



# TEST REPORT

**Applicant:** unitech electronics co., ltd.  
**Address:** 5F., No. 136, Ln. 235, Baoqiao Rd., Xindian Dist.,  
New Taipei City 231, Taiwan  
**Equipment Type:** Rugged Handheld Computer  
**Model Name:** PA768e (refer to section 2.3)  
**Brand Name:** unitech  
**FCC ID:** HLE-PA768EBWNWU  
**Test Standard:** ANSI/IEEE C95.1-1992  
(refer to section 3.1)  
**Maximum PD:** 9.24 W/m<sup>2</sup>  
**Sample Arrival Date:** Jun. 03, 2025  
**Test Date:** Sep. 03, 2025  
**Date of Issue:** Sep. 05, 2025

**ISSUED BY:**

Shenzhen BALUN Technology Co., Ltd.

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

### Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Aug. 07, 2025</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Sep. 05, 2025</u>	<u>Retest WIFI 6E SAR and PD, update the report homepage and chapters 3.3, 9, 10, and update ANNEX A&amp;B&amp;E</u>

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# 1 GENERAL INFORMATION

## 1.1 Test Laboratory

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

## 1.2 Test Location

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

## 1.3 Test Environment Condition

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

## 2 PRODUCT INFORMATION

### 2.1 Applicant Information

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

### 2.2 Manufacturer Information

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

### 2.3 General Description for Equipment under Test (EUT)

EUT Name	Rugged Handheld Computer
Model Name Under Test	PA768e
Series Model Name	PA768
Description of Model Name Differentiation	Only differences are model names for trading purpose. (this information provided by the applicant).
Hardware Version	FH22_MB_PCB_V1.2
Software Version	RAYAe_V14.00.00.09_20250517
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

### 2.4 Ancillary Equipment

Ancillary Equipment 1	Battery	
	Brand Name	N/A
	Model No.	1400-900069G
	Serial No.	N/A
	Capacitance	4950mAh
	Rated Voltage	3.85V
	Limited Voltage	N/A
	Manufacturer	LiFun Technology Corporation Ltd

## 2.5 Technical Information

Network and Wireless connectivity	2G Network GPRS/EDGE 850/900/1800/1900 MHz 3G Network WCDMA/HSDPA/HSUPA/DC-HSDPA/HSPA+ Band 1/2/5/8 4G Network LTE FDD Band 1/2/3/4/5/7/8/12/14/17/20/28 LTE TDD Band 38/39/41 Bluetooth (BR+EDR+BLE) WIFI 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac and 802.11ax NFC, GPS, GLONASS, Galileo, BDS, UHF
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The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	6G WIFI	
Frequency Range	802.11 /ax(HE20/HE40/ HE80)	5925 ~ 6425 MHz
		6425 ~ 6525 MHz
		6525 ~ 6875 MHz
		6875 ~ 7125 MHz
Antenna Type	PIFA Antenna	
Hotspot Function	N/A	
Exposure Category	General Population/Uncontrolled exposure	
Product Type	Portable Device	
EUT Type	<input checked="" type="checkbox"/> Production unit	<input type="checkbox"/> 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 ☆	47 CFR Part 1.1310	Radiofrequency radiation exposure limits
3	ANSI/IEEE C95.1-1992	IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz
4	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01
5 ☆	KDB 865664 D02 v01r02	RF Exposure Reporting
6 ☆	KDB 248227 D01 v02r02	SAR Guidance for IEEE 802.11 (Wi-Fi) Transmitters
7	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)
8 ☆	IEC/IEEE 63195-1:2022	ASSESSMENT OF POWER DENSITY OF HUMAN EXPOSURE TO RADIO FREQUENCY FIELDS FROM WIRELESS DEVICES IN CLOSE PROXIMITY TO THE HEAD AND BODY (Frequency range of 6 GHz to 300 GHz) – Part 1: Measurement procedure
9 ☆	IEC TR 63170:2018	Measurement procedure for the evaluation of power density related to human exposure to radio frequency fields from wireless communication devices operating between 6 GHz and 100 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 power density for frequencies between 1.5GHz and 100 GHz is  $1.0 \text{ mW/cm}^2 = 10 \text{ W/m}^2$

Table of Exposure Limits:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW / cm <sup>2</sup> )	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	*900/f <sup>2</sup>	6
30-300	61.4	0.163	1.0	6
300-1,500	/	/	f/300	6
1,500-100,000	/	/	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f <sup>2</sup>	30
30-300	27.5	0.073	0.2	30
300-1,500	/	/	f/1500	30
1,500-100,000	/	/	1.0	30
<i>f = frequency in MHz * = Plane-wave equivalent power density</i>				

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 Power Density

Equipment Class	Band	Antenna	Maximum Scaled PD (W/m <sup>2</sup> )	Maximum Report PD (W/m <sup>2</sup> )
			Body	Body
U-NII-5/6/7/8	6G WIFI	Ant. 2	<b>9.24</b>	<b>9.24</b>
		Ant. 3	4.05	
Limit (W/m <sup>2</sup> )			10	
Verdict			Pass	

### 3.4 Test Uncertainty

For PTP measurement method: DASY8 uncertainty budget in compliance with IEC/IEEE 63195-1 for the cases indicated in the reference table.

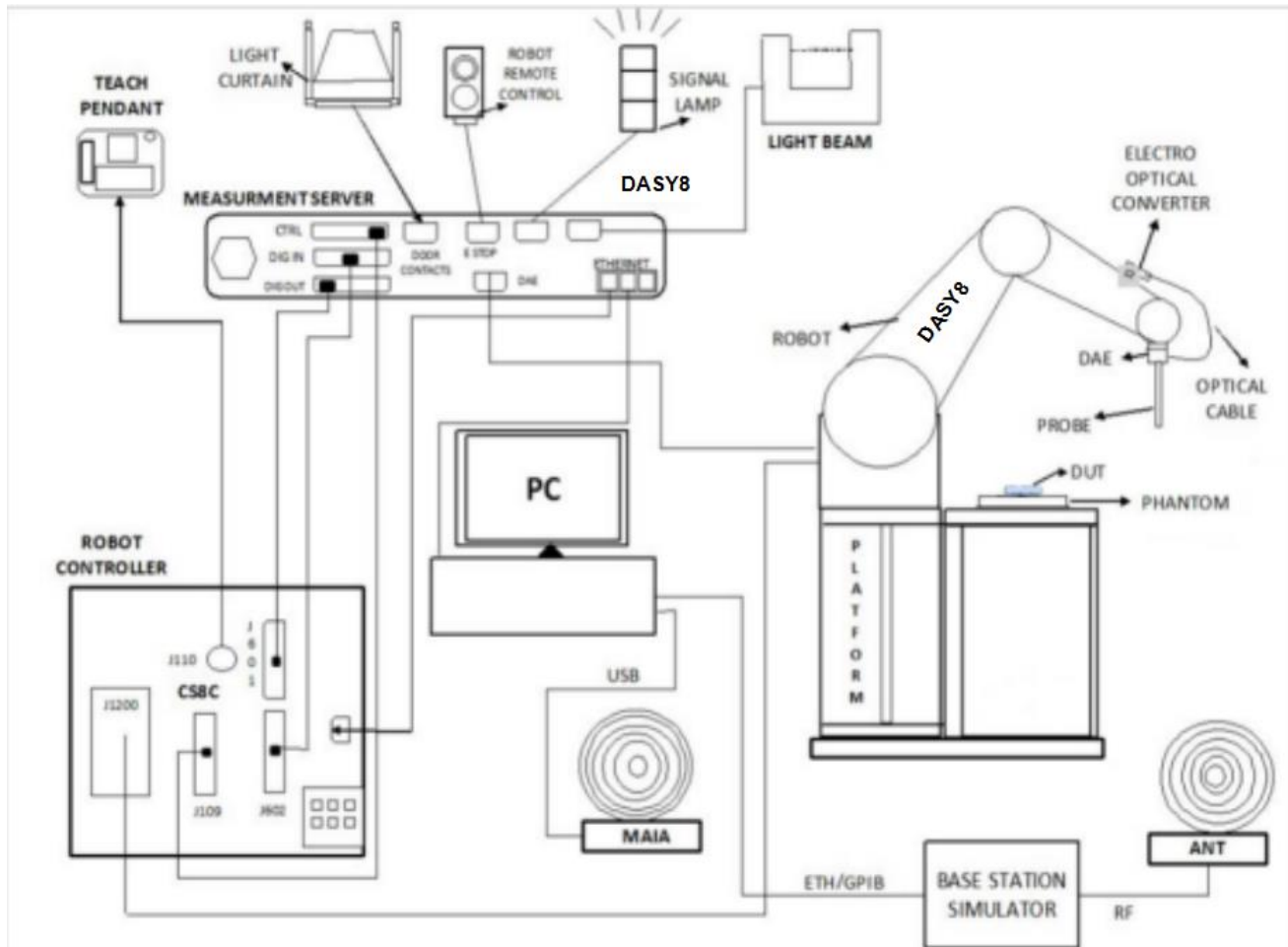
<b>DASY8 Uncertainty Budget for PD (avg <math>\geq 1</math> cm<sup>2</sup>)</b> Evaluation Distances to the Antennas $\geq \lambda/5$ in Compliance with IEC/IEEE 63195							
Error Description		Unc. Value ( $\pm$ dB)	Probab. Distri.	Div.	(c)	Std. Unc. ( $\pm$ dB)	(vi) veff
<b>Uncertainty terms dependent on the measurement system</b>							
CAL	Calibration	0.49	N	1	1	0.49	$\infty$
COR	Probe correction	0	R	1.732	1	0	$\infty$
FRS	Frequency response (BW $\leq 1$ GHz)	0.2	R	1.732	1	0.12	$\infty$
SCC	Sensor cross coupling	0	R	1.732	1	0	$\infty$
ISO	Isotropy	0.5	R	1.732	1	0.29	$\infty$
LIN	Linearity	0.2	R	1.732	1	0.12	$\infty$
PSC	Probe scattering	0	R	1.732	1	0	$\infty$
PPO	Probe positioning offset	0.3	R	1.732	1	0.17	$\infty$
PPR	Probe positioning repeatability	0.04	R	1.732	1	0.02	$\infty$
SMO	Sensor mechanical offset	0	R	1.732	1	0	$\infty$
PSR	Probe spatial resolution	0	R	1.732	1	0	$\infty$
FLD	Field impedance dependence	0	R	1.732	1	0	$\infty$
APD	Amplitude and phase drift	0	R	1.732	1	0	$\infty$
APN	Amplitude and phase noise	0.04	R	1.732	1	0.02	$\infty$
TR	Measurement area truncation	0	R	1.732	1	0	$\infty$
DAQ	Data acquisition	0.03	N	1	1	0.03	$\infty$
SMP	Sampling	0	R	1.732	1	0	$\infty$
REC	Field reconstruction	0.6	R	1.732	1	0.35	$\infty$
TRA	FTE/MEO	0 (0.7)	R	1.732	1	0 (0.4)	$\infty$
SCA	Power density scaling	—	R	1.732	1	—	$\infty$
SAV	Spatial averaging	0.1	R	1.732	1	0.06	$\infty$
SDL	System detection limit	0.04	R	1.732	1	0.02	$\infty$
<b>Uncertainty terms dependent on the DUT and environmental factors</b>							
PC	Probe coupling with DUT	0	R	1.732	1	0	$\infty$
MOD	Modulation response	0.4	R	1.732	1	0.23	$\infty$
IT	Integration time	0	R	1.732	1	0	$\infty$
RT	Response time	0	R	1.732	1	0	$\infty$
DH	Device holder influence	0.14	R	1.732	1	0.08	$\infty$
DA	DUT alignment	0	R	1.732	1	0	$\infty$
AC	RF ambient conditions	0.04	R	1.732	1	0.02	$\infty$
AR	Ambient reflections	0.04	R	1.732	1	0.02	$\infty$
MSI	Immunity / secondary reception	0	R	1.732	1	0	$\infty$
DRI	Drift of the DUT	—	R	1.732	1	—	$\infty$

Combined Std Uncertainty (w/ FTE/MEO)	—	—	—	0.75	$\infty$
<b>Expanded Std Uncertainty (w/ FTE/MEO)</b>	—	—	—	<b>1.50 (1.71)</b>	—

## 4 MEASUREMENT SYSTEM

### 4.1 DASY Power Density System

#### 4.1.1 DASY PD System Diagram



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

1. A standard high precision 6-axis robot (Stäubli RX family) with controller and software. An arm extension for accommodating the data acquisition electronics (DAE).
2. A dosimetric probe, i.e. an isotropic E-field probe optimized and calibrated for usage in tissue simulating liquid. The probe is equipped with an optical surface detector system.
3. A data acquisition electronic (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
4. A unit to operate the optical surface detector which is connected to the EOC.
5. The Electro-Optical Coupler (EOC) performs the conversion from the optical into a digital electric signal of the DAE. The EOC is connected to the DASY measurement server.
6. The DASY measurement server, which performs all real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operation.

7. DASY 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.

#### 4.1.2 Robot


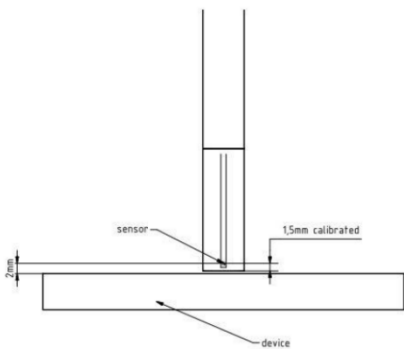
The Dasy SAR system uses the high precision robots. Symmetrical design with triangular core Built-in optical fiber for surface detection system For the 6-axis controller system, Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents). The robot series have many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



- High precision  
(repeatability  $\pm 0.02$  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)

### 4.1.3 EUmmWave Probe / E-Field 5G Probe

The EUmmWave3 probe design allows measurements at distances as small as 2mm

Frequency	750 MHz – 110 GHz
Probe Overall Length	320 mm
Probe Body Diameter	8.0 mm
Tip Length	23.0 mm
Tip Diameter	8.0 mm
Probe's two dipoles length	0.9 mm – Diode loaded
Dynamic Range	< 20 V/m – 10000 V/m with PRE-10 (min < 50 V/m – 3000 V/m)
Position Precision	< 0.2 mm
Distance between diode sensors and probe's tip	1.5 mm
Minimum Mechanical separation between probe tip and a Surface	0.5 mm
Applications	E-field measurements of 5G devices and other mm-wave transmitters operating above 10GHz in < 2 mm distance from device (free-space) Power density, H-field and far-field analysis using total field reconstruction.
Compatibility	cDASY6 + 5G-Module SW1.0 and higher
<div style="display: flex; align-items: center;">   </div>	

#### 4.1.4 Data Acquisition Electronics

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



- Input Impedance: 200M $\Omega$ m
- The Inputs: Symmetrical and Floating
- Common Mode Rejection: Above 80dB



## 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 Power Density 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

The system was verified to be within  $\pm 0.66$  dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check.

The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially (shape) and numerically (level) from the distribution provided by the manufacturer, per November 2017 TCBC Workshop Notes.

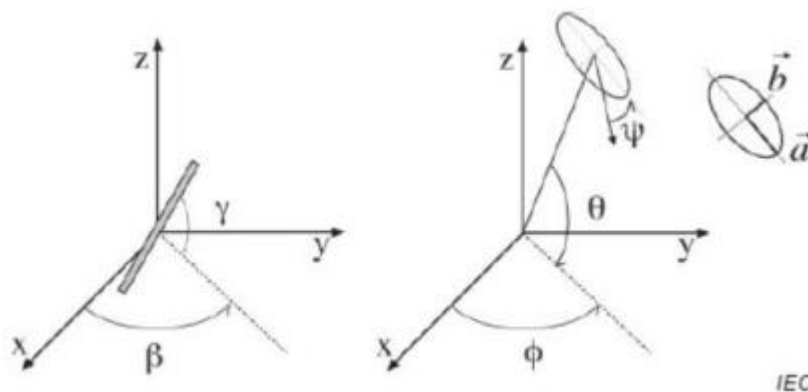
## 6 POWER DENSITY MEASUREMENT PROCEDURE

### 6.1 Computation of the Electric Field Polarization Ellipse

For the numerical description of an arbitrarily oriented ellipse in three-dimensional space, five parameters are needed: the semi-major axis ( $a$ ), the semi-minor axis ( $b$ ), two angles describing the orientation of the normal vector of the ellipse ( $\phi$ ,  $\theta$ ), and one angle describing the tilt of the semi-major axis ( $\psi$ ). For the two

extreme cases, i.e. circular and linear polarizations, three parameters only ( $a$ ,  $\phi$  and  $\theta$ ) are sufficient for

the description of the incident field.



**Illustration of the angles used for the numerical description of the sensor and the orientation of an ellipse in 3-D space**

For the construction of the ellipse parameters from measured data, the problem can be reformulated as a nonlinear search problem. The semi-major and semi-minor axes of an elliptical field can be express as functions of the three angles ( $\phi$ ,  $\theta$  and  $\psi$ ). The parameters can be uniquely determined towards minimizing the error based on least-squares for the given set of angles and the measured data. In this way, the numbers of three parameters is reduced from five to three, which means that least three sensors readings are necessary to gain sufficient information for the reconstruction of ellipse parameters.

However, to suppress the noise and increase the reconstruction accuracy, it is desirable to have an over determined system of equations. The solution to use a probe consisting of two sensors angled by  $\gamma_1$  and  $\gamma_2$  toward the probe axis and to perform measurements at three angular positions of the probe, i.e. at  $\beta_1$ ,  $\beta_2$  and  $\beta_3$ , results in over determination of two. If there is a need for more information or increased accuracy, more rotation angles can be added.

The reconstruction of ellipse parameters can be separated into linear and non-linear parts that are best solved by the givens algorithm combined with a downhill simplex algorithm. To minimize the mutual coupling, sensor angles are set with a  $90^\circ$  shift ( $\gamma_1 = \gamma_2 + 90^\circ$ ), and, to simplify, the first rotation angle of the probe ( $\beta_1$ ) can be set to  $0^\circ$ .

## 6.2 Total Field and Power Flux Density Reconstruction

Computation of the power density in general requires knowledge of the electric and magnetic field amplitudes and phases in the plane of incidence. Reconstruction of these quantities from pseudo-vector E-field measurements is feasible, as they are constrained by Maxwell's equations. The SPEAG have developed a reconstruction approach based on the Gerchberg-Saxton algorithm, which benefits from the availability of the E-Field polarization ellipse information obtained with the EUMMWV2 probe. This reconstruction algorithm, together with the ability of the probe to measure extremely close to the source without perturbing the field, permits reconstruction of the E-field and H-field, as well as of the power density, on measurement planes located as near as  $\lambda/5$  away.

## 6.3 Power Flux Density Averaging

The average of the reconstructed power density is evaluated over a circular area in each measurement plane. The area of the circle is defined by the user; the default is 1cm<sup>2</sup>. The computed peak average value

is displayed in the box at the top right. Note that the average is evaluated only for grid points where the averaging circle is completely filled with values; for points at the edge where the averaging circle is only partly filled with values, the average power density is set to zero. Two average power density values are computed.

## 6.4 Measurement Workflow

The incident power density must be measured for the test configuration producing the highest SAR value. The

measurement procedure is summarized below:

1. Perform a system performance check at 10 GHz.
2. Determine the optimal grid resolution to be used for subsequent measurements.
3. Assess the incident power for the configuration to be tested.
4. Calculate the additional reconstruction uncertainty at 2mm and compute the total measurement uncertainty.
5. Adjust the incident psPD results by the amount that the measurement uncertainty exceeds 30%

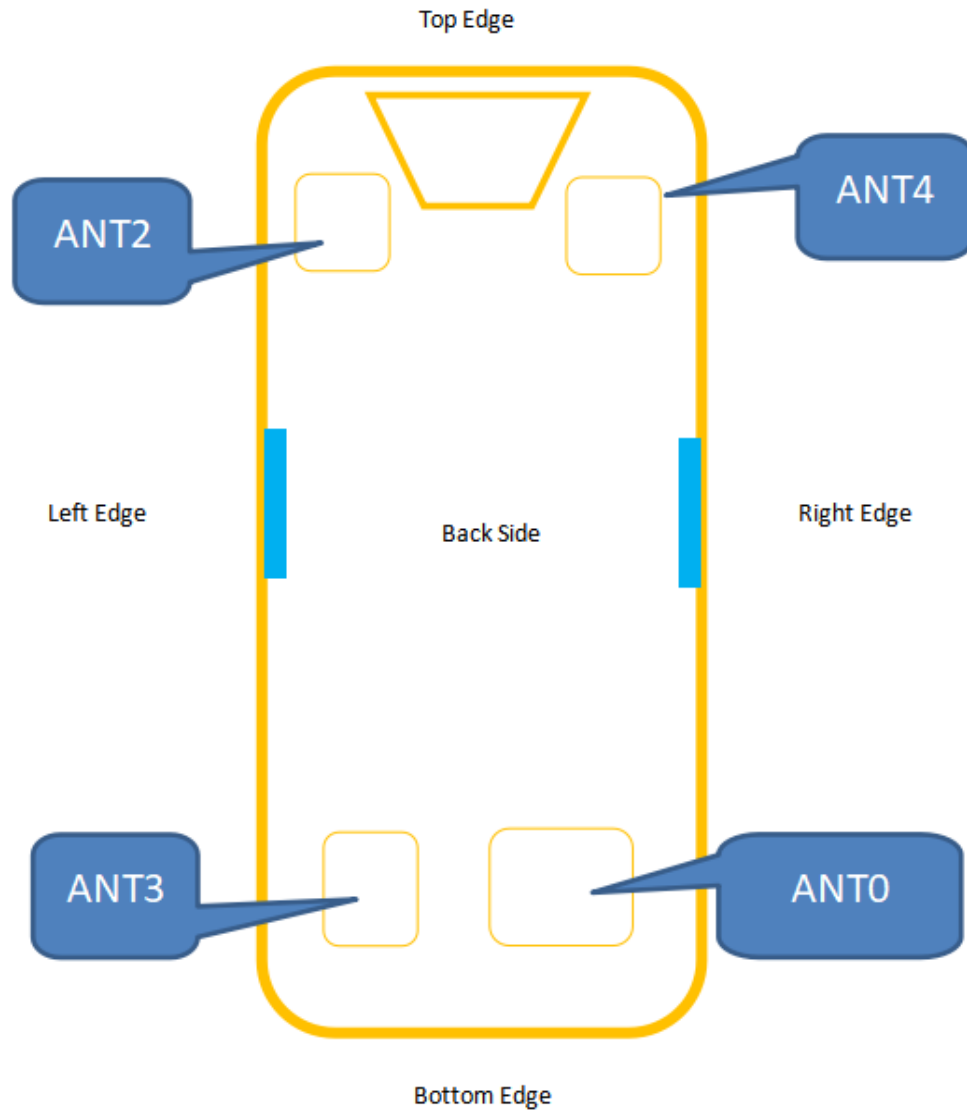
## **7 CONDUCTED RF OUPUT POWER**

### **7.1 WIFI**

Please refer the document “BL-SZ2580053-AP-2.pdf”.

## 8 ANTENNA LOCATION

### 8.1 Antenna location sketch



Antenna	Support Bands
Ant.0	GSM 850/1900
	WCDMA Band 2/5
	LTE Band 2/4/5/7/12/14/17/38/41
Ant.2	WIFI 2.4G/5G/6G
	BT
Ant.3	WIFI 2.4G/5G/6G
Ant.4	UHF

## 9 TEST RESULT OF POWER DENSITY

### General Note:

1. The reported PD is the measured Total PD value adjusted for maximum tune-up tolerance and duty cycle factor.
  - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
  - b. For PD testing of WIFI signal with non-100% duty cycle, the measured PD is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)".
2. The most conservative test distance of 2mm was applied to PD measurement.
3. Power density was calculated by repeated E-field measurements on two measurement planes separated by  $\lambda/4$ .
4. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools.
5. Per FCC guidance and equipment manufacturer guidance, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.66 dB (84.5%) was used to determine the psPD measurement scaling factor.
6. According to TCBC workshop in October 2018 that 4cm<sup>2</sup> averaging area may now be considered.

## 9.1.1 WIFI 6GHz SAR

Antenna	Mode	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	10g Meas SAR (W/kg)	Meas. Power (dBm)	Max. tune-up power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	10g Scaled SAR (W/kg)
<b>Limbs</b>													
Ant.2	802.11ax80	Front Side	0	199	6945	-0.16	0.199	18.32	18.50	1.042	93.08	1.074	0.223
		Back Side	0	199	6945	-0.12	1.830	18.32	18.50	1.042	93.08	1.074	2.048
		Left Edge	0	199	6945	0.19	1.290	18.32	18.50	1.042	93.08	1.074	1.444
		Right Edge	0	199	6945	-0.13	0.031	18.32	18.50	1.042	93.08	1.074	0.035
		Top Edge	0	199	6945	0.02	0.361	18.32	18.50	1.042	93.08	1.074	0.404
		Bottom Edge	0	199	6945	0.10	0.011	18.32	18.50	1.042	93.08	1.074	0.012
		Back Side	0	7	5985	0.16	0.590	13.14	14.00	1.219	93.08	1.074	0.772
		Back Side	0	39	6145	-0.07	0.632	12.34	14.00	1.466	93.08	1.074	0.995
		Back Side	0	87	6385	-0.19	0.566	12.61	14.00	1.377	93.08	1.074	0.837
		Back Side	0	103	6465	0.06	1.580	16.92	18.50	1.439	93.08	1.074	2.442
		Back Side	0	119	6545	0.05	1.550	16.78	18.50	1.486	93.08	1.074	2.474
		Back Side	0	135	6625	-0.02	1.840	17.64	18.50	1.219	93.08	1.074	2.409
		Back Side	0	151	6705	0.07	1.670	18.08	18.50	1.102	93.08	1.074	1.977
		Back Side	0	167	6785	-0.10	2.020	18.09	18.50	1.099	93.08	1.074	2.384
		Back Side	0	183	6865	-0.02	2.200	18.14	18.50	1.086	93.08	1.074	2.566
		Back Side	0	215	7025	0.13	1.430	17.61	18.50	1.227	93.08	1.074	1.884
Ant.3	802.11ax80	Front Side	0	151	6705	-0.17	0.315	17.77	18.50	1.183	93.08	1.074	0.400
		Back Side	0	151	6705	0.08	0.370	17.77	18.50	1.183	93.08	1.074	0.470
		Left Edge	0	151	6705	0.05	0.572	17.77	18.50	1.183	93.08	1.074	0.727
		Right Edge	0	151	6705	-0.06	0.024	17.77	18.50	1.183	93.08	1.074	0.030
		Top Edge	0	151	6705	0.07	0.056	17.77	18.50	1.183	93.08	1.074	0.071
		Bottom Edge	0	151	6705	-0.17	0.306	17.77	18.50	1.183	93.08	1.074	0.389
		Left Edge	0	7	5985	0.12	0.157	13.61	14.00	1.094	93.08	1.074	0.184
		Left Edge	0	39	6145	-0.06	0.159	12.82	14.00	1.312	93.08	1.074	0.224
		Left Edge	0	87	6385	0.03	0.161	13.05	14.00	1.245	93.08	1.074	0.215
		Left Edge	0	103	6465	0.17	0.569	17.43	18.50	1.279	93.08	1.074	0.782
		Left Edge	0	119	6545	-0.09	0.578	17.61	18.50	1.227	93.08	1.074	0.762
		Left Edge	0	135	6625	0.07	0.577	17.63	18.50	1.222	93.08	1.074	0.757
		Left Edge	0	167	6785	-0.18	0.572	17.65	18.50	1.216	93.08	1.074	0.747
		Left Edge	0	183	6865	0.00	0.575	17.64	18.50	1.219	93.08	1.074	0.753
		Left Edge	0	199	6945	0.19	0.765	17.52	18.50	1.253	93.08	1.074	1.029
		Left Edge	0	215	7025	-0.09	0.576	17.05	18.50	1.396	93.08	1.074	0.864

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

9.1.2 WIFI 6GHz PD

Fre. Band	Mode	Antenna	Position	Dist. (mm)	Grid Step( $\lambda$ )	Ch.	Freq. (MHz)	IPDn	IPD ratio ( $\geq -1$ )
6G	802.11ax(HE80)	Ant.2	Back Side	2.00	0.0625	183	6865	4.36	1.02
6G	802.11ax(HE80)	Ant.2	Back Side	8.74	0.0625	183	6865	3.45	

Mode	Antenna	Position	Dist. (mm)	Ch.	Freq. (MHz)	Power Drift (dB)	Meas Total psPD [W/m2]	Meas. Power (dBm)	Max. tune-up Power (dBm)	Scaling Factor	Duty cycle (%)	Duty cycle Factor	Meas. Uncertainty Scaling Factor	Scaled Total psPD [W/m2]	Meas. No.
Body															
802.11 ax (HE80)	Ant.2	Front Side	2	183	6865	-0.14	0.511	18.14	18.50	1.086	93.08	1.074	1.545	0.921	/
		Back Side	2	183	6865	0.02	5.130	18.14	18.50	1.086	93.08	1.074	1.545	9.244	1#
		Left Edge	2	183	6865	-0.06	3.020	18.14	18.50	1.086	93.08	1.074	1.545	5.442	/
		Right Edge	2	183	6865	0.02	0.076	18.14	18.50	1.086	93.08	1.074	1.545	0.137	/
		Top Edge	2	183	6865	-0.01	0.883	18.14	18.50	1.086	93.08	1.074	1.545	1.591	/
		Bottom Edge	2	183	6865	0.11	0.045	18.14	18.50	1.086	93.08	1.074	1.545	0.081	/
		Back Side	2	7	5985	0.16	1.410	13.14	14.00	1.219	93.08	1.074	1.545	2.852	/
		Back Side	2	103	6465	-0.17	3.740	16.92	18.50	1.439	93.08	1.074	1.545	8.930	/
		Back Side	2	167	6785	0.02	4.550	18.09	18.50	1.099	93.08	1.074	1.545	8.297	/
		Back Side	2	215	7025	0.09	3.490	17.61	18.50	1.227	93.08	1.074	1.545	7.106	/
	Ant.3	Left Edge	2	199	6945	-0.13	1.950	17.52	18.50	1.253	93.08	1.074	1.545	4.054	/
Note: According to FCC test guidance and equipment manufacturer guidance, power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.66 dB (84.5%) was used to determine the psPD measurement scaling factor.															



## 10 TEST EQUIPMENTS LIST

Description	Manufacturer	Model	Serial No./Version	Cal. Date	Cal. Due
PC	Dell	N/A	N/A	N/A	N/A
Test System	Speag	DASY8 mmWave	V2.4.0.44	N/A	N/A
Verification Source	Speag	10GHz	SN: 1039	2025/05/13	2026/05/12
EUmmW Probe	Speag	EUmmWV4	SN: 9565	2025/01/15	2026/01/14
Data Acquisition Electronics	Speag	DAE4	SN: 878	2025/03/05	2026/03/04
Signal Generator	Keysight	N5173B	MY62150163	2024/08/12	2025/08/11
Power Meter	R&S	NRVD-B2	835843/014	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z4	100381	2024/08/08	2025/08/07
Power Sensor	R&S	NRV-Z2	100211	2024/08/08	2025/08/07
Thermometer	Elitech	RC-4HC	EF7239002655	2024/10/31	2025/10/30
Power Amplifier	Mini-Circuits	ZVA-183W-S+	932502132	N/A	N/A
Directional coupler	AA-MCS	AAMCS-UDC	000272	N/A	N/A

## ANNEX A SIMULATING LIQUID VERIFICATION RESULT

The system was verified to be within  $\pm 0.66$  dB of the power density targets on the calibration certificate according to the test system specification in the users manual and calibration facility recommendation.

Date	Freq. (GHz)	Meas. Forward Power (dBm)	Measured PD 4 cm <sup>2</sup> (W/m <sup>2</sup> )	Normalized PD 4 cm <sup>2</sup> (W/m <sup>2</sup> )	Target Forward PD 4 cm <sup>2</sup> (W/m <sup>2</sup> )	Deviation (dB)
2025.09.03	10000	20	59.40	59.40	56.30	0.23

Note 1: The tolerance limit of System validation  $\pm 0.66$ dB.

Note 2: According the verification source 10GHz calibration report the target forward power is 20.00dBm.

Note 3: Normalized PD 4 cm<sup>2</sup>= Measured PD 4 cm<sup>2</sup> \*10<sup>^(0.1\*(Target Forward power- Meas. Forward Power))</sup>.

Note 4: Please refer the document "BL-SZ2580053-ASC-2.pdf".

## **ANNEX B POWER DENSITY TEST DATA**

Please refer the document “BL-SZ2580053-ATD-2.pdf”.

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document “BL-SZ2580053-AW.pdf”.

## **ANNEX D POWER DENSITY TEST SETUP PHOTOS**

Please refer the document “BL-SZ2580053-AS-2.pdf”.

## **ANNEX E POWER DENSITY CALIBRATION REPORT**

Please refer the document “BL-SZ2580053-AC-2.pdf”.

## Statement

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--END OF REPORT--