




# TEST REPORT

## For SAR

Report No. .... : **SHTEW22050042** Report verification: 

Project No..... : **SHT2204061104EW**

FCC ID..... : **2AC68-CRUISE2A**

Applicant's name..... : **SEUIC Technologies Co., Ltd.**

Address..... : NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, Nanjing, China, 210061

Test item description ..... : **Portable Data Collection Terminal**

Trade Mark ..... : -

Model/Type reference..... : CRUISE2A

Listed Model(s) ..... : CRUISE2


Standard ..... : **FCC 47 CFR Part2.1093**  
**IEEE Std C95.1: 1999 Edition**  
**IEEE Std 1528: 2013**

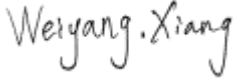
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Result..... : **PASS**

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*The test report merely correspond to the test sample.*

## Contents

<u>1.</u>	<u>Statement of Compliance</u>	<u>3</u>
<u>2.</u>	<u>Test Standards and Report version</u>	<u>4</u>
2.1.	Test Standards	4
2.2.	Report version	4
<u>3.</u>	<u>Summary</u>	<u>5</u>
3.1.	Client Information	5
3.2.	Product Description	5
3.3.	RF Specification Description	6
3.4.	Testing Laboratory Information	7
3.5.	Environmental conditions	7
<u>4.</u>	<u>Equipments Used during the Test</u>	<u>8</u>
<u>5.</u>	<u>Measurement Uncertainty</u>	<u>9</u>
<u>6.</u>	<u>SAR Measurement System Configuration</u>	<u>10</u>
6.1.	SAR Measurement Set-up	10
6.2.	DASY5 E-field Probe System	11
6.3.	Phantoms	12
6.4.	Device Holder	12
<u>7.</u>	<u>SAR Test Procedure</u>	<u>13</u>
7.1.	Scanning Procedure	13
7.2.	Data Storage and Evaluation	15
<u>8.</u>	<u>Position of the wireless device in relation to the phantom</u>	<u>17</u>
8.1.	Head Position	17
8.2.	Body Position	18
8.3.	Hotspot Mode Exposure conditions	18
<u>9.</u>	<u>Dielectric Property Measurements &amp; System Check</u>	<u>19</u>
9.1.	Tissue Dielectric Parameters	19
9.2.	System Check	21
<u>10.</u>	<u>SAR Exposure Limits</u>	<u>32</u>
<u>11.</u>	<u>Conducted Power Measurement Results and Tune-up</u>	<u>33</u>
<u>12.</u>	<u>Antenna Location</u>	<u>36</u>
<u>13.</u>	<u>Measured and Reported SAR Results</u>	<u>37</u>
<u>14.</u>	<u>SAR Measurement Variability</u>	<u>40</u>
<u>15.</u>	<u>Simultaneous Transmission analysis</u>	<u>41</u>
<u>16.</u>	<u>TestSetup Photos</u>	<u>42</u>
<u>17.</u>	<u>External Photos of the EUT</u>	<u>45</u>

## 1. Statement of Compliance

Maximum Reported SAR (W/kg @1g)						
Type	Test setting	PCE	DTS	NII	BT	Simultaneous TX
Head	Cheek	1.100	0.113	0.204	0.090	1.304
Body-worn	Dist.= 10mm	1.116	0.162	0.218	0.111	1.334
Hotspot	Dist.= 10mm	1.116	0.162	-	-	1.278

Note:

1. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg@1g) specified in FCC 47 CFR part 2 (2.1093) and IEEE Std C95.1,
2. This device had been tested in accordance with the measurement methods and procedures specified in IEEE 1528 and FCC KDB publications.

## 2 . Test Standards and Report version

### 2.1. Test Standards

The tests were performed according to following standards:

[FCC 47 Part 2.1093](#): Radiofrequency radiation exposure evaluation: portable devices.

[IEEE Std C95.1, 1999 Edition](#): IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz

[IEEE Std 1528™-2013](#): IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques.

FCC published RF exposure KDB procedures:

[865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04](#): SAR Measurement Requirements for 100 MHz to 6 GHz

[865664 D02 RF Exposure Reporting v01r02](#): RF Exposure Compliance Reporting and Documentation Considerations

[447498 D04 Interim General RF Exposure Guidance v01](#): Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies

[248227 D01 802.11 Wi-Fi SAR v02r02](#): SAR Measurement Procedures for 802.11 a/b/g Transmitters

[648474 D04 Handset SAR v01r03](#): SAR Evaluation Considerations for Wireless Handsets

[941225 D01 3G SAR Procedures v03r01](#): SAR Measurement Procedures for 3G Devices

[941225 D05 SAR for LTE Devices v02r05](#): SAR Evaluation Considerations for LTE Devices

[941225 D06 Hotspot Mode v02r01](#): SAR Evaluation Procedures for Portable Devices with Wireless Router Capabilities

[TCB workshop](#) April, 2019; Page 19, Tissue Simulating Liquids (TSL)

### 2.2. Report version

Revision No.	Date of issue	Description
N/A	2022-05-07	Original

### 3. Summary

#### 3.1. Client Information

Applicant:	SEUIC Technologies Co., Ltd.
Address:	NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, Nanjing, China, 210061
Manufacturer:	SEUIC Technologies Co., Ltd.
Address:	NO.15 Xinghuo Road, Nanjing New & High Technology Industry Development Zone, Nanjing, China, 210061

#### 3.2. Product Description

Main unit	
Name of EUT:	Portable Data Collection Terminal
Trade Mark:	-
Model No.:	CRUISE2A
Listed Model(s):	CRUISE2
Power supply:	DC 3.85V
Hardware version:	MC561_MB_V1.02
Software version:	D730_V0.1.7
Device Dimension:	Length x Width x Thickness (mm): 156X76X13.9
Device Category:	Portable
Product stage:	Production unit
RF Exposure Environment:	General Population/Uncontrolled
HTW test sample No.:	YPHT22040611001
Support SIM card quantity: <sup>#1</sup>	<input checked="" type="checkbox"/> Single card <input type="checkbox"/> Double card

*Note:*

*#1: The Test EUT support two SIM card, so all the tests are performed at each SIM card mode, the datum recorded is the worst case for all the mode at SIM1 Card mode.*

*#2: The EUT battery must be fully charged and checked periodically during the test to ascertain uniform power.*

### 3.3. RF Specification Description

GSM				
Operation Band:	<input checked="" type="checkbox"/> GSM850	<input checked="" type="checkbox"/> PCS1900		
Support type:	<input checked="" type="checkbox"/> GSM	<input checked="" type="checkbox"/> GPRS	<input checked="" type="checkbox"/> EGPRS	
Modulation type:	<input checked="" type="checkbox"/> GMSK	<input checked="" type="checkbox"/> 8PSK		
Power Class:	<input checked="" type="checkbox"/> GSM850: Class 4		<input checked="" type="checkbox"/> PCS1900: Class 1	
Device Class:	B			
GPRS Multi-Slot Class:	12			
EGPRS Multi-Slot Class:	12			
<i>Note:</i> <i>This device doesn't support DTM (Dual Transfer Mode).</i>				
WCDMA				
Operation Band:	<input checked="" type="checkbox"/> Band II	<input checked="" type="checkbox"/> Band IV	<input checked="" type="checkbox"/> Band V	
Support type:	<input checked="" type="checkbox"/> UMTS Rel. 99 (Voice & Data)		<input checked="" type="checkbox"/> HSDPA	<input checked="" type="checkbox"/> HSUPA
Modulation type:	<input checked="" type="checkbox"/> QPSK	<input checked="" type="checkbox"/> 16QAM		
Power Class:	Class 3			
LTE				
Operation Band:	<input checked="" type="checkbox"/> Band 2	<input checked="" type="checkbox"/> Band 4	<input checked="" type="checkbox"/> Band 5	<input checked="" type="checkbox"/> Band 7
	<input checked="" type="checkbox"/> Band 12	<input checked="" type="checkbox"/> Band 13	<input checked="" type="checkbox"/> Band 17	<input checked="" type="checkbox"/> Band 25
	<input checked="" type="checkbox"/> Band 26	<input type="checkbox"/> Band 30	<input checked="" type="checkbox"/> Band 66	<input type="checkbox"/> Band 71
	<input checked="" type="checkbox"/> Band 38	<input checked="" type="checkbox"/> Band 41		
Support type:	<input checked="" type="checkbox"/> Single Carrier	<input type="checkbox"/> CA-UL	<input type="checkbox"/> CA-DL	<input type="checkbox"/> MIMO-UL
Modulation type:	<input checked="" type="checkbox"/> QPSK	<input checked="" type="checkbox"/> 16QAM	<input checked="" type="checkbox"/> 64QAM	
Power Class:	<input checked="" type="checkbox"/> Class 3	<input type="checkbox"/> Class 2		
<i>Note:</i> <i>This device doesn't support SV-LTE (1xRTT-LTE).</i>				
Wi-Fi 2.4G				
Support type:	<input checked="" type="checkbox"/> 802.11b	<input checked="" type="checkbox"/> 802.11g	<input checked="" type="checkbox"/> 802.11n	<input type="checkbox"/> 802.11ax
Support bandwidth:	<input checked="" type="checkbox"/> 20MHz	<input checked="" type="checkbox"/> 40MHz		
<i>Note:</i> <i>This device 2.4GHz Wi-Fi support hotspot operation</i>				
Wi-Fi 5G				
Operation Band:	<input checked="" type="checkbox"/> U-NII-1	<input checked="" type="checkbox"/> U-NII-2A	<input checked="" type="checkbox"/> U-NII-2C	<input checked="" type="checkbox"/> U-NII-3
Support type:	<input checked="" type="checkbox"/> 802.11a	<input checked="" type="checkbox"/> 802.11n	<input checked="" type="checkbox"/> 802.11ac	<input type="checkbox"/> 802.11ax
Support bandwidth:	<input checked="" type="checkbox"/> 20MHz	<input checked="" type="checkbox"/> 40MHz	<input checked="" type="checkbox"/> 80MHz	<input type="checkbox"/> 160MHz
<i>Note:</i> <i>This device 5GHz Wi-Fi doesn't support hotspot operation</i>				
Bluetooth				
Support type:	<input checked="" type="checkbox"/> BR	<input checked="" type="checkbox"/> EDR	<input checked="" type="checkbox"/> BLE-1Mbps	<input type="checkbox"/> BLE-2Mbps
<i>Note:</i> <i>This device support Bluetooth Tethering.</i>				

### 3.4. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China	
Connect information:	Tel: 86-755-26715499 E-mail: <a href="mailto:cs@szhtw.com.cn">cs@szhtw.com.cn</a> <a href="http://www.szhtw.com.cn">http://www.szhtw.com.cn</a>	
Qualifications	Type	Accreditation Number
	FCC	762235

### 3.5. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Ambient temperature	18 °C to 25 °C
Ambient humidity	30%RH to 70%RH
Air Pressure	950-1050mbar

#### 4. Equipments Used during the Test

Used	Test Equipment	Manufacturer	Model No.	Serial No.	Cal. date (YY-MM-DD)	Due date (YY-MM-DD)
•	Data Acquisition Electronics DAEx	SPEAG	DAE4	540	2022/02/22	2023/02/21
•	E-field Probe	SPEAG	EX3DV4	3748	2021/12/29	2022/12/28
•	Universal Radio Communication Tester	R&S	CMW500	137681	2021/05/27	2022/05/26
<b>• Tissue-equivalent liquids Validation</b>						
•	Dielectric Assessment Kit	SPEAG	DAK-3.5	1267	N/A	N/A
○	Dielectric Assessment Kit	SPEAG	DAK-12	1130	N/A	N/A
•	Network analyzer	Keysight	E5071C	MY46733048	2021/09/17	2022/09/16
<b>• System Validation</b>						
○	System Validation Antenna	SPEAG	CLA-150	4024	2021/01/25	2024/01/24
○	System Validation Dipole	SPEAG	D450V3	1102	2021/01/20	2024/01/19
•	System Validation Dipole	SPEAG	D750V3	1180	2021/01/22	2024/01/21
•	System Validation Dipole	SPEAG	D835V2	4d238	2021/01/22	2024/01/21
•	System Validation Dipole	SPEAG	D1750V2	1164	2021/01/22	2024/01/21
•	System Validation Dipole	SPEAG	D1900V2	5d226	2021/01/22	2024/01/21
•	System Validation Dipole	SPEAG	D2450V2	1009	2021/01/25	2024/01/24
•	System Validation Dipole	SPEAG	D2600V2	1150	2021/01/25	2024/01/24
•	System Validation Dipole	SPEAG	D5GHzV2	1273	2021/01/26	2024/01/25
•	Signal Generator	R&S	SMB100A	114360	2021/08/05	2022/08/04
•	Power Viewer for Windows	R&S	N/A	N/A	N/A	N/A
•	Power sensor	R&S	NRP18A	101010	2021/08/05	2022/08/04
•	Power sensor	R&S	NRP18A	101386	2021/05/27	2022/05/26
•	Power Amplifier	BONN	BLWA 0160-2M	1811887	2021/11/11	2022/11/10
•	Dual Directional Coupler	Mini-Circuits	ZHDC-10-62-S+	F975001814	2021/11/11	2022/11/10
•	Attenuator	Mini-Circuits	VAT-3W2+	1819	2021/11/11	2022/11/10
•	Attenuator	Mini-Circuits	VAT-10W2+	1741	2021/11/11	2022/11/10

**Note:**

1. The Probe, Dipole and DAE calibration reference to the Appendix E and F.
2. Referring to KDB865664 D01, the dipole calibration interval can be extended to 3 years with justification. The dipole are also not physically damaged or repaired during the interval.



## **5. Measurement Uncertainty**

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is  $< 1.5$  W/kg and the measured 10-g SAR within a frequency band is  $< 3.75$  W/kg. The expanded SAR measurement uncertainty must be  $\leq 30\%$ , for a confidence interval of  $k = 2$ . If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528 is not required in SAR reports submitted for equipment approval.

Therefore, the measurement uncertainty is not required.

## 6. SAR Measurement System Configuration

### 6.1. SAR Measurement Set-up

The DASY5 system for performing compliance tests consists of the following items:

A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).

A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.

A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.

A unit to operate the optical surface detector which is connected to the EOC.

The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.

The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation. A computer operating Windows 2003.

DASY5 software and SEMCAD data evaluation software.

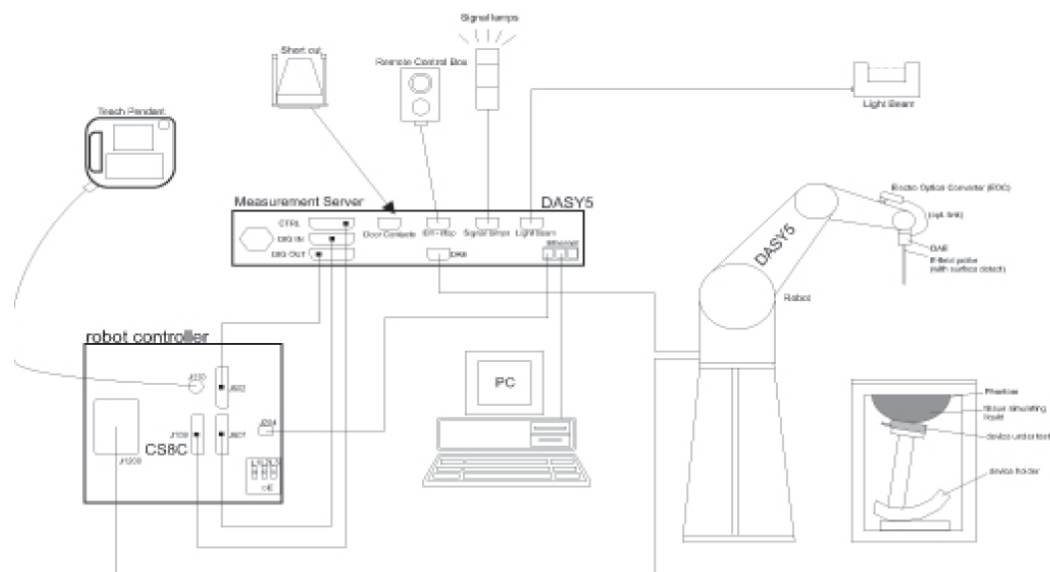
Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.

The generic twin phantom enabling the testing of left-hand and right-hand usage.

The device holder for handheld Mobile Phones.

Tissue simulating liquid mixed according to the given recipes.

System validation dipoles allowing to validate the proper functioning of the system.



## 6.2. DASY5 E-field Probe System

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

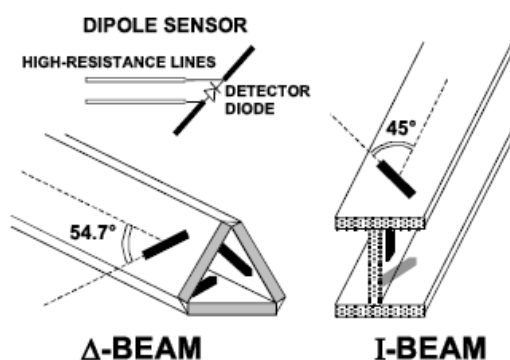
### ● Probe Specification

Construction	Symmetrical design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	ISO/IEC 17025 calibration service available.
Frequency	4 MHz to 10 GHz; Linearity: $\pm 0.2$ dB (30 MHz to 6 GHz)
Directivity	$\pm 0.3$ dB in HSL (rotation around probe axis) $\pm 0.5$ dB in tissue material (rotation normal to probe axis)
Dynamic Range	10 $\mu$ W/g to > 100 W/kg; Linearity: $\pm 0.2$ dB
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 6 GHz Dosimetry in strong gradient fields Compliance tests of Mobile Phones
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

### ◆ Isotropic E-Field Probe

The isotropic E-Field probe has been fully calibrated and assessed for isotropicity, and boundary effect within a controlled environment. Depending on the frequency for which the probe is calibrated the method utilized for calibration will change.

The E-Field probe utilizes a triangular sensor arrangement as detailed in the diagram below:



### 6.3. Phantoms

The phantom used for all tests i.e. for both system checks and device testing, was the twin-headed "SAM Phantom", manufactured by SPEAG. The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region, where shell thickness increases to 6mm).

System checking was performed using the flat section, whilst Head SAR tests used the left and right head profile sections. Body SAR testing also used the flat section between the head profiles.



SAM-Twin Phantom

### 6.4. Device Holder

The device was placed in the device holder (illustrated below) that is supplied by SPEAG as an integral part of the DASY system.

The DASY device holder is designed to cope with the different positions given in the standard. It has two scales for device rotation (with respect to the body axis) and device inclination (with respect to the line between the ear reference points). The rotation centers for both scales is the ear reference point (ERP). Thus the device needs no repositioning when changing the angles.



Device holder supplied by SPEAG

## 7. SAR Test Procedure

### 7.1. Scanning Procedure

#### Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. Measure the local SAR at a test point within 8 mm of the phantom inner surface that is closest to the DUT. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

#### Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASYS software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in dB) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE Standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan). If only one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of Zoom Scans has to be increased accordingly.

#### Area Scan Resolutions per FCC KDB Publication 865664 D01v04

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

**Step 3: Zoom Scan**

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

**Zoom Scan Resolutions per FCC KDB Publication 865664 D01v04**

Maximum zoom scan spatial resolution: $\Delta x_{Zoom}$ , $\Delta y_{Zoom}$		$\leq 2$ GHz: $\leq 8$ mm 2 – 3 GHz: $\leq 5$ mm*	3 – 4 GHz: $\leq 5$ mm* 4 – 6 GHz: $\leq 4$ mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$	$\leq 5$ mm	3 – 4 GHz: $\leq 4$ mm 4 – 5 GHz: $\leq 3$ mm 5 – 6 GHz: $\leq 2$ mm	
	graded grid	$\Delta z_{Zoom}(1)$ : between 1 <sup>st</sup> two points closest to phantom surface	$\leq 4$ mm	3 – 4 GHz: $\leq 3$ mm 4 – 5 GHz: $\leq 2.5$ mm 5 – 6 GHz: $\leq 2$ mm
		$\Delta z_{Zoom}(n>1)$ : between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$ mm	
Minimum zoom scan volume	x, y, z	$\geq 30$ mm	3 – 4 GHz: $\geq 28$ mm 4 – 5 GHz: $\geq 25$ mm 5 – 6 GHz: $\geq 22$ mm	
<p>Note: <math>\delta</math> is the penetration depth of a plane-wave at normal incidence to the tissue medium; see IEEE Std 1528-2013 for details.</p> <p>* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB Publication 447498 is <math>\leq 1.4</math> W/kg, <math>\leq 8</math> mm, <math>\leq 7</math> mm and <math>\leq 5</math> mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</p>				

**Step 4: Power drift measurement**

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the last Power Reference Measurement. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1. The SAR drift shall be kept within  $\pm 5$  %.

## 7.2. Data Storage and Evaluation

### Data Storage

The DASY5 software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors),s together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension “.DA4”. The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated.

The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [W/kg], [mW/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

### Data Evaluation

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	Sensitivity:	Normi, ai0, ai1, ai2
	Conversion factor:	ConvFi
	Diode compression point:	Dcpi
Device parameters:	Frequency:	f
	Crest factor:	cf
Media parameters:	Conductivity:	$\sigma$
	Density:	$\rho$

These parameters must be set correctly in the software. They can be found in the component documents or they can be imported into the software from the configuration files issued for the DASY5 components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

Vi:	compensated signal of channel ( i = x, y, z )
Ui:	input signal of channel ( i = x, y, z )
cf:	crest factor of exciting field (DASY parameter)
dcp <sub>i</sub> :	diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

$$E - \text{fieldprobes} : \quad E_i = \sqrt{\frac{V_i}{\text{Norm}_i \cdot \text{ConvF}}}$$

$$H - \text{fieldprobes} : \quad H_i = \sqrt{V_i} \cdot \frac{a_{i0} + a_{i1}f + a_{i2}f^2}{f}$$

Vi:	compensated signal of channel ( i = x, y, z )
Norm <sub>i</sub> :	sensor sensitivity of channel ( i = x, y, z ), [mV/(V/m)²] for E-field Probes
ConvF:	sensitivity enhancement in solution
a <sub>ij</sub> :	sensor sensitivity factors for H-field probes
f:	carrier frequency [GHz]
E <sub>i</sub> :	electric field strength of channel i in V/m
H <sub>i</sub> :	magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$SAR = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1'000}$$

SAR: local specific absorption rate in W/kg  
Etot: total field strength in V/m  
 $\sigma$ : conductivity in [mho/m] or [Siemens/m]  
 $\rho$ : equivalent tissue density in g/cm<sup>3</sup>

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid.



## 8. Position of the wireless device in relation to the phantom

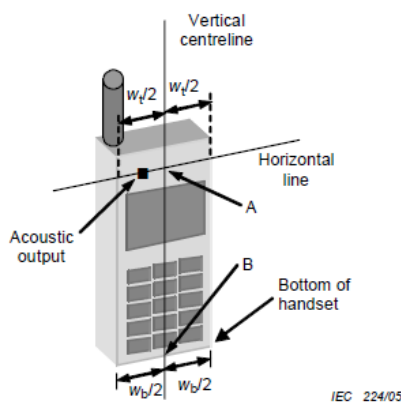
### 8.1. Head Position

The wireless device define two imaginary lines on the handset, the vertical centreline and the horizontal line, for the handset in vertical orientation as shown in Figures 5a and 5b.

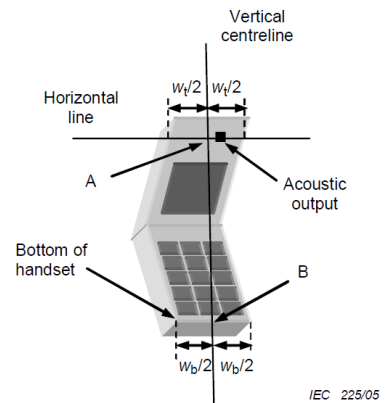
The vertical centreline passes through two points on the front side of the handset: the midpoint of the width  $W_t$  of the handset at the level of the acoustic output (point A in Figures 5a and 5b), and the midpoint of the width  $W_b$  of the bottom of the handset (point B).

The horizontal line is perpendicular to the vertical centreline and passes through the centre of the acoustic output (see Figures 5a and 5b). The two lines intersect at point A.

Note that for many handsets, point A coincides with the centre of the acoustic output. However, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical centreline is not necessarily parallel to the front face of the handset (see Figure 5b), especially for clam-shell handsets, handsets with flip cover pieces, and other irregularly shaped handsets.



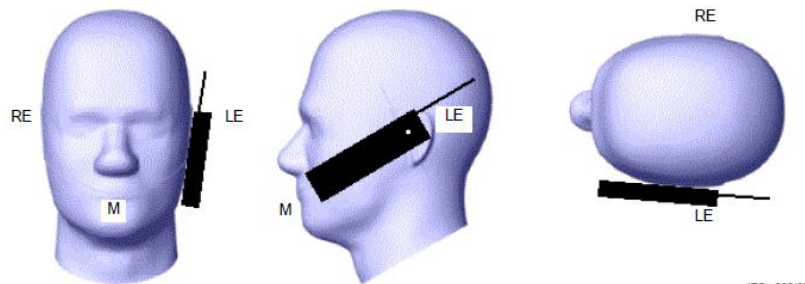
Figures 5a



Figures 5b

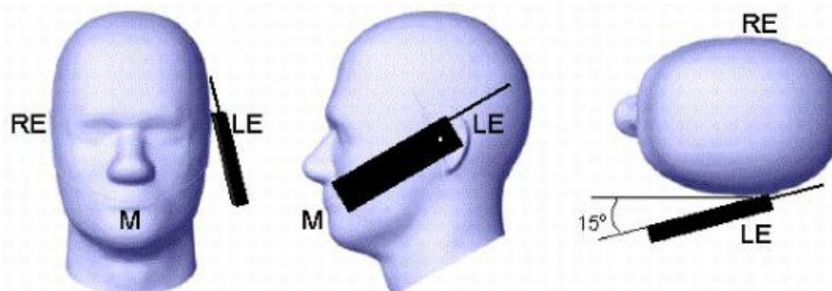
- $W_t$  Width of the handset at the level of the acoustic
- $W_b$  Width of the bottom of the handset
- A Midpoint of the width  $w_t$  of the handset at the level of the acoustic output
- B Midpoint of the width  $w_b$  of the bottom of the handset

### Cheek position



Picture 2 Cheek position of the wireless device on the left side of SAM

### Tilt position

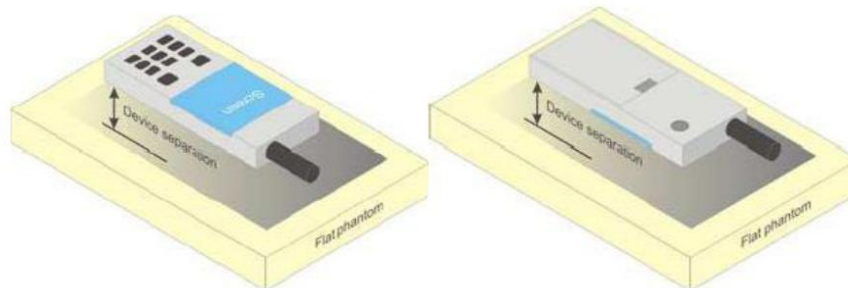


Picture 3 Tilt position of the wireless device on the left side of SAM

## 8.2. Body Position

Devices that support transmission while used with body-worn accessories must be tested for body-worn accessory SAR compliance, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics.

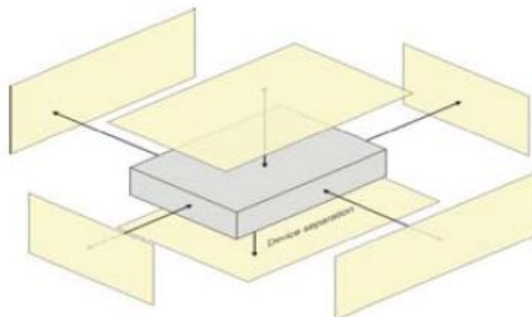
Devices that are designed to operate on the body of users using lanyards and straps or without requiring additional body-worn accessories must be tested for SAR compliance using a conservative minimum test separation distance  $\leq 5\text{mm}$  to support compliance.



Picture 4 Test positions for body-worn devices

## 8.3. Hotspot Mode Exposure conditions

The hotspot mode and body-worn accessory SAR test configurations may overlap for handsets. When the same wireless mode transmission configurations for voice and data are required for SAR measurements, the more conservative configuration with a smaller separation distance should be tested for the overlapping SAR configurations. This typically applies to the back and front surfaces of a handset when SAR is required for both hotspot mode and body-worn accessory exposure conditions. Depending on the form factor and dimensions of a device, the test separation distance used for hotspot mode SAR measurement is either 10 mm or that used in the body-worn accessory configuration, whichever is less for devices with dimension  $> 9\text{ cm} \times 5\text{ cm}$ . For smaller devices with dimensions  $\leq 9\text{ cm} \times 5\text{ cm}$  because of a greater potential for next to body use a test separation of  $\leq 5\text{ mm}$  must be used.



Picture 5 Test positions for Hotspot Mode

## 9. Dielectric Property Measurements & System Check

### 9.1. Tissue Dielectric Parameters

The temperature of the tissue-equivalent medium used during measurement must also be within 18°C to 25°C and within  $\pm 2^\circ\text{C}$  of the temperature when the tissue parameters are characterized.

The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements. The parameters should be re-measured after each 3-4 days of use; or earlier if the dielectric parameters can become out of tolerance; for example, when the parameters are marginal at the beginning of the measurement series.

The dielectric constant ( $\epsilon_r$ ) and conductivity ( $\sigma$ ) of typical tissue-equivalent media recipes are expected to be within  $\pm 5\%$  of the required target values; but for SAR measurement systems that have implemented the SAR error compensation algorithms documented in IEEE Std 1528, to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, the tolerance for  $\epsilon_r$  and  $\sigma$  may be relaxed to  $\pm 10\%$ . This is limited to frequencies  $\leq 3$  GHz.

#### Tissue Dielectric Parameters

FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

Tissue dielectric parameters for Head and Body				
Target Frequency (MHz)	Head		Body	
	$\epsilon_r$	$\sigma(\text{S/m})$	$\epsilon_r$	$\sigma(\text{S/m})$
750	41.9	0.89	55.5	0.96
835	41.5	0.90	55.2	0.97
1750	40.1	1.37	53.4	1.49
1800-2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
2600	39.0	1.96	52.5	2.16
5200	36.0	4.66	49.0	5.30
5300	35.9	4.76	48.9	5.42
5500	35.6	4.96	48.6	5.65
5600	35.5	5.07	48.5	5.77
5800	35.3	5.27	48.2	6.00

**Measurement Results:**

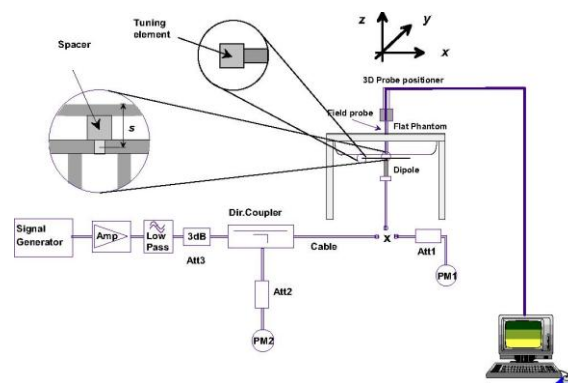
Dielectric performance of Head tissue simulating liquid									
Frequency (MHz)	$\epsilon_r$		$\sigma$ (S/m)		Delta ( $\epsilon_r$ )	Delta ( $\sigma$ )	Limit	Temp (°C)	Date
	Target	Measured	Target	Measured					
750	41.90	41.12	0.890	0.863	-1.86%	-3.03%	±5%	22.2	2022/4/20
835	41.50	40.96	0.900	0.906	-1.30%	0.67%	±5%	22.2	2022/4/21
1750	40.10	39.06	1.370	1.389	-2.59%	1.39%	±5%	22.2	2022/4/22
1900	40.00	38.87	1.400	1.406	-2.83%	0.43%	±5%	22.2	2022/4/24
2450	39.20	38.56	1.800	1.794	-1.63%	-0.33%	±5%	22.2	2022/4/25
2600	39.00	37.72	1.960	1.946	-3.28%	-0.71%	±5%	22.2	2022/4/26
5250	35.93	36.30	4.706	4.840	1.03%	2.85%	±5%	22.2	2022/4/27
5600	35.53	35.74	5.065	5.198	0.59%	2.63%	±5%	22.2	2022/4/27
5750	35.36	35.50	5.219	5.342	0.40%	2.36%	±5%	22.2	2022/4/27

## 9.2. System Check

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 same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are re-measured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

### System Performance Check Measurement Conditions:

- ◆ The measurements were performed in the flat section of the TWIN SAM or ELI phantom, shell thickness:  $2.0 \pm 0.2$  mm (bottom plate) filled with Body or Head simulating liquid of the following parameters.
- ◆ The depth of tissue-equivalent liquid in a phantom must be  $\geq 15.0$  cm for SAR measurements  $\leq 3$  GHz and  $\geq 10.0$  cm for measurements  $> 3$  GHz.
- ◆ The DASY system with an E-Field Probe was used for the measurements.
- ◆ The dipole was mounted on the small tripod so that the dipole feed point was positioned below the center marking of the flat phantom section and the dipole was oriented parallel to the body axis (the long side of the phantom). The standard measuring distance was 10 mm (above 1 GHz) and 15 mm (below 1 GHz) from dipole center to the simulating liquid surface.
- ◆ The coarse grid with a grid spacing of 15 mm was aligned with the dipole.  
For 5 GHz band - The coarse grid with a grid spacing of 10 mm was aligned with the dipole.
- ◆ Special 7x7x7 (below 3 GHz) and/or 8x8x7 (above 3 GHz) fine cube was chosen for the cube.
- ◆ The results are normalized to 1 W input power.



System Performance Check Setup

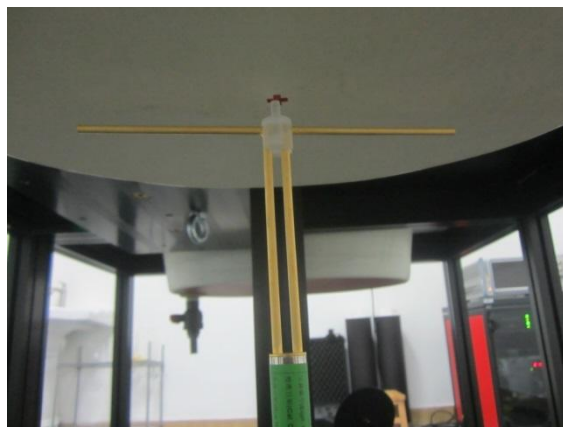


Photo of Dipole Setup

**Measurement Results:**

Head											
Frequency (MHz)	1g SAR			10g SAR			Delta (1g)	Delta (10g)	Limit	Temp (°C)	Date
	Target 1W	Normalize to 1W	Measured 250mW	Target 1W	Normalize to 1W	Measured 250mW					
750	8.43	8.00	2.00	5.59	5.32	1.33	-5.10%	-4.83%	±10%	22.2	2022/4/20
835	9.39	9.60	2.40	6.14	6.32	1.58	2.24%	2.93%	±10%	22.2	2022/4/21
1750	36.40	37.88	9.47	19.20	20.76	5.19	4.07%	8.13%	±10%	22.2	2022/4/22
1900	39.80	38.88	9.72	20.30	20.76	5.19	-2.31%	2.27%	±10%	22.2	2022/4/24
2450	52.00	54.40	13.60	23.90	25.84	6.46	4.62%	8.12%	±10%	22.2	2022/4/25
2600	56.50	57.60	14.40	25.00	26.68	6.67	1.95%	6.72%	±10%	22.2	2022/4/26
Frequency (MHz)	1g SAR			10g SAR			Delta (1g)	Delta (10g)	Limit	Temp (°C)	Date
	Target 1W	Normalize to 1W	Measured 100mW	Target 1W	Normalize to 1W	Measured 100mW					
5250	78.20	79.00	7.90	22.30	23.20	2.32	1.02%	4.04%	±10%	22.2	2022/4/27
5600	81.60	79.00	7.90	23.30	23.50	2.35	-3.19%	0.86%	±10%	22.2	2022/4/27
5750	79.30	80.30	8.03	22.50	23.50	2.35	1.26%	4.44%	±10%	22.2	2022/4/27

*Note:*

The 1-g and 10-g SAR measured with a reference dipole, using the required tissue-equivalent medium at the test frequency, must be within ±10% of the manufacturer calibrated dipole SAR target.

**Plots of System Performance Check****SystemPerformanceCheck-750MHz**

Communication System: UID 0, A-CW (0); Frequency: 750 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.863$  S/m;  $\epsilon_r = 41.116$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Ambient Temperature:22.4°C;Liquid Temperature:22.2°C;

**DASY Configuration:**

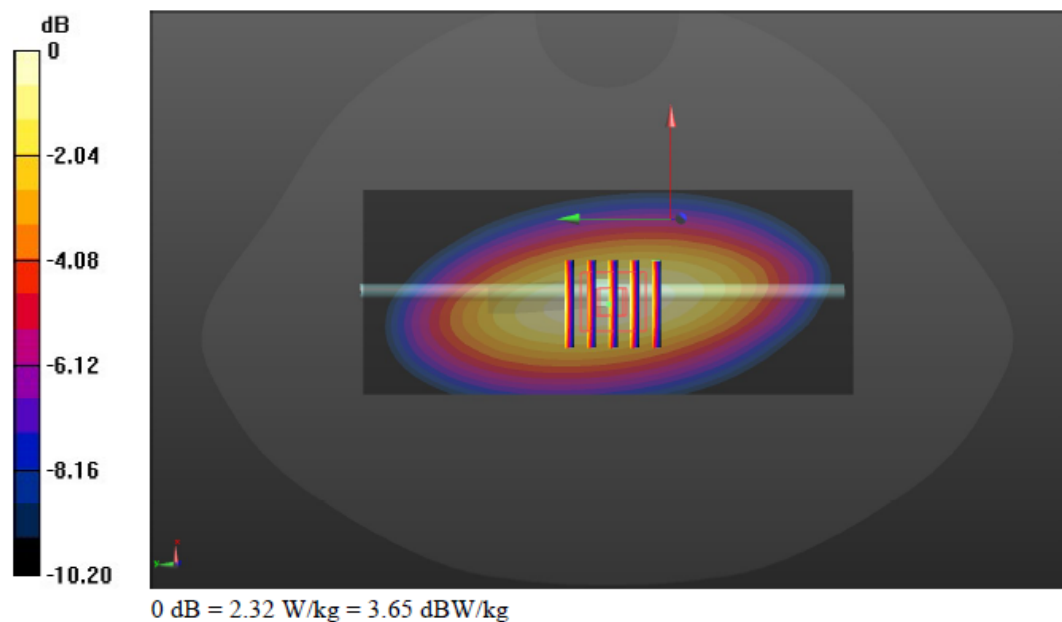
- Probe: EX3DV4 - SN3748; ConvF(8.82, 8.82, 8.82) @ 750 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Head/d=15mm, Pin=250mW, dist=1.4mm (EX-Probe)/Area Scan (51x121x1):**

Interpolated grid: dx=1.500 mm, dy=1.500 mm  
Maximum value of SAR (interpolated) = 2.31 W/kg

**Head/d=15mm, Pin=250mW, dist=1.4mm (EX-Probe)/Zoom Scan (5x5x7)/Cube 0:**

Measurement grid: dx=8mm, dy=8mm, dz=5mm  
Reference Value = 51.25 V/m; Power Drift = 0.00 dB  
Peak SAR (extrapolated) = 2.96 W/kg  
SAR(1 g) = 2 W/kg; SAR(10 g) = 1.33 W/kg  
Maximum value of SAR (measured) = 2.32 W/kg





## SystemPerformanceCheck-835MHz

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.906$  S/m;  $\epsilon_r = 40.959$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature:22.4°C;Liquid Temperature:22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.48, 8.48, 8.48) @ 835 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Head/d=15mm, Pin=250mW/Area Scan (41x101x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.80 W/kg

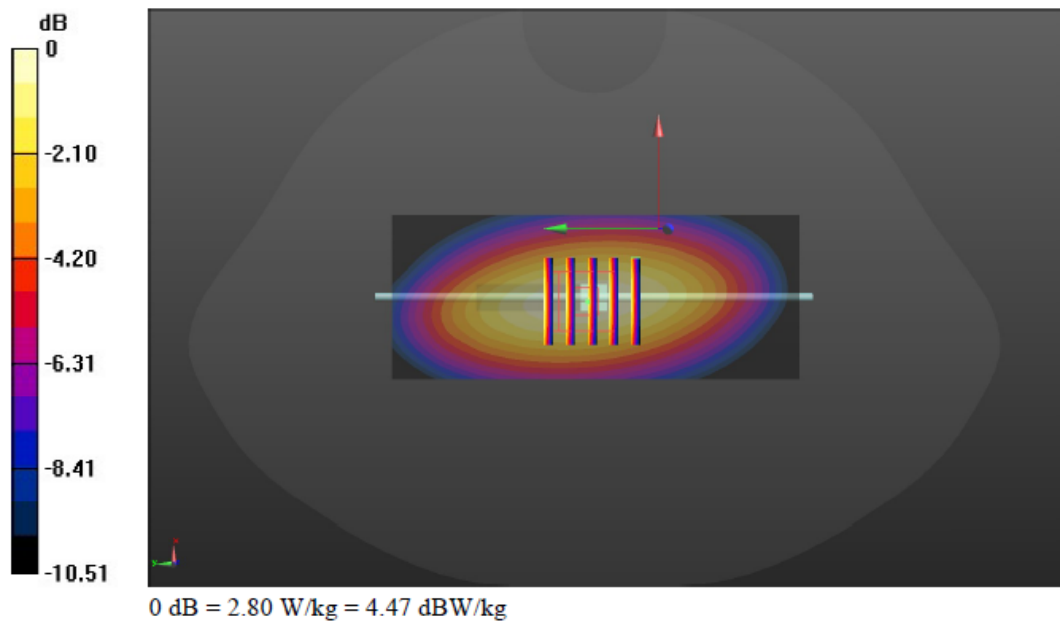
**Head/d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 55.85 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.55 W/kg

SAR(1 g) = 2.4 W/kg; SAR(10 g) = 1.58 W/kg

Maximum value of SAR (measured) = 2.80 W/kg





## SystemPerformanceCheck-1750MHz

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1

Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.389$  S/m;  $\epsilon_r = 39.061$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature:22.4°C;Liquid Temperature:22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.42, 7.42, 7.42) @ 1750 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Head/d=10mm,Pin=250mW/Area Scan (41x61x1):** Interpolated grid: dx=1.500 mm,  
dy=1.500 mm

Maximum value of SAR (interpolated) = 12.0 W/kg

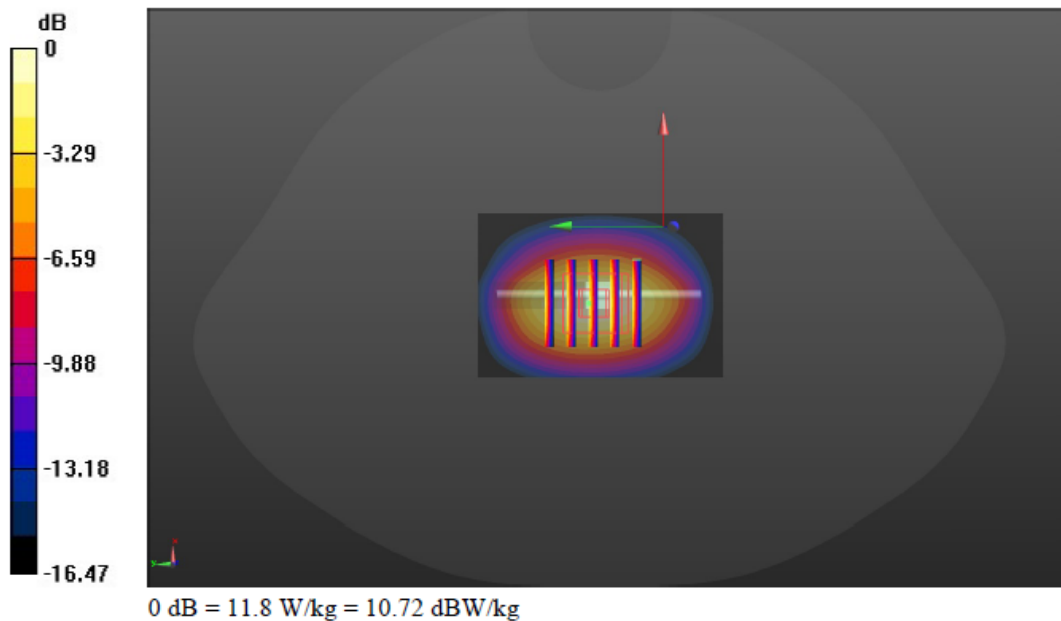
**Head/d=10mm,Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm,  
dy=8mm, dz=5mm

Reference Value = 88.86 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 16.4 W/kg

SAR(1 g) = 9.47 W/kg; SAR(10 g) = 5.19 W/kg

Maximum value of SAR (measured) = 11.8 W/kg



## SystemPerformanceCheck-1900MHz

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

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.406$  S/m;  $\epsilon_r = 38.873$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature: 22.4°C; Liquid Temperature: 22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.18, 7.18, 7.18) @ 1900 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Head/d=10mm, Pin=250mW /Area Scan (41x61x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 12.8 W/kg

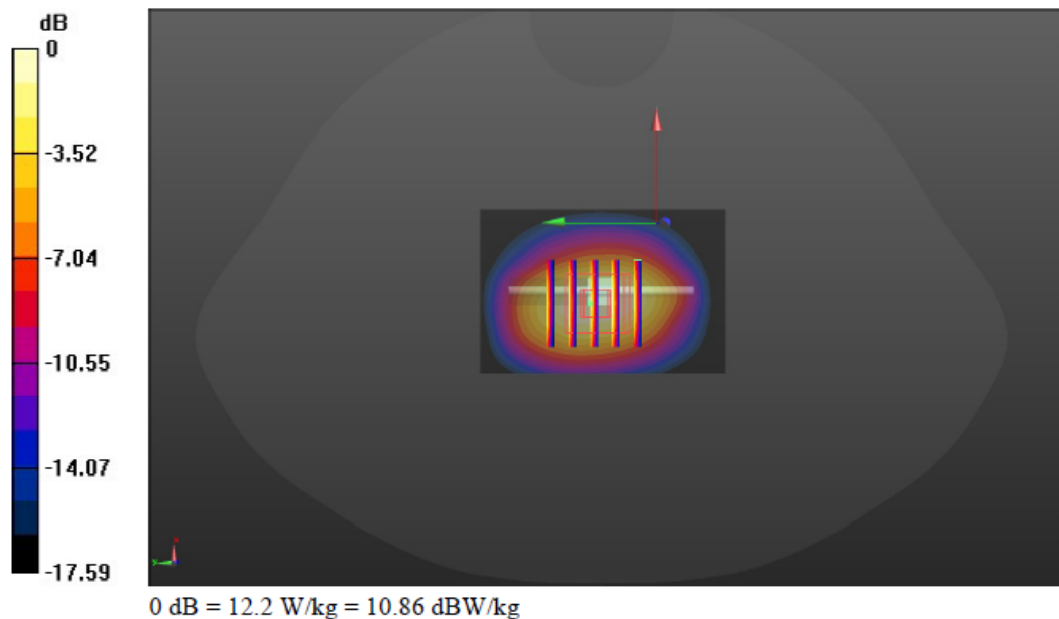
**Head/d=10mm, Pin=250mW /Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 88.57 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 17.2 W/kg

SAR(1 g) = 9.72 W/kg; SAR(10 g) = 5.19 W/kg

Maximum value of SAR (measured) = 12.2 W/kg



### SystemPerformanceCheck-2450MHz

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 2450$  MHz;  $\sigma = 1.794$  S/m;  $\epsilon_r = 38.559$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature:22.4°C;Liquid Temperature:22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.82, 6.82, 6.82) @ 2450 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Head/d=10mm,Pin=250mW/Area Scan (41x61x1):** Interpolated grid: dx=1.200 mm,  
dy=1.200 mm

Maximum value of SAR (interpolated) = 18.6 W/kg

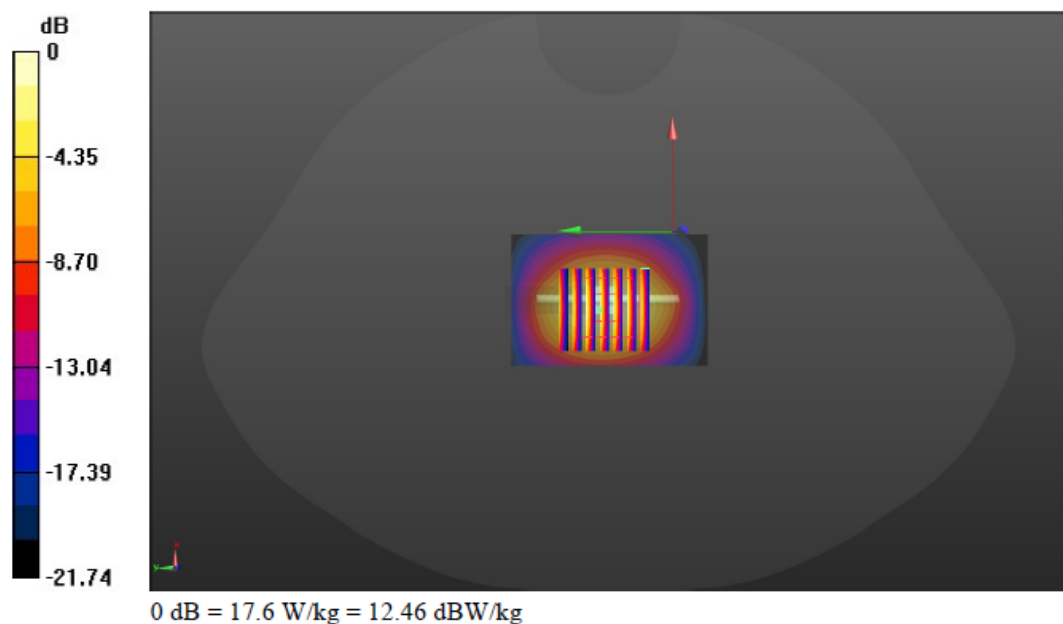
**Head/d=10mm,Pin=250mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm,  
dy=5mm, dz=5mm

Reference Value = 97.34 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 27.4 W/kg

SAR(1 g) = 13.6 W/kg; SAR(10 g) = 6.46 W/kg

Maximum value of SAR (measured) = 17.6 W/kg



## SystemPerformanceCheck-2600MHz

Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 2600$  MHz;  $\sigma = 1.946$  S/m;  $\epsilon_r = 37.72$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature: 22.4°C; Liquid Temperature: 22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.55, 6.55, 6.55) @ 2600 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Head/d=10mm, Pin=250mW /Area Scan (41x51x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 25.5 W/kg

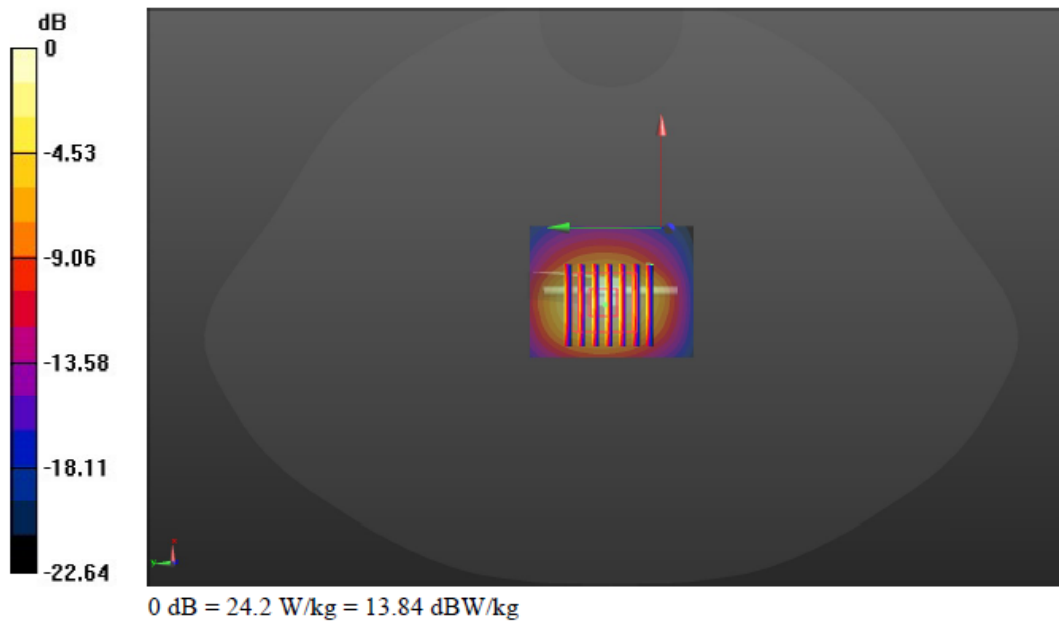
**Head/d=10mm, Pin=250mW /Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 106.8 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 30.0 W/kg

SAR(1 g) = 14.4 W/kg; SAR(10 g) = 6.67 W/kg

Maximum value of SAR (measured) = 24.2 W/kg



## SystemPerformanceCheck-5250MHz

Communication System: UID 0, Generic WIFI (0); Frequency: 5250 MHz;Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 5250$  MHz;  $\sigma = 4.84$  S/m;  $\epsilon_r = 36.297$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature:22.4°C;Liquid Temperature:22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(5, 5, 5) @ 5250 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Head/d=10mm,pin=100mW /Area Scan (41x41x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 19.3 W/kg

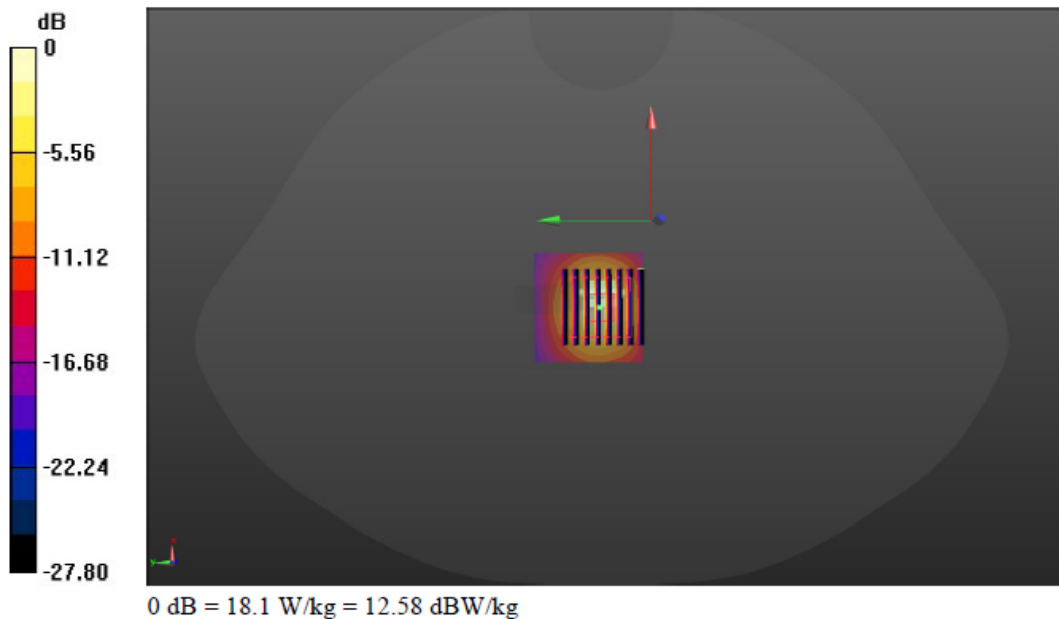
**Head/d=10mm,pin=100mW /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 57.76 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 29.8 W/kg

SAR(1 g) = 7.9 W/kg; SAR(10 g) = 2.32 W/kg

Maximum value of SAR (measured) = 18.1 W/kg



### SystemPerformanceCheck-5600MHz

Communication System: UID 0, Generic WIFI (0); Frequency: 5600 MHz;Duty Cycle: 1:1  
Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.198$  S/m;  $\epsilon_r = 35.744$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature:22.4°C;Liquid Temperature:22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.58, 4.58, 4.58) @ 5600 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Head/d=10mm, Pin=100mW, f=5600 MHz /Area Scan (41x41x1):** Interpolated grid:  
dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 18.7 W/kg

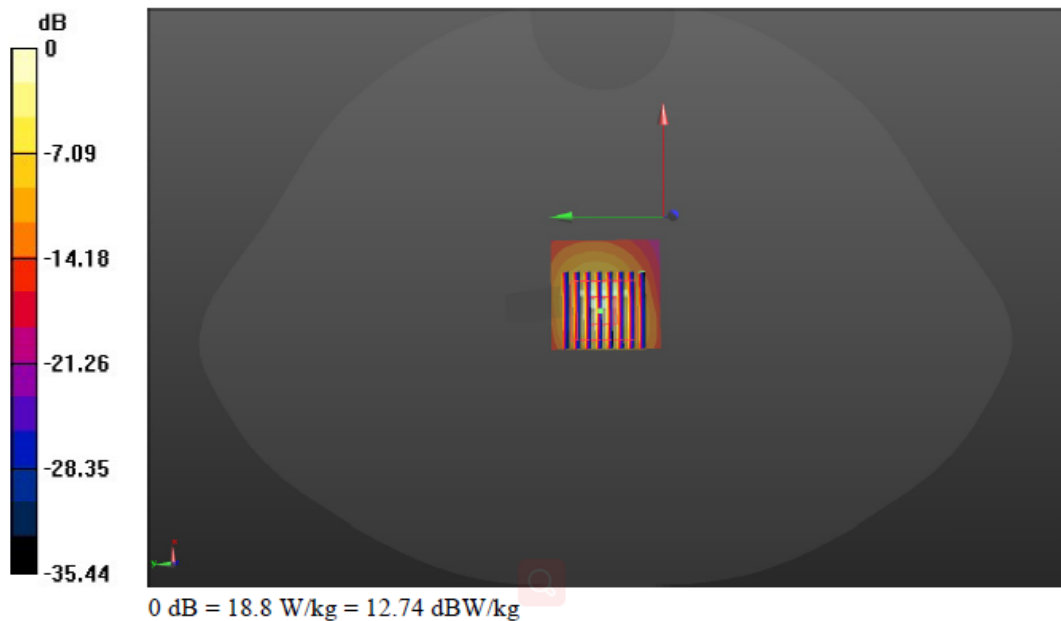
**Head/d=10mm, Pin=100mW, f=5600 MHz /Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 56.43 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 32.7 W/kg

SAR(1 g) = 7.9 W/kg; SAR(10 g) = 2.35 W/kg

Maximum value of SAR (measured) = 18.8 W/kg



### SystemPerformanceCheck-5750MHz

Communication System: UID 0, Generic WIFI (0); Frequency: 5750 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.342$  S/m;  $\epsilon_r = 35.505$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Ambient Temperature: 22.4°C; Liquid Temperature: 22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.67, 4.67, 4.67) @ 5750 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Head/ HBBL5750MHz/ Area Scan (31x31x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 21.2 W/kg

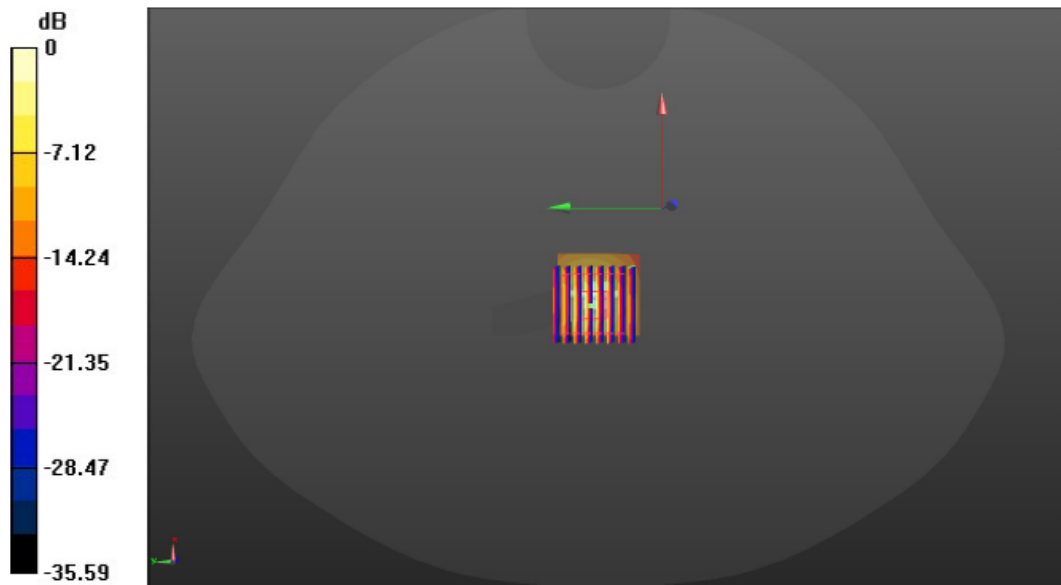
**Head/ HBBL5750MHz/ Zoom Scan (8x8x7)/ Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 59.75 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 33.3 W/kg

SAR(1 g) = 8.03 W/kg; SAR(10 g) = 2.35 W/kg

Maximum value of SAR (measured) = 19.1 W/kg



0 dB = 19.1 W/kg = 12.81 dBW/kg

## 10. SAR Exposure Limits

SAR assessments have been made in line with the requirements of FCC 47 CFR § 2.1093.

Type Exposure	Limit (W/kg)	
	General Population/ Uncontrolled Exposure Environment	Occupational/ Controlled Exposure Environment
Spatial Average SAR (whole body)	0.08	0.4
Spatial Peak SAR (1g cube tissue for head and trunk)	1.6	8.0
Spatial Peak SAR (10g for limb)	4.0	20.0

**Note:**

1. *Population/Uncontrolled Environments: are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.*
2. *Occupational/Controlled Environments: are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure (i.e. as a result of employment or occupation).*



## 11. Conducted Power Measurement Results and Tune-up

Please refer to appendix report

Note:

### GSM

1. Per KDB 447498 D04, the maximum output power channel is used for SAR testing and further SAR test reduction.
2. Per KDB 941225 D01, considering the possibility of e.g. 3rd party VoIP operation for Head and Body-worn SAR test reduction for GSM and GPRS modes is determined by the source-base time-averaged output power including tune-up tolerance. The mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.
3. Per KDB941225 D01, for hotspot SAR test reduction for GPRS modes is determined by the source-based time-averaged output power including tune-up tolerance, For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested.

### WCDMA

1. The following tests were conducted according to the test requirements outlines in 3GPP TS34.121 specification.
2. The procedures in KDB 941225 D01 are applied for 3GPP Rel. 6 HSPA to configure the device in the required sub-test mode to determine SAR test exclusion

A summary of these settings are illustrated below:

### HSDPA Setup Configuration:

- a) The EUT was connected to base station RS CMU200 referred to the setup configuration
- b) The RF path losses were compensated into the measurements
- c) A call was established between EUT and base station with following setting:
  - i. Set Gain Factors ( $\beta_c$  and  $\beta_d$ ) and parameters were set according to each specific sub-test in the following table, C10.1.4, Quoted from the TS 34.121
  - ii. Set RMC 12.2Kbps + HSDPA mode
  - iii. Set Cell Power=-86dBm
  - iv. Set HS-DSCH Configuration Type to FRC (H-set 1, QPSK)
  - v. Select HSDPA uplink parameters
  - vi. Set Delta ACK, Delta NACK and Delta CQI=8
  - vii. Set Ack-Nack repetition Factor to 3
  - viii. Set CQI Feedback Cycle (K) to 4ms
  - ix. Set CQI repetition factor to 2
  - x. Power ctrl mode= all up bits
- d) The transmitter maximum output power was recorded.

**Table C.10.1.4:  $\beta$  values for transmitter characteristics tests with HS-DPCCH**

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{HS}$ (Note 1, Note 2)	CM (dB) (Note 3)	MPR (dB) (Note 3)
1	2/15	15/15	64	2/15	4/15	0.0	0.0
2	12/15 (Note 4)	15/15 (Note 4)	64	12/15 (Note 4)	24/15	1.0	0.0
3	15/15	8/15	64	15/8	30/15	1.5	0.5
4	15/15	4/15	64	15/4	30/15	1.5	0.5

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{CQI} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ .

Note 2: For the HS-DPCCH power mask requirement test in clause 5.2C, 5.7A, and the Error Vector Magnitude (EVM) with HS-DPCCH test in clause 5.13.1A, and HSDPA EVM with phase discontinuity in clause 5.13.1AA,  $\Delta_{ACK}$  and  $\Delta_{NACK} = 30/15$  with  $\beta_{HS} = 30/15 * \beta_c$ , and  $\Delta_{CQI} = 24/15$  with  $\beta_{HS} = 24/15 * \beta_c$ .

Note 3: CM = 1 for  $\beta_c/\beta_d = 12/15$ ,  $\beta_{HS}/\beta_c = 24/15$ . For all other combinations of DPDCH, DPCCH and HS-DPCCH the MPR is based on the relative CM difference. This is applicable for only UEs that support HSDPA in release 6 and later releases.

Note 4: For subtest 2 the  $\beta_c/\beta_d$  ratio of 12/15 for the TFC during the measurement period (TF1, TF0) is achieved by setting the signalled gain factors for the reference TFC (TF1, TF1) to  $\beta_c = 11/15$  and  $\beta_d = 15/15$ .

### Setup Configuration

**HSUPA Setup Configuration:**

- a) The EUT was connected to base station RS CMU200 referred to the setup configuration
- b) The RF path losses were compensated into the measurements
- c) A call was established between EUT and base station with following setting:
  - i. Call configs = 5.2b, 5.9b, 5.10b, and 5.13.2B with QPSK
  - ii. Set Gain Factors ( $\beta_c$  and  $\beta_d$ ) and parameters (AG index) were set according to each specific sub-test in the following table, C11.1.3, Quoted from the TS 34.121
  - iii. Set Cell Power=-86dBm
  - iv. Set channel type= 12.2Kbps + HSPA mode
  - v. Set UE Target power
  - vi. Set Ctrl mode=Alternating bits
  - vii. Set and observe the E-TFCI
  - viii. Confirm that E-TFCI is equal the target E-TFCI of 75 for Sub-test 1, and other subtest's E-TFCI
- d) The transmitter maximum output power was recorded.

**Table C.11.1.3:  $\beta$  values for transmitter characteristics tests with HS-DPCCH and E-DCH**

Sub-test	$\beta_c$	$\beta_d$	$\beta_d$ (SF)	$\beta_c/\beta_d$	$\beta_{HS}$ (Note 1)	$\beta_{ec}$	$\beta_{ed}$ (Note 5) (Note 6)	$\beta_{ed}$ (SF)	$\beta_{ed}$ (Codes)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 6)	E-TFCI
1	11/15 (Note 3)	15/15 (Note 3)	64	11/15 (Note 3)	22/15	209/25	1309/225	4	1	1.0	0.0	20	75
2	6/15	15/15	64	6/15	12/15	12/15	94/75	4	1	3.0	2.0	12	67
3	15/15	9/15	64	15/9	30/15	30/15	$\beta_{ed1}$ : 47/15 $\beta_{ed2}$ : 47/15	4	2	2.0	1.0	15	92
4	2/15	15/15	64	2/15	4/15	2/15	56/75	4	1	3.0	2.0	17	71
5	15/15 (Note 4)	15/15 (Note 4)	64	15/15 (Note 4)	30/15	24/15	134/15	4	1	1.0	0.0	21	81

Note 1:  $\Delta_{ACK}$ ,  $\Delta_{NACK}$  and  $\Delta_{DQI} = 30/15$  with  $\beta_{isc} = 30/15 * \beta_c$ .

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

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

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

Note 5: In case of testing by UE using E-DPDCH Physical Layer category 1, Sub-test 3 is omitted according to TS25.306 Table 5.1g.

Note 6:  $\beta_{ed}$  can not be set directly, it is set by Absolute Grant Value.

**LTE****General:**

1. CMW500 base station simulator was used to setup the connection with EUT; the frequency band, channel, bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r03, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r03, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r03, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.

## LTE (TDD) Considerations

1. According to KDB 941225 D05 SAR for LTE Devices, for Time-Division Duplex (TDD) systems, SAR must be tested using a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by the defined 3GPP LTE TDD configurations.
2. SAR was tested with the highest transmission duty factor (63.33%) using Uplink-downlink configuration 0 and Special subframe configuration 7.
3. LTE TDD Bands support 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplinkdownlink configurations and Table 4.2-1 for Special subframe configurations.

**Table 4.2-1: 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	$6592 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$	$7680 \cdot T_s$	$(1+X) \cdot 2192 \cdot T_s$	$(1+X) \cdot 2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$			$7680 \cdot T_s$		
5	$6592 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$	$20480 \cdot T_s$	$(2+X) \cdot 2192 \cdot T_s$	$(2+X) \cdot 2560 \cdot T_s$
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$		
8	$24144 \cdot T_s$			-		
9	$13168 \cdot T_s$			-		
10	$13168 \cdot T_s$	$13152 \cdot T_s$	$12800 \cdot T_s$	-	-	-

**Table 4.2-2: 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

Calculated Duty Cycle = Extended cyclic prefix in uplink  $\times (T_s) \times \#$  of S +  $\#$  of U

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

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

where

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

This device supports uplink-downlink configurations 0-6. The configuration with highest duty cycle was used-configuration 0 at 63.3% duty cycle.

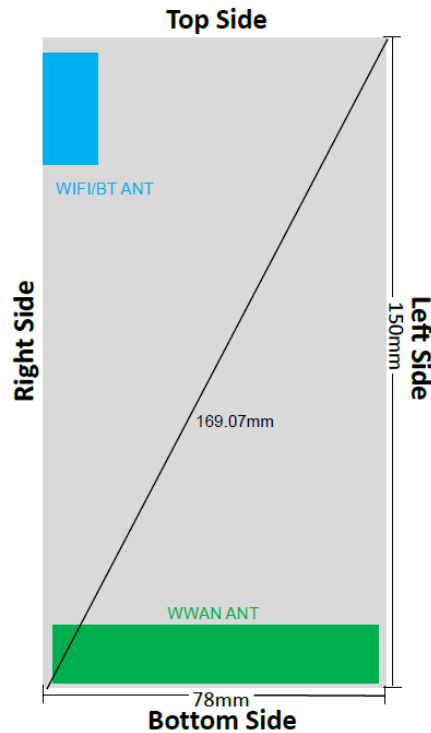
## Wi-Fi

For 2.4GHz Wi-Fi SAR testing, highest average RF output power channel for the lowest data rate for 802.11b were for SAR evaluation.

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.

SAR testing is not required for OFDM mode(s) when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is  $\leq 1.2 \text{ W/kg}$ .

## 12. Antenna Location



Distance of the Antenna to the EUT surface/edge(mm)						
Antenna	Rear	Front	Top side	Bottom side	Right side	Left side
WWAN	3	5	150	10	25	15
Wi-Fi/BT	3	5	20	130	75	5

Positions for SAR tests; Hotspot mode						
Antenna	Rear	Front	Top side	Bottom side	Right side	Left side
WWAN	Yes	Yes	No	Yes	Yes	Yes
Wi-Fi/BT	Yes	Yes	Yes	No	No	Yes

**Note:**

Referring to KDB941225 D06, when the overall device length and width are >9cm\*5cm, the test distance is 10mm. SAR must be measured for all sides and surfaces with a transmitting antenna located within 25mm from that surface or edge.

## 13. Measured and Reported SAR Results

### Measurement Results:

Please refer to appendix report

### Measurement data plots:

Please refer to appendix D

Note:

#### **SAR Test Reduction criteria are as follows:**

- Reported SAR(W/kg) for WWAN = Measured SAR \* Tune-up Scaling Factor
- Reported SAR(W/kg) for Wi-Fi and Bluetooth = Measured SAR \* Tune-up scaling factor \* Duty Cycle scaling factor
- Duty Cycle scaling factor = 1 / Duty cycle (%)

#### **KDB 447498 D04 Interim General RF Exposure Guidance v01:**

Testing of other required channels within the operating mode of a frequency band is not required when the reported 1-g or 10-g SAR for the mid-band or highest output power channel is:

- $\leq 0.8$  W/kg or  $2.0$  W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz
- $\leq 0.6$  W/kg or  $1.5$  W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
- $\leq 0.4$  W/kg or  $1.0$  W/kg, for 1-g or 10-g respectively, when the transmission band is  $\geq 200$  MHz

#### **KDB 648474 D04 Handset SAR:**

With headset attached, when the reported SAR for body-worn accessory, measured without a headset connected to the handset, is  $> 1.2$  W/kg, the highest reported SAR configuration for that wireless mode and frequency band should be repeated for that body-worn accessory with a headset attached to the handset. Additional 1-g SAR testing at 5 mm is not required when hotspot mode 10-g extremity SAR is not required for the surfaces and edges; since all 1-g reported SAR  $< 1.2$  W/kg.

#### **KDB 941225 D01 SAR test for 3G SAR Test Reduction Procedure:**

When the maximum output power and tune-up tolerance specified for production units in a secondary mode is  $\leq 1/4$  dB higher than the primary mode or when the highest reported SAR of the primary mode is scaled by the ratio of specified maximum output power and tune-up tolerance of secondary to primary mode and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for the secondary mode.

#### **GSM Guidance**

SAR test reduction for GPRS and EDGE modes is determined by the source-based time-averaged output power specified for production units, including tune-up tolerance. The data mode with highest specified time-averaged output power should be tested for SAR compliance in the applicable exposure conditions. For modes with the same specified maximum output power and tolerance, the higher number time-slot configuration should be tested. Please refer to section 9. for GSM power verification.

SAR is not required for EDGE (8PSK) mode because the maximum output power and tune-up limit is  $\leq 1/4$ dB higher than GPRS/EDGE (GMSK) or the adjusted SAR of the highest reported SAR of GPRS/EDGE (GMSK) is  $\leq 1.2$ W/kg.

#### **W-CDMA Guidance**

SAR for next to the ear head exposure is measured using a 12.2 kbps RMC with TPC bits configured to all "1's". The 3G SAR test reduction procedure is applied to AMR configurations with 12.2 kbps RMC (Head) and other spreading codes and multiple DPDCHn configurations supported by the handset with 12.2 kbps RMC (Body-Worn Accessory) as the primary mode.

Per KDB 941225 D01 RMC12.2Kbps setting is used to evaluate SAR. If the maximum output power and Tune-up tolerance specified for production units in HSDPA/HSUPA is  $\leq 1/4$ dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio fo specified maximum output power and tune-up tolerance of HSDPA / HSUPA to RMC 12.2Kbps and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for HSDPA / HSUPA.

**KDB 941225 D05 SAR for LTE Devices:**

SAR test reduction is applied using the following criteria:

- Start with the largest channel bandwidth and measure SAR for QPSK with 1 RB, and 50% 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 for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel.
- Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are > 0.8 W/kg. Testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation < 1.45 W/kg.
- Testing for 16-QAM and 64-QAM modulation is not required because the reported SAR for QPSK is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of QPSK.
- Testing for the other channel bandwidths is not required because the reported SAR for the highest channel bandwidth is < 1.45 W/Kg and its output power is not more than 0.5 dB higher than that of the highest channel bandwidth.

**TDD LTE requirement:**

For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9%) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix  $63.3\%/62.9\% = 1.006$  is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg) \* Tune-up Scaling Factor \* scaling factor for extended cyclic prefix.

**KDB 248227 D01 SAR meas for 802.11:**

When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. The reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit.

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

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

- $\leq 0.4$  W/kg, further SAR measurement is not required for the other test positions in that exposure configuration and wireless mode combination within the frequency band or aggregated band. DSSS and OFDM configurations are considered separately according to the required SAR procedures.
- $> 0.4$  W/kg, SAR is repeated using the same wireless mode test configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position, on the highest maximum output power channel, until the reported SAR is  $\leq 0.8$  W/kg or all required test positions are tested.
  - For subsequent test positions with equivalent test separation distance or when exposure is dominated by coupling conditions, the position for maximum coupling condition should be tested.
  - When it is unclear, all equivalent conditions must be tested.
- For all positions/configurations tested using the initial test position and subsequent test positions, when the reported SAR is  $> 0.8$  W/kg, measure the SAR for these positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is  $\leq 1.2$  W/kg or all required test channels are considered.
  - The additional power measurements required for this step should be limited to those necessary for identifying subsequent highest output power channels to apply the test reduction.
- When the specified maximum output power is the same for both UNII 1 and UNII 2A, begin SAR

*measurements in UNII 2A with the channel with the highest measured output power. If the reported SAR for UNII 2A is  $\leq 1.2$  W/kg, SAR is not required for UNII 1; otherwise treat the remaining bands separately and test them independently for SAR.*

- *When the specified maximum output power is different between UNII 1 and UNII 2A, begin SAR with the band that has the higher specified maximum output. If the highest reported SAR for the band with the highest specified power is  $\leq 1.2$  W/kg, testing for the band with the lower specified output power is not required; otherwise test the remaining bands independently for SAR.*

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

## 14. SAR Measurement Variability

In accordance with published RF Exposure KDB 865664 D01 SAR measurement 100 MHz to 6 GHz. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

- 1) Repeated measurement is not required when the original highest measured SAR is <math><0.8</math> or 2 W/kg (1-g or 10-g respectively); steps 2) through 4) do not apply.
- 2) When the original highest measured SAR is  $\geq 0.8$  or 2 W/kg (1-g or 10-g respectively), 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  $\geq 1.45$  or 3.6 W/kg (~ 10% from the 1-g or 10-g respective SAR limit).
- 4) Perform a third repeated measurement only if the original, first, or second repeated measurement is  $\geq 1.5$  or 3.75 W/kg (1-g or 10-g respectively) and the ratio of largest to smallest SAR for the original, first and second repeated measurements is  $> 1.20$ .

Band	Test Position	Frequency		Highest Measured SAR (W/kg)	First Repeated		Second Repeated	
		CH	MHz		Measured SAR(W/kg)	Largest to Smallest SAR Ratio	Measured SAR(W/kg)	Largest to Smallest SAR Ratio
GSM1900	Rear	661	1880.0	1.090	1.070	1.019	N/A	N/A
WCDMA Band II	Rear	9262	1852.4	1.030	1.010	1.020	N/A	N/A
WCDMA Band IV	Rear	1513	1752.6	1.000	0.985	1.015	N/A	N/A



## 15. Simultaneous Transmission analysis

No.	Simultaneous Transmission Configurations	Head	Body-worn	Hotspot	Note
1	GSM(voice) + Bluetooth (data)	Yes	Yes		
2	GSM(voice) + WLAN (data)	Yes	Yes		
3	WCDMA(voice) + Bluetooth (data)	Yes	Yes		
4	WCDMA(voice) + WLAN (data)	Yes	Yes		
5	GPRS (data) + Bluetooth (data)	Yes	Yes	NA	
6	GPRS (data) + WLAN (data)	Yes	Yes	Yes	
7	WCDMA (data) + Bluetooth (data)	Yes	Yes	NA	
8	WCDMA (data) + WLAN (data)	Yes	Yes	Yes	
9	LTE + Bluetooth (data)	Yes	Yes	NA	
10	LTE + WLAN (data)	Yes	Yes	Yes	

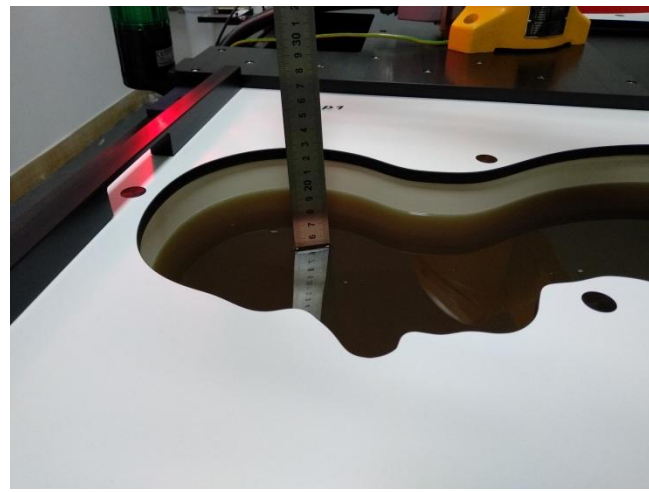
General note:

1. WLAN and Bluetooth share the same antenna, and cannot transmit simultaneously.
2. EUT will choose either GSM or WCDMA LTE according to the network signal condition; therefore, they will not operate simultaneously at any moment.
3. The reported SAR summation is calculated based on the same configuration and test position

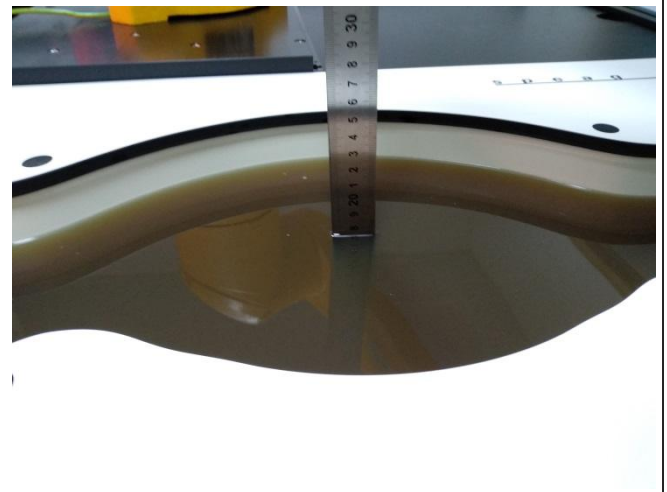
### **Simultaneous Transmission data:**

Please refer to appendix report

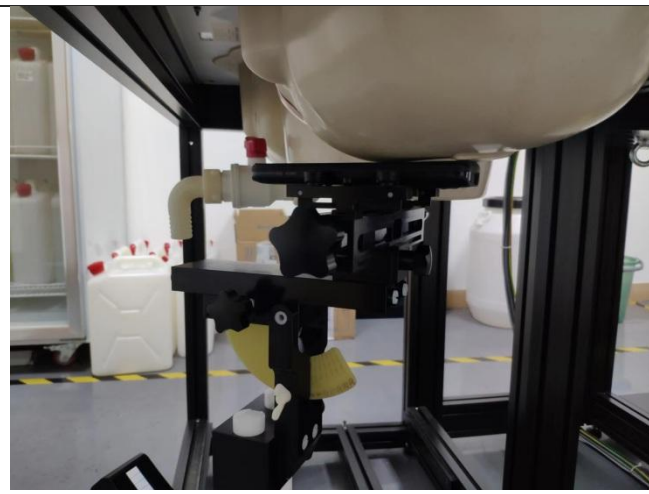
### 16. TestSetup Photos



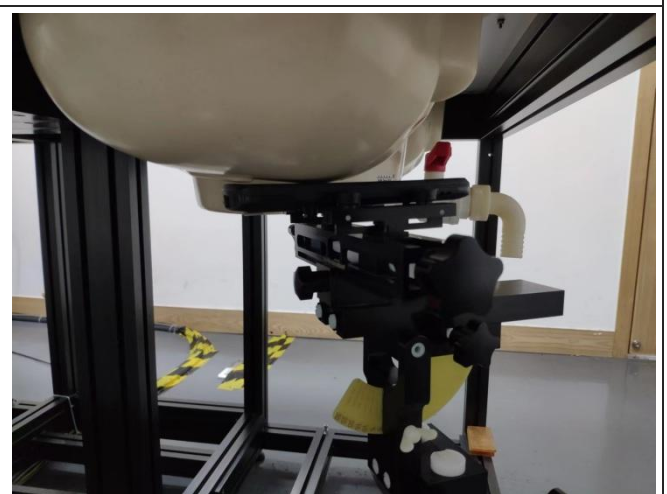
Liquid depth in the Head phantom



Liquid depth in the Body phantom



Left Head Touch



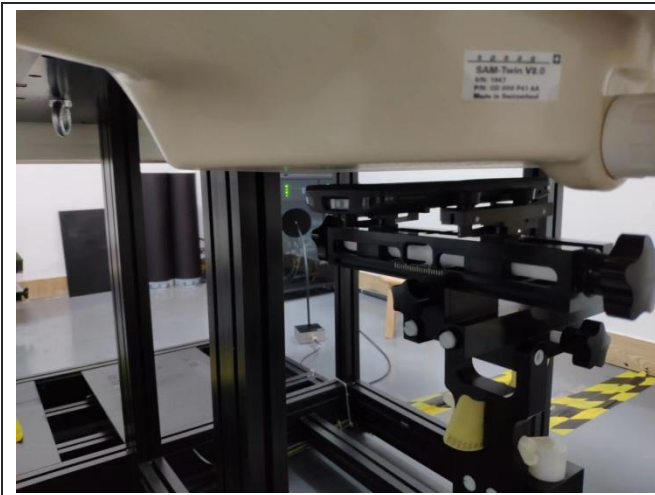
Right Head Touch



Left Head Tilt (15°)



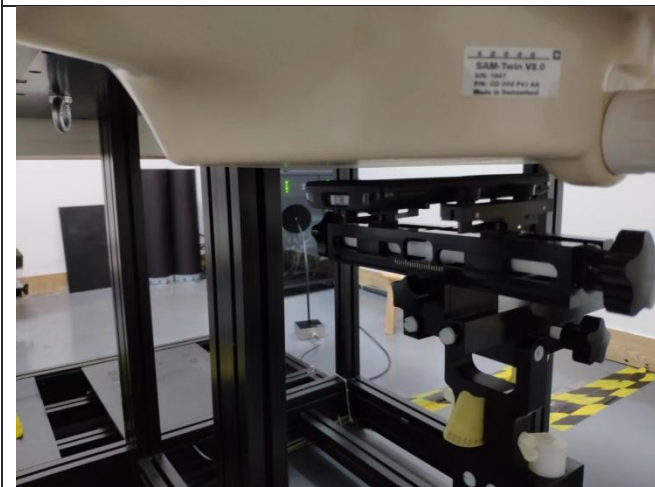
Right Head Tilt (15°)



Body-worn Front (10mm)



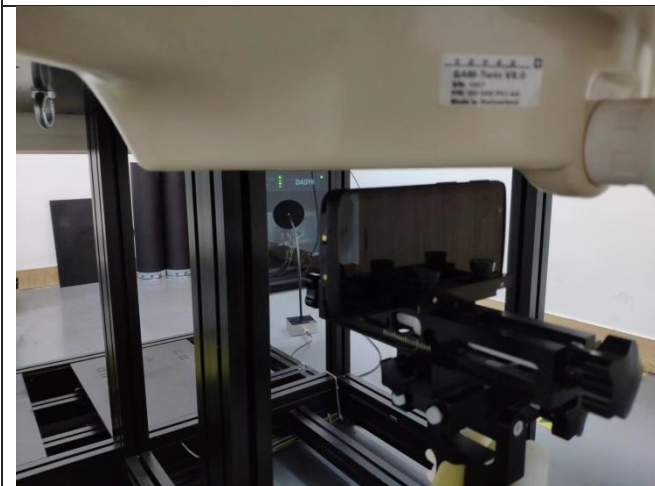
Body-worn Rear(10mm)



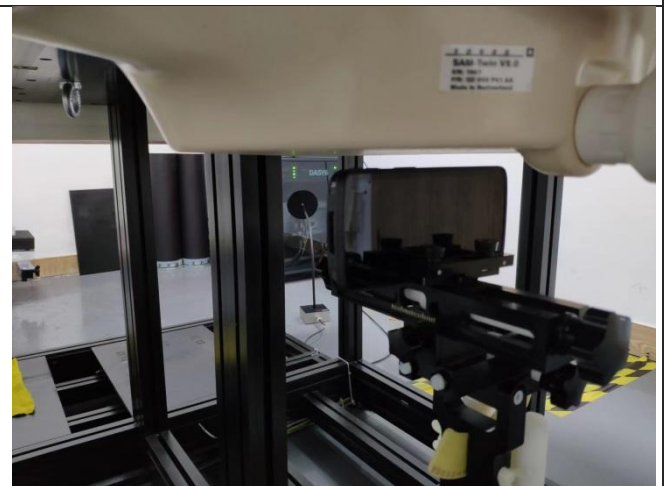
Front (10mm)



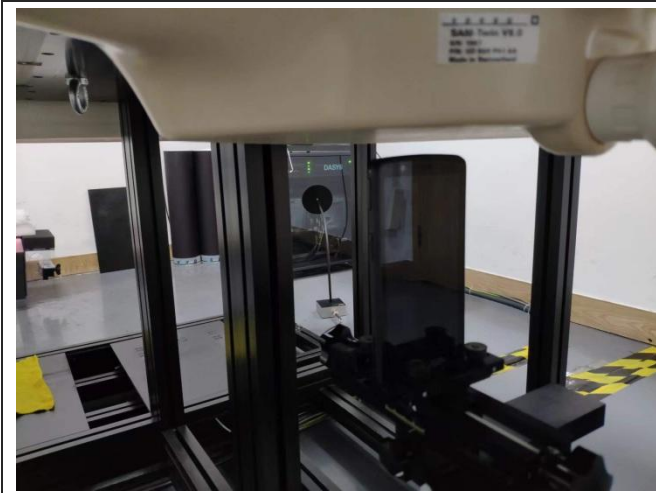
Rear (10mm)



Left Side (10mm)



Right Side (10mm)



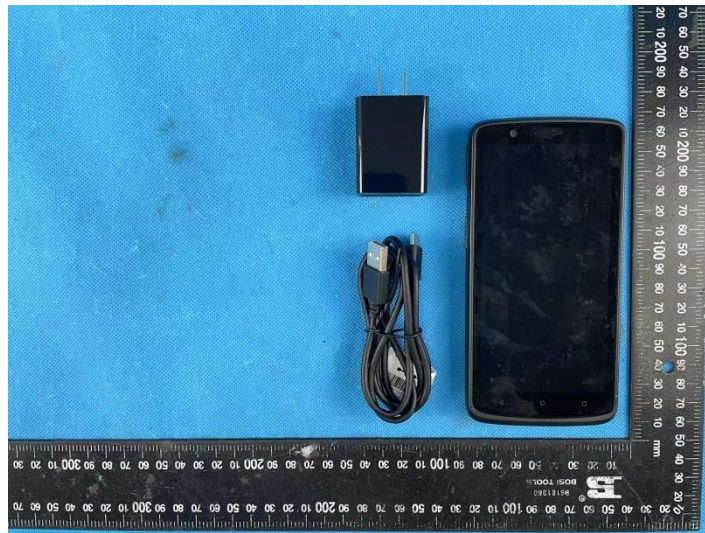
Top Side (10mm)

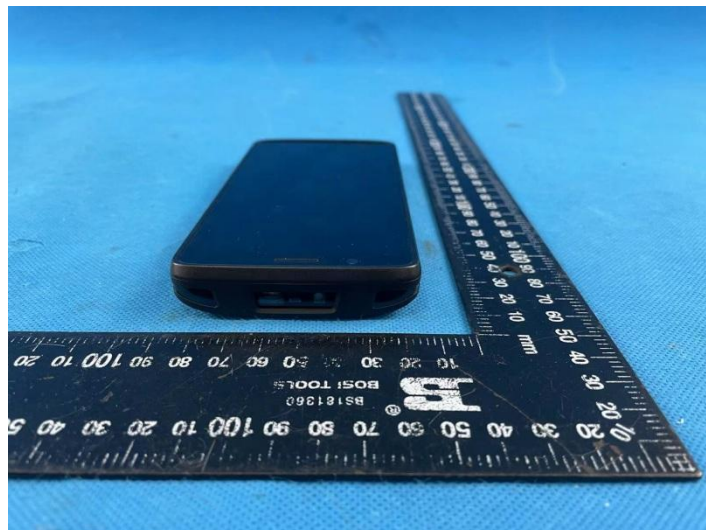
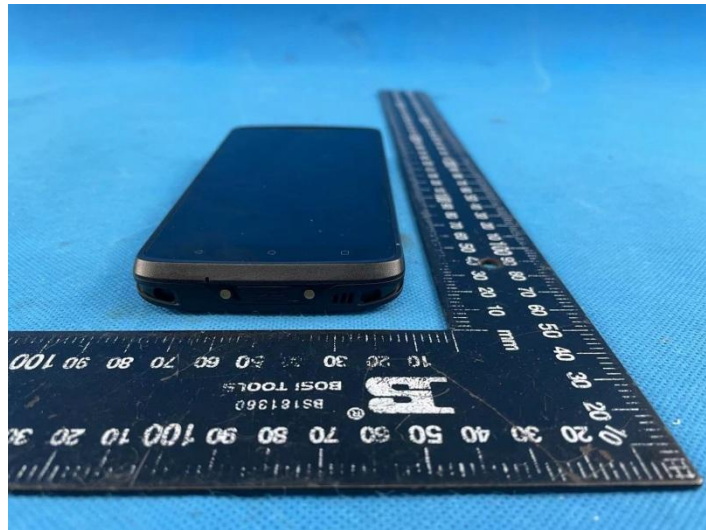


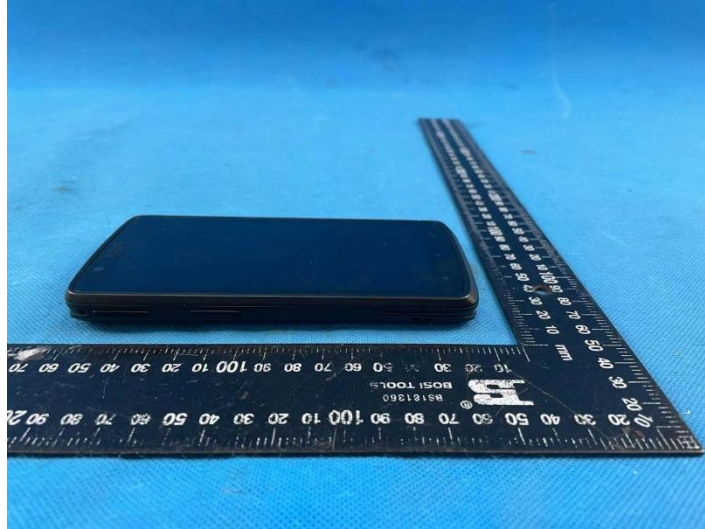
Bottom Side (10mm)



### 17. External Photos of the EUT







**-----End of Report-----**



Project No.	SHT2204061104EW		
Test sample No.	YPHT22040611001	Model No.	CRUISE2A
Start test date	2022/4/20	Finish date	2022/4/28
Temperature	22.6°C	Humidity	47%
Test Engineer	Bo Wang	Auditor	<i>Xiaodong Zhu</i>

Appendix clause	Test Item	Result
A	Conducted Power Measurement Results	PASS
B	SAR Measurement Results	PASS
C	Simultaneous Transmission analysis	PASS



**Appendix A:Conducted Power Measurement Results-GSM**

GSM850		Burst Average Power (dBm)			Tune-up limit (dBm)	Division Factors	Frame-Average Power (dBm)			Tune-up limit (dBm)
		CH128	CH190	CH251			CH128	CH190	CH251	
		824.2MHz	836.6MHz	848.8MHz			824.2MHz	836.6MHz	848.8MHz	
GSM		32.58	32.24	32.27	33.00	-9.03	23.55	23.21	23.24	23.97
GPRS (GMSK)	1Tx slot	30.65	30.53	30.59	31.00	-9.03	21.62	21.50	21.56	21.97
	2Tx slots	30.93	30.15	30.99	31.00	-6.02	24.91	24.13	24.97	24.98
	3Tx slots	29.48	29.74	29.55	30.00	-4.26	25.22	25.48	25.29	25.74
	4Tx slots	27.45	27.29	27.61	28.00	-3.01	24.44	24.28	24.60	24.99
EGPRS (8PSK)	1Tx slot	25.47	25.37	25.26	25.50	-9.03	16.44	16.34	16.23	16.47
	2Tx slots	25.44	25.75	25.78	26.00	-6.02	19.42	19.73	19.76	19.98
	3Tx slots	24.19	24.72	24.12	25.00	-4.26	19.93	20.46	19.86	20.74
	4Tx slots	22.66	22.94	22.71	23.00	-3.01	19.65	19.93	19.70	19.99

GSM1900		Burst Average Power (dBm)			Tune-up limit (dBm)	Division Factors	Frame-Average Power (dBm)			Tune-up limit (dBm)
		CH512	CH661	CH810			CH512	CH661	CH810	
		1850.2MHz	1880MHz	1909.8MHz			1850.2MHz	1880.0MHz	1909.8MHz	
GSM		30.54	30.33	30.29	31.00	-9.03	21.51	21.30	21.26	21.97
GPRS (GMSK)	1Tx slot	30.29	30.23	30.18	30.50	-9.03	21.26	21.20	21.15	21.47
	2Tx slots	29.14	29.40	29.50	30.00	-6.02	23.12	23.38	23.48	23.98
	3Tx slots	27.91	27.92	27.37	28.00	-4.26	23.65	23.66	23.11	23.74
	4Tx slots	25.31	25.84	25.55	26.00	-3.01	22.30	22.83	22.54	22.99
EGPRS (8PSK)	1Tx slot	24.97	24.72	24.57	25.00	-9.03	15.94	15.69	15.54	15.97
	2Tx slots	24.91	24.22	24.71	25.00	-6.02	18.89	18.20	18.69	18.98
	3Tx slots	23.13	23.27	23.89	24.00	-4.26	18.87	19.01	19.63	19.74
	4Tx slots	22.96	22.35	22.96	23.00	-3.01	19.95	19.34	19.95	19.99

**Appendix A:Conducted Power Measurement Results-WCDMA**

WCDMA Band II		Conducted Power (dBm)			Tune-up limit (dBm)
		CH9262	CH9400	CH9538	
		1852.4MHz	1880MHz	1907.6MHz	
AMR 12.2K		23.61	23.27	23.26	24.00
RMC 12.2K		23.65	23.30	23.29	24.00
HSDPA	Subtest-1	23.88	23.62	23.74	24.00
	Subtest-2	22.56	22.92	22.25	23.00
	Subtest-3	21.65	21.54	21.83	22.00
	Subtest-4	20.71	20.29	20.32	21.00
HSUPA	Subtest-1	21.52	21.64	21.57	22.00
	Subtest-2	21.07	21.33	21.29	21.50
	Subtest-3	20.93	20.32	20.65	21.00
	Subtest-4	19.82	19.71	19.50	20.00
	Subtest-5	19.47	19.42	19.36	19.50

WCDMA Band IV		Conducted Power (dBm)			Tune-up limit (dBm)
		CH1312	CH1413	CH1513	
		1712.4MHz	1732.6MHz	1752.6MHz	
AMR 12.2K		23.44	23.58	23.66	24.00
RMC 12.2K		23.48	23.62	23.70	24.00
HSDPA	Subtest-1	23.90	23.92	23.23	24.00
	Subtest-2	22.75	22.64	22.01	23.00
	Subtest-3	21.87	21.42	21.17	22.00
	Subtest-4	20.24	20.37	20.31	20.50
HSUPA	Subtest-1	21.93	21.64	21.86	22.00
	Subtest-2	21.20	21.11	21.46	21.50
	Subtest-3	20.15	20.70	20.90	21.00
	Subtest-4	20.00	19.78	19.66	20.50
	Subtest-5	19.32	19.12	19.39	19.50

WCDMA Band V		Conducted Power (dBm)			Tune-up limit (dBm)
		CH4132	CH4183	CH4233	
		826.4MHz	836.6MHz	846.6MHz	
AMR 12.2K		23.22	23.91	23.36	24.00
RMC 12.2K		23.25	23.95	23.40	24.00
HSDPA	Subtest-1	23.14	23.88	23.16	24.00
	Subtest-2	22.43	22.56	22.13	23.00
	Subtest-3	21.49	21.53	21.35	22.00
	Subtest-4	20.66	20.67	20.48	21.00
HSUPA	Subtest-1	21.91	21.95	21.50	22.00
	Subtest-2	21.27	21.07	21.17	21.50
	Subtest-3	21.00	20.43	20.31	21.50
	Subtest-4	19.98	19.91	19.72	20.00
	Subtest-5	19.36	19.14	19.17	19.50

**Appendix A:Conducted Power Measurement Results-LTE**

LTE-FDD Band 2				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width (MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	22.67	22.96	22.98	23.50
			2	22.70	22.95	23.13	
			5	22.62	22.83	23.06	
		3	0	22.64	22.87	22.96	23.00
			1	22.67	22.90	22.94	
			3	22.56	22.83	22.95	
	6	0	21.65	21.95	21.93	22.00	
	16QAM	1	0	21.95	22.00	21.95	22.50
			2	22.02	21.90	22.09	
			5	21.82	21.84	21.90	
		3	0	21.46	21.63	21.68	22.00
			1	21.49	21.66	21.76	
			3	21.40	21.64	21.72	
	6	0	20.75	20.85	20.89	21.00	
	3	QPSK	1	0	22.81	23.11	23.12
8				22.81	23.04	23.06	
14				22.76	22.95	23.01	
8			0	21.81	22.01	22.05	22.50
			4	21.81	22.02	22.04	
			7	21.73	22.01	22.05	
15		0	21.73	22.01	22.01	22.50	
16QAM		1	0	21.86	22.18	21.88	22.50
			8	21.84	21.87	22.01	
			14	21.68	21.91	21.87	
		8	0	20.79	20.98	21.17	21.50
			4	20.78	21.01	20.98	
			7	20.72	20.96	21.00	
15		0	20.69	20.88	20.96	21.00	
5		QPSK	1	0	23.05	23.17	23.22
	12			22.90	23.04	23.12	
	24			22.88	22.86	22.82	
	12		0	21.75	22.06	22.07	22.50
			6	21.74	22.06	22.05	
			13	21.71	21.95	21.99	
	25	0	21.74	22.00	22.00	22.50	
	16QAM	1	0	21.86	22.30	21.99	22.50
			12	21.68	22.23	21.98	
			24	21.72	22.17	21.72	
		12	0	20.74	21.12	21.07	21.50
			6	20.66	21.02	21.06	
			13	20.59	20.93	21.00	
	25	0	20.72	20.98	21.04	21.50	

10	QPSK	1	0	22.85	23.20	23.12	23.50	
			24	22.73	22.98	23.02		
			49	22.93	22.88	22.61		
		25	0	21.75	22.04	21.93	22.50	
			12	21.73	22.01	21.94		
			25	21.81	21.93	22.04		
	50	0	21.69	21.95	21.98	22.00		
	16QAM	1	0	22.01	21.99	21.78	22.50	
			24	21.84	21.84	21.84		
			49	22.09	21.97	21.33		
		25	0	20.74	21.00	20.96	21.50	
			12	20.71	20.97	20.99		
25			20.73	20.97	21.00			
50		0	20.64	20.93	20.96	21.00		
15		QPSK	1	0	21.58	23.14	23.05	23.50
				38	21.96	22.85	23.00	
	74			21.32	22.90	22.72		
	38		0	20.31	22.39	21.80	22.50	
			18	20.85	22.05	21.66		
			37	20.23	22.18	21.46		
	75	0	20.61	21.93	21.87	22.00		
	16QAM	1	0	20.43	22.31	21.85	22.50	
			38	20.90	22.06	21.68		
			74	20.26	22.17	21.43		
		38	0	20.29	22.30	21.81	22.50	
			18	20.84	22.07	21.86		
37			20.23	22.23	21.46			
75	0	19.52	20.91	20.92	21.00			
20	QPSK	1	0	22.70	23.01	22.81	23.50	
			49	22.78	22.94	22.95		
			99	22.68	22.65	22.70		
		50	0	21.62	21.99	21.95	22.00	
			25	21.61	21.98	21.94		
			50	21.66	21.81	21.85		
	100	0	21.70	21.84	21.85	22.00		
	16QAM	1	0	21.60	22.24	21.77	22.50	
			49	21.77	22.35	21.85		
			99	21.58	21.94	21.47		
		50	0	20.65	21.03	20.96	21.50	
			25	20.63	21.01	21.01		
50			20.64	20.85	20.87			
100	0	20.68	20.90	20.85	21.00			

LTE-FDD Band 4				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	21.72	22.06	22.08	22.50
			2	21.59	22.39	22.13	
			5	21.43	22.15	22.04	
		3	0	21.40	22.04	22.15	22.50
			1	21.33	22.06	22.12	
			3	21.23	22.01	22.07	
	6	0	20.11	21.10	21.13	21.50	
	16QAM	1	0	20.52	21.01	21.09	21.50
			2	20.47	21.11	21.19	
			5	20.30	21.06	21.01	
		3	0	20.12	20.92	20.90	21.00
			1	20.03	20.88	20.90	
			3	19.98	20.84	20.82	
	6	0	19.05	20.08	20.02	20.50	
	3	QPSK	1	0	21.50	22.50	22.27
8				21.39	22.53	22.34	
14				21.19	22.15	22.27	
8			0	20.12	21.30	21.18	21.50
			4	20.11	21.24	21.16	
			7	20.01	21.24	21.27	
15		0	20.06	21.36	21.20	21.50	
16QAM		1	0	20.36	21.08	21.17	21.50
			8	20.29	21.15	21.19	
			14	20.11	21.10	21.23	
		8	0	19.07	20.21	20.18	20.50
			4	19.06	20.19	20.16	
			7	18.96	20.38	20.25	
15		0	19.01	20.18	20.20	20.50	
5		QPSK	1	0	22.02	22.32	22.12
	12			21.94	22.29	22.34	
	24			21.96	22.14	22.23	
	12		0	20.95	21.24	21.21	21.50
			6	20.95	21.21	21.15	
			13	20.92	21.18	21.17	
	25	0	20.89	21.27	21.17	21.50	
	16QAM	1	0	20.98	21.31	21.12	21.50
			12	21.08	21.31	21.11	
			24	20.85	21.19	21.14	
		12	0	19.96	20.36	20.08	20.50
			6	19.96	20.37	20.12	
			13	19.87	20.27	20.11	
	25	0	19.90	20.23	20.18	20.50	

10	QPSK	1	0	21.74	21.83	22.07	23.00	
			24	21.53	21.88	21.98		
			49	21.80	22.22	22.50		
		25	0	20.41	21.25	20.97	21.50	
			12	20.39	21.26	21.01		
			25	20.47	21.16	21.17		
	50	0	20.47	21.18	21.08	21.50		
	16QAM	1	0	20.74	20.71	21.21	21.50	
			24	20.55	21.21	21.04		
			49	20.87	21.29	21.38		
		25	0	19.36	20.29	19.94	20.50	
			12	19.31	20.26	19.95		
25			19.50	20.22	20.17			
50		0	19.36	20.15	20.01	20.50		
15		QPSK	1	0	21.88	21.95	21.65	22.50
				38	21.92	21.55	21.64	
	74			22.07	21.74	21.99		
	38		0	21.09	21.06	20.58	21.50	
			18	21.04	20.71	20.84		
			37	21.34	20.98	21.05		
	75	0	20.77	20.68	20.55	21.00		
	16QAM	1	0	20.97	20.85	20.64	21.50	
			38	20.94	20.80	20.61		
			74	21.34	20.86	21.10		
		38	0	21.14	21.13	20.64	21.50	
			18	20.87	20.76	20.79		
			37	21.34	20.97	21.19		
		75	0	19.68	19.66	19.50	20.00	
		20	QPSK	1	0	21.65	21.70	21.59
49					21.80	21.72	21.63	
99	21.81				21.75	21.86		
50	0			20.73	20.85	20.57	21.00	
	25			20.68	20.79	20.57		
	50			20.99	20.80	20.77		
100	0		20.84	20.77	20.71	21.00		
16QAM	1		0	20.52	20.71	20.53	21.00	
			49	20.74	20.97	20.60		
			99	20.88	20.96	20.65		
	50		0	19.70	19.74	19.62	20.50	
			25	19.70	19.77	19.56		
			50	20.00	19.76	19.67		
	100		0	19.83	19.77	19.58	20.00	

LTE-FDD Band 5				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	22.07	23.56	23.50	24.00
			2	21.99	23.53	23.41	
			5	21.90	23.48	23.45	
		3	0	21.90	23.50	23.48	24.00
			1	21.88	23.48	23.47	
			3	21.81	23.43	23.40	
	6	0	20.84	22.47	22.41	22.50	
	16QAM	1	0	20.96	22.42	22.46	23.00
			2	20.95	22.43	22.47	
			5	20.82	22.50	22.31	
		3	0	20.69	22.23	22.28	22.50
			1	20.67	22.23	22.19	
			3	20.63	22.17	22.17	
	6	0	19.83	21.36	21.32	21.50	
	3	QPSK	1	0	23.33	23.53	23.60
8				23.35	23.48	23.61	
14				23.31	23.51	23.44	
8			0	22.32	22.50	22.52	23.00
			4	22.30	22.50	22.48	
			7	22.35	22.51	22.50	
15		0	22.34	22.45	22.45	22.50	
16QAM		1	0	22.31	22.38	22.50	23.00
			8	22.37	22.47	22.59	
			14	22.30	22.37	22.40	
		8	0	21.30	21.43	21.52	22.00
			4	21.32	21.43	21.51	
			7	21.30	21.50	21.55	
15		0	21.24	21.38	21.49	21.50	
5		QPSK	1	0	23.58	23.61	23.79
	12			23.58	23.60	23.83	
	24			23.41	23.58	23.66	
	12		0	22.48	22.51	22.68	23.00
			6	22.46	22.46	22.61	
			13	22.43	22.53	22.66	
	25	0	22.45	22.49	22.69	23.00	
	16QAM	1	0	22.44	22.76	22.74	23.00
			12	22.52	22.68	22.77	
			24	22.32	22.70	22.53	
		12	0	21.42	21.54	21.59	22.00
			6	21.43	21.56	21.55	
			13	21.32	21.55	21.62	
	25	0	21.37	21.46	21.71	22.00	
	10	QPSK	1	0	23.67	23.84	24.05
24				23.38	23.58	23.74	
49				23.79	23.98	24.01	
25			0	22.52	22.65	22.68	23.00
			12	22.50	22.67	22.72	
			25	22.56	22.71	22.78	
50		0	22.49	22.66	22.79	23.00	
16QAM		1	0	22.60	22.64	23.03	23.50
			24	22.42	22.44	22.73	
			49	22.80	22.76	23.00	
		25	0	21.43	21.66	21.70	22.00
			12	21.44	21.64	21.69	
			25	21.57	21.75	21.75	
50		0	21.47	21.69	21.79	22.00	

LTE-FDD Band 7				Conducted Power (dBm)			Tune-up Limit(dBm)	
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High		
5	QPSK	1	0	21.73	21.58	21.74	22.00	
			12	21.51	21.46	21.79		
			24	21.36	21.38	21.69		
		12	0	20.50	20.54	20.34	21.00	
			6	20.49	20.53	20.26		
			13	20.38	20.40	20.15		
	25	0	20.34	20.45	20.72	21.00		
	16QAM	1	0	20.62	20.68	20.70	21.00	
			12	20.40	20.64	20.65		
			24	20.34	20.48	20.55		
		12	0	19.45	19.55	19.35	20.00	
			6	19.46	19.53	19.35		
			13	19.37	19.44	19.60		
		25	0	19.34	19.38	19.74	20.00	
		10	QPSK	1	0	21.71	21.72	22.26
24					21.43	21.54	21.92	
49	21.41				21.79	22.19		
25	0			20.46	20.66	20.85	21.00	
	12			20.46	20.65	20.80		
	25			20.28	20.54	20.92		
50	0		20.43	20.58	20.78	21.00		
16QAM	1		0	20.70	20.64	20.83	21.00	
			24	20.37	20.39	20.71		
			49	20.48	20.40	20.75		
	25		0	19.47	19.68	19.84	20.00	
			12	19.47	19.67	19.86		
			25	19.23	19.50	19.90		
	50		0	19.43	19.55	19.83	20.00	
	15		QPSK	1	0	21.53	21.44	21.52
		38			21.27	21.51	21.75	
74		21.25			21.32	21.69		
38		0		20.59	20.75	20.19	21.00	
		18		20.49	20.76	20.59		
		37		20.28	20.63	20.39		
75		0	20.35	20.59	20.68	21.00		
16QAM		1	0	20.57	20.68	20.23	21.00	
			38	20.55	20.82	20.56		
			74	20.27	20.60	20.43		
		38	0	20.51	20.70	20.43	21.00	
			18	20.40	20.74	20.48		
			37	20.45	20.72	20.50		
		75	0	19.30	19.53	19.66	20.00	
		20	QPSK	1	0	21.55	21.40	21.57
	49				21.37	21.57	21.80	
99	21.41				21.43	21.64		
50	0			20.39	20.44	20.68	21.00	
	25			20.39	20.45	20.67		
	50			20.23	20.56	20.77		
100	0		20.34	20.48	20.69	21.00		
16QAM	1		0	20.47	20.69	20.51	21.00	
			49	20.20	20.89	20.57		
			99	20.33	20.76	20.66		
	50		0	19.43	19.39	19.71	20.00	
			25	19.40	19.43	19.70		
			50	19.28	19.54	19.77		
	100		0	19.35	19.46	19.71	20.00	



LTE-FDD Band 12				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	21.21	23.17	23.32	23.50
			2	21.26	23.42	23.31	
			5	21.20	23.26	23.30	
		3	0	21.05	23.23	23.16	23.50
			1	21.02	23.18	23.18	
			3	21.08	23.24	23.15	
	6	0	20.20	22.19	22.07	22.50	
	16QAM	1	0	20.15	22.28	22.08	22.50
			2	20.24	22.33	22.31	
			5	20.17	22.17	22.06	
		3	0	19.85	21.98	21.89	22.50
			1	19.83	22.03	21.94	
			3	19.92	21.99	21.90	
	6	0	19.23	21.16	20.99	21.50	
	3	QPSK	1	0	23.03	23.21	23.22
8				23.21	23.41	23.22	
14				23.22	23.28	23.22	
8			0	22.02	22.26	22.14	22.50
			4	22.03	22.24	22.16	
			7	22.08	22.29	22.22	
15		0	22.22	22.27	22.21	22.50	
16QAM		1	0	22.04	22.02	21.95	22.50
			8	22.19	22.25	21.99	
			14	22.32	22.06	21.97	
		8	0	21.13	21.23	21.15	21.50
			4	21.07	21.21	21.16	
			7	21.13	21.14	21.10	
15		0	21.22	21.11	21.08	21.50	
5		QPSK	1	0	23.25	23.26	23.25
	12			23.40	23.34	23.29	
	24			23.22	23.32	23.28	
	12		0	22.12	22.22	22.19	22.50
			6	22.11	22.22	22.23	
			13	22.15	22.28	22.19	
	25	0	22.18	22.25	22.25	22.50	
	16QAM	1	0	22.17	22.38	22.04	23.00
			12	22.19	22.53	22.22	
			24	22.08	22.54	22.25	
		12	0	21.14	21.25	21.23	21.50
			6	21.10	21.23	21.21	
			13	21.18	21.31	21.23	
	25	0	21.15	21.19	21.25	21.50	
	10	QPSK	1	0	23.47	23.62	23.50
24				23.19	23.44	23.15	
49				23.38	23.63	23.47	
25			0	22.34	22.39	22.27	22.50
			12	22.38	22.40	22.28	
			25	22.22	22.44	22.27	
50		0	22.26	22.34	22.29	22.50	
16QAM		1	0	22.54	22.36	22.21	23.00
			24	22.28	22.27	22.07	
			49	22.55	22.41	22.17	
		25	0	21.30	21.39	21.31	21.50
			12	21.32	21.38	21.26	
			25	21.23	21.39	21.30	
50		0	21.26	21.33	21.30	21.50	

LTE-FDD Band 13				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
5	QPSK	1	0	23.08	23.39	23.44	24.00
			12	23.38	23.43	23.58	
			24	23.37	23.46	23.01	
		12	0	22.24	22.37	22.40	22.50
			6	22.24	22.36	22.44	
			13	22.26	22.44	22.48	
	25	0	22.23	22.33	22.44	22.50	
	16QAM	1	0	22.16	22.17	22.30	23.00
			12	22.29	22.55	22.41	
			24	22.40	22.51	22.31	
		12	0	21.18	21.47	21.40	21.50
			6	21.16	21.42	21.43	
			13	21.29	21.40	21.49	
	25	0	21.18	21.31	21.43	21.50	
	10	QPSK	1	0	-	23.56	-
24				-	23.35	-	
49				-	23.56	-	
25			0	-	22.31	-	22.50
			12	-	22.33	-	
			25	-	22.35	-	
50		0	-	22.32	-	22.50	
16QAM		1	0	-	22.50	-	23.00
			24	-	22.45	-	
			49	-	22.58	-	
		25	0	-	21.32	-	21.50
			12	-	21.44	-	
			25	-	21.40	-	
50		0	-	21.45	-	21.50	

LTE-FDD Band 17				Conducted Power (dBm)			Tune-up Limit(dBm)	
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High		
5	QPSK	1	0	23.44	23.32	23.54	24.00	
			12	23.53	23.42	23.51		
			24	23.48	23.33	23.41		
		12	0	22.35	22.23	22.35	22.50	
			6	22.39	22.26	22.40		
			13	22.41	22.32	22.46		
	25	0	22.46	22.30	22.46	22.50		
	16QAM	1	0	22.42	22.44	22.37	23.00	
			12	22.51	22.40	22.40		
			24	22.33	22.41	22.29		
		12	0	21.36	21.22	21.36	21.50	
			6	21.36	21.22	21.33		
			13	21.30	21.36	21.42		
		25	0	21.46	21.22	21.40	21.50	
		10	QPSK	1	0	23.67	23.56	23.62
24					23.27	23.35	23.33	
49	23.55				23.57	23.56		
25	0			22.41	22.35	22.31	22.50	
	12			22.35	22.33	22.27		
	25			22.36	22.28	22.28		
50	0		22.34	22.33	22.36	22.50		
16QAM	1		0	22.67	22.36	22.28	23.00	
			24	22.31	22.05	22.03		
			49	22.52	22.28	22.32		
	25		0	21.36	21.34	21.31	21.50	
			12	21.34	21.34	21.32		
			25	21.32	21.27	21.31		
	50		0	21.29	21.32	21.37	21.50	

LTE-FDD Band 25				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	22.71	22.63	22.76	23.00
			2	22.66	22.60	22.32	
			5	22.55	22.53	22.02	
		3	0	22.61	22.59	22.28	23.00
			1	22.56	22.57	22.24	
			3	22.58	22.50	21.93	
	6	0	21.63	21.63	21.96	22.00	
	16QAM	1	0	21.88	21.61	21.58	22.00
			2	21.81	21.68	21.28	
			5	21.71	21.56	20.95	
		3	0	21.43	21.25	21.08	21.50
			1	21.48	21.29	21.04	
			3	21.37	21.33	20.76	
	6	0	20.51	20.49	20.96	21.00	
	3	QPSK	1	0	22.69	22.66	22.83
8				22.60	22.64	22.34	
14				22.60	22.53	21.80	
8			0	21.67	21.63	21.93	22.00
			4	21.67	21.57	21.93	
			7	21.58	21.58	21.97	
15		0	21.58	21.57	21.83	22.00	
16QAM		1	0	21.52	21.50	21.52	22.00
			8	21.85	21.46	21.10	
			14	21.57	21.37	20.57	
		8	0	20.59	20.58	20.92	21.00
			4	20.59	20.59	20.80	
			7	20.60	20.40	20.99	
15		0	20.55	20.44	20.76	21.00	
5		QPSK	1	0	22.76	22.79	23.07
	12			22.65	22.64	22.70	
	24			22.55	22.68	21.67	
	12		0	21.58	21.65	22.02	22.50
			6	21.58	21.67	22.06	
			13	21.51	21.59	22.00	
	25	0	21.54	21.60	21.97	22.00	
	16QAM	1	0	21.73	21.94	22.02	22.50
			12	21.36	21.89	21.61	
			24	21.46	21.78	20.57	
		12	0	20.59	20.67	21.04	21.50
			6	20.56	20.69	21.01	
			13	20.50	20.58	20.90	
	25	0	20.56	20.52	20.99	21.00	

10	QPSK	1	0	22.76	22.80	23.02	23.50	
			24	22.61	22.68	22.85		
			49	22.87	22.80	21.46		
		25	0	21.55	21.65	21.93	22.50	
			12	21.56	21.61	21.93		
			25	21.69	21.76	22.07		
	50	0	21.58	21.60	21.93	22.00		
	16QAM	1	0	21.76	21.71	21.83	22.00	
			24	21.57	21.37	21.63		
			49	21.83	21.60	20.21		
		25	0	20.52	20.61	20.98	21.50	
			12	20.55	20.61	21.04		
25			20.65	20.70	20.99			
50		0	20.49	20.57	20.98	21.00		
15		QPSK	1	0	22.58	22.88	23.07	23.50
				38	22.76	22.62	23.17	
	74			22.91	22.75	21.74		
	38		0	21.74	22.09	21.83	22.50	
			18	21.83	21.96	21.86		
			37	21.96	21.99	20.48		
	75	0	21.66	21.75	22.21	22.50		
	16QAM	1	0	21.60	22.01	21.82	22.50	
			38	21.94	22.09	22.01		
			74	22.03	22.06	20.47		
		38	0	21.54	21.96	21.84	22.50	
			18	21.72	22.01	21.85		
			37	21.97	21.93	20.48		
		75	0	20.57	20.78	21.27	21.50	
		20	QPSK	1	0	22.59	22.86	23.02
49					22.89	22.86	23.15	
99	22.69				22.56	21.73		
50	0			21.60	21.73	22.08	22.50	
	25			21.62	21.73	22.03		
	50			21.82	21.66	22.10		
100	0		21.67	21.78	22.12	22.50		
16QAM	1		0	21.49	22.12	21.81	22.50	
			49	21.69	22.01	22.04		
			99	21.63	21.82	20.54		
	50		0	20.59	20.76	21.11	21.50	
			25	20.63	20.72	21.09		
			50	20.81	20.66	21.17		
	100		0	20.61	20.74	21.12	21.50	

LTE-FDD Band 26				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	23.99	24.18	24.03	24.50
			2	23.81	24.28	23.93	
			5	23.82	24.26	24.09	
		3	0	23.80	24.17	23.91	24.50
			1	23.76	24.22	23.92	
			3	24.00	24.27	23.85	
	6	0	22.75	23.19	22.87	23.50	
	16QAM	1	0	22.70	23.06	23.00	23.50
			2	22.79	23.01	23.11	
			5	22.73	23.15	22.86	
		3	0	22.53	23.11	22.68	23.50
			1	22.61	22.97	22.65	
			3	22.67	22.88	22.66	
	6	0	21.68	22.08	21.85	22.50	
	3	QPSK	1	0	23.71	24.31	23.88
8				23.89	24.18	23.94	
14				23.63	24.39	24.17	
8			0	22.87	23.14	23.09	23.50
			4	22.76	23.15	23.14	
			7	22.70	23.03	22.99	
15		0	22.81	23.06	23.07	23.50	
16QAM		1	0	22.86	23.11	23.15	23.50
			8	22.89	23.19	22.68	
			14	22.66	23.06	23.28	
		8	0	21.86	22.11	22.11	22.50
			4	21.79	22.21	22.11	
			7	21.72	22.11	22.04	
15		0	21.81	22.04	22.07	22.50	
5		QPSK	1	0	23.76	24.31	24.21
	12			23.80	24.37	24.43	
	24			23.78	24.01	23.64	
	12		0	22.79	23.17	23.18	23.50
			6	22.73	23.17	23.21	
			13	22.68	23.11	22.98	
	25	0	22.67	22.96	23.10	23.50	
	16QAM	1	0	22.77	23.10	23.26	23.50
			12	22.68	23.33	23.46	
			24	22.62	23.15	23.43	
		12	0	21.80	22.20	22.20	22.50
			6	21.80	22.21	22.22	
			13	21.66	22.19	22.08	
	25	0	21.66	22.06	22.09	22.50	

10	QPSK	1	0	24.18	24.52	24.52	25.00	
			24	23.89	24.51	24.92		
			49	24.13	24.24	24.21		
		25	0	22.79	23.10	23.49	23.50	
			12	22.95	23.15	23.36		
			25	22.90	23.11	23.18		
		50	0	22.88	23.12	23.24	23.50	
		16QAM	1	0	23.12	23.34	23.52	24.00
				24	22.90	23.04	23.31	
	49			23.02	23.07	23.23		
	25		0	21.78	22.17	22.22	22.50	
			12	21.84	22.21	22.17		
			25	21.93	22.11	22.07		
	50		0	21.81	22.23	22.11	22.50	
	15		QPSK	1	0	24.27	24.04	24.64
38					24.04	24.22	24.70	
74		24.32			24.50	24.02		
38		0		23.06	23.49	23.77	24.00	
		18		23.31	23.31	23.15		
		37		23.43	23.49	23.16		
75		0		23.03	23.18	23.27	23.50	
16QAM		1		0	23.05	23.09	23.67	24.00
				38	23.25	23.22	23.22	
			74	23.36	23.09	23.37		
		38	0	23.19	23.05	23.67	24.00	
			18	23.30	23.39	23.31		
			37	23.24	23.66	23.39		
75		0	22.03	22.11	22.24	22.50		

LTE-FDD Band 66				Conducted Power (dBm)			Tune-up Limit(dBm)
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High	
1.4	QPSK	1	0	21.09	21.77	21.69	22.00
			2	21.05	21.68	21.76	
			5	20.97	21.92	21.74	
		3	0	20.86	21.68	21.74	22.50
			1	20.82	21.85	22.04	
			3	20.81	21.62	21.70	
	6	0	19.70	20.74	20.77	21.00	
	16QAM	1	0	19.95	20.66	20.70	21.50
			2	19.96	20.76	20.65	
			5	19.85	20.82	21.04	
		3	0	19.63	20.45	20.53	21.00
			1	19.59	20.54	20.62	
			3	19.60	20.64	20.44	
	6	0	18.65	19.69	19.75	20.00	
	3	QPSK	1	0	21.81	21.65	21.76
8				21.81	21.88	21.87	
14				21.86	21.67	21.94	
8			0	20.80	20.66	20.82	21.00
			4	20.78	20.68	20.85	
			7	20.80	20.74	20.77	
15		0	20.80	20.78	20.78	21.00	
16QAM		1	0	20.83	20.77	20.77	21.50
			8	20.98	20.90	20.73	
			14	21.10	20.76	20.81	
		8	0	19.84	19.78	19.70	20.00
			4	19.78	19.82	19.70	
			7	19.78	19.80	19.86	
15		0	19.87	19.80	19.89	20.00	
5		QPSK	1	0	22.01	21.79	22.09
	12			22.18	21.86	22.37	
	24			21.93	21.84	21.75	
	12		0	20.94	20.78	20.86	21.00
			6	20.79	20.65	20.96	
			13	20.98	20.79	20.75	
	25	0	20.83	20.83	21.16	21.50	
	16QAM	1	0	20.95	21.02	20.94	21.50
			12	20.96	20.87	20.83	
			24	20.91	21.36	20.81	
		12	0	19.74	19.75	20.06	20.50
			6	19.72	19.75	19.80	
			13	19.83	19.74	19.83	
	25	0	19.85	20.03	19.67	20.50	



10	QPSK	1	0	21.23	20.99	21.15	22.50	
			24	21.89	21.96	21.53		
			49	22.28	22.24	22.18		
		25	0	20.75	20.52	20.69	21.50	
			12	20.81	20.53	20.79		
			25	21.08	21.00	20.97		
	50	0	20.99	20.79	20.94	21.00		
	16QAM	1	0	20.10	20.15	20.45	21.50	
			24	20.72	20.82	21.36		
			49	21.20	21.27	21.33		
		25	0	19.79	19.71	19.76	20.50	
			12	19.87	19.70	19.80		
25			20.20	19.95	19.91			
50		0	19.96	19.81	19.82	20.00		
15		QPSK	1	0	21.99	20.97	21.80	22.50
				38	21.83	21.54	21.88	
	74			22.06	21.87	21.95		
	38		0	21.02	20.67	21.10	21.50	
			18	20.93	20.69	20.75		
			37	21.10	21.41	21.17		
	75	0	20.85	20.61	20.63	21.00		
	16QAM	1	0	20.91	20.21	21.02	21.50	
			38	21.03	21.00	20.83		
			74	20.98	20.94	20.75		
		38	0	20.29	20.80	21.10	21.50	
			18	20.91	20.76	20.73		
			37	21.02	21.40	20.78		
		75	0	19.80	19.58	19.60	20.00	
		20	QPSK	1	0	21.25	21.14	21.96
49					21.64	21.62	21.64	
99	21.50				21.88	22.01		
50	0			20.41	20.32	20.58	21.00	
	25			20.65	20.32	20.74		
	50			20.75	20.56	20.73		
100	0		20.60	20.52	20.75	21.00		
16QAM	1		0	19.99	19.75	20.51	21.50	
			49	20.94	20.40	20.58		
			99	21.06	21.36	20.91		
	50		0	19.60	18.95	19.68	20.00	
			25	19.27	18.96	19.65		
			50	19.68	19.70	19.69		
	100		0	19.61	19.48	19.61	20.00	

LTE-TDD Band 38				Conducted Power (dBm)			Tune-up Limit(dBm)	
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High		
5	QPSK	1	0	21.11	21.76	21.75	22.00	
			12	21.23	21.78	21.71		
			24	20.83	21.66	21.64		
		12	0	20.05	20.78	20.73	21.00	
			6	20.05	20.73	20.75		
			13	19.87	20.66	20.56		
	25	0	20.00	20.78	20.70	21.00		
	16QAM	1	0	19.95	20.89	20.80	21.00	
			12	20.10	20.91	20.65		
			24	19.69	20.75	20.37		
		12	0	18.95	19.78	19.69	20.00	
			6	18.95	19.76	19.66		
			13	18.77	19.68	19.64		
		25	0	18.91	19.67	19.69	20.00	
		10	QPSK	1	0	22.26	22.02	22.20
24					22.02	21.82	21.92	
49	22.18				22.01	22.03		
25	0			21.11	20.91	20.86	21.50	
	12			21.13	20.92	20.90		
	25			21.11	20.83	20.92		
50	0		21.11	20.93	20.86	21.50		
16QAM	1		0	21.48	20.87	20.99	21.50	
			24	21.17	20.79	20.61		
			49	21.30	20.90	20.80		
	25		0	20.07	19.91	19.87	20.50	
			12	20.06	19.93	19.86		
			25	20.00	19.83	19.85		
	50		0	19.94	19.80	19.89	20.00	
	15		QPSK	1	0	22.15	21.85	21.95
		38			22.00	21.54	21.69	
74		22.18			21.79	21.93		
38		0		21.19	21.04	20.75	21.50	
		18		20.96	20.67	20.44		
		37		21.17	20.88	20.70		
75		0	21.06	20.68	20.80	21.50		
16QAM		1	0	21.25	21.02	20.80	21.50	
			38	21.03	20.73	20.58		
			74	21.19	21.04	20.69		
		38	0	21.22	21.01	20.69	21.50	
			18	20.94	20.73	20.48		
			37	21.22	20.97	20.73		
		75	0	20.03	19.74	19.72	20.50	
		20	QPSK	1	0	22.14	21.87	21.86
	49				22.02	21.63	21.84	
99	22.00				21.79	21.85		
50	0			20.90	20.70	20.74	21.00	
	25			20.88	20.70	20.73		
	50			20.95	20.69	20.84		
100	0		20.90	20.75	20.77	21.00		
16QAM	1		0	20.95	20.93	20.62	21.50	
			49	20.73	20.72	20.64		
			99	20.89	21.18	20.69		
	50		0	19.85	19.69	19.80	20.00	
			25	19.85	19.69	19.81		
			50	19.96	19.70	19.81		
	100		0	19.92	19.67	19.80	20.00	

LTE-TDD Band 41				Conducted Power (dBm)			Tune-up Limit(dBm)	
Band-width(MHz)	Modulation	RB allocation	RB offset	Low	Middle	High		
5	QPSK	1	0	21.26	21.52	21.74	22.00	
			12	21.14	21.49	21.66		
			24	21.28	21.43	21.86		
		12	0	20.29	20.42	20.78	21.00	
			6	20.27	20.45	20.79		
			13	20.21	20.43	20.68		
	25	0	20.32	20.46	20.68	21.00		
	16QAM	1	0	20.68	20.40	20.74	21.00	
			12	20.75	20.43	20.58		
			24	20.34	20.44	20.70		
		12	0	19.23	19.42	19.70	20.00	
			6	19.08	19.47	19.80		
			13	19.23	19.48	19.66		
		25	0	19.24	19.44	19.67	20.00	
		10	QPSK	1	0	21.61	21.67	22.01
24					21.52	21.54	21.89	
49	21.52				21.58	21.96		
25	0			20.44	20.51	20.77	21.00	
	12			20.40	20.49	20.77		
	25			20.49	20.61	20.73		
50	0		20.44	20.48	20.79	21.00		
16QAM	1		0	20.49	20.69	20.91	21.50	
			24	20.36	20.55	21.03		
			49	20.27	20.71	20.84		
	25		0	19.50	19.48	19.79	20.00	
			12	19.50	19.48	19.76		
			25	19.50	19.53	19.68		
	50		0	19.45	19.52	19.76	20.00	
	15		QPSK	1	0	21.29	21.36	21.78
		38			21.78	21.77	22.05	
74		21.02			21.02	21.45		
38		0		20.32	20.45	20.80	21.50	
		18		20.82	20.96	21.12		
		37		20.13	20.12	20.33		
75		0	20.68	20.64	20.91	21.00		
16QAM		1	0	20.32	20.43	20.65	21.50	
			38	20.70	20.93	21.05		
			74	20.07	20.13	20.24		
		38	0	20.33	20.43	20.66	21.50	
			18	20.81	20.90	21.18		
			37	20.00	20.08	20.34		
		75	0	19.61	19.64	19.92	20.00	
		20	QPSK	1	0	21.93	21.82	21.94
	49				22.00	21.93	22.23	
99	21.82				21.85	22.31		
50	0			20.84	20.80	21.22	21.50	
	25			20.88	20.82	21.22		
	50			20.93	20.79	21.19		
100	0		20.90	20.83	21.18	21.50		
16QAM	1		0	20.99	20.59	20.94	21.50	
			49	20.93	20.67	21.01		
			99	20.95	20.65	21.12		
	50		0	19.84	19.83	20.11	20.50	
			25	19.85	19.85	20.17		
			50	19.87	19.84	20.20		
	100		0	19.87	19.83	20.14	20.50	

**Appendix A:Conducted Power Measurement Results-WIFI/Bluetooth**

WIFI 2.4G				
Mode	Channel	Frequency (MHz)	Average Power(dBm)	Tune-up limit (dBm)
802.11b 1Mbps	1	2412	14.38	14.50
	6	2437	14.34	14.50
	11	2462	16.04	16.50
802.11g 6Mbps	1	2412	18.04	18.50
	6	2437	18.05	18.50
	11	2462	19.57	20.00
802.11n (HT20) MCS0	1	2412	17.92	18.00
	6	2437	17.97	18.00
	11	2462	19.49	19.50
802.11n (HT40) MCS0	3	2422	17.17	17.50
	6	2437	18.87	19.00
	9	2452	19.40	19.50

WIFI 5G U-NII-1					
Bandwidth	Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up limit (dBm)
20	802.11ac	36	5180	15.03	15.50
		44	5220	15.07	15.50
		48	5240	14.44	14.50
	802.11n	36	5180	14.16	14.50
		44	5220	14.32	14.50
		48	5240	14.73	15.00
	802.11a	36	5180	14.38	14.50
		44	5220	14.85	15.00
		48	5240	14.27	14.50
40	802.11ac	38	5190	14.38	14.50
		46	5230	14.23	14.50
	802.11n	38	5190	14.72	15.00
		46	5230	14.75	15.00
80	802.11ac	42	5210	15.05	15.50

WIFI 5G U-NII-2A					
Bandwidth	Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up limit (dBm)
20	802.11ac	52	5260	14.89	14.50
		56	5280	14.68	15.00
		64	5320	14.79	15.00
	802.11n	52	5260	14.63	15.00
		56	5280	14.52	15.00
		64	5320	14.75	15.00
	802.11a	52	5260	14.61	15.00
		56	5280	14.29	14.50
		64	5320	14.47	14.50
40	802.11ac	54	5270	14.58	15.00
		62	5310	14.65	15.00
	802.11n	54	5270	14.78	15.00
		62	5310	14.65	15.00
80	802.11ac	58	5290	14.87	15.00

WIFI 5G U-NII-2C					
Bandwidth	Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up limit (dBm)
20	802.11ac	100	5500	14.75	15.00
		116	5580	14.65	15.00
		144	5720	14.52	15.00
	802.11n	100	5500	14.87	15.00
		116	5580	14.91	15.00
		144	5720	14.83	15.00
	802.11a	100	5500	14.69	15.00
		116	5580	14.28	14.50
		144	5720	14.77	15.00
40	802.11ac	102	5510	14.58	15.00
		110	5550	14.63	15.00
		142	5710	14.58	15.00
	802.11n	102	5510	14.32	14.50
		110	5550	14.79	15.00
		142	5710	14.78	15.00
80	802.11ac	106	5530	14.82	15.00
		138	5690	14.61	15.00

WIFI 5G U-NII-3					
Bandwidth	Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up limit (dBm)
20	802.11ac	149	5745	16.57	17.00
		157	5785	16.25	16.50
		165	5825	16.46	16.50
	802.11n	149	5745	15.95	16.00
		157	5785	15.94	16.00
		165	5825	16.39	16.50
	802.11a	149	5745	16.26	16.50
		157	5785	16.02	16.50
		165	5825	15.78	16.00
40	802.11ac	151	5755	15.74	16.00
		159	5795	16.45	16.50
	802.11n	151	5755	15.74	16.00
		159	5795	16.45	16.50
80	802.11ac	155	5775	14.36	14.50

Bluetooth					
Mode	Channel	Frequency (MHz)	Average Power (dBm)	Tune-up limit (dBm)	
EDR	GFSK	0	2402	-0.07	0.00
		39	2441	0.94	1.00
		78	2480	1.28	1.50
	π/4QPSK	0	2402	-0.85	0.00
		39	2441	0.02	0.50
		78	2480	0.56	0.50
	8DPSK	0	2402	-0.56	0.00
		39	2441	0.34	0.50
		78	2480	0.87	1.00
BLE	GFSK	0	2402	4.12	4.50
		19	2440	5.60	6.00
		39	2480	6.37	6.50

**Appendix B:SAR Measurement Results-Head**

GSM850										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
GPRS 3Tx slots	Left-Cheek	128	824.2	29.48	30.00	1.127	-	-	-	-
		190	836.6	29.74	30.00	1.062	-0.05	0.321	0.341	1
		251	848.8	29.55	30.00	1.109	-	-	-	-
	Left-Tilt	128	824.2	29.48	30.00	1.127	-	-	-	-
		190	836.6	29.74	30.00	1.062	0.06	0.246	0.261	-
		251	848.8	29.55	30.00	1.109	-	-	-	-
	Right-Cheek	128	824.2	29.48	30.00	1.127	-	-	-	-
		190	836.6	29.74	30.00	1.062	0.02	0.298	0.316	-
		251	848.8	29.55	30.00	1.109	-	-	-	-
	Right-Tilt	128	824.2	29.48	30.00	1.127	-	-	-	-
		190	836.6	29.74	30.00	1.062	-0.03	0.226	0.240	-
		251	848.8	29.55	30.00	1.109	-	-	-	-

GSM1900										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
GPRS 3Tx slots	Left-Cheek	512	1850.2	27.91	28.00	1.021	0.08	0.952	0.972	-
		661	1880.0	27.92	28.00	1.019	0.02	1.080	1.100	2
		810	1909.8	27.37	28.00	1.156	0.05	0.850	0.983	-
	Left-Tilt	512	1850.2	27.91	28.00	1.021	-	-	-	-
		661	1880.0	27.92	28.00	1.019	0.01	0.756	0.770	-
		810	1909.8	27.37	28.00	1.156	-	-	-	-
	Right-Cheek	512	1850.2	27.91	28.00	1.021	-0.06	0.923	0.942	-
		661	1880.0	27.92	28.00	1.019	-0.01	1.038	1.057	-
		810	1909.8	27.37	28.00	1.156	-0.10	0.866	1.001	-
	Right-Tilt	512	1850.2	27.91	28.00	1.021	-	-	-	-
		661	1880.0	27.92	28.00	1.019	-0.01	0.732	0.746	-
		810	1909.8	27.37	28.00	1.156	-	-	-	-

WCDMA Band II										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
RMC 12.2Kbps	Left-Cheek	9262	1852.4	23.65	24.00	1.084	-0.08	0.732	0.793	3
		9400	1880.0	23.30	24.00	1.175	-	-	-	-
		9538	1907.6	23.29	24.00	1.178	-	-	-	-
	Left-Tilt	9262	1852.4	23.65	24.00	1.084	-0.07	0.602	0.653	-
		9400	1880.0	23.30	24.00	1.175	-	-	-	-
		9538	1907.6	23.29	24.00	1.178	-	-	-	-
	Right-Cheek	9262	1852.4	23.65	24.00	1.084	-0.11	0.699	0.758	-
		9400	1880.0	23.30	24.00	1.175	-	-	-	-
		9538	1907.6	23.29	24.00	1.178	-	-	-	-
	Right-Tilt	9262	1852.4	23.65	24.00	1.084	0.03	0.560	0.607	-
		9400	1880.0	23.30	24.00	1.175	-	-	-	-
		9538	1907.6	23.29	24.00	1.178	-	-	-	-

WCDMA Band IV										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
RMC 12.2Kbps	Left-Cheek	1312	1712.4	23.48	24.00	1.127	-	-	-	-
		1413	1732.6	23.62	24.00	1.091	-	-	-	-
		1513	1752.6	23.70	24.00	1.072	-0.06	0.685	0.734	4
	Left-Tilt	1312	1712.4	23.48	24.00	1.127	-	-	-	-
		1413	1732.6	23.62	24.00	1.091	-	-	-	-
		1513	1752.6	23.70	24.00	1.072	-0.05	0.563	0.603	-
	Right-Cheek	1312	1712.4	23.48	24.00	1.127	-	-	-	-
		1413	1732.6	23.62	24.00	1.091	-	-	-	-
		1513	1752.6	23.70	24.00	1.072	-0.08	0.654	0.701	-
	Right-Tilt	1312	1712.4	23.48	24.00	1.127	-	-	-	-
		1413	1732.6	23.62	24.00	1.091	-	-	-	-
		1513	1752.6	23.70	24.00	1.072	0.03	0.524	0.561	-

WCDMA Band V										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
RMC 12.2Kbps	Left-Cheek	4132	826.4	23.25	24.00	1.189	-	-	-	-
		4183	836.6	23.95	24.00	1.012	-0.05	0.314	0.318	5
		4233	846.6	23.40	24.00	1.148	-	-	-	-
	Left-Tilt	4132	826.4	23.25	24.00	1.189	-	-	-	-
		4183	836.6	23.95	24.00	1.012	0.06	0.240	0.243	-
		4233	846.6	23.40	24.00	1.148	-	-	-	-
	Right-Cheek	4132	826.4	23.25	24.00	1.189	-	-	-	-
		4183	836.6	23.95	24.00	1.012	-0.14	0.216	0.219	-
		4233	846.6	23.40	24.00	1.148	-	-	-	-
	Right-Tilt	4132	826.4	23.25	24.00	1.189	-	-	-	-
		4183	836.6	23.95	24.00	1.012	-0.03	0.164	0.166	-
		4233	846.6	23.40	24.00	1.148	-	-	-	-

LTE Band 2										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Left-Cheek	18700	1860.0	22.70	23.50	1.202	-	-	-	-
		18900	1880.0	23.01	23.50	1.119	-0.09	0.675	0.756	6
		19100	1900.0	22.81	23.50	1.172	-	-	-	-
	Left-Tilt	18700	1860.0	22.70	23.50	1.202	-	-	-	-
		18900	1880.0	23.01	23.50	1.119	0.06	0.553	0.619	-
		19100	1900.0	22.81	23.50	1.172	-	-	-	-
	Right-Cheek	18700	1860.0	22.70	23.50	1.202	-	-	-	-
		18900	1880.0	23.01	23.50	1.119	0.04	0.658	0.736	-
		19100	1900.0	22.81	23.50	1.172	-	-	-	-
	Right-Tilt	18700	1860.0	22.70	23.50	1.202	-	-	-	-
		18900	1880.0	23.01	23.50	1.119	-0.05	0.524	0.587	-
		19100	1900.0	22.81	23.50	1.172	-	-	-	-
20M QPSK 50RB	Left-Cheek	18700	1860.0	21.62	22.00	1.091	-	-	-	-
		18900	1880.0	21.99	22.00	1.002	-0.04	0.548	0.549	-
		19100	1900.0	21.95	22.00	1.012	-	-	-	-
	Left-Tilt	18700	1860.0	21.62	22.00	1.091	-	-	-	-
		18900	1880.0	21.99	22.00	1.002	0.02	0.480	0.481	-
		19100	1900.0	21.95	22.00	1.012	-	-	-	-
	Right-Cheek	18700	1860.0	21.62	22.00	1.091	-	-	-	-
		18900	1880.0	21.99	22.00	1.002	0.02	0.507	0.508	-
		19100	1900.0	21.95	22.00	1.012	-	-	-	-
	Right-Tilt	18700	1860.0	21.62	22.00	1.091	-	-	-	-
		18900	1880.0	21.99	22.00	1.002	-0.01	0.431	0.432	-
		19100	1900.0	21.95	22.00	1.012	-	-	-	-



LTE Band 4										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Left-Cheek	20050	1720.0	21.81	22.00	1.045	-	-	-	-
		20175	1732.5	21.75	22.00	1.059	-	-	-	-
		20300	1745.0	21.86	22.00	1.033	-0.10	0.624	0.644	7
	Left-Tilt	20050	1720.0	21.81	22.00	1.045	-	-	-	-
		20175	1732.5	21.75	22.00	1.059	-	-	-	-
		20300	1745.0	21.86	22.00	1.033	-0.05	0.523	0.540	-
	Right-Cheek	20050	1720.0	21.81	22.00	1.045	-	-	-	-
		20175	1732.5	21.75	22.00	1.059	-	-	-	-
		20300	1745.0	21.86	22.00	1.033	0.07	0.603	0.623	-
	Right-Tilt	20050	1720.0	21.81	22.00	1.045	-	-	-	-
		20175	1732.5	21.75	22.00	1.059	-	-	-	-
		20300	1745.0	21.86	22.00	1.033	-0.04	0.478	0.494	-
20M QPSK 50RB	Left-Cheek	20050	1720.0	20.99	21.00	1.002	-	-	-	-
		20175	1732.5	20.80	21.00	1.047	-	-	-	-
		20300	1745.0	20.77	21.00	1.054	-0.06	0.545	0.575	-
	Left-Tilt	20050	1720.0	20.99	21.00	1.002	-	-	-	-
		20175	1732.5	20.80	21.00	1.047	-	-	-	-
		20300	1745.0	20.77	21.00	1.054	-0.03	0.457	0.481	-
	Right-Cheek	20050	1720.0	20.99	21.00	1.002	-	-	-	-
		20175	1732.5	20.80	21.00	1.047	-	-	-	-
		20300	1745.0	20.77	21.00	1.054	0.04	0.527	0.555	-
	Right-Tilt	20050	1720.0	20.99	21.00	1.002	-	-	-	-
		20175	1732.5	20.80	21.00	1.047	-	-	-	-
		20300	1745.0	20.77	21.00	1.054	-0.02	0.417	0.440	-

LTE Band 5										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Left-Cheek	20450	829.0	23.67	24.50	1.211	-	-	-	-
		20525	836.5	23.84	24.50	1.164	-	-	-	-
		20600	844.0	24.05	24.50	1.109	-0.10	0.316	0.350	8
	Left-Tilt	20450	829.0	23.67	24.50	1.211	-	-	-	-
		20525	836.5	23.84	24.50	1.164	-	-	-	-
		20600	844.0	24.05	24.50	1.109	-0.05	0.265	0.294	-
	Right-Cheek	20450	829.0	23.67	24.50	1.211	-	-	-	-
		20525	836.5	23.84	24.50	1.164	-	-	-	-
		20600	844.0	24.05	24.50	1.109	0.07	0.305	0.339	-
	Right-Tilt	20450	829.0	23.67	24.50	1.211	-	-	-	-
		20525	836.5	23.84	24.50	1.164	-	-	-	-
		20600	844.0	24.05	24.50	1.109	-0.04	0.242	0.268	-
10M QPSK 25RB	Left-Cheek	20450	829.0	22.56	23.00	1.107	-	-	-	-
		20525	836.5	22.71	23.00	1.069	-	-	-	-
		20600	844.0	22.78	23.00	1.052	-0.06	0.287	0.302	-
	Left-Tilt	20450	829.0	22.56	23.00	1.107	-	-	-	-
		20525	836.5	22.71	23.00	1.069	-	-	-	-
		20600	844.0	22.78	23.00	1.052	0.04	0.223	0.234	-
	Right-Cheek	20450	829.0	22.56	23.00	1.107	-	-	-	-
		20525	836.5	22.71	23.00	1.069	-	-	-	-
		20600	844.0	22.78	23.00	1.052	-0.03	0.286	0.300	-
	Right-Tilt	20450	829.0	22.56	23.00	1.107	-	-	-	-
		20525	836.5	22.71	23.00	1.069	-	-	-	-
		20600	844.0	22.78	23.00	1.052	-0.03	0.233	0.245	-

LTE Band 7										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Left-Cheek	20850	2510.0	21.37	22.00	1.156	-	-	-	-
		21100	2535.0	21.57	22.00	1.104	-	-	-	-
		21350	2560.0	21.80	22.00	1.047	-0.12	0.130	0.136	9
	Left-Tilt	20850	2510.0	21.37	22.00	1.156	-	-	-	-
		21100	2535.0	21.57	22.00	1.104	-	-	-	-
		21350	2560.0	21.80	22.00	1.047	-0.06	0.109	0.114	-
	Right-Cheek	20850	2510.0	21.37	22.00	1.156	-	-	-	-
		21100	2535.0	21.57	22.00	1.104	-	-	-	-
		21350	2560.0	21.80	22.00	1.047	0.09	0.126	0.132	-
	Right-Tilt	20850	2510.0	21.37	22.00	1.156	-	-	-	-
		21100	2535.0	21.57	22.00	1.104	-	-	-	-
		21350	2560.0	21.80	22.00	1.047	-0.04	0.100	0.104	-
20M QPSK 50RB	Left-Cheek	20850	2510.0	20.23	21.00	1.194	-	-	-	-
		21100	2535.0	20.56	21.00	1.107	-	-	-	-
		21350	2560.0	20.77	21.00	1.054	-0.10	0.112	0.118	-
	Left-Tilt	20850	2510.0	20.23	21.00	1.194	-	-	-	-
		21100	2535.0	20.56	21.00	1.107	-	-	-	-
		21350	2560.0	20.77	21.00	1.054	-0.05	0.094	0.099	-
	Right-Cheek	20850	2510.0	20.23	21.00	1.194	-	-	-	-
		21100	2535.0	20.56	21.00	1.107	-	-	-	-
		21350	2560.0	20.77	21.00	1.054	0.07	0.108	0.114	-
	Right-Tilt	20850	2510.0	20.23	21.00	1.194	-	-	-	-
		21100	2535.0	20.56	21.00	1.107	-	-	-	-
		21350	2560.0	20.77	21.00	1.054	-0.04	0.086	0.090	-

LTE Band 12										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Left-Cheek	23060	704.0	23.38	24.00	1.153	-	-	-	-
		23095	707.5	23.63	24.00	1.089	-0.05	0.299	0.326	10
		23130	711.0	23.47	24.00	1.130	-	-	-	-
	Left-Tilt	23060	704.0	23.38	24.00	1.153	-	-	-	-
		23095	707.5	23.63	24.00	1.089	-0.03	0.250	0.273	-
		23130	711.0	23.47	24.00	1.130	-	-	-	-
	Right-Cheek	23060	704.0	23.38	24.00	1.153	-	-	-	-
		23095	707.5	23.63	24.00	1.089	0.04	0.289	0.315	-
		23130	711.0	23.47	24.00	1.130	-	-	-	-
	Right-Tilt	23060	704.0	23.38	24.00	1.153	-	-	-	-
		23095	707.5	23.63	24.00	1.089	-0.02	0.229	0.249	-
		23130	711.0	23.47	24.00	1.130	-	-	-	-
10M QPSK 25RB	Left-Cheek	23060	704.0	22.22	22.50	1.067	-	-	-	-
		23095	707.5	22.44	22.50	1.014	-0.10	0.254	0.258	-
		23130	711.0	22.27	22.50	1.054	-	-	-	-
	Left-Tilt	23060	704.0	22.22	22.50	1.067	-	-	-	-
		23095	707.5	22.44	22.50	1.014	0.06	0.197	0.200	-
		23130	711.0	22.27	22.50	1.054	-	-	-	-
	Right-Cheek	23060	704.0	22.22	22.50	1.067	-	-	-	-
		23095	707.5	22.44	22.50	1.014	-0.05	0.253	0.256	-
		23130	711.0	22.27	22.50	1.054	-	-	-	-
	Right-Tilt	23060	704.0	22.22	22.50	1.067	-	-	-	-
		23095	707.5	22.44	22.50	1.014	-0.06	0.206	0.209	-
		23130	711.0	22.27	22.50	1.054	-	-	-	-

LTE Band 13										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Left-Cheek	23230	782.0	23.56	24.00	1.107	-0.12	0.304	0.336	11
	Left-Tilt	23230	782.0	23.56	24.00	1.107	-0.06	0.255	0.282	-
	Right-Cheek	23230	782.0	23.56	24.00	1.107	0.09	0.294	0.325	-
	Right-Tilt	23230	782.0	23.56	24.00	1.107	-0.04	0.233	0.258	-
10M QPSK 25RB	Left-Cheek	23230	782.0	22.35	22.50	1.035	-0.08	0.275	0.285	-
	Left-Tilt	23230	782.0	22.35	22.50	1.035	0.05	0.213	0.221	-
	Right-Cheek	23230	782.0	22.35	22.50	1.035	-0.04	0.274	0.283	-
	Right-Tilt	23230	782.0	22.35	22.50	1.035	-0.05	0.223	0.231	-

LTE Band 17										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Left-Cheek	23780	709.0	23.67	24.00	1.079	-0.08	0.300	0.324	12
		23790	710.0	23.56	24.00	1.107	-	-	-	-
		23800	711.0	23.62	24.00	1.091	-	-	-	-
	Left-Tilt	23780	709.0	23.67	24.00	1.079	-0.04	0.251	0.271	-
		23790	710.0	23.56	24.00	1.107	-	-	-	-
		23800	711.0	23.62	24.00	1.091	-	-	-	-
	Right-Cheek	23780	709.0	23.67	24.00	1.079	0.06	0.290	0.313	-
		23790	710.0	23.56	24.00	1.107	-	-	-	-
		23800	711.0	23.62	24.00	1.091	-	-	-	-
	Right-Tilt	23780	709.0	23.67	24.00	1.079	0.03	0.243	0.262	-
		23790	710.0	23.56	24.00	1.107	-	-	-	-
		23800	711.0	23.62	24.00	1.091	-	-	-	-
10M QPSK 25RB	Left-Cheek	23780	709.0	22.41	22.50	1.021	-0.02	0.255	0.260	-
		23790	710.0	22.35	22.50	1.035	-	-	-	-
		23800	711.0	22.31	22.50	1.045	-	-	-	-
	Left-Tilt	23780	709.0	22.41	22.50	1.021	-0.01	0.214	0.218	-
		23790	710.0	22.35	22.50	1.035	-	-	-	-
		23800	711.0	22.31	22.50	1.045	-	-	-	-
	Right-Cheek	23780	709.0	22.41	22.50	1.021	0.01	0.246	0.252	-
		23790	710.0	22.35	22.50	1.035	-	-	-	-
		23800	711.0	22.31	22.50	1.045	-	-	-	-
Right-Tilt	23780	709.0	22.41	22.50	1.021	0.01	0.206	0.211	-	
	23790	710.0	22.35	22.50	1.035	-	-	-	-	
	23800	711.0	22.31	22.50	1.045	-	-	-	-	

LTE Band 25										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Left-Cheek	26140	1860.0	22.89	23.50	1.151	-	-	-	-
		26365	1882.5	22.86	23.50	1.159	-	-	-	-
		26590	1905.0	23.15	23.50	1.084	-0.07	0.732	0.793	13
	Left-Tilt	26140	1860.0	22.89	23.50	1.151	-	-	-	-
		26365	1882.5	22.86	23.50	1.159	-	-	-	-
		26590	1905.0	23.15	23.50	1.084	-0.04	0.613	0.665	-
	Right-Cheek	26140	1860.0	22.89	23.50	1.151	-	-	-	-
		26365	1882.5	22.86	23.50	1.159	-	-	-	-
		26590	1905.0	23.15	23.50	1.084	0.05	0.707	0.767	-
	Right-Tilt	26140	1860.0	22.89	23.50	1.151	-	-	-	-
		26365	1882.5	22.86	23.50	1.159	-	-	-	-
		26590	1905.0	23.15	23.50	1.084	-0.02	0.561	0.608	-
20M QPSK 50RB	Left-Cheek	26140	1860.0	21.62	22.50	1.225	-	-	-	-
		26365	1882.5	21.73	22.50	1.194	-	-	-	-
		26590	1905.0	22.03	22.50	1.114	-0.11	0.688	0.767	-
	Left-Tilt	26140	1860.0	21.62	22.50	1.225	-	-	-	-
		26365	1882.5	21.73	22.50	1.194	-	-	-	-
		26590	1905.0	22.03	22.50	1.114	-0.06	0.576	0.642	-
	Right-Cheek	26140	1860.0	21.62	22.50	1.225	-	-	-	-
		26365	1882.5	21.73	22.50	1.194	-	-	-	-
		26590	1905.0	22.03	22.50	1.114	0.08	0.665	0.741	-
	Right-Tilt	26140	1860.0	21.62	22.50	1.225	-	-	-	-
		26365	1882.5	21.73	22.50	1.194	-	-	-	-
		26590	1905.0	22.03	22.50	1.114	-0.04	0.527	0.587	-

LTE Band 26										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
15M QPSK 1RB	Left-Cheek	26765	821.5	24.04	25.00	1.247	-	-	-	-
		26865	831.5	24.22	25.00	1.197	-	-	-	-
		26965	841.5	24.70	25.00	1.072	-0.04	0.315	0.338	14
	Left-Tilt	26765	821.5	24.04	25.00	1.247	-	-	-	-
		26865	831.5	24.22	25.00	1.197	-	-	-	-
		26965	841.5	24.70	25.00	1.072	-0.02	0.264	0.283	-
	Right-Cheek	26765	821.5	24.04	25.00	1.247	-	-	-	-
		26865	831.5	24.22	25.00	1.197	-	-	-	-
		26965	841.5	24.70	25.00	1.072	0.03	0.304	0.326	-
	Right-Tilt	26765	821.5	24.04	25.00	1.247	-	-	-	-
		26865	831.5	24.22	25.00	1.197	-	-	-	-
		26965	841.5	24.70	25.00	1.072	-0.01	0.241	0.259	-
15M QPSK 38RB	Left-Cheek	26765	821.5	23.06	24.00	1.242	-	-	-	-
		26865	831.5	23.49	24.00	1.125	-	-	-	-
		26965	841.5	23.77	24.00	1.054	-0.05	0.277	0.292	-
	Left-Tilt	26765	821.5	23.06	24.00	1.242	-	-	-	-
		26865	831.5	23.49	24.00	1.125	-	-	-	-
		26965	841.5	23.77	24.00	1.054	-0.03	0.232	0.245	-
	Right-Cheek	26765	821.5	23.06	24.00	1.242	-	-	-	-
		26865	831.5	23.49	24.00	1.125	-	-	-	-
		26965	841.5	23.77	24.00	1.054	0.04	0.268	0.282	-
	Right-Tilt	26765	821.5	23.06	24.00	1.242	-	-	-	-
		26865	831.5	23.49	24.00	1.125	-	-	-	-
		26965	841.5	23.77	24.00	1.054	-0.02	0.212	0.224	-

LTE Band 66										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Left-Cheek	132072	1720.0	21.50	22.50	1.259	-	-	-	-
		132322	1745.0	21.88	22.50	1.153	-	-	-	-
		132572	1770.0	22.01	22.50	1.119	0.13	0.628	0.703	15
	Left-Tilt	132072	1720.0	21.50	22.50	1.259	-	-	-	-
		132322	1745.0	21.88	22.50	1.153	-	-	-	-
		132572	1770.0	22.01	22.50	1.119	0.07	0.526	0.589	-
	Right-Cheek	132072	1720.0	21.50	22.50	1.259	-	-	-	-
		132322	1745.0	21.88	22.50	1.153	-	-	-	-
		132572	1770.0	22.01	22.50	1.119	-0.10	0.607	0.679	-
	Right-Tilt	132072	1720.0	21.50	22.50	1.259	-	-	-	-
		132322	1745.0	21.88	22.50	1.153	-	-	-	-
		132572	1770.0	22.01	22.50	1.119	0.05	0.481	0.538	-
20M QPSK 50RB	Left-Cheek	132072	1720.0	20.41	21.00	1.146	-	-	-	-
		132322	1745.0	20.32	21.00	1.169	-	-	-	-
		132572	1770.0	20.58	21.00	1.102	-0.03	0.441	0.486	-
	Left-Tilt	132072	1720.0	20.41	21.00	1.146	-	-	-	-
		132322	1745.0	20.32	21.00	1.169	-	-	-	-
		132572	1770.0	20.58	21.00	1.102	-0.02	0.369	0.407	-
	Right-Cheek	132072	1720.0	20.41	21.00	1.146	-	-	-	-
		132322	1745.0	20.32	21.00	1.169	-	-	-	-
		132572	1770.0	20.58	21.00	1.102	0.02	0.426	0.469	-
	Right-Tilt	132072	1720.0	20.41	21.00	1.146	-	-	-	-
		132322	1745.0	20.32	21.00	1.169	-	-	-	-
		132572	1770.0	20.58	21.00	1.102	-0.01	0.338	0.372	-



LTE Band 38											
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz						(W/kg)	(W/kg)	
20M QPSK 1RB	Left-Cheek	37850	2580.0	22.14	22.50	1.086	1.006	-0.02	0.134	0.146	16
		38000	2595.0	21.87	22.50	1.156	1.006	-	-	-	-
		38150	2610.0	21.86	22.50	1.159	1.006	-	-	-	-
	Left-Tilt	37850	2580.0	22.14	22.50	1.086	1.006	-0.01	0.112	0.123	-
		38000	2595.0	21.87	22.50	1.156	1.006	-	-	-	-
		38150	2610.0	21.86	22.50	1.159	1.006	-	-	-	-
	Right-Cheek	37850	2580.0	22.14	22.50	1.086	1.006	0.01	0.129	0.142	-
		38000	2595.0	21.87	22.50	1.156	1.006	-	-	-	-
		38150	2610.0	21.86	22.50	1.159	1.006	-	-	-	-
	Right-Tilt	37850	2580.0	22.14	22.50	1.086	1.006	-0.01	0.103	0.112	-
		38000	2595.0	21.87	22.50	1.156	1.006	-	-	-	-
		38150	2610.0	21.86	22.50	1.159	1.006	-	-	-	-
20M QPSK 50RB	Left-Cheek	37850	2580.0	20.90	21.00	1.023	1.006	-0.05	0.102	0.105	-
		38000	2595.0	20.70	21.00	1.072	1.006	-	-	-	-
		38150	2610.0	20.74	21.00	1.062	1.006	-	-	-	-
	Left-Tilt	37850	2580.0	20.90	21.00	1.023	1.006	-0.03	0.085	0.088	-
		38000	2595.0	20.70	21.00	1.072	1.006	-	-	-	-
		38150	2610.0	20.74	21.00	1.062	1.006	-	-	-	-
	Right-Cheek	37850	2580.0	20.90	21.00	1.023	1.006	0.04	0.099	0.101	-
		38000	2595.0	20.70	21.00	1.072	1.006	-	-	-	-
		38150	2610.0	20.74	21.00	1.062	1.006	-	-	-	-
	Right-Tilt	37850	2580.0	20.90	21.00	1.023	1.006	-0.02	0.078	0.080	-
		38000	2595.0	20.70	21.00	1.072	1.006	-	-	-	-
		38150	2610.0	20.74	21.00	1.062	1.006	-	-	-	-

LTE Band 41											
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz						(W/kg)	(W/kg)	
20M QPSK 1RB	Left-Cheek	40340	2565.0	21.82	22.50	1.169	1.006	-	-	-	-
		40740	2602.5	21.85	22.50	1.161	1.006	-	-	-	-
		41140	2645.0	22.31	22.50	1.045	1.006	-0.18	0.140	0.141	17
	Left-Tilt	40340	2565.0	21.82	22.50	1.169	1.006	-	-	-	-
		40740	2602.5	21.85	22.50	1.161	1.006	-	-	-	-
		41140	2645.0	22.31	22.50	1.045	1.006	-0.09	0.117	0.118	-
	Right-Cheek	40340	2565.0	21.82	22.50	1.169	1.006	-	-	-	-
		40740	2602.5	21.85	22.50	1.161	1.006	-	-	-	-
		41140	2645.0	22.31	22.50	1.045	1.006	0.13	0.135	0.136	-
	Right-Tilt	40340	2565.0	21.82	22.50	1.169	1.006	-	-	-	-
		40740	2602.5	21.85	22.50	1.161	1.006	-	-	-	-
		41140	2645.0	22.31	22.50	1.045	1.006	-0.06	0.107	0.108	-
20M QPSK 50RB	Left-Cheek	40340	2565.0	20.93	21.50	1.140	1.006	-	-	-	-
		40740	2602.5	20.79	21.50	1.178	1.006	-	-	-	-
		41140	2645.0	21.19	21.50	1.074	1.006	-0.11	0.110	0.111	-
	Left-Tilt	40340	2565.0	20.93	21.50	1.140	1.006	-	-	-	-
		40740	2602.5	20.79	21.50	1.178	1.006	-	-	-	-
		41140	2645.0	21.19	21.50	1.074	1.006	-0.06	0.092	0.093	-
	Right-Cheek	40340	2565.0	20.93	21.50	1.140	1.006	-	-	-	-
		40740	2602.5	20.79	21.50	1.178	1.006	-	-	-	-
		41140	2645.0	21.19	21.50	1.074	1.006	0.08	0.106	0.107	-
	Right-Tilt	40340	2565.0	20.93	21.50	1.140	1.006	-	-	-	-
		40740	2602.5	20.79	21.50	1.178	1.006	-	-	-	-
		41140	2645.0	21.19	21.50	1.074	1.006	-0.04	0.084	0.085	-

WIFI 2.4G												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11b	Left-Cheek	1	2412	14.38	14.50	1.028	100.00%	1.000	-	-	-	-
		6	2437	14.34	14.50	1.038	100.00%	1.000	-	-	-	-
		11	2462	16.04	16.50	1.112	100.00%	1.000	-0.11	0.102	0.113	18
	Left-Tilt	1	2412	14.38	14.50	1.028	100.00%	1.000	-	-	-	-
		6	2437	14.34	14.50	1.038	100.00%	1.000	-	-	-	-
		11	2462	16.04	16.50	1.112	100.00%	1.000	0.15	0.086	0.096	-
	Right-Cheek	1	2412	14.38	14.50	1.028	100.00%	1.000	-	-	-	-
		6	2437	14.34	14.50	1.038	100.00%	1.000	-	-	-	-
		11	2462	16.04	16.50	1.112	100.00%	1.000	0.06	0.098	0.109	-
	Right-Tilt	1	2412	14.38	14.50	1.028	100.00%	1.000	-	-	-	-
		6	2437	14.34	14.50	1.038	100.00%	1.000	-	-	-	-
		11	2462	16.04	16.50	1.112	100.00%	1.000	-0.08	0.082	0.092	-

WIFI 5G U-NII-1												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11ac (VHT80)	Left-Cheek	42	5210	15.05	15.50	1.109	100.00%	1.000	-0.06	0.122	0.135	19
	Left-Tilt	42	5210	15.05	15.50	1.109	100.00%	1.000	0.08	0.103	0.115	-
	Right-Cheek	42	5210	15.05	15.50	1.109	100.00%	1.000	0.03	0.117	0.130	-
	Right-Tilt	42	5210	15.05	15.50	1.109	100.00%	1.000	-0.04	0.098	0.109	-

WIFI 5G U-NII-2A												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11ac (VHT80)	Left-Cheek	58	5290	14.87	15.00	1.030	100.00%	1.000	-0.05	0.136	0.140	20
	Left-Tilt	58	5290	14.87	15.00	1.030	100.00%	1.000	0.07	0.115	0.119	-
	Right-Cheek	58	5290	14.87	15.00	1.030	100.00%	1.000	0.03	0.131	0.135	-
	Right-Tilt	58	5290	14.87	15.00	1.030	100.00%	1.000	-0.04	0.110	0.113	-

WIFI 5G U-NII-2C												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11ac (VHT80)	Left-Cheek	106	5530	14.82	15.00	1.042	100.00%	1.000	-0.04	0.164	0.171	21
		138	5690	14.61	15.00	1.094	100.00%	1.000	-	-	-	-
	Left-Tilt	106	5530	14.82	15.00	1.042	100.00%	1.000	0.05	0.139	0.145	-
		138	5690	14.61	15.00	1.094	100.00%	1.000	-	-	-	-
	Right-Cheek	106	5530	14.82	15.00	1.042	100.00%	1.000	0.02	0.158	0.164	-
		138	5690	14.61	15.00	1.094	100.00%	1.000	-	-	-	-
	Right-Tilt	106	5530	14.82	15.00	1.042	100.00%	1.000	-0.03	0.132	0.138	-
		138	5690	14.61	15.00	1.094	100.00%	1.000	-	-	-	-

WIFI 5G U-NII-3												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11ac (VHT20)	Left-Cheek	149	5745	16.57	17.00	1.104	100.00%	1.000	-0.15	0.185	0.204	22
		157	5785	16.25	16.50	1.059	100.00%	1.000	-	-	-	-
		165	5825	16.46	16.50	1.009	100.00%	1.000	-	-	-	-
	Left-Tilt	149	5745	16.57	17.00	1.104	100.00%	1.000	0.20	0.157	0.173	-
		157	5785	16.25	16.50	1.059	100.00%	1.000	-	-	-	-
		165	5825	16.46	16.50	1.009	100.00%	1.000	-	-	-	-
	Right-Cheek	149	5745	16.57	17.00	1.104	100.00%	1.000	0.08	0.178	0.196	-
		157	5785	16.25	16.50	1.059	100.00%	1.000	-	-	-	-
		165	5825	16.46	16.50	1.009	100.00%	1.000	-	-	-	-
	Right-Tilt	149	5745	16.57	17.00	1.104	100.00%	1.000	-0.11	0.149	0.165	-
		157	5785	16.25	16.50	1.059	100.00%	1.000	-	-	-	-
		165	5825	16.46	16.50	1.009	100.00%	1.000	-	-	-	-

Bluetooth												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
BLE GFSK	Left-Cheek	0	2402	4.12	4.50	1.091	100.00%	1.000	-	-	-	-
		39	2441	5.60	6.00	1.096	100.00%	1.000	-	-	-	-
		78	2480	6.37	6.50	1.030	100.00%	1.000	-0.08	0.088	0.090	23
	Left-Tilt	0	2402	4.12	4.50	1.091	100.00%	1.000	-	-	-	-
		39	2441	5.60	6.00	1.096	100.00%	1.000	-	-	-	-
		78	2480	6.37	6.50	1.030	100.00%	1.000	0.11	0.074	0.076	-
	Right-Cheek	0	2402	4.12	4.50	1.091	100.00%	1.000	-	-	-	-
		39	2441	5.60	6.00	1.096	100.00%	1.000	-	-	-	-
		78	2480	6.37	6.50	1.030	100.00%	1.000	0.04	0.084	0.087	-
	Right-Tilt	0	2402	4.12	4.50	1.091	100.00%	1.000	-	-	-	-
		39	2441	5.60	6.00	1.096	100.00%	1.000	-	-	-	-
		78	2480	6.37	6.50	1.030	100.00%	1.000	-0.06	0.071	0.073	-

**Appendix B:SAR Measurement Results-Body**

GSM850										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
GPRS 3Tx slots	Front	128	824.2	29.48	30.00	1.127	-	-	-	-
		190	836.6	29.74	30.00	1.062	-0.02	0.432	0.459	-
		251	848.8	29.55	30.00	1.109	-	-	-	-
	Rear	128	824.2	29.48	30.00	1.127	-	-	-	-
		190	836.6	29.74	30.00	1.062	0.04	0.654	0.694	24
		251	848.8	29.55	30.00	1.109	-	-	-	-

GSM1900										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
GPRS 3Tx slots	Front	512	1850.2	27.91	28.00	1.021	-	-	-	-
		661	1880.0	27.92	28.00	1.019	0.10	0.690	0.703	-
		810	1909.8	27.37	28.00	1.156	-	-	-	-
	Rear	512	1850.2	27.91	28.00	1.021	0.06	0.855	0.873	-
		661	1880.0	27.92	28.00	1.019	-0.14	1.090	1.110	25
		810	1909.8	27.37	28.00	1.156	0.03	0.763	0.882	-

WCDMA Band II										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
RMC 12.2Kbps	Front	9262	1852.4	23.65	24.00	1.084	0.02	0.733	0.795	-
		9400	1880.0	23.30	24.00	1.175	-	-	-	-
		9538	1907.6	23.29	24.00	1.178	-	-	-	-
	Rear	9262	1852.4	23.65	24.00	1.084	-0.04	1.030	1.116	26
		9400	1880.0	23.30	24.00	1.175	0.06	0.855	1.005	-
		9538	1907.6	23.29	24.00	1.178	0.03	0.742	0.874	-

WCDMA Band IV										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
RMC 12.2Kbps	Front	1312	1712.4	23.48	24.00	1.127	-	-	-	-
		1413	1732.6	23.62	24.00	1.091	-	-	-	-
		1513	1752.6	23.70	24.00	1.072	0.04	0.712	0.763	-
	Rear	1312	1712.4	23.48	24.00	1.127	0.06	0.765	0.862	-
		1413	1732.6	23.62	24.00	1.091	0.05	0.883	0.964	-
		1513	1752.6	23.70	24.00	1.072	-0.10	1.000	1.072	27

WCDMA Band V										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
RMC 12.2Kbps	Front	4132	826.4	23.25	24.00	1.189	-	-	-	-
		4183	836.6	23.95	24.00	1.012	0.02	0.541	0.547	-
		4233	846.6	23.40	24.00	1.148	-	-	-	-
	Rear	4132	826.4	23.25	24.00	1.189	-	-	-	-
		4183	836.6	23.95	24.00	1.012	-0.05	0.633	0.640	28
		4233	846.6	23.40	24.00	1.148	-	-	-	-

LTE Band 2										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	18700	1860.0	22.70	23.50	1.202	-	-	-	-
		18900	1880.0	23.01	23.50	1.119	0.05	0.506	0.566	-
		19100	1900.0	22.81	23.50	1.172	-	-	-	-
	Rear	18700	1860.0	22.70	23.50	1.202	-	-	-	-
		18900	1880.0	23.01	23.50	1.119	-0.14	0.711	0.796	29
		19100	1900.0	22.81	23.50	1.172	-	-	-	-
20M QPSK 50RB	Front	18700	1860.0	21.62	22.00	1.091	-	-	-	-
		18900	1880.0	21.99	22.00	1.002	0.04	0.423	0.424	-
		19100	1900.0	21.95	22.00	1.012	-	-	-	-
	Rear	18700	1860.0	21.62	22.00	1.091	-	-	-	-
		18900	1880.0	21.99	22.00	1.002	-0.10	0.594	0.595	-
		19100	1900.0	21.95	22.00	1.012	-	-	-	-

LTE Band 4										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	20050	1720.0	21.81	22.00	1.045	-	-	-	-
		20175	1732.5	21.75	22.00	1.059	-	-	-	-
		20300	1745.0	21.86	22.00	1.033	0.05	0.492	0.508	-
	Rear	20050	1720.0	21.81	22.00	1.045	-	-	-	-
		20175	1732.5	21.75	22.00	1.059	-	-	-	-
		20300	1745.0	21.86	22.00	1.033	-0.14	0.691	0.714	30
20M QPSK 50RB	Front	20050	1720.0	20.99	21.00	1.002	-	-	-	-
		20175	1732.5	20.80	21.00	1.047	-	-	-	-
		20300	1745.0	20.77	21.00	1.054	0.03	0.409	0.431	-
	Rear	20050	1720.0	20.99	21.00	1.002	-	-	-	-
		20175	1732.5	20.80	21.00	1.047	-	-	-	-
		20300	1745.0	20.77	21.00	1.054	-0.08	0.575	0.606	-

LTE Band 5										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Front	20450	829.0	23.67	24.50	1.211	-	-	-	-
		20525	836.5	23.84	24.50	1.164	-	-	-	-
		20600	844.0	24.05	24.50	1.109	0.03	0.454	0.504	-
	Rear	20450	829.0	23.67	24.50	1.211	-	-	-	-
		20525	836.5	23.84	24.50	1.164	-	-	-	-
		20600	844.0	24.05	24.50	1.109	-0.08	0.638	0.708	31
10M QPSK 25RB	Front	20450	829.0	22.56	23.00	1.107	-	-	-	-
		20525	836.5	22.71	23.00	1.069	-	-	-	-
		20600	844.0	22.78	23.00	1.052	0.02	0.411	0.432	-
	Rear	20450	829.0	22.56	23.00	1.107	-	-	-	-
		20525	836.5	22.71	23.00	1.069	-	-	-	-
		20600	844.0	22.78	23.00	1.052	-0.04	0.578	0.608	-

LTE Band 7										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	20850	2510.0	21.37	22.00	1.156	-	-	-	-
		21100	2535.0	21.57	22.00	1.104	-	-	-	-
		21350	2560.0	21.80	22.00	1.047	0.04	0.202	0.212	-
	Rear	20850	2510.0	21.37	22.00	1.156	-	-	-	-
		21100	2535.0	21.57	22.00	1.104	-	-	-	-
		21350	2560.0	21.80	22.00	1.047	-0.10	0.284	0.297	32
20M QPSK 50RB	Front	20850	2510.0	20.23	21.00	1.194	-	-	-	-
		21100	2535.0	20.56	21.00	1.107	-	-	-	-
		21350	2560.0	20.77	21.00	1.054	0.02	0.162	0.171	-
	Rear	20850	2510.0	20.23	21.00	1.194	-	-	-	-
		21100	2535.0	20.56	21.00	1.107	-	-	-	-
		21350	2560.0	20.77	21.00	1.054	-0.05	0.228	0.240	-

LTE Band 12										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Front	23060	704.0	23.38	24.00	1.153	-	-	-	-
		23095	707.5	23.63	24.00	1.089	0.03	0.431	0.469	-
		23130	711.0	23.47	24.00	1.130	-	-	-	-
	Rear	23060	704.0	23.38	24.00	1.153	-	-	-	-
		23095	707.5	23.63	24.00	1.089	-0.07	0.606	0.660	33
		23130	711.0	23.47	24.00	1.130	-	-	-	-
10M QPSK 25RB	Front	23060	704.0	22.22	22.50	1.067	-	-	-	-
		23095	707.5	22.44	22.50	1.014	0.01	0.398	0.404	-
		23130	711.0	22.27	22.50	1.054	-	-	-	-
	Rear	23060	704.0	22.22	22.50	1.067	-	-	-	-
		23095	707.5	22.44	22.50	1.014	-0.03	0.559	0.567	-
		23130	711.0	22.27	22.50	1.054	-	-	-	-

LTE Band 13										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Front	23230	782.0	23.56	24.00	1.107	0.02	0.438	0.485	-
	Rear	23230	782.0	23.56	24.00	1.107	-0.05	0.616	0.682	34
10M QPSK 25RB	Front	23230	782.0	22.35	22.50	1.035	0.01	0.401	0.415	-
	Rear	23230	782.0	22.35	22.50	1.035	-0.02	0.564	0.584	-

LTE Band 17										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Front	23780	709.0	23.67	24.00	1.079	0.05	0.418	0.451	-
		23790	710.0	23.56	24.00	1.107	-	-	-	-
		23800	711.0	23.62	24.00	1.091	-	-	-	-
	Rear	23780	709.0	23.67	24.00	1.079	-0.12	0.587	0.633	35
		23790	710.0	23.56	24.00	1.107	-	-	-	-
		23800	711.0	23.62	24.00	1.091	-	-	-	-
10M QPSK 25RB	Front	23780	709.0	22.41	22.50	1.021	0.02	0.364	0.372	-
		23790	710.0	22.35	22.50	1.035	-	-	-	-
		23800	711.0	22.31	22.50	1.045	-	-	-	-
	Rear	23780	709.0	22.41	22.50	1.021	-0.04	0.512	0.523	-
		23790	710.0	22.35	22.50	1.035	-	-	-	-
		23800	711.0	22.31	22.50	1.045	-	-	-	-

LTE Band 25										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	26140	1860.0	22.89	23.50	1.151	-	-	-	-
		26365	1882.5	22.86	23.50	1.159	-	-	-	-
		26590	1905.0	23.15	23.50	1.084	0.02	0.508	0.551	-
	Rear	26140	1860.0	22.89	23.50	1.151	-	-	-	-
		26365	1882.5	22.86	23.50	1.159	-	-	-	-
		26590	1905.0	23.15	23.50	1.084	-0.04	0.714	0.774	36
20M QPSK 50RB	Front	26140	1860.0	21.62	22.50	1.225	-	-	-	-
		26365	1882.5	21.73	22.50	1.194	-	-	-	-
		26590	1905.0	22.03	22.50	1.114	0.01	0.435	0.485	-
	Rear	26140	1860.0	21.62	22.50	1.225	-	-	-	-
		26365	1882.5	21.73	22.50	1.194	-	-	-	-
		26590	1905.0	22.03	22.50	1.114	-0.03	0.611	0.681	-

LTE Band 26										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	26765	821.5	24.04	25.00	1.247	-	-	-	-
		26865	831.5	24.22	25.00	1.197	-	-	-	-
		26965	841.5	24.70	25.00	1.072	0.01	0.453	0.485	-
	Rear	26765	821.5	24.04	25.00	1.247	-	-	-	-
		26865	831.5	24.22	25.00	1.197	-	-	-	-
		26965	841.5	24.70	25.00	1.072	-0.03	0.636	0.681	37
20M QPSK 50RB	Front	26765	821.5	23.06	24.00	1.242	-	-	-	-
		26865	831.5	23.49	24.00	1.125	-	-	-	-
		26965	841.5	23.77	24.00	1.054	0.03	0.427	0.450	-
	Rear	26765	821.5	23.06	24.00	1.242	-	-	-	-
		26865	831.5	23.49	24.00	1.125	-	-	-	-
		26965	841.5	23.77	24.00	1.054	-0.07	0.600	0.633	-



LTE Band 66										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	132072	1720.0	21.50	22.50	1.259	-	-	-	-
		132322	1745.0	21.88	22.50	1.153	-	-	-	-
		132572	1770.0	22.01	22.50	1.119	0.04	0.456	0.510	-
	Rear	132072	1720.0	21.50	22.50	1.259	-	-	-	-
		132322	1745.0	21.88	22.50	1.153	-	-	-	38
		132572	1770.0	22.01	22.50	1.119	-0.10	0.641	0.718	-
20M QPSK 50RB	Front	132072	1720.0	20.41	21.00	1.146	-	-	-	-
		132322	1745.0	20.32	21.00	1.169	-	-	-	-
		132572	1770.0	20.58	21.00	1.102	0.01	0.323	0.356	-
	Rear	132072	1720.0	20.41	21.00	1.146	-	-	-	-
		132322	1745.0	20.32	21.00	1.169	-	-	-	-
		132572	1770.0	20.58	21.00	1.102	-0.02	0.454	0.500	-

LTE Band 38											
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz						(W/kg)	(W/kg)	
20M QPSK 1RB	Front	37850	2580.0	22.14	22.50	1.086	1.006	0.04	0.209	0.210	-
		38000	2595.0	21.87	22.50	1.156	1.006	-	-	-	-
		38150	2610.0	21.86	22.50	1.159	1.006	-	-	-	-
	Rear	37850	2580.0	22.14	22.50	1.086	1.006	-0.10	0.293	0.295	39
		38000	2595.0	21.87	22.50	1.156	1.006	-	-	-	-
		38150	2610.0	21.86	22.50	1.159	1.006	-	-	-	-
20M QPSK 50RB	Front	37850	2580.0	20.90	21.00	1.023	1.006	0.02	0.180	0.181	-
		38000	2595.0	20.70	21.00	1.072	1.006	-	-	-	-
		38150	2610.0	20.74	21.00	1.062	1.006	-	-	-	-
	Rear	37850	2580.0	20.90	21.00	1.023	1.006	-0.05	0.253	0.255	-
		38000	2595.0	20.70	21.00	1.072	1.006	-	-	-	-
		38150	2610.0	20.74	21.00	1.062	1.006	-	-	-	-

LTE Band 41											
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz						(W/kg)	(W/kg)	
20M QPSK 1RB	Front	40340	2565.0	21.82	22.50	1.169	1.006	-	-	-	-
		40740	2602.5	21.85	22.50	1.161	1.006	-	-	-	-
		41140	2645.0	22.31	22.50	1.045	1.006	0.06	0.218	0.219	-
	Rear	40340	2565.0	21.82	22.50	1.169	1.006	-	-	-	-
		40740	2602.5	21.85	22.50	1.161	1.006	-	-	-	-
		41140	2645.0	22.31	22.50	1.045	1.006	-0.15	0.307	0.309	40
20M QPSK 50RB	Front	40340	2565.0	20.93	21.50	1.140	1.006	-	-	-	-
		40740	2602.5	20.79	21.50	1.178	1.006	-	-	-	-
		41140	2645.0	21.19	21.50	1.074	1.006	0.01	0.196	0.197	-
	Rear	40340	2565.0	20.93	21.50	1.140	1.006	-	-	-	-
		40740	2602.5	20.79	21.50	1.178	1.006	-	-	-	-
		41140	2645.0	21.19	21.50	1.074	1.006	-0.03	0.275	0.277	-

WIFI 2.4G												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11b	Front	1	2412	14.38	14.50	1.028	1.000	1.000	-	-	-	-
		6	2437	14.34	14.50	1.038	1.000	1.000	-	-	-	-
		11	2462	16.04	16.50	1.112	1.000	1.000	-0.10	0.102	0.113	-
	Rear	1	2412	14.38	14.50	1.028	1.000	1.000	-	-	-	-
		6	2437	14.34	14.50	1.038	1.000	1.000	-	-	-	-
		11	2462	16.04	16.50	1.112	1.000	1.000	-0.13	0.146	0.162	41

WIFI 5G U-NII-1												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11ac (VHT80)	Front	42	5210	15.05	15.50	1.109	1.000	1.000	-0.09	0.096	0.106	-
	Rear	42	5210	15.05	15.50	1.109	1.000	1.000	-0.04	0.138	0.153	42

WIFI 5G U-NII-2A												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11ac (VHT80)	Front	58	5290	14.87	15.00	1.030	1.000	1.000	-0.06	0.113	0.116	-
	Rear	58	5290	14.87	15.00	1.030	1.000	1.000	-0.10	0.152	0.157	43

WIFI 5G U-NII-2C												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11ac (VHT80)	Front	106	5530	14.82	15.00	1.042	1.000	1.000	-0.10	0.125	0.130	-
		138	5690	14.61	15.00	1.094	1.000	1.000	-	-	-	-
	Rear	106	5530	14.61	15.00	1.094	1.000	1.000	-0.14	0.167	0.183	44
		138	5690	14.82	15.00	1.042	1.000	1.000	-	-	-	-

WIFI 5G U-NII-3												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11ac (VHT20)	Front	149	5745	16.57	17.00	1.104	1.000	1.000	-0.03	0.138	0.152	-
		157	5785	16.25	16.50	1.059	1.000	1.000	-	-	-	-
		165	5825	16.46	16.50	1.009	1.000	1.000	-	-	-	-
	Rear	149	5745	16.57	17.00	1.104	1.000	1.000	-0.05	0.197	0.218	45
		157	5785	16.25	16.50	1.059	1.000	1.000	-	-	-	-
		165	5825	16.46	16.50	1.009	1.000	1.000	-	-	-	-

Bluetooth												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
GFSK	Front	0	2402	4.12	4.50	1.091	1.000	1.000	-	-	-	-
		39	2441	5.60	6.00	1.096	1.000	1.000	-	-	-	-
		78	2480	6.37	6.50	1.030	1.000	1.000	-0.10	0.085	0.088	-
	Rear	0	2402	4.12	4.50	1.091	1.000	1.000	-	-	-	-
		39	2441	5.60	6.00	1.096	1.000	1.000	-	-	-	-
		78	2480	6.37	6.50	1.030	1.000	1.000	-0.13	0.108	0.111	46

**Appendix B:SAR Measurement Results-Hotspot**

GSM850										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
GPRS 3Tx slots	Front	128	824.2	29.48	30.00	1.127	-	-	-	-
		190	836.6	29.74	30.00	1.062	-0.02	0.432	0.459	-
		251	848.8	29.55	30.00	1.109	-	-	-	-
	Rear	128	824.2	29.48	30.00	1.127	-	-	-	-
		190	836.6	29.74	30.00	1.062	0.04	0.654	0.694	24
		251	848.8	29.55	30.00	1.109	-	-	-	-
	Left	190	836.6	29.74	30.00	1.062	-0.02	0.402	0.427	-
	Right	190	836.6	29.74	30.00	1.062	0.01	0.385	0.409	-
	Top	190	836.6	29.74	30.00	1.062	-	-	-	-
Bottom	190	836.6	29.74	30.00	1.062	0.01	0.265	0.281	-	

GSM1900										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
GPRS 3Tx slots	Front	512	1850.2	27.91	28.00	1.021	-	-	-	-
		661	1880.0	27.92	28.00	1.019	0.10	0.690	0.703	-
		810	1909.8	27.37	28.00	1.156	-	-	-	-
	Rear	512	1850.2	27.91	28.00	1.021	0.06	0.855	0.873	-
		661	1880.0	27.92	28.00	1.019	-0.14	1.090	1.110	25
		810	1909.8	27.37	28.00	1.156	0.03	0.763	0.882	-
	Left	661	1880.0	27.92	28.00	1.019	0.08	0.671	0.683	-
	Right	661	1880.0	27.92	28.00	1.019	-0.05	0.641	0.653	-
	Top	661	1880.0	27.92	28.00	1.019	-	-	-	-
Bottom	661	1880.0	27.92	28.00	1.019	-0.05	0.745	0.759	-	

WCDMA Band II										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
RMC 12.2Kbps	Front	9262	1852.4	23.65	24.00	1.084	0.02	0.733	0.795	-
		9400	1880.0	23.30	24.00	1.175	-	-	-	-
		9538	1907.6	23.29	24.00	1.178	-	-	-	-
	Rear	9262	1852.4	23.65	24.00	1.084	-0.04	1.030	1.116	26
		9400	1880.0	23.30	24.00	1.175	0.06	0.855	1.005	-
		9538	1907.6	23.29	24.00	1.178	0.03	0.742	0.874	-
	Left	9262	1852.4	23.65	24.00	1.084	0.02	0.634	0.687	-
	Right	9262	1852.4	23.65	24.00	1.084	-0.01	0.606	0.657	-
	Top	9262	1852.4	23.65	24.00	1.084	-	-	-	-
Bottom	9262	1852.4	23.65	24.00	1.084	-0.01	0.725	0.786	-	

WCDMA Band IV										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
RMC 12.2Kbps	Front	1312	1712.4	23.48	24.00	1.127	-	-	-	-
		1413	1732.6	23.62	24.00	1.091	-	-	-	-
		1513	1752.6	23.70	24.00	1.072	0.04	0.712	0.763	-
	Rear	1312	1712.4	23.48	24.00	1.127	0.06	0.765	0.862	-
		1413	1732.6	23.62	24.00	1.091	0.05	0.883	0.964	-
		1513	1752.6	23.70	24.00	1.072	-0.10	1.000	1.072	27
	Left	1513	1752.6	23.70	24.00	1.072	0.06	0.615	0.659	-
	Right	1513	1752.6	23.70	24.00	1.072	-0.04	0.588	0.630	-
	Top	1513	1752.6	23.70	24.00	1.072	-	-	-	-
Bottom	1513	1752.6	23.70	24.00	1.072	-0.04	0.694	0.744	-	

WCDMA Band V										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
RMC 12.2Kbps	Front	4132	826.4	23.25	24.00	1.189	-	-	-	-
		4183	836.6	23.95	24.00	1.012	0.02	0.541	0.547	-
		4233	846.6	23.40	24.00	1.148	-	-	-	-
	Rear	4132	826.4	23.25	24.00	1.189	-	-	-	-
		4183	836.6	23.95	24.00	1.012	-0.05	0.633	0.640	28
		4233	846.6	23.40	24.00	1.148	-	-	-	-
	Left	4183	836.6	23.95	24.00	1.012	0.03	0.390	0.395	-
	Right	4183	836.6	23.95	24.00	1.012	-0.02	0.372	0.376	-
	Top	4183	836.6	23.95	24.00	1.012	-	-	-	-
Bottom	4183	836.6	23.95	24.00	1.012	-0.02	0.257	0.260	-	

LTE Band 2										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	18700	1860.0	22.70	23.50	1.202	-	-	-	-
		18900	1880.0	23.01	23.50	1.119	0.05	0.506	0.566	-
		19100	1900.0	22.81	23.50	1.172	-	-	-	-
	Rear	18700	1860.0	22.70	23.50	1.202	-	-	-	-
		18900	1880.0	23.01	23.50	1.119	-0.14	0.711	0.796	29
		19100	1900.0	22.81	23.50	1.172	-	-	-	-
	Left	18900	1880.0	23.01	23.50	1.119	0.08	0.438	0.490	-
	Right	18900	1880.0	23.01	23.50	1.119	-0.05	0.418	0.468	-
	Top	18900	1880.0	23.01	23.50	1.119	-	-	-	-
Bottom	18900	1880.0	23.01	23.50	1.119	-0.05	0.555	0.621	-	
20M QPSK 50RB	Front	18700	1860.0	21.62	22.00	1.091	-	-	-	-
		18900	1880.0	21.99	22.00	1.002	0.04	0.423	0.424	-
		19100	1900.0	21.95	22.00	1.012	-	-	-	-
	Rear	18700	1860.0	21.62	22.00	1.091	-	-	-	-
		18900	1880.0	21.99	22.00	1.002	-0.10	0.594	0.595	-
		19100	1900.0	21.95	22.00	1.012	-	-	-	-
	Left	18900	1880.0	21.99	22.00	1.002	0.06	0.366	0.367	-
	Right	18900	1880.0	21.99	22.00	1.002	-0.04	0.349	0.350	-
	Top	18900	1880.0	21.99	22.00	1.002	-	-	-	-
Bottom	18900	1880.0	21.99	22.00	1.002	-0.04	0.464	0.465	-	

LTE Band 4										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	20050	1720.0	21.81	22.00	1.045	-	-	-	-
		20175	1732.5	21.75	22.00	1.059	-	-	-	-
		20300	1745.0	21.86	22.00	1.033	0.05	0.492	0.508	-
	Rear	20050	1720.0	21.81	22.00	1.045	-	-	-	-
		20175	1732.5	21.75	22.00	1.059	-	-	-	-
		20300	1745.0	21.86	22.00	1.033	-0.14	0.691	0.714	30
	Left	20300	1745.0	21.86	22.00	1.033	0.08	0.425	0.439	-
	Right	20300	1745.0	21.86	22.00	1.033	-0.05	0.406	0.419	-
	Top	20300	1745.0	21.86	22.00	1.033	-	-	-	-
Bottom	20300	1745.0	21.86	22.00	1.033	-0.05	0.539	0.557	-	
20M QPSK 50RB	Front	20050	1720.0	20.99	21.00	1.002	-	-	-	-
		20175	1732.5	20.80	21.00	1.047	-	-	-	-
		20300	1745.0	20.77	21.00	1.054	0.03	0.409	0.431	-
	Rear	20050	1720.0	20.99	21.00	1.002	-	-	-	-
		20175	1732.5	20.80	21.00	1.047	-	-	-	-
		20300	1745.0	20.77	21.00	1.054	-0.08	0.575	0.606	-
	Left	20300	1745.0	20.77	21.00	1.054	0.05	0.354	0.373	-
	Right	20300	1745.0	20.77	21.00	1.054	-0.03	0.338	0.356	-
	Top	20300	1745.0	20.77	21.00	1.054	-	-	-	-
Bottom	20300	1745.0	20.77	21.00	1.054	-0.03	0.449	0.473	-	

LTE Band 5										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Front	20450	829.0	23.67	24.50	1.211	-	-	-	-
		20525	836.5	23.84	24.50	1.164	-	-	-	-
		20600	844.0	24.05	24.50	1.109	0.03	0.454	0.504	-
	Rear	20450	829.0	23.67	24.50	1.211	-	-	-	-
		20525	836.5	23.84	24.50	1.164	-	-	-	-
		20600	844.0	24.05	24.50	1.109	-0.08	0.638	0.708	31
	Left	20600	844.0	24.05	24.50	1.109	0.05	0.393	0.436	-
	Right	20600	844.0	24.05	24.50	1.109	-0.03	0.375	0.416	-
	Top	20600	844.0	24.05	24.50	1.109	-	-	-	-
Bottom	20600	844.0	24.05	24.50	1.109	-0.03	0.498	0.552	-	
10M QPSK 25RB	Front	20450	829.0	22.56	23.00	1.107	-	-	-	-
		20525	836.5	22.71	23.00	1.069	-	-	-	-
		20600	844.0	22.78	23.00	1.052	0.02	0.411	0.432	-
	Rear	20450	829.0	22.56	23.00	1.107	-	-	-	-
		20525	836.5	22.71	23.00	1.069	-	-	-	-
		20600	844.0	22.78	23.00	1.052	-0.04	0.578	0.608	-
	Left	20600	844.0	22.78	23.00	1.052	0.02	0.356	0.374	-
	Right	20600	844.0	22.78	23.00	1.052	-0.01	0.340	0.358	-
	Top	20600	844.0	22.78	23.00	1.052	-	-	-	-
Bottom	20600	844.0	22.78	23.00	1.052	-0.01	0.451	0.474	-	

LTE Band 7										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	20850	2510.0	21.37	22.00	1.156	-	-	-	-
		21100	2535.0	21.57	22.00	1.104	-	-	-	-
		21350	2560.0	21.80	22.00	1.047	0.04	0.202	0.212	-
	Rear	20850	2510.0	21.37	22.00	1.156	-	-	-	-
		21100	2535.0	21.57	22.00	1.104	-	-	-	-
		21350	2560.0	21.80	22.00	1.047	-0.10	0.284	0.297	32
	Left	21350	2560.0	21.80	22.00	1.047	0.06	0.175	0.183	-
	Right	21350	2560.0	21.80	22.00	1.047	-0.04	0.167	0.175	-
	Top	21350	2560.0	21.80	22.00	1.047	-	-	-	-
Bottom	21350	2560.0	21.80	22.00	1.047	-0.04	0.222	0.232	-	
20M QPSK 50RB	Front	20850	2510.0	20.23	21.00	1.194	-	-	-	-
		21100	2535.0	20.56	21.00	1.107	-	-	-	-
		21350	2560.0	20.77	21.00	1.054	0.02	0.162	0.171	-
	Rear	20850	2510.0	20.23	21.00	1.194	-	-	-	-
		21100	2535.0	20.56	21.00	1.107	-	-	-	-
		21350	2560.0	20.77	21.00	1.054	-0.05	0.228	0.240	-
	Left	21350	2560.0	20.77	21.00	1.054	0.03	0.140	0.148	-
	Right	21350	2560.0	20.77	21.00	1.054	-0.02	0.134	0.141	-
	Top	21350	2560.0	20.77	21.00	1.054	-	-	-	-
Bottom	21350	2560.0	20.77	21.00	1.054	-0.02	0.178	0.188	-	

LTE Band 12										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Front	23060	704.0	23.38	24.00	1.153	-	-	-	-
		23095	707.5	23.63	24.00	1.089	0.03	0.431	0.469	-
		23130	711.0	23.47	24.00	1.130	-	-	-	-
	Rear	23060	704.0	23.38	24.00	1.153	-	-	-	-
		23095	707.5	23.63	24.00	1.089	-0.07	0.606	0.660	33
		23130	711.0	23.47	24.00	1.130	-	-	-	-
	Left	23095	707.5	23.63	24.00	1.089	0.04	0.373	0.406	-
	Right	23095	707.5	23.63	24.00	1.089	-0.03	0.356	0.388	-
	Top	23095	707.5	23.63	24.00	1.089	-	-	-	-
Bottom	23095	707.5	23.63	24.00	1.089	-0.03	0.246	0.268	-	
10M QPSK 25RB	Front	23060	704.0	22.22	22.50	1.067	-	-	-	-
		23095	707.5	22.44	22.50	1.014	0.01	0.398	0.404	-
		23130	711.0	22.27	22.50	1.054	-	-	-	-
	Rear	23060	704.0	22.22	22.50	1.067	-	-	-	-
		23095	707.5	22.44	22.50	1.014	-0.03	0.559	0.567	-
		23130	711.0	22.27	22.50	1.054	-	-	-	-
	Left	23095	707.5	22.44	22.50	1.014	0.02	0.344	0.349	-
	Right	23095	707.5	22.44	22.50	1.014	-0.01	0.329	0.334	-
	Top	23095	707.5	22.44	22.50	1.014	-	-	-	-
Bottom	23095	707.5	22.44	22.50	1.014	-0.01	0.227	0.230	-	

LTE Band 13										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Front	23230	782.0	23.56	24.00	1.107	0.02	0.438	0.485	-
	Rear	23230	782.0	23.56	24.00	1.107	-0.05	0.616	0.682	34
	Left	23230	782.0	23.56	24.00	1.107	-0.01	0.379	0.419	-
	Right	23230	782.0	23.56	24.00	1.107	0.01	0.362	0.401	-
	Top	23230	782.0	23.56	24.00	1.107	-	-	-	-
	Bottom	23230	782.0	23.56	24.00	1.107	0.01	0.250	0.277	-
10M QPSK 25RB	Front	23230	782.0	22.35	22.50	1.035	0.01	0.401	0.415	-
	Rear	23230	782.0	22.35	22.50	1.035	-0.02	0.564	0.584	-
	Left	23230	782.0	22.35	22.50	1.035	-0.01	0.347	0.359	-
	Right	23230	782.0	22.35	22.50	1.035	0.00	0.332	0.344	-
	Top	23230	782.0	22.35	22.50	1.035	-	-	-	-
	Bottom	23230	782.0	22.35	22.50	1.035	0.00	0.229	0.237	-

LTE Band 17										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
10M QPSK 1RB	Front	23780	709.0	23.67	24.00	1.079	0.05	0.418	0.451	-
		23790	710.0	23.56	24.00	1.107	-	-	-	-
		23800	711.0	23.62	24.00	1.091	-	-	-	-
	Rear	23780	709.0	23.67	24.00	1.079	-0.12	0.587	0.633	35
		23790	710.0	23.56	24.00	1.107	-	-	-	-
		23800	711.0	23.62	24.00	1.091	-	-	-	-
	Left	23780	709.0	23.67	24.00	1.079	0.07	0.361	0.389	-
	Right	23780	709.0	23.67	24.00	1.079	-0.04	0.345	0.372	-
	Top	23780	709.0	23.67	24.00	1.079	-	-	-	-
Bottom	23780	709.0	23.67	24.00	1.079	-0.04	0.238	0.257	-	
10M QPSK 25RB	Front	23780	709.0	22.41	22.50	1.021	0.02	0.364	0.372	-
		23790	710.0	22.35	22.50	1.035	-	-	-	-
		23800	711.0	22.31	22.50	1.045	-	-	-	-
	Rear	23780	709.0	22.41	22.50	1.021	-0.04	0.512	0.523	-
		23790	710.0	22.35	22.50	1.035	-	-	-	-
		23800	711.0	22.31	22.50	1.045	-	-	-	-
	Left	23780	709.0	22.41	22.50	1.021	0.02	0.315	0.322	-
	Right	23780	709.0	22.41	22.50	1.021	-0.01	0.301	0.307	-
	Top	23780	709.0	22.41	22.50	1.021	-	-	-	-
Bottom	23780	709.0	22.41	22.50	1.021	-0.01	0.208	0.212	-	

LTE Band 25										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	26140	1860.0	22.89	23.50	1.151	-	-	-	-
		26365	1882.5	22.86	23.50	1.159	-	-	-	-
		26590	1905.0	23.15	23.50	1.084	0.02	0.508	0.551	-
	Rear	26140	1860.0	22.89	23.50	1.151	-	-	-	-
		26365	1882.5	22.86	23.50	1.159	-	-	-	-
		26590	1905.0	23.15	23.50	1.084	-0.04	0.714	0.774	36
	Left	26590	1905.0	23.15	23.50	1.084	0.02	0.439	0.476	-
	Right	26590	1905.0	23.15	23.50	1.084	-0.01	0.270	0.293	-
	Top	26590	1905.0	23.15	23.50	1.084	-	-	-	-
Bottom	26590	1905.0	23.15	23.50	1.084	-0.01	0.557	0.604	-	
20M QPSK 50RB	Front	26140	1860.0	21.62	22.50	1.225	-	-	-	-
		26365	1882.5	21.73	22.50	1.194	-	-	-	-
		26590	1905.0	22.03	22.50	1.114	0.01	0.435	0.485	-
	Rear	26140	1860.0	21.62	22.50	1.225	-	-	-	-
		26365	1882.5	21.73	22.50	1.194	-	-	-	-
		26590	1905.0	22.03	22.50	1.114	-0.03	0.611	0.681	-
	Left	26590	1905.0	22.03	22.50	1.114	0.02	0.376	0.419	-
	Right	26590	1905.0	22.03	22.50	1.114	-0.01	0.231	0.257	-
	Top	26590	1905.0	22.03	22.50	1.114	-	-	-	-
Bottom	26590	1905.0	22.03	22.50	1.114	-0.01	0.477	0.532	-	



LTE Band 26										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	26765	821.5	24.04	25.00	1.247	-	-	-	-
		26865	831.5	24.22	25.00	1.197	-	-	-	-
		26965	841.5	24.70	25.00	1.072	0.01	0.453	0.485	-
	Rear	26765	821.5	24.04	25.00	1.247	-	-	-	-
		26865	831.5	24.22	25.00	1.197	-	-	-	-
		26965	841.5	24.70	25.00	1.072	-0.03	0.636	0.681	37
	Left	26965	841.5	24.70	25.00	1.072	0.02	0.391	0.419	-
	Right	26965	841.5	24.70	25.00	1.072	-0.01	0.374	0.401	-
	Top	26965	841.5	24.70	25.00	1.072	-	-	-	-
Bottom	26965	841.5	24.70	25.00	1.072	-0.01	0.496	0.531	-	
20M QPSK 50RB	Front	26765	821.5	23.06	24.00	1.242	-	-	-	-
		26865	831.5	23.49	24.00	1.125	-	-	-	-
		26965	841.5	23.77	24.00	1.054	0.03	0.427	0.450	-
	Rear	26765	821.5	23.06	24.00	1.242	-	-	-	-
		26865	831.5	23.49	24.00	1.125	-	-	-	-
		26965	841.5	23.77	24.00	1.054	-0.07	0.600	0.633	-
	Left	26965	841.5	23.77	24.00	1.054	0.04	0.369	0.389	-
	Right	26965	841.5	23.77	24.00	1.054	-0.03	0.353	0.372	-
	Top	26965	841.5	23.77	24.00	1.054	-	-	-	-
Bottom	26965	841.5	23.77	24.00	1.054	-0.03	0.468	0.493	-	

LTE Band 66										
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz					(W/kg)	(W/kg)	
20M QPSK 1RB	Front	132072	1720.0	21.50	22.50	1.259	-	-	-	-
		132322	1745.0	21.88	22.50	1.153	-	-	-	-
		132572	1770.0	22.01	22.50	1.119	0.04	0.456	0.510	-
	Rear	132072	1720.0	21.50	22.50	1.259	-	-	-	-
		132322	1745.0	21.88	22.50	1.153	-	-	-	-
		132572	1770.0	22.01	22.50	1.119	-0.10	0.641	0.718	38
	Left	132572	1770.0	22.01	22.50	1.119	0.06	0.394	0.441	-
	Right	132572	1770.0	22.01	22.50	1.119	-0.04	0.377	0.422	-
	Top	132572	1770.0	22.01	22.50	1.119	-	-	-	-
Bottom	132572	1770.0	22.01	22.50	1.119	-0.04	0.500	0.560	-	
20M QPSK 50RB	Front	132072	1720.0	20.41	21.00	1.146	-	-	-	-
		132322	1745.0	20.32	21.00	1.169	-	-	-	-
		132572	1770.0	20.58	21.00	1.102	0.01	0.323	0.356	-
	Rear	132072	1720.0	20.41	21.00	1.146	-	-	-	-
		132322	1745.0	20.32	21.00	1.169	-	-	-	-
		132572	1770.0	20.58	21.00	1.102	-0.02	0.454	0.500	-
	Left	132572	1770.0	20.58	21.00	1.102	0.01	0.279	0.307	-
	Right	132572	1770.0	20.58	21.00	1.102	-0.01	0.267	0.294	-
	Top	132572	1770.0	20.58	21.00	1.102	-	-	-	-
Bottom	132572	1770.0	20.58	21.00	1.102	-0.01	0.354	0.390	-	

LTE Band 38											
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz						(W/kg)	(W/kg)	
20M QPSK 1RB	Front	37850	2580.0	22.14	22.50	1.086	1.006	0.04	0.209	0.210	-
		38000	2595.0	21.87	22.50	1.156	1.006	-	-	-	-
		38150	2610.0	21.86	22.50	1.159	1.006	-	-	-	-
	Rear	37850	2580.0	22.14	22.50	1.086	1.006	-0.10	0.293	0.295	39
		38000	2595.0	21.87	22.50	1.156	1.006	-	-	-	-
		38150	2610.0	21.86	22.50	1.159	1.006	-	-	-	-
	Left	37850	2580.0	22.14	22.50	1.086	1.006	0.06	0.180	0.181	-
	Right	37850	2580.0	22.14	22.50	1.086	1.006	-0.04	0.172	0.173	-
	Top	37850	2580.0	22.14	22.50	1.086	1.006	-	-	-	-
Bottom	37850	2580.0	22.14	22.50	1.086	1.006	-0.04	0.119	0.120	-	
20M QPSK 50RB	Front	37850	2580.0	20.90	21.00	1.023	1.006	0.02	0.180	0.181	-
		38000	2595.0	20.70	21.00	1.072	1.006	-	-	-	-
		38150	2610.0	20.74	21.00	1.062	1.006	-	-	-	-
	Rear	37850	2580.0	20.90	21.00	1.023	1.006	-0.05	0.253	0.255	-
		38000	2595.0	20.70	21.00	1.072	1.006	-	-	-	-
		38150	2610.0	20.74	21.00	1.062	1.006	-	-	-	-
	Left	37850	2580.0	20.90	21.00	1.023	1.006	0.03	0.156	0.157	-
	Right	37850	2580.0	20.90	21.00	1.023	1.006	-0.02	0.149	0.150	-
	Top	37850	2580.0	20.90	21.00	1.023	1.006	-	-	-	-
Bottom	37850	2580.0	20.90	21.00	1.023	1.006	-0.02	0.103	0.104	-	

LTE Band 41											
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz						(W/kg)	(W/kg)	
20M QPSK 1RB	Front	40340	2565.0	21.82	22.50	1.169	1.006	-	-	-	-
		40740	2602.5	21.85	22.50	1.161	1.006	-	-	-	-
		41140	2645.0	22.31	22.50	1.045	1.006	0.06	0.218	0.219	-
	Rear	40340	2565.0	21.82	22.50	1.169	1.006	-	-	-	-
		40740	2602.5	21.85	22.50	1.161	1.006	-	-	-	-
		40340	2645.0	22.31	22.50	1.045	1.006	-0.15	0.307	0.309	40
	Left	40340	2645.0	22.31	22.50	1.045	1.006	0.09	0.189	0.190	-
	Right	40340	2645.0	22.31	22.50	1.045	1.006	-0.05	0.181	0.182	-
	Top	40340	2645.0	22.31	22.50	1.045	1.006	-	-	-	-
Bottom	40340	2645.0	22.31	22.50	1.045	1.006	-0.05	0.240	0.241	-	
20M QPSK 50RB	Front	40340	2565.0	20.93	21.50	1.140	1.006	-	-	-	-
		40740	2602.5	20.79	21.50	1.178	1.006	-	-	-	-
		41140	2645.0	21.19	21.50	1.074	1.006	0.01	0.196	0.197	-
	Rear	40340	2565.0	20.93	21.50	1.140	1.006	-	-	-	-
		40740	2602.5	20.79	21.50	1.178	1.006	-	-	-	-
		41140	2645.0	21.19	21.50	1.074	1.006	-0.03	0.275	0.277	-
	Left	41140	2645.0	21.19	21.50	1.074	1.006	0.02	0.169	0.170	-
	Right	41140	2645.0	21.19	21.50	1.074	1.006	-0.01	0.162	0.163	-
	Top	41140	2645.0	21.19	21.50	1.074	1.006	-	-	-	-
Bottom	41140	2645.0	21.19	21.50	1.074	1.006	-0.01	0.215	0.216	-	

WIFI 2.4G												
Mode	Test Position	Frequency		Conducted Power (dBm)	Tune-up limit (dBm)	Tune-up scaling factor	Duty Cycle	Duty Cycle Scaling Factor	Power Drift(dB)	Measured SAR(1g)	Report SAR(1g)	Plot No.
		CH	MHz							(W/kg)	(W/kg)	
802.11b 1Mbps	Front	1	2412	14.38	14.50	1.028	1.000	1.000	-	-	-	-
		6	2437	14.34	14.50	1.038	1.000	1.000	-	-	-	-
		11	2462	16.04	16.50	1.112	1.000	1.000	-0.10	0.102	0.113	-
	Rear	1	2412	14.38	14.50	1.028	1.000	1.000	-	-	-	-
		6	2437	14.34	14.50	1.038	1.000	1.000	-	-	-	-
		11	2462	16.04	16.50	1.112	1.000	1.000	-0.13	0.146	0.162	41
	Left	11	2462	16.04	16.50	1.112	1.000	1.000	0.07	0.090	0.100	-
	Right	11	2462	16.04	16.50	1.112	1.000	1.000	-	-	-	-
	Top	11	2462	16.04	16.50	1.112	1.000	1.000	-0.11	0.120	0.133	-
	Bottom	11	2462	16.04	16.50	1.112	1.000	1.000	-	-	-	-

**Appendix C: Simultaneous Transmission analysis-Head**

PCE + WLAN DTS					
WWAN Band		Exposure Position	Max SAR (W/kg)		Summed SAR
			PCE	WLAN DTS	(W/kg)
GSM	GSM850	Left Cheek	0.341	0.113	0.454
		Left Tilted	0.261	0.096	0.357
		Right Cheek	0.316	0.109	0.425
		Right Tilted	0.240	0.092	0.332
	PCS1900	Left Cheek	1.100	0.113	1.213
		Left Tilted	0.770	0.096	0.866
		Right Cheek	1.057	0.109	1.166
		Right Tilted	0.746	0.092	0.838
WCDMA	Band II	Left Cheek	0.793	0.113	0.906
		Left Tilted	0.653	0.096	0.749
		Right Cheek	0.758	0.109	0.867
		Right Tilted	0.607	0.092	0.699
	Band IV	Left Cheek	0.734	0.113	0.847
		Left Tilted	0.603	0.096	0.699
		Right Cheek	0.701	0.109	0.810
		Right Tilted	0.561	0.092	0.653
	Band V	Left Cheek	0.318	0.113	0.431
		Left Tilted	0.243	0.096	0.339
		Right Cheek	0.219	0.109	0.328
		Right Tilted	0.166	0.092	0.258
	B2 1RB	Left Cheek	0.756	0.113	0.869
		Left Tilted	0.619	0.096	0.715
		Right Cheek	0.736	0.109	0.845
		Right Tilted	0.587	0.092	0.679
	B2 50RB	Left Cheek	0.549	0.113	0.662
		Left Tilted	0.481	0.096	0.577
		Right Cheek	0.508	0.109	0.617
		Right Tilted	0.432	0.092	0.524
	B4 1RB	Left Cheek	0.644	0.113	0.757
		Left Tilted	0.540	0.096	0.636
		Right Cheek	0.623	0.109	0.732
		Right Tilted	0.494	0.092	0.586
	B4 50RB	Left Cheek	0.575	0.113	0.688
		Left Tilted	0.481	0.096	0.577
		Right Cheek	0.555	0.109	0.664
		Right Tilted	0.440	0.092	0.532
	B5 1RB	Left Cheek	0.350	0.113	0.463
		Left Tilted	0.294	0.096	0.390
		Right Cheek	0.339	0.109	0.448
		Right Tilted	0.268	0.092	0.360
B5 25RB	Left Cheek	0.302	0.113	0.415	
	Left Tilted	0.234	0.096	0.330	
	Right Cheek	0.300	0.109	0.409	
	Right Tilted	0.245	0.092	0.337	

LTE

B7 1RB	Left Cheek	0.136	0.113	0.249
	Left Tilted	0.114	0.096	0.210
	Right Cheek	0.132	0.109	0.241
	Right Tilted	0.104	0.092	0.196
B7 50RB	Left Cheek	0.118	0.113	0.231
	Left Tilted	0.099	0.096	0.195
	Right Cheek	0.114	0.109	0.223
	Right Tilted	0.090	0.092	0.182
B12 1RB	Left Cheek	0.326	0.113	0.439
	Left Tilted	0.273	0.096	0.369
	Right Cheek	0.315	0.109	0.424
	Right Tilted	0.249	0.092	0.341
B12 25RB	Left Cheek	0.258	0.113	0.371
	Left Tilted	0.200	0.096	0.296
	Right Cheek	0.256	0.109	0.365
	Right Tilted	0.209	0.092	0.301
B13 1RB	Left Cheek	0.336	0.113	0.449
	Left Tilted	0.282	0.096	0.378
	Right Cheek	0.325	0.109	0.434
	Right Tilted	0.258	0.092	0.350
B13 25RB	Left Cheek	0.285	0.113	0.398
	Left Tilted	0.221	0.096	0.317
	Right Cheek	0.283	0.109	0.392
	Right Tilted	0.231	0.092	0.323
B17 1RB	Left Cheek	0.324	0.113	0.437
	Left Tilted	0.271	0.096	0.367
	Right Cheek	0.313	0.109	0.422
	Right Tilted	0.262	0.092	0.354
B17 25RB	Left Cheek	0.260	0.113	0.373
	Left Tilted	0.218	0.096	0.314
	Right Cheek	0.252	0.109	0.361
	Right Tilted	0.211	0.092	0.303
B25 1RB	Left Cheek	0.793	0.113	0.906
	Left Tilted	0.665	0.096	0.761
	Right Cheek	0.767	0.109	0.876
	Right Tilted	0.608	0.092	0.700
B25 50RB	Left Cheek	0.767	0.113	0.880
	Left Tilted	0.642	0.096	0.738
	Right Cheek	0.741	0.109	0.850
	Right Tilted	0.587	0.092	0.679
B26 1RB	Left Cheek	0.338	0.113	0.451
	Left Tilted	0.283	0.096	0.379
	Right Cheek	0.326	0.109	0.435
	Right Tilted	0.259	0.092	0.351
B26 38RB	Left Cheek	0.292	0.113	0.405
	Left Tilted	0.245	0.096	0.341
	Right Cheek	0.282	0.109	0.391
	Right Tilted	0.224	0.092	0.316

B66 1RB	Left Cheek	0.703	0.113	0.816
	Left Tilted	0.589	0.096	0.685
	Right Cheek	0.679	0.109	0.788
	Right Tilted	0.538	0.092	0.630
B66 50RB	Left Cheek	0.486	0.113	0.599
	Left Tilted	0.407	0.096	0.503
	Right Cheek	0.469	0.109	0.578
	Right Tilted	0.372	0.092	0.464
B38 1RB	Left Cheek	0.146	0.113	0.259
	Left Tilted	0.123	0.096	0.219
	Right Cheek	0.142	0.109	0.251
	Right Tilted	0.112	0.092	0.204
B38 50RB	Left Cheek	0.105	0.113	0.218
	Left Tilted	0.088	0.096	0.184
	Right Cheek	0.101	0.109	0.210
	Right Tilted	0.080	0.092	0.172
B41 1RB	Left Cheek	0.141	0.113	0.254
	Left Tilted	0.118	0.096	0.214
	Right Cheek	0.136	0.109	0.245
	Right Tilted	0.108	0.092	0.200
B41 50RB	Left Cheek	0.111	0.113	0.224
	Left Tilted	0.093	0.096	0.189
	Right Cheek	0.107	0.109	0.216
	Right Tilted	0.085	0.092	0.177

PCE + WLAN U-NII					
WWAN Band		Exposure Position	Max SAR (W/kg)		Summed SAR
			PCE	WLAN U-NII	(W/kg)
GSM	GSM850	Left Cheek	0.341	0.204	0.545
		Left Tilted	0.261	0.173	0.434
		Right Cheek	0.316	0.196	0.512
		Right Tilted	0.240	0.169	0.409
	PCS1900	Left Cheek	1.100	0.204	1.304
		Left Tilted	0.770	0.173	0.943
		Right Cheek	1.057	0.196	1.253
		Right Tilted	0.746	0.169	0.915
WCDMA	Band II	Left Cheek	0.793	0.204	0.997
		Left Tilted	0.653	0.173	0.826
		Right Cheek	0.758	0.196	0.954
		Right Tilted	0.607	0.169	0.776
	Band IV	Left Cheek	0.734	0.204	0.938
		Left Tilted	0.603	0.173	0.776
		Right Cheek	0.701	0.196	0.897
		Right Tilted	0.561	0.169	0.730
	Band V	Left Cheek	0.318	0.204	0.522
		Left Tilted	0.243	0.173	0.416
		Right Cheek	0.219	0.196	0.415
		Right Tilted	0.166	0.169	0.335
LTE	B2 1RB	Left Cheek	0.756	0.204	0.960
		Left Tilted	0.619	0.173	0.792
		Right Cheek	0.736	0.196	0.932
		Right Tilted	0.587	0.169	0.756
	B2 50RB	Left Cheek	0.549	0.204	0.753
		Left Tilted	0.481	0.173	0.654
		Right Cheek	0.508	0.196	0.704
		Right Tilted	0.432	0.169	0.601
	B4 1RB	Left Cheek	0.644	0.204	0.848
		Left Tilted	0.540	0.173	0.713
		Right Cheek	0.623	0.196	0.819
		Right Tilted	0.494	0.169	0.663
	B4 50RB	Left Cheek	0.575	0.204	0.779
		Left Tilted	0.481	0.173	0.654
		Right Cheek	0.555	0.196	0.751
		Right Tilted	0.440	0.169	0.609
	B5 1RB	Left Cheek	0.350	0.204	0.554
		Left Tilted	0.294	0.173	0.467
		Right Cheek	0.339	0.196	0.535
		Right Tilted	0.268	0.169	0.437
	B5 25RB	Left Cheek	0.302	0.204	0.506
		Left Tilted	0.234	0.173	0.407
		Right Cheek	0.300	0.196	0.496
		Right Tilted	0.245	0.169	0.414
	B7 1RB	Left Cheek	0.136	0.204	0.340
		Left Tilted	0.114	0.173	0.287
		Right Cheek	0.132	0.196	0.328
		Right Tilted	0.104	0.169	0.273
B7 50RB	Left Cheek	0.118	0.204	0.322	
	Left Tilted	0.099	0.173	0.272	
	Right Cheek	0.114	0.196	0.310	
	Right Tilted	0.090	0.169	0.259	

LTE

B12 1RB	Left Cheek	0.326	0.204	0.530
	Left Tilted	0.273	0.173	0.446
	Right Cheek	0.315	0.196	0.511
	Right Tilted	0.249	0.169	0.418
B12 25RB	Left Cheek	0.258	0.204	0.462
	Left Tilted	0.200	0.173	0.373
	Right Cheek	0.256	0.196	0.452
	Right Tilted	0.209	0.169	0.378
B13 1RB	Left Cheek	0.336	0.204	0.540
	Left Tilted	0.282	0.173	0.455
	Right Cheek	0.325	0.196	0.521
	Right Tilted	0.258	0.169	0.427
B13 25RB	Left Cheek	0.285	0.204	0.489
	Left Tilted	0.221	0.173	0.394
	Right Cheek	0.283	0.196	0.479
	Right Tilted	0.231	0.169	0.400
B17 1RB	Left Cheek	0.324	0.204	0.528
	Left Tilted	0.271	0.173	0.444
	Right Cheek	0.313	0.196	0.509
	Right Tilted	0.262	0.169	0.431
B17 25RB	Left Cheek	0.260	0.204	0.464
	Left Tilted	0.218	0.173	0.391
	Right Cheek	0.252	0.196	0.448
	Right Tilted	0.211	0.169	0.380
B25 1RB	Left Cheek	0.793	0.204	0.997
	Left Tilted	0.665	0.173	0.838
	Right Cheek	0.767	0.196	0.963
	Right Tilted	0.608	0.169	0.777
B25 50RB	Left Cheek	0.767	0.204	0.971
	Left Tilted	0.642	0.173	0.815
	Right Cheek	0.741	0.196	0.937
	Right Tilted	0.587	0.169	0.756
B26 1RB	Left Cheek	0.338	0.204	0.542
	Left Tilted	0.283	0.173	0.456
	Right Cheek	0.326	0.196	0.522
	Right Tilted	0.259	0.169	0.428
B26 38RB	Left Cheek	0.292	0.204	0.496
	Left Tilted	0.245	0.173	0.418
	Right Cheek	0.282	0.196	0.478
	Right Tilted	0.224	0.169	0.393



B66 1RB	Left Cheek	0.703	0.204	0.907
	Left Tilted	0.589	0.173	0.762
	Right Cheek	0.679	0.196	0.875
	Right Tilted	0.538	0.169	0.707
B66 50RB	Left Cheek	0.486	0.204	0.690
	Left Tilted	0.407	0.173	0.580
	Right Cheek	0.469	0.196	0.665
	Right Tilted	0.372	0.169	0.541
B38 1RB	Left Cheek	0.146	0.204	0.350
	Left Tilted	0.123	0.173	0.296
	Right Cheek	0.142	0.196	0.338
	Right Tilted	0.112	0.169	0.281
B38 50RB	Left Cheek	0.105	0.204	0.309
	Left Tilted	0.088	0.173	0.261
	Right Cheek	0.101	0.196	0.297
	Right Tilted	0.080	0.169	0.249
B41 1RB	Left Cheek	0.141	0.204	0.345
	Left Tilted	0.118	0.173	0.291
	Right Cheek	0.136	0.196	0.332
	Right Tilted	0.108	0.169	0.277
B41 50RB	Left Cheek	0.111	0.204	0.315
	Left Tilted	0.093	0.173	0.266
	Right Cheek	0.107	0.196	0.303
	Right Tilted	0.085	0.169	0.254

PCE + Bluetooth					
WWAN Band		Exposure Position	Max SAR (W/kg)		Summed SAR
			PCE	BT	(W/kg)
GSM	GSM850	Left Cheek	0.341	0.090	0.431
		Left Tilted	0.261	0.076	0.337
		Right Cheek	0.316	0.087	0.403
		Right Tilted	0.240	0.073	0.313
	PCS1900	Left Cheek	1.100	0.090	1.190
		Left Tilted	0.770	0.076	0.846
		Right Cheek	1.057	0.087	1.144
		Right Tilted	0.746	0.073	0.819
WCDMA	Band II	Left Cheek	0.793	0.090	0.883
		Left Tilted	0.653	0.076	0.729
		Right Cheek	0.758	0.087	0.845
		Right Tilted	0.607	0.073	0.680
	Band IV	Left Cheek	0.734	0.090	0.824
		Left Tilted	0.603	0.076	0.679
		Right Cheek	0.701	0.087	0.788
		Right Tilted	0.561	0.073	0.634
	Band V	Left Cheek	0.318	0.090	0.408
		Left Tilted	0.243	0.076	0.319
		Right Cheek	0.219	0.087	0.306
		Right Tilted	0.166	0.073	0.239
	B2 1RB	Left Cheek	0.756	0.090	0.846
		Left Tilted	0.619	0.076	0.695
		Right Cheek	0.736	0.087	0.823
		Right Tilted	0.587	0.073	0.660
	B2 50RB	Left Cheek	0.549	0.090	0.639
		Left Tilted	0.481	0.076	0.557
		Right Cheek	0.508	0.087	0.595
		Right Tilted	0.432	0.073	0.505
	B4 1RB	Left Cheek	0.644	0.090	0.734
		Left Tilted	0.540	0.076	0.616
		Right Cheek	0.623	0.087	0.710
		Right Tilted	0.494	0.073	0.567
	B4 50RB	Left Cheek	0.575	0.090	0.665
		Left Tilted	0.481	0.076	0.557
		Right Cheek	0.555	0.087	0.642
		Right Tilted	0.440	0.073	0.513
	B5 1RB	Left Cheek	0.350	0.090	0.440
		Left Tilted	0.294	0.076	0.370
		Right Cheek	0.339	0.087	0.426
		Right Tilted	0.268	0.073	0.341
	B5 25RB	Left Cheek	0.302	0.090	0.392
		Left Tilted	0.234	0.076	0.310
		Right Cheek	0.300	0.087	0.387
		Right Tilted	0.245	0.073	0.318
	B7 1RB	Left Cheek	0.136	0.090	0.226
		Left Tilted	0.114	0.076	0.190
		Right Cheek	0.132	0.087	0.219
		Right Tilted	0.104	0.073	0.177
B7 50RB	Left Cheek	0.118	0.090	0.208	
	Left Tilted	0.099	0.076	0.175	
	Right Cheek	0.114	0.087	0.201	
	Right Tilted	0.090	0.073	0.163	

LTE

B12 1RB	Left Cheek	0.326	0.090	0.416
	Left Tilted	0.273	0.076	0.349
	Right Cheek	0.315	0.087	0.402
	Right Tilted	0.249	0.073	0.322
B12 25RB	Left Cheek	0.258	0.090	0.348
	Left Tilted	0.200	0.076	0.276
	Right Cheek	0.256	0.087	0.343
	Right Tilted	0.209	0.073	0.282
B13 1RB	Left Cheek	0.336	0.090	0.426
	Left Tilted	0.282	0.076	0.358
	Right Cheek	0.325	0.087	0.412
	Right Tilted	0.258	0.073	0.331
B13 25RB	Left Cheek	0.285	0.090	0.375
	Left Tilted	0.221	0.076	0.297
	Right Cheek	0.283	0.087	0.370
	Right Tilted	0.231	0.073	0.304
B17 1RB	Left Cheek	0.324	0.090	0.414
	Left Tilted	0.271	0.076	0.347
	Right Cheek	0.313	0.087	0.400
	Right Tilted	0.262	0.073	0.335
B17 25RB	Left Cheek	0.260	0.090	0.350
	Left Tilted	0.218	0.076	0.294
	Right Cheek	0.252	0.087	0.339
	Right Tilted	0.211	0.073	0.284
B25 1RB	Left Cheek	0.793	0.090	0.883
	Left Tilted	0.665	0.076	0.741
	Right Cheek	0.767	0.087	0.854
	Right Tilted	0.608	0.073	0.681
B25 50RB	Left Cheek	0.767	0.090	0.857
	Left Tilted	0.642	0.076	0.718
	Right Cheek	0.741	0.087	0.828
	Right Tilted	0.587	0.073	0.660
B26 1RB	Left Cheek	0.338	0.090	0.428
	Left Tilted	0.283	0.076	0.359
	Right Cheek	0.326	0.087	0.413
	Right Tilted	0.259	0.073	0.332
B26 38RB	Left Cheek	0.292	0.090	0.382
	Left Tilted	0.245	0.076	0.321
	Right Cheek	0.282	0.087	0.369
	Right Tilted	0.224	0.073	0.297

B66 1RB	Left Cheek	0.703	0.090	0.793
	Left Tilted	0.589	0.076	0.665
	Right Cheek	0.679	0.087	0.766
	Right Tilted	0.538	0.073	0.611
B66 50RB	Left Cheek	0.486	0.090	0.576
	Left Tilted	0.407	0.076	0.483
	Right Cheek	0.469	0.087	0.556
	Right Tilted	0.372	0.073	0.445
B38 1RB	Left Cheek	0.146	0.090	0.236
	Left Tilted	0.123	0.076	0.199
	Right Cheek	0.142	0.087	0.229
	Right Tilted	0.112	0.073	0.185
B38 50RB	Left Cheek	0.105	0.090	0.195
	Left Tilted	0.088	0.076	0.164
	Right Cheek	0.101	0.087	0.188
	Right Tilted	0.080	0.073	0.153
B41 1RB	Left Cheek	0.141	0.090	0.231
	Left Tilted	0.118	0.076	0.194
	Right Cheek	0.136	0.087	0.223
	Right Tilted	0.108	0.073	0.181
B41 50RB	Left Cheek	0.111	0.090	0.201
	Left Tilted	0.093	0.076	0.169
	Right Cheek	0.107	0.087	0.194
	Right Tilted	0.085	0.073	0.158

**Appendix C: Simultaneous Transmission analysis-Body**

PCE + WLAN DTS					
WWAN Band		Exposure Position	Max SAR (W/kg)		Summed SAR (W/kg)
			PCE	WLAN DTS	
GSM	GSM850	Front	0.459	0.113	0.572
		Rear	0.694	0.162	0.856
	PCS1900	Front	0.703	0.113	0.816
		Rear	1.110	0.162	1.272
WCDMA	Band II	Front	0.795	0.113	0.908
		Rear	1.116	0.162	1.278
	Band IV	Front	0.763	0.113	0.876
		Rear	1.072	0.162	1.234
	Band V	Front	0.547	0.113	0.660
		Rear	0.640	0.162	0.802
LTE	B2 1RB	Front	0.566	0.113	0.679
		Rear	0.796	0.162	0.958
	B2 50RB	Front	0.424	0.113	0.537
		Rear	0.595	0.162	0.757
	B4 1RB	Front	0.508	0.113	0.621
		Rear	0.714	0.162	0.876
	B4 50RB	Front	0.431	0.113	0.544
		Rear	0.606	0.162	0.768
	B5 1RB	Front	0.504	0.113	0.617
		Rear	0.708	0.162	0.870
	B5 25RB	Front	0.432	0.113	0.545
		Rear	0.608	0.162	0.770
	B7 1RB	Front	0.212	0.113	0.325
		Rear	0.297	0.162	0.459
	B7 50RB	Front	0.171	0.113	0.284
		Rear	0.240	0.162	0.402
	B12 1RB	Front	0.469	0.113	0.582
		Rear	0.660	0.162	0.822
	B12 25RB	Front	0.404	0.113	0.517
		Rear	0.567	0.162	0.729
	B13 1RB	Front	0.485	0.113	0.598
		Rear	0.682	0.162	0.844
	B13 25RB	Front	0.415	0.113	0.528
		Rear	0.584	0.162	0.746
	B17 1RB	Front	0.451	0.113	0.564
		Rear	0.633	0.162	0.795
	B17 25RB	Front	0.372	0.113	0.485
		Rear	0.523	0.162	0.685
	B25 1RB	Front	0.551	0.113	0.664
		Rear	0.774	0.162	0.936
	B25 50RB	Front	0.485	0.113	0.598
		Rear	0.681	0.162	0.843
B26 1RB	Front	0.485	0.113	0.598	
	Rear	0.681	0.162	0.843	
B26 38RB	Front	0.450	0.113	0.563	
	Rear	0.633	0.162	0.795	

B66 1RB	Front	0.510	0.113	0.623
	Rear	0.718	0.162	0.880
B66 50RB	Front	0.356	0.113	0.469
	Rear	0.500	0.162	0.662
B38 1RB	Front	0.210	0.113	0.323
	Rear	0.295	0.162	0.457
B38 50RB	Front	0.181	0.113	0.294
	Rear	0.255	0.162	0.417
B41 1RB	Front	0.219	0.113	0.332
	Rear	0.309	0.162	0.471
B41 50RB	Front	0.197	0.113	0.310
	Rear	0.277	0.162	0.439

PCE + WLAN U-NII					
WWAN Band		Exposure Position	Max SAR (W/kg)		Summed SAR (W/kg)
			PCE	WLAN U-NII	
GSM	GSM850	Front	0.459	0.152	0.611
		Rear	0.694	0.218	0.912
	PCS1900	Front	0.703	0.152	0.855
		Rear	1.110	0.218	1.328
WCDMA	Band II	Front	0.795	0.152	0.947
		Rear	1.116	0.218	1.334
	Band IV	Front	0.763	0.152	0.915
		Rear	1.072	0.218	1.290
	Band V	Front	0.547	0.152	0.699
		Rear	0.640	0.218	0.858
LTE	B2 1RB	Front	0.566	0.152	0.718
		Rear	0.796	0.218	1.014
	B2 50RB	Front	0.424	0.152	0.576
		Rear	0.595	0.218	0.813
	B4 1RB	Front	0.508	0.152	0.660
		Rear	0.714	0.218	0.932
	B4 50RB	Front	0.431	0.152	0.583
		Rear	0.606	0.218	0.824
	B5 1RB	Front	0.504	0.152	0.656
		Rear	0.708	0.218	0.926
	B5 25RB	Front	0.432	0.152	0.584
		Rear	0.608	0.218	0.826
	B7 1RB	Front	0.212	0.152	0.364
		Rear	0.297	0.218	0.515
	B7 50RB	Front	0.171	0.152	0.323
		Rear	0.240	0.218	0.458
	B12 1RB	Front	0.469	0.152	0.621
		Rear	0.660	0.218	0.878
	B12 25RB	Front	0.404	0.152	0.556
		Rear	0.567	0.218	0.785
	B13 1RB	Front	0.485	0.152	0.637
		Rear	0.682	0.218	0.900
	B13 25RB	Front	0.415	0.152	0.567
		Rear	0.584	0.218	0.802
	B17 1RB	Front	0.451	0.152	0.603
		Rear	0.633	0.218	0.851
	B17 25RB	Front	0.372	0.152	0.524
		Rear	0.523	0.218	0.741
	B25 1RB	Front	0.551	0.152	0.703
		Rear	0.774	0.218	0.992
	B25 50RB	Front	0.485	0.152	0.637
		Rear	0.681	0.218	0.899
B26 1RB	Front	0.485	0.152	0.637	
	Rear	0.681	0.218	0.899	
B26 38RB	Front	0.450	0.152	0.602	
	Rear	0.633	0.218	0.851	

B66 1RB	Front	0.510	0.152	0.662
	Rear	0.718	0.218	0.936
B66 50RB	Front	0.356	0.152	0.508
	Rear	0.500	0.218	0.718
B38 1RB	Front	0.210	0.152	0.362
	Rear	0.295	0.218	0.513
B38 50RB	Front	0.181	0.152	0.333
	Rear	0.255	0.218	0.473
B41 1RB	Front	0.219	0.152	0.371
	Rear	0.309	0.218	0.527
B41 50RB	Front	0.197	0.152	0.349
	Rear	0.277	0.218	0.495



PCE + BT					
WWAN Band		Exposure Position	Max SAR (W/kg)		Summed SAR
			PCE	BT	(W/kg)
GSM	GSM850	Front	0.459	0.088	0.547
		Rear	0.694	0.111	0.805
	PCS1900	Front	0.703	0.088	0.791
		Rear	1.110	0.111	1.221
WCDMA	Band II	Front	0.795	0.088	0.883
		Rear	1.116	0.111	1.227
	Band IV	Front	0.763	0.088	0.851
		Rear	1.072	0.111	1.183
	Band V	Front	0.547	0.088	0.635
		Rear	0.640	0.111	0.751
LTE	B2 1RB	Front	0.566	0.088	0.654
		Rear	0.796	0.111	0.907
	B2 50RB	Front	0.424	0.088	0.512
		Rear	0.595	0.111	0.706
	B4 1RB	Front	0.508	0.088	0.596
		Rear	0.714	0.111	0.825
	B4 50RB	Front	0.431	0.088	0.519
		Rear	0.606	0.111	0.717
	B5 1RB	Front	0.504	0.088	0.592
		Rear	0.708	0.111	0.819
	B5 25RB	Front	0.432	0.088	0.520
		Rear	0.608	0.111	0.719
	B7 1RB	Front	0.212	0.088	0.300
		Rear	0.297	0.111	0.408
	B7 50RB	Front	0.171	0.088	0.259
		Rear	0.240	0.111	0.351
	B12 1RB	Front	0.469	0.088	0.557
		Rear	0.660	0.111	0.771
	B12 25RB	Front	0.404	0.088	0.492
		Rear	0.567	0.111	0.678
	B13 1RB	Front	0.485	0.088	0.573
		Rear	0.682	0.111	0.793
	B13 25RB	Front	0.415	0.088	0.503
		Rear	0.584	0.111	0.695
	B17 1RB	Front	0.451	0.088	0.539
		Rear	0.633	0.111	0.744
	B17 25RB	Front	0.372	0.088	0.460
		Rear	0.523	0.111	0.634
	B25 1RB	Front	0.551	0.088	0.639
		Rear	0.774	0.111	0.885
	B25 50RB	Front	0.485	0.088	0.573
		Rear	0.681	0.111	0.792
B26 1RB	Front	0.485	0.088	0.573	
	Rear	0.681	0.111	0.792	
B26 38RB	Front	0.450	0.088	0.538	
	Rear	0.633	0.111	0.744	

B66 1RB	Front	0.510	0.088	0.598
	Rear	0.718	0.111	0.829
B66 50RB	Front	0.356	0.088	0.444
	Rear	0.500	0.111	0.611
B38 1RB	Front	0.210	0.088	0.298
	Rear	0.295	0.111	0.406
B38 50RB	Front	0.181	0.088	0.269
	Rear	0.255	0.111	0.366
B41 1RB	Front	0.219	0.088	0.307
	Rear	0.309	0.111	0.420
B41 50RB	Front	0.197	0.088	0.285
	Rear	0.277	0.111	0.388

**Appendix C: Simultaneous Transmission analysis-Hotspot**

PCE + WLAN DTS					
WWAN Band		Exposure Position	Max SAR (W/kg)		Summed SAR
			PCE	WLAN DTS	(W/kg)
GSM	GSM850	Front	0.459	0.113	0.572
		Rear	0.694	0.162	0.856
		Left side	0.427	0.100	0.527
		Right side	0.409	-	0.409
		Top side	-	0.133	0.133
		Bottom side	0.281	-	0.281
	PCS1900	Front	0.703	0.113	0.816
		Rear	1.110	0.162	1.272
		Left side	0.683	0.100	0.783
		Right side	0.653	-	0.653
		Top side	-	0.133	0.133
		Bottom side	0.759	-	0.759
WCDMA	Band II	Front	0.795	0.113	0.908
		Rear	1.116	0.162	1.278
		Left side	0.687	0.100	0.787
		Right side	0.657	-	0.657
		Top side	-	0.133	0.133
		Bottom side	0.786	-	0.786
	Band IV	Front	0.763	0.113	0.876
		Rear	1.072	0.162	1.234
		Left side	0.659	0.100	0.759
		Right side	0.630	-	0.630
		Top side	-	0.133	0.133
		Bottom side	0.744	-	0.744
	Band V	Front	0.547	0.113	0.660
		Rear	0.640	0.162	0.802
		Left side	0.395	0.100	0.495
		Right side	0.376	-	0.376
		Top side	-	0.133	0.133
		Bottom side	0.260	-	0.260
B2 1RB	B2 1RB	Front	0.566	0.113	0.679
		Rear	0.796	0.162	0.958
		Left side	0.490	0.100	0.590
		Right side	0.468	-	0.468
		Top side	-	0.133	0.133
		Bottom side	0.621	-	0.621
	B2 50RB	Front	0.424	0.113	0.537
		Rear	0.595	0.162	0.757
		Left side	0.367	0.100	0.467
		Right side	0.350	-	0.350
		Top side	-	0.133	0.133
		Bottom side	0.465	-	0.465

B4 1RB	Front	0.508	0.113	0.621
	Rear	0.714	0.162	0.876
	Left side	0.419	0.100	0.519
	Right side	0.419	-	0.419
	Top side	-	0.133	0.133
	Bottom side	0.557	-	0.557
B4 50RB	Front	0.431	0.113	0.544
	Rear	0.606	0.162	0.768
	Left side	0.373	0.100	0.473
	Right side	0.356	-	0.356
	Top side	-	0.133	0.133
	Bottom side	0.473	-	0.473
B5 1RB	Front	0.504	0.113	0.617
	Rear	0.708	0.162	0.870
	Left side	0.436	0.100	0.536
	Right side	0.183	-	0.183
	Top side	-	0.133	0.133
	Bottom side	0.552	-	0.552
B5 25RB	Front	0.432	0.113	0.545
	Rear	0.608	0.162	0.770
	Left side	0.374	0.100	0.474
	Right side	0.358	-	0.358
	Top side	-	0.133	0.133
	Bottom side	0.474	-	0.474
B7 1RB	Front	0.212	0.113	0.325
	Rear	0.297	0.162	0.459
	Left side	0.183	0.100	0.283
	Right side	0.175	-	0.175
	Top side	-	0.133	0.133
	Bottom side	0.232	-	0.232
B7 50RB	Front	0.171	0.113	0.284
	Rear	0.240	0.162	0.402
	Left side	0.148	0.100	0.248
	Right side	0.141	-	0.141
	Top side	-	0.133	0.133
	Bottom side	0.188	-	0.188
B12 1RB	Front	0.469	0.113	0.582
	Rear	0.660	0.162	0.822
	Left side	0.406	0.100	0.506
	Right side	0.388	-	0.388
	Top side	-	0.133	0.133
	Bottom side	0.268	-	0.268
B12 25RB	Front	0.404	0.113	0.517
	Rear	0.567	0.162	0.729
	Left side	0.349	0.100	0.449
	Right side	0.334	-	0.334
	Top side	-	0.133	0.133
	Bottom side	0.230	-	0.230

LTE

B13 1RB	Front	0.485	0.113	0.598
	Rear	0.682	0.162	0.844
	Left side	0.419	0.100	0.519
	Right side	0.401	-	0.401
	Top side	-	0.133	0.133
	Bottom side	0.277	-	0.277
B13 25RB	Front	0.415	0.113	0.528
	Rear	0.500	0.162	0.662
	Left side	0.359	0.100	0.459
	Right side	0.344	-	0.344
	Top side	-	0.133	0.133
	Bottom side	0.237	-	0.237
B17 1RB	Front	0.451	0.113	0.564
	Rear	0.633	0.162	0.795
	Left side	0.389	0.100	0.489
	Right side	0.372	-	0.372
	Top side	0.257	0.133	0.133
	Bottom side	0.372	-	0.372
B17 25RB	Front	0.523	0.113	0.636
	Rear	0.523	0.162	0.685
	Left side	0.322	0.100	0.422
	Right side	0.307	-	0.307
	Top side	-	0.133	0.133
	Bottom side	0.212	-	0.212
B25 1RB	Front	0.551	0.113	0.664
	Rear	0.774	0.162	0.936
	Left side	0.476	0.100	0.576
	Right side	0.270	-	0.270
	Top side	-	0.133	0.133
	Bottom side	0.604	-	0.604
B25 50RB	Front	0.485	0.113	0.598
	Rear	0.681	0.162	0.843
	Left side	0.419	0.100	0.519
	Right side	0.257	-	0.257
	Top side	-	0.133	0.133
	Bottom side	0.532	-	0.532

B26 1RB	Front	0.485	0.113	0.598
	Rear	0.681	0.162	0.843
	Left side	0.419	0.100	0.519
	Right side	0.401	-	0.401
	Top side	-	0.133	0.133
	Bottom side	0.531	-	0.531
B26 38RB	Front	0.450	0.113	0.563
	Rear	0.633	0.162	0.795
	Left side	0.389	0.100	0.489
	Right side	0.372	-	0.372
	Top side	-	0.133	0.133
	Bottom side	0.493	-	0.493
B66 1RB	Front	0.510	0.113	0.623
	Rear	0.718	0.162	0.880
	Left side	0.441	0.100	0.541
	Right side	0.422	-	0.422
	Top side	-	0.133	0.133
	Bottom side	0.560	-	0.560
B66 50RB	Front	0.356	0.113	0.469
	Rear	0.500	0.162	0.662
	Left side	0.307	0.100	0.407
	Right side	0.294	-	0.294
	Top side	-	0.133	0.133
	Bottom side	0.390	-	0.390
B38 1RB	Front	0.210	0.113	0.323
	Rear	0.295	0.162	0.457
	Left side	0.181	0.100	0.281
	Right side	0.173	-	0.173
	Top side	-	0.133	0.133
	Bottom side	0.120	-	0.120
B38 50RB	Front	0.181	0.113	0.294
	Rear	0.255	0.162	0.417
	Left side	0.157	0.100	0.257
	Right side	0.150	-	0.150
	Top side	-	0.133	0.133
	Bottom side	0.104	-	0.104
B41 1RB	Front	0.219	0.113	0.332
	Rear	0.309	0.162	0.471
	Left side	0.190	0.100	0.290
	Right side	0.182	-	0.182
	Top side	-	0.133	0.133
	Bottom side	0.241	-	0.241
B41 50RB	Front	0.197	0.113	0.310
	Rear	0.277	0.162	0.439
	Left side	0.170	0.100	0.270
	Right side	0.163	-	0.163
	Top side	-	0.133	0.133
	Bottom side	0.216	-	0.216

### GSM 850-M-Head

Communication System: UID 0, Generic GPRS(TDMA, GMSK, TN 0-1-2) (0); Frequency: 836.6 MHz; Duty Cycle: 1:2.66993

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.907$  S/m;  $\epsilon_r = 40.958$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Ambient Temperature: 22.4°C; Liquid Temperature: 22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.48, 8.48, 8.48) @ 836.6 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Left Touch Cheek/CH 190/Area Scan (61x101x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

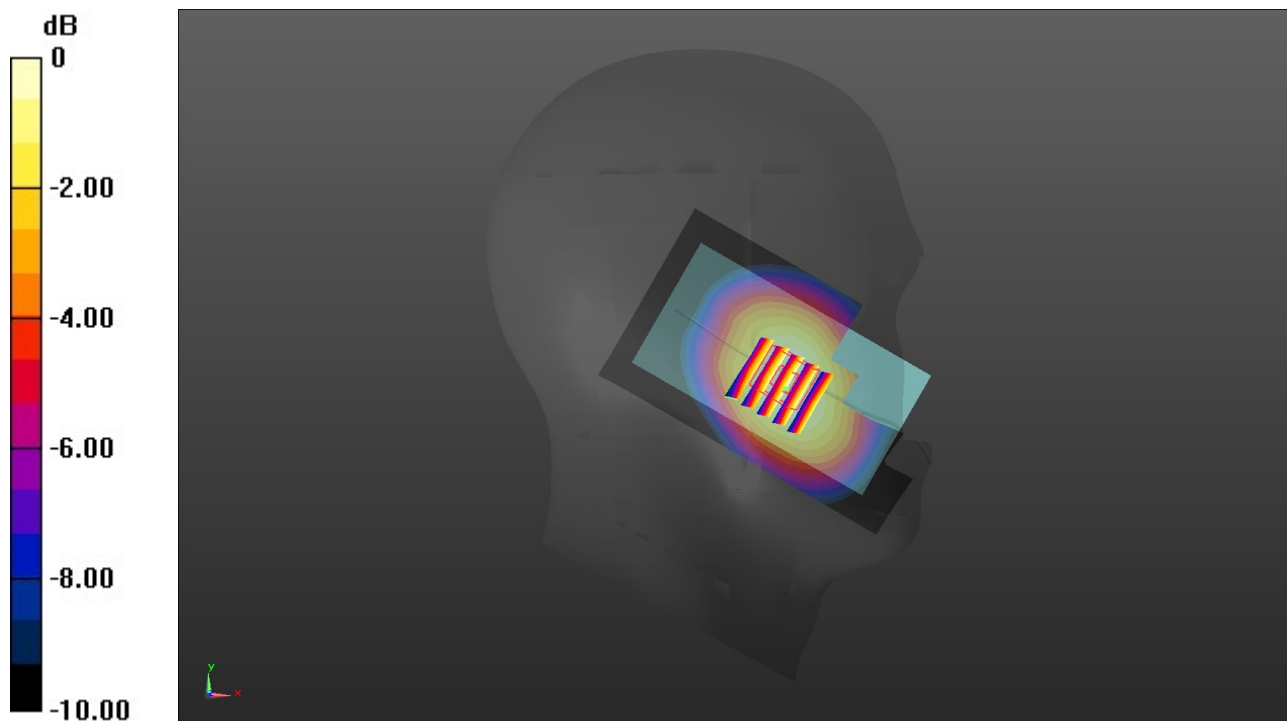
**Left Touch Cheek/CH 190/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.413 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 0.424 W/kg

**SAR(1 g) = 0.321 W/kg; SAR(10 g) = 0.208 W/kg**

Maximum value of SAR (measured) = 0.356 W/kg



0 dB = 0.356 W/kg = -3.41 dBW/kg

### GSM 1900-M-Head

Communication System: UID 0, Generic GPRS(TDMA, GMSK, TN 0-1-2) (0); Frequency: 1880 MHz; Duty Cycle: 1:2.66993

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.434$  S/m;  $\epsilon_r = 38.883$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Ambient Temperature: 22.4°C; Liquid Temperature: 22.2°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.18, 7.18, 7.18) @ 1880 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Left Touch Cheek/CH 661/Area Scan (61x101x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

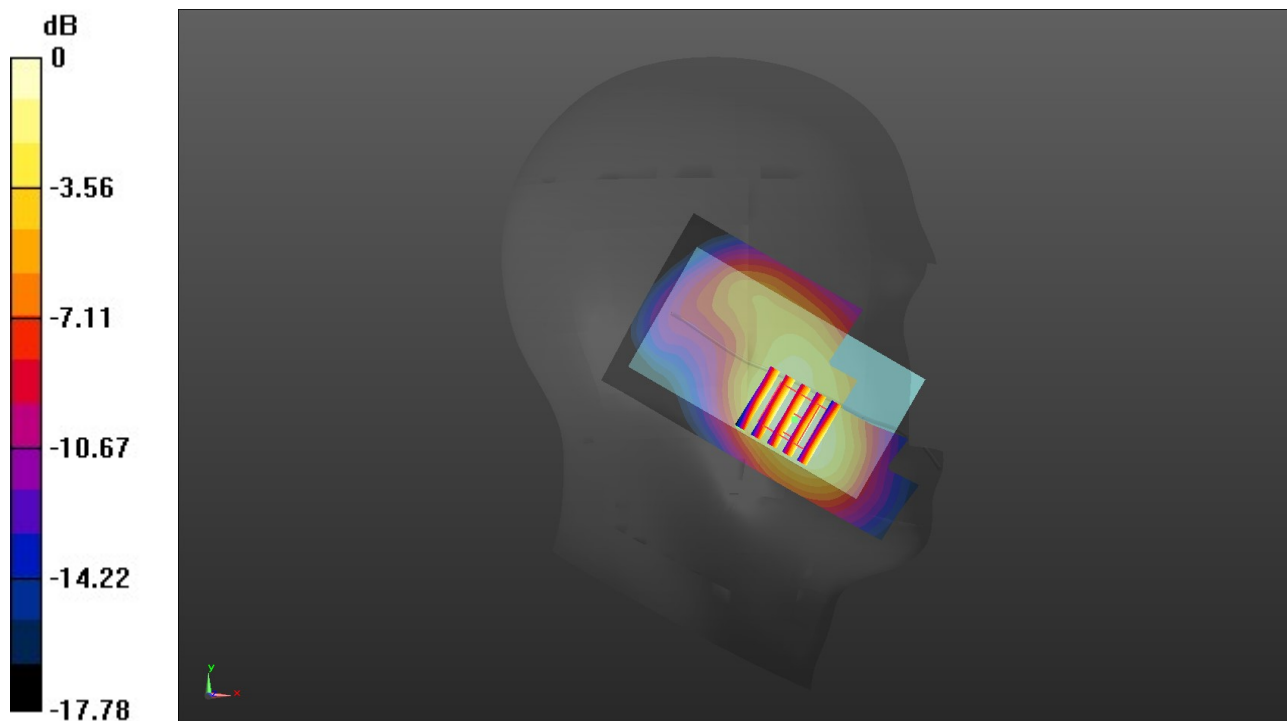
**Left Touch Cheek/CH 661/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.181 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.73 W/kg

**SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.676 W/kg**

Maximum value of SAR (measured) = 1.25 W/kg



0 dB = 1.25 W/kg = 0.97 dBW/kg



### WCDMA Band II-L-Head

Communication System: UID 0, Generic UMTS (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 1852.4 \text{ MHz}$ ;  $\sigma = 1.403 \text{ S/m}$ ;  $\epsilon_r = 38.918$ ;  $\rho = 1000 \text{ kg/m}^3$

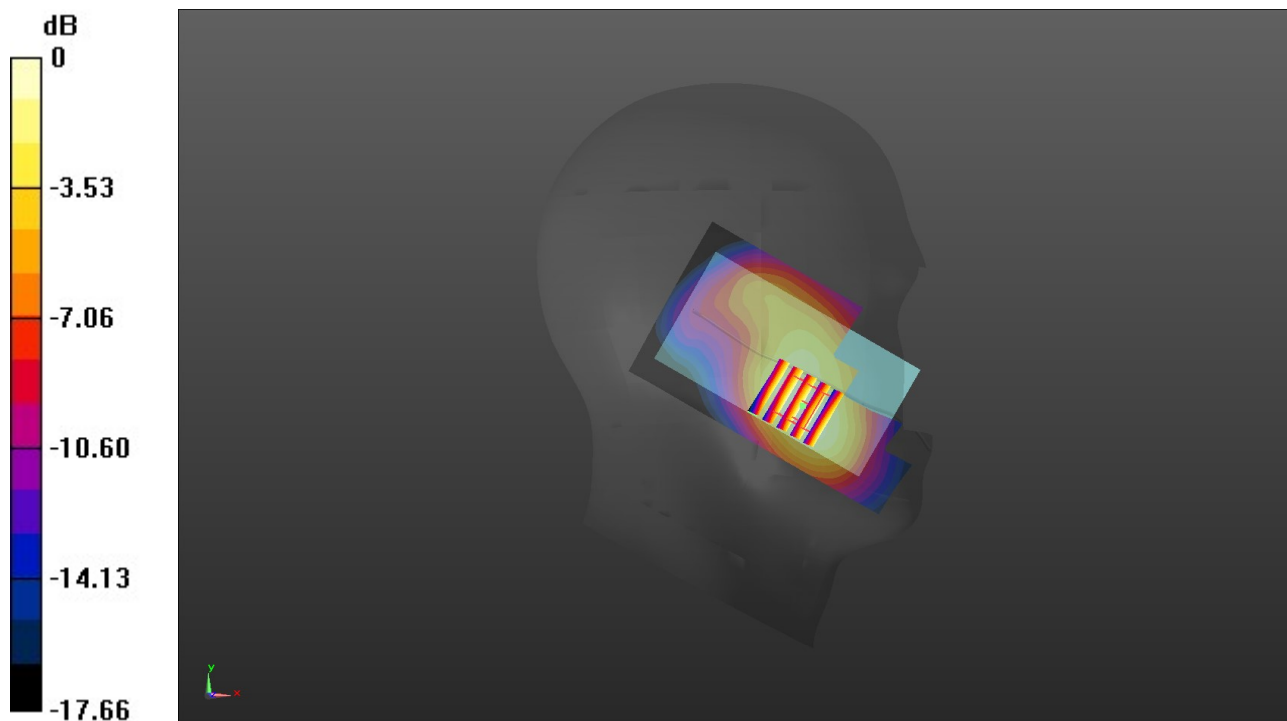
Phantom section: Left Section  
 Ambient Temperature:  $22.4^\circ\text{C}$ ; Liquid Temperature:  $22.2^\circ\text{C}$ ;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.18, 7.18, 7.18) @ 1852.4 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Left Touch Cheek/CH 9262/Area Scan (61x101x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  
 $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.817 \text{ W/kg}$

**Left Touch Cheek/CH 9262/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  
 $dy=8\text{mm}$ ,  $dz=5\text{mm}$   
 Reference Value =  $9.124 \text{ V/m}$ ; Power Drift =  $-0.08 \text{ dB}$   
 Peak SAR (extrapolated) =  $1.28 \text{ W/kg}$   
**SAR(1 g) =  $0.732 \text{ W/kg}$ ; SAR(10 g) =  $0.323 \text{ W/kg}$**   
 Maximum value of SAR (measured) =  $0.798 \text{ W/kg}$



0 dB =  $0.798 \text{ W/kg} = 0.472 \text{ dBW/kg}$

### WCDMA Band IV-H-Head

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

Medium parameters used (interpolated):  $f = 1752.6$  MHz;  $\sigma = 1.392$  S/m;  $\epsilon_r = 39.057$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Ambient Temperature: 22.3°C; Liquid Temperature: 22.0°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.42, 7.42, 7.42) @ 1752.6 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Left Touch Cheek/CH 1513/Area Scan (61x101x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

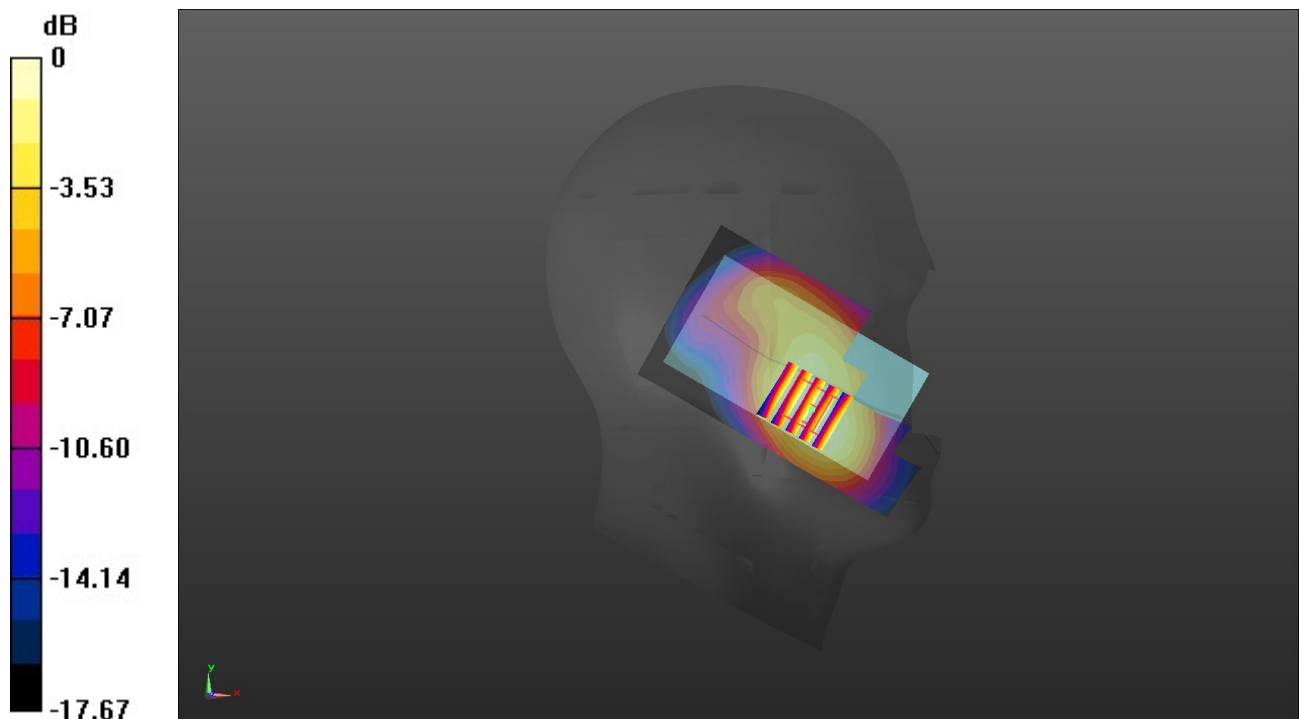
**Left Touch Cheek/CH 1513/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.034 V/m; Power Drift = - 0.06 dB

Peak SAR (extrapolated) = 0.938 W/kg

**SAR(1 g) = 0.685 W/kg; SAR(10 g) = 0.326 W/kg**

Maximum value of SAR (measured) = 0.835 W/kg



0 dB = 0.835 W/kg = -0.261 dBW/kg

### WCDMA Band V-M-Head

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

Medium parameters used (interpolated):  $f = 836.6$  MHz;  $\sigma = 0.907$  S/m;  $\epsilon_r = 40.958$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Ambient Temperature: 22.2°C; Liquid Temperature: 22.0°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.48, 8.48, 8.48) @ 836.6 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Left Touch Cheek/CH 4183/Area Scan (61x101x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

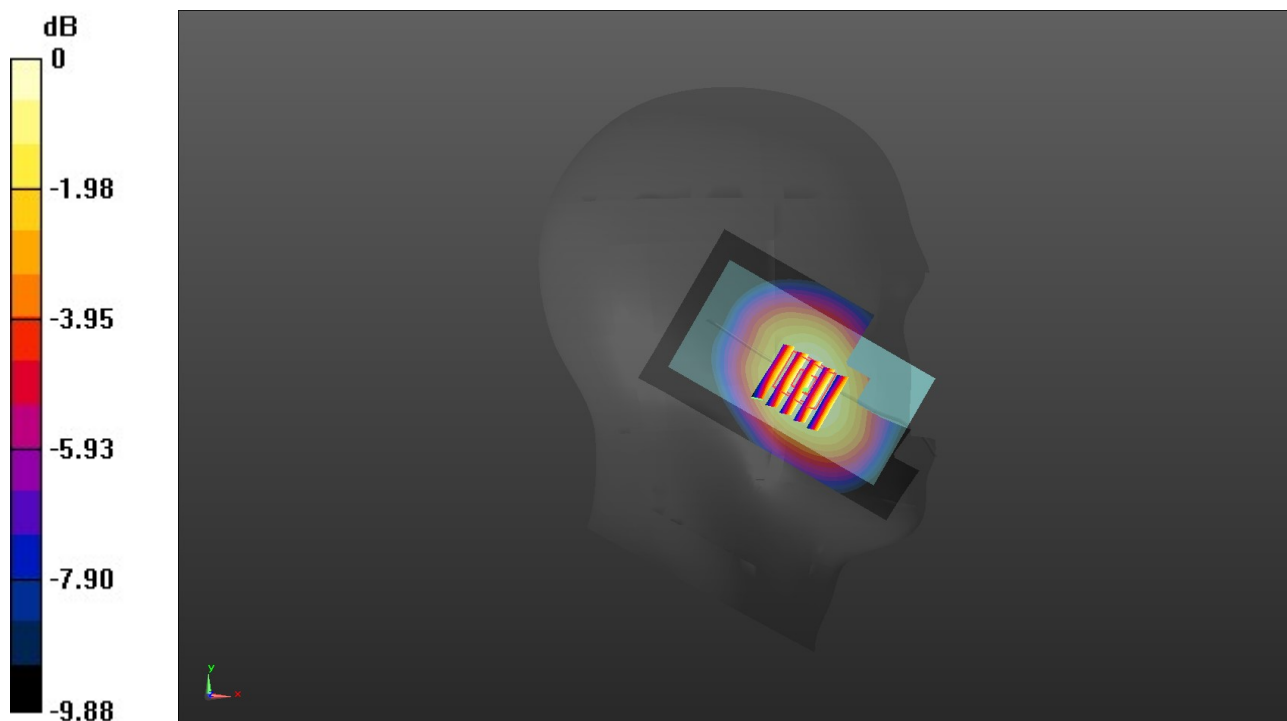
**Left Touch Cheek/CH 4183/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.410 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.517 W/kg

**SAR(1 g) = 0.314 W/kg; SAR(10 g) = 0.242 W/kg**

Maximum value of SAR (measured) = 0.443 W/kg



0 dB = 0.443 W/kg = -3.54 dBW/kg

## LTE Band 2-M-Head

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

Medium parameters used:  $f = 1880$  MHz;  $\sigma = 1.434$  S/m;  $\epsilon_r = 38.883$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Left Section

Ambient Temperature: 22.3°C; Liquid Temperature: 22.1°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.18, 7.18, 7.18) @ 1880 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Left Touch Cheek/CH 18900/Area Scan (61x101x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

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

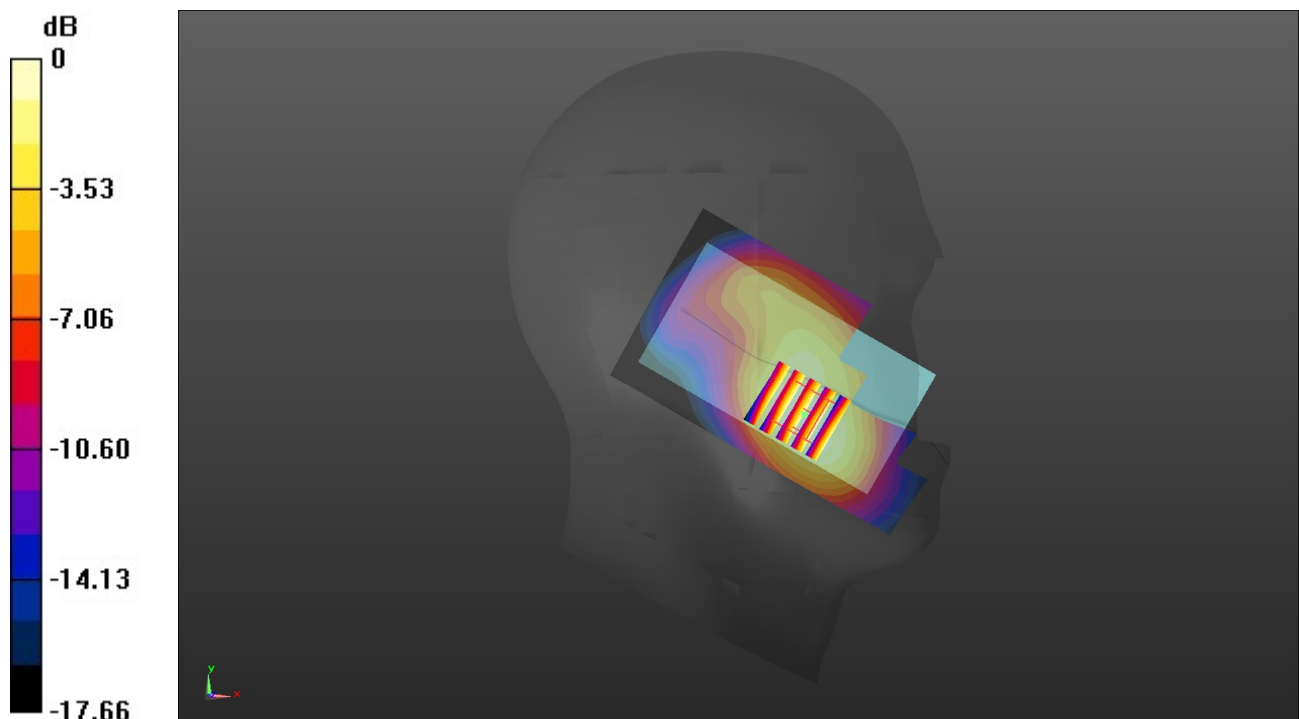
**Left Touch Cheek/CH 18900/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.165 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 1.47 W/kg

**SAR(1 g) = 0.675 W/kg; SAR(10 g) = 0.363 W/kg**

Maximum value of SAR (measured) = 1.11 W/kg



0 dB = 1.11 W/kg = 0.83 dBW/kg

### LTE Band 4-H-Head

Communication System: UID 0, Generic LTE-FDD (0); Frequency: 1745 MHz; Duty Cycle: 1:1  
 Medium parameters used (interpolated):  $f = 1745 \text{ MHz}$ ;  $\sigma = 1.384 \text{ S/m}$ ;  $\epsilon_r = 39.065$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Left Section

Ambient Temperature: 22.2°C; Liquid Temperature: 22.0°C;

DASY Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.42, 7.42, 7.42) @ 1745 MHz; Calibrated: 12/29/2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2/22/2022
- Phantom: Twin-SAM V8.0 ; Type: QD 000 P41 AA; Serial: 1974
- DASY52 52.10.2(1495); SEMCAD X 14.6.12(7450)

**Left Touch Cheek/CH 20300/Area Scan (61x101x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$ .

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

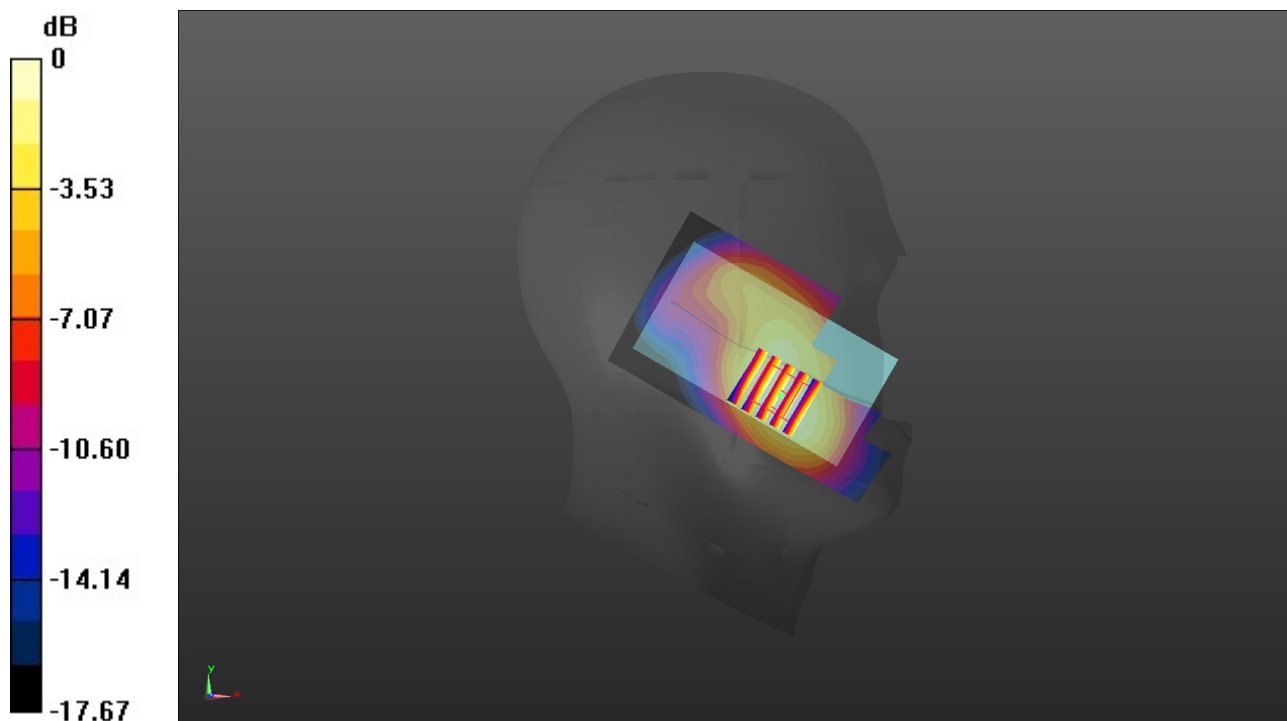
**Left Touch Cheek/CH 20300/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 9.023 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 1.57 W/kg

**SAR(1 g) = 0.624 W/kg; SAR(10 g) = 0.421 W/kg**

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



0 dB = 1.14 W/kg = 0.57 dBW/kg