



SAR TEST REPORT

Applicant Huawei Device Co., Ltd.
FCC ID 2ATEYCTR-LX3
Product Smart phone
Model CTR-LX3
Report No. R2205A0419-S1
Issue Date June 16, 2022

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

Fangying Wei

Prepared by: Fangying Wei

Guangchang Fan

Approved by: Guangchang Fan

TA Technology (Shanghai) Co., Ltd.

No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China

TEL: +86-021-50791141/2/3

FAX: +86-021-50791141/2/3-8000

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1 Test Laboratory

1.1 Notes of the Test Report

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

1.2 Test facility

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

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

A2LA (Certificate Number: 3857.01)

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

1.3 Testing Location

Company: TA Technology (Shanghai) Co., Ltd.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
City: Shanghai
Post code: 201201
Country: P. R. China
Contact: Fan Guangchang
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: fanguangchang@ta-shanghai.com



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	0.23	0.21	0.32	NA
GSM 1900	0.84	0.18	0.60	NA
WCDMA Band II	0.84	0.25	0.83	NA
WCDMA Band IV	0.50	0.25	0.67	NA
WCDMA Band V	0.56	0.22	0.27	NA
LTE FDD 2	0.78	0.27	0.80	NA
LTE FDD 4	0.56	0.43	0.83	NA
LTE FDD 5	0.75	0.22	0.32	NA
LTE FDD 7	0.67	0.36	0.80	NA
LTE FDD 13	0.62	0.24	0.35	NA
LTE FDD 26	0.85	0.23	0.36	NA
LTE TDD 38	0.85	0.47	0.85	NA
LTE FDD 66	0.79	0.85	0.80	NA
Wi-Fi (2.4G)	0.23	0.17	0.62	NA
Wi-Fi (5G)	0.37	0.29	0.53	NA
BT	0.13	<0.1	<0.1	NA
Date of Testing: May 26, 2022 ~ June 12, 2022				
Date of Sample Received: May 17, 2022				
<p>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.</p> <p>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.</p>				



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

Head (W/kg)	Body-worn (W/kg)	Hotspot (W/kg)	Simultaneous Transmission Exposure Conditions (W/kg)
0.85	0.85	0.85	1.14

2) Stand-alone SAR evaluation is not required for BT, more details information see section 10.3.

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

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

3 Description of Equipment under Test

Client Information

Applicant	Huawei Device Co., Ltd.
Applicant address	No.2 of Xincheng Road, Songshan Lake Zone, Dongguan, Guangdong 523808, People's Republic of China
Manufacturer	Huawei Device Co., Ltd.
Manufacturer address	No.2 of Xincheng Road, Songshan Lake Zone, Dongguan, Guangdong 523808, People's Republic of China

General Technologies

Application Purpose	Original Grant		
EUT Stage	Identical Prototype		
Model	CTR-LX3		
SN	A7F6R22423000891		
Hardware Version	LLDM599		
Software Version	12.0.1.108(C900E105R1P1)		
Antenna Type	Internal Antenna		
Device Class	B		
Wi-Fi Hotspot	Wi-Fi 2.4G Wi-Fi 5G		
Power Class	GSM 850: 4 GSM 1900: 1 UMTS Band II/IV/V: 3 LTE FDD 2/4/5/7/13/26/66: 3 LTE TDD 38: 3		
Power Level	GSM 850: level 5 GSM 1900: level 0 UMTS Band II/IV/V: all up bits LTE FDD 2/4/5/7/13/26/66: max power LTE TDD 38: max power		
EUT Accessory			
Accessory	Model	Manufacture	No.
Adapter	HW-100400E01	Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	1
	HW-100400B01	Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	2
		Huawei Technologies Co., Ltd. (Manufacturer: HUIZHOU BYD ELECTRONIC CO., LTD.)	3



	HW-100400U01	Huawei Technologies Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	4
	HW-100400E02	Huawei Device Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	5
	HW-100400B02	Huawei Device Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	6
	HW-100400U02	Huawei Device Co., Ltd. (Manufacturer: ASAP TECHNOLOGY (Jiangxi) CO., LTD)	7
Battery	HB496493EGW	Dongguan NVT Technology Co., Ltd.	1
		Shenzhen Sunwoda Intelligence Technology Co., Ltd.	2
Earphone	MEND1532B52 8A11	Jiangxi Lianchuang Hongsheng Electronic Co. ,LTD.	1
	1293-3283-3.5m m-339	Boluo County Quancheng Electronic Co.,Ltd.	2
	EPAB542-2WH0 5-DH	FOXCONN INTERCONNECT TECHNOLOGY LIMITED	3
USB Cable	WA0046	GUANGXI BROAD TELECOMMUNICATION CO.,LTD	1
	AU2-CHO006H F	FREEPOR T RESOURCES ENTERPRISES (JIANGXI) CO .,LTD	2
	213-00989-0	DONGGUAN MINGJI ELECTRONICS TECHNOLOGY GROUP CO.,LTD	3
	L99UC138-CS- H	LUXSHARE PRECISION INDUSTRY CO.,LTD	4
Note: The EUT is sent from the applicant to TA and the information of the EUT is declared by the applicant.			

Wireless Technology and Frequency Range

Wireless Technology		Modulation	Operating mode	Tx (MHz)
GSM	850	Voice(GMSK) GPRS(GMSK) EGPRS(GMSK,8PSK)	<input type="checkbox"/> Multi-slot Class:8-1UP <input type="checkbox"/> Multi-slot Class:10-2UP <input checked="" type="checkbox"/> Multi-slot Class:12-4UP <input type="checkbox"/> Multi-slot Class:33-4UP	824 ~ 849
	1900			1850 ~ 1910
	Does this device support DTM (Dual Transfer Mode)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
UMTS	Band II	QPSK	HSDPA UE Category:24 HSUPA UE Category:6 DC-HSDPA UE Category:24	1850 ~ 1910
	Band IV			1710 ~ 1755
	Band V			824 ~ 849
LTE	FDD 2	QPSK, 16QAM, 64QAM	Category 7	1850 ~ 1910
	FDD 4			1710 ~ 1755
	FDD 5			824 ~ 849
	FDD 7			2500 ~ 2570
	FDD 13			777 ~ 787
	FDD 26			814 ~ 849
	TDD 38			2570 ~ 2620
	FDD 66			1710 ~ 1780
	Does this device support Carrier Aggregation (CA) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
Does this device support SV-LTE (1xRTT-LTE)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				
BT	2.4G	Version 5.0 BR/EDR + LE		2402 ~2480
Wi-Fi	2.4G	DSSS, OFDM	802.11b/g/n HT20	2412 ~ 2462
		OFDM	802.11n HT40	2422 ~ 2452
	5G	OFDM	802.11a/n HT20/ HT40/ ac VHT20/ VHT40/ VHT80	5150 ~ 5350 5470 ~ 5850
Does this device support MIMO <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No				



4 Test Specification, Methods and Procedures

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

Reference Standards

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

5 Operational Conditions during Test

5.1 Test Positions

5.1.1 Against Phantom Head

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

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

5.1.2 Body Worn Configuration

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

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

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

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

5.1.3 Phablet SAR test considerations

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

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

5.2 Measurement Variability

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

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

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

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

5.3 Test Configuration

5.3.1 GSM Test Configuration

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

Output power of reductions:

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

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

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

5.3.2 UMTS Test Configuration

5.3.2.1 3G SAR Test Reduction Procedure

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

5.3.2.2 Head SAR

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

5.3.2.3 Body-worn accessory SAR

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

5.3.2.4 Release 5 HSDPA Test Configuration

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

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

Table 3: Subtests for UMTS Release 5 HSDPA

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

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

5.3.2.5 Release 6 HSUPA Test Configuration

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

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

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

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

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

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

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

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

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

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

Table 5: HSUPA UE category

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



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

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

5.3.2.6 HSPA 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 6: HS-DSCH UE category

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

5.3.3 LTE Test Configuration

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

A) Spectrum Plots for RB Configurations

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

B) MPR

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

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

C) A-MPR

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

D) Largest channel bandwidth standalone SAR test requirements

1) QPSK with 1 RB allocation

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

2) QPSK with 50% RB allocation

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

3) QPSK with 100% RB allocation

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

4) Higher order modulations

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

E) Other channel bandwidth standalone SAR test requirements

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

5.3.4 Additional requirements for TDD LTE specification

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

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

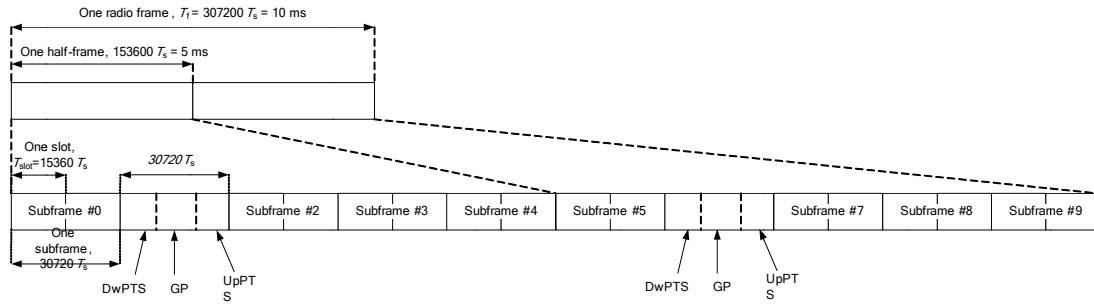


Figure 1: Frame structure type 2

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

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

Table 8: Uplink-downlink configurations

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

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

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

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

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

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

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

And we can get different Duty cycles under different configurations:

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

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

Path: Physical Cell Setup/TDD/Uplink Downlink Configuration

Subframe Number	Direction
0	↓ S
1	↑
2	↑
3	↑
4	↑
5	↓ S
6	↑
7	↑
8	↑
9	↑

LTE Signaling **ON**

5.3.5 Wi-Fi Test Configuration

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

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

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

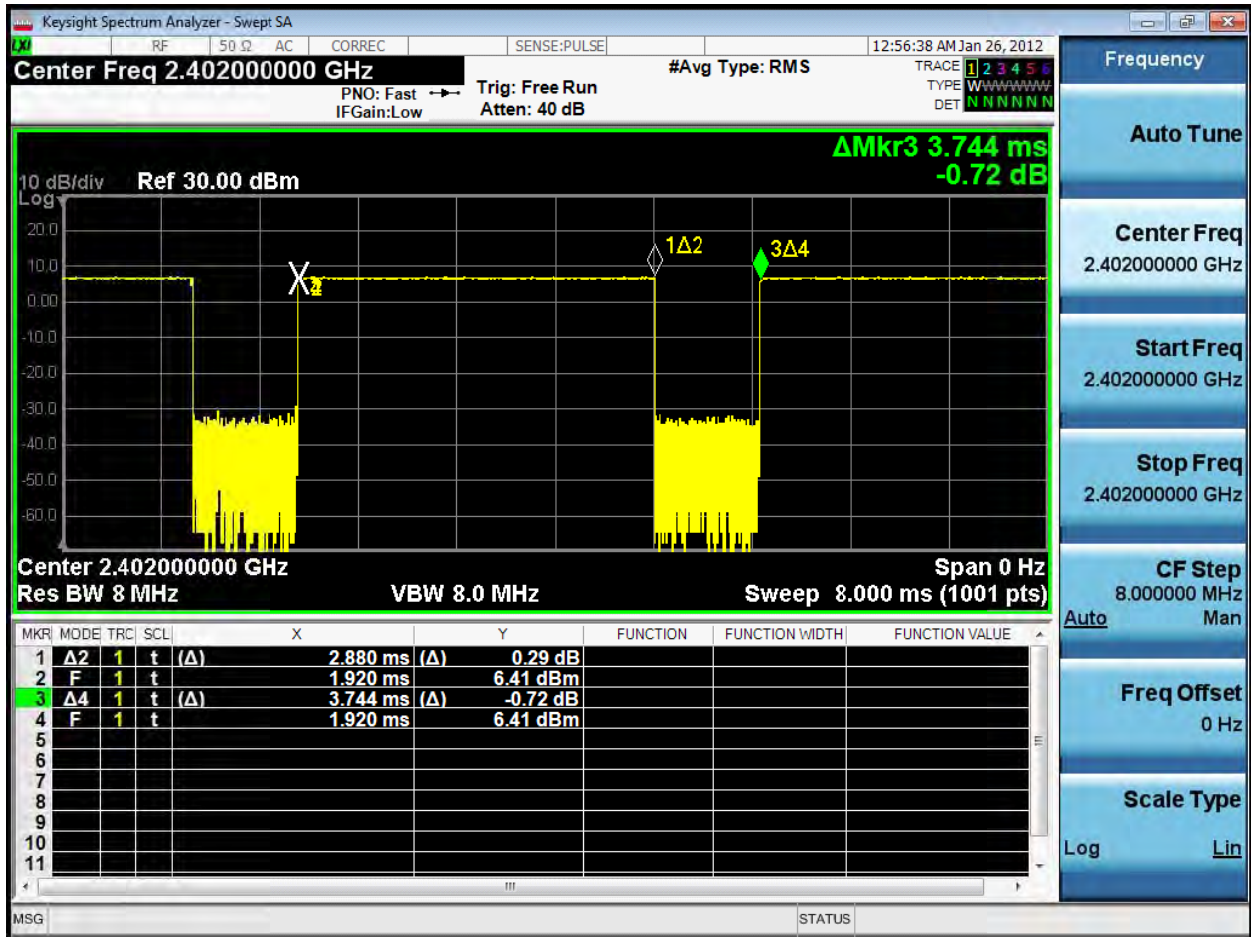
To determine the initial test position, Area Scans were performed to determine the position with the Maximum Value of SAR (measured). The position that produced the highest Maximum Value of SAR is considered the worst case position; thus used as the initial test position.

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

5.3.6 BT Test Configuration

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

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



Note: Duty factor= Ton (ms)/ T(on+off) (ms)=2.880/3.744*100%=77.0%



5.3.7 SAR Reduction detection mechanism specification

This device support the receiver and hotspot detection mechanism, the main purpose is to minimize triggering associated with power reduction scenarios and provide enhanced user experience. It uses the receiver to indicate whether the user is making a call in head scenario or not. The selection between head and body power levels is based on the receiver detection mechanism. It can determine proximity to head or body and set the relevant power level for 2G&3G&4G and Wi-Fi antennas accordingly.

More details information followings:

Main Antenna		Power Reduction Level Amount (dB)													
Power Reduction Scenario	Receiver /Hotspot Mode	GSM850	GSM1900	UMTS B2	UMTS B4	UMTS B5	LTE B2	LTE B4	LTE B5	LTE B7	LTE B13	LTE B26	LTE B38	LTE B66	
Full power	Receiver off	34.00	31.00	24.00	24.00	24.50	24.00	24.50	25.00	24.00	25.00	25.00	24.50	24.50	
	Receiver on	0.00	0.00	4.50	6.00	0.00	4.00	5.00	0.00	5.00	0.00	0.00	3.00	4.50	
Standalone	Receiver off	0.00	2.00	1.00	1.00	0.00	0.50	0.00	0.00	2.00	0.00	0.00	0.50	0.00	
	Hotspot on	0.00	2.00	1.00	2.00	0.00	0.50	0.50	0.00	2.50	0.00	0.00	0.50	0.00	
	Receiver on	0.00	0.00	4.50	6.00	0.00	4.00	5.00	0.00	5.00	0.00	0.00	3.00	4.50	
Simultaneous	Wi-Fi on	Receiver off	0.00	2.00	1.00	1.00	0.00	0.50	0.00	2.00	0.00	0.00	0.50	0.00	
	Hotspot on	0.00	2.00	1.00	2.00	0.00	0.50	0.50	0.00	2.50	0.00	0.00	0.50	0.00	

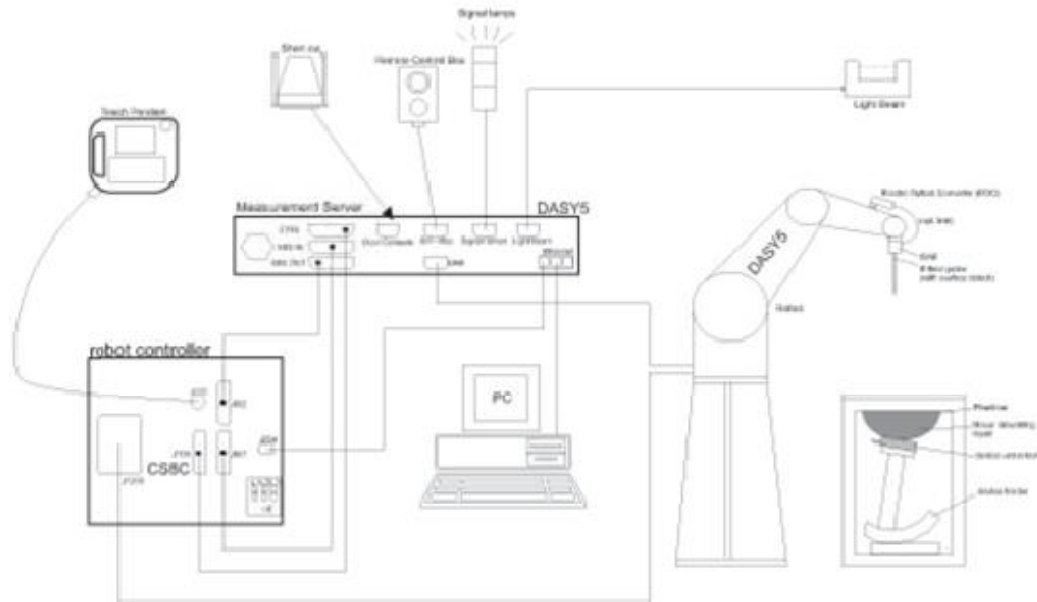
Div Antenna		Power Reduction Level Amount (dB)													
Power Reduction Scenario	Receiver /Hotspot Mode	GSM850	GSM1900	UMTS B2	UMTS B4	UMTS B5	LTE B2	LTE B4	LTE B5	LTE B7	LTE B13	LTE B26	LTE B38	LTE B66	
Full power	Receiver off	33.50	30.50	23.30	23.00	24.50	24.00	23.50	25.00	24.00	25.00	25.00	24.50	23.50	
	Receiver on	5.00	0.00	1.00	0.00	0.00	0.50	0.00	0.00	3.50	0.00	0.00	1.00	0.00	
Standalone	Receiver off	5.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00	3.50	0.00	0.00	1.00	0.00	
	Hotspot on	6.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00	3.50	0.00	0.00	3.00	0.00	
	Receiver on	7.00	0.00	1.00	0.00	0.00	0.50	0.00	0.00	3.50	0.00	0.00	1.00	0.00	
Simultaneous	Wi-Fi on	Receiver on	8.00	0.00	0.50	0.00	0.00	0.50	0.00	3.50	0.00	0.00	1.00	0.00	
	Receiver off	8.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00	3.50	0.00	0.00	1.00	0.00	
	Hotspot on	9.00	0.00	0.50	0.00	0.00	0.50	0.00	0.00	3.50	0.00	0.00	3.00	0.00	

Wi-Fi Antenna		Power Reduction Level Amount (dB)									
Power Reduction Scenario	Receiver Mode	WiFi 2.4G 11b	WiFi 2.4G 11g	WiFi 2.4G 11n HT20	WiFi 2.4G 11n HT40	WiFi 5G 11a	WiFi 5G 11n HT20	WiFi 5G 11n HT40	WiFi 5G 11ac-VHT20	WiFi 5G 11ac-VHT40	WiFi 5G 11ac-VHT80
Full power	off	18.50	19.00	18.00	13.00	19.00	18.00	17.00	17.00	17.00	16.00
	on	6.00	7.00	6.00	1.00	7.00	6.00	6.00	5.00	5.00	4.00
Standalone	off	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	on	6.00	7.00	6.00	1.00	7.00	6.00	6.00	5.00	5.00	4.00
Simultaneous with 2G&3G&4G	off	6.00	7.00	6.00	1.00	7.00	6.00	6.00	5.00	5.00	4.00
	on	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

6 SAR Measurements System Configuration

6.1 SAR Measurement Set-up

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



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

6.2 DASY5 E-field Probe System

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

EX3DV4 Probe Specification

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



E-field Probe Calibration

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

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies below 1 GHz, and in a wave guide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

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



$$\text{SAR} = C \Delta T / \Delta t$$

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

Or

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

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

6.3 SAR Measurement Procedure

Power Reference Measurement

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

Area Scan

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

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

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be \leq the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

Zoom Scan

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

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

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

Volume Scan Procedures

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

Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In 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	2022-05-14	2023-05-13
Dielectric Probe Kit	Agilent	85070E	US44020115	/	/
Power meter	R&S	NRP R&S	102186	2022-05-13	2023-05-14
Power sensor	R&S	NRP18S	101954	2022-05-13	2023-05-14
Dual directional coupler	UCL	UCL-DDC0 56G-S	20010600118	/	/
Amplifier	INDEXSAR	TPA-005060 G01	13030502	2022-05-13	2023-05-14
Wireless communication tester	Anritsu	MT8820C	6201342015	2021-12-12	2022-12-11
Wideband radio communication tester	R&S	CMW 500	146734	2022-05-14	2023-05-13
E-field Probe	SPEAG	EX3DV4	3677	2021-08-12	2022-08-11
DAE	SPEAG	DAE4	1692	2021-10-04	2022-10-03
Validation Kit 750MHz	SPEAG	D750V3	1045	2020-08-28	2023-08-27
Validation Kit 835MHz	SPEAG	D835V2	4d020	2020-08-28	2023-08-27
Validation Kit 1750MHz	SPEAG	D1750V2	1033	2020-02-25	2023-02-24
Validation Kit 1900MHz	SPEAG	D1900V2	5d060	2020-08-27	2023-08-26
Validation Kit 2450MHz	SPEAG	D2450V2	786	2020-08-27	2023-08-26
Validation Kit 2600MHz	SPEAG	D2600V2	1025	2021-04-23	2024-04-22
Validation Kit 5GHz	SPEAG	D5GHzV2	1151	2020-02-27	2023-02-26
Temperature Probe	Tianjin jinming	JM222	381	2022-05-14	2023-05-13
Hygrothermograph	Anymetr	HTC - 1	TY2020A001	2022-05-14	2023-05-13
Twin SAM Phantom	Speag	SAM2	1666	/	/
Software for Test	Speag	DASY52	/	/	/
Softwarefor Tissue	Agilent	85070	/	/	/

8 Tissue Dielectric Parameter Measurements & System Verification

8.1 Tissue Verification

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within ± 2°C of the temperature when the tissue parameters are characterized. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 24 hours of use; or earlier if the dielectric parameters can become out of tolerance.

Target values

Frequency (MHz)	ϵ_r	σ (s/m)
750	41.9	0.89
835	41.5	0.90
1750	40.1	1.37
1900	40.0	1.40
2450	39.2	1.80
2600	39.0	1.96
Frequency (MHz)	ϵ_r	σ (s/m)
5250	35.9	4.71
5600	35.5	5.07
5750	35.4	5.22

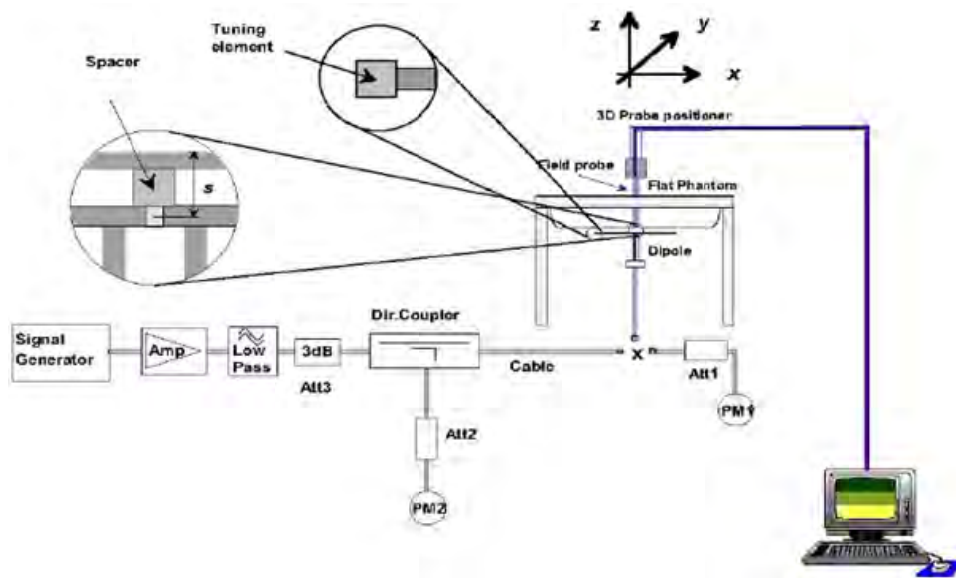
Measurements results

Frequency (MHz)	Test Date	Temp °C	Measured Dielectric Parameters		Target Dielectric Parameters		Limit (Within ±5%)	
			ϵ_r	σ (s/m)	ϵ_r	σ (s/m)	Dev ϵ_r (%)	Dev σ (%)
750	2022/6/2	21.5	42.3	0.88	41.9	0.89	0.95	-1.12
835	2022/5/30	21.5	41.3	0.87	41.5	0.90	-0.48	-3.33
	2022/5/31	21.5	41.4	0.92	41.5	0.90	-0.24	2.22
	2022/6/1	21.5	41.4	0.88	41.5	0.90	-0.24	-2.22
1750	2022/6/9	21.5	40.2	1.34	40.1	1.37	0.25	-2.19
	2022/6/11	21.5	40.1	1.34	40.1	1.37	0.00	-2.19
	2022/6/12	21.5	40.2	1.36	40.1	1.37	0.25	-0.73
1900	2022/5/26	21.5	40.2	1.43	40.0	1.40	0.50	2.14
	2022/5/27	21.5	40.0	1.40	40.0	1.40	0.00	0.00
	2022/6/1	21.5	40.1	1.41	40.0	1.40	0.25	0.71
2450	2022/6/8	21.5	38.6	1.81	39.2	1.80	-1.53	0.56
2600	2022/6/3	21.5	38.2	2.01	39.0	1.96	-2.05	2.55
	2022/6/4	21.5	38.4	1.94	39.0	1.96	-1.54	-1.02
	2022/6/7	21.5	38.3	1.99	39.0	1.96	-1.79	1.53
5250	2022/6/5	21.5	35.5	4.80	35.9	4.71	-1.11	1.91
5600	2022/6/10	21.5	34.2	5.21	35.5	5.07	-3.66	2.76
5750	2022/6/6	21.5	34.9	5.21	35.4	5.22	-1.41	-0.19
<p>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.</p>								

8.2 System Performance Check

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

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



Picture 1 System Performance Check setup



Picture 2 Setup Photo

**Justification for Extended SAR Dipole Calibrations**

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

Dipole		Date of Measurement	Return Loss(dB)	Δ %	Impedance (Ω)	$\Delta\Omega$
Dipole D750V3 SN: 1045	Head	8/28/2020	-26.6	/	54.3	/
	Liquid	8/27/2021	-26.2	-1.5	53.9	-0.4
Dipole D835V2 SN: 4d020	Head	8/28/2020	-26.2	/	54.8	/
	Liquid	8/27/2021	-26.5	1.1	55.2	0.4
Dipole D1750V2 SN: 1033	Head	2/25/2020	-38.3	/	48.8	/
		2/24/2021	-40.0	4.4	49.9	1.1
		2/23/2022	-40.6	1.5	51.1	1.2
Dipole D1900V2 SN: 5d060	Head	8/27/2020	-23.3	/	52.5	/
	Liquid	8/26/2021	-23.0	-1.3	51.9	-0.6
Dipole D2450V2 SN: 786	Head	8/27/2020	-26.9	/	54.5	/
	Liquid	8/26/2021	-27.1	0.7	53.8	-0.7
Dipole D5GHzV2 SN: 1151 (5250MHz)	Head	2/27/2020	-23.4	/	52.4	/
		2/26/2021	-23.8	1.7	50.0	-2.4
		2/25/2022	-23.9	0.4	49.3	-0.7
Dipole D5GHzV2 SN: 1151 (5600MHz)	Head	2/27/2020	-22.6	/	52.4	/
		2/26/2021	-21.5	-4.9	50.0	-2.4
		2/25/2022	-20.9	-2.8	49.3	-0.7
Dipole D5GHzV2 SN: 1151 (5750MHz)	Head	2/27/2020	-25.0	/	55.9	/
		2/26/2021	-26.8	-1.8	52.5	-3.4
		2/25/2022	-27.1	1.1	52.1	-0.4

**System Check results**

Frequency (MHz)	Test Date	Temp °C	250mW /100mW Measured SAR _{1g} (W/kg)	1W Normalized SAR _{1g} (W/kg)	1W Target SAR _{1g} (W/kg)	Δ % (Limit ±10%)	Plot No.
750	2022/6/2	21.5	2.13	8.52	8.37	1.79	1
835	2022/5/30	21.5	2.46	9.84	9.65	1.97	2
	2022/5/31	21.5	2.43	9.72	9.65	0.73	3
	2022/6/1	21.5	2.44	9.76	9.65	1.14	4
1750	2022/6/9	21.5	8.95	35.80	35.90	-0.28	5
	2022/6/11	21.5	9.11	36.44	35.90	1.50	6
	2022/6/12	21.5	8.96	35.84	35.90	-0.17	7
1900	2022/5/26	21.5	9.85	39.40	39.50	-0.25	8
	2022/5/27	21.5	10.15	40.60	39.50	2.78	9
	2022/6/1	21.5	9.88	39.52	39.50	0.05	10
2450	2022/6/8	21.5	13.70	54.80	52.30	4.78	11
2600	2022/6/3	21.5	13.90	55.60	56.10	-0.89	12
	2022/6/4	21.5	13.88	55.52	56.10	-1.03	13
	2022/6/7	21.5	13.94	55.76	56.10	-0.61	14
5250	2022/6/5	21.5	7.87	78.70	78.00	0.90	15
5600	2022/6/10	21.5	7.67	76.70	80.50	-4.72	16
5750	2022/6/6	21.5	7.66	76.60	77.40	-1.03	17
Note: Target Values used derive from the calibration certificate Data Storage and Evaluation.							

8.3 SAR System Validation

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

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

Frequency [MHz]	Date	Probe SN	Probe Type	Probe Cal Point		PERM (Er)	COND (Σ)	CW Validation		
								Sensitivity	Probe Linearity	Probe Isotropy
750	8/12/2021	3677	EX3DV4	750	Head	42.81	0.85	PASS	PASS	PASS
835	8/12/2021	3677	EX3DV4	835	Head	42.22	0.90	PASS	PASS	PASS
1750	8/12/2021	3677	EX3DV4	1750	Head	39.91	1.32	PASS	PASS	PASS
1900	8/12/2021	3677	EX3DV4	1900	Head	39.43	1.42	PASS	PASS	PASS
2450	8/12/2021	3677	EX3DV4	2450	Head	38.19	1.83	PASS	PASS	PASS
2600	8/12/2021	3677	EX3DV4	2600	Head	37.60	1.99	PASS	PASS	PASS
5250	8/12/2021	3677	EX3DV4	5250	Head	35.36	4.83	PASS	PASS	PASS
5600	8/12/2021	3677	EX3DV4	5600	Head	34.43	5.29	PASS	PASS	PASS
5750	8/12/2021	3677	EX3DV4	5750	Head	34.07	5.47	PASS	PASS	PASS

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

9 Normal and Maximum Output Power

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

9.1 GSM Mode

Main- Antenna

GSM850										
Body SAR & Receiver on & Hotspot--Main Ant0		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	128/824.2	190/836.6	251/848.8		MAX	128/824.2	190/836.6	251/848.8
GSM	CS	34.00	33.46	33.60	33.35	9.03	24.97	24.43	24.57	24.32
GPRS/EGPRS (GMSK)	1 Tx Slot	34.00	33.13	33.44	33.15	9.03	24.97	24.10	24.41	24.12
	2 Tx Slots	30.50	29.31	30.14	29.75	6.02	24.48	23.29	24.12	23.73
	3 Tx Slots	28.00	27.08	27.25	27.21	4.26	23.74	22.82	22.99	22.95
	4 Tx Slots	26.00	25.30	25.54	25.60	3.01	22.99	22.29	22.53	22.59
EGPRS (8PSK)	1 Tx Slot	27.50	26.28	26.60	26.10	9.03	18.47	17.25	17.57	17.07
	2 Tx Slots	25.50	23.90	24.21	23.97	6.02	19.48	17.88	18.19	17.95
	3 Tx Slots	22.50	21.58	21.87	21.78	4.26	18.24	17.32	17.61	17.52
	4 Tx Slots	21.50	20.50	20.78	20.81	3.01	18.49	17.49	17.77	17.80
PCS 1900										
Receiver on--Main Ant2		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	512/1850.2	661/1880	810/1909.8		MAX	512/1850.2	661/1880	810/1909.8
GSM	CS	29.00	27.70	27.90	27.81	9.03	19.97	18.67	18.87	18.78
GPRS/EGPRS (GMSK)	1 Tx Slot	29.00	27.55	28.20	27.80	9.03	19.97	18.52	19.17	18.77
	2 Tx Slots	25.50	24.40	24.40	24.44	6.02	19.48	18.38	18.38	18.42
	3 Tx Slots	23.00	22.24	22.01	22.48	4.26	18.74	17.98	17.75	18.22
	4 Tx Slots	21.00	20.56	20.16	20.53	3.01	17.99	17.55	17.15	17.52
EGPRS (8PSK)	1 Tx Slot	25.50	23.84	24.20	24.01	9.03	16.47	14.81	15.17	14.98
	2 Tx Slots	21.50	20.42	20.54	20.47	6.02	15.48	14.40	14.52	14.45
	3 Tx Slots	19.00	18.33	18.05	17.99	4.26	14.74	14.07	13.79	13.73
	4 Tx Slots	17.50	16.37	16.45	16.32	3.01	14.49	13.36	13.44	13.31
PCS 1900										
Body SAR & Hotspot --Main Ant2		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	512/1850.2	661/1880	810/1909.8		MAX	512/1850.2	661/1880	810/1909.8
GSM	CS	31.00	29.29	29.64	29.55	9.03	21.97	20.26	20.61	20.52
GPRS/EGPRS (GMSK)	1 Tx Slot	31.00	29.32	29.85	29.41	9.03	21.97	20.29	20.82	20.38
	2 Tx Slots	27.50	26.25	26.38	26.24	6.02	21.48	20.23	20.36	20.22
	3 Tx Slots	25.00	24.05	24.05	24.05	4.26	20.74	19.79	19.79	19.79



	4 Tx Slots	23.00	22.45	22.40	22.44	3.01	19.99	19.44	19.39	19.43
EGPRS (8PSK)	1 Tx Slot	25.50	24.73	25.21	24.95	9.03	16.47	15.70	16.18	15.92
	2 Tx Slots	23.50	22.33	22.92	22.40	6.02	17.48	16.31	16.90	16.38
	3 Tx Slots	21.00	19.83	20.25	19.88	4.26	16.74	15.57	15.99	15.62
	4 Tx Slots	19.50	18.20	18.50	18.07	3.01	16.49	15.19	15.49	15.06

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

1. Standalone: GSM 850 GMSK (GPRS) mode with 1 time slot for Max power, PCS 1900 GMSK (GPRS) mode with 1 time slot for Max power, based on the output power measurements above..



Div - Antenna

GSM850										
Body SAR&Receiver on& Hotspot on--DIV Ant3		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	128/824.2	190/836.6	251/848.8		MAX	128/824.2	190/836.6	251/848.8
GSM	CS	28.50	27.05	27.01	27.04	9.03	19.47	18.02	17.98	18.01
GPRS/EGPRS (GMSK)	1 Tx Slot	28.50	26.66	27.04	26.82	9.03	19.47	17.63	18.01	17.79
	2 Tx Slots	25.00	23.24	23.92	23.58	6.02	18.98	17.22	17.90	17.56
	3 Tx Slots	22.50	21.05	21.60	21.36	4.26	18.24	16.79	17.34	17.10
	4 Tx Slots	21.50	19.57	20.03	19.79	3.01	18.49	16.56	17.02	16.78
EGPRS (8PSK)	1 Tx Slot	28.00	26.24	26.21	26.50	9.03	18.97	17.21	17.18	17.47
	2 Tx Slots	24.50	22.75	23.24	23.32	6.02	18.48	16.73	17.22	17.30
	3 Tx Slots	22.00	20.58	20.98	21.13	4.26	17.74	16.32	16.72	16.87
	4 Tx Slots	21.00	19.31	19.36	19.57	3.01	17.99	16.30	16.35	16.56
PCS 1900										
Body SAR&Receiver on& Hotspot--DIV Ant1		Burst-Averaged output power(dBm)				Division Factors	Frame-Averaged output power(dBm)			
		Tune-up	Channel/Frequency(MHz)				Tune-up	Channel/Frequency(MHz)		
		MAX	512/1850.2	661/1880	810/1909.8		MAX	512/1850.2	661/1880	810/1909.8
GSM	CS	30.50	29.77	30.03	29.97	9.03	21.47	20.74	21.00	20.94
GPRS/EGPRS (GMSK)	1 Tx Slot	30.50	29.42	30.01	29.81	9.03	21.47	20.39	20.98	20.78
	2 Tx Slots	27.50	26.08	26.52	26.47	6.02	21.48	20.06	20.50	20.45
	3 Tx Slots	25.00	23.71	24.21	24.05	4.26	20.74	19.45	19.95	19.79
	4 Tx Slots	23.00	22.03	22.45	22.17	3.01	19.99	19.02	19.44	19.16
EGPRS (8PSK)	1 Tx Slot	26.00	25.01	25.05	24.91	9.03	16.97	15.98	16.02	15.88
	2 Tx Slots	23.50	22.65	23.02	22.45	6.02	17.48	16.63	17.00	16.43
	3 Tx Slots	21.00	19.78	20.42	20.01	4.26	16.74	15.52	16.16	15.75
	4 Tx Slots	19.50	18.39	18.70	18.51	3.01	16.49	15.38	15.69	15.50
Notes: The worst-case configuration and mode for SAR testing is determined to be as follows:										
1. Standalone: GSM 850 GMSK (GPRS) mode with 1 time slots for Max power, PCS 1900 GMSK (GPRS) mode with 2 time slots for Max power, based on the output power measurements above..										

9.2 WCDMA Mode

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

Main- Antenna

WCDMA Band II					
Receiver on--Main Ant2		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	18.30	18.56	18.18	19.50
AMR	12.2k	18.34	18.36	18.14	19.50
HSDPA	Subtest 1	18.26	18.28	18.30	19.50
	Subtest 2	18.36	18.40	18.28	19.50
	Subtest 3	17.84	17.80	17.68	19.00
	Subtest 4	17.78	17.80	17.68	19.00
HSUPA	Subtest 1	17.96	18.08	18.14	19.30
	Subtest 2	16.26	16.14	15.98	17.30
	Subtest 3	17.26	17.20	17.06	18.30
	Subtest 4	16.04	16.14	15.96	17.30
	Subtest 5	18.06	18.12	18.06	19.30
DC-HSDPA	Subtest 1	17.94	18.04	18.02	19.30
	Subtest 2	18.04	18.18	17.98	19.30
	Subtest 3	17.70	17.42	17.58	18.80
	Subtest 4	17.68	17.58	17.56	18.80
WCDMA Band II					
Body SAR&Hotspot--Main Ant2		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	21.85	22.25	21.74	23.00
AMR	12.2k	21.75	21.66	21.90	23.00
HSDPA	Subtest 1	21.93	21.64	21.74	23.00
	Subtest 2	21.83	21.82	21.74	23.00
	Subtest 3	21.29	21.40	21.38	22.50
	Subtest 4	21.33	21.30	21.34	22.50
HSUPA	Subtest 1	21.79	21.76	21.64	22.80
	Subtest 2	19.73	19.66	19.66	20.80
	Subtest 3	20.59	20.74	20.56	21.80
	Subtest 4	19.63	19.48	19.50	20.80



	Subtest 5	21.79	21.76	21.60	22.80
DC-HSDPA	Subtest 1	21.55	21.52	21.46	22.80
	Subtest 2	21.53	21.70	21.70	22.80
	Subtest 3	21.21	21.18	21.02	22.30
	Subtest 4	21.13	21.00	21.16	22.30

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

WCDMA Band IV					
Receiver on--Main Ant2		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	17.12	17.33	17.20	18.00
AMR	12.2k	17.02	17.29	17.06	18.00
HSDPA	Subtest 1	17.28	17.47	17.16	18.00
	Subtest 2	17.22	17.23	17.28	18.00
	Subtest 3	16.52	16.67	16.82	17.50
	Subtest 4	16.52	16.91	16.66	17.50
HSUPA	Subtest 1	17.08	17.15	17.04	17.80
	Subtest 2	15.04	15.25	14.88	15.80
	Subtest 3	15.92	16.25	15.94	16.80
	Subtest 4	15.02	14.97	15.00	15.80
	Subtest 5	16.78	17.13	17.04	17.80
DC-HSDPA	Subtest 1	16.80	17.23	17.10	17.80
	Subtest 2	16.94	16.99	16.88	17.80
	Subtest 3	16.48	16.59	16.42	17.30
	Subtest 4	16.38	16.71	16.40	17.30
WCDMA Band IV					
Body SAR--Main Ant2		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	22.32	22.31	22.34	23.00
AMR	12.2k	22.36	22.35	22.34	23.00
HSDPA	Subtest 1	22.38	22.37	22.46	23.00
	Subtest 2	22.24	22.39	22.46	23.00
	Subtest 3	21.92	21.75	22.00	22.50
	Subtest 4	21.80	21.71	21.84	22.50
HSUPA	Subtest 1	22.22	22.27	22.26	22.80
	Subtest 2	20.18	20.05	20.00	20.80
	Subtest 3	21.20	21.27	21.26	21.80



WCDMA Band IV					
Hotspot--Main Ant2		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	21.33	21.14	21.39	22.00
AMR	12.2k	21.45	21.04	21.37	22.00
HSDPA	Subtest 1	21.23	21.02	21.55	22.00
	Subtest 2	21.17	21.10	21.53	22.00
	Subtest 3	20.87	20.52	21.01	21.50
	Subtest 4	20.95	20.60	20.89	21.50
HSUPA	Subtest 1	21.13	20.80	21.25	21.80
	Subtest 2	19.19	19.06	19.07	19.80
	Subtest 3	20.17	20.04	20.17	20.80
	Subtest 4	19.29	18.92	19.15	19.80
	Subtest 5	21.25	20.78	21.13	21.80
DC-HSDPA	Subtest 1	21.01	21.10	21.31	21.80
	Subtest 2	21.13	20.98	21.15	21.80
	Subtest 3	20.77	20.28	20.77	21.30
	Subtest 4	20.69	20.34	20.85	21.30

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

WCDMA Band V					
Body SAR&Receiver on&Hotspot--Main Ant0		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	24.20	23.88	22.73	24.50
AMR	12.2k	24.32	23.98	22.71	24.50
HSDPA	Subtest 1	23.48	22.98	22.07	23.70
	Subtest 2	23.50	23.18	21.91	23.70
	Subtest 3	22.92	22.64	21.37	23.20
	Subtest 4	22.84	22.48	21.53	23.20
HSUPA	Subtest 1	23.36	23.08	21.81	23.70
	Subtest 2	21.46	21.02	19.89	21.70



	Subtest 3	22.50	22.22	20.79	22.70
	Subtest 4	21.26	20.96	19.79	21.70
	Subtest 5	23.24	23.14	21.83	23.70
DC-HSDPA	Subtest 1	23.22	22.76	21.73	23.50
	Subtest 2	23.06	22.92	21.79	23.50
	Subtest 3	22.64	22.30	21.39	23.00
	Subtest 4	22.76	22.22	21.27	23.00

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



Div - Antenna

WCDMA Band II					
Body SAR&Receiver on--DIV Ant1		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	21.67	21.56	21.51	22.30
AMR	12.2k	21.65	21.40	21.37	22.30
HSDPA	Subtest 1	21.51	21.54	21.59	22.30
	Subtest 2	21.55	21.46	21.47	22.30
	Subtest 3	21.27	21.20	20.91	21.80
	Subtest 4	21.07	21.20	20.99	21.80
HSUPA	Subtest 1	20.25	20.34	20.25	21.00
	Subtest 2	19.33	19.26	19.21	20.10
	Subtest 3	20.63	20.40	20.35	21.10
	Subtest 4	19.45	19.44	19.39	20.10
	Subtest 5	21.63	21.26	21.43	22.10
DC-HSDPA	Subtest 1	21.51	21.42	21.31	22.10
	Subtest 2	21.53	21.42	21.43	22.10
	Subtest 3	21.05	21.00	20.87	21.60
	Subtest 4	21.13	20.74	20.71	21.60
WCDMA Band II					
Hotspot--DIV Ant1		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		9262/1852.4	9400/1880	9538/1907.6	
RMC	12.2k	22.16	22.09	22.05	22.80
AMR	12.2k	22.30	22.19	22.15	22.80
HSDPA	Subtest 1	22.18	21.99	22.21	22.80
	Subtest 2	22.22	22.21	21.93	22.80
	Subtest 3	21.72	21.57	21.67	22.30
	Subtest 4	21.52	21.61	21.51	22.30
HSUPA	Subtest 1	20.74	20.83	20.79	21.50
	Subtest 2	20.08	19.93	19.91	20.60
	Subtest 3	20.88	20.87	20.89	21.60
	Subtest 4	19.92	19.73	19.71	20.60
	Subtest 5	22.00	21.79	21.71	22.60
DC-HSDPA	Subtest 1	21.98	22.01	21.73	22.60
	Subtest 2	21.80	21.83	21.83	22.60
	Subtest 3	21.42	21.49	21.47	22.10
	Subtest 4	21.58	21.27	21.25	22.10

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 IV					
Body SAR&Receiver on&Hotspot--DIV Ant1		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		1312/1712.4	1413/1732.6	1513/1752.6	
RMC	12.2k	22.36	22.46	22.83	23.00
AMR	12.2k	22.20	22.58	22.85	23.00
HSDPA	Subtest 1	22.48	22.32	22.71	23.00
	Subtest 2	22.30	22.48	22.67	23.00
	Subtest 3	21.76	21.92	22.17	22.50
	Subtest 4	21.74	21.96	22.33	22.50
HSUPA	Subtest 1	21.04	21.24	21.65	22.80
	Subtest 2	20.12	20.12	20.69	20.80
	Subtest 3	21.26	21.36	21.67	21.80
	Subtest 4	20.16	20.14	20.75	20.80
	Subtest 5	22.12	22.28	22.47	22.80
DC-HSDPA	Subtest 1	22.20	22.24	22.59	22.80
	Subtest 2	22.26	22.36	22.65	22.80
	Subtest 3	21.82	21.60	21.99	22.30
	Subtest 4	21.70	21.68	22.11	22.30

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

WCDMA Band V					
Body SAR&Receiver on&Hotspot--DIV Ant3		Maximum Output Power (dBm)			
		Channel/Frequency(MHz)			Tune-up
		4132/826.4	4183/836.6	4233/846.6	
RMC	12.2k	23.16	23.25	23.38	24.50
AMR	12.2k	23.24	23.15	23.26	24.50
HSDPA	Subtest 1	23.30	23.13	23.46	23.70
	Subtest 2	23.32	23.19	23.46	23.70
	Subtest 3	22.60	22.89	22.82	23.20
	Subtest 4	22.70	22.73	22.88	23.20
HSUPA	Subtest 1	21.84	21.87	22.18	23.70
	Subtest 2	20.86	21.07	21.14	21.70
	Subtest 3	21.94	21.97	22.32	22.70
	Subtest 4	21.02	21.01	21.02	21.70
	Subtest 5	22.84	23.19	23.12	23.70
DC-HSDPA	Subtest 1	22.90	22.99	23.08	23.50
	Subtest 2	23.04	23.19	23.32	23.50
	Subtest 3	22.36	22.69	22.64	23.00
	Subtest 4	22.52	22.69	22.74	23.00

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

9.3 LTE Mode

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

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

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

Main-Antenna

LTE Band 2							
Receiver on--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	19.15	18.98	18.96	20.50
		1	2	19.09	19.28	19.08	20.50
		1	5	18.86	19.16	18.62	20.50
		3	0	19.09	19.02	19.21	20.50
		3	2	19.18	19.21	19.34	20.50
		3	3	18.99	18.92	19.13	20.50
		6	0	19.16	19.23	19.20	20.50
	16QAM	1	0	19.24	19.02	19.20	20.50
		1	2	19.34	19.16	19.35	20.50
		1	5	18.87	19.51	18.82	20.50
		3	0	19.02	19.07	19.91	20.50
		3	2	19.09	19.17	19.08	20.50
		3	3	19.04	18.96	18.87	20.50
		6	0	19.03	19.02	18.94	20.50
	64QAM	1	0	19.04	19.19	19.00	20.50
		1	2	19.02	19.37	19.16	20.50
		1	5	19.24	19.34	19.37	20.50
		3	0	18.79	19.11	19.26	20.50
		3	2	18.94	19.16	19.20	20.50
		3	3	19.09	19.25	18.94	20.50
		6	0	19.13	19.02	19.19	20.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	19.12	18.94	18.93	20.00
		1	7	19.08	19.24	19.06	20.00
		1	14	18.84	19.15	18.59	20.00
		8	0	19.06	18.97	19.17	20.00
		8	4	19.16	19.17	19.31	20.00
		8	7	18.96	18.87	19.09	20.00
		15	0	19.13	19.18	19.16	20.00
	16QAM	1	0	19.21	18.98	19.15	20.00
		1	7	19.31	19.14	19.31	20.00
		1	14	18.84	19.48	18.80	20.00
		8	0	18.99	19.03	19.88	20.00
		8	4	19.06	19.15	19.05	20.00
		8	7	19.01	18.91	18.83	20.00
		15	0	19.01	18.98	18.91	20.00
	64QAM	1	0	19.02	19.15	18.95	20.00
		1	7	18.98	19.35	19.12	20.00
		1	14	19.18	19.28	19.31	20.00
		8	0	18.74	19.03	19.19	20.00
		8	4	18.90	19.12	19.14	20.00
		8	7	19.06	19.20	18.90	20.00
		15	0	19.11	18.98	19.16	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
5MHz	QPSK	1	0	19.09	18.92	18.89	20.00
		1	13	19.06	19.20	19.03	20.00
		1	24	18.81	19.10	18.55	20.00
		12	0	19.03	18.92	19.13	20.00
		12	6	19.14	19.13	19.26	20.00
		12	13	18.94	18.85	19.05	20.00
		25	0	19.13	19.17	19.14	20.00
	16QAM	1	0	19.21	18.94	19.12	20.00
		1	13	19.31	19.12	19.28	20.00
		1	24	18.81	19.46	18.76	20.00
		12	0	18.97	18.99	19.85	20.00
		12	6	19.03	19.10	19.01	20.00
		12	13	18.98	18.86	18.79	20.00
		25	0	18.99	18.94	18.86	20.00
	64QAM	1	0	18.99	19.15	18.92	20.00
		1	13	18.95	19.37	19.09	20.00
		1	24	19.19	19.26	19.27	20.00
		12	0	18.72	18.99	19.20	20.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				18650/1855	18900/1880	19150/1905		
10MHz	QPSK	12	6	18.87	19.07	19.10	20.00	
		12	13	19.03	19.15	18.86	20.00	
		25	0	19.09	18.94	19.11	20.00	
		1	0	19.11	18.93	18.92	20.00	
		1	25	19.09	19.25	19.07	20.00	
		1	49	18.83	19.14	18.58	20.00	
		25	0	19.06	18.97	19.17	20.00	
	16QAM	25	13	19.17	19.18	19.30	20.00	
		25	25	18.96	18.89	19.10	20.00	
		50	0	19.17	19.19	19.18	20.00	
		1	0	19.25	18.97	19.14	20.00	
		1	25	19.35	19.16	19.31	20.00	
		1	49	18.84	19.48	18.79	20.00	
		25	0	19.00	19.04	19.89	20.00	
	64QAM	25	13	19.05	19.14	19.04	20.00	
		25	25	19.01	18.91	18.83	20.00	
		50	0	19.02	18.99	18.90	20.00	
		1	0	19.01	19.14	18.94	20.00	
		1	25	18.98	19.37	19.12	20.00	
		1	49	19.18	19.28	19.30	20.00	
		25	0	18.75	19.04	19.20	20.00	
	15MHz	QPSK	25	13	18.89	19.11	19.13	20.00
			25	25	19.06	19.20	18.90	20.00
			50	0	19.12	18.99	19.15	20.00
			1	0	19.10	18.89	18.90	20.00
			1	38	19.07	19.24	19.04	20.00
			1	74	18.80	19.09	18.54	20.00
36			0	19.04	18.93	19.14	20.00	
16QAM		36	18	19.14	19.13	19.26	20.00	
		36	39	18.93	18.86	19.06	20.00	
		75	0	19.15	19.15	19.13	20.00	
	1	0	19.23	18.95	19.12	20.00		
	1	38	19.33	19.13	19.29	20.00		
	1	74	18.82	19.44	18.76	20.00		
	36	0	18.97	19.02	19.86	20.00		
64QAM	36	18	19.02	19.09	19.00	20.00		
	36	39	18.99	18.87	18.80	20.00		
	75	0	18.99	18.94	18.86	20.00		



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				18700/1860	18900/1880	19100/1900		
20MHz	QPSK	1	38	18.96	19.34	19.10	20.00	
		1	74	19.19	19.27	19.31	20.00	
		36	0	18.74	19.06	19.21	20.00	
		36	18	18.87	19.08	19.12	20.00	
		36	39	19.04	19.16	18.87	20.00	
		75	0	19.09	18.94	19.11	20.00	
	16QAM	QPSK	1	0	19.32	18.85	18.87	20.00
			1	50	19.06	19.45	19.36	20.00
			1	99	18.78	19.08	18.51	20.00
			50	0	19.01	18.88	19.10	20.00
			50	25	19.12	19.09	19.23	20.00
			50	50	18.90	18.81	19.02	20.00
		16QAM	100	0	19.12	19.10	19.09	20.00
			1	0	19.20	18.91	19.07	20.00
			1	50	19.30	19.11	19.25	20.00
			1	99	18.79	19.41	18.74	20.00
			50	0	18.94	18.98	19.83	20.00
			50	25	18.99	19.07	18.97	20.00
	64QAM	50	50	18.96	18.82	18.76	20.00	
		100	0	18.97	18.90	18.83	20.00	
		1	0	18.94	19.08	18.87	20.00	
		1	50	18.92	19.32	19.06	20.00	
		1	99	19.13	19.21	19.25	20.00	
		50	0	18.69	18.98	19.14	20.00	
	64QAM	50	25	18.83	19.04	19.06	20.00	
		50	50	19.01	19.11	18.83	20.00	
		100	0	19.07	18.90	19.08	20.00	

LTE Band 2							
Body SAR--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	22.47	22.48	22.49	24.00
		1	2	22.71	22.67	22.60	24.00
		1	5	22.14	22.07	22.09	24.00
		3	0	23.07	23.03	23.19	24.00
		3	2	23.12	23.18	23.27	24.00
		3	3	22.93	22.87	23.01	24.00
	16QAM	6	0	22.09	22.15	22.13	23.50
		1	0	22.03	22.27	22.31	23.50
		1	2	22.20	22.35	22.24	23.50



		1	5	21.78	21.84	21.73	23.50	
		3	0	21.97	22.08	22.03	23.50	
		3	2	22.07	22.16	22.04	23.50	
		3	3	21.83	21.95	22.02	23.50	
		6	0	21.01	21.13	21.04	22.50	
		64QAM	1	0	20.95	21.11	21.08	22.50
			1	2	21.12	21.25	21.23	22.50
			1	5	20.85	20.83	20.72	22.50
			3	0	21.12	21.03	20.98	22.50
			3	2	21.08	21.20	21.17	22.50
			3	3	20.78	20.90	20.93	22.50
			6	0	20.16	20.13	19.94	21.50
		Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)		
18615/1851.5	18900/1880					19185/1908.5		
3MHz	QPSK	1	0	22.49	22.52	22.52	23.50	
		1	7	22.69	22.70	22.64	23.50	
		1	14	22.17	22.12	22.13	23.50	
		8	0	22.17	22.15	22.32	23.00	
		8	4	22.24	22.28	22.39	23.00	
		8	7	22.03	21.98	22.11	23.00	
		15	0	22.09	22.19	22.16	23.00	
	16QAM	1	0	22.03	22.29	22.34	23.00	
		1	7	22.20	22.35	22.28	23.00	
		1	14	21.80	21.88	21.76	23.00	
		8	0	21.08	21.21	21.15	22.00	
		8	4	21.18	21.29	21.16	22.00	
		8	7	20.93	21.07	21.15	22.00	
		15	0	21.04	21.17	21.07	22.00	
	64QAM	1	0	20.98	21.13	21.11	22.00	
		1	7	21.15	21.25	21.25	22.00	
		1	14	20.87	20.82	20.75	22.00	
		8	0	20.23	20.16	20.10	21.00	
		8	4	20.19	20.33	20.29	21.00	
		8	7	19.88	20.02	20.06	21.00	
		15	0	20.19	20.17	19.97	21.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					18625/1852.5	18900/1880	19175/1907.5	
	5MHz	QPSK	1	0	22.46	22.50	22.48	23.50
1			13	22.67	22.66	22.61	23.50	
1			24	22.14	22.07	22.09	23.50	
12			0	22.14	22.10	22.28	23.00	
12			6	22.22	22.24	22.34	23.00	
12			13	22.01	21.96	22.07	23.00	



	16QAM	25	0	22.09	22.18	22.14	23.00
		1	0	22.03	22.25	22.31	23.00
		1	13	22.20	22.33	22.25	23.00
		1	24	21.77	21.86	21.72	23.00
		12	0	21.06	21.17	21.12	22.00
		12	6	21.15	21.24	21.12	22.00
		12	13	20.90	21.02	21.11	22.00
		25	0	21.02	21.13	21.02	22.00
	64QAM	1	0	20.95	21.13	21.08	22.00
		1	13	21.12	21.27	21.22	22.00
		1	24	20.88	20.80	20.71	22.00
		12	0	20.21	20.12	20.11	21.00
		12	6	20.16	20.28	20.25	21.00
		12	13	19.85	19.97	20.02	21.00
		25	0	20.17	20.13	19.92	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	22.48	22.51	22.51	23.50
		1	25	22.70	22.71	22.65	23.50
		1	49	22.16	22.11	22.12	23.50
		25	0	22.17	22.15	22.32	23.00
		25	13	22.25	22.29	22.38	23.00
		25	25	22.03	22.00	22.12	23.00
		50	0	22.13	22.20	22.18	23.00
	16QAM	1	0	22.07	22.28	22.33	23.00
		1	25	22.24	22.37	22.28	23.00
		1	49	21.80	21.88	21.75	23.00
		25	0	21.09	21.22	21.16	22.00
		25	13	21.17	21.28	21.15	22.00
		25	25	20.93	21.07	21.15	22.00
		50	0	21.05	21.18	21.06	22.00
	64QAM	1	0	20.97	21.12	21.10	22.00
		1	25	21.15	21.27	21.25	22.00
		1	49	20.87	20.82	20.74	22.00
		25	0	20.24	20.17	20.11	21.00
		25	13	20.18	20.32	20.28	21.00
		25	25	19.88	20.02	20.06	21.00
		50	0	20.20	20.18	19.96	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	22.47	22.47	22.49	23.50
		1	38	22.68	22.70	22.62	23.50
		1	74	22.13	22.06	22.08	23.50



		36	0	22.15	22.11	22.29	23.00	
		36	18	22.22	22.24	22.34	23.00	
		36	39	22.00	21.97	22.08	23.00	
		75	0	22.11	22.16	22.13	23.00	
	16QAM	1	0	22.05	22.26	22.31	23.00	
		1	38	22.22	22.34	22.26	23.00	
		1	74	21.78	21.84	21.72	23.00	
		36	0	21.06	21.20	21.13	22.00	
		36	18	21.14	21.23	21.11	22.00	
		36	39	20.91	21.03	21.12	22.00	
		75	0	21.02	21.13	21.02	22.00	
	64QAM	1	0	20.92	21.10	21.08	22.00	
		1	38	21.13	21.24	21.23	22.00	
		1	74	20.88	20.81	20.75	22.00	
		36	0	20.23	20.19	20.12	21.00	
		36	18	20.16	20.29	20.27	21.00	
		36	39	19.86	19.98	20.03	21.00	
		75	0	20.17	20.13	19.92	21.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					18700/1860	18900/1880	19100/1900	
	20MHz	QPSK	1	0	22.44	22.43	22.46	23.50
1			50	22.67	22.66	22.60	23.50	
1			99	22.11	22.05	22.05	23.50	
50			0	22.12	22.06	22.25	23.00	
50			25	22.20	22.20	22.31	23.00	
50			50	21.97	21.92	22.04	23.00	
100			0	22.08	22.11	22.09	23.00	
16QAM		1	0	22.02	22.22	22.26	23.00	
		1	50	22.19	22.32	22.22	23.00	
		1	99	21.75	21.81	21.70	23.00	
		50	0	21.03	21.16	21.10	22.00	
		50	25	21.11	21.21	21.08	22.00	
		50	50	20.88	20.98	21.08	22.00	
		100	0	21.00	21.09	20.99	22.00	
64QAM		1	0	20.90	21.06	21.03	22.00	
		1	50	21.09	21.22	21.19	22.00	
		1	99	20.82	20.75	20.69	22.00	
		50	0	20.18	20.11	20.05	21.00	
		50	25	20.12	20.25	20.21	21.00	
		50	50	19.83	19.93	19.99	21.00	
		100	0	20.15	20.09	19.89	21.00	



LTE Band 2							
Hotspot--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	22.07	22.06	22.05	23.50
		1	2	22.27	22.30	22.17	23.50
		1	5	21.64	21.73	21.58	23.50
		3	0	23.08	23.04	23.19	23.50
		3	2	23.18	23.21	23.29	23.50
		3	3	22.89	22.89	22.98	23.50
		6	0	22.11	22.11	22.20	23.50
	16QAM	1	0	22.38	22.37	22.37	23.50
		1	2	22.65	22.53	22.61	23.50
		1	5	22.12	22.02	22.05	23.50
		3	0	22.11	22.00	22.03	23.50
		3	2	22.22	22.17	22.15	23.50
		3	3	22.19	21.98	22.10	23.50
		6	0	21.26	21.12	21.21	22.50
	64QAM	1	0	21.26	21.17	21.18	22.50
		1	2	21.27	21.34	21.39	22.50
		1	5	20.68	20.78	20.68	22.50
		3	0	20.97	21.06	20.90	22.50
		3	2	21.31	21.21	21.24	22.50
		3	3	21.04	20.90	21.06	22.50
		6	0	20.10	20.12	20.07	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	22.09	22.10	22.08	23.50
		1	7	22.25	22.33	22.21	23.50
		1	14	21.67	21.78	21.62	23.50
		8	0	22.18	22.16	22.32	23.50
		8	4	22.30	22.31	22.41	23.50
		8	7	21.99	22.00	22.08	23.50
		15	0	22.11	22.15	22.23	23.50
	16QAM	1	0	22.38	22.39	22.40	23.50
		1	7	22.65	22.53	22.65	23.50
		1	14	22.14	22.06	22.08	23.50
		8	0	21.22	21.13	21.15	22.50
		8	4	21.33	21.30	21.27	22.50
		8	7	21.29	21.10	21.23	22.50
		15	0	21.29	21.16	21.24	22.50
	64QAM	1	0	21.29	21.19	21.21	22.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				18625/1852.5	18900/1880	19175/1907.5		
		1	7	21.30	21.34	21.41	22.50	
		1	14	20.70	20.77	20.71	22.50	
		8	0	20.08	20.19	20.02	21.50	
		8	4	20.42	20.34	20.36	21.50	
		8	7	20.14	20.02	20.19	21.50	
		15	0	20.13	20.16	20.10	21.50	
5MHz	QPSK	1	0	22.06	22.08	22.04	23.50	
		1	13	22.23	22.29	22.18	23.50	
		1	24	21.64	21.73	21.58	23.50	
		12	0	22.15	22.11	22.28	23.50	
		12	6	22.28	22.27	22.36	23.50	
		12	13	21.97	21.98	22.04	23.50	
	16QAM	25	0	22.11	22.14	22.21	23.50	
		1	0	22.38	22.35	22.37	23.50	
		1	13	22.65	22.51	22.62	23.50	
		1	24	22.11	22.04	22.04	23.50	
		12	0	21.20	21.09	21.12	22.50	
		12	6	21.30	21.25	21.23	22.50	
	64QAM	12	13	21.26	21.05	21.19	22.50	
		25	0	21.27	21.12	21.19	22.50	
		1	0	21.26	21.19	21.18	22.50	
		1	13	21.27	21.36	21.38	22.50	
		1	24	20.71	20.75	20.67	22.50	
		12	0	20.06	20.15	20.03	21.50	
	10MHz	QPSK	12	6	20.39	20.29	20.32	21.50
			12	13	20.11	19.97	20.15	21.50
			25	0	20.11	20.12	20.05	21.50
			1	0	22.08	22.09	22.07	23.50
			1	25	22.26	22.34	22.22	23.50
			1	49	21.66	21.77	21.61	23.50
16QAM		25	0	22.18	22.16	22.32	23.50	
		25	13	22.31	22.32	22.40	23.50	
		25	25	21.99	22.02	22.09	23.50	
		50	0	22.15	22.16	22.25	23.50	
		1	0	22.42	22.38	22.39	23.50	
		1	25	22.69	22.55	22.65	23.50	
		1	49	22.14	22.06	22.07	23.50	
		25	0	21.23	21.14	21.16	22.50	
		25	13	21.32	21.29	21.26	22.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				18675/1857.5	18900/1880	19125/1902.5		
	64QAM	25	25	21.29	21.10	21.23	22.50	
		50	0	21.30	21.17	21.23	22.50	
		1	0	21.28	21.18	21.20	22.50	
		1	25	21.30	21.36	21.41	22.50	
		1	49	20.70	20.77	20.70	22.50	
		25	0	20.09	20.20	20.03	21.50	
		25	13	20.41	20.33	20.35	21.50	
		25	25	20.14	20.02	20.19	21.50	
		50	0	20.14	20.17	20.09	21.50	
15MHz	QPSK	1	0	22.07	22.05	22.05	23.50	
		1	38	22.24	22.33	22.19	23.50	
		1	74	21.63	21.72	21.57	23.50	
		36	0	22.16	22.12	22.29	23.50	
		36	18	22.28	22.27	22.36	23.50	
		36	39	21.96	21.99	22.05	23.50	
		75	0	22.13	22.12	22.20	23.50	
	16QAM	1	0	22.40	22.36	22.37	23.50	
		1	38	22.67	22.52	22.63	23.50	
		1	74	22.12	22.02	22.04	23.50	
		36	0	21.20	21.12	21.13	22.50	
		36	18	21.29	21.24	21.22	22.50	
		36	39	21.27	21.06	21.20	22.50	
		75	0	21.27	21.12	21.19	22.50	
	64QAM	1	0	21.23	21.16	21.18	22.50	
		1	38	21.28	21.33	21.39	22.50	
		1	74	20.71	20.76	20.71	22.50	
		36	0	20.08	20.22	20.04	21.50	
		36	18	20.39	20.30	20.34	21.50	
		36	39	20.12	19.98	20.16	21.50	
		75	0	20.11	20.12	20.05	21.50	
	20MHz	QPSK	1	0	22.04	22.01	22.02	23.50
			1	50	22.23	22.29	22.17	23.50
	1		99	21.61	21.71	21.54	23.50	
50	0		22.13	22.07	22.25	23.50		
50	25		22.26	22.23	22.33	23.50		
50	50		21.93	21.94	22.01	23.50		
100	0		22.10	22.07	22.16	23.50		
16QAM	1	0	22.37	22.32	22.32	23.50		
	1	50	22.64	22.50	22.59	23.50		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				18700/1860	18900/1880	19100/1900		



		1	99	22.09	21.99	22.02	23.50
		50	0	21.17	21.08	21.10	22.50
		50	25	21.26	21.22	21.19	22.50
		50	50	21.24	21.01	21.16	22.50
		100	0	21.25	21.08	21.16	22.50
	64QAM	1	0	21.21	21.12	21.13	22.50
		1	50	21.24	21.31	21.35	22.50
		1	99	20.65	20.70	20.65	22.50
		50	0	20.03	20.14	19.97	21.50
		50	25	20.35	20.26	20.28	21.50
		50	50	20.09	19.93	20.12	21.50
		100	0	20.09	20.08	20.02	21.50

LTE Band 4							
Receiver on--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	18.10	18.20	18.21	19.50
		1	2	18.28	18.18	18.28	19.50
		1	5	18.05	17.86	18.05	19.50
		3	0	18.03	18.16	18.12	19.50
		3	2	18.08	18.05	18.07	19.50
		3	3	18.00	18.00	17.91	19.50
		6	0	17.92	18.09	18.02	19.50
	16QAM	1	0	18.10	18.36	18.28	19.50
		1	2	18.29	18.26	18.74	19.50
		1	5	18.26	18.36	18.05	19.50
		3	0	17.99	18.07	18.13	19.50
		3	2	18.25	18.14	18.39	19.50
		3	3	18.21	18.17	18.23	19.50
		6	0	18.13	18.04	18.34	19.50
	64QAM	1	0	18.35	18.22	18.28	19.50
		1	2	18.39	18.30	18.44	19.50
		1	5	18.22	18.16	17.84	19.50
		3	0	17.98	18.13	18.38	19.50
		3	2	18.10	18.12	18.41	19.50
		3	3	18.16	18.08	18.26	19.50
		6	0	18.13	17.96	18.12	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	18.08	18.13	18.19	19.50
		1	7	18.28	18.18	18.27	19.50
		1	14	18.02	17.84	18.01	19.50



		8	0	18.01	18.12	18.09	19.50	
		8	4	18.06	18.01	18.04	19.50	
		8	7	17.96	17.96	17.88	19.50	
		15	0	17.91	18.02	17.97	19.50	
	16QAM	1	0	18.09	18.33	18.23	19.50	
		1	7	18.28	18.25	18.71	19.50	
		1	14	18.24	18.31	18.03	19.50	
		8	0	17.96	18.06	18.11	19.50	
		8	4	18.21	18.11	18.35	19.50	
		8	7	18.19	18.13	18.20	19.50	
		15	0	18.11	18.00	18.31	19.50	
	64QAM	1	0	18.30	18.15	18.23	19.50	
		1	7	18.36	18.25	18.41	19.50	
		1	14	18.16	18.11	17.82	19.50	
		8	0	17.95	18.12	18.32	19.50	
		8	4	18.06	18.09	18.37	19.50	
		8	7	18.14	18.04	18.23	19.50	
		15	0	18.11	17.92	18.09	19.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					19975/1712.5	20175/1732.5	20375/1752.5	
	5MHz	QPSK	1	0	18.05	18.11	18.15	19.50
1			13	18.26	18.14	18.24	19.50	
1			24	17.99	17.79	17.97	19.50	
12			0	17.98	18.07	18.05	19.50	
12			6	18.04	17.97	17.99	19.50	
12			13	17.94	17.94	17.84	19.50	
25			0	17.91	18.01	17.95	19.50	
16QAM		1	0	18.09	18.29	18.20	19.50	
		1	13	18.28	18.23	18.68	19.50	
		1	24	18.21	18.29	17.99	19.50	
		12	0	17.94	18.02	18.08	19.50	
		12	6	18.18	18.06	18.31	19.50	
		12	13	18.16	18.08	18.16	19.50	
		25	0	18.09	17.96	18.26	19.50	
64QAM		1	0	18.27	18.15	18.20	19.50	
		1	13	18.33	18.27	18.38	19.50	
		1	24	18.17	18.09	17.78	19.50	
		12	0	17.93	18.08	18.33	19.50	
		12	6	18.03	18.04	18.33	19.50	
		12	13	18.11	17.99	18.19	19.50	
		25	0	18.09	17.88	18.04	19.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	18.07	18.12	18.18	19.50
		1	25	18.29	18.19	18.28	19.50
		1	49	18.01	17.83	18.00	19.50
		25	0	18.01	18.12	18.09	19.50
		25	13	18.07	18.02	18.03	19.50
		25	25	17.96	17.98	17.89	19.50
		50	0	17.95	18.03	17.99	19.50
	16QAM	1	0	18.13	18.32	18.22	19.50
		1	25	18.32	18.27	18.71	19.50
		1	49	18.24	18.31	18.02	19.50
		25	0	17.97	18.07	18.12	19.50
		25	13	18.20	18.10	18.34	19.50
		25	25	18.19	18.13	18.20	19.50
		50	0	18.12	18.01	18.30	19.50
	64QAM	1	0	18.29	18.14	18.22	19.50
		1	25	18.36	18.27	18.41	19.50
		1	49	18.16	18.11	17.81	19.50
		25	0	17.96	18.13	18.33	19.50
		25	13	18.05	18.08	18.36	19.50
		25	25	18.14	18.04	18.23	19.50
		50	0	18.12	17.93	18.08	19.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	18.06	18.08	18.16	19.50
		1	38	18.27	18.18	18.25	19.50
		1	74	17.98	17.78	17.96	19.50
		36	0	17.99	18.08	18.06	19.50
		36	18	18.04	17.97	17.99	19.50
		36	39	17.93	17.95	17.85	19.50
		75	0	17.93	17.99	17.94	19.50
	16QAM	1	0	18.11	18.30	18.20	19.50
		1	38	18.30	18.24	18.69	19.50
		1	74	18.22	18.27	17.99	19.50
		36	0	17.94	18.05	18.09	19.50
		36	18	18.17	18.05	18.30	19.50
		36	39	18.17	18.09	18.17	19.50
		75	0	18.09	17.96	18.26	19.50
	64QAM	1	0	18.24	18.12	18.20	19.50
		1	38	18.34	18.24	18.39	19.50
		1	74	18.17	18.10	17.82	19.50
		36	0	17.95	18.15	18.34	19.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	36	18	18.03	18.05	18.35	19.50
		36	39	18.12	18.00	18.20	19.50
		75	0	18.09	17.88	18.04	19.50
		1	0	18.03	18.04	18.13	19.50
		1	50	18.26	18.14	18.23	19.50
		1	99	17.96	17.77	17.93	19.50
		50	0	17.96	18.03	18.02	19.50
	50	25	18.02	17.93	17.96	19.50	
	50	50	17.90	17.90	17.81	19.50	
	100	0	17.90	17.94	17.90	19.50	
	16QAM	1	0	18.08	18.26	18.15	19.50
		1	50	18.27	18.22	18.65	19.50
		1	99	18.19	18.24	17.97	19.50
		50	0	17.91	18.01	18.06	19.50
		50	25	18.14	18.03	18.27	19.50
		50	50	18.14	18.04	18.13	19.50
		100	0	18.07	17.92	18.23	19.50
	64QAM	1	0	18.22	18.08	18.15	19.50
		1	50	18.30	18.22	18.35	19.50
		1	99	18.11	18.04	17.76	19.50
		50	0	17.90	18.07	18.27	19.50
		50	25	17.99	18.01	18.29	19.50
		50	50	18.09	17.95	18.16	19.50
		100	0	18.07	17.84	18.01	19.50

LTE Band 4							
Body SAR--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	22.98	23.11	23.16	24.50
		1	2	23.26	23.13	23.11	24.50
		1	5	23.02	22.90	23.88	24.50
		3	0	23.07	23.18	23.14	24.50
		3	2	23.13	23.12	23.15	24.50
		3	3	23.06	23.08	23.03	24.50
		6	0	22.07	22.21	22.17	23.50
	16QAM	1	0	22.52	22.40	22.66	23.50
		1	2	22.36	22.47	22.52	23.50
		1	5	22.29	22.31	22.44	23.50
		3	0	22.16	22.10	22.22	23.50
		3	2	22.12	22.17	22.26	23.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				19965/1711.5	20175/1732.5	20385/1753.5		
	64QAM	3	3	22.06	22.04	22.15	23.50	
		6	0	21.13	21.12	21.08	22.50	
		1	0	22.34	21.37	22.10	22.50	
		1	2	21.14	21.41	22.13	22.50	
		1	5	21.19	21.28	21.13	22.50	
		3	0	22.05	21.11	21.06	22.50	
		3	2	21.00	21.06	21.05	22.50	
		3	3	20.95	21.09	21.00	22.50	
		6	0	20.01	20.11	20.14	21.50	
3MHz	QPSK	1	0	23.00	23.15	23.19	24.50	
		1	7	23.24	23.16	23.15	24.50	
		1	14	23.05	22.95	23.92	24.50	
		8	0	22.17	22.30	22.27	23.50	
		8	4	22.25	22.22	22.27	23.50	
		8	7	22.16	22.19	22.13	23.50	
		15	0	22.07	22.25	22.20	23.50	
	16QAM	1	0	22.52	22.42	22.69	23.50	
		1	7	22.36	22.47	22.56	23.50	
		1	14	22.31	22.35	22.47	23.50	
		8	0	21.27	21.23	21.34	22.50	
		8	4	21.23	21.30	21.38	22.50	
		8	7	21.16	21.16	21.28	22.50	
		15	0	21.16	21.16	21.11	22.50	
	64QAM	1	0	22.37	21.39	22.13	22.50	
		1	7	21.17	21.41	22.15	22.50	
		1	14	21.21	21.27	21.16	22.50	
		8	0	21.16	20.24	20.18	21.50	
		8	4	20.11	20.19	20.17	21.50	
		8	7	20.05	20.21	20.13	21.50	
		15	0	20.04	20.15	20.17	21.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					19975/1712.5	20175/1732.5	20375/1752.5	
	5MHz	QPSK	1	0	22.97	23.13	23.15	24.50
1			13	23.22	23.12	23.12	24.50	
1			24	23.02	22.90	23.88	24.50	
12			0	22.14	22.25	22.23	23.50	
12			6	22.23	22.18	22.22	23.50	
12			13	22.14	22.17	22.09	23.50	
25			0	22.07	22.24	22.18	23.50	
16QAM		1	0	22.52	22.38	22.66	23.50	
		1	13	22.36	22.45	22.53	23.50	



		1	24	22.28	22.33	22.43	23.50	
		12	0	21.25	21.19	21.31	22.50	
		12	6	21.20	21.25	21.34	22.50	
		12	13	21.13	21.11	21.24	22.50	
		25	0	21.14	21.12	21.06	22.50	
	64QAM	1	0	22.34	21.39	22.10	22.50	
		1	13	21.14	21.43	22.12	22.50	
		1	24	21.22	21.25	21.12	22.50	
		12	0	21.14	20.20	20.19	21.50	
		12	6	20.08	20.14	20.13	21.50	
		12	13	20.02	20.16	20.09	21.50	
		25	0	20.02	20.11	20.12	21.50	
		25	0	20.02	20.11	20.12	21.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20000/1715	20175/1732.5	20350/1750		
10MHz	QPSK	1	0	22.99	23.14	23.18	24.50	
		1	25	23.25	23.17	23.16	24.50	
		1	49	23.04	22.94	23.91	24.50	
		25	0	22.17	22.30	22.27	23.50	
		25	13	22.26	22.23	22.26	23.50	
		25	25	22.16	22.21	22.14	23.50	
		50	0	22.11	22.26	22.22	23.50	
	16QAM	1	0	22.56	22.41	22.68	23.50	
		1	25	22.40	22.49	22.56	23.50	
		1	49	22.31	22.35	22.46	23.50	
		25	0	21.28	21.24	21.35	22.50	
		25	13	21.22	21.29	21.37	22.50	
		25	25	21.16	21.16	21.28	22.50	
		50	0	21.17	21.17	21.10	22.50	
	64QAM	1	0	22.36	21.38	22.12	22.50	
		1	25	21.17	21.43	22.15	22.50	
		1	49	21.21	21.27	21.15	22.50	
		25	0	21.17	20.25	20.19	21.50	
		25	13	20.10	20.18	20.16	21.50	
		25	25	20.05	20.21	20.13	21.50	
		50	0	20.05	20.16	20.16	21.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20025/1717.5	20175/1732.5	20325/1747.5	
	15MHz	QPSK	1	0	22.98	23.10	23.16	24.50
1			38	23.23	23.16	23.13	24.50	
1			74	23.01	22.89	23.87	24.50	
36			0	22.15	22.26	22.24	23.50	
36			18	22.23	22.18	22.22	23.50	
36			39	22.13	22.18	22.10	23.50	



	16QAM	75	0	22.09	22.22	22.17	23.50		
		1	0	22.54	22.39	22.66	23.50		
		1	38	22.38	22.46	22.54	23.50		
		1	74	22.29	22.31	22.43	23.50		
		36	0	21.25	21.22	21.32	22.50		
		36	18	21.19	21.24	21.33	22.50		
		36	39	21.14	21.12	21.25	22.50		
	64QAM	75	0	21.14	21.12	21.06	22.50		
		1	0	22.31	21.36	22.10	22.50		
		1	38	21.15	21.40	22.13	22.50		
		1	74	21.22	21.26	21.16	22.50		
		36	0	21.16	20.27	20.20	21.50		
		36	18	20.08	20.15	20.15	21.50		
		36	39	20.03	20.17	20.10	21.50		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up		
				20050/1720	20175/1732.5	20300/1745			
		20MHz	QPSK	1	0	22.95	23.06	23.13	24.50
				1	50	23.22	23.12	23.11	24.50
				1	99	22.99	22.88	23.84	24.50
				50	0	22.12	22.21	22.20	23.50
				50	25	22.21	22.14	22.19	23.50
				50	50	22.10	22.13	22.06	23.50
				100	0	22.06	22.17	22.13	23.50
			16QAM	1	0	22.51	22.35	22.61	23.50
				1	50	22.35	22.44	22.50	23.50
				1	99	22.26	22.28	22.41	23.50
				50	0	21.22	21.18	21.29	22.50
				50	25	21.16	21.22	21.30	22.50
50	50			21.11	21.07	21.21	22.50		
100	0			21.12	21.08	21.03	22.50		
64QAM	1		0	22.29	21.32	22.05	22.50		
	1		50	21.11	21.38	22.09	22.50		
	1		99	21.16	21.20	21.10	22.50		
	50		0	21.11	20.19	20.13	21.50		
	50		25	20.04	20.11	20.09	21.50		
	50		50	20.00	20.12	20.06	21.50		
	100		0	20.00	20.07	20.09	21.50		



LTE Band 4							
Hotspot--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	22.48	22.63	22.60	24.00
		1	2	22.72	22.65	22.61	24.00
		1	5	22.48	22.46	22.37	24.00
		3	0	23.05	23.13	23.11	24.00
		3	2	23.13	23.12	23.13	24.00
		3	3	23.05	23.05	23.00	24.00
		6	0	22.05	22.15	22.17	23.50
	16QAM	1	0	22.35	22.38	22.24	23.50
		1	2	22.29	22.44	22.43	23.50
		1	5	22.14	22.21	22.15	23.50
		3	0	22.10	22.01	21.87	23.50
		3	2	21.97	22.03	21.89	23.50
		3	3	21.98	22.02	21.99	23.50
		6	0	21.05	21.11	21.06	22.50
	64QAM	1	0	21.44	21.49	21.30	22.50
		1	2	21.38	21.62	21.21	22.50
		1	5	21.06	21.33	21.06	22.50
		3	0	20.88	21.12	20.79	22.50
		3	2	20.99	21.07	20.80	22.50
		3	3	20.91	21.05	20.97	22.50
		6	0	19.95	20.11	19.94	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
3MHz	QPSK	1	0	22.50	22.67	22.63	24.00
		1	7	22.70	22.68	22.65	24.00
		1	14	22.51	22.51	22.41	24.00
		8	0	22.15	22.25	22.24	23.50
		8	4	22.25	22.22	22.25	23.50
		8	7	22.15	22.16	22.10	23.50
		15	0	22.05	22.19	22.20	23.50
	16QAM	1	0	22.35	22.40	22.27	23.50
		1	7	22.29	22.44	22.47	23.50
		1	14	22.16	22.25	22.18	23.50
		8	0	21.21	21.14	20.99	22.50
		8	4	21.08	21.16	21.01	22.50
		8	7	21.08	21.14	21.12	22.50
		15	0	21.08	21.15	21.09	22.50
	64QAM	1	0	21.47	21.51	21.33	22.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up		
				19975/1712.5	20175/1732.5	20375/1752.5			
		1	7	21.41	21.62	21.23	22.50		
		1	14	21.08	21.32	21.09	22.50		
		8	0	19.99	20.25	19.91	21.50		
		8	4	20.10	20.20	19.92	21.50		
		8	7	20.01	20.17	20.10	21.50		
		15	0	19.98	20.15	19.97	21.50		
5MHz	QPSK	1	0	22.47	22.65	22.59	24.00		
		1	13	22.68	22.64	22.62	24.00		
		1	24	22.48	22.46	22.37	24.00		
		12	0	22.12	22.20	22.20	23.50		
		12	6	22.23	22.18	22.20	23.50		
		12	13	22.13	22.14	22.06	23.50		
	16QAM	25	0	22.05	22.18	22.18	23.50		
		1	0	22.35	22.36	22.24	23.50		
		1	13	22.29	22.42	22.44	23.50		
		1	24	22.13	22.23	22.14	23.50		
		12	0	21.19	21.10	20.96	22.50		
		12	6	21.05	21.11	20.97	22.50		
	64QAM	12	13	21.05	21.09	21.08	22.50		
		25	0	21.06	21.11	21.04	22.50		
		1	0	21.44	21.51	21.30	22.50		
		1	13	21.38	21.64	21.20	22.50		
		1	24	21.09	21.30	21.05	22.50		
		12	0	19.97	20.21	19.92	21.50		
	10MHz	QPSK	12	6	20.07	20.15	19.88	21.50	
			12	13	19.98	20.12	20.06	21.50	
			25	0	19.96	20.11	19.92	21.50	
			1	0	22.49	22.66	22.62	24.00	
			1	25	22.71	22.69	22.66	24.00	
			1	49	22.50	22.50	22.40	24.00	
16QAM		25	0	22.15	22.25	22.24	23.50		
		25	13	22.26	22.23	22.24	23.50		
		25	25	22.15	22.18	22.11	23.50		
		50	0	22.09	22.20	22.22	23.50		
		1	0	22.39	22.39	22.26	23.50		
		1	25	22.33	22.46	22.47	23.50		
		1	49	22.16	22.25	22.17	23.50		
		25	0	21.22	21.15	21.00	22.50		
		25	13	21.07	21.15	21.00	22.50		
						20000/1715	20175/1732.5	20350/1750	
						20000/1715	20175/1732.5	20350/1750	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20025/1717.5	20175/1732.5	20325/1747.5		
	64QAM	25	25	21.08	21.14	21.12	22.50	
		50	0	21.09	21.16	21.08	22.50	
		1	0	21.46	21.50	21.32	22.50	
		1	25	21.41	21.64	21.23	22.50	
		1	49	21.08	21.32	21.08	22.50	
		25	0	20.00	20.26	19.92	21.50	
		25	13	20.09	20.19	19.91	21.50	
		25	25	20.01	20.17	20.10	21.50	
		50	0	19.99	20.16	19.96	21.50	
15MHz	QPSK	1	0	22.48	22.62	22.60	24.00	
		1	38	22.69	22.68	22.63	24.00	
		1	74	22.47	22.45	22.36	24.00	
		36	0	22.13	22.21	22.21	23.50	
		36	18	22.23	22.18	22.20	23.50	
		36	39	22.12	22.15	22.07	23.50	
		75	0	22.07	22.16	22.17	23.50	
	16QAM	1	0	22.37	22.37	22.24	23.50	
		1	38	22.31	22.43	22.45	23.50	
		1	74	22.14	22.21	22.14	23.50	
		36	0	21.19	21.13	20.97	22.50	
		36	18	21.04	21.10	20.96	22.50	
		36	39	21.06	21.10	21.09	22.50	
		75	0	21.06	21.11	21.04	22.50	
	64QAM	1	0	21.41	21.48	21.30	22.50	
		1	38	21.39	21.61	21.21	22.50	
		1	74	21.09	21.31	21.09	22.50	
		36	0	19.99	20.28	19.93	21.50	
		36	18	20.07	20.16	19.90	21.50	
		36	39	19.99	20.13	20.07	21.50	
		75	0	19.96	20.11	19.92	21.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20050/1720	20175/1732.5	20300/1745	
	20MHz	QPSK	1	0	22.45	22.58	22.57	24.00
1			50	22.68	22.64	22.61	24.00	
1			99	22.45	22.44	22.33	24.00	
50			0	22.10	22.16	22.17	23.50	
50			25	22.21	22.14	22.17	23.50	
50			50	22.09	22.10	22.03	23.50	
100			0	22.04	22.11	22.13	23.50	
16QAM		1	0	22.34	22.33	22.19	23.50	
		1	50	22.28	22.41	22.41	23.50	



		1	99	22.11	22.18	22.12	23.50
		50	0	21.16	21.09	20.94	22.50
		50	25	21.01	21.08	20.93	22.50
		50	50	21.03	21.05	21.05	22.50
		100	0	21.04	21.07	21.01	22.50
	64QAM	1	0	21.39	21.44	21.25	22.50
		1	50	21.35	21.59	21.17	22.50
		1	99	21.03	21.25	21.03	22.50
		50	0	19.94	20.20	19.86	21.50
		50	25	20.03	20.12	19.84	21.50
		50	50	19.96	20.08	20.03	21.50
		100	0	19.94	20.07	19.89	21.50

LTE Band 5								
Body SAR&Receiver on&Hotspot--Main Ant0				Maximum Output Power (dBm)			Tune-up	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)				
				20407/824.7	20525/836.5	20643/848.3		
1.4MHz	QPSK	1	0	23.97	24.25	23.88	25.00	
		1	2	23.86	23.92	23.81	25.00	
		1	5	24.23	24.18	24.03	25.00	
		3	0	23.77	23.85	23.78	25.00	
		3	2	23.78	23.84	23.91	25.00	
		3	3	23.87	23.88	23.77	25.00	
		6	0	22.86	22.87	22.90	24.00	
	16QAM	1	0	23.36	23.65	23.53	24.00	
		1	2	23.17	23.24	23.30	24.00	
		1	5	23.23	23.33	23.50	24.00	
		3	0	22.93	22.73	23.02	24.00	
		3	2	22.99	22.77	23.04	24.00	
		3	3	22.48	22.83	22.70	24.00	
		6	0	22.05	21.92	22.06	23.00	
	64QAM	1	0	21.91	22.29	22.10	23.00	
		1	2	22.25	22.18	22.16	23.00	
		1	5	22.13	22.12	22.07	23.00	
		3	0	21.86	21.79	22.00	23.00	
		3	2	22.15	21.86	22.13	23.00	
		3	3	22.01	21.87	21.98	23.00	
		6	0	21.04	20.95	21.18	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20415/825.5	20525/836.5	20635/847.5	
	3MHz	QPSK	1	0	23.98	24.28	23.90	25.00
1			7	23.85	23.96	23.86	25.00	
1			14	24.25	24.22	24.06	25.00	



		8	0	22.87	22.97	22.91	24.00	
		8	4	22.91	22.95	23.02	24.00	
		8	7	22.97	23.01	22.88	24.00	
		15	0	22.90	22.92	22.95	24.00	
	16QAM	1	0	23.40	23.66	23.55	24.00	
		1	7	23.21	23.26	23.34	24.00	
		1	14	23.25	23.37	23.52	24.00	
		8	0	22.05	21.87	22.15	23.00	
		8	4	22.09	21.89	22.15	23.00	
		8	7	21.58	21.95	21.83	23.00	
		15	0	22.09	21.97	22.08	23.00	
		64QAM	1	0	21.93	22.30	22.12	23.00
	1		7	22.28	22.20	22.18	23.00	
	1		14	22.15	22.11	22.09	23.00	
	8		0	20.98	20.93	21.13	22.00	
	8		4	21.25	20.98	21.24	22.00	
	8		7	21.11	20.99	21.11	22.00	
	15		0	21.08	21.00	21.20	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20425/826.5	20525/836.5	20625/846.5	
	5MHz	QPSK	1	0	23.97	24.24	23.88	25.00
1			13	23.83	23.95	23.83	25.00	
1			24	24.22	24.17	24.02	25.00	
12			0	22.85	22.93	22.88	24.00	
12			6	22.88	22.90	22.98	24.00	
12			13	22.94	22.98	22.84	24.00	
25			0	22.88	22.88	22.90	24.00	
16QAM		1	0	23.38	23.64	23.53	24.00	
		1	13	23.19	23.23	23.32	24.00	
		1	24	23.23	23.33	23.49	24.00	
		12	0	22.02	21.85	22.12	23.00	
		12	6	22.06	21.84	22.11	23.00	
		12	13	21.56	21.91	21.80	23.00	
		25	0	22.06	21.92	22.04	23.00	
64QAM		1	0	21.88	22.28	22.10	23.00	
		1	13	22.26	22.17	22.16	23.00	
		1	24	22.16	22.10	22.10	23.00	
		12	0	20.97	20.95	21.14	22.00	
		12	6	21.23	20.95	21.23	22.00	
		12	13	21.09	20.95	21.08	22.00	
		25	0	21.05	20.95	21.16	22.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20450/829	20525/836.5	20600/844	
10MHz	QPSK	1	0	23.94	24.20	23.85	25.00
		1	25	23.82	23.91	23.81	25.00
		1	49	24.20	24.16	23.99	25.00
		25	0	22.82	22.88	22.84	24.00
		25	13	22.86	22.86	22.95	24.00
		25	25	22.91	22.93	22.80	24.00
		50	0	22.85	22.83	22.86	24.00
	16QAM	1	0	23.35	23.60	23.48	24.00
		1	25	23.16	23.21	23.28	24.00
		1	49	23.20	23.30	23.47	24.00
		25	0	21.99	21.81	22.09	23.00
		25	13	22.03	21.82	22.08	23.00
		25	25	21.53	21.86	21.76	23.00
		50	0	22.04	21.88	22.01	23.00
	64QAM	1	0	21.86	22.24	22.05	23.00
		1	25	22.22	22.15	22.12	23.00
		1	49	22.10	22.04	22.04	23.00
		25	0	20.92	20.87	21.07	22.00
		25	13	21.19	20.91	21.17	22.00
		25	25	21.06	20.90	21.04	22.00
		50	0	21.03	20.91	21.13	22.00

LTE Band 7							
Receiver on--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	17.97	17.91	18.02	19.00
		1	13	17.93	17.91	18.14	19.00
		1	24	18.05	17.87	18.04	19.00
		12	0	17.96	17.67	17.96	19.00
		12	6	18.08	18.01	18.16	19.00
		12	13	18.25	17.93	17.98	19.00
		25	0	18.04	18.10	18.05	19.00
	16QAM	1	0	18.06	17.88	18.05	19.00
		1	13	18.78	18.20	18.12	19.00
		1	24	18.11	17.96	18.13	19.00
		12	0	18.11	17.93	17.95	19.00
		12	6	18.21	17.98	18.08	19.00
		12	13	18.15	18.03	18.17	19.00
		25	0	18.25	18.16	18.10	19.00
	64QAM	1	0	18.22	17.96	18.17	19.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20800/2505	21100/2535	21400/2565		
		1	13	18.10	18.22	18.16	19.00	
		1	24	17.94	17.80	18.05	19.00	
		12	0	18.12	17.99	18.08	19.00	
		12	6	18.13	18.07	18.15	19.00	
		12	13	18.18	17.95	18.12	19.00	
		25	0	18.12	17.94	18.10	19.00	
10MHz	QPSK	1	0	17.99	17.92	18.05	19.00	
		1	25	17.96	17.96	18.18	19.00	
		1	49	18.07	17.91	18.07	19.00	
		25	0	17.99	17.72	18.00	19.00	
		25	13	18.11	18.06	18.20	19.00	
		25	25	18.27	17.97	18.03	19.00	
		50	0	18.08	18.12	18.09	19.00	
	16QAM	1	0	18.10	17.91	18.07	19.00	
		1	25	18.82	18.24	18.15	19.00	
		1	49	18.14	17.98	18.16	19.00	
		25	0	18.14	17.98	17.99	19.00	
		25	13	18.23	18.02	18.11	19.00	
		25	25	18.18	18.08	18.21	19.00	
		50	0	18.28	18.21	18.14	19.00	
	64QAM	1	0	18.24	17.95	18.19	19.00	
		1	25	18.13	18.22	18.19	19.00	
		1	49	17.93	17.82	18.08	19.00	
		25	0	18.15	18.04	18.08	19.00	
		25	13	18.15	18.11	18.18	19.00	
		25	25	18.21	18.00	18.16	19.00	
		50	0	18.15	17.99	18.14	19.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20825/2507.5	21100/2535	21375/2562.5	
	15MHz	QPSK	1	0	17.98	17.88	18.03	19.00
1			38	17.94	17.95	18.15	19.00	
1			74	18.04	17.86	18.03	19.00	
36			0	17.97	17.68	17.97	19.00	
36			18	18.08	18.01	18.16	19.00	
36			39	18.24	17.94	17.99	19.00	
75			0	18.06	18.08	18.04	19.00	
16QAM		1	0	18.08	17.89	18.05	19.00	
		1	38	18.80	18.21	18.13	19.00	
		1	74	18.12	17.94	18.13	19.00	
		36	0	18.11	17.96	17.96	19.00	
		36	18	18.20	17.97	18.07	19.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20850/2510	21100/2535	21350/2560		
20MHz	64QAM	36	39	18.16	18.04	18.18	19.00	
		75	0	18.25	18.16	18.10	19.00	
		1	0	18.19	17.93	18.17	19.00	
		1	38	18.11	18.19	18.17	19.00	
		1	74	17.94	17.81	18.09	19.00	
		36	0	18.14	18.06	18.09	19.00	
		36	18	18.13	18.08	18.17	19.00	
		36	39	18.19	17.96	18.13	19.00	
	75	0	18.12	17.94	18.10	19.00		
	20MHz	QPSK	1	0	17.95	17.84	18.00	19.00
			1	50	17.93	17.91	18.13	19.00
			1	99	18.02	17.85	18.00	19.00
			50	0	17.94	17.63	17.93	19.00
			50	25	18.06	17.97	18.13	19.00
			50	50	18.21	17.89	17.95	19.00
			100	0	18.03	18.03	18.00	19.00
16QAM		1	0	18.05	17.85	18.00	19.00	
		1	50	18.77	18.19	18.09	19.00	
		1	99	18.09	17.91	18.11	19.00	
		50	0	18.08	17.92	17.93	19.00	
		50	25	18.17	17.95	18.04	19.00	
		50	50	18.13	17.99	18.14	19.00	
		100	0	18.23	18.12	18.07	19.00	
64QAM		1	0	18.17	17.89	18.12	19.00	
		1	50	18.07	18.17	18.13	19.00	
		1	99	17.88	17.75	18.03	19.00	
		50	0	18.09	17.98	18.02	19.00	
	50	25	18.09	18.04	18.11	19.00		
	50	50	18.16	17.91	18.09	19.00		
	100	0	18.10	17.90	18.07	19.00		

LTE Band 7							
Body SAR--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	20.92	20.92	21.03	22.00
		1	13	21.17	21.00	21.47	22.00
		1	24	20.94	20.86	21.16	22.00
		12	0	21.10	21.10	21.25	22.00
		12	6	21.18	21.12	21.35	22.00
		12	13	21.07	21.08	21.24	22.00



	16QAM	25	0	21.08	21.07	21.33	22.00
		1	0	21.06	21.22	21.18	22.00
		1	13	21.17	21.47	21.25	22.00
		1	24	21.18	21.13	21.24	22.00
		12	0	21.09	21.08	21.13	22.00
		12	6	21.15	21.14	21.23	22.00
		12	13	21.08	21.09	21.16	22.00
		25	0	21.01	21.01	21.10	22.00
	64QAM	1	0	20.81	21.19	20.89	22.00
		1	13	21.53	21.49	21.59	22.00
		1	24	21.04	21.05	21.06	22.00
		12	0	19.85	20.09	19.93	21.00
		12	6	20.02	20.10	20.10	21.00
		12	13	19.76	20.06	19.84	21.00
25		0	19.80	20.01	19.89	21.00	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	20.94	20.93	21.06	22.00
		1	25	21.20	21.05	21.51	22.00
		1	49	20.96	20.90	21.19	22.00
		25	0	21.13	21.15	21.29	22.00
		25	13	21.21	21.17	21.39	22.00
		25	25	21.09	21.12	21.29	22.00
		50	0	21.12	21.09	21.37	22.00
	16QAM	1	0	21.10	21.25	21.20	22.00
		1	25	21.21	21.51	21.28	22.00
		1	49	21.21	21.15	21.27	22.00
		25	0	21.12	21.13	21.17	22.00
		25	13	21.17	21.18	21.26	22.00
		25	25	21.11	21.14	21.20	22.00
		50	0	21.04	21.06	21.14	22.00
	64QAM	1	0	20.83	21.18	20.91	22.00
		1	25	21.56	21.49	21.62	22.00
		1	49	21.03	21.07	21.09	22.00
		25	0	19.88	20.14	19.93	21.00
		25	13	20.04	20.14	20.13	21.00
		25	25	19.79	20.11	19.88	21.00
		50	0	19.83	20.06	19.93	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	20.93	20.89	21.04	22.00
		1	38	21.18	21.04	21.48	22.00
		1	74	20.93	20.85	21.15	22.00



		36	0	21.11	21.11	21.26	22.00	
		36	18	21.18	21.12	21.35	22.00	
		36	39	21.06	21.09	21.25	22.00	
		75	0	21.10	21.05	21.32	22.00	
	16QAM	1	0	21.08	21.23	21.18	22.00	
		1	38	21.19	21.48	21.26	22.00	
		1	74	21.19	21.11	21.24	22.00	
		36	0	21.09	21.11	21.14	22.00	
		36	18	21.14	21.13	21.22	22.00	
		36	39	21.09	21.10	21.17	22.00	
		75	0	21.01	21.01	21.10	22.00	
	64QAM	1	0	20.78	21.16	20.89	22.00	
		1	38	21.54	21.46	21.60	22.00	
		1	74	21.04	21.06	21.10	22.00	
		36	0	19.87	20.16	19.94	21.00	
		36	18	20.02	20.11	20.12	21.00	
		36	39	19.77	20.07	19.85	21.00	
		75	0	19.80	20.01	19.89	21.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20850/2510	21100/2535	21350/2560	
	20MHz	QPSK	1	0	20.90	20.85	21.01	22.00
1			50	21.17	21.00	21.46	22.00	
1			99	20.91	20.84	21.12	22.00	
50			0	21.08	21.06	21.22	22.00	
50			25	21.16	21.08	21.32	22.00	
50			50	21.03	21.04	21.21	22.00	
100			0	21.07	21.00	21.28	22.00	
16QAM		1	0	21.05	21.19	21.13	22.00	
		1	50	21.16	21.46	21.22	22.00	
		1	99	21.16	21.08	21.22	22.00	
		50	0	21.06	21.07	21.11	22.00	
		50	25	21.11	21.11	21.19	22.00	
		50	50	21.06	21.05	21.13	22.00	
		100	0	20.99	20.97	21.07	22.00	
64QAM		1	0	20.76	21.12	20.84	22.00	
		1	50	21.50	21.44	21.56	22.00	
		1	99	20.98	21.00	21.04	22.00	
		50	0	19.82	20.08	19.87	21.00	
		50	25	19.98	20.07	20.06	21.00	
		50	50	19.74	20.02	19.81	21.00	
		100	0	19.78	19.97	19.86	21.00	



LTE Band 7							
Hotspot--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	20.68	20.66	20.72	21.50
		1	13	20.91	20.89	21.09	21.50
		1	24	20.69	20.56	20.78	21.50
		12	0	20.74	20.85	20.94	21.50
		12	6	20.87	20.87	21.05	21.50
		12	13	20.77	20.80	20.91	21.50
		25	0	20.76	20.78	21.02	21.50
	16QAM	1	0	21.02	21.04	21.11	21.50
		1	13	21.29	21.27	21.34	21.50
		1	24	21.03	21.05	21.04	21.50
		12	0	20.75	20.72	20.74	21.50
		12	6	20.82	20.81	20.85	21.50
		12	13	20.79	20.83	20.82	21.50
		25	0	20.71	20.76	20.77	21.50
	64QAM	1	0	21.00	20.93	21.00	21.50
		1	13	21.22	21.14	21.21	21.50
		1	24	20.98	20.96	20.95	21.50
		12	0	20.35	20.28	20.34	21.00
		12	6	20.38	20.34	20.38	21.00
		12	13	20.33	20.37	20.36	21.00
		25	0	20.23	20.28	20.29	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20800/2505	21100/2535	21400/2565	
10MHz	QPSK	1	0	20.67	20.62	20.70	21.50
		1	25	20.89	20.88	21.06	21.50
		1	49	20.66	20.51	20.74	21.50
		25	0	20.72	20.81	20.91	21.50
		25	13	20.84	20.82	21.01	21.50
		25	25	20.74	20.77	20.87	21.50
		50	0	20.74	20.74	20.97	21.50
	16QAM	1	0	21.00	21.02	21.09	21.50
		1	25	21.27	21.24	21.32	21.50
		1	49	21.01	21.01	21.01	21.50
		25	0	20.72	20.70	20.71	21.50
		25	13	20.79	20.76	20.81	21.50
		25	25	20.77	20.79	20.79	21.50
		50	0	20.68	20.71	20.73	21.50
	64QAM	1	0	20.95	20.91	20.98	21.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20825/2507.5	21100/2535	21375/2562.5		
		1	25	21.20	21.11	21.19	21.50	
		1	49	20.99	20.95	20.96	21.50	
		25	0	20.34	20.30	20.35	21.00	
		25	13	20.36	20.31	20.37	21.00	
		25	25	20.31	20.33	20.33	21.00	
		50	0	20.20	20.23	20.25	21.00	
15MHz	QPSK	1	0	20.64	20.58	20.67	21.50	
		1	38	20.88	20.84	21.04	21.50	
		1	74	20.64	20.50	20.71	21.50	
		36	0	20.69	20.76	20.87	21.50	
		36	18	20.82	20.78	20.98	21.50	
		36	39	20.71	20.72	20.83	21.50	
		75	0	20.71	20.69	20.93	21.50	
	16QAM	1	0	20.97	20.98	21.04	21.50	
		1	38	21.24	21.22	21.28	21.50	
		1	74	20.98	20.98	20.99	21.50	
		36	0	20.69	20.66	20.68	21.50	
		36	18	20.76	20.74	20.78	21.50	
		36	39	20.74	20.74	20.75	21.50	
		75	0	20.66	20.67	20.70	21.50	
	64QAM	1	0	20.93	20.87	20.93	21.50	
		1	38	21.16	21.09	21.15	21.50	
		1	74	20.93	20.89	20.90	21.50	
		36	0	20.29	20.22	20.28	21.00	
		36	18	20.32	20.27	20.31	21.00	
		36	39	20.28	20.28	20.29	21.00	
		75	0	20.18	20.19	20.22	21.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					20850/2510	21100/2535	21350/2560	
	20MHz	QPSK	1	0	20.59	20.49	20.61	21.50
1			50	20.86	20.80	21.00	21.50	
1			99	20.58	20.43	20.63	21.50	
50			0	20.64	20.67	20.80	21.50	
50			25	20.78	20.70	20.90	21.50	
50			50	20.65	20.66	20.76	21.50	
100			0	20.70	20.61	20.86	21.50	
16QAM		1	0	20.96	20.91	20.96	21.50	
		1	50	21.23	21.19	21.22	21.50	
		1	99	20.93	20.91	20.93	21.50	
		50	0	20.64	20.61	20.63	21.50	
		50	25	20.69	20.66	20.70	21.50	



		50	50	20.69	20.65	20.68	21.50
		100	0	20.62	20.59	20.62	21.50
	64QAM	1	0	20.85	20.80	20.85	21.50
		1	50	21.10	21.06	21.09	21.50
		1	99	20.88	20.82	20.84	21.50
		50	0	20.24	20.17	20.23	21.00
		50	25	20.25	20.19	20.23	21.00
		50	50	20.23	20.19	20.22	21.00
		100	0	20.14	20.11	20.14	21.00

LTE Band 13							
Body SAR&Receiver on&Hotspot--Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				23205/779.5	23230/782	23255/784.5	
5MHz	QPSK	1	0	24.31	24.36	24.31	25.00
		1	13	24.30	24.30	24.31	25.00
		1	24	24.27	24.26	24.28	25.00
		12	0	23.41	23.43	23.42	24.00
		12	6	23.35	23.37	23.36	24.00
		12	13	23.50	23.50	23.49	24.00
		25	0	23.37	23.43	23.41	24.00
	16QAM	1	0	23.75	23.77	23.79	24.00
		1	13	23.52	23.52	23.54	24.00
		1	24	23.79	23.82	23.79	24.00
		12	0	22.33	22.31	22.32	23.00
		12	6	22.17	22.16	22.17	23.00
		12	13	22.29	22.31	22.30	23.00
		25	0	22.46	22.48	22.47	23.00
	64QAM	1	0	22.73	22.75	22.73	23.00
		1	13	22.64	22.66	22.64	23.00
		1	24	22.63	22.62	22.59	23.00
		12	0	21.34	21.32	21.37	22.00
		12	6	21.11	21.10	21.11	22.00
		12	13	21.30	21.32	21.31	22.00
		25	0	21.34	21.36	21.35	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
10MHz	QPSK	1	0	/	24.29	/	25.00
		1	25	/	24.30	/	25.00
		1	49	/	24.24	/	25.00
		25	0	/	23.39	/	24.00
		25	13	/	23.33	/	24.00
		25	25	/	23.46	/	24.00
		/	23230/782	/			



	16QAM	50	0	/	23.36	/	24.00
		1	0	/	23.74	/	24.00
		1	25	/	23.51	/	24.00
		1	49	/	23.77	/	24.00
		25	0	/	22.30	/	23.00
		25	13	/	22.13	/	23.00
		25	25	/	22.27	/	23.00
		50	0	/	22.44	/	23.00
	64QAM	1	0	/	22.68	/	23.00
		1	25	/	22.61	/	23.00
		1	49	/	22.57	/	23.00
		25	0	/	21.31	/	22.00
		25	13	/	21.07	/	22.00
		25	25	/	21.28	/	22.00
		50	0	/	21.32	/	22.00

LTE Band 26							
Body SAR&Receiver on&Hotspot--Main Ant0				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				26697/814.7	26865/831.5	27033/848.3	
1.4MHz	QPSK	1	0	24.10	24.26	24.22	25.00
		1	2	24.06	24.03	24.05	25.00
		1	5	24.08	24.31	24.26	25.00
		3	0	24.16	24.22	24.31	25.00
		3	2	24.07	24.08	23.98	25.00
		3	3	23.93	23.87	23.83	25.00
		6	0	23.18	23.08	23.20	24.00
	16QAM	1	0	23.88	23.80	23.78	24.00
		1	2	23.15	23.33	23.16	24.00
		1	5	23.51	23.63	23.69	24.00
		3	0	22.83	23.16	22.78	24.00
		3	2	23.03	23.06	22.99	24.00
		3	3	22.73	22.86	22.68	24.00
		6	0	21.99	22.21	21.96	23.00
	64QAM	1	0	22.00	22.40	21.97	23.00
		1	2	22.08	22.13	22.08	23.00
		1	5	22.56	22.79	22.35	23.00
		3	0	21.84	22.11	21.82	23.00
		3	2	22.11	22.00	22.08	23.00
		3	3	21.77	21.79	21.72	23.00
		6	0	20.90	21.14	20.90	22.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				26705/815.5	26865/831.5	27025/847.5	
3MHz	QPSK	1	0	24.09	24.28	24.21	25.00
		1	7	24.02	24.02	24.06	25.00
		1	14	24.08	24.31	24.26	25.00
		8	0	23.23	23.29	23.40	24.00
		8	4	23.17	23.14	23.05	24.00
		8	7	23.01	22.96	22.89	24.00
		15	0	23.18	23.11	23.21	24.00
	16QAM	1	0	23.88	23.78	23.78	24.00
		1	7	23.15	23.31	23.17	24.00
		1	14	23.50	23.65	23.68	24.00
		8	0	21.92	22.25	21.87	23.00
		8	4	22.11	22.14	22.07	23.00
		8	7	21.80	21.93	21.77	23.00
		15	0	22.00	22.21	21.94	23.00
	64QAM	1	0	22.00	22.42	21.97	23.00
		1	7	22.08	22.15	22.07	23.00
		1	14	22.59	22.76	22.34	23.00
		8	0	20.93	21.20	20.95	22.00
		8	4	21.19	21.08	21.16	22.00
		8	7	20.84	20.86	20.81	22.00
		15	0	20.91	21.14	20.88	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
5MHz	QPSK	1	0	24.11	24.29	24.24	25.00
		1	13	24.05	24.07	24.10	25.00
		1	24	24.10	24.35	24.29	25.00
		12	0	23.26	23.34	23.44	24.00
		12	6	23.20	23.19	23.09	24.00
		12	13	23.03	23.00	22.94	24.00
		25	0	23.22	23.13	23.25	24.00
	16QAM	1	0	23.92	23.81	23.80	24.00
		1	13	23.19	23.35	23.20	24.00
		1	24	23.53	23.67	23.71	24.00
		12	0	21.95	22.30	21.91	23.00
		12	6	22.13	22.18	22.10	23.00
		12	13	21.83	21.98	21.81	23.00
		25	0	22.03	22.26	21.98	23.00
	64QAM	1	0	22.02	22.41	21.99	23.00
		1	13	22.11	22.15	22.10	23.00
		1	24	22.58	22.78	22.37	23.00
		12	0	20.96	21.25	20.95	22.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				26740/819	26865/831.5	26990/844		
10MHz	QPSK	12	6	21.21	21.12	21.19	22.00	
		12	13	20.87	20.91	20.85	22.00	
		25	0	20.94	21.19	20.92	22.00	
		1	0	24.10	24.25	24.22	25.00	
		1	25	24.03	24.06	24.07	25.00	
		1	49	24.07	24.30	24.25	25.00	
		25	0	23.24	23.30	23.41	24.00	
	25	13	23.17	23.14	23.05	24.00		
	25	25	23.00	22.97	22.90	24.00		
	50	0	23.20	23.09	23.20	24.00		
	16QAM	1	0	23.90	23.79	23.78	24.00	
		1	25	23.17	23.32	23.18	24.00	
		1	49	23.51	23.63	23.68	24.00	
		25	0	21.92	22.28	21.88	23.00	
		25	13	22.10	22.13	22.06	23.00	
		25	25	21.81	21.94	21.78	23.00	
		50	0	22.00	22.21	21.94	23.00	
	64QAM	1	0	21.97	22.39	21.97	23.00	
		1	25	22.09	22.12	22.08	23.00	
		1	49	22.59	22.77	22.38	23.00	
		25	0	20.95	21.27	20.96	22.00	
		25	13	21.19	21.09	21.18	22.00	
		25	25	20.85	20.87	20.82	22.00	
		50	0	20.91	21.14	20.88	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					26765/821.5	26865/831.5	26965/841.5	
	15MHz	QPSK	1	0	24.07	24.21	24.19	25.00
1			38	24.02	24.02	24.05	25.00	
1			74	24.05	24.29	24.22	25.00	
36			0	23.21	23.25	23.37	24.00	
36			18	23.15	23.10	23.02	24.00	
36			39	22.97	22.92	22.86	24.00	
75			0	23.17	23.04	23.16	24.00	
16QAM		1	0	23.87	23.75	23.73	24.00	
		1	38	23.14	23.30	23.14	24.00	
		1	74	23.48	23.60	23.66	24.00	
		36	0	21.89	22.24	21.85	23.00	
		36	18	22.07	22.11	22.03	23.00	
		36	39	21.78	21.89	21.74	23.00	
		75	0	21.98	22.17	21.91	23.00	
64QAM		1	0	21.95	22.35	21.92	23.00	



		1	38	22.05	22.10	22.04	23.00
		1	74	22.53	22.71	22.32	23.00
		36	0	20.90	21.19	20.89	22.00
		36	18	21.15	21.05	21.12	22.00
		36	39	20.82	20.82	20.78	22.00
		75	0	20.89	21.10	20.85	22.00

LTE Band 38							
Receiver on--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	20.29	20.32	20.38	21.50
		1	13	20.69	20.55	20.62	21.50
		1	24	20.35	20.46	20.41	21.50
		12	0	20.42	20.39	20.38	21.50
		12	6	20.48	20.47	20.60	21.50
		12	13	20.31	20.37	20.46	21.50
		25	0	20.39	20.48	20.41	21.50
	16QAM	1	0	20.36	20.51	20.31	21.50
		1	13	20.88	20.85	20.72	21.50
		1	24	20.48	20.69	20.55	21.50
		12	0	20.88	20.81	20.76	21.50
		12	6	20.51	20.55	20.50	21.50
		12	13	20.21	20.41	20.07	21.50
		25	0	20.34	20.54	20.55	21.50
	64QAM	1	0	20.52	20.55	20.37	21.50
		1	13	20.55	20.36	20.19	21.50
		1	24	20.66	20.62	20.64	21.50
		12	0	20.06	20.30	20.19	21.50
		12	6	20.37	20.42	20.48	21.50
		12	13	20.22	20.39	20.33	21.50
		25	0	20.26	20.38	20.35	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	20.31	20.33	20.41	21.50
		1	25	20.72	20.60	20.66	21.50
		1	49	20.37	20.50	20.44	21.50
		25	0	20.45	20.44	20.42	21.50
		25	13	20.51	20.52	20.64	21.50
		25	25	20.33	20.41	20.51	21.50
		50	0	20.43	20.50	20.45	21.50
	16QAM	1	0	20.40	20.54	20.33	21.50
		1	25	20.92	20.89	20.75	21.50



		1	49	20.51	20.71	20.58	21.50	
		25	0	20.91	20.86	20.80	21.50	
		25	13	20.53	20.59	20.53	21.50	
		25	25	20.24	20.46	20.11	21.50	
		50	0	20.37	20.59	20.59	21.50	
	64QAM	1	0	20.54	20.54	20.39	21.50	
		1	25	20.58	20.36	20.22	21.50	
		1	49	20.65	20.64	20.67	21.50	
		25	0	20.09	20.35	20.19	21.50	
		25	13	20.39	20.46	20.51	21.50	
		25	25	20.25	20.44	20.37	21.50	
		50	0	20.29	20.43	20.39	21.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	20.30	20.29	20.39	21.50	
		1	38	20.70	20.59	20.63	21.50	
		1	74	20.34	20.45	20.40	21.50	
		36	0	20.43	20.40	20.39	21.50	
		36	18	20.48	20.47	20.60	21.50	
		36	39	20.30	20.38	20.47	21.50	
		75	0	20.41	20.46	20.40	21.50	
	16QAM	1	0	20.38	20.52	20.31	21.50	
		1	38	20.90	20.86	20.73	21.50	
		1	74	20.49	20.67	20.55	21.50	
		36	0	20.88	20.84	20.77	21.50	
		36	18	20.50	20.54	20.49	21.50	
		36	39	20.22	20.42	20.08	21.50	
		75	0	20.34	20.54	20.55	21.50	
	64QAM	1	0	20.49	20.52	20.37	21.50	
		1	38	20.56	20.33	20.20	21.50	
		1	74	20.66	20.63	20.68	21.50	
		36	0	20.08	20.37	20.20	21.50	
		36	18	20.37	20.43	20.50	21.50	
		36	39	20.23	20.40	20.34	21.50	
		75	0	20.26	20.38	20.35	21.50	
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				37850/2580	38000/2595	38150/2610		
20MHz	QPSK	1	0	20.27	20.25	20.36	21.50	
		1	50	20.69	20.55	20.61	21.50	
		1	99	20.32	20.44	20.37	21.50	
		50	0	20.40	20.35	20.35	21.50	
		50	25	20.46	20.43	20.57	21.50	
		50	50	20.27	20.33	20.43	21.50	



	16QAM	100	0	20.38	20.41	20.36	21.50
		1	0	20.35	20.48	20.26	21.50
		1	50	20.87	20.84	20.69	21.50
		1	99	20.46	20.64	20.53	21.50
		50	0	20.85	20.80	20.74	21.50
		50	25	20.47	20.52	20.46	21.50
		50	50	20.19	20.37	20.04	21.50
		100	0	20.32	20.50	20.52	21.50
	64QAM	1	0	20.47	20.48	20.32	21.50
		1	50	20.52	20.31	20.16	21.50
		1	99	20.60	20.57	20.62	21.50
		50	0	20.03	20.29	20.13	21.50
		50	25	20.33	20.39	20.44	21.50
		50	50	20.20	20.35	20.30	21.50
100		0	20.24	20.34	20.32	21.50	

LTE Band 38							
Body SAR&Hotspot--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	23.07	23.23	23.02	24.00
		1	13	23.42	23.05	23.35	24.00
		1	24	23.12	23.22	23.13	24.00
		12	0	22.74	22.90	22.71	23.50
		12	6	22.83	22.99	22.89	23.50
		12	13	22.82	22.93	22.75	23.50
		25	0	22.77	22.95	22.78	23.50
	16QAM	1	0	22.92	22.94	22.81	23.50
		1	13	22.86	23.01	23.01	23.50
		1	24	23.10	23.04	23.01	23.50
		12	0	21.76	21.81	21.66	22.50
		12	6	21.75	21.92	21.77	22.50
		12	13	21.85	21.79	21.88	22.50
		25	0	21.82	21.88	21.84	22.50
	64QAM	1	0	21.60	21.52	21.70	22.50
		1	13	21.79	21.71	21.77	22.50
		1	24	21.89	21.66	21.85	22.50
		12	0	20.67	20.79	20.66	21.50
		12	6	20.87	20.88	20.68	21.50
		12	13	20.78	20.84	20.86	21.50
		25	0	20.76	20.82	20.72	21.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	23.09	23.24	23.05	24.00
		1	25	23.45	23.10	23.39	24.00
		1	49	23.14	23.26	23.16	24.00
		25	0	22.77	22.95	22.75	23.50
		25	13	22.86	23.04	22.93	23.50
		25	25	22.84	22.97	22.80	23.50
		50	0	22.81	22.97	22.82	23.50
	16QAM	1	0	22.96	22.97	22.83	23.50
		1	25	22.90	23.05	23.04	23.50
		1	49	23.13	23.06	23.04	23.50
		25	0	21.79	21.86	21.70	22.50
		25	13	21.77	21.96	21.80	22.50
		25	25	21.88	21.84	21.92	22.50
		50	0	21.85	21.93	21.88	22.50
	64QAM	1	0	21.62	21.51	21.72	22.50
		1	25	21.82	21.71	21.80	22.50
		1	49	21.88	21.68	21.88	22.50
		25	0	20.70	20.84	20.66	21.50
		25	13	20.89	20.92	20.71	21.50
		25	25	20.81	20.89	20.90	21.50
		50	0	20.79	20.87	20.76	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	23.08	23.20	23.03	24.00
		1	38	23.43	23.09	23.36	24.00
		1	74	23.11	23.21	23.12	24.00
		36	0	22.75	22.91	22.72	23.50
		36	18	22.83	22.99	22.89	23.50
		36	39	22.81	22.94	22.76	23.50
		75	0	22.79	22.93	22.77	23.50
	16QAM	1	0	22.94	22.95	22.81	23.50
		1	38	22.88	23.02	23.02	23.50
		1	74	23.11	23.02	23.01	23.50
		36	0	21.76	21.84	21.67	22.50
		36	18	21.74	21.91	21.76	22.50
		36	39	21.86	21.80	21.89	22.50
		75	0	21.82	21.88	21.84	22.50
	64QAM	1	0	21.57	21.49	21.70	22.50
		1	38	21.80	21.68	21.78	22.50
		1	74	21.89	21.67	21.89	22.50
		36	0	20.69	20.86	20.67	21.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37850/2580	38000/2595	38150/2610	
20MHz	QPSK	36	18	20.87	20.89	20.70	21.50
		36	39	20.79	20.85	20.87	21.50
		75	0	20.76	20.82	20.72	21.50
		1	0	23.05	23.16	23.00	24.00
		1	50	23.42	23.05	23.34	24.00
		1	99	23.09	23.20	23.09	24.00
		50	0	22.72	22.86	22.68	23.50
	50	25	22.81	22.95	22.86	23.50	
	50	50	22.78	22.89	22.72	23.50	
	100	0	22.76	22.88	22.73	23.50	
	16QAM	1	0	22.91	22.91	22.76	23.50
		1	50	22.85	23.00	22.98	23.50
		1	99	23.08	22.99	22.99	23.50
		50	0	21.73	21.80	21.64	22.50
		50	25	21.71	21.89	21.73	22.50
		50	50	21.83	21.75	21.85	22.50
	64QAM	100	0	21.80	21.84	21.81	22.50
		1	0	21.55	21.45	21.65	22.50
		1	50	21.76	21.66	21.74	22.50
		1	99	21.83	21.61	21.83	22.50
		50	0	20.64	20.78	20.60	21.50
50		25	20.83	20.85	20.64	21.50	
50		50	20.76	20.80	20.83	21.50	
100	0	20.74	20.78	20.69	21.50		

LTE Band 66							
Receiver on--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	18.25	18.36	18.23	20.00
		1	2	18.50	18.69	18.11	20.00
		1	5	18.74	18.70	18.74	20.00
		3	0	18.28	18.55	18.44	20.00
		3	2	18.39	18.59	18.23	20.00
		3	3	18.42	18.51	18.62	20.00
		6	0	18.31	18.58	18.60	20.00
	16QAM	1	0	18.47	18.46	18.31	20.00
		1	2	18.81	19.00	18.91	20.00
		1	5	18.75	18.93	18.87	20.00
		3	0	18.33	18.45	18.56	20.00
		3	2	18.62	18.57	18.48	20.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
	64QAM	3	3	18.26	18.43	18.39	20.00
		6	0	18.35	18.47	18.46	20.00
		1	0	18.59	18.56	18.56	20.00
		1	2	19.07	18.86	19.16	20.00
		1	5	18.33	18.58	18.70	20.00
		3	0	18.29	18.44	18.27	20.00
		3	2	18.53	18.64	18.47	20.00
		3	3	18.22	18.45	18.27	20.00
		6	0	18.54	18.58	18.60	20.00
3MHz	QPSK	1	0	18.20	18.27	18.17	20.00
		1	7	18.48	18.65	18.07	20.00
		1	14	18.68	18.63	18.66	20.00
		8	0	18.23	18.46	18.37	20.00
		8	4	18.35	18.51	18.15	20.00
		8	7	18.36	18.45	18.55	20.00
		15	0	18.30	18.50	18.53	20.00
	16QAM	1	0	18.46	18.39	18.23	20.00
		1	7	18.80	18.97	18.85	20.00
		1	14	18.70	18.86	18.81	20.00
		8	0	18.28	18.40	18.51	20.00
		8	4	18.55	18.49	18.40	20.00
		8	7	18.21	18.34	18.32	20.00
		15	0	18.31	18.39	18.38	20.00
	64QAM	1	0	18.51	18.49	18.48	20.00
		1	7	19.01	18.83	19.10	20.00
		1	14	18.28	18.51	18.64	20.00
		8	0	18.24	18.39	18.22	20.00
		8	4	18.46	18.56	18.39	20.00
		8	7	18.17	18.36	18.20	20.00
		15	0	18.50	18.50	18.52	20.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	18.17	18.25	18.13	20.00
		1	13	18.46	18.61	18.04	20.00
		1	24	18.65	18.58	18.62	20.00
		12	0	18.20	18.41	18.33	20.00
		12	6	18.33	18.47	18.10	20.00
		12	13	18.34	18.43	18.51	20.00
		25	0	18.30	18.49	18.51	20.00
	16QAM	1	0	18.46	18.35	18.20	20.00
		1	13	18.80	18.95	18.82	20.00



		1	24	18.67	18.84	18.77	20.00	
		12	0	18.26	18.36	18.48	20.00	
		12	6	18.52	18.44	18.36	20.00	
		12	13	18.18	18.29	18.28	20.00	
		25	0	18.29	18.35	18.33	20.00	
	64QAM	1	0	18.48	18.49	18.45	20.00	
		1	13	18.98	18.85	19.07	20.00	
		1	24	18.29	18.49	18.60	20.00	
		12	0	18.22	18.35	18.23	20.00	
		12	6	18.43	18.51	18.35	20.00	
		12	13	18.14	18.31	18.16	20.00	
		25	0	18.48	18.46	18.47	20.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					132022/1715	132322/1745	132622/1775	
10MHz	QPSK	1	0	18.18	18.22	18.14	20.00	
		1	25	18.47	18.65	18.05	20.00	
		1	49	18.64	18.57	18.61	20.00	
		25	0	18.21	18.42	18.34	20.00	
		25	13	18.33	18.47	18.10	20.00	
		25	25	18.33	18.44	18.52	20.00	
		50	0	18.32	18.47	18.50	20.00	
	16QAM	1	0	18.48	18.36	18.20	20.00	
		1	25	18.82	18.96	18.83	20.00	
		1	49	18.68	18.82	18.77	20.00	
		25	0	18.26	18.39	18.49	20.00	
		25	13	18.51	18.43	18.35	20.00	
		25	25	18.19	18.30	18.29	20.00	
		50	0	18.29	18.35	18.33	20.00	
	64QAM	1	0	18.45	18.46	18.45	20.00	
		1	25	18.99	18.82	19.08	20.00	
		1	49	18.29	18.50	18.64	20.00	
		25	0	18.24	18.42	18.24	20.00	
		25	13	18.43	18.52	18.37	20.00	
		25	25	18.15	18.32	18.17	20.00	
		50	0	18.48	18.46	18.47	20.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					132047/1717.5	132322/1745	132597/1772.5	
	15MHz	QPSK	1	0	18.19	18.26	18.16	20.00
1			38	18.49	18.66	18.08	20.00	
1			74	18.67	18.62	18.65	20.00	
36			0	18.23	18.46	18.37	20.00	
36			18	18.36	18.52	18.14	20.00	
36			39	18.36	18.47	18.56	20.00	



	16QAM	75	0	18.34	18.51	18.55	20.00
		1	0	18.50	18.38	18.22	20.00
		1	38	18.84	18.99	18.85	20.00
		1	74	18.70	18.86	18.80	20.00
		36	0	18.29	18.41	18.52	20.00
		36	18	18.54	18.48	18.39	20.00
		36	39	18.21	18.34	18.32	20.00
		75	0	18.32	18.40	18.37	20.00
	64QAM	1	0	18.50	18.48	18.47	20.00
		1	38	19.01	18.85	19.10	20.00
		1	74	18.28	18.51	18.63	20.00
		36	0	18.25	18.40	18.23	20.00
		36	18	18.45	18.55	18.38	20.00
		36	39	18.17	18.36	18.20	20.00
75	0	18.51	18.51	18.51	20.00		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	18.15	18.18	18.11	20.00
		1	50	18.46	18.61	18.03	20.00
		1	99	18.62	18.56	18.58	20.00
		50	0	18.18	18.37	18.30	20.00
		50	25	18.31	18.43	18.07	20.00
		50	50	18.30	18.39	18.48	20.00
		100	0	18.29	18.42	18.46	20.00
	16QAM	1	0	18.45	18.32	18.15	20.00
		1	50	18.79	18.94	18.79	20.00
		1	99	18.65	18.79	18.75	20.00
		50	0	18.23	18.35	18.46	20.00
		50	25	18.48	18.41	18.32	20.00
		50	50	18.16	18.25	18.25	20.00
		100	0	18.27	18.31	18.30	20.00
	64QAM	1	0	18.43	18.42	18.40	20.00
		1	50	18.95	18.80	19.04	20.00
		1	99	18.23	18.44	18.58	20.00
		50	0	18.19	18.34	18.17	20.00
		50	25	18.39	18.48	18.31	20.00
		50	50	18.12	18.27	18.13	20.00
		100	0	18.46	18.42	18.44	20.00



LTE Band 66							
Body SAR&Hotspot--Main Ant2				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	23.00	23.22	23.01	24.50
		1	2	23.37	23.45	23.39	24.50
		1	5	23.41	23.55	23.45	24.50
		3	0	23.11	23.36	23.17	24.50
		3	2	23.16	23.41	23.38	24.50
		3	3	23.24	23.29	23.32	24.50
		6	0	22.19	22.39	22.11	23.50
	16QAM	1	0	21.95	22.43	22.25	23.50
		1	2	22.58	22.57	22.62	23.50
		1	5	22.77	22.81	22.75	23.50
		3	0	22.22	22.21	22.17	23.50
		3	2	22.24	22.38	22.23	23.50
		3	3	22.23	22.28	22.19	23.50
		6	0	21.17	21.36	21.21	22.50
	64QAM	1	0	21.48	21.34	21.44	22.50
		1	2	21.33	21.53	21.42	22.50
		1	5	21.59	21.85	21.74	22.50
		3	0	21.25	21.25	21.16	22.50
		3	2	21.24	21.40	21.21	22.50
		3	3	21.29	21.30	21.25	22.50
		6	0	20.27	20.42	20.31	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	22.97	23.17	22.98	24.50
		1	7	23.33	23.44	23.39	24.50
		1	14	23.38	23.53	23.41	24.50
		8	0	22.16	22.39	22.23	23.50
		8	4	22.24	22.43	22.42	23.50
		8	7	22.28	22.34	22.35	23.50
		15	0	22.18	22.35	22.07	23.50
	16QAM	1	0	21.94	22.38	22.20	23.50
		1	7	22.57	22.54	22.60	23.50
		1	14	22.74	22.78	22.72	23.50
		8	0	21.28	21.29	21.24	22.50
		8	4	21.28	21.43	21.27	22.50
		8	7	21.28	21.31	21.25	22.50
		15	0	21.16	21.32	21.16	22.50
	64QAM	1	0	21.43	21.29	21.39	22.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				131997/1712.5	132322/1745	132647/1777.5		
		1	7	21.30	21.50	21.38	22.50	
		1	14	21.56	21.77	21.71	22.50	
		8	0	20.31	20.33	20.23	21.50	
		8	4	20.28	20.45	20.25	21.50	
		8	7	20.34	20.33	20.31	21.50	
		15	0	20.26	20.38	20.26	21.50	
5MHz	QPSK	1	0	22.94	23.15	22.94	24.50	
		1	13	23.31	23.40	23.36	24.50	
		1	24	23.35	23.48	23.37	24.50	
		12	0	22.13	22.34	22.19	23.50	
		12	6	22.22	22.39	22.37	23.50	
		12	13	22.26	22.32	22.31	23.50	
	16QAM	25	0	22.18	22.34	22.05	23.50	
		1	0	21.94	22.34	22.17	23.50	
		1	13	22.57	22.52	22.57	23.50	
		1	24	22.71	22.76	22.68	23.50	
		12	0	21.26	21.25	21.21	22.50	
		12	6	21.25	21.38	21.23	22.50	
	64QAM	12	13	21.25	21.26	21.21	22.50	
		25	0	21.14	21.28	21.11	22.50	
		1	0	21.40	21.29	21.36	22.50	
		1	13	21.27	21.52	21.35	22.50	
		1	24	21.57	21.75	21.67	22.50	
		12	0	20.29	20.29	20.24	21.50	
	10MHz	QPSK	12	6	20.25	20.40	20.21	21.50
			12	13	20.31	20.28	20.27	21.50
			25	0	20.24	20.34	20.21	21.50
			1	0	22.96	23.16	22.97	24.50
			1	25	23.34	23.45	23.40	24.50
			1	49	23.37	23.52	23.40	24.50
16QAM		25	0	22.16	22.39	22.23	23.50	
		25	13	22.25	22.44	22.41	23.50	
		25	25	22.28	22.36	22.36	23.50	
		50	0	22.22	22.36	22.09	23.50	
		1	0	21.98	22.37	22.19	23.50	
		1	25	22.61	22.56	22.60	23.50	
		1	49	22.74	22.78	22.71	23.50	
		25	0	21.29	21.30	21.25	22.50	
		25	13	21.27	21.42	21.26	22.50	



		25	25	21.28	21.31	21.25	22.50
		50	0	21.17	21.33	21.15	22.50
	64QAM	1	0	21.42	21.28	21.38	22.50
		1	25	21.30	21.52	21.38	22.50
		1	49	21.56	21.77	21.70	22.50
		25	0	20.32	20.34	20.24	21.50
		25	13	20.27	20.44	20.24	21.50
		25	25	20.34	20.33	20.31	21.50
		50	0	20.27	20.39	20.25	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	22.95	23.12	22.95	24.50
		1	38	23.32	23.44	23.37	24.50
		1	74	23.34	23.47	23.36	24.50
		36	0	22.14	22.35	22.20	23.50
		36	18	22.22	22.39	22.37	23.50
		36	39	22.25	22.33	22.32	23.50
		75	0	22.20	22.32	22.04	23.50
	16QAM	1	0	21.96	22.35	22.17	23.50
		1	38	22.59	22.53	22.58	23.50
		1	74	22.72	22.74	22.68	23.50
		36	0	21.26	21.28	21.22	22.50
		36	18	21.24	21.37	21.22	22.50
		36	39	21.26	21.27	21.22	22.50
		75	0	21.14	21.28	21.11	22.50
	64QAM	1	0	21.37	21.26	21.36	22.50
		1	38	21.28	21.49	21.36	22.50
		1	74	21.57	21.76	21.71	22.50
		36	0	20.31	20.36	20.25	21.50
		36	18	20.25	20.41	20.23	21.50
		36	39	20.32	20.29	20.28	21.50
		75	0	20.24	20.34	20.21	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132072/1720	132322/1745	132572/1770	
20MHz	QPSK	1	0	22.92	23.08	22.92	24.50
		1	50	23.31	23.40	23.35	24.50
		1	99	23.32	23.46	23.33	24.50
		50	0	22.11	22.30	22.16	23.50
		50	25	22.20	22.35	22.34	23.50
		50	50	22.22	22.28	22.28	23.50
		100	0	22.17	22.27	22.00	23.50
	16QAM	1	0	21.93	22.31	22.12	23.50
		1	50	22.56	22.51	22.54	23.50



		1	99	22.69	22.71	22.66	23.50
		50	0	21.23	21.24	21.19	22.50
		50	25	21.21	21.35	21.19	22.50
		50	50	21.23	21.22	21.18	22.50
		100	0	21.12	21.24	21.08	22.50
	64QAM	1	0	21.35	21.22	21.31	22.50
		1	50	21.24	21.47	21.32	22.50
		1	99	21.51	21.70	21.65	22.50
		50	0	20.26	20.28	20.18	21.50
		50	25	20.21	20.37	20.17	21.50
		50	50	20.29	20.24	20.24	21.50
		100	0	20.22	20.30	20.18	21.50



Div - Antenna

LTE Band 2							
Body SAR&Receiver on--DIV Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	21.99	21.88	22.01	23.50
		1	2	22.16	22.05	22.22	23.50
		1	5	21.56	21.53	21.57	23.50
		3	0	22.95	22.93	23.11	23.50
		3	2	23.10	23.09	23.15	23.50
		3	3	22.85	22.83	22.90	23.50
		6	0	22.07	22.10	22.11	23.50
	16QAM	1	0	22.24	22.35	22.43	23.50
		1	2	22.31	22.36	22.37	23.50
		1	5	22.03	22.02	21.99	23.50
		3	0	21.83	21.94	21.92	23.50
		3	2	22.06	22.10	22.08	23.50
		3	3	21.74	21.80	21.72	23.50
		6	0	21.01	21.05	21.14	22.50
	64QAM	1	0	21.01	21.18	21.08	22.50
		1	2	21.28	21.36	21.34	22.50
		1	5	20.92	20.90	20.75	22.50
		3	0	20.86	20.89	20.87	22.50
		3	2	20.97	21.06	21.09	22.50
		3	3	20.75	20.85	20.84	22.50
		6	0	19.88	20.01	20.04	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18615/1851.5	18900/1880	19185/1908.5	
3MHz	QPSK	1	0	22.01	21.92	22.04	23.50
		1	7	22.14	22.08	22.26	23.50
		1	14	21.59	21.58	21.61	23.50
		8	0	22.05	22.05	22.24	23.50
		8	4	22.22	22.19	22.27	23.50
		8	7	21.95	21.94	22.00	23.50
		15	0	22.07	22.14	22.14	23.50
	16QAM	1	0	22.24	22.37	22.46	23.50
		1	7	22.31	22.36	22.41	23.50
		1	14	22.05	22.06	22.02	23.50
		8	0	20.94	21.07	21.04	22.50
		8	4	21.17	21.23	21.20	22.50
		8	7	20.84	20.92	20.85	22.50
		15	0	21.04	21.09	21.17	22.50
	64QAM	1	0	21.04	21.20	21.11	22.50



		1	7	21.31	21.36	21.36	22.50
		1	14	20.94	20.89	20.78	22.50
		8	0	19.97	20.02	19.99	21.50
		8	4	20.08	20.19	20.21	21.50
		8	7	19.85	19.97	19.97	21.50
		15	0	19.91	20.05	20.07	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18625/1852.5	18900/1880	19175/1907.5	
5MHz	QPSK	1	0	21.98	21.90	22.00	23.50
		1	13	22.12	22.04	22.23	23.50
		1	24	21.56	21.53	21.57	23.50
		12	0	22.02	22.00	22.20	23.50
		12	6	22.20	22.15	22.22	23.50
		12	13	21.93	21.92	21.96	23.50
		25	0	22.07	22.13	22.12	23.50
	16QAM	1	0	22.24	22.33	22.43	23.50
		1	13	22.31	22.34	22.38	23.50
		1	24	22.02	22.04	21.98	23.50
		12	0	20.92	21.03	21.01	22.50
		12	6	21.14	21.18	21.16	22.50
		12	13	20.81	20.87	20.81	22.50
		25	0	21.02	21.05	21.12	22.50
	64QAM	1	0	21.01	21.20	21.08	22.50
		1	13	21.28	21.38	21.33	22.50
		1	24	20.95	20.87	20.74	22.50
		12	0	19.95	19.98	20.00	21.50
		12	6	20.05	20.14	20.17	21.50
		12	13	19.82	19.92	19.93	21.50
		25	0	19.89	20.01	20.02	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	22.00	21.91	22.03	23.50
		1	25	22.15	22.09	22.27	23.50
		1	49	21.58	21.57	21.60	23.50
		25	0	22.05	22.05	22.24	23.50
		25	13	22.23	22.20	22.26	23.50
		25	25	21.95	21.96	22.01	23.50
		50	0	22.11	22.15	22.16	23.50
	16QAM	1	0	22.28	22.36	22.45	23.50
		1	25	22.35	22.38	22.41	23.50
		1	49	22.05	22.06	22.01	23.50
		25	0	20.95	21.08	21.05	22.50
		25	13	21.16	21.22	21.19	22.50



		25	25	20.84	20.92	20.85	22.50
		50	0	21.05	21.10	21.16	22.50
	64QAM	1	0	21.03	21.19	21.10	22.50
		1	25	21.31	21.38	21.36	22.50
		1	49	20.94	20.89	20.77	22.50
		25	0	19.98	20.03	20.00	21.50
		25	13	20.07	20.18	20.20	21.50
		25	25	19.85	19.97	19.97	21.50
		50	0	19.92	20.06	20.06	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18675/1857.5	18900/1880	19125/1902.5	
15MHz	QPSK	1	0	21.99	21.87	22.01	23.50
		1	38	22.13	22.08	22.24	23.50
		1	74	21.55	21.52	21.56	23.50
		36	0	22.03	22.01	22.21	23.50
		36	18	22.20	22.15	22.22	23.50
		36	39	21.92	21.93	21.97	23.50
		75	0	22.09	22.11	22.11	23.50
	16QAM	1	0	22.26	22.34	22.43	23.50
		1	38	22.33	22.35	22.39	23.50
		1	74	22.03	22.02	21.98	23.50
		36	0	20.92	21.06	21.02	22.50
		36	18	21.13	21.17	21.15	22.50
		36	39	20.82	20.88	20.82	22.50
		75	0	21.02	21.05	21.12	22.50
	64QAM	1	0	20.98	21.17	21.08	22.50
		1	38	21.29	21.35	21.34	22.50
		1	74	20.95	20.88	20.78	22.50
		36	0	19.97	20.05	20.01	21.50
		36	18	20.05	20.15	20.19	21.50
		36	39	19.83	19.93	19.94	21.50
		75	0	19.89	20.01	20.02	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	1	0	21.96	21.83	21.98	23.50
		1	50	22.12	22.04	22.22	23.50
		1	99	21.53	21.51	21.53	23.50
		50	0	22.00	21.96	22.17	23.50
		50	25	22.18	22.11	22.19	23.50
		50	50	21.89	21.88	21.93	23.50
		100	0	22.06	22.06	22.07	23.50
	16QAM	1	0	22.23	22.30	22.38	23.50
		1	50	22.30	22.33	22.35	23.50



		1	99	22.00	21.99	21.96	23.50
		50	0	20.89	21.02	20.99	22.50
		50	25	21.10	21.15	21.12	22.50
		50	50	20.79	20.83	20.78	22.50
		100	0	21.00	21.01	21.09	22.50
	64QAM	1	0	20.96	21.13	21.03	22.50
		1	50	21.25	21.33	21.30	22.50
		1	99	20.89	20.82	20.72	22.50
		50	0	19.92	19.97	19.94	21.50
		50	25	20.01	20.11	20.13	21.50
		50	50	19.80	19.88	19.90	21.50
		100	0	19.87	19.97	19.99	21.50

LTE Band 2							
Hotspot--DIV Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				18607/1850.7	18900/1880	19193/1909.3	
1.4MHz	QPSK	1	0	22.33	22.40	22.39	24.00
		1	2	22.48	22.34	22.49	24.00
		1	5	22.08	22.08	22.12	24.00
		3	0	22.86	22.79	23.02	24.00
		3	2	22.98	22.96	23.05	24.00
		3	3	22.68	22.70	22.69	24.00
		6	0	21.86	21.97	21.99	23.50
	16QAM	1	0	22.01	22.14	22.00	23.50
		1	2	22.10	22.16	22.08	23.50
		1	5	21.97	22.04	22.07	23.50
		3	0	21.78	21.80	21.71	23.50
		3	2	21.95	21.98	22.09	23.50
		3	3	21.69	21.68	21.64	23.50
		6	0	20.92	20.92	20.85	22.50
	64QAM	1	0	21.05	21.12	21.08	22.50
		1	2	21.40	21.47	21.48	22.50
		1	5	20.71	20.83	20.88	22.50
		3	0	20.74	20.77	20.68	22.50
		3	2	20.74	20.93	20.86	22.50
		3	3	20.68	20.72	20.62	22.50
		6	0	19.85	19.89	19.80	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
3MHz	QPSK			18615/1851.5	18900/1880	19185/1908.5	
		1	0	22.35	22.44	22.42	23.50
		1	7	22.46	22.37	22.53	23.50
		1	14	22.11	22.13	22.16	23.50



		8	0	21.96	21.91	22.15	23.00	
		8	4	22.10	22.06	22.17	23.00	
		8	7	21.78	21.81	21.79	23.00	
		15	0	21.86	22.01	22.02	23.00	
	16QAM	1	0	22.01	22.16	22.03	23.00	
		1	7	22.10	22.16	22.12	23.00	
		1	14	21.99	22.08	22.10	23.00	
		8	0	20.89	20.93	20.83	22.00	
		8	4	21.06	21.11	21.21	22.00	
		8	7	20.79	20.80	20.77	22.00	
		15	0	20.95	20.96	20.88	22.00	
	64QAM	1	0	21.08	21.14	21.11	22.00	
		1	7	21.43	21.47	21.50	22.00	
		1	14	20.73	20.82	20.91	22.00	
		8	0	19.85	19.90	19.80	21.00	
		8	4	19.85	20.06	19.98	21.00	
		8	7	19.78	19.84	19.75	21.00	
		15	0	19.88	19.93	19.83	21.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					18625/1852.5	18900/1880	19175/1907.5	
	5MHz	QPSK	1	0	22.32	22.42	22.38	23.50
1			13	22.44	22.33	22.50	23.50	
1			24	22.08	22.08	22.12	23.50	
12			0	21.93	21.86	22.11	23.00	
12			6	22.08	22.02	22.12	23.00	
12			13	21.76	21.79	21.75	23.00	
25			0	21.86	22.00	22.00	23.00	
16QAM		1	0	22.01	22.12	22.00	23.00	
		1	13	22.10	22.14	22.09	23.00	
		1	24	21.96	22.06	22.06	23.00	
		12	0	20.87	20.89	20.80	22.00	
		12	6	21.03	21.06	21.17	22.00	
		12	13	20.76	20.75	20.73	22.00	
		25	0	20.93	20.92	20.83	22.00	
64QAM		1	0	21.05	21.14	21.08	22.00	
		1	13	21.40	21.49	21.47	22.00	
		1	24	20.74	20.80	20.87	22.00	
		12	0	19.83	19.86	19.81	21.00	
		12	6	19.82	20.01	19.94	21.00	
		12	13	19.75	19.79	19.71	21.00	
		25	0	19.86	19.89	19.78	21.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18650/1855	18900/1880	19150/1905	
10MHz	QPSK	1	0	22.34	22.43	22.41	23.50
		1	25	22.47	22.38	22.54	23.50
		1	49	22.10	22.12	22.15	23.50
		25	0	21.96	21.91	22.15	23.00
		25	13	22.11	22.07	22.16	23.00
		25	25	21.78	21.83	21.80	23.00
		50	0	21.90	22.02	22.04	23.00
	16QAM	1	0	22.05	22.15	22.02	23.00
		1	25	22.14	22.18	22.12	23.00
		1	49	21.99	22.08	22.09	23.00
		25	0	20.90	20.94	20.84	22.00
		25	13	21.05	21.10	21.20	22.00
		25	25	20.79	20.80	20.77	22.00
		50	0	20.96	20.97	20.87	22.00
	64QAM	1	0	21.07	21.13	21.10	22.00
		1	25	21.43	21.49	21.50	22.00
		1	49	20.73	20.82	20.90	22.00
		25	0	19.86	19.91	19.81	21.00
		25	13	19.84	20.05	19.97	21.00
		25	25	19.78	19.84	19.75	21.00
		50	0	19.89	19.94	19.82	21.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
15MHz	QPSK	1	0	22.33	22.39	22.39	23.50
		1	38	22.45	22.37	22.51	23.50
		1	74	22.07	22.07	22.11	23.50
		36	0	21.94	21.87	22.12	23.00
		36	18	22.08	22.02	22.12	23.00
		36	39	21.75	21.80	21.76	23.00
		75	0	21.88	21.98	21.99	23.00
	16QAM	1	0	22.03	22.13	22.00	23.00
		1	38	22.12	22.15	22.10	23.00
		1	74	21.97	22.04	22.06	23.00
		36	0	20.87	20.92	20.81	22.00
		36	18	21.02	21.05	21.16	22.00
		36	39	20.77	20.76	20.74	22.00
		75	0	20.93	20.92	20.83	22.00
	64QAM	1	0	21.02	21.11	21.08	22.00
		1	38	21.41	21.46	21.48	22.00
		1	74	20.74	20.81	20.91	22.00
		36	0	19.85	19.93	19.82	21.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				18700/1860	18900/1880	19100/1900	
20MHz	QPSK	36	18	19.82	20.02	19.96	21.00
		36	39	19.76	19.80	19.72	21.00
		75	0	19.86	19.89	19.78	21.00
		1	0	22.30	22.65	22.36	23.50
		1	50	22.64	22.33	22.88	23.50
		1	99	22.05	22.06	22.08	23.50
		50	0	21.91	21.82	22.08	23.00
	50	25	22.06	21.98	22.09	23.00	
	50	50	21.72	21.75	21.72	23.00	
	100	0	21.85	21.93	21.95	23.00	
	16QAM	1	0	22.00	22.09	21.95	23.00
		1	50	22.09	22.13	22.06	23.00
		1	99	21.94	22.01	22.04	23.00
		50	0	20.84	20.88	20.78	22.00
		50	25	20.99	21.03	21.13	22.00
		50	50	20.74	20.71	20.70	22.00
	64QAM	100	0	20.91	20.88	20.80	22.00
		1	0	21.00	21.07	21.03	22.00
		1	50	21.37	21.44	21.44	22.00
		1	99	20.68	20.75	20.85	22.00
		50	0	19.80	19.85	19.75	21.00
50		25	19.78	19.98	19.90	21.00	
50		50	19.73	19.75	19.68	21.00	
100	0	19.84	19.85	19.75	21.00		

LTE Band 4							
Body SAR&Receiver on&Hotspot--DIV Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				19957/1710.7	20175/1732.5	20393/1754.3	
1.4MHz	QPSK	1	0	23.03	22.96	22.94	23.50
		1	2	23.01	22.91	23.12	23.50
		1	5	22.86	22.81	22.82	23.50
		3	0	22.10	22.17	22.01	23.50
		3	2	22.10	22.06	22.12	23.50
		3	3	22.05	22.00	22.01	23.50
		6	0	21.93	21.96	22.05	22.50
	16QAM	1	0	22.32	22.39	22.33	22.50
		1	2	22.18	22.20	22.15	22.50
		1	5	21.91	21.97	21.85	22.50
		3	0	21.02	21.08	20.97	22.50
		3	2	20.86	20.95	20.91	22.50



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19965/1711.5	20175/1732.5	20385/1753.5	
	64QAM	3	3	20.88	20.97	20.85	22.50
		6	0	20.87	20.98	20.87	21.50
		1	0	20.90	20.94	20.78	21.50
		1	2	20.92	21.01	20.86	21.50
		1	5	20.91	20.94	20.89	21.50
		3	0	19.92	20.01	19.90	21.50
		3	2	19.80	19.92	19.89	21.50
		3	3	19.85	19.94	19.76	21.50
		6	0	19.81	19.83	19.72	20.50
3MHz	QPSK	1	0	23.00	22.92	22.91	23.50
		1	7	23.00	22.87	23.10	23.50
		1	14	22.84	22.80	22.79	23.50
		8	0	22.07	22.12	21.97	22.50
		8	4	22.08	22.02	22.09	22.50
		8	7	22.02	21.95	21.97	22.50
		15	0	21.90	21.91	22.01	22.50
	16QAM	1	0	22.29	22.35	22.28	22.50
		1	7	22.15	22.18	22.11	22.50
		1	14	21.88	21.94	21.83	22.50
		8	0	20.99	21.04	20.94	21.50
		8	4	20.83	20.93	20.88	21.50
		8	7	20.85	20.92	20.81	21.50
		15	0	20.85	20.94	20.84	21.50
	64QAM	1	0	20.88	20.90	20.73	21.50
		1	7	20.88	20.99	20.82	21.50
		1	14	20.85	20.88	20.83	21.50
		8	0	19.87	19.93	19.83	20.50
		8	4	19.76	19.88	19.83	20.50
		8	7	19.82	19.89	19.72	20.50
		15	0	19.79	19.79	19.69	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				19975/1712.5	20175/1732.5	20375/1752.5	
5MHz	QPSK	1	0	22.97	22.90	22.87	23.50
		1	13	22.98	22.83	23.07	23.50
		1	24	22.81	22.75	22.75	23.50
		12	0	22.04	22.07	21.93	22.50
		12	6	22.06	21.98	22.04	22.50
		12	13	22.00	21.93	21.93	22.50
		25	0	21.90	21.90	21.99	22.50
	16QAM	1	0	22.29	22.31	22.25	22.50
		1	13	22.15	22.16	22.08	22.50



		1	24	21.85	21.92	21.79	22.50
		12	0	20.97	21.00	20.91	21.50
		12	6	20.80	20.88	20.84	21.50
		12	13	20.82	20.87	20.77	21.50
		25	0	20.83	20.90	20.79	21.50
	64QAM	1	0	20.85	20.90	20.70	21.50
		1	13	20.85	21.01	20.79	21.50
		1	24	20.86	20.86	20.79	21.50
		12	0	19.85	19.89	19.84	20.50
		12	6	19.73	19.83	19.79	20.50
		12	13	19.79	19.84	19.68	20.50
		25	0	19.77	19.75	19.64	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20000/1715	20175/1732.5	20350/1750	
10MHz	QPSK	1	0	22.99	22.91	22.90	23.50
		1	25	23.01	22.88	23.11	23.50
		1	49	22.83	22.79	22.78	23.50
		25	0	22.07	22.12	21.97	22.50
		25	13	22.09	22.03	22.08	22.50
		25	25	22.02	21.97	21.98	22.50
		50	0	21.94	21.92	22.03	22.50
	16QAM	1	0	22.33	22.34	22.27	22.50
		1	25	22.19	22.20	22.11	22.50
		1	49	21.88	21.94	21.82	22.50
		25	0	21.00	21.05	20.95	21.50
		25	13	20.82	20.92	20.87	21.50
		25	25	20.85	20.92	20.81	21.50
		50	0	20.86	20.95	20.83	21.50
	64QAM	1	0	20.87	20.89	20.72	21.50
		1	25	20.88	21.01	20.82	21.50
		1	49	20.85	20.88	20.82	21.50
		25	0	19.88	19.94	19.84	20.50
		25	13	19.75	19.87	19.82	20.50
		25	25	19.82	19.89	19.72	20.50
		50	0	19.80	19.80	19.68	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20025/1717.5	20175/1732.5	20325/1747.5	
15MHz	QPSK	1	0	22.98	22.87	22.88	23.50
		1	38	22.99	22.87	23.08	23.50
		1	74	22.80	22.74	22.74	23.50
		36	0	22.05	22.08	21.94	22.50
		36	18	22.06	21.98	22.04	22.50
		36	39	21.99	21.94	21.94	22.50



	16QAM	75	0	21.92	21.88	21.98	22.50
		1	0	22.31	22.32	22.25	22.50
		1	38	22.17	22.17	22.09	22.50
		1	74	21.86	21.90	21.79	22.50
		36	0	20.97	21.03	20.92	21.50
		36	18	20.79	20.87	20.83	21.50
		36	39	20.83	20.88	20.78	21.50
		75	0	20.83	20.90	20.79	21.50
	64QAM	1	0	20.82	20.87	20.70	21.50
		1	38	20.86	20.98	20.80	21.50
		1	74	20.86	20.87	20.83	21.50
		36	0	19.87	19.96	19.85	20.50
		36	18	19.73	19.84	19.81	20.50
		36	39	19.80	19.85	19.69	20.50
		75	0	19.77	19.75	19.64	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20050/1720	20175/1732.5	20300/1745	
20MHz	QPSK	1	0	22.95	22.83	22.85	23.50
		1	50	22.98	22.83	23.06	23.50
		1	99	22.78	22.73	22.71	23.50
		50	0	22.02	22.03	21.90	22.50
		50	25	22.04	21.94	22.01	22.50
		50	50	21.96	21.89	21.90	22.50
		100	0	21.89	21.83	21.94	22.50
	16QAM	1	0	22.28	22.28	22.20	22.50
		1	50	22.14	22.15	22.05	22.50
		1	99	21.83	21.87	21.77	22.50
		50	0	20.94	20.99	20.89	21.50
		50	25	20.76	20.85	20.80	21.50
		50	50	20.80	20.83	20.74	21.50
		100	0	20.81	20.86	20.76	21.50
	64QAM	1	0	20.80	20.83	20.65	21.50
		1	50	20.82	20.96	20.76	21.50
		1	99	20.80	20.81	20.77	21.50
		50	0	19.82	19.88	19.78	20.50
		50	25	19.69	19.80	19.75	20.50
		50	50	19.77	19.80	19.65	20.50
		100	0	19.75	19.71	19.61	20.50



LTE Band 5							
Body SAR&Receiver on&Hotspot--DIV Ant3				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20407/824.7	20525/836.5	20643/848.3	
1.4MHz	QPSK	1	0	23.29	23.32	23.32	25.00
		1	2	23.25	23.10	23.05	25.00
		1	5	23.38	23.19	23.38	25.00
		3	0	24.05	24.01	23.93	25.00
		3	2	24.02	23.99	23.93	25.00
		3	3	24.12	24.02	23.97	25.00
		6	0	22.20	22.11	22.10	24.00
	16QAM	1	0	22.72	22.71	22.73	24.00
		1	2	22.51	22.60	22.48	24.00
		1	5	23.02	22.89	22.89	24.00
		3	0	23.03	22.96	23.16	24.00
		3	2	23.20	23.12	23.05	24.00
		3	3	23.00	23.22	23.17	24.00
		6	0	21.18	21.12	21.35	23.00
	64QAM	1	0	21.42	21.53	21.46	23.00
		1	2	21.17	21.28	21.37	23.00
		1	5	21.40	21.55	21.44	23.00
		3	0	21.91	21.96	22.04	23.00
		3	2	22.08	21.99	22.11	23.00
		3	3	21.94	22.06	22.20	23.00
		6	0	20.08	20.20	20.44	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
3MHz	QPSK	1	0	23.27	23.30	23.31	25.00
		1	7	23.20	23.13	23.10	25.00
		1	14	23.37	23.21	23.37	25.00
		8	0	22.20	22.16	22.12	24.00
		8	4	22.23	22.12	22.08	24.00
		8	7	22.26	22.20	22.11	24.00
		15	0	22.23	22.12	22.11	24.00
	16QAM	1	0	22.75	22.67	22.70	24.00
		1	7	22.54	22.59	22.50	24.00
		1	14	23.01	22.90	22.88	24.00
		8	0	21.21	21.18	21.36	23.00
		8	4	21.34	21.29	21.20	23.00
		8	7	21.15	21.37	21.36	23.00
		15	0	21.21	21.13	21.32	23.00
	64QAM	1	0	21.39	21.49	21.43	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				20425/826.5	20525/836.5	20625/846.5		
		1	7	21.17	21.27	21.35	23.00	
		1	14	21.39	21.46	21.43	23.00	
		8	0	20.09	20.18	20.24	22.00	
		8	4	20.22	20.16	20.26	22.00	
		8	7	20.09	20.21	20.39	22.00	
		15	0	20.11	20.21	20.41	22.00	
5MHz	QPSK	1	0	23.26	23.26	23.29	25.00	
		1	13	23.18	23.12	23.07	25.00	
		1	24	23.34	23.16	23.33	25.00	
		12	0	22.18	22.12	22.09	24.00	
		12	6	22.20	22.07	22.04	24.00	
		12	13	22.23	22.17	22.07	24.00	
	16QAM	25	0	22.21	22.08	22.06	24.00	
		1	0	22.73	22.65	22.68	24.00	
		1	13	22.52	22.56	22.48	24.00	
		1	24	22.99	22.86	22.85	24.00	
		12	0	21.18	21.16	21.33	23.00	
		12	6	21.31	21.24	21.16	23.00	
	64QAM	12	13	21.13	21.33	21.33	23.00	
		25	0	21.18	21.08	21.28	23.00	
		1	0	21.34	21.47	21.41	23.00	
		1	13	21.15	21.24	21.33	23.00	
		1	24	21.40	21.45	21.44	23.00	
		12	0	20.08	20.20	20.25	22.00	
	10MHz	QPSK	12	6	20.20	20.13	20.25	22.00
			12	13	20.07	20.17	20.36	22.00
			25	0	20.08	20.16	20.37	22.00
			1	0	23.23	23.22	23.26	25.00
			1	25	23.17	23.08	23.05	25.00
			1	49	23.32	23.15	23.30	25.00
16QAM		25	0	22.15	22.07	22.05	24.00	
		25	13	22.18	22.03	22.01	24.00	
		25	25	22.20	22.12	22.03	24.00	
		50	0	22.18	22.03	22.02	24.00	
		1	0	22.70	22.61	22.63	24.00	
		1	25	22.49	22.54	22.44	24.00	
		1	49	22.96	22.83	22.83	24.00	
		25	0	21.15	21.12	21.30	23.00	
		25	13	21.28	21.22	21.13	23.00	



		25	25	21.10	21.28	21.29	23.00
		50	0	21.16	21.04	21.25	23.00
	64QAM	1	0	21.32	21.43	21.36	23.00
		1	25	21.11	21.22	21.29	23.00
		1	49	21.34	21.39	21.38	23.00
		25	0	20.03	20.12	20.18	22.00
		25	13	20.16	20.09	20.19	22.00
		25	25	20.04	20.12	20.32	22.00
		50	0	20.06	20.12	20.34	22.00

LTE Band 7							
Body SAR&Receiver on&Hotspot--DIV Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				20775/2502.5	21100/2535	21425/2567.5	
5MHz	QPSK	1	0	19.49	19.41	19.29	20.50
		1	13	19.69	19.40	19.76	20.50
		1	24	19.27	19.29	19.31	20.50
		12	0	19.49	19.38	19.35	20.50
		12	6	19.62	19.47	19.52	20.50
		12	13	19.63	19.39	19.31	20.50
		25	0	19.33	19.63	19.51	20.50
	16QAM	1	0	19.44	19.53	19.70	20.50
		1	13	19.53	19.52	19.49	20.50
		1	24	19.22	19.37	19.28	20.50
		12	0	19.34	19.38	19.28	20.50
		12	6	19.33	19.49	19.35	20.50
		12	13	19.32	19.31	19.19	20.50
		25	0	19.69	19.55	19.62	20.50
	64QAM	1	0	19.49	19.39	19.41	20.50
		1	13	19.55	19.60	19.63	20.50
		1	24	19.50	19.45	19.60	20.50
		12	0	19.25	19.39	19.23	20.50
		12	6	19.45	19.42	19.37	20.50
		12	13	19.28	19.44	19.42	20.50
		25	0	19.30	19.61	19.36	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
10MHz	QPSK			20800/2505	21100/2535	21400/2565	
		1	0	19.51	19.42	19.32	20.50
		1	25	19.72	19.45	19.80	20.50
		1	49	19.29	19.33	19.34	20.50
		25	0	19.52	19.43	19.39	20.50
		25	13	19.65	19.52	19.56	20.50
25	25	19.65	19.43	19.36	20.50		



	16QAM	50	0	19.37	19.65	19.55	20.50
		1	0	19.48	19.56	19.72	20.50
		1	25	19.57	19.56	19.52	20.50
		1	49	19.25	19.39	19.31	20.50
		25	0	19.37	19.43	19.32	20.50
		25	13	19.35	19.53	19.38	20.50
		25	25	19.35	19.36	19.23	20.50
		50	0	19.72	19.60	19.66	20.50
	64QAM	1	0	19.51	19.38	19.43	20.50
		1	25	19.58	19.60	19.66	20.50
		1	49	19.49	19.47	19.63	20.50
		25	0	19.28	19.44	19.23	20.50
		25	13	19.47	19.46	19.40	20.50
		25	25	19.31	19.49	19.46	20.50
50	0	19.33	19.66	19.40	20.50		
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20825/2507.5	21100/2535	21375/2562.5	
15MHz	QPSK	1	0	19.50	19.38	19.30	20.50
		1	38	19.70	19.44	19.77	20.50
		1	74	19.26	19.28	19.30	20.50
		36	0	19.50	19.39	19.36	20.50
		36	18	19.62	19.47	19.52	20.50
		36	39	19.62	19.40	19.32	20.50
		75	0	19.35	19.61	19.50	20.50
	16QAM	1	0	19.46	19.54	19.70	20.50
		1	38	19.55	19.53	19.50	20.50
		1	74	19.23	19.35	19.28	20.50
		36	0	19.34	19.41	19.29	20.50
		36	18	19.32	19.48	19.34	20.50
		36	39	19.33	19.32	19.20	20.50
		75	0	19.69	19.55	19.62	20.50
	64QAM	1	0	19.46	19.36	19.41	20.50
		1	38	19.56	19.57	19.64	20.50
		1	74	19.50	19.46	19.64	20.50
		36	0	19.27	19.46	19.24	20.50
		36	18	19.45	19.43	19.39	20.50
		36	39	19.29	19.45	19.43	20.50
		75	0	19.30	19.61	19.36	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				20850/2510	21100/2535	21350/2560	
20MHz	QPSK	1	0	19.47	19.34	19.27	20.50
		1	50	19.69	19.40	19.72	20.50
		1	99	19.24	19.27	19.27	20.50



		50	0	19.47	19.34	19.32	20.50
		50	25	19.60	19.43	19.49	20.50
		50	50	19.59	19.35	19.28	20.50
		100	0	19.32	19.56	19.46	20.50
	16QAM	1	0	19.43	19.50	19.65	20.50
		1	50	19.52	19.51	19.46	20.50
		1	99	19.20	19.32	19.26	20.50
		50	0	19.31	19.37	19.26	20.50
		50	25	19.29	19.46	19.31	20.50
		50	50	19.30	19.27	19.16	20.50
		100	0	19.67	19.51	19.59	20.50
	64QAM	1	0	19.44	19.32	19.36	20.50
		1	50	19.52	19.55	19.60	20.50
		1	99	19.44	19.40	19.58	20.50
		50	0	19.22	19.38	19.17	20.50
		50	25	19.41	19.39	19.33	20.50
		50	50	19.26	19.40	19.39	20.50
		100	0	19.28	19.57	19.33	20.50

LTE Band 13							
Body SAR&Receiver on&Hotspot--DIV Ant3				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				23205/779.5	23230/782	23255/784.5	
5MHz	QPSK	1	0	23.17	23.18	23.17	25.00
		1	13	23.27	23.30	23.28	25.00
		1	24	23.24	23.23	23.25	25.00
		12	0	22.23	22.25	22.24	24.00
		12	6	22.37	22.39	22.38	24.00
		12	13	22.40	22.42	22.41	24.00
		25	0	22.57	22.59	22.58	24.00
	16QAM	1	0	22.51	22.52	22.53	24.00
		1	13	22.56	22.55	22.57	24.00
		1	24	22.49	22.49	22.48	24.00
		12	0	21.79	21.80	21.79	23.00
		12	6	21.53	21.52	21.53	23.00
		12	13	21.61	21.63	21.62	23.00
		25	0	21.49	21.51	21.50	23.00
	64QAM	1	0	21.64	21.66	21.67	23.00
		1	13	21.65	21.63	21.65	23.00
		1	24	21.79	21.79	21.79	23.00
		12	0	20.61	20.64	20.63	22.00
		12	6	20.34	20.34	20.36	22.00
		12	13	20.47	20.49	20.48	22.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up			
				25	0	20.65		20.67	20.66	22.00
				/	23230/782	/				
10MHz	QPSK	1	0	/	23.14	/	25.00			
		1	25	/	23.26	/	25.00			
		1	49	/	23.22	/	25.00			
		25	0	/	22.20	/	24.00			
		25	13	/	22.35	/	24.00			
		25	25	/	22.37	/	24.00			
		50	0	/	22.54	/	24.00			
	16QAM	1	0	/	22.48	/	24.00			
		1	25	/	22.53	/	24.00			
		1	49	/	22.46	/	24.00			
		25	0	/	21.76	/	23.00			
		25	13	/	21.50	/	23.00			
		25	25	/	21.58	/	23.00			
		50	0	/	21.47	/	23.00			
	64QAM	1	0	/	21.62	/	23.00			
		1	25	/	21.61	/	23.00			
		1	49	/	21.73	/	23.00			
		25	0	/	20.56	/	22.00			
		25	13	/	20.30	/	22.00			
		25	25	/	20.44	/	22.00			
		50	0	/	20.63	/	22.00			

LTE Band 26							
Body SAR&Receiver on&Hotspot--DIV Ant3				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				26697/814.7	26865/831.5	27033/848.3	
1.4MHz	QPSK	1	0	23.38	23.44	23.49	25.00
		1	2	23.30	23.24	23.11	25.00
		1	5	23.43	23.47	23.29	25.00
		3	0	23.52	23.43	23.44	25.00
		3	2	23.15	23.28	23.27	25.00
		3	3	23.14	23.02	23.06	25.00
		6	0	22.28	22.35	22.29	24.00
	16QAM	1	0	22.80	22.94	22.73	24.00
		1	2	23.07	22.90	22.74	24.00
		1	5	22.79	22.88	22.85	24.00
		3	0	22.29	22.38	22.58	24.00
		3	2	22.04	22.14	22.14	24.00
		3	3	22.14	22.03	22.44	24.00
		6	0	21.19	21.28	21.31	23.00



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up	
				26705/815.5	26865/831.5	27025/847.5		
	64QAM	1	0	21.64	21.55	21.75	23.00	
		1	2	21.35	21.45	21.52	23.00	
		1	5	21.68	21.58	21.45	23.00	
		3	0	21.40	21.30	21.52	23.00	
		3	2	21.37	21.15	21.14	23.00	
		3	3	21.03	21.15	21.11	23.00	
		6	0	20.38	20.34	20.30	22.00	
3MHz	QPSK	1	0	23.37	23.46	23.48	25.00	
		1	7	23.26	23.23	23.12	25.00	
		1	14	23.43	23.47	23.29	25.00	
		8	0	22.59	22.50	22.53	24.00	
		8	4	22.25	22.34	22.34	24.00	
		8	7	22.22	22.11	22.12	24.00	
		15	0	22.28	22.38	22.30	24.00	
	16QAM	1	0	22.80	22.92	22.73	24.00	
		1	7	23.07	22.88	22.75	24.00	
		1	14	22.78	22.90	22.84	24.00	
		8	0	21.38	21.47	21.67	23.00	
		8	4	21.12	21.22	21.22	23.00	
		8	7	21.21	21.10	21.53	23.00	
		15	0	21.20	21.28	21.29	23.00	
	64QAM	1	0	21.64	21.57	21.75	23.00	
		1	7	21.35	21.47	21.51	23.00	
		1	14	21.71	21.55	21.44	23.00	
		8	0	20.49	20.39	20.65	22.00	
		8	4	20.45	20.23	20.22	22.00	
		8	7	20.10	20.22	20.20	22.00	
		15	0	20.39	20.34	20.28	22.00	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					26715/816.5	26865/831.5	27015/846.5	
	5MHz	QPSK	1	0	23.39	23.47	23.51	25.00
			1	13	23.29	23.28	23.16	25.00
			1	24	23.45	23.51	23.32	25.00
			12	0	22.62	22.55	22.57	24.00
			12	6	22.28	22.39	22.38	24.00
12			13	22.24	22.15	22.17	24.00	
25			0	22.32	22.40	22.34	24.00	
16QAM		1	0	22.84	22.95	22.75	24.00	
		1	13	23.11	22.92	22.78	24.00	
		1	24	22.81	22.92	22.87	24.00	
		12	0	21.41	21.52	21.71	23.00	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				26740/819	26865/831.5	26990/844	
	64QAM	12	6	21.14	21.26	21.25	23.00
		12	13	21.24	21.15	21.57	23.00
		25	0	21.23	21.33	21.33	23.00
		1	0	21.66	21.56	21.77	23.00
		1	13	21.38	21.47	21.54	23.00
		1	24	21.70	21.57	21.47	23.00
		12	0	20.52	20.44	20.65	22.00
		12	6	20.47	20.27	20.25	22.00
		12	13	20.13	20.27	20.24	22.00
		25	0	20.42	20.39	20.32	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				26740/819	26865/831.5	26990/844	
10MHz	QPSK	1	0	23.38	23.43	23.49	25.00
		1	25	23.27	23.27	23.13	25.00
		1	49	23.42	23.46	23.28	25.00
		25	0	22.60	22.51	22.54	24.00
		25	13	22.25	22.34	22.34	24.00
		25	25	22.21	22.12	22.13	24.00
		50	0	22.30	22.36	22.29	24.00
	16QAM	1	0	22.82	22.93	22.73	24.00
		1	25	23.09	22.89	22.76	24.00
		1	49	22.79	22.88	22.84	24.00
		25	0	21.38	21.50	21.68	23.00
		25	13	21.11	21.21	21.21	23.00
		25	25	21.22	21.11	21.54	23.00
		50	0	21.20	21.28	21.29	23.00
	64QAM	1	0	21.61	21.54	21.75	23.00
		1	25	21.36	21.44	21.52	23.00
		1	49	21.71	21.56	21.48	23.00
		25	0	20.51	20.46	20.66	22.00
		25	13	20.45	20.24	20.24	22.00
		25	25	20.11	20.23	20.21	22.00
		50	0	20.39	20.34	20.28	22.00
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				26765/821.5	26865/831.5	26965/841.5	
15MHz	QPSK	1	0	23.35	23.39	23.56	25.00
		1	38	23.26	23.23	23.11	25.00
		1	74	23.40	23.45	23.25	25.00
		36	0	22.57	22.46	22.50	24.00
		36	18	22.23	22.30	22.31	24.00
		36	39	22.18	22.07	22.09	24.00
		75	0	22.27	22.31	22.25	24.00
	16QAM	1	0	22.79	22.89	22.68	24.00



		1	38	23.06	22.87	22.72	24.00
		1	74	22.76	22.85	22.82	24.00
		36	0	21.35	21.46	21.65	23.00
		36	18	21.08	21.19	21.18	23.00
		36	39	21.19	21.06	21.50	23.00
		75	0	21.18	21.24	21.26	23.00
		75	0	20.37	20.30	20.25	22.00
	64QAM	1	0	21.59	21.50	21.70	23.00
		1	38	21.32	21.42	21.48	23.00
		1	74	21.65	21.50	21.42	23.00
		36	0	20.46	20.38	20.59	22.00
		36	18	20.41	20.20	20.18	22.00
		36	39	20.08	20.18	20.17	22.00
		75	0	20.37	20.30	20.25	22.00

LTE Band 38							
Body SAR&Receiver on--DIV Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	22.50	22.56	22.59	23.50
		1	13	22.56	22.48	22.81	23.50
		1	24	22.21	22.35	22.46	23.50
		12	0	22.57	22.47	22.57	23.50
		12	6	22.58	22.61	22.81	23.50
		12	13	22.32	22.45	22.63	23.50
		25	0	22.44	22.70	22.64	23.50
	16QAM	1	0	22.73	22.67	22.65	23.50
		1	13	22.76	22.70	22.73	23.50
		1	24	22.69	22.66	22.60	23.50
		12	0	21.65	21.78	21.56	22.50
		12	6	21.77	21.88	21.77	22.50
		12	13	21.51	21.46	21.58	22.50
		25	0	21.39	21.53	21.51	22.50
	64QAM	1	0	21.62	21.56	21.82	22.50
		1	13	21.75	21.71	21.90	22.50
		1	24	21.73	21.86	21.76	22.50
		12	0	20.50	20.73	20.58	21.50
		12	6	20.63	20.54	20.72	21.50
		12	13	20.67	20.82	20.55	21.50
		25	0	20.89	20.83	20.84	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
10MHz	QPSK	1	0	37800/2575	38000/2595	38200/2615	23.50
		1	25	22.59	22.53	22.85	23.50



		1	49	22.23	22.39	22.49	23.50	
		25	0	22.60	22.52	22.61	23.50	
		25	13	22.61	22.66	22.85	23.50	
		25	25	22.34	22.49	22.68	23.50	
		50	0	22.48	22.72	22.68	23.50	
		16QAM	1	0	22.77	22.70	22.67	23.50
			1	25	22.80	22.74	22.76	23.50
	1		49	22.72	22.68	22.63	23.50	
	25		0	21.68	21.83	21.60	22.50	
	25		13	21.79	21.92	21.80	22.50	
	25		25	21.54	21.51	21.62	22.50	
	50		0	21.42	21.58	21.55	22.50	
	64QAM	1	0	21.64	21.55	21.84	22.50	
		1	25	21.78	21.71	21.93	22.50	
		1	49	21.72	21.88	21.79	22.50	
		25	0	20.53	20.78	20.58	21.50	
		25	13	20.65	20.58	20.75	21.50	
		25	25	20.70	20.87	20.59	21.50	
		50	0	20.92	20.88	20.88	21.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	22.51	22.53	22.60	23.50	
		1	38	22.57	22.52	22.82	23.50	
		1	74	22.20	22.34	22.45	23.50	
		36	0	22.58	22.48	22.58	23.50	
		36	18	22.58	22.61	22.81	23.50	
		36	39	22.31	22.46	22.64	23.50	
		75	0	22.46	22.68	22.63	23.50	
	16QAM	1	0	22.75	22.68	22.65	23.50	
		1	38	22.78	22.71	22.74	23.50	
		1	74	22.70	22.64	22.60	23.50	
		36	0	21.65	21.81	21.57	22.50	
		36	18	21.76	21.87	21.76	22.50	
		36	39	21.52	21.47	21.59	22.50	
		75	0	21.39	21.53	21.51	22.50	
	64QAM	1	0	21.59	21.53	21.82	22.50	
		1	38	21.76	21.68	21.91	22.50	
		1	74	21.73	21.87	21.80	22.50	
		36	0	20.52	20.80	20.59	21.50	
		36	18	20.63	20.55	20.74	21.50	
		36	39	20.68	20.83	20.56	21.50	
		75	0	20.89	20.83	20.84	21.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37850/2580	38000/2595	38150/2610	
20MHz	QPSK	1	0	22.48	22.49	22.57	23.50
		1	50	22.56	22.48	22.80	23.50
		1	99	22.18	22.33	22.42	23.50
		50	0	22.55	22.43	22.54	23.50
		50	25	22.56	22.57	22.78	23.50
		50	50	22.28	22.41	22.60	23.50
		100	0	22.43	22.63	22.59	23.50
	16QAM	1	0	22.72	22.64	22.60	23.50
		1	50	22.75	22.69	22.70	23.50
		1	99	22.67	22.61	22.58	23.50
		50	0	21.62	21.77	21.54	22.50
		50	25	21.73	21.85	21.73	22.50
		50	50	21.49	21.42	21.55	22.50
		100	0	21.37	21.49	21.48	22.50
	64QAM	1	0	21.57	21.49	21.77	22.50
		1	50	21.72	21.66	21.87	22.50
		1	99	21.67	21.81	21.74	22.50
		50	0	20.47	20.72	20.52	21.50
		50	25	20.59	20.51	20.68	21.50
		50	50	20.65	20.78	20.52	21.50
		100	0	20.87	20.79	20.81	21.50

LTE Band 38							
Hotspot--DIV Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				37775/2572.5	38000/2595	38225/2617.5	
5MHz	QPSK	1	0	20.58	20.38	20.58	21.50
		1	13	20.54	20.58	20.68	21.50
		1	24	20.33	20.51	20.45	21.50
		12	0	20.55	20.54	20.57	21.50
		12	6	20.52	20.41	20.67	21.50
		12	13	20.38	20.52	20.62	21.50
		25	0	20.47	20.64	20.56	21.50
	16QAM	1	0	20.58	20.63	20.46	21.50
		1	13	20.50	20.43	20.33	21.50
		1	24	20.45	20.57	20.59	21.50
		12	0	20.52	20.49	20.39	21.50
		12	6	20.59	20.53	20.69	21.50
		12	13	20.66	20.74	20.70	21.50
		25	0	20.34	20.53	20.65	21.50
	64QAM	1	0	20.75	20.85	20.69	21.50



		1	13	20.88	20.96	20.93	21.50
		1	24	20.78	20.81	20.68	21.50
		12	0	20.46	20.51	20.65	21.50
		12	6	20.53	20.52	20.66	21.50
		12	13	20.65	20.47	20.68	21.50
		25	0	20.57	20.46	20.62	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37800/2575	38000/2595	38200/2615	
10MHz	QPSK	1	0	20.60	20.39	20.61	21.50
		1	25	20.57	20.63	20.72	21.50
		1	49	20.35	20.55	20.48	21.50
		25	0	20.58	20.59	20.61	21.50
		25	13	20.55	20.46	20.71	21.50
		25	25	20.40	20.56	20.67	21.50
		50	0	20.51	20.66	20.60	21.50
	16QAM	1	0	20.62	20.66	20.48	21.50
		1	25	20.54	20.47	20.36	21.50
		1	49	20.48	20.59	20.62	21.50
		25	0	20.55	20.54	20.43	21.50
		25	13	20.61	20.57	20.72	21.50
		25	25	20.69	20.79	20.74	21.50
		50	0	20.37	20.58	20.69	21.50
	64QAM	1	0	20.77	20.84	20.71	21.50
		1	25	20.91	20.96	20.96	21.50
		1	49	20.77	20.83	20.71	21.50
		25	0	20.49	20.56	20.65	21.50
		25	13	20.55	20.56	20.69	21.50
		25	25	20.68	20.52	20.72	21.50
		50	0	20.60	20.51	20.66	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37825/2577.5	38000/2595	38175/2612.5	
15MHz	QPSK	1	0	20.59	20.35	20.59	21.50
		1	38	20.55	20.62	20.69	21.50
		1	74	20.32	20.50	20.44	21.50
		36	0	20.56	20.55	20.58	21.50
		36	18	20.52	20.41	20.67	21.50
		36	39	20.37	20.53	20.63	21.50
		75	0	20.49	20.62	20.55	21.50
	16QAM	1	0	20.60	20.64	20.46	21.50
		1	38	20.52	20.44	20.34	21.50
		1	74	20.46	20.55	20.59	21.50
		36	0	20.52	20.52	20.40	21.50
		36	18	20.58	20.52	20.68	21.50



		36	39	20.67	20.75	20.71	21.50
		75	0	20.34	20.53	20.65	21.50
	64QAM	1	0	20.72	20.82	20.69	21.50
		1	38	20.89	20.93	20.94	21.50
		1	74	20.78	20.82	20.72	21.50
		36	0	20.48	20.58	20.66	21.50
		36	18	20.53	20.53	20.68	21.50
		36	39	20.66	20.48	20.69	21.50
		75	0	20.57	20.46	20.62	21.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				37850/2580	38000/2595	38150/2610	
20MHz	QPSK	1	0	20.56	20.31	20.56	21.50
		1	50	20.54	20.58	20.78	21.50
		1	99	20.30	20.49	20.41	21.50
		50	0	20.53	20.50	20.54	21.50
		50	25	20.50	20.37	20.74	21.50
		50	50	20.34	20.48	20.59	21.50
		100	0	20.46	20.57	20.51	21.50
	16QAM	1	0	20.57	20.60	20.41	21.50
		1	50	20.49	20.42	20.30	21.50
		1	99	20.43	20.52	20.57	21.50
		50	0	20.49	20.48	20.37	21.50
		50	25	20.55	20.50	20.65	21.50
		50	50	20.64	20.70	20.67	21.50
		100	0	20.32	20.49	20.62	21.50
	64QAM	1	0	20.70	20.78	20.64	21.50
		1	50	20.85	20.91	20.90	21.50
		1	99	20.72	20.76	20.66	21.50
		50	0	20.43	20.50	20.59	21.50
		50	25	20.49	20.49	20.62	21.50
		50	50	20.63	20.43	20.65	21.50
		100	0	20.55	20.42	20.59	21.50

LTE Band 66							
Body SAR&Receiveron&Hotspot--DIV Ant1				Maximum Output Power (dBm)			Tune-up
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			
				131979/1710.7	132322/1745	132665/1779.3	
1.4MHz	QPSK	1	0	22.19	22.45	22.30	23.50
		1	2	22.70	22.63	22.40	23.50
		1	5	22.66	23.02	22.44	23.50
		3	0	22.57	22.84	22.58	23.50
		3	2	22.81	23.04	22.74	23.50
		3	3	22.83	22.75	22.44	23.50



	16QAM	6	0	21.74	21.73	21.46	22.50
		1	0	21.91	21.78	21.51	22.50
		1	2	21.73	21.62	21.67	22.50
		1	5	21.68	21.73	21.48	22.50
		3	0	21.29	21.22	21.48	22.50
		3	2	21.71	21.41	21.65	22.50
		3	3	21.32	21.73	21.75	22.50
		6	0	20.64	20.81	21.02	21.50
	64QAM	1	0	20.52	20.61	20.74	21.50
		1	2	21.10	21.22	21.29	21.50
		1	5	20.76	21.01	20.95	21.50
		3	0	20.93	20.78	20.82	21.50
		3	2	20.95	20.99	20.91	21.50
		3	3	21.03	21.03	20.91	21.50
		6	0	20.03	19.96	19.99	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				1319871711.5	132322/1745	132657/1778.5	
3MHz	QPSK	1	0	22.21	22.49	22.33	23.50
		1	7	22.68	22.66	22.44	23.50
		1	14	22.69	23.07	22.48	23.50
		8	0	21.67	21.96	21.71	22.50
		8	4	21.93	22.14	21.86	22.50
		8	7	21.93	21.86	21.54	22.50
		15	0	21.74	21.77	21.49	22.50
	16QAM	1	0	21.91	21.80	21.54	22.50
		1	7	21.73	21.62	21.71	22.50
		1	14	21.70	21.77	21.51	22.50
		8	0	20.40	20.35	20.60	21.50
		8	4	20.82	20.54	20.77	21.50
		8	7	20.42	20.85	20.88	21.50
		15	0	20.67	20.85	21.05	21.50
	64QAM	1	0	20.55	20.63	20.77	21.50
		1	7	21.13	21.22	21.31	21.50
		1	14	20.78	21.00	20.98	21.50
		8	0	20.04	19.91	19.94	20.50
		8	4	20.06	20.12	20.03	20.50
		8	7	20.13	20.15	20.04	20.50
		15	0	20.06	20.00	20.02	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				131997/1712.5	132322/1745	132647/1777.5	
5MHz	QPSK	1	0	22.18	22.47	22.29	23.50
		1	13	22.66	22.62	22.41	23.50
		1	24	22.66	23.02	22.44	23.50



		12	0	21.64	21.91	21.67	22.50	
		12	6	21.91	22.10	21.81	22.50	
		12	13	21.91	21.84	21.50	22.50	
		25	0	21.74	21.76	21.47	22.50	
	16QAM	1	0	21.91	21.76	21.51	22.50	
		1	13	21.73	21.60	21.68	22.50	
		1	24	21.67	21.75	21.47	22.50	
		12	0	20.38	20.31	20.57	21.50	
		12	6	20.79	20.49	20.73	21.50	
		12	13	20.39	20.80	20.84	21.50	
		25	0	20.65	20.81	21.00	21.50	
	64QAM	1	0	20.52	20.63	20.74	21.50	
		1	13	21.10	21.24	21.28	21.50	
		1	24	20.79	20.98	20.94	21.50	
		12	0	20.02	19.87	19.95	20.50	
		12	6	20.03	20.07	19.99	20.50	
		12	13	20.10	20.10	20.00	20.50	
		25	0	20.04	19.96	19.97	20.50	
	Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
					132022/1715	132322/1745	132622/1775	
	10MHz	QPSK	1	0	22.20	22.48	22.32	23.50
1			25	22.69	22.67	22.45	23.50	
1			49	22.68	23.06	22.47	23.50	
25			0	21.67	21.96	21.71	22.50	
25			13	21.94	22.15	21.85	22.50	
25			25	21.93	21.88	21.55	22.50	
50			0	21.78	21.78	21.51	22.50	
16QAM		1	0	21.95	21.79	21.53	22.50	
		1	25	21.77	21.64	21.71	22.50	
		1	49	21.70	21.77	21.50	22.50	
		25	0	20.41	20.36	20.61	21.50	
		25	13	20.81	20.53	20.76	21.50	
		25	25	20.42	20.85	20.88	21.50	
		50	0	20.68	20.86	21.04	21.50	
64QAM		1	0	20.54	20.62	20.76	21.50	
		1	25	21.13	21.24	21.31	21.50	
		1	49	20.78	21.00	20.97	21.50	
		25	0	20.05	19.92	19.95	20.50	
		25	13	20.05	20.11	20.02	20.50	
		25	25	20.13	20.15	20.04	20.50	
		50	0	20.07	20.01	20.01	20.50	



Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
				132047/1717.5	132322/1745	132597/1772.5	
15MHz	QPSK	1	0	22.19	22.44	22.30	23.50
		1	38	22.67	22.66	22.42	23.50
		1	74	22.65	23.01	22.43	23.50
		36	0	21.65	21.92	21.68	22.50
		36	18	21.91	22.10	21.81	22.50
		36	39	21.90	21.85	21.51	22.50
		75	0	21.76	21.74	21.46	22.50
	16QAM	1	0	21.93	21.77	21.51	22.50
		1	38	21.75	21.61	21.69	22.50
		1	74	21.68	21.73	21.47	22.50
		36	0	20.38	20.34	20.58	21.50
		36	18	20.78	20.48	20.72	21.50
		36	39	20.40	20.81	20.85	21.50
		75	0	20.65	20.81	21.00	21.50
	64QAM	1	0	20.49	20.60	20.74	21.50
		1	38	21.11	21.21	21.29	21.50
		1	74	20.79	20.99	20.98	21.50
		36	0	20.04	19.94	19.96	20.50
		36	18	20.03	20.08	20.01	20.50
		36	39	20.11	20.11	20.01	20.50
		75	0	20.04	19.96	19.97	20.50
Bandwidth	Modulation	RB allocation	offset	Channel/Frequency(MHz)			Tune-up
20MHz	QPSK	1	0	22.16	22.40	22.27	23.50
		1	50	22.66	22.62	22.40	23.50
		1	99	22.63	23.00	22.40	23.50
		50	0	21.62	21.87	21.64	22.50
		50	25	21.89	22.06	21.78	22.50
		50	50	21.87	21.80	21.47	22.50
		100	0	21.73	21.69	21.42	22.50
	16QAM	1	0	21.90	21.73	21.46	22.50
		1	50	21.72	21.59	21.65	22.50
		1	99	21.65	21.70	21.45	22.50
		50	0	20.35	20.30	20.55	21.50
		50	25	20.75	20.46	20.69	21.50
		50	50	20.37	20.76	20.81	21.50
		100	0	20.63	20.77	20.97	21.50
	64QAM	1	0	20.47	20.56	20.69	21.50
		1	50	21.07	21.19	21.25	21.50
		1	99	20.73	20.93	20.92	21.50
		50	0	19.99	19.86	19.89	20.50



		50	25	19.99	20.04	19.95	20.50
		50	50	20.08	20.06	19.97	20.50
		100	0	20.02	19.92	19.94	20.50

9.4 WLAN Mode

Wi-Fi 2.4G Full Power Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	18.00	16.04
	6/2437	18.00	16.06
	11/2462	18.00	16.03
802.11g (6M)	1/2412	13.00	11.09
	6/2437	19.00	17.01
	11/2462	15.00	13.16
802.11n-HT20 (MCS0)	1/2412	13.00	10.86
	6/2437	18.00	15.95
	11/2462	15.00	12.77
802.11n-HT40 (MCS0)	3/2422	9.00	7.02
	6/2437	13.00	10.74
	9/2452	13.00	11.04

Note: Initial test configuration is 802.11g mode.

Wi-Fi 2.4G Receiver on Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11b (1M)	1/2412	12.00	10.82
	6/2437	12.00	10.14
	11/2462	12.00	10.05
802.11g (6M)	1/2412	12.00	9.92
	6/2437	12.00	9.75
	11/2462	12.00	9.36
802.11n-HT20 (MCS0)	1/2412	12.00	9.51
	6/2437	12.00	9.27
	11/2462	12.00	8.96
802.11n-HT40 (MCS0)	3/2422	9.00	6.68
	6/2437	12.00	9.71
	9/2452	12.00	9.90

Note: Initial test configuration is 802.11b mode.

Wi-Fi 5G (U-NII-1) Full Power Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	17.00	15.78
	40/5200	19.00	17.18
	44/5220	19.00	17.16
	48/5240	19.00	17.33
802.11n-HT20 (MCS0)	36/5180	17.00	15.47
	40/5200	18.00	16.01
	44/5220	18.00	16.05
	48/5240	18.00	16.04
802.11n-HT40 (MCS0)	38/5190	11.00	9.86
	46/5230	18.00	16.01
802.11ac-VHT20 (MCS0)	36/5180	17.00	15.34
	40/5200	17.00	15.37
	44/5220	17.00	15.43
	48/5240	17.00	15.37
802.11ac-VHT40 (MCS0)	38/5190	10.50	9.34
	46/5230	17.00	15.40
802.11ac-VHT80 (MCS0)	42/5210	10.50	10.09

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

Wi-Fi 5G (U-NII-1) Receiver on Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	36/5180	12.00	11.72
	40/5200	12.00	11.36
	44/5220	12.00	11.33
	48/5240	12.00	11.59
802.11n-HT20 (MCS0)	36/5180	12.00	11.70
	40/5200	12.00	11.12
	44/5220	12.00	11.17
	48/5240	12.00	11.35
802.11n-HT40 (MCS0)	38/5190	11.00	10.07
	46/5230	12.00	11.36
802.11ac-VHT20 (MCS0)	36/5180	12.00	11.47
	40/5200	12.00	11.32
	44/5220	12.00	11.05



	48/5240	12.00	11.34
802.11ac-VHT40 (MCS0)	38/5190	11.00	9.97
	46/5230	12.00	11.27
802.11ac-VHT80 (MCS0)	42/5210	11.00	9.91

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

Wi-Fi 5G (U-NII-2A) Full Power Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	52/5260	19.00	17.37
	56/5280	19.00	17.62
	60/5300	19.00	17.85
	64/5320	17.00	16.96
802.11n-HT20 (MCS0)	52/5260	18.00	16.16
	56/5280	18.00	16.49
	60/5300	18.00	16.73
	64/5320	17.00	15.38
802.11n-HT40 (MCS0)	54/5270	18.00	16.24
	62/5310	11.00	10.61
802.11ac-VHT20 (MCS0)	52/5260	17.00	15.45
	56/5280	17.00	15.76
	60/5300	17.00	16.02
	64/5320	17.00	15.31
802.11ac-VHT40 (MCS0)	54/5270	17.00	15.60
	62/5310	11.00	10.60
802.11ac-VHT80 (MCS0)	58/5290	11.00	10.99

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

Wi-Fi 5G (U-NII-2A) Receiver on Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	52/5260	12.00	11.36
	56/5280	12.00	11.80
	60/5300	12.00	11.80
	64/5320	12.00	11.15
802.11n-HT20 (MCS0)	52/5260	12.00	11.32
	56/5280	12.00	11.65
	60/5300	12.00	11.66
	64/5320	12.00	11.06
802.11n-HT40 (MCS0)	54/5270	12.00	11.56
	62/5310	11.00	10.80
802.11ac-VHT20 (MCS0)	52/5260	12.00	11.34
	56/5280	12.00	11.47
	60/5300	12.00	11.66
	64/5320	12.00	10.97
802.11ac-VHT40 (MCS0)	54/5270	12.00	11.65
	62/5310	11.00	10.80
802.11ac-VHT80 (MCS0)	58/5290	11.00	10.51

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

Wi-Fi 5G (U-NII-2C) Full Power Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	17.00	15.26
	116/5580	19.00	17.01
	132/5660	19.00	17.22
	140/5700	15.00	13.78
802.11n-HT20 (MCS0)	100/5500	17.00	15.06
	116/5580	18.00	15.80
	132/5660	18.00	15.70
	140/5700	13.00	11.37
802.11n-HT40 (MCS0)	102/5510	10.00	8.66
	110/5550	18.00	15.72
	118/5590	18.00	15.64
	134/5670	16.00	14.22
802.11ac-VHT20 (MCS0)	100/5500	17.00	15.09
	116/5580	17.00	15.08



	132/5660	17.00	15.03
	140/5700	13.00	11.93
802.11ac-VHT40 (MCS0)	102/5510	10.00	8.58
	110/5550	17.00	15.05
	118/5590	17.00	15.01
	134/5670	16.00	14.23
802.11ac-VHT80 (MCS0)	106/5530	10.00	9.36
	122/5610	16.00	15.30

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

Wi-Fi 5G (U-NII-2C) Receiver on Mode	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
802.11a (6M)	100/5500	12.00	10.85
	116/5580	12.00	10.65
	132/5660	12.00	10.93
	140/5700	12.00	11.22
802.11n-HT20 (MCS0)	100/5500	12.00	10.70
	116/5580	12.00	10.56
	132/5660	12.00	10.78
	140/5700	12.00	11.10
802.11n-HT40 (MCS0)	102/5510	10.00	9.02
	110/5550	12.00	10.80
	118/5590	12.00	10.76
	134/5670	12.00	10.95
802.11ac-VHT20 (MCS0)	100/5500	12.00	10.58
	116/5580	12.00	10.51
	132/5660	12.00	10.81
	140/5700	12.00	11.10
802.11ac-VHT40 (MCS0)	102/5510	10.00	8.91
	110/5550	12.00	10.82
	118/5590	12.00	10.75
	134/5670	12.00	10.93
802.11ac-VHT80 (MCS0)	106/5530	10.00	8.77
	122/5610	12.00	10.80

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

Wi-Fi 5G (U-NII-3) Full Power	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Mode			
802.11a (6M)	149/5745	19.00	17.33
	157/5785	19.00	17.18
	165/5825	19.00	17.55
802.11n-HT20 (MCS0)	149/5745	18.00	16.18
	157/5785	18.00	16.04
	165/5825	18.00	16.79
802.11n-HT40 (MCS0)	151/5755	18.00	16.18
	159/5795	18.00	16.06
802.11ac-VHT20 (MCS0)	149/5745	17.00	15.61
	157/5785	17.00	15.47
	165/5825	17.00	15.32
802.11ac-VHT40 (MCS0)	151/5755	17.00	15.56
	159/5795	17.00	15.26
802.11ac-VHT80 (MCS0)	155/5775	16.00	15.66

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

Wi-Fi 5G (U-NII-3) Receiver on	Channel /Frequency(MHz)	Maximum Output Power (dBm)	
		Tune-up	Meas.
Mode			
802.11a (6M)	149/5745	12.00	11.27
	157/5785	12.00	11.01
	165/5825	12.00	11.50
802.11n-HT20 (MCS0)	149/5745	12.00	11.15
	157/5785	12.00	10.93
	165/5825	12.00	10.52
802.11n-HT40 (MCS0)	151/5755	12.00	11.30
	159/5795	12.00	10.99
802.11ac-VHT20 (MCS0)	149/5745	12.00	11.14
	157/5785	12.00	10.93
	165/5825	12.00	11.40



802.11ac-VHT40 (MCS0)	151/5755	12.00	11.31
	159/5795	12.00	10.98
802.11ac-VHT80 (MCS0)	155/5775	12.00	11.03

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

9.5 Bluetooth Mode

BT	Conducted Power(dBm)			Tune-up Limit (dBm)
	Channel/Frequency(MHz)			
	Ch 0/2402 MHz	Ch 39/2441 MHz	Ch 78/2480 MHz	
GFSK	10.11	10.80	10.08	12.00
$\pi/4$ DQPSK	10.02	10.79	10.01	12.00
8DPSK	10.03	10.78	10.01	12.00
BLE	Ch 0/2402 MHz	Ch 19/2440 MHz	Ch 39/2480 MHz	Tune-up Limit (dBm)
GFSK	9.00	8.46	8.05	10.00

10 Measured and Reported (Scaled) SAR Results

10.1 EUT Antenna Locations

The Detailed Antenna Locations refer to *Antenna Locations*.

Antenna		Band
Main Antenna	ANT 0	GSM 850/WCDMA 5/LTE 5/13/26
	ANT 2	GSM 1900/WCDMA 2/4/LTE 2/4/7/38/66
Div Antenna	ANT 1	GSM 1900/WCDMA 2/4/LTE 2/4/7/38/66
	ANT 3	GSM 850/WCDMA 5/LTE 5/13/26
Wi-Fi Antenna & BT	ANT 5	Wi-Fi 5G
	ANT 6	Wi-Fi 2.4G/Bluetooth

Overall (Length x Width): 163.1 mm x 74.7 mm Overall Diagonal: 173 mm/Display Diagonal:171mm							
Distance of the Antenna to the EUT surface/edge							
Antenna		Back Side	Front side	Left Edge	Right Edge	Top Edge	Bottom Edge
Main Antenna	ANT 0	<25mm	<25mm	>25mm	<25mm	>25mm	<25mm
	ANT 2	<25mm	<25mm	<25mm	>25mm	<25mm	>25mm
Div Antenna	ANT 1	<25mm	<25mm	<25mm	>25mm	>25mm	<25mm
	ANT 3	<25mm	<25mm	<25mm	>25mm	<25mm	>25mm
BT/Wi-Fi Antenna	ANT 5	<25mm	<25mm	>25mm	<25mm	<25mm	>25mm
	ANT 6	<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	ANT 0	Yes	Yes	N/A	Yes	N/A	Yes
	ANT 2	Yes	Yes	Yes	N/A	Yes	N/A
Div Antenna	ANT 1	Yes	Yes	Yes	N/A	N/A	Yes
	ANT 3	Yes	Yes	Yes	N/A	Yes	N/A
BT/Wi-Fi Antenna	ANT 5	Yes	Yes	N/A	Yes	Yes	N/A
	ANT 6	Yes	Yes	N/A	Yes	Yes	N/A

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

2. For smart phones with an overall diagonal dimension is 173 mm. Per KDB 648474 D04, for smart phones with a display diagonal dimension $> 15.0\text{ cm}$ or an overall diagonal dimension $> 16.0\text{ cm}$, product specific 10-g SAR must be tested as a phablet to determine SAR compliance. For Phablet, Since hotspot mode 1-g reported SAR $< 1.2\text{ W/kg}$, product specific 10-g SAR is no required.

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



- a) ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - b) ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz.
 - c) ≤ 0.4 W/kg or 1.0 W/kg, 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 $\leq \frac{1}{4}$ dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is ≤ 1.2 W/kg, SAR measurement is not required for the secondary mode.

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

5. Accessories that do not contain RF transmitters and have been proven to increase the peak SAR by less than 5 %, such as hands-free kits, do not need SAR tests separate from the SAR tests attached to a main EUT configuration.

Head SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
GSM 850	Main (ANT0)	Left cheek	0	GSM	Receiver on	-	-	190/836.6	34.00	33.60	0.113	-0.025	1.10	0.124	/
		Left Tilt	0	GSM	Receiver on	-	-	190/836.6	34.00	33.60	0.056	0.022	1.10	0.061	/
		Right cheek	0	GSM	Receiver on	-	-	190/836.6	34.00	33.60	0.121	0.012	1.10	0.133	/
		Right Tilt	0	GSM	Receiver on	-	-	190/836.6	34.00	33.60	0.066	-0.110	1.10	0.072	/
	DIV (ANT3)	Left cheek	0	GSM	Receiver on	-	-	190/836.6	28.50	27.01	0.163	0.049	1.41	0.230	18
		Left Tilt	0	GSM	Receiver on	-	-	190/836.6	28.50	27.01	0.081	0.090	1.41	0.114	/
		Right cheek	0	GSM	Receiver on	-	-	190/836.6	28.50	27.01	0.156	0.027	1.41	0.220	/
		Right Tilt	0	GSM	Receiver on	-	-	190/836.6	28.50	27.01	0.100	-0.030	1.41	0.140	/
	DIV (ANT3)	Left cheek (Battery 2)	0	GSM	Receiver on	-	-	190/836.6	28.50	27.01	0.142	0.025	1.41	0.200	/
	GSM 1900	Main (ANT2)	Left cheek	0	GSM	Receiver on	-	-	661/1880	29.00	27.90	0.319	0.021	1.29	0.410
Left Tilt			0	GSM	Receiver on	-	-	661/1880	29.00	27.90	0.294	-0.015	1.29	0.378	/
Right cheek			0	GSM	Receiver on	-	-	661/1880	29.00	27.90	0.652	0.022	1.29	0.840	19
Right cheek			0	GSM	Receiver on	-	-	512/1850.2	29.00	27.70	0.622	0.024	1.35	0.839	/
Right cheek			0	GSM	Receiver on	-	-	810/1909.8	29.00	27.81	0.631	0.015	1.32	0.830	/
Right Tilt			0	GSM	Receiver on	-	-	661/1880	29.00	27.90	0.389	-0.055	1.29	0.501	/
DIV (ANT1)		Left cheek	0	GSM	Receiver on	-	-	661/1880	30.50	30.03	0.010	0.120	1.11	0.011	/
		Left Tilt	0	GSM	Receiver on	-	-	661/1880	30.50	30.03	0.005	0.014	1.11	0.006	/
		Right cheek	0	GSM	Receiver on	-	-	661/1880	30.50	30.03	0.009	0.025	1.11	0.010	/
		Right Tilt	0	GSM	Receiver on	-	-	661/1880	30.50	30.03	0.006	0.012	1.11	0.007	/
Main (ANT2)	Right cheek (Battery 2)	0	GSM	Receiver on	-	-	661/1880	29.00	27.90	0.623	0.019	1.29	0.803	/	
WCDMA II	Main (ANT2)	Left cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	19.50	18.56	0.174	0.021	1.24	0.216	/
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	19.50	18.56	0.131	-0.010	1.24	0.163	/
		Right cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	19.50	18.56	0.674	0.027	1.24	0.837	20



		Right cheek	0	RMC 12.2K	Receiver on	-	-	9262/1852.4	19.50	18.30	0.576	0.020	1.32	0.759	/	
		Right cheek	0	RMC 12.2K	Receiver on	-	-	9538/1907.6	19.50	18.18	0.503	-0.010	1.36	0.682	/	
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	19.50	18.56	0.240	0.020	1.24	0.298	/	
	DIV (ANT1)	Left cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	22.30	21.56	0.019	0.025	1.19	0.023	/	
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	22.30	21.56	0.010	0.003	1.19	0.012	/	
		Right cheek	0	RMC 12.2K	Receiver on	-	-	9400/1880	22.30	21.56	0.016	0.021	1.19	0.019	/	
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	9400/1880	22.30	21.56	0.016	-0.012	1.19	0.019	/	
Main (ANT2)	Right cheek (Battery 2)	0	RMC 12.2K	Receiver on	-	-	9400/1880	19.50	18.56	0.645	-0.090	1.24	0.801	/		
WCDMA IV	Main (ANT2)	Left cheek	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	18.00	17.33	0.131	0.070	1.17	0.153	/	
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	18.00	17.33	0.098	0.020	1.17	0.114	/	
		Right cheek	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	18.00	17.33	0.413	0.024	1.17	0.482	/	
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	18.00	17.33	0.156	0.026	1.17	0.182	/	
	DIV (ANT1)	Left cheek	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.00	22.46	0.002	0.005	1.13	0.002	/	
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.00	22.46	0.000	0.000	1.13	0.000	/	
		Right cheek	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.00	22.46	0.004	0.016	1.13	0.005	/	
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	23.00	22.46	0.002	0.025	1.13	0.002	/	
	Main (ANT2)	Right cheek (Battery 2)	0	RMC 12.2K	Receiver on	-	-	1413/1732.6	18.00	17.33	0.432	0.023	1.17	0.504	21	
	WCDMA V	Main (ANT0)	Left cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.50	23.88	0.113	0.055	1.15	0.130	/
			Left Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.50	23.88	0.065	-0.086	1.15	0.075	/
			Right cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.50	23.88	0.104	0.022	1.15	0.120	/
Right Tilt			0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.50	23.88	0.071	-0.065	1.15	0.082	/	
DIV (ANT3)		Left cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.50	23.25	0.357	0.056	1.33	0.476	/	
		Left Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.50	23.25	0.270	0.025	1.33	0.360	/	
		Right cheek	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.50	23.25	0.393	-0.120	1.33	0.524	/	
		Right Tilt	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.50	23.25	0.418	0.023	1.33	0.557	22	
DIV (ANT3)		Right Tilt (Battery 2)	0	RMC 12.2K	Receiver on	-	-	4183/836.6	24.50	23.25	0.406	-0.065	1.33	0.541	/	
LTE 2		Main (ANT2)	Left cheek	0	QPSK	Receiver on	1	50	18900/1880	20.00	19.45	0.212	0.044	1.14	0.241	/
	0			QPSK	Receiver on	50%	25	19100/1900	20.00	19.23	0.198	0.054	1.19	0.236	/	
	Left Tilt		0	QPSK	Receiver on	1	50	18900/1880	20.00	19.45	0.189	-0.058	1.14	0.215	/	
			0	QPSK	Receiver on	50%	25	19100/1900	20.00	19.23	0.192	-0.120	1.19	0.229	/	
	Right cheek		0	QPSK	Receiver on	1	50	18900/1880	20.00	19.45	0.656	0.032	1.14	0.745	23	
			0	QPSK	Receiver on	50%	25	19100/1900	20.00	19.23	0.649	0.015	1.19	0.775	/	
	Right Tilt		0	QPSK	Receiver on	1	50	18900/1880	20.00	19.45	0.280	0.021	1.14	0.318	/	
			0	QPSK	Receiver on	50%	25	19100/1900	20.00	19.23	0.187	0.025	1.19	0.223	/	
	DIV (ANT1)	Left cheek	0	QPSK	Receiver on	1	50	19100/1900	23.50	22.22	0.032	0.025	1.34	0.043	/	
			0	QPSK	Receiver on	50%	25	19100/1900	23.50	22.19	0.033	0.025	1.35	0.045	/	
		Left Tilt	0	QPSK	Receiver on	1	50	19100/1900	23.50	22.22	0.013	-0.028	1.34	0.017	/	
			0	QPSK	Receiver on	50%	25	19100/1900	23.50	22.19	0.009	-0.160	1.35	0.012	/	
		Right cheek	0	QPSK	Receiver on	1	50	19100/1900	23.50	22.22	0.015	0.042	1.34	0.020	/	
			0	QPSK	Receiver on	50%	25	19100/1900	23.50	22.19	0.014	0.026	1.35	0.019	/	



		Right Tilt	0	QPSK	Receiver on	1	50	19100/1900	23.50	22.22	0.002	-0.096	1.34	0.003	/	
			0	QPSK	Receiver on	50%	25	19100/1900	23.50	22.19	0.002	0.052	1.35	0.003	/	
	Main (ANT2)	Right cheek (Battery 2)	0	QPSK	Receiver on	50%	25	19100/1900	20.00	19.23	0.644	0.012	1.19	0.769	/	
LTE 4	Main (ANT2)	Left cheek	0	QPSK	Receiver on	1	50	20050/1720	19.50	18.26	0.159	0.120	1.33	0.212	/	
			0	QPSK	Receiver on	50%	0	20175/1732.5	19.50	18.03	0.167	0.058	1.40	0.234	/	
		Left Tilt	0	QPSK	Receiver on	1	50	20050/1720	19.50	18.26	0.127	-0.160	1.33	0.169	/	
			0	QPSK	Receiver on	50%	0	20175/1732.5	19.50	18.03	0.132	-0.085	1.40	0.185	/	
		Right cheek	0	QPSK	Receiver on	1	50	20050/1720	19.50	18.26	0.407	-0.050	1.33	0.541	/	
			0	QPSK	Receiver on	50%	0	20175/1732.5	19.50	18.03	0.379	0.024	1.40	0.532	/	
		Right Tilt	0	QPSK	Receiver on	1	50	20050/1720	19.50	18.26	0.174	0.030	1.33	0.231	/	
			0	QPSK	Receiver on	50%	0	20175/1732.5	19.50	18.03	0.156	0.021	1.40	0.219	/	
	DIV (ANT1)	Left cheek	0	QPSK	Receiver on	1	50	20300/1745	23.50	23.06	0.003	0.015	1.11	0.003	/	
			0	QPSK	Receiver on	50%	25	20050/1720	22.50	22.04	0.002	0.025	1.11	0.002	/	
		Left Tilt	0	QPSK	Receiver on	1	50	20300/1745	23.50	23.06	0.002	0.016	1.11	0.002	/	
			0	QPSK	Receiver on	50%	25	20050/1720	22.50	22.04	0.000	0.000	1.11	0.000	/	
		Right cheek	0	QPSK	Receiver on	1	50	20300/1745	23.50	23.06	0.002	0.045	1.11	0.002	/	
			0	QPSK	Receiver on	50%	25	20050/1720	22.50	22.04	0.000	0.000	1.11	0.000	/	
		Right Tilt	0	QPSK	Receiver on	1	50	20300/1745	23.50	23.06	0.002	-0.085	1.11	0.002	/	
			0	QPSK	Receiver on	50%	25	20050/1720	22.50	22.04	0.000	0.000	1.11	0.000	/	
	Main (ANT2)	Right cheek (Battery 2)	0	QPSK	Receiver on	1	50	20050/1720	19.50	18.26	0.418	0.026	1.33	0.556	24	
	LTE 5	Main (ANT0)	Left cheek	0	QPSK	Receiver on	1	0	20525/836.5	25.00	24.20	0.160	0.022	1.20	0.192	/
				0	QPSK	Receiver on	50%	13	20600/844	24.00	22.95	0.124	0.056	1.27	0.158	/
			Left Tilt	0	QPSK	Receiver on	1	0	20525/836.5	25.00	24.20	0.082	-0.058	1.20	0.099	/
0				QPSK	Receiver on	50%	13	20600/844	24.00	22.95	0.063	-0.022	1.27	0.080	/	
Right cheek			0	QPSK	Receiver on	1	0	20525/836.5	25.00	24.20	0.137	0.025	1.20	0.165	/	
			0	QPSK	Receiver on	50%	13	20600/844	24.00	22.95	0.107	0.032	1.27	0.136	/	
Right Tilt			0	QPSK	Receiver on	1	0	20525/836.5	25.00	24.20	0.084	0.120	1.20	0.101	/	
			0	QPSK	Receiver on	50%	13	20600/844	24.00	22.95	0.064	0.025	1.27	0.082	/	
DIV (ANT3)		Left cheek	0	QPSK	Receiver on	1	49	20450/829	25.00	23.32	0.322	0.021	1.47	0.474	/	
			0	QPSK	Receiver on	50%	25	20450/829	24.00	22.20	0.187	0.080	1.51	0.283	/	
		Left Tilt	0	QPSK	Receiver on	1	49	20450/829	25.00	23.32	0.358	0.070	1.47	0.527	/	
			0	QPSK	Receiver on	50%	25	20450/829	24.00	22.20	0.186	0.043	1.51	0.282	/	
		Right cheek	0	QPSK	Receiver on	1	49	20450/829	25.00	23.32	0.405	0.040	1.47	0.596	/	
			0	QPSK	Receiver on	50%	25	20450/829	24.00	22.20	0.296	0.120	1.51	0.448	/	
		Right Tilt	0	QPSK	Receiver on	1	49	20450/829	25.00	23.32	0.510	-0.025	1.47	0.751	25	
			0	QPSK	Receiver on	50%	25	20450/829	24.00	22.20	0.365	-0.045	1.51	0.552	/	
DIV (ANT3)		Right Tilt (Battery 2)	0	QPSK	Receiver on	1	49	20450/829	25.00	23.32	0.498	0.021	1.47	0.733	/	
LTE 7		Main (ANT2)	Left cheek	0	QPSK	Receiver on	1	50	21350/2560	19.00	18.13	0.197	0.015	1.22	0.240	/
				0	QPSK	Receiver on	50%	50	20850/2510	19.00	18.21	0.240	0.025	1.20	0.288	/
			Left Tilt	0	QPSK	Receiver on	1	50	21350/2560	19.00	18.13	0.197	-0.140	1.22	0.240	/



LTE 13	DIV (ANT1)	Right cheek	0	QPSK	Receiver on	50%	50	20850/2510	19.00	18.21	0.216	-0.054	1.20	0.259	/	
			0	QPSK	Receiver on	1	50	21350/2560	19.00	18.13	0.436	0.022	1.22	0.533	/	
		Right Tilt	0	QPSK	Receiver on	50%	50	20850/2510	19.00	18.21	0.562	0.170	1.20	0.674	26	
			0	QPSK	Receiver on	1	50	21350/2560	19.00	18.13	0.216	0.047	1.22	0.264	/	
		Main (ANT2)	Left cheek	0	QPSK	Receiver on	50%	50	20850/2510	19.00	18.21	0.273	0.021	1.20	0.327	/
				0	QPSK	Receiver on	1	50	21350/2560	20.50	19.72	0.026	0.041	1.20	0.031	/
			Left Tilt	0	QPSK	Receiver on	50%	25	20850/2510	20.50	19.60	0.020	0.023	1.23	0.025	/
				0	QPSK	Receiver on	1	50	21350/2560	20.50	19.72	0.017	-0.090	1.20	0.020	/
	Right cheek		0	QPSK	Receiver on	50%	25	20850/2510	20.50	19.60	0.013	0.006	1.23	0.016	/	
			0	QPSK	Receiver on	1	50	21350/2560	20.50	19.72	0.017	0.052	1.20	0.020	/	
	Right Tilt		0	QPSK	Receiver on	50%	25	20850/2510	20.50	19.60	0.015	0.065	1.23	0.018	/	
			0	QPSK	Receiver on	1	50	21350/2560	20.50	19.72	0.028	0.065	1.20	0.034	/	
	0	QPSK	Receiver on	50%	25	20850/2510	20.50	19.60	0.027	0.085	1.23	0.033	/			
	LTE 13	Main (ANT0)	Left cheek	0	QPSK	Receiver on	50%	50	20850/2510	19.00	18.21	0.544	0.076	1.20	0.653	/
				0	QPSK	Receiver on	1	50	21350/2560	20.50	19.72	0.028	0.065	1.20	0.034	/
			Left Tilt	0	QPSK	Receiver on	1	25	23230/782	25.00	24.30	0.124	0.045	1.17	0.146	/
				0	QPSK	Receiver on	50%	25	23230/782	24.00	23.46	0.096	0.025	1.13	0.109	/
			Right cheek	0	QPSK	Receiver on	1	25	23230/782	25.00	24.30	0.062	-0.095	1.17	0.073	/
				0	QPSK	Receiver on	50%	25	23230/782	24.00	23.46	0.048	-0.012	1.13	0.054	/
			Right Tilt	0	QPSK	Receiver on	1	25	23230/782	25.00	24.30	0.112	0.030	1.17	0.132	/
0				QPSK	Receiver on	50%	25	23230/782	24.00	23.46	0.086	0.021	1.13	0.097	/	
0		QPSK	Receiver on	1	25	23230/782	25.00	24.30	0.063	-0.090	1.17	0.074	/			
0		QPSK	Receiver on	50%	25	23230/782	24.00	23.46	0.058	0.014	1.13	0.066	/			
DIV (ANT3)		Left cheek	0	QPSK	Receiver on	1	25	23230/782	25.00	23.26	0.330	0.045	1.49	0.493	/	
			0	QPSK	Receiver on	50%	25	23230/782	24.00	22.37	0.257	0.026	1.46	0.374	/	
		Left Tilt	0	QPSK	Receiver on	1	25	23230/782	25.00	23.26	0.355	0.000	1.49	0.530	/	
			0	QPSK	Receiver on	50%	25	23230/782	24.00	22.37	0.244	0.190	1.46	0.355	/	
		Right cheek	0	QPSK	Receiver on	1	25	23230/782	25.00	23.26	0.359	-0.032	1.49	0.536	/	
			0	QPSK	Receiver on	50%	25	23230/782	24.00	22.37	0.316	0.130	1.46	0.460	/	
		Right Tilt	0	QPSK	Receiver on	1	25	23230/782	25.00	23.26	0.392	0.060	1.49	0.585	/	
			0	QPSK	Receiver on	50%	25	23230/782	24.00	22.37	0.330	-0.050	1.46	0.480	/	
0		QPSK	Receiver on	1	25	23230/782	25.00	23.26	0.415	0.000	1.49	0.620	27			
LTE 26		Main (ANT0)	Left cheek	0	QPSK	Receiver on	1	74	26865/831.5	25.00	24.29	0.176	0.022	1.18	0.207	/
	0			QPSK	Receiver on	50%	0	26965/841.5	24.00	23.37	0.143	-0.011	1.16	0.165	/	
	Left Tilt		0	QPSK	Receiver on	1	74	26865/831.5	25.00	24.29	0.088	-0.087	1.18	0.104	/	
			0	QPSK	Receiver on	50%	0	26965/841.5	24.00	23.37	0.070	0.022	1.16	0.081	/	
	Right cheek		0	QPSK	Receiver on	1	74	26865/831.5	25.00	24.29	0.155	0.065	1.18	0.183	/	
			0	QPSK	Receiver on	50%	0	26965/841.5	24.00	23.37	0.122	0.022	1.16	0.141	/	
	Right Tilt		0	QPSK	Receiver on	1	74	26865/831.5	25.00	24.29	0.090	0.045	1.18	0.106	/	
			0	QPSK	Receiver on	50%	0	26965/841.5	24.00	23.37	0.072	0.003	1.16	0.083	/	
	DIV (ANT3)	Left cheek	0	QPSK	Receiver on	1	0	26965/841.5	25.00	23.56	0.338	-0.090	1.39	0.471	/	
			0	QPSK	Receiver on	50%	0	26765/821.5	24.00	22.57	0.179	0.026	1.39	0.249	/	



	Left Tilt	0	QPSK	Receiver on	1	0	26965/841.5	25.00	23.56	0.271	0.032	1.39	0.378	/	
		0	QPSK	Receiver on	50%	0	26765/821.5	24.00	22.57	0.226	0.052	1.39	0.314	/	
	Right cheek	0	QPSK	Receiver on	1	0	26965/841.5	25.00	23.56	0.353	0.110	1.39	0.492	/	
		0	QPSK	Receiver on	50%	0	26765/821.5	24.00	22.57	0.293	0.056	1.39	0.407	/	
	Right Tilt	0	QPSK	Receiver on	1	0	26965/841.5	25.00	23.56	0.607	-0.030	1.39	0.846	28	
		0	QPSK	Receiver on	1	74	26765/821.5	25.00	23.40	0.576	0.032	1.45	0.833	/	
		0	QPSK	Receiver on	1	74	26865/831.5	25.00	23.45	0.526	0.065	1.43	0.752	/	
		0	QPSK	Receiver on	100%	0	26865/831.5	24.00	22.31	0.540	0.012	1.48	0.797	/	
	DIV (ANT3)	Right Tilt (Battery 2)	0	QPSK	Receiver on	1	0	26965/841.5	25.00	23.56	0.588	0.036	1.39	0.819	/
		Right Tilt (SIM 2)	0	QPSK	Receiver on	1	0	26965/841.5	25.00	23.56	0.594	0.025	1.39	0.828	/
LTE 38	Left cheek	0	QPSK	Receiver on	1	50	37850/2580	21.50	20.69	0.272	-0.022	1.21	0.327	/	
		0	QPSK	Receiver on	50%	25	38150/2610	21.50	20.57	0.256	0.065	1.24	0.317	/	
	Left Tilt	0	QPSK	Receiver on	1	50	37850/2580	21.50	20.69	0.193	-0.025	1.21	0.233	/	
		0	QPSK	Receiver on	50%	25	38150/2610	21.50	20.57	0.181	-0.052	1.24	0.224	/	
	Right cheek	0	QPSK	Receiver on	1	50	37850/2580	21.50	20.69	0.702	-0.110	1.21	0.846	29	
		0	QPSK	Receiver on	1	50	38000/2595	21.50	20.61	0.635	0.025	1.23	0.779	/	
		0	QPSK	Receiver on	1	50	38150/2610	21.50	20.69	0.652	0.052	1.21	0.786	/	
		0	QPSK	Receiver on	100%	0	38000/2595	21.50	20.41	0.614	0.045	1.29	0.789	/	
	Right Tilt	0	QPSK	Receiver on	50%	25	38150/2610	21.50	20.57	0.479	0.025	1.24	0.593	/	
		0	QPSK	Receiver on	1	50	37850/2580	21.50	20.69	0.281	0.160	1.21	0.338	/	
	DIV (ANT1)	Left cheek	0	QPSK	Receiver on	1	50	38150/2610	23.50	22.80	0.020	0.052	1.17	0.023	/
			0	QPSK	Receiver on	50%	25	38150/2610	23.50	22.78	0.020	0.054	1.18	0.024	/
		Left Tilt	0	QPSK	Receiver on	1	50	38150/2610	23.50	22.80	0.013	0.050	1.17	0.015	/
			0	QPSK	Receiver on	50%	25	38150/2610	23.50	22.78	0.014	0.001	1.18	0.017	/
		Right cheek	0	QPSK	Receiver on	1	50	38150/2610	23.50	22.80	0.014	0.062	1.17	0.016	/
			0	QPSK	Receiver on	50%	25	38150/2610	23.50	22.78	0.014	-0.095	1.18	0.017	/
		Right Tilt	0	QPSK	Receiver on	1	50	38150/2610	23.50	22.80	0.019	0.025	1.17	0.022	/
			0	QPSK	Receiver on	50%	25	38150/2610	23.50	22.78	0.017	0.018	1.18	0.020	/
Main (ANT2)	Right cheek (Battery 2)	0	QPSK	Receiver on	1	50	37850/2580	21.50	20.69	0.683	0.054	1.21	0.823	/	
LTE 66	Left cheek	0	QPSK	Receiver on	1	99	132072/1720	20.00	18.62	0.202	-0.032	1.37	0.278	/	
		0	QPSK	Receiver on	50%	50	132572/1770	20.00	18.48	0.180	0.022	1.42	0.255	/	
	Left Tilt	0	QPSK	Receiver on	1	99	132072/1720	20.00	18.62	0.158	-0.058	1.37	0.217	/	
		0	QPSK	Receiver on	50%	50	132572/1770	20.00	18.48	0.145	0.020	1.42	0.206	/	
	Right cheek	0	QPSK	Receiver on	1	99	132072/1720	20.00	18.62	0.514	0.020	1.37	0.706	/	
		0	QPSK	Receiver on	50%	50	132572/1770	20.00	18.48	0.542	0.050	1.42	0.769	/	
	Right Tilt	0	QPSK	Receiver on	1	99	132072/1720	20.00	18.62	0.225	0.030	1.37	0.309	/	
		0	QPSK	Receiver on	50%	50	132572/1770	20.00	18.48	0.239	0.020	1.42	0.339	/	
DIV	Left cheek	0	QPSK	Receiver on	1	99	132322/1745	23.50	23.00	0.003	-0.012	1.12	0.003	/	



(ANT1)		0	QPSK	Receiver on	50%	25	132322/1745	22.50	22.06	0.000	0.000	1.11	0.000	/
	Left Tilt	0	QPSK	Receiver on	1	99	132322/1745	23.50	23.00	0.000	0.000	1.12	0.000	/
		0	QPSK	Receiver on	50%	25	132322/1745	22.50	22.06	0.000	0.000	1.11	0.000	/
	Right cheek	0	QPSK	Receiver on	1	99	132322/1745	23.50	23.00	0.002	0.000	1.12	0.002	/
		0	QPSK	Receiver on	50%	25	132322/1745	22.50	22.06	0.000	0.000	1.11	0.000	/
	Right Tilt	0	QPSK	Receiver on	1	99	132322/1745	23.50	23.00	0.000	0.000	1.12	0.000	/
		0	QPSK	Receiver on	50%	25	132322/1745	22.50	22.06	0.000	0.000	1.11	0.000	/
Main (ANT2)	Right cheek (Battery 2)	0	QPSK	Receiver on	50%	50	132572/1770	20.00	18.48	0.559	0.065	1.42	0.793	30

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
2.4G	Wi-Fi	Left cheek	0	802.11b	98.0%	Receiver on	1/2412	12.00	10.82	0.173	0.090	1.34	0.232	31
		Left Tilt	0	802.11b	98.0%	Receiver on	1/2412	12.00	10.82	0.101	0.035	1.34	0.135	/
		Right cheek	0	802.11b	98.0%	Receiver on	1/2412	12.00	10.82	0.049	0.024	1.34	0.066	/
		Right Tilt	0	802.11b	98.0%	Receiver on	1/2412	12.00	10.82	0.036	0.054	1.34	0.048	/
		Left cheek (Battery 2)	0	802.11b	98.0%	Receiver on	1/2412	12.00	10.82	0.168	0.150	1.34	0.225	/
U-NII-1	Wi-Fi	Left cheek	0	802.11a	98.0%	Receiver on	36/5180	12.00	11.72	0.068	-0.160	1.09	0.074	/
		Left Tilt	0	802.11a	98.0%	Receiver on	36/5180	12.00	11.72	0.050	-0.120	1.09	0.054	/
		Right cheek	0	802.11a	98.0%	Receiver on	36/5180	12.00	11.72	0.051	0.024	1.09	0.055	/
		Right Tilt	0	802.11a	98.0%	Receiver on	36/5180	12.00	11.72	0.042	-0.140	1.09	0.046	/
		Left cheek (Battery 2)	0	802.11a	98.0%	Receiver on	36/5180	12.00	11.72	0.079	0.065	1.09	0.086	/
U-NII-2A	Wi-Fi	Left cheek	0	802.11a	98.0%	Receiver on	56/5280	12.00	11.80	0.107	0.026	1.07	0.114	/
		Left Tilt	0	802.11a	98.0%	Receiver on	56/5280	12.00	11.80	0.090	0.073	1.07	0.096	/
		Right cheek	0	802.11a	98.0%	Receiver on	56/5280	12.00	11.80	0.056	-0.058	1.07	0.060	/
		Right Tilt	0	802.11a	98.0%	Receiver on	56/5280	12.00	11.80	0.061	-0.037	1.07	0.066	/
		Left cheek (Battery 2)	0	802.11a	98.0%	Receiver on	56/5280	12.00	11.80	0.112	0.065	1.07	0.120	/
U-NII-2C	Wi-Fi	Left cheek	0	802.11a	98.0%	Receiver on	140/5700	12.00	11.22	0.247	0.142	1.22	0.302	/
		Left Tilt	0	802.11a	98.0%	Receiver on	140/5700	12.00	11.22	0.299	0.039	1.22	0.365	32
		Right cheek	0	802.11a	98.0%	Receiver on	140/5700	12.00	11.22	0.070	0.015	1.22	0.085	/
		Right Tilt	0	802.11a	98.0%	Receiver on	140/5700	12.00	11.22	0.120	0.028	1.22	0.147	/
		Left Tilt (Battery 2)	0	802.11a	98.0%	Receiver on	140/5700	12.00	11.22	0.231	0.044	1.22	0.282	/
		Left Tilt (SIM 2)	0	802.11a	98.0%	Receiver on	140/5700	12.00	11.22	0.285	0.056	1.22	0.348	/
U-NII-3	Wi-Fi	Left cheek	0	802.11a	98.0%	Receiver on	165/5825	12.00	11.50	0.156	0.039	1.14	0.179	/
		Left Tilt	0	802.11a	98.0%	Receiver on	165/5825	12.00	11.50	0.193	0.022	1.14	0.221	/
		Right cheek	0	802.11a	98.0%	Receiver on	165/5825	12.00	11.50	0.053	0.023	1.14	0.061	/
		Right Tilt	0	802.11a	98.0%	Receiver on	165/5825	12.00	11.50	0.085	0.027	1.14	0.098	/



		Left Tilt (Battery 2)	0	802.11a	98.0%	Receiver on	165/5825	12.00	11.50	0.185	0.028	1.14	0.212	/
Bluetooth	BT	Left cheek	0	DH5	77.0%	/	39/2441	12.00	10.80	0.063	0.033	1.71	0.108	/
		Left Tilt	0	DH5	77.0%	/	39/2441	12.00	10.80	0.039	0.048	1.71	0.067	/
		Right cheek	0	DH5	77.0%	/	39/2441	12.00	10.80	0.019	0.056	1.71	0.033	/
		Right Tilt	0	DH5	77.0%	/	39/2441	12.00	10.80	0.022	0.026	1.71	0.038	/
		Left cheek (Battery 2)	0	DH5	77.0%	/	39/2441	12.00	10.80	0.076	-0.010	1.71	0.130	33



Body-worn SAR

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
GSM 850	Main (ANT0)	Back Side	15	GSM	Receiver off	-	-	190/836.6	34.00	33.60	0.188	0.032	1.10	0.206	34
		Front Side	15	GSM	Receiver off	-	-	190/836.6	34.00	33.60	0.167	0.016	1.10	0.183	/
	DIV (ANT3)	Back Side	15	GSM	Receiver off	-	-	190/836.6	28.50	27.01	0.000	-0.078	1.41	0.000	/
		Front Side	15	GSM	Receiver off	-	-	190/836.6	28.50	27.01	0.000	0.096	1.41	0.000	/
	Main (ANT0)	Back Side (Battery 2)	15	GSM	Receiver off	-	-	190/836.6	34.00	33.60	0.165	0.023	1.10	0.181	/
GSM 1900	Main (ANT2)	Back Side	15	GSM	Receiver off	-	-	661/1880	31.00	29.64	0.114	0.020	1.37	0.156	/
		Front Side	15	GSM	Receiver off	-	-	661/1880	31.00	29.64	0.077	-0.023	1.37	0.105	/
	DIV (ANT1)	Back Side	15	GSM	Receiver off	-	-	661/1880	30.50	30.03	0.158	0.074	1.11	0.176	35
		Front Side	15	GSM	Receiver off	-	-	661/1880	30.50	30.03	0.054	0.130	1.11	0.060	/
	DIV (ANT1)	Back Side (Battery 2)	15	GSM	Receiver off	-	-	661/1880	30.50	29.64	0.109	0.056	1.22	0.133	/
WCDMA II	Main (ANT2)	Back Side	15	RMC	Receiver off	-	-	9400/1880	23.00	22.25	0.197	0.010	1.19	0.234	/
		Front Side	15	RMC	Receiver off	-	-	9400/1880	23.00	22.25	0.120	-0.020	1.19	0.143	/
	DIV (ANT1)	Back Side	15	RMC	Receiver off	-	-	9400/1880	22.30	21.56	0.208	0.054	1.19	0.247	36
		Front Side	15	RMC	Receiver off	-	-	9400/1880	22.30	21.56	0.086	0.026	1.19	0.102	/
	DIV (ANT1)	Back Side (Battery 2)	15	RMC	Receiver off	-	-	9400/1880	22.30	21.56	0.203	0.000	1.19	0.241	/
WCDMA IV	Main (ANT2)	Back Side	15	RMC	Receiver off	-	-	1413/1732.6	23.00	22.31	0.214	-0.100	1.17	0.251	37
		Front Side	15	RMC	Receiver off	-	-	1413/1732.6	23.00	22.31	0.113	0.140	1.17	0.132	/
	DIV (ANT1)	Back Side	15	RMC	Receiver off	-	-	1413/1732.6	23.00	22.46	0.016	0.023	1.13	0.018	/
		Front Side	15	RMC	Receiver off	-	-	1413/1732.6	23.00	22.46	0.006	0.099	1.13	0.007	/
	Main (ANT2)	Back Side (Battery 2)	15	RMC	Receiver off	-	-	1413/1732.6	23.00	22.31	0.206	0.026	1.17	0.241	/
WCDMA V	Main (ANT0)	Back Side	15	RMC	Receiver off	-	-	4183/836.6	24.50	23.88	0.092	0.030	1.15	0.106	/
		Front Side	15	RMC	Receiver off	-	-	4183/836.6	24.50	23.88	0.065	-0.110	1.15	0.075	/
	DIV (ANT3)	Back Side	15	RMC	Receiver off	-	-	4183/836.6	24.50	23.25	0.158	-0.180	1.33	0.211	/
		Front Side	15	RMC	Receiver off	-	-	4183/836.6	24.50	23.25	0.069	0.030	1.33	0.092	/
	DIV (ANT3)	Back Side (Battery 2)	15	RMC	Receiver off	-	-	4183/836.6	24.50	23.25	0.166	0.035	1.33	0.221	38
LTE 2	Main (ANT2)	Back Side	15	QPSK	Receiver off	1	50	18700/1860	23.50	22.67	0.162	0.011	1.21	0.196	/
			15	QPSK	Receiver off	50%	25	19100/1900	23.00	22.31	0.169	0.021	1.17	0.198	/
		Front Side	15	QPSK	Receiver off	1	50	18700/1860	23.50	22.67	0.143	-0.021	1.21	0.173	/
			15	QPSK	Receiver off	50%	25	19100/1900	23.00	22.31	0.145	0.011	1.17	0.170	/
	DIV (ANT1)	Back Side	15	QPSK	Receiver off	1	50	19100/1900	23.50	22.22	0.195	-0.060	1.34	0.262	/
			15	QPSK	Receiver off	50%	25	19100/1900	23.50	22.19	0.200	0.048	1.35	0.270	/
		Front Side	15	QPSK	Receiver off	1	50	19100/1900	23.50	22.22	0.099	0.081	1.34	0.133	/
			15	QPSK	Receiver off	50%	25	19100/1900	23.50	22.19	0.103	0.030	1.35	0.139	/
	DIV	Back Side	15	QPSK	Receiver off	50%	25	19100/1900	23.50	22.19	0.203	0.028	1.35	0.274	39



	(ANT1)	(Battery 2)													
LTE 4	Main (ANT2)	Back Side	15	QPSK	Receiver off	1	99	20300/1745	24.50	23.84	0.373	-0.070	1.16	0.434	40
			15	QPSK	Receiver off	50%	25	20050/1720	23.50	22.21	0.192	-0.011	1.35	0.258	/
		Front Side	15	QPSK	Receiver off	1	99	20300/1745	24.50	23.84	0.110	-0.088	1.16	0.128	/
			15	QPSK	Receiver off	50%	25	20050/1720	23.50	22.21	0.086	0.045	1.35	0.116	/
	DIV (ANT1)	Back Side	15	QPSK	Receiver off	1	50	20300/1745	23.50	23.06	0.012	0.068	1.11	0.013	/
			15	QPSK	Receiver off	50%	25	20050/1720	22.50	22.04	0.011	0.043	1.11	0.012	/
		Front Side	15	QPSK	Receiver off	1	50	20300/1745	23.50	23.06	0.006	0.108	1.11	0.006	/
			15	QPSK	Receiver off	50%	25	20050/1720	22.50	22.04	0.006	0.099	1.11	0.007	/
	Main (ANT2)	Back Side (Battery 2)	15	QPSK	Receiver off	1	99	20300/1745	24.50	23.84	0.365	0.023	1.16	0.425	/
	LTE 5	Main (ANT0)	Back Side	15	QPSK	Receiver off	1	0	20525/836.5	25.00	24.20	0.176	-0.070	1.20	0.212
15				QPSK	Receiver off	50%	13	20600/844	24.00	22.95	0.141	-0.050	1.27	0.180	/
Front Side			15	QPSK	Receiver off	1	0	20525/836.5	25.00	24.20	0.165	-0.010	1.20	0.198	/
			15	QPSK	Receiver off	50%	13	20600/844	24.00	22.95	0.134	-0.100	1.27	0.171	/
DIV (ANT3)		Back Side	15	QPSK	Receiver off	1	49	20450/829	25.00	23.32	0.147	-0.050	1.47	0.216	/
			15	QPSK	Receiver off	50%	25	20450/829	24.00	22.20	0.106	0.010	1.51	0.160	/
		Front Side	15	QPSK	Receiver off	1	49	20450/829	25.00	23.32	0.063	0.160	1.47	0.093	/
			15	QPSK	Receiver off	50%	25	20450/829	24.00	22.20	0.046	0.035	1.51	0.069	/
DIV (ANT3)		Back Side (Battery 2)	15	QPSK	Receiver off	1	49	20450/829	25.00	23.32	0.136	0.025	1.47	0.200	/
LTE 7		Main (ANT2)	Back Side	15	QPSK	Receiver off	1	50	21350/2560	22.00	21.46	0.290	0.023	1.13	0.328
	15			QPSK	Receiver off	50%	25	21350/2560	22.00	21.32	0.294	0.062	1.17	0.344	/
	Front Side		15	QPSK	Receiver off	1	50	21350/2560	22.00	21.46	0.139	0.056	1.13	0.157	/
			15	QPSK	Receiver off	50%	25	21350/2560	22.00	21.32	0.135	-0.074	1.17	0.158	/
	DIV (ANT1)	Back Side	15	QPSK	Receiver off	1	50	21350/2560	20.50	19.72	0.270	0.116	1.20	0.323	/
			15	QPSK	Receiver off	50%	25	20850/2510	20.50	19.60	0.219	0.094	1.23	0.269	/
		Front Side	15	QPSK	Receiver off	1	50	21350/2560	20.50	19.72	0.129	0.039	1.20	0.154	/
			15	QPSK	Receiver off	50%	25	20850/2510	20.50	19.60	0.100	0.116	1.23	0.123	/
	Main (ANT2)	Back Side (Battery 2)	15	QPSK	Receiver off	50%	25	21350/2560	22.00	21.32	0.304	0.025	1.17	0.356	42
	LTE 13	Main (ANT0)	Back Side	15	QPSK	Receiver off	1	25	23230/782	25.00	24.30	0.194	-0.110	1.17	0.228
15				QPSK	Receiver off	50%	25	23230/782	24.00	23.46	0.155	-0.020	1.13	0.176	/
Front Side			15	QPSK	Receiver off	1	25	23230/782	25.00	24.30	0.158	-0.190	1.17	0.186	/
			15	QPSK	Receiver off	50%	25	23230/782	24.00	23.46	0.126	-0.020	1.13	0.143	/
DIV (ANT3)		Back Side	15	QPSK	Receiver off	1	25	23230/782	25.00	23.26	0.146	-0.090	1.49	0.218	/
			15	QPSK	Receiver off	50%	25	23230/782	24.00	22.37	0.111	0.030	1.46	0.162	/
		Front Side	15	QPSK	Receiver off	1	25	23230/782	25.00	23.26	0.067	0.120	1.49	0.100	/
			15	QPSK	Receiver off	50%	25	23230/782	24.00	22.37	0.051	0.070	1.46	0.074	/
Main (ANT0)		Back Side (Battery 2)	15	QPSK	Receiver off	1	25	23230/782	25.00	24.30	0.203	0.025	1.17	0.239	43
LTE 26		Main (ANT0)	Back Side	15	QPSK	Receiver off	1	74	26865/831.5	25.00	24.29	0.183	0.011	1.18	0.216
	15			QPSK	Receiver off	50%	0	26965/841.5	24.00	23.37	0.156	0.021	1.16	0.180	/



	Front Side	15	QPSK	Receiver off	1	74	26865/831.5	25.00	24.29	0.162	0.032	1.18	0.191	/		
		15	QPSK	Receiver off	50%	0	26965/841.5	24.00	23.37	0.132	0.015	1.16	0.153	/		
	DIV (ANT3)	Back Side	15	QPSK	Receiver off	1	0	26965/841.5	25.00	23.56	0.157	0.060	1.39	0.219	/	
			15	QPSK	Receiver off	50%	0	26765/821.5	24.00	22.57	0.080	0.090	1.39	0.111	/	
		Front Side	15	QPSK	Receiver off	1	0	26965/841.5	25.00	23.56	0.069	0.050	1.39	0.095	/	
			15	QPSK	Receiver off	50%	0	26765/821.5	24.00	22.57	0.035	-0.020	1.39	0.049	/	
	DIV (ANT3)	Back Side (Battery 2)	15	QPSK	Receiver off	1	0	26965/841.5	25.00	23.56	0.166	0.032	1.39	0.231	/	
	LTE 38	Main (ANT2)	Back Side	15	QPSK	Receiver off	1	50	37850/2580	24.00	23.42	0.219	0.120	1.14	0.250	/
				15	QPSK	Receiver off	50%	25	38000/2595	23.50	22.95	0.203	-0.085	1.14	0.230	/
			Front Side	15	QPSK	Receiver off	1	50	37850/2580	24.00	23.42	0.162	0.065	1.14	0.185	/
15				QPSK	Receiver off	50%	25	38000/2595	23.50	22.95	0.073	-0.036	1.14	0.083	/	
DIV (ANT1)		Back Side	15	QPSK	Receiver off	1	50	38150/2610	23.50	22.80	0.370	0.140	1.17	0.435	/	
			15	QPSK	Receiver off	50%	25	38150/2610	23.50	22.78	0.233	0.010	1.18	0.275	/	
		Front Side	15	QPSK	Receiver off	1	50	38150/2610	23.50	22.80	0.148	-0.020	1.17	0.174	/	
			15	QPSK	Receiver off	50%	25	38150/2610	23.50	22.78	0.142	0.023	1.18	0.168	/	
DIV (ANT1)		Back Side (Battery 2)	15	QPSK	Receiver off	1	50	38150/2610	23.50	22.80	0.399	0.035	1.17	0.469	45	
LTE 66		Main (ANT2)	Back Side	15	QPSK	Receiver off	1	99	132322/1745	24.50	23.46	0.384	0.010	1.27	0.488	/
				15	QPSK	Receiver off	50%	25	132322/1745	23.50	22.35	0.325	0.044	1.30	0.424	/
			Front Side	15	QPSK	Receiver off	1	99	132322/1745	24.50	23.46	0.121	0.140	1.27	0.154	/
				15	QPSK	Receiver off	50%	25	132322/1745	23.50	22.35	0.094	0.052	1.30	0.122	/
		DIV (ANT1)	Back Side	15	QPSK	Receiver off	1	99	132322/1745	23.50	23.00	0.014	0.099	1.12	0.015	/
	15			QPSK	Receiver off	50%	25	132322/1745	22.50	22.06	0.009	0.000	1.11	0.010	/	
	Front Side		15	QPSK	Receiver off	1	99	132322/1745	23.50	23.00	0.003	0.031	1.12	0.003	/	
			15	QPSK	Receiver off	50%	25	132322/1745	22.50	22.06	0.004	0.099	1.11	0.005	/	
	Main (ANT2)	Back Side (Battery 2)	15	QPSK	Receiver off	1	99	132322/1745	24.50	23.46	0.665	0.015	1.27	0.845	46	
		Back Side	15	QPSK	Receiver off	1	99	132322/1745	24.50	23.46	0.346	0.065	1.27	0.440	/	

Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
2.4G	Wi-Fi	Back Side	15	802.11b	98.0%	Receiver off	6/2437	18.00	16.06	0.086	-0.030	1.75	0.150	/
		Front Side	15	802.11b	98.0%	Receiver off	6/2437	18.00	16.06	0.063	0.020	1.75	0.110	/
		Back Side	15	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.061	-0.090	1.81	0.111	/
		Front Side	15	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.089	-0.020	1.61	0.144	/
		Front Side (Battery 2)	15	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.102	0.160	1.61	0.165	47
U-NII-1	Wi-Fi	Back Side	15	802.11a	98.0%	Receiver off	48/5240	19.00	17.33	0.075	0.099	1.50	0.113	/
		Front Side	15	802.11a	98.0%	Receiver off	48/5240	19.00	17.33	0.005	0.099	1.50	0.007	/
		Back Side (Battery 2)	15	802.11a	98.0%	Receiver off	48/5240	19.00	17.33	0.081	0.045	1.50	0.121	/



U-NII-2A	Wi-Fi	Back Side	15	802.11a	98.0%	Receiver off	60/5300	19.00	17.85	0.094	0.027	1.33	0.124	/
		Front Side	15	802.11a	98.0%	Receiver off	60/5300	19.00	17.85	0.004	0.044	1.33	0.006	/
		Back Side (Battery 2)	15	802.11a	98.0%	Receiver off	60/5300	19.00	17.85	0.088	0.065	1.33	0.117	/
U-NII-2C	Wi-Fi	Back Side	15	802.11a	98.0%	Receiver off	132/5660	19.00	17.22	0.151	0.012	1.54	0.233	/
		Front Side	15	802.11a	98.0%	Receiver off	132/5660	19.00	17.22	0.023	0.032	1.54	0.036	/
		Back Side (Battery 2)	15	802.11a	98.0%	Receiver off	132/5660	19.00	17.22	0.146	0.079	1.54	0.224	/
U-NII-3	Wi-Fi	Back Side	15	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.206	0.100	1.42	0.294	48
		Front Side	15	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.100	0.099	1.42	0.142	/
		Back Side (Battery 2)	15	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.185	0.035	1.42	0.264	/
		Back Side (SIM 2)	15	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.184	0.055	1.42	0.262	/
Bluetooth	BT	Back Side	15	DH5	77.0%	/	39/2441	12.00	10.80	0.005	0.068	1.71	0.009	/
		Front Side	15	DH5	77.0%	/	39/2441	12.00	10.80	0.003	0.170	1.71	0.005	/
		Back Side (Battery 2)	15	DH5	77.0%	/	39/2441	12.00	10.80	0.008	0.054	1.71	0.014	49



Hotspot

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.
GSM 850	Main (ANT0)	Back Side	10	1TX Slot	Hotspot	-	-	190/836.6	34.00	33.44	0.279	0.103	1.14	0.317	50
		Front Side	10	1TX Slot	Hotspot	-	-	190/836.6	34.00	33.44	0.274	-0.053	1.14	0.312	/
		Left Edge	10	1TX Slot	Hotspot	-	-	190/836.6	34.00	33.44	0.054	0.013	1.14	0.061	/
		Right Edge	10	1TX Slot	Hotspot	-	-	190/836.6	34.00	33.44	0.158	0.081	1.14	0.180	/
		Top Edge	10	1TX Slot	Hotspot	-	-	190/836.6	34.00	33.44	0.000	0.070	1.14	0.000	/
		Bottom Edge	10	1TX Slot	Hotspot	-	-	190/836.6	34.00	33.44	0.130	0.050	1.14	0.148	/
	DIV (ANT3)	Back Side	10	1TX Slot	Hotspot	-	-	190/836.6	28.50	27.04	0.000	0.050	1.40	0.000	/
		Front Side	10	1TX Slot	Hotspot	-	-	190/836.6	28.50	27.04	0.000	0.023	1.40	0.000	/
		Left Edge	10	1TX Slot	Hotspot	-	-	190/836.6	28.50	27.04	0.000	0.190	1.40	0.000	/
		Right Edge	10	1TX Slot	Hotspot	-	-	190/836.6	28.50	27.04	0.000	0.048	1.40	0.000	/
		Top Edge	10	1TX Slot	Hotspot	-	-	190/836.6	28.50	27.04	0.000	-0.044	1.40	0.000	/
		Bottom Edge	10	1TX Slot	Hotspot	-	-	190/836.6	28.50	27.04	0.000	0.090	1.40	0.000	/
Main (ANT0)	Back Side (Battery 2)	10	1TX Slot	Hotspot	-	-	190/836.6	34.00	33.44	0.266	0.020	1.14	0.303	/	
GSM 1900	Main (ANT2)	Back Side	10	1TX Slot	Hotspot	-	-	661/1880	31.00	29.85	0.375	0.023	1.30	0.489	/
		Front Side	10	1TX Slot	Hotspot	-	-	661/1880	31.00	29.85	0.133	-0.020	1.30	0.173	/
		Left Edge	10	1TX Slot	Hotspot	-	-	661/1880	31.00	29.85	0.460	-0.023	1.30	0.599	51
		Left Edge	10	1TX Slot	Hotspot	-	-	512/1850.2	31.00	29.85	0.458	0.052	1.30	0.597	/
		Left Edge	10	1TX Slot	Hotspot	-	-	810/1909.8	31.00	29.85	0.455	0.045	1.30	0.593	/
		Right Edge	10	1TX Slot	Hotspot	-	-	661/1880	31.00	29.85	0.026	0.011	1.30	0.034	/
		Top Edge	10	1TX Slot	Hotspot	-	-	661/1880	31.00	29.85	0.079	-0.021	1.30	0.103	/
		Bottom Edge	10	1TX Slot	Hotspot	-	-	661/1880	31.00	29.85	0.020	0.011	1.30	0.026	/
	DIV (ANT1)	Back Side	10	1TX Slot	Hotspot	-	-	661/1880	27.50	26.52	0.061	-0.060	1.25	0.076	/
		Front Side	10	1TX Slot	Hotspot	-	-	661/1880	27.50	26.52	0.021	-0.040	1.25	0.026	/
		Left Edge	10	1TX Slot	Hotspot	-	-	661/1880	27.50	26.52	0.005	-0.028	1.25	0.006	/
		Right Edge	10	1TX Slot	Hotspot	-	-	661/1880	27.50	26.52	0.008	-0.060	1.25	0.010	/
		Top Edge	10	1TX Slot	Hotspot	-	-	661/1880	27.50	26.52	0.001	0.032	1.25	0.001	/
		Bottom Edge	10	1TX Slot	Hotspot	-	-	661/1880	27.50	26.52	0.085	-0.020	1.25	0.107	/
Main (ANT2)	Left Edge (Battery 2)	10	1TX Slot	Hotspot	-	-	661/1880	31.00	29.85	0.448	0.066	1.30	0.584	/	
WCDMA II	Main (ANT2)	Back Side	10	RMC	Hotspot	-	-	9400/1880	23.00	22.25	0.439	0.020	1.19	0.522	/
		Front Side	10	RMC	Hotspot	-	-	9400/1880	23.00	22.25	0.246	-0.015	1.19	0.292	/
		Left Edge	10	RMC	Hotspot	-	-	9400/1880	23.00	22.25	0.701	0.020	1.19	0.833	52
		Right Edge	10	RMC	Hotspot	-	-	9400/1880	23.00	22.25	0.029	0.010	1.19	0.034	/
		Top Edge	10	RMC	Hotspot	-	-	9400/1880	23.00	22.25	0.233	0.015	1.19	0.277	/
		Bottom Edge	10	RMC	Hotspot	-	-	9400/1880	23.00	22.25	0.038	-0.023	1.19	0.045	/
	DIV (ANT1)	Back Side	10	RMC	Hotspot	-	-	9400/1880	22.80	22.09	0.318	0.010	1.18	0.374	/
		Front Side	10	RMC	Hotspot	-	-	9400/1880	22.80	22.09	0.278	0.031	1.18	0.327	/
		Left Edge	10	RMC	Hotspot	-	-	9400/1880	22.80	22.09	0.064	-0.010	1.18	0.075	/



		Right Edge	10	RMC	Hotspot	-	-	9400/1880	22.80	22.09	0.045	0.012	1.18	0.053	/
		Top Edge	10	RMC	Hotspot	-	-	9400/1880	22.80	22.09	0.004	0.011	1.18	0.005	/
		Bottom Edge	10	RMC	Hotspot	-	-	9400/1880	22.80	22.09	0.656	0.023	1.18	0.773	/
	Main (ANT2)	Left Edge (Battery 2)	10	RMC	Hotspot	-	-	9400/1880	23.00	22.25	0.689	-0.096	1.19	0.819	/
		WCDMA IV													
		Main (ANT2)	Back Side	10	RMC	Hotspot	-	-	1413/1732.6	22.00	21.14	0.351	-0.025	1.22	0.428
Front Side	10		RMC	Hotspot	-	-	1413/1732.6	22.00	21.14	0.227	0.011	1.22	0.277	/	
Left Edge	10		RMC	Hotspot	-	-	1413/1732.6	22.00	21.14	0.542	-0.020	1.22	0.661	/	
Right Edge	10		RMC	Hotspot	-	-	1413/1732.6	22.00	21.14	0.057	0.022	1.22	0.069	/	
Top Edge	10		RMC	Hotspot	-	-	1413/1732.6	22.00	21.14	0.195	-0.021	1.22	0.238	/	
Bottom Edge	10		RMC	Hotspot	-	-	1413/1732.6	22.00	21.14	0.041	0.011	1.22	0.050	/	
DIV (ANT1)	Back Side	10	RMC	Hotspot	-	-	1413/1732.6	23.00	22.46	0.034	0.011	1.13	0.039	/	
	Front Side	10	RMC	Hotspot	-	-	1413/1732.6	23.00	22.46	0.013	-0.012	1.13	0.015	/	
	Left Edge	10	RMC	Hotspot	-	-	1413/1732.6	23.00	22.46	0.003	0.010	1.13	0.003	/	
	Right Edge	10	RMC	Hotspot	-	-	1413/1732.6	23.00	22.46	0.006	0.001	1.13	0.007	/	
	Top Edge	10	RMC	Hotspot	-	-	1413/1732.6	23.00	22.46	0.003	0.010	1.13	0.003	/	
	Bottom Edge	10	RMC	Hotspot	-	-	1413/1732.6	23.00	22.46	0.041	0.020	1.13	0.046	/	
Main (ANT2)	Left Edge (Battery 2)	10	RMC	Hotspot	-	-	1413/1732.6	22.00	21.14	0.552	0.036	1.22	0.673	53	
WCDMA V	Main (ANT0)	Back Side	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.88	0.237	0.010	1.15	0.273	54
		Front Side	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.88	0.180	0.011	1.15	0.208	/
		Left Edge	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.88	0.153	-0.020	1.15	0.176	/
		Right Edge	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.88	0.082	-0.010	1.15	0.095	/
		Top Edge	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.88	0.013	0.021	1.15	0.015	/
		Bottom Edge	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.88	0.141	-0.015	1.15	0.163	/
	DIV (ANT3)	Back Side	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.25	0.183	0.010	1.33	0.244	/
		Front Side	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.25	0.069	-0.020	1.33	0.092	/
		Left Edge	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.25	0.061	0.023	1.33	0.081	/
		Right Edge	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.25	0.028	0.011	1.33	0.037	/
		Top Edge	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.25	0.198	-0.023	1.33	0.264	/
		Bottom Edge	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.25	0.007	0.021	1.33	0.009	/
Main (ANT0)	Back Side (Battery 2)	10	RMC	Hotspot	-	-	4183/836.6	24.50	23.88	0.226	0.045	1.15	0.261	/	
LTE 2	Main (ANT2)	Back Side	10	QPSK	Hotspot	1	50	18900/1880	23.50	22.29	0.284	0.021	1.32	0.375	/
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.33	0.294	0.023	1.31	0.385	/
		Front Side	10	QPSK	Hotspot	1	50	18900/1880	23.50	22.29	0.256	-0.011	1.32	0.338	/
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.33	0.252	0.011	1.31	0.330	/
		Left Edge	10	QPSK	Hotspot	1	50	18900/1880	23.50	22.29	0.524	0.023	1.32	0.692	/
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.33	0.532	-0.020	1.31	0.696	/
		Right Edge	10	QPSK	Hotspot	1	50	18900/1880	23.50	22.29	0.053	-0.011	1.32	0.070	/
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.33	0.057	0.010	1.31	0.075	/
		Top Edge	10	QPSK	Hotspot	1	50	18900/1880	23.50	22.29	0.196	0.012	1.32	0.259	/
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.33	0.218	0.066	1.31	0.285	/



LTE 4	DIV (ANT1)	Bottom Edge	10	QPSK	Hotspot	1	50	18900/1880	23.50	22.29	0.051	0.025	1.32	0.067	/	
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.33	0.036	0.024	1.31	0.047	/	
	DIV (ANT1)	Back Side	10	QPSK	Hotspot	1	50	19100/1900	23.50	22.88	0.335	0.140	1.15	0.386	/	
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.09	0.308	-0.070	1.38	0.426	/	
		Front Side	10	QPSK	Hotspot	1	50	19100/1900	23.50	22.88	0.199	-0.160	1.15	0.230	/	
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.09	0.182	0.022	1.38	0.252	/	
		Left Edge	10	QPSK	Hotspot	1	50	19100/1900	23.50	22.88	0.065	-0.190	1.15	0.075	/	
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.09	0.059	0.160	1.38	0.082	/	
		Right Edge	10	QPSK	Hotspot	1	50	19100/1900	23.50	22.88	0.033	0.000	1.15	0.038	/	
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.09	0.030	-0.150	1.38	0.042	/	
		Top Edge	10	QPSK	Hotspot	1	50	19100/1900	23.50	22.88	0.000	0.000	1.15	0.000	/	
			10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.09	0.000	0.000	1.38	0.000	/	
	Bottom Edge	10	QPSK	Hotspot	1	50	19100/1900	23.50	22.88	0.653	0.024	1.15	0.753	55		
		10	QPSK	Hotspot	1	50	18700/1860	23.50	22.64	0.574	0.059	1.22	0.700	/		
		10	QPSK	Hotspot	1	0	18900/1880	23.50	22.65	0.569	0.130	1.22	0.692	/		
		10	QPSK	Hotspot	100%	0	19100/1900	23.50	21.95	0.558	0.012	1.43	0.797	/		
	10	QPSK	Hotspot	50%	25	19100/1900	23.50	22.09	0.540	-0.150	1.38	0.747	/			
	DIV (ANT1)	Bottom Edge (Battery 2)	10	QPSK	Hotspot	1	50	19100/1900	23.50	22.88	0.644	0.066	1.15	0.743	/	
	LTE 4	Main (ANT2)	Back Side	10	QPSK	Hotspot	1	50	20050/1720	24.00	22.68	0.318	-0.033	1.36	0.431	/
				10	QPSK	Hotspot	50%	25	20050/1720	23.50	22.21	0.361	0.045	1.35	0.486	/
Front Side			10	QPSK	Hotspot	1	50	20050/1720	24.00	22.68	0.155	0.033	1.36	0.210	/	
			10	QPSK	Hotspot	50%	25	20050/1720	23.50	22.21	0.136	-0.041	1.35	0.183	/	
Left Edge			10	QPSK	Hotspot	1	50	20050/1720	24.00	22.68	0.614	0.029	1.36	0.832	56	
			10	QPSK	Hotspot	1	50	20175/1732.5	24.00	22.64	0.589	0.012	1.37	0.806	/	
			10	QPSK	Hotspot	1	50	20300/1745	24.00	22.61	0.578	0.025	1.38	0.796	/	
			10	QPSK	Hotspot	100%	0	20300/1745	23.50	22.13	0.558	0.045	1.37	0.765	/	
Right Edge			10	QPSK	Hotspot	50%	25	20050/1720	23.50	22.21	0.390	-0.058	1.35	0.525	/	
			10	QPSK	Hotspot	1	50	20050/1720	24.00	22.68	0.038	-0.074	1.36	0.051	/	
Top Edge		10	QPSK	Hotspot	50%	25	20050/1720	23.50	22.21	0.034	0.170	1.35	0.046	/		
		10	QPSK	Hotspot	1	50	20050/1720	24.00	22.68	0.205	0.052	1.36	0.278	/		
Bottom Edge		10	QPSK	Hotspot	50%	25	20050/1720	23.50	22.21	0.180	0.021	1.35	0.242	/		
		10	QPSK	Hotspot	1	50	20050/1720	24.00	22.68	0.000	0.000	1.36	0.000	/		
DIV (ANT1)		Back Side	10	QPSK	Hotspot	1	50	20050/1720	23.50	22.21	0.000	0.000	1.35	0.000	/	
			10	QPSK	Hotspot	50%	25	20050/1720	22.50	22.04	0.018	-0.030	1.11	0.020	/	
		Front Side	10	QPSK	Hotspot	1	50	20300/1745	23.50	23.06	0.017	0.021	1.11	0.019	/	
			10	QPSK	Hotspot	50%	25	20050/1720	22.50	22.04	0.000	0.000	1.11	0.000	/	
	Left Edge	10	QPSK	Hotspot	1	50	20300/1745	23.50	23.06	0.005	-0.085	1.11	0.006	/		
		10	QPSK	Hotspot	50%	25	20050/1720	22.50	22.04	0.004	0.160	1.11	0.004	/		
	Right Edge	10	QPSK	Hotspot	1	50	20300/1745	23.50	23.06	0.003	-0.059	1.11	0.003	/		
		10	QPSK	Hotspot	50%	25	20050/1720	22.50	22.04	0.004	0.011	1.11	0.004	/		
	10	QPSK	Hotspot	1	50	20300/1745	23.50	23.06	0.000	0.000	1.11	0.000	/			



	Bottom Edge	10	QPSK	Hotspot	50%	25	20050/1720	22.50	22.04	0.000	0.000	1.11	0.000	/		
		10	QPSK	Hotspot	1	50	20300/1745	23.50	23.06	0.045	-0.010	1.11	0.050	/		
		10	QPSK	Hotspot	50%	25	20050/1720	22.50	22.04	0.025	0.000	1.11	0.028	/		
Main (ANT2)	Left Edge (Battery 2)	10	QPSK	Hotspot	1	50	20050/1720	24.00	22.68	0.602	0.035	1.36	0.816	/		
LTE 5	Main (ANT0)	Back Side	10	QPSK	Hotspot	1	0	20525/836.5	25.00	24.20	0.262	-0.016	1.20	0.315	57	
			10	QPSK	Hotspot	50%	13	20600/844	24.00	22.95	0.218	-0.037	1.27	0.278	/	
		Front Side	10	QPSK	Hotspot	1	0	20525/836.5	25.00	24.20	0.196	0.022	1.20	0.236	/	
			10	QPSK	Hotspot	50%	13	20600/844	24.00	22.95	0.163	0.150	1.27	0.208	/	
		Left Edge	10	QPSK	Hotspot	1	0	20525/836.5	25.00	24.20	0.128	-0.011	1.20	0.154	/	
			10	QPSK	Hotspot	50%	13	20600/844	24.00	22.95	0.082	-0.120	1.27	0.104	/	
		Right Edge	10	QPSK	Hotspot	1	0	20525/836.5	25.00	24.20	0.116	-0.096	1.20	0.139	/	
			10	QPSK	Hotspot	50%	13	20600/844	24.00	22.95	0.086	-0.130	1.27	0.110	/	
		Top Edge	10	QPSK	Hotspot	1	0	20525/836.5	25.00	24.20	0.011	0.044	1.20	0.013	/	
			10	QPSK	Hotspot	50%	13	20600/844	24.00	22.95	0.009	-0.028	1.27	0.011	/	
	Bottom Edge	10	QPSK	Hotspot	1	0	20525/836.5	25.00	24.20	0.123	0.088	1.20	0.148	/		
		10	QPSK	Hotspot	50%	13	20600/844	24.00	22.95	0.105	0.063	1.27	0.134	/		
	DIV (ANT3)	Back Side	10	QPSK	Hotspot	1	49	20450/829	25.00	23.32	0.201	-0.052	1.47	0.296	/	
			10	QPSK	Hotspot	50%	25	20450/829	24.00	22.20	0.149	0.014	1.51	0.226	/	
		Front Side	10	QPSK	Hotspot	1	49	20450/829	25.00	23.32	0.092	-0.160	1.47	0.136	/	
			10	QPSK	Hotspot	50%	25	20450/829	24.00	22.20	0.065	0.022	1.51	0.098	/	
		Left Edge	10	QPSK	Hotspot	1	49	20450/829	25.00	23.32	0.082	-0.150	1.47	0.121	/	
			10	QPSK	Hotspot	50%	25	20450/829	24.00	22.20	0.060	0.110	1.51	0.091	/	
		Right Edge	10	QPSK	Hotspot	1	49	20450/829	25.00	23.32	0.025	-0.150	1.47	0.037	/	
			10	QPSK	Hotspot	50%	25	20450/829	24.00	22.20	0.019	0.056	1.51	0.029	/	
		Top Edge	10	QPSK	Hotspot	1	49	20450/829	25.00	23.32	0.200	0.022	1.47	0.294	/	
			10	QPSK	Hotspot	50%	25	20450/829	24.00	22.20	0.143	-0.096	1.51	0.216	/	
	Bottom Edge	10	QPSK	Hotspot	1	49	20450/829	25.00	23.32	0.012	0.065	1.47	0.018	/		
		10	QPSK	Hotspot	50%	25	20450/829	24.00	22.20	0.009	-0.025	1.51	0.014	/		
	Main (ANT0)	Back Side (Battery 2)	10	QPSK	Hotspot	1	0	20525/836.5	25.00	24.20	0.258	0.068	1.20	0.310	/	
	LTE 7	Main (ANT2)	Back Side	10	QPSK	Hotspot	1	50	21350/2560	21.50	21.00	0.432	0.021	1.12	0.485	/
				10	QPSK	Hotspot	50%	25	21350/2560	21.50	20.90	0.407	-0.014	1.15	0.467	/
			Front Side	10	QPSK	Hotspot	1	50	21350/2560	21.50	21.00	0.200	0.055	1.12	0.224	/
				10	QPSK	Hotspot	50%	25	21350/2560	21.50	20.90	0.200	0.082	1.15	0.230	/
			Left Edge	10	QPSK	Hotspot	1	50	21350/2560	21.50	21.00	0.475	0.021	1.12	0.533	/
10				QPSK	Hotspot	50%	25	21350/2560	21.50	20.90	0.516	0.085	1.15	0.592	/	
Right Edge			10	QPSK	Hotspot	1	50	21350/2560	21.50	21.00	0.035	0.180	1.12	0.039	/	
			10	QPSK	Hotspot	50%	25	21350/2560	21.50	20.90	0.037	-0.110	1.15	0.042	/	
Top Edge			10	QPSK	Hotspot	1	50	21350/2560	21.50	21.00	0.139	0.170	1.12	0.156	/	
			10	QPSK	Hotspot	50%	25	21350/2560	21.50	20.90	0.153	0.027	1.15	0.176	/	
Bottom Edge			10	QPSK	Hotspot	1	50	21350/2560	21.50	21.00	0.000	0.000	1.12	0.000	/	
			10	QPSK	Hotspot	50%	25	21350/2560	21.50	20.90	0.000	0.000	1.15	0.000	/	



LTE 13	DIV (ANT1)	Back Side	10	QPSK	Hotspot	1	50	21350/2560	20.50	19.72	0.475	-0.058	1.20	0.568	/
			10	QPSK	Hotspot	50%	25	20850/2510	20.50	19.60	0.306	0.025	1.23	0.376	/
		Front Side	10	QPSK	Hotspot	1	50	21350/2560	20.50	19.72	0.232	0.022	1.20	0.278	/
			10	QPSK	Hotspot	50%	25	20850/2510	20.50	19.60	0.220	-0.160	1.23	0.271	/
		Left Edge	10	QPSK	Hotspot	1	50	21350/2560	20.50	19.72	0.023	0.000	1.20	0.028	/
			10	QPSK	Hotspot	50%	25	20850/2510	20.50	19.60	0.030	0.022	1.23	0.037	/
		Right Edge	10	QPSK	Hotspot	1	50	21350/2560	20.50	19.72	0.043	-0.110	1.20	0.051	/
			10	QPSK	Hotspot	50%	25	20850/2510	20.50	19.60	0.031	-0.032	1.23	0.038	/
		Top Edge	10	QPSK	Hotspot	1	50	21350/2560	20.50	19.72	0.002	0.020	1.20	0.002	/
			10	QPSK	Hotspot	50%	25	20850/2510	20.50	19.60	0.003	0.025	1.23	0.004	/
		Bottom Edge	10	QPSK	Hotspot	1	50	21350/2560	20.50	19.72	0.664	0.091	1.20	0.795	58
			10	QPSK	Hotspot	1	50	21100/2535	20.50	19.90	0.649	0.097	1.15	0.745	/
			10	QPSK	Hotspot	1	50	20850/2510	20.50	19.69	0.592	0.076	1.21	0.714	/
			10	QPSK	Hotspot	100%	0	21100/2535	20.50	19.56	0.466	0.025	1.24	0.578	/
	DIV (ANT1)	Bottom Edge (Battery 2)	10	QPSK	Hotspot	1	50	21350/2560	20.50	20.15	0.654	0.025	1.08	0.709	/
			10	QPSK	Hotspot	1	50	21350/2560	20.50	20.15	0.650	0.065	1.08	0.705	/
	Main (ANT0)	Back Side	10	QPSK	Hotspot	1	25	23230/782	25.00	24.30	0.274	-0.065	1.17	0.322	59
			10	QPSK	Hotspot	50%	25	23230/782	24.00	23.46	0.219	0.018	1.13	0.248	/
		Front Side	10	QPSK	Hotspot	1	25	23230/782	25.00	24.30	0.172	-0.086	1.17	0.202	/
			10	QPSK	Hotspot	50%	25	23230/782	24.00	23.46	0.137	-0.065	1.13	0.155	/
Left Edge		10	QPSK	Hotspot	1	25	23230/782	25.00	24.30	0.153	0.085	1.17	0.180	/	
		10	QPSK	Hotspot	50%	25	23230/782	24.00	23.46	0.121	-0.074	1.13	0.137	/	
Right Edge		10	QPSK	Hotspot	1	25	23230/782	25.00	24.30	0.128	-0.022	1.17	0.150	/	
		10	QPSK	Hotspot	50%	25	23230/782	24.00	23.46	0.096	0.056	1.13	0.109	/	
Top Edge		10	QPSK	Hotspot	1	25	23230/782	25.00	24.30	0.009	0.028	1.17	0.011	/	
		10	QPSK	Hotspot	50%	25	23230/782	24.00	23.46	0.007	-0.074	1.13	0.008	/	
Bottom Edge		10	QPSK	Hotspot	1	25	23230/782	25.00	24.30	0.083	0.067	1.17	0.098	/	
		10	QPSK	Hotspot	50%	25	23230/782	24.00	23.46	0.068	0.190	1.13	0.077	/	
DIV (ANT3)		Back Side	10	QPSK	Hotspot	1	25	23230/782	25.00	23.26	0.184	-0.055	1.49	0.275	/
			10	QPSK	Hotspot	50%	25	23230/782	24.00	22.37	0.137	0.022	1.46	0.199	/
		Front Side	10	QPSK	Hotspot	1	25	23230/782	25.00	23.26	0.096	0.150	1.49	0.143	/
			10	QPSK	Hotspot	50%	25	23230/782	24.00	22.37	0.081	0.052	1.46	0.118	/
		Left Edge	10	QPSK	Hotspot	1	25	23230/782	25.00	23.26	0.107	0.190	1.49	0.160	/
			10	QPSK	Hotspot	50%	25	23230/782	24.00	22.37	0.078	0.100	1.46	0.114	/
	Right Edge	10	QPSK	Hotspot	1	25	23230/782	25.00	23.26	0.033	0.055	1.49	0.049	/	
		10	QPSK	Hotspot	50%	25	23230/782	24.00	22.37	0.025	0.049	1.46	0.036	/	
	Top Edge	10	QPSK	Hotspot	1	25	23230/782	25.00	23.26	0.231	0.056	1.49	0.345	/	
		10	QPSK	Hotspot	50%	25	23230/782	24.00	22.37	0.169	0.025	1.46	0.246	/	
Bottom Edge	10	QPSK	Hotspot	1	25	23230/782	25.00	23.26	0.007	-0.058	1.49	0.010	/		
	10	QPSK	Hotspot	50%	25	23230/782	24.00	22.37	0.005	-0.036	1.46	0.007	/		



	DIV (ANT3)	Top Edge (Battery 2)	10	QPSK	Hotspot	1	25	23230/782	25.00	23.26	0.228	0.075	1.49	0.340	/	
LTE 26	Main (ANT0)	Back Side	10	QPSK	Hotspot	1	74	26865/831.5	25.00	24.29	0.291	0.022	1.18	0.343	/	
			10	QPSK	Hotspot	50%	0	26965/841.5	24.00	23.37	0.239	0.011	1.16	0.276	/	
		Front Side	10	QPSK	Hotspot	1	74	26865/831.5	25.00	24.29	0.218	0.077	1.18	0.257	/	
			10	QPSK	Hotspot	50%	0	26965/841.5	24.00	23.37	0.177	0.018	1.16	0.205	/	
		Left Edge	10	QPSK	Hotspot	1	74	26865/831.5	25.00	24.29	0.128	0.065	1.18	0.151	/	
			10	QPSK	Hotspot	50%	0	26965/841.5	24.00	23.37	0.102	0.012	1.16	0.118	/	
		Right Edge	10	QPSK	Hotspot	1	74	26865/831.5	25.00	24.29	0.095	-0.055	1.18	0.112	/	
			10	QPSK	Hotspot	50%	0	26965/841.5	24.00	23.37	0.093	-0.110	1.16	0.108	/	
		Top Edge	10	QPSK	Hotspot	1	74	26865/831.5	25.00	24.29	0.014	-0.059	1.18	0.016	/	
			10	QPSK	Hotspot	50%	0	26965/841.5	24.00	23.37	0.011	0.045	1.16	0.013	/	
	Bottom Edge	10	QPSK	Hotspot	1	74	26865/831.5	25.00	24.29	0.138	-0.066	1.18	0.163	/		
		10	QPSK	Hotspot	50%	0	26965/841.5	24.00	23.37	0.111	0.044	1.16	0.128	/		
	DIV (ANT3)	Back Side	10	QPSK	Hotspot	1	0	26965/841.5	25.00	23.56	0.214	-0.096	1.39	0.298	/	
			10	QPSK	Hotspot	50%	0	26765/821.5	24.00	22.57	0.109	0.022	1.39	0.152	/	
		Front Side	10	QPSK	Hotspot	1	0	26965/841.5	25.00	23.56	0.101	-0.150	1.39	0.141	/	
			10	QPSK	Hotspot	50%	0	26765/821.5	24.00	22.57	0.085	-0.140	1.39	0.118	/	
		Left Edge	10	QPSK	Hotspot	1	0	26965/841.5	25.00	23.56	0.086	0.030	1.39	0.120	/	
			10	QPSK	Hotspot	50%	0	26765/821.5	24.00	22.57	0.091	0.180	1.39	0.126	/	
		Right Edge	10	QPSK	Hotspot	1	0	26965/841.5	25.00	23.56	0.026	0.024	1.39	0.036	/	
			10	QPSK	Hotspot	50%	0	26765/821.5	24.00	22.57	0.021	-0.045	1.39	0.029	/	
		Top Edge	10	QPSK	Hotspot	1	0	26965/841.5	25.00	23.56	0.210	-0.032	1.39	0.293	/	
			10	QPSK	Hotspot	50%	0	26765/821.5	24.00	22.57	0.176	0.021	1.39	0.245	/	
	Bottom Edge	10	QPSK	Hotspot	1	0	26965/841.5	25.00	23.56	0.013	-0.025	1.39	0.018	/		
		10	QPSK	Hotspot	50%	0	26765/821.5	24.00	22.57	0.007	0.012	1.39	0.010	/		
	Main (ANT0)	Back Side (Battery 2)	10	QPSK	Hotspot	1	74	26865/831.5	25.00	24.29	0.306	0.088	1.18	0.360	60	
	LTE 38	Main (ANT2)	Back Side	10	QPSK	Hotspot	1	50	37850/2580	24.00	23.42	0.434	0.100	1.14	0.496	/
				10	QPSK	Hotspot	50%	25	38000/2595	23.50	22.95	0.337	0.012	1.14	0.382	/
			Front Side	10	QPSK	Hotspot	1	50	37850/2580	24.00	23.42	0.304	0.060	1.14	0.347	/
10				QPSK	Hotspot	50%	25	38000/2595	23.50	22.95	0.204	0.070	1.14	0.232	/	
Left Edge			10	QPSK	Hotspot	1	50	37850/2580	24.00	23.42	0.526	-0.020	1.14	0.601	/	
			10	QPSK	Hotspot	50%	25	38000/2595	23.50	22.95	0.473	0.012	1.14	0.537	/	
Right Edge			10	QPSK	Hotspot	1	50	37850/2580	24.00	23.42	0.000	0.044	1.14	0.000	/	
			10	QPSK	Hotspot	50%	25	38000/2595	23.50	22.95	0.000	-0.010	1.14	0.000	/	
Top Edge			10	QPSK	Hotspot	1	50	37850/2580	24.00	23.42	0.157	0.079	1.14	0.179	/	
			10	QPSK	Hotspot	50%	25	38000/2595	23.50	22.95	0.063	0.053	1.14	0.072	/	
Bottom Edge		10	QPSK	Hotspot	1	50	37850/2580	24.00	23.42	0.000	0.080	1.14	0.000	/		
		10	QPSK	Hotspot	50%	25	38000/2595	23.50	22.95	0.000	0.000	1.14	0.000	/		
DIV (ANT1)		Back Side	10	QPSK	Hotspot	1	50	38150/2610	21.50	20.78	0.432	0.000	1.18	0.510	/	
			10	QPSK	Hotspot	50%	25	38150/2610	21.50	20.74	0.403	0.015	1.19	0.480	/	
	Front Side	10	QPSK	Hotspot	1	50	38150/2610	21.50	20.78	0.232	0.012	1.18	0.274	/		



			10	QPSK	Hotspot	50%	25	38150/2610	21.50	20.74	0.238	0.010	1.19	0.284	/		
		Left Edge	10	QPSK	Hotspot	1	50	38150/2610	21.50	20.78	0.048	-0.023	1.18	0.056	/		
			10	QPSK	Hotspot	50%	25	38150/2610	21.50	20.74	0.046	0.021	1.19	0.055	/		
		Right Edge	10	QPSK	Hotspot	1	50	38150/2610	21.50	20.78	0.019	0.023	1.18	0.022	/		
			10	QPSK	Hotspot	50%	25	38150/2610	21.50	20.74	0.019	0.009	1.19	0.022	/		
		Top Edge	10	QPSK	Hotspot	1	50	38150/2610	21.50	20.78	0.003	0.010	1.18	0.004	/		
			10	QPSK	Hotspot	50%	25	38150/2610	21.50	20.74	0.003	0.002	1.19	0.004	/		
		Bottom Edge	10	QPSK	Hotspot	1	50	38150/2610	21.50	20.78	0.717	0.021	1.18	0.846	61		
			10	QPSK	Hotspot	1	0	37850/2580	21.50	20.56	0.590	0.011	1.24	0.733	/		
			10	QPSK	Hotspot	1	50	38000/2595	21.50	20.58	0.656	0.010	1.24	0.811	/		
			10	QPSK	Hotspot	100%	0	38000/2595	21.50	20.57	0.586	0.025	1.24	0.726	/		
			10	QPSK	Hotspot	50%	25	38150/2610	21.50	20.74	0.707	-0.020	1.19	0.842	/		
			10	QPSK	Hotspot	50%	0	37850/2580	21.50	20.53	0.623	0.011	1.25	0.779	/		
				10	QPSK	Hotspot	50%	0	38000/2595	21.50	20.50	0.658	0.010	1.26	0.828	/	
		DIV (ANT1)	Bottom Edge (Battery 2)	10	QPSK	Hotspot	1	50	38150/2610	21.50	20.78	0.705	0.015	1.18	0.832	/	
		LTE 66	Main (ANT2)	Back Side	10	QPSK	Hotspot	1	99	132322/1745	24.50	23.46	0.445	-0.025	1.27	0.565	/
					10	QPSK	Hotspot	50%	25	132322/1745	23.50	22.35	0.355	0.130	1.30	0.463	/
Front Side	10			QPSK	Hotspot	1	99	132322/1745	24.50	23.46	0.215	0.062	1.27	0.273	/		
	10			QPSK	Hotspot	50%	25	132322/1745	23.50	22.35	0.162	0.045	1.30	0.211	/		
Left Edge	10			QPSK	Hotspot	1	99	132322/1745	24.50	23.46	0.627	0.085	1.27	0.797	62		
	10			QPSK	Hotspot	50%	25	132322/1745	23.50	22.35	0.474	-0.095	1.30	0.618	/		
Right Edge	10			QPSK	Hotspot	1	99	132322/1745	24.50	23.46	0.050	-0.150	1.27	0.064	/		
	10			QPSK	Hotspot	50%	25	132322/1745	23.50	22.35	0.043	-0.021	1.30	0.056	/		
Top Edge	10			QPSK	Hotspot	1	99	132322/1745	24.50	23.46	0.235	-0.044	1.27	0.299	/		
	10			QPSK	Hotspot	50%	25	132322/1745	23.50	22.35	0.186	-0.052	1.30	0.242	/		
Bottom Edge	10			QPSK	Hotspot	1	99	132322/1745	24.50	23.46	0.000	0.000	1.27	0.000	/		
	10			QPSK	Hotspot	50%	25	132322/1745	23.50	22.35	0.000	0.000	1.30	0.000	/		
DIV (ANT1)	Back Side		10	QPSK	Hotspot	1	99	132322/1745	23.50	23.00	0.036	-0.033	1.12	0.040	/		
			10	QPSK	Hotspot	50%	25	132322/1745	22.50	22.06	0.030	0.100	1.11	0.033	/		
	Front Side		10	QPSK	Hotspot	1	99	132322/1745	23.50	23.00	0.018	-0.022	1.12	0.020	/		
			10	QPSK	Hotspot	50%	25	132322/1745	22.50	22.06	0.013	0.160	1.11	0.014	/		
	Left Edge		10	QPSK	Hotspot	1	99	132322/1745	23.50	23.00	0.006	0.020	1.12	0.007	/		
			10	QPSK	Hotspot	50%	25	132322/1745	22.50	22.06	0.005	0.005	1.11	0.006	/		
	Right Edge		10	QPSK	Hotspot	1	99	132322/1745	23.50	23.00	0.006	-0.140	1.12	0.007	/		
			10	QPSK	Hotspot	50%	25	132322/1745	22.50	22.06	0.006	0.021	1.11	0.007	/		
	Top Edge		10	QPSK	Hotspot	1	99	132322/1745	23.50	23.00	0.002	0.050	1.12	0.002	/		
			10	QPSK	Hotspot	50%	25	132322/1745	22.50	22.06	0.001	0.025	1.11	0.001	/		
	Bottom Edge		10	QPSK	Hotspot	1	99	132322/1745	23.50	23.00	0.053	0.021	1.12	0.059	/		
			10	QPSK	Hotspot	50%	25	132322/1745	22.50	22.06	0.037	-0.025	1.11	0.041	/		
Main (ANT2)	Left Edge (Battery 2)	10	QPSK	Hotspot	1	99	132322/1745	24.50	23.46	0.611	0.037	1.27	0.776	/			



Band	Antenna	Test Position	Dist. (mm)	Mode	Duty Cycle	Power Reduction	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Power Drift (dB)	Scaling Factor	Report SAR1g (W/kg)	Plot No.	
2.4G	Wi-Fi	Back Side	10	802.11b	98.0%	Receiver off	6/2437	18.00	16.06	0.110	-0.050	1.60	0.175	/	
		Front Side	10	802.11b	98.0%	Receiver off	6/2437	18.00	16.06	0.091	0.060	1.60	0.145	/	
		Left Edge	10	802.11b	98.0%	Receiver off	6/2437	18.00	16.06	0.008	0.020	1.60	0.013	/	
		Right Edge	10	802.11b	98.0%	Receiver off	6/2437	18.00	16.06	0.229	0.040	1.60	0.365	/	
		Top Edge	10	802.11b	98.0%	Receiver off	6/2437	18.00	16.06	0.037	0.040	1.60	0.059	/	
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Back Side	10	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.230	0.070	1.61	0.370	/	
		Front Side	10	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.140	0.046	1.61	0.226	/	
		Left Edge	10	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.013	0.170	1.61	0.021	/	
		Right Edge	10	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.387	0.010	1.61	0.624	63	
		Top Edge	10	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.068	0.100	1.61	0.110	/	
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Right Edge (Battery 2)	10	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.365	0.065	1.61	0.589	/	
		Right Edge (SIM 2)	10	802.11g	98.0%	Receiver off	6/2437	19.00	17.01	0.372	0.045	1.61	0.600	/	
U-NII-1	Wi-Fi	Back Side	10	802.11a	98.0%	Receiver off	48/5240	19.00	17.33	0.127	0.040	1.50	0.190	/	
		Front Side	10	802.11a	98.0%	Receiver off	48/5240	19.00	17.33	0.025	0.099	1.50	0.037	/	
		Left Edge	10	802.11a	98.0%	Receiver off	48/5240	19.00	17.33	0.018	0.099	1.50	0.028	/	
		Right Edge	10	802.11a	98.0%	Receiver off	48/5240	19.00	17.33	0.055	0.021	1.50	0.082	/	
		Top Edge	10	802.11a	98.0%	Receiver off	48/5240	19.00	17.33	0.105	0.020	1.50	0.157	/	
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Back Side (Battery 2)	10	802.11a	98.0%	Receiver off	48/5240	19.00	17.33	0.138	0.180	1.50	0.207	/	
U-NII-2A	Wi-Fi	Back Side	10	802.11a	98.0%	Receiver off	60/5300	19.00	17.85	0.161	0.030	1.33	0.214	/	
		Front Side	10	802.11a	98.0%	Receiver off	60/5300	19.00	17.85	0.071	0.099	1.33	0.094	/	
		Left Edge	10	802.11a	98.0%	Receiver off	60/5300	19.00	17.85	0.036	0.068	1.33	0.048	/	
		Right Edge	10	802.11a	98.0%	Receiver off	60/5300	19.00	17.85	0.070	0.089	1.33	0.093	/	
		Top Edge	10	802.11a	98.0%	Receiver off	60/5300	19.00	17.85	0.180	0.072	1.33	0.239	/	
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Top Edge (Battery 2)	10	802.11a	98.0%	Receiver off	60/5300	19.00	17.85	0.168	0.056	1.33	0.223	/	
U-NII-2C	Wi-Fi	Back Side	10	802.11a	98.0%	Receiver off	132/5660	19.00	17.22	0.218	-0.020	1.54	0.335	/	
		Front Side	10	802.11a	98.0%	Receiver off	132/5660	19.00	17.22	0.108	0.014	1.54	0.166	/	
		Left Edge	10	802.11a	98.0%	Receiver off	132/5660	19.00	17.22	0.070	0.080	1.54	0.108	/	
		Right Edge	10	802.11a	98.0%	Receiver off	132/5660	19.00	17.22	0.116	-0.100	1.54	0.178	/	
		Top Edge	10	802.11a	98.0%	Receiver off	132/5660	19.00	17.22	0.347	0.000	1.54	0.533	/	
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Top Edge	10	802.11a	98.0%	Receiver off	132/5660	19.00	17.22	0.338	0.026	1.54	0.520	/	



		(Battery 2)												
U-NII-3	Wi-Fi	Back Side	10	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.210	0.040	1.42	0.299	/
		Front Side	10	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.141	0.029	1.42	0.201	/
		Left Edge	10	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.076	-0.037	1.42	0.108	/
		Right Edge	10	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.137	0.069	1.42	0.195	/
		Top Edge	10	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.367	0.032	1.42	0.523	64
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Top Edge (Battery 2)	10	802.11a	98.0%	Receiver off	165/5825	19.00	17.55	0.354	0.025	1.42	0.504	/
Bluetooth	BT	Back Side	10	DH5	77.0%	/	39/2441	12.00	10.80	0.022	0.032	1.71	0.038	/
		Front Side	10	DH5	77.0%	/	39/2441	12.00	10.80	0.025	0.032	1.71	0.043	65
		Left Edge	10	DH5	77.0%	/	39/2441	12.00	10.80	0.000	0.000	1.71	0.000	/
		Right Edge	10	DH5	77.0%	/	39/2441	12.00	10.80	0.024	0.085	1.71	0.041	/
		Top Edge	10	DH5	77.0%	/	39/2441	12.00	10.80	0.009	0.035	1.71	0.015	/
		Bottom Edge	10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	/
		Front Side (Battery 2)	10	DH5	77.0%	/	39/2441	12.00	10.80	0.018	0.025	1.71	0.031	/



Product-specific 10g SAR Evaluation

Band	Antenna	Test Position	Dist. (mm)	Mode	Power Reduction	RB	offset	Ch./Freq. (MHz)	Tune-up (dBm)	Measured power (dBm)	Measured SAR1g (W/kg)	Scaling Factor	Report SAR1g (W/kg)	SAR Evaluation
WCDMA IV	Main (ANT2)	Back Side	10	RMC	Body SAR	-	-	1413/1732.6	23.00	22.00	0.351	1.26	0.442	NO
		Front Side	10	RMC	Body SAR	-	-	1413/1732.6	23.00	22.00	0.227	1.26	0.286	NO
		Left Edge	10	RMC	Body SAR	-	-	1413/1732.6	23.00	22.00	0.542	1.26	0.682	NO
		Right Edge	10	RMC	Body SAR	-	-	1413/1732.6	23.00	22.00	0.057	1.26	0.072	NO
		Top Edge	10	RMC	Body SAR	-	-	1413/1732.6	23.00	22.00	0.195	1.26	0.245	NO
		Bottom Edge	10	RMC	Body SAR	-	-	1413/1732.6	23.00	22.00	0.041	1.26	0.052	NO
LTE 2	Main (ANT2)	Back Side	10	QPSK	Body SAR	1	50	18900/1880	23.50	23.50	0.284	1.12	0.319	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.294	1.12	0.330	NO
		Front Side	10	QPSK	Body SAR	1	50	18900/1880	23.50	23.50	0.256	1.12	0.287	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.252	1.12	0.283	NO
		Left Edge	10	QPSK	Body SAR	1	50	18900/1880	23.50	23.50	0.524	1.12	0.588	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.532	1.12	0.597	NO
		Right Edge	10	QPSK	Body SAR	1	50	18900/1880	23.50	23.50	0.053	1.12	0.059	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.057	1.12	0.064	NO
		Top Edge	10	QPSK	Body SAR	1	50	18900/1880	23.50	23.50	0.196	1.12	0.220	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.218	1.12	0.245	NO
		Bottom Edge	10	QPSK	Body SAR	1	50	18900/1880	23.50	23.50	0.051	1.12	0.057	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.036	1.12	0.040	NO
	DIV (ANT1)	Back Side	10	QPSK	Body SAR	1	50	19100/1900	23.50	23.50	0.335	1.00	0.335	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.308	1.00	0.308	NO
		Front Side	10	QPSK	Body SAR	1	50	19100/1900	23.50	23.50	0.199	1.00	0.199	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.182	1.00	0.182	NO
		Left Edge	10	QPSK	Body SAR	1	50	19100/1900	23.50	23.50	0.065	1.00	0.065	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.059	1.00	0.059	NO
		Right Edge	10	QPSK	Body SAR	1	50	19100/1900	23.50	23.50	0.033	1.00	0.033	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.030	1.00	0.030	NO
		Top Edge	10	QPSK	Body SAR	1	50	19100/1900	23.50	23.50	0.000	1.00	0.000	NO
			10	QPSK	Body SAR	50%	25	19100/1900	23.50	23.50	0.000	1.00	0.000	NO
		Bottom Edge	10	QPSK	Body SAR	1	50	19100/1900	23.50	23.50	0.653	1.00	0.653	NO
			10	QPSK	Body SAR	1	50	18700/1860	23.50	23.50	0.574	1.00	0.574	NO
10	QPSK		Body SAR	1	0	18900/1880	23.50	23.50	0.569	1.00	0.569	NO		
10	QPSK		Body SAR	100%	0	19100/1900	23.50	23.50	0.558	1.00	0.558	NO		
10	QPSK		Body SAR	50%	25	19100/1900	23.50	23.50	0.540	1.00	0.540	NO		
LTE 4	Main (ANT2)	Back Side	10	QPSK	Body SAR	1	50	20050/1720	24.50	24.00	0.318	1.12	0.357	NO
			10	QPSK	Body SAR	50%	25	20050/1720	24.50	23.50	0.361	1.26	0.454	NO
		Front Side	10	QPSK	Body SAR	1	50	20050/1720	24.50	24.00	0.155	1.12	0.174	NO
			10	QPSK	Body SAR	50%	25	20050/1720	24.50	23.50	0.136	1.26	0.171	NO
		Left Edge	10	QPSK	Body SAR	1	50	20050/1720	24.50	24.00	0.614	1.12	0.689	NO
			10	QPSK	Body SAR	50%	25	20050/1720	24.50	23.50	0.390	1.26	0.491	NO



		Right Edge	10	QPSK	Body SAR	1	50	20050/1720	24.50	24.00	0.038	1.12	0.043	NO
			10	QPSK	Body SAR	50%	25	20050/1720	24.50	23.50	0.034	1.26	0.043	NO
		Top Edge	10	QPSK	Body SAR	1	50	20050/1720	24.50	24.00	0.205	1.12	0.230	NO
			10	QPSK	Body SAR	50%	25	20050/1720	24.50	23.50	0.180	1.26	0.227	NO
		Bottom Edge	10	QPSK	Body SAR	1	50	20050/1720	24.50	24.00	0.000	1.12	0.000	NO
			10	QPSK	Body SAR	50%	25	20050/1720	24.50	23.50	0.000	1.26	0.000	NO
LTE 7	Main (ANT2)	Back Side	10	QPSK	Body SAR	1	50	21350/2560	22.00	21.50	0.432	1.12	0.485	NO
			10	QPSK	Body SAR	50%	25	21350/2560	22.00	21.50	0.407	1.12	0.457	NO
		Front Side	10	QPSK	Body SAR	1	50	21350/2560	22.00	21.50	0.200	1.12	0.224	NO
			10	QPSK	Body SAR	50%	25	21350/2560	22.00	21.50	0.200	1.12	0.224	NO
		Left Edge	10	QPSK	Body SAR	1	50	21350/2560	22.00	21.50	0.475	1.12	0.533	NO
			10	QPSK	Body SAR	50%	25	21350/2560	22.00	21.50	0.516	1.12	0.579	NO
		Right Edge	10	QPSK	Body SAR	1	50	21350/2560	22.00	21.50	0.035	1.12	0.039	NO
			10	QPSK	Body SAR	50%	25	21350/2560	22.00	21.50	0.037	1.12	0.042	NO
		Top Edge	10	QPSK	Body SAR	1	50	21350/2560	22.00	21.50	0.139	1.12	0.156	NO
			10	QPSK	Body SAR	50%	25	21350/2560	22.00	21.50	0.153	1.12	0.172	NO
		Bottom Edge	10	QPSK	Body SAR	1	50	21350/2560	22.00	21.50	0.000	1.12	0.000	NO
			10	QPSK	Body SAR	50%	25	21350/2560	22.00	21.50	0.000	1.12	0.000	NO
LTE 38	DIV (ANT1)	Back Side	10	QPSK	Body SAR	1	50	38150/2610	23.50	21.50	0.432	1.58	0.685	NO
			10	QPSK	Body SAR	50%	25	38150/2610	23.50	21.50	0.403	1.58	0.639	NO
		Front Side	10	QPSK	Body SAR	1	50	38150/2610	23.50	21.50	0.232	1.58	0.368	NO
			10	QPSK	Body SAR	50%	25	38150/2610	23.50	21.50	0.238	1.58	0.378	NO
		Left Edge	10	QPSK	Body SAR	1	50	38150/2610	23.50	21.50	0.048	1.58	0.076	NO
			10	QPSK	Body SAR	50%	25	38150/2610	23.50	21.50	0.046	1.58	0.074	NO
		Right Edge	10	QPSK	Body SAR	1	50	38150/2610	23.50	21.50	0.019	1.58	0.029	NO
			10	QPSK	Body SAR	50%	25	38150/2610	23.50	21.50	0.019	1.58	0.029	NO
		Top Edge	10	QPSK	Body SAR	1	50	38150/2610	23.50	21.50	0.003	1.58	0.006	NO
			10	QPSK	Body SAR	50%	25	38150/2610	23.50	21.50	0.003	1.58	0.006	NO
		Bottom Edge	10	QPSK	Body SAR	1	50	38150/2610	23.50	21.50	0.717	1.58	1.136	NO
			10	QPSK	Body SAR	1	0	37850/2580	23.50	21.50	0.590	1.58	0.935	NO
10	QPSK		Body SAR	1	50	38000/2595	23.50	21.50	0.656	1.58	1.040	NO		
10	QPSK		Body SAR	50%	25	38150/2610	23.50	21.50	0.586	1.58	1.120	NO		
10	QPSK		Body SAR	50%	0	37850/2580	23.50	21.50	0.707	1.58	0.987	NO		
10	QPSK		Body SAR	50%	0	38000/2595	23.50	21.50	0.623	1.58	1.043	NO		

10.3 Simultaneous Transmission Analysis

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

General Note:

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



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

SAR _{1g} (W/kg)		GSM	GSM	WCDMA	WCDMA	WCDMA	LTE	LTE	LTE	LTE	LTE	LTE	LTE	LTE	MAX.
Test Position		850	1900	Band II	Band IV	Band V	2	4	5	7	13	26	38	66	SAR _{1g}
Head	Left Cheek	0.124	0.410	0.216	0.153	0.130	0.241	0.234	0.192	0.288	0.146	0.207	0.327	0.278	0.410
	Left Tilt	0.061	0.378	0.163	0.114	0.075	0.229	0.185	0.099	0.259	0.073	0.104	0.233	0.217	0.378
	Right Cheek	0.133	0.840	0.837	0.504	0.120	0.775	0.556	0.165	0.674	0.132	0.183	0.846	0.793	0.846
	Right Tilt	0.072	0.501	0.298	0.182	0.082	0.318	0.231	0.101	0.327	0.074	0.106	0.338	0.339	0.501
Body worn	Back Side	0.206	0.156	0.234	0.251	0.106	0.198	0.434	0.212	0.356	0.239	0.216	0.250	0.845	0.845
	Front Side	0.183	0.105	0.143	0.132	0.075	0.173	0.258	0.198	0.158	0.186	0.191	0.185	0.154	0.258
Hotspot	Back Side	0.317	0.489	0.522	0.428	0.273	0.385	0.486	0.315	0.485	0.322	0.360	0.496	0.565	0.565
	Front Side	0.312	0.173	0.292	0.277	0.208	0.338	0.210	0.236	0.230	0.202	0.257	0.347	0.273	0.347
	Left Edge	0.061	0.599	0.833	0.673	0.176	0.696	0.832	0.154	0.592	0.180	0.151	0.601	0.797	0.833
	Right Edge	0.180	0.034	0.034	0.069	0.095	0.075	0.051	0.139	0.042	0.150	0.112	0.000	0.064	0.180
	Top Edge	0.000	0.103	0.277	0.238	0.015	0.285	0.278	0.013	0.176	0.011	0.016	0.179	0.299	0.299
	Bottom Edge	0.148	0.026	0.045	0.050	0.163	0.067	0.000	0.148	0.000	0.098	0.163	0.000	0.000	0.163

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

SAR _{1g} (W/kg)		GSM	GSM	WCDMA	WCDMA	WCDMA	LTE	LTE	LTE	LTE	LTE	LTE	LTE	LTE	MAX.
Test Position		850	1900	Band II	Band IV	Band V	2	4	5	7	13	26	38	66	SAR _{1g}
Head	Left Cheek	0.230	0.011	0.023	0.002	0.476	0.045	0.003	0.474	0.031	0.493	0.471	0.024	0.003	0.493
	Left Tilt	0.114	0.006	0.012	0.000	0.360	0.017	0.002	0.527	0.020	0.530	0.378	0.017	0.000	0.530
	Right Cheek	0.220	0.010	0.019	0.005	0.524	0.020	0.002	0.596	0.020	0.536	0.492	0.017	0.002	0.596
	Right Tilt	0.140	0.007	0.019	0.002	0.557	0.003	0.002	0.751	0.034	0.620	0.846	0.022	0.000	0.846
Body worn	Back Side	0.000	0.176	0.247	0.018	0.221	0.274	0.128	0.216	0.323	0.218	0.231	0.469	0.015	0.469
	Front Side	0.000	0.060	0.102	0.007	0.092	0.139	0.116	0.093	0.154	0.100	0.095	0.174	0.005	0.174
Hotspot	Back Side	0.000	0.076	0.374	0.039	0.244	0.426	0.034	0.296	0.568	0.275	0.298	0.510	0.040	0.568
	Front Side	0.000	0.026	0.327	0.015	0.092	0.252	0.019	0.136	0.278	0.143	0.141	0.284	0.020	0.327
	Left Edge	0.000	0.006	0.075	0.003	0.081	0.082	0.006	0.121	0.037	0.160	0.126	0.056	0.007	0.160
	Right Edge	0.000	0.010	0.053	0.007	0.037	0.042	0.004	0.037	0.051	0.049	0.036	0.022	0.007	0.053
	Top Edge	0.000	0.001	0.005	0.003	0.264	0.000	0.000	0.294	0.004	0.345	0.293	0.004	0.002	0.345
	Bottom Edge	0.000	0.107	0.773	0.046	0.009	0.797	0.050	0.018	0.795	0.010	0.018	0.846	0.059	0.846

About BT/ Wi-Fi Antenna and Main Antenna/Div Antenna

SAR _{1g} (W/kg)		Main antenna	Div Antenna	Wi-Fi 2.4G	Wi-Fi 5G				Bluetooth	MAX. ΣSAR _{1g}
					U-NII-1	U-NII-2A	U-NII-2C	U-NII-3		
Test Position										
Head	Left Cheek	0.410	0.493	0.232	0.086	0.120	0.302	0.179	0.130	0.795
	Left Tilt	0.378	0.530	0.135	0.054	0.096	0.365	0.221	0.067	0.895
	Right Cheek	0.846	0.596	0.066	0.055	0.060	0.085	0.061	0.033	0.931
	Right Tilt	0.501	0.846	0.048	0.046	0.066	0.147	0.098	0.038	0.993
Body worn	Back Side	0.845	0.469	0.150	0.121	0.124	0.233	0.294	0.014	1.139
	Front Side	0.258	0.174	0.165	0.007	0.006	0.036	0.142	0.005	0.423
Hotspot	Back Side	0.565	0.568	0.370	0.207	0.214	0.335	0.299	0.038	0.938
	Front Side	0.347	0.327	0.226	0.037	0.094	0.166	0.201	0.043	0.573
	Left Edge	0.833	0.160	0.021	0.028	0.048	0.108	0.108	0.000	0.941
	Right Edge	0.180	0.053	0.624	0.082	0.093	0.178	0.195	0.041	0.804
	Top Edge	0.299	0.345	0.110	0.157	0.239	0.533	0.523	0.015	0.878
	Bottom Edge	0.163	0.846	N/A	N/A	N/A	N/A	N/A	N/A	0.846

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

MAX. ΣSAR_{1g} =1.139W/kg<1.6W/kg, so the Simultaneous transimition SAR with volum scan are not required for BT and Main-Antenna.

Conclusion:

According to the KDB 690783 D01 section 1) d) i), when the sum of 1-g SAR applies for simultaneous transmission SAR test exclusion, the highest sum of 1-g SAR according to the highest reported stand-alone SAR values is used, and the highest Reported SAR for simultaneous transmission exposure conditions is 1.139 W/kg



11 Measurement Uncertainty

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528- 2013 is not required in SAR reports submitted for equipment approval. This also applies to the 10-g SAR required for phablets in KDB Publication 648474.

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

ANNEX A: Test Layout

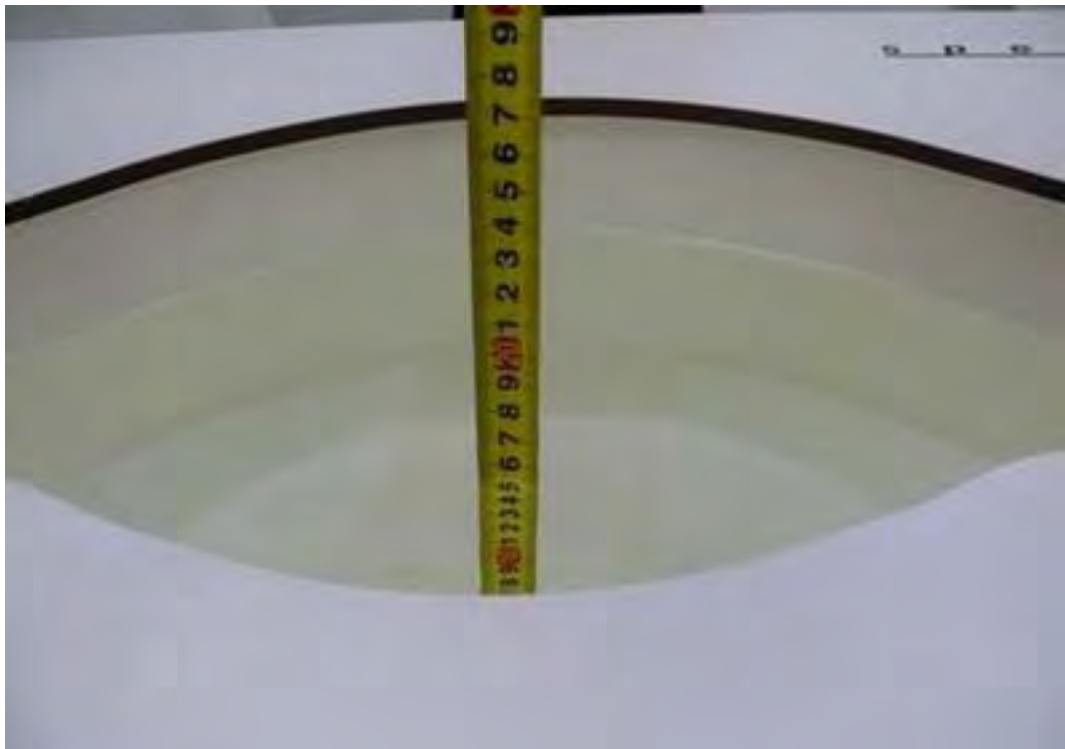


Tissue Simulating Liquids

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



Picture 3: liquid depth in the head Phantom



Picture 4: Liquid depth in the flat Phantom

ANNEX B: System Check Results

Plot 1 System Performance Check at 750 MHz TSL

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

Date: 2022/6/2

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

Medium parameters used: $f = 750$ MHz; $\sigma = 0.88$ S/m; $\epsilon_r = 42.3$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(9.64, 9.64, 9.64); Calibrated: 2021/8/12

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

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

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

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

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

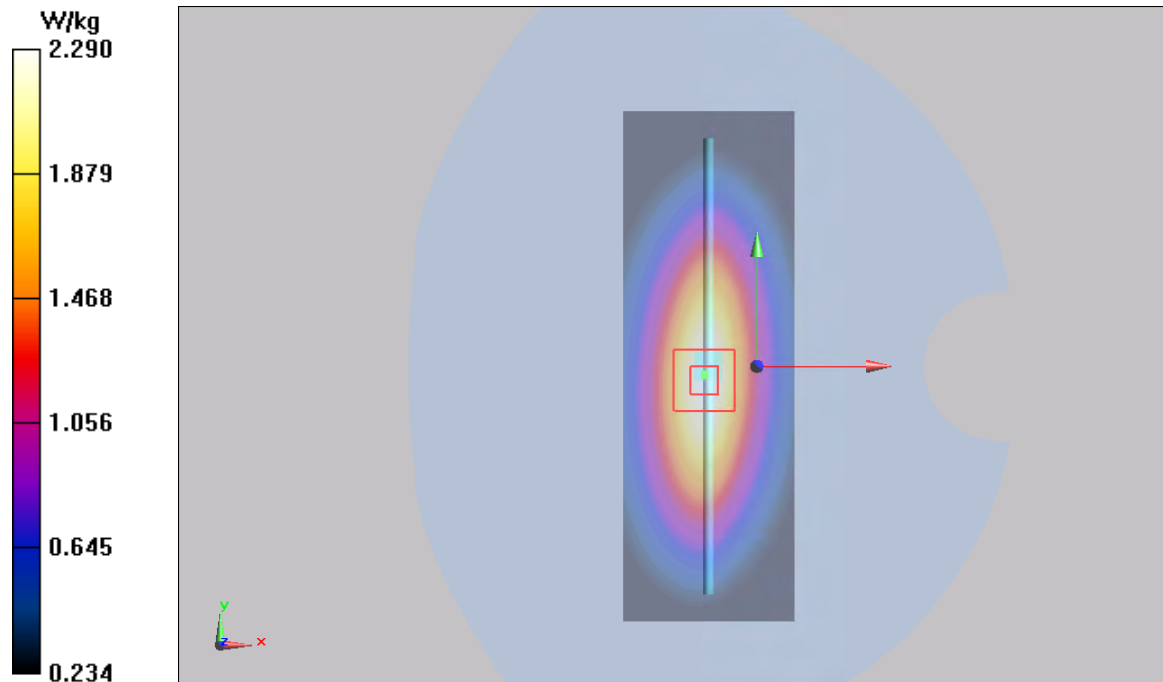
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 3.16 W/kg

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

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



Plot 2 System Performance Check at 835 MHz TSL

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

Date: 2022/5/30

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

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

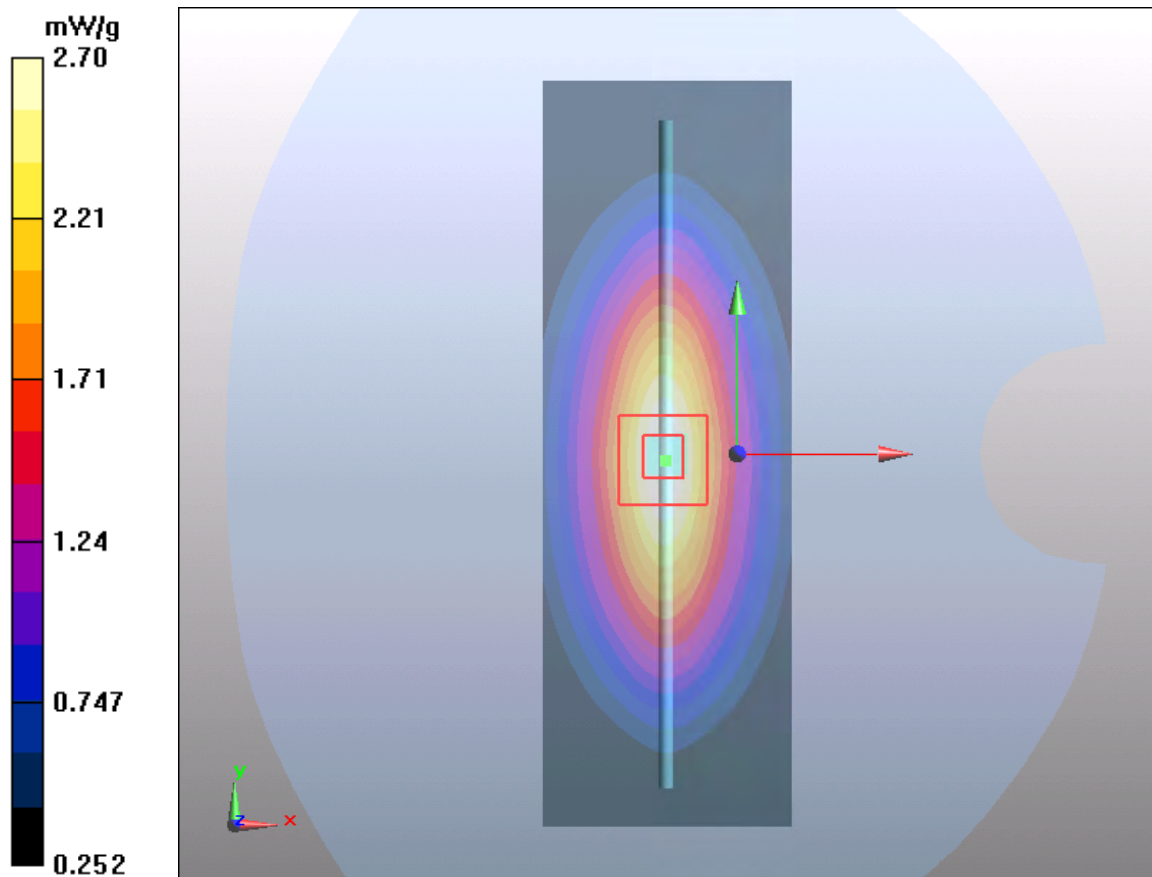
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 3.67 W/kg

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

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



Plot 3 System Performance Check at 835 MHz TSL

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

Date: 2022/5/31

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.92 \text{ S/m}$; $\epsilon_r = 41.4$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

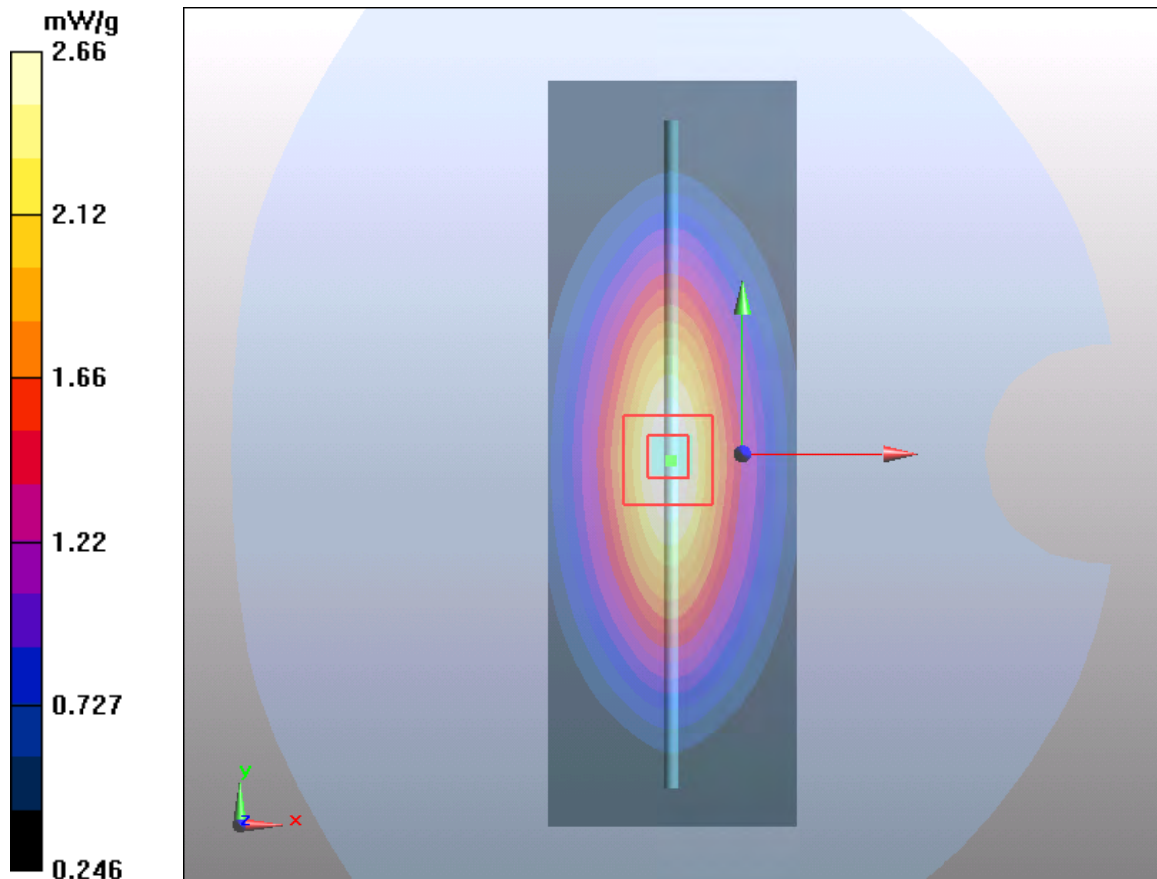
d=15mm, Pin=250mW/Zoom Scan(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 3.67 W/kg

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

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



Plot 4 System Performance Check at 835 MHz TSL

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

Date: 2022/6/1

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

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

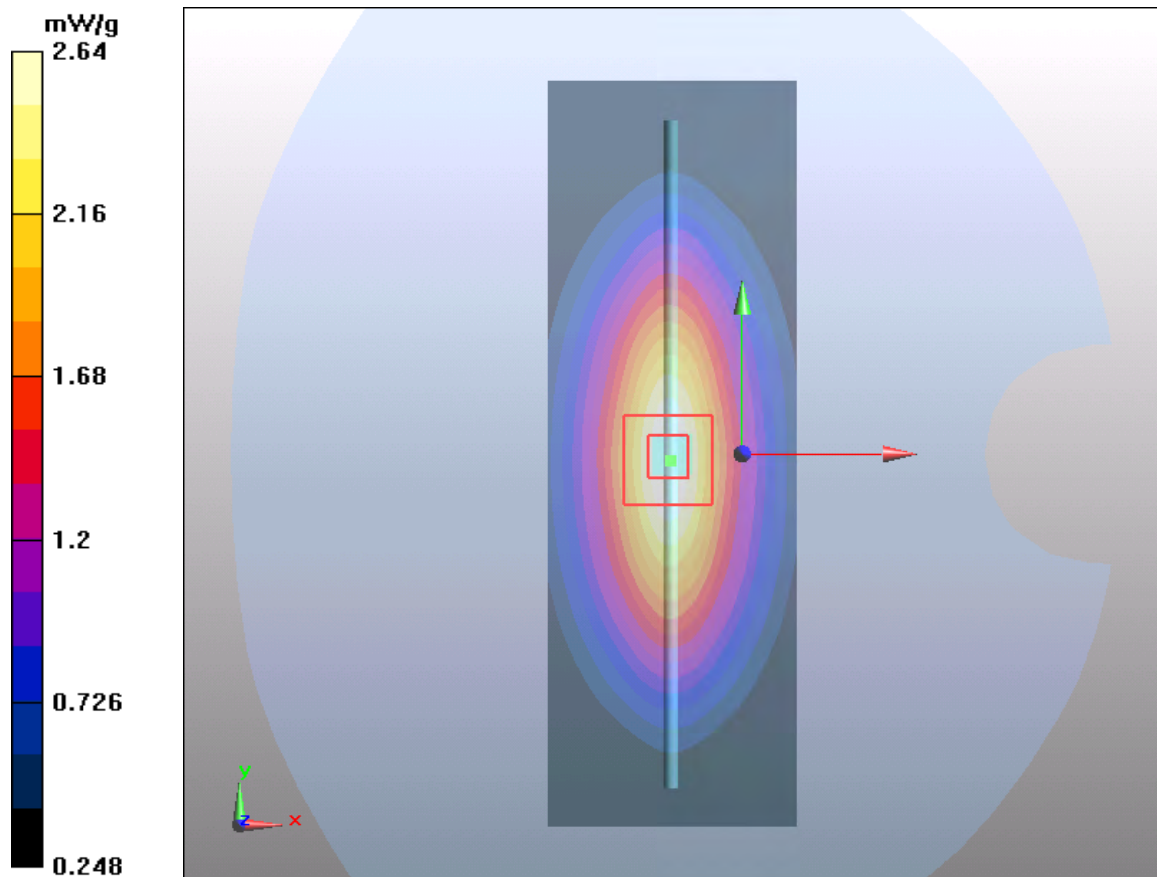
d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 3.67 W/kg

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

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



Plot 5 System Performance Check at 1750 MHz TSL

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

Date: 2022/6/9

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.34$ S/m; $\epsilon_r = 40.2$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); Calibrated: 2021/8/12

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

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

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

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

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

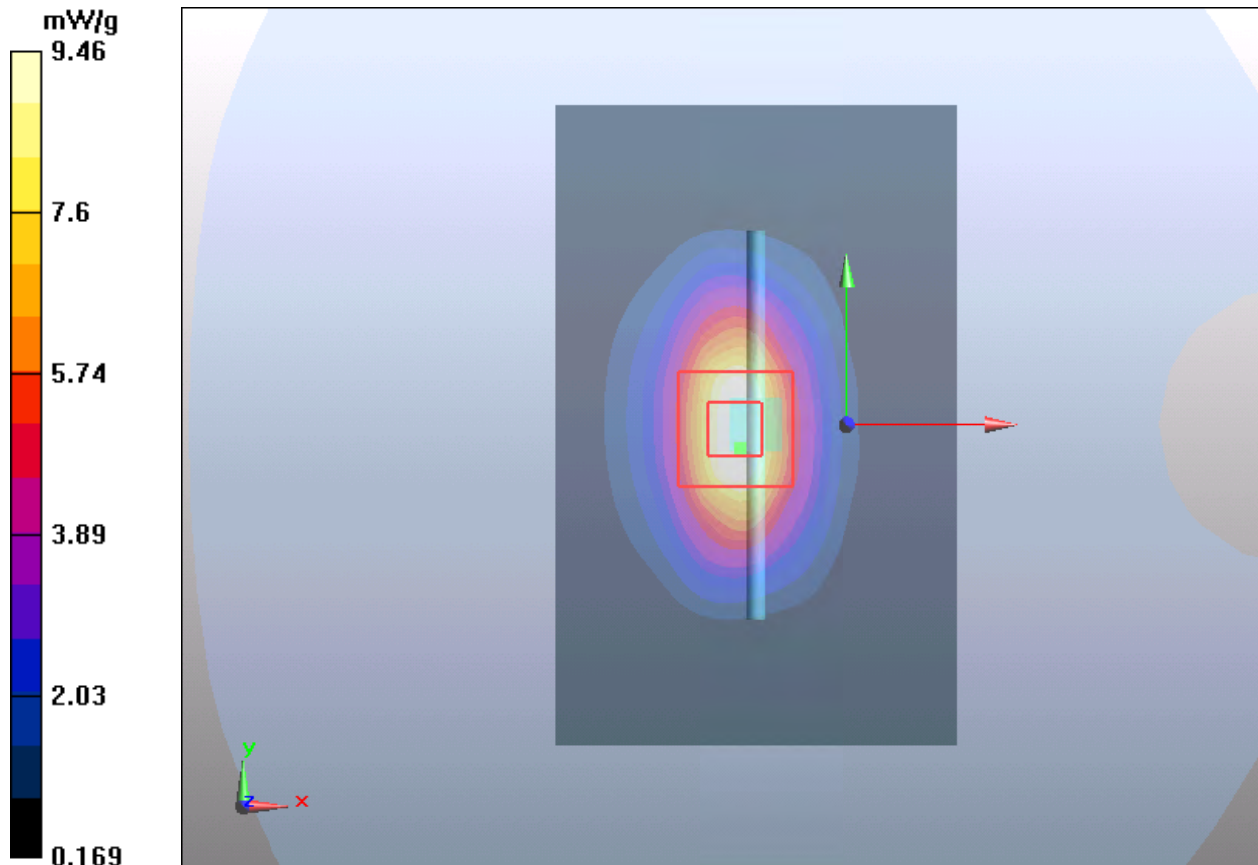
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 15.5 W/kg

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

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



Plot 6 System Performance Check at 1750 MHz TSL

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

Date: 2022/6/11

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

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.34$ S/m; $\epsilon_r = 40.1$; $\rho = 1000$ kg/m³

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); Calibrated: 2021/8/12

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

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

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

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

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

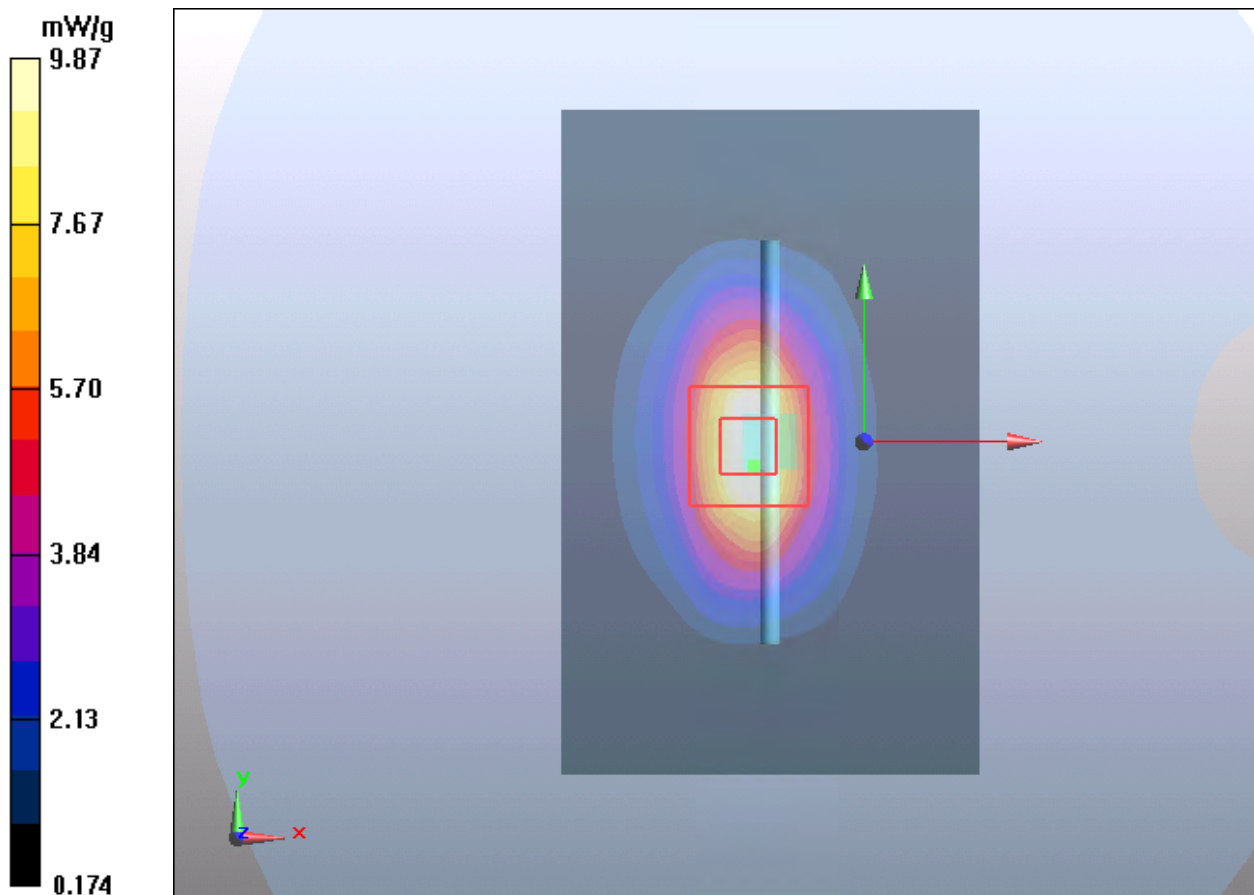
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 15.51 W/kg

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

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



Plot 7 System Performance Check at 1750 MHz TSL

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

Date: 2022/6/12

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

Medium parameters used: $f = 1750 \text{ MHz}$; $\sigma = 1.36 \text{ mho/m}$; $\epsilon_r = 40.2$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); Calibrated: 2021/8/12

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

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

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

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

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

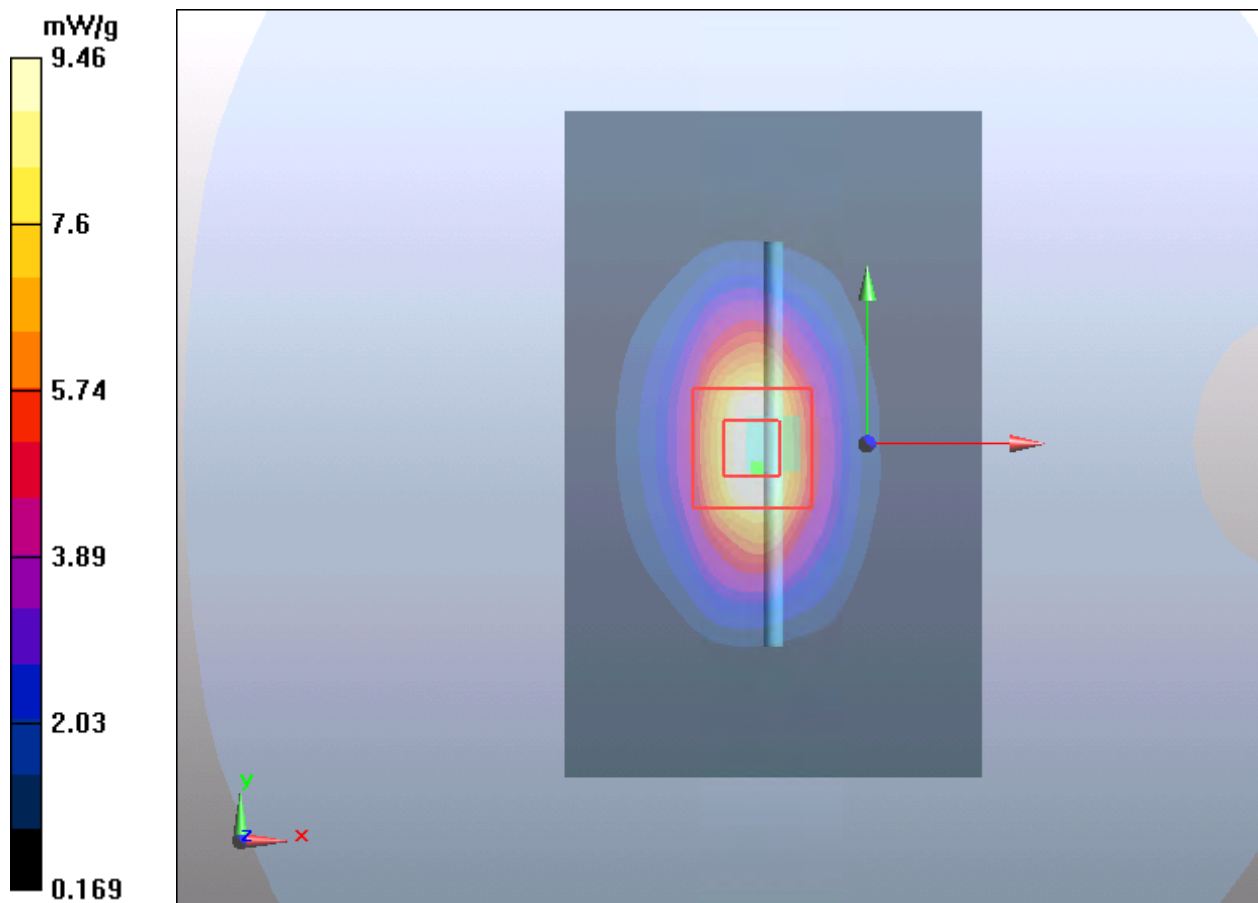
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

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 8 System Performance Check at 1900 MHz TSL

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

Date: 2022/5/26

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

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

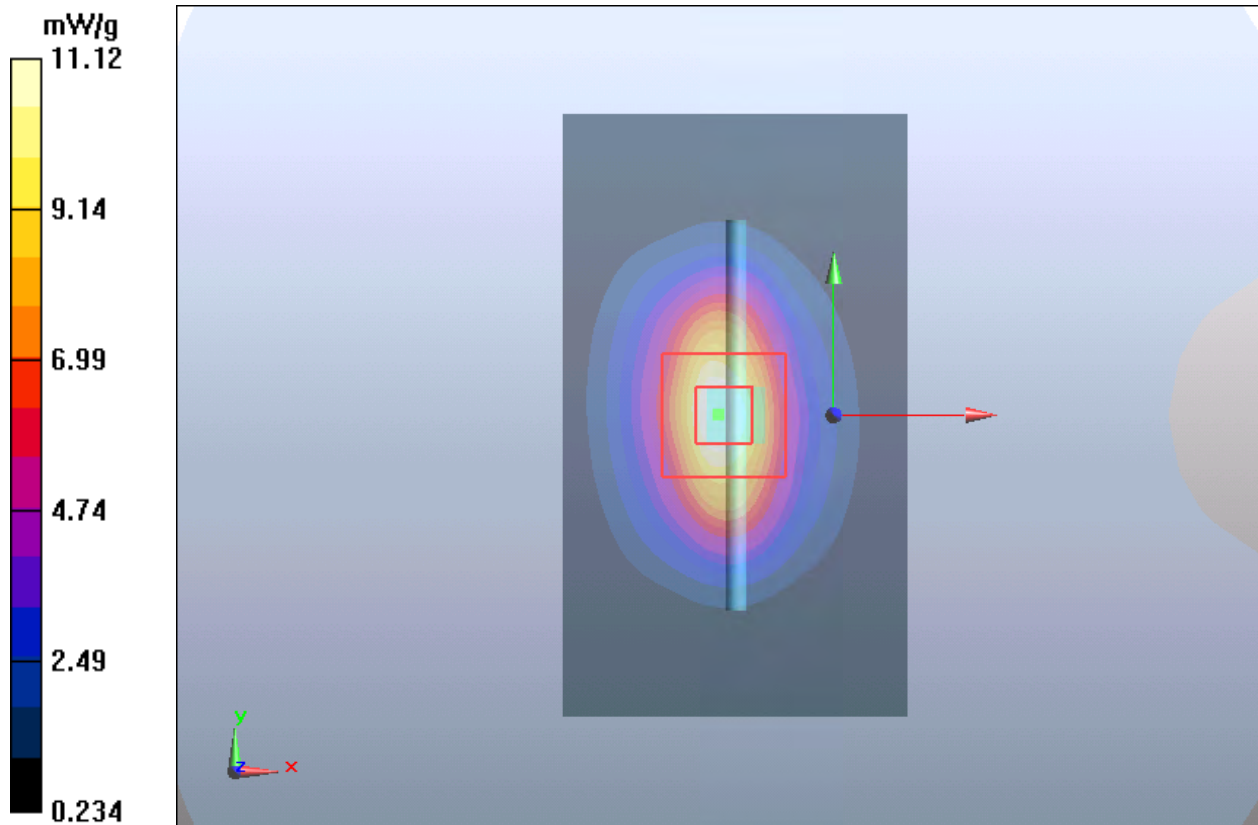
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 17.8 W/kg

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

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



Plot 9 System Performance Check at 1900 MHz

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

Date: 2022/5/27

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

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

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

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

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

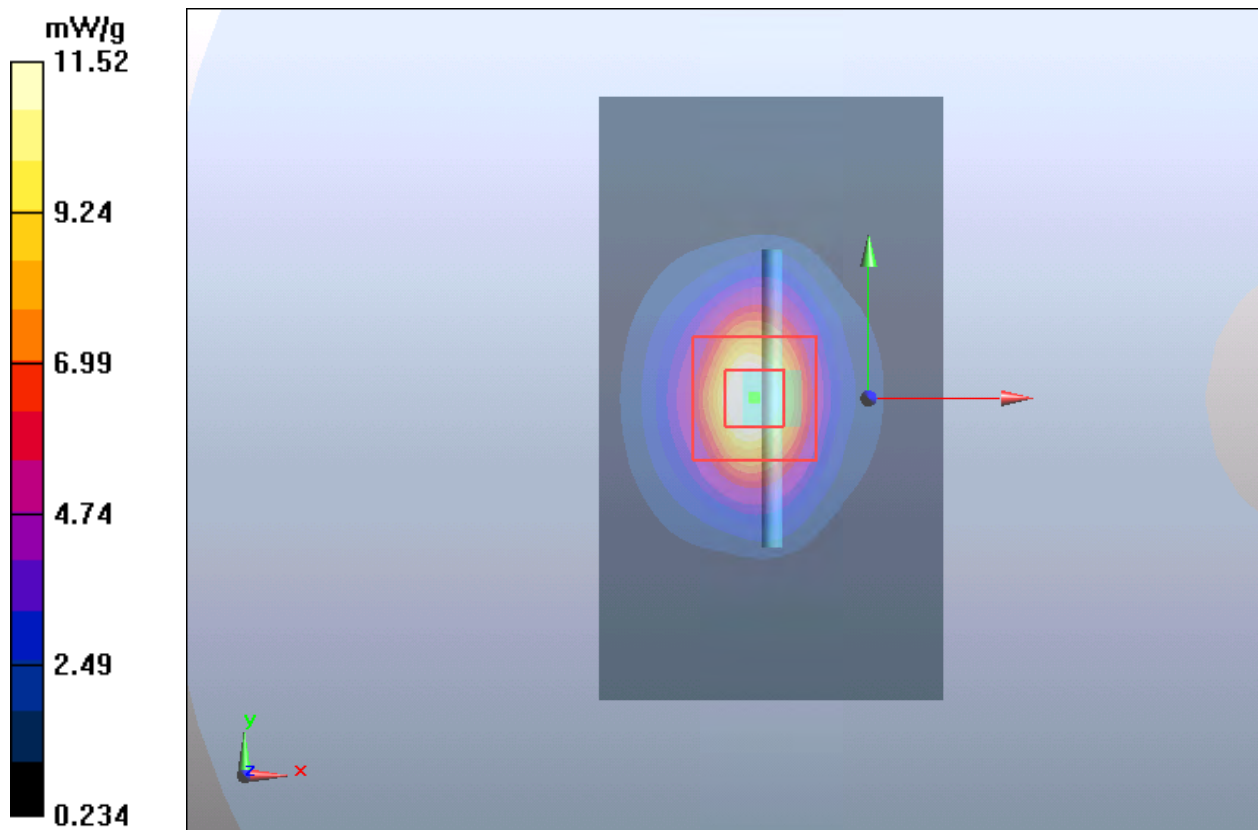
dz=5mm

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

Peak SAR (extrapolated) = 20.1 W/kg

SAR(1 g) = 10.15 mW/g; SAR(10 g) = 5.39 mW/g

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



Plot 10 System Performance Check at 1900 MHz TSL

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

Date: 2022/6/1

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

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

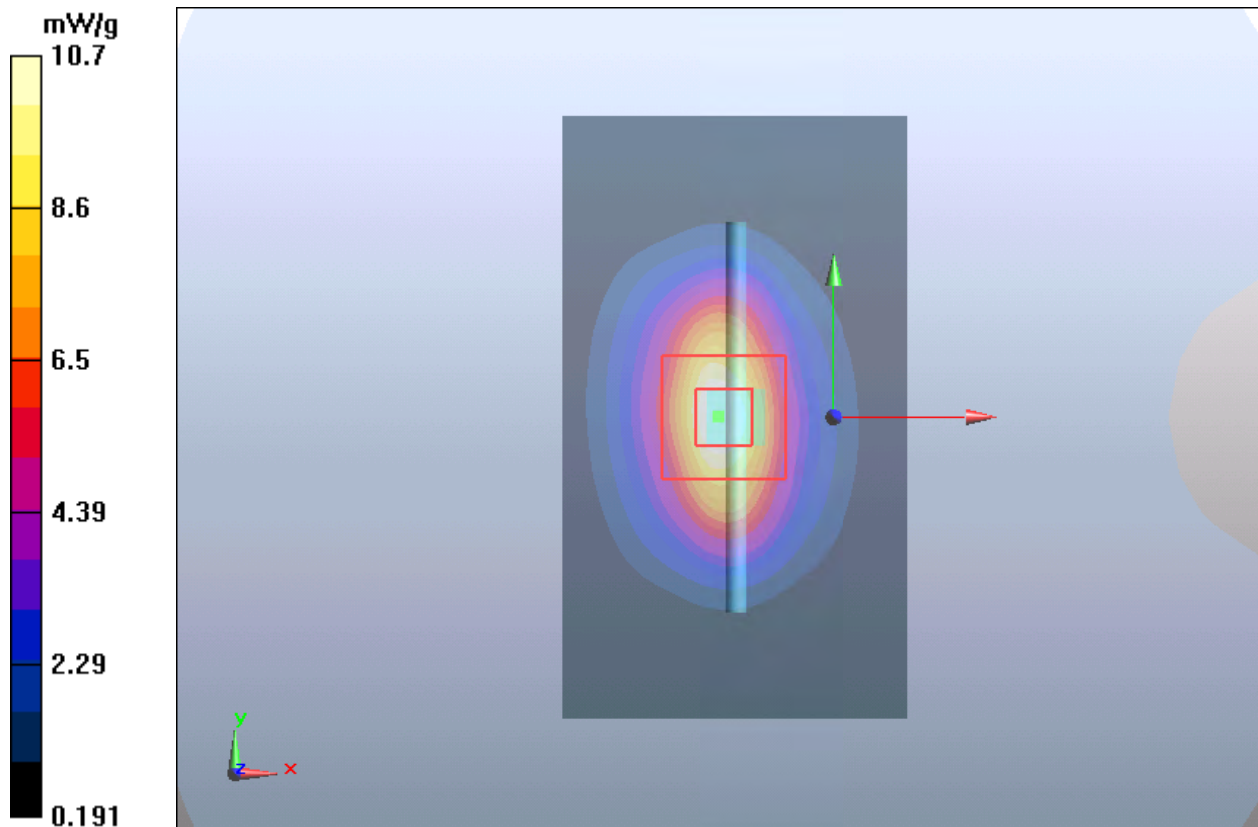
d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

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

Peak SAR (extrapolated) = 17.8 W/kg

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

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



Plot 11 System Performance Check at 2450 MHz TSL

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

Date: 2022/6/8

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

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

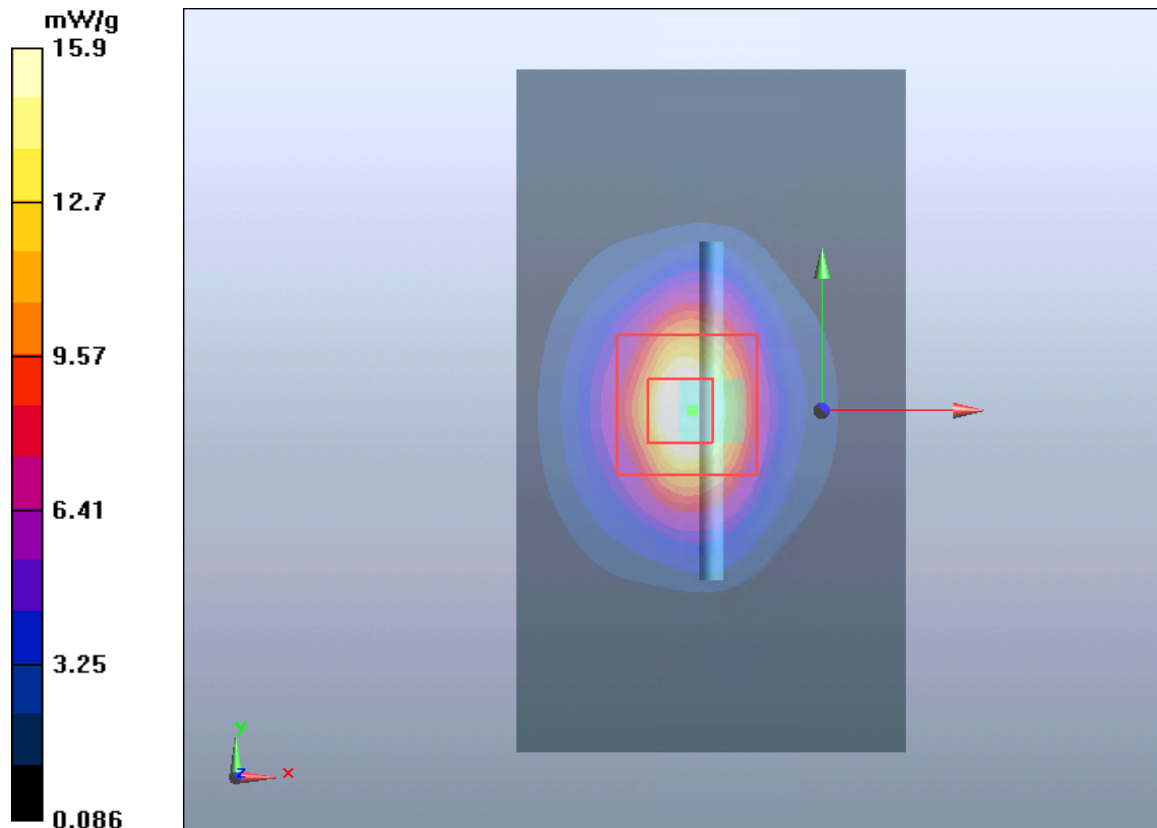
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

Peak SAR (extrapolated) = 30 W/kg

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

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



Plot 12 System Performance Check at 2600 MHz TSL

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

Date: 2022/6/3

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

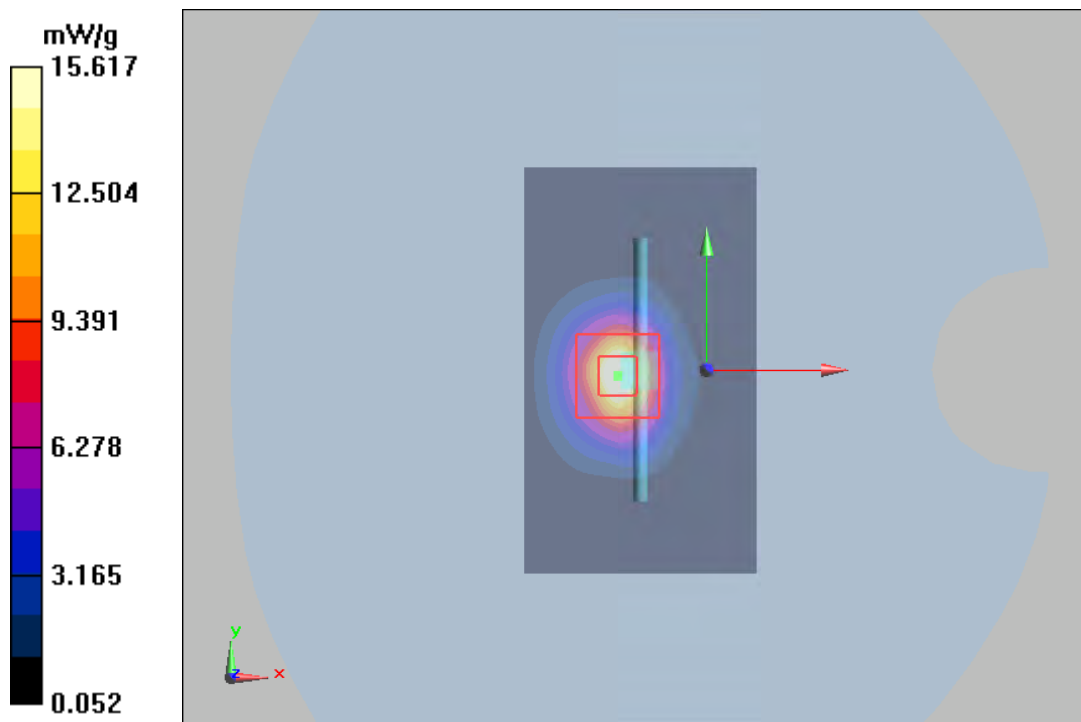
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

Peak SAR (extrapolated) = 31.858 W/kg

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

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



Plot 13 System Performance Check at 2600 MHz TSL**DUT: Dipole 2600 MHz; Type: D2600V2; Serial: 1025**

Date: 2022/6/4

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

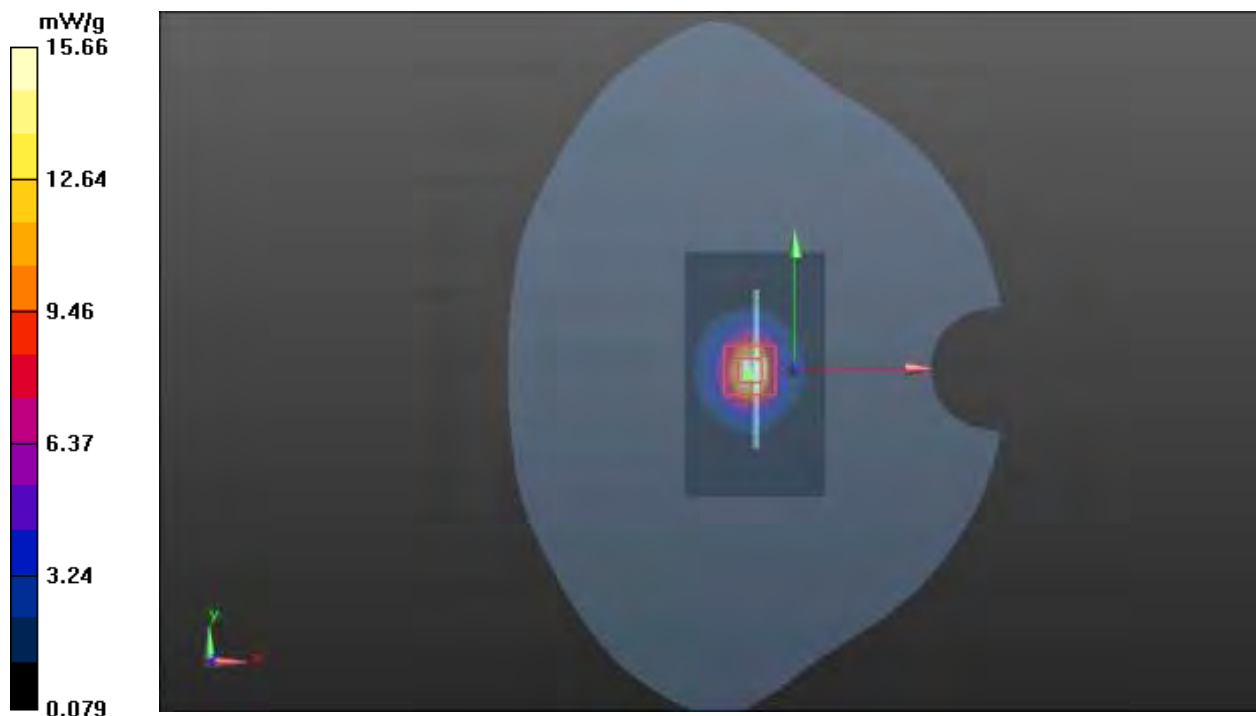
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

Peak SAR (extrapolated) = 31.858 W/kg

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

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



Plot 14 System Performance Check at 2600 MHz TSL

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

Date: 2022/6/7

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

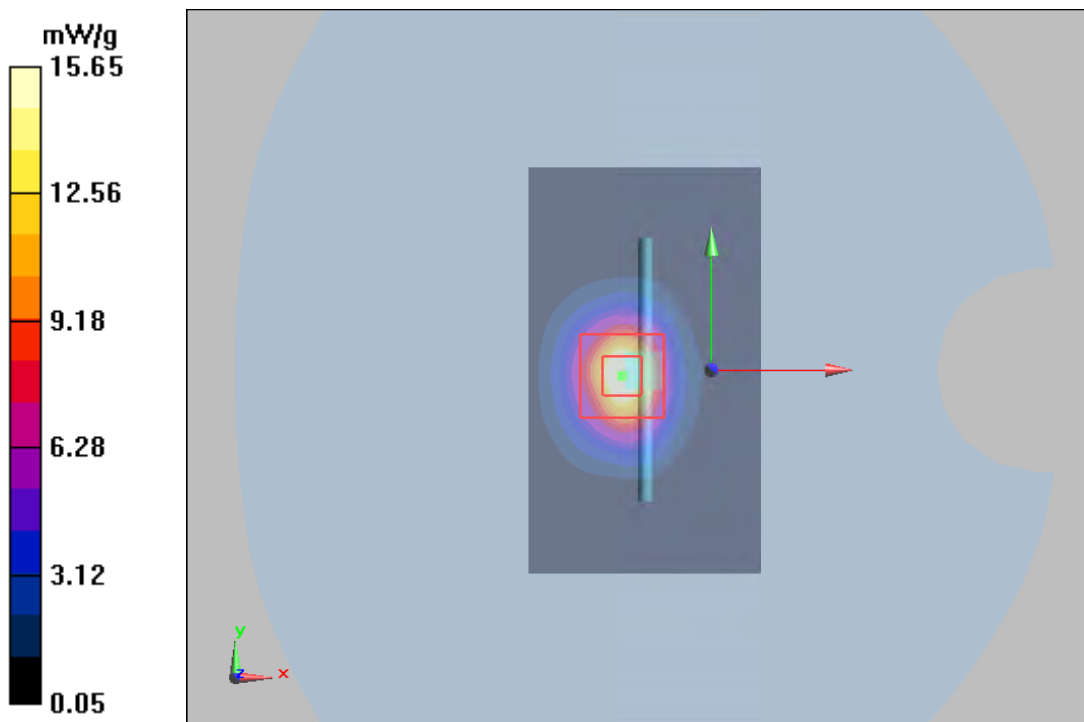
d=10mm, Pin=250mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

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

Peak SAR (extrapolated) = 31.85 W/kg

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

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



Plot 15 System Performance Check at 5250 MHz TSL**DUT: Dipole 5250 MHz; Type: D5GHzV2; Serial: 1151**

Date: 2022/6/5

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

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

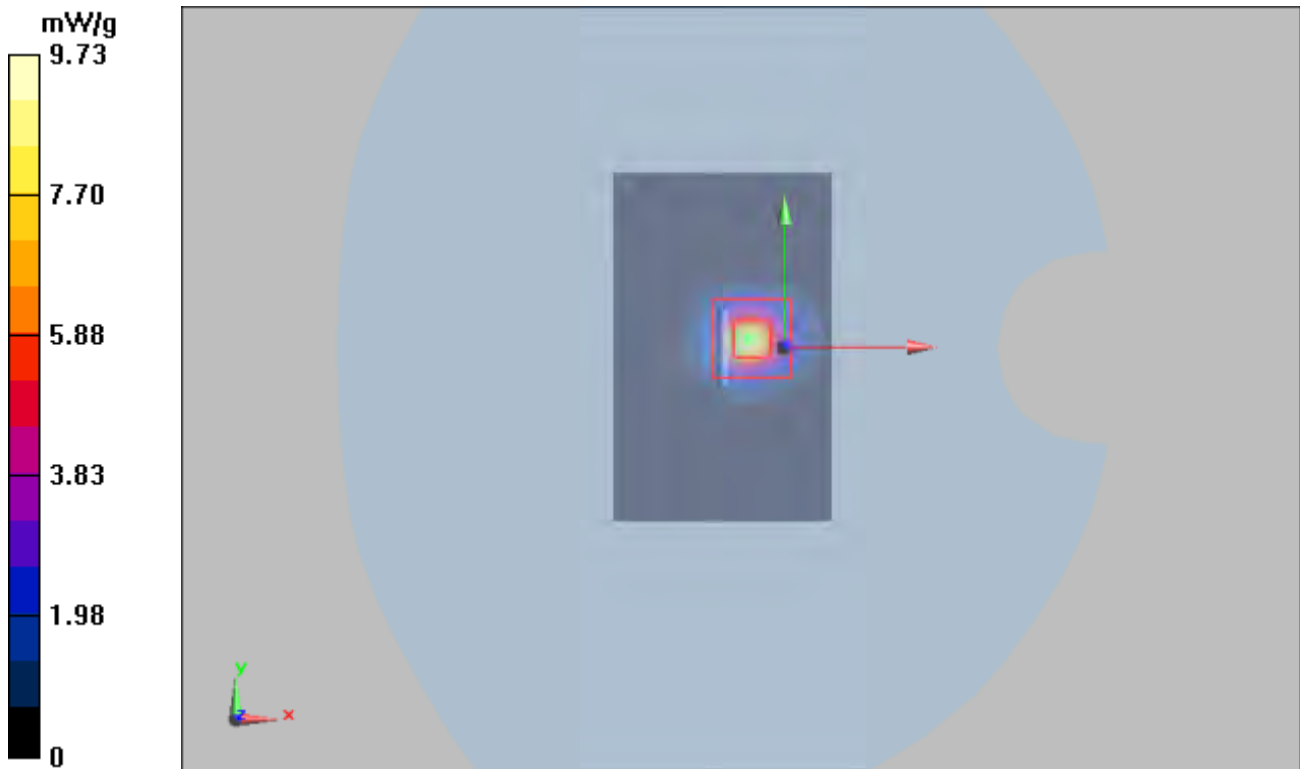
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

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

Peak SAR (extrapolated) = 52.2 W/kg

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

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



Plot 16 System Performance Check at 5600 MHz TSL

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

Date: 2022/6/10

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

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

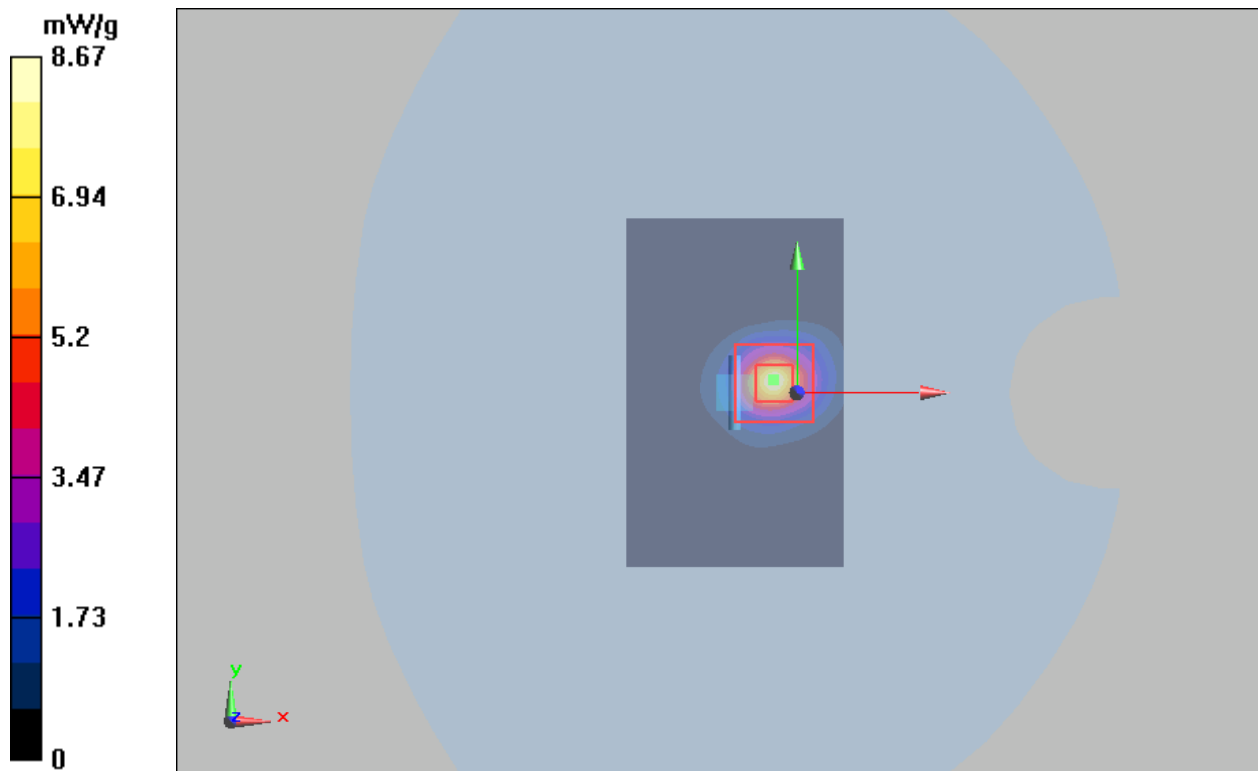
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

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

Peak SAR (extrapolated) = 22.9 W/kg

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

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



Plot 17 System Performance Check at 5750 MHz TSL**DUT: Dipole 5750 MHz; Type: D5GHzV2; Serial: 1151**

Date: 2022/6/6

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

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

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

Phantom section: Flat Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

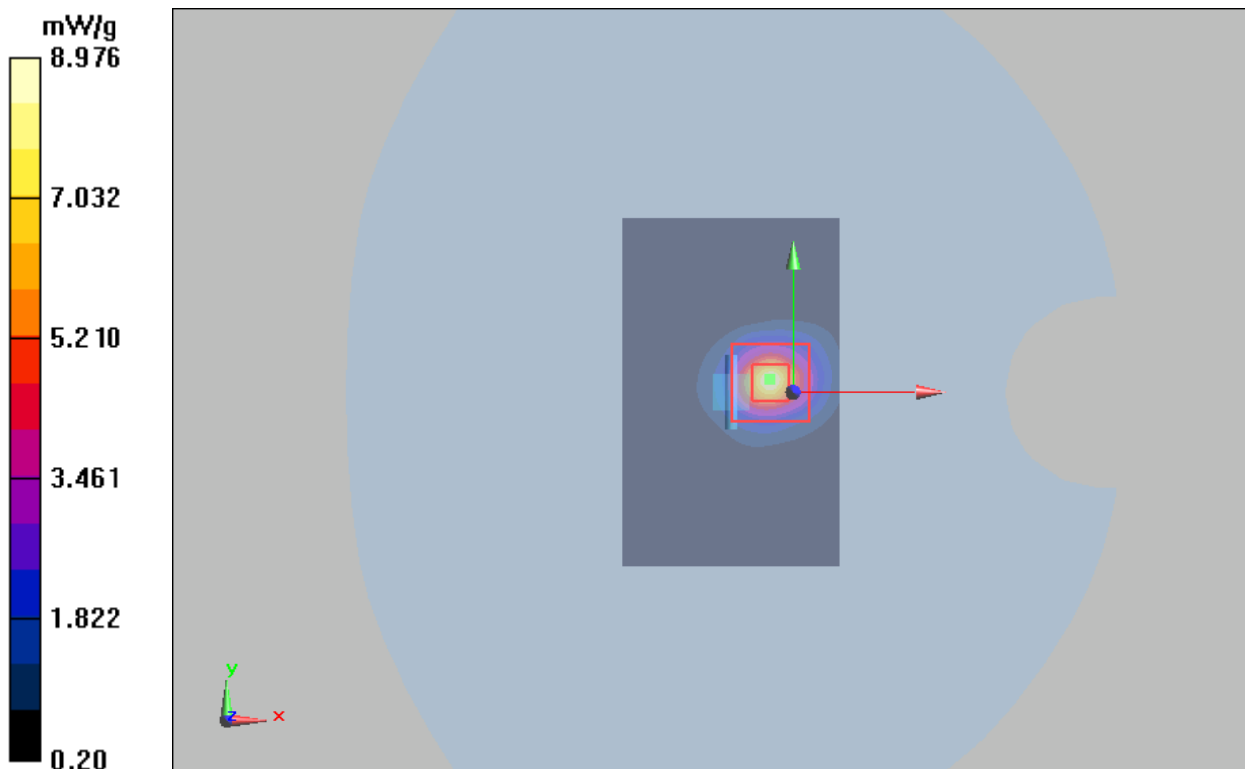
d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

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

Peak SAR (extrapolated) = 23.4 W/kg

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

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



ANNEX C: Highest Graph Results

Plot 18 GSM 850 Left Cheek Middle

Date: 2022/5/31

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

Medium parameters used: $f = 836.6$ MHz; $\sigma = 0.953$ S/m; $\epsilon_r = 39.762$; $\rho = 1000$ kg/m³

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

Phantom section: Left Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

Maximum value of SAR (measured) = 0.168 W/kg

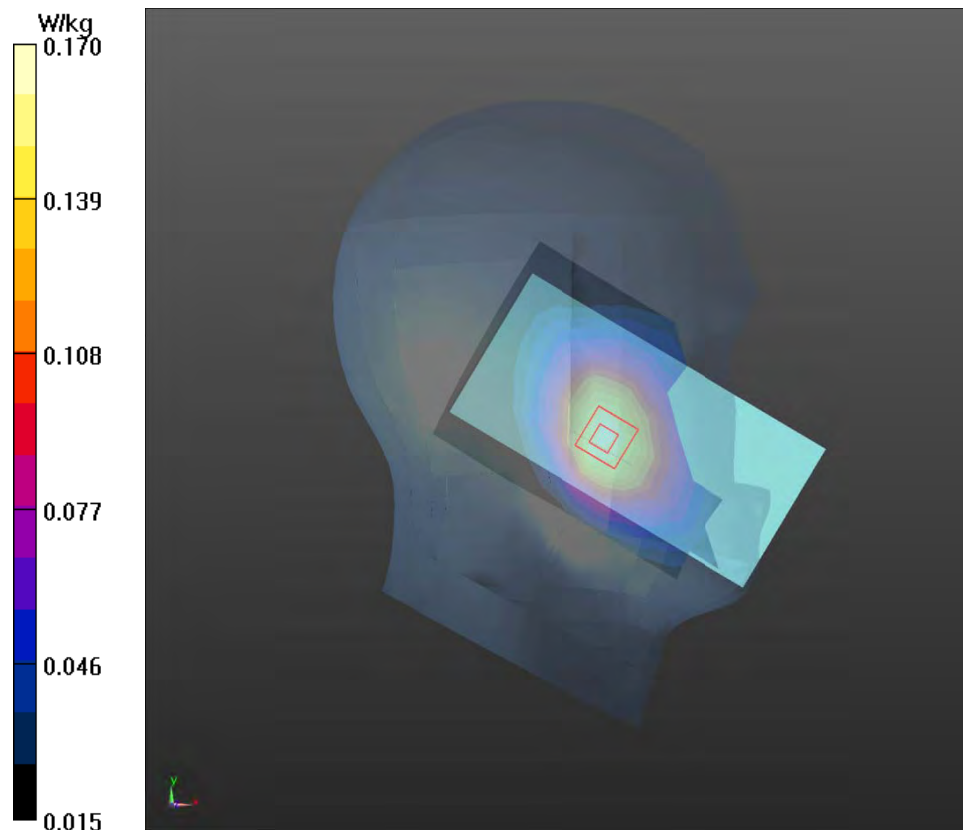
Left Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.944 V/m; Power Drift = 0.049 dB

Peak SAR (extrapolated) = 0.213 W/kg

SAR(1 g) = 0.163 W/kg; SAR(10 g) = 0.121 W/kg

Maximum value of SAR (measured) = 0.170 W/kg



Plot 19 GSM 1900 Right Cheek Middle

Date: 2022/5/26

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

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.393 \text{ S/m}$; $\epsilon_r = 38.344$; $\rho = 1000 \text{ kg/m}^3$

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

Maximum value of SAR (measured) = 1.14 W/kg

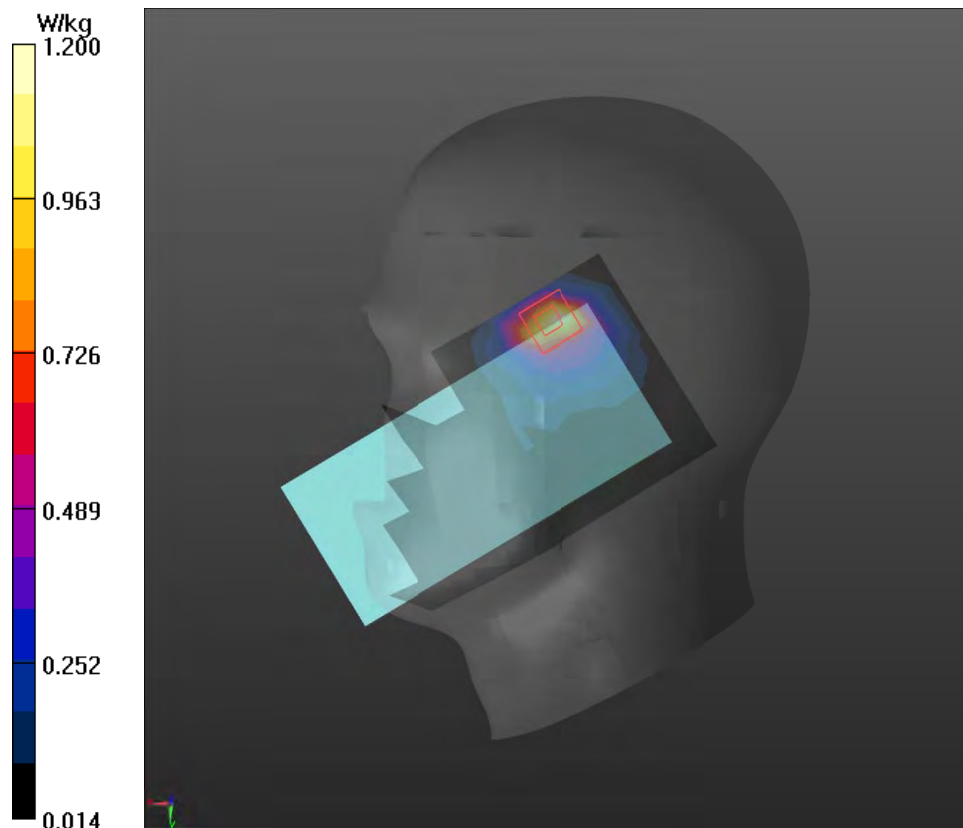
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.57 V/m ; Power Drift = 0.022dB

Peak SAR (extrapolated) = 1.55 W/kg

SAR(1 g) = 0.652 W/kg ; SAR(10 g) = 0.322 W/kg

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



Plot 20 UMTS Band II Right Cheek Middle

Date: 2022/5/27

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

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

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

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

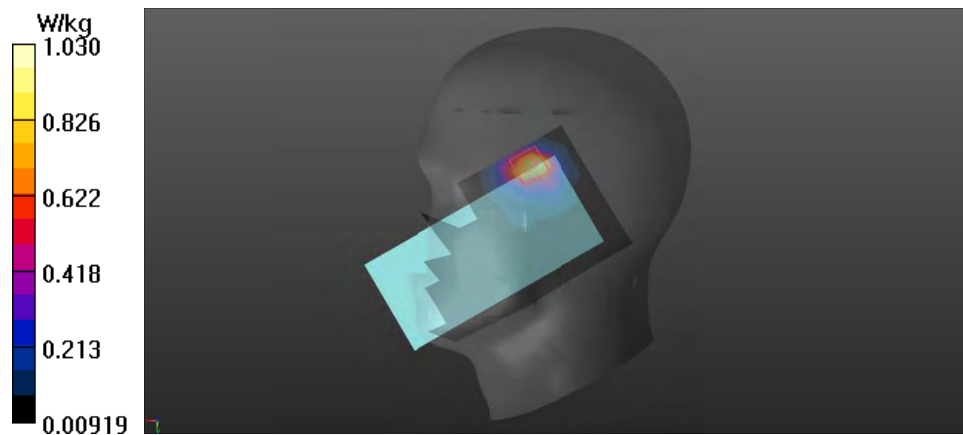
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.036 V/m; Power Drift = 0.027 dB

Peak SAR (extrapolated) = 1.41 W/kg

SAR(1 g) = 0.674 W/kg; SAR(10 g) = 0.312 W/kg

Maximum value of SAR (measured) = 1.03 W/kg



Plot 21 UMTS Band IV Cheek Tilt Middle

Date: 2022/6/9

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

Medium parameters used: $f = 1732.6$ MHz; $\sigma = 1.293$ S/m; $\epsilon_r = 38.782$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); Calibrated: 2021/8/12

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

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

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

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

Maximum value of SAR (measured) = 0.515 W/kg

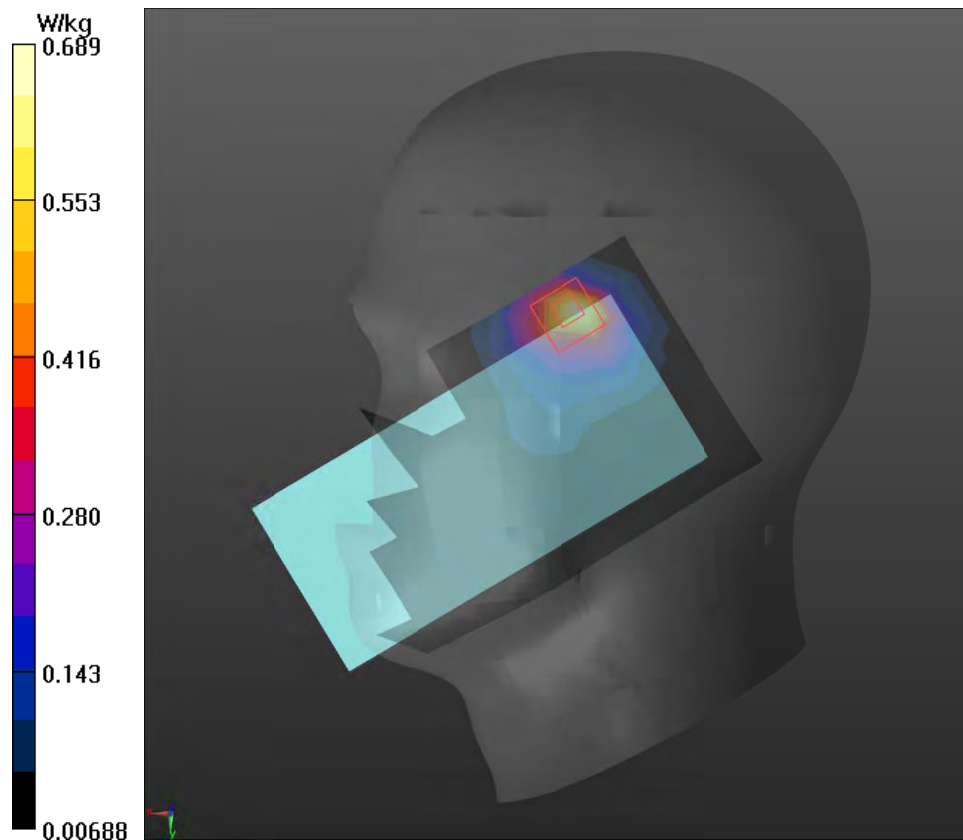
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.389 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 0.896 W/kg

SAR(1 g) = 0.432 W/kg; SAR(10 g) = 0.223 W/kg

Maximum value of SAR (measured) = 0.689 W/kg



Plot 22 UMTS Band V Right Tilt Middle

Date: 2022/5/31

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

Medium parameters used: $f = 836.6$ MHz; $\sigma = 0.953$ S/m; $\epsilon_r = 39.762$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

Maximum value of SAR (measured) = 0.570 W/kg

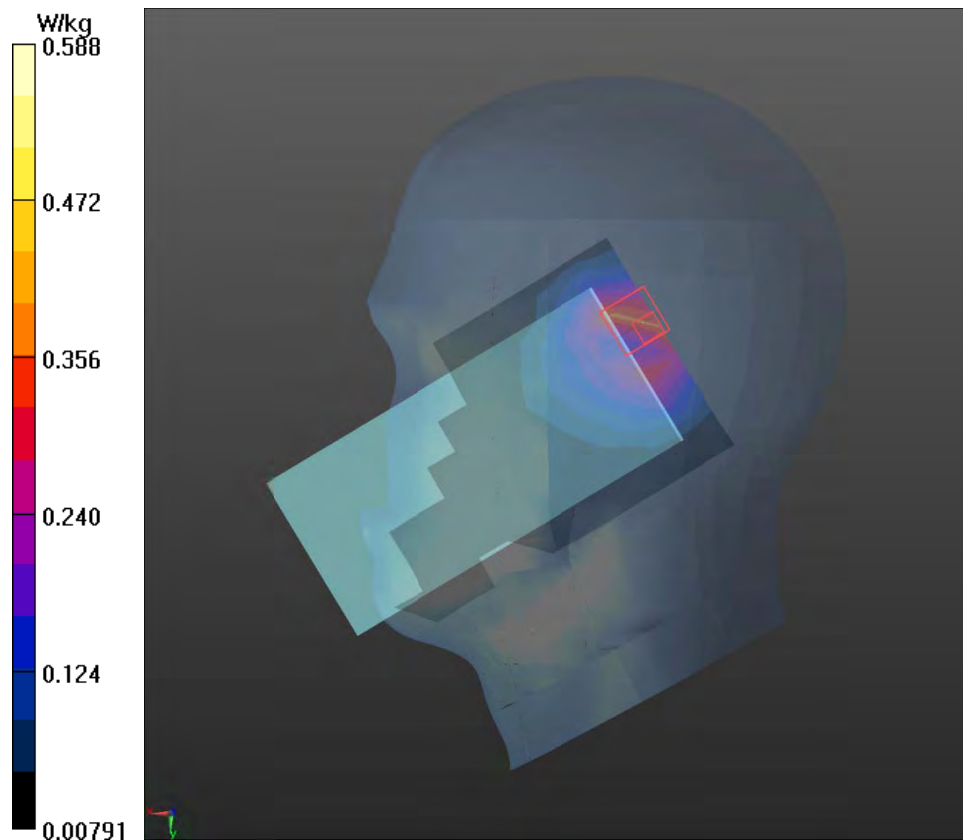
Right Tilt Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.56 V/m; Power Drift = 0.023 dB

Peak SAR (extrapolated) = 0.802 W/kg

SAR(1 g) = 0.418 W/kg; SAR(10 g) = 0.266 W/kg

Maximum value of SAR (measured) = 0.588 W/kg



Plot 23 LTE Band 2 1RB Right Cheek Middle

Date: 2022/6/1

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

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

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

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

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

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

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

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

Maximum value of SAR (measured) = 0.686 W/kg

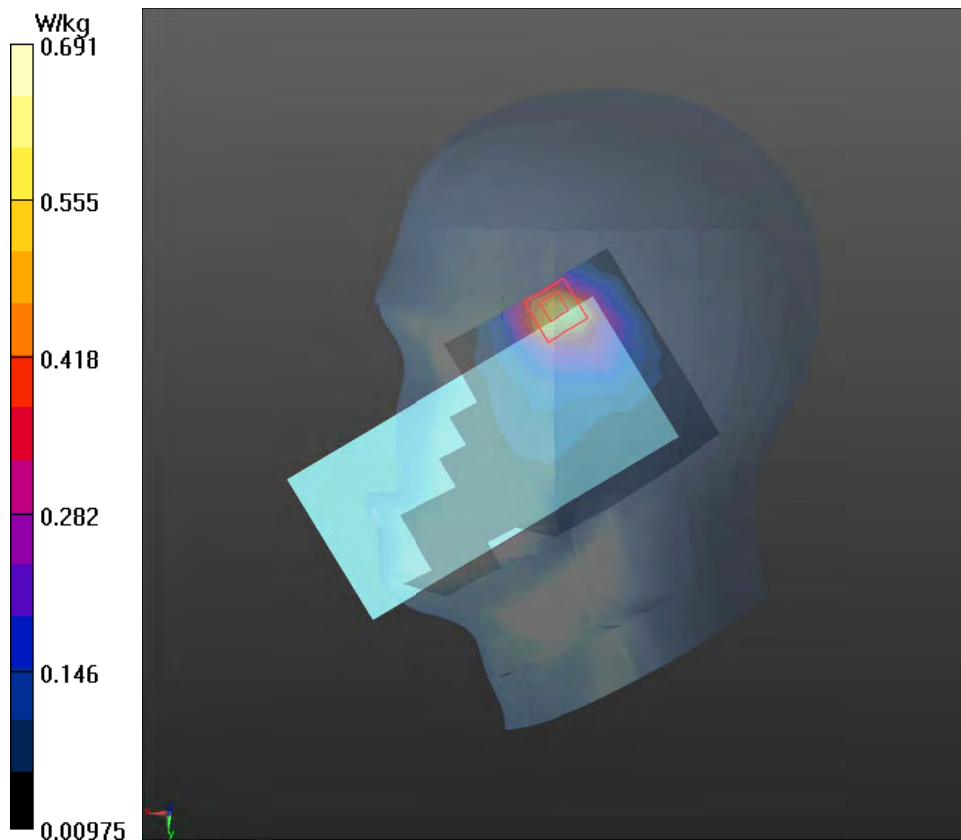
Right Cheek Middle/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.73 V/m; Power Drift = 0.032 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.656 W/kg; SAR(10 g) = 0.326 W/kg

Maximum value of SAR (measured) = 0.691 W/kg



Plot 24 LTE Band 4 1RB Right Cheek Low

Date: 2022/6/11

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

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.284$ S/m; $\epsilon_r = 38.855$; $\rho = 1000$ kg/m³

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

Phantom section: Right Section

DASY5 Configuration:

Sensor-Surface: 1.4mm (Mechanical Surface Detection)

Probe: EX3DV4 - SN3677; ConvF(8.22, 8.22, 8.22); Calibrated: 2021/8/12

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

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

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

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

Maximum value of SAR (measured) = 0.600 W/kg

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

Reference Value = 6.848 V/m; Power Drift = 0.026 dB

Peak SAR (extrapolated) = 0.833 W/kg

SAR(1 g) = 0.418 W/kg; SAR(10 g) = 0.208 W/kg

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

