



SAR TEST REPORT

No. I22Z60821-SEM03

For

COOSEA GROUP (HK) COMPANY LIMITED

Smart Phone

Model Name: SN304AE

with

Hardware Version: 1.0

Software Version: SN304AEC10102

FCC ID: 2A28USN304AE

Issued Date: 2022-7-13

Note:

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REPORT HISTORY

Report Number	Revision	Issue Date	Description
I22Z60821-SEM03	Rev.0	2022-6-30	Initial creation of test report
I22Z60821-SEM03	Rev.1	2022-7-8	<ol style="list-style-type: none"> 1. Revise the tune up power for WCDMA B2-Power Level A1 on page29. 2. Revise the tune up power for LTE B48-ENDC on page32. 3. Revise the SAR sensor triggering distance on page269. 4. Remove the power for WIFI5G CH142 on page94. 5. Revise the picture of antenna location in section12.2 on page95.
I22Z60821-SEM03	Rev.2	2022-7-13	<ol style="list-style-type: none"> 1. Add conductive power of DL CA: CA_29A-30A, CA_29A-66A, CA_2A-2A, CA_2A-30A and CA_30A-66A on page79. 2. Add SAR results of UL CA-5B in Table 13.3 on page98

TABLE OF CONTENT

1 TEST LABORATORY	5
1.1 TESTING LOCATION	5
1.2 TESTING ENVIRONMENT.....	5
1.3 PROJECT DATA	5
1.4 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 INTERNAL IDENTIFICATION OF EUT USED DURING THE TEST	11
4.3 INTERNAL IDENTIFICATION OF AE USED DURING THE TEST	11
5 TEST METHODOLOGY	12
5.1 APPLICABLE LIMIT REGULATIONS.....	12
5.2 APPLICABLE MEASUREMENT STANDARDS	12
6 SPECIFIC ABSORPTION RATE (SAR).....	13
6.1 INTRODUCTION.....	13
6.2 SAR DEFINITION.....	13
7 TISSUE SIMULATING LIQUIDS	14
7.1 TARGETS FOR TISSUE SIMULATING LIQUID.....	14
7.2 DIELECTRIC PERFORMANCE	14
8 SYSTEM VERIFICATION	19
8.1 SYSTEM SETUP.....	19
8.2 SYSTEM VERIFICATION.....	20
9 MEASUREMENT PROCEDURES	21
9.1 TESTS TO BE PERFORMED	21
9.2 GENERAL MEASUREMENT PROCEDURE.....	23
9.3 WCDMA MEASUREMENT PROCEDURES FOR SAR	24
9.4 SAR MEASUREMENT FOR LTE.....	25
9.5 BLUETOOTH & WI-FI MEASUREMENT PROCEDURES FOR SAR	27
9.6 POWER DRIFT.....	27
10 AREA SCAN BASED 1-G SAR.....	28
10.1 REQUIREMENT OF KDB.....	28
10.2 FAST SAR ALGORITHMS	28

11 CONDUCTED OUTPUT POWER.....	29
11.1 WCDMA MEASUREMENT RESULT	29
11.2 LTE MEASUREMENT RESULT	32
11.3 5G NR MEASUREMENT RESULT.....	81
11.4 WI-FI AND BT MEASUREMENT RESULT	90
12 SIMULTANEOUS TX SAR CONSIDERATIONS.....	95
12.1 INTRODUCTION.....	95
12.2 TRANSMIT ANTENNA SEPARATION DISTANCES.....	95
12.3 SAR MEASUREMENT POSITIONS	96
13 EVALUATION OF SIMULTANEOUS.....	96
14 SAR TEST RESULT	99
14.1 SAR RESULTS FOR 3G/4G	99
14.2 SAR RESULTS FOR 5G NR.....	113
14.3 SAR EVALUATION FOR WIFI 2.4G	117
14.4 SAR EVALUATION FOR WIFI 5G.....	120
14.5 SAR EVALUATION FOR BT.....	123
14.6 SAR RESULTS FOR 10-G EXTREMITY SAR.....	124
15 SAR MEASUREMENT VARIABILITY.....	125
16 MEASUREMENT UNCERTAINTY	126
16.1 MEASUREMENT UNCERTAINTY FOR NORMAL SAR TESTS (300MHZ~3GHZ).....	126
16.2 MEASUREMENT UNCERTAINTY FOR NORMAL SAR TESTS (3~6GHZ)	127
16.3 MEASUREMENT UNCERTAINTY FOR FAST SAR TESTS (300MHZ~3GHZ).....	128
16.4 MEASUREMENT UNCERTAINTY FOR FAST SAR TESTS (3~6GHZ)	129
17 MAIN TEST INSTRUMENTS.....	131
ANNEX A GRAPH RESULTS.....	132
ANNEX B SYSTEM VERIFICATION RESULTS	176
ANNEX C SAR MEASUREMENT SETUP	188
ANNEX D POSITION OF THE WIRELESS DEVICE IN RELATION TO THE PHANTOM	194
ANNEX E EQUIVALENT MEDIA RECIPES.....	197
ANNEX F SYSTEM VALIDATION	198
ANNEX G PROBE CALIBRATION CERTIFICATE	199
ANNEX H DIPOLE CALIBRATION CERTIFICATE	208
ANNEX I EXTENDED CALIBRATION SAR DIPOLE.....	267
ANNEX J SAR SENSOR TRIGGERING DATA SUMMARY	269
ANNEX K ACCREDITATION CERTIFICATE.....	271

1 Test Laboratory

1.1 Testing Location

Company Name:	CTTL(Shouxiang)
Address:	No. 51, Xueyuan Road, Haidian District, Beijing, P. R. China 100191.

1.2 Testing Environment

Temperature:	18°C~25°C,
Relative humidity:	30%~ 70%
Ground system resistance:	< 0.5 Ω
Ambient noise & Reflection:	< 0.012 W/kg

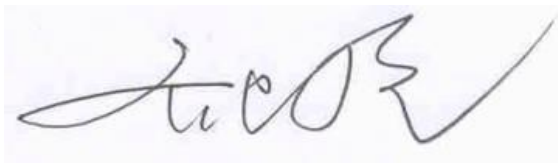
1.3 Project Data

Project Leader:	Qi Dianyuan
Test Engineer:	Yao Juming
Testing Start Date:	June 5, 2022
Testing End Date:	June 23, 2022

1.4 Signature

姚聚明

Yao Juming
(Prepared this test report)



Qi Dianyuan
(Reviewed this test report)

陆冰松

Lu Bingsong
Deputy Director of the laboratory
(Approved this test report)

2 Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for COOSEA GROUP (HK) COMPANY LIMITED Smart Phone SN304AE is as follows:

Table 2.1: Highest Reported SAR (1g)

Technology Band	Head	Hotspot	Body-Worn	Phablet-10g	Equipment Class
WCDMA1900	0.08	0.71	0.46	/	PCE
WCDMA1700	0.11	0.63	0.35	/	
WCDMA 850	0.17	0.31	0.31	/	
LTE Band2-ANT1	0.12	0.78	0.75	/	
LTE Band2-ANT6	0.61	0.46	0.46	/	
LTE Band5	0.27	0.52	0.52	/	
LTE Band12	0.31	0.44	0.38	/	
LTE Band14	0.26	0.60	0.57	/	
LTE Band30-ANT5	1.01	0.52	0.69	/	
LTE Band30-ANT7	0.32	0.68	0.68	/	
LTE Band66-ANT1	0.15	1.40	0.87	/	
LTE Band66-ANT6	0.73	0.48	0.48	/	
5G NR n2	0.73	0.49	0.49	/	
5G NR n5	0.31	0.48	0.48	/	
5G NR n66	0.79	0.47	0.47	/	
5G NR n77	0.68	0.57	0.31	/	
LTE Band48	0.79	0.67	0.43	/	CBE
WLAN 2.4GHz	0.52	0.22	0.17	/	DTS
WLAN 5GHz	0.28	0.56	0.56	/	NII
BT	0.13	0.02	0.02	/	DSS

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.

For body operation, this device has been tested and meets FCC RF exposure guidelines when used with any accessory that contains no metal and which provides a minimum separation distance of 15/10 mm between this device and the body of the user. Use of other accessories may not ensure compliance with FCC RF exposure guidelines.

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**), and the values are: **1.40 W/kg(1g)**.

Remark:

This device supports both LTE B4 and LTE B66. Since the supported frequency span for LTE B4 falls completely within the supports frequency span for LTE B66, both LTE bands have the same target power, and both LTE bands share the same transmission path; therefore, SAR was only assessed for LTE B66.

Table 2.2: The sum of SAR values for Main antenna + Wifi2.4G

	Position	Main antenna	WiFi-2.4G	Sum
Highest SAR value for Head	Left head, Cheek (ENDC 12A-n30A)	1.04	0.48	1.52
Highest SAR value for Body	Right 10mm (ENDC 30A-n77A)	1.25	0.16	1.41

Table 2.3: The sum of SAR values for Main antenna + Wifi5G +BT

	Position	Main antenna	WiFi-5G	BT	Sum
Highest SAR value for Head	Left head, Cheek (ENDC 12A-n30A)	1.04	0.28	0.12	1.44
Highest SAR value for Body	Rear 10mm (ENDC 14A-n2A)	1.06	0.50	0.02	1.58

Table 2.4: The SAR values for UL CA

LTE	LTE	Mode	Position	Reported SAR 1g(W/kg)
LTE B2-ANT6	LTE B5	Head	Right Cheek	0.88(0.61+0.27)
		Body	Rear 10mm	0.98(0.46+0.52)
	LTE B12	Head	Right Cheek	0.92(0.61+0.31)
		Body	Rear 10mm	0.84(0.46+0.38)
	LTE B14	Head	Right Cheek	0.87(0.61+0.26)
		Body	Rear 10mm	1.03(0.46+0.57)
LTE B5	LTE B30	Head	Left Cheek	0.78(0.19+0.59)
		Body	Right 10mm	0.85(0.33+0.52)
	LTE B66	Head	Right Cheek	1.00(0.27+0.73)
		Body	Rear 10mm	1.06(0.52+0.54)
UL CA 5B	/	Head	Right Cheek	0.24
		Body	Rear 10mm	0.47
LTE B12	LTE B30	Head	Left Cheek	0.87(0.28+0.59)
		Body	Right 10mm	0.96(0.44+0.52)
	LTE B66	Head	Right Cheek	1.04(0.31+0.73)
		Body	Rear 10mm	0.86(0.38+0.48)
LTE B14	LTE B30	Head	Left Cheek	0.74(0.15+0.59)
		Body	Right 10mm	0.97(0.45+0.52)
	LTE B66	Head	Right Cheek	0.99(0.26+0.73)
		Body	Rear 10mm	1.05(0.57+0.48)

Table 2.5: The SAR values for ENDC

LTE	NR	Mode	Position	Reported SAR 1g(W/kg)
LTE B2-ANT1	N2	Head	Right Cheek	0.79(0.06+0.73)
		Body	Rear 10mm	0.93(0.44+0.49)
		Head	Right Cheek	0.85(0.06+0.79)

	N66	Body	Rear 10mm	0.91(0.44+0.47)
	N77	Head	Left Cheek	0.80(0.12+0.68)
LTE B2-ANT6		N5	Body	Rear 10mm
	Head		Right Cheek	0.92(0.61+0.31)
LTE B5	N2	Body	Rear 10mm	0.94(0.46+0.48)
		Head	Right Cheek	1.00(0.27+0.73)
	N30	Body	Rear 10mm	1.01(0.52+0.49)
		Head	Left Cheek	0.95(0.19+0.76)
	N66	Body	Right 10mm	1.03(0.33+0.70)
		Head	Right Cheek	1.06(0.27+0.79)
	N77	Body	Rear 10mm	0.99(0.52+0.47)
		Head	Left Cheek	0.87(0.19+0.68)
LTE B12	N2	Body	Right 10mm	0.90(0.33+0.57)
		Head	Right Cheek	1.04(0.31+0.73)
	N30	Body	Rear 10mm	0.87(0.38+0.49)
		Head	Left Cheek	1.04(0.28+0.76)
	N66	Body	Right 10mm	1.14(0.44+0.70)
		Head	Right Cheek	1.10(0.31+0.79)
N77	Body	Rear 10mm	0.85(0.38+0.47)	
	Head	Left Cheek	0.96(0.28+0.68)	
	N2	Body	Right 10mm	1.01(0.44+0.57)
		Head	Right Cheek	0.99(0.26+0.73)
LTE B14	N30	Body	Rear 10mm	1.06(0.57+0.49)
		Head	Left Cheek	0.91(0.15+0.76)
	N66	Body	Right 10mm	1.15(0.45+0.70)
		Head	Right Cheek	1.05(0.26+0.79)
	N77	Body	Rear 10mm	1.04(0.57+0.47)
		Head	Left Cheek	0.83(0.15+0.68)
LTE B30-ANT5	N5	Body	Right 10mm	1.02(0.45+0.57)
		Head	Left Cheek	0.81(0.59+0.22)
LTE B30-ANT7	N77	Body	Right 10mm	0.70(0.52+0.18)
		Head	Left Cheek	1.17(0.21+0.68)
LTE B66-ANT1	N2	Body	Right 10mm	1.25(0.68+0.57)
		Head	Right Cheek	0.88(0.15+0.73)
	N77	Body	Rear 10mm	0.91(0.42+0.49)
		Head	Left Cheek	0.79(0.11+0.68)
LTE B66-ANT6	N5	Body	Rear 10mm	0.73(0.42+0.31)
		Head	Right Cheek	1.04(0.73+0.31)
		Body	Rear 10mm	1.02(0.54+0.48)

Conclusion:

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

According to the above tables, the highest sum of reported SAR values is **1.58 W/kg (1g)**. The detail for simultaneous transmission consideration is described in chapter 13.

3 Client Information

3.1 Applicant Information

Company Name:	COOSEA GROUP (HK) COMPANY LIMITED
Address/Post:	UNIT 5-6 16/F MULTIFIELD PLAZA 3-7A PRAT AVENUE TSIM SHA TSUI KL
Contact Person:	zhaojiandong
Contact Email:	zhaojiandong@cooseagroup.com
Telephone:	13759849661

3.2 Manufacturer Information

Company Name:	COOSEA GROUP (HK) COMPANY LIMITED
Address/Post:	UNIT 5-6 16/F MULTIFIELD PLAZA 3-7A PRAT AVENUE TSIM SHA TSUI KL
Contact Person:	zhaojiandong
Contact Email:	zhaojiandong@cooseagroup.com
Telephone:	13759849661

4 Equipment Under Test (EUT) and Ancillary Equipment (AE)

4.1 About EUT

Description:	Smart Phone
Model name:	SN304AE
Operating mode(s):	WCDMA B2/B4/B5 LTE Band2/4/5/12/14/29/30/48/66 BT, Wi-Fi(2.4G/5G) 5G NR n2/n5/n30/n66/n77
Tested Tx Frequency:	824 – 849 MHz (WCDMA 850 Band V)
	1850 – 1910 MHz (WCDMA1900 Band IV)
	1710-1755 MHz (WCDMA1700 Band II)
	1850.7 – 1909.3 MHz (LTE Band 2)
	824 – 849 MHz (LTE Band 5)
	699.7 – 715.3 MHz (LTE Band 12)
	790.5–795.5 MHz (LTE Band 14)
	2307.5–2312.5 MHz (LTE Band 30)
	3552.5 –3697.5 MHz (LTE Band 48)
	1710.7 –1779.3 MHz (LTE Band 66)
	2412 – 2462 MHz (Wi-Fi 2.4G)
	5180 – 5240 MHz (Wi-Fi 5.2G)
	5260 – 5320 MHz (Wi-Fi 5.3G)
	5500 – 5700 MHz (Wi-Fi 5.5G)
	5745 – 5825 MHz (Wi-Fi 5.8G)
	2400 – 2483.5 MHz (Bluetooth)
	1850 – 1910 MHz(n2)
824 – 849 MHz(n5)	
2305 – 2315 MHz(n30)	
1710 – 1780 MHz(n66)	
3450– 3550 MHz ,3700– 3980 MHz (n77)	
Test device production information:	Production unit
Device type:	Portable device
Antenna type:	Integrated antenna
Hotspot mode:	Support

4.2 Internal Identification of EUT used during the test

EUT ID*	IMEI	HW Version	SW Version
EUT1	354266480006997	1.0	SN304AEC10102
EUT2	354266480007862	1.0	SN304AEC10102
EUT3	354266480007904	1.0	SN304AEC10102
EUT4	354266480009017	1.0	SN304AEC10102
EUT5	354262480007557	1.0	SN304AEC10102
EUT6	354266480007755	1.0	SN304AEC10102
EUT7	354266480007417	1.0	SN304AEC10102
EUT8	354266480008159	1.0	SN304AEC10102
EUT9	354266480011195	1.0	SN304AEC10102

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

Note: It is performed to test SAR with the EUT1~7 and conducted power with the EUT8~9.

4.3 Internal Identification of AE used during the test

AE ID*	Description	Model	SN	Manufacturer
AE1	Battery	BL-A40CT	/	Shenzhen Aerospace Electronic 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: Measurement Techniques.

KDB447498 D01: General RF Exposure Guidance v06: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

KDB648474 D04 Handset SAR v01r03: SAR Evaluation Considerations for Wireless Handsets.

KDB941225 D01 SAR test for 3G devices v03r01: SAR Measurement Procedures for 3G Devices

KDB941225 D05 SAR for LTE Devices v02r05: SAR Evaluation Considerations for LTE Devices

KDB941225 D06 Hotspot Mode SAR v02r01: SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities

KDB248227 D01 802.11 Wi-Fi SAR v02r02: SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS

KDB865664 D01 SAR measurement 100 MHz to 6 GHz v01r04: SAR Measurement Requirements for 100 MHz to 6 GHz.

KDB865664 D02 RF Exposure Reporting v01r02: RF Exposure Compliance Reporting and Documentation Considerations

TCB Workshop Nov 2017:RF Exposure Procedures (Carrier Aggregation SAR)

TCB Workshop Nov 2019:RF Exposure Policy Updates (5G NR NSA Sub 6G SAR)

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)	$\pm 10\%$ Range	Permittivity(ϵ)	$\pm 10\%$ Range
750	Head	0.89	0.80~0.98	41.94	37.75~46.13
835	Head	0.90	0.81~0.99	41.5	37.35~45.65
1750	Head	1.40	1.26~1.54	40.0	36~44
1900	Head	1.40	1.26~1.54	40.0	36~44
2300	Head	1.67	1.50~1.84	39.47	35.52~43.42
2450	Head	1.80	1.62~1.98	39.2	35.28~43.12
2600	Head	1.96	1.76~2.16	39.01	35.11~42.91

Table 7.2: Targets for tissue simulating liquid

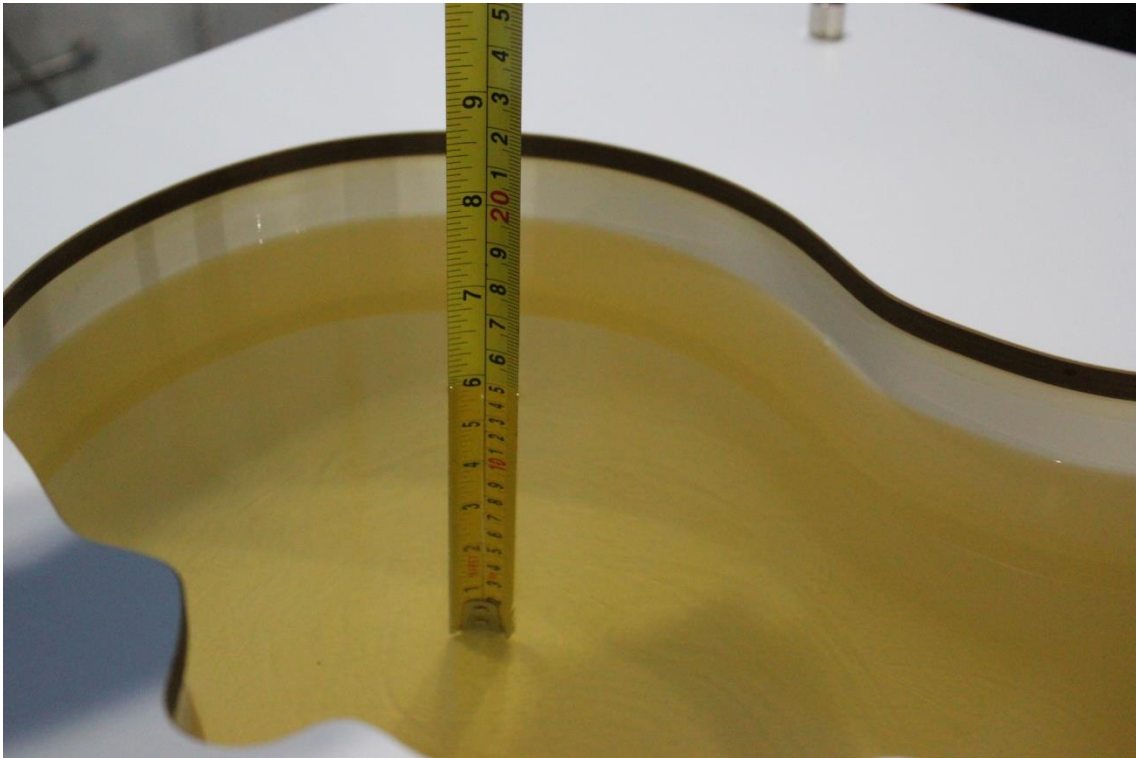
Frequency(MHz)	Liquid Type	Conductivity(σ)	$\pm 5\%$ Range	Permittivity(ϵ)	$\pm 5\%$ Range
3500	Head	2.91	2.76~3.06	37.93	36.03~39.83
3700	Head	3.12	2.96~3.28	37.70	35.82~39.59
3900	Head	3.32	3.15~3.49	37.47	35.6~39.34
5250	Head	4.71	4.47~4.95	35.93	34.13~37.73
5600	Head	5.07	4.82~5.32	35.53	33.8~37.3
5750	Head	5.22	4.96~5.48	35.36	33.59~37.13

7.2 Dielectric Performance

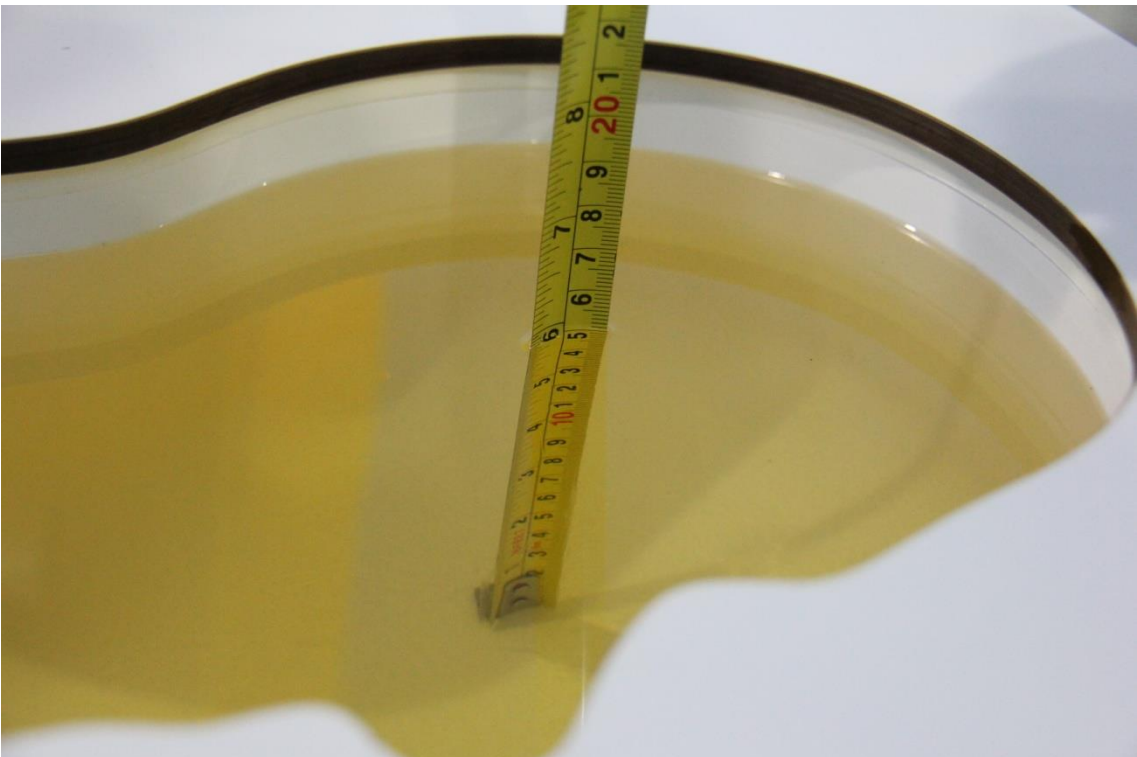
Table 7.3: Dielectric Performance of Tissue Simulating Liquid

Measurement Date (yyyy-mm-dd)	Type	Frequency	Permittivity ϵ	Drift (%)	Conductivity σ (S/m)	Drift (%)
2022-6-5	Head	750 MHz	45	7.30	0.8313	-6.60
2022-6-6	Head	835 MHz	44.67	7.64	0.867	-3.67
2022-6-7	Head	1750 MHz	42.33	5.61	1.385	1.09
2022-6-9	Head	1900 MHz	41.95	4.88	1.49	6.43
2022-6-10	Head	2300 MHz	41.23	4.46	1.791	7.25
2022-6-11	Head	2450 MHz	40.88	4.29	1.921	6.72
2022-6-15	Head	3600 MHz	38.33	1.38	2.969	-1.69
2022-6-16	Head	3800 MHz	37.94	0.93	3.161	-1.83
2022-6-21	Head	5250 MHz	35.07	-2.39	4.727	0.36
2022-6-22	Head	5600 MHz	34.37	-3.26	5.105	0.69
2022-6-23	Head	5750 MHz	34.09	-3.59	5.276	1.07

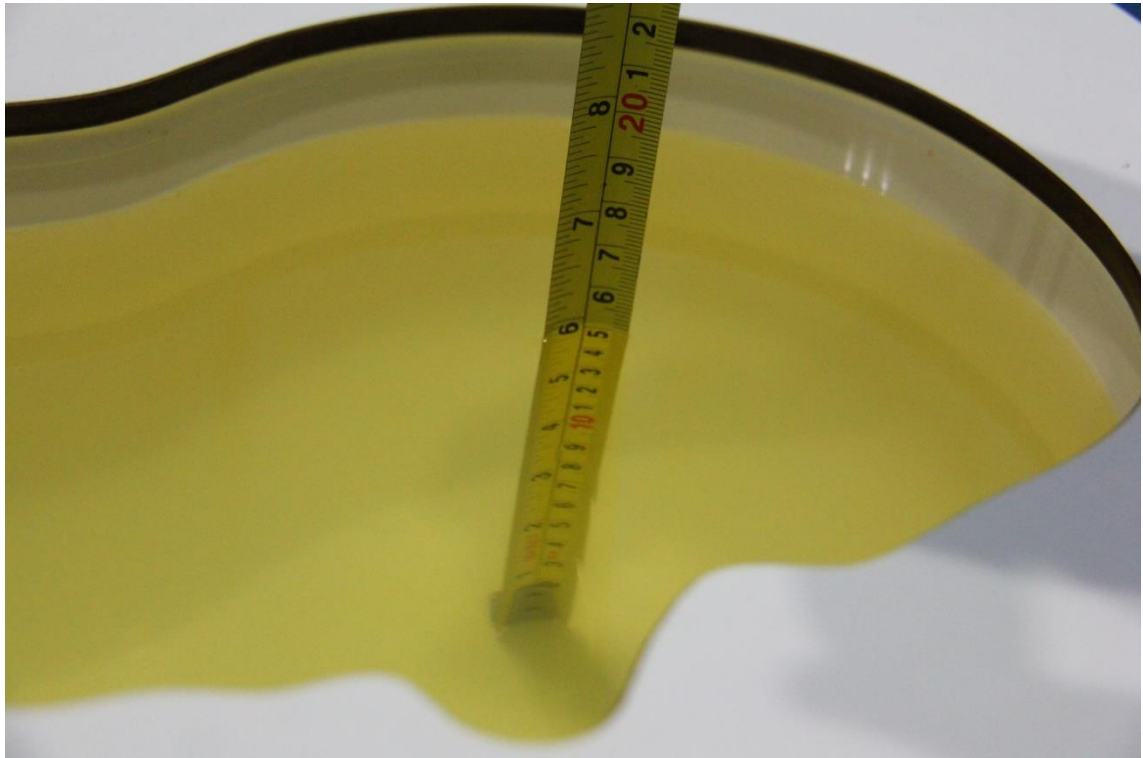
Note: The liquid temperature is 22.0°C



Picture 7-1 Liquid depth in the Head Phantom (750MHz)



Picture 7-2 Liquid depth in the Head Phantom (835 MHz)



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



Picture 7-4 Liquid depth in the Head Phantom (2300MHz)



Picture 7-5 Liquid depth in the Head Phantom (2450 MHz)



Picture 7-6 Liquid depth in the Head Phantom (3GHz)

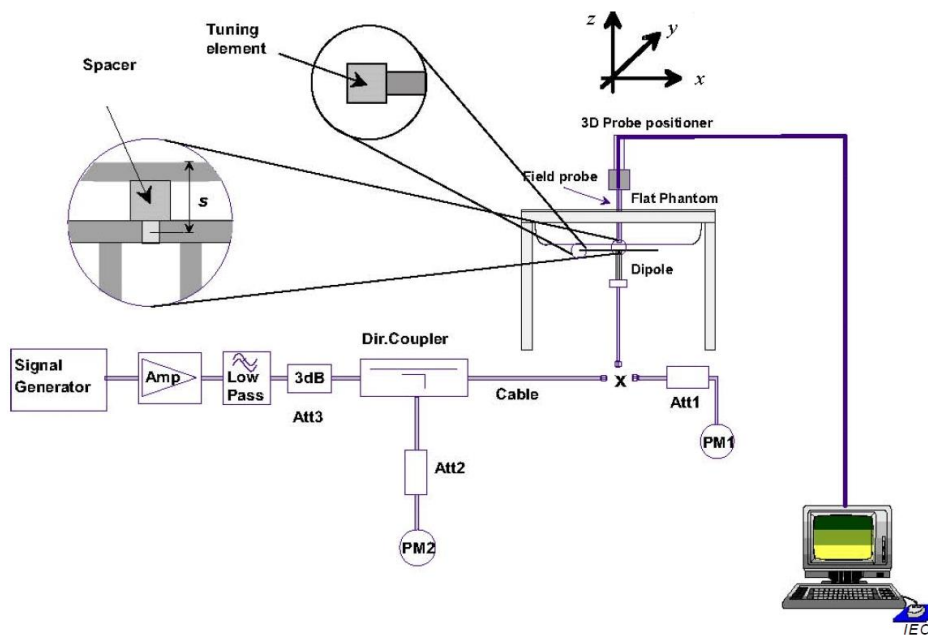


Picture 7-7 Liquid depth in the Head Phantom (5GHz)

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



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.

The system verification results are required that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR. The details are presented in annex B.

Table 8.1: System Verification of Head

Measurement Date (yyyy-mm-dd)	Frequency	Target value (W/kg)		Measured value(W/kg)		Deviation	
		10 g Average	1 g Average	10 g Average	1 g Average	10 g Average	1 g Average
2022-6-5	750 MHz	5.65	8.68	5.80	8.80	2.65%	1.38%
2022-6-6	835 MHz	6.24	9.63	6.04	9.32	-3.21%	-3.22%
2022-6-7	1750 MHz	19.4	36.9	20.0	37.6	3.30%	2.01%
2022-6-9	1900 MHz	20.9	40.1	20.6	39.8	-1.24%	-0.75%
2022-6-10	2300 MHz	24.3	50.1	24.8	51.6	2.22%	3.07%
2022-6-11	2450 MHz	24.9	53.3	24.2	52.2	-2.81%	-2.06%
2022-6-15	3600 MHz	24.9	66.5	24.2	64.7	-2.81%	-2.71%
2022-6-16	3800 MHz	24.0	65.4	23.9	64.5	-0.42%	-1.38%
2022-6-21	5250 MHz	23.1	80.9	22.5	77.6	-2.60%	-4.08%
2022-6-22	5600 MHz	23.9	84.4	23.0	80.6	-3.77%	-4.50%
2022-6-23	5750 MHz	22.8	81.2	22.1	79.2	-3.07%	-2.46%

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.

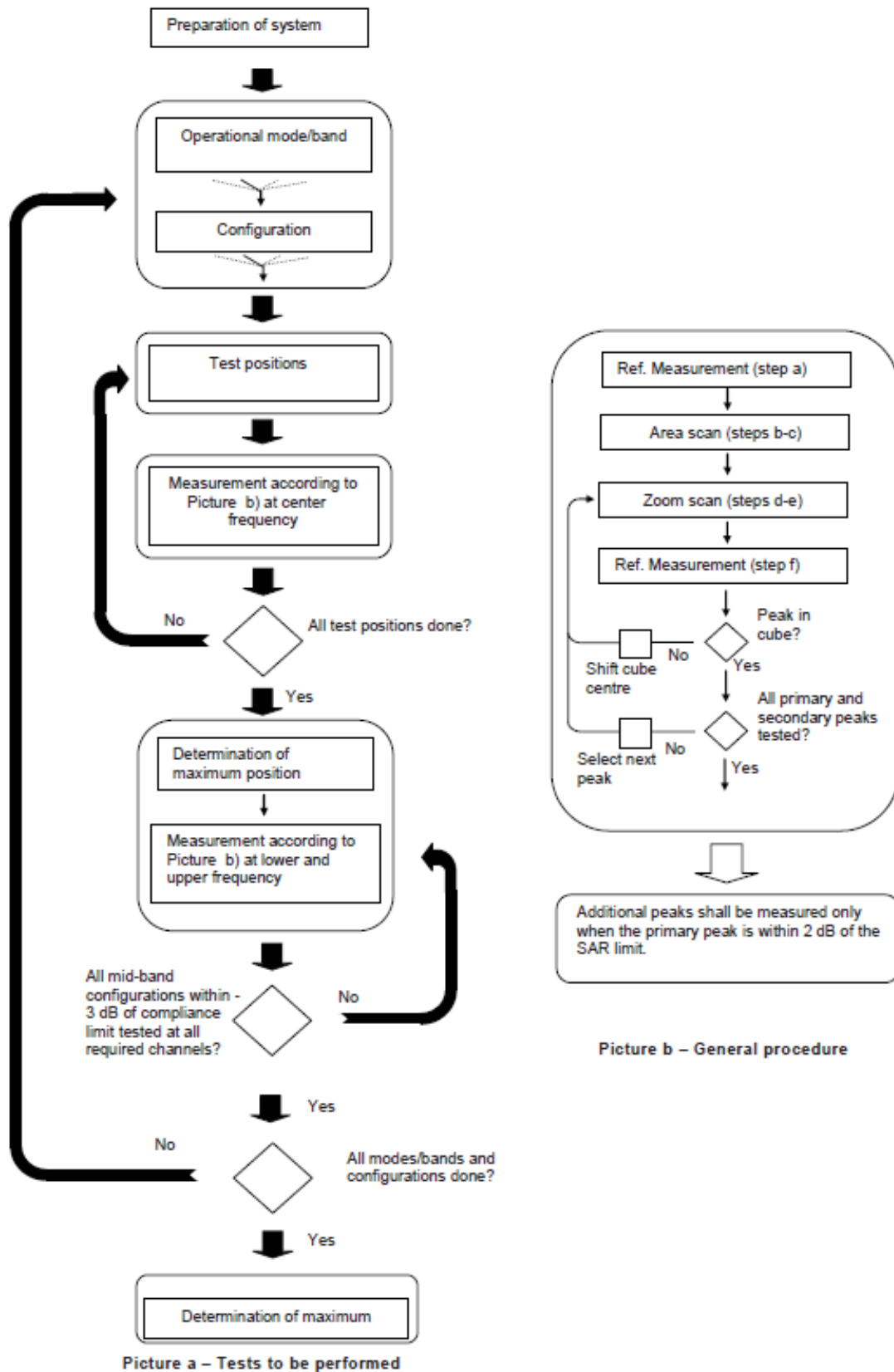
Step 1: The tests described in 9.2 shall be performed at the channel that is closest to the centre of the transmit frequency band (f_c) for:

- 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 1528-2003. 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: Δx_{Area} , Δy_{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: Δx_{Zoom} , Δy_{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
		$\Delta z_{Zoom}(n>1)$: 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
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details. * When zoom scan is required and the <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.			

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	1.5	1.5	20	75
2	6/15	15/15	64	6/15	12/15	12/15	12/15	4	1	1.5	1.5	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}:47/15$ $\beta_{ed2}:47/15$	4	2	1.5	1.5	15	92
4	2/15	15/15	64	2/15	4/15	4/15	56/75	4	1	1.5	1.5	17	71
5	15/15	15/15	64	15/15	24/15	30/15	134/15	4	1	1.5	1.5	21	81

Rel.8 DC-HSDPA (Cat 24)

SAR test exclusion for Rel.8 DC-HSDPA must satisfy the SAR test exclusion requirements of Rel.5 HSDPA. SAR test exclusion for DC-HSDPA devices is determined by power measurements according to the H-Set 12, Fixed Reference Channel (FRC) configuration in Table C.8.1.12 of 3GPP TS 34.121-1. A primary and a secondary serving HS-DSCH Cell are required to perform the power measurement and for the results to qualify for SAR test exclusion.

9.4 SAR Measurement for LTE

SAR tests for LTE are performed with a base station simulator, Rohde & Schwarz CMW500. Closed loop power control was used so the UE transmits with maximum output power during SAR testing. All powers were measured with the CMW 500.

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.

TDD test:

TDD testing is performed using guidance from FCC KDB 941225 D05 and the SAR test guidance provided in April 2013 TCB works hop notes. TDD is tested at the highest duty factor using UL-DL configuration 0 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211.

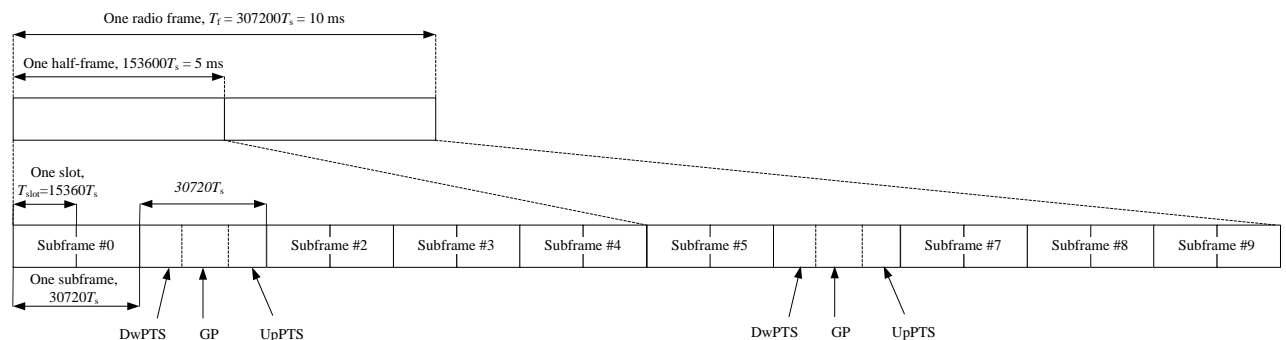


Figure 9.2: Frame structure type 2 (for 5 ms switch-point periodicity)

Table 9.1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS)

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

Table 9.2: Uplink-downlink configurations

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

Duty factor is calculated by:

Duty factor = uplink frame*6+UpPTS*2/one frame length

$$= (30720 \cdot T_s * 6 + 5120 \cdot T_s * 2) / 307200 \cdot T_s$$

$$= 0.633$$

9.5 Bluetooth & Wi-Fi 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.

9.6 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 Area Scan Based 1-g SAR

10.1 Requirement of KDB

According to the KDB447498 D01, when the implementation is based the specific polynomial fit algorithm as presented at the 29th Bioelectromagnetics Society meeting (2007) and the estimated 1-gSAR is ≤ 1.2 W/kg, a zoom scan measurement is not required provided it is also not needed for any other purpose; for example, if the peak SAR location required for simultaneous transmission SAR test exclusion can be determined accurately by the SAR system or manually to discriminate between distinctive peaks and scattered noisy SAR distributions from area scans.

There must not be any warning or alert messages due to various measurement concerns identified by the SAR system; for example, noise in measurements, peaks too close to scan boundary, peaks are too sharp, spatial resolution and uncertainty issues etc. The SAR system verification must also demonstrate that the area scan estimated 1-g SAR is within 3% of the zoom scan 1-g SAR (See Annex B). When all the SAR results for each exposure condition in a frequency band and wireless mode are based on estimated 1-g SAR, the 1-g SAR for the highest SAR configuration must be determined by a zoom scan.

10.2 Fast SAR Algorithms

The approach is based on the area scan measurement applying a frequency dependent attenuation parameter. This attenuation parameter was empirically determined by analyzing a large number of phones. The MOTOROLA FAST SAR was developed and validated by the MOTOROLA Research Group in Ft. Lauderdale.

In the initial study, an approximation algorithm based on Linear fit was developed. The accuracy of the algorithm has been demonstrated across a broad frequency range (136-2450 MHz) and for both 1- and 10-g averaged SAR using a sample of 264 SAR measurements from 55 wireless handsets. For the sample size studied, the root-mean-squared errors of the algorithm are 1.2% and 5.8% for 1- and 10-g averaged SAR, respectively. The paper describing the algorithm in detail is expected to be published in August 2004 within the Special Issue of Transactions on MTT.

In the second step, the same research group optimized the fitting algorithm to an Polynomial fit whereby the frequency validity was extended to cover the range 30-6000MHz. Details of this study can be found in the BEMS 2007 Proceedings.

Both algorithms are implemented in DASY software.

11 Conducted Output Power

Table11.1: Summary of Receiver detection mechanism-Main antenna

Antenna	Receiver on	Receiver off+ Hotspot off	Receiver off+ Hotspot on	Receiver off+ sensor on (Only for LTE B30/B48)
Main Antenna	Power Level A1	Power Level B1	Power Level C1	Power Level D1

Antenna	Receiver on	Receiver off+ Hotspot off	Receiver off+ Hotspot on
Main Antenna (Only for ENDC)	Power Level A2	Power Level B2	Power Level C2

11.1 WCDMA Measurement result

Table 11.1-1: The conducted Power for WCDMA B2/B4 -Power Level A1

WCDMA1900	FDDII result (dBm)			Tune up
	9538/9938 (1907.6MHz)	9400/9800 (1880MHz)	9262/9662 (1852.4MHz)	
	21.98	22.05	21.97	23.00
HSUPA	18.63	18.70	18.55	19.50
	18.13	18.22	18.07	19.50
	19.18	19.20	19.15	20.50
	17.55	17.73	17.57	19.50
	19.06	19.14	19.15	20.50
HSPA+	19.58	19.61	19.60	20.50
DC-HSDPA	20.12	20.13	20.01	21.50
	19.95	20.06	20.07	21.50
	19.60	19.69	19.61	21.50
	19.60	19.62	19.65	21.50

WCDMA1700	FDDIV result (dBm)			Tune up
	1513/1738	1412/1637	1312/1537	
	(1752.6MHz)	(1732.4MHz)	(1712.4MHz)	
	21.81	21.78	21.80	23.50
HSUPA	17.92	18.38	18.45	19.00
	17.98	17.93	17.99	19.00
	18.02	17.99	18.00	19.50
	17.52	17.47	17.50	19.00
	18.98	18.94	18.97	19.50
HSPA+	19.45	19.42	19.48	20.50
DC-HSDPA	19.91	19.92	19.99	21.50
	19.82	19.84	19.93	21.50
	19.50	19.52	19.55	21.00
	19.46	19.48	19.54	21.00

Table 11.1-2: The conducted Power for WCDMA B2/B4 -Power Level B1/C1

WCDMA1900	FDDII result (dBm)			Tune up
	9538/9938	9400/9800	9262/9662	
	(1907.6MHz)	(1880MHz)	(1852.4MHz)	
	18.79	18.95	18.75	20.00
HSUPA	16.29	16.36	16.21	16.50
	15.77	15.86	15.68	16.50
	15.80	15.95	15.71	17.50
	15.33	15.28	15.24	16.50
	16.79	16.78	16.67	17.50
HSPA+	17.34	17.36	17.19	17.50
DC-HSDPA	16.92	16.95	16.85	18.50
	16.72	16.92	16.84	18.50
	16.53	16.55	16.53	18.50
	16.51	16.56	16.52	18.50

WCDMA1700	FDDIV result (dBm)			Tune up
	1513/1738	1412/1637	1312/1537	
	(1752.6MHz)	(1732.4MHz)	(1712.4MHz)	
	16.85	16.81	16.86	18.50
HSUPA	14.30	14.27	14.37	14.50
	13.80	13.76	13.87	14.50
	13.82	13.85	13.87	15.00
	13.32	13.29	13.37	14.50
	14.78	14.81	14.87	15.00
HSPA+	15.31	15.22	15.32	15.50
DC-HSDPA	14.84	14.83	15.01	16.50
	14.59	14.62	14.79	16.50
	14.39	14.35	14.53	16.00
	14.33	14.35	14.46	16.00

Table 11.1-3: The conducted Power for WCDMA B5 -Power Level A1/B1/C1

WCDMA850	FDDV result (dBm)			Tune up
	4233/4458	4183/4408	4132/4357	
	(846.6MHz)	(836.6MHz)	(826.4MHz)	
	22.48	22.05	22.59	24.00
HSUPA	19.36	19.25	19.37	20.00
	19.01	18.78	18.88	20.00
	18.92	18.81	18.97	20.00
	18.53	18.26	18.39	20.00
	19.92	19.68	19.80	20.00
HSPA+	20.39	20.31	20.47	21.00
DC-HSDPA	20.84	20.73	20.88	22.50
	20.61	20.76	20.75	22.50
	20.33	20.29	20.43	22.00
	20.31	20.36	20.42	22.00

11.2 LTE Measurement result

Maximum Target Power for Production Unit

Band	Tune up (dBm)			
	Receiver on	Receiver off+ Hotspot off	Receiver off+ Hotspot on	Receiver off+ sensor on (Only for LTE B30/B48)
	Power Level A1	Power Level B1	Power Level C1	Power Level D1
LTE B2-ANT1	25.5	21.5	21.5	/
LTE B5	25	25	25	/
LTE B12	25	25	25	/
LTE B14	25	25	25	/
LTE B30-ANT5	19	25	19	19
LTE B48	21	25	21.5	21.5
LTE B66-ANT1	25.5	22.5	22.5	/

Band	Tune up (dBm)		
	Receiver on	Receiver off+ Hotspot off	Receiver off+ Hotspot on
	Power Level A2	Power Level B2	Power Level C2
LTE B2-ANT1 under ENDC	25.5	20.5	20.5
LTE B30-ANT5 under ENDC	16	19	19
LTE B48 under ENDC	19.5	20.5	20.5
LTE B66-ANT1 under ENDC	25.5	19	19
LTE B2-ANT6 under ENDC	14	18	18
LTE B66-ANT6 under ENDC	18	23	23
LTE B30-ANT7 under ENDC	24	18	18

LTE B2 ANT1-Power Level A1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3 (19193)	24.24	23.38	22.49
		1880 (18900)	24.26	23.45	22.56
		1850.7 (18607)	24.33	23.40	22.60
	1RB-Middle (3)	1909.3 (19193)	24.24	23.44	22.53
		1880 (18900)	24.27	23.54	22.49
		1850.7 (18607)	24.34	23.48	22.56
	1RB-Low (0)	1909.3 (19193)	24.22	23.38	22.52
		1880 (18900)	24.24	23.40	22.48
		1850.7 (18607)	24.32	23.43	22.54
	3RB-High (3)	1909.3 (19193)	24.29	23.23	22.46
		1880 (18900)	24.28	23.27	22.48
		1850.7 (18607)	24.35	23.38	22.53
	3RB-Middle (1)	1909.3 (19193)	24.26	23.33	22.45
		1880 (18900)	24.28	23.35	22.53
		1850.7 (18607)	24.31	23.30	22.53
	3RB-Low (0)	1909.3 (19193)	24.26	23.23	22.47
		1880 (18900)	24.26	23.28	22.44
		1850.7 (18607)	24.37	23.37	22.53
	6RB (0)	1909.3 (19193)	23.27	22.42	21.36
		1880 (18900)	23.27	22.48	21.38
		1850.7 (18607)	23.31	22.54	21.45
3MHz	1RB-High (14)	1908.5 (19185)	24.28	23.33	22.54
		1880 (18900)	24.26	23.39	22.55
		1851.5 (18615)	24.27	23.49	22.59
	1RB-Middle (7)	1908.5 (19185)	24.27	23.48	22.50
		1880 (18900)	24.24	23.46	22.60
		1851.5 (18615)	24.30	23.49	22.56
	1RB-Low (0)	1908.5 (19185)	24.30	23.46	22.53
		1880 (18900)	24.25	23.47	22.54
		1851.5 (18615)	24.32	23.50	22.52
	8RB-High (7)	1908.5 (19185)	23.20	22.39	21.41
		1880 (18900)	23.20	22.44	21.40
		1851.5 (18615)	23.26	22.47	21.47
	8RB-Middle (4)	1908.5 (19185)	23.21	22.38	21.42
		1880 (18900)	23.18	22.42	21.39
		1851.5 (18615)	23.27	22.46	21.44
	8RB-Low (0)	1908.5 (19185)	23.24	22.47	21.46
		1880 (18900)	23.25	22.47	21.41
		1851.5 (18615)	23.28	22.53	21.49
	15RB (0)	1908.5 (19185)	23.16	22.40	21.36
		1880 (18900)	23.18	22.41	21.35
		1851.5 (18615)	23.28	22.45	21.43

5MHz	1RB-High (24)	1907.5 (19175)	24.30	23.37	22.53	
		1880 (18900)	24.30	23.41	22.57	
		1852.5 (18625)	24.33	23.47	22.57	
	1RB-Middle (12)	1907.5 (19175)	24.32	23.51	22.55	
		1880 (18900)	24.26	23.47	22.57	
		1852.5 (18625)	24.30	23.38	22.59	
	1RB-Low (0)	1907.5 (19175)	24.27	23.46	22.51	
		1880 (18900)	24.28	23.56	22.50	
		1852.5 (18625)	24.39	23.46	22.63	
	12RB-High (13)	1907.5 (19175)	23.21	22.38	21.42	
		1880 (18900)	23.25	22.37	21.41	
		1852.5 (18625)	23.26	22.46	21.46	
	12RB-Middle (6)	1907.5 (19175)	23.18	22.36	21.39	
		1880 (18900)	23.26	22.42	21.45	
		1852.5 (18625)	23.27	22.42	21.43	
	12RB-Low (0)	1907.5 (19175)	23.21	22.38	21.41	
		1880 (18900)	23.27	22.42	21.46	
		1852.5 (18625)	23.28	22.45	21.49	
	25RB (0)	1907.5 (19175)	23.22	22.44	21.38	
		1880 (18900)	23.25	22.46	21.45	
		1852.5 (18625)	23.26	22.45	21.44	
	10MHz	1RB-High (49)	1905 (19150)	24.29	23.41	22.49
			1880 (18900)	24.31	23.47	22.54
			1855 (18650)	24.31	23.41	22.53
1RB-Middle (24)		1905 (19150)	24.28	23.39	22.53	
		1880 (18900)	24.31	23.52	22.55	
		1855 (18650)	24.34	23.43	22.56	
1RB-Low (0)		1905 (19150)	24.26	23.53	22.50	
		1880 (18900)	24.32	23.42	22.52	
		1855 (18650)	24.33	23.55	22.54	
25RB-High (25)		1905 (19150)	23.30	22.51	21.51	
		1880 (18900)	23.24	22.42	21.44	
		1855 (18650)	23.34	22.53	21.48	
25RB-Middle (12)		1905 (19150)	23.20	22.43	21.44	
		1880 (18900)	23.25	22.45	21.41	
		1855 (18650)	23.25	22.45	21.46	
25RB-Low (0)		1905 (19150)	23.25	22.49	21.43	
		1880 (18900)	23.30	22.47	21.46	
		1855 (18650)	23.24	22.47	21.41	
50RB (0)		1905 (19150)	23.32	22.45	21.45	
		1880 (18900)	23.28	22.45	21.45	
		1855 (18650)	23.31	22.43	21.44	

15MHz	1RB-High (74)	1902.5 (19125)	24.18	23.31	22.52
		1880 (18900)	24.17	23.38	22.46
		1857.5 (18675)	24.21	23.37	22.47
	1RB-Middle (37)	1902.5 (19125)	24.21	23.45	22.62
		1880 (18900)	24.24	23.45	22.52
		1857.5 (18675)	24.22	23.52	22.56
	1RB-Low (0)	1902.5 (19125)	24.17	23.31	22.45
		1880 (18900)	24.22	23.38	22.49
		1857.5 (18675)	24.24	23.50	22.46
	36RB-High (38)	1902.5 (19125)	23.24	22.43	21.47
		1880 (18900)	23.24	22.40	21.42
		1857.5 (18675)	23.27	22.38	21.40
	36RB-Middle (19)	1902.5 (19125)	23.20	22.36	21.35
		1880 (18900)	23.22	22.37	21.41
		1857.5 (18675)	23.20	22.37	21.42
	36RB-Low (0)	1902.5 (19125)	23.19	22.40	21.39
		1880 (18900)	23.21	22.44	21.42
		1857.5 (18675)	23.18	22.38	21.40
	75RB (0)	1902.5 (19125)	23.24	22.44	21.42
		1880 (18900)	23.24	22.39	21.37
		1857.5 (18675)	23.26	22.39	21.38
20MHz	1RB-High (99)	1900 (19100)	24.38	23.59	22.63
		1880 (18900)	24.40	23.51	22.50
		1860 (18700)	24.44	23.66	22.61
	1RB-Middle (50)	1900 (19100)	24.46	23.56	22.60
		1880 (18900)	24.42	23.62	22.64
		1860 (18700)	24.43	23.41	22.56
	1RB-Low (0)	1900 (19100)	24.42	23.63	22.61
		1880 (18900)	24.37	23.60	22.56
		1860 (18700)	24.39	23.54	22.62
	50RB-High (50)	1900 (19100)	23.40	22.54	21.54
		1880 (18900)	23.40	22.53	21.52
		1860 (18700)	23.33	22.46	21.47
	50RB-Middle (25)	1900 (19100)	23.43	22.61	21.56
		1880 (18900)	23.40	22.54	21.49
		1860 (18700)	23.37	22.48	21.50
	50RB-Low (0)	1900 (19100)	23.49	22.64	21.63
		1880 (18900)	23.44	22.58	21.56
		1860 (18700)	23.41	22.38	21.40
	100RB (0)	1900 (19100)	23.45	22.56	21.57
		1880 (18900)	23.40	22.53	21.49
		1860 (18700)	23.25	22.39	21.43

LTE B2 ANT1-Power Level B1/C1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3 (19193)	20.22	20.44	20.53
		1880 (18900)	20.38	20.61	20.43
		1850.7 (18607)	20.15	20.50	20.52
	1RB-Middle (3)	1909.3 (19193)	20.42	20.75	20.61
		1880 (18900)	20.27	20.75	20.53
		1850.7 (18607)	20.33	20.36	20.50
	1RB-Low (0)	1909.3 (19193)	20.46	20.48	20.41
		1880 (18900)	20.29	20.31	20.35
		1850.7 (18607)	20.22	20.66	20.43
	3RB-High (3)	1909.3 (19193)	20.48	20.52	20.41
		1880 (18900)	20.54	20.45	20.42
		1850.7 (18607)	20.22	20.32	20.16
	3RB-Middle (1)	1909.3 (19193)	20.44	20.54	20.39
		1880 (18900)	20.36	20.41	20.26
		1850.7 (18607)	20.25	20.27	20.29
	3RB-Low (0)	1909.3 (19193)	20.58	20.63	20.62
		1880 (18900)	20.25	20.43	20.22
		1850.7 (18607)	20.26	20.19	20.25
	6RB (0)	1909.3 (19193)	20.46	20.59	20.46
		1880 (18900)	20.32	20.44	20.36
		1850.7 (18607)	20.10	20.32	20.20
3MHz	1RB-High (14)	1908.5 (19185)	20.39	20.51	20.49
		1880 (18900)	20.35	20.51	20.33
		1851.5 (18615)	20.18	20.46	20.38
	1RB-Middle (7)	1908.5 (19185)	20.33	20.65	20.53
		1880 (18900)	20.46	20.65	20.46
		1851.5 (18615)	20.39	20.41	20.58
	1RB-Low (0)	1908.5 (19185)	20.35	20.71	20.49
		1880 (18900)	20.21	20.47	20.46
		1851.5 (18615)	20.40	20.64	20.38
	8RB-High (7)	1908.5 (19185)	20.56	20.55	20.53
		1880 (18900)	20.53	20.40	20.41
		1851.5 (18615)	20.14	20.24	20.32
	8RB-Middle (4)	1908.5 (19185)	20.40	20.34	20.34
		1880 (18900)	20.32	20.32	20.34
		1851.5 (18615)	20.29	20.29	20.32
	8RB-Low (0)	1908.5 (19185)	20.65	20.49	20.53
		1880 (18900)	20.34	20.31	20.31
		1851.5 (18615)	20.19	20.29	20.22
	15RB (0)	1908.5 (19185)	20.54	20.49	20.46
		1880 (18900)	20.34	20.38	20.41
		1851.5 (18615)	20.18	20.34	20.34

5MHz	1RB-High (24)	1907.5 (19175)	20.29	20.52	20.46	
		1880 (18900)	20.34	20.66	20.38	
		1852.5 (18625)	20.18	20.54	20.53	
	1RB-Middle (12)	1907.5 (19175)	20.29	20.62	20.63	
		1880 (18900)	20.43	20.59	20.54	
		1852.5 (18625)	20.22	20.46	20.50	
	1RB-Low (0)	1907.5 (19175)	20.39	20.70	20.55	
		1880 (18900)	20.33	20.32	20.44	
		1852.5 (18625)	20.42	20.59	20.35	
	12RB-High (13)	1907.5 (19175)	20.59	20.65	20.62	
		1880 (18900)	20.45	20.55	20.53	
		1852.5 (18625)	20.24	20.14	20.24	
	12RB-Middle (6)	1907.5 (19175)	20.51	20.33	20.52	
		1880 (18900)	20.30	20.31	20.42	
		1852.5 (18625)	20.30	20.30	20.35	
	12RB-Low (0)	1907.5 (19175)	20.62	20.69	20.66	
		1880 (18900)	20.45	20.41	20.40	
		1852.5 (18625)	20.16	20.27	20.39	
	25RB (0)	1907.5 (19175)	20.54	20.58	20.50	
		1880 (18900)	20.49	20.49	20.42	
		1852.5 (18625)	20.34	20.17	20.17	
	10MHz	1RB-High (49)	1905 (19150)	20.28	20.47	20.62
			1880 (18900)	20.30	20.65	20.25
			1855 (18650)	20.20	20.43	20.36
1RB-Middle (24)		1905 (19150)	20.36	20.74	20.63	
		1880 (18900)	20.43	20.66	20.62	
		1855 (18650)	20.44	20.35	20.52	
1RB-Low (0)		1905 (19150)	20.43	20.65	20.48	
		1880 (18900)	20.13	20.27	20.30	
		1855 (18650)	20.30	20.59	20.35	
25RB-High (25)		1905 (19150)	20.50	20.54	20.40	
		1880 (18900)	20.52	20.36	20.51	
		1855 (18650)	20.29	20.16	20.29	
25RB-Middle (12)		1905 (19150)	20.53	20.50	20.46	
		1880 (18900)	20.37	20.30	20.26	
		1855 (18650)	20.36	20.44	20.46	
25RB-Low (0)		1905 (19150)	20.62	20.55	20.49	
		1880 (18900)	20.33	20.45	20.31	
		1855 (18650)	20.34	20.20	20.39	
50RB (0)		1905 (19150)	20.67	20.49	20.62	
		1880 (18900)	20.45	20.45	20.32	
		1855 (18650)	20.33	20.33	20.13	

15MHz	1RB-High (74)	1902.5 (19125)	20.18	20.41	20.39
		1880 (18900)	20.31	20.52	20.49
		1857.5 (18675)	20.21	20.56	20.38
	1RB-Middle (37)	1902.5 (19125)	20.49	20.55	20.57
		1880 (18900)	20.32	20.51	20.43
		1857.5 (18675)	20.46	20.42	20.59
	1RB-Low (0)	1902.5 (19125)	20.36	20.49	20.36
		1880 (18900)	20.21	20.38	20.30
		1857.5 (18675)	20.44	20.72	20.43
	36RB-High (38)	1902.5 (19125)	20.44	20.62	20.63
		1880 (18900)	20.46	20.37	20.43
		1857.5 (18675)	20.33	20.13	20.19
	36RB-Middle (19)	1902.5 (19125)	20.37	20.36	20.49
		1880 (18900)	20.29	20.31	20.44
		1857.5 (18675)	20.32	20.39	20.37
	36RB-Low (0)	1902.5 (19125)	20.68	20.61	20.71
		1880 (18900)	20.33	20.41	20.26
		1857.5 (18675)	20.37	20.22	20.27
	75RB (0)	1902.5 (19125)	20.57	20.51	20.43
		1880 (18900)	20.36	20.32	20.47
		1857.5 (18675)	20.10	20.19	20.13
20MHz	1RB-High (99)	1900 (19100)	20.36	20.59	20.57
		1880 (18900)	20.38	20.66	20.45
		1860 (18700)	20.29	20.58	20.48
	1RB-Middle (50)	1900 (19100)	20.45	20.70	20.61
		1880 (18900)	20.44	20.71	20.58
		1860 (18700)	20.41	20.55	20.59
	1RB-Low (0)	1900 (19100)	20.43	20.66	20.56
		1880 (18900)	20.30	20.47	20.47
		1860 (18700)	20.40	20.68	20.47
	50RB-High (50)	1900 (19100)	20.63	20.60	20.58
		1880 (18900)	20.51	20.53	20.51
		1860 (18700)	20.32	20.32	20.33
	50RB-Middle (25)	1900 (19100)	20.51	20.50	20.54
		1880 (18900)	20.46	20.45	20.39
		1860 (18700)	20.42	20.40	20.47
	50RB-Low (0)	1900 (19100)	20.65	20.68	20.67
		1880 (18900)	20.40	20.47	20.42
		1860 (18700)	20.32	20.30	20.35
	100RB (0)	1900 (19100)	20.64	20.65	20.62
		1880 (18900)	20.45	20.47	20.44
		1860 (18700)	20.29	20.29	20.31

LTE B2 ANT1-Power Level B2/C2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3 (19193)	19.75	20.05	19.82
		1880 (18900)	19.91	19.96	19.89
		1850.7 (18607)	19.88	19.99	19.93
	1RB-Middle (3)	1909.3 (19193)	19.92	20.06	19.94
		1880 (18900)	19.90	20.25	20.18
		1850.7 (18607)	19.98	20.07	19.94
	1RB-Low (0)	1909.3 (19193)	19.73	20.05	19.99
		1880 (18900)	19.87	20.08	20.06
		1850.7 (18607)	19.78	20.02	19.90
	3RB-High (3)	1909.3 (19193)	19.95	20.01	19.93
		1880 (18900)	19.96	19.99	19.85
		1850.7 (18607)	19.83	19.75	19.79
	3RB-Middle (1)	1909.3 (19193)	20.00	19.97	19.98
		1880 (18900)	19.96	19.88	19.90
		1850.7 (18607)	19.97	19.89	19.89
	3RB-Low (0)	1909.3 (19193)	20.03	20.04	20.02
		1880 (18900)	19.94	19.92	20.01
		1850.7 (18607)	19.89	19.74	19.84
	6RB (0)	1909.3 (19193)	19.97	19.95	20.03
		1880 (18900)	19.96	19.87	19.99
		1850.7 (18607)	19.72	19.84	19.85
3MHz	1RB-High (14)	1908.5 (19185)	19.70	19.96	19.86
		1880 (18900)	19.74	20.09	19.92
		1851.5 (18615)	19.94	20.02	19.86
	1RB-Middle (7)	1908.5 (19185)	19.92	20.10	19.95
		1880 (18900)	20.02	20.26	20.13
		1851.5 (18615)	19.97	20.01	19.78
	1RB-Low (0)	1908.5 (19185)	19.79	20.20	20.03
		1880 (18900)	19.88	20.08	19.96
		1851.5 (18615)	19.81	20.15	19.84
	8RB-High (7)	1908.5 (19185)	19.99	19.93	20.00
		1880 (18900)	19.94	20.03	19.94
		1851.5 (18615)	19.81	19.80	19.82
	8RB-Middle (4)	1908.5 (19185)	19.90	19.96	19.86
		1880 (18900)	19.80	19.96	19.88
		1851.5 (18615)	19.91	19.94	19.95
	8RB-Low (0)	1908.5 (19185)	19.95	20.05	20.08
		1880 (18900)	19.83	19.90	20.02
		1851.5 (18615)	19.87	19.75	19.81
	15RB (0)	1908.5 (19185)	19.92	20.05	20.08
		1880 (18900)	19.90	19.95	19.97
		1851.5 (18615)	19.69	19.74	19.80

5MHz	1RB-High (24)	1907.5 (19175)	19.87	19.93	19.81	
		1880 (18900)	19.86	20.07	19.84	
		1852.5 (18625)	19.96	20.14	19.97	
	1RB-Middle (12)	1907.5 (19175)	19.90	20.06	20.01	
		1880 (18900)	19.87	20.06	20.15	
		1852.5 (18625)	19.97	20.21	19.81	
	1RB-Low (0)	1907.5 (19175)	19.86	20.18	20.02	
		1880 (18900)	19.94	19.94	20.00	
		1852.5 (18625)	19.88	20.02	19.95	
	12RB-High (13)	1907.5 (19175)	19.94	19.87	19.95	
		1880 (18900)	19.88	20.05	20.03	
		1852.5 (18625)	19.71	19.73	19.80	
	12RB-Middle (6)	1907.5 (19175)	19.88	19.97	19.88	
		1880 (18900)	19.85	19.99	19.86	
		1852.5 (18625)	19.97	19.86	19.82	
	12RB-Low (0)	1907.5 (19175)	20.15	20.09	20.18	
		1880 (18900)	19.91	19.98	20.00	
		1852.5 (18625)	19.78	19.75	19.87	
	25RB (0)	1907.5 (19175)	20.06	20.04	19.93	
		1880 (18900)	19.83	19.95	19.83	
		1852.5 (18625)	19.74	19.66	19.72	
	10MHz	1RB-High (49)	1905 (19150)	19.73	20.00	19.79
			1880 (18900)	19.77	20.07	19.80
			1855 (18650)	19.95	20.18	20.03
1RB-Middle (24)		1905 (19150)	19.88	20.09	19.97	
		1880 (18900)	19.89	20.22	20.12	
		1855 (18650)	19.90	20.05	19.84	
1RB-Low (0)		1905 (19150)	19.69	20.13	19.97	
		1880 (18900)	19.82	20.08	20.01	
		1855 (18650)	19.80	20.08	19.92	
25RB-High (25)		1905 (19150)	20.02	19.98	19.91	
		1880 (18900)	19.84	19.96	20.02	
		1855 (18650)	19.86	19.87	19.78	
25RB-Middle (12)		1905 (19150)	19.98	19.91	19.88	
		1880 (18900)	19.99	19.94	19.96	
		1855 (18650)	19.86	19.92	19.90	
25RB-Low (0)		1905 (19150)	20.13	20.14	20.05	
		1880 (18900)	20.00	20.00	20.05	
		1855 (18650)	19.82	19.68	19.68	
50RB (0)		1905 (19150)	20.09	19.96	19.96	
		1880 (18900)	19.86	19.87	19.95	
		1855 (18650)	19.81	19.73	19.79	

15MHz	1RB-High (74)	1902.5 (19125)	19.85	20.07	19.98	
		1880 (18900)	19.91	19.95	19.86	
		1857.5 (18675)	19.88	20.16	19.90	
	1RB-Middle (37)	1902.5 (19125)	19.96	20.16	20.05	
		1880 (18900)	19.88	20.11	20.07	
		1857.5 (18675)	19.95	20.15	19.79	
	1RB-Low (0)	1902.5 (19125)	19.76	20.14	20.06	
		1880 (18900)	19.88	20.12	20.00	
		1857.5 (18675)	19.80	20.04	19.98	
	36RB-High (38)	1902.5 (19125)	19.90	19.95	19.94	
		1880 (18900)	19.87	20.05	19.96	
		1857.5 (18675)	19.90	19.86	19.88	
	36RB-Middle (19)	1902.5 (19125)	19.91	19.99	20.02	
		1880 (18900)	19.97	19.94	19.84	
		1857.5 (18675)	19.98	19.76	19.79	
	36RB-Low (0)	1902.5 (19125)	20.08	20.14	20.14	
		1880 (18900)	19.98	20.00	19.99	
		1857.5 (18675)	19.78	19.76	19.68	
	75RB (0)	1902.5 (19125)	20.00	20.07	20.12	
		1880 (18900)	19.84	19.96	19.80	
		1857.5 (18675)	19.76	19.83	19.76	
	20MHz	1RB-High (99)	1900 (19100)	19.82	20.03	19.94
			1880 (18900)	19.86	20.07	19.94
			1860 (18700)	19.92	20.13	19.99
1RB-Middle (50)		1900 (19100)	19.99	20.21	20.09	
		1880 (18900)	19.98	20.21	20.14	
		1860 (18700)	19.96	20.16	19.93	
1RB-Low (0)		1900 (19100)	19.84	20.19	20.05	
		1880 (18900)	19.89	20.07	20.02	
		1860 (18700)	19.87	20.12	19.95	
50RB-High (50)		1900 (19100)	20.03	20.02	20.02	
		1880 (18900)	19.98	20.01	19.98	
		1860 (18700)	19.86	19.88	19.85	
50RB-Middle (25)		1900 (19100)	19.98	20.01	20.00	
		1880 (18900)	19.95	19.94	19.93	
		1860 (18700)	19.95	19.91	19.93	
50RB-Low (0)		1900 (19100)	20.10	20.12	20.13	
		1880 (18900)	19.96	19.99	20.00	
		1860 (18700)	19.84	19.83	19.83	
100RB (0)		1900 (19100)	20.07	20.05	20.08	
		1880 (18900)	19.92	19.94	19.95	
		1860 (18700)	19.83	19.81	19.84	

LTE B5-Power Level A1/B1/C1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	848.3 (20643)	23.88	23.11	22.15
		836.5 (20525)	23.90	23.15	22.17
		824.7 (20407)	24.01	23.22	22.28
	1RB-Middle (3)	848.3 (20643)	23.89	23.07	22.15
		836.5 (20525)	23.91	23.15	22.21
		824.7 (20407)	24.02	23.12	22.25
	1RB-Low (0)	848.3 (20643)	23.87	22.95	22.10
		836.5 (20525)	23.95	23.13	22.18
		824.7 (20407)	24.00	23.12	22.28
	3RB-High (3)	848.3 (20643)	23.89	22.94	22.09
		836.5 (20525)	23.91	22.82	22.12
		824.7 (20407)	24.04	22.98	22.20
	3RB-Middle (1)	848.3 (20643)	23.90	22.91	22.11
		836.5 (20525)	23.92	22.91	22.10
		824.7 (20407)	24.02	22.93	22.25
	3RB-Low (0)	848.3 (20643)	23.89	22.86	22.07
		836.5 (20525)	23.92	22.90	22.20
		824.7 (20407)	23.99	23.02	22.24
	6RB (0)	848.3 (20643)	22.87	22.12	20.96
		836.5 (20525)	22.93	22.14	20.99
		824.7 (20407)	23.00	22.27	21.03
3MHz	1RB-High (14)	847.5 (20635)	23.87	23.02	22.17
		836.5 (20525)	23.85	23.06	22.15
		825.5 (20415)	23.92	23.15	22.26
	1RB-Middle (7)	847.5 (20635)	23.82	22.96	22.11
		836.5 (20525)	23.94	23.13	22.28
		825.5 (20415)	24.02	23.29	22.33
	1RB-Low (0)	847.5 (20635)	23.77	22.98	22.10
		836.5 (20525)	23.88	23.05	22.25
		825.5 (20415)	23.97	23.23	22.24
	8RB-High (7)	847.5 (20635)	22.85	22.05	21.00
		836.5 (20525)	22.83	22.11	21.07
		825.5 (20415)	22.96	22.20	21.14
	8RB-Middle (4)	847.5 (20635)	22.82	22.03	21.01
		836.5 (20525)	22.87	22.13	21.09
		825.5 (20415)	22.96	22.19	21.15
	8RB-Low (0)	847.5 (20635)	22.82	22.01	20.98
		836.5 (20525)	22.81	22.06	21.05
		825.5 (20415)	22.99	22.18	21.17
	15RB (0)	847.5 (20635)	22.80	22.05	20.93
		836.5 (20525)	22.85	22.07	21.03
		825.5 (20415)	22.97	22.17	21.09

5MHz	1RB-High (24)	846.5 (20625)	23.87	22.98	22.10	
		836.5 (20525)	23.84	23.01	22.09	
		826.5 (20425)	23.99	23.16	22.21	
	1RB-Middle (12)	846.5 (20625)	23.82	23.01	22.12	
		836.5 (20525)	23.93	23.04	22.16	
		826.5 (20425)	24.07	23.25	22.36	
	1RB-Low (0)	846.5 (20625)	23.82	23.03	22.15	
		836.5 (20525)	23.96	23.16	22.24	
		826.5 (20425)	23.99	23.10	22.30	
	12RB-High (13)	846.5 (20625)	22.79	21.94	20.97	
		836.5 (20525)	22.85	21.99	21.06	
		826.5 (20425)	22.93	22.07	21.07	
	12RB-Middle (6)	846.5 (20625)	22.86	21.97	21.02	
		836.5 (20525)	22.90	22.04	21.05	
		826.5 (20425)	22.99	22.09	21.13	
	12RB-Low (0)	846.5 (20625)	22.86	22.06	21.04	
		836.5 (20525)	22.87	22.07	21.08	
		826.5 (20425)	23.00	22.19	21.19	
	25RB (0)	846.5 (20625)	22.85	22.01	21.00	
		836.5 (20525)	22.84	22.07	21.06	
		826.5 (20425)	22.97	22.16	21.12	
	10MHz	1RB-High (49)	844 (20600)	24.26	23.42	22.55
			836.5 (20525)	24.41	23.49	22.63
			829 (20450)	24.43	23.45	22.56
1RB-Middle (24)		844 (20600)	24.42	23.59	22.49	
		836.5 (20525)	24.52	23.65	22.70	
		829 (20450)	24.55	23.77	22.70	
1RB-Low (0)		844 (20600)	24.48	23.68	22.66	
		836.5 (20525)	24.62	23.70	22.78	
		829 (20450)	24.63	23.92	22.85	
25RB-High (25)		844 (20600)	23.31	22.29	21.44	
		836.5 (20525)	23.39	22.57	21.55	
		829 (20450)	23.51	22.67	21.63	
25RB-Middle (12)		844 (20600)	23.39	22.41	21.52	
		836.5 (20525)	23.42	22.59	21.58	
		829 (20450)	23.49	22.66	21.62	
25RB-Low (0)		844 (20600)	23.35	22.52	21.51	
		836.5 (20525)	23.41	22.59	21.56	
		829 (20450)	23.52	22.73	21.67	
50RB (0)		844 (20600)	23.36	22.34	21.49	
		836.5 (20525)	23.41	22.57	21.56	
		829 (20450)	23.57	22.66	21.64	

LTE B12-Power Level A1/B1/C1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	715.3	23.99	23.35	22.29
		707.5	24.16	23.50	22.38
		699.7	24.10	23.44	22.40
	1RB-Middle (3)	715.3	23.99	23.37	22.30
		707.5	24.14	23.44	22.34
		699.7	24.18	23.48	22.40
	1RB-Low (0)	715.3	24.02	23.34	22.33
		707.5	24.15	23.40	22.42
		699.7	24.11	23.46	22.41
	3RB-High (3)	715.3	24.00	23.23	22.24
		707.5	24.14	23.27	22.36
		699.7	24.15	23.30	22.38
	3RB-Middle (1)	715.3	24.02	23.23	22.27
		707.5	24.10	23.28	22.31
		699.7	24.18	23.29	22.38
	3RB-Low (0)	715.3	24.03	23.26	22.29
		707.5	24.14	23.32	22.34
		699.7	24.14	23.35	22.43
	6RB (0)	715.3	23.21	22.26	21.16
		707.5	23.29	22.28	21.24
		699.7	23.28	22.38	21.22
3MHz	1RB-High (14)	714.5	23.97	23.33	22.27
		707.5	24.14	23.55	22.37
		700.5	24.07	23.44	22.49
	1RB-Middle (7)	714.5	24.04	23.37	22.32
		707.5	24.17	23.51	22.46
		700.5	24.25	23.44	22.47
	1RB-Low (0)	714.5	24.06	23.46	22.32
		707.5	24.09	23.52	22.41
		700.5	24.10	23.40	22.43
	8RB-High (7)	714.5	23.15	22.20	21.17
		707.5	23.23	22.33	21.27
		700.5	23.32	22.31	21.29
	8RB-Middle (4)	714.5	23.17	22.26	21.17
		707.5	23.28	22.36	21.27
		700.5	23.29	22.34	21.29
	8RB-Low (0)	714.5	23.24	22.26	21.26
		707.5	23.26	22.33	21.32
		700.5	23.30	22.37	21.30
	15RB (0)	714.5	23.17	22.21	21.14
		707.5	23.20	22.28	21.23
		700.5	23.27	22.29	21.28

5MHz	1RB-High (24)	713.5	24.03	23.35	22.24	
		707.5	24.13	23.55	22.39	
		701.5	24.18	23.60	22.44	
	1RB-Middle (12)	713.5	24.11	23.42	22.38	
		707.5	24.17	23.59	22.44	
		701.5	24.19	23.49	22.46	
	1RB-Low (0)	713.5	24.14	23.53	22.42	
		707.5	24.18	23.45	22.39	
		701.5	24.19	23.60	22.44	
	12RB-High (13)	713.5	23.16	22.12	21.19	
		707.5	23.25	22.22	21.27	
		701.5	23.27	22.25	21.27	
	12RB-Middle (6)	713.5	23.22	22.23	21.24	
		707.5	23.28	22.29	21.29	
		701.5	23.33	22.29	21.29	
	12RB-Low (0)	713.5	23.31	22.28	21.32	
		707.5	23.26	22.26	21.26	
		701.5	23.34	22.31	21.28	
	25RB (0)	713.5	23.26	22.27	21.23	
		707.5	23.27	22.31	21.26	
		701.5	23.31	22.34	21.30	
	10MHz	1RB-High (49)	711	24.17	23.42	22.36
			707.5	24.23	23.54	22.38
			704	24.23	23.52	22.49
1RB-Middle (24)		711	24.24	23.64	22.53	
		707.5	24.30	23.55	22.45	
		704	24.22	23.63	22.49	
1RB-Low (0)		711	24.25	23.53	22.47	
		707.5	24.29	23.57	22.48	
		704	24.33	23.60	22.45	
25RB-High (25)		711	23.29	22.29	21.28	
		707.5	23.32	22.34	21.30	
		704	23.41	22.42	21.28	
25RB-Middle (12)		711	23.36	22.34	21.35	
		707.5	23.34	22.37	21.40	
		704	23.36	22.35	21.26	
25RB-Low (0)		711	23.38	22.37	21.40	
		707.5	23.36	22.38	21.39	
		704	23.39	22.44	21.33	
50RB (0)		711	23.34	22.30	21.37	
		707.5	23.39	22.36	21.38	
		704	23.43	22.41	21.43	

LTE B14-Power Level A1/B1/C1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	795.5 (23355)	24.03	23.16	22.27
		793 (23330)	24.04	23.18	22.32
		790.5 (23305)	24.12	23.23	22.44
	1RB-Middle (12)	795.5 (23355)	24.07	23.31	22.42
		793 (23330)	24.11	23.28	22.43
		790.5 (23305)	24.21	23.41	22.52
	1RB-Low (0)	795.5 (23355)	24.10	23.33	22.39
		793 (23330)	24.21	23.40	22.55
		790.5 (23305)	24.16	23.25	22.44
	12RB-High (13)	795.5 (23355)	23.03	22.18	21.18
		793 (23330)	23.05	22.20	21.21
		790.5 (23305)	23.09	22.24	21.27
	12RB-Middle (6)	795.5 (23355)	23.08	22.26	21.22
		793 (23330)	23.11	22.27	21.24
		790.5 (23305)	23.13	22.28	21.32
	12RB-Low (0)	795.5 (23355)	23.06	22.25	21.23
		793 (23330)	23.14	22.28	21.31
		790.5 (23305)	23.20	22.33	21.36
	25RB (0)	795.5 (23355)	23.05	22.26	21.20
		793 (23330)	23.09	22.29	21.25
		790.5 (23305)	23.17	22.30	21.30
10MHz	1RB-High (49)	793 (23330)	24.64	23.73	22.88
	1RB-Middle (24)	793 (23330)	24.84	23.90	22.95
	1RB-Low (0)	793 (23330)	24.80	24.00	22.97
	25RB-High (25)	793 (23330)	23.62	22.73	21.76
	25RB-Middle (12)	793 (23330)	23.72	22.85	21.87
	25RB-Low (0)	793 (23330)	23.70	22.88	21.82
	50RB (0)	793 (23330)	23.71	22.85	21.86

LTE B30-Power Level A1/C1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2312.5 (27735)	18.50	18.82	18.63
		2310 (27710)	18.83	18.87	18.85
		2307.5 (27685)	18.76	18.83	18.89
	1RB-Middle (12)	2312.5 (27735)	18.49	18.51	18.42
		2310 (27710)	18.71	18.69	18.62
		2307.5 (27685)	18.61	18.60	18.62
	1RB-Low (0)	2312.5 (27735)	18.53	18.63	18.61
		2310 (27710)	18.59	18.80	18.76
		2307.5 (27685)	18.74	18.83	18.79
	12RB-High (13)	2312.5 (27735)	18.80	18.93	18.84
		2310 (27710)	18.45	18.50	18.49
		2307.5 (27685)	18.62	18.63	18.75
	12RB-Middle (6)	2312.5 (27735)	18.58	18.57	18.59
		2310 (27710)	18.59	18.63	18.61
		2307.5 (27685)	18.49	18.79	18.60
	12RB-Low (0)	2312.5 (27735)	18.76	18.90	18.86
		2310 (27710)	18.82	18.83	18.81
		2307.5 (27685)	18.48	18.49	18.52
	25RB (0)	2312.5 (27735)	18.69	18.69	18.72
		2310 (27710)	18.64	18.55	18.49
		2307.5 (27685)	18.57	18.59	18.47
10MHz	1RB-High (49)	2310 (27710)	18.57	18.88	18.75
	1RB-Middle (24)	2310 (27710)	18.81	18.98	18.90
	1RB-Low (0)	2310 (27710)	18.88	18.95	18.95
	25RB-High (25)	2310 (27710)	18.51	18.55	18.56
	25RB-Middle (12)	2310 (27710)	18.75	18.72	18.75
	25RB-Low (0)	2310 (27710)	18.66	18.67	18.64
	50RB (0)	2310 (27710)	18.59	18.61	18.60

LTE B30-Power Level B1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2312.5 (27735)	23.29	22.42	21.38
		2310 (27710)	23.28	22.43	21.44
		2307.5 (27685)	23.35	22.51	21.42
	1RB-Middle (12)	2312.5 (27735)	23.30	22.49	21.33
		2310 (27710)	23.32	22.61	21.48
		2307.5 (27685)	23.38	22.50	21.49
	1RB-Low (0)	2312.5 (27735)	23.34	22.57	21.46
		2310 (27710)	23.41	22.59	21.54
		2307.5 (27685)	23.42	22.70	21.56
	12RB-High (13)	2312.5 (27735)	22.16	21.18	20.15
		2310 (27710)	22.19	21.20	20.21
		2307.5 (27685)	22.28	21.26	20.30
	12RB-Middle (6)	2312.5 (27735)	22.20	21.21	20.18
		2310 (27710)	22.25	21.28	20.29
		2307.5 (27685)	22.25	21.27	20.30
	12RB-Low (0)	2312.5 (27735)	22.24	21.22	20.26
		2310 (27710)	22.28	21.30	20.31
		2307.5 (27685)	22.25	21.32	20.30
	25RB (0)	2312.5 (27735)	22.20	21.22	20.21
		2310 (27710)	22.23	21.25	20.27
		2307.5 (27685)	22.28	21.32	20.29
10MHz	1RB-High (49)	2310 (27710)	23.14	22.47	21.35
	1RB-Middle (24)	2310 (27710)	23.25	22.57	21.36
	1RB-Low (0)	2310 (27710)	23.37	22.62	21.46
	25RB-High (25)	2310 (27710)	22.05	21.09	20.08
	25RB-Middle (12)	2310 (27710)	22.14	21.22	20.27
	25RB-Low (0)	2310 (27710)	22.08	21.09	20.13
	50RB (0)	2310 (27710)	22.07	21.07	20.09

LTE B30-Power Level A2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2312.5 (27735)	14.77	15.07	14.83
		2310 (27710)	14.91	15.21	14.85
		2307.5 (27685)	14.89	15.22	15.04
	1RB-Middle (12)	2312.5 (27735)	14.79	14.83	14.85
		2310 (27710)	14.90	14.88	14.85
		2307.5 (27685)	14.92	14.84	14.92
	1RB-Low (0)	2312.5 (27735)	14.78	14.81	14.87
		2310 (27710)	14.87	15.14	14.90
		2307.5 (27685)	14.85	15.20	14.97
	12RB-High (13)	2312.5 (27735)	14.81	15.20	14.94
		2310 (27710)	14.85	14.87	14.72
		2307.5 (27685)	14.92	14.88	14.92
	12RB-Middle (6)	2312.5 (27735)	14.82	14.88	14.88
		2310 (27710)	14.76	14.85	14.81
		2307.5 (27685)	14.68	15.00	14.84
	12RB-Low (0)	2312.5 (27735)	14.77	15.15	15.00
		2310 (27710)	14.85	15.12	15.05
		2307.5 (27685)	14.88	14.71	14.86
	25RB (0)	2312.5 (27735)	14.91	14.81	14.80
		2310 (27710)	14.87	14.82	14.73
		2307.5 (27685)	14.76	14.90	14.72
10MHz	1RB-High (49)	2310 (27710)	14.82	15.09	14.90
	1RB-Middle (24)	2310 (27710)	14.90	15.23	15.00
	1RB-Low (0)	2310 (27710)	14.93	15.27	15.01
	25RB-High (25)	2310 (27710)	14.83	14.83	14.85
	25RB-Middle (12)	2310 (27710)	14.89	14.90	14.90
	25RB-Low (0)	2310 (27710)	14.88	14.87	14.87
	50RB (0)	2310 (27710)	14.90	14.88	14.85

LTE B48-Power Level A1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	3697.5(56715)	19.18	19.17	18.69
		3625(55990)	19.17	19.13	18.68
		3552.5(55265)	18.81	18.94	18.49
	1RB-Middle (12)	3697.5(56715)	19.21	19.19	18.69
		3625(55990)	19.18	19.30	18.81
		3552.5(55265)	19.05	18.96	18.72
	1RB-Low (0)	3697.5(56715)	19.00	19.09	18.75
		3625(55990)	19.07	19.15	18.76
		3552.5(55265)	19.09	19.07	18.70
	12RB-High (13)	3697.5(56715)	19.02	19.11	19.09
		3625(55990)	19.25	19.23	19.31
		3552.5(55265)	19.03	18.88	18.95
	12RB-Middle (6)	3697.5(56715)	19.09	19.18	19.13
		3625(55990)	19.22	19.24	19.32
		3552.5(55265)	18.99	19.09	19.14
	12RB-Low (0)	3697.5(56715)	19.13	19.28	19.09
		3625(55990)	19.19	19.15	19.22
		3552.5(55265)	19.01	19.20	19.09
	25RB (0)	3697.5(56715)	19.19	19.16	19.16
		3625(55990)	19.21	19.25	19.16
		3552.5(55265)	19.11	19.05	19.01
10MHz	1RB-High (49)	3695(56690)	19.04	19.13	18.73
		3625(55990)	19.13	19.11	18.82
		3555(55290)	18.88	18.84	18.58
	1RB-Middle (24)	3695(56690)	19.09	19.20	18.83
		3625(55990)	19.19	19.21	18.84
		3555(55290)	19.06	19.06	18.58
	1RB-Low (0)	3695(56690)	18.98	18.98	18.69
		3625(55990)	19.10	19.14	18.73
		3555(55290)	18.97	18.98	18.76
	25RB-High (25)	3695(56690)	19.10	19.11	19.08
		3625(55990)	19.29	19.19	19.31
		3555(55290)	18.90	19.07	19.07
	25RB-Middle (12)	3695(56690)	19.19	19.10	19.17
		3625(55990)	19.18	19.29	19.22
		3555(55290)	19.00	19.14	18.99
	25RB-Low (0)	3695(56690)	19.17	19.10	19.23
		3625(55990)	19.32	19.18	19.22
		3555(55290)	19.07	19.18	19.03
	50RB (0)	3695(56690)	19.22	19.12	19.14
		3625(55990)	19.14	19.26	19.22
		3555(55290)	18.96	19.02	19.05

15MHz	1RB-High (74)	3692.5(56665)	19.10	19.21	18.81	
		3625(55990)	19.16	19.22	18.71	
		3557.5(55315)	18.89	18.89	18.58	
	1RB-Middle (37)	3692.5(56665)	19.08	19.17	18.82	
		3625(55990)	19.16	19.36	18.84	
		3557.5(55315)	18.99	19.14	18.64	
	1RB-Low (0)	3692.5(56665)	19.07	18.98	18.60	
		3625(55990)	19.10	19.18	18.78	
		3557.5(55315)	19.15	18.97	18.71	
	36RB-High (38)	3692.5(56665)	19.01	19.25	19.04	
		3625(55990)	19.13	19.30	19.21	
		3557.5(55315)	18.91	19.05	18.88	
	36RB-Middle (19)	3692.5(56665)	19.08	19.28	19.17	
		3625(55990)	19.21	19.27	19.34	
		3557.5(55315)	19.14	19.15	19.01	
	36RB-Low (0)	3692.5(56665)	19.21	19.16	19.15	
		3625(55990)	19.18	19.22	19.21	
		3557.5(55315)	19.02	19.25	19.13	
	75RB (0)	3692.5(56665)	19.17	19.21	19.21	
		3625(55990)	19.25	19.26	19.11	
		3557.5(55315)	18.95	19.04	19.08	
	20MHz	1RB-High (99)	3690(56640)	19.16	19.20	18.80
			3625(55990)	19.19	19.19	18.83
			3560(55340)	18.90	18.96	18.57
1RB-Middle (50)		3690(56640)	19.16	19.20	18.81	
		3625(55990)	19.30	19.31	18.93	
		3560(55340)	19.08	19.11	18.72	
1RB-Low (0)		3690(56640)	19.09	19.10	18.73	
		3625(55990)	19.17	19.22	18.82	
		3560(55340)	19.10	19.12	18.73	
50RB-High (50)		3690(56640)	19.16	19.22	19.19	
		3625(55990)	19.28	19.27	19.26	
		3560(55340)	19.03	19.02	19.03	
50RB-Middle (25)		3690(56640)	19.18	19.25	19.17	
		3625(55990)	19.31	19.35	19.32	
		3560(55340)	19.12	19.16	19.11	
50RB-Low (0)		3690(56640)	19.18	19.23	19.20	
		3625(55990)	19.28	19.28	19.25	
		3560(55340)	19.13	19.21	19.11	
100RB (0)		3690(56640)	19.17	19.18	19.18	
		3625(55990)	19.27	19.26	19.25	
		3560(55340)	19.10	19.09	19.09	

LTE B48-Power Level B1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	3697.5(56715)	23.04	22.26	21.23
		3625(55990)	23.63	22.64	21.19
		3552.5(55265)	23.09	22.11	21.27
	1RB-Middle (12)	3697.5(56715)	23.05	22.34	21.05
		3625(55990)	23.77	22.70	21.36
		3552.5(55265)	23.11	22.25	21.18
	1RB-Low (0)	3697.5(56715)	23.35	22.17	21.12
		3625(55990)	23.70	22.70	21.26
		3552.5(55265)	23.31	22.27	21.05
	12RB-High (13)	3697.5(56715)	22.22	21.10	20.30
		3625(55990)	22.73	21.56	20.46
		3552.5(55265)	22.46	21.59	20.48
	12RB-Middle (6)	3697.5(56715)	22.41	21.29	20.59
		3625(55990)	22.57	21.83	20.64
		3552.5(55265)	22.30	21.55	20.69
	12RB-Low (0)	3697.5(56715)	22.35	21.27	20.40
		3625(55990)	22.63	21.62	20.63
		3552.5(55265)	22.30	21.54	20.57
	25RB (0)	3697.5(56715)	22.20	21.37	20.30
		3625(55990)	22.74	21.78	20.76
		3552.5(55265)	22.18	21.57	20.42
10MHz	1RB-High (49)	3695(56690)	23.21	22.16	21.05
		3625(55990)	23.57	22.60	21.21
		3555(55290)	23.10	22.06	21.33
	1RB-Middle (24)	3695(56690)	23.13	22.41	21.03
		3625(55990)	23.73	22.82	21.38
		3555(55290)	23.25	22.23	21.15
	1RB-Low (0)	3695(56690)	23.19	22.32	21.05
		3625(55990)	23.63	22.69	21.35
		3555(55290)	23.07	22.23	21.17
	25RB-High (25)	3695(56690)	22.15	21.14	20.41
		3625(55990)	22.60	21.63	20.58
		3555(55290)	22.29	21.37	20.50
	25RB-Middle (12)	3695(56690)	22.44	21.33	20.38
		3625(55990)	22.79	21.72	20.64
		3555(55290)	22.33	21.76	20.49
	25RB-Low (0)	3695(56690)	22.35	21.34	20.40
		3625(55990)	22.59	21.64	20.56
		3555(55290)	22.28	21.64	20.64
	50RB (0)	3695(56690)	22.17	21.18	20.40
		3625(55990)	22.60	21.64	20.55
		3555(55290)	22.07	21.47	20.62

15MHz	1RB-High (74)	3692.5(56665)	23.22	22.19	21.05	
		3625(55990)	23.71	22.52	21.18	
		3557.5(55315)	23.05	22.11	21.34	
	1RB-Middle (37)	3692.5(56665)	23.17	22.46	21.11	
		3625(55990)	23.71	22.82	21.19	
		3557.5(55315)	23.11	22.23	21.17	
	1RB-Low (0)	3692.5(56665)	23.11	22.29	21.15	
		3625(55990)	23.75	22.63	21.31	
		3557.5(55315)	23.14	22.27	21.24	
	36RB-High (38)	3692.5(56665)	22.30	21.24	20.32	
		3625(55990)	22.71	21.61	20.67	
		3557.5(55315)	22.29	21.54	20.57	
	36RB-Middle (19)	3692.5(56665)	22.32	21.34	20.39	
		3625(55990)	22.69	21.62	20.61	
		3557.5(55315)	22.32	21.66	20.64	
	36RB-Low (0)	3692.5(56665)	22.50	21.42	20.56	
		3625(55990)	22.82	21.83	20.62	
		3557.5(55315)	22.31	21.54	20.52	
	75RB (0)	3692.5(56665)	22.21	21.20	20.50	
		3625(55990)	22.79	21.59	20.65	
		3557.5(55315)	22.24	21.60	20.46	
	20MHz	1RB-High (99)	3690(56640)	23.19	22.26	21.20
			3625(55990)	23.66	22.63	21.23
			3560(55340)	23.12	22.03	21.32
1RB-Middle (50)		3690(56640)	23.16	22.44	21.06	
		3625(55990)	23.79	22.77	21.39	
		3560(55340)	23.06	22.01	21.33	
1RB-Low (0)		3690(56640)	23.31	22.34	21.12	
		3625(55990)	23.76	22.76	21.34	
		3560(55340)	23.27	22.35	21.19	
50RB-High (50)		3690(56640)	22.29	21.29	20.41	
		3625(55990)	22.68	21.69	20.66	
		3560(55340)	22.45	21.56	20.54	
50RB-Middle (25)		3690(56640)	22.40	21.44	20.56	
		3625(55990)	22.77	21.80	20.76	
		3560(55340)	22.35	21.71	20.68	
50RB-Low (0)		3690(56640)	22.45	21.45	20.56	
		3625(55990)	22.78	21.80	20.75	
		3560(55340)	22.31	21.74	20.70	
100RB (0)		3690(56640)	22.34	21.36	20.48	
		3625(55990)	22.74	21.76	20.71	
		3560(55340)	22.24	21.64	20.61	

LTE B48-Power Level A2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	3697.5(56715)	17.90	18.04	17.76
		3625(55990)	18.04	17.94	17.79
		3552.5(55265)	17.64	17.76	17.55
	1RB-Middle (12)	3697.5(56715)	17.95	18.08	17.54
		3625(55990)	18.14	18.19	17.80
		3552.5(55265)	17.89	17.94	17.40
	1RB-Low (0)	3697.5(56715)	17.95	17.79	17.66
		3625(55990)	18.02	18.06	17.62
		3552.5(55265)	17.96	17.94	17.42
	12RB-High (13)	3697.5(56715)	18.00	18.22	18.01
		3625(55990)	18.01	18.08	17.99
		3552.5(55265)	17.93	17.80	17.86
	12RB-Middle (6)	3697.5(56715)	17.84	18.12	17.88
		3625(55990)	18.04	18.20	18.26
		3552.5(55265)	17.89	17.97	17.86
	12RB-Low (0)	3697.5(56715)	18.05	18.17	18.07
		3625(55990)	18.07	18.27	18.28
		3552.5(55265)	18.04	18.09	17.97
	25RB (0)	3697.5(56715)	18.11	18.00	17.92
		3625(55990)	18.18	18.00	18.12
		3552.5(55265)	17.92	18.03	17.95
10MHz	1RB-High (49)	3695(56690)	18.06	17.87	17.77
		3625(55990)	17.88	17.87	17.77
		3555(55290)	17.58	17.80	17.53
	1RB-Middle (24)	3695(56690)	18.01	18.09	17.61
		3625(55990)	18.14	18.20	17.65
		3555(55290)	18.00	18.02	17.57
	1RB-Low (0)	3695(56690)	17.86	17.92	17.66
		3625(55990)	18.06	18.13	17.73
		3555(55290)	18.03	17.86	17.52
	25RB-High (25)	3695(56690)	18.17	18.21	18.18
		3625(55990)	18.10	18.15	17.97
		3555(55290)	18.05	17.91	17.91
	25RB-Middle (12)	3695(56690)	17.86	18.07	18.01
		3625(55990)	18.06	18.16	18.19
		3555(55290)	17.92	18.06	17.94
	25RB-Low (0)	3695(56690)	18.07	18.25	17.94
		3625(55990)	18.03	18.14	18.21
		3555(55290)	17.96	18.24	17.90
	50RB (0)	3695(56690)	18.13	17.93	18.03
		3625(55990)	18.17	17.98	18.06
		3555(55290)	17.95	17.95	17.92

15MHz	1RB-High (74)	3692.5(56665)	17.99	17.96	17.60
		3625(55990)	17.92	17.99	17.72
		3557.5(55315)	17.72	17.86	17.52
	1RB-Middle (37)	3692.5(56665)	17.90	18.00	17.67
		3625(55990)	18.15	18.07	17.64
		3557.5(55315)	17.95	17.95	17.50
	1RB-Low (0)	3692.5(56665)	17.98	17.88	17.73
		3625(55990)	18.05	18.19	17.70
		3557.5(55315)	18.10	17.88	17.56
	36RB-High (38)	3692.5(56665)	18.16	18.19	18.04
		3625(55990)	17.97	18.06	18.06
		3557.5(55315)	17.97	17.91	17.83
	36RB-Middle (19)	3692.5(56665)	17.90	18.04	17.90
		3625(55990)	18.18	18.17	18.13
		3557.5(55315)	17.89	18.00	17.93
	36RB-Low (0)	3692.5(56665)	18.05	18.13	17.93
		3625(55990)	18.21	18.09	18.16
		3557.5(55315)	18.00	18.11	17.91
	75RB (0)	3692.5(56665)	17.98	17.86	18.00
		3625(55990)	18.20	18.06	18.07
		3557.5(55315)	18.04	17.87	17.83
20MHz	1RB-High (99)	3690(56640)	18.05	18.01	17.74
		3625(55990)	18.00	18.02	17.78
		3560(55340)	17.71	17.82	17.56
	1RB-Middle (50)	3690(56640)	18.02	18.04	17.62
		3625(55990)	18.29	18.21	17.75
		3560(55340)	17.97	18.01	17.55
	1RB-Low (0)	3690(56640)	17.94	17.93	17.72
		3625(55990)	18.05	18.17	17.73
		3560(55340)	18.05	17.92	17.55
	50RB-High (50)	3690(56640)	18.14	18.20	18.15
		3625(55990)	18.09	18.17	18.12
		3560(55340)	18.00	17.90	17.91
	50RB-Middle (25)	3690(56640)	17.98	18.17	18.03
		3625(55990)	18.19	18.16	18.23
		3560(55340)	18.04	18.04	17.96
	50RB-Low (0)	3690(56640)	18.15	18.21	18.04
		3625(55990)	18.18	18.24	18.23
		3560(55340)	18.06	18.19	18.02
	100RB (0)	3690(56640)	18.11	17.98	18.02
		3625(55990)	18.17	18.10	18.14
		3560(55340)	18.02	18.02	17.98

LTE B66-Power Level A1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1779.3 (132665)	24.19	23.38	22.52
		1745 (132322)	24.24	23.42	22.50
		1710.7 (131979)	24.27	23.39	22.37
	1RB-Middle (3)	1779.3 (132665)	24.21	23.33	22.49
		1745 (132322)	24.22	23.35	22.42
		1710.7 (131979)	24.29	23.40	22.33
	1RB-Low (0)	1779.3 (132665)	24.21	23.30	22.49
		1745 (132322)	24.24	23.34	22.50
		1710.7 (131979)	24.27	23.46	22.42
	3RB-High (3)	1779.3 (132665)	24.25	23.21	22.50
		1745 (132322)	24.19	23.24	22.38
		1710.7 (131979)	24.28	23.27	22.31
	3RB-Middle (1)	1779.3 (132665)	24.23	23.24	22.48
		1745 (132322)	24.26	23.28	22.43
		1710.7 (131979)	24.29	23.27	22.34
	3RB-Low (0)	1779.3 (132665)	24.24	23.31	22.43
		1745 (132322)	24.23	23.19	22.41
		1710.7 (131979)	24.27	23.27	22.29
	6RB (0)	1779.3 (132665)	23.24	22.43	21.35
		1745 (132322)	23.22	22.49	21.34
		1710.7 (131979)	23.29	22.32	21.32
3MHz	1RB-High (14)	1778.5 (132657)	24.18	23.30	22.48
		1745 (132322)	24.19	23.41	22.48
		1711.5 (131987)	24.24	23.44	22.36
	1RB-Middle (7)	1778.5 (132657)	24.24	23.39	22.53
		1745 (132322)	24.26	23.33	22.53
		1711.5 (131987)	24.26	23.40	22.44
	1RB-Low (0)	1778.5 (132657)	24.26	23.30	22.45
		1745 (132322)	24.24	23.42	22.50
		1711.5 (131987)	24.24	23.39	22.32
	8RB-High (7)	1778.5 (132657)	23.18	22.40	21.38
		1745 (132322)	23.15	22.33	21.33
		1711.5 (131987)	23.24	22.28	21.47
	8RB-Middle (4)	1778.5 (132657)	23.16	22.41	21.38
		1745 (132322)	23.15	22.39	21.31
		1711.5 (131987)	23.24	22.27	21.46
	8RB-Low (0)	1778.5 (132657)	23.21	22.40	21.37
		1745 (132322)	23.19	22.44	21.39
		1711.5 (131987)	23.23	22.31	21.44
	15RB (0)	1778.5 (132657)	23.15	22.39	21.35
		1745 (132322)	23.17	22.32	21.30
		1711.5 (131987)	23.27	22.23	21.39

5MHz	1RB-High (24)	1777.5 (132647)	24.24	23.38	22.46	
		1745 (132322)	24.22	23.36	22.46	
		1712.5 (131997)	24.27	23.39	22.35	
	1RB-Middle (12)	1777.5 (132647)	24.23	23.42	22.58	
		1745 (132322)	24.25	23.45	22.52	
		1712.5 (131997)	24.37	23.33	22.40	
	1RB-Low (0)	1777.5 (132647)	24.25	23.45	22.59	
		1745 (132322)	24.27	23.35	22.48	
		1712.5 (131997)	24.27	23.36	22.32	
	12RB-High (13)	1777.5 (132647)	23.19	22.36	21.36	
		1745 (132322)	23.10	22.28	21.30	
		1712.5 (131997)	23.24	22.24	21.36	
	12RB-Middle (6)	1777.5 (132647)	23.20	22.36	21.44	
		1745 (132322)	23.20	22.42	21.40	
		1712.5 (131997)	23.28	22.26	21.46	
	12RB-Low (0)	1777.5 (132647)	23.24	22.42	21.44	
		1745 (132322)	23.25	22.40	21.45	
		1712.5 (131997)	23.29	22.32	21.47	
	25RB (0)	1777.5 (132647)	23.22	22.46	21.39	
		1745 (132322)	23.16	22.37	21.38	
		1712.5 (131997)	23.24	22.29	21.45	
	10MHz	1RB-High (49)	1775 (132622)	24.17	23.21	22.44
			1745 (132322)	24.18	23.37	22.44
			1715 (132022)	24.24	23.29	22.45
1RB-Middle (24)		1775 (132622)	24.24	23.35	22.50	
		1745 (132322)	24.30	23.40	22.47	
		1715 (132022)	24.32	23.47	22.41	
1RB-Low (0)		1775 (132622)	24.19	23.37	22.41	
		1745 (132322)	24.27	23.48	22.51	
		1715 (132022)	24.24	23.44	22.30	
25RB-High (25)		1775 (132622)	23.16	22.39	21.36	
		1745 (132322)	23.18	22.37	21.37	
		1715 (132022)	23.29	22.47	21.48	
25RB-Middle (12)		1775 (132622)	23.18	22.36	21.35	
		1745 (132322)	23.23	22.41	21.36	
		1715 (132022)	23.26	22.28	21.44	
25RB-Low (0)		1775 (132622)	23.34	22.49	21.46	
		1745 (132322)	23.32	22.49	21.49	
		1715 (132022)	23.32	22.33	21.47	
50RB (0)		1775 (132622)	23.24	22.42	21.44	
		1745 (132322)	23.23	22.43	21.43	
		1715 (132022)	23.31	22.30	21.44	

15MHz	1RB-High (74)	1772.5 (132597)	24.16	23.35	22.46	
		1745 (132322)	24.14	23.25	22.43	
		1717.5 (132047)	24.18	23.29	22.44	
	1RB-Middle (37)	1772.5 (132597)	24.24	23.40	22.50	
		1745 (132322)	24.25	23.46	22.45	
		1717.5 (132047)	24.29	23.42	22.51	
	1RB-Low (0)	1772.5 (132597)	24.14	23.35	22.39	
		1745 (132322)	24.20	23.40	22.39	
		1717.5 (132047)	24.25	23.38	22.31	
	36RB-High (38)	1772.5 (132597)	23.14	22.31	21.30	
		1745 (132322)	23.17	22.30	21.36	
		1717.5 (132047)	23.31	22.47	21.50	
	36RB-Middle (19)	1772.5 (132597)	23.19	22.37	21.37	
		1745 (132322)	23.21	22.38	21.38	
		1717.5 (132047)	23.26	22.46	21.43	
	36RB-Low (0)	1772.5 (132597)	23.27	22.43	21.44	
		1745 (132322)	23.31	22.45	21.43	
		1717.5 (132047)	23.29	22.30	21.52	
	75RB (0)	1772.5 (132597)	23.24	22.41	21.38	
		1745 (132322)	23.22	22.39	21.38	
		1717.5 (132047)	23.29	22.45	21.42	
	20MHz	1RB-High (99)	1770 (132572)	24.49	23.64	22.58
			1745 (132322)	24.42	23.60	22.61
			1720 (132072)	24.39	23.65	22.58
1RB-Middle (50)		1770 (132572)	24.55	23.65	22.58	
		1745 (132322)	24.47	23.67	22.58	
		1720 (132072)	24.44	23.57	22.45	
1RB-Low (0)		1770 (132572)	24.49	23.61	22.60	
		1745 (132322)	24.48	23.56	22.57	
		1720 (132072)	24.46	23.68	22.55	
50RB-High (50)		1770 (132572)	23.33	22.33	21.43	
		1745 (132322)	23.37	22.37	21.47	
		1720 (132072)	23.49	22.47	21.60	
50RB-Middle (25)		1770 (132572)	23.47	22.50	21.60	
		1745 (132322)	23.47	22.49	21.57	
		1720 (132072)	23.44	22.44	21.54	
50RB-Low (0)		1770 (132572)	23.53	22.53	21.65	
		1745 (132322)	23.51	22.53	21.60	
		1720 (132072)	23.47	22.44	21.55	
100RB (0)		1770 (132572)	23.39	22.40	21.51	
		1745 (132322)	23.45	22.42	21.54	
		1720 (132072)	23.43	22.43	21.57	

LTE B66-Power Level B1/C1					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1779.3 (132665)	21.33	21.66	21.34
		1745 (132322)	21.35	21.51	21.44
		1710.7 (131979)	21.37	21.59	21.34
	1RB-Middle (3)	1779.3 (132665)	21.42	21.57	21.68
		1745 (132322)	21.41	21.47	21.52
		1710.7 (131979)	21.46	21.66	21.59
	1RB-Low (0)	1779.3 (132665)	21.34	21.54	21.48
		1745 (132322)	21.29	21.58	21.51
		1710.7 (131979)	21.36	21.69	21.42
	3RB-High (3)	1779.3 (132665)	21.47	21.42	21.38
		1745 (132322)	21.40	21.51	21.53
		1710.7 (131979)	21.52	21.46	21.55
	3RB-Middle (1)	1779.3 (132665)	21.36	21.32	21.42
		1745 (132322)	21.30	21.49	21.29
		1710.7 (131979)	21.41	21.34	21.37
	3RB-Low (0)	1779.3 (132665)	21.40	21.63	21.55
		1745 (132322)	21.51	21.27	21.49
		1710.7 (131979)	21.30	21.36	21.40
	6RB (0)	1779.3 (132665)	21.54	21.41	21.58
		1745 (132322)	21.44	21.56	21.31
		1710.7 (131979)	21.41	21.45	21.22
3MHz	1RB-High (14)	1778.5 (132657)	21.24	21.69	21.42
		1745 (132322)	21.19	21.48	21.38
		1711.5 (131987)	21.43	21.57	21.41
	1RB-Middle (7)	1778.5 (132657)	21.39	21.70	21.64
		1745 (132322)	21.50	21.44	21.44
		1711.5 (131987)	21.37	21.71	21.46
	1RB-Low (0)	1778.5 (132657)	21.29	21.52	21.50
		1745 (132322)	21.39	21.67	21.49
		1711.5 (131987)	21.32	21.47	21.34
	8RB-High (7)	1778.5 (132657)	21.31	21.44	21.28
		1745 (132322)	21.43	21.38	21.48
		1711.5 (131987)	21.44	21.47	21.38
	8RB-Middle (4)	1778.5 (132657)	21.44	21.35	21.41
		1745 (132322)	21.32	21.50	21.44
		1711.5 (131987)	21.32	21.52	21.48
	8RB-Low (0)	1778.5 (132657)	21.52	21.44	21.46
		1745 (132322)	21.29	21.30	21.49
		1711.5 (131987)	21.27	21.38	21.42
	15RB (0)	1778.5 (132657)	21.40	21.43	21.47
		1745 (132322)	21.49	21.44	21.49
		1711.5 (131987)	21.27	21.23	21.40

5MHz	1RB-High (24)	1777.5 (132647)	21.21	21.64	21.39	
		1745 (132322)	21.15	21.50	21.24	
		1712.5 (131997)	21.34	21.44	21.40	
	1RB-Middle (12)	1777.5 (132647)	21.49	21.55	21.44	
		1745 (132322)	21.27	21.52	21.43	
		1712.5 (131997)	21.48	21.64	21.62	
	1RB-Low (0)	1777.5 (132647)	21.24	21.47	21.39	
		1745 (132322)	21.29	21.60	21.45	
		1712.5 (131997)	21.45	21.56	21.51	
	12RB-High (13)	1777.5 (132647)	21.31	21.42	21.41	
		1745 (132322)	21.50	21.40	21.41	
		1712.5 (131997)	21.32	21.28	21.35	
	12RB-Middle (6)	1777.5 (132647)	21.39	21.46	21.33	
		1745 (132322)	21.25	21.35	21.40	
		1712.5 (131997)	21.53	21.49	21.54	
	12RB-Low (0)	1777.5 (132647)	21.54	21.45	21.51	
		1745 (132322)	21.33	21.43	21.37	
		1712.5 (131997)	21.20	21.33	21.43	
	25RB (0)	1777.5 (132647)	21.46	21.33	21.49	
		1745 (132322)	21.44	21.31	21.49	
		1712.5 (131997)	21.48	21.37	21.25	
	10MHz	1RB-High (49)	1775 (132622)	21.28	21.68	21.28
			1745 (132322)	21.30	21.45	21.47
			1715 (132022)	21.33	21.47	21.38
1RB-Middle (24)		1775 (132622)	21.40	21.71	21.55	
		1745 (132322)	21.30	21.44	21.48	
		1715 (132022)	21.28	21.60	21.57	
1RB-Low (0)		1775 (132622)	21.26	21.56	21.46	
		1745 (132322)	21.41	21.61	21.44	
		1715 (132022)	21.22	21.57	21.52	
25RB-High (25)		1775 (132622)	21.36	21.25	21.27	
		1745 (132322)	21.34	21.35	21.41	
		1715 (132022)	21.43	21.49	21.38	
25RB-Middle (12)		1775 (132622)	21.32	21.35	21.36	
		1745 (132322)	21.24	21.49	21.39	
		1715 (132022)	21.52	21.44	21.42	
25RB-Low (0)		1775 (132622)	21.56	21.63	21.50	
		1745 (132322)	21.52	21.34	21.43	
		1715 (132022)	21.40	21.46	21.27	
50RB (0)		1775 (132622)	21.32	21.52	21.50	
		1745 (132322)	21.30	21.53	21.46	
		1715 (132022)	21.30	21.43	21.23	

15MHz	1RB-High (74)	1772.5 (132597)	21.32	21.57	21.50	
		1745 (132322)	21.16	21.50	21.27	
		1717.5 (132047)	21.20	21.49	21.53	
	1RB-Middle (37)	1772.5 (132597)	21.31	21.73	21.67	
		1745 (132322)	21.29	21.52	21.59	
		1717.5 (132047)	21.40	21.61	21.52	
	1RB-Low (0)	1772.5 (132597)	21.34	21.54	21.40	
		1745 (132322)	21.33	21.52	21.43	
		1717.5 (132047)	21.26	21.71	21.35	
	36RB-High (38)	1772.5 (132597)	21.32	21.38	21.34	
		1745 (132322)	21.38	21.29	21.36	
		1717.5 (132047)	21.34	21.51	21.31	
	36RB-Middle (19)	1772.5 (132597)	21.42	21.25	21.31	
		1745 (132322)	21.45	21.45	21.30	
		1717.5 (132047)	21.36	21.32	21.32	
	36RB-Low (0)	1772.5 (132597)	21.51	21.55	21.56	
		1745 (132322)	21.41	21.27	21.28	
		1717.5 (132047)	21.24	21.46	21.30	
	75RB (0)	1772.5 (132597)	21.54	21.33	21.52	
		1745 (132322)	21.34	21.55	21.40	
		1717.5 (132047)	21.46	21.28	21.46	
	20MHz	1RB-High (99)	1770 (132572)	21.37	21.66	21.46
			1745 (132322)	21.32	21.65	21.44
			1720 (132072)	21.40	21.59	21.50
		1RB-Middle (50)	1770 (132572)	21.50	21.71	21.63
			1745 (132322)	21.45	21.57	21.59
			1720 (132072)	21.45	21.74	21.60
1RB-Low (0)		1770 (132572)	21.37	21.61	21.54	
		1745 (132322)	21.36	21.64	21.47	
		1720 (132072)	21.41	21.66	21.51	
50RB-High (50)		1770 (132572)	21.43	21.44	21.47	
		1745 (132322)	21.52	21.49	21.49	
		1720 (132072)	21.50	21.46	21.51	
50RB-Middle (25)		1770 (132572)	21.42	21.45	21.50	
		1745 (132322)	21.44	21.47	21.45	
		1720 (132072)	21.51	21.48	21.51	
50RB-Low (0)		1770 (132572)	21.58	21.60	21.63	
		1745 (132322)	21.48	21.47	21.47	
		1720 (132072)	21.39	21.41	21.39	
100RB (0)		1770 (132572)	21.52	21.53	21.53	
		1745 (132322)	21.48	21.51	21.49	
		1720 (132072)	21.43	21.43	21.41	

LTE B66-Power Level B2/C2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1779.3 (132665)	17.97	18.04	18.02
		1745 (132322)	17.89	17.90	17.84
		1710.7 (131979)	17.89	18.11	18.05
	1RB-Middle (3)	1779.3 (132665)	17.92	18.16	18.11
		1745 (132322)	17.94	18.10	17.96
		1710.7 (131979)	17.82	18.00	18.09
	1RB-Low (0)	1779.3 (132665)	17.87	18.06	18.00
		1745 (132322)	17.76	18.17	17.96
		1710.7 (131979)	17.97	17.98	17.91
	3RB-High (3)	1779.3 (132665)	17.94	17.79	17.96
		1745 (132322)	17.92	17.92	17.82
		1710.7 (131979)	18.05	18.05	17.97
	3RB-Middle (1)	1779.3 (132665)	17.85	17.95	18.05
		1745 (132322)	18.02	17.99	18.02
		1710.7 (131979)	17.82	17.81	17.84
	3RB-Low (0)	1779.3 (132665)	18.03	18.14	17.97
		1745 (132322)	18.05	17.98	17.94
		1710.7 (131979)	17.81	17.76	17.73
	6RB (0)	1779.3 (132665)	17.84	17.96	17.90
		1745 (132322)	17.86	18.01	17.93
		1710.7 (131979)	17.83	17.98	17.86
3MHz	1RB-High (14)	1778.5 (132657)	17.86	18.13	18.05
		1745 (132322)	17.71	18.02	17.86
		1711.5 (131987)	17.72	18.04	17.90
	1RB-Middle (7)	1778.5 (132657)	17.94	18.19	18.13
		1745 (132322)	17.87	18.09	18.07
		1711.5 (131987)	17.81	17.98	18.01
	1RB-Low (0)	1778.5 (132657)	17.74	18.12	18.05
		1745 (132322)	17.73	18.01	17.88
		1711.5 (131987)	17.79	17.95	17.86
	8RB-High (7)	1778.5 (132657)	17.87	17.85	17.86
		1745 (132322)	17.98	17.95	18.01
		1711.5 (131987)	17.94	17.98	17.99
	8RB-Middle (4)	1778.5 (132657)	17.87	17.86	18.02
		1745 (132322)	17.82	18.03	17.97
		1711.5 (131987)	17.91	17.94	17.98
	8RB-Low (0)	1778.5 (132657)	18.12	18.04	18.01
		1745 (132322)	18.10	17.92	18.08
		1711.5 (131987)	17.86	17.84	17.85
	15RB (0)	1778.5 (132657)	17.87	17.89	17.91
		1745 (132322)	17.83	17.92	18.02
		1711.5 (131987)	17.91	17.99	17.91

5MHz	1RB-High (24)	1777.5 (132647)	17.89	18.11	17.89	
		1745 (132322)	17.74	17.93	17.93	
		1712.5 (131997)	17.85	18.02	18.00	
	1RB-Middle (12)	1777.5 (132647)	18.04	18.12	18.00	
		1745 (132322)	17.93	18.27	18.02	
		1712.5 (131997)	17.95	17.93	18.09	
	1RB-Low (0)	1777.5 (132647)	17.77	18.02	17.95	
		1745 (132322)	17.88	18.13	17.86	
		1712.5 (131997)	17.77	18.06	17.90	
	12RB-High (13)	1777.5 (132647)	17.87	17.95	17.80	
		1745 (132322)	17.93	17.98	17.86	
		1712.5 (131997)	17.89	17.90	17.97	
	12RB-Middle (6)	1777.5 (132647)	18.00	17.97	17.94	
		1745 (132322)	17.91	18.06	17.93	
		1712.5 (131997)	17.99	17.87	17.97	
	12RB-Low (0)	1777.5 (132647)	17.94	18.13	18.00	
		1745 (132322)	18.08	18.07	18.02	
		1712.5 (131997)	17.87	17.81	17.75	
	25RB (0)	1777.5 (132647)	17.99	17.91	17.97	
		1745 (132322)	17.85	18.06	17.86	
		1712.5 (131997)	17.83	17.84	17.91	
	10MHz	1RB-High (49)	1775 (132622)	17.83	18.15	17.92
			1745 (132322)	17.79	17.85	17.96
			1715 (132022)	17.86	17.93	18.01
1RB-Middle (24)		1775 (132622)	18.05	18.06	18.07	
		1745 (132322)	17.93	18.08	18.15	
		1715 (132022)	17.81	18.10	17.92	
1RB-Low (0)		1775 (132622)	17.80	18.14	18.01	
		1745 (132322)	17.85	18.06	17.80	
		1715 (132022)	17.88	18.02	17.82	
25RB-High (25)		1775 (132622)	17.76	17.85	17.76	
		1745 (132322)	17.85	17.85	17.83	
		1715 (132022)	18.01	18.03	17.95	
25RB-Middle (12)		1775 (132622)	17.85	17.94	17.98	
		1745 (132322)	17.99	17.97	17.90	
		1715 (132022)	18.00	17.86	17.95	
25RB-Low (0)		1775 (132622)	18.07	18.08	18.15	
		1745 (132322)	18.04	18.05	18.13	
		1715 (132022)	17.92	17.83	17.81	
50RB (0)		1775 (132622)	17.95	18.03	17.86	
		1745 (132322)	18.01	17.86	18.01	
		1715 (132022)	17.97	17.96	17.94	

15MHz	1RB-High (74)	1772.5 (132597)	17.94	18.13	17.88
		1745 (132322)	17.78	17.87	17.98
		1717.5 (132047)	17.78	18.07	17.97
	1RB-Middle (37)	1772.5 (132597)	17.97	18.03	18.01
		1745 (132322)	17.85	18.11	18.10
		1717.5 (132047)	17.82	18.07	17.94
	1RB-Low (0)	1772.5 (132597)	17.85	18.14	18.05
		1745 (132322)	17.72	17.97	17.93
		1717.5 (132047)	17.93	18.06	17.84
	36RB-High (38)	1772.5 (132597)	17.79	17.79	17.84
		1745 (132322)	18.00	18.00	17.92
		1717.5 (132047)	17.88	18.07	18.05
	36RB-Middle (19)	1772.5 (132597)	17.87	17.96	17.97
		1745 (132322)	17.97	17.90	17.88
		1717.5 (132047)	17.85	17.88	18.02
	36RB-Low (0)	1772.5 (132597)	18.03	18.05	18.05
		1745 (132322)	17.92	18.02	18.06
		1717.5 (132047)	17.81	17.77	17.89
	75RB (0)	1772.5 (132597)	17.82	17.88	17.84
		1745 (132322)	17.95	17.94	17.95
		1717.5 (132047)	17.94	17.99	17.96
20MHz	1RB-High (99)	1770 (132572)	17.95	18.19	18.03
		1745 (132322)	17.86	17.99	17.99
		1720 (132072)	17.84	18.07	18.01
	1RB-Middle (50)	1770 (132572)	18.01	18.16	18.13
		1745 (132322)	17.97	18.23	18.11
		1720 (132072)	17.96	18.08	18.05
	1RB-Low (0)	1770 (132572)	17.88	18.14	18.08
		1745 (132322)	17.83	18.12	17.91
		1720 (132072)	17.92	18.03	17.97
	50RB-High (50)	1770 (132572)	17.91	17.91	17.91
		1745 (132322)	17.95	17.95	17.97
		1720 (132072)	18.01	18.02	18.02
	50RB-Middle (25)	1770 (132572)	17.95	18.01	18.01
		1745 (132322)	17.97	18.01	17.99
		1720 (132072)	17.96	17.94	17.97
	50RB-Low (0)	1770 (132572)	18.08	18.10	18.10
		1745 (132322)	18.06	18.07	18.08
		1720 (132072)	17.87	17.86	17.84
	100RB (0)	1770 (132572)	17.96	17.98	17.98
		1745 (132322)	17.98	18.01	18.01
		1720 (132072)	17.93	17.94	17.95

LTE B2 ANT6-Power Level A2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3 (19193)	13.45	13.47	13.40
		1880 (18900)	13.48	13.58	13.54
		1850.7 (18607)	13.71	13.76	13.77
	1RB-Middle (3)	1909.3 (19193)	13.42	13.40	13.42
		1880 (18900)	13.63	13.63	13.64
		1850.7 (18607)	13.66	13.79	13.68
	1RB-Low (0)	1909.3 (19193)	13.41	13.49	13.34
		1880 (18900)	13.65	13.68	13.72
		1850.7 (18607)	13.62	13.84	13.78
	3RB-High (3)	1909.3 (19193)	13.15	13.18	13.24
		1880 (18900)	13.57	13.65	13.63
		1850.7 (18607)	13.61	13.62	13.73
	3RB-Middle (1)	1909.3 (19193)	13.28	13.52	13.33
		1880 (18900)	13.54	13.62	13.55
		1850.7 (18607)	13.72	13.77	13.68
	3RB-Low (0)	1909.3 (19193)	13.35	13.56	13.42
		1880 (18900)	13.59	13.71	13.68
		1850.7 (18607)	13.57	13.74	13.63
	6RB (0)	1909.3 (19193)	13.23	13.46	13.44
		1880 (18900)	13.44	13.67	13.53
		1850.7 (18607)	13.64	13.68	13.65
3MHz	1RB-High (14)	1908.5 (19185)	13.40	13.58	13.59
		1880 (18900)	13.41	13.59	13.43
		1851.5 (18615)	13.63	13.84	13.79
	1RB-Middle (7)	1908.5 (19185)	13.30	13.48	13.28
		1880 (18900)	13.63	13.78	13.58
		1851.5 (18615)	13.73	13.81	13.72
	1RB-Low (0)	1908.5 (19185)	13.33	13.44	13.50
		1880 (18900)	13.62	13.66	13.71
		1851.5 (18615)	13.72	13.84	13.79
	8RB-High (7)	1908.5 (19185)	13.09	13.29	13.28
		1880 (18900)	13.57	13.53	13.48
		1851.5 (18615)	13.58	13.79	13.70
	8RB-Middle (4)	1908.5 (19185)	13.28	13.54	13.41
		1880 (18900)	13.60	13.62	13.63
		1851.5 (18615)	13.68	13.70	13.64
	8RB-Low (0)	1908.5 (19185)	13.42	13.47	13.34
		1880 (18900)	13.51	13.61	13.61
		1851.5 (18615)	13.69	13.64	13.70
15RB (0)	1908.5 (19185)	13.27	13.43	13.40	
	1880 (18900)	13.60	13.72	13.50	
	1851.5 (18615)	13.58	13.71	13.62	

5MHz	1RB-High (24)	1907.5 (19175)	13.37	13.57	13.47
		1880 (18900)	13.35	13.56	13.51
		1852.5 (18625)	13.61	13.71	13.60
	1RB-Middle (12)	1907.5 (19175)	13.40	13.52	13.34
		1880 (18900)	13.68	13.74	13.58
		1852.5 (18625)	13.75	13.69	13.82
	1RB-Low (0)	1907.5 (19175)	13.30	13.45	13.53
		1880 (18900)	13.65	13.62	13.56
		1852.5 (18625)	13.67	13.81	13.84
	12RB-High (13)	1907.5 (19175)	13.07	13.30	13.29
		1880 (18900)	13.45	13.50	13.44
		1852.5 (18625)	13.50	13.66	13.71
	12RB-Middle (6)	1907.5 (19175)	13.26	13.49	13.34
		1880 (18900)	13.54	13.60	13.60
		1852.5 (18625)	13.80	13.69	13.74
	12RB-Low (0)	1907.5 (19175)	13.38	13.55	13.47
		1880 (18900)	13.62	13.65	13.51
		1852.5 (18625)	13.57	13.66	13.66
25RB (0)	1907.5 (19175)	13.34	13.34	13.32	
	1880 (18900)	13.58	13.67	13.59	
	1852.5 (18625)	13.56	13.78	13.61	
10MHz	1RB-High (49)	1905 (19150)	13.37	13.59	13.47
		1880 (18900)	13.46	13.56	13.59
		1855 (18650)	13.63	13.79	13.73
	1RB-Middle (24)	1905 (19150)	13.29	13.36	13.29
		1880 (18900)	13.63	13.75	13.76
		1855 (18650)	13.74	13.75	13.81
	1RB-Low (0)	1905 (19150)	13.36	13.46	13.53
		1880 (18900)	13.60	13.71	13.64
		1855 (18650)	13.78	13.84	13.82
	25RB-High (25)	1905 (19150)	13.17	13.29	13.25
		1880 (18900)	13.42	13.53	13.62
		1855 (18650)	13.69	13.68	13.65
	25RB-Middle (12)	1905 (19150)	13.44	13.34	13.44
		1880 (18900)	13.63	13.72	13.60
		1855 (18650)	13.75	13.78	13.66
	25RB-Low (0)	1905 (19150)	13.32	13.39	13.49
		1880 (18900)	13.59	13.72	13.68
		1855 (18650)	13.57	13.76	13.71
50RB (0)	1905 (19150)	13.37	13.41	13.27	
	1880 (18900)	13.47	13.69	13.49	
	1855 (18650)	13.72	13.63	13.76	

15MHz	1RB-High (74)	1902.5 (19125)	13.44	13.57	13.49
		1880 (18900)	13.54	13.45	13.40
		1857.5 (18675)	13.67	13.72	13.68
	1RB-Middle (37)	1902.5 (19125)	13.24	13.44	13.35
		1880 (18900)	13.58	13.72	13.78
		1857.5 (18675)	13.75	13.87	13.65
	1RB-Low (0)	1902.5 (19125)	13.34	13.56	13.43
		1880 (18900)	13.54	13.63	13.54
		1857.5 (18675)	13.78	13.76	13.67
	36RB-High (38)	1902.5 (19125)	13.22	13.14	13.18
		1880 (18900)	13.52	13.56	13.60
		1857.5 (18675)	13.64	13.72	13.74
	36RB-Middle (19)	1902.5 (19125)	13.44	13.42	13.29
		1880 (18900)	13.62	13.78	13.64
		1857.5 (18675)	13.70	13.83	13.74
	36RB-Low (0)	1902.5 (19125)	13.46	13.52	13.42
		1880 (18900)	13.60	13.69	13.64
		1857.5 (18675)	13.73	13.75	13.59
75RB (0)	1902.5 (19125)	13.31	13.29	13.28	
	1880 (18900)	13.52	13.60	13.62	
	1857.5 (18675)	13.70	13.78	13.76	
20MHz	1RB-High (99)	1900 (19100)	13.56	13.65	13.60
		1880 (18900)	13.55	13.64	13.59
		1860 (18700)	13.75	13.84	13.79
	1RB-Middle (50)	1900 (19100)	13.44	13.53	13.48
		1880 (18900)	13.74	13.83	13.78
		1860 (18700)	13.80	13.89	13.84
	1RB-Low (0)	1900 (19100)	13.50	13.59	13.54
		1880 (18900)	13.70	13.79	13.74
		1860 (18700)	13.81	13.90	13.85
	50RB-High (50)	1900 (19100)	13.25	13.34	13.29
		1880 (18900)	13.60	13.69	13.64
		1860 (18700)	13.70	13.79	13.74
	50RB-Middle (25)	1900 (19100)	13.45	13.54	13.49
		1880 (18900)	13.70	13.79	13.74
		1860 (18700)	13.80	13.89	13.84
	50RB-Low (0)	1900 (19100)	13.50	13.59	13.54
		1880 (18900)	13.65	13.74	13.69
		1860 (18700)	13.75	13.84	13.79
100RB (0)	1900 (19100)	13.40	13.49	13.44	
	1880 (18900)	13.63	13.72	13.67	
	1860 (18700)	13.73	13.82	13.77	

LTE B2 ANT6-Power Level B2/C2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1909.3 (19193)	17.11	17.25	17.23
		1880 (18900)	17.42	17.43	17.55
		1850.7 (18607)	17.50	17.67	17.73
	1RB-Middle (3)	1909.3 (19193)	17.45	17.52	17.36
		1880 (18900)	17.73	17.81	17.59
		1850.7 (18607)	17.65	17.74	17.70
	1RB-Low (0)	1909.3 (19193)	17.33	17.38	17.48
		1880 (18900)	17.66	17.78	17.66
		1850.7 (18607)	17.71	17.66	17.80
	3RB-High (3)	1909.3 (19193)	17.08	17.13	17.16
		1880 (18900)	17.49	17.70	17.61
		1850.7 (18607)	17.55	17.65	17.67
	3RB-Middle (1)	1909.3 (19193)	17.43	17.54	17.40
		1880 (18900)	17.57	17.74	17.72
		1850.7 (18607)	17.78	17.69	17.73
	3RB-Low (0)	1909.3 (19193)	17.47	17.52	17.38
		1880 (18900)	17.46	17.62	17.57
		1850.7 (18607)	17.65	17.83	17.67
	6RB (0)	1909.3 (19193)	17.35	17.39	17.38
		1880 (18900)	17.60	17.59	17.60
		1850.7 (18607)	17.65	17.73	17.65
3MHz	1RB-High (14)	1908.5 (19185)	17.05	17.24	17.18
		1880 (18900)	17.43	17.50	17.51
		1851.5 (18615)	17.69	17.65	17.64
	1RB-Middle (7)	1908.5 (19185)	17.25	17.53	17.28
		1880 (18900)	17.54	17.75	17.65
		1851.5 (18615)	17.79	17.71	17.68
	1RB-Low (0)	1908.5 (19185)	17.38	17.56	17.37
		1880 (18900)	17.71	17.79	17.68
		1851.5 (18615)	17.68	17.80	17.66
	8RB-High (7)	1908.5 (19185)	17.15	17.29	17.12
		1880 (18900)	17.62	17.68	17.59
		1851.5 (18615)	17.60	17.82	17.75
	8RB-Middle (4)	1908.5 (19185)	17.43	17.41	17.32
		1880 (18900)	17.69	17.63	17.68
		1851.5 (18615)	17.61	17.88	17.66
	8RB-Low (0)	1908.5 (19185)	17.48	17.53	17.44
		1880 (18900)	17.61	17.65	17.58
		1851.5 (18615)	17.70	17.84	17.69
15RB (0)	1908.5 (19185)	17.28	17.33	17.33	
	1880 (18900)	17.63	17.69	17.63	
	1851.5 (18615)	17.72	17.67	17.66	

5MHz	1RB-High (24)	1907.5 (19175)	17.19	17.16	17.20
		1880 (18900)	17.41	17.44	17.44
		1852.5 (18625)	17.55	17.73	17.57
	1RB-Middle (12)	1907.5 (19175)	17.44	17.51	17.41
		1880 (18900)	17.59	17.70	17.69
		1852.5 (18625)	17.70	17.76	17.80
	1RB-Low (0)	1907.5 (19175)	17.40	17.50	17.39
		1880 (18900)	17.59	17.64	17.60
		1852.5 (18625)	17.77	17.84	17.74
	12RB-High (13)	1907.5 (19175)	17.14	17.30	17.14
		1880 (18900)	17.51	17.52	17.50
		1852.5 (18625)	17.55	17.64	17.70
	12RB-Middle (6)	1907.5 (19175)	17.39	17.54	17.44
		1880 (18900)	17.51	17.74	17.66
		1852.5 (18625)	17.77	17.71	17.74
	12RB-Low (0)	1907.5 (19175)	17.52	17.57	17.54
		1880 (18900)	17.62	17.60	17.54
		1852.5 (18625)	17.63	17.72	17.68
	25RB (0)	1907.5 (19175)	17.36	17.33	17.31
		1880 (18900)	17.46	17.67	17.53
		1852.5 (18625)	17.57	17.81	17.63
10MHz	1RB-High (49)	1905 (19150)	17.10	17.32	17.08
		1880 (18900)	17.39	17.46	17.56
		1855 (18650)	17.64	17.76	17.53
	1RB-Middle (24)	1905 (19150)	17.38	17.47	17.37
		1880 (18900)	17.68	17.75	17.66
		1855 (18650)	17.74	17.89	17.69
	1RB-Low (0)	1905 (19150)	17.40	17.52	17.46
		1880 (18900)	17.56	17.78	17.68
		1855 (18650)	17.62	17.74	17.78
	25RB-High (25)	1905 (19150)	17.06	17.13	17.18
		1880 (18900)	17.54	17.67	17.62
		1855 (18650)	17.70	17.80	17.62
	25RB-Middle (12)	1905 (19150)	17.33	17.36	17.31
		1880 (18900)	17.65	17.66	17.67
		1855 (18650)	17.79	17.86	17.83
	25RB-Low (0)	1905 (19150)	17.34	17.43	17.46
		1880 (18900)	17.66	17.56	17.61
		1855 (18650)	17.64	17.75	17.73
	50RB (0)	1905 (19150)	17.35	17.47	17.36
		1880 (18900)	17.59	17.67	17.56
		1855 (18650)	17.70	17.71	17.60

15MHz	1RB-High (74)	1902.5 (19125)	17.23	17.33	17.13
		1880 (18900)	17.55	17.53	17.56
		1857.5 (18675)	17.69	17.73	17.59
	1RB-Middle (37)	1902.5 (19125)	17.29	17.44	17.42
		1880 (18900)	17.58	17.75	17.68
		1857.5 (18675)	17.79	17.75	17.71
	1RB-Low (0)	1902.5 (19125)	17.29	17.57	17.35
		1880 (18900)	17.55	17.71	17.64
		1857.5 (18675)	17.72	17.77	17.81
	36RB-High (38)	1902.5 (19125)	17.05	17.24	17.20
		1880 (18900)	17.51	17.64	17.60
		1857.5 (18675)	17.61	17.62	17.64
	36RB-Middle (19)	1902.5 (19125)	17.37	17.41	17.50
		1880 (18900)	17.54	17.57	17.71
		1857.5 (18675)	17.75	17.76	17.83
	36RB-Low (0)	1902.5 (19125)	17.41	17.56	17.46
		1880 (18900)	17.65	17.61	17.53
		1857.5 (18675)	17.64	17.81	17.78
	75RB (0)	1902.5 (19125)	17.30	17.49	17.43
		1880 (18900)	17.54	17.58	17.50
		1857.5 (18675)	17.54	17.81	17.64
20MHz	1RB-High (99)	1900 (19100)	17.25	17.33	17.28
		1880 (18900)	17.55	17.63	17.58
		1860 (18700)	17.70	17.78	17.73
	1RB-Middle (50)	1900 (19100)	17.45	17.53	17.48
		1880 (18900)	17.74	17.82	17.77
		1860 (18700)	17.81	17.89	17.84
	1RB-Low (0)	1900 (19100)	17.49	17.57	17.52
		1880 (18900)	17.72	17.80	17.75
		1860 (18700)	17.78	17.86	17.81
	50RB-High (50)	1900 (19100)	17.25	17.33	17.28
		1880 (18900)	17.62	17.70	17.65
		1860 (18700)	17.74	17.82	17.77
	50RB-Middle (25)	1900 (19100)	17.48	17.56	17.51
		1880 (18900)	17.69	17.77	17.72
		1860 (18700)	17.81	17.89	17.84
	50RB-Low (0)	1900 (19100)	17.52	17.60	17.55
		1880 (18900)	17.66	17.74	17.69
		1860 (18700)	17.79	17.87	17.82
	100RB (0)	1900 (19100)	17.41	17.49	17.44
		1880 (18900)	17.64	17.72	17.67
		1860 (18700)	17.73	17.81	17.76

LTE B66 ANT6-Power Level A2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1779.3 (132665)	16.77	16.84	16.80
		1745 (132322)	16.25	16.25	16.31
		1710.7 (131979)	15.95	16.01	15.86
	1RB-Middle (3)	1779.3 (132665)	16.73	16.81	16.67
		1745 (132322)	16.18	16.26	16.25
		1710.7 (131979)	15.82	15.94	15.90
	1RB-Low (0)	1779.3 (132665)	16.43	16.50	16.39
		1745 (132322)	16.06	16.05	16.07
		1710.7 (131979)	15.83	15.86	15.90
	3RB-High (3)	1779.3 (132665)	16.57	16.60	16.60
		1745 (132322)	16.23	16.27	16.26
		1710.7 (131979)	15.87	15.89	15.85
	3RB-Middle (1)	1779.3 (132665)	16.71	16.74	16.68
		1745 (132322)	16.09	16.10	16.10
		1710.7 (131979)	15.90	15.79	15.74
	3RB-Low (0)	1779.3 (132665)	16.64	16.48	16.50
		1745 (132322)	16.15	16.15	16.10
		1710.7 (131979)	15.73	15.74	15.76
	6RB (0)	1779.3 (132665)	16.63	16.57	16.69
		1745 (132322)	16.08	16.13	16.18
		1710.7 (131979)	15.75	15.82	15.74
3MHz	1RB-High (14)	1778.5 (132657)	16.81	16.94	16.88
		1745 (132322)	16.17	16.43	16.30
		1711.5 (131987)	15.89	16.09	15.90
	1RB-Middle (7)	1778.5 (132657)	16.61	16.77	16.65
		1745 (132322)	16.13	16.17	16.27
		1711.5 (131987)	15.79	15.91	15.92
	1RB-Low (0)	1778.5 (132657)	16.51	16.52	16.36
		1745 (132322)	16.07	16.08	16.07
		1711.5 (131987)	15.91	15.89	15.86
	8RB-High (7)	1778.5 (132657)	16.74	16.76	16.65
		1745 (132322)	16.28	16.23	16.06
		1711.5 (131987)	15.92	15.77	15.87
	8RB-Middle (4)	1778.5 (132657)	16.63	16.57	16.55
		1745 (132322)	16.17	16.08	16.24
		1711.5 (131987)	15.92	15.77	15.91
	8RB-Low (0)	1778.5 (132657)	16.50	16.53	16.45
		1745 (132322)	16.14	16.07	16.03
		1711.5 (131987)	15.71	15.81	15.76
	15RB (0)	1778.5 (132657)	16.62	16.64	16.51
		1745 (132322)	16.11	16.03	16.00
		1711.5 (131987)	15.74	15.90	15.76

5MHz	1RB-High (24)	1777.5 (132647)	16.85	16.88	16.72	
		1745 (132322)	16.34	16.24	16.20	
		1712.5 (131997)	15.81	16.01	15.92	
	1RB-Middle (12)	1777.5 (132647)	16.54	16.70	16.72	
		1745 (132322)	16.09	16.31	16.27	
		1712.5 (131997)	15.93	15.99	15.98	
	1RB-Low (0)	1777.5 (132647)	16.38	16.49	16.47	
		1745 (132322)	16.00	16.06	16.02	
		1712.5 (131997)	15.92	15.89	15.97	
	12RB-High (13)	1777.5 (132647)	16.59	16.67	16.74	
		1745 (132322)	16.12	16.22	16.23	
		1712.5 (131997)	15.79	15.95	15.81	
	12RB-Middle (6)	1777.5 (132647)	16.72	16.54	16.71	
		1745 (132322)	16.21	16.12	16.08	
		1712.5 (131997)	15.80	15.90	15.90	
	12RB-Low (0)	1777.5 (132647)	16.49	16.59	16.43	
		1745 (132322)	16.10	16.02	16.11	
		1712.5 (131997)	15.83	15.74	15.75	
	25RB (0)	1777.5 (132647)	16.57	16.69	16.59	
		1745 (132322)	16.09	16.12	16.12	
		1712.5 (131997)	15.90	15.85	15.82	
	10MHz	1RB-High (49)	1775 (132622)	16.72	16.81	16.74
			1745 (132322)	16.28	16.30	16.30
			1715 (132022)	15.99	15.91	15.85
1RB-Middle (24)		1775 (132622)	16.64	16.75	16.62	
		1745 (132322)	16.17	16.32	16.22	
		1715 (132022)	15.95	15.89	15.87	
1RB-Low (0)		1775 (132622)	16.49	16.49	16.49	
		1745 (132322)	15.91	16.06	15.95	
		1715 (132022)	15.84	15.96	15.89	
25RB-High (25)		1775 (132622)	16.62	16.72	16.69	
		1745 (132322)	16.21	16.12	16.09	
		1715 (132022)	15.96	15.89	15.95	
25RB-Middle (12)		1775 (132622)	16.67	16.61	16.67	
		1745 (132322)	16.12	16.24	16.10	
		1715 (132022)	15.91	15.84	15.92	
25RB-Low (0)		1775 (132622)	16.63	16.62	16.52	
		1745 (132322)	16.20	16.18	16.11	
		1715 (132022)	15.81	15.82	15.82	
50RB (0)		1775 (132622)	16.52	16.60	16.64	
		1745 (132322)	16.15	16.21	16.17	
		1715 (132022)	15.77	15.76	15.88	

15MHz	1RB-High (74)	1772.5 (132597)	16.88	16.88	16.84
		1745 (132322)	16.31	16.33	16.20
		1717.5 (132047)	15.96	16.00	15.85
	1RB-Middle (37)	1772.5 (132597)	16.57	16.62	16.60
		1745 (132322)	16.26	16.33	16.29
		1717.5 (132047)	15.95	15.97	15.89
	1RB-Low (0)	1772.5 (132597)	16.51	16.47	16.52
		1745 (132322)	15.94	16.08	15.94
		1717.5 (132047)	15.86	15.93	15.86
	36RB-High (38)	1772.5 (132597)	16.64	16.70	16.57
		1745 (132322)	16.11	16.07	16.12
		1717.5 (132047)	15.85	15.83	15.76
	36RB-Middle (19)	1772.5 (132597)	16.66	16.65	16.55
		1745 (132322)	16.23	16.12	16.14
		1717.5 (132047)	15.89	15.89	15.76
	36RB-Low (0)	1772.5 (132597)	16.52	16.64	16.53
		1745 (132322)	16.18	16.08	16.07
		1717.5 (132047)	15.88	15.77	15.68
	75RB (0)	1772.5 (132597)	16.53	16.66	16.60
		1745 (132322)	16.21	16.19	16.01
		1717.5 (132047)	15.75	15.81	15.92
20MHz	1RB-High (99)	1770 (132572)	16.88	16.96	16.92
		1745 (132322)	16.36	16.44	16.40
		1720 (132072)	16.01	16.09	16.05
	1RB-Middle (50)	1770 (132572)	16.74	16.82	16.78
		1745 (132322)	16.28	16.36	16.32
		1720 (132072)	15.98	16.07	16.02
	1RB-Low (0)	1770 (132572)	16.52	16.60	16.56
		1745 (132322)	16.07	16.15	16.11
		1720 (132072)	15.93	16.02	15.97
	50RB-High (50)	1770 (132572)	16.77	16.76	16.75
		1745 (132322)	16.28	16.27	16.26
		1720 (132072)	15.98	15.97	15.96
	50RB-Middle (25)	1770 (132572)	16.75	16.74	16.73
		1745 (132322)	16.26	16.25	16.24
		1720 (132072)	15.95	15.94	15.93
	50RB-Low (0)	1770 (132572)	16.65	16.64	16.63
		1745 (132322)	16.21	16.20	16.19
		1720 (132072)	15.88	15.87	15.86
	100RB (0)	1770 (132572)	16.71	16.70	16.69
		1745 (132322)	16.22	16.21	16.20
		1720 (132072)	15.94	15.93	15.92

LTE B66 ANT6-Power Level B2/C2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
1.4MHz	1RB-High (5)	1779.3 (132665)	22.11	22.07	21.16
		1745 (132322)	21.49	21.67	20.52
		1710.7 (131979)	21.19	21.26	20.18
	1RB-Middle (3)	1779.3 (132665)	22.07	22.00	21.01
		1745 (132322)	21.59	21.60	20.41
		1710.7 (131979)	21.13	21.21	20.18
	1RB-Low (0)	1779.3 (132665)	21.65	21.87	20.73
		1745 (132322)	21.31	21.43	20.24
		1710.7 (131979)	21.06	21.14	20.14
	3RB-High (3)	1779.3 (132665)	21.93	20.96	19.94
		1745 (132322)	21.52	20.43	19.27
		1710.7 (131979)	21.28	20.18	19.04
	3RB-Middle (1)	1779.3 (132665)	21.97	21.02	19.95
		1745 (132322)	21.38	20.48	19.42
		1710.7 (131979)	21.09	20.04	18.96
	3RB-Low (0)	1779.3 (132665)	21.76	20.82	19.74
		1745 (132322)	21.43	20.31	19.23
		1710.7 (131979)	21.12	19.91	18.80
	6RB (0)	1779.3 (132665)	22.01	21.00	19.90
		1745 (132322)	21.38	20.39	19.33
		1710.7 (131979)	21.22	20.09	18.97
3MHz	1RB-High (14)	1778.5 (132657)	22.07	22.12	21.06
		1745 (132322)	21.54	21.62	20.51
		1711.5 (131987)	21.27	21.27	20.16
	1RB-Middle (7)	1778.5 (132657)	22.00	22.05	21.06
		1745 (132322)	21.59	21.64	20.46
		1711.5 (131987)	21.10	21.30	20.10
	1RB-Low (0)	1778.5 (132657)	21.61	21.72	20.68
		1745 (132322)	21.19	21.34	20.27
		1711.5 (131987)	21.13	21.19	20.01
	8RB-High (7)	1778.5 (132657)	22.03	20.92	20.02
		1745 (132322)	21.58	20.43	19.28
		1711.5 (131987)	21.17	20.15	19.04
	8RB-Middle (4)	1778.5 (132657)	21.88	21.04	19.90
		1745 (132322)	21.51	20.32	19.32
		1711.5 (131987)	21.18	20.10	19.03
	8RB-Low (0)	1778.5 (132657)	21.95	20.74	19.82
		1745 (132322)	21.35	20.33	19.31
		1711.5 (131987)	21.07	20.06	18.84
15RB (0)	1778.5 (132657)	21.95	20.99	19.90	
	1745 (132322)	21.44	20.39	19.27	
	1711.5 (131987)	21.14	20.09	18.87	

5MHz	1RB-High (24)	1777.5 (132647)	22.15	22.17	21.17	
		1745 (132322)	21.55	21.54	20.43	
		1712.5 (131997)	21.21	21.38	20.14	
	1RB-Middle (12)	1777.5 (132647)	21.89	22.09	20.97	
		1745 (132322)	21.61	21.58	20.56	
		1712.5 (131997)	21.25	21.35	20.10	
	1RB-Low (0)	1777.5 (132647)	21.61	21.74	20.80	
		1745 (132322)	21.34	21.25	20.10	
		1712.5 (131997)	21.22	21.29	20.02	
	12RB-High (13)	1777.5 (132647)	21.97	21.03	20.00	
		1745 (132322)	21.52	20.53	19.37	
		1712.5 (131997)	21.24	20.20	19.03	
	12RB-Middle (6)	1777.5 (132647)	22.00	20.88	19.91	
		1745 (132322)	21.47	20.32	19.36	
		1712.5 (131997)	21.12	20.13	18.94	
	12RB-Low (0)	1777.5 (132647)	21.81	20.79	19.80	
		1745 (132322)	21.53	20.27	19.16	
		1712.5 (131997)	21.06	20.03	18.84	
	25RB (0)	1777.5 (132647)	21.87	20.87	19.88	
		1745 (132322)	21.46	20.46	19.38	
		1712.5 (131997)	21.16	20.08	18.95	
	10MHz	1RB-High (49)	1775 (132622)	21.98	22.25	21.11
			1745 (132322)	21.54	21.66	20.54
			1715 (132022)	21.13	21.38	20.06
1RB-Middle (24)		1775 (132622)	22.06	22.06	21.08	
		1745 (132322)	21.54	21.73	20.51	
		1715 (132022)	21.22	21.26	20.12	
1RB-Low (0)		1775 (132622)	21.72	21.70	20.79	
		1745 (132322)	21.25	21.25	20.21	
		1715 (132022)	21.22	21.30	20.05	
25RB-High (25)		1775 (132622)	21.94	20.93	19.96	
		1745 (132322)	21.61	20.39	19.38	
		1715 (132022)	21.27	20.08	19.04	
25RB-Middle (12)		1775 (132622)	21.93	20.88	19.93	
		1745 (132322)	21.57	20.42	19.38	
		1715 (132022)	21.26	20.03	18.96	
25RB-Low (0)		1775 (132622)	21.88	20.83	19.82	
		1745 (132322)	21.41	20.35	19.25	
		1715 (132022)	21.11	20.08	18.77	
50RB (0)		1775 (132622)	22.03	20.87	19.85	
		1745 (132322)	21.50	20.51	19.34	
		1715 (132022)	21.17	20.00	18.96	

15MHz	1RB-High (74)	1772.5 (132597)	22.06	22.12	21.17	
		1745 (132322)	21.47	21.57	20.57	
		1717.5 (132047)	21.20	21.24	20.10	
	1RB-Middle (37)	1772.5 (132597)	22.07	22.07	21.01	
		1745 (132322)	21.60	21.57	20.47	
		1717.5 (132047)	21.18	21.32	20.19	
	1RB-Low (0)	1772.5 (132597)	21.74	21.70	20.77	
		1745 (132322)	21.20	21.42	20.22	
		1717.5 (132047)	21.12	21.15	20.06	
	36RB-High (38)	1772.5 (132597)	21.94	21.07	19.94	
		1745 (132322)	21.54	20.41	19.42	
		1717.5 (132047)	21.20	20.19	18.98	
	36RB-Middle (19)	1772.5 (132597)	21.96	21.08	19.85	
		1745 (132322)	21.40	20.34	19.35	
		1717.5 (132047)	21.19	20.02	18.95	
	36RB-Low (0)	1772.5 (132597)	21.84	20.74	19.73	
		1745 (132322)	21.48	20.32	19.16	
		1717.5 (132047)	21.02	20.01	18.77	
	75RB (0)	1772.5 (132597)	22.00	21.02	19.90	
		1745 (132322)	21.45	20.50	19.22	
		1717.5 (132047)	21.15	20.11	19.01	
	20MHz	1RB-High (99)	1770 (132572)	22.18	22.27	21.22
			1745 (132322)	21.63	21.73	20.61
			1720 (132072)	21.29	21.39	20.23
		1RB-Middle (50)	1770 (132572)	22.08	22.17	21.11
			1745 (132322)	21.63	21.73	20.61
			1720 (132072)	21.29	21.39	20.23
1RB-Low (0)		1770 (132572)	21.81	21.90	20.81	
		1745 (132322)	21.34	21.44	20.29	
		1720 (132072)	21.22	21.32	20.16	
50RB-High (50)		1770 (132572)	22.28	21.08	20.03	
		1745 (132322)	21.61	20.56	19.45	
		1720 (132072)	21.29	20.20	19.06	
50RB-Middle (25)		1770 (132572)	22.07	21.08	20.03	
		1745 (132322)	21.58	20.52	19.42	
		1720 (132072)	21.27	20.18	19.04	
50RB-Low (0)		1770 (132572)	21.95	20.94	19.87	
		1745 (132322)	21.53	20.47	19.35	
		1720 (132072)	21.20	20.10	18.95	
100RB (0)		1770 (132572)	22.04	21.04	19.98	
		1745 (132322)	21.58	20.52	19.42	
		1720 (132072)	21.27	20.18	19.04	

LTE B30 ANT7-Power Level A2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2312.5 (27735)	22.95	22.10	20.97
		2310 (27710)	23.11	22.23	21.18
		2307.5 (27685)	23.13	22.14	21.10
	1RB-Middle (12)	2312.5 (27735)	22.93	22.05	20.98
		2310 (27710)	23.09	22.19	21.19
		2307.5 (27685)	23.10	22.22	21.06
	1RB-Low (0)	2312.5 (27735)	22.84	21.99	21.01
		2310 (27710)	23.06	22.13	21.18
		2307.5 (27685)	23.12	22.11	21.02
	12RB-High (13)	2312.5 (27735)	21.96	21.01	19.91
		2310 (27710)	22.10	21.01	19.96
		2307.5 (27685)	22.13	20.99	20.09
	12RB-Middle (6)	2312.5 (27735)	21.94	20.86	19.86
		2310 (27710)	22.03	21.09	19.91
		2307.5 (27685)	22.15	21.11	20.10
	12RB-Low (0)	2312.5 (27735)	21.90	20.88	19.94
		2310 (27710)	22.03	20.97	19.97
		2307.5 (27685)	22.07	21.07	20.05
	25RB (0)	2312.5 (27735)	21.95	20.97	20.04
		2310 (27710)	21.99	21.11	20.07
		2307.5 (27685)	22.17	21.04	20.08
10MHz	1RB-High (49)	2310 (27710)	22.97	22.05	21.03
	1RB-Middle (24)	2310 (27710)	23.16	22.22	21.18
	1RB-Low (0)	2310 (27710)	23.13	22.19	21.17
	25RB-High (25)	2310 (27710)	22.01	20.99	19.99
	25RB-Middle (12)	2310 (27710)	22.08	21.06	20.06
	25RB-Low (0)	2310 (27710)	22.15	21.12	20.11
	50RB (0)	2310 (27710)	22.08	21.03	20.04

LTE B30 ANT7-Power Level B2/C2					
BANDWIDTH	Number of RBs	Frequency	QPSK	16QAM	64QAM
5MHz	1RB-High (24)	2312.5 (27735)	16.76	16.88	16.86
		2310 (27710)	16.85	16.93	17.05
		2307.5 (27685)	16.95	16.93	16.92
	1RB-Middle (12)	2312.5 (27735)	16.76	16.79	16.85
		2310 (27710)	16.70	16.89	16.80
		2307.5 (27685)	16.83	16.78	16.86
	1RB-Low (0)	2312.5 (27735)	16.77	16.83	16.96
		2310 (27710)	16.96	17.00	17.03
		2307.5 (27685)	16.89	16.90	16.89
	12RB-High (13)	2312.5 (27735)	16.63	16.74	16.77
		2310 (27710)	16.88	16.70	16.83
		2307.5 (27685)	16.75	16.75	16.73
	12RB-Middle (6)	2312.5 (27735)	16.78	16.82	16.91
		2310 (27710)	16.88	17.07	17.08
		2307.5 (27685)	16.94	17.08	16.89
	12RB-Low (0)	2312.5 (27735)	16.79	16.79	16.86
		2310 (27710)	16.72	16.74	16.80
		2307.5 (27685)	16.82	16.81	16.83
	25RB (0)	2312.5 (27735)	16.84	16.91	16.89
		2310 (27710)	16.87	17.09	17.11
		2307.5 (27685)	16.99	16.90	17.04
10MHz	1RB-High (49)	2310 (27710)	16.84	16.93	16.98
	1RB-Middle (24)	2310 (27710)	16.96	17.05	17.09
	1RB-Low (0)	2310 (27710)	16.94	17.03	17.04
	25RB-High (25)	2310 (27710)	16.74	16.77	16.81
	25RB-Middle (12)	2310 (27710)	16.85	16.85	16.88
	25RB-Low (0)	2310 (27710)	16.87	16.89	16.88
	50RB (0)	2310 (27710)	16.84	16.83	16.84

Uplink maximum output power is measured with downlink carrier aggregation active, using the channel with highest measured maximum output power when downlink carrier aggregation is inactive. SAR test is not required since maximum output power when downlink carrier aggregation active is not more than ¼ dB higher than the maximum output power measured when downlink carrier aggregation inactive.

The device supports Intra-band uplink LTE Carrier Aggregation (CA) CA_B41C. The conducted power measurement results of LTE CA are provided as follow.

All other uplink communications are identical to the release 8 specifications. Other LTE Rel.10 or higher features are not supported, including Enhanced SC-FDMA or Uplink MIMO etc.

The conducted power measurement results of LTE downlink CA are as below:

DL LTE CA Class	PCC								SCC			Power		
	PC C Band	PCC Band width (MHz)	PCC UL RB size	PCC UL RB offset	PCC DL RB size	PCC DL RB offset	PCC UL Channel	PCC DL Channel	SCC Band	SCC Band width (MHz)	SCC DL Channel	Rel 8 LTETx Power (dBm)	Rel 10 DL LTE CA Tx Power(dBm)	Tune -up
2A-2A	2	20	1	99	1	0	18700	700	2	5	1175	24.44	24.05	25.5
2A-5A	2	20	1	50	100	0	19100	1100	5	10	2525	24.46	24.01	25.5
2A-5A	5	10	1	0	50	0	20450	2450	2	20	900	24.63	24.36	25
2A-12A	2	20	1	50	100	0	19100	1100	12	10	5095	24.46	23.98	25.5
2A-12A	12	10	1	0	50	0	23060	5060	2	20	900	24.33	24.19	25
2A-14A	2	20	1	50	100	0	19100	1100	14	10	5330	24.46	24.06	25
2A-14A	14	10	1	24	50	0	23330	5330	2	20	900	24.84	24.41	25.5
2A-29A	2	20	1	50	100	0	19100	1100	29	10	9715	24.46	23.96	25.5
2A-30A	2	20	1	50	100	0	19100	1100	30	10	9820	24.46	24.23	25.5
2A-30A	30	10	1	0	50	0	27710	9820	2	20	900	23.37	23.33	25
2A-66A	2	20	1	50	100	0	19100	1100	66	20	66786	24.46	24.02	25.5
2A-66A	66	20	1	50	100	0	132572	67036	2	20	900	24.55	23.94	25.5
5A-30A	5	10	1	0	50	0	20450	2450	30	10	9820	24.63	24.36	25
5A-30A	30	10	1	0	50	0	27710	9820	5	10	2525	23.37	23.31	25
5A-66A	5	10	1	0	50	0	20450	2450	66	20	66786	24.63	23.92	25
5A-66A	66	20	1	50	100	0	132572	67036	5	10	2525	24.55	23.91	25.5
5B	5	10	1	0	50	0	20450	2450	5	10	2549	24.63	23.34	25
12A-30A	12	10	1	0	50	0	23060	5060	30	10	9820	24.33	23.75	25
12A-30A	30	10	1	0	50	0	27710	9820	12	10	5095	23.37	23.32	25
12A-66A	12	10	1	0	50	0	23060	5060	66	20	66786	24.33	23.86	25
12A-66A	66	20	1	50	100	0	132572	67036	12	10	5095	24.55	23.98	25.5
14A-30A	14	10	1	24	50	0	23330	5330	30	10	9820	24.84	23.53	25
14A-30A	30	10	1	0	50	0	27710	9820	14	10	5330	23.37	23.82	25
14A-66A	14	10	1	24	50	0	23330	5330	66	20	66786	24.84	23.47	25
14A-66A	66	20	1	50	100	0	132572	67036	14	10	5330	24.55	23.95	25.5
29A-30A	30	10	1	0	50	0	27710	9820	29	10	9715	23.37	23.29	25
29A-66A	66	20	1	50	100	0	132572	67036	29	10	9715	24.55	24.18	25.5
30A-66A	30	10	1	0	50	0	27710	9820	66	20	66786	23.37	23.25	25
30A-66A	66	20	1	50	100	0	132572	67036	30	10	9820	24.55	24.05	25.5
66A-66A	66	20	1	50	100	0	132572	67036	66	20	66786	24.55	23.96	25.5

Note: Testing is not required in bands or modes not intended/allowed for US operation.

The conducted power measurement results of LTE uplink CA are as below :

UL LTE CA Class	PCC				SCC				conducted power (dBm)
	PCC Bandwidth	UL channel	UL RB	UL RB OFFSET	SCC Bandwidth	DL channel	UL RB	UL RB OFFSET	
CA_5B	5M	20425	1	24	3M	2464	1	0	24.08
CA_5B	10M	20450	1	49	5M	2522	1	0	24.15
CA_5B	10M	20450	1	49	10M	2549	1	0	24.09
CA_5B	5M	20625	25	0	3M	2586	15	0	24.11
CA_5B	10M	20600	50	0	5M	2528	25	0	22.25
CA_5B	10M	20600	50	0	10M	2501	50	0	22.13

11.3 5G NR Measurement result

Maximum Target Power for Production Unit –Power Level A2/B2/C2

Band	Tune up (dBm)		
	Receiver on	Receiver off+ Hotspot off	Receiver off+ Hotspot on
	Power Level A2	Power Level B2	Power Level C2
n2(NSA)	15	18	18
n5(NSA)	25	25	25
n30(NSA)	14	18	18
n66(NSA)	19	21	21
n77(NSA)	16.5	17.5	17.5

5G n2-Power Level A2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1907.5	381500	13.99
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1880	376000	14.42
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1852.5	370500	14.55
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1900	380000	14.22
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1880	376000	14.58
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1860	372000	14.53
15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	1880	376000	14.39
15	5	DFT-s-OFDM 16QAM	Inner_Full	12_6	1880	376000	14.45
15	5	DFT-s-OFDM 64QAM	Inner_Full	12_6	1880	376000	14.43
15	5	DFT-s-OFDM 256QAM	Inner_Full	12_6	1880	376000	14.47
15	5	CP-OFDM QPSK	Inner_Full	12_6	1880	376000	14.48
15	5	CP-OFDM 16QAM	Inner_Full	12_6	1880	376000	14.55
15	5	CP-OFDM 64QAM	Inner_Full	12_6	1880	376000	14.48
15	5	CP-OFDM 256QAM	Inner_Full	12_6	1880	376000	14.47
15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2_23	1880	376000	14.40
15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	1880	376000	14.47
15	5	DFT-s-OFDM QPSK	Edge_1RB_Right	1_24	1880	376000	14.35
15	5	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	1880	376000	14.43
15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1_23	1880	376000	14.34
15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	1880	376000	14.43
15	5	DFT-s-OFDM QPSK	Outer_Full	25_0	1880	376000	14.49
15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	1880	376000	14.30
15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	1880	376000	14.50

5G n2-Power Level B2/C2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1907.5	381500	16.87
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1880	376000	17.39
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1852.5	370500	17.54
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1900	380000	17.15
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1880	376000	17.55
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1860	372000	17.51
15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	1880	376000	17.34
15	5	DFT-s-OFDM 16QAM	Inner_Full	12_6	1880	376000	17.41
15	5	DFT-s-OFDM 64QAM	Inner_Full	12_6	1880	376000	17.39
15	5	DFT-s-OFDM 256QAM	Inner_Full	12_6	1880	376000	17.43
15	5	CP-OFDM QPSK	Inner_Full	12_6	1880	376000	17.45
15	5	CP-OFDM 16QAM	Inner_Full	12_6	1880	376000	17.53
15	5	CP-OFDM 64QAM	Inner_Full	12_6	1880	376000	17.45
15	5	CP-OFDM 256QAM	Inner_Full	12_6	1880	376000	17.43
15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2_23	1880	376000	17.34
15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	1880	376000	17.43
15	5	DFT-s-OFDM QPSK	Edge_1RB_Right	1_24	1880	376000	17.28
15	5	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	1880	376000	17.38
15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1_23	1880	376000	17.27
15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	1880	376000	17.38
15	5	DFT-s-OFDM QPSK	Outer_Full	25_0	1880	376000	17.45
15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	1880	376000	17.30
15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	1880	376000	17.47

5G n5-Power Level A2/B2/C2								
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Tune up	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	846.5	169300	25.00	24.02
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	836.5	167300	25.00	24.17
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	826.5	165300	25.00	24.16
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	839	167800	25.00	23.76
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	836.5	167300	25.00	23.92
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	834	166800	25.00	23.91
15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	836.5	167300	25.00	23.98
15	5	DFT-s-OFDM 16QAM	Inner_Full	12_6	836.5	167300	24.00	22.92
15	5	DFT-s-OFDM 64QAM	Inner_Full	12_6	836.5	167300	22.50	21.50
15	5	DFT-s-OFDM 256QAM	Inner_Full	12_6	836.5	167300	20.50	19.45
15	5	CP-OFDM QPSK	Inner_Full	12_6	836.5	167300	23.50	22.30
15	5	CP-OFDM 16QAM	Inner_Full	12_6	836.5	167300	23.00	21.98
15	5	CP-OFDM 64QAM	Inner_Full	12_6	836.5	167300	21.50	20.49
15	5	CP-OFDM 256QAM	Inner_Full	12_6	836.5	167300	18.50	17.50
15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2_23	836.5	167300	24.00	22.90
15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	836.5	167300	24.00	22.92
15	5	DFT-s-OFDM QPSK	Edge_1RB_Right	1_24	836.5	167300	24.00	22.85
15	5	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	836.5	167300	24.00	22.95
15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1_23	836.5	167300	25.00	23.87
15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	836.5	167300	25.00	23.97
15	5	DFT-s-OFDM QPSK	Outer_Full	25_0	836.5	167300	24.00	22.95
15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	836.5	167300	25.00	23.89
15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	836.5	167300	25.00	23.97

5G n30-Power Level A2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2312.5	355500	12.98
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2310	349000	13.02
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2307.5	342500	13.18
15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	2310	349000	12.85
15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	2307.5	342500	13.15
15	5	DFT-s-OFDM 16QAM	Inner_Full	12_6	2307.5	342500	13.12
15	5	DFT-s-OFDM 64QAM	Inner_Full	12_6	2307.5	342500	13.10
15	5	DFT-s-OFDM 256QAM	Inner_Full	12_6	2307.5	342500	13.11
15	5	CP-OFDM QPSK	Inner_Full	12_6	2307.5	342500	13.13
15	5	CP-OFDM 16QAM	Inner_Full	12_6	2307.5	342500	13.11
15	5	CP-OFDM 64QAM	Inner_Full	12_6	2307.5	342500	13.12
15	5	CP-OFDM 256QAM	Inner_Full	12_6	2307.5	342500	13.10
15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2_23	2307.5	342500	13.01
15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	2307.5	342500	13.07
15	5	DFT-s-OFDM QPSK	Edge_1RB_Right	1_24	2307.5	342500	12.96
15	5	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	2307.5	342500	13.04
15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1_23	2307.5	342500	12.95
15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	2307.5	342500	13.04
15	5	DFT-s-OFDM QPSK	Outer_Full	25_0	2307.5	342500	13.09

5G n30-Power Level B2/C2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2312.5	355500	16.94
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2310	349000	16.97
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	2307.5	342500	17.05
15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	2310	349000	16.84
15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	2307.5	342500	16.97
15	5	DFT-s-OFDM 16QAM	Inner_Full	12_6	2307.5	342500	16.95
15	5	DFT-s-OFDM 64QAM	Inner_Full	12_6	2307.5	342500	16.93
15	5	DFT-s-OFDM 256QAM	Inner_Full	12_6	2307.5	342500	16.94
15	5	CP-OFDM QPSK	Inner_Full	12_6	2307.5	342500	16.96
15	5	CP-OFDM 16QAM	Inner_Full	12_6	2307.5	342500	17.02
15	5	CP-OFDM 64QAM	Inner_Full	12_6	2307.5	342500	16.95
15	5	CP-OFDM 256QAM	Inner_Full	12_6	2307.5	342500	16.93
15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2_23	2307.5	342500	16.90
15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	2307.5	342500	16.94
15	5	DFT-s-OFDM QPSK	Edge_1RB_Right	1_24	2307.5	342500	16.86
15	5	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	2307.5	342500	16.92
15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1_23	2307.5	342500	16.85
15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	2307.5	342500	16.92
15	5	DFT-s-OFDM QPSK	Outer_Full	25_0	2307.5	342500	16.96

5G n66-Power Level A2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1777.5	355500	18.35
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1745	349000	17.83
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1712.5	342500	17.94
15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1760	352000	17.95
15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1745	349000	17.67
15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1730	346000	17.45
15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	1777.5	355500	18.14
15	5	DFT-s-OFDM 16QAM	Inner_Full	12_6	1777.5	355500	18.20
15	5	DFT-s-OFDM 64QAM	Inner_Full	12_6	1777.5	355500	18.18
15	5	DFT-s-OFDM 256QAM	Inner_Full	12_6	1777.5	355500	18.19
15	5	CP-OFDM QPSK	Inner_Full	12_6	1777.5	355500	18.17
15	5	CP-OFDM 16QAM	Inner_Full	12_6	1777.5	355500	18.26
15	5	CP-OFDM 64QAM	Inner_Full	12_6	1777.5	355500	18.21
15	5	CP-OFDM 256QAM	Inner_Full	12_6	1777.5	355500	17.66
15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2_23	1777.5	355500	18.07
15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	1777.5	355500	18.15
15	5	DFT-s-OFDM QPSK	Edge_1RB_Right	1_24	1777.5	355500	18.00
15	5	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	1777.5	355500	18.11
15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1_23	1777.5	355500	17.98
15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	1777.5	355500	18.11
15	5	DFT-s-OFDM QPSK	Outer_Full	25_0	1777.5	355500	18.18
15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	1775	355000	17.98
15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	1772.5	354500	18.14
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1770	354000	18.10
15	25	DFT-s-OFDM QPSK	Inner_Full	64_32	1767.5	353500	18.05
15	30	DFT-s-OFDM QPSK	Inner_Full	80_40	1765	35300	17.93

5G n66-Power Level B2/C2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1777.5	355500	20.20
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1745	349000	19.66
15	5	DFT-s-OFDM QPSK	Inner_Full	12_6	1712.5	342500	19.38
15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1760	352000	19.93
15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1745	349000	19.69
15	40	DFT-s-OFDM QPSK	Inner_Full	108_54	1730	346000	19.51
15	5	DFT-s-OFDM PI/2 BPSK1	Inner_Full	12_6	1777.5	355500	20.14
15	5	DFT-s-OFDM 16QAM	Inner_Full	12_6	1777.5	355500	20.15
15	5	DFT-s-OFDM 64QAM	Inner_Full	12_6	1777.5	355500	20.17
15	5	DFT-s-OFDM 256QAM	Inner_Full	12_6	1777.5	355500	20.18
15	5	CP-OFDM QPSK	Inner_Full	12_6	1777.5	355500	20.16
15	5	CP-OFDM 16QAM	Inner_Full	12_6	1777.5	355500	20.15
15	5	CP-OFDM 64QAM	Inner_Full	12_6	1777.5	355500	20.17
15	5	CP-OFDM 256QAM	Inner_Full	12_6	1777.5	355500	19.74
15	5	DFT-s-OFDM QPSK	Edge_Full_Right	2_23	1777.5	355500	20.06
15	5	DFT-s-OFDM QPSK	Edge_Full_Left	2_0	1777.5	355500	20.12
15	5	DFT-s-OFDM QPSK	Edge_1RB_Right	1_24	1777.5	355500	20.00
15	5	DFT-s-OFDM QPSK	Edge_1RB_Left	1_0	1777.5	355500	20.09
15	5	DFT-s-OFDM QPSK	Inner_1RB_Right	1_23	1777.5	355500	19.98
15	5	DFT-s-OFDM QPSK	Inner_1RB_Left	1_1	1777.5	355500	20.09
15	5	DFT-s-OFDM QPSK	Outer_Full	25_0	1777.5	355500	20.15
15	10	DFT-s-OFDM QPSK	Inner_Full	25_12	1775	355000	19.98
15	15	DFT-s-OFDM QPSK	Inner_Full	36_18	1772.5	354500	20.11
15	20	DFT-s-OFDM QPSK	Inner_Full	50_25	1770	354000	20.08
15	25	DFT-s-OFDM QPSK	Inner_Full	64-32	1767.5	353500	20.03
15	30	DFT-s-OFDM QPSK	Inner_Full	80_40	1765	35300	19.93

5G n77(3450-3550MHz)-Power Level A2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3540	636000	14.97
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3500.01	633334	14.73
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3460.02	630668	14.68
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3499.98	633332	14.71
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3500.01	633334	14.7
30	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	25@12	3540	636000	14.83
30	20	DFT-s-OFDM 16QAM	Inner_Full	25@12	3540	636000	14.93
30	20	DFT-s-OFDM 64QAM	Inner_Full	25@12	3540	636000	14.89
30	20	DFT-s-OFDM 256QAM	Inner_Full	25@12	3540	636000	14.95
30	20	CP-OFDM QPSK	Inner_Full	25@12	3540	636000	14.88
30	20	CP-OFDM 16QAM	Inner_Full	25@12	3540	636000	14.96
30	20	CP-OFDM 64QAM	Inner_Full	25@12	3540	636000	14.82
30	20	CP-OFDM 256QAM	Inner_Full	25@12	3540	636000	14.87
30	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@49	3540	636000	14.70
30	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	3540	636000	14.81
30	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@49	3540	636000	14.57
30	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	3540	636000	14.75
30	20	DFT-s-OFDM QPSK	Outer_Full	50@0	3540	636000	14.85
30	40	DFT-s-OFDM QPSK	Inner_Full	50@25	3529.98	635332	14.71
30	50	DFT-s-OFDM QPSK	Inner_Full	64@32	3525	635000	14.75
30	60	DFT-s-OFDM QPSK	Inner_Full	81@40	3519.99	634666	14.68
30	80	DFT-s-OFDM QPSK	Inner_Full	108@54	3510	634000	14.63
30	90	DFT-s-OFDM QPSK	Inner_Full	120@60	3499.98	633332	14.60

5G n77(3700-3980MHz)-Power Level A2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3969.990	664666	14.52
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3918.000	661200	14.8
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3866.000	657733	15.41
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3814.000	654267	15.25
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3762.000	650800	14.7
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3710.010	647334	14.56
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3930.000	662000	14.64
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3894.000	659600	15.21
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3858.000	657200	15.39
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3822.000	654800	15.28
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3786.000	652400	14.91
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3750.000	650000	14.6
30	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	25@12	3866.000	657733	15.38
30	20	DFT-s-OFDM 16QAM	Inner_Full	25@12	3866.000	657733	15.47
30	20	DFT-s-OFDM 64QAM	Inner_Full	25@12	3866.000	657733	15.43
30	20	DFT-s-OFDM 256QAM	Inner_Full	25@12	3866.000	657733	15.49
30	20	CP-OFDM QPSK	Inner_Full	25@12	3866.000	657733	15.42
30	20	CP-OFDM 16QAM	Inner_Full	25@12	3866.000	657733	15.50
30	20	CP-OFDM 64QAM	Inner_Full	25@12	3866.000	657733	15.37
30	20	CP-OFDM 256QAM	Inner_Full	25@12	3866.000	657733	15.41
30	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@49	3866.000	657733	15.26
30	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	3866.000	657733	15.36
30	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@49	3866.000	657733	15.14
30	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	3866.000	657733	15.31
30	20	DFT-s-OFDM QPSK	Outer_Full	50@0	3866.000	657733	15.40
30	40	DFT-s-OFDM QPSK	Inner_Full	50@25	3866.000	657733	15.46
30	50	DFT-s-OFDM QPSK	Inner_Full	64@32	3866.000	657733	15.50
30	60	DFT-s-OFDM QPSK	Inner_Full	81@40	3866.000	657733	15.43
30	80	DFT-s-OFDM QPSK	Inner_Full	108@54	3866.000	657733	15.39
30	90	DFT-s-OFDM QPSK	Inner_Full	120@60	3866.000	657733	15.36

5G n77(3450-3550MHz)-Power Level B2/C2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3540	636000	16.15
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3500.01	633334	15.79
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3460.02	630668	15.73
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3499.98	633332	15.81
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3500.01	633334	15.78
30	20	DFT-s-OFDM PI/2 BPSK1	Inner_Full	25@12	3540	636000	15.74
30	20	DFT-s-OFDM 16QAM	Inner_Full	25@12	3540	636000	15.93
30	20	DFT-s-OFDM 64QAM	Inner_Full	25@12	3540	636000	15.79
30	20	DFT-s-OFDM 256QAM	Inner_Full	25@12	3540	636000	15.85
30	20	CP-OFDM QPSK	Inner_Full	25@12	3540	636000	15.80
30	20	CP-OFDM 16QAM	Inner_Full	25@12	3540	636000	15.86
30	20	CP-OFDM 64QAM	Inner_Full	25@12	3540	636000	15.85
30	20	CP-OFDM 256QAM	Inner_Full	25@12	3540	636000	15.90
30	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@49	3540	636000	15.65
30	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	3540	636000	15.79
30	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@49	3540	636000	15.49
30	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	3540	636000	15.72
30	20	DFT-s-OFDM QPSK	Outer_Full	50@0	3540	636000	15.89
30	40	DFT-s-OFDM QPSK	Inner_Full	50@25	3529.98	635332	15.63
30	50	DFT-s-OFDM QPSK	Inner_Full	64@32	3525	635000	15.73
30	60	DFT-s-OFDM QPSK	Inner_Full	81@40	3519.99	634666	15.71
30	80	DFT-s-OFDM QPSK	Inner_Full	108@54	3510	634000	15.68
30	90	DFT-s-OFDM QPSK	Inner_Full	120@60	3499.98	633332	15.62

5G n77(3700-3980MHz)-Power Level B2/C2							
SCS (kHz)	NR BW (MHz)	Modulation	RB allocation		NR Test Freq. (MHz)	NR Test CH.	Power Results (dBm)
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3969.990	664666	15.68
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3918.000	661200	16.03
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3866.000	657733	16.47
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3814.000	654267	16.31
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3762.000	650800	15.73
30	20	DFT-s-OFDM QPSK	Inner_Full	25@12	3710.010	647334	15.67
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3930.000	662000	15.81
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3894.000	659600	16.33
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3858.000	657200	16.42
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3822.000	654800	16.36
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3786.000	652400	16.01
30	100	DFT-s-OFDM QPSK	Inner_Full	135@67	3750.000	650000	15.71
30	20	DFT-s-OFDM PI/2 BPSK	Inner_Full	25@12	3866.000	657733	16.33
30	20	DFT-s-OFDM 16QAM	Inner_Full	25@12	3866.000	657733	16.41
30	20	DFT-s-OFDM 64QAM	Inner_Full	25@12	3866.000	657733	16.27
30	20	DFT-s-OFDM 256QAM	Inner_Full	25@12	3866.000	657733	16.30
30	20	CP-OFDM QPSK	Inner_Full	25@12	3866.000	657733	16.34
30	20	CP-OFDM 16QAM	Inner_Full	25@12	3866.000	657733	16.35
30	20	CP-OFDM 64QAM	Inner_Full	25@12	3866.000	657733	16.23
30	20	CP-OFDM 256QAM	Inner_Full	25@12	3866.000	657733	16.35
30	20	DFT-s-OFDM QPSK	Edge_Full_Right	2@49	3866.000	657733	16.06
30	20	DFT-s-OFDM QPSK	Edge_Full_Left	2@0	3866.000	657733	16.19
30	20	DFT-s-OFDM QPSK	Inner_1RB_Right	1@49	3866.000	657733	16.06
30	20	DFT-s-OFDM QPSK	Inner_1RB_Left	1@1	3866.000	657733	16.14
30	20	DFT-s-OFDM QPSK	Outer_Full	50@0	3866.000	657733	16.24
30	40	DFT-s-OFDM QPSK	Inner_Full	50@25	3866.000	657733	16.26
30	50	DFT-s-OFDM QPSK	Inner_Full	64@32	3866.000	657733	16.42
30	60	DFT-s-OFDM QPSK	Inner_Full	81@40	3866.000	657733	16.29
30	80	DFT-s-OFDM QPSK	Inner_Full	108@54	3866.000	657733	16.19
30	90	DFT-s-OFDM QPSK	Inner_Full	120@60	3866.000	657733	16.26

11.4 Wi-Fi and BT Measurement result

The maximum output power of BT antenna is 10.38dBm.

The maximum tune up of BT antenna is 10.5dBm.

Table 11.4: Summary of Receiver detection mechanism-WiFi antenna

Antenna	Receiver on	Receiver off+ Hotspot off	Receiver off+ Hotspot on
WLAN Antenna	Power Level A1	Power Level B1	Power Level C1

The average conducted power for Wi-Fi 2.4G is as following:

Power Level A1

802.11b		
Channel\data rate	1Mbps	Tune up
11(2462MHz)	14.45	15.00
6(2437(MHz)	14.63	15.00
1(2412MHz)	14.59	15.00
802.11g		
Channel\data rate	6Mbps	Tune up
11(2462MHz)	13.40	15.00
6(2437(MHz)	13.95	15.00
1(2412MHz)	13.14	15.00
802.11n-20MHz		
Channel\data rate	MCS0	Tune up
11(2462MHz)	13.25	15.00
6(2437(MHz)	13.87	15.00
1(2412MHz)	14.13	15.00
802.11n-40MHz		
Channel\data rate	MCS0	Tune up
9(2452MHz)	14.12	15.00
6(2437MHz)	13.11	15.00
3(2422MHz)	13.11	15.00

Power Level B1/C1

802.11b		
Channel\data rate	1Mbps	Tune up
11(2462MHz)	17.41	18.50
6(2437(MHz)	18.47	18.50
1(2412MHz)	17.83	18.50
802.11g		
Channel\data rate	6Mbps	Tune up
11(2462MHz)	16.32	17.00
6(2437(MHz)	16.27	17.00
1(2412MHz)	15.81	17.00
802.11n-20MHz		
Channel\data rate	MCS0	Tune up
11(2462MHz)	15.11	16.00
6(2437(MHz)	15.12	16.00
1(2412MHz)	14.67	16.00
802.11n-40MHz		
Channel\data rate	MCS0	Tune up
9(2452MHz)	15.03	16.00
6(2437MHz)	15.07	16.00
3(2422MHz)	15.06	16.00

The tune up power for Wi-Fi 5G is as following:

WiFi 802.11a (5GHz)-Power Level A1			
Channel	Channel 36	Channel 100	Channel 165
Target (dBm)	16.5	16.5	16.5
Tolerance \pm (dB)	-1, +1.5	-1, +1.5	-1, +1.5
WiFi 802.11n-20 (5GHz)			
Channel	Channel 36	Channel 100	Channel 165
Target (dBm)	15	15	15
Tolerance \pm (dB)	1	1	1
WiFi 802.11n-40 (5GHz)			
Channel	Channel 38	Channel 102	Channel 1159
Target (dBm)	15	15	15
Tolerance \pm (dB)	1	1	1
WiFi 802.11ac-20 (5GHz)			
Channel	Channel 36	Channel 100	Channel 165
Target (dBm)	14	14	14
Tolerance \pm (dB)	1	1	1
WiFi 802.11ac-40 (5GHz)			
Channel	Channel 38	Channel 102	Channel 1159
Target (dBm)	13	13	13
Tolerance \pm (dB)	1	1	1
WiFi 802.11ac-80 (5GHz)			
Channel	Channel 42	Channel 122	Channel 155
Target (dBm)	12.5	12.5	12.5
Tolerance \pm (dB)	1	1	1

WiFi 802.11a (5GHz)-Power Level B1/C1			
Channel	Channel 36	Channel 100	Channel 165
Target (dBm)	10.5	10.5	10.5
Tolerance \pm (dB)	-1, +1.5	-1, +1.5	-1, +1.5
WiFi 802.11n-20 (5GHz)			
Channel	Channel 36	Channel 100	Channel 165
Target (dBm)	10.5	10.5	10.5
Tolerance \pm (dB)	-1, +1.5	-1, +1.5	-1, +1.5
WiFi 802.11n-40 (5GHz)			
Channel	Channel 38	Channel 102	Channel 1159
Target (dBm)	10.5	10.5	10.5
Tolerance \pm (dB)	-1, +1.5	-1, +1.5	-1, +1.5
WiFi 802.11ac-20 (5GHz)			
Channel	Channel 36	Channel 100	Channel 165
Target (dBm)	10.5	10.5	10.5
Tolerance \pm (dB)	-1, +1.5	-1, +1.5	-1, +1.5
WiFi 802.11ac-40 (5GHz)			
Channel	Channel 38	Channel 102	Channel 1159
Target (dBm)	10.5	10.5	10.5
Tolerance \pm (dB)	-1, +1.5	-1, +1.5	-1, +1.5
WiFi 802.11ac-80 (5GHz)			
Channel	Channel 42	Channel 122	Channel 155
Target (dBm)	10.5	10.5	10.5
Tolerance \pm (dB)	-1, +1.5	-1, +1.5	-1, +1.5

The average conducted power for Wi-Fi 5G is as following:

Power Level A1:

802.11n(dBm)-20MHz	
Channel\data rate	6Mbps
36(5180 MHz)	16.69
40(5200 MHz)	16.30
44(5220 MHz)	16.16
48(5240 MHz)	16.33
52(5260 MHz)	16.87
56(5280 MHz)	17.24
60(5300 MHz)	17.45
64(5320 MHz)	17.27
100(5500 MHz)	16.63
104(5520 MHz)	16.24
108(5540 MHz)	16.16
112(5560 MHz)	16.37
116(5580 MHz)	16.76
120(5600 MHz)	17.29
124(5620 MHz)	17.75
128(5640 MHz)	17.79
132(5660 MHz)	17.47
136(5680 MHz)	16.80
140(5700 MHz)	16.71
149(5745 MHz)	16.60
153(5765 MHz)	17.00
157(5785 MHz)	17.31
161(5805 MHz)	17.21
165(5825 MHz)	17.16
Tune up	18.00

Power Level B1/C1:

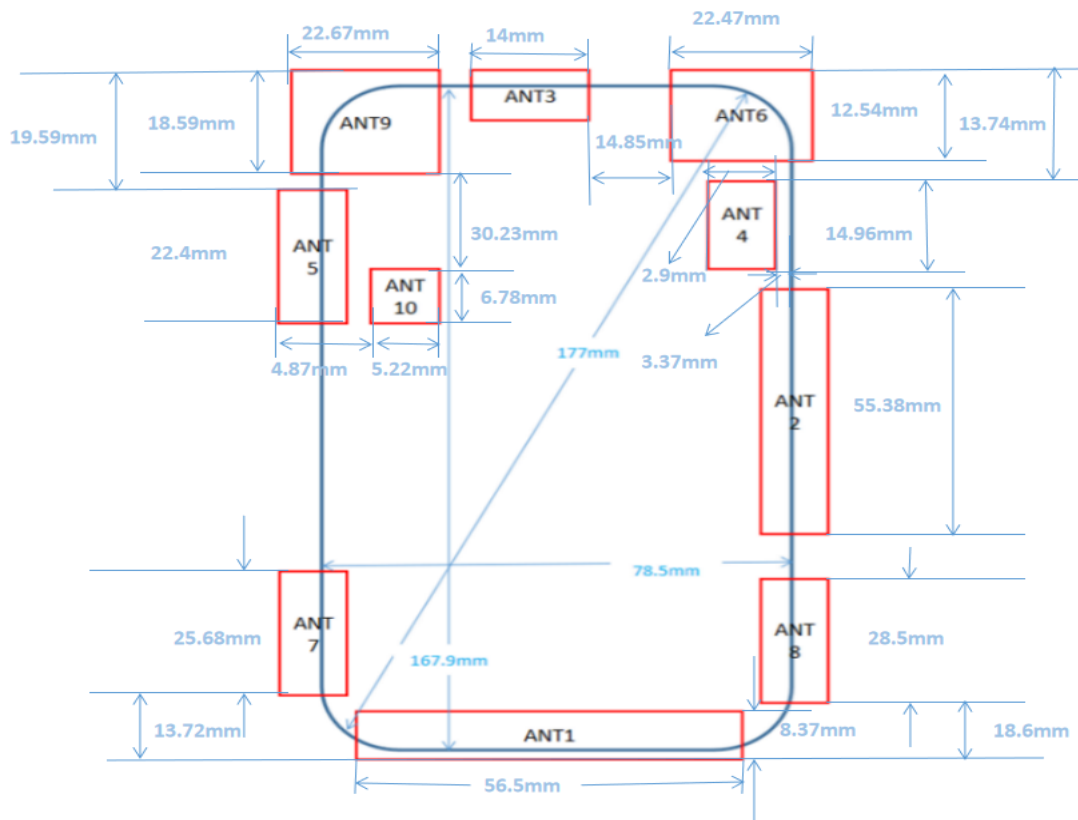
802.11ac(dBm)-80MHz	
Channel\data rate	6Mbps
42(5210 MHz)	10.33
58(5290 MHz)	10.74
106(5530 MHz)	10.61
122(5610 MHz)	10.94
138(5690 MHz)	11.07
155(5775 MHz)	10.96
Tune up	12.00

12 Simultaneous TX SAR Considerations

12.1 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 BT and Wi-Fi can transmit simultaneous with other transmitters.

12.2 Transmit Antenna Separation Distances



	Band	Frequency
ANT1	B2/4/5/12/14/29/66 TRX N5 TRX N2/66 PRX2	699~2180MHZ
ANT2	B2/4/5/12/14/29/66 DRX N5/N2/66 DRX	699~2180MHZ
ANT3	N30/B30 DRX2+N77/B48 PRX2	2310~2360MHZ+3300~4200MHZ
ANT4	N30/B30 DRX	2310~2360MHZ
ANT5	N30/B30/B48 TRX+ N77 TRX	2310~2360MHZ+3300~4200MHZ
ANT6	N2/66 TRX +B2/66 PRX2 B2/66 TX(ENDC)	1710~2180MHZ
ANT7	N30/B30 PRX2+ N77/B48 DRX2 B30 TX(ENDC)	2310~2360MHZ+3300~4200MHZ
ANT8	N2/66(B2/66)DRX2+ N77/B48 DRX	1710~2180MHZ+3300~4200MHZ
ANT9	WIFI 2.4G+BT+GPS	1575MHZ+2402~2472MHZ
ANT10	5G WIFI	5200~5800MHZ

Picture 12.1 Antenna Locations

12.3 SAR Measurement Positions

According to the KDB941225 D06 Hot Spot SAR, the edges with less than 2.5 cm distance to the antennas need to be tested for SAR.

SAR measurement positions						
Mode	Front	Rear	Left edge	Right edge	Top edge	Bottom edge
ANT1	Yes	Yes	Yes	Yes	No	Yes
ANT5	Yes	Yes	No	Yes	Yes	No
ANT6	Yes	Yes	Yes	No	Yes	No
2.4G WIFI	Yes	Yes	No	Yes	Yes	No
5G WIFI	Yes	Yes	No	Yes	Yes	No

13 Evaluation of Simultaneous

Table 13.1: The sum of SAR values for Main antenna + Wifi2.4G +BT

	Position	Main antenna	WiFi-2.4G	Sum
Highest SAR value for Head	Left head, Cheek (ENDC 12A-n30A)	1.04	0.48	1.52
Highest SAR value for Body	Right 10mm (ENDC 30A-n77A)	1.25	0.16	1.41

Table 13.2: The sum of SAR values for Main antenna + Wifi5G +BT

	Position	Main antenna	WiFi-5G	BT	Sum
Highest SAR value for Head	Left head, Cheek (ENDC 12A-n30A)	1.04	0.28	0.12	1.44
Highest SAR value for Body	Rear 10mm (ENDC 14A-n2A)	1.06	0.50	0.02	1.58

Table 13.3: The SAR values for UL CA

LTE	LTE	Mode	Position	Reported SAR 1g(W/kg)
LTE B2-ANT6	LTE B5	Head	Right Cheek	0.88(0.61+0.27)
		Body	Rear 10mm	0.98(0.46+0.52)
	LTE B12	Head	Right Cheek	0.92(0.61+0.31)
		Body	Rear 10mm	0.84(0.46+0.38)
	LTE B14	Head	Right Cheek	0.87(0.61+0.26)
		Body	Rear 10mm	1.03(0.46+0.57)
LTE B5	LTE B30	Head	Left Cheek	0.78(0.19+0.59)
		Body	Right 10mm	0.85(0.33+0.52)
	LTE B66	Head	Right Cheek	1.00(0.27+0.73)
		Body	Rear 10mm	1.06(0.52+0.54)
UL CA 5B	/	Head	Right Cheek	0.24
		Body	Rear 10mm	0.47
LTE B12	LTE B30	Head	Left Cheek	0.87(0.28+0.59)
		Body	Right 10mm	0.96(0.44+0.52)
	LTE B66	Head	Right Cheek	1.04(0.31+0.73)
		Body	Rear 10mm	0.86(0.38+0.48)
LTE B14	LTE B30	Head	Left Cheek	0.74(0.15+0.59)
		Body	Right 10mm	0.97(0.45+0.52)
	LTE B66	Head	Right Cheek	0.99(0.26+0.73)
		Body	Rear 10mm	1.05(0.57+0.48)

Table 13.4: The SAR values for ENDC

LTE	NR	Mode	Position	Reported SAR 1g(W/kg)
LTE B2-ANT1	N2	Head	Right Cheek	0.79(0.06+0.73)
		Body	Rear 10mm	0.93(0.44+0.49)
	N66	Head	Right Cheek	0.85(0.06+0.79)
		Body	Rear 10mm	0.91(0.44+0.47)
	N77	Head	Left Cheek	0.80(0.12+0.68)
		Body	Rear 10mm	0.75(0.44+0.31)
LTE B2-ANT6	N5	Head	Right Cheek	0.92(0.61+0.31)
		Body	Rear 10mm	0.94(0.46+0.48)
LTE B5	N2	Head	Right Cheek	1.00(0.27+0.73)
		Body	Rear 10mm	1.01(0.52+0.49)
	N30	Head	Left Cheek	0.95(0.19+0.76)
		Body	Right 10mm	1.03(0.33+0.70)
	N66	Head	Right Cheek	1.06(0.27+0.79)
		Body	Rear 10mm	0.99(0.52+0.47)
	N77	Head	Left Cheek	0.87(0.19+0.68)
		Body	Right 10mm	0.90(0.33+0.57)
LTE B12	N2	Head	Right Cheek	1.04(0.31+0.73)
		Body	Rear 10mm	0.87(0.38+0.49)
		Head	Left Cheek	1.04(0.28+0.76)

	N30	Body	Right 10mm	1.14(0.44+0.70)
	N66	Head	Right Cheek	1.10(0.31+0.79)
		Body	Rear 10mm	0.85(0.38+0.47)
	N77	Head	Left Cheek	0.96(0.28+0.68)
Body		Right 10mm	1.01(0.44+0.57)	
LTE B14	N2	Head	Right Cheek	0.99(0.26+0.73)
		Body	Rear 10mm	1.06(0.57+0.49)
	N30	Head	Left Cheek	0.91(0.15+0.76)
		Body	Right 10mm	1.15(0.45+0.70)
	N66	Head	Right Cheek	1.05(0.26+0.79)
		Body	Rear 10mm	1.04(0.57+0.47)
N77	Head	Left Cheek	0.83(0.15+0.68)	
	Body	Right 10mm	1.02(0.45+0.57)	
LTE B30-ANT5	N5	Head	Left Cheek	0.81(0.59+0.22)
		Body	Right 10mm	0.70(0.52+0.18)
LTE B30-ANT7	N77	Head	Left Cheek	1.17(0.21+0.68)
		Body	Right 10mm	1.25(0.68+0.57)
LTE B66-ANT1	N2	Head	Right Cheek	0.88(0.15+0.73)
		Body	Rear 10mm	0.91(0.42+0.49)
	N77	Head	Left Cheek	0.79(0.11+0.68)
		Body	Rear 10mm	0.73(0.42+0.31)
LTE B66-ANT6	N5	Head	Right Cheek	1.04(0.73+0.31)
		Body	Rear 10mm	1.02(0.54+0.48)

Conclusion:

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

14 SAR Test Result

It is determined by user manual for the distance between the EUT and the phantom bottom.

The distance is 10 mm and just applied to the condition of body worn accessory.

It is performed for all SAR measurements with area scan based 1-g SAR estimation (Fast SAR). A zoom scan measurement is added when the estimated 1-g SAR is the highest measured SAR in each exposure configuration, wireless mode and frequency band combination or more than 1.2W/kg.

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 11.

Table 14.1: Duty Cycle

Mode	Duty Cycle
WCDMA<E FDD&5G NR	1:1

14.1 SAR results for 3G/4G

Table 14.1-1: SAR Values (WCDMA 1900 MHz Band - Head)

Frequency		Side	Test Position	Figure No.	Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C		Reported SAR(1g) (W/kg)	Measured SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz				Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)			
9538	1907.6	Left	Cheek	Fig.1	21.8	23	0.037	0.05	0.061	0.08	0.03
9400	1880	Left	Cheek	/	21.84	23	0.029	0.04	0.047	0.06	-0.07
9262	1852.4	Left	Cheek	/	21.68	23	0.034	0.05	0.055	0.07	-0.1
9400	1880	Left	Tilt	/	21.84	23	0.024	0.03	0.038	0.05	0.11
9400	1880	Right	Cheek	/	21.84	23	0.027	0.04	0.045	0.06	-0.18
9400	1880	Right	Tilt	/	21.84	23	<0.01	<0.01	<0.01	<0.01	/

Table 14.1-2: SAR Values (WCDMA 1900 MHz Band -Body)

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5°C				
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
9400	1880	Front	/	18.95	20	0.105	0.13	0.175	0.22	-0.02
9400	1880	Rear	/	18.95	20	0.204	0.26	0.364	0.46	0.17
9400	1880	Left	/	18.95	20	0.046	0.06	0.085	0.11	-0.01
9400	1880	Right	/	18.95	20	<0.01	<0.01	<0.01	<0.01	/
9538	1907.6	Bottom	/	18.79	20	0.269	0.36	0.467	0.62	0.07
9400	1880	Bottom	Fig.2	18.95	20	0.312	0.40	0.558	0.71	-0.1
9262	1852.4	Bottom	/	18.75	20	0.291	0.39	0.521	0.69	0.08

Note1: The distance between the EUT and the phantom bottom is 10mm

Table 14.1-3: SAR Values (WCDMA 1700 MHz Band - Head)

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5°C					
Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
1412	1732.4	Left	Cheek	/	21.78	23.5	0.037	0.05	0.07	0.10	0.15
1412	1732.4	Left	Tilt	/	21.78	23.5	0.018	0.03	0.039	0.06	-0.06
1513	1752.6	Right	Cheek	/	21.81	23.5	0.04	0.06	0.065	0.10	0.12
1412	1732.4	Right	Cheek	Fig.3	21.78	23.5	0.047	0.07	0.075	0.11	0.03
1312	1712.4	Right	Cheek	/	21.8	23.5	0.026	0.04	0.042	0.06	0.05
1412	1732.4	Right	Tilt	/	21.78	23.5	<0.01	<0.01	<0.01	<0.01	/

Table 14.1-4: SAR Values (WCDMA 1700 MHz Band - Body)

Ambient Temperature: 22.9 °C						Liquid Temperature: 22.5°C				
Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
1412	1732.5	Front	/	16.81	18.5	0.086	0.13	0.139	0.21	-0.18
1412	1732.5	Rear	/	16.81	18.5	0.139	0.21	0.235	0.35	-0.09
1412	1732.5	Left	/	16.81	18.5	0.021	0.03	0.039	0.06	-0.01
1412	1732.5	Right	/	16.81	18.5	<0.01	<0.01	<0.01	<0.01	/
1513	1752.6	Bottom	Fig.4	16.85	18.5	0.244	0.36	0.431	0.63	-0.01
1412	1732.5	Bottom	/	16.81	18.5	0.17	0.25	0.301	0.44	0.17
1312	1712.4	Bottom	/	16.86	18.5	0.236	0.34	0.418	0.61	-0.17

Note1: The distance between the EUT and the phantom bottom is 10mm

Table 14.1-5: SAR Values (WCDMA 850 MHz Band - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C											
4183	836.6	Left	Cheek	/	22.33	24	0.046	0.07	0.063	0.09	-0.02
4183	836.6	Left	Tilt	/	22.33	24	<0.01	<0.01	<0.01	<0.01	/
4233	846.6	Right	Cheek	/	22.52	24	0.083	0.12	0.11	0.15	-0.16
4183	836.6	Right	Cheek	/	22.33	24	0.055	0.08	0.077	0.11	-0.18
4132	826.4	Right	Cheek	Fig.5	22.47	24	0.088	0.13	0.117	0.17	-0.06
4183	836.6	Right	Tilt	/	22.33	24	<0.01	<0.01	<0.01	<0.01	/

Table 14.1-6: SAR Values (WCDMA 850 MHz Band - Body)

Frequency		Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C										
4183	836.6	Front	/	22.33	24	0.089	0.13	0.145	0.21	0.02
4233	846.6	Rear	/	22.52	24	0.097	0.14	0.161	0.23	0.08
4183	836.6	Rear	Fig.6	22.33	24	0.123	0.18	0.209	0.31	-0.19
4132	826.4	Rear	/	22.47	24	0.121	0.17	0.203	0.29	-0.16
4183	836.6	Left	/	22.33	24	<0.01	<0.01	<0.01	<0.01	/
4183	836.6	Right	/	22.33	24	0.055	0.08	0.082	0.12	0.14
4183	836.6	Bottom	/	22.33	24	0.06	0.09	0.124	0.18	-0.15

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.1-7: SAR Values (LTE Band2 ANT1- Head)

Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C												
19100	1900	1RB_Mid	Left	Cheek	Fig.7	24.46	25.5	0.06	0.08	0.098	0.12	-0.08
19100	1900	1RB_Mid	Left	Tilt	/	24.46	25.5	0.028	0.04	0.044	0.06	-0.14
19100	1900	1RB_Mid	Right	Cheek	/	24.46	25.5	0.031	0.04	0.051	0.06	0.18
19100	1900	1RB_Mid	Right	Tilt	/	24.46	25.5	0.018	0.02	0.03	0.04	-0.17
19100	1900	50RB-Low	Left	Cheek	/	23.49	24.5	0.047	0.06	0.074	0.09	0.1
19100	1900	50RB-Low	Left	Tilt	/	23.49	24.5	0.019	0.02	0.03	0.04	0.05
19100	1900	50RB-Low	Right	Cheek	/	23.49	24.5	0.026	0.03	0.042	0.05	-0.16
19100	1900	50RB-Low	Right	Tilt	/	23.49	24.5	<0.01	<0.01	<0.01	<0.01	/

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-8: SAR Values (LTE Band2 ANT1 – Body)

Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
19100	1900	1RB-Mid Front	/	20.45	21.5	0.144	0.18	0.247	0.31	0.04
19100	1900	1RB-Mid Rear	/	20.45	21.5	0.323	0.41	0.588	0.75	-0.15
19100	1900	1RB-Mid Left	/	20.45	21.5	0.053	0.07	0.103	0.13	0.11
19100	1900	1RB-Mid Right	/	20.45	21.5	<0.01	<0.01	<0.01	<0.01	/
19100	1900	1RB-Mid Bottom	/	20.45	21.5	0.335	0.43	0.601	0.77	-0.11
19100	1900	50RB-Low Front	/	20.65	21.5	0.149	0.18	0.255	0.31	-0.1
19100	1900	50RB-Low Rear	/	20.65	21.5	0.313	0.38	0.577	0.70	-0.08
19100	1900	50RB-Low Left	/	20.65	21.5	0.053	0.06	0.107	0.13	0.08
19100	1900	50RB-Low Right	/	20.65	21.5	<0.01	<0.01	<0.01	<0.01	/
19100	1900	50RB-Mid Bottom	Fig.8	20.65	21.5	0.358	0.44	0.64	0.78	-0.1
19100	1900	1RB-Mid Front	Note3	19.99	20.5	0.117	0.13	0.198	0.22	-0.15
19100	1900	1RB-Mid Rear	Note3	19.99	20.5	0.198	0.22	0.365	0.41	0.09
19100	1900	1RB-Mid Left	Note3	19.99	20.5	0.024	0.03	0.054	0.06	-0.06
19100	1900	1RB-Mid Right	Note3	19.99	20.5	<0.01	<0.01	<0.01	<0.01	/
19100	1900	1RB-Mid Bottom	Note3	19.99	20.5	0.258	0.29	0.462	0.52	0.01
19100	1900	50RB-Mid Front	Note3	20.1	20.5	0.113	0.12	0.192	0.21	0.09
19100	1900	50RB-Mid Rear	Note3	20.1	20.5	0.226	0.25	0.397	0.44	-0.12
19100	1900	50RB-Mid Left	Note3	20.1	20.5	0.032	0.04	0.065	0.07	0.07
19100	1900	50RB-Mid Right	Note3	20.1	20.5	<0.01	<0.01	<0.01	<0.01	/
19100	1900	50RB-Mid Bottom	Note3	20.1	20.5	0.256	0.28	0.46	0.50	-0.12

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_20MHz.

Note3: The results are for ENDC only.

Table 14.1-9: SAR Values (LTE Band2 ANT6- Head)

Frequency		Mode	Side	Test Position	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measure d SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measure d SAR(1g) (W/kg)	Reporte d SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
18700	1860	1RB_Low	Left	Cheek	/	13.81	14	0.17	0.18	0.265	0.28	-0.08
18700	1860	1RB_Low	Left	Tilt	/	13.81	14	0.134	0.14	0.212	0.22	-0.17
18700	1860	1RB_Low	Right	Cheek	/	13.81	14	0.303	0.32	0.509	0.53	0.16
18700	1860	1RB_Low	Right	Tilt	/	13.81	14	0.197	0.21	0.319	0.33	0.18
18700	1860	50RB-Mid	Left	Cheek	/	13.8	14	0.191	0.20	0.296	0.31	-0.16
18700	1860	50RB-Mid	Left	Tilt	/	13.8	14	0.136	0.14	0.219	0.23	-0.17
18700	1860	50RB-Mid	Right	Cheek	Fig.9	13.8	14	0.33	0.35	0.584	0.61	0.07
18700	1860	50RB-Mid	Right	Tilt	/	13.8	14	0.221	0.23	0.36	0.38	0.11

Note1: The LTE mode is QPSK_20MHz.

Note2: All the results are for ENDC only.

Table 14.1-10: SAR Values (LTE Band2 ANT6 – Body)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
18700	1860	1RB-Low Front	/	17.81	18	0.209	0.22	0.347	0.36	-0.04
18700	1860	1RB-Low Rear	Fig.10	17.81	18	0.247	0.26	0.436	0.46	0.2
18700	1860	1RB-Low Left	/	17.81	18	0.197	0.21	0.336	0.35	0.13
18700	1860	1RB-Low Top	/	17.81	18	0.068	0.07	0.116	0.12	-0.05
18700	1860	50RB-Mid Front	/	17.81	18	0.222	0.23	0.371	0.39	0.15
18700	1860	50RB-Mid Rear	/	17.81	18	0.249	0.26	0.435	0.45	-0.11
18700	1860	50RB-Mid Left	/	17.81	18	0.179	0.19	0.304	0.32	-0.06
18700	1860	50RB-Mid Top	/	17.81	18	0.073	0.08	0.127	0.13	0.07

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_10MHz.

Note3: All the results are for ENDC only.

Table 14.1-11: SAR Values (LTE Band5 - Head)

Ambient Temperature: 22.9°C							Liquid Temperature: 22.5°C					
Frequency		Mode	Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
20450	829	1RB_Low	Left	Cheek	/	24.63	25	0.132	0.14	0.173	0.19	-0.07
20450	829	1RB_Low	Left	Tilt	/	24.63	25	<0.01	<0.01	<0.01	<0.01	/
20450	829	1RB_Low	Right	Cheek	Fig.11	24.63	25	0.184	0.20	0.248	0.27	-0.03
20450	829	1RB_Low	Right	Tilt	/	24.63	25	<0.01	<0.01	<0.01	<0.01	/
20450	829	25RB-Low	Left	Cheek	/	23.52	24	0.048	0.05	0.065	0.07	0.03
20450	829	25RB-Low	Left	Tilt	/	23.52	24	<0.01	<0.01	<0.01	<0.01	/
20450	829	25RB-Low	Right	Cheek	/	23.52	24	0.06	0.07	0.08	0.09	0.15
20450	829	25RB-Low	Right	Tilt	/	23.52	24	<0.01	<0.01	<0.01	<0.01	/
20450	829	UL CA	Right	Cheek	/	24.15	25	0.141	0.17	0.194	0.24	0.06

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-12: SAR Values (LTE Band5 – Body)

Ambient Temperature: 22.9°C							Liquid Temperature: 22.5°C				
Frequency		Mode	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)	
Ch.	MHz										
20450	829	1RB-Low Front	/	24.63	25	0.293	0.32	0.454	0.49	-0.06	
20450	829	1RB-Low Rear	Fig.12	24.63	25	0.28	0.30	0.478	0.52	-0.01	
20450	829	1RB-Low Left	/	24.63	25	<0.01	<0.01	<0.01	<0.01	/	
20450	829	1RB-Low Right	/	24.63	25	2.09	2.28	0.299	0.33	-0.04	
20450	829	1RB-Low Bottom	/	24.63	25	0.176	0.19	0.343	0.37	0.07	
20450	829	1RB-Mid Bottom	/	23.52	24	0.093	0.10	0.171	0.19	0.12	
20450	829	25RB-Low Front	/	23.52	24	0.117	0.13	0.207	0.23	-0.08	
20450	829	25RB-Low Rear	/	23.52	24	<0.01	<0.01	<0.01	<0.01	/	
20450	829	25RB-Low Left	/	23.52	24	0.072	0.08	0.115	0.13	0.03	
20450	829	25RB-Low Right	/	23.52	24	0.069	0.08	0.152	0.17	-0.12	
20450	829	25RB-Low Bottom	/	24.63	25	0.293	0.32	0.454	0.49	-0.06	
20450	829	UL CA Rear	/	24.15	25	0.191	0.23	0.385	0.47	0.15	

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-13: SAR Values (LTE Band12 - Head)

Frequency		Mode	Side	Test Position	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measure d SAR(1g) (W/kg)	Reporte d SAR(1g) (W/kg)	Powe r Drift (dB)
Ch.	MHz											
23060	704	1RB-Low	Left	Cheek	/	24.33	25	0.185	0.22	0.238	0.28	0.11
23060	704	1RB-Low	Left	Tilt	/	24.33	25	0.134	0.16	0.171	0.20	-0.18
23060	704	1RB-Low	Right	Cheek	Fig.13	24.33	25	0.204	0.24	0.265	0.31	0.02
23060	704	1RB-Low	Right	Tilt	/	24.33	25	0.116	0.14	0.154	0.18	0.16
23060	704	25RB-High	Left	Cheek	/	23.41	24	0.125	0.14	0.16	0.18	0.18
23060	704	25RB-High	Left	Tilt	/	23.41	24	0.083	0.10	0.106	0.12	0.14
23060	704	25RB-High	Right	Cheek	/	23.41	24	0.136	0.16	0.177	0.20	0.05
23060	704	25RB-High	Right	Tilt	/	23.41	24	0.082	0.09	0.106	0.12	-0.09

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-14: SAR Values (LTE Band12 – Body)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
23060	704	1RB-Low Front	/	24.33	25	0.179	0.21	0.28	0.33	0.03
23060	704	1RB-Low Rear	/	24.33	25	0.233	0.27	0.329	0.38	0.11
23060	704	1RB-Low Left	/	24.33	25	0.1	0.12	0.139	0.16	-0.13
23060	704	1RB-Low Right	Fig.14	24.33	25	0.259	0.30	0.381	0.44	-0.08
23060	704	1RB-Low Bottom	/	24.33	25	0.096	0.11	0.18	0.21	0.04
23060	704	25RB-High Front	/	23.41	24	0.099	0.11	0.157	0.18	-0.06
23060	704	25RB-High Rear	/	23.41	24	0.119	0.14	0.163	0.19	0.17
23060	704	25RB-High Left	/	23.41	24	0.058	0.07	0.084	0.10	0.16
23060	704	25RB-High Right	/	23.41	24	0.126	0.14	0.185	0.21	-0.04
23060	704	25RB-High Bottom	/	23.41	24	0.05	0.06	0.097	0.11	0.07

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-15: SAR Values (LTE Band14 - Head)

Frequency		Mode	Side	Test Position	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measure d SAR(1g) (W/kg)	Reporte d SAR(1g) (W/kg)	Pow er Drift (dB)
Ch.	MHz											
23330	793	1RB-Mid	Left	Cheek	/	24.84	25	0.11	0.11	0.149	0.15	-0.18
23330	793	1RB-Mid	Left	Tilt	/	24.84	25	0.08	0.08	0.109	0.11	0.07
23330	793	1RB-Mid	Right	Cheek	Fig.15	24.84	25	0.185	0.19	0.248	0.26	0.06
23330	793	1RB-Mid	Right	Tilt	/	24.84	25	0.136	0.14	0.184	0.19	-0.08
23330	793	25RB-Mid	Left	Cheek	/	23.72	24	0.085	0.09	0.113	0.12	-0.07
23330	793	25RB-Mid	Left	Tilt	/	23.72	24	0.061	0.07	0.083	0.09	-0.05
23330	793	25RB-Mid	Right	Cheek	/	23.72	24	0.143	0.15	0.203	0.22	0.11
23330	793	25RB-Mid	Right	Tilt	/	23.72	24	0.116	0.12	0.158	0.17	-0.05

Note1: The LTE mode is QPSK_10MHz.

Table 14.1-16: SAR Values (LTE Band14 – Body)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
23330	793	1RB-Mid Front	Fig.16	24.84	25	0.331	0.34	0.58	0.60	-0.05
23330	793	1RB-Mid Rear	/	24.84	25	0.335	0.35	0.55	0.57	-0.07
23330	793	1RB-Mid Left	/	24.84	25	0.105	0.11	0.162	0.17	0.16
23330	793	1RB-Mid Right	/	24.84	25	0.278	0.29	0.431	0.45	-0.17
23330	793	1RB-Mid Bottom	/	24.84	25	0.184	0.19	0.385	0.40	-0.18
23330	793	25RB-Mid Front	/	23.72	24	0.262	0.28	0.441	0.47	0.17
23330	793	25RB-Mid Rear	/	23.72	24	0.283	0.30	0.469	0.50	0.11
23330	793	25RB-Mid Left	/	23.72	24	0.087	0.09	0.136	0.15	-0.1
23330	793	25RB-Mid Right	/	23.72	24	0.223	0.24	0.346	0.37	-0.04
23330	793	25RB-Mid Bottom	/	23.72	24	0.153	0.16	0.324	0.35	0.09

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-17: SAR Values (LTE Band30 ANT5- Head)

Frequency		Mode	Side	Test Position	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Pow er Drift (dB)
Ch.	MHz											
27710	2310	1RB-Low	Left	Cheek	Fig.17	18.88	19	0.412	0.42	0.985	1.01	0.01
27710	2310	1RB-Low	Left	Tilt	/	18.88	19	0.195	0.20	0.417	0.43	-0.12
27710	2310	1RB-Low	Right	Cheek	/	18.88	19	0.123	0.13	0.245	0.25	-0.18
27710	2310	1RB-Low	Right	Tilt	/	18.88	19	0.097	0.10	0.206	0.21	0.17
27710	2310	25RB-Mid	Left	Cheek	/	18.75	19	0.393	0.42	0.937	0.99	-0.18
27710	2310	25RB-Mid	Left	Tilt	/	18.75	19	0.193	0.20	0.41	0.43	-0.11
27710	2310	25RB-Mid	Right	Cheek	/	18.75	19	0.116	0.12	0.227	0.24	0.14
27710	2310	25RB-Mid	Right	Tilt	/	18.75	19	0.086	0.09	0.184	0.19	0.1
27710	2310	50RB	Left	Cheek	/	18.73	19	0.378	0.40	0.918	0.98	0.15
27710	2310	1RB-Low	Left	Cheek	Note2	14.93	16	0.155	0.20	0.368	0.47	0.05
27710	2310	1RB-Low	Left	Tilt	Note2	14.93	16	0.085	0.11	0.178	0.23	-0.05
27710	2310	1RB-Low	Right	Cheek	Note2	14.93	16	0.046	0.06	0.091	0.12	0.03
27710	2310	1RB-Low	Right	Tilt	Note2	14.93	16	0.03	0.04	0.06	0.08	-0.12
27710	2310	25RB-Mid	Left	Cheek	Note2	14.89	16	0.194	0.25	0.454	0.59	0.01
27710	2310	25RB-Mid	Left	Tilt	Note2	14.89	16	0.082	0.11	0.175	0.23	0.06
27710	2310	25RB-Mid	Right	Cheek	Note2	14.89	16	0.043	0.06	0.087	0.11	-0.07
27710	2310	25RB-Mid	Right	Tilt	Note2	14.89	16	0.029	0.04	0.061	0.08	0.07

Note1: The LTE mode is QPSK_10MHz.

Note2: The results are for ENDC only.

Table 14.1-18: SAR Values (LTE Band30 ANT5- Body worn)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
27710	2310	1RB-Mid Front	/	23.37	25	0.242	0.35	0.456	0.66	0.16
27710	2310	1RB-Mid Rear	Fig.18	23.37	25	0.253	0.37	0.472	0.69	-0.04
27710	2310	25RB-Mid Front	/	22.14	24	0.194	0.30	0.361	0.55	0.05
27710	2310	25RB-Mid Rear	/	22.14	24	0.204	0.31	0.377	0.58	0.07

Note1: The distance between the EUT and the phantom bottom is 15mm

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-19: SAR Values (LTE Band30 ANT5 – Hotspot)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
27710	2310	1RB-Low Front	/	18.88	19	0.115	0.12	0.233	0.24	0.17
27710	2310	1RB-Low Rear	/	18.88	19	0.11	0.11	0.218	0.22	-0.11
27710	2310	1RB-Low Right	/	18.88	19	0.213	0.22	0.472	0.49	0.07
27710	2310	1RB-Low Top	/	18.88	19	0.048	0.05	0.099	0.10	0.01
27710	2310	25RB-Mid Front	/	18.75	19	0.106	0.11	0.205	0.22	-0.04
27710	2310	25RB-Mid Rear	/	18.75	19	0.096	0.10	0.186	0.20	0.14
27710	2310	25RB-Mid Right	Fig.19	18.75	19	0.221	0.23	0.487	0.52	-0.09
27710	2310	25RB-Mid Top	/	18.75	19	0.046	0.05	0.092	0.10	0.17

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-20: SAR Values (LTE Band30 ANT7 - Head)

Frequency		Mode	Side	Test Position	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
27710	2310	1RB-Low	Left	Cheek	/	23.16	24	0.1	0.12	0.171	0.21	0.06
27710	2310	1RB-Low	Left	Tilt	/	23.16	24	0.067	0.08	0.125	0.15	0.1
27710	2310	1RB-Low	Right	Cheek	Fig.20	23.16	24	0.153	0.19	0.267	0.32	-0.06
27710	2310	1RB-Low	Right	Tilt	/	23.16	24	0.038	0.05	0.069	0.08	0.09
27710	2310	25RB-Mid	Left	Cheek	/	22.15	23	0.078	0.09	0.132	0.16	-0.05
27710	2310	25RB-Mid	Left	Tilt	/	22.15	23	0.053	0.06	0.102	0.12	0.03
27710	2310	25RB-Mid	Right	Cheek	/	22.15	23	0.116	0.14	0.2	0.24	0.17
27710	2310	25RB-Mid	Right	Tilt	/	22.15	23	0.031	0.04	0.055	0.07	-0.15

Note1: The LTE mode is QPSK_10MHz.

Note2: The results are for ENDC only.

Table 14.1-21: SAR Values (LTE Band30 ANT7 – Body)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
27710	2310	1RB-Mid Front	/	16.96	18	0.144	0.18	0.287	0.36	0.03
27710	2310	1RB-Mid Rear	/	16.96	18	0.118	0.15	0.231	0.29	-0.07
27710	2310	1RB-Mid Right	Fig.21	16.96	18	0.245	0.31	0.534	0.68	-0.04
27710	2310	1RB-Mid Bottom	/	16.96	18	<0.01	<0.01	<0.01	<0.01	/
27710	2310	25RB-Low Front	/	16.85	18	0.143	0.19	0.275	0.36	0.03
27710	2310	25RB-Low Rear	/	16.85	18	0.124	0.16	0.24	0.31	-0.12
27710	2310	25RB-Low Right	/	16.85	18	0.235	0.31	0.517	0.67	-0.11
27710	2310	25RB-Low Bottom	/	16.85	18	<0.01	<0.01	<0.01	<0.01	/

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_10MHz.

Table 14.1-22: SAR Values (LTE Band48 - Head)

Frequency		Mode	Side	Test Position	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz											
55990	3625	1RB-Mid	Left	Cheek	Fig.22	19.3	20.5	0.201	0.26	0.6	0.79	0.06
55990	3625	1RB-Mid	Left	Tilt	/	19.3	20.5	0.109	0.14	0.283	0.37	-0.06
55990	3625	1RB-Mid	Right	Cheek	/	19.3	20.5	0.049	0.06	0.118	0.16	0.09
55990	3625	1RB-Mid	Right	Tilt	/	19.3	20.5	0.04	0.05	0.1	0.13	-0.12
55990	3625	50RB-Mid	Left	Cheek	/	19.31	20.5	0.193	0.25	0.556	0.73	-0.07
55990	3625	50RB-Mid	Left	Tilt	/	19.31	20.5	0.11	0.14	0.28	0.37	-0.12
55990	3625	50RB-Mid	Right	Cheek	/	19.31	20.5	0.046	0.06	0.108	0.14	0.03
55990	3625	50RB-Mid	Right	Tilt	/	19.31	20.5	0.039	0.05	0.097	0.13	-0.07
55990	3625	1RB-Mid	Left	Cheek	Note2	18.29	19.5	0.142	0.19	0.419	0.55	-0.15
55990	3625	1RB-Mid	Left	Tilt	Note2	18.29	19.5	0.077	0.10	0.198	0.26	0.04
55990	3625	1RB-Mid	Right	Cheek	Note2	18.29	19.5	0.035	0.05	0.082	0.11	0.13
55990	3625	1RB-Mid	Right	Tilt	Note2	18.29	19.5	0.028	0.04	0.07	0.09	-0.06
55990	3625	50RB-Mid	Left	Cheek	Note2	18.19	19.5	0.136	0.18	0.388	0.52	0.03
55990	3625	50RB-Mid	Left	Tilt	Note2	18.19	19.5	0.078	0.11	0.196	0.27	0.01
55990	3625	50RB-Mid	Right	Cheek	Note2	18.19	19.5	0.032	0.04	0.075	0.10	0.17
55990	3625	50RB-Mid	Right	Tilt	Note2	18.19	19.5	0.028	0.04	0.068	0.09	0.07

Note1: The LTE mode is QPSK_20MHz.

Note2: The results are for ENDC only.

Table 14.1-23: SAR Values (LTE Band48 – Body worn)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
55990	3625	1RB-Mid Front	/	23.79	25	0.13	0.17	0.277	0.37	0.14
55990	3625	1RB-Mid Rear	Fig.23	23.79	25	0.153	0.20	0.327	0.43	0.02
55990	3625	50RB-Low Front	/	22.78	24	0.095	0.13	0.199	0.26	-0.1
55990	3625	50RB-Low Rear	/	22.78	24	0.115	0.15	0.243	0.32	0.04

Note1: The distance between the EUT and the phantom bottom is 15mm

Note2: The LTE mode is QPSK_20MHz.

Table 14.1-24: SAR Values (LTE Band48 – Hotspot)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
55990	3625	1RB-Mid Front	/	19.3	20.5	0.077	0.10	0.183	0.24	0.17
55990	3625	1RB-Mid Rear	/	19.3	20.5	0.103	0.14	0.231	0.30	-0.16
55990	3625	1RB-Mid Right	Fig.24	19.3	20.5	0.2	0.26	0.512	0.67	0.08
55990	3625	1RB-Mid Top	/	19.3	20.5	0.047	0.06	0.104	0.14	0.08
55990	3625	50RB-Mid Front	/	19.31	20.5	0.089	0.12	0.194	0.26	0.05
55990	3625	50RB-Mid Rear	/	19.31	20.5	0.084	0.11	0.192	0.25	-0.14
55990	3625	50RB-Mid Right	/	19.31	20.5	0.195	0.26	0.488	0.64	-0.14
55990	3625	50RB-Mid Top	/	19.31	20.5	0.048	0.06	0.105	0.14	-0.11

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_20MHz.

Table 14.1-25: SAR Values (LTE Band66 ANT1- Head)

Frequency		Mode	Side	Test Position	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measure d SAR(1g) (W/kg)	Reporte d SAR(1g) (W/kg)	Pow er Drift (dB)
Ch.	MHz											
Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C												
132572	1770	1RB-Mid	Left	Cheek	/	24.55	25.5	0.037	0.05	0.091	0.11	-0.09
132572	1770	1RB-Mid	Left	Tilt	/	24.55	25.5	0.04	0.05	0.063	0.08	-0.06
132572	1770	1RB-Mid	Right	Cheek	Fig.25	24.55	25.5	0.076	0.09	0.121	0.15	0.04
132572	1770	1RB-Mid	Right	Tilt	/	24.55	25.5	<0.01	<0.01	<0.01	<0.01	/
132572	1770	50RB-Low	Left	Cheek	/	23.53	24.5	0.052	0.07	0.08	0.10	0.02
132572	1770	50RB-Low	Left	Tilt	/	23.53	24.5	<0.01	<0.01	<0.01	<0.01	/
132572	1770	50RB-Low	Right	Cheek	/	23.53	24.5	0.061	0.08	0.098	0.12	0.03
132572	1770	50RB-Low	Right	Tilt	/	23.53	24.5	<0.01	<0.01	<0.01	<0.01	/

Note1: The LTE mode is QPSK_20MHz.

Table 14.1-26: SAR Values (LTE Band66 ANT1- Body)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C										
132572	1770	1RB-Mid Front	/	21.5	22.5	0.249	0.31	0.442	0.56	-0.16
132572	1770	1RB-Mid Rear	/	21.5	22.5	0.334	0.42	0.69	0.87	-0.01
132572	1770	1RB-Mid Left	/	21.5	22.5	0.091	0.11	0.19	0.24	-0.1
132572	1770	1RB-Mid Right	/	21.5	22.5	0.056	0.07	0.086	0.11	-0.11
132572	1770	1RB-Mid Bottom	/	21.5	22.5	0.584	0.74	1.07	1.35	-0.14
132322	1745	1RB-Mid Bottom	Fig.26	21.45	22.5	0.621	0.79	1.1	1.40	-0.1
132072	1720	1RB-Mid Bottom	/	21.45	22.5	0.585	0.74	1.06	1.35	0.12
132322	1745	100RB Bottom	/	21.48	22.5	0.611	0.77	1.03	1.30	0.09
132572	1770	50RB-Low Front	/	21.58	22.5	0.279	0.34	0.483	0.60	-0.08
132572	1770	50RB-Low Rear	/	21.58	22.5	0.417	0.52	0.756	0.93	0.07
132572	1770	50RB-Low Left	/	21.58	22.5	0.081	0.10	0.167	0.21	-0.15
132572	1770	50RB-Low Right	/	21.58	22.5	0.043	0.05	0.067	0.08	0.11
132572	1770	50RB-Low Bottom	/	21.58	22.5	0.62	0.77	1.04	1.29	-0.07
132572	1770	1RB-Mid Front	Note3	18.01	19	0.111	0.14	0.191	0.24	0.08
132572	1770	1RB-Mid Rear	Note3	18.01	19	0.184	0.23	0.32	0.40	-0.15
132572	1770	1RB-Mid Left	Note3	18.01	19	0.041	0.05	0.08	0.10	-0.06
132572	1770	1RB-Mid Right	Note3	18.01	19	<0.01	<0.01	<0.01	<0.01	/
132572	1770	1RB-Mid Bottom	Note3	18.01	19	0.254	0.32	0.45	0.57	0.06
132572	1770	50RB-Low Front	Note3	18.08	19	0.111	0.14	0.192	0.24	-0.11
132572	1770	50RB-Low Rear	Note3	18.08	19	0.196	0.24	0.336	0.42	0.07

132572	1770	50RB-Low Left	Note3	18.08	19	0.041	0.05	0.08	0.10	-0.12
132572	1770	50RB-Low Right	Note3	18.08	19	<0.01	<0.01	<0.01	<0.01	/
132572	1770	50RB-Low Bottom	Note3	18.08	19	0.272	0.34	0.481	0.59	-0.02

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_20MHz.

Note3: The results are for ENDC only.

Table 14.1-27: SAR Values (LTE Band66 ANT6- Head)

Frequency		Mode	Side	Test Position	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measure d SAR(1g) (W/kg)	Reporte d SAR(1g) (W/kg)	Pow er Drift (dB)
Ch.	MHz											
Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C												
132572	1770	1RB-High	Left	Cheek	/	16.88	18	0.121	0.16	0.186	0.24	-0.03
132572	1770	1RB-High	Left	Tilt	/	16.88	18	0.1	0.13	0.158	0.20	0.04
132572	1770	1RB-High	Right	Cheek	Fig.27	16.88	18	0.318	0.41	0.561	0.73	0.13
132572	1770	1RB-High	Right	Tilt	/	16.88	18	0.159	0.21	0.264	0.34	0.12
132572	1770	50RB-High	Left	Cheek	/	16.77	18	0.163	0.22	0.253	0.34	0.05
132572	1770	50RB-High	Left	Tilt	/	16.77	18	0.108	0.14	0.173	0.23	0.14
132572	1770	50RB-High	Right	Cheek	/	16.77	18	0.248	0.33	0.407	0.54	-0.07
132572	1770	50RB-High	Right	Tilt	/	16.77	18	0.148	0.20	0.247	0.33	0.06

Note1: The LTE mode is QPSK_20MHz.

Note2: All the results are for ENDC only.

Table 14.1-28 SAR Values (LTE Band66 ANT6 – Body)

Frequency		Mode	Figure No.	Conduct ed Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
Ambient Temperature: 22.9 °C Liquid Temperature: 22.5 °C										
132572	1770	1RB-Low Front	/	22.18	23	0.171	0.21	0.286	0.35	-0.15
132572	1770	1RB-Low Rear	/	22.18	23	0.207	0.25	0.36	0.43	0.09
132572	1770	1RB-Low Left	/	22.18	23	0.178	0.21	0.3	0.36	-0.18
132572	1770	1RB-Low Top	/	22.18	23	0.063	0.08	0.109	0.13	-0.12
132572	1770	50RB-High Front	/	22.28	23	0.216	0.25	0.363	0.43	-0.14
132572	1770	50RB-High Rear	Fig.28	22.28	23	0.233	0.28	0.41	0.48	0.13
132572	1770	50RB-High Left	/	22.28	23	0.226	0.27	0.381	0.45	0.03
132572	1770	50RB-High Top	/	22.28	23	0.07	0.08	0.12	0.14	-0.06

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The LTE mode is QPSK_20MHz.

Note3: All the results are for ENDC only.

14.2 SAR results for 5G NR

Table 14.2-1: SAR Values (n2 – Head) – NSA

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
376000	1880	Left	Cheek	/	14.58	15	0.233	0.26	0.367	0.40	-0.13
376000	1880	Left	Tilt	/	14.58	15	0.138	0.15	0.213	0.23	0.08
376000	1880	Right	Cheek	Fig.29	14.58	15	0.374	0.41	0.664	0.73	0.05
376000	1880	Right	Tilt	/	14.58	15	0.268	0.30	0.442	0.49	-0.08

Table 14.2-2: SAR Values (n2 – Body) – NSA

Frequency		Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
376000	1880	Front	/	17.55	18	0.221	0.25	0.378	0.42	0.1
376000	1880	Rear	Fig.30	17.55	18	0.253	0.28	0.445	0.49	0.01
376000	1880	Left	/	17.55	18	0.183	0.20	0.321	0.36	0.04
376000	1880	Top	/	17.55	18	0.036	0.04	0.071	0.08	-0.16

Note1: The distance between the EUT and the phantom bottom is 10mm

Table 14.2-3: SAR Values (n5–Head) – NSA

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
167300	836.5	Left	Cheek	/	24.17	25	0.143	0.17	0.182	0.22	0.02
167300	836.5	Left	Tilt	/	24.17	25	0.12	0.15	0.155	0.19	-0.07
167300	836.5	Right	Cheek	Fig.31	24.17	25	0.195	0.24	0.256	0.31	0.11
167300	836.5	Right	Tilt		24.17	25	0.131	0.16	0.167	0.20	0.04

Table 14.2-4: SAR Values (n5–Body) – NSA

Frequency		Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)	
Ch.	MHz										
		Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5°C					
167300	836.5	Front	/	24.17	25	0.21	0.25	0.348	0.42	0.05	
167300	836.5	Rear	Fig.32	24.17	25	0.234	0.28	0.395	0.48	-0.18	
167300	836.5	Left	/	24.17	25	0.043	0.05	0.065	0.08	0.15	
167300	836.5	Right	/	24.17	25	0.097	0.12	0.147	0.18	0.04	
167300	836.5	Bottom	/	24.17	25	0.126	0.15	0.267	0.32	0.05	

Note1: The distance between the EUT and the phantom bottom is 10mm

Table 14.2-5: SAR Values (n30 – Head) – NSA

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
		Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5°C					
342500	2307.5	Left	Cheek	Fig.33	13.18	14	0.268	0.32	0.633	0.76	-0.02
342500	2307.5	Left	Tilt	/	13.18	14	0.136	0.16	0.292	0.35	0.18
342500	2307.5	Right	Cheek	/	13.18	14	0.07	0.08	0.135	0.16	-0.13
342500	2307.5	Right	Tilt	/	13.18	14	0.054	0.07	0.107	0.13	0.14

Table 14.2-6: SAR Values (n30 –Body) – NSA

Frequency		Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)	
Ch.	MHz										
		Ambient Temperature: 22.9 °C				Liquid Temperature: 22.5°C					
342500	2307.5	Front	/	17.05	18	0.173	0.22	0.343	0.43	-0.06	
342500	2307.5	Rear	/	17.05	18	0.18	0.22	0.355	0.44	-0.16	
342500	2307.5	Right	Fig.34	17.05	18	0.26	0.32	0.56	0.70	-0.06	
342500	2307.5	Top	/	17.05	18	0.042	0.05	0.075	0.09	-0.08	

Note1: The distance between the EUT and the phantom bottom is 10mm

Note2: The results are only for NSA.

Table 14.2-7: SAR Values (n66–Head) – NSA

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C									
355500	1777.5	Left	Cheek	/	18.35	19	0.29	0.34	0.449	0.52	-0.1
355500	1777.5	Left	Tilt	/	18.35	19	0.203	0.24	0.32	0.37	0.15
355500	1777.5	Right	Cheek	Fig.35	18.35	19	0.386	0.45	0.679	0.79	-0.01
355500	1777.5	Right	Tilt	/	18.35	19	0.272	0.32	0.473	0.55	0.08

Table 14.2-8: SAR Values (n66-Body) – NSA

Frequency		Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)	
Ch.	MHz										
Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C									
355500	1777.5	Front	/	20.2	21	0.19	0.23	0.325	0.39	-0.14	
355500	1777.5	Rear	Fig.36	20.2	21	0.221	0.27	0.393	0.47	0.12	
355500	1777.5	Left	/	20.2	21	0.156	0.19	0.27	0.32	0.02	
355500	1777.5	Top	/	20.2	21	0.076	0.09	0.135	0.16	0.06	

Note1: The distance between the EUT and the phantom bottom is 10mm

Table 14.2-9: SAR Values (n77–Head) – NSA

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C									
657733	3866	Left	Cheek	/	15.41	16.5	0.181	0.23	0.476	0.61	-0.04
657733	3866	Left	Tilt	/	15.41	16.5	0.11	0.14	0.288	0.37	0.04
657733	3866	Right	Cheek	/	15.41	16.5	0.041	0.05	0.101	0.13	0.05
657733	3866	Right	Tilt	/	15.41	16.5	0.039	0.05	0.101	0.13	0.1
636000	3540	Left	Cheek	Fig.37	14.97	16.5	0.156	0.22	0.477	0.68	0.02
636000	3540	Left	Tilt	/	14.97	16.5	0.089	0.13	0.248	0.35	-0.01
636000	3540	Right	Cheek	/	14.97	16.5	0.034	0.05	0.091	0.13	-0.11
636000	3540	Right	Tilt	/	14.97	16.5	0.037	0.05	0.107	0.15	0.18

Table 14.2-10: SAR Values (n77 –Body) – NSA

Ambient Temperature: 22.9 °C

Liquid Temperature: 22.5 °C

Frequency		Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz									
657733	3866	Front	/	16.47	17.5	0.054	0.07	0.125	0.16	-0.16
657733	3866	Rear	/	16.47	17.5	0.081	0.10	0.18	0.23	-0.03
657733	3866	Right	/	16.47	17.5	0.164	0.21	0.403	0.51	0.05
657733	3866	Top	/	16.47	17.5	0.015	0.02	0.041	0.05	0.15
636000	3540	Front	/	16.15	17.5	0.078	0.11	0.174	0.24	-0.02
636000	3540	Rear	/	16.15	17.5	0.101	0.14	0.229	0.31	-0.02
636000	3540	Right	Fig.38	16.15	17.5	0.166	0.23	0.419	0.57	0.12
636000	3540	Top	/	16.15	17.5	0.051	0.07	0.115	0.16	-0.15

Note1: The distance between the EUT and the phantom bottom is 10mm

14.3 SAR Evaluation for WIFI 2.4G

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.

SAR Test reduction was applied from KDB 248227 guidance, when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

Head Evaluation

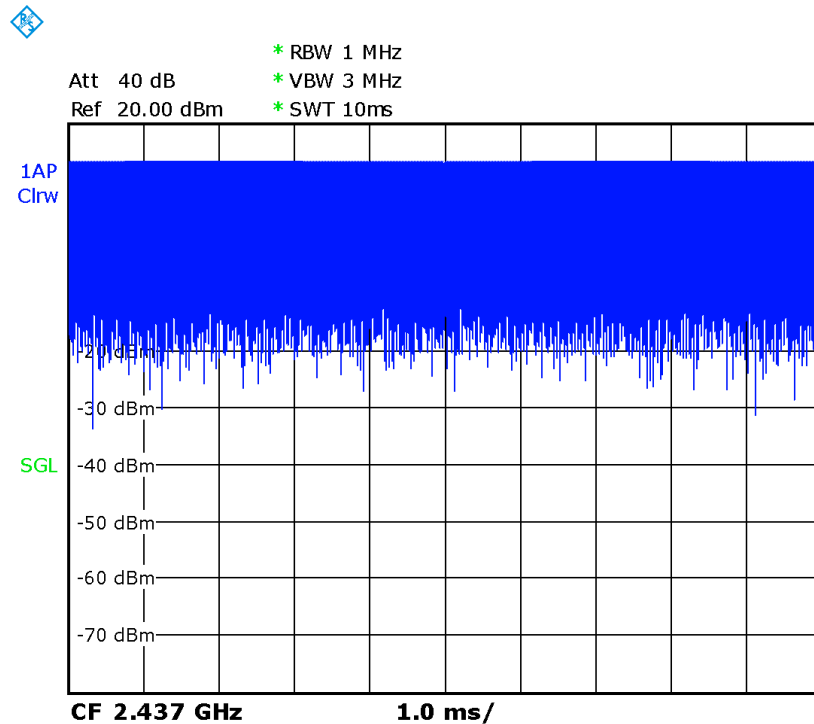
Table 14.3-1: SAR Values (WLAN - Head)– 802.11b

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W /kg)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)	Power Drift (dB)
Ch.	MHz										
Ambient Temperature: 22.9 °C					Liquid Temperature: 22.5 °C						
6	2437	Left	Cheek	/	14.63	16	0.158	0.22	0.347	0.48	-0.05
6	2437	Left	Tilt	Fig.39	14.63	16	0.162	0.22	0.382	0.52	0.08
6	2437	Right	Cheek	/	14.63	16	0.085	0.12	0.162	0.22	0.07
6	2437	Right	Tilt	/	14.63	16	0.102	0.14	0.211	0.29	-0.09

Table 14.3-2: SAR Values (WLAN - Head) – 802.11b (Scaled Reported SAR)

Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g)(W/kg)	Scaled reported SAR (1g)(W/kg)
MHz	Ch.						
2437	6	Left	Tilt	100%	100%	0.52	0.52

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


Picture 14.3-1 Duty factor plot

Body Evaluation
Table 14.3-3: SAR Values (WLAN - Body)– 802.11b

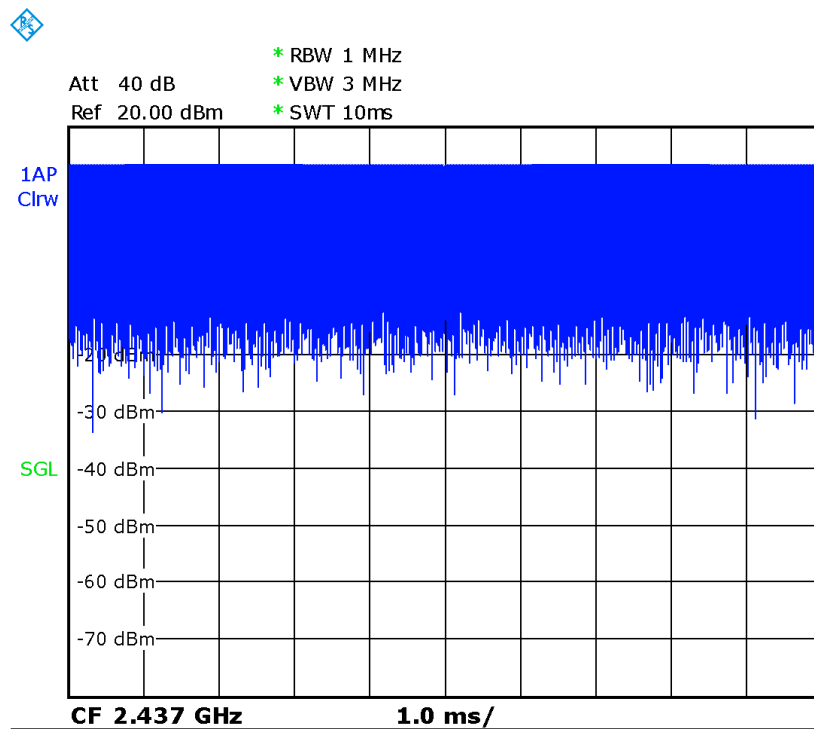
Frequency		Test Position	Figure No.	Ambient Temperature: 22.9 °C		Liquid Temperature: 22.5 °C		Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
Ch.	MHz			Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g)(W/kg)			
6	2437	Front	/	18.47	19	0.063	0.07	0.12	0.14	0.06
6	2437	Rear	/	18.47	19	0.078	0.09	0.151	0.17	-0.15
6	2437	Right	/	18.47	19	0.069	0.08	0.143	0.16	0.03
6	2437	Top	Fig.40	18.47	19	0.094	0.11	0.199	0.22	-0.18

Note: The distance between the EUT and the phantom bottom is 10mm.

Table 14.3-4: 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					
11	2462	Top 10mm	100%	100%	0.22	0.22

SAR is not required for OFDM because the 802.11g adjusted SAR \leq 1.2 W/kg.


Picture 14.3-2 Duty factor plot

14.4 SAR Evaluation For WIFI 5G

The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures.

When the same transmission mode configurations have the same maximum output power on the same channel for the 802.11 a/g/n/ac/ax modes, the channel in the lower order/sequence 802.11 mode (i.e. a, g, n ac then ax) is selected.

SAR Test reduction was applied from KDB 248227 guidance, when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, for each frequency band. Additional output power measurements were not deemed necessary.

Table 14.4-1: SAR Values (WLAN 5G - Head)

Frequency		Side	Test Position	Figure No.	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Power Drift (dB)
Ch.	MHz										
60	5300	Left	Cheek	/	17.45	18	0.069	0.08	0.184	0.21	-0.03
60	5300	Left	Tilt	/	17.45	18	0.025	0.03	0.059	0.07	-0.05
60	5300	Right	Cheek	/	17.45	18	0.007	0.01	0.037	0.04	-0.12
60	5300	Right	Tilt	/	17.45	18	0.013	0.01	0.031	0.04	0.08
128	5640	Left	Cheek	Fig.41	17.79	18	0.092	0.10	0.268	0.28	-0.02
128	5640	Left	Tilt	/	17.79	18	0.021	0.02	0.054	0.06	-0.15
128	5640	Right	Cheek	/	17.79	18	0.018	0.02	0.047	0.05	0.04
128	5640	Right	Tilt	/	17.79	18	0.01	0.01	0.03	0.03	-0.05
157	5785	Left	Cheek	/	17.31	18	0.06	0.07	0.158	0.19	0.09
157	5785	Left	Tilt	/	17.31	18	0.013	0.02	0.043	0.05	-0.07
157	5785	Right	Cheek	/	17.31	18	0.021	0.02	0.051	0.06	-0.13
157	5785	Right	Tilt	/	17.31	18	0.007	0.01	0.032	0.04	0.04

Table 14.4-2: SAR Values (WLAN 5G – Body)

Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(1g) (W/kg)	Reported SAR(1g) (W/kg)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Power Drift (dB)
Ch.	MHz									
58	5290	Front	/	10.74	12	0.007	0.01	0.043	0.06	-0.1
58	5290	Rear	/	10.74	12	0.06	0.08	0.186	0.25	0.08
58	5290	Right	/	10.74	12	0.024	0.03	0.074	0.10	0.02
58	5290	Top	/	10.74	12	0.01	0.01	0.047	0.06	-0.08
138	5690	Front	/	11.62	12	0.013	0.01	0.066	0.07	0.08
138	5690	Rear	Fig.42	11.62	12	0.125	0.14	0.456	0.50	0.09
138	5690	Right	/	11.62	12	0.033	0.04	0.093	0.10	-0.18
138	5690	Top	/	11.62	12	0.016	0.02	0.051	0.06	0.1
155	5775	Front	/	10.96	12	0.012	0.02	0.055	0.07	-0.14
155	5775	Rear	/	10.96	12	0.089	0.11	0.282	0.36	0.06
155	5775	Right	/	10.96	12	0.025	0.03	0.071	0.09	-0.16
155	5775	Top	/	10.96	12	0.01	0.01	0.044	0.06	0.05

Note1: The distance between the EUT and the phantom bottom is 10mm.

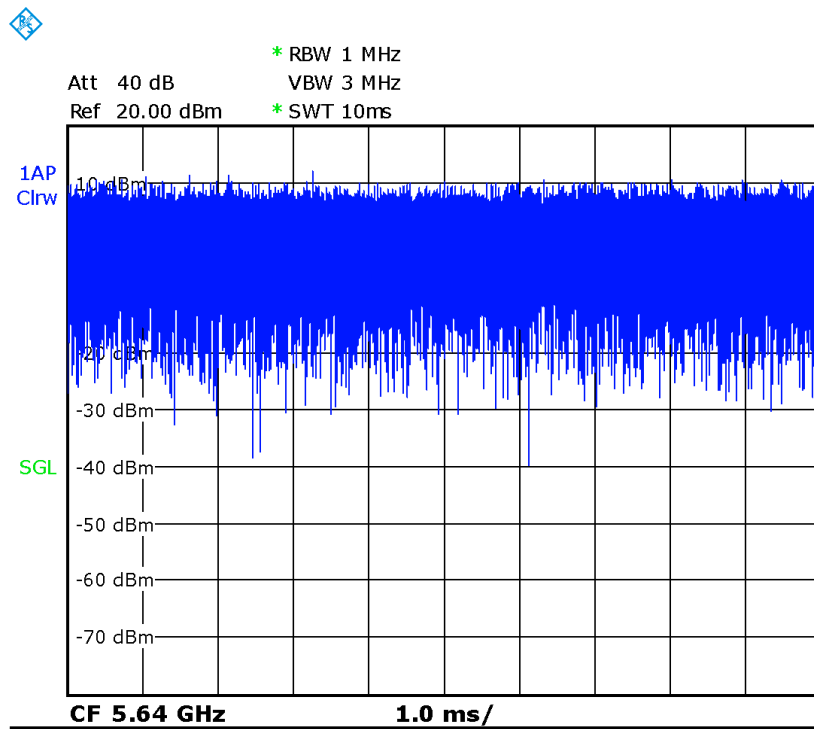
According to the KDB248227 D01, The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. The scaled reported SAR is presented as below.

Table 14.4-3: SAR Values (WLAN 5G - Head) (Scaled Reported SAR)

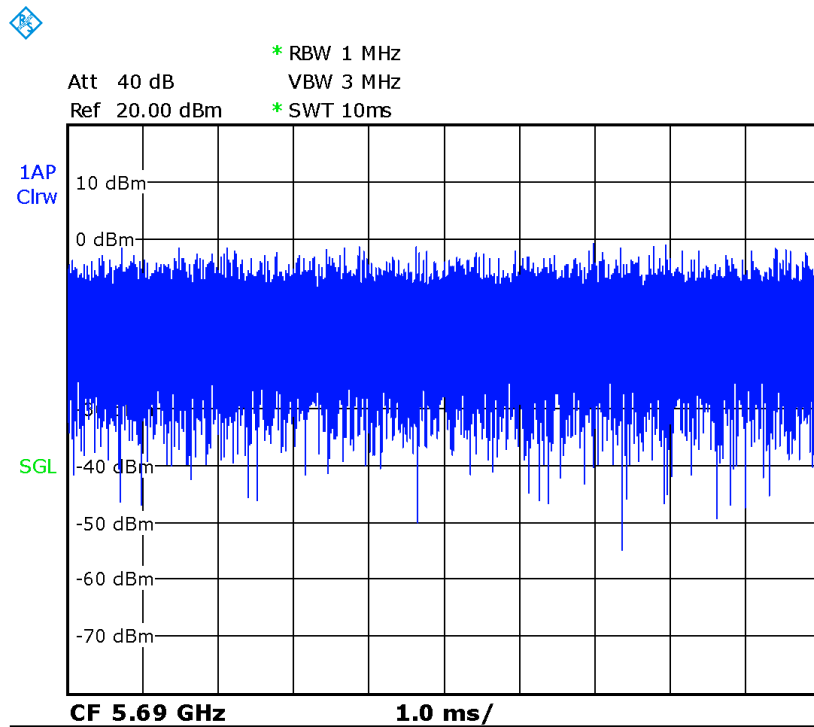
Frequency		Side	Test Position	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
Ch.	MHz						
128	5640	Left	Cheek	100%	100%	0.28	0.28

Table 14.4-4: SAR Values (WLAN 5G - Body) (Scaled Reported SAR)

Frequency		Test Position	D (mm)	Actual duty factor	maximum duty factor	Reported SAR (1g) (W/kg)	Scaled reported SAR (1g) (W/kg)
Ch.	MHz						
138	5690	Rear	10	100%	100%	0.50	0.50



Picture 14.4-1 The plot of duty factor for CH.128



Picture 14.4-2 The plot of duty factor for CH.138

14.5 SAR Evaluation For BT

Table 14.5-1: SAR Values (BT - Head)

Frequency		Side	Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
Ch.	MHz										
78	2480	Left	Cheek	/	10.38	10.5	0.041	0.04	0.113	0.12	0.06
78	2480	Left	Tilt	Fig.43	10.38	10.5	0.05	0.05	0.122	0.13	0.05
78	2480	Right	Cheek	/	10.38	10.5	<0.01	<0.01	<0.01	<0.01	/
78	2480	Right	Tilt	/	10.38	10.5	0.03	0.03	0.069	0.07	-0.11

Table 14.5-2: SAR Values (BT - Body)

Frequency		Test Position	Figure No./Note	Conducted Power (dBm)	Max. tune-up Power (dBm)	Measured SAR(10g) (W/kg)	Reported SAR(10g) (W/kg)	Measured SAR(1g) (W/kg)	Reported SAR(1g)(W/kg)	Power Drift (dB)
Ch.	MHz									
78	2480	Front	/	10.38	10.5	0.007	0.01	0.013	0.01	-0.06
78	2480	Rear	Fig.44	10.38	10.5	0.01	0.01	0.022	0.02	0.07
78	2480	Right	/	10.38	10.5	<0.01	<0.01	<0.01	<0.01	/
78	2480	Top	/	10.38	10.5	<0.01	<0.01	<0.01	<0.01	/

Note1: The distance between the EUT and the phantom bottom is 10mm.

14.6 SAR results for 10-g extremity SAR

According to the KDB648474 D04, the UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB Publication 865664 D01 to address interactive hand use exposure conditions. 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.

For this device, SAR is not required for 10-g extremity SAR because the scaled SAR is ≤ 1.2 W/kg.

15 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 ($\sim 10\%$ 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

Mode	CH	Freq	Test Position	Original SAR(W/kg)	First Repeated SAR(W/kg)	The Ratio
LTE Band30	27710	2310	Left Cheek	0.985	0.977	1.01
LTE Band66 ANT1	132322	1745	Bottom 10mm	1.1	1.07	1.03

16 Measurement Uncertainty

16.1 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	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	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	N	1	1	1	0.6	0.6	∞
6	Readout electronics	B	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.4	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	71
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	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
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	1.0	0.8	521

Combined standard uncertainty	$u_c' = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$							9.55	9.43	257
Expanded uncertainty (confidence interval of 95 %)	$u_e = 2u_c$							19.1	18.9	

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

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	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
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	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
Test sample related										
14	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
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	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
18	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞
19	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	43
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	1.0	0.8	521
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{21} c_i^2 u_i^2}$						10.7	10.6	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						21.4	21.1	

16.3 Measurement Uncertainty for Fast 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	6.0	N	1	1	1	6.0	6.0	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	1.0	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	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RF ambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.4	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	71
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	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞

20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	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	1.0	0.8	521
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$						10.4	10.3	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$						20.8	20.6	

16.4 Measurement Uncertainty for Fast SAR Tests (3~6GHz)

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	6.55	N	1	1	1	6.55	6.55	∞
2	Isotropy	B	4.7	R	$\sqrt{3}$	0.7	0.7	1.9	1.9	∞
3	Boundary effect	B	2.0	R	$\sqrt{3}$	1	1	1.2	1.2	∞
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	0.3	R	$\sqrt{3}$	1	1	0.3	0.3	∞
7	Response time	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
8	Integration time	B	2.6	R	$\sqrt{3}$	1	1	1.5	1.5	∞
9	RF ambient conditions-noise	B	0	R	$\sqrt{3}$	1	1	0	0	∞
10	RFambient conditions-reflection	B	0	R	$\sqrt{3}$	1	1	0	0	∞
11	Probe positioned mech. Restrictions	B	0.8	R	$\sqrt{3}$	1	1	0.5	0.5	∞
12	Probe positioning with respect to phantom shell	B	6.7	R	$\sqrt{3}$	1	1	3.9	3.9	∞
13	Post-processing	B	1.0	R	$\sqrt{3}$	1	1	0.6	0.6	∞
14	Fast SAR z-Approximation	B	14.0	R	$\sqrt{3}$	1	1	8.1	8.1	∞
Test sample related										
15	Test sample positioning	A	3.3	N	1	1	1	3.3	3.3	71
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	4.0	R	$\sqrt{3}$	1	1	2.3	2.3	∞	
19	Liquid conductivity (target)	B	5.0	R	$\sqrt{3}$	0.64	0.43	1.8	1.2	∞	
20	Liquid conductivity (meas.)	A	2.06	N	1	0.64	0.43	1.32	0.89	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	1.0	0.8	521	
Combined standard uncertainty		$u_c = \sqrt{\sum_{i=1}^{22} c_i^2 u_i^2}$							13.5	13.4	257
Expanded uncertainty (confidence interval of 95 %)		$u_e = 2u_c$							27.0	26.8	

17 MAIN TEST INSTRUMENTS

Table 17.1: List of Main Instruments

No.	Name	Type	Serial Number	Calibration Date	Valid Period
01	Network analyzer	E5071C	MY46110673	January 14, 2022	One year
02	Power sensor	NRP110T	101139	January 13, 2022	One year
03	Power sensor	NRP110T	101159	January 13, 2022	One year
04	Signal Generator	E4438C	MY49071430	January 13, 2022	One year
05	Amplifier	60S1G4	0331848	No Calibration Requested	
06	BTS	CMW500	159850	January 24, 2022	One year
07	E-field Probe	SPEAG EX3DV4	7548	June 25, 2021	One year
08	DAE	SPEAG DAE4	1331	September 1, 2021	One year
09	Dipole Validation Kit	SPEAG D750V3	1017	July 12,,2021	One year
10	Dipole Validation Kit	SPEAG D835V2	4d069	July 21,,2021	One year
11	Dipole Validation Kit	SPEAG D1750V2	1003	July 12,,2021	One year
12	Dipole Validation Kit	SPEAG D1900V2	5d101	July 15,2021	One year
13	Dipole Validation Kit	SPEAG D2300V2	1018	July 26,2021	One year
14	Dipole Validation Kit	SPEAG D2450V2	853	July 26,2021	One year
15	Dipole Validation Kit	SPEAG D3500V2	1016	June 21,2021	Three year
16	Dipole Validation Kit	SPEAG D3700V2	1004	June 21,2021	Three year
17	Dipole Validation Kit	SPEAG D5GHzV2	1060	January 27,2022	One year

END OF REPORT BODY

ANNEX A Graph Results

WCDMA850 Head

Date: 6/6/2022

Electronics: DAE4 Sn1331

Medium: Head 850M

Medium parameters used: $f = 826.4$ MHz; $\sigma = 0.867$ S/m; $\epsilon_r = 44.67$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: WCDMA850(B5) 826.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

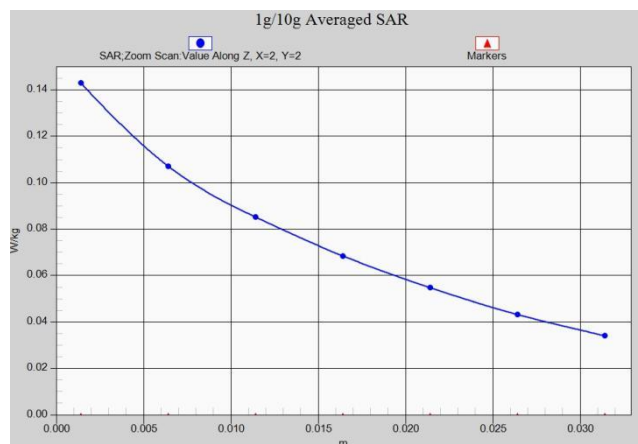
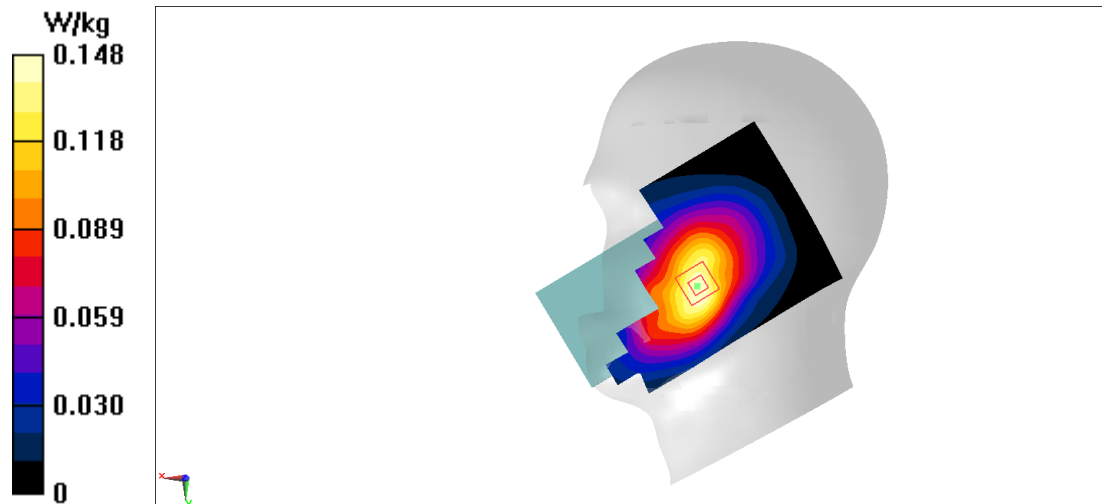
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.849 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.158 W/kg

SAR(1 g) = 0.117 W/kg; SAR(10 g) = 0.088 W/kg

Maximum value of SAR (measured) = 0.143 W/kg



WCDMA850 Body

Date: 6/6/2022

Electronics: DAE4 Sn1331

Medium: Head 850M

Medium parameters used: $f = 836.6 \text{ MHz}$; $\sigma = 0.867 \text{ S/m}$; $\epsilon_r = 44.67$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: WCDMA850(B5) 836.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (71x121x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.315 W/kg

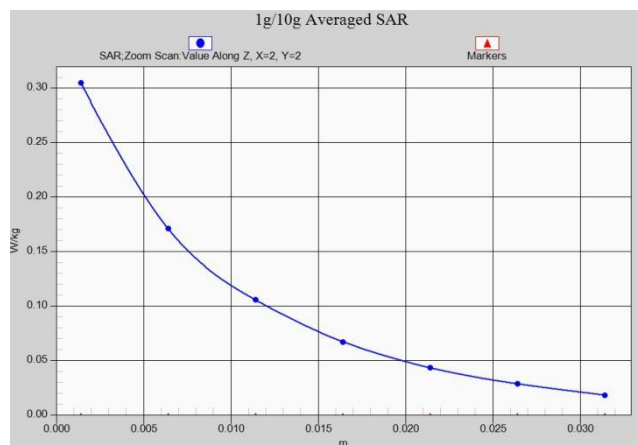
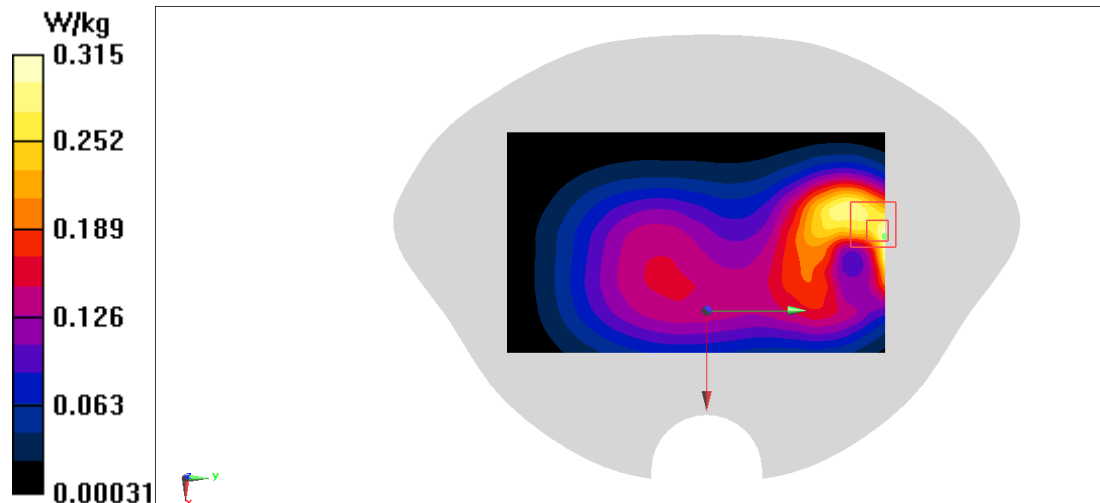
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.72 V/m ; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 0.381 W/kg

SAR(1 g) = 0.209 W/kg ; SAR(10 g) = 0.123 W/kg

Maximum value of SAR (measured) = 0.305 W/kg



WCDMA1700 Head

Date: 6/7/2022

Electronics: DAE4 Sn1331

Medium: Head 1750M

Medium parameters used: $f = 1732.4$ MHz; $\sigma = 1.385$ S/m; $\epsilon_r = 42.33$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: WCDMA1700(B4) 1732.4 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(8.14, 8.14, 8.14)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0984 W/kg

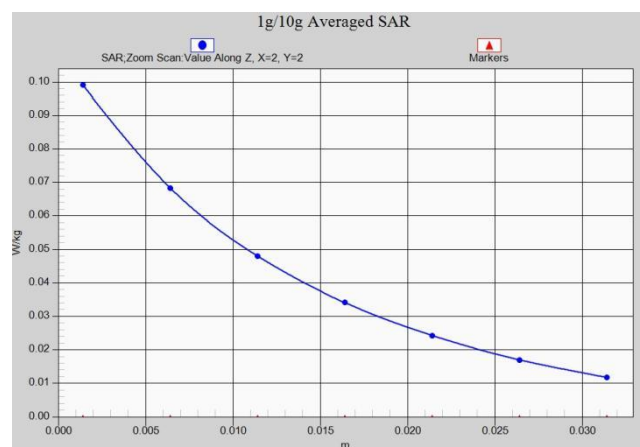
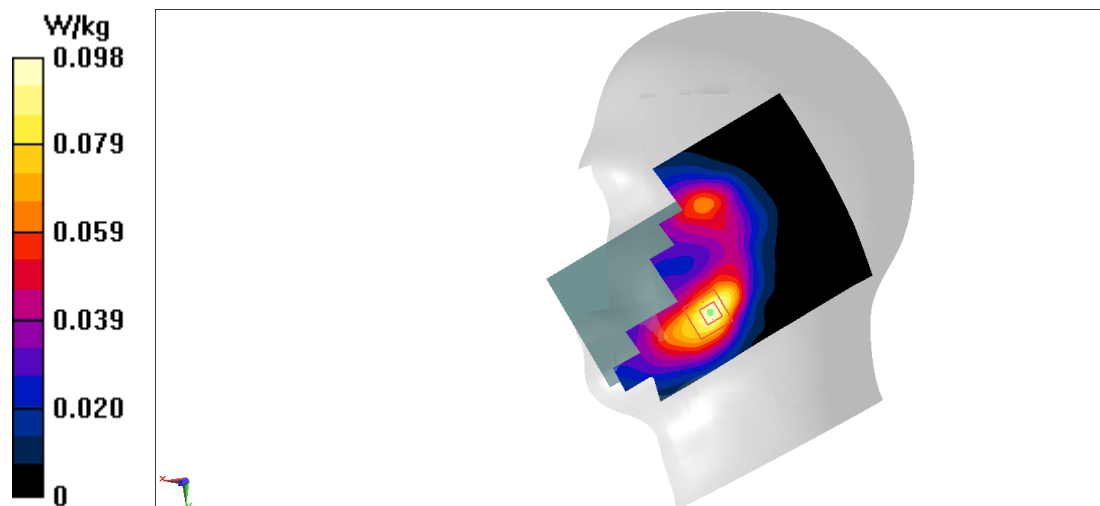
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.4870 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.111 W/kg

SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.047 W/kg

Maximum value of SAR (measured) = 0.0991 W/kg



WCDMA1700 Body

Date: 6/7/2022

Electronics: DAE4 Sn1331

Medium: Head 1750M

Medium parameters used: $f = 1752.6 \text{ MHz}$; $\sigma = 1.385 \text{ S/m}$; $\epsilon_r = 42.33$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: WCDMA1700(B4) 1752.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(8.14, 8.14, 8.14)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.645 W/kg

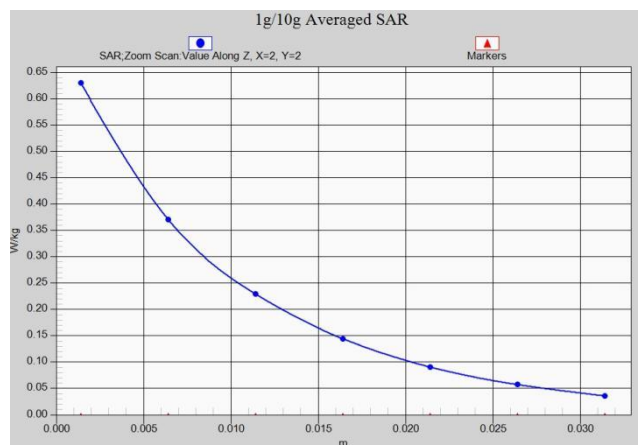
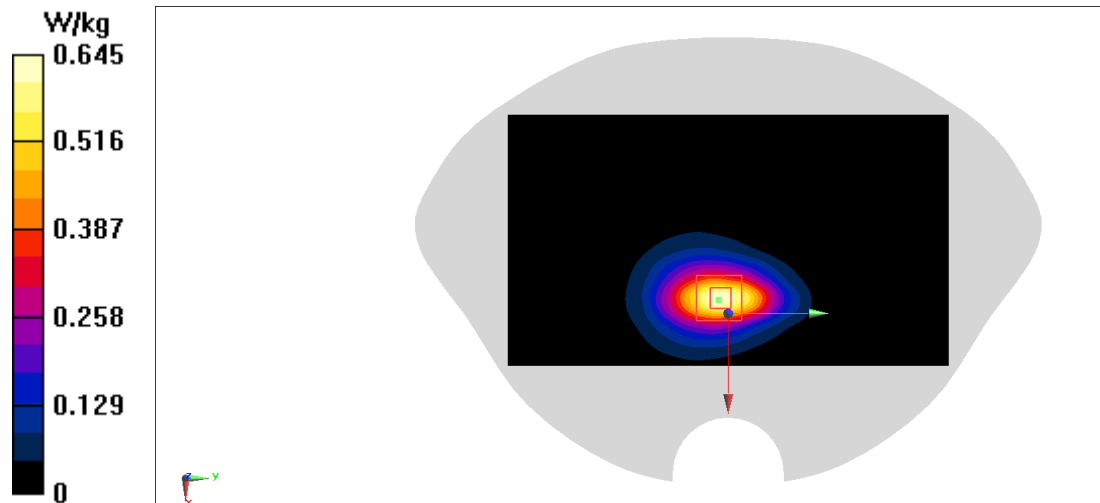
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.90 V/m ; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.737 W/kg

SAR(1 g) = 0.431 W/kg ; SAR(10 g) = 0.244 W/kg

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



WCDMA1900 Head

Date: 6/9/2022

Electronics: DAE4 Sn1331

Medium: Head 1900M

Medium parameters used: $f = 1907.6$ MHz; $\sigma = 1.526$ S/m; $\epsilon_r = 40.542$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: WCDMA1900(B2) 1907.6 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.88, 7.88, 7.88)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.0877 W/kg

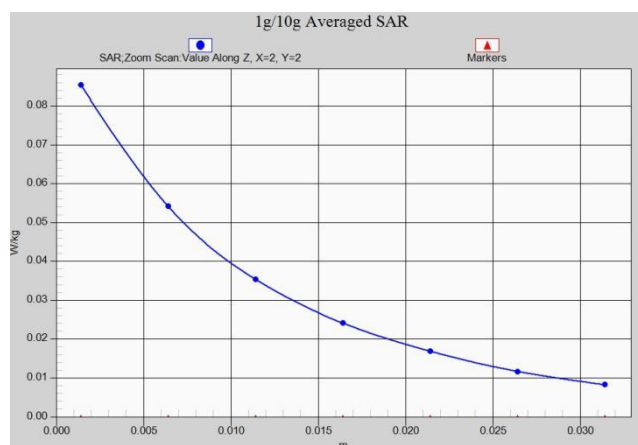
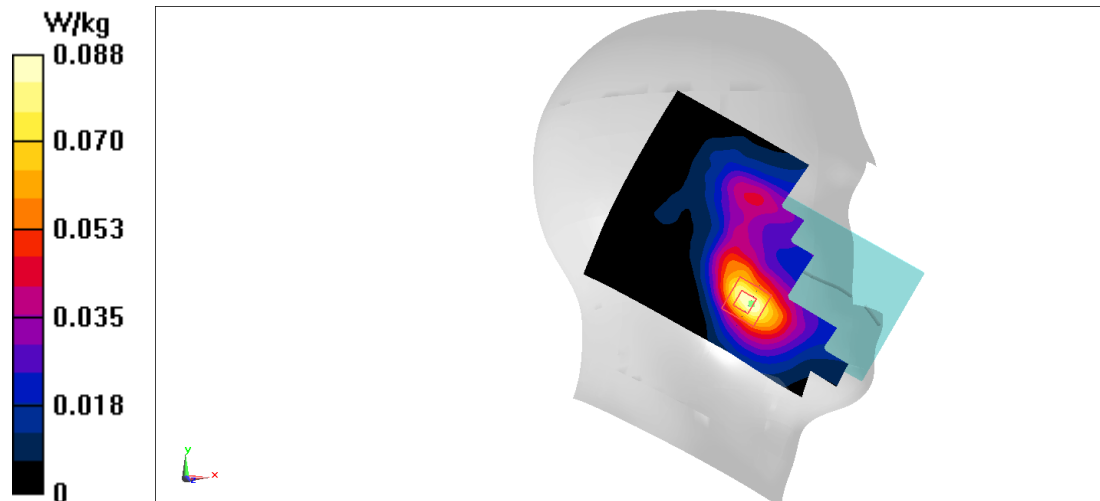
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.270 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.0980 W/kg

SAR(1 g) = 0.061 W/kg; SAR(10 g) = 0.037 W/kg

Maximum value of SAR (measured) = 0.0854 W/kg



WCDMA1900 Body

Date: 6/9/2022

Electronics: DAE4 Sn1331

Medium: Head 1900M

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.485 \text{ S/m}$; $\epsilon_r = 42.065$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: WCDMA1900(B2) 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.88, 7.88, 7.88)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.841 W/kg

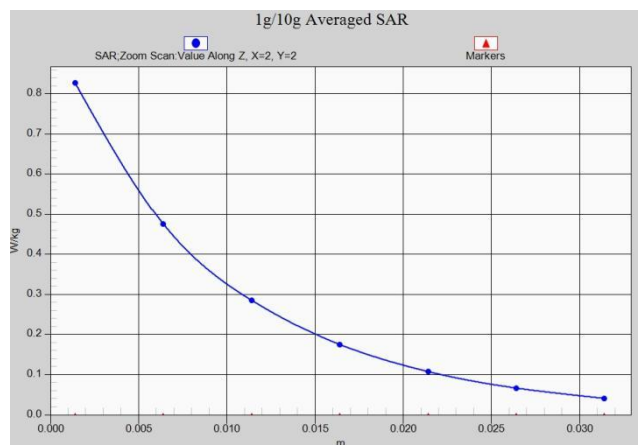
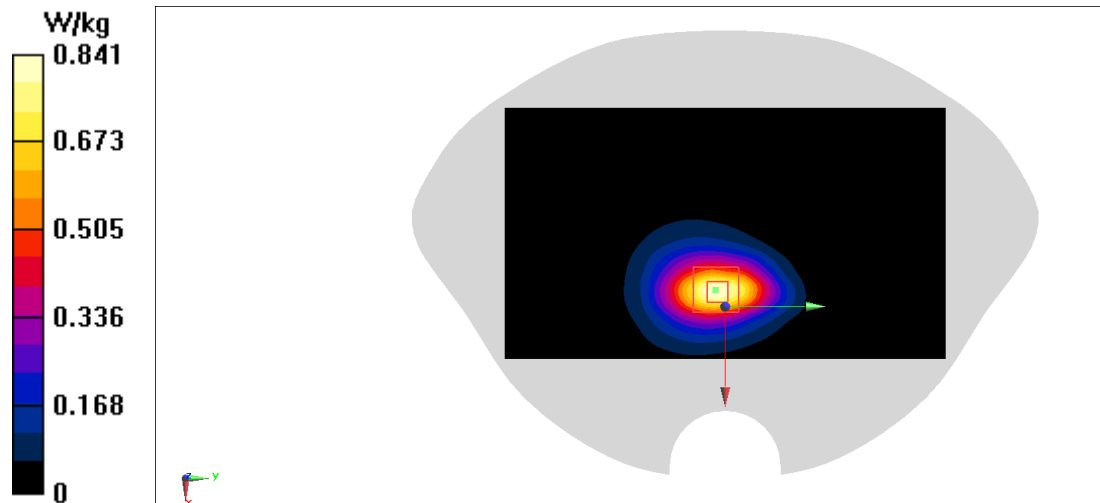
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 13.11 V/m ; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.973 W/kg

SAR(1 g) = 0.558 W/kg ; SAR(10 g) = 0.312 W/kg

Maximum value of SAR (measured) = 0.827 W/kg



LTE Band2-ANT1 Head

Date: 6/9/2022

Electronics: DAE4 Sn1331

Medium: Head 1900M

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.522$ S/m; $\epsilon_r = 40.564$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band2 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.88, 7.88, 7.88)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

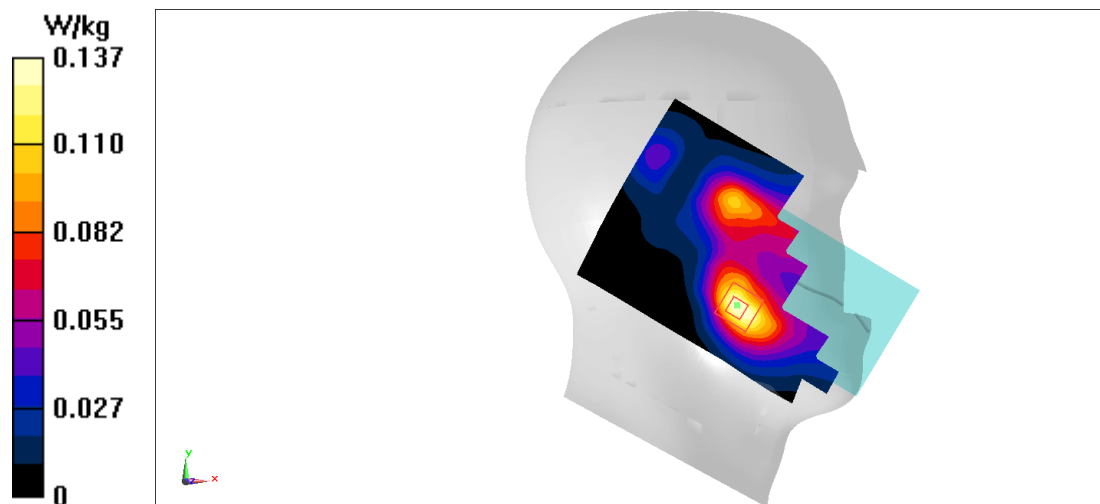
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.409 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.155 W/kg

SAR(1 g) = 0.098 W/kg; SAR(10 g) = 0.060 W/kg

Maximum value of SAR (measured) = 0.133 W/kg



LTE Band2-ANT1 Body

Date: 6/9/2022

Electronics: DAE4 Sn1331

Medium: Head 1900M

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.496$ S/m; $\epsilon_r = 42.037$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band2 1900 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.88, 7.88, 7.88)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

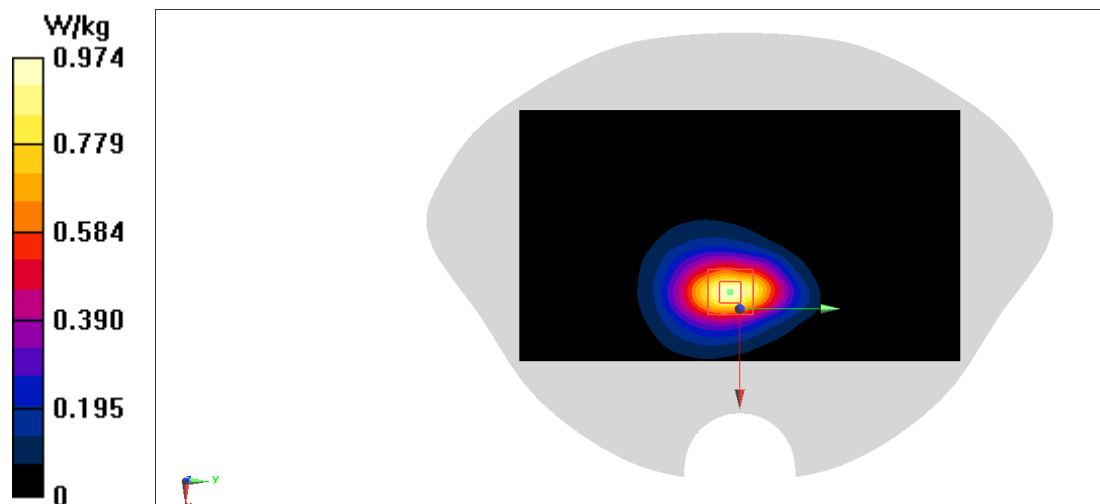
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.61 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.640 W/kg; SAR(10 g) = 0.358 W/kg

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



LTE Band5 Head

Date: 6/6/2022

Electronics: DAE4 Sn1331

Medium: Head 850M

Medium parameters used: $f = 829 \text{ MHz}$; $\sigma = 0.956 \text{ S/m}$; $\epsilon_r = 44.129$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band5 829 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.315 W/kg

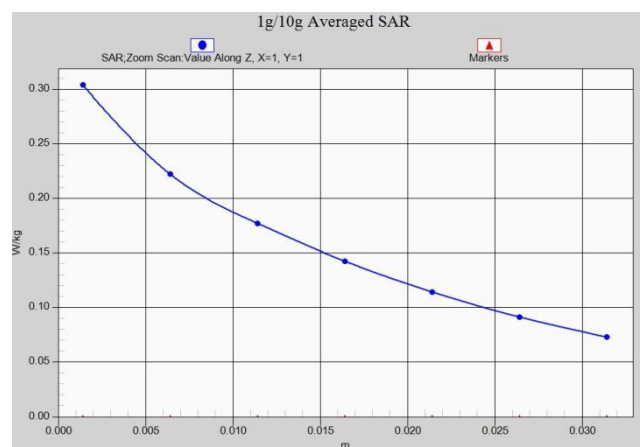
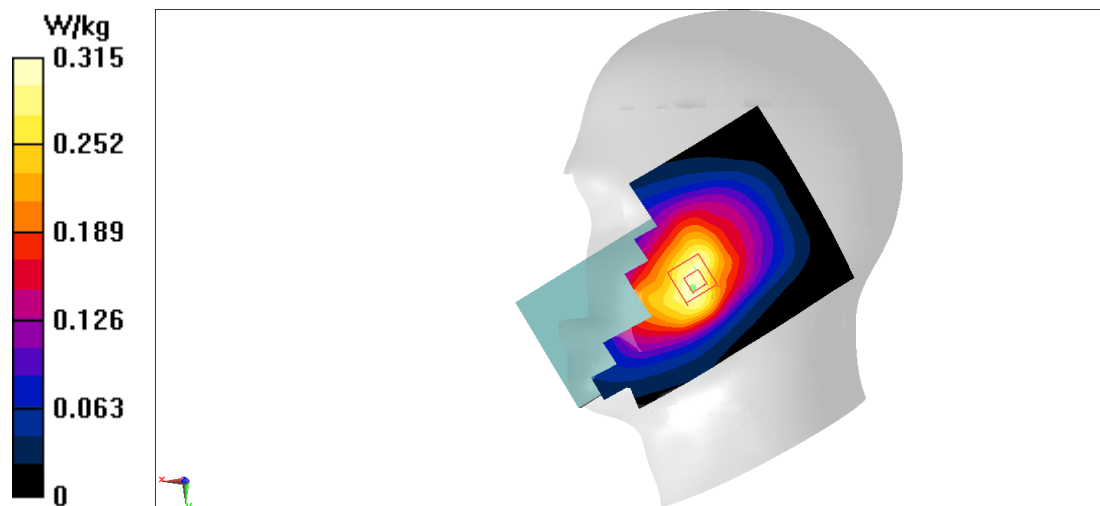
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.019 V/m ; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.346 W/kg

SAR(1 g) = 0.248 W/kg ; SAR(10 g) = 0.184 W/kg

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



LTE Band5 Body

Date: 6/6/2022

Electronics: DAE4 Sn1331

Medium: Head 850M

Medium parameters used: $f = 829 \text{ MHz}$; $\sigma = 0.956 \text{ S/m}$; $\epsilon_r = 44.129$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band5 829 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.727 W/kg

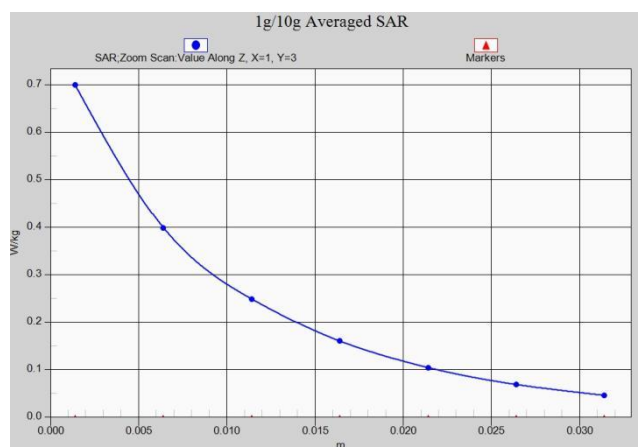
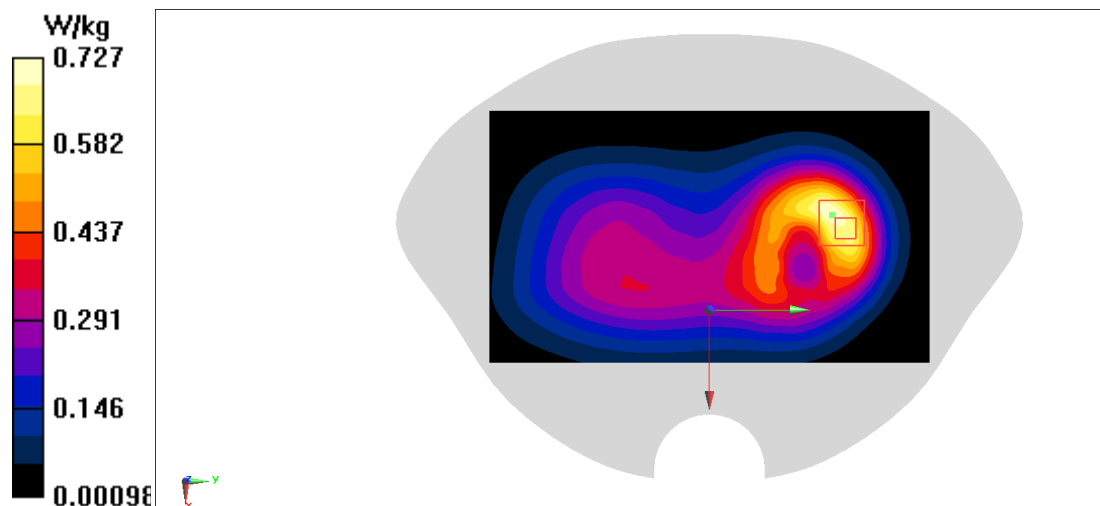
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 19.10 V/m ; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.859 W/kg

SAR(1 g) = 0.478 W/kg ; SAR(10 g) = 0.280 W/kg

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



LTE Band12 Head

Date: 6/5/2022

Electronics: DAE4 Sn1331

Medium: Head 750M

Medium parameters used: $f = 704 \text{ MHz}$; $\sigma = 0.914 \text{ S/m}$; $\epsilon_r = 44.543$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band12 704 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.309 W/kg

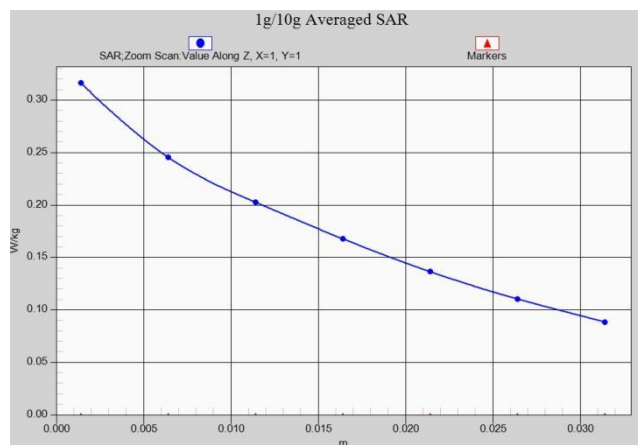
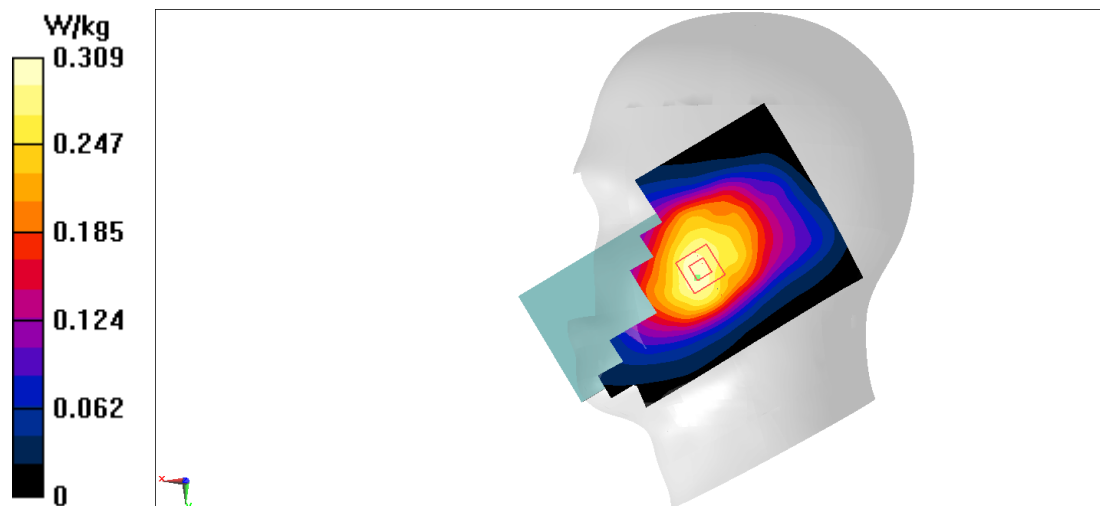
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 11.83 V/m ; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.349 W/kg

SAR(1 g) = 0.265 W/kg ; SAR(10 g) = 0.204 W/kg

Maximum value of SAR (measured) = 0.316 W/kg



LTE Band12 Body

Date: 6/5/2022

Electronics: DAE4 Sn1331

Medium: Head 750M

Medium parameters used: $f = 704 \text{ MHz}$; $\sigma = 0.914 \text{ S/m}$; $\epsilon_r = 44.543$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band12 704 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

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

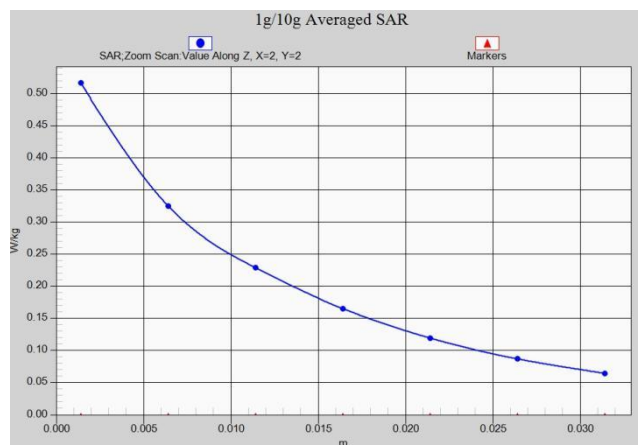
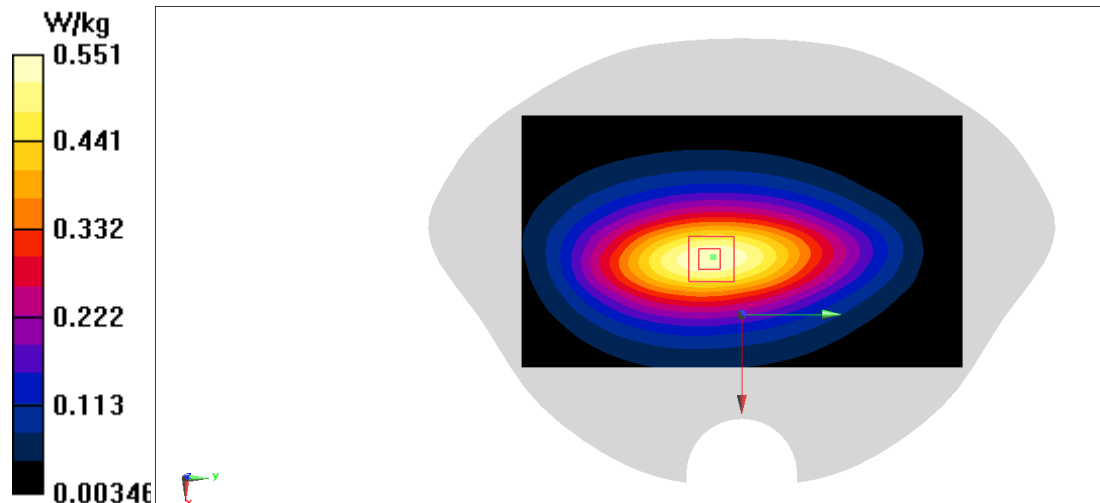
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 25.86 V/m ; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 0.607 W/kg

SAR(1 g) = 0.381 W/kg ; SAR(10 g) = 0.259 W/kg

Maximum value of SAR (measured) = 0.517 W/kg



LTE Band14 Head

Date: 6/5/2022

Electronics: DAE4 Sn1331

Medium: Head 750M

Medium parameters used: $f = 793 \text{ MHz}$; $\sigma = 0.947 \text{ S/m}$; $\epsilon_r = 44.238$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band14 793 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.308 W/kg

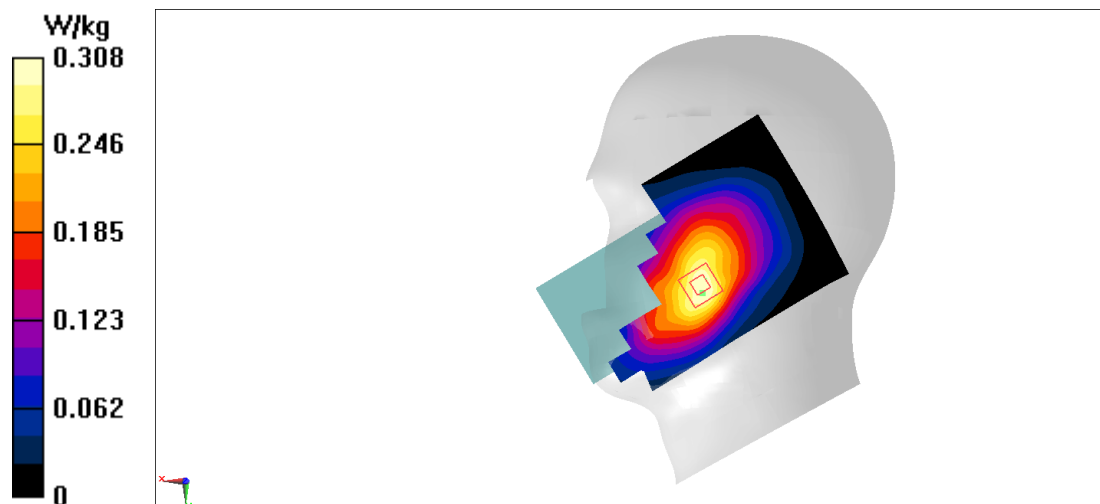
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.559 V/m ; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.337 W/kg

SAR(1 g) = 0.248 W/kg ; SAR(10 g) = 0.185 W/kg

Maximum value of SAR (measured) = 0.303 W/kg



LTE Band14 Body

Date: 6/5/2022

Electronics: DAE4 Sn1331

Medium: Head 750M

Medium parameters used: $f = 793 \text{ MHz}$; $\sigma = 0.947 \text{ S/m}$; $\epsilon_r = 44.238$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band14 793 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.915 W/kg

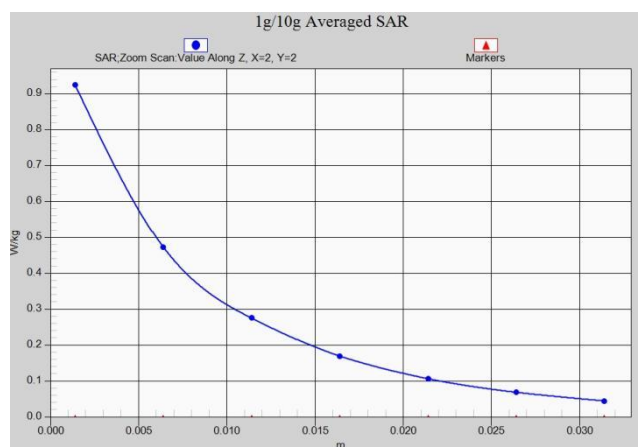
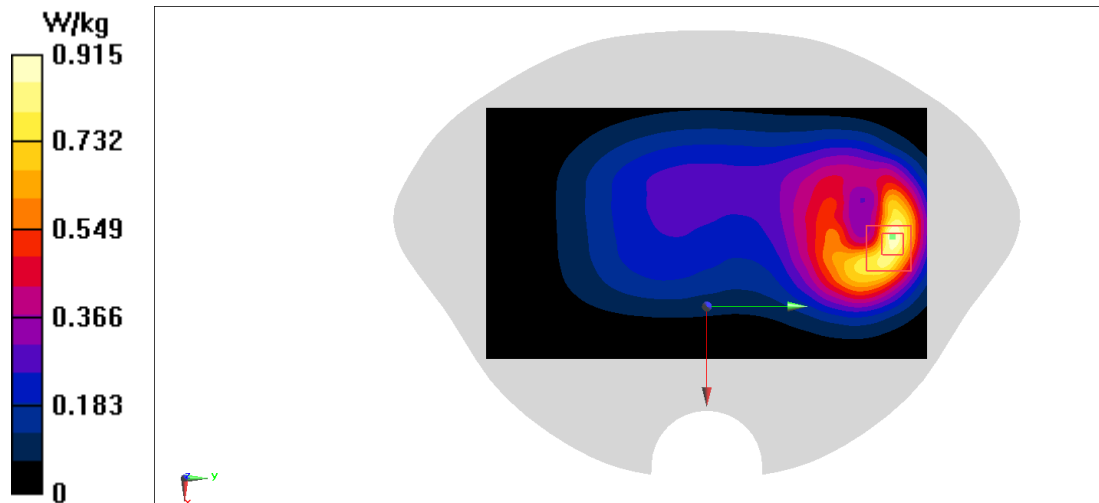
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.35 V/m ; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.580 W/kg ; SAR(10 g) = 0.331 W/kg

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



LTE Band30-ANT5 Head

Date: 6/10/2022

Electronics: DAE4 Sn1331

Medium: Head 2300M

Medium parameters used: $f = 2310$ MHz; $\sigma = 1.77$ S/m; $\epsilon_r = 41.389$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band30 2310 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.6, 7.6, 7.6)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

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

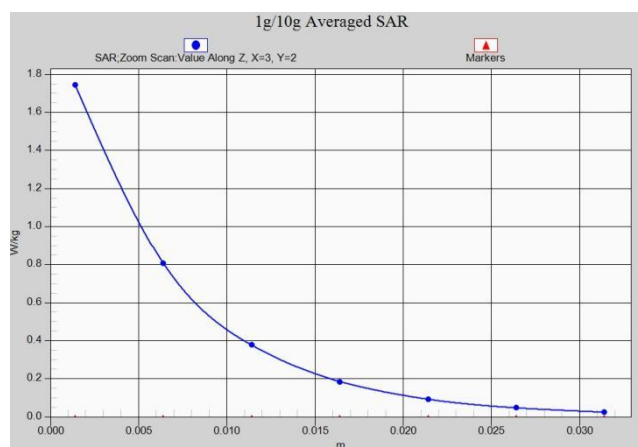
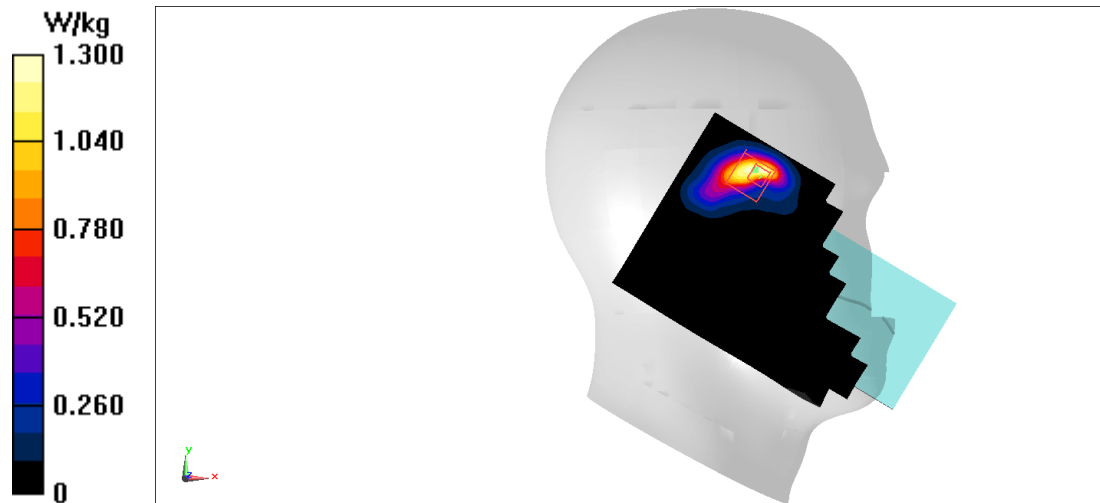
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.355 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 2.35 W/kg

SAR(1 g) = 0.985 W/kg; SAR(10 g) = 0.412 W/kg

Maximum value of SAR (measured) = 1.74 W/kg



LTE Band30-ANT5 Body worn

Date: 6/10/2022

Electronics: DAE4 Sn1331

Medium: Head 2300M

Medium parameters used: $f = 2310$ MHz; $\sigma = 1.77$ S/m; $\epsilon_r = 41.389$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band30 2310 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.6, 7.6, 7.6)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.820 W/kg

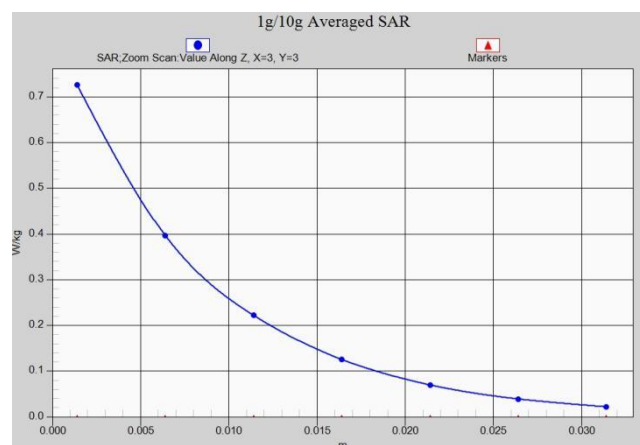
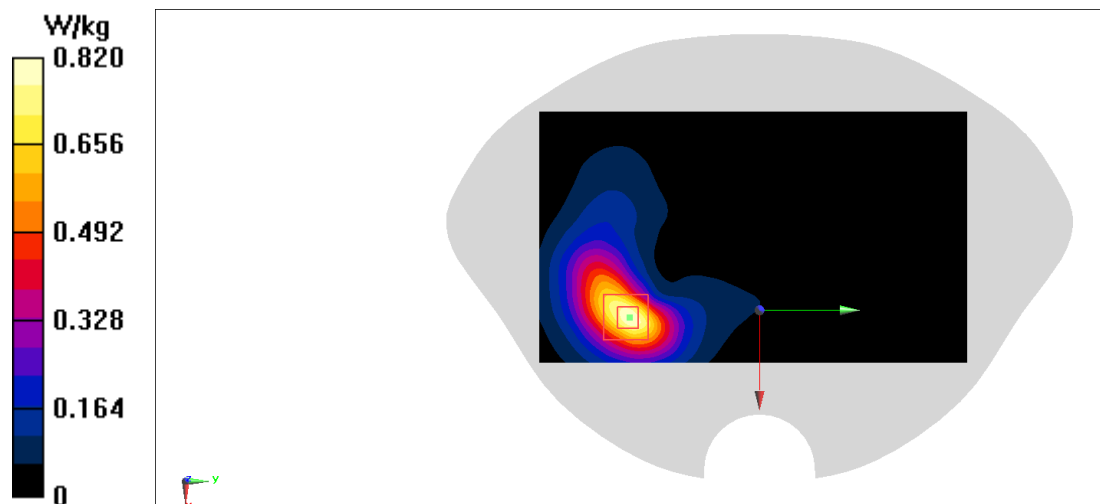
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.044 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.867 W/kg

SAR(1 g) = 0.472 W/kg; SAR(10 g) = 0.253 W/kg

Maximum value of SAR (measured) = 0.726 W/kg



LTE Band30-ANT5 Hotspot

Date: 6/10/2022

Electronics: DAE4 Sn1331

Medium: Head 2300M

Medium parameters used: $f = 2310$ MHz; $\sigma = 1.787$ S/m; $\epsilon_r = 41.463$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band30 2310 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.6, 7.6, 7.6)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

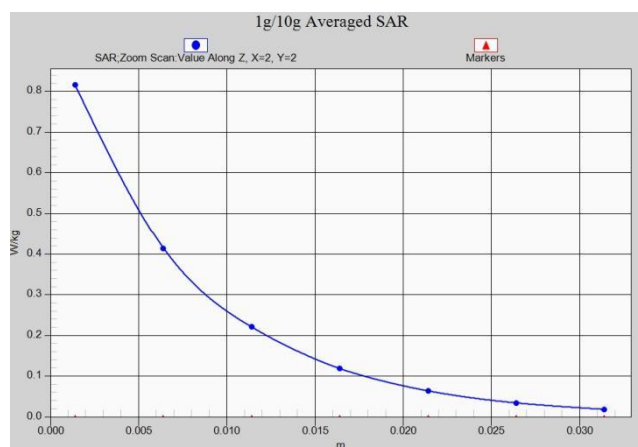
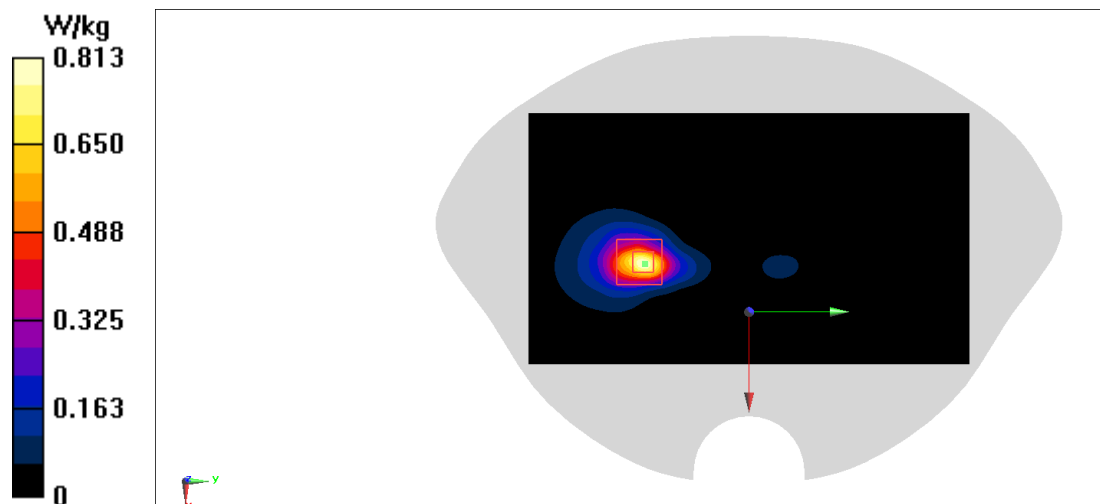
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.483 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.994 W/kg

SAR(1 g) = 0.487 W/kg; SAR(10 g) = 0.221 W/kg

Maximum value of SAR (measured) = 0.816 W/kg



LTE Band30-ANT7 Head

Date: 6/10/2022

Electronics: DAE4 Sn1331

Medium: Head 2300M

Medium parameters used: $f = 2310$ MHz; $\sigma = 1.793$ S/m; $\epsilon_r = 41.965$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band30 (0) Frequency: 2310 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.6, 7.6, 7.6) @ 2310 MHz

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.395 W/kg

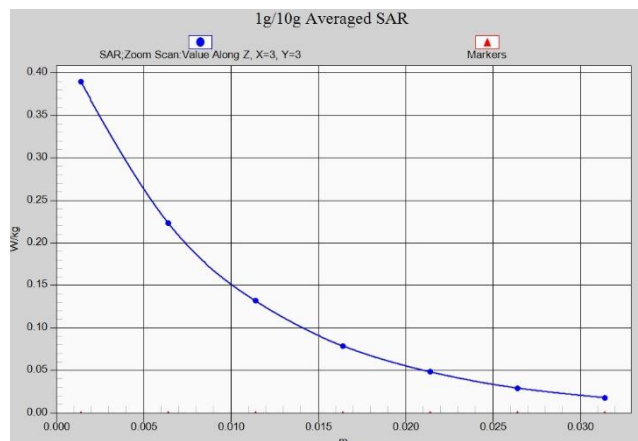
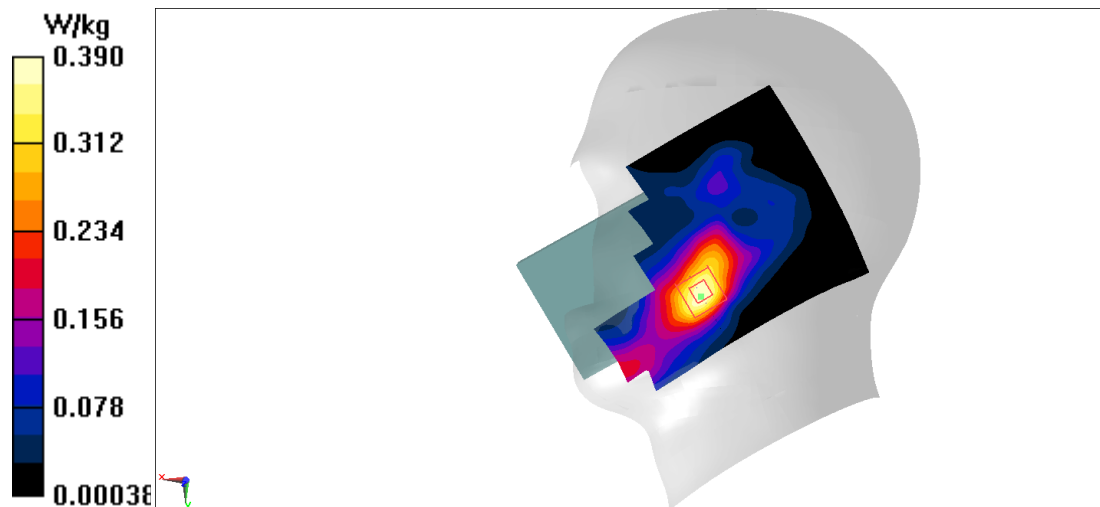
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.184 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.460 W/kg

SAR(1 g) = 0.267 W/kg; SAR(10 g) = 0.153 W/kg

Maximum value of SAR (measured) = 0.390 W/kg



LTE Band30-ANT7 Body

Date: 6/10/2022

Electronics: DAE4 Sn1331

Medium: Head 2300M

Medium parameters used: $f = 2310$ MHz; $\sigma = 1.793$ S/m; $\epsilon_r = 41.965$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: UID 0, LTE Band30 (0) Frequency: 2310 MHz Duty Cycle: 1:1

Probe: EX3DV4 – SN7548 ConvF(7.6, 7.6, 7.6) @ 2310 MHz

Area Scan (51x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.897 W/kg

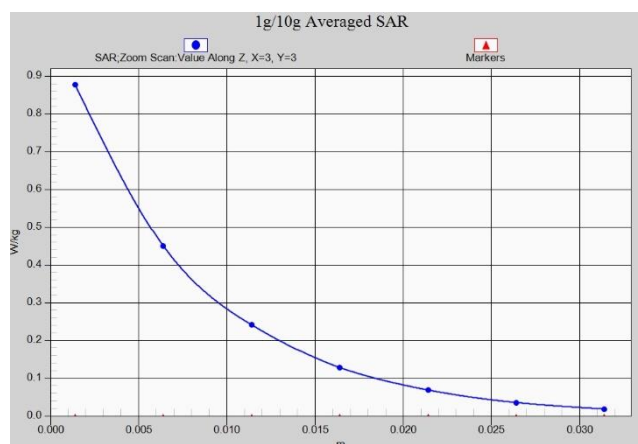
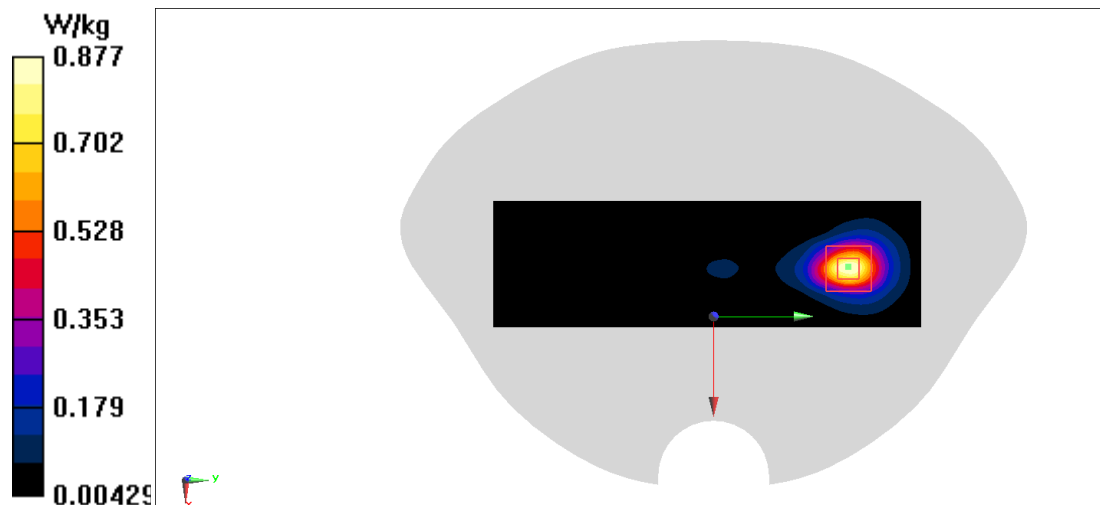
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 6.497 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.534 W/kg; SAR(10 g) = 0.245 W/kg

Maximum value of SAR (measured) = 0.877 W/kg



LTE Band48 Head

Date: 6/15/2022

Electronics: DAE4 Sn1331

Medium: Head 3600M

Medium parameters used: $f = 3560$ MHz; $\sigma = 2.764$ S/m; $\epsilon_r = 38.01$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band48 3560 MHz Duty Cycle: 1:1.5787

Probe: EX3DV4 - SN7548 ConvF(6.64, 6.64, 6.64)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.891 W/kg

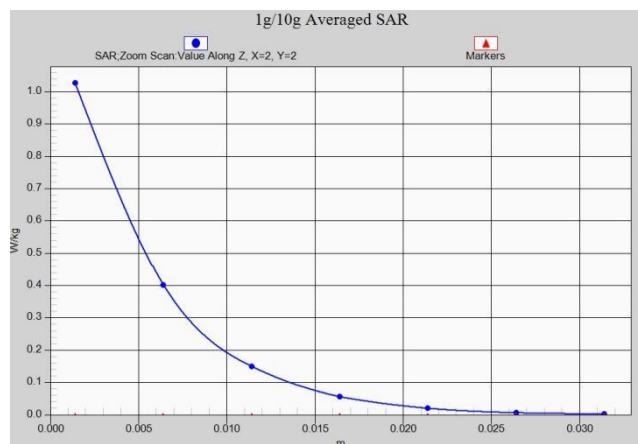
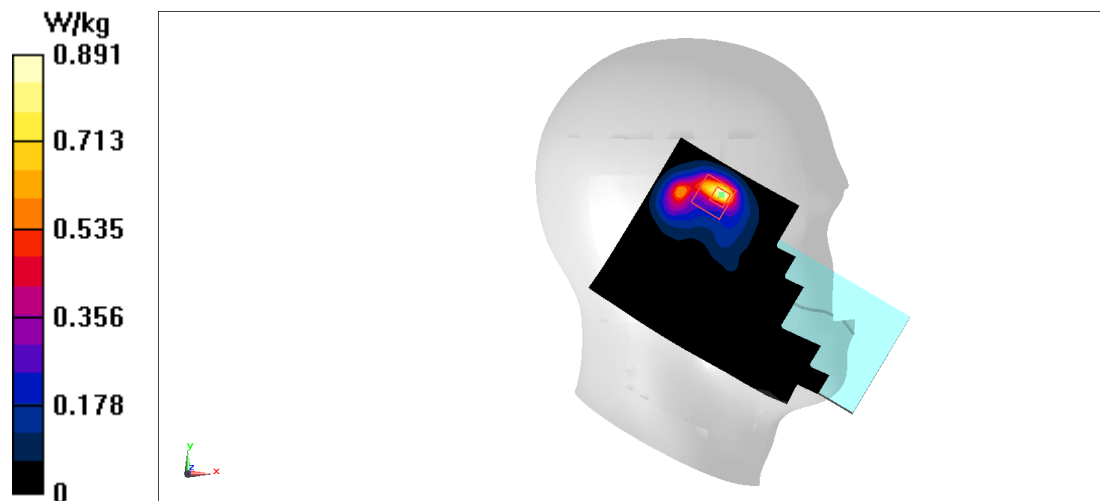
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.598 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 1.36 W/kg

SAR(1 g) = 0.60 W/kg; SAR(10 g) = 0.201 W/kg

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



LTE Band48 Body worn

Date: 6/15/2022

Electronics: DAE4 Sn1331

Medium: Head 3600M

Medium parameters used: $f = 3625$ MHz; $\sigma = 2.888$ S/m; $\epsilon_r = 39.07$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band48 3625 MHz Duty Cycle: 1:1.5787

Probe: EX3DV4 - SN7548 ConvF(6.42, 6.42, 6.42)

Area Scan (121x211x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.566 W/kg

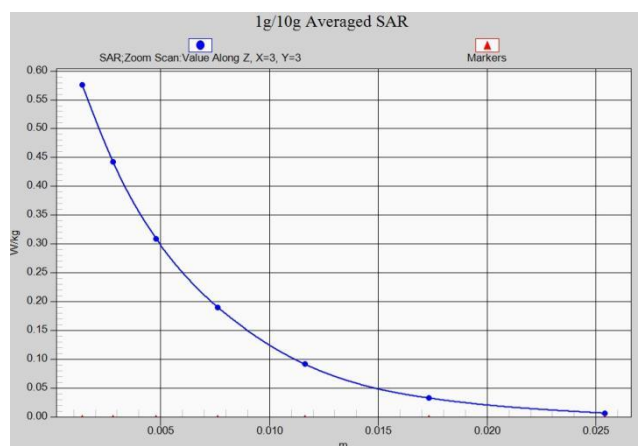
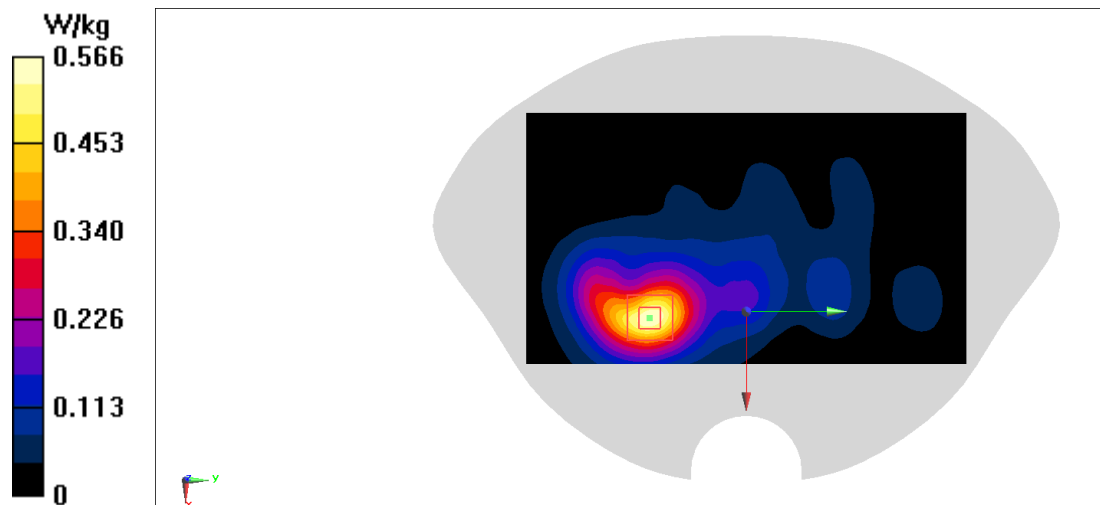
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 6.661 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.756 W/kg

SAR(1 g) = 0.327 W/kg; SAR(10 g) = 0.153 W/kg

Maximum value of SAR (measured) = 0.576 W/kg



LTE Band48 Hotspot

Date: 6/15/2022

Electronics: DAE4 Sn1331

Medium: Head 3600M

Medium parameters used: $f = 3625$ MHz; $\sigma = 2.993$ S/m; $\epsilon_r = 38.28$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band48 3625 MHz Duty Cycle: 1:1.5787

Probe: EX3DV4 - SN7548 ConvF(6.42, 6.42, 6.42)

Area Scan (61x211x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.987 W/kg

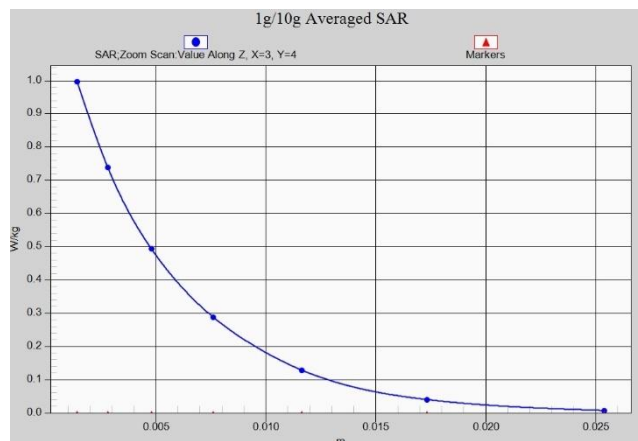
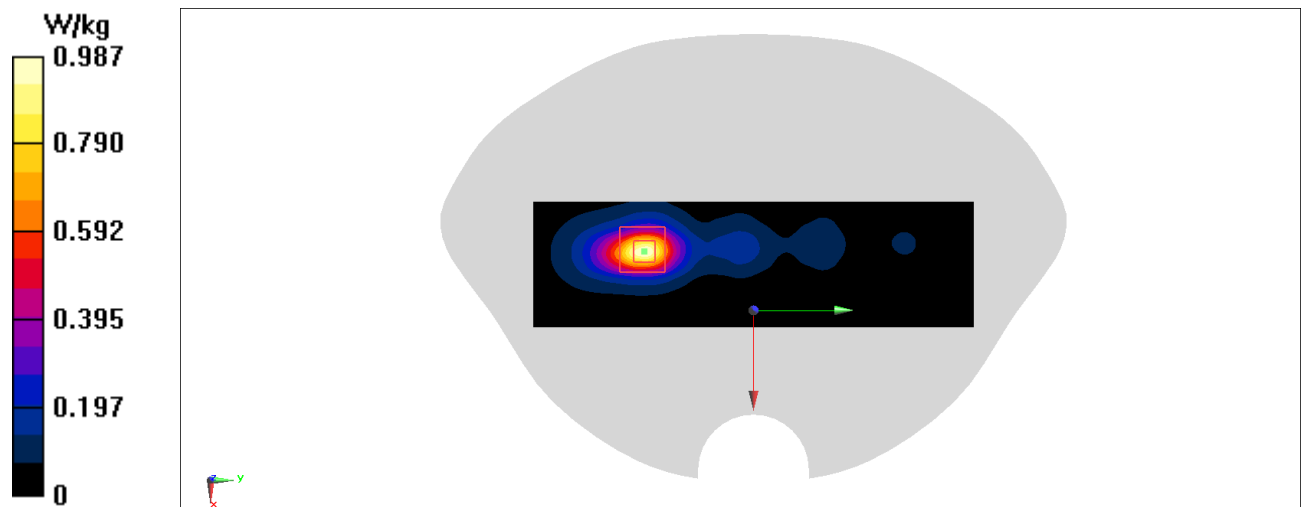
Zoom Scan (8x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 5.175 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.512 W/kg; SAR(10 g) = 0.200 W/kg

Maximum value of SAR (measured) = 0.997 W/kg



LTE Band66-ANT1 Head

Date: 6/7/2022

Electronics: DAE4 Sn1331

Medium: Head 1750M

Medium parameters used: $f = 1770$ MHz; $\sigma = 1.451$ S/m; $\epsilon_r = 40.838$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band66 1770 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(8.14, 8.14, 8.14)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

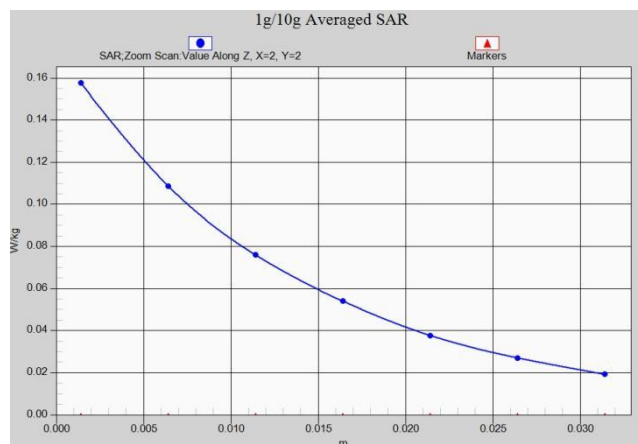
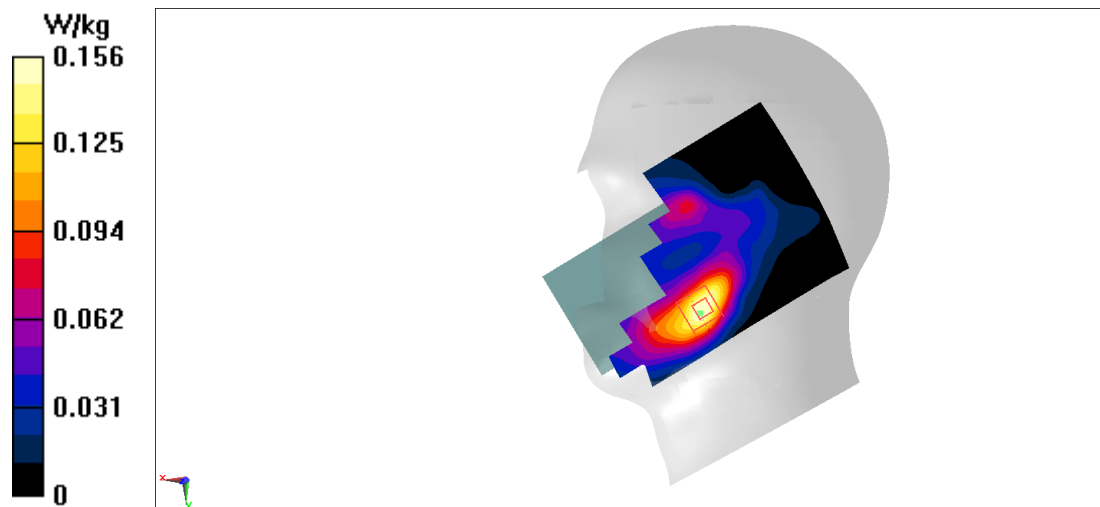
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.528 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.180 W/kg

SAR(1 g) = 0.121 W/kg; SAR(10 g) = 0.076 W/kg

Maximum value of SAR (measured) = 0.158 W/kg



LTE Band66-ANT1 Body

Date: 6/7/2022

Electronics: DAE4 Sn1331

Medium: Head 1750M

Medium parameters used: $f = 1745 \text{ MHz}$; $\sigma = 1.405 \text{ S/m}$; $\epsilon_r = 41.711$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band66 1745 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(8.14, 8.14, 8.14)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 1.65 W/kg

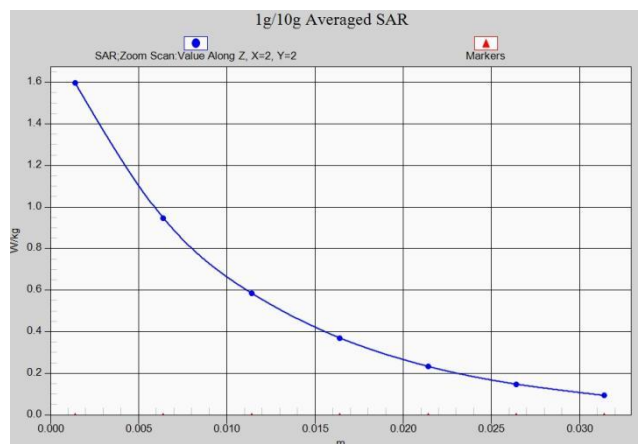
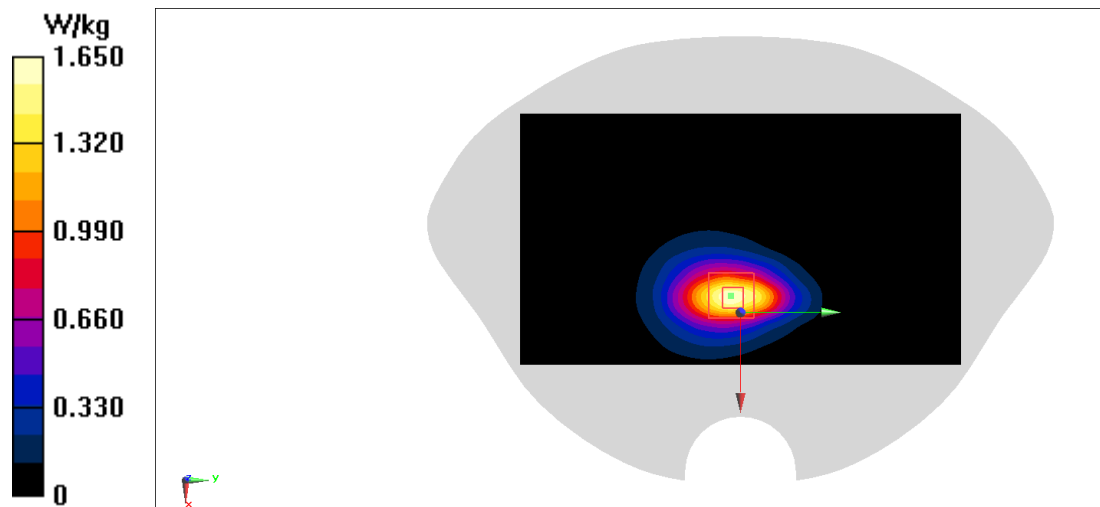
Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 17.52 V/m ; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.86 W/kg

SAR(1 g) = 1.1 W/kg ; SAR(10 g) = 0.621 W/kg

Maximum value of SAR (measured) = 1.60 W/kg



LTE Band2-ANT6 Head

Date: 6/9/2022

Electronics: DAE4 Sn1331

Medium: Head 1900M

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.446$ S/m; $\epsilon_r = 41.614$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band2 1860 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.88, 7.88, 7.88)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.904 W/kg

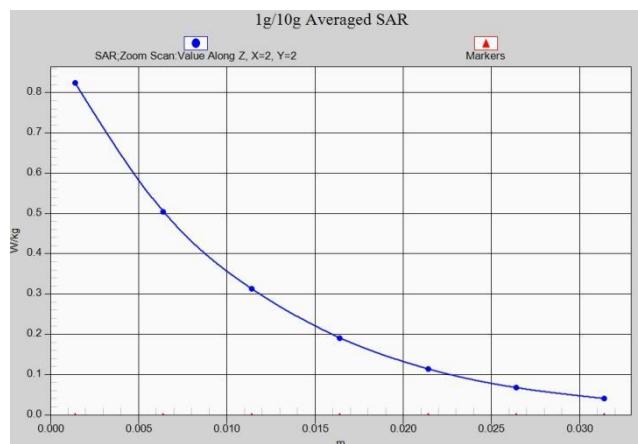
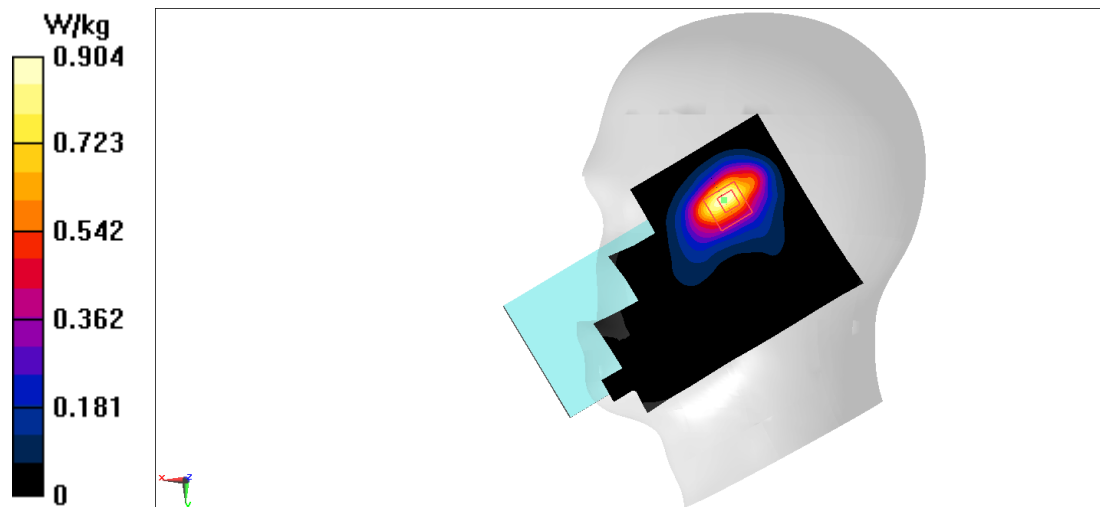
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.88 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.987 W/kg

SAR(1 g) = 0.584 W/kg; SAR(10 g) = 0.330 W/kg

Maximum value of SAR (measured) = 0.824 W/kg



LTE Band2-ANT6 Body

Date: 6/9/2022

Electronics: DAE4 Sn1331

Medium: Head 1900M

Medium parameters used: $f = 1860$ MHz; $\sigma = 1.446$ S/m; $\epsilon_r = 41.614$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band2 1860 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.88, 7.88, 7.88)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

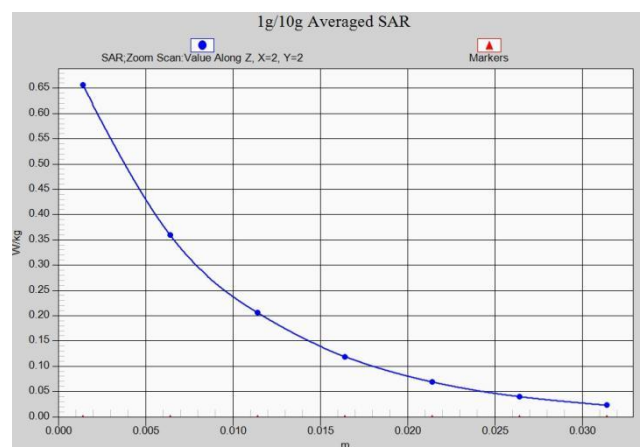
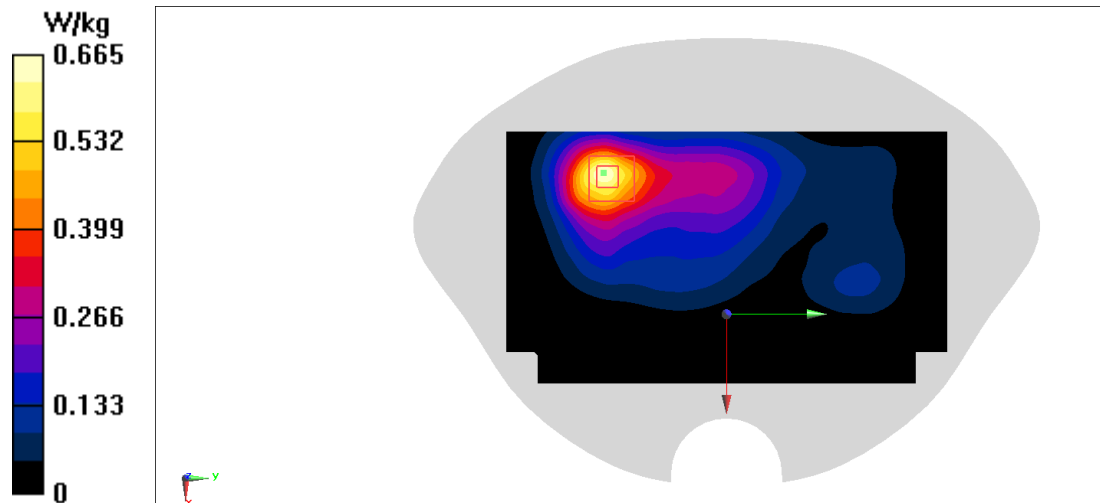
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.842 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 0.798 W/kg

SAR(1 g) = 0.436 W/kg; SAR(10 g) = 0.247 W/kg

Maximum value of SAR (measured) = 0.656 W/kg



LTE Band66-ANT6 Head

Date: 6/7/2022

Electronics: DAE4 Sn1331

Medium: Head 1750M

Medium parameters used: $f = 1770$ MHz; $\sigma = 1.388$ S/m; $\epsilon_r = 41.787$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band66 1770 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(8.14, 8.14, 8.14)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.857 W/kg

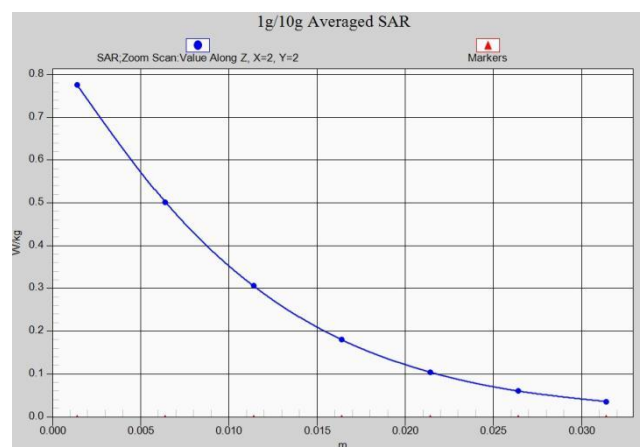
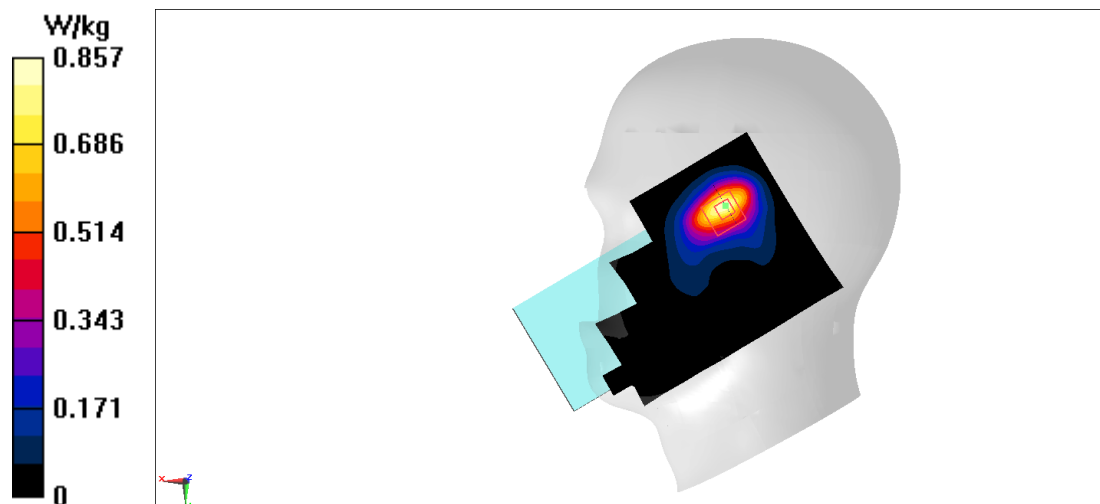
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.48 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.907 W/kg

SAR(1 g) = 0.561 W/kg; SAR(10 g) = 0.318 W/kg

Maximum value of SAR (measured) = 0.775 W/kg



LTE Band66-ANT6 Body

Date: 6/7/2022

Electronics: DAE4 Sn1331

Medium: Head 1750M

Medium parameters used: $f = 1770$ MHz; $\sigma = 1.388$ S/m; $\epsilon_r = 41.787$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: LTE Band66 1770 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(8.14, 8.14, 8.14)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.616 W/kg

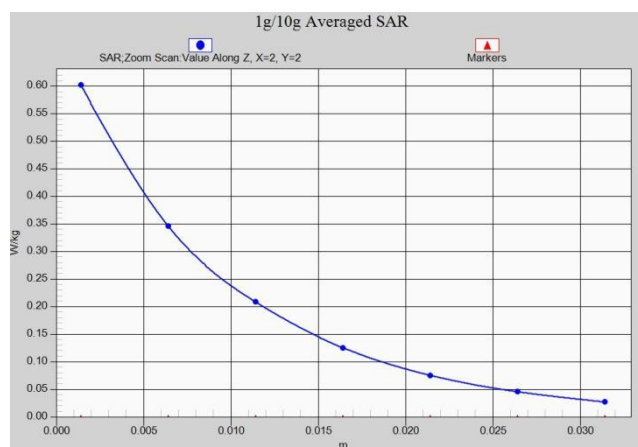
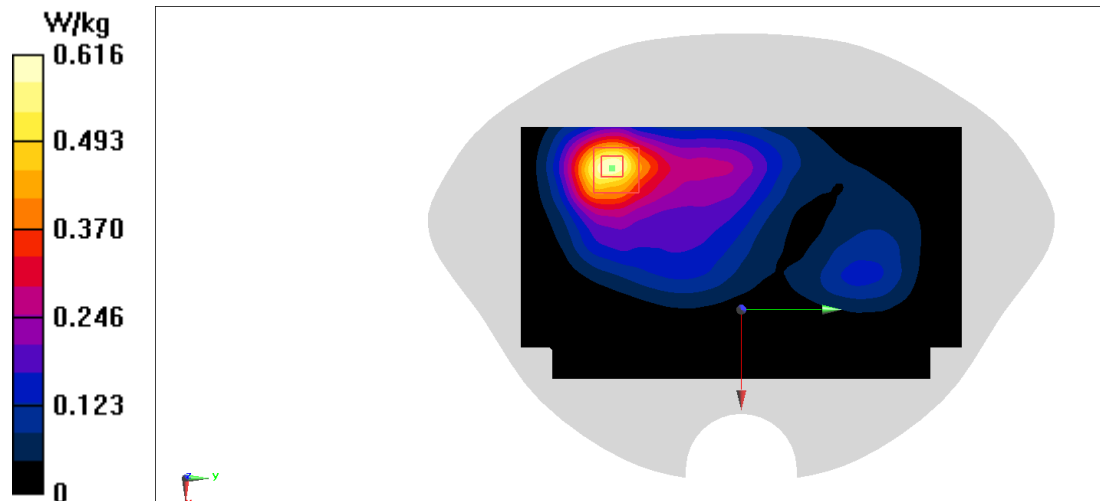
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.445 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.738 W/kg

SAR(1 g) = 0.410 W/kg; SAR(10 g) = 0.233 W/kg

Maximum value of SAR (measured) = 0.602 W/kg



5G NR N2 Head

Date: 6/9/2022

Electronics: DAE4 Sn1331

Medium: Head 1900M

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.404$ S/m; $\epsilon_r = 42.158$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: 5G NR 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.88, 7.88, 7.88)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

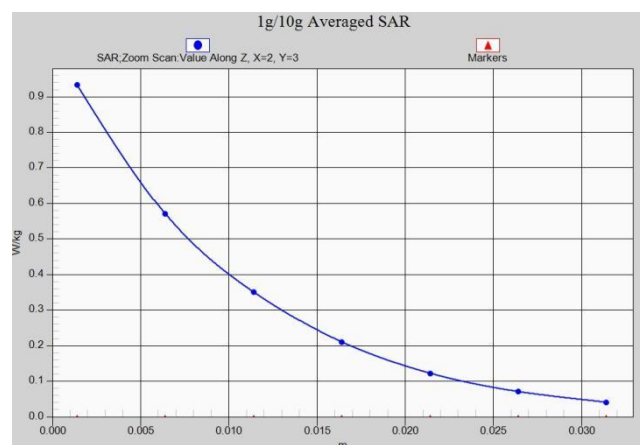
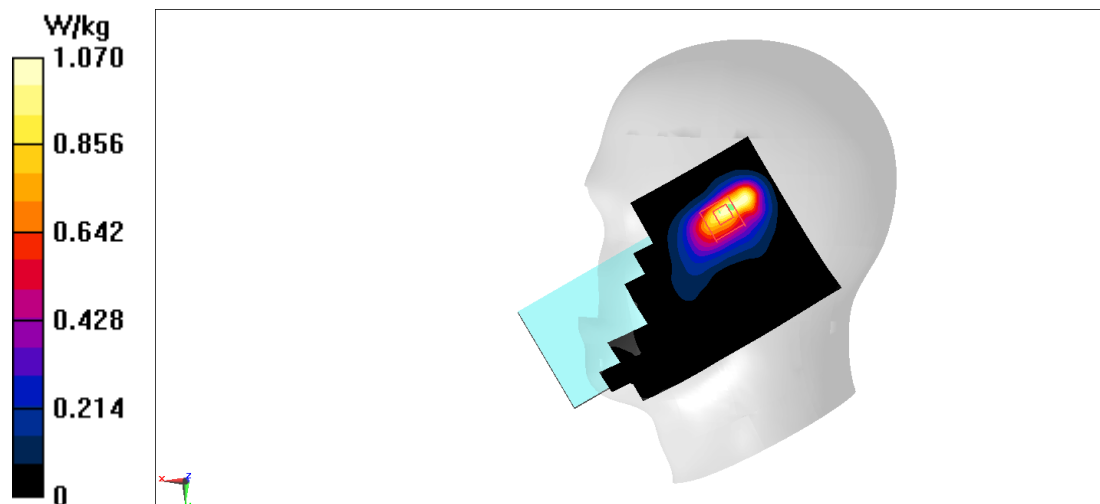
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 12.57 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.12 W/kg

SAR(1 g) = 0.664 W/kg; SAR(10 g) = 0.374 W/kg

Maximum value of SAR (measured) = 0.933 W/kg



5G NR N2 Body

Date: 6/9/2022

Electronics: DAE4 Sn1331

Medium: Head 1900M

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.404$ S/m; $\epsilon_r = 42.158$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: 5G NR 1880 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.88, 7.88, 7.88)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.654 W/kg

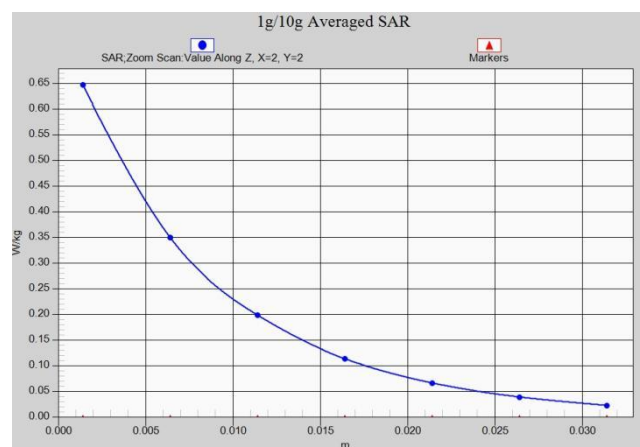
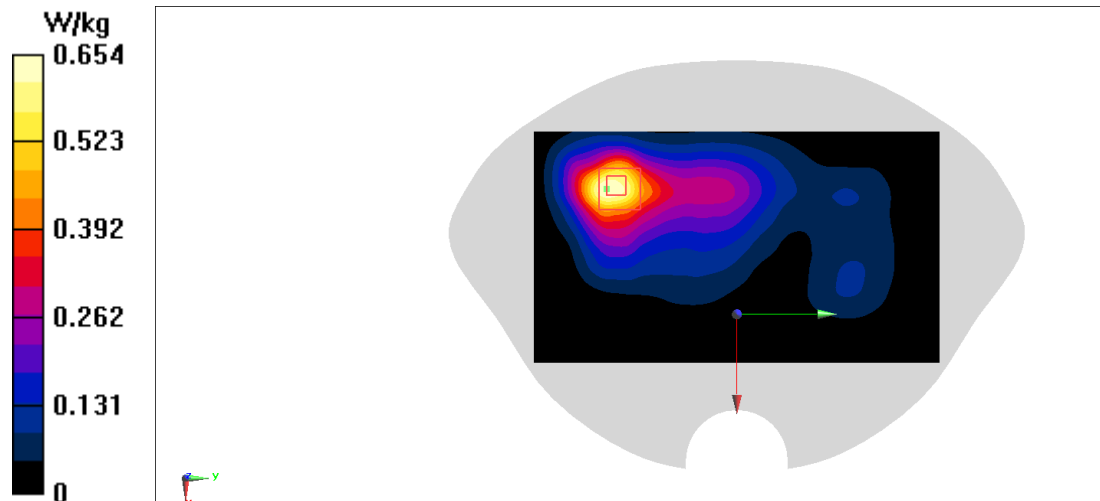
Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.887 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.792 W/kg

SAR(1 g) = 0.445 W/kg; SAR(10 g) = 0.253 W/kg

Maximum value of SAR (measured) = 0.647 W/kg



5G NR N5 Head

Date: 6/6/2022

Electronics: DAE4 Sn1331

Medium: Head 850M

Medium parameters used: $f = 836.5 \text{ MHz}$; $\sigma = 0.946 \text{ S/m}$; $\epsilon_r = 44.046$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: 5G NR 836.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.313 W/kg

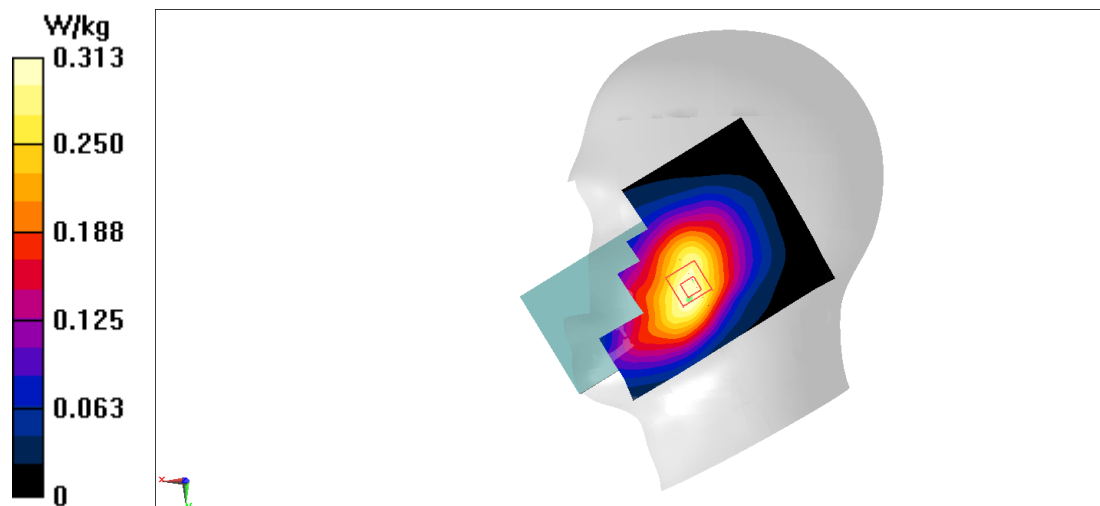
Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.391 V/m ; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.343 W/kg

SAR(1 g) = 0.256 W/kg ; SAR(10 g) = 0.195 W/kg

Maximum value of SAR (measured) = 0.312 W/kg



5G NR N5 Body

Date: 6/6/2022

Electronics: DAE4 Sn1331

Medium: Head 850M

Medium parameters used: $f = 836.5 \text{ MHz}$; $\sigma = 0.946 \text{ S/m}$; $\epsilon_r = 44.046$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: 5G NR 836.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(10.36, 10.36, 10.36)

Area Scan (81x141x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.556 W/kg

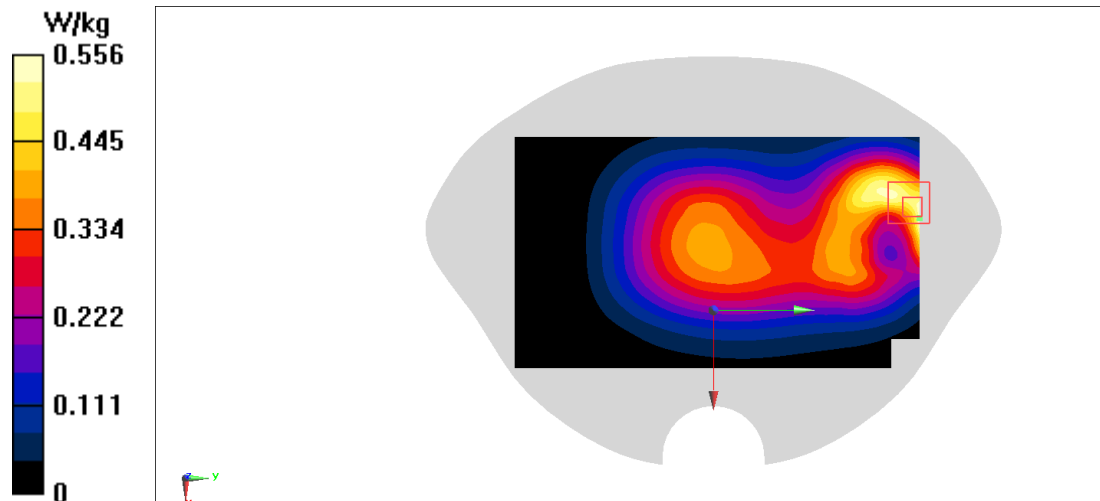
Zoom Scan (6x6x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.77 V/m ; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.691 W/kg

SAR(1 g) = 0.395 W/kg ; SAR(10 g) = 0.234 W/kg

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



5G NR N30 Head

Date: 6/10/2022

Electronics: DAE4 Sn1331

Medium: Head 2300M

Medium parameters used: $f = 2307.5$ MHz; $\sigma = 1.79$ S/m; $\epsilon_r = 40.796$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: 5G N30 2307.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.6, 7.6, 7.6)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

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

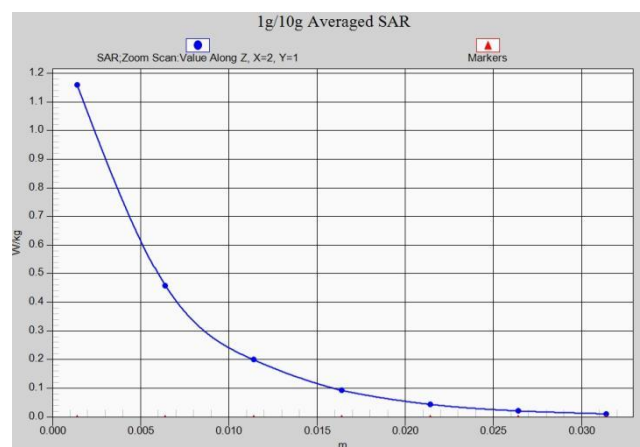
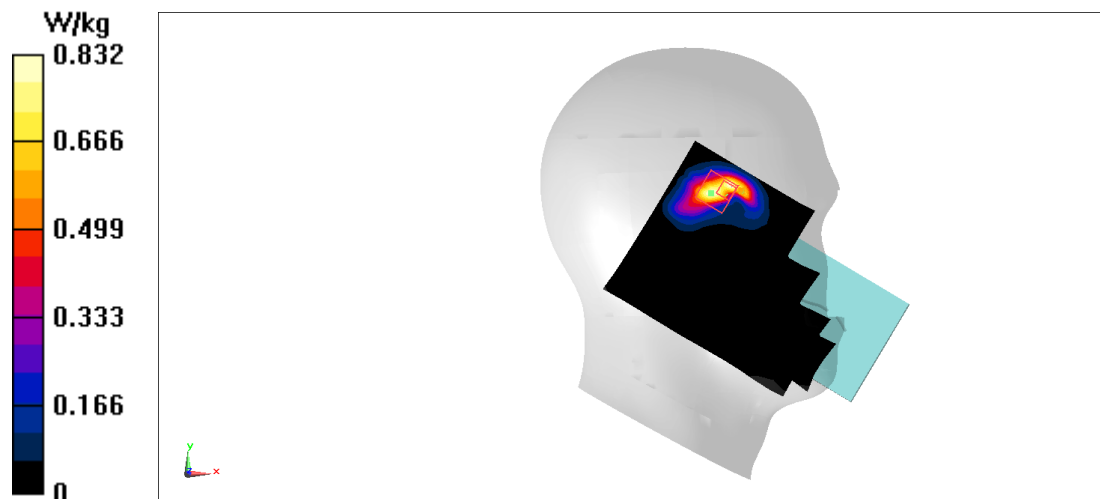
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.823 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.64 W/kg

SAR(1 g) = 0.633 W/kg; SAR(10 g) = 0.268 W/kg

Maximum value of SAR (measured) = 1.16 W/kg



5G NR N30 Body

Date: 6/10/2022

Electronics: DAE4 Sn1331

Medium: Head 2300M

Medium parameters used: $f = 2307.5$ MHz; $\sigma = 1.79$ S/m; $\epsilon_r = 40.796$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: 5G N30 2307.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.6, 7.6, 7.6)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.975 W/kg

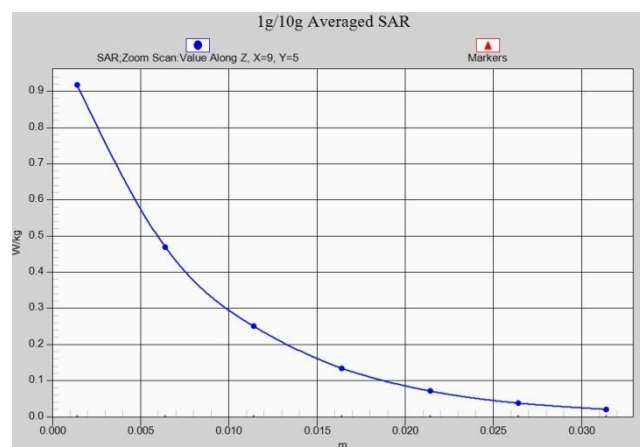
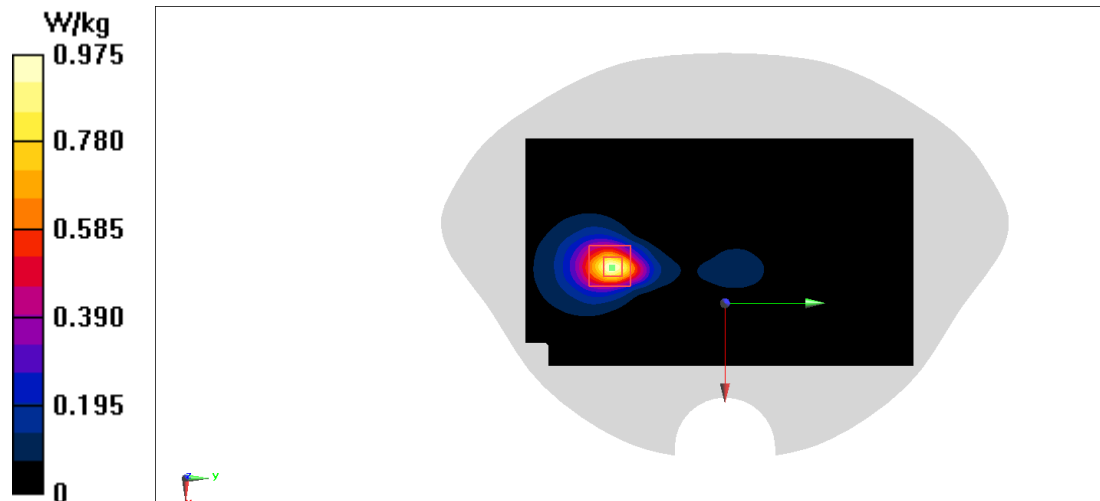
Zoom Scan (13x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.986 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 1.14 W/kg

SAR(1 g) = 0.560 W/kg; SAR(10 g) = 0.260 W/kg

Maximum value of SAR (measured) = 0.917 W/kg



5G NR N66 Head

Date: 6/7/2022

Electronics: DAE4 Sn1331

Medium: Head 1750M

Medium parameters used: $f = 1777.5$ MHz; $\sigma = 1.352$ S/m; $\epsilon_r = 42.251$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: 5G NR 1777.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(8.14, 8.14, 8.14)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

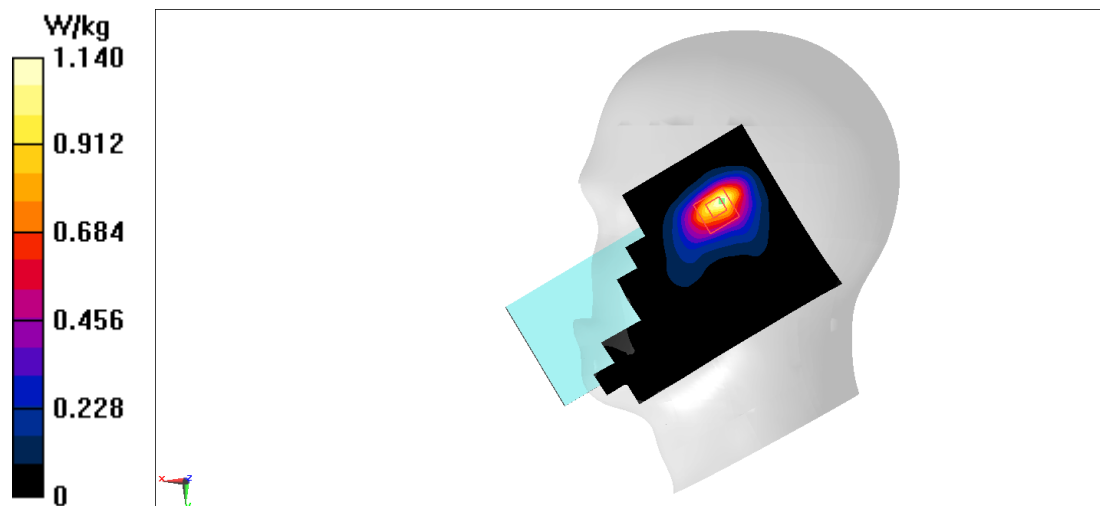
Zoom Scan (6x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 13.44 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.679 W/kg; SAR(10 g) = 0.386 W/kg

Maximum value of SAR (measured) = 0.914 W/kg



5G NR N66 Body

Date: 6/7/2022

Electronics: DAE4 Sn1331

Medium: Head 1750M

Medium parameters used: $f = 1777.5$ MHz; $\sigma = 1.352$ S/m; $\epsilon_r = 42.251$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: 5G NR 1777.5 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(8.14, 8.14, 8.14)

Area Scan (81x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.592 W/kg

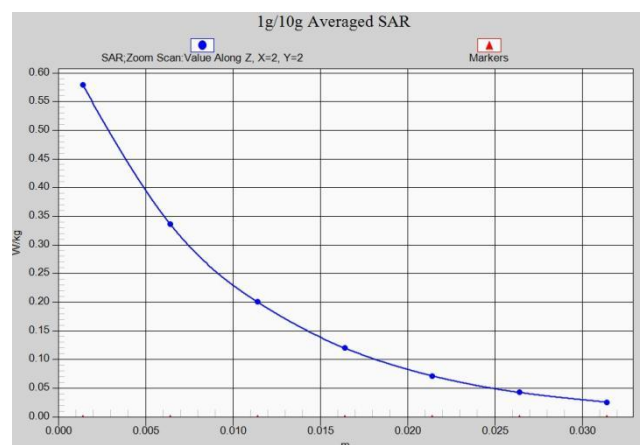
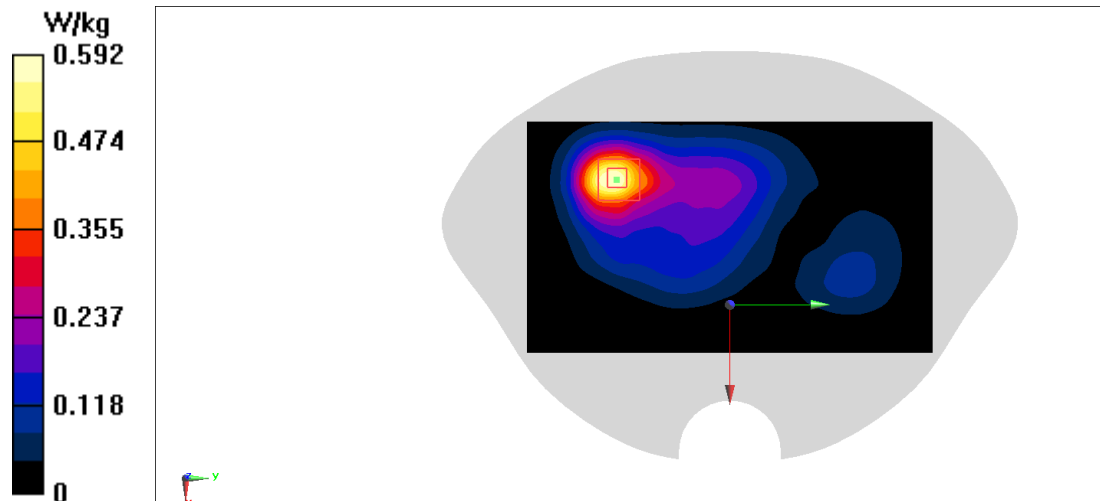
Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.399 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 0.694 W/kg

SAR(1 g) = 0.393 W/kg; SAR(10 g) = 0.221 W/kg

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



5G NR N77 Head

Date: 6/16/2022

Electronics: DAE4 Sn1331

Medium: Head 3800M

Medium parameters used: $f = 3540$ MHz; $\sigma = 2.901$ S/m; $\epsilon_r = 38.175$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: N77 3540 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(6.64, 6.64, 6.64)

Area Scan (121x211x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.751 W/kg

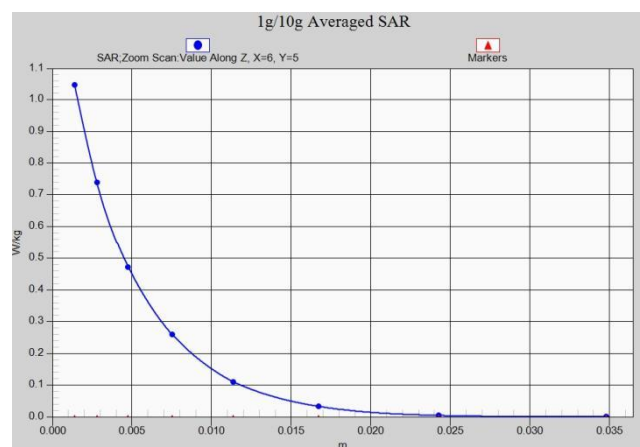
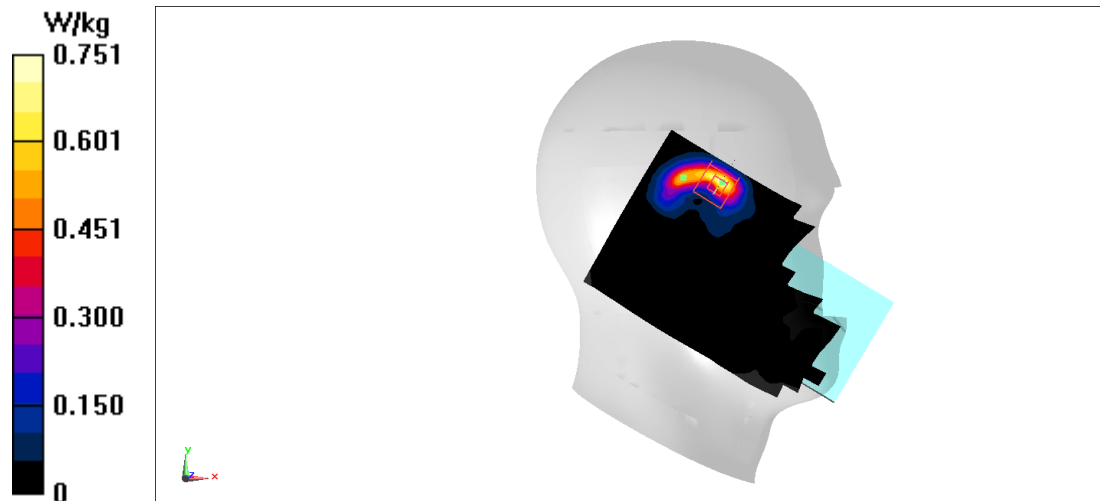
Zoom Scan (10x10x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.388 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.60 W/kg

SAR(1 g) = 0.477 W/kg; SAR(10 g) = 0.156 W/kg

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



5G NR N77 Body

Date: 6/16/2022

Electronics: DAE4 Sn1331

Medium: Head 3800M

Medium parameters used: $f = 3540$ MHz; $\sigma = 2.901$ S/m; $\epsilon_r = 38.175$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: N77 3540 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(6.64, 6.64, 6.64)

Area Scan (121x211x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

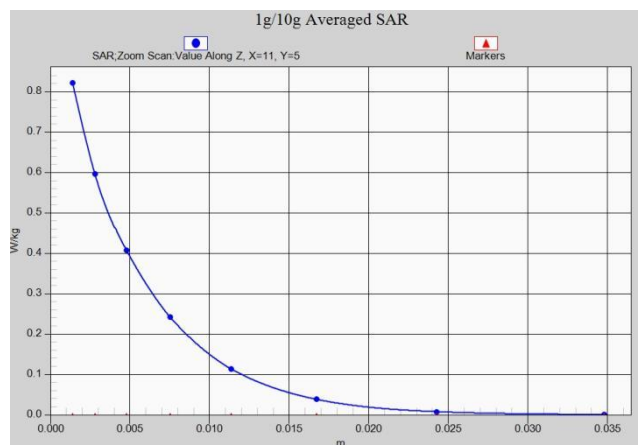
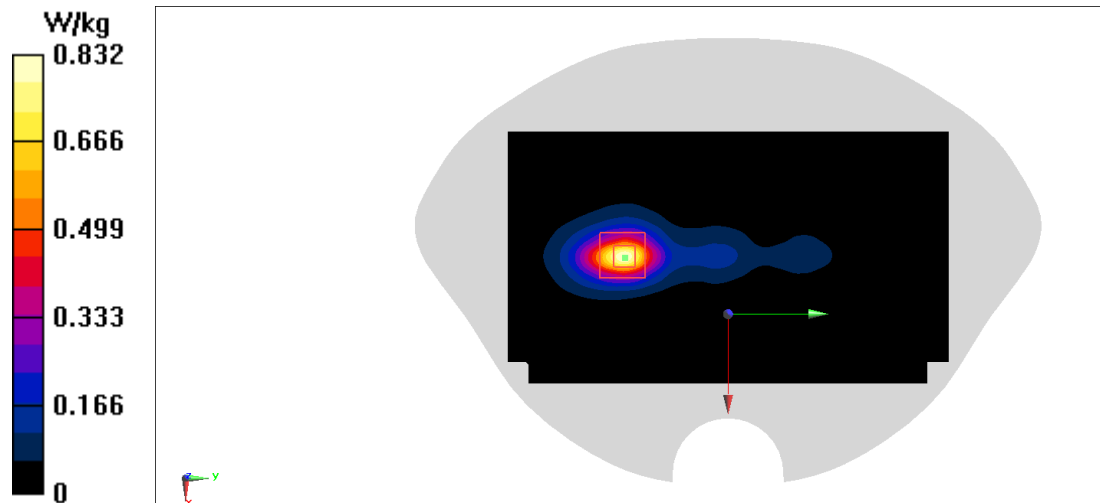
Zoom Scan (16x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 5.106 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.419 W/kg; SAR(10 g) = 0.166 W/kg

Maximum value of SAR (measured) = 0.822 W/kg



WLAN2.4G Head

Date: 6/11/2022

Electronics: DAE4 Sn1331

Medium: Head 2450M

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.894$ S/m; $\epsilon_r = 40.513$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: WIFI 2450 2437 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.35, 7.35, 7.35)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.626 W/kg

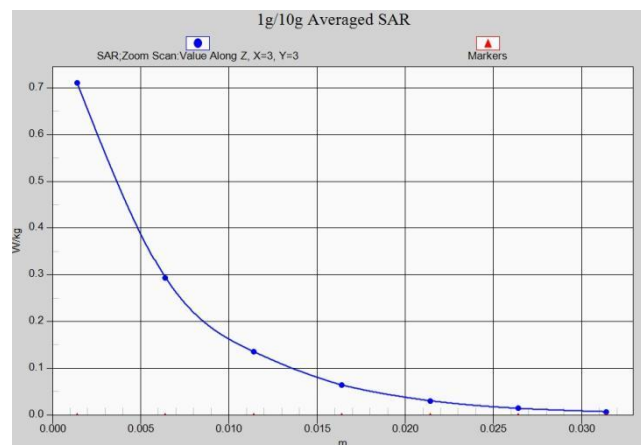
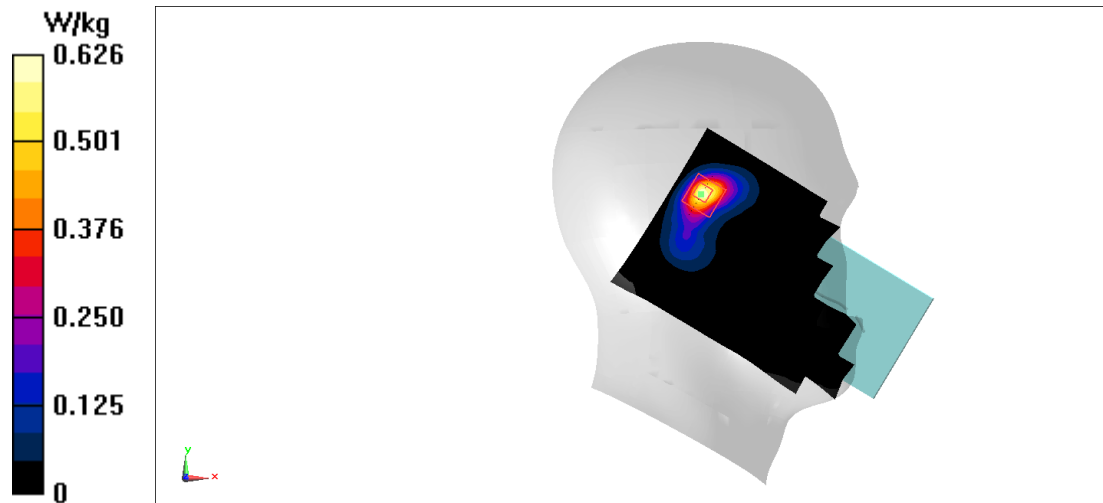
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 10.47 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.955 W/kg

SAR(1 g) = 0.382 W/kg; SAR(10 g) = 0.162 W/kg

Maximum value of SAR (measured) = 0.710 W/kg



WLAN2.4G Body

Date: 6/11/2022

Electronics: DAE4 Sn1331

Medium: Head 2450M

Medium parameters used: $f = 2437$ MHz; $\sigma = 1.884$ S/m; $\epsilon_r = 41.221$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: wifi 2450 2437 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.35, 7.35, 7.35)

Area Scan (51x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.320 W/kg

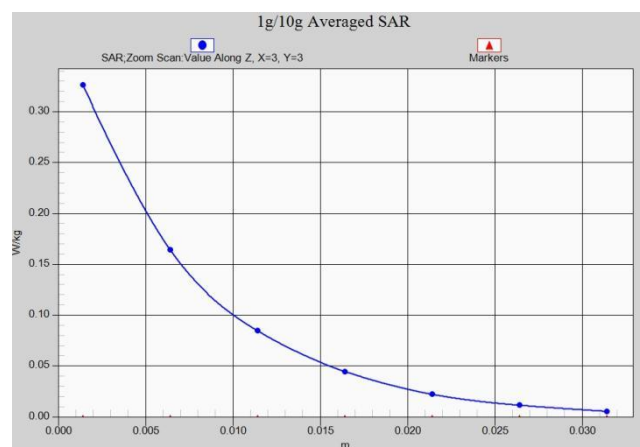
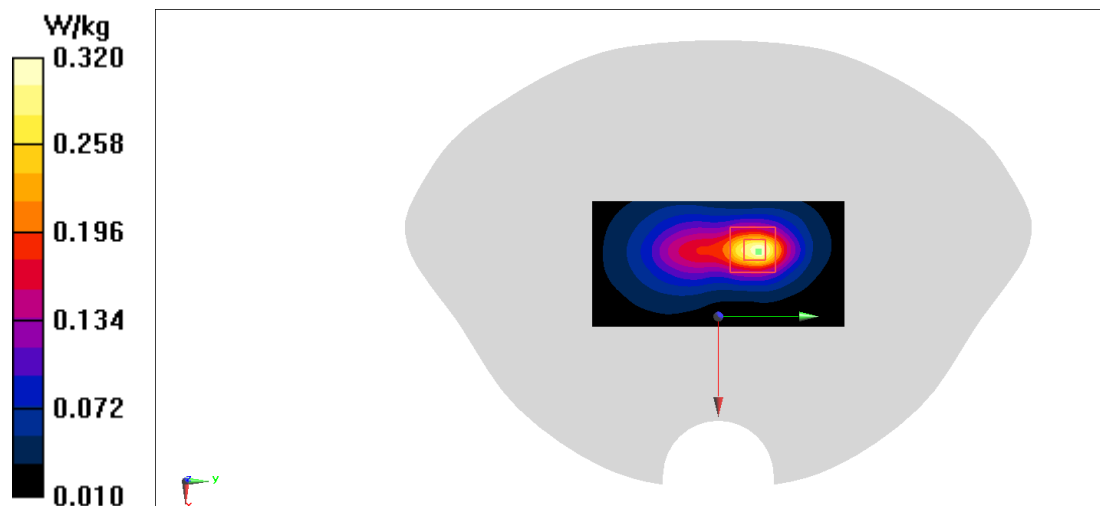
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.695 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 0.402 W/kg

SAR(1 g) = 0.199 W/kg; SAR(10 g) = 0.094 W/kg

Maximum value of SAR (measured) = 0.326 W/kg



WLAN5G Head

Date: 6/22/2022

Electronics: DAE4 Sn1331

Medium: Head 5GHz

Medium parameters used: $f = 5640 \text{ MHz}$; $\sigma = 5 \text{ S/m}$; $\epsilon_r = 34.243$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: WLAN 11a 5640 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(4.68, 4.68, 4.68)

Area Scan (121x211x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Maximum value of SAR (interpolated) = 0.676 W/kg

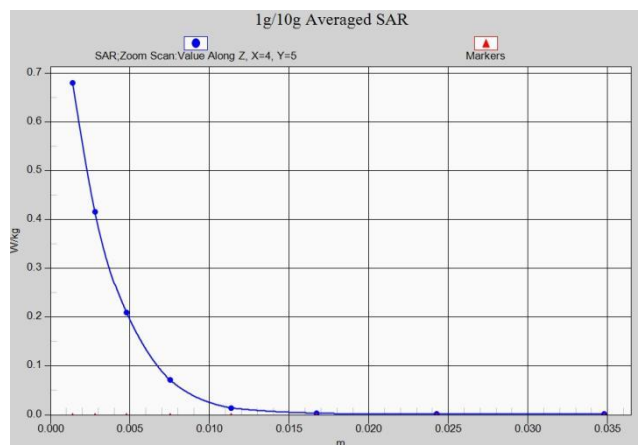
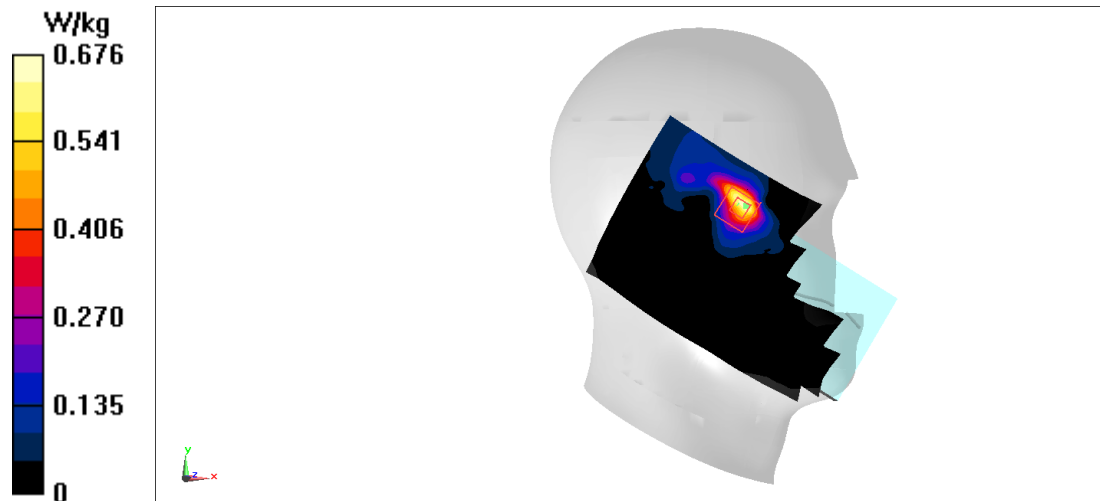
Zoom Scan (9x9x8)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 1.987 V/m ; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.268 W/kg ; SAR(10 g) = 0.092 W/kg

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



WLAN5G Body

Date: 6/22/2022

Electronics: DAE4 Sn1331

Medium: Head 5GHz

Medium parameters used: $f = 5690$ MHz; $\sigma = 5.244$ S/m; $\epsilon_r = 33.977$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: WLAN 11a 5690 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(4.68, 4.68, 4.68)

Area Scan (121x211x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

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

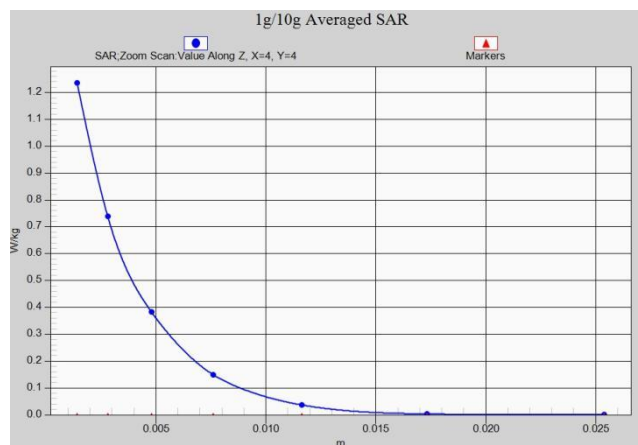
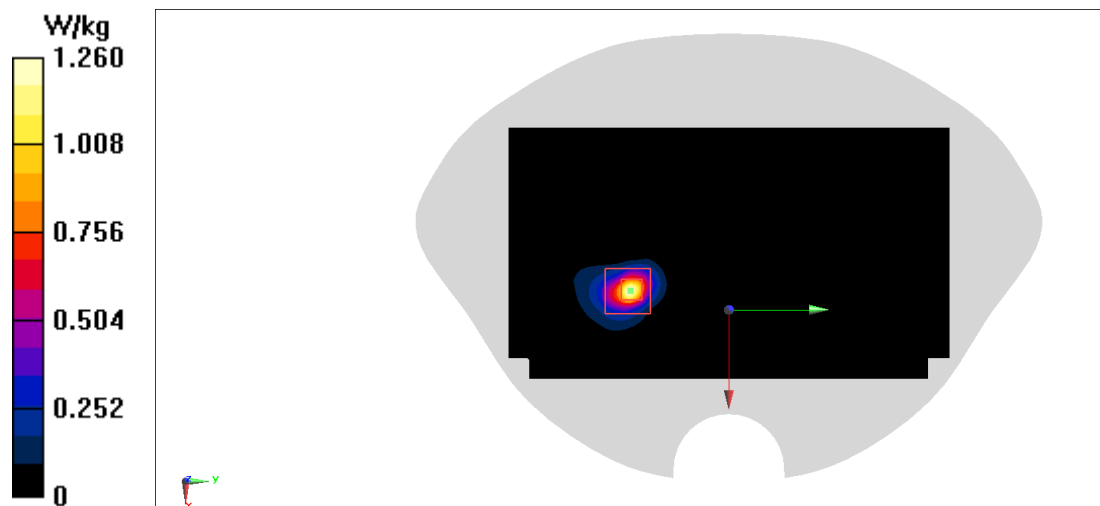
Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 0.7900 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 2.18 W/kg

SAR(1 g) = 0.456 W/kg; SAR(10 g) = 0.125 W/kg

Maximum value of SAR (measured) = 1.24 W/kg



BT Head

Date: 6/11/2022

Electronics: DAE4 Sn1331

Medium: Head 2450M

Medium parameters used: $f = 2480$ MHz; $\sigma = 1.93$ S/m; $\epsilon_r = 40.426$; $\rho = 1000$ kg/m³

Ambient Temperature: 23.3°C Liquid Temperature: 22.5°C

Communication System: Bluetooth 2480 MHz Duty Cycle: 1:1

Probe: EX3DV4 - SN7548 ConvF(7.35, 7.35, 7.35)

Area Scan (101x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

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

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

Reference Value = 6.270 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.297 W/kg

SAR(1 g) = 0.122 W/kg; SAR(10 g) = 0.050 W/kg

Maximum value of SAR (measured) = 0.219 W/kg

