

TEST REPORT

Applicant: TCL Communication Ltd.
Address: 5/F, Building 22E, 22 Science Park East Avenue,
Hong Kong Science Park, Shatin, NT, Hong Kong
Equipment Type: Tablet PC
Model Name: 8183A
Brand Name: TCL
FCC ID: 2ACCJB240
Test Standard: FCC 47 CFR Part 2.1093
(refer section 3.1)
Maximum SAR: Body (1 g@0mm): 1.17 W/kg
Sample Arrival Date: May 9, 2025
Test Date: May 24, 2025 – Jun. 3, 2025
Date of Issue: Jun. 11, 2025

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

**Tested by:** Guo Guangwei**Checked by:** Xu Rui**Approved by:** Tolan Tu
(Testing Director)*Guo Guangwei**Xu Rui**Tolan Tu*

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Jun. 11, 2025</u>	<u>Initial Issue</u>

TABLE OF CONTENTS

1	GENERAL INFORMATION	5
1.1	Test Laboratory	5
1.2	Test Location	5
1.3	Test Environment Condition	5
2	PRODUCT INFORMATION	6
2.1	Applicant Information	6
2.2	Manufacturer Information	6
2.3	General Description for Equipment under Test (EUT)	6
2.4	Ancillary Equipment	6
2.5	Technical Information	7
3	SUMMARY OF TEST RESULT	8
3.1	Test Standards	8
3.2	Device Category and SAR Limit	9
3.3	Test Result Summary	10
3.4	Test Uncertainty	12
4	MEASUREMENT SYSTEM	13
4.1	Specific Absorption Rate (SAR) Definition	13
4.2	DASY SAR System	14
5	SYSTEM VERIFICATION	22
5.1	Purpose of System Check	22
5.2	System Check Setup	22
6	TEST POSITION CONFIGURATIONS	23
6.1	Tablet Exposure Condition	23
7	MEASUREMENT PROCEDURE	24

7.1	Measurement Process Diagram.....	24
7.2	SAR Scan General Requirement	25
7.3	Area & Zoom Scan Procedure	26
8	CONDUCTED RF OUPUT POWER.....	27
8.1	GSM	27
8.2	WCDMA	27
8.3	LTE.....	27
8.4	WIFI.....	27
8.5	Bluetooth	27
8.6	Power Reduction List	28
9	PROXIMITY SENSOR TRIGGERING TEST	36
10	TEST EXCLUSION CONSIDERATION.....	39
10.1	SAR Test Consideration Table.....	39
11	TEST RESULT	44
11.1	GSM	44
11.2	WCDMA	45
11.3	LTE.....	46
11.4	WIFI.....	54
11.5	Bluetooth	55
12	SAR Measurement Variability.....	56
13	SIMULTANEOUS TRANSMISSION	58
13.1	Simultaneous Transmission Mode Considerations	58
13.2	Body Simultaneous Transmission SAR Evaluation.....	58
14	TEST EQUIPMENTS LIST	59
ANNEX A	SIMULATING LIQUID VERIFICATION RESULT	60
ANNEX B	SYSTEM CHECK RESULT	61
ANNEX C	TEST DATA.....	62
ANNEX D	EUT EXTERNAL PHOTOS	62
ANNEX E	SAR TEST SETUP PHOTOS.....	62
ANNEX F	CALIBRATION REPORT	62

ANNEX G TUNE-UP PROCEDURE 62

1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☐ Block B, 1/F, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
	☒ 1/F, Building B, Ganghongji High-tech Intelligent Industrial Park, No. 1008, Songbai Road, Yangguang Community, Xili Sub-district, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

1.3 Test Environment Condition

Ambient Temperature	18°C to 25°C
Ambient Relative Humidity	30% to 70%

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	TCL Communication Ltd.
Address	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong

2.2 Manufacturer Information

Manufacturer	TCL Communication Ltd.
Address	5/F, Building 22E, 22 Science Park East Avenue, Hong Kong Science Park, Shatin, NT, Hong Kong

2.3 General Description for Equipment under Test (EUT)

EUT Name	Tablet PC
Model Name Under Test	8183A
Series Model Name	N/A
Description of Model Name Differentiation	N/A
Hardware Version	05
Software Version	7LS2
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Ancillary Equipment

Ancillary Equipment 1	Li-Polymer Battery 1	
	Brand Name	N/A
	Model No.	2853B7PL-2P
	Serial No.	N/A
	Capacitance	Rated: 5820mAh
	Manufacturer	HUNAN GAOYUAN BATTERY Co., Ltd.

2.5 Technical Information

The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	GSM; WCDMA; LTE; WIFI, Bluetooth		
Frequency Range	GSM 850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	GSM 1900	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	WCDMA Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990MHz
	LTE Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 7	TX: 2500 ~ 2570 MHz	RX: 2620 ~ 2690 MHz
	LTE Band 12	TX: 699 ~ 716 MHz	RX: 729 ~ 746 MHz
	LTE Band 13	TX: 777 ~ 787 MHz	RX: 746 ~ 756 MHz
	LTE Band 17	TX: 704 ~ 716 MHz	RX: 734~ 746 MHz
	LTE Band 26	TX: 814 ~ 849 MHz	RX: 859 ~ 894 MHz
	LTE Band 38	TX: 2570 ~ 2620 MHz	RX: 2570 ~ 2620 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	LTE Band 66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2180 MHz
	802.11b/g/ n(HT20/HT40)	2412 MHz ~ 2462 MHz	
	802.11a/ n(HT20/HT40) /ac(VHT20/VHT40 /VHT80)	5150 MHz ~ 5250 MHz	
		5250 MHz ~ 5350 MHz	
		5470 MHz ~ 5725 MHz	
		5725 MHz ~ 5850 MHz	
	Bluetooth	2402 MHz ~ 2480 MHz	
Antenna Type	WIFI: IFA Antenna Bluetooth: IFA Antenna		
Hotspot Function	N/A		
Exposure Category	General Population/Uncontrolled exposure		
Product Type	Portable Device		
EUT Type	☒ Production unit	☐ Identical prototype	

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2.1093	Radiofrequency radiation exposure evaluation: portable devices
2	ANSI/IEEE C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3	FCC KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01
4	KDB 941225 D01 v03r01	3G SAR MEAUREMENT PROCEDURES
5	KDB 941225 D05 v02r05	SAR Evaluation Considerations for LTE Devices
6	FCC KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
7	FCC KDB 865664 D02 v01r02	RF Exposure Reporting
8	KDB 248227 D01 v02r02	SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters
9	KDB 616217 D04v01r02	SAR for laptop and tablets

3.2 Device Category and SAR Limit

This device belongs to portable device category because its radiating structure is allowed to be used within 20 centimeters of the body of the user.

Limit for General Population/Uncontrolled exposure should be applied for this device, it is 1.6 W/kg as averaged over any 1 gram of tissue.

Body Position	SAR Value (W/Kg)	
	General Population/ Uncontrolled Exposure	Occupational/ Controlled Exposure
Whole-Body SAR (averaged over the entire body)	0.08	0.4
Partial-Body SAR (averaged over any 1 gram of tissue)	1.60	8.0
SAR for hands, wrists, feet and ankles (averaged over any 10 grams of tissue)	4.0	20.0

NOTE:

General Population/Uncontrolled Exposure: Locations where there is the exposure of individuals who have no knowledge or control of their exposure. General population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

Occupational/Controlled Exposure: Locations where there is exposure that may be incurred by persons who are aware of the potential for exposure. In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. This exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

3.3 Test Result Summary

3.3.1 Highest SAR

Equipment Class	Band	Maximum Report SAR (W/kg)
		Body (0mm)
PCE	GSM 850	0.96
	GSM 1900	1.03
	WCDMA Band 2	1.09
	WCDMA Band 4	1.07
	WCDMA Band 5	1.05
	LTE Band 2	1.10
	LTE Band 4	0.95
	LTE Band 5	1.11
	LTE Band 7	1.17
	LTE Band 12	0.92
	LTE Band 13	1.04
	LTE Band 17	0.99
	LTE Band 26	1.00
	LTE Band 66	0.76
	LTE Band 38	1.04
	LTE Band 41	1.08
DTS	2.4G WIFI	1.01
NII	5.3G WIFI	1.15
	5.6G WIFI	1.16
	5.8G WIFI	1.17
DSSS	Bluetooth	0.77
Limit (W/kg)		1.60
Verdict		PASS
Note 1: The highest Reported Body 1g Report SAR is 1.17 W/kg		

3.3.2 Highest Simultaneous Transmission SAR Values

Equipment Class	Maximum Report SAR (W/kg)	SPLSR
	Body(0mm)	
	1g SAR	
PCE	1.59	0.04
DTS	1.59	0.03
NII	1.59	0.04
DSS	1.59	0.04
Limit (W/Kg)	1.60	0.04
Verdict	PASS	

3.4 Test Uncertainty

According to KDB 865664 D01, when the highest measured 1 g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis is not required in SAR reports submitted for equipment approval.

The maximum 1 g SAR for the EUT in this report is 1.17 W/kg, which is lower than 1.5 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

4 MEASUREMENT SYSTEM

4.1 Specific Absorption Rate (SAR) Definition

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

SAR is expressed in units of Watts per kilogram (W/kg) SAR measurement can be related to the electrical field in the tissue by

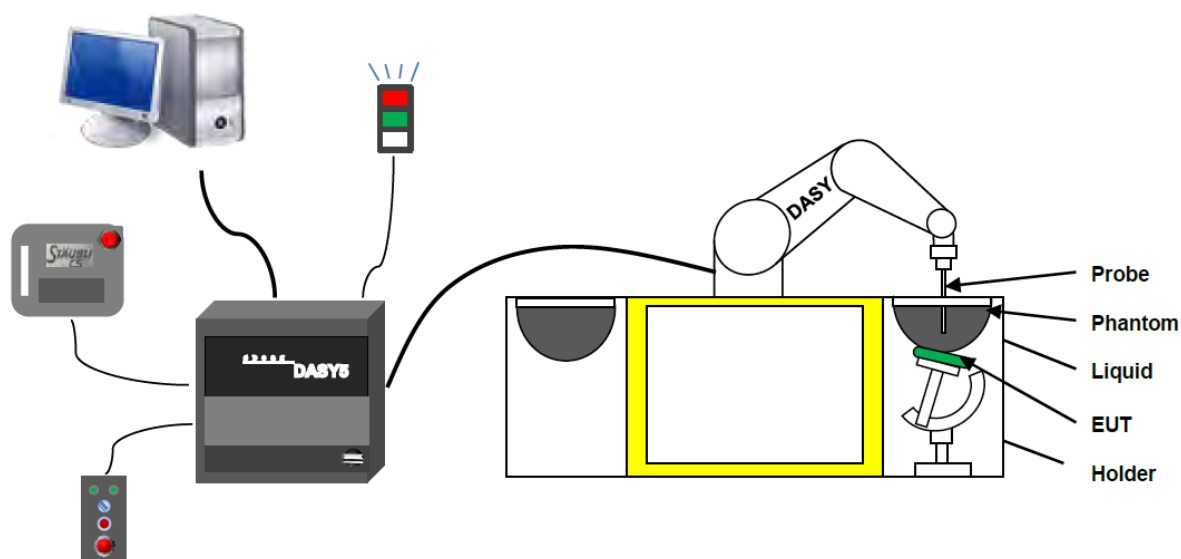
$$SAR = \frac{\sigma E^2}{\rho}$$

Where: σ is the conductivity of the tissue,

ρ is the mass density of the tissue and E is the RMS electrical field strength.

4.2 DASY SAR System

4.2.1 DASY SAR System Diagram



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

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. A unit to operate the optical surface detector which is connected to the EOC.
5. The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY5 measurement server.
6. The DASY5 measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation.
7. DASY5 software and SEMCAD data evaluation software.
8. Remote control with teach panel and additional circuitry for robot safety such as warning lamps, etc.
9. The generic twin phantom enabling the testing of left-hand and right-hand usage.
10. The device holder for handheld mobile phones.
11. Tissue simulating liquid mixed according to the given recipes.
12. System validation dipoles allowing to validate the proper functioning of the system.

4.2.2 Robot

The Dasy SAR system uses the high precision robots. Symmetrical design with triangular core Built-in optical fiber for surface detection system For the 6-axis controller system, Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents). The robot series have many features that are important for our application:



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

4.2.3 E-Field Probe

The probe is specially designed and calibrated for use in liquids with high permittivities for the measurements the Specific Dosimetric E-Field Probe EX3DV4 with following specifications is used.

Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	10 MHz to 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ; ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic range	5 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 9 mm) Tip diameter: 2.5 mm (Body: 10 mm) Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (EX3DV4)



E-Field Probe Calibration Process

Probe calibration is realized, in compliance with CENELEC EN 62209-1/-2 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the EN 62209-1/2 annexe technique using reference guide at the five frequencies.

4.2.4 Data Acquisition Electronics

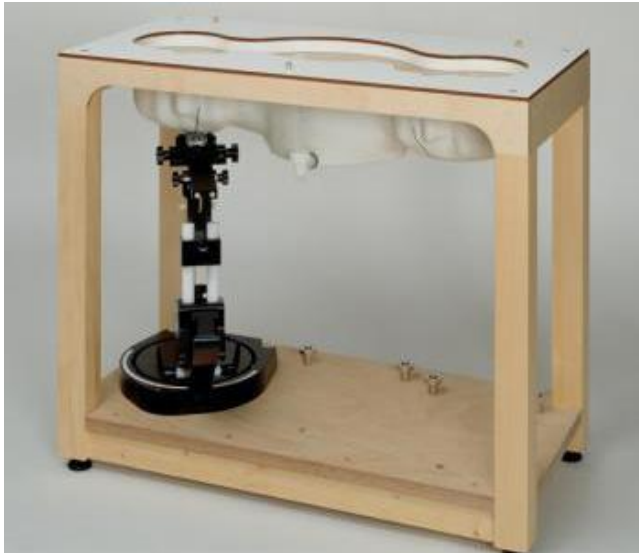
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through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



- Input Impedance: 200M Ω
- The Inputs: Symmetrical and Floating
- Common Mode Rejection: Above 80dB

4.2.5 Phantoms

For the measurements the Specific Anthropomorphic Mannequin (SAM) 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. It enables the dosimetric evaluation of left and right phone usage and includes an additional flat phantom part for the simplified performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.



- Left hand
- Right hand
- Flat phantom

Photo of Phantom



Serial Number	Material	Length	Height
SAM	Vinylester, glass fiber reinforced	1000	500

Phantom for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with the latest draft of the standard IEC 62209 Part II and all known tissue simulating liquids. ELI4 has been optimized regarding its performance and can be integrated into our standard phantom tables. A cover prevents evaporation of the liquid. Reference markings on the phantom allow installation of the complete setup, including all predefined phantom positions and measurement grids, by teaching three points.



• Flat phantom

Photo of Phantom



Serial Number	Shell Thickness (mm)	Major ellipse axis (mm)	Minor axis (mm)
ELI4	2.0 ± 0.2	600	500

The DASY5 device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65° . The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. This device holder is used for standard mobile phones or PDA's only. If necessary an additional support of polystyrene material is used. Larger DUT's (e.g. notebooks) cannot be tested using this device holder. Instead a support of bigger polystyrene cubes and thin polystyrene plates is used to position the DUT in all relevant positions to find and measure spots with maximum SAR values. Therefore those devices are normally only tested at the flat part of the SAM.

The positioning system allows obtaining cheek and tilting position with a very good accuracy.

Incompliance with CENELEC, the tilt angle uncertainty is lower than 1° .

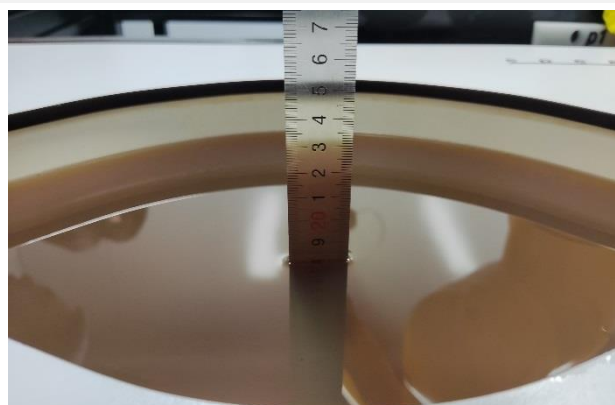
4.2.6 Simulating Liquid

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 height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15 cm. For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15 cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 5%.

Head Liquid Depth



Body Liquid Depth



The following table gives the recipes for tissue simulating liquid.

TSL	Manufacturer / Model	Freq Range (MHz)	Main Ingredients
Head WideBand	SPEAG HBBL600-10000V6	600-10000	Ethanediol, Sodium petroleum sulfonate, Hexylene Glycol / 2-Methyl-pentane-2.4-diol, Alkoxylated alcohol

5 SYSTEM VERIFICATION

5.1 Purpose of System Check

The system performance check verifies that the system operates within its specifications. System and operator errors can be detected and corrected. It is recommended that the system performance check be performed prior to any usage of the system in order to guarantee reproducible results. The system performance check uses normal SAR measurements in a simplified setup with a well characterized source. This setup was selected to give a high sensitivity to all parameters that might fail or vary over time. The system check does not intend to replace the calibration of the components, but indicates situations where the system uncertainty is exceeded due to drift or failure.

5.2 System Check Setup

In the simplified setup for system evaluation, the EUT is replaced by a calibrated dipole and the power source is replaced by a continuous wave that comes from a signal generator. The calibrated dipole must be placed beneath the flat phantom section of the SAM twin phantom with the correct distance holder. The distance holder should touch the phantom surface with a light pressure at the reference marking and be oriented parallel to the long side of the phantom. The equipment setup is shown below:

6 TEST POSITION CONFIGURATIONS

According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

6.1 Tablet Exposure Condition

This DUT was tested in three different positions. They are back side, right edge and top edge in these positions, the surface of DUT is touching with phantom 0mm

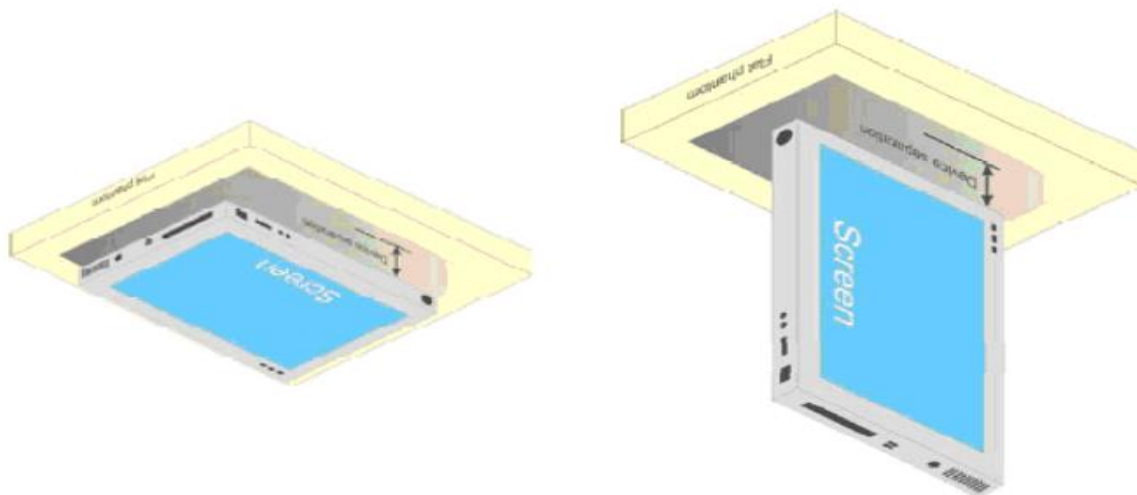
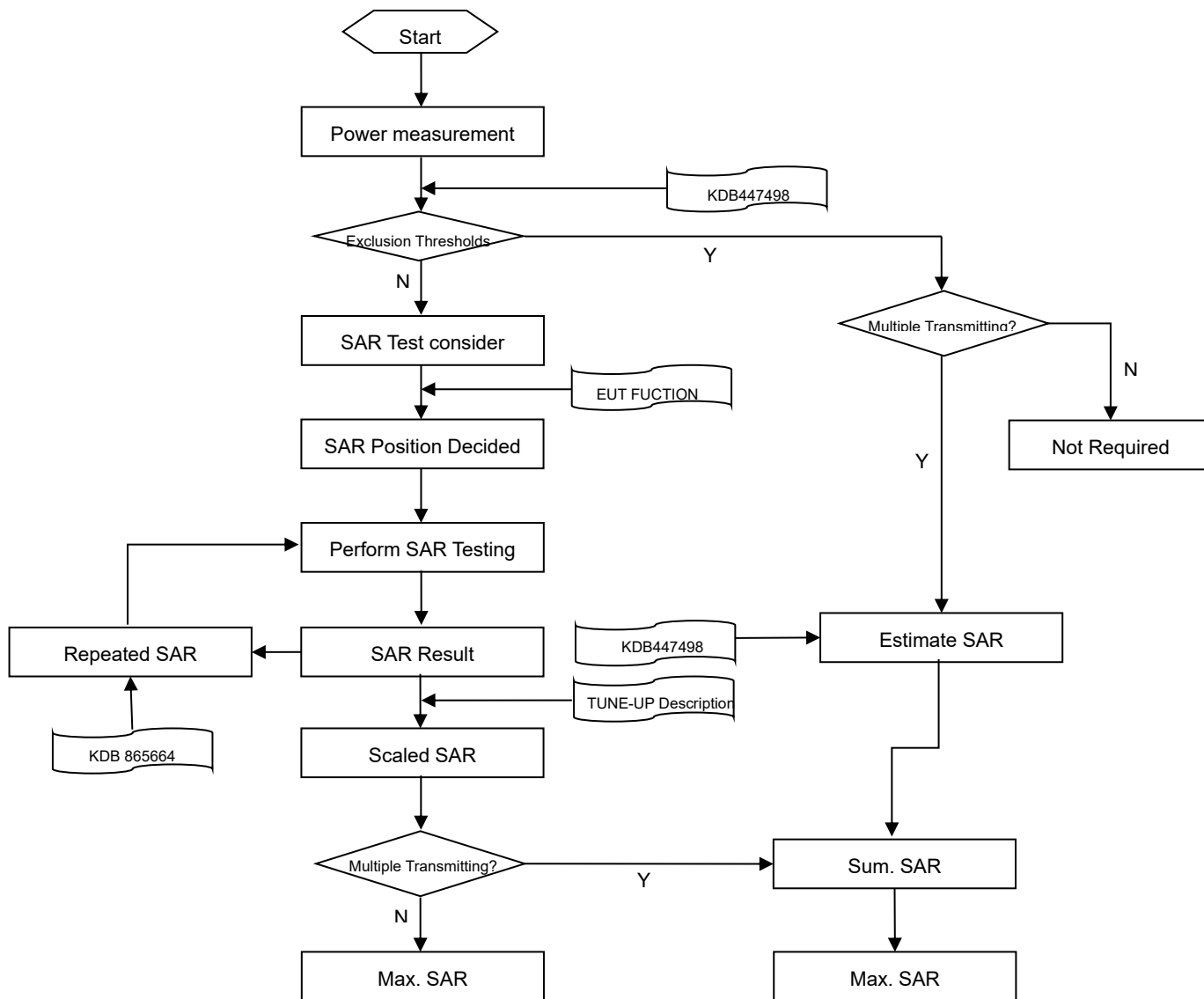


Fig Illustration for Lap-touching Position

7 MEASUREMENT PROCEDURE

7.1 Measurement Process Diagram



7.2 SAR Scan General Requirement

Probe boundary effect error compensation is required for measurements with the probe tip closer than half a probe tip diameter to the phantom surface. Both the probe tip diameter and sensor offset distance must satisfy measurement protocols; to ensure probe boundary effect errors are minimized and the higher fields closest to the phantom surface can be correctly measured and extrapolated to the phantom surface for computing 1 g SAR. Tolerances of the post-processing algorithms must be verified by the test laboratory for the scan resolutions used in the SAR measurements, according to the reference distribution functions specified in IEEE Std 1528-2013.

			≤3GHz	>3GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5±1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			30°±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 1st two points closest to phantom surface	≤ 4 mm	3–4 GHz: ≤ 3 mm
				4–5 GHz: ≤ 2.5 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 reported SAR from the area scan based 1 g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.

The following steps are used for each test position

- a.
- b. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
- c. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- d. Measurement of the SAR distribution with a grid of 8 to 16mm * 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.
- e. 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.

7.3 Area & Zoom Scan Procedure

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.

When the 1 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR.

8 CONDUCTED RF OUPUT POWER

8.1 GSM

Please refer the document "BL-SZ2531395-AP.pdf".

8.2 WCDMA

Please refer the document "BL-SZ2531395-AP.pdf".

8.3 LTE

Please refer the document "BL-SZ2531395-AP.pdf".

8.4 WIFI

Please refer the document "BL-SZ2531395-AP.pdf".

8.5 Bluetooth

Please refer the document "BL-SZ2531395-AP.pdf".

8.6 Power Reduction List

Note:

- 1.The device employs proximity sensors that detect the presence of the user's body and Product Specific of the device. When these conditions are detected, Body and Limb reduced power will be active.
- 2.When the proximity sensor invalid, the power is reduced to the corresponding Minimum power scenario.

WWAN Reduced power level table

Reduced	Sensor	Transmitting	
		conditions	
Full	Off	Back Side; Left Edge Right Edge; Top Edge; Bottom Edge	WWAN Only; WWAN+WIFI2.4G; WWAN+WIFI5G+BT
Level1	On	Back Side; Right Edge; Top Edge	WWAN Only
Level2	On	Back Side; Right Edge; Top Edge	WWAN+WIFI2.4G; WWAN+WIFI5G+BT

Mode	Antenna	WWAN Ant.1		
		Body		
		Sensor off	Sensor on	Sensor
		Full	Level1	Level2
GPRS850 1 Tx Slot	Ant.1	33.50	27.50	27.50
GPRS850 2 Tx Slots	Ant.1	32.50	26.50	26.50
GPRS850 3 Tx Slots	Ant.1	30.50	24.50	24.50
GPRS850 4 Tx Slots	Ant.1	29.50	23.50	23.50
EGPRS850 1 Tx Slot	Ant.1	28.50	22.50	22.50
EGPRS850 2 Tx Slots	Ant.1	27.50	21.50	21.50
EGPRS850 3 Tx Slots	Ant.1	25.50	19.50	19.50
EGPRS850 4 Tx Slots	Ant.1	23.50	17.50	17.50
GPRS1900 1 Tx Slot	Ant.1	31.00	21.00	21.00
GPRS1900 2 Tx Slots	Ant.1	30.00	20.00	20.00
GPRS1900 3 Tx Slots	Ant.1	28.00	18.00	18.00
GPRS1900 4 Tx Slots	Ant.1	26.00	16.00	16.00
EGPRS1900 1 Tx Slot	Ant.1	27.50	17.50	17.50
EGPRS1900 2 Tx Slots	Ant.1	26.50	16.50	16.50
EGPRS1900 3 Tx Slots	Ant.1	24.50	14.50	14.50

EGPRS1900 4 Tx Slots	Ant.1	23.00	13.00	13.00
WCDMA Band2 RMC	Ant.1	23.50	14.50	14.50
HSDPA Subtest-1	Ant.1	23.50	14.50	14.50
HSDPA Subtest-2	Ant.1	23.50	14.50	14.50
HSDPA Subtest-3	Ant.1	23.00	14.00	14.00
HSDPA Subtest-4	Ant.1	23.00	14.00	14.00
DC-HSDPA Subtest-1	Ant.1	23.50	14.50	14.50
DC-HSDPA Subtest-2	Ant.1	23.50	14.50	14.50
DC-HSDPA Subtest-3	Ant.1	23.00	14.00	14.00
DC-HSDPA Subtest-4	Ant.1	23.00	14.00	14.00
HSUPA Subtest-1	Ant.1	22.00	13.00	13.00
HSUPA Subtest-2	Ant.1	21.50	12.50	12.50
HSUPA Subtest-3	Ant.1	22.50	13.50	13.50
HSUPA Subtest-4	Ant.1	21.00	12.00	12.00
HSUPA Subtest-5	Ant.1	22.50	13.50	13.50
HSPA+	Ant.1	21.50	12.50	12.50
WCDMA Band4 RMC	Ant.1	25.00	17.00	17.00
HSDPA Subtest-1	Ant.1	24.00	16.00	16.00

HSDPA Subtest-2	Ant.1	24.00	16.00	16.00
HSDPA Subtest-3	Ant.1	23.50	15.50	15.50
HSDPA Subtest-4	Ant.1	23.50	15.50	15.50
DC-HSDPA Subtest-1	Ant.1	24.00	16.00	16.00
DC-HSDPA Subtest-2	Ant.1	24.00	16.00	16.00
DC-HSDPA Subtest-3	Ant.1	23.50	15.50	15.50
DC-HSDPA Subtest-4	Ant.1	23.50	15.50	15.50
HSUPA Subtest-1	Ant.1	22.00	14.00	14.00
HSUPA Subtest-2	Ant.1	22.00	14.00	14.00
HSUPA Subtest-3	Ant.1	23.00	15.00	15.00
HSUPA Subtest-4	Ant.1	21.50	13.50	13.50
HSUPA Subtest-5	Ant.1	23.00	15.00	15.00
HSPA+	Ant.1	22.00	14.00	14.00
WCDMA Band5 RMC	Ant.1	25.00	20.00	20.00
HSDPA Subtest-1	Ant.1	24.00	19.00	19.00
HSDPA Subtest-2	Ant.1	24.00	19.00	19.00
HSDPA Subtest-3	Ant.1	23.50	18.50	18.50
HSDPA Subtest-4	Ant.1	23.50	18.50	18.50

DC-HSDPA Subtest-1	Ant.1	24.00	19.00	19.00
DC-HSDPA Subtest-2	Ant.1	24.00	19.00	19.00
DC-HSDPA Subtest-3	Ant.1	23.50	18.50	18.50
DC-HSDPA Subtest-4	Ant.1	23.50	18.50	18.50
HSUPA Subtest-1	Ant.1	22.00	17.00	17.00
HSUPA Subtest-2	Ant.1	22.00	17.00	17.00
HSUPA Subtest-3	Ant.1	23.00	18.00	18.00
HSUPA Subtest-4	Ant.1	21.50	16.50	16.50
HSUPA Subtest-5	Ant.1	23.00	18.00	18.00
HSPA+	Ant.1	22.00	17.00	17.00
FDD Band 2	Ant.1	23.50	13.50	13.50
FDD Band 4	Ant.1	24.50	14.50	14.50
FDD Band 5	Ant.1	24.50	20.50	20.50
FDD Band 7	Ant.1	23.50	13.50	13.50
FDD Band 12	Ant.1	24.50	19.50	19.50
FDD Band 13	Ant.1	24.50	21.50	21.50
FDD Band 17	Ant.1	24.50	19.50	19.50
FDD Band 26	Ant.1	24.50	20.50	20.50

FDD Band 66	Ant.1	24.50	15.50	15.50
TDD Band 38	Ant.1	24.50	15.50	15.50
TDD Band 41	Ant.1	24.50	14.50	14.50

WIFI&BT Reduced power level table

Reduced	Sensor	Transmitting conditions	
Full	Off	Back Side; Left Edge Right Edge; Top Edge; Bottom Edge;	WIFI Only; WWAN+WIFI2.4G; WWAN+WIFI5G+BT
Level1	On	Top Edge	WIFI Only
Level2	On	Top Edge	WWAN+WIFI2.4G; WWAN+WIFI5G+BT

Mode	Antenna	WIFI Ant.2		
		Body		
		Sensor off	Sensor on	Sensor on
		Full	Level1	Level2
2.4G WIFI 802.11b	Ant.2	17.00	11.00	10.00
2.4G WIFI 802.11g	Ant.2	17.00	11.00	10.00
2.4G WIFI 802.11n20	Ant.2	17.00	11.00	10.00
2.4G WIFI 802.11n40	Ant.2	17.00	10.50	9.50
5.2&3G WIFI 802.11a	Ant.2	18.50	15.50	11.50
5.2&3G WIFI 802.11n20	Ant.2	18.50	15.50	11.50
5.2&3G WIFI 802.11n40	Ant.2	17.50	15.00	11.00
5.2&3G WIFI 802.11ac20	Ant.2	18.50	15.50	11.50
5.2&3G WIFI 802.11ac40	Ant.2	18.00	15.00	11.00
5.2&3G WIFI 802.11ac80	Ant.2	18.00	15.00	11.00
5.6G WIFI 802.11a	Ant.2	18.50	13.00	10.50
5.6G WIFI 802.11n20	Ant.2	18.50	13.00	10.50
5.6G WIFI 802.11n40	Ant.2	18.00	12.50	10.00
5.6G WIFI 802.11ac20	Ant.2	18.50	13.00	10.50

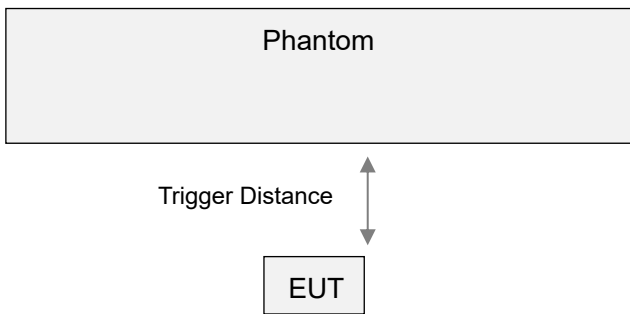
5.6G WIFI 802.11ac40	Ant.2	17.00	12.50	10.00
5.6G WIFI 802.11ac80	Ant.2	18.00	12.50	10.00
5.8G WIFI 802.11a	Ant.2	18.50	13.50	10.50
5.8G WIFI 802.11n20	Ant.2	18.50	13.50	10.50
5.8G WIFI 802.11n40	Ant.2	18.00	13.00	10.00
5.8G WIFI 802.11ac20	Ant.2	18.50	13.50	10.50
5.8G WIFI 802.11ac40	Ant.2	18.00	13.00	10.00
5.8G WIFI 802.11ac80	Ant.2	18.00	13.00	10.00
Bluetooth	Ant.2	10.50	/	/

9 PROXIMITY SENSOR TRIGGERING TEST

The device uses two proximity sensors to reduce the maximum output power in selected wireless mode and operating configurations to ensure SAR compliance. The sensor implementation can identify and facilitate triggering different max power levels for different scenarios including the device held by hand(Extremity) and different exposure test positions test positions when the device is closed to a user's body.

Proximity sensor triggering distance testing was performed, EUT moving further away from the phantom and EUT moving toward the phantom were both assessed, and the shortest triggering distances were reported and used for SAR assessment.

9.1.1 proximity sensor 1

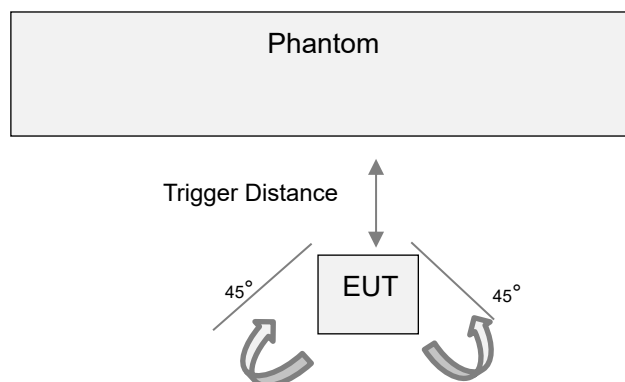


Distance in mm	0	1~8	9	10	11	12	13	14	15	16	17	18	19	20
Back Side	On	On	On	On	On	On	On	On	On	Off	Off	Off	Back	On
Right Edge	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Right	On
Top Edge	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Top	On

Note: Power reduction is only applicable for Ant.1

The influence of EUT tilt angles to proximity sensor 1 triggering was determined by positioning each EUT edge that contains a transmitting ant.1, perpendicular to the flat phantom, at 16 mm separation for the back side, 13 mm separation for the Right edge , 12 mm separation for the top edge.

Rotating the tablet around the edge next to the phantom in $\leq 10^\circ$ increments until the tablet is $\pm 45^\circ$ from the vertical position at 0° , and the maximum output power remains in the reduced mode.

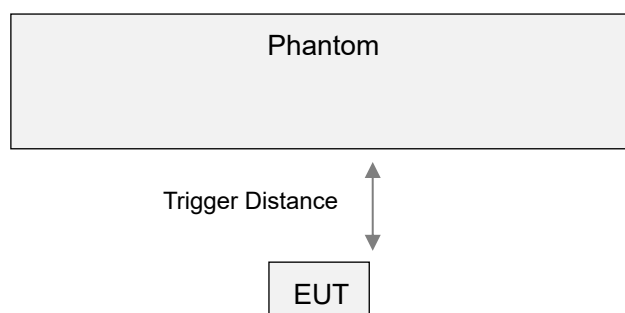


For verification of compliance of power reduction scheme, additional SAR test with EUT transmitting at full RF power at a separation of “the triggering distance – 1 mm”

Ant.1 of proximity sensor 1

EUT Sides	Additional SAR test Distance in mm
Back Side	16
Right Edge	13
Top Edge	12

9.1.2 proximity sensor 2

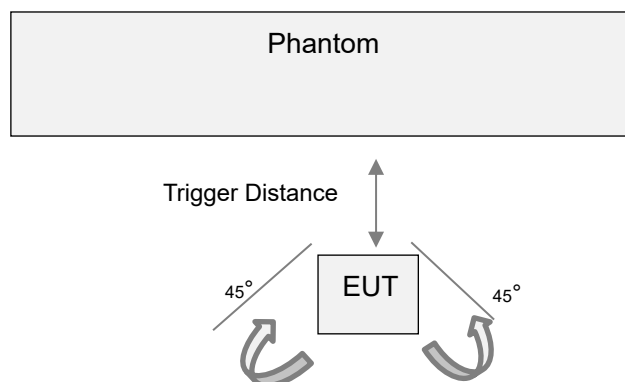


Distance in mm	0	1~8	9	10	11	12	13	14	15	16	17
Top Edge	On	On	On	On	On	Off	Off	Off	Off	Off	Off

Note: Power reduction is only applicable for Ant.2

The influence of EUT tilt angles to proximity sensor 2 triggering was determined by positioning each EUT edge that contains a transmitting ant.2, perpendicular to the flat phantom, at 10 mm separation for the Top edge.

Rotating the tablet around the edge next to the phantom in $\leq 10^\circ$ increments until the tablet is $\pm 45^\circ$ from the vertical position at 0° , and the maximum output power remains in the reduced mode.



For verification of compliance of power reduction scheme, additional SAR test with EUT transmitting at full RF power at a separation of “the triggering distance – 1 mm”

Ant.2 of proximity sensor 2

EUT Sides	Additional SAR test Distance in mm
Top Edge	10

10 TEST EXCLUSION CONSIDERATION

For antenna location and support bands please refer the document “BL-SZ2531395-AI EUT internal photo.pdf”.

10.1 SAR Test Consideration Table

According with FCC KDB 447498 D04, Appendix B, The SAR-based exemption formula applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). The following table shows the power threshold from 5mm to 50mm.

Power Thresholds (mW)					
Frequency (MHz)	At separation distance of ≤ 5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
300	39 mW	65 mW	88 mW	110 mW	129 mW
450	22 mW	44 mW	67 mW	89 mW	112 mW
835	9 mW	25 mW	44 mW	66 mW	90 mW
1900	3 mW	12 mW	26 mW	44 mW	66 mW
2450	3 mW	10 mW	22 mW	38 mW	59 mW
3600	2 mW	8 mW	18 mW	32 mW	49 mW
5800	1 mW	6 mW	14 mW	25 mW	40 mW
Frequency (MHz)	At separation distance of 30 mm	At separation distance of 35 mm	At separation distance of 40 mm	At separation distance of 45 mm	At separation distance of 50 mm
300	148 mW	166 mW	184 mW	201 mW	217 mW
450	135 mW	158 mW	180 mW	203 mW	226 mW
835	116 mW	145 mW	175 mW	207 mW	240 mW
1900	92 mW	122 mW	157 mW	195 mW	236 mW
2450	83 mW	111 mW	143 mW	179 mW	219 mW
3600	71 mW	96 mW	125 mW	158 mW	195 mW
5800	58 mW	80 mW	106 mW	136 mW	169 mW

10.1.1 Tablet mode SAR Test Consideration

RF exposure Position	RF exposure scenarios
Back Side	Body
Left Edge	Body
Right Edge	Body
Top Edge	Body
Bottom Edge	Body

Antenna1 WWAN Body RF exposure scenarios

Position	Band	Calculated Frequency(GHz)	Distance to User (mm)	Exclusion Threshold (mW)	Max. Peak Power (dBm)	Max. Peak Power (mW)	SAR Test Required
Back Side	GSM850	0.849	5	9.03	26.37	433.51	Yes
	GSM1900	1.909	5	3.35	23.87	243.78	Yes
	WCDMA Band2	1.91	5	3.35	23.50	223.87	Yes
	WCDMA Band4	1.755	5	3.58	25.00	316.23	Yes
	WCDMA Band5	0.847	5	9.06	25.00	316.23	Yes
	LTE Band2	1.91	5	3.35	23.50	223.87	Yes
	LTE Band4	1.755	5	3.58	24.50	281.84	Yes
	LTE Band5	0.844	5	9.11	24.50	281.84	Yes
	LTE Band7	2.57	5	2.64	23.50	223.87	Yes
	LTE Band12	0.711	5	11.59	24.50	281.84	Yes
	LTE Band13	0.782	5	10.14	24.50	281.84	Yes
	LTE Band17	0.711	5	11.59	24.50	281.84	Yes
	LTE Band26	0.842	5	9.14	24.50	281.84	Yes
	LTE Band66	1.745	5	3.60	24.50	281.84	Yes
	LTE Band38	2.62	5	2.60	24.50	281.84	Yes
	LTE Band41	2.68	5	2.55	24.50	281.84	Yes
Left Edge	GSM850	0.849	120	836.45	26.37	433.51	No
	GSM1900	1.909	120	1190.56	23.87	243.78	No
	WCDMA Band2	1.91	120	1190.49	23.50	223.87	No
	WCDMA Band4	1.755	120	1201.72	25.00	316.23	No
	WCDMA Band5	0.847	120	835.13	25.00	316.23	No
	LTE Band2	1.91	120	1190.49	23.50	223.87	No
	LTE Band4	1.755	120	1201.72	24.50	281.84	No
	LTE Band5	0.844	120	833.16	24.50	281.84	No
	LTE Band7	2.57	120	1151.93	23.50	223.87	No
	LTE Band12	0.711	120	743.08	24.50	281.84	No
	LTE Band13	0.782	120	791.80	24.50	281.84	No
	LTE Band17	0.711	120	743.08	24.50	281.84	No
	LTE Band26	0.842	120	831.84	24.50	281.84	No
	LTE Band66	1.745	120	1202.48	24.50	281.84	No

	LTE Band38	2.62	120	1149.47	24.50	281.84	No
	LTE Band41	2.68	120	1146.59	24.50	281.84	No
Right Edge	GSM850	0.849	10	24.25	26.37	433.51	Yes
	GSM1900	1.909	10	12.06	23.87	243.78	Yes
	WCDMA Band2	1.91	10	12.06	23.50	223.87	Yes
	WCDMA Band4	1.755	10	12.74	25.00	316.23	Yes
	WCDMA Band5	0.847	10	24.31	25.00	316.23	Yes
	LTE Band2	1.91	10	12.06	23.50	223.87	Yes
	LTE Band4	1.755	10	12.74	24.50	281.84	Yes
	LTE Band5	0.844	10	24.39	24.50	281.84	Yes
	LTE Band7	2.57	10	9.94	23.50	223.87	Yes
	LTE Band12	0.711	10	28.71	24.50	281.84	Yes
	LTE Band13	0.782	10	26.23	24.50	281.84	Yes
	LTE Band17	0.711	10	28.71	24.50	281.84	Yes
	LTE Band26	0.842	10	24.45	24.50	281.84	Yes
	LTE Band66	1.745	10	12.79	24.50	281.84	Yes
	LTE Band38	2.62	10	9.82	24.50	281.84	Yes
	LTE Band41	2.68	10	9.67	24.50	281.84	Yes
Top Edge	GSM850	0.849	2	2.45	26.37	433.51	Yes
	GSM1900	1.909	2	0.62	23.87	243.78	Yes
	WCDMA Band2	1.91	2	0.62	23.50	223.87	Yes
	WCDMA Band4	1.755	2	0.67	25.00	316.23	Yes
	WCDMA Band5	0.847	2	2.46	25.00	316.23	Yes
	LTE Band2	1.91	2	0.62	23.50	223.87	Yes
	LTE Band4	1.755	2	0.67	24.50	281.84	Yes
	LTE Band5	0.844	2	2.48	24.50	281.84	Yes
	LTE Band7	2.57	2	0.46	23.50	223.87	Yes
	LTE Band12	0.711	2	3.49	24.50	281.84	Yes
	LTE Band13	0.782	2	2.89	24.50	281.84	Yes
	LTE Band17	0.711	2	3.49	24.50	281.84	Yes
	LTE Band26	0.842	2	2.49	24.50	281.84	Yes
	LTE Band66	1.745	2	0.67	24.50	281.84	Yes
	LTE Band38	2.62	2	0.45	24.50	281.84	Yes
	LTE Band41	2.68	2	0.44	24.50	281.84	Yes
Bottom Edge	GSM850	0.849	230	2113.60	26.37	433.51	No
	GSM1900	1.909	230	3961.77	23.87	243.78	No
	WCDMA Band2	1.91	230	3961.83	23.50	223.87	No
	WCDMA Band4	1.755	230	3951.67	25.00	316.23	No
	WCDMA Band5	0.847	230	2108.17	25.00	316.23	No
	LTE Band2	1.91	230	3961.83	23.50	223.87	No
	LTE Band4	1.755	230	3951.67	24.50	281.84	No
	LTE Band5	0.844	230	2100.02	24.50	281.84	No
	LTE Band7	2.57	230	3997.68	23.50	223.87	No

	LTE Band12	0.711	230	1741.69	24.50	281.84	No
	LTE Band13	0.782	230	1932.29	24.50	281.84	No
	LTE Band17	0.711	230	1741.69	24.50	281.84	No
	LTE Band26	0.842	230	2094.59	24.50	281.84	No
	LTE Band66	1.745	230	3950.99	24.50	281.84	No
	LTE Band38	2.62	230	4000.02	24.50	281.84	No
	LTE Band41	2.68	230	4002.77	24.50	281.84	No

Antenna2 WLAN Body RF exposure scenarios

Position	Band	Calculated Frequency(GHz)	Distance to User (mm)	Exclusion Threshold (mW)	Max. Peak Power (dBm)	Max. Peak Power (mW)	SAR Test Required
Back Side	Bluetooth	2.48	5	2.72	10.50	11.22	Yes
	WIFI2.4G	2.462	5	2.73	18.00	63.10	Yes
	WIFI5.3G	5.32	5	1.47	18.50	70.79	Yes
	WIFI5.6G	5.71	5	1.39	18.50	70.79	Yes
	WIFI5.8G	5.825	5	1.37	18.50	70.79	Yes
Left Edge	Bluetooth	2.48	37	122.98	10.50	11.22	No
	WIFI2.4G	2.462	37	123.31	18.00	63.10	No
	WIFI5.3G	5.32	37	92.98	18.50	70.79	No
	WIFI5.6G	5.71	37	90.60	18.50	70.79	No
	WIFI5.8G	5.825	37	89.94	18.50	70.79	No
Right Edge	Bluetooth	2.48	78	509.08	10.50	11.22	No
	WIFI2.4G	2.462	78	509.84	18.00	63.10	No
	WIFI5.3G	5.32	78	435.52	18.50	70.79	No
	WIFI5.6G	5.71	78	429.27	18.50	70.79	No
	WIFI5.8G	5.825	78	427.52	18.50	70.79	No
Top Edge	Bluetooth	2.48	2	0.47	10.50	11.22	Yes
	WIFI2.4G	2.462	2	0.48	18.00	63.10	Yes
	WIFI5.3G	5.32	2	0.22	18.50	70.79	Yes
	WIFI5.6G	5.71	2	0.21	18.50	70.79	Yes
	WIFI5.8G	5.825	2	0.20	18.50	70.79	Yes
Bottom Edge	Bluetooth	2.48	230	3993.36	10.50	11.22	No
	WIFI2.4G	2.462	230	3992.48	18.00	63.10	No
	WIFI5.3G	5.32	230	4086.94	18.50	70.79	No
	WIFI5.6G	5.71	230	4095.72	18.50	70.79	No
	WIFI5.8G	5.825	230	4098.20	18.50	70.79	No

Note:

- Maximum power is the source-based time-average power and represents the maximum RF output power including tune-up tolerance among production units
- Per KDB 447498 D04, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
- Per KDB 447498 D04, standalone SAR test exclusion threshold is applied; If the distance of the antenna to the user is <

5mm, 5mm is used to determine SAR exclusion threshold

4. Per KDB 447498 D04, for separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive), the threshold Pth (mW) is given by Following:

$$P_{th}(mW) = \begin{cases} ERP_{20cm}(d/20cm)^x & d \leq 20cm \\ ERP_{20cm} & 20cm < d \leq 40cm \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20cm}\sqrt{f}} \right)$$

- f(GHz) is the RF channel transmit frequency in GHz
- d is the separation distance (cm), The result is rounded to one decimal place for comparison
- ERP_{20cm} are determined by:

$$ERP_{20cm}(mW) = f(x) = \begin{cases} 2040f & 0.3GHz \leq f < 1.5GHz \\ 3060 & 1.5GHz \leq f \leq 6GHz \end{cases}$$

- Per KDB 248227 D01, choose the highest output power channel to test SAR and determine further SAR exclusion.8. For each frequency band, testing at higher data rates and higher order modulations is not required when the maximum average output power for each of these configurations is less than 1/4dB higher than those measured at the lowest data rate
- Per KDB 248227 D01 SAR is not required for the following 2.4 GHz OFDM conditions.
 - When KDB Publication 447498 D04 SAR test exclusion applies to the OFDM configuration.
 - When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
- Per KDB 248227 D01 SAR is not required for the following U-NII-1 and U-NII-2A bands conditions.
 - When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.
 - When different maximum output power is specified for the bands, begin SAR measurement in the band with higher specified maximum output power. The highest reported SAR for the tested configuration is adjusted by the ratio of lower to higher specified maximum output power for the two bands. When the adjusted SAR is ≤ 1.2 W/kg, SAR is not required for the band with lower maximum output power in that test configuration; otherwise, each band is tested independently for SAR.
- For Limb SAR, SAR test exemption considered by applying a factor of 2.5 to the applicable power level thresholds.

11 TEST RESULT

11.1 GSM

11.1.1 GSM850

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body														
Ant.1	Level1&2	On	DATA 2slots	Back Side	0	190	836.6	0.03	0.725	25.29	26.50	1.321	0.958	1#
	Level1&2	On		Right Edge	0	190	836.6	-0.14	0.432	25.29	26.50	1.321	0.571	/
	Level1&2	On		Top Edge	0	190	836.6	0.11	0.265	25.29	26.50	1.321	0.350	/
	Level1&2	On		Back Side	0	128	824.2	-0.16	0.621	25.12	26.50	1.374	0.853	/
	Level1&2	On		Back Side	0	251	848.8	-0.05	0.565	24.89	26.50	1.449	0.819	/
Sensor-1														
Ant.1	Full	Off	DATA 2slots	Back Side	16	190	836.6	-0.19	0.335	31.18	32.50	1.355	0.454	/
	Full	Off		Right Edge	13	190	836.6	0.13	0.191	31.18	32.50	1.355	0.259	/
	Full	Off		Top Edge	12	190	836.6	-0.03	0.236	31.18	32.50	1.355	0.320	/
	Full	Off		Back Side	16	128	824.2	0.01	0.330	31.16	32.50	1.361	0.449	/
	Full	Off		Back Side	16	251	848.8	-0.01	0.321	31.07	32.50	1.390	0.446	/

11.1.2 GSM1900

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body														
Ant.1	Level1&2	On	DATA 2slots	Back Side	0	661	1880	0.03	0.982	19.80	20.00	1.047	1.028	2#
	Level1&2	On		Right Edge	0	661	1880	0.13	0.311	19.80	20.00	1.047	0.326	/
	Level1&2	On		Top Edge	0	661	1880	0.10	0.174	19.80	20.00	1.047	0.182	/
	Level1&2	On		Back Side	0	512	1850.2	0.16	0.865	19.79	20.00	1.050	0.908	/
	Level1&2	On		Back Side	0	810	1909	-0.08	0.911	19.76	20.00	1.057	0.963	/
Sensor-1														
Ant.1	Full	Off	DATA 2slots	Back Side	16	661	1880	-0.12	0.168	28.13	30.00	1.538	0.258	/
	Full	Off		Right Edge	13	661	1880	0.17	0.149	28.13	30.00	1.538	0.229	/
	Full	Off		Top Edge	12	661	1880	0.00	0.122	28.13	30.00	1.538	0.188	/
	Full	Off		Back Side	16	512	1850.2	-0.19	0.142	28.12	30.00	1.542	0.219	/
	Full	Off		Back Side	16	810	1909	-0.01	0.250	28.11	30.00	1.545	0.386	/

11.2WCDMA

11.2.1 WCDMA Band2

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body														
Ant.1	Level1&2	On	RMC	Back Side	0	9400	1880	0.15	0.811	14.14	14.50	1.086	0.881	/
	Level1&2	On		Right Edge	0	9400	1880	0.13	0.278	14.14	14.50	1.086	0.302	/
	Level1&2	On		Top Edge	0	9400	1880	0.19	0.154	14.14	14.50	1.086	0.167	/
	Level1&2	On		Back Side	0	9262	1852.4	0.05	0.835	14.12	14.50	1.091	0.911	/
	Level1&2	On		Back Side	0	9538	1907.6	0.11	0.999	14.12	14.50	1.091	1.090	3#
Sensor-1														
Ant.1	Full	Off	RMC	Back Side	16	9400	1880	0.08	0.256	23.28	23.50	1.052	0.269	/
	Full	Off		Right Edge	13	9400	1880	-0.19	0.251	23.28	23.50	1.052	0.264	/
	Full	Off		Top Edge	12	9400	1880	-0.10	0.190	23.28	23.50	1.052	0.200	/
	Full	Off		Back Side	16	9262	1852.4	0.10	0.243	23.34	23.50	1.038	0.252	/
	Full	Off		Back Side	16	9538	1907.6	-0.10	0.291	23.30	23.50	1.047	0.305	/

11.2.2 WCDMA Band4

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body														
Ant.1	Level1&2	On	RMC	Back Side	0	1412	1732.4	-0.06	0.906	16.79	17.00	1.050	0.951	/
	Level1&2	On		Right Edge	0	1412	1732.4	-0.02	0.133	16.79	17.00	1.050	0.140	/
	Level1&2	On		Top Edge	0	1412	1732.4	-0.04	0.467	16.79	17.00	1.050	0.490	/
	Level1&2	On		Back Side	0	1312	1712.4	-0.01	0.921	16.59	17.00	1.099	1.012	/
	Level1&2	On		Back Side	0	1513	1752.6	0.06	1.000	16.70	17.00	1.072	1.072	4#
Sensor-1														
Ant.1	Full	Off	RMC	Back Side	16	1412	1732.4	-0.08	0.138	23.42	25.00	1.439	0.199	/
	Full	Off		Right Edge	13	1412	1732.4	0.11	0.065	23.42	25.00	1.439	0.094	/
	Full	Off		Top Edge	12	1412	1732.4	-0.05	0.183	23.42	25.00	1.439	0.263	/
	Full	Off		Top Edge	12	1312	1712.4	0.08	0.134	23.49	25.00	1.416	0.190	/
	Full	Off		Top Edge	12	1513	1752.6	-0.16	0.227	23.40	25.00	1.445	0.328	/

11.2.3 WCDMA Band5

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body														
Ant.1	Level1&2	On	RMC	Back Side	0	4182	836.4	-0.02	0.841	19.36	20.00	1.159	0.975	/
	Level1&2	On		Right Edge	0	4182	836.4	0.19	0.456	19.36	20.00	1.159	0.529	/
	Level1&2	On		Top Edge	0	4182	836.4	0.00	0.217	19.36	20.00	1.159	0.252	/
	Level1&2	On		Back Side	0	4132	826.4	0.04	0.888	19.26	20.00	1.186	1.053	5#
	Level1&2	On		Back Side	0	4233	846.6	-0.05	0.844	19.16	20.00	1.213	1.024	/
Sensor-1														
Ant.1	Full	Off	RMC	Back Side	16	4182	836.4	0.08	0.247	23.40	25.00	1.445	0.357	/
	Full	Off		Right Edge	13	4182	836.4	0.13	0.121	23.40	25.00	1.445	0.175	/
	Full	Off		Top Edge	12	4182	836.4	0.09	0.195	23.40	25.00	1.445	0.282	/
	Full	Off		Back Side	16	4132	826.4	0.06	0.215	23.49	25.00	1.416	0.304	/
	Full	Off		Back Side	16	4233	846.6	0.10	0.279	23.42	25.00	1.439	0.401	/

11.3LTE

11.3.1 LTE Band2 (20MHz Bandwidth)

Antenna	Power Reduction	Sensors	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-power (dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant.1	Level1&2	On	QPSK	Back Side	0	18900	1880	1	Mid	0.13	0.968	12.95	13.50	1.135	1.099	6#
	Level1&2	On		Right Edge	0	18900	1880	1	Mid	-0.17	0.242	12.95	13.50	1.135	0.275	/
	Level1&2	On		Top Edge	0	18900	1880	1	Mid	0.17	0.371	12.95	13.50	1.135	0.421	/
	Level1&2	On		Back Side	0	18900	1880	50	Low	0.03	0.856	12.95	13.50	1.135	0.972	/
	Level1&2	On		Right Edge	0	18900	1880	50	Low	-0.19	0.198	12.95	13.50	1.135	0.225	/
	Level1&2	On		Top Edge	0	18900	1880	50	Low	-0.19	0.355	12.95	13.50	1.135	0.403	/
	Level1&2	On		Back Side	0	18700	1860	1	Low	0.09	0.886	12.95	13.50	1.135	1.006	/
	Level1&2	On		Back Side	0	19100	1900	1	Mid	0.08	0.923	12.84	13.50	1.164	1.074	/
	Level1&2	On		Back Side	0	18700	1860	50	Low	0.03	0.822	12.91	13.50	1.146	0.942	/
	Level1&2	On		Back Side	0	19100	1900	50	Low	0.10	0.834	12.90	13.50	1.148	0.957	/
	Level1&2	On		Back Side	0	18900	1880	100	Low	-0.09	0.821	12.78	13.50	1.180	0.969	/
	Level1&2	On		Back Side	0	18700	1860	100	Low	0.04	0.836	12.70	13.50	1.202	1.005	/
	Level1&2	On		Back Side	0	19100	1900	100	Low	0.06	0.858	12.79	13.50	1.178	1.011	/
Sensor-1																

Ant.1	Full	Off	QPSK	Back Side	16	18900	1880	1	Mid	0.19	0.411	23.10	23.50	1.096	0.450	/
	Full	Off		Right Edge	13	18900	1880	1	Mid	0.07	0.333	23.10	23.50	1.096	0.365	/
	Full	Off		Top Edge	12	18900	1880	1	Mid	-0.13	0.397	23.10	23.50	1.096	0.435	/
	Full	Off		Back Side	16	18900	1880	50	Mid	0.18	0.358	21.97	22.50	1.130	0.405	/
	Full	Off		Right Edge	13	18900	1880	50	Mid	0.19	0.288	21.97	22.50	1.130	0.325	/
	Full	Off		Top Edge	12	18900	1880	50	Mid	-0.06	0.358	21.97	22.50	1.130	0.405	/

11.3.2 LTE Band4 (20MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant.1	Level1&2	On	QPSK	Back Side	0	20175	1732.5	1	Mid	-0.18	0.822	14.13	14.50	1.089	0.895	/
	Level1&2	On		Right Edge	0	20175	1732.5	1	Mid	0.02	0.206	14.13	14.50	1.089	0.224	/
	Level1&2	On		Top Edge	0	20175	1732.5	1	Mid	0.04	0.152	14.13	14.50	1.089	0.166	/
	Level1&2	On		Back Side	0	20175	1732.5	50	Mid	-0.14	0.711	14.11	14.50	1.094	0.778	/
	Level1&2	On		Right Edge	0	20175	1732.5	50	Mid	0.11	0.165	14.11	14.50	1.094	0.181	/
	Level1&2	On		Top Edge	0	20175	1732.5	50	Mid	0.10	0.133	14.11	14.50	1.094	0.146	/
	Level1&2	On		Back Side	0	20050	1720	1	Mid	-0.08	0.806	14.11	14.50	1.094	0.882	/
	Level1&2	On		Back Side	0	20300	1745	1	Mid	-0.17	0.867	14.12	14.50	1.091	0.946	7#
	Level1&2	On		Back Side	0	20050	1720	50	Mid	0.11	0.811	14.06	14.50	1.107	0.898	/
	Level1&2	On		Back Side	0	20300	1745	50	Mid	0.18	0.785	14.07	14.50	1.104	0.867	/
	Level1&2	On		Back Side	0	20175	1732.5	100	Low	0.10	0.831	13.99	14.50	1.125	0.935	/
	Level1&2	On		Back Side	0	20050	1720	100	Low	-0.19	0.822	13.94	14.50	1.138	0.935	/
	Level1&2	On		Back Side	0	20300	1745	100	Low	0.19	0.796	13.98	14.50	1.127	0.897	/
	Sensor-1															
Ant.1	Full	Off	QPSK	Back Side	16	20175	1732.5	1	Mid	0.12	0.219	23.26	24.50	1.330	0.291	/
	Full	Off		Right Edge	13	20175	1732.5	1	Mid	-0.07	0.178	23.26	24.50	1.330	0.237	/
	Full	Off		Top Edge	12	20175	1732.5	1	Mid	0.07	0.150	23.26	24.50	1.330	0.200	/
	Full	Off		Back Side	16	20175	1732.5	50	Mid	0.18	0.178	22.18	23.50	1.355	0.241	/
	Full	Off		Right Edge	13	20175	1732.5	50	Mid	-0.18	0.148	22.18	23.50	1.355	0.201	/
	Full	Off		Top Edge	12	20175	1732.5	50	Mid	-0.17	0.126	22.18	23.50	1.355	0.171	/

11.3.3 LTE Band5 (10MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant.1	Level1&2	On	QPSK	Back Side	0	20525	836.5	1	Mid	0.02	0.955	20.35	20.50	1.035	0.988	/
	Level1&2	On		Right Edge	0	20525	836.5	1	Mid	0.13	0.411	20.35	20.50	1.035	0.425	/
	Level1&2	On		Top Edge	0	20525	836.5	1	Mid	-0.14	0.266	20.35	20.50	1.035	0.275	/
	Level1&2	On		Back Side	0	20525	836.5	25	Mid	0.05	0.811	20.33	20.50	1.040	0.843	/
	Level1&2	On		Right Edge	0	20525	836.5	25	Mid	0.09	0.406	20.33	20.50	1.040	0.422	/
	Level1&2	On		Top Edge	0	20525	836.5	25	Mid	0.01	0.253	20.33	20.50	1.040	0.263	/
	Level1&2	On		Back Side	0	20450	829	1	High	0.14	1.040	20.23	20.50	1.064	1.107	8#
	Level1&2	On		Back Side	0	20600	844	1	Low	-0.17	1.010	20.29	20.50	1.050	1.061	/
	Level1&2	On		Back Side	0	20450	829	25	Low	0.09	0.955	20.28	20.50	1.052	1.005	/
	Level1&2	On		Back Side	0	20600	844	25	Mid	-0.16	1.030	20.28	20.50	1.052	1.084	/
	Level1&2	On		Back Side	0	20525	836.5	50	Low	-0.02	0.923	20.22	20.50	1.067	0.985	/
	Level1&2	On		Back Side	0	20450	829	50	Low	-0.14	0.941	20.09	20.50	1.099	1.034	/
	Level1&2	On		Back Side	0	20600	844	50	Low	0.04	0.986	20.22	20.50	1.067	1.052	/
Sensor-1																
Ant.1	Full	Off	QPSK	Back Side	16	20525	836.5	1	Mid	-0.02	0.208	23.22	24.50	1.343	0.279	/
	Full	Off		Right Edge	13	20525	836.5	1	Mid	-0.10	0.098	23.22	24.50	1.343	0.132	/
	Full	Off		Top Edge	12	20525	836.5	1	Mid	0.06	0.162	23.22	24.50	1.343	0.218	/
	Full	Off		Back Side	16	20525	836.5	25	Mid	-0.02	0.177	22.07	23.50	1.390	0.246	/
	Full	Off		Right Edge	13	20525	836.5	25	Mid	-0.01	0.088	22.07	23.50	1.390	0.122	/
	Full	Off		Top Edge	12	20525	836.5	25	Mid	-0.01	0.144	22.07	23.50	1.390	0.200	/

11.3.4 LTE Band7 (20MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant.1	Level1&2	On	QPSK	Back Side	0	21100	2535	1	Mid	0.02	1.070	13.47	13.50	1.007	1.077	/
	Level1&2	On		Right Edge	0	21100	2535	1	Mid	0.17	0.255	13.47	13.50	1.007	0.257	/
	Level1&2	On		Top Edge	0	21100	2535	1	Mid	-0.05	0.367	13.47	13.50	1.007	0.370	/
	Level1&2	On		Back Side	0	21100	2535	50	Mid	0.14	0.922	13.45	13.50	1.012	0.933	/
	Level1&2	On		Right Edge	0	21100	2535	50	Mid	0.00	0.255	13.45	13.50	1.012	0.258	/
	Level1&2	On		Top Edge	0	21100	2535	50	Mid	0.06	0.355	13.45	13.50	1.012	0.359	/
	Level1&2	On		Back Side	0	20850	2510	1	High	0.01	1.050	13.46	13.50	1.009	1.059	/

	Level1&2	On		Back Side	0	21350	2560	1	Mid	0.00	1.150	13.44	13.50	1.014	1.166	9#
	Level1&2	On		Back Side	0	20850	2510	50	Low	-0.08	1.030	13.43	13.50	1.016	1.046	/
	Level1&2	On		Back Side	0	21350	2560	50	High	0.03	0.956	13.43	13.50	1.016	0.971	/
	Level1&2	On		Back Side	0	21100	2535	100	Low	0.11	1.080	13.22	13.50	1.067	1.152	/
	Level1&2	On		Back Side	0	20850	2510	100	Low	0.15	1.030	13.11	13.50	1.094	1.127	/
	Level1&2	On		Back Side	0	21350	2560	100	Low	0.07	0.974	13.18	13.50	1.076	1.048	/
Sensor-1																
Ant.1	Full	Off	QPSK	Back Side	16	21100	2535	1	Mid	-0.05	0.334	23.32	23.50	1.042	0.348	/
	Full	Off		Right Edge	13	21100	2535	1	Mid	0.18	0.148	23.32	23.50	1.042	0.154	/
	Full	Off		Top Edge	12	21100	2535	1	Mid	0.14	0.584	23.32	23.50	1.042	0.609	/
	Full	Off		Back Side	16	21100	2535	50	Mid	-0.05	0.295	22.22	22.50	1.067	0.315	/
	Full	Off		Right Edge	13	21100	2535	50	Mid	0.04	0.130	22.22	22.50	1.067	0.139	/
	Full	Off		Top Edge	12	21100	2535	50	Mid	0.06	0.509	22.22	22.50	1.067	0.543	/

11.3.5 LTE Band12 (10MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant.1	Level1&2	On	QPSK	Back Side	0	23095	707.5	1	Mid	0.11	0.810	18.95	19.50	1.135	0.919	10#
	Level1&2	On		Right Edge	0	23095	707.5	1	Mid	-0.04	0.622	18.95	19.50	1.135	0.706	/
	Level1&2	On		Top Edge	0	23095	707.5	1	Mid	-0.03	0.233	18.95	19.50	1.135	0.264	/
	Level1&2	On		Back Side	0	23095	707.5	25	Mid	0.09	0.621	18.88	19.50	1.153	0.716	/
	Level1&2	On		Right Edge	0	23095	707.5	25	Mid	0.09	0.355	18.88	19.50	1.153	0.409	/
	Level1&2	On		Top Edge	0	23095	707.5	25	Mid	0.02	0.223	18.88	19.50	1.153	0.257	/
	Level1&2	On		Back Side	0	23060	704	1	Low	0.16	0.733	18.92	19.50	1.143	0.838	/
	Level1&2	On		Back Side	0	23130	711	1	High	-0.14	0.785	18.88	19.50	1.153	0.905	/
	Level1&2	On		Back Side	0	23060	704	25	Mid	-0.02	0.766	18.83	19.50	1.167	0.894	/
	Level1&2	On		Back Side	0	23130	711	25	Low	0.02	0.741	18.82	19.50	1.169	0.866	/
	Level1&2	On		Back Side	0	23095	707.5	50	Low	0.07	0.765	18.75	19.50	1.189	0.910	/
	Level1&2	On		Back Side	0	23060	704	50	Low	-0.05	0.722	18.72	19.50	1.197	0.864	/
	Level1&2	On		Back Side	0	23130	711	50	Low	0.08	0.752	18.72	19.50	1.197	0.900	/
Sensor-1																
Ant.1	Full	Off	QPSK	Back Side	16	23095	707.5	1	Mid	0.19	0.116	22.91	24.50	1.442	0.167	/
	Full	Off		Right Edge	13	23095	707.5	1	Mid	-0.02	0.045	22.91	24.50	1.442	0.065	/
	Full	Off		Top Edge	12	23095	707.5	1	Mid	-0.04	0.147	22.91	24.50	1.442	0.212	/
	Full	Off		Back Side	16	23095	707.5	25	High	-0.04	0.102	22.03	23.50	1.403	0.143	/
	Full	Off		Right Edge	13	23095	707.5	25	High	-0.08	0.000	22.03	23.50	1.403	0.000	/
	Full	Off		Top Edge	12	23095	707.5	25	High	-0.13	0.127	22.03	23.50	1.403	0.178	/

11.3.6 LTE Band13 (10MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant.1	Level1&2	On	QPSK	Back Side	0	23230	782	1	Mid	0.02	0.898	20.87	21.50	1.156	1.038	11#
	Level1&2	On		Right Edge	0	23230	782	1	Mid	0.14	0.823	20.87	21.50	1.156	0.951	/
	Level1&2	On		Top Edge	0	23230	782	1	Mid	0.10	0.394	20.87	21.50	1.156	0.455	/
	Level1&2	On		Back Side	0	23230	782	25	Mid	-0.19	0.741	21.00	21.50	1.122	0.831	/
	Level1&2	On		Right Edge	0	23230	782	25	Mid	-0.12	0.232	21.00	21.50	1.122	0.260	/
	Level1&2	On		Top Edge	0	23230	782	25	Mid	-0.01	0.371	21.00	21.50	1.122	0.416	/
	Level1&2	On		Back Side	0	23230	782	50	Low	-0.03	0.862	21.02	21.50	1.117	0.963	/
Sensor-1																
Ant.1	Full	Off	QPSK	Back Side	16	23230	782	1	Mid	0.04	0.186	23.22	24.50	1.343	0.250	/
	Full	Off		Right Edge	13	23230	782	1	Mid	-0.01	0.097	23.22	24.50	1.343	0.130	/
	Full	Off		Top Edge	12	23230	782	1	Mid	-0.05	0.190	23.22	24.50	1.343	0.255	/
	Full	Off		Back Side	16	23230	782	25	Mid	0.09	0.147	22.01	23.50	1.409	0.207	/
	Full	Off		Right Edge	13	23230	782	25	Mid	-0.12	0.079	22.01	23.50	1.409	0.111	/
	Full	Off		Top Edge	12	23230	782	25	Mid	0.00	0.149	22.01	23.50	1.409	0.210	/

11.3.7 LTE Band17 (10MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant.1	Level1&2	On	QPSK	Back Side	0	23790	710	1	High	0.08	0.855	18.88	19.50	1.153	0.986	12#
	Level1&2	On		Right Edge	0	23790	710	1	High	0.10	0.622	18.88	19.50	1.153	0.717	/
	Level1&2	On		Top Edge	0	23790	710	1	High	-0.06	0.232	18.88	19.50	1.153	0.267	/
	Level1&2	On		Back Side	0	23790	710	25	Mid	-0.16	0.634	18.92	19.50	1.143	0.725	/
	Level1&2	On		Right Edge	0	23790	710	25	Mid	-0.16	0.556	18.92	19.50	1.143	0.636	/
	Level1&2	On		Top Edge	0	23790	710	25	Mid	0.04	0.225	18.92	19.50	1.143	0.257	/
	Level1&2	On		Back Side	0	23780	709	1	Mid	0.02	0.822	18.83	19.50	1.167	0.959	/
	Level1&2	On		Back Side	0	23800	711	1	High	0.05	0.834	18.85	19.50	1.161	0.968	/
	Level1&2	On		Back Side	0	23780	709	25	Low	-0.04	0.808	18.82	19.50	1.169	0.945	/
	Level1&2	On		Back Side	0	23800	711	25	High	-0.07	0.785	18.87	19.50	1.156	0.907	/
	Level1&2	On		Back Side	0	23790	710	50	Low	0.05	0.813	18.93	19.50	1.140	0.927	/
	Level1&2	On		Back Side	0	23780	709	50	Low	-0.09	0.808	18.71	19.50	1.199	0.969	/
	Level1&2	On		Back Side	0	23800	711	50	Low	0.09	0.813	18.68	19.50	1.208	0.982	/
Sensor-1																

Ant.1	Full	Off	QPSK	Back Side	16	23790	710	1	Mid	0.09	0.129	22.95	24.50	1.429	0.184	/
	Full	Off		Right Edge	13	23790	710	1	Mid	-0.01	0.046	22.95	24.50	1.429	0.066	/
	Full	Off		Top Edge	12	23790	710	1	Mid	-0.12	0.153	22.95	24.50	1.429	0.219	/
	Full	Off		Back Side	16	23790	710	25	Mid	-0.17	0.105	21.96	23.50	1.426	0.150	/
	Full	Off		Right Edge	13	23790	710	25	Mid	-0.14	0.000	21.96	23.50	1.426	0.000	/
	Full	Off		Top Edge	12	23790	710	25	Mid	0.06	0.120	21.96	23.50	1.426	0.171	/

11.3.8 LTE Band26 (15MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant.1	Level1&2	On	QPSK	Back Side	0	26865	831.5	1	Low	0.08	0.877	19.92	20.50	1.143	1.002	13#
	Level1&2	On		Right Edge	0	26865	831.5	1	Low	0.06	0.644	19.92	20.50	1.143	0.736	/
	Level1&2	On		Top Edge	0	26865	831.5	1	Low	0.19	0.230	19.92	20.50	1.143	0.263	/
	Level1&2	On		Back Side	0	26865	831.5	36	Low	-0.09	0.632	19.95	20.50	1.135	0.717	/
	Level1&2	On		Right Edge	0	26865	831.5	36	Low	0.02	0.551	19.95	20.50	1.135	0.625	/
	Level1&2	On		Top Edge	0	26865	831.5	36	Low	0.17	0.221	19.95	20.50	1.135	0.251	/
	Level1&2	On		Back Side	0	26765	821.5	1	High	0.12	0.822	19.90	20.50	1.148	0.944	/
	Level1&2	On		Back Side	0	26965	841.5	1	Low	0.01	0.806	19.83	20.50	1.167	0.941	/
	Level1&2	On		Back Side	0	26765	821.5	36	Low	-0.17	0.811	19.93	20.50	1.140	0.925	/
	Level1&2	On		Back Side	0	26965	841.5	36	Mid	-0.14	0.788	19.95	20.50	1.135	0.894	/
	Level1&2	On		Back Side	0	26965	841.5	72	Low	0.09	0.806	19.92	20.50	1.143	0.921	/
	Level1&2	On		Back Side	0	26765	821.5	72	Low	0.07	0.763	19.87	20.50	1.156	0.882	/
	Level1&2	On		Back Side	0	26965	841.5	72	Low	0.08	0.774	19.82	20.50	1.169	0.905	/
Sensor-1																
Ant.1	Full	Off	QPSK	Back Side	16	26865	831.5	1	Mid	-0.03	0.178	23.08	24.50	1.387	0.247	/
	Full	Off		Right Edge	13	26865	831.5	1	Mid	-0.10	0.083	23.08	24.50	1.387	0.115	/
	Full	Off		Top Edge	12	26865	831.5	1	Mid	-0.02	0.147	23.08	24.50	1.387	0.204	/
	Full	Off		Back Side	16	26865	831.5	36	Mid	-0.09	0.152	22.09	23.50	1.384	0.210	/
	Full	Off		Right Edge	13	26865	831.5	36	Mid	-0.15	0.074	22.09	23.50	1.384	0.102	/
	Full	Off		Top Edge	12	26865	831.5	36	Mid	0.08	0.125	22.09	23.50	1.384	0.173	/

11.3.9 LTE Band66 (20MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant.1	Level1&2	On	QPSK	Back Side	0	132322	1745	1	Mid	-0.12	0.622	15.25	15.50	1.059	0.659	/

	Level1&2	On		Right Edge	0	132322	1745	1	Mid	-0.02	0.099	15.25	15.50	1.059	0.105	/
	Level1&2	On		Top Edge	0	132322	1745	1	Mid	0.02	0.226	15.25	15.50	1.059	0.239	/
	Level1&2	On		Back Side	0	132322	1745	50	Mid	0.06	0.715	15.25	15.50	1.059	0.757	14#
	Level1&2	On		Right Edge	0	132322	1745	50	Mid	0.08	0.056	15.25	15.50	1.059	0.059	/
	Level1&2	On		Top Edge	0	132322	1745	50	Mid	0.11	0.206	15.25	15.50	1.059	0.218	/
Sensor-1																
Ant.1	Full	Off	QPSK	Back Side	16	132322	1745	1	Mid	-0.17	0.114	23.30	24.50	1.318	0.150	/
	Full	Off		Right Edge	13	132322	1745	1	Mid	-0.14	0.059	23.30	24.50	1.318	0.078	/
	Full	Off		Top Edge	12	132322	1745	1	Mid	-0.05	0.158	23.30	24.50	1.318	0.208	/
	Full	Off		Back Side	16	132322	1745	50	Mid	-0.13	0.098	22.23	23.50	1.340	0.131	/
	Full	Off		Right Edge	13	132322	1745	50	Mid	-0.14	0.053	22.23	23.50	1.340	0.071	/
	Full	Off		Top Edge	12	132322	1745	50	Mid	0.08	0.142	22.23	23.50	1.340	0.190	/

11.3.10 LTE Band38 (20MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mod e	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune- power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.N o
Body																
Ant. 1	Level1&2	On	QP SK	Back Side	0	38000	2595	1	Mid	0.14	0.773	14.71	15.50	1.199	0.927	/
	Level1&2	On		Right Edge	0	38000	2595	1	Mid	0.04	0.035	14.71	15.50	1.199	0.042	/
	Level1&2	On		Top Edge	0	38000	2595	1	Mid	-0.10	0.434	14.71	15.50	1.199	0.520	/
	Level1&2	On		Back Side	0	38000	2595	50	Mid	-0.13	0.623	14.69	15.50	1.205	0.751	/
	Level1&2	On		Right Edge	0	38000	2595	50	Mid	0.09	0.026	14.69	15.50	1.205	0.031	/
	Level1&2	On		Top Edge	0	38000	2595	50	Mid	-0.19	0.421	14.69	15.50	1.205	0.507	/
	Level1&2	On		Back Side	0	37850	2580	1	Mid	-0.08	0.823	14.61	15.50	1.227	1.010	/
	Level1&2	On		Back Side	0	38150	2610	1	Mid	0.07	0.868	14.71	15.50	1.199	1.041	15#
	Level1&2	On		Back Side	0	37850	2580	50	Mid	-0.19	0.802	14.65	15.50	1.216	0.975	/
	Level1&2	On		Back Side	0	38150	2610	50	Mid	0.05	0.811	14.54	15.50	1.247	1.011	/
	Level1&2	On	Back Side	0	38000	2595	100	Low	-0.12	0.756	14.47	15.50	1.268	0.959	/	
	Level1&2	On		Back Side	0	37850	2580	100	Low	0.04	0.733	14.46	15.5	1.271	0.932	/
	Level1&2	On		Back Side	0	38150	2610	100	Low	0.07	0.741	14.45	15.5	1.274	0.944	/
	Body-N-1															
	Full	Off		Back Side	16	38000	2595	1	Mid	-0.15	0.355	23.29	24.50	1.321	0.469	/
	Full	Off		Right Edge	13	38000	2595	1	Mid	0.08	0.100	23.29	24.50	1.321	0.132	/
	Full	Off		Top Edge	12	38000	2595	1	Mid	0.02	0.622	23.29	24.50	1.321	0.822	/
	Full	Off		Back Side	16	38000	2595	50	Mid	0.15	0.291	22.25	23.50	1.334	0.388	/
	Full	Off		Right Edge	13	38000	2595	50	Mid	-0.08	0.084	22.25	23.50	1.334	0.112	/
	Full	Off		Top Edge	12	38000	2595	50	Mid	0.03	0.534	22.25	23.50	1.334	0.712	/
	Full	Off		Top Edge	0	37850	2580	1	Mid	0.00	0.585	23.24	24.50	1.337	0.782	/
	Full	Off		Top Edge	0	38150	2610	1	Mid	-0.13	0.571	23.28	24.50	1.324	0.756	/

	Full	Off		Top Edge	0	38150	2610	100	Low	0.19	0.516	22.17	23.50	1.358	0.701	/
--	------	-----	--	----------	---	-------	------	-----	-----	------	-------	-------	-------	-------	-------	---

11.3.11 LTE Band41 (20MHz Bandwidth)

Antenna	Power Reduction	Sensor	Mod e	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power(dBm)	Max. tune-power(dBm)	Scaling Factor	1 g Scaled SAR (W/kg)	Meas.No
Body																
Ant. 1	Level1&2	On	QP SK	Back Side	0	40620	2593	1	Mid	-0.10	0.755	13.47	14.50	1.268	0.957	/
	Level1&2	On		Right Edge	0	40620	2593	1	Mid	-0.14	0.145	13.47	14.50	1.268	0.184	/
	Level1&2	On		Top Edge	0	40620	2593	1	Mid	-0.19	0.323	13.47	14.50	1.268	0.410	/
	Level1&2	On		Back Side	0	40620	2593	50	Mid	-0.07	0.788	13.59	14.50	1.233	0.972	/
	Level1&2	On		Right Edge	0	40620	2593	50	Mid	0.18	0.134	13.59	14.50	1.233	0.165	/
	Level1&2	On		Top Edge	0	40620	2593	50	Mid	0.19	0.345	13.59	14.50	1.233	0.425	/
	Level1&2	On		Back Side	0	39750	2506	1	High	-0.01	0.802	13.21	14.50	1.346	1.079	16#
	Level1&2	On		Back Side	0	40185	2549.5	1	High	0.12	0.767	13.36	14.50	1.300	0.997	/
	Level1&2	On		Back Side	0	41055	2636.5	1	Low	-0.03	0.722	13.35	14.50	1.303	0.941	/
	Level1&2	On		Back Side	0	41490	2680	1	Mid	-0.08	0.754	13.41	14.50	1.285	0.969	/
	Level1&2	On		Back Side	0	39750	2506	50	High	-0.03	0.736	13.56	14.50	1.242	0.914	/
	Level1&2	On		Back Side	0	40185	2549.5	50	High	-0.09	0.740	13.53	14.50	1.250	0.925	/
	Level1&2	On		Back Side	0	41055	2636.5	50	Low	0.07	0.769	13.47	14.50	1.268	0.975	/
	Level1&2	On		Back Side	0	41490	2680	50	Mid	-0.12	0.713	13.39	14.50	1.291	0.920	/
	Level1&2	On		Back Side	0	40620	2593	100	Low	0.18	0.748	13.59	14.50	1.233	0.922	/
	Level1&2	On		Back Side	0	39750	2506	100	Low	0.11	0.731	13.53	14.50	1.250	0.914	/
	Level1&2	On		Back Side	0	40185	2549.5	100	Low	-0.02	0.732	13.31	14.50	1.315	0.963	/
	Level1&2	On		Back Side	0	41055	2636.5	100	Low	-0.14	0.749	13.27	14.50	1.327	0.994	/
	Level1&2	On		Back Side	0	41490	2680	100	Low	-0.09	0.758	13.43	14.50	1.279	0.969	/
Sensor-1																
Ant. 1	Full	Off	QP SK	Back Side	16	40620	2593	1	Mid	0.08	0.323	23.36	24.50	1.300	0.420	/
	Full	Off		Right Edge	13	40620	2593	1	Mid	-0.11	0.171	23.36	24.50	1.300	0.222	/
	Full	Off		Top Edge	12	40620	2593	1	Mid	0.05	0.593	23.36	24.50	1.300	0.771	/
	Full	Off		Back Side	16	40620	2593	50	Mid	-0.13	0.276	22.39	23.50	1.291	0.356	/
	Full	Off		Right Edge	13	40620	2593	50	Mid	0.12	0.139	22.39	23.50	1.291	0.179	/
	Full	Off		Top Edge	12	40620	2593	50	Mid	0.03	0.483	22.39	23.50	1.291	0.624	/

11.4 WIFI

11.4.1 WIFI 2.4GHz

Mode	Antenna	Power Reduction	Sensor	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift(dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Scaled SAR (W/kg)	Meas. No.
Body																
802.11b	Ant.2	Full	Off	Back Side	0	6	2437	0.03	0.511	16.84	17.00	1.038	97.23	1.028	0.545	/
		Level1	On	Top Edge	0	11	2462	0.13	0.713	10.11	11.00	1.227	97.23	1.028	0.899	/
		Level1	On	Top Edge	0	1	2412	-0.17	0.734	10.05	11.00	1.245	97.23	1.028	0.939	/
		Level1	On	Top Edge	0	6	2437	-0.03	0.762	9.89	11.00	1.291	97.23	1.028	1.011	17#
802.11b	Ant.2	Full	Off	Back Side	0	6	2437	0.03	0.511	16.84	17.00	1.038	97.23	1.028	0.545	/
		Level2	On	Top Edge	0	11	2462	0.04	0.522	8.23	10.00	1.503	97.23	1.028	0.807	/
		Level2	On	Top Edge	0	1	2412	-0.19	0.506	8.14	10.00	1.535	97.23	1.028	0.798	/
		Level2	On	Top Edge	0	6	2437	0.04	0.533	8.13	10.00	1.538	97.23	1.028	0.843	/
Sensor-1																
802.11b	Ant.2	Full	Off	Top Edge	10	6	2437	-0.11	0.668	16.84	17.00	1.038	97.23	1.028	0.713	/
		Full	Off	Top Edge	10	1	2412	-0.15	0.480	16.19	17.00	1.205	97.23	1.028	0.595	/
		Full	Off	Top Edge	10	11	2462	-0.14	0.578	16.42	17.00	1.143	97.23	1.028	0.679	/

11.4.2 WIFI 5GHz

Band	Mode	Antenn a	Power Reducti on	Sensor	Position	Dist . (m m)	Ch.	Freq. (MHz)	Power Drift(dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune- up power(dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Scaled SAR (W/kg)	Meas. No.
Body																	
5.3G	802.11 a	Ant.2	Full	Off	Back Side	0	64	5320	-0.13	0.228	17.23	18.50	1.340	95.41	1.048	0.320	/
			Level1	On	Top Edge	0	64	5320	-0.01	0.796	14.11	15.50	1.377	95.41	1.048	1.149	18#
			Level1	On	Top Edge	0	52	5260	-0.17	0.754	14.05	15.50	1.396	95.41	1.048	1.103	/
			Level1	On	Top Edge	0	60	5300	-0.04	0.763	14.23	15.50	1.340	95.41	1.048	1.071	/
5.3G	802.11 a	Ant.2	Full	Off	Back Side	0	64	5320	-0.13	0.228	17.23	18.50	1.340	95.41	1.048	0.320	/
			Level2	On	Top Edge	0	64	5320	-0.13	0.265	11.23	11.50	1.064	95.41	1.048	0.295	/
			Level2	On	Top Edge	0	52	5260	0.01	0.211	11.34	11.50	1.038	95.41	1.048	0.230	/
			Level2	On	Top Edge	0	60	5300	0.04	0.234	11.26	11.50	1.057	95.41	1.048	0.259	/
5.6G	802.11 a	Ant.2	Full	Off	Back Side	0	116	5580	0.04	0.354	17.94	18.50	1.138	95.41	1.048	0.422	/
			Level1	On	Top Edge	0	116	5580	0.02	1.090	12.94	13.00	1.014	95.41	1.048	1.158	19#
			Level1	On	Top Edge	0	100	5500	-0.19	1.010	12.85	13.00	1.035	95.41	1.048	1.096	/
			Level1	On	Top Edge	0	140	5700	-0.13	0.989	12.83	13.00	1.040	95.41	1.048	1.078	/
5.6G	802.11 a	Ant.2	Full	Off	Back Side	0	116	5580	0.04	0.354	17.94	18.50	1.138	95.41	1.048	0.422	/
			Level2	On	Top Edge	0	116	5580	0.05	0.512	10.41	10.50	1.021	95.41	1.048	0.548	/

			Level2	On	Top Edge	0	100	5500	0.17	0.505	10.44	10.50	1.014	95.41	1.048	0.537	/
			Level2	On	Top Edge	0	140	5700	0.08	0.524	10.46	10.50	1.009	95.41	1.048	0.554	/
5.8G	802.11 a	Ant.2	Full	Off	Back Side	0	149	5745	-0.06	0.266	17.65	18.50	1.216	95.41	1.048	0.339	/
			Level1	On	Top Edge	0	149	5745	0.01	0.889	12.53	13.50	1.250	95.41	1.048	1.165	20#
			Level1	On	Top Edge	0	157	5785	0.12	0.752	12.65	13.50	1.216	95.41	1.048	0.958	/
			Level1	On	Top Edge	0	165	5825	-0.19	0.779	12.44	13.50	1.276	95.41	1.048	1.042	/
5.8G	802.11 a	Ant.2	Full	Off	Back Side	0	149	5745	-0.06	0.266	17.65	18.50	1.216	95.41	1.048	0.339	/
			Level2	On	Top Edge	0	149	5745	-0.04	0.421	10.13	10.50	1.089	95.41	1.048	0.480	/
			Level2	On	Top Edge	0	157	5785	-0.15	0.385	10.21	10.50	1.069	95.41	1.048	0.431	/
			Level2	On	Top Edge	0	165	5825	0.05	0.411	10.16	10.50	1.081	95.41	1.048	0.466	/
Sensor-1																	
5.3G	802.11 a	Ant.2	Full	Off	Top Edge	10	64	5320	0.03	0.234	17.23	18.50	1.340	95.41	1.048	0.329	/
			Full	Off	Top Edge	10	52	5260	-0.17	0.205	17.12	18.50	1.374	95.41	1.048	0.295	/
			Full	Off	Top Edge	10	60	5300	0.16	0.225	17.10	18.50	1.380	95.41	1.048	0.325	/
5.6G	802.11 a	Ant.2	Full	Off	Top Edge	10	116	5580	-0.06	0.365	17.94	18.50	1.138	95.41	1.048	0.435	/
			Full	Off	Top Edge	10	100	5500	0.09	0.335	17.93	18.50	1.140	95.41	1.048	0.400	/
			Full	Off	Top Edge	10	140	5700	-0.12	0.340	15.44	16.50	1.276	95.41	1.048	0.455	/
5.8G	802.11 a	Ant.2	Full	Off	Top Edge	10	149	5745	0.02	0.343	17.65	18.50	1.216	95.41	1.048	0.437	/
			Full	Off	Top Edge	10	157	5785	0.08	0.266	17.77	18.50	1.183	95.41	1.048	0.330	/
			Full	Off	Top Edge	10	165	5825	0.04	0.218	17.78	18.50	1.180	95.41	1.048	0.270	/

11.5Bluetooth

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift(dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
DH5	Ant.2	Back Side	0	39	2441	0.17	0.111	10.38	10.50	1.028	76.61	1.305	0.149	/
		Top Edge	0	39	2441	-0.11	0.570	10.38	10.50	1.028	76.61	1.305	0.765	21#
		Top Edge	0	0	2402	0.01	0.486	9.95	10.50	1.135	76.61	1.305	0.720	/
		Top Edge	0	78	2480	0.00	0.421	8.40	9.50	1.288	76.61	1.305	0.708	/

12 SAR Measurement Variability

According to KDB 865664 D01, SAR measurement variability was assessed for each frequency band, which is determined by the SAR probe calibration point and tissue-equivalent medium used for the device measurements. When both head and body tissue-equivalent media are required for SAR measurements in a frequency band, the variability measurement procedures should be applied to the tissue medium with the highest measured SAR, using the highest measured SAR configuration for that tissue-equivalent medium. Alternatively, if the highest measured SAR for both head and body tissue-equivalent media are ≤ 1.45 W/kg and the ratio of these highest SAR values, i.e., largest divided by smallest value, is ≤ 1.10 , the highest SAR configuration for either head or body tissue-equivalent medium may be used to perform the repeated measurement. 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.

SAR repeated measurement procedure:

1. When the highest measured SAR is < 0.80 W/kg, repeated measurement is not required.
2. When the highest measured SAR is ≥ 0.80 W/kg, repeat that measurement once.
3. 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, perform a second repeated measurement.
4. If the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20 , and the original, first or second repeated measurement is ≥ 1.5 W/kg, perform a third repeated measurement.

Frequency Band (MHz)	Wireless Band	Antenna	RF Exposure Conditions	Test Position	Highest Measured SAR (W/kg)	Repeated SAR (Yes/No)	Highest Measured SAR (W/kg)	Largest to Smallest SAR Ratio
1850.2	GPRS1900	Ant.1	Body	Back Side	0.865	Yes	0.833	1.04
1880	GPRS1900	Ant.1	Body	Back Side	0.982	Yes	0.962	1.02
1907.6	GPRS1900	Ant.1	Body	Back Side	0.911	Yes	0.903	1.01
1852.4	WCDMA Band2	Ant.1	Body	Back Side	0.835	Yes	0.822	1.02
1880	WCDMA Band2	Ant.1	Body	Back Side	0.811	Yes	0.806	1.01
1907.6	WCDMA Band2	Ant.1	Body	Back Side	0.999	Yes	0.974	1.03
1712.4	WCDMA Band4	Ant.1	Body	Back Side	0.921	Yes	0.913	1.01
1732.4	WCDMA Band4	Ant.1	Body	Back Side	0.906	Yes	0.887	1.02
1752.6	WCDMA Band4	Ant.1	Body	Back Side	1.000	Yes	0.956	1.05
826.4	WCDMA Band5	Ant.1	Body	Back Side	0.888	Yes	0.863	1.03
836.4	WCDMA Band5	Ant.1	Body	Back Side	0.841	Yes	0.832	1.01
846.6	WCDMA Band5	Ant.1	Body	Back Side	0.844	Yes	0.816	1.03

1860	LTE Band2	Ant.1	Body	Back Side	0.886	Yes	0.845	1.05
1880	LTE Band2	Ant.1	Body	Back Side	0.968	Yes	0.933	1.04
1900	LTE Band2	Ant.1	Body	Back Side	0.923	Yes	0.912	1.01
1720	LTE Band4	Ant.1	Body	Back Side	0.822	Yes	0.811	1.01
1732.5	LTE Band4	Ant.1	Body	Back Side	0.831	Yes	0.826	1.01
1745	LTE Band4	Ant.1	Body	Back Side	0.867	Yes	0.853	1.02
829	LTE Band5	Ant.1	Body	Back Side	1.040	Yes	1.02	1.02
836.5	LTE Band5	Ant.1	Body	Back Side	0.955	Yes	0.934	1.02
844	LTE Band5	Ant.1	Body	Back Side	1.030	Yes	0.992	1.04
2510	LTE Band7	Ant.1	Body	Back Side	1.050	Yes	1.05	1.00
2535	LTE Band7	Ant.1	Body	Back Side	1.080	Yes	1.06	1.02
2560	LTE Band7	Ant.1	Body	Back Side	1.150	Yes	1.11	1.04
707.5	LTE Band12	Ant.1	Body	Back Side	0.810	Yes	0.785	1.03
782	LTE Band13	Ant.1	Body	Back Side	0.898	Yes	0.863	1.04
709	LTE Band17	Ant.1	Body	Back Side	0.822	Yes	0.816	1.01
710	LTE Band17	Ant.1	Body	Back Side	0.855	Yes	0.841	1.02
711	LTE Band17	Ant.1	Body	Back Side	0.834	Yes	0.817	1.02
821.5	LTE Band26	Ant.1	Body	Back Side	0.822	Yes	0.811	1.01
831.5	LTE Band26	Ant.1	Body	Back Side	0.877	Yes	0.851	1.03
841.5	LTE Band26	Ant.1	Body	Back Side	0.806	Yes	0.795	1.01
2580	LTE Band38	Ant.1	Body	Back Side	0.823	Yes	0.812	1.01
2610	LTE Band38	Ant.1	Body	Back Side	0.868	Yes	0.855	1.02
2506	LTE Band41	Ant.1	Body	Back Side	0.802	Yes	0.774	1.04
5580	802.11 a	Ant.2	Body	Top Edge	1.090	Yes	1.05	1.04
5745	802.11 a	Ant.2	Body	Top Edge	0.889	Yes	0.838	1.06

Note: The ratio of largest to smallest SAR for the original and first repeated measurements is < 1.20, the second repeated measurement is not required.

13 SIMULTANEOUS TRANSMISSION

Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneous transmitting antenna. When the sum of SAR 1g of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit (SAR 1g 1.6 W/kg), the simultaneous transmission SAR is not required. When the sum of SAR 1g is greater than the SAR limit (SAR 1g 1.6 W/kg), SAR test exclusion is determined by the SAR to Peak Location Ratio (SPLSR).

According KDB 447498 D04, simultaneous transmission:

- a) $SPLSR = (SAR1 + SAR2)^{1.5} / R_i$ (min. separation distance, mm), and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
SAR1 is the highest reported or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition.
SAR2 is the highest reported or estimated SAR for the second of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition as the first.
- b) If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary.
- c) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.

13.1 Simultaneous Transmission Mode Considerations

NO.	Mode	Body
1	WWAN+WIFI2.4G	Yes
2	WWAN+WIFI5G+BT	Yes
Note: 1. WiFi 2.4G and Bluetooth share the same antenna, and can't transmit simultaneously. 2. When stand-alone SAR is not required for a side of antenna, its SAR is considered zero in the SAR summing process to assess Multi-band transmission SAR compliance. 3. The maximum SAR summation is calculated based on the same configuration and test position. 4. The simultaneous transmission combinations of the more antennas contain combinations of less antennas, so only the worst simultaneous transmission combinations is shown in this report.		

13.2 Body Simultaneous Transmission SAR Evaluation

Please refer the document "BL-SZ25313795-AST.pdf".

14 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test Software	Speag	DASY5	52.8.8.1222	N/A	N/A
750MHz Validation Dipole	Speag	D750V3	SN: 1208	2024/08/19	2027/08/18
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2024/05/08	2027/05/07
1750MHz Validation Dipole	Speag	D1750V2	SN: 1130	2024/05/08	2027/05/07
1950MHz Validation Dipole	Speag	D1950V3	SN: 1240	2024/08/22	2027/08/21
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2024/05/07	2027/05/06
2600MHz Validation Dipole	Speag	D2600V2	SN: 1095	2024/05/08	2027/05/07
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1200	2024/05/09	2027/05/08
Data Acquisition Electronics	Speag	DAE4	SN: 878	2025/03/05	2026/03/04
E-Field Probe	Speag	EX3DV4	SN: 7893	2024/09/05	2025/09/04
Signal Generator	Keysight	N5173B	MY62150163	2024/08/12	2025/08/11
Power Meter	R&S	NRVD-B2	835843/014	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z4	100381	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z2	100211	2024/08/08	2025/08/07
Wireless Communication Test Set	R&S	CMW500	104946	2024/06/24	2025/06/23
Network Analyzer	Agilent	E5071C	MY46103472	2024/09/11	2025/09/10
Thermometer	Elitech	RC-4HC	EF7239002655	2024/10/31	2025/10/30
Thermometer	Elitech	RC-4HC	EF7216002974	2024/10/31	2025/10/30
Power Amplifier	Mini-Circuits	ZVA-183W-S+	932502132	N/A	N/A
Dielectric Probe Kit	Speag	DAK3.5	SN: 1312	N/A	N/A
Phantom	Speag	SAM	SN: 1858	N/A	N/A
Attenuator	COM-MW	ZA-S1-31	1305003187	N/A	N/A
Directional coupler	AA-MCS	AAMCS-UDC	000272	N/A	N/A

Note: For dipole antennas, BALUN has adopted 3 years as calibration intervals, and on annual basis, every measurement dipole has been evaluated and is in compliance with the following criteria:

1. There is no physical damage on the dipole;
2. System validation with specific dipole is within 10% of calibrated value;
3. Return-loss in within 20% of calibrated measurement.
4. Impedance (real or imaginary parts) in within 5 Ohms of calibrated measurement.

ANNEX A SIMULATING LIQUID VERIFICATION RESULT

The dielectric parameters of the liquids were verified prior to the SAR evaluation using a DAK3.5 Dielectric Probe Kit.

Head Liquid

Date	Liquid Type	Fre. (MHz)	Temp. (°C)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ϵ)	Target Conductivity (σ) (S/m)	Target Permittivity (ϵ)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2025.05.24	Head	750	21.2	0.90	42.16	0.89	41.94	1.12	0.52
2025.05.25	Head	835	21.3	0.92	41.23	0.90	41.50	2.22	-0.65
2025.05.27	Head	835	21.4	0.90	41.52	0.90	41.50	0.00	0.05
2025.05.28	Head	1750	21.2	1.37	39.24	1.37	40.08	0.00	-2.10
2025.05.29	Head	1950	21.4	1.44	38.65	1.40	40.00	2.86	-3.38
2025.05.30	Head	2450	21.3	1.81	38.60	1.80	39.20	0.56	-1.53
2025.05.31	Head	2600	21.1	1.92	38.46	1.96	39.01	-2.04	-1.41
2025.06.01	Head	5250	21.3	4.70	36.78	4.71	35.93	-0.21	2.37
2025.06.02	Head	5600	21.5	5.12	34.51	5.07	35.53	0.99	-2.87
2025.06.03	Head	5750	21.5	5.24	34.85	5.22	35.36	0.38	-1.44
2025.06.04	Head	2600	21.0	1.92	38.43	1.96	39.01	-2.04	-1.49

Note: The tolerance limit of Conductivity and Permittivity is $\pm 5\%$.

ANNEX B SYSTEM CHECK RESULT

Comparing to the original SAR value provided by SPEAG, the validation data should be within its specification of 10 % (for 1 g).

Head liquid 1g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2025.05.24	Head	750	100	0.887	8.87	8.46	4.85
2025.05.25	Head	835	100	1.010	10.10	9.74	3.70
2025.05.27	Head	835	100	0.935	9.35	9.74	-4.00
2025.05.28	Head	1750	100	3.530	35.30	37.00	-4.59
2025.05.29	Head	1950	100	4.110	41.10	41.70	-1.44
2025.05.30	Head	2450	100	5.270	52.70	52.60	0.19
2025.05.31	Head	2600	100	5.460	54.60	55.90	-2.33
2025.06.01	Head	5250	100	7.860	78.60	77.70	1.16
2025.06.02	Head	5600	100	8.230	82.30	81.30	1.23
2025.06.03	Head	5750	100	7.740	77.40	77.60	-0.26
2025.06.04	Head	2600	100	5.350	53.50	55.90	-4.29

Note: The tolerance limit of System validation $\pm 10\%$.

Please refer the document "BL-SZ2531395-ASC.pdf".

ANNEX C TEST DATA

Please refer the document “BL-SZ2531395-ATD.pdf”.

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ2531395-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SZ2531395-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “BL-SZ2531395-AC.pdf”.

ANNEX G TUNE-UP PROCEDURE

Please refer the document “BL-SZ2531395-AT.pdf”.

Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the "inspection and testing dedicated stamp" or test report stamp.
5. The test data and results are only valid for the tested samples provided by the customer.
6. This report shall not be partially reproduced without the written permission of the laboratory.
7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--