FCC SAR EVALUATION REPORT

In accordance with the requirements of
FCC 47 CFR Part 2(2.1093), ANSI/IEEE C95.1-1992 and
IEEE Std 1528-2013

Product Name： 4G Mobile Hotspot

Trademark： Horizon

Model Name： MH50

Family Model： N/A

Report No.： S20112501101001

FCC ID： 2ADX3MH50

Prepared for

Telecell Mobile (H.K) Ltd.

RM 801 Metro Ctr II, 21 Lam Hing Street Kln Bay Hong Kong

Prepared by

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TEST RESULT CERTIFICATION

Applicant's name.....: Telecell Mobile (H.K) Ltd.

Address.....: RM 801 Metro Ctr II, 21 Lam Hing Street Kln Bay Hong Kong

Manufacturer's Name.....: Telecell Mobile (H.K) Ltd.

Address.....: RM 801 Metro Ctr II, 21 Lam Hing Street Kln Bay Hong Kong

Product description

Product name.....: 4G Mobile Hotspot

Trademark .....: Horizon

Model Name .....: MH50

Family Model.....: N/A

Standards.....: FCC 47 CFR Part 2(2.1093)
ANSI/IEEE C95.1-1992
IEEE Std 1528-2013
Published RF exposure KDB procedures

This device described above has been tested by Shenzhen NTEK. In accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 and KDB 865664 D01. Testing has shown that this device is capable of compliance with localized specific absorption rate (SAR) specified in FCC 47 CFR Part 2(2.1093) and ANSI/IEEE C95.1-1992. The test results in this report apply only to the tested sample of the stated device/equipment. Other similar device/equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

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Date of Test

Date (s) of performance of tests.....: Oct. 21, 2020 ~ Dec. 05, 2020

Date of Issue .....: Dec. 11, 2020

Test Result .....: **Pass**

Prepared By
(Test Engineer) : Cheng Jiawen
(Cheng Jiawen)

Approved By
(Lab Manager) : Alex
(Alex Li)

※ ※ Revision History ※ ※

REV.	DESCRIPTION	ISSUED DATE	REMARK
Rev.1.0	Initial Test Report Release	Dec. 11, 2020	Cheng Jiawen

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1. General Information

1.1. RF exposure limits

(A).Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

(B).Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

NOTE: ***Whole-Body SAR*** is averaged over the entire body, ***partial-body SAR*** is averaged over any 1 gram of tissue defined as a tissue volume in the shape of a cube. ***SAR for hands, wrists, feet and ankles*** is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

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).

General Population/Uncontrolled Environments:

Are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure.

NOTE

HEAD AND TRUNK LIMIT

1.6 W/kg

APPLIED TO THIS EUT

1.2. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during testing for MH50 are as follows.

RF Exposure Conditions	Equipment Class -Highest Reported SAR (W/kg)			
	PCB	DTS	NII	DSS
1-g Hotspot (Separation distance of 10mm)	0.937	0.373	0.187	N/A
Max Simultaneous Tx	1.310	1.310	1.124	N/A

Note: The Max Simultaneous Tx is calculated based on the same configuration and test position.
This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in FCC 47 CFR Part 2(2.1093) and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE Std 1528-2013 & KDB 865664 D01.

1.3. EUT Description

Device Information			
Product Name	4G Mobile Hotspot		
Trade Name	Horizon		
Model Name	MH50		
Family Model	N/A		
FCC ID	2ADX3MH50		
Device Phase	Identical Prototype		
Exposure Category	General population / Uncontrolled environment		
Antenna	PIFA Antenna		
Battery Information	DC 3.7V, 2300mAh		
Device Operating Configurations			
Supporting Mode(s)	LTE Band 2/4/5/12/13/17/25/26/41/66, WLAN 2.4G/5.8G		
Test Modulation	LTE(QPSK/16QAM), WLAN(DSSS/OFDM)		
Device Class	B		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	LTE Band 2	1850-1910	1930-1990
	LTE Band 4	1710-1755	2110-2155
	LTE Band 5	824-849	869-894
	LTE Band 12	699-716	729-746
	LTE Band 13	777-787	746-756
	LTE Band 17	704-716	734-746
	LTE Band 25	1850-1915	1930-1995
	LTE Band 26	814-849	859-894

	LTE Band 66	1710-1780	2110-2200
	LTE Band 41	2570-2640	
	WLAN 2.4G	2412-2462	
	WLAN 5.8G	5745-5825	

1.4. Test specification(s)

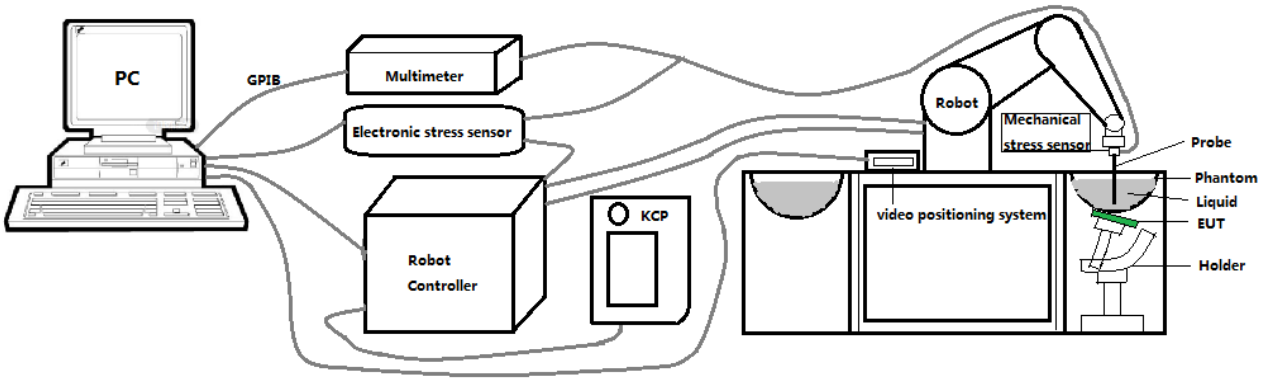
FCC 47 CFR Part 2(2.1093)
ANSI/IEEE C95.1-1992
IEEE Std 1528-2013
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz
KDB 865664 D02 RF Exposure Reporting
KDB 447498 D01 General RF Exposure Guidance
KDB 248227 D01 802.11 Wi-Fi SAR
KDB 941225 D05 SAR for LTE Devices
KDB 941225 D06 Hotspot SAR
KDB 616217 D04 SAR for laptop and tablets

1.5. Ambient Condition

Ambient temperature	20°C – 24°C
Relative Humidity	30% – 70%

2. SAR Measurement System

2.1. SATIMO SAR Measurement Set-up Diagram



These measurements were performed with the automated near-field scanning system OPENSAR from SATIMO. The system is based on a high precision robot (working range: 901 mm), which positions the probes with a positional repeatability of better than ±0.03 mm. The SAR measurements were conducted with dosimetric probe (manufactured by SATIMO), designed in the classical triangular configuration and optimized for dosimetric evaluation.

The first step of the field measurement is the evaluation of the voltages induced on the probe by the device under test. Probe diode detectors are nonlinear. Below the diode compression point, the output voltage is proportional to the square of the applied E-field; above the diode compression point, it is linear to the applied E-field. The compression point depends on the diode, and a calibration procedure is necessary for each sensor of the probe.

The Keithley multimeter reads the voltage of each sensor and send these three values to the PC. The corresponding E field value is calculated using the probe calibration factors, which are stored in the working directory. This evaluation includes linearization of the diode characteristics. The field calculation is done separately for each sensor. Each component of the E field is displayed on the "Dipole Area Scan Interface" and the total E field is displayed on the "3D Interface"

2.2. Robot

The SATIMO SAR system uses the high precision robots from KUKA. For the 6-axis controller system, the robot controller version (KUKA) from KUKA is used. The KUKA robot series have many features that are important for our application:

- High precision (repeatability ±0.03 mm)
- High reliability (industrial design)
- Jerk-free straight movements
- Low ELF interference (the closed metallic construction shields against motor control fields)

2.3. E-Field Probe

This E-field detection probe is composed of three orthogonal dipoles linked to special Schottky diodes with low detection thresholds. The probe allows the measurement of electric fields in liquids such as the one defined in the IEEE and CENELEC standards.

For the measurements the Specific Dosimetric E-Field Probe SN 08/16 EPGO287 with following specifications is used

- Dynamic range: 0.01-100 W/kg
- Tip Diameter: 2.5 mm
- Distance between probe tip and sensor center: 1 mm
- Distance between sensor center and the inner phantom surface: 2 mm (repeatability better than ±1 mm).
- Probe linearity: ±0.08 dB
- Axial isotropy: 0.06 dB
- Hemispherical Isotropy: 0.08 dB
- Calibration range: 650MHz to 5900MHz for head & body simulating liquid.
- Lower detection limit: 7mW/kg

Angle between probe axis (evaluation axis) and surface normal line: less than 30°.

2.3.1. E-Field Probe Calibration

Each probe needs to be calibrated according to a dosimetric assessment procedure with accuracy better than ±10%. The spherical isotropy shall be evaluated and within ±0.25dB. The sensitivity parameters (Norm X, Norm Y, and Norm Z), the diode compression parameter (DCP) and the conversion factor (Conv F) of the probe are tested. The calibration data can be referred to appendix D of this report.

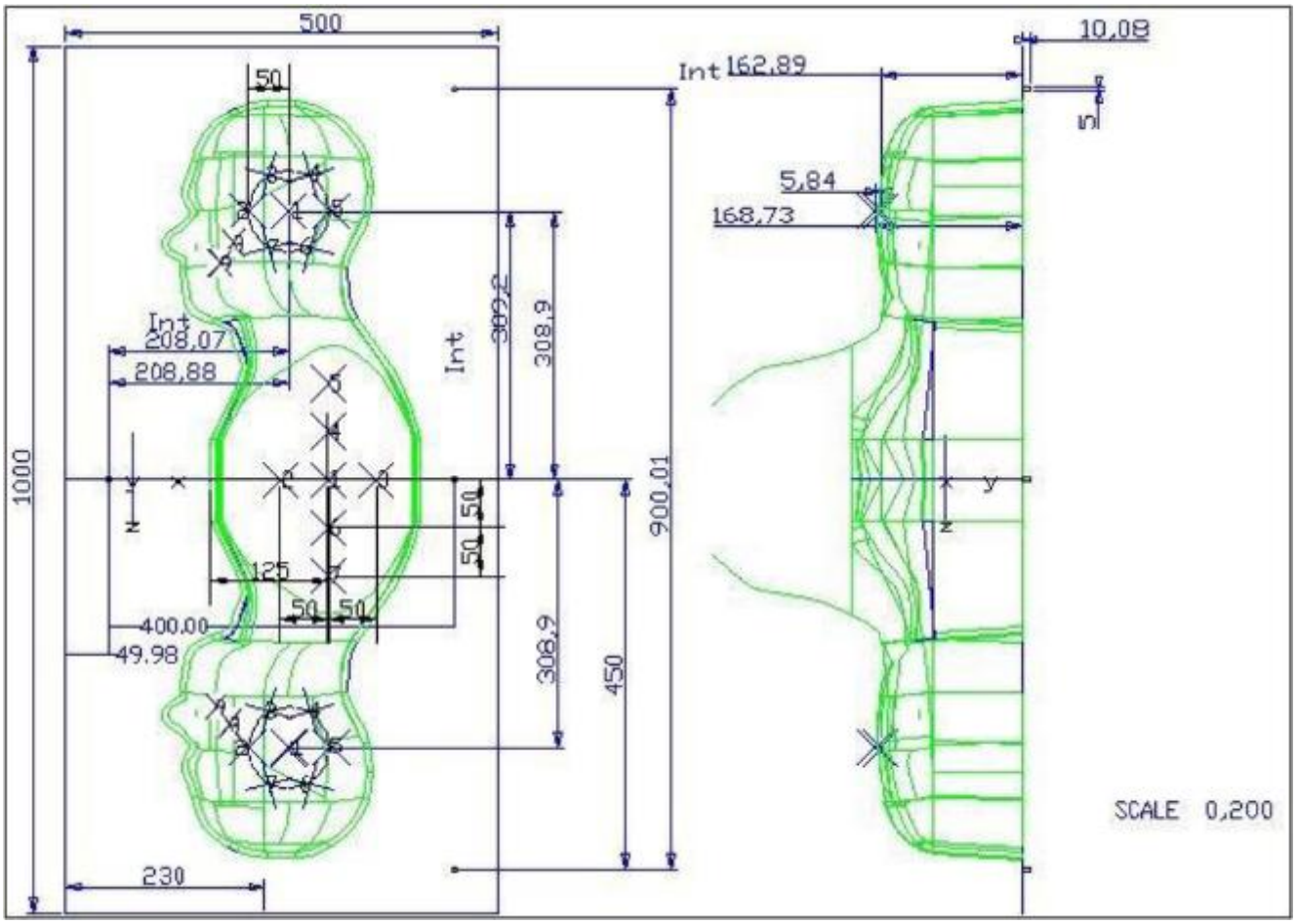
2.4. SAM phantoms

Photo of SAM phantom SN 16/15 SAM119

The SAM phantom is used to measure the SAR relative to people exposed to electro-magnetic field radiated by mobile phones.

2.4.1. Technical Data

Serial Number	Shell thickness	Filling volume	Dimensions	Positionner Material	Permittivity	Loss Tangent
SN 16/15 SAM119	2 mm ±0.2 mm	27 liters	Length:1000 mm Width:500 mm Height:200 mm	Gelcoat with fiberglass	3.4	0.02

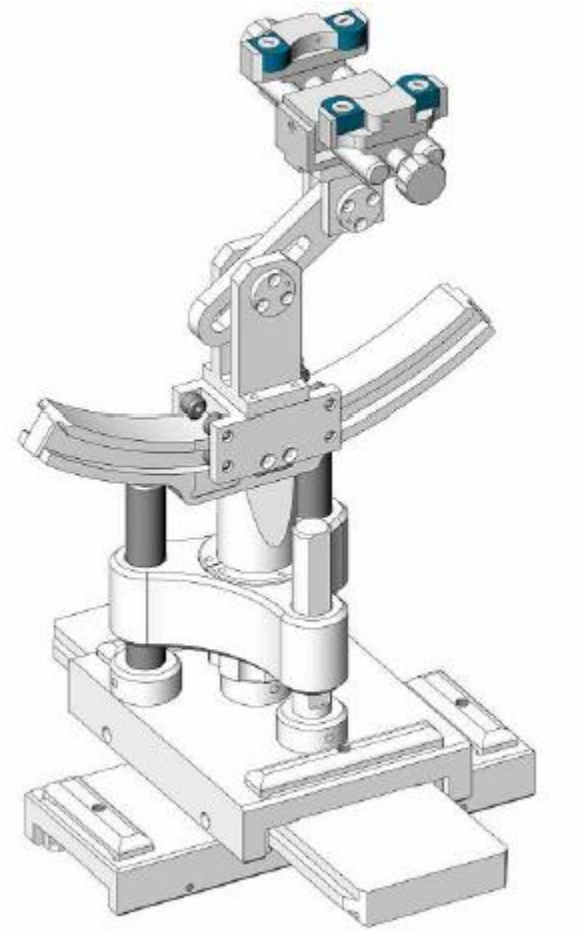


Serial Number	Left Head(mm)		Right Head(mm)		Flat Part(mm)	
SN 16/15 SAM119	2	2.02	2	2.08	1	2.09
	3	2.05	3	2.06	2	2.06
	4	2.07	4	2.07	3	2.08
	5	2.08	5	2.08	4	2.10
	6	2.05	6	2.07	5	2.10
	7	2.05	7	2.05	6	2.07
	8	2.07	8	2.06	7	2.07
	9	2.08	9	2.06	-	-

The test, based on ultrasonic system, allows measuring the thickness with an accuracy of 10 µm.

2.5. Device Holder

The positioning system allows obtaining cheek and tilting position with a very good accuracy. In compliance with CENELEC, the tilt angle uncertainty is lower than 1 degree.



Serial Number	Holder Material	Permittivity	Loss Tangent
SN 16/15 MSH100	Delrin	3.7	0.005

2.6. Test Equipment List

This table gives a complete overview of the SAR measurement equipment.

Devices used during the test described are marked ☒

	Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
					Last Cal.	Due Date
☒	MVG	E FIELD PROBE	SSE2	SN 08/16 EPGO287	Dec. 27, 2019	Dec. 26, 2020
☒	MVG	750 MHz Dipole	SID750	SN 03/15 DIP 0G750-355	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	835 MHz Dipole	SID835	SN 03/15 DIP 0G835-347	Apr. 19, 2018	Apr. 18, 2021
☐	MVG	900 MHz Dipole	SID900	SN 03/15 DIP 0G900-348	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	1800 MHz Dipole	SID1800	SN 03/15 DIP 1G800-349	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	1900 MHz Dipole	SID1900	SN 03/15 DIP 1G900-350	Apr. 19, 2018	Apr. 18, 2021
☐	MVG	2000 MHz Dipole	SID2000	SN 03/15 DIP 2G000-351	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	2450 MHz Dipole	SID2450	SN 03/15 DIP 2G450-352	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	2600 MHz Dipole	SID2600	SN 03/15 DIP 2G600-356	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	5000 MHz Dipole	SWG5500	SN 13/14 WGA 33	Apr. 19, 2018	Apr. 18, 2021
☒	MVG	Liquid measurement Kit	SCLMP	SN 21/15 OCPG 72	NCR	NCR
☒	MVG	Power Amplifier	N.A	AMPLISAR_28/14_003	NCR	NCR
☒	KEITHLEY	Millivoltmeter	2000	4072790	NCR	NCR
☐	R&S	Universal radio communication tester	CMU200	117858	Jul. 13, 2020	Jul. 12, 2021
☒	R&S	Wideband radio communication tester	CMW500	103917	Jul. 13, 2020	Jul. 12, 2021
☒	HP	Network Analyzer	8753D	3410J01136	Jul. 13, 2020	Jul. 12, 2021
☒	Agilent	PSG Analog Signal Generator	E8257D	MY51110112	Jul. 13, 2020	Jul. 12, 2021

☒	Agilent	Power meter	E4419B	MY45102538	Jul. 13, 2020	Jul. 12, 2021
☒	Agilent	Power sensor	E9301A	MY41495644	Jul. 13, 2020	Jul. 12, 2021
☒	Agilent	Power sensor	E9301A	US39212148	Jul. 13, 2020	Jul. 12, 2021
☒	MCLI/USA	Directional Coupler	CB11-20	0D2L51502	Jul. 17, 2020	Jul. 16, 2023

3. SAR Measurement Procedures

The measurement procedures are as follows:

<Conducted power measurement>

(a) For WWAN power measurement, use base station simulator to configure EUT WWAN transmission in conducted connection with RF cable, at maximum power in each supported wireless interface and frequency band.

(b) Read the WWAN RF power level from the base station simulator.

(c) For WLAN/Bluetooth power measurement, use engineering software to configure EUT WLAN/Bluetooth continuously transmission, at maximum RF power in each supported wireless interface and frequency band.

(d) Connect EUT RF port through RF cable to the power meter, and measure WLAN/Bluetooth output power.

<SAR measurement>

(a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT WLAN/Bluetooth continuously transmission, at maximum RF power, in the highest power channel.

(b) Place the EUT in the positions as Appendix A demonstrates.

(c) Set scan area, grid size and other setting on the OPENSAR software.

(d) Measure SAR results for the highest power channel on each testing position.

(e) Find out the largest SAR result on these testing positions of each band.

(f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg.

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

(a) Power reference measurement

(b) Area scan

(c) Zoom scan

(d) Power drift measurement

3.1. Power Reference

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

3.2. Area scan & Zoom scan

The area scan is a 2D scan to find the hot spot location on the DUT. The zoom scan is a 3D scan above the hot spot to calculate the 1g and 10g SAR value.

Measurement of the SAR distribution with a grid of 8 to 16 mm * 8 to 16 mm and a constant distance to the inner surface of the phantom. Since the sensors cannot directly measure at the inner phantom surface, the values between the sensors and the inner phantom surface are extrapolated. With these values the area of the maximum SAR is calculated by an interpolation scheme. Around this point, a cube of 30 * 30 *30 mm or 32 * 32 * 32 mm is assessed by measuring 5 or 8 * 5 or 8 * 4 or 5 mm. With these data, the peak spatial-average SAR value can be calculated.

From the scanned SAR distribution, identify the position of the maximum SAR value, in addition identify the positions of any local maxima with SAR values within 2 dB of the maximum value that will not be within the zoom scan of other peaks; additional peaks shall be measured only when the primary peak is within 2 dB of the SAR compliance limit (e.g., 1 W/kg for 1,6 W/kg 1 g limit, or 1,26 W/kg for 2 W/kg, 10 g limit).

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

<table>
<tr><td colspan="3"></td><td>≤ 3 GHz</td><td>> 3 GHz</td></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5 ± 1 mm</td><td>½·δ·ln(2) ± 0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30° ± 1°</td><td>20° ± 1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx_{Area}, Δy_{Area}</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3 – 4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx_{Zoom}, Δy_{Zoom}</td><td>≤ 2 GHz: ≤ 8 mm
2 – 3 GHz: ≤ 5 mm*</td><td>3 – 4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="3">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2">uniform grid: $\Delta z_{Zoom}(n)$</td><td>≤ 5 mm</td><td>3 – 4 GHz: ≤ 4 mm
4 – 5 GHz: ≤ 3 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="2">graded grid</td><td>$\Delta z_{Zoom}(1)$: between 1st two points closest to phantom surface</td><td>≤ 4 mm</td><td>3 – 4 GHz: ≤ 3 mm
4 – 5 GHz: ≤ 2.5 mm
5 – 6 GHz: ≤ 2 mm</td></tr>
<tr><td>$\Delta z_{Zoom}(n>1)$: between subsequent points</td><td colspan="2">≤ 1.5·$\Delta z_{Zoom}(n-1)$</td></tr>
<tr><td>Minimum zoom scan volume</td><td colspan="2">x, y, z</td><td>≥ 30 mm</td><td>3 – 4 GHz: ≥ 28 mm
4 – 5 GHz: ≥ 25 mm
5 – 6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.
* When zoom scan is required and the reported SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.</td></tr>
</table>

3.3. Description of interpolation/extrapolation scheme

The local SAR inside the phantom is measured using small dipole sensing elements inside a probe body. The probe tip must not be in contact with the phantom surface in order to minimise measurements errors, but the highest local SAR will occur at the surface of the phantom.
An extrapolation is using to determinate this highest local SAR values. The extrapolation is based on a fourth-order least-square polynomial fit of measured data. The local SAR value is then extrapolated from the liquid surface with a 1 mm step.
The measurements have to be performed over a limited time (due to the duration of the battery) so the step of measurement is high. It could vary between 5 and 8 mm. To obtain an accurate assessment of the maximum SAR averaged over 10 grams and 1 gram requires a very fine resolution in the three dimensional scanned data array.

3.4. Volumetric Scan

The volumetric scan consists to a full 3D scan over a specific area. This 3D scan is useful form multi Tx SAR measurement. Indeed, it is possible with OpenSAR to add, point by point, several volumetric scan to calculate the SAR value of the combined measurement as it is define in the standard IEEE1528 and IEC62209.

3.5. Power Drift

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In OpenSAR measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in V/m. If the power drifts more than ±5%, the SAR will be retested.

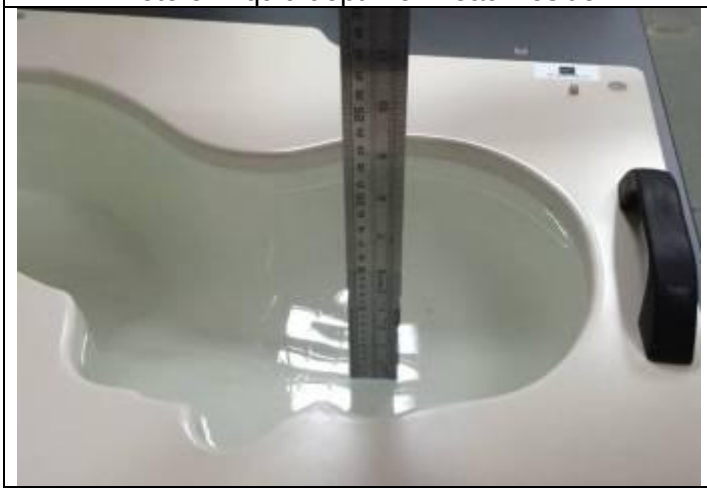
4. System Verification Procedure

4.1. Tissue Verification

The following tissue formulations are provided for reference only as some of the parameters have not been thoroughly verified. The composition of ingredients may be modified accordingly to achieve the desired target tissue parameters required for routine SAR evaluation.

Ingredients (% of weight)	Head Tissue									
Frequency Band (MHz)	750	835	900	1800	1900	2000	2450	2600	5200	5800
Water	34.40	34.40	34.40	55.36	55.36	57.87	57.87	57.87	65.53	65.53
NaCl	0.79	0.79	0.79	0.35	0.35	0.16	0.16	0.16	0.00	0.00
1,2-Propanediol	64.81	64.81	64.81	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Triton X-100	0.00	0.00	0.00	30.45	30.45	19.97	19.97	19.97	24.24	24.24
DGBE	0.00	0.00	0.00	13.84	13.84	22.00	22.00	22.00	10.23	10.23
Ingredients (% of weight)	Body Tissue									
Frequency Band (MHz)	750	835	900	1800	1900	2000	2450	2600	5200	5800
Water	50.30	50.30	50.30	69.91	69.91	71.88	71.88	71.88	79.54	79.54
NaCl	0.60	0.60	0.60	0.13	0.13	0.16	0.16	0.16	0.00	0.00
1,2-Propanediol	49.10	49.10	49.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Triton X-100	0.00	0.00	0.00	9.99	9.99	19.97	19.97	19.97	11.24	11.24
DGBE	0.00	0.00	0.00	19.97	19.97	7.99	7.99	7.99	9.22	9.22

For SAR measurement of the field distribution inside the phantom, the phantom must be filled with homogeneous tissue simulating liquid to a depth of at least 15 cm. For head SAR testing, the liquid depth from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm.

Photo of Liquid depth for Head Position	Photo of Liquid depth for Body Position
	

4.1.1. Tissue Dielectric Parameter Check Results

The simulating liquids should be checked at the beginning of a series of SAR measurements to determine of the dielectric parameter are within the tolerances of the specified target values. The measured conductivity and relative permittivity should be within ±5% of the target values.

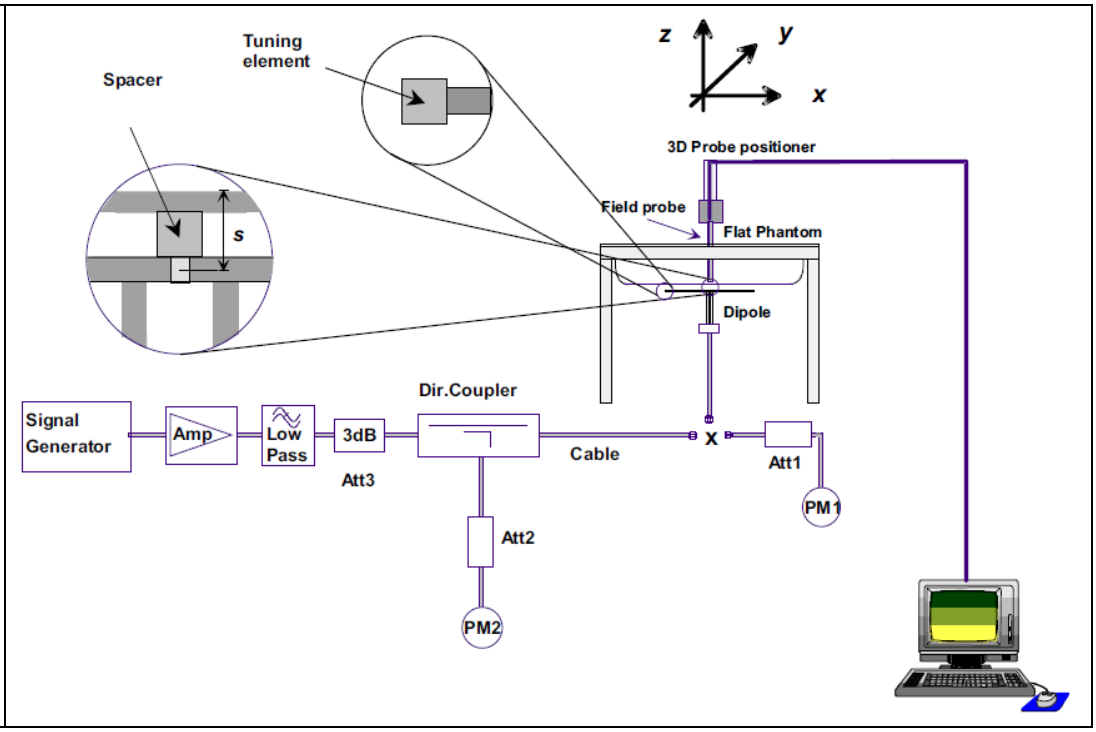
Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
		εr (±5%)	σ (S/m) (±5%)	εr	σ (S/m)		
Body 750	750	55.55 (52.77~58.33)	0.96 (0.91~1.01)	55.58	0.97	21.2 °C	Oct. 21, 2020
Body 850	835	55.20 (52.44~57.96)	0.97 (0.92~1.02)	54.63	0.98	21.3°C	Oct. 22, 2020
Body 1800	1800	53.30 (50.64~55.97)	1.52 (1.44~1.60)	54.16	1.51	21.1 °C	Oct. 23, 2020
Body 1900	1900	53.30 (50.64~55.97)	1.52 (1.44~1.60)	54.37	1.52	21.5 °C	Oct. 23, 2020
Body 2450	2450	52.70 (50.07~55.34)	1.95 (1.85~2.05)	51.65	1.88	21.5 °C	Oct. 24, 2020
Body 2600	2600	52.51 (49.88~55.14)	2.16 (2.05~2.27)	52.91	2.21	21.2 °C	Nov. 07, 2020
Body 5800	5800	48.20 (45.79~50.61)	6.00 (5.70~6.30)	48.40	6.05	21.2 °C	Oct. 24, 2020
Body 750	750	55.55 (52.77~58.33)	0.96 (0.91~1.01)	55.52	0.97	21.2 °C	Dec. 03, 2020
Body 850	835	55.20 (52.44~57.96)	0.97 (0.92~1.02)	55.20	0.96	21.3 °C	Dec. 04, 2020
Body 1800	1800	53.30 (50.64~55.97)	1.52 (1.44~1.60)	54.53	1.51	21.2 °C	Dec. 04, 2020
Body 1900	1900	53.30 (50.64~55.97)	1.52 (1.44~1.60)	54.73	1.52	21.4 °C	Dec. 05, 2020

NOTE: The dielectric parameters of the tissue-equivalent liquid should be measured under similar ambient conditions and within 2 °C of the conditions expected during the SAR evaluation to satisfy protocol requirements.

4.2. System Verification Procedure

The system verification is performed for verifying the accuracy of the complete measurement system and performance of the software. The dipole is connected to the signal source consisting of signal generator and amplifier via a directional coupler, N-connector cable and adaption to SMA. It is fed with a power of 100mW (below 5GHz) or 100mW (above 5GHz). To adjust this power a power meter is used. The power sensor is connected to the cable before the system verification to measure the power at this point and do adjustments at the signal generator. At the outputs of the directional coupler both return loss as well as forward power are controlled during the system verification to make sure that emitted power at the dipole is kept constant. This can also be checked by the power drift measurement after the test (result on plot).

The system verification is shown as below picture:



4.2.1. System Verification Results

Comparing to the original SAR value provided by SATIMO, the verification data should be within its specification of ±10%. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance verification can meet the variation criterion and the plots can be referred to Appendix B of this report.

System Verification	Target SAR (1W) (±10%)		Measured SAR (Normalized to 1W)		Liquid Temp.	Test Date
	1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)		
750MHz Body	8.85 (7.97~9.74)	5.91 (5.32~6.50)	9.08	6.00	21.2 °C	Oct. 21, 2020
835MHz Body	9.83 (8.85~10.81)	6.45 (5.81~7.10)	9.63	6.36	21.3°C	Oct. 22, 2020
1800MHz Body	38.13 (34.32~41.94)	20.65 (18.59~22.72)	39.43	21.64	21.1 °C	Oct. 23, 2020
1900MHz Body	39.02 (35.12~42.92)	20.57 (18.51~22.63)	37.71	20.61	21.5 °C	Oct. 23, 2020
2450MHz Body	52.90 (47.61~58.19)	24.09 (21.68~26.50)	50.63	23.80	21.5 °C	Oct. 24, 2020
2600MHz Body	52.49 (47.24~57.74)	23.74 (21.37~26.11)	56.03	23.42	21.2 °C	Nov. 07, 2020
5800MHz Body	169.30 (152.37~186.23)	58.49 (52.64~64.34)	170.87	59.28	21.2 °C	Oct. 24, 2020
750MHz Body	8.85 (7.97~9.74)	5.91 (5.32~6.50)	8.42	5.63	21.2 °C	Dec. 03, 2020
835MHz Body	9.83 (8.85~10.81)	6.45 (5.81~7.10)	9.39	6.80	21.3 °C	Dec. 04, 2020
1800MHz Body	38.13 (34.32~41.94)	20.65 (18.59~22.72)	39.62	21.36	21.2 °C	Dec. 04, 2020
1900MHz Body	39.02 (35.12~42.92)	20.57 (18.51~22.63)	39.80	20.67	21.4 °C	Dec. 05, 2020

5. SAR Measurement variability and uncertainty

5.1. SAR measurement variability

Per KDB865664 D01 SAR measurement 100 MHz to 6 GHz, SAR measurement variability must be assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. The 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 < 0.80 W/kg; steps 2) through 4) do not apply.
2) When the original highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg (~ 10% from the 1-g SAR limit).
4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

5.2. SAR measurement uncertainty

Per KDB865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

6. RF Exposure Positions

6.1. Wireless Router Decices

Some battery-operated handsets have the capability to transmit and receive user through simultaneous transmission of WLAN simultaneously with a separate licensed transmitter. The FCC has provided guidance in FCC KDB Publication 941225 D06 where SAR test considerations for handsets (L x W ≥ 9 cm x 5 cm) are based on a composite test separation distance of 10mm from the front, back and edges of the device containing transmitting antennas within 2.5cm of their edges, determined form general mixed use conditions for this type of devices. Since the hotspot SAR results may overlap with the body-worn accessory SAR requirements, the more conservative configurations can be considered, thus excluding some body-worn accessory SAR tests.

When the user enables the personal wireless router functions for the handset, actual operations include simultaneous transmission of both the WLAN transmitter and another licensed transmitter. Both transmitters often do not transmit at the same transmitting frequency and thus cannot be evaluated for SAR under actual use conditions due to the limitations of the SAR assessment probes. Therefore, SAR must be evaluated for each frequency transmission and mode separately and spatially summed with the WLAN transmitter according to FCC KDB Publication 447498 D01 publication procedures. The “Portable Hotspot” feature on the handset was NOT activated during SAR assessments, to ensure the SAR measurements were evaluated for a single transmission frequency RF signal at a time.

7. RF Output Power

The proximity sensor is used in this device to reduce the maximum output power (LTE Band 2/4/5/13/25/26/66) in selected wireless mode and operating configurations to ensure SAR compliance.

7.1. LTE Conducted Power

Proximity Sensor Inactive

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18607/1850.7	18900/1880	19193/1909.3
LTE Band 2	1.4MHz	QPSK	1	0	24.00	22.79	22.94	22.86
			1	2	24.00	23.04	22.87	22.76
			1	5	24.00	22.73	22.93	22.79
			3	0	24.00	22.71	22.81	22.88
			3	1	24.00	22.86	22.99	22.94
			3	2	24.00	22.79	22.95	23.03
			6	0	22.00	21.76	21.87	21.94
		16QAM	1	0	23.00	21.83	21.58	21.91
			1	2	23.00	21.78	21.54	22.08
			1	5	23.00	21.72	21.50	21.74
			3	0	23.00	21.73	21.43	22.19
			3	1	23.00	21.76	21.38	22.16
			3	2	23.00	21.81	21.34	22.18
			6	0	21.00	20.99	20.84	20.91
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18615/1851.5	18900/1880	19185/1908.5
LTE Band 2	3MHz	QPSK	1	0	24.00	23.02	22.87	23.02
			1	7	24.00	22.79	22.95	22.99
			1	14	24.00	22.95	22.88	22.99
			8	0	22.00	21.85	21.83	21.85
			8	4	22.00	21.87	21.89	21.88
			8	7	22.00	21.83	21.85	21.90
			15	0	22.00	21.85	21.84	21.88
		16QAM	1	0	23.00	22.18	21.41	21.72
			1	7	23.00	22.23	21.82	21.81
			1	14	23.00	22.05	21.35	21.91
			8	0	21.00	20.64	20.54	20.55
			8	4	21.00	20.65	20.60	20.59
			8	7	21.00	20.71	20.56	20.62
			15	0	21.00	20.94	20.72	20.76
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18625/1852.5	18900/1880	19175/1907.5
LTE Band	5MHz	QPSK	1	0	24.00	22.64	22.19	22.60
			1	12	24.00	23.29	22.78	22.91

2			1	24	24.00	22.50	22.58	22.95
			12	0	22.00	21.64	21.83	21.89
			12	6	22.00	21.75	21.95	21.92
			12	11	22.00	21.76	21.93	21.91
			25	0	22.00	21.74	21.92	21.95
		16QAM	1	0	22.00	21.66	21.59	21.93
			1	12	22.00	21.82	21.87	21.93
			1	24	22.00	21.66	21.44	21.88
			12	0	21.00	20.36	20.47	20.72
			12	6	21.00	20.40	20.50	20.81
			12	11	21.00	20.53	20.48	20.59
			25	0	21.00	20.61	20.74	20.90
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18650/1855	18900/1880	19150/1905
LTE Band 2	10MHz	QPSK	1	0	24.00	22.63	22.72	22.99
			1	24	24.00	23.04	23.09	22.92
			1	49	24.00	22.77	22.69	23.12
			25	0	22.00	21.70	21.92	21.93
			25	12	22.00	21.77	21.94	21.91
			25	24	22.00	21.79	21.82	21.84
			50	0	22.00	21.74	21.87	21.88
		16QAM	1	0	23.00	22.12	21.37	21.71
			1	24	23.00	22.85	21.59	22.04
			1	49	23.00	22.31	21.42	21.92
			25	0	22.00	20.63	20.82	20.94
			25	12	22.00	20.75	20.96	20.94
			25	24	22.00	20.76	21.04	20.93
			50	0	21.00	20.58	21.00	20.83
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18675/1857.5	18900/1880	19125/1902.5
LTE Band 2	15MHz	QPSK	1	0	24.00	22.64	22.66	22.70
			1	37	24.00	23.20	23.30	22.98
			1	74	24.00	22.83	22.91	22.77
			36	0	22.00	21.77	21.88	21.92
			36	18	22.00	21.89	21.96	21.99
			36	37	22.00	21.85	21.81	21.89
			75	0	22.00	21.73	21.70	21.97
		16QAM	1	0	23.00	22.13	21.53	22.01
			1	37	23.00	22.94	22.04	22.64
			1	74	23.00	22.71	21.43	22.04
			36	0	21.00	20.71	20.87	20.87
			36	18	21.00	20.76	20.96	20.97
			36	37	21.00	20.77	20.80	20.90
			75	0	21.00	20.68	20.62	20.92
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		

			RB Size	RB Offset		18700/1860	18900/1880	19100/1900
LTE Band 2	20MHz	QPSK	1	0	24.00	22.42	22.75	22.60
			1	49	24.00	23.10	23.15	23.10
			1	99	24.00	22.42	22.76	22.77
			50	0	22.00	21.76	21.80	21.85
			50	24	22.00	21.88	21.95	21.87
			50	49	22.00	21.89	21.80	21.70
			100	0	22.00	21.83	21.80	21.86
		16QAM	1	0	22.00	21.79	21.34	21.50
			1	49	22.00	21.86	21.84	21.32
			1	99	22.00	21.13	21.18	21.39
			50	0	21.00	20.69	20.36	20.87
			50	24	21.00	20.98	20.86	20.83
			50	49	21.00	20.86	20.81	20.72
			100	0	21.00	20.73	20.71	20.72

Proximity Sensor Active

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18607/1850.7	18900/1880	19193/1909.3
LTE Band 2	1.4MHz	QPSK	1	0	20.00	19.28	19.57	19.28
			1	2	20.00	19.71	19.40	19.42
			1	5	20.00	19.23	19.55	19.18
			3	0	20.00	19.35	19.36	19.47
			3	1	20.00	19.23	19.43	19.34
			3	2	20.00	19.17	19.50	19.48
			6	0	19.00	18.15	18.37	18.33
		16QAM	1	0	19.00	18.29	18.12	18.55
			1	2	19.00	18.48	18.13	18.76
			1	5	19.00	18.22	17.91	18.14
			3	0	19.00	18.35	17.89	18.81
			3	1	19.00	18.30	17.86	18.77
			3	2	19.00	18.38	18.00	18.83
			6	0	18.00	17.43	17.31	17.30
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18615/1851.5	18900/1880	19185/1908.5
LTE Band 2	3MHz	QPSK	1	0	20.00	19.46	19.33	19.65
			1	7	20.00	19.30	19.55	19.59
			1	14	20.00	19.42	19.23	19.41
			8	0	19.00	18.21	18.25	18.42

			8	4	19.00	18.28	18.25	18.36
			8	7	19.00	18.42	18.20	18.57
			15	0	19.00	18.30	18.35	18.25
		16QAM	1	0	19.00	18.55	18.07	18.36
			1	7	19.00	18.82	18.48	18.24
			1	14	19.00	18.43	18.03	18.52
			8	0	18.00	17.34	17.21	17.19
			8	4	18.00	17.06	17.27	17.22
			8	7	18.00	17.13	17.25	17.21
			15	0	18.00	17.44	17.11	17.41
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18625/1852.5	18900/1880	19175/1907.5
LTE Band 2	5MHz	QPSK	1	0	20.00	19.04	18.84	19.15
			1	12	20.00	19.64	19.21	19.60
			1	24	20.00	19.14	19.07	19.43
			12	0	19.00	18.15	18.21	18.28
			12	6	19.00	18.43	18.35	18.40
			12	11	19.00	18.44	18.56	18.30
			25	0	19.00	18.37	18.31	18.39
		16QAM	1	0	19.00	18.34	18.27	18.32
			1	12	19.00	18.25	18.56	18.43
			1	24	19.00	18.25	18.00	18.44
			12	0	18.00	16.86	17.11	17.12
			12	6	18.00	16.86	16.86	17.40
			12	11	18.00	17.07	16.97	17.17
			25	0	18.00	17.26	17.15	17.41
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18650/1855	18900/1880	19150/1905
LTE Band 2	10MHz	QPSK	1	0	20.00	19.25	19.39	19.48
			1	24	20.00	19.56	19.78	19.39
			1	49	20.00	19.22	19.29	19.61
			25	0	19.00	18.06	18.51	18.33
			25	12	19.00	18.25	18.61	18.32
			25	24	19.00	18.37	18.18	18.28
			50	0	19.00	18.12	18.43	18.53
		16QAM	1	0	19.00	18.75	17.85	18.25

			1	24	19.00	18.38	18.29	18.48
			1	49	19.00	18.97	17.87	18.50
			25	0	18.00	17.12	17.51	17.46
			25	12	18.00	17.37	17.32	17.37
			25	24	18.00	17.23	17.44	17.44
			50	0	18.00	17.05	17.56	17.35
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18675/1857.5	18900/1880	19125/1902.5
LTE Band 2	15MHz	QPSK	1	0	20.00	19.26	19.14	19.38
			1	37	20.00	19.84	19.81	19.49
			1	74	20.00	19.21	19.33	19.26
			36	0	19.00	18.30	18.33	18.55
			36	18	19.00	18.38	18.34	18.54
			36	37	19.00	18.45	18.35	18.54
			75	0	19.00	18.33	18.25	18.46
		16QAM	1	0	19.00	18.59	17.89	18.66
			1	37	19.00	18.49	18.74	18.29
			1	74	19.00	18.28	17.89	18.72
			36	0	18.00	17.25	17.55	17.39
			36	18	18.00	17.26	17.38	17.38
			36	37	18.00	17.42	17.16	17.34
			75	0	18.00	17.30	17.03	17.43
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		18700/1860	18900/1880	19100/1900
LTE Band 2	20MHz	QPSK	1	0	20.00	18.92	19.33	19.04
			1	49	20.00	19.70	19.73	19.72
			1	99	20.00	19.02	19.13	19.35
			50	0	19.00	18.33	18.50	18.35
			50	24	19.00	18.38	18.30	18.27
			50	49	19.00	18.39	18.27	18.36
			100	0	19.00	18.40	18.38	18.25
		16QAM	1	0	19.00	18.37	17.83	17.86
			1	49	19.00	18.32	18.40	17.81
			1	99	19.00	17.72	17.56	17.76
			50	0	18.00	17.21	16.79	17.46
			50	24	18.00	17.54	17.47	17.18

			50	49	18.00	17.30	17.38	17.31
			100	0	18.00	17.42	17.38	17.37

Proximity Sensor Inactive

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		19957/1710.7	20175/1732.5	20393/1754.3
LTE Band 4	1.4MHz	QPSK	1	0	23.00	22.54	22.81	22.42
			1	2	23.00	22.58	22.83	22.45
			1	5	23.00	22.61	22.74	22.38
			3	0	23.00	22.68	22.76	22.59
			3	1	23.00	22.75	22.78	22.72
			3	2	23.00	22.68	22.73	22.68
			6	0	22.00	21.75	21.55	21.54
		16QAM	1	0	23.00	21.62	22.06	21.66
			1	2	23.00	21.71	22.20	21.63
			1	5	23.00	21.67	22.14	21.68
			3	0	23.00	22.01	22.15	21.83
			3	1	23.00	21.98	22.09	21.87
			3	2	23.00	21.94	22.04	21.65
			6	0	21.00	20.70	20.70	20.61
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		19965/1711.5	20175/1732.5	20385/1753.5
LTE Band 4	3MHz	QPSK	1	0	23.00	22.56	22.94	22.40
			1	7	23.00	22.70	22.79	22.68
			1	14	23.00	22.49	22.74	22.85
			8	0	22.00	21.76	21.71	21.69
			8	4	22.00	21.73	21.68	21.65
			8	7	22.00	21.68	21.71	21.60
			15	0	22.00	21.69	21.82	21.70
		16QAM	1	0	23.00	22.09	21.32	21.52
			1	7	23.00	22.12	21.36	21.61
			1	14	23.00	21.98	21.19	21.53
			8	0	21.00	20.76	20.64	20.66
			8	4	21.00	20.66	20.88	20.70
			8	7	21.00	20.68	20.82	20.78
			15	0	21.00	20.60	20.69	20.83
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		19975/1712.5	20175/1732.5	20375/1752.5
LTE Band 4	5MHz	QPSK	1	0	23.00	22.53	22.66	22.46
			1	12	23.00	22.78	22.79	22.59
			1	24	23.00	22.54	22.55	22.71
			12	0	22.00	21.71	21.65	21.70
			12	6	22.00	21.65	21.86	21.79
			12	11	22.00	21.59	21.79	21.75

			25	0	22.00	21.59	21.81	21.83
		16QAM	1	0	22.00	21.75	21.19	21.76
			1	12	22.00	21.77	21.39	21.59
			1	24	22.00	21.53	21.36	21.60
			12	0	21.00	20.46	20.58	20.55
			12	6	21.00	20.43	20.62	20.55
			12	11	21.00	20.38	20.57	20.60
			25	0	21.00	20.64	20.71	20.61
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20000/1715	20175/1732.5	20350/1750
LTE Band 4	10MHz	QPSK	1	0	23.00	22.78	22.58	22.65
			1	24	23.00	22.77	22.87	22.69
			1	49	23.00	22.56	22.57	22.84
			25	0	22.00	21.67	21.68	21.66
			25	12	22.00	21.66	21.78	21.71
			25	24	22.00	21.67	21.74	21.59
			50	0	22.00	21.72	21.75	21.68
		16QAM	1	0	23.00	22.18	21.23	21.57
			1	24	23.00	22.73	21.27	21.65
			1	49	23.00	21.83	21.36	21.80
			25	0	21.00	20.61	20.59	20.85
			25	12	21.00	20.64	20.69	20.78
			25	24	21.00	20.65	20.57	20.76
			50	0	21.00	20.68	20.61	20.56
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20025/1717.5	20175/1732.5	20325/1747.5
LTE Band 4	15MHz	QPSK	1	0	24.00	22.85	22.54	22.65
			1	37	24.00	23.14	22.97	22.68
			1	74	24.00	22.72	22.40	22.44
			36	0	22.00	21.64	21.66	21.67
			36	18	22.00	21.77	21.78	21.80
			36	37	22.00	21.70	21.62	21.58
			75	0	22.00	21.74	21.65	21.67
		16QAM	1	0	23.00	22.35	21.47	21.99
			1	37	23.00	22.05	21.93	21.61
			1	74	23.00	22.07	21.32	22.32
			36	0	21.00	20.68	20.62	20.62
			36	18	21.00	20.65	20.78	20.69
			36	37	21.00	20.67	20.64	20.43
			75	0	21.00	20.72	20.58	20.78
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20050/1720	20175/1732.5	20300/1745
LTE Band 4	20MHz	QPSK	1	0	24.00	22.65	23.05	23.15
			1	49	24.00	22.53	22.33	22.59
			1	99	24.00	22.47	22.82	22.93

			50	0	22.00	21.78	21.77	21.44
			50	24	22.00	21.75	21.92	21.81
			50	49	22.00	21.63	21.21	21.69
			100	0	22.00	21.78	21.82	21.69
		16QAM	1	0	22.00	21.14	21.29	21.55
			1	49	22.00	21.58	21.26	21.38
			1	99	22.00	21.63	21.52	20.83
			50	0	21.00	20.78	20.51	20.31
			50	24	21.00	20.85	20.62	20.70
			50	49	21.00	20.65	20.66	20.71
			100	0	21.00	20.67	20.60	20.33

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Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		19957/1710.7	20175/1732.5	20393/1754.3
LTE Band 4	1.4MHz	QPSK	1	0	18.00	17.64	17.99	17.59
			1	2	18.00	17.60	17.79	17.52
			1	5	18.00	17.63	17.76	17.44
			3	0	18.00	17.78	17.79	17.61
			3	1	18.00	17.86	17.97	17.64
			3	2	18.00	17.80	17.87	17.80
			6	0	17.00	16.61	16.41	16.63
		16QAM	1	0	18.00	16.75	17.00	16.57
			1	2	18.00	16.83	17.25	16.58
			1	5	18.00	16.73	17.12	16.55
			3	0	18.00	17.01	17.22	16.95
			3	1	18.00	17.12	16.98	16.79
			3	2	18.00	17.10	17.05	16.61
			6	0	16.00	15.79	15.64	15.78
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		19965/1711.5	20175/1732.5	20385/1753.5
LTE Band 4	3MHz	QPSK	1	0	18.00	17.65	18.00	17.32
			1	7	18.00	17.86	17.69	17.85
			1	14	18.00	17.48	17.67	17.77
			8	0	17.00	16.96	16.74	16.86
			8	4	17.00	16.88	16.81	16.75
			8	7	17.00	16.55	16.62	16.63
			15	0	17.00	16.74	16.71	16.68
		16QAM	1	0	18.00	17.21	16.48	16.45

			1	7	18.00	17.09	16.30	16.56
			1	14	18.00	16.87	16.17	16.53
			8	0	17.00	15.84	15.71	15.61
			8	4	17.00	15.76	16.08	15.69
			8	7	17.00	15.81	15.78	15.65
			15	0	16.00	15.71	15.74	15.83
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		19975/1712.5	20175/1732.5	20375/1752.5
LTE Band 4	5MHz	QPSK	1	0	18.00	17.60	17.72	17.59
			1	12	18.00	17.82	17.97	17.45
			1	24	18.00	17.55	17.44	17.75
			12	0	17.00	16.78	16.79	16.87
			12	6	17.00	16.64	16.79	16.77
			12	11	17.00	16.47	16.95	16.66
			25	0	17.00	16.55	16.96	16.69
		16QAM	1	0	17.00	16.62	16.11	16.77
			1	12	17.00	16.76	16.33	16.50
			1	24	17.00	16.57	16.26	16.64
			12	0	16.00	15.43	15.75	15.69
			12	6	16.00	15.51	15.67	15.53
			12	11	16.00	15.54	15.62	15.76
			25	0	16.00	15.67	15.80	15.68
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20000/1715	20175/1732.5	20350/1750
LTE Band 4	10MHz	QPSK	1	0	18.00	17.65	17.63	17.63
			1	24	18.00	17.75	17.98	17.56
			1	49	18.00	17.44	17.53	17.88
			25	0	17.00	16.67	16.68	16.65
			25	12	17.00	16.53	16.85	16.65
			25	24	17.00	16.65	16.91	16.58
			50	0	17.00	16.65	16.75	16.80
		16QAM	1	0	18.00	17.25	16.17	16.48
			1	24	18.00	17.66	16.43	16.69
			1	49	18.00	16.92	16.41	16.98
			25	0	16.00	15.59	15.76	15.87
			25	12	16.00	15.69	15.75	15.69

			25	24	16.00	15.82	15.44	15.68
			50	0	16.00	15.78	15.78	15.50
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20025/1717.5	20175/1732.5	20325/1747.5
LTE Band 4	15MHz	QPSK	1	0	18.00	17.93	17.50	17.75
			1	37	18.00	18.00	17.85	17.87
			1	74	18.00	17.62	17.30	17.32
			36	0	17.00	16.65	16.66	16.58
			36	18	17.00	16.63	16.91	16.75
			36	37	17.00	16.64	16.67	16.73
			75	0	17.00	16.66	16.67	16.68
		16QAM	1	0	18.00	17.33	16.44	17.17
			1	37	18.00	16.97	16.85	16.79
			1	74	18.00	17.07	16.23	17.38
			36	0	16.00	15.79	15.52	15.69
			36	18	16.00	15.64	15.86	15.56
			36	37	16.00	15.58	15.58	15.45
			75	0	16.00	15.64	15.66	15.69
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20050/1720	20175/1732.5	20300/1745
LTE Band 4	20MHz	QPSK	1	0	18.00	17.65	18.00	18.00
			1	49	18.00	17.58	17.50	17.64
			1	99	18.00	17.36	17.91	18.00
			50	0	17.00	16.82	16.88	16.50
			50	24	17.00	16.76	16.85	16.75
			50	49	17.00	16.61	16.22	16.57
			100	0	17.00	16.94	16.80	16.57
		16QAM	1	0	17.00	16.19	16.29	16.62
			1	49	17.00	16.67	16.43	16.54
			1	99	17.00	16.70	16.52	15.80
			50	0	16.00	15.81	15.57	15.48
			50	24	16.00	15.77	15.56	15.55
			50	49	16.00	15.58	15.56	15.82
			100	0	16.00	15.53	15.78	15.22

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Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20407/824.7	20525/836.5	20643/848.3
LTE Band 5	1.4MHz	QPSK	1	0	24.00	23.05	22.85	23.08
			1	2	24.00	23.15	22.89	22.99
			1	5	24.00	23.06	22.04	22.82
			3	0	24.00	23.08	23.00	23.13
			3	1	24.00	23.15	23.03	23.15
			3	2	24.00	23.03	22.98	22.90
			6	0	23.00	22.07	22.03	22.11
		16QAM	1	0	23.00	22.39	21.77	21.96
			1	2	23.00	22.64	21.71	21.89
			1	5	23.00	22.51	21.77	21.89
			3	0	23.00	22.58	21.90	22.32
			3	1	23.00	22.49	21.95	22.20
			3	2	23.00	22.41	21.91	22.08
			6	0	22.00	21.46	21.01	21.08
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20415/825.5	20525/836.5	20635/847.5
LTE Band 5	3MHz	QPSK	1	0	24.00	23.02	23.01	22.54
			1	7	24.00	23.10	23.03	23.13
			1	14	24.00	22.81	22.94	22.85
			8	0	23.00	22.13	22.17	22.10
			8	4	23.00	22.15	22.06	22.06
			8	7	23.00	22.03	22.08	21.99
			15	0	23.00	22.11	22.10	22.05
		16QAM	1	0	23.00	22.54	21.77	21.92
			1	7	23.00	22.49	22.02	21.92
			1	14	23.00	22.36	21.83	21.46
			8	0	22.00	21.41	20.91	21.11
			8	4	22.00	21.01	20.81	21.09
			8	7	22.00	20.91	20.92	20.76
			15	0	22.00	21.17	21.08	21.07
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20425/826.5	20525/836.5	20625/846.5
LTE Band 5	5MHz	QPSK	1	0	24.00	23.09	22.68	22.61
			1	12	24.00	23.11	23.05	23.06
			1	24	24.00	22.94	22.92	22.65
			12	0	23.00	22.06	22.08	21.98
			12	6	23.00	22.00	22.06	22.06
			12	11	23.00	21.95	21.92	21.92
			25	0	23.00	22.08	22.01	21.98
		16QAM	1	0	23.00	21.97	21.97	21.65
			1	12	23.00	22.12	22.04	22.09
			1	24	23.00	21.99	21.50	21.73
			12	0	22.00	20.99	20.80	21.00

			12	6	22.00	20.94	20.75	21.07
			12	11	22.00	20.80	20.62	20.97
			25	0	22.00	21.09	20.99	20.85
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20450/829	20525/836.5	20600/844
LTE Band 5	10MHz	QPSK	1	0	24.00	23.11	23.10	23.08
			1	24	24.00	23.57	23.22	22.96
			1	49	24.00	23.23	22.90	22.95
			25	0	23.00	22.15	22.16	22.00
			25	12	23.00	22.20	22.07	22.07
			25	24	23.00	22.21	22.02	22.00
			50	0	23.00	22.12	22.17	21.91
		16QAM	1	0	23.00	22.48	21.75	22.09
			1	24	23.00	22.23	21.73	21.92
			1	49	23.00	22.62	21.78	21.41
			25	0	22.00	21.10	21.14	20.92
			25	12	22.00	21.10	21.15	20.98
			25	24	22.00	21.13	20.99	20.89
			50	0	22.00	21.02	21.15	20.85

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Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20407/824.7	20525/836.5	20643/848.3
LTE Band 5	1.4MHz	QPSK	1	0	23.00	21.97	22.05	22.10
			1	2	23.00	22.05	21.89	22.06
			1	5	23.00	22.26	21.55	21.81
			3	0	23.00	22.07	21.85	22.12
			3	1	23.00	22.22	22.16	22.31
			3	2	23.00	22.05	21.98	21.84
			6	0	22.00	21.00	20.97	21.18
		16QAM	1	0	22.00	21.33	20.69	21.09
			1	2	22.00	21.69	20.89	21.07
			1	5	22.00	21.53	20.90	21.07
			3	0	22.00	21.61	20.97	21.40
			3	1	22.00	21.54	20.87	21.05
			3	2	22.00	21.38	20.97	20.96
			6	0	21.00	20.40	20.14	20.06
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20415/825.5	20525/836.5	20635/847.5

LTE Band 5	3MHz	QPSK	1	0	23.00	22.21	22.13	21.56
			1	7	23.00	22.23	22.01	22.01
			1	14	23.00	21.97	21.99	21.74
			8	0	22.00	21.08	21.29	20.95
			8	4	22.00	21.11	20.96	21.16
			8	7	22.00	20.91	21.27	20.90
			15	0	22.00	20.98	21.22	21.25
		16QAM	1	0	22.00	21.45	20.68	20.89
			1	7	22.00	21.51	20.99	20.98
			1	14	22.00	21.26	20.89	20.35
			8	0	21.00	20.49	19.96	20.03
			8	4	21.00	19.98	19.73	20.16
			8	7	21.00	20.04	20.01	19.63
			15	0	21.00	20.18	19.93	20.04
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20425/826.5	20525/836.5	20625/846.5
LTE Band 5	5MHz	QPSK	1	0	23.00	22.14	21.79	21.58
			1	12	23.00	22.02	22.16	22.25
			1	24	23.00	21.84	21.88	21.83
			12	0	22.00	20.99	21.03	20.85
			12	6	22.00	20.97	21.06	21.03
			12	11	22.00	21.07	20.80	21.00
			25	0	22.00	21.09	21.14	20.84
		16QAM	1	0	22.00	20.95	21.05	20.69
			1	12	22.00	21.14	21.02	20.99
			1	24	22.00	21.11	20.44	20.68
			12	0	21.00	19.95	19.96	20.05
			12	6	21.00	19.83	19.94	20.10
			12	11	21.00	19.79	19.57	20.07
			25	0	20.00	19.95	19.99	19.85
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		20450/829	20525/836.5	20600/844
LTE Band 5	10MHz	QPSK	1	0	23.00	22.07	22.06	22.19
			1	24	23.00	22.59	22.13	22.06
			1	49	23.00	22.43	22.05	21.81
			25	0	22.00	21.32	21.10	20.90

			25	12	22.00	21.35	21.24	20.98
			25	24	22.00	21.20	20.94	21.15
			50	0	22.00	21.18	21.17	20.85
		16QAM	1	0	22.00	21.66	20.89	21.01
			1	24	22.00	21.31	20.76	20.85
			1	49	22.00	21.61	20.71	20.57
			25	0	21.00	20.15	20.21	19.77
			25	12	21.00	20.07	20.29	20.13
			25	24	21.00	20.07	19.91	19.77
			50	0	21.00	19.95	20.10	19.93

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23017/699.7	23095/707.5	23173/715.3
LTE Band 12	1.4MHz	QPSK	1	0	24.00	23.00	22.94	22.69
			1	2	24.00	23.08	22.85	23.07
			1	5	24.00	23.05	22.91	22.68
			3	0	24.00	22.93	22.73	22.93
			3	1	24.00	23.07	23.20	22.92
			3	2	24.00	22.89	23.01	22.98
			6	0	23.00	22.10	21.90	22.10
		16QAM	1	0	23.00	21.75	22.12	22.36
			1	2	23.00	22.08	21.91	22.43
			1	5	23.00	21.84	22.35	21.87
			3	0	23.00	21.94	21.74	21.83
			3	1	23.00	22.11	21.95	21.86
			3	2	23.00	22.16	22.17	21.81
			6	0	22.00	21.10	20.93	21.25
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23025/700.5	23095/707.5	23165/714.5
LTE Band 12	3MHz	QPSK	1	0	24.00	22.81	22.73	22.88
			1	7	24.00	23.21	22.82	23.27
			1	14	24.00	22.75	23.08	23.24
			8	0	23.00	22.00	21.99	22.13
			8	4	23.00	21.99	22.01	21.85
			8	7	23.00	21.81	22.01	22.16
			15	0	23.00	22.11	22.05	21.91
		16QAM	1	0	23.00	22.37	21.69	21.95
			1	7	23.00	22.70	21.93	21.97
			1	14	23.00	22.31	21.70	21.66
			8	0	22.00	21.06	20.72	21.19
			8	4	22.00	21.13	20.70	20.90
			8	7	22.00	21.06	21.02	20.70
			15	0	22.00	21.09	20.70	21.20
Band	Band	Modulation	RB		Tune-up	Channel/Frequency(MHz)		

	Width		Configuration					
			RB Size	RB Offset		23035/701.5	23095/707.5	23155/713.5
LTE Band 12	5MHz	QPSK	1	0	24.00	22.71	22.73	22.75
			1	12	24.00	22.91	23.09	22.85
			1	24	24.00	22.94	22.97	22.94
			12	0	23.00	22.18	21.75	22.09
			12	6	23.00	22.05	22.08	21.79
			12	11	23.00	22.02	22.06	21.82
			25	0	23.00	22.12	22.07	21.96
		16QAM	1	0	23.00	22.00	21.47	21.96
			1	12	23.00	22.04	21.68	21.57
			1	24	23.00	22.04	21.92	21.82
			12	0	21.00	21.00	20.56	20.91
			12	6	21.00	20.77	20.66	20.64
			12	11	21.00	20.68	20.88	20.94
			25	0	22.00	21.13	20.72	20.98

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23060/704	23095/707.5	23130/711
LTE Band 12	10MHz	QPSK	1	0	24.00	22.90	22.65	22.75
			1	24	24.00	23.17	23.10	23.24
			1	49	24.00	23.19	23.06	22.47
			25	0	23.00	22.03	21.77	22.22
			25	12	23.00	22.11	21.90	22.13
			25	24	23.00	21.85	22.11	21.80
			50	0	23.00	22.12	21.87	22.07
		16QAM	1	0	23.00	22.59	21.78	21.73
			1	24	23.00	22.58	21.64	22.28
			1	49	23.00	22.32	21.75	21.66
			25	0	22.00	21.01	21.25	21.25
			25	12	22.00	20.93	20.96	21.08
			25	24	22.00	20.87	21.06	20.88
			50	0	21.00	20.89	20.74	20.87

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Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23205/779.5	23230/782	23255/784.5
LTE Band 13	5MHz	QPSK	1	0	24.00	22.93	22.67	22.86
			1	12	24.00	23.03	23.03	23.16
			1	24	24.00	23.04	22.63	23.02
			12	0	23.00	22.17	22.25	22.14
			12	6	23.00	22.33	22.20	22.14
			12	11	23.00	22.21	22.24	22.25
			25	0	23.00	22.21	22.16	22.21
		16QAM	1	0	23.00	22.08	22.06	22.20
			1	12	23.00	22.08	21.74	22.13
			1	24	23.00	22.13	21.47	22.02

			12	0	22.00	20.95	20.93	21.08
			12	6	22.00	21.17	21.00	21.00
			12	11	22.00	21.15	20.91	20.86
			25	0	22.00	21.20	21.28	21.19
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23230/782	23230/782	23230/782
LTE Band 13	10MHz	QPSK	1	0	24.00	23.27	23.28	23.24
			1	24	24.00	23.53	23.53	23.49
			1	49	24.00	23.28	23.19	23.37
			25	0	23.00	22.25	22.27	22.31
			25	12	23.00	22.15	22.08	22.24
			25	24	23.00	22.09	22.11	22.15
			50	0	23.00	22.13	22.15	22.21
		16QAM	1	0	24.00	22.58	22.79	22.66
			1	24	24.00	23.23	23.25	23.31
			1	49	24.00	22.56	22.58	22.55
			25	0	22.00	21.35	21.28	21.34
			25	12	22.00	21.14	21.18	21.17
			25	24	22.00	21.01	21.07	21.03
			50	0	22.00	21.15	21.10	21.15

Proximity Sensor Active

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23205/779.5	23230/782	23255/784.5
LTE Band 13	5MHz	QPSK	1	0	23.00	21.84	21.78	21.97
			1	12	23.00	21.95	22.09	22.24
			1	24	23.00	22.19	21.65	22.04
			12	0	22.00	21.15	21.40	21.07
			12	6	22.00	21.27	21.34	21.28
			12	11	22.00	21.17	21.40	21.30
			25	0	22.00	21.38	21.04	21.28
		16QAM	1	0	22.00	21.15	21.02	21.14
			1	12	22.00	21.13	20.65	21.28
			1	24	22.00	21.13	20.55	21.10
			12	0	21.00	20.06	19.78	20.18
			12	6	21.00	20.17	20.18	20.04
			12	11	21.00	20.14	19.84	19.72
			25	0	21.00	20.20	20.21	20.16
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB	RB		23230/782	23230/782	23230/782

			Size	Offset				
LTE Band 13	10MHz	QPSK	1	0	23.00	22.21	22.45	22.42
			1	24	23.00	22.60	22.61	22.57
			1	49	23.00	22.47	22.27	22.33
			25	0	22.00	21.30	21.29	21.26
			25	12	22.00	21.04	21.22	21.24
			25	24	22.00	21.11	21.24	21.19
			50	0	22.00	21.19	21.33	21.33
		16QAM	1	0	23.00	21.51	21.95	21.56
			1	24	23.00	22.39	22.38	22.36
			1	49	23.00	21.49	21.46	21.55
			25	0	21.00	20.28	20.34	20.46
			25	12	21.00	20.27	20.08	20.07
			25	24	21.00	20.03	20.04	20.20
			50	0	21.00	20.07	20.18	20.24

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23755/706.5	23790/710	23825/713.5
LTE Band 17	5MHz	QPSK	1	0	24.00	22.24	22.48	22.96
			1	12	24.00	23.09	22.99	23.19
			1	24	24.00	22.82	22.81	22.80
			12	0	23.00	21.93	22.30	22.08
			12	6	23.00	22.06	22.29	22.11
			12	11	23.00	22.03	22.05	21.86
			25	0	23.00	22.27	22.07	21.88
		16QAM	1	0	23.00	21.66	21.96	22.00
			1	12	23.00	21.49	22.26	21.90
			1	24	23.00	21.86	21.66	21.73
			12	0	21.00	20.81	20.79	20.80
			12	6	21.00	20.98	20.91	20.92
			12	11	21.00	20.97	20.93	20.68
			25	0	22.00	20.71	20.98	21.05
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		23780/709	23790/710	23800/711
LTE Band 17	10MHz	QPSK	1	0	24.00	22.92	22.97	22.47
			1	24	24.00	23.56	23.00	22.96
			1	49	24.00	23.01	22.35	22.23
			25	0	23.00	21.88	22.06	22.33
			25	12	23.00	22.38	22.19	22.16
			25	24	23.00	22.26	22.22	22.13
			50	0	23.00	22.25	22.02	22.13
		16QAM	1	0	23.00	21.44	21.39	21.60

			1	24	23.00	22.05	21.79	22.08
			1	49	23.00	22.59	21.07	21.34
			25	0	22.00	20.79	21.14	21.35
			25	12	22.00	21.28	21.36	21.25
			25	24	22.00	21.29	20.85	20.98
			50	0	22.00	20.98	20.94	21.08

Proximity Sensor Inactive

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26047/1850.7	26365/1882.5	26683/1914.3
LTE Band 25	1.4MHz	QPSK	1	0	23.00	22.73	22.82	22.52
			1	2	23.00	22.76	22.85	22.60
			1	5	23.00	22.71	22.62	22.48
			3	0	23.00	22.70	22.65	22.73
			3	1	23.00	22.74	22.68	22.73
			3	2	23.00	22.82	22.75	22.70
			6	0	22.00	21.67	21.71	21.64
		16QAM	1	0	22.00	21.44	21.66	21.34
			1	2	22.00	21.51	21.61	21.27
			1	5	22.00	21.46	21.64	21.12
			3	0	22.00	21.92	21.55	21.50
			3	1	22.00	21.85	21.61	21.66
			3	2	22.00	21.81	21.72	21.53
			6	0	21.00	20.71	20.93	20.67
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26055/1851.5	26365/1882.5	26675/1913.5
LTE Band 25	3MHz	QPSK	1	0	23.00	22.55	22.63	22.83
			1	7	23.00	22.65	22.65	22.93
			1	14	23.00	22.65	22.62	22.72
			8	0	22.00	21.60	21.63	21.95
			8	4	22.00	21.70	21.67	21.88
			8	7	22.00	21.59	21.63	21.80
			15	0	22.00	21.69	21.72	21.83
		16QAM	1	0	23.00	22.15	21.26	21.77
			1	7	23.00	22.19	21.79	21.73
			1	14	23.00	22.43	21.65	21.53
			8	0	22.00	21.10	20.52	20.81
			8	4	22.00	21.05	20.42	20.63
			8	7	22.00	21.01	20.38	20.65
			15	0	21.00	20.77	20.48	20.66
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26065/1852.5	26365/1882.5	26665/1912.5
LTE Band 25	5MHz	QPSK	1	0	23.00	22.45	22.17	22.62
			1	12	23.00	22.87	22.64	22.93
			1	24	23.00	22.76	22.54	22.64

			12	0	22.00	21.59	21.65	21.82
			12	6	22.00	21.61	21.66	21.94
			12	11	22.00	21.69	21.64	21.90
			25	0	22.00	21.59	21.64	21.87
		16QAM	1	0	22.00	21.63	21.48	21.76
			1	12	22.00	21.77	21.35	21.71
			1	24	22.00	21.61	21.37	21.42
			12	0	21.00	20.33	20.32	20.72
			12	6	21.00	20.57	20.35	20.84
			12	11	21.00	20.58	20.34	20.66
			25	0	21.00	20.42	20.68	20.61
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26090/1855	26365/1882.5	26640/1910
LTE Band 25	10MHz	QPSK	1	0	23.00	22.64	22.62	22.88
			1	24	23.00	22.93	22.96	22.24
			1	49	23.00	22.97	22.66	22.92
			25	0	22.00	21.68	21.74	21.83
			25	12	22.00	21.73	21.78	21.82
			25	24	22.00	21.73	21.69	21.86
			50	0	22.00	21.71	21.67	21.78
		16QAM	1	0	23.00	22.12	21.35	21.57
			1	24	23.00	22.55	21.24	21.77
			1	49	23.00	22.70	21.95	21.54
			25	0	21.00	20.61	20.67	20.59
			25	12	21.00	20.72	20.81	20.75
			25	24	21.00	20.62	20.72	20.71
			50	0	21.00	20.55	20.62	20.58
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26115/1857.5	26365/1882.5	26615/1907.5
LTE Band 25	15MHz	QPSK	1	0	23.00	22.72	22.56	22.80
			1	37	23.00	22.28	22.91	22.59
			1	74	23.00	22.82	22.63	22.57
			36	0	22.00	21.74	21.78	21.82
			36	18	22.00	21.84	21.80	21.73
			36	37	22.00	21.84	21.65	21.69
			75	0	22.00	21.70	21.72	21.75
		16QAM	1	0	23.00	22.14	21.53	21.96
			1	37	23.00	22.80	21.76	21.77
			1	74	23.00	22.17	21.33	21.57
			36	0	21.00	20.48	20.68	20.82
			36	18	21.00	20.72	20.78	20.73
			36	37	21.00	20.79	20.75	20.59
			75	0	21.00	20.54	20.65	20.71
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26140/1860	26365/1882.5	26590/1905

LTE Band 25	20MHz	QPSK	1	0	23.00	22.30	22.70	22.41
			1	49	23.00	22.50	22.87	22.46
			1	99	23.00	22.07	22.72	22.39
			50	0	22.00	21.58	21.69	21.85
			50	24	22.00	21.73	21.65	21.73
			50	49	22.00	21.54	21.66	21.63
			100	0	22.00	21.60	21.63	21.82
		16QAM	1	0	22.00	21.50	21.98	21.35
			1	49	22.00	21.60	21.58	21.21
			1	99	22.00	20.91	21.08	21.22
			50	0	21.00	20.49	20.47	20.70
			50	24	21.00	20.82	20.66	20.61
			50	49	21.00	20.61	20.56	20.57
			100	0	21.00	20.54	20.65	20.72

Proximity Sensor Active

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26047/1850.7	26365/1882.5	26683/1914.3
LTE Band 25	1.4MHz	QPSK	1	0	21.00	20.60	20.88	20.39
			1	2	21.00	20.64	20.91	20.75
			1	5	21.00	20.59	20.61	20.59
			3	0	21.00	20.55	20.69	20.89
			3	1	21.00	20.78	20.63	20.83
			3	2	21.00	20.86	20.94	20.80
			6	0	20.00	19.81	19.61	19.62
		16QAM	1	0	20.00	19.30	19.53	19.46
			1	2	20.00	19.58	19.54	19.25
			1	5	20.00	19.38	19.82	19.15
			3	0	21.00	20.09	19.48	19.66
			3	1	21.00	20.00	19.76	19.52
			3	2	21.00	19.68	19.60	19.48
			6	0	20.00	18.89	19.12	18.63

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26055/1851.5	26365/1882.5	26675/1913.5
LTE Band 25	3MHz	QPSK	1	0	21.00	20.54	20.82	20.97
			1	7	21.00	20.75	20.84	20.94
			1	14	21.00	20.81	20.78	20.81
			8	0	21.00	19.55	19.71	20.09
			8	4	21.00	19.57	19.73	19.93

			8	7	21.00	19.56	19.58	19.82
			15	0	20.00	19.77	19.66	19.94
		16QAM	1	0	21.00	20.30	19.27	19.77
			1	7	21.00	20.16	19.98	19.80
			1	14	21.00	20.49	19.80	19.51
			8	0	20.00	19.23	18.67	18.84
			8	4	20.00	18.97	18.30	18.51
			8	7	20.00	19.17	18.41	18.51
			15	0	19.00	18.83	18.47	18.85
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26065/1852.5	26365/1882.5	26665/1912.5
LTE Band 25	5MHz	QPSK	1	0	21.00	20.57	20.06	20.49
			1	12	21.00	21.00	20.57	21.00
			1	24	21.00	20.71	20.57	20.69
			12	0	21.00	19.53	19.82	19.82
			12	6	21.00	19.46	19.82	19.81
			12	11	21.00	19.78	19.60	20.02
			25	0	20.00	19.46	19.74	19.89
		16QAM	1	0	20.00	19.75	19.37	19.77
			1	12	20.00	19.88	19.22	19.79
			1	24	20.00	19.66	19.25	19.49
			12	0	19.00	18.29	18.20	18.87
			12	6	19.00	18.48	18.27	18.77
			12	11	19.00	18.66	18.23	18.64
			25	0	19.00	18.51	18.59	18.58
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26090/1855	26365/1882.5	26640/1910
LTE Band 25	10MHz	QPSK	1	0	21.00	20.83	20.82	20.93
			1	24	21.00	21.00	20.96	20.44
			1	49	21.00	21.00	20.70	21.00
			25	0	20.00	19.73	19.69	19.86
			25	12	20.00	19.71	19.95	19.79
			25	24	20.00	19.62	19.77	19.81
			50	0	20.00	19.71	19.70	19.82
		16QAM	1	0	21.00	20.15	19.31	19.50
			1	24	21.00	20.47	19.09	19.77

			1	49	21.00	20.85	19.97	19.41
			25	0	19.00	18.80	18.63	18.69
			25	12	19.00	18.58	18.87	18.71
			25	24	19.00	18.72	18.71	18.87
			50	0	19.00	18.43	18.69	18.47
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26115/1857.5	26365/1882.5	26615/1907.5
LTE Band 25	15MHz	QPSK	1	0	21.00	20.85	20.61	20.71
			1	37	21.00	20.20	21.00	20.56
			1	74	21.00	20.85	20.71	20.72
			36	0	20.00	19.61	19.69	19.93
			36	18	20.00	19.77	19.74	19.78
			36	37	20.00	20.00	19.82	19.81
			75	0	20.00	19.61	19.77	19.87
		16QAM	1	0	21.00	20.17	19.45	20.11
			1	37	21.00	20.97	19.67	19.62
			1	74	21.00	20.05	19.33	19.70
			36	0	19.00	18.44	18.83	18.75
			36	18	19.00	18.78	18.96	18.68
			36	37	19.00	18.75	18.79	18.77
			75	0	19.00	18.67	18.77	18.56
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26140/1860	26365/1882.5	26590/1905
LTE Band 25	20MHz	QPSK	1	0	21.00	20.24	20.87	20.38
			1	49	21.00	20.44	20.95	20.47
			1	99	21.00	20.02	20.73	20.30
			50	0	20.00	19.53	19.55	19.91
			50	24	20.00	19.60	19.63	19.80
			50	49	20.00	19.70	19.73	19.81
			100	0	20.00	19.70	19.73	20.00
		16QAM	1	0	20.00	19.37	19.98	19.40
			1	49	20.00	19.68	19.57	19.12
			1	99	20.00	19.04	19.26	19.37
			50	0	19.00	18.36	18.49	18.90
			50	24	19.00	18.95	18.80	18.60
			50	49	19.00	18.79	18.58	18.65

			100	0	19.00	18.59	18.61	18.73

Proximity Sensor Inactive

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26797/824.7	26915/836.5	27033/848.3
LTE Band 26	1.4MHz	QPSK	1	0	24.00	22.99	22.81	22.66
			1	2	24.00	23.01	23.00	22.68
			1	5	24.00	22.99	22.75	22.65
			3	0	24.00	23.09	23.03	22.94
			3	1	24.00	23.08	22.97	22.88
			3	2	24.00	23.05	22.84	22.65
			6	0	23.00	21.99	21.87	22.03
		16QAM	1	0	23.00	22.38	22.29	21.70
			1	2	23.00	22.52	22.41	21.81
			1	5	23.00	22.47	22.29	21.66
			3	0	23.00	22.47	22.08	22.08
			3	1	23.00	22.37	22.13	21.97
			3	2	23.00	22.33	22.00	21.86
			6	0	22.00	21.16	20.87	20.93
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26805/825.5	26915/836.5	27025/847.5
LTE Band 26	3MHz	QPSK	1	0	24.00	23.09	22.79	22.78
			1	7	24.00	23.09	23.08	22.94
			1	14	24.00	23.01	22.88	22.65
			8	0	23.00	22.08	22.03	21.99
			8	4	23.00	21.95	21.93	21.96
			8	7	23.00	21.83	21.87	21.81
			15	0	22.00	21.98	21.97	21.94
		16QAM	1	0	23.00	22.69	21.72	21.80
			1	7	23.00	22.58	22.03	21.76
			1	14	23.00	22.26	21.75	21.54
			8	0	21.00	20.97	20.80	21.00
			8	4	21.00	20.97	20.69	20.99
			8	7	21.00	20.90	20.64	20.69
			15	0	21.00	20.98	20.88	20.80
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26815/826.5	26915/836.5	27015/846.5
LTE Band 26	5MHz	QPSK	1	0	24.00	22.77	22.40	22.63
			1	12	24.00	22.93	23.11	22.93
			1	24	24.00	22.80	22.56	22.70
			12	0	23.00	22.01	22.11	21.87
			12	6	23.00	21.87	22.06	21.94
			12	11	23.00	21.97	21.94	21.83
			25	0	23.00	21.99	22.02	21.90
		16QAM	1	0	23.00	21.92	21.84	21.93

			1	12	23.00	21.99	22.08	21.92
			1	24	23.00	21.75	21.62	21.28
			12	0	21.00	20.75	20.69	20.53
			12	6	21.00	20.63	20.67	20.62
			12	11	21.00	20.70	20.72	20.53
			25	0	22.00	21.11	21.07	20.85
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26840/829.0	26915/836.5	26990/844
LTE Band 26	10MHz	QPSK	1	0	24.00	23.06	22.88	22.90
			1	24	24.00	23.42	23.36	23.00
			1	49	24.00	23.08	23.19	22.70
			25	0	23.00	22.08	22.08	21.87
			25	12	23.00	22.07	22.04	21.94
			25	24	23.00	21.96	21.95	21.94
			50	0	22.00	21.99	21.96	21.87
		16QAM	1	0	23.00	22.47	21.71	21.91
			1	24	23.00	23.00	21.55	21.91
			1	49	23.00	22.50	21.65	21.73
			25	0	22.00	21.03	21.23	20.74
			25	12	22.00	21.04	21.12	20.84
			25	24	22.00	20.96	20.80	20.70
			50	0	21.00	20.97	20.85	20.67
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26865/831.5	26915/836.5	26965/841.5
LTE Band 26	15MHz	QPSK	1	0	24.00	23.01	22.78	22.74
			1	37	24.00	23.52	23.04	22.91
			1	74	24.00	22.97	22.64	22.58
			36	0	23.00	21.89	21.98	21.98
			36	18	23.00	22.06	22.03	21.99
			36	37	23.00	21.90	21.90	21.79
			75	0	23.00	22.05	22.00	21.93
		16QAM	1	0	23.00	22.58	21.85	22.19
			1	37	23.00	22.17	22.34	22.14
			1	74	23.00	22.54	21.36	21.62
			36	0	22.00	21.03	20.89	20.95
			36	18	22.00	20.89	20.97	20.73
			36	37	22.00	20.86	20.80	20.67
			75	0	21.00	20.87	20.72	20.94

Proximity Sensor Active

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26797/824.7	26915/836.5	27033/848.3
LTE Band	1.4MHz	QPSK	1	0	23.00	21.92	21.72	21.79
			1	2	23.00	21.92	22.11	21.86

26			1	5	23.00	21.92	21.61	21.74
			3	0	23.00	21.95	22.17	21.83
			3	1	23.00	22.10	21.93	22.04
			3	2	23.00	22.10	21.95	21.57
			6	0	22.00	20.91	20.90	21.02
		16QAM	1	0	22.00	21.57	21.41	20.85
			1	2	22.00	21.39	21.31	20.80
			1	5	22.00	21.47	21.34	20.73
			3	0	22.00	21.58	21.17	20.97
			3	1	22.00	21.53	21.03	21.13
			3	2	22.00	21.42	21.16	20.91
			6	0	21.00	20.21	19.91	19.93
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26805/825.5	26915/836.5	27025/847.5
LTE Band 26	3MHz	QPSK	1	0	23.00	22.28	21.86	21.91
			1	7	23.00	21.99	22.17	21.98
			1	14	23.00	21.97	22.03	21.83
			8	0	22.00	21.27	21.02	20.91
			8	4	22.00	20.82	21.07	20.97
			8	7	22.00	20.95	20.88	20.88
			15	0	22.00	21.10	20.92	20.90
		16QAM	1	0	22.00	21.73	20.87	20.67
			1	7	22.00	21.76	21.17	20.96
			1	14	22.00	21.45	20.67	20.57
			8	0	21.00	19.84	19.79	19.93
			8	4	21.00	19.97	19.79	20.01
			8	7	21.00	19.95	19.53	19.85
			15	0	20.00	19.90	19.98	19.87
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26815/826.5	26915/836.5	27015/846.5
LTE Band 26	5MHz	QPSK	1	0	23.00	21.72	21.43	21.54
			1	12	23.00	22.09	22.22	21.91
			1	24	23.00	21.66	21.43	21.78
			12	0	22.00	21.14	21.03	20.99
			12	6	22.00	20.82	21.14	20.89
			12	11	22.00	21.07	21.08	20.87

			25	0	22.00	21.15	21.14	20.91
		16QAM	1	0	22.00	20.85	20.87	21.03
			1	12	22.00	20.88	21.28	20.89
			1	24	22.00	20.87	20.65	20.18
			12	0	20.00	19.60	19.61	19.59
			12	6	20.00	19.73	19.80	19.61
			12	11	20.00	19.76	19.60	19.57
			25	0	21.00	20.20	20.00	19.83
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26840/829.0	26915/836.5	26990/844
LTE Band 26	10MHz	QPSK	1	0	23.00	22.23	21.84	21.97
			1	24	23.00	22.57	22.23	22.05
			1	49	23.00	22.00	22.36	21.82
			25	0	22.00	21.13	20.96	21.02
			25	12	22.00	21.21	21.18	21.06
			25	24	22.00	20.91	21.01	20.87
			50	0	22.00	20.84	21.11	20.79
		16QAM	1	0	22.00	21.53	20.60	20.91
			1	24	22.00	21.96	20.69	20.89
			1	49	22.00	21.42	20.71	20.75
			25	0	21.00	20.21	20.29	19.63
			25	12	21.00	20.17	20.13	19.81
			25	24	21.00	19.99	19.81	19.82
			50	0	20.00	19.86	19.93	19.69
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26865/831.5	26915/836.5	26965/841.5
LTE Band 26	15MHz	QPSK	1	0	23.00	21.89	21.82	21.77
			1	37	23.00	22.60	22.21	21.90
			1	74	23.00	21.95	21.53	21.74
			36	0	22.00	21.04	20.97	20.93
			36	18	22.00	21.22	21.11	21.19
			36	37	22.00	20.83	20.79	20.98
			75	0	22.00	21.08	21.16	20.98
		16QAM	1	0	22.00	21.49	20.75	21.06
			1	37	22.00	21.29	21.37	21.16
			1	74	22.00	21.63	20.22	20.74

			36	0	20.00	19.99	19.94	19.81
			36	18	20.00	19.96	19.97	19.60
			36	37	20.00	19.90	19.73	19.68
			75	0	21.00	20.04	19.90	19.85

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Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26697/814.7	26740/819	26783/823.3
LTE Band 26	1.4MHz	QPSK	1	0	24.00	22.78	22.79	22.87
			1	2	24.00	22.87	22.90	22.88
			1	5	24.00	22.90	22.56	23.12
			3	0	24.00	22.89	22.77	22.98
			3	1	24.00	22.98	22.85	23.29
			3	2	24.00	22.90	22.93	23.08
			6	0	23.00	21.86	21.74	22.13
		16QAM	1	0	23.00	22.03	21.53	21.92
			1	2	23.00	22.07	21.54	21.88
			1	5	23.00	22.07	21.52	22.04
			3	0	23.00	22.23	21.94	22.09
			3	1	23.00	22.24	22.04	22.12
			3	2	23.00	22.17	21.79	22.05
			6	0	22.00	21.15	20.81	20.92
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26705/815.5	26740/819	26775/822.5
LTE Band 26	3MHz	QPSK	1	0	24.00	22.85	22.80	22.82
			1	7	24.00	23.05	22.98	23.22
			1	14	24.00	22.96	22.85	23.08
			8	0	23.00	21.84	21.91	22.09
			8	4	23.00	22.18	21.94	22.01
			8	7	23.00	22.11	21.83	21.90
			15	0	23.00	22.14	21.94	21.95
		16QAM	1	0	23.00	22.22	21.68	21.73
			1	7	23.00	22.43	22.12	21.87
			1	14	23.00	22.55	21.49	21.83
			8	0	22.00	21.24	20.76	21.05
			8	4	22.00	21.28	20.78	20.91

			8	7	22.00	21.22	20.68	20.80
			15	0	22.00	20.95	20.84	21.01
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26715/816.5	26740/819	26765/821.5
LTE Band 26	5MHz	QPSK	1	0	24.00	22.63	22.49	22.63
			1	12	24.00	23.42	23.14	22.90
			1	24	24.00	23.00	22.56	22.79
			12	0	23.00	22.06	21.98	21.92
			12	6	23.00	22.06	22.04	22.02
			12	11	23.00	21.98	21.96	21.88
			25	0	23.00	22.06	21.95	21.98
		16QAM	1	0	23.00	21.85	21.73	21.91
			1	12	23.00	21.95	22.24	21.96
			1	24	23.00	21.86	21.72	21.41
			12	0	21.00	20.95	20.56	20.87
			12	6	21.00	20.82	20.65	20.97
			12	11	21.00	20.71	20.55	20.84
			25	0	22.00	21.13	20.77	20.96
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26740/819		
LTE Band 26	10MHz	QPSK	1	0	24.00	22.91		
			1	24	24.00	23.24		
			1	49	24.00	22.97		
			25	0	23.00	22.12		
			25	12	23.00	22.11		
			25	24	23.00	21.92		
			50	0	22.00	21.97		
		16QAM	1	0	24.00	22.41		
			1	24	24.00	23.06		
			1	49	24.00	22.38		
			25	0	22.00	21.16		
			25	12	22.00	21.12		
			25	24	22.00	21.03		
			50	0	21.00	20.98		

Proximity Sensor Active

Band	Band	Modulation	RB		Tune-up	Channel/Frequency(MHz)

	Width		Configuration					
			RB Size	RB Offset		26697/814.7	26740/819	26783/823.3
LTE Band 26	1.4MHz	QPSK	1	0	23.00	21.80	21.66	21.98
			1	2	23.00	21.81	21.95	21.92
			1	5	23.00	21.79	21.54	22.18
			3	0	23.00	22.03	21.68	21.89
			3	1	23.00	21.95	21.85	22.21
			3	2	23.00	21.96	21.88	22.02
			6	0	22.00	20.88	20.73	21.09
		16QAM	1	0	22.00	20.92	20.47	21.04
			1	2	22.00	21.25	20.70	21.05
			1	5	22.00	21.13	20.46	20.93
			3	0	22.00	21.42	20.85	20.99
			3	1	22.00	21.32	21.15	21.18
			3	2	22.00	21.37	20.95	21.10
			6	0	21.00	20.28	19.90	19.85
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26705/815.5	26740/819	26775/822.5
LTE Band 26	3MHz	QPSK	1	0	23.00	21.82	21.86	21.68
			1	7	23.00	21.93	21.89	22.16
			1	14	23.00	21.82	22.04	21.97
			8	0	22.00	20.78	20.99	21.25
			8	4	22.00	21.08	20.84	21.06
			8	7	22.00	21.01	20.80	20.88
			15	0	22.00	21.22	20.79	20.81
		16QAM	1	0	22.00	21.33	20.77	20.76
			1	7	22.00	21.34	21.06	20.99
			1	14	22.00	21.50	20.69	21.00
			8	0	21.00	20.32	19.84	19.93
			8	4	21.00	20.27	19.75	19.85
			8	7	21.00	20.23	19.58	19.85
			15	0	21.00	20.11	19.74	20.13
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		26715/816.5	26740/819	26765/821.5
LTE	5MHz	QPSK	1	0	23.00	21.65	21.65	21.72

Band 26			1	12	23.00	22.34	22.17	21.92
			1	24	23.00	21.91	21.70	21.64
			12	0	22.00	20.97	21.17	21.10
			12	6	22.00	21.18	20.98	21.03
			12	11	22.00	21.16	21.16	21.07
			25	0	22.00	21.15	21.14	20.89
		16QAM	1	0	22.00	20.75	20.74	20.83
			1	12	22.00	21.09	21.38	21.04
			1	24	22.00	20.81	20.77	20.52
			12	0	21.00	19.85	19.62	20.05
			12	6	21.00	19.87	19.59	20.15
			12	11	21.00	19.64	19.75	19.70
			25	0	21.00	20.26	19.87	20.14

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)
			RB Size	RB Offset		26740/819
LTE Band 26	10MHz	QPSK	1	0	23.00	21.85
			1	24	23.00	22.40
			1	49	23.00	21.86
			25	0	22.00	21.26
			25	12	22.00	21.18
			25	24	22.00	21.07
			50	0	21.00	21.00
		16QAM	1	0	23.00	21.28
			1	24	23.00	22.22
			1	49	23.00	21.38
			25	0	21.00	20.32
			25	12	21.00	20.27
			25	24	21.00	19.88
			50	0	20.00	19.85

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		39675/2687.8	40620/2593.0	41565/2687.5
LTE Band 41	5MHz	QPSK	1	0	24.00	22.66	23.32	23.43
			1	12	24.00	23.21	23.77	23.88
			1	24	24.00	22.96	23.31	23.45
			12	0	23.00	21.95	22.32	22.67
			12	6	23.00	21.91	22.30	22.57
			12	11	23.00	22.08	22.22	22.59

			25	0	23.00	21.85	22.14	22.58
		16QAM	1	0	23.00	21.57	22.06	22.32
			1	12	23.00	21.60	22.09	22.61
			1	24	23.00	21.63	22.04	22.38
			12	0	22.00	20.80	21.05	21.68
			12	6	22.00	20.80	21.00	21.71
			12	11	22.00	20.88	20.92	21.70
			25	0	22.00	20.86	21.27	21.54

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		39700/2501.0	40620/2593.0	41540/2685.0
LTE Band 41	10MHz	QPSK	1	0	24.00	23.19	23.21	23.88
			1	24	24.00	23.12	23.30	23.65
			1	49	24.00	22.90	23.15	23.80
			25	0	23.00	22.03	22.28	22.66
			25	12	23.00	21.98	22.38	22.66
			25	24	23.00	21.99	22.27	22.61
			50	0	23.00	21.98	22.37	22.64
		16QAM	1	0	23.00	22.75	21.46	22.67
			1	24	23.00	22.49	21.59	22.94
			1	49	23.00	22.55	21.33	22.99
			25	0	22.00	21.02	21.14	21.56
			25	12	22.00	20.97	21.24	21.47
			25	24	22.00	20.96	21.19	21.54
			50	0	22.00	20.71	21.24	21.68

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		39725/2503.5	40620/2593.0	41515/2682.5
LTE Band 41	15MHz	QPSK	1	0	24.00	22.90	23.49	23.65
			1	37	24.00	23.00	23.20	23.23
			1	74	24.00	22.84	23.13	23.58
			36	0	23.00	21.89	22.45	22.64
			36	18	23.00	21.98	22.40	22.67
			36	37	23.00	22.01	22.31	22.64
			75	0	23.00	21.84	22.27	22.69
		16QAM	1	0	23.00	22.75	21.64	22.65
			1	37	23.00	22.44	21.76	22.67
			1	74	23.00	22.38	21.47	22.72
			36	0	22.00	20.66	21.47	21.49
			36	18	22.00	20.95	21.39	21.58
			36	37	22.00	20.81	21.38	21.56
			75	0	22.00	20.78	21.37	21.72

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		39750/2506.0	40620/2593	41490/2680.0
LTE Band 41	20MHz	QPSK	1	0	24.00	22.95	23.59	23.83
			1	49	24.00	22.94	23.52	23.99
			1	99	24.00	22.82	23.32	23.54

			50	0	23.00	21.85	22.44	22.62
			50	24	23.00	21.96	22.42	22.55
			50	49	23.00	21.98	22.35	22.67
			100	0	23.00	21.88	22.48	22.65
		16QAM	1	0	23.00	21.58	21.63	22.47
			1	49	23.00	21.60	21.70	22.58
			1	99	23.00	21.77	21.54	22.09
			50	0	22.00	20.90	21.40	21.64
			50	24	22.00	21.03	21.35	21.66
			50	49	22.00	21.05	21.28	21.70
			100	0	22.00	20.81	21.20	21.62

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Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	1.4MHz	QPSK	1	0	23.00	21.38	22.43	22.59
			1	2	23.00	22.43	22.75	22.70
			1	5	23.00	22.35	22.53	22.85
			3	0	23.00	22.40	22.76	22.63
			3	1	23.00	22.50	22.90	22.64
			3	2	23.00	22.45	22.88	22.58
			6	0	22.00	21.56	21.70	21.46
		16QAM	1	0	22.00	21.75	21.32	21.43
			1	2	22.00	21.82	21.27	21.41
			1	5	22.00	21.59	21.27	21.40
			3	0	22.00	21.20	21.67	21.83
			3	1	22.00	21.37	21.42	21.83
			3	2	22.00	21.46	21.66	21.76
			6	0	21.00	20.73	20.81	20.65
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	3MHz	QPSK	1	0	23.00	22.61	22.71	22.46
			1	7	23.00	22.57	22.73	22.55
			1	14	23.00	22.58	22.62	22.56
			8	0	22.00	21.60	21.62	21.42
			8	4	22.00	21.67	21.71	21.46
			8	7	22.00	21.61	21.72	21.61
			15	0	22.00	21.61	21.77	21.37
		16QAM	1	0	22.00	21.96	21.52	21.42
			1	7	22.00	21.98	21.55	21.48
			1	14	22.00	21.81	21.26	21.21
			8	0	21.00	20.48	20.43	20.49
			8	4	21.00	20.54	20.52	20.47
			8	7	21.00	20.62	20.53	20.39
			15	0	21.00	20.59	20.57	20.37
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		

			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	5MHz	QPSK	1	0	23.00	22.32	22.11	22.20
			1	12	23.00	22.62	22.57	22.16
			1	24	23.00	22.42	22.56	22.41
			12	0	22.00	21.47	21.65	21.74
			12	6	22.00	21.54	21.78	21.76
			12	11	22.00	21.47	21.76	21.53
			25	0	22.00	21.47	21.67	21.72
		16QAM	1	0	22.00	21.42	21.52	21.54
			1	12	22.00	21.61	21.80	21.67
			1	24	22.00	21.39	21.16	21.55
			12	0	21.00	20.31	20.40	20.37
			12	6	21.00	20.24	20.44	20.35
			12	11	21.00	20.32	20.43	20.33
			25	0	21.00	20.40	20.65	20.52

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	10MHz	QPSK	1	0	23.00	22.51	22.56	22.42
			1	24	23.00	22.85	22.83	22.70
			1	49	23.00	22.48	22.58	22.42
			25	0	22.00	21.61	21.66	21.45
			25	12	22.00	21.62	21.73	21.46
			25	24	22.00	21.51	21.71	21.36
			50	0	22.00	21.54	21.70	21.45
		16QAM	1	0	23.00	21.96	21.22	21.31
			1	24	23.00	22.63	21.46	21.56
			1	49	23.00	21.72	21.35	21.87
			25	0	21.00	20.56	20.73	20.39
			25	12	21.00	20.68	20.69	20.40
			25	24	21.00	20.47	20.63	20.64
			50	0	21.00	20.60	20.64	20.29

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	15MHz	QPSK	1	0	23.00	22.60	22.49	22.41
			1	37	23.00	22.78	22.91	22.55
			1	74	23.00	22.52	22.50	22.31
			36	0	22.00	21.54	21.60	21.45
			36	18	22.00	21.54	21.64	21.51
			36	37	22.00	21.39	21.64	21.13
			75	0	22.00	21.52	21.61	21.38
		16QAM	1	0	23.00	22.15	21.51	21.69
			1	37	23.00	22.71	21.70	22.12
			1	74	23.00	21.91	21.22	21.38
			36	0	21.00	20.53	20.65	20.43
			36	18	21.00	20.61	20.67	20.36
			36	37	21.00	20.47	20.68	20.54

			75	0	21.00	20.46	20.49	20.40
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	20MHz	QPSK	1	0	23.00	21.46	22.68	22.23
			1	49	23.00	22.73	23.00	22.71
			1	99	23.00	22.26	22.73	22.27
			50	0	22.00	21.56	21.76	21.52
			50	24	22.00	21.62	21.83	21.62
			50	49	22.00	21.57	21.83	21.51
			100	0	22.00	21.63	21.74	21.59
		16QAM	1	0	23.00	21.56	22.09	21.98
			1	49	23.00	21.45	21.77	21.94
			1	99	23.00	21.97	21.40	21.09
			50	0	21.00	20.66	20.47	20.47
			50	24	21.00	20.64	20.76	20.42
			50	49	21.00	20.67	20.75	20.39
			100	0	21.00	20.62	20.68	20.55

Proximity Sensor Active

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	1.4MHz	QPSK	1	0	20.00	18.80	19.00	19.25
			1	2	20.00	18.96	19.34	19.38
			1	5	20.00	18.78	19.16	19.47
			3	0	20.00	19.05	19.26	19.18
			3	1	20.00	18.92	19.58	19.09
			3	2	20.00	19.02	19.51	18.97
			6	0	19.00	18.23	18.29	17.89
		16QAM	1	0	19.00	18.11	17.69	18.08
			1	2	19.00	18.50	17.76	17.80
			1	5	19.00	18.07	17.89	17.84
			3	0	19.00	17.65	18.30	18.50
			3	1	19.00	17.97	18.08	18.21
			3	2	19.00	18.03	18.10	18.24
			6	0	18.00	17.38	17.33	17.03
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE	3MHz	QPSK	1	0	20.00	19.14	19.12	18.99

Band 66			1	7	20.00	18.98	19.21	19.20
			1	14	20.00	19.21	19.26	18.98
			8	0	19.00	17.95	17.99	17.83
			8	4	19.00	18.28	18.31	18.04
			8	7	19.00	18.31	18.35	18.12
			15	0	19.00	18.13	18.42	17.93
		16QAM	1	0	19.00	18.56	17.97	17.95
			1	7	19.00	18.51	17.92	17.91
			1	14	19.00	18.22	17.69	17.82
			8	0	18.00	16.89	17.04	16.91
			8	4	18.00	17.00	17.00	16.93
			8	7	18.00	17.25	17.11	17.02
			15	0	18.00	17.01	17.10	17.06

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	5MHz	QPSK	1	0	20.00	18.71	18.53	18.59
			1	12	20.00	19.07	19.12	18.80
			1	24	20.00	19.11	19.00	18.93
			12	0	19.00	18.08	18.23	18.41
			12	6	19.00	18.22	18.13	18.17
			12	11	19.00	18.08	18.36	18.05
			25	0	19.00	17.85	18.27	18.16
		16QAM	1	0	19.00	17.80	17.97	18.09
			1	12	19.00	18.03	18.50	18.20
			1	24	19.00	18.03	17.69	18.23
			12	0	18.00	16.77	16.83	16.92
			12	6	18.00	16.72	17.14	17.03
			12	11	18.00	16.94	16.80	16.98
			25	0	18.00	16.99	17.06	17.07

Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	10MHz	QPSK	1	0	20.00	19.16	18.98	18.85
			1	24	20.00	19.52	19.43	19.13
			1	49	20.00	19.09	19.17	18.85
			25	0	19.00	18.01	18.35	18.00
			25	12	19.00	17.97	18.16	17.86

			25	24	19.00	18.08	18.17	17.92
			50	0	19.00	18.09	18.10	18.06
		16QAM	1	0	20.00	18.60	18.59	18.91
			1	24	20.00	19.19	18.04	18.22
			1	49	20.00	18.32	18.02	18.50
			25	0	18.00	17.14	17.38	17.01
			25	12	18.00	17.20	17.28	16.99
			25	24	18.00	16.85	17.24	17.29
			50	0	18.00	17.24	17.12	16.89
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	15MHz	QPSK	1	0	20.00	18.99	19.12	18.77
			1	37	20.00	19.44	19.49	19.15
			1	74	20.00	18.89	19.01	18.69
			36	0	19.00	18.03	18.14	17.92
			36	18	19.00	17.95	18.02	18.16
			36	37	19.00	17.76	18.05	17.76
			75	0	19.00	18.18	18.24	17.90
		16QAM	1	0	20.00	18.58	18.21	18.26
			1	37	20.00	19.37	18.26	18.80
			1	74	20.00	18.27	18.73	18.77
			36	0	18.00	16.97	17.16	17.03
			36	18	18.00	16.97	17.24	16.77
			36	37	18.00	17.06	17.25	17.12
			75	0	17.00	16.88	16.99	16.83
Band	Band Width	Modulation	RB Configuration		Tune-up	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1710.7	132322/1745	132597/1779.3
LTE Band 66	20MHz	QPSK	1	0	20.00	18.11	19.16	18.78
			1	49	20.00	19.40	19.66	19.06
			1	99	20.00	18.71	19.26	18.67
			50	0	19.00	18.12	18.24	17.95
			50	24	19.00	18.19	18.42	18.31
			50	49	19.00	18.02	18.42	17.91
			100	0	19.00	18.18	18.34	18.03
		16QAM	1	0	19.00	18.16	18.73	18.66
			1	49	19.00	17.93	18.36	18.48

			1	99	19.00	18.62	17.83	17.64
			50	0	18.00	17.14	16.87	16.99
			50	24	18.00	17.08	17.34	17.08
			50	49	18.00	17.16	17.40	16.90
			100	0	18.00	17.31	17.34	17.22

7.2. WLAN & Bluetooth Output Power

7.2.1. Output Power Results Of WLAN

Mode	Channel	Frequency (MHz)	ANT 1		ANT 2		MIMO	
			Tune-up	Output Power (dBm)	Tune-up	Output Power (dBm)	Tune-up	Output Power (dBm)
802.11b	1	2412	19.00	17.87	18.00	17.54	N/A	N/A
	6	2437	19.00	17.75	18.00	17.35	N/A	N/A
	11	2462	19.00	18.14	18.00	17.94	N/A	N/A
802.11g	1	2412	16.00	15.66	17.00	16.13	N/A	N/A
	6	2437	16.00	15.55	17.00	15.87	N/A	N/A
	11	2462	16.00	15.78	17.00	16.24	N/A	N/A
802.11n HT20	1	2412	16.00	14.82	16.00	15.35	19.00	18.10
	6	2437	16.00	14.74	16.00	15.19	19.00	17.98
	11	2462	16.00	15.10	16.00	15.56	19.00	18.35
802.11n HT40	3	2422	15.00	14.01	15.00	14.36	18.00	17.20
	6	2437	15.00	13.87	15.00	14.36	18.00	17.13
	9	2452	15.00	14.06	15.00	14.67	18.00	17.39

NOTE: Power measurement results of WLAN 2.4G.

Mode	Channel	Frequency (MHz)	ANT 1		ANT 2		MIMO	
			Tune-up	Output Power (dBm)	Tune-up	Output Power (dBm)	Tune-up	Output Power (dBm)
802.11a	149	5745	15.00	14.25	15.00	14.67	N/A	N/A
	157	5785	15.00	14.29	15.00	14.33	N/A	N/A
	165	5825	15.00	14.72	15.00	14.48	N/A	N/A
802.11n HT20	149	5745	15.00	14.21	15.00	14.61	18.00	17.42
	157	5785	15.00	14.30	15.00	14.22	18.00	17.27
	165	5825	15.00	14.66	15.00	14.51	18.00	17.60
802.11n HT40	151	5755	13.00	12.78	14.00	13.07	16.00	15.94
	159	5795	13.00	12.93	14.00	12.77	16.00	15.86
802.11ac	149	5745	14.00	13.36	15.00	14.61	18.00	17.04

VHT20	157	5785	14.00	13.38	15.00	14.26	18.00	16.85
	165	5825	14.00	13.80	15.00	14.49	18.00	17.17
802.11ac VHT40	151	5755	13.00	12.74	14.00	13.03	16.00	15.90
	159	5795	13.00	12.91	14.00	12.72	16.00	15.83
802.11ac VHT80	155	5775	13.00	12.47	13.00	12.50	16.00	15.50

NOTE: Power measurement results of WLAN 5.8G.

7.3. Proximity Sensor Considerations

7.3.1. Proximity sensor triggering distances

LTE Band 2 20M QPSK(1,49) CH18900 Front Side						LTE Band 2 20M QPSK(1,49) CH18900 Back Side						LTE Band 2 20M QPSK(1,49) CH18900 Right Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power
44	Inactive	23.15	0	Active	19.73	44	Inactive	23.14	0	Active	19.71	44	Inactive	23.11	0	Active	19.72
41	Inactive	23.11	3	Active	19.72	41	Inactive	23.15	3	Active	19.72	41	Inactive	23.15	3	Active	19.68
38	Inactive	23.11	6	Active	19.68	38	Inactive	23.13	6	Active	19.73	38	Inactive	23.14	6	Active	19.71
35	Inactive	23.14	9	Active	19.71	35	Inactive	23.15	9	Active	19.73	35	Inactive	23.12	9	Active	19.73
32	Inactive	23.15	10	Active	19.73	32	Inactive	23.14	10	Active	19.71	32	Inactive	23.15	10	Active	19.72
29	Inactive	23.13	13	Active	19.72	29	Inactive	23.12	13	Active	19.69	29	Inactive	23.14	13	Active	19.69
26	Inactive	23.15	16	Active	19.69	26	Inactive	23.15	16	Active	19.71	28	Inactive	23.12	16	Active	19.71
25	Inactive	23.14	17	Active	19.71	25	Inactive	23.12	17	Active	19.72	27	Inactive	23.14	19	Active	19.72
24	Inactive	23.12	18	Active	19.72	24	Inactive	23.15	18	Active	19.73	26	Inactive	23.15	20	Active	19.73
23	Inactive	23.15	19	Active	19.73	23	Inactive	23.11	19	Active	19.73	25	Inactive	23.15	21	Active	19.73
22	Inactive	23.15	20	Active	19.73	22	Inactive	23.11	20	Active	19.71	24	Active	19.73	22	Active	19.71
21	Active	19.73	21	Active	19.71	21	Inactive	23.15	21	Active	19.73	23	Active	19.72	23	Active	19.72
20	Active	19.68	22	Active	19.73	20	Active	19.73	22	Inactive	23.15	22	Active	19.73	24	Active	19.69
19	Active	19.71	23	Inactive	23.15	19	Active	19.72	23	Inactive	23.14	21	Active	19.73	25	Active	19.73
18	Active	19.73	24	Inactive	23.14	18	Active	19.69	24	Inactive	23.15	20	Active	19.71	26	Inactive	23.15
17	Active	19.72	25	Inactive	23.15	17	Active	19.71	25	Inactive	23.13	19	Active	19.69	27	Inactive	23.13
16	Active	19.69	26	Inactive	23.13	16	Active	19.72	26	Inactive	23.15	16	Active	19.71	28	Inactive	23.15
15	Active	19.71	27	Inactive	23.15	15	Active	19.73	27	Inactive	23.14	13	Active	19.72	29	Inactive	23.14
12	Active	19.72	30	Inactive	23.14	12	Active	19.73	30	Inactive	23.12	10	Active	19.73	30	Inactive	23.12
10	Active	19.73	33	Inactive	23.12	10	Active	19.71	33	Inactive	23.15	7	Active	19.73	33	Inactive	23.15
7	Active	19.73	36	Inactive	23.15	7	Active	19.69	36	Inactive	23.14	5	Active	19.71	36	Inactive	23.12
4	Active	19.71	39	Inactive	23.11	4	Active	19.71	39	Inactive	23.12	4	Active	19.71	39	Inactive	23.15
1	Active	19.69	42	Inactive	23.11	1	Active	19.73	42	Inactive	23.15	3	Active	19.72	42	Inactive	23.11

0	Active	19.71	45	Inactive	23.14	0	Active	19.71	45	Inactive	23.11	0	Active	19.73	45	Inactive	23.14

LTE Band 4 20M QPSK(1,0) CH20175 Front Side						LTE Band 4 20M QPSK(1,0) CH20175 Back Side						LTE Band 4 20M QPSK(1,0) CH20175 Right Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power
44	Inactive	23.05	0	Active	17.93	44	Inactive	23.03	0	Active	17.95	44	Inactive	23.02	0	Active	17.98
41	Inactive	23.05	3	Active	17.96	41	Inactive	23.02	3	Active	17.97	41	Inactive	23.04	3	Active	17.92
38	Inactive	23.01	6	Active	17.95	38	Inactive	23.04	6	Active	17.98	38	Inactive	23.01	6	Active	17.91
35	Inactive	23.03	9	Active	17.97	35	Inactive	23.01	9	Active	17.92	35	Inactive	23.05	9	Active	18.00
32	Inactive	23.03	10	Active	17.98	32	Inactive	23.05	10	Active	17.91	32	Inactive	23.05	10	Active	17.93
29	Inactive	23.05	13	Active	17.92	29	Inactive	23.05	13	Active	18.00	29	Inactive	23.01	13	Active	17.96
26	Inactive	23.03	16	Active	17.91	26	Inactive	23.01	16	Active	17.93	28	Inactive	23.03	16	Active	17.95
25	Inactive	23.02	17	Active	18.00	25	Inactive	23.03	17	Active	17.96	27	Inactive	23.03	19	Active	17.97
24	Inactive	23.04	18	Active	18.00	24	Inactive	23.03	18	Active	17.95	26	Inactive	23.04	20	Active	17.98
23	Inactive	23.01	19	Active	17.96	23	Inactive	23.05	19	Active	17.98	25	Inactive	23.05	21	Active	17.92
22	Inactive	23.05	20	Active	17.94	22	Inactive	23.03	20	Active	17.92	24	Active	18.00	22	Active	17.91
21	Active	18.00	21	Active	17.97	21	Inactive	23.05	21	Active	18.00	23	Active	17.99	23	Active	18.00
20	Active	17.91	22	Active	18.00	20	Active	18.00	22	Inactive	23.05	22	Active	18.00	24	Active	17.95
19	Active	17.96	23	Inactive	23.05	19	Active	17.92	23	Inactive	23.01	21	Active	17.93	25	Active	18.00
18	Active	17.94	24	Inactive	23.03	18	Active	17.91	24	Inactive	23.03	20	Active	17.96	26	Inactive	23.05
17	Active	17.99	25	Inactive	23.02	17	Active	17.94	25	Inactive	23.03	19	Active	17.95	27	Inactive	23.02
16	Active	18.00	26	Inactive	23.04	16	Active	17.99	26	Inactive	23.05	16	Active	17.97	28	Inactive	23.04
15	Active	17.93	27	Inactive	23.01	15	Active	18.00	27	Inactive	23.05	13	Active	17.98	29	Inactive	23.01
12	Active	17.96	30	Inactive	23.05	12	Active	17.93	30	Inactive	23.03	10	Active	17.92	30	Inactive	23.05
10	Active	17.95	33	Inactive	23.05	10	Active	17.96	33	Inactive	23.02	7	Active	17.91	33	Inactive	23.01
7	Active	17.97	36	Inactive	23.01	7	Active	17.95	36	Inactive	23.04	5	Active	17.96	36	Inactive	23.03
4	Active	17.98	39	Inactive	23.03	4	Active	17.97	39	Inactive	23.01	4	Active	17.94	39	Inactive	23.03
1	Active	17.92	42	Inactive	23.03	1	Active	17.98	42	Inactive	23.05	3	Active	17.99	42	Inactive	23.05
0	Active	17.91	45	Inactive	23.05	0	Active	17.96	45	Inactive	23.05	0	Active	18.00	45	Inactive	23.03

LTE Band 5 10M QPSK(1,24) CH20525 Front Side						LTE Band 5 10M QPSK(1,24) CH20525 Back Side						LTE Band 5 10M QPSK(1,24) CH20525 Right Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power
44	Inactive	23.22	0	Active	22.07	44	Inactive	23.22	0	Active	22.09	44	Inactive	23.15	0	Active	22.09
41	Inactive	23.18	3	Active	22.09	41	Inactive	23.16	3	Active	22.03	41	Inactive	23.19	3	Active	22.07

38	Inactive	23.16	6	Active	22.03	38	Inactive	23.18	6	Active	22.11	38	Inactive	23.22	6	Active	22.09
35	Inactive	23.18	9	Active	22.11	35	Inactive	23.21	9	Active	22.09	35	Inactive	23.16	9	Active	22.03
32	Inactive	23.21	10	Active	22.01	32	Inactive	23.22	10	Active	22.07	32	Inactive	23.18	10	Active	22.11
29	Inactive	23.17	13	Active	22.05	29	Inactive	23.15	13	Active	22.01	29	Inactive	23.21	13	Active	22.09
26	Inactive	23.18	16	Active	22.09	26	Inactive	23.19	16	Active	22.05	28	Inactive	23.18	16	Active	22.07
25	Inactive	23.21	17	Active	22.07	25	Inactive	23.22	17	Active	22.09	27	Inactive	23.18	19	Active	22.13
24	Inactive	23.15	18	Active	22.09	24	Inactive	23.16	18	Active	22.07	26	Inactive	23.21	20	Active	22.01
23	Inactive	23.19	19	Active	22.03	23	Inactive	23.21	19	Active	22.09	25	Inactive	23.22	21	Active	22.05
22	Inactive	23.22	20	Active	22.11	22	Inactive	23.16	20	Active	22.03	24	Active	22.13	22	Active	22.09
21	Active	22.13	21	Active	22.12	21	Inactive	23.22	21	Active	22.13	23	Active	22.05	23	Active	22.07
20	Active	22.01	22	Active	22.13	20	Active	22.13	22	Inactive	23.22	22	Active	22.09	24	Active	22.09
19	Active	22.05	23	Inactive	23.22	19	Active	22.05	23	Inactive	23.18	21	Active	22.07	25	Active	22.13
18	Active	22.09	24	Inactive	23.15	18	Active	22.09	24	Inactive	23.16	20	Active	22.09	26	Inactive	23.22
17	Active	22.07	25	Inactive	23.19	17	Active	22.07	25	Inactive	23.18	19	Active	22.03	27	Inactive	23.21
16	Active	22.09	26	Inactive	23.22	16	Active	22.07	26	Inactive	23.21	16	Active	22.09	28	Inactive	23.22
15	Active	22.03	27	Inactive	23.16	15	Active	22.09	27	Inactive	23.17	13	Active	22.03	29	Inactive	23.15
12	Active	22.11	30	Inactive	23.18	12	Active	22.03	30	Inactive	23.18	10	Active	22.11	30	Inactive	23.19
10	Active	22.09	33	Inactive	23.21	10	Active	22.11	33	Inactive	23.21	7	Active	22.09	33	Inactive	23.22
7	Active	22.07	36	Inactive	23.16	7	Active	22.09	36	Inactive	23.22	5	Active	22.07	36	Inactive	23.16
4	Active	22.12	39	Inactive	23.18	4	Active	22.03	39	Inactive	23.18	4	Active	22.01	39	Inactive	23.18
1	Active	22.11	42	Inactive	23.18	1	Active	22.11	42	Inactive	23.16	3	Active	22.09	42	Inactive	23.21
0	Active	22.07	45	Inactive	23.21	0	Active	22.12	45	Inactive	23.19	0	Active	22.03	45	Inactive	23.22

LTE Band 13 10M QPSK(1,24) CH23230 Front Side						LTE Band 13 10M QPSK(1,24) CH23230 Back Side						LTE Band 13 10M QPSK(1,24) CH23230 Right Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power
44	Inactive	23.45	0	Active	22.59	44	Inactive	23.47	0	Active	22.51	44	Inactive	23.52	0	Active	22.57
41	Inactive	23.49	3	Active	22.55	41	Inactive	23.49	3	Active	22.54	41	Inactive	23.51	3	Active	22.59
38	Inactive	23.44	6	Active	22.58	38	Inactive	23.52	6	Active	22.55	38	Inactive	23.49	6	Active	22.53
35	Inactive	23.52	9	Active	22.57	35	Inactive	23.45	9	Active	22.58	35	Inactive	23.49	9	Active	22.55
32	Inactive	23.51	10	Active	22.59	32	Inactive	23.49	10	Active	22.57	32	Inactive	23.52	10	Active	22.49
29	Inactive	23.49	13	Active	22.53	29	Inactive	23.44	13	Active	22.59	29	Inactive	23.52	13	Active	22.59
26	Inactive	23.47	16	Active	22.55	26	Inactive	23.52	16	Active	22.53	28	Inactive	23.45	16	Active	22.59
25	Inactive	23.49	17	Active	22.49	25	Inactive	23.51	17	Active	22.55	27	Inactive	23.49	19	Active	22.55
24	Inactive	23.52	18	Active	22.59	24	Inactive	23.49	18	Active	22.49	26	Inactive	23.44	20	Active	22.49
23	Inactive	23.44	19	Active	22.59	23	Inactive	23.49	19	Active	22.59	25	Inactive	23.53	21	Active	22.59
22	Inactive	23.53	20	Active	22.51	22	Inactive	23.52	20	Active	22.57	24	Active	22.61	22	Active	22.55

21	Active	22.61	21	Active	22.54	21	Inactive	23.53	21	Active	22.61	23	Active	22.49	23	Active	22.58
20	Active	22.51	22	Active	22.61	20	Active	22.61	22	Inactive	23.53	22	Active	22.59	24	Active	22.57
19	Active	22.59	23	Inactive	23.53	19	Active	22.55	23	Inactive	23.44	21	Active	22.59	25	Active	22.61
18	Active	22.53	24	Inactive	23.49	18	Active	22.58	24	Inactive	23.53	20	Active	22.51	26	Inactive	23.53
17	Active	22.55	25	Inactive	23.47	17	Active	22.57	25	Inactive	23.49	19	Active	22.54	27	Inactive	23.47
16	Active	22.49	26	Inactive	23.49	16	Active	22.59	26	Inactive	23.52	16	Active	22.58	28	Inactive	23.49
15	Active	22.59	27	Inactive	23.52	15	Active	22.53	27	Inactive	23.52	13	Active	22.57	29	Inactive	23.52
12	Active	22.55	30	Inactive	23.45	12	Active	22.55	30	Inactive	23.51	10	Active	22.59	30	Inactive	23.45
10	Active	22.58	33	Inactive	23.49	10	Active	22.49	33	Inactive	23.49	7	Active	22.53	33	Inactive	23.44
7	Active	22.57	36	Inactive	23.44	7	Active	22.59	36	Inactive	23.47	5	Active	22.55	36	Inactive	23.52
4	Active	22.59	39	Inactive	23.52	4	Active	22.59	39	Inactive	23.45	4	Active	22.55	39	Inactive	23.51
1	Active	22.51	42	Inactive	23.51	1	Active	22.55	42	Inactive	23.49	3	Active	22.58	42	Inactive	23.49
0	Active	22.54	45	Inactive	23.49	0	Active	22.49	45	Inactive	23.44	0	Active	22.57	45	Inactive	23.52

LTE Band 25 20M QPSK(1,49) CH26365 Front Side						LTE Band 25 20M QPSK(1,49) CH26365 Back Side						LTE Band 25 20M QPSK(1,49) CH26365 Right Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power
44	Inactive	22.77	0	Active	20.88	44	Inactive	22.75	0	Active	20.93	44	Inactive	22.86	0	Active	20.87
41	Inactive	22.73	3	Active	20.92	41	Inactive	22.82	3	Active	20.85	41	Inactive	22.79	3	Active	20.91
38	Inactive	22.85	6	Active	20.93	38	Inactive	22.75	6	Active	20.87	38	Inactive	22.75	6	Active	20.94
35	Inactive	22.81	9	Active	20.88	35	Inactive	22.87	9	Active	20.88	35	Inactive	22.82	9	Active	20.88
32	Inactive	22.83	10	Active	20.93	32	Inactive	22.77	10	Active	20.92	32	Inactive	22.85	10	Active	20.85
29	Inactive	22.86	13	Active	20.85	29	Inactive	22.73	13	Active	20.93	29	Inactive	22.81	13	Active	20.82
26	Inactive	22.79	16	Active	20.87	26	Inactive	22.85	16	Active	20.88	28	Inactive	22.83	16	Active	20.87
25	Inactive	22.75	17	Active	20.91	25	Inactive	22.81	17	Active	20.85	27	Inactive	22.77	19	Active	20.91
24	Inactive	22.82	18	Active	20.94	24	Inactive	22.83	18	Active	20.82	26	Inactive	22.73	20	Active	20.94
23	Inactive	22.75	19	Active	20.88	23	Inactive	22.86	19	Active	20.91	25	Inactive	22.87	21	Active	20.88
22	Inactive	22.87	20	Active	20.85	22	Inactive	22.79	20	Active	20.94	24	Active	20.95	22	Active	20.85
21	Active	20.95	21	Active	20.82	21	Inactive	22.87	21	Active	20.95	23	Active	20.91	23	Active	20.92
20	Active	20.91	22	Active	20.95	20	Active	20.95	22	Inactive	22.87	22	Active	20.94	24	Active	20.93
19	Active	20.94	23	Inactive	22.87	19	Active	20.87	23	Inactive	22.73	21	Active	20.88	25	Active	20.95
18	Active	20.88	24	Inactive	22.85	18	Active	20.91	24	Inactive	22.85	20	Active	20.85	26	Inactive	22.87
17	Active	20.93	25	Inactive	22.81	17	Active	20.94	25	Inactive	22.81	19	Active	20.82	27	Inactive	22.73
16	Active	20.85	26	Inactive	22.83	16	Active	20.88	26	Inactive	22.83	16	Active	20.93	28	Inactive	22.85
15	Active	20.87	27	Inactive	22.77	15	Active	20.85	27	Inactive	22.86	13	Active	20.85	29	Inactive	22.86
12	Active	20.88	30	Inactive	22.73	12	Active	20.82	30	Inactive	22.79	10	Active	20.87	30	Inactive	22.79
10	Active	20.92	33	Inactive	22.85	10	Active	20.92	33	Inactive	22.75	7	Active	20.88	33	Inactive	22.75

7	Active	20.93	36	Inactive	22.86	7	Active	20.93	36	Inactive	22.82	5	Active	20.85	36	Inactive	22.82
4	Active	20.88	39	Inactive	22.79	4	Active	20.88	39	Inactive	22.75	4	Active	20.82	39	Inactive	22.87
1	Active	20.85	42	Inactive	22.75	1	Active	20.93	42	Inactive	22.87	3	Active	20.91	42	Inactive	22.73
0	Active	20.82	45	Inactive	22.82	0	Active	20.88	45	Inactive	22.77	0	Active	20.93	45	Inactive	22.85

LTE Band 26 15M QPSK(1,37) CH26915 Front Side						LTE Band 26 15M QPSK(1,37) CH26915 Back Side						LTE Band 26 15M QPSK(1,37) CH26915 Right Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power
44	Inactive	22.93	0	Active	22.15	44	Inactive	22.98	0	Active	22.12	44	Inactive	22.94	0	Active	22.18
41	Inactive	22.99	3	Active	22.21	41	Inactive	22.94	3	Active	22.21	41	Inactive	22.93	3	Active	22.13
38	Inactive	22.95	6	Active	22.18	38	Inactive	22.93	6	Active	22.19	38	Inactive	22.99	6	Active	22.15
35	Inactive	23.02	9	Active	22.21	35	Inactive	22.99	9	Active	22.18	35	Inactive	22.95	9	Active	22.12
32	Inactive	23.04	10	Active	22.19	32	Inactive	22.95	10	Active	22.13	32	Inactive	23.04	10	Active	22.14
29	Inactive	22.97	13	Active	22.18	29	Inactive	23.04	13	Active	22.15	29	Inactive	23.02	13	Active	22.16
26	Inactive	23.03	16	Active	22.13	26	Inactive	23.02	16	Active	22.21	28	Inactive	23.04	16	Active	22.15
25	Inactive	23.01	17	Active	22.15	25	Inactive	23.04	17	Active	22.18	27	Inactive	22.97	19	Active	22.18
24	Inactive	22.98	18	Active	22.12	24	Inactive	22.97	18	Active	22.14	26	Inactive	23.03	20	Active	22.13
23	Inactive	22.94	19	Active	22.14	23	Inactive	23.03	19	Active	22.16	25	Inactive	23.04	21	Active	22.15
22	Inactive	23.04	20	Active	22.16	22	Inactive	23.01	20	Active	22.15	24	Active	22.21	22	Active	22.21
21	Active	22.21	21	Active	22.15	21	Inactive	23.04	21	Active	22.21	23	Active	22.19	23	Active	22.15
20	Active	22.15	22	Active	22.21	20	Active	22.21	22	Inactive	23.04	22	Active	22.18	24	Active	22.21
19	Active	22.12	23	Inactive	23.04	19	Active	22.15	23	Inactive	22.97	21	Active	22.13	25	Active	22.21
18	Active	22.21	24	Inactive	23.02	18	Active	22.12	24	Inactive	23.03	20	Active	22.15	26	Inactive	23.04
17	Active	22.19	25	Inactive	23.04	17	Active	22.14	25	Inactive	23.01	19	Active	22.21	27	Inactive	22.99
16	Active	22.18	26	Inactive	22.97	16	Active	22.16	26	Inactive	22.98	16	Active	22.18	28	Inactive	22.95
15	Active	22.13	27	Inactive	23.03	15	Active	22.15	27	Inactive	22.94	13	Active	22.14	29	Inactive	23.02
12	Active	22.15	30	Inactive	23.01	12	Active	22.21	30	Inactive	22.93	10	Active	22.16	30	Inactive	23.04
10	Active	22.21	33	Inactive	22.98	10	Active	22.18	33	Inactive	22.99	7	Active	22.21	33	Inactive	22.93
7	Active	22.18	36	Inactive	22.94	7	Active	22.21	36	Inactive	22.95	5	Active	22.18	36	Inactive	22.99
4	Active	22.14	39	Inactive	22.93	4	Active	22.19	39	Inactive	23.02	4	Active	22.21	39	Inactive	22.95
1	Active	22.16	42	Inactive	22.99	1	Active	22.18	42	Inactive	23.04	3	Active	22.19	42	Inactive	23.01
0	Active	22.15	45	Inactive	22.95	0	Active	22.13	45	Inactive	22.93	0	Active	22.18	45	Inactive	22.98

LTE Band 26 10M QPSK(1,24) CH26740 Front Side						LTE Band 26 10M QPSK(1,24) CH26740 Back Side						LTE Band 26 10M QPSK(1,24) CH26740 Right Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap	P	Power	Gap	P	Power	Gap	P	Power	Gap	P	Power	Gap	P	Power	Gap	P	Power

(mm)	sensor		(mm)	sensor		(mm)	sensor		(mm)	sensor		(mm)	sensor		(mm)	sensor	
44	Inactive	23.16	0	Active	22.34	44	Inactive	23.15	0	Active	22.38	44	Inactive	23.16	0	Active	22.35
41	Inactive	23.18	3	Active	22.23	41	Inactive	23.19	3	Active	22.37	41	Inactive	23.24	3	Active	22.38
38	Inactive	23.21	6	Active	22.35	38	Inactive	23.22	6	Active	22.39	38	Inactive	23.16	6	Active	22.37
35	Inactive	23.22	9	Active	22.35	35	Inactive	23.16	9	Active	22.31	35	Inactive	23.18	9	Active	22.39
32	Inactive	23.15	10	Active	22.38	32	Inactive	23.21	10	Active	22.23	32	Inactive	23.21	10	Active	22.31
29	Inactive	23.19	13	Active	22.37	29	Inactive	23.16	13	Active	22.35	29	Inactive	23.22	13	Active	22.35
26	Inactive	23.22	16	Active	22.39	26	Inactive	23.24	16	Active	22.21	28	Inactive	23.15	16	Active	22.21
25	Inactive	23.16	17	Active	22.31	25	Inactive	23.18	17	Active	22.23	27	Inactive	23.21	19	Active	22.38
24	Inactive	23.21	18	Active	22.35	24	Inactive	23.21	18	Active	22.35	26	Inactive	23.16	20	Active	22.37
23	Inactive	23.16	19	Active	22.21	23	Inactive	23.22	19	Active	22.39	25	Inactive	23.24	21	Active	22.39
22	Inactive	23.24	20	Active	22.35	22	Inactive	23.15	20	Active	22.31	24	Active	22.40	22	Active	22.31
21	Active	22.40	21	Active	22.29	21	Inactive	23.24	21	Active	22.40	23	Active	22.31	23	Active	22.21
20	Active	22.35	22	Active	22.40	20	Active	22.40	22	Inactive	23.24	22	Active	22.23	24	Active	22.23
19	Active	22.29	23	Inactive	23.24	19	Active	22.31	23	Inactive	23.21	21	Active	22.35	25	Active	22.40
18	Active	22.29	24	Inactive	23.21	18	Active	22.34	24	Inactive	23.22	20	Active	22.21	26	Inactive	23.24
17	Active	22.35	25	Inactive	23.16	17	Active	22.23	25	Inactive	23.15	19	Active	22.35	27	Inactive	23.15
16	Active	22.38	26	Inactive	23.24	16	Active	22.35	26	Inactive	23.19	16	Active	22.35	28	Inactive	23.19
15	Active	22.37	27	Inactive	23.16	15	Active	22.21	27	Inactive	23.22	13	Active	22.38	29	Inactive	23.22
12	Active	22.39	30	Inactive	23.18	12	Active	22.23	30	Inactive	23.22	10	Active	22.37	30	Inactive	23.22
10	Active	22.31	33	Inactive	23.21	10	Active	22.35	33	Inactive	23.16	7	Active	22.35	33	Inactive	23.16
7	Active	22.34	36	Inactive	23.22	7	Active	22.35	36	Inactive	23.21	5	Active	22.38	36	Inactive	23.16
4	Active	22.23	39	Inactive	23.15	4	Active	22.38	39	Inactive	23.16	4	Active	22.37	39	Inactive	23.24
1	Active	22.35	42	Inactive	23.19	1	Active	22.37	42	Inactive	23.22	3	Active	22.34	42	Inactive	23.16
0	Active	22.21	45	Inactive	23.22	0	Active	22.39	45	Inactive	23.22	0	Active	22.23	45	Inactive	23.18

LTE Band 66 20M QPSK(1,49) CH132322 Front Side						LTE Band 66 20M QPSK(1,49) CH132322 Back Side						LTE Band 66 20M QPSK(1,49) CH132322 Right Side					
Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom			Moved toward the phantom			Away from the phantom		
Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power	Gap (mm)	P sensor	Power
44	Inactive	22.95	0	Active	19.66	44	Inactive	22.93	0	Active	19.57	44	Inactive	22.93	0	Active	19.54
41	Inactive	22.96	3	Active	19.60	41	Inactive	22.99	3	Active	19.66	41	Inactive	22.99	3	Active	19.57
38	Inactive	22.98	6	Active	19.57	38	Inactive	22.85	6	Active	19.60	38	Inactive	22.95	6	Active	19.59
35	Inactive	22.94	9	Active	19.66	35	Inactive	22.91	9	Active	19.59	35	Inactive	22.96	9	Active	19.54
32	Inactive	22.93	10	Active	19.60	32	Inactive	22.95	10	Active	19.63	32	Inactive	22.98	10	Active	19.66
29	Inactive	22.99	13	Active	19.59	29	Inactive	22.96	13	Active	19.66	29	Inactive	22.94	13	Active	19.55
26	Inactive	22.95	16	Active	19.54	26	Inactive	22.98	16	Active	19.55	28	Inactive	22.93	16	Active	19.57
25	Inactive	22.82	17	Active	19.59	25	Inactive	22.94	17	Active	19.62	27	Inactive	22.99	19	Active	19.58

24	Inactive	22.85	18	Active	19.60	24	Inactive	22.93	18	Active	19.66	26	Inactive	22.82	20	Active	19.62
23	Inactive	22.91	19	Active	19.55	23	Inactive	22.99	19	Active	19.60	25	Inactive	23.00	21	Active	19.57
22	Inactive	23.00	20	Active	19.57	22	Inactive	22.95	20	Active	19.57	24	Active	19.66	22	Active	19.66
21	Active	19.66	21	Active	19.58	21	Inactive	23.00	21	Active	19.66	23	Active	19.54	23	Active	19.60
20	Active	19.54	22	Active	19.66	20	Active	19.66	22	Inactive	23.00	22	Active	19.59	24	Active	19.59
19	Active	19.59	23	Inactive	23.00	19	Active	19.54	23	Inactive	22.94	21	Active	19.60	25	Active	19.66
18	Active	19.60	24	Inactive	22.82	18	Active	19.57	24	Inactive	22.93	20	Active	19.63	26	Inactive	23.00
17	Active	19.63	25	Inactive	22.85	17	Active	19.59	25	Inactive	22.99	19	Active	19.66	27	Inactive	22.94
16	Active	19.66	26	Inactive	22.98	16	Active	19.54	26	Inactive	22.95	16	Active	19.55	28	Inactive	22.93
15	Active	19.55	27	Inactive	22.94	15	Active	19.63	27	Inactive	22.95	13	Active	19.57	29	Inactive	22.99
12	Active	19.57	30	Inactive	22.95	12	Active	19.66	30	Inactive	22.82	10	Active	19.58	30	Inactive	22.95
10	Active	19.58	33	Inactive	22.96	10	Active	19.60	33	Inactive	22.85	7	Active	19.57	33	Inactive	22.82
7	Active	19.62	36	Inactive	22.98	7	Active	19.55	36	Inactive	22.91	5	Active	19.66	36	Inactive	22.85
4	Active	19.66	39	Inactive	22.94	4	Active	19.57	39	Inactive	23.00	4	Active	19.60	39	Inactive	22.85
1	Active	19.60	42	Inactive	22.95	1	Active	19.58	42	Inactive	22.82	3	Active	19.55	42	Inactive	22.91
0	Active	19.59	45	Inactive	22.82	0	Active	19.62	45	Inactive	22.85	0	Active	19.62	45	Inactive	22.95

7.3.2. Proximity sensor coverage range

The WWAN antenna and sensor are collocated.

7.3.3. EUT tilt angle influences to proximity sensor triggering

LTE Band 2 20M QPSK(1,49) CH18900						LTE Band 4 20M QPSK(1,0) CH20175						LTE Band 5 10M QPSK(1,24) CH20525					
Right side vertical to phantom with Gap(20mm)			Right side vertical to phantom with Gap(20mm)			Right side vertical to phantom with Gap(20mm)			Right side vertical to phantom with Gap(20mm)			Right side vertical to phantom with Gap(20mm)			Right side vertical to phantom with Gap(20mm)		
Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power
0	Active	19.71	0	Active	19.73	0	Active	18.00	0	Active	18.00	0	Active	22.07	0	Active	22.13
10	Active	19.72	-10	Active	19.73	10	Active	18.00	-10	Active	17.99	10	Active	22.09	-10	Active	22.05
20	Active	19.73	-20	Active	19.71	20	Active	17.96	-20	Active	18.00	20	Active	22.03	-20	Active	22.09
30	Active	19.73	-30	Active	19.72	30	Active	17.94	-30	Active	17.93	30	Active	22.11	-30	Active	22.07
40	Active	19.71	-40	Active	19.69	40	Active	17.97	-40	Active	17.96	40	Active	22.12	-40	Active	22.09
45	Active	19.73	-45	Active	19.73	45	Active	18.00	-45	Active	17.95	45	Active	22.13	-45	Active	22.03

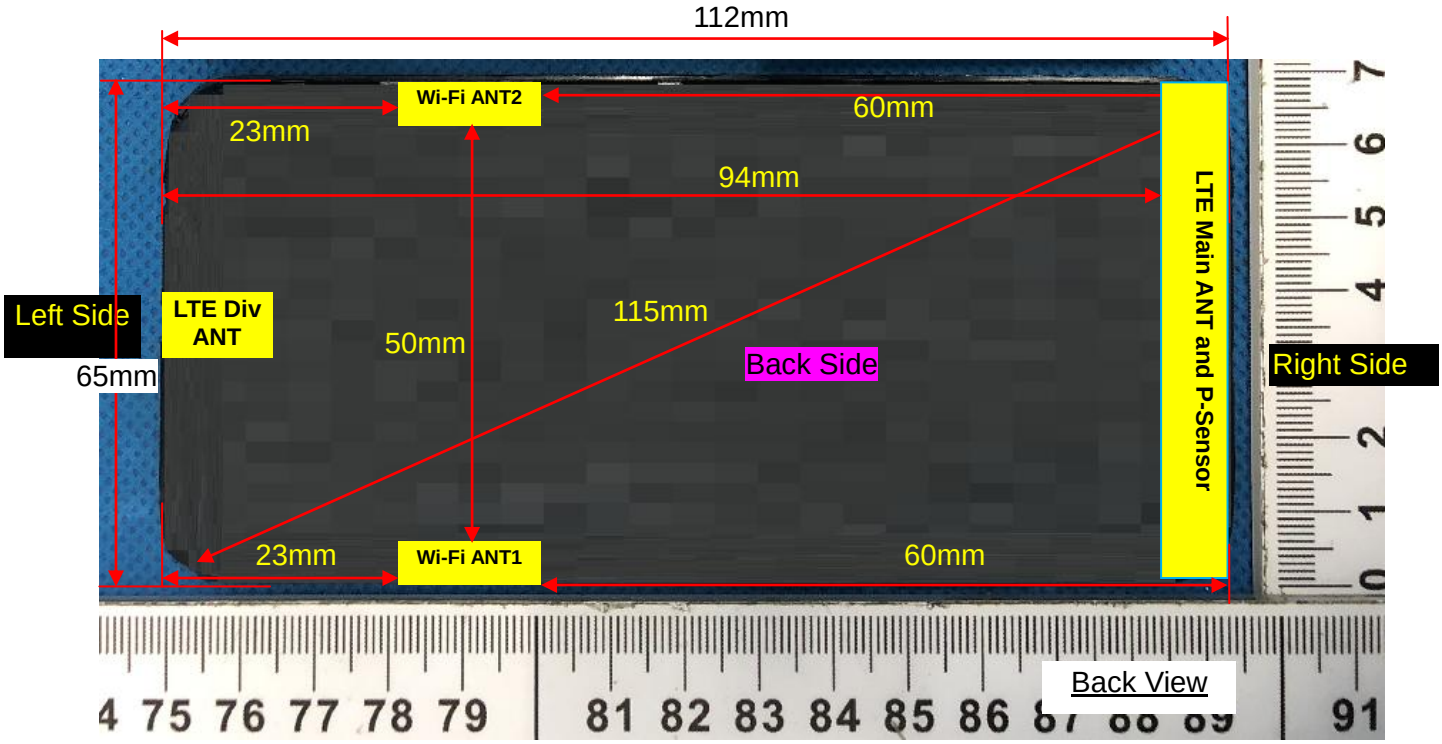
LTE Band 13 10M QPSK(1,24) CH23230		LTE Band 25 20M QPSK(1,49) CH26365		LTE Band 26 15M QPSK(1,37) CH26915	
Right side vertical to phantom with Gap(20mm)	Right side vertical to phantom with Gap(20mm)	Right side vertical to phantom with Gap(20mm)	Right side vertical to phantom with Gap(20mm)	Right side vertical to phantom with Gap(20mm)	Right side vertical to phantom with Gap(20mm)

Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power
0	Active	22.53	0	Active	22.61	0	Active	20.95	0	Active	20.94	0	Active	22.15	0	Active	22.21
10	Active	22.55	-10	Active	22.49	10	Active	20.87	-10	Active	20.88	10	Active	22.12	-10	Active	22.18
20	Active	22.49	-20	Active	22.59	20	Active	20.91	-20	Active	20.85	20	Active	22.21	-20	Active	22.14
30	Active	22.59	-30	Active	22.59	30	Active	20.94	-30	Active	20.92	30	Active	22.19	-30	Active	22.16
40	Active	22.57	-40	Active	22.51	40	Active	20.88	-40	Active	20.93	40	Active	22.18	-40	Active	22.15
45	Active	22.61	-45	Active	22.54	45	Active	20.85	-45	Active	20.95	45	Active	22.13	-45	Active	22.21

LTE Band 26 10M QPSK(1,24) CH26740						LTE Band 66 20M QPSK(1,49) CH132322					
Right side vertical to phantom with Gap(20mm)			Right side vertical to phantom with Gap(20mm)			Right side vertical to phantom with Gap(20mm)			Right side vertical to phantom with Gap(20mm)		
Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power	Tilt angle (°)	P sensor	Power
0	Active	22.40	0	Active	22.40	0	Active	19.62	0	Active	19.66
10	Active	22.35	-10	Active	22.31	10	Active	19.57	-10	Active	19.54
20	Active	22.29	-20	Active	22.23	20	Active	19.66	-20	Active	19.57
30	Active	22.29	-30	Active	22.35	30	Active	19.60	-30	Active	19.59
40	Active	22.35	-40	Active	22.21	40	Active	19.59	-40	Active	19.54
45	Active	22.38	-45	Active	22.35	45	Active	19.66	-45	Active	19.63

8. Antenna Location

Bottom Side



Top Side

Distance of the Antenna to the EUT surface/edge						
Antennas	Front Side	Back Side	Left Side	Right Side	Top Side	Bottom Side
WWAN Main	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	≤ 25mm	≤ 25mm
WLAN 1	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	≤ 25mm	>25mm
WLAN 2	≤ 25mm	≤ 25mm	≤ 25mm	>25mm	>25mm	≤ 25mm
Positions for SAR tests						
Antennas	Front Side	Back Side	Left Side	Right Side	Top Side	Bottom Side
WWAN Main	Yes	Yes	NO	Yes	Yes	Yes
WLAN 1	Yes	Yes	Yes	NO	Yes	NO
WLAN 2	Yes	Yes	Yes	NO	NO	Yes

9. SAR Results

9.1. SAR measurement results

9.1.1. SAR measurement Result of LTE Band 2

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
1RB											
Front Side	18900/1880	20M QPSK(1,49)	10	Active	0.406	0.231	-0.03	19.73	20.00	0.432	2020/10/23
Front Side	18900/1880	20M QPSK(1,49)	18	Inactive	0.588	0.333	0.20	23.15	24.00	0.715	2020/12/5
Back Side	18900/1880	20M QPSK(1,49)	10	Active	0.557	0.315	-3.13	19.73	20.00	0.593	2020/10/23
Back Side	18900/1880	20M QPSK(1,49)	18	Inactive	0.353	0.215	-1.76	23.15	24.00	0.429	2020/12/5
Right Side	18900/1880	20M QPSK(1,49)	10	Active	0.165	0.093	2.92	19.73	20.00	0.176	2020/10/23
Right Side	18900/1880	20M QPSK(1,49)	18	Inactive	0.257	0.152	1.17	23.15	24.00	0.313	2020/12/5
Top Side	18900/1880	20M QPSK(1,49)	10	Inactive	0.260	0.156	0.04	23.15	24.00	0.316	2020/12/5
Bottom Side	18900/1880	20M QPSK(1,49)	10	Inactive	0.122	0.070	3.72	23.15	24.00	0.148	2020/10/23
50%RB											
Front Side	18900/1880	1.4M QPSK(3,2)	10	Active	0.242	0.136	3.99	19.50	20.00	0.272	2020/10/23
Front Side	18900/1880	1.4M QPSK(3,2)	18	Inactive	0.432	0.300	-4.64	22.95	24.00	0.550	2020/12/5
Back Side	18900/1880	1.4M QPSK(3,2)	10	Active	0.366	0.205	3.52	19.50	20.00	0.411	2020/10/23
Back Side	18900/1880	1.4M QPSK(3,2)	18	Inactive	0.322	0.185	-2.62	22.95	24.00	0.410	2020/12/5
Right Side	18900/1880	1.4M QPSK(3,2)	10	Active	0.108	0.057	2.48	19.50	20.00	0.121	2020/10/23
Right Side	18900/1880	1.4M QPSK(3,2)	18	Inactive	0.220	0.144	-2.80	22.95	24.00	0.280	2020/12/5
Top	18900/1880	1.4M	10	Inactive	0.197	0.121	2.34	22.95	24.00	0.251	2020/12/5

Side		QPSK(3,2)									
Bottom Side	18900/1880	1.4M QPSK(3,2)	10	Inactive	0.076	0.041	1.46	22.95	24.00	0.097	2020/10/23

NOTE: Hotspot SAR test results of LTE Band 2

9.1.2. SAR measurement Result of LTE Band 4

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
1RB											
Front Side	20175/1732.5	20M QPSK(1,0)	10	Active	0.481	0.294	1.35	18.00	18.00	0.481	2020/10/23
Front Side	20175/1732.5	20M QPSK(1,0)	18	Inactive	0.598	0.330	-0.32	23.05	24.00	0.744	2020/12/4
Back Side	20175/1732.5	20M QPSK(1,0)	10	Active	0.714	0.434	-4.59	18.00	18.00	0.714	2020/10/23
Back Side	20175/1732.5	20M QPSK(1,0)	18	Inactive	0.716	0.429	-0.78	23.05	24.00	0.891	2020/12/4
Right Side	20175/1732.5	20M QPSK(1,0)	10	Active	0.194	0.120	-2.34	18.00	18.00	0.194	2020/10/23
Right Side	20175/1732.5	20M QPSK(1,0)	18	Inactive	0.359	0.220	-1.41	23.05	24.00	0.447	2020/12/4
Top Side	20175/1732.5	20M QPSK(1,0)	10	Inactive	0.160	0.107	-2.88	23.05	24.00	0.199	2020/12/4
Bottom Side	20175/1732.5	20M QPSK(1,0)	10	Inactive	0.150	0.086	3.99	23.05	24.00	0.187	2020/10/23
Back Side	20050/1720	20M QPSK(1,0)	18	Inactive	0.687	0.408	2.13	22.65	24.00	0.937	2020/12/4
Back Side	20300/1745	20M QPSK(1,0)	18	Inactive	0.655	0.386	0.48	23.15	24.00	0.797	2020/12/4
50%RB											
Front Side	20175/1732.5	1.4M QPSK(3,1)	10	Active	0.327	0.200	-3.90	17.97	18.00	0.329	2020/10/23
Front Side	20175/1732.5	1.4M QPSK(3,1)	18	Inactive	0.639	0.381	-2.70	22.78	23.00	0.672	2020/12/4
Back Side	20175/1732.5	1.4M QPSK(3,1)	10	Active	0.466	0.282	-1.42	17.97	18.00	0.469	2020/10/23
Back Side	20175/1732.5	1.4M QPSK(3,1)	18	Inactive	0.604	0.382	-1.77	22.78	23.00	0.635	2020/12/4

Right Side	20175/1732.5	1.4M QPSK(3,1)	10	Active	0.145	0.090	-1.47	17.97	18.00	0.146	2020/10/23
Right Side	20175/1732.5	1.4M QPSK(3,1)	18	Inactive	0.323	0.189	2.62	22.78	23.00	0.340	2020/12/4
Top Side	20175/1732.5	1.4M QPSK(3,1)	10	Inactive	0.084	0.063	-0.45	22.78	23.00	0.088	2020/12/4
Bottom Side	20175/1732.5	1.4M QPSK(3,1)	10	Inactive	0.101	0.056	0.97	22.78	23.00	0.106	2020/10/23
100%RB											
Back Side	20175/1732.5	20M QPSK(100,0)	10	Active	0.289	0.120	0.34	21.82	22.00	0.301	2020/10/23
Back Side	20175/1732.5	20M QPSK(100,0)	18	Inactive	0.220	0.144	-2.80	16.41	17.00	0.252	2020/12/4

NOTE: Hotspot SAR test results of LTE Band 4

9.1.3. SAR measurement Result of LTE Band 5

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
1RB											
Front Side	20525/836.5	10M QPSK(1,24)	10	Active	0.165	0.114	-1.68	22.13	23.00	0.202	2020/10/22
Front Side	20525/836.5	10M QPSK(1,24)	18	Inactive	0.638	0.510	-1.46	23.22	24.00	0.764	2020/12/4
Back Side	20525/836.5	10M QPSK(1,24)	10	Active	0.242	0.174	-2.35	22.13	23.00	0.296	2020/10/22
Back Side	20525/836.5	10M QPSK(1,24)	18	Inactive	0.665	0.566	-1.02	23.22	24.00	0.796	2020/12/4
Right Side	20525/836.5	10M QPSK(1,24)	10	Active	0.067	0.049	-3.82	22.13	23.00	0.082	2020/10/22
Right Side	20525/836.5	10M QPSK(1,24)	18	Inactive	0.086	0.058	-0.92	23.22	24.00	0.103	2020/12/4
Top Side	20525/836.5	10M QPSK(1,24)	10	Inactive	0.620	0.542	-2.58	23.22	24.00	0.742	2020/12/4
Bottom Side	20525/836.5	10M QPSK(1,24)	10	Inactive	0.059	0.046	3.89	23.22	24.00	0.071	2020/10/22
50%RB											
Front Side	20525/836.5	1.4M QPSK(3,1)	10	Active	0.114	0.085	0.45	22.16	23.00	0.138	2020/10/22

Front Side	20525/836.5	1.4M QPSK(3,1)	18	Inactive	0.577	0.452	1.52	23.03	24.00	0.721	2020/12/4
Back Side	20525/836.5	1.4M QPSK(3,1)	10	Active	0.174	0.122	-0.23	22.16	23.00	0.211	2020/10/22
Back Side	20525/836.5	1.4M QPSK(3,1)	18	Inactive	0.639	0.512	-2.94	23.03	24.00	0.799	2020/12/4
Right Side	20525/836.5	1.4M QPSK(3,1)	10	Active	0.050	0.037	-3.13	22.16	23.00	0.061	2020/10/22
Right Side	20525/836.5	1.4M QPSK(3,1)	18	Inactive	0.080	0.054	-2.74	23.03	24.00	0.100	2020/12/4
Top Side	20525/836.5	1.4M QPSK(3,1)	10	Inactive	0.548	0.410	2.27	23.03	24.00	0.685	2020/12/4
Bottom Side	20525/836.5	1.4M QPSK(3,1)	10	Inactive	0.048	0.034	3.75	23.03	24.00	0.060	2020/10/22

NOTE: Hotspot SAR test results of LTE Band 5

9.1.4. SAR measurement Result of LTE Band 12

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
1RB											
Front Side	23095/707.5	10M QPSK(1,24)	10	N/A	0.412	0.304	-0.72	23.10	24.00	0.507	2020/10/21
Back Side	23095/707.5	10M QPSK(1,24)	10	N/A	0.615	0.454	0.20	23.10	24.00	0.757	2020/10/21
Right Side	23095/707.5	10M QPSK(1,24)	10	N/A	0.222	0.166	1.58	23.10	24.00	0.273	2020/10/21
Top Side	23095/707.5	10M QPSK(1,24)	10	N/A	0.504	0.406	0.57	23.10	24.00	0.620	2020/10/21
Bottom Side	23095/707.5	10M QPSK(1,24)	10	N/A	0.148	0.113	-2.81	23.10	24.00	0.182	2020/10/21
50%RB											
Front Side	23095/707.5	1.4M QPSK(3,1)	10	N/A	0.271	0.205	-1.05	23.20	24.00	0.326	2020/10/21
Back Side	23095/707.5	1.4M QPSK(3,1)	10	N/A	0.389	0.287	3.68	23.20	24.00	0.468	2020/10/21
Right Side	23095/707.5	1.4M QPSK(3,1)	10	N/A	0.144	0.107	-0.61	23.20	24.00	0.173	2020/10/21
Top	23095/707.5	1.4M	10	N/A	0.390	0.318	1.03	23.20	24.00	0.469	2020/10/21

Side		QPSK(3,1)									
Bottom Side	23095/707.5	1.4M QPSK(3,1)	10	N/A	0.107	0.080	-1.52	23.20	24.00	0.129	2020/10/21

NOTE: Hotspot SAR test results of LTE Band 12

9.1.5. SAR measurement Result of LTE Band 13

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
1RB											
Front Side	23230/782	10M QPSK(1,24)	10	Active	0.353	0.261	1.79	22.61	23.00	0.386	2020/10/21
Front Side	23230/782	10M QPSK(1,24)	18	Inactive	0.429	0.314	-4.93	23.53	24.00	0.478	2020/12/3
Back Side	23230/782	10M QPSK(1,24)	10	Active	0.558	0.407	-2.53	22.61	23.00	0.610	2020/10/21
Back Side	23230/782	10M QPSK(1,24)	18	Inactive	0.431	0.314	0.35	23.53	24.00	0.480	2020/12/3
Right Side	23230/782	10M QPSK(1,24)	10	Active	0.173	0.126	-1.98	22.61	23.00	0.189	2020/10/21
Right Side	23230/782	10M QPSK(1,24)	18	Inactive	0.098	0.066	-2.95	23.53	24.00	0.109	2020/12/3
Top Side	23230/782	10M QPSK(1,24)	10	Inactive	0.597	0.469	2.63	23.53	24.00	0.665	2020/12/3
Bottom Side	23230/782	10M QPSK(1,24)	10	Inactive	0.138	0.101	-0.65	23.53	24.00	0.154	2020/10/21
50%RB											
Front Side	23230/782	10M QPSK(25,0)	10	Active	0.188	0.145	-1.65	21.29	22.00	0.221	2020/10/21
Front Side	23230/782	10M QPSK(25,0)	18	Inactive	0.404	0.289	4.03	22.27	23.00	0.478	2020/12/3
Back Side	23230/782	10M QPSK(25,0)	10	Active	0.305	0.206	-2.00	21.29	22.00	0.359	2020/10/21
Back Side	23230/782	10M QPSK(25,0)	18	Inactive	0.408	0.281	-3.38	22.27	23.00	0.483	2020/12/3
Right Side	23230/782	10M QPSK(25,0)	10	Active	0.102	0.068	4.53	21.29	22.00	0.120	2020/10/21
Right Side	23230/782	10M QPSK(25,0)	18	Inactive	0.085	0.061	-2.47	22.27	23.00	0.101	2020/12/3

Top Side	23230/782	10M QPSK(25,0)	10	Inactive	0.452	0.357	-3.41	22.27	23.00	0.535	2020/12/3
Bottom Side	23230/782	10M QPSK(25,0)	10	Inactive	0.081	0.057	0.58	22.27	23.00	0.096	2020/10/21

NOTE: Hotspot SAR test results of LTE Band 13

9.1.6. SAR measurement Result of LTE Band 17

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
1RB											
Front Side	23790/710	10M QPSK(1,24)	10	N/A	0.380	0.281	0.22	23.00	24.00	0.478	2020/10/21
Back Side	23790/710	10M QPSK(1,24)	10	N/A	0.552	0.415	-0.28	23.00	24.00	0.695	2020/10/21
Right Side	23790/710	10M QPSK(1,24)	10	N/A	0.169	0.127	0.06	23.00	24.00	0.213	2020/10/21
Top Side	23790/710	10M QPSK(1,24)	10	N/A	0.461	0.379	-0.46	23.00	24.00	0.580	2020/10/21
Bottom Side	23790/710	10M QPSK(1,24)	10	N/A	0.135	0.102	1.64	23.00	24.00	0.170	2020/10/21
50%RB											
Front Side	23790/710	10M QPSK(25,12)	10	N/A	0.409	0.319	2.94	22.19	23.00	0.493	2020/10/21
Back Side	23790/710	10M QPSK(25,12)	10	N/A	0.467	0.374	3.87	22.19	23.00	0.563	2020/10/21
Right Side	23790/710	10M QPSK(25,12)	10	N/A	0.062	0.044	-3.76	22.19	23.00	0.075	2020/10/21
Top Side	23790/710	10M QPSK(25,12)	10	N/A	0.365	0.300	0.37	22.19	23.00	0.440	2020/10/21
Bottom Side	23790/710	10M QPSK(25,12)	10	N/A	0.071	0.058	-0.91	22.19	23.00	0.086	2020/10/21

NOTE: Hotspot SAR test results of LTE Band 17

9.1.7. SAR measurement Result of LTE Band 25

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					

1RB											
Front Side	26365/1882.5	20M QPSK(1,49)	10	Active	0.298	0.184	0.23	20.95	21.00	0.301	2020/10/23
Front Side	26365/1882.5	20M QPSK(1,49)	18	Inactive	0.644	0.376	-0.69	22.87	23.00	0.664	2020/12/5
Back Side	26365/1882.5	20M QPSK(1,49)	10	Active	0.424	0.255	-1.28	20.95	21.00	0.429	2020/10/23
Back Side	26365/1882.5	20M QPSK(1,49)	18	Inactive	0.436	0.261	-4.32	22.87	23.00	0.449	2020/12/5
Right Side	26365/1882.5	20M QPSK(1,49)	10	Active	0.119	0.069	3.99	20.95	21.00	0.120	2020/10/23
Right Side	26365/1882.5	20M QPSK(1,49)	18	Inactive	0.224	0.149	-0.95	22.87	23.00	0.231	2020/12/5
Top Side	26365/1882.5	20M QPSK(1,49)	10	Inactive	0.280	0.172	2.04	22.87	23.00	0.289	2020/12/5
Bottom Side	26365/1882.5	20M QPSK(1,49)	10	Inactive	0.084	0.049	1.60	22.87	23.00	0.087	2020/10/23
50%RB											
Front Side	26365/1882.5	1.4M QPSK(3,2)	10	Active	0.172	0.098	2.08	20.94	21.00	0.174	2020/10/23
Front Side	26365/1882.5	1.4M QPSK(3,2)	18	Inactive	0.566	0.333	1.36	22.75	23.00	0.600	2020/12/5
Back Side	26365/1882.5	1.4M QPSK(3,2)	10	Active	0.214	0.137	-4.79	20.94	21.00	0.217	2020/10/23
Back Side	26365/1882.5	1.4M QPSK(3,2)	18	Inactive	0.401	0.244	1.62	22.75	23.00	0.425	2020/12/5
Right Side	26365/1882.5	1.4M QPSK(3,2)	10	Active	0.063	0.039	-0.76	20.94	21.00	0.064	2020/10/23
Right Side	26365/1882.5	1.4M QPSK(3,2)	18	Inactive	0.203	0.138	0.51	22.75	23.00	0.215	2020/12/5
Top Side	26365/1882.5	1.4M QPSK(3,2)	10	Inactive	0.220	0.131	3.20	22.75	23.00	0.233	2020/12/5
Bottom Side	26365/1882.5	1.4M QPSK(3,2)	10	Inactive	0.044	0.025	4.43	22.75	23.00	0.047	2020/10/23

NOTE: Hotspot SAR test results of LTE Band 25

9.1.8. SAR measurement Result of LTE Band 26

Test Position of	Test channel /Freq.	Test Mode	Test separation distance	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g	Date
					1g	10g					

Hotspot			(mm)							(W/Kg)	
1RB											
Front Side	26915/836.5	15M QPSK(1,37)	10	Active	0.361	0.207	3.47	22.21	23.00	0.433	2020/10/22
Front Side	26915/836.5	15M QPSK(1,37)	18	Inactive	0.639	0.534	-3.84	23.04	24.00	0.797	2020/12/4
Back Side	26915/836.5	15M QPSK(1,37)	10	Active	0.522	0.293	1.45	22.21	23.00	0.626	2020/10/22
Back Side	26915/836.5	15M QPSK(1,37)	18	Inactive	0.640	0.574	-2.74	23.04	24.00	0.798	2020/12/4
Right Side	26915/836.5	15M QPSK(1,37)	10	Active	0.158	0.089	2.06	22.21	23.00	0.190	2020/10/22
Right Side	26915/836.5	15M QPSK(1,37)	18	Inactive	0.060	0.042	-0.20	23.04	24.00	0.075	2020/12/4
Top Side	26915/836.5	15M QPSK(1,37)	10	Inactive	0.636	0.555	-1.07	23.04	24.00	0.793	2020/12/4
Bottom Side	26915/836.5	15M QPSK(1,37)	10	Inactive	0.100	0.060	-1.88	23.04	24.00	0.125	2020/10/22
Front Side	26740/819	10M QPSK(1,24)	10	Active	0.318	0.190	1.54	22.40	23.00	0.365	2020/10/22
Front Side	26740/819	10M QPSK(1,24)	18	Inactive	0.614	0.403	-3.95	23.24	24.00	0.731	2020/12/4
Back Side	26740/819	10M QPSK(1,24)	10	Active	0.420	0.249	-0.35	22.40	23.00	0.482	2020/10/22
Back Side	26740/819	10M QPSK(1,24)	18	Inactive	0.600	0.514	-2.88	23.24	24.00	0.715	2020/12/4
Right Side	26740/819	10M QPSK(1,24)	10	Active	0.021	0.014	-4.68	22.40	23.00	0.024	2020/10/22
Right Side	26740/819	10M QPSK(1,24)	18	Inactive	0.036	-0.023	-0.33	23.24	24.00	0.043	2020/12/4
Top Side	26740/819	10M QPSK(1,24)	10	Inactive	0.616	0.540	-1.18	23.24	24.00	0.734	2020/12/4
Bottom Side	26740/819	10M QPSK(1,24)	10	Inactive	0.052	0.019	-4.33	23.24	24.00	0.062	2020/10/22
50%RB											
Front Side	26915/836.5	1.4M QPSK(3,0)	10	Active	0.195	0.119	-3.63	22.17	23.00	0.236	2020/10/22
Front Side	26915/836.5	1.4M QPSK(3,0)	18	Inactive	0.636	0.478	-2.73	23.03	24.00	0.795	2020/12/4
Back	26915/836.5	1.4M	10	Active	0.270	0.148	4.26	22.17	23.00	0.327	2020/10/22

Side		QPSK(3,0)									
Back Side	26915/836.5	1.4M QPSK(3,0)	18	Inactive	0.627	0.496	-3.74	23.03	24.00	0.784	2020/12/4
Right Side	26915/836.5	1.4M QPSK(3,0)	10	Active	0.091	0.048	-1.59	22.17	23.00	0.110	2020/10/22
Right Side	26915/836.5	1.4M QPSK(3,0)	18	Inactive	0.056	0.038	-1.44	23.03	24.00	0.070	2020/12/4
Top Side	26915/836.5	1.4M QPSK(3,0)	10	Inactive	0.541	0.402	1.79	23.03	24.00	0.676	2020/12/4
Bottom Side	26915/836.5	1.4M QPSK(3,0)	10	Inactive	0.055	0.035	-0.60	23.03	24.00	0.069	2020/10/22
Front Side	26740/819	1.4M QPSK(3,1)	10	Active	0.169	0.098	2.61	21.85	23.00	0.220	2020/10/22
Front Side	26740/819	1.4M QPSK(3,1)	18	Inactive	0.576	0.328	-2.80	22.85	24.00	0.751	2020/12/4
Back Side	26740/819	1.4M QPSK(3,1)	10	Active	0.203	0.126	3.62	21.85	23.00	0.265	2020/10/22
Back Side	26740/819	1.4M QPSK(3,1)	18	Inactive	0.530	0.363	-3.80	22.85	24.00	0.691	2020/12/4
Right Side	26740/819	1.4M QPSK(3,1)	10	Active	0.095	0.045	-3.24	21.85	23.00	0.124	2020/10/22
Right Side	26740/819	1.4M QPSK(3,1)	18	Inactive	0.064	0.053	-0.02	22.85	24.00	0.083	2020/12/4
Top Side	26740/819	1.4M QPSK(3,1)	10	Inactive	0.466	0.334	1.78	22.85	24.00	0.607	2020/12/4
Bottom Side	26740/819	1.4M QPSK(3,1)	10	Inactive	0.095	0.074	-0.81	22.85	24.00	0.124	2020/10/22

NOTE: Hotspot SAR test results of LTE Band 26

9.1.9. SAR measurement Result of LTE Band 41

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
1RB											
Front Side	40620/2593	20M QPSK(1,49)	10	N/A	0.232	0.119	0.84	23.52	24.00	0.259	2020/11/7
Back Side	40620/2593	20M QPSK(1,49)	10	N/A	0.365	0.192	-0.31	23.52	24.00	0.408	2020/11/7
Right	40620/2593	20M	10	N/A	0.133	0.071	-0.66	23.52	24.00	0.149	2020/11/7

Side		QPSK(1,49)									
Top Side	40620/2593	20M QPSK(1,49)	10	N/A	0.088	0.048	3.26	23.52	24.00	0.098	2020/11/7
Bottom Side	40620/2593	20M QPSK(1,49)	10	N/A	0.081	0.043	-2.90	23.52	24.00	0.090	2020/11/7
50%RB											
Front Side	40620/2593	20M QPSK(50,49)	10	N/A	0.132	0.069	-3.17	22.35	23.00	0.153	2020/11/7
Back Side	40620/2593	20M QPSK(50,49)	10	N/A	0.203	0.098	-4.48	22.35	23.00	0.236	2020/11/7
Right Side	40620/2593	20M QPSK(50,49)	10	N/A	0.068	0.043	4.78	22.35	23.00	0.079	2020/11/7
Top Side	40620/2593	20M QPSK(50,49)	10	N/A	0.053	0.025	-1.85	22.35	23.00	0.062	2020/11/7
Bottom Side	40620/2593	20M QPSK(50,49)	10	N/A	0.044	0.025	3.14	22.35	23.00	0.051	2020/11/7

NOTE: Hotspot SAR test results of LTE Band 41

9.1.10. SAR measurement Result of LTE Band 66

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
1RB											
Front Side	132322/1745	20M QPSK(1,49)	10	Active	0.403	0.229	3.19	19.66	20.00	0.436	2020/10/23
Front Side	132322/1745	20M QPSK(1,49)	18	Inactive	0.742	0.443	-0.26	23.00	23.00	0.742	2020/12/4
Back Side	132322/1745	20M QPSK(1,49)	10	Active	0.557	0.315	-3.02	19.66	20.00	0.602	2020/10/23
Back Side	132322/1745	20M QPSK(1,49)	18	Inactive	0.623	0.385	-0.01	23.00	23.00	0.623	2020/12/4
Right Side	132322/1745	20M QPSK(1,49)	10	Active	0.175	0.104	0.16	19.66	20.00	0.189	2020/10/23
Right Side	132322/1745	20M QPSK(1,49)	18	Inactive	0.512	0.303	-2.47	23.00	23.00	0.512	2020/12/4
Top Side	132322/1745	20M QPSK(1,49)	10	Inactive	0.186	0.121	-0.82	23.00	23.00	0.186	2020/12/4
Bottom Side	132322/1745	20M QPSK(1,49)	10	Inactive	0.156	0.086	-3.32	23.00	23.00	0.156	2020/10/23

50%RB											
Front Side	132322/1745	1.4M QPSK(3,1)	10	Active	0.228	0.124	-2.28	19.58	20.00	0.251	2020/10/23
Front Side	132322/1745	1.4M QPSK(3,1)	18	Inactive	0.685	0.400	-4.33	22.90	23.00	0.701	2020/12/4
Back Side	132322/1745	1.4M QPSK(3,1)	10	Active	0.332	0.170	0.71	19.58	20.00	0.366	2020/10/23
Back Side	132322/1745	1.4M QPSK(3,1)	18	Inactive	0.564	0.355	-2.60	22.90	23.00	0.577	2020/12/4
Right Side	132322/1745	1.4M QPSK(3,1)	10	Active	0.101	0.058	0.73	19.58	20.00	0.111	2020/10/23
Right Side	132322/1745	1.4M QPSK(3,1)	18	Inactive	0.479	0.270	2.85	22.90	23.00	0.490	2020/12/4
Top Side	132322/1745	1.4M QPSK(3,1)	10	Inactive	0.134	0.089	2.76	22.90	23.00	0.137	2020/12/4
Bottom Side	132322/1745	1.4M QPSK(3,1)	10	Inactive	0.082	0.049	0.10	22.90	23.00	0.084	2020/10/23

NOTE: Hotspot SAR test results of LTE Band 66

9.1.11. SAR measurement Result of WLAN 2.4G

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
MIMO											
Front Side	6/2437	802.11 n(HT20)	10	N/A	0.178	0.104	3.44	17.98	19.00	0.225	2020/10/24
Back Side	6/2437	802.11 n(HT20)	10	N/A	0.295	0.170	-0.68	17.98	19.00	0.373	2020/10/24
Left Side	6/2437	802.11 n(HT20)	10	N/A	0.083	0.055	0.12	17.98	19.00	0.105	2020/10/24
Top Side	6/2437	802.11 n(HT20)	10	N/A	0.091	0.052	0.22	17.98	19.00	0.115	2020/10/24
Bottom Side	6/2437	802.11 n(HT20)	10	N/A	0.096	0.057	2.12	17.98	19.00	0.121	2020/10/24
ANT 1											
Front Side	6/2437	802.11 b	10	N/A	0.165	0.094	1.52	17.75	19.00	0.220	2020/10/24
Back Side	6/2437	802.11 b	10	N/A	0.272	0.147	0.22	17.75	19.00	0.363	2020/10/24

Left Side	6/2437	802.11 b	10	N/A	0.066	0.037	-2.94	17.75	19.00	0.088	2020/10/24
Top Side	6/2437	802.11 b	10	N/A	0.085	0.046	-2.54	17.75	19.00	0.113	2020/10/24
ANT 2											
Front Side	6/2437	802.11 b	10	N/A	0.157	0.089	0.18	17.35	18.00	0.182	2020/10/24
Back Side	6/2437	802.11 b	10	N/A	0.257	0.143	0.23	17.35	18.00	0.298	2020/10/24
Left Side	6/2437	802.11 b	10	N/A	0.107	0.093	0.03	17.35	18.00	0.124	2020/10/24
Bottom Side	6/2437	802.11 b	10	N/A	0.078	0.048	2.00	17.35	18.00	0.091	2020/10/24

NOTE: Hotspot SAR test results of WLAN 2.4G

9.1.12. SAR measurement Result of WLAN 5.8G

Test Position of Hotspot	Test channel /Freq.	Test Mode	Test separation distance (mm)	P-sensor	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date
					1g	10g					
MIMO											
Front Side	157/5785	802.11 n(HT20)	10	N/A	0.101	0.059	-2.78	17.27	18.00	0.119	2020/10/24
Back Side	157/5785	802.11 n(HT20)	10	N/A	0.158	0.093	3.06	17.27	18.00	0.187	2020/10/24
Left Side	157/5785	802.11 n(HT20)	10	N/A	0.083	0.041	0.12	17.27	18.00	0.098	2020/10/24
Top Side	157/5785	802.11 n(HT20)	10	N/A	0.073	0.038	0.03	17.27	18.00	0.086	2020/10/24
Bottom Side	157/5785	802.11 n(HT20)	10	N/A	0.053	0.029	0.06	17.27	18.00	0.063	2020/10/24
ANT 1											
Front Side	40/5200	802.11a	10	N/A	0.072	0.051	-4.79	14.29	15.00	0.085	2020/10/24
Back Side	40/5200	802.11a	10	N/A	0.108	0.069	-0.69	14.29	15.00	0.127	2020/10/24
Left Side	40/5200	802.11a	10	N/A	0.086	0.054	-0.49	14.29	15.00	0.101	2020/10/24
Top Side	40/5200	802.11a	10	N/A	0.062	0.034	-4.24	14.29	15.00	0.073	2020/10/24
ANT 2											
Front Side	157/5785	802.11a	10	N/A	0.088	0.047	0.94	14.33	15.00	0.103	2020/10/24
Back Side	157/5785	802.11a	10	N/A	0.143	0.076	0.28	14.33	15.00	0.167	2020/10/24

Left Side	157/5785	802.11a	10	N/A	0.061	0.033	0.02	14.33	15.00	0.071	2020/10/24
Bottom Side	157/5785	802.11a	10	N/A	0.048	0.026	-1.76	14.33	15.00	0.056	2020/10/24

NOTE: Hotspot SAR test results of WLAN 5.8G

9.2. SAR Summation Scenario

Per KDB 447498 D01, simultaneous transmission SAR is compliant if,

1) Scalar SAR summation < 1.6W/kg.

2) SPLSR = $(SAR_1 + SAR_2)^{1.5}$ / (min. separation distance, mm), and the peak separation distance is determined from the square root of $[(x_1-x_2)^2 + (y_1-y_2)^2 + (z_1-z_2)^2]$, where (x_1, y_1, z_1) and (x_2, y_2, z_2) are the coordinates of the extrapolated peak SAR locations in the zoom scan. If SPLSR ≤ 0.04, simultaneously transmission SAR measurement is not necessary.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 2	WLAN 2.4G			
Hotspot	Front Side	0.715	0.225	0.940	N/A	N/A
	Back Side	0.593	0.373	0.966	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A
	Right Side	0.313	N/A	0.313	N/A	N/A
	Top Side	0.316	0.115	0.431	N/A	N/A
	Bottom Side	0.148	0.121	0.269	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 2 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 4	WLAN 2.4G			
Hotspot	Front Side	0.744	0.225	0.969	N/A	N/A
	Back Side	0.937	0.373	1.310	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A
	Right Side	0.447	N/A	0.447	N/A	N/A
	Top Side	0.199	0.115	0.314	N/A	N/A
	Bottom Side	0.187	0.121	0.308	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 4 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 5	WLAN 2.4G			
Hotspot	Front Side	0.764	0.225	0.989	N/A	N/A
	Back Side	0.799	0.373	1.172	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A
	Right Side	0.103	N/A	0.103	N/A	N/A
	Top Side	0.742	0.115	0.857	N/A	N/A

	Bottom Side	0.071	0.121	0.192	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 5 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 12	WLAN 2.4G			
Hotspot	Front Side	0.507	0.225	0.732	N/A	N/A
	Back Side	0.757	0.373	1.130	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A
	Right Side	0.273	N/A	0.273	N/A	N/A
	Top Side	0.620	0.115	0.735	N/A	N/A
	Bottom Side	0.182	0.121	0.303	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 12 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 13	WLAN 2.4G			
Hotspot	Front Side	0.478	0.225	0.703	N/A	N/A
	Back Side	0.610	0.373	0.983	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A
	Right Side	0.189	N/A	0.189	N/A	N/A
	Top Side	0.665	0.115	0.780	N/A	N/A
	Bottom Side	0.154	0.121	0.275	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 13 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 17	WLAN 2.4G			
Hotspot	Front Side	0.493	0.225	0.718	N/A	N/A
	Back Side	0.695	0.373	1.068	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A
	Right Side	0.213	N/A	0.213	N/A	N/A
	Top Side	0.580	0.115	0.695	N/A	N/A
	Bottom Side	0.170	0.121	0.291	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 17 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 25	WLAN 2.4G			
Hotspot	Front Side	0.664	0.225	0.889	N/A	N/A
	Back Side	0.449	0.373	0.822	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A

	Right Side	0.231	N/A	0.231	N/A	N/A
	Top Side	0.289	0.115	0.404	N/A	N/A
	Bottom Side	0.087	0.121	0.208	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 25 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 26	WLAN 2.4G			
Hotspot	Front Side	0.797	0.225	1.022	N/A	N/A
	Back Side	0.798	0.373	1.171	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A
	Right Side	0.190	N/A	0.190	N/A	N/A
	Top Side	0.793	0.115	0.908	N/A	N/A
	Bottom Side	0.125	0.121	0.246	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 26 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 41	WLAN 2.4G			
Hotspot	Front Side	0.259	0.225	0.484	N/A	N/A
	Back Side	0.408	0.373	0.781	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A
	Right Side	0.149	N/A	0.149	N/A	N/A
	Top Side	0.098	0.115	0.213	N/A	N/A
	Bottom Side	0.090	0.121	0.211	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 41 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 66	WLAN 2.4G			
Hotspot	Front Side	0.742	0.225	0.967	N/A	N/A
	Back Side	0.623	0.373	0.996	N/A	N/A
	Left Side	N/A	0.124	0.124	N/A	N/A
	Right Side	0.512	N/A	0.512	N/A	N/A
	Top Side	0.186	0.115	0.301	N/A	N/A
	Bottom Side	0.156	0.121	0.277	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 66 and WLAN 2.4G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 2	WLAN 5.8G			
Hotspot	Front Side	0.715	0.119	0.834	N/A	N/A
	Back Side	0.593	0.187	0.780	N/A	N/A

	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.313	N/A	0.313	N/A	N/A
	Top Side	0.316	0.086	0.402	N/A	N/A
	Bottom Side	0.148	0.063	0.211	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 2 and WLAN 5.8G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 4	WLAN 5.8G			
Hotspot	Front Side	0.744	0.119	0.863	N/A	N/A
	Back Side	0.937	0.187	1.124	N/A	N/A
	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.447	N/A	0.447	N/A	N/A
	Top Side	0.199	0.086	0.285	N/A	N/A
	Bottom Side	0.187	0.063	0.250	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 4 and WLAN 5.8G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 5	WLAN 5.8G			
Hotspot	Front Side	0.764	0.119	0.883	N/A	N/A
	Back Side	0.799	0.187	0.986	N/A	N/A
	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.103	N/A	0.103	N/A	N/A
	Top Side	0.742	0.086	0.828	N/A	N/A
	Bottom Side	0.071	0.063	0.134	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 5 and WLAN 5.8G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 12	WLAN 5.8G			
Hotspot	Front Side	0.507	0.119	0.626	N/A	N/A
	Back Side	0.757	0.187	0.944	N/A	N/A
	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.273	N/A	0.273	N/A	N/A
	Top Side	0.620	0.086	0.706	N/A	N/A
	Bottom Side	0.182	0.063	0.245	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 12 and WLAN 5.8G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 13	WLAN 5.8G			
Hotspot	Front Side	0.478	0.119	0.597	N/A	N/A

	Back Side	0.610	0.187	0.797	N/A	N/A
	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.189	N/A	0.189	N/A	N/A
	Top Side	0.665	0.086	0.751	N/A	N/A
	Bottom Side	0.154	0.063	0.217	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 13 and WLAN 5.8G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 17	WLAN 5.8G			
Hotspot	Front Side	0.493	0.119	0.612	N/A	N/A
	Back Side	0.695	0.187	0.882	N/A	N/A
	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.213	N/A	0.213	N/A	N/A
	Top Side	0.580	0.086	0.666	N/A	N/A
	Bottom Side	0.170	0.063	0.233	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 17 and WLAN 5.8G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 25	WLAN 5.8G			
Hotspot	Front Side	0.664	0.119	0.783	N/A	N/A
	Back Side	0.449	0.187	0.636	N/A	N/A
	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.231	N/A	0.231	N/A	N/A
	Top Side	0.289	0.086	0.375	N/A	N/A
	Bottom Side	0.087	0.063	0.150	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 25 and WLAN 5.8G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 26	WLAN 5.8G			
Hotspot	Front Side	0.797	0.119	0.916	N/A	N/A
	Back Side	0.798	0.187	0.985	N/A	N/A
	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.190	N/A	0.190	N/A	N/A
	Top Side	0.793	0.086	0.879	N/A	N/A
	Bottom Side	0.125	0.063	0.188	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 26 and WLAN 5.8G.

Test Position	Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
	LTE Band	WLAN 5.8G			

		41				
Hotspot	Front Side	0.259	0.119	0.378	N/A	N/A
	Back Side	0.408	0.187	0.595	N/A	N/A
	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.149	N/A	0.149	N/A	N/A
	Top Side	0.098	0.086	0.184	N/A	N/A
	Bottom Side	0.090	0.063	0.153	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 41 and WLAN 5.8G.

Test Position		Scaled SAR_{MAX}		∑1-g SAR (W/Kg)	SPLSR	Remark
		LTE Band 66	WLAN 5.8G			
Hotspot	Front Side	0.742	0.119	0.861	N/A	N/A
	Back Side	0.623	0.187	0.810	N/A	N/A
	Left Side	N/A	0.101	0.101	N/A	N/A
	Right Side	0.512	N/A	0.512	N/A	N/A
	Top Side	0.186	0.086	0.272	N/A	N/A
	Bottom Side	0.156	0.063	0.219	N/A	N/A

NOTE: 1-g SAR Simultaneous Tx Combination of LTE Band 66 and WLAN 5.8G.

10. Appendix A. Photo documentation

Refer to appendix Test Setup photo---SAR

11. Appendix B. System Check Plots

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MEASUREMENT 5 System Performance Check - SID2450 - Body
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MEASUREMENT 7 System Performance Check - SID5800 - Body
MEASUREMENT 8 System Performance Check - SID750 - Body
MEASUREMENT 9 System Performance Check - SID835 - Body
MEASUREMENT 10 System Performance Check - SID1800 - Body
MEASUREMENT 11 System Performance Check - SID1900 - Body

MEASUREMENT 1

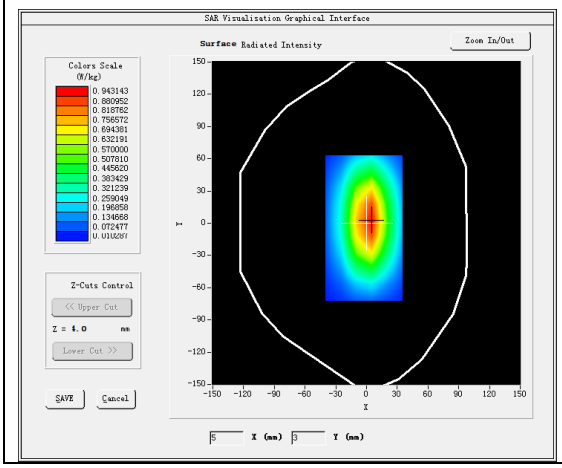
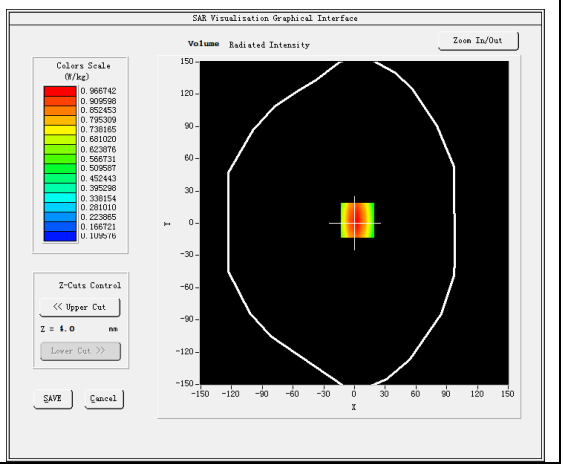
Date of measurement: 21/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

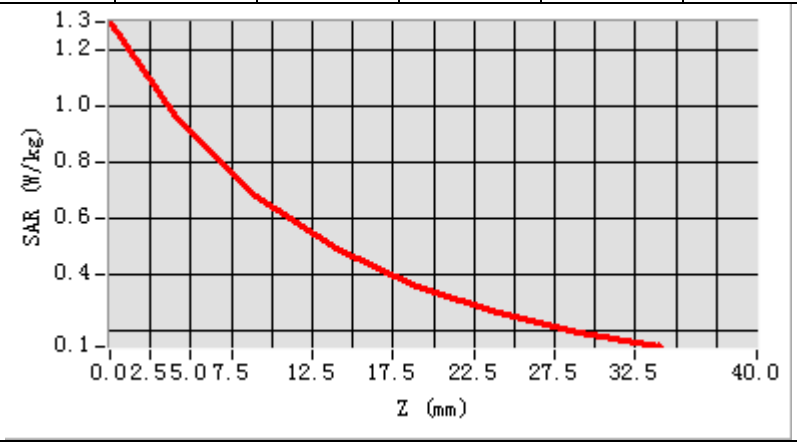
Frequency (MHz)	750.000000
Relative permittivity (real part)	55.580248
Relative permittivity (imaginary part)	23.363842
Conductivity (S/m)	0.970318
Variation (%)	-0.490000

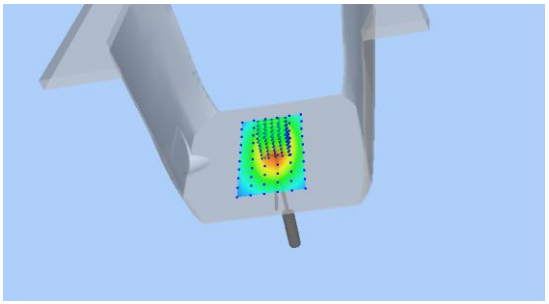
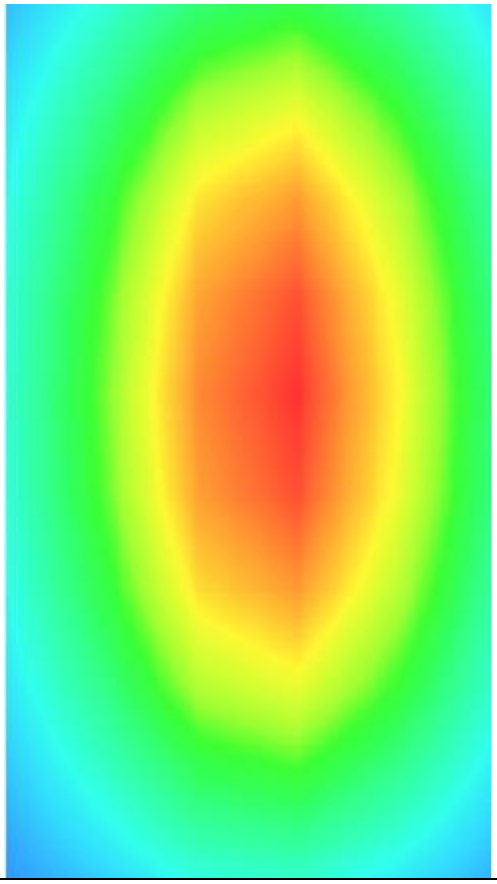
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=3.00
SAR Peak: 1.30 W/kg

SAR 10g (W/Kg)	0.600281
SAR 1g (W/Kg)	0.908263

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.2957	0.9688	0.6736	0.4819	0.3573	0.2623	0.1930



3D screen shot	Hot spot position
	

MEASUREMENT 2

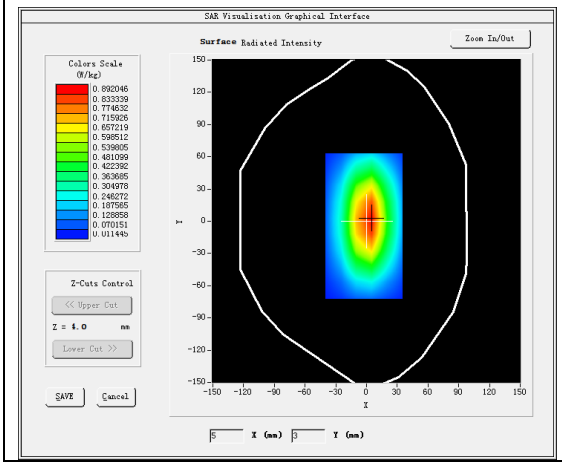
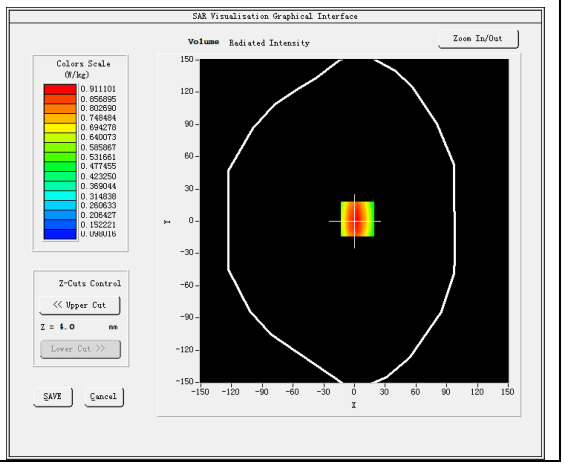
Date of measurement: 22/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

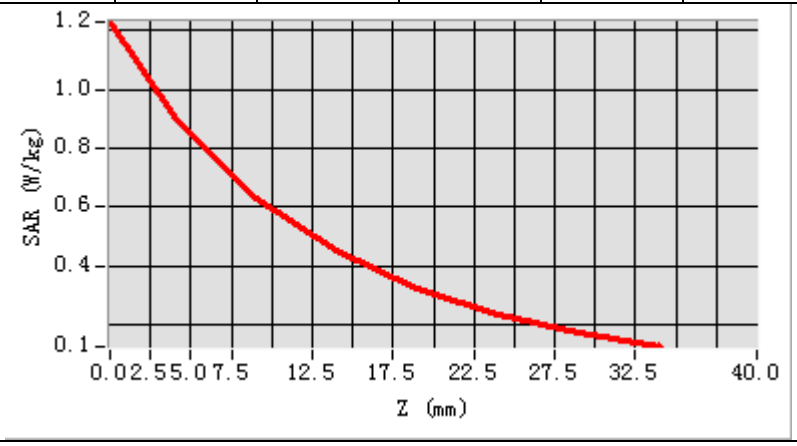
Frequency (MHz)	835.000000
Relative permittivity (real part)	54.631100
Relative permittivity (imaginary part)	21.133459
Conductivity (S/m)	0.980836
Variation (%)	-1.210000

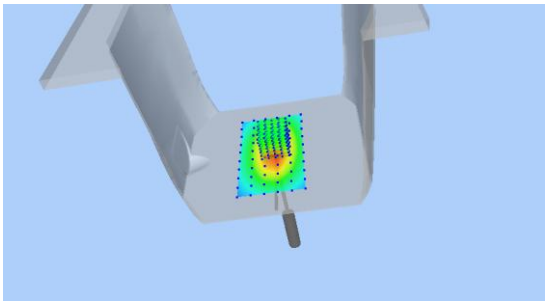
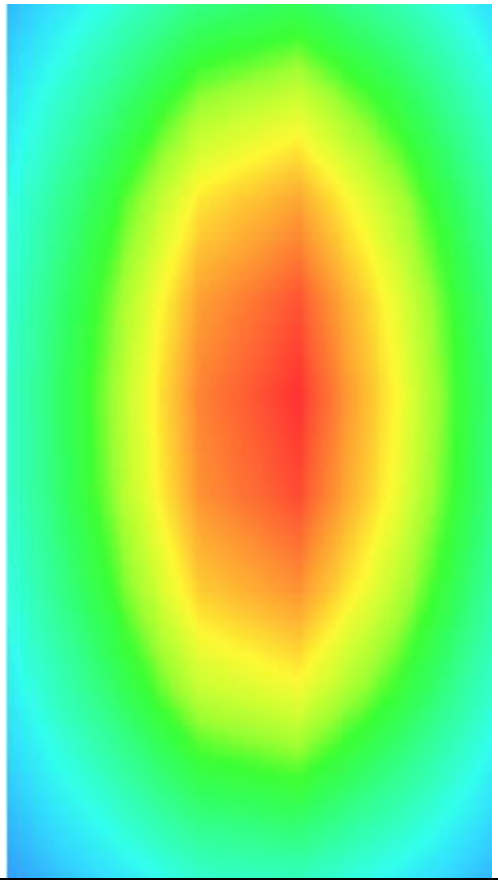
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=2.00
SAR Peak: 1.23 W/kg

SAR 10g (W/Kg)	0.636023
SAR 1g (W/Kg)	0.963356

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.2214	0.9178	0.6330	0.4575	0.3252	0.2301	0.1735



3D screen shot	Hot spot position
	

MEASUREMENT 3

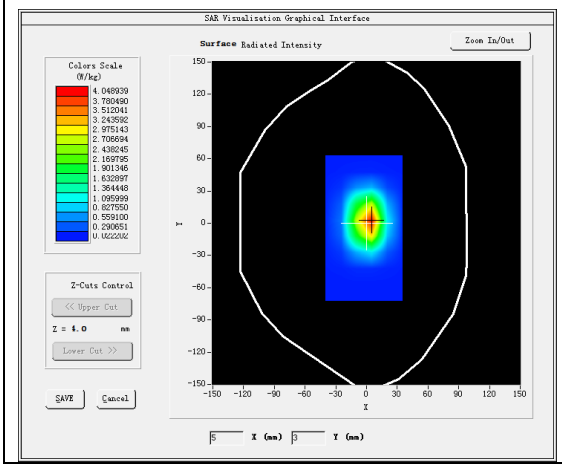
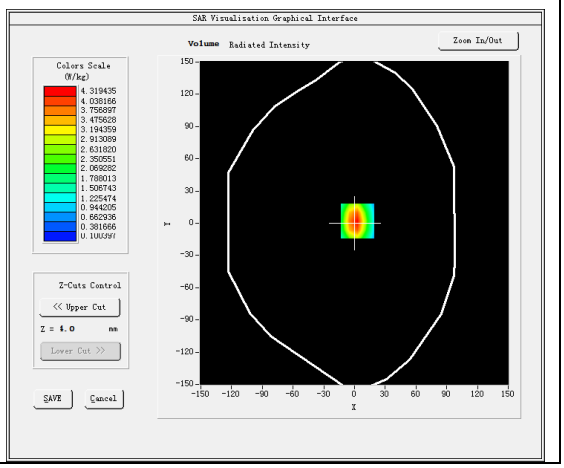
Date of measurement: 23/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

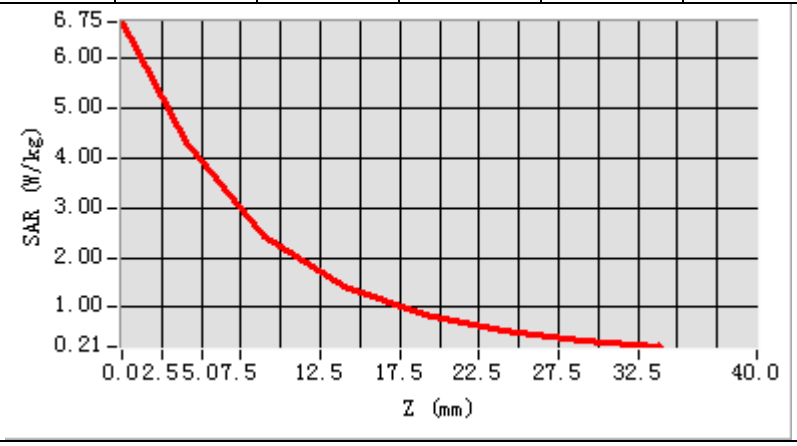
Frequency (MHz)	1800.000000
Relative permittivity (real part)	54.163510
Relative permittivity (imaginary part)	15.080016
Conductivity (S/m)	1.513096
Variation (%)	1.510000

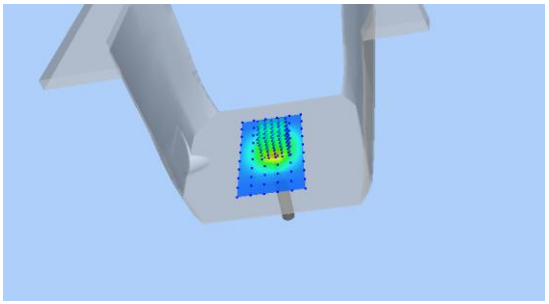
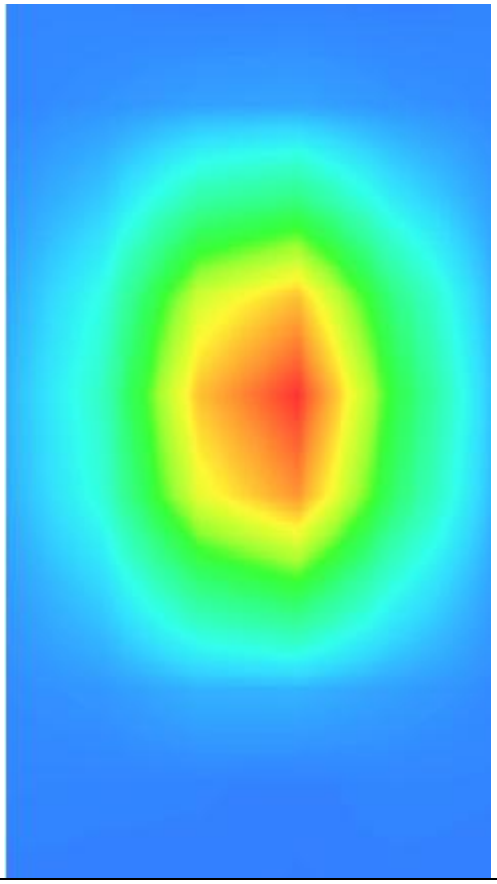
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=2.00
SAR Peak: 6.82 W/kg

SAR 10g (W/Kg)	2.164239
SAR 1g (W/Kg)	3.943268

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.7434	4.3133	2.4332	1.4247	0.8577	0.5244	0.3266



3D screen shot	Hot spot position
	

MEASUREMENT 4

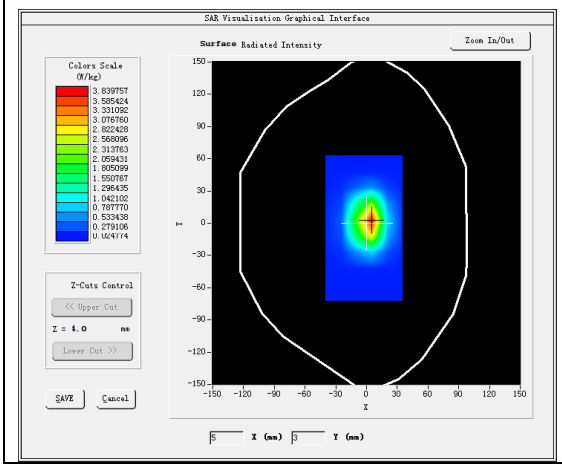
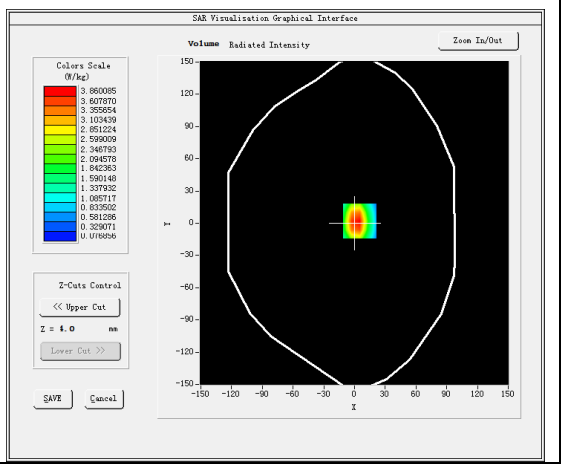
Date of measurement: 23/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

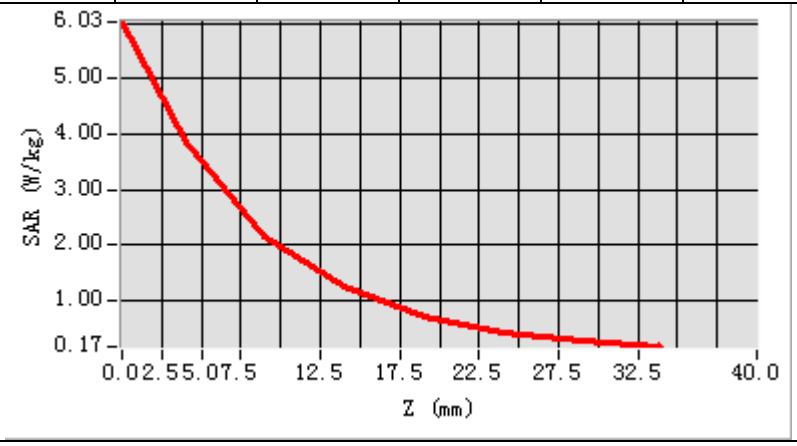
Frequency (MHz)	1900.000000
Relative permittivity (real part)	54.370335
Relative permittivity (imaginary part)	14.431803
Conductivity (S/m)	1.520066
Variation (%)	0.120000

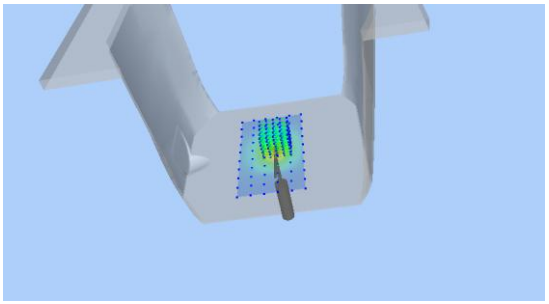
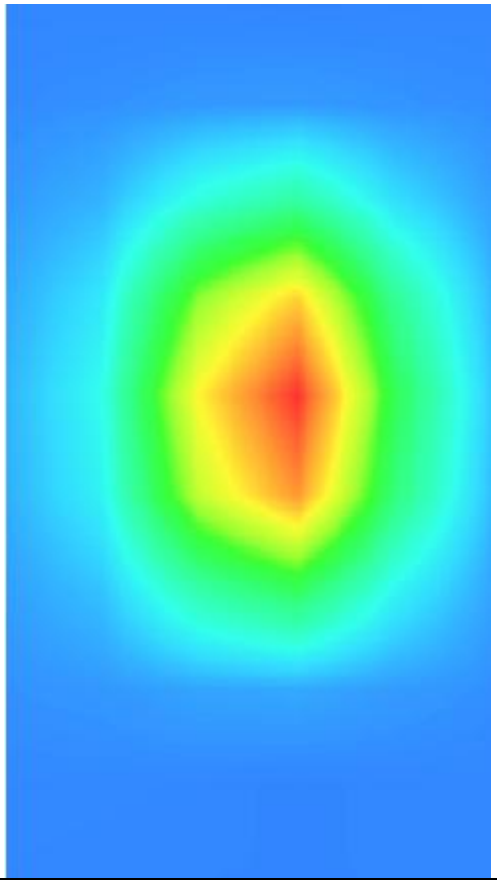
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=2.00
SAR Peak: 6.39 W/kg

SAR 10g (W/Kg)	2.061329
SAR 1g (W/Kg)	3.771402

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.0345	3.8665	2.1619	1.2445	0.7255	0.4326	0.2634



3D screen shot	Hot spot position
	

MEASUREMENT 5

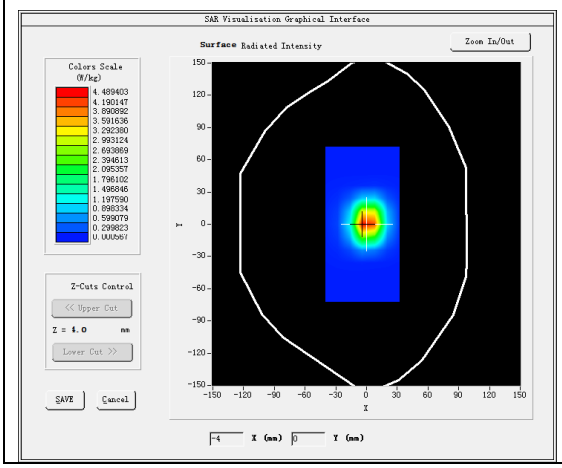
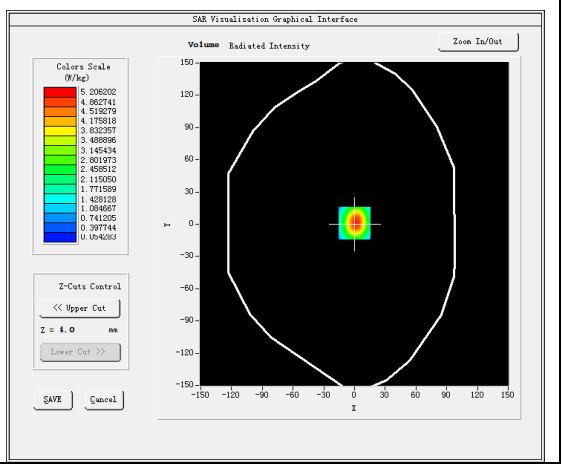
Date of measurement: 24/10/2020

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2450
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

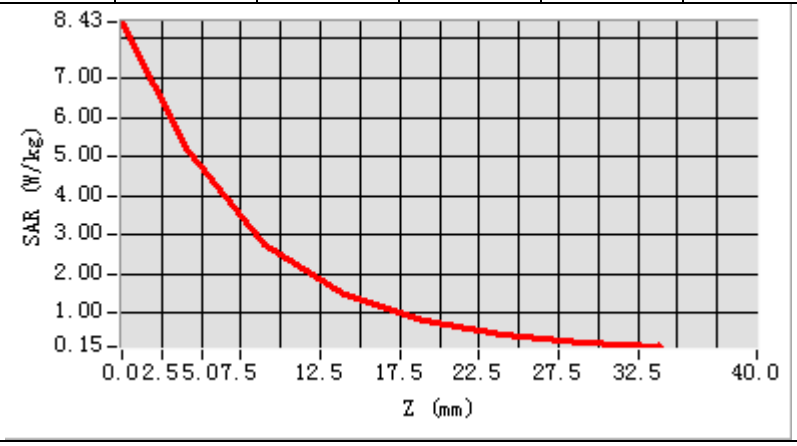
Frequency (MHz)	2450.000000
Relative permittivity (real part)	51.651697
Relative permittivity (imaginary part)	13.803566
Conductivity (S/m)	1.882816
Variation (%)	0.420000

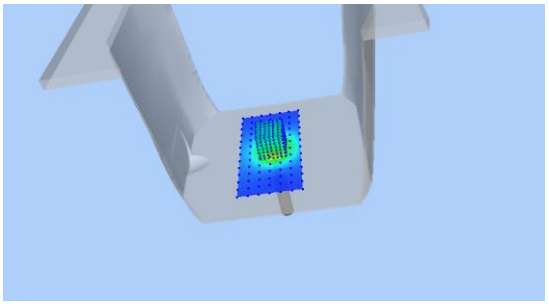
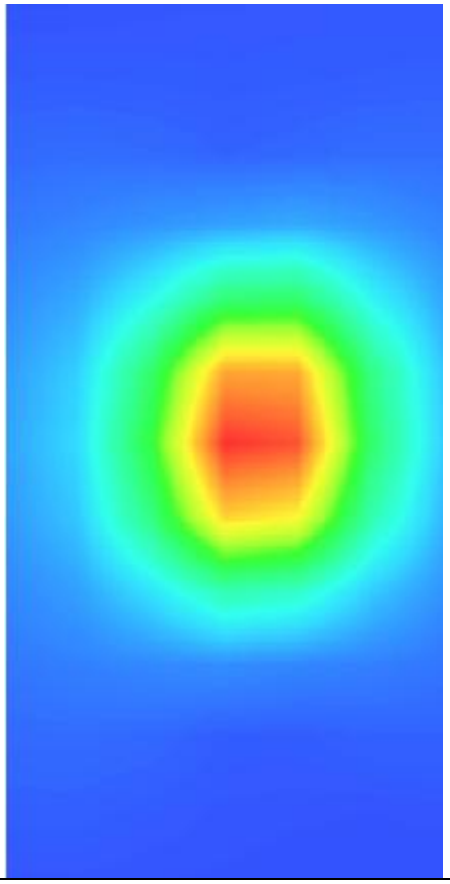
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=1.00
SAR Peak: 8.46 W/kg

SAR 10g (W/Kg)	2.380285
SAR 1g (W/Kg)	5.063270

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	8.4312	5.2217	2.7528	1.4235	0.8268	0.4398	0.2567



3D screen shot	Hot spot position
	

MEASUREMENT 6

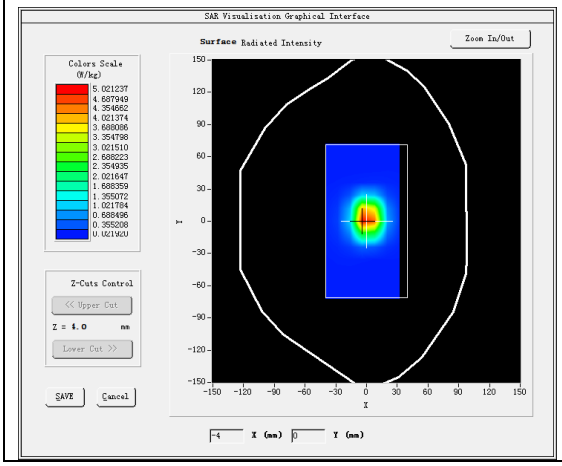
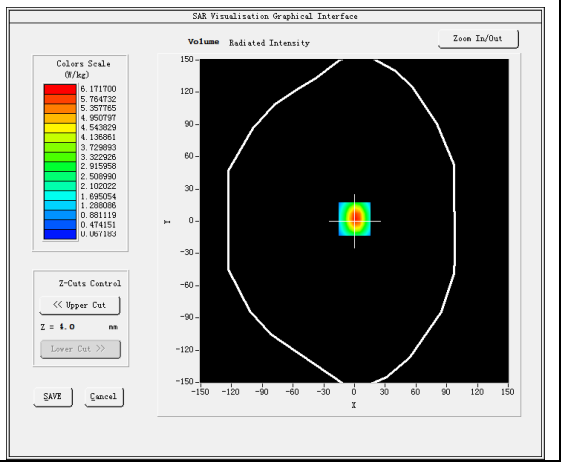
Date of measurement: 7/11/2020

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW2600
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

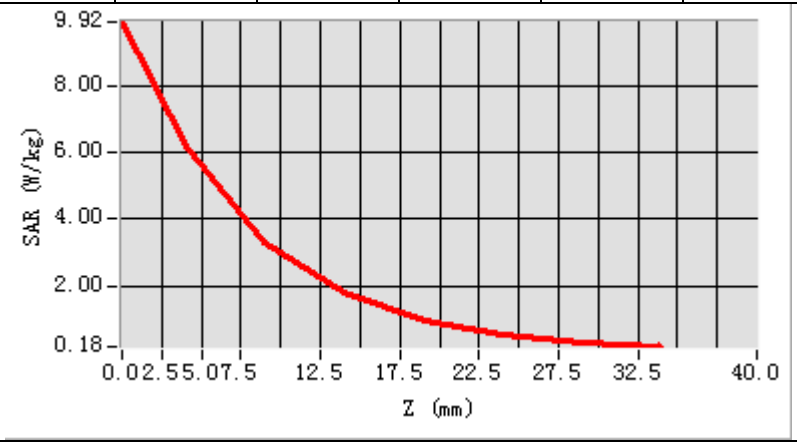
Frequency (MHz)	2600.000000
Relative permittivity (real part)	52.910066
Relative permittivity (imaginary part)	15.310637
Conductivity (S/m)	2.213465
Variation (%)	-1.220000

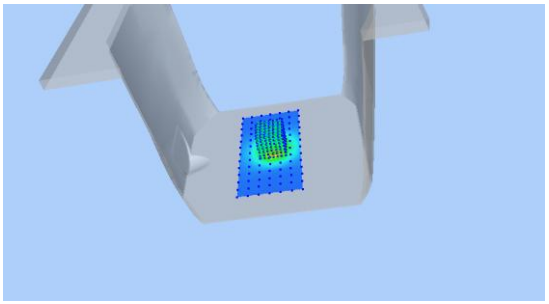
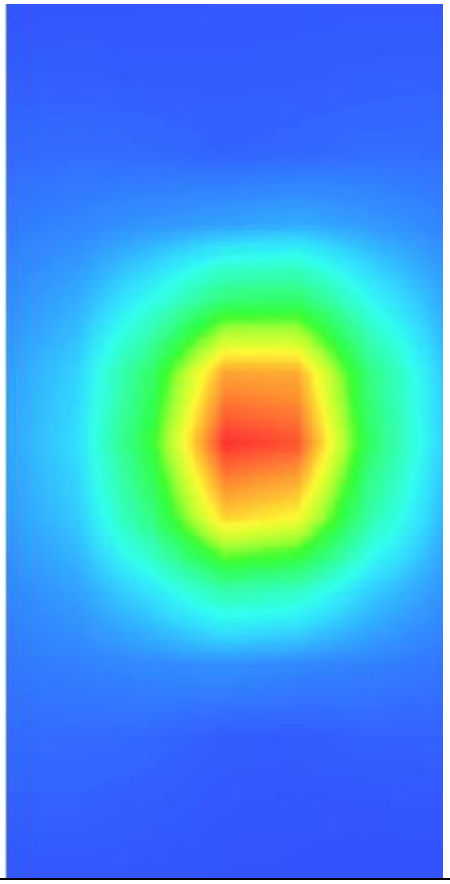
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=2.00
SAR Peak: 9.99 W/kg

SAR 10g (W/Kg)	2.342324
SAR 1g (W/Kg)	5.603188

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	9.9118	6.1777	3.2952	1.7819	0.9818	0.5452	0.3128



3D screen shot	Hot spot position
	

MEASUREMENT 7

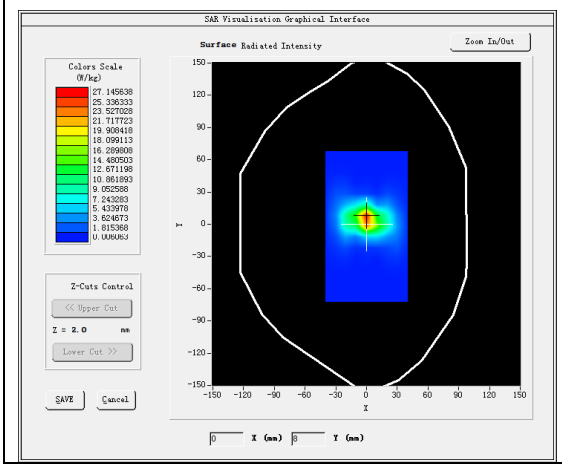
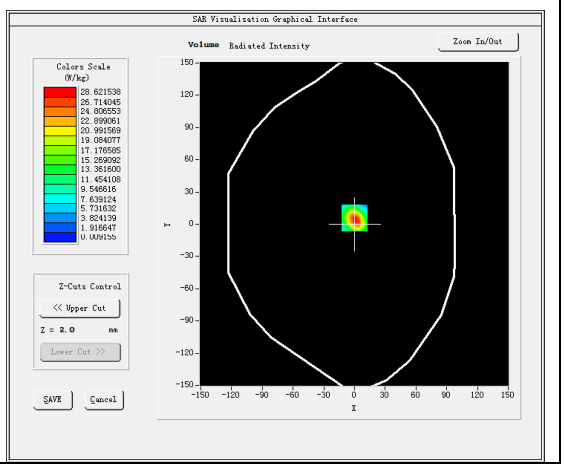
Date of measurement: 24/10/2020

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Dipole
Band	CW5800
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

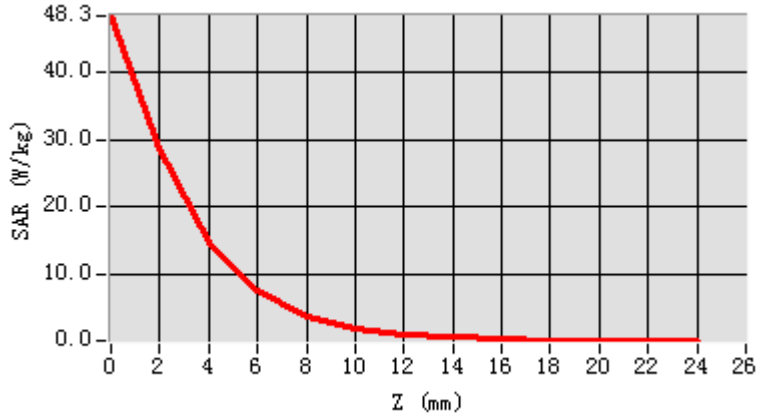
Frequency (MHz)	5800.000000
Relative permittivity (real part)	48.400523
Relative permittivity (imaginary part)	18.780143
Conductivity (S/m)	6.051524
Variation (%)	1.340000

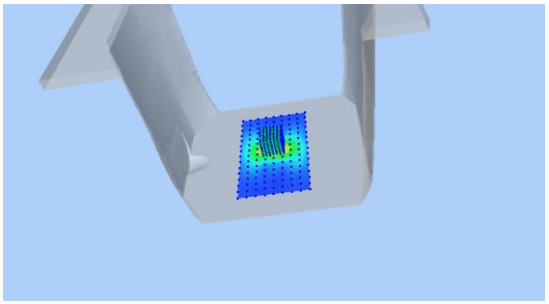
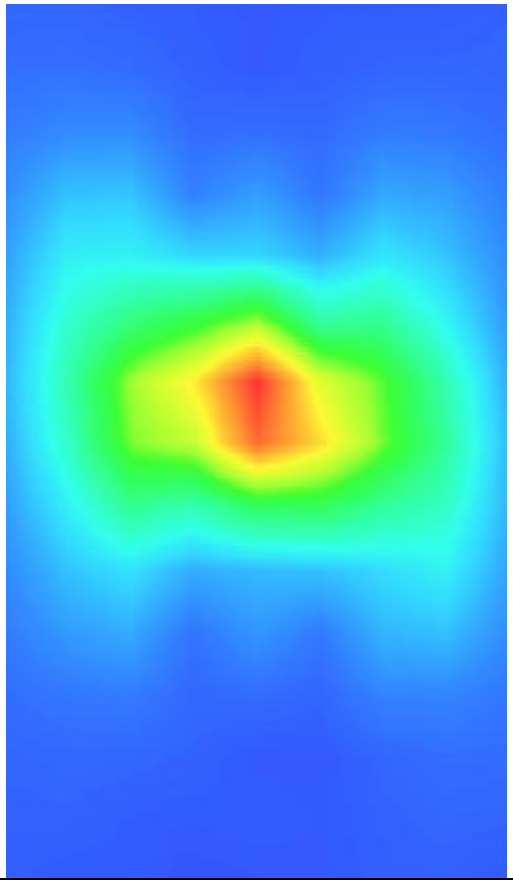
SURFACE SAR	VOLUME SAR
	

Maximum location: X=0.00, Y=6.00
SAR Peak: 51.30 W/kg

SAR 10g (W/Kg)	5.928184
SAR 1g (W/Kg)	17.087052

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	48.3472	28.6209	14.6589	7.4039	3.6857	1.8335	0.9318	0.4760	0.2513	0.1308	0.0783	0.0522



3D screen shot	Hot spot position
	

MEASUREMENT 8

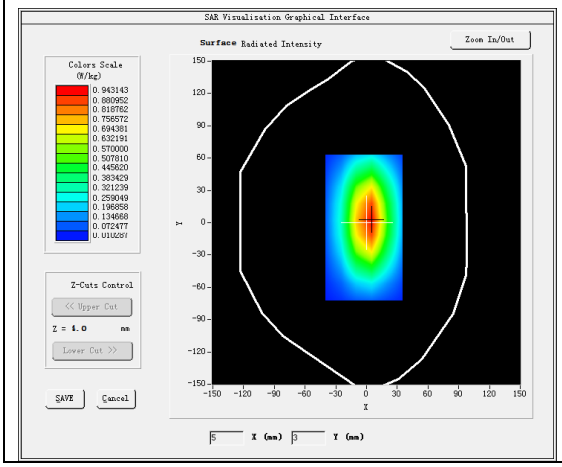
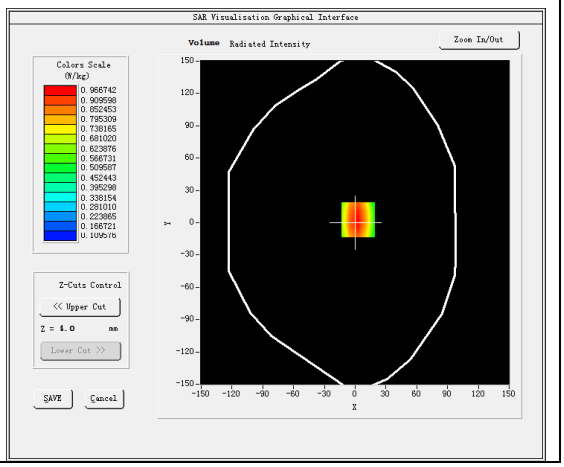
Date of measurement: 3/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW750
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

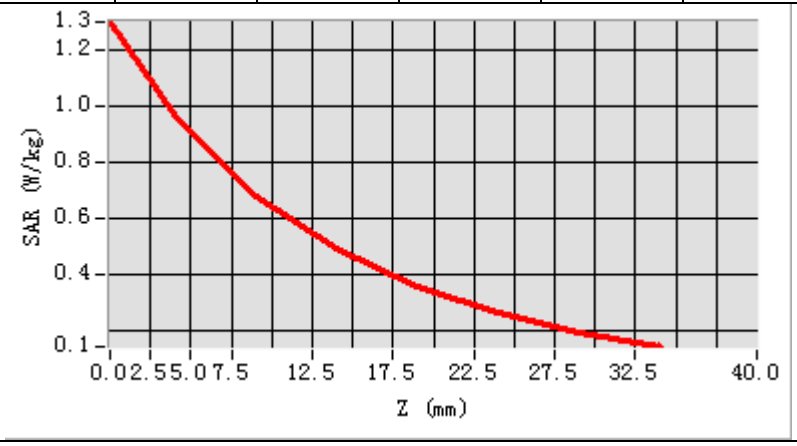
Frequency (MHz)	750.000000
Relative permittivity (real part)	55.520248
Relative permittivity (imaginary part)	23.393842
Conductivity (S/m)	0.970318
Variation (%)	-1.490000

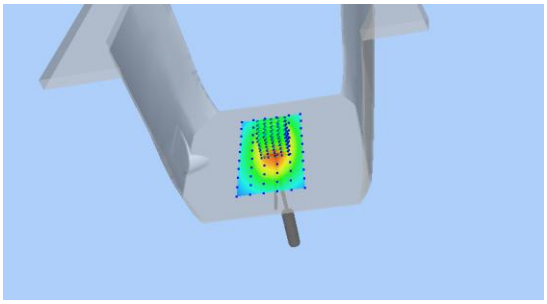
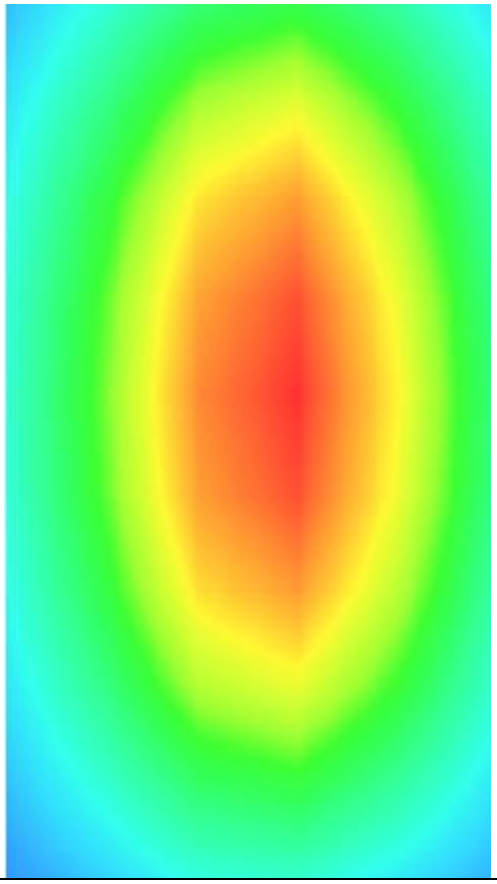
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=3.00
SAR Peak: 1.30 W/kg

SAR 10g (W/Kg)	0.563281
SAR 1g (W/Kg)	0.842263

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.2957	0.9688	0.6736	0.4819	0.3573	0.2623	0.1930



3D screen shot	Hot spot position
	

MEASUREMENT 9

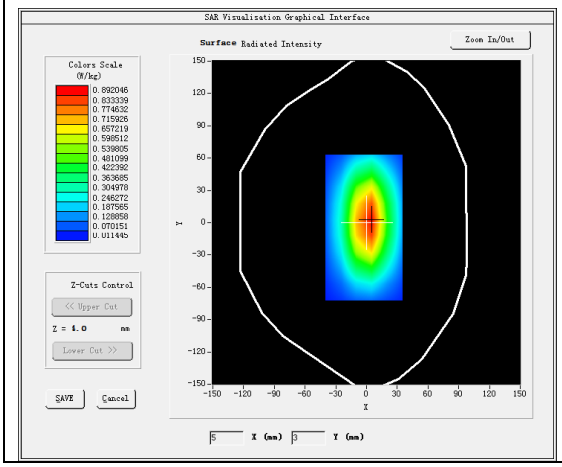
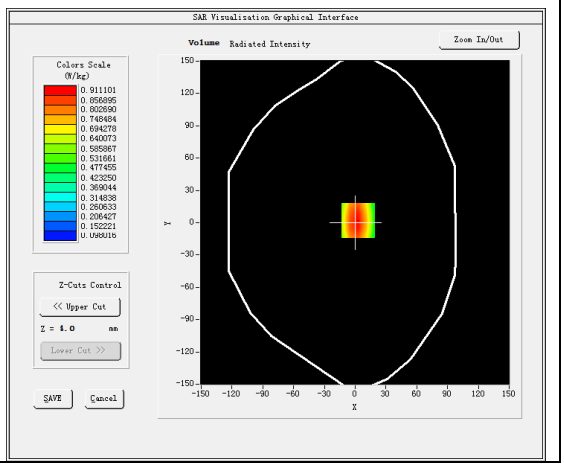
Date of measurement: 4/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW835
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

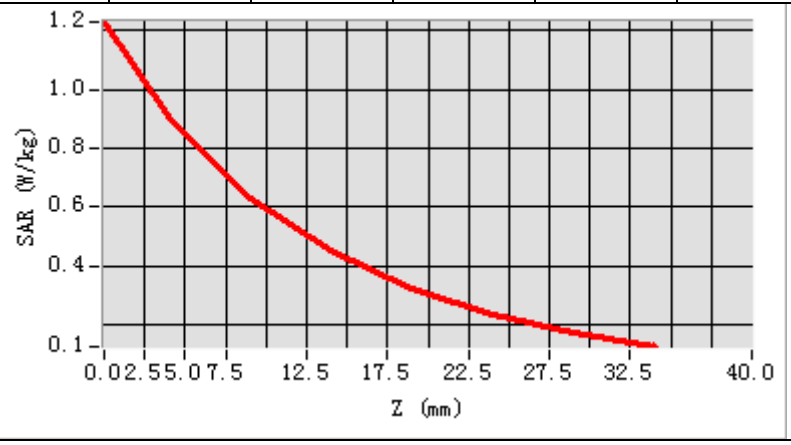
Frequency (MHz)	835.000000
Relative permittivity (real part)	55.201111
Relative permittivity (imaginary part)	20.723359
Conductivity (S/m)	0.961236
Variation (%)	-1.200000

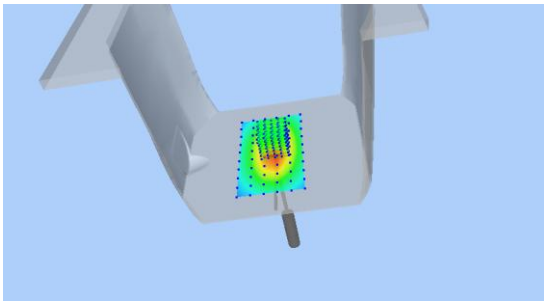
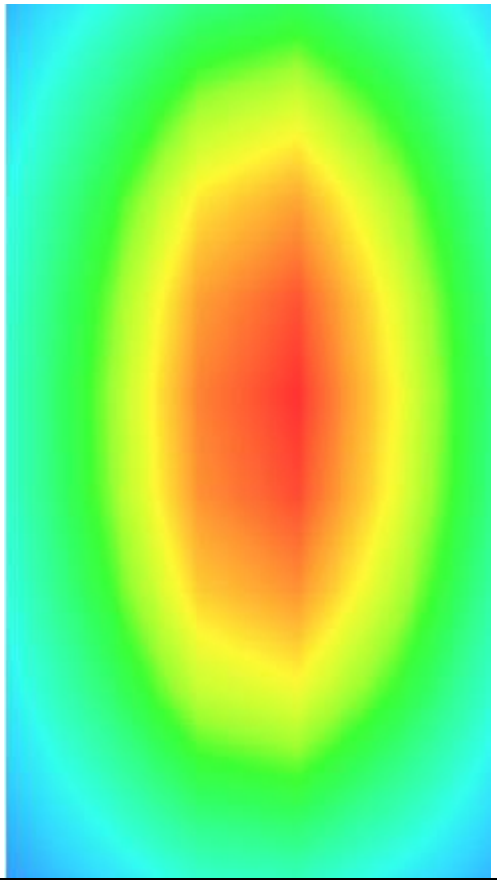
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=2.00
SAR Peak: 1.23 W/kg

SAR 10g (W/Kg)	0.680123
SAR 1g (W/Kg)	0.939356

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.2214	0.9178	0.6330	0.4575	0.3252	0.2301	0.1735



3D screen shot	Hot spot position
	

MEASUREMENT 10

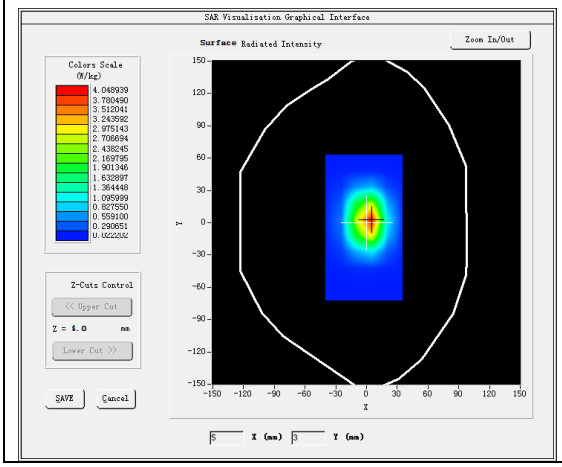
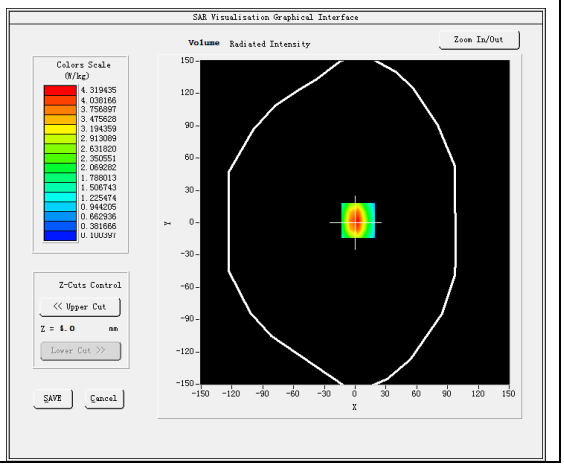
Date of measurement: 4/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1800
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

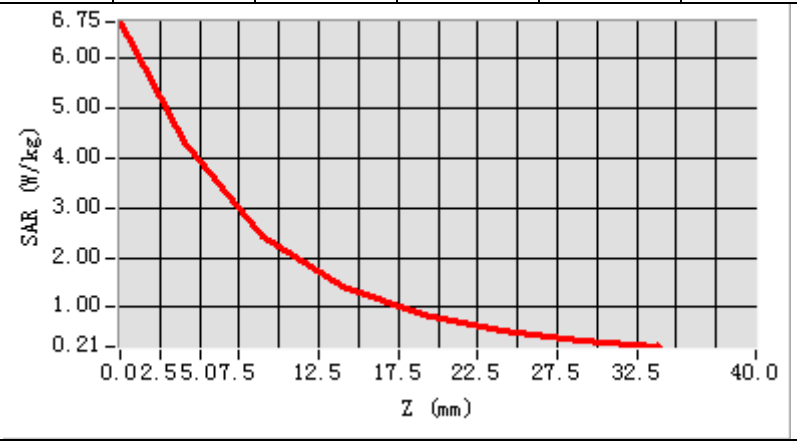
Frequency (MHz)	1800.000000
Relative permittivity (real part)	54.533510
Relative permittivity (imaginary part)	15.064016
Conductivity (S/m)	1.513096
Variation (%)	2.020000

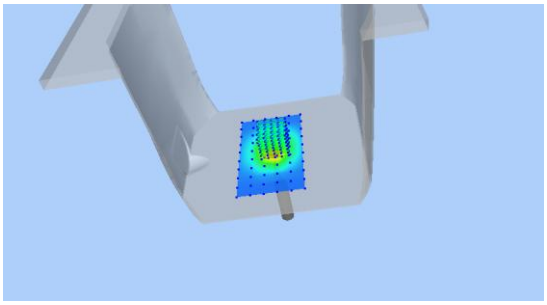
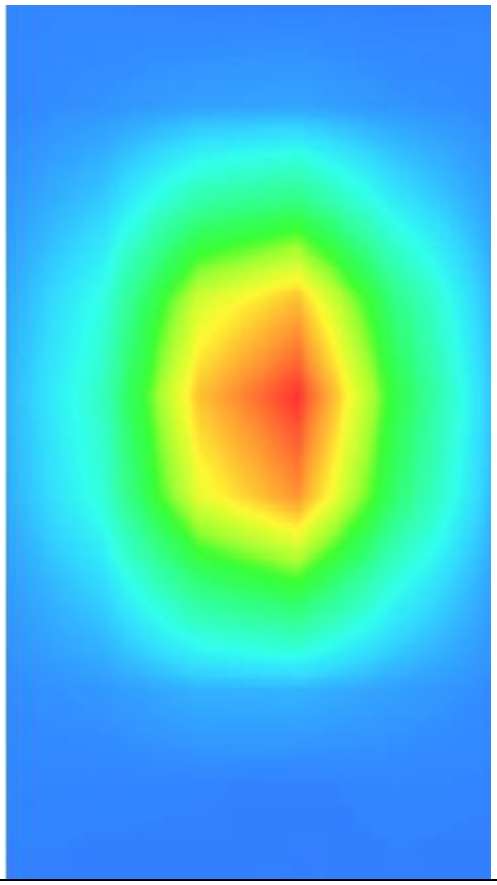
SURFACE SAR	VOLUME SAR
	

Maximum location: X=3.00, Y=2.00
SAR Peak: 6.82 W/kg

SAR 10g (W/Kg)	2.136379
SAR 1g (W/Kg)	3.962268

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.7434	4.3133	2.4332	1.4247	0.8577	0.5244	0.3266



3D screen shot	Hot spot position
	

MEASUREMENT 11

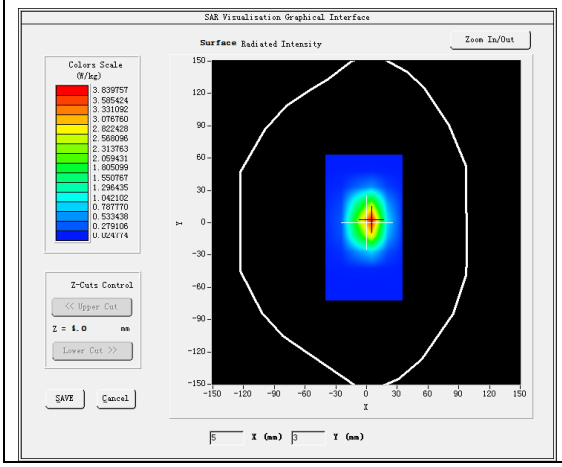
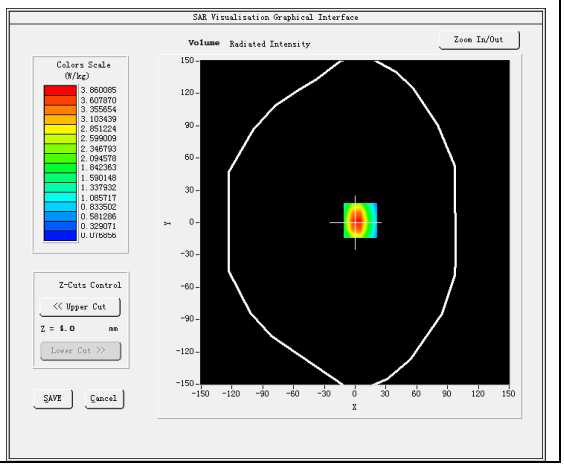
Date of measurement: 5/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Dipole
Band	CW1900
Channels	Middle
Signal	CW (Crest factor: 1.0)

B. SAR Measurement Results

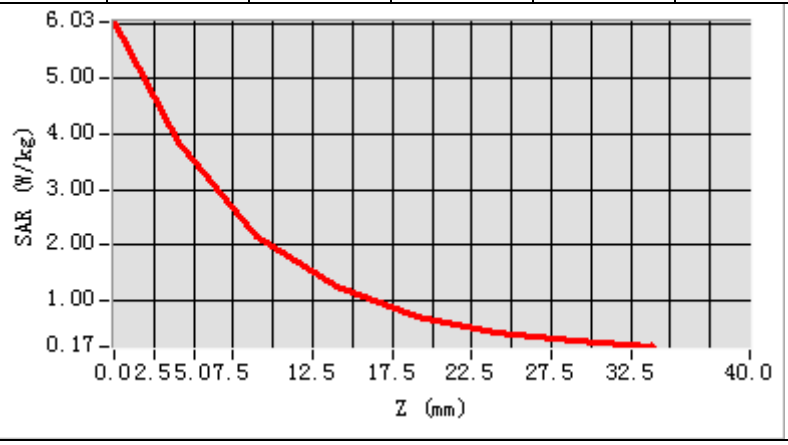
Frequency (MHz)	1900.000000
Relative permittivity (real part)	54.733335
Relative permittivity (imaginary part)	14.413503
Conductivity (S/m)	1.520566
Variation (%)	3.460000

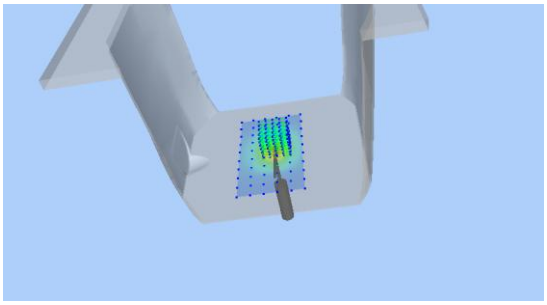
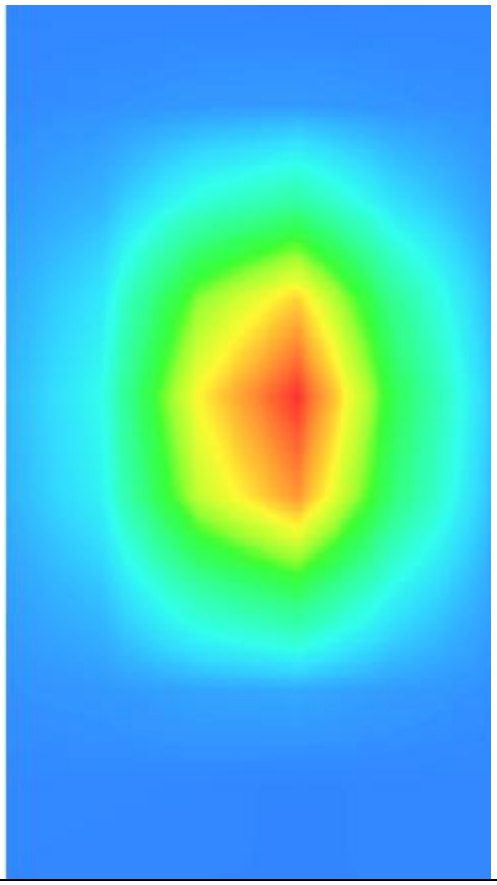
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=2.00
SAR Peak: 6.39 W/kg

SAR 10g (W/Kg)	2.067329
SAR 1g (W/Kg)	3.980402

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	6.0345	3.8665	2.1619	1.2445	0.7255	0.4326	0.2634



3D screen shot	Hot spot position
	

12. Appendix C. Plots of High SAR Measurement

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MEASUREMENT 6 LTE Band 17
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MEASUREMENT 1

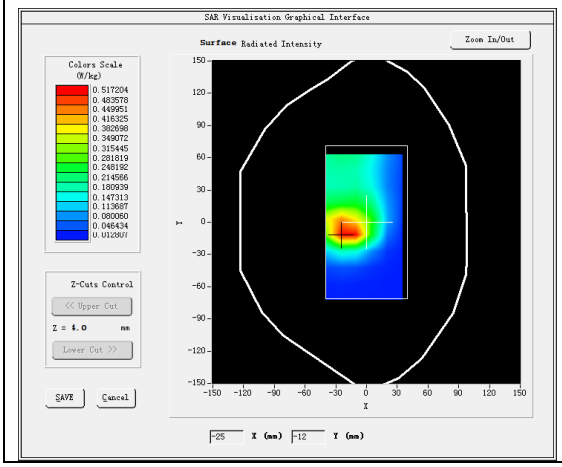
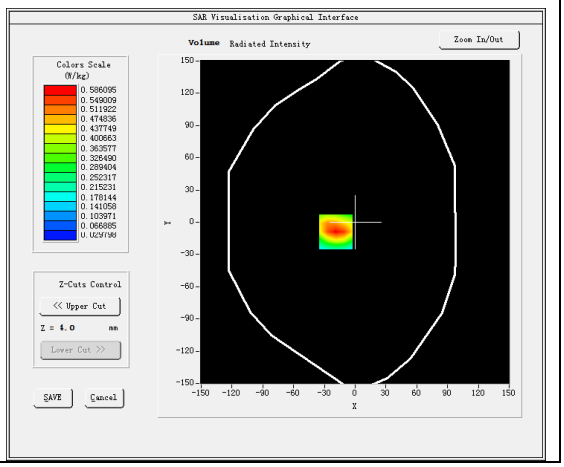
Date of measurement: 23/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 2
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

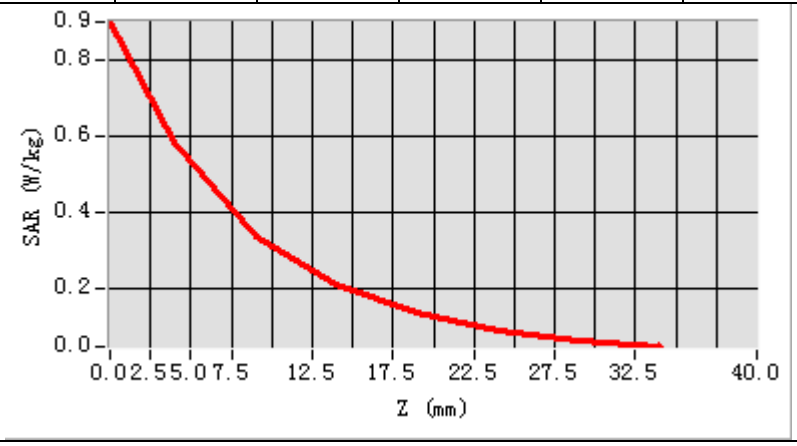
Frequency (MHz)	1880.000000
Relative permittivity (real part)	54.450951
Relative permittivity (imaginary part)	14.526150
Conductivity (S/m)	1.516772
Variation (%)	-3.130000

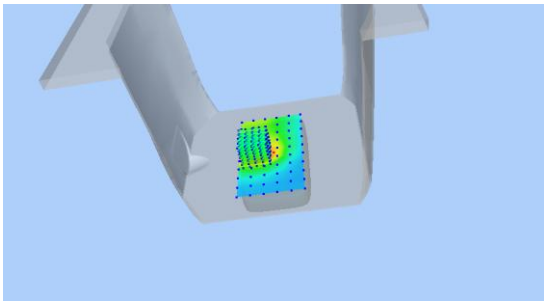
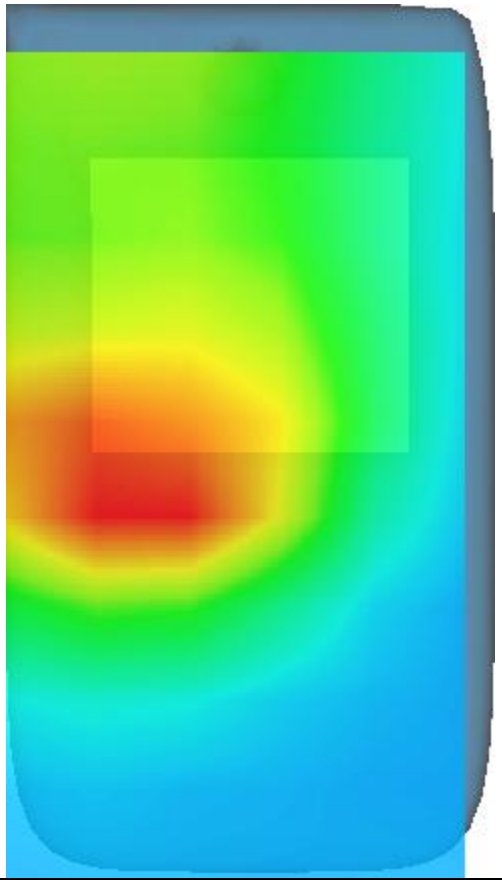
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-19.00, Y=-9.00
SAR Peak: 0.90 W/kg

SAR 10g (W/Kg)	0.315242
SAR 1g (W/Kg)	0.556558

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.9030	0.5861	0.3395	0.2098	0.1335	0.0884	0.0626



3D screen shot	Hot spot position
	

MEASUREMENT 2

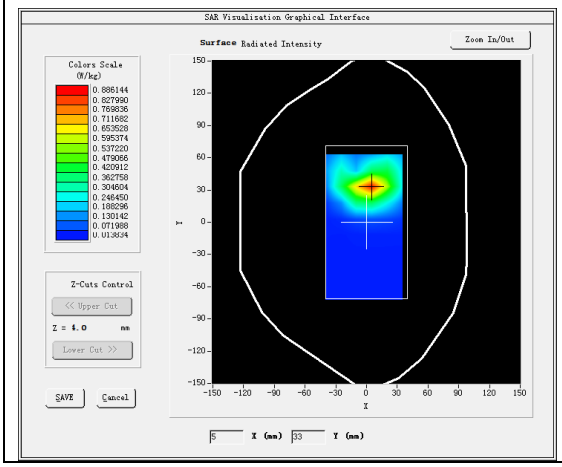
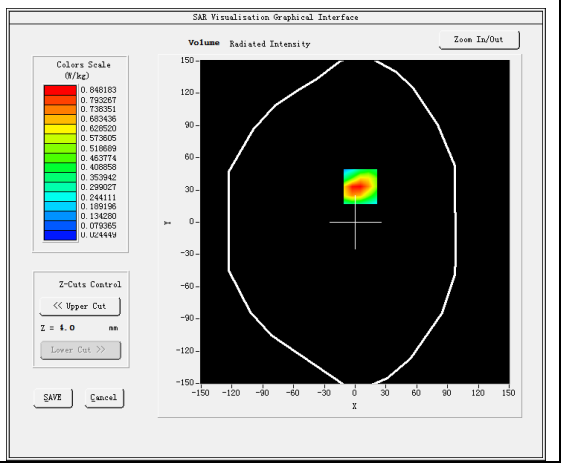
Date of measurement: 23/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 4
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

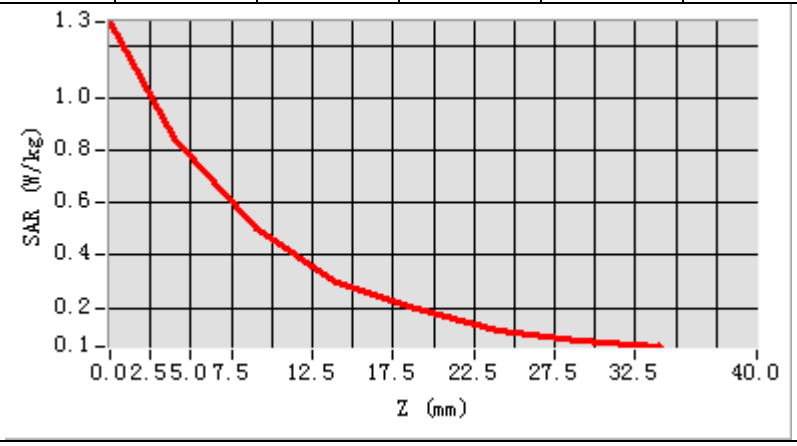
Frequency (MHz)	1732.500000
Relative permittivity (real part)	54.548367
Relative permittivity (imaginary part)	15.108220
Conductivity (S/m)	1.454166
Variation (%)	-4.590000

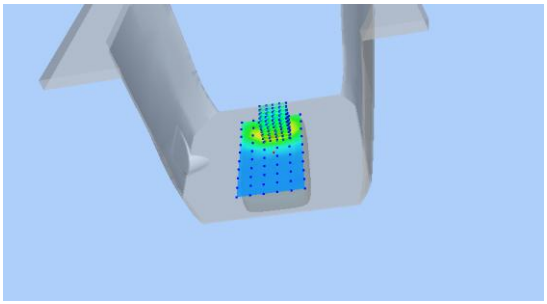
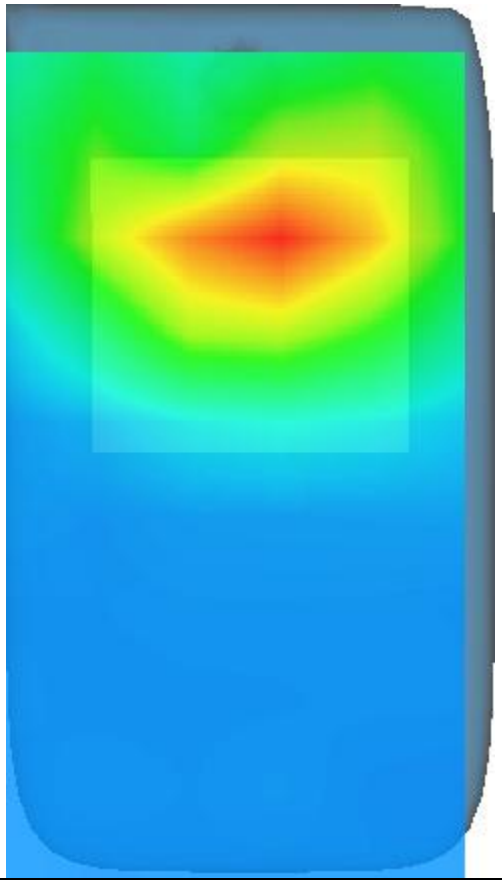
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=33.00
SAR Peak: 1.34 W/kg

SAR 10g (W/Kg)	0.433603
SAR 1g (W/Kg)	0.714096

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.2893	0.8482	0.5027	0.2944	0.1941	0.1156	0.0764



3D screen shot	Hot spot position
	

MEASUREMENT 3

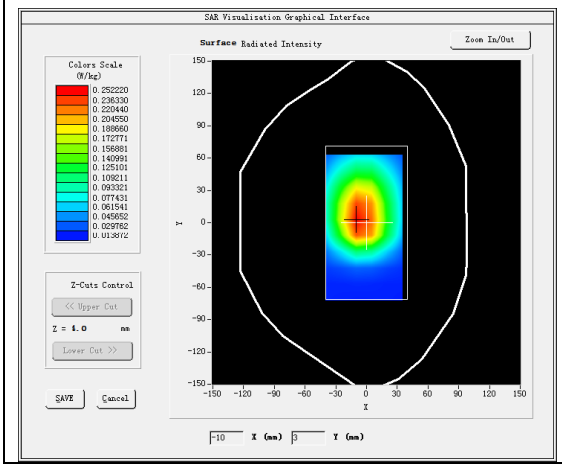
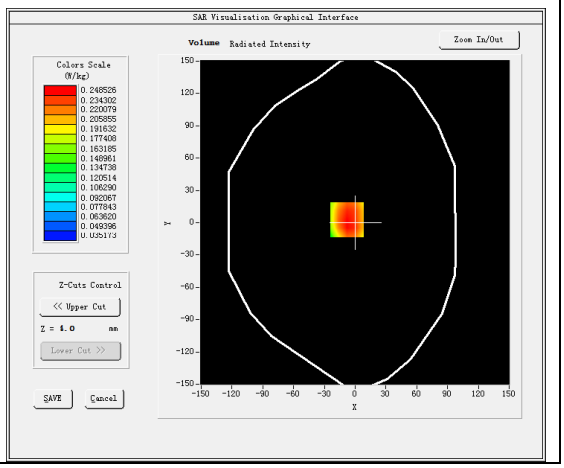
Date of measurement: 22/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 5
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

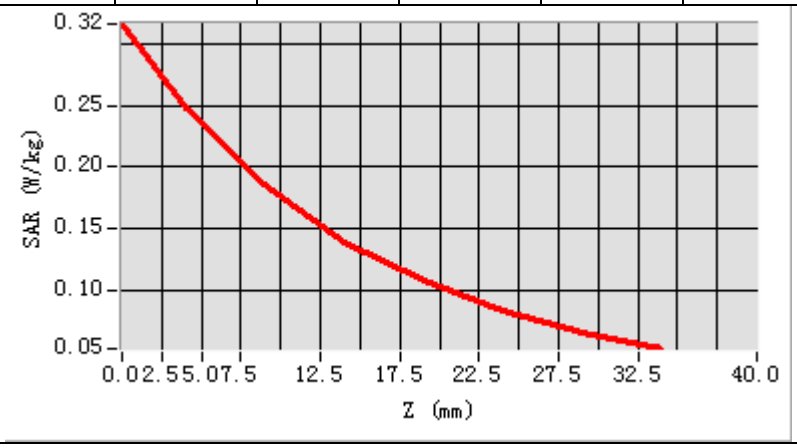
Frequency (MHz)	836.500000
Relative permittivity (real part)	54.643501
Relative permittivity (imaginary part)	21.107000
Conductivity (S/m)	0.980889
Variation (%)	-2.350000

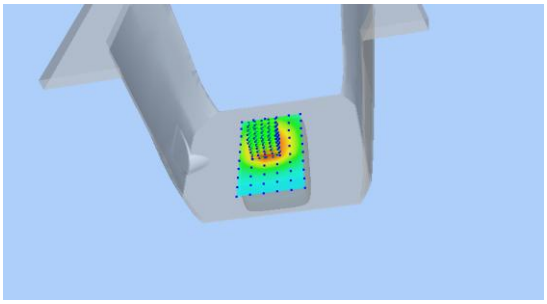
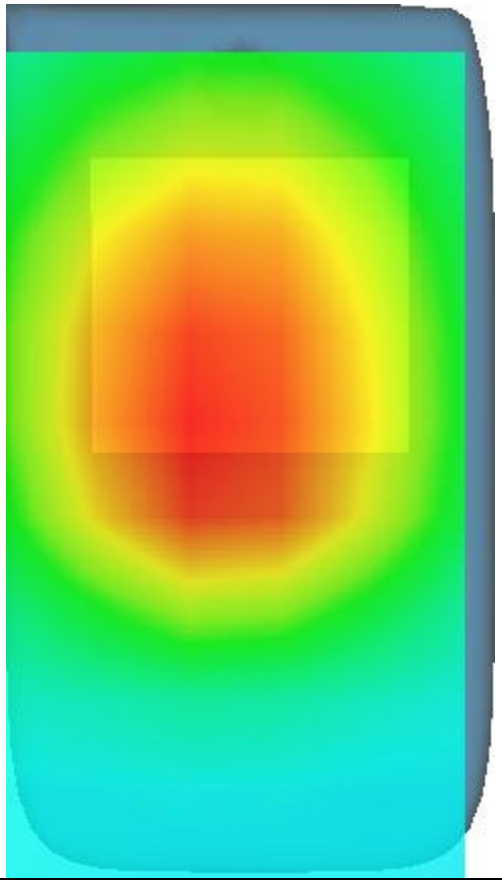
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-8.00, Y=3.00
SAR Peak: 0.33 W/kg

SAR 10g (W/Kg)	0.173800
SAR 1g (W/Kg)	0.242280

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.3168	0.2485	0.1853	0.1389	0.1075	0.0827	0.0654



3D screen shot	Hot spot position
	

MEASUREMENT 4

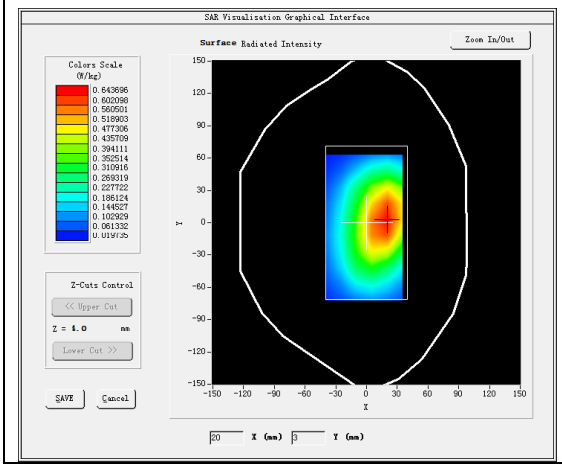
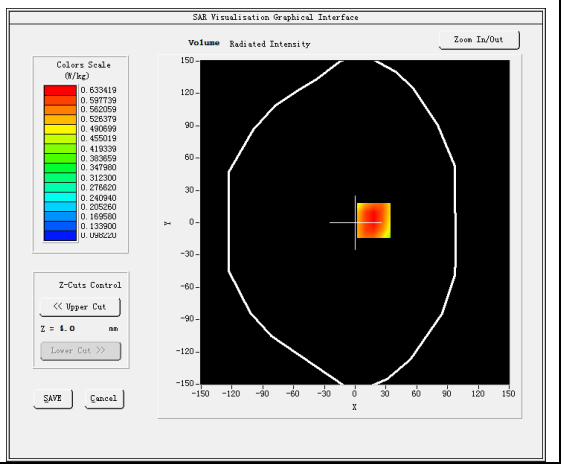
Date of measurement: 21/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 12
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

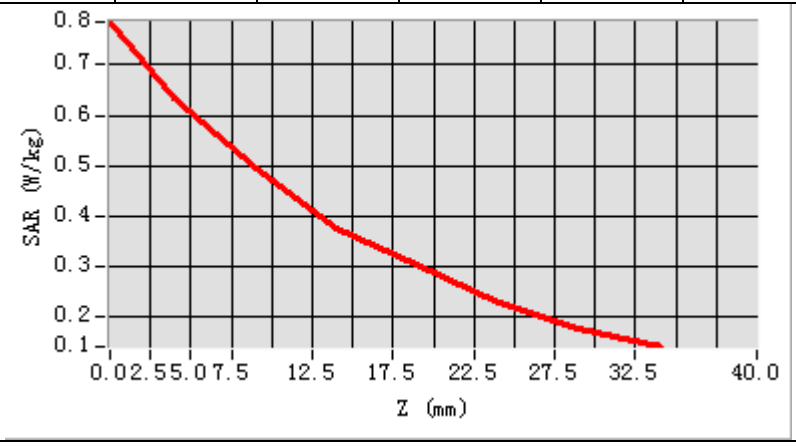
Frequency (MHz)	707.500000
Relative permittivity (real part)	55.731659
Relative permittivity (imaginary part)	23.490850
Conductivity (S/m)	0.923321
Variation (%)	0.200000

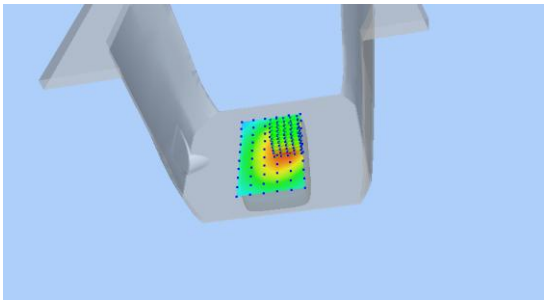
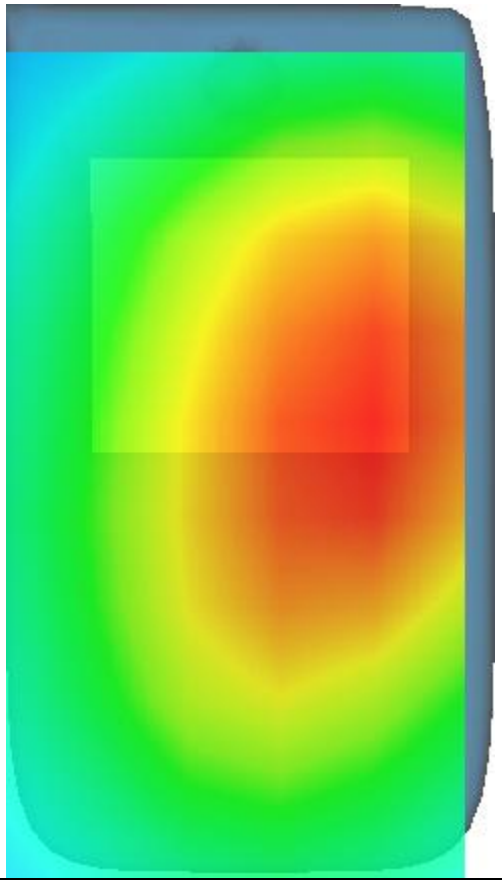
SURFACE SAR	VOLUME SAR
	

Maximum location: X=18.00, Y=2.00
SAR Peak: 0.79 W/kg

SAR 10g (W/Kg)	0.453745
SAR 1g (W/Kg)	0.614588

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.7855	0.6334	0.4942	0.3743	0.3053	0.2273	0.1785



3D screen shot	Hot spot position
	

MEASUREMENT 5

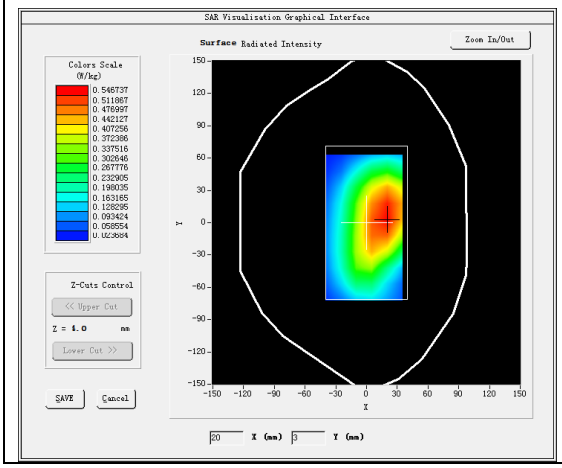
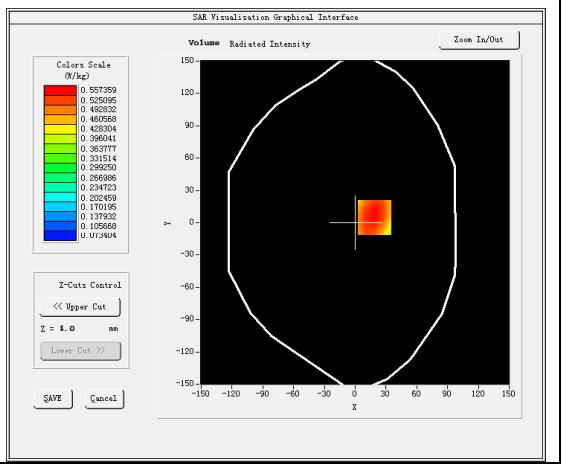
Date of measurement: 21/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 13
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

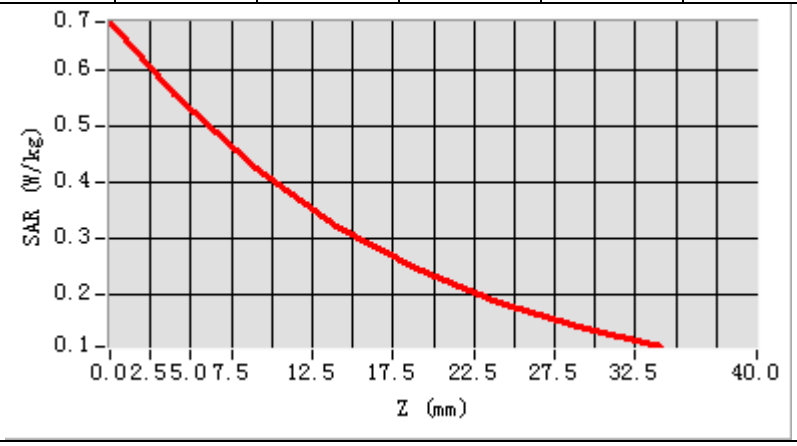
Frequency (MHz)	782.000000
Relative permittivity (real part)	55.201759
Relative permittivity (imaginary part)	23.265301
Conductivity (S/m)	1.010102
Variation (%)	-2.530000

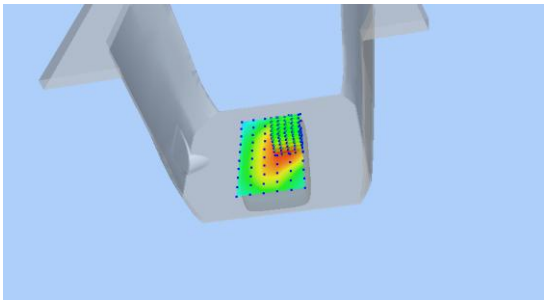
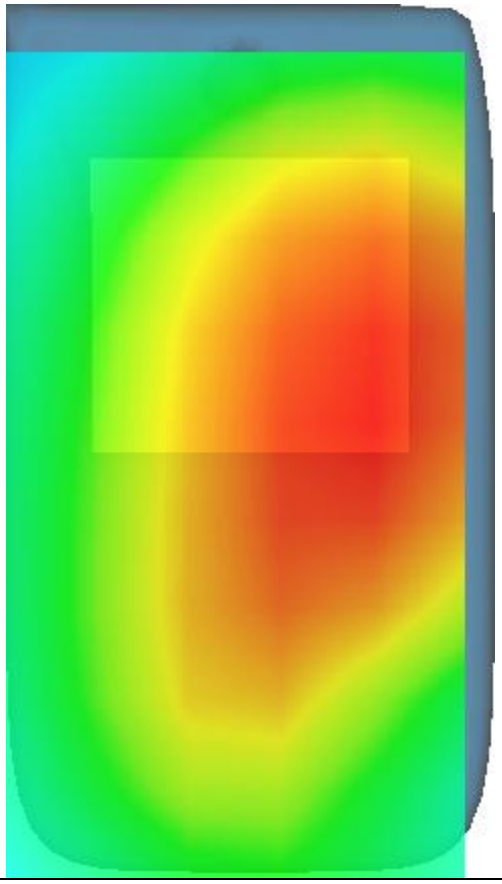
SURFACE SAR	VOLUME SAR
	

Maximum location: X=19.00, Y=5.00
SAR Peak: 0.70 W/kg

SAR 10g (W/Kg)	0.407464
SAR 1g (W/Kg)	0.558078

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6850	0.5574	0.4251	0.3219	0.2439	0.1853	0.1426



3D screen shot	Hot spot position
	

MEASUREMENT 6

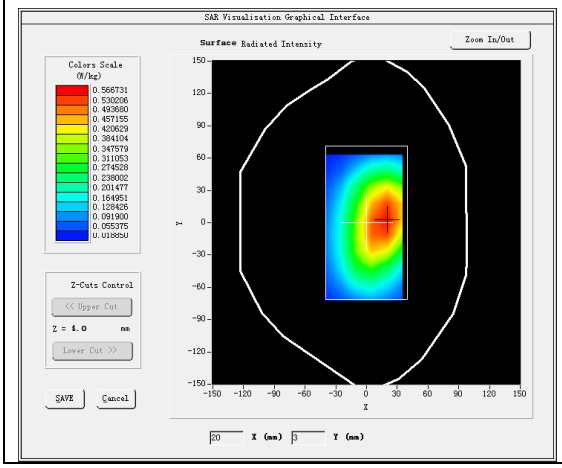
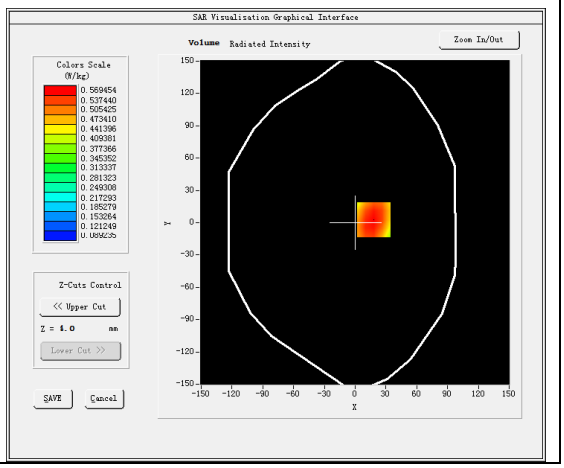
Date of measurement: 21/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 17
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

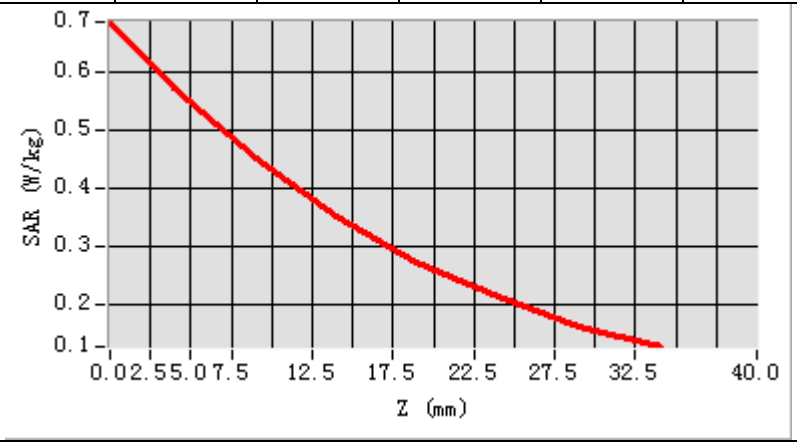
Frequency (MHz)	710.000000
Relative permittivity (real part)	55.753761
Relative permittivity (imaginary part)	23.419500
Conductivity (S/m)	0.923769
Variation (%)	-0.280000

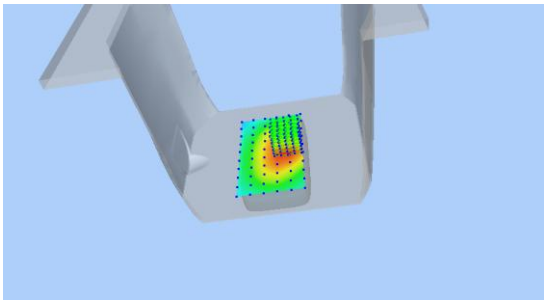
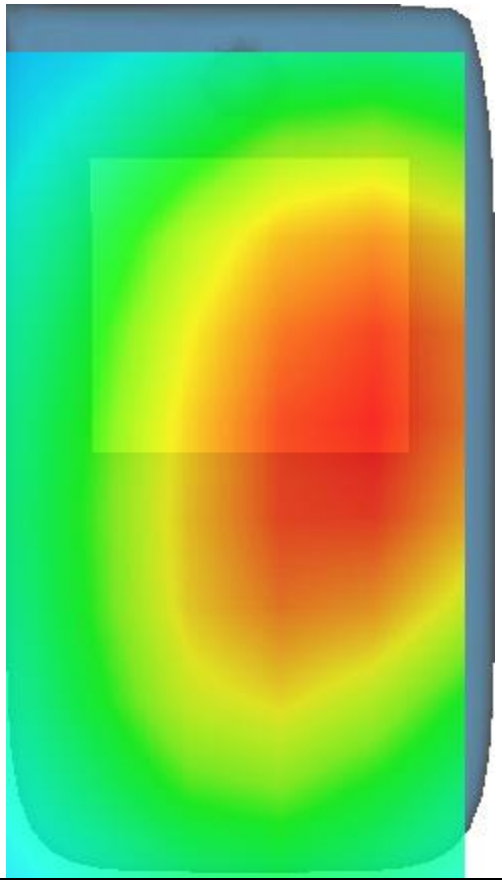
SURFACE SAR	VOLUME SAR
	

Maximum location: X=18.00, Y=3.00
SAR Peak: 0.69 W/kg

SAR 10g (W/Kg)	0.414689
SAR 1g (W/Kg)	0.551764

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6841	0.5695	0.4508	0.3506	0.2733	0.2154	0.1640



3D screen shot	Hot spot position
	

MEASUREMENT 7

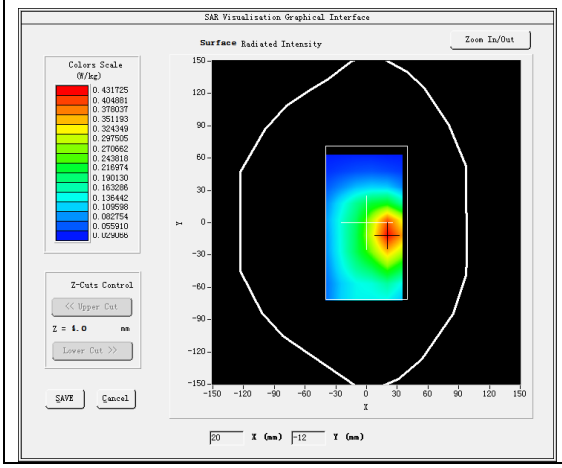
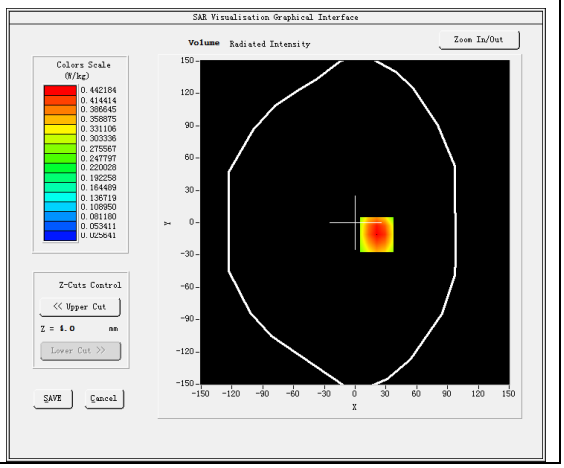
Date of measurement: 23/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 25
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

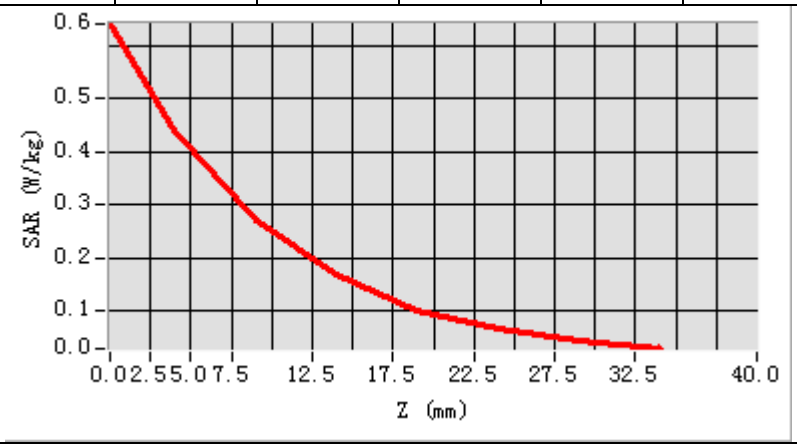
Frequency (MHz)	1882.500000
Relative permittivity (real part)	54.404099
Relative permittivity (imaginary part)	14.498800
Conductivity (S/m)	1.515930
Variation (%)	-1.280000

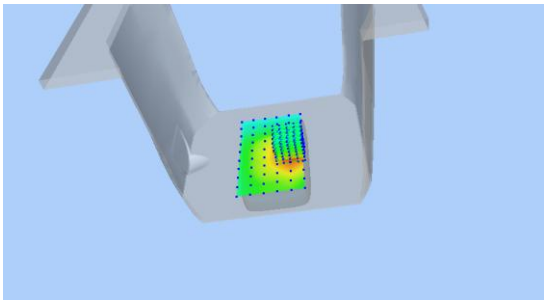
SURFACE SAR	VOLUME SAR
	

Maximum location: X=21.00, Y=-11.00
SAR Peak: 0.65 W/kg

SAR 10g (W/Kg)	0.254962
SAR 1g (W/Kg)	0.424398

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6413	0.4422	0.2700	0.1676	0.1017	0.0655	0.0455



3D screen shot	Hot spot position
	

MEASUREMENT 8

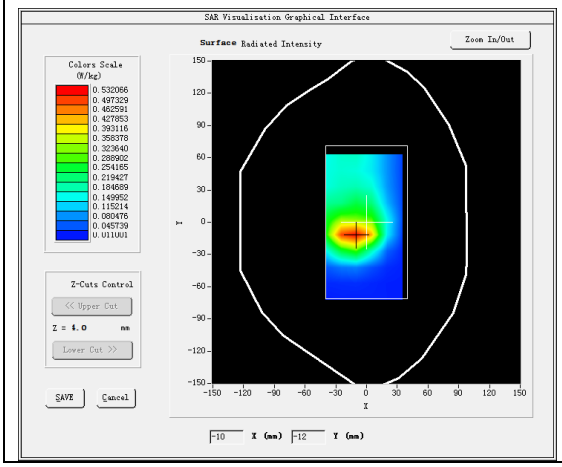
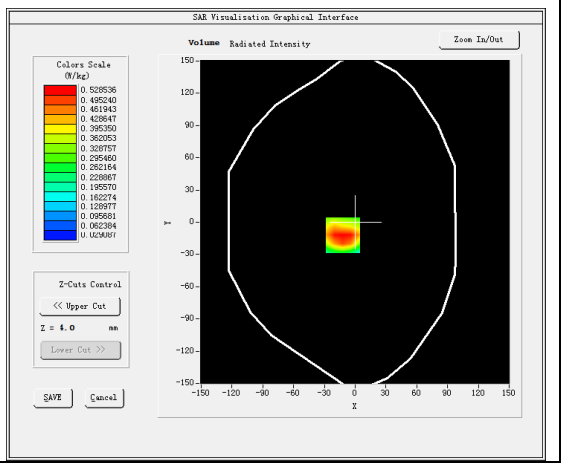
Date of measurement: 22/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 26
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

Frequency (MHz)	836.500000
Relative permittivity (real part)	54.623900
Relative permittivity (imaginary part)	21.135700
Conductivity (S/m)	0.977248
Variation (%)	1.450000

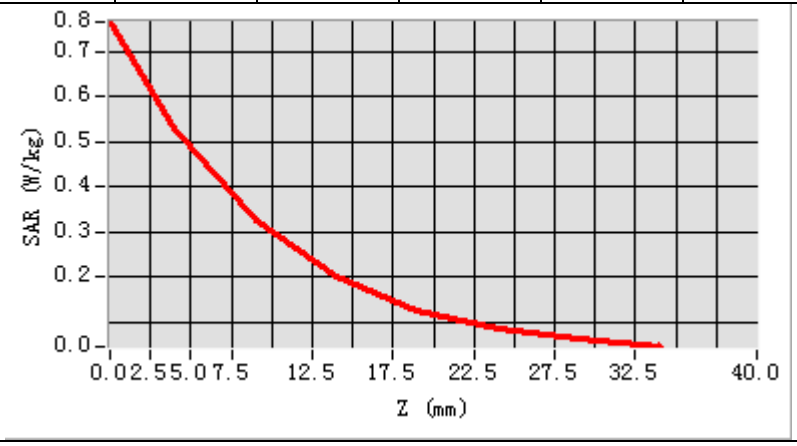
SURFACE SAR	VOLUME SAR
	

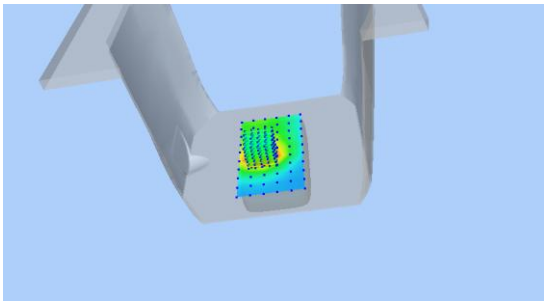
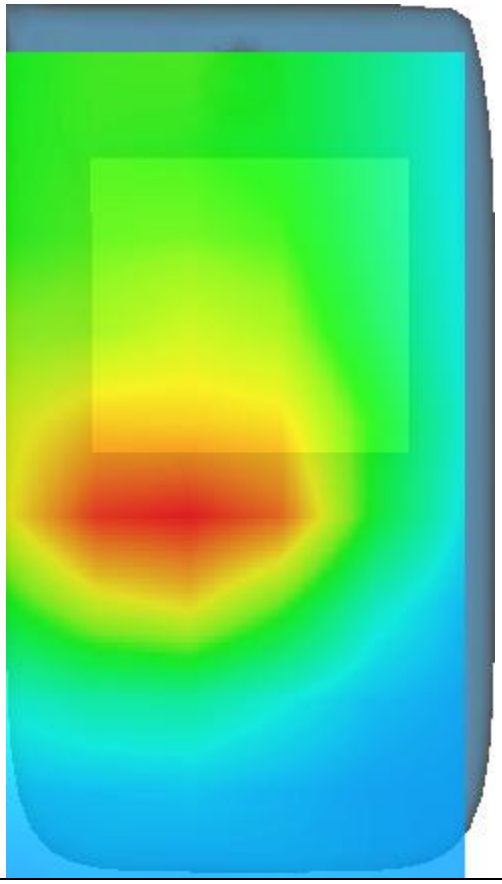
Maximum location: X=-12.00, Y=-12.00

SAR Peak: 0.86 W/kg

SAR 10g (W/Kg)	0.293495
SAR 1g (W/Kg)	0.521962

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.7663	0.5285	0.3236	0.1994	0.1229	0.0830	0.0604



3D screen shot	Hot spot position
	

MEASUREMENT 9

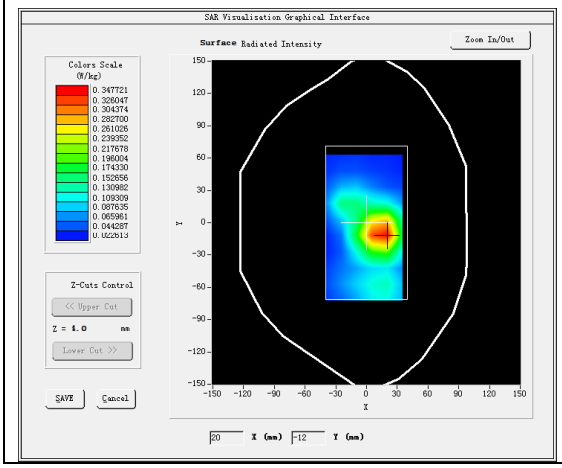
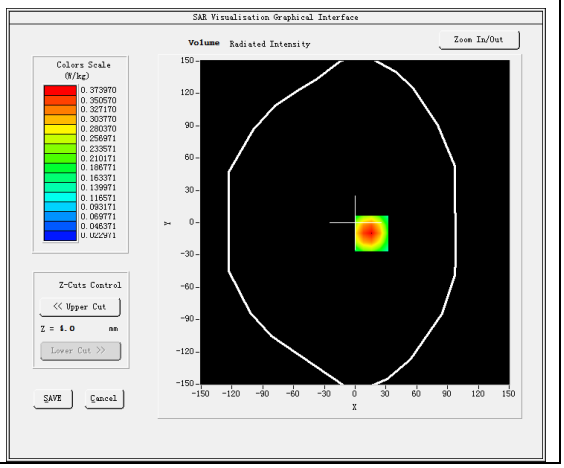
Date of measurement: 7/11/2020

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 41
Channels	Middle
Signal	LTE (Crest factor: 1.6)

B. SAR Measurement Results

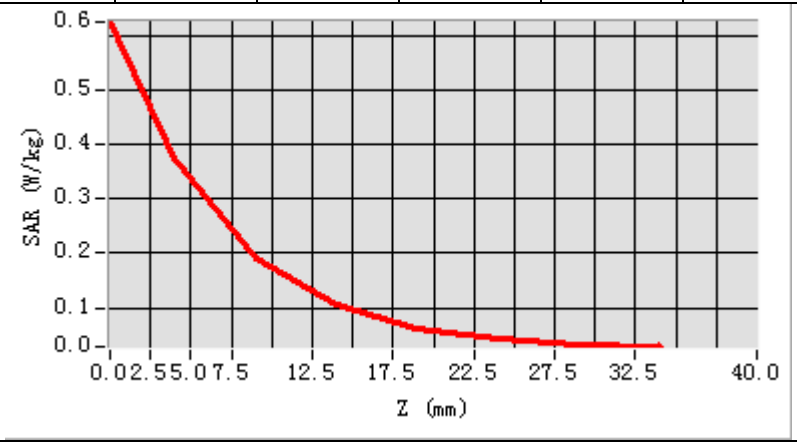
Frequency (MHz)	2593.000000
Relative permittivity (real part)	52.965446
Relative permittivity (imaginary part)	15.341440
Conductivity (S/m)	2.210020
Variation (%)	-0.310000

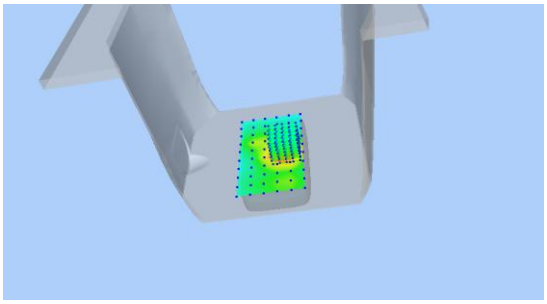
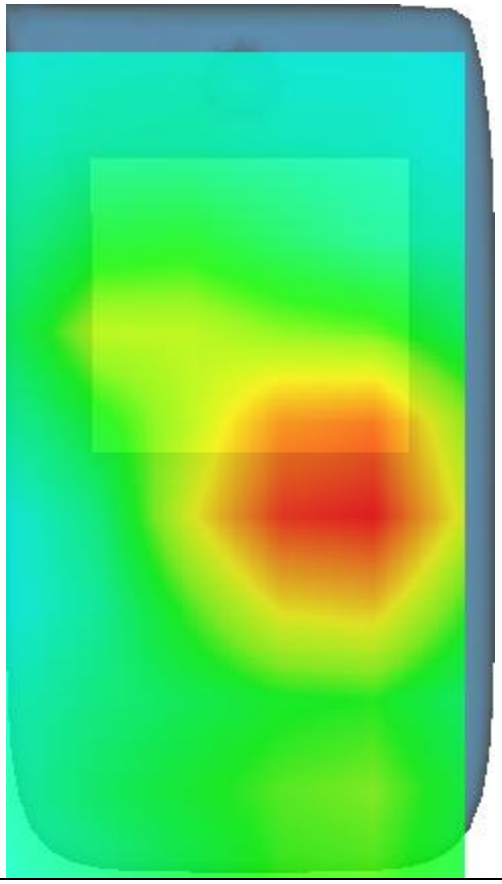
SURFACE SAR	VOLUME SAR
	

Maximum location: X=16.00, Y=-10.00
SAR Peak: 0.62 W/kg

SAR 10g (W/Kg)	0.192241
SAR 1g (W/Kg)	0.365262

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6257	0.3740	0.1900	0.1061	0.0619	0.0418	0.0316



3D screen shot	Hot spot position
	

MEASUREMENT 10

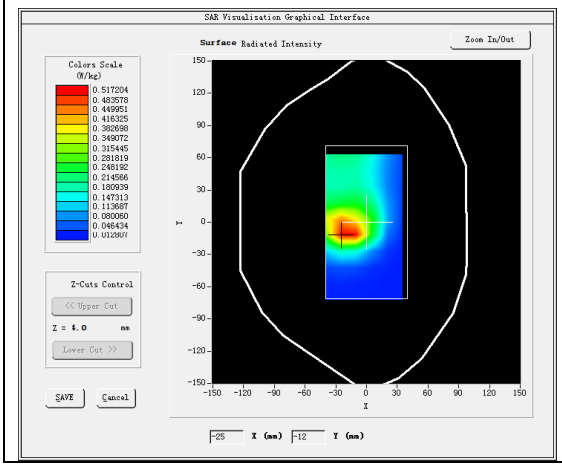
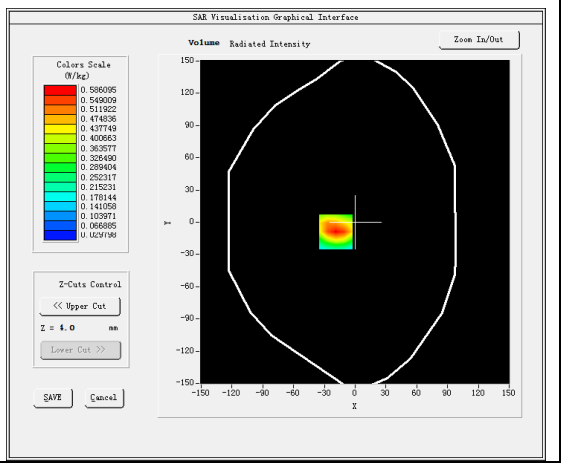
Date of measurement: 23/10/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 66
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

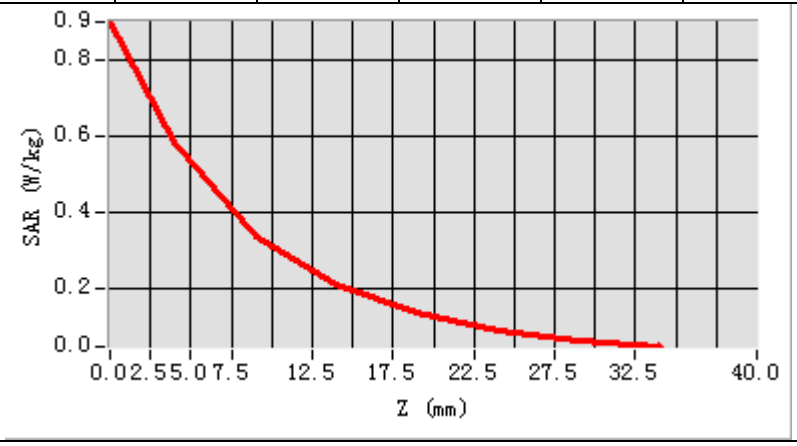
Frequency (MHz)	1745.000000
Relative permittivity (real part)	54.476265
Relative permittivity (imaginary part)	15.097170
Conductivity (S/m)	1.463587
Variation (%)	-3.020000

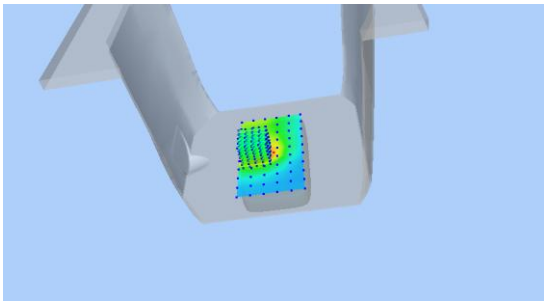
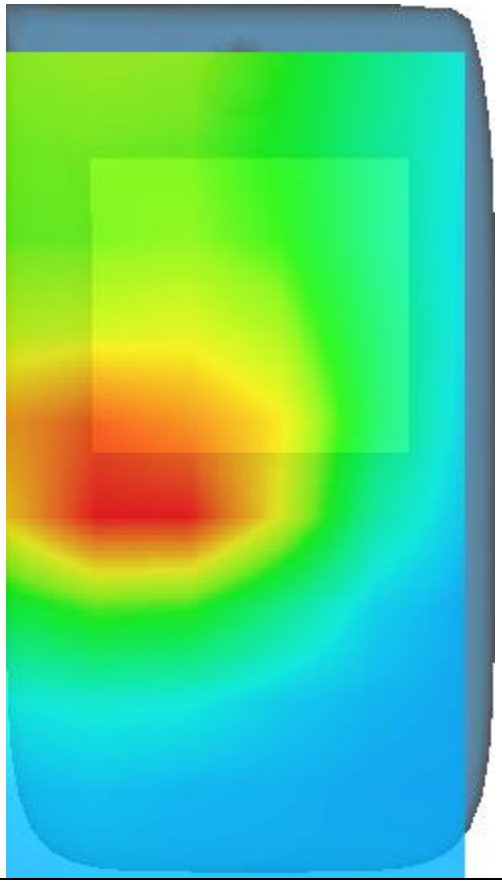
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-19.00, Y=-9.00
SAR Peak: 0.90 W/kg

SAR 10g (W/Kg)	0.315242
SAR 1g (W/Kg)	0.556558

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.9030	0.5861	0.3395	0.2098	0.1335	0.0884	0.0626



3D screen shot	Hot spot position
	

MEASUREMENT 11

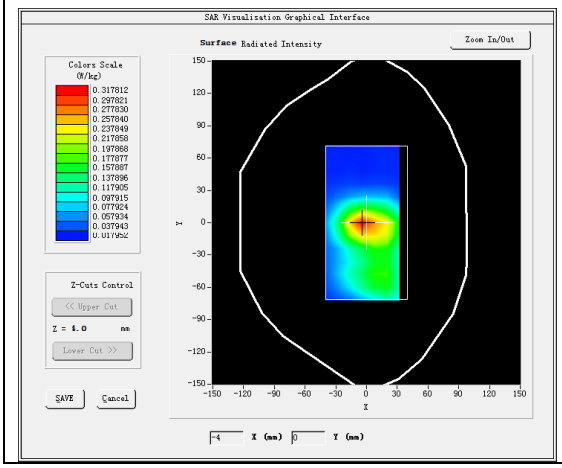
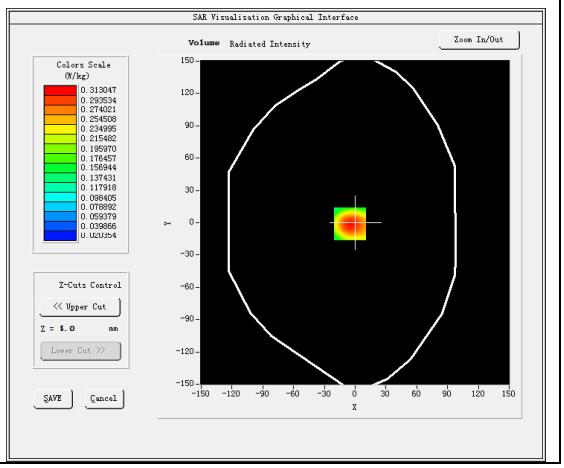
Date of measurement: 24/10/2020

A. Experimental conditions.

Area Scan	dx=12mm dy=12mm, h= 5.00 mm
ZoomScan	7x7x7,dx=5mm dy=5mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11 n(HT20) ISM
Channels	Middle
Signal	IEEE802.11b (Crest factor: 1.0)

B. SAR Measurement Results

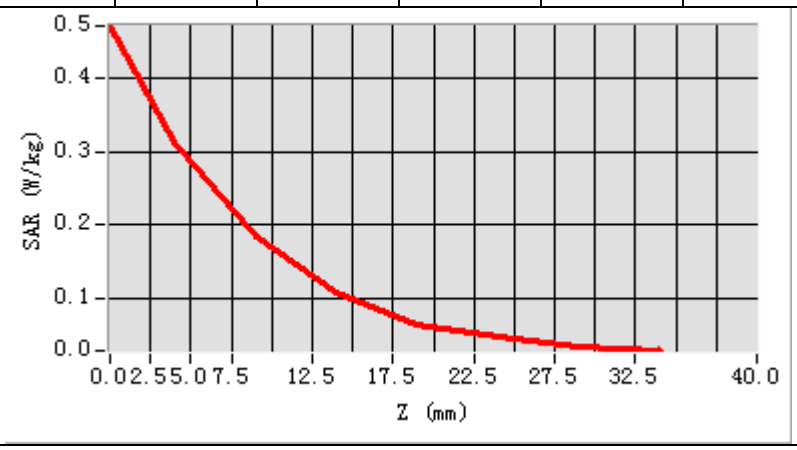
Frequency (MHz)	2437.000000
Relative permittivity (real part)	51.783700
Relative permittivity (imaginary part)	13.874400
Conductivity (S/m)	1.878440
Variation (%)	-0.680000

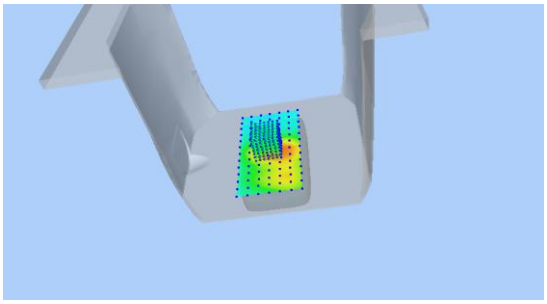
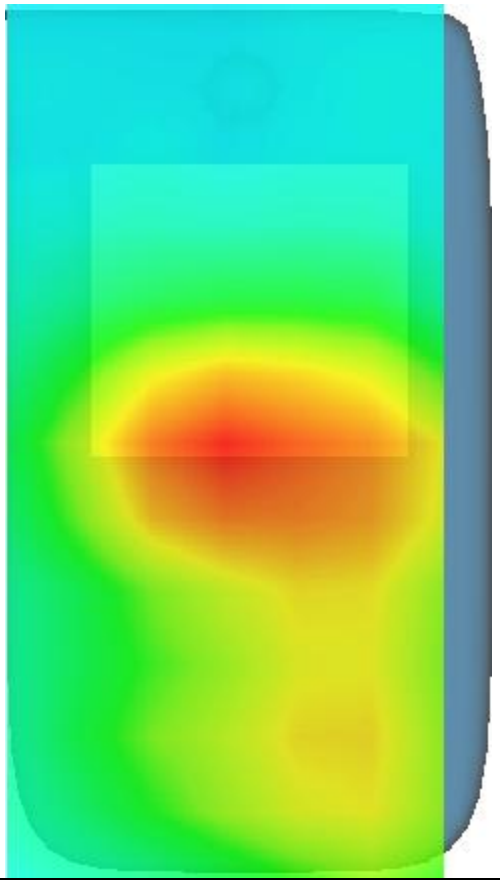
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-5.00, Y=-1.00
SAR Peak: 0.47 W/kg

SAR 10g (W/Kg)	0.169728
SAR 1g (W/Kg)	0.295420

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.4718	0.3130	0.1838	0.1077	0.0655	0.0477	0.0339



3D screen shot	Hot spot position
	

MEASUREMENT 12

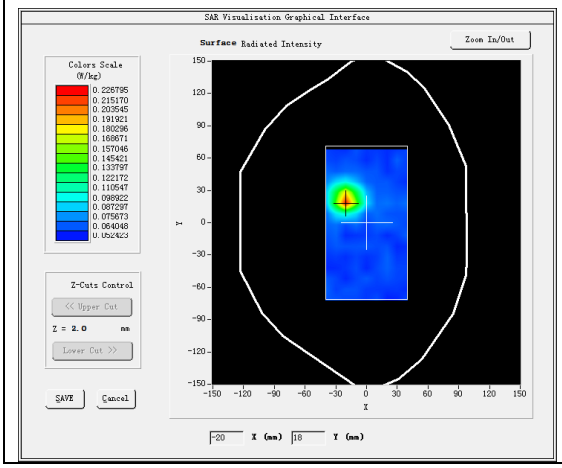
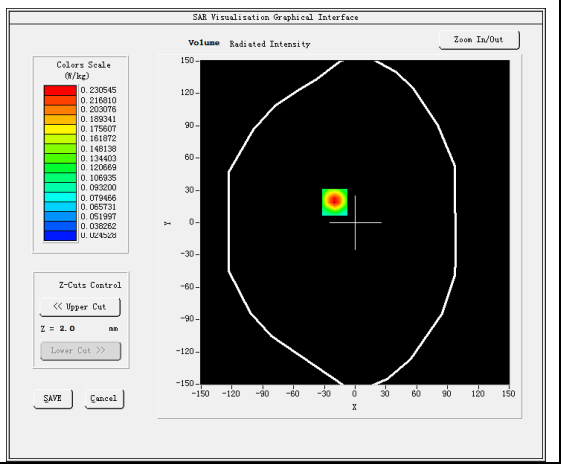
Date of measurement: 24/10/2020

A. Experimental conditions.

Area Scan	dx=10mm dy=10mm, h= 2.00 mm
ZoomScan	7x7x12,dx=4mm dy=4mm dz=2mm
Phantom	Validation plane
Device Position	Body
Band	IEEE 802.11 n(HT20) U-NII
Channels	Middle
Signal	IEEE802.11a (Crest factor: 1.0)

B. SAR Measurement Results

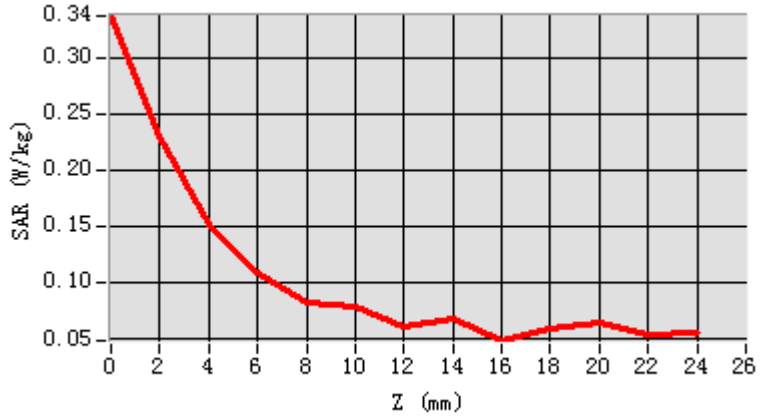
Frequency (MHz)	5785.000000
Relative permittivity (real part)	48.478702
Relative permittivity (imaginary part)	18.656766
Conductivity (S/m)	5.996077
Variation (%)	3.060000

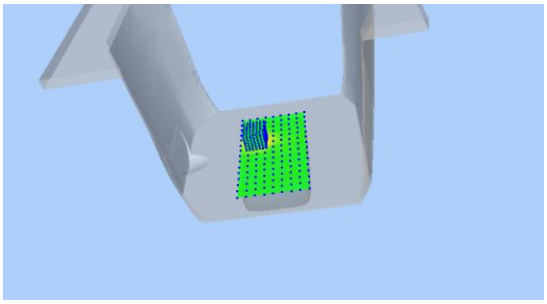
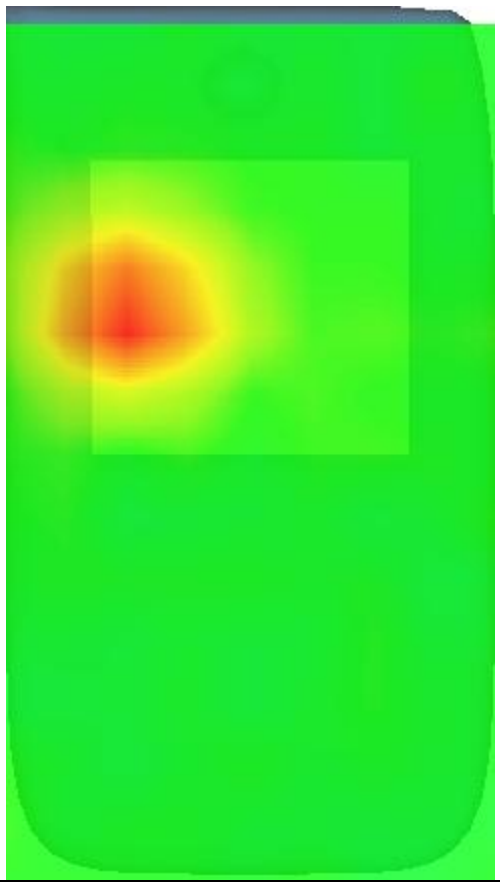
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-20.00, Y=19.00
SAR Peak: 0.36 W/kg

SAR 10g (W/Kg)	0.092950
SAR 1g (W/Kg)	0.158177

Z (mm)	0.00	2.00	4.00	6.00	8.00	10.00	12.00	14.00	16.00	18.00	20.00	22.00
SAR (W/Kg)	0.3372	0.2305	0.1516	0.1090	0.0829	0.0781	0.0614	0.0683	0.0487	0.0597	0.0645	0.0545



3D screen shot	Hot spot position
	

MEASUREMENT 13

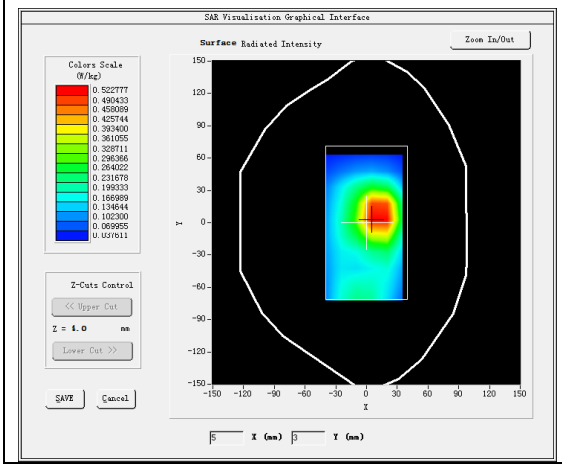
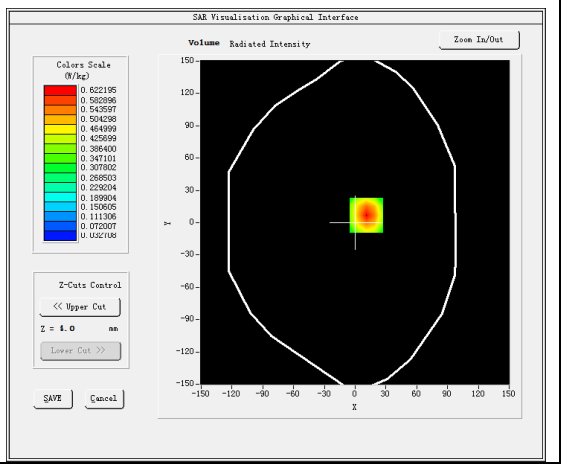
Date of measurement: 5/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 2
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

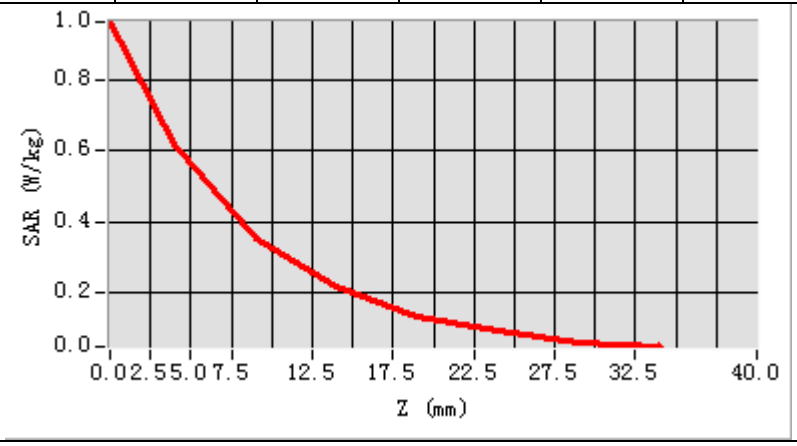
Frequency (MHz)	1880.000000
Relative permittivity (real part)	54.809655
Relative permittivity (imaginary part)	14.498893
Conductivity (S/m)	1.514329
Variation (%)	0.200000

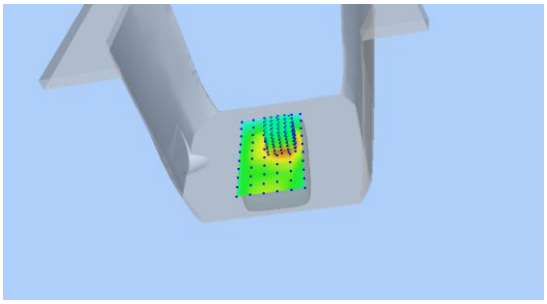
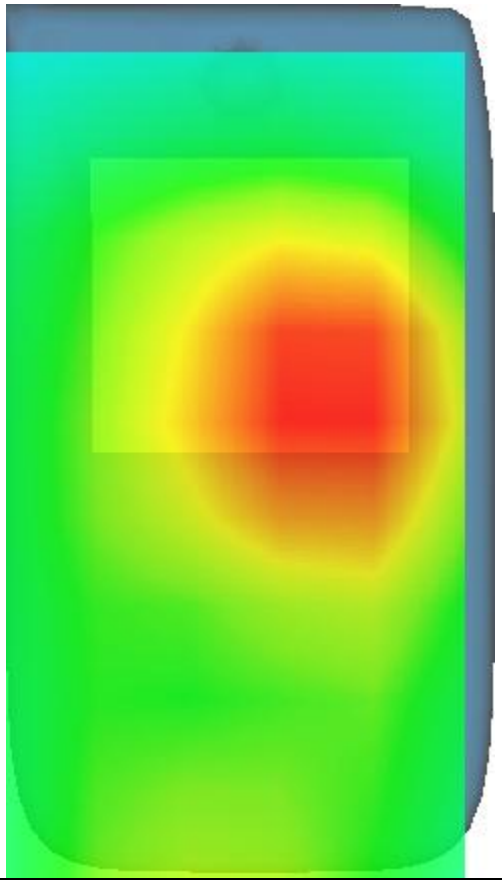
SURFACE SAR	VOLUME SAR
	

Maximum location: X=11.00, Y=7.00
SAR Peak: 0.96 W/kg

SAR 10g (W/Kg)	0.333171
SAR 1g (W/Kg)	0.588215

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.9677	0.6222	0.3543	0.2151	0.1305	0.0862	0.0567



3D screen shot	Hot spot position
	

MEASUREMENT 14

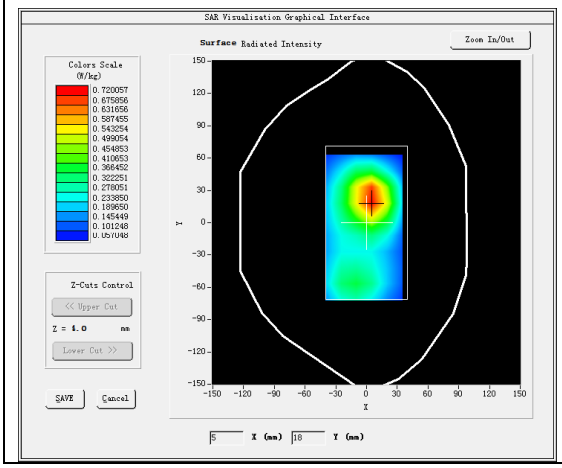
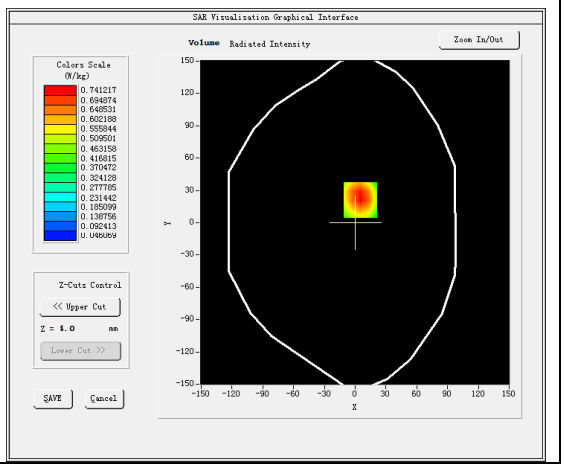
Date of measurement: 4/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 4
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

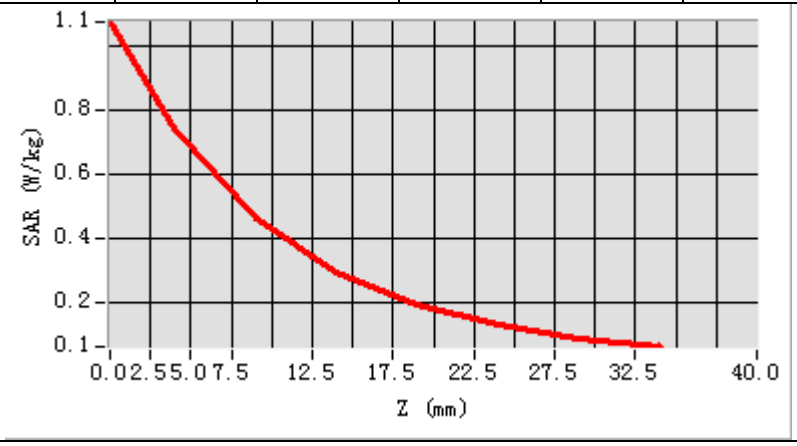
Frequency (MHz)	1732.500000
Relative permittivity (real part)	54.926921
Relative permittivity (imaginary part)	15.107563
Conductivity (S/m)	1.453683
Variation (%)	-0.780000

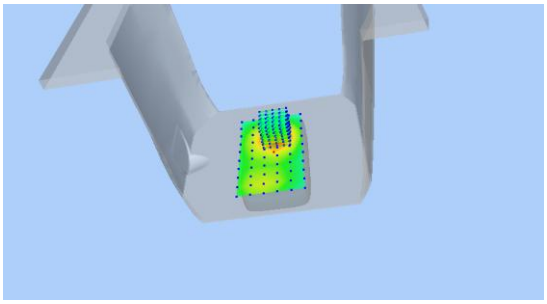
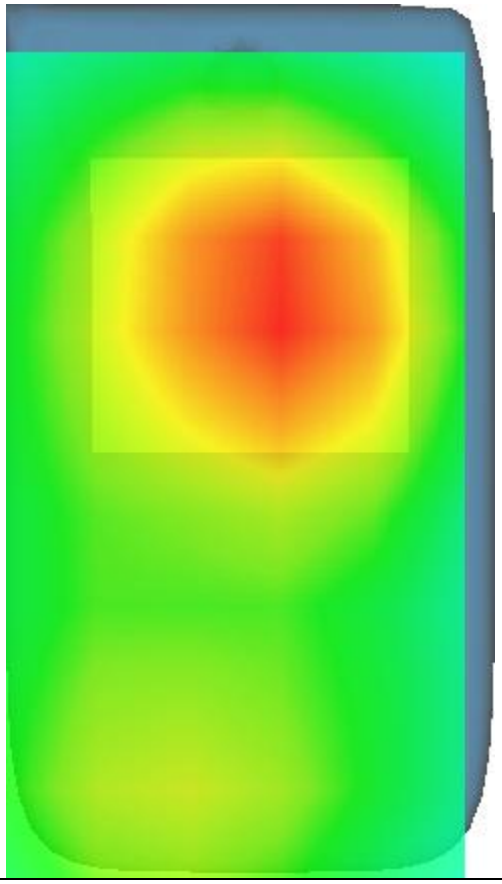
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=21.00
SAR Peak: 1.10 W/kg

SAR 10g (W/Kg)	0.429343
SAR 1g (W/Kg)	0.716109

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.0758	0.7412	0.4636	0.2943	0.1906	0.1275	0.0848



3D screen shot	Hot spot position
	

MEASUREMENT 15

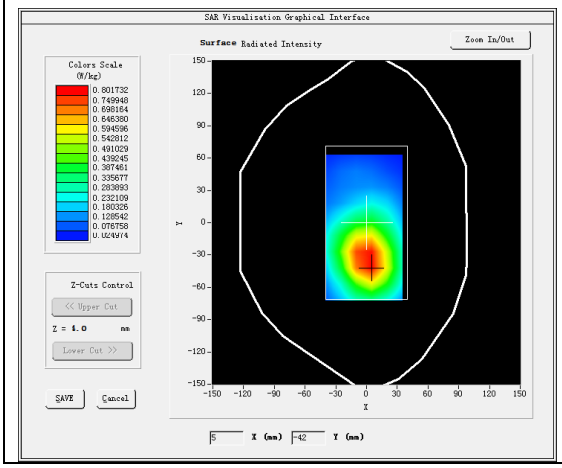
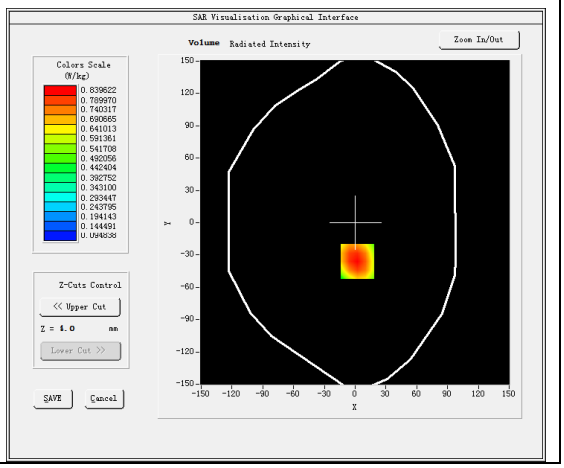
Date of measurement: 4/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 5
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

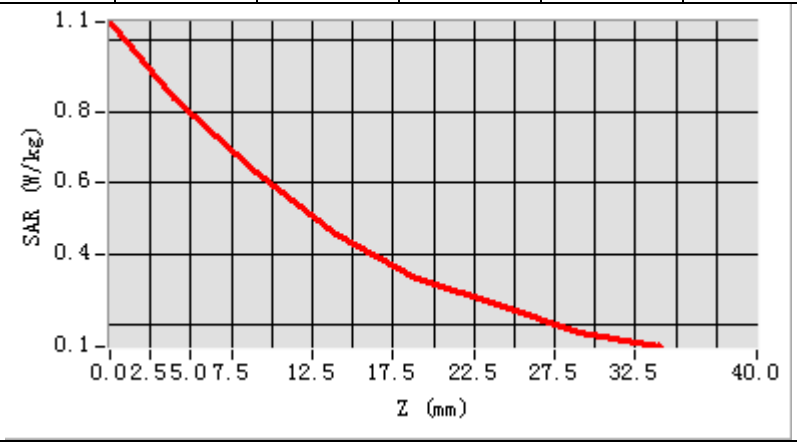
Frequency (MHz)	836.500000
Relative permittivity (real part)	55.200593
Relative permittivity (imaginary part)	20.728908
Conductivity (S/m)	0.963318
Variation (%)	-1.020000

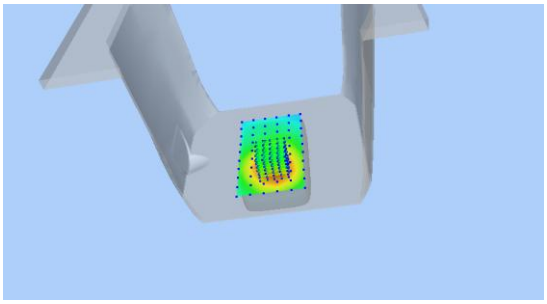
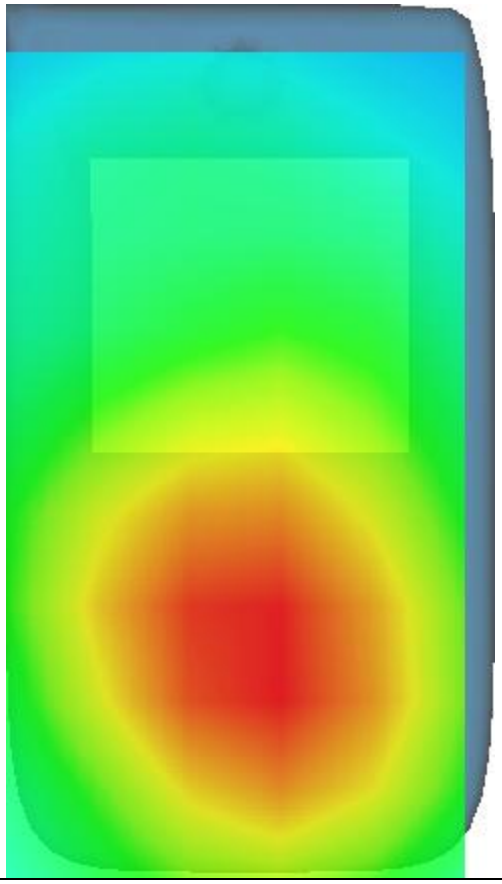
SURFACE SAR	VOLUME SAR
	

Maximum location: X=2.00, Y=-36.00
SAR Peak: 1.07 W/kg

SAR 10g (W/Kg)	0.566364
SAR 1g (W/Kg)	0.665467

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.0525	0.8396	0.6296	0.4528	0.3330	0.2569	0.1800



3D screen shot	Hot spot position
	

MEASUREMENT 16

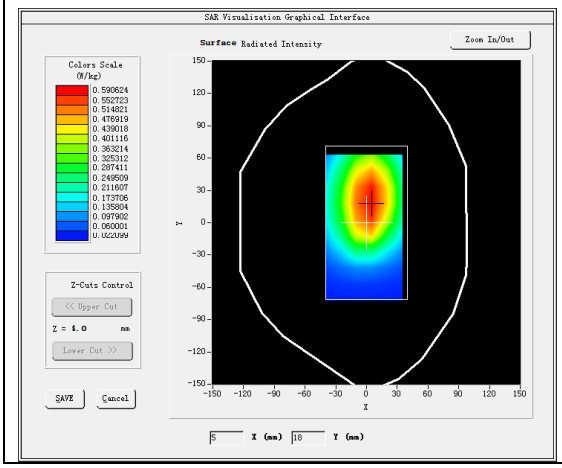
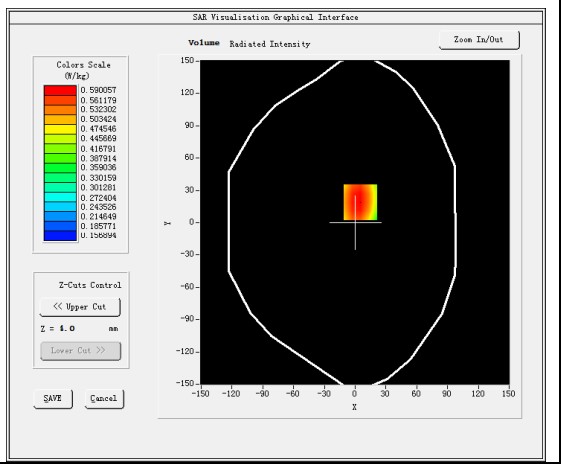
Date of measurement: 3/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 13
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

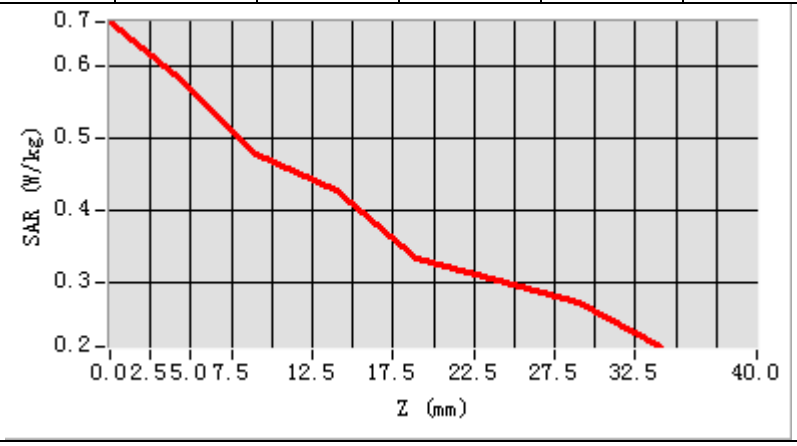
Frequency (MHz)	782.000000
Relative permittivity (real part)	55.136560
Relative permittivity (imaginary part)	23.302800
Conductivity (S/m)	1.012377
Variation (%)	2.630000

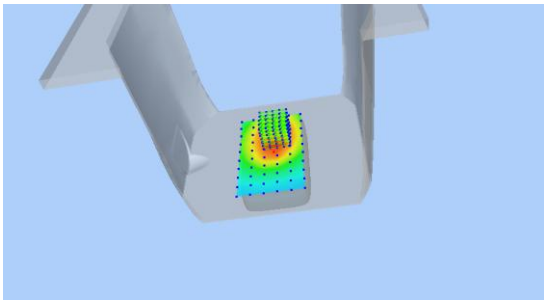
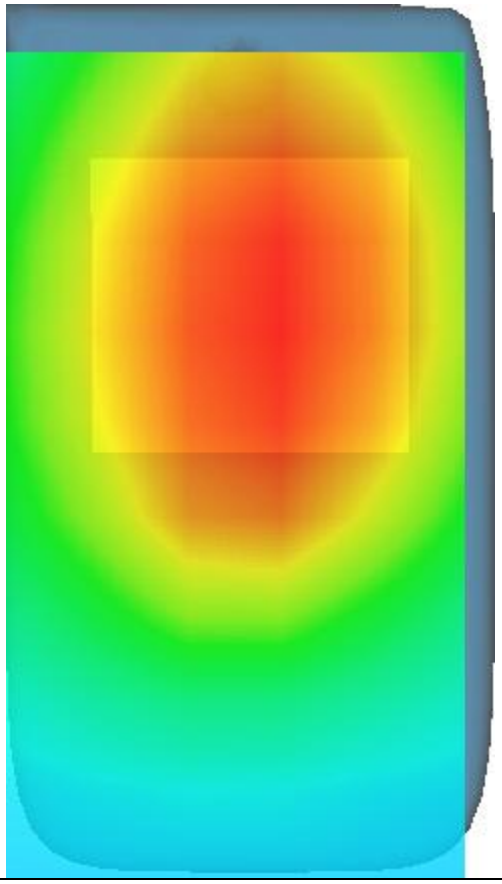
SURFACE SAR	VOLUME SAR
	

Maximum location: X=5.00, Y=19.00
SAR Peak: 0.71 W/kg

SAR 10g (W/Kg)	0.468643
SAR 1g (W/Kg)	0.596873

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.6610	0.5901	0.4784	0.4282	0.3337	0.3019	0.2722



3D screen shot	Hot spot position
	

MEASUREMENT 17

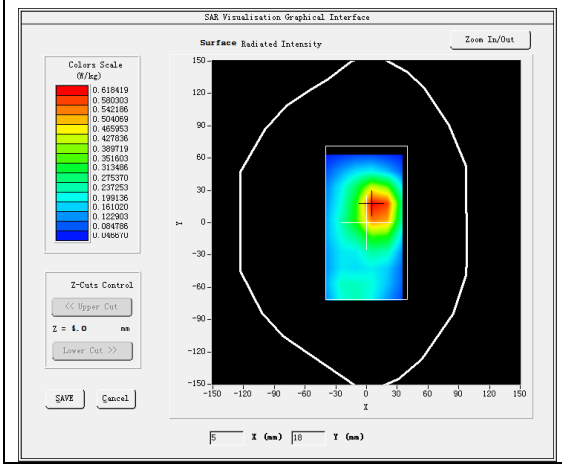
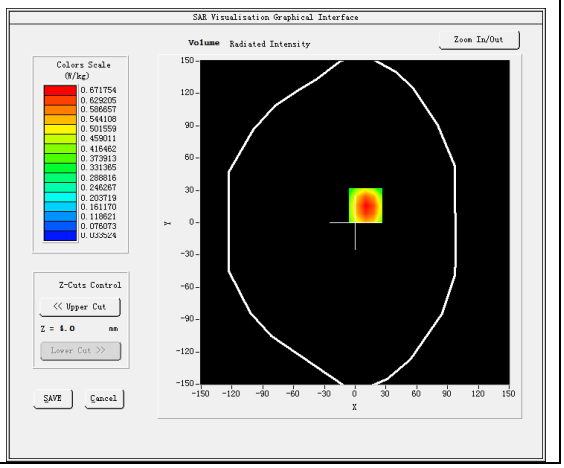
Date of measurement: 5/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 25
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

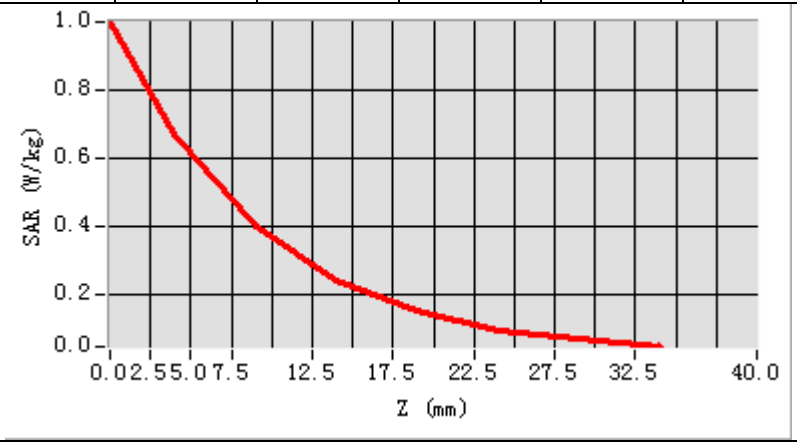
Frequency (MHz)	1882.500000
Relative permittivity (real part)	54.769855
Relative permittivity (imaginary part)	14.479993
Conductivity (S/m)	1.514366
Variation (%)	-0.690000

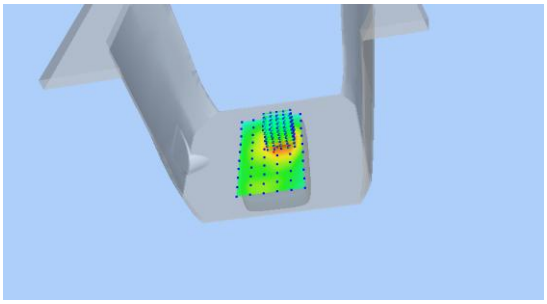
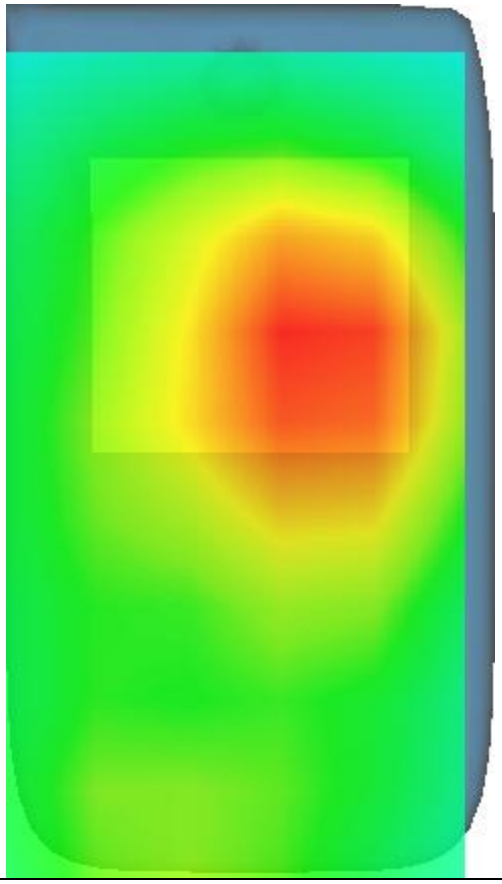
SURFACE SAR	VOLUME SAR
	

Maximum location: X=10.00, Y=16.00
SAR Peak: 1.00 W/kg

SAR 10g (W/Kg)	0.376198
SAR 1g (W/Kg)	0.643838

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.0012	0.6718	0.3999	0.2394	0.1481	0.0933	0.0647



3D screen shot	Hot spot position
	

MEASUREMENT 18

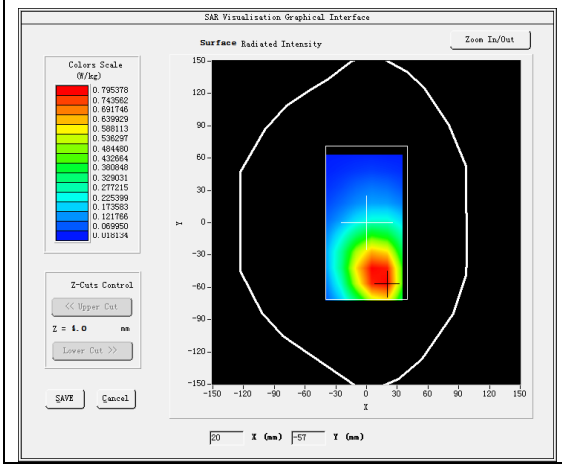
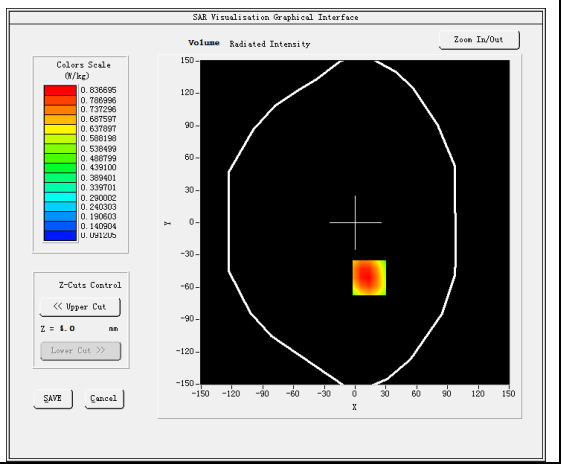
Date of measurement: 4/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 26
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

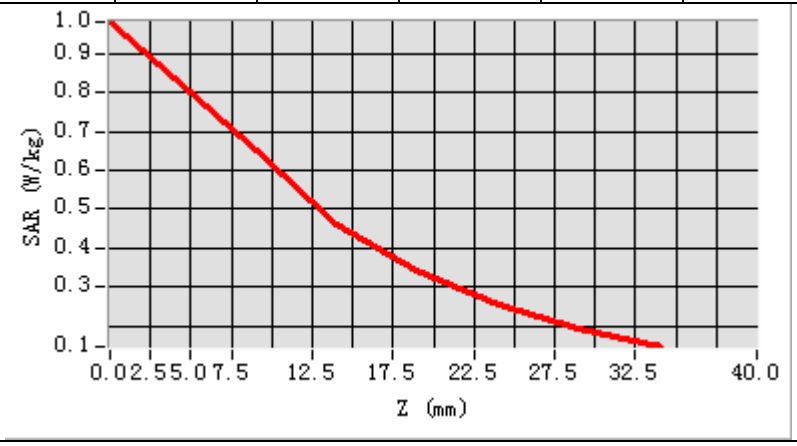
Frequency (MHz)	831.500000
Relative permittivity (real part)	55.264193
Relative permittivity (imaginary part)	20.719608
Conductivity (S/m)	0.957131
Variation (%)	-2.740000

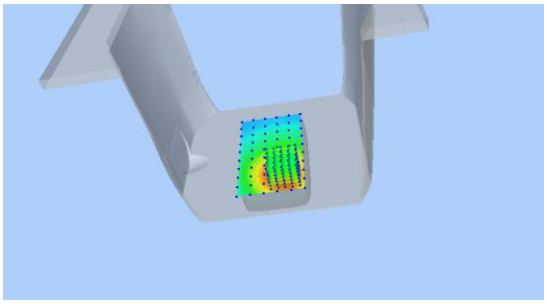
SURFACE SAR	VOLUME SAR
	

Maximum location: X=14.00, Y=-51.00
SAR Peak: 1.05 W/kg

SAR 10g (W/Kg)	0.573807
SAR 1g (W/Kg)	0.640188

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.9828	0.8367	0.6509	0.4598	0.3422	0.2548	0.1930



3D screen shot	Hot spot position
	

MEASUREMENT 19

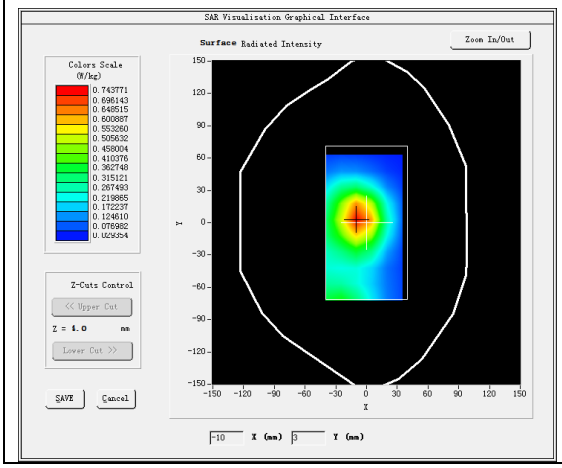
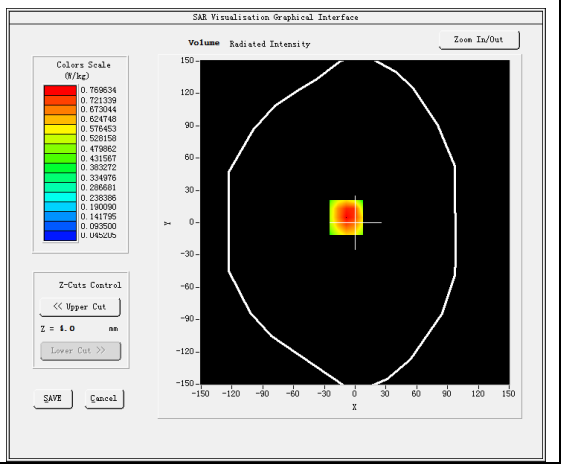
Date of measurement: 4/12/2020

A. Experimental conditions.

Area Scan	dx=15mm dy=15mm, h= 5.00 mm
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm
Phantom	Validation plane
Device Position	Body
Band	LTE band 66
Channels	Middle
Signal	LTE (Crest factor: 1.0)

B. SAR Measurement Results

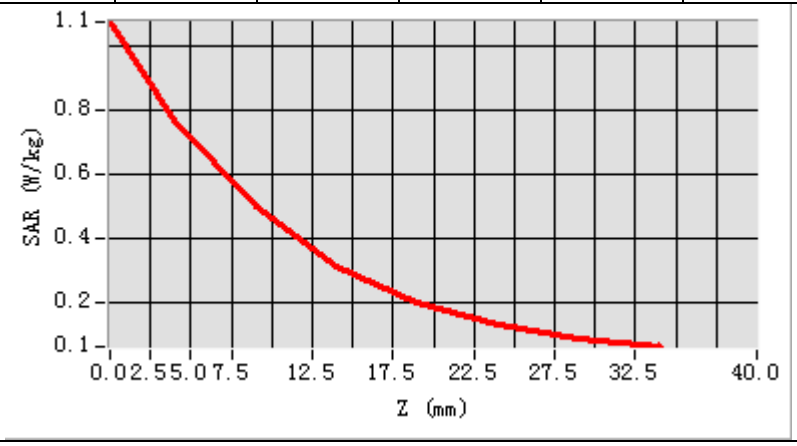
Frequency (MHz)	1745.000000
Relative permittivity (real part)	54.842021
Relative permittivity (imaginary part)	15.078363
Conductivity (S/m)	1.461764
Variation (%)	-0.260000

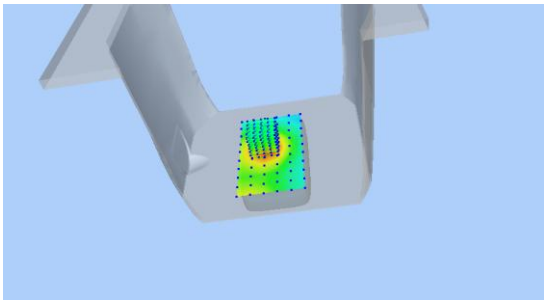
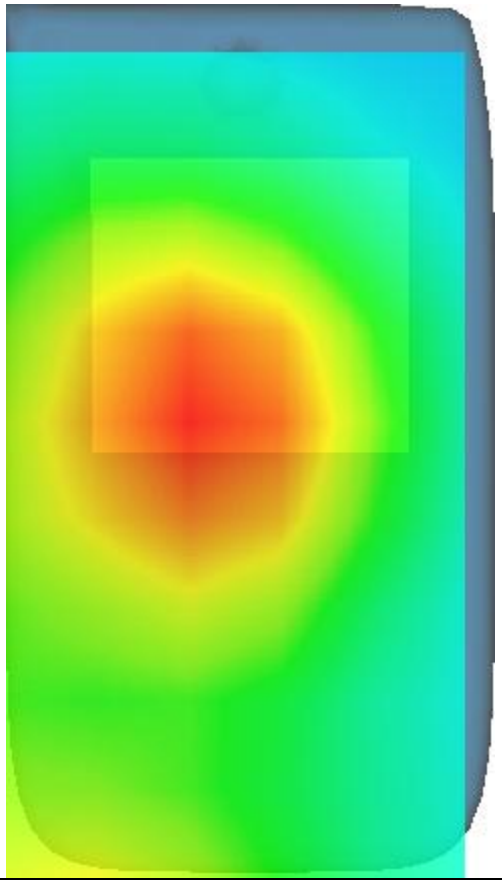
SURFACE SAR	VOLUME SAR
	

Maximum location: X=-9.00, Y=5.00
SAR Peak: 1.19 W/kg

SAR 10g (W/Kg)	0.443489
SAR 1g (W/Kg)	0.742340

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	1.0731	0.7696	0.4961	0.3095	0.1965	0.1320	0.0889



3D screen shot	Hot spot position
	

13. Appendix D. Calibration Certificate

Table of contents
E Field Probe - SN 08/16 EPGO287
750 MHz Dipole - SN 03/15 DIP 0G750-355
835 MHz Dipole - SN 03/15 DIP 0G835-347
1800 MHz Dipole - SN 03/15 DIP 1G800-349
1900 MHz Dipole - SN 03/15 DIP 1G900-350
2450 MHz Dipole - SN 03/15 DIP 2G450-352
2600 MHz Dipole - SN 03/15 DIP 2G600-356
5000-6000 MHz Dipole - SN 13/14 WGA 33
Extended Calibration Certificate

COMOSAR E-Field Probe Calibration Report

Ref : ACR.260.1.18.SATU.A

SHENZHEN NTEK TESTING TECHNOLOGY CO., LTD.

BUILDING E, FENDA SCIENCE PARK, SANWEI COMMUNITY, XIXIANG STREET,

BAO'AN DISTRICT, SHENZHEN GUANGDONG, CHINA

MVG COMOSAR DOSIMETRIC E-FIELD PROBE

SERIAL NO.: SN 08/16 EPGO287

Calibrated at MVG US

2105 Barrett Park Dr. - Kennesaw, GA 30144

Calibration Date: 12/27/2019

Summary:

This document presents the method and results from an accredited COMOSAR Dosimetric E-Field Probe calibration performed in MVG USA using the CALISAR / CALIBAIR test bench, for use with a COMOSAR system only. All calibration results are traceable to national metrology institutions.

COMOSAR E-FIELD PROBE CALIBRATION REPORT

Ref: ACR.260.1.18.SATU.A

	Name	*Function*	*Date*	*Signature*
Prepared by :	Jérôme LUC	Product Manager	12/27/2019	
Checked by :	Jérôme LUC	Product Manager	12/27/2019	
Approved by :	Kim RUTKOWSKI	Quality Manager	12/27/2019	

	Customer Name
Distribution :	SHENZHEN NTEK TESTING TECHNOLOGY CO., LTD.

Issue	*Date*	*Modifications*
A	12/27/2019	Initial release

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1 DEVICE UNDER TEST

Device Under Test	
Device Type	COMOSAR DOSIMETRIC E FIELD PROBE
Manufacturer	MVG
Model	SSE2
Serial Number	SN 08/16 EPGO287
Product Condition (new / used)	Used
Frequency Range of Probe	0.15 GHz-6GHz
Resistance of Three Dipoles at Connector	Dipole 1: R1=0.209 MΩ Dipole 2: R2=0.196 MΩ Dipole 3: R3=0.197 MΩ

A yearly calibration interval is recommended.

2 PRODUCT DESCRIPTION

2.1 GENERAL INFORMATION

MVG's COMOSAR E field Probes are built in accordance to the IEEE 1528, OET 65 Bulletin C and CEI/IEC 62209 standards.

Figure 1 – *MVG COMOSAR Dosimetric E field Dipole*

Probe Length	330 mm
Length of Individual Dipoles	2 mm
Maximum external diameter	8 mm
Probe Tip External Diameter	2.5 mm
Distance between dipoles / probe extremity	1 mm

3 MEASUREMENT METHOD

The IEEE 1528, OET 65 Bulletin C, CENELEC EN50361 and CEI/IEC 62209 standards provide recommended practices for the probe calibrations, including the performance characteristics of interest and methods by which to assess their affect. All calibrations / measurements performed meet the fore mentioned standards.

3.1 LINEARITY

The evaluation of the linearity was done in free space using the waveguide, performing a power sweep to cover the SAR range 0.01W/kg to 100W/kg.

3.2 SENSITIVITY

The sensitivity factors of the three dipoles were determined using a two step calibration method (air and tissue simulating liquid) using waveguides as outlined in the standards.

3.3 LOWER DETECTION LIMIT

The lower detection limit was assessed using the same measurement set up as used for the linearity measurement. The required lower detection limit is 10 mW/kg.

3.4 ISOTROPY

The axial isotropy was evaluated by exposing the probe to a reference wave from a standard dipole with the dipole mounted under the flat phantom in the test configuration suggested for system validations and checks. The probe was rotated along its main axis from 0 - 360 degrees in 15 degree steps. The hemispherical isotropy is determined by inserting the probe in a thin plastic box filled with tissue-equivalent liquid, with the plastic box illuminated with the fields from a half wave dipole. The dipole is rotated about its axis (0°–180°) in 15° increments. At each step the probe is rotated about its axis (0°–360°).

3.5 BOUNDARY EFFECT

The boundary effect is defined as the deviation between the SAR measured data and the expected exponential decay in the liquid when the probe is oriented normal to the interface. To evaluate this effect, the liquid filled flat phantom is exposed to fields from either a reference dipole or waveguide. With the probe normal to the phantom surface, the peak spatial average SAR is measured and compared to the analytical value at the surface.

4 MEASUREMENT UNCERTAINTY

The guidelines outlined in the IEEE 1528, OET 65 Bulletin C, CENELEC EN50361 and CEI/IEC 62209 standards were followed to generate the measurement uncertainty associated with an E-field probe calibration using the waveguide technique. All uncertainties listed below represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2, traceable to the Internationally Accepted Guides to Measurement Uncertainty.

Uncertainty analysis of the probe calibration in waveguide					
ERROR SOURCES	Uncertainty value (%)	Probability Distribution	Divisor	ci	Standard Uncertainty (%)
Incident or forward power	3.00%	Rectangular	$\sqrt{3}$	1	1.732%
Reflected power	3.00%	Rectangular	$\sqrt{3}$	1	1.732%
Liquid conductivity	5.00%	Rectangular	$\sqrt{3}$	1	2.887%
Liquid permittivity	4.00%	Rectangular	$\sqrt{3}$	1	2.309%
Field homogeneity	3.00%	Rectangular	$\sqrt{3}$	1	1.732%
Field probe positioning	5.00%	Rectangular	$\sqrt{3}$	1	2.887%
Field probe linearity	3.00%	Rectangular	$\sqrt{3}$	1	1.732%
Combined standard uncertainty					5.831%
Expanded uncertainty 95 % confidence level k = 2					12.0%

5 CALIBRATION MEASUREMENT RESULTS

Calibration Parameters	
Liquid Temperature	21 °C
Lab Temperature	21 °C
Lab Humidity	45 %

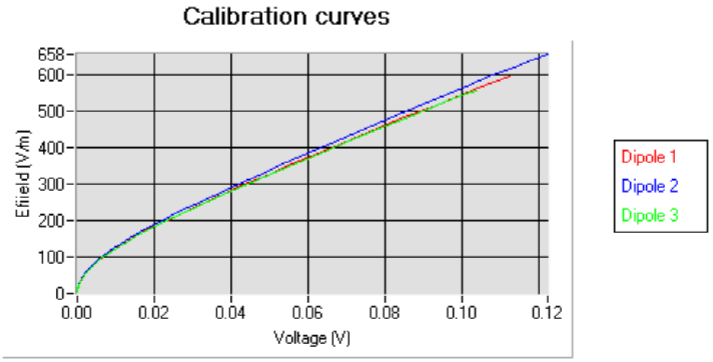
5.1 SENSITIVITY IN AIR

Normx dipole 1 (μV/(V/m)²)	Normy dipole 2 (μV/(V/m)²)	Normz dipole 3 (μV/(V/m)²)
0.66	0.75	0.58

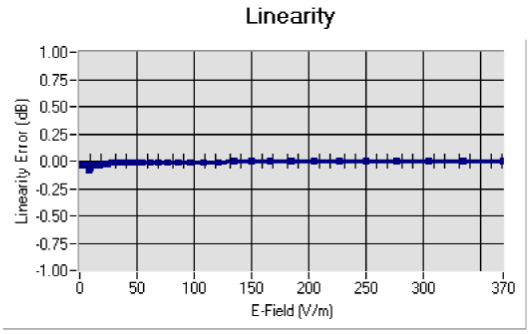
DCP dipole 1 (mV)	DCP dipole 2 (mV)	DCP dipole 3 (mV)
93	93	98

Calibration curves ei=f(V) (i=1,2,3) allow to obtain H-field value using the formula:

$$E = \sqrt{E_1^{\,2} + E_2^{\,2} + E_3^{\,2}}$$



5.2 LINEARITY



Linearity:+/-1.89% (+/-0.08dB)

5.3 SENSITIVITY IN LIQUID

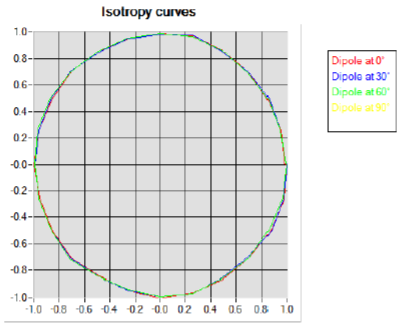
Liquid	Frequency (MHz +/- 100MHz)	Permittivity	Epsilon (S/m)	ConvF
HL750	750	40.03	0.93	1.45
BL750	750	56.83	1.00	1.49
HL850	835	42.19	0.90	1.50
BL850	835	54.67	1.01	1.56
HL900	900	42.08	1.01	1.51
HL1800	1800	41.68	1.46	1.71
BL1800	1800	53.86	1.46	1.77
HL1900	1900	38.45	1.45	2.03
BL1900	1900	53.32	1.56	2.07
HL2000	2000	38.26	1.38	1.76
HL2450	2450	37.50	1.80	2.00
BL2450	2450	53.22	1.89	2.08
HL2600	2600	39.80	1.99	2.12
BL2600	2600	52.52	2.23	2.19
HL5200	5200	35.64	4.67	2.55
BL5200	5200	48.64	5.51	2.62
HL5400	5400	36.44	4.87	2.53
BL5400	5400	46.52	5.77	2.59
HL5600	5600	36.66	5.17	2.64
BL5600	5600	46.79	5.77	2.73
HL5800	5800	35.31	5.31	2.72
BL5800	5800	47.04	6.10	2.81

LOWER DETECTION LIMIT: 7mW/kg

5.4 ISOTROPY

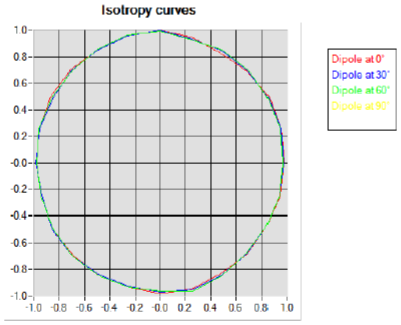
HL900 MHz

- Axial isotropy: 0.04 dB
- Hemispherical isotropy: 0.07 dB



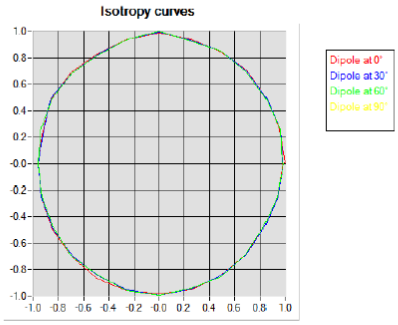
HL1800 MHz

- Axial isotropy: 0.06 dB
- Hemispherical isotropy: 0.08 dB



HL5600 MHz

- Axial isotropy: 0.06 dB
- Hemispherical isotropy: 0.08 dB



6 LIST OF EQUIPMENT

Equipment Summary Sheet				
Equipment Description	**Manufacturer / Model**	**Identification No.**	**Current Calibration Date**	**Next Calibration Date**
Flat Phantom	MVG	SN-20/09-SAM71	Validated. No cal required.	Validated. No cal required.
COMOSAR Test Bench	Version 3	NA	Validated. No cal required.	Validated. No cal required.
Network Analyzer	Rhode & Schwarz ZVA	SN100132	02/2019	02/2022
Reference Probe	MVG	EP 94 SN 37/08	10/2019	10/2020
Multimeter	Keithley 2000	1188656	01/2017	01/2020
Signal Generator	Agilent E4438C	MY49070581	01/2017	01/2020
Amplifier	Aethercomm	SN 046	Characterized prior to test. No cal required.	Characterized prior to test. No cal required.
Power Meter	HP E4418A	US38261498	01/2017	01/2020
Power Sensor	HP ECP-E26A	US37181460	01/2017	01/2020
Directional Coupler	Narda 4216-20	01386	Characterized prior to test. No cal required.	Characterized prior to test. No cal required.
Waveguide	Mega Industries	069Y7-158-13-712	Validated. No cal required.	Validated. No cal required.
Waveguide Transition	Mega Industries	069Y7-158-13-701	Validated. No cal required.	Validated. No cal required.
Waveguide Termination	Mega Industries	069Y7-158-13-701	Validated. No cal required.	Validated. No cal required.
Temperature / Humidity Sensor	Control Company	150798832	11/2017	11/2020

SAR Reference Dipole Calibration Report

Ref : ACR.109.1.18.SATU.A

SHENZHEN NTEK TESTING TECHNOLOGY CO., LTD.

BUILDING E, FENDA SCIENCE PARK, SANWEI COMMUNITY, XIXIANG STREET,
BAO'AN DISTRICT, SHENZHEN GUANGDONG, CHINA

MVG COMOSAR REFERENCE DIPOLE

FREQUENCY: 750 MHZ

SERIAL NO.: SN 03/15 DIP 0G750-355

Calibrated at MVG US

2105 Barrett Park Dr. - Kennesaw, GA 30144

Calibration Date: 04/19/2018

Summary:

This document presents the method and results from an accredited SAR reference dipole calibration performed in MVG USA using the COMOSAR test bench. All calibration results are traceable to national metrology institutions.

SAR REFERENCE DIPOLE CALIBRATION REPORT

Ref: ACR.109.1.18.SATU.A

	Name	*Function*	*Date*	*Signature*
Prepared by :	Jérôme LUC	Product Manager	4/19/2018	
Checked by :	Jérôme LUC	Product Manager	4/19/2018	
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