

FCC SAR EVALUATION REPORT

**In accordance with the requirements of
FCC 47 CFR Part 2(2.1093) and
IEEE Std 1528-2013**

Product Name: Tablet

Model No.: Tab E3+

Tab E3+ VIP Edition, Tab E3,

Serial Model: Tab E3 VIP Edition, Tab E3 Play,
Tab E3 Play VIP Edition

Brand Name: DOOGEE

Report No.: AiTSZ-250409027FW1

FCC ID: 2AX4YTABE3

Prepared for

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TEST RESULT CERTIFICATION

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Product description

Product name: Tablet
Trademark: DOOGEE
Model and/or type reference ...: Tab E3+
Serial Model.....: Tab E3+ VIP Edition, Tab E3, Tab E3 VIP Edition, Tab E3 Play,
Tab E3 Play VIP Edition
FCC 47 CFR Part 2(2.1093)

Standards: IEEE Std 1528-2013

Published RF exposure KDB procedures

This device described above has been tested by Guangdong Asia Hongke Test Technology Limited. 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). 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: Apr. 07, 2025 ~ Apr. 17, 2025

Date of Issue.....: May 19, 2025

Test Result: **Pass**

Reviewed by: 
Simba Huang

Approved by:  
Sean She

※ ※ Revision History ※ ※

REV.	DESCRIPTION	ISSUED DATE	REMARK
Rev.1.0	Initial Test Report Release	May 19, 2025	Sean She

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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
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 as follows.

Band	Max SAR Value Reported(W/kg)	
	1-g Body (Separation distance of 0mm)	Max SAR Summation
GSM850	0.120	Body: 1.296
GSM1900	0.280	
WCDMA Band II	0.300	
WCDMA Band IV	0.399	
WCDMA Band V	0.355	
LTE band 2	0.315	
LTE band 4	0.199	
LTE band 5	0.401	
LTE band 7	0.403	
LTE band 19	0.240	
LTE band 25	0.595	
LTE band 26a	0.189	
LTE band 26b	0.199	
LTE band 38	0.536	
LTE band 41	0.611	
LTE band 66	0.293	
2.4GHz WLAN	0.212	
5.2GHz WLAN	0.575	
5.8GHz WLAN	0.685	
Bluetooth	0.290	

NOTE: The Max SAR Summation 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 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	Tablet		
Brand Name	DOOGEE		
Model Name	Tab E3+		
Family Model	Tab E3+ VIP Edition,Tab E3,Tab E3 VIP Edition, Tab E3 Play,Tab E3 Play VIP Edition		
Model Difference	All the model are the same circuit and RF module, except the model names.		
Device Phase	Identical Prototype		
Exposure Category	General population / Uncontrolled environment		
Antenna Type	PIFA antenna		
Power rating:	DC 3.85V 8800mAh		
Hardware version	WT_G31_Y_6789_BJJ_UFS_MB_V2.1_20241218		
Software version	DOOGEE-Tab E3+-EEA-Android15.0-20250225		
Device Operating Configurations			
Supporting Mode(s)	GSM 850/1900, WCDMA Band 2/4/5, LTE Band 2/4/5/7/19/25/26a/26b/38/41/66, WLAN 2.4G/5.2G/5.8G, Bluetooth		
Test Modulation	GSM(GMSK/8PSK), WCDMA(QPSK), LTE(QPSK/16-QAM), WLAN(DSSS/OFDM), Bluetooth(GFSK, $\pi/4$ DQPSK, 8DPSK)		
Device Class	B		
Operating Frequency Range(s)	Band	Tx (MHz)	Rx (MHz)
	GSM 850	824-849	869-894
	GSM 1900	1850-1910	1930-1990
	WCDMA Band 2	1850-1910	1930-1990
	WCDMA Band 4	1710-1755	2110-2155
	WCDMA Band 5	824-849	869-894
	LTE Band 2	1850-1910	1930-1990
	LTE Band 4	1710-1755	2110-2155
	LTE Band 5	824-849	869-894
	LTE Band 7	2500-2570	2620-2690
	LTE Band 19	830-845	875-890
	LTE Band 25	1850-1915	1930-1995
	LTE Band 26a	814-824	859-869
	LTE Band 26b	824-849	869-894
	LTE Band 38	2570-2620	
	LTE Band 41	2535-2655	
	LTE Band 66	1710-1780	2110-2200

	WLAN 2.4G	2412-2462
	WLAN 5.2G	5180-5240
	WLAN 5.8G	5745-5825
	Bluetooth	2402-2480
GPRS Multislot Class(12)	Max Number of Timeslots in Uplink	4
	Max Number of Timeslots in Downlink	4
	Max Total Timeslot	5
EGPRS Multislot Class(12)	Max Number of Timeslots in Uplink	4
	Max Number of Timeslots in Downlink	4
	Max Total Timeslot	5
Power Class	4, tested with power level 5(GSM 850)	
	1, tested with power level 0(GSM 1900)	
	3, tested with power control "all 1"(WCDMA Band 2)	
	3, tested with power control "all 1"(WCDMA Band 4)	
	3, tested with power control "all 1"(WCDMA Band 5)	
	3, tested with power control all Max.(LTE Band 2)	
	3, tested with power control all Max.(LTE Band 4)	
	3, tested with power control all Max.(LTE Band 5)	
	3, tested with power control all Max.(LTE Band 7)	
	3, tested with power control all Max.(LTE Band 19)	
	3, tested with power control all Max.(LTE Band 25)	
	3, tested with power control all Max.(LTE Band 26a)	
	3, tested with power control all Max.(LTE Band 26b)	
	3, tested with power control all Max.(LTE Band 38)	
	3, tested with power control all Max.(LTE Band 41)	
	3, tested with power control all Max.(LTE Band 66)	

1.4. Test specification(s)

FCC 47 CFR Part 2(2.1093)
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 D01 3G SAR Procedures
KDB 941225 D05 SAR for LTE Devices
KDB 616217 D04 SAR for laptop and tablets

1.5. Ambient Condition

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

1.6. Test Facility

Test Laboratory:

Guangdong Asia Hongke Test Technology Limited

B1/F, Building 11, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

The test facility is recognized, certified or accredited by the following organizations:

FCC-Registration No.: 251906 Designation Number: CN1376

Guangdong Asia Hongke Test Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC —Registration No.: 31737 CAB identifier: CN0165

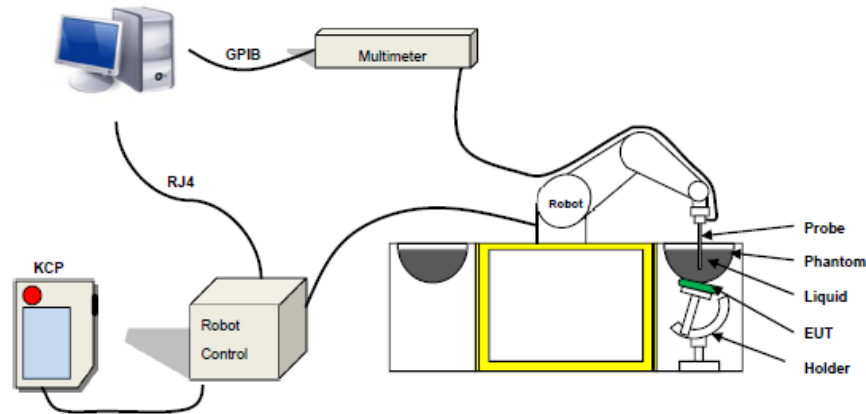
The 3m Semi-anechoic chamber of Guangdong Asia Hongke Test Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 31737

A2LA-Lab Cert. No.: 7133.01

Guangdong Asia Hongke Test Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

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. 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 EPGO 0523-403 with following specifications is used.



- Probe Length: 330 mm
- Length of Individual Dipoles: 2 mm
- Maximum external diameter: 8 mm
- Probe Tip External Diameter: 2.5 mm
- Distance between dipole/probe extremity: 1 mm
- Dynamic range: 0.01-100 W/kg
- Probe linearity: 3%
- Axial Isotropy: < 0.10 dB
- Spherical Isotropy: < 0.10 dB
- Calibration range: 150 MHz to 6 GHz for head & body simulating liquid.
- 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 $\pm 10\%$. The spherical isotropy shall be evaluated and within $\pm 0.25\text{dB}$. 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. Phantoms

For the measurements the Elliptical defined by the IEEE SCC-34/SC2 group is used. The phantom is a polyurethane shell integrated in a wooden table. The thickness of the phantom amounts to 2mm +/- 0.2mm. The Elliptical phantom has elliptic shape. The Elliptical phantom provide one reference point on its top part to position the probe tip correctly. The phantom set-up includes a cover, which prevents the evaporation of the liquid.



Elliptical

2.5. Technical Data

Overall thickness	2±0.2mm
Internal Dimensions (Bottom part)	600 mm (L) x 400 mm (W) 170 mm (H)
External Dimensions	1000 mm (L) x 500 mm (W) x 280 mm (H)
Maximum volume	35 L
Material	Fiberglass based
Relative permittivity	3.4
Loss tangent	0.02

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

2.6. Device Holder



The SAR in the phantom is approximately inversely proportional to the square of the distance between the source and the liquid surface.

Material properties: the positioning system is made of PETP. This material offers a low permittivity of 3.2 and low loss, with a loss tangent of 0.005 to minimize the influence of the DUT on measurement results.

Mechanical properties: 2 rows of rail to cover easily the surface of the phantom. The fixing plate is perfectly adapted to larger devices, such as a PC which can be positioned in all configurations.

Accuracy and precision: graduated scale available on each axis. The DUT is fixed with a specific adaptable grip.

2.7. 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	EPGO 0523-403	Sep. 11, 2024	Sep. 10, 2025
☐	MVG	750 MHz Dipole	SID750	SN 03/15 DIP 0G750-355	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	835 MHz Dipole	SID835	SN 03/15 DIP 0G835-347	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	900 MHz Dipole	SID900	SN 03/15 DI P 0G900-348	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	1800 MHz Dipole	SID1800	SN 03/15 DIP 1G800-349	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	1900 MHz Dipole	SID1900	SN 03/15 DIP 1G900-350	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	2000 MHz Dipole	SID2000	SN 03/15 DIP 2G000-351	Feb. 21, 2024	Feb. 20, 2027
☐	MVG	2300 MHz Dipole	SID2300	SN 03/16 DIP 2G300-358	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	2450 MHz Dipole	SID2450	SN 03/15 DIP 2G450-352	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	2600 MHz Dipole	SID2600	SN 03/15 DIP 2G600-356	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	5000 MHz Dipole	SWG5500	SN 13/14 WGA 33	Feb. 21, 2024	Feb. 20, 2027
☒	MVG	Liquid measurement Kit	SCLMP	SN 21/15 OCPG 72	Jul. 01, 2024	Jun. 30, 2025
☒	MVG	Power Amplifier	N.A	AMPLISAR_28/14_003	NCR	NCR
☒	KEITHLEY	Millivoltmeter	2000	4072790	Jul. 01, 2024	Jun. 30, 2025
☒	R&S	Universal radio communication tester	CMU200	117858	Jul. 01, 2024	Jun. 30, 2025
☒	R&S	Wideband radio communication tester	CMW500	116581	Jul. 01, 2024	Jun. 30, 2025
☒	HP	Network Analyzer	8753D	3410J01136	Jul. 01,	Jun. 30,

					2024	2025
☒	Agilent	PSG Analog Signal Generator	E8257D	MY51110112	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power meter	E4419B	MY45102538	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power meter	E4419B	MY45102140	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power meter	E4419B	MY45102215	Jul. 01, 2024	Jun. 30, 2025
☒	JFW	attenuator	50FPE-006	4360846-494-4	Jul. 01, 2024	Jun. 30, 2025
☒	JFW	attenuator	50FPE-006	4360846-492-1	Jul. 01, 2024	Jun. 30, 2025
☒	JFW	attenuator	50FPE-006	4360846-490-6	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power sensor	E9301A	MY41495644	Jul. 01, 2024	Jun. 30, 2025
☒	Agilent	Power sensor	E9301A	US39212148	Jul. 01, 2024	Jun. 30, 2025
☒	MCLI/USA	Directional Coupler	CB11-20	0D2L51502	Jul. 17, 2024	Jul. 16, 2027
☒	MVG	Elliptical Phantom	SSM2	SN 20/11 ELLI20	NCR	NCR
☒	MVG	Device Holder	SMPPD	SN 24/11 LSH15	NCR	NCR

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 Wi-Fi/BT power measurement, use engineering software to configure EUT Wi-Fi/BT 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 Wi-Fi/BT output power.

<SAR measurement>

- (a) Use base station simulator to configure EUT WWAN transmission in radiated connection, and engineering software to configure EUT Wi-Fi/BT 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 parameters extracted from FCC KDB 865664 D01 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: Δx _{Area} , Δy _{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be ≤ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx _{Zoom} , Δy _{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: Δz _{Zoom} (n)		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	Δz _{Zoom} (1): between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		Δz _{Zoom} (n>1): between subsequent points	≤ 1.5 · Δz _{Zoom} (n-1)	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> 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.				

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 used to determine 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 for 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 defined 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 $\pm 5\%$, 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									
	750	835	900	1800	1900	2000	2450	2600	5200	5800
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

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.



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 $\pm 5\%$ of the target values.

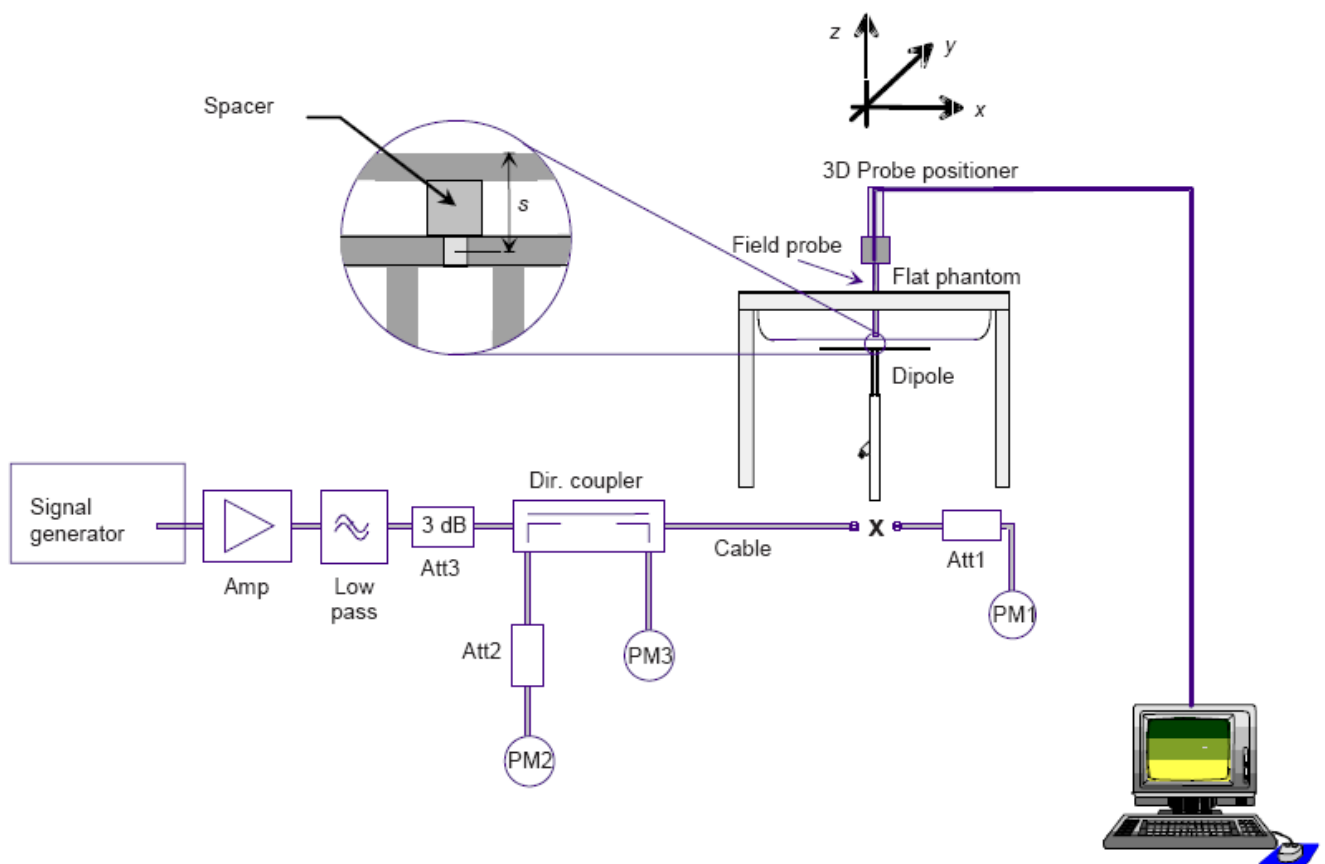
Tissue Type	Measured Frequency (MHz)	Target Tissue		Measured Tissue		Liquid Temp.	Test Date
		ϵ_r ($\pm 5\%$)	σ (S/m) ($\pm 5\%$)	ϵ_r	σ (S/m)		
Head 850	835	41.50 (39.43~43.58)	0.90 (0.86~0.95)	42.01	0.94	21.2 °C	Apr. 07, 2025
Head 1800	1800	40.00 (38.00~42.00)	1.40 (1.33~1.47)	39.61	1.41	21.1 °C	Apr. 08, 2025
Head 1900	1900	40.00 (38.00~42.00)	1.40 (1.33~1.47)	41.42	1.39	21.3 °C	Apr. 09, 2025
Head 2450	2450	39.20 (37.24~41.16)	1.80 (1.71~1.89)	40.41	1.82	21.4 °C	Apr. 10, 2025
Head 2600	2600	39.01 (37.06~40.96)	1.96 (1.86~2.06)	39.43	1.99	21.5 °C	Apr. 11, 2025
Head 5200	5200	36.00 (34.20~37.80)	4.66 (4.43~4.89)	37.40	4.51	21.7 °C	Apr. 14, 2025
Head 5800	5800	35.30 (33.54~37.07)	5.27 (5.01~5.53)	35.30	5.27	21.0 °C	Apr. 17, 2025

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 $\pm 10\%$. 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	Power fed to reference dipole (mW)	Measured SAR Value		Measured SAR (Normalized to 1W)		Target SAR Value (1W)		Deviation (%)		Test Date
		1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)	1-g (W/Kg)	10-g (W/Kg)	
835MHz	100	1.011	0.612	10.11	6.12	9.40	6.28	7.55%	-2.55%	Apr. 07, 2025
1800MHz	100	3.832	2.025	38.32	20.25	37.06	20.01	3.40%	1.20%	Apr. 08, 2025
1900MHz	100	4.154	2.153	41.54	21.53	39.69	20.92	4.66%	2.92%	Apr. 09, 2025
2450MHz	100	5.184	2.359	51.84	23.59	50.05	23.80	3.58%	-0.88%	Apr. 10, 2025
2600MHz	100	5.433	2.523	54.33	25.23	54.16	24.85	0.31%	1.53%	Apr. 11, 2025
5200MHz	100	14.712	5.212	147.12	52.12	162.59	56.21	-9.51%	-7.28%	Apr. 14, 2025
5800MHz	100	16.421	5.623	164.21	56.23	182.2	61.32	-9.87%	-8.30%	Apr. 17, 2025

5. 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 ($\sim 10\%$ from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥ 1.5 W/kg and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 .

6. 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.

7. RF Exposure Positions

7.1. Tablet PC host platform exposure conditions

Refer to KDB616217 D04, when the modular approach is used, transmitters and modules must be initially tested for standalone operations in generic host conditions according to the following minimum test separation distance and antenna installation requirements for incorporation in the tablet platform. The separation distance required for incorporation in qualified hosts is described in KDB 447498; item 5) of section 4.1 and item 1) of section 5.2.2 etc.

- ≤ 5 mm between the antenna and user for both back surface and edge exposure conditions
- the antennas used by the host must have been tested for equipment approval or qualify for SAR test exclusion
- the antenna polarization, physical orientation, rotation and installation configurations used by the host must have been tested for compliance or qualify for test exclusion
- when the *SAR Test Exclusion Threshold* in KDB 447498 applies, a *test separation distance* of 5 mm is required to determine test exclusion for the tablet platform

The antennas embedded in tablets are typically ≤ 5 mm from the outer housing. The required antenna to user test separation distance is a “not to exceed test” distance required to apply the modular approach. Instead of the typical zero gap tablet edge test requirement between the edge of a tablet and the user, when an antenna has been tested at ≤ 5 mm according to the modular approach it can be incorporated into tablets with at least twice the tested distance from the outer housing of the tablet edge; otherwise, the tablet edge zero gap test requirement applies. When the dedicated host approach is applied, the back surface and edges of the tablet should be tested for SAR compliance with the tablet touching the phantom.

8. RF Output Power

8.1. GSM Conducted Power

Band GSM850	Burst-Averaged output Power (dBm)				Factor	Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	128	189	251		Tune-up	128	189	251
Frequency (MHz)		824.2	836.4	848.8			824.2	836.4	848.8
GSM (GMSK)	33.00	32.52	32.64	32.49	/	/	/	/	/
GPRS(GMSK,1 Tx slot)	33.00	32.61	32.69	32.54	-9.03	23.97	23.58	23.66	23.51
GPRS(GMSK,2 Tx slot)	32.00	31.75	31.84	31.68	-6.02	25.98	25.73	25.82	25.66
GPRS(GMSK,3 Tx slot)	30.00	29.88	29.97	29.80	-4.26	25.74	25.62	25.71	25.54
GPRS(GMSK,4 Tx slot)	29.00	28.84	28.94	28.76	-3.01	25.99	25.83	25.93	25.75
EGPRS(8PSK,1 Tx slot)	27.00	26.05	26.71	26.93	-9.03	17.97	17.02	17.68	17.90
EGPRS(8PSK,2 Tx slot)	26.00	24.87	25.56	25.86	-6.02	19.98	18.85	19.54	19.84
EGPRS(8PSK,3 Tx slot)	24.00	22.78	23.50	23.71	-4.26	19.74	18.52	19.24	19.45
EGPRS(8PSK,4 Tx slot)	23.00	21.78	22.38	22.65	-3.01	19.99	18.77	19.37	19.64

Band GSM1900	Burst-Averaged output Power (dBm)				Factor	Frame-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	512	661	810		Tune-up	512	661	810
Frequency (MHz)		1850.2	1880	1909.8			1850.2	1880	1909.8
GSM (GMSK)	30.00	29.20	29.56	29.46	/	/	/	/	/
GPRS(GMSK,1 Tx slot)	30.50	29.82	30.12	29.93	-9.03	21.47	20.79	21.09	20.90
GPRS(GMSK,2 Tx slot)	29.50	28.82	29.13	28.91	-6.02	23.48	22.80	23.11	22.89
GPRS(GMSK,3 Tx slot)	27.50	26.79	27.09	26.86	-4.26	23.24	22.53	22.83	22.60
GPRS(GMSK,4 Tx slot)	26.50	25.73	26.07	25.80	-3.01	23.49	22.72	23.06	22.79
EGPRS(8PSK,1 Tx slot)	25.50	24.93	25.32	25.15	-9.03	16.47	15.90	16.29	16.12
EGPRS(8PSK,2 Tx slot)	24.50	24.05	24.42	24.18	-6.02	18.48	18.03	18.40	18.16
EGPRS(8PSK,3 Tx slot)	23.00	22.27	22.56	22.33	-4.26	18.74	18.01	18.30	18.07
EGPRS(8PSK,4 Tx slot)	22.00	21.29	21.60	21.33	-3.01	18.99	18.28	18.59	18.32

Note:

Remark: GPRS, CS4 coding scheme. EGPRS, MCS5 coding scheme.

Multi-Slot Class 8, Support Max 4 downlink, 1 uplink, 5 working link

Multi-Slot Class 10, Support Max 4 downlink, 2 uplink, 5 working link

Multi-Slot Class 12, Support Max 4 downlink, 4 uplink, 5 working link

SAR testing was performed on the maximum frame-averaged power mode.

The frame-averaged power is linearly proportion to the slot number configured and it is linearly scaled the maximum

Burst-averaged power based on time slots. The calculated method is shown as below:

Frame-averaged power = Burst averaged power (1 TX Slot) – 9.03 dB

Frame-averaged power = Burst averaged power (2 TX Slots) – 6.02 dB

Frame-averaged power = Burst averaged power (3 TX Slots) - 4.26 dB

Frame-averaged power = Burst averaged power (4 TX Slots) – 3.01 dB

8.2. WCDMA Conducted Power

The following tests were conducted according to the test requirements outlines in 3GPP TS 34.121 specification. A summary of these settings are illustrated below:

1. Release99 Setup Configuration

Mode	Subtest	Rel99
WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm1
	β_c/β_d	8/15

2. HSDPA Setup Configuration

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subtest	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm 1			
	β_c	2/15	12/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	β_c/β_d	2/15	12/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
HSDPA Specific Settings	D_{ACK}	8			
	D_{NAK}	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback (Table 5.2B.4)	4ms			
	CQI Repetition Factor (Table 5.2B.4)	2			
	$A_{hs} = \beta_{hs}/\beta_c$	30/15			

3. HSUPA Setup Configuration

	Mode	HSUPA	HSUPA	HSUPA	HSUPA	HSUPA
	Subtest	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm1				
	β_c	11/15	6/15	15/15	2/15	15/15
	β_d	15/15	15/15	9/15	15/15	15/15
	β_{ec}	209/225	12/15	30/15	2/15	24/15
	β_c/β_d	11/15	6/15	15/9	2/15	15/15
	β_{hs}	22/15	12/15	30/15	4/15	30/15
	β_{ed}	1309/225	94/75	47/15 47/15	56/75	134/15
	CM (dB)	1.0	3.0	2.0	3.0	1.0
HSDPA Specific Settings	D_{ACK}	8				
	D_{NAK}	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback (Table 5.2B.4)	4ms				

HSUPA Specific Settings	CQI Repetition Factor (Table 5.2B.4)	2				
	Ahs = β_{hs}/β_c	30/15				
	D E-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI (from 34.121 Table C.11.1.3)	75	67	92	71	81
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9

4. WCDMA Conducted Power Results

Choose the highest output power mode RMC 12.2Kbps for Band V/II at middle channel to test SAR and determine the worst configuration for further high/low channel test.

WCDMA Band II	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	9262	9400	9538
Frequency (MHz)		1852.4	1880	1907.6
RMC12.2K	23.00	22.69	22.96	22.79
HSDPA Sub 1	22.50	22.05	22.22	22.14
HSDPA Sub 2	22.00	21.40	21.68	21.52
HSDPA Sub 3	22.00	21.39	21.66	21.51
HSDPA Sub 4	22.00	21.31	21.62	21.39
HSUPA Sub 1	21.00	20.48	20.67	20.47
HSUPA Sub 2	20.50	20.18	20.44	20.17
HSUPA Sub 3	21.50	21.00	21.25	21.06
HSUPA Sub 4	20.50	19.72	20.13	19.79
HSUPA Sub 5	21.50	21.09	21.37	21.14

WCDMA Band IV	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	1312	1413	1513
Frequency (MHz)		1712.4	1732.6	1752.6
RMC12.2K	23.50	23.04	23.00	22.77
HSDPA Sub 1	22.50	22.22	22.27	21.94
HSDPA Sub 2	22.00	21.65	21.71	21.47
HSDPA Sub 3	22.00	21.61	21.60	21.35
HSDPA Sub 4	22.00	21.59	21.66	21.36
HSUPA Sub 1	21.00	20.94	20.91	20.45
HSUPA Sub 2	20.50	20.36	20.38	19.70
HSUPA Sub 3	21.00	20.86	20.87	20.57
HSUPA Sub 4	18.50	18.06	18.16	18.21
HSUPA Sub 5	21.00	20.74	20.66	20.26

WCDMA Band V	Burst-Averaged output Power (dBm)			
Tx Channel	Tune-up (dBm)	4132	4182	4233
Frequency (MHz)		826.4	836.4	846.6
RMC12.2K	22.00	21.10	21.72	21.89
HSDPA Sub 1	21.50	21.19	21.08	21.22
HSDPA Sub 2	21.50	21.15	20.59	20.48
HSDPA Sub 3	21.00	19.88	20.85	20.96
HSDPA Sub 4	21.00	20.82	20.56	20.29
HSUPA Sub 1	22.00	21.52	21.79	21.11
HSUPA Sub 2	21.50	21.20	21.19	20.59
HSUPA Sub 3	22.00	21.62	21.47	20.78
HSUPA Sub 4	18.50	18.41	18.19	18.47
HSUPA Sub 5	22.00	21.59	20.83	20.61

8.3. LTE Conducted Power

1. The following tests were conducted according to the test requirements outlines in 3GPP TS 36.521-1 specification. A summary of these configurations are illustrated below:

Test Parameters for Channel Bandwidths				
Ch BW	Downlink Configuration	Mod'n	Uplink Configuration	
	N/A for Max UE output power testing		RB allocation	
			FDD	TDD
1.4MHz		QPSK	1	1
1.4MHz		QPSK	5	5
3MHz		QPSK	1	1
3MHz		QPSK	4	4
5MHz		QPSK	1	1
5MHz		QPSK	8	8
10MHz		QPSK	1	1
10MHz		QPSK	12	12
15MHz		QPSK	1	1
15MHz		QPSK	16	16
20MHz		QPSK	1	1
20MHz		QPSK	18	18

Note 1: Test Channel Bandwidths are checked separately for each E-UTRA band, the applicable channel bandwidths are specified in Table 5.4.2.1-1.

Note 2: For E-UTRA bands not applied with Note 2 in Table 6.2.2.3-1:

- The 1 RB allocation shall be tested at RB#0 for low and mid range, RB #max for high range test frequency.
- The RBstart of non-1RB allocation shall be RB #0 for low and mid range, RB# (max +1 - RB allocation) for high range test frequency.

Note 3: For E-UTRA bands applied with Note 2 in Table 6.2.2.3-1:

- If the test channel bandwidth is larger than 4MHz, then the 1 RB allocation shall be tested at both RB #0 and RB #max.
- If the test channel bandwidth is smaller or equal to 4MHz, then the 1 RB allocation shall be tested at RB #0.
- If the test channel bandwidth = (FUL_high - FUL_low) specified by the operating band, then only one frequency range shall be tested and the 1 RB allocation shall be tested at RB #0, RB # $\left\lceil N_{RB}^{UL} / 2 \right\rceil$ and RB #max.
- For non-1RB allocation, test frequency is middle range, and the RBstart shall be RB #0.

2. LTE Conducted Power Results

LTE output list

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18607/1850.7	18900/1880	19193/1909.3
LTE Band 2	1.4MHz	QPSK	1	0	22.50	22.04	22.18	21.36
			1	2	22.50	22.03	22.03	21.31
			1	5	22.50	22.02	22.04	21.32
			3	0	22.50	22.24	22.29	21.55
			3	1	22.50	22.26	22.32	21.58
			3	2	22.50	22.21	22.24	21.53
		16QAM	6	0	21.50	21.37	21.31	20.70
			1	0	21.50	21.18	21.18	20.54
			1	2	21.50	21.25	21.15	20.48
			1	5	21.50	21.17	21.12	20.48
			3	0	21.50	21.28	21.36	20.64
			3	1	21.50	21.28	21.39	20.65
			3	2	21.50	21.27	21.29	20.59
			6	0	21.00	20.61	20.42	19.92
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18615/1851.5	18900/1880	19185/1908.5
LTE Band 2	3MHz	QPSK	1	0	22.50	22.05	22.18	21.53
			1	7	22.50	22.10	22.01	21.41
			1	14	22.50	22.08	21.94	21.33
			8	0	22.00	21.46	21.56	20.94
			8	4	22.00	21.49	21.56	20.92
			8	7	22.00	21.57	21.46	20.90
			15	0	22.00	21.60	21.54	20.93
		16QAM	1	0	21.50	21.28	21.42	20.77
			1	7	21.50	21.35	21.26	20.69
			1	14	21.50	21.36	21.21	20.64
			8	0	21.00	20.79	20.83	20.22
			8	4	21.00	20.78	20.87	20.22
			8	7	21.00	20.84	20.75	20.15
			15	0	21.00	20.82	20.86	20.22
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18625/1852.5	18900/1880	19175/1907.5
LTE Band 2	5MHz	QPSK	1	0	23.00	22.34	22.55	21.96
			1	12	23.00	22.48	22.36	21.81
			1	24	23.00	22.48	22.15	21.62
			12	0	22.00	21.64	21.79	21.20
			12	6	22.00	21.63	21.81	21.22
			12	11	22.00	21.76	21.51	21.00
			25	0	22.00	21.74	21.70	21.17
		16QAM	1	0	22.00	21.48	21.68	21.08
			1	12	22.00	21.58	21.45	20.93
			1	24	22.00	21.61	21.33	20.82
			12	0	21.50	20.86	21.04	20.49

			12	6	21.50	20.84	21.02	20.47
			12	11	21.50	20.99	20.79	20.20
			25	0	21.50	21.02	21.00	20.44
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18650/1855	18900/1880	19150/1905
LTE Band 2	10MHz	QPSK	1	0	23.00	22.34	22.68	22.15
			1	24	23.00	22.44	22.25	21.87
			1	49	23.00	22.56	21.95	21.63
			25	0	22.00	21.64	21.94	21.57
			25	12	22.00	21.70	21.93	21.55
			25	24	22.00	21.97	21.48	21.02
			50	0	22.00	21.85	21.79	21.38
		16QAM	1	0	22.00	21.62	21.91	21.43
			1	24	22.00	21.73	21.54	21.13
			1	49	22.00	21.81	21.19	20.94
			25	0	21.50	20.90	21.18	20.82
			25	12	21.50	20.92	21.20	20.82
			25	24	21.50	21.20	20.76	20.32
			50	0	21.50	21.11	21.05	20.62
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18675/1857.5	18900/1880	19125/1902.5
LTE Band 2	15MHz	QPSK	1	0	23.00	22.35	22.79	21.94
			1	37	23.00	22.51	22.27	22.01
			1	74	23.00	22.77	21.78	21.64
			36	0	22.50	21.58	22.00	21.21
			36	18	22.50	21.75	21.49	21.28
			36	37	22.50	22.02	21.06	20.87
			75	0	22.00	21.87	21.64	21.26
		16QAM	1	0	22.50	21.58	22.04	21.18
			1	37	22.50	21.76	21.50	21.26
			1	74	22.50	21.98	21.10	20.90
			36	0	22.50	21.60	22.05	21.19
			36	18	22.50	21.75	21.51	21.27
			36	37	22.50	21.98	21.07	20.91
			75	0	21.50	21.05	20.86	20.45
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		18700/1860	18900/1880	19100/1900
LTE Band 2	20MHz	QPSK	1	0	23.00	22.29	22.83	21.78
			1	49	23.00	22.62	22.31	22.18
			1	99	23.00	22.84	21.71	21.67
			50	0	22.50	21.72	22.30	21.16
			50	24	22.50	21.73	22.30	21.19
			50	49	22.50	22.26	21.45	21.09
			100	0	22.50	22.02	21.86	21.12
		16QAM	1	0	22.00	21.46	21.96	21.15
			1	49	22.00	21.75	21.50	21.48
			1	99	22.00	21.96	20.89	20.97
			50	0	22.00	20.98	21.56	20.47

			50	24	22.00	20.98	21.55	20.49
			50	49	22.00	21.49	20.72	20.36
			100	0	21.50	21.28	21.14	20.40

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19957/1710.7	20175/1732.5	20393/1754.3
LTE Band 4	1.4MHz	QPSK	1	0	23.50	22.67	23.02	22.62
			1	2	23.50	22.63	22.98	22.62
			1	5	23.50	22.66	22.99	22.63
			3	0	23.50	22.88	23.17	22.82
			3	1	23.50	22.85	23.14	22.83
			3	2	23.50	22.84	23.15	22.84
			6	0	22.50	21.97	22.25	21.92
		16QAM	1	0	22.50	21.84	22.03	21.63
			1	2	22.50	21.84	22.04	21.62
			1	5	22.50	21.81	22.03	21.67
			3	0	22.50	21.91	22.21	21.86
			3	1	22.50	21.90	22.22	21.83
			3	2	22.50	21.89	22.20	21.83
			6	0	21.50	21.17	21.33	21.13
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	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	22.74	22.99	22.66
			1	7	23.00	22.72	22.97	22.67
			1	14	23.00	22.62	22.91	22.68
			8	0	22.50	22.09	22.40	22.05
			8	4	22.50	22.13	22.39	22.01
			8	7	22.50	22.10	22.45	22.06
			15	0	22.50	22.10	22.44	22.05
		16QAM	1	0	22.50	21.86	22.16	21.76
			1	7	22.50	21.73	22.19	21.67
			1	14	22.50	21.68	22.18	21.68
			8	0	22.00	21.38	21.63	21.29
			8	4	22.00	21.39	21.67	21.29
			8	7	22.00	21.36	21.66	21.25
			15	0	22.00	21.32	21.71	21.25
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		19975/1712.5	20175/1732.5	20375/1752.5
LTE Band 4	5MHz	QPSK	1	0	23.50	22.92	23.28	22.87
			1	12	23.50	22.86	23.25	22.90
			1	24	23.50	22.89	23.18	22.82
			12	0	23.00	22.24	22.51	22.23
			12	6	23.00	22.20	22.56	22.25
			12	11	23.00	22.18	22.52	22.21
			25	0	23.00	22.26	22.53	22.22
		16QAM	1	0	22.50	22.25	22.39	22.17
			1	12	22.50	22.19	22.37	22.18
			1	24	22.50	22.19	22.31	22.16

			12	0	22.00	21.53	21.76	21.51
			12	6	22.00	21.52	21.73	21.52
			12	11	22.00	21.47	21.72	21.49
			25	0	22.00	21.52	21.79	21.47
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20000/1715	20175/1732.5	20350/1750
LTE Band 4	10MHz	QPSK	1	0	23.50	22.99	23.26	22.94
			1	24	23.50	22.94	23.16	22.89
			1	49	23.50	23.16	23.14	22.91
			25	0	23.00	22.25	22.55	22.22
			25	12	23.00	22.24	22.53	22.23
			25	24	23.00	22.29	22.55	22.17
			50	0	23.00	22.30	22.54	22.29
		16QAM	1	0	23.00	22.07	22.55	22.02
			1	24	23.00	21.98	22.40	21.92
			1	49	23.00	22.20	22.39	21.96
			25	0	22.00	21.55	21.80	21.55
			25	12	22.00	21.54	21.76	21.53
			25	24	22.00	21.59	21.80	21.45
			50	0	22.00	21.59	21.82	21.54
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20025/1717.5	20175/1732.5	20325/1747.5
LTE Band 4	15MHz	QPSK	1	0	23.50	22.89	23.23	23.01
			1	37	23.50	22.92	23.14	22.87
			1	74	23.50	23.08	23.07	22.82
			36	0	23.00	22.22	22.50	22.37
			36	18	23.00	22.30	22.43	22.20
			36	37	23.00	22.50	22.29	22.19
			75	0	22.50	22.28	22.49	22.21
		16QAM	1	0	23.00	22.26	22.51	22.32
			1	37	23.00	22.29	22.43	22.18
			1	74	23.00	22.46	22.30	22.18
			36	0	23.00	22.25	22.52	22.38
			36	18	23.00	22.30	22.42	22.15
			36	37	23.00	22.49	22.30	22.20
			75	0	22.00	21.58	21.65	21.41
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20050/1720	20175/1732.5	20300/1745
LTE Band 4	20MHz	QPSK	1	0	23.50	22.93	23.14	23.13
			1	49	23.50	23.10	23.22	22.94
			1	99	23.50	23.19	23.01	22.82
			50	0	23.00	22.41	22.57	22.34
			50	24	23.00	22.43	22.59	22.34
			50	49	23.00	22.54	22.60	22.22
			100	0	23.00	22.41	22.56	22.26
		16QAM	1	0	23.00	22.28	22.23	22.46
			1	49	23.00	22.47	22.33	22.27
			1	99	23.00	22.58	22.09	22.19

			50	0	22.00	21.71	21.81	21.63
			50	24	22.00	21.71	21.81	21.61
			50	49	22.00	21.82	21.84	21.51
			100	0	22.00	21.67	21.78	21.52

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20407/824.7	20525/836.5	20643/848.3
LTE Band 5	1.4MHz	QPSK	1	0	23.50	23.07	22.91	22.77
			1	2	23.50	23.10	22.97	22.72
			1	5	23.50	23.06	22.99	22.75
			3	0	23.50	23.32	23.11	23.03
			3	1	23.50	23.30	23.14	22.98
			3	2	23.50	23.31	23.15	22.91
			6	0	22.50	22.39	22.18	22.07
		16QAM	1	0	22.50	22.23	21.97	21.94
			1	2	22.50	22.30	21.95	21.98
			1	5	22.50	22.20	22.04	21.87
			3	0	22.50	22.35	22.20	22.02
			3	1	22.50	22.37	22.16	22.02
			3	2	22.50	22.36	22.25	22.01
			6	0	22.00	21.64	21.29	21.37
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20415/825.5	20525/836.5	20635/847.5
LTE Band 5	3MHz	QPSK	1	0	23.50	23.08	22.87	22.81
			1	7	23.50	23.17	22.90	22.82
			1	14	23.50	23.13	22.89	22.76
			8	0	23.00	22.51	22.28	22.18
			8	4	23.00	22.51	22.28	22.23
			8	7	23.00	22.55	22.41	22.23
			15	0	23.00	22.56	22.38	22.26
		16QAM	1	0	22.50	22.17	22.08	21.96
			1	7	22.50	22.19	22.11	21.91
			1	14	22.50	22.18	22.12	21.87
			8	0	22.00	21.73	21.58	21.52
			8	4	22.00	21.71	21.59	21.52
			8	7	22.00	21.81	21.58	21.45
			15	0	22.00	21.72	21.64	21.43
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20425/826.5	20525/836.5	20625/846.5
LTE Band 5	5MHz	QPSK	1	0	23.50	23.31	23.17	23.10
			1	12	23.50	23.35	23.21	23.10
			1	24	23.50	23.23	23.17	22.97
			12	0	23.00	22.63	22.43	22.42
			12	6	23.00	22.66	22.37	22.44
			12	11	23.00	22.59	22.49	22.33
			25	0	23.00	22.63	22.49	22.46
		16QAM	1	0	23.00	22.54	22.28	22.44
			1	12	23.00	22.67	22.40	22.38
			1	24	23.00	22.51	22.33	22.27

			12	0	22.00	21.95	21.66	21.71
			12	6	22.00	21.94	21.63	21.75
			12	11	22.00	21.88	21.70	21.61
			25	0	22.00	21.91	21.76	21.64
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20450/829	20525/836.5	20600/844
LTE Band 5	10MHz	QPSK	1	0	21/23/23	20.37	22.47	22.47
			1	24	23.00	22.59	22.54	22.56
			1	49	23.00	22.55	22.51	22.50
			25	0	22.00	21.47	21.51	21.46
			25	12	22.00	21.47	21.45	21.46
			25	24	22.00	21.53	21.53	21.50
			50	0	22.00	21.49	21.51	21.53
		16QAM	1	0	22.50	22.15	22.02	22.07
			1	24	22.50	22.19	22.15	22.16
			1	49	22.50	22.11	22.10	22.08
			25	0	21.00	20.54	20.54	20.53
			25	12	21.00	20.53	20.56	20.54
			25	24	21.00	20.57	20.58	20.61
			50	0	21.00	20.53	20.53	20.49

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20775/2502.5	21100/2535	21425/2567.5
LTE Band 7	5MHz	QPSK	1	0	22.00	21.31	21.53	21.70
			1	12	22.00	21.45	21.51	21.85
			1	24	22.00	21.37	21.32	21.71
			12	0	21.00	20.24	20.44	20.70
			12	6	21.00	20.26	20.44	20.74
			12	11	21.00	20.40	20.39	20.70
			25	0	21.00	20.32	20.42	20.72
		16QAM	1	0	21.00	20.17	20.43	20.73
			1	12	21.00	20.34	20.50	20.90
			1	24	21.00	20.28	20.25	20.78
			12	0	20.00	19.28	19.39	19.74
			12	6	20.00	19.25	19.39	19.76
			12	11	20.00	19.42	19.36	19.72
			25	0	20.00	19.39	19.47	19.67
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20800/2505	21100/2535	21400/2565
LTE Band 7	10MHz	QPSK	1	0	22.00	21.34	21.66	21.68
			1	24	22.00	21.46	21.52	21.81
			1	49	22.00	21.52	21.35	21.88
			25	0	21.00	20.30	20.55	20.69
			25	12	21.00	20.26	20.50	20.68
			25	24	21.00	20.50	20.41	20.69
			50	0	21.00	20.45	20.44	20.77
		16QAM	1	0	21.00	20.12	20.65	20.50
			1	24	21.00	20.24	20.48	20.61
			1	49	21.00	20.30	20.31	20.69

			25	0	20.00	19.31	19.45	19.75
			25	12	20.00	19.35	19.52	19.73
			25	24	20.00	19.53	19.38	19.74
			50	0	20.00	19.39	19.44	19.70
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20825/2507.5	21100/2535	21375/2562.5
LTE Band 7	15MHz	QPSK	1	0	22.00	21.38	21.68	21.42
			1	37	22.00	21.58	21.57	21.74
			1	74	22.00	21.63	21.25	21.74
			36	0	21.00	20.08	20.72	20.56
			36	18	21.00	20.34	20.60	20.90
			36	37	21.00	20.36	20.27	20.88
			75	0	21.00	20.45	20.46	20.72
		16QAM	1	0	21.00	20.13	20.73	20.56
			1	37	21.00	20.33	20.61	20.86
			1	74	21.00	20.37	20.28	20.81
			36	0	21.00	20.12	20.70	20.57
			36	18	21.00	20.34	20.58	20.83
			36	37	21.00	20.35	20.26	20.86
			75	0	20.00	19.45	19.41	19.70
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		20850/2510	21100/2535	21350/2560
LTE Band 7	20MHz	QPSK	1	0	22.00	21.28	21.76	21.30
			1	49	22.00	21.63	21.56	21.72
			1	99	22.00	21.68	21.20	21.78
			50	0	21.00	20.31	20.63	20.50
			50	24	21.00	20.32	20.63	20.52
			50	49	21.00	20.67	20.35	20.63
			100	0	21.00	20.46	20.50	20.56
		16QAM	1	0	21.00	20.42	20.66	20.41
			1	49	21.00	20.71	20.46	20.87
			1	99	21.00	20.81	20.09	20.86
			50	0	20.00	19.32	19.62	19.52
			50	24	20.00	19.35	19.61	19.52
			50	49	20.00	19.63	19.36	19.65
			100	0	20.00	19.48	19.47	19.56

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		24025/832.5	24075/837.5	24125/842.5
LTE Band 19	5MHz	QPSK	1	0	23.50	22.73	22.17	22.35
			1	12	23.50	22.16	23.18	23.06
			1	24	23.50	22.11	21.95	23.21
			12	0	22.00	21.37	21.50	21.65
			12	6	22.00	21.06	21.43	21.67
			12	11	22.00	21.87	21.60	21.71
			25	0	22.50	22.09	21.63	21.68
		16QAM	1	0	22.50	21.23	21.43	21.42
			1	12	22.50	21.26	22.36	21.24
			1	24	22.50	21.23	20.70	21.94
			12	0	21.50	19.62	20.76	20.93

			12	6	21.50	20.26	21.07	20.87
			12	11	21.50	21.35	20.88	21.30
			25	0	22.00	21.62	20.76	21.00
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		24050/835	24075/837.5	24100/840
LTE Band 19	10MHz	QPSK	1	0	22.50	22.09	22.18	22.18
			1	24	22.50	22.19	22.23	22.38
			1	49	22.50	22.32	22.39	22.42
			25	0	22/21/22	21.76	20.91	21.57
			25	12	22.00	21.40	21.48	21.59
			25	24	23/22/22	22.53	21.75	21.73
			50	0	22.00	21.27	21.64	21.68
		16QAM	1	0	22.00	21.36	21.42	21.32
			1	24	22.00	21.46	21.50	21.41
			1	49	22.00	21.56	21.99	21.48
			25	0	22.00	20.65	21.67	20.80
			25	12	22.00	20.68	20.74	20.85
			25	24	22.00	21.87	20.93	20.99
			50	0	21.50	21.19	20.88	20.96
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		24075/837.5	24075/837.5	24075/837.5
LTE Band 19	15MHz	QPSK	1	0	22.50		22.17	
			1	37	22.50		22.28	
			1	74	22.50		22.27	
			36	0	22.00		21.41	
			36	18	22.00		21.51	
			36	37	22.00		21.64	
			75	0	21.50		21.49	
		16QAM	1	0	22.00		21.38	
			1	37	22.00		21.46	
			1	74	22.00		21.67	
			36	0	22.00		21.42	
			36	18	22.00		21.47	
			36	37	22.00		21.63	
			75	0	21.00		20.67	

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	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	22.48	22.22	22.96
			1	2	23.00	22.49	22.22	22.93
			1	5	23.00	22.38	22.20	22.84
			3	0	23.00	22.56	22.41	22.69
			3	1	23.00	22.57	22.40	22.68
			3	2	23.00	22.51	22.34	22.71
			6	0	22.50	21.53	21.39	22.01
		16QAM	1	0	22.00	21.36	21.19	21.52
			1	2	22.00	21.40	21.24	21.52
			1	5	22.00	21.28	21.14	21.44
			3	0	21.50	21.36	21.20	21.42

			3	1	21.50	21.32	21.21	21.44
			3	2	21.50	21.36	21.18	21.39
			6	0	21.00	20.55	20.44	20.81
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26055/1851.5	26365/1882.5	26675/1913.5
LTE Band 25	3MHz	QPSK	1	0	23.50	23.15	22.74	22.77
			1	7	23.50	23.32	23.16	22.89
			1	14	23.50	21.89	21.68	22.72
			8	0	23.00	22.34	22.52	21.86
			8	4	23.00	22.22	22.06	21.85
			8	7	23.00	22.30	22.46	21.84
			15	0	22.50	22.10	22.45	21.74
		16QAM	1	0	23/22/22	22.61	21.95	21.56
			1	7	22.00	21.79	21.60	21.64
			1	14	22.00	21.19	20.97	21.52
			8	0	21.50	21.02	21.23	20.73
			8	4	21.50	21.39	20.79	20.73
			8	7	21.50	20.80	21.10	20.68
			15	0	23/24/21	22.69	23.46	20.72
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26065/1852.5	26365/1882.5	26665/1912.5
LTE Band 25	5MHz	QPSK	1	0	23.50	22.73	22.60	22.95
			1	12	23.50	22.76	22.62	23.11
			1	24	23.50	22.71	22.40	22.96
			12	0	22.00	21.64	21.54	21.75
			12	6	22.00	21.62	21.59	21.70
			12	11	22.00	21.59	21.46	21.76
			25	0	22.00	21.63	21.48	21.71
		16QAM	1	0	22.00	21.72	21.63	21.79
			1	12	22.00	21.74	21.66	21.83
			1	24	22.00	21.62	21.53	21.74
			12	0	21.00	20.60	20.67	20.64
			12	6	21.00	20.61	20.58	20.66
			12	11	21.00	20.63	20.56	20.66
			25	0	21.00	20.62	20.51	20.70
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26090/1855	26365/1882.5	26640/1910
LTE Band 25	10MHz	QPSK	1	0	22.50	22.16	22.34	21.96
			1	24	22.50	22.22	22.02	21.52
			1	49	22.50	22.49	21.85	21.87
			25	0	22.00	21.43	21.57	21.12
			25	12	22.00	21.44	21.59	21.12
			25	24	22.00	21.78	21.35	21.23
			50	0	22.00	21.66	21.51	21.23
		16QAM	1	0	22.00	21.20	21.59	21.19
			1	24	22.00	21.26	21.26	20.78
			1	49	22.00	21.53	21.08	21.13
			25	0	21.50	20.71	20.84	20.42

			25	12	21.50	20.70	20.87	20.36
			25	24	21.50	21.05	20.58	20.45
			50	0	21.00	20.90	20.77	20.47
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	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	22.12	22.51	22.07
			1	37	23.00	22.39	22.01	21.74
			1	74	23.00	22.66	21.82	21.85
			36	0	22.00	21.38	21.74	21.30
			36	18	22.00	21.60	21.27	20.97
			36	37	22.00	21.82	21.09	21.08
			75	0	22.00	21.65	21.36	21.23
		16QAM	1	0	22.00	21.34	21.78	21.33
			1	37	22.00	21.62	21.29	20.96
			1	74	22.00	21.85	21.05	21.09
			36	0	22.00	21.37	21.74	21.33
			36	18	22.00	21.60	21.28	21.00
			36	37	22.00	21.84	21.04	21.10
			75	0	21.00	20.83	20.58	20.38
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26140/1860	26365/1882.5	26590/1905
LTE Band 25	20MHz	QPSK	1	0	23.00	22.11	22.61	21.90
			1	49	23.00	22.48	22.08	22.01
			1	99	23.00	22.67	21.78	21.83
			50	0	22.50	21.47	21.93	21.59
			50	24	22.50	21.50	21.99	21.56
			50	49	22.50	22.10	21.44	21.19
			100	0	22.00	21.85	21.67	21.37
		16QAM	1	0	22.00	21.17	21.74	21.00
			1	49	22.00	21.64	21.28	21.07
			1	99	22.00	21.81	20.92	20.88
			50	0	21.50	20.73	21.21	20.81
			50	24	21.50	20.71	21.22	20.80
			50	49	21.50	21.34	20.68	20.43
			100	0	21.50	21.04	20.95	20.60

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26697/814.7	26740/819	26783/823.3
LTE Band 26a	1.4MHz	QPSK	1	0	24.00	23.61	23.58	23.57
			1	2	24.00	23.57	23.64	23.60
			1	5	24.00	23.58	23.61	23.63
			3	0	24.00	23.73	23.76	23.70
			3	1	24.00	23.71	23.71	23.71
			3	2	24.00	23.61	23.70	23.65
			6	0	23.00	22.75	22.67	22.77
		16QAM	1	0	23.00	22.45	22.36	22.50
			1	2	23.00	22.56	22.39	22.51
			1	5	23.00	22.48	22.31	22.43
			3	0	23.00	22.50	22.44	22.46

			3	1	23.00	22.45	22.47	22.47
			3	2	23.00	22.39	22.44	22.43
			6	0	22.00	21.74	21.64	21.75
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26705/818.5	26740/819	26775/822.5
LTE Band 26a	3MHz	QPSK	1	0	24.00	23.43	23.50	23.48
			1	7	24.00	23.54	23.56	23.60
			1	14	24.00	23.48	23.51	23.53
			8	0	23.00	22.58	22.67	22.72
			8	4	23.00	22.56	22.66	22.69
			8	7	23.00	22.57	22.70	22.76
			15	0	23.00	22.60	22.72	22.73
		16QAM	1	0	23.00	22.27	22.14	22.44
			1	7	23.00	22.34	22.29	22.61
			1	14	23.00	22.28	22.25	22.45
			8	0	22.00	21.59	21.62	21.71
			8	4	22.00	21.56	21.61	21.68
			8	7	22.00	21.60	21.61	21.76
			15	0	22.00	21.49	21.61	21.70
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26715/816.5	26740/819	26765/821.5
LTE Band 26a	5MHz	QPSK	1	0	24.00	23.65	23.82	23.71
			1	12	24.00	23.90	23.86	23.91
			1	24	24.00	23.71	23.79	23.73
			12	0	23.00	22.73	22.82	22.87
			12	6	23.00	22.72	22.83	22.83
			12	11	23.00	22.61	22.74	22.86
			25	0	23.00	22.75	22.76	22.80
		16QAM	1	0	23.00	22.68	22.70	22.83
			1	12	23.00	22.79	22.77	22.92
			1	24	23.00	22.66	22.70	22.78
			12	0	22.00	21.67	21.82	21.84
			12	6	22.00	21.68	21.79	21.86
			12	11	22.00	21.60	21.71	21.89
			25	0	22.00	21.76	21.80	21.88
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		/	26740/819	/
LTE Band 26a	10MHz	QPSK	1	0	24.00	/	23.83	/
			1	24	24.00	/	23.91	/
			1	49	24.00	/	23.86	/
			25	0	23.00	/	22.89	/
			25	12	23.00	/	22.92	/
			25	24	23.00	/	22.78	/
			50	0	23.00	/	22.83	/
		16QAM	1	0	23.00	/	22.64	/
			1	24	23.00	/	22.71	/
			1	49	23.00	/	22.64	/
			25	0	22.00	/	21.89	/
			25	12	22.00	/	21.90	/
			25	24	22.00	/	21.78	/

			50	0	22.00	/	21.87	/
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Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26797/824.7	26915/836.5	27033/848.3
LTE Band 26b	1.4MHz	QPSK	1	0	24.00	23.72	23.65	23.54
			1	2	24.00	23.72	23.68	23.50
			1	5	24.00	23.67	23.65	23.57
			3	0	24.00	23.74	23.77	23.60
			3	1	24.00	23.73	23.80	23.57
			3	2	24.00	23.72	23.76	23.61
			6	0	23.00	22.85	22.85	22.59
		16QAM	1	0	23.00	22.57	22.57	22.24
			1	2	23.00	22.58	22.61	22.35
			1	5	23.00	22.52	22.51	22.33
			3	0	23.00	22.55	22.55	22.41
			3	1	23.00	22.53	22.52	22.43
			3	2	23.00	22.51	22.53	22.39
			6	0	22.00	21.78	21.80	21.47
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26805/825.5	26915/836.5	27025/847.5
LTE Band 26b	3MHz	QPSK	1	0	24.00	23.57	23.50	23.33
			1	7	24.00	23.66	23.62	23.46
			1	14	24.00	23.50	23.49	23.41
			8	0	23.00	22.71	22.74	22.58
			8	4	23.00	22.72	22.72	22.61
			8	7	23.00	22.75	22.72	22.53
			15	0	23.00	22.76	22.75	22.59
		16QAM	1	0	23.00	22.51	22.50	22.22
			1	7	23.00	22.58	22.61	22.29
			1	14	23.00	22.48	22.52	22.16
			8	0	22.00	21.69	21.74	21.50
			8	4	22.00	21.71	21.75	21.53
			8	7	22.00	21.74	21.71	21.43
			15	0	22.00	21.72	21.74	21.47
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26815/826.5	26915/836.5	27015/846.5
LTE Band 26b	5MHz	QPSK	1	0	24.00	23.89	23.88	23.61
			1	12	24.00	23.99	23.93	23.73
			1	24	24.00	23.83	23.81	23.62
			12	0	23.00	22.66	22.91	22.62
			12	6	23.00	22.72	22.92	22.67
			12	11	23.00	22.91	22.70	22.31
			25	0	23.00	22.84	22.84	22.49
		16QAM	1	0	23.00	22.79	22.79	22.65
			1	12	23.00	22.88	22.87	22.78
			1	24	23.00	22.75	22.68	22.65
			12	0	22.00	21.65	21.85	21.65
			12	6	22.00	21.67	21.85	21.70

			12	11	22.00	21.83	21.69	21.40
			25	0	22.00	21.84	21.87	21.51
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26840/829	26915/836.5	26990/844
LTE Band 26b	10MHz	QPSK	1	0	24.00	23.89	23.87	23.88
			1	24	24.00	23.83	23.90	23.77
			1	49	24.00	23.92	23.81	23.67
			25	0	23.50	22.61	23.06	22.45
			25	12	23.50	22.60	23.02	22.44
			25	24	23.50	22.79	22.69	22.36
			50	0	23.00	22.76	22.95	22.41
		16QAM	1	0	23.00	22.83	22.92	22.65
			1	24	23.00	22.88	22.89	22.54
			1	49	23.00	22.88	22.74	22.47
			25	0	22.50	21.58	22.02	21.45
			25	12	22.50	21.55	22.04	21.46
			25	24	22.50	21.78	21.71	21.40
			50	0	22.00	21.76	21.90	21.47
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		26865/831.5	26915/836.5	26965/841.5
LTE Band 26b	15MHz	QPSK	1	0	24.00	23.83	23.86	23.80
			1	37	24.00	23.99	23.94	23.80
			1	74	24.00	23.76	23.66	23.55
			36	0	23.50	22.77	22.82	22.95
			36	18	23.50	23.01	22.95	22.82
			36	37	23.50	22.78	22.62	22.64
			75	0	23.00	22.72	23.00	22.74
		16QAM	1	0	23.00	22.82	22.83	22.94
			1	37	23.00	22.97	22.94	22.84
			1	74	23.00	22.81	22.63	22.64
			36	0	23.00	22.75	22.83	22.95
			36	18	23.00	23.00	22.95	22.85
			36	37	23.00	22.79	22.61	22.64
			75	0	22.00	21.61	21.93	21.70

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		37775/2572.5	38000/2595	38225/2617.5
LTE Band 38	5MHz	QPSK	1	0	24.00	23.51	23.82	23.53
			1	12	24.00	23.52	24.00	23.53
			1	24	24.00	23.46	23.97	23.53
			12	0	23.00	22.56	22.94	22.60
			12	6	23.00	22.58	22.84	22.60
			12	11	23.00	22.54	22.81	22.56
			25	0	23.00	22.60	22.88	22.54
		16QAM	1	0	23.00	22.41	22.81	22.53
			1	12	23.00	22.43	22.82	22.58
			1	24	23.00	22.37	22.96	22.59
			12	0	22.00	21.54	21.84	21.59

			12	6	22.00	21.56	21.85	21.59
			12	11	22.00	21.54	22.00	21.56
			25	0	22.00	21.47	21.91	21.65
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		37800/2575	38000/2595	38200/2615
LTE Band 38	10MHz	QPSK	1	0	24.00	23.64	24.00	23.41
			1	24	24.00	23.63	23.62	23.18
			1	49	24.00	23.69	23.93	23.30
			25	0	23.00	22.53	22.91	22.68
			25	12	23.00	22.54	22.92	22.46
			25	24	23.00	22.54	22.88	22.46
			50	0	23.00	22.60	22.87	22.57
		16QAM	1	0	23.50	22.78	23.08	22.53
			1	24	23.50	22.90	22.78	22.12
			1	49	23.50	22.84	23.11	22.51
			25	0	22.50	21.55	21.85	21.59
			25	12	22.50	21.55	21.86	21.59
			25	24	22.50	21.61	22.05	21.59
			50	0	22.00	21.54	21.94	21.62
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		37825/2577.5	38000/2595	38175/2615
LTE Band 38	15MHz	QPSK	1	0	24.00	23.45	23.77	23.31
			1	37	24.00	23.60	23.97	23.25
			1	74	24.00	23.74	23.80	23.12
			36	0	23.00	22.47	22.75	22.40
			36	18	23.00	22.47	22.75	22.40
			36	37	23.00	22.47	22.76	22.40
			75	0	23.00	22.48	22.76	22.40
		16QAM	1	0	23.50	22.64	22.81	22.72
			1	37	23.50	22.62	23.10	22.48
			1	74	23.50	22.81	22.83	22.42
			36	0	23.00	22.47	22.76	22.40
			36	18	23.00	22.47	22.76	22.40
			36	37	23.00	22.48	22.76	22.41
			75	0	22.00	21.45	21.76	21.46
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		37850/2580	38000/2595	38150/2610
LTE Band 38	20MHz	QPSK	1	0	24.00	23.38	23.63	23.52
			1	49	24.00	23.39	23.37	23.04
			1	99	24.00	23.75	23.53	23.14
			50	0	23.00	22.43	22.62	22.65
			50	24	23.00	22.44	22.64	22.57
			50	49	23.00	22.61	22.72	22.29
			100	0	23.00	22.47	22.67	22.52
		16QAM	1	0	23.00	22.28	22.54	22.97
			1	49	23.00	22.37	22.27	22.45
			1	99	23.00	22.68	22.55	22.58
			50	0	22.00	21.42	21.88	21.54
			50	24	22.00	21.43	21.89	21.54
			50	49	22.00	21.64	21.74	21.31

			100	0	22.00	21.47	21.73	21.54
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Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39675/2498.5	40620/2593	41565/2687.5
LTE Band 41	5MHz	QPSK	1	0	23.00	21.43	21.64	22.43
			1	12	23.00	21.51	21.79	22.69
			1	24	23.00	21.32	21.66	22.56
			12	0	22.00	20.43	20.69	21.59
			12	6	22.00	20.45	20.70	21.57
			12	11	22.00	20.44	20.63	21.57
			25	0	22.00	20.42	20.66	21.55
		16QAM	1	0	22.00	20.83	20.74	21.76
			1	12	22.00	20.88	20.83	21.93
			1	24	22.00	20.65	20.72	21.81
			12	0	20.50	19.53	19.59	20.49
			12	6	20.50	19.48	19.60	20.49
			12	11	20.50	19.45	19.60	20.48
			25	0	21.00	19.44	19.65	20.57
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39700/2501	40620/2593	41540/2685
LTE Band 41	10MHz	QPSK	1	0	23.00	21.54	21.69	22.47
			1	24	23.00	21.49	21.81	22.58
			1	49	23.00	21.38	21.77	22.64
			25	0	22.00	20.42	20.68	21.46
			25	12	22.00	20.39	20.67	21.51
			25	24	22.00	20.41	20.70	21.49
			50	0	22.00	20.44	20.68	21.53
		16QAM	1	0	22.00	20.73	20.37	21.39
			1	24	22.00	20.64	20.42	21.49
			1	49	22.00	20.58	20.45	21.53
			25	0	21.00	19.50	19.68	20.53
			25	12	21.00	19.46	19.69	20.52
			25	24	21.00	19.49	19.65	20.54
			50	0	20.50	19.41	19.70	20.48
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39725/2503.5	40620/2593	41515/2682.5
LTE Band 41	15MHz	QPSK	1	0	23.00	21.53	21.75	22.31
			1	37	23.00	21.47	21.87	22.60
			1	74	23.00	21.34	21.89	22.59
			36	0	22.00	20.39	20.67	21.48
			36	18	22.00	20.40	20.66	21.50
			36	37	22.00	20.35	20.70	21.49
			75	0	21.50	20.37	20.71	21.48
		16QAM	1	0	22.00	20.62	20.55	21.21
			1	37	22.00	20.67	20.65	21.51
			1	74	22.00	20.59	20.62	21.47
			36	0	22.00	20.39	20.75	21.46

			36	18	22.00	20.38	20.65	21.51
			36	37	22.00	20.38	20.65	21.47
			75	0	20.50	19.40	19.69	20.44
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		39750/2506	40620/2593	41490/2680
LTE Band 41	20MHz	QPSK	1	0	23.00	21.45	21.55	22.15
			1	49	23.00	21.50	21.73	22.55
			1	99	23.00	21.46	21.74	22.61
			50	0	21.50	20.26	20.68	21.30
			50	24	21.50	20.30	20.73	21.32
			50	49	21.50	20.57	20.70	21.42
			100	0	21.50	20.44	20.70	21.32
		16QAM	1	0	21.50	20.46	20.21	20.80
			1	49	21.50	20.50	20.32	21.18
			1	99	21.50	20.49	20.35	21.18
			50	0	20.50	19.33	19.74	20.29
			50	24	20.50	19.35	19.73	20.25
			50	49	20.50	19.63	19.69	20.35
			100	0	20.50	19.42	19.66	20.33

Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131979/1710.7	132322/1745	132665/1779.3
LTE Band 66	1.4MHz	QPSK	1	0	23.50	23.40	23.10	23.30
			1	2	23.50	23.37	23.10	23.28
			1	5	23.50	23.35	23.06	23.25
			3	0	24.00	23.55	23.22	23.39
			3	1	24.00	23.53	23.20	23.37
			3	2	24.00	23.49	23.18	23.41
			6	0	23.00	22.57	22.28	22.43
		16QAM	1	0	22.50	22.29	22.06	22.13
			1	2	22.50	22.35	22.04	22.12
			1	5	22.50	22.27	21.92	22.12
			3	0	22.50	22.30	22.00	22.23
			3	1	22.50	22.30	21.99	22.20
			3	2	22.50	22.24	21.97	22.20
			6	0	22.00	21.54	21.25	21.32
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131987/1711.5	132322/1745	132657/1778.5
LTE Band 66	3MHz	QPSK	1	0	23.50	23.29	23.05	23.21
			1	7	23.50	23.37	23.10	23.29
			1	14	23.50	23.31	22.94	23.15
			8	0	23.00	22.47	22.18	22.34
			8	4	23.00	22.50	22.20	22.30
			8	7	23.00	22.45	22.23	22.34
			15	0	22.50	22.46	22.16	22.38
		16QAM	1	0	22.50	22.07	22.03	22.05
			1	7	22.50	22.18	22.10	22.11

			1	14	22.50	22.09	21.98	21.97
			8	0	22.00	21.51	21.18	21.30
			8	4	22.00	21.45	21.22	21.31
			8	7	22.00	21.44	21.18	21.31
			15	0	21.50	21.36	21.19	21.24
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		131997/1712.5	132322/1745	132647/1777.5
LTE Band 66	5MHz	QPSK	1	0	24.00	23.61	23.45	23.39
			1	12	24.00	23.73	23.41	23.53
			1	24	24.00	23.59	23.23	23.41
			12	0	23.00	22.54	22.27	22.44
			12	6	23.00	22.57	22.26	22.49
			12	11	23.00	22.50	22.25	22.43
		16QAM	25	0	23.00	22.55	22.30	22.45
			1	0	23.00	22.55	22.31	22.49
			1	12	23.00	22.60	22.35	22.61
			1	24	23.00	22.55	22.15	22.53
			12	0	22.00	21.56	21.21	21.48
			12	6	22.00	21.54	21.24	21.47
			12	11	22.00	21.52	21.20	21.49
			25	0	22.00	21.62	21.33	21.43
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132022/1715	132322/1745	132622/1775
LTE Band 66	10MHz	QPSK	1	0	24.00	23.63	23.51	23.47
			1	24	24.00	23.66	23.34	23.49
			1	49	24.00	23.64	23.17	23.48
			25	0	23.00	22.51	22.29	22.45
			25	12	23.00	22.56	22.25	22.42
			25	24	23.00	22.55	22.26	22.51
		16QAM	50	0	23.00	22.55	22.32	22.52
			1	0	23.00	22.46	22.32	22.47
			1	24	23.00	22.47	22.07	22.55
			1	49	23.00	22.49	21.94	22.50
			25	0	22.00	21.63	21.34	21.42
			25	12	22.00	21.57	21.39	21.44
			25	24	22.00	21.59	21.27	21.48
			50	0	22.00	21.59	21.30	21.53
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132047/1717.5	132322/1745	132597/1772.5
LTE Band 66	15MHz	QPSK	1	0	24.00	23.60	23.44	23.31
			1	37	24.00	23.71	23.29	23.49
			1	74	24.00	23.65	23.06	23.36
			36	0	23.00	22.63	22.60	22.28
			36	18	23.00	22.79	22.44	22.54
			36	37	23.00	22.73	22.19	22.50
			75	0	23.00	22.63	22.32	22.43
		16QAM	1	0	23.00	22.65	22.59	22.31
			1	37	23.00	22.82	22.48	22.53

			1	74	23.00	22.68	22.18	22.45
			36	0	23.00	22.66	22.59	22.30
			36	18	23.00	22.75	22.45	22.53
			36	37	23.00	22.68	22.18	22.45
			75	0	22.00	21.61	21.30	21.35
Band	Band Width	Modulation	RB Configuration		Tune-up (dBm)	Channel/Frequency(MHz)		
			RB Size	RB Offset		132072/1720	132322/1745	132572/1770
LTE Band 66	20MHz	QPSK	1	0	24.00	23.55	23.52	23.13
			1	49	24.00	23.73	23.42	23.52
			1	99	24.00	23.64	23.06	23.39
			50	0	23.00	22.70	22.36	22.30
			50	24	23.00	22.68	22.36	22.35
			50	49	23.00	22.72	22.22	22.40
			100	0	23.00	22.70	22.28	22.33
		16QAM	1	0	23.00	22.43	22.45	22.04
			1	49	23.00	22.66	22.32	22.42
			1	99	23.00	22.58	21.92	22.31
			50	0	22.00	21.62	21.35	21.31
			50	24	22.00	21.66	21.34	21.31
			50	49	22.00	21.70	21.18	21.39
			100	0	22.00	21.68	21.28	21.31

8.4. Wi-Fi & BT Output Power

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11b	1	2412	11.50	11.43
	6	2437	11.50	10.97
	11	2462	11.50	10.22
802.11g	1	2412	11.00	10.65
	6	2437	11.00	10.40
	11	2462	11.00	9.66
802.11n HT20	1	2412	11.00	10.55
	6	2437	11.00	10.54
	11	2462	11.00	9.61
802.11n HT40	3	2422	10.00	9.69
	6	2437	10.00	9.64
	9	2452	10.00	9.02

Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	36	5180	8.00	7.70
	40	5200	8.00	7.45
	48	5240	8.00	7.84
802.11n HT20	36	5180	8.00	7.13
	40	5200	8.00	7.60
	48	5240	8.00	7.80
802.11n HT40	38	5190	8.00	7.62
	46	5230	8.00	7.64
802.11ac VHT20	36	5180	7.50	6.91
	40	5200	7.50	7.38
	48	5240	7.50	7.40
802.11ac VHT40	38	5190	8.00	7.00
	46	5230	8.00	7.50
802.11ac VHT80	42	5210	7.00	6.84

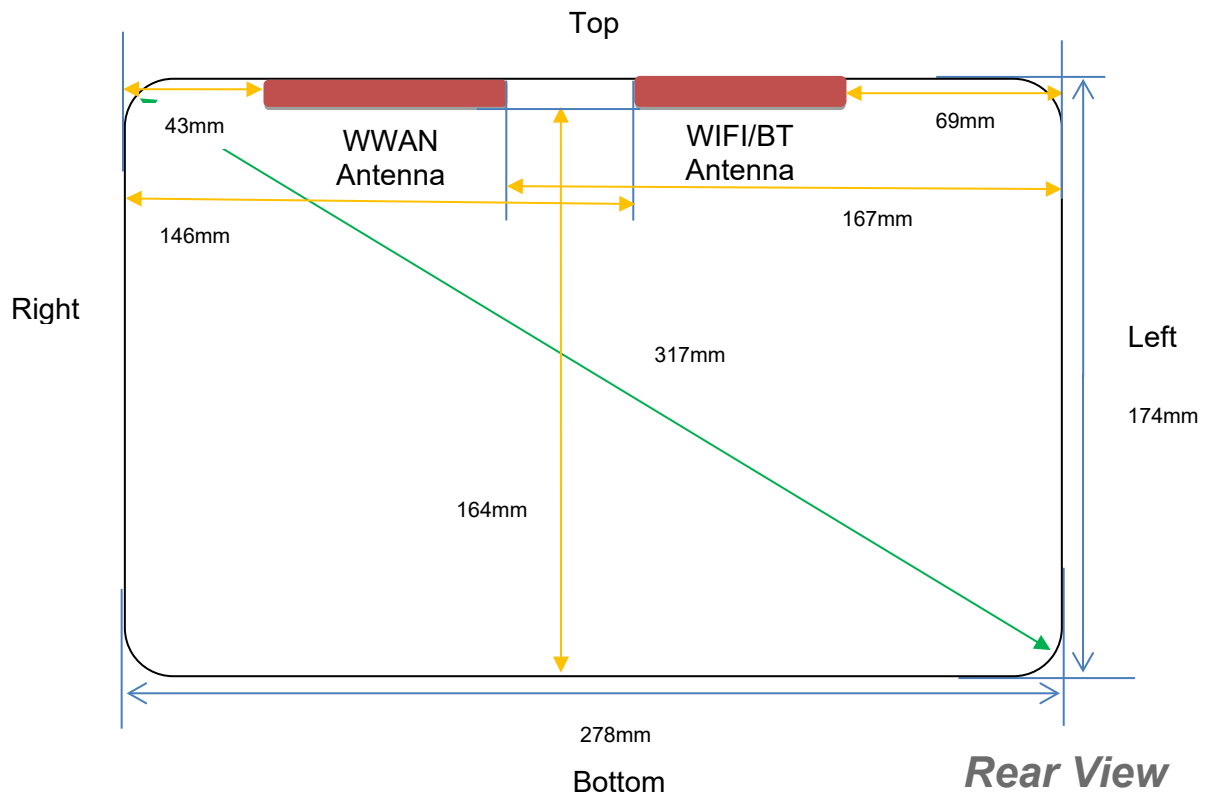
Mode	Channel	Frequency (MHz)	Tune-up (dBm)	Output Power (dBm)
802.11a	149	5745	11.50	10.87
	157	5785	11.50	11.43
	165	5825	11.50	11.34
802.11n HT20	149	5745	11.50	11.28
	157	5785	11.50	11.37
	165	5825	11.50	11.14

802.11n HT40	151	5755	12.50	11.37
	159	5795	12.50	12.16
802.11ac VHT20	149	5745	12.00	11.19
	157	5785	12.00	11.98
	165	5825	12.00	11.77
802.11ac VHT40	151	5755	12.50	11.40
	159	5795	12.50	12.35
802.11ac VHT80	155	5775	12.00	11.56

BR+EDR	Output Power (dBm)				
	Data Rates	Tune-up (dBm)	Channel		
			0CH	39CH	78CH
	1M	11.00	10.23	10.36	10.92
	2M	10.00	8.62	8.66	9.08
	3M	10.00	8.35	8.60	9.11

Mode	Channel	Tune-up (dBm)	Output Power (dBm)
BLE1M	CH00	7.00	6.97
	CH19	7.00	6.76
	CH39	8.00	7.04
BLE2M	CH00	7.00	6.95
	CH19	7.00	6.72
	CH39	8.00	7.02

9. Antenna Location



Antenna information:

Distance of The Antenna to the EUT surface and edge (mm)					
Antennas	Back Side	Top Side	Bottom Side	Left Side	Right Side
BT/WLAN	5	5	164	69	146
WWAN	5	5	164	167	43

Note: When the minimum separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Positions for SAR tests		
Test separation distances > 50 mm		
Exposure Positions	Tune-up Maximum power of WLAN 2.4G/ Bluetooth	
	11.50 dBm/11.00 dBm	14.13 mW/12.59 mW
Left Side	Antenna to user(mm)	69
	SAR exclusion threshold(mW)	286
	SAR testing required?	NO
Right Side	Antenna to user(mm)	146
	SAR exclusion threshold(mW)	1056
	SAR testing required?	NO

Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1236
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WLAN 5.2G	
	8.00 dBm	6.31 mW
Left Side	Antenna to user(mm)	69
	SAR exclusion threshold(mW)	256
	SAR testing required?	NO
Right Side	Antenna to user(mm)	146
	SAR exclusion threshold(mW)	1026
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1206
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WLAN 5.8G	
	12.50 dBm	17.78 mW
Left Side	Antenna to user(mm)	69
	SAR exclusion threshold(mW)	252
	SAR testing required?	NO
Right Side	Antenna to user(mm)	146
	SAR exclusion threshold(mW)	1022
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1202
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of GSM 850	
	29.00 dBm	794.33 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	815
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	799
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of GSM 1900	
	29.50 dBm	891.25 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1279
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1249

	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WCDMA Band 2	
	23.00 dBm	199.53 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1279
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1249
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WCDMA Band 4	
	23.50 dBm	223.87 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1279
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1249
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of WCDMA Band 5	
	22.00 dBm	158.49 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	815
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	799
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 2	
	23.00 dBm	199.53 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1279
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1249
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 4	
	23.50 dBm	223.87 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1279
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1249

	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 5	
	23.00 dBm	199.53 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	815
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	799
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 7	
	22.00 dBm	158.49 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1266
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1236
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 19	
	22.50 dBm	177.83 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	815
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	799
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 25	
	23.00 dBm	199.53 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1279
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1249
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 26a	
	24.00 dBm	251.19 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	815
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	799

	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 26b	
	24.00 dBm	251.19 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	815
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	799
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 38	
	24.00 dBm	251.19 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1266
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1236
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 41	
	23.00 dBm	199.53 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1266
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1236
	SAR testing required?	NO
Exposure Positions	Tune-up Maximum power of LTE Band 66	
	24.00 dBm	251.19 mW
Left Side	Antenna to user(mm)	167
	SAR exclusion threshold(mW)	1279
	SAR testing required?	NO
Bottom Side	Antenna to user(mm)	164
	SAR exclusion threshold(mW)	1249
	SAR testing required?	NO

NOTE: Refer to section 4.3.1 of KDB 447498 D01.

10. Stand-alone SAR test exclusion

Refer to FCC KDB 447498D01, the 1-g SAR and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where:

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Mode	Pmax (dBm)	Pmax (mW)	Distance (mm)	f (GHz)	Calculation Result	SAR Exclusion threshold	SAR test exclusion
Bluetooth	11.00	12.59	5	2.480	4	3	NO

NOTE: Standalone SAR test exclusion for Bluetooth.

11. SAR Measurement Results

< GSM 850 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	189/836.4	GPRS(GMSK 4TS)	0.118	0.076	4.55	28.94	29.00	0.120	2025/4/7	1#
Right Side	189/836.4	GPRS(GMSK 4TS)	0.056	0.034	0.14	28.94	29.00	0.057	2025/4/7	
Top Side	189/836.4	GPRS(GMSK 4TS)	0.078	0.049	2.94	28.94	29.00	0.079	2025/4/7	

< GSM 1900 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1- g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	661/1880	GPRS(GMSK 2TS)	0.257	0.162	0.18	29.13	29.50	0.280	2025/4/9	2#
Right Side	661/1880	GPRS(GMSK 2TS)	0.112	0.068	-1.81	29.13	29.50	0.122	2025/4/9	
Top Side	661/1880	GPRS(GMSK 2TS)	0.156	0.093	2.99	29.13	29.50	0.170	2025/4/9	

< WCDMA Band 2 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1- g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	9400/1880	RMC12.2K	0.297	0.178	3.99	22.96	23.00	0.300	2025/4/9	3#
Right Side	9400/1880	RMC12.2K	0.120	0.070	-3.83	22.96	23.00	0.121	2025/4/9	
Top Side	9400/1880	RMC12.2K	0.180	0.108	-1.17	22.96	23.00	0.182	2025/4/9	

< WCDMA Band 4 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1- g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	1413/1732.6	RMC12.2K	0.356	0.217	2.66	23.00	23.50	0.399	2025/4/8	4#
Right Side	1413/1732.6	RMC12.2K	0.148	0.087	-1.28	23.00	23.50	0.166	2025/4/8	
Top Side	1413/1732.6	RMC12.2K	0.234	0.138	2.75	23.00	23.50	0.263	2025/4/8	

< WCDMA Band 5 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
Back Side	4182/836.4	RMC12.2K	0.333	0.206	-1.61	21.72	22.00	0.355	2025/4/7	5#
Right Side	4182/836.4	RMC12.2K	0.136	0.081	-1.62	21.72	22.00	0.145	2025/4/7	
Top Side	4182/836.4	RMC12.2K	0.204	0.121	-3.66	21.72	22.00	0.218	2025/4/7	

< LTE Band2 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	18900/1880	20M QPSK(1,99)	0.234	0.163	3.01	21.71	23.00	0.315	2025/4/9	10#
Right Side	18900/1880	20M QPSK(1,99)	0.096	0.064	-3.12	21.71	23.00	0.129	2025/4/9	
Top Side	18900/1880	20M QPSK(1,99)	0.156	0.108	0.77	21.71	23.00	0.210	2025/4/9	
50%RB										
Back Side	18900/1880	20M QPSK(50,24)	0.126	0.082	-2.36	22.30	22.50	0.132	2025/4/9	
Right Side	18900/1880	20M QPSK(50,24)	0.051	0.035	1.41	22.30	22.50	0.053	2025/4/9	
Top Side	18900/1880	20M QPSK(50,24)	0.083	0.057	1.53	22.30	22.50	0.087	2025/4/9	

< LTE Band4 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	20175/1732.5	20M QPSK(1,49)	0.187	0.137	4.58	23.22	23.50	0.199	2025/4/8	11#
Right Side	20175/1732.5	20M QPSK(1,49)	0.092	0.067	-2.05	23.22	23.50	0.098	2025/4/8	
Top Side	20175/1732.5	20M QPSK(1,49)	0.114	0.082	-2.85	23.22	23.50	0.122	2025/4/8	
50%RB										

Back Side	20175/1732.5	20M QPSK(50,49)	0.109	0.071	3.55	22.60	23.00	0.120	2025/4/8	
Right Side	20175/1732.5	20M QPSK(50,49)	0.047	0.039	3.93	22.60	23.00	0.052	2025/4/8	
Top Side	20175/1732.5	20M QPSK(50,49)	0.058	0.047	0.42	22.60	23.00	0.064	2025/4/8	

< LTE Band5 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	20525/836.5	10M QPSK(1,24)	0.361	0.296	-1.40	22.54	23.00	0.401	2025/4/7	12#
Right Side	20525/836.5	10M QPSK(1,24)	0.148	0.119	3.14	22.54	23.00	0.165	2025/4/7	
Top Side	20525/836.5	10M QPSK(1,24)	0.222	0.173	2.13	22.54	23.00	0.247	2025/4/7	
50%RB										
Back Side	20525/836.5	10M QPSK(25,24)	0.216	0.165	-3.77	21.53	22.00	0.241	2025/4/7	
Right Side	20525/836.5	10M QPSK(25,24)	0.075	0.061	-1.35	21.53	22.00	0.084	2025/4/7	
Top Side	20525/836.5	10M QPSK(25,24)	0.115	0.097	-3.38	21.53	22.00	0.128	2025/4/7	

< LTE Band7 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	21100/2535	20M QPSK(1,99)	0.335	0.212	2.84	21.20	22.00	0.403	2025/4/11	13#
Right Side	21100/2535	20M QPSK(1,99)	0.148	0.089	0.91	21.20	22.00	0.178	2025/4/11	
Top Side	21100/2535	20M QPSK(1,99)	0.204	0.128	-0.07	21.20	22.00	0.245	2025/4/11	
50%RB										
Back Side	21100/2535	20M QPSK(50,49)	0.184	0.121	3.28	20.35	21.00	0.214	2025/4/11	

Right Side	21100/2535	20M QPSK(50,49)	0.087	0.051	-0.85	20.35	21.00	0.101	2025/4/11	
Top Side	21100/2535	20M QPSK(50,49)	0.115	0.066	-3.21	20.35	21.00	0.134	2025/4/11	

< LTE Band19 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	24075/837.5	15M QPSK(1,37)	0.228	0.145	-4.02	22.28	22.50	0.240	2025/4/7	20#
Right Side	24075/837.5	15M QPSK(1,37)	0.092	0.056	3.09	22.28	22.50	0.097	2025/4/7	
Top Side	24075/837.5	15M QPSK(1,37)	0.156	0.098	-2.83	22.28	22.50	0.164	2025/4/7	
50%RB										
Back Side	24075/837.5	15M QPSK(36,37)	0.116	0.074	2.85	21.64	22.00	0.126	2025/4/7	
Right Side	24075/837.5	15M QPSK(36,37)	0.047	0.030	-0.93	21.64	22.00	0.051	2025/4/7	
Top Side	24075/837.5	15M QPSK(36,37)	0.081	0.055	2.05	21.64	22.00	0.088	2025/4/7	

< LTE Band25 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	26365/1882.5	20M QPSK(1,99)	0.449	0.301	-4.61	21.78	23.00	0.595	2025/4/9	14#
Right Side	26365/1882.5	20M QPSK(1,99)	0.184	0.123	0.34	21.78	23.00	0.244	2025/4/9	
Top Side	26365/1882.5	20M QPSK(1,99)	0.294	0.193	1.04	21.78	23.00	0.389	2025/4/9	
50%RB										
Back Side	26365/1882.5	20M QPSK(50,49)	0.259	0.157	0.98	21.44	22.50	0.331	2025/4/9	
Right Side	26365/1882.5	20M QPSK(50,49)	0.102	0.062	-4.06	21.44	22.50	0.130	2025/4/9	

Top Side	26365/1882.5	20M QPSK(50,49)	0.150	0.102	1.59	21.44	22.50	0.191	2025/4/9	
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< LTE Band26a >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	26740/819	10M QPSK(1,24)	0.185	0.120	-1.97	23.91	24.00	0.189	2025/4/7	17#
Right Side	26740/819	10M QPSK(1,24)	0.092	0.059	3.40	23.91	24.00	0.094	2025/4/7	
Top Side	26740/819	10M QPSK(1,24)	0.132	0.086	1.50	23.91	24.00	0.135	2025/4/7	
50%RB										
Back Side	26740/819	10M QPSK(25,12)	0.098	0.064	-0.72	22.92	23.00	0.100	2025/4/7	
Right Side	26740/819	10M QPSK(25,12)	0.049	0.032	-0.49	22.92	23.00	0.050	2025/4/7	
Top Side	26740/819	10M QPSK(25,12)	0.079	0.044	1.13	22.92	23.00	0.080	2025/4/7	

< LTE Band26b >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	26865/831.5	15M QPSK(1,37)	0.196	0.129	-1.21	23.94	24.00	0.199	2025/4/7	18#
Right Side	26865/831.5	15M QPSK(1,37)	0.096	0.062	1.27	23.94	24.00	0.097	2025/4/7	
Top Side	26865/831.5	15M QPSK(1,37)	0.126	0.081	-3.30	23.94	24.00	0.128	2025/4/7	
50%RB										
Back Side	26865/831.5	15M QPSK(36,18)	0.118	0.073	-3.86	22.95	23.50	0.134	2025/4/7	
Right Side	26865/831.5	15M QPSK(36,18)	0.049	0.037	-3.17	22.95	23.50	0.056	2025/4/7	
Top Side	26865/831.5	15M QPSK(36,18)	0.072	0.041	2.03	22.95	23.50	0.082	2025/4/7	

< LTE Band38 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			(W/kg)							
			1-g	10-g						
1RB										
Back Side	38000/2595	20M QPSK(1,99)	0.481	0.305	4.64	23.53	24.00	0.536	2025/4/11	15#
Right Side	38000/2595	20M QPSK(1,99)	0.208	0.131	0.69	23.53	24.00	0.232	2025/4/11	
Top Side	38000/2595	20M QPSK(1,99)	0.312	0.198	1.48	23.53	24.00	0.348	2025/4/11	
50%RB										
Back Side	38000/2595	20M QPSK(50,49)	0.260	0.176	3.91	22.72	23.00	0.277	2025/4/11	
Right Side	38000/2595	20M QPSK(50,49)	0.105	0.078	0.31	22.72	23.00	0.112	2025/4/11	
Top Side	38000/2595	20M QPSK(50,49)	0.174	0.114	4.25	22.72	23.00	0.186	2025/4/11	

< LTE Band41 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			(W/kg)							
			1-g	10-g						
1RB										
Back Side	40620/2593	20M QPSK(1,99)	0.457	0.292	-0.65	21.74	23.00	0.611	2025/4/11	16#
Right Side	40620/2593	20M QPSK(1,99)	0.184	0.112	0.41	21.74	23.00	0.246	2025/4/11	
Top Side	40620/2593	20M QPSK(1,99)	0.288	0.180	-3.05	21.74	23.00	0.385	2025/4/11	
50%RB										
Back Side	40620/2593	20M QPSK(50,49)	0.265	0.165	0.45	20.70	21.35	0.308	2025/4/11	
Right Side	40620/2593	20M QPSK(50,49)	0.097	0.058	2.05	20.70	21.35	0.113	2025/4/11	
Top Side	40620/2593	20M QPSK(50,49)	0.153	0.107	-1.33	20.70	21.35	0.178	2025/4/11	

< LTE Band66 >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift(%)	Conducted Power (dBm)	Tune-up Power (dBm)	Scaled SAR 1-g (W/Kg)	Date	Plot
			1-g	10-g						
1RB										
Back Side	132322/1745	20M QPSK(1,49)	0.256	0.179	-3.93	23.42	24.00	0.293	2025/4/8	19#
Right Side	132322/1745	20M QPSK(1,49)	0.116	0.077	-0.14	23.42	24.00	0.133	2025/4/8	
Top Side	132322/1745	20M QPSK(1,49)	0.156	0.109	-0.97	23.42	24.00	0.178	2025/4/8	
50%RB										
Back Side	132322/1745	20M QPSK(50,49)	0.151	0.092	4.60	22.22	23.00	0.181	2025/4/8	
Right Side	132322/1745	20M QPSK(50,49)	0.067	0.042	-3.88	22.22	23.00	0.080	2025/4/8	
Top Side	132322/1745	20M QPSK(50,49)	0.081	0.057	4.42	22.22	23.00	0.097	2025/4/8	

< WLAN 2.4G >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Back Side	1/2412	802.11b	0.209	0.131	3.38	11.43	11.50	0.212	2025/4/10	9#
Top Side	1/2412	802.11b	0.126	0.077	-1.74	11.43	11.50	0.128	2025/4/10	

< WLAN 5.2G >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Back Side	48/5240	802.11a	0.554	0.298	0.12	7.84	8.00	0.575	2025/4/14	7#
Top Side	48/5240	802.11a	0.336	0.174	1.65	7.84	8.00	0.349	2025/4/14	

< WLAN 5.8G >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Back Side	159/5795	802.11ac	0.662	0.353	0.43	12.35	12.50	0.685	2025/4/17	8#

		VHT40								
Top Side	159/5795	802.11ac VHT40	0.402	0.212	-3.20	12.35	12.50	0.416	2025/4/17	

< Bluetooth >

Test Position of Body with 0mm	Test channel /Freq.	Mode	SAR Value (W/kg)		Power Drift (±5%)	Conducted power (dBm)	Tune-up power (dBm)	Scaled SAR 1g (W/Kg)	Date	Plot
			1g	10g						
Back Side	78/2480	1DH5	0.285	0.201	-3.13	10.92	11.00	0.290	2025/4/10	6#
Top Side	78/2480	1DH5	0.192	0.134	3.06	10.92	11.00	0.196	2025/4/10	

12. Simultaneous Transmission Analysis

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

1) Scalar SAR summation $< 1.6\text{W/kg}$.

2) $\text{SPLSR} = \frac{(\text{SAR}_1 + \text{SAR}_2)^{1.5}}{d}$ / (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 $\text{SPLSR} \leq 0.04$, simultaneously transmission SAR measurement is not necessary.

No.	Simultaneous Tx	Body-worn	Hotspot
1	WWAN+WLAN	Yes	Yes
2	WWAN+Bluetooth	Yes	Yes

Note : WiFi and Bluetooth use the same antenna and cannot be transmitted at the same time.

Exposure Position		WWAN Band	DTS/DSS/NII Band	Simultaneous Tx SAR(W/Kg)
		SAR(W/Kg)	SAR(W/Kg)	
Body	Front Side	/	/	/
	Back Side	0.611	0.685	1.296
	Left Side	/	/	/
	Right Side	0.246	/	0.246
	Top Side	0.389	0.416	0.805
	Bottom Side	/	/	/

Note : The Simultaneous Tx is calculated based on the same configuration and test position.

Appendix A. Photo documentation

Refer to appendix Test Setup photo-SAR

Appendix B. System Check Plots

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MEASUREMENT 1 System Performance Check - 835MHz
MEASUREMENT 2 System Performance Check - 1800MHz
MEASUREMENT 3 System Performance Check - 1900MHz
MEASUREMENT 4 System Performance Check - 2450MHz
MEASUREMENT 5 System Performance Check - 2600MHz
MEASUREMENT 6 System Performance Check - 5200MHz
MEASUREMENT 7 System Performance Check - 5800MHz

MEASUREMENT 1

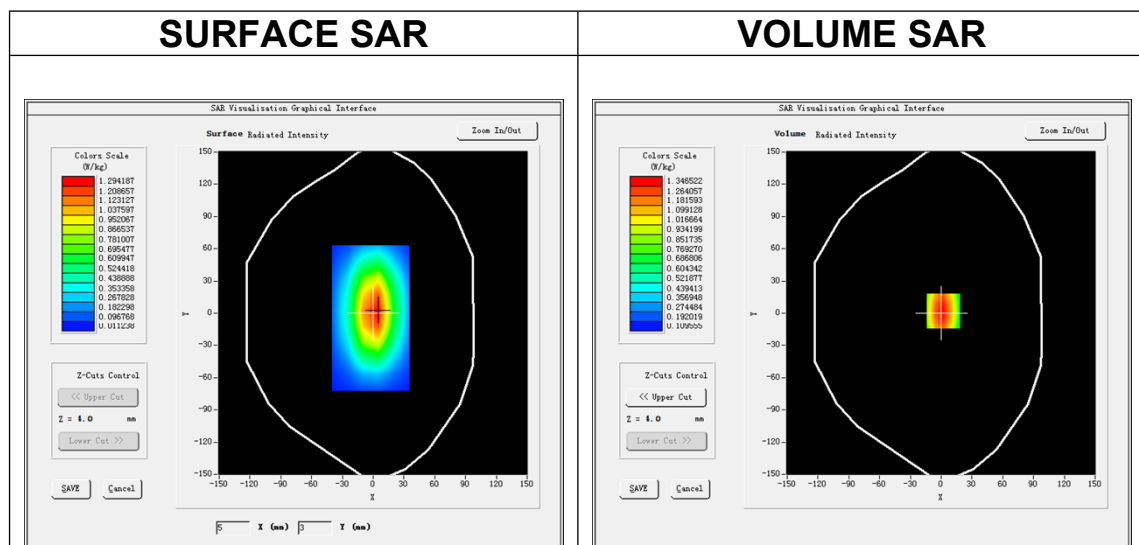
Date of measurement: 7/4/2025

A. Experimental conditions.

Area Scan	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
ZoomScan	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
Phantom	<u>Validation plane</u>
Device Position	<u>Dipole</u>
Band	<u>CW835</u>
Channels	<u>Middle</u>
Signal	<u>CW (Crest factor: 1.0)</u>
ConvF	<u>1.66</u>

B. SAR Measurement Results

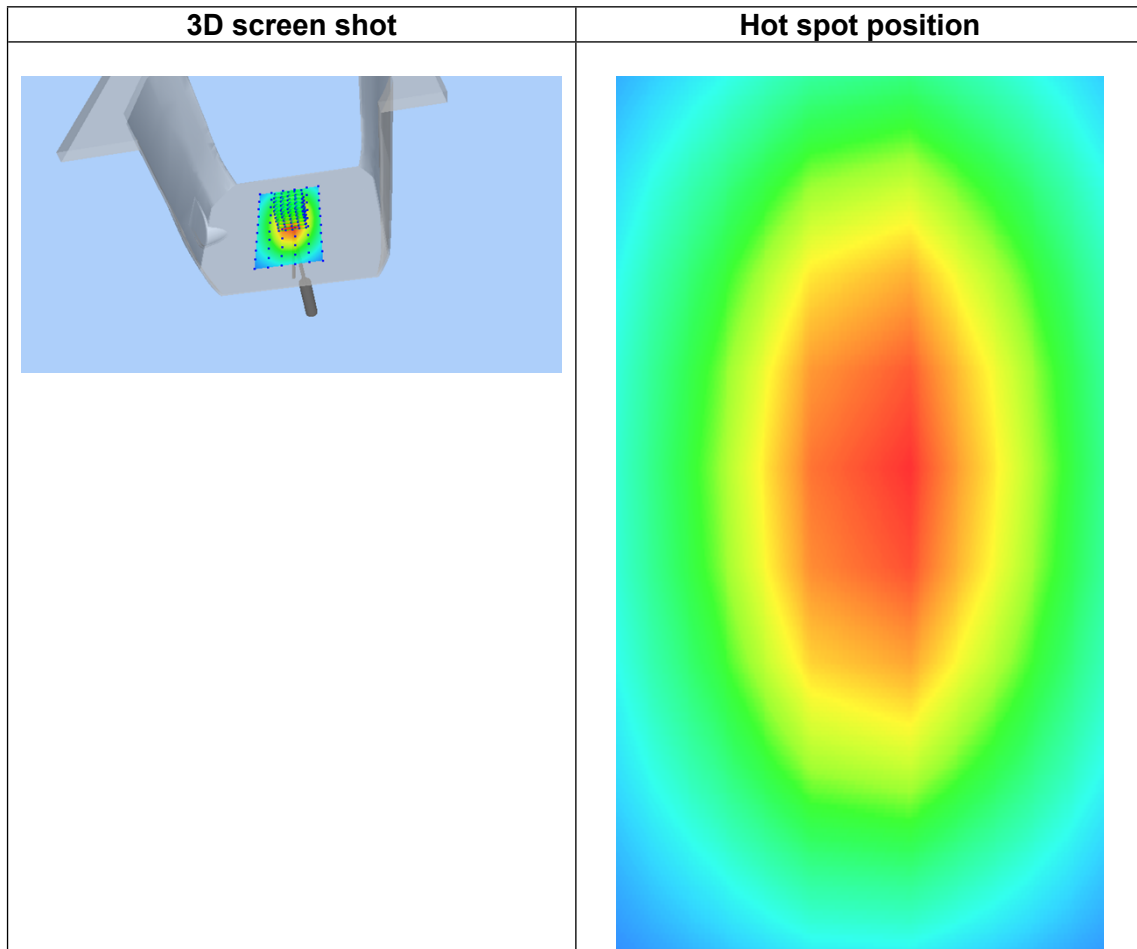
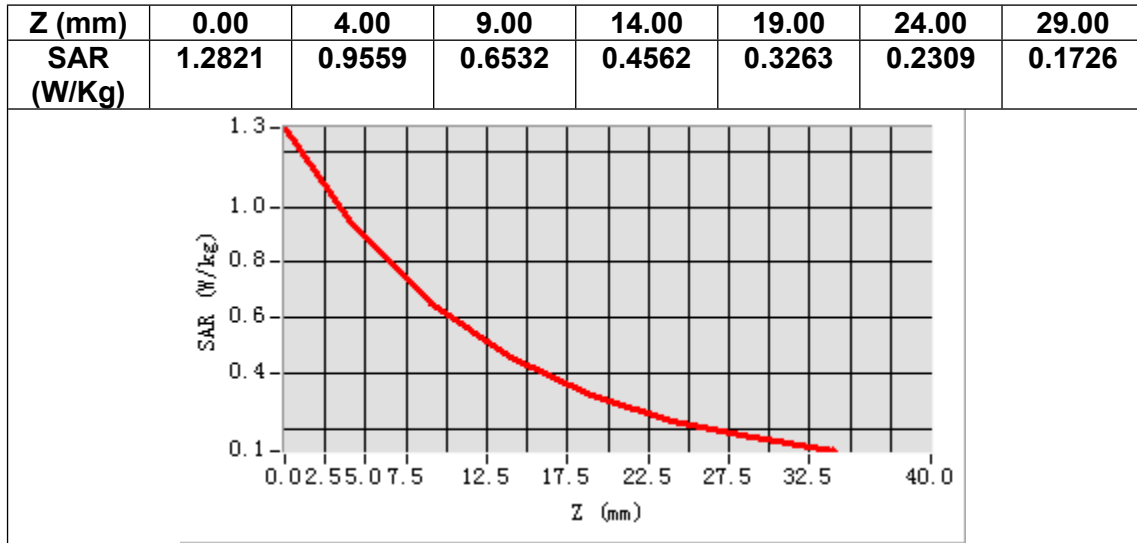
Frequency (MHz)	835.000000
Relative permittivity (real part)	42.012031
Relative permittivity (imaginary part)	19.131021
Conductivity (S/m)	0.941030
Variation (%)	0.310000



Maximum location: X=2.00, Y=2.00

SAR Peak: 1.87 W/kg

SAR 10g (W/Kg)	0.612031
SAR 1g (W/Kg)	1.011231



MEASUREMENT 2

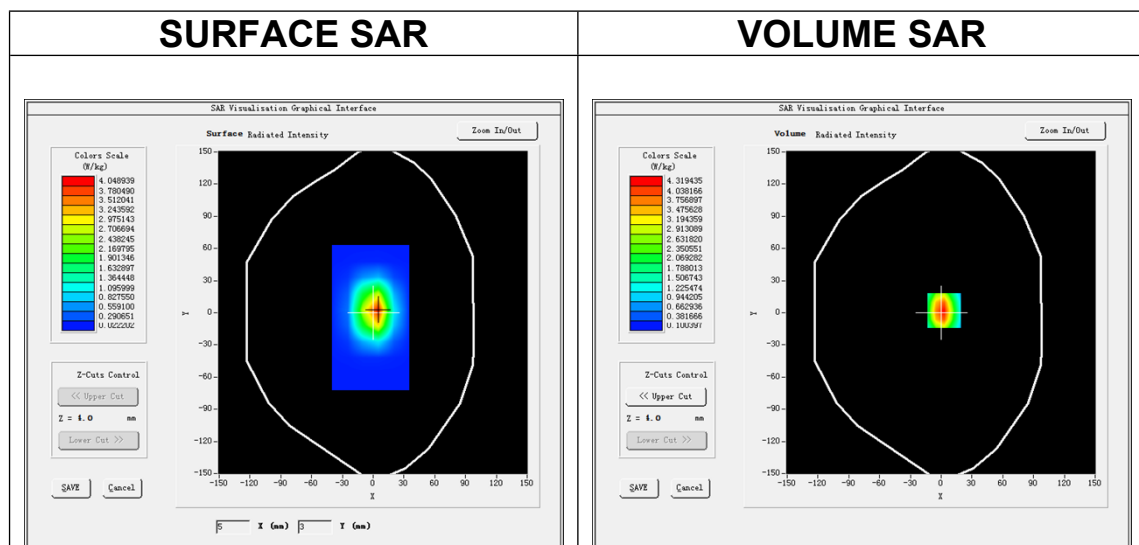
Date of measurement: 8/4/2025

A. Experimental conditions.

Area Scan	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
ZoomScan	<u>5x5x7, dx=8mm dy=8mm dz=5mm</u>
Phantom	<u>Validation plane</u>
Device Position	<u>Dipole</u>
Band	<u>CW1800</u>
Channels	<u>Middle</u>
Signal	<u>CW (Crest factor: 1.0)</u>
ConvF	<u>2.05</u>

B. SAR Measurement Results

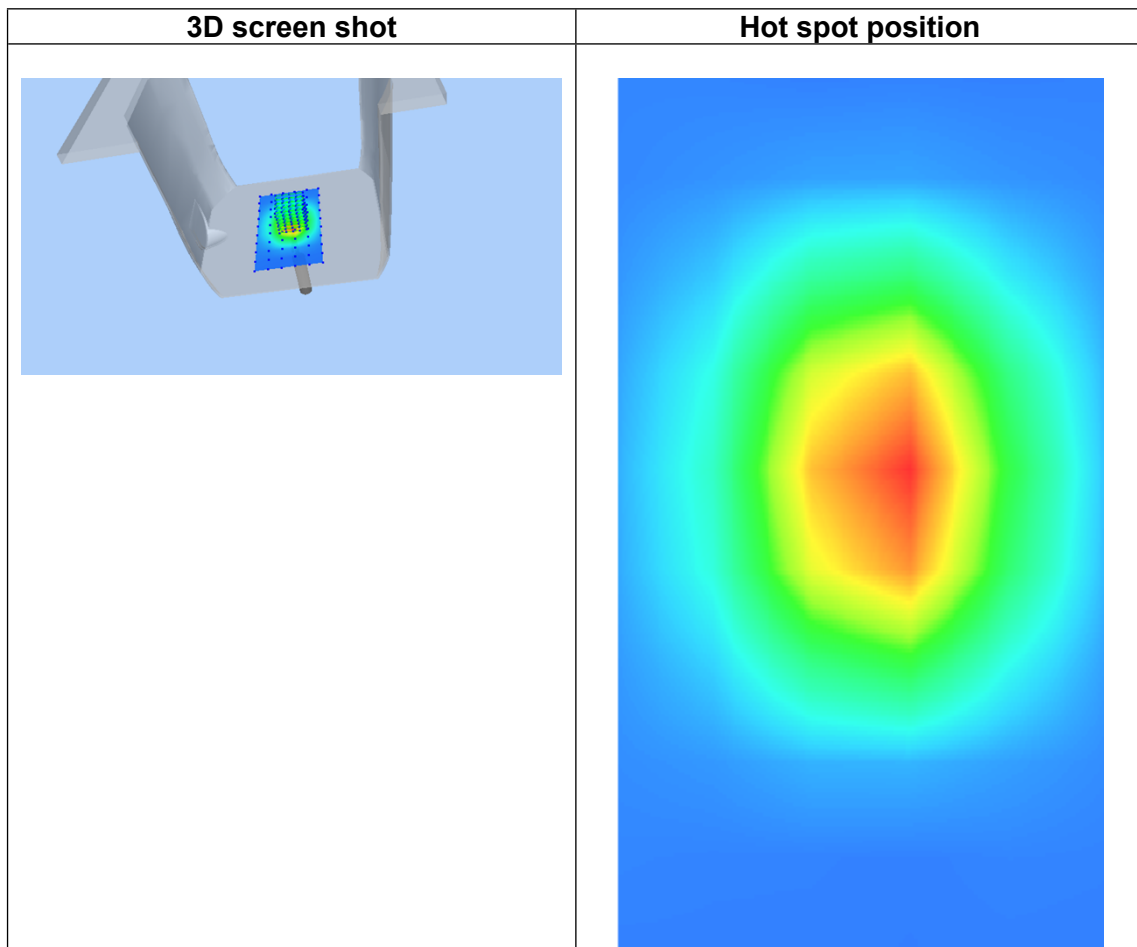
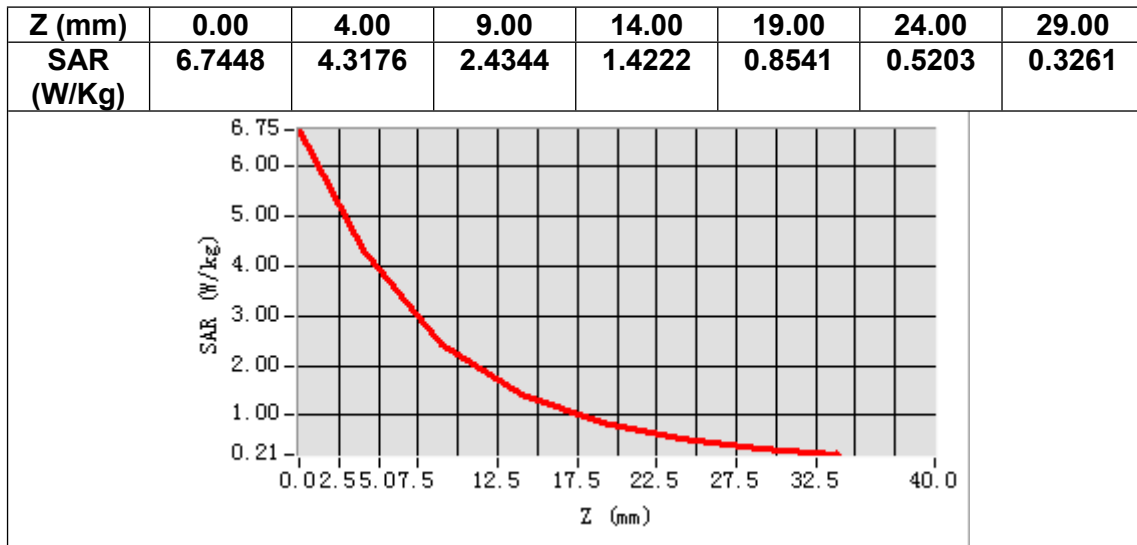
Frequency (MHz)	1800.000000
Relative permittivity (real part)	39.606403
Relative permittivity (imaginary part)	14.067180
Conductivity (S/m)	1.406718
Variation (%)	-0.140000



Maximum location: X=3.00, Y=2.00

SAR Peak: 6.82 W/kg

SAR 10g (W/Kg)	2.024557
SAR 1g (W/Kg)	3.832112



MEASUREMENT 3

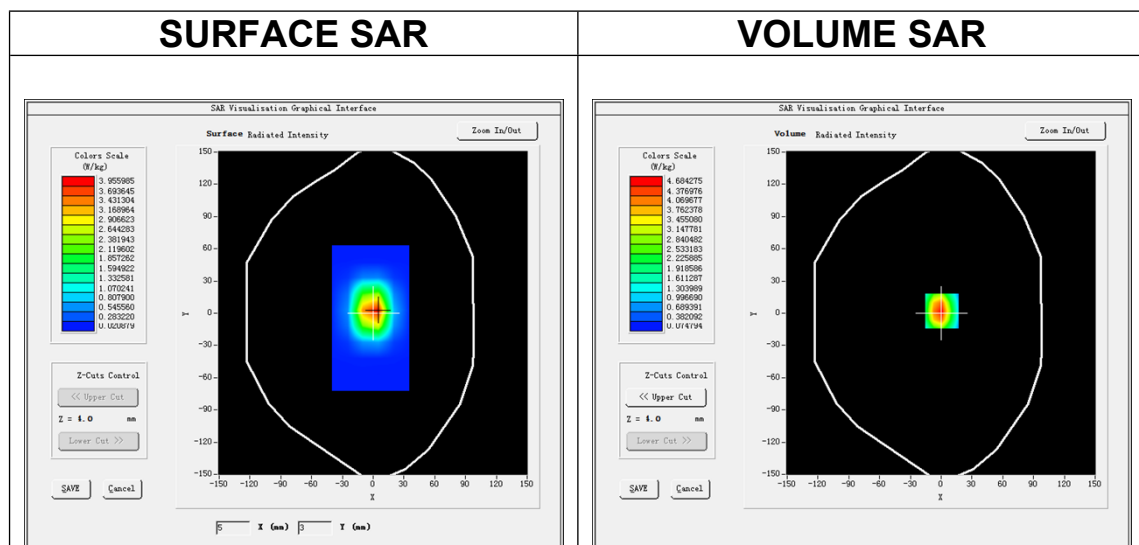
Date of measurement: 9/4/2025

A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.05</u>

B. SAR Measurement Results

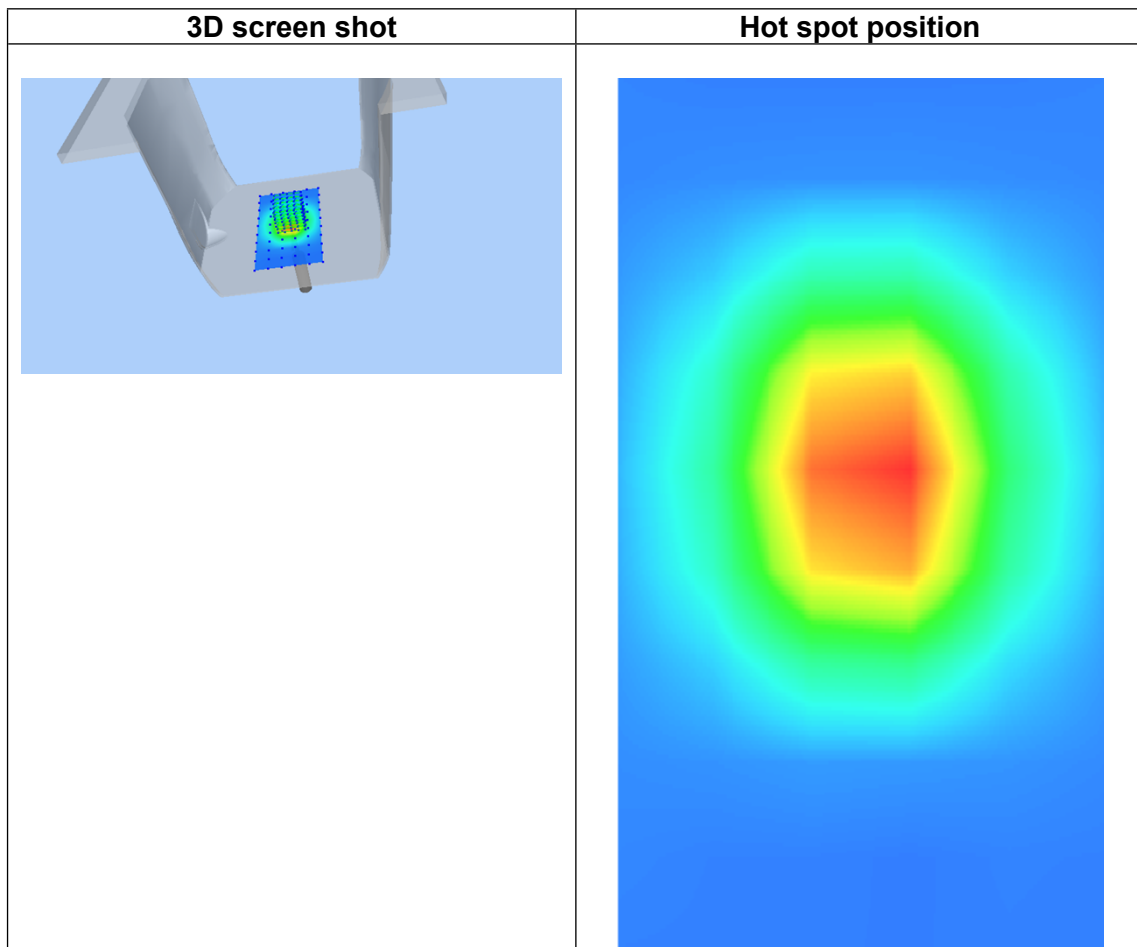
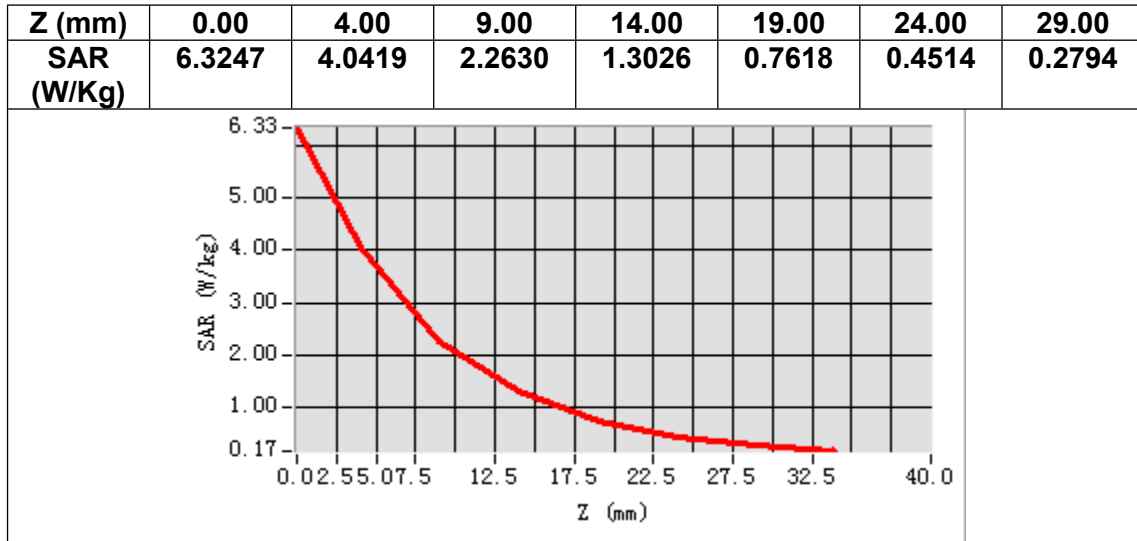
Frequency (MHz)	1900.000000
Relative permittivity (real part)	41.420140
Relative permittivity (imaginary part)	12.570123
Conductivity (S/m)	1.390503
Variation (%)	-0.440000



Maximum location: X=1.00, Y=2.00

SAR Peak: 7.65 W/kg

SAR 10g (W/Kg)	2.153165
SAR 1g (W/Kg)	4.153568



MEASUREMENT 4

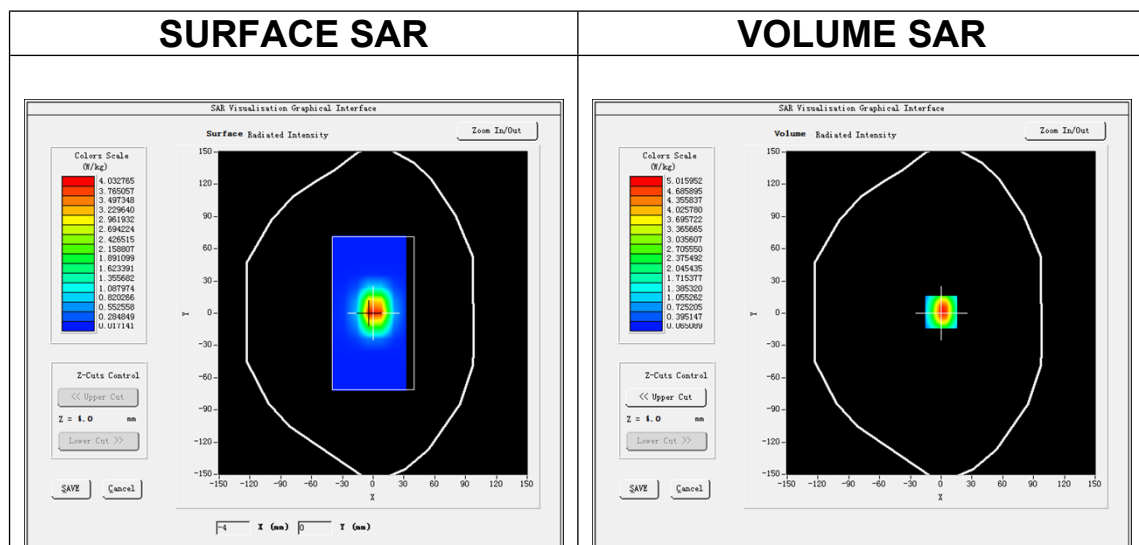
Date of measurement: 10/4/2025

A. Experimental conditions.

Area Scan	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
ZoomScan	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
Phantom	<u>Validation plane</u>
Device Position	<u>Dipole</u>
Band	<u>CW2450</u>
Channels	<u>Middle</u>
Signal	<u>CW (Crest factor: 1.0)</u>
ConvF	<u>2.38</u>

B. SAR Measurement Results

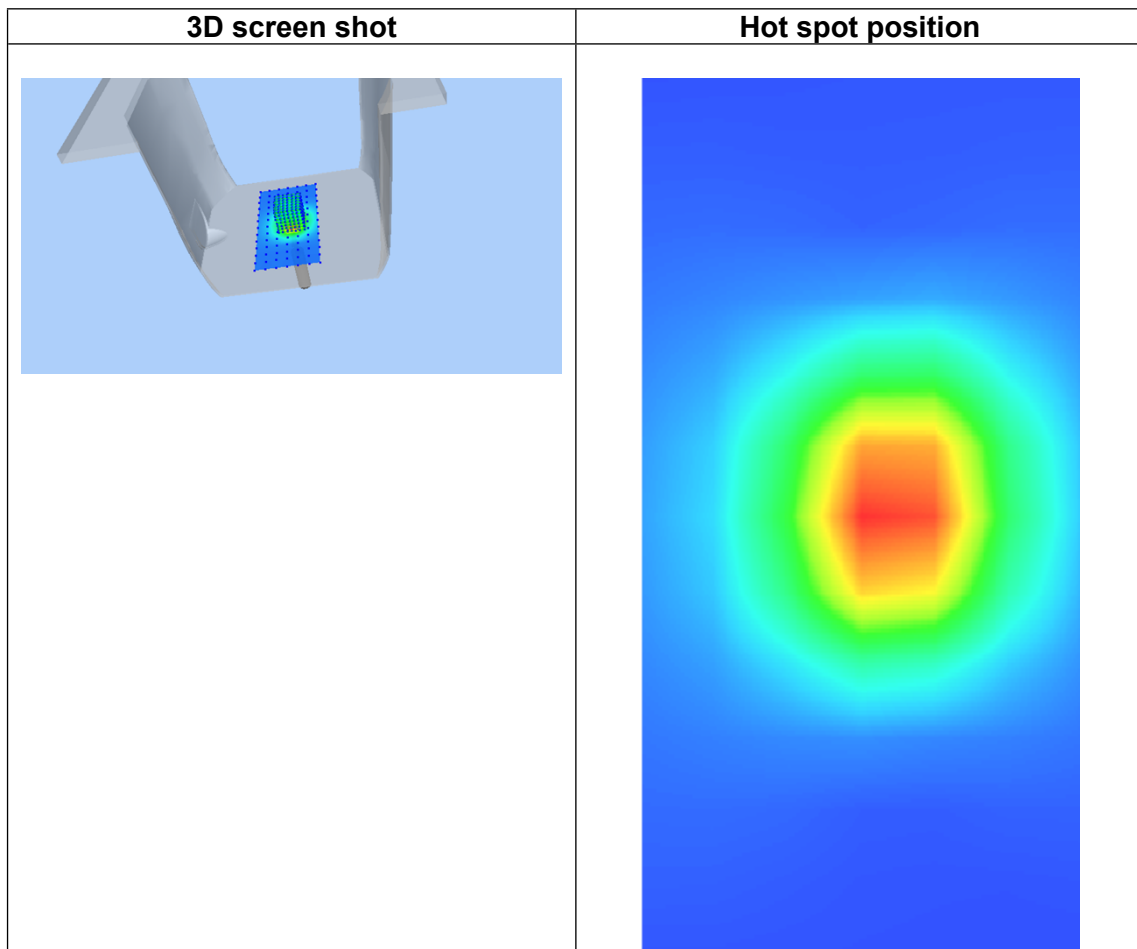
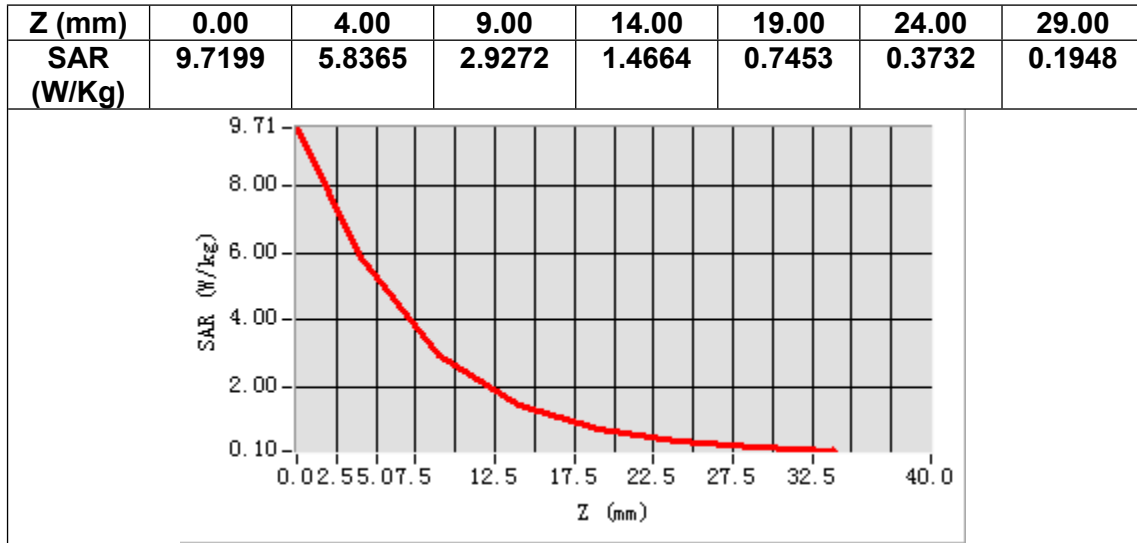
Frequency (MHz)	2450.000000
Relative permittivity (real part)	40.408511
Relative permittivity (imaginary part)	13.399264
Conductivity (S/m)	1.823789
Variation (%)	-1.250000



Maximum location: X=0.00, Y=1.00

SAR Peak: 8.14 W/kg

SAR 10g (W/Kg)	2.359425
SAR 1g (W/Kg)	5.183642



MEASUREMENT 5

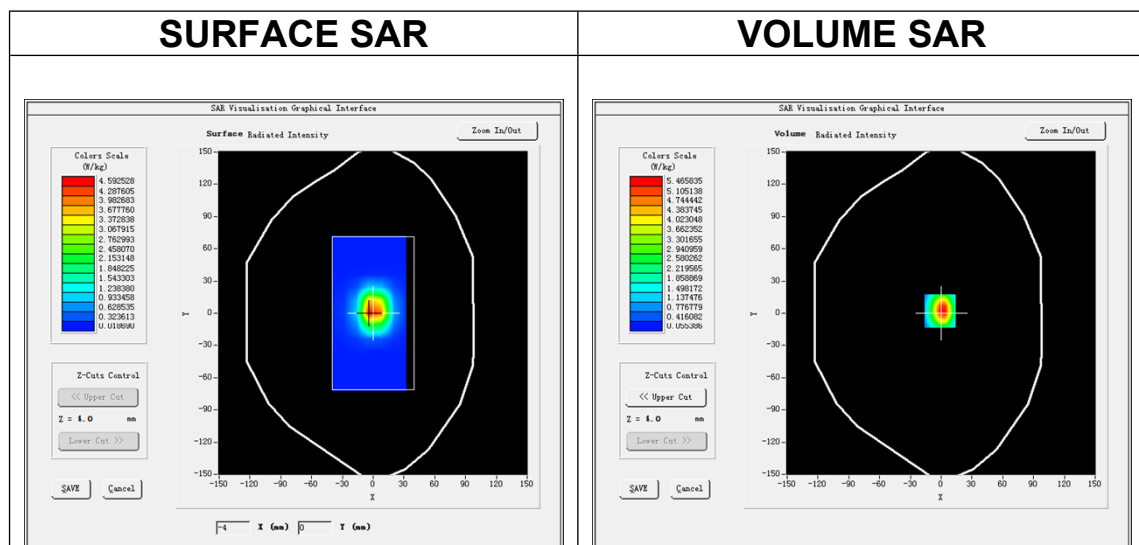
Date of measurement: 11/4/2025

A. Experimental conditions.

<u>Area Scan</u>	<u>dx=12mm dy=12mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>7x7x7,dx=5mm dy=5mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Dipole</u>
<u>Band</u>	<u>CW2600</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>CW (Crest factor: 1.0)</u>
<u>ConvF</u>	<u>2.35</u>

B. SAR Measurement Results

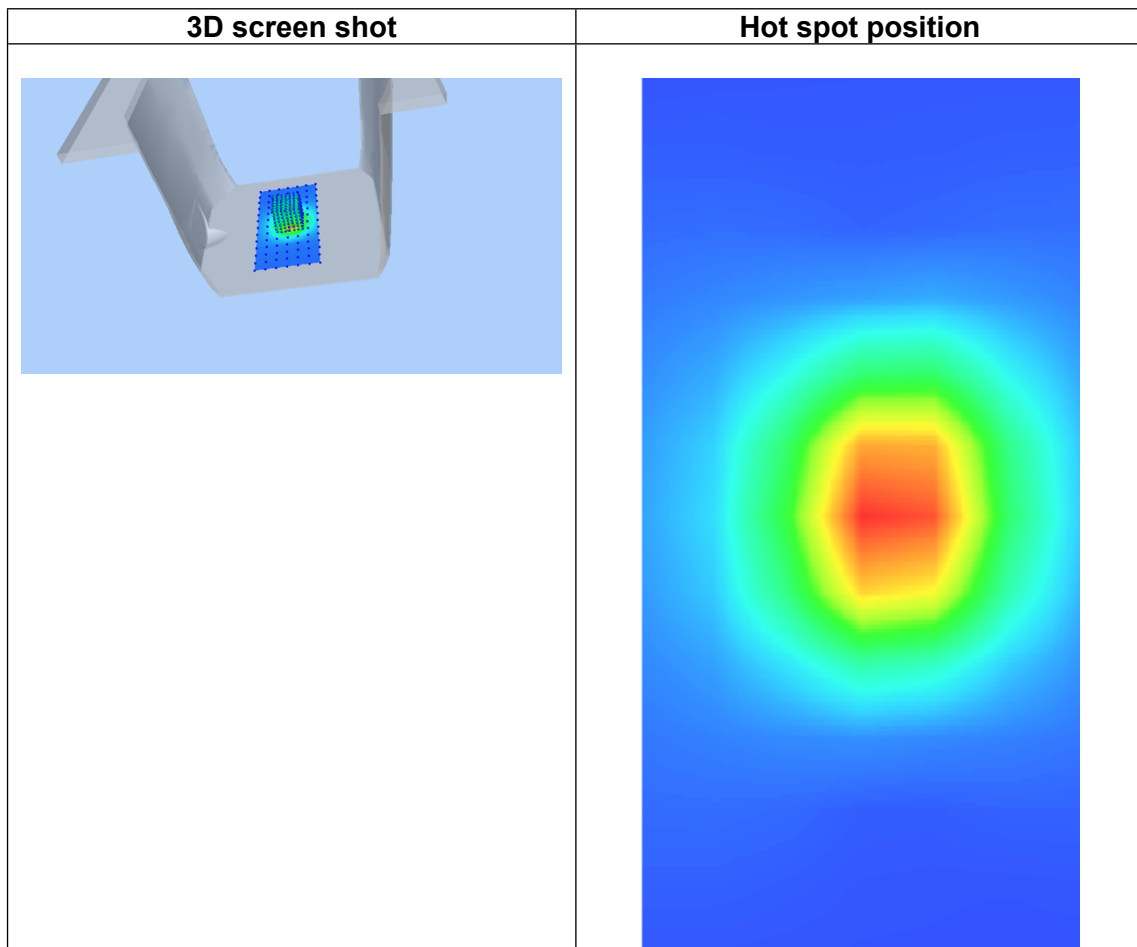
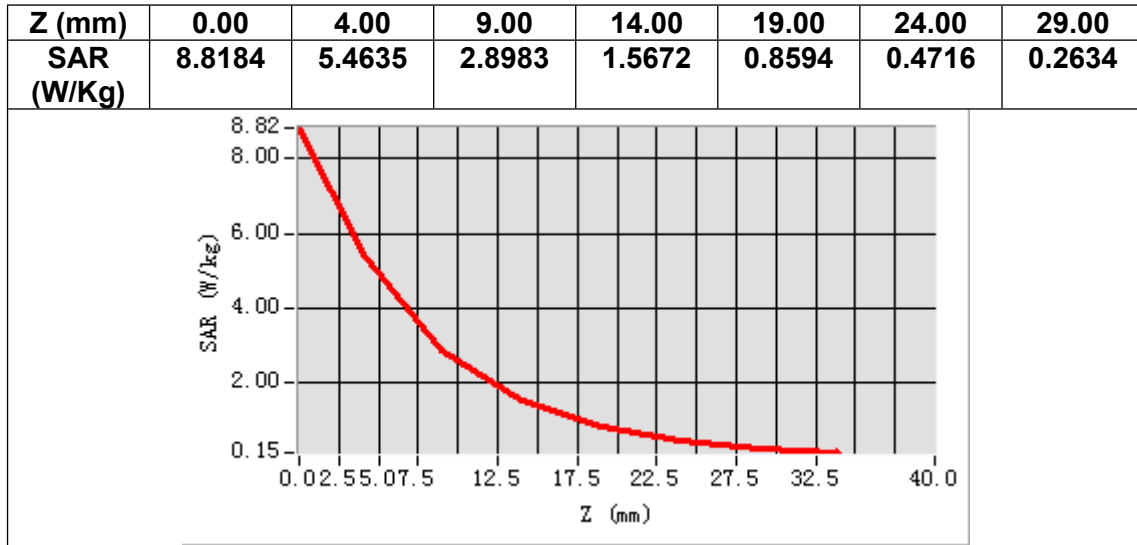
Frequency (MHz)	2600.000000
Relative permittivity (real part)	39.432362
Relative permittivity (imaginary part)	13.768602
Conductivity (S/m)	1.988798
Variation (%)	-3.980000



Maximum location: X=-1.00, Y=2.00

SAR Peak: 9.07 W/kg

SAR 10g (W/Kg)	2.523157
SAR 1g (W/Kg)	5.432595



MEASUREMENT 6

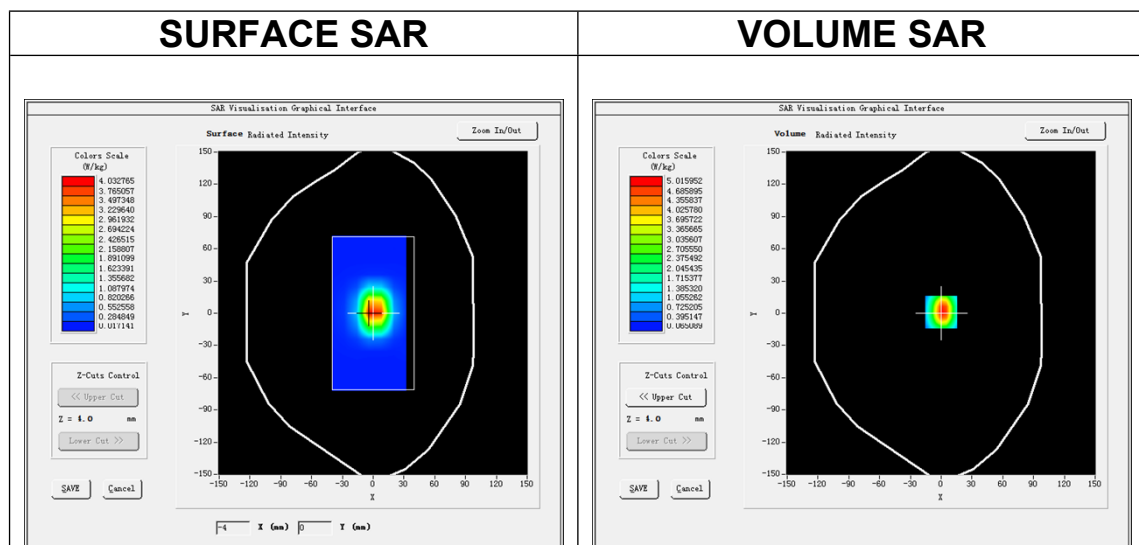
Date of measurement: 14/4/2025

A. Experimental conditions.

Area Scan	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
ZoomScan	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
Phantom	<u>Validation plane</u>
Device Position	<u>Dipole</u>
Band	<u>CW5200</u>
Channels	<u>Middle</u>
Signal	<u>CW (Crest factor: 1.0)</u>
ConvF	<u>2.30</u>

B. SAR Measurement Results

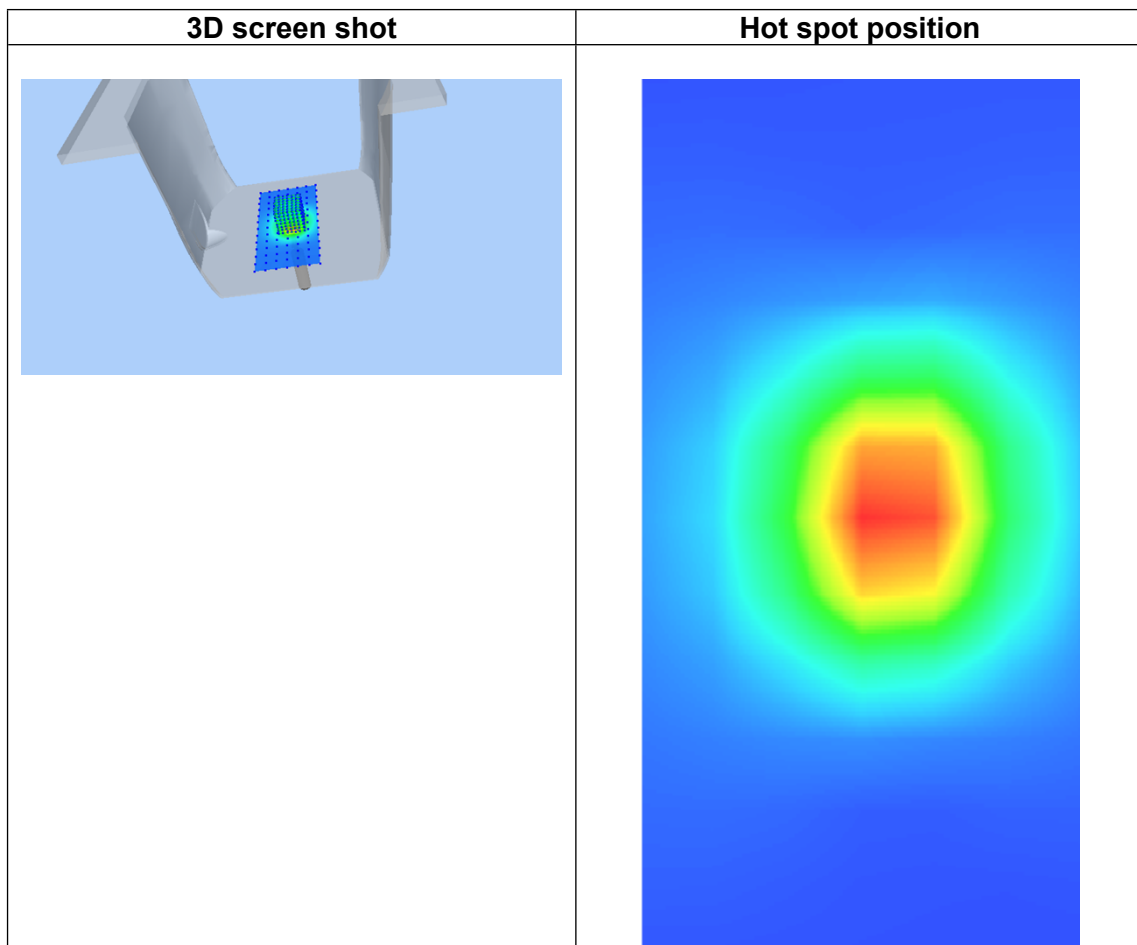
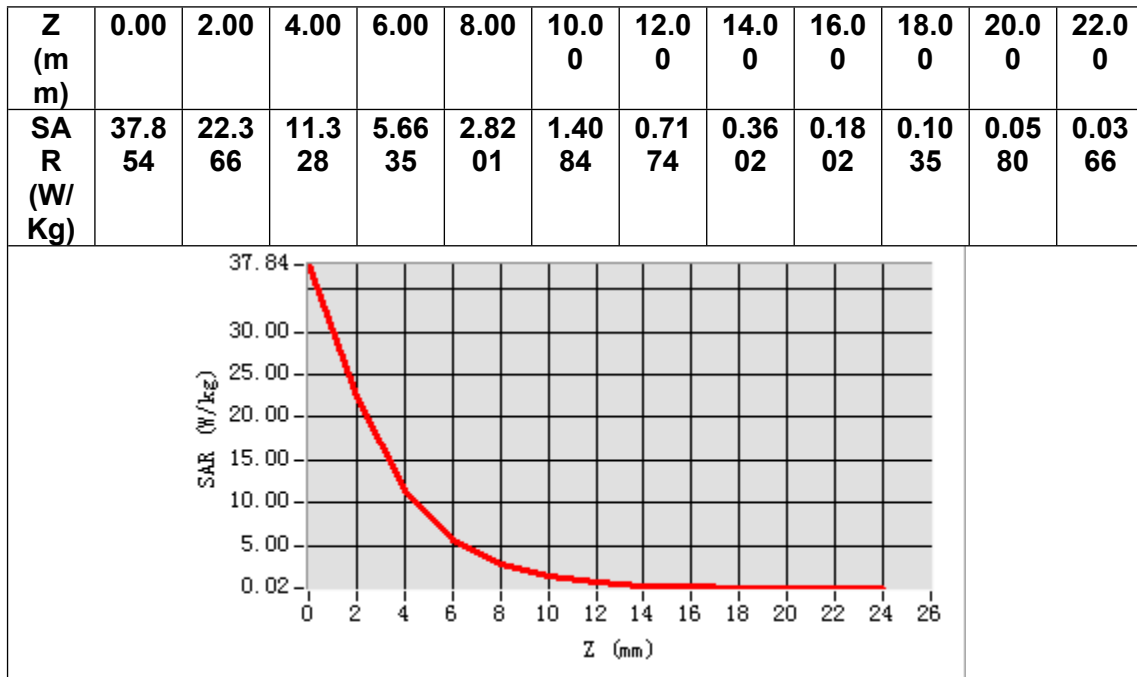
Frequency (MHz)	5200.000000
Relative permittivity (real part)	37.400000
Relative permittivity (imaginary part)	16.129999
Conductivity (S/m)	4.510778
Variation (%)	-4.570000



Maximum location: X=0.00, Y=1.00

SAR Peak: 15.14 W/kg

SAR 10g (W/Kg)	5.212361
SAR 1g (W/Kg)	14.712032



MEASUREMENT 7

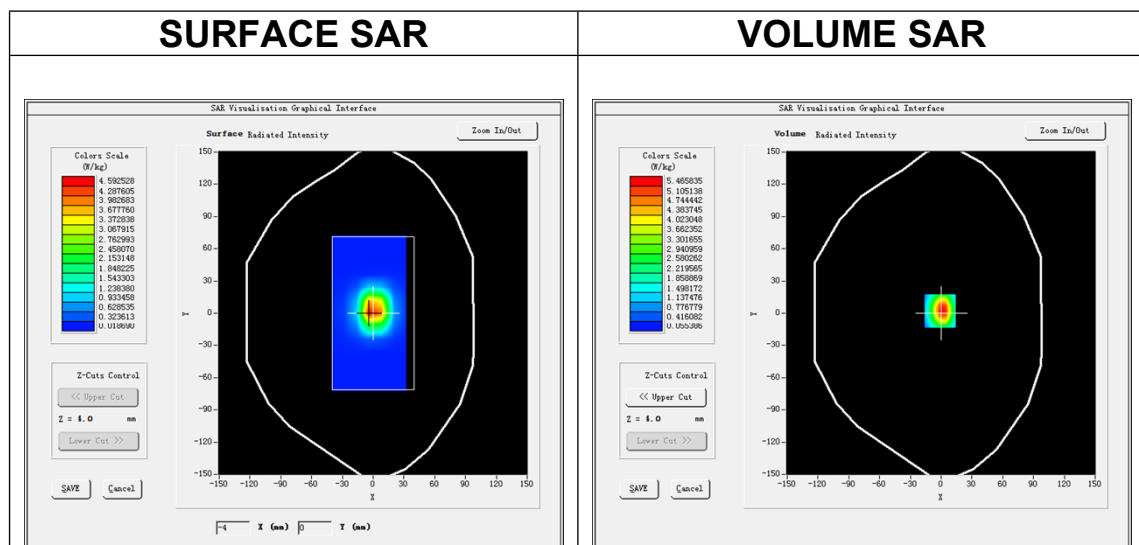
Date of measurement: 17/4/2025

A. Experimental conditions.

Area Scan	<u>dx=10mm dy=10mm, h= 2.00 mm</u>
ZoomScan	<u>7x7x12,dx=4mm dy=4mm dz=2mm</u>
Phantom	<u>Validation plane</u>
Device Position	<u>Dipole</u>
Band	<u>CW5800</u>
Channels	<u>Middle</u>
Signal	<u>CW (Crest factor: 1.0)</u>
ConvF	<u>2.27</u>

B. SAR Measurement Results

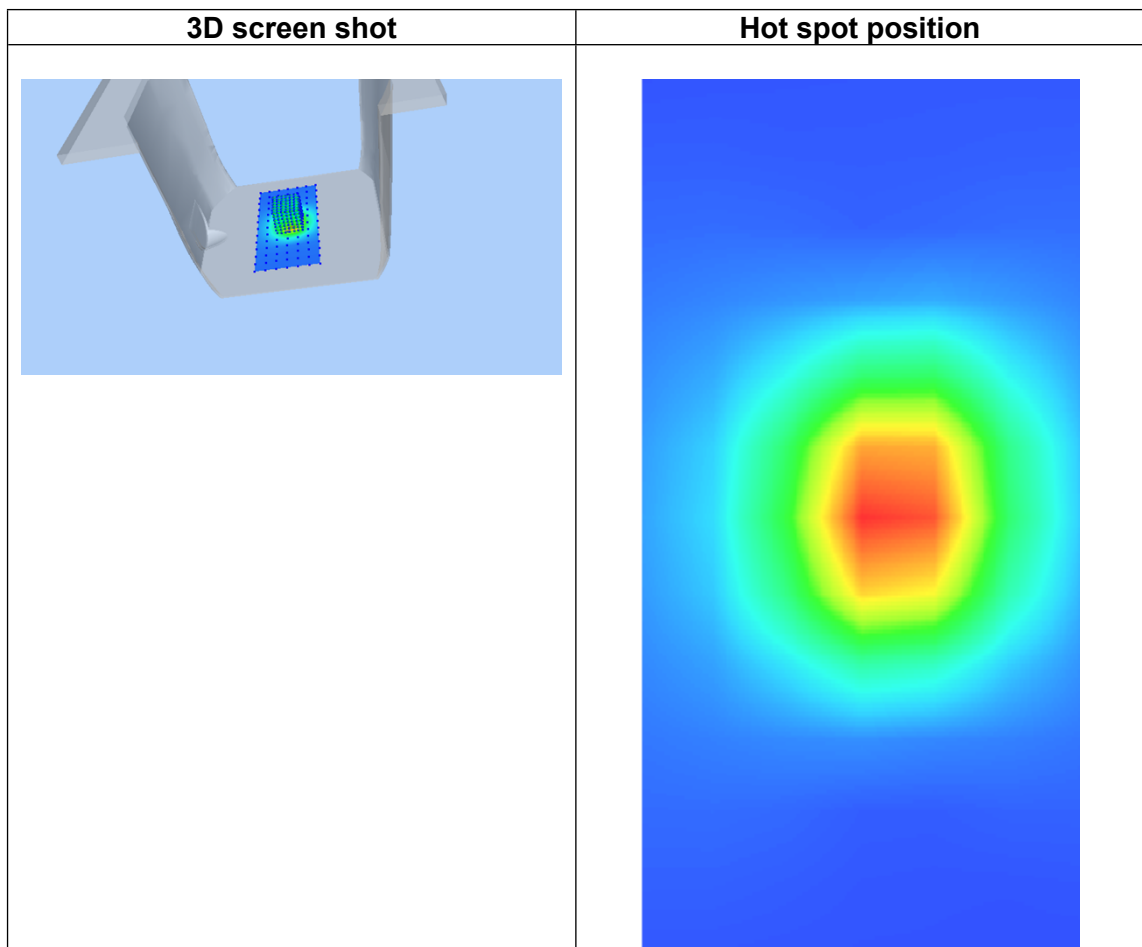
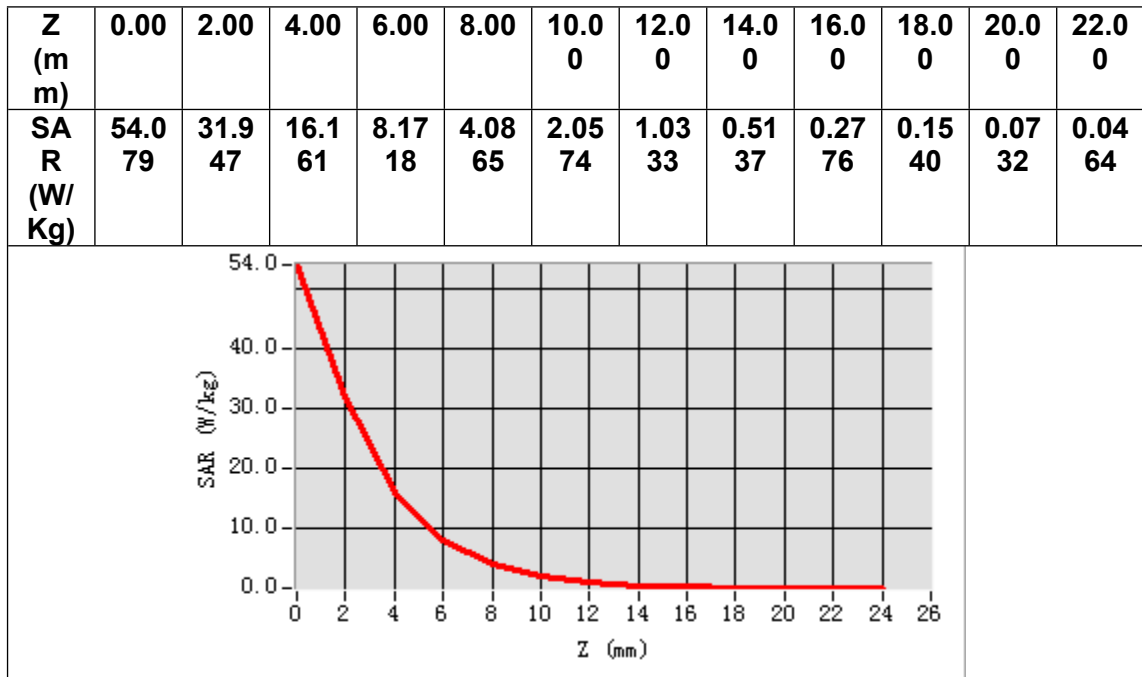
Frequency (MHz)	5800.000000
Relative permittivity (real part)	35.299999
Relative permittivity (imaginary part)	16.360001
Conductivity (S/m)	5.271556
Variation (%)	-2.480000



Maximum location: X=-1.00, Y=2.00

SAR Peak: 17.07 W/kg

SAR 10g (W/Kg)	5.623106
SAR 1g (W/Kg)	16.421035



Appendix C. SAR Test Plots

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MEASUREMENT 1

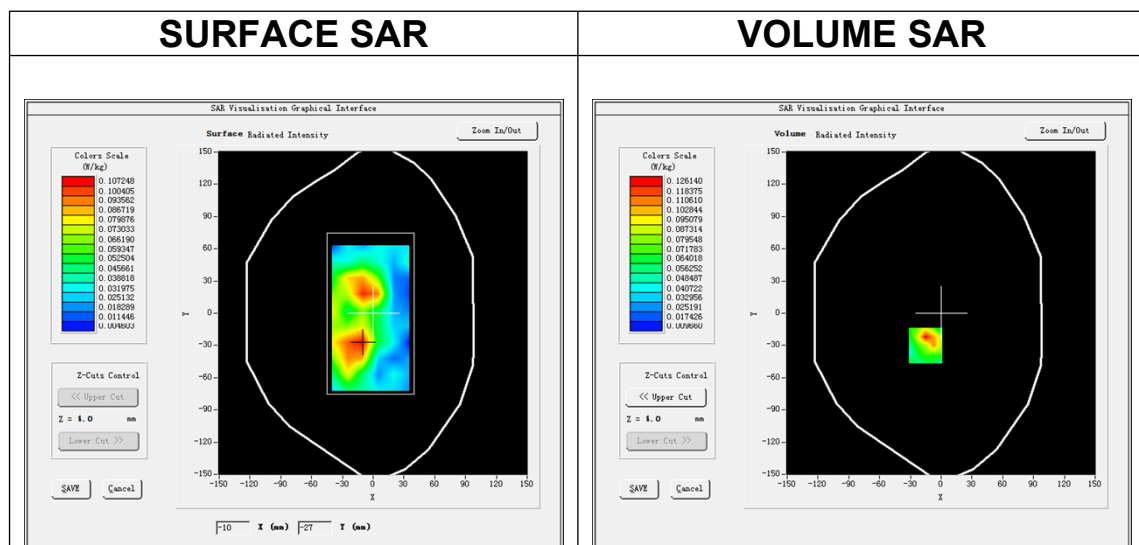
Date of measurement: 7/4/2025

A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7, dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>GSM850</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 2.0)</u>
<u>ConvF</u>	<u>1.66</u>

B. SAR Measurement Results

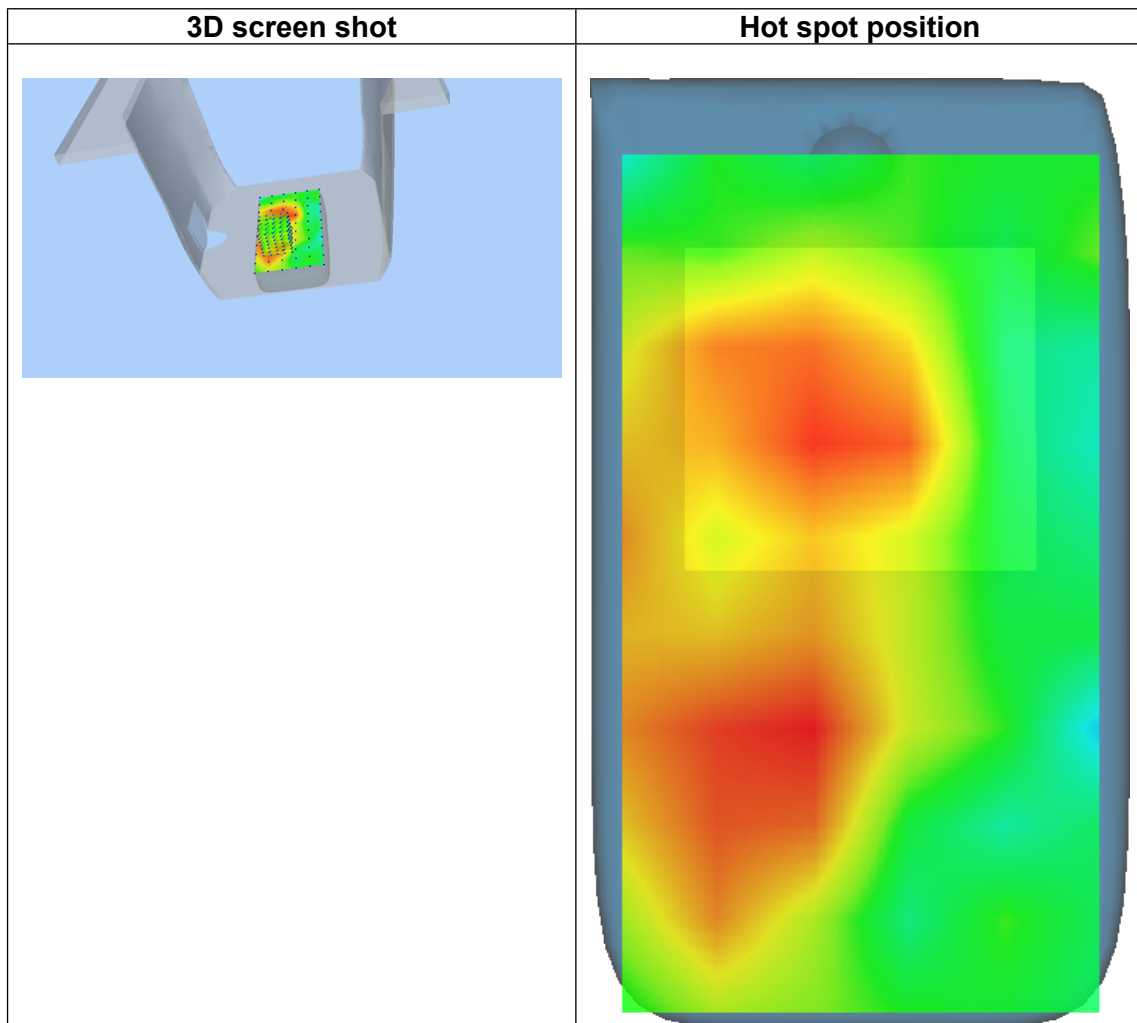
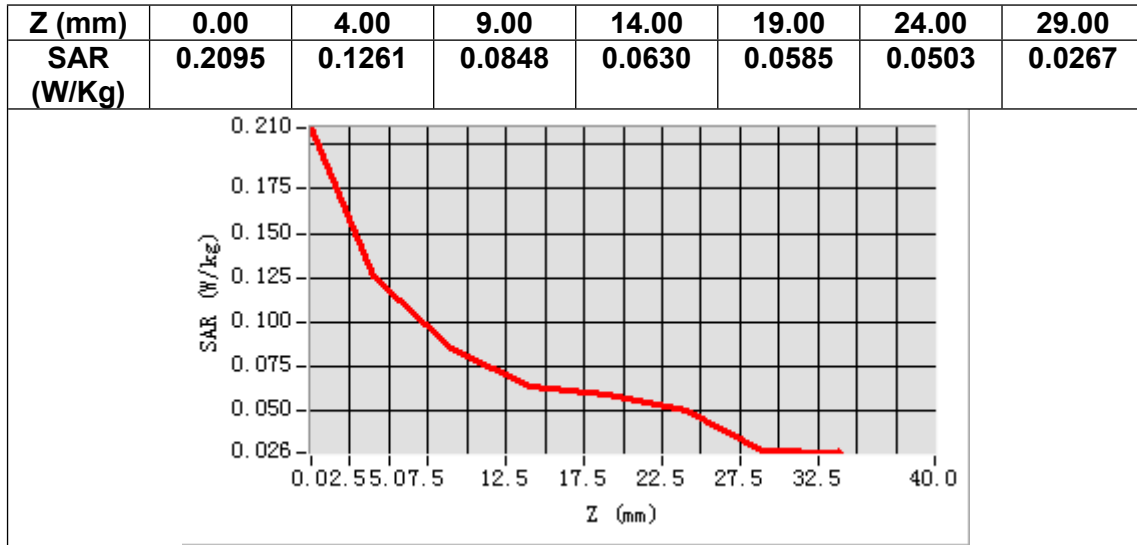
Frequency (MHz)	836.400024
Relative permittivity (real part)	41.500000
Relative permittivity (imaginary part)	19.400000
Conductivity (S/m)	0.901453
Variation (%)	4.550000



Maximum location: X=-15.00, Y=-30.00

SAR Peak: 0.22 W/kg

SAR 10g (W/Kg)	0.076205
SAR 1g (W/Kg)	0.117975



MEASUREMENT 2

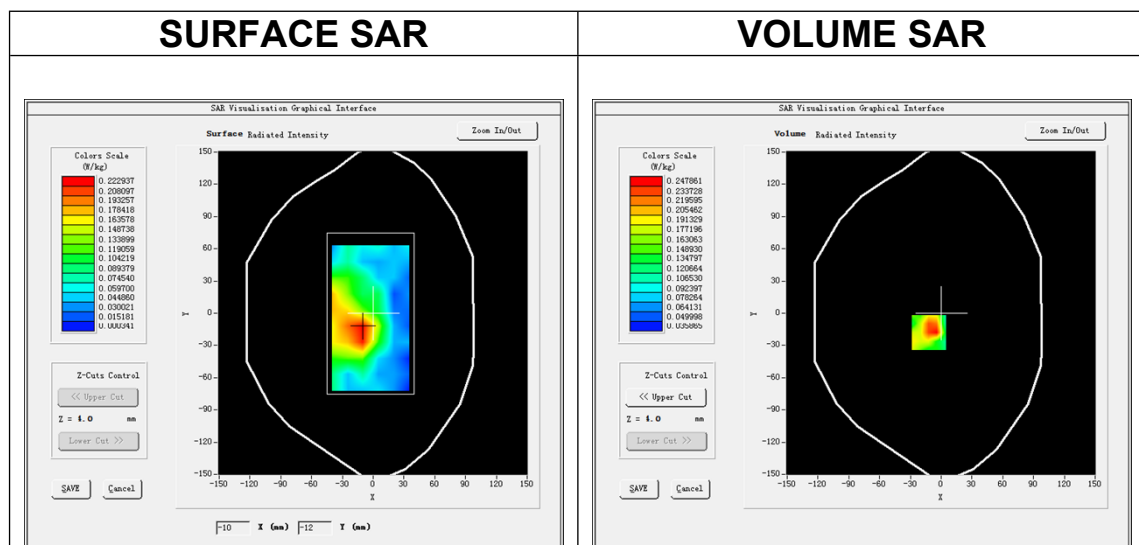
Date of measurement: 9/4/2025

A. Experimental conditions.

<u>Area Scan</u>	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
<u>ZoomScan</u>	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
<u>Phantom</u>	<u>Validation plane</u>
<u>Device Position</u>	<u>Body</u>
<u>Band</u>	<u>GSM1900</u>
<u>Channels</u>	<u>Middle</u>
<u>Signal</u>	<u>TDMA (Crest factor: 4.0)</u>
<u>ConvF</u>	<u>2.05</u>

B. SAR Measurement Results

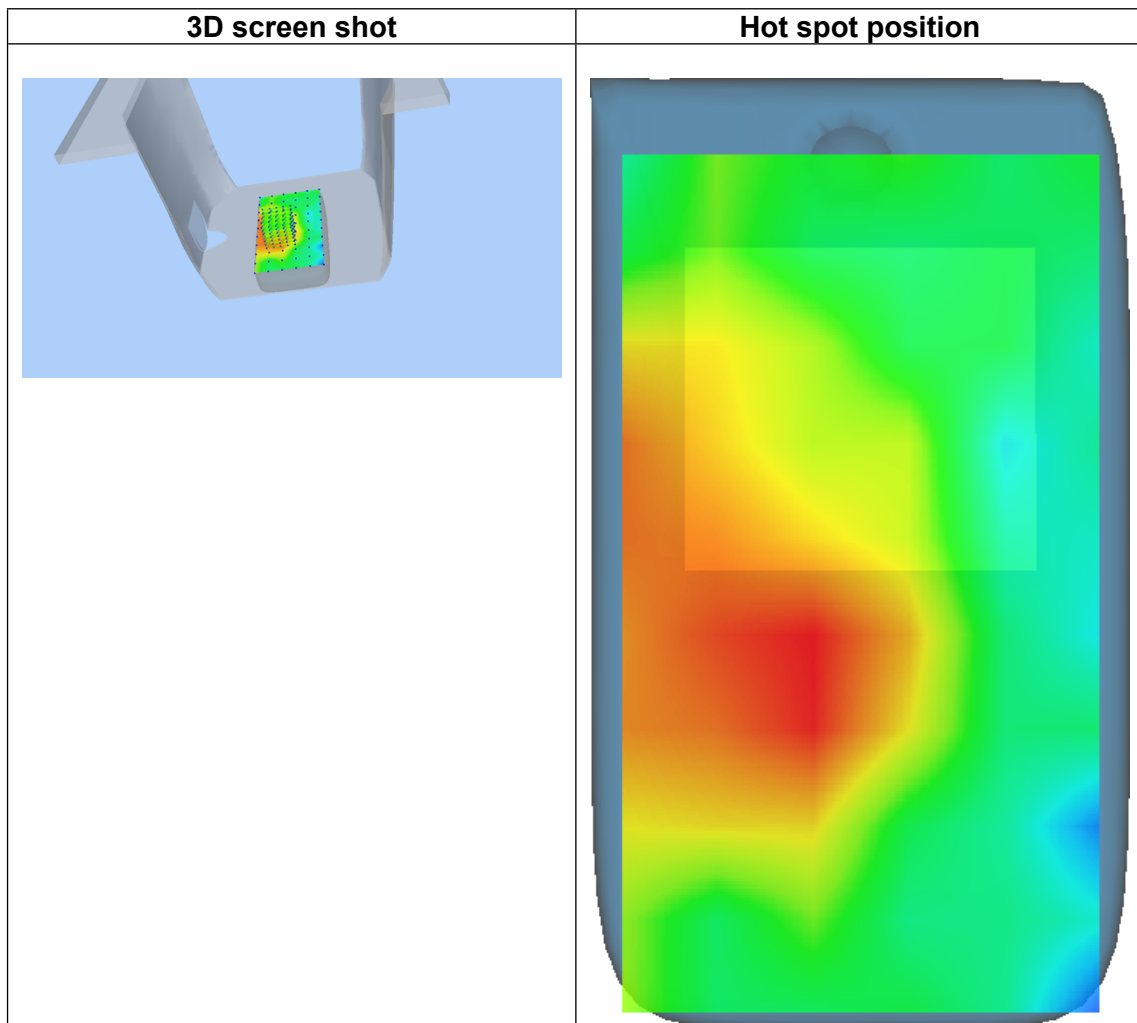
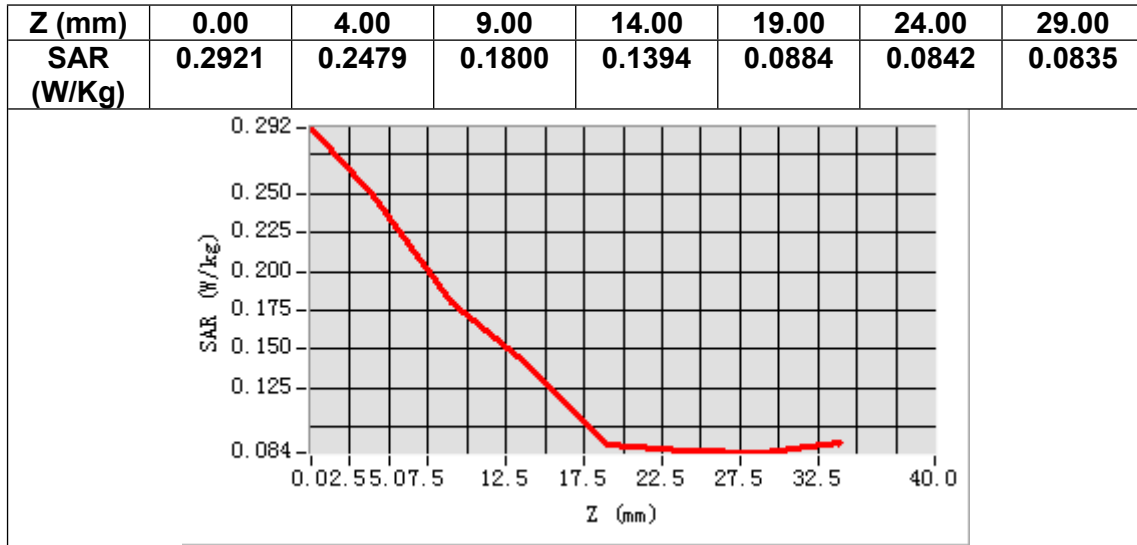
Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.000000
Relative permittivity (imaginary part)	13.408000
Conductivity (S/m)	1.400391
Variation (%)	0.180000



Maximum location: X=-12.00, Y=-18.00

SAR Peak: 0.43 W/kg

SAR 10g (W/Kg)	0.161582
SAR 1g (W/Kg)	0.256925



MEASUREMENT 3

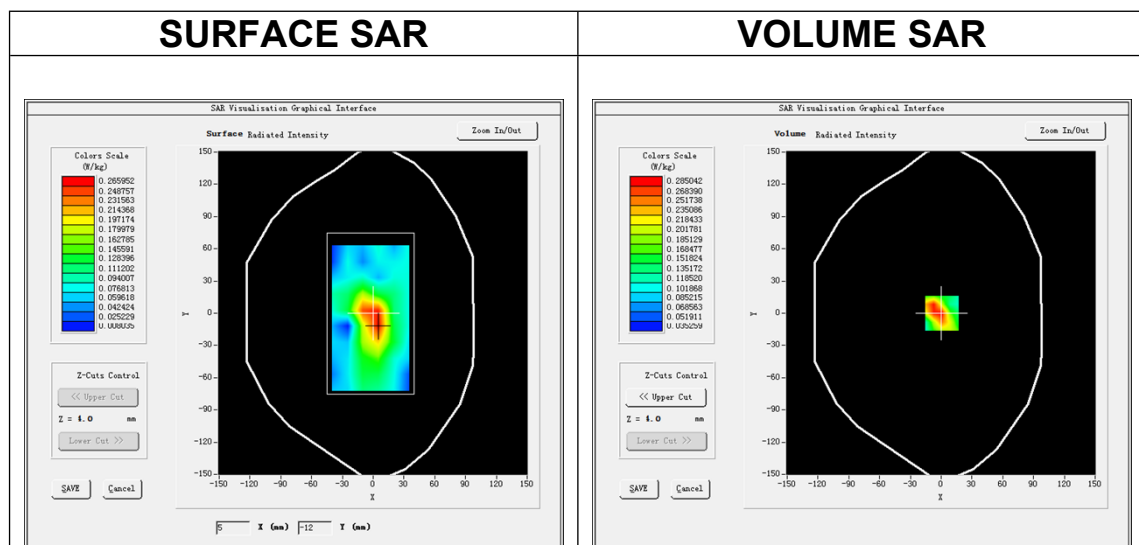
Date of measurement: 9/4/2025

A. Experimental conditions.

Area Scan	<u>dx=15mm dy=15mm, h= 5.00 mm</u>
ZoomScan	<u>5x5x7,dx=8mm dy=8mm dz=5mm</u>
Phantom	<u>Validation plane</u>
Device Position	<u>Body</u>
Band	<u>Band2 WCDMA1900</u>
Channels	<u>Middle</u>
Signal	<u>WCDMA (Crest factor: 1.0)</u>
ConvF	<u>2.05</u>

B. SAR Measurement Results

Frequency (MHz)	1880.000000
Relative permittivity (real part)	40.000000
Relative permittivity (imaginary part)	13.408000
Conductivity (S/m)	1.400391
Variation (%)	3.990000



Maximum location: X=1.00, Y=0.00

SAR Peak: 0.52 W/kg

SAR 10g (W/Kg)	0.178237
SAR 1g (W/Kg)	0.296757