

TEST REPORT

Applicant: unitech electronics co., ltd.
Address: 5F., No. 136, Ln. 235, Baoqiao Rd., Xindian Dist.,
New Taipei City 231, Taiwan
Equipment Type: Handheld Data Terminal
Model Name: HT730 Plus UHF
Brand Name: unitech
FCC ID: HLEHT730PBWNU
Test Standard: FCC 47 CFR Part 2.1093
(refer section 3.1)
Maximum SAR: Head (1 g@0mm): 0.77 W/kg
Body (1 g@5mm): 0.85 W/kg
Limbs (10 g@0mm): 1.70 W/kg
Sample Arrival Date: Jul. 10, 2026
Test Date: Aug. 29, 2026 - Oct. 18, 2026
Date of Issue: Oct. 19, 2026

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

**Tested by:** Guo Guangwei**Checked by:** Xu Rui**Approved by:** Liao Jianming
(Technical Director)

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Sep. 21, 2026</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Oct. 19, 2026</u>	<u>Updates have been made to Section 3.1, Section 10, ANNEX A&B&E.</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	601, Building 2, Intelligent Connected Vehicle Industrial Park, No.55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☐ Building 2, Intelligent Connected Vehicle Industrial Park, No.55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen, Guangdong ☒ 1/F., Building B, Ganghongji High-Tech Intelligent Industrial Park, No.1008, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong
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	unitech electronics co., ltd.
Address	5F., No. 136, Ln. 235, Baoqiao Rd., Xindian Dist., New Taipei City 231, Taiwan

2.2 Manufacturer Information

Manufacturer	unitech electronics co., ltd.
Address	5F., No. 136, Ln. 235, Baoqiao Rd., Xindian Dist., New Taipei City 231, Taiwan

2.3 General Description for Equipment under Test (EUT)

EUT Name	Handheld Data Terminal
Model Name Under Test	HT730 Plus UHF
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	V1.4
Software Version	SELINAII_V14.00.01.08_20251103
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery 1	
	Brand Name	N/A
	Model No.	1400-900082G
	Serial No.	N/A
	Capacitance	6200mAh
	Rated Voltage	3.6 V
	Limited Voltage	4.2 V
	Manufacturer	Huizhou Fuji Energy Technology Co., Ltd.
Ancillary Equipment 2	Battery 2	
	Brand Name	N/A
	Model No.	KPL481918
	Serial No.	N/A
	Capacitance	100 mAh
	Rated Voltage	3.7 V
	Limited Voltage	4.2 V
	Manufacturer	DONGGUAN KAYO BATTERY CO., LTD.

2.5 Technical Information

Network and Wireless connectivity	Bluetooth (BR+EDR+BLE) WIFI 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac and 802.11ax UHF
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The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	WIFI, Bluetooth, UHF	
Frequency Range	802.11b/g	2412 ~ 2462 MHz
	802.11n(HT20/HT40)	2412 ~ 2462 MHz
	802.11ax(HE20/HE40)	2412 ~ 2462 MHz
	802.11a	5150 ~ 5250 MHz
		5250 ~ 5350 MHz
		5470 ~ 5725 MHz
		5725 ~ 5850 MHz
	802.11n(HT20/HT40)	5150 ~ 5250 MHz
		5250 ~ 5350 MHz
		5470 ~ 5725 MHz
		5725 ~ 5850 MHz
	802.11ac (VHT20/VHT40/VHT80)	5150 ~ 5250 MHz
		5250 ~ 5350 MHz
		5470 ~ 5725 MHz
		5725 ~ 5850 MHz
	802.11ax (HE20/HE40/HE80)	5150 ~ 5250 MHz
		5250 ~ 5350 MHz
		5470 ~ 5725 MHz
		5725 ~ 5850 MHz
	802.11ac(VHT160)/ 802.11ax(HE160)	5150 ~ 5250 MHz
		5470 ~ 5725 MHz
	802.11ax (HE20/HE40/HE80/HE160)	5925 ~ 6425 MHz
		6425 ~ 6525 MHz
		6525 ~ 6875 MHz
		6875 ~ 7125 MHz
	Bluetooth	2402 ~ 2480 MHz
	UHF	902.75 ~ 927.25 MHz
Antenna Type	WIFI	PIFA Antenna
	Bluetooth	PIFA Antenna
	UHF	Patch Antenna
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	FCC 47 CFR Part 2	FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS
3	ANSI/IEEE Std. C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
4	IEEE Std. 1528-2013	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
5	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01
6	KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
7	KDB 865664 D02 v01r02	RF Exposure Reporting
8	KDB 248227 D01 v02r02	SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS
9	KDB 775926 D01 v01	SAR Testing for Irregular Shaped Devices
10	IEC/IEEE 62209-1528:2020	Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)

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.

Table of Exposure Limits:

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 Values

Equipment Class	Band	Maximum Scaled SAR (W/kg)			Maximum Report SAR (W/kg)		
		Head	Body	Limbs	Head	Body	Limbs
		(0mm)	(5mm)	(0mm)	(0mm)	(5mm)	(0mm)
		1g SAR		10g SAR	1g SAR		10g SAR
DTS	2.4G WIFI	0.04	0.32	0.30	0.77	0.85	1.70
NII	5.3G WIFI	0.32	0.85	0.62			
	5.6G WIFI	0.68	0.79	0.72			
	5.8G WIFI	0.77	0.72	0.48			
	6G WIFI	0.08	0.27	0.21			
DSS	Bluetooth	0.03	0.09	0.07			
RFID		/	/	1.70			
Limit (W/kg)		1.60		4.00	1.60		4.00
Verdict		Pass					

3.3.2 Highest Simultaneous Transmission SAR Values

Equipment Class	Maximum Simultaneous Transmission SAR (W/kg)		
	Head	Body	Limbs
	(0mm)	(5mm)	(0mm)
	1g SAR		10g SAR
DTS	0.08	0.33	1.83
NII	0.96	0.97	2.05
DSS	0.96	0.97	2.05
Limit (W/Kg)		1.60	4.00
Verdict		Pass	

Note: The highest simultaneous SAR please refer section 12.

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 0.85 W/kg, which is lower than 1.5 W/kg, so the extensive SAR measurement uncertainty analysis is not required in this report.

The maximum 10 g SAR for the EUT in this report is 1.70 W/kg, which is lower than 3.75 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:

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

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

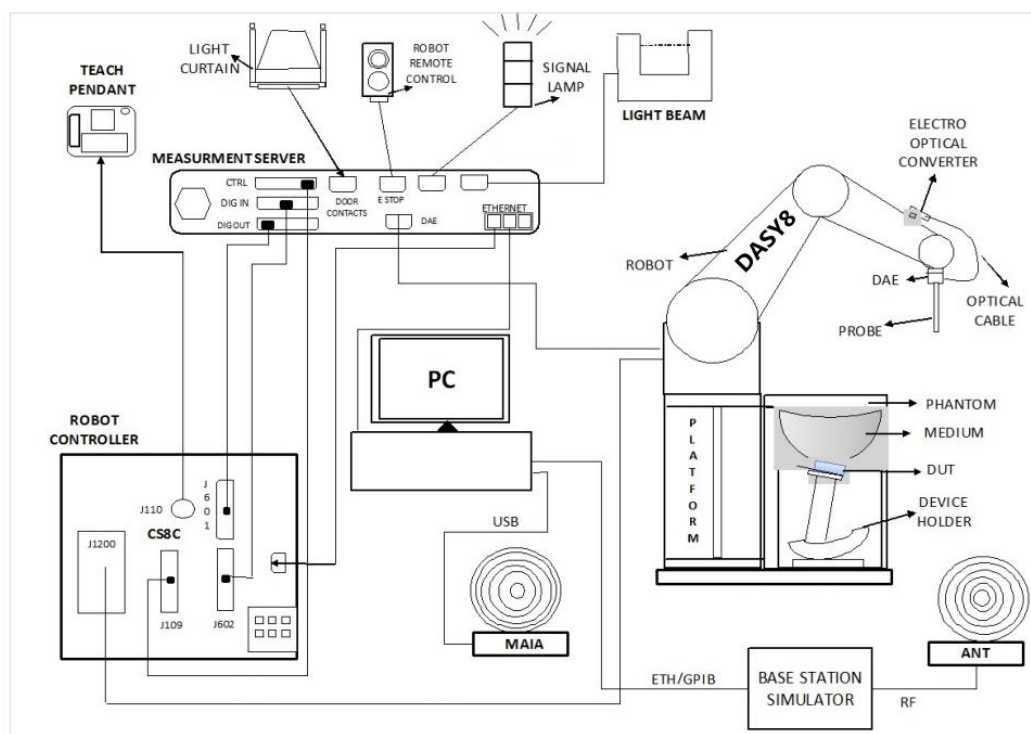
$$\text{SAR} = \frac{\sigma E^2}{\rho}$$

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 DASY 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 DASY 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	4 MHz to 10 GHz; Linearity: ± 0.2 dB
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 IEC/IEEE 62209-1528 and IEEE 1528 std, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the IEC/IEEE 62209-1528 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-converte 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
- Commom 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 head
- Right head
- Flat phantom



4.2.6 Device Holder

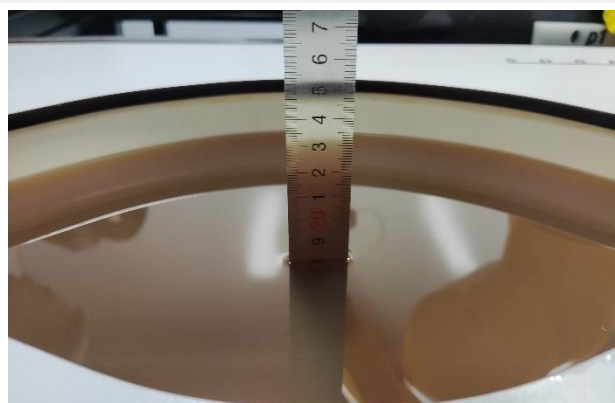
The DASY device holder has two scales for device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear openings). The plane between the ear openings and the mouth tip has a rotation angle of 65° . The bottom plate contains three pair of bolts for 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° .

4.2.7 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

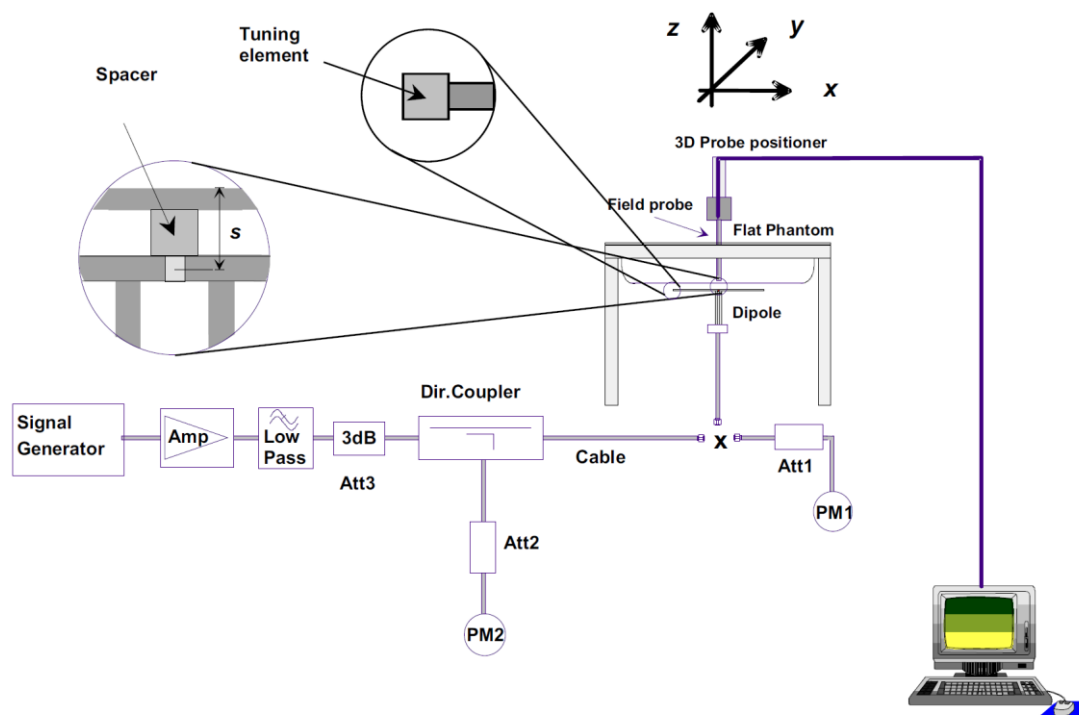
5 SYSTEM VERIFICATION

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

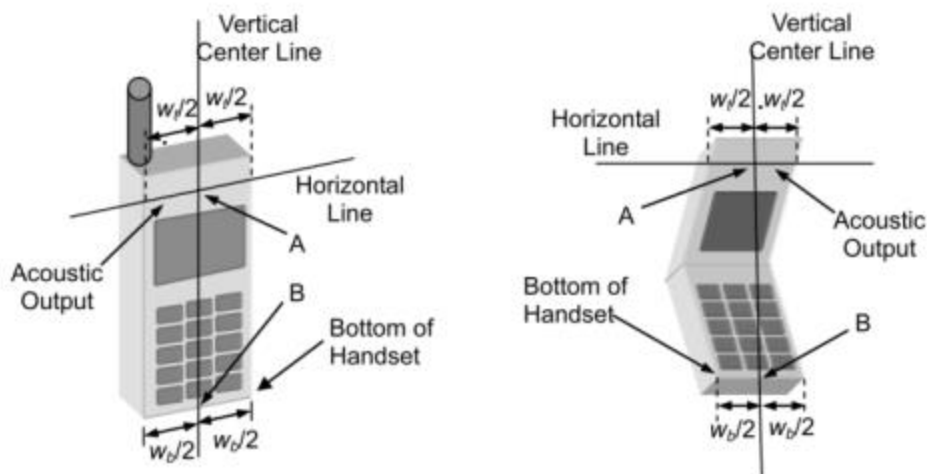
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

6.1 Head Exposure Conditions

Head exposure is limited to next to the ear voice mode operations. Head SAR compliance is tested according to the test positions defined in IEEE Std 1528-2013 using the SAM phantom illustrated as below.

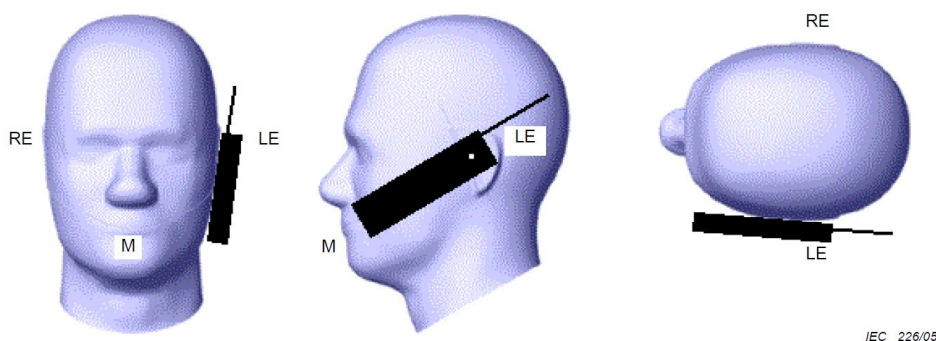
6.1.1 Two Imaginary Lines on the Handset

- The vertical center line passes through two points on the front side of the handset - the midpoint of the width w_t of the handset at the level of the acoustic output, and the midpoint of the width w_b of the bottom of the handset.
- The horizontal line is perpendicular to the vertical centerline and passes through the center of the acoustic output. The horizontal line is also tangential to the face of the handset at point A.
- The two lines intersect at point A. Note that for many handsets, point A coincides with the center of the acoustic output; however, the acoustic output may be located elsewhere on the horizontal line. Also note that the vertical center line is not necessarily parallel to the front face of the handset, especially for clamshell handsets, handsets with flip covers, and other irregularly shaped handsets.



6.1.2 Cheek Position

- (a) To position the device with the vertical center line of the body of the device and the horizontal line crossing the center piece in a plane parallel to the sagittal plane of the phantom. While maintaining the device in this plane, align the vertical center line with the reference plane containing the three ear and mouth reference point (M: Mouth, RE: Right Ear, and LE: Left Ear) and align the center of the ear piece with the line RE-LE.
- (b) To move the device towards the phantom with the ear piece aligned with the line LE-RE until the phone touched the ear. While maintaining the device in the reference plane and maintaining the phone contact with the ear, move the bottom of the phone until any point on the front side is in contact with the cheek of the phantom or until contact with the ear is lost.



6.1.3 Tilted Position

- (a) To position the device in the “cheek” position described above.
- (b) While maintaining the device the reference plane described above and pivoting against the ear, moves it outward away from the mouth by an angle of 15 degrees or until contact with the ear is lost.

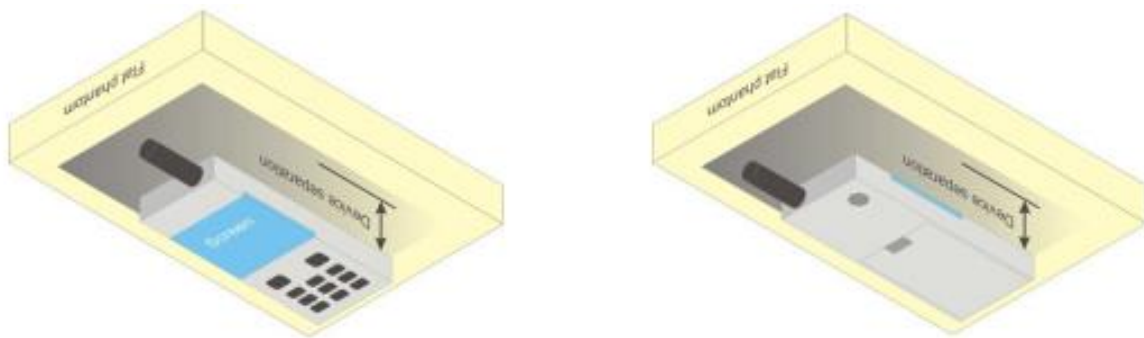


6.2 Body-worn Position Conditions

Body-worn accessory exposure is typically related to voice mode operations when handsets are carried in body-worn accessories. The body-worn accessory procedures in KDB 447498 are used to test for body-worn accessory SAR compliance, without a headset connected to it. This enables the test results for such configuration to be compatible with that required for hotspot mode when the body-worn accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a body-worn accessory.

Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics. All body-worn accessories containing metallic components are tested in conjunction with the host device.

Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice only operations in its normal and expected use conditions, testing of data mode for body-worn compliance is not required. A conservative minimum test separation distance for supporting off-the-shelf body-worn accessories that may be acquired by users of consumer handsets is used to test for body-worn accessory SAR compliance. This distance is determined by the handset manufacturer, according to the requirements of Supplement C 01-01. Devices that are designed to operate on the body of users using lanyards and straps, or without requiring additional body-worn accessories, will be tested using a conservative minimum test separation distance ≤ 5 mm to support compliance.



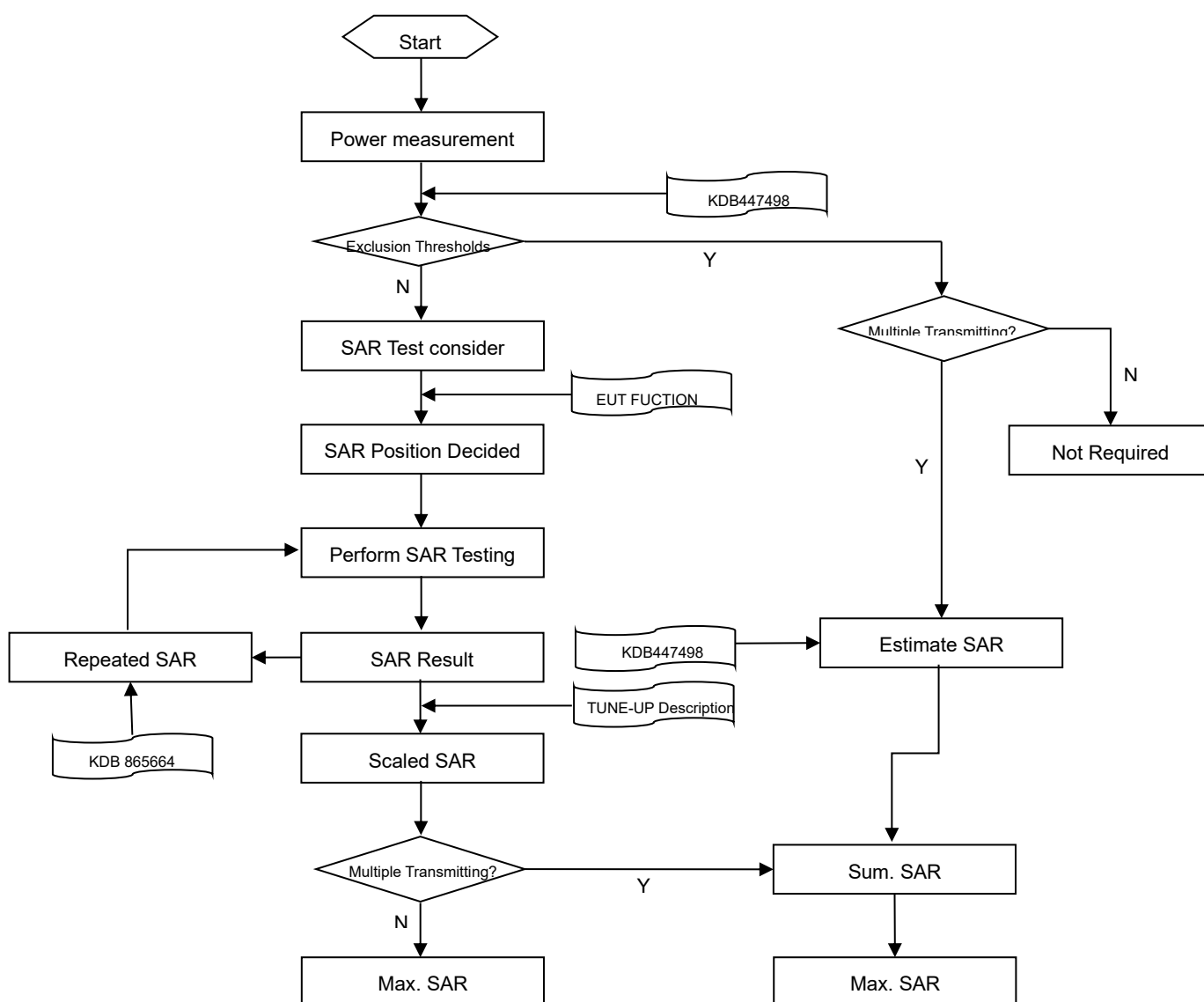
6.3 Product Specific 10g Exposure Consideration

According with FCC KDB 648474 D04, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, unless it is confirmed otherwise through KDB inquiries, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance;

The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions. The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

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	½·δ·ln(2)±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:				
1. δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
2. * 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.				

7.3 Measurement Procedure

The following steps are used for each test position

- a. 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
- b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
- c. 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.
- d. 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.

7.4 Area & Zoom Scan Procedure

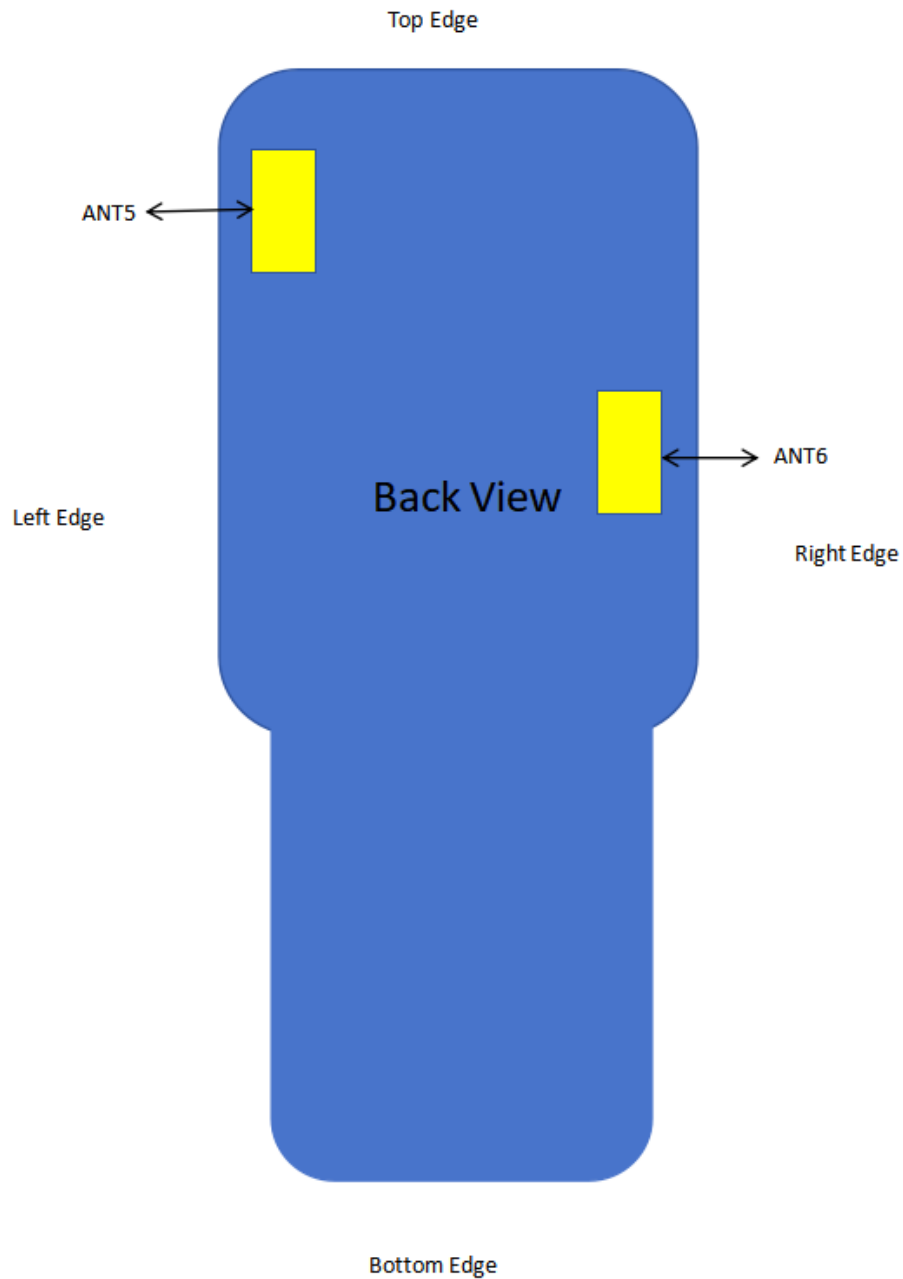
First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan 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.

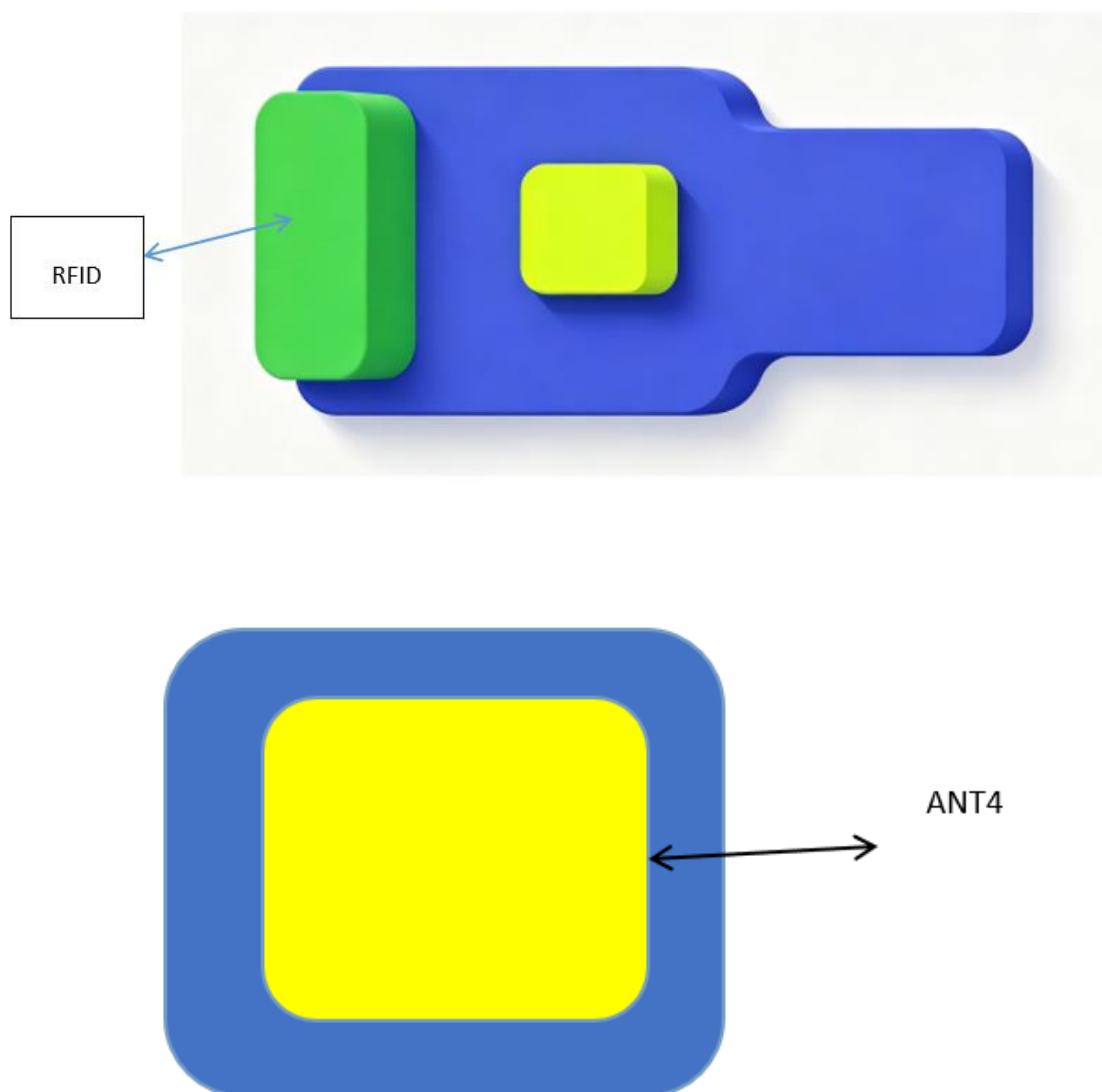
8 CONDUCTED RF OUTPUT POWER

Please refer the document “Ti-EE26070417-AP-1.pdf”.

9 TEST EXCLUSION CONSIDERATION



Schematic of the overall prototype structure



Antenna	Support Bands
ANT4	RFID
ANT5	WIFI2.4G&5G&6G Bluetooth
ANT6	WIFI2.4G&5G&6G
Owing to the prototype's special structure, the rear surfaces of the main unit and RFID module cannot be tightly attached to the phantom shell. Since removing the handle, RFID module and rear-side protrusions of the main unit does not affect Wi-Fi and BT radiated performance, the main unit and RFID module were tested separately with the rear-side protrusions of the main unit removed.	

10 TEST RESULT

Note: Refer to ANNEX C for the detailed test data for each test configuration.

10.1 Bluetooth

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g 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.
Head														
DH5	ANT5	Left Cheek	0	78	2480	0.10	0.022	5.95	6.50	1.135	76.94	1.300	0.032	1#
		Left Tilt	0	78	2480	0.04	0.015	5.95	6.50	1.135	76.94	1.300	0.022	/
		Right Cheek	0	78	2480	0.06	0.016	5.95	6.50	1.135	76.94	1.300	0.024	/
		Right Tilt	0	78	2480	-0.05	0.012	5.95	6.50	1.135	76.94	1.300	0.018	/
		Left Cheek	0	0	2402	0.12	0.018	5.72	6.50	1.197	76.94	1.300	0.028	/
		Left Cheek	0	39	2441	0.03	0.019	5.66	6.50	1.213	76.94	1.300	0.030	/
Worst Case-Equipment Under Test														
DH5	ANT5	Left Cheek	0	78	2480	0.07	0.018	5.95	6.50	1.135	76.94	1.300	0.027	/
Note: The EUT fully assembled with handle and RFID module.														
Body														
DH5	ANT5	Front Side	5	78	2480	0.11	0.031	5.95	6.50	1.135	76.94	1.300	0.046	/
		Back Side	5	78	2480	0.11	0.035	5.95	6.50	1.135	76.94	1.300	0.052	/
		Left Edge	5	78	2480	0.06	0.058	5.95	6.50	1.135	76.94	1.300	0.086	7#
		Right Edge	5	78	2480	0.04	0.006	5.95	6.50	1.135	76.94	1.300	0.009	/
		Top Edge	5	78	2480	-0.09	0.029	5.95	6.50	1.135	76.94	1.300	0.043	/
		Bottom Edge	5	78	2480	-0.09	0.042	5.95	6.50	1.135	76.94	1.300	0.062	/
		Left Edge	5	0	2402	-0.01	0.051	5.72	6.50	1.197	76.94	1.300	0.079	/
		Left Edge	5	39	2441	-0.02	0.054	5.66	6.50	1.213	76.94	1.300	0.085	/
Worst Case-Equipment Under Test														
DH5	ANT5	Left Edge	5	78	2480	0.01	0.052	5.95	6.50	1.135	76.94	1.300	0.077	/
Note: The EUT fully assembled with handle and RFID module.														

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Scaled SAR (W/kg)	Meas. No.
Limbs														
DH5	ANT5	Front Side	0	78	2480	0.05	0.041	5.95	6.50	1.135	76.94	1.300	0.060	/
		Back Side	0	78	2480	0.04	0.047	5.95	6.50	1.135	76.94	1.300	0.069	/
		Left Edge	0	78	2480	-0.02	0.050	5.95	6.50	1.135	76.94	1.300	0.074	13#
		Right Edge	0	78	2480	0.11	0.033	5.95	6.50	1.135	76.94	1.300	0.049	/
		Top Edge	0	78	2480	-0.05	0.038	5.95	6.50	1.135	76.94	1.300	0.056	/
		Bottom Edge	0	78	2480	-0.03	0.009	5.95	6.50	1.135	76.94	1.300	0.013	/
		Left Edge	0	0	2402	0.01	0.044	5.72	6.50	1.197	76.94	1.300	0.068	/
		Left Edge	0	39	2441	0.06	0.046	5.66	6.50	1.213	76.94	1.300	0.073	/
Worst Case-Equipment Under Test														
DH5	ANT5	Left Edge	0	78	2480	-0.01	0.045	5.95	6.50	1.135	76.94	1.300	0.066	/
Note: The EUT fully assembled with handle and RFID module.														

10.2WIFI 2.4GHz

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g 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.
Head														
802.11b	ANT5	Left Cheek	0	6	2437	-0.03	0.038	18.52	19.00	1.117	100.00	1.000	0.042	2#
		Left Tilt	0	6	2437	-0.02	0.012	18.52	19.00	1.117	100.00	1.000	0.013	/
		Right Cheek	0	6	2437	-0.10	0.019	18.52	19.00	1.117	100.00	1.000	0.021	/
		Right Tilt	0	6	2437	0.02	0.010	18.52	19.00	1.117	100.00	1.000	0.011	/
		Left Cheek	0	1	2412	0.10	0.015	17.30	19.00	1.479	100.00	1.000	0.022	/
		Left Cheek	0	11	2462	0.12	0.026	17.71	19.00	1.346	100.00	1.000	0.035	/
	ANT6	Left Cheek	0	11	2462	-0.07	0.025	17.36	18.00	1.159	100.00	1.000	0.029	/
		Left Tilt	0	11	2462	0.08	0.011	17.36	18.00	1.159	100.00	1.000	0.013	/
		Right Cheek	0	11	2462	0.04	0.015	17.36	18.00	1.159	100.00	1.000	0.017	/
		Right Tilt	0	11	2462	0.02	0.009	17.36	18.00	1.159	100.00	1.000	0.010	/
		Left Cheek	0	1	2412	-0.01	0.030	17.21	18.00	1.199	100.00	1.000	0.036	/
		Left Cheek	0	6	2437	-0.07	0.029	16.94	18.00	1.276	100.00	1.000	0.037	/
Worst Case-Equipment Under Test														
802.11b	ANT5	Left Cheek	0	6	2437	0.07	0.032	18.52	19.00	1.117	100.00	1.000	0.036	/
802.11b	ANT6	Left Cheek	0	6	2437	-0.03	0.025	16.94	18.00	1.276	100.00	1.000	0.032	/
Note: The EUT fully assembled with handle and RFID module.														
Body														
802.11b	ANT5	Front Side	5	6	2437	-0.06	0.071	18.52	19.00	1.117	100.00	1.000	0.079	/
		Back Side	5	6	2437	0.02	0.159	18.52	19.00	1.117	100.00	1.000	0.178	/
		Left Edge	5	6	2437	-0.01	0.169	18.52	19.00	1.117	100.00	1.000	0.189	/
		Right Edge	5	6	2437	-0.06	0.006	18.52	19.00	1.117	100.00	1.000	0.007	/
		Top Edge	5	6	2437	0.10	0.060	18.52	19.00	1.117	100.00	1.000	0.067	/
		Bottom Edge	5	6	2437	0.06	0.008	18.52	19.00	1.117	100.00	1.000	0.009	/
		Left Edge	5	1	2412	0.13	0.154	17.30	19.00	1.479	100.00	1.000	0.228	/
		Left Edge	5	11	2462	-0.05	0.161	17.71	19.00	1.346	100.00	1.000	0.217	/
	ANT6	Front Side	5	11	2462	0.03	0.053	17.36	18.00	1.159	100.00	1.000	0.061	/
		Back Side	5	11	2462	-0.11	0.119	17.36	18.00	1.159	100.00	1.000	0.138	/
		Left Edge	5	11	2462	-0.01	0.033	17.36	18.00	1.159	100.00	1.000	0.038	/
		Right Edge	5	11	2462	0.00	0.279	17.36	18.00	1.159	100.00	1.000	0.323	8#
		Top Edge	5	11	2462	0.08	0.016	17.36	18.00	1.159	100.00	1.000	0.019	/
		Bottom Edge	5	11	2462	0.05	0.009	17.36	18.00	1.159	100.00	1.000	0.010	/
Right Edge	5	1	2412	-0.04	0.268	17.21	18.00	1.199	100.00	1.000	0.321	/		
Right Edge	5	6	2437	-0.05	0.233	16.94	18.00	1.276	100.00	1.000	0.297	/		
Worst Case-Equipment Under Test														

802.11b	ANT5	Left Edge	5	1	2412	0.11	0.143	17.30	19.00	1.479	100.00	1.000	0.211	/
802.11b	ANT6	Right Edge	5	11	2462	0.08	0.255	17.36	18.00	1.159	100.00	1.000	0.296	/
Note: The EUT fully assembled with handle and RFID module.														

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Scaled SAR (W/kg)	Meas. No.
Limbs														
802.11b	ANT5	Front Side	0	6	2437	0.04	0.068	18.52	19.00	1.117	100.00	1.000	0.076	/
		Back Side	0	6	2437	-0.09	0.046	18.52	19.00	1.117	100.00	1.000	0.051	/
		Left Edge	0	6	2437	0.01	0.136	18.52	19.00	1.117	100.00	1.000	0.152	/
		Right Edge	0	6	2437	0.05	0.010	18.52	19.00	1.117	100.00	1.000	0.011	/
		Top Edge	0	6	2437	0.05	0.056	18.52	19.00	1.117	100.00	1.000	0.063	/
		Bottom Edge	0	6	2437	0.04	0.013	18.52	19.00	1.117	100.00	1.000	0.015	/
		Left Edge	0	1	2412	0.05	0.108	17.30	19.00	1.479	100.00	1.000	0.160	/
		Left Edge	0	11	2462	0.11	0.166	17.71	19.00	1.346	100.00	1.000	0.223	/
	ANT6	Front Side	0	11	2462	-0.08	0.046	17.36	18.00	1.159	100.00	1.000	0.053	/
		Back Side	0	11	2462	0.03	0.077	17.36	18.00	1.159	100.00	1.000	0.089	/
		Left Edge	0	11	2462	0.04	0.019	17.36	18.00	1.159	100.00	1.000	0.022	/
		Right Edge	0	11	2462	0.01	0.257	17.36	18.00	1.159	100.00	1.000	0.298	14#
		Top Edge	0	11	2462	-0.02	0.019	17.36	18.00	1.159	100.00	1.000	0.022	/
		Bottom Edge	0	11	2462	0.00	0.011	17.36	18.00	1.159	100.00	1.000	0.013	/
		Right Edge	0	1	2412	-0.02	0.229	17.21	18.00	1.199	100.00	1.000	0.275	/
		Right Edge	0	6	2437	-0.09	0.233	16.94	18.00	1.276	100.00	1.000	0.297	/
Worst Case-Equipment Under Test														
802.11b	ANT5	Left Edge	0	11	2462	0.14	0.154	17.71	19.00	1.346	100.00	1.000	0.207	/
802.11b	ANT6	Right Edge	0	11	2462	0.11	0.233	17.36	18.00	1.159	100.00	1.000	0.270	/
Note: The EUT fully assembled with handle and RFID module.														

10.3WIFI 5GHz

Band	Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g 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.
Head															
5.3G	802.11 ac80	ANT5	Left Cheek	0	58	5290	0.06	0.184	15.75	17.50	1.496	100.00	1.000	0.275	/
			Left Tilt	0	58	5290	-0.16	0.215	15.75	17.50	1.496	100.00	1.000	0.322	3#
			Right Cheek	0	58	5290	0.07	0.211	15.75	17.50	1.496	100.00	1.000	0.316	/
			Right Tilt	0	58	5290	0.13	0.213	15.75	17.50	1.496	100.00	1.000	0.319	/
		ANT6	Left Cheek	0	58	5290	0.07	0.124	15.92	17.00	1.282	100.00	1.000	0.159	/
			Left Tilt	0	58	5290	0.11	0.068	15.92	17.00	1.282	100.00	1.000	0.087	/
			Right Cheek	0	58	5290	0.11	0.048	15.92	17.00	1.282	100.00	1.000	0.062	/
			Right Tilt	0	58	5290	-0.03	0.033	15.92	17.00	1.282	100.00	1.000	0.042	/
5.6G	802.11 ac80	ANT5	Left Cheek	0	122	5610	-0.11	0.553	18.32	19.00	1.169	100.00	1.000	0.646	/
			Left Tilt	0	122	5610	-0.14	0.582	18.32	19.00	1.169	100.00	1.000	0.680	4#
			Right Cheek	0	122	5610	-0.06	0.576	18.32	19.00	1.169	100.00	1.000	0.673	/
			Right Tilt	0	122	5610	-0.10	0.543	18.32	19.00	1.169	100.00	1.000	0.635	/
			Right Tilt	0	106	5530	-0.05	0.479	17.54	19.00	1.400	100.00	1.000	0.671	/
			Right Tilt	0	138	5690	0.01	0.466	18.28	19.00	1.180	100.00	1.000	0.550	/
		ANT6	Left Cheek	0	122	5610	0.03	0.182	15.32	16.00	1.169	100.00	1.000	0.213	/
			Left Tilt	0	122	5610	0.02	0.090	15.32	16.00	1.169	100.00	1.000	0.105	/
			Right Cheek	0	122	5610	-0.10	0.094	15.32	16.00	1.169	100.00	1.000	0.110	/
			Right Tilt	0	122	5610	0.04	0.055	15.32	16.00	1.169	100.00	1.000	0.064	/
			Left Cheek	0	106	5530	-0.11	0.160	15.08	16.00	1.236	100.00	1.000	0.198	/
			Left Cheek	0	138	5690	0.05	0.166	15.25	16.00	1.189	100.00	1.000	0.197	/
5.8G	802.11 ac80	ANT5	Left Cheek	0	155	5775	-0.06	0.658	17.62	18.00	1.091	100.00	1.000	0.718	/
			Left Tilt	0	155	5775	-0.09	0.705	17.62	18.00	1.091	100.00	1.000	0.769	5#
			Right Cheek	0	155	5775	-0.01	0.647	17.62	18.00	1.091	100.00	1.000	0.706	/
			Right Tilt	0	155	5775	-0.02	0.647	17.62	18.00	1.091	100.00	1.000	0.706	/
		ANT6	Left Cheek	0	155	5775	-0.10	0.155	15.37	16.00	1.156	100.00	1.000	0.179	/
			Left Tilt	0	155	5775	0.09	0.084	15.37	16.00	1.156	100.00	1.000	0.097	/
			Right Cheek	0	155	5775	0.03	0.050	15.37	16.00	1.156	100.00	1.000	0.058	/
			Right Tilt	0	155	5775	0.08	0.030	15.37	16.00	1.156	100.00	1.000	0.035	/
Worst Case-Equipment Under Test															
5.3G	802.11	ANT5	Left Tilt	0	58	5290	0.16	0.202	15.75	17.50	1.496	100.00	1.000	0.302	/
	ac80	ANT6	Left Cheek	0	58	5290	0.00	0.113	15.92	17.00	1.282	100.00	1.000	0.145	/
5.6G	802.11	ANT5	Left Tilt	0	122	5610	0.04	0.556	18.32	19.00	1.169	100.00	1.000	0.650	/
	ac80	ANT6	Left Cheek	0	122	5610	0.15	0.163	15.32	16.00	1.169	100.00	1.000	0.191	/

5.8G	802.11	ANT5	Left Tilt	0	155	5775	0.05	0.674	17.62	18.00	1.091	100.00	1.000	0.735	/
	ac80	ANT6	Left Cheek	0	155	5775	-0.10	0.132	15.37	16.00	1.156	100.00	1.000	0.153	/
Note: The EUT fully assembled with handle and RFID module.															
Body															
5.3G	802.11 ac80	ANT5	Front Side	5	58	5290	-0.01	0.082	15.75	17.50	1.496	100.00	1.000	0.123	/
			Back Side	5	58	5290	-0.04	0.453	15.75	17.50	1.496	100.00	1.000	0.678	/
			Left Edge	5	58	5290	-0.08	0.567	15.75	17.50	1.496	100.00	1.000	0.848	9#
			Right Edge	5	58	5290	0.07	0.068	15.75	17.50	1.496	100.00	1.000	0.102	/
			Top Edge	5	58	5290	-0.03	0.269	15.75	17.50	1.496	100.00	1.000	0.402	/
			Bottom Edge	5	58	5290	0.13	0.087	15.75	17.50	1.496	100.00	1.000	0.130	/
		ANT6	Front Side	5	58	5290	0.07	0.023	15.92	17.00	1.282	100.00	1.000	0.029	/
			Back Side	5	58	5290	-0.02	0.088	15.92	17.00	1.282	100.00	1.000	0.113	/
			Left Edge	5	58	5290	-0.03	0.012	15.92	17.00	1.282	100.00	1.000	0.015	/
			Right Edge	5	58	5290	0.07	0.169	15.92	17.00	1.282	100.00	1.000	0.217	/
			Top Edge	5	58	5290	0.09	0.009	15.92	17.00	1.282	100.00	1.000	0.012	/
			Bottom Edge	5	58	5290	0.04	0.007	15.92	17.00	1.282	100.00	1.000	0.009	/
5.6G	802.11 ac80	ANT5	Front Side	5	122	5610	-0.11	0.294	18.32	19.00	1.169	100.00	1.000	0.344	/
			Back Side	5	122	5610	-0.09	0.664	18.32	19.00	1.169	100.00	1.000	0.776	/
			Left Edge	5	122	5610	-0.03	0.672	18.32	19.00	1.169	100.00	1.000	0.786	10#
			Right Edge	5	122	5610	0.10	0.165	18.32	19.00	1.169	100.00	1.000	0.193	/
			Top Edge	5	122	5610	0.09	0.328	18.32	19.00	1.169	100.00	1.000	0.383	/
			Bottom Edge	5	122	5610	0.09	0.067	18.32	19.00	1.169	100.00	1.000	0.078	/
			Left Edge	5	106	5530	-0.01	0.554	17.54	19.00	1.400	100.00	1.000	0.776	/
			Left Edge	5	138	5690	-0.11	0.632	18.28	19.00	1.180	100.00	1.000	0.746	/
		ANT6	Front Side	5	122	5610	0.02	0.065	15.32	16.00	1.169	100.00	1.000	0.076	/
			Back Side	5	122	5610	0.06	0.105	15.32	16.00	1.169	100.00	1.000	0.123	/
			Left Edge	5	122	5610	0.02	0.019	15.32	16.00	1.169	100.00	1.000	0.022	/
			Right Edge	5	122	5610	0.09	0.224	15.32	16.00	1.169	100.00	1.000	0.262	/
			Top Edge	5	122	5610	-0.07	0.009	15.32	16.00	1.169	100.00	1.000	0.011	/
			Bottom Edge	5	122	5610	-0.02	0.007	15.32	16.00	1.169	100.00	1.000	0.008	/
			Right Edge	5	106	5530	0.12	0.203	15.08	16.00	1.236	100.00	1.000	0.251	/
			Right Edge	5	138	5690	-0.04	0.204	15.25	16.00	1.189	100.00	1.000	0.243	/
5.8G	802.11 ac80	ANT5	Front Side	5	155	5775	-0.18	0.216	17.62	18.00	1.091	100.00	1.000	0.236	/
			Back Side	5	155	5775	0.01	0.394	17.62	18.00	1.091	100.00	1.000	0.430	/
			Left Edge	5	155	5775	-0.17	0.657	17.62	18.00	1.091	100.00	1.000	0.717	11#
			Right Edge	5	155	5775	-0.18	0.246	17.62	18.00	1.091	100.00	1.000	0.268	/
			Top Edge	5	155	5775	0.18	0.522	17.62	18.00	1.091	100.00	1.000	0.570	/
			Bottom Edge	5	155	5775	0.09	0.046	17.62	18.00	1.091	100.00	1.000	0.050	/
		ANT6	Front Side	5	155	5775	0.04	0.049	15.37	16.00	1.156	100.00	1.000	0.057	/

			Back Side	5	155	5775	0.15	0.094	15.37	16.00	1.156	100.00	1.000	0.109	/
			Left Edge	5	155	5775	0.16	0.033	15.37	16.00	1.156	100.00	1.000	0.038	/
			Right Edge	5	155	5775	-0.13	0.198	15.37	16.00	1.156	100.00	1.000	0.229	/
			Top Edge	5	155	5775	0.09	0.010	15.37	16.00	1.156	100.00	1.000	0.012	/
			Bottom Edge	5	155	5775	0.03	0.009	15.37	16.00	1.156	100.00	1.000	0.010	/
Worst Case-Equipment Under Test															
5.3G	802.11	Ant.5	Left Edge	5	58	5290	-0.14	0.532	15.75	17.50	1.496	100.00	1.000	0.796	/
	ac80	Ant.6	Right Edge	5	58	5290	0.13	0.151	15.92	17.00	1.282	100.00	1.000	0.194	/
5.6G	802.11	Ant.5	Left Edge	5	122	5610	0.07	0.647	18.32	19.00	1.169	100.00	1.000	0.756	/
	ac80	Ant.6	Right Edge	5	122	5610	0.00	0.216	15.32	16.00	1.169	100.00	1.000	0.253	/
5.8G	802.11	Ant.5	Left Edge	5	155	5775	-0.09	0.634	17.62	18.00	1.091	100.00	1.000	0.692	/
	ac80	Ant.6	Right Edge	5	155	5775	-0.16	0.185	15.37	16.00	1.156	100.00	1.000	0.214	/
Note: The EUT fully assembled with handle and RFID module.															

Band	Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Scaled SAR (W/kg)	Meas. No.
Limbs															
5.3G	802.11 ac80	ANT5	Front Side	0	58	5290	0.02	0.071	15.75	17.50	1.496	100.00	1.000	0.106	/
			Back Side	0	58	5290	-0.10	0.355	15.75	17.50	1.496	100.00	1.000	0.531	/
			Left Edge	0	58	5290	0.04	0.411	15.75	17.50	1.496	100.00	1.000	0.615	15#
			Right Edge	0	58	5290	0.13	0.091	15.75	17.50	1.496	100.00	1.000	0.136	/
			Top Edge	0	58	5290	-0.04	0.184	15.75	17.50	1.496	100.00	1.000	0.275	/
			Bottom Edge	0	58	5290	-0.06	0.066	15.75	17.50	1.496	100.00	1.000	0.099	/
		ANT6	Front Side	0	58	5290	-0.09	0.036	15.92	17.00	1.282	100.00	1.000	0.046	/
			Back Side	0	58	5290	-0.01	0.094	15.92	17.00	1.282	100.00	1.000	0.121	/
			Left Edge	0	58	5290	-0.10	0.084	15.92	17.00	1.282	100.00	1.000	0.108	/
			Right Edge	0	58	5290	-0.05	0.133	15.92	17.00	1.282	100.00	1.000	0.171	/
			Top Edge	0	58	5290	-0.06	0.066	15.92	17.00	1.282	100.00	1.000	0.085	/
			Bottom Edge	0	58	5290	-0.06	0.052	15.92	17.00	1.282	100.00	1.000	0.067	/
5.6G	802.11 ac80	ANT5	Front Side	0	122	5610	-0.10	0.167	18.32	19.00	1.169	100.00	1.000	0.195	/
			Back Side	0	122	5610	0.02	0.243	18.32	19.00	1.169	100.00	1.000	0.284	/
			Left Edge	0	122	5610	0.01	0.408	18.32	19.00	1.169	100.00	1.000	0.477	/
			Right Edge	0	122	5610	-0.03	0.064	18.32	19.00	1.169	100.00	1.000	0.075	/
			Top Edge	0	122	5610	-0.09	0.355	18.32	19.00	1.169	100.00	1.000	0.415	/
			Bottom Edge	0	122	5610	-0.03	0.038	18.32	19.00	1.169	100.00	1.000	0.044	/
			Left Edge	0	106	5530	-0.05	0.513	17.54	19.00	1.400	100.00	1.000	0.718	16#
			Left Edge	0	138	5690	-0.09	0.266	18.28	19.00	1.180	100.00	1.000	0.314	/
		ANT6	Front Side	0	122	5610	0.10	0.079	15.32	16.00	1.169	100.00	1.000	0.092	/
			Back Side	0	122	5610	0.05	0.126	15.32	16.00	1.169	100.00	1.000	0.147	/
			Left Edge	0	122	5610	0.07	0.068	15.32	16.00	1.169	100.00	1.000	0.079	/
			Right Edge	0	122	5610	0.11	0.221	15.32	16.00	1.169	100.00	1.000	0.258	/
			Top Edge	0	122	5610	-0.04	0.054	15.32	16.00	1.169	100.00	1.000	0.063	/
			Bottom Edge	0	122	5610	0.11	0.033	15.32	16.00	1.169	100.00	1.000	0.039	/
			Right Edge	0	106	5530	-0.01	0.132	15.08	16.00	1.236	100.00	1.000	0.163	/
			Right Edge	0	138	5690	0.02	0.179	15.25	16.00	1.189	100.00	1.000	0.213	/
5.8G	802.11 ac80	ANT5	Front Side	0	155	5775	-0.08	0.181	17.62	18.00	1.091	100.00	1.000	0.197	/
			Back Side	0	155	5775	-0.04	0.269	17.62	18.00	1.091	100.00	1.000	0.293	/
			Left Edge	0	155	5775	-0.03	0.438	17.62	18.00	1.091	100.00	1.000	0.478	17#
			Right Edge	0	155	5775	-0.03	0.144	17.62	18.00	1.091	100.00	1.000	0.157	/
			Top Edge	0	155	5775	-0.07	0.413	17.62	18.00	1.091	100.00	1.000	0.451	/
			Bottom Edge	0	155	5775	-0.02	0.094	17.62	18.00	1.091	100.00	1.000	0.103	/

		ANT6	Front Side	0	155	5775	-0.10	0.039	15.37	16.00	1.156	100.00	1.000	0.045	/
			Back Side	0	155	5775	0.10	0.094	15.37	16.00	1.156	100.00	1.000	0.109	/
			Left Edge	0	155	5775	0.11	0.026	15.37	16.00	1.156	100.00	1.000	0.030	/
			Right Edge	0	155	5775	-0.07	0.162	15.37	16.00	1.156	100.00	1.000	0.187	/
			Top Edge	0	155	5775	0.06	0.022	15.37	16.00	1.156	100.00	1.000	0.025	/
			Bottom Edge	0	155	5775	0.05	0.013	15.37	16.00	1.156	100.00	1.000	0.015	/
Worst Case-Equipment Under Test															
5.3G	802.11	Ant.5	Left Edge	0	58	5290	0.04	0.385	15.75	17.50	1.496	100.00	1.000	0.576	/
	ac80	Ant.6	Right Edge	0	58	5290	-0.03	0.123	15.92	17.00	1.282	100.00	1.000	0.158	/
5.6G	802.11	Ant.5	Left Edge	0	106	5530	0.18	0.506	17.54	19.00	1.400	100.00	1.000	0.708	/
	ac80	Ant.6	Right Edge	0	122	5610	0.06	0.214	15.32	16.00	1.169	100.00	1.000	0.250	/
5.8G	802.11	Ant.5	Left Edge	0	155	5775	-0.06	0.422	17.62	18.00	1.091	100.00	1.000	0.460	/
	ac80	Ant.6	Right Edge	0	155	5775	-0.12	0.153	15.37	16.00	1.156	100.00	1.000	0.177	/
Note: The EUT fully assembled with handle and RFID module.															

10.4WIFI 6GHz

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	1g Scaled SAR (W/kg)	Measur ed APD 4cm2 [W/m ²]	Meas. uncertai nty Scaling Factor	Scaled APD [W/m ²]	Meas. No.
Head																	
802.11 ax160	ANT5	Left Cheek	0	15	6025	0.06	0.045	12.51	14.50	1.581	94.81	1.055	0.075	0.314	1.028	0.538	/
		Left Tilt	0	15	6025	-0.01	0.042	12.51	14.50	1.581	94.81	1.055	0.070	0.296	1.028	0.508	/
		Right Cheek	0	15	6025	0.09	0.037	12.51	14.50	1.581	94.81	1.055	0.062	0.266	1.028	0.456	/
		Right Tilt	0	15	6025	0.12	0.043	12.51	14.50	1.581	94.81	1.055	0.072	0.306	1.028	0.525	/
		Left Cheek	0	47	6185	0.04	0.049	12.31	14.00	1.476	94.81	1.055	0.076	0.347	1.028	0.555	6#
		Left Cheek	0	79	6345	-0.04	0.043	11.98	12.00	1.005	94.81	1.055	0.046	0.196	1.028	0.214	/
		Left Cheek	0	111	6505	-0.03	0.032	12.14	12.50	1.086	94.81	1.055	0.037	0.154	1.028	0.181	/
		Left Cheek	0	143	6665	0.09	0.041	12.37	12.50	1.030	94.81	1.055	0.045	0.193	1.028	0.216	/
		Left Cheek	0	175	6825	0.12	0.044	7.36	8.00	1.159	94.81	1.055	0.054	0.224	1.028	0.282	/
		Left Cheek	0	207	6985	0.04	0.028	8.76	9.00	1.057	94.81	1.055	0.031	0.132	1.028	0.151	/
	ANT6	Left Cheek	0	15	6025	0.04	0.041	12.51	14.50	1.581	94.81	1.055	0.068	0.287	1.028	0.492	/
		Left Tilt	0	15	6025	-0.10	0.024	12.51	14.50	1.581	94.81	1.055	0.040	0.164	1.028	0.281	/
		Right Cheek	0	15	6025	0.07	0.034	12.51	14.50	1.581	94.81	1.055	0.057	0.169	1.028	0.290	/
		Right Tilt	0	15	6025	0.09	0.025	12.51	14.50	1.581	94.81	1.055	0.042	0.311	1.028	0.533	/
		Left Cheek	0	47	6185	0.04	0.034	12.51	14.50	1.581	94.81	1.055	0.057	0.243	1.028	0.417	/
		Left Cheek	0	79	6345	0.06	0.045	12.18	12.50	1.076	94.81	1.055	0.051	0.214	1.028	0.250	/
		Left Cheek	0	111	6505	0.07	0.021	12.04	12.50	1.112	94.81	1.055	0.025	0.101	1.028	0.122	/
		Left Cheek	0	143	6665	0.07	0.039	12.37	12.50	1.030	94.81	1.055	0.042	0.177	1.028	0.198	/
		Left Cheek	0	175	6825	-0.08	0.042	7.36	9.00	1.459	94.81	1.055	0.065	0.274	1.028	0.434	/
		Left Cheek	0	207	6985	-0.10	0.041	8.96	9.00	1.009	94.81	1.055	0.044	0.184	1.028	0.201	/
Worst Case-Equipment Under Test																	
802.11a	ANT5	Left Cheek	0	47	6185	0.01	0.045	12.31	14.00	1.476	94.81	1.055	0.070	0.312	1.028	0.499	/
x160	ANT6	Left Cheek	0	15	6025	-0.12	0.037	12.51	14.50	1.581	94.81	1.055	0.062	0.258	1.028	0.442	/
Note: The EUT fully assembled with handle and RFID module.																	
Body																	
802.11 ax160	ANT5	Front Side	5	15	6025	-0.05	0.012	12.51	14.50	1.581	94.81	1.055	0.020	0.110	1.028	0.189	/
		Back Side	5	15	6025	0.09	0.100	12.51	14.50	1.581	94.81	1.055	0.167	0.750	1.028	1.286	/
		Left Edge	5	15	6025	0.10	0.162	12.51	14.50	1.581	94.81	1.055	0.270	1.240	1.028	2.126	12#
		Right Edge	5	15	6025	-0.04	0.019	12.51	14.50	1.581	94.81	1.055	0.032	0.144	1.028	0.247	/
		Top Edge	5	15	6025	-0.02	0.068	12.51	14.50	1.581	94.81	1.055	0.113	0.513	1.028	0.880	/
		Bottom Edge	5	15	6025	-0.03	0.011	12.51	14.50	1.581	94.81	1.055	0.018	0.084	1.028	0.144	/
		Left Edge	5	47	6185	0.05	0.147	12.31	14.00	1.476	94.81	1.055	0.229	1.060	1.028	1.697	/
		Left Edge	5	79	6345	0.00	0.102	11.98	12.00	1.005	94.81	1.055	0.108	0.471	1.028	0.513	/

		Left Edge	5	111	6505	0.02	0.112	12.14	12.50	1.086	94.81	1.055	0.128	0.594	1.028	0.700	/
		Left Edge	5	143	6665	-0.08	0.116	12.37	12.50	1.030	94.81	1.055	0.126	0.577	1.028	0.645	/
		Left Edge	5	175	6825	0.11	0.047	7.36	8.00	1.159	94.81	1.055	0.057	0.266	1.028	0.334	/
		Left Edge	5	207	6985	0.00	0.066	8.76	9.00	1.057	94.81	1.055	0.074	0.334	1.028	0.383	/
	ANT6	Front Side	5	15	6025	0.01	0.014	12.51	14.50	1.581	94.81	1.055	0.023	0.106	1.028	0.182	/
		Back Side	5	15	6025	0.04	0.025	12.51	14.50	1.581	94.81	1.055	0.042	0.193	1.028	0.331	/
		Left Edge	5	15	6025	0.02	0.008	12.51	14.50	1.581	94.81	1.055	0.013	0.057	1.028	0.098	/
		Right Edge	5	15	6025	-0.01	0.087	12.51	14.50	1.581	94.81	1.055	0.145	0.664	1.028	1.139	/
		Top Edge	5	15	6025	0.04	0.013	12.51	14.50	1.581	94.81	1.055	0.022	0.107	1.028	0.183	/
		Bottom Edge	5	15	6025	-0.11	0.008	12.51	14.50	1.581	94.81	1.055	0.013	0.060	1.028	0.103	/
		Right Edge	5	47	6185	0.03	0.024	12.51	14.50	1.581	94.81	1.055	0.040	0.183	1.028	0.314	/
		Right Edge	5	79	6345	0.00	0.021	12.18	12.50	1.076	94.81	1.055	0.024	0.114	1.028	0.133	/
		Right Edge	5	111	6505	-0.02	0.017	12.04	12.50	1.112	94.81	1.055	0.020	0.090	1.028	0.109	/
		Right Edge	5	143	6665	-0.02	0.076	12.37	12.50	1.030	94.81	1.055	0.083	0.391	1.028	0.437	/
		Right Edge	5	175	6825	0.01	0.034	7.36	9.00	1.459	94.81	1.055	0.052	0.237	1.028	0.375	/
		Right Edge	5	207	6985	-0.08	0.041	8.96	9.00	1.009	94.81	1.055	0.044	0.206	1.028	0.225	/

Worst Case-Equipment Under Test

802.11a	ANT5	Left Edge	5	15	6025	0.13	0.154	12.51	14.50	1.581	94.81	1.055	0.257	1.120	1.028	1.920	/
x160	ANT6	Right Edge	5	15	6025	-0.07	0.071	12.51	14.50	1.581	94.81	1.055	0.118	0.585	1.028	1.003	/

Note: The EUT fully assembled with handle and RFID module.

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Scaled SAR (W/kg)	Measur ed APD 4cm2 [W/m ²]	Meas. uncertai nty Scaling Factor	Scaled APD [W/m ²]	Meas. No.
Limbs																	
802.11 ax160	ANT5	Front Side	0	15	6025	0.02	0.009	12.51	14.50	1.581	94.81	1.055	0.015	0.201	1.028	0.345	/
		Back Side	0	15	6025	-0.11	0.062	12.51	14.50	1.581	94.81	1.055	0.103	1.430	1.028	2.452	/
		Left Edge	0	15	6025	-0.14	0.126	12.51	14.50	1.581	94.81	1.055	0.210	2.930	1.028	5.024	18#
		Right Edge	0	15	6025	0.05	0.015	12.51	14.50	1.581	94.81	1.055	0.025	0.344	1.028	0.590	/
		Top Edge	0	15	6025	0.09	0.049	12.51	14.50	1.581	94.81	1.055	0.082	1.130	1.028	1.938	/
		Bottom Edge	0	15	6025	-0.10	0.007	12.51	14.50	1.581	94.81	1.055	0.012	0.166	1.028	0.285	/
		Left Edge	0	47	6185	-0.06	0.122	12.31	14.00	1.476	94.81	1.055	0.190	2.670	1.028	4.274	/
		Left Edge	0	79	6345	-0.06	0.123	11.98	12.00	1.005	94.81	1.055	0.130	1.840	1.028	2.006	/
		Left Edge	0	111	6505	0.08	0.108	12.14	12.50	1.086	94.81	1.055	0.124	1.760	1.028	2.073	/
		Left Edge	0	143	6665	-0.02	0.056	12.37	12.50	1.030	94.81	1.055	0.061	0.860	1.028	0.961	/
		Left Edge	0	175	6825	0.13	0.046	7.36	8.00	1.159	94.81	1.055	0.056	0.790	1.028	0.993	/
		Left Edge	0	207	6985	0.00	0.041	8.76	9.00	1.057	94.81	1.055	0.046	0.644	1.028	0.738	/
	ANT6	Front Side	0	15	6025	-0.09	0.031	12.51	14.50	1.581	94.81	1.055	0.052	0.723	1.028	1.240	/
		Back Side	0	15	6025	-0.11	0.059	12.51	14.50	1.581	94.81	1.055	0.098	1.360	1.028	2.332	/
		Left Edge	0	15	6025	0.03	0.015	12.51	14.50	1.581	94.81	1.055	0.025	0.344	1.028	0.590	/
		Right Edge	0	15	6025	-0.08	0.076	12.51	14.50	1.581	94.81	1.055	0.127	1.760	1.028	3.018	/
		Top Edge	0	15	6025	-0.09	0.007	12.51	14.50	1.581	94.81	1.055	0.012	0.166	1.028	0.285	/
		Bottom Edge	0	15	6025	0.06	0.006	12.51	14.50	1.581	94.81	1.055	0.010	0.134	1.028	0.230	/
		Right Edge	0	47	6185	0.07	0.040	12.51	14.50	1.581	94.81	1.055	0.067	0.933	1.028	1.600	/
		Right Edge	0	79	6345	-0.01	0.043	12.18	12.50	1.076	94.81	1.055	0.049	0.684	1.028	0.798	/
		Right Edge	0	111	6505	-0.19	0.060	12.04	12.50	1.112	94.81	1.055	0.070	0.977	1.028	1.178	/
		Right Edge	0	143	6665	-0.02	0.038	12.37	12.50	1.030	94.81	1.055	0.041	0.571	1.028	0.638	/
		Right Edge	0	175	6825	-0.08	0.069	7.36	9.00	1.459	94.81	1.055	0.106	1.470	1.028	2.326	/
		Right Edge	0	207	6985	-0.11	0.105	8.96	9.00	1.009	94.81	1.055	0.112	1.550	1.028	1.696	/
Worst Case-Equipment Under Test																	
802.11a	ANT5	Left Edge	0	15	6025	0.11	0.117	12.51	14.50	1.581	94.81	1.055	0.195	2.740	1.028	4.698	/
x160	ANT6	Right Edge	0	15	6025	-0.07	0.068	12.51	14.50	1.581	94.81	1.055	0.113	1.660	1.028	2.846	/
Note: The EUT fully assembled with handle and RFID module.																	

10.5RFID

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Scaled SAR (W/kg)	Meas. No.
Limbs														
UHF	ANT4	Front Side	0	Middle	915.75	-0.01	1.500	29.62	30.00	1.091	96.23	1.039	1.700	19#
		Back Side	0	Middle	915.75	-0.16	0.311	29.62	30.00	1.091	96.23	1.039	0.353	/
		Left Edge	0	Middle	915.75	-0.09	0.471	29.62	30.00	1.091	96.23	1.039	0.534	/
		Right Edge	0	Middle	915.75	0.07	0.466	29.62	30.00	1.091	96.23	1.039	0.528	/
		Top Edge	0	Middle	915.75	-0.03	0.906	29.62	30.00	1.091	96.23	1.039	1.027	/
		Front Side	0	Low	902.75	0.15	1.440	29.54	30.00	1.112	96.23	1.039	1.664	/
		Front Side	0	High	927.25	0.16	1.460	29.58	30.00	1.102	96.23	1.039	1.672	/
Note: To simulate the hand-held usage condition conservatively, the RFID module was rotated so that its rear side faces the phantom during the Back Side test, enabling it to be placed as close to the phantom as possible.														
Worst Case-Equipment Under Test														
UHF	ANT4	Front Side	0	Middle	915.75	-0.07	1.430	29.62	30.00	1.091	96.23	1.039	1.621	/
Note: The EUT fully assembled with handle and RFID module.														

11 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.

Note: For 1g SAR, the highest measured 1g SAR is $0.672 < 0.80$ W/kg, repeated measurement is not required.

12 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).

12.1 Simultaneous Transmission Mode Consider

No.	Simultaneous Tx Combination	Head	Body	Limbs
1	WIFI2.4G(Ant.5) + WIFI2.4G(Ant.6)	Yes	Yes	/
2	WIFI5G(Ant.5) + WIFI5G(Ant.6) + Bluetooth	Yes	Yes	/
3	WIFI6G(Ant.5) + WIFI6G(Ant.6) + Bluetooth	Yes	Yes	/
4	WIFI2.4G(Ant.5) + WIFI2.4G(Ant.6) + RFID	/	/	Yes
5	WIFI5G(Ant.5) + WIFI5G(Ant.6) + Bluetooth + RFID	/	/	Yes
6	WIFI6G(Ant.5) + WIFI6G(Ant.6) + Bluetooth + RFID	/	/	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.

12.2 Head Simultaneous Transmission SAR Evaluation

Position	Stand alone SAR							SUM SAR		
	1	2	3	4	5	6	7			
	Bluetooth	WLAN 2.4GHz (ANT5)	WLAN 2.4GHz (ANT6)	WLAN 5GHz MAX. (ANT5)	WLAN 5GHz MAX. (ANT6)	WLAN 6GHz (ANT5)	WLAN 6GHz (ANT6)	Sum SAR (2+3)	Sum SAR (1+4+5)	Sum SAR (1+6+7)
Left Cheek	0.032	0.042	0.037	0.718	0.213	0.076	0.068	0.079	0.963	0.176
Left Tilt	0.022	0.013	0.013	0.769	0.105	0.070	0.065	0.026	0.896	0.157
Right Cheek	0.024	0.021	0.017	0.706	0.110	0.062	0.042	0.038	0.840	0.128
Right Tilt	0.018	0.011	0.010	0.706	0.064	0.072	0.073	0.021	0.788	0.163
Note: 1: The simultaneous transmission combinations of more antennas contain combinations of less antennas, so only the worst simultaneous transmission combinations was shown in this table. 2: The highest Summed 1g SAR is 0.963 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.										

12.3 Body Simultaneous Transmission SAR Evaluation

Position	Stand alone SAR							SUM SAR		
	1	2	3	4	5	6	7			
	Bluetooth	WLAN 2.4GHz (ANT5)	WLAN 2.4GHz (ANT6)	WLAN 5GHz MAX. (ANT5)	WLAN 5GHz MAX. (ANT6)	WLAN 6GHz (ANT5)	WLAN 6GHz (ANT6)	Sum SAR (2+3)	Sum SAR (1+4+5)	Sum SAR (1+6+7)
Front Side 5mm	0.046	0.079	0.061	0.344	0.076	0.020	0.023	0.140	0.466	0.089
Back Side 5mm	0.052	0.178	0.138	0.776	0.123	0.167	0.042	0.316	0.951	0.261
Left Edge 5mm	0.086	0.228	0.038	0.848	0.038	0.270	0.013	0.266	0.972	0.369
Right Edge 5mm	0.009	0.007	0.323	0.268	0.262	0.032	0.145	0.330	0.539	0.186
Top Edge 5mm	0.043	0.067	0.019	0.570	0.012	0.113	0.022	0.086	0.625	0.178
Bottom Edge 5mm	0.062	0.009	0.010	0.130	0.010	0.018	0.013	0.019	0.202	0.093
Note: 1: The simultaneous transmission combinations of more antennas contain combinations of less antennas, so only the worst simultaneous transmission combinations was shown in this table. 2: The highest Summed 1g SAR is 0.972 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.										

12.4Limbs Simultaneous Transmission SAR Evaluation

Position	Stand alone SAR								SUM SAR		
	1	2	3	4	5	6	7	8			
	Bluetooth	WLAN 2.4GHz (ANT5)	WLAN 2.4GHz (ANT6)	WLAN 5GHz MAX. (ANT5)	WLAN 5GHz MAX. (ANT6)	WLAN 6GHz (ANT5)	WLAN 6GHz (ANT6)	RFID	Sum SAR (2+3+8)	Sum SAR (1+4+5+8)	Sum SAR (1+6+7+8)
Front Side 0mm	0.060	0.076	0.053	0.197	0.092	0.015	0.052	1.700	1.829	2.049	1.827
Back Side 0mm	0.069	0.051	0.089	0.531	0.147	0.103	0.098	0.353	0.493	1.100	0.623
Left Edge 0mm	0.074	0.223	0.022	0.718	0.108	0.210	0.025	0.534	0.779	1.434	0.843
Right Edge 0mm	0.049	0.011	0.298	0.157	0.258	0.025	0.127	0.528	0.837	0.992	0.729
Top Edge 0mm	0.056	0.063	0.022	0.451	0.085	0.082	0.012	1.027	1.112	1.619	1.177
Bottom Edge 0mm	0.013	0.015	0.013	0.103	0.067	0.012	0.010	0.000	0.028	0.183	0.035
Note:											
1: The simultaneous transmission combinations of more antennas contain combinations of less antennas, so only the worst simultaneous transmission combinations was shown in this table.											
2: The highest Summed 10g SAR is 2.049 W/Kg < 4.0 W/kg, so Simultaneous Transmission SAR test is not required.											

13 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	DASY8	16.2.2.1588	N/A	N/A
835MHz Validation Dipole	Speag	D835V2	SN: 4d187	2024/05/08	2027/05/07
2450MHz Validation Dipole	Speag	D2450V2	SN: 952	2024/05/07	2027/05/06
5GHz Validation Dipole	Speag	D5GHzV2	SN: 1200	2024/05/09	2027/05/08
6.5GHz Validation Dipole	Speag	D6.5GHzV2	SN: 1037	2024/05/28	2027/05/27
Data Acquisition Electronics	Speag	DAE4	SN: 878	2026/03/23	2027/03/22
Data Acquisition Electronics	Speag	DAE4	SN: 1711	2025/11/11	2026/11/10
E-Field Probe	Speag	EX3DV4	SN: 7893	2026/07/30	2027/07/29
E-Field Probe	Speag	EX3DV4	SN: 7510	2025/11/11	2026/11/10
Signal Generator	Keysight	N5173B	MY62150163	2026/06/22	2027/06/21
Power Meter	R&S	NRVD-B2	835843/014	2026/06/23	2027/06/22
Power Sensor	R&S	NRV-Z4	100381	2026/06/23	2027/06/22
Power Sensor	R&S	NRV-Z2	100211	2026/06/23	2027/06/22
Network Analyzer	Agilent	E5071C	MY46103472	2026/07/14	2027/07/13
Thermometer	Elitech	RC-4HC	EF720B004813	2025/10/30	2026/10/29
Thermometer	Elitech	RC-4HC	EF720B004817	2025/10/30	2026/10/29
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: 2090	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 DAK 3.5 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 (%)
2026.08.29	Head	835	21.6	0.908	42.6	0.900	41.5	0.89	2.59
2026.08.29	Head	2450	21.6	1.82	39.5	1.80	39.2	1.06	0.80
2026.08.30	Head	5250	21.7	4.61	37.0	4.71	35.9	-2.12	3.05
2026.08.31	Head	5600	21.5	5.03	35.5	5.07	35.5	-0.69	-0.14
2026.09.01	Head	5750	21.8	5.24	35.6	5.22	35.4	0.46	0.72
2026.09.02	Head	6500	21.4	6.05	35.0	6.07	34.5	-0.31	1.61
2026.09.03	Head	6500	21.4	5.94	34.7	6.07	34.5	-2.13	0.82
2026.10.17	Head	835	21.5	0.881	42.4	0.900	41.5	-2.11	2.17
2026.10.17	Head	2450	21.5	1.76	40.0	1.80	39.2	-2.06	2.13
2026.10.17	Head	5250	21.5	4.72	36.1	4.71	35.9	0.30	0.41
2026.10.17	Head	5600	21.5	5.18	34.7	5.07	35.5	2.19	-2.20
2026.10.17	Head	5750	21.5	5.39	34.3	5.22	35.4	3.22	-2.95
2026.10.18	Head	6500	21.4	6.16	33.9	6.07	34.5	1.43	-1.65
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 %.

Head liquid 1g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2026.08.29	Head	2450	100	5.740	57.40	52.60	9.13
2026.08.30	Head	5250	100	8.420	84.20	77.70	8.37
2026.08.31	Head	5600	100	8.610	86.10	81.30	5.90
2026.09.01	Head	5750	100	8.450	84.50	77.60	8.89
2026.09.02	Head	6500	100	28.700	287.00	299.00	-4.01
2026.09.03	Head	6500	100	29.500	295.00	299.00	-1.34
2026.10.17	Head	2450	100	5.620	56.20	52.60	6.84
2026.10.17	Head	5250	100	7.750	77.50	77.70	-0.26
2026.10.17	Head	5600	100	8.690	86.90	81.30	6.89
2026.10.17	Head	5750	100	7.960	79.60	77.60	2.58
2026.10.18	Head	6500	100	30.400	304.00	299.00	1.67

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

Head liquid 10g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2026.08.29	Head	835	100	0.638	6.38	6.43	-0.78
2026.08.29	Head	2450	100	2.660	26.60	24.70	7.69
2026.08.30	Head	5250	100	2.410	24.10	22.00	9.55
2026.08.31	Head	5600	100	2.430	24.30	23.10	5.19
2026.09.01	Head	5750	100	2.360	23.60	21.90	7.76
2026.09.02	Head	6500	100	5.440	54.40	55.20	-1.45
2026.09.03	Head	6500	100	5.540	55.40	55.20	0.36
2026.10.17	Head	835	100	0.663	6.63	6.43	3.11
2026.10.17	Head	2450	100	2.560	25.60	24.70	3.64
2026.10.17	Head	5250	100	2.320	23.20	22.00	5.45
2026.10.17	Head	5600	100	2.470	24.70	23.10	6.93
2026.10.17	Head	5750	100	2.250	22.50	21.90	2.74
2026.10.18	Head	6500	100	5.620	56.20	55.20	1.81

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

Please refer the document "Ti-EE26070417-ASC-1.pdf".

ANNEX C TEST DATA

Please refer the document “Ti-EE26070417-ATD-1.pdf”.

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “Ti-EE26070417-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “Ti-EE26070417-AS-1.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “Ti-EE26070417-AC-1.pdf”.

ANNEX G TUNE-UP PROCEDURE

Please refer the document “Ti-EE26070417-AT-1.pdf”.

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