中认信通
CHINA CERTIFICATION ICT CO.,LTD (DONGGUAN)

ACCREDITED
TESTING LABORATORY
CERTIFICATE # 6356.01

SAR TEST REPORT

Applicant: Shenzhen Xinguodu Technology Co., Ltd.

Address: 17B JinSong Mansion, Terra Industrial & Trade Park Chegongmiao, Futian District, Shenzhen, Guangdong, China.

FCC ID: XDQN92-01

Product Name: POS terminal

Standard(s): 47 CFR Part 2(2.1093)

The above device has been tested and found compliant with the requirement of the relative standards by China Certification ICT Co., Ltd (Dongguan)

Report Number: 2403V85163E-20A1

Date Of Issue: 2025/04/16

Reviewed By: Ken Zong

Title: SAR Engineer

Approved By: Karl Gong

Title: SAR Engineer

Test Laboratory: China Certification ICT Co., Ltd (Dongguan)

No. 113, Pingkang Road, Dalang Town, Dongguan,Guangdong, China
Tel: +86-769-83085888
www.ccttt.com.cn

SAR TEST RESULTS SUMMARY

Operation Frequency Bands	Highest Reported 1g SAR (W/kg)		Limits (W/kg)
	Body SAR		
GSM 850	0.88		**1.6**
PCS 1900	1.12		
WCDMA Band 2	1.03		
WCDMA Band 5	0.39		
LTE Band 2	**1.18**		
LTE Band 4	1.18		
LTE Band 5	0.40		
LTE Band 7	0.80		
LTE Band 41&38	0.36		
WLAN 2.4G	0.40		
WLAN 5.2G	0.52		
WLAN 5.3G	0.28		
WLAN 5.6G	0.10		
WLAN 5.8G	0.31		
Maximum Simultaneous Transmission SAR			
Items	**Body SAR**	**Hotspot**	**Limits**
Sum SAR(W/kg)	**1.24**	**1.18**	**1.6**
SPLSR	N/A	N/A	**0.04**
EUT Received Date:	2025/03/18		
Tested Date:	2025/03/19		
Tested Result:	Pass		

Note: The test data of WWAN, please refer to FCC ID: XDQN92-01, SAR report of 2403V85163E-SA, issued by China Certification ICT Co., Ltd (Dongguan).

Test Facility

The Test site used by China Certification ICT Co., Ltd (Dongguan) to collect test data is located on the No. 113, Pingkang Road, Dalang Town, Dongguan, Guangdong, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No. : 442868, the FCC Designation No. : CN1314.

Declarations

China Certification ICT Co., Ltd (Dongguan) is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with a triangle symbol "▲". Customer model name, addresses, names, trademarks etc. are not considered data.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

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Each test item follows the test standard(s) without deviation.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2403V85163E-SA	Original Report	2024/09/09
2.0	2403V85163E-20A1	Amended Report	2025/04/16

Note: According to manufacturer declared, the device changes based on the report 2403V85163E-SA are as follows:

1. Antenna changes(Bluetooth & wifi & GPS antenna).

2. Minor circuitry for non-transmitter portions.

   a. Added a secondary screen , Back camera(200W) and Top camera (200W).

   b. Deleted Fingerprint module , Audio jack and related circuits.

   c. Added eMMC and LPDDR4X.

3. Added a Battery(Model: GX11).

The changes between the original equipment and the existing equipment are stated and guaranteed by the applicant. The difference between them will affect the test results of Wi-Fi/BT, We chose Battery 1 # with a larger capacity to retest the test data of Wi-Fi/BT, and Configuration 2 # and Configuration 3 # to test the worst case scenario of WWAN(GSM/WCDMA/LTE), and updated test photos.

Note. Add two configurations, Configuration 2#: add customer display screen, camera at the screen (front camera), WiFi location change. Configuration 3#: Add a customer display screen, position the camera at the customer display screen (top camera), and change the WiFi location. For the two configurations, Select a higher power configuration（Configuration 3#） for testing, Configuration 2# to test the worst case scenario

Accessory Description	Manufacturer	Model	Parameters
Battery 1#	Zhengzhou BAK Battery Co.,Ltd	GX12	Typical Capacity:3300mAh Rated Capacity:3200mAh Typical Energy:23.76Wh Nominal Energy:23.04Wh Output: DC 7.2V
Battery 2# (new)	Zhengzhou BAK Battery Co.,Ltd	GX11	Typical Capacity:2600mAh Rated Capacity:2500mAh Typical Energy:18.72Wh Nominal Energy:18Wh Output: DC 7.2V

Note: Battery 1# and battery 2# are available in all configurations.

1. GENERAL INFORMATION

1.1 Product Description for Equipment under Test (EUT)

EUT Name:	POS terminal
EUT Model:	N92
Device Type:	Portable
Exposure Category:	Population / Uncontrolled
Antenna Type(s):	Internal Antenna
Body-Worn Accessories:	None
Operation modes:	GPRS/EDGE Data, WCDMA(R99 (Data), HSDPA/HSUPA/DC-HSDPA/HSPA+), FDD-LTE, TDD-LTE, WLAN, Bluetooth and NFC
Frequency Band:	GSM 850: 824-849 MHz(TX); 869-894 MHz(RX) PCS 1900: 1850-1910 MHz(TX); 1930-1990 MHz(RX) WCDMA Band 2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) WCDMA Band 5: 824-849 MHz(TX); 869-894 MHz(RX) LTE Band 2: 1850-1910 MHz(TX); 1930-1990 MHz(RX) LTE Band 4: 1710-1755 MHz(TX); 2110-2155 MHz(RX) LTE Band 5: 824-849 MHz(TX); 869-894 MHz(RX) LTE Band 7: 2500-2570 MHz(TX); 2620-2690 MHz(RX) LTE Band 38: 2570-2620 MHz(TX/RX) LTE Band 41: 2496-2690 MHz (TX/RX) WLAN 2.4G : 2412 MHz-2462 MHz/2422-2452 MHz(TX/RX) WLAN 5.2G : 5150 MHz-5250 MHz(TX/RX) WLAN 5.3G : 5250 MHz-5350 MHz(TX/RX) WLAN 5.6G : 5470 MHz-5725 MHz(TX/RX) WLAN 5.8G : 5725 MHz-5850 MHz(TX/RX) Bluetooth : 2402 MHz-2480 MHz(TX/RX) NFC: 13.56 MHz
Dimensions (L*W*H):	187.76mm (L) * 80.90mm (W) * 35.07mm (H)
Rated Input Voltage:	DC 7.2 V from Rechargeable Battery
Sample Number:	Configuration 2#:2ZZ9-1 Configuration 3#:2ZZ9-2
Normal Operation:	Body

Note: The test data of WWAN, please refer to FCC ID: XDQN92-01, SAR report of 2403V85163E-SA, issued by China Certification ICT Co., Ltd (Dongguan).

1.2 Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE 1528-2013, the following FCC Published RF exposure KDB procedures:

KDB 447498 D01 General RF Exposure Guidance v06
KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
KDB 865664 D02 RF Exposure Reporting v01r02
KDB 941225 D01 3G SAR Procedures v03r01
KDB 941225 D05 SAR for LTE Devices v02r05
KDB 941225 D06 Hotspot Mode v02r01
KDB 248227 D01 802 11 Wi-Fi SAR v02r02

TCB Workshop April 2019: RF Exposure Procedures

1.3 SAR Limits

FCC Limit

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1 g of tissue)	**1.60**	8.0
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

Population/Uncontrolled Environments are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.

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).

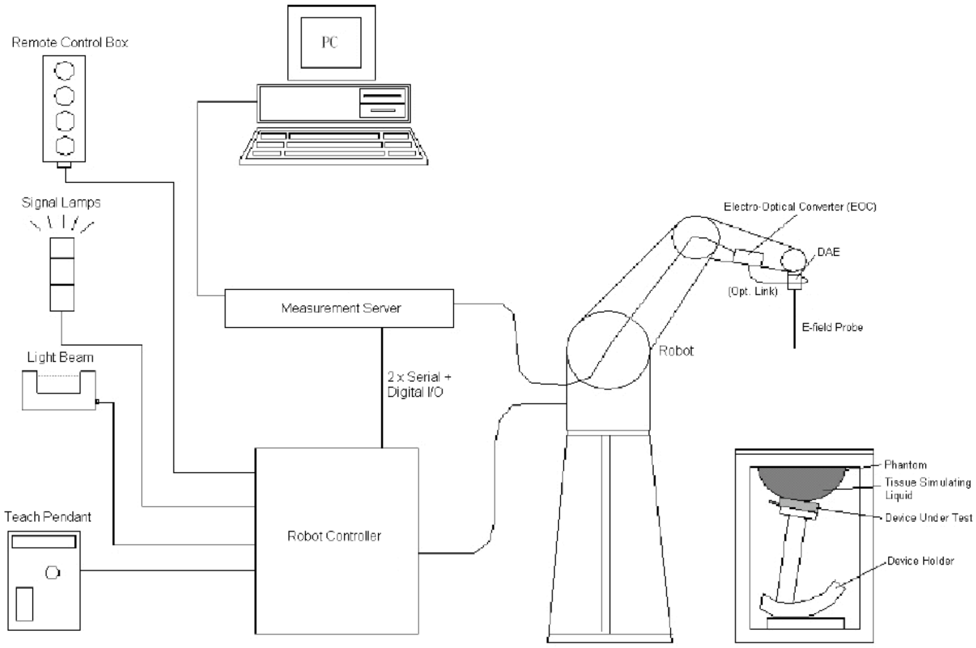
General Population/Uncontrolled environments Spatial Peak limit 1.6W/kg for 1g SAR applied to the EUT.

2. SAR MEASUREMENT SYSTEM

These measurements were performed with the automated near-field scanning system DASY5 from Schmid & Partner Engineering AG (SPEAG) which is the Fifth generation of the system shown in the figure hereinafter:

DASY5 System Description

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



- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal application, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 professional operating system and the DASY52 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

DASY5 Measurement Server

The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz Intel ULV Celeron, 128MB chip-disk and 128MB RAM. The necessary circuits for communication with the DAE4 (or DAE3) electronics box, as well as the 16 bit AD-converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized point out, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.

Data Acquisition Electronics

The data acquisition electronics (DAE4) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

The input impedance of both the DAE4 as well as of the DAE3 box is 200MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

EX3DV4 E-Field Probes

Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

Calibration Frequency Points for EX3DV4 E-Field Probes SN: 7329 Calibrated: 2024/3/27

Calibration Frequency Point(MHz)	Frequency Range(MHz)		Conversion Factor		
	From	To	X	Y	Z
750 Head	650	810	8.79	10.07	9.05
900 Head	810	1000	8.42	9.50	8.93
1750 Head	1650	1810	7.56	8.56	7.71
1900 Head	1810	2000	7.37	8.32	7.54
2300 Head	2200	2399	7.21	8.13	7.41
2450 Head	2399	2500	7.05	7.92	7.22
2600 Head	2500	2700	6.91	7.77	7.08
5250 Head	5140	5360	4.96	5.61	5.16
5600 Head	5490	5675	4.38	4.98	4.56
5750 Head	5675	5860	4.54	5.16	4.70

SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region, where shell thickness increases to 6 mm). The phantom has three measurement areas:
_ Left Head
_ Right Head
_ Flat phantom

The phantom table for the DASY systems based on the robots have the size of 100 x 50 x 85 cm (L x W x H).
For easy dislocation these tables have fork lift cut outs at the bottom.
The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. Only one device holder is necessary if two phantoms are used (e.g., for different liquids)

A white cover is provided to cover the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible. Three reference marks are provided on the phantom counter. These reference marks are used to teach the absolute phantom position relative to the robot.

Robots

The DASY5 system uses the high precision industrial robot. The robot offers the same features important for our application:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchrony motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

The above mentioned robots are controlled by the Staubli CS8c robot controllers. All information regarding the use and maintenance of the robot arm and the robot controller is contained on the CDs delivered along with the robot. Paper manuals are available upon request direct from Staubli.

SAR Scan Procedures

Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. The minimum distance of probe sensors to surface is 1.4 mm. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

Step 2: Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 15mm 2 step integral, with 1.5mm interpolation used to locate the peak SAR area used for zoom scan assessments.

Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

Area Scan Parameters extracted from 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 mm ± 1 mm	$\frac{1}{2}\cdot\delta\cdot\ln(2)$ mm ± 0.5 mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: 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.	

Step 3: Zoom Scan (Cube Scan Averaging)

The averaging zoom scan volume utilized in the DASY5 software is in the shape of a cube and the side dimension of a 1 g or 10 g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000 kg/m^3 is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1g cube is 10mm,with the side length of the 10g cube is 21.5mm.

Zoom Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz

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

Step 4: Power Drift Measurement

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

When the cube intersects with the surface of the phantom, it is oriented so that 3 vertices touch the surface of the shell or the center of a face is tangent to the surface. The face of the cube closest to the surface is modified in order to conform to the tangent surface.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 7 x7 x 7 (5mmx5mmx5mm) providing a volume of 30 mm in the X & Y & Z axis.

Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE 1528-2013

Recommended Tissue Dielectric Parameters for Head liquid

Table 3—Target dielectric properties of head tissue-equivalent material in the 300 MHz to 6000 MHz frequency range

Frequency (MHz)	Relative permittivity (ε'_r)	Conductivity (σ) (S/m)
300	45.3	0.87
450	43.5	0.87
750	*41.9*	*0.89*
835	41.5	0.90
900	41.5	0.97
1450	40.5	1.20
1500	*40.4*	*1.23*
1640	*40.2*	*1.31*
1750	*40.1*	*1.37*
1800	40.0	1.40
1900	40.0	1.40
2000	40.0	1.40
2100	*39.8*	*1.49*
2300	*39.5*	*1.67*
2450	39.2	1.80
2600	*39.0*	*1.96*
3000	38.5	2.40
3500	*37.9*	*2.91*
4000	*37.4*	*3.43*
4500	*36.8*	*3.94*
5000	*36.2*	*4.45*
5200	*36.0*	*4.66*
5400	*35.8*	*4.86*
5600	*35.5*	*5.07*
5800	35.3	5.27
6000	*35.1*	*5.48*

NOTE—For convenience, permittivity and conductivity values at some frequencies that are not part of the original data from Drossos et al. [B60] or the extension to 5800 MHz are provided (i.e., the values shown in italics). These values were linearly interpolated between the values in this table that are immediately above and below these values, except the values at 6000 MHz that were linearly extrapolated from the values at 3000 MHz and 5800 MHz.

3. EQUIPMENT LIST AND CALIBRATION

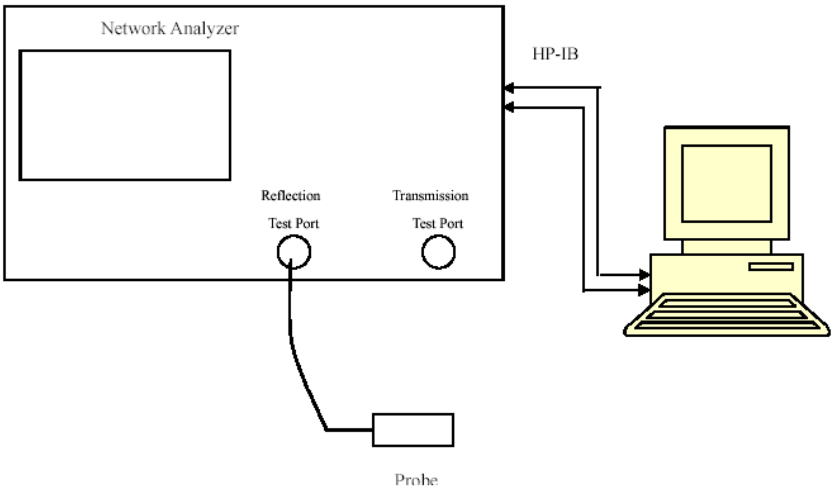
3.1 Equipments List & Calibration Information

Equipment	Model	S/N	Calibration Date	Calibration Due Date
DASY5 Test Software	DASY52.10	N/A	NCR	NCR
DASY5 Measurement Server	DASY5 4.5.12	1567	NCR	NCR
Data Acquisition Electronics	DAE4	1354	2024/12/3	2025/12/2
E-Field Probe	EX3DV4	7329	2024/3/27	2025/3/26
Mounting Device	MD4HHTV5	BJPCTC0152	NCR	NCR
Twin SAM	Twin SAM V5.0	1412	NCR	NCR
Dipole, 1900 MHz	D1900V2	5d251	2023/3/27	2026/3/26
Dipole, 2450 MHz	D2450V2	1102	2023/3/27	2026/3/26
Dipole,5GHz	D5GHzV2	1245	2023/8/23	2026/8/22
Simulated Tissue Liquid Head(500-9500 MHz)	HBBL600-10000V6	220420-2	Each Time	/
Network Analyzer	8753B	2828A00170	2024/10/17	2025/10/16
Dielectric assessment kit	DAK-3.5	1319	NCR	NCR
MXG Vector Signal Generator	N5182B	MY51350144	2024/4/1	2025/3/31
Power Meter	ML2495A	1106009	2024/8/3	2025/8/2
USB Average Power Sensor	U2001H	MY50000432	2024/4/1	2025/3/31
Power Amplifier	ZHL-5W-202-S+	416402204	NCR	NCR
Power Amplifier	ZVE-6W-83+	637202210	NCR	NCR
Directional Coupler	441493	520Z	NCR	NCR
Attenuator	20dB, 100W	LN749	NCR	NCR
Attenuator	6dB, 150W	2754	NCR	NCR
Thermometer	DTM3000	3892	2024/4/22	2025/4/21
Thermo-hygrometer	HTC-1	N/A	2024/4/22	2025/4/21
Radio Communication Analyzer	MT8820C	6201181458	2024/10/10	2025/10/9
Spectrum Analyzer	FSU26	100147	2024/4/1	2025/3/31

The Dipole calibration methods and procedures used were as detailed in:
FCC KDB Publication Number: “KDB865664 D01 SAR Measurement 100 MHz to 6 GHz”
1. The return-loss does not deviate more than 20% from the previous measurement and meets the required 20 dB minimum return-loss requirement.
2. The measurement of real or imaginary parts of impedance does not deviate more than 5Ω from the previous measurement.

4. SAR MEASUREMENT SYSTEM VERIFICATION

4.1 Liquid Verification



Liquid Verification Setup Block Diagram

Liquid Verification Results

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	Δσ (S/m)	
1860	Simulated Tissue Liquid Head	40.616	1.408	40	1.4	1.54	0.57	±5
1880	Simulated Tissue Liquid Head	40.354	1.416	40	1.4	0.88	1.14	±5
1900	Simulated Tissue Liquid Head	40.023	1.429	40	1.4	0.06	2.07	±5

**Liquid Verification above was performed on 2025/3/19.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	Δσ (S/m)	
2412	Simulated Tissue Liquid Head	40.486	1.806	39.28	1.77	3.07	2.03	±5
2437	Simulated Tissue Liquid Head	40.285	1.821	39.22	1.79	2.72	1.73	±5
2450	Simulated Tissue Liquid Head	40.148	1.827	39.2	1.8	2.42	1.5	±5
2462	Simulated Tissue Liquid Head	39.953	1.835	39.17	1.82	2	0.82	±5

**Liquid Verification above was performed on 2025/03/19.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	Δσ (S/m)	
5180	Simulated Tissue Liquid Head	37.138	4.494	36.02	4.64	3.1	-3.15	±5
5200	Simulated Tissue Liquid Head	37.024	4.504	36	4.66	2.84	-3.35	±5
5240	Simulated Tissue Liquid Head	36.855	4.531	35.96	4.7	2.49	-3.6	±5
5250	Simulated Tissue Liquid Head	36.778	4.543	35.95	4.71	2.3	-3.55	±5
5260	Simulated Tissue Liquid Head	36.685	4.556	35.94	4.72	2.07	-3.47	±5
5280	Simulated Tissue Liquid Head	36.563	4.585	35.92	4.74	1.79	-3.27	±5
5320	Simulated Tissue Liquid Head	36.392	4.613	35.88	4.78	1.43	-3.49	±5

**Liquid Verification above was performed on 2025/03/19.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	Δσ (S/m)	
5510	Simulated Tissue Liquid Head	36.464	4.845	35.64	4.98	2.31	-2.71	±5
5590	Simulated Tissue Liquid Head	36.344	4.919	35.52	5.06	2.32	-2.79	±5
5600	Simulated Tissue Liquid Head	36.065	4.955	35.5	5.07	1.59	-2.27	±5
5670	Simulated Tissue Liquid Head	35.883	5.012	35.43	5.14	1.28	-2.49	±5

**Liquid Verification above was performed on 2025/03/19.*

Frequency (MHz)	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	Δσ (S/m)	
5710	Simulated Tissue Liquid Head	36.152	5.026	35.39	5.18	2.15	-2.97	±5
5745	Simulated Tissue Liquid Head	35.873	5.112	35.36	5.22	1.45	-2.07	±5
5750	Simulated Tissue Liquid Head	35.681	5.116	35.35	5.22	0.94	-1.99	±5
5785	Simulated Tissue Liquid Head	35.507	5.141	35.32	5.26	0.53	-2.26	±5
5825	Simulated Tissue Liquid Head	35.475	5.232	35.28	5.3	0.55	-1.28	±5

**Liquid Verification above was performed on 2025/03/19.*

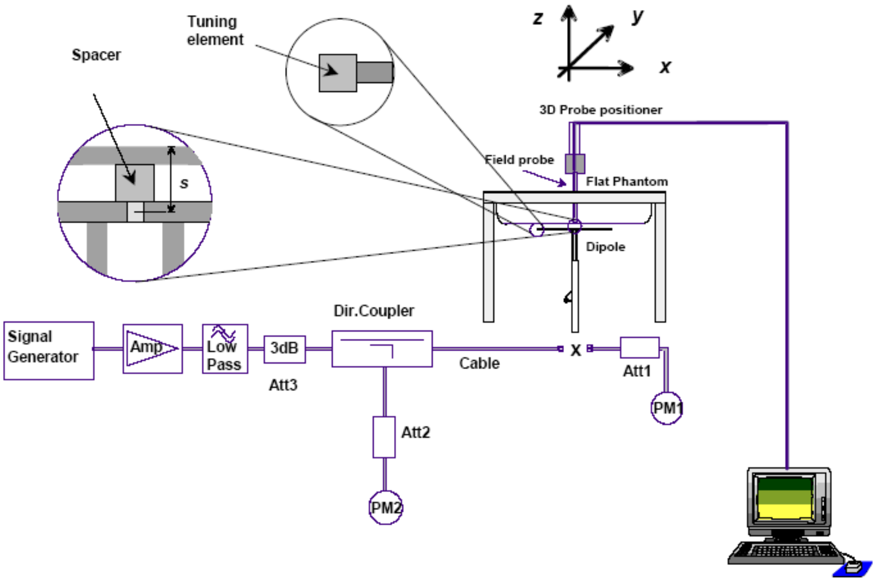
4.2 System Accuracy Verification

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of ±10%. The validation results are tabulated below. And also the corresponding SAR plot is attached as well in the SAR plots files.

The spacing distances in the **System Verification Setup Block Diagram** is given by the following:

a) s = 15 mm ± 0,2 mm for 300 MHz ≤ f ≤ 1 000 MHz;
b) s = 10 mm ± 0,2 mm for 1 000 MHz < f ≤ 3 000 MHz;
c) s = 10 mm ± 0,2 mm for 3 000 MHz < f ≤ 6 000 MHz.

System Verification Setup Block Diagram



System Accuracy Check Results

Date	Frequency Band	Liquid Type	Input Power (mW)	Measured SAR (W/kg)		Normalized to 1W (W/kg)	Target Value (W/kg)	Delta (%)	Tolerance (%)
2025/03/19	1900 MHz	Simulated Tissue Liquid Head	100	1g	4.18	41.8	38.9	7.46	±10
2025/03/19	2450 MHz	Simulated Tissue Liquid Head	100	1g	5.21	52.1	50.9	2.36	±10
2025/03/19	5250 MHz	Simulated Tissue Liquid Head	100	1g	7.9	79	78	1.28	±10
2025/03/19	5600 MHz	Simulated Tissue Liquid Head	100	1g	8.22	82.2	81	1.48	±10
2025/03/19	5750 MHz	Simulated Tissue Liquid Head	100	1g	7.73	77.3	77.8	-0.64	±10

*The SAR values above are normalized to 1 Watt forward power.

4.3 SAR SYSTEM VALIDATION DATA

System Performance 1900MHz Head was performed on 2025/03/19

DUT: D1900V2; Type: 1900 MHz; Serial: 5d251

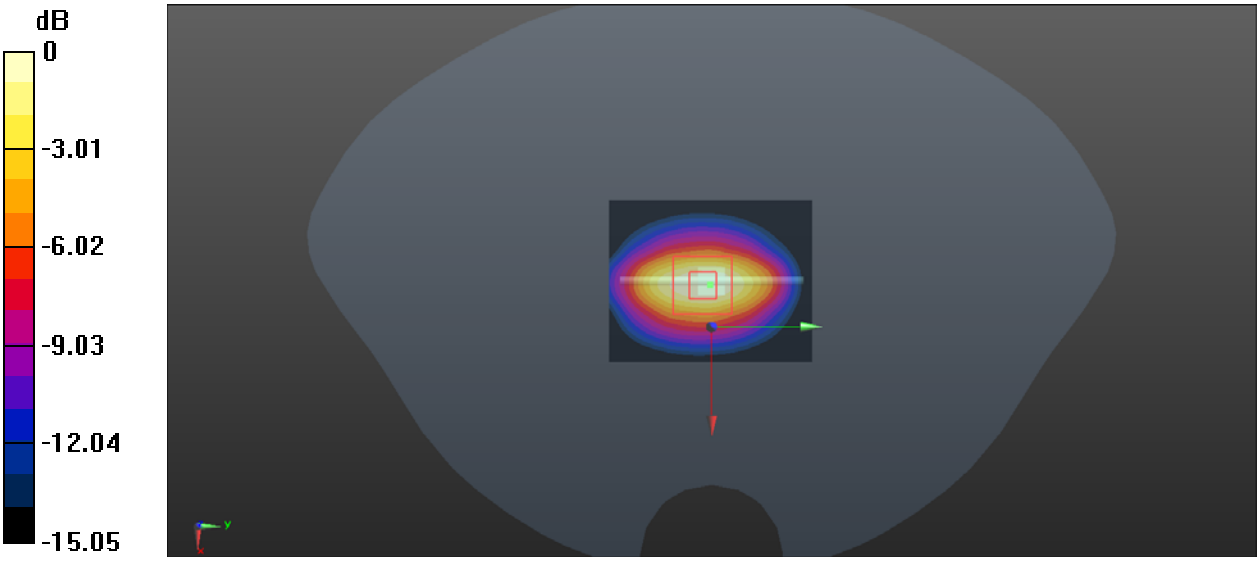
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.429 S/m; ε_r = 40.023; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(7.37, 8.32, 7.54) @ 1900 MHz; Calibrated: 2024/3/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan (5x6x1): Interpolated grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 6.88 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 57.54 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 7.79 W/kg
SAR(1 g) = 4.18 W/kg; SAR(10 g) = 2.19 W/kg
Maximum value of SAR (measured) = 6.52 W/kg



0 dB = 6.52 W/kg = 8.14 dBW/kg

System Performance 2450MHz Head was performed on 2025/03/19

DUT: D2450V2; Type: 2450 MHz; Serial: 1102

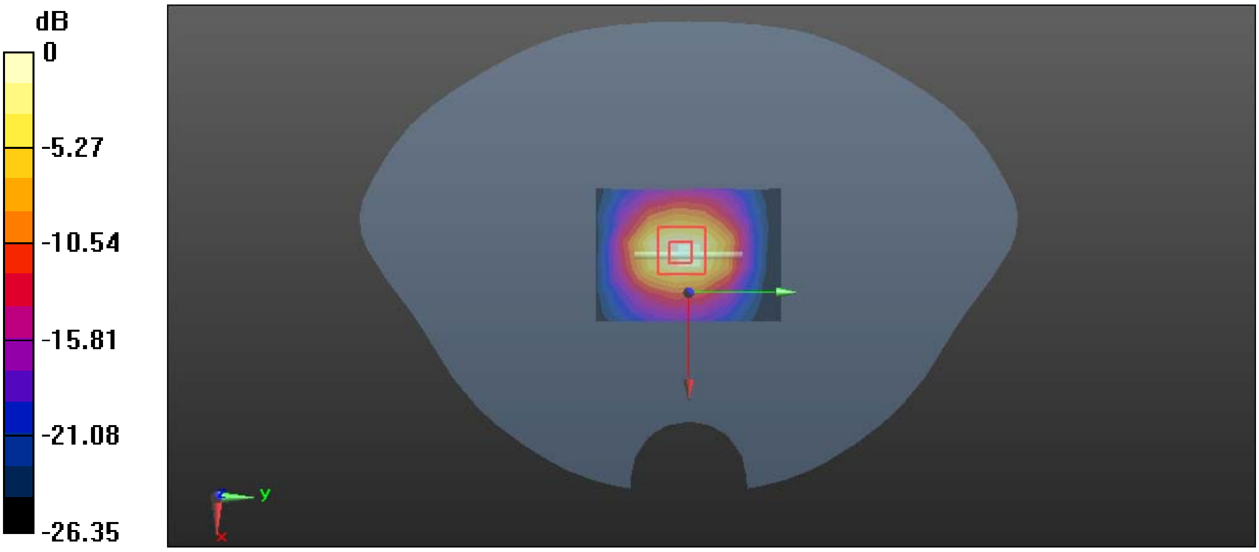
Communication System: CW; Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.827 S/m; ε_r = 40.148; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(7.05, 7.92, 7.22) @ 2450 MHz; Calibrated: 2024/3/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(7x10x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 7.38 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 68.12 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 11.0 W/kg
SAR(1 g) = 5.21 W/kg; SAR(10 g) = 2.34 W/kg
Maximum value of SAR (measured) = 8.70 W/kg



0 dB = 8.70 W/kg = 9.40 dBW/kg

System Performance 5250 MHz Head was performed on 2025/03/19

DUT: D5GHzV2; Type: 5250 MHz; Serial: 1245

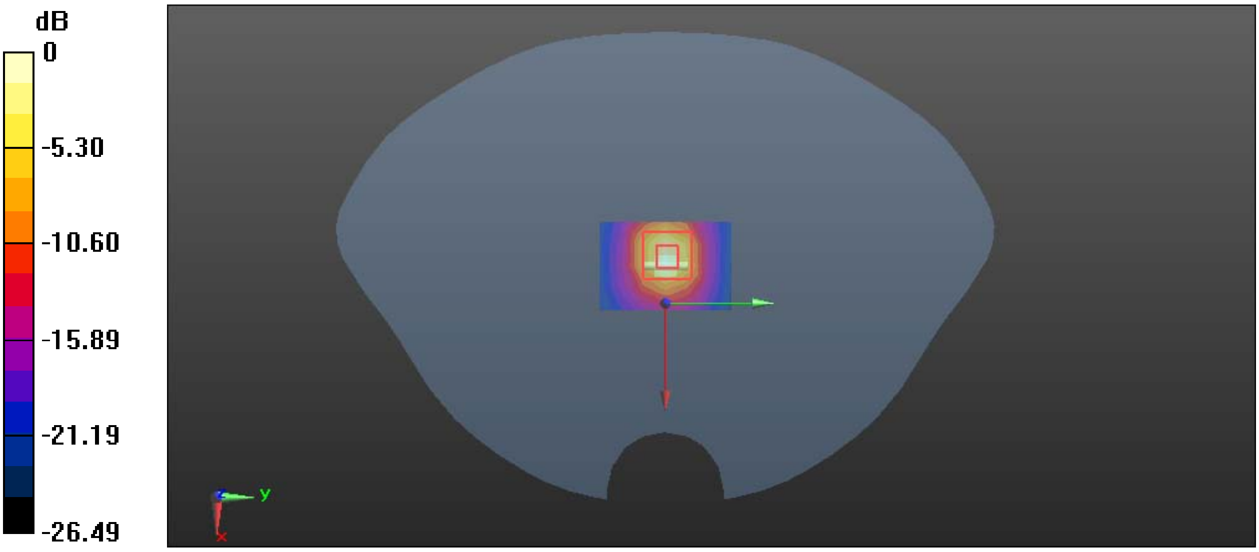
Communication System: CW; Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.543 S/m; ε_r = 36.778; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(4.96, 5.61, 5.16) @ 5250 MHz; Calibrated: 2024/3/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 18.4 W/kg

Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 39.91 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 29.8 W/kg
SAR(1 g) = 7.9 W/kg; SAR(10 g) = 2.29 W/kg
Maximum value of SAR (measured) = 19.0 W/kg



0 dB = 19.0 W/kg = 12.79 dBW/kg

System Performance 5600 MHz Head was performed on 2025/03/19

DUT: D5GHzV2; Type: 5600 MHz; Serial: 1245

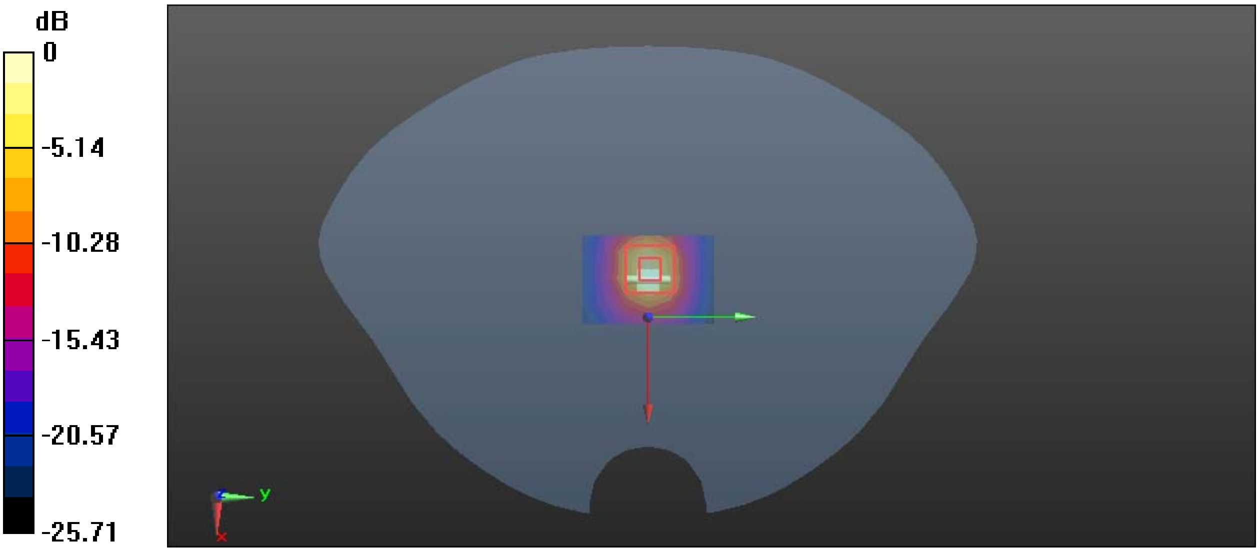
Communication System: CW; Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 4.955 S/m; ε_r = 36.065; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(4.38, 4.98, 4.56) @ 5600 MHz; Calibrated: 2024/3/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 20.2 W/kg

Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 42.44 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 32.7 W/kg
SAR(1 g) = 8.22 W/kg; SAR(10 g) = 2.41 W/kg
Maximum value of SAR (measured) = 21.6 W/kg



0 dB = 21.6 W/kg = 13.34 dBW/kg

System Performance 5750 MHz Head was performed on 2025/03/19

DUT: D5GHzV2; Type: 5750 MHz; Serial: 1245

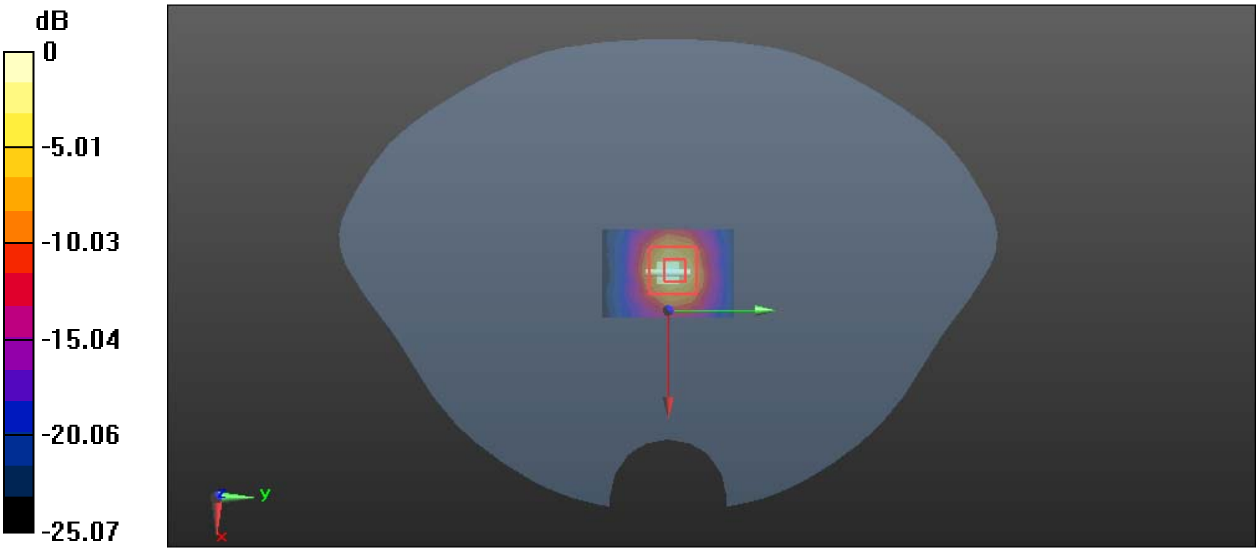
Communication System: CW; Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.116 S/m; ε_r = 35.681; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(4.54, 5.16, 4.7) @ 5750 MHz; Calibrated: 2024/3/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1354; Calibrated: 2024/12/3
- Phantom: Twin SAM; Type: Twin SAM V5.0; Serial: TP:1412
- Measurement SW: DASY52, Version 52.10 (2); SEMCAD X Version 14.6.12 (7470)

Area Scan(7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 18.3 W/kg

Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 38.70 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 35.5 W/kg
SAR(1 g) = 7.73 W/kg; SAR(10 g) = 2.18 W/kg
Maximum value of SAR (measured) = 20.4 W/kg



0 dB = 20.4 W/kg = 13.10 dBW/kg

5. EUT TEST STRATEGY AND METHODOLOGY

5.1 Test positions for body-worn and other configurations

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., the same metallic belt-clip used with different holsters with no other metallic components), only the accessory that dictates the closest spacing to the body must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.

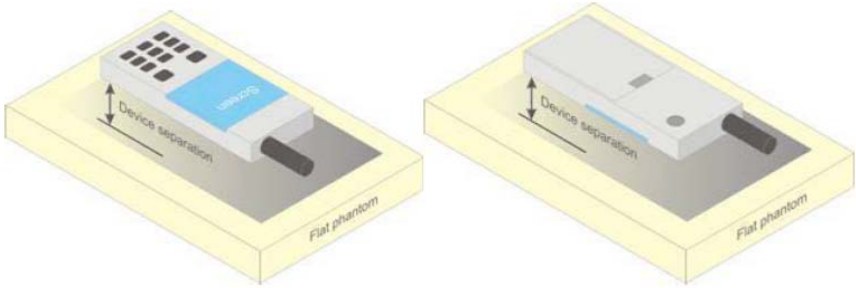


Figure 5 – Test positions for body-worn devices

5.2 Test Distance for SAR Evaluation

In this case the EUT(Equipment Under Test) is set 10mm away from the phantom, the test distance is 10mm.

5.3 SAR Evaluation Procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the SAR value at a fixed location above the ear point or central position was used as a reference value for assessing the power drop. The SAR at this point is measured at the start of the test and then again at the end of the testing.

Step 2: The SAR distribution at the exposed side of the head was measured at a distance of 4 mm from the inner surface of the shell. The area covered the entire dimension of the head or radiating structures of the EUT, the horizontal grid spacing was 15 mm x 15 mm, and the SAR distribution was determined by integrated grid of 1.5mm x 1.5mm. Based on these data, the area of the maximum absorption was determined by spline interpolation. The first Area Scan covers the entire dimension of the EUT to ensure that the hotspot was correctly identified.

Step 3: Around this point, a volume of 30 mm x 30 mm x 30 mm was assessed by measuring 7x 7 x 7 points. On the basis of this data set, the spatial peak SAR value was evaluated under the following procedure:

1) The data at the surface were extrapolated, since the center of the dipoles is 1.2 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.

2) The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by the 3D-Spline interpolation algorithm. The 3D-Spline is composed of three one dimensional splines with the “Not a knot"-condition (in x, y and z-directions). The volume was integrated with the trapezoidal-algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the averages.

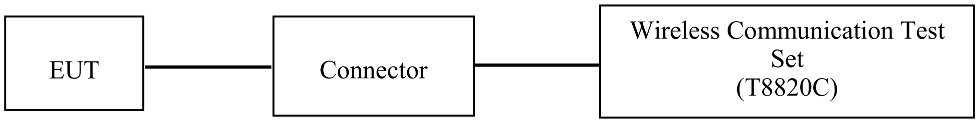
All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation was repeated.

6. CONDUCTED OUTPUT POWER MEASUREMENT

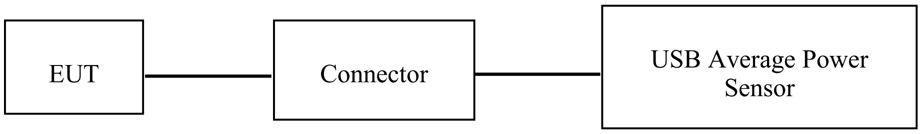
6.1 Test Procedure

The RF output of the transmitter was connected to the input of the Wireless Communication Test Set through Connector.



LTE

The RF output of the transmitter was connected to the input port of the USB Average Power Sensor through Connector.



BT/WLAN

6.2 Maximum Target Output Power

Max Target Power(dBm)			
Mode/Band	Channel		
	Low	Middle	High
WLAN 2.4G(802.11b)	18	18	18
WLAN 2.4G(802.11g)	15.5	15.5	15.5
WLAN 2.4G(802.11n ht20)	15	15	15
WLAN 2.4G(802.11n ht40)	14.5	14.5	14.5
WLAN 5.2G(802.11a)	16	16	16
WLAN 5.2G(802.11n20)	16	16	16
WLAN 5.2G(802.11n40)	13.5	/	13.5
WLAN 5.2G(802.11ac20)	16	16	16
WLAN 5.2G(802.11ac40)	13.5	/	13.5
WLAN 5.2G(802.11ac80)	/	13.5	/
WLAN 5.3G(802.11a)	14.5	14.5	14.5
WLAN 5.3G(802.11n20)	14.5	14.5	14.5
WLAN 5.3G(802.11n40)	13.5	/	13.5
WLAN 5.3G(802.11ac20)	14.5	14.5	14.5
WLAN 5.3G(802.11ac40)	13.5	/	13.5
WLAN 5.3G(802.11ac80)	/	12	/
WLAN 5.6G(802.11a)	11.5	11.5	11.5
WLAN 5.6G(802.11n20)	11	11	11
WLAN 5.6G(802.11n40)	12	12	12
WLAN 5.6G(802.11ac20)	11	11	11
WLAN 5.6G(802.11ac40)	12	12	12
WLAN 5.6G(802.11ac80)	10.5	10.5	10.5
WLAN 5.8G(802.11a)	15	15	15
WLAN 5.8G(802.11n20)	15	15	15
WLAN 5.8G(802.11n40)	14	/	14
WLAN 5.8G(802.11ac20)	15	15	15
WLAN 5.8G(802.11ac40)	14	/	14
WLAN 5.8G(802.11ac80)	/	13	/
Bluetooth BDR/EDR	4.5	4.5	4.5
BLE 1M	-2.5	-2.5	-2.5
LTE Band 2	25	25	25

Note: The Maximum Target Power for LTE bands corresponds to their maximum power in QPSK modes with maximum bandwidth.

6.3 Test Results:

WLAN 2.4G(Configuration 2#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11b	2412	1Mbps	100	17.62
	2437			**17.74**
	2462			17.57
802.11g	2412	6Mbps	100	14.98
	2437			15.29
	2462			15.07
802.11n ht20	2412	MCS0	100	14.95
	2437			14.75
	2462			14.77
802.11n ht40	2422	MCS0	100	13.9
	2437			14.38
	2452			14.16

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

WLAN 5.2G(Configuration 2#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11a	5180	6Mbps	100	15.51
	5200			**15.53**
	5240			15.36
802.11n20	5180	MCS0	100	15.43
	5200			15.47
	5240			15.2
802.11n40	5190	MCS0	100	13.43
	5230			13.19
802.11ac20	5180	MCS0	100	15.39
	5200			15.46
	5240			15.33
802.11ac40	5190	MCS0	100	13.28
	5230			13.24
802.11ac80	5210	MCS0	100	13.34

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

WLAN 5.3G(Configuration 2#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11a	5260	6Mbps	100	14.31
	5280			**14.41**
	5320			14.36
802.11n20	5260	MCS0	100	14.26
	5280			14.13
	5320			13.84
802.11n40	5270	MCS0	100	13.06
	5310			12.65
802.11ac20	5260	MCS0	100	14.21
	5280			14.09
	5320			13.67
802.11ac40	5270	MCS0	100	12.94
	5310			12.2
802.11ac80	5290	MCS0	100	11.57

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

WLAN 5.6G(Configuration 2#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11a	5500	6Mbps	100	10.06
	5580			10.15
	5700			11.15
	5720			11.27
802.11n20	5500	MCS0	100	10.6
	5580			10.49
	5700			10.92
	5720			10.88
802.11n40	5510	MCS0	100	10.93
	5590			**11.88**
	5670			10.81
	5710			11.57
802.11ac20	5500	MCS0	100	10.14
	5580			10.3
	5700			10.61
	5720			10.46
802.11ac40	5510	MCS0	100	10.39
	5590			11.66
	5670			10.37
	5710			11.58
802.11ac80	5530	MCS0	100	9.99
	5610			9.58
	5690			9.69

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

WLAN 5.8G(Configuration 2#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11a	5745	6Mbps	100	14.47
	5785			**14.79**
	5825			14.19
802.11n20	5745	MCS0	100	14.56
	5785			14.55
	5825			14.25
802.11n40	5755	MCS0	100	13.43
	5795			13.82
802.11ac20	5745	MCS0	100	14.31
	5785			14.32
	5825			13.97
802.11ac40	5755	MCS0	100	13.24
	5795			13.61
802.11ac80	5775	MCS0	100	12.73

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

Bluetooth(Configuration 2#):

Mode	Channel frequency (MHz)	RF Output Power (dBm)
BDR(GFSK)	2402	3.37
	2441	3.41
	2480	**3.92**
EDR(π/4-DQPSK)	2402	3.22
	2441	2.51
	2480	3.36
EDR(8DPSK)	2402	3.51
	2441	2.54
	2480	3.29
BLE_1M	2402	-2.83
	2440	-3.65
	2480	-3.52

WLAN 2.4G(Configuration 3#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11b	2412	1Mbps	100	17.65
	2437			**17.75**
	2462			17.66
802.11g	2412	6Mbps	100	15.06
	2437			15.42
	2462			15.13
802.11n ht20	2412	MCS0	100	14.85
	2437			14.9
	2462			14.88
802.11n ht40	2422	MCS0	100	13.88
	2437			14.35
	2452			14.25

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

WLAN 5.2G(Configuration 3#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11a	5180	6Mbps	100	15.5
	5200			**15.58**
	5240			15.44
802.11n20	5180	MCS0	100	15.43
	5200			15.46
	5240			15.31
802.11n40	5190	MCS0	100	13.42
	5230			13.27
802.11ac20	5180	MCS0	100	15.51
	5200			15.45
	5240			15.47
802.11ac40	5190	MCS0	100	13.3
	5230			13.22
802.11ac80	5210	MCS0	100	13.37

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

WLAN 5.3G(Configuration 3#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11a	5260	6Mbps	100	14.42
	5280			**14.45**
	5320			14.39
802.11n20	5260	MCS0	100	14.29
	5280			14.18
	5320			13.87
802.11n40	5270	MCS0	100	13.19
	5310			12.62
802.11ac20	5260	MCS0	100	14.33
	5280			14.16
	5320			13.8
802.11ac40	5270	MCS0	100	13.09
	5310			12.17
802.11ac80	5290	MCS0	100	11.7

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

WLAN 5.6G(Configuration 3#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11a	5500	6Mbps	100	10.1
	5580			10.14
	5700			11.28
	5720			11.31
802.11n20	5500	MCS0	100	10.6
	5580			10.63
	5700			10.93
	5720			10.87
802.11n40	5510	MCS0	100	10.97
	5590			**11.92**
	5670			10.89
	5710			11.59
802.11ac20	5500	MCS0	100	10.25
	5580			10.34
	5700			10.64
	5720			10.58
802.11ac40	5510	MCS0	100	10.45
	5590			11.69
	5670			10.32
	5710			11.65
802.11ac80	5530	MCS0	100	10.09
	5610			9.55
	5690			9.71

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

WLAN 5.8G(Configuration 3#):

Mode	Channel frequency (MHz)	Data Rate	Duty cycle (%)	RF Output Power (dBm)
802.11a	5745	6Mbps	100	14.53
	5785			**14.82**
	5825			14.3
802.11n20	5745	MCS0	100	14.55
	5785			14.6
	5825			14.27
802.11n40	5755	MCS0	100	13.46
	5795			13.94
802.11ac20	5745	MCS0	100	14.42
	5785			14.33
	5825			13.93
802.11ac40	5755	MCS0	100	13.25
	5795			13.68
802.11ac80	5775	MCS0	100	12.76

Note: The duty cycle plots, please refer to the Original Report: 2403V85163E-SA.

Bluetooth(Configuration 3#):

Mode	Channel frequency (MHz)	RF Output Power (dBm)
BDR(GFSK)	2402	3.42
	2441	3.42
	2480	**3.87**
EDR(π/4-DQPSK)	2402	3.35
	2441	2.62
	2480	3.34
EDR(8DPSK)	2402	3.6
	2441	2.52
	2480	3.35
BLE_1M	2402	-2.8
	2440	-3.56
	2480	-3.4

LTE Band 2(Configuration 2#):

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	24.31	24.25	23.84
		RB1#3	24.32	24.61	24
		RB1#5	24.35	24.34	24.02
		RB3#0	24.05	24.54	23.78
		RB3#1	24.02	24.59	23.69
		RB3#3	24.2	24.46	23.8
		RB6#0	23.17	23.47	23.21
	16-QAM	RB1#0	23.15	23.02	22.84
		RB1#3	23.12	23.07	23.1
		RB1#5	23.1	23.12	22.64
		RB3#0	23.13	22.85	22.76
		RB3#1	23.3	22.94	22.78
		RB3#3	23.08	22.83	22.85
		RB6#0	21.8	22.51	21.41
3M	QPSK	RB1#0	24.01	24.31	24.11
		RB1#8	23.97	24.3	23.78
		RB1#14	24.29	24.33	23.84
		RB8#0	22.06	23.71	23.23
		RB8#4	23.26	23.45	23.18
		RB8#7	23.21	23.66	23.23
		RB15#0	23.3	23.56	23.02
	16-QAM	RB1#0	22.88	23.26	22.82
		RB1#8	22.59	22.98	22.7
		RB1#14	22.75	23.04	22.97
		RB8#0	21.91	22.07	21.4
		RB8#4	21.74	22.22	21.58
		RB8#7	21.94	22.22	21.87
		RB15#0	21.8	22.08	21.53
5M	QPSK	RB1#0	24.15	24.49	23.94
		RB1#12	24.48	24.77	23.86
		RB1#24	24.17	24.54	23.76
		RB12#0	23.29	23.49	23.25
		RB12#7	23.28	23.32	23.27
		RB12#13	23.31	23.41	23.34
		RB25#0	23.07	23.49	23.13
	16-QAM	RB1#0	22.77	23.59	22.55
		RB1#12	23.12	23.71	22.63
		RB1#24	22.86	23.48	22.45
		RB12#0	21.89	22.12	21.75
		RB12#7	21.93	22.32	21.44
		RB12#13	21.99	22.4	21.74
		RB25#0	22	22.1	21.66

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	23.91	24.69	24.45
		RB1#25	24.19	24.75	24.19
		RB1#49	24.33	24.36	23.66
		RB25#0	23.10	23.46	23.29
		RB25#12	23.24	23.30	23.10
		RB25#25	23.40	23.22	23.32
		RB50#0	23.37	23.68	23.05
	16-QAM	RB1#0	22.66	22.99	23.11
		RB1#25	22.80	23.08	23.27
		RB1#49	22.86	23.06	22.96
		RB25#0	22.10	22.16	21.77
		RB25#12	21.98	22.37	21.48
		RB25#25	21.96	22.17	21.71
		RB50#0	21.80	22.01	21.62
15M	QPSK	RB1#0	24.27	24.47	24.32
		RB1#37	24.67	24.74	24.27
		RB1#74	24.22	24.40	23.63
		RB36#0	23.04	23.42	23.17
		RB36#20	23.13	23.60	23.35
		RB36#39	23.17	23.61	23.42
		RB75#0	23.41	23.58	23.24
	16-QAM	RB1#0	22.81	23.37	22.84
		RB1#37	23.14	23.62	22.83
		RB1#74	23.13	23.51	22.24
		RB36#0	21.85	22.35	21.92
		RB36#20	21.89	22.21	21.82
		RB36#39	22.11	22.30	21.51
		RB75#0	21.90	22.02	21.76
20M	QPSK	RB1#0	23.64	23.94	24.23
		RB1#49	24.32	**24.78**	24.65
		RB1#99	23.90	24.03	23.49
		RB50#0	24.32	24.66	24.40
		RB50#24	23.72	23.62	23.37
		RB50#50	23.40	23.55	23.22
		RB100#0	23.53	23.61	23.11
	16-QAM	RB1#0	23.11	23.43	23.29
		RB1#49	23.28	23.70	23.30
		RB1#99	23.20	23.54	23.14
		RB50#0	23.15	22.79	22.89
		RB50#24	23.68	23.18	23.72
		RB50#50	23.74	22.87	23.74
		RB100#0	23.16	23.30	23.13

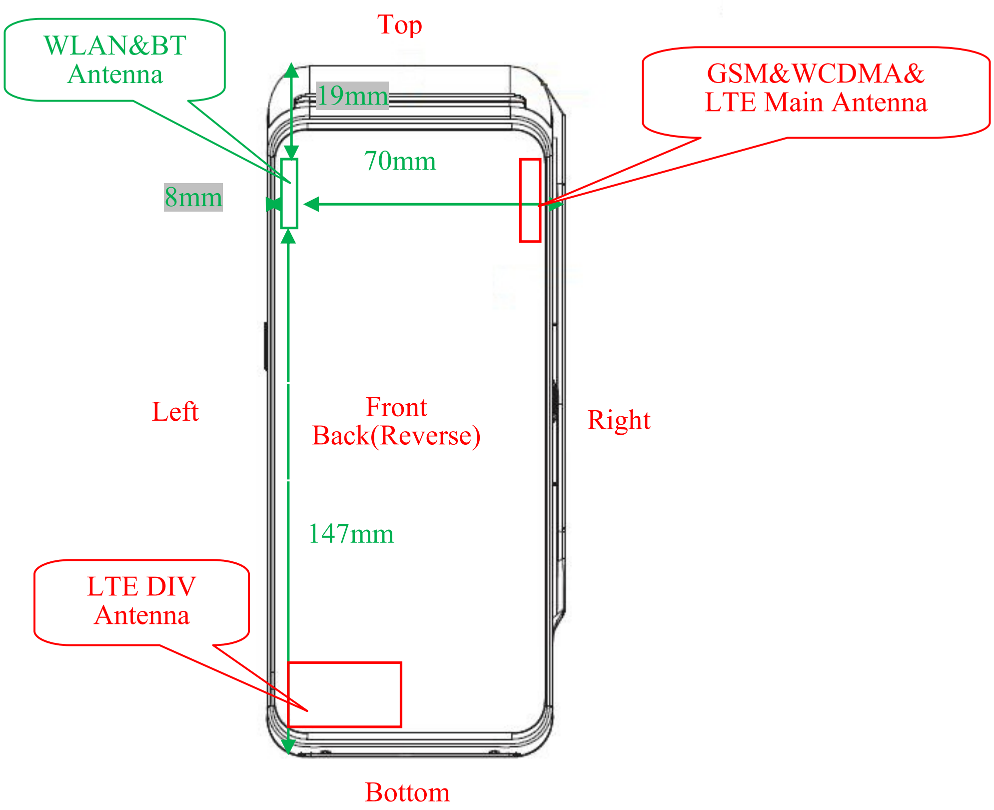
LTE Band 2(Configuration 3#):

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
1.4M	QPSK	RB1#0	24.39	24.26	23.87
		RB1#3	24.43	24.66	24.12
		RB1#5	24.49	24.42	24
		RB3#0	24.16	24.53	23.87
		RB3#1	24.13	24.7	23.82
		RB3#3	24.26	24.55	23.94
		RB6#0	23.18	23.57	23.06
	16-QAM	RB1#0	23.25	23.1	22.92
		RB1#3	23.24	23.22	23.21
		RB1#5	23.23	23.09	22.77
		RB3#0	23.27	22.83	22.82
		RB3#1	23.34	22.91	22.75
		RB3#3	23.21	22.8	22.94
		RB6#0	21.91	22.49	21.51
3M	QPSK	RB1#0	24.06	24.44	24.12
		RB1#8	24.11	24.41	23.79
		RB1#14	24.29	24.44	23.88
		RB8#0	22.09	23.68	23.39
		RB8#4	23.39	23.51	23.21
		RB8#7	23.23	23.76	23.04
		RB15#0	23.37	23.61	23.17
	16-QAM	RB1#0	22.94	23.31	22.97
		RB1#8	22.71	23	22.66
		RB1#14	22.72	23.14	23.01
		RB8#0	21.89	22.2	21.53
		RB8#4	21.78	22.35	21.67
		RB8#7	21.96	22.23	21.88
		RB15#0	21.76	22.15	21.65
5M	QPSK	RB1#0	24.2	24.47	23.59
		RB1#12	24.44	**24.86**	23.97
		RB1#24	24.12	24.36	23.67
		RB12#0	23.38	23.24	23.34
		RB12#7	23.27	23.31	23.18
		RB12#13	23.34	23.02	23.27
		RB25#0	23.1	23.45	23.12
	16-QAM	RB1#0	22.84	23.56	22.63
		RB1#12	23.16	23.78	22.77
		RB1#24	22.88	23.62	22.42
		RB12#0	21.89	22.24	21.77
		RB12#7	22.06	22.28	21.53
		RB12#13	21.97	22.39	21.69
		RB25#0	21.98	22.17	21.7

Test Bandwidth	Test Modulation	Resource Block & RB offset	Low Channel (dBm)	Middle Channel (dBm)	High Channel (dBm)
10M	QPSK	RB1#0	23.96	24.73	24.43
		RB1#25	24.27	24.80	24.26
		RB1#49	24.33	24.50	23.78
		RB25#0	23.14	23.56	23.12
		RB25#12	23.33	23.44	23.18
		RB25#25	23.52	23.34	23.22
		RB50#0	23.47	23.77	23.16
	16-QAM	RB1#0	22.79	23.13	23.23
		RB1#25	22.85	23.20	23.30
		RB1#49	22.90	23.08	23.02
		RB25#0	22.22	22.20	21.89
		RB25#12	22.09	22.39	21.60
		RB25#25	22.04	22.14	21.86
		RB50#0	21.89	22.15	21.68
15M	QPSK	RB1#0	24.28	24.45	24.27
		RB1#37	24.69	24.79	24.31
		RB1#74	24.26	24.49	23.77
		RB36#0	23.17	23.55	23.31
		RB36#20	23.19	23.69	23.27
		RB36#39	23.27	23.59	23.36
		RB75#0	23.52	23.67	23.20
	16-QAM	RB1#0	22.84	23.49	22.81
		RB1#37	23.14	23.60	22.97
		RB1#74	23.14	23.54	22.26
		RB36#0	21.81	22.30	21.94
		RB36#20	21.88	22.30	21.77
		RB36#39	22.24	22.35	21.63
		RB75#0	21.93	22.16	21.84
20M	QPSK	RB1#0	23.63	23.98	24.33
		RB1#49	24.42	24.83	24.71
		RB1#99	24.04	24.13	24.53
		RB50#0	24.34	24.63	24.44
		RB50#24	23.62	23.81	23.74
		RB50#50	23.57	23.50	23.44
		RB100#0	23.61	23.75	23.29
	16-QAM	RB1#0	23.25	23.46	23.27
		RB1#49	23.40	23.66	23.36
		RB1#99	23.15	23.69	23.14
		RB50#0	23.23	22.86	22.95
		RB50#24	23.72	23.31	23.75
		RB50#50	23.78	23.01	23.80
		RB100#0	23.31	23.41	23.15

7. Standalone SAR test exclusion considerations

Antennas Location:



Note: The LTE DIV antenna cannot transmit, and is receiving only.

7.1 Antenna Distance To Edge

Antenna Distance To Edge(mm)						
Antenna	**Front**	**Back**	**Left**	**Right**	**Top**	**Bottom**
WLAN &BT Antenna	< 5	< 5	8	70	19	147

7.2 Standalone SAR test exclusion considerations

Mode	Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Distance (mm)	Calculated value	Threshold (1-g)	SAR Test Exclusion
WLAN 2.4G	2462	18	63.1	0	19.8	3	No
WLAN 5.2G	5240	16	39.8	0	18.2	3	No
WLAN 5.3G	5320	14.5	28.2	0	13.0	3	No
WLAN 5.6G	5720	12	15.8	0	7.6	3	No
WLAN 5.8G	5825	15	31.6	0	15.3	3	No
Bluetooth	2480	4.5	2.8	0	0.9	3	YES

Note: *The bluetooth based peak power for calculation, and Wi-Fi based average power for calculation.*

NOTE:

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤7.5 for 10-g extremity SAR, where

1. f(GHz) is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

According to KDB447498 D01 General RF Exposure Guidance v06: 4.3. General SAR test exclusion guidance

c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion (also illustrated in Appendix C):

1) For test separation distances > 50 mm and < 200 mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by [1 + log(100/f(MHz))]

2) For test separation distances ≤ 50 mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by ½

3) SAR measurement procedures are not established below 100 MHz

Measurement Result:

For NFC, the power of EUT: E Field@3m is 77.76dBuV/m =-17.44dBm (0.02mW)

Note: E[dBμV/m] = EIRP[dBm] + 95.2 for d = 3 m.

SAR test exclusion threshold for NFC(13.56MHz) separation distance < 50mm

=[474*(1 + log(100/f(MHz)))]/2

= 443mW

>0.02mW

Conclusion:

The NFC SAR evaluation can be exempted.

Note: E Field please refer to Original Report: 2403V85163E-SA

7.3 Standalone SAR estimation:

Mode	Frequency (MHz)	Output Power (dBm)	Output Power (mW)	Distance (mm)	Estimated 1-g (W/kg)
BT Body	2480	4.5	2.8	10	0.06

Note: *The bluetooth based peak power for calculation.*

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
[(max. power of channel, including tune-up tolerance , mW)/(min. test separation distance,mm)] · [√f(GHz)/x]
W/kg for test separation distances ≤50 mm;
where x = 7.5 for 1-g SAR.
When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

7.4 SAR test exclusion for the EUT edge considerations Result

Mode	Front Edge	Back Edge	Left Edge	Right Edge	Top Edge	Bottom Edge
WLAN 2.4G/5G	**Required**	**Required**	**Required**	Exclusion	**Required**	Exclusion
Bluetooth	Exclusion*	Exclusion*	Exclusion*	Exclusion*	Exclusion*	Exclusion*

Note:
Required: The distance to Edge is less than 25mm, testing is required.
Exclusion: The distance to Edge is more than 25 mm, testing is not required.
Exclusion*: SAR test exclusion evaluation has been done above.

Note: The test data of WWAN, please refer to FCC ID: XDQN92-01, SAR report of 2403V85163E-SA, issued by China Certification ICT Co., Ltd (Dongguan).

8. SAR MEASUREMENT RESULTS

This page summarizes the results of the performed dosimetric evaluation.

8.1 SAR Test Data

Environmental Conditions

Temperature:	22.3-23.1 ℃
Relative Humidity:	42 %
ATM Pressure:	101.9 kPa
Test Date:	2025/03/19

Testing was performed by Wen Chen, Leo Lu, Aixlee Li, Ken Zong.

WLAN 2.4G:

EUT Position	Configuration	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)				
						Scaled Factor	Duty cycle Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	Configuration 3#	2412	802.11b	/	/	/	/	/	/	/
		2437	802.11b	17.75	18	1.059	1	0.051	0.05	/
		2462	802.11b	/	/	/	/	/	/	/
Body Back (10mm)	Configuration 3#	2412	802.11b	/	/	/	/	/	/	/
		2437	802.11b	17.75	18	1.059	1	0.109	0.12	/
		2462	802.11b	/	/	/	/	/	/	/
Body Left (10mm)	Configuration 3#	2412	802.11b	/	/	/	/	/	/	/
		2437	802.11b	17.75	18	1.059	1	0.38	0.40	1#
		2462	802.11b	/	/	/	/	/	/	/
	Configuration 2#	2412	802.11b	/	/	/	/	/	/	/
		2437	802.11b	17.74	18	1.062	1	0.316	0.34	2#
		2462	802.11b	/	/	/	/	/	/	/
Body Top (10mm)	Configuration 3#	2412	802.11b	/	/	/	/	/	/	/
		2437	802.11b	17.75	18	1.059	1	0.038	0.04	/
		2462	802.11b	/	/	/	/	/	/	/

Note:

1. When the SAR value is less than half of the limit, testing for low and high channel is optional.
2. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

3 For 802.11b mode power is the largest among 802.11b/g/n, 802.11 b mode as initial test configuration is selected to test.

4. According KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)".

WLAN 5.2G:

EUT Position	Configuration	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)				
						Scaled Factor	Duty cycle Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	Configuration 3#	5180	802.11a	/	/	/	/	/	/	/
		5200	802.11a	15.58	16	1.102	1	0.088	0.10	/
		5240	802.11a	/	/	/	/	/	/	/
Body Back (10mm)	Configuration 3#	5180	802.11a	/	/	/	/	/	/	/
		5200	802.11a	15.58	16	1.102	1	0.436	0.48	/
		5240	802.11a	/	/	/	/	/	/	/
Body Left (10mm)	Configuration 3#	5180	802.11a	/	/	/	/	/	/	/
		5200	802.11a	15.58	16	1.102	1	0.473	0.52	3#
		5240	802.11a	/	/	/	/	/	/	/
	Configuration 2#	5180	802.11a	/	/	/	/	/	/	/
		5200	802.11a	15.53	16	1.114	1	0.323	0.36	4#
		5240	802.11a	/	/	/	/	/	/	/
Body Top (10mm)	Configuration 3#	5180	802.11a	/	/	/	/	/	/	/
		5200	802.11a	15.58	16	1.102	1	0.019	0.02	/
		5240	802.11a	/	/	/	/	/	/	/

Note:

1. When the SAR value is less than half of the limit, testing for low and high channel is optional.
2.When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
3.For 802.11a mode power is the largest among 802.11a/n/ac, 802.11 a mode as initial test configuration is selected to test.
4. According KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to “1/(duty cycle)”.

WLAN 5.3G:

EUT Position	Configuration	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)				
						Scaled Factor	Duty cycle Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	Configuration 3#	5260	802.11a	/	/	/	/	/	/	/
		5280	802.11a	14.45	14.5	1.012	1	0.092	0.09	/
		5320	802.11a	/	/	/	/	/	/	/
Body Back (10mm)	Configuration 3#	5260	802.11a	/	/	/	/	/	/	/
		5280	802.11a	14.45	14.5	1.012	1	0.209	0.21	/
		5320	802.11a	/	/	/	/	/	/	/
Body Left (10mm)	Configuration 3#	5260	802.11a	/	/	/	/	/	/	/
		5280	802.11a	14.45	14.5	1.012	1	0.275	0.28	5#
		5320	802.11a	/	/	/	/	/	/	/
	Configuration 2#	5260	802.11a	/	/	/	/	/	/	/
		5280	802.11a	14.41	14.5	1.021	1	0.222	0.23	6#
		5320	802.11a	/	/	/	/	/	/	/
Body Top (10mm)	Configuration 3#	5260	802.11a	/	/	/	/	/	/	/
		5280	802.11a	14.45	14.5	1.012	1	0.018	0.02	/
		5320	802.11a	/	/	/	/	/	/	/

Note:

1. When the SAR value is less than half of the limit, testing for low and high channel is optional.
2. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
3. For 802.11a mode power is the largest among 802.11a/n/ac, 802.11 a mode as initial test configuration is selected to test.
4. According KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to “1/(duty cycle)”.

WLAN 5.6G:

EUT Position	Configuration	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)					
						Scaled Factor	Duty cycle Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	Configuration 3#	5510	802.11n40	/	/	/	/	/	/	/
		5590	802.11n40	11.92	12	1.019	1	0.032	0.03	/
		5670	802.11n40	/	/	/	/	/	/	/
		5710	802.11n40	/	/	/	/	/	/	/
Body Back (10mm)	Configuration 3#	5510	802.11n40	/	/	/	/	/	/	/
		5590	802.11n40	11.92	12	1.019	1	0.070	0.07	/
		5670	802.11n40	/	/	/	/	/	/	/
		5710	802.11n40	/	/	/	/	/	/	/
Body Left (10mm)	Configuration 3#	5510	802.11n40	/	/	/	/	/	/	/
		5590	802.11n40	11.92	12	1.019	1	0.095	0.10	7#
		5670	802.11n40	/	/	/	/	/	/	/
		5710	802.11n40	/	/	/	/	/	/	/
	Configuration 2#	5510	802.11n40	/	/	/	/	/	/	/
		5590	802.11n40	11.88	12	1.028	1	0.067	0.07	8#
		5670	802.11n40	/	/	/	/	/	/	/
		5710	802.11n40	/	/	/	/	/	/	/
Body Top (10mm)	Configuration 3#	5510	802.11n40	/	/	/	/	/	/	/
		5590	802.11n40	11.92	12	1.019	1	0.014	0.01	/
		5670	802.11n40	/	/	/	/	/	/	/
		5710	802.11n40	/	/	/	/	/	/	/

Note:

1. When the SAR value is less than half of the limit, testing for low and high channel is optional.
2.When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
3.For 802.11n40 mode power is the largest among 802.11a/n/ac, 802.11 n40 mode as initial test configuration is selected to test.
4. According KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to “1/(duty cycle)”.

WLAN 5.8G:

EUT Position	Configuration	Frequency (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)					
						Scaled Factor	Duty cycle Factor	Meas. SAR	Scaled SAR	Plot
Body Front (10mm)	Configuration 3#	5745	802.11a	/	/	/	/	/	/	/
		5785	802.11a	14.82	15	1.042	1	0.066	0.07	/
		5825	802.11a	/	/	/	/	/	/	/
Body Back (10mm)	Configuration 3#	5745	802.11a	/	/	/	/	/	/	/
		5785	802.11a	14.82	15	1.042	1	0.127	0.13	/
		5825	802.11a	/	/	/	/	/	/	/
Body Left (10mm)	Configuration 3#	5745	802.11a	/	/	/	/	/	/	/
		5785	802.11a	14.82	15	1.042	1	0.299	0.31	9#
		5825	802.11a	/	/	/	/	/	/	/
	Configuration 2#	5745	802.11a	/	/	/	/	/	/	/
		5785	802.11a	14.79	15	1.05	1	0.246	0.26	10#
		5825	802.11a	/	/	/	/	/	/	/
Body Top (10mm)	Configuration 3#	5745	802.11a	/	/	/	/	/	/	/
		5785	802.11a	14.82	15	1.042	1	0.036	0.04	/
		5825	802.11a	/	/	/	/	/	/	/

Note:

1. When the SAR value is less than half of the limit, testing for low and high channel is optional.
2.When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
3.For 802.11a mode power is the largest among 802.11a/n/ac, 802.11 a mode as initial test configuration is selected to test.
4. According KDB 248227 D01, for SAR testing of WLAN with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to “1/(duty cycle)”.

Worst case:

LTE Band 2:

Configuration	EUT Position	Frequency (MHz)	Bandwidth (MHz)	Test Mode	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/kg)			
							Scaled Factor	Meas. SAR	Scaled SAR	Plot
Configuration 2#	Body Right (10mm)	1860	20	1RB	/	/	/	/	/	/
		1880	20	1RB	24.78	25	1.052	0.934	0.98	11#
		1900	20	1RB	/	/	/	/	/	/
Configuration 3#	Body Right (10mm)	1860	20	1RB	/	/	/	/	/	/
		1880	20	1RB	24.83	25	1.04	0.956	0.99	12#
		1900	20	1RB	/	/	/	/	/	/

Note: The test data of WWAN, please refer to FCC ID: XDQN92-01, SAR report of 2403V85163E-SA, issued by China Certification ICT Co., Ltd (Dongguan).

9. Measurement Variability

In accordance with published RF Exposure KDB procedure 865664 D01 SAR measurement 100 MHz to 6 GHz v01. These additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results

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

Note: The same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.

The Highest Measured SAR Configuration in Each Frequency Band

Body

SAR probe calibration point	Frequency Band	Freq.(MHz)	EUT Position	Meas. SAR (W/kg)		Largest to Smallest SAR Ratio
				Original	Repeated	
/	/	/	/	/	/	/

Note:

1. Second Repeated Measurement is not required since the ratio of the largest to smallest SAR for the original and first repeated measurement is not > 1.20.
2. The measured SAR results **do not** have to be scaled to the maximum tune-up tolerance to determine if repeated measurements are required.
3. 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.

10. SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

Simultaneous Transmission:

Description of Simultaneous Transmit Capabilities		
Transmitter Combination	**Simultaneous?**	**Hotspot?**
WWAN(GSM/WCDMA/LTE) + Bluetooth +NFC	√	×
WWAN(GSM/WCDMA/LTE) + WLAN 2.4G+NFC	√	√
WWAN(GSM/WCDMA/LTE) + WLAN 5G+NFC	√	×
WLAN + Bluetooth	×	×

Simultaneous SAR test exclusion considerations:

Mode(SAR1+SAR2)	Position	Reported SAR(W/kg)		ΣSAR < 1.6W/kg
		SAR1	SAR2	
WWAN(GSM/WCDMA/LTE) + Bluetooth	Body Front	0.22	0.06	0.28
	Body Back	0.65	0.06	0.71
	Body Left	NA	0.06	0.06
	Body Right	1.18	0.06	1.24
	Body Top	0.29	0.06	0.35
WWAN(GSM/WCDMA/LTE) + WLAN 2.4G (Hotspot)	Body Front	0.22	0.05	0.27
	Body Back	0.65	0.12	0.77
	Body Left	NA	0.40	0.40
	Body Right	1.18	NA	1.18
	Body Top	0.29	0.04	0.33
WWAN(GSM/WCDMA/LTE) + WLAN 5G	Body Front	0.22	0.10	0.32
	Body Back	0.65	0.48	1.13
	Body Left	NA	0.52	0.52
	Body Right	1.18	NA	1.18
	Body Top	0.29	0.04	0.33

Note:

For the EIRP of NFC is 0.02 mW, per KDB447498 D01 clause 4.3, the estimated SAR is so lower, so the NFC almost have no influence on the results of simultaneous transmission.

Conclusion:
Sum of SAR: **ΣSAR ≤ 1.6 W/kg** therefore simultaneous transmission SAR with Volume Scans is **not required**.

Note: The test data of WWAN, please refer to FCC ID: XDQN92-01, SAR report of 2403V85163E-SA, issued by China Certification ICT Co., Ltd (Dongguan).

11. SAR Plots

Please Refer to the Attachment.

APPENDIX A MEASUREMENT UNCERTAINTY

The uncertainty budget has been determined for the measurement system and is given in the following Table.

Measurement uncertainty evaluation for IEEE1528-2013 SAR test

Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
Measurement system							
Probe calibration	6.55	N	1	1	1	6.3	6.3
Axial Isotropy	4.7	R	√3	1	1	2.7	2.7
Hemispherical Isotropy	9.6	R	√3	0	0	0.0	0.0
Boundary effect	1.0	R	√3	1	1	0.6	0.6
Linearity	4.7	R	√3	1	1	2.7	2.7
Detection limits	1.0	R	√3	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.0	R	√3	1	1	0.0	0.0
Integration time	0.0	R	√3	1	1	0.0	0.0
RF ambient conditions – noise	1.0	R	√3	1	1	0.6	0.6
RF ambient conditions– reflections	1.0	R	√3	1	1	0.6	0.6
Probe positioner mech. Restrictions	0.8	R	√3	1	1	0.5	0.5
Probe positioning with respect to phantom shell	6.7	R	√3	1	1	3.9	3.9
Post-processing	2.0	R	√3	1	1	1.2	1.2
Test sample related							
Test sample positioning	2.8	N	1	1	1	2.8	2.8
Device holder uncertainty	6.3	N	1	1	1	6.3	6.3
Drift of output power	5.0	R	√3	1	1	2.9	2.9
Phantom and set-up							
Phantom uncertainty (shape and thickness tolerances)	4.0	R	√3	1	1	2.3	2.3
Liquid conductivity target)	5.0	R	√3	0.64	0.43	1.8	1.2
Liquid conductivity meas.)	2.5	N	1	0.64	0.43	1.6	1.1
Liquid permittivity target)	5.0	R	√3	0.6	0.49	1.7	1.4
Liquid permittivity meas.)	2.5	N	1	0.6	0.49	1.5	1.2
Combined standard uncertainty		RSS				12.2	12.0
Expanded uncertainty 95 % confidence interval)						24.1	23.7

APPENDIX B EUT TEST POSITION PHOTOS

Please Refer to the Attachment.

APPENDIX C CALIBRATION CERTIFICATES

Please Refer to the Attachment.

******* END OF REPORT *******