

# SAR Test Report

Report No.: AGC08217191102FH01

**FCC ID** : 2AJG4-FHV1

**APPLICATION PURPOSE** : Original Equipment

**PRODUCT DESIGNATION** : FH Emergency Medical Device - V1

**BRAND NAME** : FastHelp

**MODEL NAME** : FH-V1

**APPLICANT** : Universal Physicians, LLC

**DATE OF ISSUE** : Dec. 18,2019

**STANDARD(S)** : IEEE Std. 1528:2013  
FCC 47 CFR Part 2§2.1093:2013  
IEEE C95.1TM:2005

**REPORT VERSION** : V1.0

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

Add: 2/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,  
Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

### Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	Dec. 18,2019	Valid	Initial Release



## Test Report

Applicant Name	Universal Physicians, LLC
Applicant Address	7747 Supreme Ave NW, N. Canton, Ohio United States 44720
Manufacturer Name	Vaost Limited
Manufacturer Address	1103/A, Dong Fang Xin Di Building, Nanshan District, Shenzhen, China
Factory Name	Shenzhen Smarti Technology Limited
Factory Address	1103/A, Dong Fang Xin Di Building, Nanshan District, Shenzhen, China
Product Designation	FH Emergency Medical Device - V1
Brand Name	FastHelp
Model Name	FH-V1
Different Description	N/A
EUT Voltage	DC3.7V by battery
Applicable Standard	IEEE Std. 1528:2013 FCC 47 CFR Part 2§2.1093:2013 IEEE C95.1TM:2005
Test Date	Dec. 17,2019
Report Template	AGCRT-US-3G3/SAR (2018-01-01)

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

Prepared By Jack Gui

Jack Gui (Project Engineer) Dec. 17,2019

Reviewed By Angela Li

Angela Li (Reviewer) Dec. 18,2019

Approved By Forrest Lei

Forrest Lei  
(Authorized Officer) Dec. 18,2019

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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:

Frequency Band	Highest Reported 1g-SAR(W/Kg)		SAR Test Limit (W/Kg)
	Face up(with 10mm separation)	Body-worn(with 0mm separation)	
GSM 850	0.508	1.433	1.6
PCS 1900	0.352	1.424	
UMTS Band II	0.339	1.292	
UMTS Band V	0.810	1.541	
SAR Test Result	PASS		

This device is compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6W/Kg) specified in IEEE Std. 1528:2013; FCC 47 CFR Part 2§2.1093:2013; IEEE/ANSI C95.1:2005 and the following specific FCC Test Procedures:

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



Attestation of Global Compliance

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

Add: 2/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,  
Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

## 2. GENERAL INFORMATION

### 2.1. EUT Description

General Information	
Product Designation	FH Emergency Medical Device - V1
Test Model	FH-V1
Hardware Version	M4_MB_V1.0
Software Version	M4_PCB01_hspa_MT6276_S01.M4_B2B5_V04
Device Category	Portable
RF Exposure Environment	Uncontrolled
Antenna Type	Internal
<b>GSM</b>	
Support Band	<input checked="" type="checkbox"/> GSM 850 <input checked="" type="checkbox"/> PCS 1900 <input type="checkbox"/> GSM 900 <input type="checkbox"/> DCS 1800
TX Frequency Range	GSM 850 : 820-850MHz;; PCS 1900: 1850-1910MHz;
RX Frequency Range	GSM 850 : 869~894MHz; PCS 1900: 1930~1990MHz
Release Version	R99
Type of modulation	GMSK for GSM
Antenna Gain	GSM850: -0.5dBi ;PCS1900: 1.2dBi
Max. Average Power	GSM850: 32.93dBm ;PCS1900: 29.59dBm
<b>WCDMA</b>	
Support Band	<input checked="" type="checkbox"/> UMTS FDD Band II <input checked="" type="checkbox"/> UMTS FDD Band V <input type="checkbox"/> UMTS FDD Band I <input type="checkbox"/> UMTS FDD Band VIII
HS Type	HSPA
TX Frequency Range	WCDMA FDD Band II: 1850-1910MHz; WCDMA FDD Band V: 820-850MHz
RX Frequency Range	WCDMA FDD Band II: 1930-1990MHz; WCDMA FDD Band V: 869-894MHz
Release Version	Rel-6
Type of modulation	WCDMA:QPSK
Antenna Gain	Band II: 1.2dBi; Band V: -0.5dBi
Max. Average Power	Band II: 22.53dBm; Band V: 22.37dBm
<b>Accessories</b>	
Battery	Brand name: FastHelp Model No. : FH-V1 Voltage and Capacitance: 3.7 V & 600mAh

Note: 1. CMU200can measure the average power and Peak power at the same time.

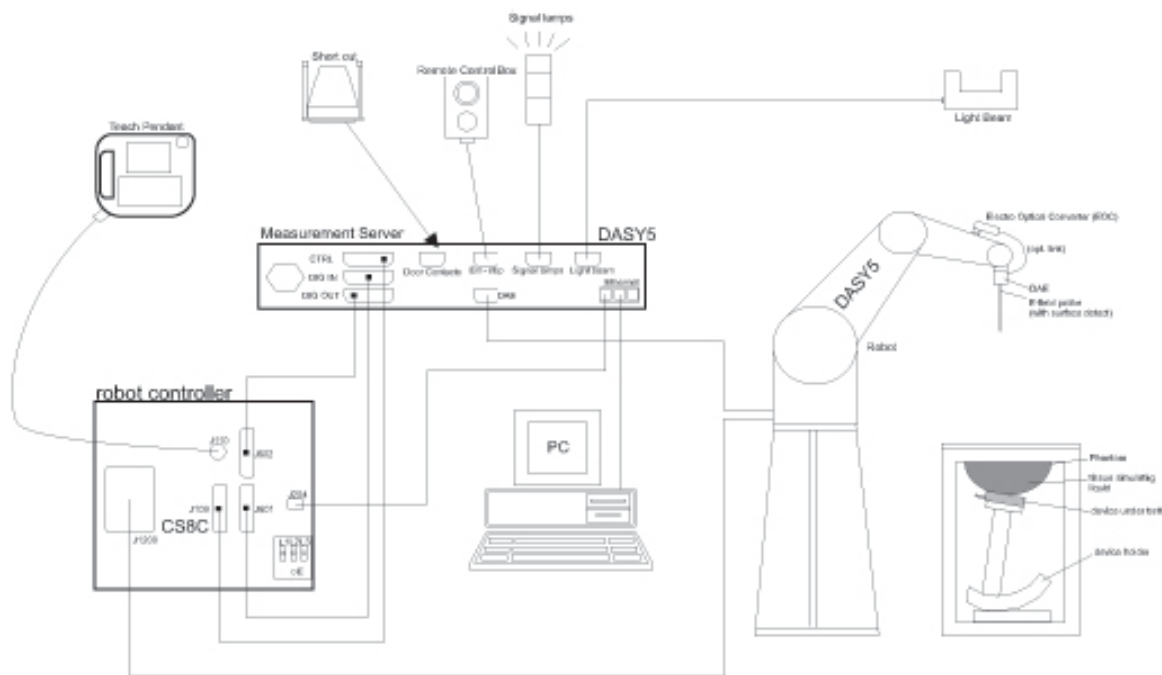
2. The sample used for testing is end product.

3. The test sample has no any deviation to the test method of standard mentioned in page 1

Product	Type
	<input checked="" type="checkbox"/> Production unit <input type="checkbox"/> Identical Prototype

### 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.



### 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 etc.) Under ISO17025. The calibration data are in Appendix D.

#### Isotropic E-Field Probe Specification


Model	EX3DV4-SN:3953	
Manufacture	SPEAG	
frequency	0.7GHz-6GHz Linearity:±0.9%(k=2)	
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 6 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	



### 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:

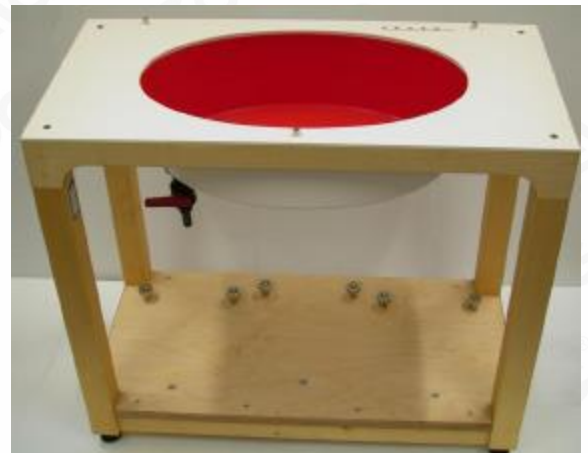
- ☐ Left head
- ☐ Right head
- ☐ Flat phantom



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

### 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





## 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, occDPA

tional/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





## 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 DASY 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

	$\leq 3 \text{ GHz}$	$> 3 \text{ GHz}$
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	$5 \pm 1 \text{ mm}$	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
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 $\leq$ 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.

## 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.

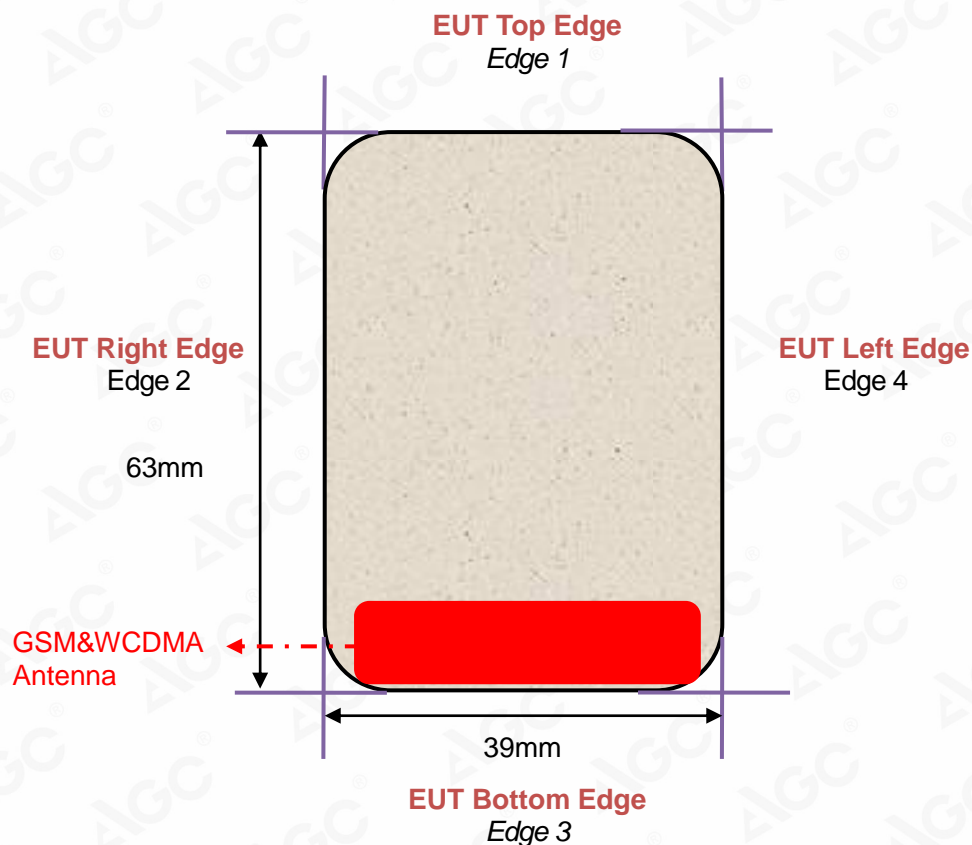
### 4.3. RF Exposure Conditions

Test Configuration and setting:

The EUT is a model of GSM/WCDMA Portable Mobile Station (MS). It supports GSM and WCDMA.

For WWAN SAR testing, the device was controlled by using a base station emulator. Communication between the device and the emulator were established by air link. The distance between the EUT and the antenna is larger than 50cm, and the output power radiated from the emulator antenna is at least 30db smaller than the output power of EUT.

**Antenna Location: (the back view)**



Attestation of Global Compliance

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

Add: 2/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,  
Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118



## 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
835 Head	50.36	1.25	48.39	0.0	0.0	0.0
835 Body	54.00	1	0.0	15	0.0	30
1900 Head	54.9	0.18	0.0	44.92	0.0	0.0
1900 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
<b>835</b>	<b>41.5</b>	<b>0.90</b>	<b>55.2</b>	<b>0.97</b>
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
<b>1800 – 2000</b>	<b>40.0</b>	<b>1.40</b>	<b>53.3</b>	<b>1.52</b>
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73

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



### 5.3. Tissue Calibration Result

The dielectric parameters of the liquids were verified prior to the SAR evaluation using DASY 5 Dielectric Probe Kit and R&S Network Analyzer ZVL6.

Tissue Stimulant Measurement for 835MHz				
	Fr. (MHz)	Dielectric Parameters ( $\pm 5\%$ )		Tissue Temp [°C]
		$\epsilon_r$ 41.5 (39.425-43.575)	$\delta$ [s/m] 0.90(0.855-0.945)	
Head	824.2	42.79	0.86	22.3
	826.4	42.37	0.87	
	835	42.05	0.88	
	836.6	41.93	0.89	
	846.6	41.60	0.90	
	848.8	41.38	0.91	
	Fr. (MHz)	Dielectric Parameters ( $\pm 5\%$ )		Tissue Temp [°C]
		$\epsilon_r$ 55.20(52.44-57.96)	$\delta$ [s/m]0.97(0.9215-1.0185)	
Body	824.2	55.26	0.94	22.4
	826.4	54.90	0.95	
	835	54.84	0.96	
	836.6	54.68	0.97	
	846.6	54.32	0.98	
	848.8	54.17	0.99	

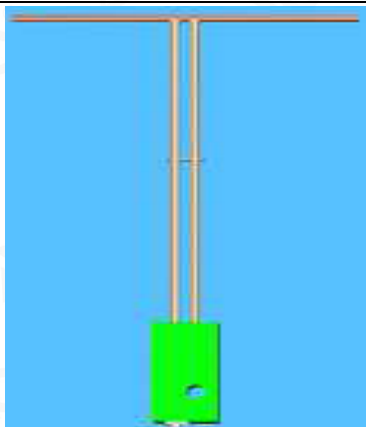
Tissue Stimulant Measurement for 1900MHz				
	Fr. (MHz)	Dielectric Parameters ( $\pm 5\%$ )		Tissue Temp [°C]
		$\epsilon_r$ 40.00(38.00-42.00)	$\delta$ [s/m]1.40(1.33-1.47)	
Head	1850.2	40.32	1.38	22.4
	1852.4	40.15	1.39	
	1880	39.78	1.40	
	1900	39.54	1.41	
	1907.6	39.32	1.42	
	1909.8	39.16	1.43	
	Fr. (MHz)	Dielectric Parameters ( $\pm 5\%$ )		Tissue Temp [°C]
		$\epsilon_r$ 53.30(50.635-55.965)	$\delta$ [s/m]1.52(1.444-1.596)	
Body	1850.2	53.65	1.48	22.5
	1852.4	53.36	1.49	
	1880	53.07	1.50	
	1900	52.89	1.51	
	1907.6	52.64	1.52	
	1909.8	52.42	1.53	


## 6.1. SAR System Check Procedures

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.

## 6.2. SAR System Check

### 6.2.1. Dipoles

	<p>The dipoles used are based on the IEEE-1528 standard, and is complied with mechanical and electrical specifications in line with the requirements of IEEE. the table below provides details for the mechanical and electrical specifications for the dipoles.</p>
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	<p>The dipoles used are based on the IEEE-1528 standard, the table below provides details for the mechanical and electrical specifications for the dipoles.</p>
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Frequency	L (mm)	h (mm)	d (mm)
835MHz	161.0	89.8	3.6
1900MHz	68	39.5	3.6



### 6.2.2. System Check Result

System Performance Check at 835MHz&1900MHz for Head								
Validation Kit: SN29/15 DIP 0G835-383& SN 46/11 DIP 1G900-187& D2450V2-SN:968								
Frequency [MHz]	Target Value(W/Kg)		Reference Result ( $\pm 10\%$ )		Tested Value(W/Kg)		Tissue Temp. [°C]	Test time
	1g	10g	1g	10g	1g	10g		
835	9.85	6.27	8.865-10.835	5.643-6.897	10.16	6.47	22.3	Dec. 17,2019
1900	40.25	20.50	36.225-44.275	18.45-22.55	40.10	20.60	22.4	Dec. 17,2019
System Performance Check at 835 MHz &1900MHz for Body								
Frequency [MHz]	Target Value(W/Kg)		Reference Result ( $\pm 10\%$ )		Tested Value(W/Kg)		Tissue Temp. [°C]	Test time
	1g	10g	1g	10g	1g	10g		
835	9.95	6.50	8.955-10.945	5.85-7.15	9.89	6.36	22.4	Dec. 17,2019
1900	40.82	20.99	36.738-44.902	18.891-23.089	38.04	19.65	22.5	Dec. 17,2019

Note:

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

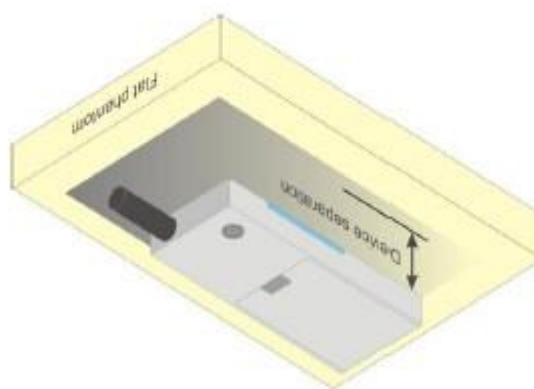
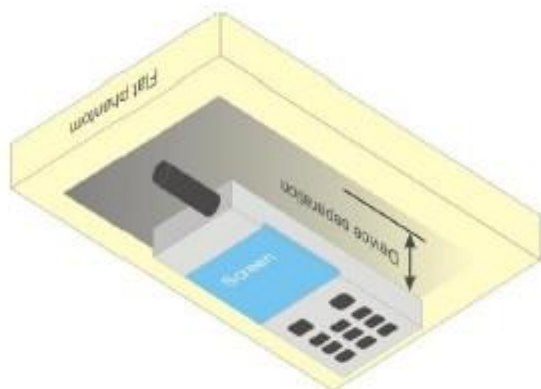


## 7. EUT TEST POSITION

This EUT was tested in **Body back and Face Up**

### 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 **10mm** while used in front of face, and body back touch with belt clip to **0mm**.



## 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



Attestation of Global Compliance

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

Add: 2/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,  
Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

## 9. TEST FACILITY

<b>Test Site</b>	Attestation of Global Compliance (Shenzhen) Co., Ltd
<b>Location</b>	1-2/F, Building 19, Junfeng Industrial Park, Chongqing Road, Heping Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China
<b>Designation Number</b>	CN1259
<b>FCC Test Firm Registration Number</b>	975832
<b>A2LA Cert. No.</b>	5054.02
<b>Description</b>	Attestation of Global Compliance(Shenzhen) Co., Ltd is accredited by A2LA



## 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	Sep. 27,2019	Sep. 26,2020
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. 16,2019	Feb. 15,2020
SAR Software	Speag-DASY5	DASY52.8	N/A	N/A
Liquid	SATIMO	-	N/A	N/A
Radio Communication Tester	R&S-CMU200	069Y7-158-13-712	Mar. 14,2019	Mar. 13,2020
Dipole	SATIMO SID835	SN29/15 DIP 0G835-383	Apr. 26,2019	Apr. 25,2022
Dipole	SATIMO SID1900	SN 46/11 DIP 1G900-187	Apr. 26,2019	Apr. 25,2022
Signal Generator	Agilent-E4438C	US41461365	Feb. 27,2019	Feb. 26,2020
Vector Analyzer	Agilent / E4440A	US41421290	Feb. 27,2019	Feb. 26,2020
Network Analyzer	Rhode & Schwarz ZVL6	SN100132	Feb. 27,2019	Feb. 26,2020
Attenuator	Warison /WATT-6SR1211	S/N:WRJ34AYM2F1	June 11,2019	June 10, 2020
Attenuator	Mini-circuits / VAT-10+	31405	June 11,2019	June 10, 2020
Amplifier	EM30180	SN060552	Feb. 27,2019	Feb. 26,2020
Directional Couple	Werlatone/ C5571-10	SN99463	June 12,2019	June 11,2020
Directional Couple	Werlatone/ C6026-10	SN99482	June 12,2019	June 11,2020
Power Sensor	NRP-Z21	1137.6000.02	Sep. 09,2019	Sep. 08,2020
Power Sensor	NRP-Z23	US38261498	Feb. 27,2019	Feb. 26,2020
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.



## 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 cxf/e	i cxg/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	6.65	N	1	1	1	6.65	6.65	∞
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				11.80	11.635	
Expanded Uncertainty (95% Confidence interval)			K=2				23.60	23.27	

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 cxf/e	i cxg/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	

DASY Uncertainty- EX3DV4									
System Validation uncertainty for Dipole averaged over 1 gram / 10 gram.									
a	b	c	d	e f(d,k)	f	g	h cxf/e	i cxg/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	6.65	N	1	1	1	6.65	6.65	∞
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				11.451	11.281	
Expanded Uncertainty (95% Confidence interval)			K=2				22.901	22.561	



## 12. CONDUCTED POWER MEASUREMENT

### GSM BAND

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1>				
GSM 850	824.2	32.92	-9	23.92
	836.6	<b>32.93</b>	-9	23.93
	848.8	32.84	-9	23.84

### GSM BAND CONTINUE

Mode	Frequency(MHz)	Avg. Burst Power(dBm)	Duty cycle Factor(dBm)	Frame Power(dBm)
Maximum Power <1>				
PCS1900	1850.2	29.34	-9	20.34
	1880	29.00	-9	20.00
	1909.8	<b>29.59</b>	-9	20.59

Note 1:

The Frame Power (Source-based time-averaged Power) is scaled the maximum burst average power based on time slots.

#### UMTS BAND II

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 1900 RMC	1852.4	22.53
	1880	21.82
	1907.6	22.07

#### UMTS BAND V

Mode	Frequency (MHz)	Avg. Burst Power (dBm)
WCDMA 850 RMC	826.4	22.37
	836.6	21.97
	846.6	22.35



## 13. TEST RESULTS

### 13.1. SAR Test Results Summary

#### 13.1.1. Test position and configuration

Face Up SAR was performed with the device configured in the positions according to IEEE 1528-2013, Body-worn SAR was performed with the device 0mm from the phantom.

#### 13.1.2. Operation Mode

1. Per KDB 447498 D01 v06 ,for each exposure position, if the highest 1-g SAR is  $\leq 0.8$  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. Body-worn exposure conditions are intended to voice call operations, therefore GSM voice call mode is selected to be test.
4. 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) ]
5. Proximity sensor, just for avoiding the wrong operation in the phone screen when call, and has no influence on output power or SAR result





### 13.1.3. Test Result

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 48.0					
Product: FH Emergency Medical Device - V1									
Test Mode: GSM850 with GMSK modulation									
Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±0.2 dB)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/Kg)	Limit (W/kg)
SIM 1 Card									
Body back	voice	128	824.2	0.06	1.190	33.00	32.92	1.212	1.6
Body back	voice	190	836.6	0.06	1.410	33.00	32.93	1.433	1.6
Body back	voice	251	848.8	0.08	1.300	33.00	32.84	1.349	1.6
Face Up	voice	190	836.6	-0.39	0.500	33.00	32.93	0.508	1.6

Note:

- When the 1-g Reported SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- The test separation for body back is 0mm and face up is 10mm of all above table.

SAR MEASUREMENT									
Depth of Liquid (cm):>15				Relative Humidity (%): 48.0					
Product: FH Emergency Medical Device - V1									
Test Mode: PCS1900 with GMSK modulation									
Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±0.2 dB)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/Kg)	Limit (W/kg)
SIM 1 Card									
Body back	voice	512	1850.2	-0.04	1.220	29.60	29.34	1.295	1.6
Body back	voice	661	1880.0	0.06	<b>1.240</b>	29.60	29.00	<b>1.424</b>	1.6
Body back	voice	810	1909.8	0.07	1.190	29.60	29.59	1.193	1.6
Face Up	voice	661	1880.0	-0.17	<b>0.307</b>	29.60	29.00	<b>0.352</b>	1.6

Note:

- When the 1-g Reported SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- The test separation for body back is 0mm and face up is 10mm of all above table.

SAR MEASUREMENT									
Depth of Liquid (cm):>15					Relative Humidity (%): 48.0				
Product: FH Emergency Medical Device - V1									
Test Mode: WCDMA Band II with QPSK modulation									
Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±0.2 dB)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/Kg)	Limit (W/kg)
Body back	RMC 12.2kbps	9262	1852.4	0.09	1.060	22.60	22.53	1.077	1.6
Body back	RMC 12.2kbps	9400	1880	0.05	1.080	22.60	21.82	1.292	1.6
Body back	RMC 12.2kbps	9538	1907.6	0.05	1.100	22.60	22.07	1.243	1.6
Face Up	RMC 12.2kbps	9400	1880	-0.06	0.283	22.60	21.82	0.339	1.6

Note:

- When the 1-g Reported SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- The test separation for body back is 0mm and face up is 10mm of all above table.



SAR MEASUREMENT									
Depth of Liquid (cm):>15					Relative Humidity (%): 48.0				
Product: FH Emergency Medical Device - V1									
Test Mode: WCDMA Band V with QPSK modulation									
Position	Mode	Ch.	Fr. (MHz)	Power Drift (<±0.2 dB)	SAR (1g) (W/kg)	Max. Tune-up Power (dBm)	Meas. output Power (dBm)	Scaled SAR (W/Kg)	Limit (W/kg)
Body back	RMC 12.2kbps	4132	826.4	0.46	1.530	22.40	22.37	1.541	1.6
Body back	RMC 12.2kbps	4183	836.6	0.37	1.360	22.40	21.97	1.502	1.6
Body back	RMC 12.2kbps	4233	846.6	-0.35	1.330	22.40	22.35	1.345	1.6
Face Up	RMC 12.2kbps	4183	836.6	0.35	0.734	22.40	21.97	0.810	1.6

Note:

- When the 1-g Reported SAR is  $\leq 0.8$  W/kg, testing for low and high channel is optional. Refer to KDB 447498.
- The test separation for body back is 0mm and face up is 10mm of all above table.



Attestation of Global Compliance

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

Add: 2/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,  
Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

Repeated SAR										
Product: FH Emergency Medical Device - V1										
Test Mode: GSM850& PCS1900& WCDMA Band II& WCDMA Band V										
Position	Mode	Ch.	Fr. (MHz)	Power Drift ( $\leq \pm 0.2$ dB)	Once SAR (1g) (W/kg)	Power Drift ( $\leq \pm 5\%$ )	Twice SAR (1g) (W/kg)	Power Drift ( $\leq \pm 0.2$ dB)	Third SAR (1g) (W/kg)	Limit (W/kg)
Body back	voice	190	836.6	0.12	1.270	-	--	--	--	1.6
Body back	voice	661	1880.0	0.10	1.250	-	--	--	--	1.6
Body back	RMC 12.2kbps	9538	1907.6	0.01	1.080	-	--	--	--	1.6
Body back	RMC 12.2kbps	4132	826.4	-0.57	1.500	-	--	--	--	1.6



## APPENDIX A. SAR SYSTEM CHECK DATA

Test Laboratory: AGC Lab

Date: Dec. 17,2019

System Check Head 835 MHz

DUT: Dipole 835 MHz Type: SID 835

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

Frequency: 835 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.88$  mho/m;  $\epsilon_r = 42.05$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C):22.7, Liquid temperature (°C): 22.3

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(10.09, 10.09, 10.09); Calibrated: Sep. 27,2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- 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 835MHz Head/Area Scan: Measurement grid:  $dx=8$ mm,  $dy=8$ mm

Configuration/System Check 835MHz Head/Zoom Scan: Measurement grid:  $dx=8$ mm, $dy=8$ mm,  $dz=5$ mm

Configuration/System Check Head 835MHz/Area Scan (9x14x1): Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 0.745 W/kg

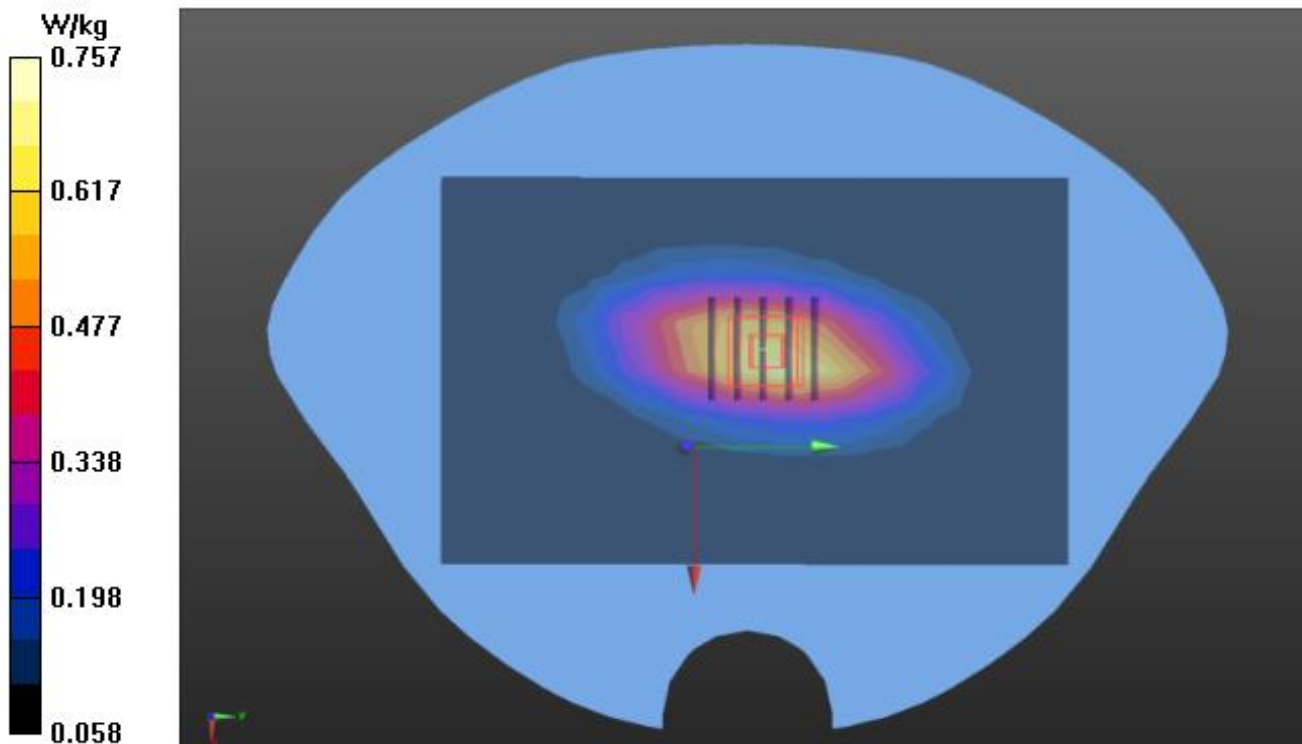
Configuration/System Check Head 835MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 23.171 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.998 W/kg

**SAR(1 g) = 0.641 W/kg; SAR(10 g) = 0.408 W/kg**

Maximum value of SAR (measured) = 0.757 W/kg



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Add: 2/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,  
Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline:400 089 2118



**Test Laboratory: AGC Lab**  
**System Check Body 835 MHz**  
**DUT: Dipole 835 MHz Type: SID 835**

**Date: Dec. 17,2019**

Communication System CW; Communication System Band: D835 (835.0 MHz); Duty Cycle: 1:1;  
Frequency: 835 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.96$  mho/m;  $\epsilon_r = 54.84$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section; Input Power=18dBm  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.4

DASY Configuration:

Probe: EX3DV4 – SN:3953; ConvF(10.14, 10.14, 10.14); Calibrated: Sep. 27,2019;

- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- 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 835MHz/Area Scan (9x14x1):** Measurement grid: dx=15mm, dy=15mm  
Maximum value of SAR (measured) = 0.738 W/kg

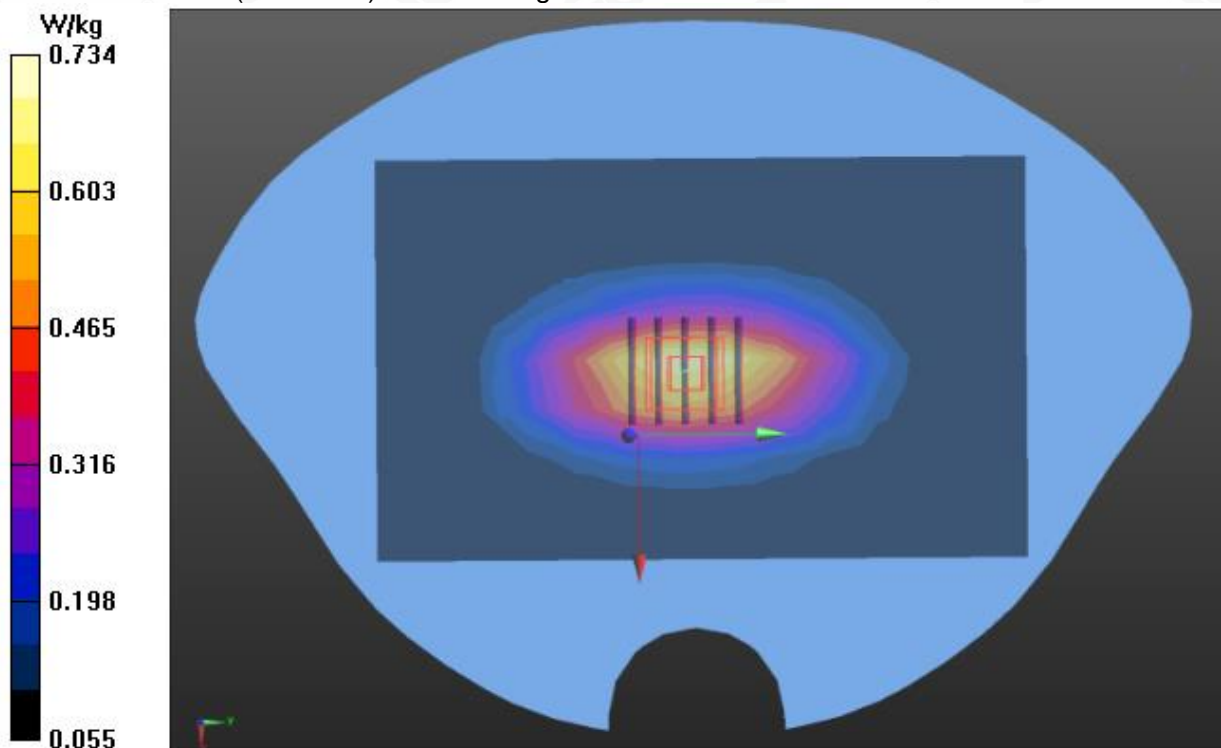
**Configuration/System Check Body 835MHz/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 29.041 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.958 W/kg

**SAR(1 g) = 0.624 W/kg; SAR(10 g) = 0.401 W/kg**

Maximum value of SAR (measured) = 0.734 W/kg



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Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

**Test Laboratory: AGC Lab**

**Date: Dec. 17,2019**

**System Check Head 1900MHz**

**DUT: Dipole 1900 MHz; Type: SID 1900**

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

Frequency: 1900 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.54$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;

Phantom section: Flat Section; Input Power=18dBm

Ambient temperature (°C):22.7, Liquid temperature (°C): 22.4

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(8.36, 8.36, 8.36); Calibrated: Sep. 27,2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- 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 1900MHz Head/Area Scan:** Measurement grid: dx=8mm, dy=8mm

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

**System Check Head 1900 MHz**

**Configuration/System Check Head 1900MHz/Area Scan (7x10x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 3.14 W/kg

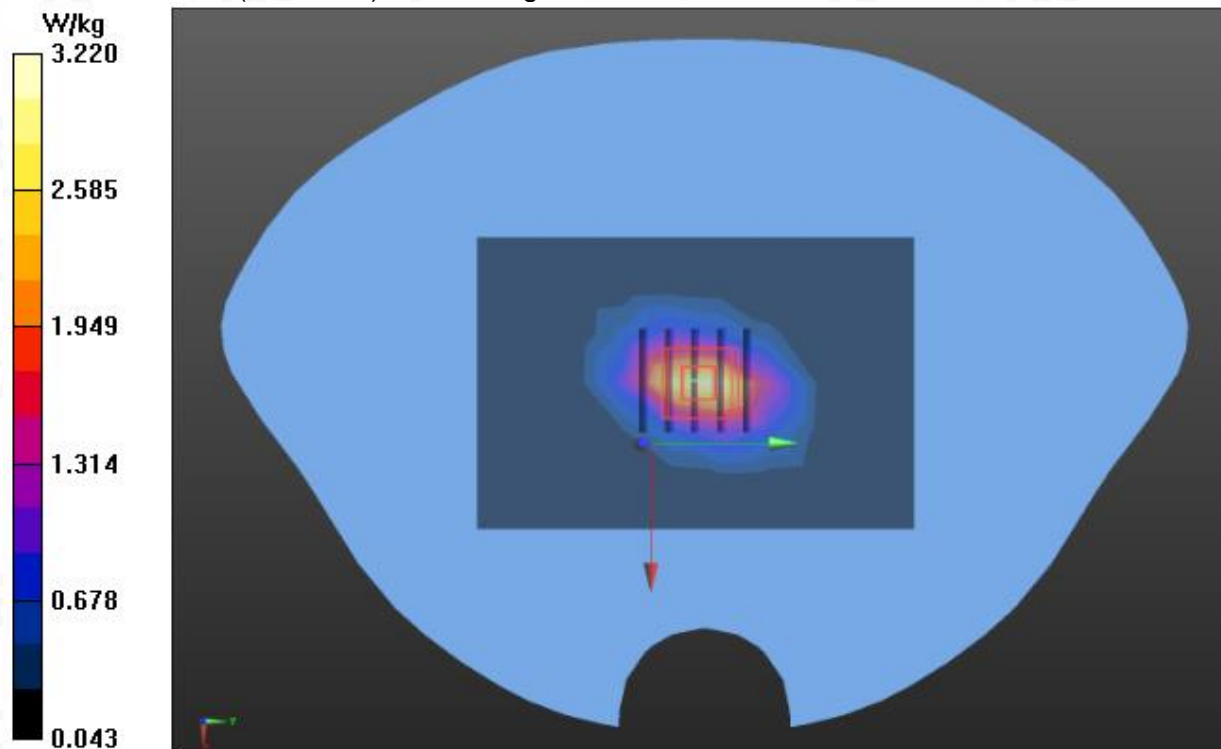
**Configuration/System Check Head 1900MHz/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 49.501 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 4.71 W/kg

**SAR(1 g) = 2.53 W/kg; SAR(10 g) = 1.3 W/kg**

Maximum value of SAR (measured) = 3.22 W/kg



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Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

**Test Laboratory: AGC Lab**  
**System Check Body 1900MHz**  
**DUT: Dipole 1900 MHz; Type: SID 1900**

**Date: Dec. 17,2019**

Communication System: CW; Communication System Band: D1900 (1900.0 MHz); Duty Cycle:1:1;  
Frequency: 1900 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.51$  mho/m;  $\epsilon_r = 52.89$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section; Input Power=18dBm  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(8.00, 8.00, 8.00); Calibrated: Sep. 27,2019;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- 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 1900MHz/Area Scan (7x10x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 2.74 W/kg

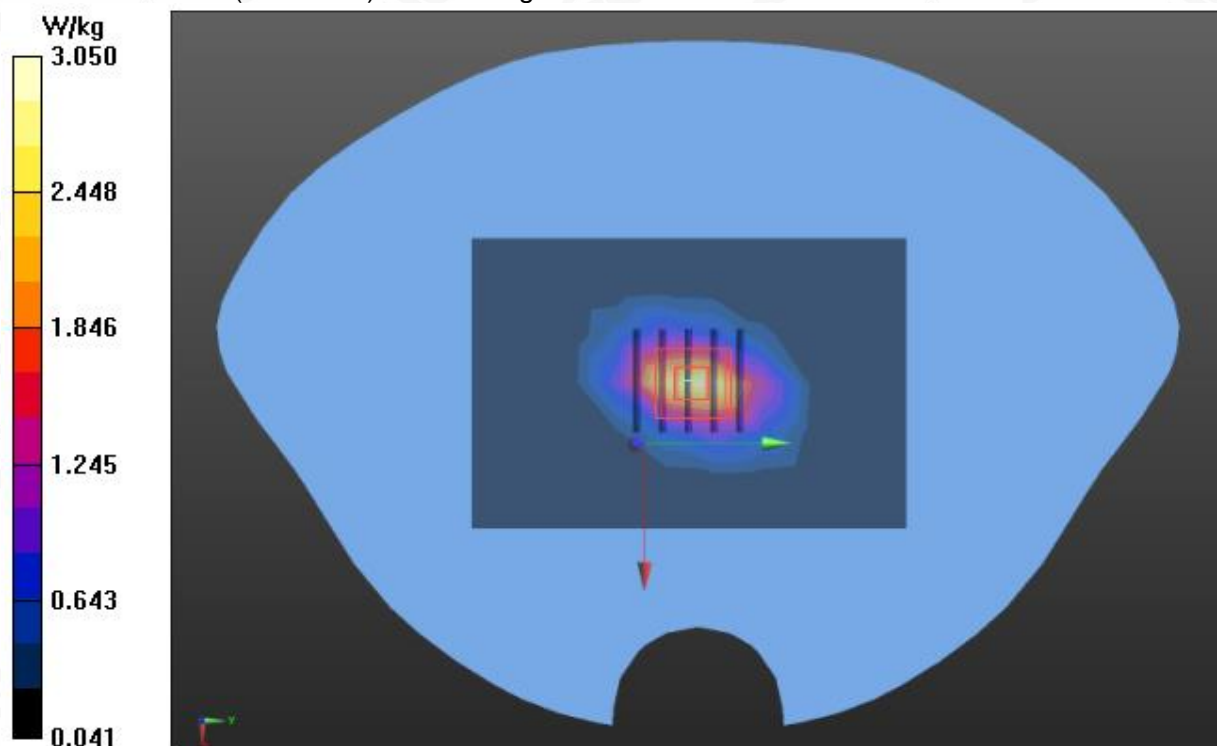
**Configuration/System Check Body 1900MHz/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 48.236 V/m; Power Drift = -0.08 dB

Peak SAR (extrapolated) = 4.47 W/kg

**SAR(1 g) = 2.4 W/kg; SAR(10 g) = 1.24 W/kg**

Maximum value of SAR (measured) = 3.05 W/kg



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Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118



## APPENDIX B. SAR MEASUREMENT DATA

Test Laboratory: AGC Lab

Date: Dec. 17, 2019

GSM 850 Mid- Face Up

DUT: FH Emergency Medical Device - V1; Type: FH-V1

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;  
Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.93$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C): 22.7, Liquid temperature (°C): 22.3

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(10.09, 10.09, 10.09); Calibrated: Sep. 27, 2019;
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16, 2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QDOVA002AA;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**FACE UP/Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 0.601 W/kg

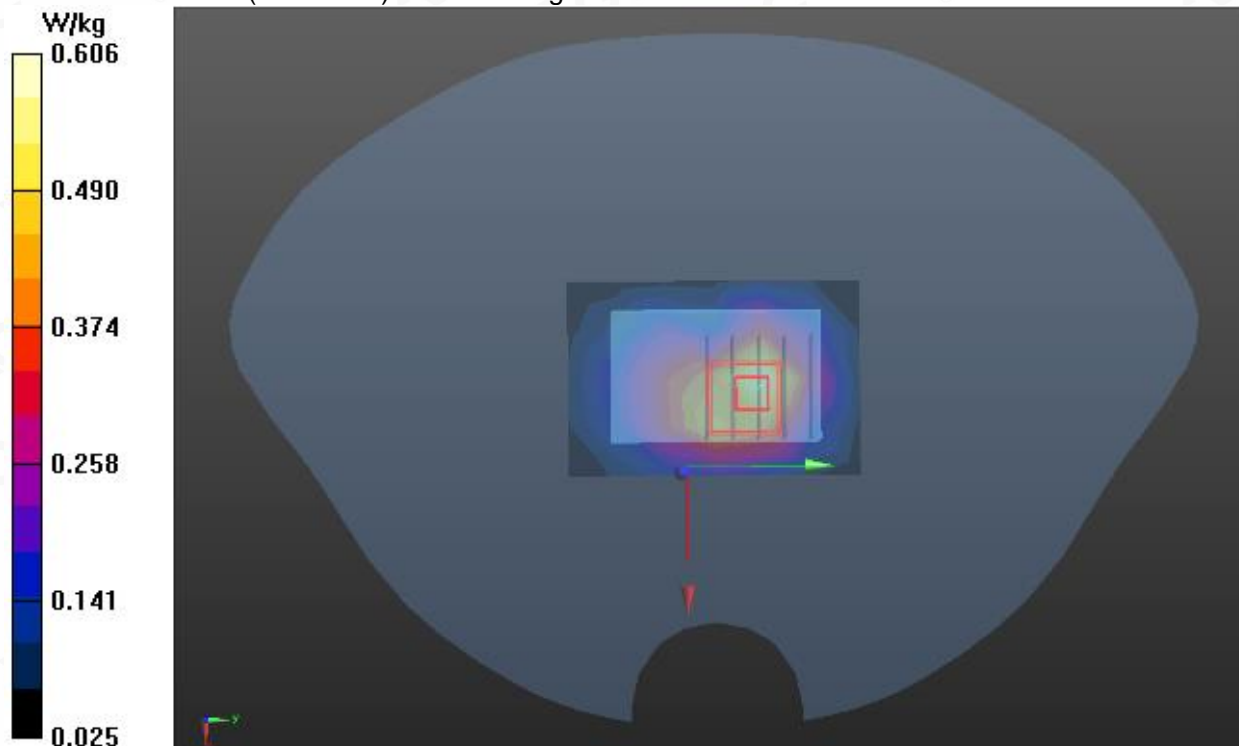
**FACE UP/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 20.799 V/m; Power Drift = -0.39 dB

Peak SAR (extrapolated) = 0.847 W/kg

**SAR(1 g) = 0.500 W/kg; SAR(10 g) = 0.297 W/kg**

Maximum value of SAR (measured) = 0.606 W/kg



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Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118



**Test Laboratory: AGC Lab**  
**GSM 850 Mid- Body- Back(MS)<SIM 1>**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;  
Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 54.68$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.4

DASY Configuration:

Probe: EX3DV4 – SN:3953; ConvF(10.14, 10.14, 10.14); Calibrated: Sep. 27,2019;

- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QDOVA002AA;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK/Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 1.58 W/kg

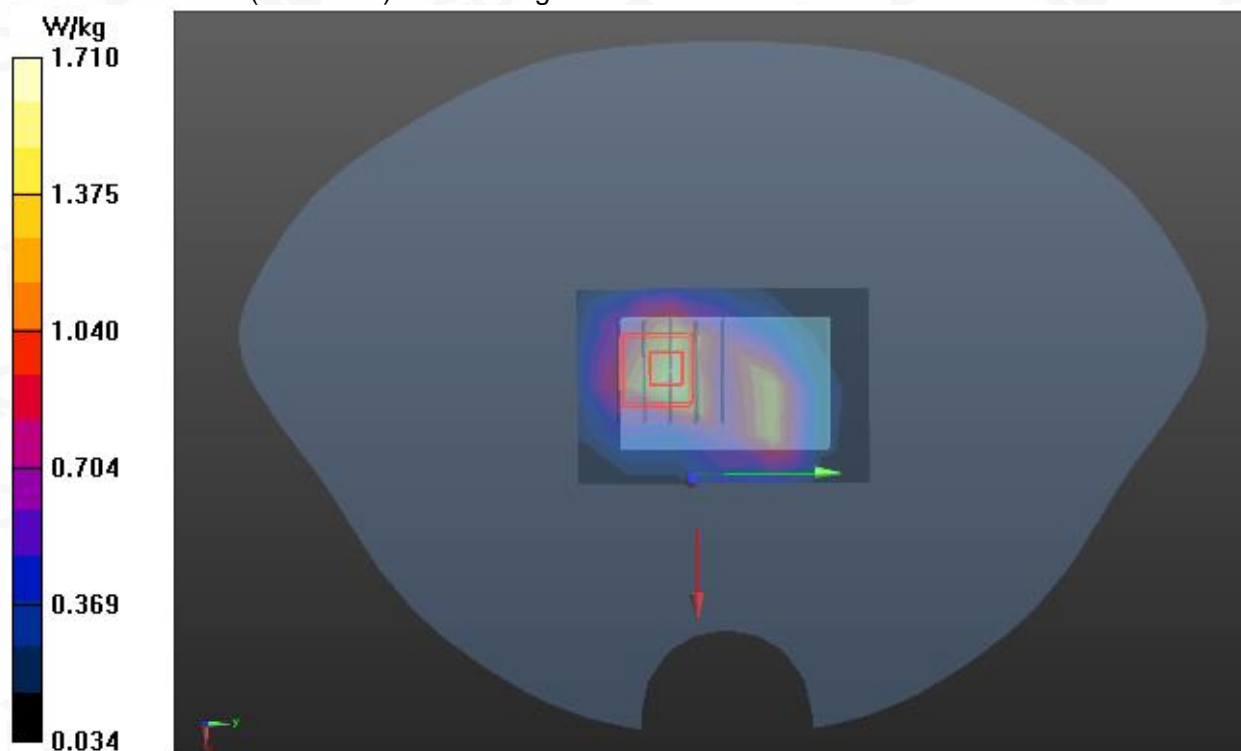
**BODY/BACK/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 27.652 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 2.33 W/kg

**SAR(1 g) = 1.41 W/kg; SAR(10 g) = 0.799 W/kg**

Maximum value of SAR (measured) = 1.71 W/kg



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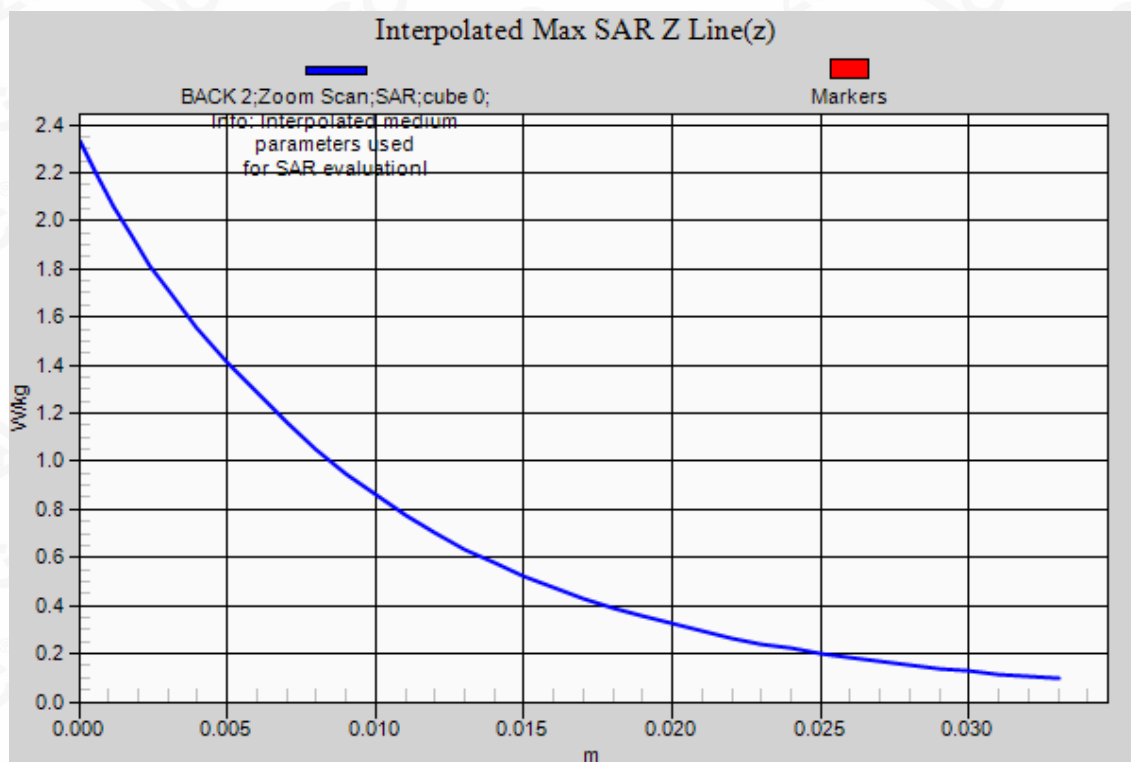
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Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118



**Test Laboratory: AGC Lab**  
**PCS 1900 Mid- Face Up**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

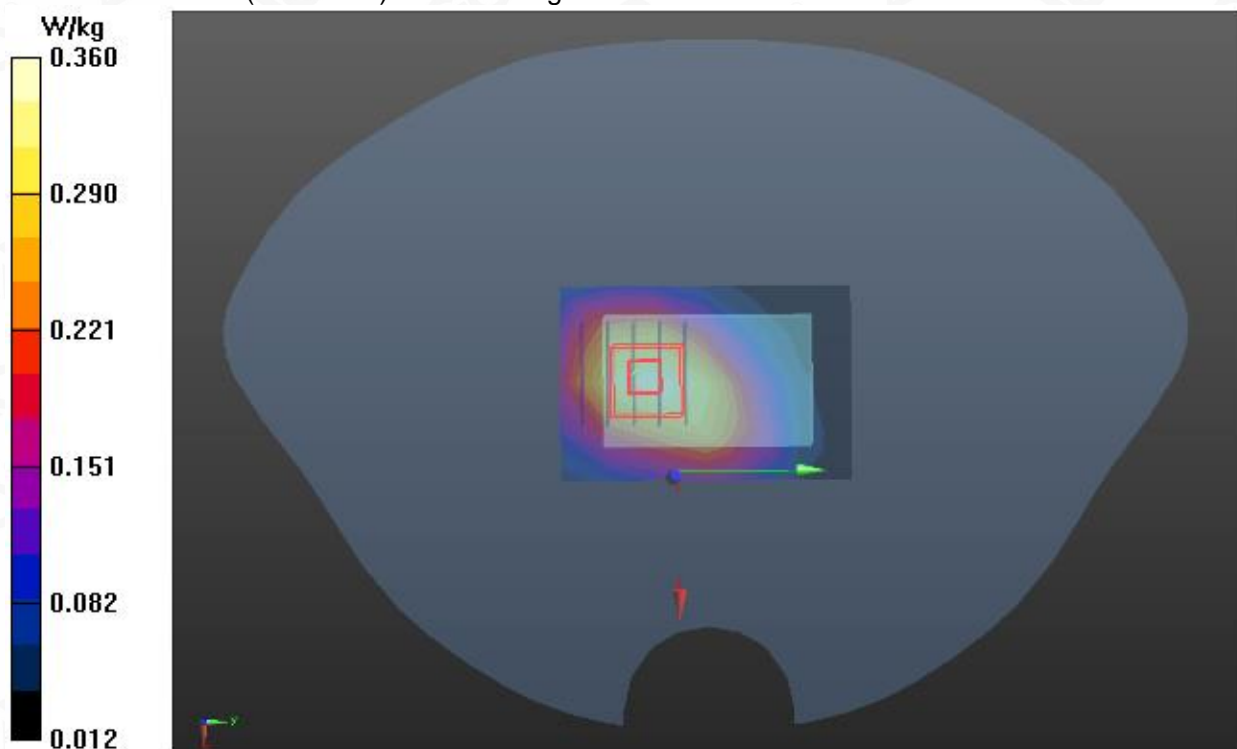
Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;  
Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 39.78$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.4

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(10.09, 10.09, 10.09); Calibrated: Sep. 27,2019;
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**FACE UP/Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 0.359 W/kg

**FACE UP/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 14.562 V/m; Power Drift = -0.17 dB  
Peak SAR (extrapolated) = 0.478 W/kg  
**SAR(1 g) = 0.307 W/kg; SAR(10 g) = 0.192 W/kg**  
Maximum value of SAR (measured) = 0.360 W/kg



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Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

**Test Laboratory: AGC Lab**  
**PCS 1900 Mid-Body- Back(MS)<SIM 1>**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

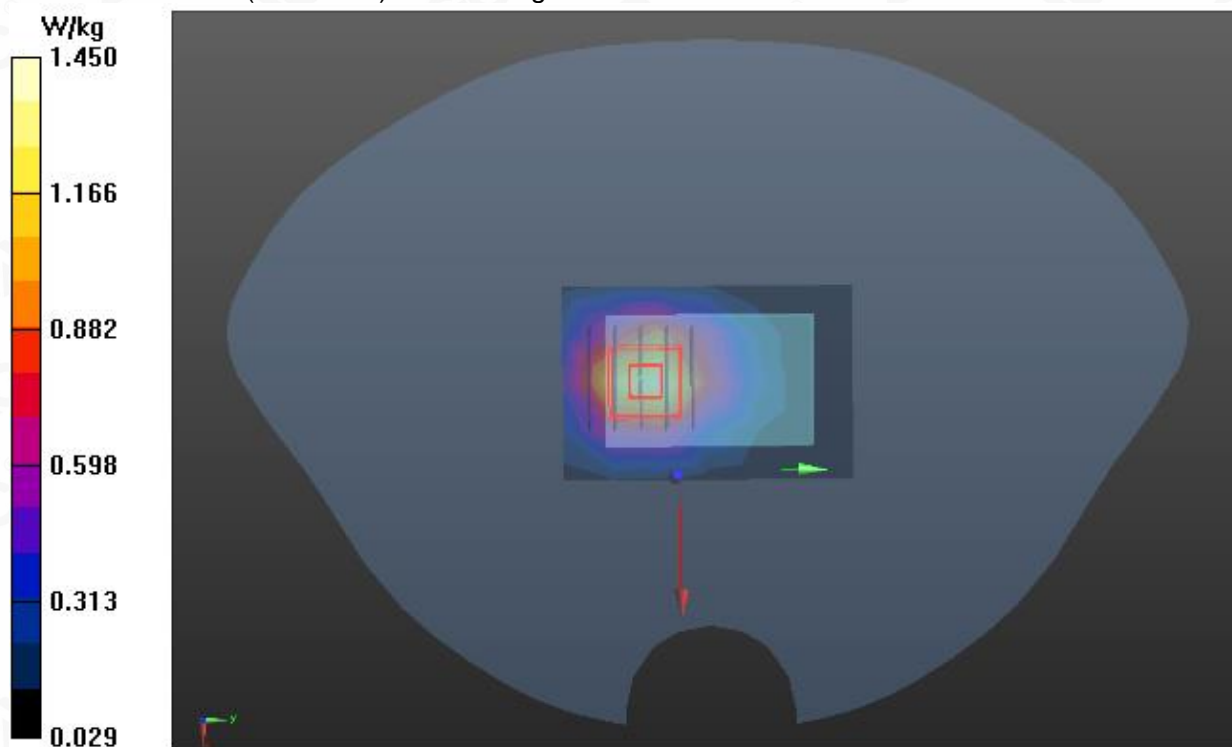
Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;  
Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.50$  mho/m;  $\epsilon_r = 53.07$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(8.00, 8.00, 8.00); Calibrated: Sep. 27,2019;
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK/Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 1.42 W/kg

**BODY/BACK/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 14.562 V/m; Power Drift = 0.06 dB  
Peak SAR (extrapolated) = 1.90 W/kg  
**SAR(1 g) = 1.24 W/kg; SAR(10 g) = 0.731 W/kg**  
Maximum value of SAR (measured) = 1.45 W/kg



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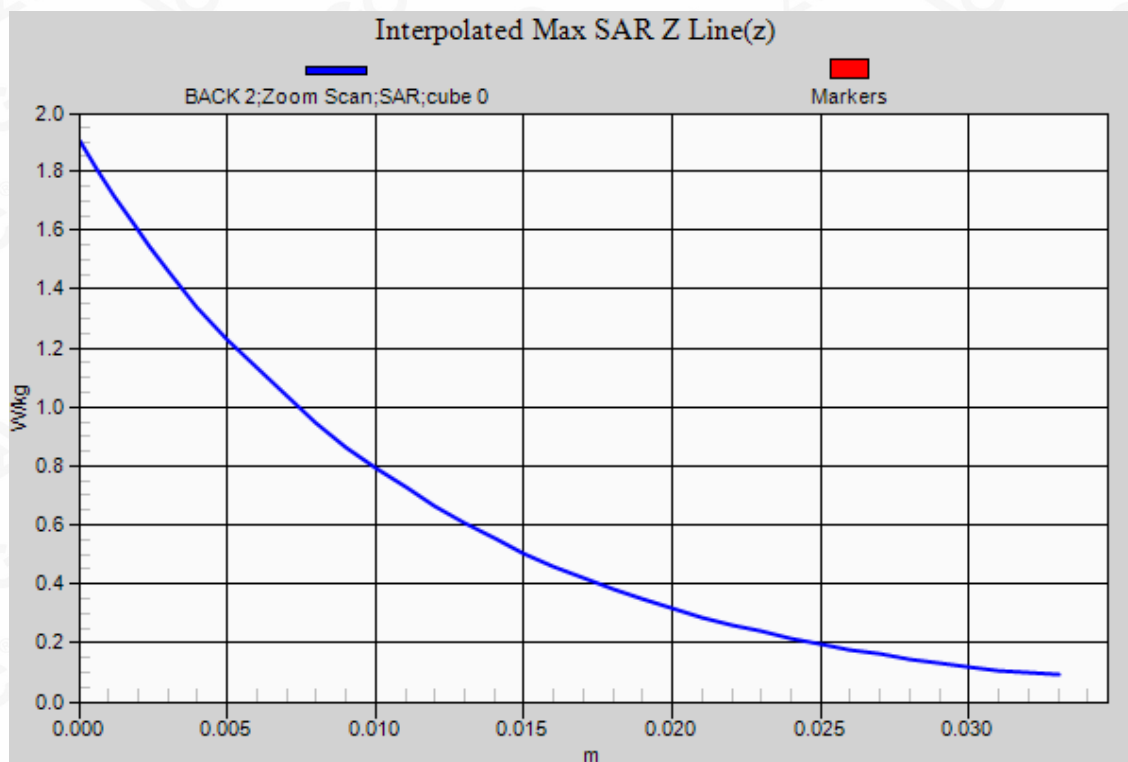
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Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

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**Test Laboratory: AGC Lab**  
**WCDMA Band II Mid - Face Up**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

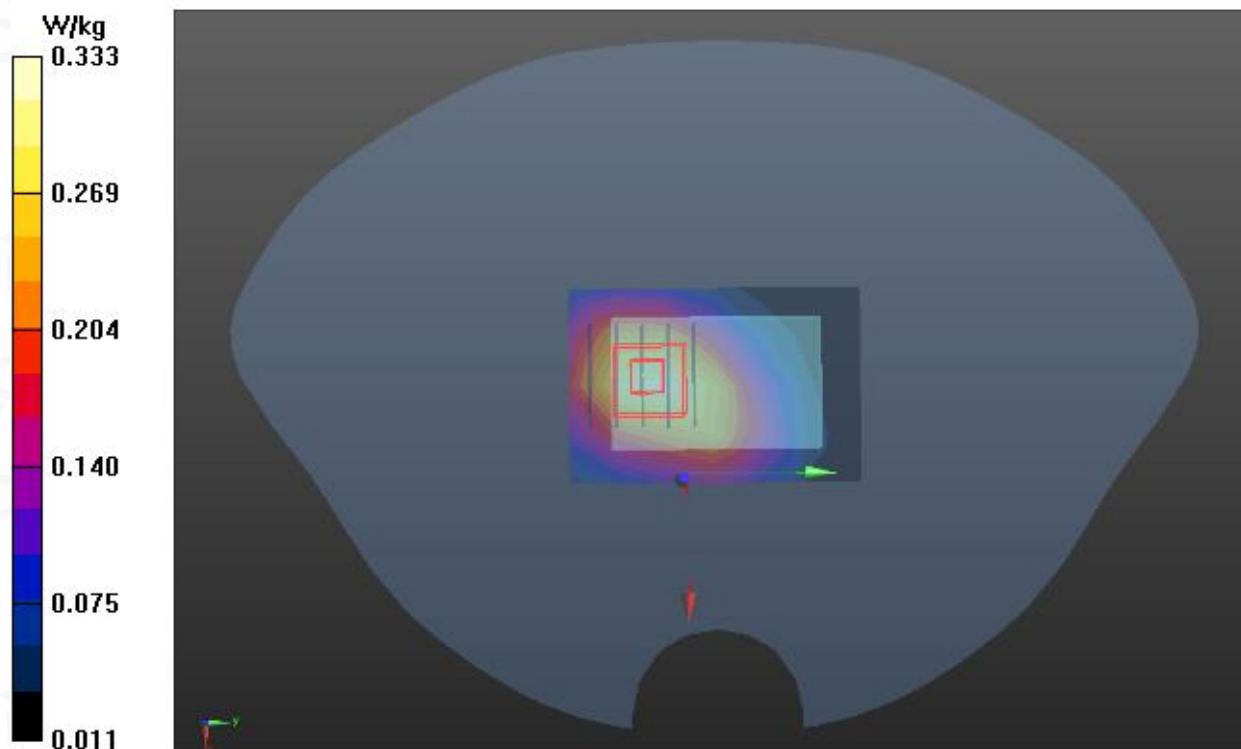
Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.40$  mho/m;  $\epsilon_r = 39.78$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.4

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(10.09, 10.09, 10.09); Calibrated: Sep. 27,2019;
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**FACE UP /Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 0.325 W/kg

**FACE UP /Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 13.124 V/m; Power Drift = -0.06 dB  
Peak SAR (extrapolated) = 0.434 W/kg  
**SAR(1 g) = 0.283 W/kg; SAR(10 g) = 0.178 W/kg**  
Maximum value of SAR (measured) = 0.333 W/kg



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Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline: 400 089 2118

**Test Laboratory: AGC Lab**  
**WCDMA Band II Mid -Body-Towards Grounds**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Frequency: 1880 MHz; Medium parameters used:  $f = 1900 \text{ MHz}$ ;  $\sigma = 1.50 \text{ mho/m}$ ;  $\epsilon_r = 53.07$ ;  $\rho = 1000 \text{ kg/m}^3$  ;  
Phantom section: Flat Section  
Ambient temperature ( $^{\circ}\text{C}$ ):22.7, Liquid temperature ( $^{\circ}\text{C}$ ): 22.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(8.00, 8.00, 8.00); Calibrated: Sep. 27,2019;
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BACK/BACK/Area Scan (5x7x1):** Measurement grid:  $dx=15\text{mm}$ ,  $dy=15\text{mm}$   
Maximum value of SAR (measured) = 1.27 W/kg

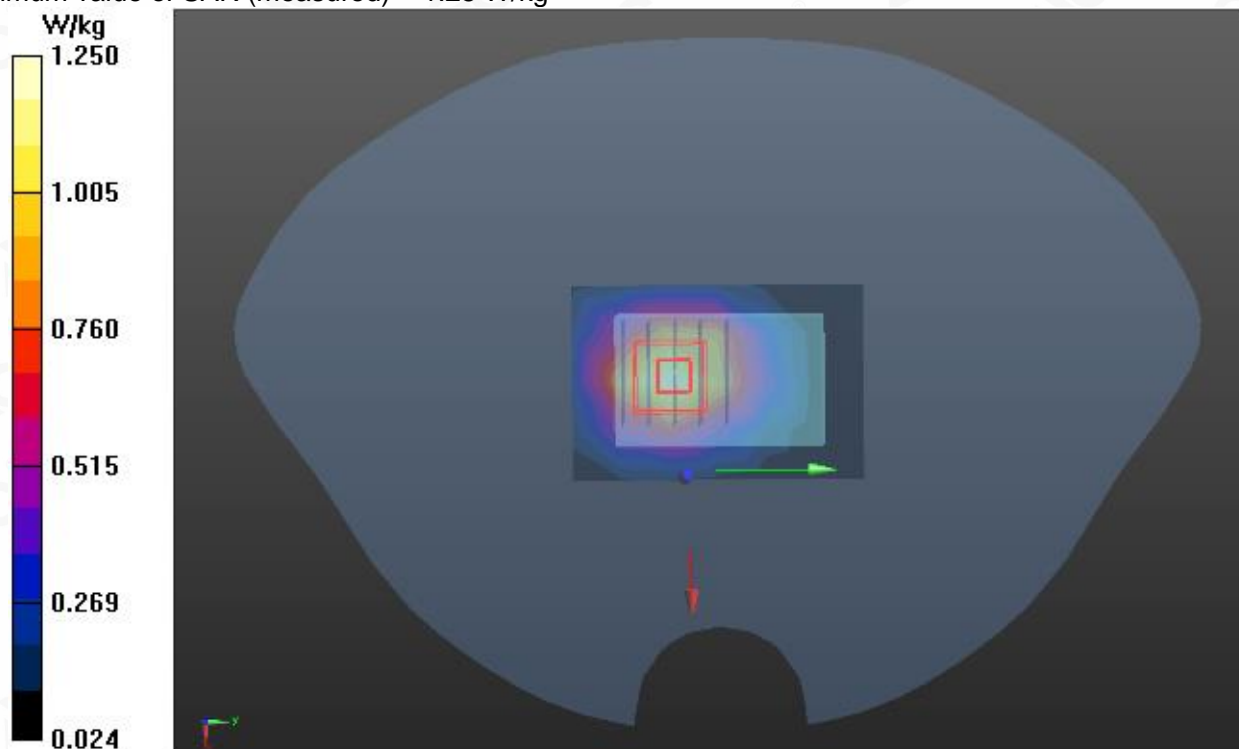
**BACK/BACK/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 24.771 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 1.58 W/kg

**SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.667 W/kg**

Maximum value of SAR (measured) = 1.25 W/kg



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Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

**Test Laboratory: AGC Lab**  
**WCDMA Band II High -Body-Towards Grounds**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

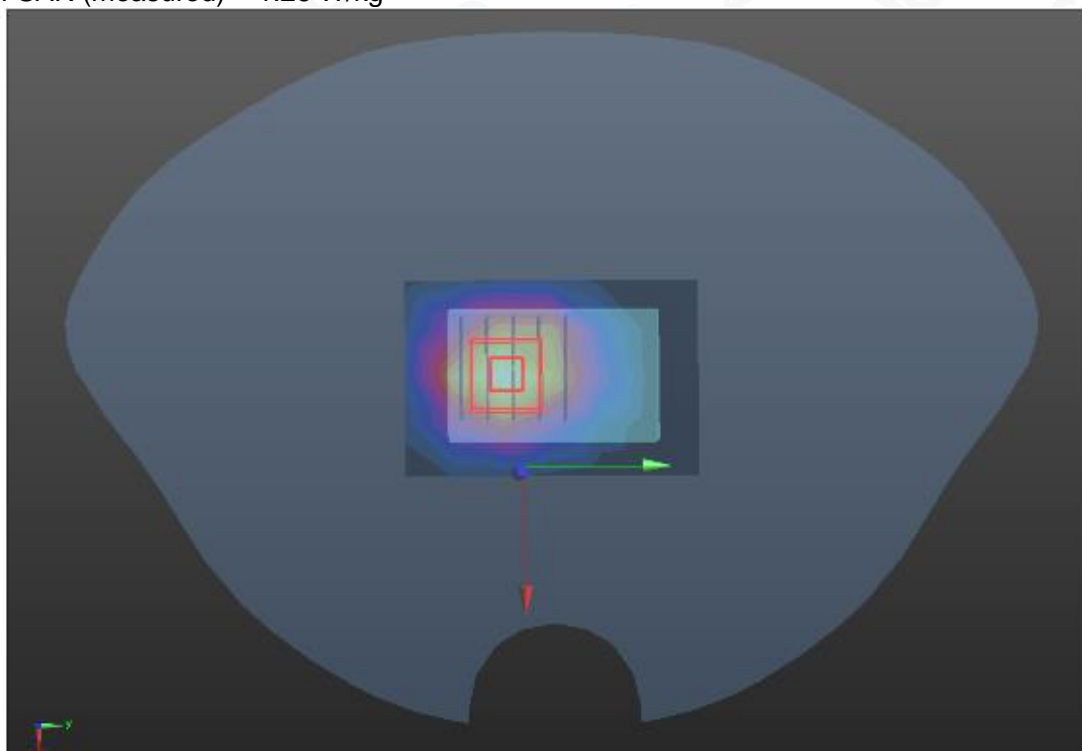
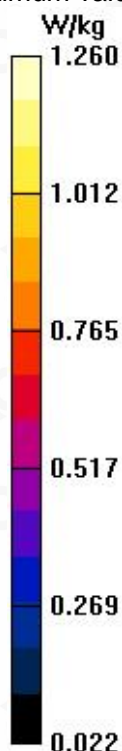
Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Frequency: 1907.6 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 52.64$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(8.00, 8.00, 8.00); Calibrated: Sep. 27,2019;
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BACK/BACK HIGH/Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 1.27 W/kg

**BACK/BACK HIGH/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 24.848 V/m; Power Drift = 0.05 dB  
Peak SAR (extrapolated) = 1.60 W/kg  
**SAR(1 g) = 1.1 W/kg; SAR(10 g) = 0.675 W/kg**  
Maximum value of SAR (measured) = 1.26 W/kg



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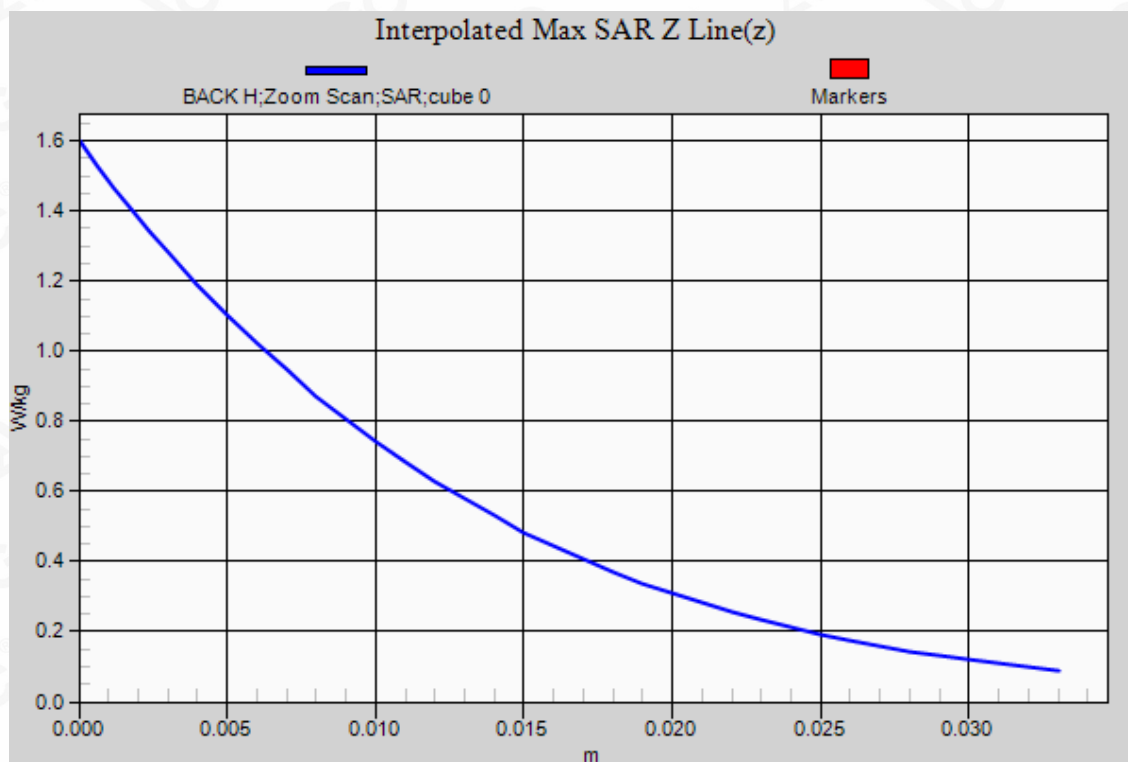
Add: 2/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,  
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E-mail: agc@agc-cert.com

Service Hotline:400 089 2118





**Test Laboratory: AGC Lab**  
**WCDMA Band V Mid- Face Up**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

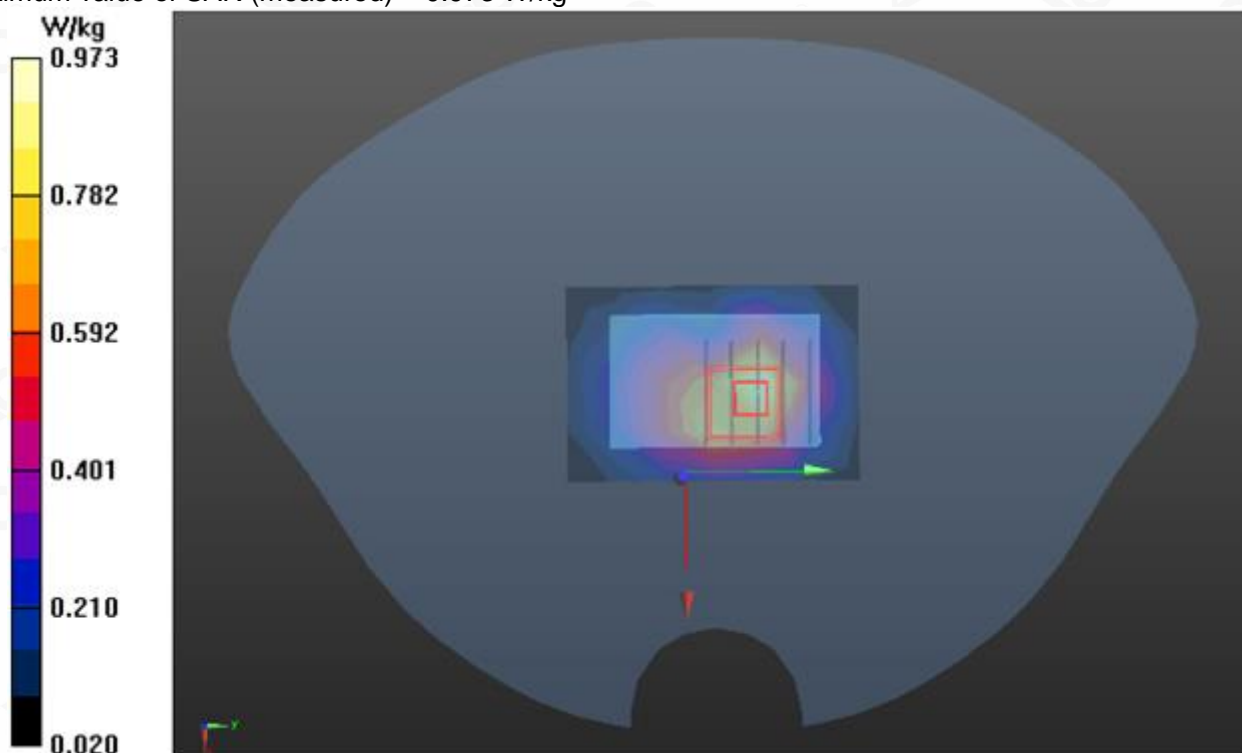
Communication System: UMTS; Communication System Band: BAND V UTRA/FDD;Duty Cycle:1:1;  
Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz; $\sigma = 0.89$  mho/m;  $\epsilon_r = 41.93$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.3

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(10.09, 10.09, 10.09); Calibrated: Sep. 27,2019;
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**FACE UP/Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 0.931 W/kg

**FACE UP/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 18.086 V/m; Power Drift = 0.35 dB  
Peak SAR (extrapolated) = 1.57 W/kg  
**SAR(1 g) = 0.734 W/kg; SAR(10 g) = 0.357 W/kg**  
Maximum value of SAR (measured) = 0.973 W/kg



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E-mail: agc@agc-cert.com

Service Hotline:400 089 2118

**Test Laboratory: AGC Lab**  
**WCDMA Band V Low-Body-Towards Grounds**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD;Duty Cycle:1:1;  
Frequency: 826.4 MHz; Medium parameters used:  $f = 835$  MHz; $\sigma=0.95$  mho/m;  $\epsilon_r = 54.90$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.4

DASY Configuration:

Probe: EX3DV4 – SN:3953; ConvF(10.14, 10.14, 10.14); Calibrated: Sep. 27,2019;

- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK LOW/Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 1.65 W/kg

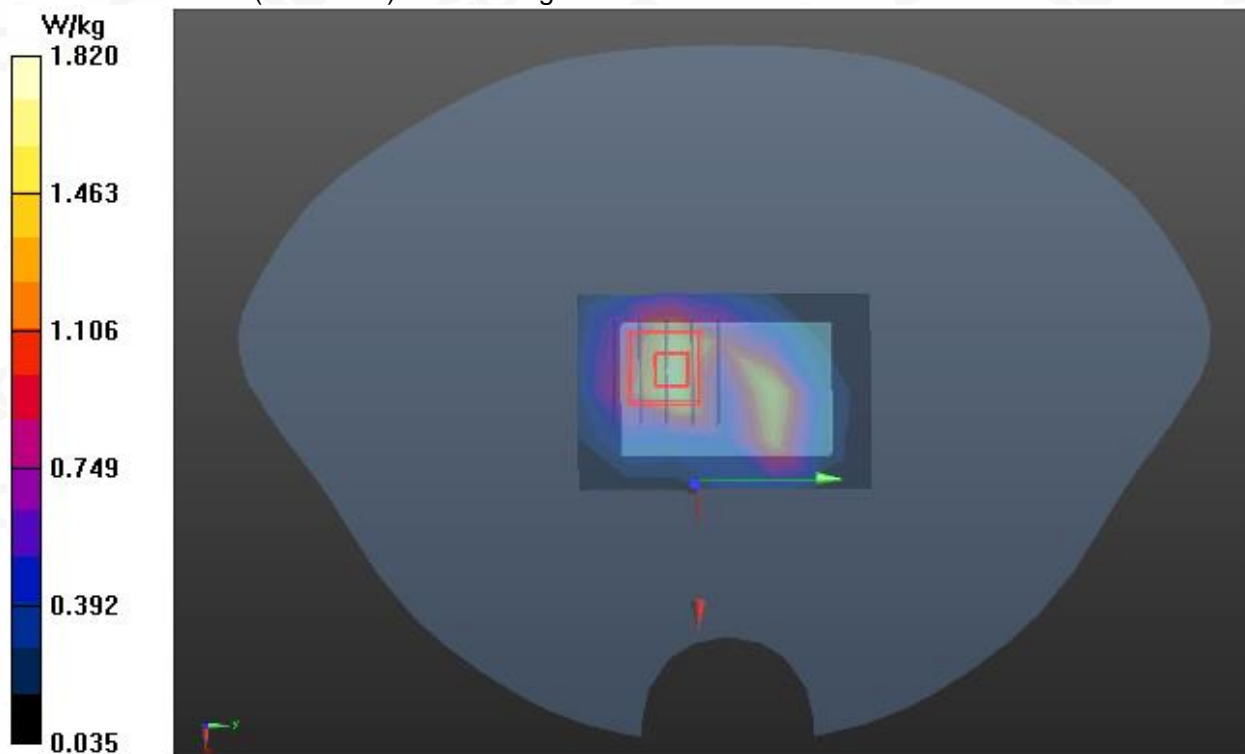
**BODY/BACK LOW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 24.210 V/m; Power Drift = 0.46 dB

Peak SAR (extrapolated) = 2.60 W/kg

**SAR(1 g) = 1.53 W/kg; SAR(10 g) = 0.879 W/kg**

Maximum value of SAR (measured) = 1.82 W/kg



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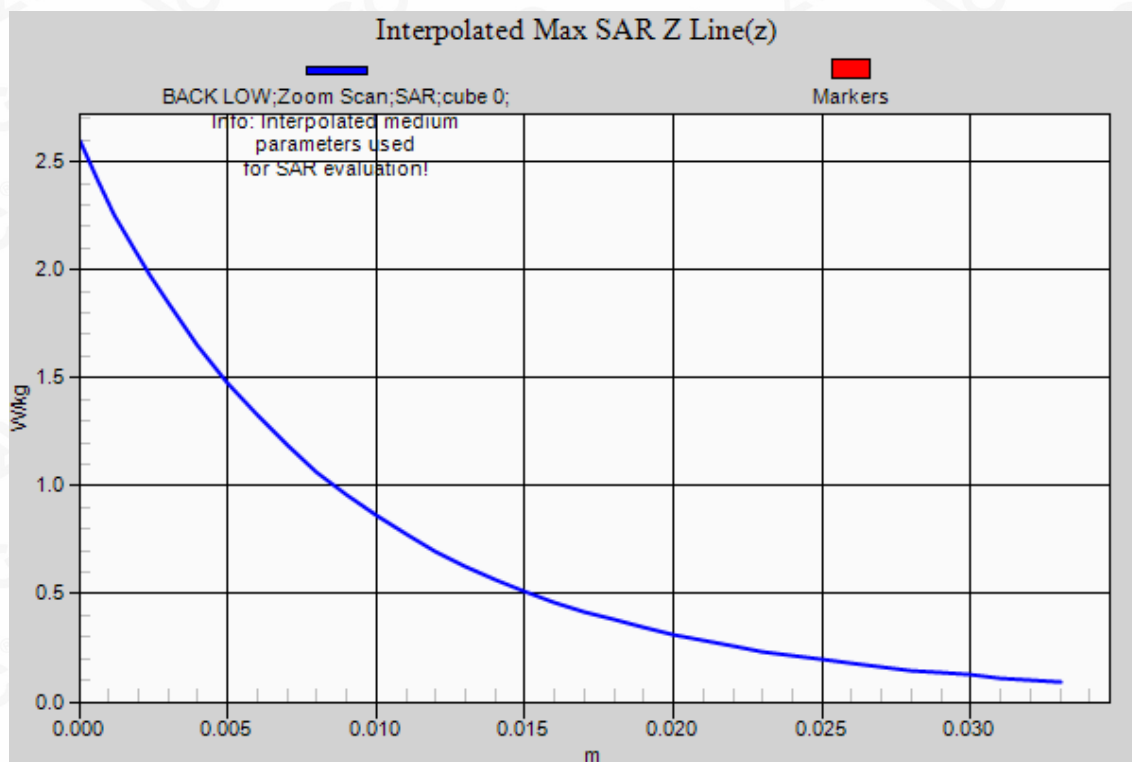
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E-mail: agc@agc-cert.com

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## Repeated SAR

Test Laboratory: AGC Lab

Date: Dec. 17,2019

GSM 850 Mid- Body- Back(MS)<SIM 1>

DUT: FH Emergency Medical Device - V1; Type: FH-V1

Communication System: Generic GSM; Communication System Band: GSM 850; Duty Cycle: 1:8.3;  
Frequency: 836.6 MHz; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.97$  mho/m;  $\epsilon_r = 54.68$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.4

DASY Configuration:

Probe: EX3DV4 – SN:3953; ConvF(10.14, 10.14, 10.14); Calibrated: Sep. 27,2019;

- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QDOVA002AA;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK Report /Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 1.43 W/kg

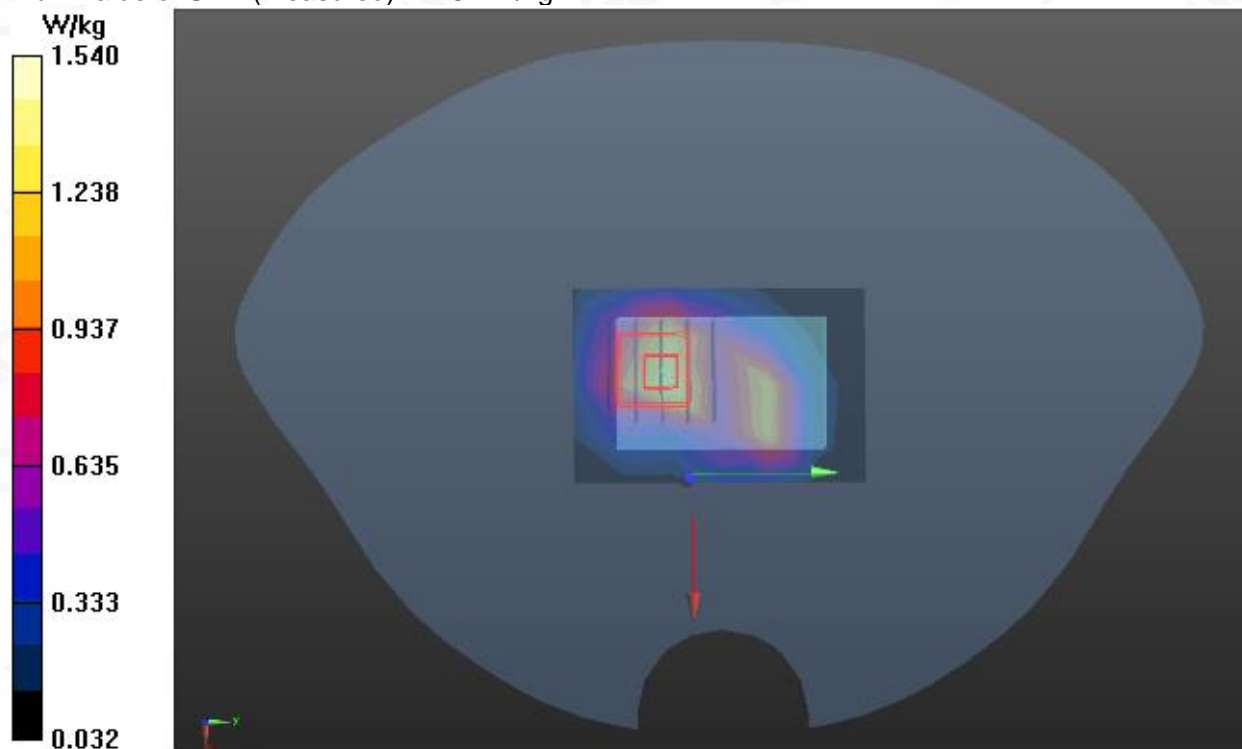
**BODY/BACK Report /Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 26.054 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 2.12 W/kg

**SAR(1 g) = 1.27 W/kg; SAR(10 g) = 0.728 W/kg**

Maximum value of SAR (measured) = 1.54 W/kg



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**Test Laboratory: AGC Lab**  
**PCS 1900 Mid-Body- Back(MS)<SIM 1>**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

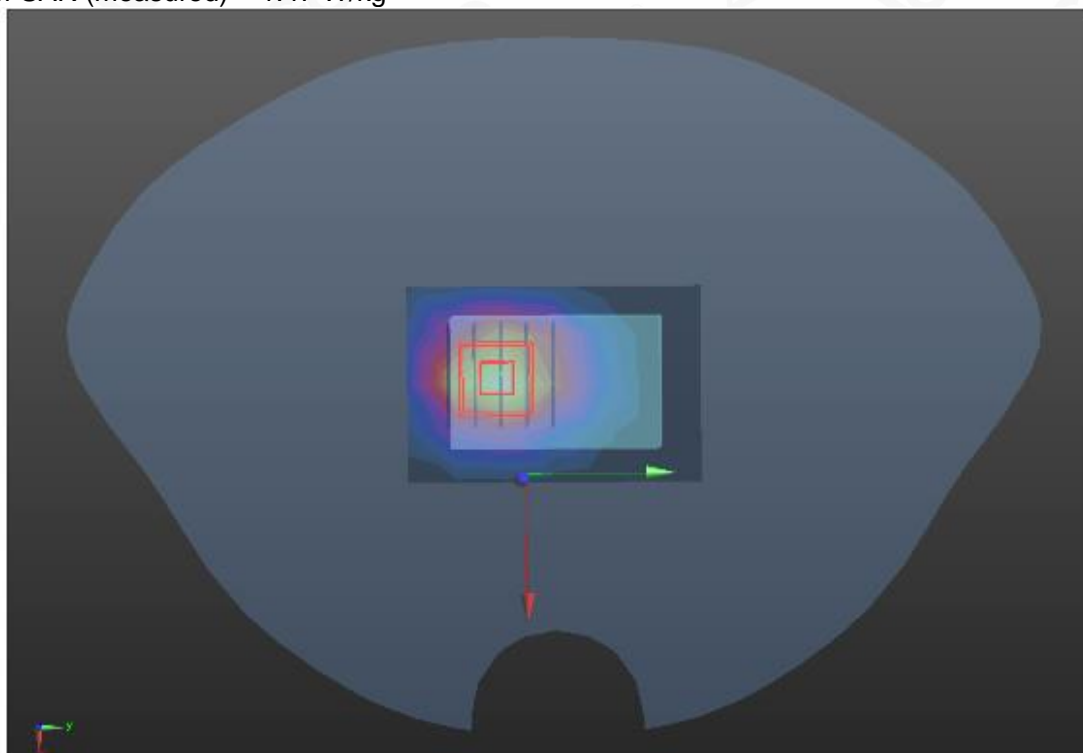
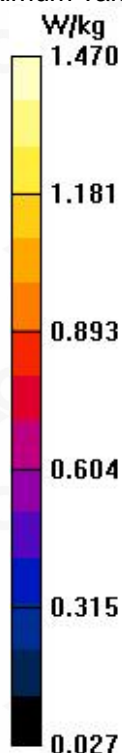
Communication System: Generic GSM; Communication System Band: PCS 1900; Duty Cycle: 1:8.3;  
Frequency: 1880 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.50$  mho/m;  $\epsilon_r = 53.07$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(8.00, 8.00, 8.00); Calibrated: Sep. 27,2019;
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK Report /Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 1.46 W/kg

**BODY/BACK Report /Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 24.342 V/m; Power Drift = 0.10 dB  
Peak SAR (extrapolated) = 1.94 W/kg  
**SAR(1 g) = 1.25 W/kg; SAR(10 g) = 0.738 W/kg**  
Maximum value of SAR (measured) = 1.47 W/kg



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E-mail: agc@agc-cert.com

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**Test Laboratory: AGC Lab**  
**WCDMA Band II High -Body-Towards Grounds**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

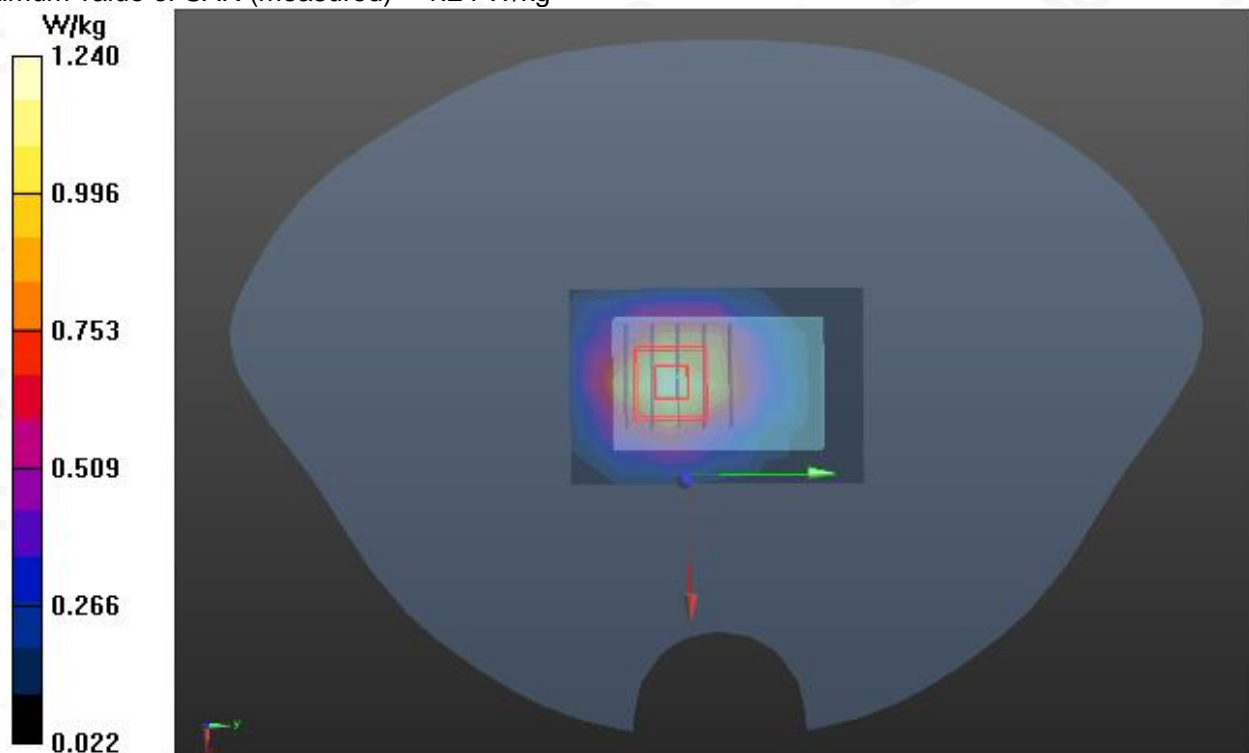
Communication System: UMTS; Communication System Band: Band II UTRA/FDD ;Duty Cycle:1:1; Frequency: 1907.6 MHz; Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.52$  mho/m;  $\epsilon_r = 52.64$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.5

DASY Configuration:

- Probe: EX3DV4 – SN:3953; ConvF(8.00, 8.00, 8.00); Calibrated: Sep. 27,2019;
- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BACK/BACK HIGH Report /Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 1.26 W/kg

**BACK/BACK HIGH Report /Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 24.639 V/m; Power Drift = 0.01 dB  
Peak SAR (extrapolated) = 1.58 W/kg  
**SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.666 W/kg**  
Maximum value of SAR (measured) = 1.24 W/kg



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Service Hotline: 400 089 2118



**Test Laboratory: AGC Lab**  
**WCDMA Band V Low-Body-Towards Grounds**  
**DUT: FH Emergency Medical Device - V1; Type: FH-V1**

**Date: Dec. 17,2019**

Communication System: UMTS; Communication System Band: BAND V UTRA/FDD;Duty Cycle:1:1;  
Frequency: 826.4 MHz; Medium parameters used:  $f = 835$  MHz; $\sigma=0.95$  mho/m;  $\epsilon_r = 54.90$ ;  $\rho = 1000$  kg/m<sup>3</sup> ;  
Phantom section: Flat Section  
Ambient temperature (°C):22.7, Liquid temperature (°C): 22.4

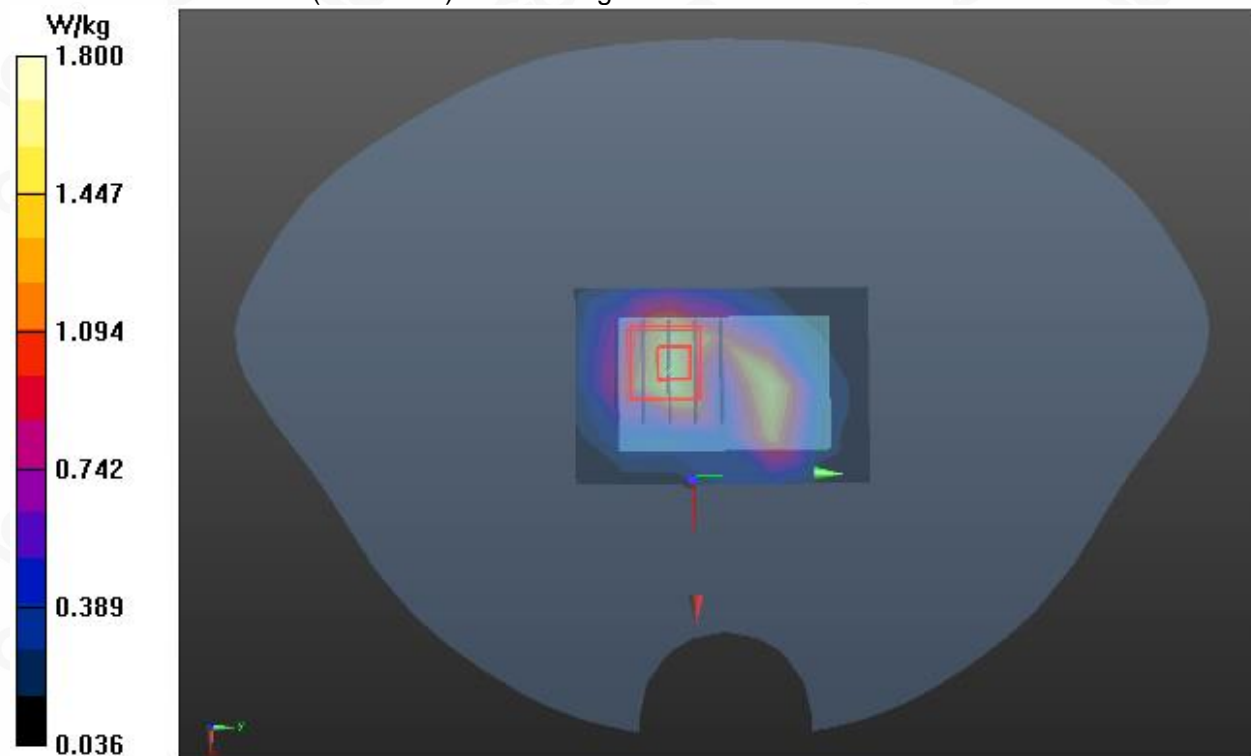
DASY Configuration:

Probe: EX3DV4 – SN:3953; ConvF(10.14, 10.14, 10.14); Calibrated: Sep. 27,2019;

- Sensor-Surface: 3mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 SN1398; Calibrated: Feb. 16,2019
- Phantom: SAM (20deg probe tilt) with CRP v5.0; Type: QD000P40CD;
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**BODY/BACK LOW Report/Area Scan (5x7x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 1.63 W/kg

**BODY/BACK LOW Report/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 26.946 V/m; Power Drift = -0.57 dB  
Peak SAR (extrapolated) = 2.56 W/kg  
**SAR(1 g) = 1.5 W/kg; SAR(10 g) = 0.861 W/kg**  
Maximum value of SAR (measured) = 1.80 W/kg



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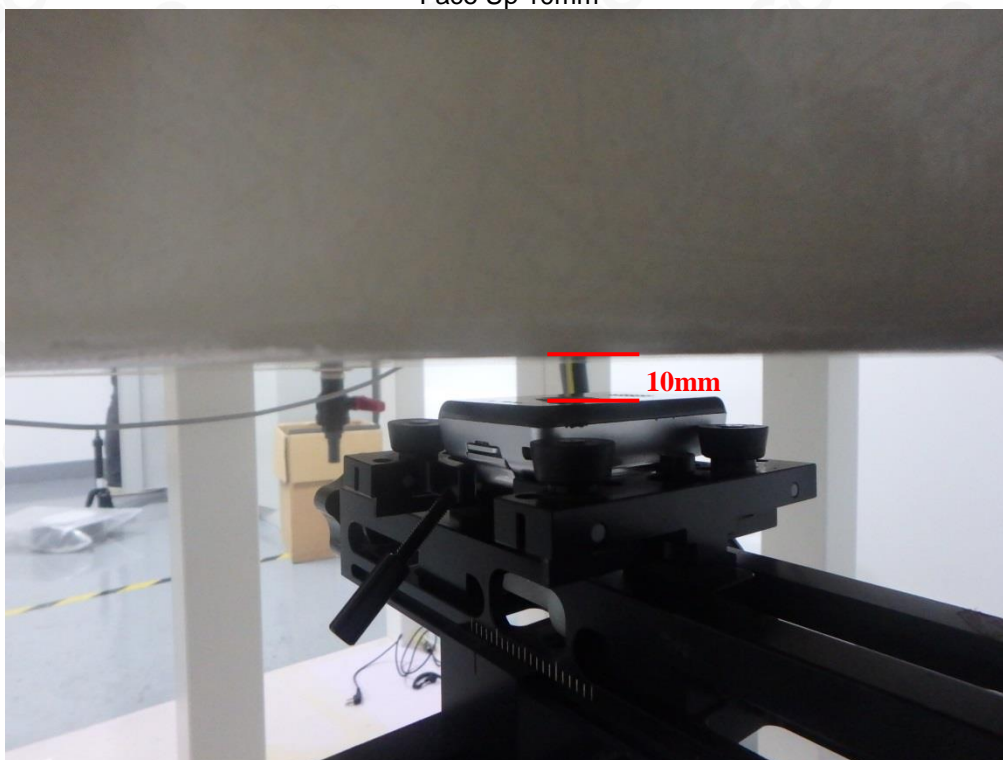


## APPENDIX C. TEST SETUP PHOTOGRAPHS

Body Back 0mm



Face Up 10mm



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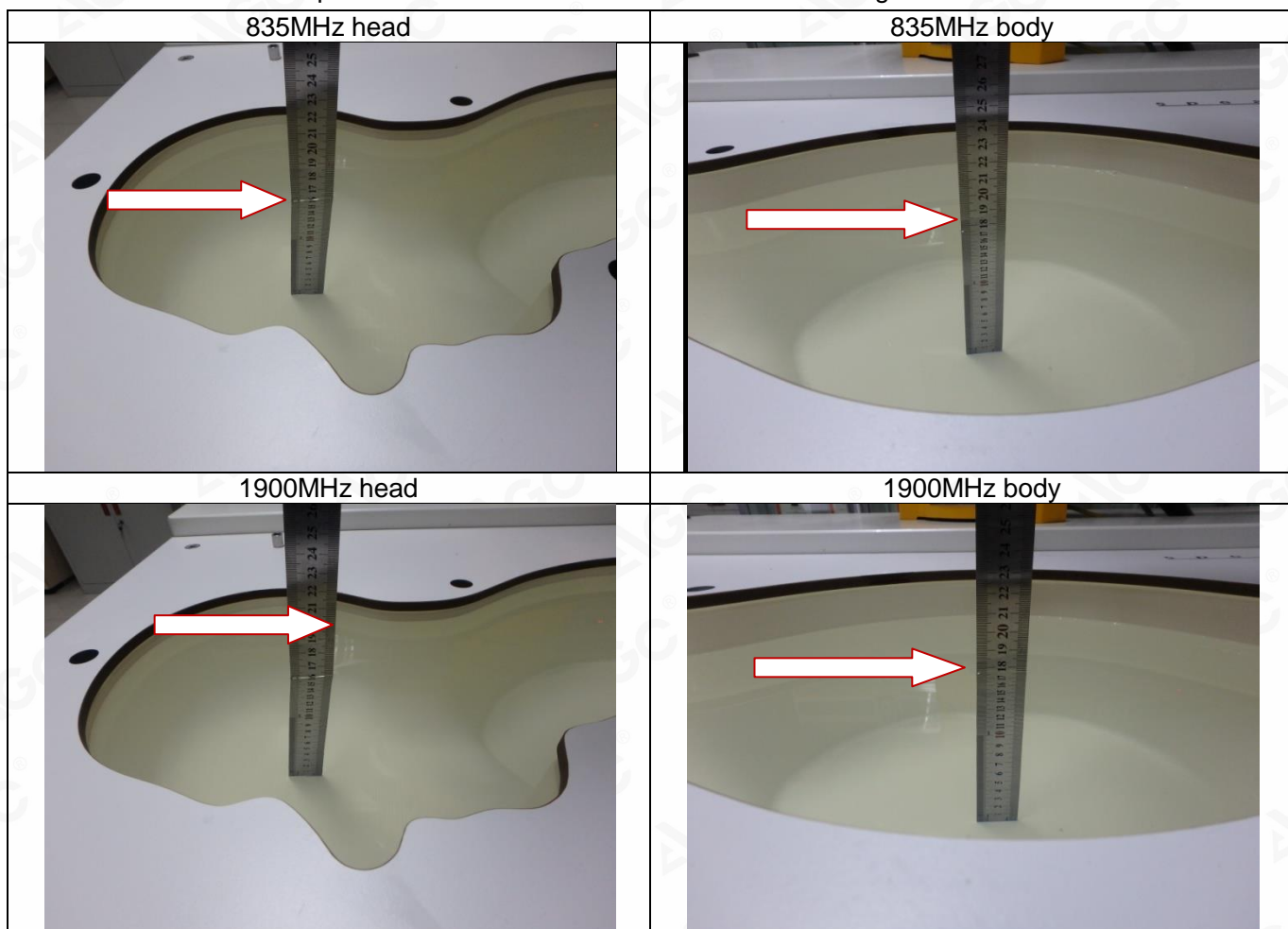
Tel: +86-755 2523 4088

E-mail: agc@agc-cert.com

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

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



## APPENDIX D. CALIBRATION DATA

Refer to Attached files.



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