



TEST REPORT

No.I21N02292-SAR

For

Guangdong OPPO Mobile Telecommunications Corp., Ltd.

Mobile Phone

Model Name: A102OP

With

Hardware Version: 11

Software Version: ColorOS V11

FCC ID: R9C-A102OP

Issued Date: 2021-09-26

Designation Number: CN1210

Note:

The test results in this test report relate only to the devices specified in this report. This report shall not be reproduced except in full without the written approval of SAICT.

Test Laboratory:

SAICT, Shenzhen Academy of Information and Communications Technology

Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China 518000.

Tel:+86(0)755-33322000, Fax:+86(0)755-33322001

Email: yewu@caict.ac.cn. www.saict.ac.cn

**REPORT HISTORY**

Report Number	Revision	Description	Issue Date
I21N02292-SAR	Rev.0	1st edition	2021-08-31
I21N02292-SAR	Rev.1	1. Added table 2.4 in Section 2. 2. Added description in Section 4.1&11.2&13. 3. Updated table 13.53 and added Section 13.5. 4. Updated ANNEX A.	2021-09-19
I21N02292-SAR	Rev.2	Updated tables 13.23&13.53&13.55	2021-09-26



CONTENTS

- 1. SUMMARY OF TEST REPORT 5**
 - 1.1. TEST ITEMS 5
 - 1.2. TEST STANDARDS 5
 - 1.3. TEST RESULT 5
 - 1.4. TESTING LOCATION 5
 - 1.5. PROJECT DATA 5
 - 1.6. SIGNATURE 5
- 2. STATEMENT OF COMPLIANCE 6**
- 3. CLIENT INFORMATION 9**
 - 3.1. APPLICANT INFORMATION 9
 - 3.2. MANUFACTURER INFORMATION 9
- 4. EQUIPMENT UNDER TEST (EUT) AND ANCILLARY EQUIPMENT (AE) 10**
 - 4.1. ABOUT EUT 10
 - 4.2. POWER REDUCTION SPECIFICATION 12
 - 4.3. INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST 13
 - 4.4. INTERNAL IDENTIFICATION OF AE USED DURING THE TEST 13
- 5. TEST METHODOLOGY 14**
 - 5.1. APPLICABLE LIMIT REGULATIONS 14
 - 5.2. APPLICABLE MEASUREMENT STANDARDS 14
- 6. SPECIFIC ABSORPTION RATE (SAR) 15**
 - 6.1. INTRODUCTION 15
 - 6.2. SAR DEFINITION 15
- 7. TISSUE SIMULATING LIQUIDS 16**
 - 7.1. TARGETS FOR TISSUE SIMULATING LIQUID 16
 - 7.2. DIELECTRIC PERFORMANCE 16
- 8. SYSTEM VERIFICATION 20**
 - 8.1. SYSTEM SETUP 20
 - 8.2. SYSTEM VERIFICATION 21
- 9. MEASUREMENT PROCEDURES 22**
 - 9.1. TESTS TO BE PERFORMED 22
 - 9.2. GENERAL MEASUREMENT PROCEDURE 24
 - 9.3. WCDMA MEASUREMENT PROCEDURES FOR SAR 25
 - 9.4. LTE MEASUREMENT PROCEDURES FOR SAR 26
 - 9.5. LTE (TDD) CONSIDERATIONS 26
 - 9.6. BLUETOOTH & WLAN MEASUREMENT PROCEDURES FOR SAR 28
 - 9.7. POWER DRIFT 28



10. CONDUCTED OUTPUT POWER.....29

10.1. GSM MEASUREMENT RESULT29

10.2. WCDMA MEASUREMENT RESULT40

10.3. LTE MEASUREMENT RESULT48

10.4. WLAN AND BLUETOOTH MEASUREMENT RESULT163

11. SIMULTANEOUS TX SAR CONSIDERATIONS 168

11.1. INTRODUCTION.....168

11.2. TRANSMIT ANTENNA SEPARATION DISTANCES.....168

11.3. SAR MEASUREMENT POSITIONS.....169

12. EVALUATION OF SIMULTANEOUS..... 170

13. SUMMARY OF TEST RESULTS.....171

13.1. TESTING ENVIRONMENT.....171

13.2. SAR RESULTS172

13.3. WLAN EVALUATION FOR 2.4G.....198

13.4. WLAN EVALUATION FOR 5G200

13.5. PRODUCT SPECIFIC 10G SAR203

14. SAR MEASUREMENT VARIABILITY205

15. MEASUREMENT UNCERTAINTY206

15.1. MEASUREMENT UNCERTAINTY FOR NORMAL SAR TESTS (300MHz~3GHz)206

15.2. MEASUREMENT UNCERTAINTY FOR NORMAL SAR TESTS (3GHz~6GHz).....207

16. MAIN TEST INSTRUMENTS.....208

ANNEX A: GRAPH RESULTS209

ANNEX B: SYSTEMVERIFICATION RESULTS.....251

ANNEX C: SAR MEASUREMENT SETUP.....262

ANNEX D: POSITION OF THE WIRELESS DEVICE IN RELATION TO THE PHANTOM.....268

ANNEX E: EQUIVALENT MEDIA RECIPES271

ANNEX F: SYSTEM VALIDATION.....272

ANNEX G: DAE CALIBRATION CERTIFICATE273

ANNEX H: PROBE CALIBRATION CERTIFICATE276

ANNEX I: DIPOLE CALIBRATION CERTIFICATE294

ANNEX J: EXTENDED CALIBRATION SAR DIPOLE.....348



1. Summary of Test Report

1.1. Test Items

Description: Mobile Phone
Model Name: A102OP
Applicant's name: Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Manufacturer's Name: Guangdong OPPO Mobile Telecommunications Corp., Ltd.

1.2. Test Standards

ANSI C95.1-1992, IEEE 1528-2013

1.3. Test Result

Pass. Please refer to "13. Summary of Test Results"

1.4. Testing Location

Address: Building G, Shenzhen International Innovation Center, No.1006 Shennan Road, Futian District, Shenzhen, Guangdong, P. R. China

1.5. Project Data

Testing Start Date: 2021-08-06

Testing End Date: 2021-09-24

1.6. Signature

Li Yongfu

(Prepared this test report)

Zhang Yunzhan

(Reviewed this test report)

Cao Junfei

(Approved this test report)



2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for Guangdong OPPO Mobile Telecommunications Corp., Ltd. Mobile Phone A102OP are as follows:

Table 2.1: Highest Reported SAR for Head (1g)

Exposure Configuration	Technology Band	Highest Reported SAR 1g(W/Kg)	Equipment Class
Head (Separation Distance 0mm)	GSM850	1.18	PCE
	PCS1900	0.79	
	WCDMA Band2	0.70	
	WCDMA Band4	0.71	
	WCDMA Band5	0.63	
	LTE Band 2	0.82	
	LTE Band 4	0.84	
	LTE Band 5	0.70	
	LTE Band 7	0.87	
	LTE Band 26	0.80	
	LTE Band 41	0.80	
	Bluetooth	0.17	DSS
	WLAN 2.4GHz	0.90	DTS
	WLAN 5GHz	0.87	NII

Table 2.2: Highest Reported SAR for Hotspot (1g)

Exposure Configuration	Technology Band	Highest Reported SAR 1g(W/Kg)	Equipment Class
Hotspot (Separation Distance 10mm)	GSM850	0.89	PCE
	PCS1900	0.81	
	WCDMA Band2	0.80	
	WCDMA Band4	0.69	
	WCDMA Band5	1.08	
	LTE Band 2	1.00	
	LTE Band 4	1.01	
	LTE Band 5	0.97	
	LTE Band 7	0.90	
	LTE Band 26	0.99	
	LTE Band 41	0.79	
	Bluetooth	0.07	DSS
	WLAN 2.4GHz	0.41	DTS

Table 2.3: Highest Reported SAR for Body-worn (1g)

Exposure Configuration	Technology Band	Highest Reported SAR 1g(W/Kg)	Equipment Class
Body-worn (Separation Distance 15mm)	GSM850	0.30	PCE
	PCS1900	0.28	
	WCDMA Band2	0.22	
	WCDMA Band4	0.22	
	WCDMA Band5	0.44	
	LTE Band 2	0.25	
	LTE Band 4	0.25	
	LTE Band 5	0.41	
	LTE Band 7	0.42	
	LTE Band 26	0.40	
	LTE Band 41	0.44	
	Bluetooth	0.04	DSS
	WLAN 2.4GHz	0.24	DTS
	WLAN 5GHz	0.37	NII

Table 2.4: Highest Reported Extremity SAR (10g)

Exposure Configuration	Technology Band	Highest Reported SAR 10g(W/Kg)	Equipment Class
Extremity (Separation Distance 0mm)	WLAN 5GHz	1.51	NII

The SAR values found for the Mobile Phone are below the maximum recommended levels of 1.6 W/Kg as averaged over any 1g tissue according to the ANSI C95.1-1992.

The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power output.

The measurement together with the test system set-up is described in annex C of this test report. A detailed description of the equipment under test can be found in chapter 4 of this test report.

The highest reported SAR value is obtained at the case of **(Table 2.1 & 2.2 & 2.3 & 2.4)**, Head value is **1.18 W/kg (1g)**, Hotspot value is **1.08 W/kg (1g)**, Body-worn value is **0.44 W/kg (1g)** and Extremity value is **1.51 W/kg (10g)**.

Table 2.5: The sum of reported SAR values for WWAN antenna and WLAN antenna

<i>l</i>	Position	WWAN (W/kg)	WLAN (W/kg)	Sum (W/kg)
Highest reported SAR value for Head	Right Cheek	1.18	0.17	1.35
Highest reported SAR value for Hotspot	Right Side	1.08	0.07	1.15
Highest reported SAR value for Body-worn	Rear Side	0.44	0.19	0.63

Note: the test positions of above tables are for the worse case that has been evaluated.

Table 2.6: The sum of reported SAR values for WWAN antenna and Bluetooth antenna

<i>l</i>	Position	WWAN (W/kg)	Bluetooth (W/kg)	Sum (W/kg)
Highest reported SAR value for Head	Right Cheek	1.18	0.08	1.26
Highest reported SAR value for Hotspot	Right Side	1.08	0.02	1.10
Highest reported SAR value for Body-worn	Rear Side	0.44	0.04	0.48

Note: the test positions of above tables are for the worse case that has been evaluated.

According to the above tables, the highest sum of reported SAR values is **1.35 W/kg (1g)**.

The detail for simultaneous transmission consideration is described in chapter 12.



3. Client Information

3.1. Applicant Information

Company Name:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address:	NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, Guangdong, China
City:	DongGuan
Country:	China
Telephone:	(86)76986076999

3.2. Manufacturer Information

Company Name:	Guangdong OPPO Mobile Telecommunications Corp., Ltd.
Address:	NO.18 Haibin Road, Wusha Village, Chang'an Town, Dongguan City, Guangdong, China
City:	DongGuan
Country:	China
Telephone:	(86)76986076999

4. Equipment under Test (EUT) and Ancillary Equipment (AE)

4.1. About EUT

Description:	Mobile Phone
Model Name:	A102OP
Condition of EUT as received:	No obvious damage in appearance
Frequency Bands:	GSM 850/1900, WCDMA Band 2/4/5, LTE Band 2/4/5/7/26/41, Bluetooth, WLAN 2.4G/5G
Tested Tx Frequency:	824 – 849MHz (GSM 850)
	1850 – 1910MHz (GSM 1900)
	1850 – 1910MHz (WCDMA Band 2)
	1710 – 1755MHz (WCDMA Band 4)
	824 – 849MHz (WCDMA Band 5)
	1850 – 1910MHz (LTE Band 2)
	1710 – 1755MHz (LTE Band 4)
	824 – 849MHz (LTE Band 5)
	2500 – 2570MHz (LTE Band 7)
	814 – 849MHz (LTE Band 26)
	2545 – 2655MHz (LTE Band 41)
	2402 – 2480MHz (Bluetooth)
	2412 – 2462MHz (WLAN 2.4G)
5180 – 5825MHz (WLAN 5G)	
GPRS/EDGE Multislot Class:	33
GPRS capability Class:	A
Dual Transfer Mode (DTM) :	11
Test device Production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Hotspot mode:	Support
Product Dimensions:	Long 162.1mm; Wide 74.6mm; Overall Diagonal 171.7mm
Remark: <ol style="list-style-type: none"> 1. This device support DTM feature, but only allows the UE in CS and PS operation simultaneously transmission at the same frequency. 2. This device WLAN 5G doesn't support hotspot operation. 3. This device has WWAN Top and Bottom transmitter antennas which can refer to antenna location chapter. 4. The device is capable of switching between the top antenna and bottom antenna based on signal strength. 5. There are totally 6 power reduction levels of WWAN antenna and 3 power reduction levels of WLAN antenna, detail descriptions of the power reduction mechanism are included in the operational description. 6. For WWAN transmitter (6 sets of power reduction levels). 	

a) Head exposure conditions:

Reduced power level 1 – GSM850/1900, WCDMA Band 2/4/5, LTE Band 2/4/5/7/26/41

While the device WWAN is transmitting at the WWAN top antenna and the audio is actively routed through the receiver, power reduction enabled for those bands.

Reduced power level 2 – GSM850/1900, WCDMA Band 2/4/5, LTE Band 2/4/5/7/26/41

While the device WLAN 2.4G/5G antenna is transmitting simultaneously with the WWAN top antenna, and the audio is actively routed through the receiver, power reduction enabled for those bands.

b) Body exposure condition

Reduced power level 3 – GSM850, WCDMA Band 2/4, LTE Band 2/4

While the device is transmitting at the WWAN top antenna and receiver is not working, power reduction enabled for those bands.

Reduced power level 4 – GSM1900, WCDMA Band 2/4, LTE Band 2/4/7

While the device is transmitting at the WWAN bottom antenna and receiver is not working, power reduction enabled for those bands.

Reduced power level 5 – GSM850, WCDMA Band 2/4, LTE Band 2/4

While the device WLAN 2.4G/5G antenna is transmitting simultaneously with the WWAN top antenna and the receiver is not working, power reduction enabled for those bands.

Reduced power level 6 – GSM1900, WCDMA Band 2/4, LTE Band 2/4/7

While the device WLAN 2.4G/5G antenna is transmitting simultaneously with the WWAN bottom antenna and the receiver is not working, power reduction enabled for those bands.

7. For WLAN transmitter (3 sets of power reduction levels).

a) Head exposure conditions:

Reduced power level 7 – WLAN 2.4G/5G

While the device WLAN 2.4G/5G antenna is transmitting and the audio is actively routed through the receiver, power reduction enabled for those bands.

Reduced power level 8 – WLAN 2.4G/5G

While the device WLAN 2.4G/5G antenna is transmitting simultaneously with the WWAN antenna and the audio is actively routed through the receiver, power reduction enabled for those bands.

b) Body exposure condition.

Reduced power level 9 – WLAN 2.4G/5G

When the device WLAN 2.4G/5G antenna is transmitting simultaneously with the WWAN antenna and the receiver is not working, power reduction enabled for those bands.

4.2. Power reduction specification

The following tables summarize the key power reduction information. The detailed full power which is the maximum power the state can use and reduced tune-up specifications and conducted power measurement results are provided in chapter 12 of this report.

Band	Top Antenna				Bottom Antenna		
	Head	Head	Body	Body	Head	Body	Body
	Reduced power level 1	Reduced power level 2	Reduced power level 3	Reduced power level 5	Normal	Reduced power level 4	Reduced power level 6
GSM850	-1.0	-1.0	-1.0	-1.0	0	0	0
GSM1900	-1.1	-1.1	0	0	0	-0.8	-0.8
WCDMA B2	-4.3	-4.3	-1.9	-1.9	0	-4.5	-4.5
WCDMA B4	-4.4	-4.4	-1.7	-1.7	0	-3.7	-3.7
WCDMA B5	-3.6	-3.6	0	0	0	0	0
LTE Band2	-2.9	-2.9	-1.0	-1.0	0	-3.7	-3.7
LTE Band4	-3.3	-3.3	-1.0	-1.0	0	-2.8	-2.8
LTE Band5	-3.2	-3.2	0	0	0	0	0
LTE Band7	-2.6	-2.6	0	0	0	-0.7	-0.7
LTE Band26	-2.9	-2.9	0	0	0	0	0
LTE Band41	-2.4	-2.4	0	0	0	0	0
Band	WLAN Antenna						
	Head		Head		Body		
	Reduced power level 7		Reduced power level 8		Reduced power level 9		
WLAN 2.4G	-3.0		-7.5		-1.0		
WLAN 5.2G	-5.0		-9.0		-2.5		
WLAN 5.3G	-5.0		-9.0		-2.5		
WLAN 5.5G	-4.5		-8.5		-3.5		
WLAN 5.8G	-4.5		-8.5		-3.5		



4.3. Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version	Receipt Date
UT04aa	IMEI1: 868994050054639 IMEI2: 868994050054621	11	ColorOS V11	2021-07-26
UT05aa	IMEI1: 868994050055131 IMEI2: 868994050055123	11	ColorOS V11	2021-07-26
UT06aa	IMEI1: 868994050056071 IMEI2: 868994050056063	11	ColorOS V11	2021-07-26
UT07aa	IMEI1: 868994050056097 IMEI2: 868994050056089	11	ColorOS V11	2021-07-26

*EUT ID: is used to identify the test sample in the lab internally.

Note: It is performed to test SAR with the UT05aa & UT06aa & UT07aa, and conducted power with the UT04aa.

4.4. Internal Identification of AE used during the test

AE ID*	Description	Model	Manufacturer
AE1	Battery	BLP779	TWS TECHNOLOGY (GUANGZHOU) LIMITED
AE6	Headset	MH156	JiangXi Risound Electronics CO.,LTD

*AE ID: is used to identify the test sample in the lab internally.



5. Test Methodology

5.1. Applicable Limit Regulations

ANSI C95.1–1992 IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz

It specifies the maximum exposure limit of **1.6 W/kg** as averaged over any 1 gram of tissue for portable devices being used within 20 cm of the user in the uncontrolled environment.

5.2. Applicable Measurement Standards

IEEE 1528–2013 Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Experimental Techniques.

KDB 447498 D01 General RF Exposure Guidance v06 Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

KDB 648474 D04 Handset SAR v01r03 SAR Evaluation Considerations for Wireless Handsets

KDB 941225 D01 SAR test for 3G devices v03r01 SAR Measurement Procedures for 3G Devices

KDB 941225 D05 SAR for LTE Devices v02r05 SAR Evaluation Considerations for LTE Devices

KDB 941225 D06 Hot Spot SAR v02r01 SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities

KDB 248227 D01 802.11 Wi-Fi SAR v02r02 SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters.

KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04 SAR Measurement Requirements for 100 MHz to 6 GHz

KDB 865664 D02 RF Exposure Reporting v01r02 RF Exposure Compliance Reporting and Documentation Considerations

KDB 941225 D07 UMPC Mini Tablet v01r02 SAR Evaluation Procedures for UMPC Mini-Tablet Devices

KDB 941225 D05A LTE Rel.10 KDB Inquiry Sheet v01r02: REL. 10 LTE SAR TEST GUIDANCE AND KDB INQUIRIES

TCB workshop April 2019; RF Exposure Procedures (Tissue Simulating Liquids)

6. Specific Absorption Rate (SAR)

6.1. Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

6.2. SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

SAR is expressed in units of Watts per kilogram (W/kg)

SAR measurement can be either related to the temperature elevation in tissue by

$$SAR = c \left(\frac{\delta T}{\delta t} \right)$$

Where: C is the specific heat capacity, δT is the temperature rise and δt is the exposure duration, or related to the electrical field in the tissue by

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

Where: σ is the conductivity of the tissue, ρ is the mass density of tissue and E is the RMS electrical field strength.

However for evaluating SAR of low power transmitter, electrical field measurement is typically applied.

7. Tissue Simulating Liquids

7.1. Targets for tissue simulating liquid

Table 7.1: Targets for tissue simulating liquid

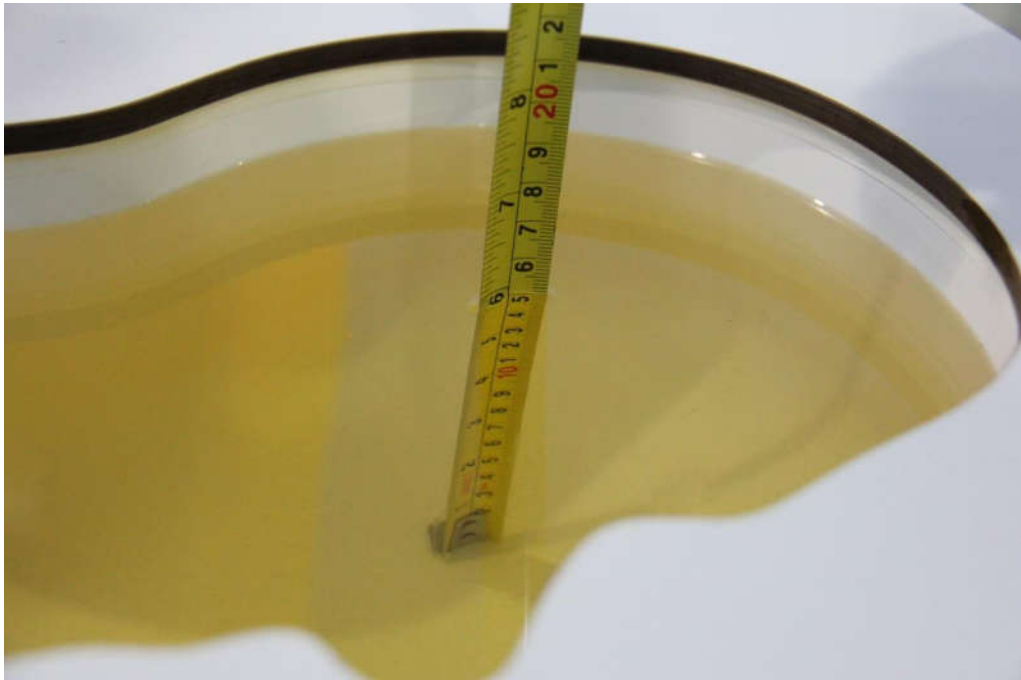
Frequency (MHz)	Liquid Type	Conductivity (σ)	$\pm 5\%$ Range	Permittivity (ϵ)	$\pm 5\%$ Range
835	Head	0.90	0.86~0.95	41.5	39.4~43.6
1750	Head	1.37	1.30~1.44	40.1	38.1~42.1
1900	Head	1.40	1.33~1.47	40.0	38.0~42.0
2450	Head	1.80	1.71~1.89	39.2	37.2~41.2
2550	Head	1.91	1.81~2.01	39.1	37.1~41.0
5250	Head	4.71	4.47~4.95	35.9	34.1~37.7
5600	Head	5.07	4.82~5.32	35.5	33.8~37.3
5750	Head	5.22	4.96~5.48	35.4	33.6~37.1

7.2. Dielectric Performance

Table 7.2: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Conductivity σ (S/m)	Drift (%)	Permittivity ϵ	Drift (%)
2021-08-15	Head	835	0.918	2.00	40.76	-1.78
2021-08-10	Head	1750	1.363	-0.51	40.54	1.15
2021-08-06	Head	1900	1.417	1.21	39.49	-1.28
2021-08-12	Head	2450	1.842	2.33	38.36	-2.14
2021-08-07	Head	2550	1.949	2.04	38.15	-2.35
2021-08-13	Head	5250	4.648	-1.32	36.72	2.20
2021-08-13	Head	5600	5.015	-1.08	35.93	1.13
2021-08-13	Head	5750	5.311	1.74	34.65	-2.12
2021-09-18	Head	5250	4.665	-0.96	36.97	2.89
2021-09-18	Head	5600	4.998	-1.42	36.16	1.77
2021-09-24	Head	5750	5.345	2.39	34.73	-1.78

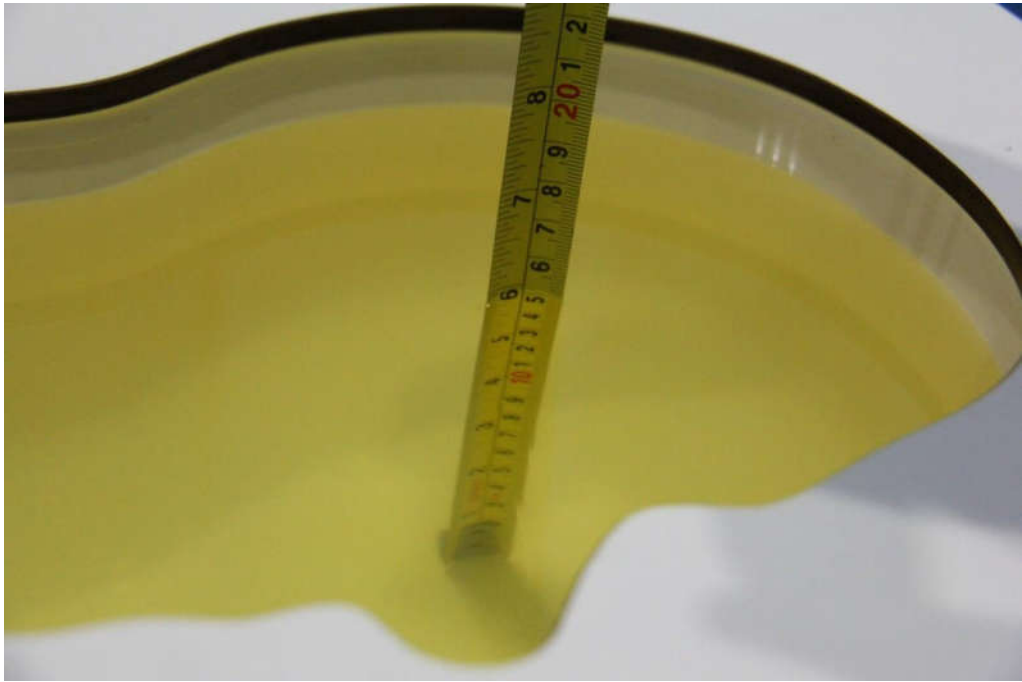
Note: The liquid temperature is 22.0°C.



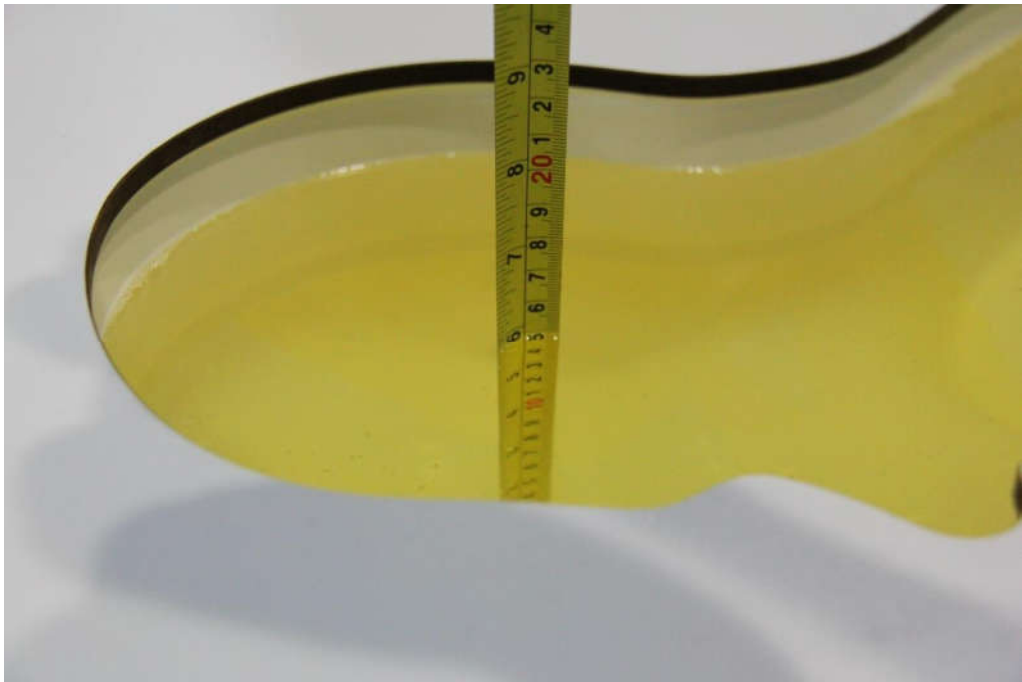
Picture 7-1: Liquid depth in the Head Phantom (835MHz)



Picture 7-2: Liquid depth in the Head Phantom (1750MHz)



Picture 7-3: Liquid depth in the Head Phantom (1900MHz)



Picture 7-4: Liquid depth in the Head Phantom(2450MHz)



Picture 7-5: Liquid depth in the Head Phantom(2550MHz)

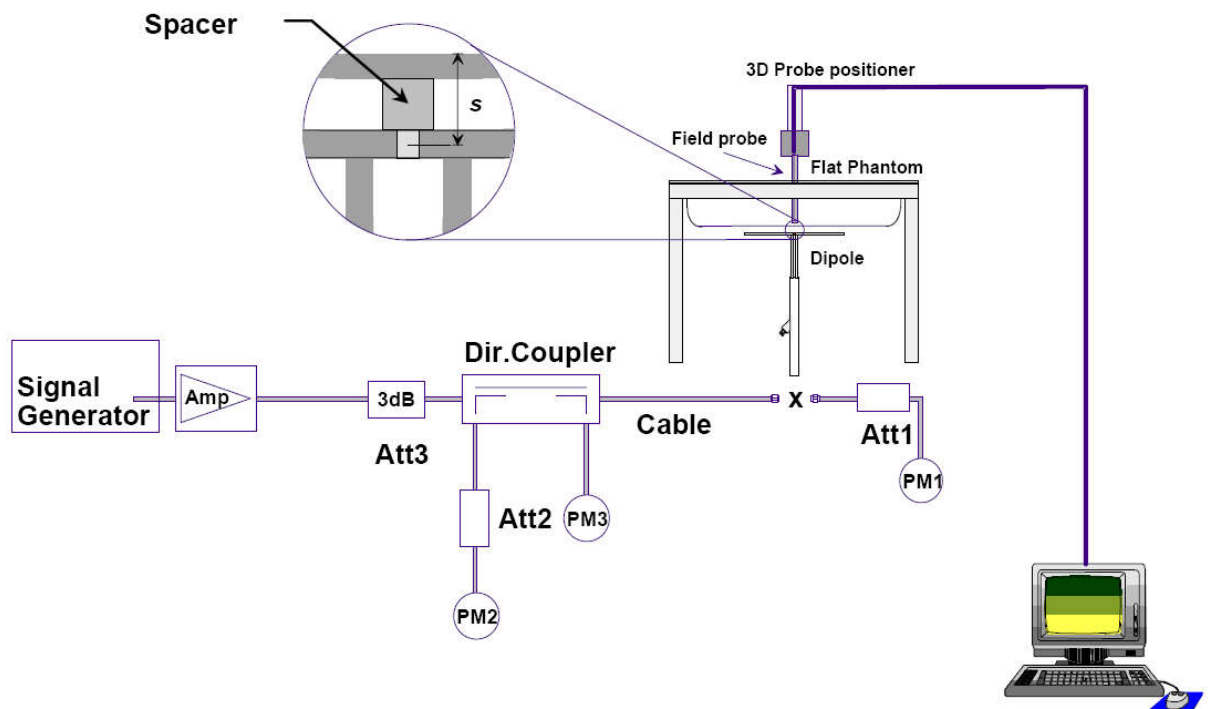


Picture 7-6: Liquid depth in the Head Phantom(5GHz)

8. System verification

8.1. System Setup

In the simplified setup for system evaluation, the DUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:



Picture 8.1 System Setup for System Evaluation

For the dipole below 3GHz, the output power on dipole port must be calibrated to 24 dBm (250mW) before dipole is connected.

For the dipole above 3GHz, the output power on dipole port must be calibrated to 20 dBm (100mW) before dipole is connected.



Picture 8.2 Photo of Dipole Setup

8.2. System Verification

SAR system verification is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device.

Table 8.1: System Verification of Head

Measurement Date	Frequency (MHz)	Target value (W/kg)		Measured value (W/kg)				Deviation (%)	
		10 g	1 g	/		Normalize to 1W		10 g	1 g
				10 g	1 g	10 g	1 g		
2021-08-15	835	6.29	9.62	1.61	2.49	6.44	9.96	2.38	3.53
2021-08-10	1750	19.30	36.40	4.75	8.81	19.00	35.24	-1.55	-3.19
2021-08-06	1900	21.00	40.50	5.32	10.4	21.28	41.60	1.33	2.72
2021-08-12	2450	24.10	52.00	6.17	13.5	24.68	54.00	2.41	3.85
2021-08-07	2550	25.20	55.90	6.48	14.6	25.92	58.40	2.86	4.47
2021-08-13	5250	22.30	78.00	2.19	7.55	21.90	75.50	-1.79	-3.21
2021-08-13	5600	22.70	79.50	2.22	7.68	22.20	76.80	-2.20	-3.40
2021-08-13	5750	22.20	78.40	2.27	8.15	22.70	81.50	2.25	3.95
2021-09-18	5250	22.30	78.00	2.20	7.64	22.00	76.40	-1.35	-2.05
2021-09-18	5600	22.70	79.50	2.23	7.71	22.30	77.10	-1.76	-3.02
2021-09-24	5750	22.20	78.40	2.29	8.22	22.90	82.20	3.15	4.85

9. Measurement Procedures

9.1. Tests to be performed

In order to determine the highest value of the peak spatial-average SAR of a handset, all device positions, configurations and operational modes shall be tested for each frequency band according to steps 1 to 3 below. A flowchart of the test process is shown in picture 9.1.

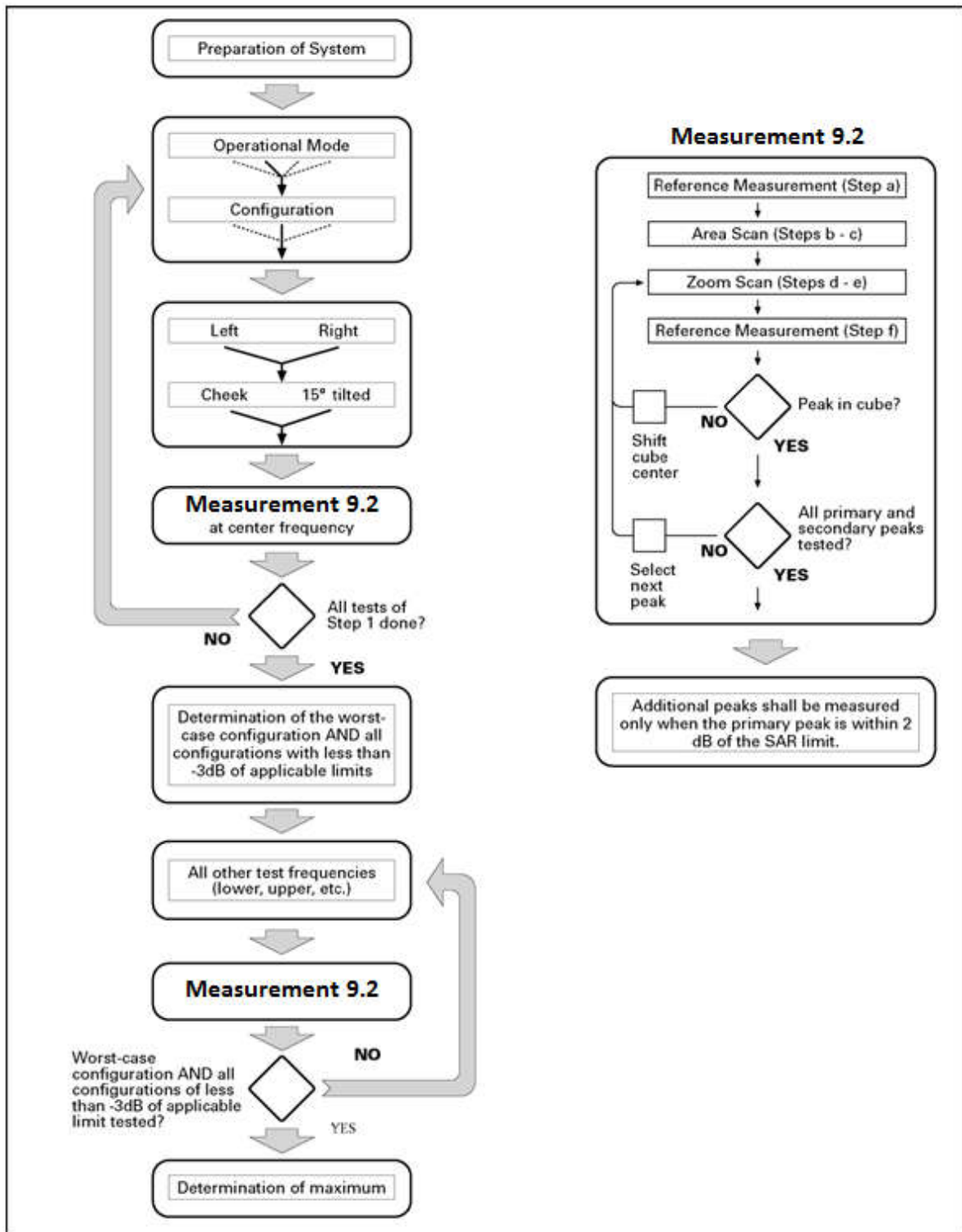
Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the center of the transmit frequency band (f_c) for:

- a) all device positions (cheek and tilt, for both left and right sides of the SAM phantom, as described in annex D),
- b) all configurations for each device position in a), e.g., antenna extended and retracted, and
- c) all operational modes, e.g., analogue and digital, for each device position in a) and configuration in b) in each frequency band.

If more than three frequencies need to be tested according to 11.1 (i.e., $N_C > 3$), then all frequencies, configurations and modes shall be tested for all of the above test conditions.

Step 2: For the condition providing highest peak spatial-average SAR determined in Step 1, perform all tests described in 9.2 at all other test frequencies, i.e., lowest and highest frequencies. In addition, for all other conditions (device position, configuration and operational mode) where the peak spatial-average SAR value determined in Step 1 is within 3 dB of the applicable SAR limit, it is recommended that all other test frequencies shall be tested as well.

Step 3: Examine all data to determine the highest value of the peak spatial-average SAR found in Steps 1 to 2.



Picture 9.1 Block diagram of the tests to be performed

9.2. General Measurement Procedure

The area and zoom scan resolutions specified in the table below must be applied to the SAR measurements and fully documented in SAR reports to qualify for TCB approval. Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1-g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2013. The results should be documented as part of the system validation records and may be requested to support test results when all the measurement parameters in the following table are not satisfied.

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

9.3. WCDMA Measurement Procedures for SAR

The following procedures are applicable to WCDMA handsets operating under 3GPP Release99, Release 5 and Release 6. The default test configuration is to measure SAR with an established radio link between the DUT and a communication test set using a 12.2kbps RMC (reference measurement channel) configured in Test Loop Mode 1. SAR is selectively confirmed for other physical channel configurations (DPCCH & DPDCH_n), HSDPA and HSPA (HSUPA/HSDPA) modes according to output power, exposure conditions and device operating capabilities. Both uplink and downlink should be configured with the same RMC or AMR, when required. SAR for Release 5 HSDPA and Release 6 HSPA are measured using the applicable FRC (fixed reference channel) and E-DCH reference channel configurations. Maximum output power is verified according to applicable versions of 3GPP TS 34.121 and SAR must be measured according to these maximum output conditions. When Maximum Power Reduction (MPR) is not implemented according to Cubic Metric (CM) requirements for Release 6 HSPA, the following procedures do not apply.

For Release 5 HSDPA Data Devices:

Sub-test	β_c	β_d	β_d (SF)	β_c / β_d	β_{hs}	CM/dB
1	2/15	15/15	64	2/15	4/15	0.0
2	12/15	15/15	64	12/15	24/25	1.0
3	15/15	8/15	64	15/8	30/15	1.5
4	15/15	4/15	64	15/4	30/15	1.5

For Release 6 HSPA Data Devices

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

9.4. LTE Measurement Procedures for SAR

SAR tests for LTE are performed with a base station simulator, Anristu MT8820C. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. All powers were measured with the Anristu MT8820C. It is performed for conducted power and SAR based on the KDB941225 D05.

SAR is evaluated separately according to the following procedures for the different test positions in each exposure condition – head, body, body-worn accessories and other use conditions. The procedures in the following subsections are applied separately to test each LTE frequency band.

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 among 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.

9.5. LTE (TDD) Considerations

According to KDB 941225 D05 SAR for LTE Devices, 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.

SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.

LTE TDD Band 41 support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations and Table 4.2-1 for Special subframe configurations.

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

Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

Uplink-Downlink Configuration	Downlink-to-Uplink Switch-point Periodicity	Subframe Number										Calculated Duty Cycle (%)
		0	1	2	3	4	5	6	7	8	9	
0	5 ms	D	S	U	U	U	D	S	U	U	U	63.33
1	5 ms	D	S	U	U	D	D	S	U	U	D	43.33
2	5 ms	D	S	U	D	D	D	S	U	D	D	23.33
3	10 ms	D	S	U	U	U	D	D	D	D	D	31.67
4	10 ms	D	S	U	U	D	D	D	D	D	D	21.67
5	10 ms	D	S	U	D	D	D	D	D	D	D	11.67
6	5 ms	D	S	U	U	U	D	S	U	U	D	53.33

Calculated Duty Cycle

Calculated Duty Cycle = Extended cyclic prefix in uplink x (Ts) x # of S + # of U

Example for Calculated Duty Cycle for Uplink-Downlink Configuration 0:

Calculated Duty Cycle = $5120 \times [1/(15000 \times 2048)] \times 2 + 6 \text{ ms} = 63.33\%$

Where

$T_s = 1/(15000 \times 2048)$ seconds

Note:

1. From May 2017 TCB Workshop, HPUE does not support uplink-downlink configurations 0 and 6.
2. This device supports uplink-downlink configurations 0-6. The configuration with highest duty cycle was used for SAR Testing: configuration 0 at 63.3% (Power Class 3) and configuration 1 at 43.3% (Power Class 2) duty cycle.

9.6. Bluetooth & WLAN Measurement Procedures for SAR

Normal network operating configurations are not suitable for measuring the SAR of 802.11 transmitters in general. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure that the results are consistent and reliable.

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in a test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

9.7. Power Drift

To control the output power stability during the SAR test, DASY5 system calculates the power drift by measuring the E-field at the same location at the beginning and at the end of the measurement for each test position. These drift values can be found in Section 14 labeled as: (Power Drift [dB]). This ensures that the power drift during one measurement is within 5%.

10. Conducted Output Power

10.1. GSM Measurement result

During the process of testing, the EUT was controlled via Agilent Digital Radio Communication tester (E5515C) to ensure the maximum power transmission and proper modulation. This result contains conducted output power for the EUT. In all cases, the measured peak output power should be greater and within 5% than EMI measurement.

Table 10.1: The conducted power measurement results for GSM

Top Antenna - Full Power				
GSM 850	Tune up	Conducted Power (dBm)		
		Ch.251 (848.8MHz)	Ch.190 (836.6MHz)	Ch.128 (824.2MHz)
	33.0	32.10	32.12	32.25
GSM 1900	Tune up	Conducted Power(dBm)		
		Ch.810 (1909.8MHz)	Ch.661 (1880MHz)	Ch.512 (1850.2MHz)
	30.5	29.19	29.20	29.75
Bottom Antenna - Full Power				
GSM 850	Tune up	Conducted Power (dBm)		
		Ch.251 (848.8MHz)	Ch.190 (836.6MHz)	Ch.128 (824.2MHz)
	33.0	32.12	32.10	32.25
GSM 1900	Tune up	Conducted Power(dBm)		
		Ch.810 (1909.8MHz)	Ch.661 (1880MHz)	Ch.512 (1850.2MHz)
	30.0	28.95	29.04	28.90

Top Antenna - Reduced power level 1/2/3/5				
GSM 850	Tune up	Conducted Power (dBm)		
		Ch.251 (848.8MHz)	Ch.190 (836.6MHz)	Ch.128 (824.2MHz)
	32.0	30.90	30.95	31.10
Top Antenna - Reduced power level 1/2				
GSM 1900	Tune up	Conducted Power(dBm)		
		Ch.810 (1909.8MHz)	Ch.661 (1880MHz)	Ch.512 (1850.2MHz)
	29.4	28.03	28.18	28.27

Bottom Antenna - Reduced power level 4/6				
GSM 1900	Tune up	Conducted Power(dBm)		
		Ch.810 (1909.8MHz)	Ch.661 (1880MHz)	Ch.512 (1850.2MHz)
	29.2	28.04	28.03	27.98

Table 10.2: The conducted power measurement results for GPRS and EGPRS

Top Antenna - Full Power								
GPRS850/ EGPRS850	Tune up	Measured Power (dBm)			calculation	Average Power (dBm)		
		251	190	128		251	190	128
1Tx-slots	33.0	32.08	32.09	32.24	-9.03dB	23.05	23.06	23.21
2Tx-slots	31.5	29.67	29.64	29.79	-6.02dB	23.65	23.62	23.77
3Tx-slots	29.7	28.12	28.19	28.37	-4.26dB	23.86	23.93	24.11
4Tx-slots	28.5	26.78	26.85	27.01	-3.01dB	23.77	23.84	24.00
EGPRS 850 (8PSK)	Tune up	Measured Power (dBm)			calculation	Measured Power (dBm)		
		251	190	128		251	190	128
1Tx-slots	28.0	26.20	26.22	26.16	-9.03dB	17.17	17.19	17.13
2Tx-slots	25.5	23.87	23.90	23.90	-6.02dB	17.85	17.88	17.88
3Tx-slots	23.7	22.00	22.03	22.01	-4.26dB	17.74	17.77	17.75
4Tx-slots	23.5	21.97	21.94	21.80	-3.01dB	18.96	18.93	18.79
GPRS1900/ EGPRS1900	Tune up	Measured Power (dBm)			calculation	Average Power (dBm)		
		810	661	512		810	661	512
1Tx-slots	30.5	29.16	29.19	29.73	-9.03dB	20.13	20.16	20.70
2Tx-slots	29.0	27.28	27.13	27.29	-6.02dB	21.26	21.11	21.27
3Tx-slots	27.2	25.48	25.60	25.77	-4.26dB	21.22	21.34	21.51
4Tx-slots	26.0	24.45	24.52	24.96	-3.01dB	21.44	21.51	21.95
EGPRS 1900 (8PSK)	Tune up	Measured Power (dBm)			calculation	Measured Power (dBm)		
		810	661	512		810	661	512
1Tx-slots	27.5	25.55	25.56	25.66	-9.03dB	16.52	16.53	16.63
2Tx-slots	25.0	23.49	23.48	23.64	-6.02dB	17.47	17.46	17.62
3Tx-slots	23.2	21.59	21.71	21.85	-4.26dB	17.33	17.45	17.59
4Tx-slots	22.5	21.07	21.20	21.28	-3.01dB	18.06	18.19	18.27



Bottom Antenna - Full Power								
GPRS850/ EGPRS850	Tune up	Measured Power (dBm)			calculation	Average Power (dBm)		
		251	190	128		251	190	128
1Tx-slots	33.0	32.10	32.08	32.23	-9.03dB	23.07	23.05	23.20
2Tx-slots	31.5	29.64	29.60	29.83	-6.02dB	23.62	23.58	23.81
3Tx-slots	29.7	28.14	28.15	28.33	-4.26dB	23.88	23.89	24.07
4Tx-slots	28.5	26.73	26.84	26.99	-3.01dB	23.72	23.83	23.98
EGPRS 850 (8PSK)	Tune up	Measured Power (dBm)			calculation	Measured Power (dBm)		
		251	190	128		251	190	128
1Tx-slots	28.0	26.18	26.21	26.18	-9.03dB	17.15	17.18	17.15
2Tx-slots	25.5	23.86	23.94	23.95	-6.02dB	17.84	17.92	17.93
3Tx-slots	23.7	21.99	22.07	21.96	-4.26dB	17.73	17.81	17.70
4Tx-slots	23.5	21.96	21.95	21.81	-3.01dB	18.95	18.94	18.80
GPRS1900/ EGPRS1900	Tune up	Measured Power (dBm)			calculation	Average Power (dBm)		
		810	661	512		810	661	512
1Tx-slots	30.0	28.94	29.01	28.88	-9.03dB	19.91	19.98	19.85
2Tx-slots	28.5	26.88	26.87	26.85	-6.02dB	20.86	20.85	20.83
3Tx-slots	26.7	25.30	25.35	25.31	-4.26dB	21.04	21.09	21.05
4Tx-slots	25.5	24.28	24.30	24.25	-3.01dB	21.27	21.29	21.24
EGPRS 1900 (8PSK)	Tune up	Measured Power (dBm)			calculation	Measured Power (dBm)		
		810	661	512		810	661	512
1Tx-slots	27.0	25.19	25.18	25.22	-9.03dB	16.16	16.15	16.19
2Tx-slots	24.5	23.09	23.14	23.20	-6.02dB	17.07	17.12	17.18
3Tx-slots	22.7	21.35	21.35	21.41	-4.26dB	17.09	17.09	17.15
4Tx-slots	22.0	20.89	20.78	20.90	-3.01dB	17.88	17.77	17.89



Top Antenna - Reduced power level 1/2/3/5								
GPRS850/ EGPRS850	Tune up	Measured Power (dBm)			calculation	Average Power (dBm)		
		251	190	128		251	190	128
1Tx-slots	32.0	30.91	31.04	31.12	-9.03dB	21.88	22.01	22.09
2Tx-slots	30.5	29.19	29.35	28.85	-6.02dB	23.17	23.33	22.83
3Tx-slots	28.7	27.10	26.99	27.13	-4.26dB	22.84	22.73	22.87
4Tx-slots	27.5	26.20	26.36	25.90	-3.01dB	23.19	23.35	22.89
EGPRS 850 (8PSK)	Tune up	Measured Power (dBm)			calculation	Measured Power (dBm)		
		251	190	128		251	190	128
1Tx-slots	27.0	25.37	25.51	25.48	-9.03dB	16.34	16.48	16.45
2Tx-slots	24.5	23.33	23.41	23.42	-6.02dB	17.31	17.39	17.40
3Tx-slots	22.7	21.89	22.01	21.93	-4.26dB	17.63	17.75	17.67
4Tx-slots	22.5	20.79	20.81	20.76	-3.01dB	17.78	17.80	17.75
Top Antenna - Reduced power level 1/2								
GPRS1900/ EGPRS1900	Tune up	Measured Power (dBm)			calculation	Average Power (dBm)		
		810	661	512		810	661	512
1Tx-slots	29.4	28.01	28.15	28.26	-9.03dB	18.98	19.12	19.23
2Tx-slots	26.9	25.42	25.46	25.61	-6.02dB	19.40	19.44	19.59
3Tx-slots	25.6	24.17	24.24	24.44	-4.26dB	19.91	19.98	20.18
4Tx-slots	24.9	23.45	23.56	23.93	-3.01dB	20.44	20.55	20.92
EGPRS 1900 (8PSK)	Tune up	Measured Power (dBm)			calculation	Measured Power (dBm)		
		810	661	512		810	661	512
1Tx-slots	26.4	24.57	24.55	24.62	-9.03dB	15.54	15.52	15.59
2Tx-slots	23.9	22.45	22.48	22.50	-6.02dB	16.43	16.46	16.48
3Tx-slots	21.7	19.95	19.93	19.97	-4.26dB	15.69	15.67	15.71
4Tx-slots	21.4	19.90	19.89	19.91	-3.01dB	16.89	16.88	16.90

Bottom Antenna - Reduced power level 4/6								
GPRS1900/ EGPRS1900	Tune up	Measured Power (dBm)			calculation	Average Power (dBm)		
		810	661	512		810	661	512
1Tx-slots	29.2	28.01	28.01	27.96	-9.03dB	18.98	18.98	18.93
2Tx-slots	27.2	25.49	25.46	25.42	-6.02dB	19.47	19.44	19.40
3Tx-slots	25.9	24.18	24.20	24.22	-4.26dB	19.92	19.94	19.96
4Tx-slots	24.7	23.68	23.69	23.71	-3.01dB	20.67	20.68	20.70
EGPRS 1900 (8PSK)	Tune up	Measured Power (dBm)			calculation	Measured Power (dBm)		
		810	661	512		810	661	512
1Tx-slots	26.2	24.36	24.32	24.38	-9.03dB	15.33	15.29	15.35
2Tx-slots	23.7	22.19	22.21	22.22	-6.02dB	16.17	16.19	16.20
3Tx-slots	21.4	19.66	19.61	19.70	-4.26dB	15.40	15.35	15.44
4Tx-slots	20.7	18.88	18.98	19.03	-3.01dB	15.87	15.97	16.02

Notes:

1) Division Factors

To average the power, the division factor is as follows:

1TX-slot = 1 transmit time slot out of 8 time slots=> conducted power divided by (8/1) => -9.03dB

2TX-slots = 2 transmit time slots out of 8 time slots=> conducted power divided by (8/2) => -6.02dB

3TX-slots = 3 transmit time slots out of 8 time slots=> conducted power divided by (8/3) => -4.26dB

4TX-slots = 4 transmit time slots out of 8 time slots=> conducted power divided by (8/4) => -3.01dB

According to the conducted power as above, the body measurements are performed with 4Txslots for GSM850MHz and GSM1900MHz.

Top Antenna – Full Power (DTM5)								
GSM850 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	31.0	29.88	29.72	29.80	/	23.96	23.85	23.90
GPRS(GSMK, 1Txslot)	31.0	30.07	30.02	30.03	/			
GSM850 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	31.0	29.91	29.80	29.89	/	21.91	21.80	21.89
EGPRS(8PSK, 1Txslot)	25.0	24.17	24.08	24.17	/			
GSM1900 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	28.0	26.60	26.73	26.95	/	20.76	20.89	21.14
GPRS(GSMK, 1Txslot)	28.0	26.95	27.08	27.37	/			
GSM1900 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	28.0	26.71	26.90	26.77	/	19.32	19.49	19.42
EGPRS(8PSK, 1Txslot)	24.5	23.32	23.47	23.50	/			

Top Antenna – Full Power (DTM9)								
GSM850 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	31.0	29.86	29.72	29.77	/	23.93	23.85	23.88
GPRS(GSMK, 1Txslot)	31.0	30.03	30.02	30.03	/			
GSM850 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	31.0	29.87	29.81	29.87	/	21.87	21.82	21.88
EGPRS(8PSK, 1Txslot)	25.0	24.15	24.14	24.20	/			
GSM1900 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	28.0	26.57	26.73	26.95	/	20.78	20.91	21.14
GPRS(GSMK, 1Txslot)	28.0	27.02	27.13	27.37	/			
GSM1900 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	28.0	27.00	27.10	27.09	/	19.53	19.64	19.64
EGPRS(8PSK, 1Txslot)	24.5	23.37	23.49	23.53	/			

Top Antenna – Full Power (DTM11)								
GSM850 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK,1Txslot)	30.0	28.95	28.76	28.88	/	24.73	24.64	24.76
GPRS(GSMK,2Txslot)	30.0	29.01	28.97	29.09	/			
GSM850 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK,1Txslot)	30.0	28.70	28.88	29.09	/	21.43	21.56	21.70
EGPRS(8PSK,2Txslot)	24.0	22.67	22.71	22.70	/			
GSM1900 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK,1Txslot)	26.5	25.08	25.20	25.29	/	21.08	21.20	21.23
GPRS(GSMK,2Txslot)	26.5	25.47	25.59	25.58	/			
GSM1900 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK,1Txslot)	26.5	25.25	25.38	25.33	/	18.95	19.01	18.99
EGPRS(8PSK,2Txslot)	22.5	21.66	21.63	21.65	/			

Bottom Antenna – Full Power (DTM5)								
GSM850 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK,1Txslot)	31.0	29.66	29.72	29.83	/	23.74	23.88	23.93
GPRS(GSMK,1Txslot)	31.0	29.85	30.07	30.07	/			
GSM850 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK,1Txslot)	31.0	29.70	29.83	30.06	/	21.72	21.84	22.03
EGPRS(8PSK,1Txslot)	25.0	24.09	24.17	24.20	/			
GSM1900 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK,1Txslot)	27.5	26.49	26.66	26.52	/	20.80	20.82	20.77
GPRS(GSMK,1Txslot)	27.5	27.12	27.02	27.04	/			
GSM1900 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK,1Txslot)	27.5	26.81	26.71	26.79	/	19.36	19.29	19.36
EGPRS(8PSK,1Txslot)	24.0	23.23	23.23	23.27	/			

Bottom Antenna – Full Power (DTM9)								
GSM850 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	31.0	29.69	29.74	29.89	/	23.77	23.86	23.98
GPRS(GSMK, 1Txslot)	31.0	29.88	30.02	30.11	/			
GSM850 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	31.0	29.68	29.81	30.03	/	21.71	21.82	22.01
EGPRS(8PSK, 1Txslot)	25.0	24.09	24.14	24.22	/			
GSM1900 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	27.5	26.47	26.64	26.57	/	20.78	20.78	20.81
GPRS(GSMK, 1Txslot)	27.5	27.10	26.96	27.07	/			
GSM1900 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	27.5	26.81	26.72	26.80	/	19.36	19.29	19.35
EGPRS(8PSK, 1Txslot)	24.0	23.24	23.21	23.22	/			

Bottom Antenna – Full Power (DTM11)								
GSM850 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	30.0	28.55	28.84	29.04	/	24.46	24.73	24.91
GPRS(GSMK, 2Txslot)	30.0	28.80	29.06	29.24	/			
GSM850 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	30.0	28.66	28.90	29.17	/	21.40	21.59	21.79
EGPRS(8PSK, 2Txslot)	24.0	22.66	22.76	22.81	/			
GSM1900 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	26.5	25.46	25.51	25.41	/	21.40	21.50	21.38
GPRS(GSMK, 2Txslot)	26.5	25.76	25.88	25.75	/			
GSM1900 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	26.5	25.51	25.59	25.61	/	19.12	19.22	19.23
EGPRS(8PSK, 2Txslot)	22.5	21.73	21.84	21.85	/			

Top Antenna – Reduced power level 1/2/3/5 (DTM5)								
GSM850 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	29.5	28.75	28.60	28.63	/	22.79	22.72	22.74
GPRS(GSMK, 1Txslot)	29.5	28.88	28.88	28.88	/			
GSM850 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	29.5	28.78	28.67	28.79	/	20.83	20.72	20.84
EGPRS(8PSK, 1Txslot)	24.0	23.27	23.18	23.30	/			
Top Antenna – Reduced power level 1/2 (DTM5)								
GSM1900 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	26.0	24.96	25.05	25.08	/	19.15	19.22	19.25
GPRS(GSMK, 1Txslot)	26.0	25.38	25.42	25.46	/			
GSM1900 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	26.0	25.08	25.21	25.12	/	17.82	17.93	17.89
EGPRS(8PSK, 1Txslot)	23.0	22.11	22.17	22.23	/			

Top Antenna – Reduced power level 1/2/3/5 (DTM9)								
GSM850 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	29.5	28.69	28.57	28.65	/	22.76	22.70	22.76
GPRS(GSMK, 1Txslot)	29.5	28.87	28.86	28.90	/			
GSM850 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	29.5	28.77	28.71	28.76	/	20.80	20.76	20.81
EGPRS(8PSK, 1Txslot)	24.0	23.21	23.23	23.27	/			
Top Antenna – Reduced power level 1/2 (DTM9)								
GSM1900 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	26.0	25.03	25.08	25.14	/	19.20	19.25	19.27
GPRS(GSMK, 1Txslot)	26.0	25.41	25.45	25.43	/			
GSM1900 DTM9 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	26.0	25.10	25.23	25.16	/	17.83	17.94	17.92
EGPRS(8PSK, 1Txslot)	23.0	22.08	22.16	22.24	/			

Top Antenna – Reduced power level 1/2/3/5 (DTM11)								
GSM850 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	28.5	27.26	27.35	26.85	/	23.11	23.30	23.22
GPRS(GSMK, 2Txslot)	28.5	27.43	27.66	27.77	/			
GSM850 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		251	190	128		251	190	128
GSM(GSMK, 1Txslot)	28.5	27.74	27.53	27.53	/	20.63	20.55	20.48
EGPRS(8PSK, 2Txslot)	23.0	22.18	22.33	22.15	/			
Top Antenna – Reduced power level 1/2 (DTM11)								
GSM1900 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	25.0	23.74	23.87	23.90	/	19.80	19.92	19.88
GPRS(GSMK, 2Txslot)	25.0	24.21	24.32	24.26	/			
GSM1900 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	25.0	23.94	24.02	23.95	/	17.31	17.36	17.35
EGPRS(8PSK, 2Txslot)	20.5	19.60	19.62	19.69	/			

Bottom Antenna – Reduced power level 4/6 (DTM5)								
GSM1900 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	25.0	23.89	24.00	24.09	/	18.07	18.11	18.19
GPRS(GSMK, 1Txslot)	25.0	24.29	24.26	24.33	/			
GSM1900 DTM5 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	25.0	24.00	24.07	24.17	/	16.76	16.85	16.93
EGPRS(8PSK, 1Txslot)	22.0	21.09	21.21	21.25	/			



Bottom Antenna – Reduced power level 4/6 (DTM9)								
GSM1900 DTM11 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	25.0	23.92	23.97	24.06	/	18.08	18.10	18.17
GPRS(GSMK, 1Txslot)	25.0	24.27	24.27	24.31	/			
GSM1900 DTM11 (2Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	25.0	23.99	24.05	24.13	/	16.76	16.82	16.90
EGPRS(8PSK, 1Txslot)	22.0	21.11	21.17	21.24	/			

Bottom Antenna – Reduced power level 4/6 (DTM11)								
GSM1900 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	25.0	23.76	23.80	23.81	/	19.79	19.80	19.79
GPRS(GSMK, 2Txslot)	25.0	24.19	24.18	24.17	/			
GSM1900 DTM11 (3Txslots)	Tune up	Measured Power (dBm)			calculation	Averaged Power (dBm)		
		810	661	512		810	661	512
GSM(GSMK, 1Txslot)	25.0	23.96	24.02	23.89	/	17.30	17.34	17.24
EGPRS(8PSK, 2Txslot)	20.0	19.56	19.57	19.52	/			

10.2. WCDMA Measurement result

Table 10.3: T The conducted power measurement results WCDMA

Top Antenna - Full Power					
Item	band	WCDMA Band 2 result			
	ARFCN	Tune up	Ch.9538 (1907.6MHz)	Ch.9400 (1880MHz)	Ch.9262 (1852.4MHz)
WCDMA	\	24.5	24.0	24.0	24.1
HSUPA	1	24.2	23.7	23.8	23.8
	2	21.5	21.0	21.2	21.1
	3	22.5	22.0	22.1	22.2
	4	21.5	21.0	21.1	21.2
	5	24.2	23.6	23.8	23.9
HSDPA	1	24.2	23.7	23.8	23.8
	2	24.2	23.7	23.8	23.9
	3	23.8	23.3	23.4	19.4
	4	23.8	23.3	23.4	23.5
DC-HSDPA	1	24.2	23.7	23.8	23.9
	2	24.2	23.7	23.7	23.8
	3	23.8	23.2	23.3	23.4
	4	23.8	23.3	23.3	23.3
Bottom Antenna - Full Power					
Item	band	WCDMA Band 2 result			
	ARFCN	Tune up	Ch.9538 (1907.6MHz)	Ch.9400 (1880MHz)	Ch.9262 (1852.4MHz)
WCDMA	\	24.0	23.0	23.2	23.2
HSUPA	1	23.7	22.7	22.9	22.9
	2	21.0	20.0	20.2	20.2
	3	22.0	20.9	21.1	21.1
	4	21.0	20.0	20.2	20.2
	5	23.7	22.6	22.8	22.9
HSDPA	1	23.7	22.7	22.9	22.9
	2	23.7	22.7	22.9	22.9
	3	23.3	22.3	22.5	22.5
	4	23.3	22.3	22.5	22.5
DC-HSDPA	1	23.7	22.7	22.8	22.9
	2	23.7	22.6	22.8	22.8
	3	23.3	22.3	22.4	22.5
	4	23.3	22.3	22.4	22.4

Top Antenna - Reduced power level 1/2					
Item	band	WCDMA Band 2 result			
	ARFCN	Tune up	Ch.9538 (1907.6MHz)	Ch.9400 (1880MHz)	Ch.9262 (1852.4MHz)
WCDMA	\	20.2	19.9	20.0	20.1
HSUPA	1	19.9	19.6	19.8	19.7
	2	17.2	16.9	17.1	17.1
	3	18.2	17.9	18.0	18.1
	4	17.2	16.9	17.1	17.0
	5	19.9	19.6	19.7	19.8
HSDPA	1	19.9	19.6	19.7	19.8
	2	19.9	19.5	19.8	19.8
	3	19.5	19.1	19.4	19.4
	4	19.5	19.1	19.4	19.4
DC-HSDPA	1	19.9	19.6	19.7	19.7
	2	19.9	19.5	19.6	19.7
	3	19.5	19.1	19.2	19.3
	4	19.5	19.1	19.2	19.2
Top Antenna - Reduced power level 3/5					
Item	band	WCDMA Band 2 result			
	ARFCN	Tune up	Ch.9538 (1907.6MHz)	Ch.9400 (1880MHz)	Ch.9262 (1852.4MHz)
WCDMA	\	22.6	22.4	22.5	22.5
HSUPA	1	22.3	22.1	22.2	22.2
	2	19.6	19.3	19.5	19.5
	3	20.6	20.3	20.5	20.5
	4	19.6	19.3	19.5	19.5
	5	22.3	22.1	22.2	22.2
HSDPA	1	22.3	22.0	22.2	22.2
	2	22.3	22.1	22.2	22.0
	3	21.9	21.7	21.7	21.8
	4	21.9	21.6	21.7	21.8
DC-HSDPA	1	22.3	22.0	22.2	22.1
	2	22.3	22.1	22.2	22.0
	3	21.9	21.8	21.8	21.8
	4	21.9	21.6	21.7	21.8



Bottom Antenna - Reduced power level 4/6					
Item	band	WCDMA Band 2 result			
	ARFCN	Tune up	Ch.9538 (1907.6MHz)	Ch.9400 (1880MHz)	Ch.9262 (1852.4MHz)
WCDMA	\	19.5	18.7	18.8	18.9
HSUPA	1	19.2	18.4	18.5	18.5
	2	16.5	15.7	15.8	15.8
	3	17.5	16.6	16.8	16.8
	4	16.5	15.7	15.8	15.8
	5	19.2	18.4	18.5	18.6
HSDPA	1	19.2	18.4	18.6	18.6
	2	19.2	18.5	18.6	18.6
	3	18.8	18.1	18.2	18.3
	4	18.8	18.1	18.2	18.2
DC-HSDPA	1	19.2	18.4	18.5	18.6
	2	19.2	18.4	18.4	18.5
	3	18.8	18.1	18.2	18.3
	4	18.8	18.2	18.2	18.2



Top Antenna - Full Power					
Item	band	WCDMA Band 4 result			
	ARFCN	Tune up	Ch.1513 (1752.6MHz)	Ch.1413 (1732.6MHz)	Ch.1312 (1712.4MHz)
WCDMA	\	25.0	24.4	24.5	24.5
HSUPA	1	24.0	23.4	23.4	23.5
	2	22.0	21.4	21.5	21.5
	3	23.0	22.4	22.4	22.5
	4	22.0	21.4	21.5	21.5
	5	24.0	23.4	23.4	23.5
HSDPA	1	24.0	23.4	23.5	23.5
	2	24.0	23.4	23.5	23.5
	3	23.5	22.9	23.0	23.0
	4	23.5	22.9	23.0	23.1
DC-HSDPA	1	24.0	23.3	23.4	23.5
	2	24.0	23.4	23.3	23.4
	3	23.5	23.0	23.0	23.0
	4	23.5	22.8	23.0	23.0
Bottom Antenna - Full Power					
Item	band	WCDMA Band 4 result			
	ARFCN	Tune up	Ch.1513 (1752.6MHz)	Ch.1413 (1732.6MHz)	Ch.1312 (1712.4MHz)
WCDMA	\	24.5	23.5	23.5	23.6
HSUPA	1	23.5	22.5	22.5	22.6
	2	21.5	20.5	20.5	20.6
	3	22.5	21.5	21.5	21.6
	4	21.5	20.5	20.6	20.6
	5	23.5	22.6	22.4	22.6
HSDPA	1	23.5	22.5	22.5	22.6
	2	23.5	22.5	22.5	22.7
	3	23.0	22.0	22.0	22.1
	4	23.0	22.0	22.0	22.1
DC-HSDPA	1	23.5	22.5	22.6	22.7
	2	23.5	22.5	22.6	22.6
	3	23.0	22.0	22.0	22.0
	4	23.0	21.8	21.9	22.1

Top Antenna - Reduced power level 1/2					
Item	band	WCDMA Band 4 result			
	ARFCN	Tune up	Ch.1513 (1752.6MHz)	Ch.1413 (1732.6MHz)	Ch.1312 (1712.4MHz)
WCDMA	\	20.6	20.3	20.4	20.4
HSUPA	1	19.6	19.3	19.3	19.4
	2	17.6	17.3	17.3	17.5
	3	18.6	18.2	18.3	18.4
	4	17.6	17.3	17.3	17.4
	5	19.6	19.2	19.5	19.4
HSDPA	1	19.6	19.3	19.4	19.4
	2	19.6	19.3	19.4	19.5
	3	19.1	18.8	18.9	18.9
	4	19.1	18.8	18.9	19.0
DC-HSDPA	1	19.6	19.3	19.4	19.4
	2	19.6	19.3	19.4	19.5
	3	19.1	18.8	18.9	18.9
	4	19.1	18.8	18.9	19.0
Top Antenna - Reduced power level 3/5					
Item	band	WCDMA Band 4 result			
	ARFCN	Tune up	Ch.1513 (1752.6MHz)	Ch.1413 (1732.6MHz)	Ch.1312 (1712.4MHz)
WCDMA	\	23.3	23.0	23.1	23.1
HSUPA	1	22.3	22.0	22.0	22.1
	2	20.3	20.0	20.1	20.2
	3	21.3	21.0	21.0	20.5
	4	20.3	20.0	20.0	20.1
	5	22.3	22.0	22.0	22.1
HSDPA	1	22.3	22.0	22.0	22.1
	2	22.3	22.0	22.0	22.2
	3	21.8	21.5	21.6	21.6
	4	21.8	21.4	21.6	21.6
DC-HSDPA	1	22.3	21.9	22.0	22.0
	2	22.3	22.0	22.0	22.1
	3	21.8	21.4	21.5	21.6
	4	21.8	21.4	21.4	21.5



Bottom Antenna - Reduced power level 4/6					
Item	band	WCDMA Band 4 result			
	ARFCN	Tune up	Ch.1513 (1752.6MHz)	Ch.1413 (1732.6MHz)	Ch.1312 (1712.4MHz)
WCDMA	\	20.8	20.1	20.1	20.2
HSUPA	1	19.8	19.1	19.1	19.3
	2	17.8	17.0	17.0	17.2
	3	18.8	18.1	18.1	18.2
	4	17.8	17.0	17.1	17.2
	5	19.8	19.2	19.0	19.1
HSDPA	1	19.8	19.1	19.1	19.2
	2	19.8	19.1	19.1	19.2
	3	19.3	18.6	18.6	18.8
	4	19.3	18.6	18.6	18.8
DC-HSDPA	1	19.8	19.1	19.1	19.1
	2	19.8	19.0	19.1	19.0
	3	19.3	18.6	18.7	18.8
	4	19.3	18.6	18.6	18.6



Top Antenna - Full Power					
Item	band	WCDMA Band 5 result			
	ARFCN	Tune up	Ch.4233 (846.6MHz)	Ch.4182 (836.4MHz)	Ch.4132 (826.4MHz)
WCDMA	\	24.5	23.3	23.4	23.3
HSUPA	1	23.5	22.4	22.4	22.3
	2	21.5	20.3	20.4	20.3
	3	22.5	21.3	21.4	21.3
	4	21.5	20.4	20.4	20.4
	5	23.5	22.3	22.5	22.3
HSDPA	1	23.5	22.4	22.4	22.3
	2	23.5	22.4	22.4	22.3
	3	23.0	21.9	21.9	21.8
	4	23.0	21.8	21.9	21.9
DC-HSDPA	1	23.5	22.3	22.4	22.5
	2	23.5	22.4	22.4	22.4
	3	23.0	21.9	21.9	21.9
	4	23.0	21.7	21.8	21.9
Bottom Antenna - Full Power					
Item	band	WCDMA Band 5 result			
	ARFCN	Tune up	Ch.4233 (846.6MHz)	Ch.4182 (836.4MHz)	Ch.4132 (826.4MHz)
WCDMA	\	24.5	23.3	23.4	23.3
HSUPA	1	23.5	22.3	22.4	22.4
	2	21.5	20.3	20.3	20.3
	3	22.5	21.3	21.3	21.3
	4	21.5	20.3	20.4	20.3
	5	23.5	22.3	22.3	22.4
HSDPA	1	23.5	22.4	22.4	22.3
	2	23.5	22.4	22.4	22.4
	3	23.0	21.8	21.9	21.9
	4	23.0	21.8	21.8	21.8
DC-HSDPA	1	23.5	22.4	22.4	22.4
	2	23.5	22.3	22.4	22.5
	3	23.0	21.8	21.9	22.0
	4	23.0	21.8	21.8	21.9



Top Antenna - Reduced power level 1/2					
Item	band	WCDMA Band 5 result			
	ARFCN	Tune up	Ch.4233 (846.6MHz)	Ch.4182 (836.4MHz)	Ch.4132 (826.4MHz)
WCDMA	\	20.9	20.1	20.2	20.1
HSUPA	1	19.9	19.1	19.2	19.1
	2	17.9	17.1	17.2	17.1
	3	18.9	18.1	18.2	18.1
	4	17.9	17.1	17.2	17.1
	5	19.9	19.1	19.2	19.0
HSDPA	1	19.9	19.1	19.2	19.1
	2	19.9	19.1	19.1	19.1
	3	19.4	18.6	18.6	18.6
	4	19.4	18.6	18.7	18.7
DC-HSDPA	1	19.9	19.1	19.2	19.1
	2	19.9	19.1	19.1	19.1
	3	19.4	18.6	18.6	18.6
	4	19.4	18.6	18.7	18.7



10.3. LTE Measurement result

Table 10.4: The conducted Power for LTE

Top Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1909.3	22.77	22.14	21.04	24.0	23.0	22.0
		1880.0	22.93	22.20	21.13	24.0	23.0	22.0
		1850.7	22.87	22.14	21.06	24.0	23.0	22.0
	1RB_3	1909.3	22.87	22.21	21.13	24.0	23.0	22.0
		1880.0	23.00	22.34	21.27	24.0	23.0	22.0
		1850.7	22.96	22.28	21.11	24.0	23.0	22.0
	1RB_0	1909.3	22.83	22.22	21.10	24.0	23.0	22.0
		1880.0	22.97	22.31	21.22	24.0	23.0	22.0
		1850.7	22.95	22.24	21.10	24.0	23.0	22.0
	3RB_3	1909.3	22.82	21.88	20.91	24.0	23.0	22.0
		1880.0	22.93	22.05	21.06	24.0	23.0	22.0
		1850.7	22.90	22.01	20.97	24.0	23.0	22.0
	3RB_1	1909.3	22.87	21.95	21.02	24.0	23.0	22.0
		1880.0	23.03	22.16	21.13	24.0	23.0	22.0
		1850.7	23.01	22.07	21.05	24.0	23.0	22.0
	3RB_0	1909.3	22.86	21.94	20.97	24.0	23.0	22.0
		1880.0	22.96	22.14	21.13	24.0	23.0	22.0
		1850.7	22.93	22.06	21.08	24.0	23.0	22.0
	6RB_0	1909.3	21.91	20.92	19.91	23.0	22.0	21.0
		1880.0	22.06	21.06	20.05	23.0	22.0	21.0
		1850.7	22.02	21.01	20.00	23.0	22.0	21.0



Top Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1908.5	22.81	22.16	21.04	24.0	23.0	22.0
		1880.0	22.93	22.30	21.22	24.0	23.0	22.0
		1851.5	22.90	22.29	21.21	24.0	23.0	22.0
	1RB_7	1908.5	22.93	22.20	21.10	24.0	23.0	22.0
		1880.0	23.01	22.34	21.28	24.0	23.0	22.0
		1851.5	23.01	22.34	21.24	24.0	23.0	22.0
	1RB_0	1908.5	22.95	22.32	21.21	24.0	23.0	22.0
		1880.0	23.04	22.44	21.36	24.0	23.0	22.0
		1851.5	23.08	22.44	21.30	24.0	23.0	22.0
	8RB_7	1908.5	21.92	20.94	19.93	23.0	22.0	21.0
		1880.0	22.05	21.10	20.06	23.0	22.0	21.0
		1851.5	22.00	21.02	19.98	23.0	22.0	21.0
	8RB_4	1908.5	21.96	21.05	20.01	23.0	22.0	21.0
		1880.0	22.07	21.14	20.14	23.0	22.0	21.0
		1851.5	22.05	21.12	20.13	23.0	22.0	21.0
	8RB_0	1908.5	22.00	21.07	20.04	23.0	22.0	21.0
		1880.0	22.09	21.13	20.08	23.0	22.0	21.0
		1851.5	22.11	21.16	20.10	23.0	22.0	21.0
	15RB_0	1908.5	21.99	20.96	19.97	23.0	22.0	21.0
		1880.0	22.03	21.07	20.01	23.0	22.0	21.0
		1851.5	22.03	21.10	20.07	23.0	22.0	21.0



Top Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1907.5	22.85	22.15	21.21	24.0	23.0	22.0
		1880.0	22.96	22.37	21.25	24.0	23.0	22.0
		1852.5	22.92	22.23	21.18	24.0	23.0	22.0
	1RB_12	1907.5	22.95	22.21	21.22	24.0	23.0	22.0
		1880.0	23.06	22.42	21.28	24.0	23.0	22.0
		1852.5	23.03	22.33	21.19	24.0	23.0	22.0
	1RB_0	1907.5	22.97	22.27	21.30	24.0	23.0	22.0
		1880.0	23.02	22.37	21.28	24.0	23.0	22.0
		1852.5	23.03	22.36	21.27	24.0	23.0	22.0
	12RB_13	1907.5	21.89	20.91	19.91	23.0	22.0	21.0
		1880.0	22.06	21.08	20.03	23.0	22.0	21.0
		1852.5	22.00	21.05	19.97	23.0	22.0	21.0
	12RB_6	1907.5	22.01	21.03	19.96	23.0	22.0	21.0
		1880.0	22.08	21.09	20.07	23.0	22.0	21.0
		1852.5	22.09	21.07	20.08	23.0	22.0	21.0
	12RB_0	1907.5	22.07	21.06	20.04	23.0	22.0	21.0
		1880.0	22.07	21.14	20.12	23.0	22.0	21.0
		1852.5	22.08	21.11	20.11	23.0	22.0	21.0
	25RB_0	1907.5	21.94	21.01	19.98	23.0	22.0	21.0
		1880.0	22.03	21.08	20.03	23.0	22.0	21.0
		1852.5	22.04	21.05	20.05	23.0	22.0	21.0



Top Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1905.0	22.85	22.19	21.09	24.0	23.0	22.0
		1880.0	22.97	22.33	21.20	24.0	23.0	22.0
		1855.0	22.94	22.21	21.15	24.0	23.0	22.0
	1RB_24	1905.0	22.87	22.20	21.12	24.0	23.0	22.0
		1880.0	22.99	22.32	21.21	24.0	23.0	22.0
		1855.0	22.94	22.25	21.11	24.0	23.0	22.0
	1RB_0	1905.0	22.97	22.28	21.19	24.0	23.0	22.0
		1880.0	23.08	22.37	21.24	24.0	23.0	22.0
		1855.0	23.02	22.36	21.25	24.0	23.0	22.0
	25RB_25	1905.0	21.97	20.98	19.93	23.0	22.0	21.0
		1880.0	22.06	21.14	20.02	23.0	22.0	21.0
		1855.0	22.02	21.03	20.00	23.0	22.0	21.0
	25RB_12	1905.0	22.02	21.04	20.04	23.0	22.0	21.0
		1880.0	22.06	21.07	20.02	23.0	22.0	21.0
		1855.0	22.09	21.11	20.06	23.0	22.0	21.0
	25RB_0	1905.0	22.00	21.10	20.01	23.0	22.0	21.0
		1880.0	22.03	21.12	20.09	23.0	22.0	21.0
		1855.0	22.07	21.14	20.11	23.0	22.0	21.0
	50RB_0	1905.0	22.02	21.02	20.05	23.0	22.0	21.0
		1880.0	21.99	21.04	20.05	23.0	22.0	21.0
		1855.0	22.05	21.09	20.03	23.0	22.0	21.0



Top Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1902.5	22.75	22.03	20.93	24.0	23.0	22.0
		1880.0	22.86	22.13	21.04	24.0	23.0	22.0
		1857.5	22.82	22.11	21.02	24.0	23.0	22.0
	1RB_37	1902.5	22.77	22.08	20.94	24.0	23.0	22.0
		1880.0	22.84	22.09	21.06	24.0	23.0	22.0
		1857.5	22.77	22.08	20.95	24.0	23.0	22.0
	1RB_0	1902.5	22.83	22.12	21.08	24.0	23.0	22.0
		1880.0	22.87	22.15	21.07	24.0	23.0	22.0
		1857.5	22.89	22.24	21.08	24.0	23.0	22.0
	36RB_38	1902.5	21.92	20.93	19.91	23.0	22.0	21.0
		1880.0	21.98	21.00	20.01	23.0	22.0	21.0
		1857.5	21.93	20.93	19.96	23.0	22.0	21.0
	36RB_19	1902.5	21.94	20.91	19.93	23.0	22.0	21.0
		1880.0	21.92	20.94	19.96	23.0	22.0	21.0
		1857.5	21.95	20.95	19.97	23.0	22.0	21.0
	36RB_0	1902.5	21.92	20.97	19.95	23.0	22.0	21.0
		1880.0	21.97	20.93	19.97	23.0	22.0	21.0
		1857.5	21.91	20.90	19.91	23.0	22.0	21.0
	75RB_0	1902.5	21.93	20.94	19.96	23.0	22.0	21.0
		1880.0	21.97	20.94	19.93	23.0	22.0	21.0
		1857.5	21.95	20.97	20.00	23.0	22.0	21.0



Top Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1900.0	22.70	22.01	20.92	24.0	23.0	22.0
		1880.0	22.84	22.13	20.99	24.0	23.0	22.0
		1860.0	22.80	22.08	20.97	24.0	23.0	22.0
	1RB_50	1900.0	22.81	22.05	20.95	24.0	23.0	22.0
		1880.0	22.85	22.13	20.99	24.0	23.0	22.0
		1860.0	22.79	22.02	20.98	24.0	23.0	22.0
	1RB_0	1900.0	22.80	22.11	21.07	24.0	23.0	22.0
		1880.0	22.87	22.17	21.04	24.0	23.0	22.0
		1860.0	22.84	22.13	21.06	24.0	23.0	22.0
	50RB_50	1900.0	21.88	20.91	19.90	23.0	22.0	21.0
		1880.0	21.98	20.97	20.00	23.0	22.0	21.0
		1860.0	21.92	20.95	19.96	23.0	22.0	21.0
	50RB_25	1900.0	21.91	20.98	19.93	23.0	22.0	21.0
		1880.0	21.92	20.95	19.91	23.0	22.0	21.0
		1860.0	21.96	21.01	19.99	23.0	22.0	21.0
	50RB_0	1900.0	21.90	20.94	19.91	23.0	22.0	21.0
		1880.0	21.96	20.95	19.97	23.0	22.0	21.0
		1860.0	21.89	20.90	19.93	23.0	22.0	21.0
	100RB_0	1900.0	21.89	20.85	19.84	23.0	22.0	21.0
		1880.0	21.93	20.96	19.94	23.0	22.0	21.0
		1860.0	21.99	20.96	19.96	23.0	22.0	21.0



Bottom Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1909.3	22.18	21.49	20.46	23.5	22.5	21.5
		1880.0	22.28	21.61	20.51	23.5	22.5	21.5
		1850.7	22.20	21.56	20.40	23.5	22.5	21.5
	1RB_3	1909.3	22.28	21.61	20.57	23.5	22.5	21.5
		1880.0	22.39	21.71	20.64	23.5	22.5	21.5
		1850.7	22.33	21.69	20.54	23.5	22.5	21.5
	1RB_0	1909.3	22.25	21.56	20.58	23.5	22.5	21.5
		1880.0	22.40	21.70	20.59	23.5	22.5	21.5
		1850.7	22.31	21.70	20.52	23.5	22.5	21.5
	3RB_3	1909.3	22.19	21.35	20.39	23.5	22.5	21.5
		1880.0	22.33	21.45	20.47	23.5	22.5	21.5
		1850.7	22.27	21.36	20.38	23.5	22.5	21.5
	3RB_1	1909.3	22.32	21.43	20.44	23.5	22.5	21.5
		1880.0	22.41	21.56	20.55	23.5	22.5	21.5
		1850.7	22.35	21.43	20.45	23.5	22.5	21.5
	3RB_0	1909.3	22.24	21.40	20.43	23.5	22.5	21.5
		1880.0	22.42	21.49	20.47	23.5	22.5	21.5
		1850.7	22.32	21.38	20.45	23.5	22.5	21.5
	6RB_0	1909.3	21.31	20.37	19.32	22.5	21.5	20.5
		1880.0	21.40	20.51	19.42	22.5	21.5	20.5
		1850.7	21.31	20.39	19.37	22.5	21.5	20.5



Bottom Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1908.5	22.25	21.61	20.49	23.5	22.5	21.5
		1880.0	22.38	21.70	20.66	23.5	22.5	21.5
		1851.5	22.29	21.59	20.61	23.5	22.5	21.5
	1RB_7	1908.5	22.34	21.64	20.55	23.5	22.5	21.5
		1880.0	22.43	21.74	20.62	23.5	22.5	21.5
		1851.5	22.39	21.68	20.67	23.5	22.5	21.5
	1RB_0	1908.5	22.41	21.70	20.66	23.5	22.5	21.5
		1880.0	22.45	21.80	20.75	23.5	22.5	21.5
		1851.5	22.43	21.76	20.75	23.5	22.5	21.5
	8RB_7	1908.5	21.33	20.36	19.39	22.5	21.5	20.5
		1880.0	21.41	20.48	19.47	22.5	21.5	20.5
		1851.5	21.36	20.41	19.37	22.5	21.5	20.5
	8RB_4	1908.5	21.43	20.49	19.43	22.5	21.5	20.5
		1880.0	21.50	20.59	19.56	22.5	21.5	20.5
		1851.5	21.42	20.51	19.49	22.5	21.5	20.5
	8RB_0	1908.5	21.46	20.49	19.45	22.5	21.5	20.5
		1880.0	21.48	20.55	19.49	22.5	21.5	20.5
		1851.5	21.47	20.56	19.46	22.5	21.5	20.5
	15RB_0	1908.5	21.42	20.42	19.42	22.5	21.5	20.5
		1880.0	21.40	20.45	19.44	22.5	21.5	20.5
		1851.5	21.40	20.45	19.46	22.5	21.5	20.5



Bottom Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1907.5	22.29	21.72	20.54	23.5	22.5	21.5
		1880.0	22.40	21.79	20.67	23.5	22.5	21.5
		1852.5	22.32	21.68	20.60	23.5	22.5	21.5
	1RB_12	1907.5	22.35	21.70	20.59	23.5	22.5	21.5
		1880.0	22.46	21.79	20.66	23.5	22.5	21.5
		1852.5	22.39	21.67	20.63	23.5	22.5	21.5
	1RB_0	1907.5	22.40	21.72	20.69	23.5	22.5	21.5
		1880.0	22.42	21.81	20.71	23.5	22.5	21.5
		1852.5	22.42	21.77	20.65	23.5	22.5	21.5
	12RB_13	1907.5	21.36	20.35	19.36	22.5	21.5	20.5
		1880.0	21.47	20.44	19.41	22.5	21.5	20.5
		1852.5	21.38	20.41	19.39	22.5	21.5	20.5
	12RB_6	1907.5	21.47	20.47	19.44	22.5	21.5	20.5
		1880.0	21.48	20.48	19.49	22.5	21.5	20.5
		1852.5	21.48	20.49	19.51	22.5	21.5	20.5
	12RB_0	1907.5	21.48	20.46	19.48	22.5	21.5	20.5
		1880.0	21.48	20.49	19.52	22.5	21.5	20.5
		1852.5	21.52	20.51	19.51	22.5	21.5	20.5
	25RB_0	1907.5	21.40	20.42	19.39	22.5	21.5	20.5
		1880.0	21.44	20.44	19.45	22.5	21.5	20.5
		1852.5	21.44	20.43	19.42	22.5	21.5	20.5



Bottom Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1905.0	22.30	21.62	20.52	23.5	22.5	21.5
		1880.0	22.35	21.71	20.61	23.5	22.5	21.5
		1855.0	22.26	21.63	20.52	23.5	22.5	21.5
	1RB_24	1905.0	22.37	21.61	20.58	23.5	22.5	21.5
		1880.0	22.46	21.70	20.61	23.5	22.5	21.5
		1855.0	22.34	21.62	20.58	23.5	22.5	21.5
	1RB_0	1905.0	22.41	21.77	20.69	23.5	22.5	21.5
		1880.0	22.44	21.75	20.68	23.5	22.5	21.5
		1855.0	22.44	21.73	20.64	23.5	22.5	21.5
	25RB_25	1905.0	21.40	20.38	19.35	22.5	21.5	20.5
		1880.0	21.47	20.46	19.47	22.5	21.5	20.5
		1855.0	21.37	20.42	19.37	22.5	21.5	20.5
	25RB_12	1905.0	21.45	20.48	19.48	22.5	21.5	20.5
		1880.0	21.43	20.47	19.49	22.5	21.5	20.5
		1855.0	21.47	20.47	19.40	22.5	21.5	20.5
	25RB_0	1905.0	21.44	20.50	19.45	22.5	21.5	20.5
		1880.0	21.47	20.46	19.50	22.5	21.5	20.5
		1855.0	21.44	20.51	19.50	22.5	21.5	20.5
	50RB_0	1905.0	21.42	20.45	19.47	22.5	21.5	20.5
		1880.0	21.42	20.45	19.42	22.5	21.5	20.5
		1855.0	21.45	20.42	19.43	22.5	21.5	20.5



Bottom Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1902.5	22.20	21.48	20.40	23.5	22.5	21.5
		1880.0	22.24	21.55	20.45	23.5	22.5	21.5
		1857.5	22.19	21.59	20.39	23.5	22.5	21.5
	1RB_37	1902.5	22.22	21.55	20.44	23.5	22.5	21.5
		1880.0	22.29	21.60	20.44	23.5	22.5	21.5
		1857.5	22.16	21.49	20.30	23.5	22.5	21.5
	1RB_0	1902.5	22.27	21.61	20.47	23.5	22.5	21.5
		1880.0	22.28	21.65	20.44	23.5	22.5	21.5
		1857.5	22.24	21.60	20.46	23.5	22.5	21.5
	36RB_38	1902.5	21.33	20.31	19.35	22.5	21.5	20.5
		1880.0	21.41	20.39	19.40	22.5	21.5	20.5
		1857.5	21.32	20.36	19.34	22.5	21.5	20.5
	36RB_19	1902.5	21.38	20.35	19.37	22.5	21.5	20.5
		1880.0	21.32	20.34	19.35	22.5	21.5	20.5
		1857.5	21.36	20.33	19.32	22.5	21.5	20.5
	36RB_0	1902.5	21.38	20.36	19.41	22.5	21.5	20.5
		1880.0	21.34	20.35	19.35	22.5	21.5	20.5
		1857.5	21.26	20.33	19.27	22.5	21.5	20.5
	75RB_0	1902.5	21.37	20.39	19.35	22.5	21.5	20.5
		1880.0	21.33	20.35	19.34	22.5	21.5	20.5
		1857.5	21.34	20.38	19.36	22.5	21.5	20.5



Bottom Antenna - Full Power								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1900.0	22.24	21.58	20.42	23.5	22.5	21.5
		1880.0	22.28	21.60	20.41	23.5	22.5	21.5
		1860.0	22.21	21.54	20.41	23.5	22.5	21.5
	1RB_50	1900.0	22.21	21.56	20.42	23.5	22.5	21.5
		1880.0	22.26	21.54	20.45	23.5	22.5	21.5
		1860.0	22.19	21.53	20.46	23.5	22.5	21.5
	1RB_0	1900.0	22.25	21.60	20.49	23.5	22.5	21.5
		1880.0	22.31	21.64	20.46	23.5	22.5	21.5
		1860.0	22.25	21.59	20.45	23.5	22.5	21.5
	50RB_50	1900.0	21.36	20.40	19.37	22.5	21.5	20.5
		1880.0	21.42	20.39	19.48	22.5	21.5	20.5
		1860.0	21.35	20.37	19.36	22.5	21.5	20.5
	50RB_25	1900.0	21.36	20.41	19.39	22.5	21.5	20.5
		1880.0	21.34	20.39	19.42	22.5	21.5	20.5
		1860.0	21.40	20.36	19.39	22.5	21.5	20.5
	50RB_0	1900.0	21.34	20.33	19.28	22.5	21.5	20.5
		1880.0	21.37	20.36	19.39	22.5	21.5	20.5
		1860.0	21.34	20.34	19.31	22.5	21.5	20.5
	100RB_0	1900.0	21.34	20.32	19.33	22.5	21.5	20.5
		1880.0	21.34	20.38	19.36	22.5	21.5	20.5
		1860.0	21.40	20.37	19.36	22.5	21.5	20.5



Top Antenna - Reduced power level 1/2								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1909.3	19.92	20.13	20.14	21.1	21.1	21.1
		1880.0	20.02	20.31	20.31	21.1	21.1	21.1
		1850.7	19.98	20.26	20.21	21.1	21.1	21.1
	1RB_3	1909.3	19.97	20.28	20.23	21.1	21.1	21.1
		1880.0	20.14	20.44	20.35	21.1	21.1	21.1
		1850.7	20.09	20.39	20.37	21.1	21.1	21.1
	1RB_0	1909.3	19.96	20.23	20.20	21.1	21.1	21.1
		1880.0	20.12	20.42	20.33	21.1	21.1	21.1
		1850.7	20.07	20.38	20.38	21.1	21.1	21.1
	3RB_3	1909.3	19.90	20.01	20.05	21.1	21.1	21.1
		1880.0	20.04	20.14	20.18	21.1	21.1	21.1
		1850.7	20.03	20.06	20.15	21.1	21.1	21.1
	3RB_1	1909.3	19.96	20.09	20.12	21.1	21.1	21.1
		1880.0	20.14	20.25	20.27	21.1	21.1	21.1
		1850.7	20.11	20.17	20.23	21.1	21.1	21.1
	3RB_0	1909.3	19.95	20.12	20.06	21.1	21.1	21.1
		1880.0	20.13	20.20	20.23	21.1	21.1	21.1
		1850.7	20.04	20.16	20.21	21.1	21.1	21.1
	6RB_0	1909.3	20.01	20.07	20.02	21.1	21.1	21.1
		1880.0	20.16	20.24	20.20	21.1	21.1	21.1
		1850.7	20.13	20.19	20.11	21.1	21.1	21.1



Top Antenna - Reduced power level 1/2								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1908.5	19.95	20.30	20.24	21.1	21.1	21.1
		1880.0	20.04	20.45	20.44	21.1	21.1	21.1
		1851.5	20.02	20.32	20.31	21.1	21.1	21.1
	1RB_7	1908.5	20.01	20.36	20.39	21.1	21.1	21.1
		1880.0	20.14	20.48	20.49	21.1	21.1	21.1
		1851.5	20.12	20.36	20.34	21.1	21.1	21.1
	1RB_0	1908.5	20.06	20.45	20.39	21.1	21.1	21.1
		1880.0	20.16	20.56	20.51	21.1	21.1	21.1
		1851.5	20.21	20.46	20.41	21.1	21.1	21.1
	8RB_7	1908.5	20.03	20.09	20.09	21.1	21.1	21.1
		1880.0	20.20	20.21	20.19	21.1	21.1	21.1
		1851.5	20.13	20.18	20.14	21.1	21.1	21.1
	8RB_4	1908.5	20.12	20.20	20.12	21.1	21.1	21.1
		1880.0	20.24	20.28	20.27	21.1	21.1	21.1
		1851.5	20.22	20.27	20.19	21.1	21.1	21.1
	8RB_0	1908.5	20.13	20.21	20.14	21.1	21.1	21.1
		1880.0	20.23	20.32	20.21	21.1	21.1	21.1
		1851.5	20.23	20.30	20.27	21.1	21.1	21.1
	15RB_0	1908.5	20.09	20.15	20.08	21.1	21.1	21.1
		1880.0	20.18	20.25	20.19	21.1	21.1	21.1
		1851.5	20.15	20.24	20.20	21.1	21.1	21.1



Top Antenna - Reduced power level 1/2								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1907.5	19.97	20.28	20.21	21.1	21.1	21.1
		1880.0	20.11	20.47	20.40	21.1	21.1	21.1
		1852.5	20.05	20.29	20.31	21.1	21.1	21.1
	1RB_12	1907.5	20.04	20.39	20.28	21.1	21.1	21.1
		1880.0	20.17	20.47	20.45	21.1	21.1	21.1
		1852.5	20.10	20.41	20.35	21.1	21.1	21.1
	1RB_0	1907.5	20.09	20.42	20.38	21.1	21.1	21.1
		1880.0	20.14	20.48	20.46	21.1	21.1	21.1
		1852.5	20.15	20.42	20.39	21.1	21.1	21.1
	12RB_13	1907.5	20.02	20.04	20.06	21.1	21.1	21.1
		1880.0	20.16	20.23	20.18	21.1	21.1	21.1
		1852.5	20.11	20.14	20.14	21.1	21.1	21.1
	12RB_6	1907.5	20.11	20.22	20.20	21.1	21.1	21.1
		1880.0	20.22	20.25	20.22	21.1	21.1	21.1
		1852.5	20.22	20.26	20.21	21.1	21.1	21.1
	12RB_0	1907.5	20.20	20.20	20.22	21.1	21.1	21.1
		1880.0	20.24	20.25	20.27	21.1	21.1	21.1
		1852.5	20.26	20.27	20.22	21.1	21.1	21.1
	25RB_0	1907.5	20.12	20.15	20.12	21.1	21.1	21.1
		1880.0	20.19	20.21	20.19	21.1	21.1	21.1
		1852.5	20.19	20.23	20.20	21.1	21.1	21.1



Top Antenna - Reduced power level 1/2								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1905.0	20.02	20.30	20.23	21.1	21.1	21.1
		1880.0	20.10	20.38	20.36	21.1	21.1	21.1
		1855.0	20.03	20.34	20.30	21.1	21.1	21.1
	1RB_24	1905.0	20.02	20.26	20.26	21.1	21.1	21.1
		1880.0	20.15	20.42	20.35	21.1	21.1	21.1
		1855.0	20.04	20.37	20.26	21.1	21.1	21.1
	1RB_0	1905.0	20.13	20.37	20.36	21.1	21.1	21.1
		1880.0	20.15	20.43	20.40	21.1	21.1	21.1
		1855.0	20.15	20.48	20.42	21.1	21.1	21.1
	25RB_25	1905.0	20.09	20.17	20.13	21.1	21.1	21.1
		1880.0	20.22	20.26	20.20	21.1	21.1	21.1
		1855.0	20.15	20.19	20.16	21.1	21.1	21.1
	25RB_12	1905.0	20.18	20.23	20.21	21.1	21.1	21.1
		1880.0	20.21	20.23	20.20	21.1	21.1	21.1
		1855.0	20.24	20.24	20.26	21.1	21.1	21.1
	25RB_0	1905.0	20.15	20.16	20.17	21.1	21.1	21.1
		1880.0	20.19	20.22	20.22	21.1	21.1	21.1
		1855.0	20.22	20.24	20.25	21.1	21.1	21.1
	50RB_0	1905.0	20.17	20.18	20.19	21.1	21.1	21.1
		1880.0	20.17	20.17	20.20	21.1	21.1	21.1
		1855.0	20.20	20.24	20.18	21.1	21.1	21.1



Top Antenna - Reduced power level 1/2								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1902.5	19.88	20.16	20.18	21.1	21.1	21.1
		1880.0	20.01	20.31	20.19	21.1	21.1	21.1
		1857.5	19.96	20.32	20.12	21.1	21.1	21.1
	1RB_37	1902.5	19.93	20.21	20.12	21.1	21.1	21.1
		1880.0	20.03	20.28	20.23	21.1	21.1	21.1
		1857.5	19.91	20.25	20.06	21.1	21.1	21.1
	1RB_0	1902.5	19.99	20.28	20.20	21.1	21.1	21.1
		1880.0	20.06	20.34	20.22	21.1	21.1	21.1
		1857.5	20.05	20.37	20.28	21.1	21.1	21.1
	36RB_38	1902.5	20.05	20.07	20.09	21.1	21.1	21.1
		1880.0	20.14	20.16	20.18	21.1	21.1	21.1
		1857.5	20.08	20.07	20.08	21.1	21.1	21.1
	36RB_19	1902.5	20.07	20.03	20.08	21.1	21.1	21.1
		1880.0	20.05	20.07	20.08	21.1	21.1	21.1
		1857.5	20.12	20.10	20.10	21.1	21.1	21.1
	36RB_0	1902.5	20.08	20.10	20.11	21.1	21.1	21.1
		1880.0	20.10	20.11	20.08	21.1	21.1	21.1
		1857.5	20.07	20.05	20.07	21.1	21.1	21.1
	75RB_0	1902.5	20.07	20.09	20.06	21.1	21.1	21.1
		1880.0	20.08	20.08	20.10	21.1	21.1	21.1
		1857.5	20.11	20.14	20.13	21.1	21.1	21.1



Top Antenna - Reduced power level 1/2								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1900.0	19.90	20.14	20.16	21.1	21.1	21.1
		1880.0	19.99	20.29	20.23	21.1	21.1	21.1
		1860.0	19.94	20.19	20.08	21.1	21.1	21.1
	1RB_50	1900.0	19.92	20.19	20.19	21.1	21.1	21.1
		1880.0	19.99	20.24	20.22	21.1	21.1	21.1
		1860.0	19.98	20.19	20.09	21.1	21.1	21.1
	1RB_0	1900.0	20.01	20.24	20.17	21.1	21.1	21.1
		1880.0	20.03	20.30	20.21	21.1	21.1	21.1
		1860.0	20.01	20.29	20.12	21.1	21.1	21.1
	50RB_50	1900.0	20.11	20.05	19.98	21.1	21.1	21.1
		1880.0	20.13	20.13	20.06	21.1	21.1	21.1
		1860.0	20.09	20.12	20.01	21.1	21.1	21.1
	50RB_25	1900.0	20.09	20.11	20.02	21.1	21.1	21.1
		1880.0	20.08	20.10	20.02	21.1	21.1	21.1
		1860.0	20.07	20.12	20.07	21.1	21.1	21.1
	50RB_0	1900.0	20.01	20.08	19.97	21.1	21.1	21.1
		1880.0	20.08	20.14	20.02	21.1	21.1	21.1
		1860.0	20.06	20.10	20.02	21.1	21.1	21.1
	100RB_0	1900.0	19.98	20.00	19.92	21.1	21.1	21.1
		1880.0	20.17	20.10	20.00	21.1	21.1	21.1
		1860.0	20.10	20.12	20.05	21.1	21.1	21.1



Top Antenna - Reduced power level 3/5								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1909.3	21.75	22.12	21.03	23.0	23.0	22.0
		1880.0	21.88	22.30	21.15	23.0	23.0	22.0
		1850.7	21.84	22.18	21.11	23.0	23.0	22.0
	1RB_3	1909.3	21.89	22.25	21.10	23.0	23.0	22.0
		1880.0	22.01	22.33	21.26	23.0	23.0	22.0
		1850.7	21.98	22.28	21.23	23.0	23.0	22.0
	1RB_0	1909.3	21.87	22.18	21.14	23.0	23.0	22.0
		1880.0	21.99	22.32	21.30	23.0	23.0	22.0
		1850.7	21.96	22.28	21.19	23.0	23.0	22.0
	3RB_3	1909.3	21.82	21.91	20.97	23.0	23.0	22.0
		1880.0	21.95	22.09	21.11	23.0	23.0	22.0
		1850.7	21.94	22.07	21.03	23.0	23.0	22.0
	3RB_1	1909.3	21.86	21.98	21.06	23.0	23.0	22.0
		1880.0	22.04	22.18	21.21	23.0	23.0	22.0
		1850.7	21.98	22.12	21.11	23.0	23.0	22.0
	3RB_0	1909.3	21.86	21.93	21.00	23.0	23.0	22.0
		1880.0	22.00	22.16	21.14	23.0	23.0	22.0
		1850.7	21.99	22.08	21.09	23.0	23.0	22.0
	6RB_0	1909.3	21.91	21.04	19.91	23.0	22.0	21.0
		1880.0	22.06	21.09	20.06	23.0	22.0	21.0
		1850.7	22.05	21.08	20.03	23.0	22.0	21.0



Top Antenna - Reduced power level 3/5								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1908.5	21.84	22.17	21.02	23.0	23.0	22.0
		1880.0	21.96	22.31	21.21	23.0	23.0	22.0
		1851.5	21.93	22.24	21.25	23.0	23.0	22.0
	1RB_7	1908.5	21.91	22.23	21.06	23.0	23.0	22.0
		1880.0	22.05	22.30	21.30	23.0	23.0	22.0
		1851.5	21.99	22.31	21.31	23.0	23.0	22.0
	1RB_0	1908.5	21.96	22.33	21.19	23.0	23.0	22.0
		1880.0	22.03	22.36	21.34	23.0	23.0	22.0
		1851.5	22.04	22.41	21.41	23.0	23.0	22.0
	8RB_7	1908.5	21.96	21.01	19.96	23.0	22.0	21.0
		1880.0	22.06	21.11	20.13	23.0	22.0	21.0
		1851.5	22.01	21.08	20.06	23.0	22.0	21.0
	8RB_4	1908.5	22.00	21.09	20.04	23.0	22.0	21.0
		1880.0	22.12	21.21	20.18	23.0	22.0	21.0
		1851.5	22.09	21.17	20.15	23.0	22.0	21.0
	8RB_0	1908.5	22.05	21.14	20.10	23.0	22.0	21.0
		1880.0	22.13	21.12	20.11	23.0	22.0	21.0
		1851.5	22.12	21.17	20.15	23.0	22.0	21.0
	15RB_0	1908.5	21.99	21.05	19.99	23.0	22.0	21.0
		1880.0	22.10	21.09	20.05	23.0	22.0	21.0
		1851.5	22.10	21.11	20.08	23.0	22.0	21.0



Top Antenna - Reduced power level 3/5								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1907.5	21.84	22.15	21.24	23.0	23.0	22.0
		1880.0	22.01	22.37	21.37	23.0	23.0	22.0
		1852.5	21.90	22.25	21.31	23.0	23.0	22.0
	1RB_12	1907.5	21.95	22.23	21.26	23.0	23.0	22.0
		1880.0	22.06	22.40	21.37	23.0	23.0	22.0
		1852.5	22.01	22.38	21.35	23.0	23.0	22.0
	1RB_0	1907.5	21.95	22.26	21.32	23.0	23.0	22.0
		1880.0	22.05	22.38	21.36	23.0	23.0	22.0
		1852.5	22.01	22.44	21.39	23.0	23.0	22.0
	12RB_13	1907.5	21.95	21.07	19.96	23.0	22.0	21.0
		1880.0	22.08	21.09	20.06	23.0	22.0	21.0
		1852.5	22.03	21.04	20.00	23.0	22.0	21.0
	12RB_6	1907.5	22.05	21.08	20.06	23.0	22.0	21.0
		1880.0	22.11	21.10	20.11	23.0	22.0	21.0
		1852.5	22.10	21.15	20.11	23.0	22.0	21.0
	12RB_0	1907.5	22.09	21.09	20.08	23.0	22.0	21.0
		1880.0	22.14	21.15	20.14	23.0	22.0	21.0
		1852.5	22.16	21.19	20.14	23.0	22.0	21.0
	25RB_0	1907.5	22.03	21.01	20.00	23.0	22.0	21.0
		1880.0	22.09	21.07	20.03	23.0	22.0	21.0
		1852.5	22.11	21.10	20.09	23.0	22.0	21.0



Top Antenna - Reduced power level 3/5								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1905.0	21.92	22.21	21.14	23.0	23.0	22.0
		1880.0	22.00	22.36	21.23	23.0	23.0	22.0
		1855.0	21.90	22.26	21.17	23.0	23.0	22.0
	1RB_24	1905.0	21.95	22.25	21.19	23.0	23.0	22.0
		1880.0	22.02	22.32	21.21	23.0	23.0	22.0
		1855.0	21.96	22.28	21.21	23.0	23.0	22.0
	1RB_0	1905.0	21.99	22.36	21.23	23.0	23.0	22.0
		1880.0	22.10	22.35	21.35	23.0	23.0	22.0
		1855.0	22.06	22.40	21.34	23.0	23.0	22.0
	25RB_25	1905.0	22.00	21.09	20.01	23.0	22.0	21.0
		1880.0	22.11	21.13	20.11	23.0	22.0	21.0
		1855.0	22.07	21.12	20.07	23.0	22.0	21.0
	25RB_12	1905.0	22.07	21.08	20.10	23.0	22.0	21.0
		1880.0	22.09	21.11	20.06	23.0	22.0	21.0
		1855.0	22.10	21.09	20.13	23.0	22.0	21.0
	25RB_0	1905.0	22.06	21.10	20.08	23.0	22.0	21.0
		1880.0	22.11	21.13	20.08	23.0	22.0	21.0
		1855.0	22.11	21.17	20.18	23.0	22.0	21.0
	50RB_0	1905.0	22.04	21.09	20.08	23.0	22.0	21.0
		1880.0	22.05	21.06	20.05	23.0	22.0	21.0
		1855.0	22.07	21.11	20.07	23.0	22.0	21.0



Top Antenna - Reduced power level 3/5								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1902.5	21.80	22.06	20.93	23.0	23.0	22.0
		1880.0	21.92	22.17	21.02	23.0	23.0	22.0
		1857.5	21.84	22.16	21.03	23.0	23.0	22.0
	1RB_37	1902.5	21.83	22.08	20.98	23.0	23.0	22.0
		1880.0	21.89	22.16	21.00	23.0	23.0	22.0
		1857.5	21.80	22.08	20.99	23.0	23.0	22.0
	1RB_0	1902.5	21.91	22.15	21.06	23.0	23.0	22.0
		1880.0	21.93	22.16	21.08	23.0	23.0	22.0
		1857.5	21.94	22.23	21.15	23.0	23.0	22.0
	36RB_38	1902.5	21.97	21.03	19.97	23.0	22.0	21.0
		1880.0	22.03	21.04	20.03	23.0	22.0	21.0
		1857.5	21.96	21.09	19.99	23.0	22.0	21.0
	36RB_19	1902.5	21.97	21.08	19.94	23.0	22.0	21.0
		1880.0	21.97	21.00	19.99	23.0	22.0	21.0
		1857.5	21.98	21.02	20.02	23.0	22.0	21.0
	36RB_0	1902.5	21.98	21.09	19.96	23.0	22.0	21.0
		1880.0	22.02	21.18	19.97	23.0	22.0	21.0
		1857.5	21.95	21.02	19.99	23.0	22.0	21.0
	75RB_0	1902.5	21.98	21.01	19.98	23.0	22.0	21.0
		1880.0	21.94	21.07	19.96	23.0	22.0	21.0
		1857.5	22.00	21.01	20.01	23.0	22.0	21.0



Top Antenna - Reduced power level 3/5								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1900.0	21.83	22.07	21.09	23.0	23.0	22.0
		1880.0	21.92	22.16	21.14	23.0	23.0	22.0
		1860.0	21.84	22.14	21.05	23.0	23.0	22.0
	1RB_50	1900.0	21.82	22.17	21.14	23.0	23.0	22.0
		1880.0	21.89	22.16	21.17	23.0	23.0	22.0
		1860.0	21.86	22.12	21.03	23.0	23.0	22.0
	1RB_0	1900.0	21.91	22.19	21.13	23.0	23.0	22.0
		1880.0	21.97	22.22	21.14	23.0	23.0	22.0
		1860.0	21.92	22.20	21.08	23.0	23.0	22.0
	50RB_50	1900.0	21.96	21.05	19.96	23.0	22.0	21.0
		1880.0	22.05	21.03	20.06	23.0	22.0	21.0
		1860.0	21.98	21.09	19.99	23.0	22.0	21.0
	50RB_25	1900.0	21.95	21.08	20.01	23.0	22.0	21.0
		1880.0	22.00	21.01	20.03	23.0	22.0	21.0
		1860.0	21.97	21.04	20.03	23.0	22.0	21.0
	50RB_0	1900.0	21.95	21.08	19.97	23.0	22.0	21.0
		1880.0	22.02	21.07	20.01	23.0	22.0	21.0
		1860.0	21.95	21.05	20.00	23.0	22.0	21.0
	100RB_0	1900.0	21.95	21.03	19.95	23.0	22.0	21.0
		1880.0	21.98	21.07	19.96	23.0	22.0	21.0
		1860.0	22.04	21.03	20.02	23.0	22.0	21.0



Bottom Antenna - Reduced power level 4/6								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1909.3	18.50	18.86	18.76	19.8	19.8	19.8
		1880.0	18.65	19.01	18.91	19.8	19.8	19.8
		1850.7	18.57	18.81	18.82	19.8	19.8	19.8
	1RB_3	1909.3	18.60	18.98	18.81	19.8	19.8	19.8
		1880.0	18.75	19.08	19.02	19.8	19.8	19.8
		1850.7	18.64	18.97	18.91	19.8	19.8	19.8
	1RB_0	1909.3	18.60	18.94	18.81	19.8	19.8	19.8
		1880.0	18.74	19.06	18.99	19.8	19.8	19.8
		1850.7	18.67	18.91	18.92	19.8	19.8	19.8
	3RB_3	1909.3	18.60	18.64	18.65	19.8	19.8	19.8
		1880.0	18.71	18.74	18.82	19.8	19.8	19.8
		1850.7	18.60	18.73	18.71	19.8	19.8	19.8
	3RB_1	1909.3	18.65	18.69	18.74	19.8	19.8	19.8
		1880.0	18.74	18.83	18.93	19.8	19.8	19.8
		1850.7	18.68	18.85	18.84	19.8	19.8	19.8
	3RB_0	1909.3	18.60	18.68	18.75	19.8	19.8	19.8
		1880.0	18.71	18.83	18.86	19.8	19.8	19.8
		1850.7	18.67	18.81	18.78	19.8	19.8	19.8
	6RB_0	1909.3	18.65	18.74	18.66	19.8	19.8	19.8
		1880.0	18.79	18.83	18.77	19.8	19.8	19.8
		1850.7	18.72	18.79	18.72	19.8	19.8	19.8



Bottom Antenna - Reduced power level 4/6								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1908.5	18.58	18.88	18.80	19.8	19.8	19.8
		1880.0	18.69	19.00	18.85	19.8	19.8	19.8
		1851.5	18.61	19.00	18.97	19.8	19.8	19.8
	1RB_7	1908.5	18.68	18.96	18.95	19.8	19.8	19.8
		1880.0	18.77	19.07	18.99	19.8	19.8	19.8
		1851.5	18.73	19.07	19.01	19.8	19.8	19.8
	1RB_0	1908.5	18.72	19.06	19.01	19.8	19.8	19.8
		1880.0	18.77	19.20	19.06	19.8	19.8	19.8
		1851.5	18.78	19.14	19.06	19.8	19.8	19.8
	8RB_7	1908.5	18.68	18.74	18.67	19.8	19.8	19.8
		1880.0	18.79	18.84	18.82	19.8	19.8	19.8
		1851.5	18.72	18.82	18.77	19.8	19.8	19.8
	8RB_4	1908.5	18.75	18.81	18.82	19.8	19.8	19.8
		1880.0	18.87	18.93	18.90	19.8	19.8	19.8
		1851.5	18.77	18.87	18.83	19.8	19.8	19.8
	8RB_0	1908.5	18.79	18.88	18.78	19.8	19.8	19.8
		1880.0	18.86	18.94	18.89	19.8	19.8	19.8
		1851.5	18.85	18.90	18.86	19.8	19.8	19.8
	15RB_0	1908.5	18.73	18.78	18.77	19.8	19.8	19.8
		1880.0	18.78	18.81	18.81	19.8	19.8	19.8
		1851.5	18.79	18.83	18.79	19.8	19.8	19.8



Bottom Antenna - Reduced power level 4/6								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1907.5	18.58	18.94	18.92	19.8	19.8	19.8
		1880.0	18.69	19.15	18.97	19.8	19.8	19.8
		1852.5	18.64	18.97	18.90	19.8	19.8	19.8
	1RB_12	1907.5	18.66	19.01	18.92	19.8	19.8	19.8
		1880.0	18.78	19.12	19.03	19.8	19.8	19.8
		1852.5	18.72	19.06	18.94	19.8	19.8	19.8
	1RB_0	1907.5	18.70	19.09	18.97	19.8	19.8	19.8
		1880.0	18.72	19.10	18.99	19.8	19.8	19.8
		1852.5	18.72	19.08	18.97	19.8	19.8	19.8
	12RB_13	1907.5	18.69	18.72	18.70	19.8	19.8	19.8
		1880.0	18.82	18.82	18.79	19.8	19.8	19.8
		1852.5	18.69	18.79	18.73	19.8	19.8	19.8
	12RB_6	1907.5	18.79	18.85	18.82	19.8	19.8	19.8
		1880.0	18.80	18.86	18.85	19.8	19.8	19.8
		1852.5	18.82	18.85	18.85	19.8	19.8	19.8
	12RB_0	1907.5	18.78	18.83	18.82	19.8	19.8	19.8
		1880.0	18.85	18.91	18.87	19.8	19.8	19.8
		1852.5	18.86	18.87	18.85	19.8	19.8	19.8
	25RB_0	1907.5	18.76	18.79	18.76	19.8	19.8	19.8
		1880.0	18.79	18.84	18.82	19.8	19.8	19.8
		1852.5	18.78	18.82	18.83	19.8	19.8	19.8



Bottom Antenna - Reduced power level 4/6								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1905.0	18.64	18.96	18.85	19.8	19.8	19.8
		1880.0	18.69	19.00	18.92	19.8	19.8	19.8
		1855.0	18.69	18.90	18.90	19.8	19.8	19.8
	1RB_24	1905.0	18.62	18.93	18.89	19.8	19.8	19.8
		1880.0	18.76	18.97	18.88	19.8	19.8	19.8
		1855.0	18.68	18.91	18.88	19.8	19.8	19.8
	1RB_0	1905.0	18.74	19.07	18.97	19.8	19.8	19.8
		1880.0	18.80	19.04	18.96	19.8	19.8	19.8
		1855.0	18.80	19.09	18.96	19.8	19.8	19.8
	25RB_25	1905.0	18.73	18.73	18.77	19.8	19.8	19.8
		1880.0	18.85	18.85	18.84	19.8	19.8	19.8
		1855.0	18.73	18.77	18.77	19.8	19.8	19.8
	25RB_12	1905.0	18.80	18.82	18.84	19.8	19.8	19.8
		1880.0	18.80	18.84	18.85	19.8	19.8	19.8
		1855.0	18.84	18.84	18.80	19.8	19.8	19.8
	25RB_0	1905.0	18.81	18.83	18.77	19.8	19.8	19.8
		1880.0	18.84	18.85	18.84	19.8	19.8	19.8
		1855.0	18.81	18.82	18.80	19.8	19.8	19.8
	50RB_0	1905.0	18.81	18.79	18.83	19.8	19.8	19.8
		1880.0	18.78	18.81	18.76	19.8	19.8	19.8
		1855.0	18.78	18.81	18.79	19.8	19.8	19.8



Bottom Antenna - Reduced power level 4/6								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1902.5	18.51	18.75	18.71	19.8	19.8	19.8
		1880.0	18.59	18.89	18.72	19.8	19.8	19.8
		1857.5	18.55	18.85	18.78	19.8	19.8	19.8
	1RB_37	1902.5	18.52	18.82	18.69	19.8	19.8	19.8
		1880.0	18.61	18.89	18.69	19.8	19.8	19.8
		1857.5	18.47	18.79	18.63	19.8	19.8	19.8
	1RB_0	1902.5	18.60	18.95	18.73	19.8	19.8	19.8
		1880.0	18.62	18.94	18.69	19.8	19.8	19.8
		1857.5	18.64	18.93	18.82	19.8	19.8	19.8
	36RB_38	1902.5	18.66	18.69	18.66	19.8	19.8	19.8
		1880.0	18.74	18.74	18.75	19.8	19.8	19.8
		1857.5	18.65	18.69	18.65	19.8	19.8	19.8
	36RB_19	1902.5	18.72	18.70	18.70	19.8	19.8	19.8
		1880.0	18.69	18.69	18.68	19.8	19.8	19.8
		1857.5	18.66	18.69	18.69	19.8	19.8	19.8
	36RB_0	1902.5	18.70	18.74	18.72	19.8	19.8	19.8
		1880.0	18.67	18.70	18.70	19.8	19.8	19.8
		1857.5	18.62	18.65	18.63	19.8	19.8	19.8
	75RB_0	1902.5	18.68	18.75	18.73	19.8	19.8	19.8
		1880.0	18.68	18.69	18.70	19.8	19.8	19.8
		1857.5	18.69	18.70	18.71	19.8	19.8	19.8



Bottom Antenna - Reduced power level 4/6								
LTE Band 2			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1900.0	18.46	18.91	18.80	19.8	19.8	19.8
		1880.0	18.64	18.95	18.91	19.8	19.8	19.8
		1860.0	18.49	18.86	18.84	19.8	19.8	19.8
	1RB_50	1900.0	18.56	18.93	18.74	19.8	19.8	19.8
		1880.0	18.62	18.94	18.94	19.8	19.8	19.8
		1860.0	18.56	18.86	18.84	19.8	19.8	19.8
	1RB_0	1900.0	18.63	18.95	18.74	19.8	19.8	19.8
		1880.0	18.59	18.98	18.86	19.8	19.8	19.8
		1860.0	18.56	18.94	18.87	19.8	19.8	19.8
	50RB_50	1900.0	18.72	18.69	18.74	19.8	19.8	19.8
		1880.0	18.74	18.76	18.77	19.8	19.8	19.8
		1860.0	18.67	18.67	18.70	19.8	19.8	19.8
	50RB_25	1900.0	18.73	18.74	18.78	19.8	19.8	19.8
		1880.0	18.69	18.71	18.73	19.8	19.8	19.8
		1860.0	18.71	18.70	18.75	19.8	19.8	19.8
	50RB_0	1900.0	18.65	18.69	18.73	19.8	19.8	19.8
		1880.0	18.71	18.73	18.76	19.8	19.8	19.8
		1860.0	18.64	18.66	18.69	19.8	19.8	19.8
	100RB_0	1900.0	18.59	18.66	18.70	19.8	19.8	19.8
		1880.0	18.69	18.69	18.73	19.8	19.8	19.8
		1860.0	18.70	18.73	18.75	19.8	19.8	19.8



Top Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1754.3	23.24	22.55	21.41	24.5	23.5	22.5
		1732.5	23.32	22.63	21.58	24.5	23.5	22.5
		1710.7	23.35	22.63	21.64	24.5	23.5	22.5
	1RB_3	1754.3	23.34	22.63	21.51	24.5	23.5	22.5
		1732.5	23.42	22.72	21.60	24.5	23.5	22.5
		1710.7	23.40	22.74	21.69	24.5	23.5	22.5
	1RB_0	1754.3	23.27	22.53	21.47	24.5	23.5	22.5
		1732.5	23.37	22.68	21.59	24.5	23.5	22.5
		1710.7	23.36	22.68	21.66	24.5	23.5	22.5
	3RB_3	1754.3	23.30	22.39	21.36	24.5	23.5	22.5
		1732.5	23.39	22.43	21.51	24.5	23.5	22.5
		1710.7	23.37	22.49	21.52	24.5	23.5	22.5
	3RB_1	1754.3	23.34	22.41	21.44	24.5	23.5	22.5
		1732.5	23.40	22.50	21.53	24.5	23.5	22.5
		1710.7	23.41	22.56	21.59	24.5	23.5	22.5
	3RB_0	1754.3	23.28	22.39	21.44	24.5	23.5	22.5
		1732.5	23.39	22.45	21.49	24.5	23.5	22.5
		1710.7	23.38	22.51	21.51	24.5	23.5	22.5
	6RB_0	1754.3	22.35	21.42	20.36	23.5	22.5	21.5
		1732.5	22.38	21.51	20.43	23.5	22.5	21.5
		1710.7	22.45	21.50	20.43	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1753.5	23.36	22.71	21.62	24.5	23.5	22.5
		1732.5	23.41	22.71	21.64	24.5	23.5	22.5
		1711.5	23.42	22.74	21.71	24.5	23.5	22.5
	1RB_7	1753.5	23.38	22.69	21.59	24.5	23.5	22.5
		1732.5	23.44	22.68	21.61	24.5	23.5	22.5
		1711.5	23.43	22.68	21.67	24.5	23.5	22.5
	1RB_0	1753.5	23.39	22.65	21.61	24.5	23.5	22.5
		1732.5	23.36	22.70	21.57	24.5	23.5	22.5
		1711.5	23.47	22.76	21.74	24.5	23.5	22.5
	8RB_7	1753.5	22.45	21.48	20.41	23.5	22.5	21.5
		1732.5	22.51	21.54	20.53	23.5	22.5	21.5
		1711.5	22.49	21.56	20.56	23.5	22.5	21.5
	8RB_4	1753.5	22.49	21.49	20.42	23.5	22.5	21.5
		1732.5	22.51	21.58	20.52	23.5	22.5	21.5
		1711.5	22.53	21.62	20.58	23.5	22.5	21.5
	8RB_0	1753.5	22.45	21.49	20.44	23.5	22.5	21.5
		1732.5	22.47	21.53	20.46	23.5	22.5	21.5
		1711.5	22.53	21.59	20.54	23.5	22.5	21.5
	15RB_0	1753.5	22.45	21.46	20.43	23.5	22.5	21.5
		1732.5	22.43	21.48	20.43	23.5	22.5	21.5
		1711.5	22.53	21.55	20.50	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1752.5	23.39	22.75	21.60	24.5	23.5	22.5
		1732.5	23.43	22.78	21.75	24.5	23.5	22.5
		1712.5	23.43	22.83	21.69	24.5	23.5	22.5
	1RB_12	1752.5	23.37	22.80	21.59	24.5	23.5	22.5
		1732.5	23.47	22.72	21.74	24.5	23.5	22.5
		1712.5	23.41	22.77	21.74	24.5	23.5	22.5
	1RB_0	1752.5	23.41	22.79	21.65	24.5	23.5	22.5
		1732.5	23.41	22.79	21.74	24.5	23.5	22.5
		1712.5	23.50	22.84	21.78	24.5	23.5	22.5
	12RB_13	1752.5	22.45	21.47	20.44	23.5	22.5	21.5
		1732.5	22.50	21.54	20.47	23.5	22.5	21.5
		1712.5	22.52	21.53	20.52	23.5	22.5	21.5
	12RB_6	1752.5	22.49	21.47	20.47	23.5	22.5	21.5
		1732.5	22.44	21.52	20.49	23.5	22.5	21.5
		1712.5	22.54	21.54	20.51	23.5	22.5	21.5
	12RB_0	1752.5	22.45	21.51	20.50	23.5	22.5	21.5
		1732.5	22.45	21.52	20.50	23.5	22.5	21.5
		1712.5	22.51	21.59	20.54	23.5	22.5	21.5
	25RB_0	1752.5	22.45	21.48	20.46	23.5	22.5	21.5
		1732.5	22.44	21.48	20.45	23.5	22.5	21.5
		1712.5	22.54	21.53	20.50	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1750.0	23.30	22.65	21.57	24.5	23.5	22.5
		1732.5	23.38	22.71	21.60	24.5	23.5	22.5
		1715.0	23.36	22.66	21.58	24.5	23.5	22.5
	1RB_24	1750.0	23.38	22.65	21.63	24.5	23.5	22.5
		1732.5	23.37	22.72	21.58	24.5	23.5	22.5
		1715.0	23.40	22.66	21.61	24.5	23.5	22.5
	1RB_0	1750.0	23.36	22.72	21.60	24.5	23.5	22.5
		1732.5	23.46	22.76	21.65	24.5	23.5	22.5
		1715.0	23.45	22.76	21.66	24.5	23.5	22.5
	25RB_25	1750.0	22.47	21.48	20.47	23.5	22.5	21.5
		1732.5	22.53	21.52	20.51	23.5	22.5	21.5
		1715.0	22.48	21.55	20.47	23.5	22.5	21.5
	25RB_12	1750.0	22.40	21.43	20.41	23.5	22.5	21.5
		1732.5	22.45	21.49	20.49	23.5	22.5	21.5
		1715.0	22.54	21.55	20.51	23.5	22.5	21.5
	25RB_0	1750.0	22.39	21.45	20.43	23.5	22.5	21.5
		1732.5	22.44	21.53	20.42	23.5	22.5	21.5
		1715.0	22.55	21.56	20.52	23.5	22.5	21.5
	50RB_0	1750.0	22.41	21.40	20.37	23.5	22.5	21.5
		1732.5	22.49	21.48	20.47	23.5	22.5	21.5
		1715.0	22.51	21.54	20.50	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1747.5	23.21	22.56	21.47	24.5	23.5	22.5
		1732.5	23.26	22.62	21.45	24.5	23.5	22.5
		1717.5	23.20	22.55	21.43	24.5	23.5	22.5
	1RB_37	1747.5	23.30	22.59	21.44	24.5	23.5	22.5
		1732.5	23.28	22.64	21.45	24.5	23.5	22.5
		1717.5	23.28	22.55	21.40	24.5	23.5	22.5
	1RB_0	1747.5	23.35	22.68	21.55	24.5	23.5	22.5
		1732.5	23.37	22.74	21.60	24.5	23.5	22.5
		1717.5	23.32	22.65	21.56	24.5	23.5	22.5
	36RB_38	1747.5	22.32	21.34	20.34	23.5	22.5	21.5
		1732.5	22.39	21.39	20.38	23.5	22.5	21.5
		1717.5	22.37	21.38	20.39	23.5	22.5	21.5
	36RB_19	1747.5	22.43	21.41	20.39	23.5	22.5	21.5
		1732.5	22.38	21.37	20.32	23.5	22.5	21.5
		1717.5	22.42	21.41	20.44	23.5	22.5	21.5
	36RB_0	1747.5	22.33	21.36	20.32	23.5	22.5	21.5
		1732.5	22.38	21.34	20.38	23.5	22.5	21.5
		1717.5	22.33	21.38	20.36	23.5	22.5	21.5
	75RB_0	1747.5	22.37	21.37	20.40	23.5	22.5	21.5
		1732.5	22.33	21.35	20.33	23.5	22.5	21.5
		1717.5	22.38	21.40	20.42	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1745.0	23.24	22.51	21.45	24.5	23.5	22.5
		1732.5	23.30	22.63	21.47	24.5	23.5	22.5
		1720.0	23.22	22.57	21.38	24.5	23.5	22.5
	1RB_50	1745.0	23.30	22.64	21.48	24.5	23.5	22.5
		1732.5	23.33	22.63	21.45	24.5	23.5	22.5
		1720.0	23.24	22.58	21.34	24.5	23.5	22.5
	1RB_0	1745.0	23.38	22.77	21.72	24.5	23.5	22.5
		1732.5	23.41	22.73	21.58	24.5	23.5	22.5
		1720.0	23.32	22.71	21.47	24.5	23.5	22.5
	50RB_50	1745.0	22.33	21.37	20.34	23.5	22.5	21.5
		1732.5	22.40	21.37	20.37	23.5	22.5	21.5
		1720.0	22.36	21.34	20.38	23.5	22.5	21.5
	50RB_25	1745.0	22.34	21.37	20.38	23.5	22.5	21.5
		1732.5	22.34	21.36	20.34	23.5	22.5	21.5
		1720.0	22.42	21.43	20.39	23.5	22.5	21.5
	50RB_0	1745.0	22.38	21.38	20.39	23.5	22.5	21.5
		1732.5	22.38	21.43	20.36	23.5	22.5	21.5
		1720.0	22.37	21.39	20.37	23.5	22.5	21.5
	100RB_0	1745.0	22.33	21.32	20.32	23.5	22.5	21.5
		1732.5	22.34	21.33	20.38	23.5	22.5	21.5
		1720.0	22.39	21.40	20.40	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1754.3	22.65	21.97	20.87	24.0	23.0	22.0
		1732.5	22.66	22.02	20.89	24.0	23.0	22.0
		1710.7	22.73	22.00	20.86	24.0	23.0	22.0
	1RB_3	1754.3	22.73	22.03	20.93	24.0	23.0	22.0
		1732.5	22.79	22.10	20.97	24.0	23.0	22.0
		1710.7	22.78	22.05	20.97	24.0	23.0	22.0
	1RB_0	1754.3	22.67	21.98	20.99	24.0	23.0	22.0
		1732.5	22.73	21.98	20.93	24.0	23.0	22.0
		1710.7	22.70	22.01	20.90	24.0	23.0	22.0
	3RB_3	1754.3	22.67	21.76	20.81	24.0	23.0	22.0
		1732.5	22.72	21.79	20.79	24.0	23.0	22.0
		1710.7	22.72	21.84	20.82	24.0	23.0	22.0
	3RB_1	1754.3	22.70	21.83	20.87	24.0	23.0	22.0
		1732.5	22.76	21.90	20.90	24.0	23.0	22.0
		1710.7	22.77	21.92	20.87	24.0	23.0	22.0
	3RB_0	1754.3	22.66	21.79	20.84	24.0	23.0	22.0
		1732.5	22.69	21.87	20.86	24.0	23.0	22.0
		1710.7	22.72	21.88	20.83	24.0	23.0	22.0
	6RB_0	1754.3	21.76	20.84	19.78	23.0	22.0	21.0
		1732.5	21.77	20.87	19.77	23.0	22.0	21.0
		1710.7	21.80	20.87	19.80	23.0	22.0	21.0



Bottom Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1753.5	22.77	22.05	21.03	24.0	23.0	22.0
		1732.5	22.79	22.12	21.02	24.0	23.0	22.0
		1711.5	22.75	22.11	21.01	24.0	23.0	22.0
	1RB_7	1753.5	22.80	22.01	21.09	24.0	23.0	22.0
		1732.5	22.79	22.09	21.01	24.0	23.0	22.0
		1711.5	22.75	22.08	21.01	24.0	23.0	22.0
	1RB_0	1753.5	22.77	22.07	21.03	24.0	23.0	22.0
		1732.5	22.76	22.06	20.92	24.0	23.0	22.0
		1711.5	22.78	22.12	20.98	24.0	23.0	22.0
	8RB_7	1753.5	21.82	20.89	19.85	23.0	22.0	21.0
		1732.5	21.82	20.90	19.88	23.0	22.0	21.0
		1711.5	21.82	20.87	19.87	23.0	22.0	21.0
	8RB_4	1753.5	21.86	20.89	19.87	23.0	22.0	21.0
		1732.5	21.90	20.90	19.94	23.0	22.0	21.0
		1711.5	21.86	20.91	19.93	23.0	22.0	21.0
	8RB_0	1753.5	21.85	20.88	19.84	23.0	22.0	21.0
		1732.5	21.80	20.84	19.86	23.0	22.0	21.0
		1711.5	21.84	20.91	19.91	23.0	22.0	21.0
	15RB_0	1753.5	21.85	20.89	19.81	23.0	22.0	21.0
		1732.5	21.82	20.80	19.83	23.0	22.0	21.0
		1711.5	21.83	20.88	19.86	23.0	22.0	21.0



Bottom Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1752.5	22.77	22.07	21.00	24.0	23.0	22.0
		1732.5	22.77	22.13	21.11	24.0	23.0	22.0
		1712.5	22.76	22.08	21.07	24.0	23.0	22.0
	1RB_12	1752.5	22.81	22.07	20.98	24.0	23.0	22.0
		1732.5	22.78	22.12	21.08	24.0	23.0	22.0
		1712.5	22.77	22.05	21.09	24.0	23.0	22.0
	1RB_0	1752.5	22.81	22.12	21.15	24.0	23.0	22.0
		1732.5	22.74	22.10	21.06	24.0	23.0	22.0
		1712.5	22.80	22.14	21.08	24.0	23.0	22.0
	12RB_13	1752.5	21.82	20.84	19.82	23.0	22.0	21.0
		1732.5	21.82	20.85	19.84	23.0	22.0	21.0
		1712.5	21.82	20.87	19.83	23.0	22.0	21.0
	12RB_6	1752.5	21.87	20.89	19.84	23.0	22.0	21.0
		1732.5	21.84	20.84	19.80	23.0	22.0	21.0
		1712.5	21.85	20.89	19.85	23.0	22.0	21.0
	12RB_0	1752.5	21.84	20.87	19.87	23.0	22.0	21.0
		1732.5	21.81	20.84	19.81	23.0	22.0	21.0
		1712.5	21.85	20.90	19.87	23.0	22.0	21.0
	25RB_0	1752.5	21.83	20.88	19.88	23.0	22.0	21.0
		1732.5	21.84	20.83	19.80	23.0	22.0	21.0
		1712.5	21.84	20.85	19.88	23.0	22.0	21.0



Bottom Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1750.0	22.70	22.04	20.92	24.0	23.0	22.0
		1732.5	22.71	22.07	21.01	24.0	23.0	22.0
		1715.0	22.67	22.05	20.90	24.0	23.0	22.0
	1RB_24	1750.0	22.83	22.04	21.00	24.0	23.0	22.0
		1732.5	22.73	22.00	21.01	24.0	23.0	22.0
		1715.0	22.68	21.97	20.93	24.0	23.0	22.0
	1RB_0	1750.0	22.74	22.13	21.03	24.0	23.0	22.0
		1732.5	22.72	22.07	21.03	24.0	23.0	22.0
		1715.0	22.75	22.10	21.01	24.0	23.0	22.0
	25RB_25	1750.0	21.83	20.83	19.88	23.0	22.0	21.0
		1732.5	21.85	20.85	19.84	23.0	22.0	21.0
		1715.0	21.83	20.80	19.82	23.0	22.0	21.0
	25RB_12	1750.0	21.79	20.82	19.83	23.0	22.0	21.0
		1732.5	21.80	20.82	19.81	23.0	22.0	21.0
		1715.0	21.85	20.88	19.89	23.0	22.0	21.0
	25RB_0	1750.0	21.82	20.77	19.83	23.0	22.0	21.0
		1732.5	21.78	20.81	19.80	23.0	22.0	21.0
		1715.0	21.84	20.86	19.86	23.0	22.0	21.0
	50RB_0	1750.0	21.76	20.83	19.80	23.0	22.0	21.0
		1732.5	21.78	20.82	19.79	23.0	22.0	21.0
		1715.0	21.81	20.88	19.83	23.0	22.0	21.0



Bottom Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1747.5	22.62	21.91	20.80	24.0	23.0	22.0
		1732.5	22.55	21.89	20.74	24.0	23.0	22.0
		1717.5	22.53	21.85	20.71	24.0	23.0	22.0
	1RB_37	1747.5	22.64	21.91	20.78	24.0	23.0	22.0
		1732.5	22.57	21.90	20.75	24.0	23.0	22.0
		1717.5	22.54	21.88	20.68	24.0	23.0	22.0
	1RB_0	1747.5	22.70	21.99	20.95	24.0	23.0	22.0
		1732.5	22.64	21.95	20.84	24.0	23.0	22.0
		1717.5	22.63	21.94	20.81	24.0	23.0	22.0
	36RB_38	1747.5	21.70	20.74	19.72	23.0	22.0	21.0
		1732.5	21.77	20.75	19.71	23.0	22.0	21.0
		1717.5	21.67	20.70	19.69	23.0	22.0	21.0
	36RB_19	1747.5	21.79	20.82	19.77	23.0	22.0	21.0
		1732.5	21.71	20.72	19.71	23.0	22.0	21.0
		1717.5	21.75	20.76	19.73	23.0	22.0	21.0
	36RB_0	1747.5	21.68	20.71	19.67	23.0	22.0	21.0
		1732.5	21.72	20.74	19.72	23.0	22.0	21.0
		1717.5	21.65	20.66	19.68	23.0	22.0	21.0
	75RB_0	1747.5	21.75	20.75	19.78	23.0	22.0	21.0
		1732.5	21.67	20.68	19.68	23.0	22.0	21.0
		1717.5	21.73	20.71	19.72	23.0	22.0	21.0



Bottom Antenna - Full Power								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1745.0	22.65	21.93	20.81	24.0	23.0	22.0
		1732.5	22.57	21.88	20.73	24.0	23.0	22.0
		1720.0	22.52	21.87	20.72	24.0	23.0	22.0
	1RB_50	1745.0	22.66	21.96	20.73	24.0	23.0	22.0
		1732.5	22.62	21.90	20.67	24.0	23.0	22.0
		1720.0	22.52	21.86	20.67	24.0	23.0	22.0
	1RB_0	1745.0	22.77	22.08	21.00	24.0	23.0	22.0
		1732.5	22.67	21.98	20.85	24.0	23.0	22.0
		1720.0	22.64	21.97	20.83	24.0	23.0	22.0
	50RB_50	1745.0	21.71	20.74	19.74	23.0	22.0	21.0
		1732.5	21.72	20.73	19.72	23.0	22.0	21.0
		1720.0	21.66	20.71	19.68	23.0	22.0	21.0
	50RB_25	1745.0	21.70	20.72	19.69	23.0	22.0	21.0
		1732.5	21.67	20.69	19.66	23.0	22.0	21.0
		1720.0	21.68	20.72	19.71	23.0	22.0	21.0
	50RB_0	1745.0	21.73	20.71	19.72	23.0	22.0	21.0
		1732.5	21.72	20.74	19.69	23.0	22.0	21.0
		1720.0	21.67	20.70	19.67	23.0	22.0	21.0
	100RB_0	1745.0	21.70	20.67	19.69	23.0	22.0	21.0
		1732.5	21.67	20.69	19.69	23.0	22.0	21.0
		1720.0	21.73	20.70	19.73	23.0	22.0	21.0



Top Antenna - Reduced power level 1/2								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1754.3	19.96	20.30	20.23	21.2	21.2	21.2
		1732.5	20.03	20.39	20.29	21.2	21.2	21.2
		1710.7	20.06	20.43	20.30	21.2	21.2	21.2
	1RB_3	1754.3	20.06	20.40	20.26	21.2	21.2	21.2
		1732.5	20.11	20.51	20.28	21.2	21.2	21.2
		1710.7	20.14	20.45	20.37	21.2	21.2	21.2
	1RB_0	1754.3	20.00	20.33	20.20	21.2	21.2	21.2
		1732.5	20.04	20.41	20.31	21.2	21.2	21.2
		1710.7	20.06	20.40	20.35	21.2	21.2	21.2
	3RB_3	1754.3	20.00	20.06	20.13	21.2	21.2	21.2
		1732.5	20.10	20.14	20.21	21.2	21.2	21.2
		1710.7	20.11	20.15	20.22	21.2	21.2	21.2
	3RB_1	1754.3	20.05	20.16	20.21	21.2	21.2	21.2
		1732.5	20.11	20.17	20.24	21.2	21.2	21.2
		1710.7	20.17	20.18	20.32	21.2	21.2	21.2
	3RB_0	1754.3	20.00	20.09	20.14	21.2	21.2	21.2
		1732.5	20.07	20.15	20.23	21.2	21.2	21.2
		1710.7	20.12	20.25	20.29	21.2	21.2	21.2
	6RB_0	1754.3	20.09	20.18	20.08	21.2	21.2	21.2
		1732.5	20.12	20.18	20.17	21.2	21.2	21.2
		1710.7	20.15	20.24	20.17	21.2	21.2	21.2



Top Antenna - Reduced power level 1/2								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1753.5	20.08	20.42	20.39	21.2	21.2	21.2
		1732.5	20.13	20.46	20.41	21.2	21.2	21.2
		1711.5	20.14	20.45	20.48	21.2	21.2	21.2
	1RB_7	1753.5	20.08	20.36	20.35	21.2	21.2	21.2
		1732.5	20.15	20.42	20.39	21.2	21.2	21.2
		1711.5	20.13	20.49	20.43	21.2	21.2	21.2
	1RB_0	1753.5	20.10	20.43	20.41	21.2	21.2	21.2
		1732.5	20.12	20.40	20.30	21.2	21.2	21.2
		1711.5	20.19	20.52	20.47	21.2	21.2	21.2
	8RB_7	1753.5	20.13	20.23	20.17	21.2	21.2	21.2
		1732.5	20.20	20.31	20.25	21.2	21.2	21.2
		1711.5	20.20	20.34	20.28	21.2	21.2	21.2
	8RB_4	1753.5	20.19	20.24	20.22	21.2	21.2	21.2
		1732.5	20.26	20.36	20.26	21.2	21.2	21.2
		1711.5	20.30	20.34	20.35	21.2	21.2	21.2
	8RB_0	1753.5	20.19	20.25	20.19	21.2	21.2	21.2
		1732.5	20.16	20.26	20.17	21.2	21.2	21.2
		1711.5	20.24	20.33	20.32	21.2	21.2	21.2
	15RB_0	1753.5	20.15	20.26	20.20	21.2	21.2	21.2
		1732.5	20.16	20.18	20.20	21.2	21.2	21.2
		1711.5	20.26	20.27	20.24	21.2	21.2	21.2



Top Antenna - Reduced power level 1/2								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1752.5	20.08	20.48	20.35	21.2	21.2	21.2
		1732.5	20.17	20.54	20.46	21.2	21.2	21.2
		1712.5	20.14	20.53	20.41	21.2	21.2	21.2
	1RB_12	1752.5	20.07	20.48	20.36	21.2	21.2	21.2
		1732.5	20.18	20.50	20.45	21.2	21.2	21.2
		1712.5	20.15	20.49	20.39	21.2	21.2	21.2
	1RB_0	1752.5	20.09	20.54	20.42	21.2	21.2	21.2
		1732.5	20.13	20.50	20.41	21.2	21.2	21.2
		1712.5	20.20	20.58	20.50	21.2	21.2	21.2
	12RB_13	1752.5	20.17	20.22	20.17	21.2	21.2	21.2
		1732.5	20.22	20.25	20.24	21.2	21.2	21.2
		1712.5	20.21	20.26	20.28	21.2	21.2	21.2
	12RB_6	1752.5	20.22	20.21	20.21	21.2	21.2	21.2
		1732.5	20.18	20.25	20.19	21.2	21.2	21.2
		1712.5	20.27	20.31	20.26	21.2	21.2	21.2
	12RB_0	1752.5	20.18	20.22	20.21	21.2	21.2	21.2
		1732.5	20.21	20.24	20.23	21.2	21.2	21.2
		1712.5	20.26	20.33	20.28	21.2	21.2	21.2
	25RB_0	1752.5	20.16	20.20	20.21	21.2	21.2	21.2
		1732.5	20.18	20.18	20.21	21.2	21.2	21.2
		1712.5	20.27	20.28	20.25	21.2	21.2	21.2



Top Antenna - Reduced power level 1/2								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1750.0	20.02	20.41	20.33	21.2	21.2	21.2
		1732.5	20.09	20.43	20.37	21.2	21.2	21.2
		1715.0	20.07	20.42	20.32	21.2	21.2	21.2
	1RB_24	1750.0	20.05	20.33	20.31	21.2	21.2	21.2
		1732.5	20.12	20.42	20.36	21.2	21.2	21.2
		1715.0	20.12	20.42	20.33	21.2	21.2	21.2
	1RB_0	1750.0	20.07	20.47	20.40	21.2	21.2	21.2
		1732.5	20.16	20.51	20.39	21.2	21.2	21.2
		1715.0	20.22	20.53	20.38	21.2	21.2	21.2
	25RB_25	1750.0	20.17	20.22	20.24	21.2	21.2	21.2
		1732.5	20.25	20.27	20.23	21.2	21.2	21.2
		1715.0	20.21	20.27	20.23	21.2	21.2	21.2
	25RB_12	1750.0	20.15	20.21	20.18	21.2	21.2	21.2
		1732.5	20.19	20.23	20.22	21.2	21.2	21.2
		1715.0	20.27	20.34	20.29	21.2	21.2	21.2
	25RB_0	1750.0	20.14	20.15	20.16	21.2	21.2	21.2
		1732.5	20.21	20.22	20.20	21.2	21.2	21.2
		1715.0	20.27	20.34	20.29	21.2	21.2	21.2
	50RB_0	1750.0	20.13	20.15	20.13	21.2	21.2	21.2
		1732.5	20.17	20.19	20.16	21.2	21.2	21.2
		1715.0	20.26	20.27	20.23	21.2	21.2	21.2



Top Antenna - Reduced power level 1/2								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1747.5	19.97	20.30	20.19	21.2	21.2	21.2
		1732.5	19.96	20.35	20.19	21.2	21.2	21.2
		1717.5	19.94	20.33	20.27	21.2	21.2	21.2
	1RB_37	1747.5	19.96	20.34	20.17	21.2	21.2	21.2
		1732.5	20.02	20.34	20.21	21.2	21.2	21.2
		1717.5	19.94	20.32	20.24	21.2	21.2	21.2
	1RB_0	1747.5	20.08	20.40	20.34	21.2	21.2	21.2
		1732.5	20.04	20.45	20.35	21.2	21.2	21.2
		1717.5	20.07	20.39	20.43	21.2	21.2	21.2
	36RB_38	1747.5	20.06	20.07	20.10	21.2	21.2	21.2
		1732.5	20.09	20.11	20.10	21.2	21.2	21.2
		1717.5	20.07	20.13	20.10	21.2	21.2	21.2
	36RB_19	1747.5	20.14	20.14	20.11	21.2	21.2	21.2
		1732.5	20.07	20.11	20.09	21.2	21.2	21.2
		1717.5	20.13	20.19	20.14	21.2	21.2	21.2
	36RB_0	1747.5	20.07	20.06	20.07	21.2	21.2	21.2
		1732.5	20.09	20.11	20.09	21.2	21.2	21.2
		1717.5	20.08	20.09	20.07	21.2	21.2	21.2
	75RB_0	1747.5	20.11	20.11	20.10	21.2	21.2	21.2
		1732.5	20.05	20.08	20.03	21.2	21.2	21.2
		1717.5	20.10	20.14	20.11	21.2	21.2	21.2



Top Antenna - Reduced power level 1/2								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1745.0	19.94	20.25	20.11	21.2	21.2	21.2
		1732.5	19.97	20.28	20.17	21.2	21.2	21.2
		1720.0	19.98	20.30	20.27	21.2	21.2	21.2
	1RB_50	1745.0	19.98	20.25	20.12	21.2	21.2	21.2
		1732.5	20.00	20.27	20.23	21.2	21.2	21.2
		1720.0	19.97	20.31	20.28	21.2	21.2	21.2
	1RB_0	1745.0	20.08	20.39	20.38	21.2	21.2	21.2
		1732.5	20.08	20.41	20.42	21.2	21.2	21.2
		1720.0	20.10	20.49	20.35	21.2	21.2	21.2
	50RB_50	1745.0	20.07	20.11	20.10	21.2	21.2	21.2
		1732.5	20.10	20.11	20.13	21.2	21.2	21.2
		1720.0	20.07	20.10	20.10	21.2	21.2	21.2
	50RB_25	1745.0	20.07	20.09	20.08	21.2	21.2	21.2
		1732.5	20.07	20.09	20.12	21.2	21.2	21.2
		1720.0	20.13	20.15	20.15	21.2	21.2	21.2
	50RB_0	1745.0	20.09	20.12	20.11	21.2	21.2	21.2
		1732.5	20.10	20.13	20.11	21.2	21.2	21.2
		1720.0	20.11	20.11	20.08	21.2	21.2	21.2
	100RB_0	1745.0	20.03	20.07	20.05	21.2	21.2	21.2
		1732.5	20.08	20.05	20.10	21.2	21.2	21.2
		1720.0	20.12	20.11	20.12	21.2	21.2	21.2



Top Antenna - Reduced power level 3/5								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1754.3	22.27	22.67	21.56	23.5	23.5	22.5
		1732.5	22.31	22.67	21.63	23.5	23.5	22.5
		1710.7	22.39	22.71	21.62	23.5	23.5	22.5
	1RB_3	1754.3	22.34	22.68	21.64	23.5	23.5	22.5
		1732.5	22.43	22.82	21.68	23.5	23.5	22.5
		1710.7	22.46	22.76	21.65	23.5	23.5	22.5
	1RB_0	1754.3	22.26	22.67	21.58	23.5	23.5	22.5
		1732.5	22.33	22.77	21.62	23.5	23.5	22.5
		1710.7	22.40	22.73	21.61	23.5	23.5	22.5
	3RB_3	1754.3	22.32	22.36	21.46	23.5	23.5	22.5
		1732.5	22.39	22.46	21.52	23.5	23.5	22.5
		1710.7	22.43	22.52	21.50	23.5	23.5	22.5
	3RB_1	1754.3	22.36	22.43	21.53	23.5	23.5	22.5
		1732.5	22.44	22.56	21.56	23.5	23.5	22.5
		1710.7	22.41	22.56	21.60	23.5	23.5	22.5
	3RB_0	1754.3	22.31	22.40	21.46	23.5	23.5	22.5
		1732.5	22.41	22.50	21.53	23.5	23.5	22.5
		1710.7	22.38	22.50	21.52	23.5	23.5	22.5
	6RB_0	1754.3	22.36	21.42	20.39	22.5	22.5	21.5
		1732.5	22.46	21.42	20.48	22.5	22.5	21.5
		1710.7	22.45	21.13	20.50	22.5	22.5	21.5



Top Antenna - Reduced power level 3/5								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1753.5	22.39	22.70	21.61	23.5	23.5	22.5
		1732.5	22.42	22.78	21.70	23.5	23.5	22.5
		1711.5	22.44	22.76	21.69	23.5	23.5	22.5
	1RB_7	1753.5	22.40	22.69	21.59	23.5	23.5	22.5
		1732.5	22.45	22.73	21.64	23.5	23.5	22.5
		1711.5	22.46	22.76	21.73	23.5	23.5	22.5
	1RB_0	1753.5	22.39	22.69	21.65	23.5	23.5	22.5
		1732.5	22.39	22.70	21.63	23.5	23.5	22.5
		1711.5	22.46	22.77	21.68	23.5	23.5	22.5
	8RB_7	1753.5	22.44	21.51	20.46	22.5	22.5	21.5
		1732.5	22.50	21.55	20.52	22.5	22.5	21.5
		1711.5	22.54	21.59	20.56	22.5	22.5	21.5
	8RB_4	1753.5	22.51	21.51	20.52	22.5	22.5	21.5
		1732.5	22.52	21.65	20.54	22.5	22.5	21.5
		1711.5	22.58	21.62	20.57	22.5	22.5	21.5
	8RB_0	1753.5	22.45	21.53	20.49	22.5	22.5	21.5
		1732.5	22.50	21.53	20.50	22.5	22.5	21.5
		1711.5	22.52	21.59	20.57	22.5	22.5	21.5
	15RB_0	1753.5	22.44	21.53	20.46	22.5	22.5	21.5
		1732.5	22.42	21.50	20.40	22.5	22.5	21.5
		1711.5	22.55	21.59	20.53	22.5	22.5	21.5



Top Antenna - Reduced power level 3/5								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1752.5	22.37	22.76	21.61	23.5	23.5	22.5
		1732.5	22.44	22.85	21.72	23.5	23.5	22.5
		1712.5	22.45	22.81	21.76	23.5	23.5	22.5
	1RB_12	1752.5	22.39	22.76	21.62	23.5	23.5	22.5
		1732.5	22.43	22.81	21.70	23.5	23.5	22.5
		1712.5	22.45	22.75	21.78	23.5	23.5	22.5
	1RB_0	1752.5	22.41	22.77	21.74	23.5	23.5	22.5
		1732.5	22.43	22.88	21.67	23.5	23.5	22.5
		1712.5	22.50	22.88	21.86	23.5	23.5	22.5
	12RB_13	1752.5	22.49	21.47	20.44	22.5	22.5	21.5
		1732.5	22.50	21.55	20.53	22.5	22.5	21.5
		1712.5	22.54	21.57	20.54	22.5	22.5	21.5
	12RB_6	1752.5	22.45	21.50	20.51	22.5	22.5	21.5
		1732.5	22.47	21.54	20.51	22.5	22.5	21.5
		1712.5	22.57	21.57	20.58	22.5	22.5	21.5
	12RB_0	1752.5	22.48	21.52	20.47	22.5	22.5	21.5
		1732.5	22.48	21.55	20.51	22.5	22.5	21.5
		1712.5	22.54	21.63	20.59	22.5	22.5	21.5
	25RB_0	1752.5	22.46	21.49	20.50	22.5	22.5	21.5
		1732.5	22.48	21.47	20.48	22.5	22.5	21.5
		1712.5	22.60	21.57	20.57	22.5	22.5	21.5



Top Antenna - Reduced power level 3/5								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1750.0	22.32	22.70	21.56	23.5	23.5	22.5
		1732.5	22.39	22.77	21.63	23.5	23.5	22.5
		1715.0	22.38	22.71	21.61	23.5	23.5	22.5
	1RB_24	1750.0	22.45	22.71	21.61	23.5	23.5	22.5
		1732.5	22.44	22.71	21.68	23.5	23.5	22.5
		1715.0	22.43	22.75	21.65	23.5	23.5	22.5
	1RB_0	1750.0	22.42	22.75	21.70	23.5	23.5	22.5
		1732.5	22.46	22.75	21.68	23.5	23.5	22.5
		1715.0	22.46	22.77	21.74	23.5	23.5	22.5
	25RB_25	1750.0	22.47	21.48	20.54	22.5	22.5	21.5
		1732.5	22.55	21.54	20.55	22.5	22.5	21.5
		1715.0	22.51	21.57	20.55	22.5	22.5	21.5
	25RB_12	1750.0	22.45	21.48	20.50	22.5	22.5	21.5
		1732.5	22.48	21.54	20.54	22.5	22.5	21.5
		1715.0	22.56	21.55	20.60	22.5	22.5	21.5
	25RB_0	1750.0	22.43	21.45	20.50	22.5	22.5	21.5
		1732.5	22.48	21.51	20.51	22.5	22.5	21.5
		1715.0	22.53	21.57	20.54	22.5	22.5	21.5
	50RB_0	1750.0	22.44	21.44	20.43	22.5	22.5	21.5
		1732.5	22.46	21.49	20.49	22.5	22.5	21.5
		1715.0	22.54	21.55	20.55	22.5	22.5	21.5



Top Antenna - Reduced power level 3/5								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1747.5	22.25	22.62	21.47	23.5	23.5	22.5
		1732.5	22.27	22.63	21.49	23.5	23.5	22.5
		1717.5	22.25	22.56	21.43	23.5	23.5	22.5
	1RB_37	1747.5	22.28	22.64	21.53	23.5	23.5	22.5
		1732.5	22.31	22.67	21.55	23.5	23.5	22.5
		1717.5	22.30	22.60	21.40	23.5	23.5	22.5
	1RB_0	1747.5	22.36	22.70	21.65	23.5	23.5	22.5
		1732.5	22.36	22.75	21.65	23.5	23.5	22.5
		1717.5	22.36	22.68	21.54	23.5	23.5	22.5
	36RB_38	1747.5	22.39	21.37	20.39	22.5	22.5	21.5
		1732.5	22.41	21.41	20.44	22.5	22.5	21.5
		1717.5	22.37	21.41	20.37	22.5	22.5	21.5
	36RB_19	1747.5	22.42	21.41	20.42	22.5	22.5	21.5
		1732.5	22.37	21.38	20.39	22.5	22.5	21.5
		1717.5	22.45	21.43	20.44	22.5	22.5	21.5
	36RB_0	1747.5	22.38	21.35	20.37	22.5	22.5	21.5
		1732.5	22.40	21.41	20.39	22.5	22.5	21.5
		1717.5	22.36	21.38	20.36	22.5	22.5	21.5
	75RB_0	1747.5	22.42	21.42	20.41	22.5	22.5	21.5
		1732.5	22.36	21.37	20.37	22.5	22.5	21.5
		1717.5	22.42	21.45	20.43	22.5	22.5	21.5



Top Antenna - Reduced power level 3/5								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1745.0	22.24	22.60	21.43	23.5	23.5	22.5
		1732.5	22.25	22.59	21.45	23.5	23.5	22.5
		1720.0	22.28	22.54	21.41	23.5	23.5	22.5
	1RB_50	1745.0	22.29	22.63	21.46	23.5	23.5	22.5
		1732.5	22.32	22.64	21.45	23.5	23.5	22.5
		1720.0	22.29	22.53	21.44	23.5	23.5	22.5
	1RB_0	1745.0	22.43	22.77	21.66	23.5	23.5	22.5
		1732.5	22.40	22.74	21.60	23.5	23.5	22.5
		1720.0	22.39	22.67	21.50	23.5	23.5	22.5
	50RB_50	1745.0	22.44	21.40	20.35	22.5	22.5	21.5
		1732.5	22.40	21.39	20.40	22.5	22.5	21.5
		1720.0	22.43	21.41	20.37	22.5	22.5	21.5
	50RB_25	1745.0	22.36	21.39	20.34	22.5	22.5	21.5
		1732.5	22.38	21.37	20.35	22.5	22.5	21.5
		1720.0	22.39	21.50	20.48	22.5	22.5	21.5
	50RB_0	1745.0	22.41	21.41	20.42	22.5	22.5	21.5
		1732.5	22.39	21.42	20.44	22.5	22.5	21.5
		1720.0	22.42	21.40	20.39	22.5	22.5	21.5
	100RB_0	1745.0	22.34	21.35	20.34	22.5	22.5	21.5
		1732.5	22.36	21.39	20.36	22.5	22.5	21.5
		1720.0	22.43	21.43	20.38	22.5	22.5	21.5



Bottom Antenna - Reduced power level 4/6								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	1754.3	19.92	20.22	20.12	21.2	21.2	21.2
		1732.5	19.94	20.26	20.27	21.2	21.2	21.2
		1710.7	19.96	20.35	19.76	21.2	21.2	21.2
	1RB_3	1754.3	19.96	20.26	20.19	21.2	21.2	21.2
		1732.5	19.99	20.35	20.21	21.2	21.2	21.2
		1710.7	19.57	20.41	19.25	21.2	21.2	21.2
	1RB_0	1754.3	19.90	20.25	20.16	21.2	21.2	21.2
		1732.5	19.95	20.26	20.15	21.2	21.2	21.2
		1710.7	19.98	20.36	20.21	21.2	21.2	21.2
	3RB_3	1754.3	19.95	20.03	20.01	21.2	21.2	21.2
		1732.5	19.94	20.01	20.12	21.2	21.2	21.2
		1710.7	19.99	20.05	20.11	21.2	21.2	21.2
	3RB_1	1754.3	19.97	20.07	20.07	21.2	21.2	21.2
		1732.5	19.98	20.03	20.12	21.2	21.2	21.2
		1710.7	20.04	20.07	20.17	21.2	21.2	21.2
	3RB_0	1754.3	19.94	20.00	20.03	21.2	21.2	21.2
		1732.5	19.96	19.98	20.07	21.2	21.2	21.2
		1710.7	19.98	20.09	20.11	21.2	21.2	21.2
	6RB_0	1754.3	20.04	20.06	19.98	21.2	21.2	21.2
		1732.5	20.04	20.08	19.04	21.2	21.2	21.2
		1710.7	20.03	20.13	20.06	21.2	21.2	21.2



Bottom Antenna - Reduced power level 4/6								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	1753.5	20.01	20.34	20.29	21.2	21.2	21.2
		1732.5	20.02	20.36	20.34	21.2	21.2	21.2
		1711.5	20.04	20.38	20.23	21.2	21.2	21.2
	1RB_7	1753.5	19.99	20.33	20.37	21.2	21.2	21.2
		1732.5	20.04	20.30	20.33	21.2	21.2	21.2
		1711.5	20.02	20.35	20.18	21.2	21.2	21.2
	1RB_0	1753.5	20.00	20.36	20.38	21.2	21.2	21.2
		1732.5	20.01	20.32	20.25	21.2	21.2	21.2
		1711.5	20.06	20.39	20.26	21.2	21.2	21.2
	8RB_7	1753.5	20.05	20.14	20.12	21.2	21.2	21.2
		1732.5	20.11	20.18	20.11	21.2	21.2	21.2
		1711.5	20.09	20.18	20.16	21.2	21.2	21.2
	8RB_4	1753.5	20.11	20.18	20.14	21.2	21.2	21.2
		1732.5	20.12	20.21	20.16	21.2	21.2	21.2
		1711.5	20.13	20.21	20.18	21.2	21.2	21.2
	8RB_0	1753.5	20.09	20.18	20.09	21.2	21.2	21.2
		1732.5	20.06	20.10	20.09	21.2	21.2	21.2
		1711.5	20.10	20.18	20.12	21.2	21.2	21.2
	15RB_0	1753.5	20.10	20.13	20.09	21.2	21.2	21.2
		1732.5	20.07	20.07	20.05	21.2	21.2	21.2
		1711.5	20.11	20.10	20.15	21.2	21.2	21.2



Bottom Antenna - Reduced power level 4/6								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	1752.5	20.06	20.38	20.27	21.2	21.2	21.2
		1732.5	20.03	20.43	20.32	21.2	21.2	21.2
		1712.5	20.03	20.35	20.27	21.2	21.2	21.2
	1RB_12	1752.5	20.01	20.30	20.26	21.2	21.2	21.2
		1732.5	20.06	20.37	20.36	21.2	21.2	21.2
		1712.5	20.01	20.35	20.26	21.2	21.2	21.2
	1RB_0	1752.5	20.06	20.40	20.34	21.2	21.2	21.2
		1732.5	20.03	20.35	20.36	21.2	21.2	21.2
		1712.5	20.11	20.40	20.32	21.2	21.2	21.2
	12RB_13	1752.5	20.11	20.12	20.12	21.2	21.2	21.2
		1732.5	20.13	20.15	20.12	21.2	21.2	21.2
		1712.5	20.09	20.11	20.10	21.2	21.2	21.2
	12RB_6	1752.5	20.11	20.12	20.11	21.2	21.2	21.2
		1732.5	20.11	20.11	20.10	21.2	21.2	21.2
		1712.5	20.14	20.17	20.11	21.2	21.2	21.2
	12RB_0	1752.5	20.10	20.10	20.14	21.2	21.2	21.2
		1732.5	20.08	20.14	20.11	21.2	21.2	21.2
		1712.5	20.13	20.16	20.15	21.2	21.2	21.2
	25RB_0	1752.5	20.10	20.14	20.13	21.2	21.2	21.2
		1732.5	20.09	20.06	20.05	21.2	21.2	21.2
		1712.5	20.12	20.15	20.11	21.2	21.2	21.2



Bottom Antenna - Reduced power level 4/6								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	1750.0	19.94	20.24	20.16	21.2	21.2	21.2
		1732.5	19.94	20.28	20.23	21.2	21.2	21.2
		1715.0	19.93	20.29	20.16	21.2	21.2	21.2
	1RB_24	1750.0	20.03	20.22	20.14	21.2	21.2	21.2
		1732.5	19.95	20.23	20.26	21.2	21.2	21.2
		1715.0	19.95	20.25	20.22	21.2	21.2	21.2
	1RB_0	1750.0	19.97	20.30	20.25	21.2	21.2	21.2
		1732.5	20.03	20.37	20.25	21.2	21.2	21.2
		1715.0	20.01	20.38	20.28	21.2	21.2	21.2
	25RB_25	1750.0	20.11	20.13	20.10	21.2	21.2	21.2
		1732.5	20.14	20.14	20.12	21.2	21.2	21.2
		1715.0	20.12	20.09	20.11	21.2	21.2	21.2
	25RB_12	1750.0	20.09	20.07	20.04	21.2	21.2	21.2
		1732.5	20.08	20.09	20.10	21.2	21.2	21.2
		1715.0	20.16	20.15	20.20	21.2	21.2	21.2
	25RB_0	1750.0	20.06	20.11	20.00	21.2	21.2	21.2
		1732.5	20.07	20.14	20.08	21.2	21.2	21.2
		1715.0	20.16	20.17	20.16	21.2	21.2	21.2
	50RB_0	1750.0	20.05	20.07	20.03	21.2	21.2	21.2
		1732.5	20.05	20.08	20.07	21.2	21.2	21.2
		1715.0	20.12	20.17	20.12	21.2	21.2	21.2



Bottom Antenna - Reduced power level 4/6								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	1747.5	19.80	20.18	20.13	21.2	21.2	21.2
		1732.5	19.83	20.24	20.08	21.2	21.2	21.2
		1717.5	19.81	20.17	20.22	21.2	21.2	21.2
	1RB_37	1747.5	19.86	20.16	20.05	21.2	21.2	21.2
		1732.5	19.88	20.25	20.21	21.2	21.2	21.2
		1717.5	19.85	20.14	20.07	21.2	21.2	21.2
	1RB_0	1747.5	19.95	20.31	20.24	21.2	21.2	21.2
		1732.5	19.93	20.27	20.31	21.2	21.2	21.2
		1717.5	19.93	20.26	20.18	21.2	21.2	21.2
	36RB_38	1747.5	20.00	19.98	19.98	21.2	21.2	21.2
		1732.5	19.98	20.04	20.00	21.2	21.2	21.2
		1717.5	19.96	19.99	19.97	21.2	21.2	21.2
	36RB_19	1747.5	20.01	20.08	20.04	21.2	21.2	21.2
		1732.5	19.95	20.01	19.97	21.2	21.2	21.2
		1717.5	20.00	20.04	20.07	21.2	21.2	21.2
	36RB_0	1747.5	19.96	19.98	19.96	21.2	21.2	21.2
		1732.5	19.96	19.97	19.97	21.2	21.2	21.2
		1717.5	19.93	19.98	19.97	21.2	21.2	21.2
	75RB_0	1747.5	19.98	20.04	20.02	21.2	21.2	21.2
		1732.5	19.92	19.94	19.91	21.2	21.2	21.2
		1717.5	19.99	20.03	20.00	21.2	21.2	21.2



Bottom Antenna - Reduced power level 4/6								
LTE Band 4			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	1745.0	19.85	20.23	19.94	21.2	21.2	21.2
		1732.5	19.87	20.26	20.11	21.2	21.2	21.2
		1720.0	19.82	20.21	20.17	21.2	21.2	21.2
	1RB_50	1745.0	19.87	20.25	19.95	21.2	21.2	21.2
		1732.5	19.87	20.20	20.16	21.2	21.2	21.2
		1720.0	19.84	20.20	20.01	21.2	21.2	21.2
	1RB_0	1745.0	19.98	20.40	20.10	21.2	21.2	21.2
		1732.5	19.93	20.32	20.21	21.2	21.2	21.2
		1720.0	19.97	20.30	20.20	21.2	21.2	21.2
	50RB_50	1745.0	19.99	20.00	19.98	21.2	21.2	21.2
		1732.5	19.96	20.00	19.97	21.2	21.2	21.2
		1720.0	19.96	19.94	19.97	21.2	21.2	21.2
	50RB_25	1745.0	19.96	19.97	19.95	21.2	21.2	21.2
		1732.5	19.92	19.96	19.98	21.2	21.2	21.2
		1720.0	19.99	20.00	20.02	21.2	21.2	21.2
	50RB_0	1745.0	19.96	19.98	19.98	21.2	21.2	21.2
		1732.5	19.95	19.98	20.00	21.2	21.2	21.2
		1720.0	19.92	19.96	19.97	21.2	21.2	21.2
	100RB_0	1745.0	19.91	19.95	19.97	21.2	21.2	21.2
		1732.5	19.93	19.93	19.96	21.2	21.2	21.2
		1720.0	19.98	19.97	20.02	21.2	21.2	21.2



Top Antenna - Full Power								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	848.3MHz	23.14	22.46	21.43	24.5	23.5	22.5
		836.5MHz	23.21	22.58	21.44	24.5	23.5	22.5
		824.7MHz	23.25	22.56	21.47	24.5	23.5	22.5
	1RB_3	848.3MHz	23.20	22.60	21.50	24.5	23.5	22.5
		836.5MHz	23.24	22.56	21.49	24.5	23.5	22.5
		824.7MHz	23.30	22.64	21.50	24.5	23.5	22.5
	1RB_0	848.3MHz	23.14	22.46	21.51	24.5	23.5	22.5
		836.5MHz	23.16	22.53	21.43	24.5	23.5	22.5
		824.7MHz	23.27	22.53	21.46	24.5	23.5	22.5
	3RB_3	848.3MHz	23.16	22.23	21.29	24.5	23.5	22.5
		836.5MHz	23.24	22.32	21.37	24.5	23.5	22.5
		824.7MHz	23.29	22.37	21.36	24.5	23.5	22.5
	3RB_1	848.3MHz	23.20	22.27	21.37	24.5	23.5	22.5
		836.5MHz	23.28	22.39	21.42	24.5	23.5	22.5
		824.7MHz	23.33	22.42	21.44	24.5	23.5	22.5
	3RB_0	848.3MHz	23.18	22.23	21.32	24.5	23.5	22.5
		836.5MHz	23.14	22.26	21.32	24.5	23.5	22.5
		824.7MHz	23.27	22.40	21.38	24.5	23.5	22.5
	6RB_0	848.3MHz	22.21	21.32	20.22	23.5	22.5	21.5
		836.5MHz	22.27	21.37	20.31	23.5	22.5	21.5
		824.7MHz	22.31	21.44	20.33	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	847.5MHz	23.28	22.61	21.67	24.5	23.5	22.5
		836.5MHz	23.31	22.67	21.56	24.5	23.5	22.5
		825.5MHz	23.33	22.64	21.58	24.5	23.5	22.5
	1RB_7	847.5MHz	23.23	22.49	21.55	24.5	23.5	22.5
		836.5MHz	23.30	22.56	21.49	24.5	23.5	22.5
		825.5MHz	23.30	22.57	21.51	24.5	23.5	22.5
	1RB_0	847.5MHz	23.24	22.58	21.65	24.5	23.5	22.5
		836.5MHz	23.25	22.58	21.41	24.5	23.5	22.5
		825.5MHz	23.33	22.71	21.59	24.5	23.5	22.5
	8RB_7	847.5MHz	22.28	21.37	20.35	23.5	22.5	21.5
		836.5MHz	22.35	21.41	20.42	23.5	22.5	21.5
		825.5MHz	22.37	21.42	20.42	23.5	22.5	21.5
	8RB_4	847.5MHz	22.31	21.39	20.35	23.5	22.5	21.5
		836.5MHz	22.41	21.46	20.43	23.5	22.5	21.5
		825.5MHz	22.39	21.47	20.43	23.5	22.5	21.5
	8RB_0	847.5MHz	22.33	21.39	20.34	23.5	22.5	21.5
		836.5MHz	22.29	21.38	20.37	23.5	22.5	21.5
		825.5MHz	22.40	21.48	20.44	23.5	22.5	21.5
	15RB_0	847.5MHz	22.35	21.36	20.32	23.5	22.5	21.5
		836.5MHz	22.33	21.35	20.31	23.5	22.5	21.5
		825.5MHz	22.39	21.42	20.41	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	846.5MHz	23.26	22.58	21.68	24.5	23.5	22.5
		836.5MHz	23.36	22.70	21.69	24.5	23.5	22.5
		826.5MHz	23.35	22.74	21.61	24.5	23.5	22.5
	1RB_12	846.5MHz	23.31	22.58	21.67	24.5	23.5	22.5
		836.5MHz	23.32	22.57	21.57	24.5	23.5	22.5
		826.5MHz	23.32	22.59	21.51	24.5	23.5	22.5
	1RB_0	846.5MHz	23.19	22.55	21.60	24.5	23.5	22.5
		836.5MHz	23.26	22.59	21.56	24.5	23.5	22.5
		826.5MHz	23.37	22.71	21.62	24.5	23.5	22.5
	12RB_13	846.5MHz	22.35	21.37	20.37	23.5	22.5	21.5
		836.5MHz	22.40	21.42	20.38	23.5	22.5	21.5
		826.5MHz	22.42	21.42	20.41	23.5	22.5	21.5
	12RB_6	846.5MHz	22.29	21.34	20.32	23.5	22.5	21.5
		836.5MHz	22.35	21.38	20.33	23.5	22.5	21.5
		826.5MHz	22.43	21.43	20.44	23.5	22.5	21.5
	12RB_0	846.5MHz	22.31	21.31	20.31	23.5	22.5	21.5
		836.5MHz	22.31	21.39	20.38	23.5	22.5	21.5
		826.5MHz	22.43	21.44	20.40	23.5	22.5	21.5
	25RB_0	846.5MHz	22.30	21.30	20.33	23.5	22.5	21.5
		836.5MHz	22.36	21.35	20.34	23.5	22.5	21.5
		826.5MHz	22.37	21.42	20.42	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	844.0MHz	23.24	22.60	21.46	24.5	23.5	22.5
		836.5MHz	23.30	22.59	21.52	24.5	23.5	22.5
		829.0MHz	23.31	22.62	21.54	24.5	23.5	22.5
	1RB_24	844.0MHz	23.28	22.56	21.46	24.5	23.5	22.5
		836.5MHz	23.31	22.51	21.47	24.5	23.5	22.5
		829.0MHz	23.27	22.58	21.51	24.5	23.5	22.5
	1RB_0	844.0MHz	23.29	22.58	21.38	24.5	23.5	22.5
		836.5MHz	23.32	22.61	21.42	24.5	23.5	22.5
		829.0MHz	23.34	22.63	21.51	24.5	23.5	22.5
	25RB_25	844.0MHz	22.35	21.41	20.45	23.5	22.5	21.5
		836.5MHz	22.40	21.41	20.45	23.5	22.5	21.5
		829.0MHz	22.42	21.44	20.49	23.5	22.5	21.5
	25RB_12	844.0MHz	22.31	21.36	20.42	23.5	22.5	21.5
		836.5MHz	22.36	21.40	20.40	23.5	22.5	21.5
		829.0MHz	22.45	21.45	20.50	23.5	22.5	21.5
	25RB_0	844.0MHz	22.30	21.32	20.39	23.5	22.5	21.5
		836.5MHz	22.33	21.39	20.38	23.5	22.5	21.5
		829.0MHz	22.35	21.39	20.41	23.5	22.5	21.5
	50RB_0	844.0MHz	22.33	21.33	20.38	23.5	22.5	21.5
		836.5MHz	22.34	21.37	20.39	23.5	22.5	21.5
		829.0MHz	22.44	21.47	20.48	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	848.3MHz	23.07	22.38	21.37	24.5	23.5	22.5
		836.5MHz	23.17	22.44	21.40	24.5	23.5	22.5
		824.7MHz	23.20	22.51	21.39	24.5	23.5	22.5
	1RB_3	848.3MHz	23.15	22.48	21.44	24.5	23.5	22.5
		836.5MHz	23.24	22.49	21.42	24.5	23.5	22.5
		824.7MHz	23.28	22.57	21.47	24.5	23.5	22.5
	1RB_0	848.3MHz	23.12	22.41	21.40	24.5	23.5	22.5
		836.5MHz	23.15	22.40	21.32	24.5	23.5	22.5
		824.7MHz	23.23	22.51	21.38	24.5	23.5	22.5
	3RB_3	848.3MHz	23.11	22.20	21.24	24.5	23.5	22.5
		836.5MHz	23.20	22.30	21.27	24.5	23.5	22.5
		824.7MHz	23.21	22.29	21.32	24.5	23.5	22.5
	3RB_1	848.3MHz	23.14	22.27	21.28	24.5	23.5	22.5
		836.5MHz	23.25	22.37	21.32	24.5	23.5	22.5
		824.7MHz	23.26	22.37	21.39	24.5	23.5	22.5
	3RB_0	848.3MHz	23.10	22.21	21.22	24.5	23.5	22.5
		836.5MHz	23.14	22.26	21.26	24.5	23.5	22.5
		824.7MHz	23.24	22.30	21.36	24.5	23.5	22.5
	6RB_0	848.3MHz	22.17	21.26	20.17	23.5	22.5	21.5
		836.5MHz	22.23	21.33	20.26	23.5	22.5	21.5
		824.7MHz	22.27	21.38	20.31	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	847.5MHz	23.24	22.52	21.60	24.5	23.5	22.5
		836.5MHz	23.31	22.60	21.51	24.5	23.5	22.5
		825.5MHz	23.30	22.62	21.47	24.5	23.5	22.5
	1RB_7	847.5MHz	23.23	22.48	21.53	24.5	23.5	22.5
		836.5MHz	23.27	22.49	21.42	24.5	23.5	22.5
		825.5MHz	23.26	22.56	21.41	24.5	23.5	22.5
	1RB_0	847.5MHz	23.25	22.55	21.59	24.5	23.5	22.5
		836.5MHz	23.20	22.55	21.40	24.5	23.5	22.5
		825.5MHz	23.32	22.62	21.54	24.5	23.5	22.5
	8RB_7	847.5MHz	22.24	21.32	20.28	23.5	22.5	21.5
		836.5MHz	22.31	21.36	20.35	23.5	22.5	21.5
		825.5MHz	22.33	21.38	20.37	23.5	22.5	21.5
	8RB_4	847.5MHz	22.26	21.34	20.31	23.5	22.5	21.5
		836.5MHz	22.33	21.43	20.41	23.5	22.5	21.5
		825.5MHz	22.36	21.38	20.38	23.5	22.5	21.5
	8RB_0	847.5MHz	22.28	21.34	20.32	23.5	22.5	21.5
		836.5MHz	22.26	21.33	20.34	23.5	22.5	21.5
		825.5MHz	22.34	21.41	20.39	23.5	22.5	21.5
	15RB_0	847.5MHz	22.28	21.30	20.28	23.5	22.5	21.5
		836.5MHz	22.26	21.29	20.28	23.5	22.5	21.5
		825.5MHz	22.32	21.36	20.37	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	846.5MHz	23.20	22.50	21.65	24.5	23.5	22.5
		836.5MHz	23.33	22.64	21.60	24.5	23.5	22.5
		826.5MHz	23.31	22.62	21.63	24.5	23.5	22.5
	1RB_12	846.5MHz	23.23	22.51	21.59	24.5	23.5	22.5
		836.5MHz	23.29	22.55	21.52	24.5	23.5	22.5
		826.5MHz	23.31	22.52	21.54	24.5	23.5	22.5
	1RB_0	846.5MHz	23.19	22.47	21.56	24.5	23.5	22.5
		836.5MHz	23.24	22.59	21.58	24.5	23.5	22.5
		826.5MHz	23.38	22.64	21.62	24.5	23.5	22.5
	12RB_13	846.5MHz	22.33	21.31	20.30	23.5	22.5	21.5
		836.5MHz	22.38	21.40	20.34	23.5	22.5	21.5
		826.5MHz	22.38	21.37	20.38	23.5	22.5	21.5
	12RB_6	846.5MHz	22.25	21.29	20.27	23.5	22.5	21.5
		836.5MHz	22.36	21.33	20.30	23.5	22.5	21.5
		826.5MHz	22.34	21.39	20.40	23.5	22.5	21.5
	12RB_0	846.5MHz	22.26	21.28	20.25	23.5	22.5	21.5
		836.5MHz	22.32	21.34	20.30	23.5	22.5	21.5
		826.5MHz	22.38	21.40	20.38	23.5	22.5	21.5
	25RB_0	846.5MHz	22.26	21.29	20.28	23.5	22.5	21.5
		836.5MHz	22.35	21.34	20.31	23.5	22.5	21.5
		826.5MHz	22.35	21.38	20.39	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	844.0MHz	23.25	22.55	21.42	24.5	23.5	22.5
		836.5MHz	23.31	22.66	21.48	24.5	23.5	22.5
		829.0MHz	23.29	22.66	21.50	24.5	23.5	22.5
	1RB_24	844.0MHz	23.29	22.52	21.41	24.5	23.5	22.5
		836.5MHz	23.32	22.53	21.43	24.5	23.5	22.5
		829.0MHz	23.34	22.61	21.54	24.5	23.5	22.5
	1RB_0	844.0MHz	23.29	22.59	21.50	24.5	23.5	22.5
		836.5MHz	23.25	22.61	21.53	24.5	23.5	22.5
		829.0MHz	23.31	22.63	21.54	24.5	23.5	22.5
	25RB_25	844.0MHz	22.38	21.37	20.39	23.5	22.5	21.5
		836.5MHz	22.40	21.44	20.37	23.5	22.5	21.5
		829.0MHz	22.39	21.42	20.38	23.5	22.5	21.5
	25RB_12	844.0MHz	22.30	21.35	20.35	23.5	22.5	21.5
		836.5MHz	22.36	21.39	20.39	23.5	22.5	21.5
		829.0MHz	22.43	21.47	20.47	23.5	22.5	21.5
	25RB_0	844.0MHz	22.28	21.30	20.32	23.5	22.5	21.5
		836.5MHz	22.34	21.34	20.31	23.5	22.5	21.5
		829.0MHz	22.35	21.32	20.33	23.5	22.5	21.5
	50RB_0	844.0MHz	22.29	21.36	20.31	23.5	22.5	21.5
		836.5MHz	22.33	21.34	20.27	23.5	22.5	21.5
		829.0MHz	22.41	21.43	20.45	23.5	22.5	21.5



Top Antenna - Reduced power level 1/2								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	848.3MHz	19.66	19.91	19.84	21.3	21.3	21.3
		836.5MHz	19.75	20.03	20.01	21.3	21.3	21.3
		824.7MHz	19.75	20.11	20.07	21.3	21.3	21.3
	1RB_3	848.3MHz	19.73	19.98	19.94	21.3	21.3	21.3
		836.5MHz	19.78	20.11	20.09	21.3	21.3	21.3
		824.7MHz	19.85	20.16	20.16	21.3	21.3	21.3
	1RB_0	848.3MHz	19.68	19.97	19.91	21.3	21.3	21.3
		836.5MHz	19.68	19.98	19.96	21.3	21.3	21.3
		824.7MHz	19.75	20.11	20.13	21.3	21.3	21.3
	3RB_3	848.3MHz	19.70	19.75	19.77	21.3	21.3	21.3
		836.5MHz	19.74	19.79	19.83	21.3	21.3	21.3
		824.7MHz	19.76	19.87	19.90	21.3	21.3	21.3
	3RB_1	848.3MHz	19.77	19.81	19.83	21.3	21.3	21.3
		836.5MHz	19.75	19.86	19.96	21.3	21.3	21.3
		824.7MHz	19.84	19.94	19.99	21.3	21.3	21.3
	3RB_0	848.3MHz	19.68	19.73	19.78	21.3	21.3	21.3
		836.5MHz	19.70	19.78	19.84	21.3	21.3	21.3
		824.7MHz	19.78	19.86	19.92	21.3	21.3	21.3
	6RB_0	848.3MHz	19.78	19.86	19.73	21.3	21.3	21.3
		836.5MHz	19.80	19.92	19.83	21.3	21.3	21.3
		824.7MHz	19.83	19.96	19.87	21.3	21.3	21.3



Top Antenna - Reduced power level 1/2								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	847.5MHz	19.81	20.14	20.15	21.3	21.3	21.3
		836.5MHz	19.84	20.15	20.11	21.3	21.3	21.3
		825.5MHz	19.83	20.20	20.12	21.3	21.3	21.3
	1RB_7	847.5MHz	19.81	20.13	20.04	21.3	21.3	21.3
		836.5MHz	19.80	20.08	20.07	21.3	21.3	21.3
		825.5MHz	19.82	20.14	20.02	21.3	21.3	21.3
	1RB_0	847.5MHz	19.82	20.18	20.10	21.3	21.3	21.3
		836.5MHz	19.78	20.11	19.99	21.3	21.3	21.3
		825.5MHz	19.90	20.20	20.13	21.3	21.3	21.3
	8RB_7	847.5MHz	19.88	19.90	19.86	21.3	21.3	21.3
		836.5MHz	19.89	19.95	19.94	21.3	21.3	21.3
		825.5MHz	19.90	19.98	19.96	21.3	21.3	21.3
	8RB_4	847.5MHz	19.89	19.93	19.87	21.3	21.3	21.3
		836.5MHz	19.91	19.98	19.94	21.3	21.3	21.3
		825.5MHz	19.96	20.03	20.00	21.3	21.3	21.3
	8RB_0	847.5MHz	19.92	19.91	19.87	21.3	21.3	21.3
		836.5MHz	19.84	19.92	19.89	21.3	21.3	21.3
		825.5MHz	19.93	19.99	19.99	21.3	21.3	21.3
	15RB_0	847.5MHz	19.89	19.90	19.88	21.3	21.3	21.3
		836.5MHz	19.86	19.89	19.86	21.3	21.3	21.3
		825.5MHz	19.90	19.98	19.94	21.3	21.3	21.3



Top Antenna - Reduced power level 1/2								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	846.5MHz	19.81	20.13	20.04	21.3	21.3	21.3
		836.5MHz	19.88	20.24	20.19	21.3	21.3	21.3
		826.5MHz	19.92	20.29	20.19	21.3	21.3	21.3
	1RB_12	846.5MHz	19.88	20.08	20.00	21.3	21.3	21.3
		836.5MHz	19.83	20.15	20.10	21.3	21.3	21.3
		826.5MHz	19.83	20.12	20.08	21.3	21.3	21.3
	1RB_0	846.5MHz	19.80	20.08	20.06	21.3	21.3	21.3
		836.5MHz	19.81	20.11	20.10	21.3	21.3	21.3
		826.5MHz	19.90	20.21	20.20	21.3	21.3	21.3
	12RB_13	846.5MHz	19.95	19.93	19.90	21.3	21.3	21.3
		836.5MHz	19.93	19.97	19.96	21.3	21.3	21.3
		826.5MHz	19.94	19.99	19.99	21.3	21.3	21.3
	12RB_6	846.5MHz	19.89	19.88	19.85	21.3	21.3	21.3
		836.5MHz	19.88	19.88	19.90	21.3	21.3	21.3
		826.5MHz	19.98	19.97	19.94	21.3	21.3	21.3
	12RB_0	846.5MHz	19.88	19.86	19.87	21.3	21.3	21.3
		836.5MHz	19.87	19.89	19.91	21.3	21.3	21.3
		826.5MHz	19.93	19.98	19.97	21.3	21.3	21.3
	25RB_0	846.5MHz	19.88	19.86	19.85	21.3	21.3	21.3
		836.5MHz	19.90	19.90	19.90	21.3	21.3	21.3
		826.5MHz	19.92	19.99	19.96	21.3	21.3	21.3



Top Antenna - Reduced power level 1/2								
LTE Band 5			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	844.0MHz	19.88	20.12	20.06	21.3	21.3	21.3
		836.5MHz	19.83	20.17	20.05	21.3	21.3	21.3
		829.0MHz	19.82	20.17	20.07	21.3	21.3	21.3
	1RB_24	844.0MHz	19.89	20.02	19.99	21.3	21.3	21.3
		836.5MHz	19.84	20.02	20.05	21.3	21.3	21.3
		829.0MHz	19.88	20.11	20.07	21.3	21.3	21.3
	1RB_0	844.0MHz	19.82	20.10	20.04	21.3	21.3	21.3
		836.5MHz	19.83	20.11	20.07	21.3	21.3	21.3
		829.0MHz	19.87	20.23	20.11	21.3	21.3	21.3
	25RB_25	844.0MHz	19.98	19.96	19.91	21.3	21.3	21.3
		836.5MHz	19.95	19.97	19.98	21.3	21.3	21.3
		829.0MHz	19.97	20.00	19.95	21.3	21.3	21.3
	25RB_12	844.0MHz	19.90	19.87	19.91	21.3	21.3	21.3
		836.5MHz	19.91	19.91	19.93	21.3	21.3	21.3
		829.0MHz	19.97	20.05	20.03	21.3	21.3	21.3
	25RB_0	844.0MHz	19.89	19.88	19.84	21.3	21.3	21.3
		836.5MHz	19.92	19.93	19.90	21.3	21.3	21.3
		829.0MHz	19.90	19.95	19.92	21.3	21.3	21.3
	50RB_0	844.0MHz	19.92	19.89	19.84	21.3	21.3	21.3
		836.5MHz	19.88	19.92	19.90	21.3	21.3	21.3
		829.0MHz	19.96	20.01	19.99	21.3	21.3	21.3



Top Antenna - Full Power								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2567.5	22.58	21.96	20.85	23.8	22.8	21.8
		2535.0	22.62	21.97	20.93	23.8	22.8	21.8
		2502.5	22.59	21.98	20.85	23.8	22.8	21.8
	1RB_12	2567.5	22.58	21.89	20.79	23.8	22.8	21.8
		2535.0	22.60	21.87	20.86	23.8	22.8	21.8
		2502.5	22.56	21.93	20.76	23.8	22.8	21.8
	1RB_0	2567.5	22.53	21.87	20.78	23.8	22.8	21.8
		2535.0	22.55	21.84	20.81	23.8	22.8	21.8
		2502.5	22.50	21.85	20.81	23.8	22.8	21.8
	12RB_13	2567.5	21.75	20.73	19.70	22.8	21.8	20.8
		2535.0	21.76	20.76	19.74	22.8	21.8	20.8
		2502.5	21.67	20.73	19.72	22.8	21.8	20.8
	12RB_6	2567.5	21.65	20.70	19.68	22.8	21.8	20.8
		2535.0	21.69	20.71	19.70	22.8	21.8	20.8
		2502.5	21.68	20.72	19.69	22.8	21.8	20.8
	12RB_0	2567.5	21.61	20.62	19.59	22.8	21.8	20.8
		2535.0	21.64	20.64	18.69	22.8	21.8	20.8
		2502.5	21.59	20.64	19.59	22.8	21.8	20.8
	25RB_0	2567.5	21.62	20.65	19.66	22.8	21.8	20.8
		2535.0	21.68	20.74	16.80	22.8	21.8	20.8
		2502.5	21.63	20.67	19.63	22.8	21.8	20.8



Top Antenna - Full Power								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2565.0	22.64	21.97	20.82	23.8	22.8	21.8
		2535.0	22.71	22.02	20.94	23.8	22.8	21.8
		2505.0	22.65	21.95	20.82	23.8	22.8	21.8
	1RB_24	2565.0	22.45	21.80	20.73	23.8	22.8	21.8
		2535.0	22.56	21.88	20.79	23.8	22.8	21.8
		2505.0	22.55	21.79	20.67	23.8	22.8	21.8
	1RB_0	2565.0	22.52	21.87	20.74	23.8	22.8	21.8
		2535.0	22.56	21.85	20.77	23.8	22.8	21.8
		2505.0	22.51	21.85	20.67	23.8	22.8	21.8
	25RB_25	2565.0	21.65	20.70	19.72	22.8	21.8	20.8
		2535.0	21.76	20.78	19.73	22.8	21.8	20.8
		2505.0	21.67	20.69	19.68	22.8	21.8	20.8
	25RB_12	2565.0	21.68	20.71	19.69	22.8	21.8	20.8
		2535.0	21.69	20.75	19.75	22.8	21.8	20.8
		2505.0	21.67	20.73	19.71	22.8	21.8	20.8
	25RB_0	2565.0	21.63	20.66	19.65	22.8	21.8	20.8
		2535.0	21.68	20.69	19.63	22.8	21.8	20.8
		2505.0	21.64	20.65	19.64	22.8	21.8	20.8
	50RB_0	2565.0	21.68	20.66	19.68	22.8	21.8	20.8
		2535.0	21.70	20.72	19.70	22.8	21.8	20.8
		2505.0	21.67	20.67	19.64	22.8	21.8	20.8



Top Antenna - Full Power								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2562.5	22.48	21.80	20.67	23.8	22.8	21.8
		2535.0	22.50	21.87	20.80	23.8	22.8	21.8
		2507.5	22.45	21.73	20.57	23.8	22.8	21.8
	1RB_37	2562.5	22.36	21.67	20.52	23.8	22.8	21.8
		2535.0	22.40	21.73	20.59	23.8	22.8	21.8
		2507.5	22.34	21.60	20.42	23.8	22.8	21.8
	1RB_0	2562.5	22.35	21.68	20.57	23.8	22.8	21.8
		2535.0	22.32	21.73	20.58	23.8	22.8	21.8
		2507.5	22.33	21.61	20.42	23.8	22.8	21.8
	36RB_38	2562.5	21.56	20.61	19.57	22.8	21.8	20.8
		2535.0	21.61	20.61	19.60	22.8	21.8	20.8
		2507.5	21.58	20.55	19.59	22.8	21.8	20.8
	36RB_19	2562.5	21.58	20.58	19.55	22.8	21.8	20.8
		2535.0	21.55	20.59	19.58	22.8	21.8	20.8
		2507.5	21.54	20.58	19.55	22.8	21.8	20.8
	36RB_0	2562.5	21.54	20.54	19.53	22.8	21.8	20.8
		2535.0	21.53	20.56	19.50	22.8	21.8	20.8
		2507.5	21.50	20.50	19.49	22.8	21.8	20.8
	75RB_0	2562.5	21.57	20.60	19.58	22.8	21.8	20.8
		2535.0	21.59	20.59	19.57	22.8	21.8	20.8
		2507.5	21.52	20.56	19.57	22.8	21.8	20.8



Top Antenna - Full Power								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2560.0	22.49	21.76	20.69	23.8	22.8	21.8
		2535.0	22.49	21.86	20.70	23.8	22.8	21.8
		2510.0	22.50	21.84	20.63	23.8	22.8	21.8
	1RB_50	2560.0	22.40	21.65	20.55	23.8	22.8	21.8
		2535.0	22.38	21.75	20.57	23.8	22.8	21.8
		2510.0	22.38	21.66	20.42	23.8	22.8	21.8
	1RB_0	2560.0	22.32	21.58	20.56	23.8	22.8	21.8
		2535.0	22.29	21.69	20.53	23.8	22.8	21.8
		2510.0	22.33	21.61	20.48	23.8	22.8	21.8
	50RB_50	2560.0	21.59	20.62	19.62	22.8	21.8	20.8
		2535.0	21.55	20.58	19.54	22.8	21.8	20.8
		2510.0	21.57	20.59	19.55	22.8	21.8	20.8
	50RB_25	2560.0	21.60	20.62	19.59	22.8	21.8	20.8
		2535.0	21.57	20.59	19.56	22.8	21.8	20.8
		2510.0	21.55	20.54	19.55	22.8	21.8	20.8
	50RB_0	2560.0	21.54	20.55	19.53	22.8	21.8	20.8
		2535.0	21.52	20.52	19.51	22.8	21.8	20.8
		2510.0	21.52	20.49	19.47	22.8	21.8	20.8
	100RB_0	2560.0	21.59	20.58	19.59	22.8	21.8	20.8
		2535.0	21.51	20.52	19.51	22.8	21.8	20.8
		2510.0	21.56	20.58	19.59	22.8	21.8	20.8



Bottom Antenna - Full Power								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2567.5	22.18	21.52	20.36	23.5	22.5	21.5
		2535.0	22.17	21.52	20.44	23.5	22.5	21.5
		2502.5	22.12	21.43	20.50	23.5	22.5	21.5
	1RB_12	2567.5	22.16	21.41	20.30	23.5	22.5	21.5
		2535.0	22.16	21.49	20.39	23.5	22.5	21.5
		2502.5	22.12	21.43	20.42	23.5	22.5	21.5
	1RB_0	2567.5	22.07	21.41	20.32	23.5	22.5	21.5
		2535.0	22.08	21.46	20.35	23.5	22.5	21.5
		2502.5	22.05	21.36	20.46	23.5	22.5	21.5
	12RB_13	2567.5	21.30	20.30	19.31	22.5	21.5	20.5
		2535.0	21.33	20.35	19.31	22.5	21.5	20.5
		2502.5	21.24	20.27	19.22	22.5	21.5	20.5
	12RB_6	2567.5	21.24	20.26	19.25	22.5	21.5	20.5
		2535.0	21.26	20.33	19.26	22.5	21.5	20.5
		2502.5	21.21	20.26	19.24	22.5	21.5	20.5
	12RB_0	2567.5	21.16	20.20	19.19	22.5	21.5	20.5
		2535.0	21.18	20.17	19.18	22.5	21.5	20.5
		2502.5	21.11	20.14	19.09	22.5	21.5	20.5
	25RB_0	2567.5	21.18	20.23	19.23	22.5	21.5	20.5
		2535.0	21.24	20.29	19.26	22.5	21.5	20.5
		2502.5	21.19	20.23	19.17	22.5	21.5	20.5



Bottom Antenna - Full Power								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2565.0	22.19	21.49	20.45	23.5	22.5	21.5
		2535.0	22.22	21.51	20.44	23.5	22.5	21.5
		2505.0	22.15	21.47	20.40	23.5	22.5	21.5
	1RB_24	2565.0	22.06	21.33	20.33	23.5	22.5	21.5
		2535.0	22.20	21.31	20.35	23.5	22.5	21.5
		2505.0	22.06	21.33	20.26	23.5	22.5	21.5
	1RB_0	2565.0	22.10	21.38	20.37	23.5	22.5	21.5
		2535.0	22.05	21.36	20.38	23.5	22.5	21.5
		2505.0	22.11	21.33	20.26	23.5	22.5	21.5
	25RB_25	2565.0	21.28	20.29	19.29	22.5	21.5	20.5
		2535.0	21.28	20.29	19.29	22.5	21.5	20.5
		2505.0	21.26	20.25	19.27	22.5	21.5	20.5
	25RB_12	2565.0	21.27	20.28	19.25	22.5	21.5	20.5
		2535.0	21.28	20.25	19.33	22.5	21.5	20.5
		2505.0	21.20	20.23	19.18	22.5	21.5	20.5
	25RB_0	2565.0	21.23	20.26	19.22	22.5	21.5	20.5
		2535.0	21.23	20.22	19.22	22.5	21.5	20.5
		2505.0	21.18	20.20	19.20	22.5	21.5	20.5
	50RB_0	2565.0	21.25	20.26	19.26	22.5	21.5	20.5
		2535.0	21.28	20.28	19.23	22.5	21.5	20.5
		2505.0	21.22	20.21	19.18	22.5	21.5	20.5



Bottom Antenna - Full Power								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2562.5	22.08	21.41	20.24	23.5	22.5	21.5
		2535.0	22.13	21.46	20.33	23.5	22.5	21.5
		2507.5	22.13	21.40	20.21	23.5	22.5	21.5
	1RB_37	2562.5	21.96	21.32	20.14	23.5	22.5	21.5
		2535.0	21.96	21.32	20.20	23.5	22.5	21.5
		2507.5	21.95	21.24	20.07	23.5	22.5	21.5
	1RB_0	2562.5	21.95	21.30	20.13	23.5	22.5	21.5
		2535.0	21.96	21.28	20.20	23.5	22.5	21.5
		2507.5	21.93	21.22	20.16	23.5	22.5	21.5
	36RB_38	2562.5	21.20	20.20	19.19	22.5	21.5	20.5
		2535.0	21.19	20.23	19.22	22.5	21.5	20.5
		2507.5	21.14	20.15	19.19	22.5	21.5	20.5
	36RB_19	2562.5	21.15	20.20	19.17	22.5	21.5	20.5
		2535.0	21.15	20.17	19.19	22.5	21.5	20.5
		2507.5	21.09	20.13	19.14	22.5	21.5	20.5
	36RB_0	2562.5	21.13	20.16	19.14	22.5	21.5	20.5
		2535.0	21.13	20.15	19.13	22.5	21.5	20.5
		2507.5	21.08	20.09	19.08	22.5	21.5	20.5
	75RB_0	2562.5	21.17	20.20	19.21	22.5	21.5	20.5
		2535.0	21.18	20.18	19.23	22.5	21.5	20.5
		2507.5	21.14	20.11	19.15	22.5	21.5	20.5



Bottom Antenna - Full Power								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2560.0	22.06	21.40	20.14	23.5	22.5	21.5
		2535.0	22.04	21.39	20.25	23.5	22.5	21.5
		2510.0	22.00	21.27	20.19	23.5	22.5	21.5
	1RB_50	2560.0	21.96	21.25	20.05	23.5	22.5	21.5
		2535.0	21.97	21.24	20.14	23.5	22.5	21.5
		2510.0	21.90	21.16	19.99	23.5	22.5	21.5
	1RB_0	2560.0	21.90	21.17	19.99	23.5	22.5	21.5
		2535.0	21.89	21.15	20.13	23.5	22.5	21.5
		2510.0	21.85	21.05	20.07	23.5	22.5	21.5
	50RB_50	2560.0	21.18	20.17	19.16	22.5	21.5	20.5
		2535.0	21.10	20.11	19.07	22.5	21.5	20.5
		2510.0	21.12	20.12	19.11	22.5	21.5	20.5
	50RB_25	2560.0	21.16	20.14	19.13	22.5	21.5	20.5
		2535.0	21.13	20.16	19.12	22.5	21.5	20.5
		2510.0	21.11	20.12	19.09	22.5	21.5	20.5
	50RB_0	2560.0	21.09	20.11	19.12	22.5	21.5	20.5
		2535.0	21.06	20.07	19.06	22.5	21.5	20.5
		2510.0	21.05	20.08	19.05	22.5	21.5	20.5
	100RB_0	2560.0	21.17	20.18	19.17	22.5	21.5	20.5
		2535.0	21.05	20.06	19.05	22.5	21.5	20.5
		2510.0	21.11	20.12	19.11	22.5	21.5	20.5



Top Antenna - Reduced power level 1/2								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2567.5	20.04	20.38	20.21	21.2	21.2	21.2
		2535.0	20.06	20.41	20.35	21.2	21.2	21.2
		2502.5	20.01	20.42	20.32	21.2	21.2	21.2
	1RB_12	2567.5	19.98	20.38	20.25	21.2	21.2	21.2
		2535.0	20.02	20.30	20.24	21.2	21.2	21.2
		2502.5	20.00	20.37	20.24	21.2	21.2	21.2
	1RB_0	2567.5	19.95	20.30	20.26	21.2	21.2	21.2
		2535.0	19.97	20.28	20.23	21.2	21.2	21.2
		2502.5	19.96	20.34	20.24	21.2	21.2	21.2
	12RB_13	2567.5	20.11	20.16	20.14	21.2	21.2	21.2
		2535.0	20.17	20.17	20.18	21.2	21.2	21.2
		2502.5	20.14	20.16	20.16	21.2	21.2	21.2
	12RB_6	2567.5	20.12	20.13	20.11	21.2	21.2	21.2
		2535.0	20.16	20.13	20.11	21.2	21.2	21.2
		2502.5	20.08	20.14	20.10	21.2	21.2	21.2
	12RB_0	2567.5	19.99	20.04	20.02	21.2	21.2	21.2
		2535.0	20.03	20.08	20.04	21.2	21.2	21.2
		2502.5	20.03	20.04	20.02	21.2	21.2	21.2
	25RB_0	2567.5	20.07	20.09	20.10	21.2	21.2	21.2
		2535.0	20.08	20.10	20.13	21.2	21.2	21.2
		2502.5	20.11	20.15	20.11	21.2	21.2	21.2



Top Antenna - Reduced power level 1/2								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2565.0	20.10	20.36	20.26	21.2	21.2	21.2
		2535.0	20.09	20.51	20.37	21.2	21.2	21.2
		2505.0	20.09	20.41	20.29	21.2	21.2	21.2
	1RB_24	2565.0	19.96	20.27	20.17	21.2	21.2	21.2
		2535.0	19.96	20.33	20.21	21.2	21.2	21.2
		2505.0	19.97	20.27	20.19	21.2	21.2	21.2
	1RB_0	2565.0	19.93	20.27	20.17	21.2	21.2	21.2
		2535.0	19.97	20.33	20.24	21.2	21.2	21.2
		2505.0	19.97	20.28	20.27	21.2	21.2	21.2
	25RB_25	2565.0	20.11	20.13	20.13	21.2	21.2	21.2
		2535.0	20.14	20.13	20.19	21.2	21.2	21.2
		2505.0	20.09	20.13	20.14	21.2	21.2	21.2
	25RB_12	2565.0	20.11	20.13	20.14	21.2	21.2	21.2
		2535.0	20.15	20.18	20.19	21.2	21.2	21.2
		2505.0	20.10	20.11	20.09	21.2	21.2	21.2
	25RB_0	2565.0	20.07	20.09	20.11	21.2	21.2	21.2
		2535.0	20.09	20.12	20.14	21.2	21.2	21.2
		2505.0	20.10	20.09	20.06	21.2	21.2	21.2
	50RB_0	2565.0	20.08	20.11	20.11	21.2	21.2	21.2
		2535.0	20.10	20.16	20.12	21.2	21.2	21.2
		2505.0	20.06	20.11	20.07	21.2	21.2	21.2



Top Antenna - Reduced power level 1/2								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2562.5	19.89	20.15	20.14	21.2	21.2	21.2
		2535.0	19.94	20.25	20.05	21.2	21.2	21.2
		2507.5	19.87	20.21	20.17	21.2	21.2	21.2
	1RB_37	2562.5	19.79	20.07	20.02	21.2	21.2	21.2
		2535.0	19.77	20.07	19.90	21.2	21.2	21.2
		2507.5	19.78	20.05	19.99	21.2	21.2	21.2
	1RB_0	2562.5	19.78	20.07	20.09	21.2	21.2	21.2
		2535.0	19.78	20.03	19.98	21.2	21.2	21.2
		2507.5	19.76	20.09	19.93	21.2	21.2	21.2
	36RB_38	2562.5	20.00	20.00	20.03	21.2	21.2	21.2
		2535.0	20.03	20.02	20.00	21.2	21.2	21.2
		2507.5	19.97	19.99	19.99	21.2	21.2	21.2
	36RB_19	2562.5	20.00	19.99	19.99	21.2	21.2	21.2
		2535.0	19.97	20.03	20.02	21.2	21.2	21.2
		2507.5	19.96	20.00	19.95	21.2	21.2	21.2
	36RB_0	2562.5	19.95	19.96	19.98	21.2	21.2	21.2
		2535.0	19.91	19.97	19.95	21.2	21.2	21.2
		2507.5	19.97	19.94	19.96	21.2	21.2	21.2
	75RB_0	2562.5	20.00	20.03	20.01	21.2	21.2	21.2
		2535.0	19.98	20.01	20.00	21.2	21.2	21.2
		2507.5	19.96	20.00	19.99	21.2	21.2	21.2



Top Antenna - Reduced power level 1/2								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2560.0	19.89	20.21	20.16	21.2	21.2	21.2
		2535.0	19.90	20.24	20.13	21.2	21.2	21.2
		2510.0	19.89	20.21	20.07	21.2	21.2	21.2
	1RB_50	2560.0	19.81	20.08	20.10	21.2	21.2	21.2
		2535.0	19.82	20.09	19.99	21.2	21.2	21.2
		2510.0	19.77	20.01	19.88	21.2	21.2	21.2
	1RB_0	2560.0	19.74	20.09	20.02	21.2	21.2	21.2
		2535.0	19.74	20.00	20.11	21.2	21.2	21.2
		2510.0	19.76	19.99	19.84	21.2	21.2	21.2
	50RB_50	2560.0	19.99	20.04	20.07	21.2	21.2	21.2
		2535.0	19.95	20.00	19.99	21.2	21.2	21.2
		2510.0	19.99	20.04	20.03	21.2	21.2	21.2
	50RB_25	2560.0	20.02	20.02	20.00	21.2	21.2	21.2
		2535.0	20.03	20.02	19.99	21.2	21.2	21.2
		2510.0	20.01	20.01	20.00	21.2	21.2	21.2
	50RB_0	2560.0	19.95	19.97	19.96	21.2	21.2	21.2
		2535.0	19.94	19.95	19.94	21.2	21.2	21.2
		2510.0	19.96	20.00	19.95	21.2	21.2	21.2
	100RB_0	2560.0	20.00	20.01	20.03	21.2	21.2	21.2
		2535.0	20.05	19.96	19.94	21.2	21.2	21.2
		2510.0	20.00	19.97	20.01	21.2	21.2	21.2



Bottom Antenna - Reduced power level 4/6								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2567.5	21.57	21.58	20.54	22.8	22.5	21.5
		2535.0	21.58	21.62	20.52	22.8	22.5	21.5
		2502.5	21.47	21.57	20.48	22.8	22.5	21.5
	1RB_12	2567.5	21.54	21.50	20.48	22.8	22.5	21.5
		2535.0	21.52	21.54	20.45	22.8	22.5	21.5
		2502.5	21.51	21.53	20.43	22.8	22.5	21.5
	1RB_0	2567.5	21.47	21.44	20.47	22.8	22.5	21.5
		2535.0	21.47	21.50	20.38	22.8	22.5	21.5
		2502.5	21.44	21.47	20.41	22.8	22.5	21.5
	12RB_13	2567.5	21.33	20.36	19.35	22.5	22.5	20.5
		2535.0	21.38	20.39	19.37	22.5	22.5	20.5
		2502.5	21.33	20.36	19.30	22.5	22.5	20.5
	12RB_6	2567.5	21.34	20.32	19.32	22.5	22.5	20.5
		2535.0	21.32	20.34	19.34	22.5	22.5	20.5
		2502.5	21.25	20.33	19.26	22.5	22.5	20.5
	12RB_0	2567.5	21.19	20.25	19.23	22.5	22.5	20.5
		2535.0	21.24	20.23	19.24	22.5	22.5	20.5
		2502.5	21.18	20.19	19.16	22.5	22.5	20.5
	25RB_0	2567.5	21.29	20.32	19.32	22.5	22.5	20.5
		2535.0	21.30	20.33	19.34	22.5	22.5	20.5
		2502.5	21.29	20.28	19.26	22.5	22.5	20.5



Bottom Antenna - Reduced power level 4/6								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2565.0	21.59	21.63	20.47	22.8	22.5	21.5
		2535.0	21.60	21.60	20.52	22.8	22.5	21.5
		2505.0	21.50	21.52	20.36	22.8	22.5	21.5
	1RB_24	2565.0	21.51	21.46	20.36	22.8	22.5	21.5
		2535.0	21.51	21.48	20.40	22.8	22.5	21.5
		2505.0	21.44	21.35	20.24	22.8	22.5	21.5
	1RB_0	2565.0	21.42	21.51	20.38	22.8	22.5	21.5
		2535.0	21.43	21.50	20.36	22.8	22.5	21.5
		2505.0	21.40	21.41	20.26	22.8	22.5	21.5
	25RB_25	2565.0	21.32	20.38	19.31	22.5	22.5	20.5
		2535.0	21.36	20.35	19.34	22.5	22.5	20.5
		2505.0	21.26	20.28	19.32	22.5	22.5	20.5
	25RB_12	2565.0	21.30	20.39	19.37	22.5	22.5	20.5
		2535.0	21.34	20.35	19.34	22.5	22.5	20.5
		2505.0	21.30	20.29	19.31	22.5	22.5	20.5
	25RB_0	2565.0	21.28	20.31	19.31	22.5	22.5	20.5
		2535.0	21.27	20.32	19.30	22.5	22.5	20.5
		2505.0	21.23	20.26	19.25	22.5	22.5	20.5
	50RB_0	2565.0	21.31	20.29	19.30	22.5	22.5	20.5
		2535.0	21.32	20.33	19.30	22.5	22.5	20.5
		2505.0	21.24	20.29	19.26	22.5	22.5	20.5



Bottom Antenna - Reduced power level 4/6								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2562.5	21.41	21.41	20.27	22.8	22.5	21.5
		2535.0	21.43	21.43	20.31	22.8	22.5	21.5
		2507.5	21.34	21.36	20.20	22.8	22.5	21.5
	1RB_37	2562.5	21.32	21.30	20.15	22.8	22.5	21.5
		2535.0	21.27	21.26	20.23	22.8	22.5	21.5
		2507.5	21.22	21.25	20.13	22.8	22.5	21.5
	1RB_0	2562.5	21.31	21.27	20.15	22.8	22.5	21.5
		2535.0	21.23	21.29	20.20	22.8	22.5	21.5
		2507.5	21.25	21.25	20.08	22.8	22.5	21.5
	36RB_38	2562.5	21.21	20.22	19.20	22.5	22.5	20.5
		2535.0	21.18	20.19	19.22	22.5	22.5	20.5
		2507.5	21.16	20.14	19.16	22.5	22.5	20.5
	36RB_19	2562.5	21.19	20.20	19.19	22.5	22.5	20.5
		2535.0	21.20	20.17	19.18	22.5	22.5	20.5
		2507.5	21.11	20.14	19.13	22.5	22.5	20.5
	36RB_0	2562.5	21.15	20.16	19.16	22.5	22.5	20.5
		2535.0	21.13	20.12	19.14	22.5	22.5	20.5
		2507.5	21.09	20.08	19.10	22.5	22.5	20.5
	75RB_0	2562.5	21.19	20.19	19.21	22.5	22.5	20.5
		2535.0	21.18	20.22	19.21	22.5	22.5	20.5
		2507.5	21.15	20.16	19.16	22.5	22.5	20.5



Bottom Antenna - Reduced power level 4/6								
LTE Band 7			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2560.0	21.41	21.38	20.31	22.8	22.5	21.5
		2535.0	21.40	21.35	20.28	22.8	22.5	21.5
		2510.0	21.40	21.30	20.22	22.8	22.5	21.5
	1RB_50	2560.0	21.31	21.33	20.20	22.8	22.5	21.5
		2535.0	21.27	21.26	20.17	22.8	22.5	21.5
		2510.0	21.26	21.20	20.05	22.8	22.5	21.5
	1RB_0	2560.0	21.24	21.20	20.13	22.8	22.5	21.5
		2535.0	21.21	21.18	20.19	22.8	22.5	21.5
		2510.0	21.25	21.15	20.11	22.8	22.5	21.5
	50RB_50	2560.0	21.20	20.19	19.23	22.5	22.5	20.5
		2535.0	21.13	20.15	19.17	22.5	22.5	20.5
		2510.0	21.18	20.17	19.17	22.5	22.5	20.5
	50RB_25	2560.0	21.21	20.19	19.20	22.5	22.5	20.5
		2535.0	21.17	20.17	19.21	22.5	22.5	20.5
		2510.0	21.15	20.14	19.17	22.5	22.5	20.5
	50RB_0	2560.0	21.13	20.16	19.17	22.5	22.5	20.5
		2535.0	21.11	20.12	19.15	22.5	22.5	20.5
		2510.0	21.09	20.12	19.11	22.5	22.5	20.5
	100RB_0	2560.0	21.19	20.21	19.20	22.5	22.5	20.5
		2535.0	21.10	20.09	19.11	22.5	22.5	20.5
		2510.0	21.15	20.18	19.16	22.5	22.5	20.5



Top Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	848.3	23.10	22.41	21.22	24.5	23.5	22.5
		831.5	23.17	22.50	21.46	24.5	23.5	22.5
		814.7	23.22	22.56	21.40	24.5	23.5	22.5
	1RB_3	848.3	23.17	22.41	21.30	24.5	23.5	22.5
		831.5	23.24	22.58	21.52	24.5	23.5	22.5
		814.7	23.33	22.66	21.54	24.5	23.5	22.5
	1RB_0	848.3	23.04	22.41	21.33	24.5	23.5	22.5
		831.5	23.12	22.48	21.43	24.5	23.5	22.5
		814.7	23.29	22.56	21.49	24.5	23.5	22.5
	3RB_3	848.3	23.08	22.17	21.19	24.5	23.5	22.5
		831.5	23.23	22.32	21.35	24.5	23.5	22.5
		814.7	23.29	22.38	21.40	24.5	23.5	22.5
	3RB_1	848.3	23.17	22.24	21.29	24.5	23.5	22.5
		831.5	23.20	22.31	21.34	24.5	23.5	22.5
		814.7	23.33	22.45	21.41	24.5	23.5	22.5
	3RB_0	848.3	23.10	22.15	21.20	24.5	23.5	22.5
		831.5	23.16	22.28	21.34	24.5	23.5	22.5
		814.7	23.28	22.40	21.36	24.5	23.5	22.5
	6RB_0	848.3	22.12	21.22	20.14	23.5	22.5	21.5
		831.5	22.22	21.32	20.26	23.5	22.5	21.5
		814.7	22.36	21.42	20.37	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	847.5	23.13	22.46	21.44	24.5	23.5	22.5
		831.5	23.28	22.58	21.58	24.5	23.5	22.5
		815.5	23.30	22.64	21.58	24.5	23.5	22.5
	1RB_7	847.5	23.18	22.45	21.34	24.5	23.5	22.5
		831.5	23.27	22.56	21.53	24.5	23.5	22.5
		815.5	23.33	22.62	21.54	24.5	23.5	22.5
	1RB_0	847.5	23.18	22.50	21.38	24.5	23.5	22.5
		831.5	23.19	22.51	21.49	24.5	23.5	22.5
		815.5	23.33	22.64	21.58	24.5	23.5	22.5
	8RB_7	847.5	22.23	21.27	20.33	23.5	22.5	21.5
		831.5	22.36	21.41	20.43	23.5	22.5	21.5
		815.5	22.35	21.43	20.47	23.5	22.5	21.5
	8RB_4	847.5	22.26	21.29	20.34	23.5	22.5	21.5
		831.5	22.40	21.45	20.46	23.5	22.5	21.5
		815.5	22.40	21.47	20.51	23.5	22.5	21.5
	8RB_0	847.5	22.25	21.31	20.34	23.5	22.5	21.5
		831.5	22.29	21.39	20.41	23.5	22.5	21.5
		815.5	22.40	21.45	20.48	23.5	22.5	21.5
	15RB_0	847.5	22.24	21.30	20.30	23.5	22.5	21.5
		831.5	22.30	21.36	20.33	23.5	22.5	21.5
		815.5	22.40	21.42	20.45	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	846.5	23.14	22.52	21.45	24.5	23.5	22.5
		831.5	23.29	22.63	21.57	24.5	23.5	22.5
		816.5	23.30	22.68	21.57	24.5	23.5	22.5
	1RB_12	846.5	23.23	22.49	21.45	24.5	23.5	22.5
		831.5	23.29	22.57	21.56	24.5	23.5	22.5
		816.5	23.35	22.65	21.55	24.5	23.5	22.5
	1RB_0	846.5	23.24	22.57	21.49	24.5	23.5	22.5
		831.5	23.26	22.54	21.55	24.5	23.5	22.5
		816.5	23.37	22.72	21.61	24.5	23.5	22.5
	12RB_13	846.5	22.25	21.27	20.28	23.5	22.5	21.5
		831.5	22.38	21.38	20.37	23.5	22.5	21.5
		816.5	22.37	21.41	20.40	23.5	22.5	21.5
	12RB_6	846.5	22.26	21.32	20.29	23.5	22.5	21.5
		831.5	22.35	21.37	20.30	23.5	22.5	21.5
		816.5	22.41	21.44	20.45	23.5	22.5	21.5
	12RB_0	846.5	22.27	21.33	20.29	23.5	22.5	21.5
		831.5	22.33	21.34	20.33	23.5	22.5	21.5
		816.5	22.40	21.43	20.41	23.5	22.5	21.5
	25RB_0	846.5	22.26	21.25	20.31	23.5	22.5	21.5
		831.5	22.33	21.33	20.30	23.5	22.5	21.5
		816.5	22.38	21.44	20.43	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	844.0	23.21	22.51	21.48	24.5	23.5	22.5
		831.5	23.28	22.62	21.56	24.5	23.5	22.5
		820.0	23.34	22.68	21.59	24.5	23.5	22.5
	1RB_24	844.0	23.23	22.56	21.44	24.5	23.5	22.5
		831.5	23.34	22.58	21.49	24.5	23.5	22.5
		820.0	23.30	22.56	21.51	24.5	23.5	22.5
	1RB_0	844.0	23.29	22.56	21.49	24.5	23.5	22.5
		831.5	23.21	22.59	21.48	24.5	23.5	22.5
		820.0	23.30	22.66	21.52	24.5	23.5	22.5
	25RB_25	844.0	22.30	21.32	20.31	23.5	22.5	21.5
		831.5	22.42	21.41	20.43	23.5	22.5	21.5
		820.0	22.37	21.41	20.38	23.5	22.5	21.5
	25RB_12	844.0	22.24	21.30	20.31	23.5	22.5	21.5
		831.5	22.34	21.33	20.35	23.5	22.5	21.5
		820.0	22.40	21.46	20.40	23.5	22.5	21.5
	25RB_0	844.0	22.28	21.28	20.29	23.5	22.5	21.5
		831.5	22.34	21.36	20.36	23.5	22.5	21.5
		820.0	22.34	21.33	20.35	23.5	22.5	21.5
	50RB_0	844.0	22.26	21.28	20.29	23.5	22.5	21.5
		831.5	22.33	21.40	20.34	23.5	22.5	21.5
		820.0	22.39	21.44	20.36	23.5	22.5	21.5



Top Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	841.5	23.08	22.41	21.31	24.5	23.5	22.5
		831.5	23.19	22.48	21.40	24.5	23.5	22.5
		822.5	23.18	22.54	21.44	24.5	23.5	22.5
	1RB_37	841.5	23.16	22.43	21.32	24.5	23.5	22.5
		831.5	23.20	22.54	21.40	24.5	23.5	22.5
		822.5	23.19	22.44	21.34	24.5	23.5	22.5
	1RB_0	841.5	23.15	22.44	21.42	24.5	23.5	22.5
		831.5	23.13	22.50	21.41	24.5	23.5	22.5
		822.5	23.14	22.50	21.42	24.5	23.5	22.5
	36RB_38	841.5	22.25	21.26	20.23	23.5	22.5	21.5
		831.5	22.33	21.32	20.35	23.5	22.5	21.5
		822.5	22.32	21.33	20.31	23.5	22.5	21.5
	36RB_19	841.5	22.14	21.16	20.15	23.5	22.5	21.5
		831.5	22.21	21.22	20.20	23.5	22.5	21.5
		822.5	22.29	21.27	20.24	23.5	22.5	21.5
	36RB_0	841.5	22.16	21.16	20.18	23.5	22.5	21.5
		831.5	22.22	21.23	20.24	23.5	22.5	21.5
		822.5	22.22	21.22	20.23	23.5	22.5	21.5
	75RB_0	841.5	22.13	21.17	20.18	23.5	22.5	21.5
		831.5	22.28	21.24	20.24	23.5	22.5	21.5
		822.5	22.23	21.32	20.33	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	848.3	23.05	22.35	21.15	24.5	23.5	22.5
		831.5	23.15	22.53	21.42	24.5	23.5	22.5
		814.7	23.23	22.51	21.43	24.5	23.5	22.5
	1RB_3	848.3	23.11	22.41	21.21	24.5	23.5	22.5
		831.5	23.22	22.61	21.47	24.5	23.5	22.5
		814.7	23.27	22.61	21.54	24.5	23.5	22.5
	1RB_0	848.3	23.03	22.34	21.25	24.5	23.5	22.5
		831.5	23.10	22.45	21.38	24.5	23.5	22.5
		814.7	23.22	22.55	21.48	24.5	23.5	22.5
	3RB_3	848.3	23.05	22.10	21.14	24.5	23.5	22.5
		831.5	23.20	22.24	21.33	24.5	23.5	22.5
		814.7	23.25	22.32	21.35	24.5	23.5	22.5
	3RB_1	848.3	23.08	22.17	21.20	24.5	23.5	22.5
		831.5	23.16	22.25	21.31	24.5	23.5	22.5
		814.7	23.29	22.37	21.42	24.5	23.5	22.5
	3RB_0	848.3	23.02	22.09	21.15	24.5	23.5	22.5
		831.5	23.12	22.17	21.27	24.5	23.5	22.5
		814.7	23.24	22.36	21.37	24.5	23.5	22.5
	6RB_0	848.3	22.11	21.20	20.09	23.5	22.5	21.5
		831.5	22.21	21.32	20.23	23.5	22.5	21.5
		814.7	22.30	21.42	20.30	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	847.5	23.16	22.43	21.41	24.5	23.5	22.5
		831.5	23.27	22.58	21.50	24.5	23.5	22.5
		815.5	23.29	22.64	21.44	24.5	23.5	22.5
	1RB_7	847.5	23.13	22.45	21.34	24.5	23.5	22.5
		831.5	23.24	22.52	21.42	24.5	23.5	22.5
		815.5	23.30	22.60	21.43	24.5	23.5	22.5
	1RB_0	847.5	23.15	22.48	21.38	24.5	23.5	22.5
		831.5	23.18	22.53	21.40	24.5	23.5	22.5
		815.5	23.32	22.68	21.51	24.5	23.5	22.5
	8RB_7	847.5	22.18	21.23	20.23	23.5	22.5	21.5
		831.5	22.33	21.37	20.35	23.5	22.5	21.5
		815.5	22.36	21.41	20.39	23.5	22.5	21.5
	8RB_4	847.5	22.25	21.31	20.27	23.5	22.5	21.5
		831.5	22.36	21.44	20.40	23.5	22.5	21.5
		815.5	22.37	21.45	20.40	23.5	22.5	21.5
	8RB_0	847.5	22.17	21.28	20.25	23.5	22.5	21.5
		831.5	22.26	21.32	20.28	23.5	22.5	21.5
		815.5	22.39	21.46	20.40	23.5	22.5	21.5
	15RB_0	847.5	22.19	21.25	20.22	23.5	22.5	21.5
		831.5	22.27	21.28	20.27	23.5	22.5	21.5
		815.5	22.40	21.40	20.38	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	846.5	23.15	22.47	21.41	24.5	23.5	22.5
		831.5	23.26	22.64	21.52	24.5	23.5	22.5
		816.5	23.29	22.65	21.49	24.5	23.5	22.5
	1RB_12	846.5	23.21	22.47	21.37	24.5	23.5	22.5
		831.5	23.29	22.62	21.47	24.5	23.5	22.5
		816.5	23.30	22.60	21.44	24.5	23.5	22.5
	1RB_0	846.5	23.16	22.56	21.46	24.5	23.5	22.5
		831.5	23.20	22.59	21.41	24.5	23.5	22.5
		816.5	23.33	22.69	21.52	24.5	23.5	22.5
	12RB_13	846.5	22.23	21.23	20.25	23.5	22.5	21.5
		831.5	22.34	21.40	20.37	23.5	22.5	21.5
		816.5	22.35	21.37	20.38	23.5	22.5	21.5
	12RB_6	846.5	22.30	21.25	20.25	23.5	22.5	21.5
		831.5	22.33	21.30	20.32	23.5	22.5	21.5
		816.5	22.39	21.44	20.43	23.5	22.5	21.5
	12RB_0	846.5	22.24	21.25	20.28	23.5	22.5	21.5
		831.5	22.30	21.27	20.32	23.5	22.5	21.5
		816.5	22.35	21.40	20.40	23.5	22.5	21.5
	25RB_0	846.5	22.25	21.24	20.26	23.5	22.5	21.5
		831.5	22.29	21.28	20.27	23.5	22.5	21.5
		816.5	22.37	21.38	20.39	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	844.0	23.19	22.48	21.38	24.5	23.5	22.5
		831.5	23.21	22.50	21.42	24.5	23.5	22.5
		820.0	23.32	22.61	21.47	24.5	23.5	22.5
	1RB_24	844.0	23.19	22.47	21.34	24.5	23.5	22.5
		831.5	23.31	22.50	21.42	24.5	23.5	22.5
		820.0	23.22	22.51	21.35	24.5	23.5	22.5
	1RB_0	844.0	23.18	22.52	21.41	24.5	23.5	22.5
		831.5	23.22	22.52	21.45	24.5	23.5	22.5
		820.0	23.24	22.60	21.46	24.5	23.5	22.5
	25RB_25	844.0	22.31	21.29	20.32	23.5	22.5	21.5
		831.5	22.38	21.42	20.41	23.5	22.5	21.5
		820.0	22.35	21.37	20.34	23.5	22.5	21.5
	25RB_12	844.0	22.24	21.29	20.20	23.5	22.5	21.5
		831.5	22.32	21.36	20.28	23.5	22.5	21.5
		820.0	22.38	21.40	20.39	23.5	22.5	21.5
	25RB_0	844.0	22.21	21.24	20.26	23.5	22.5	21.5
		831.5	22.34	21.34	20.29	23.5	22.5	21.5
		820.0	22.29	21.30	20.25	23.5	22.5	21.5
	50RB_0	844.0	22.22	21.25	20.20	23.5	22.5	21.5
		831.5	22.32	21.35	20.31	23.5	22.5	21.5
		820.0	22.40	21.38	20.35	23.5	22.5	21.5



Bottom Antenna - Full Power								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	841.5	23.09	22.37	21.33	24.5	23.5	22.5
		831.5	23.17	22.45	21.42	24.5	23.5	22.5
		822.5	23.16	22.49	21.42	24.5	23.5	22.5
	1RB_37	841.5	23.10	22.39	21.32	24.5	23.5	22.5
		831.5	23.16	22.49	21.45	24.5	23.5	22.5
		822.5	23.13	22.33	21.46	24.5	23.5	22.5
	1RB_0	841.5	23.19	22.41	21.34	24.5	23.5	22.5
		831.5	23.18	22.43	21.40	24.5	23.5	22.5
		822.5	23.15	22.45	21.42	24.5	23.5	22.5
	36RB_38	841.5	22.25	21.24	20.22	23.5	22.5	21.5
		831.5	22.29	21.30	20.28	23.5	22.5	21.5
		822.5	22.33	21.31	20.30	23.5	22.5	21.5
	36RB_19	841.5	22.14	21.16	20.11	23.5	22.5	21.5
		831.5	22.21	21.21	20.19	23.5	22.5	21.5
		822.5	22.26	21.28	20.25	23.5	22.5	21.5
	36RB_0	841.5	22.13	21.17	20.16	23.5	22.5	21.5
		831.5	22.23	21.22	20.18	23.5	22.5	21.5
		822.5	22.20	21.22	20.22	23.5	22.5	21.5
	75RB_0	841.5	22.16	21.18	20.12	23.5	22.5	21.5
		831.5	22.24	21.24	20.21	23.5	22.5	21.5
		822.5	22.26	21.29	20.30	23.5	22.5	21.5



Top Antenna - Reduced power level 1/2								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
1.4 MHz	1RB_5	848.3	19.84	20.18	20.05	21.6	21.6	21.6
		831.5	19.99	20.30	20.23	21.6	21.6	21.6
		814.7	20.03	20.37	20.26	21.6	21.6	21.6
	1RB_3	848.3	19.96	20.25	20.12	21.6	21.6	21.6
		831.5	20.06	20.38	20.32	21.6	21.6	21.6
		814.7	20.12	20.44	20.33	21.6	21.6	21.6
	1RB_0	848.3	19.89	20.23	20.09	21.6	21.6	21.6
		831.5	19.96	20.26	20.19	21.6	21.6	21.6
		814.7	20.06	20.36	20.32	21.6	21.6	21.6
	3RB_3	848.3	19.90	19.97	20.00	21.6	21.6	21.6
		831.5	20.03	20.12	20.13	21.6	21.6	21.6
		814.7	20.05	20.16	20.15	21.6	21.6	21.6
	3RB_1	848.3	19.92	20.05	20.10	21.6	21.6	21.6
		831.5	20.01	20.12	20.15	21.6	21.6	21.6
		814.7	20.12	20.22	20.24	21.6	21.6	21.6
	3RB_0	848.3	19.90	20.00	20.02	21.6	21.6	21.6
		831.5	20.01	20.07	20.10	21.6	21.6	21.6
		814.7	20.07	20.19	20.20	21.6	21.6	21.6
	6RB_0	848.3	19.96	20.08	19.98	21.6	21.6	21.6
		831.5	20.06	20.18	20.07	21.6	21.6	21.6
		814.7	20.19	20.26	20.16	21.6	21.6	21.6



Top Antenna - Reduced power level 1/2								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
3 MHz	1RB_14	847.5	19.98	20.38	20.24	21.6	21.6	21.6
		831.5	20.12	20.48	20.39	21.6	21.6	21.6
		815.5	20.12	20.50	20.40	21.6	21.6	21.6
	1RB_7	847.5	19.98	20.34	20.14	21.6	21.6	21.6
		831.5	20.11	20.46	20.32	21.6	21.6	21.6
		815.5	20.13	20.43	20.33	21.6	21.6	21.6
	1RB_0	847.5	20.00	20.34	20.22	21.6	21.6	21.6
		831.5	20.03	20.42	20.32	21.6	21.6	21.6
		815.5	20.13	20.44	20.35	21.6	21.6	21.6
	8RB_7	847.5	20.05	20.12	20.09	21.6	21.6	21.6
		831.5	20.15	20.25	20.22	21.6	21.6	21.6
		815.5	20.21	20.28	20.25	21.6	21.6	21.6
	8RB_4	847.5	20.08	20.17	20.13	21.6	21.6	21.6
		831.5	20.21	20.30	20.24	21.6	21.6	21.6
		815.5	20.26	20.32	20.25	21.6	21.6	21.6
	8RB_0	847.5	20.08	20.14	20.08	21.6	21.6	21.6
		831.5	20.11	20.19	20.16	21.6	21.6	21.6
		815.5	20.23	20.30	20.22	21.6	21.6	21.6
	15RB_0	847.5	20.08	20.09	20.09	21.6	21.6	21.6
		831.5	20.11	20.16	20.15	21.6	21.6	21.6
		815.5	20.21	20.29	20.23	21.6	21.6	21.6



Top Antenna - Reduced power level 1/2								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	846.5	20.01	20.34	20.21	21.6	21.6	21.6
		831.5	20.11	20.46	20.32	21.6	21.6	21.6
		816.5	20.11	20.47	20.37	21.6	21.6	21.6
	1RB_12	846.5	20.00	20.32	20.19	21.6	21.6	21.6
		831.5	20.16	20.46	20.28	21.6	21.6	21.6
		816.5	20.14	20.44	20.32	21.6	21.6	21.6
	1RB_0	846.5	20.05	20.39	20.23	21.6	21.6	21.6
		831.5	20.06	20.41	20.22	21.6	21.6	21.6
		816.5	20.13	20.50	20.43	21.6	21.6	21.6
	12RB_13	846.5	20.10	20.09	20.07	21.6	21.6	21.6
		831.5	20.21	20.24	20.24	21.6	21.6	21.6
		816.5	20.18	20.22	20.22	21.6	21.6	21.6
	12RB_6	846.5	20.15	20.13	20.12	21.6	21.6	21.6
		831.5	20.20	20.20	20.19	21.6	21.6	21.6
		816.5	20.25	20.28	20.24	21.6	21.6	21.6
	12RB_0	846.5	20.10	20.15	20.13	21.6	21.6	21.6
		831.5	20.15	20.19	20.20	21.6	21.6	21.6
		816.5	20.25	20.27	20.23	21.6	21.6	21.6
	25RB_0	846.5	20.06	20.13	20.11	21.6	21.6	21.6
		831.5	20.16	20.17	20.17	21.6	21.6	21.6
		816.5	20.25	20.23	20.23	21.6	21.6	21.6



Top Antenna - Reduced power level 1/2								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	844.0	19.99	20.33	20.29	21.6	21.6	21.6
		831.5	20.10	20.44	20.36	21.6	21.6	21.6
		820.0	20.12	20.48	20.33	21.6	21.6	21.6
	1RB_24	844.0	20.02	20.28	20.26	21.6	21.6	21.6
		831.5	20.10	20.37	20.34	21.6	21.6	21.6
		820.0	20.11	20.37	20.30	21.6	21.6	21.6
	1RB_0	844.0	20.05	20.34	20.27	21.6	21.6	21.6
		831.5	20.05	20.36	20.31	21.6	21.6	21.6
		820.0	20.10	20.41	20.32	21.6	21.6	21.6
	25RB_25	844.0	20.13	20.15	20.19	21.6	21.6	21.6
		831.5	20.20	20.26	20.28	21.6	21.6	21.6
		820.0	20.18	20.24	20.24	21.6	21.6	21.6
	25RB_12	844.0	20.07	20.10	20.13	21.6	21.6	21.6
		831.5	20.17	20.22	20.13	21.6	21.6	21.6
		820.0	20.21	20.23	20.23	21.6	21.6	21.6
	25RB_0	844.0	20.08	20.11	20.13	21.6	21.6	21.6
		831.5	20.15	20.22	20.22	21.6	21.6	21.6
		820.0	20.14	20.17	20.15	21.6	21.6	21.6
	50RB_0	844.0	20.08	20.08	20.12	21.6	21.6	21.6
		831.5	20.17	20.20	20.16	21.6	21.6	21.6
		820.0	20.21	20.24	20.20	21.6	21.6	21.6



Top Antenna - Reduced power level 1/2								
LTE Band 26			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	841.5	19.88	20.18	20.13	21.6	21.6	21.6
		831.5	19.96	20.28	20.17	21.6	21.6	21.6
		822.5	20.03	20.38	20.29	21.6	21.6	21.6
	1RB_37	841.5	19.91	20.20	20.13	21.6	21.6	21.6
		831.5	19.98	20.31	20.28	21.6	21.6	21.6
		822.5	19.95	20.26	20.13	21.6	21.6	21.6
	1RB_0	841.5	19.98	20.25	20.27	21.6	21.6	21.6
		831.5	19.97	20.29	20.19	21.6	21.6	21.6
		822.5	19.94	20.35	20.25	21.6	21.6	21.6
	36RB_38	841.5	20.08	20.07	20.05	21.6	21.6	21.6
		831.5	20.12	20.14	20.14	21.6	21.6	21.6
		822.5	20.13	20.12	20.12	21.6	21.6	21.6
	36RB_19	841.5	19.95	19.97	19.97	21.6	21.6	21.6
		831.5	20.05	20.03	20.03	21.6	21.6	21.6
		822.5	20.08	20.09	20.09	21.6	21.6	21.6
	36RB_0	841.5	19.96	19.99	20.01	21.6	21.6	21.6
		831.5	20.04	20.05	20.07	21.6	21.6	21.6
		822.5	19.99	20.04	20.01	21.6	21.6	21.6
	75RB_0	841.5	19.97	20.02	20.00	21.6	21.6	21.6
		831.5	20.05	20.07	20.04	21.6	21.6	21.6
		822.5	20.07	20.10	20.14	21.6	21.6	21.6



Top Antenna - Full Power								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2652.5	24.26	23.32	22.13	25.3	24.3	23.3
		2600.0	24.22	23.34	22.10	25.3	24.3	23.3
		2547.5	24.24	23.38	22.12	25.3	24.3	23.3
	1RB_12	2652.5	24.20	23.41	22.09	25.3	24.3	23.3
		2600.0	24.15	23.33	22.03	25.3	24.3	23.3
		2547.5	24.16	23.40	22.05	25.3	24.3	23.3
	1RB_0	2652.5	24.20	23.30	22.06	25.3	24.3	23.3
		2600.0	24.11	23.27	22.04	25.3	24.3	23.3
		2547.5	24.17	23.25	22.02	25.3	24.3	23.3
	12RB_13	2652.5	23.29	22.29	21.31	24.3	23.3	22.3
		2600.0	23.27	22.26	21.33	24.3	23.3	22.3
		2547.5	23.26	22.25	21.32	24.3	23.3	22.3
	12RB_6	2652.5	23.34	22.31	21.37	24.3	23.3	22.3
		2600.0	23.30	22.26	21.32	24.3	23.3	22.3
		2547.5	23.30	22.28	21.34	24.3	23.3	22.3
	12RB_0	2652.5	23.33	22.32	21.36	24.3	23.3	22.3
		2600.0	23.23	22.25	21.32	24.3	23.3	22.3
		2547.5	23.27	22.31	21.33	24.3	23.3	22.3
	25RB_0	2652.5	23.30	22.31	21.39	24.3	23.3	22.3
		2600.0	23.27	22.30	21.36	24.3	23.3	22.3
		2547.5	23.31	22.31	21.31	24.3	23.3	22.3



Top Antenna - Full Power								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2650.0	24.15	23.29	22.03	25.3	24.3	23.3
		2600.0	24.18	23.28	22.08	25.3	24.3	23.3
		2550.0	24.14	23.30	22.09	25.3	24.3	23.3
	1RB_24	2650.0	24.24	23.31	22.12	25.3	24.3	23.3
		2600.0	24.16	23.27	22.13	25.3	24.3	23.3
		2550.0	24.17	23.27	22.09	25.3	24.3	23.3
	1RB_0	2650.0	24.29	23.37	22.08	25.3	24.3	23.3
		2600.0	24.20	23.32	22.17	25.3	24.3	23.3
		2550.0	24.24	23.38	22.17	25.3	24.3	23.3
	25RB_25	2650.0	23.31	22.35	21.40	24.3	23.3	22.3
		2600.0	23.26	22.33	21.40	24.3	23.3	22.3
		2550.0	23.31	22.36	21.40	24.3	23.3	22.3
	25RB_12	2650.0	23.22	22.27	21.34	24.3	23.3	22.3
		2600.0	23.27	22.33	21.39	24.3	23.3	22.3
		2550.0	23.31	22.32	21.40	24.3	23.3	22.3
	25RB_0	2650.0	23.20	22.25	21.34	24.3	23.3	22.3
		2600.0	23.28	22.27	21.37	24.3	23.3	22.3
		2550.0	23.30	22.32	21.37	24.3	23.3	22.3
	50RB_0	2650.0	23.25	22.24	21.27	24.3	23.3	22.3
		2600.0	23.27	22.29	21.31	24.3	23.3	22.3
		2550.0	23.28	22.32	21.32	24.3	23.3	22.3



Top Antenna - Full Power								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2647.5	24.05	23.21	21.90	25.3	24.3	23.3
		2600.0	24.04	23.23	21.90	25.3	24.3	23.3
		2552.5	24.06	23.24	21.92	25.3	24.3	23.3
	1RB_37	2647.5	24.04	23.22	21.86	25.3	24.3	23.3
		2600.0	23.95	23.14	21.84	25.3	24.3	23.3
		2552.5	24.02	23.22	21.80	25.3	24.3	23.3
	1RB_0	2647.5	24.12	23.35	21.88	25.3	24.3	23.3
		2600.0	24.03	23.18	21.86	25.3	24.3	23.3
		2552.5	24.10	23.27	21.92	25.3	24.3	23.3
	36RB_38	2647.5	23.18	22.15	21.17	24.3	23.3	22.3
		2600.0	23.14	22.11	21.17	24.3	23.3	22.3
		2552.5	23.18	22.17	21.20	24.3	23.3	22.3
	36RB_19	2647.5	23.19	22.19	21.17	24.3	23.3	22.3
		2600.0	23.11	22.12	21.13	24.3	23.3	22.3
		2552.5	23.19	22.13	21.17	24.3	23.3	22.3
	36RB_0	2647.5	23.14	22.14	21.14	24.3	23.3	22.3
		2600.0	23.06	22.06	21.08	24.3	23.3	22.3
		2552.5	23.17	22.14	21.17	24.3	23.3	22.3
	75RB_0	2647.5	23.21	22.19	21.23	24.3	23.3	22.3
		2600.0	23.17	22.18	21.17	24.3	23.3	22.3
		2552.5	23.18	22.19	21.18	24.3	23.3	22.3



Top Antenna - Full Power								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2645.0	24.05	23.22	21.91	25.3	24.3	23.3
		2600.0	24.03	23.20	21.89	25.3	24.3	23.3
		2555.0	24.01	23.19	21.84	25.3	24.3	23.3
	1RB_50	2645.0	24.03	23.17	21.85	25.3	24.3	23.3
		2600.0	23.92	23.13	21.84	25.3	24.3	23.3
		2555.0	23.95	23.15	21.82	25.3	24.3	23.3
	1RB_0	2645.0	24.21	23.35	21.98	25.3	24.3	23.3
		2600.0	24.05	23.25	21.88	25.3	24.3	23.3
		2555.0	24.01	23.22	21.88	25.3	24.3	23.3
	50RB_50	2645.0	23.19	22.20	21.20	24.3	23.3	22.3
		2600.0	23.15	22.19	21.17	24.3	23.3	22.3
		2555.0	23.20	22.19	21.21	24.3	23.3	22.3
	50RB_25	2645.0	23.14	22.17	21.20	24.3	23.3	22.3
		2600.0	23.17	22.20	21.18	24.3	23.3	22.3
		2555.0	23.18	22.23	21.24	24.3	23.3	22.3
	50RB_0	2645.0	23.18	22.22	21.20	24.3	23.3	22.3
		2600.0	23.09	22.11	21.10	24.3	23.3	22.3
		2555.0	23.15	22.21	21.20	24.3	23.3	22.3
	100RB_0	2645.0	23.15	22.18	21.19	24.3	23.3	22.3
		2600.0	23.15	22.19	21.18	24.3	23.3	22.3
		2555.0	23.18	22.23	21.22	24.3	23.3	22.3



Bottom Antenna - Full Power								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2652.5	23.82	22.92	21.69	25.0	24.0	23.0
		2600.0	23.82	22.96	21.71	25.0	24.0	23.0
		2547.5	23.83	22.87	21.70	25.0	24.0	23.0
	1RB_12	2652.5	23.78	22.96	21.64	25.0	24.0	23.0
		2600.0	23.74	22.93	21.68	25.0	24.0	23.0
		2547.5	23.73	22.91	21.62	25.0	24.0	23.0
	1RB_0	2652.5	23.75	22.88	21.62	25.0	24.0	23.0
		2600.0	23.76	22.81	21.63	25.0	24.0	23.0
		2547.5	23.70	22.80	21.64	25.0	24.0	23.0
	12RB_13	2652.5	22.86	21.82	20.90	24.0	23.0	22.0
		2600.0	22.86	21.85	20.92	24.0	23.0	22.0
		2547.5	22.83	21.77	20.89	24.0	23.0	22.0
	12RB_6	2652.5	22.88	21.87	20.95	24.0	23.0	22.0
		2600.0	22.89	21.87	20.95	24.0	23.0	22.0
		2547.5	22.87	21.84	20.89	24.0	23.0	22.0
	12RB_0	2652.5	22.86	21.83	20.91	24.0	23.0	22.0
		2600.0	22.86	21.83	20.94	24.0	23.0	22.0
		2547.5	22.81	21.82	20.88	24.0	23.0	22.0
	25RB_0	2652.5	22.84	21.88	20.93	24.0	23.0	22.0
		2600.0	22.86	21.90	20.94	24.0	23.0	22.0
		2547.5	22.85	21.83	20.94	24.0	23.0	22.0



Bottom Antenna - Full Power								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2650.0	23.77	22.80	21.61	25.0	24.0	23.0
		2600.0	23.78	22.87	21.67	25.0	24.0	23.0
		2550.0	23.78	22.81	21.69	25.0	24.0	23.0
	1RB_24	2650.0	23.80	22.84	21.68	25.0	24.0	23.0
		2600.0	23.77	22.84	21.70	25.0	24.0	23.0
		2550.0	23.74	22.79	21.67	25.0	24.0	23.0
	1RB_0	2650.0	23.79	22.91	21.65	25.0	24.0	23.0
		2600.0	23.81	22.97	21.77	25.0	24.0	23.0
		2550.0	23.82	22.86	21.71	25.0	24.0	23.0
	25RB_25	2650.0	22.87	21.88	20.94	24.0	23.0	22.0
		2600.0	22.86	21.90	20.99	24.0	23.0	22.0
		2550.0	22.87	21.82	20.98	24.0	23.0	22.0
	25RB_12	2650.0	22.79	21.84	20.88	24.0	23.0	22.0
		2600.0	22.89	21.95	20.99	24.0	23.0	22.0
		2550.0	22.89	21.88	20.98	24.0	23.0	22.0
	25RB_0	2650.0	22.76	21.78	20.84	24.0	23.0	22.0
		2600.0	22.83	21.96	20.97	24.0	23.0	22.0
		2550.0	22.82	21.80	20.94	24.0	23.0	22.0
	50RB_0	2650.0	22.79	21.82	20.84	24.0	23.0	22.0
		2600.0	22.85	21.92	20.94	24.0	23.0	22.0
		2550.0	22.84	21.84	20.91	24.0	23.0	22.0



Bottom Antenna - Full Power								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2647.5	23.60	22.83	21.41	25.0	24.0	23.0
		2600.0	23.61	22.78	21.51	25.0	24.0	23.0
		2552.5	23.62	22.78	21.52	25.0	24.0	23.0
	1RB_37	2647.5	23.52	22.72	21.37	25.0	24.0	23.0
		2600.0	23.56	22.73	21.40	25.0	24.0	23.0
		2552.5	23.56	22.69	21.41	25.0	24.0	23.0
	1RB_0	2647.5	23.62	22.76	21.43	25.0	24.0	23.0
		2600.0	23.59	22.79	21.49	25.0	24.0	23.0
		2552.5	23.61	22.78	21.54	25.0	24.0	23.0
	36RB_38	2647.5	22.75	21.68	20.68	24.0	23.0	22.0
		2600.0	22.71	21.67	20.76	24.0	23.0	22.0
		2552.5	22.74	21.69	20.74	24.0	23.0	22.0
	36RB_19	2647.5	22.73	21.70	20.72	24.0	23.0	22.0
		2600.0	22.73	21.72	20.74	24.0	23.0	22.0
		2552.5	22.76	21.66	20.71	24.0	23.0	22.0
	36RB_0	2647.5	22.66	21.65	20.69	24.0	23.0	22.0
		2600.0	22.63	21.63	20.70	24.0	23.0	22.0
		2552.5	22.74	21.66	20.74	24.0	23.0	22.0
	75RB_0	2647.5	22.73	21.74	20.74	24.0	23.0	22.0
		2600.0	22.73	21.79	20.77	24.0	23.0	22.0
		2552.5	22.74	21.72	20.76	24.0	23.0	22.0



Bottom Antenna - Full Power								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2645.0	23.55	22.76	21.44	25.0	24.0	23.0
		2600.0	23.63	22.77	21.51	25.0	24.0	23.0
		2555.0	23.53	22.70	21.43	25.0	24.0	23.0
	1RB_50	2645.0	23.46	22.67	21.36	25.0	24.0	23.0
		2600.0	23.52	22.66	21.41	25.0	24.0	23.0
		2555.0	23.52	22.66	21.38	25.0	24.0	23.0
	1RB_0	2645.0	23.61	22.79	21.45	25.0	24.0	23.0
		2600.0	23.59	22.81	21.46	25.0	24.0	23.0
		2555.0	23.50	22.68	21.44	25.0	24.0	23.0
	50RB_50	2645.0	22.67	21.70	20.74	24.0	23.0	22.0
		2600.0	22.73	21.73	20.76	24.0	23.0	22.0
		2555.0	22.70	21.71	20.75	24.0	23.0	22.0
	50RB_25	2645.0	22.60	21.65	20.66	24.0	23.0	22.0
		2600.0	22.70	21.74	20.80	24.0	23.0	22.0
		2555.0	22.71	21.71	20.77	24.0	23.0	22.0
	50RB_0	2645.0	22.62	21.68	20.68	24.0	23.0	22.0
		2600.0	22.63	21.66	20.72	24.0	23.0	22.0
		2555.0	22.70	21.67	20.74	24.0	23.0	22.0
	100RB_0	2645.0	22.62	21.63	20.66	24.0	23.0	22.0
		2600.0	22.74	21.74	20.81	24.0	23.0	22.0
		2555.0	22.74	21.69	20.77	24.0	23.0	22.0



Top Antenna - Reduced power level 1/2								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
5 MHz	1RB_24	2652.5	21.88	22.02	21.76	22.9	22.9	22.9
		2600.0	21.81	21.99	21.74	22.9	22.9	22.9
		2547.5	21.83	21.97	21.75	22.9	22.9	22.9
	1RB_12	2652.5	21.82	22.02	21.72	22.9	22.9	22.9
		2600.0	21.82	21.98	21.69	22.9	22.9	22.9
		2547.5	21.80	22.00	21.71	22.9	22.9	22.9
	1RB_0	2652.5	21.87	21.97	21.71	22.9	22.9	22.9
		2600.0	21.82	21.89	21.65	22.9	22.9	22.9
		2547.5	21.80	21.88	21.66	22.9	22.9	22.9
	12RB_13	2652.5	21.93	21.92	21.32	22.9	22.9	23.3
		2600.0	21.86	21.87	21.31	22.9	22.9	23.3
		2547.5	21.91	21.92	21.33	22.9	22.9	23.3
	12RB_6	2652.5	21.94	21.94	21.40	22.9	22.9	23.3
		2600.0	21.92	21.90	21.34	22.9	22.9	23.3
		2547.5	21.93	21.94	21.34	22.9	22.9	23.3
	12RB_0	2652.5	21.94	21.95	21.39	22.9	22.9	23.3
		2600.0	21.88	21.87	21.32	22.9	22.9	23.3
		2547.5	21.89	21.88	21.36	22.9	22.9	23.3
	25RB_0	2652.5	21.95	21.96	21.42	22.9	22.9	23.3
		2600.0	21.87	21.96	21.37	22.9	22.9	23.3
		2547.5	21.92	21.94	21.34	22.9	22.9	23.3



Top Antenna - Reduced power level 1/2								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
10 MHz	1RB_49	2650.0	21.78	21.94	21.71	22.9	22.9	22.9
		2600.0	21.80	21.85	21.69	22.9	22.9	22.9
		2550.0	21.85	21.92	21.73	22.9	22.9	22.9
	1RB_24	2650.0	21.85	21.92	21.75	22.9	22.9	22.9
		2600.0	21.81	21.94	21.77	22.9	22.9	22.9
		2550.0	21.84	21.87	21.74	22.9	22.9	22.9
	1RB_0	2650.0	21.90	22.00	21.76	22.9	22.9	22.9
		2600.0	21.84	21.94	21.80	22.9	22.9	22.9
		2550.0	21.85	21.94	21.82	22.9	22.9	22.9
	25RB_25	2650.0	21.93	21.98	21.40	22.9	22.9	23.3
		2600.0	21.94	21.95	21.38	22.9	22.9	23.3
		2550.0	21.91	21.98	21.43	22.9	22.9	23.3
	25RB_12	2650.0	21.85	21.92	21.41	22.9	22.9	23.3
		2600.0	21.93	21.95	21.39	22.9	22.9	23.3
		2550.0	21.93	21.98	21.44	22.9	22.9	23.3
	25RB_0	2650.0	21.87	21.89	21.37	22.9	22.9	23.3
		2600.0	21.90	21.95	21.39	22.9	22.9	23.3
		2550.0	21.90	21.93	21.38	22.9	22.9	23.3
	50RB_0	2650.0	21.88	21.89	21.34	22.9	22.9	23.3
		2600.0	21.90	21.96	21.33	22.9	22.9	23.3
		2550.0	21.91	21.97	21.37	22.9	22.9	23.3



Top Antenna - Reduced power level 1/2								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
15 MHz	1RB_74	2647.5	21.67	21.89	21.54	22.9	22.9	22.9
		2600.0	21.66	21.88	21.56	22.9	22.9	22.9
		2552.5	21.68	21.89	21.59	22.9	22.9	22.9
	1RB_37	2647.5	21.62	21.83	21.47	22.9	22.9	22.9
		2600.0	21.56	21.73	21.43	22.9	22.9	22.9
		2552.5	21.60	21.76	21.48	22.9	22.9	22.9
	1RB_0	2647.5	21.76	21.98	21.58	22.9	22.9	22.9
		2600.0	21.62	21.83	21.47	22.9	22.9	22.9
		2552.5	21.68	21.83	21.60	22.9	22.9	22.9
	36RB_38	2647.5	21.80	21.80	21.24	22.9	22.9	23.3
		2600.0	21.77	21.73	21.17	22.9	22.9	23.3
		2552.5	21.77	21.78	21.25	22.9	22.9	23.3
	36RB_19	2647.5	21.81	21.80	21.24	22.9	22.9	23.3
		2600.0	21.73	21.74	21.17	22.9	22.9	23.3
		2552.5	21.76	21.76	21.19	22.9	22.9	23.3
	36RB_0	2647.5	21.78	21.80	21.19	22.9	22.9	23.3
		2600.0	21.70	21.68	21.11	22.9	22.9	23.3
		2552.5	21.77	21.79	21.22	22.9	22.9	23.3
	75RB_0	2647.5	21.80	21.90	21.24	22.9	22.9	23.3
		2600.0	21.77	21.80	21.21	22.9	22.9	23.3
		2552.5	21.81	21.83	21.24	22.9	22.9	23.3



Top Antenna - Reduced power level 1/2								
LTE Band 41			Actual output Power (dBm)			Tune up		
Band -width	RB No. / RB offset	Frequency (MHz)	Modulation			Modulation		
			QPSK	16QAM	64QAM	QPSK	16QAM	64QAM
20 MHz	1RB_99	2645.0	21.69	21.86	21.54	22.9	22.9	22.9
		2600.0	21.66	21.85	21.56	22.9	22.9	22.9
		2555.0	21.63	21.78	21.52	22.9	22.9	22.9
	1RB_50	2645.0	21.60	21.86	21.49	22.9	22.9	22.9
		2600.0	21.58	21.74	21.46	22.9	22.9	22.9
		2555.0	21.58	21.74	21.46	22.9	22.9	22.9
	1RB_0	2645.0	21.81	21.97	21.66	22.9	22.9	22.9
		2600.0	21.63	21.82	21.54	22.9	22.9	22.9
		2555.0	21.60	21.78	21.52	22.9	22.9	22.9
	50RB_50	2645.0	21.92	21.83	21.23	22.9	22.9	23.3
		2600.0	21.78	21.80	21.21	22.9	22.9	23.3
		2555.0	21.80	21.81	21.26	22.9	22.9	23.3
	50RB_25	2645.0	21.77	21.83	21.23	22.9	22.9	23.3
		2600.0	21.77	21.78	21.24	22.9	22.9	23.3
		2555.0	21.80	21.85	21.23	22.9	22.9	23.3
	50RB_0	2645.0	21.79	21.86	21.23	22.9	22.9	23.3
		2600.0	21.69	21.73	21.14	22.9	22.9	23.3
		2555.0	21.80	21.82	21.25	22.9	22.9	23.3
	100RB_0	2645.0	21.77	21.81	21.21	22.9	22.9	23.3
		2600.0	21.77	21.79	21.21	22.9	22.9	23.3
		2555.0	21.78	21.84	21.24	22.9	22.9	23.3

10.4. WLAN and Bluetooth Measurement result

Table 10.5: The conducted Power measurement results for Bluetooth

Mode	Tune up	Averaged Power (dBm)		
		Ch.0 (2402MHz)	Ch.39 (2441MHz)	Ch.78 (2480MHz)
GFSK	14.0	11.96	12.26	12.18
EDR2M-4_DQPSK	13.0	11.50	11.37	11.32
EDR3M-8DPSK	13.0	11.34	11.85	11.46
/	/	Ch.0 (2402MHz)	Ch.19 (2440MHz)	Ch.39 (2480MHz)
BLE(1M)	9.0	5.59	6.16	7.38
BLE(2M)	9.0	5.84	6.45	7.44

Table 10.6: The conducted Power measurement results for WLAN 2.4G

Full Power				
Mode	Tune up	Averaged Power (dBm) Duty Cycle: 100%		
		Ch.1 (2412MHz)	Ch.6 (2437MHz)	Ch.11 (2462MHz)
802.11b	20.0	18.42	18.89	18.37
802.11g	19.0	17.23	17.84	17.19
802.11n(20MHz)	19.0	17.16	17.74	17.15
Reduced power level 7				
Mode	Tune up	Averaged Power (dBm) Duty Cycle: 100%		
		Ch.1 (2412MHz)	Ch.6 (2437MHz)	Ch.11 (2462MHz)
802.11b	17.0	15.37	15.91	15.35
802.11g	17.0	15.18	15.86	15.17
802.11n(20MHz)	17.0	15.11	15.76	15.13
Reduced power level 8				
Mode	Tune up	Averaged Power (dBm) Duty Cycle: 100%		
		Ch.1 (2412MHz)	Ch.6 (2437MHz)	Ch.11 (2462MHz)
802.11b	12.5	10.99	11.37	10.86
802.11g	12.5	10.80	11.32	10.68
802.11n(20MHz)	12.5	10.73	11.22	10.64
Reduced power level 9				
Mode	Tune up	Averaged Power (dBm) Duty Cycle: 100%		
		Ch.1 (2412MHz)	Ch.6 (2437MHz)	Ch.11 (2462MHz)
802.11b	19.0	17.39	17.82	17.39
802.11g	19.0	17.23	17.84	17.19
802.11n(20MHz)	19.0	17.16	17.74	17.15

Table 10.7: The conducted Power measurement results for WLAN 5G

Full Power								
Averaged Power (dBm) Duty Cycle: 100%								
Mode	802.11a	802.11n -20MHz	802.11ac -20MHz	Mode	802.11n -40MHz	802.11ac -40MHz	Mode	802.11ac -80MHz
Channel	6Mbps	MCS0	MCS0	Channel	MCS0	MCS0	Channel	MCS0
<U-NII-1>								
Tune up	19.0	19.0	18.5	/	18.0	18.0	/	18.0
36(5180MHz)	17.12	17.01	16.65	38(5190MHz)	16.08	16.06	42(5210MHz)	16.04
40(5200MHz)	17.38	17.19	16.69	46(5230MHz)	16.19	16.22	/	/
44(5220MHz)	17.47	17.33	16.71	/	/	/	/	/
48(5240MHz)	17.42	17.39	16.74	/	/	/	/	/
<U-NII-2A>								
Tune up	19.0	19.0	18.5	/	18.0	18.0	/	18.0
52(5260MHz)	17.51	17.48	16.86	54(5270MHz)	16.42	16.35	58(5290MHz)	16.46
56(5280MHz)	17.68	17.55	16.91	62(5310MHz)	16.59	16.47	/	/
60(5300MHz)	17.64	17.60	17.13	/	/	/	/	/
64(5320MHz)	17.79	17.68	17.18	/	/	/	/	/
<U-NII-2C>								
Tune up	19.0	19.0	18.5	/	18.0	18.0	/	18.0
100(5500MHz)	17.86	17.81	17.21	102(5510MHz)	16.87	16.85	106(5530MHz)	16.75
116(5580MHz)	17.59	17.52	16.83	110(5550MHz)	16.51	16.53	122(5610MHz)	16.40
124(5620MHz)	17.61	17.59	16.87	126(5630MHz)	16.24	16.20	138(5690MHz)	16.31
132(5660MHz)	17.56	17.47	16.93	134(5670MHz)	16.33	16.29	/	/
140(5700MHz)	17.43	17.36	16.82	/	/	/	/	/
<U-NII-3>								
Tune up	19.0	18.5	18.0	/	18.5	18.0	/	18.0
149(5745MHz)	17.34	16.76	16.38	151(5755MHz)	16.53	16.02	155(5775MHz)	16.01
157(5785MHz)	17.19	16.67	16.15	159(5795MHz)	16.51	16.00	/	/
165(5825MHz)	17.28	16.79	16.31	/	/	/	/	/



Reduced power level 7								
Averaged Power (dBm) Duty Cycle: 100%								
Mode	802.11a	802.11n -20MHz	802.11ac -20MHz	Mode	802.11n -40MHz	802.11ac -40MHz	Mode	802.11ac -80MHz
Channel	6Mbps	MCS0	MCS0	Channel	MCS0	MCS0	Channel	MCS0
<U-NII-1>								
Tune up	14.0	14.0	14.0	/	14.0	14.0	/	14.0
36(5180MHz)	12.10	12.04	12.10	38(5190MHz)	12.11	12.09	42(5210MHz)	12.07
40(5200MHz)	12.36	12.22	12.14	46(5230MHz)	12.22	12.25	/	/
44(5220MHz)	12.45	12.36	12.16	/	/	/	/	/
48(5240MHz)	12.40	12.42	12.19	/	/	/	/	/
<U-NII-2A>								
Tune up	14.0	14.0	14.0	/	14.0	14.0	/	14.0
52(5260MHz)	12.49	12.51	12.31	54(5270MHz)	12.45	12.38	58(5290MHz)	12.49
56(5280MHz)	12.66	12.58	12.36	62(5310MHz)	12.62	12.50	/	/
60(5300MHz)	12.62	12.63	12.58	/	/	/	/	/
64(5320MHz)	12.77	12.71	12.63	/	/	/	/	/
<U-NII-2C>								
Tune up	14.5	14.5	14.5	/	14.5	14.5	/	14.5
100(5500MHz)	13.31	13.26	13.15	102(5510MHz)	13.30	13.28	106(5530MHz)	13.18
116(5580MHz)	13.04	12.97	12.77	110(5550MHz)	12.94	12.96	122(5610MHz)	12.83
124(5620MHz)	13.06	13.04	12.81	126(5630MHz)	12.67	12.63	138(5690MHz)	12.74
132(5660MHz)	13.01	12.92	12.87	134(5670MHz)	12.76	12.72	/	/
140(5700MHz)	12.88	12.81	12.76	/	/	/	/	/
<U-NII-3>								
Tune up	14.5	14.5	14.5	/	14.5	14.5	/	14.5
149(5745MHz)	12.86	12.74	12.91	151(5755MHz)	12.51	12.55	155(5775MHz)	12.58
157(5785MHz)	12.71	12.65	12.68	159(5795MHz)	12.47	12.53	/	/
165(5825MHz)	12.80	12.77	12.84	/	/	/	/	/



Reduced power level 8								
Averaged Power (dBm) Duty Cycle: 100%								
Mode	802.11a	802.11n -20MHz	802.11ac -20MHz	Mode	802.11n -40MHz	802.11ac -40MHz	Mode	802.11ac -80MHz
Channel	6Mbps	MCS0	MCS0	Channel	MCS0	MCS0	Channel	MCS0
<U-NII-1>								
Tune up	10.0	10.0	10.0	/	14.0	14.0	/	10.0
36(5180MHz)	8.09	8.03	8.17	38(5190MHz)	8.04	8.02	42(5210MHz)	8.00
40(5200MHz)	8.35	8.16	8.21	46(5230MHz)	8.15	8.18	/	/
44(5220MHz)	8.44	8.30	8.23	/	/	/	/	/
48(5240MHz)	8.39	8.36	8.26	/	/	/	/	/
<U-NII-2A>								
Tune up	10.0	10.0	10.0	/	10.0	10.0	/	10.0
52(5260MHz)	8.48	8.45	8.38	54(5270MHz)	8.38	8.31	58(5290MHz)	8.42
56(5280MHz)	8.65	8.52	8.43	62(5310MHz)	8.55	8.43	/	/
60(5300MHz)	8.61	8.57	8.65	/	/	/	/	/
64(5320MHz)	8.76	8.65	8.70	/	/	/	/	/
<U-NII-2C>								
Tune up	10.5	10.5	10.5	/	10.5	10.5	/	10.5
100(5500MHz)	9.29	9.24	9.24	102(5510MHz)	9.30	9.28	106(5530MHz)	9.18
116(5580MHz)	9.02	8.95	8.86	110(5550MHz)	8.94	8.96	122(5610MHz)	8.83
124(5620MHz)	9.04	9.02	8.90	126(5630MHz)	8.67	8.63	138(5690MHz)	8.74
132(5660MHz)	8.99	8.90	8.96	134(5670MHz)	8.76	8.72	/	/
140(5700MHz)	8.86	8.79	8.85	/	/	/	/	/
<U-NII-3>								
Tune up	10.5	10.5	10.5	/	10.5	10.5	/	10.5
149(5745MHz)	8.86	8.79	8.85	151(5755MHz)	8.56	8.54	155(5775MHz)	8.58
157(5785MHz)	8.71	8.70	8.62	159(5795MHz)	8.52	8.51	/	/
165(5825MHz)	8.80	8.82	8.78	/	/	/	/	/



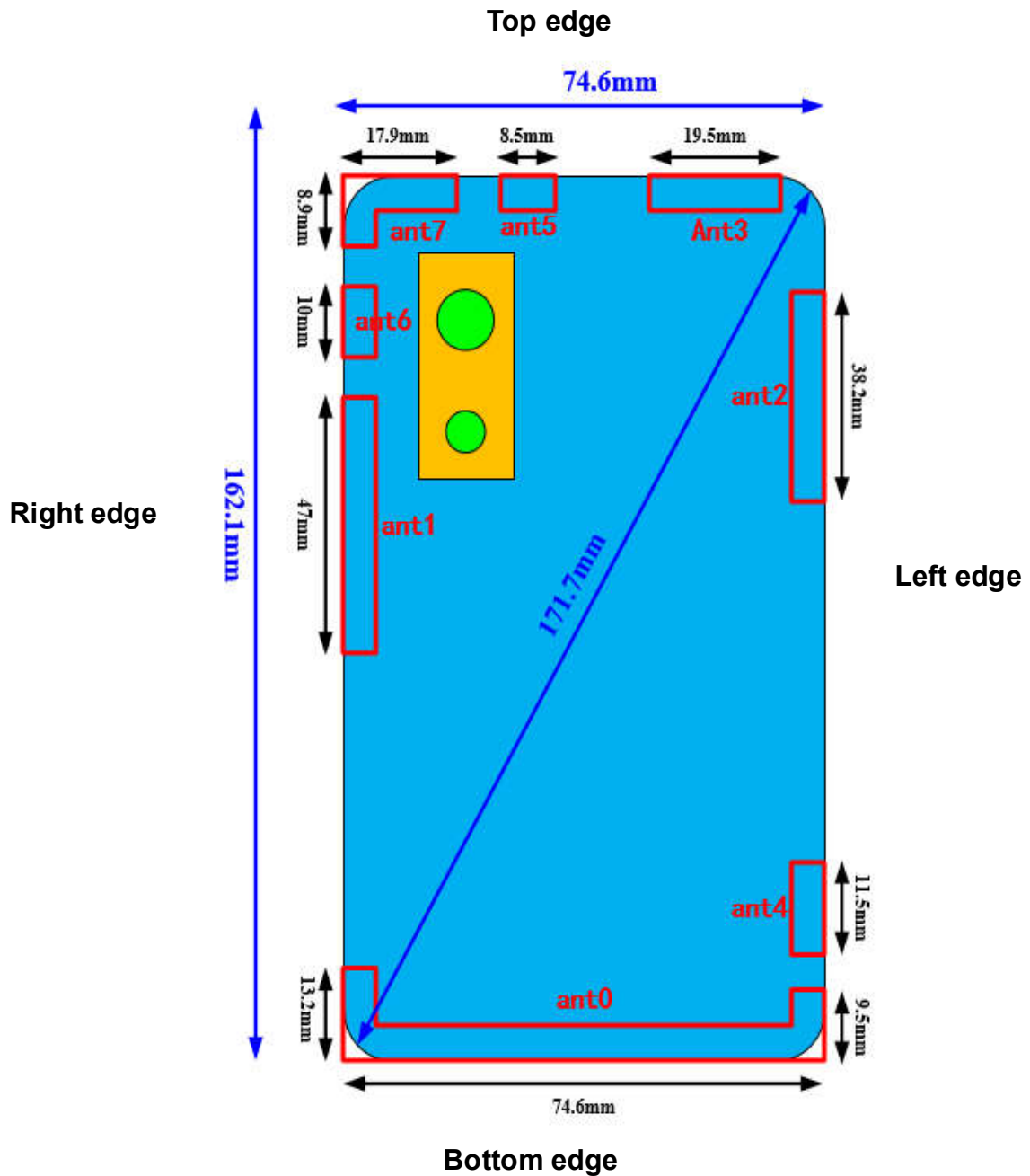
Reduced power level 9								
Averaged Power (dBm) Duty Cycle: 100%								
Mode	802.11a	802.11n -20MHz	802.11ac -20MHz	Mode	802.11n -40MHz	802.11ac -40MHz	Mode	802.11ac -80MHz
Channel	6Mbps	MCS0	MCS0	Channel	MCS0	MCS0	Channel	MCS0
<U-NII-1>								
Tune up	16.5	16.5	16.5	/	16.5	16.5	/	16.5
36(5180MHz)	14.66	14.55	14.58	38(5190MHz)	14.54	14.52	42(5210MHz)	14.50
40(5200MHz)	14.92	14.73	14.62	46(5230MHz)	14.65	14.68	/	/
44(5220MHz)	15.01	14.87	14.64	/	/	/	/	/
48(5240MHz)	14.96	14.93	14.67	/	/	/	/	/
<U-NII-2A>								
Tune up	16.5	16.5	16.5	/	16.5	16.5	/	16.5
52(5260MHz)	15.05	15.02	14.79	54(5270MHz)	14.88	14.81	58(5290MHz)	14.92
56(5280MHz)	15.22	15.09	14.84	62(5310MHz)	15.05	14.93	/	/
60(5300MHz)	15.18	15.14	15.06	/	/	/	/	/
64(5320MHz)	15.33	15.22	15.11	/	/	/	/	/
<U-NII-2C>								
Tune up	15.5	15.5	15.5	/	15.5	15.5	/	15.5
100(5500MHz)	14.29	14.24	14.19	102(5510MHz)	14.41	14.39	106(5530MHz)	14.21
116(5580MHz)	14.02	13.95	13.81	110(5550MHz)	14.05	14.07	122(5610MHz)	13.94
124(5620MHz)	14.04	14.02	13.85	126(5630MHz)	13.78	13.74	138(5690MHz)	13.85
132(5660MHz)	13.99	13.90	13.91	134(5670MHz)	13.87	13.83	/	/
140(5700MHz)	13.86	13.79	13.80	/	/	/	/	/
<U-NII-3>								
Tune up	15.5	15.5	15.5	/	15.5	15.5	/	15.5
149(5745MHz)	13.78	13.73	13.84	151(5755MHz)	13.55	13.54	155(5775MHz)	13.55
157(5785MHz)	13.63	13.64	13.61	159(5795MHz)	13.52	13.50	/	/
165(5825MHz)	13.72	13.76	13.77	/	/	/	/	/

11. Simultaneous TX SAR Considerations

11.1. Introduction

The following procedures adopted from “FCC SAR Considerations for Cell Phones with Multiple Transmitters” are applicable to handsets with built-in unlicensed transmitters such as 802.11 a/b/g and Bluetooth devices which may simultaneously transmit with the licensed transmitter. For this device, the Bluetooth and WLAN can transmit simultaneous with other transmitters.

11.2. Transmit Antenna Separation Distances



Picture 11.1 Antenna Locations (Back View)



Note:

/	Antenna	Frequency Bands (TX)
WWAN Top Antenna	Ant 1	GSM 850, WCDMA B5, LTE B5/26
	Ant 2	GSM 1900, WCDMA B2/4, LTE B2/4/7/41
	Ant 3	NR B3/77/78
	Ant 5	LTE B42, NR 77/78
	Ant 6	NR 77/78
WWAN Bottom Antenna	Ant 0	GSM 850/1900, WCDMA B2/4/5, LTE B2/4/5/7/26/41
	Ant 4	LTE B42, NR 77/78
WLAN Antenna	Ant 7	GPS L1, WIFI2.4G/5G, Bluetooth

Note: NR Bands were turned off by software by applicant.

11.3. SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR, the edges with less than 25mm distance to the antennas need to be tested for SAR.

SAR measurement positions						
Mode	Front	Rear	Left edge	Right edge	Top edge	Bottom edge
Top antenna- Ant 1	Yes	Yes	No	Yes	No	No
Top antenna- Ant 2	Yes	Yes	Yes	No	Yes	No
Bottom antenna- Ant 0	Yes	Yes	Yes	Yes	No	Yes
WLAN antenna	Yes	Yes	No	Yes	Yes	No

12. Evaluation of Simultaneous

Table 12.1: The sum of reported SAR values for WWAN antenna and WLAN antenna

/	Position	WWAN (W/kg)	WLAN (W/kg)	Sum (W/kg)
Highest reported SAR value for Head	Right Cheek	1.18	0.17	1.35
Highest reported SAR value for Hotspot	Right Side	1.08	0.07	1.15
Highest reported SAR value for Body-worn	Rear Side	0.44	0.19	0.63

Note: the test positions of above tables are for the worse case that has been evaluated.

Table 12.2: The sum of reported SAR values for WWAN antenna and Bluetooth antenna

/	Position	WWAN (W/kg)	Bluetooth (W/kg)	Sum (W/kg)
Highest reported SAR value for Head	Right Cheek	1.18	0.08	1.26
Highest reported SAR value for Hotspot	Right Side	1.08	0.02	1.10
Highest reported SAR value for Body-worn	Rear Side	0.44	0.04	0.48

Note: the test positions of above tables are for the worse case that has been evaluated.

Conclusion:

According to the above tables, the sum of reported SAR values is $< 1.6\text{W/kg}$. So the simultaneous transmission SAR with volume scans is not required.

13. Summary of Test Results

According to the client's decision rule in the test registration form, which is "based on the measurement results as the basis of the conformity statement", the test conclusion of this report meets the limit requirements.

The calculated SAR is obtained by the following formula:

$$\text{Reported SAR} = \text{Measured SAR} \times 10^{(P_{\text{Target}} - P_{\text{Measured}})/10}$$

Where P_{Target} is the power of manufacturing upper limit;

P_{Measured} is the measured power in chapter 10.

General Note:

1. Per KDB648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity 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.

- a. WLAN 5GHz tested the product specific 10g SAR since it has no hotspot mode.
- b. When 10-g product specific 10g SAR is considered, SAR thresholds is specified in the procedures for SAR test reduction and exclusion should be multiplied by 2.5.

2. The device support dual SIMs, SIM1 was used for the all configuration SAR testing and eSIM test the worst case SAR of SIM1.

Duty Cycle

Mode	Duty Cycle
Speech for GSM850/1900	1:8.3
GPRS for GSM850/1900	1:2
WCDMA Band 2/4/5	1:1
FDD_LTE Band 2/4/5/7/26	1:1
TDD_LTE Band 41	1:1.58
Bluetooth	1:1

13.1. Testing Environment

Temperature:	18°C~25°C
Relative humidity:	30%~70%
Ground system resistance:	<4Ω
Ambient noise & Reflection:	< 0.012 W/kg



13.2. SAR results

Table 13.1: SAR Values (GSM 850 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Reduced power level 1/2									
128	824.2	Speech	Left Cheek	/	31.10	32.0	0.448	0.55	-0.03
128	824.2	Speech	Left Tilt	/	31.10	32.0	0.098	0.12	0.10
128	824.2	Speech	Right Cheek	/	31.10	32.0	0.731	0.90	0.02
128	824.2	Speech	Right Tilt	/	31.10	32.0	0.097	0.12	0.07
251	848.8	Speech	Right Cheek	/	30.90	32.0	0.857	1.10	0.07
190	836.6	Speech	Right Cheek	1	30.95	32.0	0.927	1.18	0.07
190	836.6	Speech	Right Cheek	eSIM	30.95	32.0	0.908	1.16	0.03
190	836.6	DTM11	Right Cheek	/	27.35	28.5	0.888	1.16	-0.10

Table 13.2: SAR Values (GSM 850 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
128	824.2	Speech	Left Cheek	/	32.25	33.0	0.189	0.22	0.17
128	824.2	Speech	Left Tilt	/	32.25	33.0	0.077	0.09	0.06
128	824.2	Speech	Right Cheek	/	32.25	33.0	0.131	0.16	0.01
128	824.2	Speech	Right Tilt	/	32.25	33.0	0.061	0.07	0.04
128	824.2	DTM11	Left Cheek	/	29.04	30.0	0.165	0.21	0.05



Table 13.3: SAR Values (GSM 850 -Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm) - Reduced power level 3/5									
190	836.6	GPRS-4	Front	/	26.36	27.5	0.381	0.50	-0.13
190	836.6	GPRS-4	Rear	/	26.36	27.5	0.462	0.60	0.05
190	836.6	GPRS-4	Right	/	26.36	27.5	0.621	0.81	0.13
190	848.8	GPRS-4	Right	/	26.20	27.5	0.584	0.79	0.05
128	824.2	GPRS-4	Right	2	25.90	27.5	0.616	0.89	-0.08
128	824.2	DTM11	Right	/	27.77	28.5	0.504	0.60	-0.01
Body-Worn Test Data (15mm) - Reduced power level 3/5									
190	836.6	GPRS-4	Front	/	26.36	27.5	0.212	0.28	0.16
190	836.6	GPRS-4	Rear	3	26.36	27.5	0.230	0.30	-0.11

Table 13.4: SAR Values (GSM 850 -Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm)									
128	824.2	GPRS-4	Front	/	26.99	28.5	0.210	0.30	-0.07
128	824.2	GPRS-4	Rear	/	26.99	28.5	0.213	0.30	0.01
128	824.2	GPRS-4	Left	/	26.99	28.5	0.299	0.42	0.10
128	824.2	GPRS-4	Right	/	26.99	28.5	0.168	0.24	-0.03
128	824.2	GPRS-4	Bottom	/	26.99	28.5	0.165	0.23	-0.05
128	824.2	DTM11	Left	/	29.24	30.0	0.204	0.24	-0.17
Body-Worn Test Data (15mm)									
128	824.2	GPRS-4	Front	/	26.99	28.5	0.139	0.20	0.01
128	824.2	GPRS-4	Rear	/	26.99	28.5	0.118	0.17	0.08



Table 13.5: SAR Values (GSM 1900 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Reduced power level 1/2									
512	1850.2	Speech	Left Cheek	/	28.27	29.4	0.438	0.57	0.06
512	1850.2	Speech	Left Tilt	/	28.27	29.4	0.091	0.12	0.16
512	1850.2	Speech	Right Cheek	/	28.27	29.4	0.334	0.43	-0.18
512	1850.2	Speech	Right Tilt	/	28.27	29.4	0.143	0.19	0.03
512	1850.2	DTM11	Left Cheek	4	23.90	25.0	0.615	0.79	0.08

Table 13.6: SAR Values (GSM 1900 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
661	1880.0	Speech	Left Cheek	/	29.04	30.0	0.040	0.05	-0.05
661	1880.0	Speech	Left Tilt	/	29.04	30.0	0.019	0.02	0.07
661	1880.0	Speech	Right Cheek	/	29.04	30.0	0.024	0.03	0.09
661	1880.0	Speech	Right Tilt	/	29.04	30.0	0.011	0.01	0.09
661	1880.0	DTM11	Left Cheek	/	25.51	26.5	0.034	0.04	0.02

Table 13.7: SAR Values (GSM 1900 - Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm)									
512	1850.2	GPRS-4	Front	/	24.96	26.0	0.204	0.26	-0.17
512	1850.2	GPRS-4	Rear	/	24.96	26.0	0.249	0.32	0.08
512	1850.2	GPRS-4	Left	/	24.96	26.0	0.440	0.56	0.08
512	1850.2	GPRS-4	Top	/	24.96	26.0	0.074	0.09	0.11
512	1850.2	DTM	Left	/	25.58	26.5	0.223	0.28	-0.06
Body-Worn Test Data (15mm)									
512	1850.2	GPRS-4	Front	/	24.96	26.0	0.112	0.14	-0.09
512	1850.2	GPRS-4	Rear	/	24.96	26.0	0.126	0.16	0.03

Table 13.8: SAR Values (GSM 1900 - Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm) - Reduced power level 4/6									
512	1850.2	GPRS-4	Front	/	23.71	24.7	0.249	0.31	0.09
512	1850.2	GPRS-4	Rear	/	23.71	24.7	0.371	0.47	0.06
512	1850.2	GPRS-4	Left	/	23.71	24.7	0.044	0.06	0.09
512	1850.2	GPRS-4	Right	/	23.71	24.7	0.070	0.09	0.06
512	1850.2	GPRS-4	Bottom	5	23.71	24.7	0.646	0.81	-0.02
810	1909.8	GPRS-4	Bottom	/	23.68	24.7	0.626	0.79	-0.04
661	1880.0	GPRS-4	Bottom	/	23.69	24.7	0.615	0.78	-0.13
512	1850.2	DTM	Bottom	/	24.17	25.0	0.622	0.75	0.19
Body-Worn Test Data (15mm) - Reduced power level 4/6									
512	1850.2	GPRS-4	Front	/	23.71	24.7	0.149	0.19	0.03
512	1850.2	GPRS-4	Rear	6	23.71	24.7	0.224	0.28	0.02



Table 13.9: SAR Values (WCDMA Band 2 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Reduced power level 1/2									
9400	1880.0	RMC	Left Cheek	7	20.00	20.2	0.666	0.70	0.09
9400	1880.0	RMC	Left Tilt	/	20.00	20.2	0.097	0.10	0.04
9400	1880.0	RMC	Right Cheek	/	20.00	20.2	0.384	0.40	-0.04
9400	1880.0	RMC	Right Tilt	/	20.00	20.2	0.161	0.17	0.16

Table 13.10: SAR Values (WCDMA Band 2 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
9400	1880.0	RMC	Left Cheek	/	23.20	24.0	0.094	0.11	0.05
9400	1880.0	RMC	Left Tilt	/	23.20	24.0	0.054	0.07	0.04
9400	1880.0	RMC	Right Cheek	/	23.20	24.0	0.069	0.08	0.09
9400	1880.0	RMC	Right Tilt	/	23.20	24.0	0.031	0.04	0.17



Table 13.11: SAR Values (WCDMA Band 2 - Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm) - Reduced power level 3/5									
9400	1880.0	RMC	Front	/	22.50	22.6	0.311	0.32	-0.04
9400	1880.0	RMC	Rear	/	22.50	22.6	0.336	0.34	-0.18
9400	1880.0	RMC	Left	/	22.50	22.6	0.677	0.69	-0.01
9400	1880.0	RMC	Top	/	22.50	22.6	0.097	0.10	-0.03
Body-Worn Test Data - Reduced power level 3/5									
9400	1880.0	RMC	Front	/	22.50	22.6	0.187	0.19	-0.04
9400	1880.0	RMC	Rear	9	22.50	22.6	0.205	0.21	0.16

Table 13.12: SAR Values (WCDMA Band 2 - Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm) - Reduced power level 4/6									
9400	1880.0	RMC	Front	/	18.80	19.5	0.290	0.34	0.01
9400	1880.0	RMC	Rear	/	18.80	19.5	0.396	0.47	0.04
9400	1880.0	RMC	Left	/	18.80	19.5	0.052	0.06	-0.04
9400	1880.0	RMC	Right	/	18.80	19.5	0.077	0.09	0.03
9400	1880.0	RMC	Bottom	8	18.80	19.5	0.679	0.80	-0.05
Body-Worn Test Data (15mm) - Reduced power level 4/6									
9400	1880.0	RMC	Front	/	18.80	19.5	0.136	0.16	0.09
9400	1880.0	RMC	Rear	/	18.80	19.5	0.184	0.22	0.03



Table 13.13: SAR Values (WCDMA Band 4 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Reduced power level 1/2									
1413	1732.6	RMC	Left Cheek	10	20.40	20.6	0.680	0.71	0.10
1413	1732.6	RMC	Left Tilt	/	20.40	20.6	0.074	0.08	0.13
1413	1732.6	RMC	Right Cheek	/	20.40	20.6	0.481	0.50	-0.06
1413	1732.6	RMC	Right Tilt	/	20.40	20.6	0.132	0.14	0.07

Table 13.14: SAR Values (WCDMA Band 4 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
1413	1732.6	RMC	Left Cheek	/	23.50	24.5	0.088	0.11	0.05
1413	1732.6	RMC	Left Tilt	/	23.50	24.5	0.054	0.07	0.02
1413	1732.6	RMC	Right Cheek	/	23.50	24.5	0.087	0.11	0.05
1413	1732.6	RMC	Right Tilt	/	23.50	24.5	0.034	0.04	0.18



Table 13.15: SAR Values (WCDMA Band 4 - Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm) - Reduced power level 3/5									
1413	1732.6	RMC	Front	/	23.10	23.3	0.330	0.35	0.17
1413	1732.6	RMC	Rear	/	23.10	23.3	0.397	0.42	-0.03
1413	1732.6	RMC	Left	11	23.10	23.3	0.659	0.69	-0.09
1413	1732.6	RMC	Top	/	23.10	23.3	0.053	0.06	0.02
Body-Worn Test Data (15mm) - Reduced power level 3/5									
1413	1732.6	RMC	Front	/	23.10	23.3	0.174	0.18	-0.07
1413	1732.6	RMC	Rear	12	23.10	23.3	0.196	0.21	0.13

Table 13.16: SAR Values (WCDMA Band 4 - Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm) - Reduced power level 4/6									
1413	1732.6	RMC	Front	/	20.10	20.8	0.247	0.29	0.15
1413	1732.6	RMC	Rear	/	20.10	20.8	0.343	0.40	0.13
1413	1732.6	RMC	Left	/	20.10	20.8	0.037	0.04	0.06
1413	1732.6	RMC	Right	/	20.10	20.8	0.092	0.11	0.19
1413	1732.6	RMC	Bottom	/	20.10	20.8	0.571	0.67	-0.02
Body-Worn Test Data (15mm) - Reduced power level 4/6									
1413	1732.6	RMC	Front	/	20.10	20.8	0.139	0.16	0.04
1413	1732.6	RMC	Rear	/	20.10	20.8	0.189	0.22	0.14



Table 13.17: SAR Values (WCDMA Band 5 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Reduced power level 1/2									
4182	836.4	RMC	Left Cheek	/	20.20	20.9	0.293	0.34	0.05
4182	836.4	RMC	Left Tilt	/	20.20	20.9	0.066	0.08	0.04
4182	836.4	RMC	Right Cheek	13	20.20	20.9	0.534	0.63	0.03
4182	836.4	RMC	Right Tilt	/	20.20	20.9	0.065	0.08	0.02

Table 13.18: SAR Values (WCDMA Band 5 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
4182	836.4	RMC	Left Cheek	/	23.40	24.5	0.200	0.26	0.01
4182	836.4	RMC	Left Tilt	/	23.40	24.5	0.084	0.11	0.10
4182	836.4	RMC	Right Cheek	/	23.40	24.5	0.168	0.22	0.03
4182	836.4	RMC	Right Tilt	/	23.40	24.5	0.082	0.11	0.18

Table 13.19: SAR Values (WCDMA Band 5 -Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm)									
4182	836.4	RMC	Front	/	23.4	24.5	0.499	0.64	0.14
4182	836.4	RMC	Rear	/	23.4	24.5	0.594	0.77	-0.09
4182	836.4	RMC	Right	14	23.4	24.5	0.835	1.08	0.00
4233	846.6	RMC	Right	/	23.3	24.5	0.784	1.03	0.02
4132	826.4	RMC	Right	/	23.3	24.5	0.812	1.07	0.00
4182	836.4	RMC	Right	eSIM	23.4	24.5	0.828	1.07	0.06
Body-Worn Test Data (15mm)									
4182	836.4	RMC	Front	/	23.4	24.5	0.275	0.35	-0.04
4182	836.4	RMC	Rear	15	23.4	24.5	0.344	0.44	-0.14

Table 13.20: SAR Values (WCDMA Band 5 -Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm)									
4182	836.4	RMC	Front	/	23.40	24.5	0.192	0.25	0.05
4182	836.4	RMC	Rear	/	23.40	24.5	0.201	0.26	0.01
4182	836.4	RMC	Left	/	23.40	24.5	0.259	0.33	0.04
4182	836.4	RMC	Right	/	23.40	24.5	0.142	0.18	0.03
4182	836.4	RMC	Bottom	/	23.40	24.5	0.152	0.20	-0.10
Body-Worn Test Data (15mm)									
4182	836.4	RMC	Front	/	23.40	24.5	0.182	0.23	0.02
4182	836.4	RMC	Rear	/	23.40	24.5	0.198	0.26	0.04



Table 13.21: SAR Values (LTE Band 2 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Reduced power level 1/2									
18900	1880.0	1RB0	Left Cheek	/	20.03	21.1	0.564	0.72	0.07
18900	1880.0	50RB50	Left Cheek	16	20.13	21.1	0.659	0.82	0.12
18900	1880.0	1RB0	Left Tilt	/	20.03	21.1	0.108	0.14	0.06
18900	1880.0	50RB50	Left Tilt	/	20.13	21.1	0.115	0.14	0.01
18900	1880.0	1RB0	Right Cheek	/	20.03	21.1	0.484	0.62	0.10
18900	1880.0	50RB50	Right Cheek	/	20.13	21.1	0.525	0.66	-0.02
18900	1880.0	1RB0	Right Tilt	/	20.03	21.1	0.231	0.30	-0.06
18900	1880.0	50RB50	Right Tilt	/	20.13	21.1	0.239	0.30	0.03
19100	1900.0	50RB50	Left Cheek	/	20.11	21.1	0.655	0.82	0.08
18700	1860.0	50RB50	Left Cheek	/	20.09	21.1	0.620	0.78	0.08
18900	1880.0	100RB0	Left Cheek	/	20.17	21.1	0.633	0.78	0.07

Table 13.22: SAR Values (LTE Band 2 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
18900	1880.0	1RB0	Left Cheek	/	22.31	23.5	0.060	0.08	0.08
18900	1880.0	50RB50	Left Cheek	/	21.42	22.5	0.063	0.08	0.02
18900	1880.0	1RB0	Left Tilt	/	22.31	23.5	0.055	0.07	0.05
18900	1880.0	50RB50	Left Tilt	/	21.42	22.5	0.044	0.06	0.07
18900	1880.0	1RB0	Right Cheek	/	22.31	23.5	0.068	0.09	0.04
18900	1880.0	50RB50	Right Cheek	/	21.42	22.5	0.052	0.07	0.09
18900	1880.0	1RB0	Right Tilt	/	22.31	23.5	0.028	0.04	0.09
18900	1880.0	50RB50	Right Tilt	/	21.42	22.5	0.021	0.03	0.01



Table 13.23: SAR Values (LTE Band 2 - Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm) - Reduced power level 3/5									
18900	1880.0	1RB0	Front	/	21.97	23.0	0.286	0.36	-0.11
18900	1880.0	50RB50	Front	/	22.05	23.0	0.320	0.40	0.14
18900	1880.0	1RB0	Rear	/	21.97	23.0	0.319	0.40	0.08
18900	1880.0	50RB50	Rear	/	22.05	23.0	0.353	0.44	0.02
18900	1880.0	1RB0	Left	/	21.97	23.0	0.655	0.83	0.03
18900	1880.0	50RB50	Left	/	22.05	23.0	0.725	0.90	0.02
18900	1880.0	1RB0	Top	/	21.97	23.0	0.104	0.13	0.11
18900	1880.0	50RB50	Top	/	22.05	23.0	0.070	0.09	0.07
19100	1900.0	1RB0	Left	/	21.91	23.0	0.698	0.90	0.06
18700	1860.0	1RB0	Left	/	21.92	23.0	0.598	0.77	0.03
19100	1900.0	50RB50	Left	/	21.96	23.0	0.781	0.99	0.08
18700	1860.0	50RB50	Left	/	21.98	23.0	0.628	0.79	0.01
18700	1860.0	100RB	Left	/	22.04	23.0	0.662	0.83	0.01
Body-Worn Test Data (15mm) - Reduced power level 3/5									
18900	1880.0	1RB0	Front	/	21.97	23.0	0.153	0.19	0.09
18900	1880.0	50RB50	Front	/	22.05	23.0	0.170	0.21	0.14
18900	1880.0	1RB0	Rear	/	21.97	23.0	0.149	0.19	0.09
18900	1880.0	50RB50	Rear	/	22.05	23.0	0.164	0.20	0.01



Table 13.24: SAR Values (LTE Band 2 - Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm) - Reduced power level 4/6									
18900	1880.0	1RB99	Front	/	18.64	19.8	0.301	0.39	0.07
18900	1880.0	50RB50	Front	/	18.74	19.8	0.306	0.39	0.04
18900	1880.0	1RB99	Rear	/	18.64	19.8	0.408	0.53	0.02
18900	1880.0	50RB50	Rear	/	18.74	19.8	0.418	0.53	0.04
18900	1880.0	1RB99	Left	/	18.64	19.8	0.053	0.07	0.10
18900	1880.0	50RB50	Left	/	18.74	19.8	0.055	0.07	0.03
18900	1880.0	1RB99	Right	/	18.64	19.8	0.099	0.13	0.08
18900	1880.0	50RB50	Right	/	18.74	19.8	0.102	0.13	0.07
18900	1880.0	1RB99	Bottom	/	18.64	19.8	0.756	0.99	-0.03
18900	1880.0	50RB50	Bottom	/	18.74	19.8	0.781	1.00	0.00
19100	1900.0	1RB0	Bottom	/	18.63	19.8	0.758	0.99	-0.03
18700	1860.0	1RB0	Bottom	/	18.56	19.8	0.697	0.93	-0.04
19100	1900.0	50RB25	Bottom	17	18.73	19.8	0.785	1.00	-0.06
18700	1860.0	50RB25	Bottom	/	18.71	19.8	0.739	0.95	-0.04
18700	1860.0	100RB	Bottom	/	18.70	19.8	0.737	0.95	-0.04
Body-Worn Test Data (15mm) - Reduced power level 4/6									
18900	1880.0	1RB99	Front	/	18.64	19.8	0.134	0.18	-0.02
18900	1880.0	50RB50	Front	/	18.74	19.8	0.140	0.18	0.06
18900	1880.0	1RB99	Rear	/	18.64	19.8	0.189	0.25	0.05
18900	1880.0	50RB50	Rear	18	18.74	19.8	0.192	0.25	0.07



Table 13.25: SAR Values (LTE Band 4 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Reduced power level 1/2									
20050	1720.0	1RB0	Left Cheek	19	20.10	21.2	0.649	0.84	0.03
20050	1720.0	50RB25	Left Cheek	/	20.13	21.2	0.586	0.75	-0.07
20050	1720.0	1RB0	Left Tilt	/	20.10	21.2	0.095	0.12	0.04
20050	1720.0	50RB25	Left Tilt	/	20.13	21.2	0.089	0.11	0.09
20050	1720.0	1RB0	Right Cheek	/	20.10	21.2	0.472	0.61	0.11
20050	1720.0	50RB25	Right Cheek	/	20.13	21.2	0.470	0.60	0.08
20050	1720.0	1RB0	Right Tilt	/	20.10	21.2	0.153	0.20	0.11
20050	1720.0	50RB25	Right Tilt	/	20.13	21.2	0.170	0.22	0.19
20300	1745.0	1RB0	Left Cheek	/	20.08	21.2	0.612	0.79	0.14
20175	1732.5	1RB0	Left Cheek	/	20.08	21.2	0.617	0.80	0.11
20050	1720.0	100RB0	Left Cheek	/	20.12	21.2	0.642	0.82	0.08

Table 13.26: SAR Values (LTE Band 4 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
20300	1745.0	1RB0	Left Cheek	/	22.77	24.0	0.069	0.09	0.08
20300	1745.0	50RB50	Left Cheek	/	21.73	23.0	0.058	0.08	0.06
20300	1745.0	1RB0	Left Tilt	/	22.77	24.0	0.050	0.07	0.00
20300	1745.0	50RB50	Left Tilt	/	21.73	23.0	0.041	0.05	0.05
20300	1745.0	1RB0	Right Cheek	/	22.77	24.0	0.083	0.11	0.06
20300	1745.0	50RB50	Right Cheek	/	21.73	23.0	0.064	0.09	0.03
20300	1745.0	1RB0	Right Tilt	/	22.77	24.0	0.033	0.04	0.06
20300	1745.0	50RB50	Right Tilt	/	21.73	23.0	0.025	0.03	0.01



Table 13.27: SAR Values (LTE Band 4 - Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm) - Reduced power level 3/5									
20300	1745.0	1RB0	Front	/	22.43	23.5	0.329	0.42	-0.19
20300	1745.0	50RB50	Front	/	22.44	23.5	0.352	0.45	0.13
20300	1745.0	1RB0	Rear	/	22.43	23.5	0.393	0.50	0.08
20300	1745.0	50RB50	Rear	/	22.44	23.5	0.426	0.54	0.06
20300	1745.0	1RB0	Left	/	22.43	23.5	0.694	0.89	0.06
20300	1745.0	50RB50	Left	20	22.44	23.5	0.788	1.01	0.07
20300	1745.0	1RB0	Top	/	22.43	23.5	0.052	0.07	0.08
20300	1745.0	50RB50	Top	/	22.44	23.5	0.033	0.04	0.16
20175	1732.5	1RB0	Left	/	22.40	23.5	0.685	0.88	0.03
20050	1720.0	1RB0	Left	/	22.39	23.5	0.658	0.85	0.06
20175	1732.5	50RB50	Left	/	22.40	23.5	0.716	0.92	0.04
20050	1720.0	50RB50	Left	/	22.43	23.5	0.674	0.86	-0.07
20050	1720.0	100RB	Left	/	22.43	23.5	0.718	0.92	0.03
Body-Worn Test Data (15mm) - Reduced power level 3/5									
20300	1745.0	1RB0	Front	/	22.43	23.5	0.175	0.22	-0.16
20300	1745.0	50RB50	Front	/	22.44	23.5	0.177	0.23	-0.18
20300	1745.0	1RB0	Rear	/	22.43	23.5	0.186	0.24	0.09
20300	1745.0	50RB50	Rear	21	22.44	23.5	0.199	0.25	0.04



Table 13.28: SAR Values (LTE Band 4 - Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm) - Reduced power level 4/6									
20300	1745.0	1RB0	Front	/	19.98	21.2	0.223	0.30	0.07
20300	1745.0	50RB50	Front	/	19.99	21.2	0.228	0.30	0.10
20300	1745.0	1RB0	Rear	/	19.98	21.2	0.306	0.41	0.05
20300	1745.0	50RB50	Rear	/	19.99	21.2	0.309	0.41	0.16
20300	1745.0	1RB0	Left	/	19.98	21.2	0.035	0.05	0.06
20300	1745.0	50RB50	Left	/	19.99	21.2	0.037	0.05	0.01
20300	1745.0	1RB0	Right	/	19.98	21.2	0.085	0.11	0.05
20300	1745.0	50RB50	Right	/	19.99	21.2	0.085	0.11	0.08
20300	1745.0	1RB0	Bottom	/	19.98	21.2	0.527	0.70	-0.03
20300	1745.0	50RB50	Bottom	/	19.99	21.2	0.536	0.71	-0.08
Body-Worn Test Data (15mm) - Reduced power level 4/6									
20300	1745.0	1RB0	Front	/	19.98	21.2	0.131	0.17	0.06
20300	1745.0	50RB50	Front	/	19.99	21.2	0.128	0.17	0.08
20300	1745.0	1RB0	Rear	/	19.98	21.2	0.184	0.24	-0.07
20300	1745.0	50RB50	Rear	/	19.99	21.2	0.182	0.24	0.09



Table 13.29: SAR Values (LTE Band 5 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Reduced power level 1/2									
20600	844.0	1RB24	Left Cheek	/	19.89	21.3	0.282	0.39	0.09
20600	844.0	25RB25	Left Cheek	/	19.98	21.3	0.300	0.41	0.02
20600	844.0	1RB24	Left Tilt	/	19.89	21.3	0.057	0.08	0.14
20600	844.0	25RB25	Left Tilt	/	19.98	21.3	0.056	0.08	0.12
20600	844.0	1RB24	Right Cheek	/	19.89	21.3	0.509	0.70	0.10
20600	844.0	25RB25	Right Cheek	22	19.98	21.3	0.516	0.70	0.06
20600	844.0	1RB24	Right Tilt	/	19.89	21.3	0.112	0.15	0.04
20600	844.0	25RB25	Right Tilt	/	19.98	21.3	0.097	0.13	0.03

Table 13.30: SAR Values (LTE Band 5 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
20450	829.0	1RB24	Left Cheek	/	23.34	24.5	0.189	0.25	0.04
20450	829.0	25RB12	Left Cheek	/	22.43	23.5	0.152	0.19	0.19
20450	829.0	1RB24	Left Tilt	/	23.34	24.5	0.093	0.12	0.10
20450	829.0	25RB12	Left Tilt	/	22.43	23.5	0.078	0.10	0.12
20450	829.0	1RB24	Right Cheek	/	23.34	24.5	0.167	0.22	-0.15
20450	829.0	25RB12	Right Cheek	/	22.43	23.5	0.140	0.18	0.03
20450	829.0	1RB24	Right Tilt	/	23.34	24.5	0.090	0.12	0.17
20450	829.0	25RB12	Right Tilt	/	22.43	23.5	0.075	0.10	0.06



Table 13.31: SAR Values (LTE Band 5 - Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm)									
20450	829.0	1RB0	Front	/	23.34	24.5	0.463	0.60	0.03
20450	829.0	25RB12	Front	/	22.45	23.5	0.390	0.50	0.19
20450	829.0	1RB0	Rear	/	23.34	24.5	0.583	0.76	-0.01
20450	829.0	25RB12	Rear	/	22.45	23.5	0.491	0.63	-0.19
20450	829.0	1RB0	Right	/	23.34	24.5	0.688	0.90	0.02
20450	829.0	25RB12	Right	/	22.45	23.5	0.602	0.77	0.09
20600	844.0	1RB0	Right	23	23.29	24.5	0.735	0.97	0.03
20525	836.5	1RB0	Right	/	23.32	24.5	0.713	0.94	0.03
20450	829.0	50RB0	Right	/	22.44	23.5	0.605	0.77	0.03
Body-Worn Test Data (15mm)									
20450	829.0	1RB0	Front	/	23.34	24.5	0.260	0.34	-0.08
20450	829.0	25RB12	Front	/	22.45	23.5	0.210	0.27	0.02
20450	829.0	1RB0	Rear	24	23.34	24.5	0.314	0.41	-0.14
20450	829.0	25RB12	Rear	/	22.45	23.5	0.254	0.32	-0.12

Table 13.32: SAR Values (LTE Band 5 - Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm)									
20450	829.0	1RB24	Front	/	23.34	24.5	0.163	0.21	0.00
20450	829.0	25RB12	Front	/	22.43	23.5	0.134	0.17	0.01
20450	829.0	1RB24	Rear	/	23.34	24.5	0.180	0.24	0.01
20450	829.0	25RB12	Rear	/	22.43	23.5	0.149	0.19	0.06
20450	829.0	1RB24	Left	/	23.34	24.5	0.253	0.33	0.11
20450	829.0	25RB12	Left	/	22.43	23.5	0.208	0.27	0.14
20450	829.0	1RB24	Right	/	23.34	24.5	0.140	0.18	-0.07
20450	829.0	25RB12	Right	/	22.43	23.5	0.108	0.14	-0.05
20450	829.0	1RB24	Bottom	/	23.34	24.5	0.149	0.19	-0.18
20450	829.0	25RB12	Bottom	/	22.43	23.5	0.125	0.16	-0.16
Body-Worn Test Data (15mm)									
20450	829.0	1RB24	Front	/	23.34	24.5	0.199	0.26	-0.04
20450	829.0	25RB12	Front	/	22.43	23.5	0.162	0.21	0.05
20450	829.0	1RB24	Rear	/	23.34	24.5	0.205	0.27	0.06
20450	829.0	25RB12	Rear	/	22.43	23.5	0.170	0.22	0.04



Table 13.33: SAR Values (LTE Band 7 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Reduced power level 1/2									
21100	2535.0	1RB99	Left Cheek	/	19.90	21.2	0.629	0.85	0.11
21100	2535.0	50RB25	Left Cheek	/	20.03	21.2	0.628	0.82	0.15
21100	2535.0	1RB99	Left Tilt	/	19.90	21.2	0.198	0.27	0.07
21100	2535.0	50RB25	Left Tilt	/	20.03	21.2	0.198	0.26	0.13
21100	2535.0	1RB99	Right Cheek	/	19.90	21.2	0.533	0.72	0.04
21100	2535.0	50RB25	Right Cheek	/	20.03	21.2	0.531	0.70	0.18
21100	2535.0	1RB99	Right Tilt	/	19.90	21.2	0.442	0.60	0.08
21100	2535.0	50RB25	Right Tilt	/	20.03	21.2	0.428	0.56	0.08
21350	2560.0	1RB99	Left Cheek	25	19.89	21.2	0.641	0.87	0.09
20850	2510.0	1RB99	Left Cheek	/	19.89	21.2	0.524	0.71	0.01
21350	2560.0	50RB25	Left Cheek	/	20.02	21.2	0.529	0.69	0.05
20850	2510.0	50RB25	Left Cheek	/	20.01	21.2	0.529	0.70	0.05
21100	2535.0	100RB0	Left Cheek	/	20.05	21.2	0.618	0.81	0.14

Table 13.34: SAR Values (LTE Band 7 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
21350	2560.0	1RB99	Left Cheek	/	22.06	23.5	0.067	0.09	0.03
21350	2560.0	50RB50	Left Cheek	/	21.18	22.5	0.059	0.08	0.01
21350	2560.0	1RB99	Left Tilt	/	22.06	23.5	0.030	0.04	0.08
21350	2560.0	50RB50	Left Tilt	/	21.18	22.5	0.023	0.03	0.07
21350	2560.0	1RB99	Right Cheek	/	22.06	23.5	0.020	0.03	0.04
21350	2560.0	50RB50	Right Cheek	/	21.18	22.5	0.017	0.02	0.04
21350	2560.0	1RB99	Right Tilt	/	22.06	23.5	0.012	0.02	0.05
21350	2560.0	50RB50	Right Tilt	/	21.18	22.5	0.009	0.01	0.01



Table 13.35: SAR Values (LTE Band 7 - Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm)									
20850	2510.0	1RB99	Front	/	22.50	23.8	0.232	0.31	0.03
21350	2560.0	50RB25	Front	/	21.60	22.8	0.219	0.29	0.01
20850	2510.0	1RB99	Rear	/	22.50	23.8	0.285	0.38	0.05
21350	2560.0	50RB25	Rear	/	21.60	22.8	0.277	0.37	0.01
20850	2510.0	1RB99	Left	/	22.50	23.8	0.500	0.67	0.03
21350	2560.0	50RB25	Left	/	21.60	22.8	0.479	0.63	0.03
20850	2510.0	1RB99	Top	/	22.50	23.8	0.106	0.14	0.16
21350	2560.0	50RB25	Top	/	21.60	22.8	0.078	0.10	-0.01
Body-Worn Test Data (15mm)									
20850	2510.0	1RB99	Front	/	22.50	23.8	0.156	0.21	-0.01
21350	2560.0	50RB25	Front	/	21.60	22.8	0.131	0.17	-0.01
20850	2510.0	1RB99	Rear	/	22.50	23.8	0.182	0.25	0.11
21350	2560.0	50RB25	Rear	/	21.60	22.8	0.152	0.20	0.14



Table 13.36: SAR Values (LTE Band 7 - Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm) - Reduced power level 4/6									
21350	2560.0	1RB99	Front	/	21.41	22.8	0.349	0.48	0.01
21350	2560.0	50RB25	Front	/	21.21	22.5	0.289	0.39	0.01
21350	2560.0	1RB99	Rear	/	21.41	22.8	0.577	0.79	0.05
21350	2560.0	50RB25	Rear	/	21.21	22.5	0.483	0.65	0.02
21350	2560.0	1RB99	Left	/	21.41	22.8	0.115	0.16	0.10
21350	2560.0	50RB25	Left	/	21.21	22.5	0.097	0.13	0.04
21350	2560.0	1RB99	Right	/	21.41	22.8	0.045	0.06	0.08
21350	2560.0	50RB25	Right	/	21.21	22.5	0.037	0.05	0.05
21350	2560.0	1RB99	Bottom	/	21.41	22.8	0.634	0.87	0.05
21350	2560.0	50RB25	Bottom	/	21.21	22.5	0.537	0.72	0.01
21100	2535.0	1RB99	Bottom	26	21.40	22.8	0.653	0.90	-0.01
20850	2510.0	1RB99	Bottom	/	21.40	22.8	0.642	0.89	-0.06
21350	2560.0	100RB	Bottom	/	21.19	22.5	0.538	0.73	0.04
Body-Worn Test Data (15mm) - Reduced power level 4/6									
21350	2560.0	1RB99	Front	/	21.41	22.8	0.197	0.27	0.16
21350	2560.0	50RB25	Front	/	21.21	22.5	0.193	0.28	0.00
21350	2560.0	1RB99	Rear	27	21.41	22.8	0.297	0.41	0.03
21350	2560.0	50RB25	Rear	/	21.21	22.5	0.291	0.42	0.04

Table 13.37: SAR Values (LTE Band 26 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Reduced power level 1/2									
26775	822.5	1RB74	Left Cheek	/	20.03	21.6	0.345	0.50	0.14
26775	822.5	36RB38	Left Cheek	/	20.13	21.6	0.360	0.51	0.01
26775	822.5	1RB74	Left Tilt	/	20.03	21.6	0.063	0.09	0.14
26775	822.5	36RB38	Left Tilt	/	20.13	21.6	0.063	0.09	0.09
26775	822.5	1RB74	Right Cheek	/	20.03	21.6	0.532	0.76	-0.01
26775	822.5	36RB38	Right Cheek	28	20.13	21.6	0.569	0.80	0.13
26775	822.5	1RB74	Right Tilt	/	20.03	21.6	0.123	0.18	0.17
26775	822.5	36RB38	Right Tilt	/	20.13	21.6	0.125	0.18	-0.14

Table 13.38: SAR Values (LTE Band 26 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
26965	841.5	1RB0	Left Cheek	/	23.19	24.5	0.200	0.27	0.00
26775	822.5	36RB38	Left Cheek	/	22.33	23.5	0.146	0.19	0.08
26965	841.5	1RB0	Left Tilt	/	23.19	24.5	0.101	0.14	0.07
26775	822.5	36RB38	Left Tilt	/	22.33	23.5	0.073	0.10	0.16
26965	841.5	1RB0	Right Cheek	/	23.19	24.5	0.176	0.24	0.03
26775	822.5	36RB38	Right Cheek	/	22.33	23.5	0.124	0.16	0.04
26965	841.5	1RB0	Right Tilt	/	23.19	24.5	0.093	0.13	0.13
26775	822.5	36RB38	Right Tilt	/	22.33	23.5	0.068	0.09	0.01



Table 13.39: SAR Values (LTE Band 26 - Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm)									
26865	831.5	1RB37	Front	/	23.20	24.5	0.469	0.63	0.19
26865	831.5	36RB38	Front	/	22.33	23.5	0.387	0.51	0.19
26865	831.5	1RB37	Rear	/	23.20	24.5	0.593	0.80	-0.17
26865	831.5	36RB38	Rear	/	22.33	23.5	0.489	0.64	-0.16
26865	831.5	1RB37	Right	/	23.20	24.5	0.696	0.94	0.04
26865	831.5	36RB38	Right	/	22.33	23.5	0.599	0.78	0.04
26965	841.5	1RB37	Right	29	23.16	24.5	0.724	0.99	0.05
26775	822.5	1RB37	Right	/	23.19	24.5	0.689	0.93	0.01
26865	831.5	75RB0	Right	/	22.28	23.5	0.581	0.77	0.05
Body-Worn Test Data (15mm)									
26865	831.5	1RB37	Front	/	23.20	24.5	0.261	0.35	0.16
26865	831.5	36RB38	Front	/	22.33	23.5	0.207	0.27	0.17
26865	831.5	1RB37	Rear	30	23.20	24.5	0.300	0.40	-0.11
26865	831.5	36RB38	Rear	/	22.33	23.5	0.247	0.32	-0.12

Table 13.40: SAR Values (LTE Band 26 - Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.8°C Liquid Temperature: 22.3°C									
Hotspot Test Data (10mm)									
26965	841.5	1RB0	Front	/	23.19	24.5	0.175	0.24	0.01
26775	822.5	36RB38	Front	/	22.33	23.5	0.126	0.16	0.02
26965	841.5	1RB0	Rear	/	23.19	24.5	0.193	0.26	0.01
26775	822.5	36RB38	Rear	/	22.33	23.5	0.140	0.18	0.01
26965	841.5	1RB0	Left	/	23.19	24.5	0.258	0.35	0.13
26775	822.5	36RB38	Left	/	22.33	23.5	0.200	0.26	0.09
26965	841.5	1RB0	Right	/	23.19	24.5	0.119	0.16	0.07
26775	822.5	36RB38	Right	/	22.33	23.5	0.108	0.14	0.04
26965	841.5	1RB0	Bottom	/	23.19	24.5	0.158	0.21	-0.16
26775	822.5	36RB38	Bottom	/	22.33	23.5	0.110	0.14	-0.12
Body-Worn Test Data (15mm)									
26965	841.5	1RB0	Front	/	23.19	24.5	0.201	0.27	0.03
26775	822.5	36RB38	Front	/	22.33	23.5	0.159	0.21	0.01
26965	841.5	1RB0	Rear	/	23.19	24.5	0.209	0.28	0.02
26775	822.5	36RB38	Rear	/	22.33	23.5	0.162	0.21	0.06



Table 13.41: SAR Values (LTE Band 41 - Head) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.1°C Liquid Temperature: 21.6°C									
Reduced power level 1/2									
41140	2645.0	1RB0	Left Cheek	/	21.81	22.9	0.575	0.74	0.13
41140	2645.0	50RB50	Left Cheek	/	21.92	22.9	0.563	0.71	0.11
41140	2645.0	1RB0	Left Tilt	/	21.81	22.9	0.168	0.22	0.05
41140	2645.0	50RB50	Left Tilt	/	21.92	22.9	0.152	0.19	-0.06
41140	2645.0	1RB0	Right Cheek	/	21.81	22.9	0.619	0.80	0.15
41140	2645.0	50RB50	Right Cheek	31	21.92	22.9	0.642	0.80	0.10
41140	2645.0	1RB0	Right Tilt	/	21.81	22.9	0.372	0.48	0.14
41140	2645.0	50RB50	Right Tilt	/	21.92	22.9	0.352	0.44	0.01

Table 13.42: SAR Values (LTE Band 41 - Head) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.1°C Liquid Temperature: 21.6°C									
40690	2600.0	1RB99	Left Cheek	/	23.63	25.0	0.040	0.06	0.02
40690	2600.0	50RB50	Left Cheek	/	22.73	24.0	0.034	0.05	0.09
40690	2600.0	1RB99	Left Tilt	/	23.63	25.0	0.014	0.02	0.04
40690	2600.0	50RB50	Left Tilt	/	22.73	24.0	0.013	0.02	0.01
40690	2600.0	1RB99	Right Cheek	/	23.63	25.0	0.011	0.01	0.04
40690	2600.0	50RB50	Right Cheek	/	22.73	24.0	0.011	0.01	0.04
40690	2600.0	1RB99	Right Tilt	/	23.63	25.0	0.007	0.01	0.09
40690	2600.0	50RB50	Right Tilt	/	22.73	24.0	0.005	0.01	0.03



Table 13.43: SAR Values (LTE Band 41 - Body) – Top Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm)									
41140	2645.0	1RB0	Front	/	24.21	25.3	0.247	0.32	-0.01
41140	2645.0	50RB50	Front	/	23.19	24.3	0.184	0.24	0.10
41140	2645.0	1RB0	Rear	/	24.21	25.3	0.299	0.38	0.15
41140	2645.0	50RB50	Rear	/	23.19	24.3	0.229	0.30	0.17
41140	2645.0	1RB0	Left	32	24.21	25.3	0.618	0.79	0.06
41140	2645.0	50RB50	Left	/	23.19	24.3	0.482	0.62	0.04
41140	2645.0	1RB0	Top	/	24.21	25.3	0.124	0.16	-0.19
41140	2645.0	50RB50	Top	/	23.19	24.3	0.091	0.12	-0.03
Body-Worn Test Data (15mm)									
41140	2645.0	1RB0	Front	/	24.21	25.3	0.168	0.22	-0.15
41140	2645.0	50RB50	Front	/	23.19	24.3	0.123	0.16	-0.19
41140	2645.0	1RB0	Rear	/	24.21	25.3	0.196	0.25	0.08
41140	2645.0	50RB50	Rear	/	23.19	24.3	0.148	0.19	0.06

Table 13.44: SAR Values (LTE Band 41 - Body) – Bottom Antenna

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.3°C Liquid Temperature: 21.8°C									
Hotspot Test Data (10mm)									
40690	2600.0	1RB99	Front	/	23.63	25.0	0.341	0.47	0.00
40690	2600.0	50RB50	Front	/	22.73	24.0	0.271	0.36	0.08
40690	2600.0	1RB99	Rear	/	23.63	25.0	0.508	0.70	0.09
40690	2600.0	50RB50	Rear	/	22.73	24.0	0.407	0.55	0.01
40690	2600.0	1RB99	Left	/	23.63	25.0	0.082	0.11	0.02
40690	2600.0	50RB50	Left	/	22.73	24.0	0.068	0.09	0.08
40690	2600.0	1RB99	Right	/	23.63	25.0	0.049	0.07	0.08
40690	2600.0	50RB50	Right	/	22.73	24.0	0.040	0.05	0.01
40690	2600.0	1RB99	Bottom	/	23.63	25.0	0.521	0.71	-0.10
40690	2600.0	50RB50	Bottom	/	22.73	24.0	0.428	0.57	-0.10
Body-Worn Test Data (15mm)									
40690	2600.0	1RB99	Front	/	23.63	25.0	0.254	0.35	0.13
40690	2600.0	50RB50	Front	/	22.73	24.0	0.202	0.27	0.07
40690	2600.0	1RB99	Rear	33	23.63	25.0	0.319	0.44	0.05
40690	2600.0	50RB50	Rear	/	22.73	24.0	0.257	0.34	0.03



Table 13.45: SAR Values (Bluetooth - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C									
39	2441.0	GFSK	Left Cheek	34	12.26	14.0	0.112	0.17	0.05
39	2441.0	GFSK	Left Tilt	/	12.26	14.0	0.100	0.15	0.08
39	2441.0	GFSK	Right Cheek	/	12.26	14.0	0.056	0.08	0.10
39	2441.0	GFSK	Right Tilt	/	12.26	14.0	0.066	0.10	0.03

Table 13.46: SAR Values (Bluetooth - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C									
Test Data (10mm)									
39	2441.0	GFSK	Front	/	12.26	14.0	0.040	0.06	0.05
39	2441.0	GFSK	Rear	35	12.26	14.0	0.050	0.07	0.03
39	2441.0	GFSK	Right	/	12.26	14.0	0.013	0.02	0.03
39	2441.0	GFSK	Top	/	12.26	14.0	0.041	0.06	0.10
Test Data (15mm)									
39	2441.0	GFSK	Front	/	12.26	14.0	0.025	0.04	0.05
39	2441.0	GFSK	Rear	36	12.26	14.0	0.030	0.04	0.08

13.3. WLAN Evaluation for 2.4G

According to the KDB248227 D01, SAR is measured for 2.4GHz 802.11b DSSS using the initial test position procedure.

Table 13.47: SAR Values (WLAN 2.4G - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C									
Reduced power level 7									
6	2437.0	802.11b	Left Cheek	37	15.91	17.0	0.703	0.90	0.02
6	2437.0	802.11b	Left Tilt	/	15.91	17.0	0.628	0.81	-0.01
6	2437.0	802.11b	Right Cheek	/	15.91	17.0	0.354	0.45	0.09
6	2437.0	802.11b	Right Tilt	/	15.91	17.0	0.413	0.53	0.09
1	2412.0	802.11b	Left Cheek	/	15.37	17.0	0.595	0.87	0.11
1	2412.0	802.11b	Left Tilt	/	15.37	17.0	0.446	0.65	0.00
Reduced power level 8									
6	2437.0	802.11b	Left Cheek	/	11.37	12.5	0.180	0.23	0.08
6	2437.0	802.11b	Left Tilt	/	11.37	12.5	0.161	0.21	0.12
6	2437.0	802.11b	Right Cheek	/	11.37	12.5	0.091	0.12	0.03
6	2437.0	802.11b	Right Tilt	/	11.37	12.5	0.106	0.14	-0.08

Note1: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

Table 13.48: SAR Values (WLAN - Head) – 802.11b (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
Ch.	MHz					
6	2437	Left Cheek	100%	100%	0.90	0.90

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.



Table 13.49: SAR Values (WLAN 2.4G - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 23.0°C Liquid Temperature: 22.5°C									
Hotspot Test Data (10mm)									
6	2437.0	802.11b	Front	/	18.89	20.0	0.254	0.33	0.05
6	2437.0	802.11b	Rear	38	18.89	20.0	0.317	0.41	-0.08
6	2437.0	802.11b	Right	/	18.89	20.0	0.085	0.11	0.08
6	2437.0	802.11b	Top	/	18.89	20.0	0.308	0.40	-0.17
Body-Worn Test Data (15mm)									
6	2437.0	802.11b	Front	/	18.89	20.0	0.157	0.20	0.05
6	2437.0	802.11b	Rear	39	18.89	20.0	0.186	0.24	-0.07
Hotspot Test Data (10mm) - Reduced power level 9									
6	2437.0	802.11b	Front	/	17.82	19.0	0.171	0.22	-0.18
6	2437.0	802.11b	Rear	/	17.82	19.0	0.214	0.28	-0.01
6	2437.0	802.11b	Right	/	17.82	19.0	0.057	0.07	0.15
6	2437.0	802.11b	Top	/	17.82	19.0	0.208	0.27	-0.19
Body-Worn Test Data (15mm) - Reduced power level 9									
6	2437.0	802.11b	Front	/	17.82	19.0	0.119	0.16	0.07
6	2437.0	802.11b	Rear	/	17.82	19.0	0.147	0.19	-0.07

Note1: For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit..

Table 13.50: SAR Values (WLAN - Body) – 802.11b (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
Ch.	MHz					
6	2437	Rear	100%	100%	0.41	0.41

SAR is not required for OFDM because the 802.11b adjusted SAR ≤ 1.2 W/kg.



13.4. WLAN Evaluation for 5G

Table 13.51: SAR Values (WLAN 5G - Head)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.6°C Liquid Temperature: 22.1°C									
U-NII-2A - Reduced power level 7									
58	5290.0	11ac 80M	Left Cheek	/	12.49	14.0	0.517	0.73	-0.14
58	5290.0	11ac 80M	Left Tilt	/	12.49	14.0	0.467	0.66	0.09
58	5290.0	11ac 80M	Right Cheek	/	12.49	14.0	0.282	0.40	-0.15
58	5290.0	11ac 80M	Right Tilt	/	12.49	14.0	0.303	0.43	0.06
U-NII-2C - Reduced power level 7									
106	5530.0	11ac 80M	Left Cheek	/	13.18	14.5	0.540	0.73	-0.06
106	5530.0	11ac 80M	Left Tilt	/	13.18	14.5	0.461	0.62	0.01
106	5530.0	11ac 80M	Right Cheek	/	13.18	14.5	0.295	0.40	0.16
106	5530.0	11ac 80M	Right Tilt	/	13.18	14.5	0.300	0.41	0.03
U-NII-3 - Reduced power level 7									
155	5775.0	11ac 80M	Left Cheek	40	12.58	14.5	0.560	0.87	0.07
155	5775.0	11ac 80M	Left Tilt	/	12.58	14.5	0.417	0.65	0.04
155	5775.0	11ac 80M	Right Cheek	/	12.58	14.5	0.307	0.48	0.04
155	5775.0	11ac 80M	Right Tilt	/	12.58	14.5	0.295	0.46	0.06
U-NII-2A - Reduced power level 8									
58	5290.0	11ac 80M	Left Cheek	/	8.42	10.0	0.174	0.25	0.06
58	5290.0	11ac 80M	Left Tilt	/	8.42	10.0	0.158	0.23	-0.08
58	5290.0	11ac 80M	Right Cheek	/	8.42	10.0	0.095	0.14	0.09
58	5290.0	11ac 80M	Right Tilt	/	8.42	10.0	0.102	0.15	-0.16
U-NII-2C - Reduced power level 8									
106	5530.0	11ac 80M	Left Cheek	/	9.18	10.5	0.174	0.24	0.08
106	5530.0	11ac 80M	Left Tilt	/	9.18	10.5	0.149	0.20	0.02
106	5530.0	11ac 80M	Right Cheek	/	9.18	10.5	0.095	0.13	0.14
106	5530.0	11ac 80M	Right Tilt	/	9.18	10.5	0.097	0.13	-0.19
U-NII-3 - Reduced power level 8									
155	5775.0	11ac 80M	Left Cheek	/	8.58	10.5	0.198	0.31	0.07
155	5775.0	11ac 80M	Left Tilt	/	8.58	10.5	0.147	0.23	-0.04
155	5775.0	11ac 80M	Right Cheek	/	8.58	10.5	0.109	0.17	0.12
155	5775.0	11ac 80M	Right Tilt	/	8.58	10.5	0.104	0.16	0.09

Note:

1. U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
2. For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg



or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

Table 13.52: SAR Values (WLAN - Head) – 11ac-80M (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
Ch.	MHz					
155	5775.0	Left Cheek	100%	100%	0.87	0.87



Table 13.53: SAR Values (WLAN 5G - Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.6°C Liquid Temperature: 22.1°C									
U-NII-2A Body-Worn Test Data (15mm)									
64	5320.0	802.11a	Front	/	17.79	19.0	0.140	0.18	0.04
64	5320.0	802.11a	Rear	/	17.79	19.0	0.125	0.17	0.07
U-NII-2C Body-Worn Test Data (15mm)									
100	5500.0	802.11a	Front	/	17.86	19.0	0.114	0.15	0.18
100	5500.0	802.11a	Rear	/	17.86	19.0	0.168	0.22	0.09
U-NII-3 Body-Worn Test Data (15mm)									
149	5745.0	802.11a	Front	/	17.34	19.0	0.125	0.18	0.07
149	5745.0	802.11a	Rear	41	17.34	19.0	0.254	0.37	0.11
U-NII-2A Body-Worn Test Data (15mm) - Reduced power level 9									
58	5290.0	11ac 80M	Front	/	14.92	16.5	0.075	0.11	0.12
58	5290.0	11ac 80M	Rear	/	14.92	16.5	0.067	0.10	-0.09
U-NII-2C Body-Worn Test Data (15mm) - Reduced power level 9									
106	5530.0	11ac 80M	Front	/	14.21	15.5	0.050	0.07	0.17
106	5530.0	11ac 80M	Rear	/	14.21	15.5	0.074	0.10	-0.05
U-NII-3 Body-Worn Test Data (15mm) - Reduced power level 9									
155	5775.0	11ac 80M	Front	/	13.55	15.5	0.049	0.08	-0.03
155	5775.0	11ac 80M	Rear	/	13.55	15.5	0.100	0.16	0.09

Note:

1. U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band.
2. For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

Table 13.54: SAR Values (WLAN - Body) – 802.11a (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
Ch.	MHz					
149	5745.0	Rear	100%	100%	0.37	0.37



13.5. Product specific 10g SAR

Table 13.55: SAR Values (WLAN 5G- Body)

Frequency		Test Mode	Test Position	Figure No./ Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift(dB)
Ch.	MHz								
Ambient Temperature: 22.6°C Liquid Temperature: 22.1°C									
U-NII-2A Test Data (0mm)									
64	5320.0	802.11a	Front	/	17.79	19.0	0.999	1.32	0.06
64	5320.0	802.11a	Rear	/	17.79	19.0	0.376	0.50	0.02
64	5320.0	802.11a	Right	/	17.79	19.0	0.160	0.21	0.02
64	5320.0	802.11a	Top	/	17.79	19.0	0.804	1.06	-0.12
U-NII-2C Test Data (0mm)									
100	5500.0	802.11a	Front	/	17.86	19.0	0.908	1.18	0.00
100	5500.0	802.11a	Rear	/	17.86	19.0	0.608	0.79	0.06
100	5500.0	802.11a	Right	/	17.86	19.0	0.134	0.17	0.05
100	5500.0	802.11a	Top	/	17.86	19.0	0.552	0.72	0.10
U-NII-3 Test Data (0mm)									
149	5745.0	802.11a	Front	/	17.34	19.0	0.694	1.02	0.06
149	5745.0	802.11a	Rear	42	17.34	19.0	1.030	1.51	0.17
149	5745.0	802.11a	Right	/	17.34	19.0	0.144	0.21	-0.06
149	5745.0	802.11a	Top	/	17.34	19.0	0.940	1.38	-0.04
U-NII-2A Test Data (0mm) - Reduced power level 9									
58	5290.0	11ac 80M	Front	/	14.92	16.5	0.583	0.84	0.06
58	5290.0	11ac 80M	Rear	/	14.92	16.5	0.219	0.32	0.00
58	5290.0	11ac 80M	Right	/	14.92	16.5	0.093	0.13	0.02
58	5290.0	11ac 80M	Top	/	14.92	16.5	0.469	0.67	-0.03
U-NII-2C Test Data (0mm) - Reduced power level 9									
106	5530.0	11ac 80M	Front	/	14.21	15.5	0.393	0.53	0.00
106	5530.0	11ac 80M	Rear	/	14.21	15.5	0.263	0.35	-0.14
106	5530.0	11ac 80M	Right	/	14.21	15.5	0.058	0.08	0.19
106	5530.0	11ac 80M	Top	/	14.21	15.5	0.239	0.32	-0.10
U-NII-3 Test Data (0mm) - Reduced power level 9									
155	5775.0	11ac 80M	Front	/	13.55	15.5	0.303	0.47	0.01
155	5775.0	11ac 80M	Rear	/	13.55	15.5	0.450	0.71	0.18
155	5775.0	11ac 80M	Right	/	13.55	15.5	0.063	0.10	0.15
155	5775.0	11ac 80M	Top	/	13.55	15.5	0.411	0.64	0.06

Note:

1. U-NII-1 and U-NII-2A bands have the same specified maximum output and tolerance; SAR is measured for U-NII-2A band first. Adjusted SAR of U-NII-2A band is ≤ 3.0 W/kg, SAR is not required for U-NII-1 band.
2. For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is > 2.0 W/kg, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel until the reported SAR is ≤ 2.0 W/kg



or all required channels are tested.

According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

Table 13.56: SAR Values (WLAN - Body) – 802.11a (Scaled Reported SAR)

Frequency		Test Position	Actual duty factor	maximum duty factor	Reported SAR (10g)(W/kg)	Scaled reported SAR (10g)(W/kg)
Ch.	MHz					
149	5745.0	Rear	100%	100%	1.51	1.51

14. SAR Measurement Variability

SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium.

The following procedures are applied to determine if repeated measurements are required.

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

Table 14.1: SAR Measurement Variability for GSM850 Head – Top Antenna

Frequency		Test Position	Original	1 st Repeated	Ratio	2 nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
190	836.6	Right Cheek	0.927	0.919	1.01	/

Table 14.2: SAR Measurement Variability for GSM850 Body – Top Antenna

Frequency		Test Position	Original	1 st Repeated	Ratio	2 nd Repeated
Ch.	MHz		SAR (W/kg)	SAR (W/kg)		SAR (W/kg)
4182	836.4	Right Side	0.835	0.821	1.02	/

15. Measurement Uncertainty

15.1. Measurement Uncertainty for Normal SAR Tests (300MHz~3GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	12	N	2	1	1	6.0	6.0	∞
2	Isotropy	B	7.4	R	$\sqrt{3}$	1	1	4.3	4.3	∞
3	Boundary effect	B	1.1	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	1.0	N	1	1	1	1.0	1.0	∞
7	Response time	B	0.0	R	$\sqrt{3}$	1	1	0.0	0.0	∞
8	Integration time	B	1.7	R	$\sqrt{3}$	1	1	1.0	1.0	∞
9	RF ambient conditions-noise	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
10	RF ambient conditions-reflection	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
11	Probe positioned mech. restrictions	B	0.35	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	5
15	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
16	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
17	Phantom uncertainty	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	1.3	N	1	0.64	0.43	0.83	0.56	9
20	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
21	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	0.96	0.78	9
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.4	10.3	95.5
Expanded uncertainty (Confidence interval of 95 %)		$u_e = 2u_c$						20.8	20.6	

15.2. Measurement Uncertainty for Normal SAR Tests (3GHz~6GHz)

No.	Error Description	Type	Uncertainty value	Probably Distribution	Div.	(Ci) 1g	(Ci) 10g	Std. Unc. (1g)	Std. Unc. (10g)	Degree of freedom
Measurement system										
1	Probe calibration	B	13.3	N	2	1	1	6.65	6.65	∞
2	Isotropy	B	7.4	R	$\sqrt{3}$	1	1	4.3	4.3	∞
3	Boundary effect	B	1.1	R	$\sqrt{3}$	1	1	0.6	0.6	∞
4	Linearity	B	4.7	R	$\sqrt{3}$	1	1	2.7	2.7	∞
5	Detection limit	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
6	Readout electronics	B	1.0	N	1	1	1	1.0	1.0	∞
7	Response time	B	0.0	R	$\sqrt{3}$	1	1	0.0	0.0	∞
8	Integration time	B	1.7	R	$\sqrt{3}$	1	1	1.0	1.0	∞
9	RF ambient conditions-noise	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
10	RF ambient conditions-reflection	B	3.0	R	$\sqrt{3}$	1	1	1.7	1.7	∞
11	Probe positioned mech. Restrictions	B	0.35	R	$\sqrt{3}$	1	1	0.2	0.2	∞
12	Probe positioning with respect to phantom shell	B	2.9	R	$\sqrt{3}$	1	1	1.7	1.7	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	7.0	R	$\sqrt{3}$	1	1	4.0	4.0	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	5
16	Device holder uncertainty	A	3.4	N	1	1	1	3.4	3.4	5
17	Drift of output power	B	5.0	R	$\sqrt{3}$	1	1	2.9	2.9	∞
Phantom and set-up										
18	Phantom uncertainty	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
20	Liquid conductivity (meas.)	A	1.3	N	1	0.64	0.43	0.83	0.56	43
21	Liquid permittivity (target)	B	5.0	R	$\sqrt{3}$	0.6	0.49	1.7	1.4	∞
22	Liquid permittivity (meas.)	A	1.6	N	1	0.6	0.49	0.96	0.78	521
Combined standard uncertainty		$u_c' = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						11.5	11.4	257
Expanded uncertainty (Confidence interval of 95 %)		$u_e = 2u_c$						23.0	22.8	

16. Main Test Instruments

Table 16.1: List of Main Instruments for original sample test

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46103759	2020-11-15	One year
02	Dielectric probe	85070E	MY44300317	/	/
03	Power meter	E4418B	MY50000366	2020-12-13	One year
04	Power sensor	E9304A	MY50000188		
05	Power meter	NRP	101460	2021-01-15	One year
06	Power sensor	NRP-Z91	100553		
07	Signal Generator	E8257D	MY47461211	2021-01-15	One year
08	Amplifier	VTL5400	0404	/	/
09	E-field Probe	EX3DV4	7621	2020-10-05 & 2020-11-30	One year
10	DAE	DAE4	1527	2020-11-06	One year
11	Dipole Validation Kit	D835V2	4d057	2018-10-09	Three year
12	Dipole Validation Kit	D1750V2	1152	2019-08-30	Three year
13	Dipole Validation Kit	D1900V2	5d088	2018-10-24	Three year
14	Dipole Validation Kit	D2450V2	873	2018-10-26	Three year
15	Dipole Validation Kit	D2550V2	1010	2021-05-21	Three year
16	Dipole Validation Kit	D5GHzV2	1238	2019-08-29	Three year
17	BTS	MT8820C	6201341853	2021-01-15	One year
18	BTS	E5515C	GB46110722	2021-01-15	One year
19	BTS	CMW500	158344	2021-07-17	One year
20	Software	DASY5	52.8.8.1222	/	/

ANNEX A: Graph Results

GSM850 Head

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.919$ S/m; $\epsilon_r = 40.745$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Right Cheek Middle/Area Scan (71x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.19 W/kg

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

Reference Value = 7.156 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.88 W/kg

SAR(1 g) = 0.927 W/kg; SAR(10 g) = 0.492 W/kg

Maximum value of SAR (measured) = 1.18 W/kg

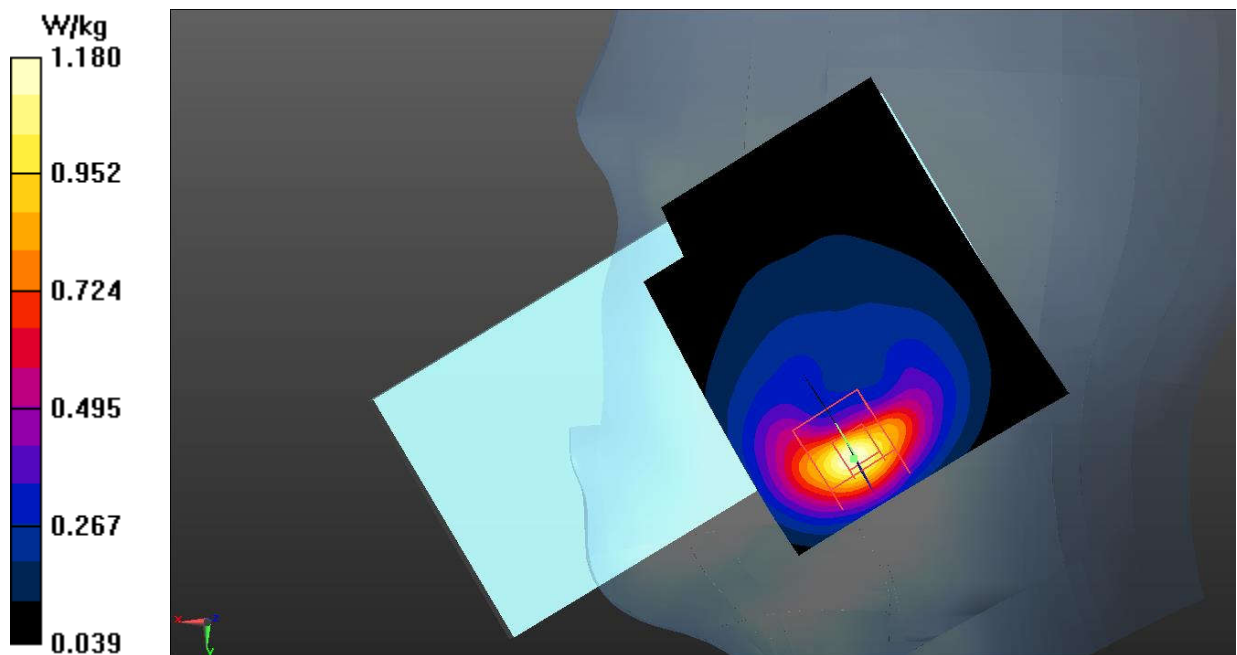


Fig.1 GSM 850

GSM850 Hotspot

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.908$ S/m; $\epsilon_r = 40.894$; $\rho = 1000$ kg/m³

Communication System: UID 0, 4 slot GPRS (0) Frequency: 824.2 MHz Duty Cycle: 1:2

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Right Side Low/Area Scan (41x121x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

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

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

Reference Value = 27.80 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 1.13 W/kg

SAR(1 g) = 0.616 W/kg; SAR(10 g) = 0.339 W/kg

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

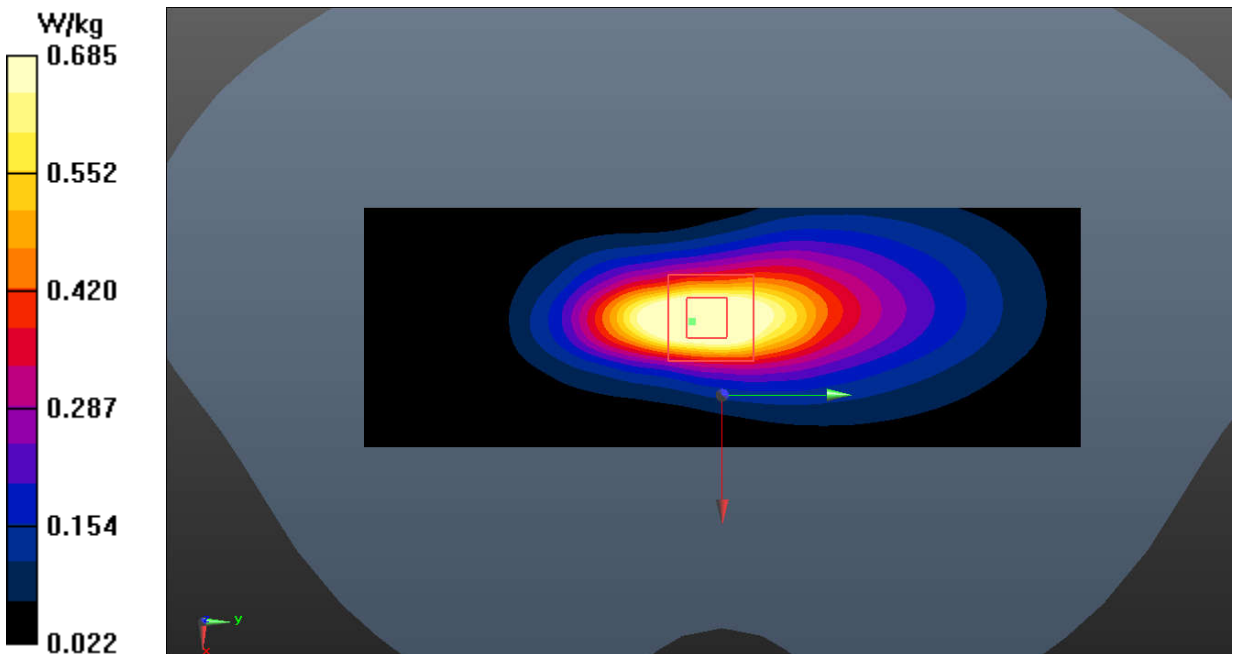


Fig.2 GSM 850

GSM850 Body-worn

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.919$ S/m; $\epsilon_r = 40.745$; $\rho = 1000$ kg/m³

Communication System: UID 0, 4 slot GPRS (0) Frequency: 836.6 MHz Duty Cycle: 1:2

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Rear Side Middle/Area Scan (71x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.397 W/kg

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

Reference Value = 15.54 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.615 W/kg

SAR(1 g) = 0.230 W/kg; SAR(10 g) = 0.144 W/kg

Maximum value of SAR (measured) = 0.389 W/kg

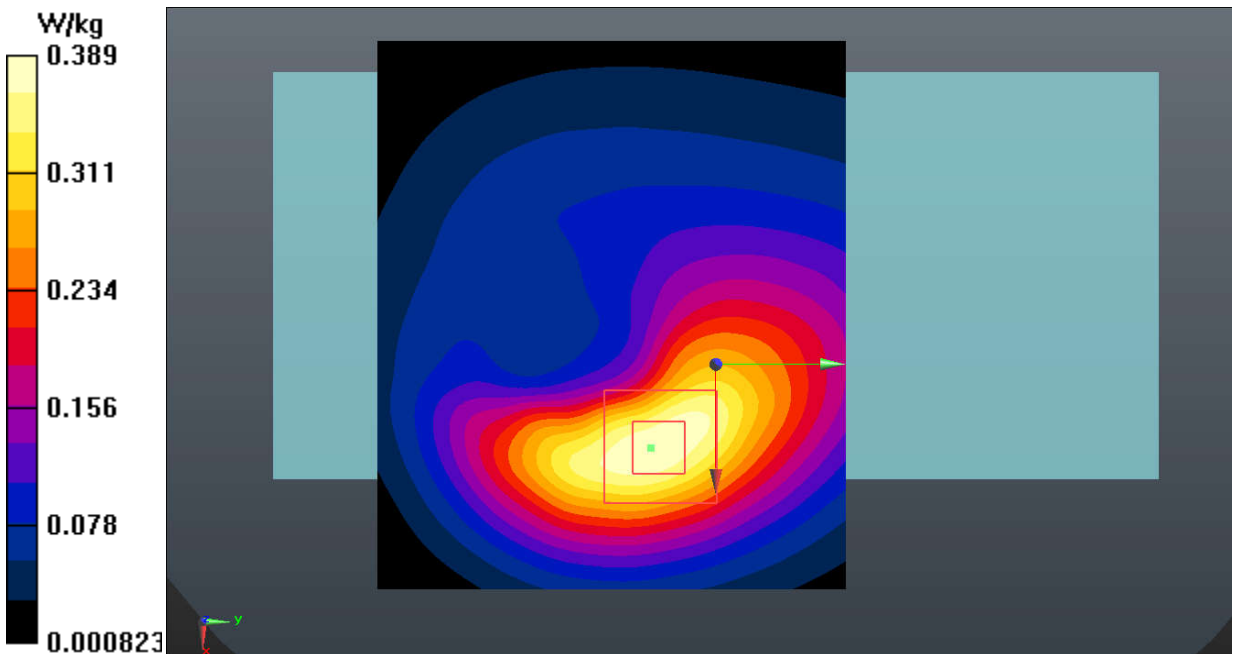


Fig.3 GSM 850

GSM1900 Head

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.373$ S/m; $\epsilon_r = 39.679$; $\rho = 1000$ kg/m³

Communication System: UID 0, 3 slot GPRS (0) Frequency: 1850.2 MHz Duty Cycle: 1:2.67

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

Left Cheek Low/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.694 W/kg

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

Reference Value = 6.940 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.615 W/kg; SAR(10 g) = 0.291 W/kg

Maximum value of SAR (measured) = 0.901 W/kg

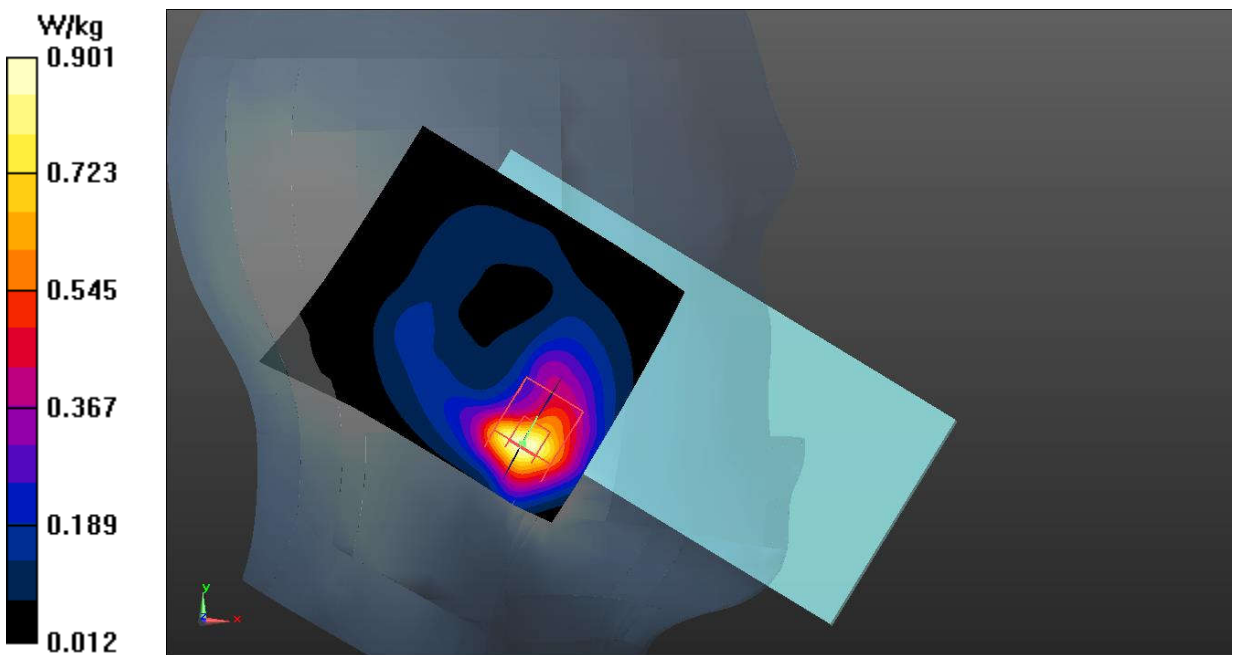


Fig.4 GSM 1900

GSM1900 Hotspot

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.373$ S/m; $\epsilon_r = 39.679$; $\rho = 1000$ kg/m³

Communication System: UID 0, 4 slot GPRS (0) Frequency: 1850.2 MHz Duty Cycle: 1:2

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

Bottom Side Low/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

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

Reference Value = 22.42 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.646 W/kg; SAR(10 g) = 0.354 W/kg

Maximum value of SAR (measured) = 0.807 W/kg

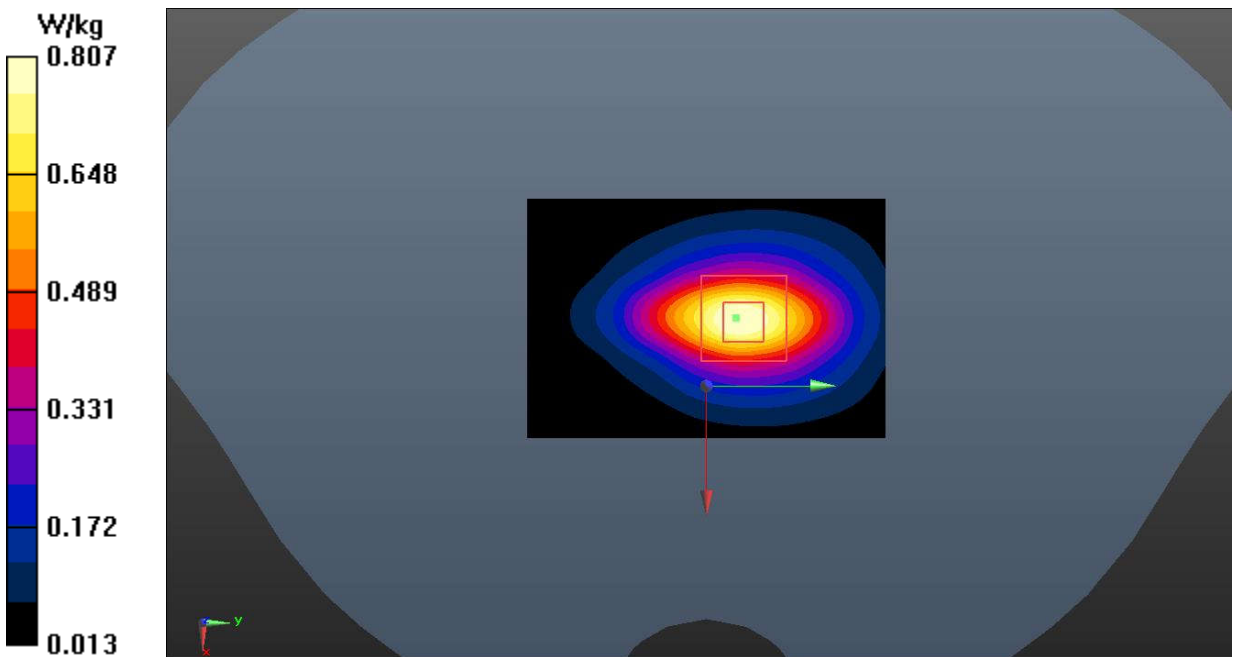


Fig.5 GSM 1900

GSM1900 Body-worn

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.373$ S/m; $\epsilon_r = 39.679$; $\rho = 1000$ kg/m³

Communication System: UID 0, 4 slot GPRS (0) Frequency: 1850.2 MHz Duty Cycle: 1:2

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

Rear Side Low/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.268 W/kg

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

Reference Value = 13.68 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.435 W/kg

SAR(1 g) = 0.224 W/kg; SAR(10 g) = 0.130 W/kg

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

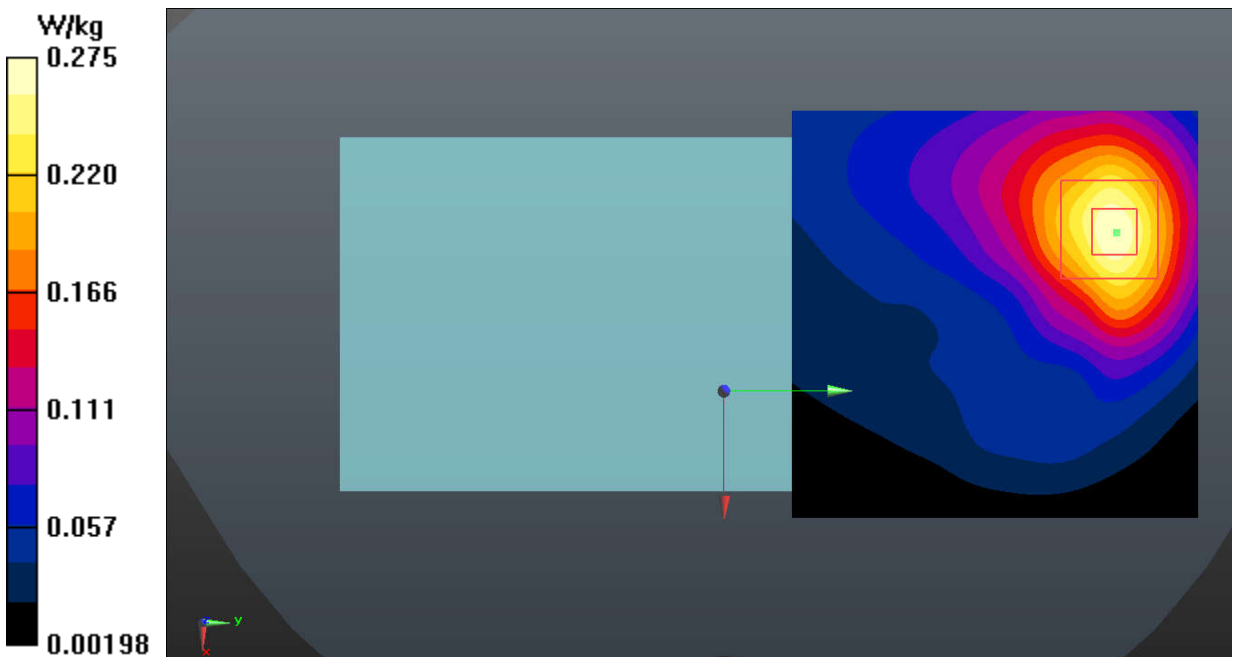


Fig.6 GSM 1900

WCDMA Band 2 Head

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.399$ S/m; $\epsilon_r = 39.563$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

Left Cheek Middle/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

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

Reference Value = 8.470 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.35 W/kg

SAR(1 g) = 0.666 W/kg; SAR(10 g) = 0.321 W/kg

Maximum value of SAR (measured) = 0.999 W/kg

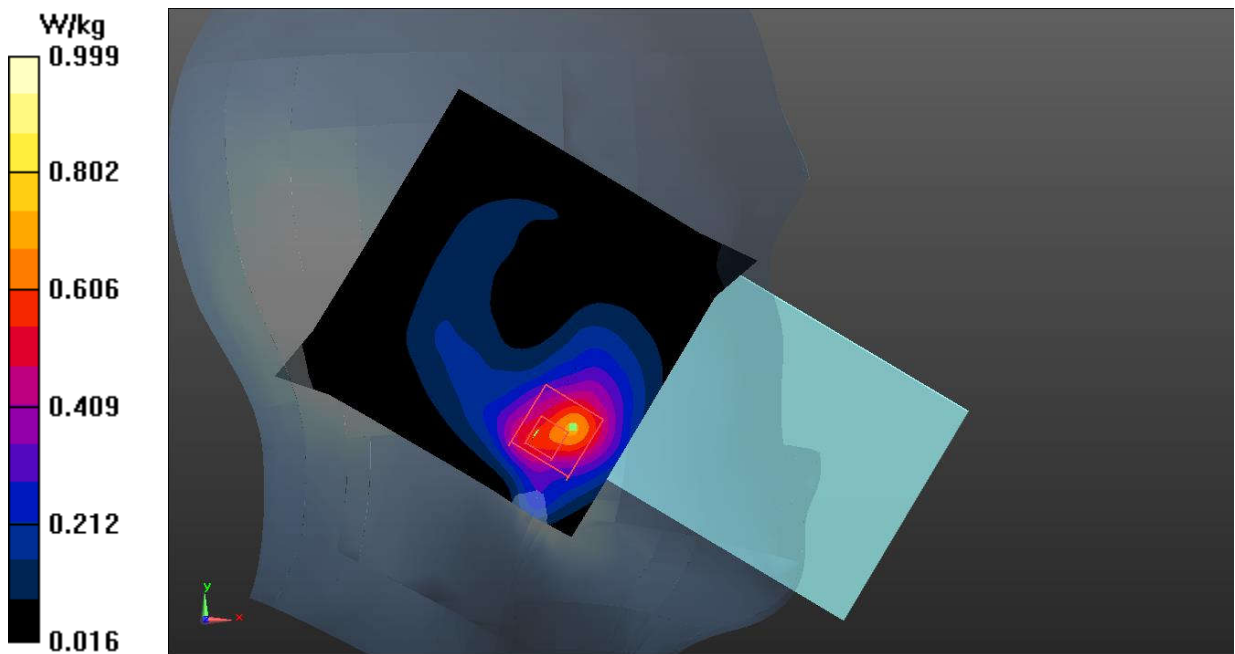


Fig.7 WCDMA Band 2

WCDMA Band 2 Hotspot

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.399$ S/m; $\epsilon_r = 39.563$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

Bottom Side Middle/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.922 W/kg**Bottom Side Middle/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.35 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.18 W/kg

SAR(1 g) = 0.679 W/kg; SAR(10 g) = 0.373 W/kg

Maximum value of SAR (measured) = 0.840 W/kg

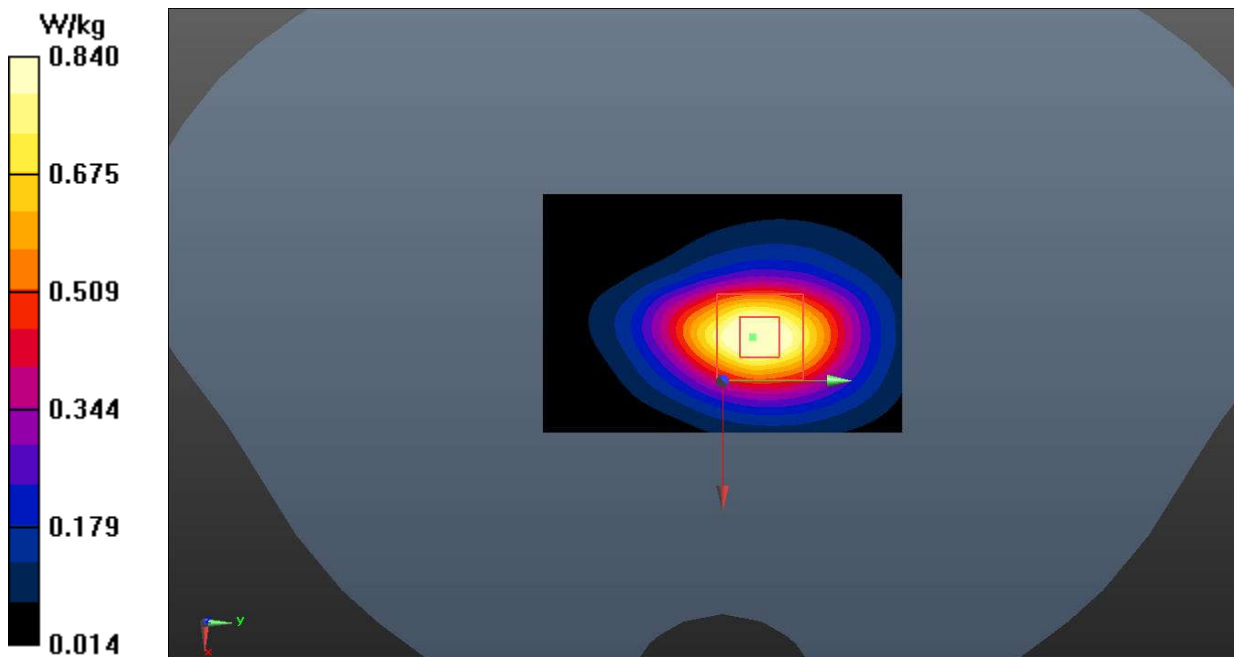


Fig.8 WCDMA Band 2

WCDMA Band 2 Body-worn

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.399$ S/m; $\epsilon_r = 39.563$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

Rear Side Middle/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

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

Reference Value = 10.48 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 0.388 W/kg

SAR(1 g) = 0.205 W/kg; SAR(10 g) = 0.122 W/kg

Maximum value of SAR (measured) = 0.234 W/kg

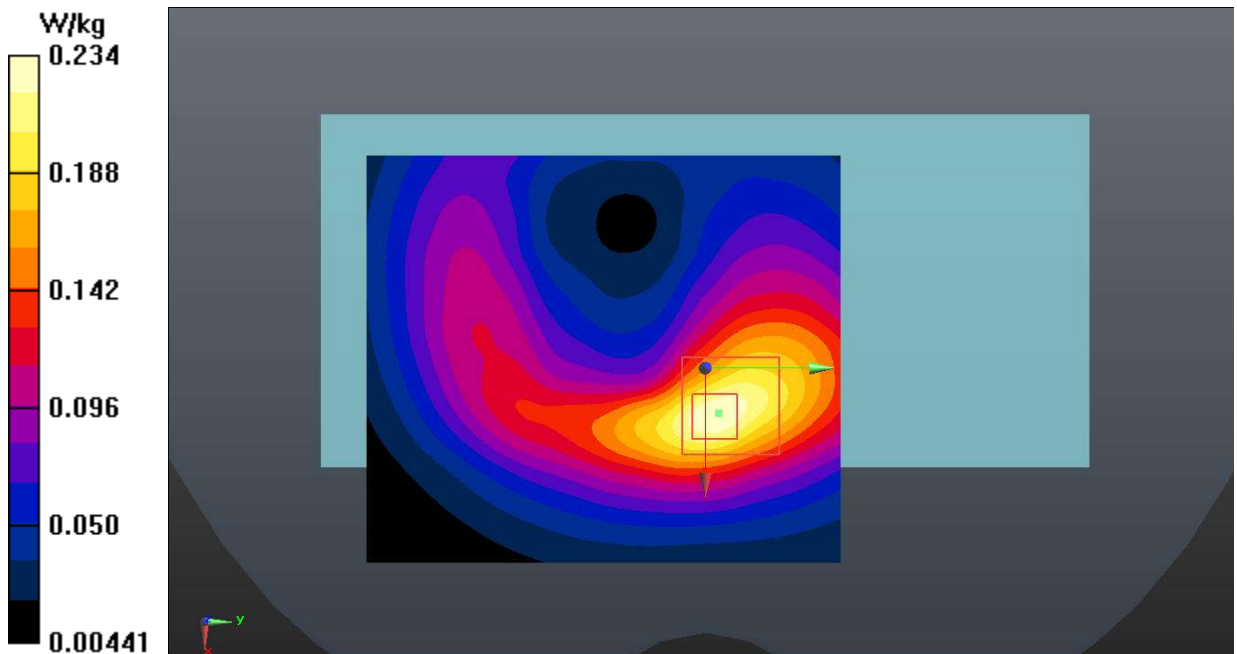


Fig.9 WCDMA Band 2

WCDMA Band 4 Head

Date: 2021-8-10

Electronics: DAE4 Sn1527

Medium: Head 1750MHz

Medium parameters used: $f = 1733$ MHz; $\sigma = 1.348$ S/m; $\epsilon_r = 40.607$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (9.14, 9.14, 9.14);

Left Cheek Middle/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.809 W/kg

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

Reference Value = 5.460 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.680 W/kg; SAR(10 g) = 0.333 W/kg

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

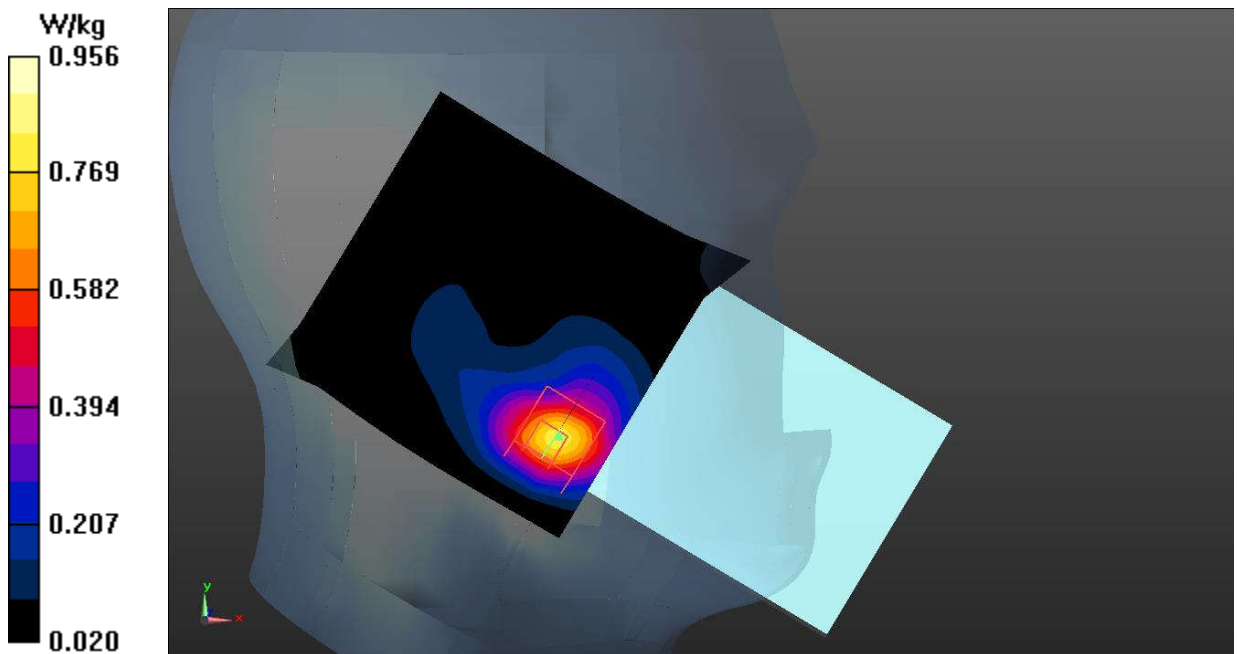


Fig.10 WCDMA Band 4

WCDMA Band 4 Hotspot

Date: 2021-8-10

Electronics: DAE4 Sn1527

Medium: Head 1750MHz

Medium parameters used: $f = 1733$ MHz; $\sigma = 1.348$ S/m; $\epsilon_r = 40.607$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (9.14, 9.14, 9.14);

Left Side Middle/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.940 W/kg

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

Reference Value = 14.16 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.339 W/kg

Maximum value of SAR (measured) = 0.949 W/kg

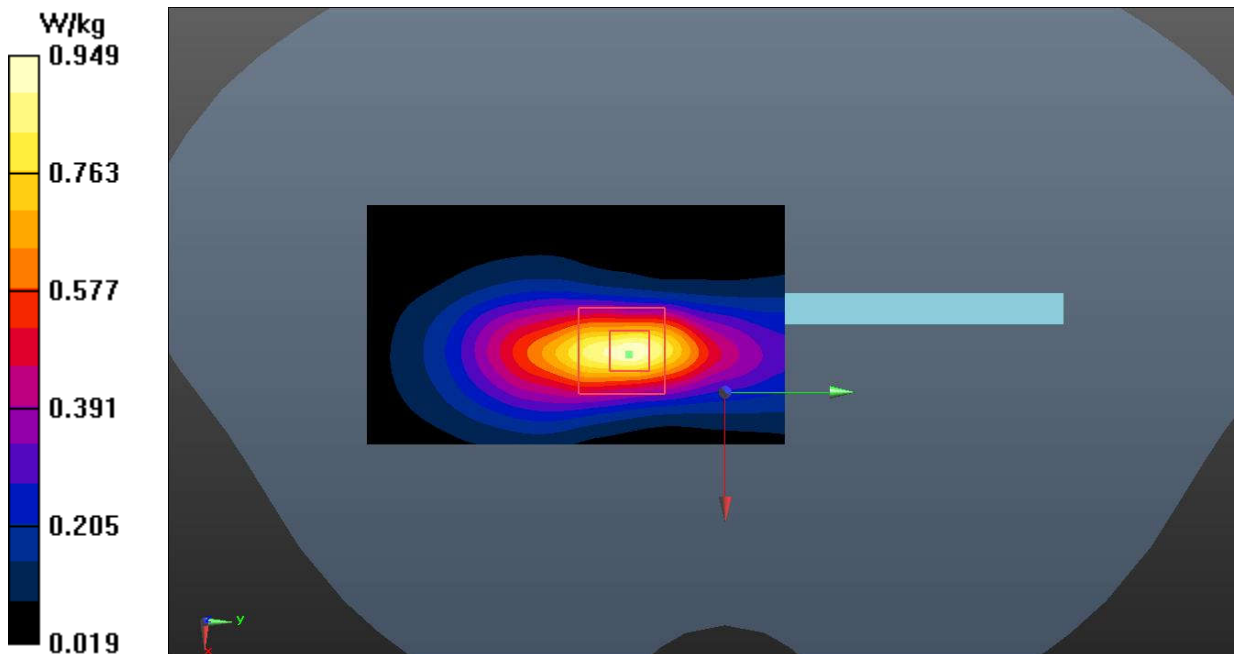


Fig.11 WCDMA Band 4

WCDMA Band 4 Body-worn

Date: 2021-8-10

Electronics: DAE4 Sn1527

Medium: Head 1750MHz

Medium parameters used: $f = 1733$ MHz; $\sigma = 1.348$ S/m; $\epsilon_r = 40.607$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (9.14, 9.14, 9.14);

Rear Side Middle/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.204 W/kg

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

Reference Value = 9.165 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.317 W/kg

SAR(1 g) = 0.196 W/kg; SAR(10 g) = 0.113 W/kg

Maximum value of SAR (measured) = 0.218 W/kg

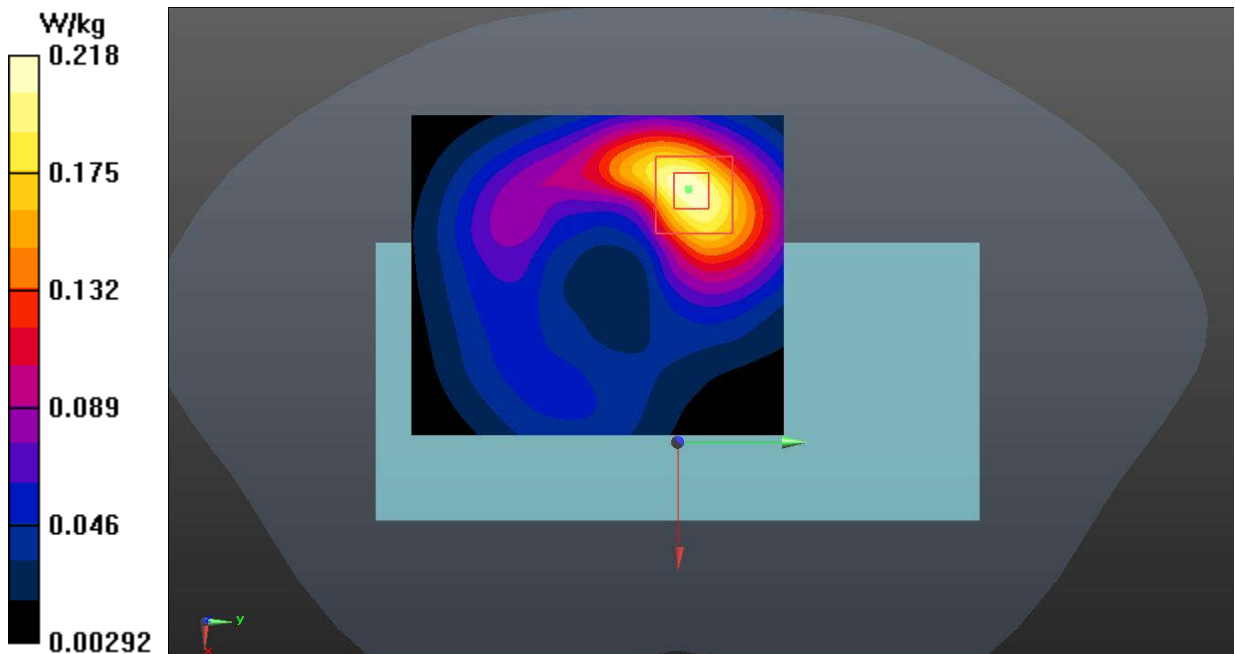


Fig.12 WCDMA Band 4

WCDMA Band 5 Head

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.919$ S/m; $\epsilon_r = 40.747$; $\rho = 1000$ kg/m³

Communication System: UID 0, WCDMA (0) Frequency: 836.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Right Cheek Middle/Area Scan (71x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.681 W/kg

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

Reference Value = 4.982 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.534 W/kg; SAR(10 g) = 0.283 W/kg

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

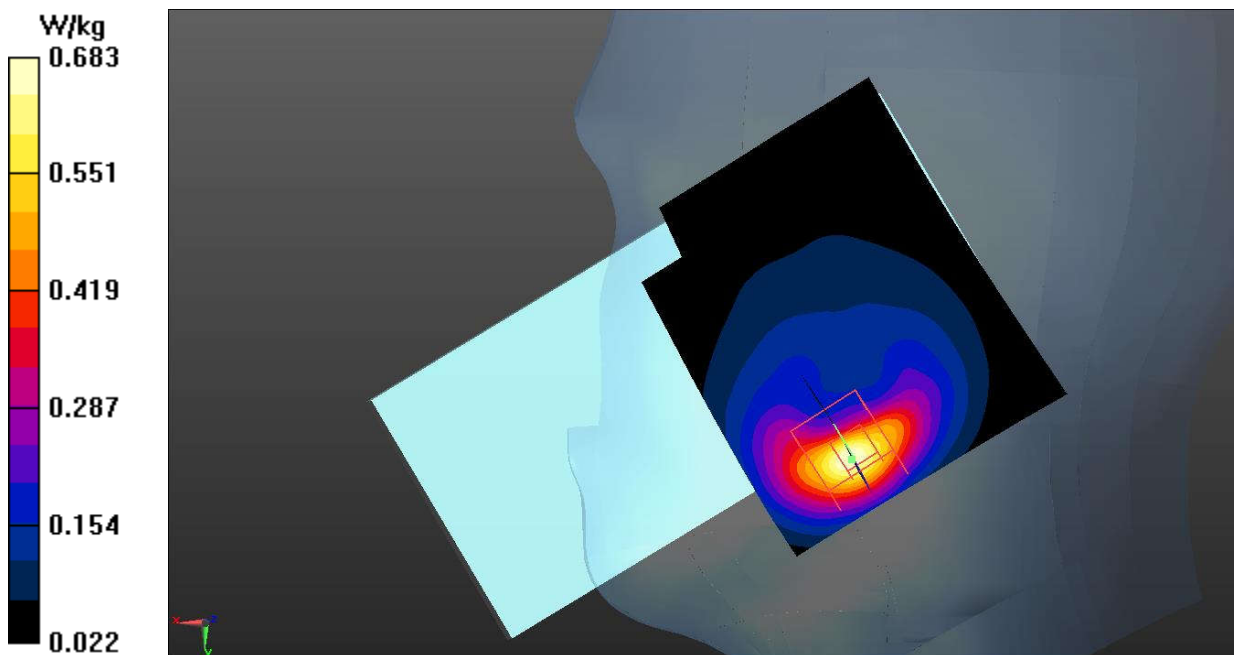


Fig.13 WCDMA Band 5

WCDMA Band 5 Hotspot

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.919$ S/m; $\epsilon_r = 40.747$; $\rho = 1000$ kg/m³

Communication System: UID 0, WCDMA (0) Frequency: 836.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Right Side Middle/Area Scan (41x101x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 1.07 W/kg

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

Reference Value = 28.82 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 1.55 W/kg

SAR(1 g) = 0.835 W/kg; SAR(10 g) = 0.458 W/kg

Maximum value of SAR (measured) = 1.05 W/kg

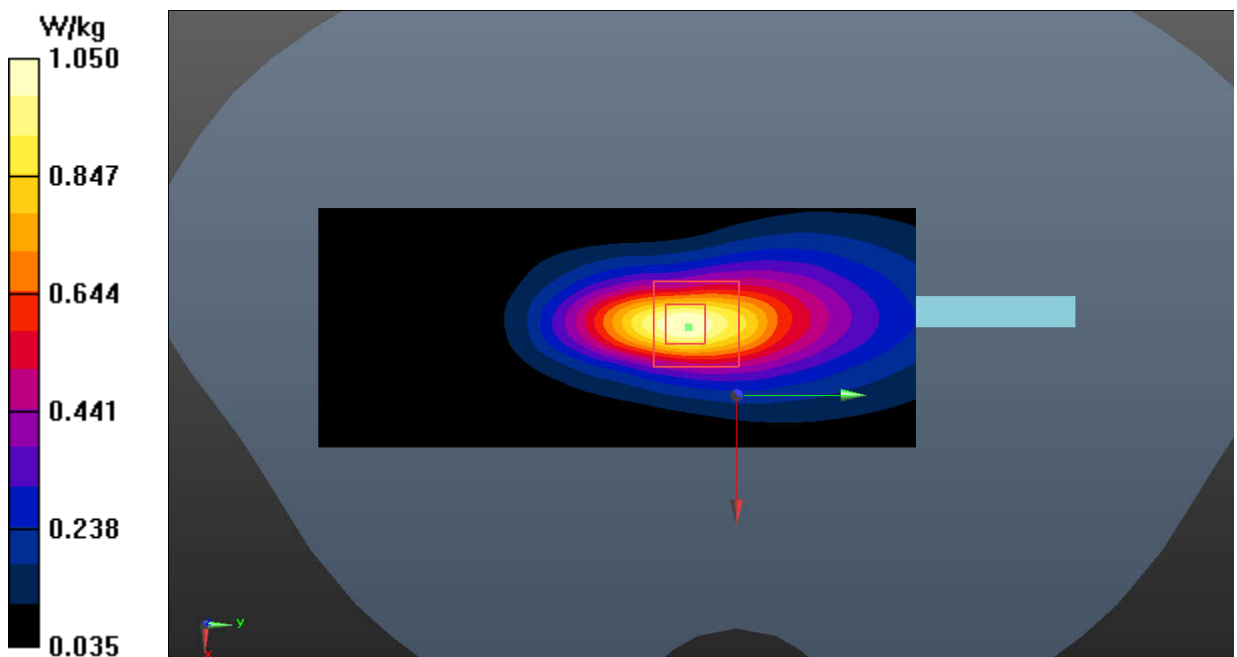


Fig.14 WCDMA Band 5

WCDMA Band 5 Body-worn

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 836.4$ MHz; $\sigma = 0.919$ S/m; $\epsilon_r = 40.747$; $\rho = 1000$ kg/m³

Communication System: UID 0, WCDMA (0) Frequency: 836.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Rear Side Middle/Area Scan (71x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.441 W/kg

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

Reference Value = 13.25 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.726 W/kg

SAR(1 g) = 0.344 W/kg; SAR(10 g) = 0.222 W/kg

Maximum value of SAR (measured) = 0.404 W/kg

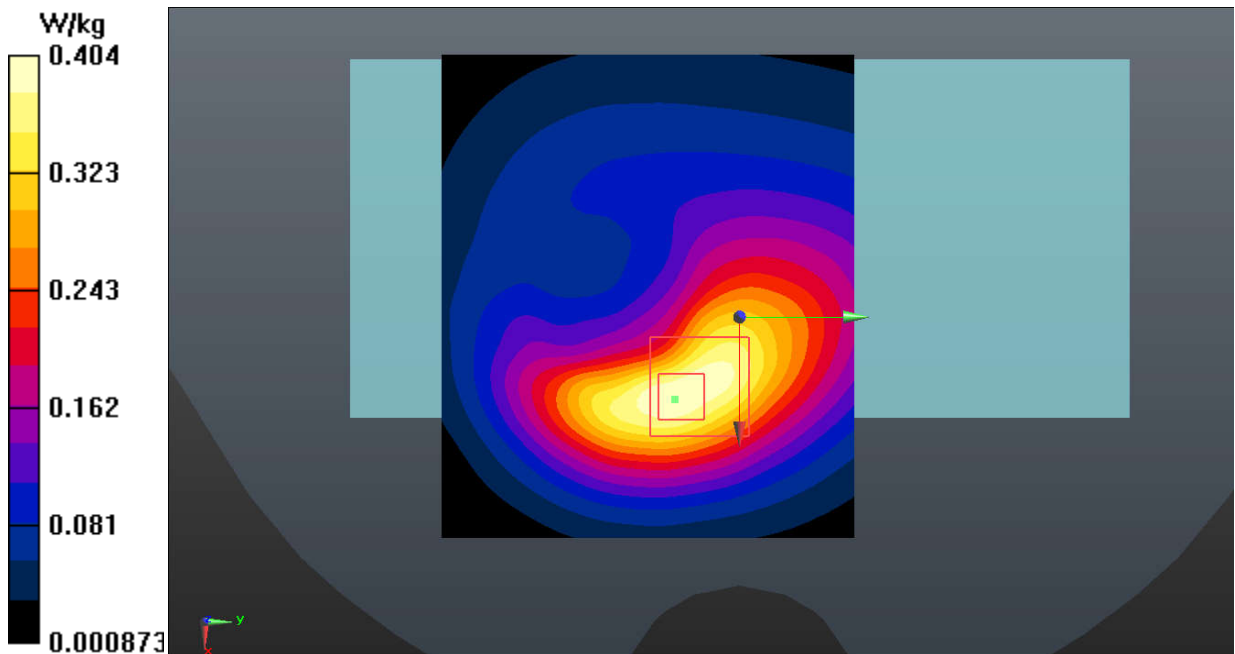


Fig.15 WCDMA Band 5

LTE Band 2 Head

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.399$ S/m; $\epsilon_r = 39.563$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

Left Cheek Middle 50RB50/Area Scan (61x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.792 W/kg**Left Cheek Middle 50RB50/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.870 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.326 W/kg

Maximum value of SAR (measured) = 0.803 W/kg

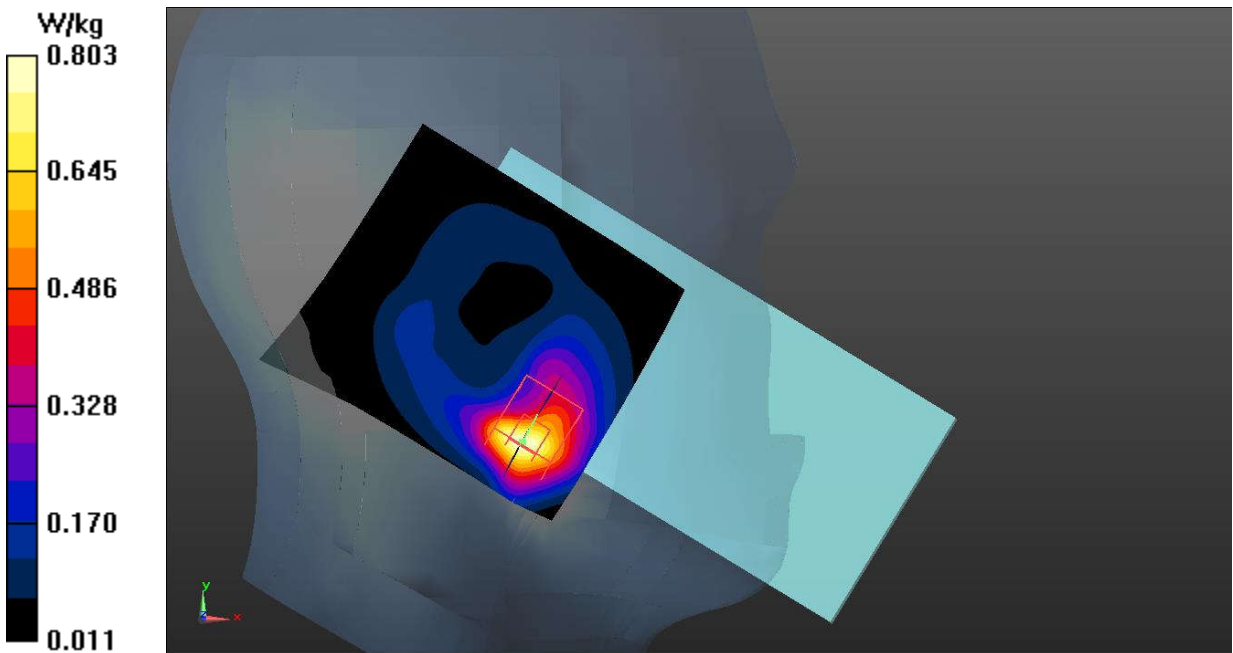


Fig.16 LTE Band 2

LTE Band 2 Hotspot

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.417$ S/m; $\epsilon_r = 39.485$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

Bottom Side High 50RB25/Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.04 W/kg**Bottom Side High 50RB25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.02 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.37 W/kg

SAR(1 g) = 0.785 W/kg; SAR(10 g) = 0.431 W/kg

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

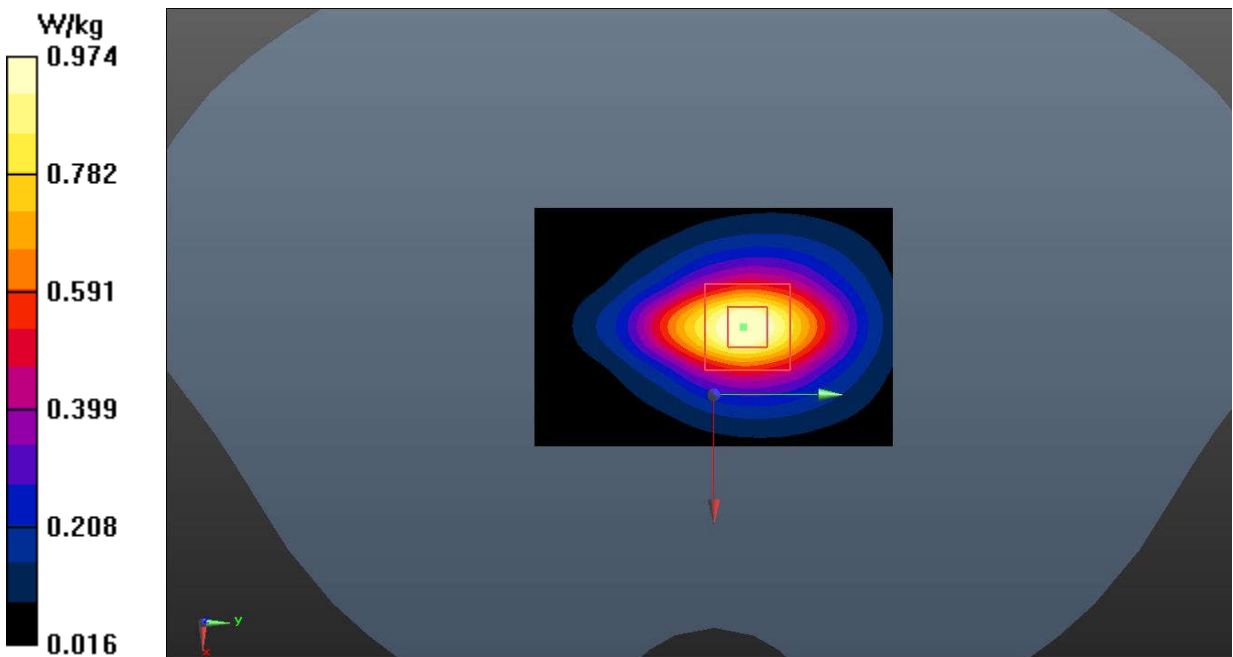


Fig.17 LTE Band 2

LTE Band 2 Body-worn

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.399$ S/m; $\epsilon_r = 39.563$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

Rear Side Middle 50RB50/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.218 W/kg**Rear Side Middle 50RB50/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.14 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.355 W/kg

SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.112 W/kg

Maximum value of SAR (measured) = 0.234 W/kg

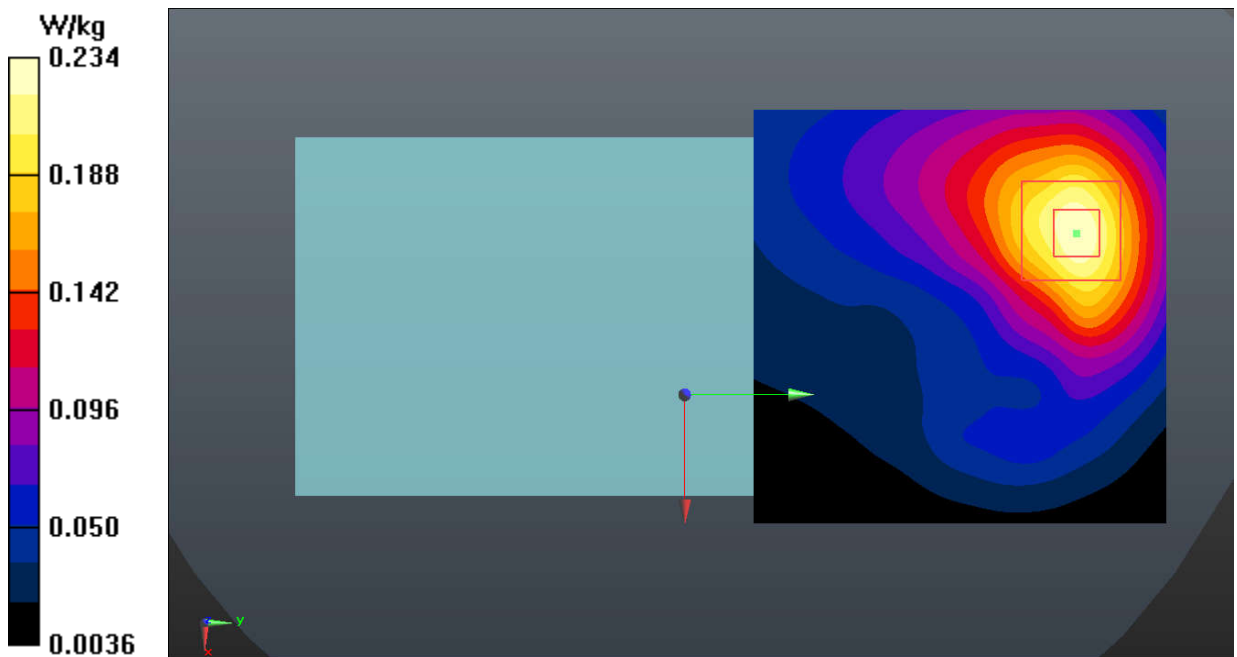


Fig.18 LTE Band 2

LTE Band 4 Head

Date: 2021-8-10

Electronics: DAE4 Sn1527

Medium: Head 1750MHz

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.337$ S/m; $\epsilon_r = 40.658$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (9.14, 9.14, 9.14);

Left Cheek Low 1RB0/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.868 W/kg

Left Cheek Low 1RB0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.973 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.649 W/kg; SAR(10 g) = 0.332 W/kg

Maximum value of SAR (measured) = 0.895 W/kg

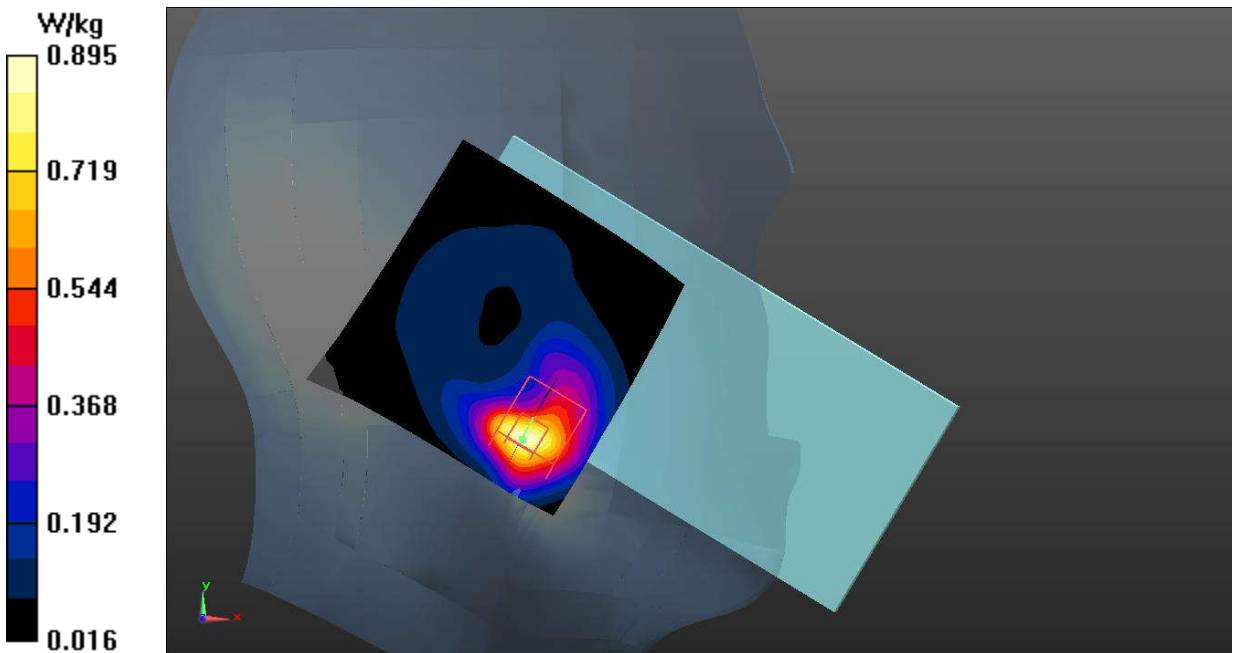


Fig.19 LTE Band 4

LTE Band 4 Hotspot

Date: 2021-8-10

Electronics: DAE4 Sn1527

Medium: Head 1750MHz

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.359$ S/m; $\epsilon_r = 40.561$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (9.14, 9.14, 9.14);

Left Side High 50RB50/Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.976 W/kg

Left Side High 50RB50/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.161 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 1.45 W/kg

SAR(1 g) = 0.788 W/kg; SAR(10 g) = 0.404 W/kg

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

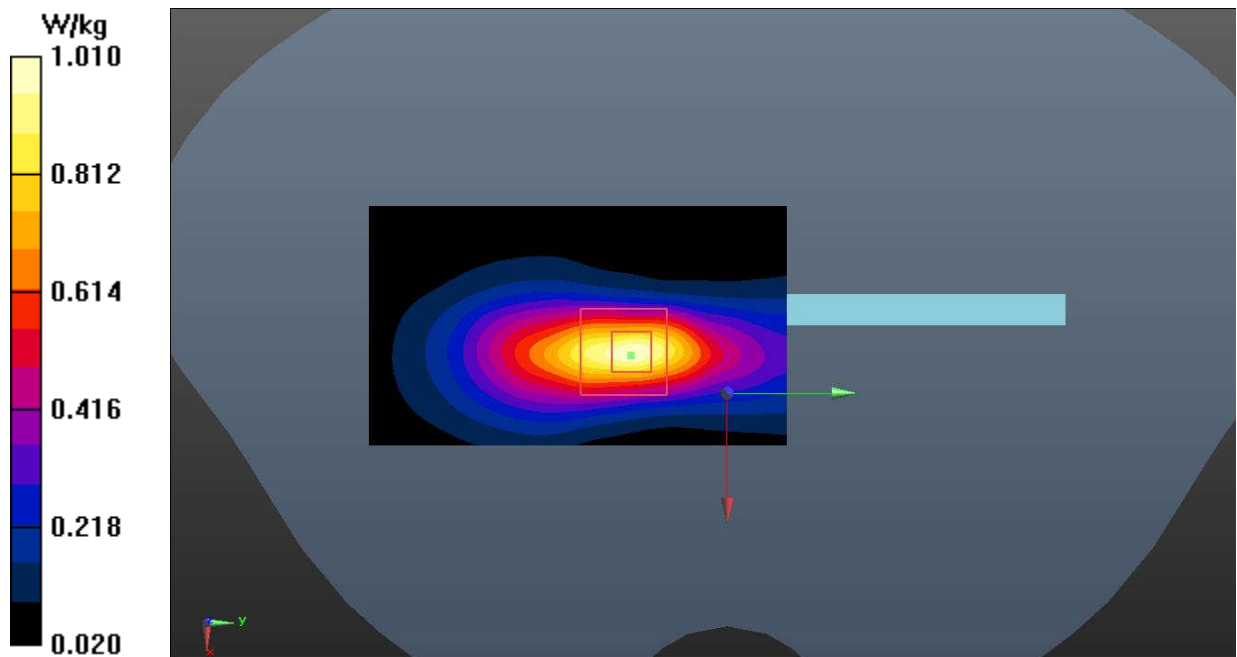


Fig.20 LTE Band 4

LTE Band 4 Body-worn

Date: 2021-8-10

Electronics: DAE4 Sn1527

Medium: Head 1750MHz

Medium parameters used: $f = 1745$ MHz; $\sigma = 1.359$ S/m; $\epsilon_r = 40.561$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (9.14, 9.14, 9.14);

Rear Side High 50RB50/Area Scan (71x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

Rear Side High 50RB50/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.864 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.386 W/kg

SAR(1 g) = 0.199 W/kg; SAR(10 g) = 0.118 W/kg

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

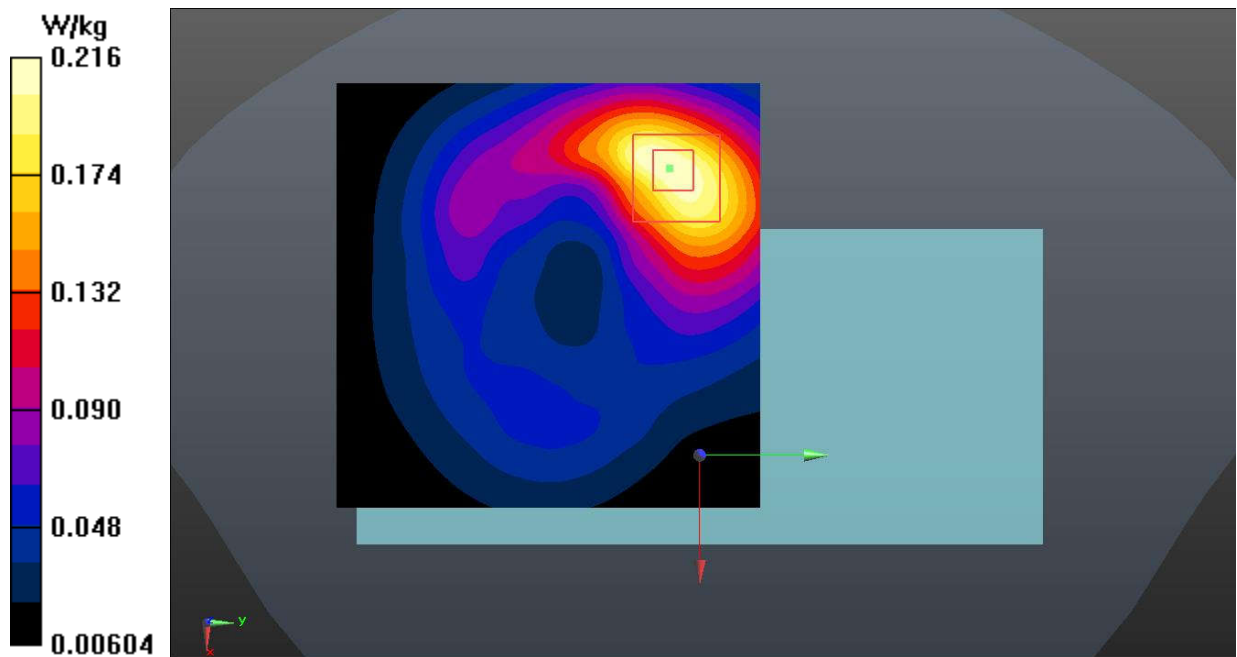


Fig.21 LTE Band 4

LTE Band 5 Head

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used: $f = 844$ MHz; $\sigma = 0.926$ S/m; $\epsilon_r = 40.656$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Right Cheek High 25RB25/Area Scan (71x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.626 W/kg**Right Cheek High 25RB25/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 5.822 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.05 W/kg

SAR(1 g) = 0.516 W/kg; SAR(10 g) = 0.274 W/kg

Maximum value of SAR (measured) = 0.636 W/kg

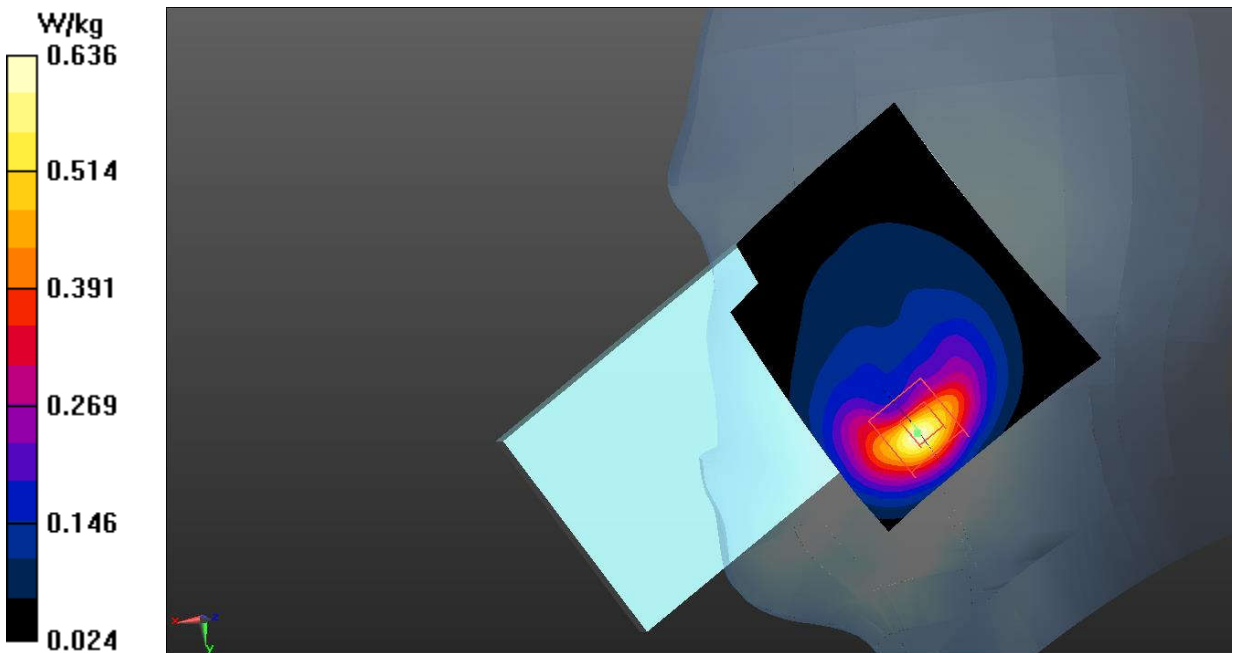


Fig.22 LTE Band 5

LTE Band 5 Hotspot

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used: $f = 844$ MHz; $\sigma = 0.926$ S/m; $\epsilon_r = 40.656$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Right Side High 1RB0/Area Scan (51x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

Right Side High 1RB0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.44 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.34 W/kg

SAR(1 g) = 0.735 W/kg; SAR(10 g) = 0.405 W/kg

Maximum value of SAR (measured) = 0.924 W/kg

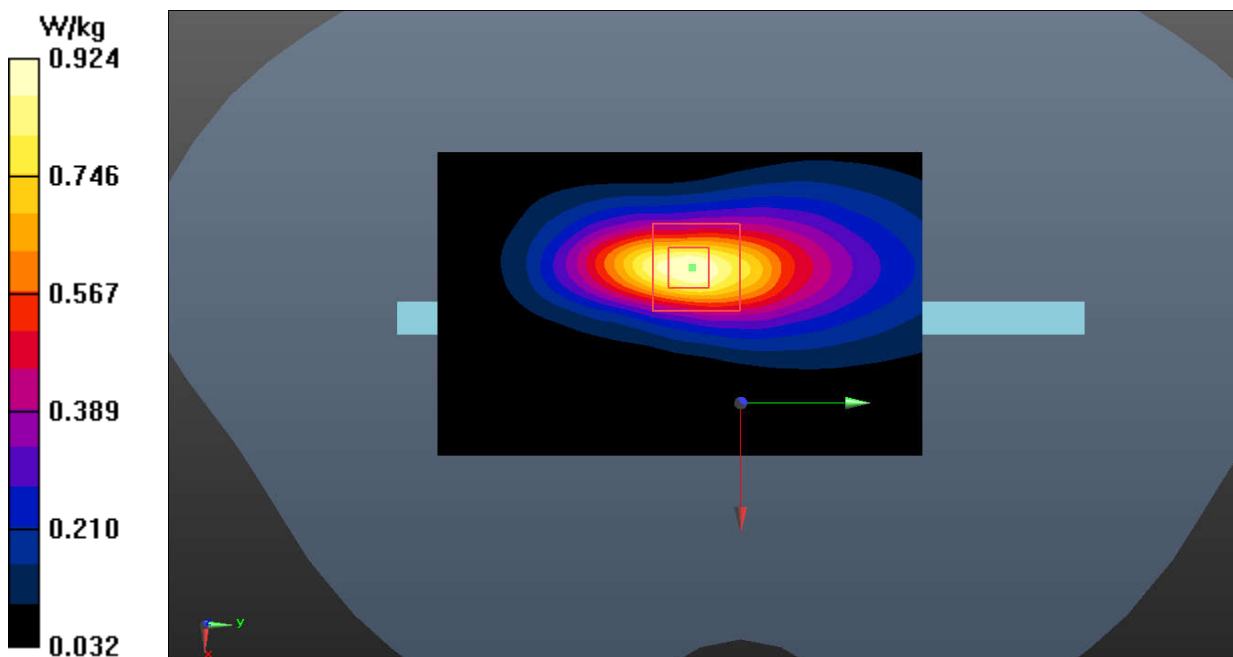


Fig.23 LTE Band 5

LTE Band 5 Body-worn

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 829$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 40.836$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Rear Side Low 1RB0/Area Scan (71x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.405 W/kg

Rear Side Low 1RB0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 7.449 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 0.632 W/kg

SAR(1 g) = 0.314 W/kg; SAR(10 g) = 0.203 W/kg

Maximum value of SAR (measured) = 0.370 W/kg

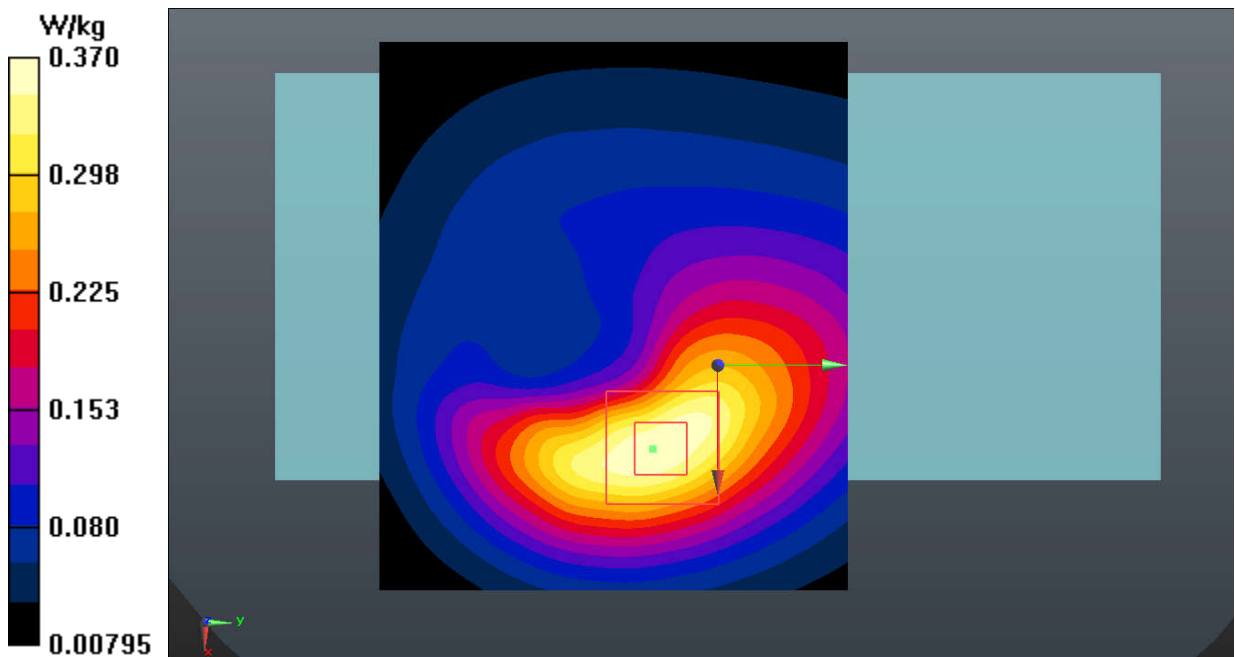


Fig.24 LTE Band 5

LTE Band 7 Head

Date: 2021-8-7

Electronics: DAE4 Sn1527

Medium: Head 2550MHz

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.961$ S/m; $\epsilon_r = 38.12$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (7.84, 7.84, 7.84);

Left Cheek High 1RB99/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.808 W/kg

Left Cheek High 1RB99/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.194 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.641 W/kg; SAR(10 g) = 0.306 W/kg

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

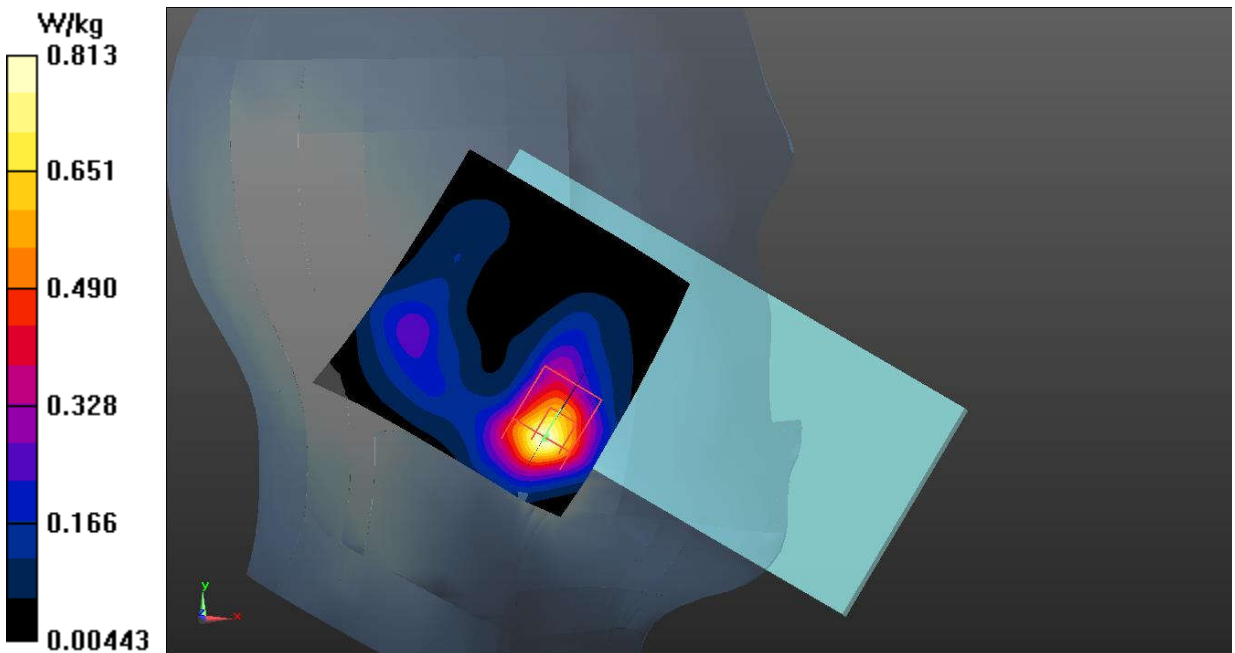


Fig.25 LTE Band 7

LTE Band 7 Hotspot

Date: 2021-8-7

Electronics: DAE4 Sn1527

Medium: Head 2550MHz

Medium parameters used (interpolated): $f = 2535$ MHz; $\sigma = 1.931$ S/m; $\epsilon_r = 38.203$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.01, 8.01, 8.01);

Bottom Side Middle 1RB99/Area Scan (61x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.824 W/kg**Bottom Side Middle 1RB99/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.35 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.653 W/kg; SAR(10 g) = 0.342 W/kg

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

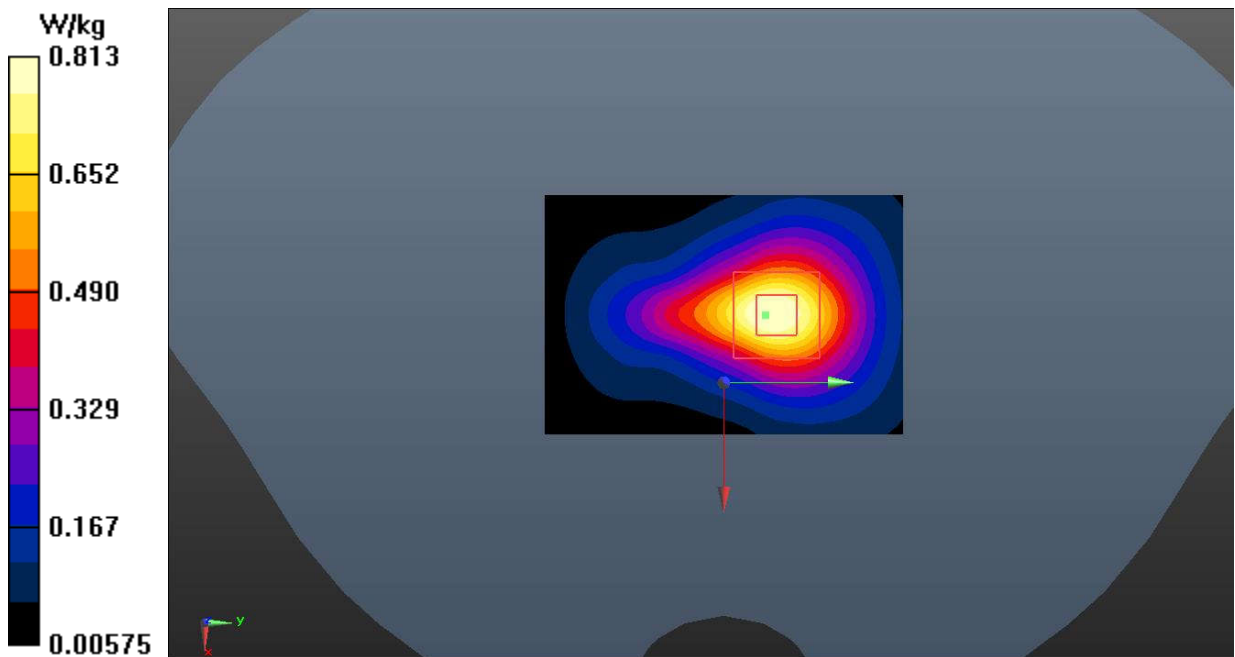


Fig.26 LTE Band 7

LTE Band 7 Body-worn

Date: 2021-8-7

Electronics: DAE4 Sn1527

Medium: Head 2550MHz

Medium parameters used: $f = 2560$ MHz; $\sigma = 1.961$ S/m; $\epsilon_r = 38.12$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (7.84, 7.84, 7.84);

Rear Side High 1RB99/Area Scan (61x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

Rear Side High 1RB99/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.59 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.514 W/kg

SAR(1 g) = 0.297 W/kg; SAR(10 g) = 0.161 W/kg

Maximum value of SAR (measured) = 0.370 W/kg

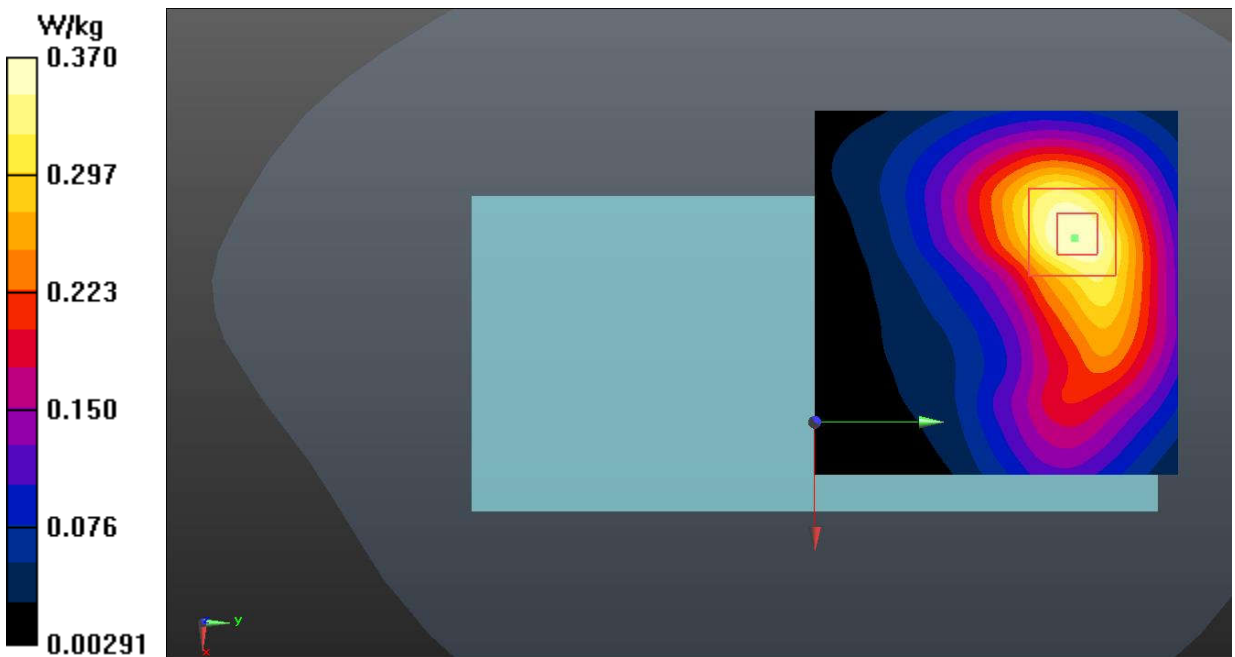


Fig.27 LTE Band 7

LTE Band 26 Head

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used (interpolated): $f = 822.5$ MHz; $\sigma = 0.907$ S/m; $\epsilon_r = 40.917$; $\rho = 1000$ kg/m³

Communication System: UID 0, LTE_FDD (0) Frequency: 822.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Right Cheek Low 36RB38/Area Scan (71x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.679 W/kg**Right Cheek Low 36RB38/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 6.067 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.569 W/kg; SAR(10 g) = 0.305 W/kg

Maximum value of SAR (measured) = 0.699 W/kg

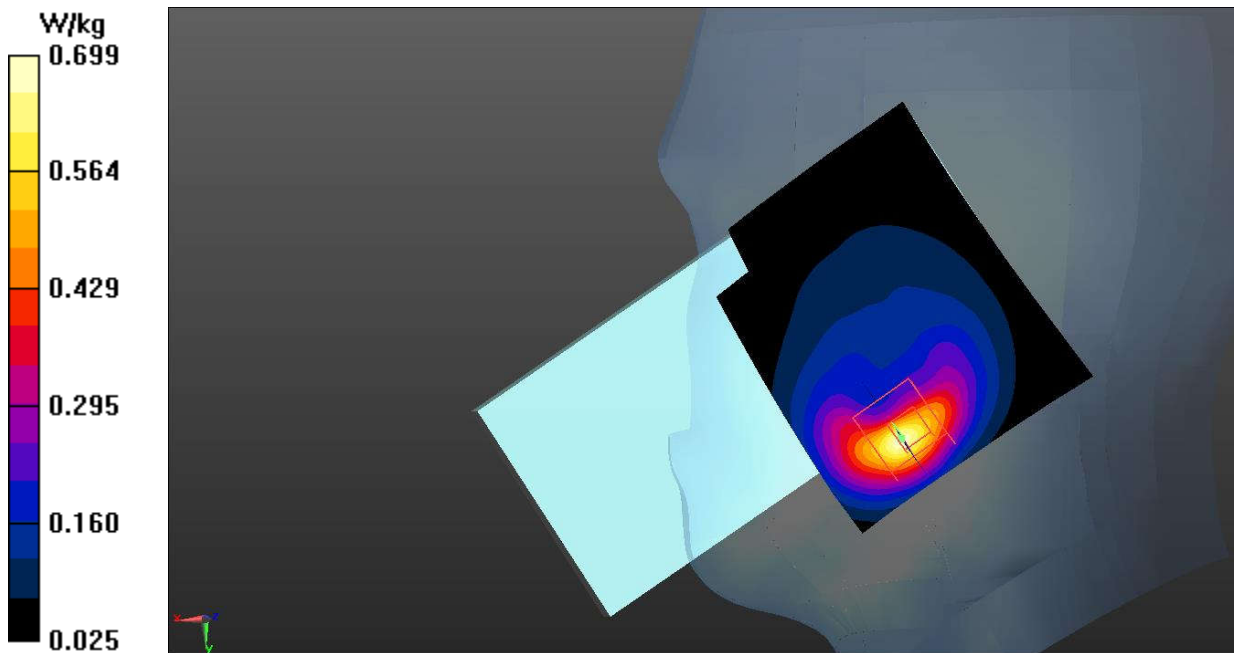


Fig.28 LTE Band 26

LTE Band 26 Hotspot

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used: $f = 842$ MHz; $\sigma = 0.924$ S/m; $\epsilon_r = 40.68$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Right Side High 1RB37/Area Scan (51x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.931 W/kg

Right Side High 1RB37/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.39 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.724 W/kg; SAR(10 g) = 0.400 W/kg

Maximum value of SAR (measured) = 0.911 W/kg

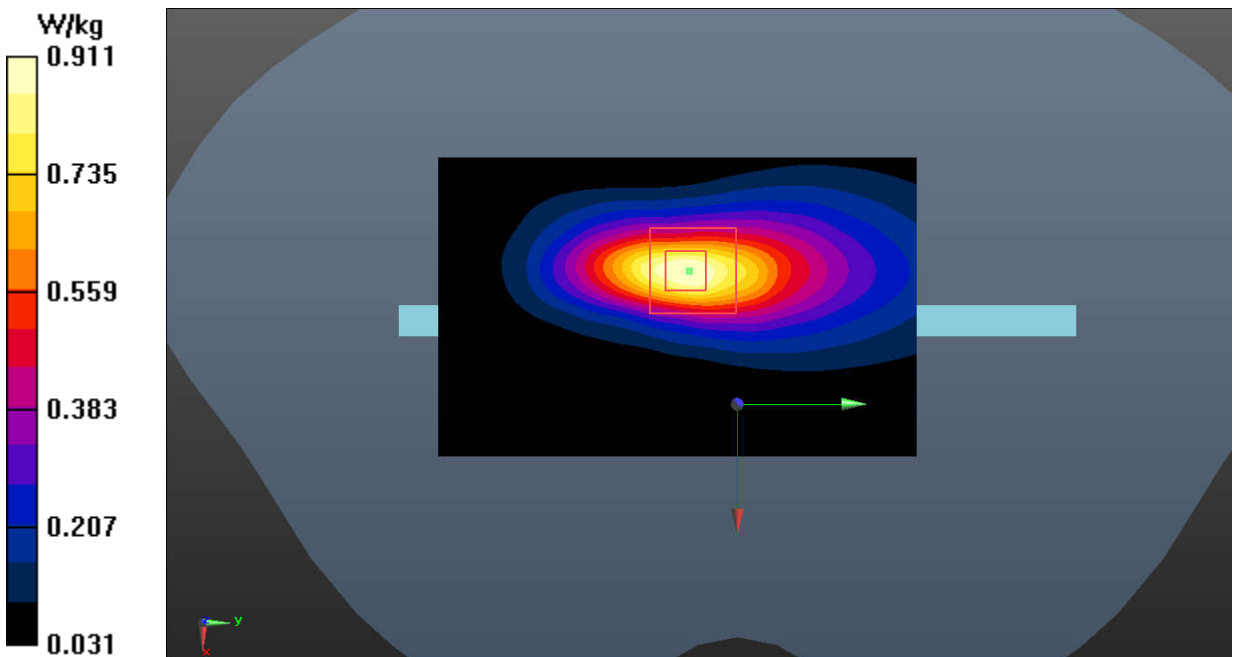


Fig.29 LTE Band 26

LTE Band 26 Body-worn

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used: $f = 832$ MHz; $\sigma = 0.915$ S/m; $\epsilon_r = 40.8$; $\rho = 1000$ kg/m³

Communication System: UID 0, LTE_FDD (0) Frequency: 831.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

Rear Side Middle 1RB37/Area Scan (71x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

Rear Side Middle 1RB37/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.732 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 0.626 W/kg

SAR(1 g) = 0.300 W/kg; SAR(10 g) = 0.193 W/kg

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

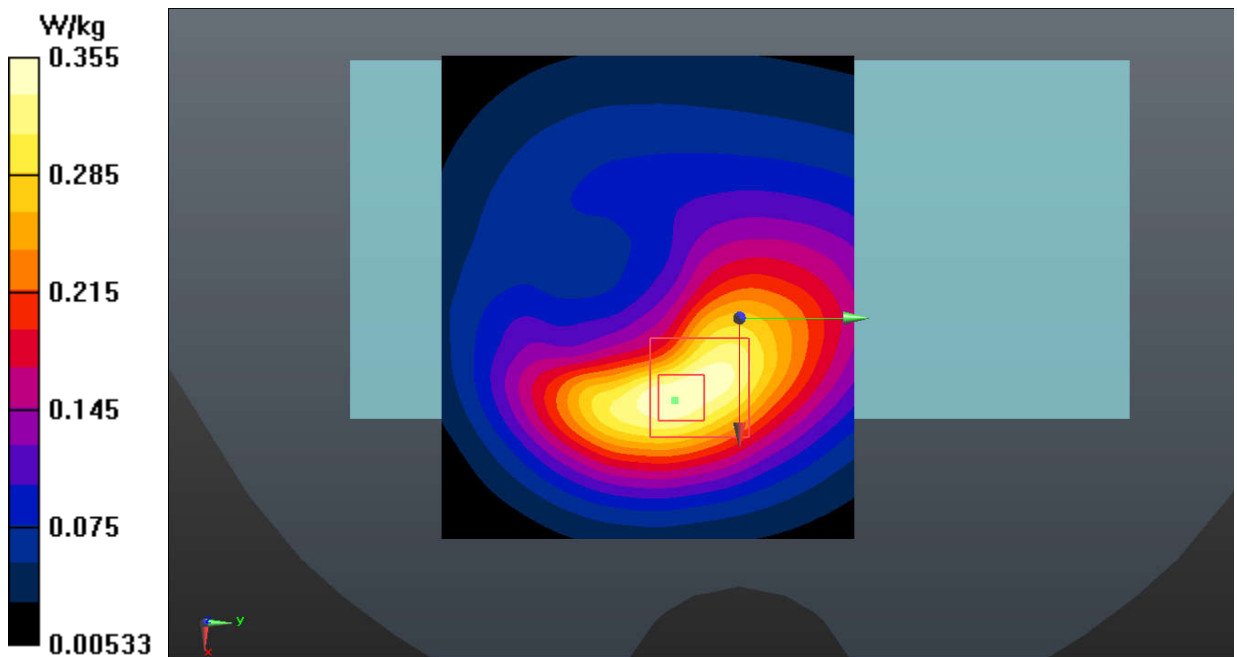


Fig.30 LTE Band 26

LTE Band 41 Head

Date: 2021-8-7

Electronics: DAE4 Sn1527

Medium: Head 2550MHz

Medium parameters used (interpolated): $f = 2645$ MHz; $\sigma = 2.061$ S/m; $\epsilon_r = 37.84$; $\rho = 1000$ kg/m³

Communication System: UID 0, LTE_TDD (0) Frequency: 2645 MHz Duty Cycle: 1:1.58

Probe: EX3DV4 – SN7621 ConvF (7.84, 7.84, 7.84);

Right Cheek High 50RB50/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.843 W/kg**Right Cheek High 50RB50/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.812 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.642 W/kg; SAR(10 g) = 0.329 W/kg

Maximum value of SAR (measured) = 0.700 W/kg

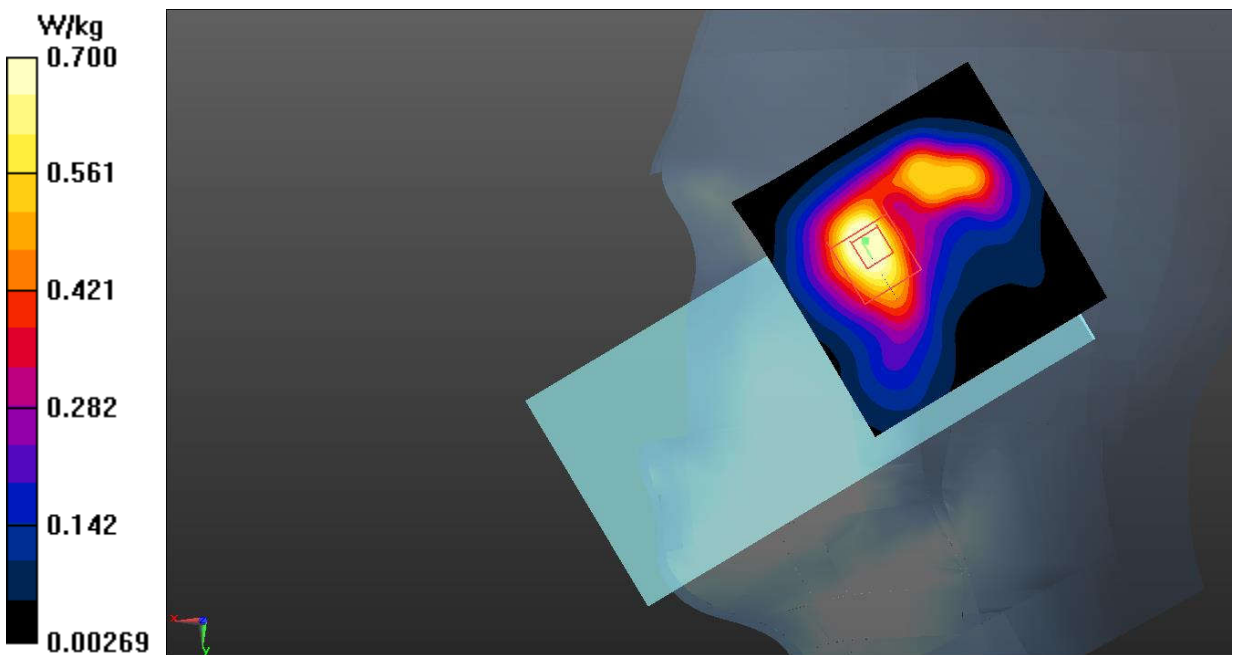


Fig.31 LTE Band 41

LTE Band 41 Hotspot

Date: 2021-8-7

Electronics: DAE4 Sn1527

Medium: Head 2550MHz

Medium parameters used (interpolated): $f = 2645$ MHz; $\sigma = 2.061$ S/m; $\epsilon_r = 37.84$; $\rho = 1000$ kg/m³

Communication System: UID 0, LTE_TDD (0) Frequency: 2645 MHz Duty Cycle: 1:1.58

Probe: EX3DV4 – SN7621 ConvF (7.84, 7.84, 7.84);

Left Side High 1RB0/Area Scan (61x111x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 0.828 W/kg**Left Side High 1RB0/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5$ mm, $dy=5$ mm,
 $dz=5$ mm

Reference Value = 9.325 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.27 W/kg

SAR(1 g) = 0.618 W/kg; SAR(10 g) = 0.295 W/kg

Maximum value of SAR (measured) = 0.832 W/kg

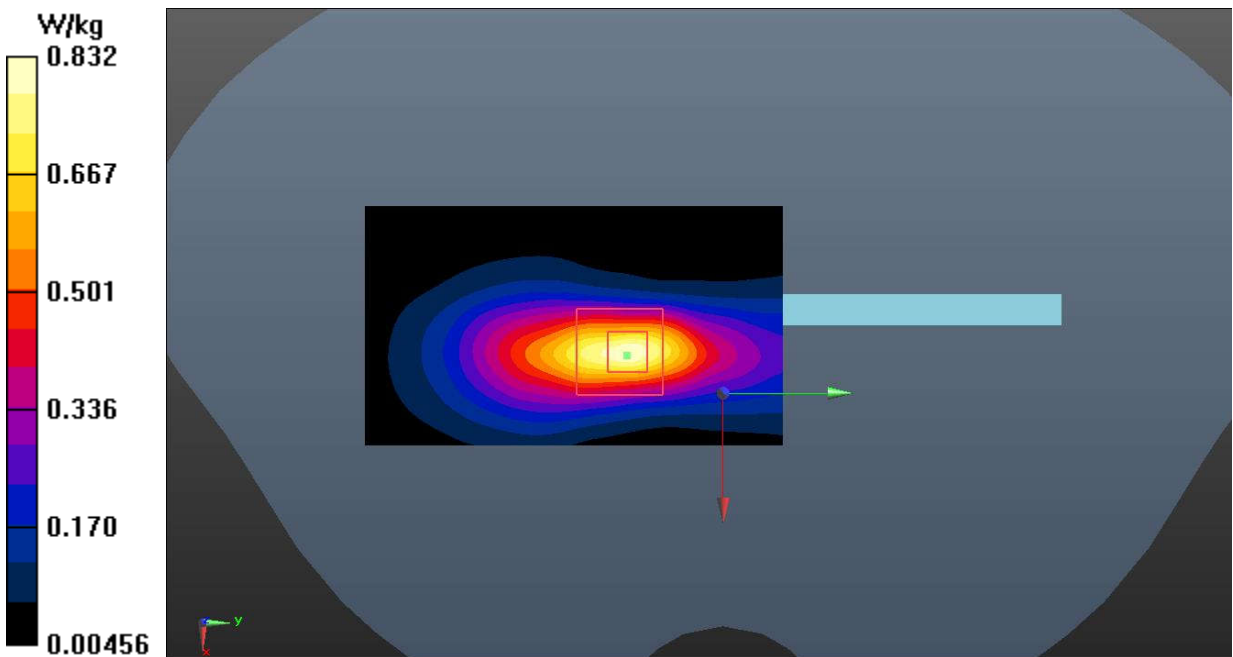


Fig.32 LTE Band 41

LTE Band 41 Body-worn

Date: 2021-8-7

Electronics: DAE4 Sn1527

Medium: Head 2550MHz

Medium parameters used: $f = 2600$ MHz; $\sigma = 2.008$ S/m; $\epsilon_r = 37.988$; $\rho = 1000$ kg/m³

Communication System: UID 0, LTE_TDD (0) Frequency: 2600 MHz Duty Cycle: 1:1.58

Probe: EX3DV4 – SN7621 ConvF (7.84, 7.84, 7.84);

Rear Side Middle 1RB99/Area Scan (61x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.375 W/kg**Rear Side Middle 1RB99/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.325 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.603 W/kg

SAR(1 g) = 0.319 W/kg; SAR(10 g) = 0.176 W/kg

Maximum value of SAR (measured) = 0.392 W/kg

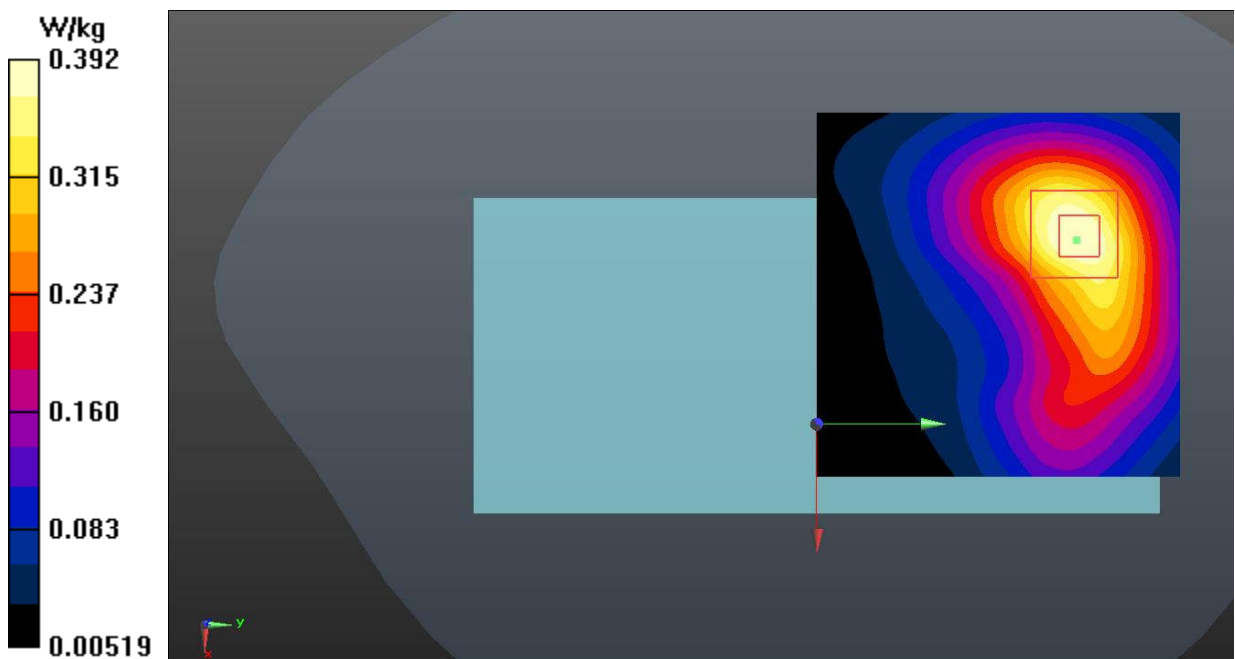


Fig.33 LTE Band 41

Bluetooth Head

Date: 2021-8-12

Electronics: DAE4 Sn1527

Medium: Head 2450MHz

Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.831$ S/m; $\epsilon_r = 38.392$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.01, 8.01, 8.01);

Left Cheek Middle/Area Scan (91x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 0.238 W/kg

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

Reference Value = 4.786 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.377 W/kg

SAR(1 g) = 0.112 W/kg; SAR(10 g) = 0.073 W/kg

Maximum value of SAR (measured) = 0.193 W/kg

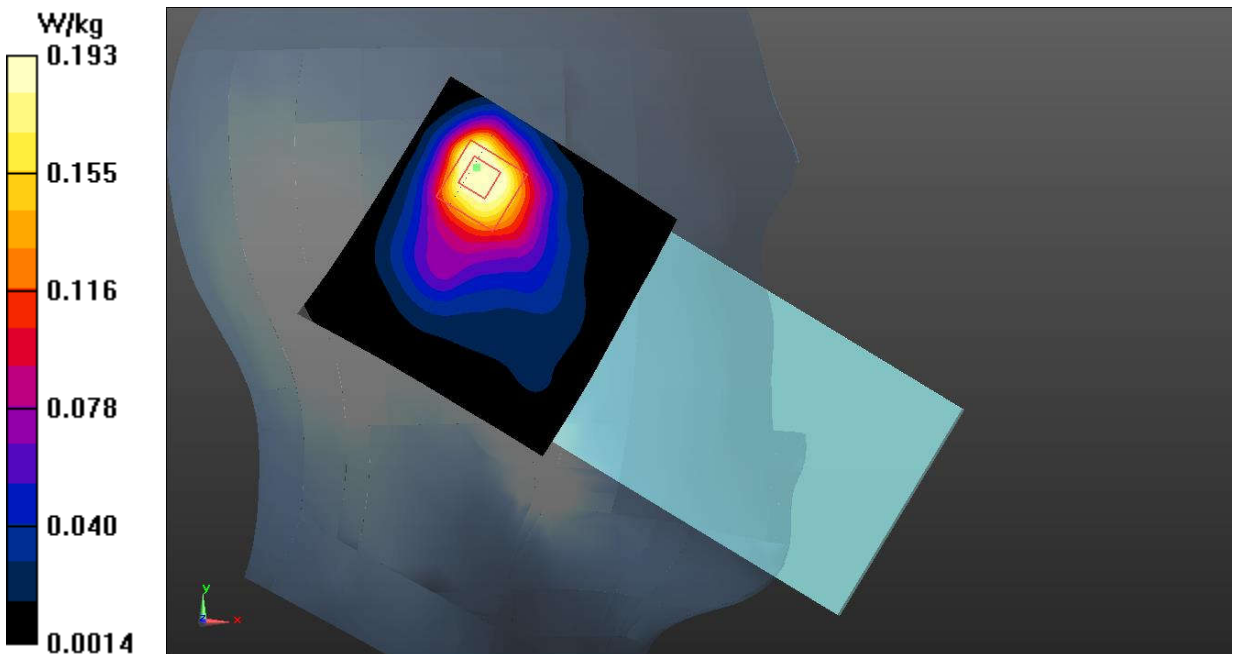


Fig.34 Bluetooth

Bluetooth Hotspot

Date: 2021-8-12

Electronics: DAE4 Sn1527

Medium: Head 2450MHz

Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.831$ S/m; $\epsilon_r = 38.392$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.01, 8.01, 8.01);

Rear Side Middle/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

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

Reference Value = 1.417 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.148 W/kg

SAR(1 g) = 0.050 W/kg; SAR(10 g) = 0.038 W/kg

Maximum value of SAR (measured) = 0.074 W/kg

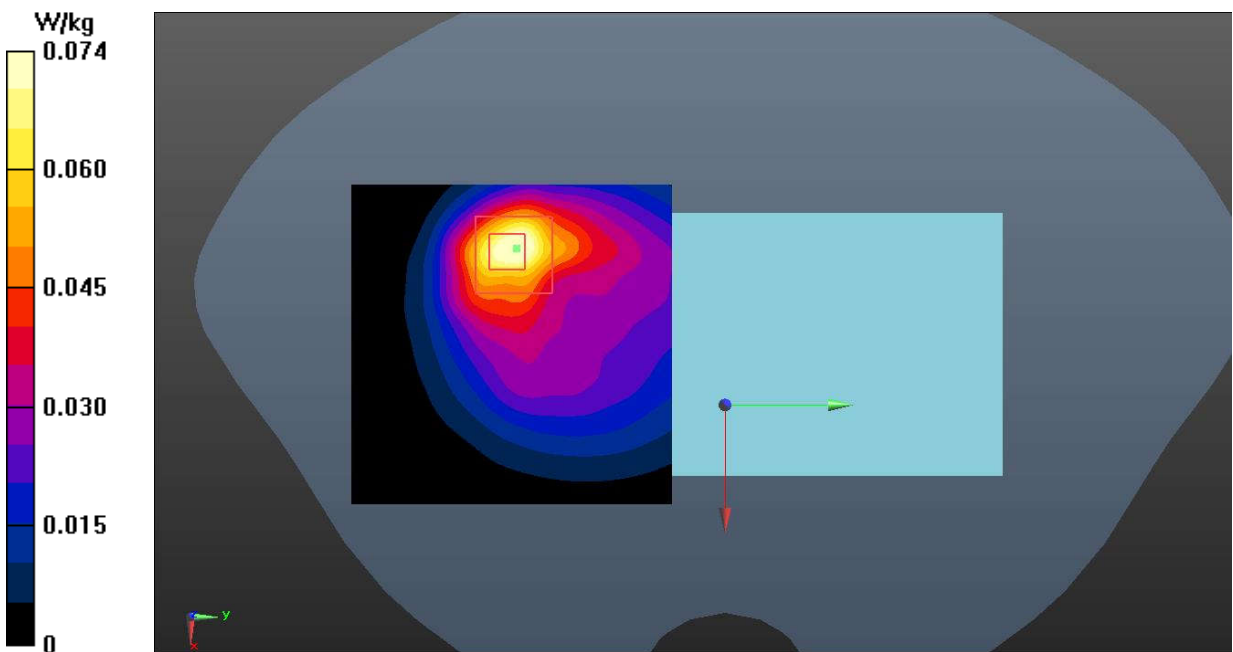


Fig.35 Bluetooth

Bluetooth Body-worn

Date: 2021-8-12

Electronics: DAE4 Sn1527

Medium: Head 2450MHz

Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.831$ S/m; $\epsilon_r = 38.392$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (8.01, 8.01, 8.01);

Rear Side Middle/Area Scan (111x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.058 W/kg

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

Reference Value = 1.003 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.115 W/kg

SAR(1 g) = 0.030 W/kg; SAR(10 g) = 0.022 W/kg

Maximum value of SAR (measured) = 0.062 W/kg

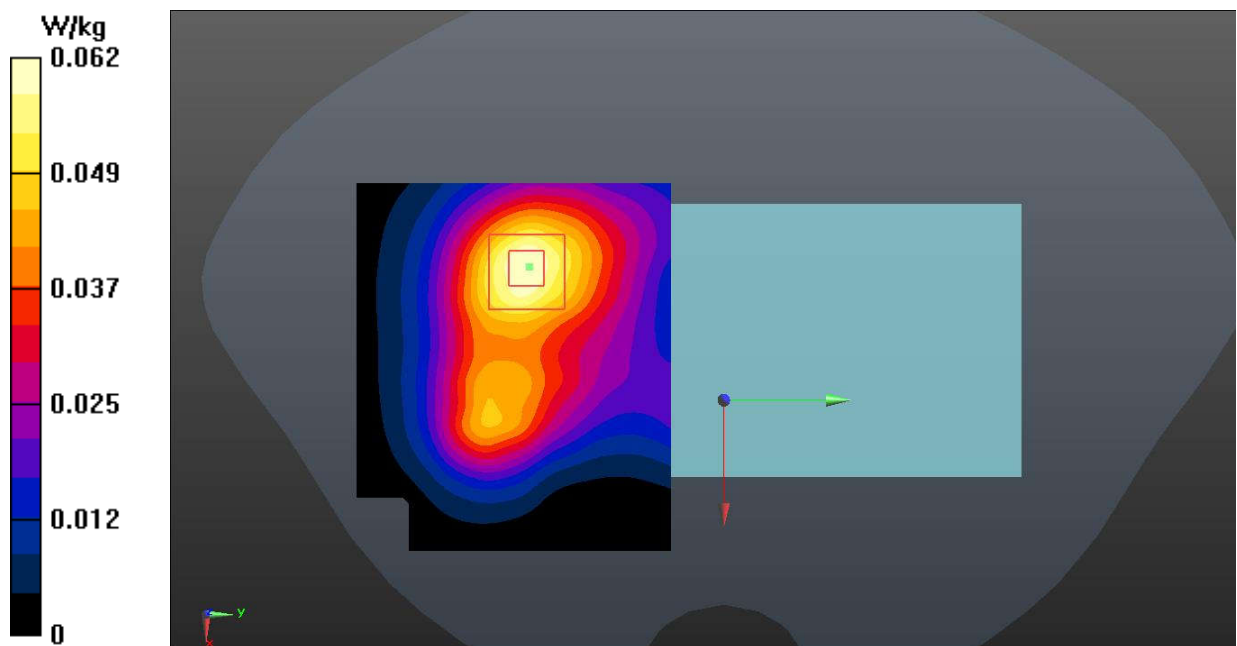


Fig.36 Bluetooth

WLAN 2.4G Head

Date: 2021-8-12

Electronics: DAE4 Sn1527

Medium: Head 2450MHz

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.827$ S/m; $\epsilon_r = 38.405$; $\rho = 1000$ kg/m³

Communication System: UID 0, WiFi (0) Frequency: 2437 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (8.01, 8.01, 8.01);

Left Cheek Middle/Area Scan (91x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

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

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

Reference Value = 12.39 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.47 W/kg

SAR(1 g) = 0.703 W/kg; SAR(10 g) = 0.348 W/kg

Maximum value of SAR (measured) = 0.767 W/kg

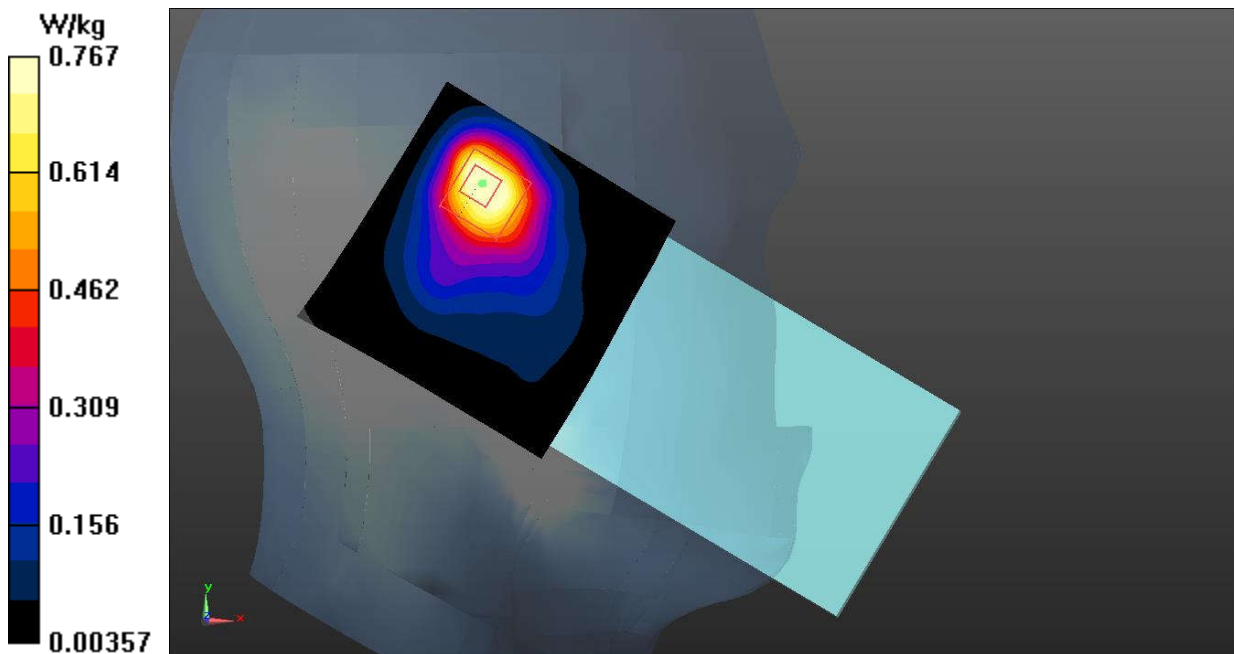


Fig.37 WLAN 2.4G

WLAN 2.4G Hotspot

Date: 2021-8-12

Electronics: DAE4 Sn1527

Medium: Head 2450MHz

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.827$ S/m; $\epsilon_r = 38.405$; $\rho = 1000$ kg/m³

Communication System: UID 0, WiFi (0) Frequency: 2437 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (8.01, 8.01, 8.01);

Rear Side Middle/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

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

Reference Value = 4.791 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.548 W/kg

SAR(1 g) = 0.317 W/kg; SAR(10 g) = 0.181 W/kg

Maximum value of SAR (measured) = 0.386 W/kg

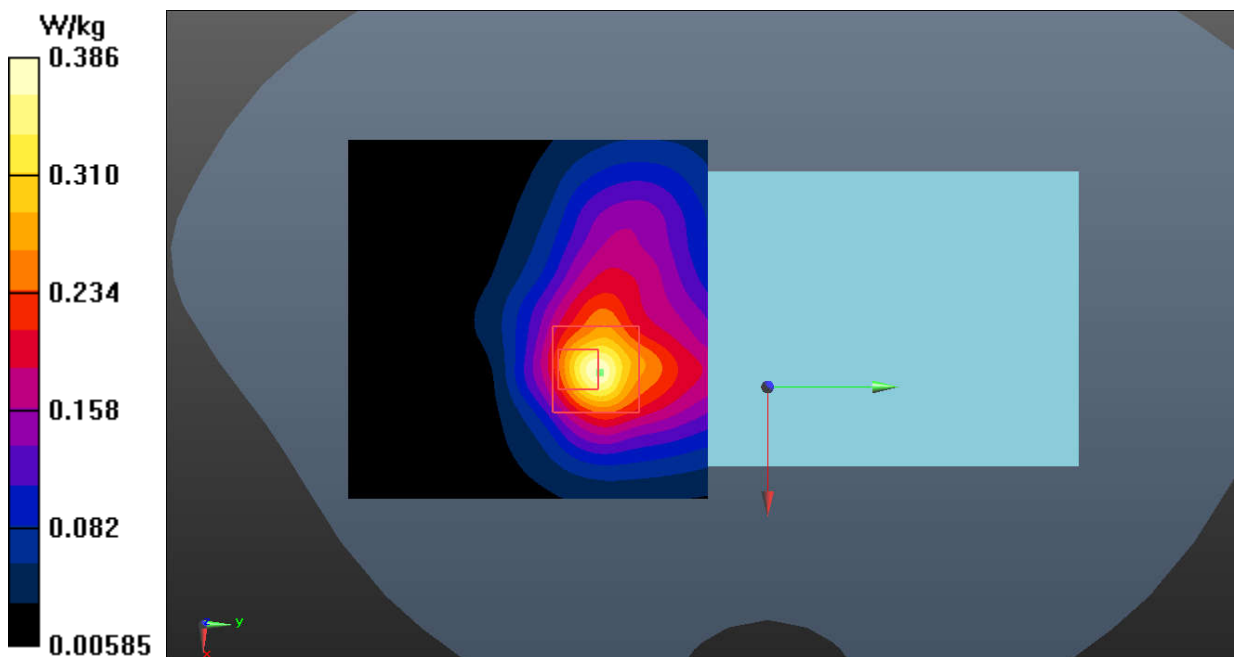


Fig.38 WLAN 2.4G

WLAN 2.4G Body-worn

Date: 2021-8-12

Electronics: DAE4 Sn1527

Medium: Head 2450MHz

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.827$ S/m; $\epsilon_r = 38.405$; $\rho = 1000$ kg/m³

Communication System: UID 0, WiFi (0) Frequency: 2437 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (8.01, 8.01, 8.01);

Rear Side Middle/Area Scan (111x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

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

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

Reference Value = 2.595 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.345 W/kg

SAR(1 g) = 0.186 W/kg; SAR(10 g) = 0.105 W/kg

Maximum value of SAR (measured) = 0.233 W/kg

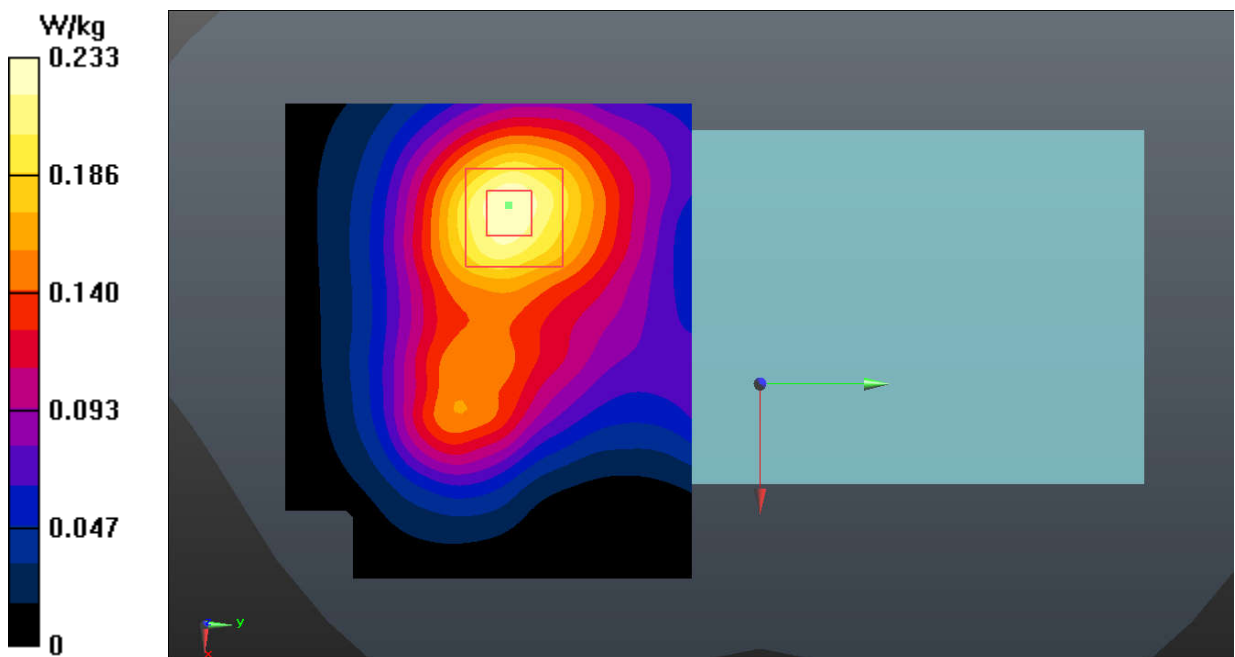


Fig.39 WLAN 2.4G

WLAN 5G Head

Date: 2021-8-13

Electronics: DAE4 Sn1527

Medium: Head 5750MHz

Medium parameters used (interpolated): $f = 5775$ MHz; $\sigma = 5.345$ S/m; $\epsilon_r = 34.586$; $\rho = 1000$ kg/m³

Communication System: UID 0, WiFi (0) Frequency: 5775 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (5.38, 5.38, 5.38);

Left Cheek Ch.155/Area Scan (91x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 1.05 W/kg**Left Cheek Ch.155/Zoom Scan (8x8x21)/Cube 0:** Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 3.663 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 2.82 W/kg

SAR(1 g) = 0.560 W/kg; SAR(10 g) = 0.162 W/kg

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

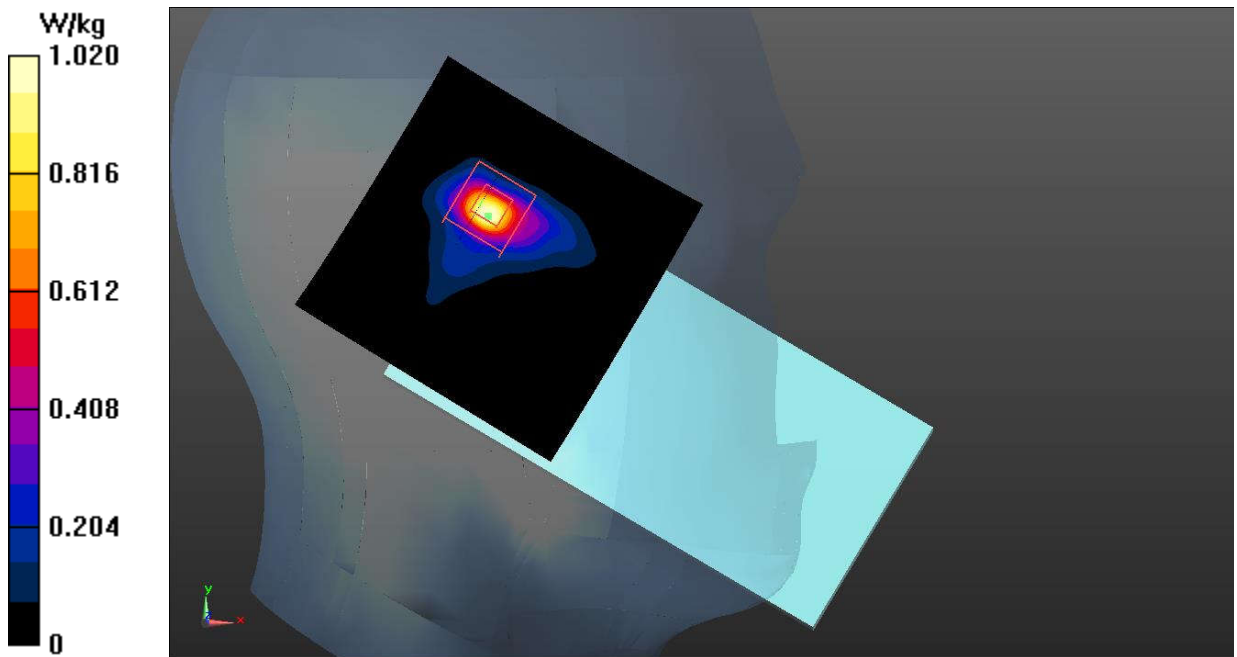


Fig.40 WLAN 5G

WLAN 5G Body-worn

Date: 2021-8-13

Electronics: DAE4 Sn1527

Medium: Head 5750MHz

Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 5.304$ S/m; $\epsilon_r = 34.667$; $\rho = 1000$ kg/m³

Communication System: UID 0, WiFi (0) Frequency: 5745 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (5.38, 5.38, 5.38);

Rear Side Ch.149/Area Scan (71x71x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.839 W/kg

Rear Side Ch.149/Zoom Scan (8x8x21)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 0.7060 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.23 W/kg

SAR(1 g) = 0.254 W/kg; SAR(10 g) = 0.103 W/kg

Maximum value of SAR (measured) = 0.479 W/kg

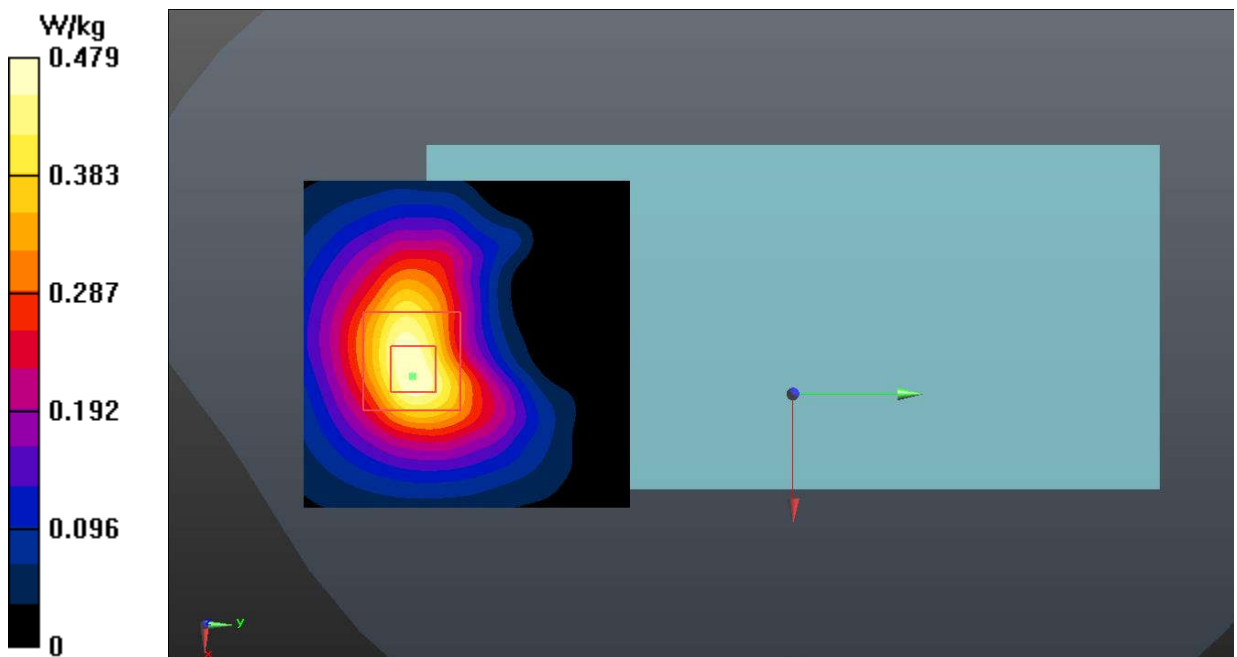


Fig.41 WLAN 5G

WLAN 5G Body (0mm)

Date: 2021-9-24

Electronics: DAE4 Sn1527

Medium: Head 5750MHz

Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 5.339$ S/m; $\epsilon_r = 34.742$; $\rho = 1000$ kg/m³

Communication System: UID 0, WiFi (0) Frequency: 5745 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (5.38, 5.38, 5.38);

Rear Side Ch.149/Area Scan (81x81x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 7.02 W/kg

Rear Side Ch.149/Zoom Scan (8x8x21)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 0.6320 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 27.3 W/kg

SAR(1 g) = 4.3 W/kg; SAR(10 g) = 1.03 W/kg

Maximum value of SAR (measured) = 8.99 W/kg

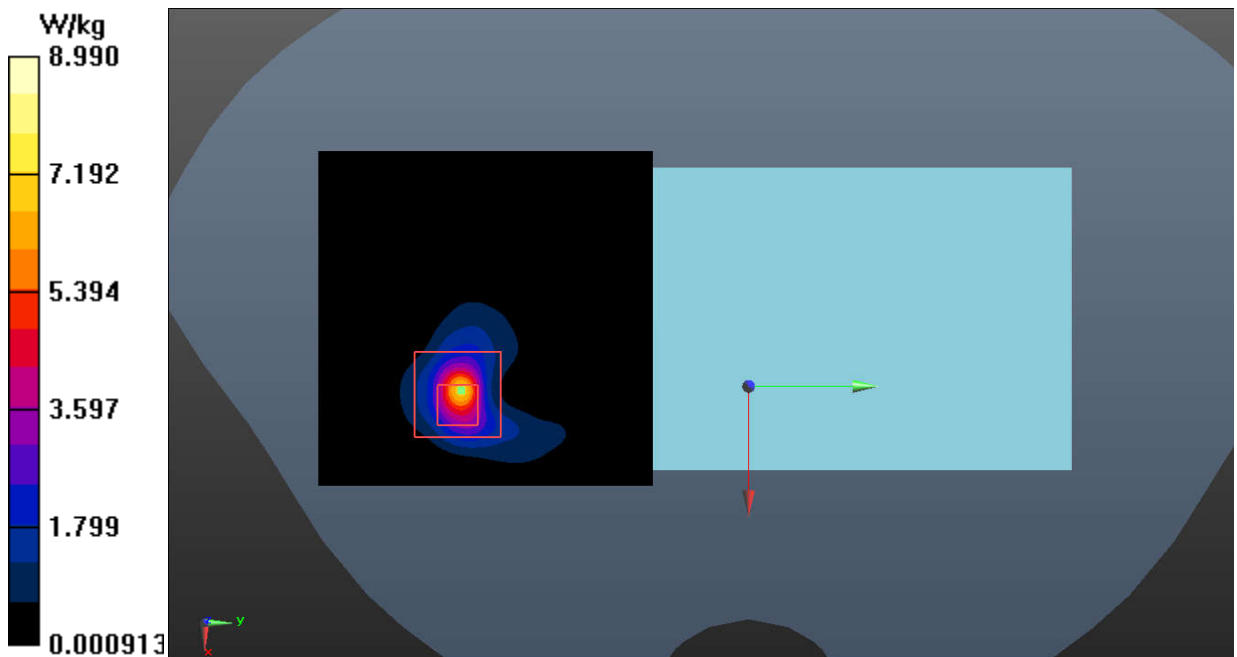


Fig.42 WLAN 5G

ANNEX B: SystemVerification Results

835MHz

Date: 2021-8-15

Electronics: DAE4 Sn1527

Medium: Head 835MHz

Medium parameters used: $f = 835$ MHz; $\sigma = 0.918$ S/m; $\epsilon_r = 40.764$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (10.35, 10.35, 10.35);

System Validation/Area Scan (81x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 65.138 V/m; Power Drift = 0.03 dB

SAR(1 g) = 2.45 W/kg; SAR(10 g) = 1.58 W/kg

Maximum value of SAR (interpolated) = 3.33 W/kg

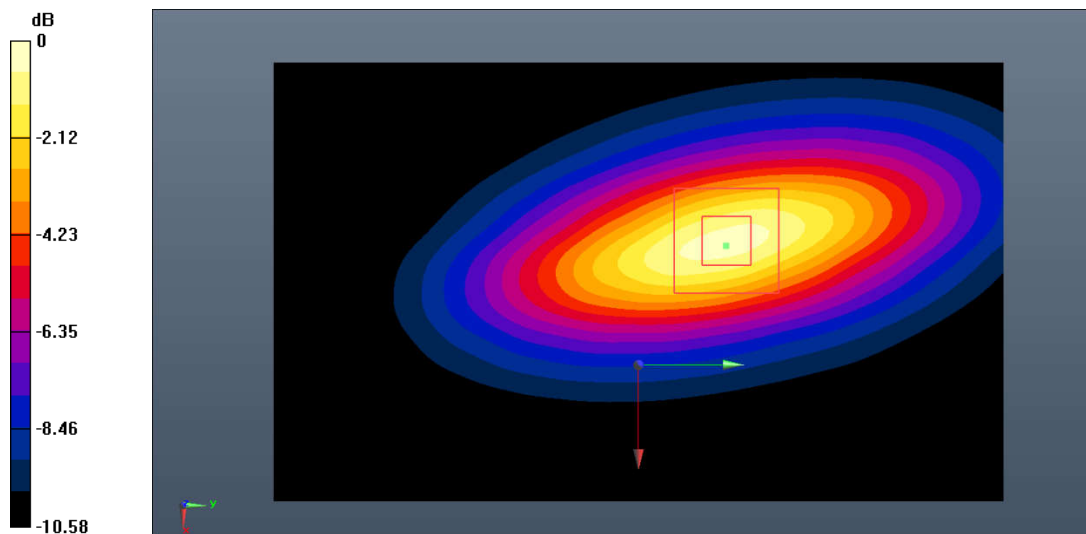
System Validation/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 65.138 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 3.68 W/kg

SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.61 W/kg

Maximum value of SAR (measured) = 3.37 W/kg



0 dB = 3.37 W/kg = 5.28 dB W/kg

Fig.B.1. Validation 835MHz 250mW

1750MHz

Date: 2021-8-10

Electronics: DAE4 Sn1527

Medium: Head 1750MHz

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.363$ S/m; $\epsilon_r = 40.541$; $\rho = 1000$ kg/m³

Communication System: CW_TMC Frequency: 1750 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (9.14, 9.14, 9.14);

System Validation/Area Scan (81x121x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 78.549 V/m; Power Drift = -0.13 dB

SAR(1 g) = 9.02 W/kg; SAR(10 g) = 4.84 W/kg

Maximum value of SAR (interpolated) = 10.2 W/kg

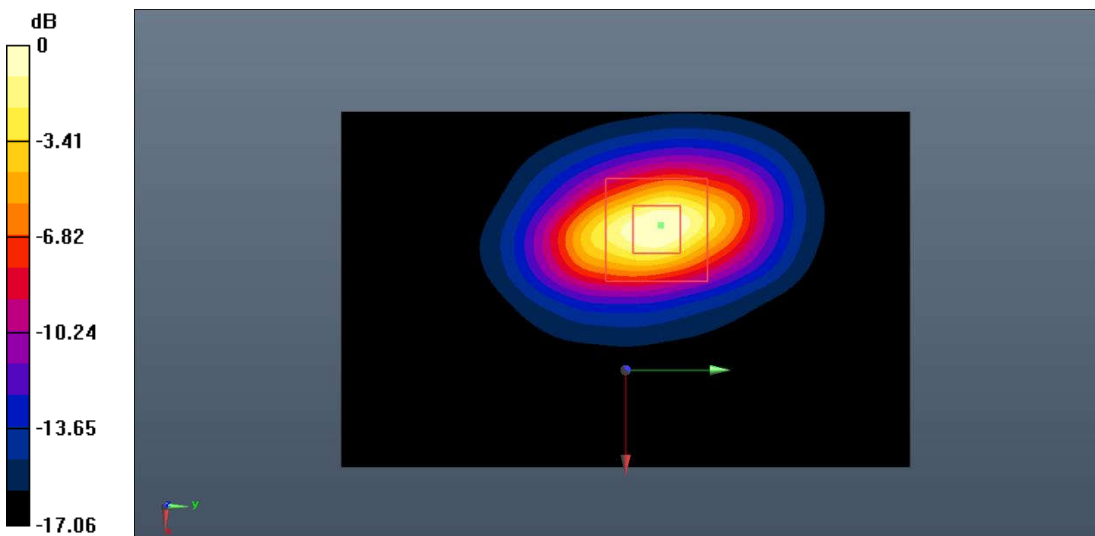
System Validation/Zoom Scan (7x7x7)/Cube0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 78.549 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 18.5 W/kg

SAR(1 g) = 8.81 W/kg; SAR(10 g) = 4.75 W/kg

Maximum value of SAR (measured) = 9.98 W/kg



0 dB = 9.98 W/kg = 9.99 dB W/kg

Fig.B.2. Validation 1750MHz 250mW

1900MHz

Date: 2021-8-6

Electronics: DAE4 Sn1527

Medium: Head 1900MHz

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.417 \text{ S/m}$; $\epsilon_r = 39.485$; $\rho = 1000 \text{ kg/m}^3$

Communication System: CW_TMC Frequency: 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (8.77, 8.77, 8.77);

System Validation/Area Scan (91x91x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 81.026 V/m; Power Drift = 0.08 dB

SAR(1 g) = 10.1 W/kg; SAR(10 g) = 5.25 W/kg

Maximum value of SAR (interpolated) = 11.5 W/kg

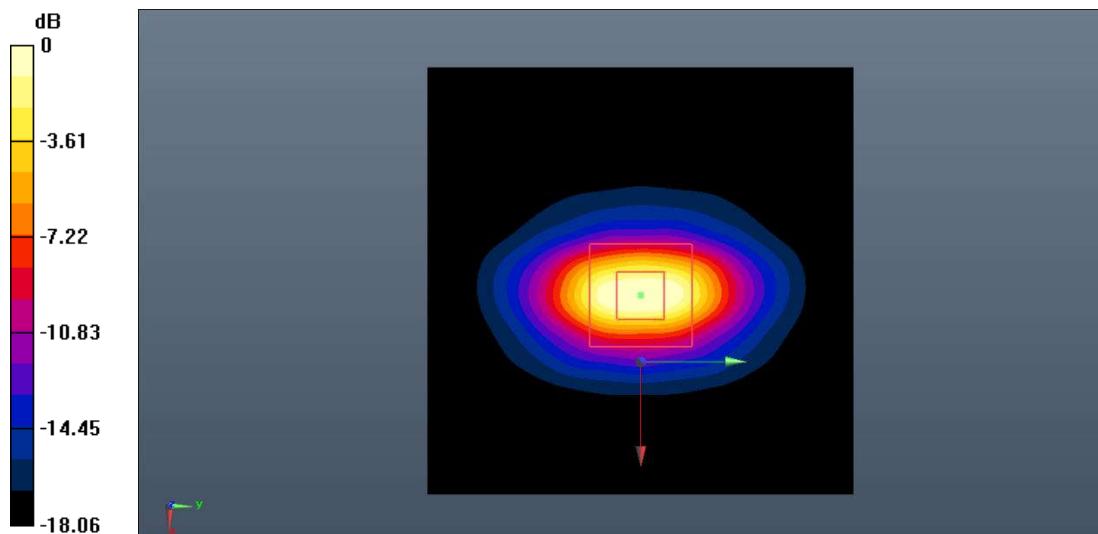
System Validation/Zoom Scan (7x7x7)/Cube0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 81.026 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 22.3 W/kg

SAR(1 g) = 10.4 W/kg; SAR(10 g) = 5.32 W/kg

Maximum value of SAR (measured) = 11.7 W/kg



0 dB = 11.7 W/kg = 10.68 dB W/kg

Fig.B.3. Validation 1900MHz 250mW

2450MHz

Date: 2021-8-12

Electronics: DAE4 Sn1527

Medium: Head 2450MHz

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.842 \text{ S/m}$; $\epsilon_r = 38.362$; $\rho = 1000 \text{ kg/m}^3$

Communication System: CW_TMC Frequency: 2450 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (8.01, 8.01, 8.01);

System Validation /Area Scan (81x121x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Reference Value = 88.713 V/m; Power Drift = 0.03 dB

SAR(1 g) = 13.2 W/kg; SAR(10 g) = 6.08 W/kg

Maximum value of SAR (interpolated) = 15.3 W/kg

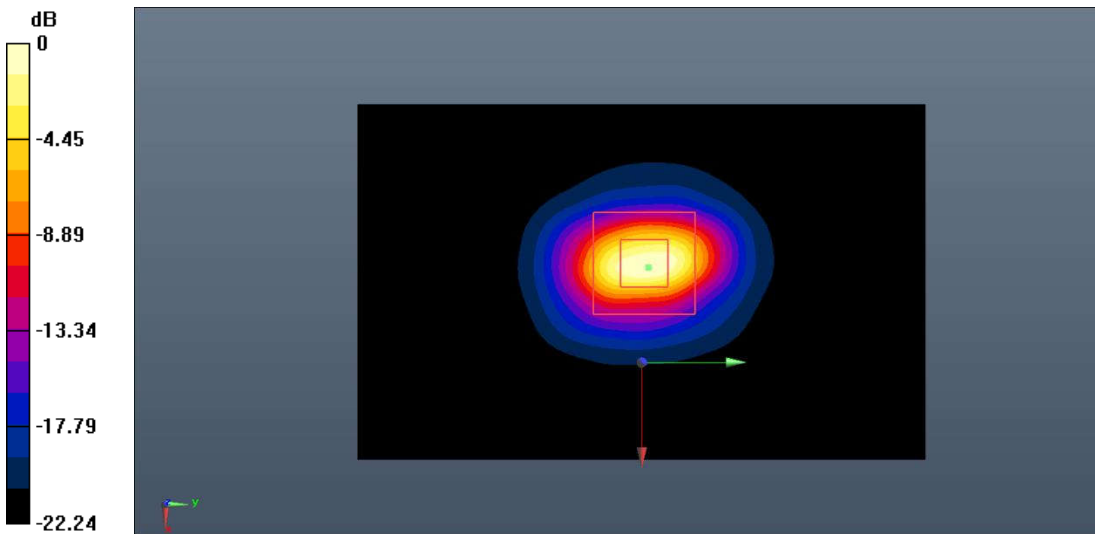
System Validation/Zoom Scan (7x7x7)/Cube0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 88.713 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 30.2 W/kg

SAR(1 g) = 13.5 W/kg; SAR(10 g) = 6.17 W/kg

Maximum value of SAR (measured) = 15.6 W/kg



0 dB = 15.6 W/kg = 11.93 dB W/kg

Fig.B.4. Validation 2450MHz 250mW

2550MHz

Date: 2021-8-7

Electronics: DAE4 Sn1527

Medium: Head 2550MHz

Medium parameters used: $f = 2550$ MHz; $\sigma = 1.949$ S/m; $\epsilon_r = 38.153$; $\rho = 1000$ kg/m³

Communication System: CW_TMC Frequency: 2550 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7621 ConvF (8.01, 8.01, 8.01);

System Validation/Area Scan (91x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 91.234 V/m; Power Drift = 0.10 dB

SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.35 W/kg

Maximum value of SAR (interpolated) = 16.4 W/kg

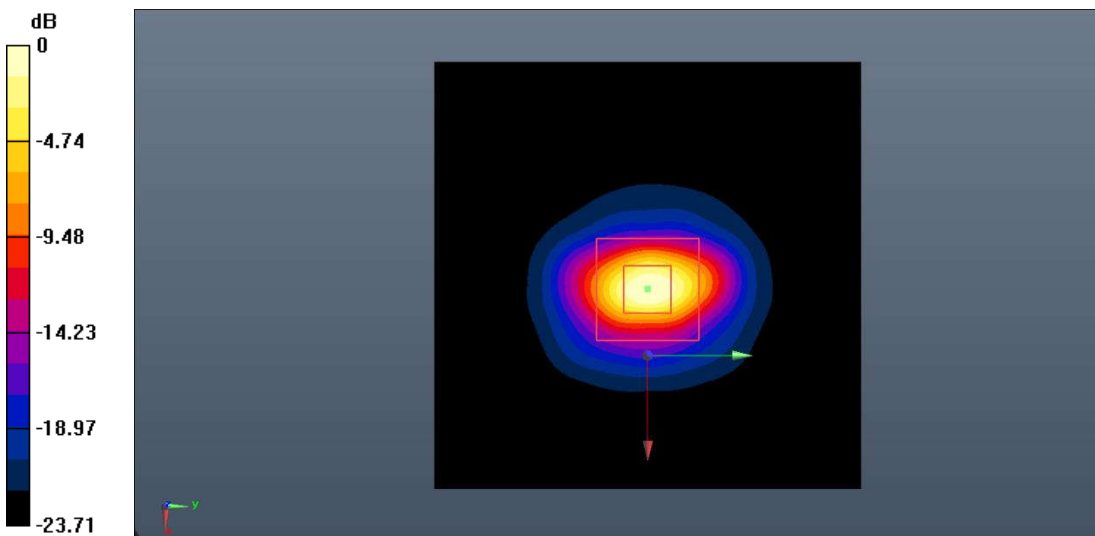
System Validation/Zoom Scan (7x7x7)/Cube0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 91.234 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 32.8 W/kg

SAR(1 g) = 14.6 W/kg; SAR(10 g) = 6.48 W/kg

Maximum value of SAR (measured) = 16.6 W/kg



0 dB = 16.6 W/kg = 12.20 dB W/kg

Fig.B.5. Validation 2550MHz 250mW

5250MHz

Date: 2021-8-13

Electronics: DAE4 Sn1527

Medium: Head 5250MHz

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.648$ S/m; $\epsilon_r = 36.716$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (5.97, 5.97, 5.97);

System Validation/Area Scan (61x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 63.292 V/m; Power Drift = -0.06 dB

SAR(1 g) = 7.68 W/kg; SAR(10 g) = 2.22 W/kg

Maximum value of SAR (interpolated) = 9.83 W/kg

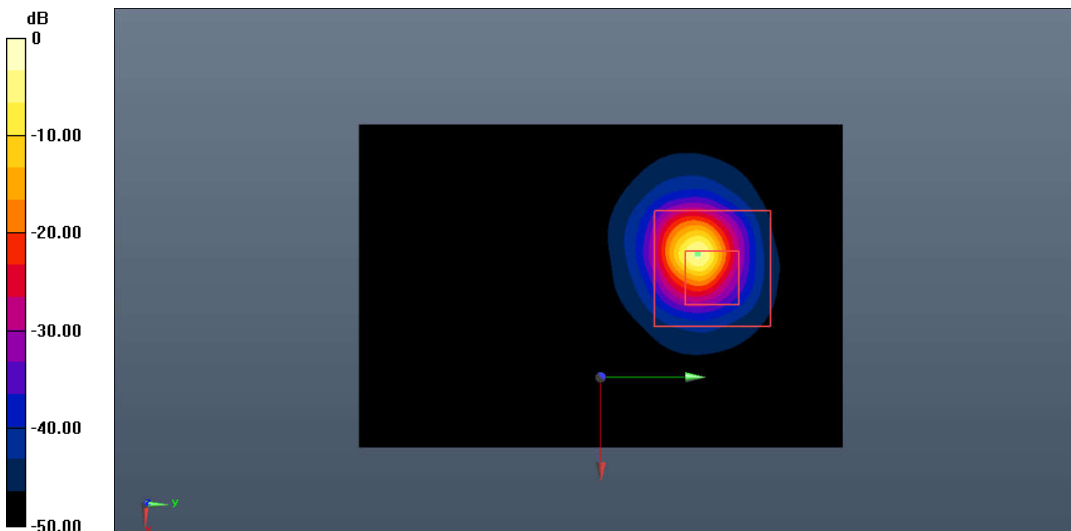
System Validation/Zoom Scan (8x8x21)/Cube0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 63.292 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 24.9 W/kg

SAR(1 g) = 7.55 W/kg; SAR(10 g) = 2.19 W/kg

Maximum value of SAR (measured) = 9.76 W/kg



0 dB = 9.76 W/kg = 9.89 dB W/kg

Fig.B.6. Validation 5250MHz 100mW

5600MHz

Date: 2021-8-13

Electronics: DAE4 Sn1527

Medium: Head 5600MHz

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.015$ S/m; $\epsilon_r = 35.926$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (5.43, 5.43, 5.43);

System Validation/Area Scan (61x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Reference Value = 64.015 V/m; Power Drift = -0.12 dB

SAR(1 g) = 7.81 W/kg; SAR(10 g) = 2.25 W/kg

Maximum value of SAR (interpolated) = 9.91 W/kg

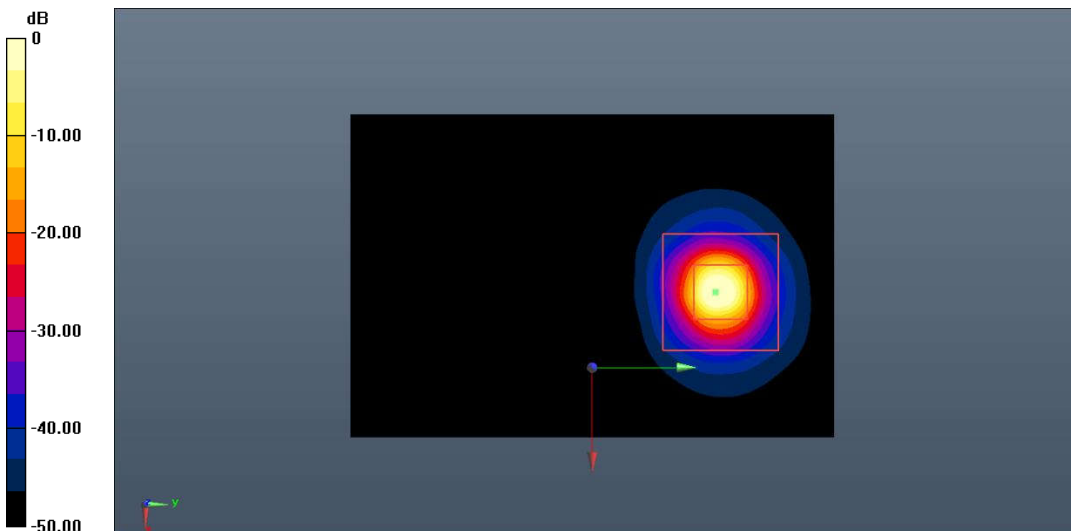
System Validation/Zoom Scan (8x8x21)/Cube0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 64.015 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 25.4 W/kg

SAR(1 g) = 7.68 W/kg; SAR(10 g) = 2.22 W/kg

Maximum value of SAR (measured) = 9.82 W/kg



0 dB = 9.82 W/kg = 9.92 dB W/kg

Fig.B.7. Validation 5600MHz 100mW

5750MHz

Date: 2021-8-13

Electronics: DAE4 Sn1527

Medium: Head 5750 MHz

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.311$ S/m; $\epsilon_r = 34.653$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (5.38, 5.38, 5.38);

System Validation/Area Scan (61x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 66.284 V/m; Power Drift = 0.09 dB

SAR(1 g) = 8.02 W/kg; SAR(10 g) = 2.24 W/kg

Maximum value of SAR (interpolated) = 10.1 W/kg

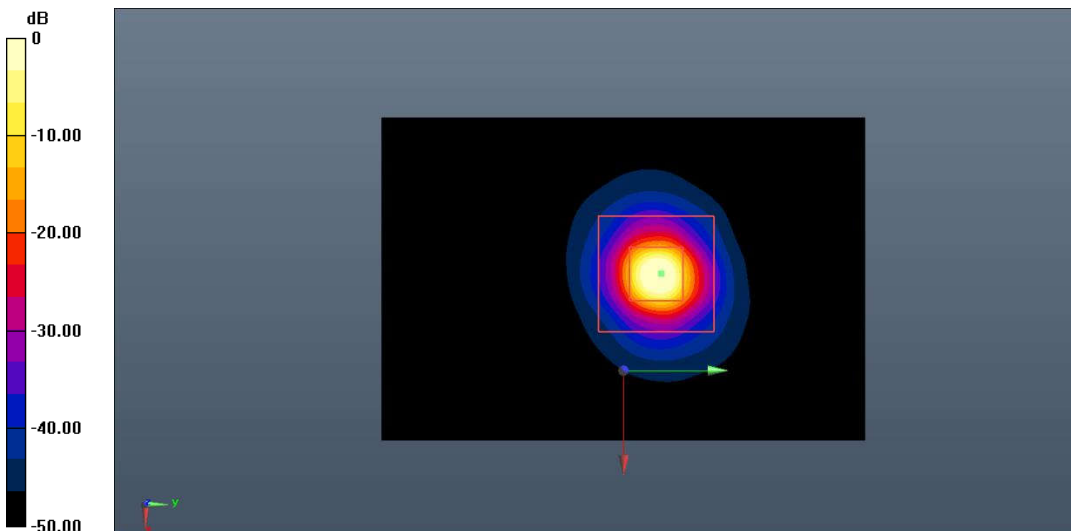
System Validation/Zoom Scan (8x8x21)/Cube0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 66.284 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 26.5 W/kg

SAR(1 g) = 8.15 W/kg; SAR(10 g) = 2.27 W/kg

Maximum value of SAR (measured) = 10.2 W/kg



0 dB = 10.2 W/kg = 10.09 dB W/kg

Fig.B.8. Validation 5750MHz 100mW

5250MHz

Date: 2021-9-18

Electronics: DAE4 Sn1527

Medium: Head 5250MHz

Medium parameters used: $f = 5250$ MHz; $\sigma = 4.665$ S/m; $\epsilon_r = 36.973$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (5.97, 5.97, 5.97);

System Validation/Area Scan (61x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Reference Value = 63.715 V/m; Power Drift = -0.12 dB

SAR(1 g) = 7.75 W/kg; SAR(10 g) = 2.23 W/kg

Maximum value of SAR (interpolated) = 9.95 W/kg

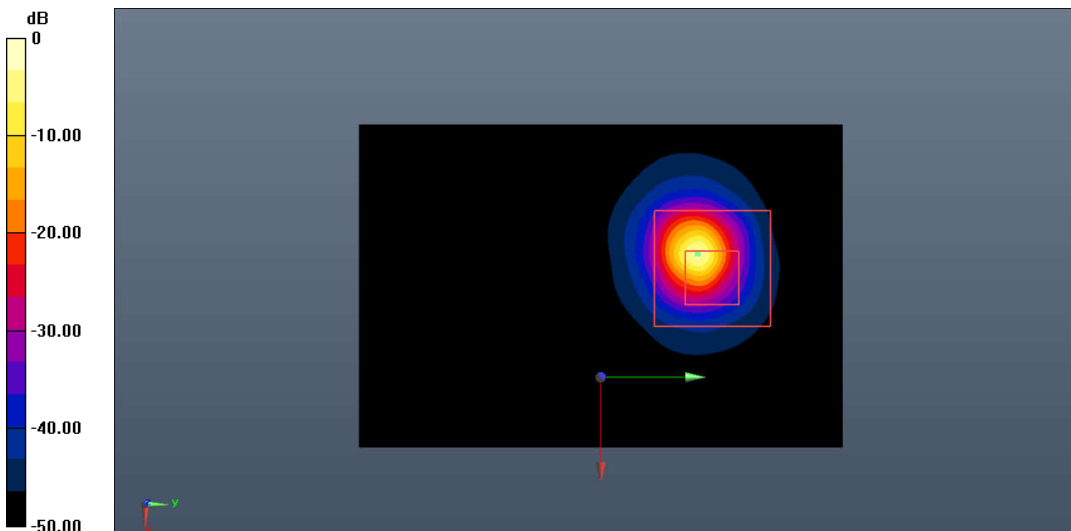
System Validation/Zoom Scan (8x8x21)/Cube0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 63.715 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 25.2 W/kg

SAR(1 g) = 7.64 W/kg; SAR(10 g) = 2.20 W/kg

Maximum value of SAR (measured) = 9.88 W/kg



0 dB = 9.88 W/kg = 9.95 dB W/kg

Fig.B.9. Validation 5250MHz 100mW

5600MHz

Date: 2021-9-18

Electronics: DAE4 Sn1527

Medium: Head 5600MHz

Medium parameters used: $f = 5600$ MHz; $\sigma = 4.998$ S/m; $\epsilon_r = 36.164$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (5.43, 5.43, 5.43);

System Validation/Area Scan (61x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Reference Value = 64.429 V/m; Power Drift = -0.05 dB

SAR(1 g) = 7.92 W/kg; SAR(10 g) = 2.26 W/kg

Maximum value of SAR (interpolated) = 10.0 W/kg

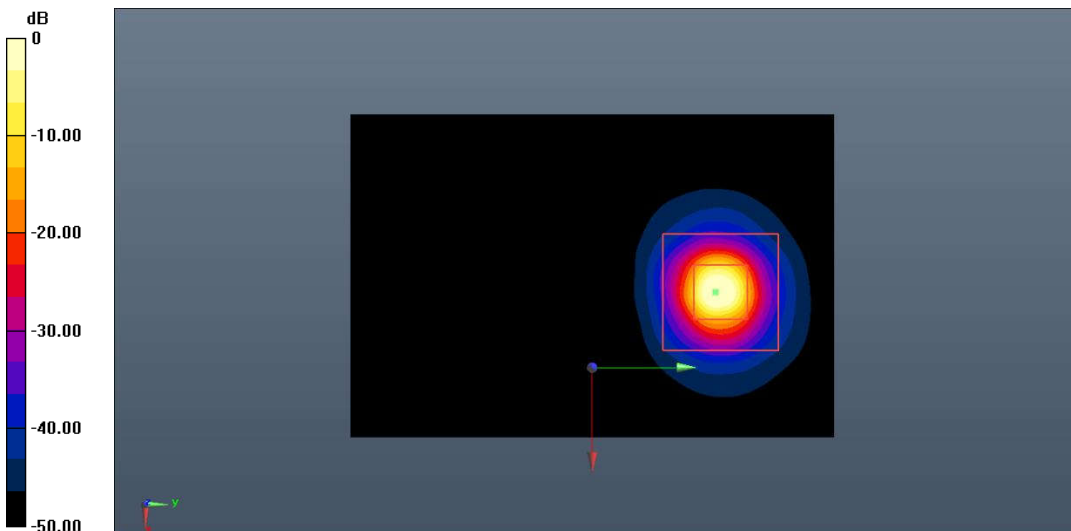
System Validation/Zoom Scan (8x8x21)/Cube0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 64.429 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 25.6 W/kg

SAR(1 g) = 7.71 W/kg; SAR(10 g) = 2.23 W/kg

Maximum value of SAR (measured) = 9.94 W/kg



0 dB = 9.94 W/kg = 9.97 dB W/kg

Fig.B.10. Validation 5600MHz 100mW

5750MHz

Date: 2021-9-24

Electronics: DAE4 Sn1527

Medium: Head 5750 MHz

Medium parameters used: $f = 5750$ MHz; $\sigma = 5.345$ S/m; $\epsilon_r = 34.727$; $\rho = 1000$ kg/m³

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

Probe: EX3DV4 – SN7621 ConvF (5.38, 5.38, 5.38);

System Validation/Area Scan (61x91x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Reference Value = 67.025 V/m; Power Drift = 0.03 dB

SAR(1 g) = 8.02 W/kg; SAR(10 g) = 2.24 W/kg

Maximum value of SAR (interpolated) = 10.2 W/kg

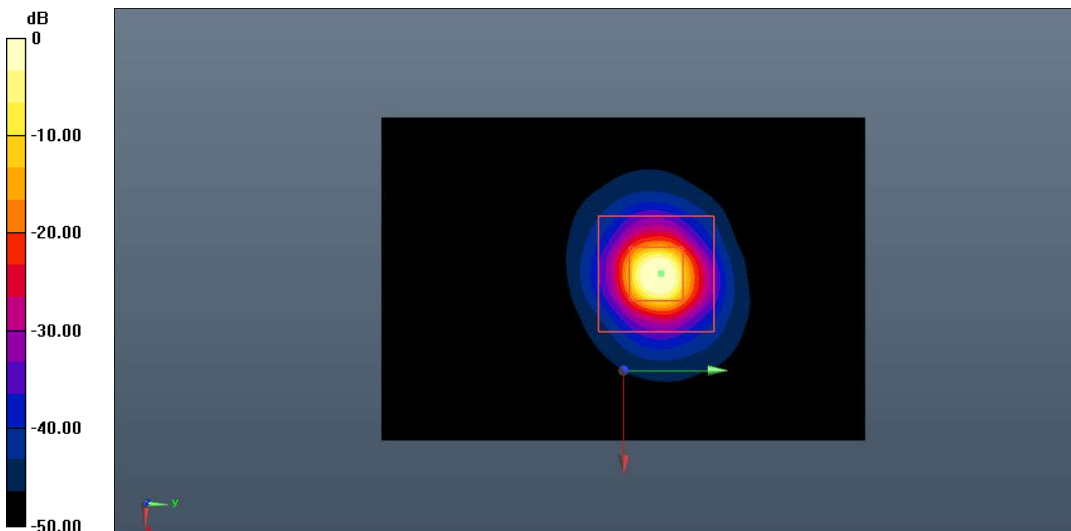
System Validation/Zoom Scan (8x8x21)/Cube0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 67.025 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 27.3 W/kg

SAR(1 g) = 8.22 W/kg; SAR(10 g) = 2.29 W/kg

Maximum value of SAR (measured) = 10.4 W/kg



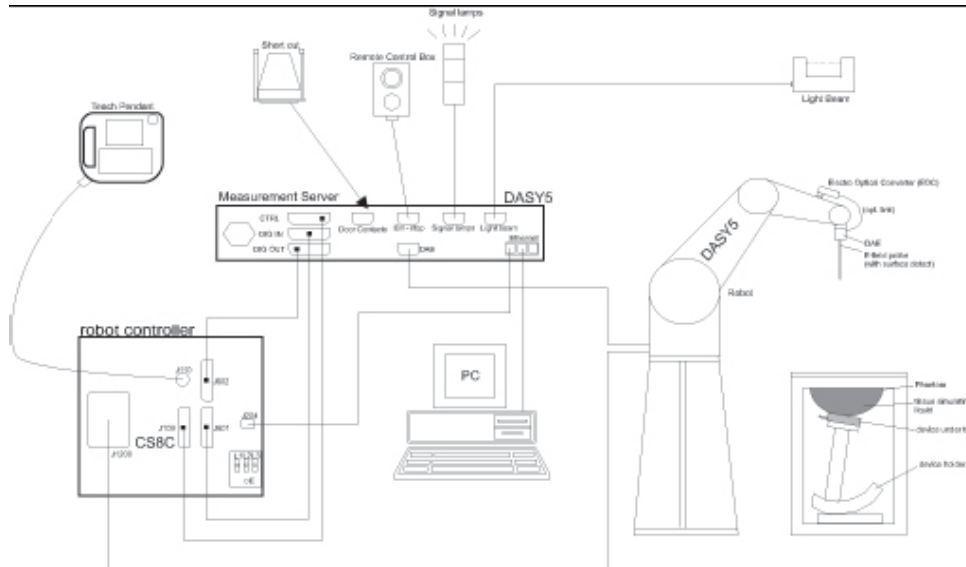
0 dB = 10.4 W/kg = 10.17 dB W/kg

Fig.B.11. Validation 5750MHz 100mW

ANNEX C: SAR Measurement Setup

C.1. Measurement Set-up

DASY5 system for performing compliance tests is illustrated above graphically. This system consists of the following items:



Picture C.1 SAR Lab Test Measurement Set-up

- A standard high precision 6-axis robot (Stäubli TX=RX family) 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 and the DASY5 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.

C.2. DASY5 E-field Probe System

The SAR measurements were conducted with the dosimetric probe designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY5 software reads the reflection during a software approach and looks for the maximum using 2nd order curve fitting. The approach is stopped at reaching the maximum.

Probe Specifications:

Model:	ES3DV3, EX3DV4
Frequency	10MHz — 6.0GHz(EX3DV4)
Range:	10MHz — 4GHz(ES3DV3)
Calibration:	In head and body simulating tissue at Frequencies from 835 up to 5800MHz
Linearity:	± 0.2 dB(30 MHz to 6 GHz) for EX3DV4 ± 0.2 dB(30 MHz to 4 GHz) for ES3DV3
Dynamic Range:	10 mW/kg — 100W/kg
Probe Length:	330 mm
Probe Tip	
Length:	20 mm
Body Diameter:	12 mm
Tip Diameter:	2.5 mm (3.9 mm for ES3DV3)
Tip-Center:	1 mm (2.0mm for ES3DV3)
Application:	SAR Dosimetry Testing Compliance tests of mobile phones Dosimetry in strong gradient fields



Picture C.2 Near-field Probe



Picture C.3 E-field Probe

C.3. E-field Probe Calibration

Each E-Probe/Probe Amplifier combination has unique calibration parameters. A TEM cell calibration procedure is conducted to determine the proper amplifier settings to enter in the probe parameters. The amplifier settings are determined for a given frequency by subjecting the probe to a known E-field density (1 mW/cm²) using an RF Signal generator, TEM cell, and RF Power Meter.

The free space E-field from amplified probe outputs is determined in a test chamber. This calibration can be performed in a TEM cell if the frequency is below 1 GHz and in a waveguide or other methodologies 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 until the three channels show the maximum reading. The power density readings equates to 1 mW/ cm².

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

$$SAR = C \frac{\Delta T}{\Delta t}$$

Where:

Δt = Exposure time (30 seconds),

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

ΔT = Temperature increase due to RF exposure.

$$SAR = \frac{|E|^2 \cdot \sigma}{\rho}$$

Where:

σ = Simulated tissue conductivity,

ρ = Tissue density (kg/m³).

C.4. Other Test Equipment

C.4.1. Data Acquisition Electronics (DAE)

The data acquisition electronics consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.



PictureC.4: DAE

C.4.2. Robot

The SPEAG DASY system uses the high precision robots (DASY5: RX160L) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from Stäubli is used. The Stäubli robot series have many features that are important for our application:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchron motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)



Picture C.5 DASY 5

C.4.3. Measurement Server

The Measurement server is based on a PC/104 CPU board with CPU (DASY5: 400 MHz, Intel Celeron), chipdisk (DASY5:128MB), RAM (DASY5:128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DASY I/O board, which is directly connected to the PC/104 bus of the CPU board.

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized pinout, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.



Picture C.6 Server for DASY 5

C.4.4. Device Holder for Phantom

The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface. For a source at 5mm distance, a positioning uncertainty of $\pm 0.5\text{mm}$ would produce a SAR uncertainty of $\pm 20\%$. Accurate device positioning is therefore crucial for accurate and repeatable measurements. The positions in which the devices must be measured are defined by the standards.

The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.

The DASY device holder is constructed of low-loss POM material having the following dielectric

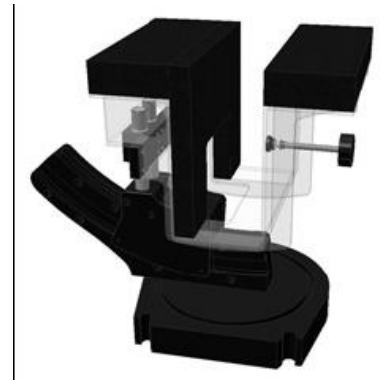
parameters: relative permittivity $\epsilon = 3$ and loss tangent $\delta = 0.02$. The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.

<Laptop Extension Kit>

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin-SAM and ELI phantoms.



Picture C.7-1: Device Holder



Picture C.7-2: Laptop Extension Kit

C.4.5. Phantom

The SAM Twin Phantom V4.0 is constructed of a fiberglass shell integrated in a table. The shape of the shell is based on data from an anatomical study designed to represent the 90th percentile of the population. The phantom enables the dissymmetric evaluation of SAR for both left and right handed handset usage, as well as body-worn usage using the flat phantom region. Reference markings on the Phantom allow the complete setup of all predefined phantom positions and measurement grids by manually teaching three points in the robot. The shell phantom has a 2mm shell thickness (except the ear region where shell thickness increases to 6 mm).

Shell Thickness: 2 ± 0.2 mm

Filling Volume: Approx. 25 liters

Dimensions: 810 x 1000 x 500 mm (H x L x W)

Available: Special

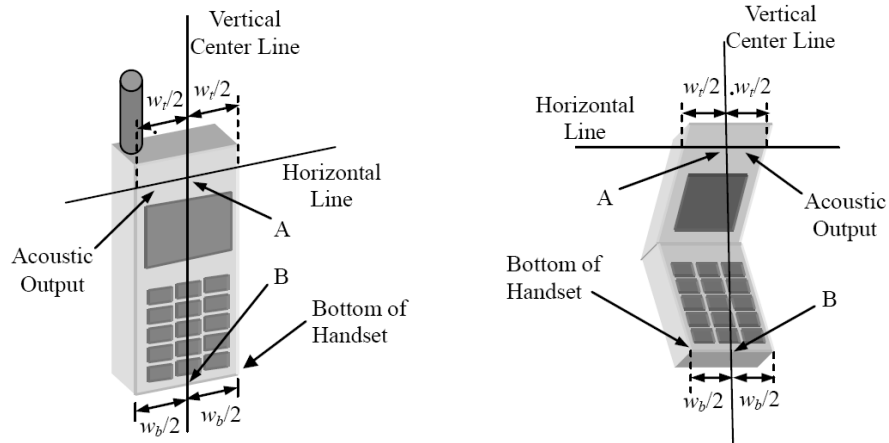


Picture C.8: SAM Twin Phantom

ANNEX D: Position of the wireless device in relation to the phantom

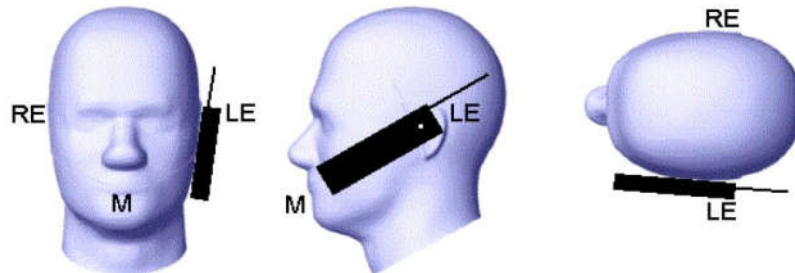
D.1. General Considerations

This standard specifies two handset test positions against the head phantom – the “cheek” position and the “tilt” position.

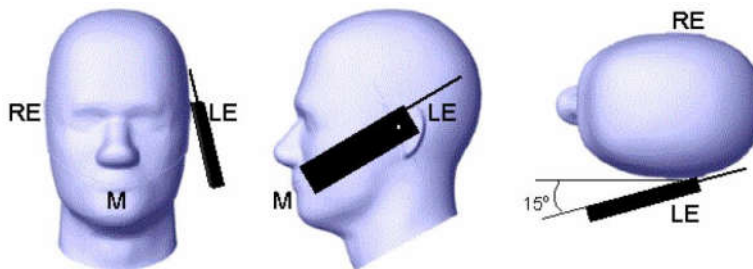


- w_t Width of the handset at the level of the acoustic
- w_b Width of the bottom of the handset
- A Midpoint of the width w_t of the handset at the level of the acoustic output
- B Midpoint of the width w_b of the bottom of the handset

Picture D.1-a Typical “fixed” case handset Picture D.1-b Typical “clam-shell” case handset



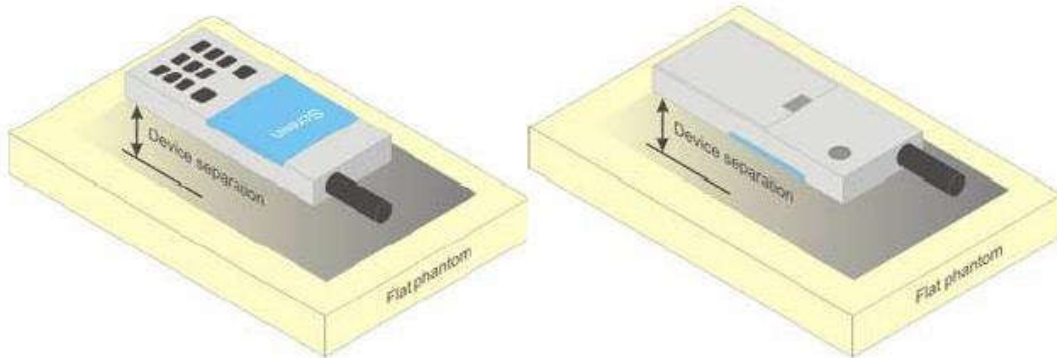
Picture D.2 Cheek position of the wireless device on the left side of SAM



Picture D.3 Tilt position of the wireless device on the left side of SAM

D.2. Body-worn device

A typical example of a body-worn device is a mobile phone, wireless enabled PDA or other battery operated wireless device with the ability to transmit while mounted on a person's body using a carry accessory approved by the wireless device manufacturer.

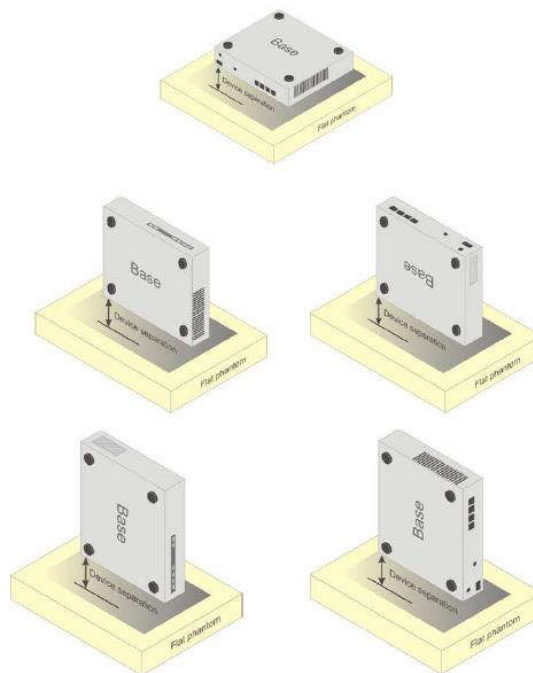


Picture D.4 Test positions for body-worn devices

D.3. Desktop device

A typical example of a desktop device is a wireless enabled desktop computer placed on a table or desk when used.

The DUT shall be positioned at the distance and in the orientation to the phantom that corresponds to the intended use as specified by the manufacturer in the user instructions. For devices that employ an external antenna with variable positions, tests shall be performed for all antenna positions specified. Picture 8.5 show positions for desktop device SAR tests. If the intended use is not specified, the device shall be tested directly against the flat phantom.



Picture D.5 Test positions for desktop devices

D.4. DUT Setup Photos



Picture D.6

ANNEX E: Equivalent Media Recipes

The liquid used for the frequency range of 700-6000 MHz consisted of water, sugar, salt, preventol, glycol monobutyl and Cellulose. The liquid has been previously proven to be suited for worst-case. The Table E.1 shows the detail solution. It's satisfying the latest tissue dielectric parameters requirements proposed by the IEEE 1528 and IEC 62209.

Table E.1: Composition of the Tissue Equivalent Matter

Frequency (MHz)	835	1750	1900	2450	2600	5200	5800
Water	41.45	55.242	55.242	58.79	58.79	65.53	66.10
Sugar	56.0	/	/	/	/	/	/
Salt	1.45	0.306	0.306	0.06	0.06		
Preventol	0.1	/	/	/	/	17.24	16.95
Cellulose	1.0	/	/	/	/	17.24	16.95
Glycol Monobutyl	/	44.452	44.452	41.15	41.15	/	/
Diethylenglycol monohexylether	/	/	/	/	/	/	/
Triton X-100	/	/	/	/	/	/	/
Dielectric Parameters Target Value	$\epsilon=41.5$ $\sigma=0.90$	$\epsilon=40.08$ $\sigma=1.37$	$\epsilon=40.0$ $\sigma=1.40$	$\epsilon=39.20$ $\sigma=1.80$	$\epsilon=39.01$ $\sigma=1.96$	$\epsilon=35.99$ $\sigma=4.66$	$\epsilon=35.30$ $\sigma=5.27$

Note: There is a little adjustment respectively for 750, 5300 and 5600, based on the recipe of closest frequency in table E.1



ANNEX F: System Validation

The SAR system must be validated against its performance specifications before it is deployed. When SAR probes, system components or software are changed, upgraded or recalibrated, these must be validated with the SAR system(s) that operates with such components.

Table F.1: System Validation

Probe SN.	Liquid name	Validation date	Frequency point	Status (OK or Not)
7621	Head 750MHz	2020-12-02	750 MHz	OK
7621	Head 835MHz	2020-04-03	835 MHz	OK
7621	Head 1750MHz	2020-10-20	1750 MHz	OK
7621	Head 1900MHz	2020-12-02	1900 MHz	OK
7621	Head 2300MHz	2020-12-03	2300 MHz	OK
7621	Head 2450MHz	2020-12-03	2450 MHz	OK
7621	Head 2550MHz	2020-12-03	2550 MHz	OK
7621	Head 5200MHz	2020-12-04	5250 MHz	OK
7621	Head 5600MHz	2020-12-04	5600 MHz	OK
7621	Head 5750MHz	2020-12-04	5750 MHz	OK



ANNEX G: DAE Calibration Certificate

DAE4 SN: 1527 Calibration Certificate



Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn



中国认可
国际互认
校准
CALIBRATION
CNAS L0570

Client : CTTL(South Branch)

Certificate No: Z20-60433

CALIBRATION CERTIFICATE			
Object	DAE4 - SN: 1527		
Calibration Procedure(s)	FF-Z11-002-01 Calibration Procedure for the Data Acquisition Electronics (DAEx)		
Calibration date:	November 06, 2020		
This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements(SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.			
All calibrations have been conducted in the closed laboratory facility: environment temperature(22±3)°C and humidity<70%.			
Calibration Equipment used (M&TE critical for calibration)			
Primary Standards	ID #	Cal Date(Calibrated by, Certificate No.)	Scheduled Calibration
Process Calibrator 753	1971018	16-Jun-20 (CTTL, No.J20X04342)	Jun-21
Calibrated by:	Name	Function	Signature
	Yu Zongying	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	
Issued: November 08, 2020			
This calibration certificate shall not be reproduced except in full without written approval of the laboratory.			



Add: No.51 Xueyuan Road, Haidian District, Beijing, 100191, China
Tel: +86-10-62304633-2512 Fax: +86-10-62304633-2504
E-mail: cttl@chinattl.com Http://www.chinattl.cn

Glossary:

DAE data acquisition electronics
Connector angle information used in DASY system to align probe sensor X to the robot coordinate system.

Methods Applied and Interpretation of Parameters:

- *DC Voltage Measurement:* Calibration Factor assessed for use in DASY system by comparison with a calibrated instrument traceable to national standards. The figure given corresponds to the full scale range of the voltmeter in the respective range.
- *Connector angle:* The angle of the connector is assessed measuring the angle mechanically by a tool inserted. Uncertainty is not required.
- The report provide only calibration results for DAE, it does not contain other performance test results.