

# SAR Test Report

Report No.: AGC00008180310FH01

**FCC ID** : TW5GD7603

**PRODUCT DESIGNATION** : 720P Digital Color Video Baby Monitor with 5 inch HD LCD

**BRAND NAME** : N/A

**MODEL NAME** : GD7603

**CLIENT** : Shenzhen Gospell Smarthome Electronic Co., Ltd.

**DATE OF ISSUE** : June. 27, 2018

**STANDARD(S)** : IEEE Std. 1528:2013  
FCC 47CFR § 2.1093  
IEEE/ANSI C95.1:2005

**REPORT VERSION** : V1.1

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

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### Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	June. 21, 2018	Invalid	Initial Release
V1.1	1 <sup>st</sup>	June. 27, 2018	Valid	Update the report, on page 16/21/31.

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## Test Report Certification

Applicant Name	Shenzhen Gospell Smarthome Electronic Co., Ltd.
Applicant Address	F/12 F518 Idea Land Baoyuan Road Baoan Central Area Shenzhen City P.R China
Manufacturer Name	Shenzhen Gospell Smarthome Electronic Co., Ltd.
Manufacturer Address	East of 01st-04st Floor, Block A, No.1 Industrial park, Fenghuanggang, South of No.1 Baotian Road, Xixiang street, Bao'an District, Shenzhen City, Guangdong Province 518126, P.R.China
Product Designation	720P Digital Color Video Baby Monitor with 5 inch HD LCD
Brand Name	N/A
Model Name	GD7603
Different Description	N/A
EUT Voltage	DC 3.7V by battery
Applicable Standard	IEEE Std. 1528:2013 FCC 47CFR § 2.1093 IEEE/ANSI C95.1:2005
Test Date	June. 14, 2018
Report Template	AGCRT- US -2.4G/SAR (2018-01-01)

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

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## 1. SUMMARY OF MAXIMUM SAR VALUE

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

Exposure Position	Frequency Band(MHz)	Highest Reported 1g-SAR(W/Kg)
Body (without antenna pop-up)	2.4 GHz	1.474
Body (with antenna pop-up)	2.4 GHz	1.545

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/ANSI C95.1:2005 and the following specific FCC Test Procedures:

- KDB 447498 D01 General RF Exposure Guidance v06
- KDB 865664 D01 SAR Measurement 100MHz to 6GHz v01r04

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## 2. GENERAL INFORMATION

### 2.1. EUT Description

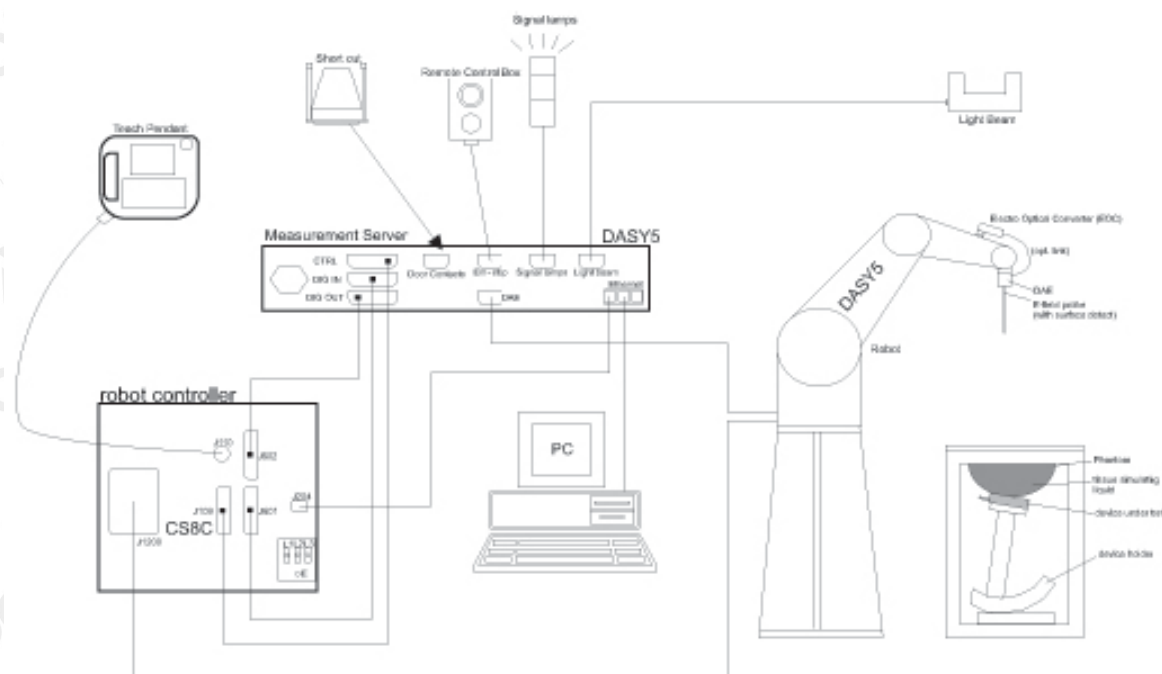
General Information	
Product Designation	720P Digital Color Video Baby Monitor with 5 inch HD LCD
Test Model	GD7603
Hardware Version	GD7603M03
Software Version	V15
Device Category	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	Internal antenna
<b>2.4 GHz</b>	
Operation Frequency	2410-2477MHz
Type of modulation	<input checked="" type="checkbox"/> GFSK <input type="checkbox"/> II/4-DQPSK <input type="checkbox"/> 8-DPSK
Peak Power	12.534dBm
Antenna Gain	3.0dBi
<b>Accessories</b>	
Battery	Brand name: N/A Model No. : KPL624763 Voltage and Capacitance: 3.7V   2000mAh
Adapter	Model No: FLYPOWER Brand name. : PS10E050K2000UU Input: AC 100-240V, 50/60Hz, 0.35A; DC 5V, 2A
Note: 1. The sample used for testing is end product.	
Product	Type <input checked="" type="checkbox"/> Production unit <input type="checkbox"/> Identical Prototype

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### 3. SAR MEASUREMENT SYSTEM

#### 3.1. The DASY5 system used for performing compliance tests consists of following items




- A standard high precision 6-axis robot with controller, teach pendant and software.
- Data acquisition electronics (DAE) which attached to the robot arm extension. The 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
- A dosimetric probe equipped with an optical surface detector system.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital Communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- A Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running WinXP and the DASY5 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- Phantoms, device holders and other accessories according to the targeted measurement.

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### 3.2. DASY5 E-Field Probe

The SAR measurement is conducted with the dosimetric probe manufactured by SPEAG. 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. SPEAG conducts the probe calibration in compliance with international and national standards (e.g. IEEE 1528 and relevant KDB files.) Under ISO 17025. The calibration data are in Appendix D.

#### Isotropic E-Field Probe Specification


Model	EX3DV4	
Manufacture	SPEAG	
frequency	0.45GHz-3 GHz Linearity:±0.9%(k=2)(450MHz-3 GHz)	
Dynamic Range	0.01W/Kg-100W/Kg Linearity:±0.9%(k=2)	
Dimensions	Overall length:337mm Tip diameter:2.5mm Typical distance from probe tip to dipole centers:1mm	
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields). Only probe which enables compliance testing for frequencies up to 3 GHz with precision of better 30%.	

### 3.3. Data Acquisition Electronics description

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.

The mechanical probe mounting device includes two different sensor systems for frontal and sideways probe contacts. They are used for mechanical surface detection and probe collision detection.

#### DAE4

<b>Input Impedance</b>	200M $\Omega$	
<b>The Inputs</b>	Symmetrical and floating	
<b>Common mode rejection</b>	above 80 dB	

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### 3.4. Robot

The DASY system uses the high precision robots (DASY5:TX60) type from Stäubli SA (France). For the 6-axis controller system, the robot controller version from 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



### 3.5. Light Beam Unit

The light beam switch allows automatic “tooling” of the probe. 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 prob.1 mm, even if the other probe has different dimensions. During probe rotations, the probe tip will keep its actual position. e, the same position will be reached with another aligned probe within 0



### 3.6. Device Holder

The DASY 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 DASY device holder has been made out of low-loss POM material having the following dielectric parameters: relative permittivity  $\epsilon=3$  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.



### 3.7. Measurement Server

The measurement server is based on a PC/104 CPU board with CPU (DASY5: 400 MHz, Intel Celeron), chip-disk (DASY5: 128MB), RAM (DASY5: 128MB). The necessary circuits for communication with the DAE electronic box, as well as the 16 bit AD converter system for optical detection and digital I/O interface are contained on the DAYS I/O board, which is directly connected to the PC/104 bus of the CPU board.

The measurement server performs all the real-time data evaluation for field measurements and surface detection, controls robot movements and handles safety operations.





### 3.8. PHANTOM 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:

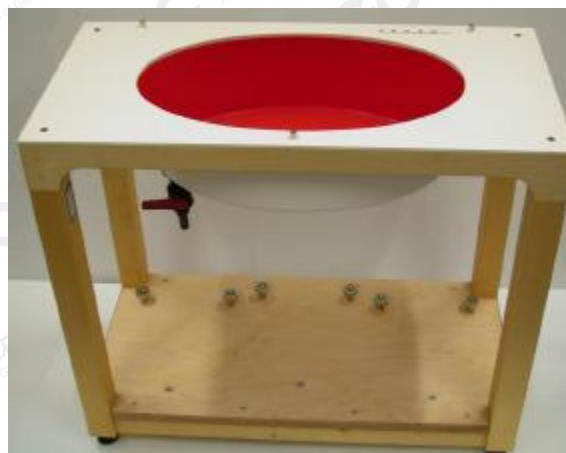
- ☐ Left head
- ☐ Right head
- ☐ Flat phantom



The bottom plate contains three pair of bolts for locking the device holder. The deviceholder positions are adjusted to the standard measurement positions in the threesections. A white cover is provided to tap the phantom during off-periods to prevent waterevaporation and changes in the liquid parameters. On the phantom top, three referencemarkers are provided to identify the phantom position with respect to the robot.

### ELI4 Phantom

- ☐ Flat phantom a fiberglass shell flat phantom with 2mm+/- 0.2 mm shell thickness. It has only one measurement area for Flat phantom



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## 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 (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 can be obtained using either of the following equations:

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

$$SAR = c_h \left. \frac{dT}{dt} \right|_{t=0}$$

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;
$\left. \frac{dT}{dt} \right _{t=0}$	is the initial time derivative of temperature in the tissue in kelvins per second

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## 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 of 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	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location	30° ± 1°	20° ± 1°
Maximum area scan spatial resolution: $\Delta x_{\text{Area}}, \Delta y_{\text{Area}}$	$\leq 2 \text{ GHz}: \leq 15 \text{ mm}$ $2 - 3 \text{ GHz}: \leq 12 \text{ mm}$	$3 - 4 \text{ GHz}: \leq 12 \text{ mm}$ $4 - 6 \text{ GHz}: \leq 10 \text{ mm}$
	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 ≤ the corresponding 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 and 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.

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

Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			$\leq 2 \text{ GHz}: \leq 8 \text{ mm}$ $2 - 3 \text{ GHz}: \leq 5 \text{ mm}^*$	$3 - 4 \text{ GHz}: \leq 5 \text{ mm}^*$ $4 - 6 \text{ GHz}: \leq 4 \text{ mm}^*$
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		$\leq 5 \text{ mm}$	$3 - 4 \text{ GHz}: \leq 4 \text{ mm}$ $4 - 5 \text{ GHz}: \leq 3 \text{ mm}$ $5 - 6 \text{ GHz}: \leq 2 \text{ mm}$
	graded grid	$\Delta z_{\text{Zoom}}(1)$ : between 1 <sup>st</sup> two points closest to phantom surface	$\leq 4 \text{ mm}$	$3 - 4 \text{ GHz}: \leq 3 \text{ mm}$ $4 - 5 \text{ GHz}: \leq 2.5 \text{ mm}$ $5 - 6 \text{ GHz}: \leq 2 \text{ mm}$
		$\Delta z_{\text{Zoom}}(n>1)$ : between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		$\geq 30 \text{ mm}$	$3 - 4 \text{ GHz}: \geq 28 \text{ mm}$ $4 - 5 \text{ GHz}: \geq 25 \text{ mm}$ $5 - 6 \text{ GHz}: \geq 22 \text{ mm}$
Note: $\delta$ 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 <u>area scan based 1-g SAR estimation</u> procedures of KDB 447498 is $\leq 1.4 \text{ W/kg}$ , $\leq 8 \text{ mm}$ , $\leq 7 \text{ mm}$ and $\leq 5 \text{ mm}$ zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

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.

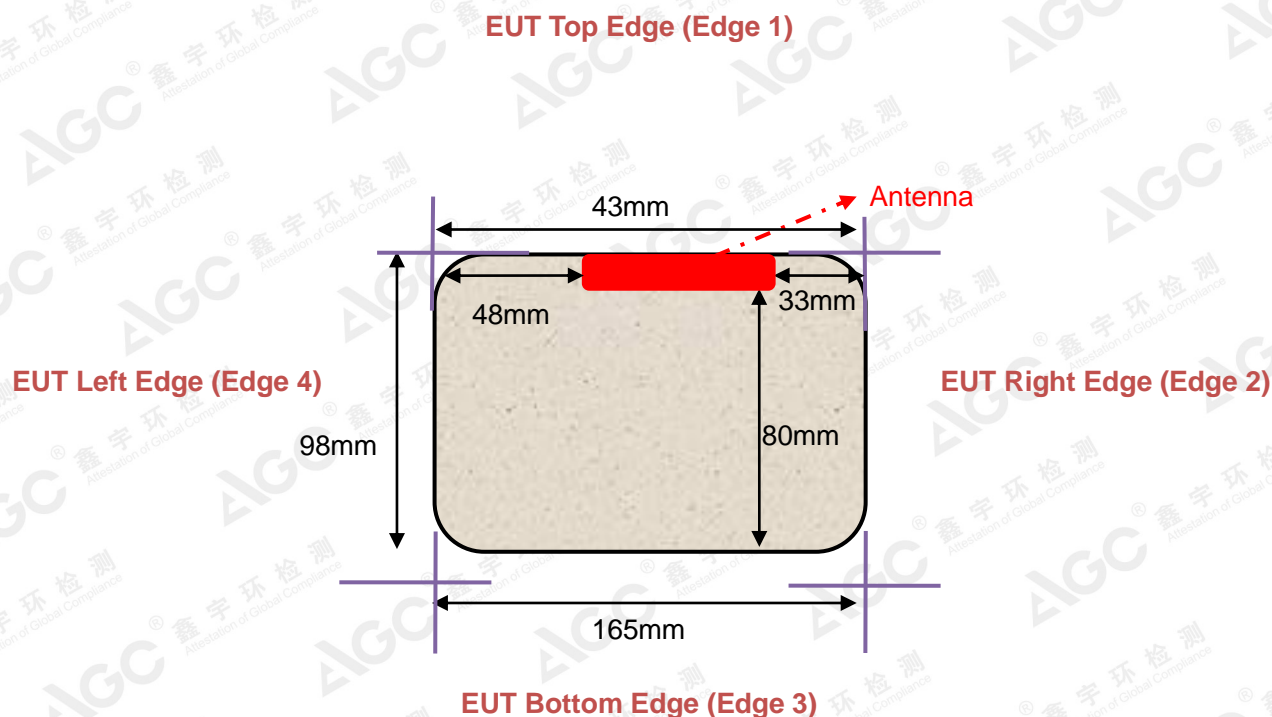


### 4.3. RF Exposure Conditions

Test Configuration and setting:

For WLAN testing, the EUT is configured with the WLAN continuous TX tool through engineering command.

**Antenna Location: (front view without antenna pop-up)**



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### SAR Test Exclusion Consideration for Adjacent Edges

Per KDB 447498 D01 cl. 4.3.1:

a) For 100 MHz to 6 GHz and test separation distances  $\leq 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

b) For 100 MHz to 6 GHz and test separation distances  $> 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

1)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)]\}$  mW, for 100 MHz to 1500 MHz

2)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$  mW, for  $> 1500$  MHz and  $\leq 6$  GHz

Please refer to SAR test set-up photoe for details.

### 2.4GHz

Edge 2(Right)

SAR test exclusion threshold

$$= [(\text{min. test separation distance, mm}) \cdot 3] / \sqrt{f(\text{GHz})}$$

$$= (33 \times 3) / \sqrt{2.41}$$

$$= 63.77 \text{ mW}$$

Edge 3(Bottom)

SAR test exclusion threshold

$$= (\text{Power allowed at numeric threshold for 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \times 10 \text{ mW}$$

$$= 96.62 + (80 - 50) \times 10 \text{ mW}$$

$$= 396.62 \text{ mW}$$

Edge 4(Left)

SAR test exclusion threshold

$$= [(\text{min. test separation distance, mm}) \cdot 3] / \sqrt{f(\text{GHz})}$$

$$= (48 \times 3) / \sqrt{2.41}$$

$$= 92.76 \text{ mW}$$

### Conclusion

Since the Maximum Tune-up Power [17.923mW(12.534dBm)] is less than the SAR Exclusion Threshold for bottom, Right and left edges, SAR evaluation for these adjacent edges are not required.

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## 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 5% are listed in 5.2

### 5.1. The composition of the tissue simulating liquid

Ingredient (% Weight) Frequency (MHz)	Water	Nacl	Polysorbate 20	DGBE	1,2 Propanediol	Triton X-100
2450 Body	70	1	0.0	9	0.0	20

### 5.2. Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE 1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in IEEE 1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in IEEE 1528.

Target Frequency (MHz)	head		body	
	$\epsilon_r$	$\sigma$ (S/m)	$\epsilon_r$	$\sigma$ (S/m)
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	1.01	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800 – 2000	40.0	1.40	53.3	1.52
<b>2450</b>	39.2	1.80	<b>52.7</b>	<b>1.95</b>
3000	38.5	2.40	52.0	2.73

( $\epsilon_r$  = relative permittivity,  $\sigma$  = conductivity and  $\rho = 1000 \text{ kg/m}^3$ )

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### 5.3. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using DASY5 Dielectric Probe Kit and R&S Network Analyzer ZVL6.

Tissue Stimulant Measurement for 2450MHz					
	Fr. (MHz)	Dielectric Parameters ( $\pm 5\%$ )		Tissue Temp [°C]	Test time
		$\epsilon_r 52.7(50.065-55.335)$	$\delta [s/m] 1.95(1.8525-2.0475)$		
Body	2410	54.26	1.87	21.5	June. 14, 2018
	2441	53.71	1.89		
	2450	53.07	1.90		
	2477	52.44	1.95		

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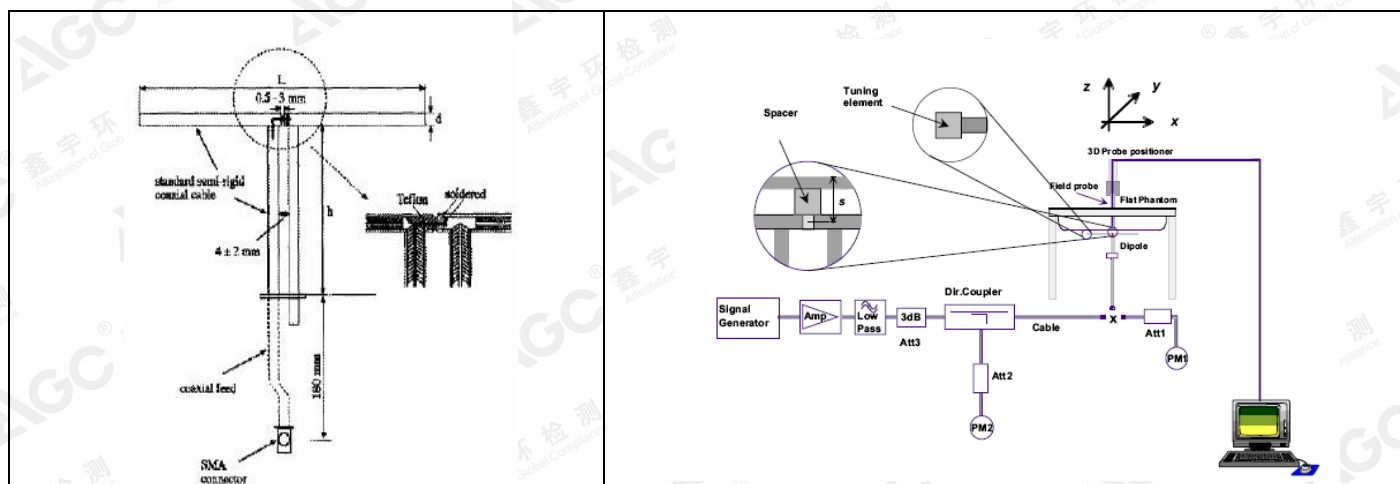
## 6. SAR SYSTEM CHECK PROCEDURE

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

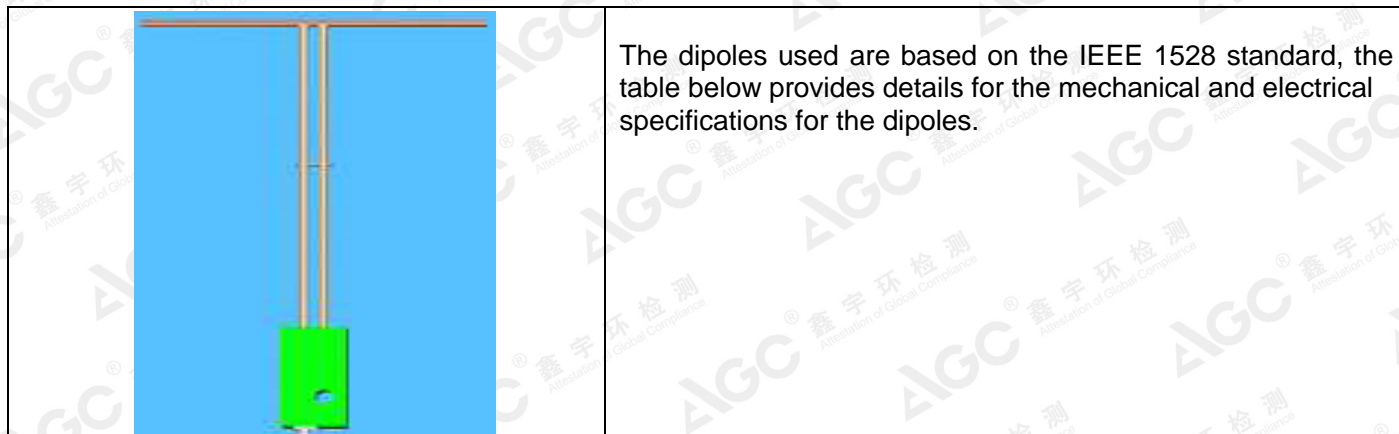
The system check verifies that the system operates within its specifications. It's performed daily or before every SAR measurement. The system check uses normal SAR measurement in the flat section of the phantom with a matched dipole at a specified distance. The system check setup is shown as below.



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## 6.2. SAR System Check

### 6.2.1. Dipoles



Frequency	L (mm)	h (mm)	d (mm)
2450MHz	51.5	30.4	3.6

### 6.2.2. System Check Result

System Performance Check at 2450MHz for Body								
Validation Kit: SN 29/15DIP 2G450-393								
Frequency [MHz]	Target Value(W/Kg)		Reference Result (± 10%)		Normalized to 1W(W/Kg)		Tissue Temp. [°C]	Test time
	1g	10g	1g	10g	1g	10g		
2450	49.92	23.16	44.928-54.912	20.844-25.476	54.52	25.36	21.5	June. 14, 2018

Note:

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

(2) Tested normalized SAR (W/kg) = Tested SAR (W/kg) × [1000/ 10<sup>1.8</sup>]

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### 6.3. SAR System Validation

The SAR measurement system was validated according to procedures in KDB 865664 D01.  
 SAR probe and tissue dielectric parameters are as shown bellow.

Test Data	Probe S/N	Tested Freq. (MHz)	Tissue Type	Cond.	Perm	CW validation			Mod. validation		
						Sensitivity	Probe Linearity	Probe Isotropy	Mod. Type	Duty Factor	Peak to average power ratio
06/12/2018	3953	2450	body	1.90	52.63	PASS	PASS	PASS	OFDM	N/A	PASS
06/12/2018	3953	2450	body	1.90	52.63	PASS	PASS	PASS	FHSS	PASS	N/A
06/12/2018	3953	2450	head	1.80	38.51	PASS	PASS	PASS	OFDM	N/A	PASS
06/12/2018	3953	2450	head	1.80	38.51	PASS	PASS	PASS	GFSK	PASS	N/A

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## 7. EUT TEST POSITION

This EUT was tested in **Back upward, Face upward, Left edge, Right edge and Bottom edge.**

### 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.**

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## 8. SAR EXPOSURE LIMITS

### 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

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## 9. TEST FACILITY

<b>Test Site</b>	Attestation of Global Compliance (Shenzhen) Co., Ltd
<b>Location</b>	1-2F., Bldg.2, No.1-4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District, Shenzhen 518012
<b>NVLAP Lab Code</b>	600153-0
<b>Designation Number</b>	CN5028
<b>Test Firm Registration Number</b>	682566
<b>Description</b>	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by National Voluntary Laboratory Accreditation program, NVLAP Code 600153-0

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## 10. TEST EQUIPMENT LIST

Equipment description	Manufacturer/ Model	Identification No.	Current calibration date	Next calibration date
Stäubli Robot	Stäubli-TX60	F13/5Q2UD1/A/01	N/A	N/A
Robot Controller	Stäubli-CS8	139522	N/A	N/A
E-Field Probe	Speag- EX3DV4	SN:3953	Aug. 31,2017	Aug. 30,2018
SAM Twin Phantom	Speag-SAM	1790	N/A	N/A
Device Holder	Speag-SD 000 H01 KA	SD 000 H01 KA	N/A	N/A
DAE4	Speag-SD 000 D04 BM	1398	Feb. 08,2018	Feb. 07,2019
SAR Software	Speag-DASY5	DASY52.8	N/A	N/A
Liquid	SATIMO	-	N/A	N/A
Dipole	SATIMO SID 2450	SN 29/15 DIP 2G450-393	July 05,2016	July 04,2019
Signal Generator	Agilent-E4438C	US41461365	Mar. 01,2018	Feb. 28,2019
Vector Analyzer	Agilent / E4440A	US41421290	Mar. 01,2018	Feb. 28,2019
Network Analyzer	Rhode & Schwarz ZVL6	SN100132	Mar. 01,2018	Feb. 28,2019
Attenuator	Warison /WATT-6SR1211	N/A	N/A	N/A
Attenuator	Mini-circuits / VAT-10+	N/A	N/A	N/A
Amplifier	EM30180	SN060552	Mar. 01,2018	Feb. 28,2019
Directional Couple	Werlatone/ C5571-10	SN99463	June 12,2018	June 11,2019
Directional Couple	Werlatone/ C6026-10	SN99482	June 12,2018	June 11,2019
Power Sensor	NRP-Z21	1137.6000.02	Oct. 12,2017	Oct. 11,2018
Power Sensor	NRP-Z23	US38261498	Mar. 01,2018	Feb. 28,2019
Power Viewer	R&S	V2.3.1.0	N/A	N/A

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 5Ω of calibrated measurement.

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## 11. MEASUREMENT UNCERTAINTY

DASY Uncertainty- EX3DV4									
Measurement uncertainty for Dipole averaged over 1 gram / 10 gram.									
a	b	c	d	e f(d,k)	f	g	h c×f/e	i c×g/e	k
Uncertainty Component	Sec.	Tol (±%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (±%)	10g Ui (±%)	vi
<b>Measurement System</b>									
Probe calibration	E.2.1	6.05	N	1	1	1	6.05	6.05	∞
Axial Isotropy	E.2.2	0.6	R	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	0.24	0.24	∞
Hemispherical Isotropy	E.2.2	1.6	R	$\sqrt{3}$	$\sqrt{0.5}$	$\sqrt{0.5}$	0.65	0.65	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	0.45	R	$\sqrt{3}$	1	1	0.26	0.26	∞
System detection limits	E.2.4	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Modulation response 调制响应	E.2.5	3.3	R	$\sqrt{3}$	1	1	1.91	1.91	∞
Readout Electronics	E.2.6	0.15	N	1	1	1	0.15	0.15	∞
Response Time	E.2.7	0	R	$\sqrt{3}$	1	1	0	0	∞
Integration Time	E.2.8	1.7	R	$\sqrt{3}$	1	1	0.98	0.98	∞
RF ambient conditions-Noise	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient conditions-reflections	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	E.6.2	0.4	R	$\sqrt{3}$	1	1	0.37	0.37	∞
Probe positioning with respect to phantom shell	E.6.3	6.7	R	$\sqrt{3}$	1	1	3.87	3.87	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
<b>Test sample Related</b>									
Test sample positioning	E.4.2	2.9	N	1	1	1	2.90	2.90	∞
Device holder uncertainty	E.4.1	3.6	N	1	1	1	3.60	3.60	∞
Output power variation—SAR drift measurement	E.2.9	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞
SAR scaling	E.6.5	5	R	$\sqrt{3}$	1	1	2.89	2.89	∞
<b>Phantom and tissue parameters</b>									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	6.6	R	$\sqrt{3}$	1	1	3.81	3.81	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	4	N	1	0.78	0.71	3.12	2.84	M
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.15	1.30	M
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	∞
Combined Standard Uncertainty			RSS				11.473	11.303	
Expanded Uncertainty (95% Confidence interval)			K=2				22.946	22.606	

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DASY Uncertainty- EX3DV4									
System Check uncertainty for Dipole averaged over 1 gram / 10 gram.									
a	b	c	d	e f(d,k)	f	g	h c x f/e	i c x g/e	k
Uncertainty Component	Sec.	Tol (±%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (±%)	10g Ui (±%)	vi
<b>Measurement System</b>									
Probe calibration drift	E.2.1	0.5	N	1	1	1	0.5	0.5	∞
Axial Isotropy	E.2.2	0.6	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Hemispherical Isotropy	E.2.2	1.6	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Linearity	E.2.4	0.45	R	$\sqrt{3}$	0	0	0.00	0.00	∞
System detection limits	E.2.4	1.0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Modulation response	E.2.5	3.3	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Readout Electronics	E.2.6	0.15	N	1	0	0	0.00	0.00	∞
Response Time	E.2.7	0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Integration Time	E.2.8	1.7	R	$\sqrt{3}$	0	0	0.00	0.00	∞
RF ambient conditions-Noise	E.6.1	3.0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
RF ambient conditions-reflections	E.6.1	3.0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Probe positioner mechanical tolerance	E.6.2	0.4	R	$\sqrt{3}$	1	1	0.37	0.37	∞
Probe positioning with respect to phantom shell	E.6.3	6.7	R	$\sqrt{3}$	1	1	3.87	3.87	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	4	R	$\sqrt{3}$	0	0	0.00	0.00	∞
<b>System check source (dipole)</b>									
Deviation of experimental dipoles	E.6.4	2.0	N	1	1	1	2.00	2.00	∞
Input power and SAR drift measurement	8,6.6.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Dipole axis to liquid distance	8,E.6.6	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
<b>Phantom and tissue parameters</b>									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	6.6	R	$\sqrt{3}$	1	1	3.81	3.81	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	4	N	1	0.78	0.71	3.12	2.84	M
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.15	1.30	M
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	∞
Combined Standard Uncertainty			RSS				7.344	7.076	
Expanded Uncertainty (95% Confidence interval)			K=2				14.689	14.153	

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<b>DASY Uncertainty- EX3DV4</b> System Validation uncertainty for Dipole averaged over 1 gram / 10 gram.									
a	b	c	d	e f(d,k)	f	g	h c×f/e	i c×g/e	k
Uncertainty Component	Sec.	Tol (±%)	Prob. Dist.	Div.	Ci (1g)	Ci (10g)	1g Ui (±%)	10g Ui (±%)	vi
<b>Measurement System</b>									
Probe calibration	E.2.1	6.05	N	1	1	1	6.05	6.05	∞
Axial Isotropy	E.2.2	0.6	R	$\sqrt{3}$	1	1	0.35	0.35	∞
Hemispherical Isotropy	E.2.2	1.6	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Boundary effect	E.2.3	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Linearity	E.2.4	0.45	R	$\sqrt{3}$	1	1	0.26	0.26	∞
System detection limits	E.2.4	1.0	R	$\sqrt{3}$	1	1	0.58	0.58	∞
Modulation response	E.2.5	3.3	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Readout Electronics	E.2.6	0.15	N	1	1	1	0.15	0.15	∞
Response Time	E.2.7	0	R	$\sqrt{3}$	0	0	0.00	0.00	∞
Integration Time	E.2.8	1.7	R	$\sqrt{3}$	0	0	0.00	0.00	∞
RF ambient conditions-Noise	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
RF ambient conditions-reflections	E.6.1	3.0	R	$\sqrt{3}$	1	1	1.73	1.73	∞
Probe positioner mechanical tolerance	E.6.2	0.4	R	$\sqrt{3}$	1	1	0.37	0.37	∞
Probe positioning with respect to phantom shell	E.6.3	6.7	R	$\sqrt{3}$	1	1	3.87	3.87	∞
Extrapolation, interpolation, and integrations algorithms for max. SAR evaluation	E.5	4	R	$\sqrt{3}$	1	1	2.31	2.31	∞
<b>System check source (dipole)</b>									
Deviation of experimental dipole from numerical dipole	E.6.4	5.0	N	1	1	1	5.00	5.00	∞
Input power and SAR drift measurement	8,6.6.4	5.0	R	$\sqrt{3}$	1	1	2.89	2.89	∞
Dipole axis to liquid distance	8,E.6.6	2.0	R	$\sqrt{3}$	1	1	1.15	1.15	∞
<b>Phantom and tissue parameters</b>									
Phantom shell uncertainty—shape, thickness, and permittivity	E.3.1	6.6	R	$\sqrt{3}$	1	1	3.81	3.81	∞
Uncertainty in SAR correction for deviations in permittivity and conductivity	E.3.2	1.9	N	1	1	0.84	1.90	1.60	∞
Liquid conductivity measurement	E.3.3	4	N	1	0.78	0.71	3.12	2.84	M
Liquid permittivity measurement	E.3.3	5	N	1	0.23	0.26	1.15	1.30	M
Liquid conductivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.78	0.71	1.13	1.02	∞
Liquid permittivity—temperature uncertainty	E.3.4	2.5	R	$\sqrt{3}$	0.23	0.26	0.33	0.38	∞
Combined Standard Uncertainty			RSS				11.113	10.938	
Expanded Uncertainty (95% Confidence interval)			K=2				22.226	21.876	

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## 12. CONDUCTED POWER MEASUREMENT 2.4GHz

Mode	Channel	Frequency (MHz)	Maximum Peak Power (dBm)
GFSK Modulation	CH00	2410	12.534
	CH10	2441	11.784
	CH22	2477	11.264

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## 13. TEST RESULTS

### 13.1. SAR Test Results Summary

#### 13.1.1. Test position and configuration

Body 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  $\leq 0.8$  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  $\geq 0.8$ W/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  $\geq 0.8$ W/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  $\geq 1.45$  W/Kg.
  - (3) Perform a third repeated measurement only if the original, first and second repeated measurement is  $\geq 1.5$  W/Kg and ratio of largest to smallest SAR for the original, first and second measurement is  $\geq 1.20$ .
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.)  $\times$  [maximum turn-up power (mw)/ maximum measurement output power(mw) ]

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### 13.1.3. SAR Test Results Summary

SAR MEASUREMENT									
Depth of Liquid (cm):>15					Relative Humidity (%): 53.3				
Product: 720P Digital Color Video Baby Monitor with 5 inch HD LCD									
Test Mode:2.4G with GFSK modulation									
Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±0.2dB)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR(1g) (W/Kg)	Limit(1g) (W/kg)
without antenna pop-up									
Body back	GFSK	CH00	2410	0.18	1.32	12.534	12.534	1.320	1.6
Body back	GFSK	CH10	2441	-0.30	1.1	12.534	11.784	1.307	1.6
Body back	GFSK	CH22	2477	-0.02	1.1	12.534	11.264	1.474	1.6
Body front	GFSK	CH10	2441	0.05	0.033	12.534	11.784	0.039	1.6
Edge 1 (Top)	GFSK	CH10	2441	-0.00	0.604	12.534	11.784	0.718	1.6
with antenna pop-up									
Body back	GFSK	CH00	2410	-0.02	1.41	12.534	12.534	1.410	1.6
Body back	GFSK	CH10	2441	-0.03	1.30	12.534	11.784	1.545	1.6
Body back	GFSK	CH22	2477	-0.01	1.15	12.534	11.264	1.541	1.6
Body front	GFSK	CH10	2441	0.02	0.114	12.534	11.784	0.135	1.6

Note:

- (1).When the 1-g Reported SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- (2).The test separation of all above table is 0mm.
- (3).Plots are only shown for the bold marked worst case SAR results

Repeated SAR										
Product: 720P Digital Color Video Baby Monitor with 5 inch HD LCD										
Test Mode:2.4G with GFSK modulation										
Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±0.2dB)	Once SAR (1g) (W/kg)	Power Drift (<±0.2dB)	Twice SAR (1g) (W/kg)	Power Drift (<±0.2dB)	Third SAR (1g) (W/kg)	Limit(1g) (W/kg)
Body back	GFSK	CH00	2410	-0.02	1.37	--	--	--	--	1.6
Body back	GFSK	CH00	2410	0.01	1.37	--	--	--	--	1.6

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## APPENDIX A. SAR SYSTEM CHECK DATA

Test Laboratory: AGC Lab

System Check Body 2450 MHz

DUT: Dipole 2450 MHz Type: D2450

Date: June. 14, 2018

Communication System: CW; Communication System Band: D2450 (2450.0 MHz); Duty Cycle: 1:3;  
Frequency: 2450 MHz; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.90$  mho/m;  $\epsilon_r = 53.07$ ;  $\rho = 1000$  kg/m<sup>3</sup>;  
Phantom section: Flat Section; Input Power=18dBm  
Ambient temperature (°C): 22.0, Liquid temperature (°C): 21.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(7.73, 7.73, 7.73); Calibrated:Aug. 31,2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1398; Calibrated: Feb. 08, 2018
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**Configuration/System Check Body 2450MHz /Area Scan (7x12x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 4.41 W/kg

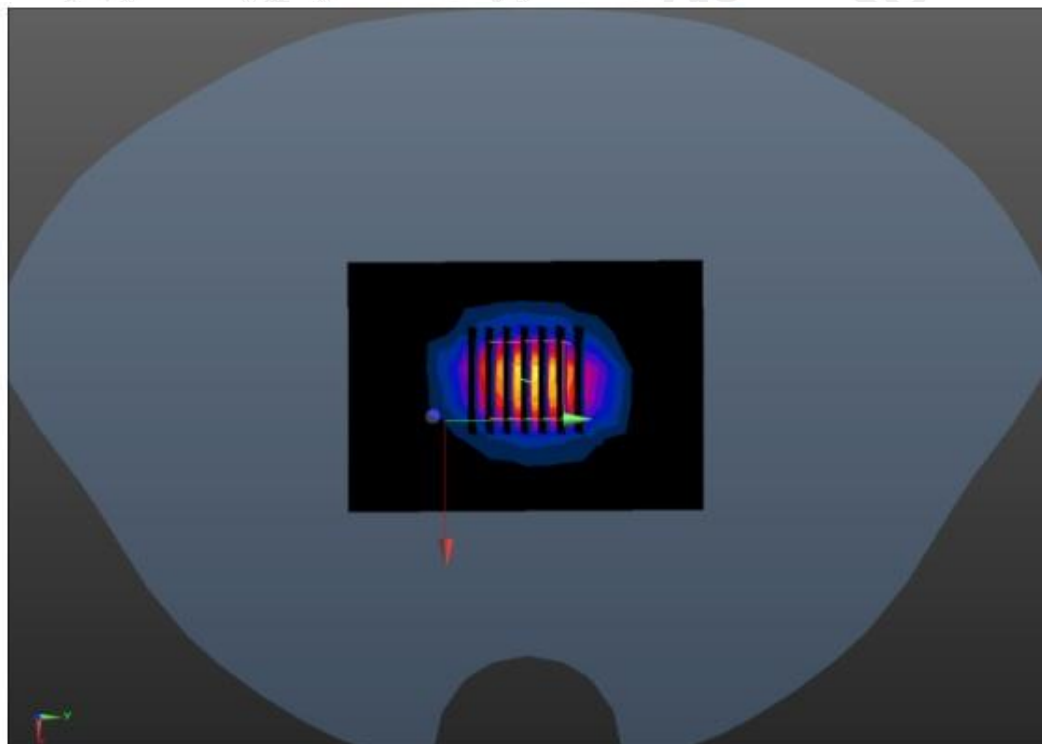
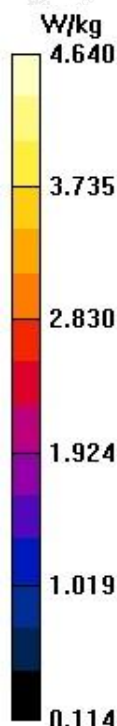
**Configuration/System Check Body 2450MHz /Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 37.702 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 7.12 W/kg

**SAR(1 g) = 3.44 W/kg; SAR(10 g) = 1.60 W/kg**

Maximum value of SAR (measured) = 4.64 W/kg



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## APPENDIX B. SAR MEASUREMENT DATA

### EUT without antenna pop-up

Test Laboratory: AGC Lab

2.4G Low-Body-Worn- Back

DUT: 720P Digital Color Video Baby Monitor with 5 inch HD LCD; Type: GD7603

Date: June, 14, 2018

Communication System: 2.4G; Communication System Band: 2.4G; Duty Cycle: 1:3;  
Frequency: 2410 MHz; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.87$  mho/m;  $\epsilon_r = 54.26$ ;  $\rho = 1000$  kg/m<sup>3</sup>;  
Phantom section: Flat Section  
Ambient temperature (°C): 22.0, Liquid temperature (°C): 21.5

#### DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(7.73, 7.73, 7.73); Calibrated: Aug. 31, 2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1398; Calibrated: Feb. 08, 2018
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK-L/Area Scan (13x20x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm

Maximum value of SAR (measured) = 1.81 W/kg

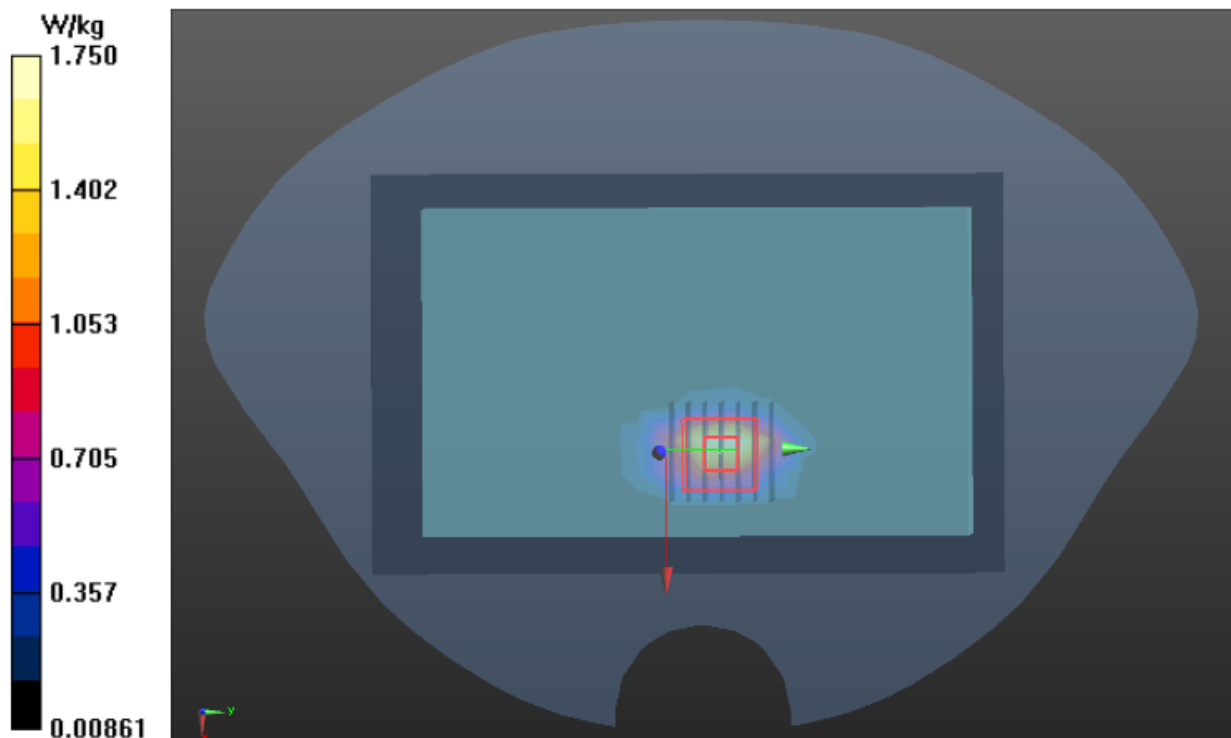
**BODY/BACK-L/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 1.199 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 2.74 W/kg

**SAR(1 g) = 1.32 W/kg; SAR(10 g) = 0.585 W/kg**

Maximum value of SAR (measured) = 1.75 W/kg



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**Test Laboratory: AGC Lab**  
**2.4G High-Body-Worn- Back**

**Date: June. 14, 2018**

**DUT: 720P Digital Color Video Baby Monitor with 5 inch HD LCD; Type: GD7603**

Communication System: 2.4G; Communication System Band: 2.4G; Duty Cycle: 1:3;  
Frequency: 2477 MHz; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.95$  mho/m;  $\epsilon_r = 52.44$ ;  $\rho = 1000$  kg/m<sup>3</sup>;  
Phantom section: Flat Section  
Ambient temperature (°C): 22.0, Liquid temperature (°C): 21.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(7.73, 7.73, 7.73); Calibrated: Aug. 31, 2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1398; Calibrated: Feb. 08, 2018
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK-H/Area Scan (13x20x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 1.16 W/kg

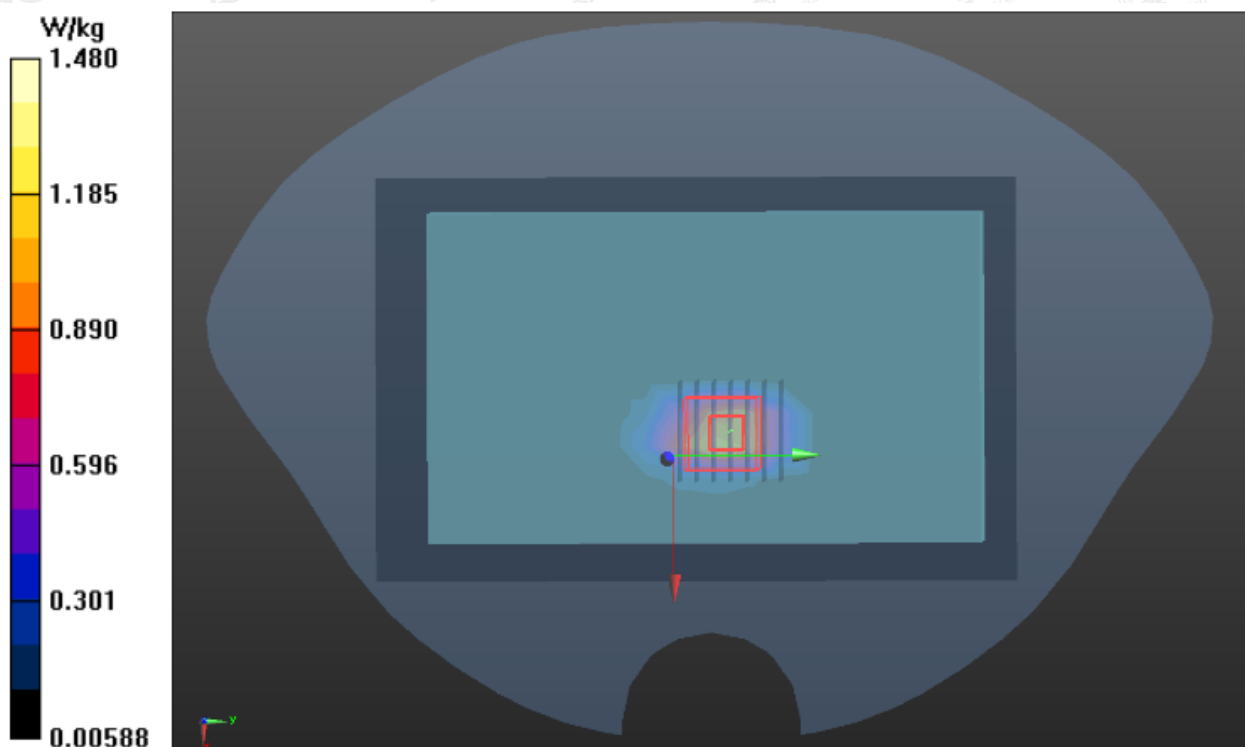
**BODY/BACK-H/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 6.296 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 2.35 W/kg

**SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.477 W/kg**

Maximum value of SAR (measured) = 1.48 W/kg



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## EUT with antenna pop-up

Test Laboratory: AGC Lab

2.4G Low-Body-Worn- Back

DUT: 720P Digital Color Video Baby Monitor with 5 inch HD LCD; Type: GD7603

Date: June. 14, 2018

Communication System: 2.4G; Communication System Band: 2.4G; Duty Cycle: 1:3;  
Frequency: 2410 MHz; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.87$  mho/m;  $\epsilon_r = 54.26$ ;  $\rho = 1000$  kg/m<sup>3</sup>;  
Phantom section: Flat Section  
Ambient temperature (°C): 22.0, Liquid temperature (°C): 21.5

### DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(7.73, 7.73, 7.73); Calibrated: Aug. 31, 2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1398; Calibrated: Feb. 08, 2018
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK-L/Area Scan (15x19x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 1.93 W/kg

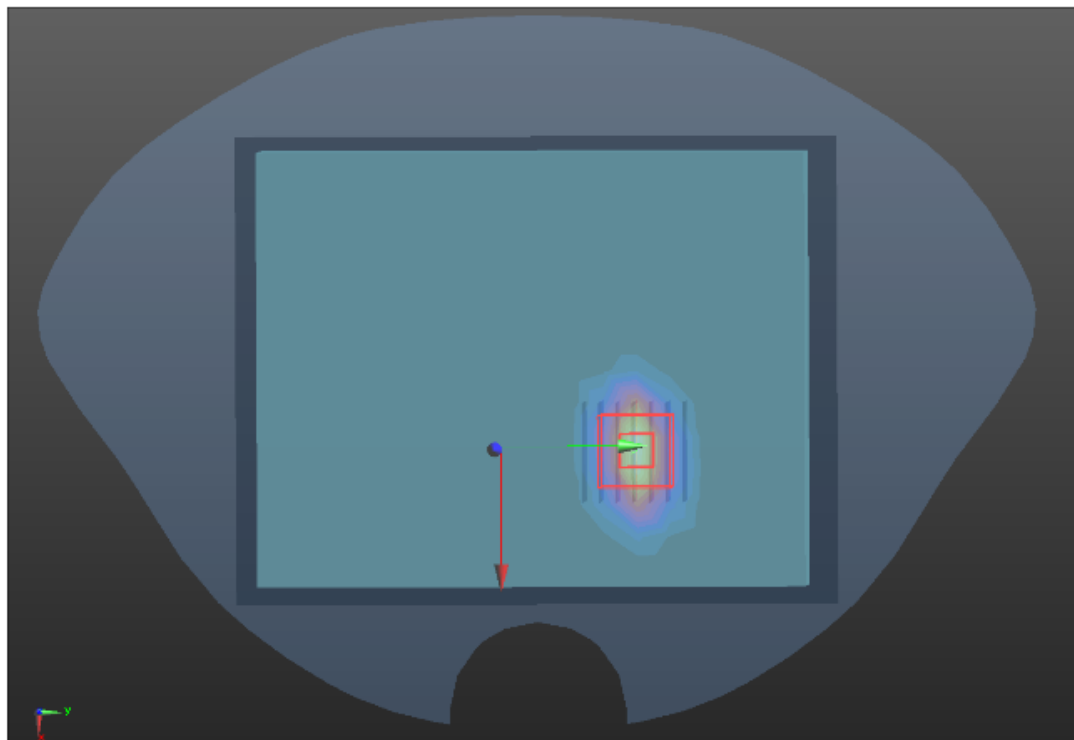
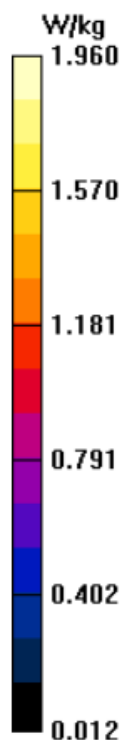
**BODY/BACK-L/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 1.881 V/m; Power Drift = -0.02 dB

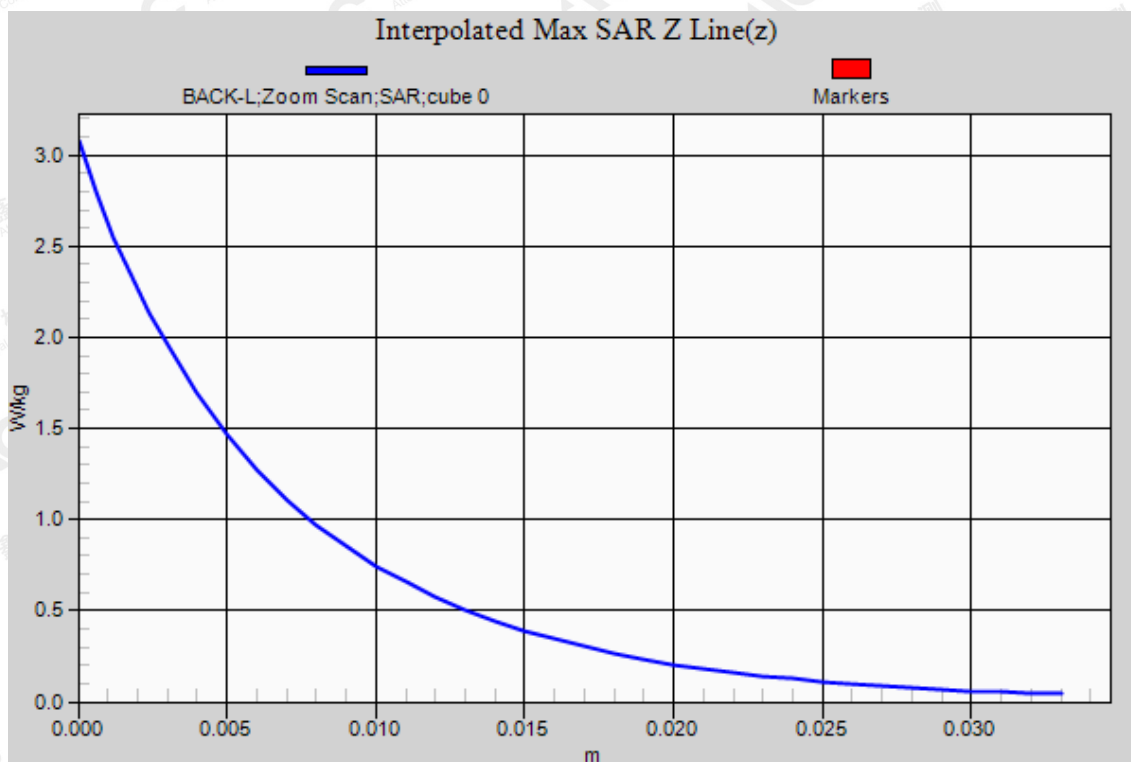
Peak SAR (extrapolated) = 3.08 W/kg

**SAR(1 g) = 1.41 W/kg; SAR(10 g) = 0.664 W/kg**

Maximum value of SAR (measured) = 1.96 W/kg



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**Test Laboratory: AGC Lab**  
**2.4G Mid-Body-Worn- Back**

**Date: June. 14, 2018**

**DUT: 720P Digital Color Video Baby Monitor with 5 inch HD LCD; Type: GD7603**

Communication System: 2.4G; Communication System Band: 2.4G; Duty Cycle: 1:3;  
Frequency: 2441 MHz; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.89$  mho/m;  $\epsilon_r = 53.71$ ;  $\rho = 1000$  kg/m<sup>3</sup>;  
Phantom section: Flat Section  
Ambient temperature (°C): 22.0, Liquid temperature (°C): 21.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(7.73, 7.73, 7.73); Calibrated: Aug. 31, 2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1398; Calibrated: Feb. 08, 2018
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY 2/BACK/Area Scan (15x19x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 1.66 W/kg

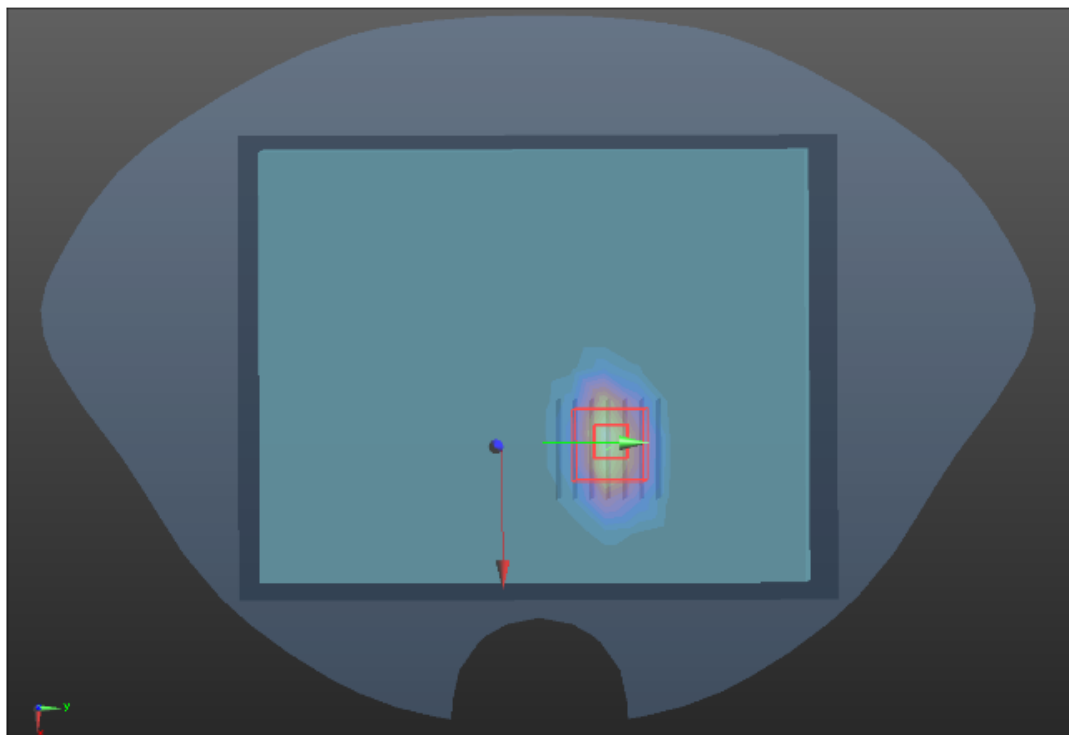
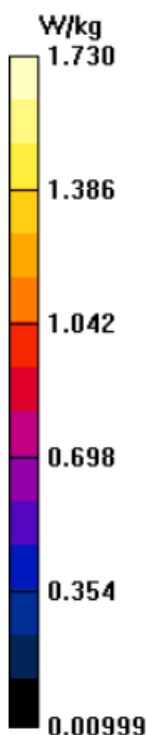
**BODY 2/BACK/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 2.813 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 2.78 W/kg

**SAR(1 g) = 1.3 W/kg; SAR(10 g) = 0.584 W/kg**

Maximum value of SAR (measured) = 1.73 W/kg



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**Repeated:**

**Test Laboratory:** AGC Lab

**Date:** June. 14, 2018

**2.4G Low-Body-Worn- Back ( once )**

**DUT: 720P Digital Color Video Baby Monitor with 5 inch HD LCD; Type: GD7603**

Communication System: 2.4G; Communication System Band: 2.4G; Duty Cycle: 1:3;  
Frequency: 2410 MHz; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.87$  mho/m;  $\epsilon_r = 54.26$ ;  $\rho = 1000$  kg/m<sup>3</sup>;  
Phantom section: Flat Section  
Ambient temperature (°C): 22.0, Liquid temperature (°C): 21.5

**DASY Configuration:**

- Probe: EX3DV4 – SN:3953; ConvF(7.73, 7.73, 7.73); Calibrated: Aug. 31, 2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1398; Calibrated: Feb. 08, 2018
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK-L-REPEATED-1/Area Scan (15x19x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm

Maximum value of SAR (measured) = 1.60 W/kg

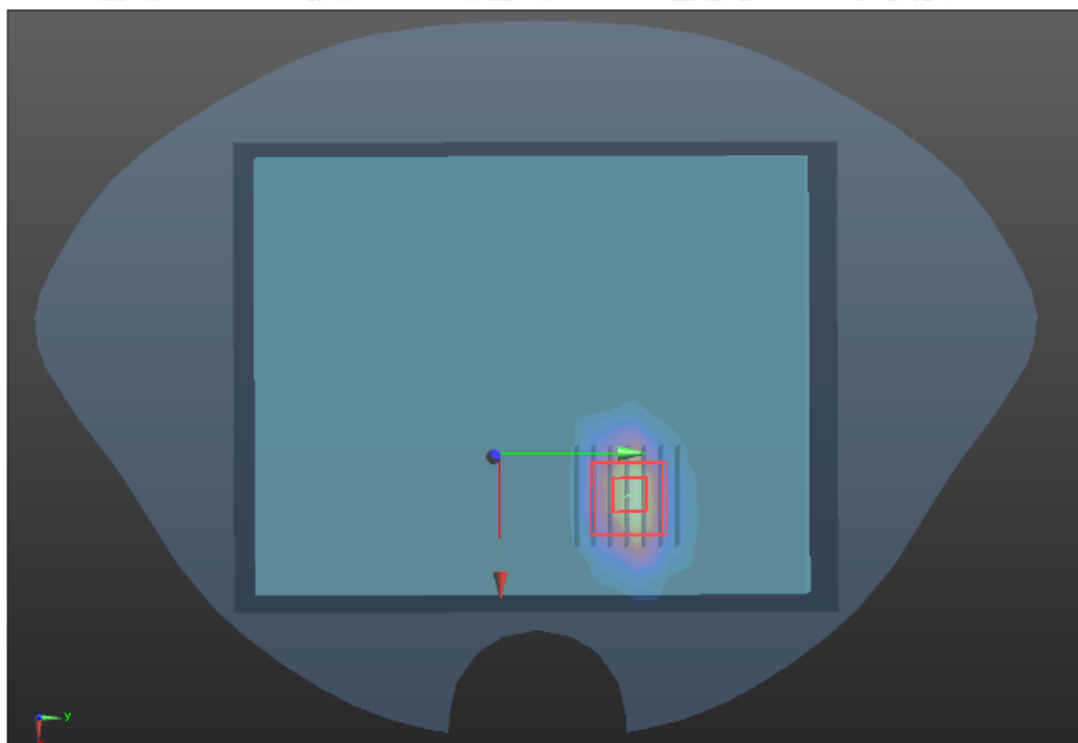
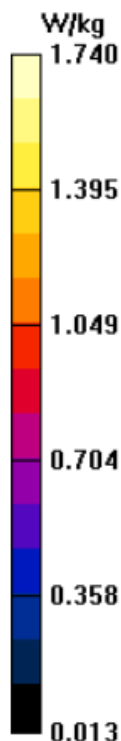
**BODY/BACK-L-REPEATED-1/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 1.332 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 2.71 W/kg

**SAR(1 g) = 1.37 W/kg; SAR(10 g) = 0.602 W/kg**

Maximum value of SAR (measured) = 1.74 W/kg



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Test Laboratory: AGC Lab

Date: June. 14, 2018

2.4G Low-Body-Worn- Back ( twice )

DUT: 720P Digital Color Video Baby Monitor with 5 inch HD LCD; Type: GD7603

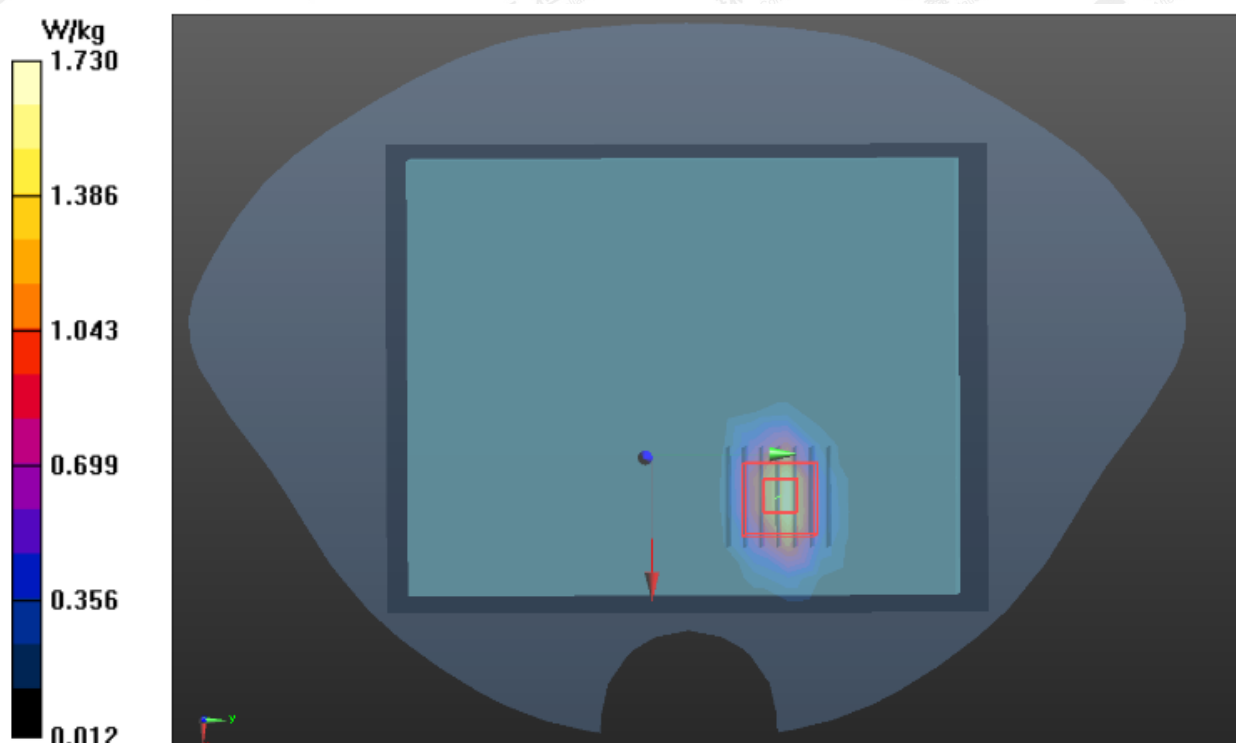
Communication System: 2.4G; Communication System Band: 2.4G; Duty Cycle: 1:3;  
Frequency: 2410 MHz; Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.87$  mho/m;  $\epsilon_r = 54.26$ ;  $\rho = 1000$  kg/m<sup>3</sup>;  
Phantom section: Flat Section  
Ambient temperature (°C): 22.0, Liquid temperature (°C): 21.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(7.73, 7.73, 7.73); Calibrated: Aug. 31, 2017;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1398; Calibrated: Feb. 08, 2018
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK-L-REPEATED-2/Area Scan (15x19x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm  
Maximum value of SAR (measured) = 1.60 W/kg

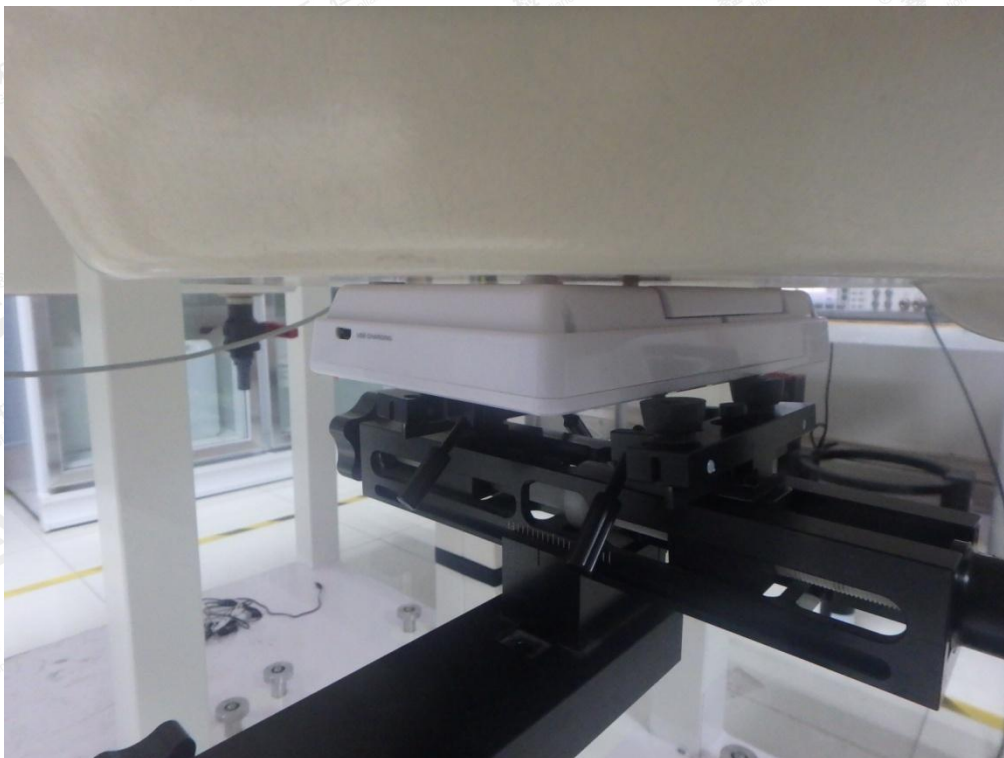
**BODY/BACK-L-REPEATED-2/Zoom Scan (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm  
Reference Value = 1.205 V/m; Power Drift = 0.01 dB  
Peak SAR (extrapolated) = 2.70 W/kg  
**SAR(1 g) = 1.37 W/kg; SAR(10 g) = 0.601 W/kg**  
Maximum value of SAR (measured) = 1.73 W/kg



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## APPENDIX C. TEST SETUP PHOTOGRAPHS

Back upward 0mm ( without antenna pop-up )



Front upward 0mm ( without antenna pop-up )



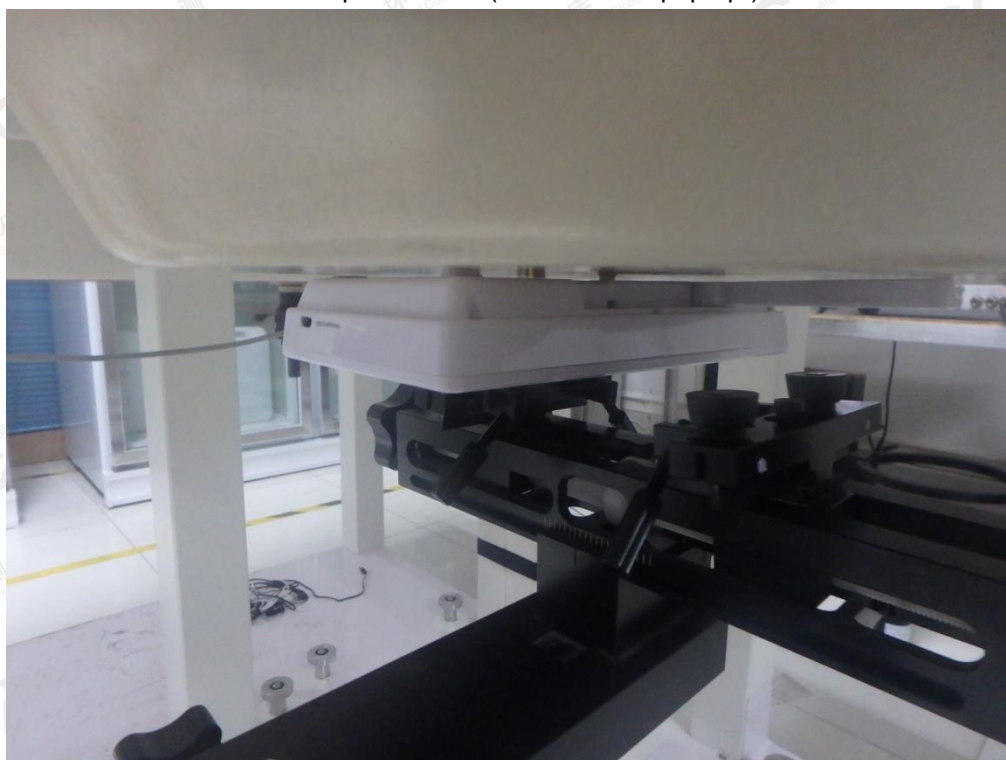
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Edge 1 ( Top ) 0mm ( without antenna pop-up )

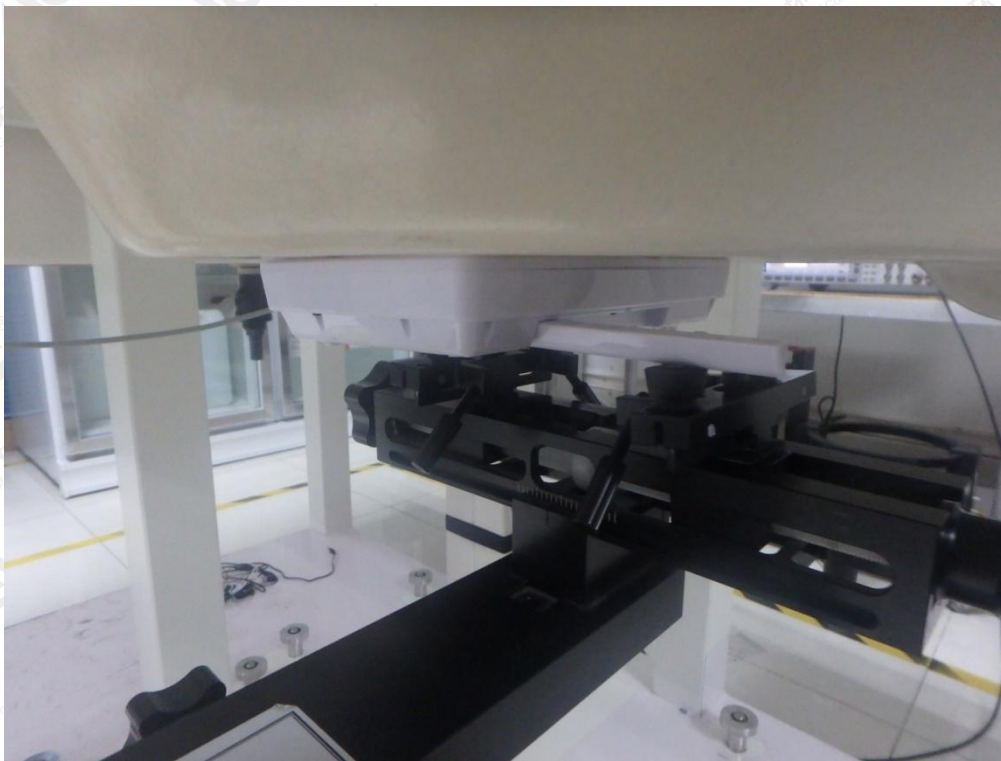


Back upward 0mm ( with antenna pop-up )



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Front upward 0mm ( with antenna pop-up )



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### DEPTH OF THE LIQUID IN THE PHANTOM—ZOOM IN

Note : The position used in the measurement were according to IEEE Std. 1528:2013



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## APPENDIX D. CALIBRATION DATA

Refer to Attached files.

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