TEST REPORT

Applicant:	Franklin Technology
Address:	#906 JEI Platz, 186, Gasan digital1-ro, Geumcheon-gu, Seoul 08502 Korea
Equipment Type:	Mobile Hotspot
Model Name:	RG3102
Brand Name:	N/A
FCC ID:	XHG-RG3102
Test Standard:	FCC 47 CFR Part 2.1093 (refer section 3.1)
Maximum SAR:	Body-worn (1 g@10mm): 1.18 W/kg Hotspot (1 g@10mm): 1.18 W/kg Extremity (10 g@10mm): 3.01 W/kg
Sample Arrival Date:	Jun. 26, 2025
Test Date:	Jul. 17, 2025
Date of Issue:	Aug. 04, 2025

ISSUED BY:

Shanghai Tejet Communications Technology Co., Ltd. Testing Center

上海泰捷通信技术有限公司 报告专用章

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

Cai Xueguo   Huang Xiaoqin   Zhang Yanqing

Revision History

Version	Issue Date	Revisions Content
Rev. 01	Aug. 04, 2025	Initial Issue

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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℃ to 25℃
Ambient Relative Humidity	30% to 70%

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Franklin Technology
Address	#906 JEI Platz, 186, Gasan digital1-ro, Geumcheon-gu, Seoul 08502 Korea

2.2 Manufacturer Information

Manufacturer	Franklin Technology
Address	#906 JEI Platz, 186, Gasan digital1-ro, Geumcheon-gu, Seoul 08502 Korea

2.3 General Description for Equipment under Test (EUT)

EUT Name	Mobile Hotspot
Model Name Under Test	RG3102
Series Model Name	N/A
Description of Model name differentiation	N/A
Sample Number	SC-SH2560054-S04, SC-SH2560054-S05
Hardware Version	P1
Software Version	RG3102.AT.1814
Dimensions (Approx.)	L: 133mm* W: 85mm* H:25.3mm
Weight (Approx.)	N/A

2.4 Ancillary Equipment

Ancillary Equipment 1	Battery 1	
	Brand Name	N/A
	Model No.	I0722A
	Serial No.	N/A
	Capacity	5000mAh
	Rated Voltage	3.8V
	Limit Charge Voltage	4.2V
Ancillary Equipment 2	Battery 2	
	Brand Name	N/A
	Model No.	BP2451
	Serial No.	N/A
	Capacity	5000mAh
	Rated Voltage	3.8V
	Limit Charge Voltage	4.2V

2.5 Technical Information

Network and Wireless connectivity	3G Network WCDMA/HSDPA/HSUPA Band 1/2/4/5/8 4G Network FDD LTE Band 1/2/3/4/5/7/8/12/13/14/20/25/26/28/29/30/66/71 TDD LTE Band 38/39/40/41/48 LTE CA with 2 carriers:CA_12A-12A, CA_12A-30A, CA_12A-66A CA_12B, CA_14A-30A, CA_14A-66A, CA_25A-25A, CA_29A-30A CA_29A-66A, CA_2A-12A, CA_2A-14A, CA_2A-29A, CA_2A-2A CA_2A-30A, CA_2A-48A, CA_2A-4A, CA_2A-5A, CA_2A-66A CA_2A-71A, CA_2C, CA_30A-66A, CA_41A-41A, CA_41C CA_48A-48A, CA_48A-66A, CA_48B, CA_48C, CA_4A-12A CA_4A-29A, CA_4A-30A, CA_4A-48A, CA_4A-4A, CA_4A-5A CA_4A-71A, CA_5A-12A, CA_5A-12A, CA_5A-30A, CA_5A-48A CA_5A-5A, CA_5A-66A, CA_5B, CA_66A-66A, CA_66A-71A CA_66B, CA_66C LTE CA with 3 carriers:CA_12A-30A-66A, CA_12A-66A-66A CA_12A-66C, CA_12B-66A, CA_14A-30A-66A, CA_14A-66A-66A CA_29A-30A-66A, CA_29A-66A-66A, CA_2A-12A-12A CA_2A-12A-30A, CA_2A-12A-66A, CA_2A-12B, CA_2A-14A-30A CA_2A-14A-66A, CA_2A-29A-30A, CA_2A-2A-12A, CA_2A-2A-14A CA_2A-2A-29A, CA_2A-2A-30A, CA_2A-2A-4A, CA_2A-2A-5A CA_2A-2A-66A, CA_2A-2A-71A, CA_2A-30A-66A, CA_2A-48A-48A CA_2A-48C, CA_2A-4A-12A, CA_2A-4A-29A, CA_2A-4A-30A CA_2A-4A-4A, CA_2A-4A-71A, CA_2A-5A-12A, CA_2A-5A-30A CA_2A-5A-48A, CA_2A-5A-5A, CA_2A-5A-66A, CA_2A-5B CA_2A-66A-66A, CA_2A-66A-71A, CA_2A-66B, CA_2A-66C CA_2C-12A, CA_2C-29A, CA_2C-30A, CA_2C-5A, CA_2C-66A CA_30A-66A-66A, CA_41A-41C, CA_41D, CA_48A-48A-66A CA_48A-48C, CA_48A-66A-66A, CA_48A-66B, CA_48A-66C CA_48B-66A, CA_48C-66A, CA_48D, CA_4A-12A-12A CA_4A-12A-30A, CA_4A-12B, CA_4A-29A-30A, CA_4A-48C CA_4A-4A-12A, CA_4A-4A-29A, CA_4A-4A-30A, CA_4A-4A-5A CA_4A-4A-71A, CA_4A-5A-12A, CA_4A-5A-29A, CA_4A-5A-30A CA_4A-5B, CA_5A-12A-66A, CA_5A-12B, CA_5A-30A-66A CA_5A-48A-66A, CA_5A-48C, CA_5A-5A-66A, CA_5A-66A-66A CA_5A-66B, CA_5A-66C, CA_5B-30A, CA_5B-66A CA_66A-66A-66A, CA_66A-66A-71A, CA_66A-66B, CA_66A-66C CA_66C-71A, CA_66D LTE CA with 4 carriers:CA_12A-30A-66A-66A, CA_12B-66A-66A CA_14A-30A-66A-66A, CA_25A-41D, CA_29A-30A-66A-66A

	CA_2A-12A-66A-66A, CA_2A-12A-66C, CA_2A-12B-66A CA_2A-14A-66A-66A, CA_2A-2A-12A-12A, CA_2A-2A-12A-30A CA_2A-2A-12A-66A, CA_2A-2A-12B, CA_2A-2A-14A-66A CA_2A-2A-29A-30A, CA_2A-2A-29A-66A, CA_2A-2A-30A-66A CA_2A-2A-4A-12A, CA_2A-2A-4A-4A 5G Network SA: NR n2/n5/n14/n25/n28/n30/n41/n48/n66/n71/n77/n78 SA UL MIMO: n2/n25/n41/n48/n66/n77 TXD: n41 PC1.5, n77 PC1.5(3450-3550MHz), n77 PC1.5(3700-3980MHz) NSA(EN-DC): 1DL+FR1: DC_2A_n66A, DC_2A_n71A, DC_66A_n25A DC_66A_n71A, DC_66A_n5A, DC_66A_n2A, DC_5A_n2A DC_30A_n66A, DC_30A_n5A, DC_30A_n2A, DC_2A_n66A DC_2A_n5A, DC_14A_n66A, DC_14A_n2A, DC_12A_n66A DC_12A_n2A, DC_2A_n41A, DC_66A_n41A, DC_66A_n77A DC_5A_n77A, DC_30A_n77A, DC_2A_n77A, DC_14A_n77A DC_12A_n77A, DC_2A_n41A, DC_66A_n41A, DC_1A_n78A DC_3A_n78A 2DL+FR1: DC_2A-2A_n71A, DC_2A-66A_n25A, DC_2A-66A_n66A DC_2A-66A_n71A, DC_2A-71A_n71A, DC_2C_n71A DC_66A-66A_n71A, DC_66A-71A_n71A, DC_66C_n71A DC_66A-66A_n5A, DC_5A-66A_n5A, DC_5A-66A_n2A DC_5A-30A_n2A, DC_30A-66A_n66A, DC_30A-66A_n5A DC_30A-66A_n2A, DC_5A-30A_n5A, DC_2A-66A_n66A DC_2A-66A_n5A, DC_2A-66A_n2A, DC_2A-5A_n5A DC_2A-5A_n2A, DC_2A-30A_n66A, DC_2A-30A_n5A DC_2A-30A_n2A, DC_2A-2A_n66A, DC_2A-2A_n5A DC_2A-29A_n66A, DC_2A-14A_n66A, DC_2A-14A_n2A DC_2A-12A_n66A, DC_2A-12A_n2A, DC_2A-66A_n66A DC_2A-5A_n5A, DC_29A-66A_n2A, DC_29A-30A_n66A DC_29A-30A_n2A, DC_14A-66A_n66A, DC_14A-66A_n2A DC_14A-66A_n2A, DC_14A-30A_n66A, DC_14A-30A_n2A DC_12A-66A_n66A, DC_12A-66A_n2A, DC_12A-30A_n66A DC_12A-30A_n2A, DC_2A-2A_n41A, DC_2A-66A_n41A DC_2A-71A_n77A, DC_2C_n41A, DC_66A-66A_n77A DC_5A-66A_n77A, DC_5A-30A_n77A, DC_30A-66A_n77A DC_2A-66A_n77A, DC_2A-5A_n77A, DC_2A-30A_n77A DC_2A-2A_n77A, DC_2A-29A_n77A, DC_2A-14A_n77A DC_2A-12A_n77A, DC_29A-66A_n77A, DC_29A-30A_n77A DC_14A-66A_n77A, DC_14A-30A_n77A, DC_12A-66A_n77A DC_12A-30A_n77A, DC_2A-2A_n41A, DC_2C_n41A

	3DL+FR1: DC_2A-2A-66A_n71A, DC_2A-66A-66A_n71A DC_2A-66C_n71A, DC_2C-66A_n71A, DC_66C-71A_n71A DC_5A-66A-66A_n5A, DC_5A-66A-66A_n5A, DC_30A-66A-66A_n5A DC_30A-66A-66A_n2A, DC_2A-66A-66A_n5A, DC_2A-2A-66A_n5A DC_2A-2A-5A_n5A, DC_2A-2A-30A_n66A, DC_2A-2A-30A_n5A DC_2A-2A-14A_n66A, DC_2A-2A-5A_n5A, DC_29A-66A-66A_n2A DC_2A-2A-66A_n41A, DC_2C-66A_n41A, DC_66A-66A-66A_n77A DC_5A-66A-66A_n77A, DC_30A-66A-66A_n77A DC_2A-66A-66A_n77A, DC_2A-2A-66A_n77A, DC_2A-2A-5A_n77A DC_2A-2A-30A_n77A, DC_2A-2A-29A_n77A, DC_2A-2A-14A_n77A DC_2A-2A-12A_n77A, DC_29A-66A-66A_n77A 4DL+FR1: DC_2A-2A-66A-66A_n5A, DC_2A-2A-66A-66A_n77A 1DL+2FR1: DC_2A_n41A-n41A, DC_2A_n41C, DC_66A_n41A-n41A DC_66A_n41C, DC_66A_n77A-n77A, DC_5A_n77A-n77A DC_30A_n77A-n77A, DC_2A_n77A-n77A, DC_14A_n77A-n77A DC_12A_n77A-n77A, DC_2A_n41A-n66A, DC_2A_n41A-n71A DC_66A_n25A-n41A, DC_66A_n41A-n71A 2DL+2FR1: DC_66A-66A_n77A-n77A, DC_2A-2A_n77A-n77A NR CA: 1FR1:CA_n14A, CA_n25A, CA_n28A, CA_n2A, CA_n30A, CA_n41A CA_n48A, CA_n5A, CA_n66A, CA_n71A, CA_n77A, CA_n78A 2FR1:CA_n25A-n41A, CA_n25A-n48A, CA_n25A-n77A CA_n41A-n66A, CA_n41A-n71A, CA_n48A-n66A, CA_n48A-n71A CA_n66A-n77A, CA_n71A-n77A, CA_n66A-n77A, CA_n5A-n77A CA_n2A-n77A, CA_n30A-n77A, CA_n14A-n77A, CA_n66A-n77A CA_n25A-n41A, CA_n25A-n77A, CA_n41A-n66A, CA_n41A-n71A CA_n66A-n77A, CA_n71A-n77A, CA_n41A-n41A, CA_n41A-n48A CA_n41A-n77A, CA_n41C, CA_n48A-n48A, CA_n48A-n77A CA_n48B, CA_n48C, CA_n77A-n77A, CA_n48C, CA_n48B CA_n48A-n48A, CA_n41A-n41A, CA_n41A-n48A, CA_n41A-n77A CA_n48A-n77A, CA_n25A-n25A, CA_n25A-n66A, CA_n25A-n71A CA_n25A-n66A, CA_n66A-n66A, CA_n25A-n71A, CA_n66A-n71A

	CA_n25A-n71A, CA_n66A-n66A, CA_n66A-n71A, CA_n71A-n71A CA_n71B, CA_n66A-n66A, CA_n5A-n66A, CA_n5A-n30A CA_n30A-n66A, CA_n2A-n66A, CA_n2A-n5A, CA_n2A-n30A CA_n2A-n14A, CA_n2A-n2A, CA_n14A-n66A, CA_n14A-n30A 3FR1: CA_n25A-n41A-n41A, CA_n25A-n41A-n77A, CA_n25A-n41C CA_n25A-n48A-n48A, CA_n25A-n48C, CA_n25A-n77A-n77A CA_n41A-n41A-n66A, CA_n41A-n41A-n71A, CA_n41A-n66A-n77A CA_n41A-n71A-n77A, CA_n41C-n66A, CA_n41C-n71A CA_n48A-n48A-n66A, CA_n48A-n48A-n71A, CA_n48A-n66A-n77A CA_n48B-n66A, CA_n48B-n71A, CA_n48C-n66A CA_n66A-n77A-n77A, CA_n71A-n77A-n77A, CA_n66A-n77A-n77A CA_n2A-n77A-n77A, CA_n30A-n77A-n77A, CA_n14A-n77A-n77A CA_n5A-n77A-n77A, CA_n41A-n41A-n41A, CA_n41A-n41A-n48A CA_n41A-n41A-n77A, CA_n41A-n41C, CA_n41A-n48B CA_n41A-n48C, CA_n41A-n77A-n77A, CA_n41C-n48A CA_n41C-n77A, CA_n48B-n77A, CA_n25A-n25A-n25A CA_n25A-n25A-n66A, CA_n25A-n25A-n66A, CA_n25A-n25A-n71A CA_n25A-n66A-n66A, CA_n25A-n71A-n71A, CA_n25A-n71B CA_n66A-n66A-n71A, CA_n66A-n71A-n71A, CA_n66A-n71B CA_n66A-n66A-n66A, CA_n5A-n66A-n66A, CA_n5A-n30A-n66A CA_n30A-n66A-n66A, CA_n2A-n66A-n66A, CA_n2A-n5A-n66A CA_n2A-n5A-n30A, CA_n2A-n30A-n66A, CA_n2A-n14A-n66A CA_n2A-n14A-n30A, CA_n2A-n2A-n66A, CA_n2A-n2A-n5A CA_n2A-n2A-n30A, CA_n2A-n2A-n14A, CA_n14A-n66A-n66A CA_n14A-n30A-n66A, CA_n25A-n25A-n41A, CA_n25A-n25A-n77A CA_n25A-n41A-n66A Bluetooth (BR+EDR+BLE) WIFI 802.11a, 802.11b, 802.11g, 802.11n(HT20/40), 802.11ac(VHT20/40/80/160), 802.11ax(HE20/40/80/160) and 802.11be(EHT20/40/80/160)

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

Operating Mode	WCDMA, LTE, NR, WIFI, Bluetooth		
Frequency Range	WCDMA Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	WCDMA Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	WCDMA Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 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 7	TX: 2500 ~ 2570 MHz	RX: 2620 ~ 2690 MHz
	LTE Band 12	TX: 699 ~ 716 MHz	RX: 729 ~ 746 MHz
	LTE Band 14	TX: 788 ~ 798 MHz	RX: 758 ~ 768 MHz

	LTE Band 26	TX: 814~ 849 MHz	RX: 859 ~ 894 MHz
	LTE Band 30	TX: 2305~ 2315 MHz	RX: 2350~ 2360 MHz
	LTE Band 66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2180 MHz
	LTE Band 38	TX: 2570 ~ 2620 MHz	RX: 2570 ~ 2620 MHz
	LTE Band 40	TX: 2300 ~ 2400 MHz	RX: 2300 ~ 2400 MHz
	LTE Band 41	TX: 2496 ~ 2690 MHz	RX: 2496 ~ 2690 MHz
	LTE Band 48	TX: 3550 ~ 3700 MHz	RX: 3550 ~ 3700 MHz
	NR n2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	NR n5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	NR n14	TX: 788 ~ 798 MHz	RX: 758 ~ 768 MHz
	NR n30	TX: 2305~ 2315 MHz	RX: 2350~ 2360 MHz
	NR n66	TX: 1710 ~ 1780 MHz	RX: 2110 ~ 2180 MHz
	NR n48	TX: 3550 ~ 3700 MHz	RX: 3550 ~ 3700 MHz
	NR n77	TX: 3450 ~ 3550 MHz	RX: 3450 ~ 3550 MHz
		TX: 3700 ~ 3980MHz	RX: 3700 ~ 3980MHz
	802.11b/g /n(HT20/HT40)	2412 ~ 2462 MHz	
	802.11ax (HE20/HE40)	2412 ~ 2462 MHz	
	802.11be (EHT20/EHT40)	2412 ~ 2462 MHz	
	802.11a/ /n(HT20/HT40) /ac(VHT20/VHT40 /VHT80/VHT160)	5150 ~ 5250 MHz	
		5250 ~ 5350 MHz	
		5470 ~ 5725 MHz	
		5725 ~ 5850 MHz	
	802.11ax (HE20/HE40/HE80 /HE160)	5150 ~ 5250 MHz	
		5250 ~ 5350 MHz	
		5470 ~ 5725 MHz	
		5725 ~ 5850 MHz	
	802.11be (EHT20/EHT40/EHT80/EHT160)	5150 ~ 5250 MHz	
		5250 ~ 5350 MHz	
		5470 ~ 5725 MHz	
		5725 ~ 5850 MHz	
	802.11ax (HE20/HE40/HE80 /HE160)	5925 ~ 6425 MHz	
		6425 ~ 6525 MHz	
		6525 ~ 6875 MHz	
		6875 ~ 7125 MHz	
	802.11be (EHT20/EHT40/EHT80/EHT160)	5925 ~ 6425 MHz	
		6425 ~ 6525 MHz	
		6525 ~ 6875 MHz	
		6875 ~ 7125 MHz	
	Bluetooth	2402 ~ 2480 MHz	
Antenna Type	WWAN: PIFA Antenna WIFI: 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	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01
4	KDB 941225 D01 v03r01	3G SAR MEAUREMENT PROCEDURES
5	KDB 941225 D05 v02r05	SAR Evaluation Considerations for LTE Devices
6	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 248227 D01 v02r02	SAR GUIDANCE FOR IEEE 802.11 (Wi-Fi) TRANSMITTERS
11	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/ 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)		
		Body-worn (10mm)	Hotspot (10mm)	Extremity (0mm)	Body-worn (10mm)	Hotspot (10mm)	Extremity (0mm)
		1g SAR		10g SAR	1g SAR		10g SAR
PCE	WCDMA Band 2	1.18	1.18	2.40	1.18	1.18	3.01
	WCDMA Band 4	0.86	0.86	1.33			
	WCDMA Band 5	0.82	0.82	1.34			
	LTE Band 2	0.68	0.68	0.71			
	LTE Band 4	0.80	0.80	1.94			
	LTE Band 5	0.72	0.72	1.47			
	LTE Band 7	0.26	0.26	0.66			
	LTE Band 12	0.32	0.32	1.02			
	LTE Band 14	0.39	0.39	0.83			
	LTE Band 26	0.82	0.82	1.35			
	LTE Band 30	0.41	0.41	1.79			
	LTE Band 66	0.92	0.92	1.68			
	LTE Band 38	0.21	0.21	0.38			
	LTE Band 40	0.60	0.60	1.05			
	LTE Band 41	0.12	0.12	0.61			
	LTE Band 48	0.21	0.21	0.43			
	n2	0.49	0.49	0.68			
	n5	0.88	0.88	1.15			
	n14	0.42	0.42	0.76			
	n30	0.76	0.76	3.01			
	n66	0.63	0.63	1.02			
	n48	0.76	0.76	1.16			
	n77	0.76	0.76	1.53			
WIFI	2.4G	0.11	0.11	0.47			
	5.2G	0.31	0.31	/			
	5.3G	0.31	/	0.86			
	5.6G	0.44	/	1.11			
	5.8G	0.42	0.42	0.72			
	6G	0.20	/	0.29			
Limit (W/kg)		1.6		4.0	1.6		4.0
Verdict		PASS					

3.3.2 Highest Simultaneous Transmission SAR Values

Equipment Class	Maximum Scaled SAR (W/kg)		
	Body-worn 1g (10mm)	Hotspot 1g (10mm)	Extremity 10g (0mm)
PCE	**1.51**	**1.51**	**3.94**
DTS	**1.51**	**1.51**	**3.94**
NII	**1.51**	**1.51**	**3.94**
Limit (W/Kg)	1.60	1.60	4.00
Verdict	Pass		
Note: The highest simultaneous SAR please refer section 12.2			

Note: Compared with the EUT of test report BL-SH2480613-701 which issued by Shenzhen BALUN Technology Co., Ltd. on Feb 06, 2025.

1. Added a DCDC power block.

Therefore, the worst-case scenario was tested (Body-worn, Hotspot and Extremity).

Other test data are the same as EUT referred in test report BL-SH2480613-701 which issued by Shenzhen BALUN Technology Co., Ltd. on Feb 06, 2025.

3.4 Test Uncertainty

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

The maximum 1 g SAR for the EUT in this report is 1.18 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 3.01 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:

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

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

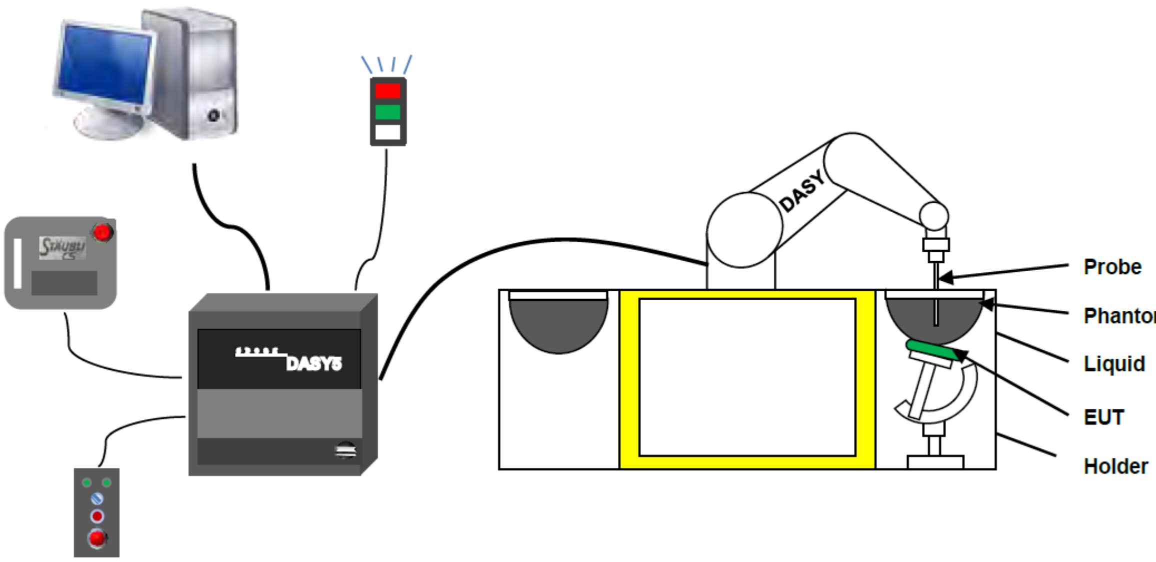
$$\mathbf{SAR} = \frac{\sigma \mathbf{E}^2}{\rho}$$

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

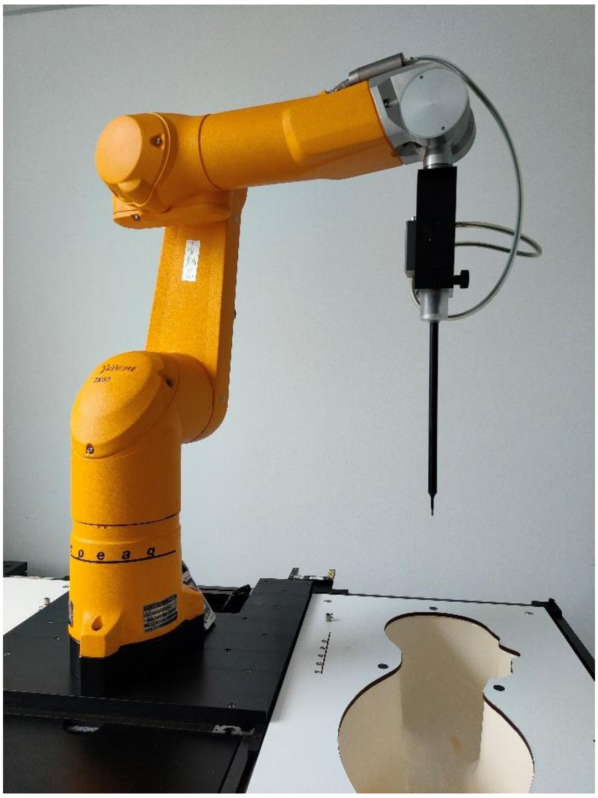


The DASY5 system for performing compliance tests consists of the following items:

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.

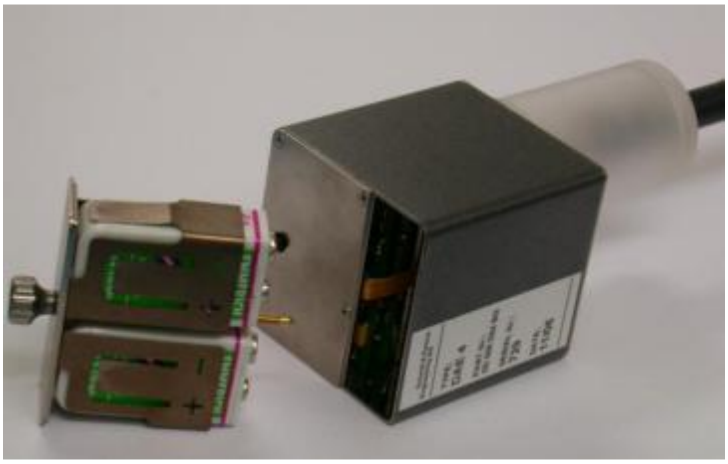
Construction	Symmetrical design with triangular core Built-in optical fiber for surface detection system Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., glycolether)
Calibration	ISO/IEC 17025 calibration service available
Frequency	4 MHz to 10 GHz; 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 μW/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

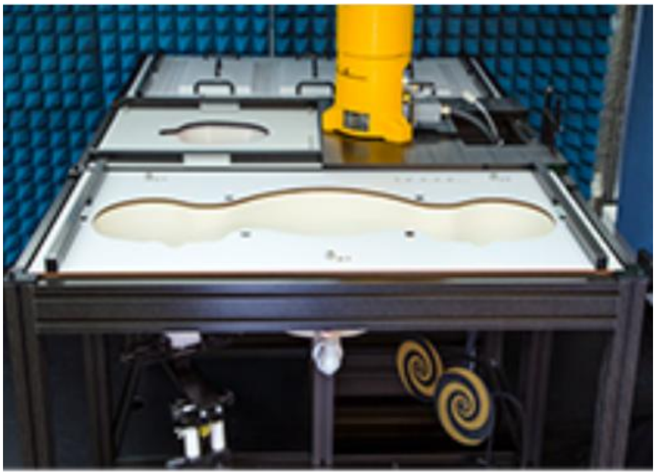
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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



- Input Impedance: 200MOhm
- 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 SN1473

Serial Number	Material	Length	Height
SN 1473 SAM2	Vinylester, glass fiber reinforced	1000	500

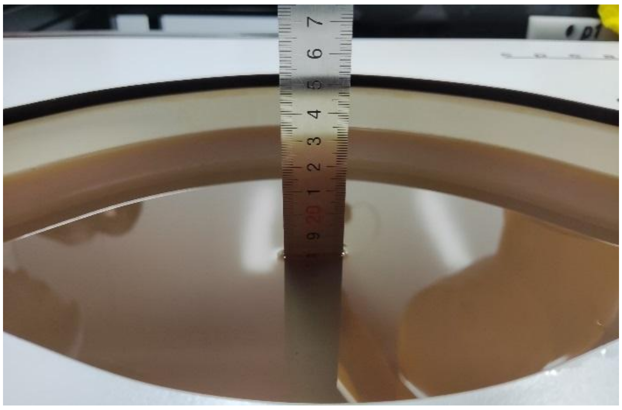
4.2.6 Device Holder

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

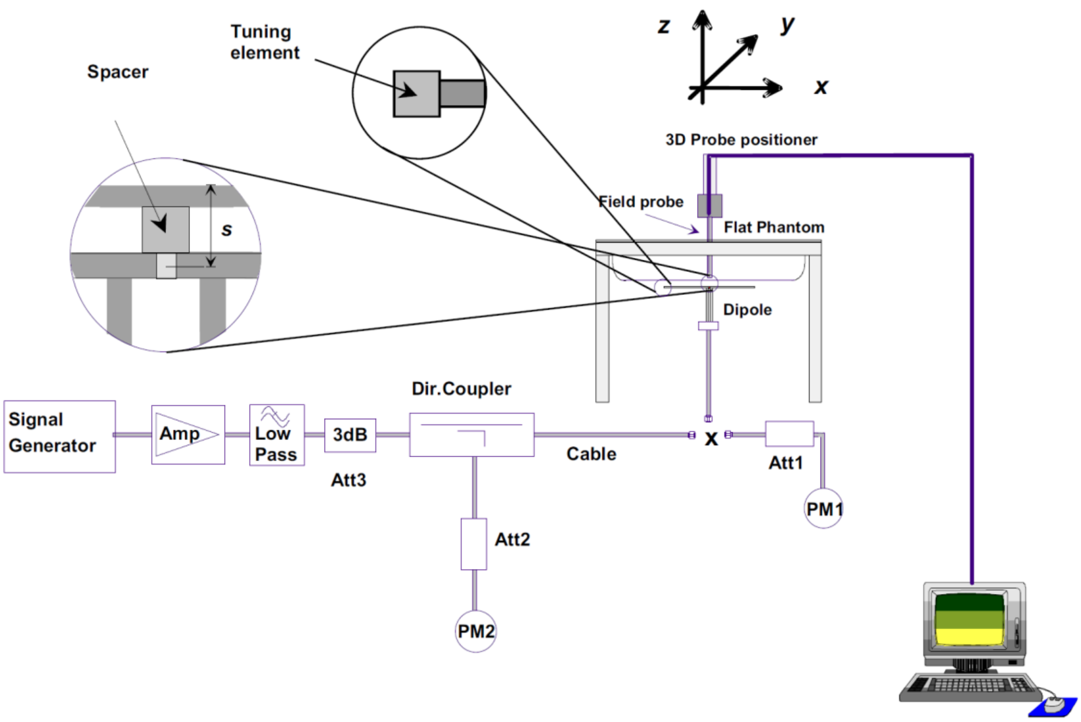
5 SYSTEM VERIFICATION

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

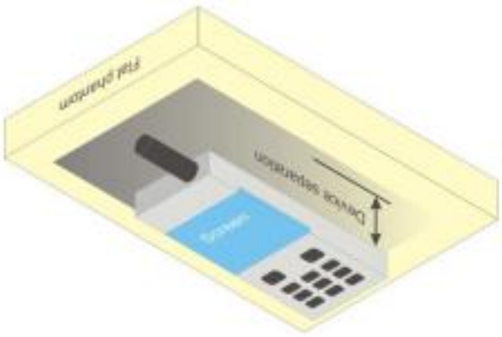
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, body-worn accessory and other use configurations described in the following subsections.

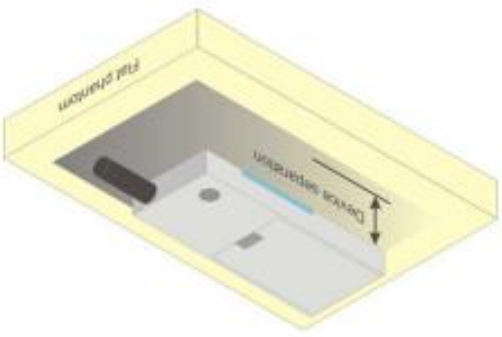
6.1 Body-worn Position Conditions

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.

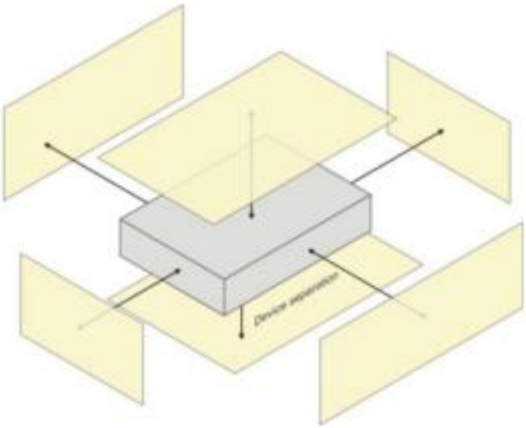
Body-worn accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each body-worn accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a body-worn accessory supports voice 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.





6.2 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).



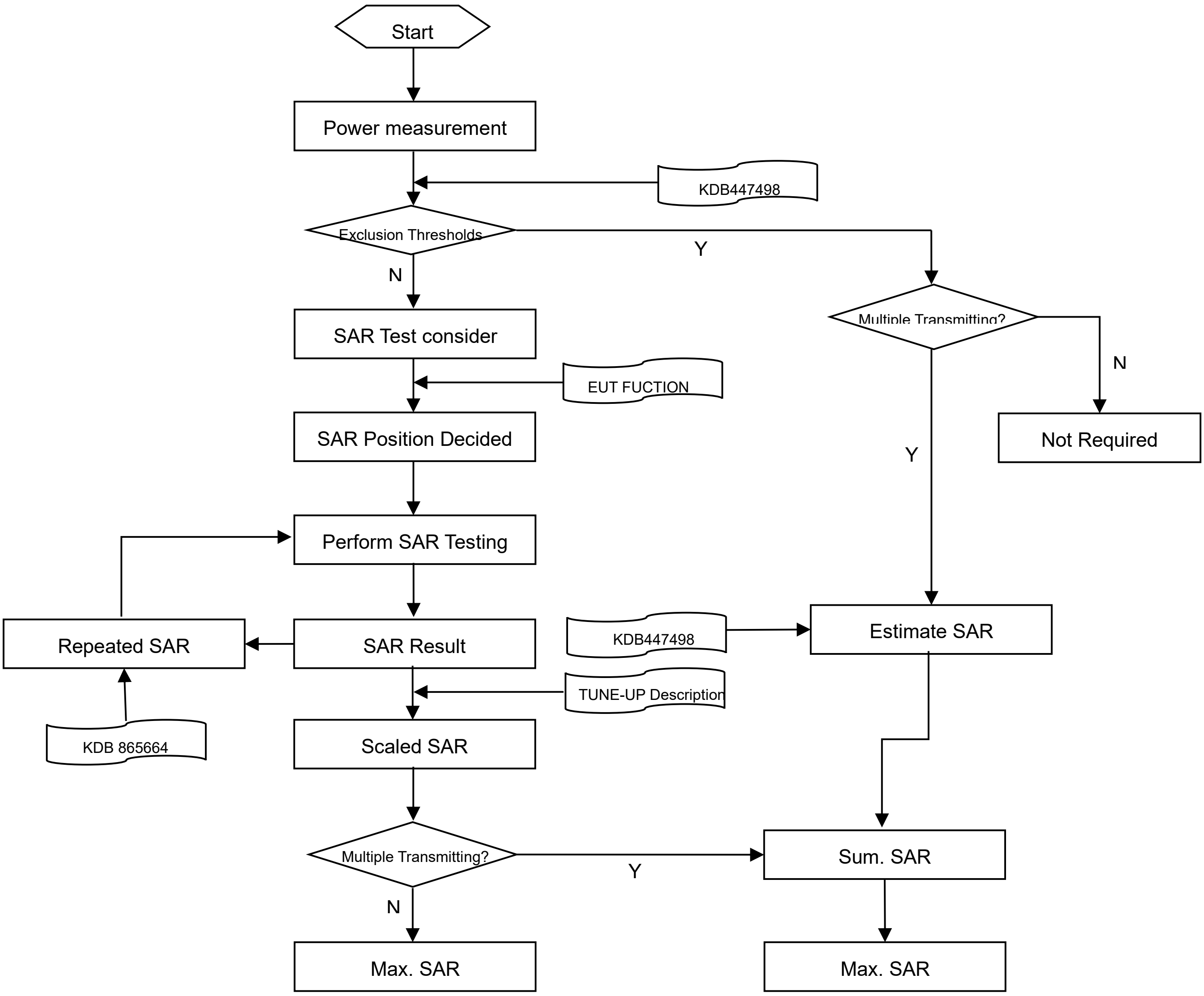
6.3 Product Specific 10g Exposure Consideration

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. Boththe 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.

<table>
<tr><th colspan="3"></th><th>≤3GHz</th><th>>3GHz</th></tr>
<tr><td colspan="3">Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface</td><td>5±1 mm</td><td>½·δ·ln(2)±0.5 mm</td></tr>
<tr><td colspan="3">Maximum probe angle from probe axis to phantom surface normal at the measurement location</td><td>30°±1°</td><td>20°±1°</td></tr>
<tr><td colspan="3" rowspan="2">Maximum area scan spatial resolution: Δx Area , Δy Area</td><td>≤ 2 GHz: ≤ 15 mm
2 – 3 GHz: ≤ 12 mm</td><td>3–4 GHz: ≤ 12 mm
4 – 6 GHz: ≤ 10 mm</td></tr>
<tr><td colspan="2">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.</td></tr>
<tr><td colspan="3">Maximum zoom scan spatial resolution: Δx Zoom , Δy Zoom</td><td>≤ 2 GHz: ≤ 8 mm
2 –3 GHz: ≤ 5 mm*</td><td>3–4 GHz: ≤ 5 mm*
4 – 6 GHz: ≤ 4 mm*</td></tr>
<tr><td rowspan="7">Maximum zoom scan spatial resolution, normal to phantom surface</td><td colspan="2" rowspan="3">uniform grid: Δz Zoom (n)</td><td rowspan="3">≤ 5 mm</td><td>3–4 GHz: ≤ 4 mm</td></tr>
<tr><td>4–5 GHz: ≤ 3 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td rowspan="4">graded grid</td><td rowspan="3">Δz Zoom (1): between 1st two points closest to phantom surface</td><td rowspan="3">≤ 4 mm</td><td>3–4 GHz: ≤ 3 mm</td></tr>
<tr><td>4–5 GHz: ≤ 2.5 mm</td></tr>
<tr><td>5–6 GHz: ≤ 2 mm</td></tr>
<tr><td>Δz Zoom (n>1): between subsequent points</td><td colspan="2">≤ 1.5·Δz Zoom (n-1)</td></tr>
<tr><td rowspan="3">Minimum zoom scan volume</td><td colspan="2" rowspan="3">x, y, z</td><td rowspan="3">≥30 mm</td><td>3–4 GHz: ≥ 28 mm</td></tr>
<tr><td>4–5 GHz: ≥ 25 mm</td></tr>
<tr><td>5–6 GHz: ≥ 22 mm</td></tr>
<tr><td colspan="5">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.</td></tr>
</table>

7.3 Measurement Procedure

The following steps are used for each test position

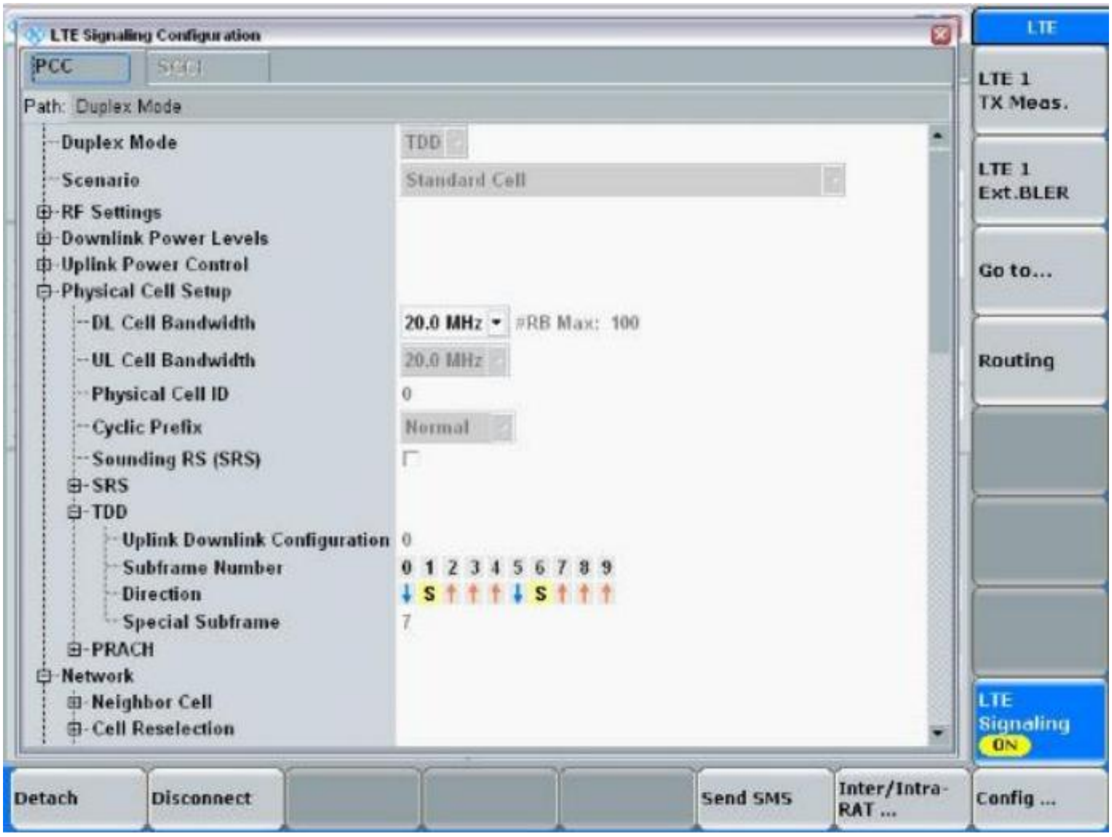
a. Establish a call with the maximum output power with a base station simulator. The connection between the mobile and the base station simulator is established via air interface
b. Measurement of the local E-field value at a fixed location. This value serves as a reference value for calculating a possible power drift.
c. Measurement of the SAR distribution with a grid of 8 to 16mm * 8 to16 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

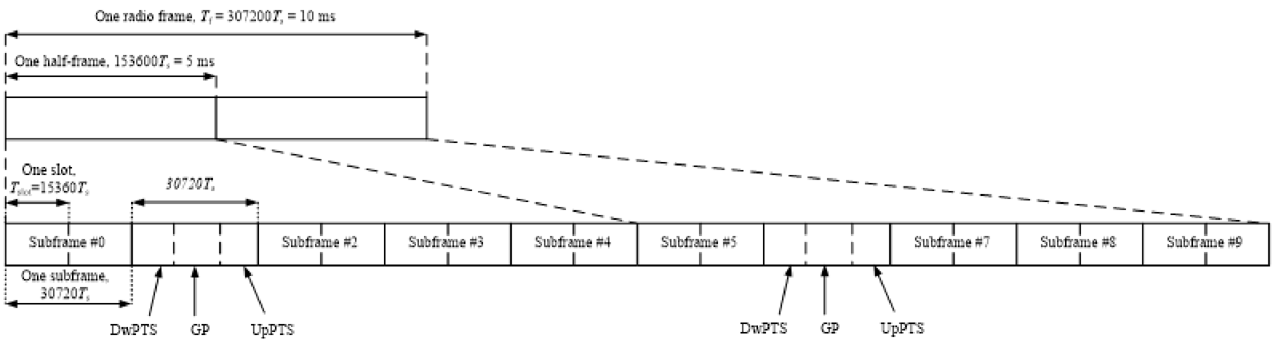
First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan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

7.5 LTE (TDD) Considerations

During TDD-LTE SAR testing, the EUT was commanded to transmit on maximum output power and maximum transmitting bandwidth. The uplink and downlink slot configuration as below in one radio frame.



According to 3GPP Per 3GPP TS 36.211. Each radio frame of length (Tf=307200*TS =10ms) of two half-frames of length (153600*TS =5ms). Each half-frame consists of five sub-frames of length (30720*TS =1ms)



And the special sub-frame with the three fields DwPTS, GP and UpPTS.

The length of DwPTS and UpPTS is given by below table subject to the total length of DwPTS, GP and UpPTS being equal to $30720*T_S$ =1ms.

Configuration of special sub-frame (lengths of DwPTS/GP/UpPTS)

<table>
<tr><th rowspan="3">Special sub-frame configuration</th><th colspan="3">Normal cyclic prefix in downlink</th><th colspan="3">Extended cyclic prefix in downlink</th></tr>
<tr><th>DwPTS</th><th colspan="2">UpPTS</th><th>DwPTS</th><th colspan="2">UpPTS</th></tr>
<tr><th></th><th>Normal cyclic prefix in uplink</th><th>Extended cyclic prefix in uplink</th><th></th><th>Normal cyclic prefix in uplink</th><th>Extended cyclic prefix in uplink</th></tr>
<tr><td>0</td><td>$6592 \cdot T_s$</td><td rowspan="5">$2192 \cdot T_s$</td><td rowspan="5">$2560 \cdot T_s$</td><td>$7680 \cdot T_s$</td><td rowspan="4">$2192 \cdot T_s$</td><td rowspan="4">$2560 \cdot T_s$</td></tr>
<tr><td>1</td><td>$19760 \cdot T_s$</td><td>$20480 \cdot T_s$</td></tr>
<tr><td>2</td><td>$21592 \cdot T_s$</td><td>$23040 \cdot T_s$</td></tr>
<tr><td>3</td><td>$24144 \cdot T_s$</td><td>$25600 \cdot T_s$</td></tr>
<tr><td>4</td><td>$26336 \cdot T_s$</td><td>$7680 \cdot T_s$</td><td rowspan="4">$2560 \cdot T_s$</td><td rowspan="4">$5120 \cdot T_s$</td></tr>
<tr><td>5</td><td>$6592 \cdot T_s$</td><td rowspan="5">$4384 \cdot T_s$</td><td rowspan="5">$5120 \cdot T_s$</td><td>$20480 \cdot T_s$</td></tr>
<tr><td>6</td><td>$19760 \cdot T_s$</td><td>$23040 \cdot T_s$</td></tr>
<tr><td>7</td><td>$21592 \cdot T_s$</td><td>$12800 \cdot T_s$</td></tr>
<tr><td>8</td><td>$24144 \cdot T_s$</td><td>-</td><td>-</td><td>-</td></tr>
<tr><td>9</td><td>$13168 \cdot T_s$</td><td>-</td><td>-</td><td>-</td></tr>
</table>

For special sub-frame uplink time we used the largest cyclic prefix for duty cycle calculate;

Maximum uplink time of one special sub-frame=(largest cyclic prefix)/(one sub-frame of length)* time of one sub-frame=5120.Ts/30720.Ts*1ms=0.167ms

One radio frame with 6 uplink sub-frames and two special sub-frame,
there for the maximum Uplink time in one radio frame is: **6*1 ms+2*0.167 ms=6.334ms**
So, the duty cycle for TDD-LTE is: **6.334ms/10ms =1: 1.58**

8 CONDUCTED RF OUPUT POWER

Please refer the report BL-SH2480613-701 which issued by Shenzhen BALUN Technology Co., Ltd. on Feb 06, 2025.

9 TEST EXCLUSION CONSIDERATION

Please refer the report BL-SH2480613-701 which issued by Shenzhen BALUN Technology Co., Ltd. on Feb 06, 2025.

10 TEST RESULT

10.1Worst-case test for Body-Worn& Hotspot

WCDMA Band 2

Antenna	Test Position	Dist.	Test Mode	Channel	Freq .(MHz)	Power Drift (dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body-Worn& Hotspot												
ANT0	Back side	10mm	RMC	9400	1880	0.13	1.090	24.78	25.00	1.052	1.147	1
Note: Refer to ANNEX C for the detailed test data for each test configuration.												

10.2Worst-case test for Extremity

n30 (10MHz Bandwidth)

Antenna	Test Position	Dist.	Test Mode	Channel	Freq. (MHz)	RB num.	RB Start	Power Drift (dB)	Measured 1-g SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Extremity														
ANT0	Back side	0mm	DFT-s-OFDM BPSK	462000	2310	50	28	-0.12	2.260	23.25	24.50	1.334	3.014	2
Note: Refer to ANNEX C for the detailed test data for each test configuration.														

11 SAR Measurement Variability

Please refer the report BL-SH2480613-701 which issued by Shenzhen BALUN Technology Co., Ltd. on Feb 06, 2025.

12 SIMULTANEOUS TRANSMISSION

Please refer the report BL-SH2480613-701 which issued by Shenzhen BALUN Technology Co., Ltd. on Feb 06, 2025.

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
1900MHz Validation Dipole	Speag	D1900V2	5d155	2024/09/02	2027/09/02
2300MHz Validation Dipole	Speag	D2300V2	1111	2024/09/03	2027/09/03
Data Acquisition Electronicsr	Speag	DAE4	SN: 1423	2025/06/05	2025/06/05
E-Field Probe	Speag	EX3DV4	SN: 3974	2025/06/05	2025/06/05
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	Keysight	85070E	MY44300524	N/A	N/A
Phantom	Speag	SAM	1473	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, 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. (℃)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ε)	Target Conductivity (σ) (S/m)	Target Permittivity (ε)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2025.7.17	Head	1900	21.3	1.44	38.90	1.40	40.00	2.86	-2.75
2025.7.17	Head	2300	21.3	1.69	38.65	1.67	39.47	1.20	-2.08
Note: The tolerance limit of Conductivity and Permittivity is± 5%.									

ANNEX B SYSTEM CHECK RESULT

Comparing to the original SAR value provided by Speag, the validation data should be within itsspecification of 10 %(for 1 g/10g).

Head liquid 1g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2025.7.17	Head	1900	100	4.230	42.30	39.90	6.02
Note: The tolerance limit of System validation ±10%.							

Head liquid 10g

Date	Liquid Type	Freq. (MHz)	Power (mW)	Measured SAR (W/kg)	Normalized SAR (W/kg)	Dipole SAR (W/kg)	Tolerance (%)
2025.7.17	Head	2300	100	2.460	24.60	23.90	2.93
Note: The tolerance limit of System validation ±10%.							

System Performance Check Data (1900MHz)

Date: 2025/7/17
Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.435 S/m; ε_r = 38.904; ρ = 1000 kg/m^3
Phantom section: Flat Section

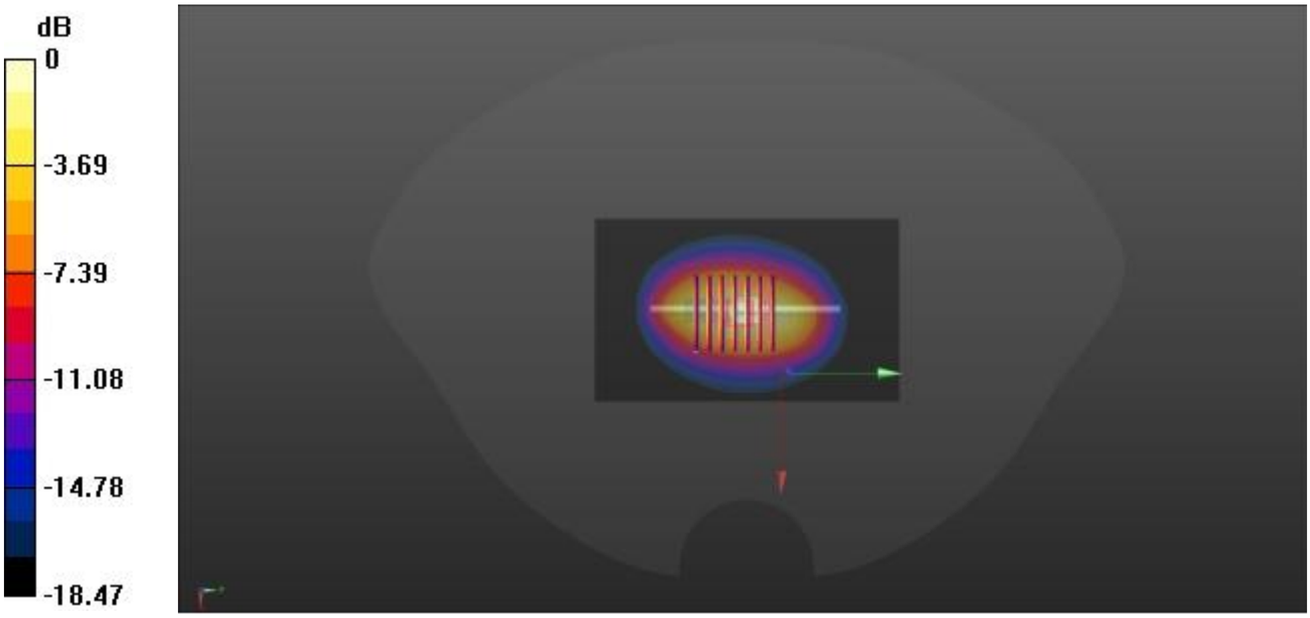
Ambient Temperature:22.8℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3974; ConvF(8.53, 8.53, 8.53); Calibrated: 2025/6/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1423; Calibrated: 2025/6/5
- Phantom: SAM2; Type: QD 000 P40 CC; Serial: 1473
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 1900/Area Scan (61x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 6.84 W/kg

CW 1900/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 57.22 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 8.10 W/kg
SAR(1 g) = 4.23 W/kg; SAR(10 g) = 2.18 W/kg
Maximum value of SAR (measured) = 6.65 W/kg



0 dB = 6.65 W/kg

System Performance Check Data (2300MHz)

Date: 2025/7/17
Communication System Band: D2300 (2300.0 MHz); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.694 S/m; ε_r = 38.651; ρ = 1000 kg/m^3
Phantom section: Flat Section

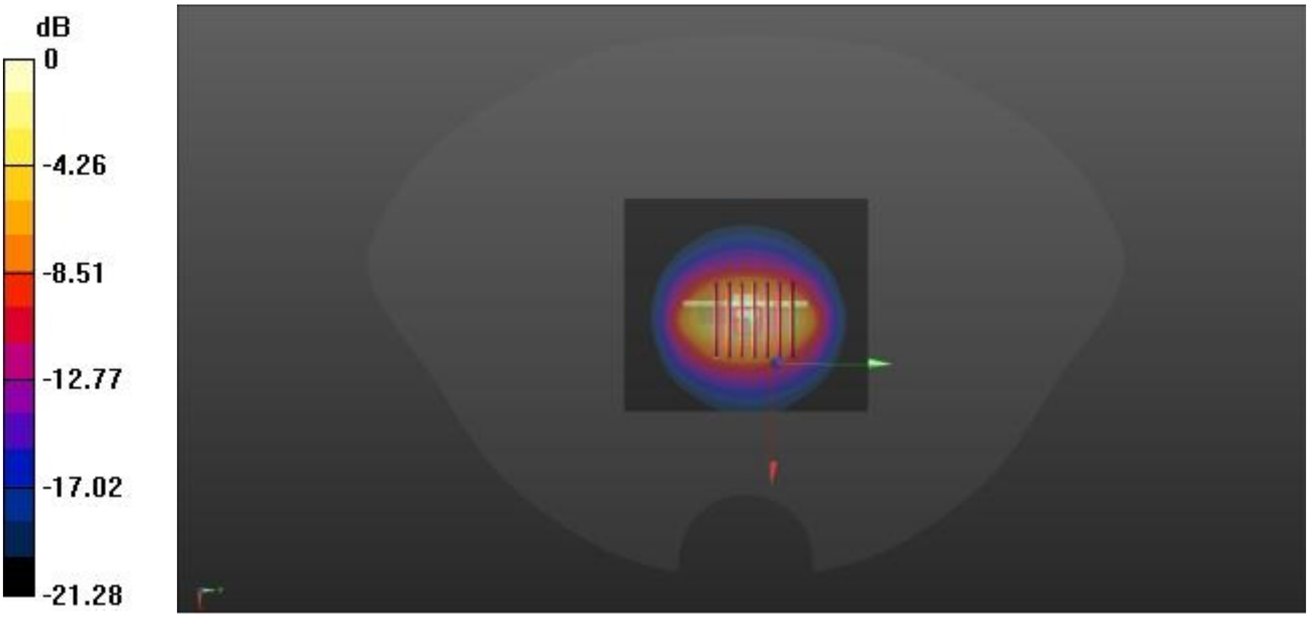
Ambient Temperature:22.8℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3974; ConvF(8.26, 8.26, 8.26); Calibrated: 2025/6/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1423; Calibrated: 2025/6/5
- Phantom: SAM2; Type: QD 000 P40 CC; Serial: 1473
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 2300/Area Scan (71x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 8.67 W/kg

CW 2300/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.37 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 10.5 W/kg
SAR(1 g) = 5.18 W/kg; SAR(10 g) = 2.46 W/kg
Maximum value of SAR (measured) = 8.51 W/kg



0 dB = 8.51 W/kg

ANNEX C TEST DATA

Meas1.Body-worn Back side 10mm WCDMA B2 Ch9400
Date: 2025/7/17
Communication System Band: Band II; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.431 S/m; ε_r = 38.93; ρ = 1000 kg/m^3
Phantom section: Flat Section

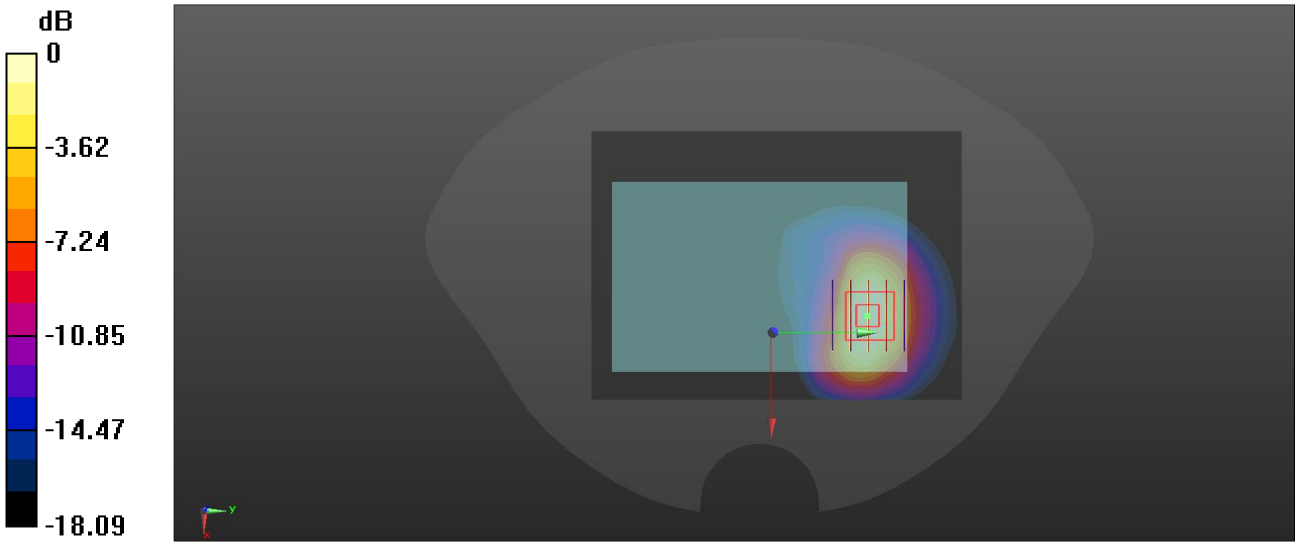
Ambient Temperature:22.8℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3974; ConvF(8.53, 8.53, 8.53) ; Calibrated: 2025/6/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1423; Calibrated: 2025/6/5
- Phantom: SAM2; Type: QD 000 P40 CC; Serial: 1473
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Ch9400/Area Scan (81x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.97 W/kg

Ch9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.275 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.593 W/kg
Maximum value of SAR (measured) = 1.61 W/kg



0 dB = 1.61 W/kg

Meas2. Extremity Back side 0mm NR N30 Ch462000
Date: 2025/7/17
Communication System Band: Band n30; Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.71 S/m; ε_r = 38.641; ρ = 1000 kg/m^3
Phantom section: Flat Section

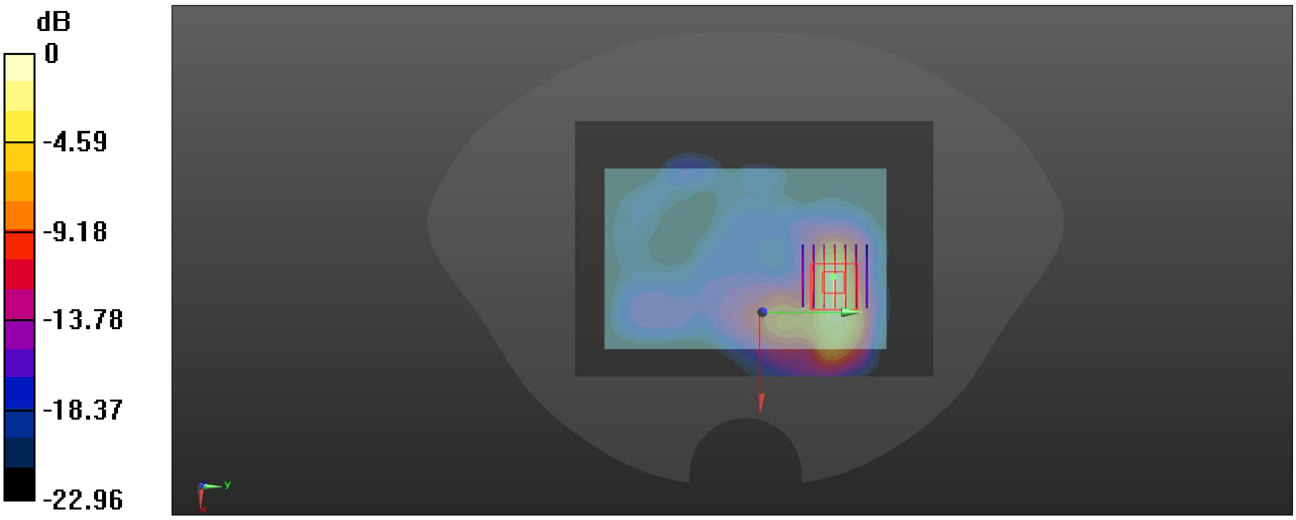
Ambient Temperature:22.8℃ Liquid Temperature:21.3℃

DASY5 Configuration:

- Probe: EX3DV4 - SN3974; ConvF(8.26, 8.26, 8.26); Calibrated: 2025/6/5
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1423; Calibrated: 2025/6/5
- Phantom: SAM2; Type: QD 000 P40 CC; Serial: 1473
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Ch462000 2/Area Scan (101x141x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 10.1 W/kg

Ch462000 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.26 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 12.8 W/kg
SAR(1 g) = 5.63 W/kg; SAR(10 g) = 2.26 W/kg
Maximum value of SAR (measured) = 10.5 W/kg



0 dB = 10.5 W/kg

ANNEX D   EUT EXTERNAL PHOTOS

Please refer the document “BL-SH2560671-AW.pdf”.

ANNEX E   SAR TEST SETUP PHOTOS

Please refer the document “BL-SH2560671-AS.pdf”.

ANNEX F   CALIBRATION REPORT

Please refer the document “BL-SH2560671-AC.pdf”.

Statement

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--END OF REPORT--