SAR TEST REPORT

Applicant	ZTE Corporation
FCC ID	SRQ-Z6252CA
Product	LTE/WCDMA/GSM(GPRS) Multi-Mode Digital Mobile Phone
Model	Z6252CA
Report No.	R2108A0747-S1V2
Issue Date	October 12, 2021

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.	October 8, 2021
Rev.1	Update Antenna location.	October 9, 2021
Rev.2	Update Antenna location.	October 12, 2021
Note: This revised report (Report No. R2108A0747-S1V2) supersedes and replaces the previously issued report (Report No. R2108A0747-S1V1). 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.
Address:	No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City:	Shanghai
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1.4 Laboratory Environment

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

2 Statement of Compliance

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

Table 1: Highest Reported SAR

Mode	Highest Reported SAR (W/kg)			
	1g SAR Head	1g SAR Body-worn (Separation 15mm)	1g SAR Hotspot (Separation 10mm)	Product Specific 10-g SAR (Separation 0mm)
GSM 850	0.189	0.395	0.574	NA
GSM 1900	0.210	0.627	**1.428**	2.846
WCDMA Band II	0.360	1.064	1.425	3.258
WCDMA Band IV	0.217	0.585	1.193	NA
WCDMA Band V	0.168	0.246	0.270	NA
LTE FDD 2	0.362	**1.091**	1.414	3.193
LTE FDD 5	0.157	0.215	0.236	NA
LTE FDD 7	0.246	0.360	0.738	NA
LTE FDD 12	0.197	0.411	0.457	NA
LTE FDD 13	0.087	0.159	0.182	NA
LTE FDD 66	0.166	0.360	1.395	**3.462**
Wi-Fi (2.4G)	**1.123**	0.441	0.633	NA
BT	0.140	NA	0.095	NA
Date of Testing: August 24. 2021 ~September 24, 2021 Date of Sample Received: August 20, 2021				
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.				

According to TCB workshop October, 2014 RF Exposure Prcedures Update (Overlappong LTE Bands):

Main and Second Antenna SAR for 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)	1.485	1.532	1.523	3.462
Note: The detail for simultaneous transmission consideration is described in chapter 10.3.				

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	Z6252CA
IMEI	860032050000183
Hardware Version	Z6252CAHW1.0
Software Version	Z6252CAV1.0.0B03
Antenna Type	Internal Antenna
Device Class	B
Wi-Fi Hotspot	Wi-Fi 2.4G
Power Class	GSM 850: 4 GSM 1900: 1 UMTS Band II/IV/V: 3 LTE FDD 2/4/5/7/12/13/66: 3
Power Level	GSM 850: level 5 GSM 1900: level 0 UMTS Band II/IV/V: all up bits LTE FDD 2/4/5/7/12/13/66: max power
EUT Accessory	
Battery	Manufacturer: VEKEN Model: Li3931T44P8h806139
Note: The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.	

Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)
GSM	850	Voice(GMSK) GPRS(GMSK) EGPRS(GMSK,8PSK)	☐Multi-slot Class:8-1UP ☐Multi-slot Class:10-2UP ☒Multi-slot Class:12-4UP ☐Multi-slot Class:33-4UP	824 ~ 849
	1900			1850 ~ 1910
	Does this device support DTM (Dual Transfer Mode)? ☐Yes ☒No			
UMTS	Band II	QPSK, 16QAM	HSDPA UE Category:24 HSUPA UE Category:7	1850 ~ 1910
	Band IV			1710 ~ 1755
	Band V			824 ~ 849
LTE	FDD 2	QPSK, 16QAM, 64QAM	Category 5	1850 ~ 1910
	FDD 4			1710 ~ 1755
	FDD 5			824 ~ 849
	FDD 7			2500 ~ 2570
	FDD 12			699 ~ 716
	FDD 13			777 ~ 787
	FDD 66			1710 ~ 1780
	Does this device support Carrier Aggregation (CA) ☐Yes ☒No			
	Does this device support SV-LTE (1xRTT-LTE)? ☐Yes ☒No			
BT	2.4G	Version 5.0 LE		2402 ~2480
Wi-Fi	2.4G	DSSS, OFDM	802.11b/g/n HT20	2412 ~ 2462
	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:

IEC 62209-1

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 GSM Test Configuration

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

Output power of reductions:

Table 3: The allowed power reduction in the multi-slot configuration

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

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

5.3.2 UMTS Test Configuration

5.3.2.1 3G SAR Test Reduction Procedure

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

5.3.2.2 Head SAR

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

5.3.2.3 Body-worn accessory SAR

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

5.3.2.4 Release 5 HSDPA Test Configuration

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

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

Table 4: Subtests for UMTS Release 5 HSDPA

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

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI}= 8$\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.

5.3.2.5 Release 6 HSUPA Test Configuration

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

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

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

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

Note 1: Δ_{ACK}, ΔNACK and Δ_{CQI} = 8 ⇔ $A_{hs} = \beta_{hs}/\beta_c$ = 30/15 ⇔β_{hs}= 30/15 *β_c.
Note 2: CM = 1 for β_c/β_d =12/15, β_{hs}/β_c =24/15. For all other combinations of DPDCH, DPCCH, HS- DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.
Note 3: For subtest 1 the β_c/β_d ratio of 11/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 10/15 and β_d = 15/15.
Note 4: For subtest 5 the β_c/β_d ratio of 15/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signaled gain factors for the reference TFC (TF1, TF1) to β_c = 14/15 and β_d = 15/15.
Note 5: Testing UE using E-DPDCH Physical Layer category 1 Sub-test 3 is not required according to TS 25.306 Figure 5.1g.
Note 6: β_{ed} cannot be set directly; it is set by Absolute Grant Value.

Table 6: HSUPA UE category

UE E-DCH Category	Maximum E-DCH Codes Transmitted	Number of HARQ Processes	E-DCHTTI (ms)	Minimum Spreading Factor	Maximum E-DCH Transport 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)						

5.3.2.6 HSPA, and DC-HSDPA Test Configuration

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

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

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

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

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

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

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

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

4) When SAR measurement is required, the test configurations, procedures and power measurement results must be clearly described to confirm that the required test parameters are used, including E-TFCI and AG index stability and output power conditions.

Table 7: HS-DSCH UE category

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

5.3.3 LTE Test Configuration

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

A) Spectrum Plots for RB Configurations

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

B) MPR

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

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

C) A-MPR

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

D) Largest channel bandwidth standalone SAR test requirements

1) QPSK with 1 RB allocation

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

2) QPSK with 50% RB allocation

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

3) QPSK with 100% RB allocation

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

4) Higher order modulations

For each modulation besides QPSK; e.g., 16-QAM, 64-QAM, apply the QPSK procedures in above sections to determine the QAM configurations that may need SAR measurement. For each configuration identified as required for testing, SAR is required only when the highest maximum output power for the configuration in the higher order modulation is > ½ dB higher than the same configuration in QPSK or when the reported SAR for the QPSK configuration is > 1.45 W/kg.

E) Other channel bandwidth standalone SAR test requirements

For the other channel bandwidths used by the device in a frequency band, apply all the procedures required for the largest channel bandwidth in section A) to determine the channels and RB configurations that need SAR testing and only measure SAR when the highest maximum output power of a configuration requiring testing in the smaller channel bandwidth is > ½ dB higher than the equivalent channel configurations in the largest channel bandwidth configuration or the reported SAR of a configuration for the largest channel bandwidth is > 1.45 W/kg.

5.3.4 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.

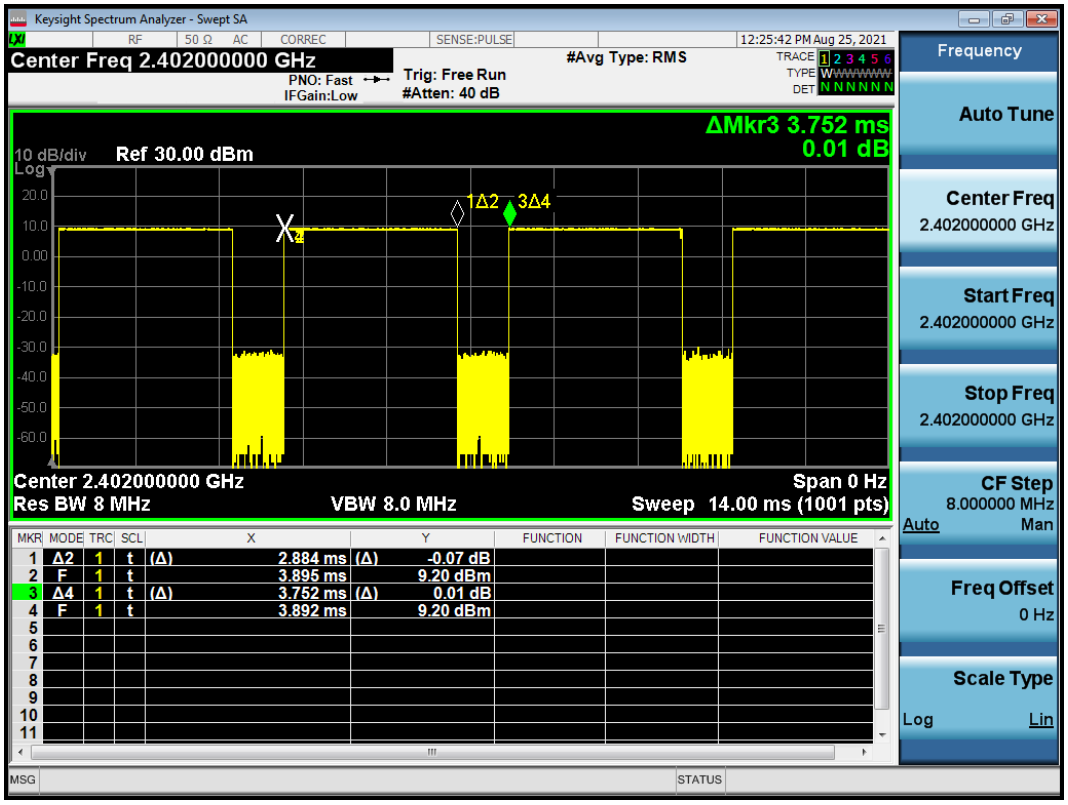
To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

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.

5.3.5 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:

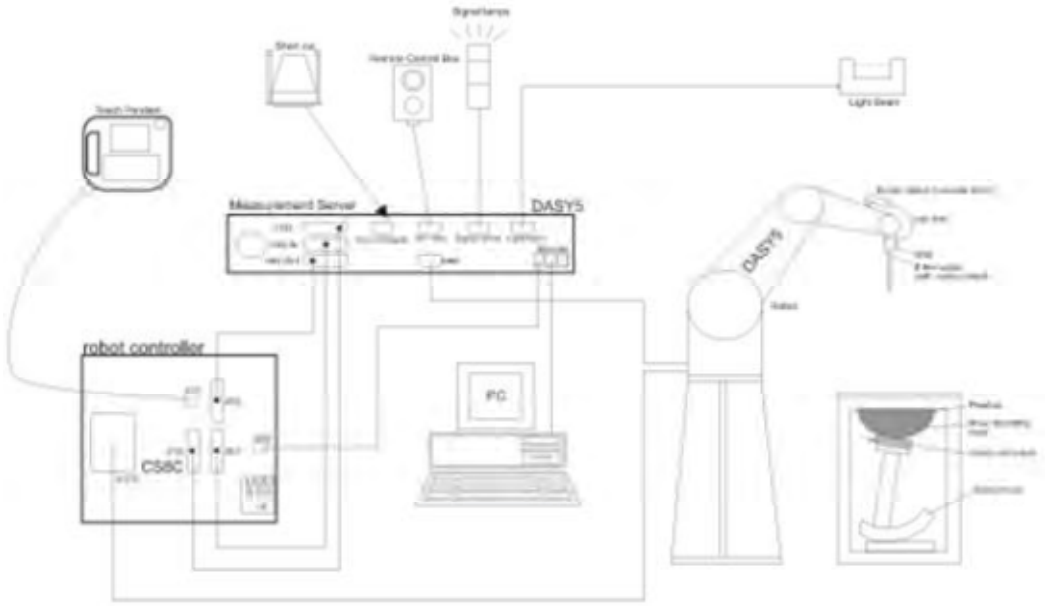


Note: Duty factor= Ton (ms)/ T(on+off) (ms)=2.884/3.752=76.9%

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.

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

Zoom Scan

Zoom scans are used 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	HP	85070E	US44020115	2021-05-15	2022-05-14
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	Agilent	778D-012	50519	/	/
Dual directional coupler	Agilent	777D	50146	/	/
Amplifier	INDEXSAR	TPA-005060 G01	13030502	2021-05-15	2022-05-14
Wireless communication tester	Anritsu	MT8820C	6201342015	2020-12-13	2021-12-12
Wireless communication tester	Key sight	E5515C	MY48360988	2020-12-13	2021-12-12
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	7628	2021-02-16	2022-02-15
DAE	SPEAG	DAE4	1317	2021-02-23	2022-02-22
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
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	SAM1	1534	/	/
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)	Water (%)	Salt (%)	Sugar (%)	Glycol (%)	Preventol (%)	Cellulose (%)	ε_r	σ(s/m)
750	41.448	1.452	56	0	0.1	1.0	41.9	0.89
835	41.45	1.45	56	0	0.1	1.0	41.5	0.90
1750	55.24	0.31	0	44.45	0	0	40.1	1.37
1900	55.242	0.306	0	44.452	0	0	40.0	1.40
2450	62.7	0.5	0	36.8	0	0	39.2	1.80
2600	55.242	0.306	0	44.452	0	0	39.0	1.96

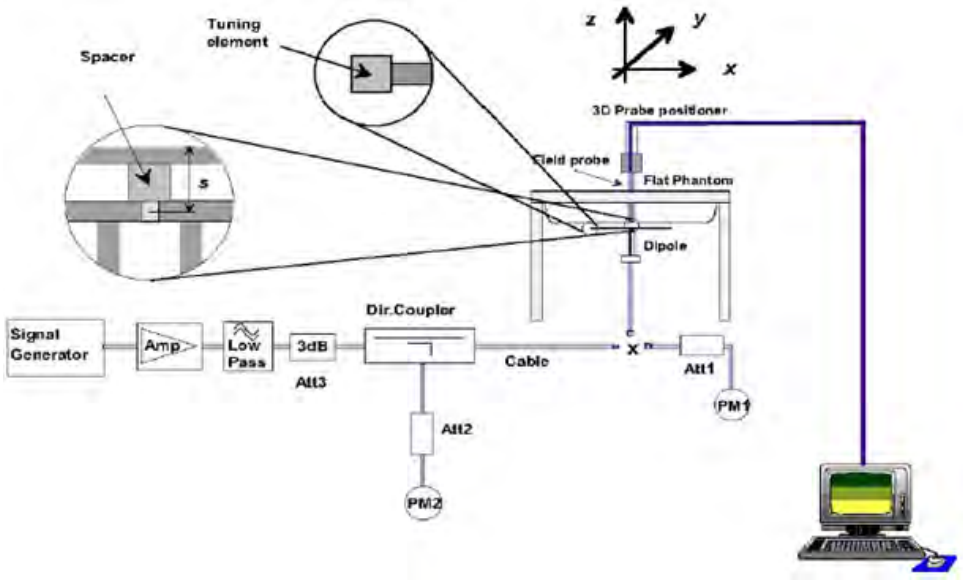
Measurements results

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	8/24/2021	21.5	42.0	0.87	41.9	0.89	0.24	-2.25
835	9/2/2021	21.5	41.4	0.92	41.5	0.90	-0.24	2.22
1750	8/29/2021	21.5	40.2	1.36	40.1	1.37	0.25	-0.73
1900	9/23/2021	21.5	40.1	1.41	40.0	1.40	0.25	0.71
	9/24/2021	21.5	40.2	1.43	40.0	1.40	0.50	2.14
2450	8/30/2021	21.5	38.6	1.81	39.2	1.80	-1.53	0.56
2600	9/16/2021	21.5	38.5	1.95	39.0	1.96	-1.28	-0.51
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 D1750V2 SN: 1033	Head Liquid	2/25/2020	-38.3	/	48.8	/
		2/26/2021	-40.0	-1.7	49.9	1.1

System Check results

Frequency (MHz)	Test Date	Temp ℃	250mW Measured SAR_{1g} (W/kg)	1W Normalized SAR_{1g} (W/kg)	1W Target SAR_{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
750	8/24/2021	21.5	2.10	8.40	8.37	0.36	1
835	9/2/2021	21.5	2.43	9.72	9.65	0.73	2
1750	8/29/2021	21.5	8.96	35.84	35.90	-0.17	3
1900	9/23/2021	21.5	9.88	39.52	39.50	0.05	4
	9/24/2021	21.5	9.85	39.40	39.50	-0.25	5
2450	8/30/2021	21.5	13.70	54.80	52.30	4.78	6
2600	9/16/2021	21.5	13.90	55.60	56.10	-0.89	7
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			Mod. Validation		
								Sensitivity	Probe Linearity	Probe Isotropy	Mod. Type	Duty Factor	PAR
750	2/16/2021	7628	EX3DV4	750	Head	42.81	0.85	PASS	PASS	PASS	FDD	PASS	N/A
835	2/16/2021	7628	EX3DV4	835	Head	42.22	0.90	PASS	PASS	PASS	GMSK	PASS	N/A
1750	2/16/2021	7628	EX3DV4	1750	Head	39.91	1.32	PASS	PASS	PASS	NA	N/A	N/A
1900	2/16/2021	7628	EX3DV4	1900	Head	39.43	1.42	PASS	PASS	PASS	GMSK	PASS	N/A
2450	2/16/2021	7628	EX3DV4	2450	Head	38.19	1.83	PASS	PASS	PASS	OFDM	PASS	PASS
2600	2/16/2021	7628	EX3DV4	2600	Head	37.60	1.99	PASS	PASS	PASS	TDD	PASS	N/A
5250	2/16/2021	7628	EX3DV4	5250	Head	35.36	4.83	PASS	PASS	PASS	OFDM	N/A	PASS
5600	2/16/2021	7628	EX3DV4	5600	Head	34.43	5.29	PASS	PASS	PASS	OFDM	N/A	PASS
5750	2/16/2021	7628	EX3DV4	5750	Head	34.07	5.47	PASS	PASS	PASS	OFDM	N/A	PASS

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

9 Normal and Maximum Output Power

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

9.1 GSM Mode

GSM 850 Full Power & Hotspot on		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frenqucy(MHz)				Tune-up	Channel/Frenqucy(MHz)		
		MAX	128 /824.2	190 /836.6	251 /848.8		MAX	128 /824.2	190 /836.6	251 /848.8
GSM	CS	33.50	32.63	32.64	32.52	9.03	24.47	23.60	23.61	23.49
GPRS/ EGPRS (GMSK)	1 Tx Slot	33.50	32.60	32.61	32.48	9.03	24.47	23.57	23.58	23.45
	2 Tx Slots	32.50	31.90	31.91	31.78	6.02	26.48	25.88	25.89	25.76
	3 Tx Slots	31.00	30.15	30.14	30.00	4.26	26.74	25.89	25.88	25.74
	4 Tx Slots	30.00	29.06	29.06	28.92	3.01	**26.99**	26.05	26.05	25.91
EGPRS (8PSK)	1 Tx Slot	28.00	27.31	26.92	27.25	9.03	18.97	18.28	17.89	18.22
	2 Tx Slots	27.00	25.90	26.75	26.08	6.02	20.98	19.88	20.73	20.06
	3 Tx Slots	25.00	24.08	24.07	24.08	4.26	20.74	19.82	19.81	19.82
	4 Tx Slots	23.00	22.46	22.27	22.71	3.01	19.99	19.45	19.26	19.70
GSM 1900 Full Power		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frenqucy(MHz)				Tune-up	Channel/Frenqucy(MHz)		
		MAX	512 /1850.2	661 /1880	810 /1909.8		MAX	512 /1850.2	661 /1880	810 /1909.8
GSM	CS	30.50	30.20	29.99	30.22	9.03	21.47	21.17	20.96	21.19
GPRS/ EGPRS (GMSK)	1 Tx Slot	30.50	30.19	29.91	30.23	9.03	21.47	21.16	20.88	21.20
	2 Tx Slots	30.00	29.49	29.23	29.63	6.02	23.98	23.47	23.21	23.61
	3 Tx Slots	28.50	27.76	27.57	28.00	4.26	24.24	23.50	23.31	23.74
	4 Tx Slots	27.50	26.67	26.50	26.97	3.01	**24.49**	23.66	23.49	23.96
EGPRS (8PSK)	1 Tx Slot	27.00	26.23	26.12	26.37	9.03	17.97	17.20	17.09	17.34
	2 Tx Slots	26.00	25.21	25.17	25.58	6.02	19.98	19.19	19.15	19.56
	3 Tx Slots	24.00	23.25	23.32	23.27	4.26	19.74	18.99	19.06	19.01
	4 Tx Slots	23.00	21.97	22.18	22.10	3.01	19.99	18.96	19.17	19.09
Notes: The worst-case configuration and mode for SAR testing is determined to be as follows: 1. Standalone: GSM 850 GMSK (GPRS) mode with 4 time slots for Max power, GSM 1900 GMSK (GPRS) mode with 4 time slots for Max power, based on the output power measurements above.										

GSM 1900 Hotspot on		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frenqucy(MHz)				Tune-up	Channel/Frenqucy(MHz)		
		MAX	512 /1850.2	661 /1880	810 /1909.8		MAX	512 /1850.2	661 /1880	810 /1909.8
GSM	CS	27.50	26.58	26.56	26.60	9.03	18.47	17.55	17.53	17.57
GPRS/ EGPRS (GMSK)	1 Tx Slot	27.50	26.45	26.47	26.72	9.03	18.47	17.42	17.44	17.69
	2 Tx Slots	26.50	25.19	25.26	25.56	6.02	**20.48**	19.17	19.24	19.54
	3 Tx Slots	23.00	21.69	21.82	22.32	4.26	18.74	17.43	17.56	18.06
	4 Tx Slots	20.50	18.92	19.18	19.46	3.01	17.49	15.91	16.17	16.45
EGPRS (8PSK)	1 Tx Slot	27.00	26.23	26.12	26.37	9.03	17.97	17.20	17.09	17.34
	2 Tx Slots	26.00	25.21	25.17	25.27	6.02	19.98	19.19	19.15	19.25
	3 Tx Slots	24.00	23.25	23.32	23.25	4.26	19.74	18.99	19.06	18.99
	4 Tx Slots	23.00	21.97	22.18	22.10	3.01	19.99	18.96	19.17	19.09

Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:
1. Standalone: GSM 1900 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above.

9.2 WCDMA Mode

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

WCDMA		Band II(dBm) Full Power				Band IV(dBm) Full Power&Hotspot on				Band V(dBm) Full Power&Hotspot on			
Tx Channel		9262	9400	9538	Tune-up	1312	1413	1513	Tune-up	4132	4183	4233	Tune-up
Frequency(MHz)		1852.4	1880	1907.6	Limit	1712.4	1732.6	1752.6	Limit	826.4	836.6	846.6	Limit
RMC	12.2kbps	23.26	**23.28**	23.21	24.00	23.21	23.12	**23.32**	24.00	23.83	**23.95**	23.91	24.50
AMR	12.2kbps	23.20	23.32	23.05	24.00	23.35	23.22	23.26	24.00	23.67	23.81	24.01	24.50
HSDPA	Sub 1	22.68	22.80	22.75	23.50	22.61	22.60	22.44	23.50	23.23	23.55	23.33	24.00
	Sub 2	22.76	22.62	22.57	23.50	22.55	22.68	22.44	23.50	23.21	23.49	23.39	24.00
	Sub 3	22.10	22.32	22.25	23.00	22.23	22.26	22.12	23.00	22.67	22.93	22.91	23.50
	Sub 4	22.18	22.30	22.25	23.00	22.11	22.16	22.22	23.00	22.91	23.09	22.79	23.50
HSUPA	Sub 1	22.66	22.94	22.55	23.50	22.87	22.76	22.66	23.50	23.19	23.37	23.39	24.00
	Sub 2	21.62	21.92	21.63	22.50	21.77	21.66	21.58	22.50	22.29	22.35	22.31	23.00
	Sub 3	22.38	22.44	22.35	23.00	22.11	22.16	22.02	23.00	22.97	23.01	22.95	23.50
	Sub 4	21.62	21.90	21.63	22.50	21.87	21.66	21.54	22.50	22.37	22.39	22.51	23.00
	Sub 5	22.88	22.72	22.57	23.50	22.75	22.56	22.60	23.50	23.49	23.51	23.57	24.00
DC-HSDPA	Sub 1	22.66	22.64	22.77	23.50	22.69	22.74	22.64	23.50	23.33	23.51	23.49	24.00
	Sub 2	22.76	22.82	22.71	23.50	22.71	22.46	22.60	23.50	23.45	23.59	23.39	24.00
	Sub 3	22.22	22.38	22.05	23.00	22.09	22.16	22.00	23.00	22.87	22.89	23.01	23.50
	Sub 4	22.40	22.38	22.15	23.00	22.25	22.08	22.04	23.00	22.89	22.85	22.87	23.50
Note: 1.Per KDB 941225 D01, SAR for each exposure is measured using a 12.2 kbps RMC with TPC bits configured to all “1’s”.													

WCDMA		Band II(dBm) hotspot on			
Tx Channel		9262	9400	9538	Tune-up Limit
Frequency(MHz)		1852.4	1880	1907.6	
RMC	12.2kbps	**20.29**	20.24	20.19	21.00
AMR	12.2kbps	20.23	20.12	20.35	21.00
HSDPA	Sub 1	19.71	19.78	19.71	20.50
	Sub 2	19.89	19.78	19.71	20.50
	Sub 3	19.45	19.16	19.13	20.00
	Sub 4	19.37	19.20	19.11	20.00
HSUPA	Sub 1	19.71	19.82	19.71	20.50
	Sub 2	18.69	18.70	18.55	19.50
	Sub 3	19.25	19.38	19.21	20.00
	Sub 4	18.75	18.58	18.57	19.50
	Sub 5	19.69	19.74	19.55	20.50
DC-HSDPA	Sub 1	19.77	19.90	19.83	20.50
	Sub 2	19.87	19.86	19.67	20.50
	Sub 3	19.15	19.26	19.21	20.00
	Sub 4	19.17	19.08	19.07	20.00
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”.					

9.3 LTE Mode

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

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

Modulation	Channel bandwidth / Transmission bandwidth (N_{RB})						MPR (dB)
	1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3

LTE FDD Band 2 Full Power				Maximum Output 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	22.99	22.88	23.19	24.00
		1	2	23.08	23.32	23.24	24.00
		1	5	22.72	23.07	22.50	24.00
		3	0	23.03	23.19	23.48	24.00
		3	2	23.03	23.32	23.21	24.00
		3	3	22.97	23.19	22.99	24.00
		6	0	22.05	22.31	22.23	23.00
	16QAM	1	0	22.60	22.11	22.07	23.00
		1	2	22.58	22.60	22.30	23.00
		1	5	22.18	22.17	21.75	23.00
		3	0	22.23	22.24	22.63	23.00
		3	2	22.24	22.28	22.64	23.00
		3	3	22.18	22.33	22.35	23.00
		6	0	21.27	21.31	21.53	22.00
	64QAM	1	0	21.56	21.17	21.37	22.00
		1	2	21.83	21.70	21.58	22.00
		1	5	21.45	21.45	20.99	22.00
		3	0	21.46	21.47	21.73	22.00
		3	2	21.49	21.49	21.68	22.00
		3	3	21.38	21.68	21.58	22.00
		6	0	20.52	20.66	20.80	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	23.01	22.92	23.22	24.00
		1	7	23.06	23.35	23.28	24.00

		1	14	22.75	23.12	22.54	24.00
		8	0	22.13	22.31	22.61	23.00
		8	4	22.15	22.42	22.33	23.00
		8	7	22.07	22.30	22.09	23.00
		15	0	22.05	22.35	22.26	23.00
	16QAM	1	0	22.63	22.13	22.10	23.00
		1	7	22.61	22.60	22.34	23.00
		1	14	22.20	22.21	21.78	23.00
		8	0	21.34	21.37	21.75	22.00
		8	4	21.35	21.41	21.76	22.00
		8	7	21.28	21.45	21.48	22.00
		15	0	21.30	21.35	21.56	22.00
	64QAM	1	0	21.59	21.19	21.40	22.00
		1	7	21.86	21.70	21.60	22.00
		1	14	21.47	21.44	21.02	22.00
		8	0	20.57	20.60	20.85	21.00
		8	4	20.60	20.62	20.80	21.00
		8	7	20.48	20.80	20.71	21.00
		15	0	20.55	20.70	20.83	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	Limit
5MHz	QPSK	1	0	22.98	22.90	23.18	24.00
		1	13	23.04	23.31	23.25	24.00
		1	24	22.72	23.07	22.50	24.00
		12	0	22.10	22.26	22.57	23.00
		12	6	22.13	22.38	22.28	23.00
		12	13	22.05	22.28	22.05	23.00
		25	0	22.05	22.34	22.24	23.00
	16QAM	1	0	22.60	22.09	22.07	23.00
		1	13	22.58	22.58	22.31	23.00
		1	24	22.17	22.19	21.74	23.00
		12	0	21.32	21.33	21.72	22.00
		12	6	21.32	21.36	21.72	22.00
		12	13	21.25	21.40	21.44	22.00
		25	0	21.28	21.31	21.51	22.00
	64QAM	1	0	21.56	21.19	21.37	22.00
		1	13	21.83	21.72	21.57	22.00
		1	24	21.48	21.42	20.98	22.00
		12	0	20.55	20.56	20.86	21.00
		12	6	20.57	20.57	20.76	21.00
		12	13	20.45	20.75	20.67	21.00
		25	0	20.53	20.66	20.78	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up

				18650/1855	18900/1880	19150/1905	Limit
10MHz	QPSK	1	0	23.00	22.91	23.21	24.00
		1	25	23.07	23.36	23.29	24.00
		1	49	22.74	23.11	22.53	24.00
		25	0	22.13	22.31	22.61	23.00
		25	13	22.16	22.43	22.32	23.00
		25	25	22.07	22.32	22.10	23.00
		50	0	22.09	22.36	22.28	23.00
	16QAM	1	0	22.62	22.12	22.09	23.00
		1	25	22.61	22.62	22.34	23.00
		1	49	22.20	22.21	21.77	23.00
		25	0	21.35	21.38	21.76	22.00
		25	13	21.34	21.40	21.75	22.00
		25	25	21.28	21.45	21.48	22.00
		50	0	21.31	21.36	21.55	22.00
	64QAM	1	0	21.58	21.18	21.39	22.00
		1	25	21.86	21.72	21.60	22.00
		1	49	21.47	21.44	21.01	22.00
		25	0	20.58	20.61	20.86	21.00
		25	13	20.59	20.61	20.79	21.00
		25	25	20.48	20.80	20.71	21.00
		50	0	20.56	20.71	20.82	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	22.99	22.87	23.19	24.00
		1	38	23.05	23.35	23.26	24.00
		1	74	22.71	23.06	22.49	24.00
		36	0	22.11	22.27	22.58	23.00
		36	18	22.13	22.38	22.28	23.00
		36	39	22.04	22.29	22.06	23.00
		75	0	22.07	22.32	22.23	23.00
	16QAM	1	0	22.57	22.10	22.07	23.00
		1	38	22.59	22.59	22.32	23.00
		1	74	22.17	22.17	21.74	23.00
		36	0	21.32	21.36	21.73	22.00
		36	18	21.31	21.35	21.71	22.00
		36	39	21.26	21.41	21.45	22.00
		75	0	21.28	21.31	21.51	22.00
	64QAM	1	0	21.53	21.16	21.37	22.00
		1	38	21.84	21.69	21.58	22.00
		1	74	21.48	21.43	21.02	22.00
		36	0	20.57	20.63	20.87	21.00
		36	18	20.57	20.58	20.78	21.00

		36	39	20.46	20.76	20.68	21.00
		75	0	20.53	20.66	20.78	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	22.96	22.83	23.16	24.00
		1	50	**23.04**	**23.31**	**23.24**	24.00
		1	99	22.69	23.05	22.46	24.00
		50	0	22.08	22.22	**22.54**	23.00
		50	25	**22.11**	**22.34**	22.25	23.00
		50	50	22.01	22.24	22.02	23.00
		100	0	22.04	**22.27**	22.19	23.00
	16QAM	1	0	22.29	22.06	22.02	23.00
		1	50	22.55	22.57	22.28	23.00
		1	99	22.15	22.14	21.72	23.00
		50	0	21.29	21.32	21.70	22.00
		50	25	21.28	21.33	21.68	22.00
		50	50	21.23	21.36	21.41	22.00
		100	0	21.26	21.27	21.48	22.00
	64QAM	1	0	21.51	21.12	21.32	22.00
		1	50	21.80	21.67	21.54	22.00
		1	99	21.42	21.37	20.96	22.00
		50	0	20.52	20.55	20.80	21.00
		50	25	20.53	20.54	20.72	21.00
		50	50	20.43	20.71	20.64	21.00
		100	0	20.51	20.62	20.75	21.00

LTE FDD Band 2 hotspot on				**Maximum Output 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	20.24	20.19	20.33	21.00
		1	2	20.41	20.57	20.41	21.00
		1	5	19.95	20.24	19.90	21.00
		3	0	20.33	20.50	20.77	21.00
		3	2	20.40	20.53	20.52	21.00
		3	3	20.21	20.49	20.30	21.00
		6	0	20.22	20.55	20.51	21.00
	16QAM	1	0	20.76	20.56	20.73	21.00
		1	2	20.75	20.68	20.77	21.00
		1	5	20.76	20.72	20.86	21.00
		3	0	20.51	20.43	20.58	21.00
		3	2	20.58	20.54	20.66	21.00
		3	3	20.62	20.61	20.76	21.00

		6	0	20.52	20.56	20.60	21.00
	64QAM	1	0	20.33	20.37	20.46	21.00
		1	2	20.32	20.18	20.41	21.00
		1	5	20.25	20.22	20.33	21.00
		3	0	19.88	19.80	19.96	21.00
		3	2	20.06	19.98	20.19	21.00
		3	3	20.08	20.08	20.19	21.00
		6	0	19.87	19.89	19.99	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	20.20	20.11	20.28	21.00
		1	7	20.38	20.52	20.36	21.00
		1	14	19.90	20.18	19.83	21.00
		8	0	20.28	20.41	20.70	21.00
		8	4	20.35	20.44	20.45	21.00
		8	7	20.15	20.41	20.22	21.00
		15	0	20.17	20.46	20.42	21.00
	16QAM	1	0	20.71	20.50	20.66	21.00
		1	7	20.69	20.63	20.71	21.00
		1	14	20.71	20.65	20.81	21.00
		8	0	20.45	20.37	20.52	21.00
		8	4	20.52	20.47	20.59	21.00
		8	7	20.57	20.52	20.69	21.00
		15	0	20.47	20.47	20.53	21.00
	64QAM	1	0	20.26	20.31	20.39	21.00
		1	7	20.26	20.13	20.35	21.00
		1	14	20.20	20.15	20.28	21.00
		8	0	19.82	19.74	19.90	21.00
		8	4	20.00	19.91	20.12	21.00
		8	7	20.03	19.99	20.12	21.00
		15	0	19.82	19.80	19.92	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	20.17	20.09	20.24	21.00
		1	13	20.36	20.48	20.33	21.00
		1	24	19.87	20.13	19.79	21.00
		12	0	20.25	20.36	20.66	21.00
		12	6	20.33	20.40	20.40	21.00
		12	13	20.13	20.39	20.18	21.00
		25	0	20.17	20.45	20.40	21.00
	16QAM	1	0	20.68	20.46	20.63	21.00
		1	13	20.66	20.61	20.68	21.00
		1	24	20.68	20.63	20.77	21.00

		12	0	20.43	20.33	20.49	21.00
		12	6	20.49	20.42	20.55	21.00
		12	13	20.54	20.47	20.65	21.00
		25	0	20.45	20.43	20.48	21.00
	64QAM	1	0	20.23	20.31	20.36	21.00
		1	13	20.23	20.15	20.32	21.00
		1	24	20.21	20.13	20.24	21.00
		12	0	19.80	19.70	19.91	21.00
		12	6	19.97	19.86	20.08	21.00
		12	13	20.00	19.94	20.08	21.00
		25	0	19.80	19.76	19.87	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	20.19	20.10	20.27	21.00
		1	25	20.39	20.53	20.37	21.00
		1	49	19.89	20.17	19.82	21.00
		25	0	20.28	20.41	20.70	21.00
		25	13	20.36	20.45	20.44	21.00
		25	25	20.15	20.43	20.23	21.00
		50	0	20.21	20.47	20.44	21.00
	16QAM	1	0	20.70	20.49	20.65	21.00
		1	25	20.69	20.65	20.71	21.00
		1	49	20.71	20.65	20.80	21.00
		25	0	20.46	20.38	20.53	21.00
		25	13	20.51	20.46	20.58	21.00
		25	25	20.57	20.52	20.69	21.00
		50	0	20.48	20.48	20.52	21.00
	64QAM	1	0	20.25	20.30	20.38	21.00
		1	25	20.26	20.15	20.35	21.00
		1	49	20.20	20.15	20.27	21.00
		25	0	19.83	19.75	19.91	21.00
		25	13	19.99	19.90	20.11	21.00
		25	25	20.03	19.99	20.12	21.00
		50	0	19.83	19.81	19.91	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	20.18	20.06	20.25	21.00
		1	38	20.37	20.52	20.34	21.00
		1	74	19.86	20.12	19.78	21.00
		36	0	20.26	20.37	20.67	21.00
		36	18	20.33	20.40	20.40	21.00
		36	39	20.12	20.40	20.19	21.00
		75	0	20.19	20.43	20.39	21.00

	16QAM	1	0	20.65	20.47	20.63	21.00
		1	38	20.67	20.62	20.69	21.00
		1	74	20.68	20.61	20.77	21.00
		36	0	20.43	20.36	20.50	21.00
		36	18	20.48	20.41	20.54	21.00
		36	39	20.55	20.48	20.66	21.00
		75	0	20.45	20.43	20.48	21.00
	64QAM	1	0	20.20	20.28	20.36	21.00
		1	38	20.24	20.12	20.33	21.00
		1	74	20.21	20.14	20.28	21.00
		36	0	19.82	19.77	19.92	21.00
		36	18	19.97	19.87	20.10	21.00
		36	39	20.01	19.95	20.09	21.00
		75	0	19.80	19.76	19.87	21.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	20.15	20.02	20.22	21.00
		1	50	**20.36**	**20.48**	**20.32**	21.00
		1	99	19.84	20.11	19.75	21.00
		50	0	20.23	20.32	**20.63**	21.00
		50	25	**20.31**	**20.36**	20.37	21.00
		50	50	20.09	20.35	20.15	21.00
		100	0	20.16	**20.38**	20.35	21.00
	16QAM	1	0	20.51	20.43	20.58	21.00
		1	50	20.63	20.60	20.65	21.00
		1	99	20.66	20.58	20.75	21.00
		50	0	20.40	20.32	20.47	21.00
		50	25	20.45	20.39	20.51	21.00
		50	50	20.52	20.43	20.62	21.00
		100	0	20.43	20.39	20.45	21.00
	64QAM	1	0	20.18	20.24	20.31	21.00
		1	50	20.20	20.10	20.29	21.00
		1	99	20.15	20.08	20.22	21.00
		50	0	19.77	19.69	19.85	21.00
		50	25	19.93	19.83	20.04	21.00
		50	50	19.98	19.90	20.05	21.00
		100	0	19.78	19.72	19.84	21.00

LTE FDD Band 4 Full Power				**Maximum Output 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	22.62	22.50	22.41	23.50

		1	2	22.81	22.73	22.75	23.50
		1	5	22.31	22.30	22.17	23.50
		3	0	22.66	22.71	22.80	23.50
		3	2	22.68	22.76	22.75	23.50
		3	3	22.78	22.56	22.56	23.50
		6	0	21.72	21.75	21.74	22.50
	16QAM	1	0	22.39	21.68	21.50	22.50
		1	2	22.37	22.03	21.72	22.50
		1	5	21.95	21.54	21.34	22.50
		3	0	21.93	21.76	21.88	22.50
		3	2	21.94	21.78	21.88	22.50
		3	3	22.01	21.79	21.65	22.50
		6	0	21.02	20.90	20.80	22.00
	64QAM	1	0	20.92	20.83	21.15	22.00
		1	2	21.36	21.19	21.36	22.00
		1	5	20.91	20.75	20.99	22.00
		3	0	21.11	21.07	21.07	22.00
		3	2	21.17	21.08	21.10	22.00
		3	3	21.30	21.15	20.86	22.00
		6	0	20.33	20.19	20.09	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	22.64	22.54	22.44	23.50
		1	7	22.79	22.76	22.79	23.50
		1	14	22.34	22.35	22.21	23.50
		8	0	21.76	21.83	21.93	22.50
		8	4	21.80	21.86	21.87	22.50
		8	7	21.88	21.67	21.66	22.50
		15	0	21.72	21.79	21.77	22.50
	16QAM	1	0	22.42	21.70	21.53	22.50
		1	7	22.40	22.03	21.76	22.50
		1	14	21.97	21.58	21.37	22.50
		8	0	21.04	20.89	21.00	22.00
		8	4	21.05	20.91	21.00	22.00
		8	7	21.11	20.91	20.78	22.00
		15	0	21.05	20.94	20.83	22.00
	64QAM	1	0	20.95	20.85	21.18	22.00
		1	7	21.39	21.19	21.38	22.00
		1	14	20.93	20.74	21.02	22.00
		8	0	20.22	20.20	20.19	21.00
		8	4	20.28	20.21	20.22	21.00
		8	7	20.40	20.27	19.99	21.00
		15	0	20.36	20.23	20.12	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	22.61	22.52	22.40	23.50
		1	13	22.77	22.72	22.76	23.50
		1	24	22.31	22.30	22.17	23.50
		12	0	21.73	21.78	21.89	22.50
		12	6	21.78	21.82	21.82	22.50
		12	13	21.86	21.65	21.62	22.50
		25	0	21.72	21.78	21.75	22.50
	16QAM	1	0	22.39	21.66	21.50	22.50
		1	13	22.37	22.01	21.73	22.50
		1	24	21.94	21.56	21.33	22.50
		12	0	21.02	20.85	20.97	22.00
		12	6	21.02	20.86	20.96	22.00
		12	13	21.08	20.86	20.74	22.00
		25	0	21.03	20.90	20.78	22.00
	64QAM	1	0	20.92	20.85	21.15	22.00
		1	13	21.36	21.21	21.35	22.00
		1	24	20.94	20.72	20.98	22.00
		12	0	20.20	20.16	20.20	21.00
		12	6	20.25	20.16	20.18	21.00
		12	13	20.37	20.22	19.95	21.00
		25	0	20.34	20.19	20.07	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	22.63	22.53	22.43	23.50
		1	25	22.80	22.77	22.80	23.50
		1	49	22.33	22.34	22.20	23.50
		25	0	21.76	21.83	21.93	22.50
		25	13	21.81	21.87	21.86	22.50
		25	25	21.88	21.69	21.67	22.50
		50	0	21.76	21.80	21.79	22.50
	16QAM	1	0	22.41	21.69	21.52	22.50
		1	25	22.40	22.05	21.76	22.50
		1	49	21.97	21.58	21.36	22.50
		25	0	21.05	20.90	21.01	22.00
		25	13	21.04	20.90	20.99	22.00
		25	25	21.11	20.91	20.78	22.00
		50	0	21.06	20.95	20.82	22.00
	64QAM	1	0	20.94	20.84	21.17	22.00
		1	25	21.39	21.21	21.38	22.00
		1	49	20.93	20.74	21.01	22.00
		25	0	20.23	20.21	20.20	21.00

		25	13	20.27	20.20	20.21	21.00
		25	25	20.40	20.27	19.99	21.00
		50	0	20.37	20.24	20.11	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	22.62	22.49	22.41	23.50
		1	38	22.78	22.76	22.77	23.50
		1	74	22.30	22.29	22.16	23.50
		36	0	21.74	21.79	21.90	22.50
		36	18	21.78	21.82	21.82	22.50
		36	39	21.85	21.66	21.63	22.50
		75	0	21.74	21.76	21.74	22.50
	16QAM	1	0	22.36	21.67	21.50	22.50
		1	38	22.38	22.02	21.74	22.50
		1	74	21.94	21.54	21.33	22.50
		36	0	21.02	20.88	20.98	22.00
		36	18	21.01	20.85	20.95	22.00
		36	39	21.09	20.87	20.75	22.00
		75	0	21.03	20.90	20.78	22.00
	64QAM	1	0	20.89	20.82	21.15	22.00
		1	38	21.37	21.18	21.36	22.00
		1	74	20.94	20.73	21.02	22.00
		36	0	20.22	20.23	20.21	21.00
		36	18	20.25	20.17	20.20	21.00
		36	39	20.38	20.23	19.96	21.00
		75	0	20.34	20.19	20.07	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	22.59	22.45	22.38	23.50
		1	50	**22.77**	**22.72**	**22.75**	23.50
		1	99	22.28	22.28	22.13	23.50
		50	0	21.71	21.74	**21.86**	22.50
		50	25	21.76	**21.78**	21.79	22.50
		50	50	**21.82**	21.61	21.59	22.50
		100	0	**21.71**	**21.71**	21.70	22.50
	16QAM	1	0	21.91	21.63	21.45	22.50
		1	50	22.34	22.00	21.70	22.50
		1	99	21.92	21.51	21.31	22.50
		50	0	20.99	20.84	20.95	22.00
		50	25	20.98	20.83	20.92	22.00
		50	50	21.06	20.82	20.71	22.00
		100	0	21.01	20.86	20.75	22.00
	64QAM	1	0	20.87	20.78	21.10	22.00

		1	50	21.33	21.16	21.32	22.00
		1	99	20.88	20.67	20.96	22.00
		50	0	20.17	20.15	20.14	21.00
		50	25	20.21	20.13	20.14	21.00
		50	50	20.35	20.18	19.92	21.00
		100	0	20.32	20.15	20.04	21.00

LTE FDD Band 5 Full Power&Hotspot on				Maximum Output 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	23.14	23.07	23.24	24.00
		1	2	23.24	23.21	23.39	24.00
		1	5	23.01	23.20	23.17	24.00
		3	0	23.07	23.19	23.17	24.00
		3	2	23.10	22.99	23.34	24.00
		3	3	23.16	23.09	23.24	24.00
		6	0	22.20	22.32	22.40	23.00
	16QAM	1	0	22.84	22.44	22.72	23.00
		1	2	22.82	22.48	22.79	23.00
		1	5	22.62	22.36	22.67	23.00
		3	0	22.38	22.15	22.47	23.00
		3	2	22.39	22.19	22.50	23.00
		3	3	22.42	22.24	22.41	23.00
		6	0	21.39	21.20	21.48	22.50
	64QAM	1	0	22.08	21.68	22.17	22.50
		1	2	22.24	21.87	22.30	22.50
		1	5	22.04	21.83	22.12	22.50
		3	0	21.86	21.79	21.92	22.50
		3	2	21.87	21.82	21.93	22.50
		3	3	21.89	21.82	21.88	22.50
		6	0	20.82	20.82	20.86	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	23.15	23.10	23.26	24.00
		1	7	23.23	23.25	23.44	24.00
		1	14	23.03	23.24	23.20	24.00
		8	0	22.17	22.31	22.30	23.00
		8	4	22.23	22.10	22.45	23.00
		8	7	22.26	22.22	22.35	23.00
		15	0	22.24	22.37	22.45	23.00
	16QAM	1	0	22.86	22.45	22.74	23.00
		1	7	22.85	22.50	22.83	23.00

		1	14	22.64	22.40	22.69	23.00
		8	0	21.50	21.29	21.60	22.50
		8	4	21.49	21.31	21.61	22.50
		8	7	21.52	21.36	21.54	22.50
		15	0	21.43	21.25	21.50	22.50
	64QAM	1	0	22.10	21.69	22.19	22.50
		1	7	22.27	21.89	22.32	22.50
		1	14	22.06	21.82	22.14	22.50
		8	0	20.98	20.93	21.05	21.50
		8	4	20.97	20.94	21.04	21.50
		8	7	20.99	20.94	21.01	21.50
		15	0	20.86	20.87	20.88	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	23.14	23.06	23.24	24.00
		1	13	23.21	23.24	23.41	24.00
		1	24	23.00	23.19	23.16	24.00
		12	0	22.15	22.27	22.27	23.00
		12	6	22.20	22.05	22.41	23.00
		12	13	22.23	22.19	22.31	23.00
		25	0	22.22	22.33	22.40	23.00
	16QAM	1	0	22.81	22.43	22.72	23.00
		1	13	22.83	22.47	22.81	23.00
		1	24	22.61	22.36	22.66	23.00
		12	0	21.47	21.27	21.57	22.50
		12	6	21.46	21.26	21.57	22.50
		12	13	21.50	21.32	21.51	22.50
		25	0	21.40	21.20	21.46	22.50
	64QAM	1	0	22.05	21.67	22.17	22.50
		1	13	22.25	21.86	22.30	22.50
		1	24	22.07	21.81	22.15	22.50
		12	0	20.97	20.95	21.06	21.50
		12	6	20.95	20.91	21.03	21.50
		12	13	20.97	20.90	20.98	21.50
		25	0	20.83	20.82	20.84	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	23.11	23.02	23.21	24.00
		1	25	**23.20**	**23.20**	**23.39**	24.00
		1	49	22.98	23.18	23.13	24.00
		25	0	22.12	**22.22**	22.23	23.00
		25	13	22.18	22.01	**22.38**	23.00
		25	25	**22.20**	22.14	22.27	23.00

		50	0	22.19	22.28	**22.36**	23.00
	16QAM	1	0	22.55	22.39	22.67	23.00
		1	25	22.79	22.45	22.77	23.00
		1	49	22.59	22.33	22.64	23.00
		25	0	21.44	21.23	21.54	22.50
		25	13	21.43	21.24	21.54	22.50
		25	25	21.47	21.27	21.47	22.50
		50	0	21.38	21.16	21.43	22.50
	64QAM	1	0	22.03	21.63	22.12	22.50
		1	25	22.21	21.84	22.26	22.50
		1	49	22.01	21.75	22.09	22.50
		25	0	20.92	20.87	20.99	21.50
		25	13	20.91	20.87	20.97	21.50
		25	25	20.94	20.85	20.94	21.50
		50	0	20.81	20.78	20.81	21.50

LTE FDD Band 7 Full Power&Hotspot on				**Maximum Output Power (dBm)**			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	21.61	21.66	21.28	23.00
		1	13	22.12	21.78	21.63	23.00
		1	24	21.91	21.26	21.59	23.00
		12	0	20.99	20.74	20.64	22.00
		12	6	21.03	20.31	20.73	22.00
		12	13	21.12	20.62	20.79	22.00
		25	0	21.08	20.72	20.76	22.00
	16QAM	1	0	21.14	20.95	20.58	22.00
		1	13	21.12	21.25	20.83	22.00
		1	24	20.69	20.69	20.68	22.00
		12	0	20.20	19.81	19.65	21.00
		12	6	20.20	19.77	19.64	21.00
		12	13	20.28	19.61	19.91	21.00
		25	0	20.21	19.64	19.83	21.00
	64QAM	1	0	20.01	19.42	19.09	21.00
		1	13	20.47	19.54	19.74	21.00
		1	24	20.01	19.16	19.40	21.00
		12	0	19.13	18.52	18.61	20.00
		12	6	19.14	18.58	18.59	20.00
		12	13	19.22	18.44	18.81	20.00
		25	0	19.15	18.52	18.69	20.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20800/2505	21100/2535	21400/2565	

10MHz	QPSK	1	0	21.63	21.67	21.31	23.00
		1	25	22.15	21.83	21.67	23.00
		1	49	21.93	21.30	21.62	23.00
		25	0	21.02	20.79	20.68	22.00
		25	13	21.06	20.36	20.77	22.00
		25	25	21.14	20.66	20.84	22.00
		50	0	21.12	20.74	20.80	22.00
	16QAM	1	0	21.16	20.98	20.60	22.00
		1	25	21.15	21.29	20.86	22.00
		1	49	20.72	20.71	20.71	22.00
		25	0	20.23	19.86	19.69	21.00
		25	13	20.22	19.81	19.67	21.00
		25	25	20.31	19.66	19.95	21.00
		50	0	20.24	19.69	19.87	21.00
	64QAM	1	0	20.03	19.41	19.11	21.00
		1	25	20.50	19.54	19.77	21.00
		1	49	20.00	19.18	19.43	21.00
		25	0	19.16	18.57	18.61	20.00
		25	13	19.16	18.62	18.62	20.00
		25	25	19.25	18.49	18.85	20.00
		50	0	19.18	18.57	18.73	20.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	21.62	21.63	21.29	23.00
		1	38	22.13	21.82	21.64	23.00
		1	74	21.90	21.25	21.58	23.00
		36	0	21.00	20.75	20.65	22.00
		36	18	21.03	20.31	20.73	22.00
		36	39	21.11	20.63	20.80	22.00
		75	0	21.10	20.70	20.75	22.00
	16QAM	1	0	21.11	20.96	20.58	22.00
		1	38	21.13	21.26	20.84	22.00
		1	74	20.69	20.67	20.68	22.00
		36	0	20.20	19.84	19.66	21.00
		36	18	20.19	19.76	19.63	21.00
		36	39	20.29	19.62	19.92	21.00
		75	0	20.21	19.64	19.83	21.00
	64QAM	1	0	19.98	19.39	19.09	21.00
		1	38	20.48	19.51	19.75	21.00
		1	74	20.01	19.17	19.44	21.00
		36	0	19.15	18.59	18.62	20.00
		36	18	19.14	18.59	18.61	20.00
		36	39	19.23	18.45	18.82	20.00

		75	0	19.15	18.52	18.69	20.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	21.59	21.59	21.26	23.00
		1	50	**22.12**	**21.78**	**21.62**	23.00
		1	99	21.88	21.24	21.55	23.00
		50	0	20.97	**20.70**	20.61	22.00
		50	25	21.01	20.27	20.70	22.00
		50	50	**21.08**	20.58	**20.76**	22.00
		100	0	**21.07**	20.65	20.71	22.00
	16QAM	1	0	20.61	20.92	20.53	22.00
		1	50	21.09	21.24	20.80	22.00
		1	99	20.67	20.64	20.66	22.00
		50	0	20.17	19.80	19.63	21.00
		50	25	20.16	19.74	19.60	21.00
		50	50	20.26	19.57	19.88	21.00
		100	0	20.19	19.60	19.80	21.00
	64QAM	1	0	19.96	19.35	19.04	21.00
		1	50	20.44	19.49	19.71	21.00
		1	99	19.95	19.11	19.38	21.00
		50	0	19.10	18.51	18.55	20.00
		50	25	19.10	18.55	18.55	20.00
		50	50	19.20	18.40	18.78	20.00
		100	0	19.13	18.48	18.66	20.00

LTE FDD Band 12 Full Power&Hotspot on				**Maximum Output 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	23.16	23.17	23.09	24.00
		1	2	23.09	23.15	22.94	24.00
		1	5	23.09	22.95	23.06	24.00
		3	0	23.12	23.02	23.11	24.00
		3	2	23.08	23.10	22.98	24.00
		3	3	23.21	22.97	22.93	24.00
		6	0	22.18	22.08	22.07	23.00
	16QAM	1	0	22.19	22.36	22.22	23.00
		1	2	22.17	22.34	22.25	23.00
		1	5	21.85	22.16	21.97	23.00
		3	0	22.02	22.04	22.10	23.00
		3	2	22.04	22.05	22.14	23.00
		3	3	22.09	21.97	21.82	23.00
		6	0	21.11	21.02	21.00	22.00

	64QAM	1	0	21.82	21.69	21.32	22.00
		1	2	21.75	21.68	21.39	22.00
		1	5	21.63	21.55	21.18	22.00
		3	0	21.53	21.36	21.48	22.00
		3	2	21.55	21.41	21.53	22.00
		3	3	21.63	21.34	21.24	22.00
		6	0	20.54	20.31	20.40	21.00
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	23.17	23.20	23.11	24.00
		1	7	23.08	23.19	22.99	24.00
		1	14	23.11	22.99	23.09	24.00
		8	0	22.22	22.14	22.24	23.00
		8	4	22.21	22.21	22.09	23.00
		8	7	22.31	22.10	22.04	23.00
		15	0	22.22	22.13	22.12	23.00
	16QAM	1	0	22.21	22.37	22.24	23.00
		1	7	22.20	22.36	22.29	23.00
		1	14	21.87	22.20	21.99	23.00
		8	0	21.14	21.18	21.23	22.00
		8	4	21.14	21.17	21.25	22.00
		8	7	21.19	21.09	20.95	22.00
		15	0	21.15	21.07	21.02	22.00
	64QAM	1	0	21.84	21.70	21.34	22.00
		1	7	21.78	21.70	21.41	22.00
		1	14	21.65	21.54	21.20	22.00
		8	0	20.65	20.50	20.61	21.00
		8	4	20.65	20.53	20.64	21.00
		8	7	20.73	20.46	20.37	21.00
		15	0	20.58	20.36	20.42	21.00
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	23.16	23.16	23.09	24.00
		1	13	23.06	23.18	22.96	24.00
		1	24	23.08	22.94	23.05	24.00
		12	0	22.20	22.10	22.21	23.00
		12	6	22.18	22.16	22.05	23.00
		12	13	22.28	22.07	22.00	23.00
		25	0	22.20	22.09	22.07	23.00
	16QAM	1	0	22.16	22.35	22.22	23.00
		1	13	22.18	22.33	22.27	23.00
		1	24	21.84	22.16	21.96	23.00
		12	0	21.11	21.16	21.20	22.00

		12	6	21.11	21.12	21.21	22.00
		12	13	21.17	21.05	20.92	22.00
		25	0	21.12	21.02	20.98	22.00
	64QAM	1	0	21.79	21.68	21.32	22.00
		1	13	21.76	21.67	21.39	22.00
		1	24	21.66	21.53	21.21	22.00
		12	0	20.64	20.52	20.62	21.00
		12	6	20.63	20.50	20.63	21.00
		12	13	20.71	20.42	20.34	21.00
		25	0	20.55	20.31	20.38	21.00

Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				23060/704	23095/707.5	23130/711	
10MHz	QPSK	1	0	**23.13**	23.12	**23.06**	24.00
		1	25	23.05	**23.14**	22.94	24.00
		1	49	23.06	22.93	23.02	24.00
		25	0	22.17	22.05	**22.17**	23.00
		25	13	22.16	**22.12**	22.02	23.00
		25	25	**22.25**	22.02	21.96	23.00
		50	0	**22.17**	22.04	22.03	23.00
	16QAM	1	0	22.01	22.31	22.17	23.00
		1	25	22.14	22.31	22.23	23.00
		1	49	21.82	22.13	21.94	23.00
		25	0	21.08	21.12	21.17	22.00
		25	13	21.08	21.10	21.18	22.00
		25	25	21.14	21.00	20.88	22.00
		50	0	21.10	20.98	20.95	22.00
	64QAM	1	0	21.77	21.64	21.27	22.00
		1	25	21.72	21.65	21.35	22.00
		1	49	21.60	21.47	21.15	22.00
		25	0	20.59	20.44	20.55	21.00
		25	13	20.59	20.46	20.57	21.00
		25	25	20.68	20.37	20.30	21.00
		50	0	20.53	20.27	20.35	21.00

LTE FDD Band 13 Full Power&Hotspot on				**Maximum Output Power (dBm)**			Tune-up Limit
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				23205/779.5	23230/782	23255/784.5	
5MHz	QPSK	1	0	22.73	22.74	22.80	24.00
		1	13	22.86	22.84	22.90	24.00
		1	24	22.77	22.75	22.79	24.00
		12	0	21.87	21.83	21.83	23.00
		12	6	21.81	21.81	21.85	23.00

		12	13	21.84	21.83	21.86	23.00
		25	0	21.84	21.85	21.88	23.00
	16QAM	1	0	21.97	22.01	22.10	23.00
		1	13	22.08	22.16	22.23	23.00
		1	24	22.04	22.05	22.10	23.00
		12	0	20.79	20.83	20.79	22.00
		12	6	20.79	20.80	20.76	22.00
		12	13	20.74	20.84	20.79	22.00
		25	0	20.77	20.82	20.80	22.00
	64QAM	1	0	21.49	21.54	21.60	22.00
		1	13	21.57	21.58	21.73	22.00
		1	24	21.52	21.55	21.60	22.00
		12	0	20.31	20.38	20.30	21.00
		12	6	20.29	20.38	20.31	21.00
		12	13	20.28	20.32	20.35	21.00
		25	0	20.25	20.32	20.33	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				/	23230/782	/	
10MHz	QPSK	1	0	/	22.50	/	24.00
		1	25	/	**22.71**	/	24.00
		1	49	/	22.61	/	24.00
		25	0	/	21.62	/	23.00
		25	13	/	21.59	/	23.00
		25	25	/	**21.65**	/	23.00
		50	0	/	**21.64**	/	23.00
	16QAM	1	0	/	21.95	/	23.00
		1	25	/	21.81	/	23.00
		1	49	/	21.74	/	23.00
		25	0	/	20.66	/	22.00
		25	13	/	20.67	/	22.00
		25	25	/	20.59	/	22.00
		50	0	/	20.56	/	22.00
	64QAM	1	0	/	21.68	/	22.00
		1	25	/	21.75	/	22.00
		1	49	/	21.64	/	22.00
		25	0	/	20.52	/	21.00
		25	13	/	20.51	/	21.00
		25	25	/	20.46	/	21.00
		50	0	/	20.38	/	21.00

LTE FDD Band 66 Full Power				Maximum Output 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	22.58	22.48	22.55	23.50
		1	2	23.06	22.79	22.88	23.50
		1	5	22.72	22.76	22.72	23.50
		3	0	22.66	22.74	22.61	23.50
		3	2	22.68	22.67	22.69	23.50
		3	3	22.81	22.57	22.71	23.50
		6	0	21.84	21.74	21.79	22.50
	16QAM	1	0	22.14	21.51	21.82	22.50
		1	2	22.12	21.83	22.28	22.50
		1	5	21.65	21.46	21.85	22.50
		3	0	21.92	21.90	21.81	22.50
		3	2	21.91	21.93	21.85	22.50
		3	3	22.01	21.82	21.87	22.50
		6	0	21.04	20.91	20.91	22.00
	64QAM	1	0	21.32	20.93	20.78	22.00
		1	2	21.81	21.29	21.23	22.00
		1	5	21.30	20.92	20.80	22.00
		3	0	21.29	21.17	21.16	22.00
		3	2	21.32	21.19	21.18	22.00
		3	3	21.39	21.02	21.18	22.00
		6	0	20.39	20.25	20.23	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	22.60	22.52	22.58	23.50
		1	7	23.04	22.82	22.92	23.50
		1	14	22.75	22.81	22.76	23.50
		8	0	21.76	21.86	21.74	22.50
		8	4	21.80	21.77	21.81	22.50
		8	7	21.91	21.68	21.81	22.50
		15	0	21.84	21.78	21.82	22.50
	16QAM	1	0	22.17	21.53	21.85	22.50
		1	7	22.15	21.83	22.32	22.50
		1	14	21.67	21.50	21.88	22.50
		8	0	21.03	21.03	20.93	22.00
		8	4	21.02	21.06	20.97	22.00
		8	7	21.11	20.94	21.00	22.00

		15	0	21.07	20.95	20.94	22.00
	64QAM	1	0	21.35	20.95	20.81	22.00
		1	7	21.84	21.29	21.25	22.00
		1	14	21.32	20.91	20.83	22.00
		8	0	20.40	20.30	20.28	21.00
		8	4	20.43	20.32	20.30	21.00
		8	7	20.49	20.14	20.31	21.00
		15	0	20.42	20.29	20.26	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	22.57	22.50	22.54	23.50
		1	13	23.02	22.78	22.89	23.50
		1	24	22.72	22.76	22.72	23.50
		12	0	21.73	21.81	21.70	22.50
		12	6	21.78	21.73	21.76	22.50
		12	13	21.89	21.66	21.77	22.50
		25	0	21.84	21.77	21.80	22.50
	16QAM	1	0	22.14	21.49	21.82	22.50
		1	13	22.12	21.81	22.29	22.50
		1	24	21.64	21.48	21.84	22.50
		12	0	21.01	20.99	20.90	22.00
		12	6	20.99	21.01	20.93	22.00
		12	13	21.08	20.89	20.96	22.00
		25	0	21.05	20.91	20.89	22.00
	64QAM	1	0	21.32	20.95	20.78	22.00
		1	13	21.81	21.31	21.22	22.00
		1	24	21.33	20.89	20.79	22.00
		12	0	20.38	20.26	20.29	21.00
		12	6	20.40	20.27	20.26	21.00
		12	13	20.46	20.09	20.27	21.00
		25	0	20.40	20.25	20.21	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				132022/1715	132322/1745	132622/1775	
10MHz	QPSK	1	0	22.59	22.51	22.57	23.50
		1	25	23.05	22.83	22.93	23.50
		1	49	22.74	22.80	22.75	23.50
		25	0	21.76	21.86	21.74	22.50
		25	13	21.81	21.78	21.80	22.50
		25	25	21.91	21.70	21.82	22.50
		50	0	21.88	21.79	21.84	22.50
	16QAM	1	0	22.16	21.52	21.84	22.50
		1	25	22.15	21.85	22.32	22.50

		1	49	21.67	21.50	21.87	22.50
		25	0	21.04	21.04	20.94	22.00
		25	13	21.01	21.05	20.96	22.00
		25	25	21.11	20.94	21.00	22.00
		50	0	21.08	20.96	20.93	22.00
	64QAM	1	0	21.34	20.94	20.80	22.00
		1	25	21.84	21.31	21.25	22.00
		1	49	21.32	20.91	20.82	22.00
		25	0	20.41	20.31	20.29	21.00
		25	13	20.42	20.31	20.29	21.00
		25	25	20.49	20.14	20.31	21.00
		50	0	20.43	20.30	20.25	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	22.58	22.47	22.55	23.50
		1	38	23.03	22.82	22.90	23.50
		1	74	22.71	22.75	22.71	23.50
		36	0	21.74	21.82	21.71	22.50
		36	18	21.78	21.73	21.76	22.50
		36	39	21.88	21.67	21.78	22.50
		75	0	21.86	21.75	21.79	22.50
	16QAM	1	0	22.11	21.50	21.82	22.50
		1	38	22.13	21.82	22.30	22.50
		1	74	21.64	21.46	21.84	22.50
		36	0	21.01	21.02	20.91	22.00
		36	18	20.98	21.00	20.92	22.00
		36	39	21.09	20.90	20.97	22.00
		75	0	21.05	20.91	20.89	22.00
	64QAM	1	0	21.29	20.92	20.78	22.00
		1	38	21.82	21.28	21.23	22.00
		1	74	21.33	20.90	20.83	22.00
		36	0	20.40	20.33	20.30	21.00
		36	18	20.40	20.28	20.28	21.00
		36	39	20.47	20.10	20.28	21.00
		75	0	20.40	20.25	20.21	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	22.55	22.43	22.52	23.50
		1	50	**23.02**	**22.78**	**22.88**	23.50
		1	99	22.69	22.74	22.68	23.50
		50	0	21.71	**21.77**	21.67	22.50
		50	25	21.76	21.69	21.73	22.50

		50	50	**21.85**	21.62	**21.74**	22.50
		100	0	**21.83**	21.70	21.75	22.50
	16QAM	1	0	21.64	21.46	21.77	22.50
		1	50	22.09	21.80	22.26	22.50
		1	99	21.62	21.43	21.82	22.50
		50	0	20.98	20.98	20.88	22.00
		50	25	20.95	20.98	20.89	22.00
		50	50	21.06	20.85	20.93	22.00
		100	0	21.03	20.87	20.86	22.00
	64QAM	1	0	21.27	20.88	20.73	22.00
		1	50	21.78	21.26	21.19	22.00
		1	99	21.27	20.84	20.77	22.00
		50	0	20.35	20.25	20.23	21.00
		50	25	20.36	20.24	20.22	21.00
		50	50	20.44	20.05	20.24	21.00
		100	0	20.38	20.21	20.18	21.00

LTE FDD Band 66 hotspot on				**Maximum Output 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	21.00	20.94	20.92	22.00
		1	2	21.35	21.20	21.37	22.00
		1	5	21.01	20.96	21.25	22.00
		3	0	21.19	21.27	21.21	22.00
		3	2	21.16	21.18	21.12	22.00
		3	3	21.27	21.15	21.28	22.00
		6	0	21.18	21.21	21.24	22.00
	16QAM	1	0	21.84	21.44	21.54	22.00
		1	2	21.86	21.73	21.81	22.00
		1	5	21.67	21.51	21.57	22.00
		3	0	20.86	20.69	20.76	22.00
		3	2	20.77	20.62	20.69	22.00
		3	3	20.80	20.65	20.71	22.00
		6	0	20.80	20.76	20.79	21.50
	64QAM	1	0	20.92	20.88	20.80	21.50
		1	2	20.91	20.64	20.79	21.50
		1	5	20.90	20.75	20.81	21.50
		3	0	20.71	20.55	20.62	21.50
		3	2	20.53	20.31	20.43	21.50
		3	3	20.52	20.40	20.45	21.50
		6	0	20.56	20.47	20.52	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	20.97	20.90	20.89	22.00
		1	7	21.34	21.16	21.35	22.00
		1	14	20.99	20.95	21.22	22.00
		8	0	21.16	21.22	21.17	22.00
		8	4	21.14	21.14	21.09	22.00
		8	7	21.24	21.10	21.24	22.00
		15	0	21.15	21.16	21.20	22.00
	16QAM	1	0	21.84	21.40	21.49	22.00
		1	7	21.82	21.71	21.77	22.00
		1	14	21.65	21.48	21.55	22.00
		8	0	20.83	20.65	20.73	21.50
		8	4	20.74	20.60	20.66	21.50
		8	7	20.77	20.60	20.67	21.50
		15	0	20.78	20.72	20.76	21.50
	64QAM	1	0	20.90	20.84	20.75	21.50
		1	7	20.87	20.62	20.75	21.50
		1	14	20.84	20.69	20.75	21.50
		8	0	20.66	20.47	20.55	21.00
		8	4	20.49	20.27	20.37	21.00
		8	7	20.49	20.35	20.41	21.00
		15	0	20.54	20.43	20.49	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	20.94	20.88	20.85	22.00
		1	13	21.32	21.12	21.32	22.00
		1	24	20.96	20.90	21.18	22.00
		12	0	21.13	21.17	21.13	22.00
		12	6	21.12	21.10	21.04	22.00
		12	13	21.22	21.08	21.20	22.00
		25	0	21.15	21.15	21.18	22.00
	16QAM	1	0	21.81	21.36	21.46	22.00
		1	13	21.79	21.69	21.74	22.00
		1	24	21.62	21.46	21.51	22.00
		12	0	20.81	20.61	20.70	21.50
		12	6	20.71	20.55	20.62	21.50
		12	13	20.74	20.55	20.63	21.50
		25	0	20.76	20.68	20.71	21.50
	64QAM	1	0	20.87	20.84	20.72	21.50
		1	13	20.84	20.64	20.72	21.50

		1	24	20.85	20.67	20.71	21.50
		12	0	20.64	20.43	20.56	21.00
		12	6	20.46	20.22	20.33	21.00
		12	13	20.46	20.30	20.37	21.00
		25	0	20.52	20.39	20.44	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				132022/1715	132322/1745	132622/1775	
10MHz	QPSK	1	0	20.96	20.89	20.88	22.00
		1	25	21.35	21.17	21.36	22.00
		1	49	20.98	20.94	21.21	22.00
		25	0	21.16	21.22	21.17	22.00
		25	13	21.15	21.15	21.08	22.00
		25	25	21.24	21.12	21.25	22.00
		50	0	21.19	21.17	21.22	22.00
	16QAM	1	0	21.83	21.39	21.48	22.00
		1	25	21.82	21.73	21.77	22.00
		1	49	21.65	21.48	21.54	22.00
		25	0	20.84	20.66	20.74	21.50
		25	13	20.73	20.59	20.65	21.50
		25	25	20.77	20.60	20.67	21.50
		50	0	20.79	20.73	20.75	21.50
	64QAM	1	0	20.89	20.83	20.74	21.50
		1	25	20.87	20.64	20.75	21.50
		1	49	20.84	20.69	20.74	21.50
		25	0	20.67	20.48	20.56	21.00
		25	13	20.48	20.26	20.36	21.00
		25	25	20.49	20.35	20.41	21.00
		50	0	20.55	20.44	20.48	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	20.95	20.85	20.86	22.00
		1	38	21.33	21.16	21.33	22.00
		1	74	20.95	20.89	21.17	22.00
		36	0	21.14	21.18	21.14	22.00
		36	18	21.12	21.10	21.04	22.00
		36	39	21.21	21.09	21.21	22.00
		75	0	21.17	21.13	21.17	22.00
	16QAM	1	0	21.78	21.37	21.46	22.00
		1	38	21.80	21.70	21.75	22.00
		1	74	21.62	21.44	21.51	22.00
		36	0	20.81	20.64	20.71	21.50
		36	18	20.70	20.54	20.61	21.50

		36	39	20.75	20.56	20.64	21.50
		75	0	20.76	20.68	20.71	21.50
	64QAM	1	0	20.84	20.81	20.72	21.50
		1	38	20.85	20.61	20.73	21.50
		1	74	20.85	20.68	20.75	21.50
		36	0	20.66	20.50	20.57	21.00
		36	18	20.46	20.23	20.35	21.00
		36	39	20.47	20.31	20.38	21.00
		75	0	20.52	20.39	20.44	21.00
Bandwidth	Modulation	RB size	RB offset	Channel/Frequency (MHz)			Tune-up Limit
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	20.92	20.81	20.83	22.00
		1	50	**21.32**	**21.12**	**21.31**	22.00
		1	99	20.93	20.88	21.14	22.00
		50	0	21.11	**21.13**	21.10	22.00
		50	25	21.10	21.06	21.01	22.00
		50	50	**21.18**	21.04	**21.17**	22.00
		100	0	**21.14**	21.08	21.13	22.00
	16QAM	1	0	21.50	21.33	21.41	22.00
		1	50	21.76	21.68	21.71	22.00
		1	99	21.60	21.41	21.49	22.00
		50	0	20.78	20.60	20.68	21.50
		50	25	20.67	20.52	20.58	21.50
		50	50	20.72	20.51	20.60	21.50
		100	0	20.74	20.64	20.68	21.50
	64QAM	1	0	20.82	20.77	20.67	21.50
		1	50	20.81	20.59	20.69	21.50
		1	99	20.79	20.62	20.69	21.50
		50	0	20.61	20.42	20.50	21.00
		50	25	20.42	20.19	20.29	21.00
		50	50	20.44	20.26	20.34	21.00
		100	0	20.50	20.35	20.41	21.00

9.4 WLAN Mode

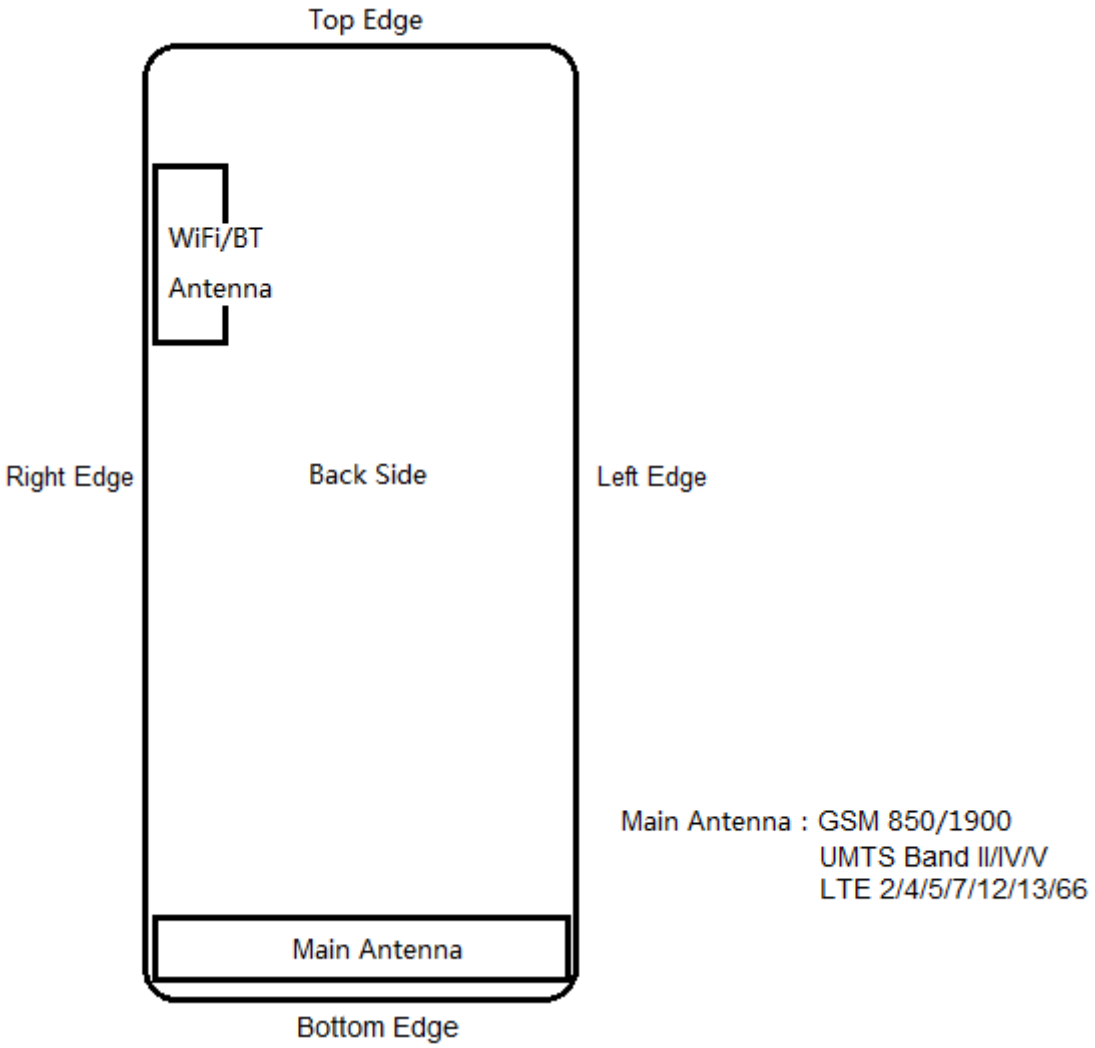
Wi-Fi 2.4G Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	21.50	20.46
	6/2437	21.50	**20.85**
	11/2462	21.50	20.47
802.11g (6M)	1/2412	17.50	16.17
	6/2437	17.50	16.38
	11/2462	17.50	16.26
802.11n-HT20 (MCS0)	1/2412	17.50	16.02
	6/2437	17.50	16.17
	11/2462	17.50	16.10
Note: Initial test configuration is 802.11b mode.			

9.5 Bluetooth Mode

BT	Maximum Output Power (dBm)			Tune-up Limit (dBm)
	Channel/Frequency(MHz)			
	Ch 0/2402 MHz	Ch 39/2441 MHz	Ch 78/2480 MHz	
GFSK	9.19	9.45	10.58	11.00
π/4DQPSK	8.02	8.64	10.48	11.00
8DPSK	7.97	8.61	10.41	11.00
BLE	Ch 0/2402 MHz	Ch 19/2440 MHz	Ch 39/2480 MHz	Tune-up Limit (dBm)
GFSK(1M)	5.08	6.17	5.63	7.00
GFSK(2M)	3.43	4.36	3.86	7.00

10 Measured and Reported (Scaled) SAR Results

10.1 EUT Antenna Locations



Overall (Length x Width): 164mm x 74mm Overall Diagonal:175mm/Display Diagonal:162mm						
Distance of the Antenna to the EUT surface/edge						
Antenna	Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Main-Antenna	＜25mm	＜25mm	＜25mm	＜25mm	＞25mm	＜25mm
BT/Wi-Fi Antenna	＜25mm	＜25mm	＞25mm	＜25mm	＜25mm	＞25mm
Hotspot mode, Positions for SAR tests						
Mode	Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Main-Antenna	Yes	Yes	Yes	Yes	N/A	Yes
BT/Wi-Fi Antenna	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 175mm. Per KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, product specific 10-g SAR must be tested as a phablet to determine SAR compliance. For Phablet, Since hotspot mode 1-g *reported* SAR < 1.2 W/kg, product specific 10-g SAR is no required.

3. Per FCC KDB 447498 D01, for each exposure position, testing of other requised channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

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

b) ≤0.6 W/kg or 1.5 W/kg, for1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.

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

4.When the original highest measured SAR is ≥ 0.80 W/kg, the measurement was repeated once.

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

10.2 Measured SAR Results

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

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

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

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

Head

Band	Test Position	Dist. (mm)	Power Reduction	Mode	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
GSM 850	Left cheek	0	Full power	GSM	-	-	190/836.6	33.50	32.64	0.139	-0.120	1.22	0.169	/
	Left Tilt	0	Full power	GSM	-	-	190/836.6	33.50	32.64	0.081	-0.020	1.22	0.099	/
	Right cheek	0	Full power	GSM	-	-	128/824.2	33.50	32.63	0.132	-0.100	1.22	0.161	/
		0	Full power	GSM	-	-	190/836.6	33.50	32.64	0.155	-0.030	1.22	0.189	8
		0	Full power	GSM	-	-	251/848.8	33.50	32.52	0.148	0.100	1.25	0.185	/
	Right Tilt	0	Full power	GSM	-	-	190/836.6	33.50	32.64	0.086	0.010	1.22	0.105	/
GSM 1900	Left cheek	0	Full power	GSM	-	-	512/1850.2	30.50	30.20	0.161	-0.090	1.07	0.173	/
		0	Full power	GSM	-	-	661/1880	30.50	29.99	0.166	0.026	1.12	0.187	/
		0	Full power	GSM	-	-	810/1909.8	30.50	30.22	0.197	0.064	1.07	0.210	9
	Left Tilt	0	Full power	GSM	-	-	661/1880	30.50	29.99	0.036	0.060	1.12	0.041	/
	Right cheek	0	Full power	GSM	-	-	661/1880	30.50	29.99	0.091	-0.150	1.12	0.103	/
	Right Tilt	0	Full power	GSM	-	-	661/1880	30.50	29.99	0.049	-0.050	1.12	0.055	/
WCDMA II	Left cheek	0	Full power	RMC 12.2K	-	-	9262/1852.4	24.00	23.26	0.245	0.040	1.19	0.291	/
		0	Full power	RMC 12.2K	-	-	9400/1880	24.00	23.28	0.263	-0.180	1.18	0.310	/
		0	Full power	RMC 12.2K	-	-	9538/1907.6	24.00	23.21	0.300	0.036	1.20	0.360	10
	Left Tilt	0	Full power	RMC 12.2K	-	-	9400/1880	24.00	23.28	0.079	0.010	1.18	0.093	/
	Right cheek	0	Full power	RMC 12.2K	-	-	9400/1880	24.00	23.28	0.138	0.030	1.18	0.163	/
	Right Tilt	0	Full power	RMC 12.2K	-	-	9400/1880	24.00	23.28	0.107	0.021	1.18	0.126	/
WCDMA IV	Left cheek	0	Full power	RMC 12.2K	-	-	1312/1712.4	24.00	23.21	0.138	0.067	1.20	0.166	/
		0	Full power	RMC 12.2K	-	-	1413/1732.6	24.00	23.12	0.177	0.094	1.22	0.217	11
		0	Full power	RMC 12.2K	-	-	1513/1752.6	24.00	23.32	0.176	0.070	1.17	0.206	/
	Left Tilt	0	Full power	RMC 12.2K	-	-	1413/1732.6	24.00	23.12	0.130	0.010	1.22	0.159	/
	Right cheek	0	Full power	RMC 12.2K	-	-	1413/1732.6	24.00	23.12	0.151	0.025	1.22	0.185	/
	Right Tilt	0	Full power	RMC 12.2K	-	-	1413/1732.6	24.00	23.12	0.096	0.070	1.22	0.118	/
WCDMA V	Left cheek	0	Full power	RMC 12.2K	-	-	4183/836.6	24.00	23.95	0.129	-0.080	1.01	0.130	/
	Left Tilt	0	Full power	RMC 12.2K	-	-	4183/836.6	24.50	23.95	0.078	0.040	1.14	0.089	/
	Right cheek	0	Full power	RMC 12.2K	-	-	4132/826.4	24.50	23.83	0.144	0.030	1.17	0.168	12

		0	Full power	RMC 12.2K	-	-	4183/836.6	24.50	23.95	0.136	0.120	1.14	0.154	/
		0	Full power	RMC 12.2K	-	-	4233/846.6	24.50	23.91	0.126	0.130	1.15	0.144	/
	Right Tilt	0	Full power	RMC 12.2K	-	-	4183/836.6	24.50	23.95	0.050	0.130	1.14	0.057	/
LTE 2	Left cheek	0	Full power	QPSK	1	50	18700/1860	24.00	23.04	0.251	0.057	1.25	0.313	/
		0	Full power	QPSK	1	50	18900/1880	24.00	23.31	0.275	0.023	1.17	0.322	/
		0	Full power	QPSK	1	50	19100/1900	24.00	23.24	0.304	0.064	1.19	0.362	13
		0	Full power	QPSK	50%	0	19100/1900	23.00	22.54	0.218	0.090	1.11	0.242	/
	Left Tilt	0	Full power	QPSK	1	50	18900/1880	24.00	23.31	0.081	0.110	1.17	0.095	/
		0	Full power	QPSK	50%	0	19100/1900	23.00	22.54	0.054	0.041	1.11	0.060	/
	Right cheek	0	Full power	QPSK	1	50	18900/1880	24.00	23.31	0.167	0.062	1.17	0.196	/
		0	Full power	QPSK	50%	0	19100/1900	23.00	22.54	0.139	0.029	1.11	0.155	/
	Right Tilt	0	Full power	QPSK	1	50	18900/1880	24.00	23.31	0.125	0.020	1.17	0.147	/
		0	Full power	QPSK	50%	0	19100/1900	23.00	22.54	0.095	0.041	1.11	0.105	/
LTE 5	Left cheek	0	Full power	QPSK	1	25	20600/844	24.00	23.39	0.054	0.140	1.15	0.063	/
		0	Full power	QPSK	50%	13	20600/844	23.00	22.38	0.095	-0.020	1.15	0.110	/
	Left Tilt	0	Full power	QPSK	1	25	20600/844	24.00	23.39	0.068	0.160	1.15	0.078	/
		0	Full power	QPSK	50%	13	20600/844	23.00	22.38	0.053	0.120	1.15	0.062	/
	Right cheek	0	Full power	QPSK	1	25	20450/829	24.00	23.20	0.103	0.150	1.20	0.124	/
		0	Full power	QPSK	1	25	20525/836.5	24.00	23.20	0.131	0.029	1.20	0.157	/
		0	Full power	QPSK	1	25	20600/844	24.00	23.39	0.136	0.021	1.15	0.157	14
		0	Full power	QPSK	50%	13	20600/844	23.00	22.38	0.109	0.056	1.15	0.126	/
	Right Tilt	0	Full power	QPSK	1	25	20600/844	24.00	23.39	0.076	-0.010	1.15	0.088	/
		0	Full power	QPSK	50%	13	20600/844	23.00	22.38	0.060	0.090	1.15	0.069	/
LTE 7	Left cheek	0	Full power	QPSK	1	50	20850/2510	23.00	22.12	0.161	0.142	1.22	0.197	/
		0	Full power	QPSK	1	50	21100/2535	23.00	21.78	0.186	0.020	1.32	0.246	15
		0	Full power	QPSK	1	50	21350/2560	23.00	21.62	0.166	0.029	1.37	0.228	/
		0	Full power	QPSK	50%	50	20850/2510	22.00	21.08	0.123	0.123	1.24	0.152	/
	Left Tilt	0	Full power	QPSK	1	50	20850/2510	23.00	22.12	0.132	0.020	1.22	0.162	/
		0	Full power	QPSK	50%	50	20850/2510	22.00	21.08	0.104	0.037	1.24	0.129	/
	Right cheek	0	Full power	QPSK	1	50	20850/2510	23.00	22.12	0.117	0.063	1.22	0.143	/
		0	Full power	QPSK	50%	50	20850/2510	22.00	21.08	0.092	0.028	1.24	0.113	/
	Right Tilt	0	Full power	QPSK	1	50	20850/2510	23.00	22.12	0.141	0.058	1.22	0.173	/
		0	Full power	QPSK	50%	50	20850/2510	22.00	21.08	0.110	0.134	1.24	0.136	/
LTE 12	Left cheek	0	Full power	QPSK	1	25	23095/707.5	24.00	23.14	0.149	-0.030	1.22	0.182	/
		0	Full power	QPSK	50%	25	23060/704	23.00	22.25	0.135	0.030	1.19	0.160	/
	Left Tilt	0	Full power	QPSK	1	25	23095/707.5	24.00	23.14	0.093	0.022	1.22	0.114	/
		0	Full power	QPSK	50%	25	23060/704	23.00	22.25	0.091	0.027	1.19	0.108	/
	Right cheek	0	Full power	QPSK	1	0	23060/704	24.00	23.13	0.161	0.140	1.22	0.197	16
		0	Full power	QPSK	1	25	23095/707.5	24.00	23.14	0.154	-0.023	1.22	0.188	/
		0	Full power	QPSK	1	0	23130/711	24.00	23.06	0.159	0.160	1.24	0.197	/
		0	Full power	QPSK	50%	25	23060/704	23.00	22.25	0.115	0.051	1.19	0.137	/
	Right Tilt	0	Full power	QPSK	1	25	23095/707.5	24.00	23.14	0.076	0.010	1.22	0.092	/
		0	Full power	QPSK	50%	25	23060/704	23.00	22.25	0.058	0.070	1.19	0.069	/

LTE 13	Left cheek	0	Full power	QPSK	1	25	23230/782	24.00	22.71	0.064	0.030	1.35	0.087	17
		0	Full power	QPSK	50%	25	23230/782	23.00	21.65	0.047	0.035	1.36	0.064	/
	Left Tilt	0	Full power	QPSK	1	25	23230/782	24.00	22.71	0.046	0.060	1.35	0.062	/
		0	Full power	QPSK	50%	25	23230/782	23.00	21.65	0.033	0.140	1.36	0.045	/
	Right cheek	0	Full power	QPSK	1	25	23230/782	24.00	22.71	0.050	0.190	1.35	0.067	/
		0	Full power	QPSK	50%	25	23230/782	23.00	21.65	0.049	0.095	1.36	0.067	/
	Right Tilt	0	Full power	QPSK	1	25	23230/782	24.00	22.71	0.039	0.023	1.35	0.052	/
		0	Full power	QPSK	50%	25	23230/782	23.00	21.65	0.031	0.190	1.36	0.042	/
LTE 66	Left cheek	0	Full power	QPSK	1	50	132072/1720	23.50	23.02	0.130	0.080	1.12	0.145	/
		0	Full power	QPSK	50%	50	132072/1720	22.50	21.85	0.105	0.123	1.16	0.122	/
	Left Tilt	0	Full power	QPSK	1	50	132072/1720	23.50	23.02	0.119	0.180	1.12	0.133	/
		0	Full power	QPSK	50%	50	132072/1720	22.50	21.85	0.095	0.026	1.16	0.110	/
	Right cheek	0	Full power	QPSK	1	50	132072/1720	23.50	23.02	0.149	0.020	1.12	0.166	18
		0	Full power	QPSK	1	50	132322/1745	23.50	22.78	0.084	0.046	1.18	0.100	/
		0	Full power	QPSK	1	50	132572/1770	23.50	22.88	0.080	0.096	1.15	0.092	/
		0	Full power	QPSK	50%	50	132072/1720	22.50	21.85	0.120	0.070	1.16	0.139	/
	Right Tilt	0	Full power	QPSK	1	50	132072/1720	23.50	23.02	0.096	0.022	1.12	0.107	/
		0	Full power	QPSK	50%	50	132072/1720	22.50	21.85	0.076	0.190	1.16	0.088	/

Band	Test Position	Dist. (mm)	Power Reduction	Mode	Duty Cycle	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
Wi-Fi 2.4G	Left cheek	0	Full Power	802.11b	98.0%	1/2412	21.50	20.46	0.866	0.020	1.30	1.123	19
		0	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.567	0.150	1.19	0.672	/
		0	Full Power	802.11b	98.0%	11/2462	21.50	20.47	0.783	0.050	1.29	1.013	/
	Left cheek Repeated	0	Full Power	802.11b	98.0%	1/2412	21.50	20.46	0.849	-0.120	1.30	1.101	/
	Left Tilt	0	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.284	0.030	1.19	0.337	/
	Right cheek	0	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.228	0.190	1.19	0.270	/
	Right Tilt	0	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.278	-0.030	1.19	0.329	/
Bluetooth	Left cheek	0	Full Power	GFSK	77.0%	39/2441	11.00	9.45	0.075	0.023	1.86	0.140	20
		0	Full Power	GFSK	77.0%	0/2402	11.00	9.19	0.040	0.043	1.97	0.079	/
		0	Full Power	GFSK	77.0%	78/2480	11.00	10.58	0.063	0.027	1.43	0.090	/
	Left Tilt	0	Full Power	GFSK	77.0%	78/2480	11.00	10.58	0.029	0.021	1.43	0.042	/
	Right cheek	0	Full Power	GFSK	77.0%	78/2480	11.00	10.58	0.021	0.185	1.43	0.030	/
	Right Tilt	0	Full Power	GFSK	77.0%	78/2480	11.00	10.58	0.026	0.038	1.43	0.037	/

Body-worn

Band	Test Position	Dist. (mm)	Power Reduction	Mode	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
GSM 850	Back Side	15	Full power	GSM	-	-	190/836.6	33.50	32.64	0.199	0.140	1.22	0.243	/
	Front Side	15	Full power	GSM	-	-	190/836.6	34.50	32.64	0.135	0.039	1.53	0.207	/
	Back Side	15	Full power	GSM	-	-	128/824.2	35.50	32.63	0.204	0.040	1.94	0.395	21
		15	Full power	GSM	-	-	251/848.8	33.50	32.52	0.185	0.015	1.25	0.232	/
GSM 1900	Back Side	15	Full power	GSM	-	-	661/1880	30.50	29.99	0.433	0.024	1.12	0.487	/
	Front Side	15	Full power	GSM	-	-	661/1880	30.50	29.99	0.157	0.018	1.12	0.177	/
	Back Side	15	Full power	GSM	-	-	512/1850.2	30.50	30.20	0.585	0.150	1.07	0.627	22
		15	Full power	GSM	-	-	810/1909.8	30.50	30.22	0.559	0.050	1.07	0.596	/
WCDMA II	Back Side	15	Full power	RMC	-	-	9400/1880	24.00	23.28	0.776	0.190	1.18	0.916	/
	Front Side	15	Full power	RMC	-	-	9400/1880	24.00	23.28	0.305	0.050	1.18	0.360	/
	Back Side	15	Full power	RMC	-	-	9262/1852.4	24.00	23.26	0.677	0.038	1.19	0.803	/
		15	Full power	RMC	-	-	9538/1907.6	24.00	23.21	0.887	-0.140	1.20	1.064	23
	Back Side Repeated	15	Full power	RMC	-	-	9538/1907.6	24.00	23.21	0.875	0.037	1.20	1.050	/
WCDMA IV	Back Side	15	Full power	RMC	-	-	1413/1732.6	24.00	23.12	0.478	0.022	1.22	0.585	/
	Front Side	15	Full power	RMC	-	-	1413/1732.6	24.00	23.12	0.222	-0.090	1.22	0.272	/
	Back Side	15	Full power	RMC	-	-	1312/1712.4	24.00	23.21	0.462	0.024	1.20	0.554	/
		15	Full power	RMC	-	-	1513/1752.6	24.00	23.32	0.490	-0.060	1.17	0.573	24
WCDMA V	Back Side	15	Full power	RMC	-	-	4183/836.6	24.50	23.95	0.180	0.012	1.14	0.204	/
	Front Side	15	Full power	RMC	-	-	4183/836.6	24.50	23.95	0.117	0.030	1.14	0.133	/
	Back Side	15	Full power	RMC	-	-	4132/826.4	24.50	23.83	0.211	-0.090	1.17	0.246	25
		15	Full power	RMC	-	-	4233/846.6	24.50	23.91	0.149	0.085	1.15	0.171	/
LTE 2	Back Side	15	Full power	QPSK	1	50	18900/1880	24.00	23.31	0.931	-0.090	1.17	1.091	26
		15	Full power	QPSK	50%	0	19100/1900	23.00	22.54	0.718	0.023	1.11	0.798	/
		15	Full power	QPSK	100%	0	18700/1860	23.00	22.01	0.729	0.080	1.26	0.916	/
		15	Full power	QPSK	100%	0	19100/1900	23.00	22.19	0.682	0.021	1.21	0.822	/
		15	Full power	QPSK	100%	0	18900/1880	23.00	22.27	0.753	0.013	1.18	0.891	/
	Back Side Repeated	15	Full power	QPSK	1	50	18900/1880	24.00	23.31	0.926	0.061	1.17	1.085	/
	Front Side	15	Full power	QPSK	1	50	18900/1880	24.00	23.31	0.305	0.048	1.17	0.358	/
		15	Full power	QPSK	50%	0	19100/1900	23.00	22.54	0.275	-0.032	1.11	0.306	/
	Back Side	15	Full power	QPSK	1	50	18700/1860	24.00	23.04	0.696	0.017	1.25	0.868	/
		15	Full power	QPSK	1	50	19100/1900	24.00	23.24	0.914	0.000	1.19	1.089	/
LTE 5	Back Side	15	Full power	QPSK	1	25	20600/844	24.00	23.39	0.187	0.120	1.15	0.215	27
		15	Full power	QPSK	50%	13	20600/844	23.00	22.38	0.114	-0.015	1.15	0.131	/
	Front Side	15	Full power	QPSK	1	25	20600/844	24.00	23.39	0.096	0.020	1.15	0.110	/
		15	Full power	QPSK	50%	13	20600/844	23.00	22.38	0.077	0.068	1.15	0.089	/
	Back Side	15	Full power	QPSK	1	25	20450/829	24.00	23.39	0.182	0.017	1.15	0.209	/

		15	Full power	QPSK	1	25	20525/836.5	24.00	23.39	0.168	0.033	1.15	0.193	/
LTE 7	Back Side	15	Full power	QPSK	1	50	20850/2510	23.00	22.12	0.229	0.029	1.22	0.280	/
		15	Full power	QPSK	50%	50	20850/2510	22.00	21.08	0.177	-0.061	1.24	0.219	/
	Front Side	15	Full power	QPSK	1	50	20850/2510	23.00	22.12	0.199	0.030	1.22	0.244	/
		15	Full power	QPSK	50%	50	20850/2510	22.00	21.08	0.202	0.048	1.24	0.250	/
	Back Side	15	Full power	QPSK	1	50	21100/2535	23.00	21.78	0.272	0.126	1.32	0.360	28
		15	Full power	QPSK	1	50	21350/2560	23.00	21.62	0.258	-0.017	1.37	0.355	/
LTE 12	Back Side	15	Full power	QPSK	1	25	23095/707.5	24.00	23.14	0.296	0.035	1.22	0.361	/
		15	Full power	QPSK	50%	25	23060/704	23.00	22.25	0.237	0.019	1.19	0.282	/
	Front Side	15	Full power	QPSK	1	25	23095/707.5	24.00	23.14	0.240	-0.070	1.22	0.293	/
		15	Full power	QPSK	50%	25	23060/704	23.00	22.25	0.194	0.022	1.19	0.231	/
	Back Side	15	Full power	QPSK	1	0	23060/704	24.00	23.13	0.336	-0.080	1.22	0.411	29
		15	Full power	QPSK	1	0	23130/711	24.00	23.06	0.267	0.065	1.24	0.332	/
LTE 13	Back Side	15	Full power	QPSK	1	25	23230/782	24.00	22.71	0.118	-0.020	1.35	0.159	30
		15	Full power	QPSK	50%	25	23230/782	23.00	21.65	0.100	0.080	1.36	0.136	/
	Front Side	15	Full power	QPSK	1	25	23230/782	24.00	22.71	0.078	-0.012	1.35	0.105	/
		15	Full power	QPSK	50%	25	23230/782	23.00	21.65	0.061	0.049	1.36	0.083	/
LTE 66	Back Side	15	Full power	QPSK	1	50	132072/1720	23.50	23.02	0.322	0.130	1.12	0.360	31
		15	Full power	QPSK	1	50	132322/1745	23.50	22.78	0.303	0.033	1.18	0.358	/
		15	Full power	QPSK	1	50	132572/1770	23.50	22.88	0.287	-0.029	1.15	0.331	/
		15	Full power	QPSK	50%	50	132072/1720	22.50	21.85	0.308	0.024	1.16	0.358	/
	Front Side	15	Full power	QPSK	1	50	132072/1720	23.50	23.02	0.211	0.017	1.12	0.236	/
		15	Full power	QPSK	50%	50	132072/1720	22.50	21.85	0.178	0.100	1.16	0.207	/

Band	Test Position	Dist. (mm)	Power Reduction	Mode	Duty Cycle	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
Wi-Fi 2.4G	Back Side	15	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.348	0.090	1.19	0.412	32
		15	Full Power	802.11b	98.0%	1/2412	21.50	20.46	0.340	-0.030	1.30	0.441	/
		15	Full Power	802.11b	98.0%	11/2462	21.50	20.47	0.222	0.027	1.29	0.287	/
	Front Side	15	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.089	0.010	1.19	0.105	/

Hotspot

Band	Test Position	Dist. (mm)	Power Reduction	Mode	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
GSM850	Back Side	10	Hotspot on	4TX Slots	—	—	190/836.6	30.00	29.06	0.425	0.039	1.24	0.528	/
	Front Side	10	Hotspot on	4TX Slots	—	—	190/836.6	30.00	29.06	0.258	-0.011	1.24	0.320	/
	Left Edge	10	Hotspot on	4TX Slots	—	—	190/836.6	30.00	29.06	0.081	0.017	1.24	0.101	/
	Right Edge	10	Hotspot on	4TX Slots	—	—	190/836.6	30.00	29.06	0.225	0.024	1.24	0.279	/
	Bottom Edge	10	Hotspot on	4TX Slots			190/836.6	30.00	29.06	0.226	0.012	1.24	0.281	/
	Back Side	10	Hotspot on	4TX Slots	—	—	128/824.2	30.00	29.06	0.433	0.060	1.24	0.538	/
		10	Hotspot on	4TX Slots	—	—	251/848.8	30.00	28.92	0.448	-0.080	1.28	0.574	33
GSM1900	Back Side	10	Hotspot on	2TX Slots	—	—	661/1880	26.50	25.26	0.989	0.100	1.33	1.316	/
	Front Side	10	Hotspot on	2TX Slots	—	—	661/1880	26.50	25.26	0.369	0.032	1.33	0.491	/
	Left Edge	10	Hotspot on	2TX Slots	—	—	661/1880	26.50	25.26	0.091	0.020	1.33	0.121	/
	Right Edge	10	Hotspot on	2TX Slots	—	—	661/1880	26.50	25.26	0.097	0.042	1.33	0.129	/
	Bottom Edge	10	Hotspot on	2TX Slots	—	—	661/1880	26.50	25.26	0.861	-0.010	1.33	1.146	/
		10	Hotspot on	2TX Slots	—	—	512/1850.2	26.50	25.19	0.793	0.014	1.35	1.072	/
		10	Hotspot on	2TX Slots	—	—	810/1909.8	26.50	25.56	0.821	-0.110	1.24	1.019	/
	Back Side	10	Hotspot on	2TX Slots	—	—	512/1850.2	26.50	25.19	0.852	0.039	1.35	1.152	/
		10	Hotspot on	2TX Slots	—	—	810/1909.8	26.50	25.56	1.150	-0.030	1.24	1.428	34
	Back Side Repeated	10	Hotspot on	2TX Slots			810/1909.8	26.50	25.56	1.090	0.021	1.24	1.353	/
WCDMA II	Back Side	10	Hotspot on	RMC	—	—	9262/1852.4	21.00	20.29	1.060	-0.110	1.18	1.248	/
		10	Hotspot on	RMC	—	—	9400/1880	21.00	20.24	0.961	-0.023	1.19	1.145	/
		10	Hotspot on	RMC	—	—	9538/1907.6	21.00	20.19	0.746	0.050	1.21	0.899	/
	Front Side	10	Hotspot on	RMC	—	—	9400/1880	21.00	20.24	0.344	0.140	1.19	0.410	/
	Left Edge	10	Hotspot on	RMC	—	—	9400/1880	21.00	20.24	0.047	0.028	1.19	0.056	/
	Right Edge	10	Hotspot on	RMC	—	—	9400/1880	21.00	20.24	0.043	-0.080	1.19	0.052	/
	Bottom Edge	10	Hotspot on	RMC	—	—	9400/1880	21.00	20.24	1.010	0.040	1.19	1.203	/
		10	Hotspot on	RMC	—	—	9262/1852.4	21.00	20.29	1.210	0.130	1.18	1.425	35
		10	Hotspot on	RMC	—	—	9538/1907.6	21.00	20.19	0.710	0.070	1.21	0.856	/
	Bottom Edge Repeated	10	Hotspot on	RMC	—	—	9262/1852.4	21.00	20.29	1.160	0.099	1.18	1.366	/
WCDMA IV	Back Side	10	Hotspot on	RMC	—	—	1413/1732.6	24.00	23.12	0.692	-0.080	1.22	0.847	/
		10	Hotspot on	RMC	—	—	1312/1712.4	24.00	23.21	0.910	0.088	1.20	1.092	/
		10	Hotspot on	RMC	—	—	1513/1752.6	24.00	23.32	1.010	0.140	1.17	1.181	/
	Front Side	10	Hotspot on	RMC	—	—	1413/1732.6	24.00	23.12	0.304	0.015	1.22	0.372	/
	Left Edge	10	Hotspot on	RMC	—	—	1413/1732.6	24.00	23.12	0.147	0.043	1.22	0.180	/
	Right Edge	10	Hotspot on	RMC	—	—	1413/1732.6	24.00	23.12	0.043	0.016	1.22	0.053	/
	Bottom Edge	10	Hotspot on	RMC	—	—	1413/1732.6	24.00	23.12	0.972	0.020	1.22	1.190	/
		10	Hotspot on	RMC	—	—	1312/1712.4	24.00	23.21	0.982	0.000	1.20	1.178	/
		10	Hotspot on	RMC	—	—	1513/1752.6	24.00	23.32	1.020	0.073	1.17	1.193	36

	Bottom Edge Repeated	10	Hotspot on	RMC	—	—	1513/1752.6	24.00	23.32	1.000	0.000	1.17	1.169	/
WCDMA V	Back Side	10	Hotspot on	RMC	—	—	4183/836.6	24.50	23.95	0.226	0.037	1.14	0.257	/
	Front Side	10	Hotspot on	RMC	—	—	4183/836.6	24.50	23.95	0.108	-0.029	1.14	0.123	/
	Left Edge	10	Hotspot on	RMC	—	—	4183/836.6	24.50	23.95	0.000	0.000	1.14	0.000	/
	Right Edge	10	Hotspot on	RMC	—	—	4183/836.6	24.50	23.95	0.087	0.032	1.14	0.099	/
	Bottom Edge	10	Hotspot on	RMC	—	—	4183/836.6	24.50	23.95	0.119	0.061	1.14	0.135	/
	Back Side	10	Hotspot on	RMC	—	—	4132/826.4	24.50	23.83	0.231	-0.140	1.17	0.270	37
		10	Hotspot on	RMC	—	—	4233/846.6	24.50	23.91	0.218	0.080	1.15	0.250	/
LTE 2	Back Side	10	Hotspot on	QPSK	1	50	18700/1860	21.00	20.36	1.200	-0.120	1.16	1.391	/
		10	Hotspot on	QPSK	1	50	18900/1880	21.00	20.48	1.180	-0.040	1.13	1.330	/
		10	Hotspot on	QPSK	1	50	19100/1900	21.00	20.32	0.963	-0.030	1.17	1.126	/
		10	Hotspot on	QPSK	50%	0	19100/1900	21.00	20.63	0.927	0.060	1.09	1.009	/
		10	Hotspot on	QPSK	50%	25	18700/1860	21.00	20.31	1.140	0.110	1.17	1.336	/
		10	Hotspot on	QPSK	50%	25	18900/1880	21.00	20.36	1.090	-0.140	1.16	1.263	/
		10	Hotspot on	QPSK	100%	0	19100/1900	21.00	20.35	0.826	0.012	1.16	0.959	/
		10	Hotspot on	QPSK	100%	0	18700/1860	21.00	20.16	0.802	0.036	1.21	0.973	/
		10	Hotspot on	QPSK	100%	0	18900/1880	21.00	20.38	0.773	0.130	1.15	0.892	/
	Back Side Repeated	10	Hotspot on	QPSK	1	50	18700/1860	21.00	20.36	1.220	0.010	1.16	1.414	38
	Front Side	10	Hotspot on	QPSK	1	50	18900/1880	21.00	20.48	0.448	0.023	1.13	0.505	/
		10	Hotspot on	QPSK	50%	0	19100/1900	21.00	20.63	0.349	-0.048	1.09	0.380	/
	Left Edge	10	Hotspot on	QPSK	1	50	18900/1880	21.00	20.48	0.060	-0.140	1.13	0.068	/
		10	Hotspot on	QPSK	50%	0	19100/1900	21.00	20.63	0.039	-0.060	1.09	0.043	/
	Right Edge	10	Hotspot on	QPSK	1	50	18900/1880	21.00	20.48	0.050	-0.060	1.13	0.056	/
		10	Hotspot on	QPSK	50%	0	19100/1900	21.00	20.63	0.052	0.036	1.09	0.056	/
	Bottom Edge	10	Hotspot on	QPSK	1	50	18900/1880	21.00	20.36	1.040	-0.020	1.16	1.205	/
		10	Hotspot on	QPSK	1	50	18700/1860	21.00	20.48	1.140	-0.030	1.13	1.285	/
		10	Hotspot on	QPSK	1	50	19100/1900	21.00	20.32	0.740	-0.010	1.17	0.865	/
		10	Hotspot on	QPSK	50%	0	19100/1900	21.00	20.63	0.768	-0.060	1.09	0.836	/
		10	Hotspot on	QPSK	50%	25	18700/1860	21.00	20.31	1.150	-0.070	1.17	1.348	/
		10	Hotspot on	QPSK	50%	25	18900/1880	21.00	20.36	1.020	-0.110	1.16	1.182	/
LTE 5	Back Side	10	Hotspot on	QPSK	1	25	20600/844	24.00	23.39	0.205	-0.060	1.15	0.236	39
		10	Hotspot on	QPSK	50%	13	20600/844	23.00	22.38	0.152	0.035	1.15	0.175	/
	Front Side	10	Hotspot on	QPSK	1	25	20600/844	24.00	23.39	0.099	-0.062	1.15	0.114	/
		10	Hotspot on	QPSK	50%	13	20600/844	23.00	22.38	0.079	0.021	1.15	0.091	/
	Left Edge	10	Hotspot on	QPSK	1	25	20600/844	24.00	23.39	0.000	0.000	1.15	0.000	/
		10	Hotspot on	QPSK	50%	13	20600/844	23.00	22.38	0.000	0.000	1.15	0.000	/
	Right Edge	10	Hotspot on	QPSK	1	25	20600/844	24.00	23.39	0.081	0.028	1.15	0.093	/
		10	Hotspot on	QPSK	50%	13	20600/844	23.00	22.38	0.076	-0.069	1.15	0.088	/
	Bottom Edge	10	Hotspot on	QPSK	1	25	20600/844	24.00	23.39	0.113	-0.035	1.15	0.130	/
		10	Hotspot on	QPSK	50%	13	20600/844	23.00	22.38	0.078	0.011	1.15	0.090	/
	Back Side	10	Hotspot on	QPSK	1	25	20450/829	24.00	23.39	0.194	0.026	1.15	0.223	/

		10	Hotspot on	QPSK	1	25	20525/836.5	24.00	23.39	0.175	0.030	1.15	0.201	/
LTE 7	Back Side	10	Hotspot on	QPSK	1	50	20850/2510	23.00	22.12	0.508	-0.015	1.22	0.622	/
		10	Hotspot on	QPSK	50%	50	20850/2510	22.00	21.08	0.492	0.020	1.24	0.608	/
	Front Side	10	Hotspot on	QPSK	1	50	20850/2510	23.00	22.12	0.268	0.039	1.22	0.328	/
		10	Hotspot on	QPSK	50%	50	20850/2510	22.00	21.08	0.333	-0.010	1.24	0.412	/
	Left Edge	10	Hotspot on	QPSK	1	50	20850/2510	23.00	22.12	0.199	0.024	1.22	0.244	/
		10	Hotspot on	QPSK	50%	50	20850/2510	22.00	21.08	0.220	0.015	1.24	0.272	/
	Right Edge	10	Hotspot on	QPSK	1	50	20850/2510	23.00	22.12	0.092	0.000	1.22	0.113	/
		10	Hotspot on	QPSK	50%	50	20850/2510	22.00	21.08	0.064	0.040	1.24	0.079	/
	Bottom Edge	10	Hotspot on	QPSK	1	50	20850/2510	23.00	22.12	0.342	0.094	1.22	0.419	/
		10	Hotspot on	QPSK	50%	50	20850/2510	22.00	21.08	0.299	-0.032	1.24	0.370	/
	Back Side	10	Hotspot on	QPSK	1	50	21100/2535	23.00	21.78	0.557	-0.040	1.32	0.738	40
		10	Hotspot on	QPSK	1	50	21350/2560	23.00	21.62	0.529	0.067	1.37	0.727	/
LTE 12	Back Side	10	Hotspot on	QPSK	1	25	23095/707.5	24.00	23.14	0.335	0.048	1.22	0.408	/
		10	Hotspot on	QPSK	50%	25	23060/704	23.00	22.25	0.306	-0.016	1.19	0.364	/
	Front Side	10	Hotspot on	QPSK	1	25	23095/707.5	24.00	23.14	0.249	0.027	1.22	0.304	/
		10	Hotspot on	QPSK	50%	25	23060/704	23.00	22.25	0.204	0.026	1.19	0.242	/
	Left Edge	10	Hotspot on	QPSK	1	25	23095/707.5	24.00	23.14	0.063	0.011	1.22	0.077	/
		10	Hotspot on	QPSK	50%	25	23060/704	23.00	22.25	0.094	0.038	1.19	0.112	/
	Right Edge	10	Hotspot on	QPSK	1	25	23095/707.5	24.00	23.14	0.098	-0.017	1.22	0.119	/
		10	Hotspot on	QPSK	50%	25	23060/704	23.00	22.25	0.115	0.022	1.19	0.137	/
	Bottom Edge	10	Hotspot on	QPSK	1	25	23095/707.5	24.00	23.14	0.095	0.036	1.22	0.116	/
		10	Hotspot on	QPSK	50%	25	23060/704	23.00	22.25	0.084	0.080	1.19	0.100	/
	Back Side	10	Hotspot on	QPSK	1	0	23060/704	24.00	23.13	0.374	-0.050	1.22	0.457	41
		10	Hotspot on	QPSK	1	0	23130/711	24.00	23.06	0.340	0.032	1.24	0.422	/
LTE 13	Back Side	10	Hotspot on	QPSK	1	25	23230/782	24.00	22.71	0.135	0.028	1.35	0.182	42
		10	Hotspot on	QPSK	50%	25	23230/782	23.00	21.65	0.106	-0.010	1.36	0.145	/
	Front Side	10	Hotspot on	QPSK	1	25	23230/782	24.00	22.71	0.073	0.026	1.35	0.098	/
		10	Hotspot on	QPSK	50%	25	23230/782	23.00	21.65	0.056	0.037	1.36	0.076	/
	Left Edge	10	Hotspot on	QPSK	1	25	23230/782	24.00	22.71	0.000	0.000	1.35	0.000	/
		10	Hotspot on	QPSK	50%	25	23230/782	23.00	21.65	0.000	0.000	1.36	0.000	/
	Right Edge	10	Hotspot on	QPSK	1	25	23230/782	24.00	22.71	0.049	0.100	1.35	0.066	/
		10	Hotspot on	QPSK	50%	25	23230/782	23.00	21.65	0.067	0.080	1.36	0.091	/
	Bottom Edge	10	Hotspot on	QPSK	1	25	23230/782	24.00	22.71	0.047	0.038	1.35	0.063	/
		10	Hotspot on	QPSK	50%	25	23230/782	23.00	21.65	0.040	-0.090	1.36	0.055	/
LTE 66	Back Side	10	Hotspot on	QPSK	1	50	132072/1720	22.00	21.32	0.758	0.012	1.17	0.886	/
		10	Hotspot on	QPSK	1	50	132322/1745	22.00	21.12	0.798	-0.048	1.22	0.977	/
		10	Hotspot on	QPSK	1	50	132572/1770	22.00	21.31	0.944	0.022	1.17	1.107	/
		10	Hotspot on	QPSK	50%	50	132072/1720	22.00	21.18	0.742	0.035	1.21	0.896	/
		10	Hotspot on	QPSK	50%	0	132322/1745	22.00	21.13	0.767	-0.017	1.22	0.937	/
		10	Hotspot on	QPSK	50%	50	132572/1770	22.00	21.17	0.870	0.050	1.21	1.053	/
	Front Side	10	Hotspot on	QPSK	1	50	132072/1720	22.00	21.32	0.376	0.070	1.17	0.440	/
		10	Hotspot on	QPSK	50%	50	132072/1720	22.00	21.18	0.353	-0.130	1.21	0.426	/

	Left Edge	10	Hotspot on	QPSK	1	50	132072/1720	22.00	21.32	0.168	0.100	1.17	0.196	/
		10	Hotspot on	QPSK	50%	50	132072/1720	22.00	21.18	0.179	-0.041	1.21	0.216	/
	Right Edge	10	Hotspot on	QPSK	1	50	132072/1720	22.00	21.32	0.020	-0.100	1.17	0.024	/
		10	Hotspot on	QPSK	50%	50	132072/1720	22.00	21.18	0.022	0.130	1.21	0.026	/
	Bottom Edge	10	Hotspot on	QPSK	1	50	132072/1720	22.00	21.32	0.960	0.024	1.17	1.123	/
		10	Hotspot on	QPSK	1	50	132322/1745	22.00	21.12	1.010	0.080	1.22	1.237	/
		10	Hotspot on	QPSK	1	50	132572/1770	22.00	21.31	1.190	0.021	1.17	1.395	43
		10	Hotspot on	QPSK	50%	0	132322/1745	22.00	21.13	1.130	-0.035	1.22	1.381	/
		10	Hotspot on	QPSK	50%	50	132572/1770	22.00	21.17	1.120	0.100	1.21	1.356	/
		10	Hotspot on	QPSK	100%	0	132072/1720	22.00	21.14	1.040	0.022	1.22	1.268	/
		10	Hotspot on	QPSK	100%	0	132322/1745	22.00	21.08	0.950	0.038	1.24	1.174	/
		10	Hotspot on	QPSK	100%	0	132572/1770	22.00	21.13	1.070	-0.010	1.22	1.307	/
		10	Hotspot on	QPSK	50%	50	132072/1720	22.00	21.18	1.030	0.040	1.21	1.244	/

Band	Test Position	Dist. (mm)	Power Reduction	Mode	Duty Cycle	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Power Drift (dB)	Scaling Factor	Report SAR1g	Plot No.
Wi-Fi 2.4G	Back Side	10	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.462	0.039	1.19	0.548	/
		10	Full Power	802.11b	98.0%	1/2412	21.50	20.46	0.488	-0.055	1.30	0.633	44
		10	Full Power	802.11b	98.0%	11/2462	21.50	20.47	0.442	-0.021	1.29	0.572	/
	Front Side	10	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.165	0.018	1.19	0.196	/
	Left Edge	10	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.000	0.000	1.19	0.000	/
	Right Edge	10	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.366	0.027	1.19	0.434	/
	Top Edge	10	Full Power	802.11b	98.0%	6/2437	21.50	20.85	0.108	0.011	1.19	0.128	/
Bluetooth	Back Side	10	Full Power	GFSK	77.0%	0/2402	11.00	9.19	0.048	0.070	1.97	0.094	/
		10	Full Power	GFSK	77.0%	39/2441	11.00	9.45	0.041	0.012	1.86	0.075	/
		10	Full Power	GFSK	77.0%	78/2480	11.00	10.58	0.067	0.085	1.43	0.095	45
	Front Side	10	Full Power	GFSK	77.0%	78/2480	11.00	10.58	0.011	0.100	1.43	0.015	/
	Left Edge	10	Full Power	GFSK	77.0%	78/2480	11.00	10.58	0.000	0.000	1.43	0.000	/
	Right Edge	10	Full Power	GFSK	77.0%	78/2480	11.00	10.58	0.030	0.027	1.43	0.042	/
	Top Edge	10	Full Power	GFSK	77.0%	78/2480	11.00	10.58	0.007	0.160	1.43	0.010	/

Product-specific 10g SAR

Band	Test Position	Dist. (mm)	Power Reduction	Mode	RB	offset	Channel Frequency(MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g	Scaling Factor	Report SAR1g	0mm
GSM1900	Back Side	10	Hotspot on	2TX Slots	—	—	661/1880	30.00	26.50	1.316	2.24	2.946	Yes
	Front Side	10	Hotspot on	2TX Slots	—	—	661/1880	30.00	26.50	0.491	2.24	1.099	No
	Left Edge	10	Hotspot on	2TX Slots	—	—	661/1880	30.00	26.50	0.121	2.24	0.271	No
	Right Edge	10	Hotspot on	2TX Slots	—	—	661/1880	30.00	26.50	0.129	2.24	0.289	No
	Bottom Edge	10	Hotspot on	2TX Slots	—	—	661/1880	30.00	26.50	1.146	2.24	2.565	Yes
WCDMA II	Back Side	10	Hotspot on	RMC	—	—	9400/1880	24.00	21.00	1.145	2.00	2.284	Yes
	Front Side	10	Hotspot on	RMC	—	—	9400/1880	24.00	21.00	0.410	2.00	0.818	No
	Left Edge	10	Hotspot on	RMC	—	—	9400/1880	24.00	21.00	0.056	2.00	0.112	No
	Right Edge	10	Hotspot on	RMC	—	—	9400/1880	24.00	21.00	0.052	2.00	0.103	No
	Bottom Edge	10	Hotspot on	RMC	—	—	9400/1880	24.00	21.00	1.203	2.00	2.401	Yes
LTE 2	Back Side	10	Hotspot on	QPSK	1	50	18900/1880	24.00	21.00	1.330	2.00	2.654	Yes
		10	Hotspot on	QPSK	50%	0	19100/1900	23.00	21.00	1.009	1.58	1.600	Yes
	Front Side	10	Hotspot on	QPSK	1	50	18900/1880	24.00	21.00	0.505	2.00	1.008	No
		10	Hotspot on	QPSK	50%	0	19100/1900	23.00	21.00	0.380	1.58	0.602	No
	Left Edge	10	Hotspot on	QPSK	1	50	18900/1880	24.00	21.00	0.068	2.00	0.135	No
		10	Hotspot on	QPSK	50%	0	19100/1900	23.00	21.00	0.043	1.58	0.068	No
	Right Edge	10	Hotspot on	QPSK	1	50	18900/1880	24.00	21.00	0.056	2.00	0.112	No
		10	Hotspot on	QPSK	50%	0	19100/1900	23.00	21.00	0.056	1.58	0.089	No
	Bottom Edge	10	Hotspot on	QPSK	1	50	18900/1880	24.00	21.00	1.205	2.00	2.405	Yes
		10	Hotspot on	QPSK	50%	0	19100/1900	23.00	21.00	0.836	1.58	1.325	Yes
LTE B66	Back Side	10	Hotspot on	QPSK	1	50	132072/1720	23.50	22.00	0.886	1.41	1.252	Yes
		10	Hotspot on	QPSK	50%	50	132072/1720	22.50	22.00	0.896	1.12	1.006	No
	Front Side	10	Hotspot on	QPSK	1	50	132072/1720	23.50	22.00	0.440	1.41	0.621	No
		10	Hotspot on	QPSK	50%	50	132072/1720	22.50	22.00	0.426	1.12	0.478	No
	Left Edge	10	Hotspot on	QPSK	1	50	132072/1720	23.50	22.00	0.196	1.41	0.278	No
		10	Hotspot on	QPSK	50%	50	132072/1720	22.50	22.00	0.216	1.12	0.243	No
	Right Edge	10	Hotspot on	QPSK	1	50	132072/1720	23.50	22.00	0.024	1.41	0.034	No
		10	Hotspot on	QPSK	50%	50	132072/1720	22.50	22.00	0.026	1.12	0.029	No
	Bottom Edge	10	Hotspot on	QPSK	1	50	132072/1720	23.50	22.00	1.123	1.41	1.586	Yes
		10	Hotspot on	QPSK	50%	50	132072/1720	22.50	22.00	1.244	1.12	1.396	Yes

Band	Test Position	Dist. (mm)	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.
GSM1900	Back Side	0	2TX Slots	Full power	-	-	661/1880	28.00	27.64	2.620	0.063	1.09	2.846	46
		0	2TX Slots	Full power	-	-	512/1850.2	28.00	27.76	2.560	0.065	1.06	2.705	/
		0	2TX Slots	Full power	-	-	810/1909.8	28.00	27.65	2.510	-0.015	1.08	2.721	/
	Bottom Edge	0	2TX Slots	Full power	-	-	661/1880	28.00	27.64	1.680	-0.084	1.09	1.825	/
WCDMA II	Back Side	0	RMC	Full power	-	-	9400/1880	24.00	23.28	2.760	0.032	1.18	3.258	47
		0	RMC	Full power	-	-	9262/1852.4	24.00	23.26	2.580	0.029	1.19	3.059	/
		0	RMC	Full power	-	-	9538/1907.6	24.00	23.21	2.320	-0.010	1.20	2.783	/
	Bottom Edge	0	RMC	Full power	-	-	9400/1880	24.00	23.28	1.420	0.048	1.18	1.676	/
LTE2	Back Side	0	QPSK	Full power	1	50	18900/1880	24.00	23.31	2.460	0.074	1.17	2.884	/
		0	QPSK	Full power	1	50	18700/1860	24.00	23.04	2.560	0.061	1.25	3.193	48
		0	QPSK	Full power	1	50	19100/1900	24.00	23.24	2.100	0.013	1.19	2.502	/
		0	QPSK	Full power	50%	0	19100/1900	23.00	22.54	1.590	0.000	1.11	1.768	/
		0	QPSK	Full power	100%	0	18900/1880	21.50	21.14	1.820	0.037	1.09	1.977	/
	Bottom Edge	0	QPSK	Full power	1	50	18900/1880	24.00	23.31	1.360	-0.042	1.17	1.594	/
		0	QPSK	Full power	50%	0	19100/1900	23.00	22.54	0.952	-0.010	1.11	1.058	/
LTE66	Back Side	0	QPSK	Full power	1	50	132072/1720	23.50	23.02	3.100	0.077	1.12	3.462	49
		0	QPSK	Full power	1	50	132322/1745	23.50	22.78	2.920	0.016	1.18	3.447	/
		0	QPSK	Full power	1	50	132572/1770	23.50	22.88	2.980	-0.090	1.15	3.437	/
		0	QPSK	Full power	50%	50	132072/1720	22.50	21.85	2.480	0.041	1.16	2.880	/
		0	QPSK	Full power	50%	0	132322/1745	22.50	21.77	2.440	0.025	1.18	2.887	/
		0	QPSK	Full power	50%	50	132572/1770	22.50	21.74	2.230	0.120	1.19	2.656	/
		0	QPSK	Full power	100%	0	132072/1720	22.50	21.83	2.150	0.010	1.17	2.509	/
		0	QPSK	Full power	100%	0	132322/1745	22.50	21.70	2.510	0.060	1.20	3.018	/
		0	QPSK	Full power	100%	0	132572/1770	22.50	21.75	2.380	-0.071	1.19	2.829	/
	Bottom Edge	0	QPSK	Full power	1	50	132072/1720	23.50	23.02	1.580	0.038	1.12	1.765	/
		0	QPSK	Full power	50%	50	132072/1720	22.50	21.85	1.070	-0.032	1.16	1.243	/

10.3 Simultaneous Transmission Analysis

Simultaneous Transmission Configurations	Head	Body-worn	Hotspot	Product Specific 10-g SAR
WWAN + WLAN 2.4GHz	Yes	Yes	Yes	Yes
WWAN+ Bluetooth	Yes	Yes	Yes	Yes

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 Main-Antenna

$SAR_{1g/10g}$(W/kg) Test Position		GSM 850	GSM 1900	WCDMA Band II	WCDMA Band IV	WCDMA Band V	LTE FDD 2	LTE FDD 5	LTE FDD 7	LTE FDD 12	LTE FDD 13	LTE FDD 66	MAX. $SAR_{1g/10g}$
Head	Left Cheek	0.169	0.210	0.360	0.217	0.130	0.362	0.110	0.246	0.182	0.087	0.145	0.362
	Left Tilt	0.099	0.041	0.093	0.159	0.089	0.095	0.078	0.162	0.114	0.062	0.133	0.162
	Right Cheek	0.189	0.103	0.163	0.185	0.168	0.196	0.157	0.143	0.197	0.067	0.166	0.197
	Right Tilt	0.105	0.067	0.126	0.118	0.057	0.147	0.088	0.173	0.092	0.052	0.107	0.173
Body worn	Back Side	0.395	0.627	1.064	0.585	0.246	1.091	0.215	0.360	0.411	0.159	0.360	1.091
	Front Side	0.207	0.177	0.360	0.272	0.133	0.358	0.110	0.250	0.293	0.105	0.236	0.360
Hotspot	Back Side	0.574	1.428	1.248	1.181	0.270	1.414	0.236	0.738	0.457	0.182	1.107	1.428
	Front Side	0.320	0.491	0.410	0.372	0.123	0.505	0.114	0.412	0.304	0.098	0.440	0.505
	Left Edge	0.101	0.121	0.056	0.180	0.000	0.068	0.000	0.272	0.112	0.000	0.216	0.272
	Right Edge	0.279	0.129	0.052	0.053	0.099	0.056	0.093	0.113	0.137	0.091	0.026	0.279
	Top Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Bottom Edge	0.281	1.146	1.425	1.193	0.135	1.348	0.130	0.419	0.116	0.063	1.395	1.425
Product Specific 10-g SAR	Back Side	N/A	N/A	3.258	N/A	N/A	3.193	N/A	N/A	N/A	N/A	3.462	3.462
	Front Side	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Left Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Right Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Top Edge	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000
	Bottom Edge	N/A	N/A	1.676	N/A	N/A	1.594	N/A	N/A	N/A	N/A	1.765	1.765

About BT and Main- Antenna

Test Position \ $SAR_{1g/10g}$(W/kg)		Main-antenna	BT	MAX. $\Sigma SAR_{1g/10g}$
Head	Left, Cheek	0.362	0.140	0.502
	Left, Tilt	0.162	0.042	0.204
	Right, Cheek	0.197	0.030	0.227
	Right, Tilt	0.173	0.037	0.210
Body worn	Back Side	1.091	N/A	1.091
	Front Side	0.360	N/A	0.360
Hotspot	Back Side	1.428	0.095	1.523
	Front Side	0.505	0.015	0.520
	Left Edge	0.272	0.000	0.272
	Right Edge	0.279	0.042	0.321
	Top Edge	0.000	0.010	0.010
	Bottom Edge	1.425	N/A	1.425
Product Specific 10-g SAR	Back Side	3.462	N/A	3.462
	Front Side	N/A	N/A	N/A
	Left Edge	N/A	N/A	N/A
	Right Edge	N/A	N/A	N/A
	Top Edge	N/A	N/A	N/A
	Bottom Edge	1.765	N/A	1.765

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} =1.523W/kg<1.6W/kg and MAX. ΣSAR10g =3.462W/kg<4 W/kg, so the Simultaneous transimition SAR with volum scan are not required for BT and Main-Antenna.

About Wi-Fi and Main-Antenna

$SAR_{1g/10g}$(W/kg) Test Position		Main-antenna	Wi-Fi 2.4G	MAX. ΣSAR_{1g}
Head	Left, Cheek	0.362	1.123	1.485
	Left, Tilt	0.162	0.337	0.499
	Right, Cheek	0.197	0.270	0.467
	Right, Tilt	0.173	0.329	0.502
Body worn	Back Side	1.091	0.441	1.532
	Front Side	0.360	0.105	0.465
Hotspot	Back Side	1.428	0.633	2.061
	Front Side	0.505	0.196	0.701
	Left Edge	0.272	0.000	0.272
	Right Edge	0.279	0.434	0.713
	Top Edge	0.000	0.128	0.128
	Bottom Edge	1.425	N/A	1.425
Product Specific 10-g SAR	Back Side	3.462	N/A	3.462
	Front Side	N/A	N/A	0.000
	Left Edge	N/A	N/A	0.000
	Right Edge	N/A	N/A	0.000
	Top Edge	N/A	N/A	0.000
	Bottom Edge	1.765	N/A	1.765

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

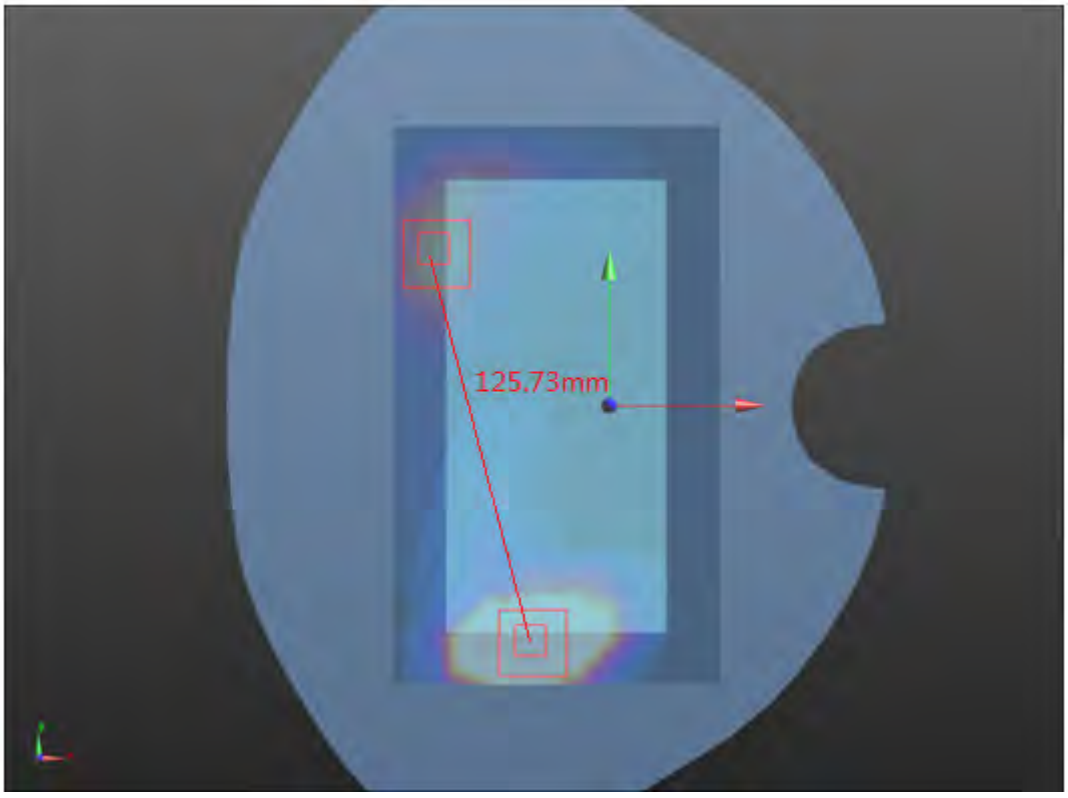
2.MAX. $\Sigma SAR_{1g/10g}$ =Unlicensed SAR_{MAX} +Licensed SAR_{MAX}

MAX. ΣSAR_{1g} = 2.061W/kg>1.6W/kg and MAX. ΣSAR_{10g} =3.462W/kg<4 W/kg, so the Simultaneous transimition SAR with volum scan are not required for Wi-Fi and Main-Antenna.

MAX. ΣSAR$_{1g}$ = 2.061 W/kg>1.6W/kg, so the SAR to peak location separation ratio should be considered

Reported SAR$_{1g}$ (W/kg) / Test Position		GSM 1900	Wi-Fi 2.4G	MAX. ΣSAR$_{1g}$
Hotspot	Back Side	1.428	0.633	2.061
Note: 1.The value with blue color is the SAR$_{1g}$>1.6 W/kg. 2. When the MAX. Σ SAR$_{1g}$>1.6 W/kg in a position, Ratio need consideration in this position.				

(SAR$_{Max}$ = 2.061W/Kg)
The position SAR $_{GSM\ 1900}$ is (x_1= -17, y_1= -72, z_1= -204),
The position SAR$_{Max\ Wi\text{-}Fi\ 2.4G}$ is (x_2=-54.5, y_2=-48, z_2=-205)
so the distance is 125.73mm.



PSLS=Peak SAR Location Separation
Ratio =[(Reported SAR$_{Max.\ Main\text{-}Antenna}$) 1.428W/kg +(Reported SAR$_{Max.WIFI}$) 0.633W/kg]$^{3/2}$ /PSLS =0.02 <0.04

so the Simultaneous transimition SAR with volum scan are not required for Wi-Fi 2.4G and Main-Antenna.

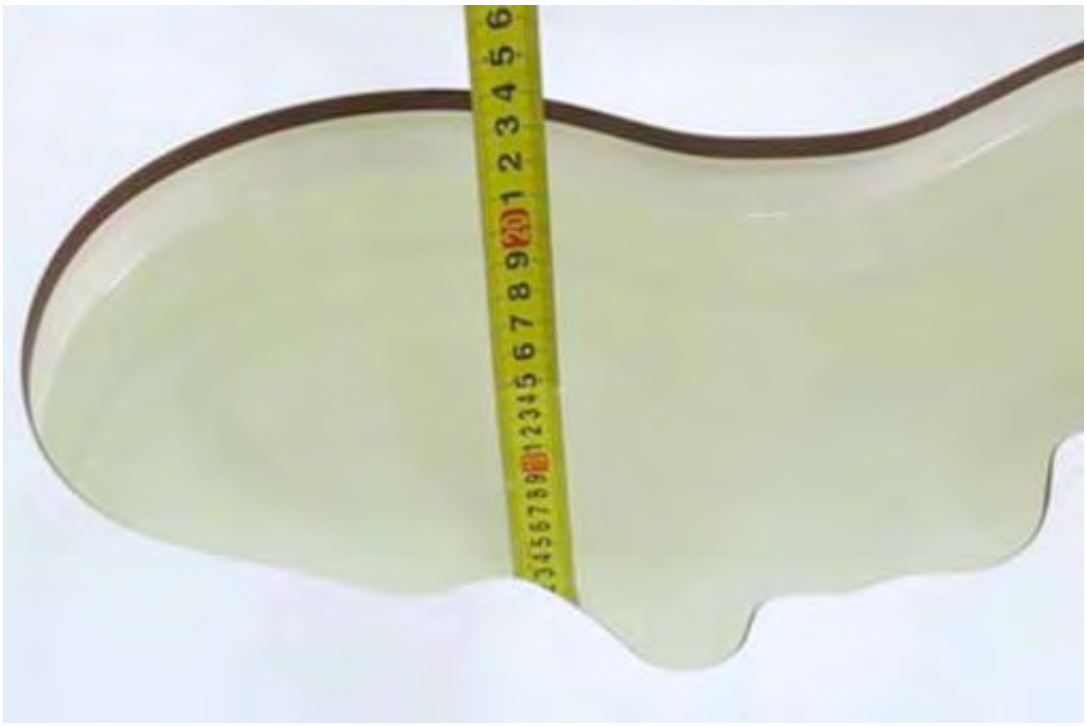
11 Measurement Uncertainty

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.

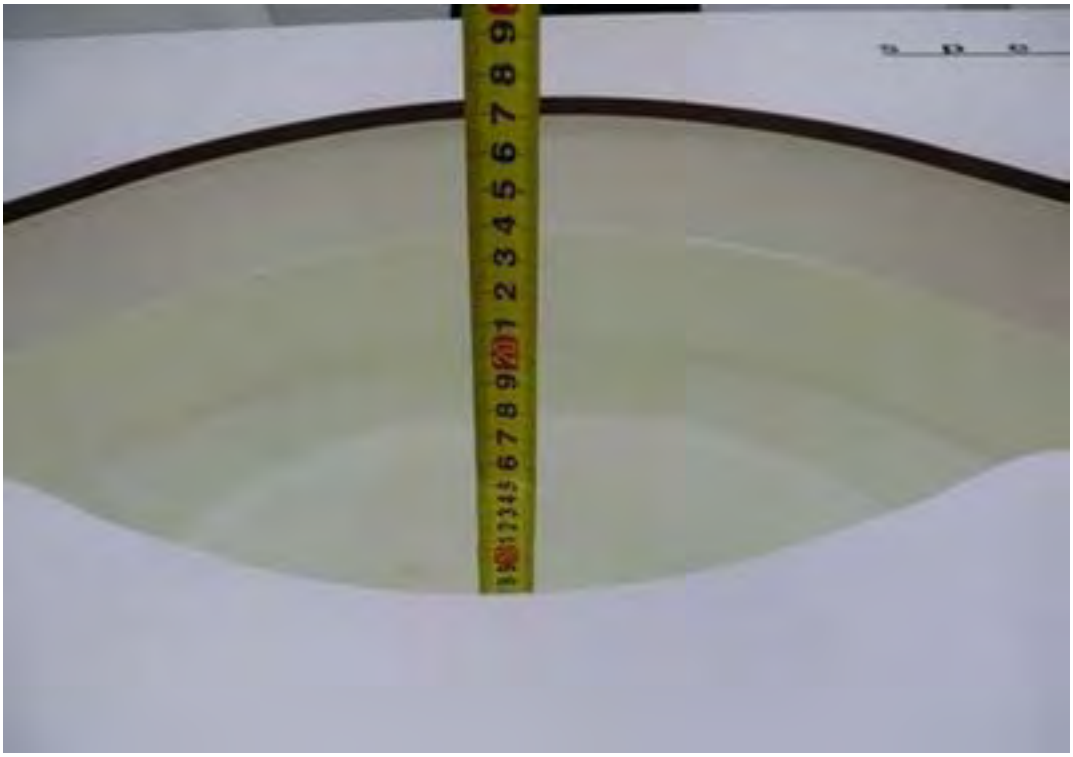
ANNEX A: Test Layout

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: D750V3

Date: 8/24/2021

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 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

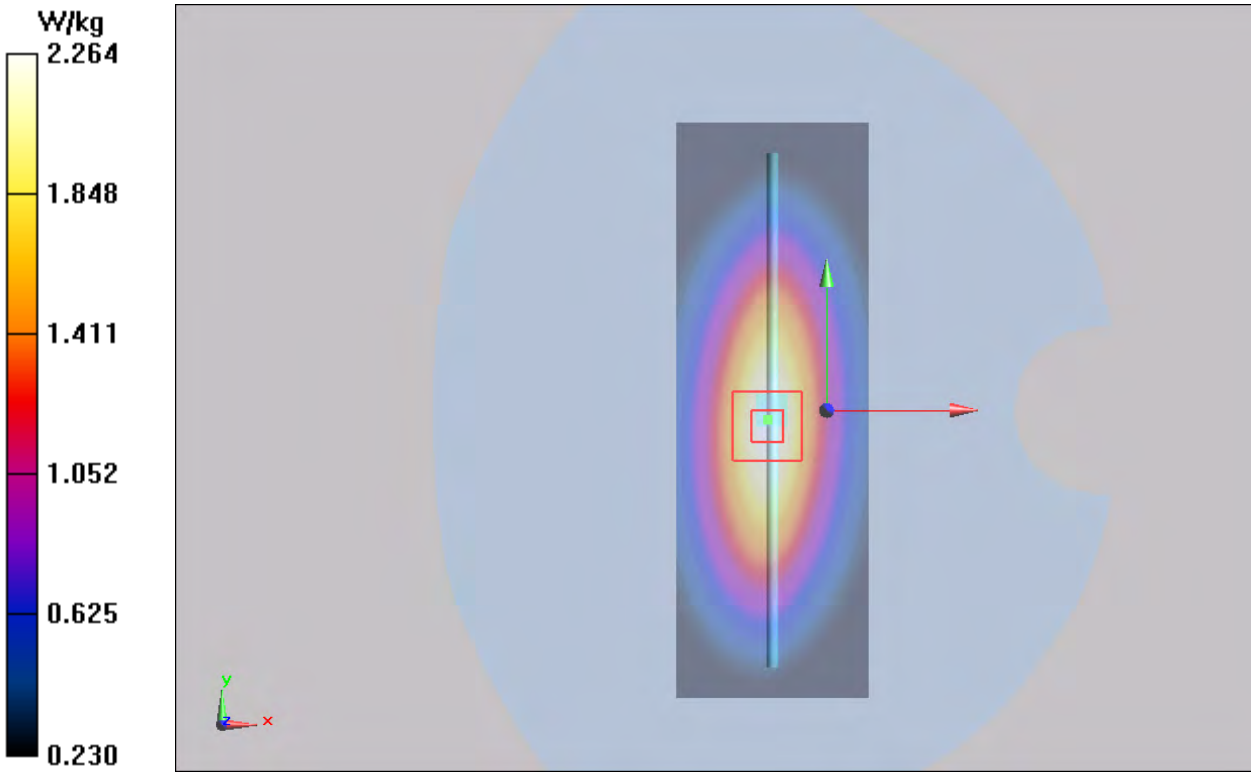
d=15mm,Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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 2 System Performance Check at 835 MHz TSL

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

Date: 9/2/2021

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

Medium parameters used: f = 835 MHz; σ = 0.92 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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

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

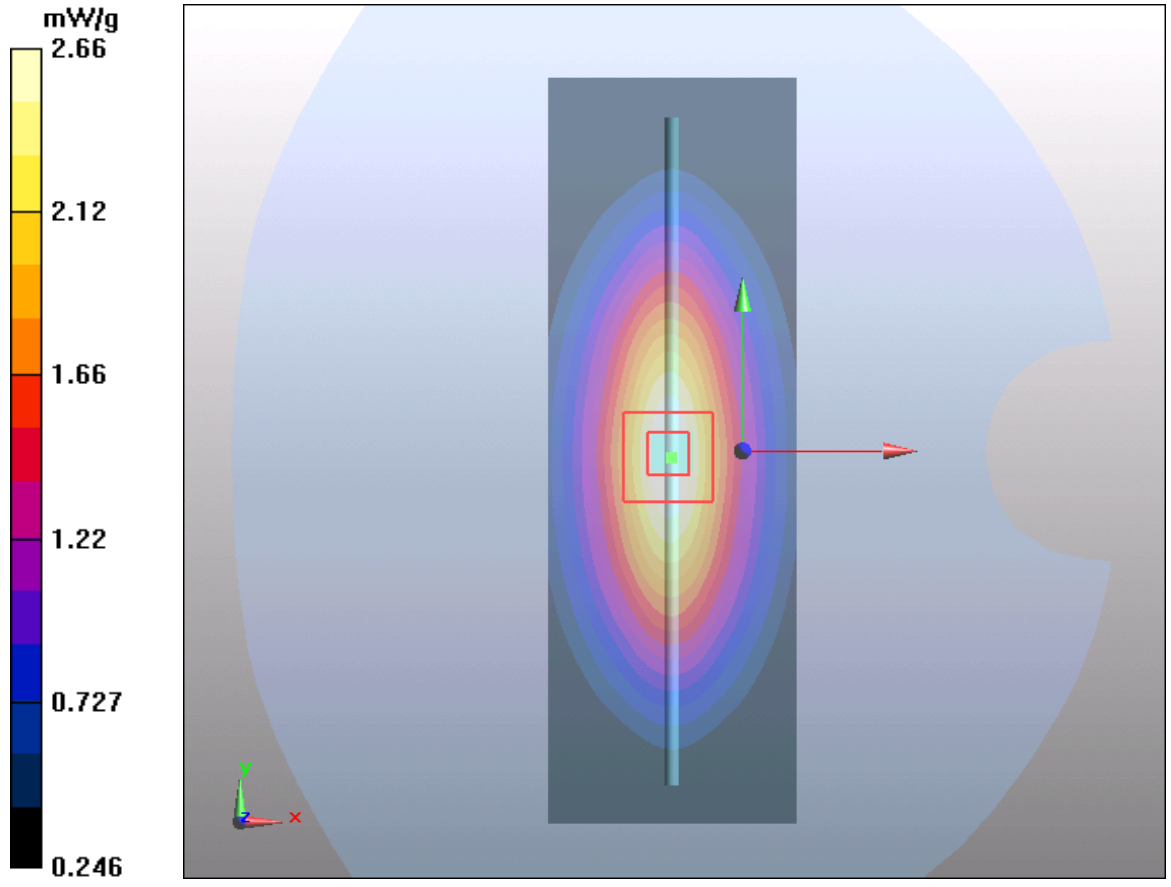
d=15mm, Pin=250mW/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 3.67 W/kg

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

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



Plot 3 System Performance Check at 1750 MHz TSL

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

Date: 8/29/2021

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

Medium parameters used: f = 1750 MHz; σ = 1.36 mho/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 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

d=10mm, Pin=250mW/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm

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

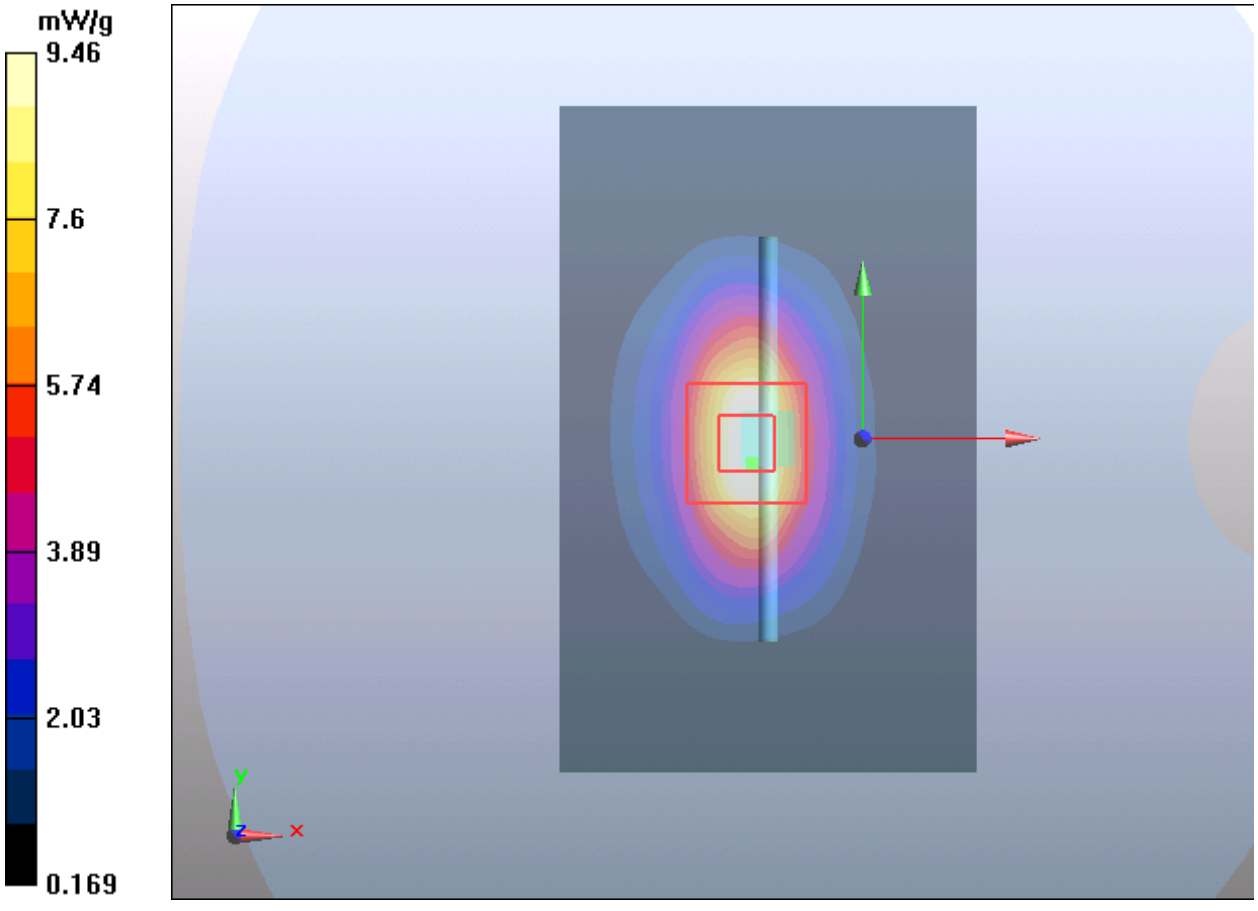
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 15.47 W/kg

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

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



Plot 4 System Performance Check at 1900 MHz TSL

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

Date: 9/23/2021

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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

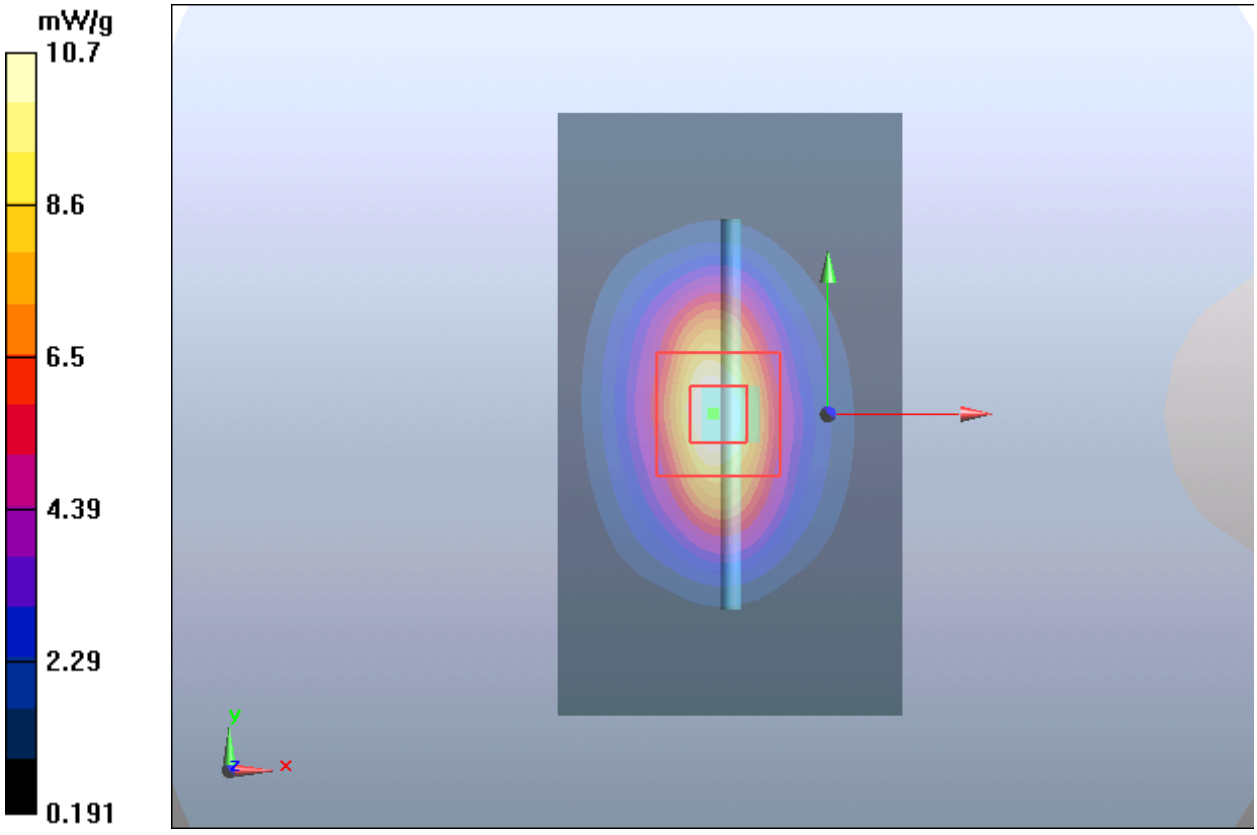
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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 5 System Performance Check at 1900 MHz TSL

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

Date: 9/24/2021

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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

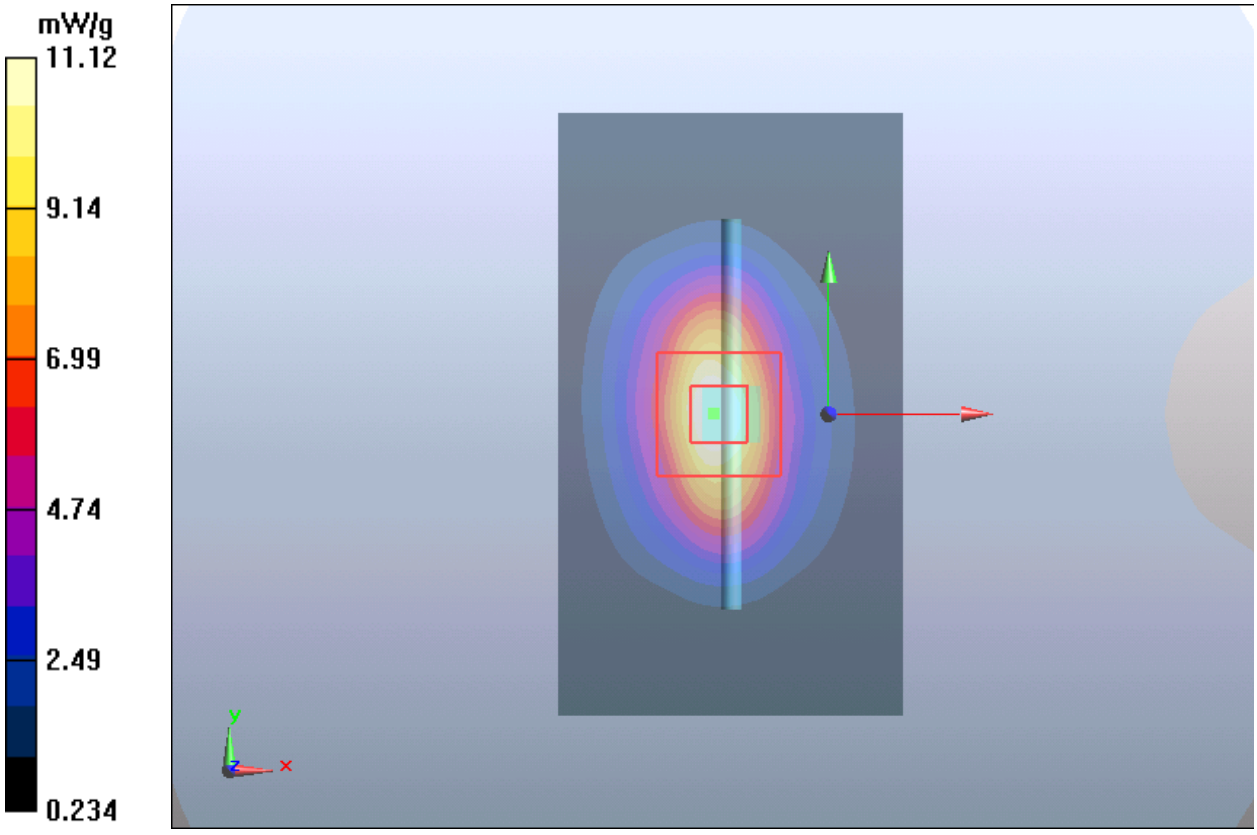
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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 6 System Performance Check at 2450 MHz TSL

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

Date: 8/30/2021

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 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

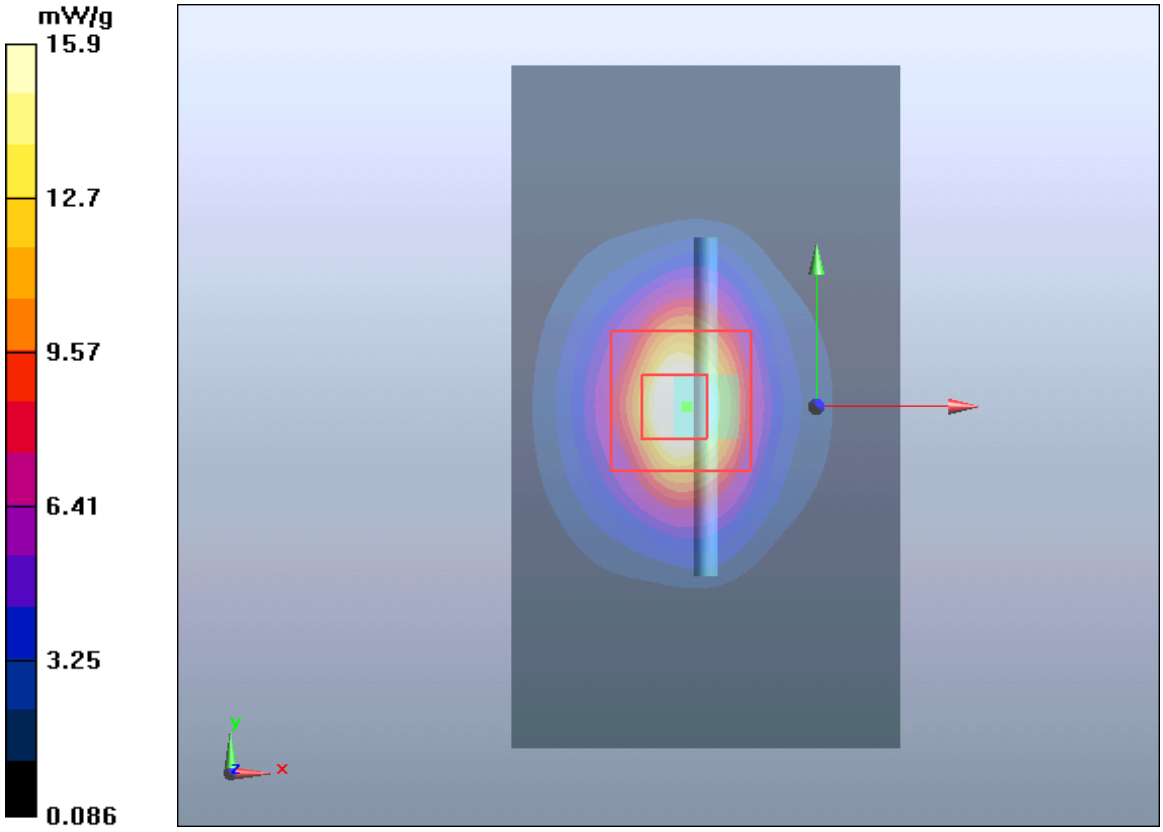
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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 7 System Performance Check at 2600 MHz TSL

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

Date: 9/16/2021

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

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

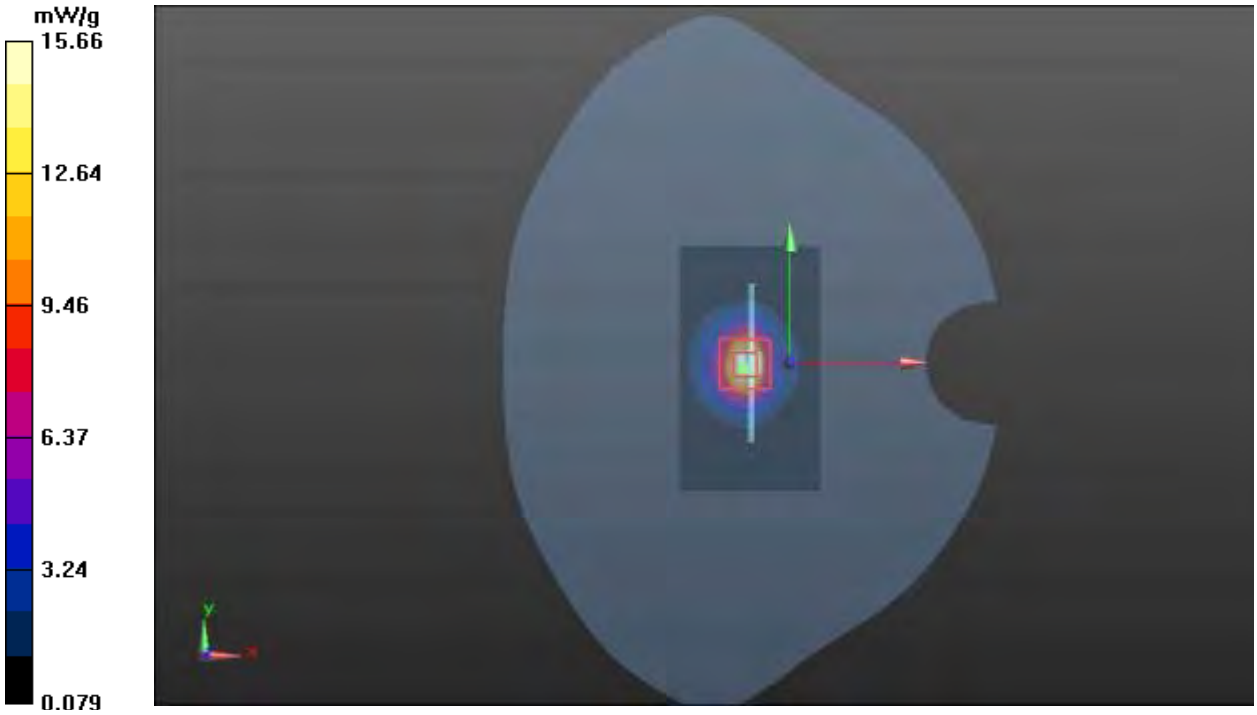
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

Peak SAR (extrapolated) = 31.858 W/kg

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

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



ANNEX C: Highest Graph Results

Plot 8 GSM 850 Right Cheek Middle

Date: 9/2/2021

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

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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.16 W/kg

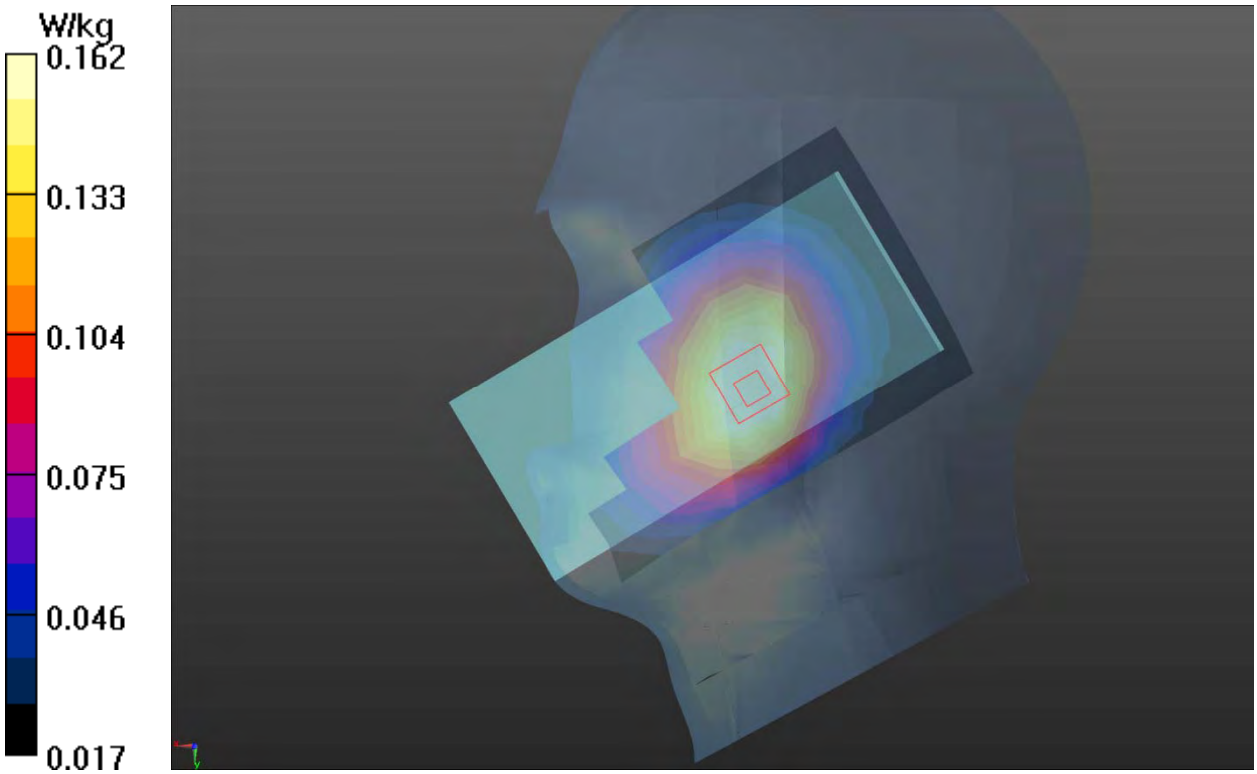
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.820 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.192 W/kg

SAR(1 g) = 0.155 W/kg; SAR(10 g) = 0.119 W/kg

Maximum value of SAR (measured) = 0.162 W/kg



Plot 9 GSM 1900 Left Cheek High

Date: 9/23/2021

Communication System: UID 0, GSM (0); Frequency: 1909.8 MHz;Duty Cycle: 1:8.3

Medium parameters used: f = 1909.8 MHz; σ = 1.442 S/m; ε_r = 38.826; 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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

Maximum value of SAR (measured) = 0.198 W/kg

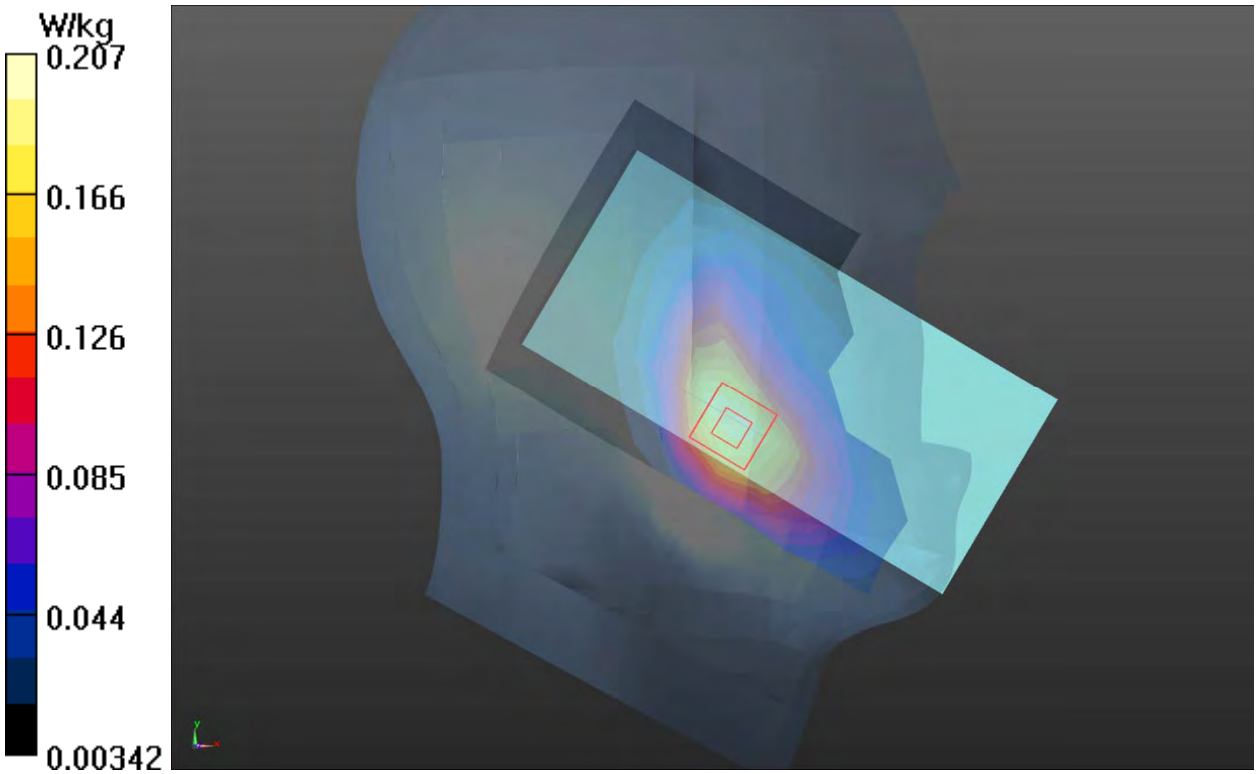
Left Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.566 V/m; Power Drift = 0.064 dB

Peak SAR (extrapolated) = 0.302 W/kg

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

Maximum value of SAR (measured) = 0.207 W/kg



Plot 10 UMTS Band II Left Cheek High

Date: 9/23/2021

Communication System: UID 0, WCDMA (0); Frequency: 1907.6 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1907.6 MHz; σ = 1.44 S/m; ε_r = 38.828; 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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

Maximum value of SAR (measured) = 0.302 W/kg

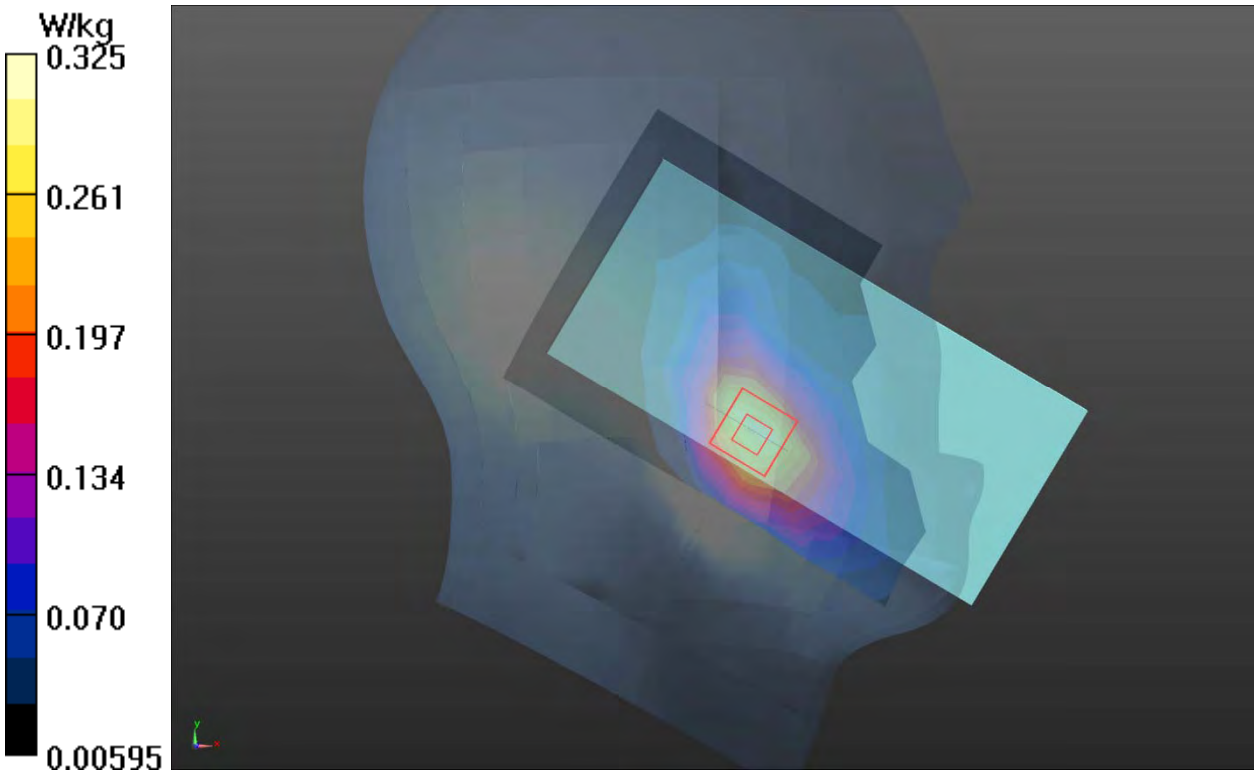
Left Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.181 V/m; Power Drift = 0.036 dB

Peak SAR (extrapolated) = 0.465 W/kg

SAR(1 g) = 0.300 W/kg; SAR(10 g) = 0.185 W/kg

Maximum value of SAR (measured) = 0.325 W/kg



Plot 11 UMTS Band IV Left Cheek Middle

Date: 8/29/2021

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: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.179 W/kg

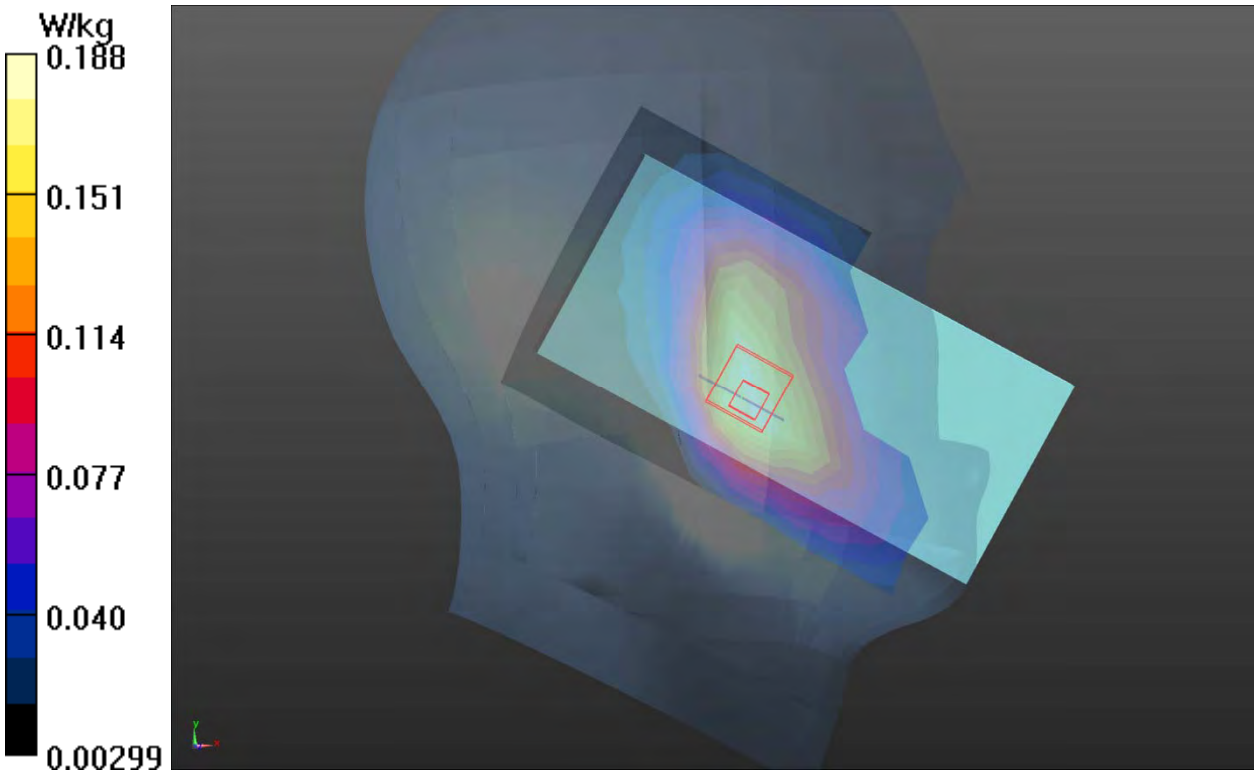
Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.267 V/m; Power Drift = 0.094 dB

Peak SAR (extrapolated) = 0.253 W/kg

SAR(1 g) = 0.177 W/kg; SAR(10 g) = 0.120 W/kg

Maximum value of SAR (measured) = 0.188 W/kg



Plot 12 UMTS Band V Right Cheek Low

Date: 9/2/2021

Communication System: UID 0, WCDMA (0); Frequency: 826.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.946 S/m; ε_r = 39.813; 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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.151 W/kg

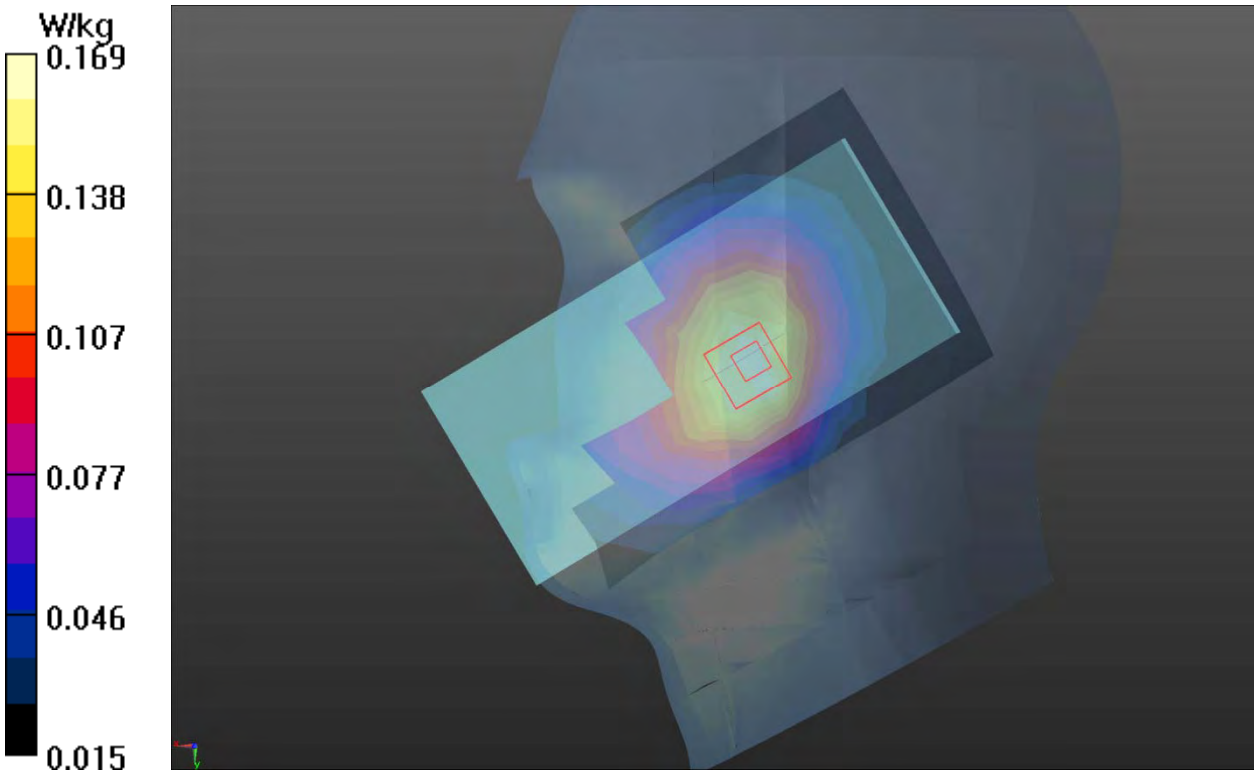
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.414 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.184 W/kg

SAR(1 g) = 0.144 W/kg; SAR(10 g) = 0.108 W/kg

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



Plot 13 LTE Band 2 1RB Left Cheek High

Date: 9/23/2021

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: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

Maximum value of SAR (measured) = 0.306 W/kg

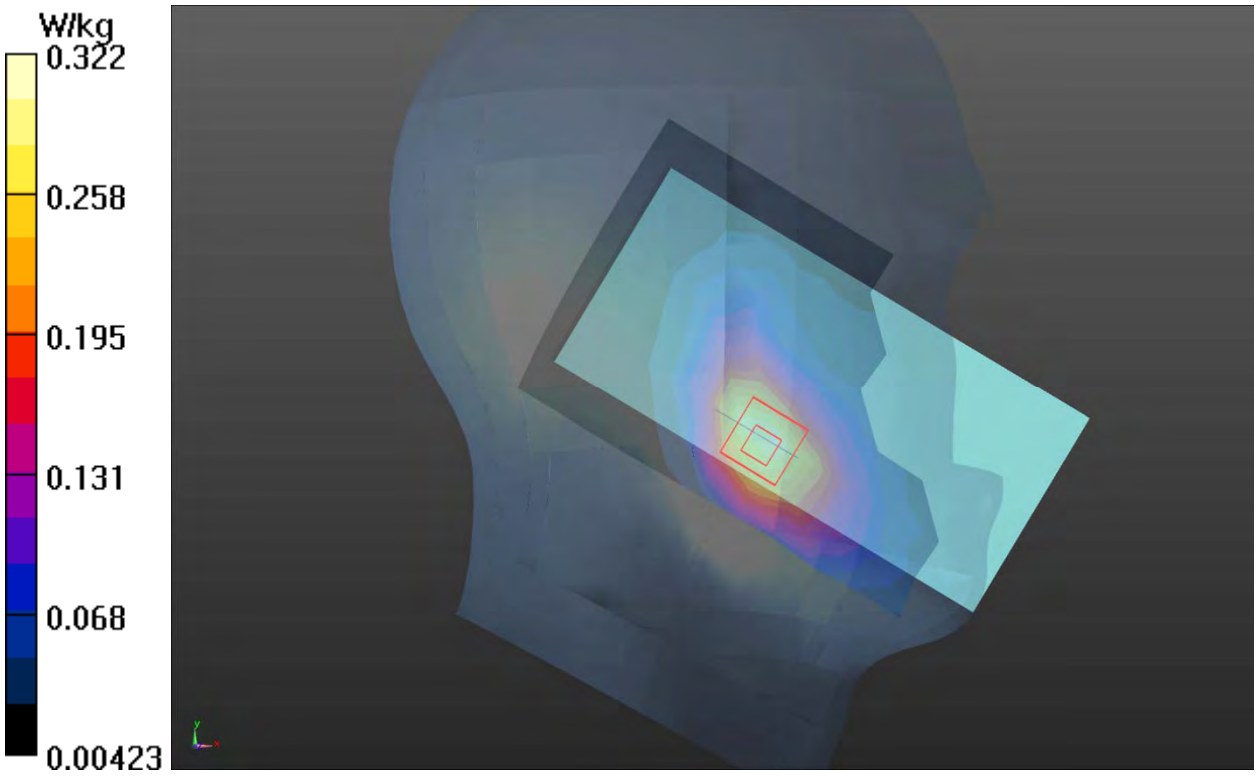
Left Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.626 V/m; Power Drift = 0.064 dB

Peak SAR (extrapolated) = 0.474 W/kg

SAR(1 g) = 0.304 W/kg; SAR(10 g) = 0.189 W/kg

Maximum value of SAR (measured) = 0.322 W/kg



Plot 14 LTE Band 5 1RB Right Cheek High

Date: 9/2/2021

Communication System: UID 0, LTE (0); Frequency: 844 MHz;Duty Cycle: 1:1

Medium parameters used: f = 844 MHz; σ = 0.958 S/m; ε_r = 39.728; 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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.140 W/kg

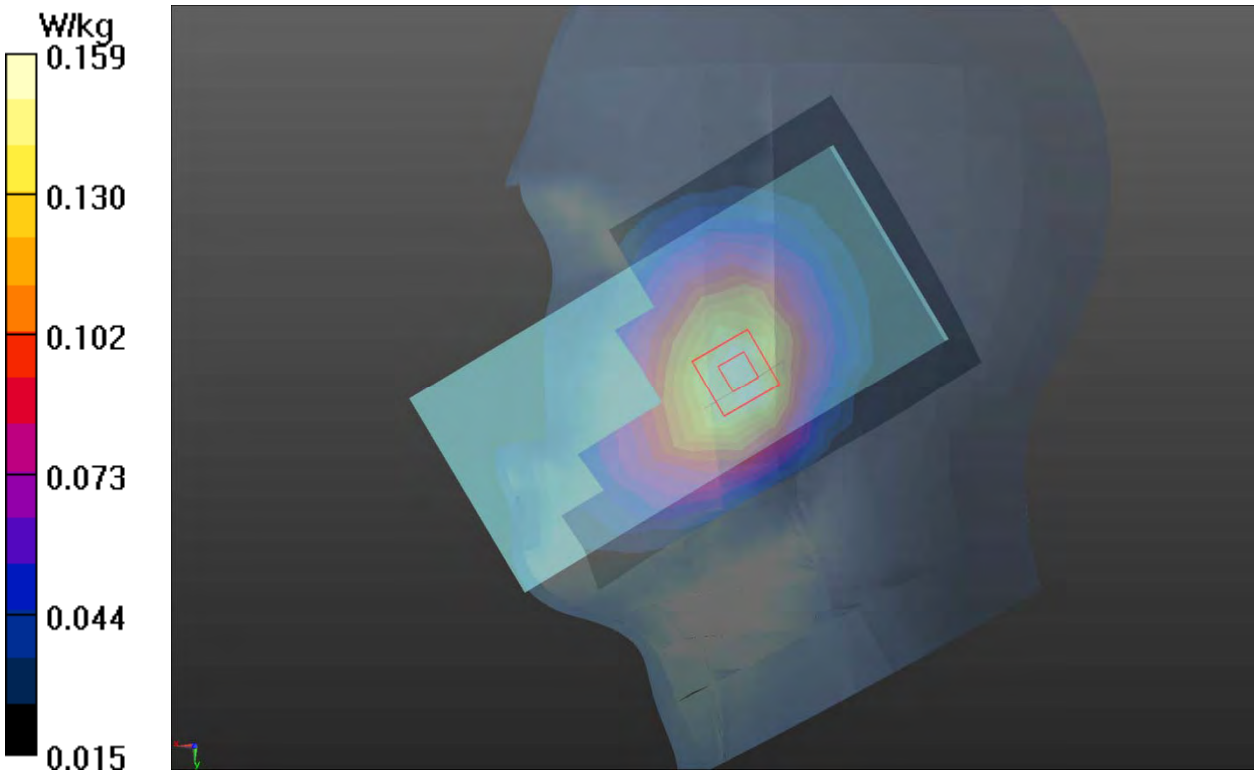
Right Cheek High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.023 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 0.173 W/kg

SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.102 W/kg

Maximum value of SAR (measured) = 0.159 W/kg



Plot 15 LTE Band 7 1RB Left Cheek Middle

Date: 9/16/2021

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

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

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

Maximum value of SAR (measured) = 0.188 W/kg

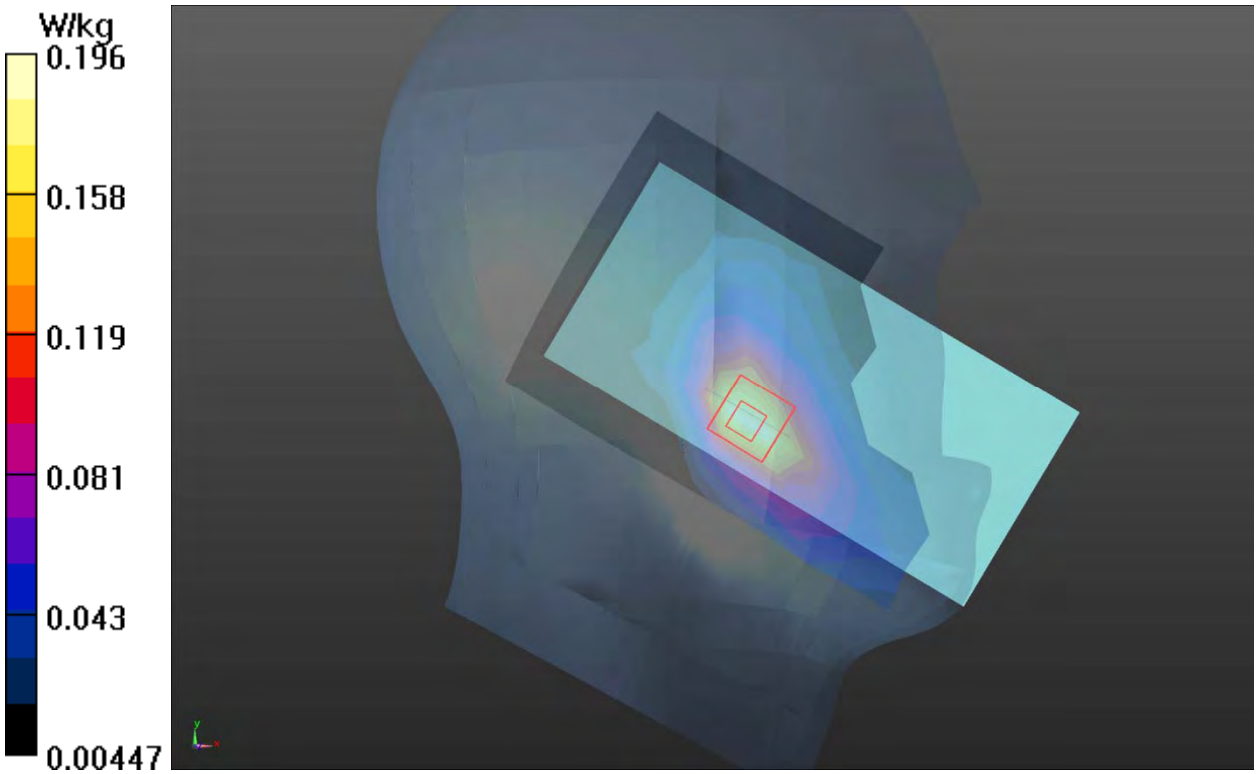
Left Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.122 V/m; Power Drift = 0.020 dB

Peak SAR (extrapolated) = 0.369 W/kg

SAR(1 g) = 0.186 W/kg; SAR(10 g) = 0.098 W/kg

Maximum value of SAR (measured) = 0.196 W/kg



Plot 16 LTE Band 12 1RB Right Cheek Low

Date: 8/24/2021

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 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.208 W/kg

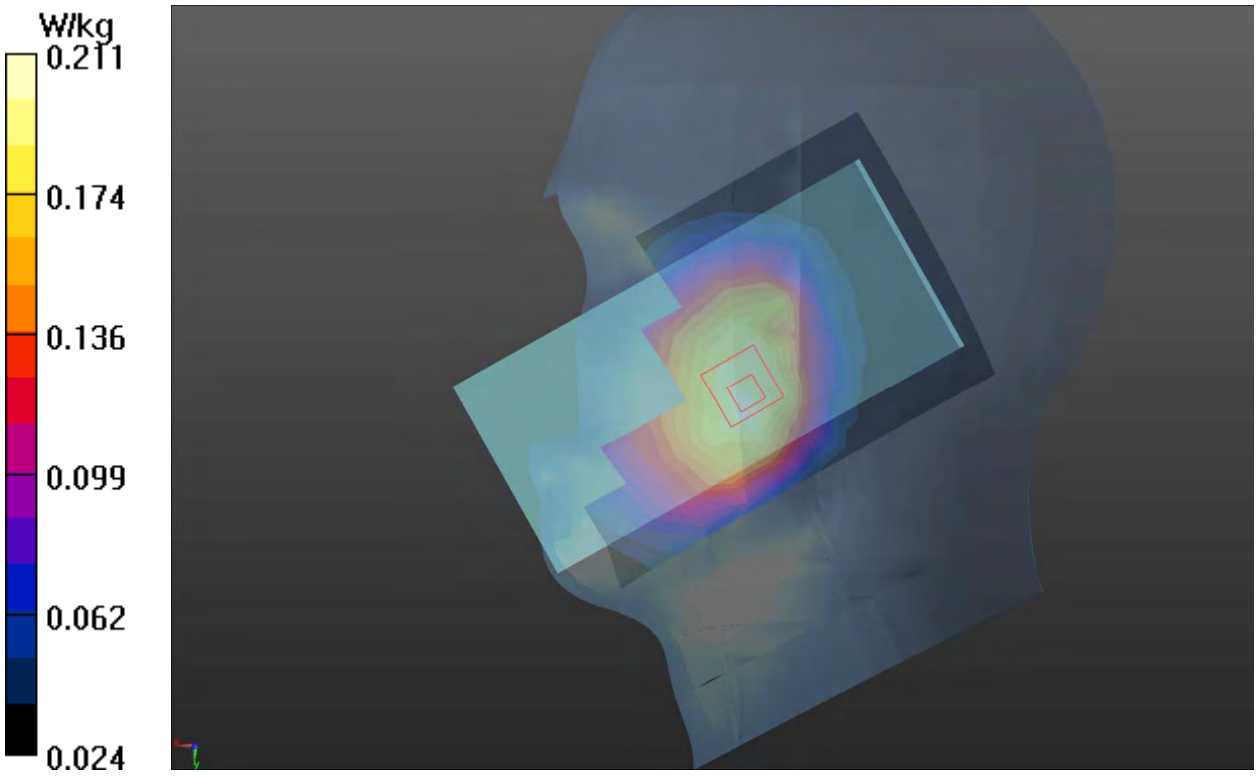
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.894 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.230 W/kg

SAR(1 g) = 0.161 W/kg; SAR(10 g) = 0.123 W/kg

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



Plot 17 LTE Band 13 1RB Left Cheek Middle

Date: 8/24/2021

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

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

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.072 W/kg

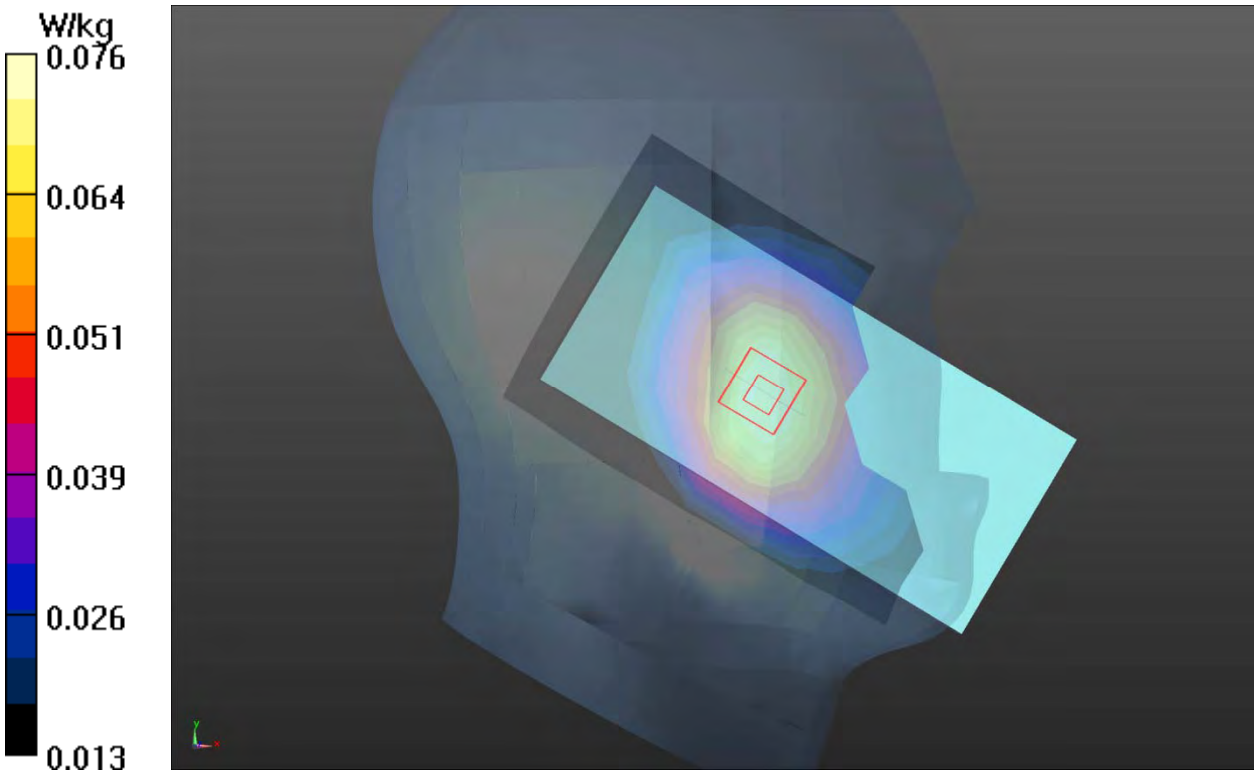
Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.229 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.082 W/kg

SAR(1 g) = 0.064 W/kg; SAR(10 g) = 0.051 W/kg

Maximum value of SAR (measured) = 0.076 W/kg



Plot 18 LTE Band 66 1RB Right Cheek Low

Date: 8/29/2021

Communication System: UID 0, LTE (0); Frequency: 1720 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1720 MHz; σ = 1.303 S/m; ε_r = 39.467; 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 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.152 W/kg

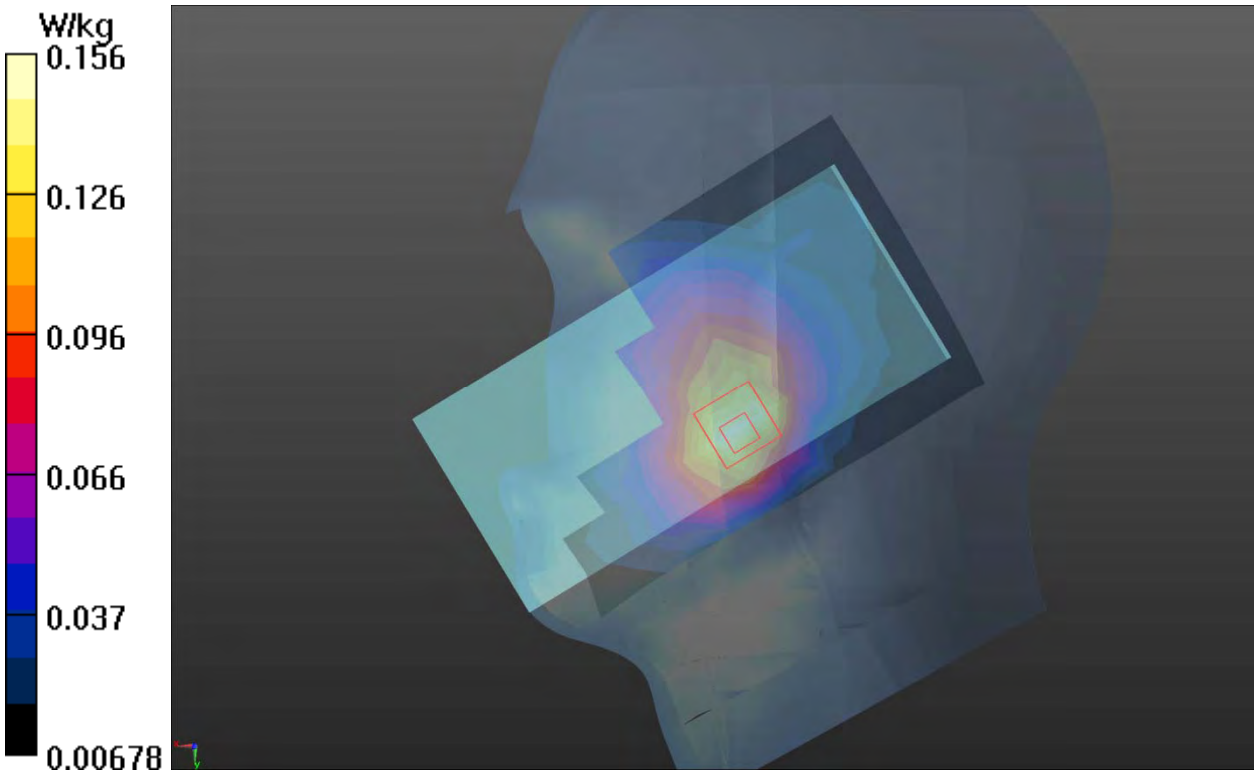
Right Cheek Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.178 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.210 W/kg

SAR(1 g) = 0.149 W/kg; SAR(10 g) = 0.100 W/kg

Maximum value of SAR (measured) = 0.156 W/kg



Plot 19 802.11b Left Cheek Low

Date: 8/30/2021

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

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 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.923 W/kg

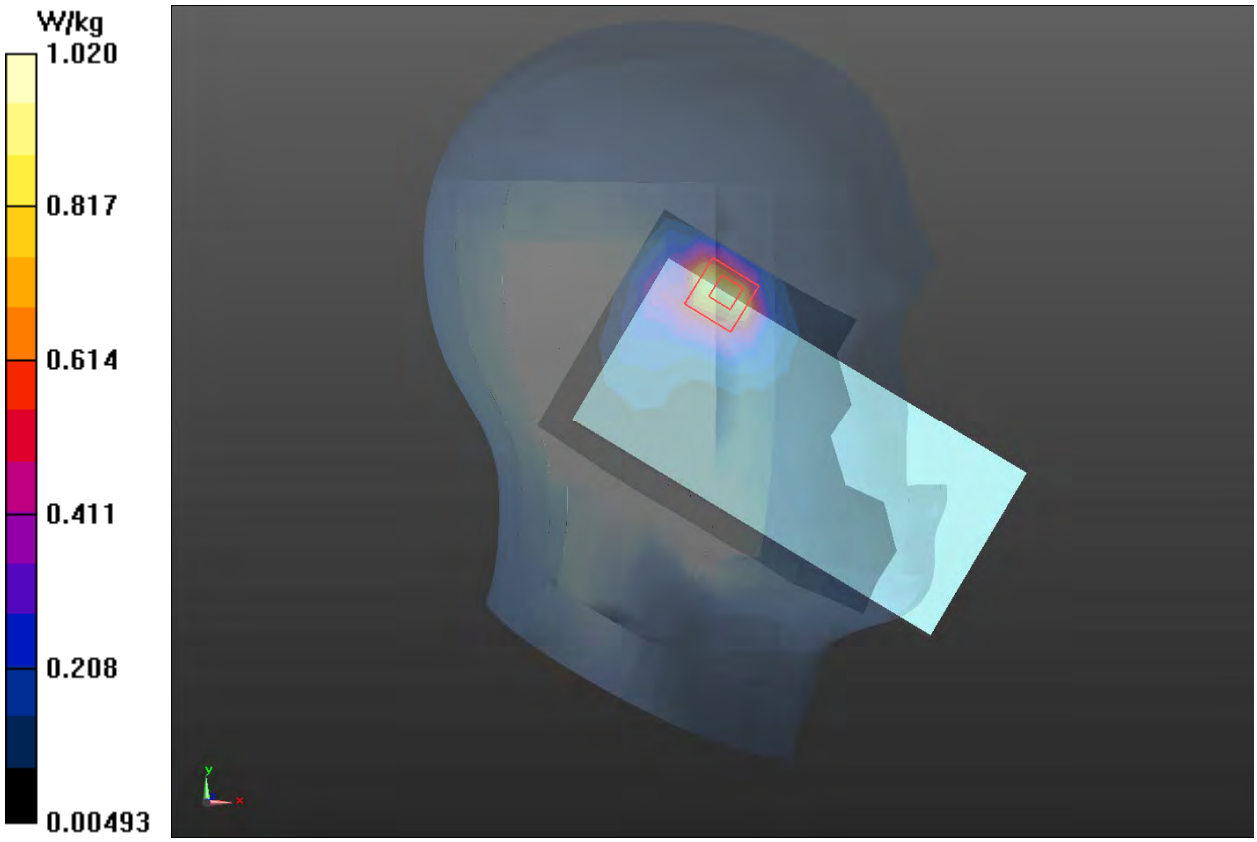
Left Cheek Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.66 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.37 W/kg

SAR(1 g) = 0.866 W/kg; SAR(10 g) = 0.389 W/kg

Maximum value of SAR (measured) = 1.02 W/kg



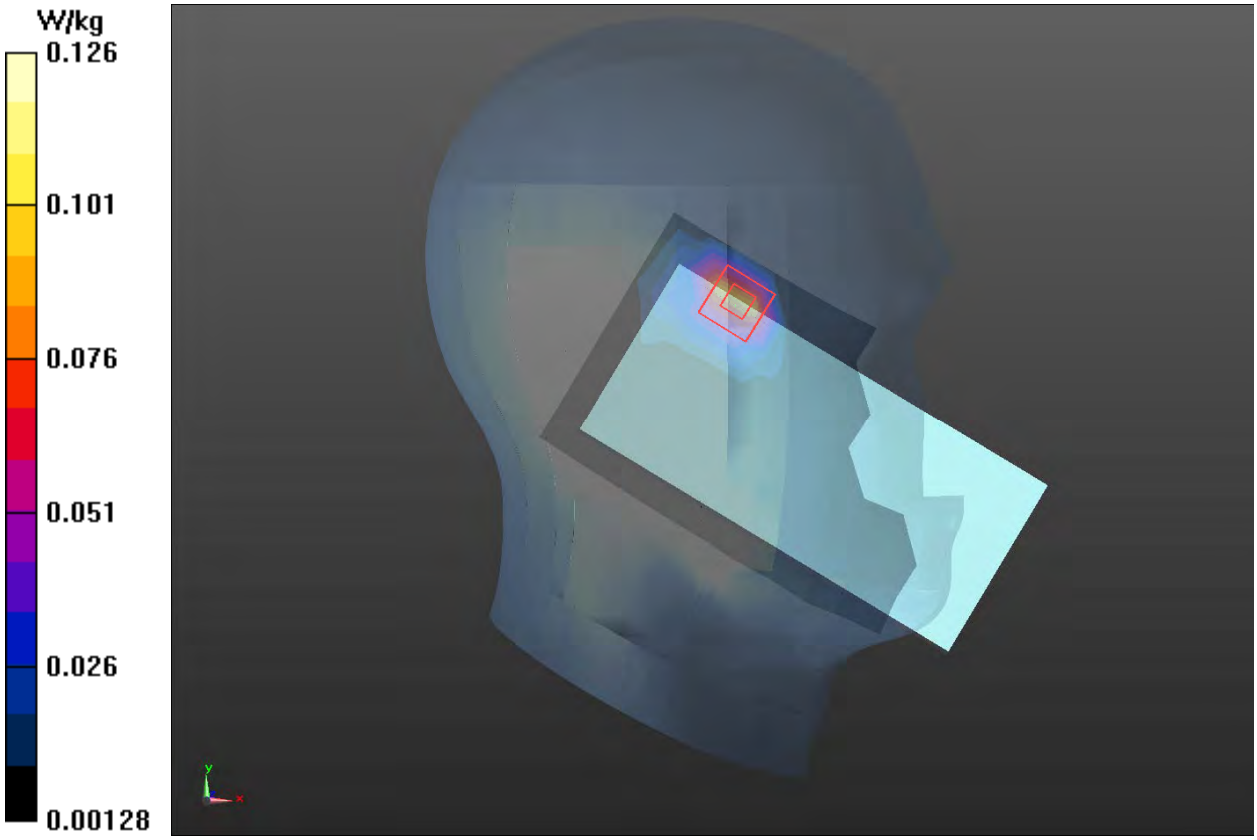
Plot 20 Bluetooth Left Cheek Middle

Date: 8/30/2021
Communication System: UID 0, 802.11b (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2412 MHz; σ = 1.801 S/m; εr = 37.737; ρ = 1000 kg/m3
Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃
Phantom section: Left Section
DASY5 Configuration:
Sensor-Surface: 1.4mm (Mechanical Surface Detection)
Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;
Electronics: DAE4 SN1317; Calibrated: 2/23/2021
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left Cheek Middle/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.091 W/kg

Left Cheek Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.760 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 0.263 W/kg
SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.034 W/kg

Maximum value of SAR (measured) = 0.126 W/kg



Plot 21 GSM 850 Back Side Low (Distance 15mm)

Date: 9/2/2021

Communication System: UID 0, GSM (0); Frequency: 824.2 MHz;Duty Cycle: 1:8.3

Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.945 S/m; ε_r = 39.833; 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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.213 W/kg

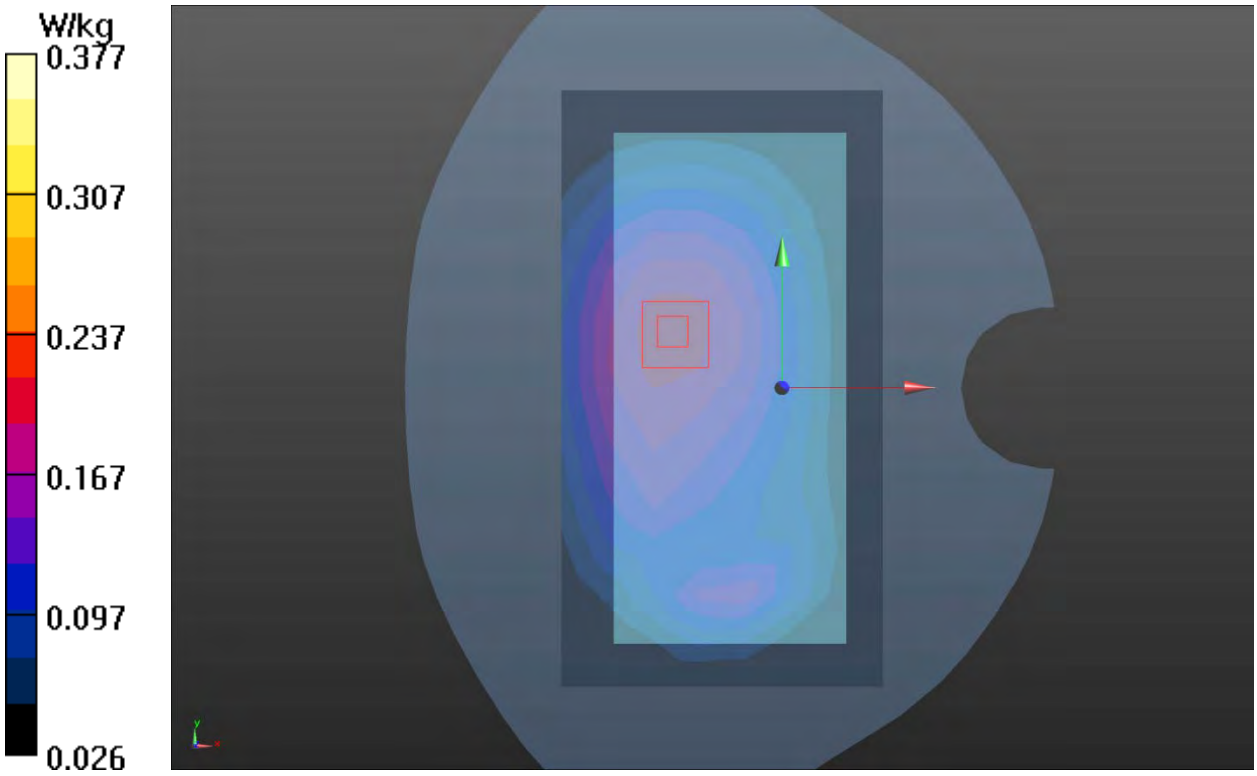
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.95 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.412 W/kg

SAR(1 g) = 0.204 W/kg; SAR(10 g) = 0.145 W/kg

Maximum value of SAR (measured) = 0.377 W/kg



Plot 22 GSM 1900 Back Side Low (Distance 15mm)

Date: 9/23/2021

Communication System: UID 0, GSM (0); Frequency: 1850.2 MHz;Duty Cycle: 1:8.3

Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.398 S/m; ε_r = 39.043; 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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.647 W/kg

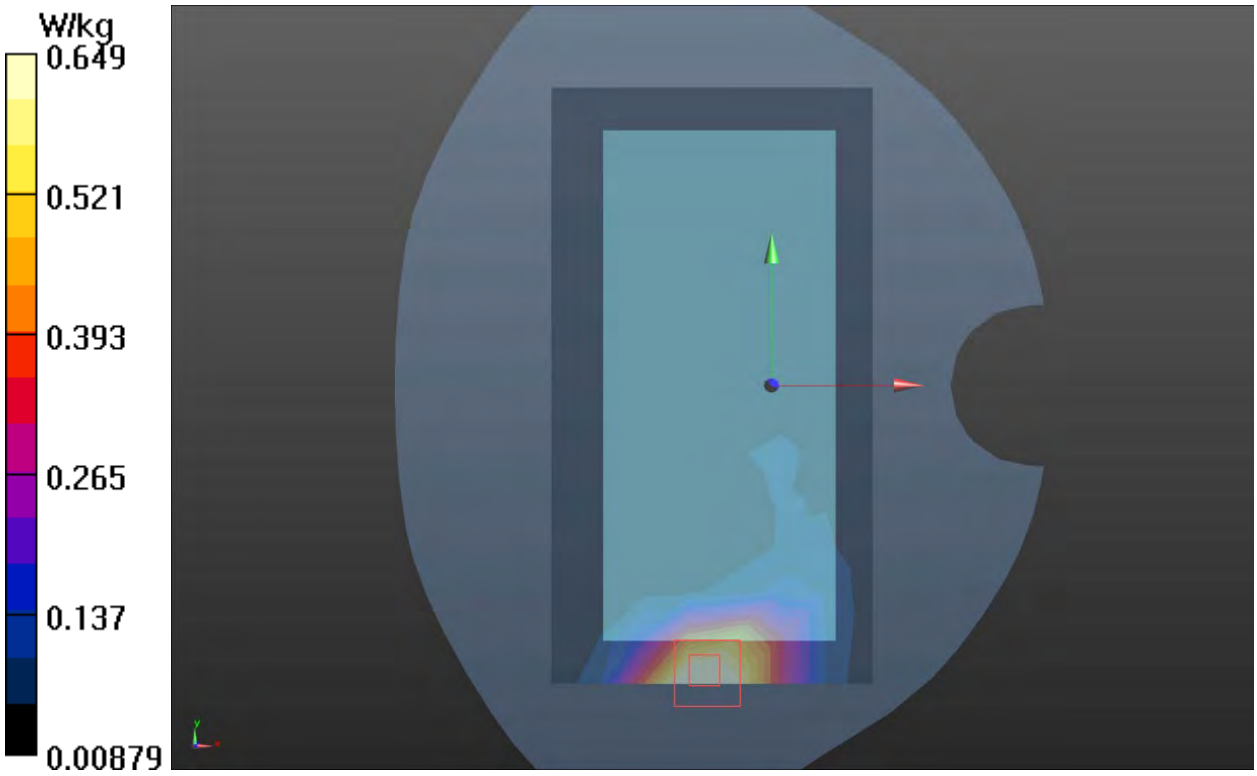
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.230 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 1.02 W/kg

SAR(1 g) = 0.585 W/kg; SAR(10 g) = 0.318 W/kg

Maximum value of SAR (measured) = 0.649 W/kg



Plot 23 UMTS Band II Back Side High (Distance 15mm)

Date: 9/23/2021

Communication System: UID 0, WCDMA (0); Frequency: 1907.6 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1907.6 MHz; σ = 1.44 S/m; ε_r = 38.828; 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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

Back Side High/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.893 W/kg

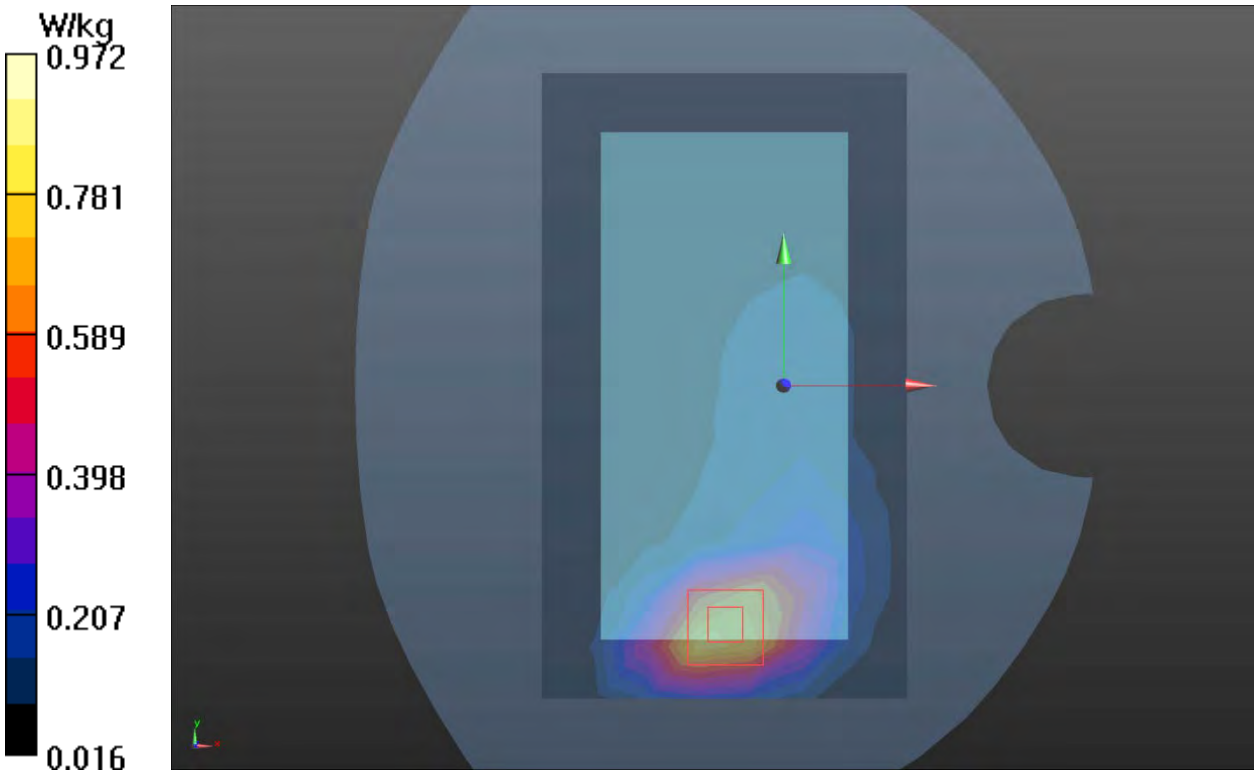
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.895 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 1.52 W/kg

SAR(1 g) = 0.887 W/kg; SAR(10 g) = 0.491 W/kg

Maximum value of SAR (measured) = 0.972 W/kg



Plot 24 UMTS Band IV Back Side High (Distance 15mm)

Date: 8/29/2021

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

Medium parameters used: f = 1752.6 MHz; σ = 1.329 S/m; ε_r = 39.357; 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 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

Back Side High/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

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

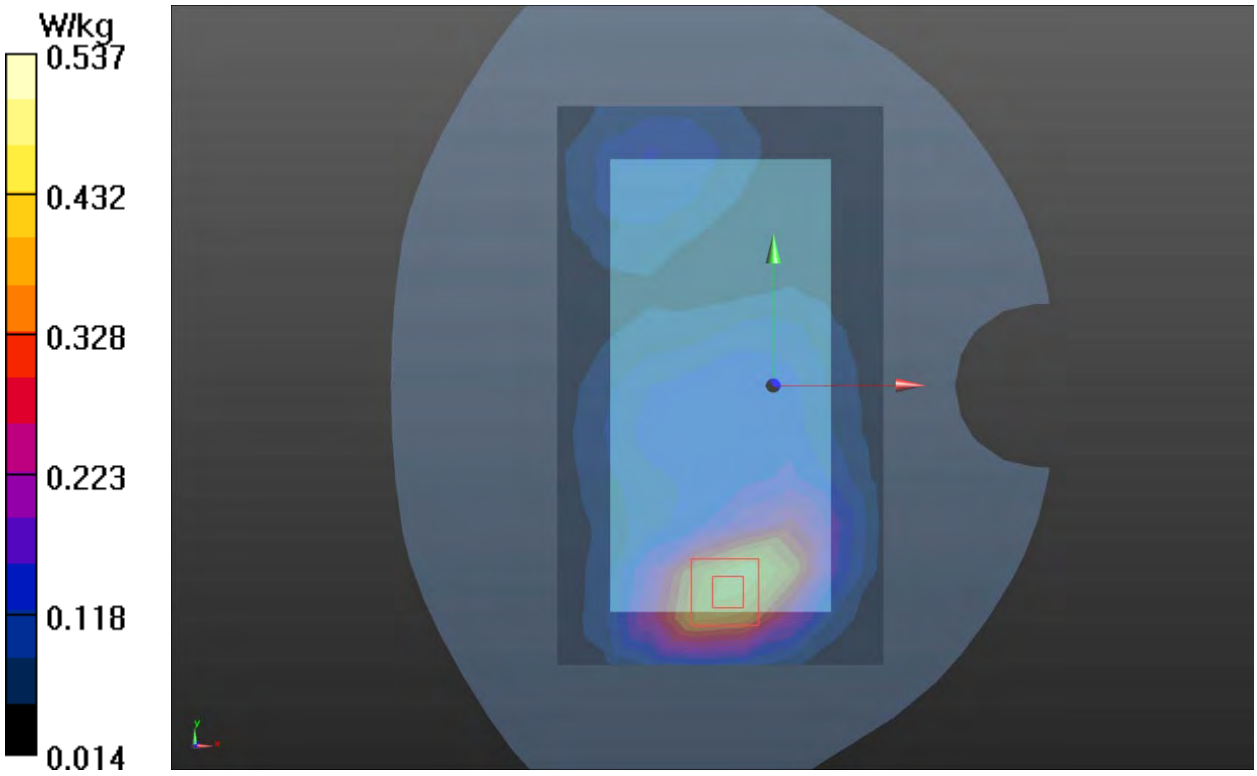
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.93 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.786 W/kg

SAR(1 g) = 0.490 W/kg; SAR(10 g) = 0.290 W/kg

Maximum value of SAR (measured) = 0.537 W/kg



Plot 25 UMTS Band V Back Side Low (Distance 15mm)

Date: 9/2/2021

Communication System: UID 0, WCDMA (0); Frequency: 826.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.917 S/m; ε_r = 42.224; 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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.215 W/kg

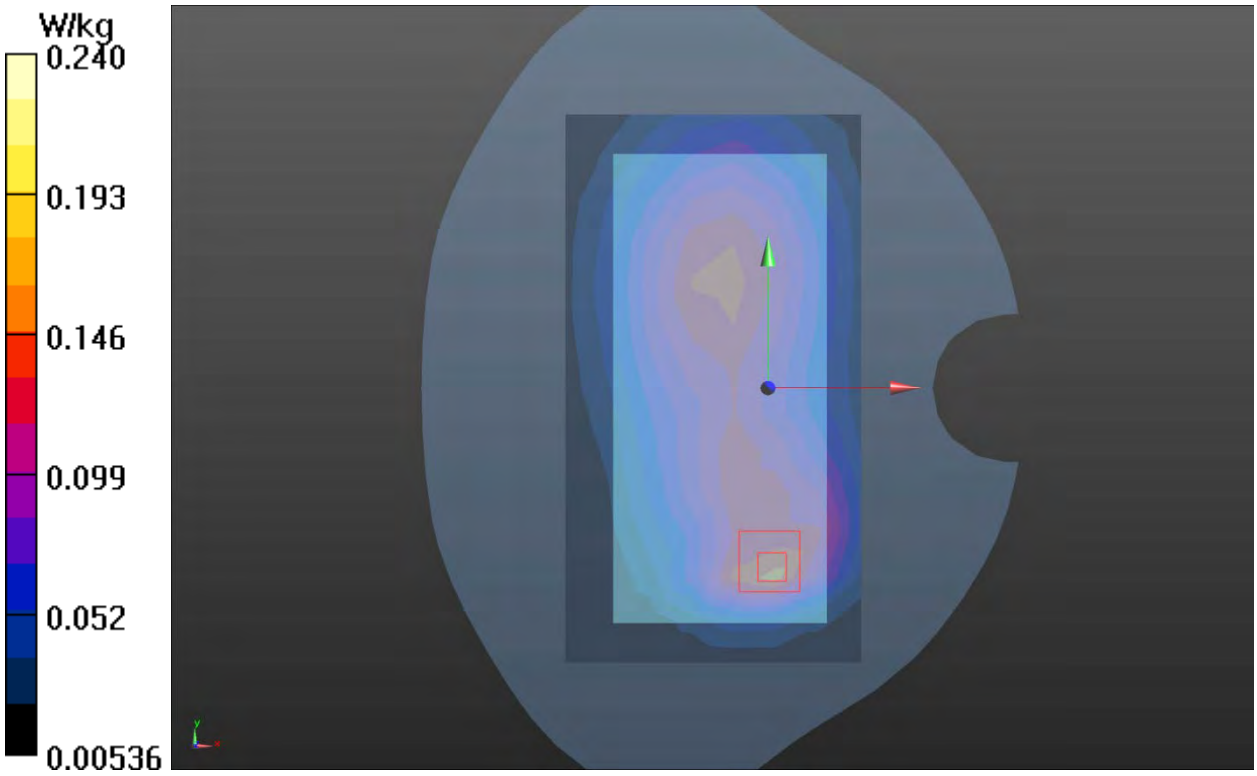
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.19 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.381 W/kg

SAR(1 g) = 0.211 W/kg; SAR(10 g) = 0.149 W/kg

Maximum value of SAR (measured) = 0.24 W/kg



Plot 26 LTE Band 2 1RB Back Side Middle (Distance 15mm)

Date: 9/23/2021

Communication System: UID 0, LTE (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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

Back Side Middle/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.954 W/kg

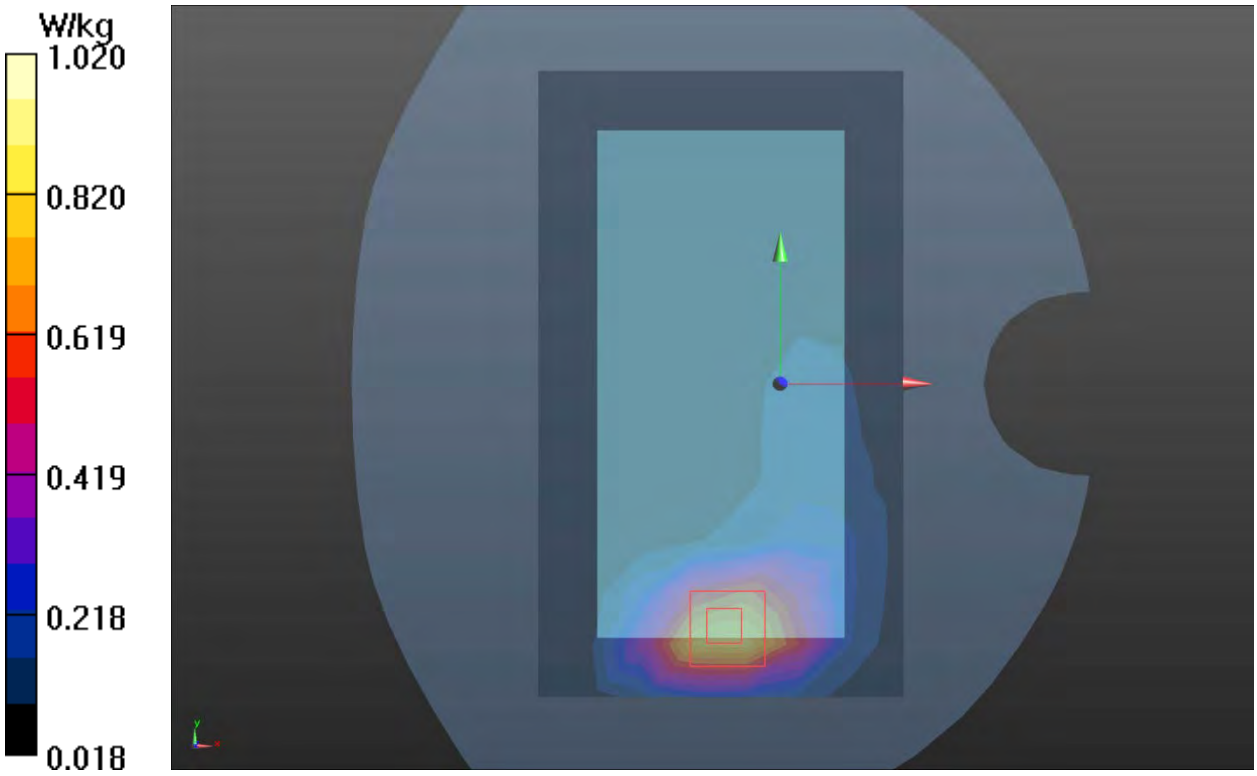
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.055 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.59 W/kg

SAR(1 g) = 0.931 W/kg; SAR(10 g) = 0.517 W/kg

Maximum value of SAR (measured) = 1.02 W/kg



Plot 27 LTE Band 5 1RB Back Side High (Distance 15mm)

Date: 9/2/2021

Communication System: UID 0, LTE (0); Frequency: 844 MHz;Duty Cycle: 1:1

Medium parameters used: f = 844 MHz; σ = 0.958 S/m; ε_r = 39.728; 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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

Maximum value of SAR (measured) = 0.19 W/kg

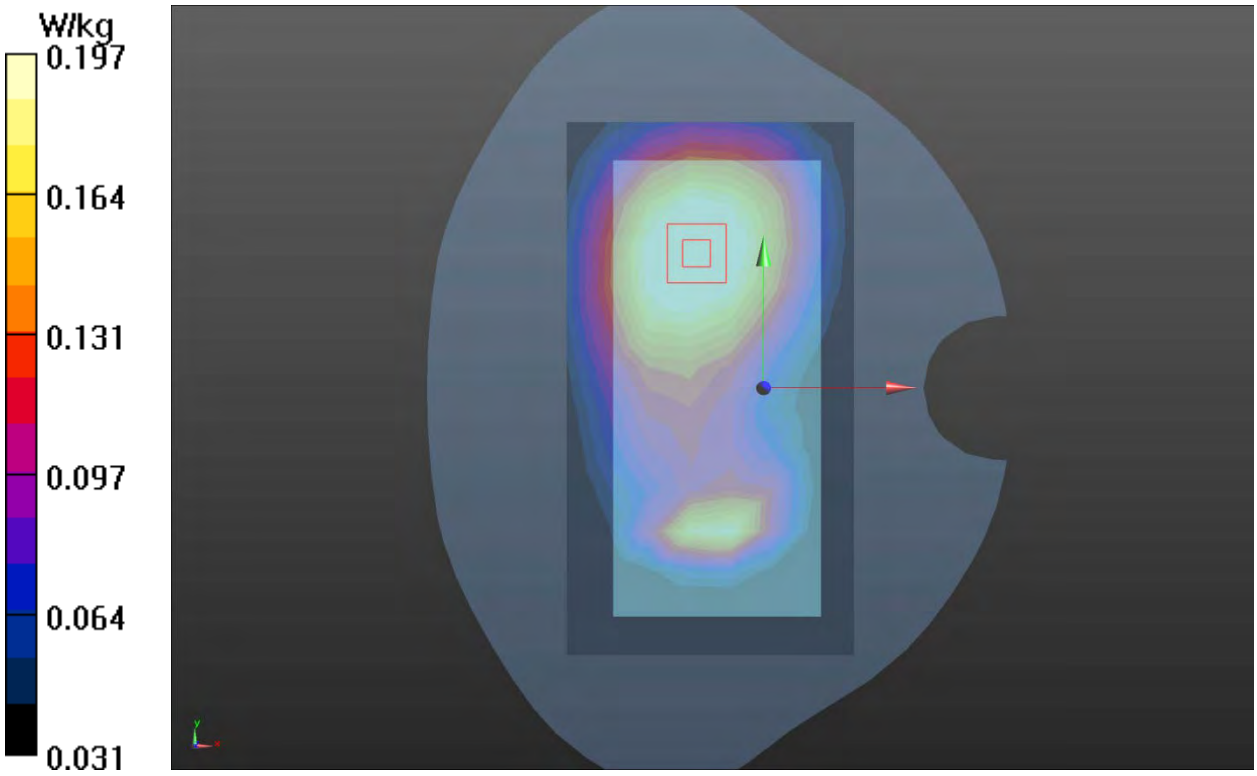
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.17 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.234 W/kg

SAR(1 g) = 0.187 W/kg; SAR(10 g) = 0.142 W/kg

Maximum value of SAR (measured) = 0.197 W/kg



Plot 28 LTE Band 7 1RB Back Side Middle (Distance 15mm)

Date: 9/16/2021

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

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

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.305 W/kg

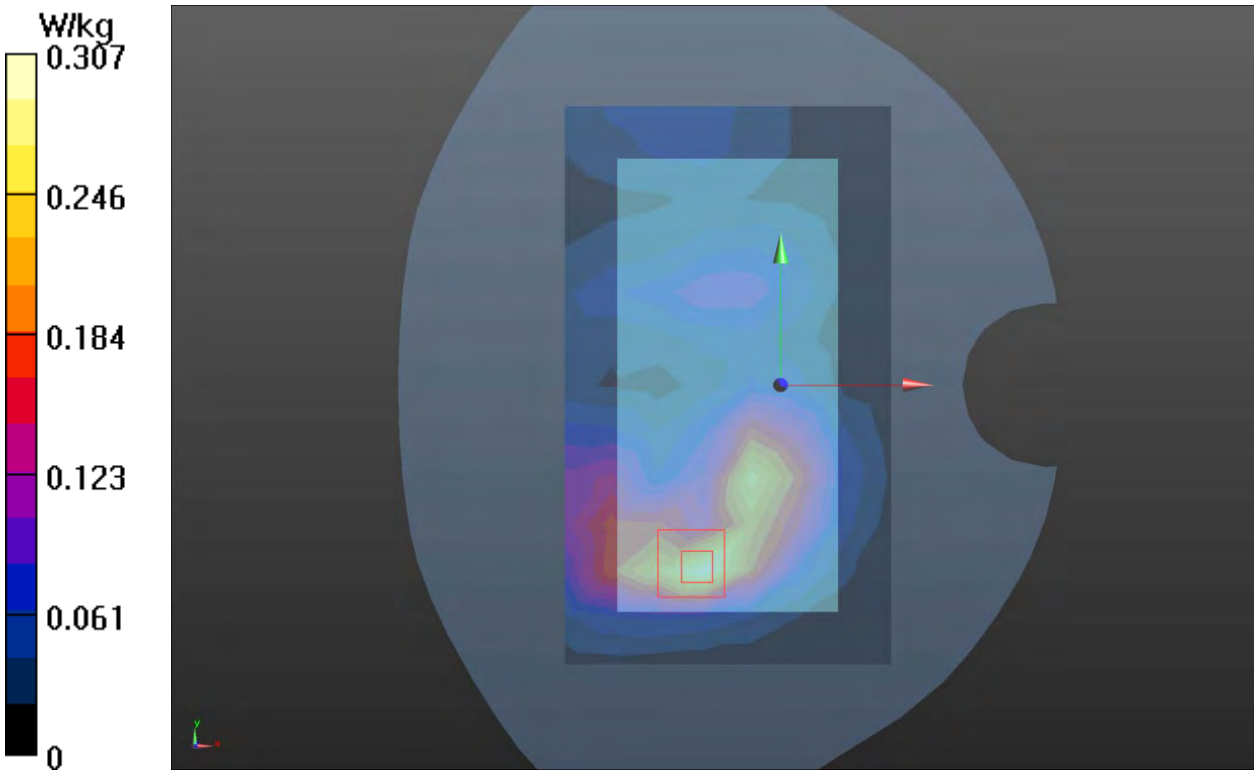
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.672 V/m; Power Drift = 0.126 dB

Peak SAR (extrapolated) = 0.610 W/kg

SAR(1 g) = 0.272 W/kg; SAR(10 g) = 0.130 W/kg

Maximum value of SAR (measured) = 0.307 W/kg



Plot 29 LTE Band 12 1RB Back Side Low (Distance 15mm)

Date: 8/24/2021

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

Medium parameters used: f = 704 MHz; σ = 0.846 S/m; ε_r = 42.775; 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 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.347 W/kg

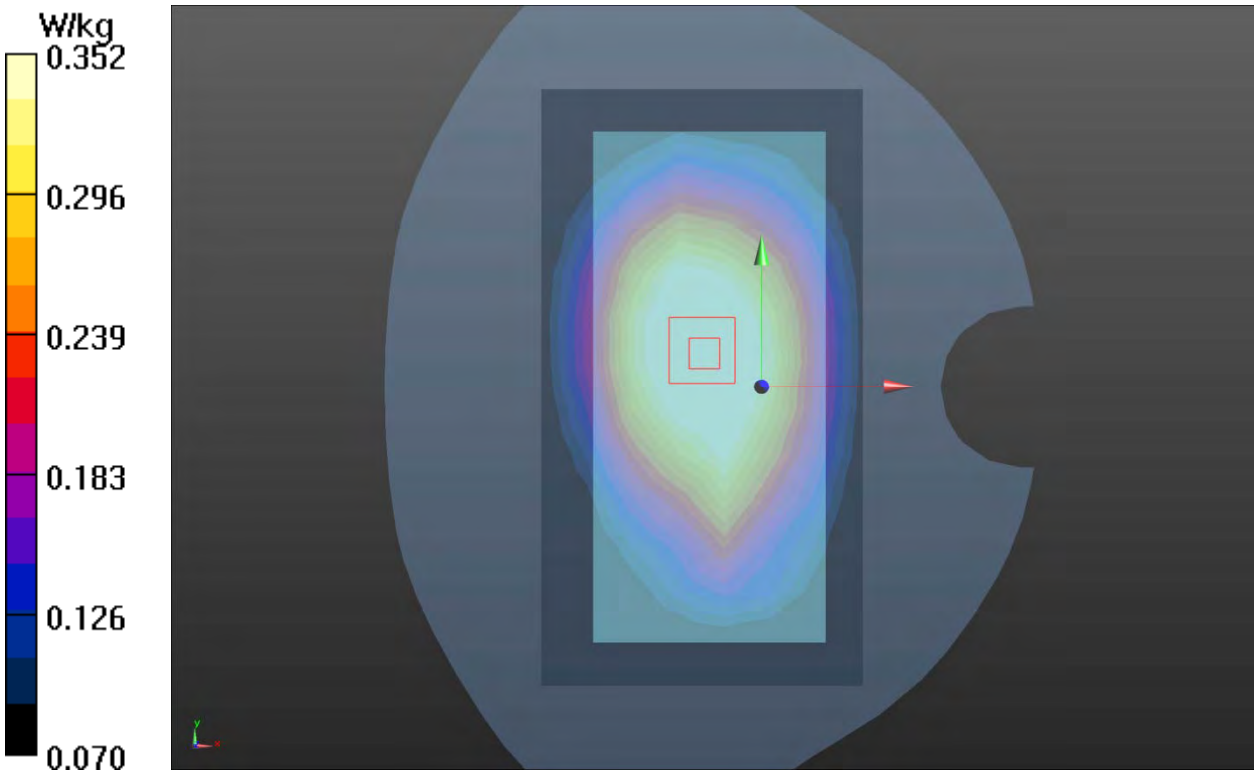
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.56 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.411 W/kg

SAR(1 g) = 0.336 W/kg; SAR(10 g) = 0.262 W/kg

Maximum value of SAR (measured) = 0.352 W/kg

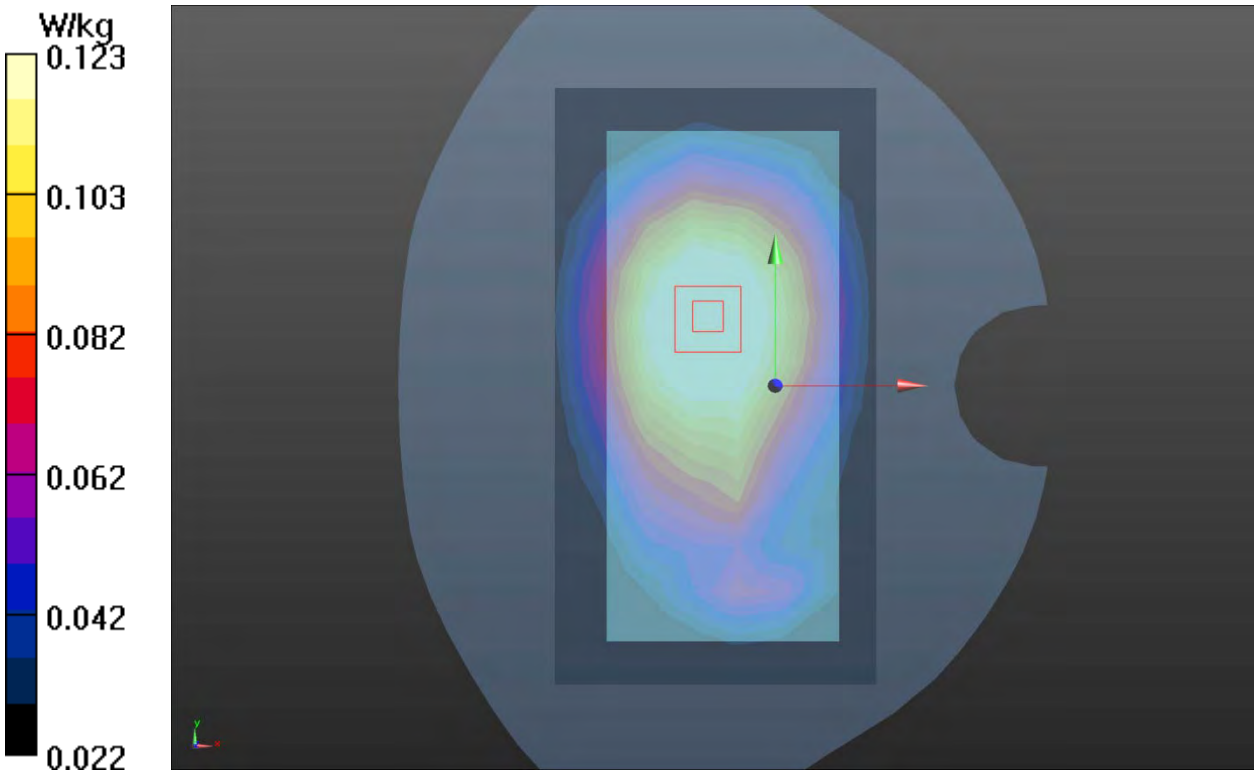


Plot 30 LTE Band 13 1RB Back Side Middle (Distance 15mm)

Date: 8/24/2021
Communication System: UID 0, LTE (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782 MHz; σ = 0.887 S/m; ε_r = 42.079; 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 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;
Electronics: DAE4 SN1317; Calibrated: 2/23/2021
Phantom: SAM1; Type: SAM; Serial: TP-1534
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) = 0.121 W/kg

Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.45 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.146 W/kg
SAR(1 g) = 0.118 W/kg; SAR(10 g) = 0.090 W/kg
Maximum value of SAR (measured) = 0.123 W/kg



Plot 31 LTE Band 66 1RB Back Side Low (Distance 15mm)

Date: 8/29/2021

Communication System: UID 0, LTE (0); Frequency: 1720 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1720 MHz; σ = 1.303 S/m; ε_r = 39.467; 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 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

Back Side Low/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.352 W/kg

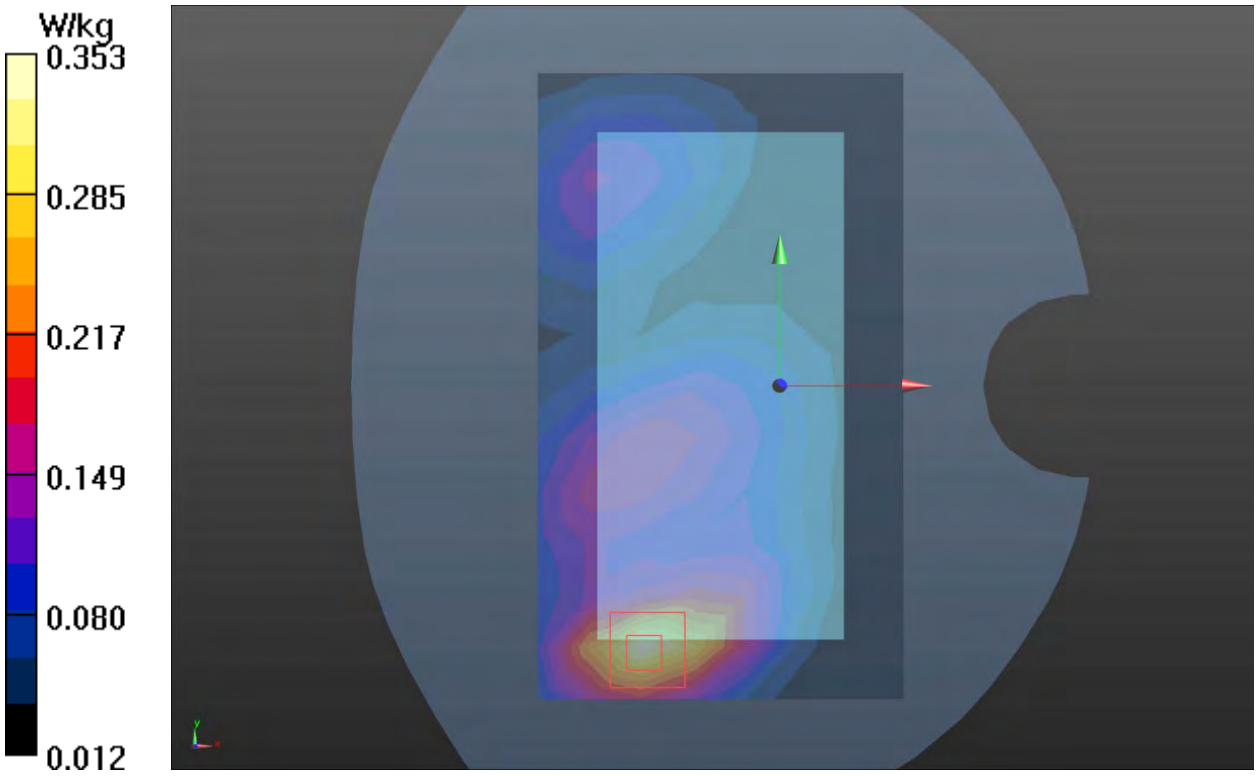
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.482 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.506 W/kg

SAR(1 g) = 0.322 W/kg; SAR(10 g) = 0.192 W/kg

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



Plot 32 802.11b Back Side Middle (Distance 15mm)

Date: 8/30/2021

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

Medium parameters used: f = 2437 MHz; σ = 1.856 S/m; ε_r = 40.836; 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 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.499 W/kg

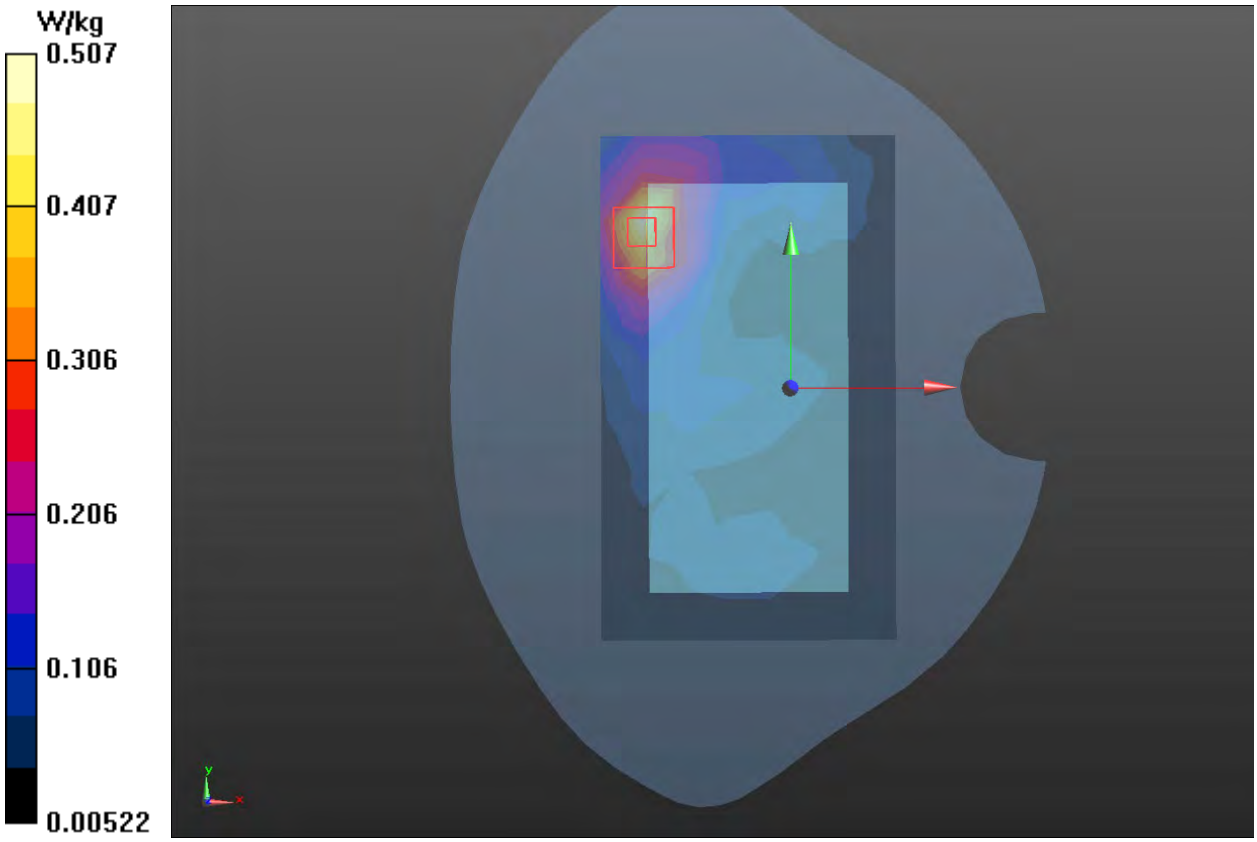
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.820 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.843 W/kg

SAR(1 g) = 0.348 W/kg; SAR(10 g) = 0.175 W/kg

Maximum value of SAR (measured) = 0.507 W/kg



Plot 33 GSM 850 GPRS (4Txslots) Back Side High (Distance 10mm)

Date: 9/2/2021

Communication System: UID 0, GPRS 4TX (0); Frequency: 848.8 MHz;Duty Cycle: 1:2.07

Medium parameters used: f = 848.8 MHz; σ = 0.961 S/m; ε_r = 39.703; 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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

Maximum value of SAR (measured) = 0.458 W/kg

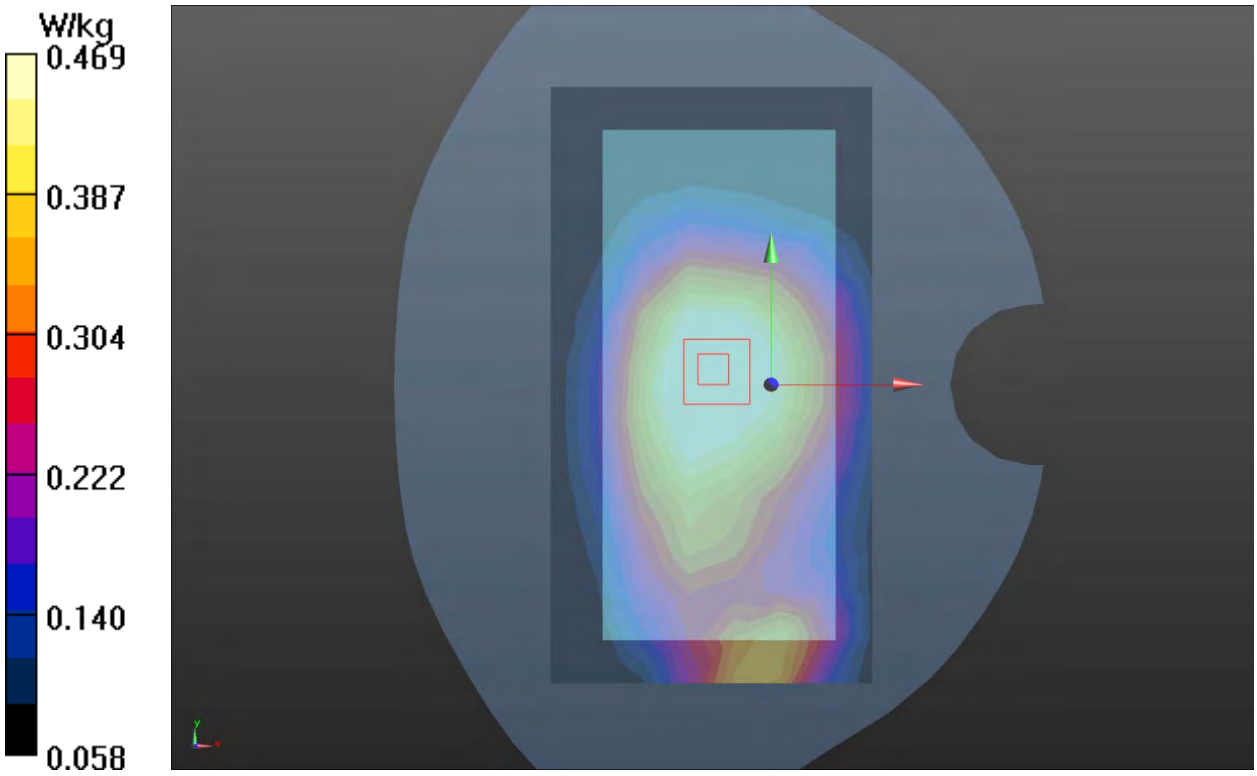
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.78 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.568 W/kg

SAR(1 g) = 0.448 W/kg; SAR(10 g) = 0.338 W/kg

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



Plot 34 GSM 1900 GPRS (2Txslots) Back Side High (Distance 10mm)

Date: 9/23/2021

Communication System: UID 0, GPRS 2TX (0); Frequency: 1909.8 MHz;Duty Cycle: 1:4.15

Medium parameters used: f = 1909.8 MHz; σ = 1.442 S/m; ε_r = 38.826; 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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

Back Side High/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.21 W/kg

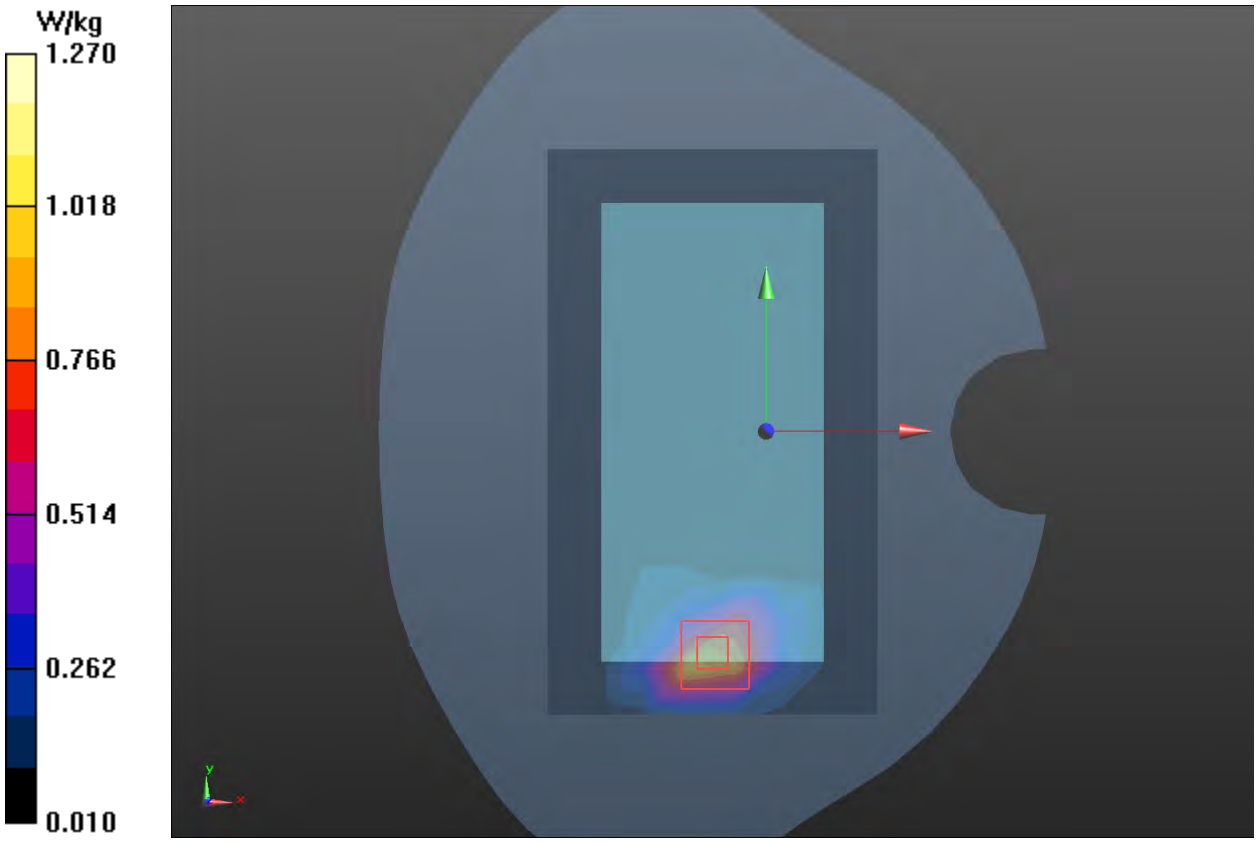
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.324 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.25 W/kg

SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.555 W/kg

Maximum value of SAR (measured) = 1.27 W/kg



Plot 35 UMTS Band II Back Side Low (Distance 10mm)

Date: 9/24/2021

Communication System: UID 0, WCDMA (0); Frequency: 1852.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.4 S/m; ε_r = 39.04; 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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 1.34 W/kg

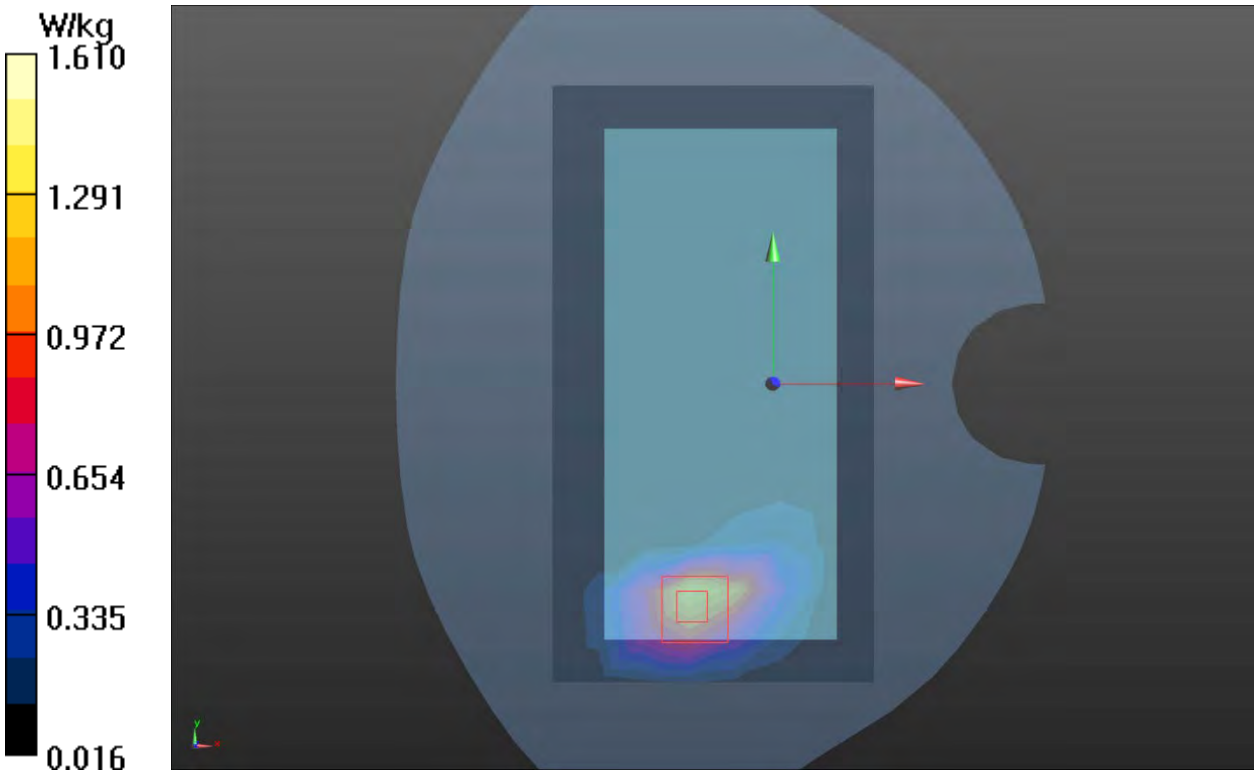
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.326 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.95 W/kg

SAR(1 g) = 1.21 W/kg; SAR(10 g) = 0.633 W/kg

Maximum value of SAR (measured) = 1.61 W/kg



Plot 36 UMTS Band IV Bottom Edge High (Distance 10mm)

Date: 8/29/2021

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

Medium parameters used: f = 1752.6 MHz; σ = 1.329 S/m; ε_r = 39.357; 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 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

Bottom Edge High/Area Scan (4x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.1 W/kg

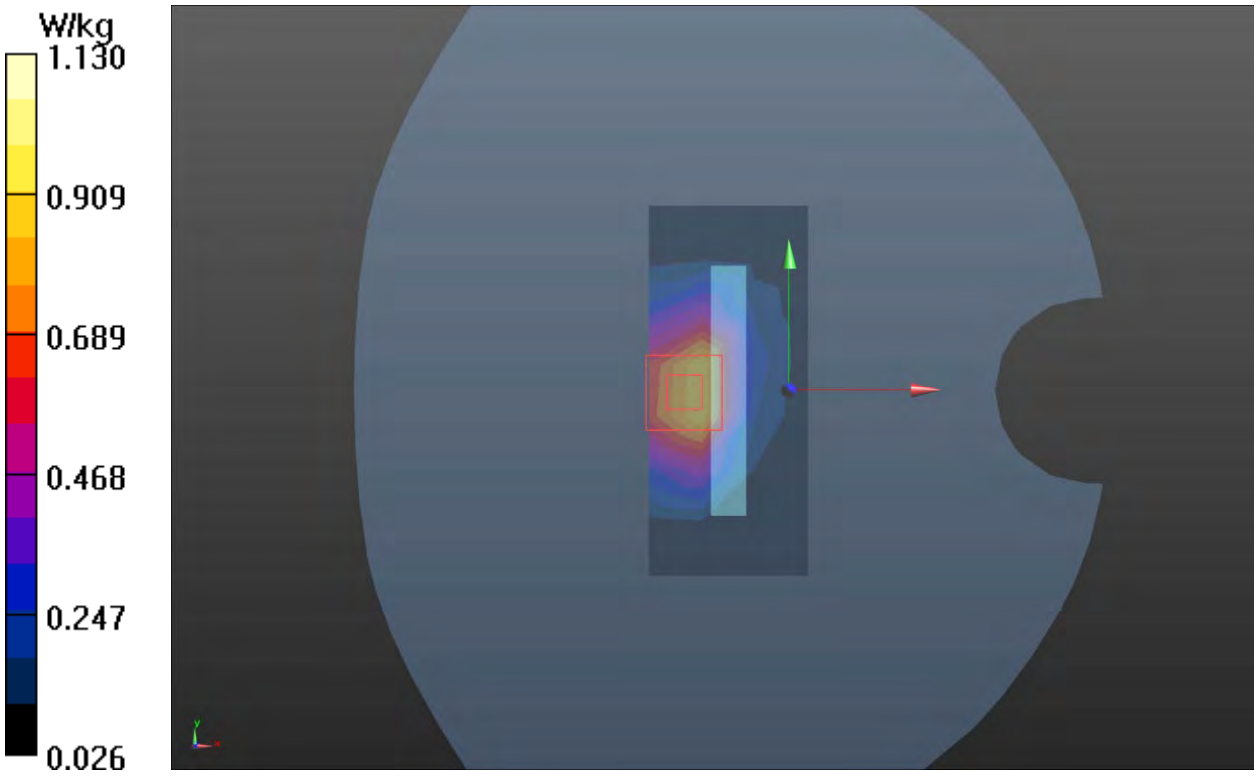
Bottom Edge High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 20.36 V/m; Power Drift = 0.073 dB

Peak SAR (extrapolated) = 1.67 W/kg

SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.568 W/kg

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



Plot 37 UMTS Band V Back Side Low (Distance 10mm)

Date: 9/2/2021

Communication System: UID 0, WCDMA (0); Frequency: 826.4 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated): f = 826.4 MHz; σ = 0.917 S/m; ε_r = 42.224; 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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.247 W/kg

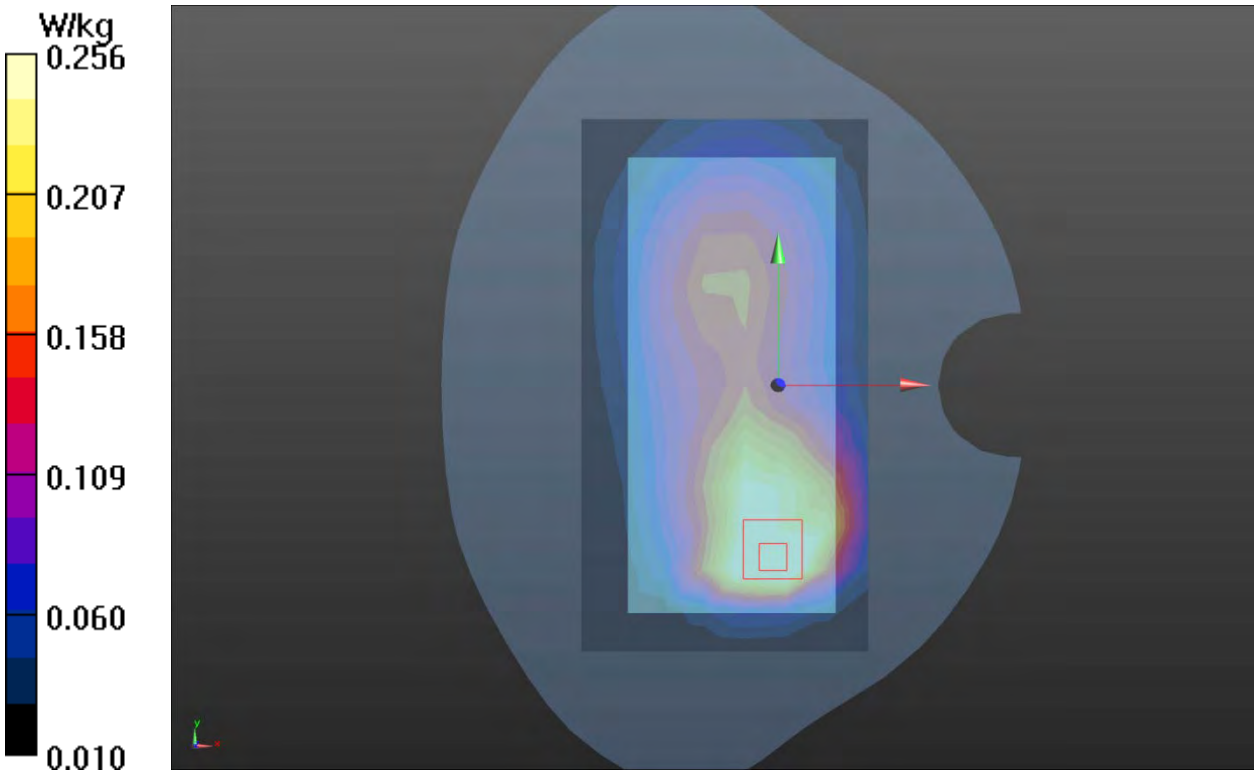
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.66 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.391 W/kg

SAR(1 g) = 0.231 W/kg; SAR(10 g) = 0.140 W/kg

Maximum value of SAR (measured) = 0.256 W/kg



Plot 38 LTE Band 2 1RB Back Side Low (Distance 10mm)

Date: 9/24/2021

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

Medium parameters used: f = 1860 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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 1.58 W/kg

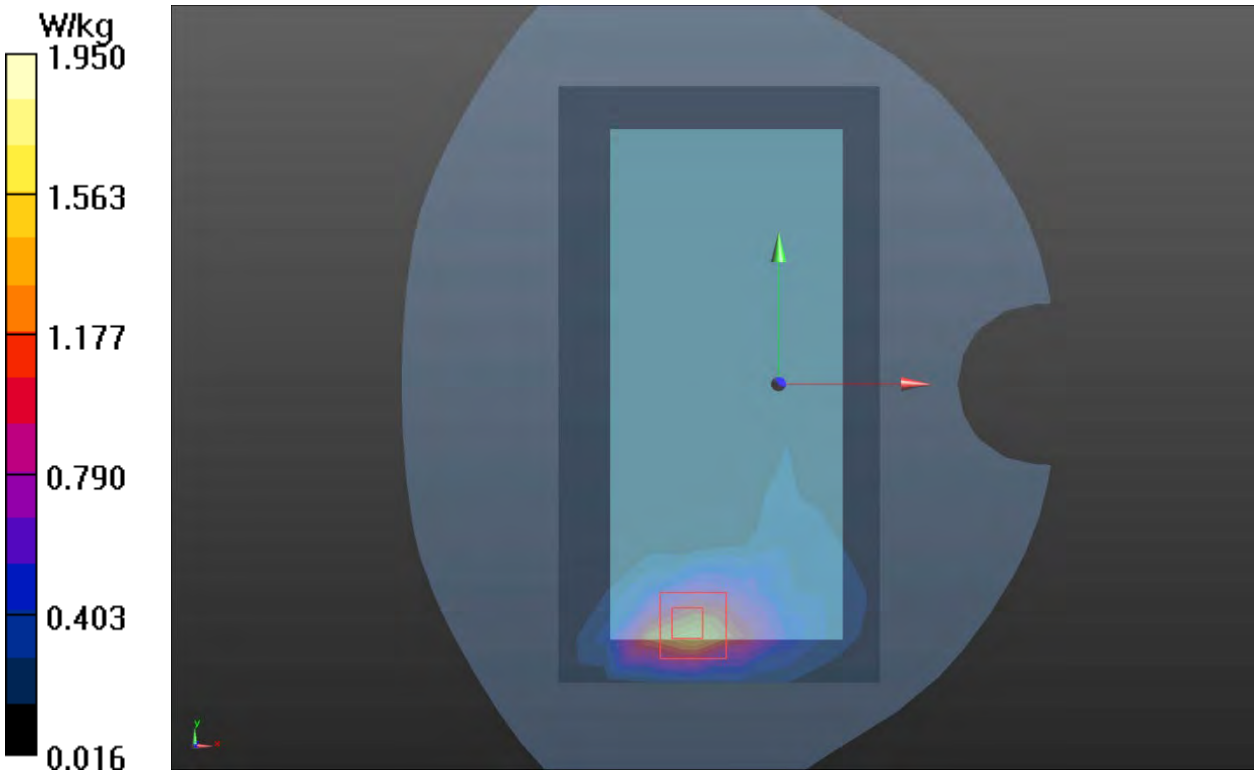
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.947 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.45 W/kg

SAR(1 g) = 1.22 W/kg; SAR(10 g) = 0.604 W/kg

Maximum value of SAR (measured) = 1.95 W/kg



Plot 39 LTE Band 5 1RB Back Side High (Distance 10mm)

Date: 9/2/2021

Communication System: UID 0, LTE (0); Frequency: 844 MHz;Duty Cycle: 1:1

Medium parameters used: f = 844 MHz; σ = 0.928 S/m; ε_r = 42.206; 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 - SN7628; ConvF(10.15, 10.15, 10.15); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

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

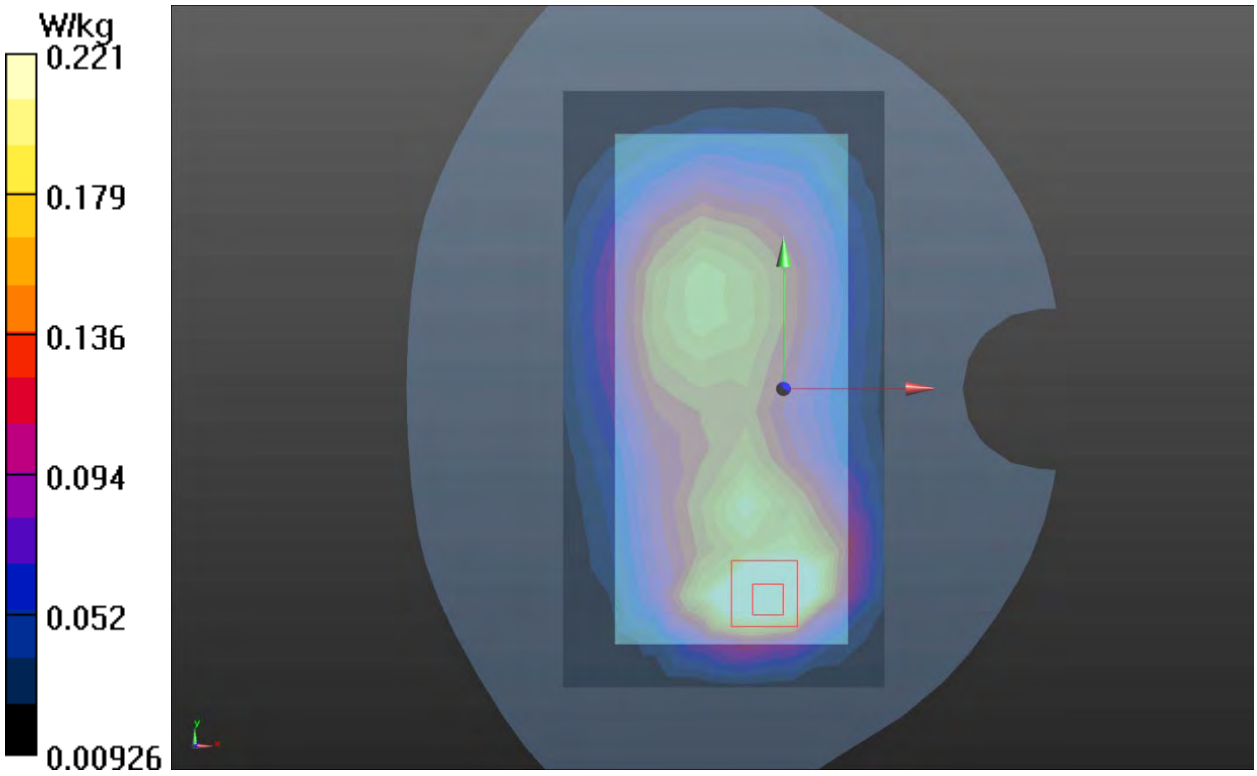
Back Side High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.73 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.353 W/kg

SAR(1 g) = 0.205 W/kg; SAR(10 g) = 0.119 W/kg

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



Plot 40 LTE Band 7 1RB Back Side Middle (Distance 10mm)

Date: 9/16/2021

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

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

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(7.71, 7.71, 7.71); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.56 W/kg

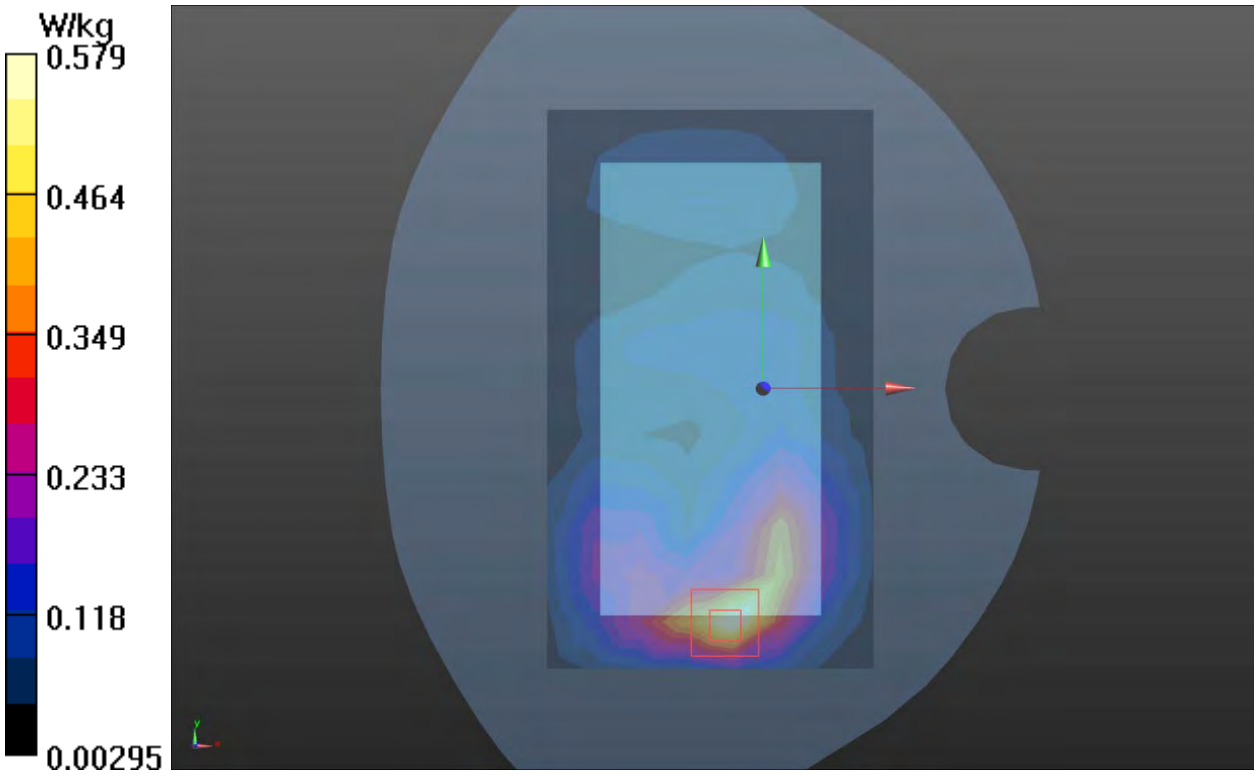
Back Side Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.418 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.557 W/kg; SAR(10 g) = 0.248 W/kg

Maximum value of SAR (measured) = 0.579 W/kg



Plot 41 LTE Band 12 1RB Back Side Low (Distance 10mm)

Date: 8/24/2021

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

Medium parameters used: f = 704 MHz; σ = 0.846 S/m; ε_r = 42.775; 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 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.382 W/kg

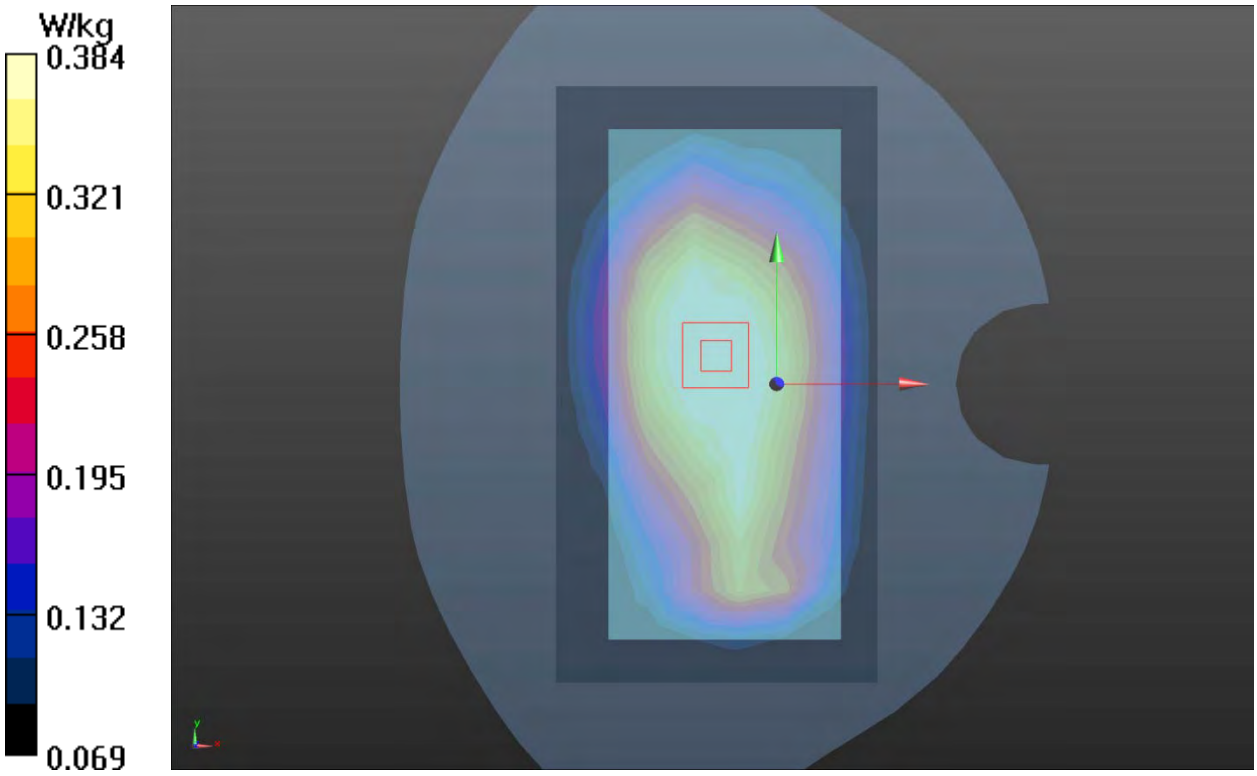
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 23.15 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.424 W/kg

SAR(1 g) = 0.374 W/kg; SAR(10 g) = 0.269 W/kg

Maximum value of SAR (measured) = 0.384 W/kg



Plot 42 LTE Band 13 1RB Back Side Middle (Distance 10mm)

Date: 8/24/2021

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

Medium parameters used: f = 782 MHz; σ = 0.887 S/m; ε_r = 42.079; 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 - SN7628; ConvF(10.48, 10.48, 10.48); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.139 W/kg

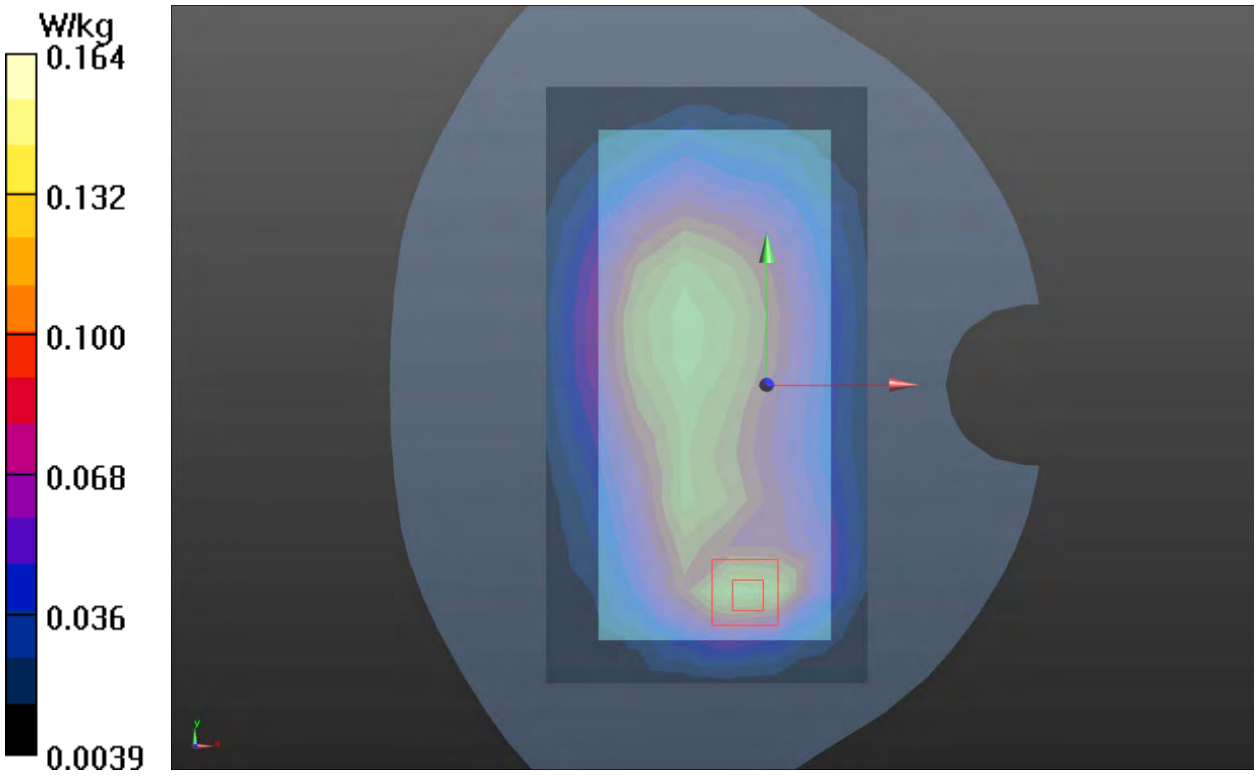
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.34 V/m; Power Drift = 0.028 dB

Peak SAR (extrapolated) = 0.259 W/kg

SAR(1 g) = 0.135 W/kg; SAR(10 g) = 0.095 W/kg

Maximum value of SAR (measured) = 0.164 W/kg



Plot 43 LTE Band 66 1RB Bottom Edge Low (Distance 10mm)

Date: 8/29/2021

Communication System: UID 0, LTE (0); Frequency: 1720 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1720 MHz; σ = 1.303 S/m; ε_r = 39.467; 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 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

Bottom Edge Low/Area Scan (4x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.26 W/kg

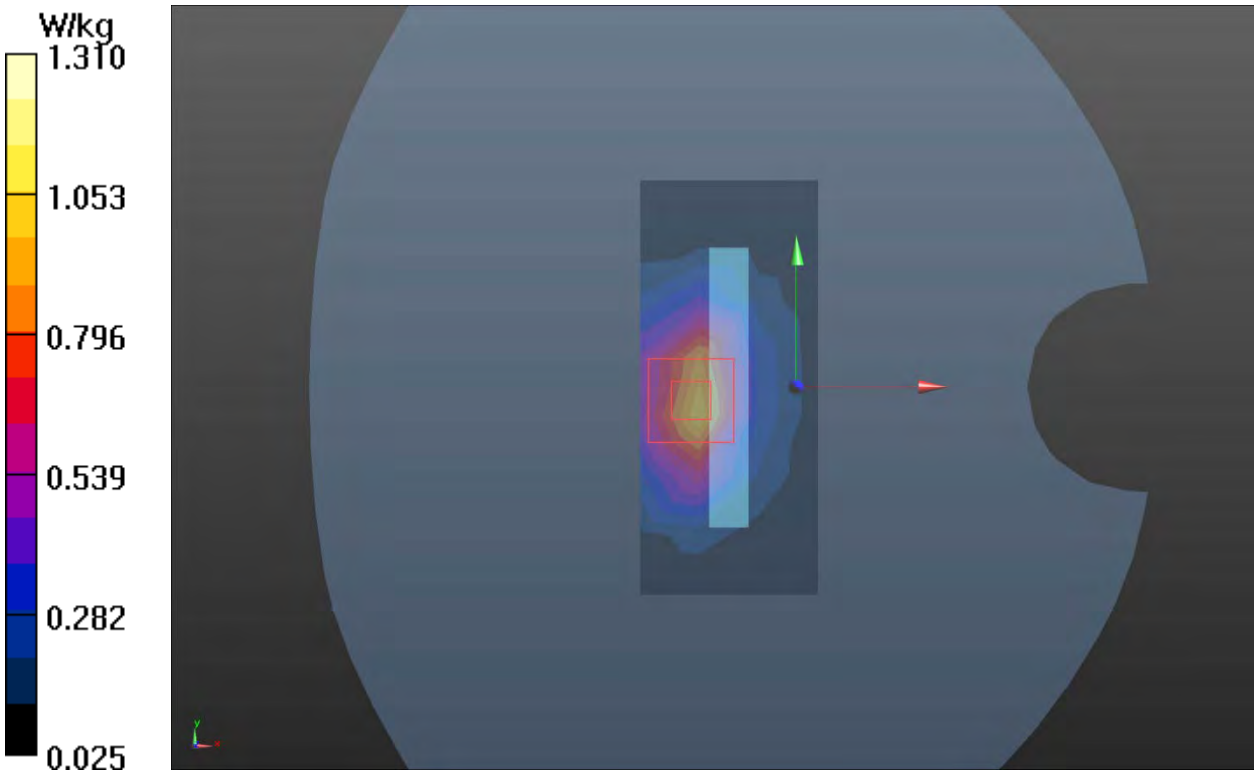
Bottom Edge Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.92 V/m; Power Drift = 0.021 dB

Peak SAR (extrapolated) = 1.63 W/kg

SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.668 W/kg

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



Plot 44 802.11b Back Side Low (Distance 10mm)

Date: 8/30/2021

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

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: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 0.503 W/kg

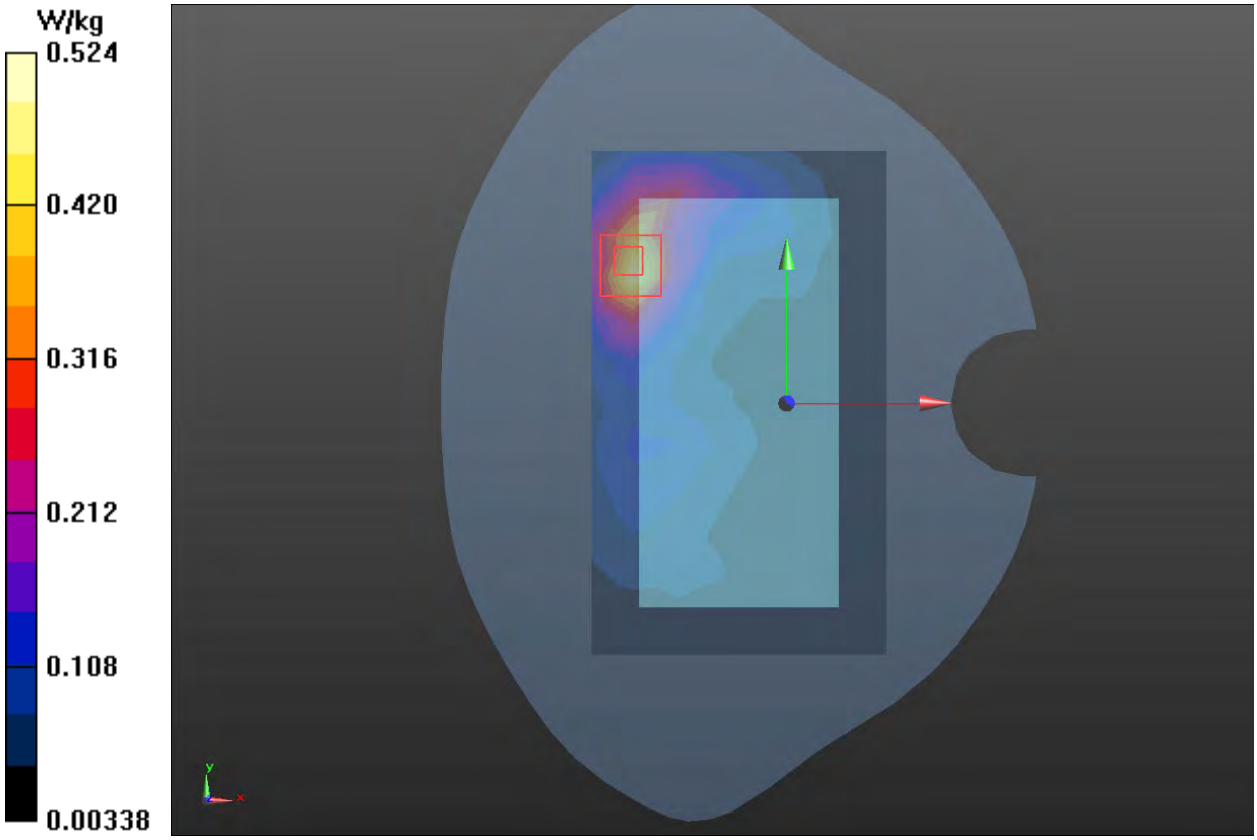
Back Side Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.207 V/m; Power Drift = -0.055 dB

Peak SAR (extrapolated) = 1.03 W/kg

SAR(1 g) = 0.488 W/kg; SAR(10 g) = 0.238 W/kg

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



Plot 45 Bluetooth Back Side High (Distance 10mm)

Date: 8/30/2021

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

Medium parameters used: f = 2480 MHz; σ = 1.878 S/m; εr = 37.511; ρ = 1000 kg/m3

Ambient Temperature:22.3 ℃ Liquid Temperature: 21.5℃

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN7628; ConvF(8.01, 8.01, 8.01); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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

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

Maximum value of SAR (measured) = 0.071 W/kg

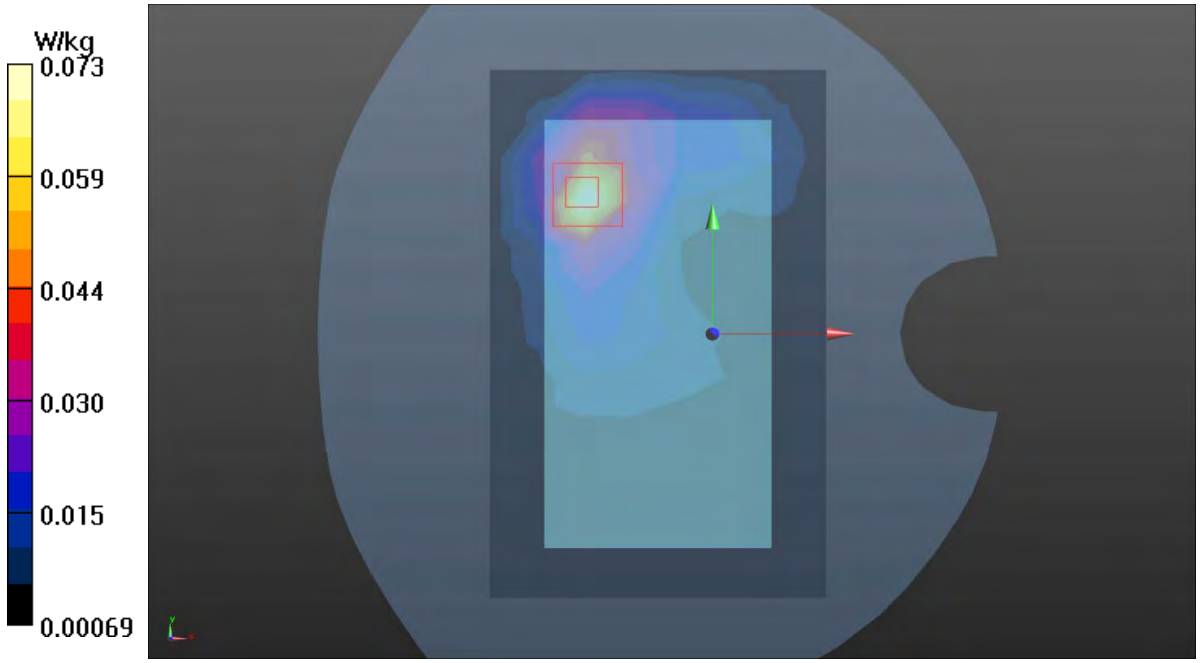
Back Side High//Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.493 V/m; Power Drift = 0.085 dB

Peak SAR (extrapolated) = 0.154 W/kg

SAR(1 g) = 0.067 W/kg; SAR(10 g) = 0.030 W/kg

Maximum value of SAR (measured) = 0.0730 W/kg



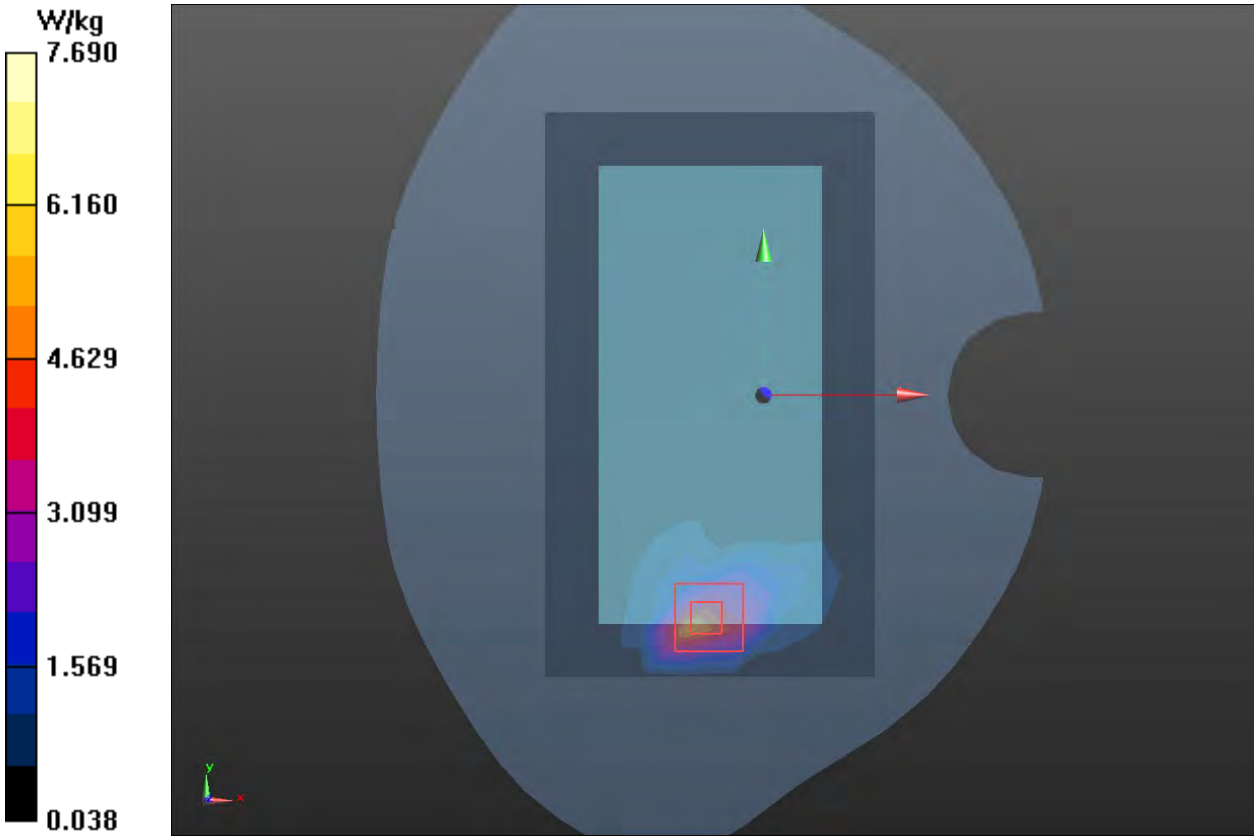
Plot 46 GSM 1900 GPRS (2Txslots) Back Side Middle (Distance 0mm)

Date: 9/24/2021
Communication System: UID 0, GPRS 2TX (0); Frequency: 1880 MHz;Duty Cycle: 1:4.15
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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;
Electronics: DAE4 SN1317; Calibrated: 2/23/2021
Phantom: SAM1; Type: SAM; Serial: TP-1534
Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Back Side Middle/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 6.93 W/kg

Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.283 V/m; Power Drift = 0.063 dB
Peak SAR (extrapolated) = 14.9 W/kg
SAR(1 g) = 6.32 W/kg; SAR(10 g) = 2.62 W/kg

Maximum value of SAR (measured) = 7.69 W/kg



Plot 47 UMTS Band II Back Side Middle(Distance 0mm)

Date: 9/24/2021

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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 11.3 W/kg

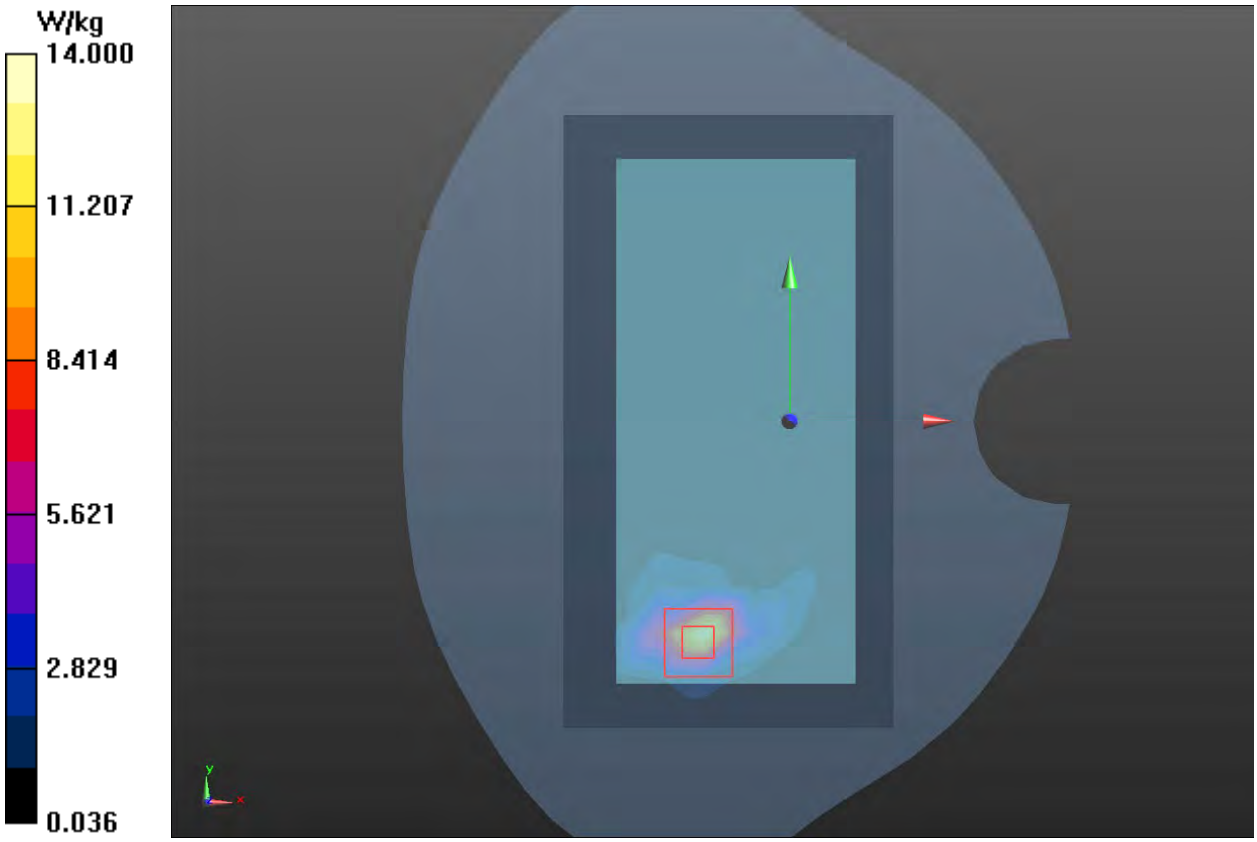
Back Side Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.221 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 18.7 W/kg

SAR(1 g) = 7.03 W/kg; SAR(10 g) = 2.76 W/kg

Maximum value of SAR (measured) = 14.0 W/kg



Plot 48 LTE Band 2 1RB Back Side Low (Distance 0mm)

Date: 9/24/2021

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 - SN7628; ConvF(8.38, 8.38, 8.38); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 6.56 W/kg

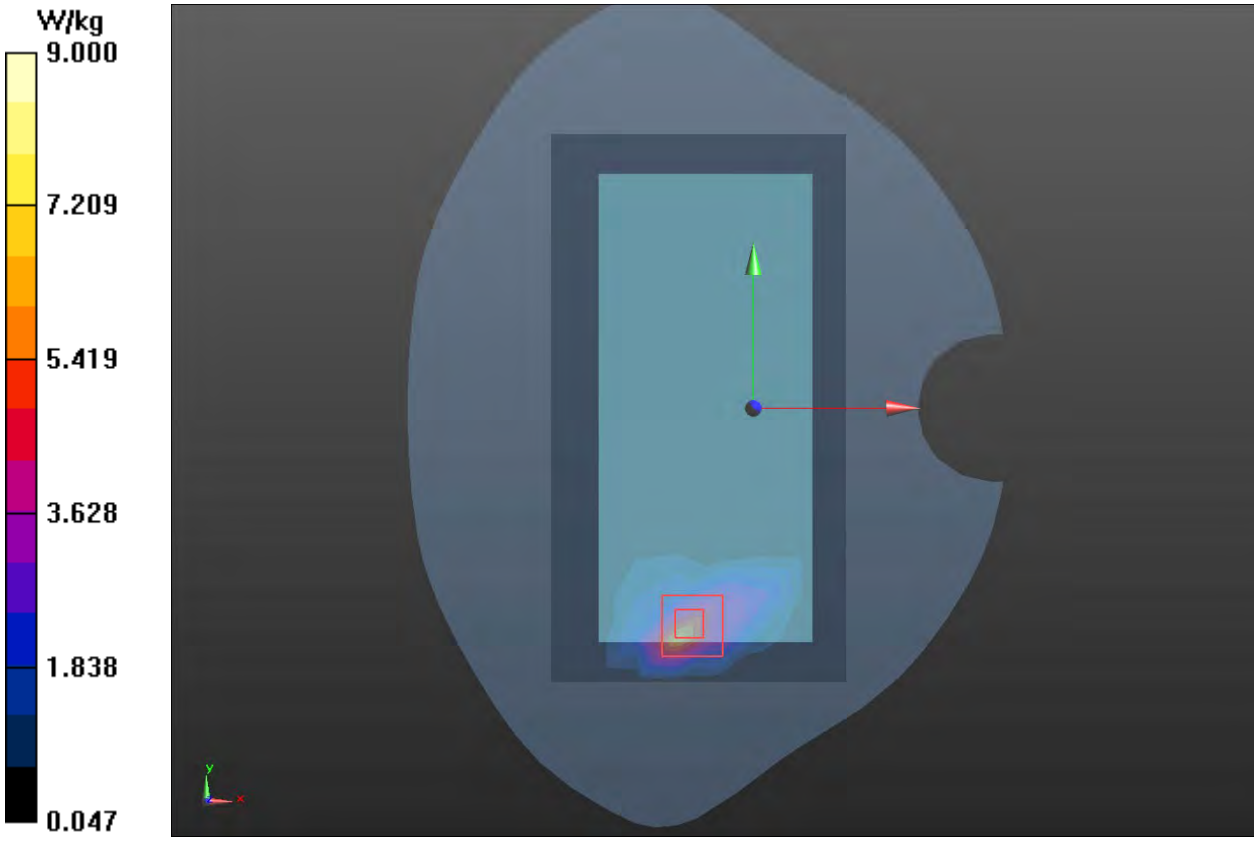
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.134 V/m; Power Drift = 0.061 dB

Peak SAR (extrapolated) = 14.0 W/kg

SAR(1 g) = 6.05 W/kg; SAR(10 g) = 2.56 W/kg

Maximum value of SAR (measured) = 9.00 W/kg



Plot 49 LTE Band 66 1RB Back Side Low (Distance 0mm)

Date: 8/29/2021

Communication System: UID 0, LTE (0); Frequency: 1720 MHz;Duty Cycle: 1:1

Medium parameters used: f = 1720 MHz; σ = 1.303 S/m; ε_r = 39.467; 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 - SN7628; ConvF(8.76, 8.76, 8.76); Calibrated: 2/16/2021;

Electronics: DAE4 SN1317; Calibrated: 2/23/2021

Phantom: SAM1; Type: SAM; Serial: TP-1534

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) = 8.21 W/kg

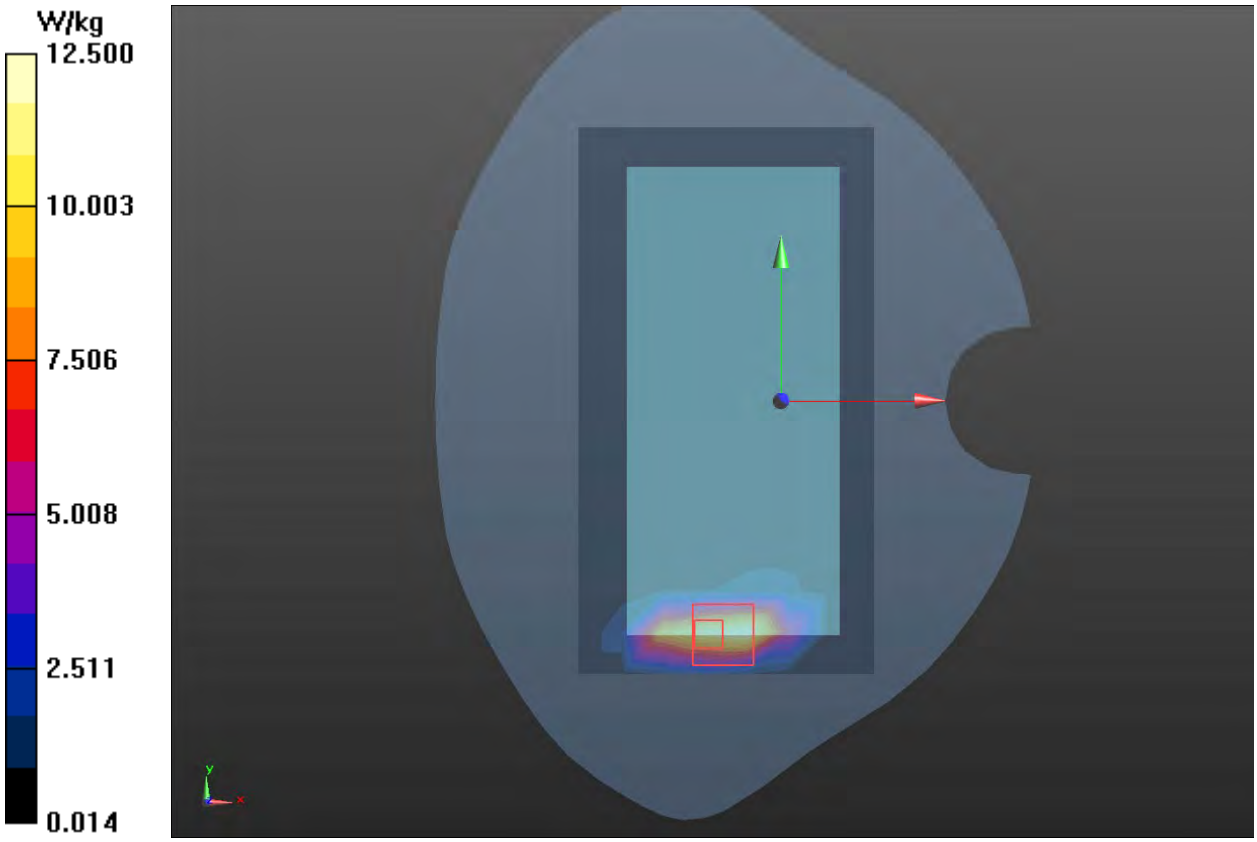
Back Side Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.830 V/m; Power Drift = 0.077 dB

Peak SAR (extrapolated) = 15.5 W/kg

SAR(1 g) = 6.82 W/kg; SAR(10 g) = 3.1 W/kg

Maximum value of SAR (measured) = 12.5 W/kg



ANNEX D: Probe Calibration Certificate

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **Auden** Certificate No: **EX3-7628_Feb21**

CALIBRATION CERTIFICATE

Object EX3DV4 - SN:7628

Calibration procedure(s) QA CAL-01.v9, QA CAL-14.v6, QA CAL-23.v5, QA CAL-25.v7
Calibration procedure for dosimetric E-field probes

Calibration date: February 16, 2021

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

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

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	01-Apr-20 (No. 217-03100/03101)	Apr-21
Power sensor NRP-Z91	SN: 103244	01-Apr-20 (No. 217-03100)	Apr-21
Power sensor NRP-Z91	SN: 103245	01-Apr-20 (No. 217-03101)	Apr-21
Reference 20 dB Attenuator	SN: CC2552 (20x)	31-Mar-20 (No. 217-03106)	Apr-21
DAE4	SN: 660	23-Dec-20 (No. DAE4-660_Dec20)	Dec-21
Reference Probe ES3DV2	SN: 3013	30-Dec-20 (No. ES3-3013_Dec20)	Dec-21
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-20)	In house check: Jun-22
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-20)	In house check: Jun-22
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-21

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: February 16, 2021

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

Certificate No: EX3-7628_Feb21 Page 1 of 23

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) Accreditation No.: SCS 0108
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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy):* in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset:* The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle:* The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

EX3DV4 – SN:7628 February 16, 2021

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.61	0.56	0.61	± 10.1 %
DCP (mV)[B]	109.2	108.2	109.0	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max dev.	Max Unc[E] (k=2)
0	CW	X	0.00	0.00	1.00	0.00	149.4	± 2.7 %	± 4.7 %
		Y	0.00	0.00	1.00		155.2		
		Z	0.00	0.00	1.00		166.3		
10352-AAA	Pulse Waveform (200Hz, 10%)	X	1.78	61.75	7.06	10.00	60.0	± 2.9 %	± 9.6 %
		Y	1.55	60.76	6.50		60.0		
		Z	1.58	60.81	6.57		60.0		
10353-AAA	Pulse Waveform (200Hz, 20%)	X	0.85	60.00	5.15	6.99	80.0	± 2.3 %	± 9.6 %
		Y	0.85	60.00	5.03		80.0		
		Z	0.79	60.00	4.98		80.0		
10354-AAA	Pulse Waveform (200Hz, 40%)	X	0.44	60.00	4.18	3.98	95.0	± 2.5 %	± 9.6 %
		Y	8.00	70.00	7.00		95.0		
		Z	0.10	132.92	0.43		95.0		
10355-AAA	Pulse Waveform (200Hz, 60%)	X	0.26	60.00	3.63	2.22	120.0	± 1.6 %	± 9.6 %
		Y	10.15	157.55	9.99		120.0		
		Z	7.49	159.80	25.97		120.0		
10387-AAA	QPSK Waveform, 1 MHz	X	0.71	69.02	16.11	1.00	150.0	± 3.3 %	± 9.6 %
		Y	0.53	63.89	12.42		150.0		
		Z	0.53	63.57	12.67		150.0		
10388-AAA	QPSK Waveform, 10 MHz	X	1.60	69.56	15.90	0.00	150.0	± 1.1 %	± 9.6 %
		Y	1.33	66.14	13.93		150.0		
		Z	1.33	66.05	14.03		150.0		
10396-AAA	64-QAM Waveform, 100 kHz	X	1.78	65.59	16.29	3.01	150.0	± 1.0 %	± 9.6 %
		Y	1.71	64.82	15.85		150.0		
		Z	1.57	63.48	15.49		150.0		
10399-AAA	64-QAM Waveform, 40 MHz	X	2.93	67.49	15.80	0.00	150.0	± 1.4 %	± 9.6 %
		Y	2.81	66.48	15.12		150.0		
		Z	2.80	66.27	15.10		150.0		
10414-AAA	WLAN CCDF, 64-QAM, 40MHz	X	3.83	66.82	15.68	0.00	150.0	± 2.5 %	± 9.6 %
		Y	3.77	66.09	15.24		150.0		
		Z	3.92	66.64	15.56		150.0		

Note: For details on UID parameters see Appendix

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	8.5	59.16	31.40	4.05	0.00	4.90	0.60	0.00	1.00
Y	9.3	65.93	32.35	4.45	0.00	4.92	0.54	0.00	1.00
Z	9.2	65.89	32.86	1.60	0.00	4.90	0.18	0.00	1.00

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-144.2
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Note: Measurement distance from surface can be increased to 3-4 mm for an *Area Scan* job.

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DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
750	41.9	0.89	10.48	10.48	10.48	0.43	0.80	± 12.0 %
835	41.5	0.90	10.15	10.15	10.15	0.46	0.80	± 12.0 %
900	41.5	0.97	9.77	9.77	9.77	0.51	0.86	± 12.0 %
1450	40.5	1.20	9.03	9.03	9.03	0.35	0.80	± 12.0 %
1750	40.1	1.37	8.76	8.76	8.76	0.28	0.86	± 12.0 %
1900	40.0	1.40	8.38	8.38	8.38	0.28	0.86	± 12.0 %
2000	40.0	1.40	8.29	8.29	8.29	0.37	0.88	± 12.0 %
2300	39.5	1.67	8.15	8.15	8.15	0.36	0.92	± 12.0 %
2450	39.2	1.80	8.01	8.01	8.01	0.27	0.92	± 12.0 %
2600	39.0	1.96	7.71	7.71	7.71	0.40	0.92	± 12.0 %
3300	38.2	2.71	7.24	7.24	7.24	0.30	1.35	± 13.1 %
3500	37.9	2.91	7.04	7.04	7.04	0.30	1.35	± 13.1 %
3700	37.7	3.12	7.00	7.00	7.00	0.35	1.35	± 13.1 %
3900	37.5	3.32	6.83	6.83	6.83	0.35	1.50	± 13.1 %
4100	37.2	3.53	6.73	6.73	6.73	0.35	1.50	± 13.1 %
4200	37.1	3.63	6.46	6.46	6.46	0.35	1.60	± 13.1 %
4400	36.9	3.84	6.39	6.39	6.39	0.35	1.60	± 13.1 %
4600	36.7	4.04	6.12	6.12	6.12	0.35	1.70	± 13.1 %
4800	36.4	4.25	6.16	6.16	6.16	0.40	1.80	± 13.1 %
4950	36.3	4.40	5.94	5.94	5.94	0.40	1.80	± 13.1 %
5250	35.9	4.71	5.51	5.51	5.51	0.40	1.80	± 13.1 %
5600	35.5	5.07	5.00	5.00	5.00	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.95	4.95	4.95	0.40	1.80	± 13.1 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

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

DASY/EASY - Parameters of Probe: EX3DV4 - SN:7628

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
6500	34.5	6.07	5.50	5.50	5.50	0.20	2.50	± 18.6 %
7000	33.9	6.65	5.60	5.60	5.60	0.25	2.50	± 18.6 %
8000	32.7	7.84	5.40	5.40	5.40	0.50	1.50	± 18.6 %
9000	31.5	9.08	5.35	5.35	5.35	0.50	1.80	± 18.6 %

[C] Frequency validity above 6GHz is ± 700 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band.
[F] At frequencies 6-10 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.
[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz; below ± 2% for frequencies between 3-6 GHz; and below ± 4% for frequencies between 6-10 GHz at any distance larger than half the probe tip diameter from the boundary.

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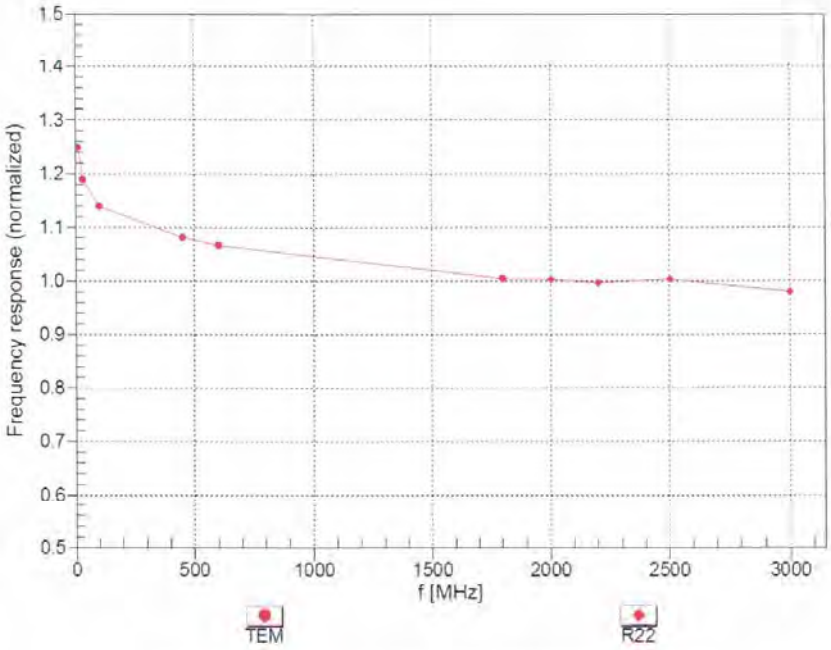
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

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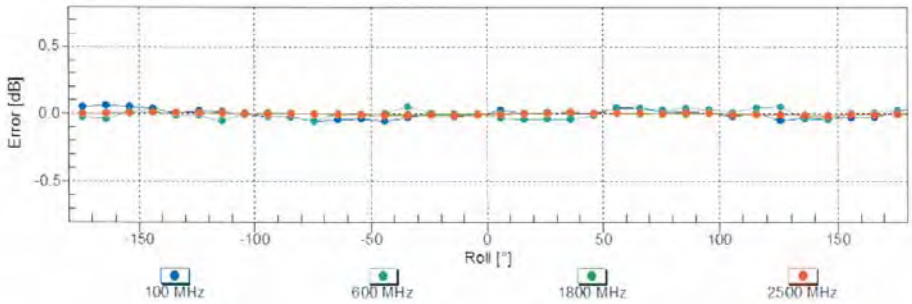
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM

f=1800 MHz,R22



Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

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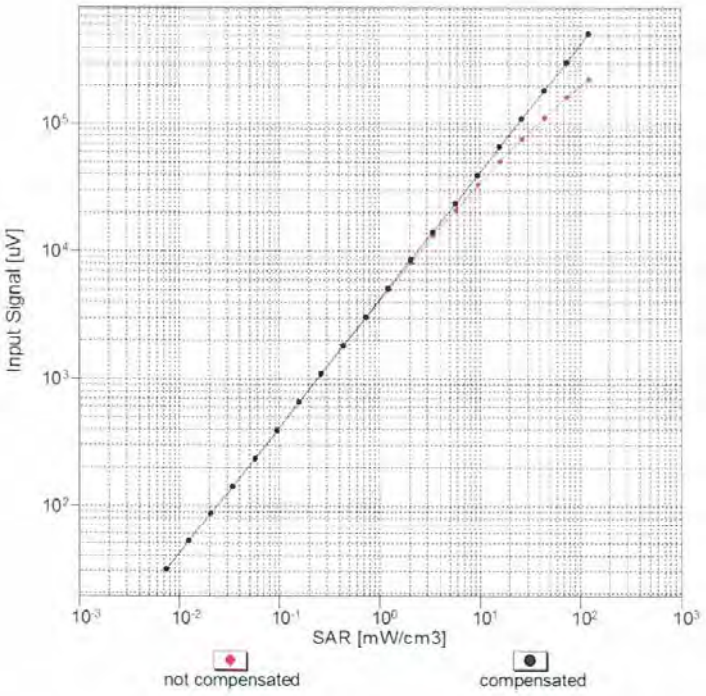
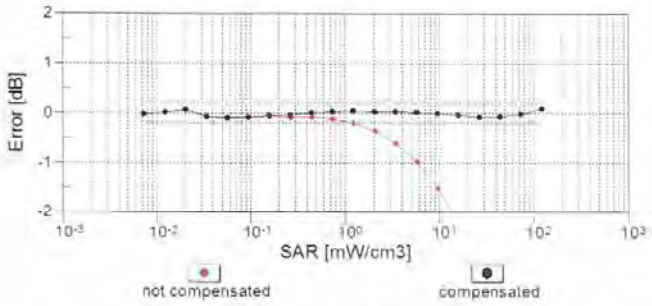
Dynamic Range f(SAR_{head})
(TEM cell , f_{eval}= 1900 MHz)





Uncertainty of Linearity Assessment: ± 0.6% (k=2)

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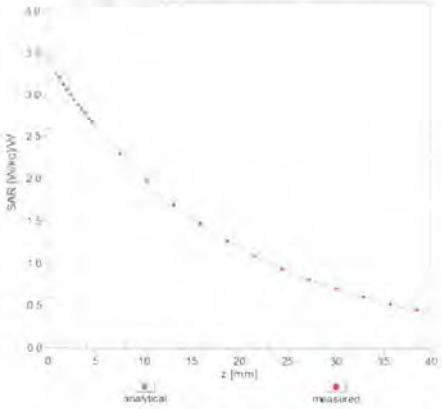
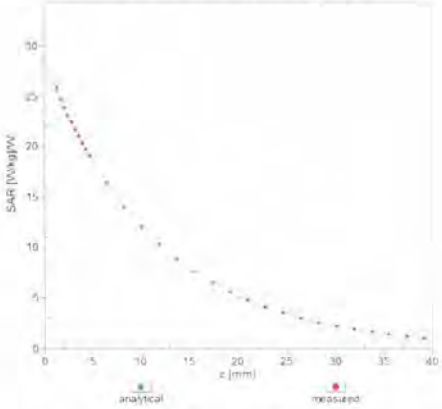
Conversion Factor Assessment

f = 835 MHz,WGLS R9 (H_convF)

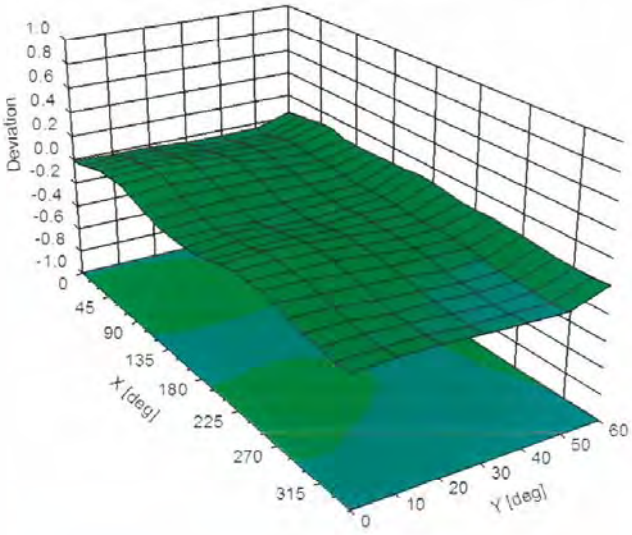


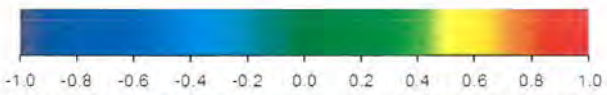
f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

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Appendix: Modulation Calibration Parameters

UID	Rev	Communication System Name	Group	PAR (dB)	Unc^E (k=2)
0		CW	CW	0.00	± 4.7 %
10010	CAA	SAR Validation (Square, 100ms, 10ms)	Test	10.00	± 9.6 %
10011	CAB	UMTS-FDD (WCDMA)	WCDMA	2.91	± 9.6 %
10012	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps)	WLAN	1.87	± 9.6 %
10013	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps)	WLAN	9.46	± 9.6 %
10021	DAC	GSM-FDD (TDMA, GMSK)	GSM	9.39	± 9.6 %
10023	DAC	GPRS-FDD (TDMA, GMSK, TN 0)	GSM	9.57	± 9.6 %
10024	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1)	GSM	6.56	± 9.6 %
10025	DAC	EDGE-FDD (TDMA, 8PSK, TN 0)	GSM	12.62	± 9.6 %
10026	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1)	GSM	9.55	± 9.6 %
10027	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2)	GSM	4.80	± 9.6 %
10028	DAC	GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)	GSM	3.55	± 9.6 %
10029	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2)	GSM	7.78	± 9.6 %
10030	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH1)	Bluetooth	5.30	± 9.6 %
10031	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH3)	Bluetooth	1.87	± 9.6 %
10032	CAA	IEEE 802.15.1 Bluetooth (GFSK, DH5)	Bluetooth	1.16	± 9.6 %
10033	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH1)	Bluetooth	7.74	± 9.6 %
10034	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH3)	Bluetooth	4.53	± 9.6 %
10035	CAA	IEEE 802.15.1 Bluetooth (PI/4-DQPSK, DH5)	Bluetooth	3.83	± 9.6 %
10036	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH1)	Bluetooth	8.01	± 9.6 %
10037	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH3)	Bluetooth	4.77	± 9.6 %
10038	CAA	IEEE 802.15.1 Bluetooth (8-DPSK, DH5)	Bluetooth	4.10	± 9.6 %
10039	CAB	CDMA2000 (1xRTT, RC1)	CDMA2000	4.57	± 9.6 %
10042	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Halfrate)	AMPS	7.78	± 9.6 %
10044	CAA	IS-91/EIA/TIA-553 FDD (FDMA, FM)	AMPS	0.00	± 9.6 %
10048	CAA	DECT (TDD, TDMA/FDM, GFSK, Full Slot, 24)	DECT	13.80	± 9.6 %
10049	CAA	DECT (TDD, TDMA/FDM, GFSK, Double Slot, 12)	DECT	10.79	± 9.6 %
10056	CAA	UMTS-TDD (TD-SCDMA, 1.28 Mcps)	TD-SCDMA	11.01	± 9.6 %
10058	DAC	EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)	GSM	6.52	± 9.6 %
10059	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps)	WLAN	2.12	± 9.6 %
10060	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps)	WLAN	2.83	± 9.6 %
10061	CAB	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)	WLAN	3.60	± 9.6 %
10062	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps)	WLAN	8.68	± 9.6 %
10063	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps)	WLAN	8.63	± 9.6 %
10064	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps)	WLAN	9.09	± 9.6 %
10065	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps)	WLAN	9.00	± 9.6 %
10066	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps)	WLAN	9.38	± 9.6 %
10067	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps)	WLAN	10.12	± 9.6 %
10068	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps)	WLAN	10.24	± 9.6 %
10069	CAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)	WLAN	10.56	± 9.6 %
10071	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 9 Mbps)	WLAN	9.83	± 9.6 %
10072	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 12 Mbps)	WLAN	9.62	± 9.6 %
10073	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 18 Mbps)	WLAN	9.94	± 9.6 %
10074	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 24 Mbps)	WLAN	10.30	± 9.6 %
10075	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 36 Mbps)	WLAN	10.77	± 9.6 %
10076	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 48 Mbps)	WLAN	10.94	± 9.6 %
10077	CAB	IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)	WLAN	11.00	± 9.6 %
10081	CAB	CDMA2000 (1xRTT, RC3)	CDMA2000	3.97	± 9.6 %
10082	CAB	IS-54 / IS-136 FDD (TDMA/FDM, PI/4-DQPSK, Fullrate)	AMPS	4.77	± 9.6 %
10090	DAC	GPRS-FDD (TDMA, GMSK, TN 0-4)	GSM	6.56	± 9.6 %
10097	CAC	UMTS-FDD (HSDPA)	WCDMA	3.98	± 9.6 %
10098	DAC	UMTS-FDD (HSUPA, Subtest 2)	WCDMA	3.98	± 9.6 %

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10099	CAC	EDGE-FDD (TDMA, 8PSK, TN 0-4)	GSM	9.55	± 9.6 %
10100	CAC	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-FDD	5.67	± 9.6 %
10101	CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10102	CAB	LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10103	DAC	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10104	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)	LTE-TDD	9.97	± 9.6 %
10105	CAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)	LTE-TDD	10.01	± 9.6 %
10108	CAE	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-FDD	5.80	± 9.6 %
10109	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10110	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10111	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-FDD	6.44	± 9.6 %
10112	CAG	LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-FDD	6.59	± 9.6 %
10113	CAG	LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10114	CAG	IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10115	CAG	IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)	WLAN	8.46	± 9.6 %
10116	CAG	IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)	WLAN	8.15	± 9.6 %
10117	CAG	IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)	WLAN	8.07	± 9.6 %
10118	CAD	IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)	WLAN	8.59	± 9.6 %
10119	CAD	IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)	WLAN	8.13	± 9.6 %
10140	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10141	CAD	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-FDD	6.53	± 9.6 %
10142	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10143	CAD	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-FDD	6.35	± 9.6 %
10144	CAC	LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-FDD	6.65	± 9.6 %
10145	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-FDD	5.76	± 9.6 %
10146	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.41	± 9.6 %
10147	CAC	LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.72	± 9.6 %
10149	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-FDD	6.42	± 9.6 %
10150	CAE	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10151	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-TDD	9.28	± 9.6 %
10152	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10153	CAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)	LTE-TDD	10.05	± 9.6 %
10154	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-FDD	5.75	± 9.6 %
10155	CAF	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10156	CAF	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-FDD	5.79	± 9.6 %
10157	CAE	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-FDD	6.49	± 9.6 %
10158	CAE	LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-FDD	6.62	± 9.6 %
10159	CAG	LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-FDD	6.56	± 9.6 %
10160	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-FDD	5.82	± 9.6 %
10161	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-FDD	6.43	± 9.6 %
10162	CAG	LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-FDD	6.58	± 9.6 %
10166	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-FDD	5.46	± 9.6 %
10167	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.21	± 9.6 %
10168	CAG	LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.79	± 9.6 %
10169	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10170	CAG	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10171	CAE	LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-FDD	6.49	± 9.6 %
10172	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10173	CAE	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10174	CAF	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10175	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10176	CAF	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10177	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10178	CAE	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10179	AAE	LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10180	CAG	LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %

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10181	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10182	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10183	CAG	LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10184	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10185	CAI	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-FDD	6.51	± 9.6 %
10186	CAG	LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10187	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-FDD	5.73	± 9.6 %
10188	CAG	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-FDD	6.52	± 9.6 %
10189	CAE	LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-FDD	6.50	± 9.6 %
10193	CAE	IEEE 802.11n (HT Greenfield, 6.5 Mbps, BPSK)	WLAN	8.09	± 9.6 %
10194	AAD	IEEE 802.11n (HT Greenfield, 39 Mbps, 16-QAM)	WLAN	8.12	± 9.6 %
10195	CAE	IEEE 802.11n (HT Greenfield, 65 Mbps, 64-QAM)	WLAN	8.21	± 9.6 %
10196	CAE	IEEE 802.11n (HT Mixed, 6.5 Mbps, BPSK)	WLAN	8.10	± 9.6 %
10197	AAE	IEEE 802.11n (HT Mixed, 39 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10198	CAF	IEEE 802.11n (HT Mixed, 65 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10219	CAF	IEEE 802.11n (HT Mixed, 7.2 Mbps, BPSK)	WLAN	8.03	± 9.6 %
10220	AAF	IEEE 802.11n (HT Mixed, 43.3 Mbps, 16-QAM)	WLAN	8.13	± 9.6 %
10221	CAC	IEEE 802.11n (HT Mixed, 72.2 Mbps, 64-QAM)	WLAN	8.27	± 9.6 %
10222	CAC	IEEE 802.11n (HT Mixed, 15 Mbps, BPSK)	WLAN	8.06	± 9.6 %
10223	CAD	IEEE 802.11n (HT Mixed, 90 Mbps, 16-QAM)	WLAN	8.48	± 9.6 %
10224	CAD	IEEE 802.11n (HT Mixed, 150 Mbps, 64-QAM)	WLAN	8.08	± 9.6 %
10225	CAD	UMTS-FDD (HSPA+)	WCDMA	5.97	± 9.6 %
10226	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.49	± 9.6 %
10227	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.26	± 9.6 %
10228	CAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)	LTE-TDD	9.22	± 9.6 %
10229	DAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10230	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10231	CAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK)	LTE-TDD	9.19	± 9.6 %
10232	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10233	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10234	CAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10235	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10236	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10237	CAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10238	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)	LTE-TDD	9.48	± 9.6 %
10239	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)	LTE-TDD	10.25	± 9.6 %
10240	CAB	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK)	LTE-TDD	9.21	± 9.6 %
10241	CAB	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.82	± 9.6 %
10242	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)	LTE-TDD	9.86	± 9.6 %
10243	CAD	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)	LTE-TDD	9.46	± 9.6 %
10244	CAD	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10245	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-TDD	10.06	± 9.6 %
10246	CAG	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10247	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)	LTE-TDD	9.91	± 9.6 %
10248	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)	LTE-TDD	10.09	± 9.6 %
10249	CAG	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK)	LTE-TDD	9.29	± 9.6 %
10250	CAG	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)	LTE-TDD	9.81	± 9.6 %
10251	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)	LTE-TDD	10.17	± 9.6 %
10252	CAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10253	CAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)	LTE-TDD	9.90	± 9.6 %
10254	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)	LTE-TDD	10.14	± 9.6 %
10255	CAB	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK)	LTE-TDD	9.20	± 9.6 %
10256	CAB	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)	LTE-TDD	9.96	± 9.6 %
10257	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)	LTE-TDD	10.08	± 9.6 %
10258	CAD	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)	LTE-TDD	9.34	± 9.6 %
10259	CAD	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)	LTE-TDD	9.98	± 9.6 %

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10260	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)	LTE-TDD	9.97	± 9.6 %
10261	CAG	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK)	LTE-TDD	9.24	± 9.6 %
10262	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)	LTE-TDD	9.83	± 9.6 %
10263	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)	LTE-TDD	10.16	± 9.6 %
10264	CAG	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK)	LTE-TDD	9.23	± 9.6 %
10265	CAG	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)	LTE-TDD	9.92	± 9.6 %
10266	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)	LTE-TDD	10.07	± 9.6 %
10267	CAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK)	LTE-TDD	9.30	± 9.6 %
10268	CAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)	LTE-TDD	10.06	± 9.6 %
10269	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)	LTE-TDD	10.13	± 9.6 %
10270	CAB	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-TDD	9.58	± 9.6 %
10274	CAB	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.10)	WCDMA	4.87	± 9.6 %
10275	CAD	UMTS-FDD (HSUPA, Subtest 5, 3GPP Rel8.4)	WCDMA	3.96	± 9.6 %
10277	CAD	PHS (QPSK)	PHS	11.81	± 9.6 %
10278	CAD	PHS (QPSK, BW 884MHz, Rolloff 0.5)	PHS	11.81	± 9.6 %
10279	CAG	PHS (QPSK, BW 884MHz, Rolloff 0.38)	PHS	12.18	± 9.6 %
10290	CAG	CDMA2000, RC1, SO55, Full Rate	CDMA2000	3.91	± 9.6 %
10291	CAG	CDMA2000, RC3, SO55, Full Rate	CDMA2000	3.46	± 9.6 %
10292	CAG	CDMA2000, RC3, SO32, Full Rate	CDMA2000	3.39	± 9.6 %
10293	CAG	CDMA2000, RC3, SO3, Full Rate	CDMA2000	3.50	± 9.6 %
10295	CAG	CDMA2000, RC1, SO3, 1/8th Rate 25 fr.	CDMA2000	12.49	± 9.6 %
10297	CAF	LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK)	LTE-FDD	5.81	± 9.6 %
10298	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, QPSK)	LTE-FDD	5.72	± 9.6 %
10299	CAF	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM)	LTE-FDD	6.39	± 9.6 %
10300	CAC	LTE-FDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM)	LTE-FDD	6.60	± 9.6 %
10301	CAC	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC)	WiMAX	12.03	± 9.6 %
10302	CAB	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, QPSK, PUSC, 3CTRL)	WiMAX	12.57	± 9.6 %
10303	CAB	IEEE 802.16e WiMAX (31:15, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	12.52	± 9.6 %
10304	CAA	IEEE 802.16e WiMAX (29:18, 5ms, 10MHz, 64QAM, PUSC)	WiMAX	11.86	± 9.6 %
10305	CAA	IEEE 802.16e WiMAX (31:15, 10ms, 10MHz, 64QAM, PUSC)	WiMAX	15.24	± 9.6 %
10306	CAA	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 64QAM, PUSC)	WiMAX	14.67	± 9.6 %
10307	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, PUSC)	WiMAX	14.49	± 9.6 %
10308	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM, PUSC)	WiMAX	14.46	± 9.6 %
10309	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, 16QAM,AMC 2x3)	WiMAX	14.58	± 9.6 %
10310	AAB	IEEE 802.16e WiMAX (29:18, 10ms, 10MHz, QPSK, AMC 2x3	WiMAX	14.57	± 9.6 %
10311	AAB	LTE-FDD (SC-FDMA, 100% RB, 15 MHz, QPSK)	LTE-FDD	6.06	± 9.6 %
10313	AAD	iDEN 1:3	iDEN	10.51	± 9.6 %
10314	AAD	iDEN 1:6	iDEN	13.48	± 9.6 %
10315	AAD	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc dc)	WLAN	1.71	± 9.6 %
10316	AAD	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
10317	AAA	IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc dc)	WLAN	8.36	± 9.6 %
10352	AAA	Pulse Waveform (200Hz, 10%)	Generic	10.00	± 9.6 %
10353	AAA	Pulse Waveform (200Hz, 20%)	Generic	6.99	± 9.6 %
10354	AAA	Pulse Waveform (200Hz, 40%)	Generic	3.98	± 9.6 %
10355	AAA	Pulse Waveform (200Hz, 60%)	Generic	2.22	± 9.6 %
10356	AAA	Pulse Waveform (200Hz, 80%)	Generic	0.97	± 9.6 %
10387	AAA	QPSK Waveform, 1 MHz	Generic	5.10	± 9.6 %
10388	AAA	QPSK Waveform, 10 MHz	Generic	5.22	± 9.6 %
10396	AAA	64-QAM Waveform, 100 kHz	Generic	6.27	± 9.6 %
10399	AAA	64-QAM Waveform, 40 MHz	Generic	6.27	± 9.6 %
10400	AAD	IEEE 802.11ac WiFi (20MHz, 64-QAM, 99pc dc)	WLAN	8.37	± 9.6 %
10401	AAA	IEEE 802.11ac WiFi (40MHz, 64-QAM, 99pc dc)	WLAN	8.60	± 9.6 %
10402	AAA	IEEE 802.11ac WiFi (80MHz, 64-QAM, 99pc dc)	WLAN	8.53	± 9.6 %
10403	AAB	CDMA2000 (1xEV-DO, Rev. 0)	CDMA2000	3.76	± 9.6 %
10404	AAB	CDMA2000 (1xEV-DO, Rev. A)	CDMA2000	3.77	± 9.6 %
10406	AAD	CDMA2000, RC3, SO32, SCH0, Full Rate	CDMA2000	5.22	± 9.6 %

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10410	AAA	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub=2,3,4,7,8,9)	LTE-TDD	7.82	± 9.6 %
10414	AAA	WLAN CCDF, 64-QAM, 40MHz	Generic	8.54	± 9.6 %
10415	AAA	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc dc)	WLAN	1.54	± 9.6 %
10416	AAA	IEEE 802.11g WiFi 2.4 GHz (ERP-OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10417	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10418	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Long)	WLAN	8.14	± 9.6 %
10419	AAA	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 99pc, Short)	WLAN	8.19	± 9.6 %
10422	AAA	IEEE 802.11n (HT Greenfield, 7.2 Mbps, BPSK)	WLAN	8.32	± 9.6 %
10423	AAA	IEEE 802.11n (HT Greenfield, 43.3 Mbps, 16-QAM)	WLAN	8.47	± 9.6 %
10424	AAE	IEEE 802.11n (HT Greenfield, 72.2 Mbps, 64-QAM)	WLAN	8.40	± 9.6 %
10425	AAE	IEEE 802.11n (HT Greenfield, 15 Mbps, BPSK)	WLAN	8.41	± 9.6 %
10426	AAE	IEEE 802.11n (HT Greenfield, 90 Mbps, 16-QAM)	WLAN	8.45	± 9.6 %
10427	AAB	IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)	WLAN	8.41	± 9.6 %
10430	AAB	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1)	LTE-FDD	8.28	± 9.6 %
10431	AAC	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1)	LTE-FDD	8.38	± 9.6 %
10432	AAB	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10433	AAC	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1)	LTE-FDD	8.34	± 9.6 %
10434	AAG	W-CDMA (BS Test Model 1, 64 DPCH)	WCDMA	8.60	± 9.6 %
10435	AAA	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10447	AAA	LTE-FDD (OFDMA, 5 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.56	± 9.6 %
10448	AAA	LTE-FDD (OFDMA, 10 MHz, E-TM 3.1, Clippin 44%)	LTE-FDD	7.53	± 9.6 %
10449	AAC	LTE-FDD (OFDMA, 15 MHz, E-TM 3.1, Cliping 44%)	LTE-FDD	7.51	± 9.6 %
10450	AAA	LTE-FDD (OFDMA, 20 MHz, E-TM 3.1, Clipping 44%)	LTE-FDD	7.48	± 9.6 %
10451	AAA	W-CDMA (BS Test Model 1, 64 DPCH, Clipping 44%)	WCDMA	7.59	± 9.6 %
10453	AAC	Validation (Square, 10ms, 1ms)	Test	10.00	± 9.6 %
10456	AAC	IEEE 802.11ac WiFi (160MHz, 64-QAM, 99pc dc)	WLAN	8.63	± 9.6 %
10457	AAC	UMTS-FDD (DC-HSDPA)	WCDMA	6.62	± 9.6 %
10458	AAC	CDMA2000 (1xEV-DO, Rev. B, 2 carriers)	CDMA2000	6.55	± 9.6 %
10459	AAC	CDMA2000 (1xEV-DO, Rev. B, 3 carriers)	CDMA2000	8.25	± 9.6 %
10460	AAC	UMTS-FDD (WCDMA, AMR)	WCDMA	2.39	± 9.6 %
10461	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10462	AAC	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.30	± 9.6 %
10463	AAD	LTE-TDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10464	AAD	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10465	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10466	AAC	LTE-TDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10467	AAA	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10468	AAF	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10469	AAD	LTE-TDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.56	± 9.6 %
10470	AAD	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10471	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10472	AAC	LTE-TDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10473	AAA	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.82	± 9.6 %
10474	AAC	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10475	AAD	LTE-TDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10477	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.32	± 9.6 %
10478	AAC	LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.57	± 9.6 %
10479	AAC	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10480	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.18	± 9.6 %
10481	AAA	LTE-TDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	± 9.6 %
10482	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.71	± 9.6 %
10483	AAA	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 16-QAM, Sub)	LTE-TDD	8.39	± 9.6 %
10484	AAB	LTE-TDD (SC-FDMA, 50% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.47	± 9.6 %
10485	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.59	± 9.6 %
10486	AAB	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.38	± 9.6 %
10487	AAC	LTE-TDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.60	± 9.6 %

10488	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.70	± 9.6 %
10489	AAC	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	± 9.6 %
10490	AAF	LTE-TDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10491	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10492	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.41	± 9.6 %
10493	AAF	LTE-TDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	± 9.6 %
10494	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10495	AAF	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.37	± 9.6 %
10496	AAE	LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10497	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10498	AAE	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM, UL Sub)	LTE-TDD	8.40	± 9.6 %
10499	AAC	LTE-TDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM, UL Sub)	LTE-TDD	8.68	± 9.6 %
10500	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, QPSK, UL Sub)	LTE-TDD	7.67	± 9.6 %
10501	AAF	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM, UL Sub)	LTE-TDD	8.44	± 9.6 %
10502	AAB	LTE-TDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM, UL Sub)	LTE-TDD	8.52	± 9.6 %
10503	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, QPSK, UL Sub)	LTE-TDD	7.72	± 9.6 %
10504	AAB	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM, UL Sub)	LTE-TDD	8.31	± 9.6 %
10505	AAC	LTE-TDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM, UL Sub)	LTE-TDD	8.54	± 9.6 %
10506	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10507	AAC	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM, UL Sub)	LTE-TDD	8.36	± 9.6 %
10508	AAF	LTE-TDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM, UL Sub)	LTE-TDD	8.55	± 9.6 %
10509	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, QPSK, UL Sub)	LTE-TDD	7.99	± 9.6 %
10510	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM, UL Sub)	LTE-TDD	8.49	± 9.6 %
10511	AAF	LTE-TDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM, UL Sub)	LTE-TDD	8.51	± 9.6 %
10512	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK, UL Sub)	LTE-TDD	7.74	± 9.6 %
10513	AAF	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM, UL Sub)	LTE-TDD	8.42	± 9.6 %
10514	AAE	LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM, UL Sub)	LTE-TDD	8.45	± 9.6 %
10515	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 99pc dc)	WLAN	1.58	± 9.6 %
10516	AAE	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 99pc dc)	WLAN	1.57	± 9.6 %
10517	AAF	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 99pc dc)	WLAN	1.58	± 9.6 %
10518	AAF	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 99pc dc)	WLAN	8.23	± 9.6 %
10519	AAF	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 99pc dc)	WLAN	8.39	± 9.6 %
10520	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 99pc dc)	WLAN	8.12	± 9.6 %
10521	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 99pc dc)	WLAN	7.97	± 9.6 %
10522	AAB	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 99pc dc)	WLAN	8.45	± 9.6 %
10523	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 99pc dc)	WLAN	8.08	± 9.6 %
10524	AAC	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 99pc dc)	WLAN	8.27	± 9.6 %
10525	AAC	IEEE 802.11ac WiFi (20MHz, MCS0, 99pc dc)	WLAN	8.36	± 9.6 %
10526	AAF	IEEE 802.11ac WiFi (20MHz, MCS1, 99pc dc)	WLAN	8.42	± 9.6 %
10527	AAF	IEEE 802.11ac WiFi (20MHz, MCS2, 99pc dc)	WLAN	8.21	± 9.6 %
10528	AAF	IEEE 802.11ac WiFi (20MHz, MCS3, 99pc dc)	WLAN	8.36	± 9.6 %
10529	AAF	IEEE 802.11ac WiFi (20MHz, MCS4, 99pc dc)	WLAN	8.36	± 9.6 %
10531	AAF	IEEE 802.11ac WiFi (20MHz, MCS6, 99pc dc)	WLAN	8.43	± 9.6 %
10532	AAF	IEEE 802.11ac WiFi (20MHz, MCS7, 99pc dc)	WLAN	8.29	± 9.6 %
10533	AAE	IEEE 802.11ac WiFi (20MHz, MCS8, 99pc dc)	WLAN	8.38	± 9.6 %
10534	AAE	IEEE 802.11ac WiFi (40MHz, MCS0, 99pc dc)	WLAN	8.45	± 9.6 %
10535	AAE	IEEE 802.11ac WiFi (40MHz, MCS1, 99pc dc)	WLAN	8.45	± 9.6 %
10536	AAF	IEEE 802.11ac WiFi (40MHz, MCS2, 99pc dc)	WLAN	8.32	± 9.6 %
10537	AAF	IEEE 802.11ac WiFi (40MHz, MCS3, 99pc dc)	WLAN	8.44	± 9.6 %
10538	AAF	IEEE 802.11ac WiFi (40MHz, MCS4, 99pc dc)	WLAN	8.54	± 9.6 %
10540	AAA	IEEE 802.11ac WiFi (40MHz, MCS6, 99pc dc)	WLAN	8.39	± 9.6 %
10541	AAA	IEEE 802.11ac WiFi (40MHz, MCS7, 99pc dc)	WLAN	8.46	± 9.6 %
10542	AAA	IEEE 802.11ac WiFi (40MHz, MCS8, 99pc dc)	WLAN	8.65	± 9.6 %
10543	AAC	IEEE 802.11ac WiFi (40MHz, MCS9, 99pc dc)	WLAN	8.65	± 9.6 %
10544	AAC	IEEE 802.11ac WiFi (80MHz, MCS0, 99pc dc)	WLAN	8.47	± 9.6 %
10545	AAC	IEEE 802.11ac WiFi (80MHz, MCS1, 99pc dc)	WLAN	8.55	± 9.6 %

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10546	AAC	IEEE 802.11ac WiFi (80MHz, MCS2, 99pc dc)	WLAN	8.35	± 9.6 %
10547	AAC	IEEE 802.11ac WiFi (80MHz, MCS3, 99pc dc)	WLAN	8.49	± 9.6 %
10548	AAC	IEEE 802.11ac WiFi (80MHz, MCS4, 99pc dc)	WLAN	8.37	± 9.6 %
10550	AAC	IEEE 802.11ac WiFi (80MHz, MCS6, 99pc dc)	WLAN	8.38	± 9.6 %
10551	AAC	IEEE 802.11ac WiFi (80MHz, MCS7, 99pc dc)	WLAN	8.50	± 9.6 %
10552	AAC	IEEE 802.11ac WiFi (80MHz, MCS8, 99pc dc)	WLAN	8.42	± 9.6 %
10553	AAC	IEEE 802.11ac WiFi (80MHz, MCS9, 99pc dc)	WLAN	8.45	± 9.6 %
10554	AAC	IEEE 802.11ac WiFi (160MHz, MCS0, 99pc dc)	WLAN	8.48	± 9.6 %
10555	AAC	IEEE 802.11ac WiFi (160MHz, MCS1, 99pc dc)	WLAN	8.47	± 9.6 %
10556	AAC	IEEE 802.11ac WiFi (160MHz, MCS2, 99pc dc)	WLAN	8.50	± 9.6 %
10557	AAC	IEEE 802.11ac WiFi (160MHz, MCS3, 99pc dc)	WLAN	8.52	± 9.6 %
10558	AAC	IEEE 802.11ac WiFi (160MHz, MCS4, 99pc dc)	WLAN	8.61	± 9.6 %
10560	AAC	IEEE 802.11ac WiFi (160MHz, MCS6, 99pc dc)	WLAN	8.73	± 9.6 %
10561	AAC	IEEE 802.11ac WiFi (160MHz, MCS7, 99pc dc)	WLAN	8.56	± 9.6 %
10562	AAC	IEEE 802.11ac WiFi (160MHz, MCS8, 99pc dc)	WLAN	8.69	± 9.6 %
10563	AAC	IEEE 802.11ac WiFi (160MHz, MCS9, 99pc dc)	WLAN	8.77	± 9.6 %
10564	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 99pc dc)	WLAN	8.25	± 9.6 %
10565	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 99pc dc)	WLAN	8.45	± 9.6 %
10566	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 99pc dc)	WLAN	8.13	± 9.6 %
10567	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 99pc dc)	WLAN	8.00	± 9.6 %
10568	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 99pc dc)	WLAN	8.37	± 9.6 %
10569	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 99pc dc)	WLAN	8.10	± 9.6 %
10570	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 99pc dc)	WLAN	8.30	± 9.6 %
10571	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 90pc dc)	WLAN	1.99	± 9.6 %
10572	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 2 Mbps, 90pc dc)	WLAN	1.99	± 9.6 %
10573	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 5.5 Mbps, 90pc dc)	WLAN	1.98	± 9.6 %
10574	AAC	IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps, 90pc dc)	WLAN	1.98	± 9.6 %
10575	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 6 Mbps, 90pc dc)	WLAN	8.59	± 9.6 %
10576	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10577	AAC	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	± 9.6 %
10578	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 18 Mbps, 90pc dc)	WLAN	8.49	± 9.6 %
10579	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 24 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
10580	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10581	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 48 Mbps, 90pc dc)	WLAN	8.35	± 9.6 %
10582	AAD	IEEE 802.11g WiFi 2.4 GHz (DSSS-OFDM, 54 Mbps, 90pc dc)	WLAN	8.67	± 9.6 %
10583	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 6 Mbps, 90pc dc)	WLAN	8.59	± 9.6 %
10584	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 9 Mbps, 90pc dc)	WLAN	8.60	± 9.6 %
10585	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 12 Mbps, 90pc dc)	WLAN	8.70	± 9.6 %
10586	AAD	IEEE 802.11a/h WiFi 5 GHz (OFDM, 18 Mbps, 90pc dc)	WLAN	8.49	± 9.6 %
10587	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 24 Mbps, 90pc dc)	WLAN	8.36	± 9.6 %
10588	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 36 Mbps, 90pc dc)	WLAN	8.76	± 9.6 %
10589	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 48 Mbps, 90pc dc)	WLAN	8.35	± 9.6 %
10590	AAA	IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps, 90pc dc)	WLAN	8.67	± 9.6 %
10591	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS0, 90pc dc)	WLAN	8.63	± 9.6 %
10592	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS1, 90pc dc)	WLAN	8.79	± 9.6 %
10593	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS2, 90pc dc)	WLAN	8.64	± 9.6 %
10594	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS3, 90pc dc)	WLAN	8.74	± 9.6 %
10595	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS4, 90pc dc)	WLAN	8.74	± 9.6 %
10596	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS5, 90pc dc)	WLAN	8.71	± 9.6 %
10597	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS6, 90pc dc)	WLAN	8.72	± 9.6 %
10598	AAA	IEEE 802.11n (HT Mixed, 20MHz, MCS7, 90pc dc)	WLAN	8.50	± 9.6 %
10599	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc dc)	WLAN	8.79	± 9.6 %
10600	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS1, 90pc dc)	WLAN	8.88	± 9.6 %
10601	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS2, 90pc dc)	WLAN	8.82	± 9.6 %
10602	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS3, 90pc dc)	WLAN	8.94	± 9.6 %
10603	AAA	IEEE 802.11n (HT Mixed, 40MHz, MCS4, 90pc dc)	WLAN	9.03	± 9.6 %