.50	22.59	0.060	0.029	1.23	0.074	/
		Right cheek	0	QPSK	Receiver on	1	25	20450/829	24.50	23.70	0.231	0.025	1.20	0.278	17
			0	QPSK	Receiver on	50%	25	20450/829	23.50	22.59	0.185	0.064	1.23	0.228	/
		Right Tilt	0	QPSK	Receiver on	1	25	20450/829	24.50	23.70	0.075	0.150	1.20	0.090	/
			0	QPSK	Receiver on	50%	25	20450/829	23.50	23.70	0.165	-0.050	1.20	0.198	/
LTE 12	ANT 0	Left cheek	0	QPSK	Receiver on	1	25	23060/704	24.50	23.35	0.111	0.019	1.30	0.145	/
			0	QPSK	Receiver on	50%	25	23060/704	23.50	22.51	0.098	0.017	1.26	0.123	/

		Left Tilt	0	QPSK	Receiver on	1	25	23060/704	24.50	23.35	0.042	0.040	1.30	0.055	/
			0	QPSK	Receiver on	50%	25	23060/704	23.50	22.51	0.037	0.074	1.26	0.046	/
		Right cheek	0	QPSK	Receiver on	1	25	23060/704	24.50	23.35	0.142	0.029	1.30	0.185	18
			0	QPSK	Receiver on	50%	25	23060/704	23.50	22.51	0.131	0.070	1.26	0.165	/
		Right Tilt	0	QPSK	Receiver on	1	25	23060/704	24.50	23.35	0.034	0.031	1.30	0.045	/
			0	QPSK	Receiver on	50%	25	23060/704	23.50	22.51	0.025	0.039	1.26	0.031	/
LTE 41	ANT 3	Left cheek	0	QPSK	Receiver on	1	50	41055/2636.5	22.50	21.51	0.262	0.073	1.26	0.329	/
			0	QPSK	Receiver on	50%	0	41055/2636.5	21.50	20.74	0.204	-0.150	1.19	0.243	/
		Left Tilt	0	QPSK	Receiver on	1	50	41055/2636.5	22.50	21.51	0.068	0.049	1.26	0.085	/
			0	QPSK	Receiver on	50%	0	41055/2636.5	21.50	20.74	0.054	0.089	1.19	0.064	/
		Right cheek	0	QPSK	Receiver on	1	50	41055/2636.5	22.50	21.51	0.775	0.010	1.26	0.973	19
			0	QPSK	Receiver on	50%	0	41055/2636.5	21.50	20.74	0.639	0.130	1.19	0.761	/
			0	QPSK	Receiver on	1	50	40185/2549.5	22.50	21.43	0.728	-0.030	1.28	0.931	/
			0	QPSK	Receiver on	1	50	41490/2680	22.50	21.42	0.732	0.028	1.28	0.939	/
			0	QPSK	Receiver on	100%	0	41055/2636.5	21.50	20.67	0.652	0.014	1.21	0.789	/
		Right Tilt	0	QPSK	Receiver on	1	50	41055/2636.5	22.50	21.51	0.163	0.060	1.26	0.205	/
			0	QPSK	Receiver on	50%	0	41055/2636.5	21.50	20.74	0.133	0.070	1.19	0.158	/
		Right cheek	0	QPSK	Receiver on	1	99	39750/2506	22.50	21.39	0.624	-0.012	1.29	0.806	/
						1	0	39948/2525.8							
LTE 66	ANT 2	Left cheek	0	QPSK	Receiver on	1	50	132322/1745	24.00	23.38	0.173	0.033	1.15	0.200	/
			0	QPSK	Receiver on	50%	0	132322/1745	23.00	22.39	0.133	0.041	1.15	0.153	/
		Left Tilt	0	QPSK	Receiver on	1	50	132322/1745	24.00	23.38	0.119	0.170	1.15	0.137	/
			0	QPSK	Receiver on	50%	0	132322/1745	23.00	22.39	0.092	0.160	1.15	0.106	/
		Right cheek	0	QPSK	Receiver on	1	50	132322/1745	24.00	23.38	0.228	0.100	1.15	0.263	20
			0	QPSK	Receiver on	50%	0	132322/1745	23.00	22.39	0.153	0.080	1.15	0.176	/
		Right Tilt	0	QPSK	Receiver on	1	50	132322/1745	24.00	23.38	0.113	0.190	1.15	0.130	/
			0	QPSK	Receiver on	50%	0	132322/1745	23.00	22.39	0.081	0.080	1.15	0.093	/
LTE 71	ANT 0	Left cheek	0	QPSK	Receiver on	1	50	133222/673	24.50	23.72	0.131	0.014	1.20	0.157	/
			0	QPSK	Receiver on	50%	50	133222/673	23.50	22.77	0.108	0.100	1.18	0.128	/
		Left Tilt	0	QPSK	Receiver on	1	50	133222/673	24.50	23.72	0.060	0.062	1.20	0.072	/
			0	QPSK	Receiver on	50%	50	133222/673	23.50	22.77	0.048	0.039	1.18	0.057	/
		Right cheek	0	QPSK	Receiver on	1	50	133222/673	24.50	23.72	0.164	0.000	1.20	0.196	21
			0	QPSK	Receiver on	50%	50	133222/673	23.50	22.77	0.155	0.040	1.18	0.183	/
		Right Tilt	0	QPSK	Receiver on	1	50	133222/673	24.50	23.72	0.094	0.025	1.20	0.112	/
			0	QPSK	Receiver on	50%	50	133222/673	23.50	22.77	0.092	0.011	1.18	0.109	/

Band	Ant.	Test Position	Dist. (mm)	Type	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.
n2	ANT 1	Left cheek	0	SA& NSA	DFT-s-OFDM QPSK	Receiver on	1	1	372000/1860	23.50	22.77	0.121	0.129	1.18	0.143	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	376000/1880	23.50	22.81	0.132	0.060	1.17	0.155	/
		Left Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	372000/1860	23.50	22.77	0.064	0.027	1.18	0.075	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	376000/1880	23.50	22.81	0.080	0.140	1.17	0.093	/

		Right cheek	0		DFT-s-OFDM QPSK	Receiver on	1	1	372000/1860	23.50	22.77	0.189	-0.061	1.18	0.224	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	376000/1880	23.50	22.81	0.200	0.022	1.17	0.234	22
		Right Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	372000/1860	23.50	22.77	0.084	0.090	1.18	0.099	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	376000/1880	23.50	22.81	0.127	-0.027	1.17	0.149	/
n5	ANT 0	Left cheek	0	SA& NSA	DFT-s-OFDM QPSK	Receiver on	1	1	167300/836.5	23.50	22.75	0.124	-0.006	1.19	0.147	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	167300/836.5	23.50	22.90	0.135	0.006	1.15	0.155	/
		Left Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	167300/836.5	23.50	22.75	0.099	0.092	1.19	0.117	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	167300/836.5	23.50	22.90	0.077	0.060	1.15	0.088	/
		Right cheek	0		DFT-s-OFDM QPSK	Receiver on	1	1	167300/836.5	23.50	22.75	0.283	0.015	1.19	0.336	23
			0		DFT-s-OFDM QPSK	Receiver on	50	25	167300/836.5	23.50	22.90	0.173	0.079	1.15	0.199	/
		Right Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	167300/836.5	23.50	22.75	0.157	0.004	1.19	0.187	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	167300/836.5	23.50	22.90	0.075	0.004	1.15	0.086	/
n25	ANT 1	Left cheek	0	SA& NSA	DFT-s-OFDM QPSK	Receiver on	1	1	381000/1905	23.50	22.26	0.167	0.010	1.33	0.222	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	372000/1860	23.50	22.32	0.192	0.054	1.31	0.252	/
		Left Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	381000/1905	23.50	22.26	0.137	0.190	1.33	0.182	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	372000/1860	23.50	22.32	0.106	0.150	1.31	0.139	/
		Right cheek	0		DFT-s-OFDM QPSK	Receiver on	1	1	381000/1905	23.50	22.26	0.282	0.054	1.33	0.375	24
			0		DFT-s-OFDM QPSK	Receiver on	50	25	372000/1860	23.50	22.32	0.280	0.026	1.31	0.367	/
		Right Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	381000/1905	23.50	22.26	0.148	0.020	1.33	0.197	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	372000/1860	23.50	22.32	0.129	0.060	1.31	0.169	/
n41	ANT 3	Left cheek	0	SA& NSA	DFT-s-OFDM QPSK	Receiver on	1	1	528000/2640	20.50	19.32	0.285	0.040	1.31	0.374	/
			0		DFT-s-OFDM QPSK	Receiver on	135	67	518598/2592.99	20.50	19.76	0.412	0.068	1.19	0.489	/
		Left Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	528000/2640	20.50	19.32	0.077	-0.035	1.31	0.101	/
			0		DFT-s-OFDM QPSK	Receiver on	135	67	518598/2592.99	20.50	19.76	0.119	0.081	1.19	0.141	/
		Right cheek	0		DFT-s-OFDM QPSK	Receiver on	1	1	528000/2640	20.50	19.32	0.369	0.030	1.31	0.484	/
			0		DFT-s-OFDM QPSK	Receiver on	135	67	518598/2592.99	20.50	19.76	0.544	-0.040	1.19	0.645	25
		Right Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	528000/2640	20.50	19.32	0.324	0.028	1.31	0.425	/
			0		DFT-s-OFDM QPSK	Receiver on	135	67	518598/2592.99	20.50	19.76	0.367	0.013	1.19	0.435	/
	ANT 3	Right cheek	0		CP-OFDM QPSK	Receiver on	1	1	518598/2592.99	19.00	17.69	0.469	0.060	1.35	0.634	/
n66	ANT 1	Left cheek	0	SA& NSA	DFT-s-OFDM QPSK	Receiver on	1	214	349000/1745	23.00	21.82	0.094	0.188	1.31	0.123	/
			0		DFT-s-OFDM QPSK	Receiver on	108	54	349000/1745	23.00	22.50	0.070	-0.063	1.12	0.078	/
		Left Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	214	349000/1745	23.00	21.82	0.068	0.014	1.31	0.089	/
			0		DFT-s-OFDM QPSK	Receiver on	108	54	349000/1745	23.00	22.50	0.052	0.080	1.12	0.058	/
		Right cheek	0		DFT-s-OFDM QPSK	Receiver on	1	214	349000/1745	23.00	21.82	0.184	0.090	1.31	0.241	26
			0		DFT-s-OFDM QPSK	Receiver on	108	54	349000/1745	23.00	22.50	0.077	0.052	1.12	0.087	/
		Right Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	214	349000/1745	23.00	21.82	0.073	0.080	1.31	0.096	/
			0		DFT-s-OFDM QPSK	Receiver on	108	54	349000/1745	23.00	22.50	0.044	-0.198	1.12	0.049	/
n71	ANT 0	Left cheek	0	SA& NSA	DFT-s-OFDM QPSK	Receiver on	1	1	134600/673	23.50	22.87	0.152	-0.030	1.16	0.176	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	134600/673	23.50	22.93	0.114	0.069	1.14	0.130	/
		Left Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	134600/673	23.50	22.87	0.129	0.019	1.16	0.149	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	134600/673	23.50	22.93	0.082	0.005	1.14	0.094	/
		Right	0		DFT-s-OFDM QPSK	Receiver on	1	1	134600/673	23.50	22.87	0.224	0.059	1.16	0.259	27

		cheek	0		DFT-s-OFDM QPSK	Receiver on	50	25	134600/673	23.50	22.93	0.218	0.055	1.14	0.249	/
		Right Tilt	0		DFT-s-OFDM QPSK	Receiver on	1	1	134600/673	23.50	22.87	0.137	0.012	1.16	0.158	/
			0		DFT-s-OFDM QPSK	Receiver on	50	25	134600/673	23.50	22.93	0.077	-0.010	1.14	0.088	/

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
2.4G	ANT 8	Left cheek	0	11b	98.0%	Receiver on	1/2412	17.00	15.72	0.510	-0.130	1.37	0.699	28
		Left Tilt	0	11b	98.0%	Receiver on	1/2412	17.00	15.72	0.392	0.036	1.37	0.537	/
		Right cheek	0	11b	98.0%	Receiver on	1/2412	17.00	15.72	0.252	0.013	1.37	0.345	/
		Right Tilt	0	11b	98.0%	Receiver on	1/2412	17.00	15.72	0.201	0.040	1.37	0.275	/
U-NII-1	ANT 8	Left cheek	0	11a	100.0%	Receiver on	48/5240	16.50	14.97	0.299	0.042	1.42	0.425	/
		Left Tilt	0	11a	100.0%	Receiver on	48/5240	16.50	14.97	0.403	0.020	1.42	0.573	29
		Right cheek	0	11a	100.0%	Receiver on	48/5240	16.50	14.97	0.160	0.039	1.42	0.228	/
		Right Tilt	0	11a	100.0%	Receiver on	48/5240	16.50	14.97	0.196	0.040	1.42	0.279	/
U-NII-3	ANT 8	Left cheek	0	11a	100.0%	Receiver on	165/5825	16.50	15.78	0.084	0.023	1.18	0.100	/
		Left Tilt	0	11a	100.0%	Receiver on	165/5825	16.50	15.78	0.153	0.037	1.18	0.181	/
		Right cheek	0	11a	100.0%	Receiver on	165/5825	16.50	15.78	0.045	0.178	1.18	0.053	/
		Right Tilt	0	11a	100.0%	Receiver on	165/5825	16.50	15.78	0.094	0.037	1.18	0.111	/
Bluetooth	ANT 8	Left cheek	0	DH5	76.6%	-	78/2480	11.50	11.21	0.214	0.036	1.40	0.299	30
		Left Tilt	0	DH5	76.6%	-	78/2480	11.50	11.21	0.162	0.030	1.40	0.226	/
		Right cheek	0	DH5	76.6%	-	78/2480	11.50	11.21	0.095	-0.030	1.40	0.132	/
		Right Tilt	0	DH5	76.6%	-	78/2480	11.50	11.21	0.100	0.044	1.40	0.139	/

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.
WCDMA II	ANT 2	Back Side	15	RMC	Receiver off	-	-	9400/1880	24.50	23.52	0.509	0.010	1.25	0.638	31
		Front Side	15	RMC	Receiver off	-	-	9400/1880	24.50	23.52	0.349	0.057	1.25	0.437	/
WCDMA IV	ANT 2	Back Side	15	RMC	Receiver off	-	-	1413/1732.6	23.00	21.27	0.567	0.027	1.49	0.844	32
		Back Side	15	RMC	Receiver off	-	-	1312/1712.4	23.00	21.23	0.529	-0.020	1.50	0.795	/
		Back Side	15	RMC	Receiver off	-	-	1513/1752.6	23.00	21.34	0.514	0.014	1.47	0.753	/
		Front Side	15	RMC	Receiver off	-	-	1413/1732.6	23.00	21.27	0.428	0.100	1.49	0.637	/
WCDMA V	ANT 0	Back Side	15	RMC	Receiver off	-	-	4183/836.6	25.00	24.00	0.580	-0.013	1.26	0.730	33
		Front Side	15	RMC	Receiver off	-	-	4183/836.6	25.00	24.00	0.284	0.032	1.26	0.358	/
LTE 2	ANT 2	Back Side	15	QPSK	Receiver off	1	50	18700/1860	24.00	23.29	0.550	0.070	1.18	0.648	34
			15	QPSK	Receiver off	50%	0	19100/1900	23.00	22.31	0.402	0.029	1.17	0.471	/
		Front Side	15	QPSK	Receiver off	1	50	18700/1860	24.00	23.29	0.405	0.010	1.18	0.477	/
			15	QPSK	Receiver off	50%	0	19100/1900	23.00	22.31	0.293	-0.060	1.17	0.343	/
LTE 5	ANT 0	Back Side	15	QPSK	Receiver off	1	25	20450/829	24.50	23.70	0.530	-0.120	1.20	0.637	35
			15	QPSK	Receiver off	50%	25	20450/829	23.50	22.59	0.432	0.084	1.23	0.533	/
		Front Side	15	QPSK	Receiver off	1	25	20450/829	24.50	23.70	0.248	0.010	1.20	0.298	/
			15	QPSK	Receiver off	50%	25	20450/829	23.50	22.59	0.205	-0.026	1.23	0.253	/
LTE 12	ANT 0	Back Side	15	QPSK	Receiver off	1	25	23060/704	24.50	23.35	0.375	-0.002	1.30	0.489	36
			15	QPSK	Receiver off	50%	25	23060/704	23.50	22.51	0.297	0.023	1.26	0.373	/
		Front Side	15	QPSK	Receiver off	1	25	23060/704	24.50	23.35	0.182	0.045	1.30	0.237	/
			15	QPSK	Receiver off	50%	25	23060/704	23.50	22.51	0.147	0.019	1.26	0.185	/
LTE 41	ANT 3	Back Side	15	QPSK	Receiver off	1	50	40620/2593	24.50	23.53	0.342	-0.033	1.25	0.428	37
			15	QPSK	Receiver off	50%	25	41055/2636.5	23.50	22.44	0.259	0.028	1.28	0.331	/
		Front Side	15	QPSK	Receiver off	1	50	40620/2593	24.50	23.53	0.114	0.019	1.25	0.143	/
			15	QPSK	Receiver off	50%	25	41055/2636.5	23.50	22.44	0.097	-0.058	1.28	0.124	/
		Back Side	15	QPSK	Receiver off	1	99	39750/2506	24.50	23.28	0.301	0.020	1.32	0.399	/
						1	0	39948/2525.8							/
LTE 66	ANT 2	Back Side	15	QPSK	Receiver off	1	50	132322/1745	24.00	23.38	0.574	0.109	1.15	0.662	38
			15	QPSK	Receiver off	50%	0	132322/1745	23.00	22.39	0.514	0.011	1.15	0.592	/
		Front Side	15	QPSK	Receiver off	1	50	132322/1745	24.00	23.38	0.484	0.023	1.15	0.558	/
			15	QPSK	Receiver off	50%	0	132322/1745	23.00	22.39	0.373	-0.180	1.15	0.429	/
LTE 71	ANT 0	Back Side	15	QPSK	Receiver off	1	50	133222/673	24.50	23.72	0.245	0.000	1.20	0.293	39
			15	QPSK	Receiver off	50%	50	133222/673	23.50	22.77	0.205	0.014	1.18	0.243	/
		Front Side	15	QPSK	Receiver off	1	50	133222/673	24.50	23.72	0.126	0.020	1.20	0.151	/
			15	QPSK	Receiver off	50%	50	133222/673	23.50	22.77	0.107	0.080	1.18	0.127	/

Band	Ant.	Test Position	Dist. (mm)	Type	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.
n2	ANT 1	Back Side	15	SA& NSA	DFT-s-OFDM QPSK	Receiver off	1	1	372000/1860	23.50	22.77	0.469	-0.030	1.18	0.555	40
			15		DFT-s-OFDM QPSK	Receiver off	50	25	376000/1880	23.50	22.81	0.386	0.100	1.17	0.452	/
		Front Side	15		DFT-s-OFDM QPSK	Receiver off	1	1	372000/1860	23.50	22.77	0.339	0.034	1.18	0.401	/
			15		DFT-s-OFDM QPSK	Receiver off	50	25	376000/1880	23.50	22.81	0.261	0.025	1.17	0.306	/
n5	ANT 0	Back Side	15	SA& NSA	DFT-s-OFDM QPSK	Receiver off	1	1	167300/836.5	23.50	22.75	0.414	0.012	1.19	0.492	/
			15		DFT-s-OFDM QPSK	Receiver off	50	25	167300/836.5	23.50	22.90	0.485	-0.024	1.15	0.557	41
		Front Side	15		DFT-s-OFDM QPSK	Receiver off	1	1	167300/836.5	23.50	22.75	0.209	0.090	1.19	0.248	/
			15		DFT-s-OFDM QPSK	Receiver off	50	25	167300/836.5	23.50	22.90	0.258	0.040	1.15	0.296	/
		Back Side	15		CP-OFDM QPSK	Receiver off	1	1	167800/839	22.00	21.24	0.357	0.017	1.19	0.425	/
n25	ANT 1	Back Side	15	SA& NSA	DFT-s-OFDM QPSK	Receiver off	1	1	381000/1905	23.50	22.26	0.394	-0.030	1.33	0.524	42
			15		DFT-s-OFDM QPSK	Receiver off	50	25	372000/1860	23.50	22.32	0.356	0.011	1.31	0.467	/
		Front Side	15		DFT-s-OFDM QPSK	Receiver off	1	1	381000/1905	23.50	22.26	0.329	0.024	1.33	0.438	/
			15		DFT-s-OFDM QPSK	Receiver off	50	25	372000/1860	23.50	22.32	0.278	0.090	1.31	0.365	/
n41	ANT 3	Back Side	15	SA& NSA	DFT-s-OFDM QPSK	Receiver off	1	1	528000/2640	23.50	22.61	0.267	0.012	1.23	0.328	/
			15		DFT-s-OFDM QPSK	Receiver off	135	67	518598/2592.99	23.50	23.25	0.403	0.059	1.06	0.427	43
		Front Side	15		DFT-s-OFDM QPSK	Receiver off	1	1	528000/2640	23.50	22.61	0.129	0.020	1.23	0.158	/
			15		DFT-s-OFDM QPSK	Receiver off	135	67	518598/2592.99	23.50	23.25	0.185	0.019	1.06	0.196	/
n66	ANT 1	Back Side	15	SA& NSA	DFT-s-OFDM QPSK	Receiver off	1	214	349000/1745	23.00	21.82	0.295	0.000	1.31	0.387	/
			15		DFT-s-OFDM QPSK	Receiver off	108	54	349000/1745	23.00	22.50	0.347	-0.020	1.12	0.389	44
		Front Side	15		DFT-s-OFDM QPSK	Receiver off	1	214	349000/1745	23.00	21.82	0.153	0.016	1.31	0.201	/
			15		DFT-s-OFDM QPSK	Receiver off	108	54	349000/1745	23.00	22.50	0.194	0.025	1.12	0.218	/
n71	ANT 0	Back Side	15	SA& NSA	DFT-s-OFDM QPSK	Receiver off	1	1	134600/673	23.50	22.87	0.267	0.019	1.16	0.309	45
			15		DFT-s-OFDM QPSK	Receiver off	50	25	134600/673	23.50	22.93	0.242	0.120	1.14	0.276	/
		Front Side	15		DFT-s-OFDM QPSK	Receiver off	1	1	134600/673	23.50	22.87	0.165	0.080	1.16	0.191	/
			15		DFT-s-OFDM QPSK	Receiver off	50	25	134600/673	23.50	22.93	0.143	-0.011	1.14	0.163	/

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
2.4G	ANT 8	Back Side	15	11b	98.0%	Receiver off	1/2412	17.00	15.72	0.179	-0.120	1.37	0.245	46
		Front Side	15	11b	98.0%	Receiver off	1/2412	17.00	15.72	0.106	0.000	1.37	0.145	/
U-NII-1	ANT 8	Back Side	15	11a	100.0%	Receiver off	48/5240	16.50	14.97	0.176	-0.060	1.42	0.250	/
		Front Side	15	11a	100.0%	Receiver off	48/5240	16.50	14.97	0.078	0.020	1.42	0.111	/
U-NII-3	ANT 8	Back Side	15	11a	100.0%	Receiver off	165/5825	16.50	15.78	0.177	-0.039	1.18	0.209	47
		Front Side	15	11a	100.0%	Receiver off	165/5825	16.50	15.78	0.076	0.024	1.18	0.090	/

Hotspot

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.
WCDMA II	ANT 2	Back Side	10	RMC	Hotspot on	-	-	9400/1880	24.50	23.52	0.682	0.017	1.25	0.855	/
		Back Side	10	RMC	Hotspot on	-	-	9262/1852.4	24.50	23.60	0.594	0.040	1.23	0.731	/
		Back Side	10	RMC	Hotspot on	-	-	9538/1907.6	24.50	23.58	0.624	0.120	1.24	0.771	/
		Front Side	10	RMC	Hotspot on	-	-	9400/1880	24.50	23.52	0.428	0.052	1.25	0.536	/
		Left Edge	10	RMC	Hotspot on	-	-	9400/1880	24.50	23.52	0.174	0.020	1.25	0.218	/
		Right Edge	10	RMC	Hotspot on	-	-	9400/1880	24.50	23.52	0.082	-0.097	1.25	0.103	/
		Top Edge	10	N/A	Hotspot on	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	24.50	23.52	0.742	-0.080	1.25	0.930	48
		Bottom Edge	10	RMC	Hotspot on	-	-	9262/1852.4	24.50	23.60	0.726	0.000	1.23	0.893	/
		Bottom Edge	10	RMC	Hotspot on	-	-	9538/1907.6	24.50	23.58	0.722	0.030	1.24	0.892	/
WCDMA IV	ANT 2	Back Side	10	RMC	Hotspot on	-	-	1413/1732.6	23.00	21.27	0.595	-0.080	1.49	0.886	49
		Back Side	10	RMC	Hotspot on	-	-	1312/1712.4	23.00	21.23	0.542	0.011	1.50	0.815	/
		Back Side	10	RMC	Hotspot on	-	-	1513/1752.6	23.00	21.34	0.573	0.080	1.47	0.840	/
		Front Side	10	RMC	Hotspot on	-	-	1413/1732.6	23.00	21.27	0.426	0.023	1.49	0.634	/
		Left Edge	10	RMC	Hotspot on	-	-	1413/1732.6	23.00	21.27	0.132	-0.020	1.49	0.197	/
		Right Edge	10	RMC	Hotspot on	-	-	1413/1732.6	23.00	21.27	0.064	0.049	1.49	0.095	/
		Top Edge	10	N/A	Hotspot on	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	23.00	21.27	0.541	-0.080	1.49	0.806	/
		Bottom Edge	10	RMC	Hotspot on	-	-	1312/1712.4	23.00	21.23	0.569	-0.030	1.50	0.855	/
		Bottom Edge	10	RMC	Hotspot on	-	-	1513/1752.6	23.00	21.34	0.482	0.014	1.47	0.706	/
WCDMA V	ANT 0	Back Side	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.00	0.789	-0.010	1.26	0.993	50
		Back Side	10	RMC	Hotspot on	-	-	4132/826.4	25.00	24.05	0.746	0.013	1.24	0.928	/
		Back Side	10	RMC	Hotspot on	-	-	4233/846.6	25.00	24.03	0.752	0.027	1.25	0.940	/
		Front Side	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.00	0.333	0.000	1.26	0.419	/
		Left Edge	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.00	0.076	0.000	1.26	0.096	/
		Right Edge	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.00	0.525	0.019	1.26	0.661	/
		Top Edge	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.00	0.024	0.039	1.26	0.030	/
		Bottom Edge	10	RMC	Hotspot on	-	-	4183/836.6	25.00	24.00	0.099	0.028	1.26	0.125	/
LTE 2	ANT 2	Back Side	10	QPSK	Hotspot on	1	50	18700/1860	24.00	23.29	0.610	-0.010	1.18	0.718	/
			10	QPSK	Hotspot on	50%	0	19100/1900	23.00	22.31	0.450	-0.010	1.17	0.527	/
		Front Side	10	QPSK	Hotspot on	1	50	18700/1860	24.00	23.29	0.533	-0.030	1.18	0.628	/
			10	QPSK	Hotspot on	50%	0	19100/1900	23.00	22.31	0.396	-0.050	1.17	0.464	/
		Left Edge	10	QPSK	Hotspot on	1	50	18700/1860	24.00	23.29	0.253	0.030	1.18	0.298	/
			10	QPSK	Hotspot on	50%	0	19100/1900	23.00	22.31	0.206	0.090	1.17	0.241	/
		Right Edge	10	QPSK	Hotspot on	1	50	18700/1860	24.00	23.29	0.109	0.140	1.18	0.128	/
			10	QPSK	Hotspot on	50%	0	19100/1900	23.00	22.31	0.094	0.160	1.17	0.110	/
		Top Edge	10	N/A	Hotspot on	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	Hotspot on	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	24.00	23.29	0.752	0.070	1.18	0.886	/

			10	QPSK	Hotspot on	1	50	18900/1880	24.00	23.26	0.628	0.100	1.19	0.745	/
			10	QPSK	Hotspot on	1	50	19100/1900	24.00	23.22	0.763	0.030	1.20	0.913	51
			10	QPSK	Hotspot on	50%	0	19100/1900	23.00	22.31	0.597	0.080	1.17	0.700	/
			10	QPSK	Hotspot on	100%	0	19100/1900	23.00	22.29	0.558	0.030	1.18	0.657	/
LTE 5	ANT 0	Back Side	10	QPSK	Hotspot on	1	25	20450/829	24.50	23.70	0.797	-0.020	1.20	0.958	52
			10	QPSK	Hotspot on	1	0	20525/836.5	24.50	23.52	0.738	0.021	1.25	0.925	/
			10	QPSK	Hotspot on	1	0	20600/844	24.50	23.46	0.725	0.011	1.27	0.921	/
			10	QPSK	Hotspot on	50%	25	20450/829	23.50	22.59	0.689	-0.025	1.23	0.850	/
			10	QPSK	Hotspot on	50%	13	20525/836.5	23.50	22.47	0.712	-0.090	1.27	0.903	/
			10	QPSK	Hotspot on	50%	0	20600/844	23.50	22.56	0.726	0.030	1.24	0.901	/
			10	QPSK	Hotspot on	100%	0	20450/829	23.50	22.66	0.647	0.018	1.21	0.785	/
		Front Side	10	QPSK	Hotspot on	1	25	20450/829	24.50	23.70	0.350	0.022	1.20	0.421	/
			10	QPSK	Hotspot on	50%	25	20450/829	23.50	22.59	0.296	0.015	1.23	0.365	/
		Left Edge	10	QPSK	Hotspot on	1	25	20450/829	24.50	23.70	0.046	0.060	1.20	0.055	/
			10	QPSK	Hotspot on	50%	25	20450/829	23.50	22.59	0.037	0.018	1.23	0.046	/
		Right Edge	10	QPSK	Hotspot on	1	25	20450/829	24.50	23.70	0.459	0.025	1.20	0.552	/
			10	QPSK	Hotspot on	50%	25	20450/829	23.50	22.59	0.402	0.013	1.23	0.496	/
		Top Edge	10	N/A	Hotspot on	1	25	20450/829	24.50	23.70	0.026	0.022	1.20	0.031	/
			10	N/A	Hotspot on	50%	25	20450/829	23.50	22.59	0.020	-0.070	1.23	0.025	/
		Bottom Edge	10	QPSK	Hotspot on	1	25	20450/829	24.50	23.70	0.123	0.040	1.20	0.148	/
			10	QPSK	Hotspot on	50%	25	20450/829	23.50	22.59	0.105	0.022	1.23	0.129	/
LTE 12	ANT 0	Back Side	10	QPSK	Hotspot on	1	25	23060/704	24.50	23.35	0.489	0.009	1.30	0.637	53
			10	QPSK	Hotspot on	50%	25	23060/704	23.50	22.51	0.395	0.015	1.26	0.496	/
		Front Side	10	QPSK	Hotspot on	1	25	23060/704	24.50	23.35	0.189	0.039	1.30	0.246	/
			10	QPSK	Hotspot on	50%	25	23060/704	23.50	22.51	0.143	0.020	1.26	0.180	/
		Left Edge	10	QPSK	Hotspot on	1	25	23060/704	24.50	23.35	0.095	0.018	1.30	0.124	/
			10	QPSK	Hotspot on	50%	25	23060/704	23.50	22.51	0.070	-0.050	1.26	0.088	/
		Right Edge	10	QPSK	Hotspot on	1	25	23060/704	24.50	23.35	0.436	0.042	1.30	0.568	/
			10	QPSK	Hotspot on	50%	25	23060/704	23.50	22.51	0.365	0.037	1.26	0.458	/
		Top Edge	10	N/A	Hotspot on	1	25	23060/704	24.50	23.35	0.059	-0.075	1.30	0.077	/
			10	N/A	Hotspot on	50%	25	23060/704	23.50	22.51	0.051	-0.138	1.26	0.064	/
		Bottom Edge	10	QPSK	Hotspot on	1	25	23060/704	24.50	23.35	0.057	0.011	1.30	0.074	/
			10	QPSK	Hotspot on	50%	25	23060/704	23.50	22.51	0.043	0.000	1.26	0.054	/
LTE 41	ANT 3	Back Side	10	QPSK	Hotspot on	1	50	40620/2593	24.50	23.53	0.638	-0.080	1.25	0.798	54
			10	QPSK	Hotspot on	50%	25	41055/2636.5	23.50	22.44	0.481	0.039	1.28	0.614	/
		Front Side	10	QPSK	Hotspot on	1	50	40620/2593	24.50	23.53	0.168	0.080	1.25	0.210	/
			10	QPSK	Hotspot on	50%	25	41055/2636.5	23.50	22.44	0.142	0.018	1.28	0.181	/
		Left Edge	10	QPSK	Hotspot on	1	50	40620/2593	24.50	23.53	0.583	-0.010	1.25	0.729	/
			10	QPSK	Hotspot on	50%	25	41055/2636.5	23.50	22.44	0.506	0.050	1.28	0.646	/
		Right Edge	10	QPSK	Hotspot on	1	50	40620/2593	24.50	23.53	0.017	0.021	1.25	0.021	/
			10	QPSK	Hotspot on	50%	25	41055/2636.5	23.50	22.44	0.028	0.030	1.28	0.036	/
		Top Edge	10	N/A	Hotspot on	1	50	40620/2593	24.50	23.53	0.091	0.127	1.25	0.113	/
			10	N/A	Hotspot on	50%	25	41055/2636.5	23.50	22.44	0.057	0.053	1.28	0.073	/

		Bottom Edge	10	QPSK	Hotspot on	1	50	40620/2593	24.50	23.53	0.046	0.042	1.25	0.058	/
			10	QPSK	Hotspot on	50%	25	41055/2636.5	23.50	22.44	0.032	0.030	1.28	0.041	/
		Back Side	10	QPSK	Hotspot on	1	99	39750/2506	24.50	23.28	0.485	0.000	1.32	0.642	/
						1	0	39948/2525.8							
LTE 66	ANT 2	Back Side	10	QPSK	Hotspot on	1	50	132322/1745	22.00	21.26	0.579	0.095	1.19	0.687	/
			10	QPSK	Hotspot on	50%	0	132322/1745	21.00	20.42	0.452	-0.036	1.14	0.517	/
		Front Side	10	QPSK	Hotspot on	1	50	132322/1745	22.00	21.26	0.427	0.025	1.19	0.506	/
			10	QPSK	Hotspot on	50%	0	132322/1745	21.00	20.42	0.349	0.010	1.14	0.399	/
		Left Edge	10	QPSK	Hotspot on	1	50	132322/1745	22.00	21.26	0.168	0.016	1.19	0.199	/
			10	QPSK	Hotspot on	50%	0	132322/1745	21.00	20.42	0.124	0.025	1.14	0.142	/
		Right Edge	10	QPSK	Hotspot on	1	50	132322/1745	22.00	21.26	0.082	-0.028	1.19	0.097	/
			10	QPSK	Hotspot on	50%	0	132322/1745	21.00	20.42	0.062	0.020	1.14	0.071	/
		Top Edge	10	N/A	Hotspot on	N/A	N/A	N/A	N/A	N/A	N/A	NA	N/A	N/A	/
			10	N/A	Hotspot on	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	22.00	21.26	0.637	0.040	1.19	0.755	55
			10	QPSK	Hotspot on	50%	0	132322/1745	21.00	20.42	0.457	-0.010	1.14	0.522	/
LTE 71	ANT 0	Back Side	10	QPSK	Hotspot on	1	50	133222/673	24.50	23.72	0.439	0.010	1.20	0.525	56
			10	QPSK	Hotspot on	50%	50	133222/673	23.50	22.77	0.364	0.024	1.18	0.431	/
		Front Side	10	QPSK	Hotspot on	1	50	133222/673	24.50	23.72	0.174	0.060	1.20	0.208	/
			10	QPSK	Hotspot on	50%	50	133222/673	23.50	22.77	0.145	-0.021	1.18	0.172	/
		Left Edge	10	QPSK	Hotspot on	1	50	133222/673	24.50	23.72	0.114	0.015	1.20	0.136	/
			10	QPSK	Hotspot on	50%	50	133222/673	23.50	22.77	0.089	0.022	1.18	0.105	/
		Right Edge	10	QPSK	Hotspot on	1	50	133222/673	24.50	23.72	0.433	0.058	1.20	0.518	/
			10	QPSK	Hotspot on	50%	50	133222/673	23.50	22.77	0.358	-0.010	1.18	0.424	/
		Top Edge	10	N/A	Hotspot on	1	50	133222/673	24.50	23.72	0.007	-0.090	1.20	0.008	/
			10	N/A	Hotspot on	50%	50	133222/673	23.50	22.77	0.006	0.000	1.18	0.007	/
		Bottom Edge	10	QPSK	Hotspot on	1	50	133222/673	24.50	23.72	0.046	0.023	1.20	0.055	/
			10	QPSK	Hotspot on	50%	50	133222/673	23.50	22.77	0.039	0.015	1.18	0.046	/

Band	Ant	Test Position	Dist. (mm)	Type	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.
n2	ANT1	Back Side	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	21.00	20.50	0.357	-0.040	1.12	0.401	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	21.00	20.30	0.439	-0.010	1.17	0.516	/
		Front Side	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	21.00	20.50	0.342	0.012	1.12	0.384	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	21.00	20.30	0.247	0.180	1.17	0.290	/
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	21.00	20.50	0.000	0.000	1.12	0.000	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	21.00	20.30	0.000	0.000	1.17	0.000	/
		Right Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	21.00	20.50	0.214	-0.032	1.12	0.240	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	21.00	20.30	0.182	0.011	1.17	0.214	/
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	21.00	20.50	0.027	0.020	1.12	0.030	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	21.00	20.30	0.018	0.062	1.17	0.021	/
		Bottom	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	21.00	20.50	0.524	-0.010	1.12	0.588	/

		Edge	10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	21.00	20.30	0.614	-0.040	1.17	0.721	57
	ANT1	Bottom Edge	10		CP-OFDM QPSK	Hotspot on	1	1	372000/1860	19.50	18.79	0.526	0.030	1.18	0.619	/
n5	ANT0	Back	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	22.50	21.34	0.452	0.026	1.31	0.590	/
		Side	10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	22.50	21.46	0.535	0.010	1.27	0.680	58
		Front	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	22.50	21.34	0.199	0.100	1.31	0.260	/
		Side	10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	22.50	21.46	0.216	0.014	1.27	0.274	/
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	22.50	21.34	0.000	0.000	1.31	0.000	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	22.50	21.46	0.000	0.000	1.27	0.000	/
		Right	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	22.50	21.34	0.365	0.015	1.31	0.477	/
		Edge	10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	22.50	21.46	0.435	0.038	1.27	0.553	/
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	22.50	21.34	0.000	0.000	1.31	0.000	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	22.50	21.46	0.000	0.000	1.27	0.000	/
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	22.50	21.34	0.109	0.058	1.31	0.142	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	22.50	21.46	0.131	0.016	1.27	0.166	/
n25	ANT1	Back	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	20.50	19.33	0.353	-0.070	1.31	0.462	/
		Side	10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	20.50	19.58	0.327	0.030	1.24	0.404	/
		Front	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	20.50	19.33	0.163	0.058	1.31	0.213	/
		Side	10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	20.50	19.58	0.187	0.025	1.24	0.231	/
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	20.50	19.33	0.023	-0.080	1.31	0.030	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	20.50	19.58	0.019	0.021	1.24	0.023	/
		Right	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	20.50	19.33	0.081	0.029	1.31	0.106	/
		Edge	10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	20.50	19.58	0.105	0.037	1.24	0.130	/
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	20.50	19.33	0.000	0.000	1.31	0.000	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	20.50	19.58	0.000	0.000	1.24	0.000	/
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	20.50	19.33	0.403	0.060	1.31	0.528	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	20.50	19.58	0.429	0.020	1.24	0.530	59
n41	ANT3	Back	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	20.50	19.32	0.505	0.020	1.31	0.663	/
		Side	10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	20.50	19.76	0.572	0.000	1.19	0.678	60
		Front	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	20.50	19.32	0.235	-0.100	1.31	0.308	/
		Side	10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	20.50	19.76	0.356	0.028	1.19	0.422	/
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	20.50	19.32	0.470	0.020	1.31	0.617	/
			10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	20.50	19.76	0.520	0.040	1.19	0.617	/
		Right	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	20.50	19.32	0.000	0.000	1.31	0.000	/
		Edge	10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	20.50	19.76	0.000	0.000	1.19	0.000	/
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	20.50	19.32	0.075	0.015	1.31	0.098	/
			10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	20.50	19.76	0.109	-0.060	1.19	0.129	/
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	20.50	19.32	0.165	0.022	1.31	0.217	/
			10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	20.50	19.76	0.142	0.027	1.19	0.168	/
n66	ANT1	Back	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	20.50	19.46	0.296	0.014	1.27	0.376	/
		Side	10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	20.50	20.06	0.306	0.021	1.11	0.339	/
		Front	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	20.50	19.46	0.157	0.075	1.27	0.199	/
		Side	10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	20.50	20.06	0.160	-0.060	1.11	0.177	/

		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	20.50	19.46	0.000	0.000	1.27	0.000	/
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	20.50	20.06	0.000	0.000	1.11	0.000	/
		Right Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	20.50	19.46	0.105	0.031	1.27	0.133	/
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	20.50	20.06	0.072	0.018	1.11	0.080	/
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	20.50	19.46	0.000	0.000	1.27	0.000	/
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	20.50	20.06	0.000	0.000	1.11	0.000	/
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	20.50	19.46	0.452	0.060	1.27	0.574	/
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	20.50	20.06	0.474	-0.010	1.11	0.525	61
n71	ANT0	Back Side	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	23.50	22.87	0.478	0.026	1.16	0.553	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	23.50	22.93	0.489	0.141	1.14	0.558	62
		Front Side	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	23.50	22.87	0.192	0.018	1.16	0.222	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	23.50	22.93	0.213	-0.050	1.14	0.243	/
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	23.50	22.87	0.000	0.000	1.16	0.000	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	23.50	22.93	0.000	0.000	1.14	0.000	/
		Right Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	23.50	22.87	0.456	0.021	1.16	0.527	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	23.50	22.93	0.467	0.018	1.14	0.532	/
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	23.50	22.87	0.000	0.000	1.16	0.000	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	23.50	22.93	0.000	0.000	1.14	0.000	/
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	23.50	22.87	0.124	-0.017	1.16	0.143	/
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	23.50	22.93	0.144	0.030	1.14	0.164	/

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 8	Back Side	10	11b	98.0%	Receiver off	1/2412	17.00	15.72	0.324	0.072	1.37	0.444	63
		Front Side	10	11b	98.0%	Receiver off	1/2412	17.00	15.72	0.248	0.029	1.37	0.340	/
		Left Edge	10	11b	98.0%	Receiver off	1/2412	17.00	15.72	0.033	0.025	1.37	0.045	/
		Right Edge	10	11b	98.0%	Receiver off	1/2412	17.00	15.72	0.162	0.069	1.37	0.222	/
		Top Edge	10	11b	98.0%	Receiver off	1/2412	17.00	15.72	0.119	-0.010	1.37	0.163	/
		Bottom Edge	10	N/A	N/A	Receiver off	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Wi-Fi U-NII-1	ANT 8	Back Side	10	11a	100.0%	Receiver off	48/5240	16.50	14.97	0.257	0.179	1.42	0.366	/
		Front Side	10	11a	100.0%	Receiver off	48/5240	16.50	14.97	0.101	0.024	1.42	0.144	/
		Left Edge	10	11a	100.0%	Receiver off	48/5240	16.50	14.97	0.063	0.018	1.42	0.090	/
		Right Edge	10	11a	100.0%	Receiver off	48/5240	16.50	14.97	0.100	-0.090	1.42	0.142	/
		Top Edge	10	11a	100.0%	Receiver off	48/5240	16.50	14.97	0.204	0.010	1.42	0.290	/
		Bottom Edge	10	N/A	N/A	Receiver off	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Wi-Fi U-NII-3	ANT 8	Back Side	10	11a	100.0%	Receiver off	165/5825	16.50	15.78	0.337	0.098	1.18	0.398	64
		Front Side	10	11a	100.0%	Receiver off	165/5825	16.50	15.78	0.096	0.011	1.18	0.113	/
		Left Edge	10	11a	100.0%	Receiver off	165/5825	16.50	15.78	0.093	-0.020	1.18	0.110	/
		Right Edge	10	11a	100.0%	Receiver off	165/5825	16.50	15.78	0.109	0.038	1.18	0.129	/
		Top Edge	10	11a	100.0%	Receiver off	165/5825	16.50	15.78	0.204	0.017	1.18	0.241	/
		Bottom Edge	10	N/A	N/A	Receiver off	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
Bluetooth	ANT 8	Back Side	10	DH5	76.6%	-	78/2480	11.50	11.21	0.039	0.051	1.40	0.054	65

		Front Side	10	DH5	76.6%	-	78/2480	11.50	11.21	0.030	-0.180	1.40	0.042	/
		Left Edge	10	DH5	76.6%	-	78/2480	11.50	11.21	0.004	0.199	1.40	0.006	/
		Right Edge	10	DH5	76.6%	-	78/2480	11.50	11.21	0.014	-0.040	1.40	0.020	/
		Top Edge	10	DH5	76.6%	-	78/2480	11.50	11.21	0.010	-0.010	1.40	0.014	/
		Bottom Edge	10	N/A	N/A	-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/

Product-specific 10g SAR Evaluation

Band	Antenna	Test Position	Mode	Power Reduction	RB	offset	Channel Frequency (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Scaling Factor	Report SAR1g	0mm SAR
LTE 66	ANT 2	Back Side	QPSK	Hotspot on	1	50	132322/1745	24.00	22.00	0.687	1.58	1.088	NO
			QPSK	Hotspot on	50%	0	132322/1745	23.00	21.00	0.517	1.58	0.819	NO
		Front Side	QPSK	Hotspot on	1	50	132322/1745	24.00	22.00	0.506	1.58	0.802	NO
			QPSK	Hotspot on	50%	0	132322/1745	23.00	21.00	0.399	1.58	0.632	NO
		Left Edge	QPSK	Hotspot on	1	50	132322/1745	24.00	22.00	0.199	1.58	0.316	NO
			QPSK	Hotspot on	50%	0	132322/1745	23.00	21.00	0.142	1.58	0.225	NO
		Right Edge	QPSK	Hotspot on	1	50	132322/1745	24.00	22.00	0.097	1.58	0.154	NO
			QPSK	Hotspot on	50%	0	132322/1745	23.00	21.00	0.071	1.58	0.112	NO
		Bottom Edge	QPSK	Hotspot on	1	50	132322/1745	24.00	22.00	0.755	1.58	1.197	NO
			QPSK	Hotspot on	50%	0	132322/1745	23.00	21.00	0.522	1.58	0.828	NO

Band	Antenna	Test Position	Type	Mode	Power Reduction	RB	offset	Channel Frequency (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Scaling Factor	Report SAR1g	0mm SAR
n2	ANT 1	Back Side	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	23.50	21.00	0.401	1.78	0.712	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	23.50	21.00	0.516	1.78	0.917	NO
		Front Side		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	23.50	21.00	0.384	1.78	0.682	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	23.50	21.00	0.290	1.78	0.516	NO
		Left Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	23.50	21.00	0.000	1.78	0.000	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	23.50	21.00	0.000	1.78	0.000	NO
		Right Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	23.50	21.00	0.240	1.78	0.427	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	23.50	21.00	0.214	1.78	0.380	NO
		Top Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	23.50	21.00	0.030	1.78	0.054	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	23.50	21.00	0.021	1.78	0.038	NO
		Bottom Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	23.50	21.00	0.588	1.78	1.046	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	23.50	21.00	0.721	1.78	1.283	YES
n5	ANT0	Back Side	SA&NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	23.50	22.50	0.447	1.26	0.562	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	23.50	22.50	0.523	1.26	0.659	NO
		Front Side		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	23.50	22.50	0.260	1.26	0.327	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	23.50	22.50	0.274	1.26	0.346	NO
		Left Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	23.50	22.50	0.000	1.26	0.000	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	23.50	22.50	0.000	1.26	0.000	NO
		Right Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	23.50	22.50	0.367	1.26	0.462	NO

				DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	23.50	22.50	0.443	1.26	0.558	NO
		Top Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	23.50	22.50	0.000	1.26	0.000	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	23.50	22.50	0.000	1.26	0.000	NO
		Bottom Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	23.50	22.50	0.142	1.26	0.179	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	23.50	22.50	0.166	1.26	0.210	NO
n25	ANT1	Back Side	SA&NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	23.50	20.50	0.462	2.00	0.922	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	23.50	20.50	0.404	2.00	0.806	NO
		Front Side		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	23.50	20.50	0.213	2.00	0.426	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	23.50	20.50	0.231	2.00	0.461	NO
		Left Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	23.50	20.50	0.030	2.00	0.060	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	23.50	20.50	0.023	2.00	0.047	NO
		Right Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	23.50	20.50	0.106	2.00	0.212	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	23.50	20.50	0.130	2.00	0.259	NO
		Top Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	23.50	20.50	0.000	2.00	0.000	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	23.50	20.50	0.000	2.00	0.000	NO
		Bottom Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	23.50	20.50	0.528	2.00	1.053	NO
				DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	23.50	20.50	0.530	2.00	1.058	NO
n41	ANT3	Back Side	SA&NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	23.50	20.50	0.663	2.00	1.322	YES
				DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	23.50	20.50	0.678	2.00	1.353	YES
		Front Side		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	23.50	20.50	0.308	2.00	0.615	NO
				DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	23.50	20.50	0.422	2.00	0.842	NO
		Left Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	23.50	20.50	0.617	2.00	1.231	YES
				DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	23.50	20.50	0.617	2.00	1.230	YES
		Right Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	23.50	20.50	0.000	2.00	0.000	NO
				DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	23.50	20.50	0.000	2.00	0.000	NO
		Top Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	23.50	20.50	0.098	2.00	0.196	NO
				DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	23.50	20.50	0.129	2.00	0.258	NO
		Bottom Edge		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	23.50	20.50	0.217	2.00	0.432	NO
				DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	23.50	20.50	0.168	2.00	0.336	NO
n66	ANT1	Back Side	SA&NSA	DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	23.00	20.50	0.376	1.78	0.669	NO
				DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	23.00	20.50	0.339	1.78	0.602	NO
		Front Side		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	23.00	20.50	0.199	1.78	0.355	NO
				DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	23.00	20.50	0.177	1.78	0.315	NO
		Left Edge		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	23.00	20.50	0.000	1.78	0.000	NO
				DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	23.00	20.50	0.000	1.78	0.000	NO
		Right Edge		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	23.00	20.50	0.133	1.78	0.237	NO
				DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	23.00	20.50	0.080	1.78	0.142	NO
		Top Edge		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	23.00	20.50	0.000	1.78	0.000	NO
				DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	23.00	20.50	0.000	1.78	0.000	NO
		Bottom Edge		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	23.00	20.50	0.574	1.78	1.021	NO
				DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	23.00	20.50	0.525	1.78	0.933	NO

Product-specific 10g SAR

Band	Ant	Dist. (mm)	Test Position	Type	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR10g	Power Drift (dB)	Scaling Factor	Report SAR10g	Plot No.
n2	ANT1	0	Bottom Edge	SA& NSA	DFT-s-OFDM QPSK	Receiver off	1	1	372000/1860	23.50	22.77	2.070	-0.020	1.18	2.449	66
		0			DFT-s-OFDM QPSK	Receiver off	1	104	376000/1880	23.50	22.61	1.410	0.011	1.23	1.731	/
		0			DFT-s-OFDM QPSK	Receiver off	1	1	380000/1900	23.50	22.56	1.590	0.039	1.24	1.974	/
		0			DFT-s-OFDM QPSK	Receiver off	50	25	376000/1880	23.50	22.81	1.820	0.040	1.17	2.133	/
		0			DFT-s-OFDM QPSK	Receiver off	100	0	376000/1880	23.50	22.62	1.620	0.100	1.22	1.984	/
n41	ANT3	0	Back Side	SA& NSA	DFT-s-OFDM QPSK	Receiver off	1	1	528000/2640	23.50	22.61	2.460	0.044	1.23	3.020	/
		0			DFT-s-OFDM QPSK	Receiver off	1	271	509202/2546.01	23.50	22.60	2.330	-0.080	1.23	2.867	/
		0			DFT-s-OFDM QPSK	Receiver off	1	271	518598/2592.99	23.50	22.58	2.190	0.019	1.24	2.707	/
		0			DFT-s-OFDM QPSK	Receiver off	135	67	518598/2592.99	23.50	23.25	2.830	0.020	1.06	2.998	/
		0			DFT-s-OFDM QPSK	Receiver off	135	67	509202/2546.01	23.50	23.19	2.580	0.100	1.07	2.771	/
		0			DFT-s-OFDM QPSK	Receiver off	135	67	528000/2640	23.50	23.18	2.760	0.000	1.08	2.971	/
		0			DFT-s-OFDM QPSK	Receiver off	270	0	509202/2546.01	23.50	22.90	2.430	-0.032	1.15	2.790	/
		0			DFT-s-OFDM QPSK	Receiver off	270	0	518598/2592.99	23.50	22.82	2.570	0.011	1.17	3.006	/
		0			DFT-s-OFDM QPSK	Receiver off	270	0	528000/2640	23.50	22.80	2.390	0.041	1.17	2.808	/
		0	Left Edge	SA& NSA	DFT-s-OFDM QPSK	Receiver off	1	1	528000/2640	23.50	22.61	2.400	-0.052	1.23	2.946	/
		0			DFT-s-OFDM QPSK	Receiver off	1	271	509202/2546.01	23.50	22.60	2.260	0.039	1.23	2.780	/
		0			DFT-s-OFDM QPSK	Receiver off	1	271	518598/2592.99	23.50	22.58	1.970	0.150	1.24	2.435	/
		0			DFT-s-OFDM QPSK	Receiver off	135	67	518598/2592.99	23.50	23.25	2.830	-0.030	1.06	2.998	/
		0			DFT-s-OFDM QPSK	Receiver off	135	67	509202/2546.01	23.50	23.19	3.060	0.127	1.07	3.286	67
		0			DFT-s-OFDM QPSK	Receiver off	135	67	528000/2640	23.50	23.18	2.740	0.030	1.08	2.950	/
		0			DFT-s-OFDM QPSK	Receiver off	270	0	509202/2546.01	23.50	22.90	2.370	0.027	1.15	2.721	/
		0			DFT-s-OFDM QPSK	Receiver off	270	0	518598/2592.99	23.50	22.82	2.150	-0.023	1.17	2.514	/
		0			DFT-s-OFDM QPSK	Receiver off	270	0	528000/2640	23.50	22.80	2.560	0.050	1.17	3.008	/
		0	Left Edge	SA& NSA	CP-OFDM QPSK	Receiver off	1	1	528000/2640	22.00	21.12	2.490	0.042	1.22	3.049	/

NR Full Power, LTE 16.5 dBm

Band	Antenna	Test Position	Dist. (mm)	Type	Mode	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	ANT 2	Back Side	10	-	QPSK	Hotspot on	1	50	18700/1860	16.50	24.00	0.718	0.18	0.128
			10	-	QPSK	Hotspot on	50%	0	19100/1900	16.50	23.00	0.527	0.22	0.118
		Front Side	10	-	QPSK	Hotspot on	1	50	18700/1860	16.50	24.00	0.628	0.18	0.112
			10	-	QPSK	Hotspot on	50%	0	19100/1900	16.50	23.00	0.464	0.22	0.104
		Left Edge	10	-	QPSK	Hotspot on	1	50	18700/1860	16.50	24.00	0.298	0.18	0.053
			10	-	QPSK	Hotspot on	50%	0	19100/1900	16.50	23.00	0.241	0.22	0.054
		Right Edge	10	-	QPSK	Hotspot on	1	50	18700/1860	16.50	24.00	0.128	0.18	0.023
			10	-	QPSK	Hotspot on	50%	0	19100/1900	16.50	23.00	0.110	0.22	0.025
		Top Edge	10	-	N/A	Hotspot on	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

			10	-	N/A	Hotspot on	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	16.50	24.00	0.886	0.18	0.157
			10	-	QPSK	Hotspot on	1	50	18900/1880	16.50	24.00	0.745	0.18	0.132
			10	-	QPSK	Hotspot on	1	50	19100/1900	16.50	24.00	0.913	0.18	0.162
			10	-	QPSK	Hotspot on	50%	0	19100/1900	16.50	23.00	0.700	0.22	0.157
			10	-	QPSK	Hotspot on	100%	0	19100/1900	16.50	23.00	0.657	0.22	0.147
LTE 5	ANT 0	Back Side	10	-	QPSK	Hotspot on	1	25	20450/829	16.50	24.50	0.958	0.16	0.152
			10	-	QPSK	Hotspot on	1	0	20525/836.5	16.50	24.50	0.925	0.20	0.185
			10	-	QPSK	Hotspot on	1	0	20600/844	16.50	24.50	0.921	0.20	0.184
			10	-	QPSK	Hotspot on	50%	25	20450/829	16.50	23.50	0.850	0.20	0.170
			10	-	QPSK	Hotspot on	50%	13	20525/836.5	16.50	23.50	0.903	0.20	0.180
			10	-	QPSK	Hotspot on	50%	0	20600/844	16.50	23.50	0.901	0.20	0.180
			10	-	QPSK	Hotspot on	100%	0	20450/829	16.50	23.50	0.785	0.20	0.157
		Front Side	10	-	QPSK	Hotspot on	1	25	20450/829	16.50	24.50	0.421	0.16	0.067
			10	-	QPSK	Hotspot on	50%	25	20450/829	16.50	23.50	0.365	0.20	0.073
		Left Edge	10	-	QPSK	Hotspot on	1	25	20450/829	16.50	24.50	0.055	0.16	0.009
			10	-	QPSK	Hotspot on	50%	25	20450/829	16.50	23.50	0.046	0.20	0.009
		Right Edge	10	-	QPSK	Hotspot on	1	25	20450/829	16.50	24.50	0.552	0.16	0.087
			10	-	QPSK	Hotspot on	50%	25	20450/829	16.50	23.50	0.496	0.20	0.099
		Top Edge	10	-	N/A	Hotspot on	1	25	20450/829	16.50	24.50	0.031	0.16	0.005
			10	-	N/A	Hotspot on	50%	25	20450/829	16.50	23.50	0.025	0.20	0.005
		Bottom Edge	10	-	QPSK	Hotspot on	1	25	20450/829	16.50	24.50	0.148	0.16	0.023
			10	-	QPSK	Hotspot on	50%	25	20450/829	16.50	23.50	0.129	0.20	0.026
LTE 12	ANT 0	Back Side	10	-	QPSK	Hotspot on	1	25	23060/704	16.50	24.50	0.637	0.16	0.101
			10	-	QPSK	Hotspot on	50%	25	23060/704	16.50	23.50	0.496	0.20	0.099
		Front Side	10	-	QPSK	Hotspot on	1	25	23060/704	16.50	24.50	0.246	0.16	0.039
			10	-	QPSK	Hotspot on	50%	25	23060/704	16.50	23.50	0.180	0.20	0.036
		Left Edge	10	-	QPSK	Hotspot on	1	25	23060/704	16.50	24.50	0.124	0.16	0.020
			10	-	QPSK	Hotspot on	50%	25	23060/704	16.50	23.50	0.088	0.20	0.018
		Right Edge	10	-	QPSK	Hotspot on	1	25	23060/704	16.50	24.50	0.568	0.16	0.090
			10	-	QPSK	Hotspot on	50%	25	23060/704	16.50	23.50	0.458	0.20	0.091
		Top Edge	10	-	N/A	Hotspot on	1	25	23060/704	16.50	24.50	0.077	0.16	0.012
			10	-	N/A	Hotspot on	50%	25	23060/704	16.50	23.50	0.064	0.20	0.013
		Bottom Edge	10	-	QPSK	Hotspot on	1	25	23060/704	16.50	24.50	0.074	0.16	0.012
			10	-	QPSK	Hotspot on	50%	25	23060/704	16.50	23.50	0.054	0.20	0.011
LTE 66	ANT 2	Back Side	10	-	QPSK	Hotspot on	1	50	132322/1745	16.50	22.00	0.687	0.28	0.193
			10	-	QPSK	Hotspot on	50%	0	132322/1745	16.50	21.00	0.517	0.35	0.183
		Front Side	10	-	QPSK	Hotspot on	1	50	132322/1745	16.50	22.00	0.506	0.28	0.143
			10	-	QPSK	Hotspot on	50%	0	132322/1745	16.50	21.00	0.399	0.35	0.142
		Left Edge	10	-	QPSK	Hotspot on	1	50	132322/1745	16.50	22.00	0.199	0.28	0.056
			10	-	QPSK	Hotspot on	50%	0	132322/1745	16.50	21.00	0.142	0.35	0.050
		Right Edge	10	-	QPSK	Hotspot on	1	50	132322/1745	16.50	22.00	0.097	0.28	0.027
			10	-	QPSK	Hotspot on	50%	0	132322/1745	16.50	21.00	0.071	0.35	0.025

		Top Edge	10	-	N/A	Hotspot on	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			10	-	N/A	Hotspot on	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	16.50	22.00	0.755	0.28	0.213
			10	-	QPSK	Hotspot on	50%	0	132322/1745	16.50	21.00	0.522	0.35	0.185

Band	Antenna	Test Position	Dist. (mm)	Type	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Scaling Factor	Report SAR1g (W/kg)
n2	ANT1	Back Side	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	16.50	21.00	0.401	0.35	0.142
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	16.50	21.00	0.516	0.35	0.183
		Front Side	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	16.50	21.00	0.384	0.35	0.136
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	16.50	21.00	0.290	0.35	0.103
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	16.50	21.00	0.000	0.35	0.000
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	16.50	21.00	0.000	0.35	0.000
		Right Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	16.50	21.00	0.240	0.35	0.085
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	16.50	21.00	0.214	0.35	0.076
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	16.50	21.00	0.030	0.35	0.011
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	16.50	21.00	0.021	0.35	0.008
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	372000/1860	16.50	21.00	0.588	0.35	0.209
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	376000/1880	16.50	21.00	0.721	0.35	0.256
	ANT1	Bottom Edge	10	SA& NSA	CP-OFDM QPSK	Hotspot on	1	1	372000/1860	16.50	19.50	0.619	0.50	0.310
n5	ANT0	Back Side	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	16.50	22.50	0.590	0.25	0.148
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	16.50	22.50	0.680	0.25	0.171
		Front Side	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	16.50	22.50	0.260	0.25	0.065
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	16.50	22.50	0.274	0.25	0.069
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	16.50	22.50	0.000	0.25	0.000
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	16.50	22.50	0.000	0.25	0.000
		Right Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	16.50	22.50	0.477	0.25	0.120
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	16.50	22.50	0.553	0.25	0.139
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	16.50	22.50	0.000	0.25	0.000
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	16.50	22.50	0.000	0.25	0.000
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	167300/836.5	16.50	22.50	0.142	0.25	0.036
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	167300/836.5	16.50	22.50	0.166	0.25	0.042
n25	ANT1	Back Side	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	16.50	20.50	0.462	0.40	0.184
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	16.50	20.50	0.404	0.40	0.161
		Front Side	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	16.50	20.50	0.213	0.40	0.085
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	16.50	20.50	0.231	0.40	0.092
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	16.50	20.50	0.030	0.40	0.012
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	16.50	20.50	0.023	0.40	0.009
		Right Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	16.50	20.50	0.106	0.40	0.042
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	16.50	20.50	0.130	0.40	0.052
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	16.50	20.50	0.000	0.40	0.000

			10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	16.50	20.50	0.000	0.40	0.000
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	381000/1905	16.50	20.50	0.528	0.40	0.210
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	372000/1860	16.50	20.50	0.530	0.40	0.211
n41	ANT3	Back Side	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	16.50	20.50	0.663	0.40	0.264
			10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	16.50	20.50	0.678	0.40	0.270
		Front Side	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	16.50	20.50	0.308	0.40	0.123
			10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	16.50	20.50	0.422	0.40	0.168
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	16.50	20.50	0.617	0.40	0.246
			10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	16.50	20.50	0.617	0.40	0.245
		Right Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	16.50	20.50	0.000	0.40	0.000
			10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	16.50	20.50	0.000	0.40	0.000
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	16.50	20.50	0.098	0.40	0.039
			10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	16.50	20.50	0.129	0.40	0.051
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	528000/2640	16.50	20.50	0.217	0.40	0.086
			10		DFT-s-OFDM QPSK	Hotspot on	135	67	518598/2592.99	16.50	20.50	0.168	0.40	0.067
n66	ANT1	Back Side	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	16.50	20.50	0.376	0.40	0.150
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	16.50	20.50	0.339	0.40	0.135
		Front Side	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	16.50	20.50	0.199	0.40	0.079
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	16.50	20.50	0.177	0.40	0.070
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	16.50	20.50	0.000	0.40	0.000
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	16.50	20.50	0.000	0.40	0.000
		Right Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	16.50	20.50	0.133	0.40	0.053
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	16.50	20.50	0.080	0.40	0.032
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	16.50	20.50	0.000	0.40	0.000
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	16.50	20.50	0.000	0.40	0.000
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	214	349000/1745	16.50	20.50	0.574	0.40	0.229
			10		DFT-s-OFDM QPSK	Hotspot on	108	54	349000/1745	16.50	20.50	0.525	0.40	0.209
n71	ANT0	Back Side	10	SA& NSA	DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	16.50	23.50	0.553	0.20	0.110
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	16.50	23.50	0.558	0.20	0.111
		Front Side	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	16.50	23.50	0.222	0.20	0.044
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	16.50	23.50	0.243	0.20	0.048
		Left Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	16.50	23.50	0.000	0.20	0.000
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	16.50	23.50	0.000	0.20	0.000
		Right Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	16.50	23.50	0.527	0.20	0.105
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	16.50	23.50	0.532	0.20	0.106
		Top Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	16.50	23.50	0.000	0.20	0.000
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	16.50	23.50	0.000	0.20	0.000
		Bottom Edge	10		DFT-s-OFDM QPSK	Hotspot on	1	1	134600/673	16.50	23.50	0.143	0.20	0.029
			10		DFT-s-OFDM QPSK	Hotspot on	50	25	134600/673	16.50	23.50	0.164	0.20	0.033

10.4 Simultaneous Transmission Analysis

Simultaneous Transmission Configurations	Head	Body-worn	Hotspot	Product Specific 10-g SAR
WWAN+WLAN 2.4G	Yes	Yes	Yes	Yes
WWAN+WLAN 5G	Yes	Yes	Yes	Yes
WWAN+BT	Yes	Yes	Yes	Yes
WLAN 2.4G+WLAN 5G	NA	NA	NA	NA
WLAN 2.4G+BT	NA	NA	NA	NA
WLAN 5G+BT	NA	NA	NA	NA

General Note:

1. The Scaled SAR summation is calculated based on the same configuration and test position.
2. Per KDB 447498 D01, simultaneous transmission SAR is compliant if,

i) Scalar SAR summation < 1.6W/kg, simultaneously transmission SAR measurement is not necessary.

ii) SPLSR = (SAR1 + SAR2)^1.5 / (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.

The maximum SAR_{1g} Value for WWAN Antenna

Test Position \ SAR_{1g}(W/kg)		WCDMA Band II	WCDMA Band IV	WCDMA Band V	WCDMA MAX. SAR_{1g}
Head	Left Cheek	0.145	0.113	0.176	0.176
	Left Tilt	0.078	0.185	0.110	0.185
	Right Cheek	0.192	0.021	0.286	0.286
	Right Tilt	0.048	0.122	0.141	0.141
Body worn	Back Side	0.638	0.844	0.730	0.844
	Front Side	0.437	0.637	0.358	0.637
Hotspot	Back Side	0.855	0.886	0.993	0.993
	Front Side	0.536	0.634	0.419	0.634
	Left Edge	0.218	0.197	0.096	0.218
	Right Edge	0.103	0.095	0.661	0.661
	Top Edge	N/A	N/A	0.030	0.030
	Bottom Edge	0.930	0.855	0.125	0.930
Product Specific 10-g SAR	Back Side	N/A	N/A	N/A	N/A
	Front Side	N/A	N/A	N/A	N/A
	Left Edge	N/A	N/A	N/A	N/A
	Right Edge	N/A	N/A	N/A	N/A
	Top Edge	N/A	N/A	N/A	N/A
	Bottom Edge	N/A	N/A	N/A	N/A

Test Position \ SAR_{1g}(W/kg)		LTE B2	LTE B5	LTE B12	LTE B41	LTE B66	LTE B71	NR n2	NR n5	NR n25	NR n41	NR n66	NR n71	LTE&NR MAX. $SAR_{1g/10g}$
		Ant 2	Ant 0	Ant 0	Ant 3	Ant 2	Ant 0	Ant 1	Ant 0	Ant 1	Ant 3	Ant 1	Ant 0	
Head	Left Cheek	0.160	0.198	0.145	0.329	0.200	0.157	0.155	0.155	0.252	0.489	0.123	0.176	0.489
	Left Tilt	0.099	0.094	0.055	0.085	0.137	0.072	0.093	0.117	0.182	0.141	0.089	0.149	0.182
	Right Cheek	0.225	0.278	0.185	0.973	0.263	0.196	0.234	0.336	0.375	0.645	0.241	0.259	0.973
	Right Tilt	0.070	0.198	0.045	0.205	0.130	0.112	0.149	0.187	0.197	0.435	0.096	0.158	0.435
Body worn	Back Side	0.648	0.637	0.489	0.428	0.662	0.293	0.555	0.557	0.524	0.427	0.389	0.309	0.662
	Front Side	0.477	0.298	0.237	0.143	0.558	0.151	0.401	0.296	0.438	0.196	0.218	0.191	0.558
Hotspot	Back Side	0.718	0.958	0.637	0.798	0.687	0.525	0.516	0.680	0.462	0.678	0.376	0.558	0.958
	Front Side	0.628	0.421	0.246	0.210	0.506	0.208	0.384	0.274	0.231	0.422	0.199	0.243	0.628
	Left Edge	0.298	0.055	0.124	0.729	0.199	0.136	0.000	0.000	0.030	0.617	0.000	0.000	0.729
	Right Edge	0.128	0.552	0.568	0.036	0.097	0.518	0.240	0.553	0.130	0.000	0.133	0.532	0.568
	Top Edge	N/A	0.031	0.077	0.113	N/A	0.008	0.030	0.000	0.000	0.129	0.000	0.000	0.129
	Bottom Edge	0.913	0.148	0.074	0.058	0.755	0.055	0.721	0.166	0.530	0.217	0.574	0.164	0.913
Product Specific 10-g	Back Side	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.020	N/A	N/A	3.020
	Front Side	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Left Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3.286	N/A	N/A	3.286

SAR	Right Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Top Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Bottom Edge	N/A	N/A	N/A	N/A	N/A	N/A	2.449	N/A	N/A	N/A	N/A	N/A	2.449

16.5dBm Power Reduction

SAR_{1g}(W/kg) / Test Position		LTE 2	LTE 5	LTE 12	LTE 66	NR n2	NR n5	NR n25	NR n41	NR n66	NR n71
		Ant 2	Ant 0	Ant 0	Ant 2	Ant 1	Ant 0	Ant 1	Ant 3	Ant 1	Ant 0
Hotspot	Back Side	0.128	0.185	0.101	0.193	0.183	0.171	0.184	0.270	0.150	0.111
	Front Side	0.112	0.073	0.039	0.143	0.136	0.069	0.092	0.168	0.079	0.048
	Left Edge	0.054	0.009	0.020	0.056	0.000	0.000	0.012	0.246	0.000	0.000
	Right Edge	0.025	0.099	0.091	0.027	0.085	0.139	0.052	0.000	0.053	0.106
	Top Edge	N/A	0.005	0.013	N/A	0.011	0.000	0.000	0.051	0.000	0.000
	Bottom Edge	0.162	0.026	0.012	0.213	0.310	0.042	0.211	0.086	0.229	0.033

Full Power for NR & 16.5dBm Power Reduction for LTE

SAR_{1g}(W/kg) / Test Position		DC_5A-n2A Ant 0 + Ant 1	DC_12A-n2A Ant 0 + Ant 1	DC_66A-n2A Ant 2 + Ant 1	DC_2A-n5A Ant 2 + Ant 0	DC_66A-n5A Ant 2 + Ant 0	DC_66A-n25A Ant 2 + Ant 1	DC_2A-n41A Ant 2 + Ant 3	DC_66A-n41A Ant 2 + Ant 3	DC_2A-n66A Ant 2 + Ant 1	DC_5A-n66A Ant 0 + Ant 1	DC_12A-n66A Ant 0 + Ant 1	DC_2A-n71A Ant 2 + Ant 0	DC_66A-n71A Ant 2 + Ant 0	MAX. SAR_{1g}
Hotspot	Back Side	0.701	0.617	0.709	0.808	0.873	0.655	0.806	0.871	0.504	0.561	0.477	0.686	0.751	0.873
	Front Side	0.457	0.423	0.527	0.386	0.417	0.374	0.534	0.565	0.311	0.272	0.238	0.355	0.386	0.565
	Left Edge	0.009	0.02	0.056	0.054	0.056	0.086	0.671	0.673	0.054	0.009	0.020	0.054	0.056	0.673
	Right Edge	0.339	0.331	0.267	0.578	0.580	0.157	0.025	0.027	0.158	0.232	0.224	0.557	0.559	0.580
	Top Edge	0.035	0.043	0.030	0	0	0	0.129	0.129	0	0.005	0.013	0	0	0.129
	Bottom Edge	0.747	0.733	0.934	0.328	0.379	0.743	0.379	0.430	0.736	0.600	0.586	0.326	0.377	0.934

16.5dBm Power Reduction for NR & Full Power for LTE

SAR_{1g}(W/kg) / Test Position		DC_5A-n2A Ant 0 + Ant 1	DC_12A-n2A Ant 0 + Ant 1	DC_66A-n2A Ant 2 + Ant 1	DC_2A-n5A Ant 2 + Ant 0	DC_66A-n5A Ant 2 + Ant 0	DC_66A-n25A Ant 2 + Ant 1	DC_2A-n41A Ant 2 + Ant 3	DC_66A-n41A Ant 2 + Ant 3	DC_2A-n66A Ant 2 + Ant 1	DC_5A-n66A Ant 0 + Ant 1	DC_12A-n66A Ant 0 + Ant 1	DC_2A-n71A Ant 2 + Ant 0	DC_66A-n71A Ant 2 + Ant 0	MAX. SAR_{1g}
Hotspot	Back Side	1.141	0.820	0.870	0.889	0.858	0.871	0.988	0.957	0.868	1.108	0.787	0.829	0.798	1.141
	Front Side	0.557	0.382	0.642	0.697	0.575	0.598	0.796	0.674	0.707	0.500	0.325	0.676	0.554	0.796
	Left Edge	0.055	0.124	0.199	0.298	0.199	0.211	0.544	0.445	0.298	0.055	0.124	0.298	0.199	0.544
	Right Edge	0.637	0.653	0.182	0.267	0.236	0.149	0.128	0.097	0.181	0.605	0.621	0.234	0.203	0.653
	Top Edge	0.042	0.088	0.011	0	0	0	0.051	0.051	0	0.031	0.077	0	0	0.088
	Bottom Edge	0.458	0.384	1.065	0.955	0.797	0.966	0.999	0.841	1.142	0.377	0.303	0.946	0.788	1.142

Full Power

Test Position	SAR_{1g}(W/kg)	DC_5A-n2A Ant 0 + Ant 1	DC_12A-n2A Ant 0 + Ant 1	DC_66A-n2A Ant 2 + Ant 1	DC_2A-n5A Ant 2 + Ant 0	DC_66A-n5A Ant 2 + Ant 0	DC_66A-n25A Ant 2 + Ant 1	DC_2A-n41A Ant 2 + Ant 3	DC_66A-n41A Ant 2 + Ant 3	DC_2A-n66A Ant 2 + Ant 1	DC_5A-n66A Ant 0 + Ant 1	DC_12A-n66A Ant 0 + Ant 1	DC_2A-n71A Ant 2 + Ant 0	DC_66A-n71A Ant 2 + Ant 0	MAX. $SAR_{1g/10g}$
Head	Left Cheek	0.353	0.300	0.355	0.315	0.355	0.452	0.649	0.689	0.283	0.321	0.268	0.336	0.376	0.689
	Left Tilt	0.187	0.148	0.230	0.216	0.254	0.319	0.240	0.278	0.188	0.183	0.144	0.248	0.286	0.319
	Right Cheek	0.512	0.419	0.497	0.561	0.599	0.638	0.870	0.908	0.466	0.519	0.426	0.484	0.522	0.908
	Right Tilt	0.347	0.194	0.279	0.257	0.317	0.327	0.505	0.565	0.166	0.294	0.141	0.228	0.288	0.565
Body worn	Back Side	1.192	1.044	1.217	1.205	1.219	1.186	1.075	1.089	1.037	1.026	0.878	0.957	0.971	1.219
	Front Side	0.699	0.638	0.959	0.773	0.854	0.996	0.673	0.754	0.695	0.516	0.455	0.668	0.749	0.996
Product Specific 10-g SAR	Back Side	0	0	0	0	0	0	3.020	3.020	0	0	0	0	0	3.020
	Front Side	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left Edge	0	0	0	0	0	0	3.286	3.286	0	0	0	0	0	3.286
	Right Edge	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Top Edge	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Bottom Edge	2.449	2.449	2.449	0	0	0	0	0	0	0	0	0	0	2.449

Test Position	SAR_{1g}(W/kg)	WCDMA MAX. SAR_{1g}	LTE&NR MAX. SAR_{1g}	EN-DC MAX. SAR_{1g}			MAX. $SAR_{1g/10g}$
				Full Power for NR & 16.5dBm Power Reduction for LTE	16.5dBm Power Reduction for NR & Full Power for LTE	Full Power	
Head	Left Cheek	0.176	0.489	/	/	0.689	0.689
	Left Tilt	0.185	0.182	/	/	0.319	0.319
	Right Cheek	0.286	0.973	/	/	0.908	0.973
	Right Tilt	0.141	0.435	/	/	0.565	0.565
Body worn	Back Side	0.844	0.662	/	/	1.219	1.219
	Front Side	0.637	0.558	/	/	0.996	0.996
Hotspot	Back Side	0.993	0.958	0.873	1.141	/	1.141
	Front Side	0.634	0.628	0.565	0.796	/	0.796
	Left Edge	0.218	0.729	0.673	0.544	/	0.729
	Right Edge	0.661	0.568	0.580	0.653	/	0.661
	Top Edge	0.030	0.129	0.129	0.088	/	0.129
	Bottom Edge	0.930	0.913	0.934	1.142	/	1.142
Product Specific 10-g SAR	Back Side	N/A	3.020	/	/	3.020	3.020
	Front Side	N/A	N/A	/	/	0	N/A
	Left Edge	N/A	3.286	/	/	3.286	3.286
	Right Edge	N/A	N/A	/	/	0	N/A
	Top Edge	N/A	N/A	/	/	0	N/A
	Bottom Edge	N/A	2.449	/	/	2.449	2.449

About Wi-Fi and Bluetooth and WWAN-Antenna

Test Position \ SAR_{1g} (W/kg)		WWAN - Antenna	Wi-Fi 2.4G	Wi-Fi 5G		Bluetooth	MAX. $\Sigma SAR_{1g/10g}$
				(U-NII-1)	(U-NII-3)		
Head	Left, Cheek	0.689	**0.699**	0.425	0.100	0.299	1.388
	Left, Tilt	0.319	0.537	**0.573**	0.181	0.226	0.892
	Right, Cheek	0.973	**0.345**	0.228	0.053	0.132	1.318
	Right, Tilt	0.565	0.275	**0.279**	0.111	0.139	0.844
Body worn	Back Side	1.219	0.245	**0.250**	0.209	0.054	1.469
	Front Side	0.996	**0.145**	0.111	0.090	0.042	1.141
Hotspot	Back Side	1.141	**0.444**	0.366	0.398	0.054	1.585
	Front Side	0.796	**0.340**	0.144	0.113	0.042	1.136
	Left Edge	0.729	0.045	0.090	**0.110**	0.006	0.839
	Right Edge	0.661	**0.222**	0.142	0.129	0.020	0.883
	Top Edge	0.129	0.163	0.290	0.241	0.014	0.419
	Bottom Edge	1.142	N/A	N/A	N/A	N/A	1.142
Product Specific 10-g SAR	Back Side	3.020	N/A	N/A	N/A	N/A	3.020
	Front Side	N/A	N/A	N/A	N/A	N/A	0
	Left Edge	3.286	N/A	N/A	N/A	N/A	3.286
	Right Edge	N/A	N/A	N/A	N/A	N/A	0
	Top Edge	N/A	N/A	N/A	N/A	N/A	0
	Bottom Edge	2.449	N/A	N/A	N/A	N/A	2.449

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

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

MAX. ΣSAR_{1g} = 1.585W/kg<1.6W/kg and MAX. ΣSAR_{10g} = 3.286W/kg<4 W/kg, so the Simultaneous transimition SAR with volum scan are not required for Wi-Fi / Bluetooth and WWAN-Antenna.

11 Measurement Uncertainty

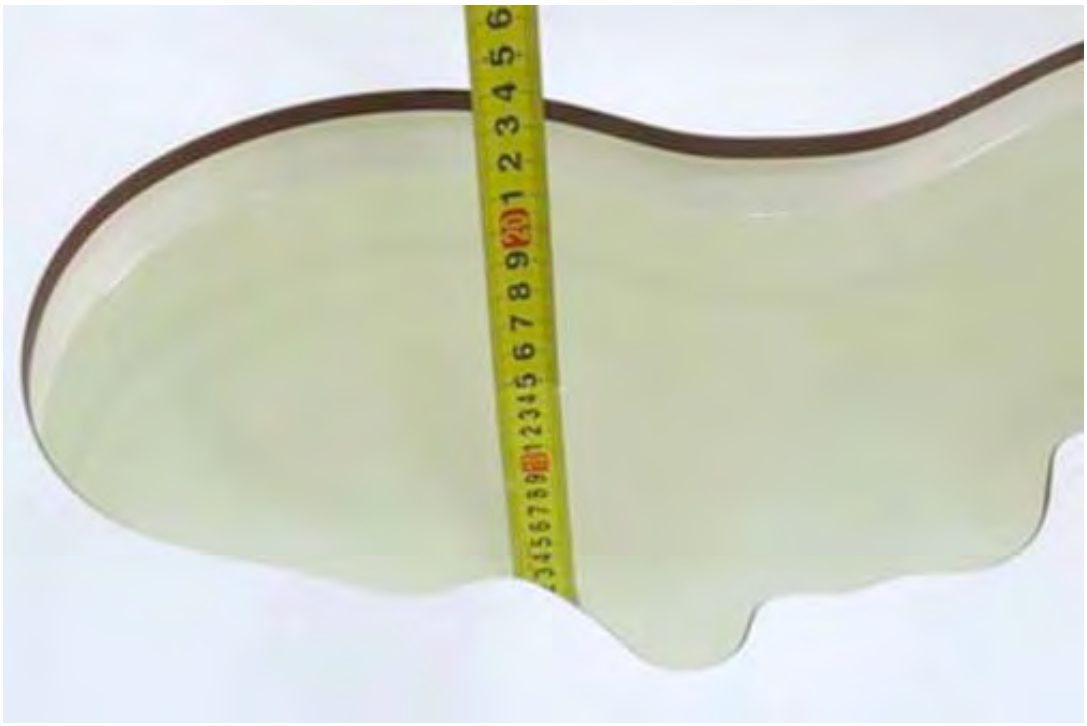
Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528- 2013 is not required in SAR reports submitted for equipment approval.

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

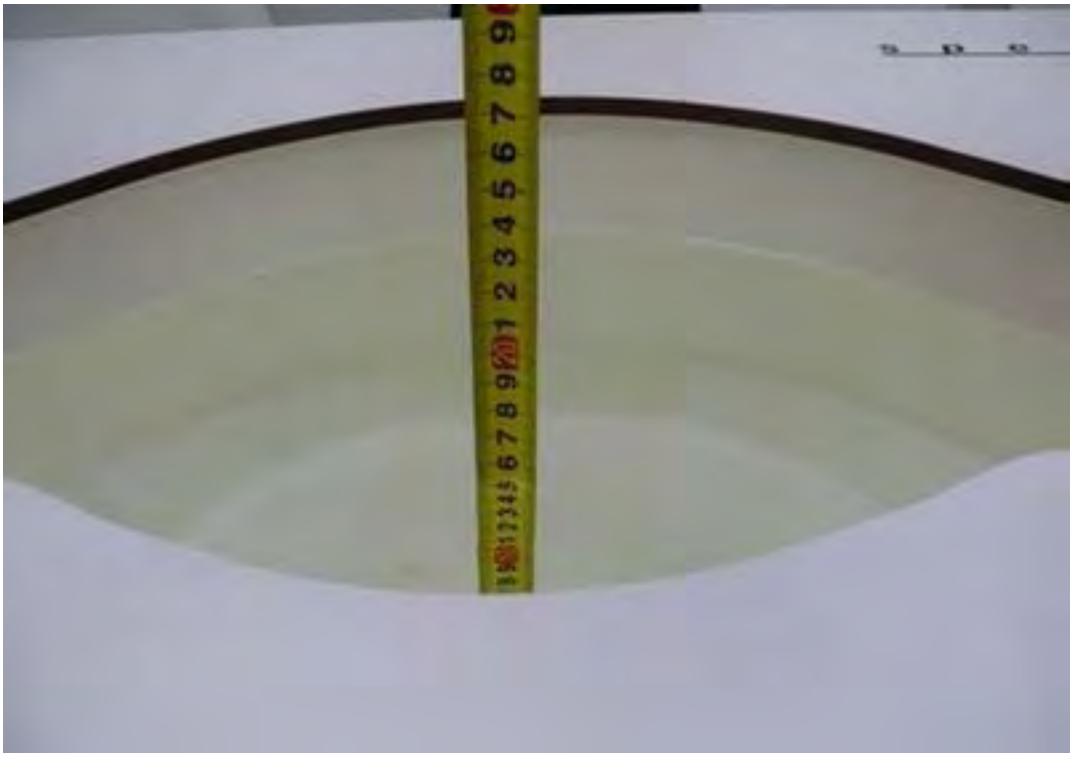
ANNEX A: Test Layout

Tissue Simulating Liquids

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



Picture 3: liquid depth in the head Phantom



Picture 4: Liquid depth in the flat Phantom

ANNEX B: System Check Results

Plot 1 System Performance Check at 750 MHz TSL

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

Date: 2022/2/21

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

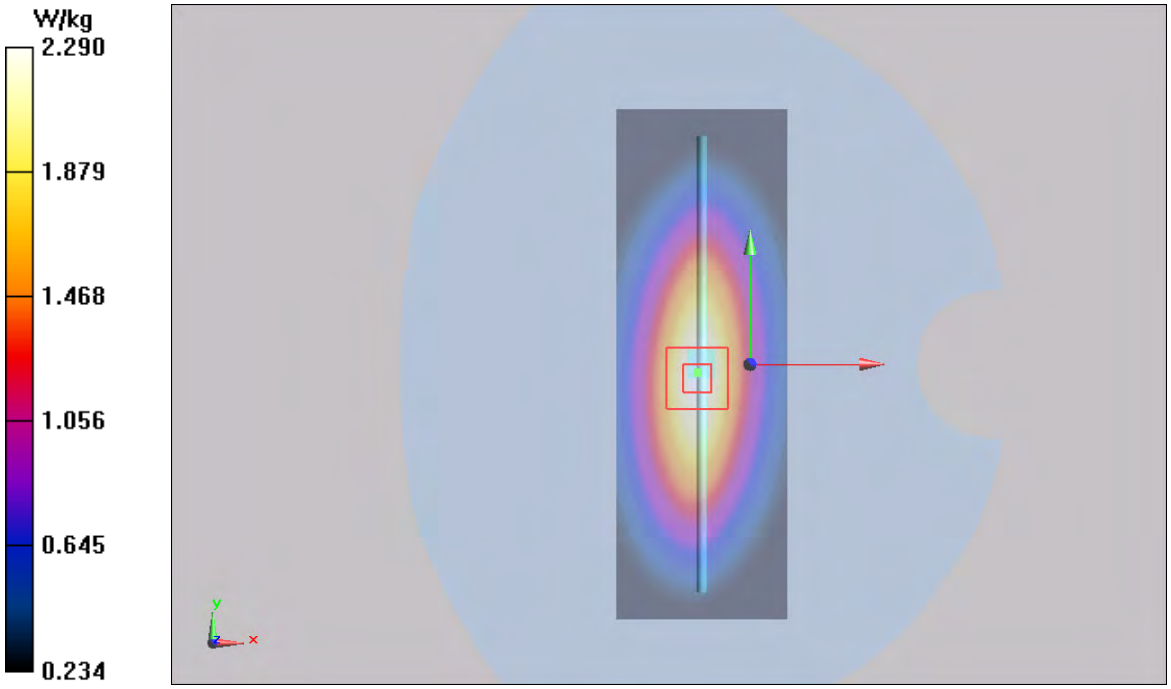
d=15mm,Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



Plot 2 System Performance Check at 750 MHz TSL

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

Date: 2022/2/22

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

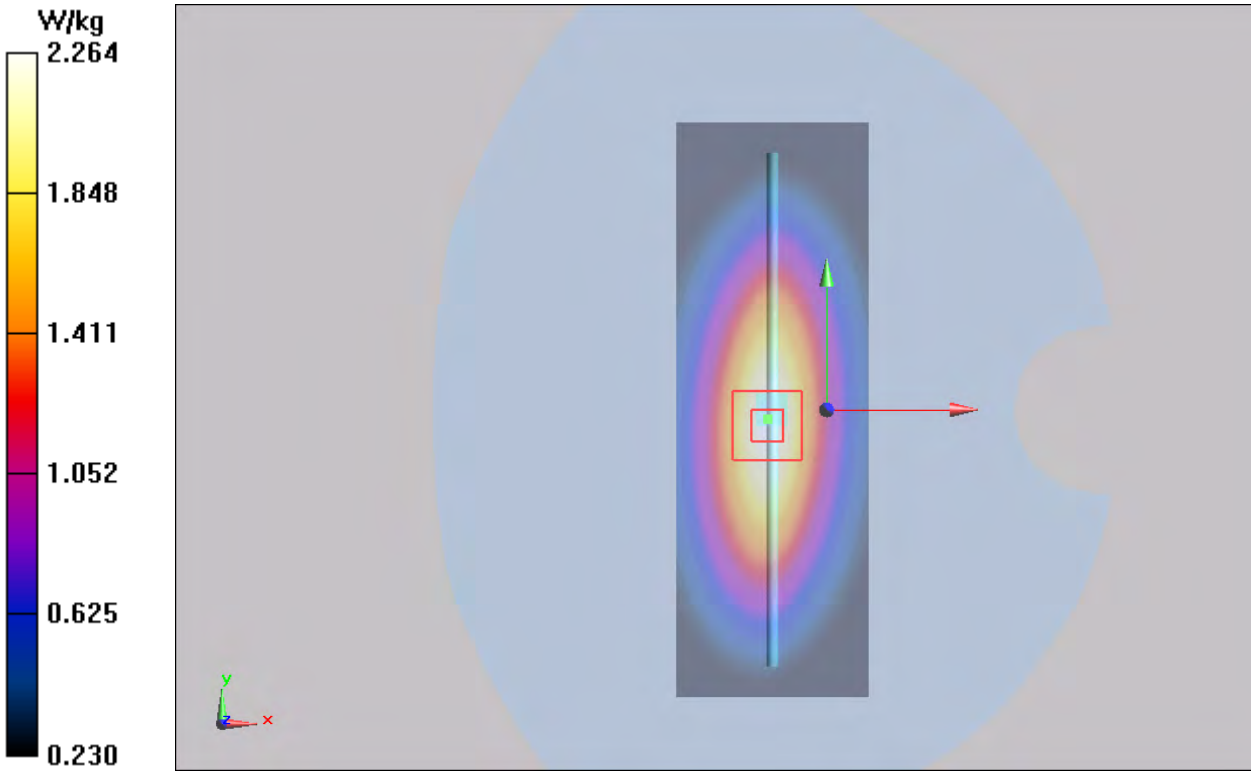
d=15mm,Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



Plot 3 System Performance Check at 835 MHz TSL

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

Date: 2022/2/22

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

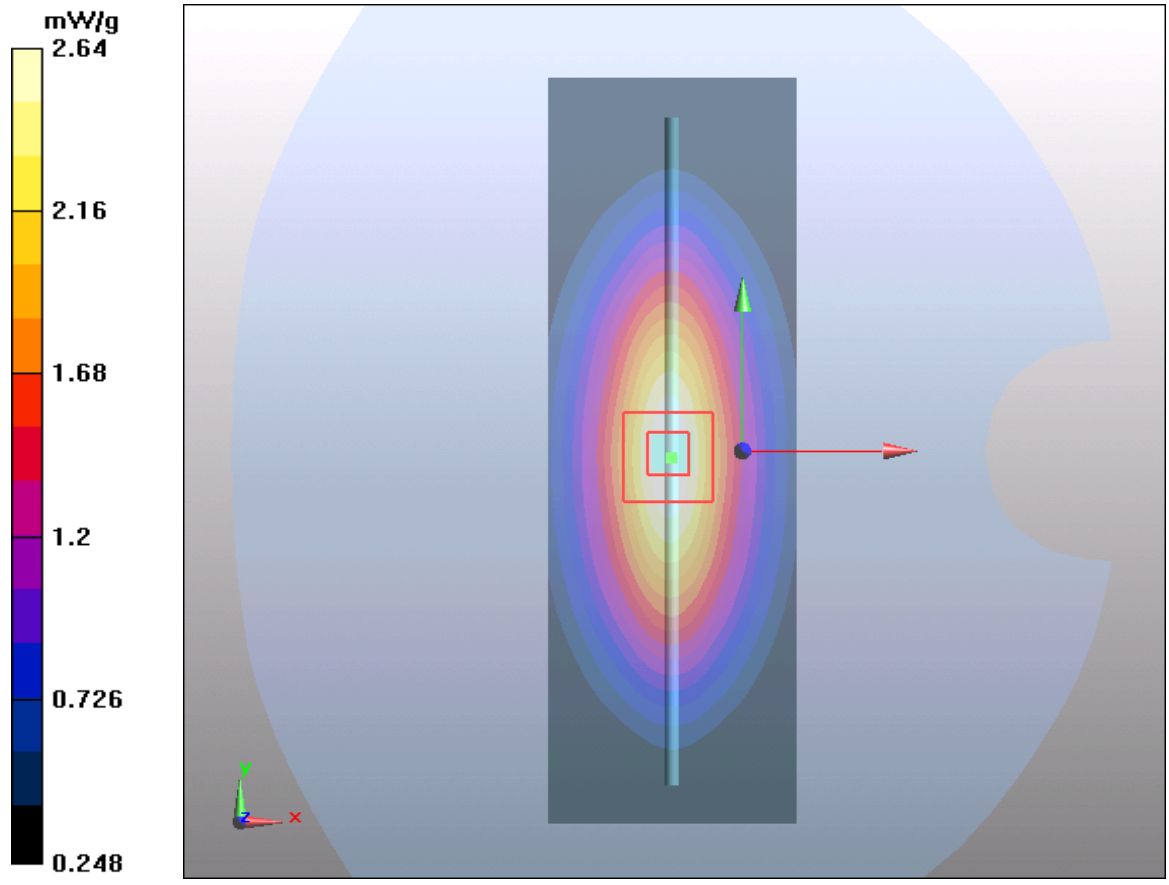
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



Plot 4 System Performance Check at 835 MHz TSL

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

Date: 2022/2/23

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

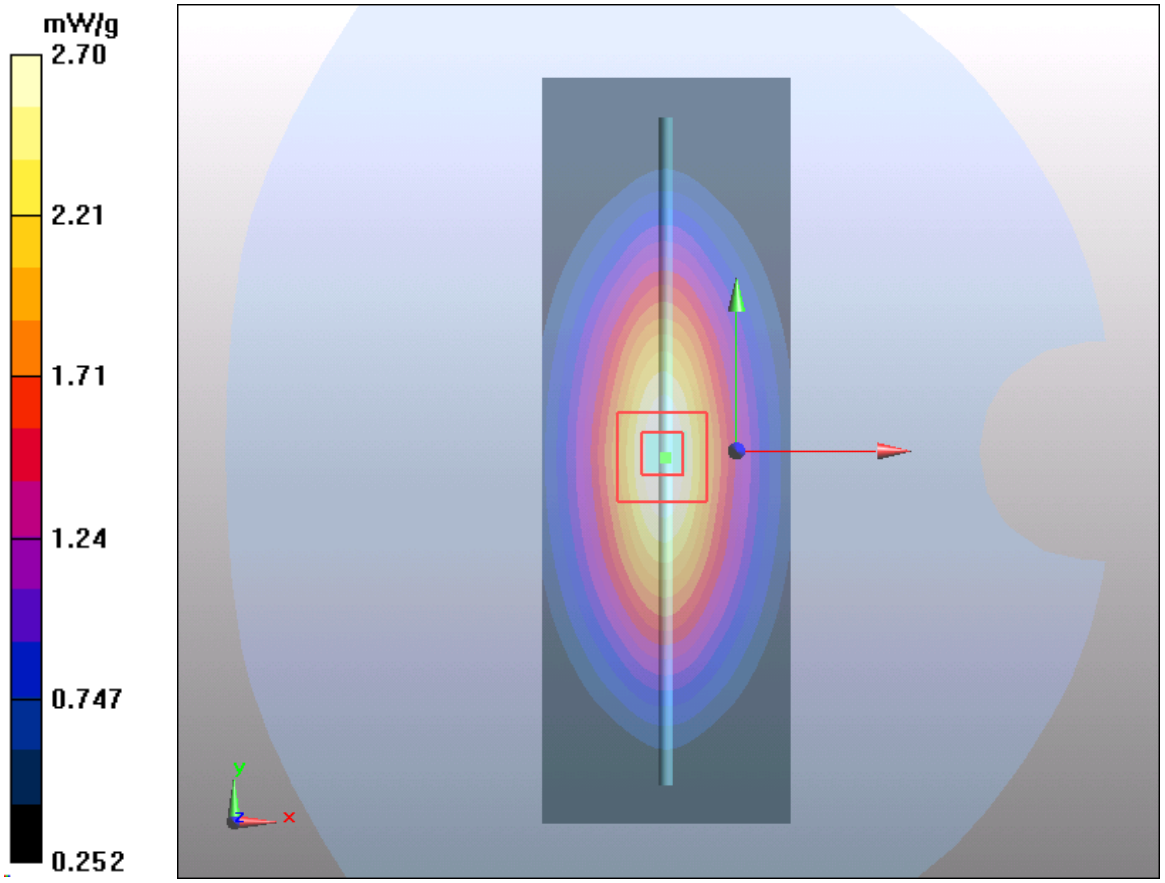
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



Plot 5 System Performance Check at 1750 MHz TSL

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

Date: 2022/3/1

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

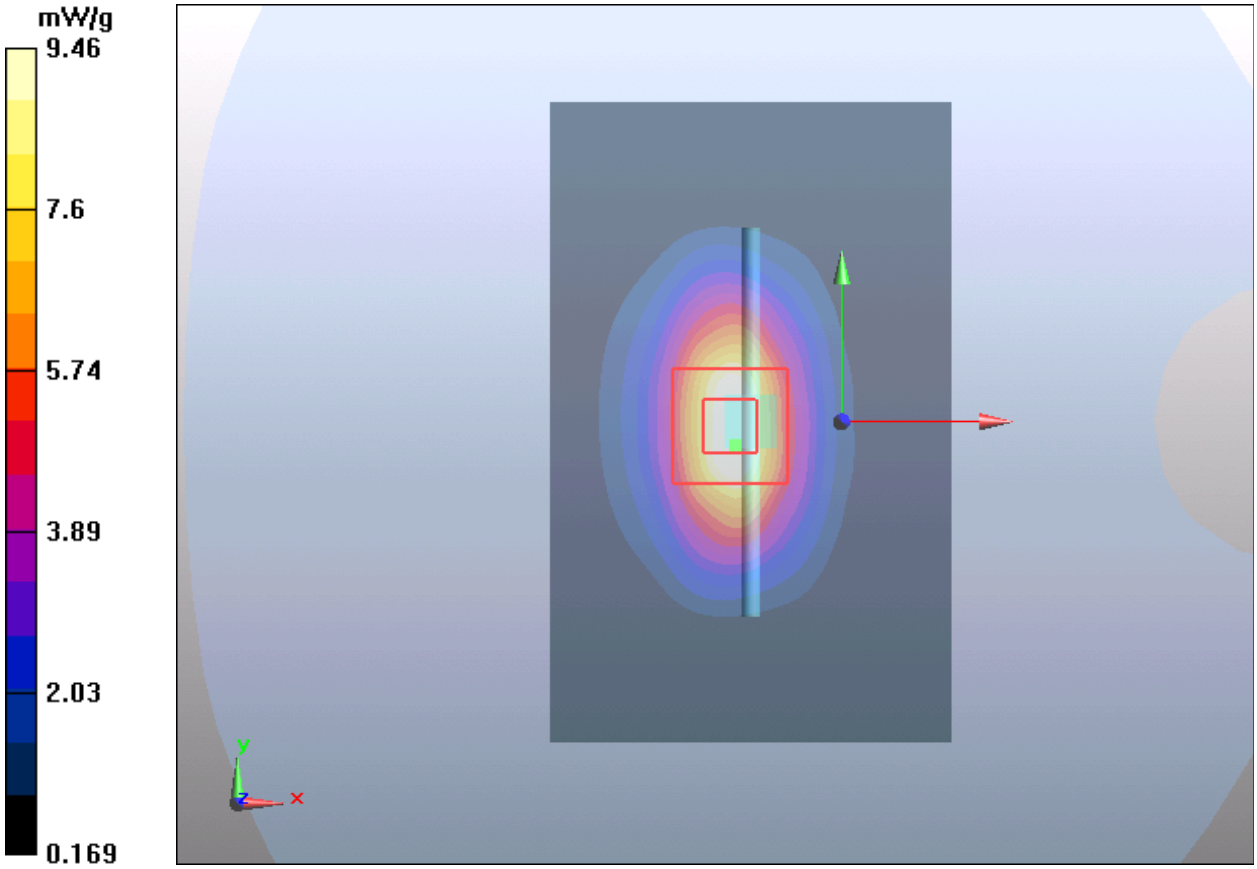
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



Plot 6 System Performance Check at 1900 MHz TSL

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

Date: 2022/2/25

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

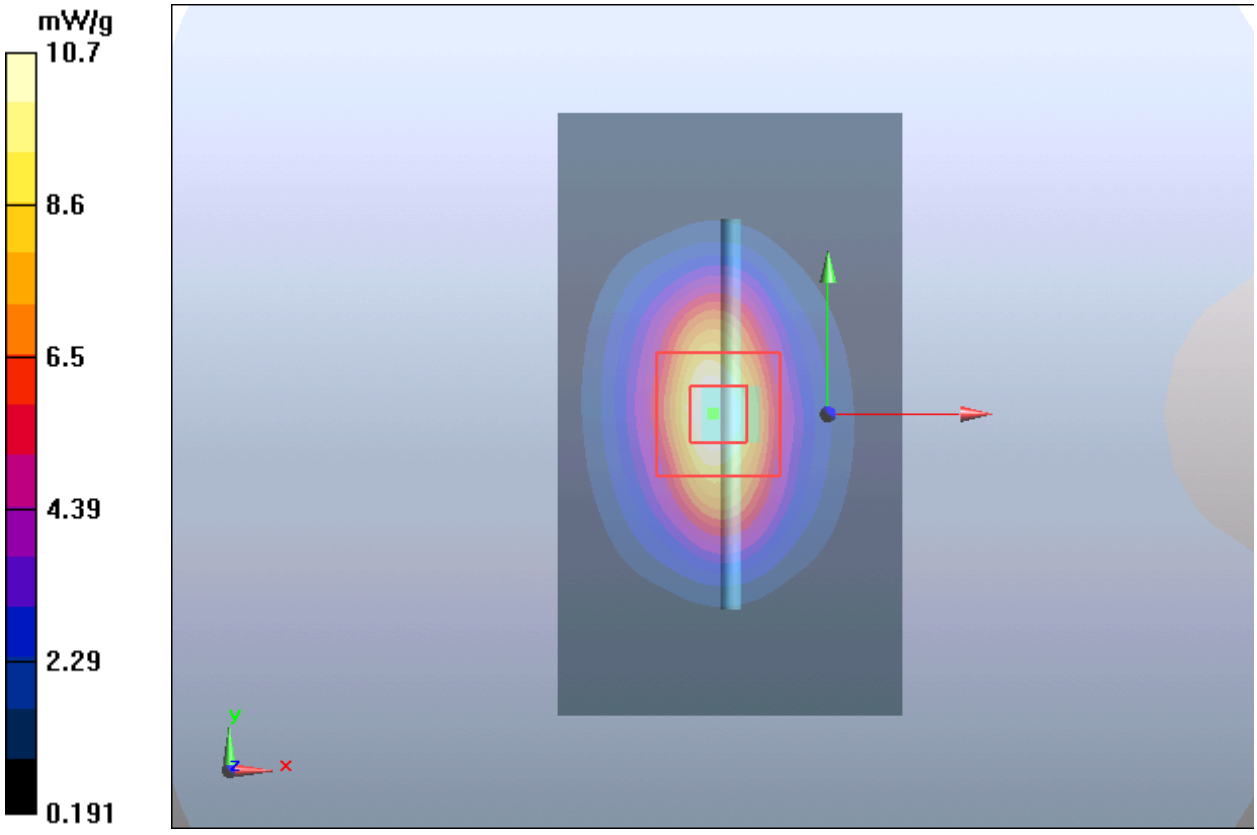
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



Plot 7 System Performance Check at 1900 MHz TSL

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

Date: 2022/2/26

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

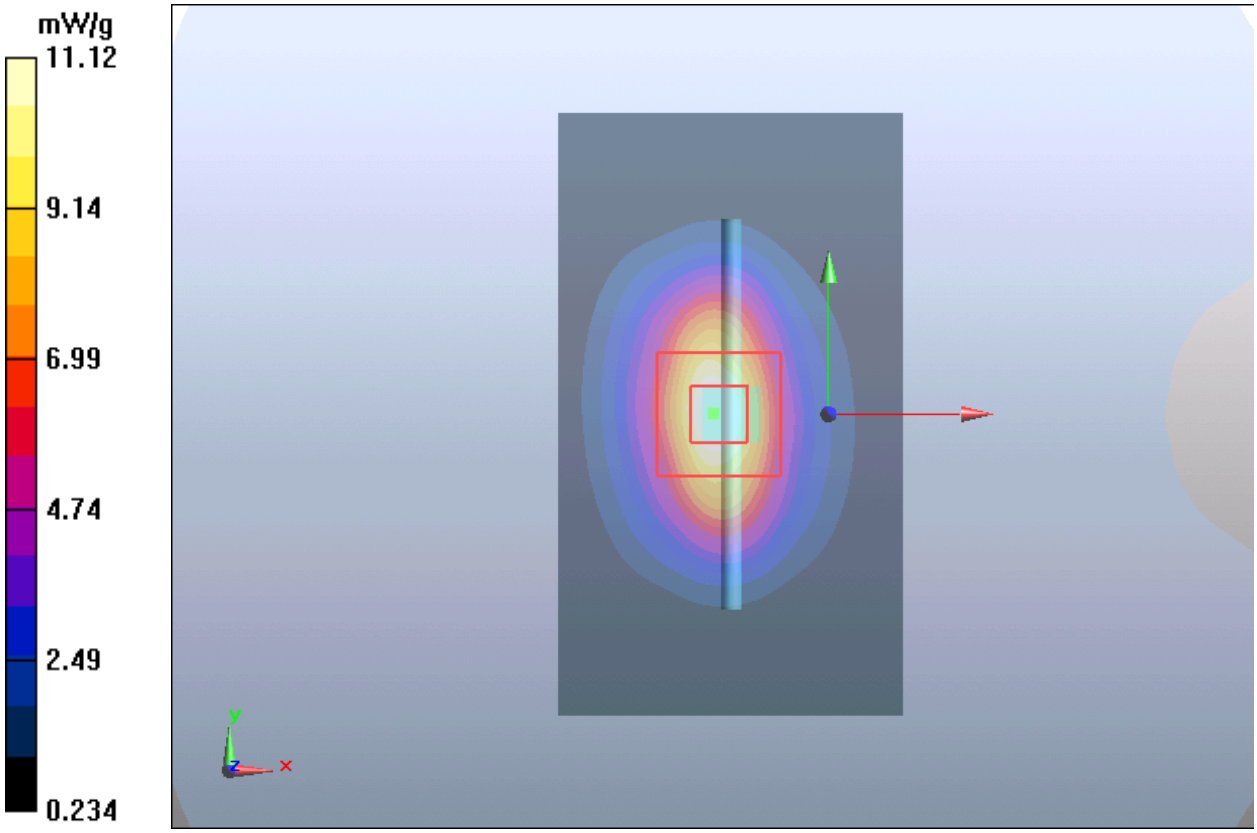
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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



Plot 8 System Performance Check at 2450 MHz TSL

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

Date: 2022/3/10

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

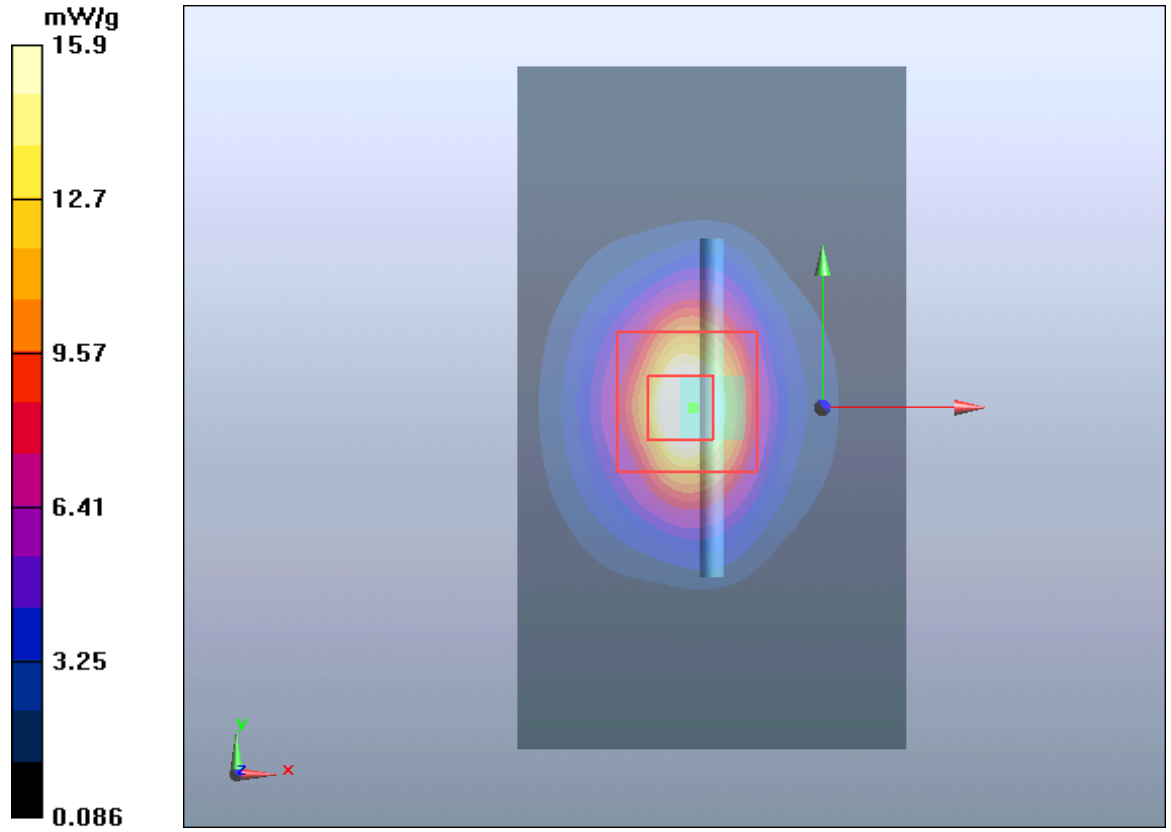
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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



Plot 9 System Performance Check at 2600 MHz TSL

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

Date: 2022/3/14

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

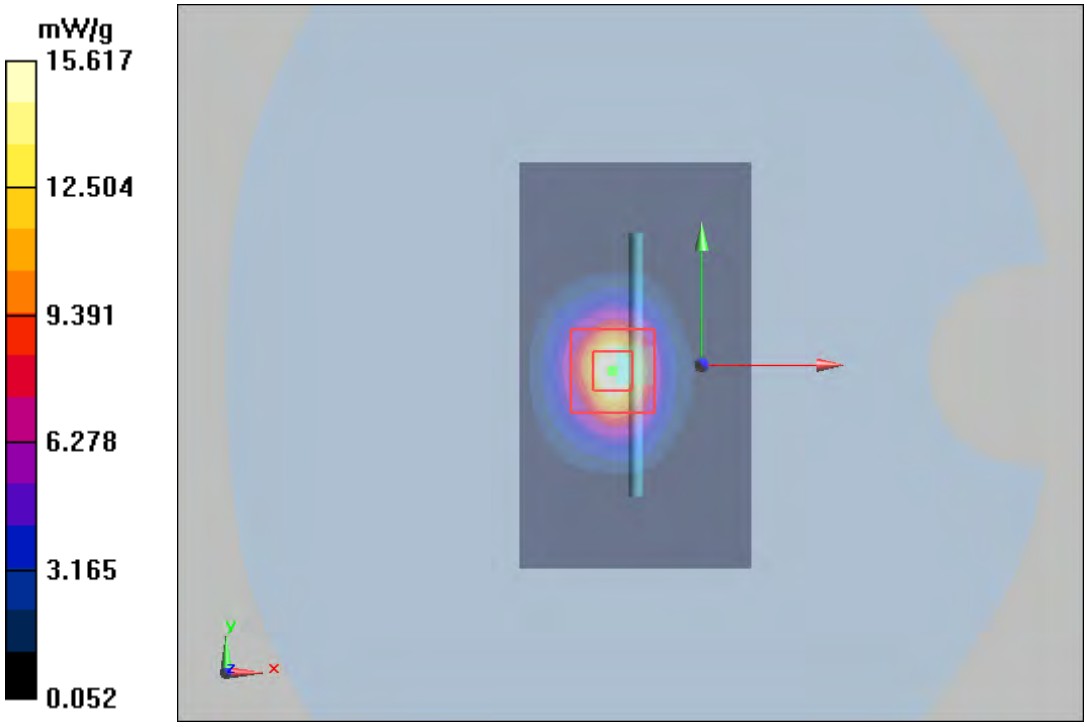
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

Peak SAR (extrapolated) = 31.858 W/kg

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

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



Plot 10 System Performance Check at 2600 MHz TSL

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

Date: 2022/3/15

Communication System: CW; Frequency: 2600 MHz;Duty Cycle: 1:1

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

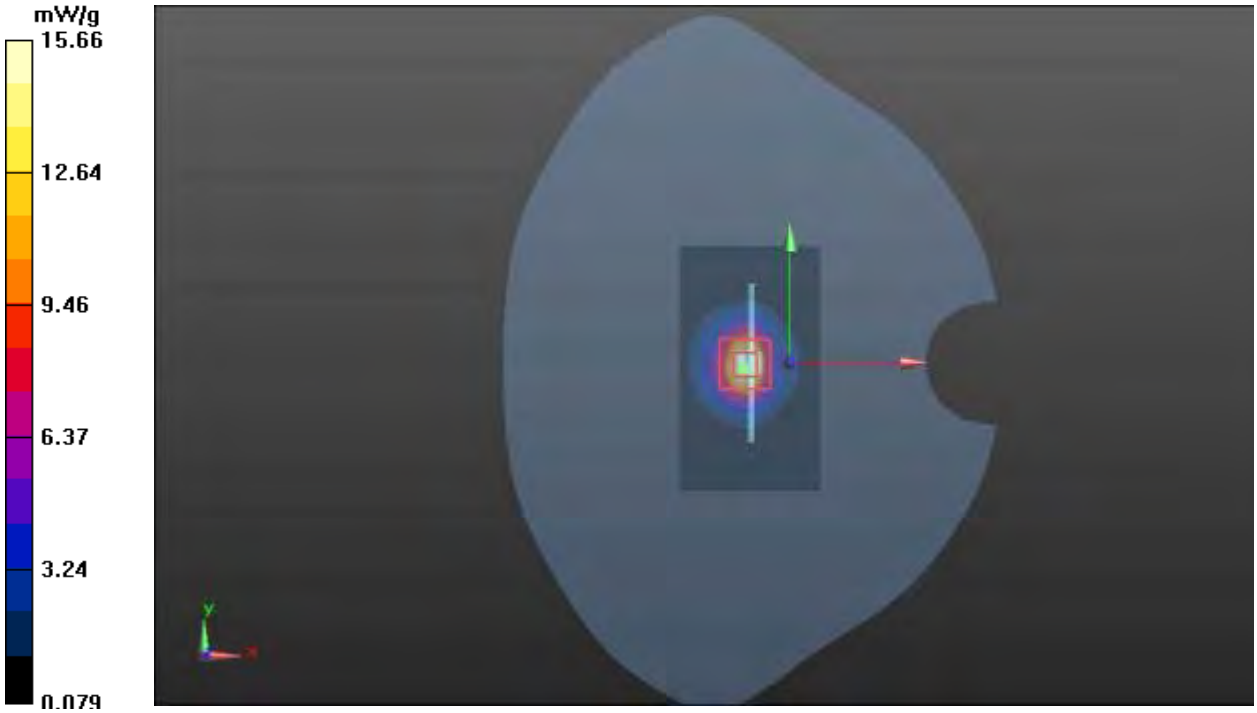
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

Peak SAR (extrapolated) = 31.858 W/kg

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

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



Plot 11 System Performance Check at 5250 MHz TSL

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

Date: 2022/3/7

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

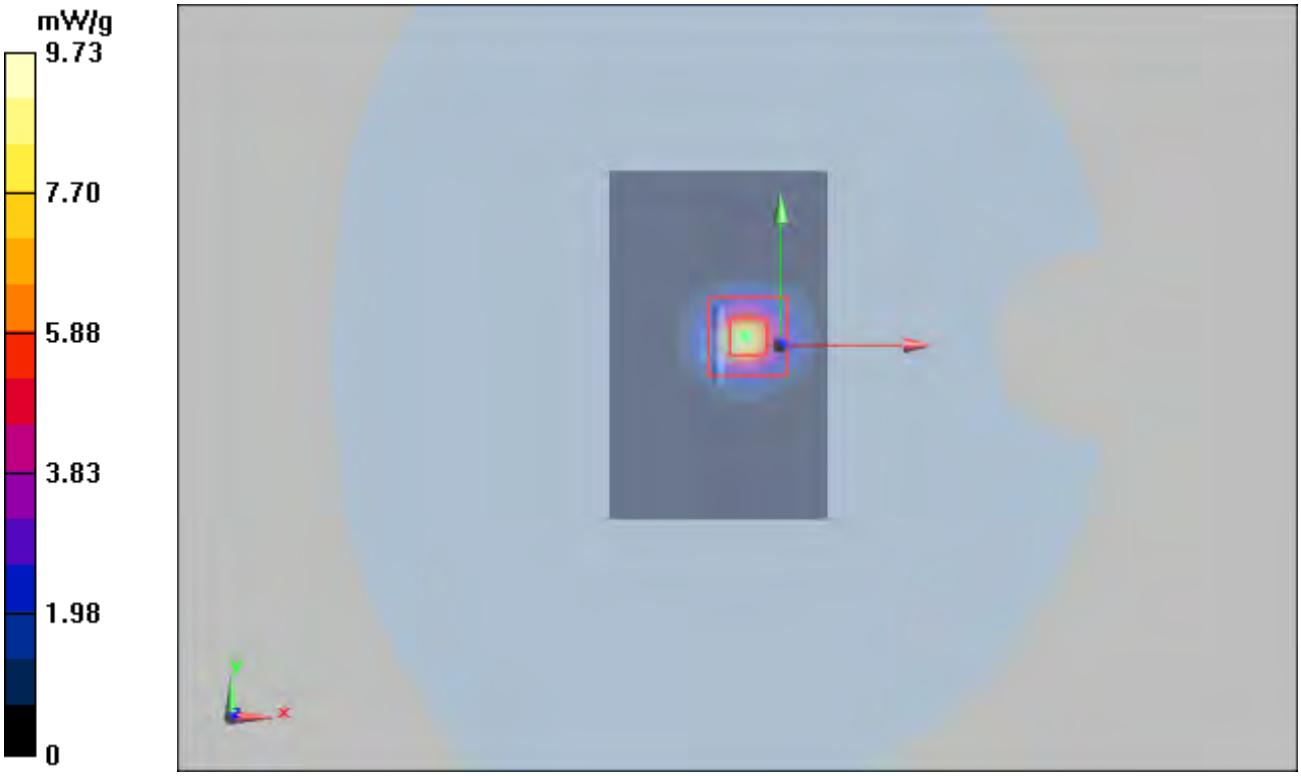
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

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



Plot 12 System Performance Check at 5750 MHz TSL

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

Date: 2022/3/7

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

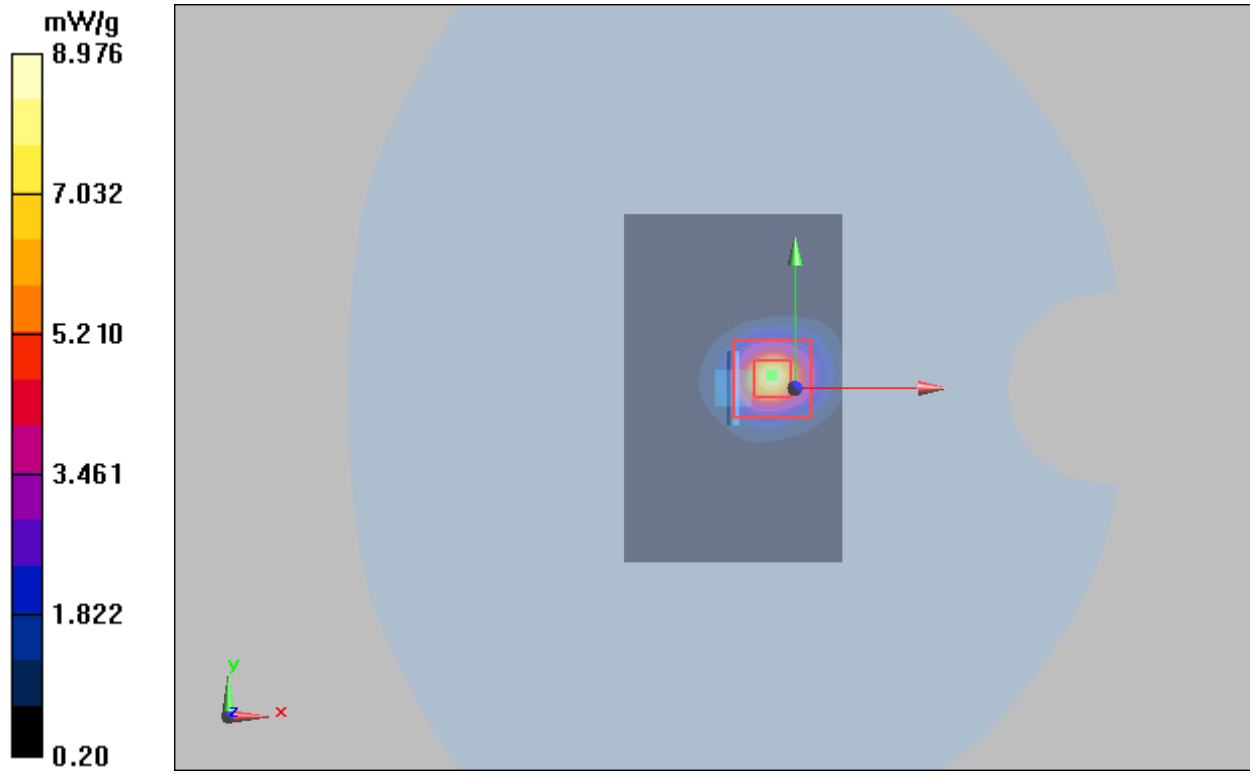
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

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



ANNEX C: Highest Graph Results

Plot 13 WCDMA Band II Right Cheek Middle

Date: 2022/2/25

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) = 0.203 W/kg

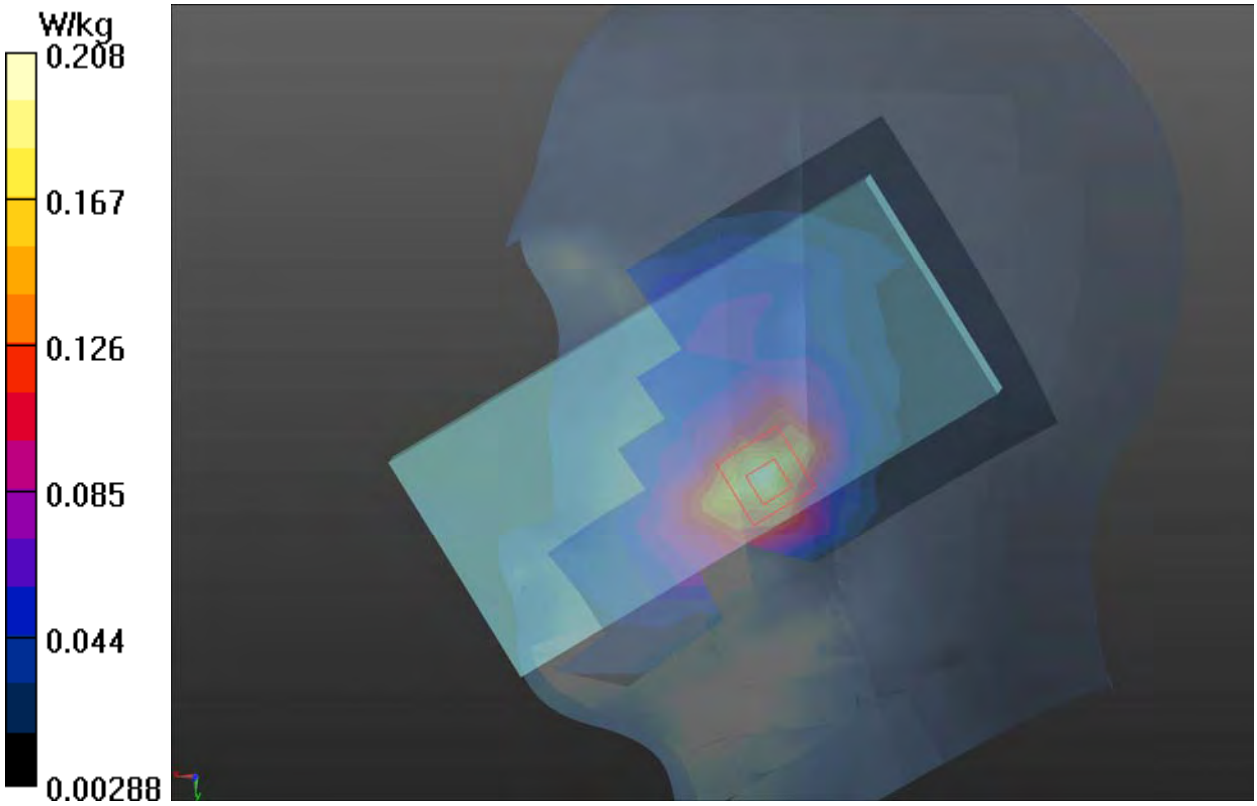
Right Cheek Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.759 V/m; Power Drift = 0.132 dB

Peak SAR (extrapolated) = 0.248 W/kg

SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.092 W/kg

Maximum value of SAR (measured) = 0.208 W/kg



Plot 14 WCDMA Band IV Left Cheek Middle

Date: 2022/3/1

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: 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) = 0.149 W/kg

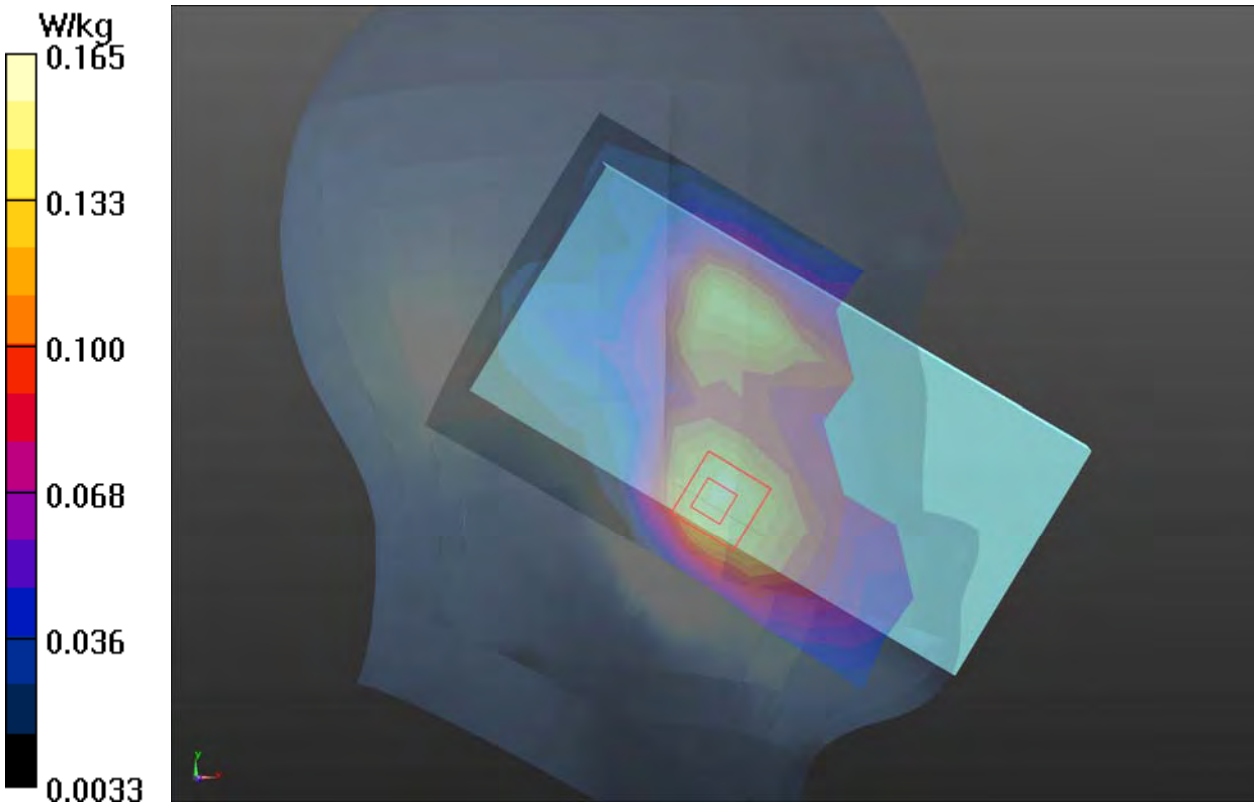
Left Cheek Middle /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.270 V/m; Power Drift = 0.034 dB

Peak SAR (extrapolated) = 0.187 W/kg

SAR(1 g) = 0.124 W/kg; SAR(10 g) = 0.082 W/kg

Maximum value of SAR (measured) = 0.165 W/kg



Plot 15 WCDMA Band V Right Cheek Middle

Date: 2022/2/22

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) = 0.256 W/kg

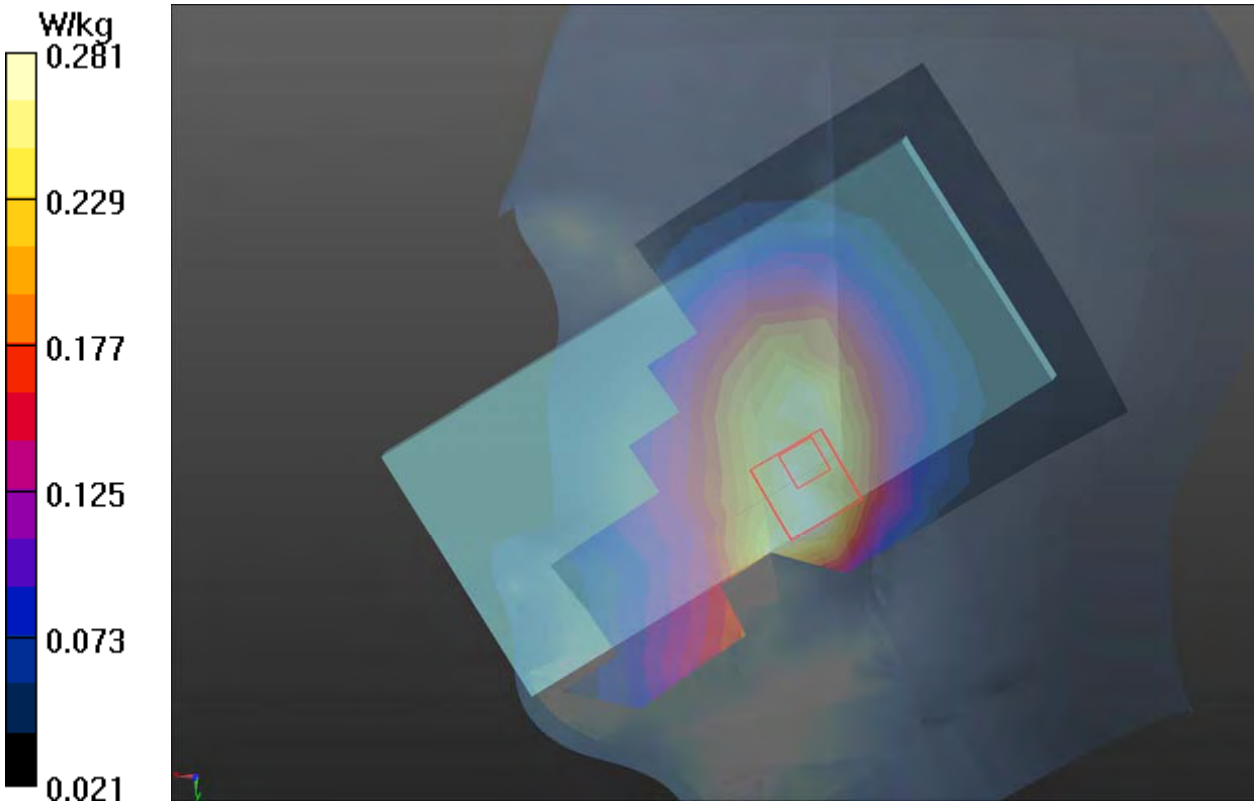
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.843 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.322 W/kg

SAR(1 g) = 0.227 W/kg; SAR(10 g) = 0.164 W/kg

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



Plot 16 LTE Band 2 1RB Right Cheek Low

Date: 2022/2/25

Communication System: UID 0, LTE (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: 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 Low 2/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.195 W/kg

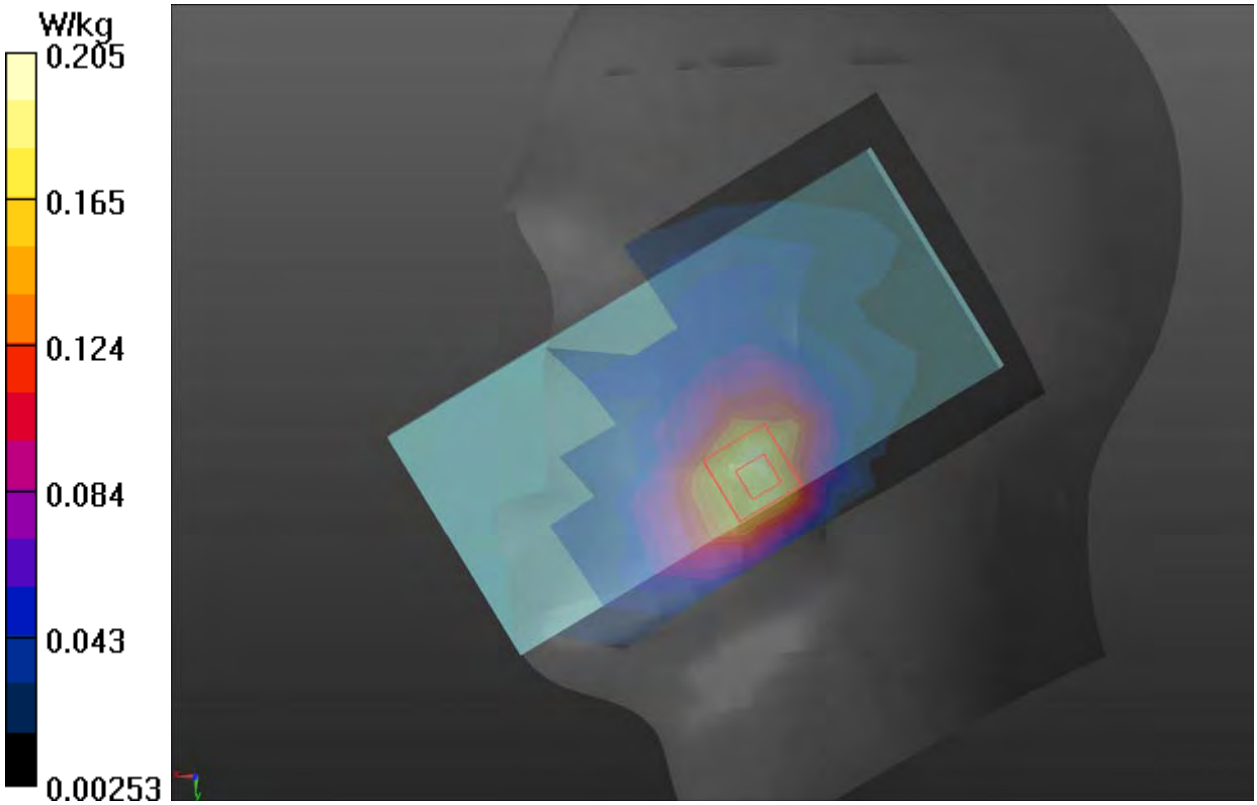
Right Cheek Low 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.806 V/m; Power Drift = -0.034 dB

Peak SAR (extrapolated) = 0.286 W/kg

SAR(1 g) = 0.191 W/kg; SAR(10 g) = 0.121 W/kg

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



Plot 17 LTE Band 5 1RB Right Cheek Low

Date: 2022/2/23

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

Medium parameters used: f = 829 MHz; σ = 0.946 S/m; ε_r = 39.678; 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 Low/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

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

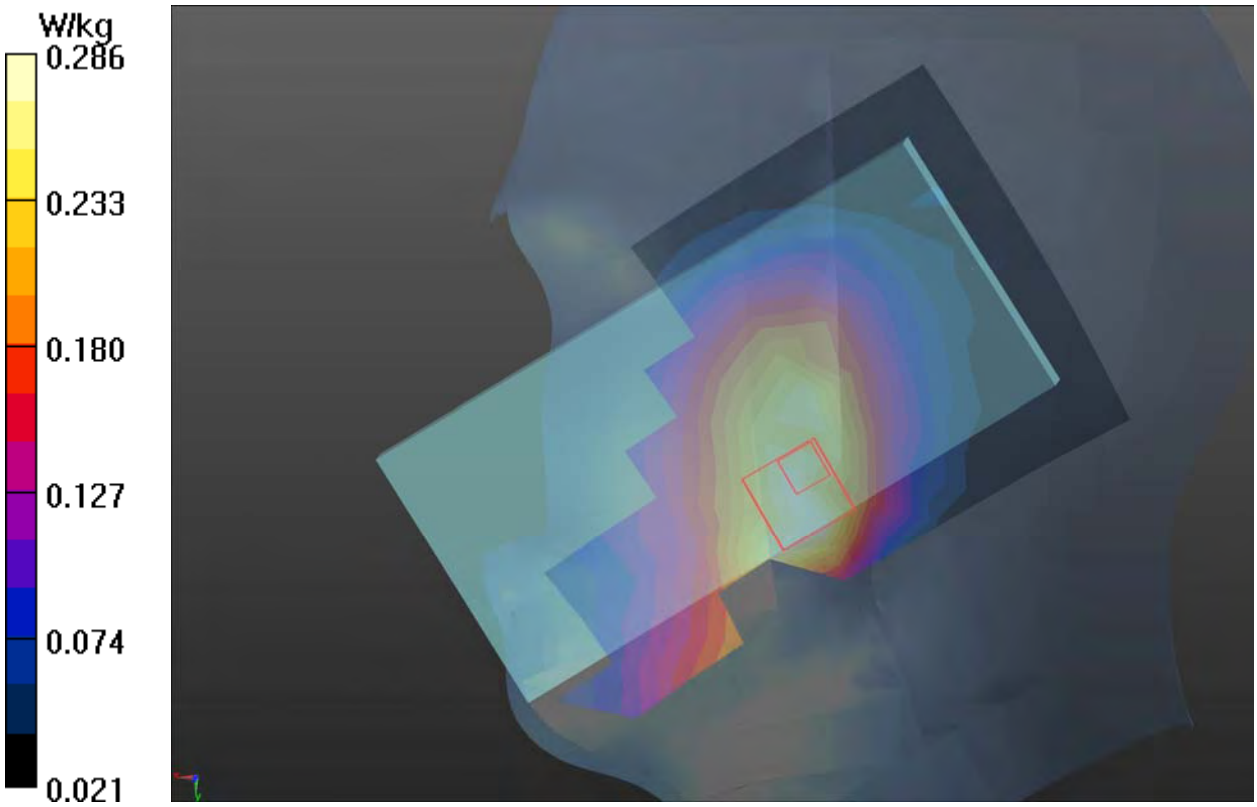
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.555 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.323 W/kg

SAR(1 g) = 0.231 W/kg; SAR(10 g) = 0.169 W/kg

Maximum value of SAR (measured) = 0.286 W/kg



Plot 18 LTE Band 12 1RB Right Cheek Low

Date: 2022/2/21

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) = 0.159 W/kg

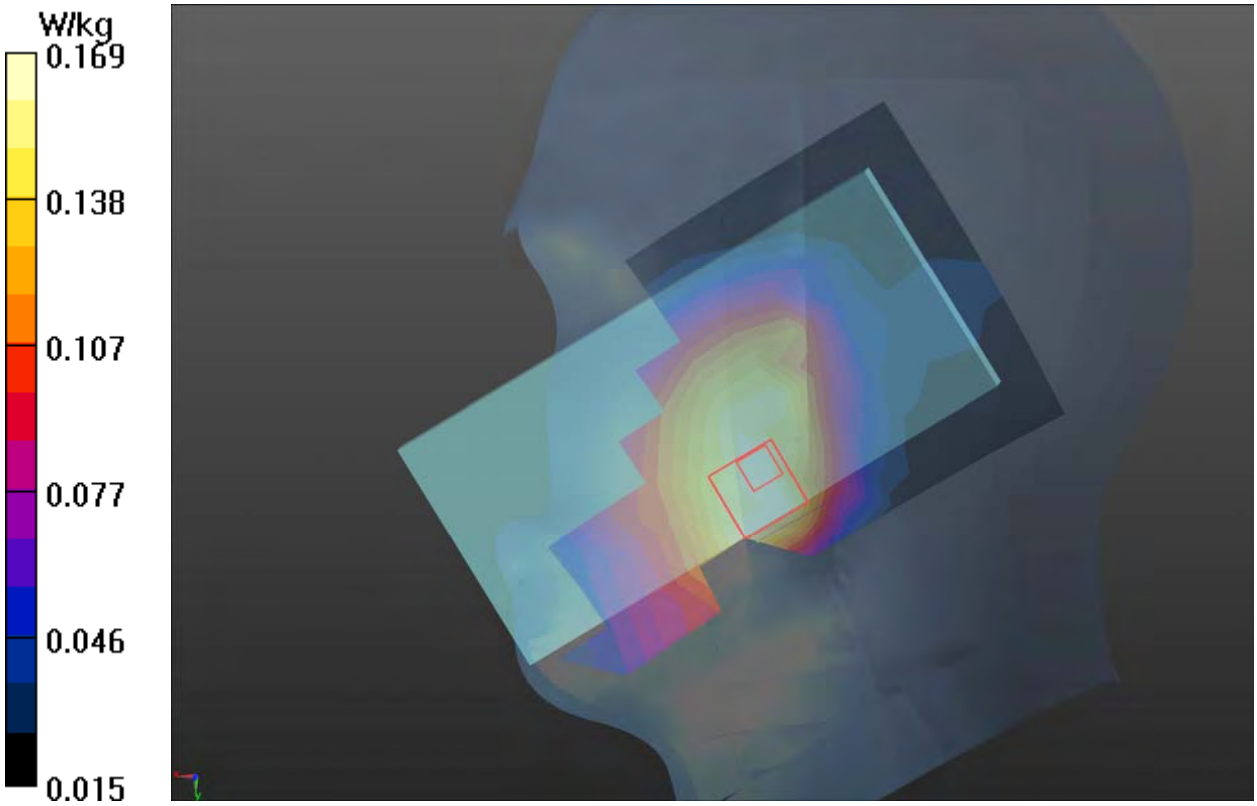
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.970 V/m; Power Drift = 0.029 dB

Peak SAR (extrapolated) = 0.195 W/kg

SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.107 W/kg

Maximum value of SAR (measured) = 0.169 W/kg



Plot 19 LTE Band 41 1RB Right Cheek High

Date: 2022/3/14

Communication System: UID 0, LTE (0); Frequency: 2636.5 MHz;Duty Cycle: 1:1.58

Medium parameters used (interpolated): f = 2636.5 MHz; σ = 2.054 S/m; ε_r = 36.947; 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 High/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.23 W/kg

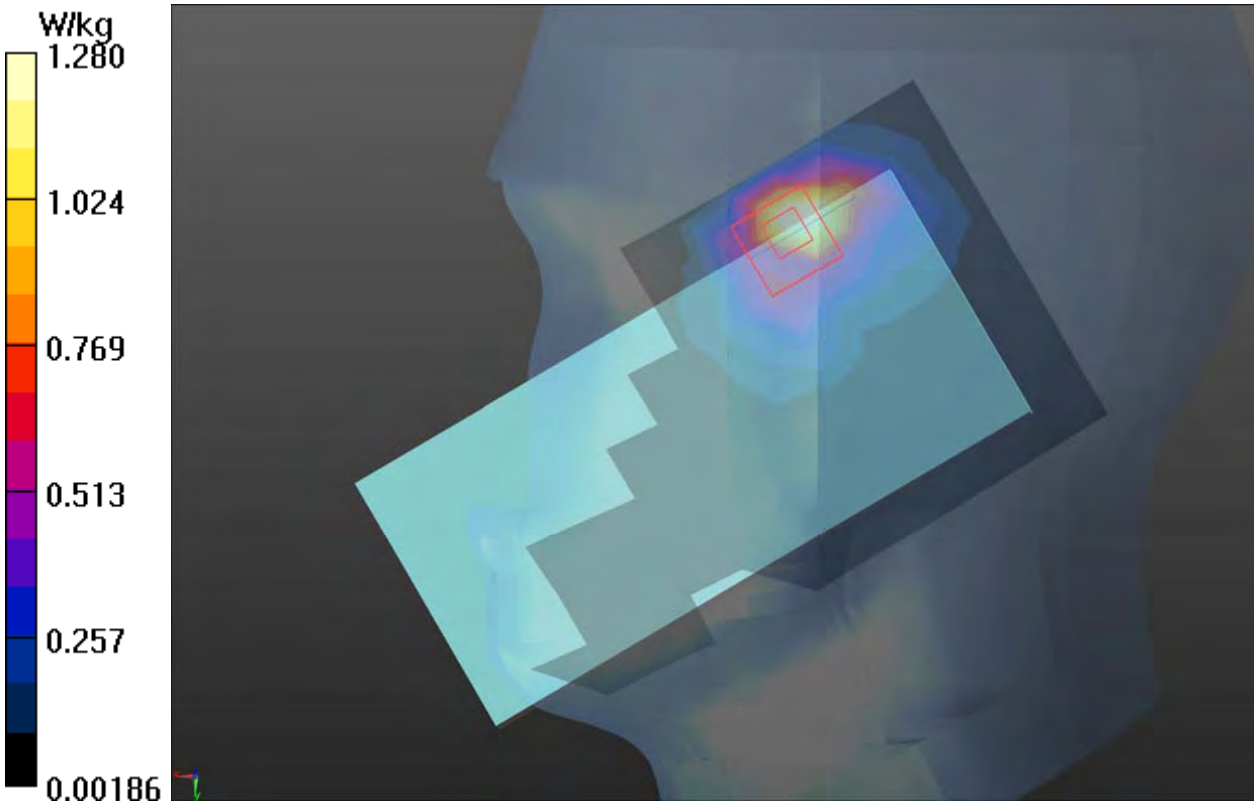
Right Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.965 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.79 W/kg

SAR(1 g) = 0.775 W/kg; SAR(10 g) = 0.328 W/kg

Maximum value of SAR (measured) = 1.28 W/kg



Plot 20 LTE Band 66 1RB Right Cheek Middle

Date: 2022/3/1

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) = 0.232 W/kg

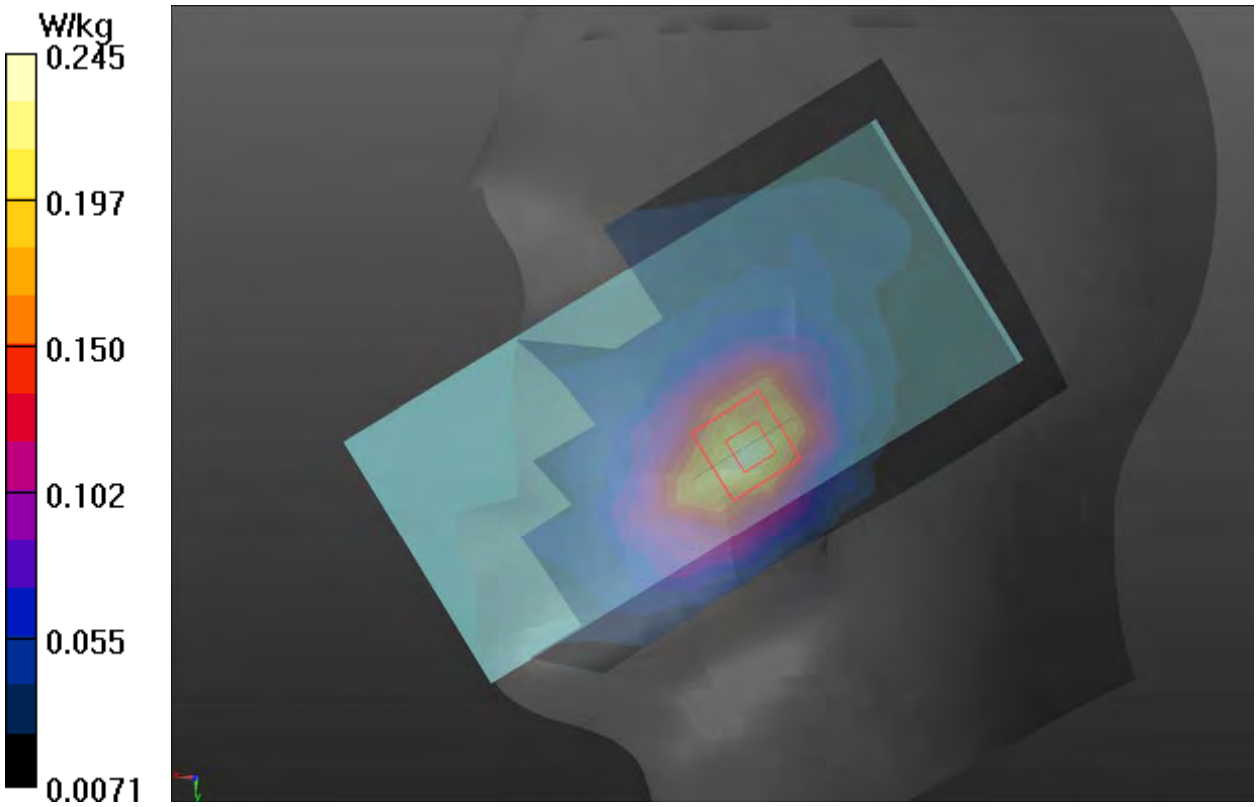
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.409 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.343 W/kg

SAR(1 g) = 0.228 W/kg; SAR(10 g) = 0.141 W/kg

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



Plot 21 LTE Band 71 1RB Right Cheek Low

Date: 2022/2/21

Communication System: UID 0, LTE (0); Frequency: 673 MHz;Duty Cycle: 1:1

Medium parameters used: f = 673 MHz; σ = 0.847 S/m; ε_r = 40.954; 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) = 0.185 W/kg

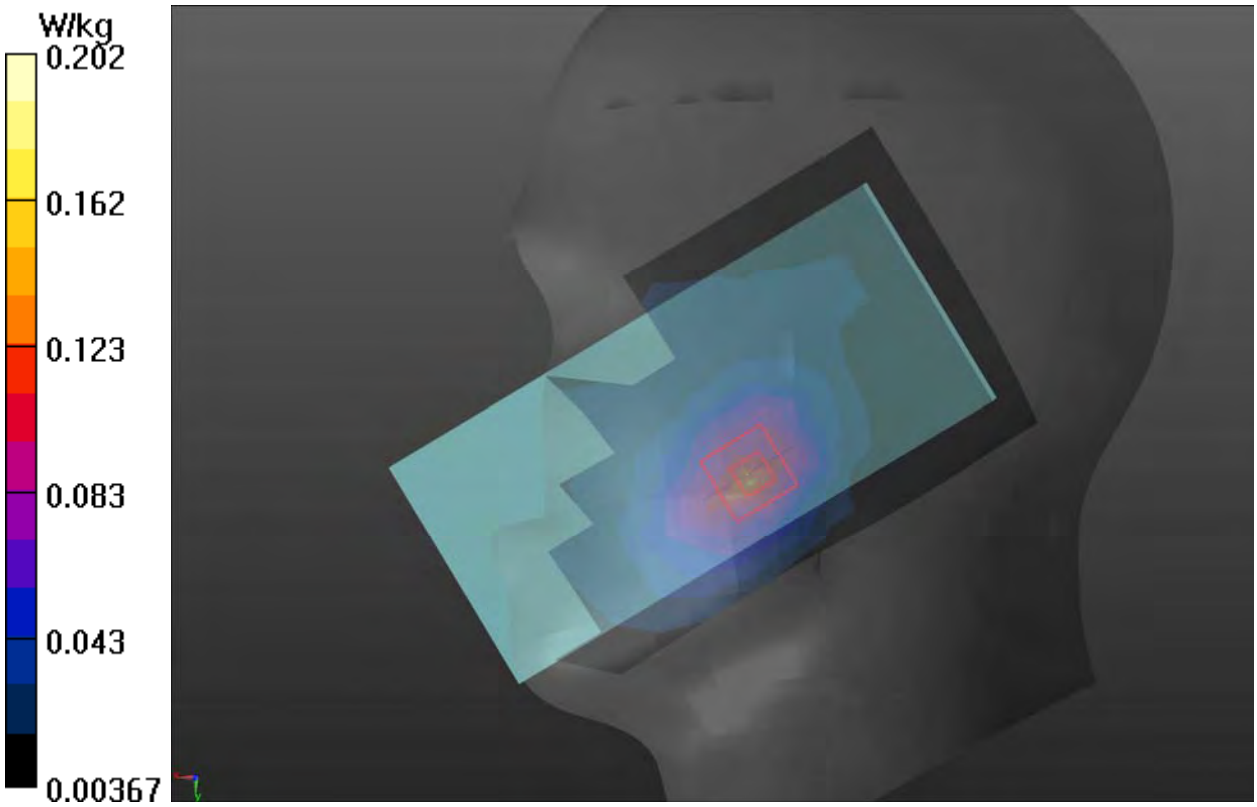
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.928 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.286 W/kg

SAR(1 g) = 0.164 W/kg; SAR(10 g) = 0.123 W/kg

Maximum value of SAR (measured) = 0.202 W/kg



Plot 22 NR n2 50RB Right Cheek Low

Date: 2022/2/26

Communication System: UID 0, 5G NR (0); Frequency: 1880 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1880 MHz; σ = 1.393 S/m; εr = 38.344; ρ = 1000 kg/m3

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

Maximum value of SAR (measured) = 0.201 W/kg

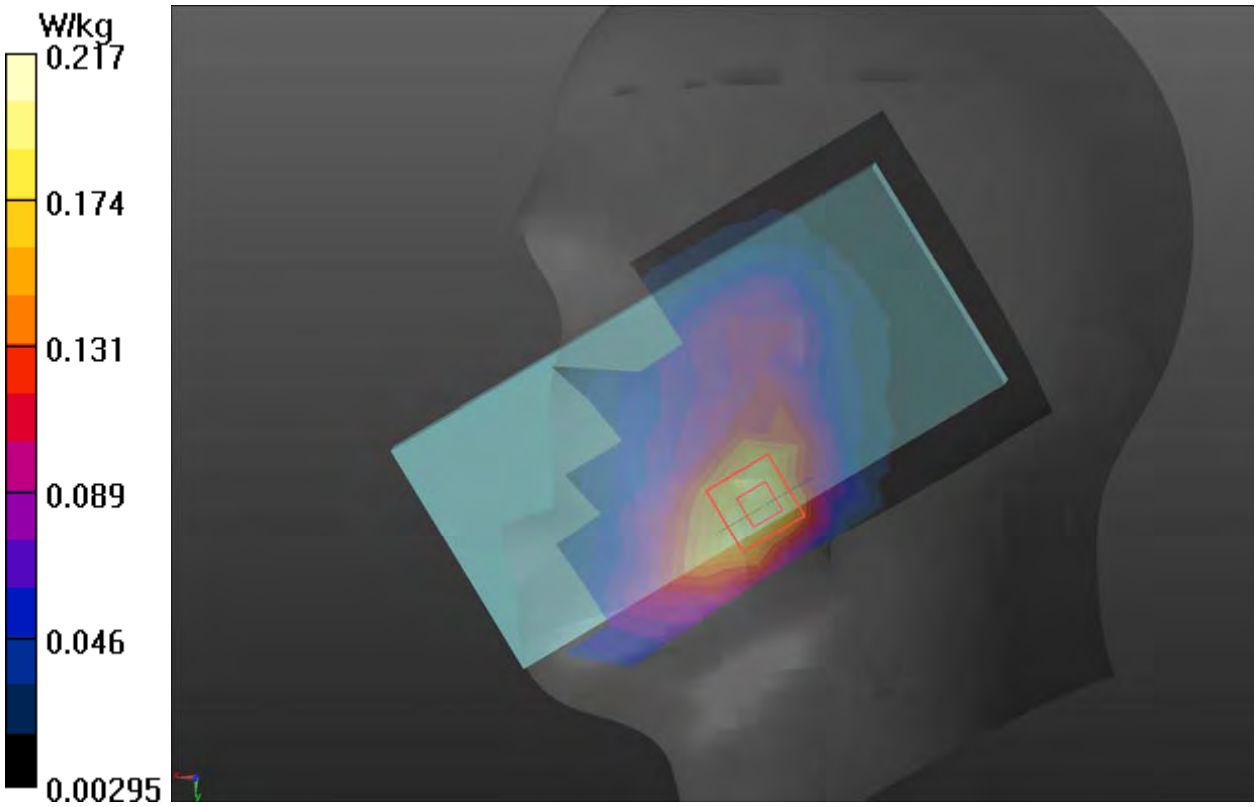
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.432 V/m; Power Drift = 0.022 dB

Peak SAR (extrapolated) = 0.302 W/kg

SAR(1 g) = 0.200 W/kg; SAR(10 g) = 0.127 W/kg

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



Plot 23 NR n5 1RB Right Cheek Middle

Date: 2022/2/23

Communication System: UID 0, 5G NR (0); Frequency: 836.5 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.953 S/m; εr = 39.767; ρ = 1000 kg/m3

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) = 0.319 W/kg

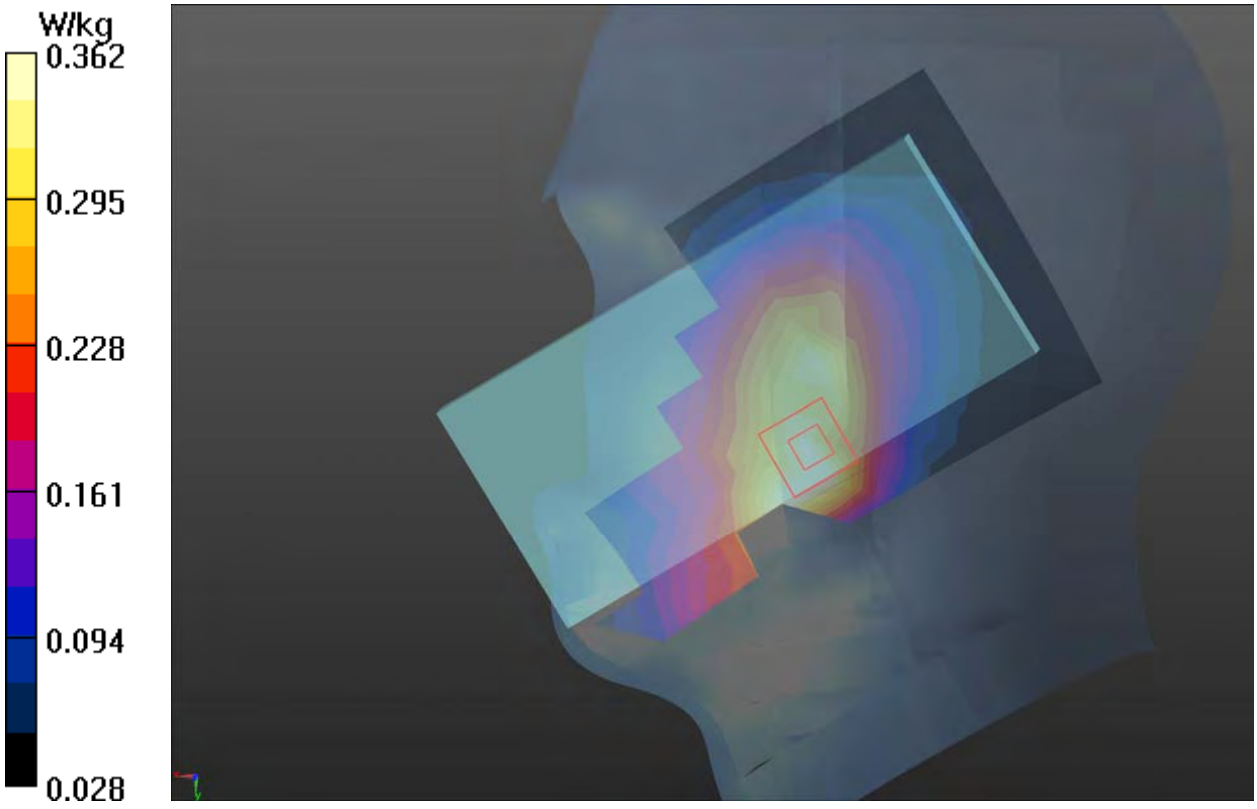
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.680 V/m; Power Drift = 0.015 dB

Peak SAR (extrapolated) = 0.431 W/kg

SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.205 W/kg

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



Plot 24 NR n25 1RB Right Cheek High

Date: 2022/2/26

Communication System: UID 0, 5G NR (0); Frequency: 1905 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1905 MHz; σ = 1.413 S/m; εr = 38.278; ρ = 1000 kg/m3

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

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

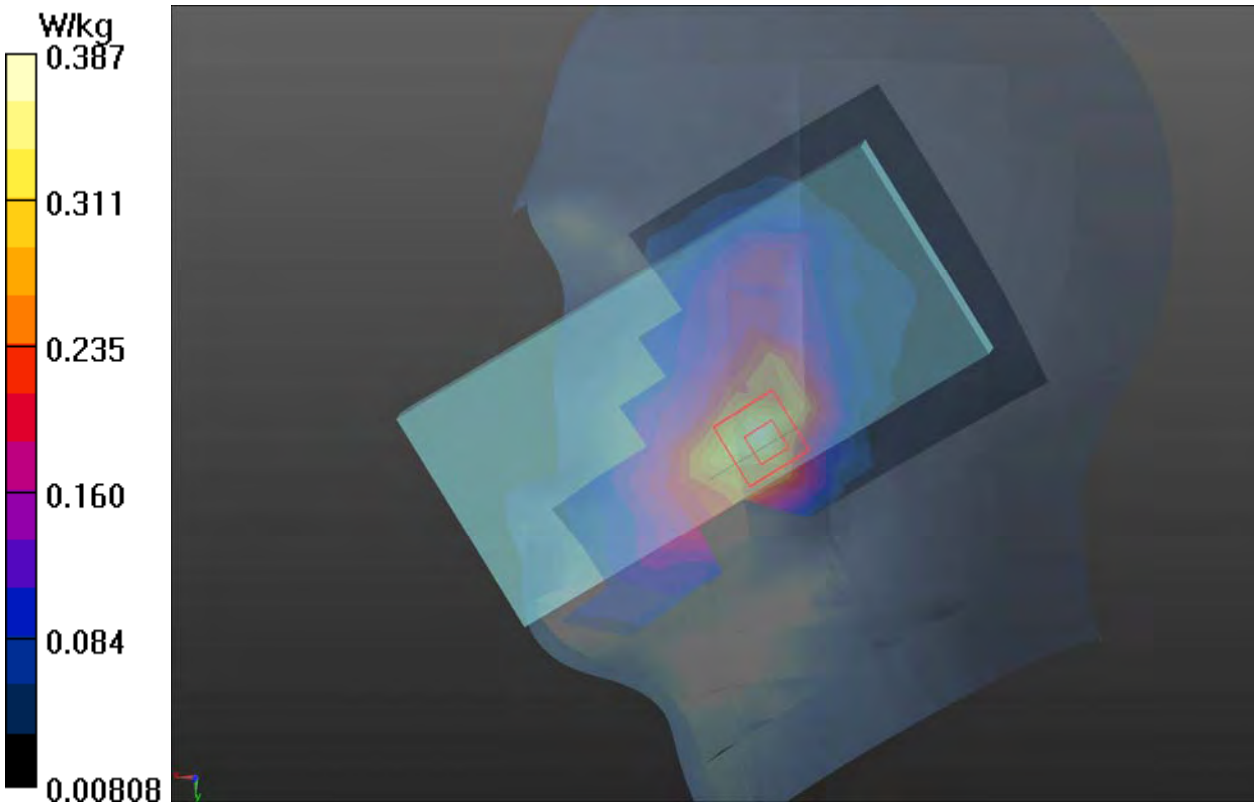
Right Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.114 V/m; Power Drift = 0.054 dB

Peak SAR (extrapolated) = 0.458 W/kg

SAR(1 g) = 0.282 W/kg; SAR(10 g) = 0.175 W/kg

Maximum value of SAR (measured) = 0.387 W/kg



Plot 25 NR n41 135RB Right Cheek Low

Date: 2022/3/15

Communication System: UID 0, 5G NR (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2592.99 MHz; σ = 2.009 S/m; εr = 37.118; ρ = 1000 kg/m3

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) = 0.635 W/kg

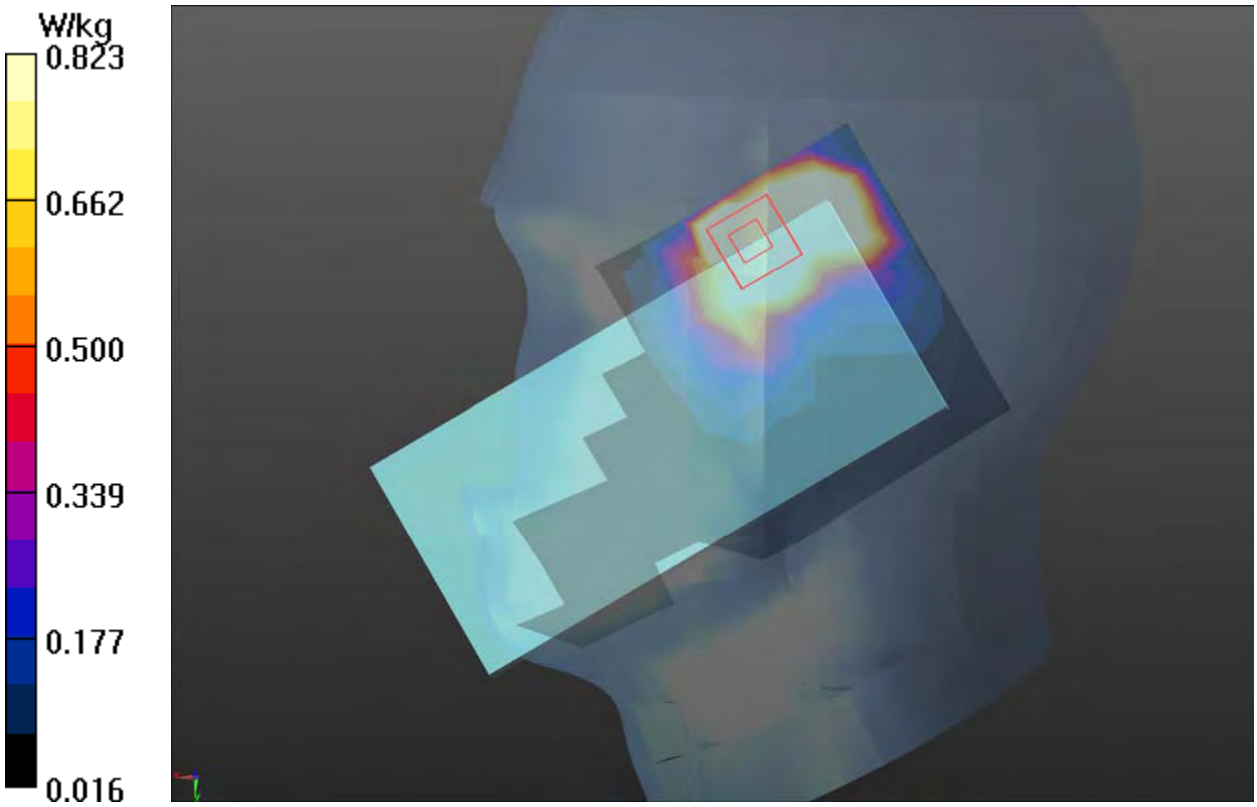
Right Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.568 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 0.544 W/kg; SAR(10 g) = 0.244 W/kg

Maximum value of SAR (measured) = 0.823 W/kg



Plot 26 NR n66 1RB Right Cheek Middle

Date: 2022/3/1

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: 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) = 0.190 W/kg

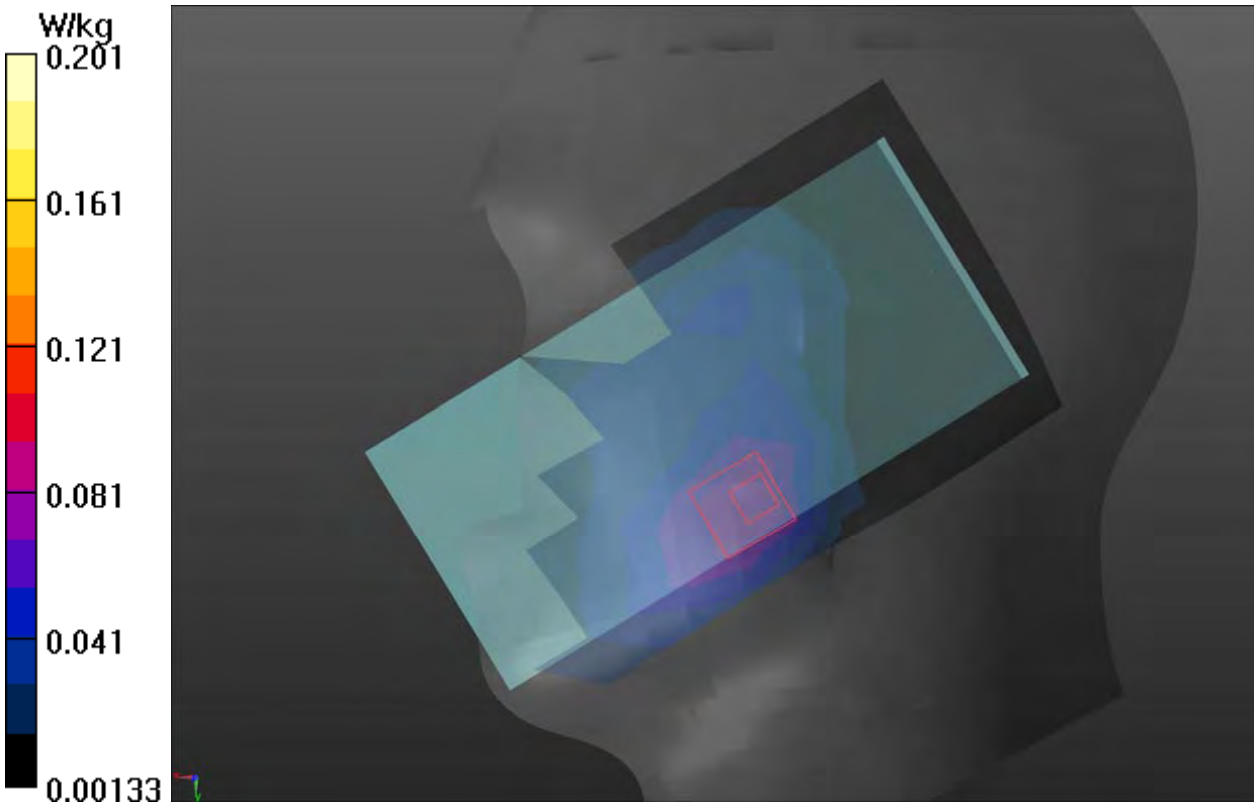
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.432 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.421 W/kg

SAR(1 g) = 0.184 W/kg; SAR(10 g) = 0.116 W/kg

Maximum value of SAR (measured) = 0.201 W/kg



Plot 27 NR n71 1RB Right Cheek Low

Date: 2022/2/22

Communication System: UID 0, 5G NR (0); Frequency: 673 MHz;Duty Cycle: 1:1

Medium parameters used: f = 673 MHz; σ = 0.847 S/m; ε_r = 40.954; 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) = 0.270 W/kg

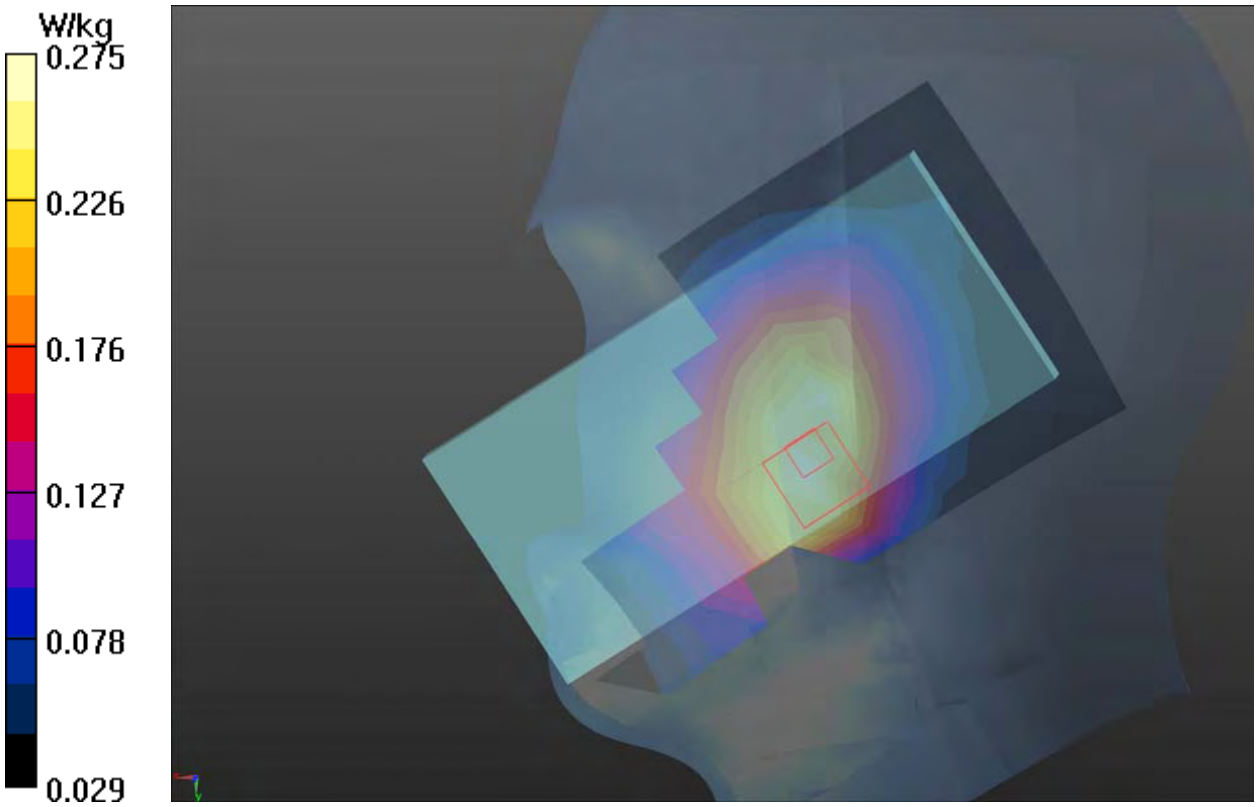
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.384 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 0.304 W/kg

SAR(1 g) = 0.224 W/kg; SAR(10 g) = 0.165 W/kg

Maximum value of SAR (measured) = 0.275 W/kg



Plot 28 802.11b Left Cheek Low

Date: 2022/3/10

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

Medium parameters used: f = 2412 MHz; σ = 1.801 S/m; ε_r = 37.737; 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 Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.641 W/kg

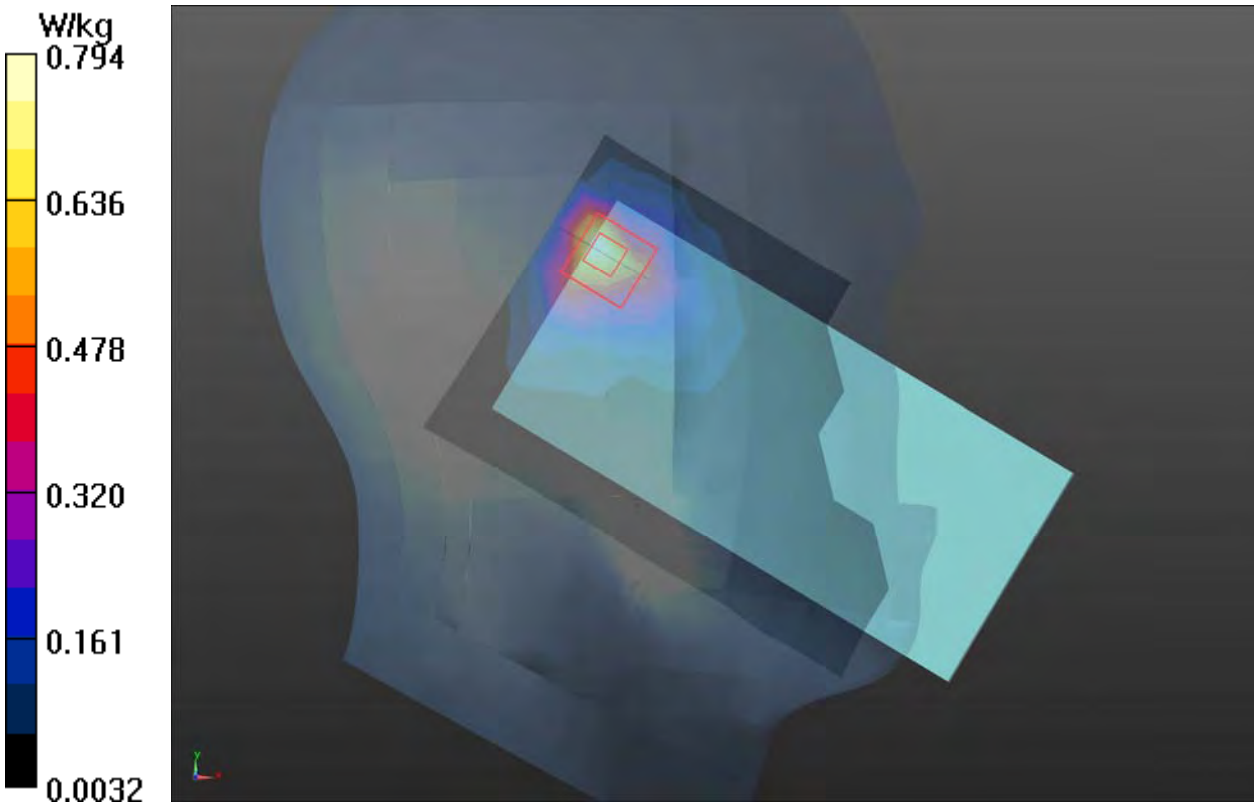
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.29 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.510 W/kg; SAR(10 g) = 0.244 W/kg

Maximum value of SAR (measured) = 0.794 W/kg



Plot 29 802.11a U-NII-1 Left Tilt Low

Date: 2022/3/7

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

Medium parameters used: f = 5240 MHz; σ = 4.847 S/m; ε_r = 36.872; 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 Low/Area Scan (12x21x1): Measurement grid: dx=15mm, dy=15mm

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

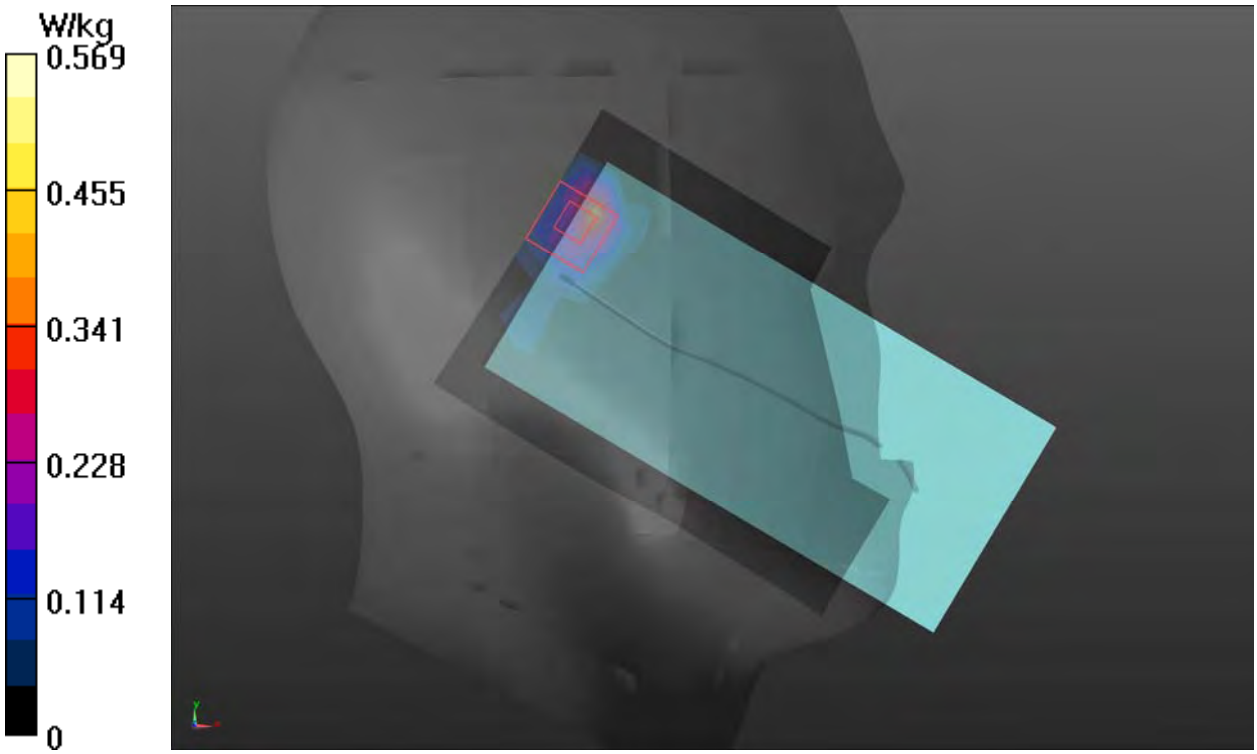
Left Tilt Low/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.655 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.403 W/kg; SAR(10 g) = 0.121 W/kg

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



Plot 30 Bluetooth Left Cheek High

Date: 2022/3/10

Communication System: UID 0, BT (0); Frequency: 2480 MHz;Duty Cycle: 1:1.31

Medium parameters used: f = 2480 MHz; σ = 1.839 S/m; ε_r = 39.245; 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) = 0.333 W/kg

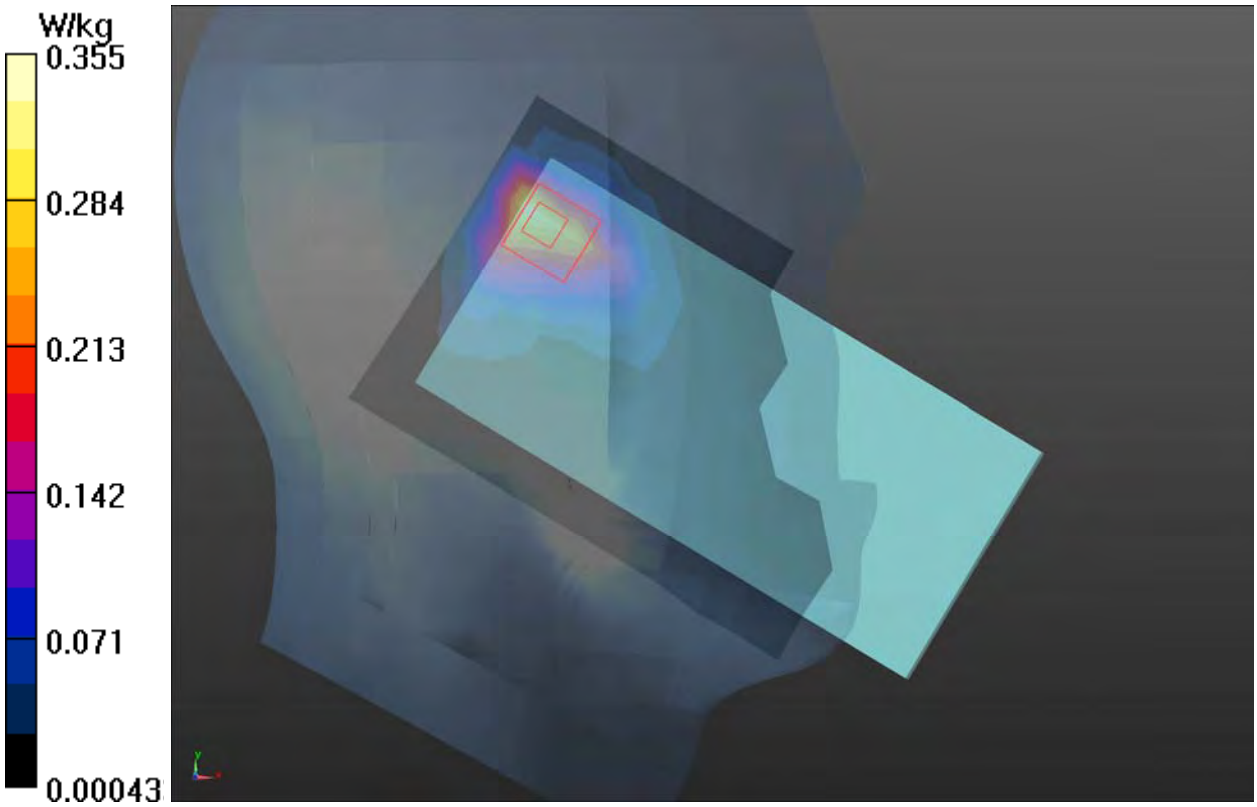
Left Cheek High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.207 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 0.464 W/kg

SAR(1 g) = 0.214 W/kg; SAR(10 g) = 0.101 W/kg

Maximum value of SAR (measured) = 0.355 W/kg



Plot 31 WCDMA Band II Back Side Middle (Distance 15mm)

Date: 2022/2/25

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) = 0.527 W/kg

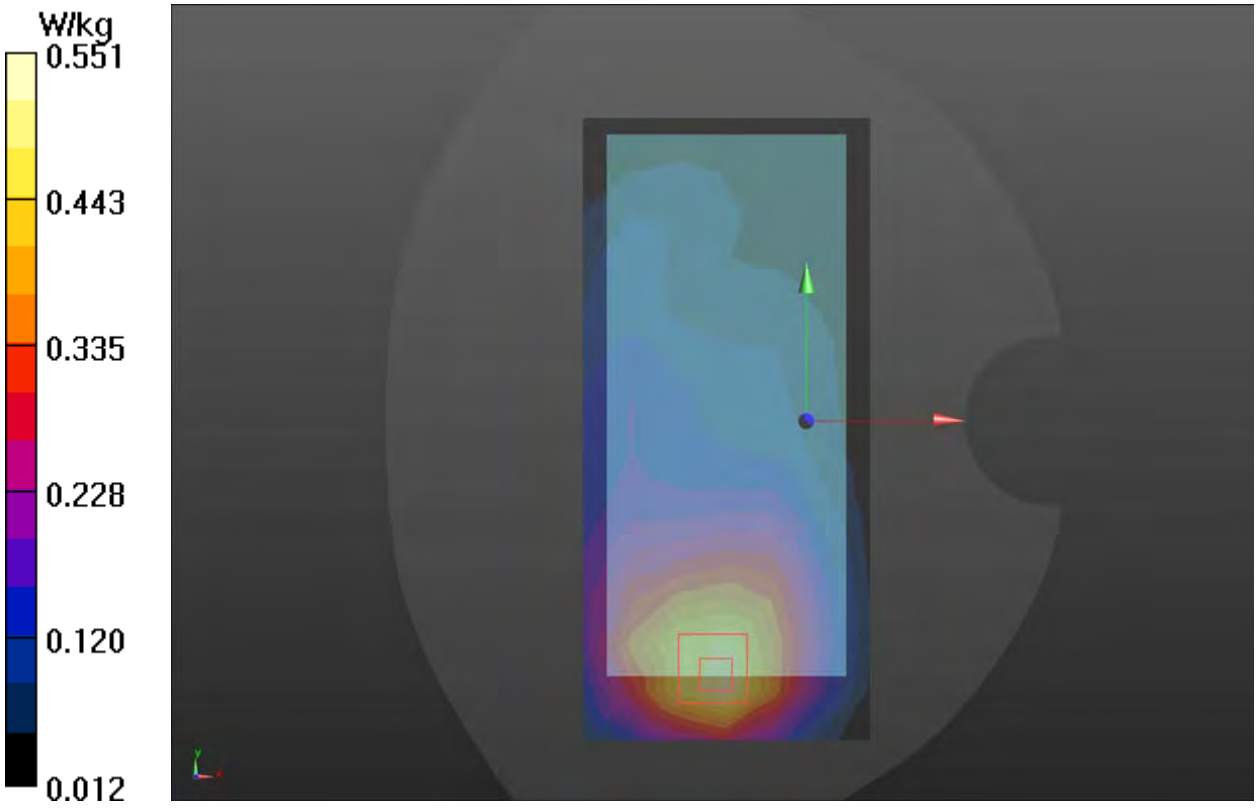
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.926 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.848 W/kg

SAR(1 g) = 0.509 W/kg; SAR(10 g) = 0.310 W/kg

Maximum value of SAR (measured) = 0.551 W/kg



Plot 32 WCDMA Band IV Back Side Middle (Distance 15mm)

Date: 2022/3/1

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)

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

Maximum value of SAR (measured) = 0.664 W/kg

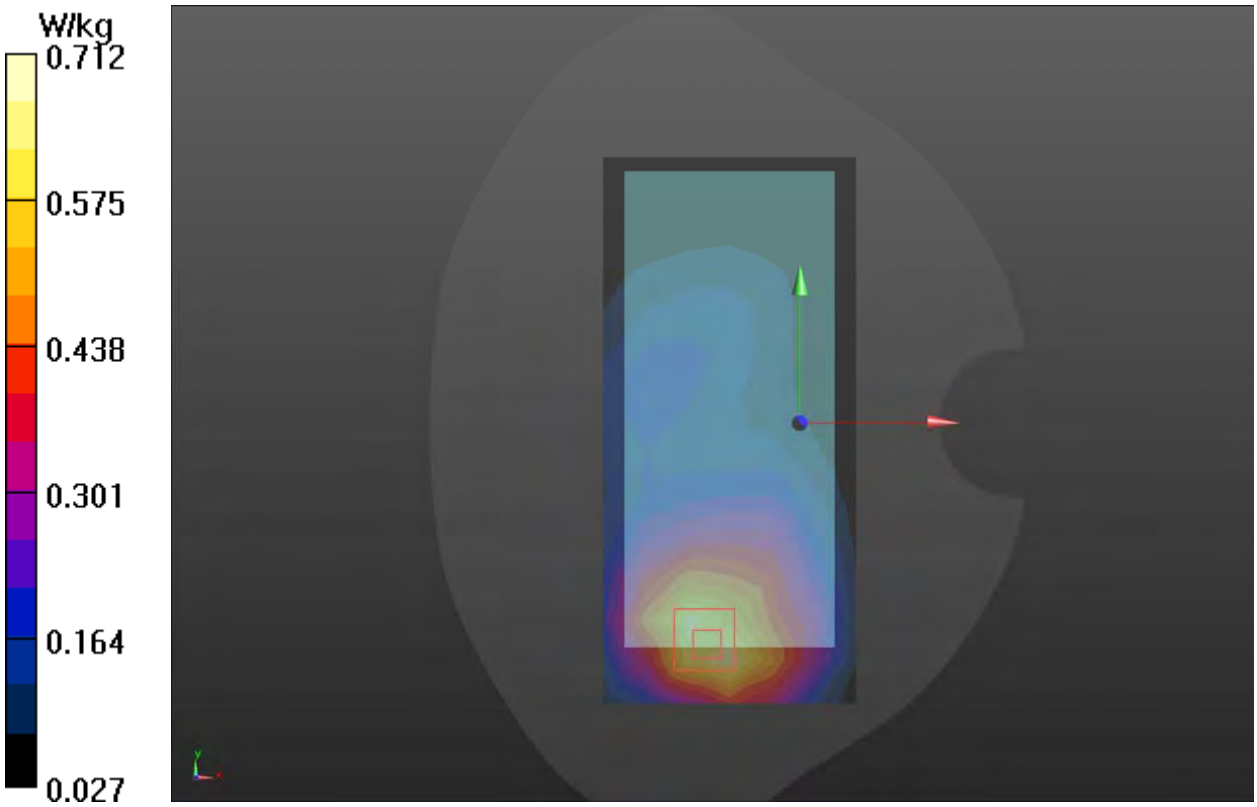
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.897 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 1.04 W/kg

SAR(1 g) = 0.567 W/kg; SAR(10 g) = 0.352 W/kg

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



Plot 33 WCDMA Band V Back Side Middle (Distance 15mm)

Date: 2022/2/22

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 (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.589 W/kg

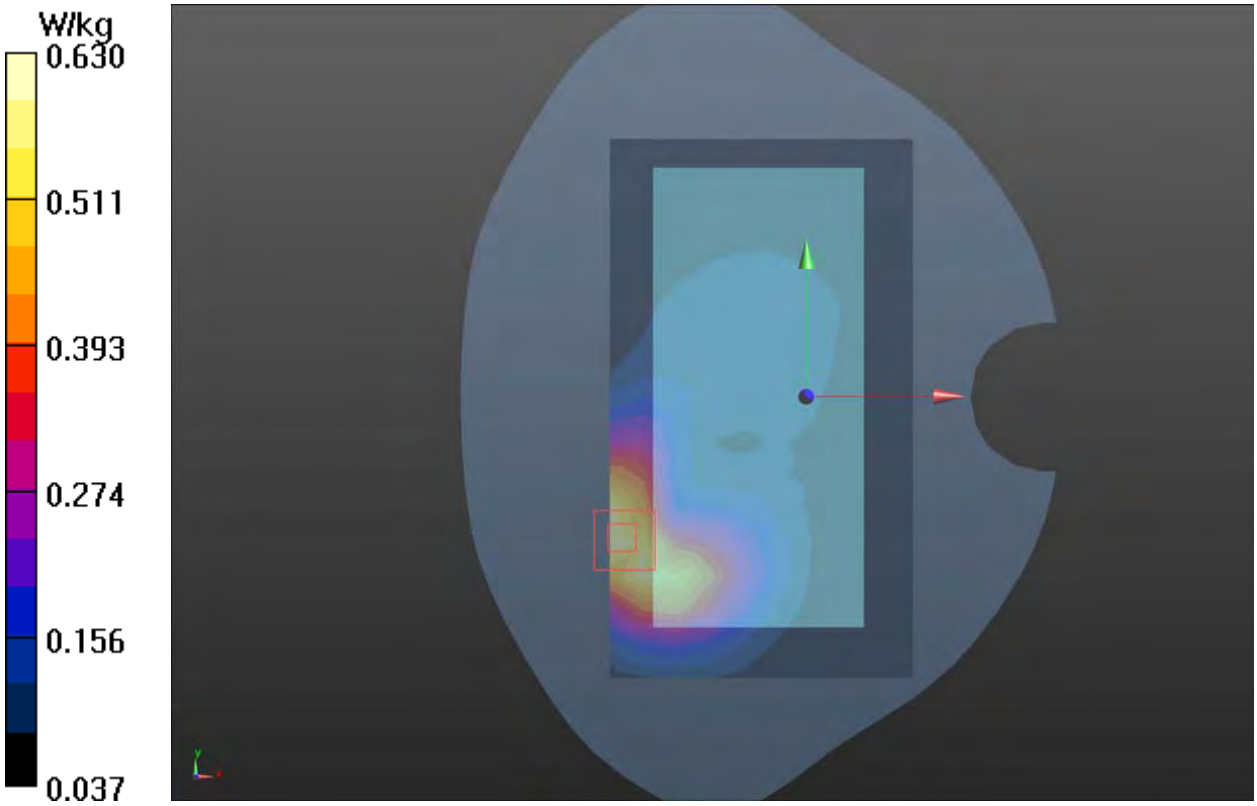
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.04 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 0.905 W/kg

SAR(1 g) = 0.580 W/kg; SAR(10 g) = 0.365 W/kg

Maximum value of SAR (measured) = 0.630 W/kg



Plot 34 LTE Band 2 1RB Back Side Low (Distance 15mm)

Date: 2022/2/25

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) = 0.571 W/kg

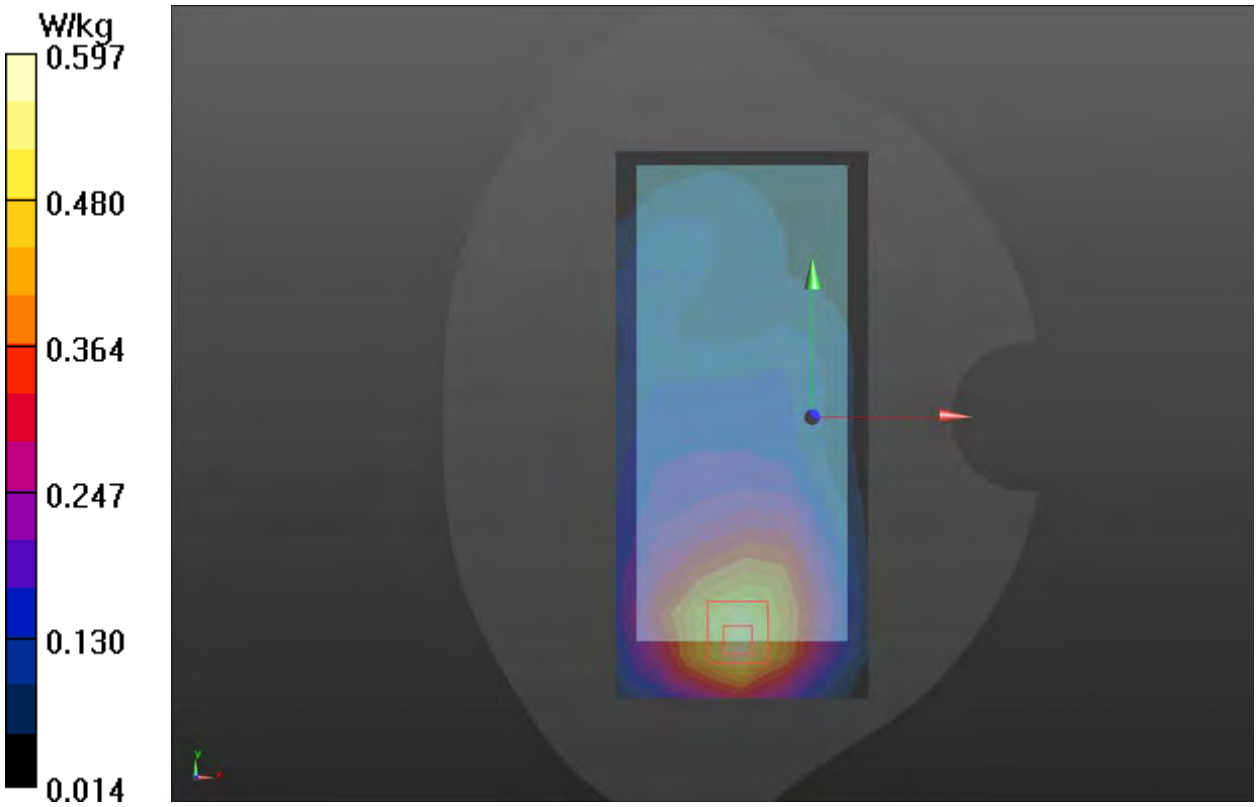
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.55 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.904 W/kg

SAR(1 g) = 0.550 W/kg; SAR(10 g) = 0.338 W/kg

Maximum value of SAR (measured) = 0.597 W/kg



Plot 35 LTE Band 5 1RB Back Side Low (Distance 15mm)

Date: 2022/2/23

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

Medium parameters used: f = 829 MHz; σ = 0.946 S/m; ε_r = 39.678; 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 Low/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm

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

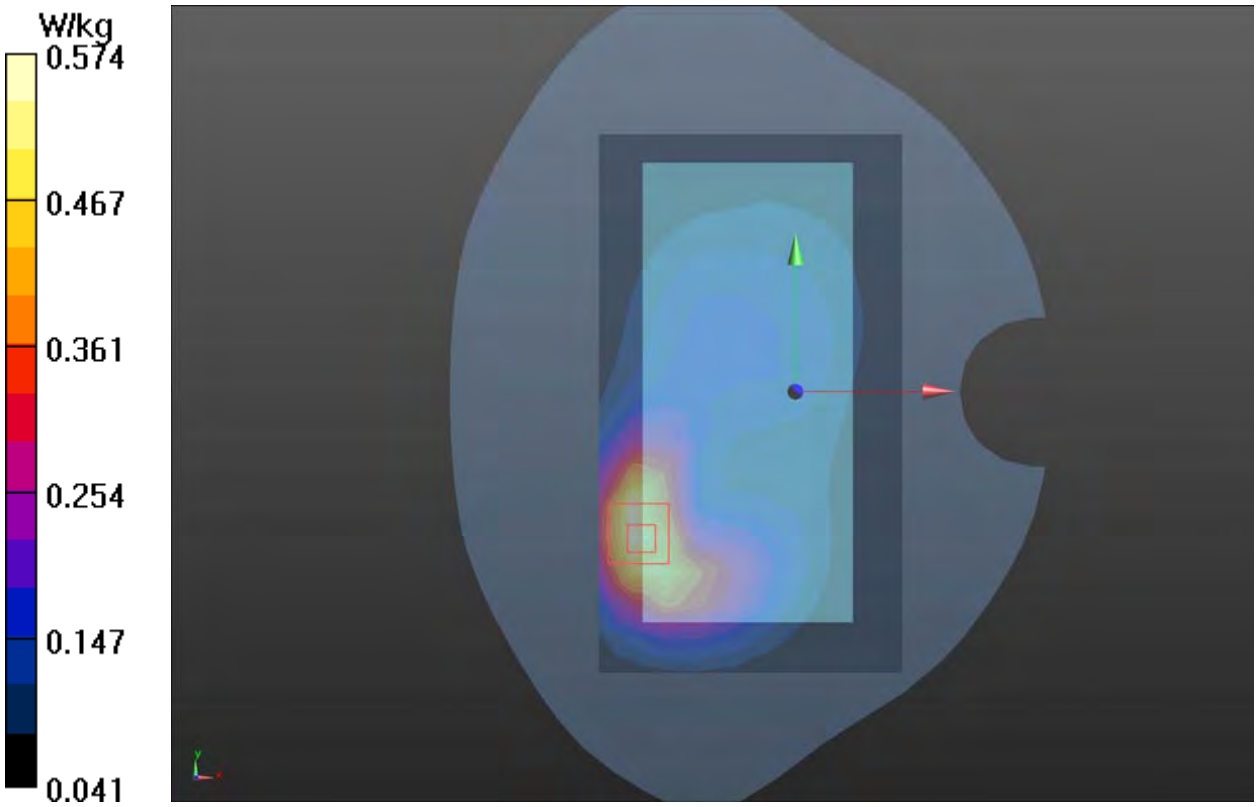
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.48 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.811 W/kg

SAR(1 g) = 0.530 W/kg; SAR(10 g) = 0.337 W/kg

Maximum value of SAR (measured) = 0.574 W/kg



Plot 36 LTE Band 12 1RB Back Side Low (Distance 15mm)

Date: 2022/2/21

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 (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.388 W/kg

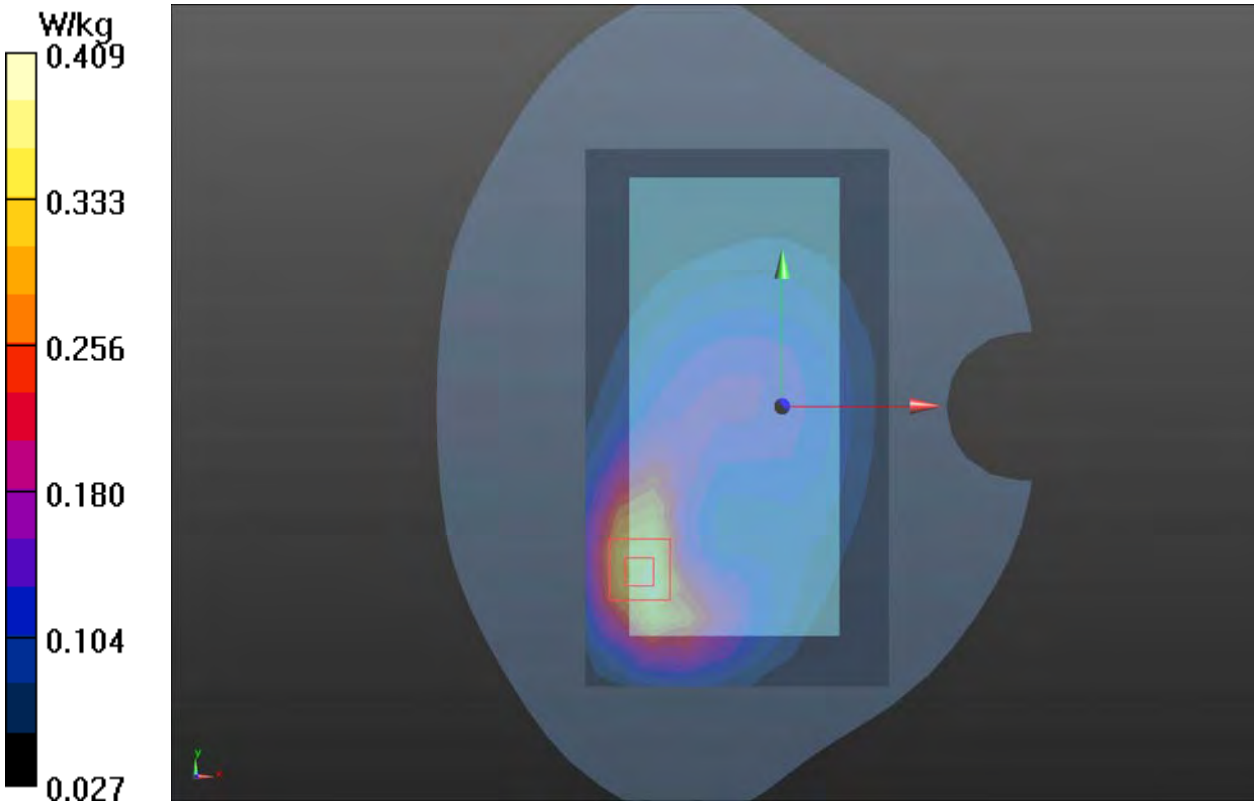
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.69 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.598 W/kg

SAR(1 g) = 0.375 W/kg; SAR(10 g) = 0.234 W/kg

Maximum value of SAR (measured) = 0.409 W/kg



Plot 37 LTE Band 41 1RB Back Side Middle (Distance 15mm)

Date: 2022/3/14

Communication System: UID 0, LTE (0); Frequency: 2593 MHz;Duty Cycle: 1:1.58

Medium parameters used: f = 2593 MHz; σ = 2.009 S/m; ε_r = 37.118; 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) = 0.457 W/kg

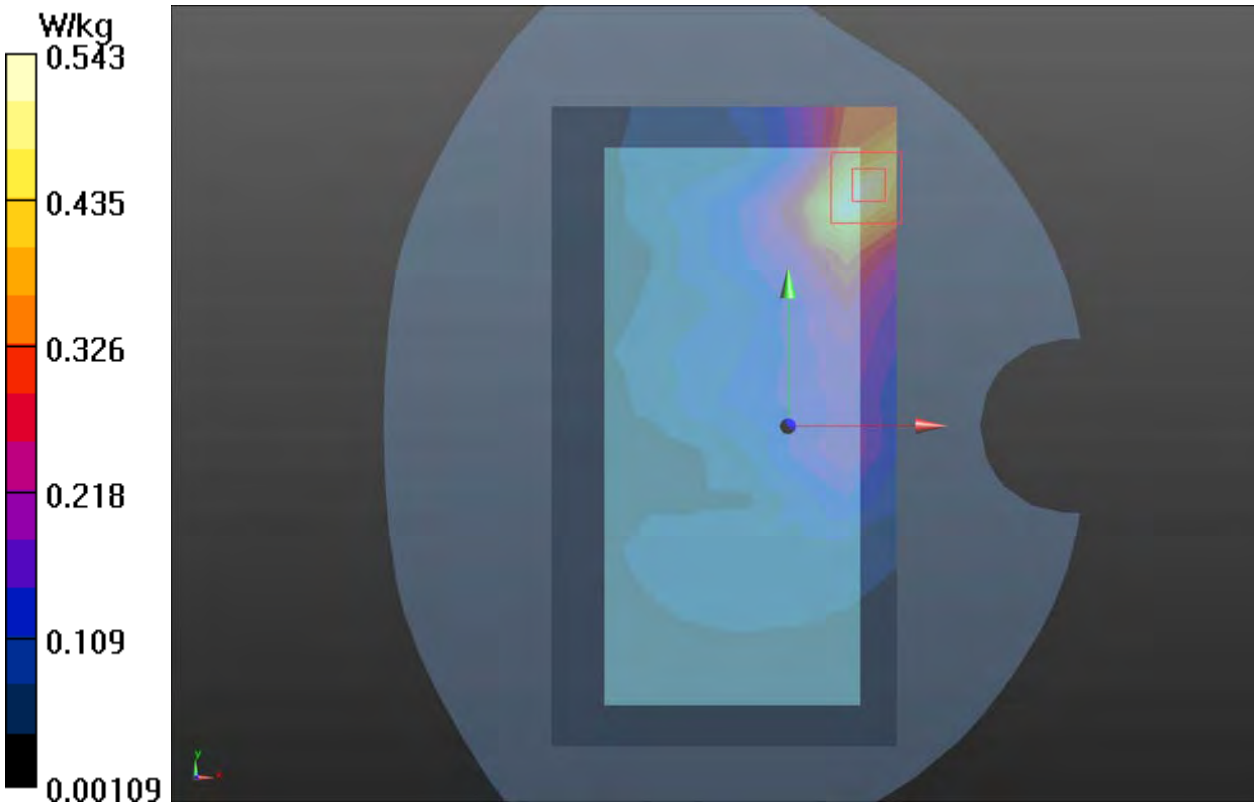
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.216 V/m; Power Drift = -0.033 dB

Peak SAR (extrapolated) = 0.720 W/kg

SAR(1 g) = 0.342 W/kg; SAR(10 g) = 0.172 W/kg

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



Plot 38 LTE Band 66 1RB Back Side Middle (Distance 15mm)

Date: 2022/3/1

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)

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

Maximum value of SAR (measured) = 0.595 W/kg

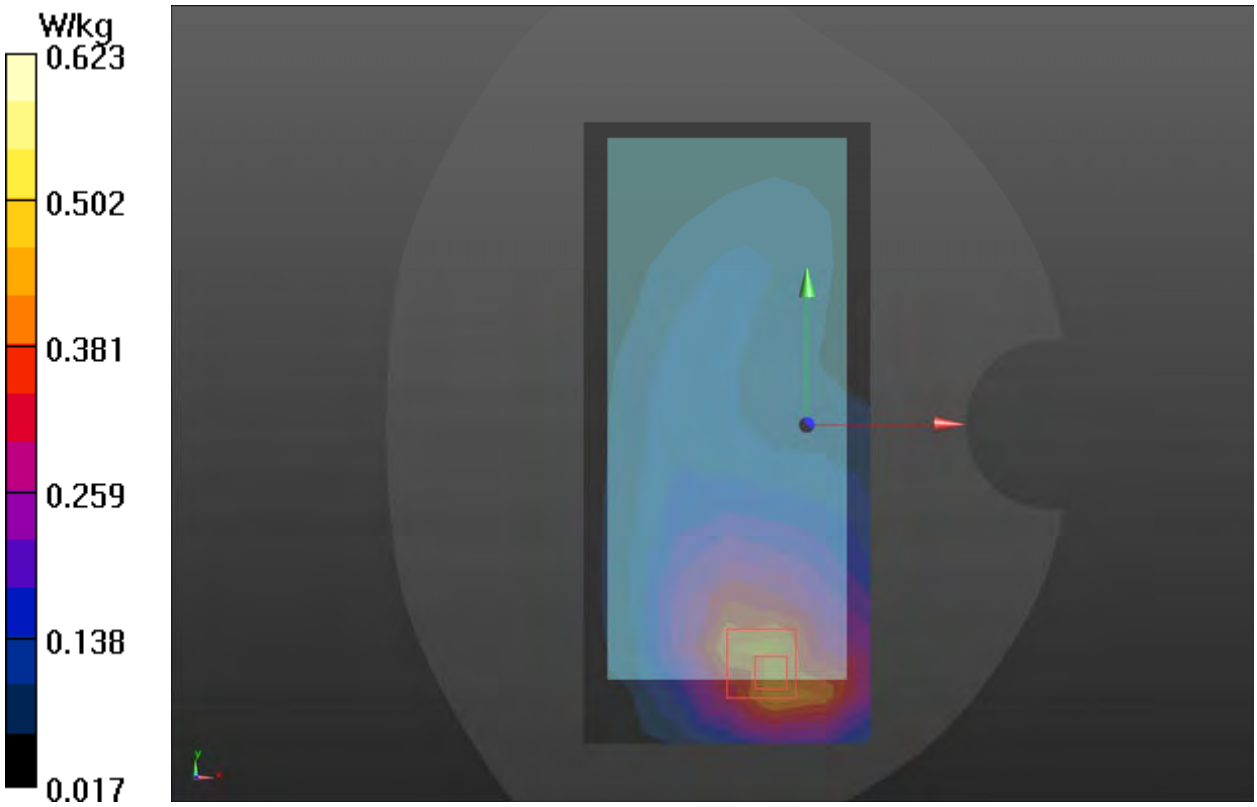
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.322 V/m; Power Drift = 0.109 dB

Peak SAR (extrapolated) = 0.915 W/kg

SAR(1 g) = 0.574 W/kg; SAR(10 g) = 0.353 W/kg

Maximum value of SAR (measured) = 0.623 W/kg



Plot 39 LTE Band 71 1RB Back Side Low (Distance 15mm)

Date: 2022/2/21

Communication System: UID 0, LTE (0); Frequency: 673 MHz;Duty Cycle: 1:1

Medium parameters used: f = 673 MHz; σ = 0.847 S/m; ε_r = 40.954; 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 (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.286 W/kg

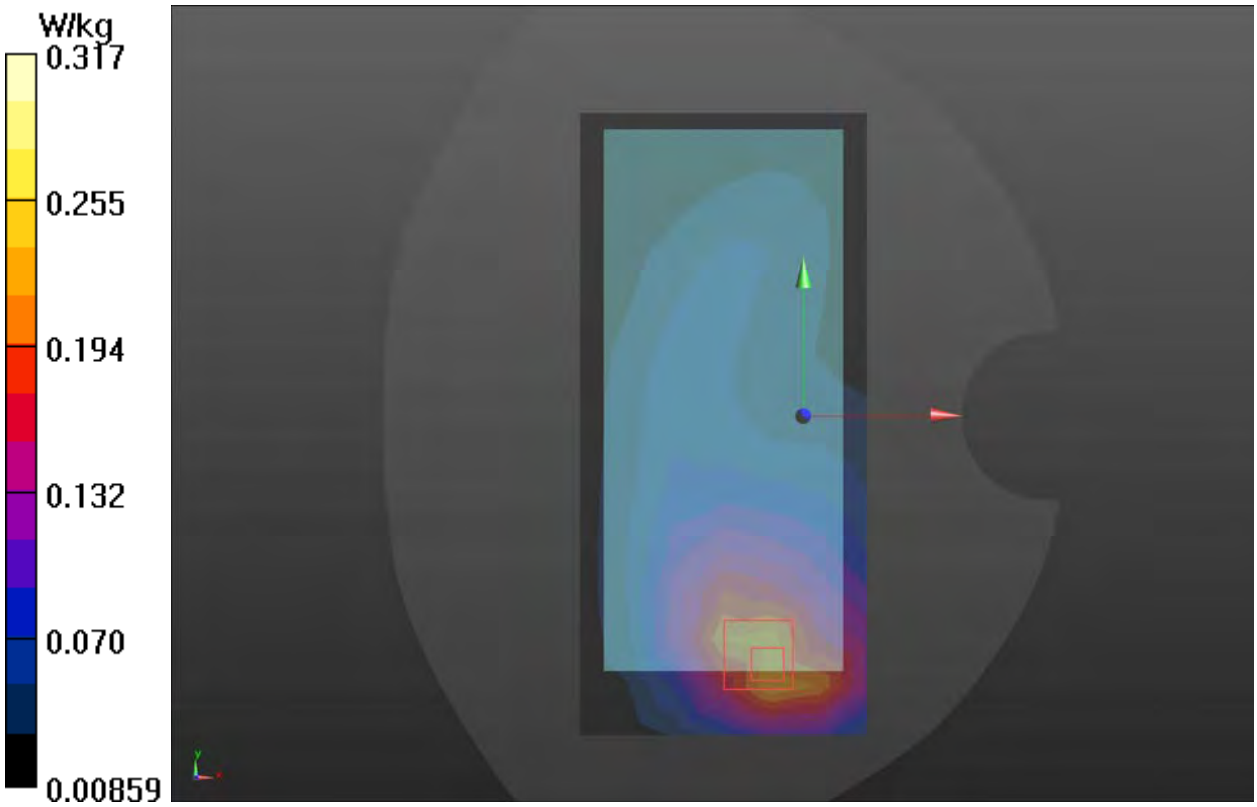
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.304 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.467 W/kg

SAR(1 g) = 0.245 W/kg; SAR(10 g) = 0.161 W/kg

Maximum value of SAR (measured) = 0.317 W/kg



Plot 40 NR n2 1RB Back Side Low (Distance 15mm)

Date: 2022/2/26

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)

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

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

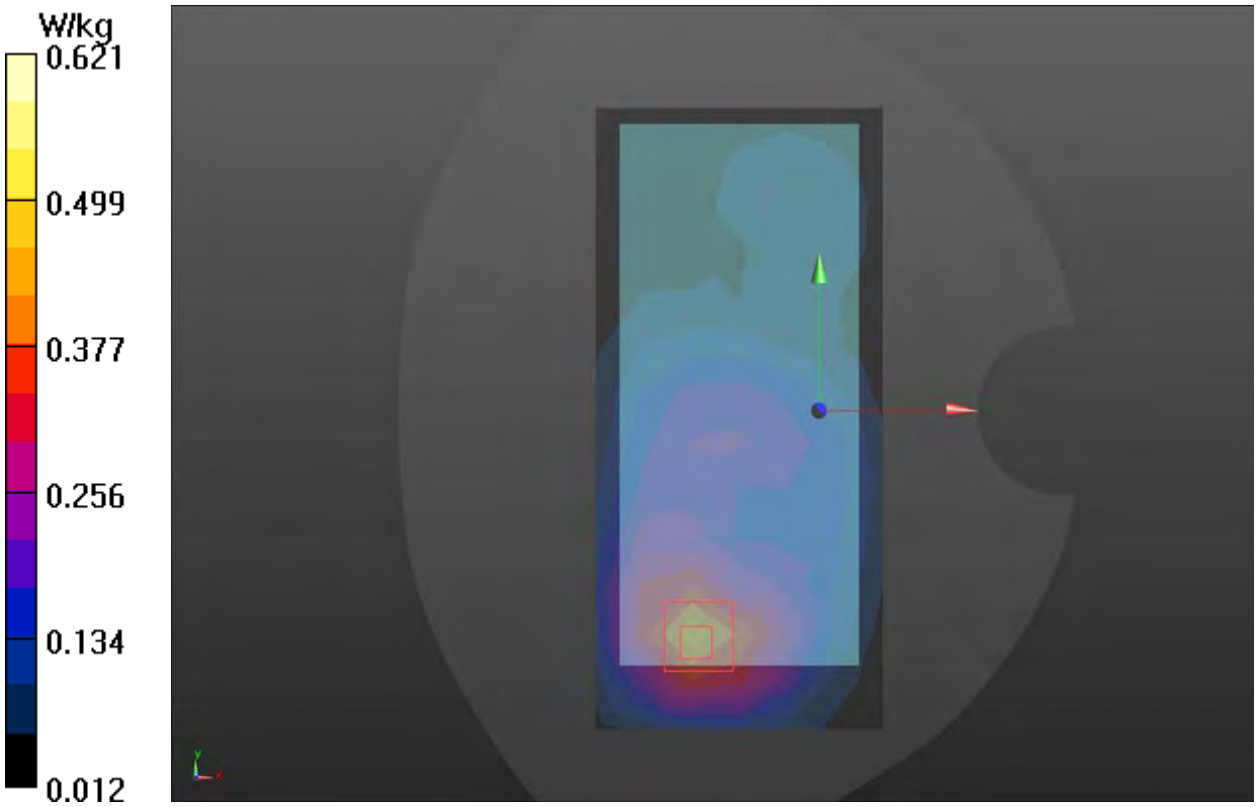
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.88 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.712 W/kg

SAR(1 g) = 0.469 W/kg; SAR(10 g) = 0.284 W/kg

Maximum value of SAR (measured) = 0.621 W/kg



Plot 41 NR n5 50RB Back Side Middle (Distance 15mm)

Date: 2022/2/23

Communication System: UID 0, 5G NR (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 (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.494 W/kg

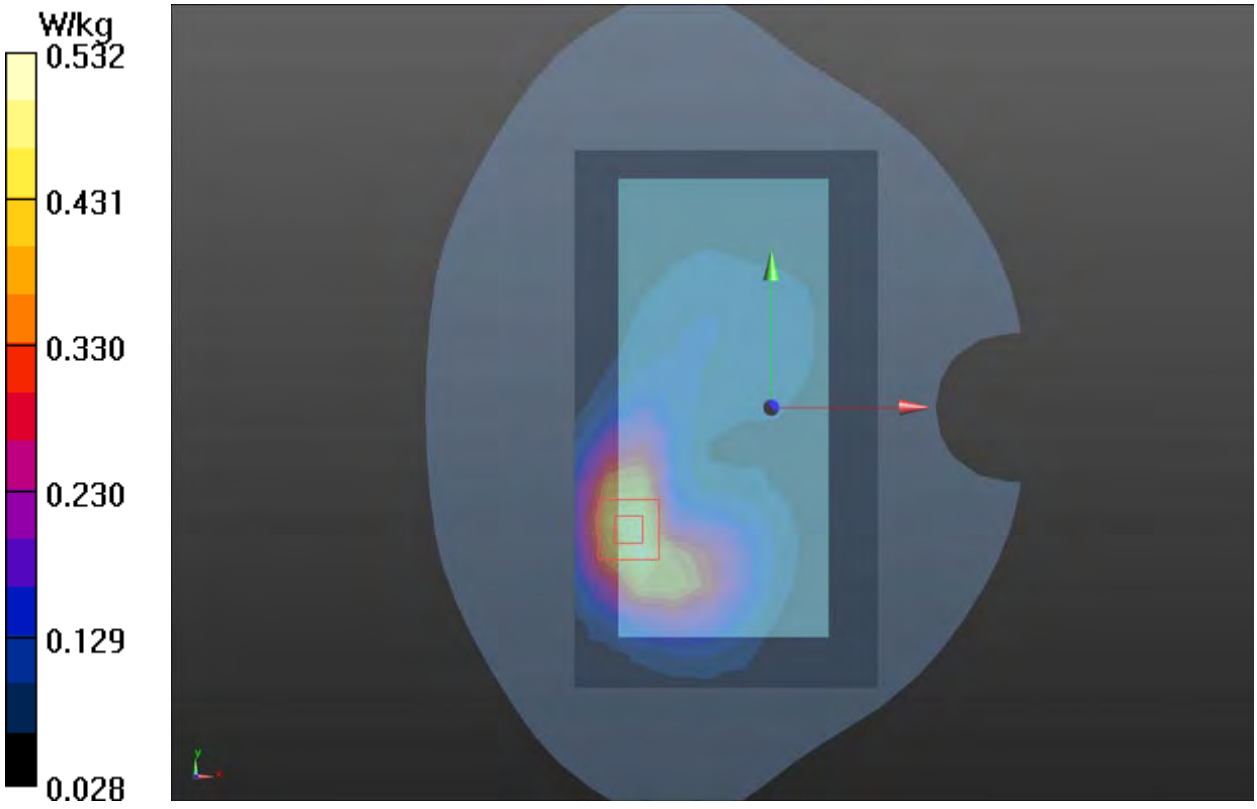
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.976 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 0.795 W/kg

SAR(1 g) = 0.485 W/kg; SAR(10 g) = 0.293 W/kg

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



Plot 42 NR n25 1RB Back Side High (Distance 15mm)

Date: 2022/2/26

Communication System: UID 0, 5G NR (0); Frequency: 1905 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1905 MHz; σ = 1.438 S/m; ε_r = 38.844; 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 High/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.402 W/kg

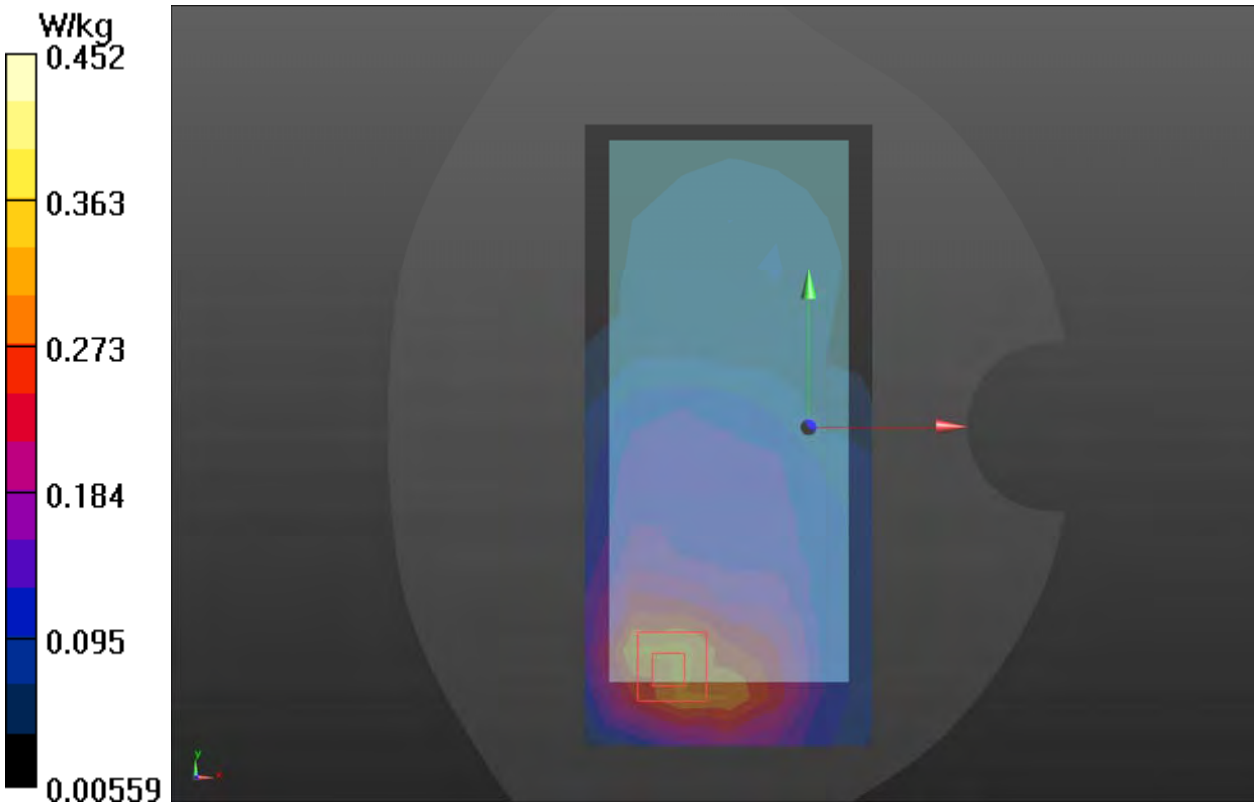
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.18 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 0.558 W/kg

SAR(1 g) = 0.394 W/kg; SAR(10 g) = 0.239 W/kg

Maximum value of SAR (measured) = 0.452 W/kg



Plot 43 NR n41 135RB Back Side Low (Distance 15mm)

Date: 2022/3/15

Communication System: UID 0, 5G NR (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2592.99 MHz; σ = 2.009 S/m; ε_r = 37.118; 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 (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.528 W/kg

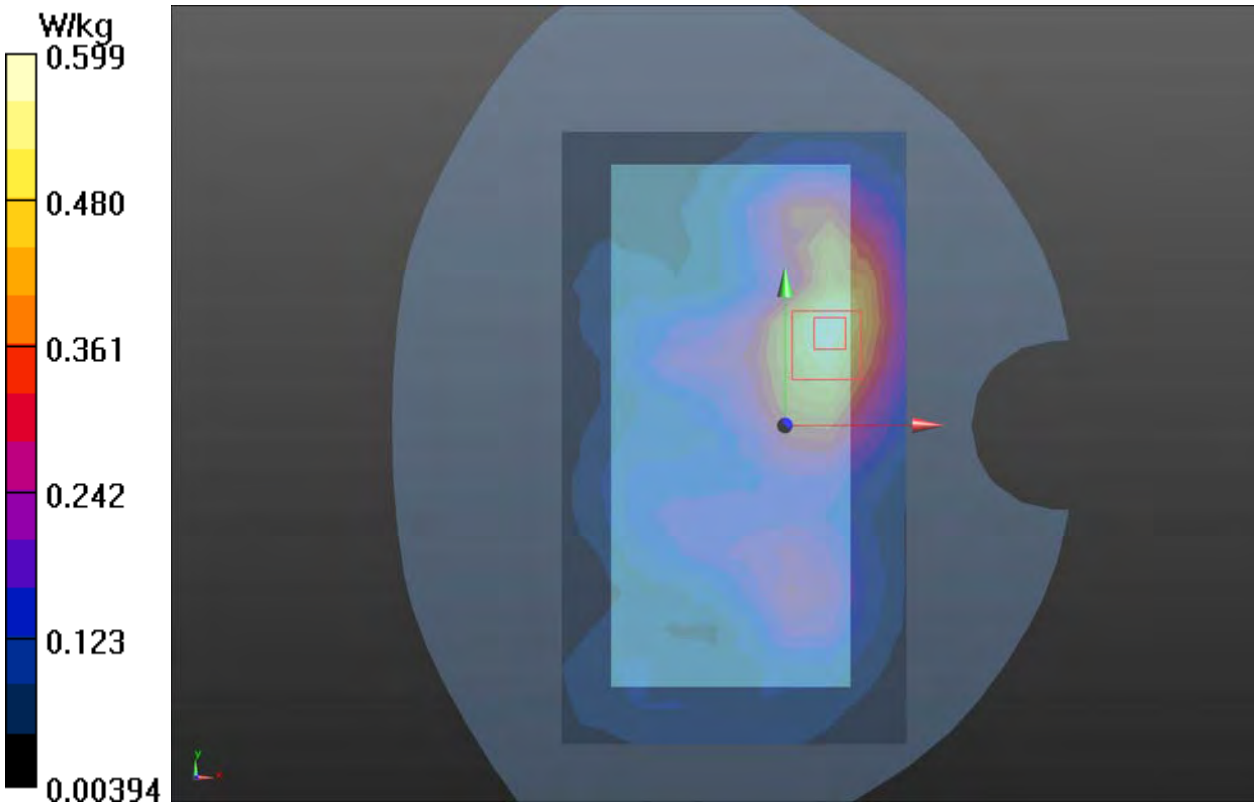
Back SideLow/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.868 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 0.765 W/kg

SAR(1 g) = 0.403 W/kg; SAR(10 g) = 0.212 W/kg

Maximum value of SAR (measured) = 0.599 W/kg



Plot 44 NR n66 108RB Back Side Middle (Distance 15mm)

Date: 2022/3/1

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)

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

Maximum value of SAR (measured) = 0.380 W/kg

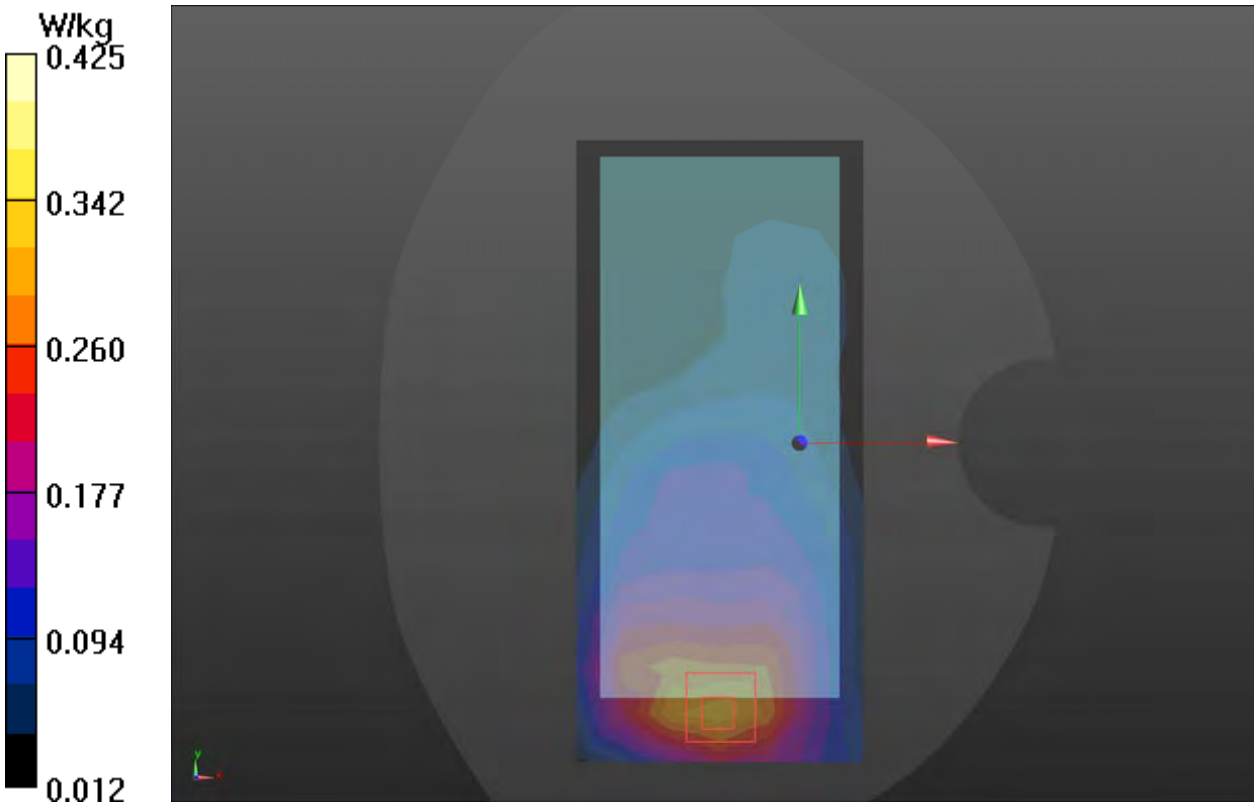
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.297 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.504 W/kg

SAR(1 g) = 0.347 W/kg; SAR(10 g) = 0.215 W/kg

Maximum value of SAR (measured) = 0.425 W/kg



Plot 45 NR n71 1RB Back Side Low (Distance 15mm)

Date: 2022/2/22

Communication System: UID 0, 5G NR (0); Frequency: 673 MHz;Duty Cycle: 1:1

Medium parameters used: f = 673 MHz; σ = 0.847 S/m; ε_r = 40.954; 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 (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.329 W/kg

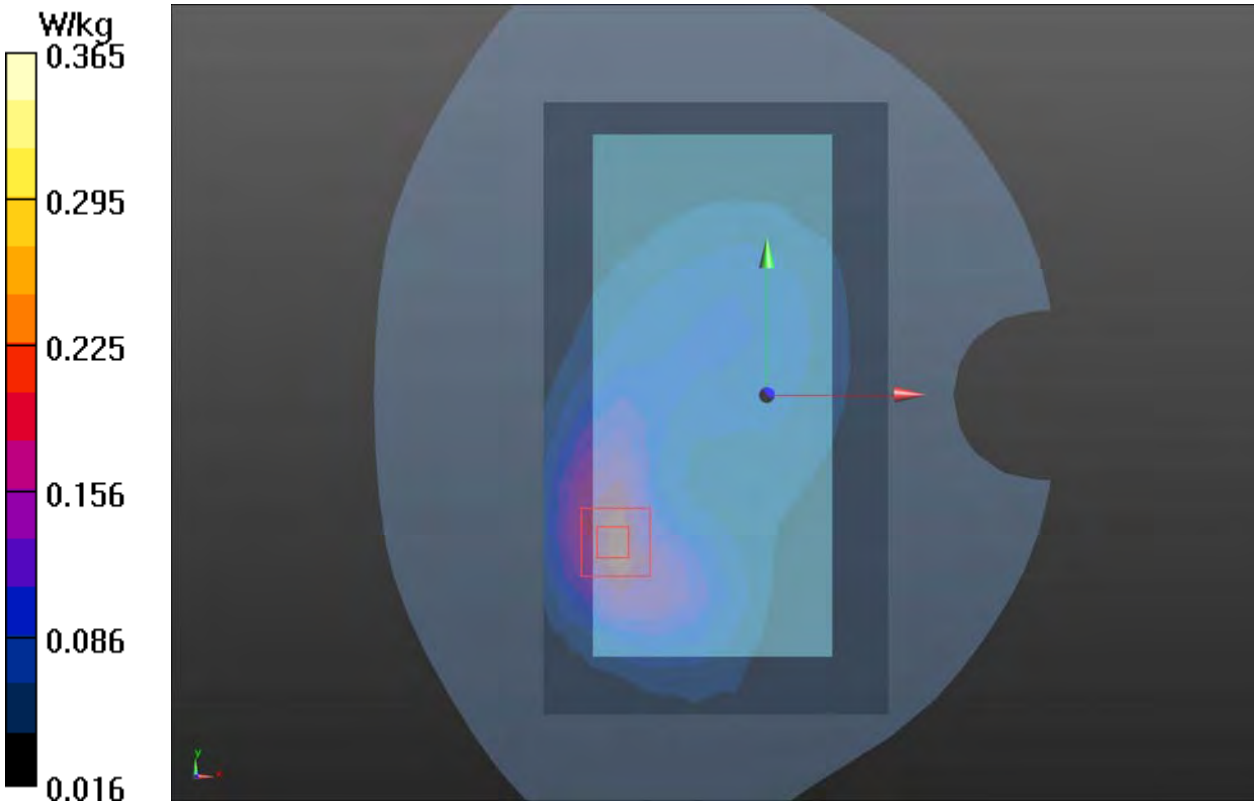
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.780 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 0.448 W/kg

SAR(1 g) = 0.267 W/kg; SAR(10 g) = 0.186 W/kg

Maximum value of SAR (measured) = 0.365 W/kg



Plot 46 802.11b Back Side Low (Distance 15mm)

Date: 2022/3/10

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

Medium parameters used: f = 2412 MHz; σ = 1.764 S/m; ε_r = 39.49; 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 Low/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm Maximum value of SAR (measured) = 0.250 W/kg

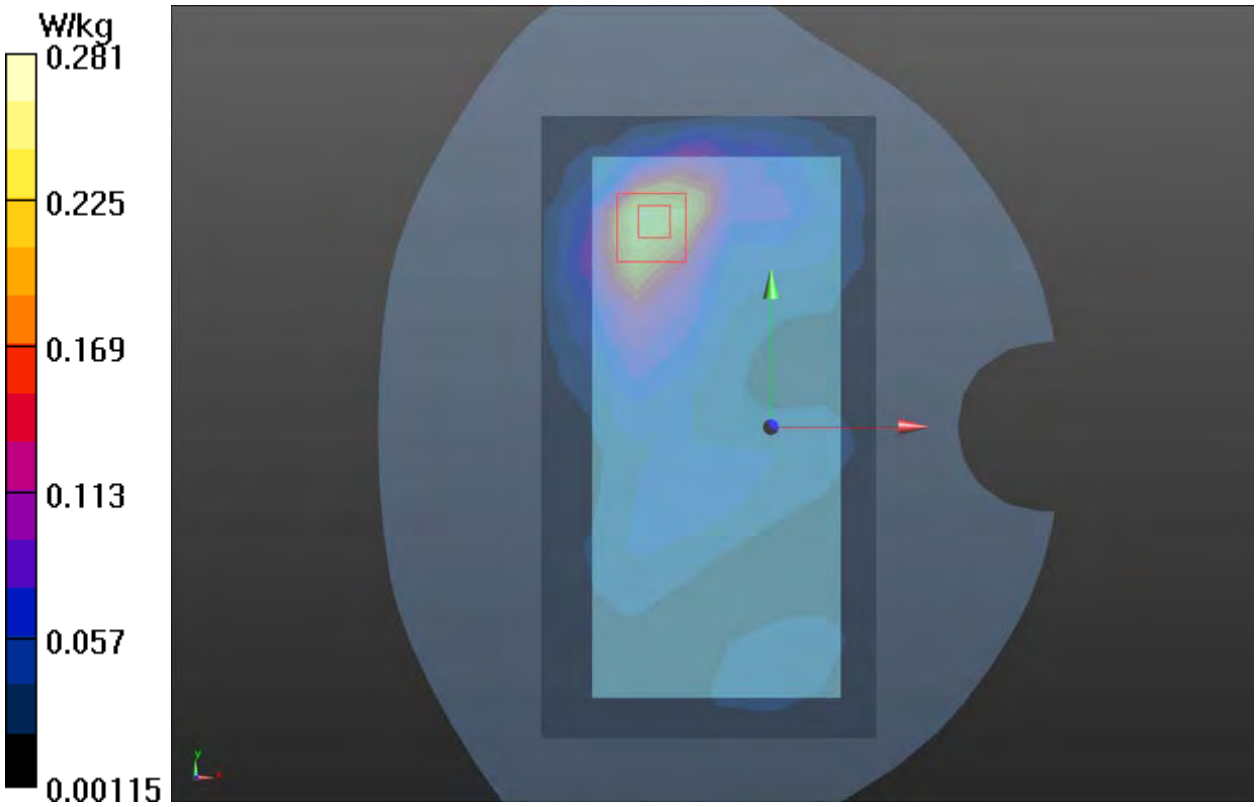
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.689 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.352 W/kg

SAR(1 g) = 0.179 W/kg; SAR(10 g) = 0.092 W/kg

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



Plot 47 802.11a U-NII-3 Back Side High (Distance 15mm)

Date: 2022/3/7

Communication System: UID 0, 802.11a (0); Frequency: 5825 MHz;Duty Cycle: 1:1

Medium parameters used: f = 5825 MHz; σ = 5.48 S/m; ε_r = 35.186; 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 High/Area Scan (11x21x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.185 W/kg

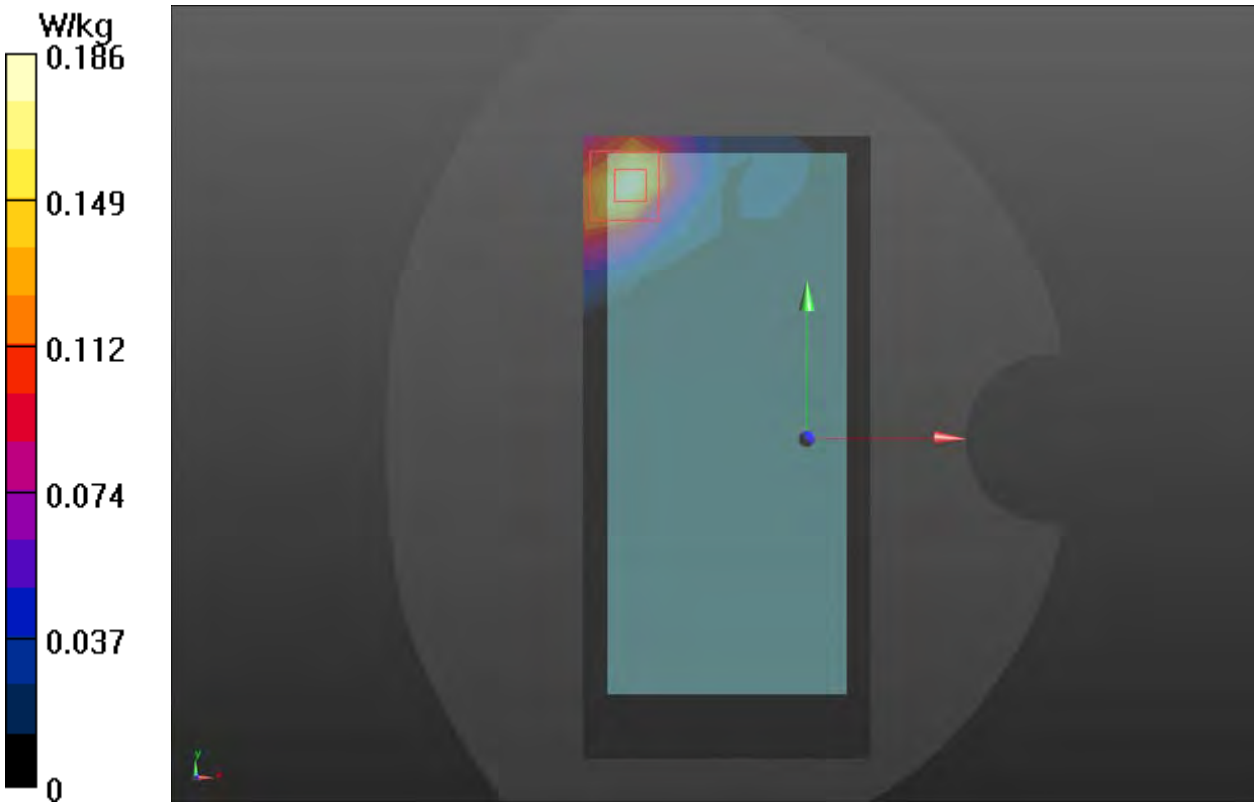
Back Side High/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.309 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 0.526 W/kg

SAR(1 g) = 0.177 W/kg; SAR(10 g) = 0.075 W/kg

Maximum value of SAR (measured) = 0.186 W/kg



Plot 48 WCDMA Band II Bottom Edge Middle (Distance 10mm)

Date: 2022/2/25

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)

Bottom Edge Middle/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.764 W/kg

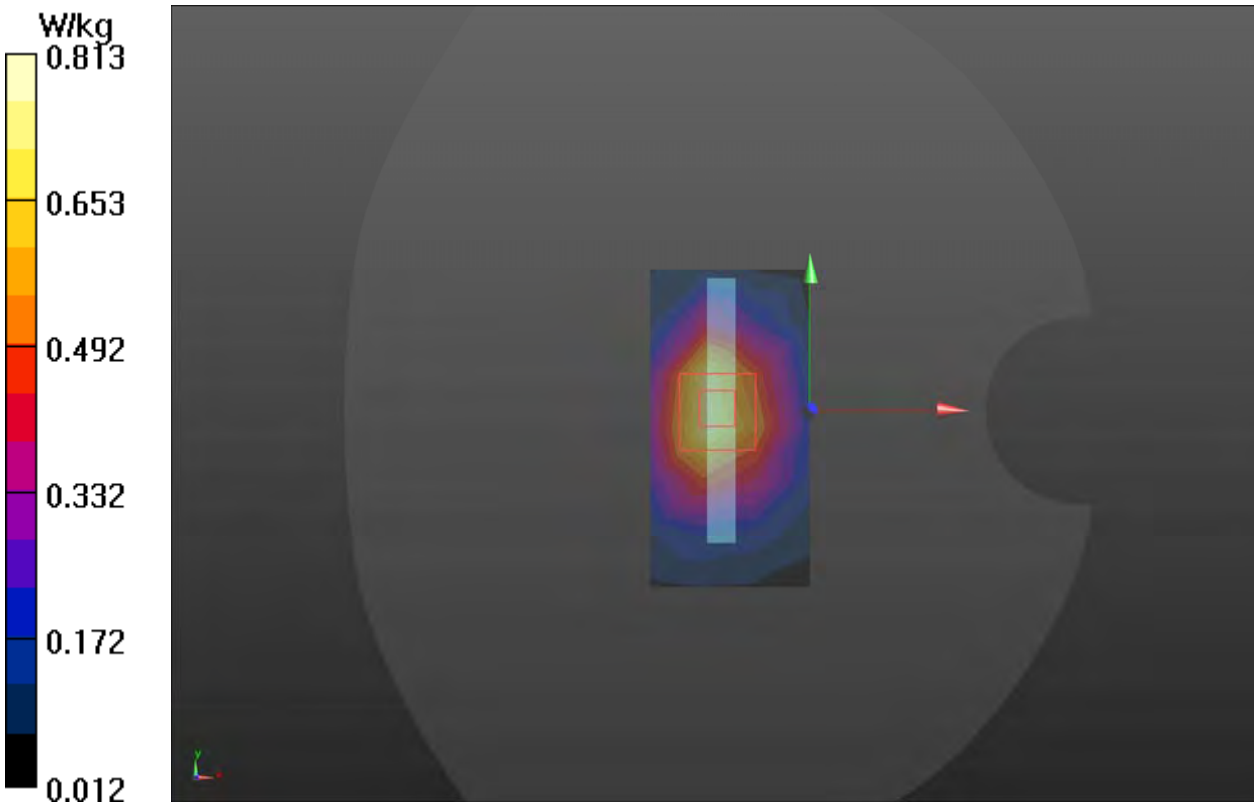
Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.45 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.742 W/kg; SAR(10 g) = 0.426 W/kg

Maximum value of SAR (measured) = 0.813 W/kg



Plot 49 WCDMA Band IV Back Side Middle (Distance 10mm)

Date: 2022/3/1

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: 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)

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

Maximum value of SAR (measured) = 0.814 W/kg

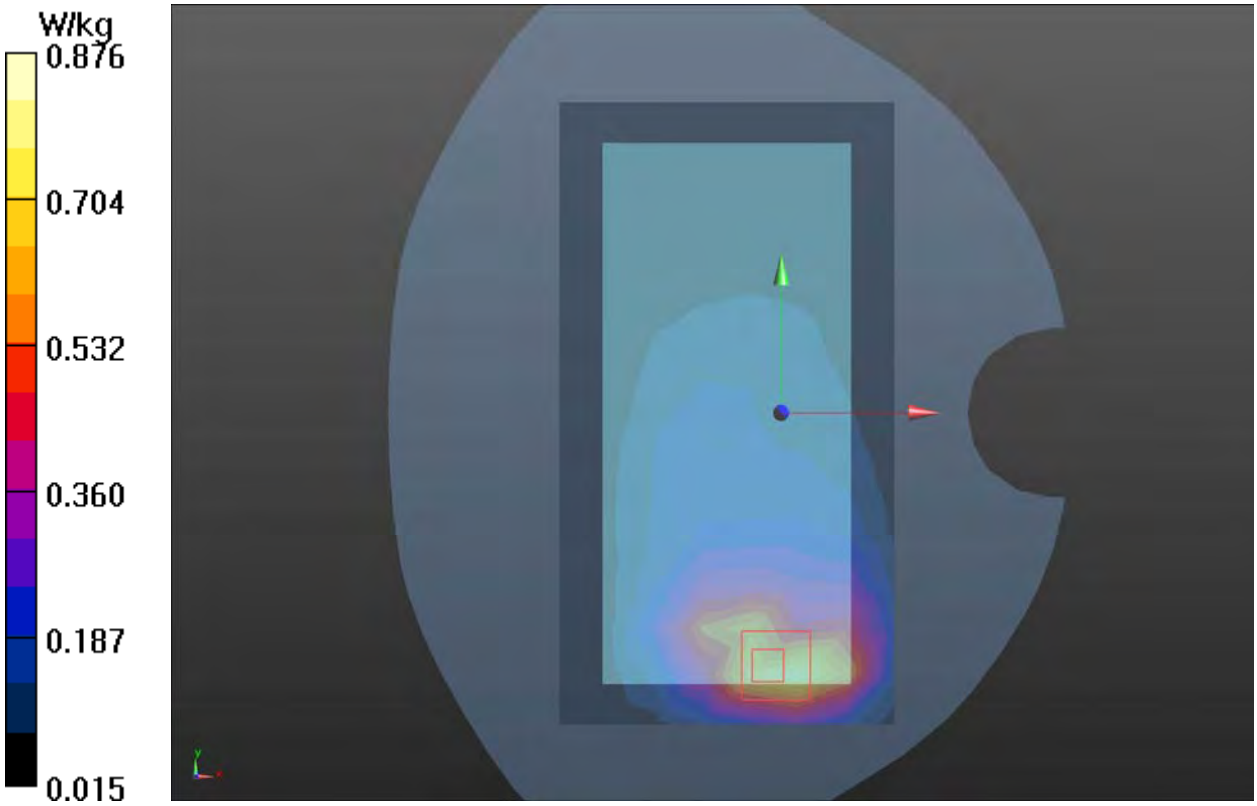
B4 Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.30 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.595 W/kg; SAR(10 g) = 0.341 W/kg

Maximum value of SAR (measured) = 0.876 W/kg



Plot 50 WCDMA Band V Back Side Middle (Distance 10mm)

Date: 2022/2/22

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 (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.943 W/kg

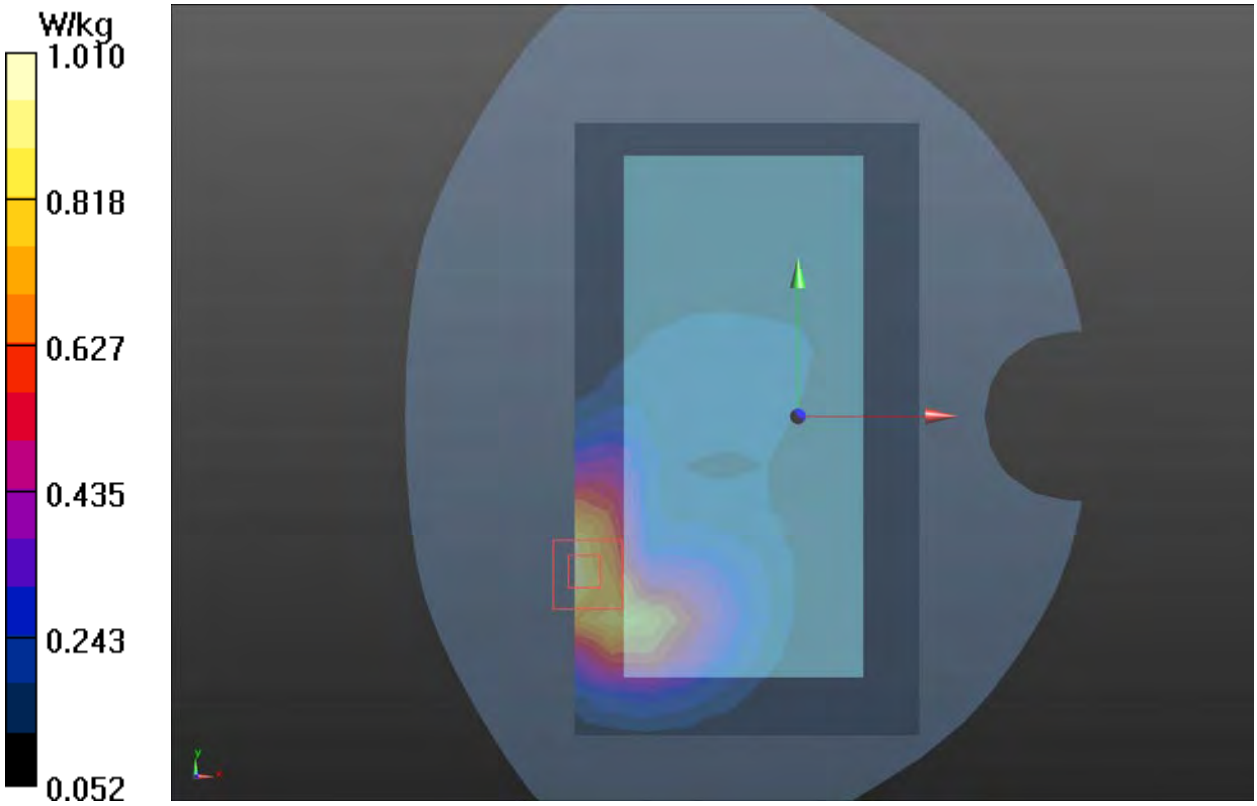
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.94 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.54 W/kg

SAR(1 g) = 0.789 W/kg; SAR(10 g) = 0.439 W/kg

Maximum value of SAR (measured) = 1.01 W/kg



Plot 51 LTE Band 2 1RB Bottom Edge High (Distance 10mm)

Date: 2022/2/25

Communication System: UID 0, LTE (0); Frequency: 1900 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1900 MHz; σ = 1.434 S/m; ε_r = 38.861; 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 High/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.789 W/kg

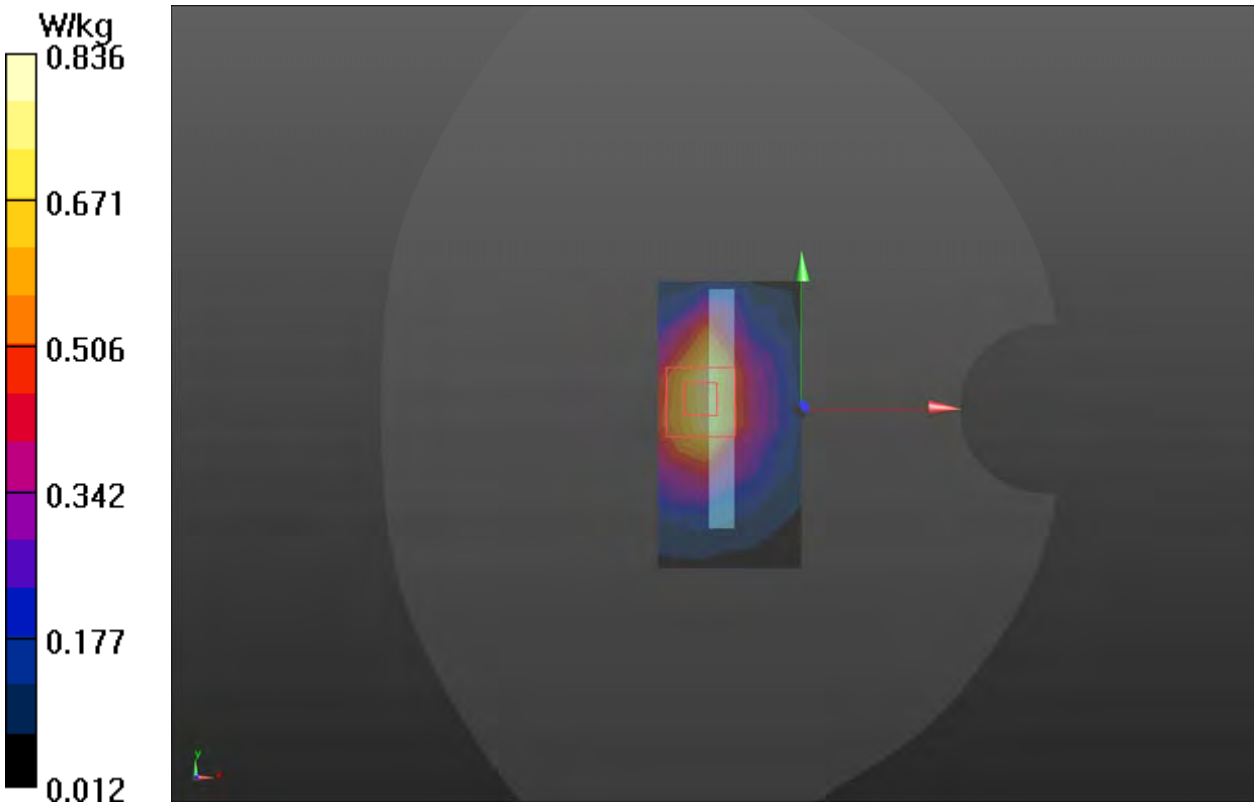
Bottom Edge High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.68 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.30 W/kg

SAR(1 g) = 0.763 W/kg; SAR(10 g) = 0.437 W/kg

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



Plot 52 LTE Band 5 1RB Back Side Low (Distance 10mm)

Date: 2022/2/23

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

Medium parameters used: f = 829 MHz; σ = 0.946 S/m; ε_r = 39.678; 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 Low/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.850 W/kg

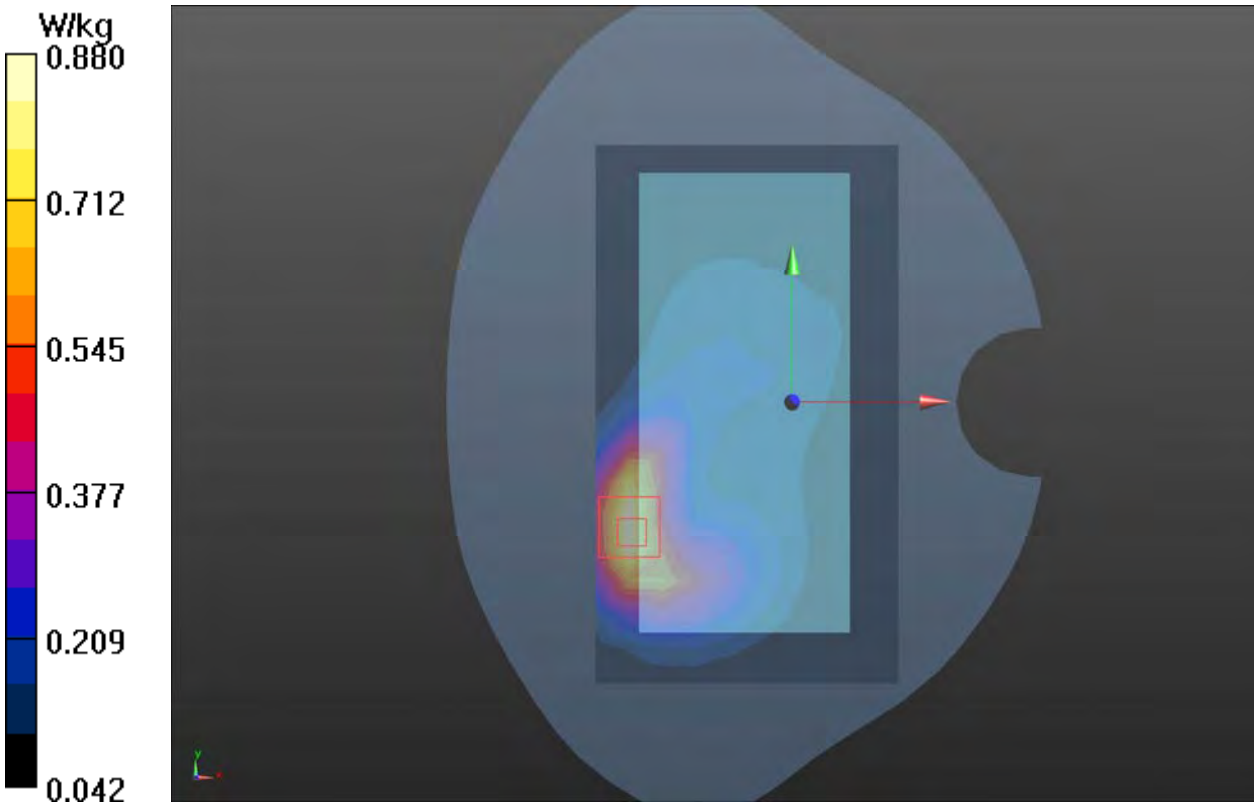
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.16 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.797 W/kg; SAR(10 g) = 0.478 W/kg

Maximum value of SAR (measured) = 0.880 W/kg



Plot 53 LTE Band 12 1RB Back Side Low (Distance 10mm)

Date: 2022/2/21

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 (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.529 W/kg

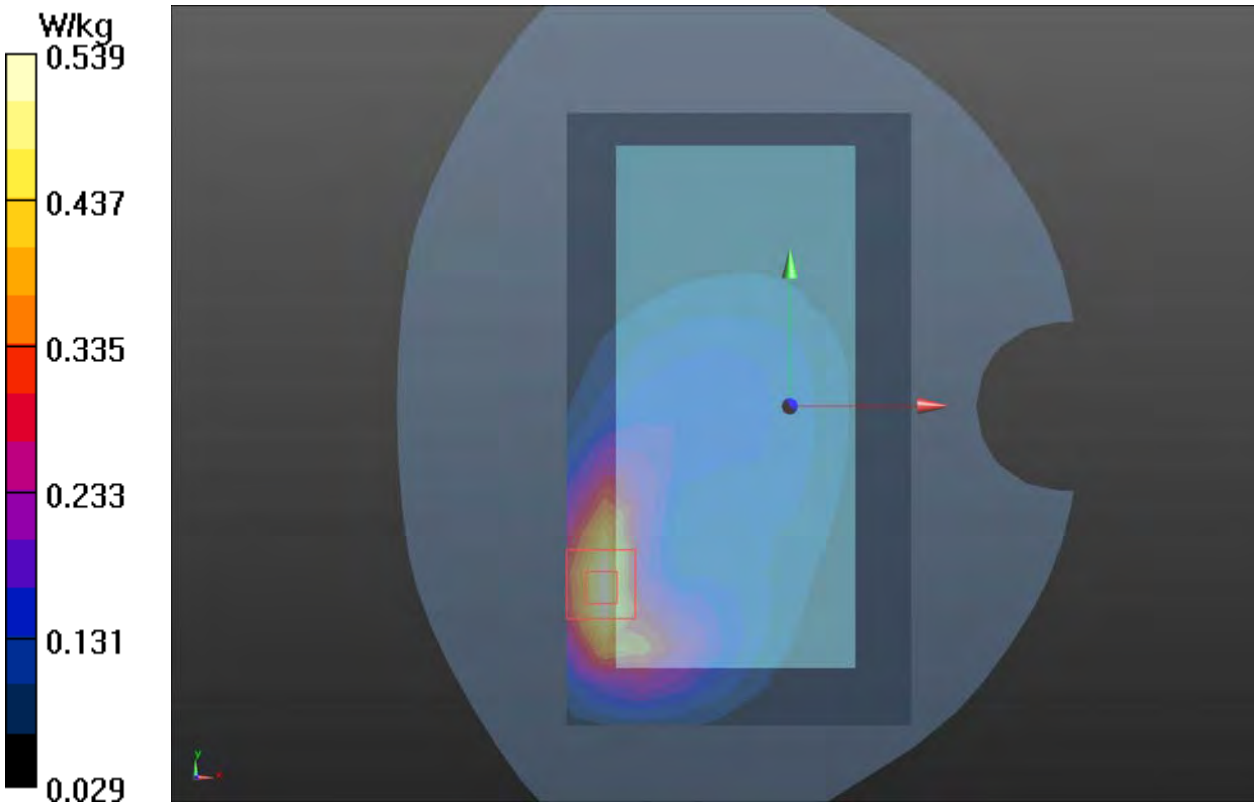
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.20 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 0.854 W/kg

SAR(1 g) = 0.489 W/kg; SAR(10 g) = 0.286 W/kg

Maximum value of SAR (measured) = 0.539 W/kg



Plot 54 LTE Band 41 1RB Back Side Middle (Distance 10mm)

Date: 2022/3/14

Communication System: UID 0, LTE (0); Frequency: 2593 MHz;Duty Cycle: 1:1.58

Medium parameters used: f = 2593 MHz; σ = 2.009 S/m; ε_r = 37.118; 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) = 0.922 W/kg

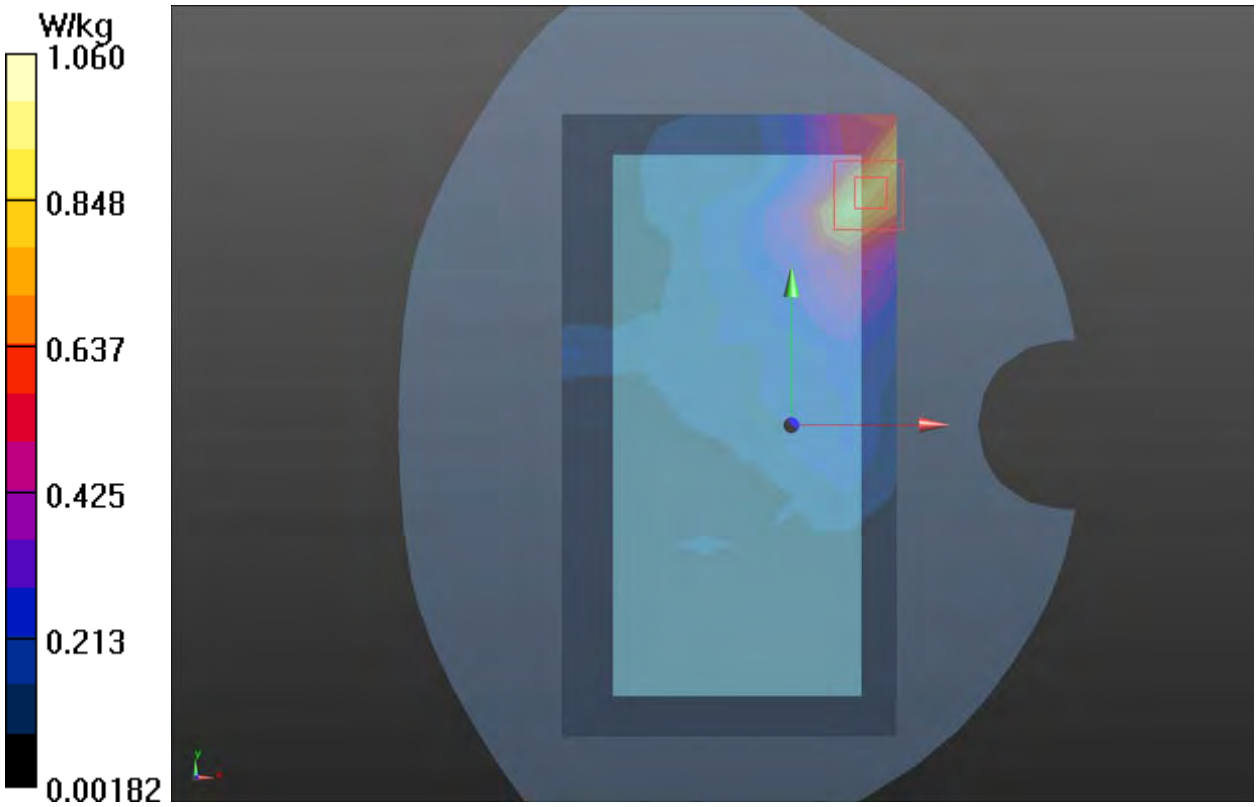
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 8.396 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.38 W/kg

SAR(1 g) = 0.638 W/kg; SAR(10 g) = 0.304 W/kg

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



Plot 55 LTE Band 66 1RB Bottom Edge Middle (Distance 10mm)

Date: 2022/3/1

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(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) = 0.742 W/kg

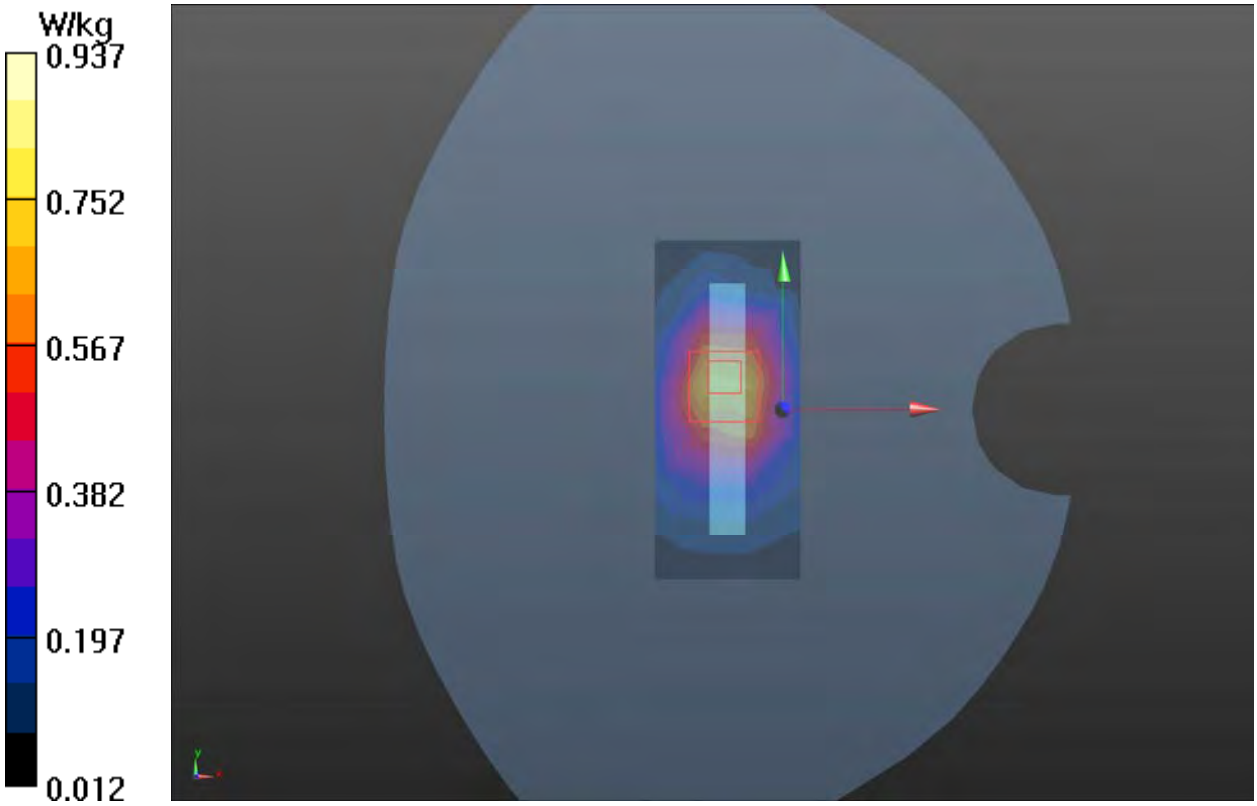
Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.95 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.637 W/kg; SAR(10 g) = 0.361 W/kg

Maximum value of SAR (measured) = 0.937 W/kg



Plot 56 LTE Band 71 1RB Back Side Low (Distance 10mm)

Date: 2022/2/21

Communication System: UID 0, LTE (0); Frequency: 673 MHz;Duty Cycle: 1:1

Medium parameters used: f = 673 MHz; σ = 0.847 S/m; ε_r = 40.954; 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) = 0.641 W/kg

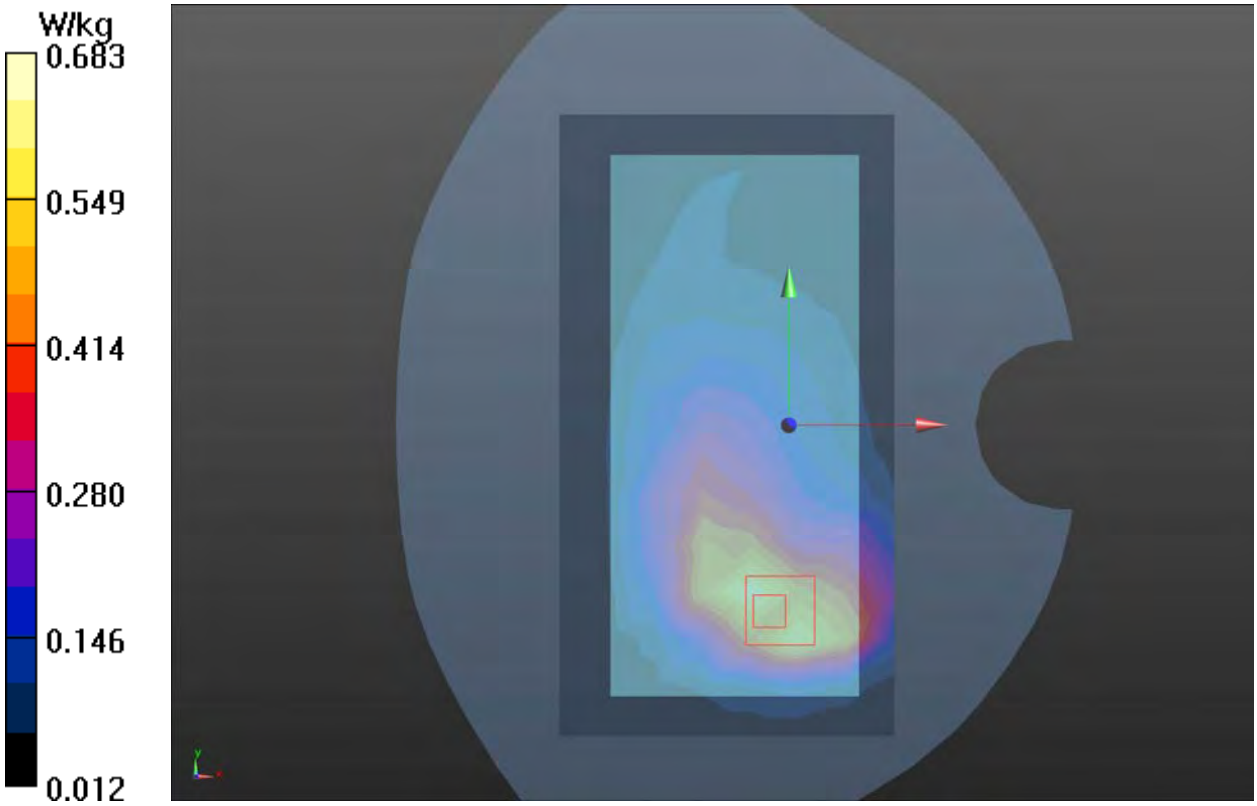
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.90 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.841 W/kg

SAR(1 g) = 0.439 W/kg; SAR(10 g) = 0.286 W/kg

Maximum value of SAR (measured) = 0.683 W/kg



Plot 57 NR n2 50%RB Bottom Edge Middle (Distance 10mm)

Date: 2022/2/26

Communication System: UID 0, 5G NR (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)

Bottom Edge Middle/Area Scan (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.646 W/kg

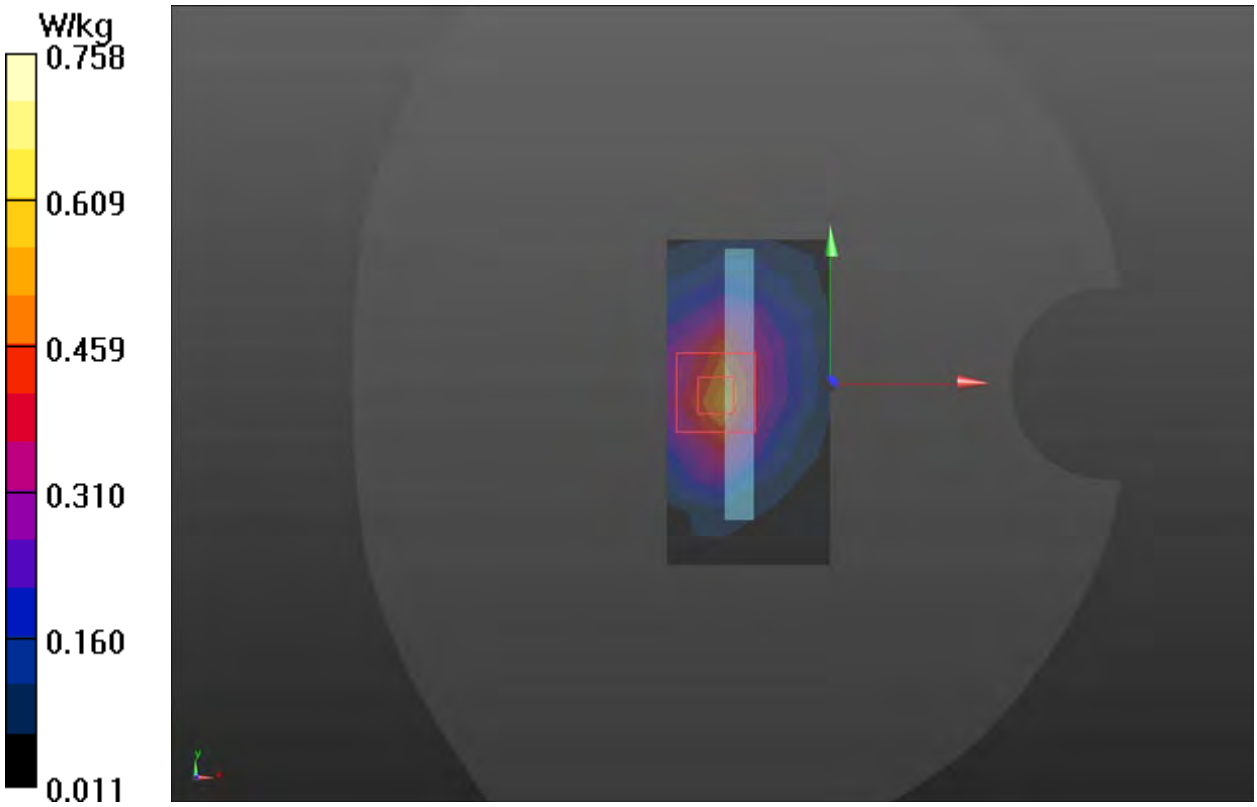
Bottom Edge Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.50 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.855 W/kg

SAR(1 g) = 0.614 W/kg; SAR(10 g) = 0.344 W/kg

Maximum value of SAR (measured) = 0.758 W/kg



Plot 58 NR n5 50%RB Back Side Middle (Distance 10mm)

Date: 2022/2/23

Communication System: UID 0, 5G NR (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 2/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.650 W/kg

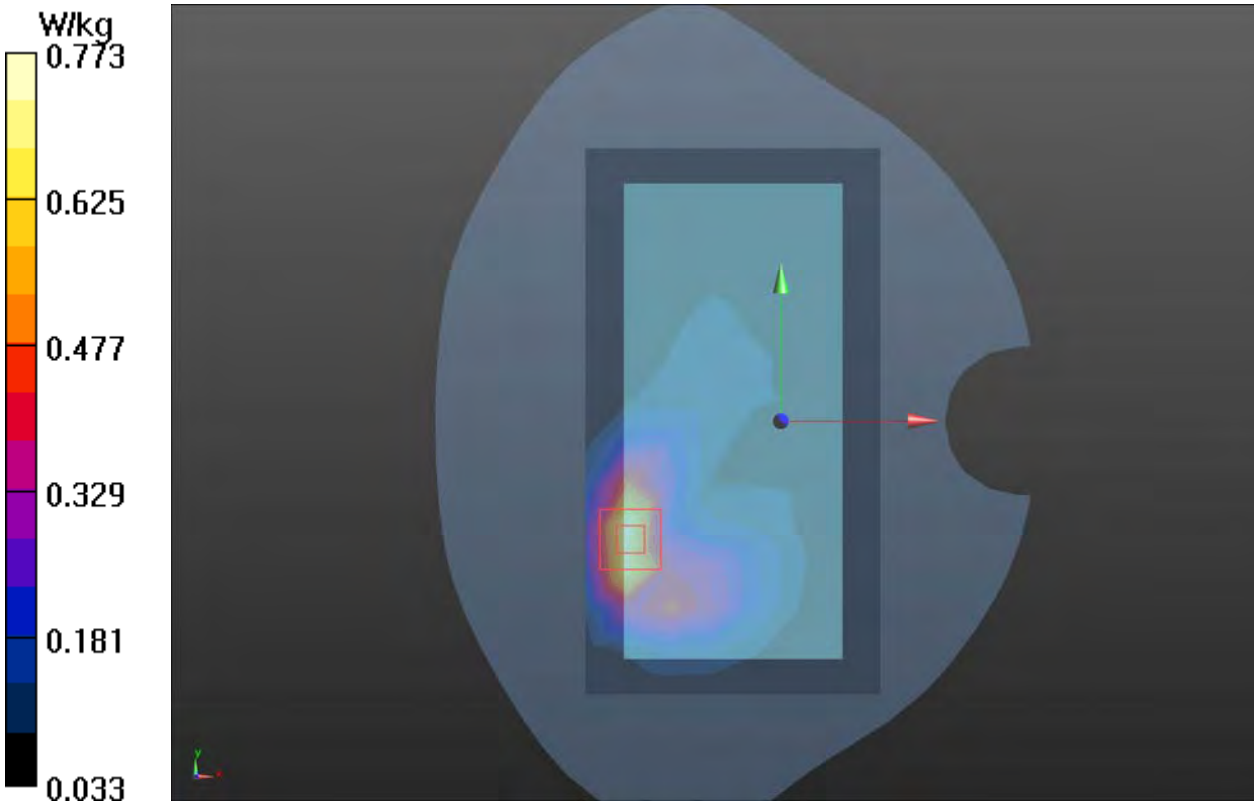
Back Side Middle 2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.871 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.931 W/kg

SAR(1 g) = 0.535 W/kg; SAR(10 g) = 0.308 W/kg

Maximum value of SAR (measured) = 0.773 W/kg



Plot 59 NR n25 50%RB Bottom Edge Low (Distance 10mm)

Date: 2022/2/26

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 (4x7x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.516 W/kg

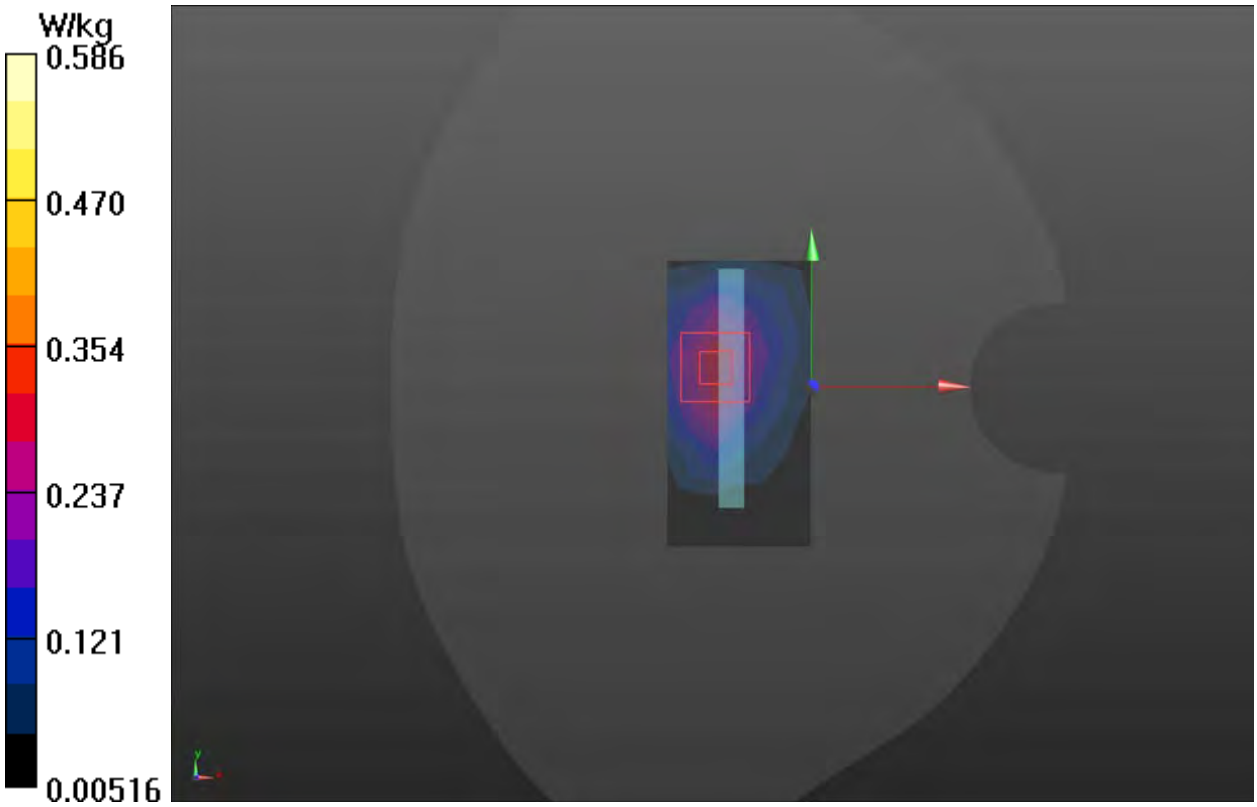
Bottom Edge Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.48 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.987 W/kg

SAR(1 g) = 0.429 W/kg; SAR(10 g) = 0.232 W/kg

Maximum value of SAR (measured) = 0.586 W/kg



Plot 60 NR n41 135RB Back Side Low (Distance 10mm)

Date: 2022/3/15

Communication System: UID 0, 5G NR (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1

Medium parameters used: f = 2592.99 MHz; σ = 2.009 S/m; ε_r = 37.118; 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 (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.30 W/kg

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

Reference Value = 11.57 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 2.38 W/kg

SAR(1 g) = 0.572 W/kg; SAR(10 g) = 0.27 W/kg

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