



Test Report Number: SZ26060095S01

SAR Test Report

For

Applicant Name: Anhui Huami Information Technology Co., Ltd

Brand Name: AMAZFIT

EUT Name: Smart Watch

Model Number: A2570

Test Standards: 47 CFR Part 2.1093
IEEE 1528-2013

FCC ID: 2AC8UA2570

Test Date: 2026-06-19

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Revision History		
Version	Issue Date	Revisions Content
R_V0	2026-07-23	Original
Note:		Once the revision has been made, then previous versions reports are invalid.





1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) found during test as bellows:

<Highest Reported standalone SAR Summary>

Exposure Position	Frequency Band	Reported SAR (W/kg)	Equipment Class	Highest Reported SAR (W/kg)
Next to Mouth 1-g SAR (10 mm Gap)	WLAN 2.4GHz	0.196	DTS	0.196
	Bluetooth	N/A		
Wrist-worn 10g SAR (0 mm Gap)	WLAN 2.4GHz	0.151	DTS	0.151
	Bluetooth	N/A		

This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg) specified in 47 CFR Part 2.1093, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and KDB publications.



2. Introduction

2.1 Identification of Testing Laboratory

Company Name:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Phone Number:	+86-0755-36698555
Fax Number:	+86-0755-36698555

2.2 Identification of the Responsible Testing Location

Test Location:	Shenzhen Morlab Communications Technology Co., Ltd.
Address:	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Description:	All measurement facilities used to collect the measurement data are located at FL.3, Building A, FeiYang Science Park, Block 67, BaoAn District, Shenzhen, 518101 P. R. China.
Designation Number	CN1192
Registration Number	226174

2.3 Laboratory Condition

Ambient Temperature:	21°C to 25°C
Ambient Relative Humidity:	48% to 70%
Ambient Pressure:	100 kPa to 102 kPa

2.4 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.





(5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

(6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

3. Product Information

3.1 Application Information

Company Name:	Anhui Huami Information Technology Co., Ltd
Address:	Room 401-1, Building H8, Hefei Innovation Industrial Park Phase II, No.2800, Chuangxin Road, High-tech Zone, Pilot Free Trade Zone, Hefei Anhui, China

3.2 Manufacturer Information

Company Name:	Anhui Huami Information Technology Co., Ltd
Address:	Room 401-1, Building H8, Hefei Innovation Industrial Park Phase II, No.2800, Chuangxin Road, High-tech Zone, Pilot Free Trade Zone, Hefei Anhui, China

3.3 General Description of Equipment under Test (EUT)

EUT Name	Smart Watch
Model Name/HVIN	A2570
Series Model/HVIN	N/A
Description of Model name differentiation	N/A
Software Version	V0.0.0
Hardware Version	0.0.3.7
FVIN	V5.1.3.1
Sample No.	1#

3.4 Equipment under Test Ancillary Equipment

Ancillary Equipment 1	Rechargeable Battery	
	Capacity	660mAh, 2.581Wh
	Nominal Voltage	3.91V

3.5 Technical Information





Network and Wireless connectivity	2.4G WIFI 802.11b, 802.11g, 802.11n(HT20) BT (BLE)
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The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	WLAN, Bluetooth	
Frequency Range	802.11b/g/n(HT20)	2412 ~ 2462 MHz
	Bluetooth	2402 ~ 2480 MHz
Antenna Type	WLAN: Metal Antenna BT: Metal Antenna	
Hotspot Function	Not Support	
Power Reduction	Not Support	
Exposure Category	General Population/Uncontrolled exposure	
EUT Stage	Portable Device	
Product	Type	
	☐ Production unit	☒ Identical prototype



4. Summary of Test Results

4.1 Test Standards

No.	Identity	Document Title
1	FCC 47 CFR Part 2 (2.1093)	Radio Frequency Radiation Exposure Evaluation: Portable Devices
2	IEEE 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
3	KDB 447498 D01v06	General RF Exposure Guidance
4	KDB 248227 D01v02r02	SAR Measurement Procedures for 802.11 Transmitters
5	KDB 865664 D01v01r04	SAR Measurement 100 MHz to 6 GHz
6	KDB 865664 D02v01r02	RF Exposure Reporting
7	KDB 941225 D06v02r01	SAR Evaluation Procedures For Portable Devices With Wireless Router Capabilities

4.2 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.

SAR assessments have been made in line with the requirements of RSS-102.

Exposure Type	SAR Value (W/Kg)	
	General Population/Uncontrolled Exposure	Occupational/Controlled Exposure
Spatial Average SAR (whole body)	0.08	0.4



Spatial Peak SAR (1g cube tissue for head and trunk)	1.60	8.0
Spatial Peak SAR (10g for limb)	4.0	20.0

NOTE:

Population/Uncontrolled Environments: are defined as locations where there is the exposure of individual who have no knowledge or control of their exposure.

Occupational/Controlled Environments: are defined as locations where there is exposure that may be incurred by people who are aware of the potential for exposure (i.e. as a result of employment or occupation).

4.3 Test Uncertainty

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor(a)	$1/k^{(b)}$	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

Standard Uncertainty for Assumed Distribution

- standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity
- k is the coverage factor



The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual “root-sum-squares” (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

DASY Uncertainty Budget According to IEC/IEEE 62209-1528:2020 (4MHz - 10 GHz range)							
Error Description	Uncertainty Value (±%)	Probability	Divisor	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System errors							
Probe Calibration	18.6	N	2	1	1	9.3	9.3
Probe calibration drift	1.7	R	1.732	1	1	1.0	1.0
Probe linearity and detection limit	4.7	R	1.732	1	1	2.7	2.7
Broadband signal	2.8	R	1.732	1	1	1.6	1.6
Probe isotropy	7.6	R	1.732	1	1	4.4	4.4
Other probe and data acquisition errors	2.4	N	1	1	1	2.4	2.4
RF ambient and noise	1.8	N	1	1	1	1.8	1.8
Probe positioning errors	0.006	N	1	0.5	0.5	0.0	0.0
Data processing errors	4	N	1	1	1	4.0	4.0
Phantom and device errors							
Measurement of phantom conductivity(σ)	2.5	N	1	0.78	0.71	2.0	1.8
Temperature effects (medium)	5.4	R	1.732	0.78	0.71	2.4	2.2
Shell permittivity	14	R	1.732	0.5	0.5	4.0	4.0
Distance between the radiating element of the DUT and the phantom medium	2	N	1	2	2	4.0	4.0



Repeatability of positioning the DUT or source against the phantom	1	N	1	1	1	1.0	1.0
Device holder effects	3.6	N	1	1	1	3.6	3.6
Effect of operating mode on probe sensitivity	2.4	R	1.732	1	1	1.4	1.4
Time-average SAR	1.7	R	1.732	1	1	1.0	1.0
Variation in SAR due to drift in output of DUT	2.5	N	1	1	1	2.5	2.5
Validation antenna uncertainty (validation measurement)	0	N	1	1	1	0.0	0.0
Uncertainty in accepted power (validation measurement only)	0	N	1	1	1	0.0	0.0
Phantom and Setup							
Phantom deviation from target (ϵ', σ)	1.9	N	1	1	0.84	1.9	1.6
SAR scaling	0	R	1.732	1	1	0.0	0.0
Combined Std. Uncertainty						14.5%	14.4%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						29.0%	28.8%

5. Measurement System

5.1 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:

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

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

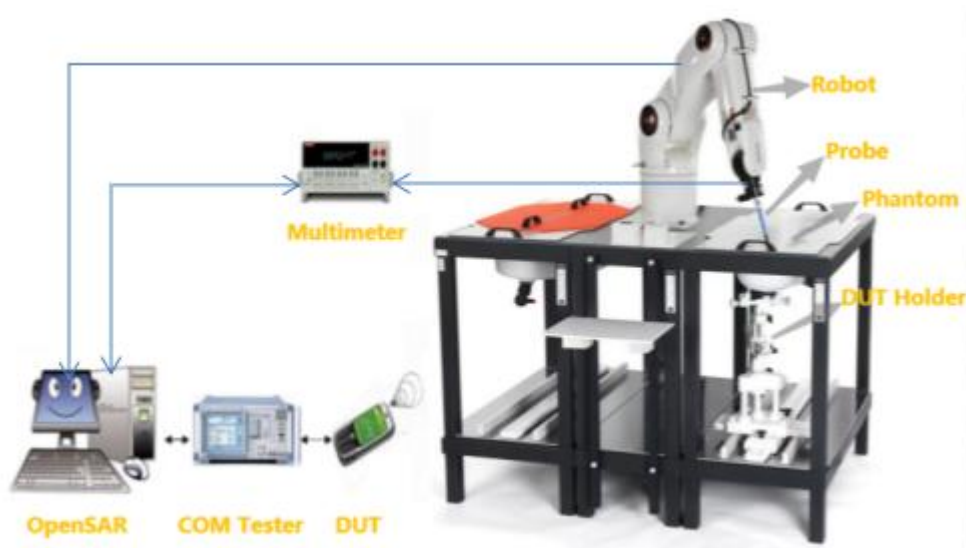
$$SAR = \frac{\sigma E^2}{\rho}$$



Where: σ is the conductivity of the tissue,
 ρ is the mass density of the tissue and E is the RMS electrical field strength.

5.2 MVG SAR System

5.2.1 SAR system diagram



5.2.2 Robot





A standard high precision 6-axis robot (Denso) with teaches pendant with Scanning System

- It must be able to scan all the volume of the phantom to evaluate the tridimensional distribution of SAR.
- Must be able to set the probe orthogonal of the surface of the phantom ($\pm 30^\circ$).
- Detects stresses on the probe and stop itself if necessary to keep the integrity of the probe.

5.2.3 E-Field Probe

For the measurements, the Specific Dosimetric SSE2 E-Field Probe with following specifications is used:

- Dynamic range: 0.01-100 W/kg
- Tip diameter: 2mm for SSE2
- Distance between probe tip and sensor center: 1mm for SSE2
- Distance between sensor center and the inner phantom surface: 2mm for $f \geq 4\text{GHz}$.
- Probe linearity: $<0.25\text{dB}$.
- Axial Isotropy: $<0.25\text{dB}$.
- Spherical Isotropy: $<0.50\text{dB}$.
- Calibration range: 150 to 6000 MHz for head & body simulating liquid
- Angle between probe axis (evaluation axis) and surface normal line: less than 20° .



5.2.4 Phantoms

SAM Phantom
For the measurements the Specific Anthropomorphic Mannequin (SAM) defined by the IEEE SCC-34/SC2 group is used. The probe scanning of the E-Field is done in the 2 halves of the normalized head. The normalized shape of the phantom corresponds to the dimensions of 90% of an adult head size. It enables the dosimetric evaluation of left and right-hand phone usage and includes an additional flat phantom part for the simplified body performance check. The phantom set-up includes a cover, which prevents the evaporation of the liquid.



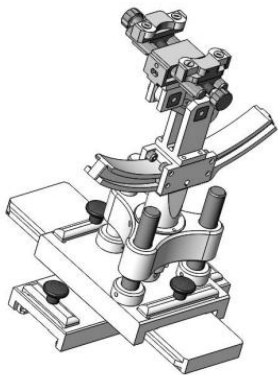
	The thickness of the phantom amounts to 2 mm±0.2 mm. The materials for the phantom do not affect the radiation of the device under test (DUT) : $\epsilon_r' < 5$ The head is filled with tissue simulating liquid. The hand do not have to be modeled.																				
SAM Phantom																					
TWIN SAM phantom																					
<table><tr><th colspan="2">Mechanical</th><th colspan="2">Electrical</th></tr><tr><td>Overall thickness</td><td>2±0.2 mm(except ear area)</td><td>Relative permittivity</td><td>3.4</td></tr><tr><td>Dimensions</td><td>1000 mm(L) x 500 mm(W) x 200 mm(H)</td><td>Loss tangent</td><td>0.02</td></tr><tr><td>Maximum volume</td><td colspan="3">27 L</td></tr><tr><td>Material</td><td colspan="3">Fiberglass based</td></tr></table>		Mechanical		Electrical		Overall thickness	2±0.2 mm(except ear area)	Relative permittivity	3.4	Dimensions	1000 mm(L) x 500 mm(W) x 200 mm(H)	Loss tangent	0.02	Maximum volume	27 L			Material	Fiberglass based		
Mechanical		Electrical																			
Overall thickness	2±0.2 mm(except ear area)	Relative permittivity	3.4																		
Dimensions	1000 mm(L) x 500 mm(W) x 200 mm(H)	Loss tangent	0.02																		
Maximum volume	27 L																				
Material	Fiberglass based																				

ELLIPTICAL Phantom	
The phantom is for Body performance check filled with tissue-equivalent liquid to a depth of at least 150 mm, whose shell material is resistant to damage or reaction with tissue-equivalent liquid chemicals.	
	The shape of the phantom is an ellipse with length 600mm±5mm and width 400mm±5mm. The phantom shell is made of low-loss and low-permittivity material, having loss tangent $\tan\delta \leq 0.05$ and relative permittivity: $\epsilon_r' \leq 5$ for $f \leq 3$ GHz $3 \leq \epsilon_r' \leq 5$ for $f > 3$ GHz The thickness of the bottom-wall of the flat phantom is 2.0 mm with a tolerance of ± 0.2 mm.
ELLI Phantom	
Technical & mechanical characteristics	
Shell thickness	2 mm ± 0.2 mm



Filling volume	25 L
Dimensions	600 mm x 400 mm x 200mm
Permittivity	4.4
Loss tangent	0.017

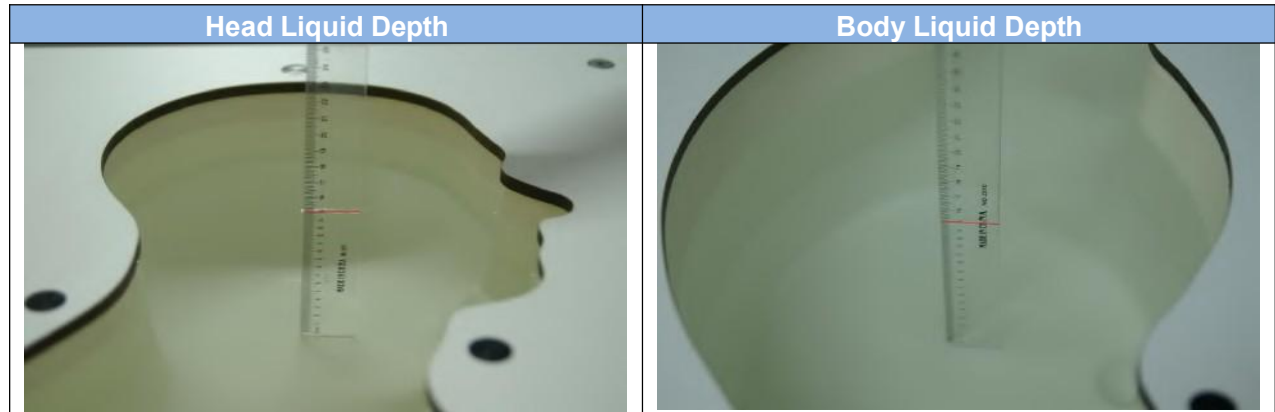
5.2.5 Device Holder

					
System Material	Permittivity	Loss tangent	System Material	Permittivity	Loss tangent
Delrin	3.7	0.005	PMMA	2.9	0.028
The positioning system allows obtaining cheek and tilting position with a very good accuracy. In compliance with CENELEC, the tilt angle uncertainty is lower than 1°.					



5.2.6 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%.



The following table gives the recipes for tissue simulating liquid and the theoretical Conductivity/Permittivity.

Head (Reference IEC/IEEE 62209-1528)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	41.1	57.0	0.2	1.4	0.2	0	0.89	41.9
835	40.3	57.9	0.2	1.4	0.2	0	0.90	41.5
900	40.3	57.9	0.2	1.4	0.2	0	0.97	41.5
1800, 1900, 2000	55.2	0	0	0.3	0	44.5	1.40	40.0
2450	55.0	0	0	0.1	0	44.9	1.80	39.2
2600	54.9	0	0	0.1	0	45.0	1.96	39.0
Frequency (MHz)	Water (%)	Hexyl Carbitol (%)			Triton X-100 (%)		Conductivity σ (S/m)	Permittivity ϵ
5200	62.52	17.24			17.24		4.66	36.0
5800	62.52	17.24			17.24		5.27	35.3
Body (From instrument manufacturer)								
Frequency (MHz)	Water (%)	Sugar (%)	Cellulose (%)	Salt (%)	Preventol (%)	DGBE (%)	Conductivity σ (S/m)	Permittivity ϵ
750	51.7	47.2	0	0.9	0.1	0	0.96	55.5
835	50.8	48.2	0	0.9	0.1	0	0.97	55.2
900	50.8	48.2	0	0.9	0.1	0	1.05	55.0
1800, 1900, 2000	70.2	0	0	0.4	0	29.4	1.52	53.3
2450	68.6	0	0	0.1	0	31.3	1.95	52.7
2600	68.2	0	0	0.1	0	31.7	2.16	52.5
Frequency (MHz)	Water	DGBE (%)			Salt (%)		Conductivity σ (S/m)	Permittivity ϵ





5200	78.60	21.40	/	5.30	49.00
5800	78.50	21.40	0.1	6.00	48.20

LIQUID MEASUREMENT RESULTS

Date	Ambient		Simulating Liquid		Parameters	Target	Measured	Deviation %	Limited %
	Temp. [°C]	Humidity %	Frequency (MHz)	Temp. [°C]					
2026-06-19	23.5	42	2412	23.2	Permittivity	39.27	39.62	0.90	±5
					Conductivity	1.77	1.76	-0.35	±5
2026-06-19	23.5	42	2437	23.2	Permittivity	39.22	39.32	0.25	±5
					Conductivity	1.79	1.77	-1.03	±5
2026-06-19	23.5	42	2450	23.2	Permittivity	39.20	38.76	-1.12	±5
					Conductivity	1.80	1.78	-1.11	±5
2026-06-19	23.5	42	2462	23.2	Permittivity	39.18	38.74	-1.12	±5
					Conductivity	1.81	1.80	-0.59	±5

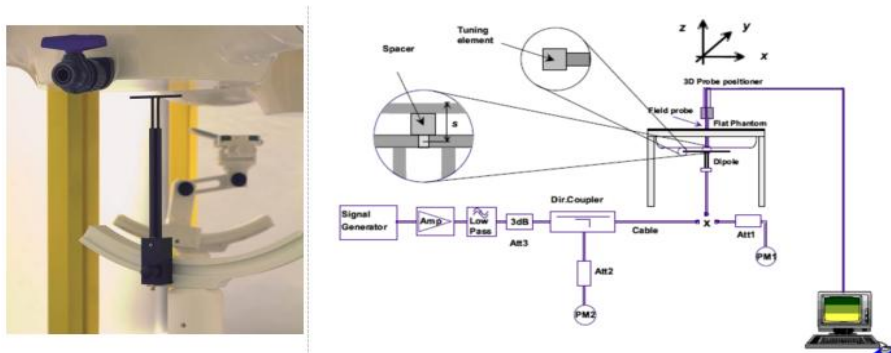


6. System Verification

6.1 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. The 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.

6.2 System Check Setup



6.3 Validation Result

Comparing to the original SAR value provided by MVG, the validation data should be within its specification of 10 %.

Date	Frequency (MHz)	Power	SAR _{1g} (W/Kg)	SAR _{10g} (W/Kg)	Drift (%)	1W Target		Difference percentage		Limited %
						SAR _{1g} (W/Kg)	SAR _{10g} (W/Kg)	1g	10g	
2026-06-19	2450	100 mW	5.442	2.416	3.02	54.70	24.11	-0.51%	0.21%	10
		Normalize to 1 Watt	54.42	24.16						



7. Test Position Configurations

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

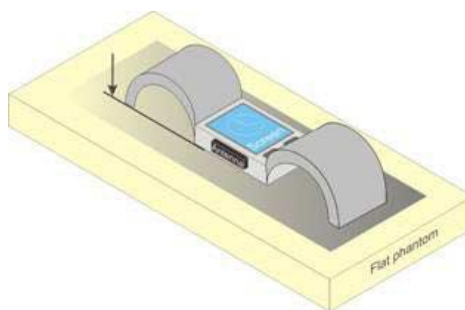
7.1 SAR Evaluations near the Mouth/Jaw Regions of the SAM

Transmitters that are built-in within a wrist watch or similar wrist-worn devices typically operate in speaker mode for voice communication, with the device worn on the wrist and positioned next to the mouth. Next to the mouth exposure requires 1-g SAR and the wrist-worn condition requires 10-g extremity SAR. The 10-g extremity and 1-g SAR test exclusions may be applied to the wrist and face exposure conditions. When SAR evaluation is required, next to the mouth use is evaluated with the front of the device positioned at 10 mm from a flat phantom filled with head tissue-equivalent medium. The wrist bands should be strapped together to represent normal use conditions. SAR for wrist exposure is evaluated with the back of the device positioned in direct contact against a flat phantom filled with body tissue-equivalent medium. The wrist bands should be unstrapped and touching the phantom. The space introduced by the watch or wrist bands and the phantom must be representative of actual use conditions; otherwise, if applicable, the neck or a curved head region of the SAM phantom may be used, provided the device positioning and SAR probe access issues have been addressed through a KDB inquiry. When other device positioning and SAR measurement considerations are necessary, a KDB inquiry is also required for the test results to be acceptable; for example, devices with rigid wrist bands or electronic circuitry and/or antenna(s) incorporated in the wrist bands. These test configurations are applicable only to devices that are worn on the wrist and cannot support other use conditions; therefore, the operating restrictions must be fully demonstrated in both the test reports and user manuals.

7.2 Limb-worn Accessory Configurations

- To position the device parallel to the phantom surface with either keypad up or down.
- To adjust the device parallel to the flat phantom.
- To adjust the distance between the device surface and the flat phantom to 10 mm or holster surface and the flat phantom to 0 mm.





8. Measurement Procedure

8.1 SAR Scan General Requirement

First Area Scan is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an Area Scan is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, Zoom Scan is required. The Zoom Scan is performed around the highest E-field value to determine the averaged SAR-distribution over 10 g. Area scan and zoom scan resolution setting follows KDB 865664 D01v01r04 quoted below.



			≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location			$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}			≤ 2 GHz: ≤ 15 mm 2 – 3 GHz: ≤ 12 mm	3 – 4 GHz: ≤ 12 mm 4 – 6 GHz: ≤ 10 mm
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom} , Δy_{Zoom}			≤ 2 GHz: ≤ 8 mm 2 – 3 GHz: ≤ 5 mm*	3 – 4 GHz: ≤ 5 mm* 4 – 6 GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{Zoom}(n)$		≤ 5 mm	3 – 4 GHz: ≤ 4 mm 4 – 5 GHz: ≤ 3 mm 5 – 6 GHz: ≤ 2 mm
	graded grid	$\Delta z_{Zoom}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	3 – 4 GHz: ≤ 3 mm 4 – 5 GHz: ≤ 2.5 mm 5 – 6 GHz: ≤ 2 mm
		$\Delta z_{Zoom}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{Zoom}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	3 – 4 GHz: ≥ 28 mm 4 – 5 GHz: ≥ 25 mm 5 – 6 GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <u>reported</u> SAR from the <i>area scan based 1-g SAR estimation</i> 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.				

8.2 Measurement Procedure

The following steps are used for each test position

- 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
- 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.

8.3 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASY measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

9. SAR Test Configuration

9.1 WLAN 2.4GHz

1. SAR is measured for 2.4 GHz 802.11b DSSS using either the fixed test position or, when applicable, the initial test position procedure. SAR test reduction is determined according to the following:



- a. When the reported SAR of the highest measured maximum output power channel for the exposure configuration is ≤ 0.8 W/kg, no further SAR testing is required for 802.11b DSSS in that exposure configuration.
- b. When the reported SAR is > 0.8 W/kg, SAR is required for that position using the next highest measured output power channel. When any reported SAR is > 1.2 W/kg, SAR is required for the third channel; i.e., all channels require testing.
2. 2.4 GHz 802.11 g/n OFDM are additionally evaluated for SAR if the highest reported SAR for 802.11b, adjusted by the ratio of the OFDM to DSSS specified maximum output power, is > 1.2 W/kg. When SAR is required for OFDM modes in 2.4 GHz band, the Initial Test configuration Procedures should be followed.
3. For held-to-ear and hotspot operations, the initial test position procedures were applied. The test position with the highest extrapolated peak SAR will be used as the initial test position. When reported SAR for the initial test position is ≤ 0.4 W/kg, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR result is ≤ 0.8 W/kg or all test positions are measured.
4. Justification for test configurations for WLAN per KDB Publication 248227 D02DR02-41929 for 2.4 GHz Wi-Fi single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement. SAR for OFDM modes (2.4 GHz 802.11g/n) was not required due to the maximum allowed powers and the highest reported DSSS SAR.
5. A fixed level power reduction is applied for WiFi when handset operates "held to the body" condition or "held to the ear" condition, the power reduction triggered by audio receiver detection and call establish status.
6. Per KDB 248227 D01v02r02, In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. SAR is not required for the following 2.4 GHz OFDM conditions:
 - a. When KDB Publication 447498 SAR test exclusion applies to the OFDM configuration.
 - b. When the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.

10. Conducted RF Output Power

10.1 Wi-Fi





2.4GWIFI				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
802.11b	1	2412	14.13	25.88
	6	2437	14.62	28.97
	11	2462	14.63	29.04
802.11g	1	2412	11.55	14.29
	6	2437	11.96	15.70
	11	2462	12.04	16.00
802.11 n-HT20	1	2412	11.40	13.80
	6	2437	11.82	15.21
	11	2462	11.91	15.52

10.2 Bluetooth

BT				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	1.51	1.42
	39	2441	1.25	1.33
	78	2480	0.95	1.24
$\pi/4$ -QPSK(2Mbps)	0	2402	1.85	1.53
	39	2441	1.60	1.45
	78	2480	1.37	1.37
8DPSK(3Mbps)	0	2402	2.29	1.69
	39	2441	2.10	1.62
	78	2480	1.80	1.51

BLE				
Mode	Channel Number	Frequency (MHz)	Average Power (dBm)	Output Power (mW)
GFSK(1Mbps)	0	2402	1.24	1.33
	19	2440	0.96	1.25
	39	2480	0.73	1.18
GFSK(2Mbps)	0	2402	1.08	1.28
	19	2440	1.13	1.30
	39	2480	0.57	1.14



11. Exclusion SAR of Bluetooth

1. According to KDB 447498 section 4.3.1, the 1-g SAR test exclusion thresholds at test separation Distances ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0.$$

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

2. When the device is used, 10 mm & 1 mm as the most conservative minimum test separation distance was used for evaluating.

Channel	Frequency (GHz)	Max. Tune-up Power (dBm)	Max. Powe (mW)	Test Distance (mm)	Result	Exclusion Thresholds for 1-g SAR
CH 0	2.402	2.5	1.8	10	0.28	3.0

Channel	Frequency (GHz)	Max. Tune-up Power (dBm)	Max. Powe (mW)	Test Distance (mm)	Result	Exclusion Thresholds for 10-g SAR
CH 0	2.402	2.5	1.8	1	2.76	7.5

Note: The conduction power was rounded in mW.

3. When standalone SAR is not required to be measured, per KDB 447498 D01v06 4.3.2), the following equation must be used to estimate the standalone 1g & 10g SAR.

$$\text{Estimated SAR} = \frac{\sqrt{f(\text{GHz})}}{7.5} \cdot \frac{\text{Max. power of channel, mW}}{\text{Min. Separation Distance, mm}}$$

Where 7.5 for 1g SAR and 18.75 for 10g SAR





12. Test Result

12.1 General Notes

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - 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 SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1 / (duty cycle)".
 - c) For WWAN: Reported SAR (W/kg) = Measured SAR (W/kg) * Tune-up Scaling Factor.
 - d) For WLAN/Bluetooth: Reported SAR (W/kg) = Measured SAR (W/kg) * Duty Cycle scaling factor * Tune-up scaling factor.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - a) ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - b) ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - c) ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 648474 D04v01r03, when the reported SAR for a body-worn accessory measured without a headset connected to the handset is ≤ 1.2 W/kg, SAR testing with a headset connected to the handset is not required.
4. Per KDB 648474 D04v01r03, for smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm, when hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg, however, when power reduction applies to hotspot mode the measured SAR must be scaled to the maximum output power, including tolerance, allowed for tablet modes to compare with the 1.2 W/kg SAR test reduction threshold.
5. Per KDB248227 D01v02r02, a Wi-Fi device must be 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 for SAR measurement. The test frequencies established using test mode must correspond to the actual channel frequencies required for operations in the U.S. When 802.11 frame gaps are accounted for in the transmission, a maximum transmission duty factor of 92 - 96% is typically achievable in most test mode configurations. A minimum transmission duty factor of 85% is required to avoid certain hardware and device implementation issues related to wide range SAR scaling. In addition, a periodic transmission duty factor is required for current generation SAR systems to measure SAR correctly. Unless it is permitted by specific KDB procedures or continuous transmission is specifically restricted by the device, the reported SAR must be scaled to 100% transmission duty factor to determine compliance at the maximum tune-up tolerance limit. When a device is not capable of sustaining continuous transmission or the output



can become nonlinear, and it is limited by hardware design and unable to transmit at higher than 85% duty factor, a periodic duty factor within 15% of the maximum duty factor the device is capable of transmitting should be used. The reported SAR must be scaled to the maximum transmission duty factor to determine compliance. Descriptions of the procedures applied to establish the specific duty factor used for SAR testing are required in SAR reports to support the test results.

12.2 Test Result Summary

Next to Mouth SAR

Band	Mod.	Test Position	Freq.	Result 1g (W/Kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
2.4GHz WLAN	802.11b	Front of face	2412	0.171	-3.86	14.50	14.13	1.089	0.186	/
		Front of face	2437	0.175	-1.57	15.00	14.62	1.091	0.191	/
		Front of face	2462	0.180	-1.21	15.00	14.63	1.089	0.196	1

Wrist-worn SAR

Band	Mod.	Test Position	Freq.	Result 10g (W/Kg)	Power Drift (%)	Max. Turn-up Power (dBm)	Meas. Output Power (dBm)	Scaling Factor	Scaled SAR (W/Kg)	Meas.No.
2.4GHz WLAN	802.11b	Wrist	2412	0.128	3.45	14.50	14.13	1.089	0.139	/
		Wrist	2437	0.132	-1.36	15.00	14.62	1.091	0.142	/
		Wrist	2462	0.139	-1.37	15.00	14.63	1.089	0.151	2

13. Simultaneous Transmission

Both the WLAN & Bluetooth transmitter share the same antenna and cannot transmit simultaneously, therefore simultaneous transmission assessment is not required.





14. Test Equipment List

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last Calibration	Calibrated Until
SAR Test System	SATIMO	N/A	V5.3.15.11	N/A	N/A
2450MHzDipole	MVG	SID2450	SN 30/13 DIP2G450-263	2026-05-07	2029-05-06
E-Field Probe	MVG	SSE2	SN 37/08 EP80	2026-05-07	2027-05-06
Dielectric Probe Kit	MVG	SCLMP	SN 32/14 OCPG67	2025-09-15	2026-09-14
Antenna	MVG	ANTA3	SN 07/13 ZNTA52	N/A	N/A
Phantom1	MVG	SAM	SN 32/14 SAM115	N/A	N/A
Phone holder	MVG	N/A	SN 32/14 MSH97	N/A	N/A
Attenuator	Agilent	HXT-10-8-SMA	240327017	2026-02-04	2027-02-03
Directional coupler	Xi'an Xingbo	XBOH-OA08-20dB	211123-4-3	2026-02-03	2027-02-02
Network Analyzer	Agilent	E5071C	MY46520378	2025-09-26	2026-09-24
Multi Meter	Keithley	Multi Meter 2000	4050073	2025-09-22	2026-09-21
Signal Generator	Agilent	N5182A	MY50140530	2025-09-26	2026-09-25
Wireless Communication Test Set	Agilent	8960-E5515C	MY48360751	2026.02.04	2027-02-03
Wireless Communication Test Set	R&S	CMW500	156324	2025-09-25	2026-09-24
Power Amplifier	DESAY	WCS-DLNA50M8G50G1	CSKJLNA231227A	2025-09-29	2026-09-28
Power Meter	R&S	NRP	100510	2025-09-25	2026-09-24
Power Sensor	R&S	NRP-Z11	101919	2025-09-25	2026-09-24
Power Sensor	Keysight	U2021XA	MY56280002	2025-09-25	2026-09-24
Temperature hygrometer	TOPRIE	TP502V4-P	6700000124198	2025-10-09	2026-10-08
Thermograph	Elitech	RC-4	S/N EF7176501537	2025-10-17	2026-10-16





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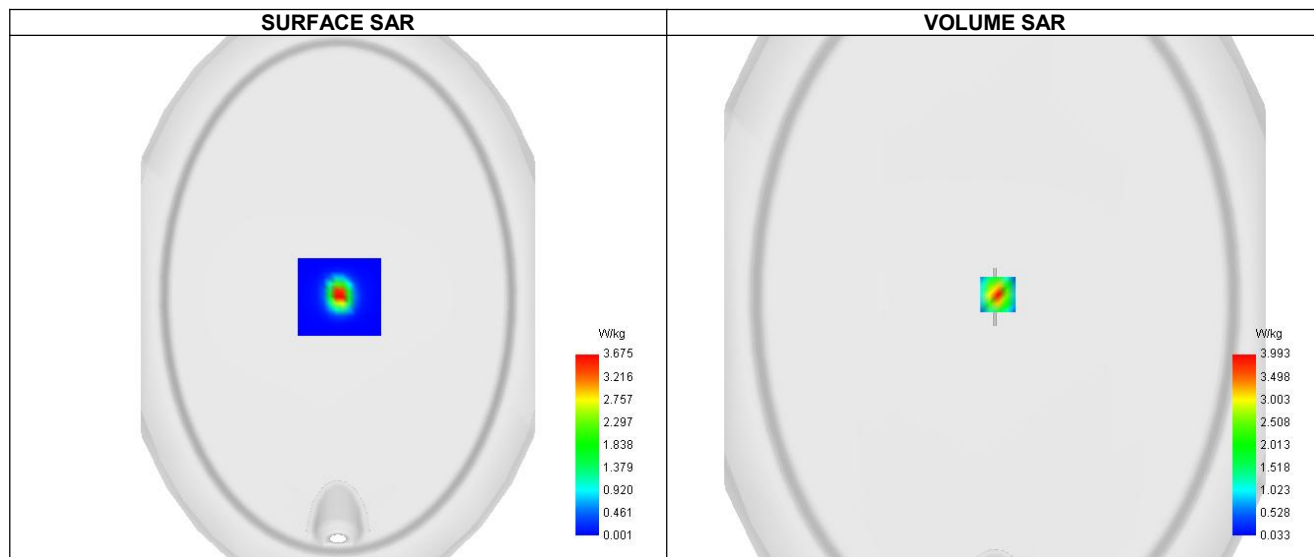
Annex A System Validation Plots

System check at 2450 MHz

Type: Phone measurement (Complete)
Area scan resolution: dx=8mm, dy=8mm
Zoom scan resolution: dx=5mm, dy=5mm, dz=5mm
Date of measurement: 2026-06-19

Experimental conditions.

Phantom	Validation plane
Device Position	Dipole
Band	2450MHz
Channels	Middle
Signal	CW
Frequency (MHz)	2450
Relative permittivity	38.76
Conductivity (S/m)	1.78
Probe	SN 37/08 EP80
ConvF	4.82
Crest factor:	1:1

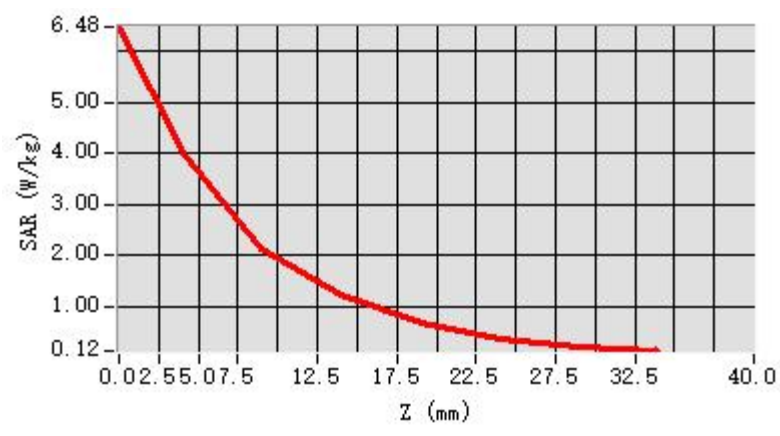


Maximum location: X=3.00, Y=2.00 ; SAR Peak: 6.45 W/kg

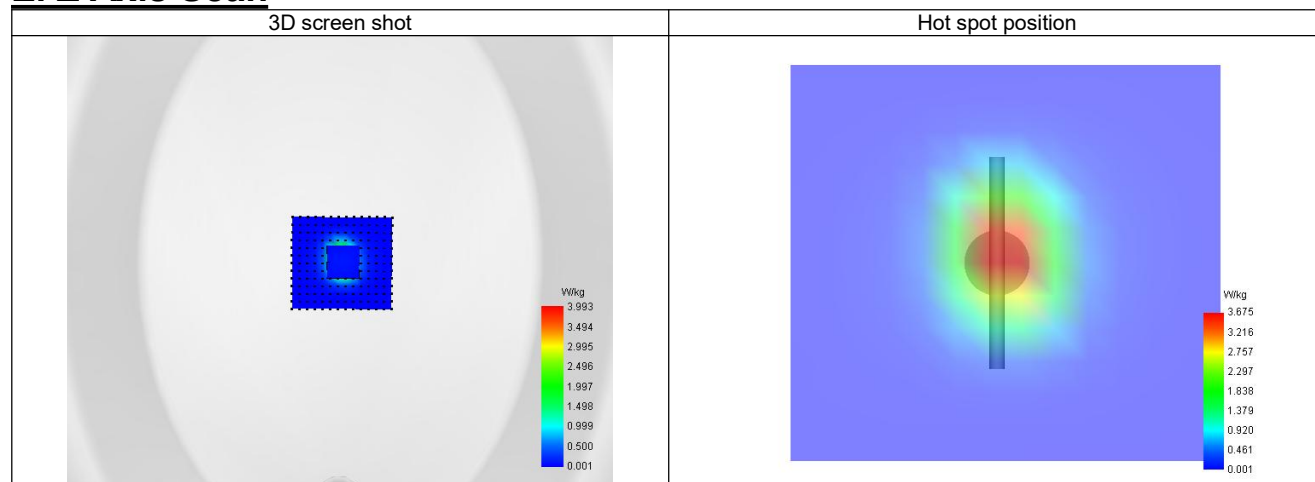


D. SAR 1g & 10g

SAR 10g (W/Kg)	2.416
SAR 1g (W/Kg)	5.442
Horizontal validation criteria: minimum distance (mm)	16.000000
Vertical validation criteria: SAR ratio M2/M1 (%)	52.962272



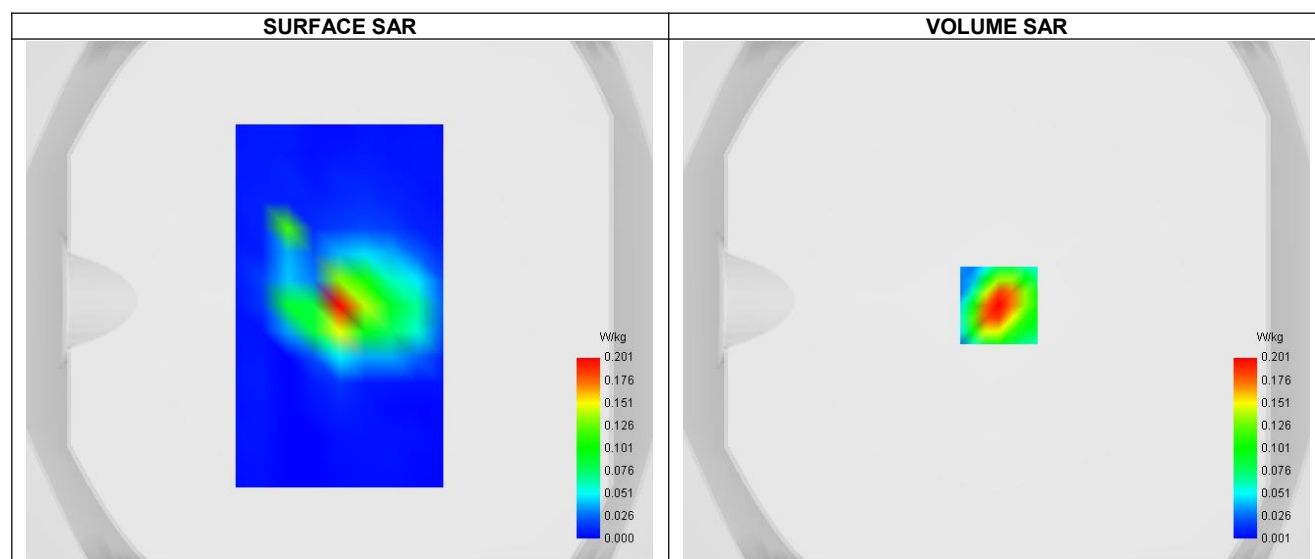
E. Z Axis Scan



Annex B SAR Test Plots

Plot 1: DUT: Smart Watch; EUT Model: A2570

Test Date	2026-06-19
ConvF	4.82
Probe	SN 37/08 EP80
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x7, dx=5mm, dy=5mm, dz=5mm
Phantom	Validation plane
Device Position	Front of face
Band	2.4GHz WLAN
Signal	802.11b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	38.74
Conductivity (S/m)	1.80



Maximum location: X=1.00, Y=-2.00 ; SAR Peak: 0.28 W/kg

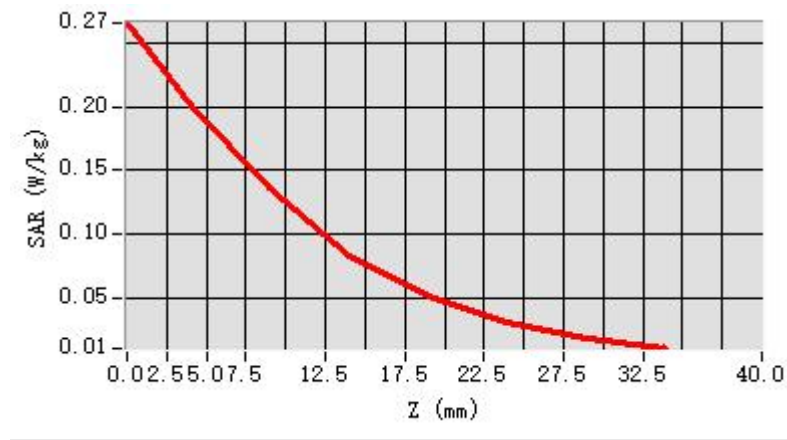
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.093
SAR 1g (W/Kg)	0.180
Horizontal validation criteria: minimum distance (mm)	11.180340
Vertical validation criteria: SAR ratio M2/M1 (%)	67.612416

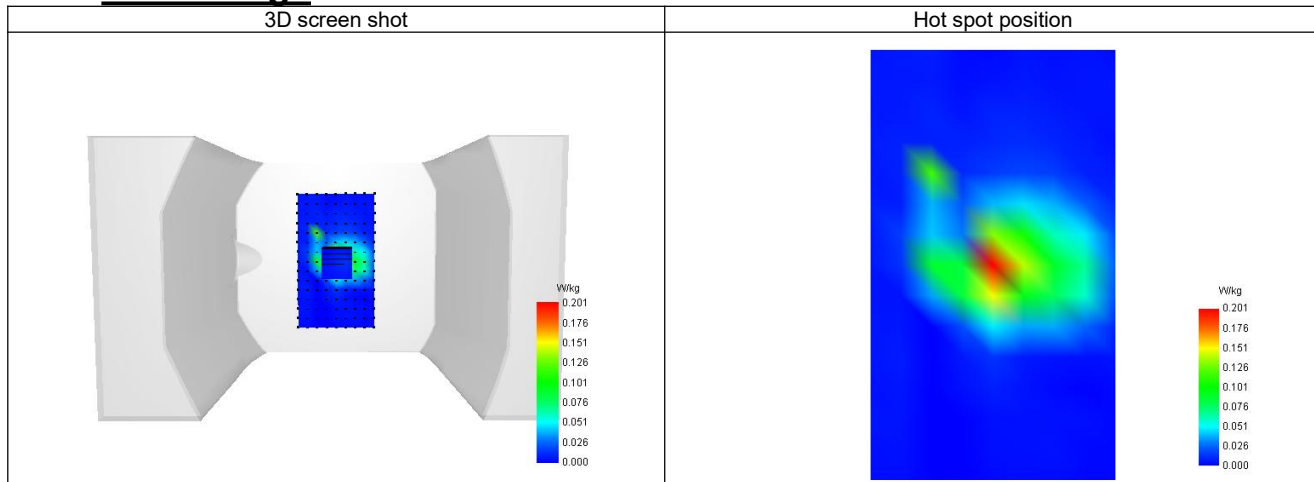


E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.266	0.201	0.136	0.083	0.051	0.030	0.017

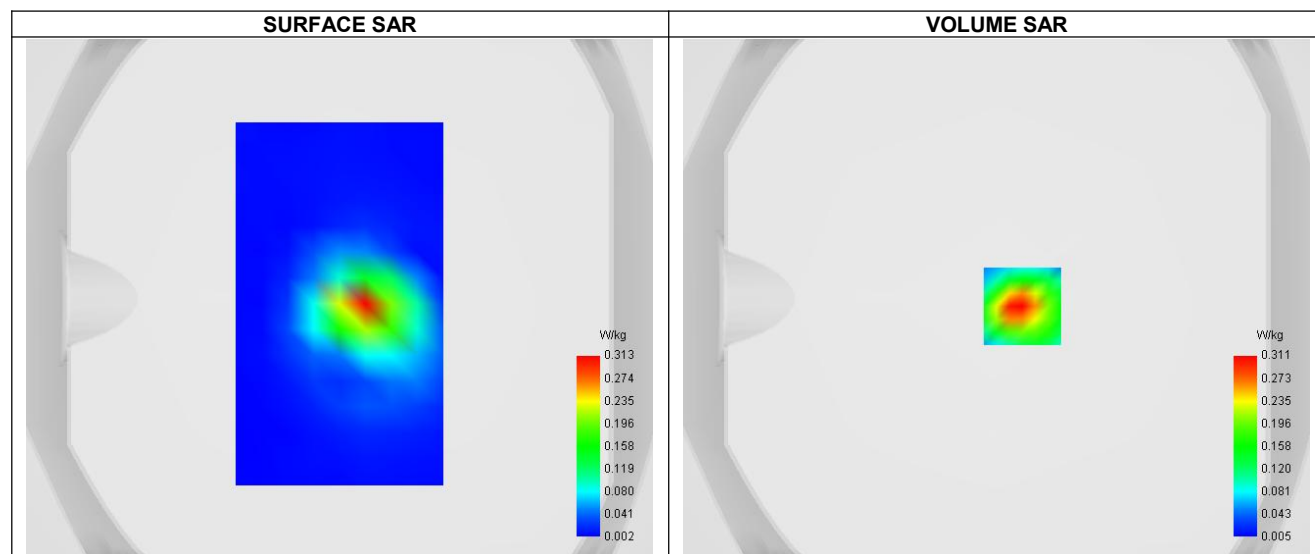


F. 3D Image



Plot 2: DUT: Smart Watch; EUT Model: A2570

Test Date	2026-06-19
ConvF	4.82
Probe	SN 37/08 EP80
Area Scan	dx=8mm, dy=8mm, h= 5.00 mm
Zoom Scan	7x7x7, dx=5mm, dy=5mm, dz=5mm
Phantom	Validation plane
Device Position	Wrist
Band	2.4GHz WLAN
Signal	802.11b (Crest factor: 1.0)
Frequency (MHz)	2462
Relative permittivity (real part)	38.74
Conductivity (S/m)	1.80



Maximum location: X=10.00, Y=-3.00 ; SAR Peak: 0.47 W/kg

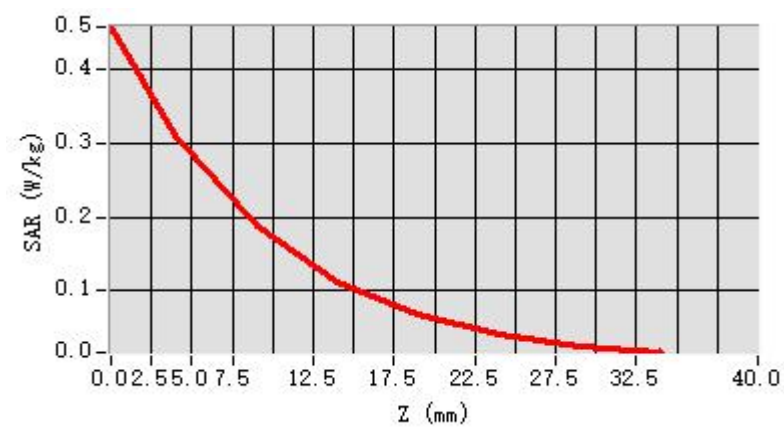
D. SAR 1g & 10g

SAR 10g (W/Kg)	0.139
SAR 1g (W/Kg)	0.278
Horizontal validation criteria: minimum distance (mm)	11.180340
Vertical validation criteria: SAR ratio M2/M1 (%)	60.631612

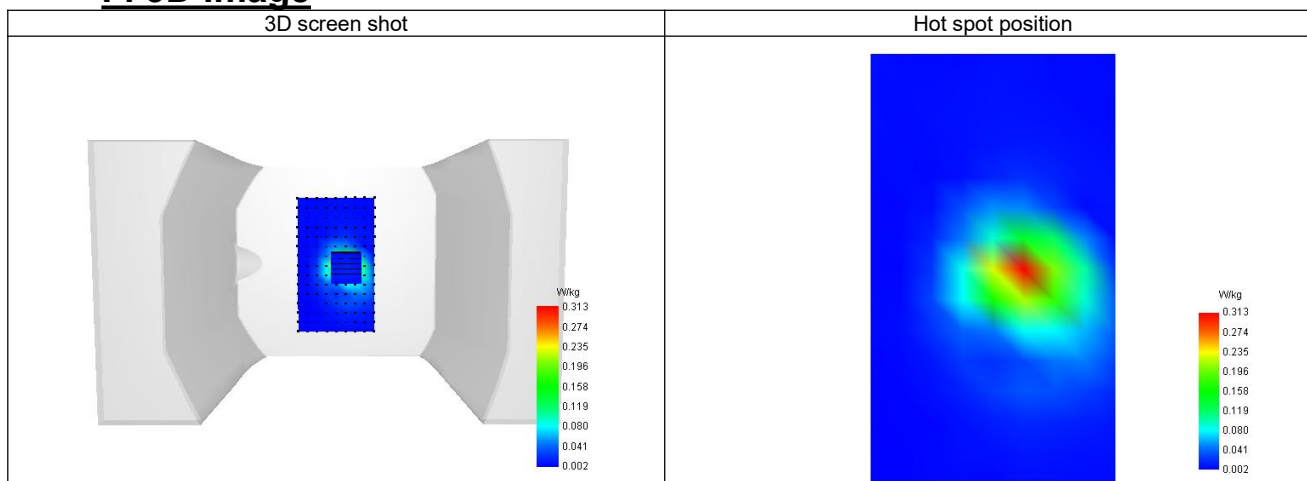


E. Z Axis Scan

Z (mm)	0.00	4.00	9.00	14.00	19.00	24.00	29.00
SAR (W/Kg)	0.458	0.311	0.189	0.112	0.069	0.040	0.025



F. 3D Image



Annex C SAR Test Setup Photos

Reference Photo: simulation liquid depth 15cm



Reference Photos



Front of face (dist. 10 mm)



Wrist (dist. 0 mm)





Test Report Number: SZ26060095S01

Annex D Calibration Information

Please refer to the document "Calibration.pdf".

--END OF REPORT--

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