

TEST REPORT

Applicant: Cloud Mobile Holdings, LLC
Address: 1149 S Hill St H400 Los Angeles, CA 90015
Equipment Type: Stratus C9 Prime
Model Name: Stratus C9 Prime
Brand Name: Cloud Mobile
FCC ID: 2AY6A-C9PR
Test Standard: FCC 47 CFR Part 2.1093
(refer section 3.1)
Maximum SAR: Head (1 g@0mm): 1.00 W/kg
Body-worn (1 g@10mm): 1.18 W/kg
Hotspot (1 g@10mm): 1.18 W/kg
Sample Arrival Date: Dec. 18, 2025
Test Date: Dec. 22, 2025 - Dec. 26, 2025
Date of Issue: Jan. 29, 2026

ISSUED BY:

Shanghai Tejet Communications Technology Co., Ltd. Testing Center

**Prepared by:** Huang Xiaogin**Reviewed by:** Cai Xueguo**Approved by:** Zhang Yanqing
(Laboratory Manager)*Huang Xiaogin**Cai Xueguo**Zhang Yanqing*

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Jan. 29, 2026</u>	<u>Initial Issue</u>

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Address	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China

1.2 Test Location

Name	Shanghai Tejet Communications Technology Co., Ltd. Testing Center
Location	1-2/F., Building 1, No.222, Xuanlan Road, Xuanqiao, Pudong New District, Shanghai, China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1352. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 29671.

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	Cloud Mobile Holdings, LLC
Address	1149 S Hill St H400 Los Angeles, CA 90015

2.2 Manufacturer Information

Manufacturer	Cloud Mobile Holdings, LLC
Address	1149 S Hill St H400 Los Angeles, CA 90015

2.3 General Description for Equipment under Test (EUT)

EUT Name	Stratus C9 Prime
Model Name Under Test	Stratus C9 Prime
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	U501A_M_2.0
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.4 Technical Information

Network and Wireless connectivity	2G Network GSM 850 MHz 3G Network WCDMA Band 5 4G Network FDD LTE Band 2/4/5/12/13/66/71 TDD LTE Band 41 Bluetooth 2.4G WIFI 802.11b, 802.11g, 802.11n HT20/40 5G WIFI 802.11a, 802.11n(HT20/40), 802.11ac(VHT20/40/80) Beidou, GPS, GLONASS, Galileo
Note: The EUT is a mobile phone, which supports dual SIM card under the same transceiver. Each SIM supports GSM, WCDMA and LTE, and both SIM share the same transmitting electro circuit, NV parameters, so only SIM1 was tested in this report.	

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

Operating Mode	GSM, WCDMA, LTE, 2.4G WLAN, 5G WLAN, Bluetooth		
Frequency Range	GSM 850	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	WCDMA Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 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 66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2180 MHz
	LTE Band 71	TX: 663 ~ 698 MHz	RX: 617 ~ 652 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	Wi-Fi2.4G	2412 ~ 2462 MHz	
	Wi-Fi5G U-NII-1	5150 ~ 5250 MHz	
	Bluetooth	2402 ~ 2480 MHz	
Antenna Type	WWAN: PIFA Antenna WLAN: PIFA Antenna Bluetooth: PIFA Antenna		
DTM	N/A		
Hotspot Function	Support		
Power Reduction	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 C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
3	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
4	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01
5	KDB 941225 D01 v03r01	3G SAR MEAUREMENT PROCEDURES
6	KDB 941225 D05 v02r05	SAR Evaluation Considerations for LTE Devices
7	KDB 941225 D05A v01r02	REL. 10 LTE SAR TEST GUIDANCE AND KDB INQUIRIES
7	KDB 941225 D06 v02r01	SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES
8	KDB 865664 D01 v01r04	SAR Measurement 100 MHz to 6 GHz
9	KDB 865664 D02 v01r02	RF Exposure Reporting
10	KDB 648474 D04 v01r03	SAR EVALUATION CONSIDERATIONS FOR WIRELESS HANDSETS
11	KDB 248227 D01 v02r02	SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS

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/ ControlledExposure
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 (0mm)	Body-worn (10mm)	Hotspot (10mm)	Head (0mm)	Body-worn (10mm)	Hotspot (10mm)
		1g SAR			1g SAR		
PCE	GSM 850	0.48	0.87	0.87	1.00	1.18	1.18
	WCDMA Band 5	0.29	0.45	0.45			
	LTE Band 2	0.10	1.18	1.18			
	LTE Band 4	0.08	0.63	0.83			
	LTE Band 5	0.19	0.32	0.32			
	LTE Band 12	0.10	0.22	0.34			
	LTE Band 13	0.18	0.33	0.33			
	LTE Band 66	0.09	0.79	0.90			
	LTE Band 71	0.12	0.25	0.25			
	LTE Band 41	0.15	0.28	0.28			
DTS	Wi-Fi2.4G	1.00	0.29	0.29			
NII	Wi-Fi5G	0.56	0.27	0.27			
DSS	Bluetooth	0.07	0.07	0.07			
Limit (W/kg)		1.6			1.6		
Verdict		Pass					

3.3.2 Highest Simultaneous Transmission SAR Values

Equipment Class	Maximum Scaled SAR(W/kg)		
	Head 1g (0mm)	Body-worn 1g (10mm)	Hotspot 1g (10mm)
PCE+DTS+DSS	1.54	1.54	1.54
PCE+NII+DSS	0.94	1.52	1.52
Limit (W/Kg)	1.60	1.60	1.60
Verdict	Pass		
Note: The highest simultaneous SAR please refer section 12			

3.4 Test Uncertainty

3.4.1 Measurement uncertainty evaluation for SAR test

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in IEC/IEEE 62209-1528. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

1) System Measurement Uncertainty (Frequency range from 300 MHz to 3 GHz)

DASY5 Uncertainty Budget (Frequency band: 300 MHz - 3 GHz range)								
Symbol	Error Description	Uncert. value	Prob Dist.	Div	(c) 1g	(c) 10g	Std. Unc. (1g)	Std. Unc. (10g)
Measurement System Errors								
CF	Probe Calibration	$\pm 12.0\%$	N	2	1	1	$\pm 6.0\%$	$\pm 6.0\%$
CF _{drift}	Probe Calibration Drift	$\pm 1.0\%$	N	1	1	1	$\pm 1.0\%$	$\pm 1.0\%$
LIN	Probe Linearity	$\pm 4.7\%$	R	$\sqrt{3}$	1	1	$\pm 2.7\%$	$\pm 2.7\%$
BBS	Broadband Signal	$\pm 3.0\%$	N	2	1	1	$\pm 1.5\%$	$\pm 1.5\%$
ISO	Probe Isotropy	$\pm 7.6\%$	R	$\sqrt{3}$	1	1	$\pm 4.4\%$	$\pm 4.4\%$
DAE	Data Acquisition	$\pm 0.3\%$	N	1	1	1	$\pm 0.3\%$	$\pm 0.3\%$
AMB	RF Ambient	$\pm 1.8\%$	N	1	1	1	$\pm 1.8\%$	$\pm 1.8\%$
Δ_{sys}	Probe Positioning	$\pm 0.2\%$	N	1	0.1 4	0.14	$\pm 0\%$	$\pm 0\%$
DAT	Data Processing	$\pm 1.2\%$	N	1	1	1	$\pm 1.2\%$	$\pm 1.2\%$
Phantom and Device Errors								
LIQ(σ)	Conductivity (meas.) ^{DAK}	$\pm 2.5\%$	N	1	0.7 8	0.71	$\pm 2.0\%$	$\pm 1.8\%$
LIQ(T_{σ})	Conductivity (temp.) ^{BB}	$\pm 3.3\%$	R	$\sqrt{3}$	0.7 8	0.71	$\pm 1.5\%$	$\pm 1.4\%$
EPS	Phantom Permittivity	$\pm 14.0\%$	R	$\sqrt{3}$	0	0	$\pm 0\%$	$\pm 0\%$
DAS	Distance DUT - TSL	$\pm 2.1\%$	N	1	2	2	$\pm 4.2\%$	$\pm 4.2\%$
H	Device Holder	$\pm 3.8\%$	N	1	1	1	$\pm 3.8\%$	$\pm 3.8\%$
MOD	DUT Modulation ^m	$\pm 2.4\%$	R	$\sqrt{3}$	1	1	$\pm 1.4\%$	$\pm 1.4\%$
TAS	Time-average SAR	$\pm 2.6\%$	R	$\sqrt{3}$	1	1	$\pm 1.5\%$	$\pm 1.5\%$
RF _{drift}	DUT drift	$\pm 5.0\%$	R	$\sqrt{3}$	1	1	$\pm 2.9\%$	$\pm 2.9\%$
Correction to the SAR results								
C(ϵ , σ)	Deviation to Target	$\pm 1.9\%$	N	1	1	0.84	$\pm 1.9\%$	$\pm 1.6\%$
C(R)	SAR scaling ^p	$\pm 0\%$	R	$\sqrt{3}$	1	1	$\pm 0\%$	$\pm 0\%$
u(Δ SAR)	Combined Uncertainty						$\pm 11.2\%$	$\pm 11.0\%$
U	Expanded Uncertainty						$\pm 22.3\%$	$\pm 22.2\%$

2) System Measurement Uncertainty (Frequency range from 3 GHz to 6 GHz)

DASY5 Uncertainty Budget (Frequency band: 3 GHz - 6 GHz range)								
Symbol	Error Description	Uncert. value	Prob. Dist.	Div	(c) 1g	(c) 10g	Std. Unc. (1g)	Std. Unc. (10g)
Measurement System Errors								
CF	Probe Calibration	±14.0%	N	2	1	1	±7.0%	±7.0%
CF _{drift}	Probe Calibration Drift	±1.0%	N	1	1	1	±1.0%	±1.0%
LIN	Probe Linearity	±4.7%	R	√3	1	1	±2.7%	±2.7%
BBS	Broadband Signal	±3.0%	N	2	1	1	±1.5%	±1.5%
ISO	Probe Isotropy	±7.6%	R	√3	1	1	±4.4%	±4.4%
DAE	Data Acquisition	±0.3%	N	1	1	1	±0.3%	±0.3%
AMB	RF Ambient	±1.8%	N	1	1	1	±1.8%	±1.8%
Δ _{sys}	Probe Positioning	±0.2%	N	1	0.3 3	0.33	±0.1%	±0.1%
DAT	Data Processing	±2.3%	N	1	1	1	±2.3%	±2.3%
Phantom and Device Errors								
LIQ(σ)	Conductivity (meas.) ^{DAK}	±2.5%	N	1	0.7 8	0.71	±2.0%	±1.8%
LIQ(T _σ)	Conductivity (temp.) ^{BB}	±3.4%	R	√3	0.7 8	0.71	±1.5%	±1.4%
EPS	Phantom Permittivity	±14.0%	R	√3	0.2 5	0.25	±2.0%	±2.0%
DAS	Distance DUT - TSL	±2.1%	N	1	2	2	±4.2%	±4.2%
H	Device Holder	±3.8%	N	1	1	1	±3.8%	±3.8%
MOD	DUT Modulation ^m	±2.4%	R	√3	1	1	±1.4%	±1.4%
TAS	Time-average SAR	±2.6%	R	√3	1	1	±1.5%	±1.5%
RF _{drift}	DUT drift	±5.0%	R	√3	1	1	±2.9%	±2.9%
Correction to the SAR results								
C(ε, σ)	Deviation to Target	±1.9%	N	1	1	0.84	±1.9%	±1.6%
C(R)	SAR scaling ^p	±0%	R	√3	1	1	±0%	±0%
u(ΔSAR)	Combined Uncertainty						±12.1%	±12.0%
U	Expanded Uncertainty						±24.2%	±24.0%

3.4.2 Measurement uncertainty evaluation for system check

This measurement uncertainty budget is suggested by IEC/IEEE 62209-1528. The breakdown of the individual uncertainties is as follows:

DASY5 Uncertainty Budget (Frequency band: 300 MHz - 6 GHz range)								
Symbol	Error Description	Uncert. value	Prob. Dist.	Div.	(c _i) 1g	(c _i) 10g	Std. Unc. (1g)	Std. Unc. (10g)
Measurement System Errors								
CF	Probe Calibration	±14.0%	N	2	1	1	±7.0%	±7.0%
CF _{drift}	Probe Calibration Drift	±1.0%	N	1	1	1	±1.0%	±1.0%
LIN	Probe Linearity	±4.7%	R	√3	1	1	±2.7%	±2.7%
BBS	Broadband Signal	±0.0%	N	2	1	1	±0.0%	±0.0%
ISO	Probe Isotropy	±7.6%	R	√3	1	1	±4.4%	±4.4%
DAE	Data Acquisition	±0.3%	N	1	1	1	±0.3%	±0.3%
AMB	RF Ambient	±1.8%	N	1	1	1	±1.8%	±1.8%
Δ _{sys}	Probe Positioning	±0.2%	N	1	0.33	0.33	±0%	±0%
Phantom and Device Errors								
LIQ(σ)	Conductivity (meas.) ^{DAK}	±2.5%	N	1	0.78	0.71	±2.0%	±1.8%
LIQ(T _σ)	Conductivity (temp.) ^{BB}	±3.4%	R	√3	0.78	0.71	±1.5%	±1.4%
EPS	Phantom Permittivity	±14.0%	R	√3	0.25	0.25	±2.0%	±2.0%
DAS	Distance DUT - TSL	±1.0%	N	1	2	2	±2.0%	±2.0%
VAL	Validation antenna	±0.0%	R	√3	1	1	±0.0%	±0.0%
P _{in}	Accepted power	±1.2%	N	1	1	1	±1.2%	±1.2%
RF _{drift}	DUT drift	±5.0%	R	√3	1	1	±2.9%	±2.9%
Correction to the SAR results								
C(ε, σ)	Deviation to Target	±1.9%	N	1	1	0.84	±1.9%	±1.6%
u(ΔSAR)	Combined Uncertainty						±10.4%	±10.3%
U	Expanded Uncertainty						±20.7%	±20.5%

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

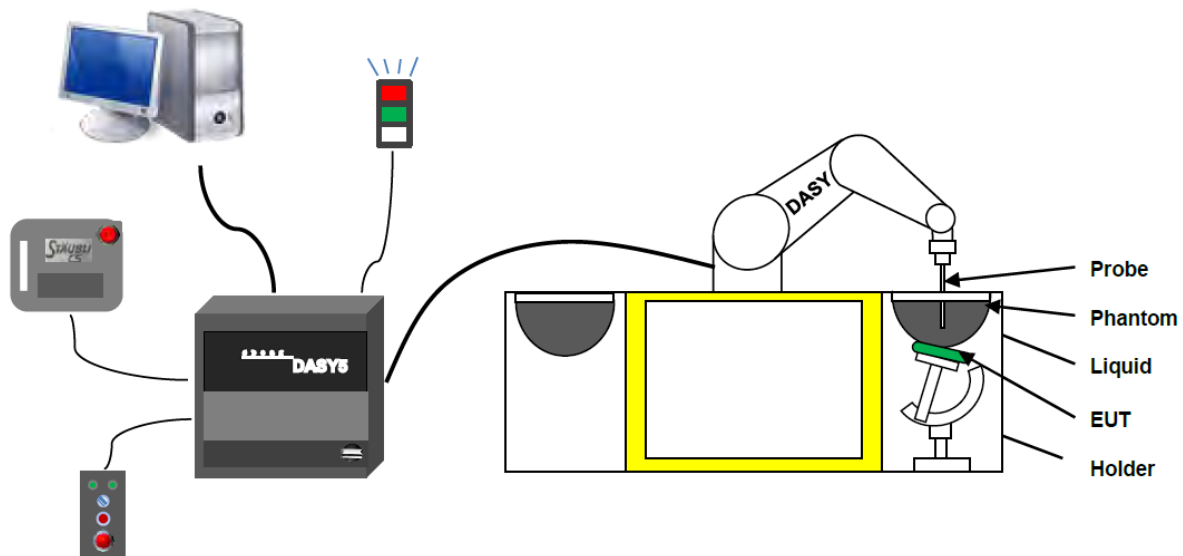
$$\text{SAR} = \frac{\sigma E^2}{\rho}$$

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

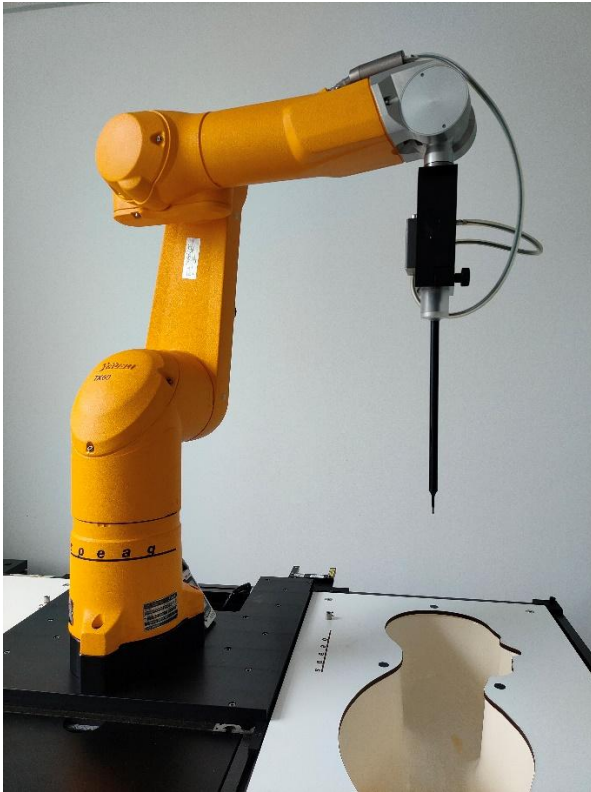


The DASY5 system for performing compliance tests consists of the following items:

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	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

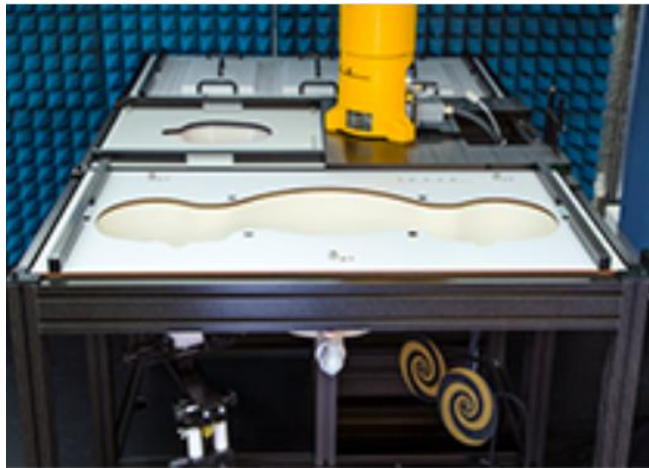
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



- Input Impedance: 200M Ω m
- 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

Photo of Phantom SN1857



Serial Number	Material	Length	Height
SN 1857 SAM1	Vinylester, glass fiber reinforced	1000	500

4.2.6 Device Holder

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.

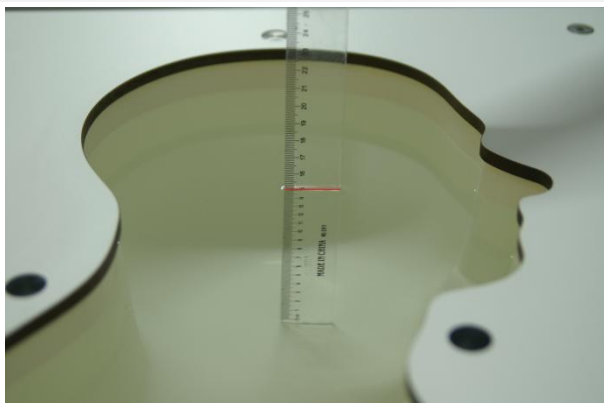


The positioning system allows obtaining cheek and tilting position with a very good accuracy. Incompliance with CENELEC, the tilt angle uncertainty is lower than 1° .

4.2.7 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

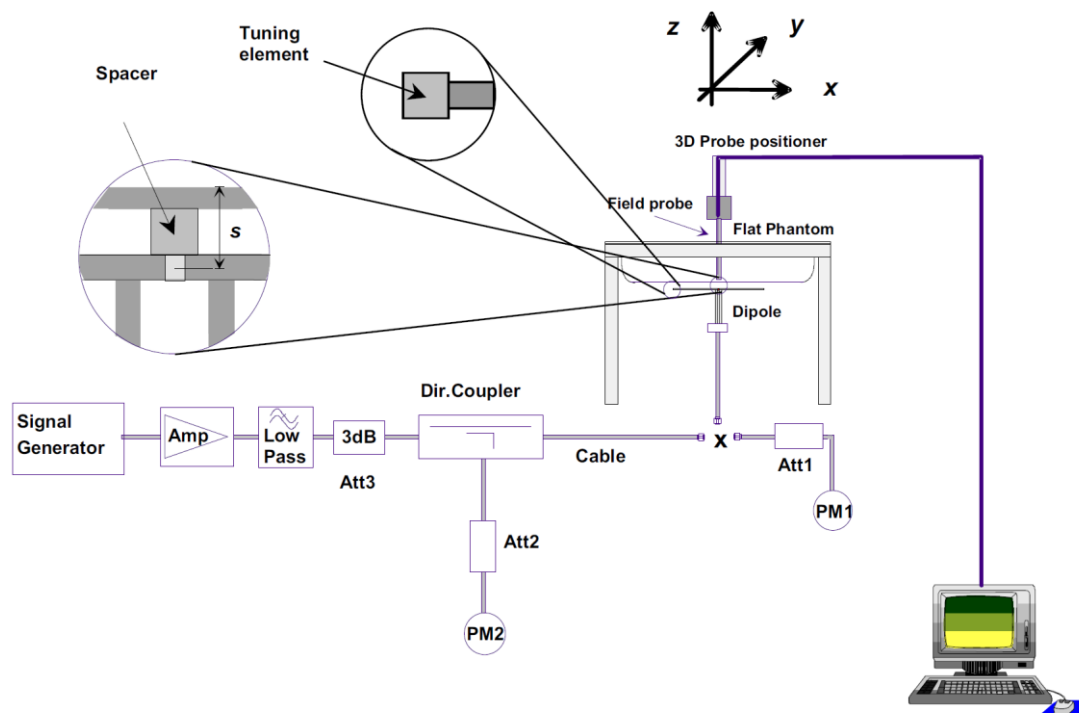
5 SYSTEM VERIFICATION

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

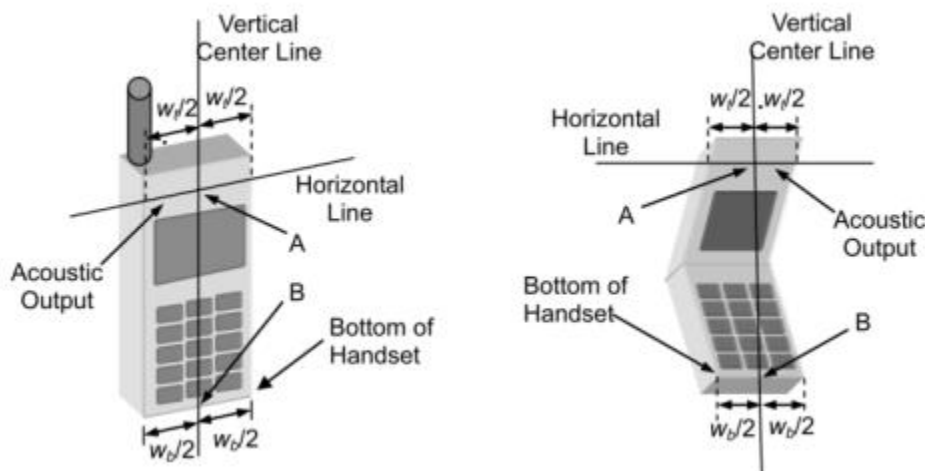
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

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.

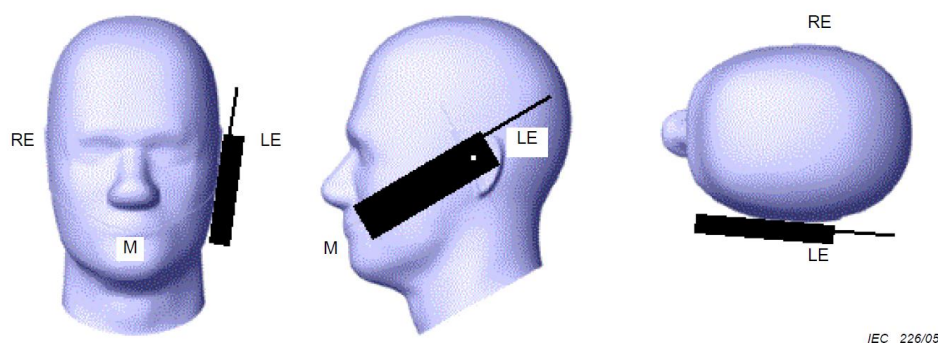
6.1.1 Two Imaginary Lines on the Handset

- 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.

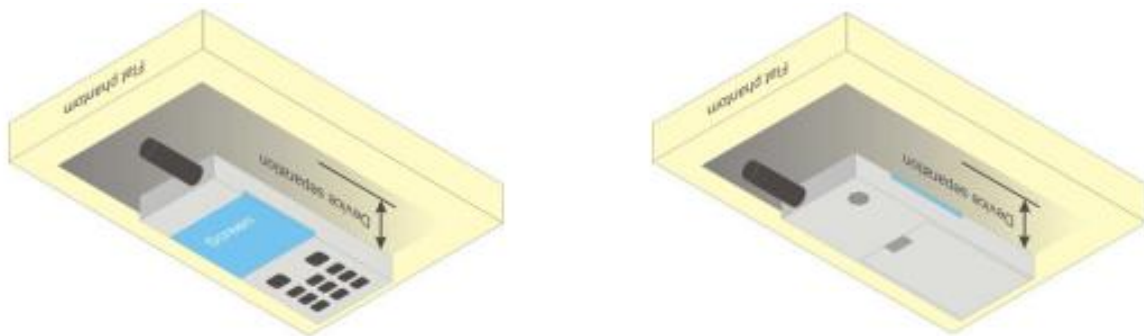


6.2 Body-worn Position Conditions

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.

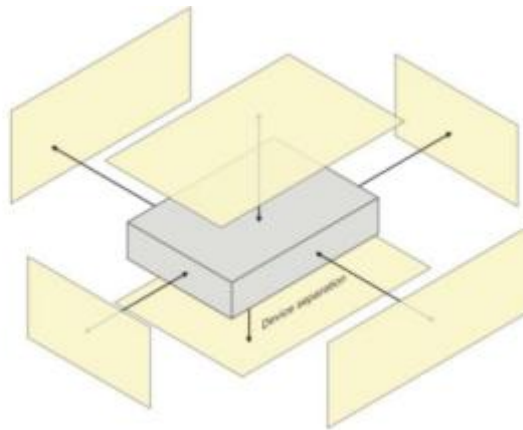
Body-worn accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of body-worn accessories with similar operating and exposure characteristics. 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 Hotspot Mode Exposure Position Conditions

For handsets that support hotspot mode operations, with wireless router capabilities and various web browsing functions, the relevant hand and body exposure conditions are tested according to the hotspot SAR procedures in KDB 941225. A test separation distance of 10 mm is required between the phantom and all surfaces and edges with a transmitting antenna located within 25 mm from that surface or edge. When the form factor of a handset is smaller than 9 cm x 5 cm, a test separation distance of 5 mm (instead of 10 mm) is required for testing hotspot mode. When the separation distance required for body-worn accessory testing is larger than or equal to that tested for hotspot mode, in the same wireless mode and for the same surface of the phone, the hotspot mode SAR data may be used to support body-worn accessory SAR compliance for that particular configuration (surface).



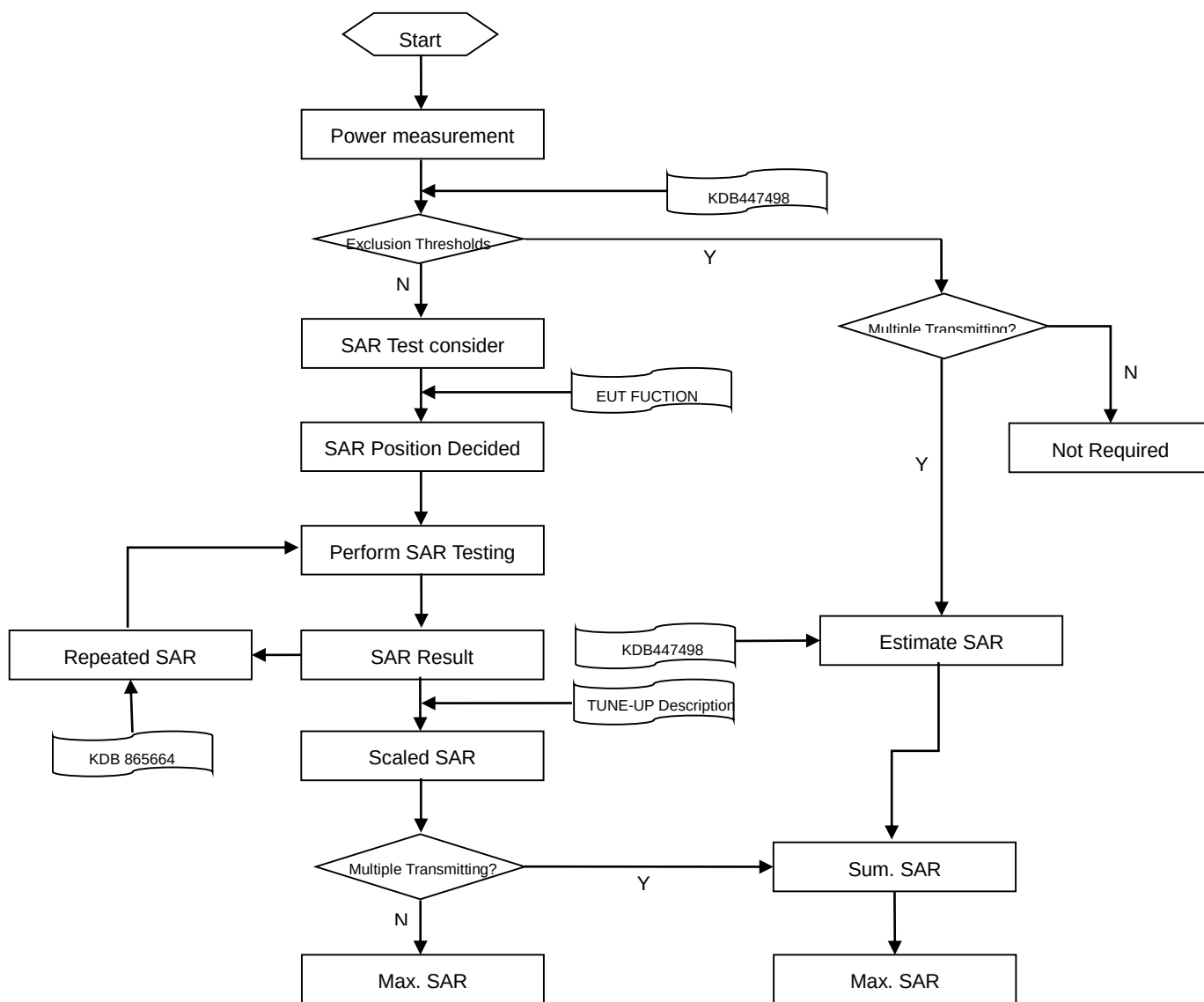
6.4 Product Specific 10g Exposure Consideration

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 OUPUT POWER

8.1 GSM

Please refer the document “BL-SH25C1413-AP.pdf”.

8.2 WCDMA

Please refer the document “BL-SH25C1413-AP.pdf”.

8.3 LTE

Please refer the document “BL-SH25C1413-AP.pdf”.

8.4 WIFI

8.4.1 2.4G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
2.4 (2.4~2.4835)	802.11b	1	2412	17.51	18.50	No
		6	2437	17.59	18.50	No
		11	2462	17.70	18.50	Yes
	802.11g	1	2412	15.44	16.00	No
		6	2437	15.39	16.00	No
		11	2462	15.56	16.50	No
	802.11n(HT20)	1	2412	15.31	16.00	No
		6	2437	15.45	16.00	No
		11	2462	15.43	16.00	No
	802.11n(HT40)	3	2422	14.65	15.50	No
		6	2437	14.64	15.50	No
		9	2452	14.64	15.50	No

Note: When multiple channel bandwidth configurations in a frequency band have the same maximum tune-up output power, the test configuration is determined by applying the following steps sequentially.

- 1) The largest channel bandwidth configuration is selected between the multiple configurations in a frequency band with the same maximum tune-up output power.
- 2) When multiple transmission modes (802.11b/g/n) have the same maximum tune-up output power, largest channel bandwidth, lowest order modulation and lowest data rate, the lowest order 802.11 mode is selected; i.e., 802.11b is chosen over 802.11g, and 802.11g chosen over 802.11n.

8.4.2 5G WIFI

Band (GHz)	Mode	Channel	Freq. (MHz)	Conducted Power (dBm)	Tune-up Limit (dBm)	SAR Test Require.
5.2 (5.15~5.25)	802.11a	36	5180	9.83	10.50	No
		44	5220	9.93	10.50	No
		48	5240	9.79	10.50	No
	802.11n(HT20)	36	5180	9.75	10.50	No
		44	5220	9.75	10.50	No
		48	5240	9.80	10.50	No
	802.11n(HT40)	38	5190	9.89	10.50	No
		46	5230	9.88	10.50	No
	802.11ac(VHT20)	36	5180	9.75	10.50	No
		44	5220	9.70	10.50	No
		48	5240	9.56	10.50	No
	802.11ac(VHT40)	38	5190	9.74	10.50	No
		46	5230	9.72	10.50	No
	802.11ac(VHT80)	42	5210	9.91	10.50	Yes

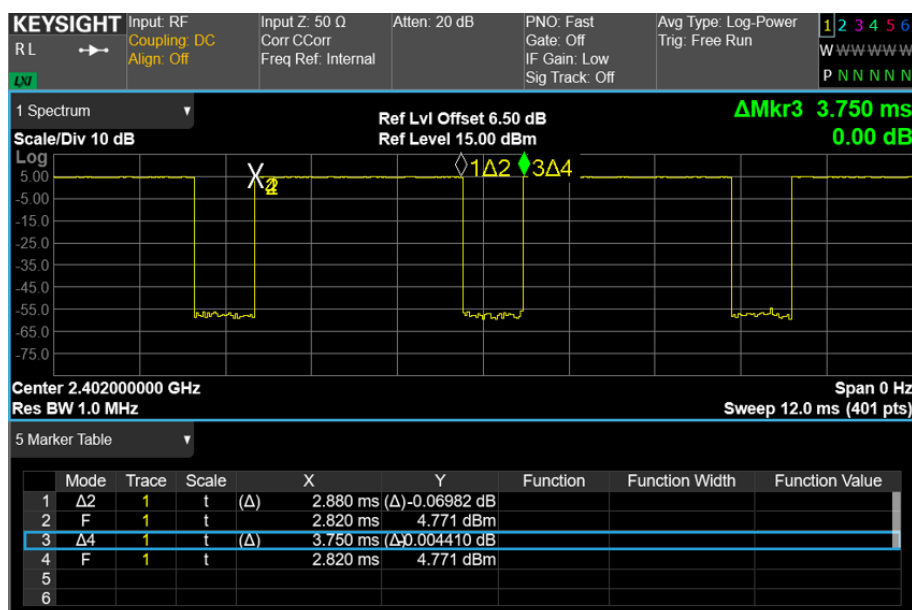
8.5 Bluetooth

Mode	GFSK			$\pi/4$ -DQPSK		
Channel	0	39	78	0	39	78
Frequency (MHz)	2402	2441	2480	2402	2441	2480
Conducted Power (dBm)	5.14	5.25	5.19	3.93	4.46	4.43
Tune-Up Limit (dBm)	6.00	6.50	6.00	5.00	5.50	5.50
SAR Test Require	NO	YES	NO	NO	NO	NO
Mode	8-DPSK			/		
Channel	0	39	78	/	/	/
Frequency (MHz)	2402	2441	2480	/	/	/
Conducted Power (dBm)	3.99	4.54	4.5	/	/	/
Tune-Up Limit (dBm)	5.00	5.50	5.50	/		
SAR Test Require	NO	NO	NO	NO	NO	NO
Mode	BLE-1Mbps			BLE-2Mbps		
Channel	0	19	39	0	19	39
Frequency (MHz)	2402	2440	2480	2402	2440	2480
Conducted Power (dBm)	-2.36	-1.76	-1.74	-2.16	-1.66	-1.63
Tune-Up Limit (dBm)	-1.00	-1.00	-1.00	-1.00	-1.00	-1.00
SAR Test Require	NO	NO	NO	NO	NO	NO

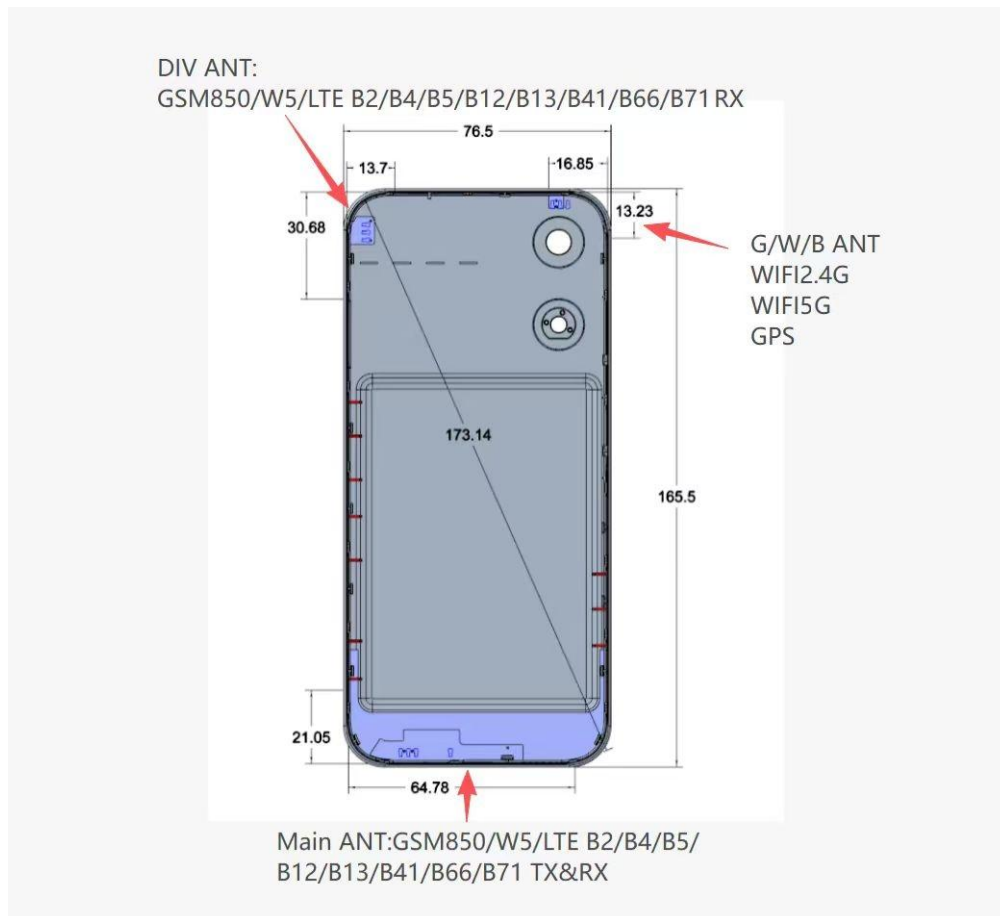
Note 1: Since bluetooth BR mode is the maximum output power mode, SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode.

Note: The Bluetooth duty cycle is 76.70% as following figure, according to 2016 Oct. TCB workshop for Bluetooth SAR scaling need further consideration and the maximum duty cycle is 100%, therefore the actual duty cycle will be scaled up to 100% for Bluetooth reported SAR calculation.

Duty Cycle



9 Antenna Location



10 TEST RESULT

10.1 GSM 850

Test Band	Test Position	Dist.	Test Mode	Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. No.
Head												
GSM 850	Left cheek	0mm	GPRS 3TX	190	836.6	-0.18	0.410	30.86	31.50	1.159	0.475	1
GSM 850	Left tilt			190	836.6	-0.03	0.254	30.86	31.50	1.159	0.294	/
GSM 850	Right cheek			190	836.6	0.02	0.355	30.86	31.50	1.159	0.411	/
GSM 850	Right tilt			190	836.6	0.04	0.194	30.86	31.50	1.159	0.225	/
Body-wron-Hotspot												
GSM 850	Front side	10mm	GPRS 3TX	190	836.6	-0.12	0.380	30.86	31.50	1.159	0.440	/
GSM 850	Back side			190	836.6	-0.13	0.682	30.86	31.50	1.159	0.790	/
GSM 850	Left side			190	836.6	0.04	0.357	30.86	31.50	1.159	0.414	/
GSM 850	Right side			190	836.6	0.04	0.228	30.86	31.50	1.159	0.264	/
GSM 850	Top side			190	836.6	-0.18	0.038	30.86	31.50	1.159	0.044	/
GSM 850	Bottom side			190	836.6	0.05	0.469	30.86	31.50	1.159	0.543	/
GSM 850	Back side			128	824.2	-0.14	0.672	30.86	31.50	1.159	0.779	/
GSM 850	Back side			251	848.8	0.07	0.748	30.86	31.50	1.159	0.867	2

10.2 WCDMA Band 5

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. no.
	Head											
WCDMA B5	Left cheek	0mm	RMC 12.2Kbps	4182	836.4	0.04	0.239	23.17	24.00	1.211	0.289	3
WCDMA B5	Left tilt			4182	836.4	0.06	0.133	23.17	24.00	1.211	0.161	/
WCDMA B5	Right cheek			4182	836.4	0.18	0.203	23.17	24.00	1.211	0.246	/
WCDMA B5	Right tilt			4182	836.4	0.02	0.113	23.17	24.00	1.211	0.137	/
WCDMA B5	Front side	10mm	RMC 12.2Kbps	4182	836.4	0.13	0.221	23.17	24.00	1.211	0.268	/
WCDMA B5	Back side			4182	836.4	0.07	0.369	23.17	24.00	1.211	0.447	4
WCDMA B5	Left side			4182	836.4	-0.08	0.205	23.17	24.00	1.211	0.248	/
WCDMA B5	Right side			4182	836.4	-0.01	0.129	23.17	24.00	1.211	0.156	/
WCDMA B5	Top side			4182	836.4	-0.03	0.038	23.17	24.00	1.211	0.046	/
WCDMA B5	Bottom side			4182	836.4	0.17	0.153	23.17	24.00	1.211	0.185	/

10.3LTE Band 2

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	RB num.	RB Start	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. no.
	Head													
LTE B2	Left cheek	0mm	QPSK-20MHz	18900	1880	1	0	-0.19	0.047	23.64	24.50	1.219	0.057	/
LTE B2	Left tilt			18900	1880	1	0	0.05	0.028	23.64	24.50	1.219	0.034	/
LTE B2	Right cheek			18900	1880	1	0	0.02	0.080	23.64	24.50	1.219	0.097	5
LTE B2	Right tilt			18900	1880	1	0	0.19	0.051	23.64	24.50	1.219	0.062	/
LTE B2	Left cheek			18900	1880	50	0	0.09	0.042	22.58	23.50	1.236	0.052	/
LTE B2	Left tilt			18900	1880	50	0	-0.18	0.025	22.58	23.50	1.236	0.031	/
LTE B2	Right cheek			18900	1880	50	0	0.18	0.073	22.58	23.50	1.236	0.090	/
LTE B2	Right tilt			18900	1880	50	0	-0.11	0.050	22.58	23.50	1.236	0.062	/
LTE B2	Front side	10mm	QPSK-20MHz	18900	1880	1	0	0.1	0.362	23.64	24.50	1.219	0.441	/
LTE B2	Back side			18900	1880	1	0	-0.13	0.887	23.64	24.50	1.219	1.081	/
LTE B2	Left side			18900	1880	1	0	0.02	0.159	23.64	24.50	1.219	0.194	/
LTE B2	Right side			18900	1880	1	0	0.17	0.059	23.64	24.50	1.219	0.072	/
LTE B2	Top side			18900	1880	1	0	0.1	0.035	23.64	24.50	1.219	0.043	/
LTE B2	Bottom side			18900	1880	1	0	-0.06	0.840	23.64	24.50	1.219	1.024	/
LTE B2	Bottom side			18700	1860	1	0	-0.06	0.842	23.64	24.50	1.219	1.026	/
LTE B2	Bottom side			19100	1900	1	0	-0.06	0.857	23.64	24.50	1.219	1.045	/
LTE B2	Back side			18700	1860	1	0	0.17	0.950	23.56	24.50	1.242	1.180	6
LTE B2	Back side			18700	1860	1	0	0.15	0.932	23.56	24.50	1.242	1.157	Repeat
LTE B2	Back side			19100	1900	1	0	-0.05	0.895	23.53	24.50	1.250	1.119	/
LTE B2	Front side			18900	1880	50	0	-0.09	0.248	22.58	23.50	1.236	0.307	/
LTE B2	Back side			18900	1880	50	0	-0.1	0.795	22.58	23.50	1.236	0.983	/
LTE B2	Left side			18900	1880	50	0	0.11	0.113	22.58	23.50	1.236	0.140	/
LTE B2	Right side			18900	1880	50	0	-0.04	0.048	22.58	23.50	1.236	0.059	/
LTE B2	Top side			18900	1880	50	0	-0.06	0.028	22.58	23.50	1.236	0.035	/
LTE B2	Bottom side			18900	1880	50	0	-0.15	0.657	22.58	23.50	1.236	0.812	/
LTE B2	Back side			18700	1860	50	0	-0.19	0.864	22.48	23.50	1.265	1.093	/
LTE B2	Back side			19100	1900	50	0	-0.17	0.908	22.45	23.50	1.274	1.156	/

10.4LTE Band 4

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	RB num.	RB Start	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. no.
	Head													
LTE B4	Left cheek	0mm	QPSK-20MHz	20175	1732.5	1	0	0.14	0.065	23.62	24.50	1.225	0.079	7
LTE B4	Left tilt			20175	1732.5	1	0	0.02	0.042	23.62	24.50	1.225	0.051	/
LTE B4	Right cheek			20175	1732.5	1	0	0.15	0.058	23.62	24.50	1.225	0.071	/
LTE B4	Right tilt			20175	1732.5	1	0	0.19	0.037	23.62	24.50	1.225	0.045	/
LTE B4	Left cheek			20175	1732.5	50	0	-0.02	0.054	22.53	23.50	1.250	0.068	/
LTE B4	Left tilt			20175	1732.5	50	0	0.16	0.052	22.53	23.50	1.250	0.065	/
LTE B4	Right cheek			20175	1732.5	50	0	-0.15	0.052	22.53	23.50	1.250	0.065	/
LTE B4	Right tilt			20175	1732.5	50	0	-0.1	0.036	22.53	23.50	1.250	0.045	/
LTE B4	Front side	10mm	QPSK-20MHz	20175	1732.5	1	0	-0.12	0.290	23.62	24.50	1.225	0.355	/
LTE B4	Back side			20175	1732.5	1	0	-0.09	0.512	23.62	24.50	1.225	0.627	/
LTE B4	Left side			20175	1732.5	1	0	0.02	0.090	23.62	24.50	1.225	0.110	/
LTE B4	Right side			20175	1732.5	1	0	-0.07	0.066	23.62	24.50	1.225	0.081	/
LTE B4	Top side			20175	1732.5	1	0	0.18	0.040	23.62	24.50	1.225	0.049	/
LTE B4	Bottom side			20175	1732.5	1	0	-0.17	0.676	23.62	24.50	1.225	0.828	8
LTE B4	Bottom side			20050	1720	1	0	0.05	0.627	23.50	24.50	1.259	0.789	/
LTE B4	Bottom side			20300	1745	1	0	0.06	0.635	23.39	24.50	1.291	0.820	/
LTE B4	Front side			20175	1732.5	50	0	-0.01	0.257	22.53	23.50	1.250	0.321	/
LTE B4	Back side			20175	1732.5	50	0	-0.09	0.455	22.53	23.50	1.250	0.569	/
LTE B4	Left side			20175	1732.5	50	0	0.03	0.071	22.53	23.50	1.250	0.089	/
LTE B4	Right side			20175	1732.5	50	0	0.13	0.061	22.53	23.50	1.250	0.076	/
LTE B4	Top side			20175	1732.5	50	0	-0.17	0.035	22.53	23.50	1.250	0.044	/
LTE B4	Bottom side			20175	1732.5	50	0	-0.16	0.510	22.53	23.50	1.250	0.638	/

10.5LTE Band 5

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	RB num.	RB Start	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. no.
Head														
LTE B5	Left cheek	0mm	QPSK-10MHz	20525	836.5	1	0	0.12	0.162	23.31	24.00	1.172	0.190	9
LTE B5	Left tilt			20525	836.5	1	0	0.01	0.122	23.31	24.00	1.172	0.143	/
LTE B5	Right cheek			20525	836.5	1	0	0.12	0.150	23.31	24.00	1.172	0.175	/
LTE B5	Right tilt			20525	836.5	1	0	-0.17	0.109	23.31	24.00	1.172	0.128	/
LTE B5	Left cheek			20525	836.5	25	0	0.07	0.151	22.25	23.00	1.189	0.179	/
LTE B5	Left tilt			20525	836.5	25	0	-0.03	0.106	22.25	23.00	1.189	0.126	/
LTE B5	Right cheek			20525	836.5	25	0	0.08	0.145	22.25	23.00	1.189	0.172	/
LTE B5	Right tilt			20525	836.5	25	0	-0.09	0.106	22.25	23.00	1.189	0.126	/
LTE B5	Front side	10mm	QPSK-10MHz	20525	836.5	1	0	-0.03	0.208	23.31	24.00	1.172	0.244	/
LTE B5	Back side			20525	836.5	1	0	-0.19	0.276	23.31	24.00	1.172	0.324	10
LTE B5	Left side			20525	836.5	1	0	-0.01	0.203	23.31	24.00	1.172	0.238	/
LTE B5	Right side			20525	836.5	1	0	-0.18	0.109	23.31	24.00	1.172	0.128	/
LTE B5	Top side			20525	836.5	1	0	-0.1	0.024	23.31	24.00	1.172	0.028	/
LTE B5	Bottom side			20525	836.5	1	0	0.07	0.242	23.31	24.00	1.172	0.284	/
LTE B5	Front side			20525	836.5	25	0	-0.09	0.177	22.25	23.00	1.189	0.210	/
LTE B5	Back side			20525	836.5	25	0	0.11	0.241	22.25	23.00	1.189	0.287	/
LTE B5	Left side			20525	836.5	25	0	-0.1	0.174	22.25	23.00	1.189	0.207	/
LTE B5	Right side			20525	836.5	25	0	0.09	0.098	22.25	23.00	1.189	0.116	/
LTE B5	Top side			20525	836.5	25	0	0.01	0.021	22.25	23.00	1.189	0.025	/
LTE B5	Bottom side			20525	836.5	25	0	0.17	0.198	22.25	23.00	1.189	0.235	/

10.6LTE Band 12

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	RB num.	RB Start	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. no.
Head														
LTE B12	Left cheek	0mm	QPSK-10MHz	23095	707.5	1	0	0.14	0.083	23.21	24.00	1.199	0.099	11
LTE B12	Left tilt			23095	707.5	1	0	0.07	0.056	23.21	24.00	1.199	0.067	/
LTE B12	Right cheek			23095	707.5	1	0	-0.12	0.072	23.21	24.00	1.199	0.086	/
LTE B12	Right tilt			23095	707.5	1	0	0.06	0.050	23.21	24.00	1.199	0.060	/
LTE B12	Left cheek			23095	707.5	25	0	-0.19	0.075	22.08	23.00	1.236	0.093	/
LTE B12	Left tilt			23095	707.5	25	0	0.12	0.046	22.08	23.00	1.236	0.057	/
LTE B12	Right cheek			23095	707.5	25	0	0.08	0.068	22.08	23.00	1.236	0.084	/
LTE B12	Right tilt			23095	707.5	25	0	-0.02	0.049	22.08	23.00	1.236	0.061	/
LTE B12	Front side	10mm	QPSK-10MHz	23095	707.5	1	0	-0.12	0.131	23.21	24.00	1.199	0.157	/
LTE B12	Back side			23095	707.5	1	0	-0.15	0.180	23.21	24.00	1.199	0.216	/
LTE B12	Left side			23095	707.5	1	0	0.02	0.284	23.21	24.00	1.199	0.341	12
LTE B12	Right side			23095	707.5	1	0	-0.18	0.108	23.21	24.00	1.199	0.130	/
LTE B12	Top side			23095	707.5	1	0	-0.11	0.035	23.21	24.00	1.199	0.042	/
LTE B12	Bottom side			23095	707.5	1	0	0.13	0.068	23.21	24.00	1.199	0.082	/
LTE B12	Front side			23095	707.5	25	0	0.16	0.093	22.08	23.00	1.236	0.115	/
LTE B12	Back side			23095	707.5	25	0	-0.03	0.151	22.08	23.00	1.236	0.187	/
LTE B12	Left side			23095	707.5	25	0	0.15	0.152	22.08	23.00	1.236	0.188	/
LTE B12	Right side			23095	707.5	25	0	0.17	0.090	22.08	23.00	1.236	0.111	/
LTE B12	Top side			23095	707.5	25	0	-0.1	0.039	22.08	23.00	1.236	0.048	/
LTE B12	Bottom side			23095	707.5	25	0	0.16	0.063	22.08	23.00	1.236	0.078	/

10.7LTE Band 13

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	RB num.	RB Start	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. no.
Head														
LTE B13	Left cheek	0mm	QPSK-10MHz	23230	782	1	0	0.01	0.152	23.25	24.00	1.189	0.181	13
LTE B13	Left tilt			23230	782	1	0	0.13	0.124	23.25	24.00	1.189	0.147	/
LTE B13	Right cheek			23230	782	1	0	0.19	0.117	23.25	24.00	1.189	0.139	/
LTE B13	Right tilt			23230	782	1	0	-0.01	0.112	23.25	24.00	1.189	0.133	/
LTE B13	Left cheek			23230	782	50	0	-0.13	0.120	22.20	23.00	1.202	0.144	/
LTE B13	Left tilt			23230	782	50	0	-0.05	0.098	22.20	23.00	1.202	0.118	/
LTE B13	Right cheek			23230	782	50	0	-0.14	0.149	22.20	23.00	1.202	0.179	/
LTE B13	Right tilt			23230	782	50	0	-0.12	0.109	22.20	23.00	1.202	0.131	/
LTE B13	Front side	10mm	QPSK-10MHz	23230	782	1	0	-0.16	0.161	23.25	24.00	1.189	0.191	/
LTE B13	Back side			23230	782	1	0	0.01	0.279	23.25	24.00	1.189	0.332	14
LTE B13	Left side			23230	782	1	0	0.16	0.208	23.25	24.00	1.189	0.247	/
LTE B13	Right side			23230	782	1	0	0.02	0.125	23.25	24.00	1.189	0.149	/
LTE B13	Top side			23230	782	1	0	0.09	0.045	23.25	24.00	1.189	0.053	/
LTE B13	Bottom side			23230	782	1	0	-0.11	0.149	23.25	24.00	1.189	0.177	/
LTE B13	Front side			23230	782	50	0	-0.11	0.118	22.20	23.00	1.202	0.142	/
LTE B13	Back side			23230	782	50	0	-0.19	0.245	22.20	23.00	1.202	0.295	/
LTE B13	Left side			23230	782	50	0	0.04	0.162	22.20	23.00	1.202	0.195	/
LTE B13	Right side			23230	782	50	0	-0.1	0.093	22.20	23.00	1.202	0.112	/
LTE B13	Top side			23230	782	50	0	-0.1	0.035	22.20	23.00	1.202	0.042	/
LTE B13	Bottom side			23230	782	50	0	0.06	0.153	22.20	23.00	1.202	0.184	/

10.8LTE Band 66

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	RB num.	RB Start	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. no.
Head														
LTE B66	Left cheek	0mm	QPSK-20MHz	132322	1745	1	0	0.04	0.075	23.55	24.50	1.245	0.093	15
LTE B66	Left tilt			132322	1745	1	0	0.05	0.041	23.55	24.50	1.245	0.051	/
LTE B66	Right cheek			132322	1745	1	0	-0.19	0.071	23.55	24.50	1.245	0.088	/
LTE B66	Right tilt			132322	1745	1	0	-0.12	0.035	23.55	24.50	1.245	0.044	/
LTE B66	Left cheek			132322	1745	50	0	0.19	0.059	22.56	23.50	1.242	0.073	/
LTE B66	Left tilt			132322	1745	50	0	-0.18	0.033	22.56	23.50	1.242	0.041	/
LTE B66	Right cheek			132322	1745	50	0	0.03	0.068	22.56	23.50	1.242	0.084	/
LTE B66	Right tilt			132322	1745	50	0	0.12	0.034	22.56	23.50	1.242	0.042	/
LTE B66	Front side	10mm	QPSK-20MHz	132322	1745	1	0	-0.08	0.336	23.55	24.50	1.245	0.418	/
LTE B66	Back side			132322	1745	1	0	-0.16	0.632	23.55	24.50	1.245	0.787	/
LTE B66	Left side			132322	1745	1	0	0.03	0.072	23.55	24.50	1.245	0.090	/
LTE B66	Right side			132322	1745	1	0	-0.03	0.061	23.55	24.50	1.245	0.076	/
LTE B66	Top side			132322	1745	1	0	0.06	0.029	23.55	24.50	1.245	0.036	/
LTE B66	Bottom side			132322	1745	1	0	0.06	0.668	23.55	24.50	1.245	0.831	/
LTE B66	Bottom side			132072	1720	1	0	-0.08	0.695	23.53	24.50	1.250	0.869	/
LTE B66	Bottom side			132572	1770	1	0	0.13	0.710	23.47	24.50	1.268	0.900	16
LTE B66	Front side			132322	1745	50	0	-0.12	0.296	22.56	23.50	1.242	0.368	/
LTE B66	Back side			132322	1745	50	0	0.14	0.614	22.56	23.50	1.242	0.762	/
LTE B66	Left side			132322	1745	50	0	-0.13	0.060	22.56	23.50	1.242	0.074	/
LTE B66	Right side			132322	1745	50	0	0.11	0.066	22.56	23.50	1.242	0.082	/
LTE B66	Top side			132322	1745	50	0	0.1	0.025	22.56	23.50	1.242	0.031	/
LTE B66	Bottom side			132322	1745	50	0	-0.15	0.659	22.56	23.50	1.242	0.818	/
LTE B66	Bottom side			132072	1720	50	0	-0.19	0.620	22.34	23.50	1.306	0.810	/
LTE B66	Bottom side			132572	1770	50	0	0.15	0.659	22.42	23.50	1.282	0.845	/

10.9 LTE Band 71

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	RB num.	RB Start	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. no.
	Head													
LTE B71	Left cheek	0mm	QPSK	133322	683	1	0	0.18	0.099	23.19	24.00	1.205	0.119	17
LTE B71	Left tilt			133322	683	1	0	0.06	0.057	23.19	24.00	1.205	0.069	/
LTE B71	Right cheek			133322	683	1	0	0.19	0.091	23.19	24.00	1.205	0.110	/
LTE B71	Right tilt			133322	683	1	0	0.11	0.052	23.19	24.00	1.205	0.063	/
LTE B71	Left cheek			133322	683	50	0	-0.02	0.080	22.13	23.00	1.222	0.098	/
LTE B71	Left tilt			133322	683	50	0	-0.14	0.051	22.13	23.00	1.222	0.062	/
LTE B71	Right cheek			133322	683	50	0	0.11	0.089	22.13	23.00	1.222	0.109	/
LTE B71	Right tilt			133322	683	50	0	-0.04	0.051	22.13	23.00	1.222	0.062	/
LTE B71	Front side	10mm	QPSK	133322	683	1	0	-0.19	0.132	23.19	24.00	1.205	0.159	/
LTE B71	Back side			133322	683	1	0	0.12	0.203	23.19	24.00	1.205	0.245	/
LTE B71	Left side			133322	683	1	0	0.04	0.210	23.19	24.00	1.205	0.253	18
LTE B71	Right side			133322	683	1	0	-0.19	0.148	23.19	24.00	1.205	0.178	/
LTE B71	Top side			133322	683	1	0	-0.09	0.033	23.19	24.00	1.205	0.040	/
LTE B71	Bottom side			133322	683	1	0	0.09	0.094	23.19	24.00	1.205	0.113	/
LTE B71	Front side			133322	683	50	0	0.06	0.108	22.13	23.00	1.222	0.132	/
LTE B71	Back side			133322	683	50	0	-0.01	0.164	22.13	23.00	1.222	0.200	/
LTE B71	Left side			133322	683	50	0	0.01	0.185	22.13	23.00	1.222	0.226	/
LTE B71	Right side			133322	683	50	0	-0.02	0.106	22.13	23.00	1.222	0.130	/
LTE B71	Top side			133322	683	50	0	-0.17	0.030	22.13	23.00	1.222	0.037	/
LTE B71	Bottom side			133322	683	50	0	0.11	0.062	22.13	23.00	1.222	0.076	/

10.10 LTE Band 41

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	RB num.	RB Start	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Reported 1g SAR (W/kg)	Meas. no.
LTE B41	Left cheek	0mm	QPSK-20MHz	40620	2593	1	1	0.01	0.124	25.79	26.50	1.178	0.146	19
LTE B41	Left tilt			40620	2593	1	1	-0.11	0.058	25.79	26.50	1.178	0.068	/
LTE B41	Right cheek			40620	2593	1	1	0.17	0.059	25.79	26.50	1.178	0.069	/
LTE B41	Right tilt			40620	2593	1	1	0.11	0.027	25.79	26.50	1.178	0.032	/
LTE B41	Left cheek			40620	2593	50	0	0.01	0.091	24.78	25.50	1.180	0.107	/
LTE B41	Left tilt			40620	2593	50	0	0.03	0.059	24.78	25.50	1.180	0.070	/
LTE B41	Right cheek			40620	2593	50	0	-0.17	0.057	24.78	25.50	1.180	0.067	/
LTE B41	Right tilt			40620	2593	50	0	0.15	0.026	24.78	25.50	1.180	0.031	/
LTE B41	Front side	10mm	QPSK-20MHz	40620	2593	1	0	0.07	0.125	25.79	26.50	1.178	0.147	/
LTE B41	Back side			40620	2593	1	0	0.09	0.236	25.79	26.50	1.178	0.278	20
LTE B41	Left side			40620	2593	1	0	0.03	0.131	25.79	26.50	1.178	0.154	/
LTE B41	Right side			40620	2593	1	0	-0.14	0.038	25.79	26.50	1.178	0.045	/
LTE B41	Top side			40620	2593	1	0	0.02	0.036	25.79	26.50	1.178	0.042	/
LTE B41	Bottom side			40620	2593	1	0	0.01	0.143	25.79	26.50	1.178	0.168	/
LTE B41	Front side			40620	2593	50	0	0.19	0.094	24.78	25.50	1.180	0.111	/
LTE B41	Back side			40620	2593	50	0	-0.14	0.168	24.78	25.50	1.180	0.198	/
LTE B41	Left side			40620	2593	50	0	0.05	0.101	24.78	25.50	1.180	0.119	/
LTE B41	Right side			40620	2593	50	0	0.11	0.025	24.78	25.50	1.180	0.030	/
LTE B41	Top side			40620	2593	50	0	-0.11	0.033	24.78	25.50	1.180	0.039	/
LTE B41	Bottom side			40620	2593	50	0	0.14	0.121	24.78	25.50	1.180	0.143	/

10.11 Bluetooth

Band	Position	Dist.	Test Mode	Channel	Freq. (MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle (%)	Duty Cycle Scaled Factor	Reported 1g SAR (W/kg)	Meas. no.
Bluetooth	Head													
	Left cheek	0mm	BR/EDR 1Mbps	39	2441	0.03	0.040	5.25	6.50	1.334	76.80	1.302	0.069	21
	Left tilt			39	2441	-0.19	0.038	5.25	6.50	1.334	76.80	1.302	0.066	
	Right cheek			39	2441	0.05	0.021	5.25	6.50	1.334	76.80	1.302	0.036	
	Right tilt			39	2441	0.07	0.013	5.25	6.50	1.334	76.80	1.302	0.023	
	Hotspot													
	Front side	10mm	BR/EDR 1Mbps	39	2441	0.06	0.032	5.25	6.50	1.334	76.80	1.302	0.056	22
	Back side			39	2441	0.01	0.041	5.25	6.50	1.334	76.80	1.302	0.071	
	Left side			39	2441	-0.03	0.028	5.25	6.50	1.334	76.80	1.302	0.049	
	Right side			39	2441	-0.14	0.038	5.25	6.50	1.334	76.80	1.302	0.066	
	Top side			39	2441	-0.08	0.031	5.25	6.50	1.334	76.80	1.302	0.054	
	Bottom side			39	2441	0.19	0.024	5.25	6.50	1.334	76.80	1.302	0.042	

10.12 WIFI 2.4GHZ

Test Band	Test Position	Dist.	Test Mode	Test Channe	Freq.(MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle (%)	Duty Cycle Scaled Factor	Reported 1g SAR (W/kg)	Meas. No.
Wi-Fi 2.4G	Left cheek	0mm	802.11b 1Mbps	11	2462	-0.06	0.818	17.70	18.50	1.203	99.32	1.007	0.991	/
	Left tilt			11	2462	-0.07	0.628	17.70	18.50	1.203	99.32	1.007	0.760	/
	Right cheek			11	2462	-0.03	0.384	17.70	18.50	1.203	99.32	1.007	0.465	/
	Right tilt			11	2462	0.18	0.344	17.70	18.50	1.203	99.32	1.007	0.417	/
	Left cheek			1	2412	0.19	0.743	17.51	18.50	1.256	99.32	1.007	0.940	/
	Left cheek			6	2437	0.02	0.805	17.59	18.50	1.233	99.32	1.007	1.000	23
	Left cheek			6	2437	0.05	0.795	17.59	18.50	1.233	99.32	1.007	0.987	Repeat
	Front side	10mm	802.11b 1Mbps	11	2462	-0.15	0.209	17.70	18.50	1.203	99.32	1.007	0.253	/
	Back side			11	2462	0.13	0.237	17.70	18.50	1.203	99.32	1.007	0.287	24
	Left side			11	2462	0.01	0.038	17.70	18.50	1.203	99.32	1.007	0.046	/
	Right side			11	2462	-0.03	0.179	17.70	18.50	1.203	99.32	1.007	0.217	/
	Top side			11	2462	-0.15	0.092	17.70	18.50	1.203	99.32	1.007	0.111	/
	Bottom side			11	2462	0.15	0.030	17.70	18.50	1.203	99.32	1.007	0.036	/

10.13 WIFI 5GHZ

Test Band	Test Position	Dist.	Test Mode	Test Channe	Freq.(MHz)	Power Drift(dB)	Measured 1-g SAR (W/kg)	Average Power (dBm)	Tune-up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle (%)	Duty Cycle Scaled Factor	Reported 1g SAR (W/kg)	Meas. No.
Wi-Fi 5.2G	Left cheek	0mm	802.11ac 80	42	5210	0.14	0.302	9.91	10.50	1.145	87.68	1.141	0.395	/
	Left tilt			42	5210	0.01	0.426	9.91	10.50	1.145	87.68	1.141	0.557	25
	Right cheek			42	5210	0.17	0.325	9.91	10.50	1.145	87.68	1.141	0.425	/
	Right tilt			42	5210	-0.14	0.342	9.91	10.50	1.145	87.68	1.141	0.447	/
Wi-Fi 5.2G	Front side	10mm	802.11ac 80	42	5210	-0.12	0.127	9.91	10.50	1.145	87.68	1.141	0.166	/
	Back side			42	5210	0.13	0.207	9.91	10.50	1.145	87.68	1.141	0.270	26
	Left side			42	5210	-0.08	0.059	9.91	10.50	1.145	87.68	1.141	0.077	/
	Right side			42	5210	0.02	0.072	9.91	10.50	1.145	87.68	1.141	0.094	/
	Top side			42	5210	-0.01	0.138	9.91	10.50	1.145	87.68	1.141	0.180	/
	Bottom side			42	5210	-0.08	0.044	9.91	10.50	1.145	87.68	1.141	0.057	/

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.

Frequency Band (MHz)	Wireless Band	RF Exposure Conditions	Test Position	Highest Measured SAR (W/kg)	Repeated SAR (Yes/No)	Repeated ^{1st} Measured SAR (W/kg)	Largest to Smallest SAR Radio
1900	LTE band 2	Body-worn&Hotspot	Back side	0.950	Yes	0.932	1.02
2450	Wi-Fi2.4G	Head	Left cheek	0.805	Yes	0.795	1.01

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.

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-worn	Hotspot
1	WWAN+WIFI 2.4G+BT	Yes	Yes	Yes
2	WWAN+WIFI 5G+BT	Yes	Yes	Yes
Note: 1, 2G&3G&4G share the same antenna and can't transmit simultaneously. 2, The maximum SAR summation is calculated based on the same configuration and test position.				

12.2 Sum SAR of Simultaneous Transmission

12.2.1 Sum Head SAR of Simultaneous Transmission

Band	Position	Stand alone SAR				SUM SAR	
		1	2	3	4		
		WWAN	2.4GWIFI	5G WIFI	Bluetooth	1+2+4	1+3+4
GSM 850	Left Cheek	0.475	1.000	0.395	0.069	1.54	0.94
GSM 850	Left Tilt	0.294	0.760	0.557	0.066	1.12	0.92
GSM 850	Right Cheek	0.411	0.465	0.425	0.036	0.91	0.87
GSM 850	Right Tilt	0.225	0.417	0.447	0.023	0.66	0.69
WCDMA B5	Left Cheek	0.289	1.000	0.395	0.069	1.36	0.75
WCDMA B5	Left Tilt	0.161	0.760	0.557	0.066	0.99	0.78
WCDMA B5	Right Cheek	0.246	0.465	0.425	0.036	0.75	0.71
WCDMA B5	Right Tilt	0.137	0.417	0.447	0.023	0.58	0.61
LTE B2	Left Cheek	0.057	1.000	0.395	0.069	1.13	0.52
LTE B2	Left Tilt	0.034	0.760	0.557	0.066	0.86	0.66
LTE B2	Right Cheek	0.097	0.465	0.425	0.036	0.60	0.56
LTE B2	Right Tilt	0.062	0.417	0.447	0.023	0.50	0.53
LTE B4	Left Cheek	0.079	1.000	0.395	0.069	1.15	0.54
LTE B4	Left Tilt	0.065	0.760	0.557	0.066	0.89	0.69
LTE B4	Right Cheek	0.071	0.465	0.425	0.036	0.57	0.53
LTE B4	Right Tilt	0.045	0.417	0.447	0.023	0.49	0.52
LTE B5	Left Cheek	0.190	1.000	0.395	0.069	1.26	0.65
LTE B5	Left Tilt	0.143	0.760	0.557	0.066	0.97	0.77
LTE B5	Right Cheek	0.175	0.465	0.425	0.036	0.68	0.64
LTE B5	Right Tilt	0.128	0.417	0.447	0.023	0.57	0.60
LTE B12	Left Cheek	0.099	1.000	0.395	0.069	1.17	0.56
LTE B12	Left Tilt	0.067	0.760	0.557	0.066	0.89	0.69
LTE B12	Right Cheek	0.086	0.465	0.425	0.036	0.59	0.55
LTE B12	Right Tilt	0.061	0.417	0.447	0.023	0.50	0.53
LTE B13	Left Cheek	0.181	1.000	0.395	0.069	1.25	0.64
LTE B13	Left Tilt	0.147	0.760	0.557	0.066	0.97	0.77
LTE B13	Right Cheek	0.179	0.465	0.425	0.036	0.68	0.64
LTE B13	Right Tilt	0.133	0.417	0.447	0.023	0.57	0.60
LTE B66	Left Cheek	0.093	1.000	0.395	0.069	1.16	0.56
LTE B66	Left Tilt	0.051	0.760	0.557	0.066	0.88	0.67
LTE B66	Right Cheek	0.088	0.465	0.425	0.036	0.59	0.55
LTE B66	Right Tilt	0.044	0.417	0.447	0.023	0.48	0.51
LTE B71	Left Cheek	0.119	1.000	0.395	0.069	1.19	0.58
LTE B71	Left Tilt	0.069	0.760	0.557	0.066	0.89	0.69
LTE B71	Right Cheek	0.110	0.465	0.425	0.036	0.61	0.57
LTE B71	Right Tilt	0.063	0.417	0.447	0.023	0.50	0.53
LTE B41	Left Cheek	0.146	1.000	0.395	0.069	1.22	0.61
LTE B41	Left Tilt	0.070	0.760	0.557	0.066	0.90	0.69
LTE B41	Right Cheek	0.069	0.465	0.425	0.036	0.57	0.53
LTE B41	Right Tilt	0.032	0.417	0.447	0.023	0.47	0.50

Note:

- 1: The product contains simultaneous transmission SAR for antenna combinations of two or more antennas. Only the worst simultaneous transmission combination is shown in this table.
 2: The simultaneous transmission 1g SAR is 1.54 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.2 Sum Body-worn SAR of Simultaneous Transmission

Band	Position	Stand alone SAR				SUM SAR	
		1	2	3	4	1+2+4	1+3+4
		WWAN	2.4GWIFI	5G WIFI	Bluetooth		
GSM 850	Front Side	0.440	0.253	0.166	0.056	0.75	0.66
GSM 850	Back Side	0.867	0.287	0.270	0.071	1.22	1.21
WCDMA B5	Front Side	0.268	0.253	0.166	0.056	0.58	0.49
WCDMA B5	Back Side	0.447	0.287	0.270	0.071	0.80	0.79
LTE B2	Front Side	0.441	0.253	0.166	0.056	0.75	0.66
LTE B2	Back Side	1.180	0.287	0.270	0.071	1.54	1.52
LTE B4	Front Side	0.355	0.253	0.166	0.056	0.66	0.58
LTE B4	Back Side	0.627	0.287	0.270	0.071	0.99	0.97
LTE B5	Front Side	0.244	0.253	0.166	0.056	0.55	0.47
LTE B5	Back Side	0.324	0.287	0.270	0.071	0.68	0.66
LTE B12	Front Side	0.157	0.253	0.166	0.056	0.47	0.38
LTE B12	Back Side	0.216	0.287	0.270	0.071	0.57	0.56
LTE B13	Front Side	0.191	0.253	0.166	0.056	0.50	0.41
LTE B13	Back Side	0.332	0.287	0.270	0.071	0.69	0.67
LTE B66	Front Side	0.418	0.253	0.166	0.056	0.73	0.64
LTE B66	Back Side	0.787	0.287	0.270	0.071	1.14	1.13
LTE B71	Front Side	0.159	0.253	0.166	0.056	0.47	0.38
LTE B71	Back Side	0.245	0.287	0.270	0.071	0.60	0.59
LTE B41	Front Side	0.147	0.253	0.166	0.056	0.46	0.37
LTE B41	Back Side	0.278	0.287	0.270	0.071	0.64	0.62

Note:

1: The product contains simultaneous transmission SAR for antenna combinations of two or more antennas. Only the worst simultaneous transmission combination is shown in this table.

2: The simultaneous transmission 1g SAR is 1.54 W/Kg < 1.6 W/kg, so Simultaneous Transmission SAR test is not required.

12.2.3 Sum Hotspot mode SAR of Simultaneous Transmission

Band	Position	Stand alone SAR				SUM SAR	
		1	2	3	4	1+2+4	1+3+4
		WWAN	2.4GWIFI	5G WIFI	Bluetooth		
GSM 850	Front Side	0.440	0.253	0.166	0.056	0.75	0.66
GSM 850	Back Side	0.867	0.287	0.270	0.071	1.22	1.21
GSM 850	Left Side	0.414	0.046	0.077	0.049	0.51	0.54
GSM 850	Right Side	0.264	0.217	0.094	0.066	0.55	0.42
GSM 850	Top Side	0.044	0.111	0.180	0.054	0.21	0.28
GSM 850	Bottom Side	0.543	0.036	0.057	0.042	0.62	0.64
WCDMA B5	Front Side	0.268	0.253	0.166	0.056	0.58	0.49
WCDMA B5	Back Side	0.447	0.287	0.270	0.071	0.80	0.79
WCDMA B5	Left Side	0.248	0.046	0.077	0.049	0.34	0.37
WCDMA B5	Right Side	0.156	0.217	0.094	0.066	0.44	0.32
WCDMA B5	Top Side	0.046	0.111	0.180	0.054	0.21	0.28
WCDMA B5	Bottom Side	0.185	0.036	0.057	0.042	0.26	0.28
LTE B2	Front Side	0.441	0.253	0.166	0.056	0.75	0.66
LTE B2	Back Side	1.180	0.287	0.270	0.071	1.54	1.52
LTE B2	Left Side	0.194	0.046	0.077	0.049	0.29	0.32
LTE B2	Right Side	0.072	0.217	0.094	0.066	0.35	0.23
LTE B2	Top Side	0.043	0.111	0.180	0.054	0.21	0.28
LTE B2	Bottom Side	1.045	0.036	0.057	0.042	1.12	1.14
LTE B4	Front Side	0.355	0.253	0.166	0.056	0.66	0.58
LTE B4	Back Side	0.627	0.287	0.270	0.071	0.99	0.97
LTE B4	Left Side	0.110	0.046	0.077	0.049	0.21	0.24
LTE B4	Right Side	0.081	0.217	0.094	0.066	0.36	0.24
LTE B4	Top Side	0.049	0.111	0.180	0.054	0.21	0.28
LTE B4	Bottom Side	0.828	0.036	0.057	0.042	0.91	0.93
LTE B5	Front Side	0.244	0.253	0.166	0.056	0.55	0.47
LTE B5	Back Side	0.324	0.287	0.270	0.071	0.68	0.66
LTE B5	Left Side	0.238	0.046	0.077	0.049	0.33	0.36
LTE B5	Right Side	0.128	0.217	0.094	0.066	0.41	0.29
LTE B5	Top Side	0.028	0.111	0.180	0.054	0.19	0.26
LTE B5	Bottom Side	0.284	0.036	0.057	0.042	0.36	0.38
LTE B12	Front Side	0.157	0.253	0.166	0.056	0.47	0.38
LTE B12	Back Side	0.216	0.287	0.270	0.071	0.57	0.56
LTE B12	Left Side	0.341	0.046	0.077	0.049	0.44	0.47
LTE B12	Right Side	0.130	0.217	0.094	0.066	0.41	0.29
LTE B12	Top Side	0.048	0.111	0.180	0.054	0.21	0.28
LTE B12	Bottom Side	0.082	0.036	0.057	0.042	0.16	0.18
LTE B13	Front Side	0.191	0.253	0.166	0.056	0.50	0.41
LTE B13	Back Side	0.332	0.287	0.270	0.071	0.69	0.67
LTE B13	Left Side	0.247	0.046	0.077	0.049	0.34	0.37
LTE B13	Right Side	0.149	0.217	0.094	0.066	0.43	0.31
LTE B13	Top Side	0.053	0.111	0.180	0.054	0.22	0.29
LTE B13	Bottom Side	0.184	0.036	0.057	0.042	0.26	0.28
LTE B66	Front Side	0.418	0.253	0.166	0.056	0.73	0.64
LTE B66	Back Side	0.787	0.287	0.270	0.071	1.14	1.13
LTE B66	Left Side	0.090	0.046	0.077	0.049	0.18	0.22
LTE B66	Right Side	0.082	0.217	0.094	0.066	0.36	0.24
LTE B66	Top Side	0.036	0.111	0.180	0.054	0.20	0.27
LTE B66	Bottom Side	0.900	0.036	0.057	0.042	0.98	1.00
LTE B71	Front Side	0.159	0.253	0.166	0.056	0.47	0.38
LTE B71	Back Side	0.245	0.287	0.270	0.071	0.60	0.59
LTE B71	Left Side	0.253	0.046	0.077	0.049	0.35	0.38
LTE B71	Right Side	0.178	0.217	0.094	0.066	0.46	0.34
LTE B71	Top Side	0.040	0.111	0.180	0.054	0.20	0.27
LTE B71	Bottom Side	0.113	0.036	0.057	0.042	0.19	0.21
LTE B41	Front Side	0.147	0.253	0.166	0.056	0.46	0.37
LTE B41	Back Side	0.278	0.287	0.270	0.071	0.64	0.62
LTE B41	Left Side	0.154	0.046	0.077	0.049	0.25	0.28
LTE B41	Right Side	0.045	0.217	0.094	0.066	0.33	0.20
LTE B41	Top Side	0.042	0.111	0.180	0.054	0.21	0.28
LTE B41	Bottom Side	0.168	0.036	0.057	0.042	0.25	0.27

Note:

- 1: The product contains simultaneous transmission SAR for antenna combinations of two or more antennas. Only the worst simultaneous transmission combination is shown in this table..
 2: The simultaneous transmission 1g SAR is 1.54 W/Kg < 1.6 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	DASY5	52.10.4.1535	N/A	N/A
750MHz Validation Dipole	Speag	D750V3	1201	2024/09/03	2027/09/03
835MHz Validation Dipole	Speag	D835V2	4d277	2024/08/30	2027/08/30
1750MHz Validation Dipole	Speag	D1750V2	1183	2024/09/03	2027/09/03
1900MHz Validation Dipole	Speag	D1900V2	5d155	2024/09/02	2027/09/02
2450MHz Validation Dipole	Speag	D2450V2	1065	2024/09/05	2027/09/05
2600MHz Validation Dipole	Speag	D2600V2	1184	2024/08/30	2027/08/30
5GHz Validation Dipole	Speag	D5GHzV2	1333	2024/09/04	2027/09/04
Data Acquisition Electronicsr	Speag	DAE4	SN: 540	2025/04/21	2026/04/20
E-Field Probe	Speag	EX3DV4	SN: 3748	2025/04/24	2026/04/23
Signal Generator	R&S	SMB100A	182635	2025/02/12	2026/02/12
Power Meter	Agilent	E4419B	MY45104512	2025/02/11	2026/02/11
Power Sensor	Agilent	E9304A	MY41499059	2025/02/11	2026/02/11
Power Sensor	Agilent	E9304A	MY41499060	2025/02/11	2026/02/11
Wireless Communication Test Set	R&S	CMW500	168792	2025/02/11	2026/02/11
Wireless Communication Test Set	Anritsu	MT8820C	6201061029	2025/02/12	2026/02/12
Network Analyzer	Agilent	E5071C	MY56301409	2025/02/12	2026/02/12
Thermometer	CEM	DT-322	210402350	2025/01/22	2026/01/22
Thermometer	Elitech	RC-4HC	EF7247001275	2025/01/22	2026/01/22
Power Amplifier	COM-MW	PAO.4	201704001	N/A	N/A
Dielectric Probe Kit	Speag	DAK3.5	/	N/A	N/A
Phantom	Speag	SAM	1857	N/A	N/A
Attenuator	COM-MW	/	/	N/A	N/A

Note: For dipole antennas, Tejet 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 an 85070E 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 (%)
2025.12.22	Head	750	21.3	0.87	42.78	0.89	41.94	-2.25	2.00
2025.12.23	Head	835	21.4	0.90	42.32	0.90	41.50	0.00	1.98
2025.12.24	Head	1750	21.2	1.38	39.21	1.37	40.08	0.73	-2.17
2025.12.25	Head	1900	21.0	1.44	38.93	1.40	40.00	2.86	-2.68
2025.12.25	Head	2450	21.0	1.83	38.40	1.80	39.20	1.67	-2.04
2025.12.26	Head	2600	21.3	1.97	38.07	1.96	39.01	0.51	-2.41
2025.12.26	Head	5200	21.3	4.54	35.20	4.66	35.99	-2.58	-2.20
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 (%)
2025.12.22	Head	750	100	0.847	8.47	8.46	0.12
2025.12.23	Head	835	100	0.900	9.00	9.59	-6.15
2025.12.24	Head	1750	100	3.650	36.50	36.50	0.00
2025.12.25	Head	1900	100	4.320	43.20	39.90	8.27
2025.12.25	Head	2450	100	5.280	52.80	52.60	0.38
2025.12.26	Head	2600	100	5.510	55.10	55.30	-0.36
2025.12.26	Head	5200	100	7.230	72.30	77.80	-7.07
Note: The tolerance limit of System validation $\pm 10\%$.							

Please refer the document "BL-SH25C1413-ASC.pdf".

ANNEX C TEST DATA

Please refer the document “BL-SH25C1413-ATD.pdf”.

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SH25C1413-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SH25C1413-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “BL-SH25C1413-AC.pdf”.

Statement

1. The Testing Center 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. For the report with Accreditation Symbol, the items marked with "☆" are not within the accredited scope.
3. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the test report stamp.
4. The test data and results are only valid for the tested samples provided by the customer.
5. This report shall not be partially reproduced without the written permission of the Testing Center.
6. Any objection shall be raised to the Testing Center within 30 days after receiving the report.

--END OF REPORT--