



TEST REPORT

Applicant: OnPoint Systems, LLC
Address: 7 Perimeter Rd. Manchester NH 03103 United States
Equipment Type: SpotOn GPS Fence
Model Name: SOF-11-0001
Brand Name: SpotOn Fence™
FCC ID 2APPWSOF11
ISED Number: 24233-SOF11
Test Standard: RSS-102 Issue 6 (refer section 3.1)
Maximum SAR: Body (1 g@0mm): 0.65 W/kg
Sample Arrival Date: Sep. 2, 2025
Test Date: Oct. 20, 2025 - Oct.10, 2025
Date of Issue: Dec. 03, 2025

ISSUED BY:

Shanghai Tejet Communications Technology Co., Ltd. Testing Center

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

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Nov. 18, 2025</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Dec. 03, 2025</u>	<u>UWB add simultaneous transmission explanation, change the LTE Cat-M B26 bandwidth, change NB-IoT B25 power and recalculated the reported SAR, change BL-SH2580953-AP NB-IoT f , the original report is invalid.</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	OnPoint Systems, LLC
Address	7 Perimeter Rd. Manchester NH 03103 United States

2.2 Manufacturer Information

Manufacturer	OnPoint Systems, LLC
Address	7 Perimeter Rd. Manchester NH 03103 United States

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	SpotOn GPS Fence
Model Name Under Test	SOF-11-0001
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	V2.0
Software Version	V1.1.0.0
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Ancillary Equipment	Battery	
	Brand Name	GJ 142851
	Model No.	N/A
	Serial No.	N/A
	Capacity	2200mAh
	Rated Voltage	3.7V
	Limit Charge Voltage	N/A
	Manufacturer	Guangdong Guojun New Energy Co.,Ltd

2.6 Technical Information

Network and Wireless connectivity	4G Network LTE CAT-M Band 2/4/5/12/13/25/26/66 LTE NB-IoT Band 2/4/5/12/13/17/25/66 UWB,BLE,2.4G WIFI,5G WIFI,GPS
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The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	LTE CAT-M, LTE NB-IoT ,WLAN, Bluetooth		
Frequency Range	LTE CAT-M Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE CAT-M Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE CAT-M Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE CAT-M Band 12	TX: 699-716MHz	RX: 729-746MHz
	LTE CAT-M Band 13	TX: 777-787MHz	RX: 746-756MHz
	LTE CAT-M Band 25	TX: 1850-1915MHz	RX:1930-1995 MHz
	LTE CAT-M Band 26	TX: 814-849MHz	RX: 859-894MHz
	LTE CAT-M Band 66	TX: 1710-1780MHz	RX: 2110-2200MHz
	LTE NB-IoT Band 2	TX: 1850 ~ 1910 MHz	RX: 1930 ~ 1990 MHz
	LTE NB-IoT Band 4	TX: 1710 ~ 1755 MHz	RX: 2110 ~ 2155 MHz
	LTE NB-IoT Band 5	TX: 824 ~ 849 MHz	RX: 869 ~ 894 MHz
	LTE NB-IoT Band 12	TX: 699-716MHz	RX: 729-746MHz
	LTE NB-IoT Band 13	TX: 777-787MHz	RX: 746-756MHz
	LTE NB-IoT Band 17	TX: 704-716MHz	RX: 734-746MHz
	LTE NB-IoT Band 25	TX: 1850-1915MHz	RX:1930-1995 MHz
	LTE NB-IoT Band 66	TX: 1710-1780MHz	RX: 2110-2200MHz
	802.11b/g/n(HT20)	2412 ~ 2462 MHz	
	802.11a/n(HT20)	5150 ~ 5250 MHz	
		5250 ~ 5350 MHz	
		5470 ~ 5725 MHz	
		5725 ~ 5850 MHz	

	Bluetooth	2402 ~ 2480 MHz
Antenna Type	WWAN: PIFA Antenna WIFI: Ceramics Antenna Bluetooth: Ceramics Antenna UWB: Monopole Antenna	
DTM	N/A	
Power Reduction	Not Support	
Exposure Category	General Population/Uncontrolled exposure	
Product Type	Portable Device	
EUT Type	☒ Production unit	☐ Identical prototype
Note: UWB can transmit with WWAN or BT&WIFI simultaneously.		

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	RSS-102 Issue 6	Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands)
2	RSS-102.SAR.MEAS Issue 2	Measurement Procedure for Assessing Specific Absorption Rate (SAR) Compliance in Accordance with RSS-102
3	47 CFR Part 2.1093☆	Radiofrequency radiation exposure evaluation: portable devices
4	IEEE Std. 1528-2013	IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate(SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques
5	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)
6	KDB 447498 D01 v06☆	447498 D01 Interim General RF Exposure Guidance v06
7	KDB 941225 D01 v03r01☆	3G SAR MEAUREMENT PROCEDURES
8	KDB 941225 D05 v02r05☆	SAR Evaluation Considerations for LTE Devices
9	KDB 941225 D06 v02r01☆	SAR EVALUATION PROCEDURES FOR PORTABLE DEVICES WITH WIRELESS ROUTER CAPABILITIES
10	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/ Controlled Exposure
Whole-Body SAR (averaged over the entire body)	0.08	0.4
Partial-Body SAR (averaged over any 1 gram of tissue)	1.60	8.0
SAR for hands, wrists, feet and ankles (averaged over any 10 grams of tissue)	4.0	20.0

NOTE:

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

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

3.3 Test Result Summary

3.3.1 Highest SAR Values

Equipment Class	Band	Maximum Scaled SAR (W/kg)		Maximum Report SAR (W/kg)
		Body (Separation 0mm)		Body (Separation 0mm)
		CAT-M	NB-IoT	
		1g SAR(W/kg)		
PCE	Band 2	0.32	0.39	0.65
	Band 4	0.40	0.35	
	Band 5	0.08	0.09	
	Band 12	0.08	0.10	
	Band 13	0.10	0.09	
	Band 25	0.31	0.33	
	Band 26	0.09	/	
	Band 66	0.35	0.36	
DTS	2.4G WIFI	0.51		0.65
NII	5G WIFI	0.65		
DTS	Bluetooth	0.39		
Limit (W/kg)		1.60	1.60	1.60
Verdict		Pass		

Note: This device supports LTE CAT-M B12 and LTE NB-IoT B17. Since the supported frequency span for LTE NB-IoT B17 falls completely within the supports frequency span for LTE CAT-M B12, these LTE bands share the same transmission path, and LTE CAT-M B12 have same target power as LTE NB-IoT B17; Therefore, SAR was only assessed for LTE CAT-M B12.

3.3.2 Highest Simultaneous Transmission SAR Values

Equipment Class	Maximum Scaled SAR (W/kg)
	Body 1g (0mm)
PCE	1.04
DTS	0.90
NII	1.04
DSS	0.78
Limit (W/kg)	1.60
Verdict	Pass
Note: The highest simultaneous SAR please refer section 11	

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 62209-1528:2020 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(ΔSAR)	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 break down 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

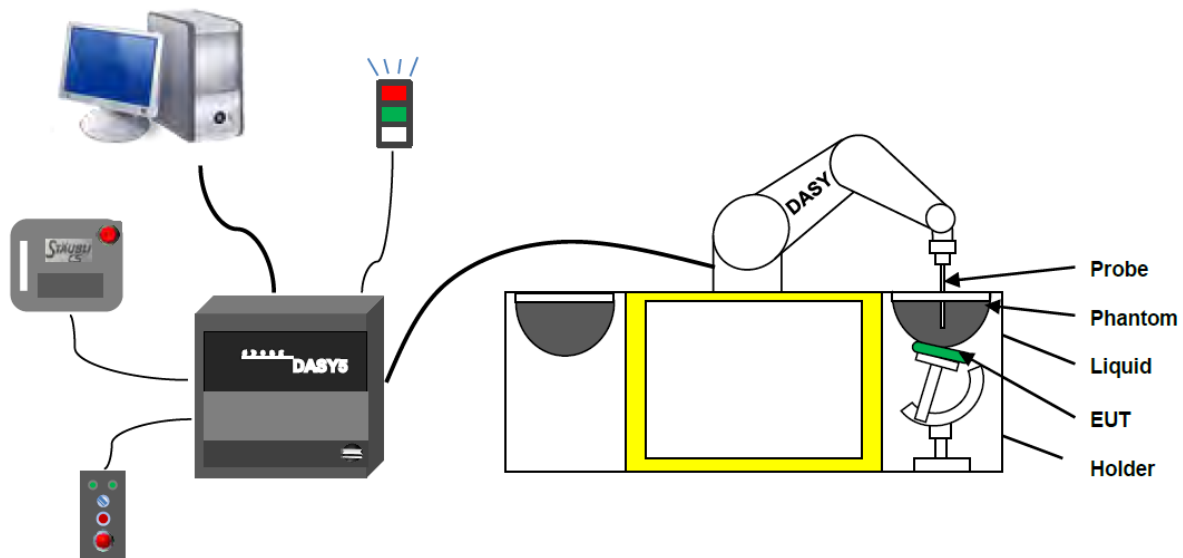
$$\text{SAR} = \frac{\sigma E^2}{\rho}$$

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

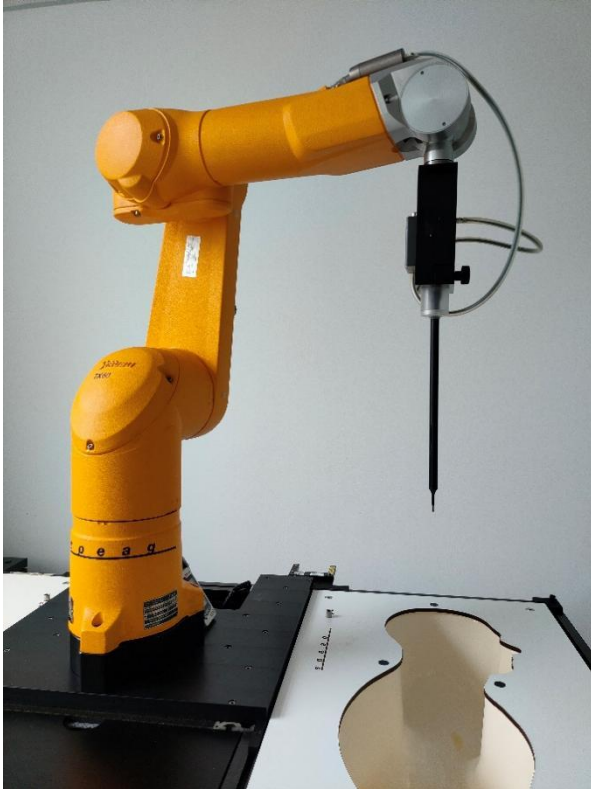


The DASY5 system for performing compliance tests consists of the following items:

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	10 MHz to 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis) ; ± 0.4 dB in HSL (rotation normal to probe axis)
Dynamic range	5 μ W/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 337 mm (Tip: 9 mm) Tip diameter: 2.5 mm (Body: 10 mm) Distance from probe tip to dipole centers: 1.0 mm
Application	General dosimetry up to 3 GHz Compliance tests of mobile phones Fast automatic scanning in arbitrary phantoms (EX3DV4)



E-Field Probe Calibration Process

Probe calibration is realized, in compliance with IEC/IEEE 62209-1528:2020, with CALISAR, Antennessa proprietary calibration system. The calibration is performed with the IEC/IEEE 62209-1528:2020 annexe technique using reference guide at the five frequencies.

4.2.4 Data Acquisition Electronics

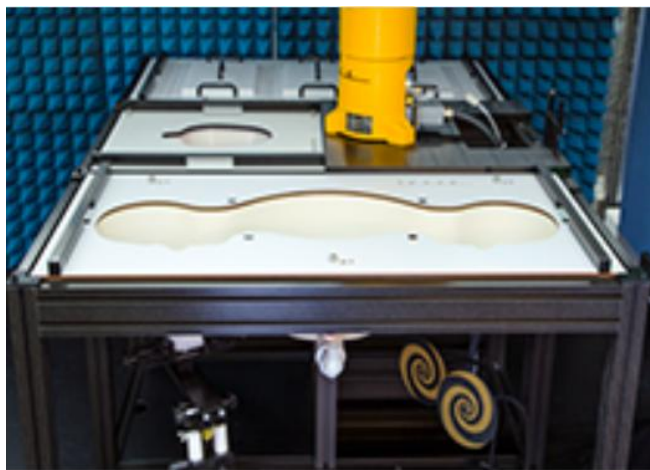
The data acquisition electronics (DAE) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converte and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an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

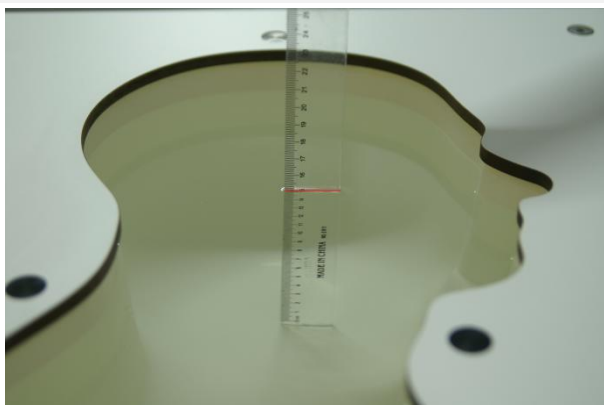


The positioning system allows obtaining cheek and tilting position with a very good accuracy. Incompliance with CENELEC, the tilt angle uncertainty is lower than 1° .

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	Ethenediol, Sodium petroleum sulfonate, Hexylene Glycol / 2-Methyl-pentane-2.4-diol, Alkoxylated alcohol

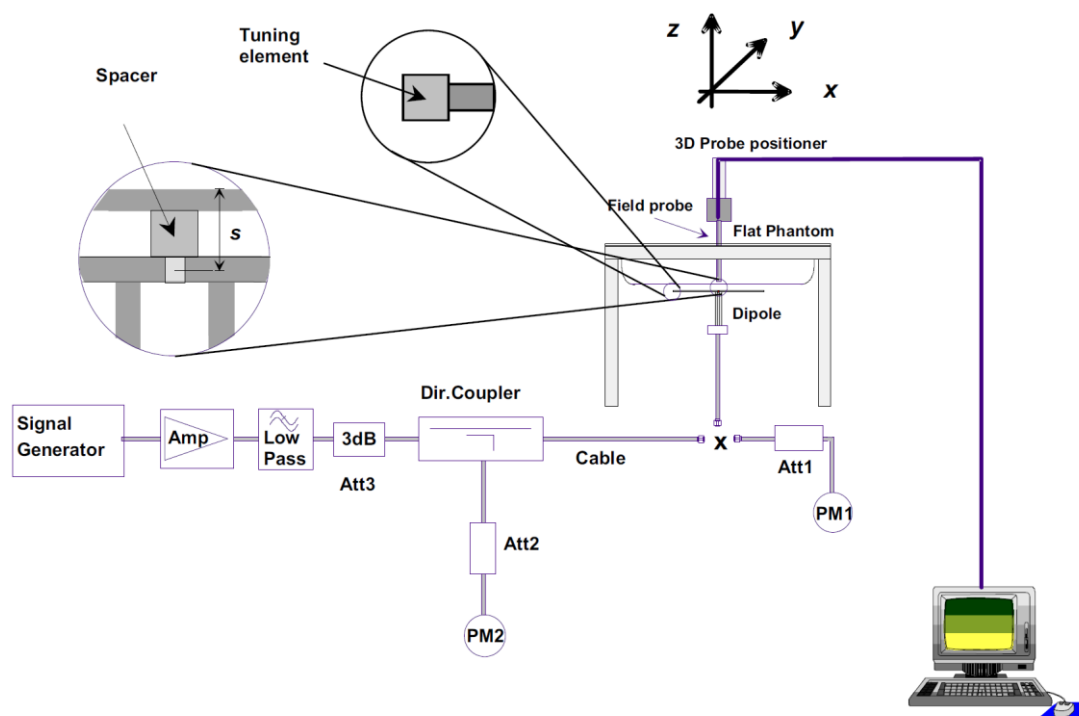
5 SYSTEM VERIFICATION

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

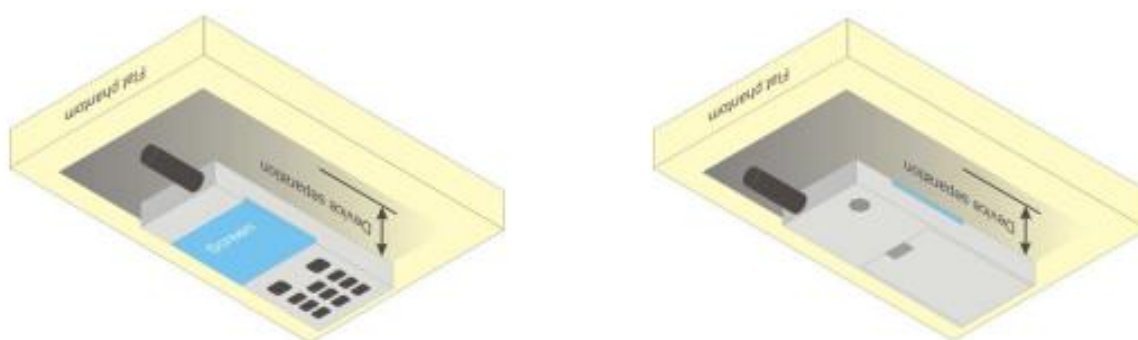
According to KDB 648474 D04 Handset, handsets are tested for SAR compliance in head, Body accessory and other use configurations described in the following subsections.

6.1 Body Position Conditions

Body accessory exposure is typically related to voice mode operations when handsets are carried in Body accessories. The Body accessory procedures in KDB 447498 are used to test for Body 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 accessory test separation distance is greater than or equal to that required for hotspot mode. When the reported SAR for a Body accessory.

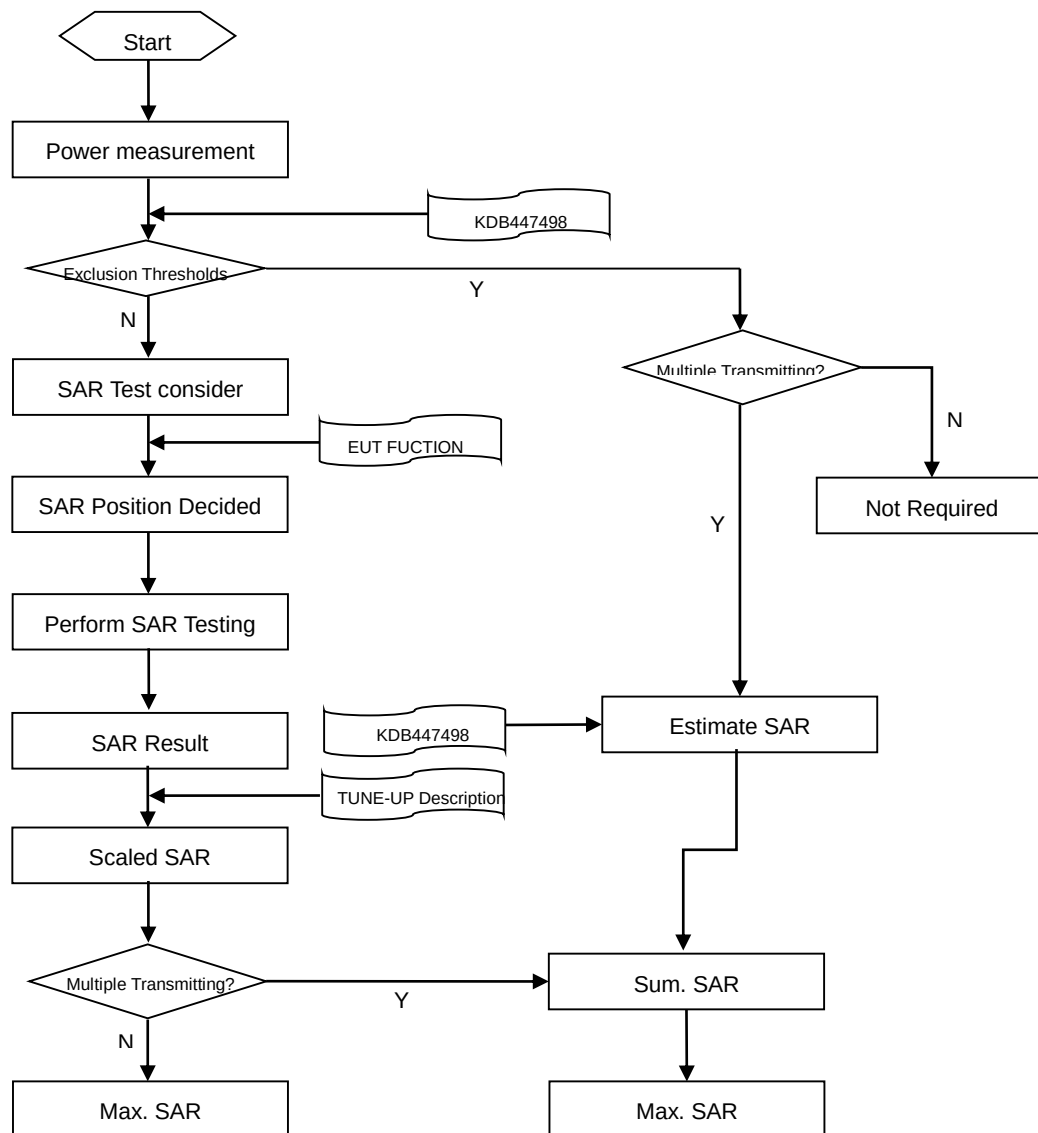
Body accessories that do not contain metallic or conductive components may be tested according to worst-case exposure configurations, typically according to the smallest test separation distance required for the group of Body accessories with similar operating and exposure characteristics. All Body accessories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

Body accessory SAR compliance is based on a single minimum test separation distance for all wireless and operating modes applicable to each Body accessory used by the host, and according to the relevant voice and/or data mode transmissions and operations. If a Body accessory supports voice only operations in its normal and expected use conditions, testing of data mode for Body compliance is not required. A conservative minimum test separation distance for supporting off-the-shelf Body accessories that may be acquired by users of consumer handsets is used to test for Body 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 accessories, will be tested using a conservative minimum test separation distance ≤ 15 mm to support compliance.



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 or 10 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 IEC/IEEE 62209-1528:2020.

Area scan Parameter	$\leq 3\text{GHz}$	$3\text{ GHz} < f \leq 10\text{ GHz}$
Maximum distance between the measured points (geometric centre of the sensors) and the inner phantom surface	$5 \pm 1\text{ mm}$	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5\text{ mm}$
Maximum spacing between adjacent measured points in mm	20, or half of the corresponding zoom scan length, whichever is smaller	$60 / f$, or half of the corresponding zoom scan length, whichever is smaller
Maximum angle between the probe axis and the phantom surface normal	5° (flat phantom only) 30° (other phantoms)	5° (flat phantom only) 20° (other phantoms)
Tolerance in the probe angle	1°	1°
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium.		

Zoom scan Parameter	$\leq 3\text{GHz}$	$3\text{ GHz} < f \leq 10\text{ GHz}$
Maximum distance between the closest measured points and the phantom surface	5 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2)$ mm
Maximum angle between the probe axis and the phantom surface normal	5° (flat phantom only) 30° (other phantoms)	5° (flat phantom only) 20° (other phantoms)
Maximum spacing between measured points in the x- and y-directions (Δx and Δy , in mm)	8 mm	$24 / f$ mm
For uniform grids: Maximum spacing between measured points in the direction normal to the phantom shell	5 mm	$10 / (f - 1)$
For graded grids: Maximum spacing between the two closest measured points in the direction normal to the phantom shell	4 mm	$12 / f$ mm
For graded grids: Maximum incremental increase in the spacing between measured points in the direction normal to the phantom shell	1.5 mm	1.5 mm
Minimum edge length of the zoom scan volume in the x- and y-directions	30 mm	22 mm
Minimum edge length of the zoom scan volume in the direction normal to the phantom shell	30 mm	22 mm
Tolerance in the probe angle	1°	1°
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium.		

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 1 g or 10 g. Area scan and zoom scan resolution setting follows IEC/IEEE 62209-1528:2020 quoted below.

When the 1 g or 10 g SAR of the highest peak is within 2 dB of the SAR limit, additional zoom scans are required for other peaks within 2 dB of the highest peak that have not been included in any zoom scan to ensure there is no increase in SAR

8 CONDUCTED RF OUTPUT POWER

8.1 LTE CAT-M

Please refer the document “BL-SH2580953-AP List.pdf”.

8.2 LTE NB-IoT

Please refer the document “BL-SH2580953-AP List.pdf”.

8.3 WIFI

8.3.1 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	13.41	14.00	Yes
		6	2437	13.88	14.50	Yes
		11	2462	13.75	14.50	Yes
	802.11g	1	2412	8.73	9.50	No
		6	2437	13.57	14.00	No
		11	2462	8.97	9.50	No
	802.11n(HT20)	1	2412	8.52	9.50	No
		6	2437	12.26	13.00	No
		11	2462	8.61	9.50	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.

8.3.2 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	8.04	9.00	No
		44	5220	8.13	9.00	No
		48	5240	7.87	8.50	No
	802.11n(HT20)	36	5180	8.59	9.50	Yes
		44	5220	7.91	8.50	Yes
		48	5240	7.53	8.50	Yes
5.3 (5.25~5.35)	802.11a	52	5260	7.67	8.50	Yes
		60	5300	8.09	9.00	Yes
		64	5320	8.80	9.50	Yes
	802.11n(HT20)	52	5260	7.44	8.00	No
		60	5300	7.87	8.50	No
		64	5320	8.61	9.50	No
5.6 (5.47~5.725)	802.11a	100	5500	6.66	7.50	Yes
		116	5580	10.04	11.00	Yes
		140	5700	8.08	9.00	Yes
	802.11n(HT20)	100	5500	6.55	7.50	No
		116	5580	10.05	11.00	No
		140	5700	7.81	8.50	No
5.8 (5.725~5.850)	802.11a	149	5745	10.83	11.50	Yes
		157	5785	10.91	11.50	Yes
		165	5825	9.26	10.00	Yes
	802.11n(HT20)	149	5745	10.66	11.50	No
		157	5785	10.56	11.50	No
		165	5825	9.63	10.50	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) When the same maximum output power is specified for both bands, begin SAR measurement in U-NII-2A band by applying the OFDM SAR requirements. If the highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for U-NII-1 band for that configuration (802.11 mode and exposure condition); otherwise, each band is tested independently for SAR.

2) The largest channel bandwidth configuration is selected among the multiple configurations in a frequency band with the same maximum tune-up output power.

3) When multiple transmission modes (802.11a/g/n/ac) 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., 802.11a is chosen over 802.11n then 802.11ac.

8.4 Bluetooth

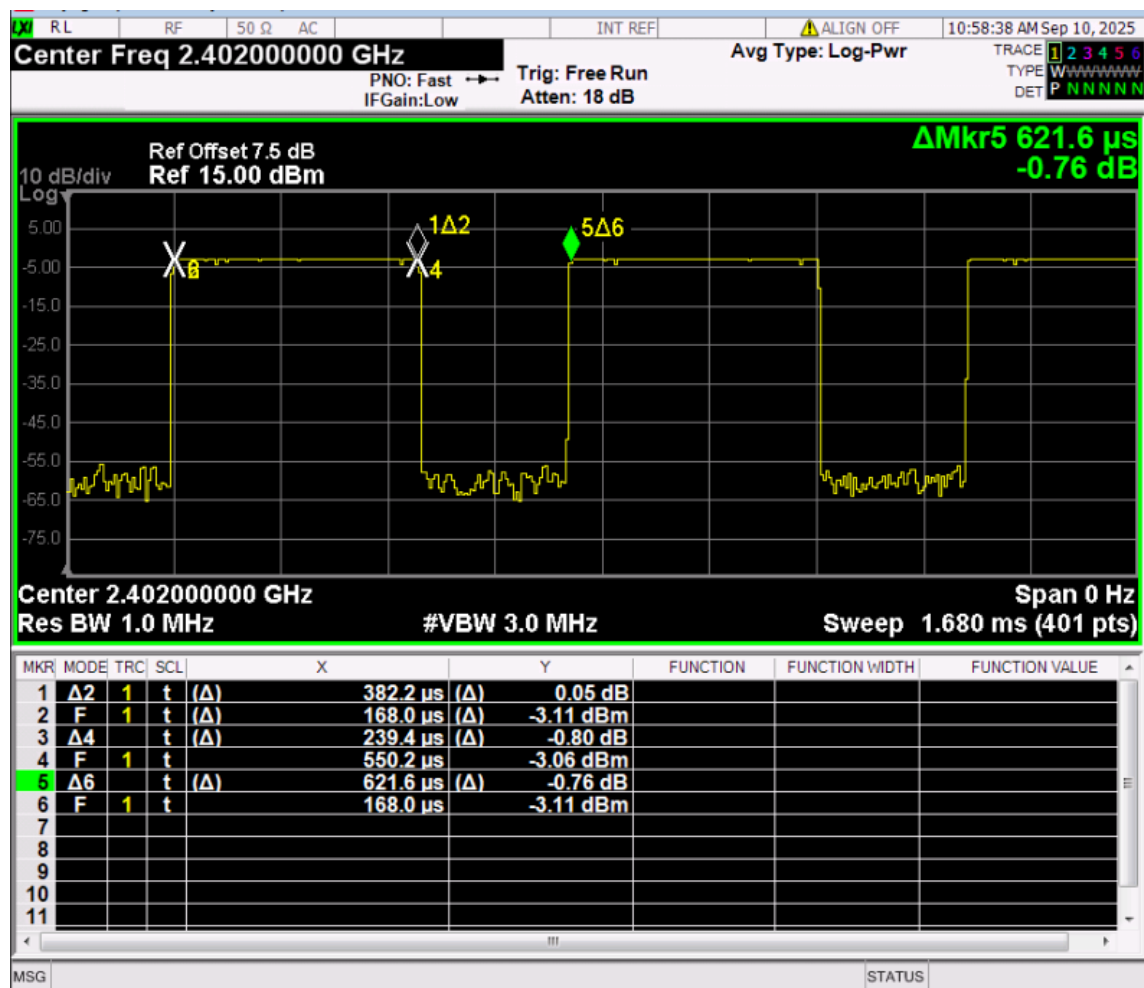
8.4.1 Bluetooth output Power

Mode	BLE-1Mbps			BLE-2Mbps		
Channel	0	19	39	0	19	39
Frequency (MHz)	2402	2440	2480	2402	2440	2480
EIRP (dBm)	-3.62	-3.30	-2.86	/	/	/
Tune-Up Limit (dBm)	-2.50	-2.50	-2.00	/	/	/
SAR Test Require	Yes	Yes	Yes	/	/	/

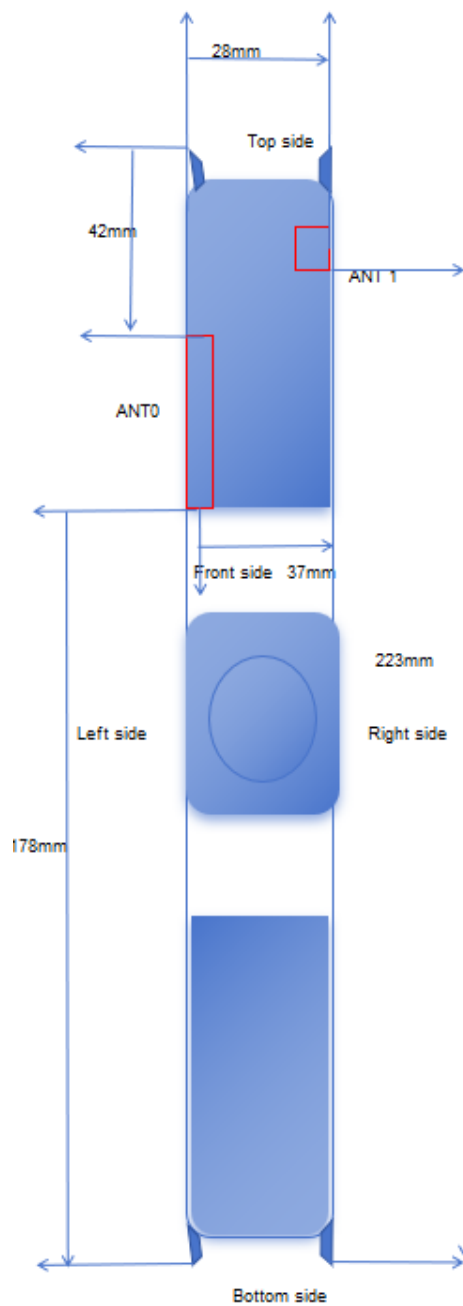
Note 1: Since bluetooth BR mode is the maximum output power mode, SAR measurements were performed with test software using DH5 modulation, and SAR measurement is not required for the EDR and LE. When the secondary mode is $\leq \frac{1}{4}$ dB higher than the primary mode.

8.4.2 Bluetooth Duty Cycle

The Bluetooth duty cycle is 61.79% 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 TEST EXCLUSION CONSIDERATION



<Front View>

Antenna	Support Bands
ANT0	LTE CAT-M 2/4/5/12/13/25/26/66 LTE NB-IoT 2/4/5/12/13/25/66
ANT1	BT/2.4G WIFI /5G WIFI

10 TEST RESULT

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

10.1LTE Band 2

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/ kg)	Meas. Power (dBm)	Max. tune-up power(d Bm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANTO	CAT-M QPSK- 20MHz	Front side	0	18900	1880	1	0	0.08	0.261	22.59	23.50	1.233	0.322	1
		Back side		18900	1880	1	0	0.18	0.215	22.59	23.50	1.233	0.265	/
		Left side		18900	1880	1	0	-0.15	0.173	22.59	23.50	1.233	0.213	/
		Right side		18900	1880	1	0	-0.01	0.059	22.59	23.50	1.233	0.073	/
		Front side		18700	1860	1	0	-0.14	0.202	22.56	23.50	1.242	0.251	/
		Front side		19100	1900	1	0	0.09	0.217	22.45	23.50	1.274	0.276	/
ANTO	CAT-M QPSK- 20MHz	Front side	0	18900	1880	6	0	0.12	0.175	22.57	23.50	1.239	0.217	/
		Back side		18900	1880	6	0	0.19	0.168	22.57	23.50	1.239	0.208	/
		Left side		18900	1880	6	0	0.03	0.093	22.57	23.50	1.239	0.115	/
		Right side		18900	1880	6	0	-0.18	0.021	22.57	23.50	1.239	0.026	/
		Front side		18700	1860	6	0	0.02	0.153	22.54	23.50	1.247	0.191	/
		Front side		19100	1900	6	0	-0.11	0.170	22.44	23.50	1.276	0.217	/
ANTO	NB-IOT QPSK- 15kHz	Front side	0	18900	1880	1	0	0.05	0.313	22.53	23.50	1.250	0.391	2
		Back side		18900	1880	1	0	-0.02	0.208	22.53	23.50	1.250	0.260	/
		Left side		18900	1880	1	0	-0.18	0.165	22.53	23.50	1.250	0.206	/
		Right side		18900	1880	1	0	-0.18	0.051	22.53	23.50	1.250	0.064	/
		Front side		18601	1850.1	1	0	-0.06	0.195	22.14	23.50	1.368	0.267	/
		Front side		19199	1909.9	1	0	0.01	0.210	22.36	23.50	1.300	0.273	/
ANTO	NB-IOT QPSK- 15kHz	Front side	0	18900	1880	12	0	0.01	0.167	22.49	23.50	1.262	0.211	/
		Back side		18900	1880	12	0	-0.12	0.160	22.49	23.50	1.262	0.202	/
		Left side		18900	1880	12	0	-0.08	0.085	22.49	23.50	1.262	0.107	/
		Right side		18900	1880	12	0	0.1	0.050	22.49	23.50	1.262	0.063	/
		Front side		18601	1850.1	12	0	0.18	0.145	22.43	23.50	1.279	0.186	/
		Front side		19199	1909.9	12	0	0.05	0.162	22.32	23.50	1.312	0.213	/

10.2LTE Band 4

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/ kg)	Meas. Power (dBm)	Max. tune-up power(d Bm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANTO	CAT-M QPSK- 20MHz	Front side	0	20175	1732.5	1	0	0.06	0.253	23.17	24.00	1.211	0.306	/
		Back side		20175	1732.5	1	0	-0.01	0.280	23.17	24.00	1.211	0.338	/
		Left side		20175	1732.5	1	0	-0.16	0.134	23.17	24.00	1.211	0.162	/
		Right side		20175	1732.5	1	0	-0.03	0.077	23.17	24.00	1.211	0.093	/
		Back side		20050	1720	1	0	0.16	0.270	22.74	24.00	1.337	0.361	/
		Back side		20300	1745	1	0	-0.16	0.323	23.12	24.00	1.225	0.396	3
ANTO	CAT-M QPSK- 20MHz	Front side	0	20175	1732.5	6	0	-0.11	0.203	23.11	24.00	1.227	0.249	/
		Back side		20175	1732.5	6	0	0.13	0.230	23.11	24.00	1.227	0.282	/
		Left side		20175	1732.5	6	0	-0.01	0.084	23.11	24.00	1.227	0.103	/
		Right side		20175	1732.5	6	0	-0.02	0.027	23.11	24.00	1.227	0.033	/
		Back side		20050	1720	6	0	0.09	0.220	23.09	24.00	1.233	0.271	/
		Back side		20300	1745	6	0	0.09	0.235	22.91	24.00	1.285	0.302	/
ANTO	NB-IOT QPSK- 15kHz	Front side	0	20175	1732.5	1	0	0.15	0.260	22.30	23.00	1.175	0.305	/
		Back side		20175	1732.5	1	0	-0.06	0.287	22.30	23.00	1.175	0.337	/
		Left side		20175	1732.5	1	0	-0.09	0.141	22.30	23.00	1.175	0.166	/
		Right side		20175	1732.5	1	0	0.1	0.084	22.30	23.00	1.175	0.099	/
		Back side		19951	1710.1	1	0	0.08	0.277	22.22	23.00	1.197	0.331	/
		Back side		20399	1754.9	1	0	0.09	0.291	22.26	23.00	1.186	0.345	4
ANTO	NB-IOT QPSK- 15kHz	Front side	0	20175	1732.5	12	0	-0.15	0.210	22.25	23.00	1.189	0.250	/
		Back side		20175	1732.5	12	0	-0.03	0.237	22.25	23.00	1.189	0.281	/
		Left side		20175	1732.5	12	0	0.19	0.091	22.25	23.00	1.189	0.108	/
		Right side		20175	1732.5	12	0	-0.12	0.034	22.25	23.00	1.189	0.040	/
		Back side		19951	1710.1	12	0	-0.04	0.227	22.23	23.00	1.194	0.271	/
		Back side		20399	1754.9	12	0	-0.07	0.242	22.21	23.00	1.199	0.290	/

10.3LTE Band 5

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/ kg)	Meas. Power (dBm)	Max. tune-up power(d Bm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANT0	CAT-M QPSK- 10MHz	Front side	0	20525	836.5	1	0	-0.16	0.058	22.64	23.50	1.219	0.071	/
		Back side		20525	836.5	1	0	0.17	0.064	22.64	23.50	1.219	0.078	5
		Left side		20525	836.5	1	0	-0.19	0.047	22.64	23.50	1.219	0.057	/
		Right side		20525	836.5	1	0	0.09	0.042	22.64	23.50	1.219	0.051	/
		Back side		20450	829	1	0	-0.14	0.055	22.62	23.50	1.225	0.068	/
		Back side		20600	844	1	0	0.13	0.058	22.57	23.50	1.239	0.072	/
ANT0	CAT-M QPSK- 10MHz	Front side	0	20525	836.5	6	0	-0.08	0.047	22.63	23.50	1.222	0.057	/
		Back side		20525	836.5	6	0	0.12	0.063	22.63	23.50	1.222	0.077	/
		Left side		20525	836.5	6	0	-0.14	0.036	22.63	23.50	1.222	0.044	/
		Right side		20525	836.5	6	0	0.06	0.031	22.63	23.50	1.222	0.038	/
		Back side		20450	829	6	0	-0.12	0.054	22.53	23.50	1.250	0.068	/
		Back side		20600	844	6	0	-0.02	0.057	22.56	23.50	1.242	0.071	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	20525	836.5	1	0	0.19	0.063	22.68	23.50	1.208	0.076	/
		Back side		20525	836.5	1	0	-0.01	0.072	22.68	23.50	1.208	0.087	6
		Left side		20525	836.5	1	0	-0.11	0.052	22.68	23.50	1.208	0.063	/
		Right side		20525	836.5	1	0	-0.19	0.047	22.68	23.50	1.208	0.057	/
		Back side		20401	824.1	1	0	0.18	0.070	22.61	23.50	1.227	0.086	/
		Back side		20649	848.9	1	0	0.1	0.066	22.52	23.50	1.253	0.083	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	20525	836.5	12	0	-0.14	0.052	22.58	23.50	1.236	0.064	/
		Back side		20525	836.5	12	0	-0.09	0.069	22.58	23.50	1.236	0.085	/
		Left side		20525	836.5	12	0	-0.03	0.041	22.58	23.50	1.236	0.051	/
		Right side		20525	836.5	12	0	0.17	0.036	22.58	23.50	1.236	0.044	/
		Back side		20401	824.1	12	0	-0.14	0.059	22.52	23.50	1.253	0.074	/
		Back side		20649	848.9	12	0	-0.05	0.062	22.54	23.50	1.247	0.077	/

10.4LTE Band 12

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/ kg)	Meas. Power (dBm)	Max. tune-up power(d Bm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANT0	CAT-M QPSK- 10MHz	Front side	0	23095	707.5	1	0	0.16	0.072	21.80	22.50	1.175	0.084	7
		Back side		23095	707.5	1	0	-0.13	0.051	21.80	22.50	1.175	0.060	/
		Left side		23095	707.5	1	0	-0.09	0.062	21.80	22.50	1.175	0.073	/
		Right side		23095	707.5	1	0	0.17	0.025	21.80	22.50	1.175	0.029	/
		Front side		23060	704	1	0	0.07	0.065	21.44	22.50	1.276	0.083	/
		Front side		23130	711	1	0	-0.1	0.070	21.77	22.50	1.183	0.083	/
ANT0	CAT-M QPSK- 10MHz	Front side	0	23095	707.5	6	0	0.19	0.067	21.76	22.50	1.186	0.079	/
		Back side		23095	707.5	6	0	0.17	0.041	21.76	22.50	1.186	0.049	/
		Left side		23095	707.5	6	0	0.12	0.052	21.76	22.50	1.186	0.062	/
		Right side		23095	707.5	6	0	-0.15	0.015	21.76	22.50	1.186	0.018	/
		Front side		23060	704	6	0	-0.1	0.055	21.42	22.50	1.282	0.071	/
		Front side		23130	711	6	0	0.08	0.065	21.72	22.50	1.197	0.078	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	23095	707.5	1	0	0.06	0.078	22.95	24.00	1.274	0.099	8
		Back side		23095	707.5	1	0	-0.15	0.057	22.95	24.00	1.274	0.073	/
		Left side		23095	707.5	1	0	0.09	0.068	22.95	24.00	1.274	0.087	/
		Right side		23095	707.5	1	0	0.03	0.031	22.95	24.00	1.274	0.039	/
		Front side		23011	699	1	0	-0.03	0.071	22.89	24.00	1.291	0.092	/
		Front side		23179	715.9	1	0	-0.19	0.076	22.90	24.00	1.288	0.098	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	23095	707.5	12	0	0.01	0.073	22.89	24.00	1.291	0.094	/
		Back side		23095	707.5	12	0	-0.17	0.047	22.89	24.00	1.291	0.061	/
		Left side		23095	707.5	12	0	-0.07	0.058	22.89	24.00	1.291	0.075	/
		Right side		23095	707.5	12	0	-0.1	0.021	22.89	24.00	1.291	0.027	/
		Front side		23011	699	12	0	0.14	0.061	22.78	24.00	1.324	0.081	/
		Front side		23179	715.9	12	0	0.18	0.071	22.84	24.00	1.306	0.093	/

10.5LTE Band 13

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/ kg)	Meas. Power (dBm)	Max. tune-up power(d Bm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANT0	CAT-M QPSK- 10MHz	Front side	0	23230	782	1	0	0.09	0.041	22.53	23.50	1.250	0.051	/
		Back side		23230	782	1	0	0.03	0.046	22.53	23.50	1.250	0.058	/
		Left side		23230	782	1	0	-0.13	0.077	22.53	23.50	1.250	0.096	9
		Right side		23230	782	1	0	-0.16	0.025	22.53	23.50	1.250	0.031	/
ANT0	CAT-M QPSK- 10MHz	Front side	0	23230	782	6	0	0.01	0.033	22.52	23.50	1.253	0.041	/
		Back side		23230	782	6	0	0.12	0.038	22.52	23.50	1.253	0.048	/
		Left side		23230	782	6	0	-0.19	0.045	22.52	23.50	1.253	0.056	/
		Right side		23230	782	6	0	0.03	0.017	22.52	23.50	1.253	0.021	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	23230	782	1	0	0.06	0.049	22.20	23.00	1.202	0.059	/
		Back side		23230	782	1	0	-0.09	0.054	22.20	23.00	1.202	0.065	/
		Left side		23230	782	1	0	-0.12	0.071	22.20	23.00	1.202	0.085	10
		Right side		23230	782	1	0	-0.01	0.033	22.20	23.00	1.202	0.040	/
		Left side		23181	777	1	0	-0.05	0.062	22.15	23.00	1.216	0.075	/
		Left side		23279	786.9	1	0	0.18	0.068	22.03	23.00	1.250	0.085	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	23230	782	12	0	-0.12	0.041	22.19	23.00	1.205	0.049	/
		Back side		23230	782	12	0	-0.17	0.046	22.19	23.00	1.205	0.055	/
		Left side		23230	782	12	0	-0.07	0.053	22.19	23.00	1.205	0.064	/
		Right side		23230	782	12	0	0.09	0.025	22.19	23.00	1.205	0.030	/
		Left side		23181	777	12	0	0.14	0.041	22.14	23.00	1.219	0.050	/
		Left side		23279	786.9	12	0	0.05	0.049	22.13	23.00	1.222	0.060	/
		Left side												

10.6LTE Band 25

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/ kg)	Meas. Power (dBm)	Max. tune-up power(d Bm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANT0	CAT-M QPSK- 20MHz	Front side	0	26365	1882.5	1	0	-0.15	0.255	23.16	24.00	1.213	0.309	11
		Back side		26365	1882.5	1	0	-0.03	0.240	23.16	24.00	1.213	0.291	/
		Left side		26365	1882.5	1	0	0.01	0.139	23.16	24.00	1.213	0.169	/
		Right side		26365	1882.5	1	0	0.05	0.050	23.16	24.00	1.213	0.061	/
		Front side		26140	1860	1	0	0.02	0.214	22.64	24.00	1.368	0.293	/
		Front side		26590	1905	1	0	0.18	0.233	22.87	24.00	1.297	0.302	/
ANT0	CAT-M QPSK- 20MHz	Front side	0	26365	1882.5	6	0	-0.02	0.228	23.04	24.00	1.247	0.284	/
		Back side		26365	1882.5	6	0	-0.04	0.216	23.04	24.00	1.247	0.269	/
		Left side		26365	1882.5	6	0	-0.02	0.115	23.04	24.00	1.247	0.143	/
		Right side		26365	1882.5	6	0	-0.15	0.026	23.04	24.00	1.247	0.032	/
		Front side		26140	1860	6	0	-0.08	0.223	22.95	24.00	1.274	0.284	/
		Front side		26590	1905	6	0	-0.06	0.226	22.69	24.00	1.352	0.306	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	26365	1882.5	1	0	0.03	0.263	23.00	24.00	1.259	0.331	12
		Back side		26365	1882.5	1	0	-0.03	0.249	23.00	24.00	1.259	0.313	/
		Left side		26365	1882.5	1	0	-0.05	0.148	23.00	24.00	1.259	0.186	/
		Right side		26365	1882.5	1	0	-0.07	0.059	23.00	24.00	1.259	0.074	/
		Front side		26041	1850.1	1	0	0.19	0.023	22.51	24.00	1.409	0.033	/
		Front side		26689	1914.9	1	0	0.18	0.241	22.87	24.00	1.297	0.313	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	26365	1882.5	12	0	-0.01	0.237	22.99	24.00	1.262	0.299	/
		Back side		26365	1882.5	12	0	0.1	0.225	22.99	24.00	1.262	0.284	/
		Left side		26365	1882.5	12	0	-0.05	0.124	22.99	24.00	1.262	0.156	/
		Right side		26365	1882.5	12	0	-0.17	0.035	22.99	24.00	1.262	0.044	/
		Front side		26041	1850.1	12	0	0.13	0.196	22.77	24.00	1.327	0.260	/
		Front side		26689	1914.9	12	0	0.1	0.235	22.96	24.00	1.271	0.299	/

10.7LTE Band 26

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/ kg)	Meas. Power (dBm)	Max. tune-up power(d Bm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANT0	CAT-M QPSK- 15MHz	Front side	0	26865	831.5	1	0	0.02	0.052	23.35	24.00	1.161	0.060	/
		Back side		26865	831.5	1	0	0.08	0.048	23.35	24.00	1.161	0.056	/
		Left side		26865	831.5	1	0	0.11	0.045	23.35	24.00	1.161	0.052	/
		Right side		26865	831.5	1	0	-0.07	0.034	23.35	24.00	1.161	0.039	/
		Front side		26765	821.5	1	0	0.09	0.062	22.90	24.00	1.288	0.080	/
		Front side		26965	841.5	1	0	0.08	0.077	23.32	24.00	1.169	0.090	13
ANT0	CAT-M QPSK- 15MHz	Front side	0	26865	831.5	6	0	0.15	0.043	22.83	24.00	1.309	0.056	/
		Back side		26865	831.5	6	0	0.07	0.039	22.83	24.00	1.309	0.051	/
		Left side		26865	831.5	6	0	0.13	0.036	22.83	24.00	1.309	0.047	/
		Right side		26865	831.5	6	0	-0.1	0.025	22.83	24.00	1.309	0.033	/
		Front side		26765	821.5	6	0	0.15	0.053	22.72	24.00	1.343	0.071	/
		Front side		26965	841.5	6	0	-0.18	0.056	22.82	24.00	1.312	0.074	/

10.8LTE Band 66

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	RB Num.	RB Start	Power Drift (dB)	1 g Meas SAR(W/ kg)	Meas. Power (dBm)	Max. tune-up power(d Bm)	Scaling Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANT0	CAT-M QPSK- 20MHz	Front side	0	132322	1745	1	0	0.18	0.260	23.21	24.00	1.199	0.312	/
		Back side		132322	1745	1	0	0.14	0.292	23.21	24.00	1.199	0.350	14
		Left side		132322	1745	1	0	-0.06	0.138	23.21	24.00	1.199	0.166	/
		Right side		132322	1745	1	0	0.09	0.080	23.21	24.00	1.199	0.096	/
		Back side		132072	1720	1	0	0.12	0.236	22.60	24.00	1.380	0.326	/
		Back side		132572	1770	1	0	-0.1	0.260	22.89	24.00	1.291	0.336	/
ANT0	CAT-M QPSK- 20MHz	Front side	0	132322	1745	6	0	0.14	0.229	22.89	24.00	1.291	0.296	/
		Back side		132322	1745	6	0	-0.1	0.256	22.89	24.00	1.291	0.331	/
		Left side		132322	1745	6	0	0.14	0.107	22.89	24.00	1.291	0.138	/
		Right side		132322	1745	6	0	0.05	0.049	22.89	24.00	1.291	0.063	/
		Back side		132072	1720	6	0	-0.16	0.243	22.81	24.00	1.315	0.320	/
		Back side		132572	1770	6	0	0.02	0.256	22.82	24.00	1.312	0.336	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	132322	1745	1	0	-0.18	0.270	22.15	23.00	1.216	0.328	/
		Back side		132322	1745	1	0	0.07	0.292	22.15	23.00	1.216	0.355	15
		Left side		132322	1745	1	0	-0.02	0.148	22.15	23.00	1.216	0.180	/
		Right side		132322	1745	1	0	0.02	0.090	22.15	23.00	1.216	0.109	/
		Back side		131973	1710.1	1	0	-0.16	0.284	22.11	23.00	1.227	0.349	/
		Back side		132671	1779.9	1	0	0.07	0.028	22.10	23.00	1.230	0.034	/
ANT0	NB-IoT QPSK- 15kHz	Front side	0	132322	1745	12	0	-0.13	0.239	22.11	23.00	1.227	0.293	/
		Back side		132322	1745	12	0	0.04	0.266	22.11	23.00	1.227	0.326	/
		Left side		132322	1745	12	0	0.17	0.117	22.11	23.00	1.227	0.144	/
		Right side		132322	1745	12	0	0.05	0.059	22.11	23.00	1.227	0.072	/
		Back side		131973	1710.1	12	0	-0.01	0.253	22.08	23.00	1.236	0.313	/
		Back side		132671	1779.9	12	0	-0.13	0.265	22.02	23.00	1.253	0.332	/

10.9 Bluetooth

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/kg)	Meas. Power (dBm)	Max. tune-up power(dBm)	Scaling Factor	Duty cycle(%)	Duty Factor	1g Scaled SAR (W/kg)	Meas No.
Body														
ANT1	BLE	Front side	0	39	2480	0.05	0.197	-2.86	-2.00	1.218	61.49	1.626	0.390	16
		Back side		39	2480	0.08	0.054	-2.86	-2.00	1.218	61.49	1.626	0.107	/
		Left side		39	2480	0.13	0.037	-2.86	-2.00	1.218	61.49	1.626	0.073	/
		Right side		39	2480	-0.02	0.031	-2.86	-2.00	1.218	61.49	1.626	0.061	/
		Front side		0	2402	-0.09	0.160	-3.62	-2.50	1.293	61.49	1.626	0.336	/
		Front side		19	2440	0.07	0.178	-3.30	-2.50	1.201	61.49	1.626	0.348	/

10.10 WIFI 2.4GHz

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR(W/k g)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	Duty cycle (%)	Duty Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANT1	802.11b	Front side	0	6	2437	-0.10	0.337	13.88	14.50	1.153	96.52	1.036	0.403	/
		Back side		6	2437	-0.10	0.150	13.88	14.50	1.153	96.52	1.036	0.179	/
		Left side		6	2437	0.15	0.085	13.88	14.50	1.153	96.52	1.036	0.102	/
		Right side		6	2437	0.02	0.070	13.88	14.50	1.153	96.52	1.036	0.084	/
		Front side		1	2412	0.11	0.322	13.41	14.00	1.146	96.52	1.036	0.382	/
		Front side		11	2462	0.03	0.416	13.75	14.50	1.189	96.52	1.036	0.512	17

10.11 WIFI 5GHz

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	1 g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune- up power (dBm)	Scaling Factor	Duty cycle (%)	Duty Factor	1g Scaled SAR (W/kg)	Meas. No.
Body														
ANT1	802.11n (HT20)	Front side	0	36	5180	-0.12	0.211	8.59	9.50	1.233	90.63	1.103	0.287	/
		Back side		36	5180	0.07	0.080	8.59	9.50	1.233	90.63	1.103	0.109	/
		Left side		36	5180	0.01	0.070	8.59	9.50	1.233	90.63	1.103	0.095	/
		Right side		36	5180	0.07	0.065	8.59	9.50	1.233	90.63	1.103	0.088	/
		Front side		44	5220	-0.18	0.350	7.91	8.50	1.146	90.63	1.103	0.442	/
		Front side		48	5240	-0.07	0.393	7.53	8.50	1.250	90.63	1.103	0.542	18
ANT1	802.11a	Front side	0	64	5320	0.18	0.277	8.80	9.50	1.175	91.50	1.093	0.356	/
		Back side		64	5320	-0.07	0.078	8.80	9.50	1.175	91.50	1.093	0.100	/
		Left side		64	5320	-0.14	0.070	8.80	9.50	1.175	91.50	1.093	0.090	/
		Right side		64	5320	0.18	0.062	8.80	9.50	1.175	91.50	1.093	0.080	/
		Front side		52	5260	-0.12	0.385	7.67	8.50	1.211	91.50	1.093	0.509	/
		Front side		60	5300	-0.16	0.404	8.09	9.00	1.233	91.50	1.093	0.544	19
ANT1	802.11a	Front side	0	116	5580	0.08	0.412	10.04	11.00	1.247	91.50	1.093	0.562	20
		Back side		116	5580	-0.06	0.100	10.04	11.00	1.247	91.50	1.093	0.136	/
		Left side		116	5580	0.18	0.081	10.04	11.00	1.247	91.50	1.093	0.110	/
		Right side		116	5580	-0.01	0.077	10.04	11.00	1.247	91.50	1.093	0.105	/
		Front side		100	5500	0.04	0.284	6.66	7.50	1.213	91.50	1.093	0.377	/
		Front side		140	5700	-0.14	0.202	8.08	9.00	1.236	91.50	1.093	0.273	/
ANT1	802.11a	Front side	0	157	5785	-0.07	0.497	10.91	11.50	1.146	91.50	1.093	0.622	/
		Back side		157	5785	-0.17	0.156	10.91	11.50	1.146	91.50	1.093	0.195	/
		Left side		157	5785	0.11	0.098	10.91	11.50	1.146	91.50	1.093	0.123	/
		Right side		157	5785	-0.14	0.080	10.91	11.50	1.146	91.50	1.093	0.100	/
		Front side		149	5745	0.19	0.471	10.83	11.50	1.167	91.50	1.093	0.601	/
		Front side		165	5825	-0.11	0.502	9.26	10.00	1.186	91.50	1.093	0.651	21

11 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).

11.1 Simultaneous Transmission Mode Consider

No.	Simultaneous Tx Combination	Body
1	WWAN + WiFi 2.4G	Yes
2	WWAN + WiFi 5G	Yes
3	WWAN + BT	Yes

Note:

1. 2.4G WLAN can't transmit simultaneously with Bluetooth or 5G WLAN.
2. The maximum SAR summation is calculated based on the same configuration and test position.

11.2 Sum Body SAR of Simultaneous Transmission

Band	Mode	Position	Stand alone SAR				SUM SAR		
			1	2	3	4			
			WWAN	2.4GWIFI	5G WIFI	Bluetooth	1+2	1+3	1+4
LTE B2	CAT-M	Front side	0.322	0.512	0.651	0.390	0.834	0.972	0.712
		Back Side	0.265	0.179	0.195	0.107	0.444	0.460	0.372
		Left Side	0.213	0.102	0.195	0.073	0.315	0.409	0.287
		Right Side	0.073	0.084	0.123	0.061	0.156	0.195	0.134
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	NB-IoT	Front side	0.391	0.512	0.651	0.390	0.904	1.042	0.782
		Back Side	0.260	0.179	0.195	0.107	0.439	0.455	0.367
		Left Side	0.206	0.102	0.195	0.073	0.308	0.402	0.280
		Right Side	0.064	0.084	0.123	0.061	0.147	0.186	0.125
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B4	CAT-M	Front side	0.306	0.512	0.651	0.390	0.819	0.957	0.697
		Back Side	0.396	0.179	0.195	0.107	0.575	0.591	0.503
		Left Side	0.162	0.102	0.195	0.073	0.264	0.358	0.236
		Right Side	0.093	0.084	0.123	0.061	0.177	0.216	0.155
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	NB-IoT	Front side	0.305	0.512	0.651	0.390	0.818	0.956	0.696
		Back Side	0.345	0.179	0.195	0.107	0.524	0.540	0.452
		Left Side	0.166	0.102	0.195	0.073	0.267	0.361	0.239
		Right Side	0.099	0.084	0.123	0.061	0.182	0.221	0.160
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B5	CAT-M	Front side	0.071	0.512	0.651	0.390	0.583	0.721	0.461
		Back Side	0.078	0.179	0.195	0.107	0.257	0.273	0.185
		Left Side	0.057	0.102	0.195	0.073	0.159	0.253	0.131
		Right Side	0.051	0.084	0.123	0.061	0.135	0.174	0.113
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	NB-IoT	Front side	0.076	0.512	0.651	0.390	0.588	0.727	0.466
		Back Side	0.087	0.179	0.195	0.107	0.266	0.283	0.194
		Left Side	0.063	0.102	0.195	0.073	0.164	0.258	0.136
		Right Side	0.057	0.084	0.123	0.061	0.140	0.179	0.118
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B12	CAT-M	Front side	0.084	0.512	0.651	0.390	0.597	0.735	0.475

		Back Side	0.060	0.179	0.195	0.107	0.239	0.255	0.167
		Left Side	0.073	0.102	0.195	0.073	0.174	0.268	0.146
		Right Side	0.029	0.084	0.123	0.061	0.113	0.152	0.091
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	NB	Front side	0.099	0.512	0.651	0.390	0.612	0.750	0.490
		Back Side	0.073	0.179	0.195	0.107	0.252	0.268	0.180
		Left Side	0.087	0.102	0.195	0.073	0.188	0.282	0.160
		Right Side	0.039	0.084	0.123	0.061	0.123	0.162	0.101
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B13	CAT-M	Front side	0.051	0.512	0.651	0.390	0.564	0.702	0.442
		Back Side	0.058	0.179	0.195	0.107	0.237	0.253	0.165
		Left Side	0.096	0.102	0.195	0.073	0.198	0.292	0.170
		Right Side	0.031	0.084	0.123	0.061	0.115	0.154	0.093
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	NB-IoT	Front side	0.059	0.512	0.651	0.390	0.571	0.709	0.449
		Back Side	0.065	0.179	0.195	0.107	0.244	0.260	0.172
		Left Side	0.085	0.102	0.195	0.073	0.187	0.281	0.159
		Right Side	0.040	0.084	0.123	0.061	0.123	0.162	0.101
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B25	CAT-M	Front side	0.309	0.512	0.651	0.390	0.822	0.960	0.700
		Back Side	0.291	0.179	0.195	0.107	0.470	0.487	0.398
		Left Side	0.169	0.102	0.195	0.073	0.270	0.364	0.242
		Right Side	0.061	0.084	0.123	0.061	0.144	0.183	0.122
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	NB-IoT	Front side	0.331	0.512	0.651	0.390	0.843	0.982	0.721
		Back Side	0.313	0.179	0.195	0.107	0.493	0.509	0.420
		Left Side	0.186	0.102	0.195	0.073	0.288	0.382	0.260
		Right Side	0.074	0.084	0.123	0.061	0.158	0.197	0.136
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B26	CAT-M	Front side	0.090	0.512	0.651	0.390	0.602	0.741	0.480
		Back Side	0.056	0.179	0.195	0.107	0.235	0.251	0.163
		Left Side	0.052	0.102	0.195	0.073	0.154	0.248	0.126
		Right Side	0.039	0.084	0.123	0.061	0.123	0.162	0.101
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LTE B66	CAT-M	Front side	0.312	0.512	0.651	0.390	0.824	0.962	0.702
		Back Side	0.350	0.179	0.195	0.107	0.530	0.546	0.457

		Left Side	0.166	0.102	0.195	0.073	0.267	0.361	0.239
		Right Side	0.096	0.084	0.123	0.061	0.180	0.219	0.157
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	NB-IoT	Front side	0.328	0.512	0.651	0.390	0.841	0.979	0.719
		Back Side	0.355	0.179	0.195	0.107	0.534	0.550	0.462
		Left Side	0.180	0.102	0.195	0.073	0.282	0.375	0.253
		Right Side	0.109	0.084	0.123	0.061	0.193	0.232	0.171
		Top Side	0.000	0.000	0.105	0.000	0.000	0.105	0.000
		Bottom Side	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Note:

- 1: The simultaneous transmission combinations of the antennas contain combinations of two antennas, so only the worst simultaneous transmission combinations was shown in this table.
- 2: The highest sumed 1g SAR is $1.042 \text{ W/Kg} < 1.6 \text{ W/kg}$, so Simultaneous Transmission SAR test is not required.

12 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	2024/09/02	2027/09/02
5GHz Validation Dipole	Speag	D5GHzV2	1333	2024/09/04	2027/09/04
Data Acquisition Electronics	Speag	DAE4	540	2025/04/21	2026/04/21
E-Field Probe	Speag	EX3DV4	3748	2025/04/24	2026/04/24
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
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
Thermometer	CEM	DT-322	220718792	2025/01/22	2026/01/22
Thermometer	Elitech	RC-4HC	EF7247001260	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	1857	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	Fre. (MHz)	Temp. (°C)	Meas. Conductivity (σ) (S/m)	Meas. Permittivity (ϵ)	Target Conductivity(σ) (S/m)	Target Permittivity (ϵ)	Conductivity Tolerance (%)	Permittivity Tolerance (%)
2025.10.20	750	21.3	0.87	42.78	0.89	41.94	-2.25	2.00
2025.10.20	699.1	21.3	0.85	43.06	0.86	42.58	-1.16	1.13
2025.10.20	704	21.3	0.86	42.95	0.89	42.18	-3.37	1.83
2025.10.20	707.5	21.3	0.88	42.92	0.89	42.16	-1.12	1.80
2025.10.20	711	21.3	0.88	42.90	0.89	42.14	-1.12	1.80
2025.10.20	715.9	21.3	0.89	42.87	0.88	42.12	1.14	1.78
2025.10.20	777.1	21.3	0.88	42.56	0.87	41.88	1.15	1.62
2025.10.20	782	21.3	0.88	42.53	0.90	41.77	-2.22	1.82
2025.10.20	786.9	21.3	0.91	42.45	0.89	41.75	2.25	1.68
2025.10.21	835	21.4	0.90	42.32	0.90	41.50	0.00	1.98
2025.10.21	824.1	21.4	0.90	42.35	0.90	41.55	0.00	1.93
2025.10.21	829	21.4	0.90	42.34	0.90	41.53	0.00	1.95
2025.10.21	836.5	21.4	0.90	42.32	0.90	41.50	0.00	1.98
2025.10.21	848.9	21.4	0.91	42.31	0.87	41.50	4.60	1.95
2025.10.21	821.5	21.4	0.90	42.35	0.88	42.45	2.27	-0.24
2025.10.21	831.5	21.4	0.90	42.33	0.89	42.45	1.12	-0.28
2025.10.21	841.5	21.4	0.91	42.32	0.88	42.36	3.41	-0.09
2025.10.22	1750	21.2	1.38	39.21	1.37	40.08	0.73	-2.17
2025.10.22	1710.1	21.2	1.36	39.45	1.36	40.11	0.00	-1.65
2025.10.22	1720	21.2	1.37	39.38	1.35	40.13	1.48	-1.87
2025.10.22	1732.5	21.2	1.37	39.34	1.36	40.11	0.74	-1.92
2025.10.22	1745	21.2	1.38	39.23	1.37	40.09	0.73	-2.15
2025.10.22	1754.9	21.2	1.39	39.21	1.37	40.10	1.46	-2.22
2025.10.22	1710.1	21.2	1.36	39.45	1.37	40.05	-0.73	-1.50
2025.10.22	1720	21.2	1.37	39.38	1.35	40.13	1.48	-1.87
2025.10.22	1745	21.2	1.38	39.23	1.37	40.09	0.73	-2.15
2025.10.22	1770	21.2	1.40	39.12	1.38	40.05	1.45	-2.32
2025.10.22	1779.9	21.2	1.40	39.10	1.39	40.30	0.72	-2.98
2025.10.23	1900	21.3	1.44	38.93	1.40	40.00	2.86	-2.68
2025.10.23	1850.1	21.3	1.41	38.95	1.40	40.20	0.71	-3.11
2025.10.23	1860	21.3	1.42	38.94	1.40	40.00	1.43	-2.65
2025.10.23	1880	21.3	1.43	38.93	1.40	40.00	2.14	-2.68
2025.10.23	1909.9	21.3	1.44	38.85	1.40	40.00	2.86	-2.88

2025.10.23	1882.5	21.3	1.43	38.93	1.40	40.10	2.14	-2.92
2025.10.23	1905	21.3	1.45	38.92	1.40	40.00	3.57	-2.70
2025.10.23	1914.5	21.3	1.45	38.92	1.40	40.10	3.57	-2.94
2025.10.24	2450	21.0	1.83	38.40	1.80	39.20	1.67	-2.04
2025.10.24	2402	21.0	1.82	38.43	1.76	39.29	3.41	-2.19
2025.10.24	2440	21.0	1.83	38.40	1.79	39.22	2.23	-2.09
2025.10.24	2480	21.0	1.83	38.41	1.83	39.16	0.00	-1.92
2025.10.24	2412	21.0	1.82	38.43	1.77	39.27	2.82	-2.14
2025.10.24	2437	21.0	1.83	38.41	1.79	39.22	2.23	-2.07
2025.10.24	2462	21.0	1.84	38.36	1.81	39.19	1.66	-2.12
2025.10.25	5200	21.1	4.54	35.20	4.66	35.99	-2.58	-2.20
2025.10.25	5180	21.1	4.53	35.23	4.63	36.01	-2.16	-2.17
2025.10.25	5220	21.1	4.56	35.19	4.68	35.97	-2.56	-2.17
2025.10.25	5240	21.1	4.58	35.30	4.70	35.94	-2.55	-1.78
2025.10.25	5300	21.5	4.65	35.20	4.76	35.87	-2.31	-1.87
2025.10.25	5260	21.5	4.62	35.26	4.72	35.92	-2.12	-1.84
2025.10.25	5320	21.5	4.67	35.17	4.78	35.85	-2.30	-1.90
2025.10.26	5600	21.4	4.96	34.58	5.07	35.53	-2.17	-2.67
2025.10.26	5500	21.4	4.95	34.59	4.96	35.64	-0.20	-2.95
2025.10.26	5580	21.4	4.93	34.60	4.94	35.45	-0.20	-2.40
2025.10.26	5700	21.4	4.96	34.53	5.17	35.41	-4.06	-2.49
2025.10.26	5800	21.2	5.16	34.18	5.27	35.30	-2.09	-3.17
2025.10.26	5745	21.2	1.80	34.20	1.80	35.30	0.00	-3.12
2025.10.26	5785	21.2	1.79	34.19	1.80	35.60	-0.56	-3.96
2025.10.26	5825	21.2	1.78	34.12	1.80	35.55	-1.11	-4.02

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	Freq. (MHz)	Power (mW)	1g Meas. SAR (W/kg)	1g Normalized SAR (W/kg)	1g Dipole SAR (W/kg)	1g Dipole. SAR Div. (%)
2025.10.20	750	100	0.847	8.47	8.46	0.12
2025.10.21	835	100	0.986	9.86	9.59	2.82
2025.10.22	1750	100	3.830	38.30	36.50	4.93
2025.10.23	1900	100	4.320	43.20	39.90	8.27
2025.10.24	2450	100	5.490	54.90	52.60	4.37
2025.10.25	5200	100	7.230	72.30	77.80	-7.07
2025.10.25	5300	100	7.260	72.60	79.00	-8.10
2025.10.26	5600	100	8.160	81.60	82.80	-1.45
2025.10.26	5800	100	7.810	78.10	78.50	-0.51

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

System Performance Check Data (750MHz)

Date: 2025/10/20

Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 750$ MHz; $\sigma = 0.873$ S/m; $\epsilon_r = 42.783$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.4°C Liquid Temperature: 21.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(9.14, 9.14, 9.14); Calibrated: 2025/4/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2025/4/21
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 750/Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.16 W/kg

CW 750/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 31.27 V/m; Power Drift = -0.02 dB

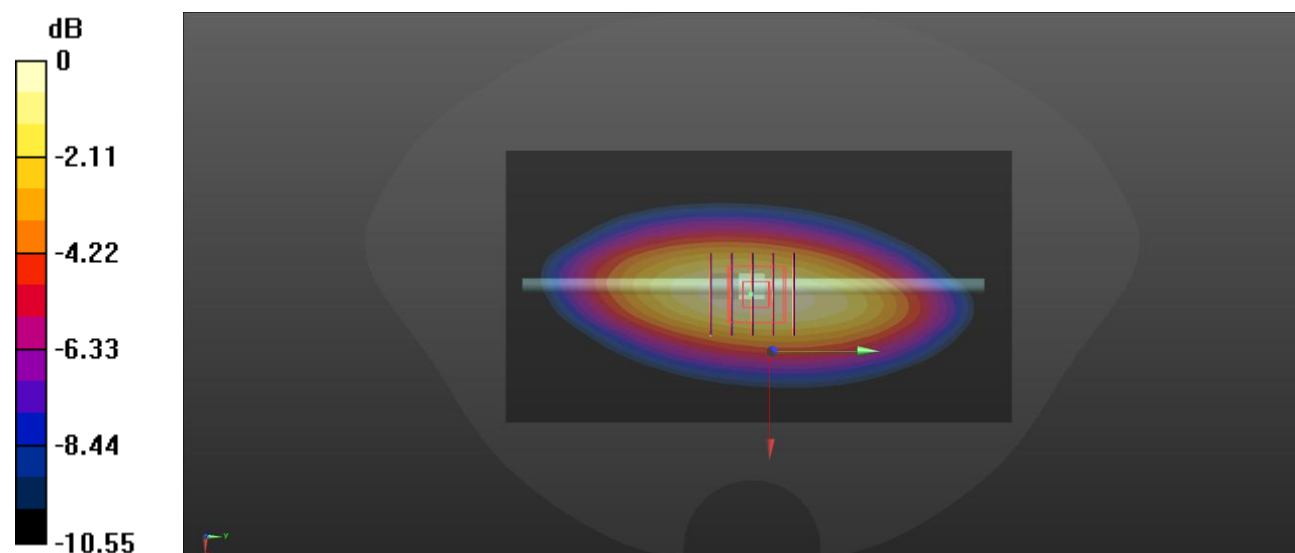
Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.847 W/kg; SAR(10 g) = 0.555 W/kg

Smallest distance from peaks to all points 3 dB below = 16.1 mm

Ratio of SAR at M2 to SAR at M1 = 61.1%

Maximum value of SAR (measured) = 1.18 W/kg



0 dB = 1.18 W/kg

System Performance Check Data (835MHz)

Date: 2025/10/21

Communication System Band: D835 (835.0 MHz); Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835$ MHz; $\sigma = 0.902$ S/m; $\epsilon_r = 42.323$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.3°C Liquid Temperature: 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(8.74, 8.74, 8.74); Calibrated: 2025/4/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2025/4/21
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 835/Area Scan (71x121x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.33 W/kg

CW 835/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 34.33 V/m; Power Drift = -0.18 dB

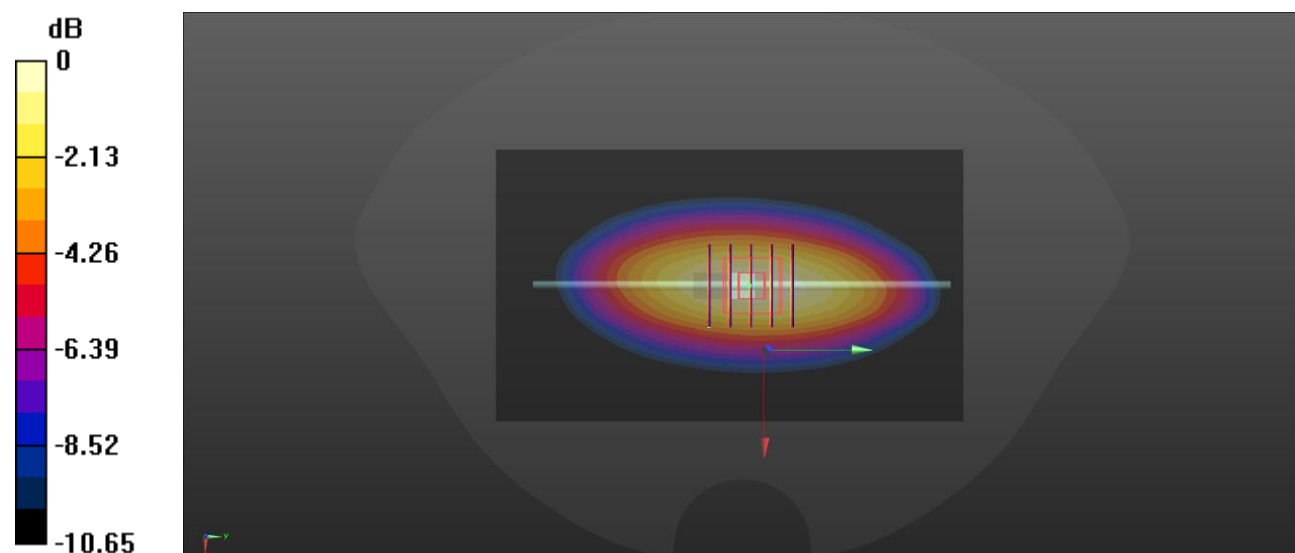
Peak SAR (extrapolated) = 1.58 W/kg

SAR(1 g) = 0.986 W/kg; SAR(10 g) = 0.645 W/kg

Smallest distance from peaks to all points 3 dB below = 16 mm

Ratio of SAR at M2 to SAR at M1 = 62.7%

Maximum value of SAR (measured) = 1.36 W/kg



0 dB = 1.36 W/kg

System Performance Check Data (1750MHz)

Date: 2025/10/22

Communication System Band: D1750 (1750.0 MHz); Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1750$ MHz; $\sigma = 1.382$ S/m; $\epsilon_r = 39.211$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.2°C Liquid Temperature: 21.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.63, 7.63, 7.63); Calibrated: 2025/4/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2025/4/21
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 1750/Area Scan (51x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 6.17 W/kg

CW 1750/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 51.77 V/m; Power Drift = -0.05 dB

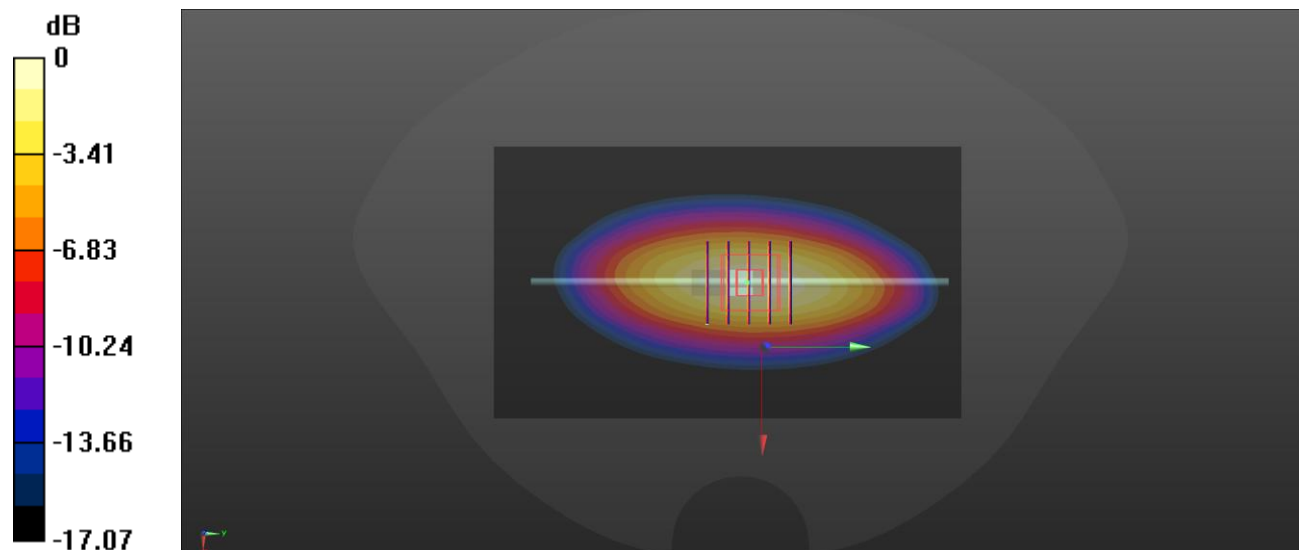
Peak SAR (extrapolated) = 7.28 W/kg

SAR(1 g) = 3.83 W/kg; SAR(10 g) = 2.01 W/kg

Smallest distance from peaks to all points 3 dB below = 9.8 mm

Ratio of SAR at M2 to SAR at M1 = 53%

Maximum value of SAR (measured) = 6.00 W/kg



0 dB = 6.00 W/kg

System Performance Check Data (1900MHz)

Date: 2025/10/23

Communication System Band: D1900 (1900.0 MHz); Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.443$ S/m; $\epsilon_r = 38.928$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.1°C Liquid Temperature: 21.3°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(7.3, 7.3, 7.3); Calibrated: 2025/4/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2025/4/21
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- 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) = 6.98 W/kg

CW 1900/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 57.22 V/m; Power Drift = -0.05 dB

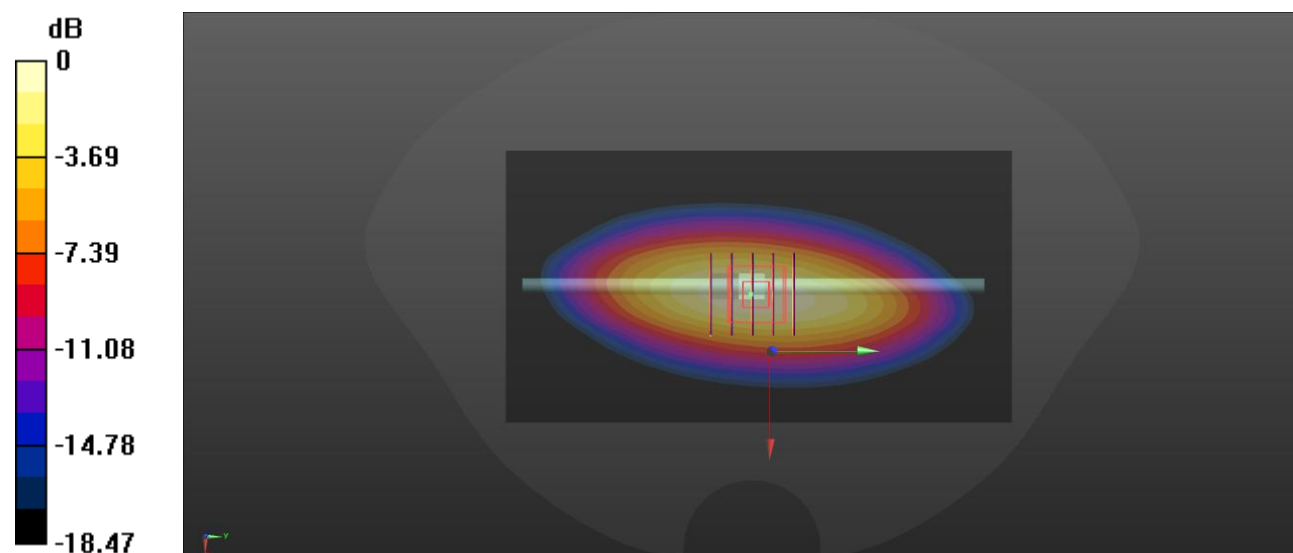
Peak SAR (extrapolated) = 8.25 W/kg

SAR(1 g) = 4.32 W/kg; SAR(10 g) = 2.22 W/kg

Smallest distance from peaks to all points 3 dB below = 9.5 mm

Ratio of SAR at M2 to SAR at M1 = 52.7%

Maximum value of SAR (measured) = 6.78 W/kg



0 dB = 6.78 W/kg

System Performance Check Data (2450MHz)

Date: 2025/10/24

Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.83$ S/m; $\epsilon_r = 38.395$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 21.8°C Liquid Temperature: 21°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(6.9, 6.9, 6.9); Calibrated: 2025/4/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2025/4/21
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 2450/Area Scan (71x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 9.58 W/kg

CW 2450/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 58.18 V/m; Power Drift = -0.04 dB

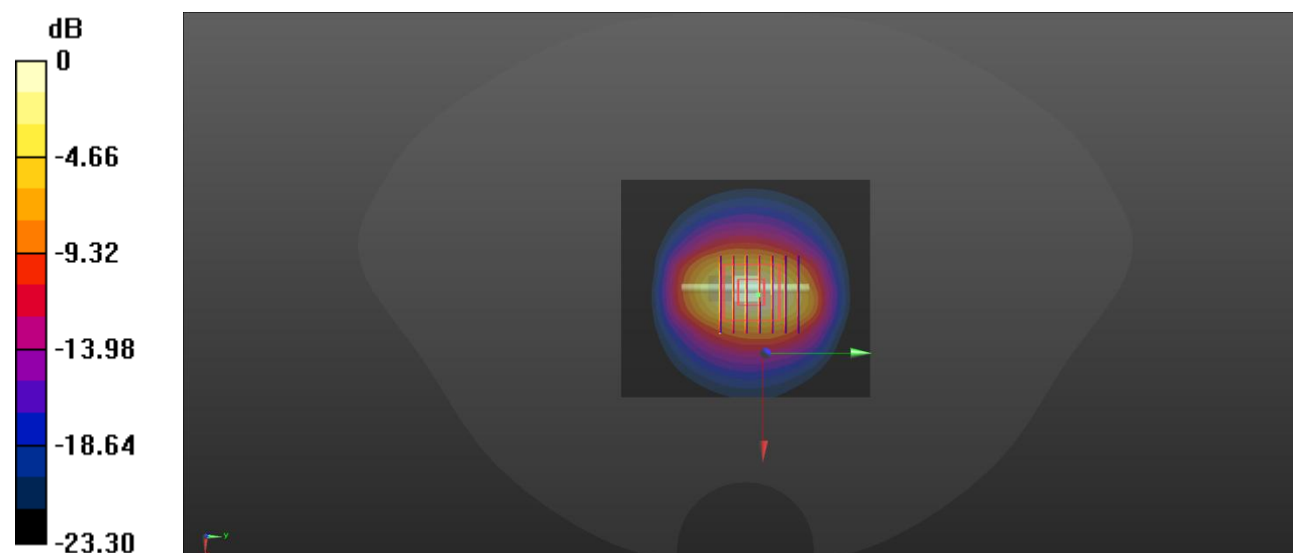
Peak SAR (extrapolated) = 11.6 W/kg

SAR(1 g) = 5.49 W/kg; SAR(10 g) = 2.52 W/kg

Smallest distance from peaks to all points 3 dB below = 8.5 mm

Ratio of SAR at M2 to SAR at M1 = 47.9%

Maximum value of SAR (measured) = 9.22 W/kg



0 dB = 9.22 W/kg

System Performance Check Data (5200MHz)

Date: 2025/10/25

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.542$ S/m; $\epsilon_r = 35.204$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22°C Liquid Temperature: 21.1°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(5, 5, 5); Calibrated: 2025/4/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2025/4/21
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 5200/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 15.3 W/kg

CW 5200/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 29.03 V/m; Power Drift = -0.10 dB

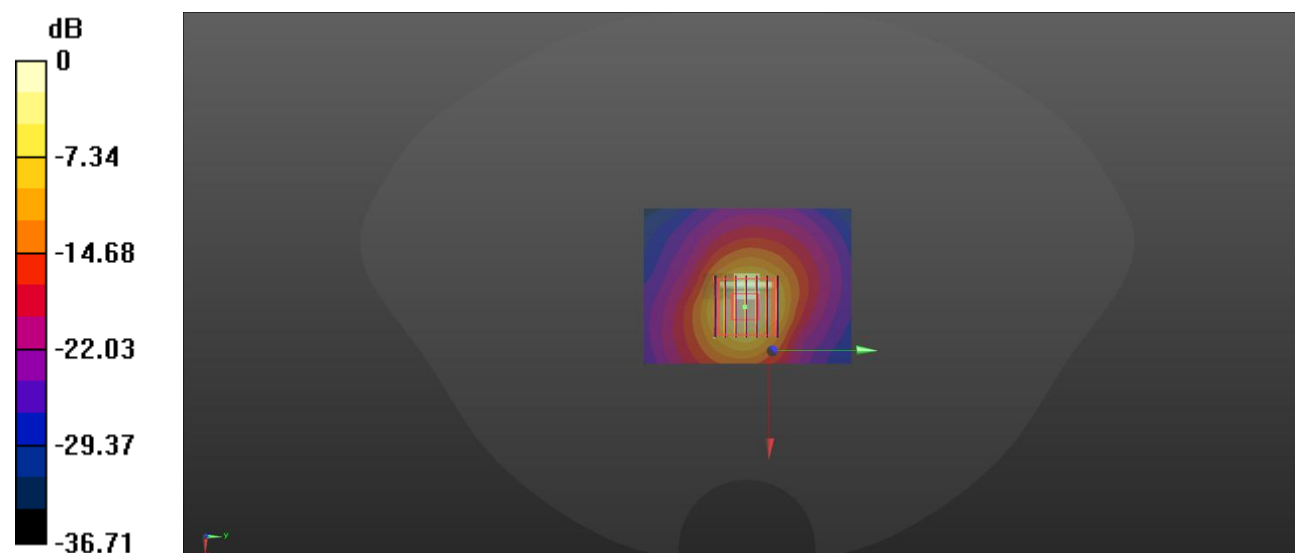
Peak SAR (extrapolated) = 30.3 W/kg

SAR(1 g) = 7.23 W/kg; SAR(10 g) = 2.07 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 53.6%

Maximum value of SAR (measured) = 15.1 W/kg



0 dB = 15.1 W/kg

System Performance Check Data (5300MHz)

Date: 2025/10/25

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.647$ S/m; $\epsilon_r = 35.197$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.5°C Liquid Temperature: 21.5°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.85, 4.85, 4.85); Calibrated: 2025/4/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2025/4/21
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 5300/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 15.1 W/kg

CW 5300/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 39.30 V/m; Power Drift = -0.02 dB

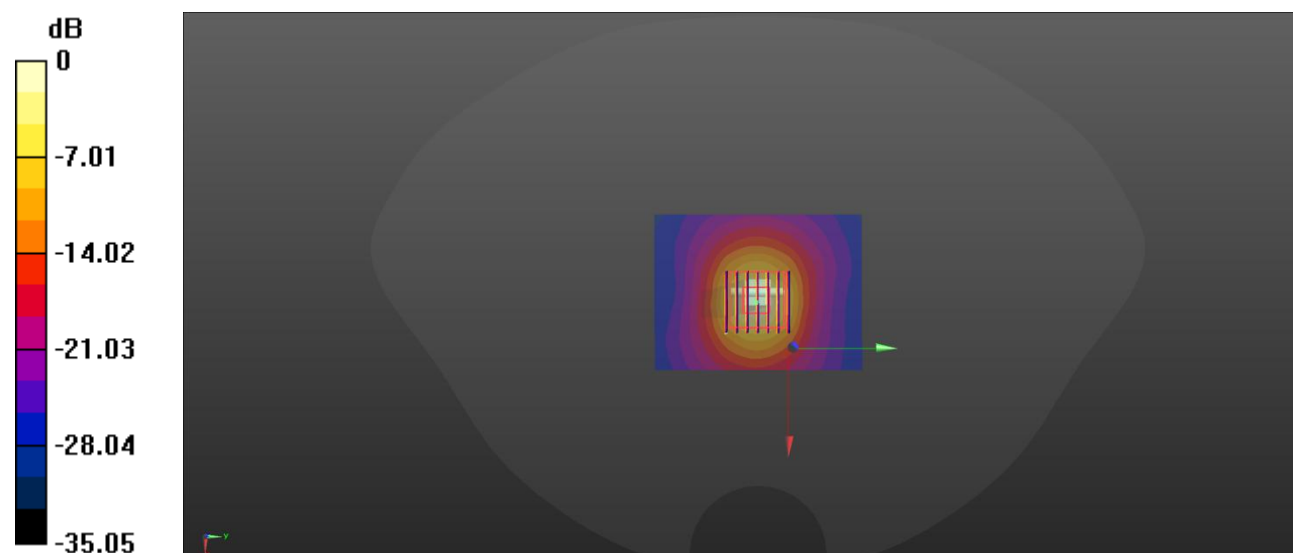
Peak SAR (extrapolated) = 30.8 W/kg

SAR(1 g) = 7.26 W/kg; SAR(10 g) = 2.2 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 53.4%

Maximum value of SAR (measured) = 15.2 W/kg



0 dB = 15.2 W/kg

System Performance Check Data (5600MHz)

Date: 2025/10/26

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5600$ MHz; $\sigma = 4.956$ S/m; $\epsilon_r = 34.579$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.3°C Liquid Temperature: 21.4°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.39, 4.39, 4.39); Calibrated: 2025/4/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2025/4/21
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 5600/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 17.2 W/kg

CW 5600/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 16.21 V/m; Power Drift = -0.18 dB

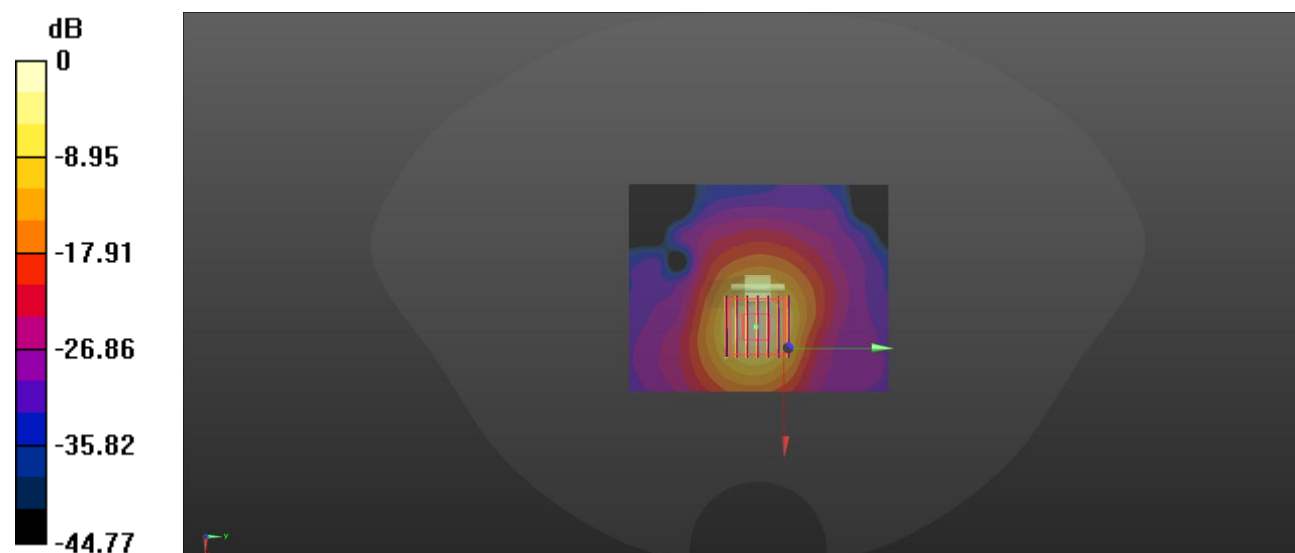
Peak SAR (extrapolated) = 37.9 W/kg

SAR(1 g) = 8.16 W/kg; SAR(10 g) = 2.29 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 50.3%

Maximum value of SAR (measured) = 17.6 W/kg



0 dB = 17.6 W/kg

System Performance Check Data (5800MHz)

Date: 2025/10/26

Communication System Band: D5GHz (5000.0 - 6000.0 MHz); Frequency: 5800 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5800$ MHz; $\sigma = 5.159$ S/m; $\epsilon_r = 34.177$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Ambient Temperature: 22.7°C Liquid Temperature: 21.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3748; ConvF(4.41, 4.41, 4.41); Calibrated: 2025/4/24
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn540; Calibrated: 2025/4/21
- Phantom: Twin-SAM Right V5.0 (20deg probe tilt); Type: QD 000 P40 CD; Serial: 1857
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

CW 5800/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 16.6 W/kg

CW 5800/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 15.70 V/m; Power Drift = -0.18 dB

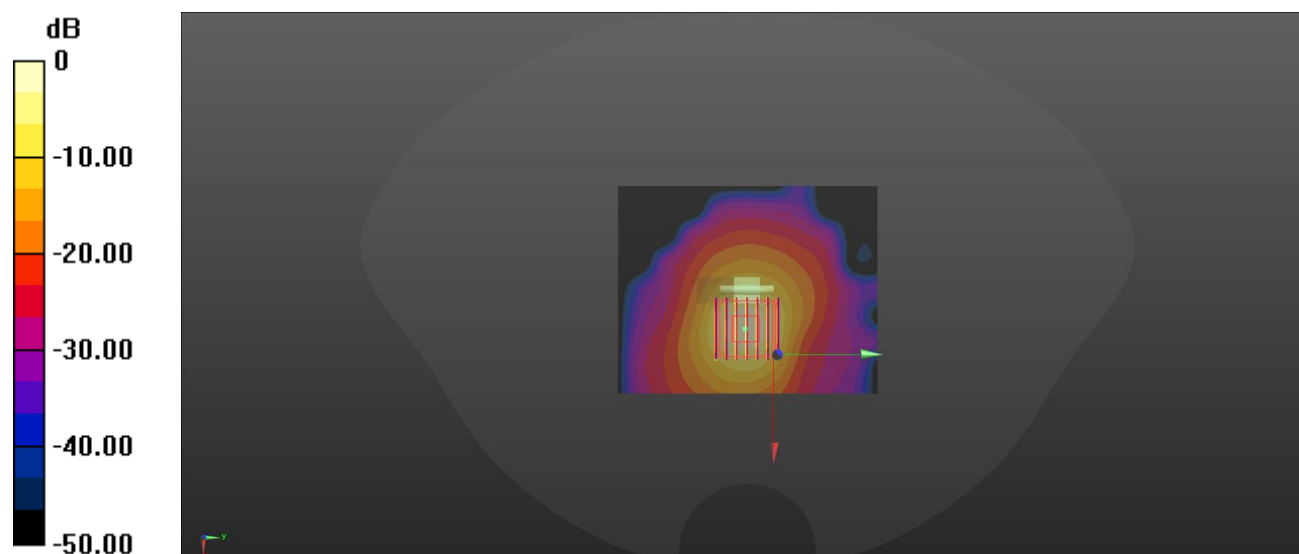
Peak SAR (extrapolated) = 37.7 W/kg

SAR(1 g) = 7.81 W/kg; SAR(10 g) = 2.19 W/kg

Smallest distance from peaks to all points 3 dB below = 7.4 mm

Ratio of SAR at M2 to SAR at M1 = 49%

Maximum value of SAR (measured) = 16.9 W/kg



0 dB = 16.9 W/kg

ANNEX C TEST DATA

Please refer the document “BL-SH2580953-ATD.pdf”.

ANNEX D EUT EXTERNAL PHOTOS

Please refer the document “BL-SH2580953-AW.pdf”.

ANNEX E SAR TEST SETUP PHOTOS

Please refer the document “BL-SH2580953-AS.pdf”.

ANNEX F CALIBRATION REPORT

Please refer the document “BL-SH2580953-AC.pdf”.

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--END OF REPORT--