





# **SAR Test Report**

Report No.: AGC14499250706FH01

FCC ID : 2BCUQ-DT10

**APPLICATION PURPOSE**: Original Equipment

**PRODUCT DESIGNATION**: Dongle

BRAND NAME : LINKVIL

MODEL NAME : DT10

APPLICANT: Fanvil Link Technology Co., LTD

**DATE OF ISSUE** : Aug. 12, 2025

IEEE Std. 1528:2013

**STANDARD(S)** : FCC 47 CFR Part 2§2.1093

IEEE Std C95.1 ™-2019

**REPORT VERSION**: V1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd.



Page 2 of 35

# **Report Revise Record**

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Aug. 12, 2025	Valid	Initial Release

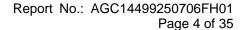


Report No.: AGC14499250706FH01 Page 3 of 35

Test Report			
Applicant Name	Fanvil Link Technology Co., LTD		
Applicant Address	13th Floor, Building 2, Runzhi R&D Center, Xin'an Street, Bao'an District, Shenzhen, Guangdong, 518000 China		
Manufacturer Name	Fanvil Link Technology Co., LTD		
Manufacturer Address	13th Floor, Building 2, Runzhi R&D Center, Xin'an Street, Bao'an District, Shenzhen, Guangdong, 518000 China		
Factory Name	N/A		
Factory Address	N/A		
Product Designation	Dongle		
Brand Name	LINXVIL		
Model Name	DT10		
Series Models	N/A		
Declaration of Difference	N/A		
EUT Voltage	DC 5V		
Applicable Standard	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093 IEEE Std C95.1 ™-2019		
Date of receipt of test item	Jul. 16, 2025		
Test Date	Aug. 01, 2025		
Report Template	AGCRT-US-1.8G/SAR (2021-04-20)		

Note: The results of testing in this report apply to the product/system which was tested only.

Prepared By	Bibo zhang	
Reviewed By	Bibo Zhang (Project Engineer)  Joule Gai	Aug. 12, 2025
Approved By	Jack Gui (Reviewer)	Aug. 12, 2025
	Angela Li (Authorized Officer)	Aug. 12, 2025





#### **TABLE OF CONTENTS**

1. SUMMARY OF MAXIMUM SAR VALUE	5
2. GENERAL INFORMATION	6
2.1. EUT DESCRIPTION	6
3. SAR MEASUREMENT SYSTEM	7
3.1. THE SATIMO SYSTEM USED FOR PERFORMING COMPLIANCE TESTS CONSISTS OF FOLLOWING ITEMS	8
3.4. VIDEO POSITIONING SYSTEM  3.5. DEVICE HOLDER  3.6. SAM TWIN PHANTOM	9 10
4. SAR MEASUREMENT PROCEDURE	
4.1. SPECIFIC ABSORPTION RATE (SAR)	12 13
5. TISSUE SIMULATING LIQUID	16
5.1. THE COMPOSITION OF THE TISSUE SIMULATING LIQUID	16
6. SAR SYSTEM CHECK PROCEDURE	18
6.1. SAR SYSTEM CHECK PROCEDURES	
7. EUT TEST POSITION	20
7.1. Body Worn Position	20
8. SAR EXPOSURE LIMITS	<b>2</b> 1
9. TEST FACILITY	22
10. TEST EQUIPMENT LIST	23
11. MEASUREMENT UNCERTAINTY	24
12. CONDUCTED POWER MEASUREMENT	27
13. TEST RESULTS	28
13.1. SAR Test Results Summary	28
APPENDIX A. SAR SYSTEM CHECK DATA	
APPENDIX B. SAR MEASUREMENT DATA	
APPENDIX C. TEST SETUP PHOTOGRAPHS	
APPENDIX D. CALIBRATION DATA	34



Page 5 of 35

# 1. SUMMARY OF MAXIMUM SAR VALUE

The maximum results of Specific Absorption Rate (SAR) found during testing for EUT are as follows:

Francisco Dand	Highest Reported 1g-SAR(W/kg)	SAR Test Limit
Frequency Band	Body-worn(with 0mm separation)	(W/kg)
1.9GHz	0.059	1.6
SAR Test Result	PASS	

This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6W/kg) specified in IEEE Std. 1528:2013; FCC 47CFR § 2.1093; IEEE Std C95.1 <sup>™</sup>-2019 and the following specific FCC Test Procedures:

- KDB 447498 D01 General RF Exposure Guidance v06
- KDB 648474 D04 Handset SAR v01r03
- KDB 865664 D01 SAR Measurement 100MHz to 6GHz v01r04
- KDB 941225 D01 3G SAR Procedures v03r01

Note: This standard FCC 47 CFR Part 2§2.1093 is not within the A2LA control range.



Page 6 of 35

# 2. GENERAL INFORMATION

2.1. EUT Description

General Information			
Product Designation	Dongle		
Test Model	DT10		
Hardware Version	V1.0		
Software Version	V1.0.1		
Duty cycle measurements	4% (manufacturer declared)		
Device Category	Portable		
RF Exposure Environment	Uncontrolled		
Antenna Type	FPC Antenna		
1.9 GHz			
Operating Frequency Range	1921.536MHz~1928.448MHz		
Type of modulation	GFSK		
Antenna Gain	0.6dBi		
Max. EIRP	4.411dBm		

Note:1. The sample used for testing is end product.

- 2. The test sample has no any deviation to the test method of standard mentioned in page 1.
- 3. The Headset DH30 and the Dongle DT10 and the Charging Standare DB10 shipped as a set, and the set model name is DH301D.

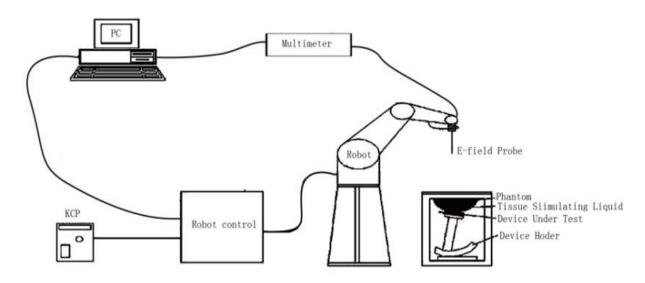
Product	Type	
Product	□ Production unit	☐ Identical Prototype





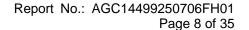
#### 3. SAR MEASUREMENT SYSTEM

# 3.1. The SATIMO system used for performing compliance tests consists of following items



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

- The PC. It controls most of the bench devices and stores measurement data. A computer running WinXP and the Opensar software.
- The E-Field probe. The probe is a 3-axis system made of 3 distinct dipoles. Each dipole returns a voltage in function of the ambient electric field.
- The Keithley multimeter measures each probe dipole voltages.
- The SAM phantom simulates a human head. The measurement of the electric field is made inside the phantom.
- The liquids simulate the dielectric properties of the human head tissues.
- The network emulator controls the mobile phone under test.
- The validation dipoles are used to measure a reference SAR. They are used to periodically check the bench to make sure that there is no drift of the system characteristics over time.
- •The phantom, the device holder and other accessories according to the targeted measurement.





#### 3.2. COMOSAR E-Field Probe

The SAR measurement is conducted with the dosimetric probe manufactured by SATIMO. The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. SATIMO conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528 and relevant KDB files.) The calibration data are in Appendix D.

# **Isotropic E-Field Probe Specification**

Model	SSE2	
Manufacture	MVG	
Identification No.	2023-EPGO-414	
Frequency	0.15GHz-7.5GHz Linearity:±0.08dB(0.15GHz-7.5GHz)	
Dynamic Range	0.01W/kg-100W/kg Linearity:±0.08dB	
Dimensions	Overall length:330mm Length of individual dipoles:2mm Maximum external diameter:8mm Probe Tip external diameter:2.5mm Distance between dipoles/ probe extremity:1mm	
Application	High precision dosimetric measureme (e.g., very strong gradient fields). Only compliance testing for frequencies up 30%.	probe which enables

Model	SSE2	
Manufacture	MVG	
Identification No.	2023-EPGO-414	
Frequency	0.15GHz-7.5GHz Linearity:±0.10dB(0.15GHz-7.5GHz)	
Dynamic Range	0.01W/kg-100W/kg Linearity:±0.10dB	
Dimensions	Overall length:330mm Length of individual dipoles:2mm Maximum external diameter:8mm Probe Tip external diameter:2.5mm Distance between dipoles/ probe extremity:1mm	
Application	High precision dosimetric measuremet (e.g., very strong gradient fields). Only compliance testing for frequencies up 30%.	probe which enables



Report No.: AGC14499250706FH01 Page 9 of 35

#### 3.3. Robot

The COMOSAR system uses the KUKA robot from SATIMO SA (France). For the 6-axis controller COMOSAR system, the KUKA robot controller version from SATIMO is used.

The XL robot series have many features that are important for our application:

☐ High precision (repeatability 0.02 mm)

☐ High reliability (industrial design)

☐ Jerk-free straight movements

☐ Low ELF interference (the closed metallic

construction shields against motor control fields)

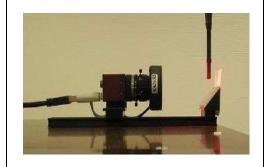
☐ 6-axis controller



# 3.4. Video Positioning System

The video positioning system is used in OpenSAR to check the probe. Which is composed of a camera, LED, mirror and mechanical parts. The camera is piloted by the main computer with firewire link. During the process, the actual position of the probe tip with respect to the robot arm is measured, as well as the probe length and the horizontal probe offset. The software then corrects all movements, such that the robot coordinates are valid for the probe tip.

The repeatability of this process is better than 0.1 mm. If a position has been taught with an aligned probe, the same position will be reached with another aligned probe within 0.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position.





Page 10 of 35

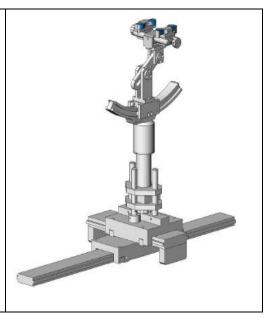
#### 3.5. Device Holder

The COMOSAR device holder is designed to cope with different positions given in the standard. It has two scales for the device rotation (with respect to the body axis) and the device inclination (with respect to the line between the ear reference points). The rotation center for both scales is the ear reference point (EPR).

Thus the device needs no repositioning when changing the angles.

The COMOSAR device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity

 $\epsilon r=3$  and loss tangent  $\delta=0.02$ . The amount of dielectric material has been reduced in the closest vicinity of the device, since measurements have suggested that the influence of the clamp on the test results could thus be lowered.





Page 11 of 35

#### 3.6. SAM Twin Phantom

The SAM twin phantom is a fiberglass shell phantom with 2mm shell thickness (except the ear region where shell thickness increases to 6mm). It has three measurement areas:

□ Left head

☐ Right head

☐ Flat phantom



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. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.



Page 12 of 35

#### 4. SAR MEASUREMENT PROCEDURE

# 4.1. Specific Absorption Rate (SAR)

SAR is related to the rate at which energy is absorbed per unit mass in 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 occupational/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 given mass density ( $\rho$ ). The equation description is as below:

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

SAR is expressed in units of Watts per kilogram (W/kg) SAR can be obtained using either of the following equations:

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

$$SAR = c_h \frac{dT}{dt}\Big|_{t=0}$$

Where

SAR is the specific absorption rate in watts per kilogram;
E is the r.m.s. value of the electric field strength in the tissue in volts per meter;

σ is the conductivity of the tissue in siemens per metre;
 ρ is the density of the tissue in kilograms per cubic metre;

c<sub>h</sub> is the heat capacity of the tissue in joules per kilogram and Kelvin;

 $\frac{dT}{dt}$  | t = 0 is the initial time derivative of temperature in the tissue in kelvins per second



Page 13 of 35

#### 4.2. SAR Measurement Procedure

#### Step 1: Power Reference Measurement

The Power Reference Measurement and Power Drift Measurement are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface is 2.7mm This distance cannot be smaller than the distance os sensor calibration points to probe tip as `defined in the probe properties,

#### Step 2: Area Scan

The Area Scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in SATIMO software can find the maximum locations even in relatively coarse grids. When an Area Scan has measured all reachable points, it computes the field maximal found in the scanned area, within a range of the global maximum. The range (in db) is specified in the standards for compliance testing. For example, a 2db range is required in IEEE Standard 1528, whereby 3db is a requirement when compliance is assessed in accordance with the ARIB standard (Japan) If one Zoom Scan follows the Area Scan, then only the absolute maximum will be taken as reference. For cases where multiple maximum are detected, the number of Zoom Scan has to be increased accordingly.

Area Scan Parameters extracted from KDB 865664 D01 SAR Measurement 100MHz to 6GHz

	≤ 3 GHz	> 3 GHz	
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	½·δ·ln(2) ± 0.5 mm	
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°	
	≤2 GHz: ≤15 mm 2 – 3 GHz: ≤12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm	
Maximum area scan spatial resolution: Δx <sub>Area</sub> , Δy <sub>Area</sub>	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the at the measurement resolution must be ≤ the correspond x or y dimension of the test device with at least one measurement point on the test device.		

#### Step 3: Zoom Scan

Zoom Scan are used to assess the peak spatial SAR value within a cubic average volume containing 1g abd 10g of simulated tissue. The Zoom Scan measures points(refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the Zoom Scan evaluates the averaged SAR for 1g and 10g and displays these values next to the job's label.



Page 14 of 35

#### Zoom Scan Parameters extracted from KDB865664 d01 SAR Measurement 100MHz to 6GHz

Maximum zoom scan spatial resolution: Δx <sub>Zoom</sub> , Δy <sub>Zoom</sub>		≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*	
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded	Δz <sub>Zoom</sub> (1): between 1 <sup>st</sup> two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
	grid	id Δz <sub>Zoom</sub> (n>1): between subsequent points	≤ 1.5·Δz	Zoom(n-1)
Minimum zoom scan volume	x, y, z		3 – 4 GHz: ≥ 28 ms ≥ 30 mm 4 – 5 GHz: ≥ 25 ms 5 – 6 GHz: ≥ 22 ms	

Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.

#### Step 4: Power Drift Measurement

The Power Drift Measurement measures the field at the same location as the most recent power reference measurement within the same procedure, and with the same settings. The Power Drift Measurement gives the field difference in dB from the reading conducted within the same settings. This allows a user to monitor the power drift of the device under test within a batch process. The measurement procedure is the same as Step 1.

<sup>\*</sup> When zoom scan is required and the <u>reported</u> SAR from the area scan based 1-g SAR estimation procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.



Page 15 of 35

4.3. RF Exposure Conditions

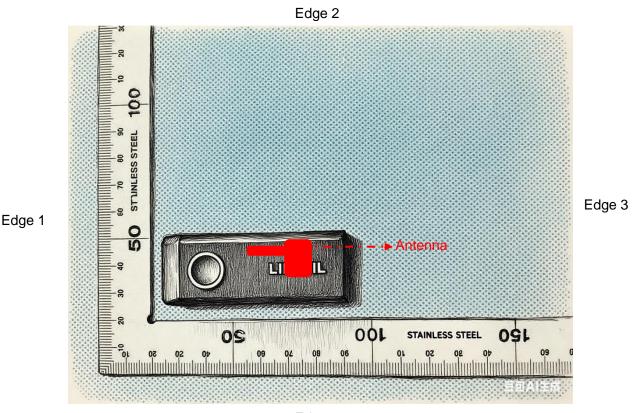
Test Configuration and setting:

The EUT is a Dongle which supports 1.9GHz & Bluetooth.

Lab. carry out tests according to the locations and test separation distances specified by the client.

For SAR test, the EUT is controlled with DECT communication system TX2012 which can provide continuous transmitting RF signal.

Antenna Location: (the back view)



Edge 4

Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.



Page 16 of 35

#### 5. TISSUE 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 15cm. For head SAR testing the liquid height from the ear reference point (ERP) of the phantom to the liquid top surface is larger than 15cm For body SAR testing, the liquid height from the center of the flat phantom to the liquid top surface is larger than 15cm. The nominal dielectric values of the tissue simulating liquids in the phantom and the tolerance of 10% are listed in 6.2

5.1. The composition of the tissue simulating liquid

Ingredient (% Weight) Frequency (MHz)	Water	Nacl	Polysorbate 20	DGBE	1,2 Propanediol	Triton X-100
1900 Head	54.9	0.18	0.0	44.92	0.0	0.0

# 5.2. Tissue Dielectric Parameters for Head and Body Phantoms

The head and body tissue dielectric parameters recommended by the IEEE Std. 1528 have been incorporated in the following table.

Target Frequency	he	ead	body			
(MHz)	εr	σ (S/m)	εr	σ (S/m)		
300	45.3	0.87	45.3	0.87		
450	43.5	0.87	43.5	0.87		
835	41.5	0.90	41.5	0.90		
900	41.5	0.97	41.5	0.97		
915	41.5	1.01	41.5	1.01		
1450	40.5	1.20	40.5	1.20		
1610	40.3	1.29	40.3	1.29		
1800 – 2000	40.0	1.40	40.0	1.40		
2450	39.2	1.80	39.2	1.80		
3000	38.5	2.40	38.5	2.40		

( $\epsilon r$  = relative permittivity,  $\sigma$  = conductivity and  $\rho$  = 1000 kg/m3)



Page 17 of 35

#### 5.3. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using SATIMO Dielectric Probe Kit and R&S Network Analyzer ZVL6.

	Tissue Stimulant Measurement for 1900MHz										
	Fr.	Dielectric Para	meters (±5%)	Ambient	Relative	Tissue					
	(MHz)	εr40.00	δ[s/m]1.40	Temp	Humidity	Temp	Test time				
Head	(1711 12)	(36.00-44.00)	(1.26-1.54)	[℃]	(%)	[oC]					
	1900	39.01	1.35	21.7	54.4	21.3	Aug. 01,				
-	1924.992	38.62	1.37	21.7	54.4	21.3	2025				



Page 18 of 35

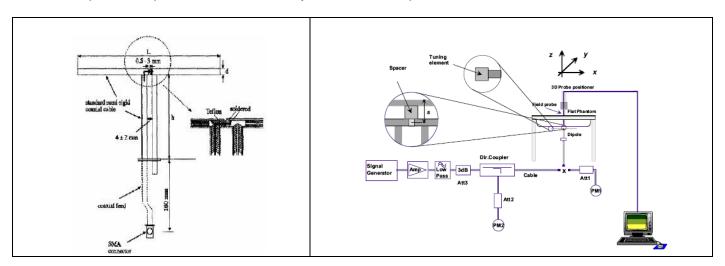
#### 6. SAR SYSTEM CHECK PROCEDURE

#### 6.1. SAR System Check Procedures

SAR system check is required to confirm measurement accuracy, according to the tissue dielectric media, probe calibration points and other system operating parameters required for measuring the SAR of a test device. The system verification must be performed for each frequency band and within the valid range of each probe calibration point required for testing the device. The same SAR probe(s) and tissue-equivalent media combinations used with each specific SAR system for system verification must be used for device testing. When multiple probe calibration points are required to cover substantially large transmission bands, independent system verifications are required for each probe calibration point. A system verification must be performed before each series of SAR measurements using the same probe calibration point and tissue-equivalent medium. Additional system verification should be considered according to the conditions of the tissue-equivalent medium and measured tissue dielectric parameters, typically every three to four days when the liquid parameters are remeasured or sooner when marginal liquid parameters are used at the beginning of a series of measurements.

Each SATIMO system is equipped with one or more system check kits. These units, together with the predefined measurement procedures within the SATIMO software, enable the user to conduct the system check and system validation. System kit includes a dipole, and dipole device holder.

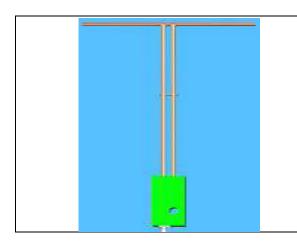
The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system check setup is shown as below.





Page 19 of 35

# 6.2. SAR System Check 6.2.1. Dipoles



The dipoles used is based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of IEEE. the table below provides details for the mechanical and electrical Specifications for the dipoles.

Frequency	L (mm)	h (mm)	d (mm)
1900MHz	68	39.5	3.6

# 6.2.2. System Check Result

System Performance Check at 1900MHz for Head										
Validation Kit: SN 2915 DIP 1G900-389										
Frequency		get (W/kg)	Reference (± 1		sted (W/kg)	Test time				
[IVIHZ]	[MHz] 1g 10g		1g	10g	1g	10g				
1900	39.83	20.59	35.85-43.81	18.53-22.65	40.13	20.19	Aug. 01, 2025			

#### Note:

(1) We use a CW signal of 18dBm for system check, and then all SAR values are normalized to 1W forward power. The result must be within  $\pm 10\%$  of target value.



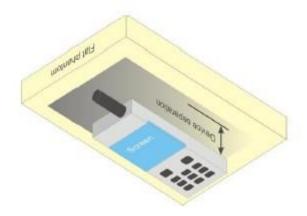
Page 20 of 35

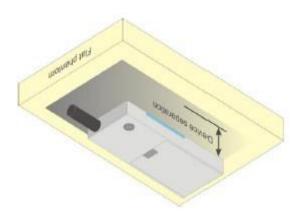
# 7. EUT TEST POSITION

This EUT was tested in Body back, Body front and 4 Edges

# 7.1. Body Worn Position

- (1) To position the EUT parallel to the phantom surface.
- (2) To adjust the EUT parallel to the flat phantom.
- (3) To adjust the distance between the EUT surface and the flat phantom to 0mm.







Page 21 of 35

# 8. SAR EXPOSURE LIMITS

SAR assessments have been made in line with the requirements of IEEE-1528, and comply with ANSI/IEEE C95.1-2005 "Uncontrolled Environments" limits. These limits apply to a location which is deemed as "Uncontrolled Environment" which can be described as a situation where the general public may be exposed to an RF source with no prior knowledge or control over their exposure.

Limits for General Population/Uncontrolled Exposure (W/kg)

Type Exposure	Uncontrolled Environment Limit (W/kg)
Spatial Peak SAR (1g cube tissue for brain or body)	1.60
Spatial Average SAR (Whole body)	0.08
Spatial Peak SAR (Limbs)	4.0



Page 22 of 35

# 9. TEST FACILITY

Test Site	Attestation of Global Compliance (Shenzhen) Co., Ltd
Location	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
Designation Number	CN1259
A2LA Cert. No.	5054.02
Description	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA



Page 23 of 35

# 10. TEST EQUIPMENT LIST

No.	Equipment description	Manufacturer/ Model	Identification No.	Software version	Current calibration date	Next calibration date
AGC-HE-A103	SAR Probe	MVG	2023-EPGO-414	N/A	2025-05-06	2026-05-05
AGC-HE-E016	Phantom	SATIMO	SN_4511_SAM90	N/A	Validated. No cal required.	Validated. No cal required.
AGC-ER-E020	WIRELESS COMMUNICATIO N TEST SET	Agilent-8960	GB46200384	N/A	2025-05-21	2026-05-20
AGC-HE-E005	Multimeter	Keithley 2000	1350784	N/A	2025-05-16	2026-05-15
AGC-HE-S003	SAR Software	MVG-OpenSAR	N/A	V5.3.15.8	N/A	N/A
AGC-HE-A059	Dipole	SATIMO SID1900	SN 2915 DIP 1G900-389	N/A	2025-05-15	2028-05-14
AGC-HE-E021	Signal Generator	Agilent-E4438C	US41461365	V5.03	2025-05-21	2026-05-20
AGC-EM-E061	EXA Signal Analyzer	Agilent / N9010A	MY53470504	N/A	2025-05-08	2026-05-07
AGC-HE-E004	Network Analyzer	Rhode & Schwarz ZVL6	101443	3.2	2025-07-18	2026-07-17
AGC-ER-A001	Attenuator	SMA-JK	N/A	N/A	2023-09-21	2025-09-20
AGC-EM-E019	Amplifier	AS0104-55_55	1004793	N/A	N/A	N/A
AGC-EM-E040	Directional Couple	Werlatone/ C5571-10	SN99463	N/A	2024-02-01	2026-01-31
AGC-EM-E041	Directional Couple	Werlatone/ C6026-10	SN99482	N/A	2024-02-01	2026-01-31
AGC-BQ-E016	Power Sensor	NRP-Z21	104604	N/A	2025-05-16	2026-05-15
AGC-HE-E023	Power Sensor	NRP-Z23	100323	N/A	2025-01-14	2026-01-13
AGC-HE-S004	Power Viewer	R&S	V2.3.1.0	N/A	N/A	N/A
AGC-HE-A001	Calibration standard parts for network sub - port	R&S/ ZV-Z132	100707	V2.3.1.0	2024-11-08	2025-11-07
AGC-HE-A002	Thermometer	DigiMate/TP677	3811930452	N/A	2025-05-24	2027-05-23

Note: Per KDB 865664 Dipole SAR Validation, AGC Lab has adopted 3 years calibration intervals. 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 is within 20% of calibrated measurement;
- 4. Impedance is within  $5\Omega$  of calibrated measurement.



Page 24 of 35

# 11. MEASUREMENT UNCERTAINTY

11. MEASUREMENT		SATIMO Uno		2023-FPG	O-414					
M	Measurement uncertainty for DUT averaged over 1 gram / 10 gram.									
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi	
Measurement System		1 ( , , , , ,	2.0		L	1	( , , , , ,	( , , , ,		
Probe calibration	E.2.1	7.000	N	1	1	1	7.000	7.000	∞	
Axial Isotropy	E.2.2	0.105	R	1.732	0.707	0.707	0.043	0.043	∞	
Hemispherical Isotropy	E.2.2	0.105	R	1.732	0.707	0.707	0.043	0.043	∞	
Boundary effect	E.2.3	1.000	R	1.732	1	1	0.577	0.577	∞	
Linearity	E.2.4	1.105	R	1.732	1	1	0.638	0.638	∞	
System detection limits	E.2.4	1.000	R	1.732	1	1	0.577	0.577	∞	
Modulation response	E2.5	3.000	R	1.732	1	1	1.732	1.732	∞	
Readout Electronics	E.2.6	0.021	N	1	1	1	0.021	0.021	∞	
Response Time	E.2.7	0.000	R	1.732	1	1	0.000	0.000	∞	
Integration Time	E.2.8	1.400	R	1.732	1	1	0.808	0.808	∞	
RF ambient conditions-Noise	E.6.1	3.000	R	1.732	1	1	1.732	1.732	∞	
RF ambient conditions-reflections	E.6.1	3.000	R	1.732	1	1	1.732	1.732	∞	
Probe positioner mechanical tolerance	E.6.2	1.400	R	1.732	1	1	0.808	0.808	∞	
Probe positioning with respect to phantom shell	E.6.3	1.400	R	1.732	1	1	0.808	0.808	∞	
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.300	R	1.732	1	1	1.328	1.328	∞	
Test sample Related					_					
Test sample positioning	E.4.2	2.6	N	1	1	1	2.60	2.60	∞	
Device holder uncertainty	E.4.1	3	N	1	1	1	3.00	3.00	×	
Output power variation—SAR drift measurement	E.2.9	5	R	1.732	1	1	2.89	2.89	∞	
SAR scaling	E.6.5	5	R	1.732	1	1	2.89	2.89	8	
Phantom and tissue parameter	s									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	1.732	1	1	2.309	2.309	8	
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.900	1.596	8	
Liquid conductivity measurement	E.3.3	4	N	1	0.78	0.71	3.120	2.840	М	
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.150	1.300	М	
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	1.732	0.78	0.71	1.126	1.025	∞	
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	1.732	0.23	0.26	0.332	0.375	8	
Combined Standard Uncertainty			RSS				10.533	10.348		
Expanded Uncertainty (95% Confidence interval)			K=2				21.065	20.695		



Page 25 of 35

	S	ATIMO Uno	ertainty-	2023-EPG	Ω-414				
System		uncertainty				n / 10 gram.			
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi
Measurement System	,	Γ	1	T	1	_	1		1
Probe calibration	E.2.1	7.000	N	1	1	1	7.000	7.000	∞
Axial Isotropy	E.2.2	0.105	R	1.732	1.000	1.000	0.061	0.061	∞
Hemispherical Isotropy	E.2.2	0.105	R	1.732	0.000	0.000	0.000	0.000	$\infty$
Boundary effect	E.2.3	1.000	R	1.732	1.000	1.000	0.577	0.577	$\infty$
Linearity	E.2.4	1.105	R	1.732	1.000	1.000	0.638	0.638	8
System detection limits	E.2.4	1.000	R	1.732	1.000	1.000	0.577	0.577	∞
Modulation response	E2.5	3.000	R	1.732	0.000	0.000	0.000	0.000	∞
Readout Electronics	E.2.6	0.021	N	1.000	1.000	1.000	0.021	0.021	∞
Response Time	E.2.7	0.000	R	1.732	0.000	0.000	0.000	0.000	∞
Integration Time	E.2.8	1.400	R	1.732	0.000	0.000	0.000	0.000	∞
RF ambient conditions-Noise	E.6.1	3.000	R	1.732	1.000	1.000	1.732	1.732	∞
RF ambient conditions-reflections	E.6.1	3.000	R	1.732	1.000	1.000	1.732	1.732	∞
Probe positioner mechanical tolerance	E.6.2	1.400	R	1.732	1.000	1.000	0.808	0.808	∞
Probe positioning with respect to phantom shell	E.6.3	1.400	R	1.732	1.000	1.000	0.808	0.808	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.300	R	1.732	1.000	1.000	1.328	1.328	8
System validation source									
Deviation of experimental dipole from numerical dipole	E.6.4	5	N	1	1	1	5	5	∞
Input power and SAR drift measurement	8,6.6.4	5	R	1.732	1	1	2.887	2.887	∞
Dipole axis to liquid distance	8,E.6.6	2	R	1.732	1	1	1.155	1.155	∞
Phantom and set-up									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	1.732	1	1	2.309	2.309	8
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.9	1.596	8
Liquid conductivity (temperature uncertainty)	E.3.3	4	N	1	0.78	0.71	3.12	2.84	8
Liquid conductivity (measured)	E.3.3	5	N	1	0.23	0.26	1.15	1.3	М
Liquid permittivity (temperature uncertainty)	E.3.4	2.5	R	1.732	0.78	0.71	1.126	1.025	8
Liquid permittivity (measured)	E.3.4	2.5	R	1.732	0.23	0.26	0.332	0.375	М
Combined Standard Uncertainty			RSS				10.466	10.279	
Expanded Uncertainty (95% Confidence interval)			K=2				20.931	20.559	



Page 26 of 35

	S	SATIMO Uno	ertainty-	2023-FPG	Ω-414					
System Check uncertainty for DUT averaged over 1 gram / 10 gram.										
Uncertainty Component	Sec.	Tol (+- %)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (+-%)	10g Ui (+-%)	vi	
Measurement System	Measurement System									
Probe calibration drift	E.2.1.3	0.500	N	1	1	1	0.5	0.5	∞	
Axial Isotropy	E.2.2	0.105	R	1.732	0	0	0	0	×	
Hemispherical Isotropy	E.2.2	0.105	R	1.732	0	0	0	0	8	
Boundary effect	E.2.3	1.000	R	1.732	0	0	0	0	×	
Linearity	E.2.4	1.105	R	1.732	0	0	0	0	∞	
System detection limits	E.2.4	1	R	1.732	0	0	0	0	∞	
Modulation response	E2.5	3	R	1.732	0	0	0	0	∞	
Readout Electronics	E.2.6	0.021	N	1	0	0	0	0	<sub>∞</sub>	
Response Time	E.2.7	0	R	1.732	0	0	0	0	×	
Integration Time	E.2.8	1.4	R	1.732	0	0	0	0	× ×	
RF ambient conditions-Noise	E.6.1	3	R	1.732	0	0	0	0	× ×	
RF ambient conditions-reflections	E.6.1	3	R	1.732	0	0	0	0	∞	
Probe positioner mechanical tolerance	E.6.2	1.4	R	$\sqrt{3}$	1	1	0.81	0.81	$\infty$	
Probe positioning with respect to phantom shell	E.6.3	1.4	R	√3	1	1	0.81	0.81	∞	
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	2.3	R	√3	0	0	0	0.00	∞	
System check source (dipole)										
Deviation of experimental dipoles	E.6.4	2	N	1	1	1	2	2	∞	
Input power and SAR drift measurement	8,6.6.4	5	R	√3	1	1	2.89	2.89	∞	
Dipole axis to liquid distance	8,E.6.6	2	R	√3	1	1	1.15	1.15	$\infty$	
Phantom and tissue parameter	rs									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	4	R	√3	1	1	2.31	2.31	∞	
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1.000	1	0.84	1.90	1.60	∞	
Liquid conductivity measurement	E.3.3	4	N	1.000	0.78	0.71	3.12	2.84	∞	
Liquid permittivity measurement	E.3.3	5	N	1.000	0.23	0.26	1.15	1.30	М	
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	√3	0.78	0.71	1.13	1.02	∞	
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	√3	0.23	0.26	0.33	0.38	М	
Combined Standard Uncertainty			RSS				5.562	5.203		
Expanded Uncertainty (95% Confidence interval)			K=2				11.124	10.406		



Page 27 of 35

# 12. CONDUCTED POWER MEASUREMENT

Mode	Channel	Frequency(MHz)	Avg. power (dBm)	Gain (dBi)	EIRP (dBm)
	CH0	1928.448	3.271	0.6	3.871
1.9GHz	CH2	1924.992	3.641	0.6	4.241
	CH4	1921.536	3.811	0.6	4.411



Page 28 of 35

#### 13. TEST RESULTS

# 13.1. SAR Test Results Summary

# 13.1.1. Test position and configuration

Body-worn SAR was performed with the device 0mm from the phantom.

#### 13.1.2. Operation Mode

- 1. Per KDB 447498 D01 v06 ,for each exposure position, if the highest 1-g SAR is ≤ 0.8 W/kg, testing for low and high channel is optional.
- 2. Per KDB 865664 D01 v01r04,for each frequency band, if the measured SAR is ≥0.8W/kg, testing for repeated SAR measurement is required, that the highest measured SAR is only to be tested. When the SAR results are near the limit, the following procedures are required for each device to verify these types of SAR measurement related variation concerns by repeating the highest measured SAR configuration in each frequency band.
  - (1) When the original highest measured SAR is  $\geq$ 0.8W/kg, repeat that measurement once.
  - (2) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is >1.20 or when the original or repeated measurement is ≥1.45 W/kg.
  - (3) Perform a third repeated measurement only if the original, first and second repeated measurement is ≥1.5 W/kg and ratio of largest to smallest SAR for the original, first and second measurement is ≥ 1.20.
- 3. Maximum Scaling SAR in order to calculate the Maximum SAR values to test under the standard Peak Power, Calculation method is as follows:

  Maximum Scaling SAR =tested SAR (Max.) ×[maximum turn-up power (mw)/ maximum measurement output power(mw)]
- 4. Proximity sensor, just for avoiding the wrong operation in the phone screen when call, and has no influence on output power or SAR result.



Page 29 of 35

#### 13.1.3. Test Result

#### **SAR MEASUREMENT**

Depth of Liquid (cm):>15

Product: Dongle

Test Mode: 1.9GHz with GFSK modulation

Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±5%)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Tune-up Scaling factor	Scaled SAR (W/kg)	Limit (W/kg)
Body back	GFSK	CH2	1924.992	0.10	0.009	4.5	4.241	1.061	0.010	1.6
Body front	GFSK	CH2	1924.992	-0.13	0.056	4.5	4.241	1.061	0.059	1.6
Edge 1	GFSK	CH2	1924.992	0.10	0.010	4.5	4.241	1.061	0.011	1.6
Edge 2	GFSK	CH2	1924.992	-0.02	0.036	4.5	4.241	1.061	0.038	1.6
Edge 3	GFSK	CH2	1924.992	-0.05	0.008	4.5	4.241	1.061	0.008	1.6
Edge 4	GFSK	CH2	1924.992	0.32	0.027	4.5	4.241	1.061	0.029	1.6

#### Note:

• When the 1-g Reported SAR is ≤ 0.8 W/kg, testing for low and high channel is optional. Refer to KDB 447498.

• The test separation of all above table is 0mm.



Page 30 of 35

# APPENDIX A. SAR SYSTEM CHECK DATA

Test Laboratory: AGC Lab Date: Aug. 01, 2025

System Check Head 1900MHz

DUT: Dipole 1900 MHz; Type: SID 1900

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1; Conv.F=2.25 Frequency: 1900 MHz; Medium parameters used: f = 1800 MHz;  $\sigma$ =1.35 mho/m;  $\epsilon$ r =39.01;  $\rho$ = 1000 kg/m³;

Phantom section: Flat Section; Input Power=18dBm

#### SATIMO Configuration:

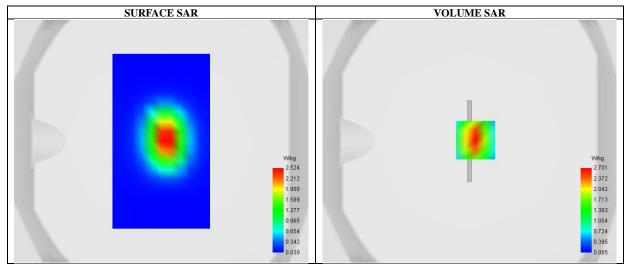
• Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414

· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

Measurement SW: OpenSAR V5.3.15.8

Configuration/System Check 1900MHz Head/Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/System Check 1900MHz Head/Zoom Scan: Measurement grid: dx=8mm, dy=8mm, dz=5mm



Maximum location: X=5.00, Y=1.00; SAR Peak: 4.37 W/kg

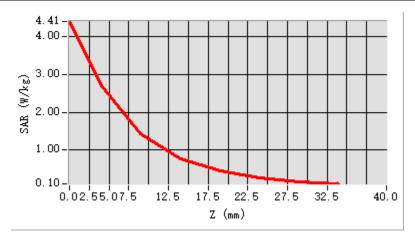
SAR 10g (W/Kg)	1.274
SAR 1g (W/Kg)	2.532
Variation (%)	-0.060
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	52.558614

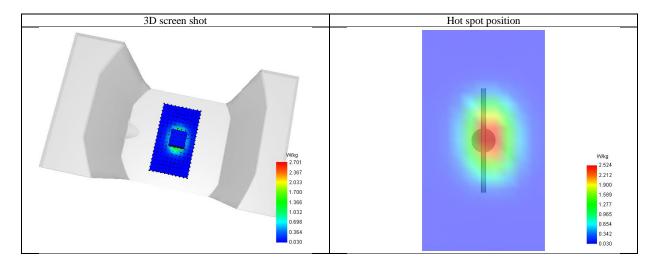
Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	4.406	2.701	1.420	0.776	0.442	0.255	0.159





Any report having not been signed by authorized approver, or having been altered without authorization, or having not been stamped by the "Dedicated Testing/Inspection Stamp" is deemed to be invalid. Copying or excerpting portion of, or altering the content of the report is not permitted without the written authorization of AGC. The test results presented in the report apply only to the tested sample. Any objections to report issued by AGC should be submitted to AGC within 15days after the issuance of the test report. Further enquiry of validity or verification of the test report should be addressed to AGC by agc01@agccert.com.

Tel: +86-755 2523 4088 E-mail: agc@agccert.com Web: http://www.agccert.com/



Page 32 of 35

# APPENDIX B. SAR MEASUREMENT DATA

Test Laboratory: AGC Lab Date: Aug. 01, 2025

1.9GHz Mid-Body -Front DUT: Dongle; Type: DT10

Communication System: 1.9GHz; Communication System Band: 1.9GHz; Duty Cycle: 4%; Conv.F=2.25;

Frequency: 1924.992 MHz; Medium parameters used: f = 1800 MHz;  $\sigma = 1.37 \text{ mho/m}$ ;  $\epsilon r = 38.62$ ;  $\rho = 1000 \text{ kg/m}^3$ ;

Phantom section: Flat Section

#### **SATIMO Configuration:**

• Probe: SSE2; Calibrated: 2025-05-06; Serial No.: 2023-EPGO-414

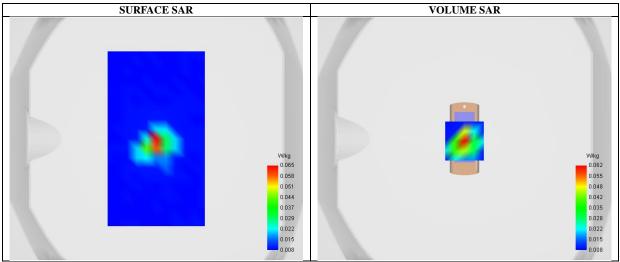
· Sensor-Surface: 4mm (Mechanical Surface Detection)

· Phantom: SAM twin phantom

· Measurement SW: OpenSAR V5.3.15.8

Configuration/1.9GHz Mid-Body- Front /Area Scan: Measurement grid: dx=8mm, dy=8mm Configuration/1.9GHz Mid-Body- Front /Zoom Scan: Measurement grid: dx=8mm,dy=8mm, dz=5mm;

Area Scan	surf_sam_plan.txt, h= 5.00 mm			
ZoomScan	5x5x7,dx=8mm dy=8mm dz=5mm,Complete			
Phantom	Validation plane			
Device Position	Body Front			
Band	1.9GHz			
Channels	Middle			
Signal	TDMA (Crest factor: 8.0)			



Maximum location: X=0.00, Y=-2.00; SAR Peak: 0.13 W/kg

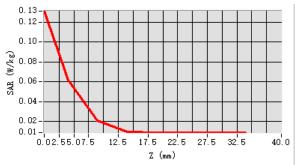
SAR 10g (W/Kg)	0.022
SAR 1g (W/Kg)	0.056
Variation (%)	-30.730
Horizontal validation criteria: minimum distance (mm)	11.313708
Vertical validation criteria: SAR ratio M2/M1 (%)	33.618244

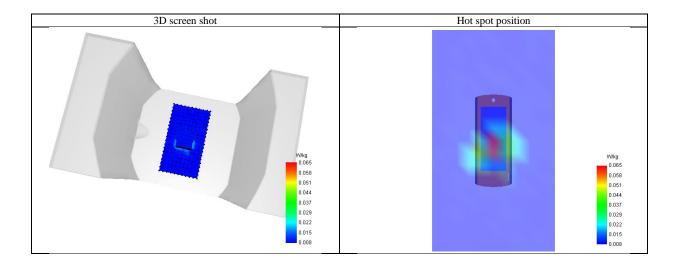
Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00





SAR (W/Kg) 0.131 0.062 0.021 0.009 0.009 0.009 0.009







Page 34 of 35

# APPENDIX C. TEST SETUP PHOTOGRAPHS

Refer to Attached files.

# APPENDIX D. CALIBRATION DATA

Refer to Attached files.



Page 35 of 35

# Conditions of Issuance of Test Reports

- 1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Co., Ltd (the "Company") solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the "Clients").
- 2. Any report issued by Company as a result of this application for testing services (the "Report") shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
- 3. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
- 4. In the event of the improper use of the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
- 5. Samples submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
- 6. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.

  7. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to

submitting the sample for testing.

- 8. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
- 9. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

#### ----END OF REPORT----