SAR TEST REPORT

HCT CO., LTD

EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
FCC ID:	JYCPREMIAV
Model:	ADR930LVW
Date of Issue:	Jul. 24, 2012
Test report No.:	HCTA1206FS01
Test Laboratory:	**HCT CO., LTD.** 105-1, Jangam-ri, Majang-myeon, Icheon-si,Gyeonggi-do,Korea 467-811 TEL: +82 31 645 6485 FAX: +82 31 645 6401
Applicant :	**Pantech Co., Ltd.** Pantech Building, I-2, DMC, Sangam-dong, Mapo-gu,Seoul, Korea(ZIP :121-792) Tel: 82-2-2030-1319 Fax: 82-2-2030-2500
Testing has been carried out in accordance with:	RSS-102 Issue 4; Health Canada Safety Code 6 47CFR §2.1093 FCC OET Bulletin 65(Edition 97-01), Supplement C (Edition 01-01) ANSI/ IEEE C95.1 – 1992 IEEE 1528-2003
Test result:	The tested device complies with the requirements in respect of all parameters subject to the test. The test results and statements relate only to the items tested. The test report shall not be reproduced except in full, without written approval of the laboratory.
Signature	  Report prepared by : Young-Soo Jang Test Engineer of SAR Part Approved by : Jae-Sang So Manager of SAR Part

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1. INTRODUCTION

The FCC has adopted the guidelines for evaluating the environmental effects of radio frequency radiation in ET Docket 93-62 on Aug. 6, 1996 to protect the public and workers from the potential hazards of RF emissions due to FCC-regulated portable devices.

The safety limits used for the environmental evaluation measurements are based on the criteria published by the American National Standards Institute (ANSI) for localized specific absorption rate (SAR) in IEEE/ANSI C95.1-1992 Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz. 1992 by the Institute of Electrical and Electronics Engineers, Inc., New York, New York 10017. The measurement procedure described in IEEE/ANSI C95.3-1992 Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave is used for guidance in measuring SAR due to the RF radiation exposure from the Equipment Under Test (EUT). These criteria for SAR evaluation are similar to those recommended by the National Council on Radiation Protection and Measurements (NCRP) in Biological Effects and Exposure Criteria for Radio frequency Electromagnetic Fields," NCRP Report No. 86 NCRP, 1986, Bethesda, MD 20814. SAR is a measure of the rate of energy absorption due to exposure to an RF transmitting source. SAR values have been related to threshold levels for potential biological hazards.

SAR Definition

Specific Absorption Rate (SAR) is defined as the time derivative of the incremental electromagnetic energy (d*W*) absorbed by (dissipated in) an incremental mass (d*m*) contained in a volume element (d*V*) of a given density (*r*). It is also defined as the rate of RF energy absorption per unit mass at a point in an absorbing body.

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

Figure 2. SAR Mathematical Equation

SAR is expressed in units of Watts per Kilogram (W/kg).

$$SAR = \sigma E^2 / \rho$$

where:

σ	=	conductivity of the tissue-simulant material (S/m)
ρ	=	mass density of the tissue-simulant material (kg/m^3)
E	=	Total RMS electric field strength (V/m)

NOTE:

The primary factors that control rate of energy absorption were found to be the wavelength of the incident field in relations to the dimensions and geometry of the irradiated organism, the orientation of the organism in relation to the polarity of field vectors, the presence of reflecting surfaces, and whether conductive contact is made by the organism with a ground plane.

2. DESCRIPTION OF DEVICE

Environmental evaluation measurements of specific absorption rate (SAR) distributions in emulated human head and body tissues exposed to radio frequency (RF) radiation from wireless portable devices for compliance with the rules and regulations of the U.S. Federal Communications Commission (FCC).

2.1 General Information

EUT Type	CDMA/GSM/LTE Phone with BT/WLAN/NFC		
FCC ID:	JYCPREMIAV		
Model:	ADR930LVW		
Trade Name	Pantech	Serial Number(s)	#1
Mode(s)of Operation	GSM850/GSM1900 /CDMA835/PCS1900/802.11bgn/LTE Band13		
Application Type	Certification		
Tx Frequency	824.70 - 848.31 MHz (CDMA835) / 1 851.25 – 1 908.75 MHz (PCS CDMA) 824.20 - 848.80 MHz (GSM850) /1 850.20 – 1 909.80 MHz (GSM1900) 2 412- 2 462 MHz (WLAN)/ 777-787 MHz (LTE Band13) 802.11a/n: 5180-5240MHz/ 5260-5320 MHz/ 5500-5700 MHz/ 5745-5825 MHz		
Rx Frequency	869.70 - 893.31 MHz (CDMA835) / 1 931.25 – 1 988.75 MHz (PCS CDMA) 869.20 - 893.80 MHz (GSM850)/ 1 930.20 – 1 989.80 MHz (GSM1900) 2 412- 2 462 MHz (WLAN)/ 746 – 756 MHz (LTE Band13) 802.11a/n: 5180-5240MHz/ 5260-5320 MHz/ 5500-5700 MHz/ 5745-5825 MHz		
FCC Classification	Licensed Portable Transmitter Held to Ear (PCE)/ DSS/ DTS		
Production Unit	Prototype		

Max SAR

Band	1g SAR (W/kg)		
	Head	Body-worn	Hotspot
CDMA835	0.691	0.384	0.384
PCS1900	1.03	0.758	0.758
GSM850	0.237	0.472	0.472
GSM1900	0.061	0.580	0.598
LTE 13	0.902	0.428	0.428
802.11b	0.285	0.184	0.184
802.11a/n	0.145	0.246	-
Simultaneous SAR per KDB 690783 D01	1.484	1.432	1.351

Date(s) of Tests	May. 28, 2012 ~ Jun. 28, 2012
Antenna Type	Integral Antenna
EVDO	Rev.0, A
GPRS	Multislot Class: 10, Mode Class: B
Key Features;	Mobile Hotspot support, SVDO & SVLTE support, Bluetooth 4.0 capability support

2.2 KDB 941225 LTE information

<table>
<tr><th>No.</th><th>Description</th><th>Parameter</th></tr>
<tr><td>1</td><td>Frequency Range:</td><td>Band 13: 777 - 787 MHz</td></tr>
<tr><td>2</td><td>Channel Bandwidth:</td><td>10 MHz</td></tr>
<tr><td>3</td><td>Channel Number & Frequency:</td><td>LTE Band13, Ch No.: 23230, Frequency: 782 MHz</td></tr>
<tr><td>4</td><td>UE Category & Uplink Modulation</td><td>UE Category 3, QPSK, 16QAM</td></tr>
<tr><td>5</td><td>Power Class</td><td>UE Power Class 3</td></tr>
<tr><td>6</td><td>Description of the LTE Transmitter & antenna</td><td>This model have three Tx antennas.
- One for LTE & CDMA850/1900 EVDO. It can not transmit simultaneously.
- Another is for CDMA850/1900 1xRTT.
- The other is for BT & WLAN. It can not transmit simultaneously.
Please find the section 10.</td></tr>
<tr><td>7</td><td>LTE voice/data requirements</td><td>Data Only. Please find the section 10.
LTE voice is available via VoIP. Considering the users may install 3rd party software to enable VoIP, LTE Head SAR is also evaluated.</td></tr>
<tr><td>8</td><td>Identify if MPR is optional or mandatory</td><td>The EUT incorporates MPR as per 36.101.
The MPR is permanently built-in by design as a mandatory.
A-MPR is not implemented.
During SAR testing, A-MPR was disabled by setting NS=01 on the R&S CMW500.</td></tr>
<tr><td>9</td><td>Maximum average conducted output power</td><td>LTE Band 13: 22.98 dBm
See section 9 RF outpower measurements in the SAR report.</td></tr>
<tr><td>10</td><td>Identify all other U.S. wireless operating modes, device exposure configurations and frequency bands</td><td>- CDMA835/1900, GSM850/GSM1900 and LTE Band 13
: Head/Body worn and Hotspot SAR is required.
- Bluetooth 2.4 GHz: BT SAR is not required as maximum output power < 12 mW
- WiFi 2.4 GHz: Head/Body worn and Hotspot SAR is required.
- WiFi 5 GHz: Head/Body worn SAR is required</td></tr>
<tr><td>11</td><td>Maximum average conducted output power for other wireless mode and frequency</td><td>See section 9 RF outpower measurements in the SAR report.</td></tr>
<tr><td>12</td><td>Simultaneous Transmission</td><td>See section 11 Simultaneous transmission conditions in the SAR report.</td></tr>
<tr><td>13</td><td>Power reduction explanation</td><td>
<table>
<tr><th>Mode</th><th>Voice Average Power 1x(dBm)</th><th>Maximum EVDO Average Power</th></tr>
<tr><td rowspan="2">SVDO</td><td>P<15.5</td><td>24</td></tr>
<tr><td>P≥15.5</td><td>19</td></tr>
<tr><th>Mode</th><th>Voice Averag Power 1x (dBm)</th><th>Maximum LTE Average Power (dBm)</th></tr>
<tr><td rowspan="2">SVLTE</td><td>P<18.5</td><td>23</td></tr>
<tr><td>P≥18.5</td><td>19</td></tr>
</table>
</td></tr>
<tr><td>14</td><td>Description of the test equipment, software, etc.</td><td>SAR Testing was performed using a CMW500.
UE transmits with maximum output power during SAR testing.</td></tr>
</table>

3. DESCRIPTION OF TEST EQUIPMENT

3.1 SAR MEASUREMENT SETUP

These measurements are performed using the DASY4 automated dosimetric assessment system. It is made by Schmid & Partner Engineering AG (SPEAG) in Zurich, Switzerland. It consists of high precision robotics system (Staubli), robot controller, Pentium III computer, near-field probe, probe alignment sensor, and the generic twin phantom containing the brain equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of mMaximum electromagnetic field (EMF) (see Figure.3.1).

A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The PC consists of the HP Pentium IV 3.0 GHz computer with Windows XP system and SAR Measurement Software DASY4, A/D interface card, monitor, mouse, and keyboard. The Staubli Robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card.

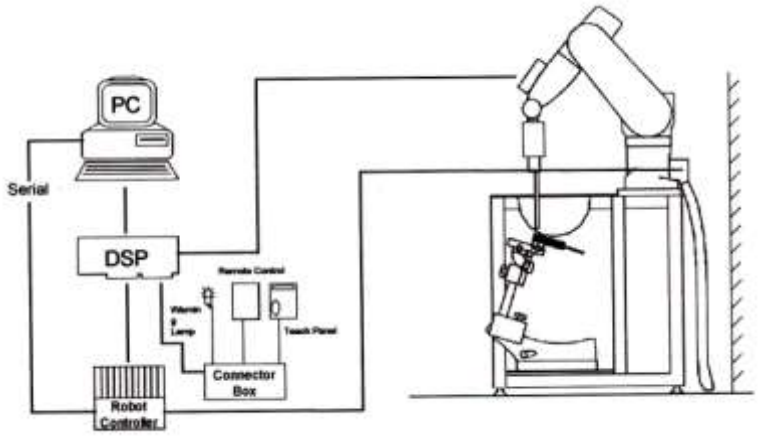


Figure 3.1 HCT SAR Lab. Test Measurement Set-up

The DAE4 consists 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 and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer. The system is described in detail in.

3.2 DASY4 E-FIELD PROBE SYSTEM

3.1 EX3DV4 Probe Specification

Construction	Symmetrical design with triangular core Interleaved sensors
	Built-in shielding against static charges
	PEEK enclosure material (resistant to organic solvents, e.g., DGBE)
Calibration	Basic Broad Band Calibration in air
	Conversion Factors (CF) for HSL 900 and HSL 1810
	Additional CF for other liquids and frequencies upon request
Frequency	10 MHz to 6 GHz; Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.2 dB in HSL (rotation around probe axis)
	± 0.3 dB in tissue material (rotation normal to probe axis)
Dynamic Range	5 µW/g to > 100 mW/g; Linearity: ± 0.2 dB
Dimensions	Overall length: 330 mm (Tip: 20 mm)
	Tip diameter: 3.9 mm (Body: 12 mm)
	Distance from probe tip to dipole centers: 2.0 mm
Application	General dosimetry up to 6 GHz
	Dosimetry in strong gradient fields
	Compliance tests of mobile phones

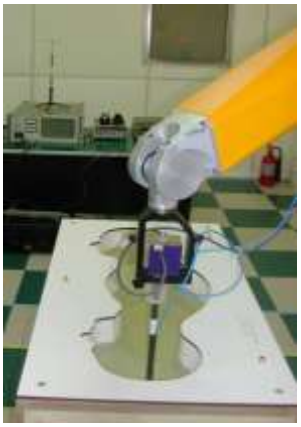


Figure 3.1 Photograph of the probe and the Phantom

Figure 3.2 EX3DV4 E-field

The SAR measurements were conducted with the dosimetric probe EX3DV4, designed in the classical triangular configuration and optimized for dosimetric evaluation. The probe is constructed using the thick film technique; with printed resistive lines on ceramic substrates. The probe is equipped with an optical multifiber line ending at the front of the probe tip. It is connected to the EOC box on the robot arm and provides an automatic detection of the phantom surface. Half of the fibers are connected to a pulsed infrared transmitter, the other half to a synchronized receiver. As the probe approaches the surface, the reflection from the surface produces a coupling from the transmitting to the receiving fibers. This reflection increases first during the approach, reaches a maximum and then decreases. If the probe is flatly touching the surface, the coupling is zero. The distance of the coupling maximum to the surface is independent of the surface reflectivity and largely independent of the surface to probe angle. The DASY4 software reads the reflection during a software approach and looks for the maximum using a 2nd order fitting. The approach is stopped at reaching the maximum.

3.3 PROBE CALIBRATION PROCESS

3.3.1 E-Probe Calibration

Each probe is calibrated according to a dosimetric assessment procedure with an accuracy better than ± 10 %. The spherical isotropy was evaluated with the proper procedure and found to be better than ± 0.25 dB. The sensitivity parameters (NormX, NormY, NormZ), the diode compression parameter (DCP) and the conversion factor (ConvF) of the probe is tested.

The free space E-field from amplified probe outputs is determined in a test chamber. This is performed in a TEM cell for frequencies bellow 1 GHz, and in a waveguide above 1 GHz for free space. For the free space calibration, the probe is placed in the volumetric center of the cavity and at the proper orientation with the field. The probe is then rotated 360 degrees.

E-field temperature correlation calibration is performed in a flat phantom filled with the appropriate simulated brain tissue. The measured free space E-field in the medium correlates to temperature rise in a dielectric medium. For temperature correlation calibration a RF transparent thermistor-based temperature probe is used in conjunction with the E-field probe.

$$SAR = C\frac{\Delta T}{\Delta t}$$

where:

Δt = exposure time (30 seconds),

C = heat capacity of tissue (brain or muscle),

ΔT = temperature increase due to RF exposure.

SAR is proportional to $\Delta T / \Delta t$, the initial rate of tissue heating, before thermal diffusion takes place. Now it's possible to quantify the electric field in the simulated tissue by equating the thermally derived SAR to the E- field;

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

where:

σ = simulated tissue conductivity,

ρ = Tissue density (1.25 g/cm^3 for brain tissue)

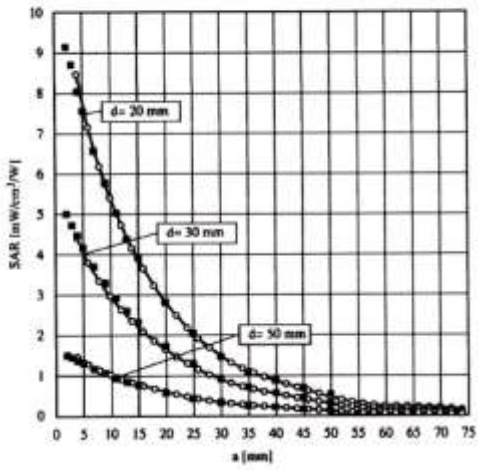


Figure 3.4 E-Field and Temperature measurements at 900 MHz

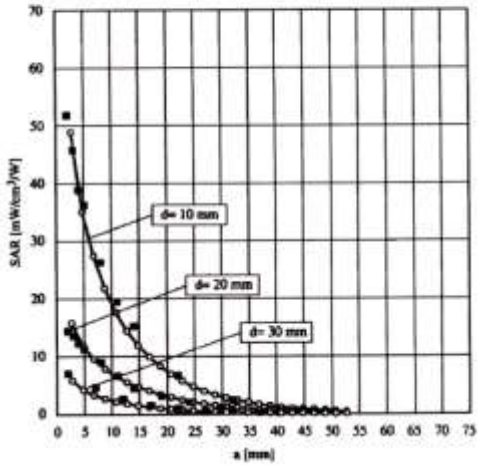


Figure 3.5 E-Field and temperature measurements at 1.8 GHz

3.3.2 Data Extrapolation

The DASY4 software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics. If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given like below;

$$V_i = U_i + U_i^2 \cdot \frac{cf}{dcp_i}$$

with V_i = compensated signal of channel i (i=x,y,z)
U_i = input signal of channel i (i=x,y,z)
cf = crest factor of exciting field (DASY parameter)
dcp_i = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes:

$$E_i = \sqrt{\frac{V_i}{Norm_i \cdot ConvF}}$$

with V_i = compensated signal of channel i (i = x,y,z)
$Norm_i$ = sensor sensitivity of channel i (i = x,y,z)
$\mu V/(V/m)^2$ for E-field probes
ConvF = sensitivity of enhancement in solution
E_i = electric field strength of channel i in V/m

The RSS value of the field components gives the total field strength (Hermetian magnitude):

$$E_{tot} = \sqrt{E_x^2 + E_y^2 + E_z^2}$$

The primary field data are used to calculate the derived field units.

$$SAR = E_{tot}^2 \cdot \frac{\sigma}{\rho \cdot 1000}$$

with SAR = local specific absorption rate in W/g
E_{tot} = total field strength in V/m
σ = conductivity in [mho/m] or [Siemens/m]
ρ = equivalent tissue density in g/cm^3

The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{pwe} = \frac{E_{tot}^2}{3770}$$

with P_{pwe} = equivalent power density of a plane wave in W/cm^2
E_{tot} = total electric field strength in V/m

3.4 SAM Phantom

The shell corresponds to the specifications of the Specific Anthropomorphic Mannequin (SAM) phantom defined in IEEE 1528 and IEC 62209-1. It enables the dosimetric evaluation of left and right hand phone usage as well as body mounted usage at the flat phantom region. A cover prevents evaporation of the liquid. Reference markings on the phantom allow the complete setup of all predefined phantom positions and measurement grids by teaching three points with the robot.

Figure 3.6 SAM Phantom

Shell Thickness	2.0 mm ± 0.2 mm (6 ± 0.2 mm at ear point)
Filling Volume	about 25 L
Dimensions	1 000 mm x 500 mm (L x W)

3.5 Device Holder for Transmitters

In combination with the SAM Phantom V 4.0, the Mounting Device (POM) enables the rotation of the mounted transmitter in spherical coordinates whereby the rotation points is the ear opening. The devices can be easily, accurately, and repeatable positioned according to the FCC and CENELEC specifications. The device holder can be locked at different phantom locations (left head, right head, flat phantom).

Note: A simulating human hand is not used due to the complex anatomical and geometrical structure of the hand that may produced infinite number of configurations. To produce the Worst-case condition (the hand absorbs antenna output power), the hand is omitted during the tests.

Figure 3.7 Device Holder

3.6 Brain & Muscle Simulating Mixture Characterization

The brain and muscle mixtures consist of a viscous gel using hydrox-ethyl cellulose (HEC) gelling agent and saline solution (see Table 3.1). Preservation with a bacteriacide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue. The mixture characterizations used for the brain and muscle tissue simulating liquids are according to the data by C. Gabriel and G. Hartsgrove.

Ingredients (% by weight)	Frequency (MHz)											
	750		835		915		1 900		2 450		5200-5800	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	41.2	51.7	41.45	52.4	41.05	56.0	54.9	40.4	62.7	73.2	65.52	78.66
Salt (NaCl)	1.4	1.0	1.45	1.4	1.35	0.76	0.18	0.5	0.5	0.04	0.0	0.0
Sugar	57	47.2	56.0	45.0	56.5	41.76	0.0	58.0	0.0	0.0	0.0	0.0
HEC	0.2	0.0	1.0	1.0	1.0	1.21	0.0	1.0	0.0	0.0	0.0	0.0
Bactericide	0.2	0.1	0.1	0.1	0.1	0.27	0.0	0.1	0.0	0.0	0.0	0.0
Triton X-100	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.8	0.0	17.24	10.67
DGBE	0.00	0.0	0.0	0.0	0.0	0.0	44.92	0.0	0.0	26.7	0.0	0.0
Diethylene glycol hexyl ether											17.24	10.67

Salt:	99 % Pure Sodium Chloride	Sugar:	98 % Pure Sucrose
Water:	De-ionized, 16M resistivity	HEC:	Hydroxyethyl Cellulose
DGBE:	99 % Di(ethylene glycol) butyl ether,[2-(2-butoxyethoxy) ethanol]		
Triton X-100(ultra pure):	Polyethylene glycol mono[4-(1,1,3,3-tetramethylbutyl)phenyl] ether		

Table 3.1 Composition of the Tissue Equivalent Matter

3.7 SAR TEST EQUIPMENT

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
Staubli	Robot RX90L	F01/5K09A1/A/01	N/A	N/A	N/A
Staubli	Robot ControllerCS7MB	F99/5A82A1/C/01	N/A	N/A	N/A
HP	Pavilion t000_puffer	KRJ51201TV	N/A	N/A	N/A
SPEAG	Light Alignment Sensor	265	N/A	N/A	N/A
Staubli	Teach Pendant (Joystick)	D221340.01	N/A	N/A	N/A
SPEAG	DAE3	466	Feb. 21, 2012	Annual	Feb. 21, 2013
SPEAG	E-Field Probe EX3DV4	3797	July 25, 2011	Annual	July 25, 2012
SPEAG	Validation Dipole D750V3	1014	July 15, 2011	Annual	July 15, 2012
SPEAG	Validation Dipole 5GHzV2	1107	Nov. 15, 2011	Annual	Nov. 15, 2012
SPEAG	Validation Dipole D835V2	441	May 16, 2012	Annual	May 16, 2013
SPEAG	Validation Dipole D1900V2	5d032	July 22, 2011	Annual	July 22, 2012
SPEAG	Validation Dipole D2450V2	743	Aug. 29, 2011	Annual	Aug. 29, 2012
Agilent	Power Meter(F) E4419B	MY41291386	Nov. 04, 2011	Annual	Nov. 04, 2012
Agilent	Power Sensor(G) 8481	MY41090870	Nov. 04, 2011	Annual	Nov. 04, 2012
HP	Dielectric Probe Kit	00721521	N/A	N/A	N/A
HP	Dual Directional Coupler	16072	Nov. 04, 2011	Annual	Nov. 04, 2012
R&S	Base Station CMU200	110740	July 26, 2011	Annual	July 26, 2012
Agilent	Base Station E5515C	GB44400269	Feb. 10, 2012	Annual	Feb. 10, 2013
HP	Signal Generator E4438C	MY42082646	Nov. 11, 2011	Annual	Nov. 11, 2012
HP	Network Analyzer 8753ES	JP39240221	Apr. 3, 2012	Annual	Apr. 3, 2013
R&S	Base Station CMW500	101901	Aug. 5, 2011	Annual	Aug. 5, 2012

NOTE:

The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Validation measurement is performed by HCT Lab. before each test. The brain simulating material is calibrated by HCT using the dielectric probe system and network analyzer to determine the conductivity and permittivity (dielectric constant) of the brain-equivalent material.

4. SAR MEASUREMENT PROCEDURE

The evaluation was performed with the following procedure:

1. The SAR value at a fixed location above the ear point was measured and was used as a reference value for assessing the power drop.

2. The SAR distribution at the exposed side of the head was measured at a distance of 3.9 mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 15 mm x 15 mm. Based on this data, the area of the mMaximum absorption was determined by spline interpolation.

3. Around this point, a volume of 32 mm x 32 mm x 30 mm was assessed by measuring 5 x 5 x 7 points. On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

   a. The data at the surface were extrapolated, since the center of the dipoles is 2.7 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2 mm. The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip.
   b. The mMaximum interpolated value was searched with a straight-forward algorithm. Around this mMaximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed using the 3D-Spline interpolation algorithm. The 3D-spline is composed of three one-dimensional splines with the “Not a knot” condition (in x, y, and z directions. The volume was integrated with the trapezoidal algorithm. One thousand points (10 x 10 x 10) were interpolated to calculate the average.
   c. All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

4. The SAR value, at the same location as procedure #1, was re-measured. If the value changed by more than 5 %, the evaluation is repeated.

5. Per KDB pub. 865664 FCC SAR Measurement requirement, a minimum volume of 24 mm x 24 mm x 20 mm was assessed by measuring 7 x 7 x 11 points for 5GHz testing.

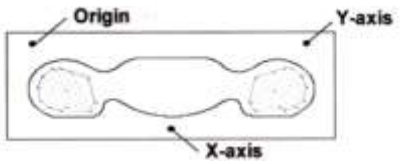


Figure 4.1 SAR Measurement Point in Area Scan

5. DESCRIPTION OF TEST POSITION

5.1 HEAD POSITION

The device was placed in a normal operating position with the Point A on the device, as illustrated in following drawing, aligned with the location of the RE(ERP) on the phantom. With the ear-piece pressed against the head, the vertical center line of the body of the handset was aligned with an imaginary plane consisting of the RE, LE and M. While maintaining these alignments, the body of the handset was gradually moved towards the cheek until any point on the mouth-piece or keypad contacted the cheek. This is a cheek/touch position. For ear/tilt position, while maintain the device aligned with the BM and FN lines, the device was pivot against ERP back for 15º or until the device antenna touch the phantom. Please refer to IEEE 1528-2003 illustration below.

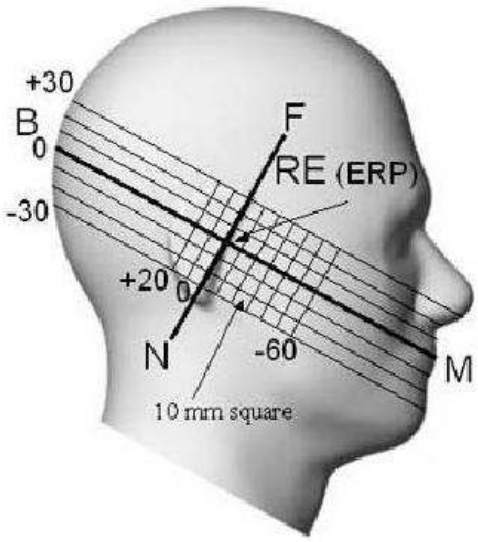


Figure 5.1 Side view of the phantom

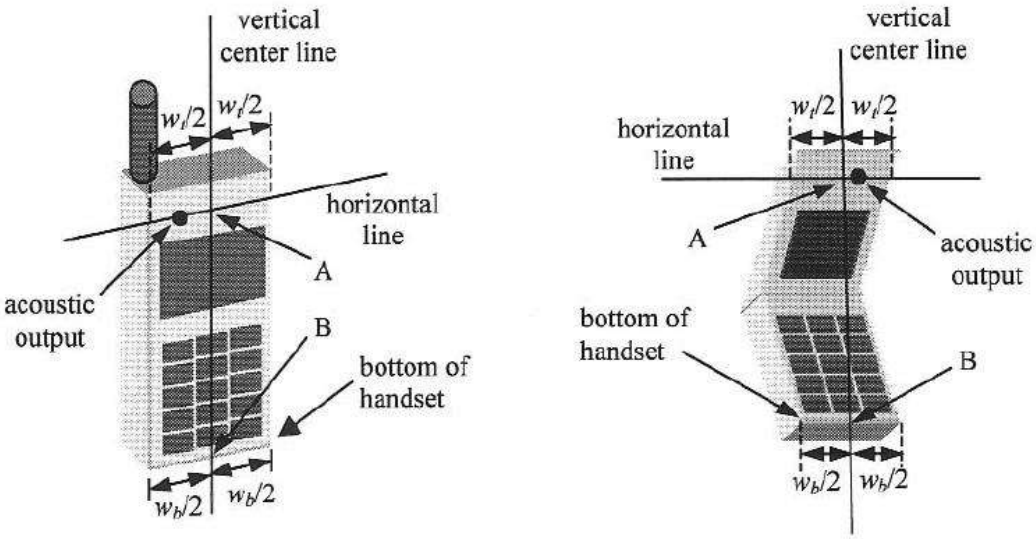


Figure 5.2 Handset vertical and horizontal reference lines

5.2 Body Holster/Belt Clip Configurations

Body-worn operating configurations are tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in a normal use configuration. A device with a headset output is tested with a headset connected to the device. Body dielectric parameters are used.

Accessories for Body-worn operation configurations are divided into two categories: those that do not contain metallic components and those that contain metallic components. When multiple accessories that do not contain metallic components are supplied with the device, the device is tested with only the accessory that dictates the closest spacing to the body. Then multiple accessories that contain metallic components are tested with each accessory. If multiple accessory share an identical metallic component (i.e. the same metallic belt-clip used with different holsters with no other metallic components) only the accessory that dictates the closest spacing to the body is tested.

Body-worn accessories may not always be supplied or available as options for some Devices intended to be authorized for body-worn use. In this case, a test configuration with a separation distance between the back of the device and the flat phantom is used.

Since this EUT does not supply any body worn accessory to the end user a distance of 1.0 cm from the EUT back surface to the liquid interface is configured for the generic test.

"See the Test SET-UP Photo"

Transmitters that are designed to operate in front of a person’s face, as in push-to-talk configurations, are tested for SAR compliance with the front of the device positioned to face the flat phantom. For devices that are carried next to the body such as a shoulder, waist or chest-worn transmitters, SAR compliance is tested with the accessory(ies), Including headsets and microphones, attached to the device and positioned against a flat phantom in a normal use configuration.

In all cases SAR measurements are performed to investigate the worst-case positioning. Worstcase positioning is then documented and used to perform Body SAR testing.

6. MEASUREMENT UNCERTAINTY

Error Description	Tol (± %)	Prob. dist.	Div.	c_i	Standard Uncertainty (± %)	v_{eff}
1. Measurement System						
Probe Calibration	6.00	N	1	1	6.00	∞
Axial Isotropy	4.70	R	1.73	0.7	1.90	∞
Hemispherical Isotropy	9.60	R	1.73	0.7	3.88	∞
Boundary Effects	1.00	R	1.73	1	0.58	∞
Linearity	4.70	R	1.73	1	2.71	∞
System Detection Limits	1.00	R	1.73	1	0.58	∞
Readout Electronics	0.30	N	1.00	1	0.30	∞
Response Time	0.8	R	1.73	1	0.46	∞
Integration Time	2.6	R	1.73	1	1.50	∞
RF Ambient Conditions	3.00	R	1.73	1	1.73	∞
Probe Positioner	0.40	R	1.73	1	0.23	∞
Probe Positioning	2.90	R	1.73	1	1.67	∞
Max SAR Eval	1.00	R	1.73	1	0.58	∞
2.Test Sample Related						
Device Positioning	2.90	N	1.00	1	2.90	145
Device Holder	3.60	N	1.00	1	3.60	5
Power Drift	5.00	R	1.73	1	2.89	∞
3.Phantom and Setup						
Phantom Uncertainty	4.00	R	1.73	1	2.31	∞
Liquid Conductivity(target)	5.00	R	1.73	0.64	1.85	∞
Liquid Conductivity(meas.)	2.07	N	1	0.64	1.32	9
Liquid Permitivity(target)	5.00	R	1.73	0.6	1.73	∞
Liquid Permitivity(meas.)	5.02	N	1	0.6	3.01	9
Combind Standard Uncertainty					11.13	
Coverage Factor for 95 %					k=2	
Expanded STD Uncertainty					22.25	

Table 6.1 Uncertainty (750 MHz- 2600 MHz)

Error Description	Tol (± %)	Prob. dist.	Div.	c_i	Standard Uncertainty (± %)	v_{eff}
1. Measurement System						
Probe Calibration	6.55	N	1	1	6.55	∞
Axial Isotropy	4.70	R	1.73	0.7	1.90	∞
Hemispherical Isotropy	9.60	R	1.73	0.7	3.88	∞
Boundary Effects	1.00	R	1.73	1	0.58	∞
Linearity	4.70	R	1.73	1	2.71	∞
System Detection Limits	1.00	R	1.73	1	0.58	∞
Readout Electronics	0.30	N	1.00	1	0.30	∞
Response Time	0.8	R	1.73	1	0.46	∞
Integration Time	2.6	R	1.73	1	1.50	∞
RF Ambient Conditions	3.00	R	1.73	1	1.73	∞
Probe Positioner	0.40	R	1.73	1	0.23	∞
Probe Positioning	2.90	R	1.73	1	1.67	∞
Max SAR Eval	1.00	R	1.73	1	0.58	∞
2.Test Sample Related						
Device Positioning	2.90	N	1.00	1	2.90	145
Device Holder	3.60	N	1.00	1	3.60	5
Power Drift	5.00	R	1.73	1	2.89	∞
3.Phantom and Setup						
Phantom Uncertainty	4.00	R	1.73	1	2.31	∞
Liquid Conductivity(target)	5.00	R	1.73	0.64	1.85	∞
Liquid Conductivity(meas.)	2.07	N	1	0.64	1.32	9
Liquid Permitivity(target)	5.00	R	1.73	0.6	1.73	∞
Liquid Permitivity(meas.)	5.02	N	1	0.6	3.01	9
Combind Standard Uncertainty					11.43	
Coverage Factor for 95 %					$k=2$	
Expanded STD Uncertainty					22.86	

Table 6.2 Uncertainty (5000-5900 MHz)

7. ANSI/ IEEE C95.1 - 1992 RF EXPOSURE LIMITS

HUMAN EXPOSURE	UNCONTROLLED ENVIRONMENT General Population (W/kg) or (mW/g)	CONTROLLED ENVIRONMENT Occupational (W/kg) or (mW/g)
SPATIAL PEAK SAR * (Brain)	1.60	8.00
SPATIAL AVERAGE SAR ** (Whole Body)	0.08	0.40
SPATIAL PEAK SAR *** (Hands / Feet / Ankle / Wrist)	4.00	20.00

Table 7.1 Safety Limits for Partial Body Exposure

NOTES:

* The Spatial Peak value of the SAR averaged over any 1 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

** The Spatial Average value of the SAR averaged over the whole-body.

*** The Spatial Peak value of the SAR averaged over any 10 g of tissue (defined as a tissue volume in the shape of a cube) and over the appropriate averaging time.

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

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

8. SYSTEM VERIFICATION

8.1 Tissue Verification

Band	Freq. [MHz]	Date	Liquid	Liquid Temp.[°C]	Parameters	Target Value	Measured Value	Deviation [%]	Limit [%]
850	835	May. 28, 2012	Head	21.2	ε r	41.5	39.9	- 3.86	± 5
					σ	0.90	0.874	- 2.89	± 5
	835	May. 29, 2012	Body	21.1	ε r	55.2	54.8	- 0.72	± 5
					σ	0.97	1.01	+ 4.12	± 5
1900	1 900	May. 30, 2012	Head	21.3	ε r	40.0	40.8	+ 2.00	± 5
					σ	1.40	1.4	0.00	± 5
	1 900	May. 31, 2012	Body	21.2	ε r	53.3	51.8	- 2.81	± 5
					σ	1.52	1.52	0.00	± 5
LTE B13	750	Jun.02, 2012	Head	21.1	ε ρ	41.9	42.2	+ 0.72	± 5
					σ	0.89	0.867	- 2.58	± 5
	750	Jun.03, 2012	Body	21.3	ε r	55.5	54.4	- 1.98	± 5
					σ	0.96	0.944	- 1.67	± 5
WLAN	2 450	Jun.01, 2012	Head	21.1	ε r	39.2	40	+ 2.04	± 5
					σ	1.80	1.88	+ 4.44	± 5
	2 450	Jun.01, 2012	Body	21.1	ε r	52.7	51.8	- 1.71	± 5
					σ	1.95	1.94	- 0.51	± 5
5GHz	5200	Jun.26, 2012	Head	21.3	ε r	36.0	36.6	+ 1.67	± 5
					σ	4.66	4.59	- 1.50	± 5
	5200	Jun.27, 2012	Body	21.3	ε r	49.0	47.2	- 3.67	± 5
					σ	5.3	5.24	- 1.13	± 5
	5500	Jun.26, 2012	Head	21.3	ε r	35.6	35.8	+ 0.56	± 5
					σ	4.96	4.95	- 0.20	± 5
	5500	Jun.27, 2012	Body	21.3	ε r	48.6	46.3	- 4.73	± 5
					σ	5.65	5.75	+ 1.77	± 5
	5800	Jun.26, 2012	Head	21.3	ε r	35.3	35	- 0.85	± 5
					σ	5.27	5.37	+ 1.90	± 5
	5800	Jun.27, 2012	Body	21.3	ε r	48.2	45.9	- 4.77	± 5
					σ	6.00	6.01	+ 0.17	± 5

The dielectronic parameters of the liquids were verified prior to the SAR evaluation using an Agilent 85070C Dielectronic Probe Kit and Agilent Network Analyzer.

8.2 System Validation

Prior to assessment, the system is verified to the ± 10 % of the specifications at 835 MHz / 750 MHz/ 1 900 MHz/ 2 450 MHz by using the system validation kit. (Graphic Plots Attached)

Band	Freq. [MHz]	Probe (SN)	Dipole (SN)	Date	Liquid	Liquid Temp. [°C]	1 W Target SAR_{1g} (mW/g)	Measured SAR_{1g} (mW/g)	1 W Normalized SAR_{1g} (mW/g)	Deviation [%]	Limit [%]
850	835	3797	441	May. 28, 2012	Head	21.2	9.43	0.966	9.66	+ 2.44	± 10
	835			May. 29, 2012	Body	21.1	9.50	0.951	9.51	+ 0.11	± 10
1900	1 900		5d032	May. 30, 2012	Head	21.3	39.9	3.99	39.9	0.00	± 10
	1 900			May. 31, 2012	Body	21.2	41.5	4.01	40.1	- 3.37	± 10
LTE B13	750		1014	Jun.02, 2012	Head	21.1	8.29	0.818	8.18	- 1.33	± 10
	750			Jun.03, 2012	Body	21.3	8.8	0.868	8.68	- 1.36	± 10
WLAN	2 450		743	Jun.01, 2012	Head	21.1	53.8	5.33	53.3	- 0.93	± 10
	2 450			Jun.01, 2012	Body	21.1	51.7	5.1	51	- 1.35	± 10
5GHz	5 200		1107	Jun.26, 2012	Head	21.3	80.3	8.04	80.4	+ 0.12	± 10
	5 200			Jun.27, 2012	Body	21.3	77.2	7.74	77.4	+ 0.26	± 10
	5 500			Jun.26, 2012	Head	21.3	87.8	8.63	86.3	- 1.71	± 10
	5 500			Jun.27, 2012	Body	21.3	81.6	8.14	81.4	- 0.25	± 10
	5 800			Jun.26, 2012	Head	21.3	78.9	7.95	79.5	+ 0.76	± 10
	5 800			Jun.27, 2012	Body	21.3	76.9	7.63	76.3	- 0.78	± 10

8.3 System Validation Procedure

SAR measurement was Prior to assessment, the system is verified to the ± 10 % of the specifications at target frequency by using the system validation kit. (Graphic Plots Attached)

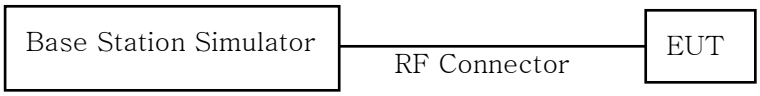
- Cabling the system, using the validation kit equipments.
- Generate about 100 mW Input Level from the Signal generator to the Dipole Antenna.
- Dipole Antenna was placed below the Flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.
- The results are normalized to 1 W input power.

Note;
SAR Verification was performed according to the FCC KDB 450824.

9. RF CONDUCTED POWER MEASUREMENT

Power measurements were performed using a base station simulator under digital average power.
The handset was placed into a simulated call using a base station simulator in a shielded chamber.
Such test signals offer a consistent means for testing SAR and are recommended for evaluation SAR
SAR measurements were taken with a fully charged battery. In order to verify that the device was tested
and maintained at full power, this was configured with the base station simulator. The SAR measurement
Software calculates a reference point at the start and end of the test to check for power drifts. If conducted
Power deviations of more then 5 % occurred, the tests were repeated.

Conducted output power measurements were performed using a base station simulator under digital average power.



SAR Test for WWAN & LTE were performed with a base station simulator Agilent E5515C & CMW500. Communication between the device and the emulator was established by air link. Set base station emulator to allow DUT to radiate maximum output power during all tests.

9.1 CDMA & EVDO

9.1.1 Output Power Verification

See 3GPP2 C.S0011/TIA-98-E as recommended by "SAR Measurement Procedures for 3G Devices", May 2006. MMaximum output power is verified on the High, Middle and Low channels according to procedures defined in section 4.4.5.2 of 3GPP2 C.S0011/TIA-98-E. SO55 tests were measured with power control bits in “All Up” condition.

1. If the mobile station supports Reverse TCH RC 1 and Forward TCH RC 1, set up a call using Fundamental Channel Test Mode 1 (RC=1/1) with 9 600 bps data rate only.
2. Under RC1, C.S0011 Table 4.4.5.2-1 (Table 9.1) parameters were applied.
3. If the MS supports the RC 3 Reverse FCH, RC3 Reverse SCH0 and demodulation of RC 3, 4, or 5, set up a call using Supplemental Channel Test Mode 3 (RC 3/3) with 9 600 bps Fundamental Channel and 9 600 bps SCH0 data rate Channel and 9 600 bps SCH0 data rate.
4. Under RC3, C.S0011 Table 4.4.5.2-2(Table 9.2) was applied.
5. FCHs were configured at full rate for mMaximum SAR with “All Up” power control bits.

Parameters for Max. Power for RC1

Parameter	Units	Value
I_{or}	dBm/1.23 MHz	-104
$\frac{\text{Pilot } E_c}{I_{or}}$	dB	-7
$\frac{\text{Traffic } E_c}{I_{or}}$	dB	-7.4

Table. 9.1

Parameters for Max. Power for RC3

Parameter	Units	Value
I_{or}	dBm/1.23 MHz	-86
$\frac{\text{Pilot } E_c}{I_{or}}$	dB	-7
$\frac{\text{Traffic } E_c}{I_{or}}$	dB	-7.4

Table. 9.2

9.1.2 Head SAR Measurement

SAR for head exposure configurations is measured in RC3 with the DUT configured to transmit at full rate using Loopback Service Option SO55. SAR for RC1 is not required when the mMaximum average output of each channel is less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the mMaximum output channel in RC1 using the exposure configuration that results in the highest SAR for that channel in RC3.

9.1.3 Body SAR Measurement

SAR for body exposure configurations is measured in RC3 with the DUT configured to transmit at full rate on FCH with all other code channels disabled using TDSO / SO32. SAR for multiple code channels (FCH + SCHn) is not required when the mMaximum average output of each RF channel is less than ¼ dB higher than that measured with FCH only. Otherwise, SAR is measured on the mMaximum output channel (FCH + SCHn) with FCH at full rate and SCH0 enabled at 9 600 bps using the exposure configuration that results in the highest SAR for that channel with FCH only. When multiple code channels are enabled, the DUT output may shift by more than 0.5 dB and lead to higher SAR drifts and SCH dropouts.

Body SAR in RC1 is not required when the mMaximum average output of each channel is less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the mMaximum output channel in RC1; with Loopback Service Option SO55, at full rate, using the body exposure configuration that results in the highest SAR for that channel in RC3.

9.1.4 Handsets with EV-DO

For handsets with Ev-Do capabilities, when the mMaximum average output of each channel in Rev. 0 is less than ¼ dB higher than that measured in RC3 (1x RTT), body SAR for Ev-Do is not required. Otherwise, SAR for Rev. 0 is measured on the mMaximum output channel at 153.6 kbps using the body exposure configuration that results in the highest SAR for that channel in RC3. SAR for Rev. A is not required when the mMaximum average output of each channel is less than that measured in Rev. 0 or less than ¼ dB higher than that measured in RC3. Otherwise, SAR is measured on the mMaximum output channel for Rev. A using a Reverse Data Channel payload size of 4 096 bits and a Termination Target of 16 slots defined for Subtype 2 Physical Layer configurations. A Forward Traffic Channel data rate corresponding to the 2-slot version of 307.2 kbps with the ACK Channel transmitting in all slots should be configured in the downlink for both Rev. 0 and Rev. A.

9.1.4.1 EVDO Release 0 (RTAP)

Application Config > Enhanced Test Application Protocol > RTAP

RTAP Rate > 153.6 kbps

Protocol Rev > 0 (1x EVDO)

Power: All Up bits

9.1.4.2 EVDO Release 0 (FTAP)

Application Config > Enhanced Test Application Protocol > FTAP

RTAP Rate > 307.2 kbps

Protocol Rev > 0 (1x EVDO)

Power: All Up bits

9.1.4.3 EVDO Release A (RETAP)

Protocol Rev > A (1x EVDO A)

Application Config > Enhanced Test Application Protocol > RETAP

R-Data Pkt Size > 4096

Power: All Up bits

9.1.4.4 EVDO Release A (FETAP)

Protocol Rev > A (1x EVDO A)

Application Config > Enhanced Test Application Protocol > FETAP

F-Traffic Format > 4 (1024, 2, 128) Canonical (307.2k, QPSK)

Power: All Up bits

Maximum Average Output Power Measurement for FCC ID: JYCPREMIAV

Target Power : 23.7 dBm

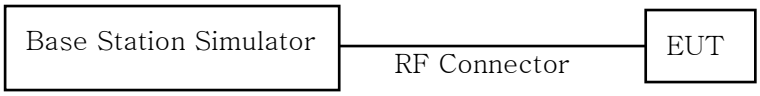
Turn-up Tolerance : - 1.5dB/ + 0.7dB

Band	Channel	SO2	SO2	SO55	SO55	TDSO SO32	1xEvDO Rev.O	1xEvDO Rev.O	1xEvDO Rev.A	1xEvDO Rev.A
		RC1/1 (dBm)	RC3/3 (dBm)	RC1/1 (dBm)	RC3/3 (dBm)	RC3/3 (dBm)	(FTAP)	(RTAP)	(FETAP)	(RETAP)
CDMA	1013	23.78	23.75	23.78	23.82	23.70	24.17	24.21	24.18	24.13
	384	23.88	23.87	23.89	23.89	23.88	24.21	24.19	24.25	24.17
	777	24.12	24.06	24.14	24.16	24.04	24.19	24.18	24.26	24.12
PCS	25	23.76	23.81	23.82	23.83	23.67	24.15	24.24	24.25	24.21
	600	24.06	24.08	24.15	24.11	24.01	24.08	24.06	24.06	24.05
	1175	23.94	24.02	24.04	24.00	23.92	24.19	24.29	24.37	24.35

CDMA Avergae Conducted output powers (dBm)

9.2 GSM

Conducted output power measurements were performed using a base station simulator under digital average power.



SAR Test for WWAN were performed with a base station simulator Agilent E5515C. Communication between the device and the emulator was established by air link. Set base station emulator to allow DUT to radiate maximum output power during all tests. Please refer to the below worst case SAR operation setup.

- GSM voice: Head SAR
- GPRS Multi-slots : Body SAR with GPRS Multi-slot Class10 with CS 1 (GMSK)

Note;

CS1/MCS7 coding scheme was used in GPRS/EDGE output power measurements and SAR Testing, as a

condition where GMSK/8PSK modulation was ensured. Investigation has shown that CS1 - CS4/ MCS5 – MCS9 settings do not have any impact on the output levels in the GPRS/EDGE modes.

GSM850/GPRS850
Target Power : 32.3 dBm
Turn-up Tolerance : - 1.5dB/ + 0.7dB

GSM1900/GPRS1900
Target Power : 29.3 dBm
Turn-up Tolerance : - 1.5dB/ + 0.7dB

GSM Conducted output powers (Burst-Average)

Band	Channel	GSM	GPRS(GMSK) Data – CS1		EDGE(8PSK) Data – MCS7	
		Voice (dBm)	GPRS 1 TX Slot (dBm)	GPRS 2 TX Slot (dBm)	EDGE 1 TX Slot (dBm)	EDGE 2 TX Slot (dBm)
GSM 850	128	32.97	32.45	31.33	27.88	25.25
	190	32.50	32.59	31.41	27.89	25.13
	251	32.53	32.56	30.70	27.78	25.10
GSM 1900	512	29.40	29.42	28.30	26.01	24.62
	661	29.54	29.45	28.43	26.00	24.65
	810	29.56	29.57	28.28	26.05	24.50

GSM Conducted output powers (Frame-Average)

Band	Channel	GSM	GPRS(GMSK) Data – CS1		EDGE(8PSK) Data – MCS7	
		Voice (dBm)	GPRS 1 TX Slot (dBm)	GPRS 2 TX Slot (dBm)	EDGE 1 TX Slot (dBm)	EDGE 2 TX Slot (dBm)
GSM 850	128	23.94	23.42	25.31	18.85	19.23
	190	23.47	23.56	25.39	18.86	19.11
	251	23.5	23.53	24.68	18.75	19.08
GSM 1900	512	20.37	20.39	22.28	16.98	18.6
	661	20.51	20.42	22.41	16.97	18.63
	810	20.53	20.54	22.26	17.02	18.48

Note:

Time slot average factor is as follows:

1 Tx slot = 9.03 dB, Frame-Average output power = Burst-Average output power – 9.03 dB

2 Tx slot = 6.02 dB, Frame-Average output power = Burst-Average output power – 6.02 dB

3 Tx slot = 4.26 dB, Frame-Average output power = Burst-Average output power – 4.26 dB

4 Tx slot = 3.01 dB, Frame-Average output power = Burst-Average output power – 3.01 dB

9.3 WiFi

9.3.1 SAR Testing for 802.11a/b/g/n modes

General Device Setup

Normal Network operating configurations are not suitable for measuring the SAR of 802.11 a/b/g transmitters. Unpredictable fluctuations in network traffic and antenna diversity conditions can introduce undesirable variations in SAR results. The SAR for these devices should be measured using chipset based test mode software to ensure the results are consistent and reliable.

Chipset based test mode software is hardware dependent and generally varies among manufacturers. The device operating parameters established in test mode for SAR measurements must be identical to those programmed in production units, including output power levels, amplifier gain settings and other RF performance tuning parameters. The test frequencies should correspond to actual channel frequencies defined for domestic use. SAR for devices with switched diversity should be measured with only one antenna transmitting at a time during each SAR measurement, according to a fixed modulation and data rate. The same data pattern should be used for all measurements.

Frequency Channel Configurations

80.11 a/b/g and 4.9 GHz operating modes are tested independently according to the service requirements in each frequency band. 80.211 b/g modes are tested on channels 1, 6 and 11.802.11a is tested for UNII operations on channels 36 and 48 in the 5.15-5.25 GHz band; channels 52 and 64 in the 5.25-5.35 GHz band; Channels 104, 116, 124 and 136 in the 5.470-5.725 GHz band; and channels 149 and 161 in the 5.8 GHz band. When 5.8 GHz § 15.247 is also available, channels 149, 157 and 165 should be tested instead of the UNII channels. 4.9 GHz is tested on channels 1, 10 and 5 or 6, whichever has the higher output power, for 5 MHz channels; channels 11,15 and 19 for 10 MHz channels; and channels 21 and 25 for 20 MHz channels.

These are referred to as the “default test channels”. 802.11g mode was evaluated only if the output power was 0.25 dB higher than the 802.11b mode.

Mode		GHz	Channel	Turbo Channel	“Default Test Channels”			
					§15.247		UNII	
					802.11b	802.11g		
802.11 b/g		2.412	1		√	∇		
		2.437	6	6	√	∇		
		2.462	11		√	∇		
802.11a	UNII	5.18	36				√	
		5.20	40	42 (5.21 GHz)				*
		5.22	44					*
		5.24	48	50 (5.25 GHz)			√	
		5.26	52				√	
		5.28	56	58 (5.29 GHz)				*
		5.30	60					*
		5.32	64				√	
		5.500	100	Unknown				*
		5.520	104				√	
		5.540	108					*
		5.560	112					*
		5.580	116				√	
		5.600	120					*
		5.620	124				√	
		5.640	128					*
		5.660	132					*
		5.680	136				√	
		5.700	140					*
	UNII or §15.247	5.745	149		√		√	
		5.765	153	152 (5.76 GHz)		*		*
		5.785	157		√			*
		5.805	161	160 (5.80 GHz)		*	√	
	§15.247	5.825	165		√			

802.11 Test Channels per FCC Requirements

Band	Channel	Conducted Power (dBm)			
		Data Rate (Mbps)			
		1	2	5.5	11
IEEE 802.11b	1	17.18	17.00	17.17	16.48
	6	16.97	16.81	16.97	16.71
	11	16.92	16.91	16.82	16.31

Average IEEE 802.11b Conducted output power

Band	Channel	Conducted Power (dBm)							
		Data Rate (Mbps)							
		6	9	12	18	24	36	48	54
IEEE 802.11g	1	15.18	14.88	14.66	14.25	13.84	13.24	12.67	12.44
	6	15.32	15.04	14.83	14.37	13.93	13.37	12.79	12.56
	11	14.26	13.92	13.76	13.35	12.95	12.25	11.75	11.50

Average IEEE 802.11g Conducted output power

Band	Channel	Conducted Power (dBm)							
		Data Rate (Mbps)							
		6.5	13	20	26	39	52	58	65
IEEE 802.11n (HT-20)	1	10.38	9.87	9.42	9.24	8.39	7.89	7.68	7.53
	6	10.17	9.64	9.23	8.76	8.21	7.67	7.46	7.29
	11	9.25	8.75	8.32	8.01	7.28	6.77	6.57	6.39

Average IEEE 802.11n Conducted output power

WLAN 5GHz Average Conducted Powers

20 MHz

Conducted Output Power Measurements

802.11 a

Mode	Freq [MHz]	Channel	conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11a	5180	36	10.93	10.60	10.24	10.07	9.66	9.07	8.38	8.26
802.11a	5200	40	10.94	10.71	10.38	10.05	9.54	8.99	8.49	8.19
802.11a	5220	44	11.14	10.80	10.70	10.21	9.91	9.21	8.51	8.34
802.11a	5240	48	11.55	11.33	11.19	10.60	10.30	9.64	9.05	8.72
802.11a	5260	52	11.63	11.47	11.29	10.74	10.32	9.68	9.26	9.02
802.11a	5280	56	11.61	11.57	11.23	10.80	10.44	9.82	9.21	9.11
802.11a	5300	60	11.35	10.90	10.66	10.29	9.83	9.46	8.87	8.47
802.11a	5320	64	11.40	11.14	10.92	10.32	10.02	9.35	8.95	8.72
802.11a	5500	100	12.56	12.39	12.30	11.75	11.17	10.64	9.82	9.74
802.11a	5520	104	12.20	12.00	11.82	11.27	10.83	10.14	9.59	9.52
802.11a	5540	108	12.63	12.32	12.06	11.66	11.30	10.75	10.17	9.85
802.11a	5560	112	12.68	12.45	12.30	11.82	11.35	10.74	10.06	10.12
802.11a	5580	116	13.02	12.64	12.47	12.24	11.72	11.00	10.38	10.31
802.11a	5600	120	13.76	13.65	13.12	12.95	12.49	11.84	11.24	11.08
802.11a	5620	124	13.60	12.36	12.96	12.68	12.19	11.53	10.92	10.78
802.11a	5640	128	13.01	13.72	13.55	13.08	12.69	112.05	11.42	11.36
802.11a	5660	132	13.52	13.21	13.18	13.36	13.00	12.16	11.62	11.65
802.11a	5680	136	13.48	13.21	13.09	13.02	13.03	13.01	13.05	12.75
802.11a	5700	140	11.52	11.29	11.22	10.45	9.94	9.34	8.77	8.71
802.11a	5745	149	11.14	10.90	10.73	10.28	9.80	8.80	8.72	8.54
802.11a	5765	153	11.04	10.65	10.40	10.04	9.62	8.97	8.31	8.22
802.11a	5785	157	11.67	11.31	10.98	10.46	10.21	9.54	9.13	8.90
802.11a	5805	161	11.43	11.11	10.95	10.50	10.11	9.38	8.80	8.69
802.11a	5825	165	11.28	11.12	10.89	10.59	9.97	9.11	8.88	8.42

20 MHz

Conducted Output Power Measurements

802.11 n

Mode	Freq [MHz]	Channel	conducted Power [dBm]							
			Data Rate [Mbps]							
			6.5	13	19.5	26	39	52	58.5	65
802.11n	5180	36	9.96	9.47	9.05	8.69	8.12	7.53	7.37	7.32
802.11n	5200	40	9.97	9.41	9.12	8.68	8.18	7.82	7.37	7.26
802.11n	5220	44	10.14	9.47	9.05	8.77	7.98	7.64	7.31	7.18
802.11n	5240	48	10.45	10.08	9.61	9.18	8.68	8.18	7.90	7.78
802.11n	5260	52	10.84	10.35	9.89	9.46	8.83	8.39	8.19	8.03
802.11n	5280	56	10.56	10.10	9.77	9.33	8.63	8.19	7.93	7.81
802.11n	5300	60	11.26	10.79	10.30	9.86	9.36	8.83	8.61	8.51
802.11n	5320	64	10.37	9.98	9.49	9.07	8.41	7.97	7.71	7.47
802.11n	5500	100	12.38	11.74	11.27	10.89	10.21	9.93	9.76	9.56
802.11n	5520	104	10.16	9.62	9.14	8.80	8.04	7.68	7.46	7.15
802.11n	5540	108	10.41	10.01	9.48	9.14	8.50	8.06	7.80	7.59
802.11n	5560	112	10.63	10.14	9.57	9.43	8.70	8.13	8.01	7.66
802.11n	5580	116	10.62	10.23	9.59	9.34	8.62	8.25	7.98	7.73
802.11n	5600	120	10.09	9.31	9.12	8.74	8.15	7.57	7.37	7.08
802.11n	5620	124	11.06	10.70	10.03	9.73	9.11	8.58	8.29	8.16
802.11n	5640	128	11.63.	11.06	10.66	10.26	9.65	9.21	8.97	8.75
802.11n	5660	132	11.60	11.12	10.61	10.26	9.59	9.14	8.97	8.73
802.11n	5680	136	11.90	11.44	10.98	10.54	9.92	9.52	9.25	9.04
802.11n	5700	140	10.55	9.86	9.40	8.98	8.58	7.83	7.63	7.52
802.11n	5745	149	10.18	9.71	9.27	8.95	8.25	7.65	7.45	7.28
802.11n	5765	153	9.09	8.54	8.02	7.66	6.95	6.50	6.28	6.02
802.11n	5785	157	9.87	9.32	9.11	8.46	7.70	7.55	7.22	6.85
802.11n	5805	161	9.86	9.36	8.85	8.57	7.89	7.41	7.20	6.96
802.11n	5825	165	10.75	10.01	9.50	9.04	8.46	8.53	7.88	7.64

NOTES:

1 SAR testing was performed according to the FCC KDB 248227.
2 SAR testing was not required for 802.11n mode because the highest output power in each band did not exceed the output power for 802.11a mode by more than 0.25dB

40 MHz

Conducted Output Power Measurements

802.11n Mode

Mode	Freq [MHz]	Channel	conducted Power [dBm]							
			Data Rate [Mbps]							
			13.5	27	40.5	54	81	108	121.5	135
802.11n	5755	151	10.86	10.43	10.05	9.66	9.14	8.75	8.58	8.50
802.11n	5795	159	9.80	9.38	8.99	8.63	8.17	7.85	7.53	7.52
802.11n	5190	38	9.84	9.43	9.06	8.66	8.23	7.79	7.64	7.60
802.11n	5230	46	10.26	9.78	9.44	9.02	8.58	8.20	8.09	7.99
802.11n	5270	54	9.85	9.37	9.02	8.61	8.15	7.75	7.59	7.53
802.11n	5310	62	10.30	9.84	9.47	9.08	8.58	8.19	8.11	7.96
802.11n	5510	102	11.64	11.47	11.13	10.79	10.25	9.9	9.68	9.69
802.11n	5590	118	11.58	11.33	11.27	11.19	11.10	10.68	10.58	10.53
802.11n	5670	134	10.29	9.68	9.38	8.96	8.45	8.25	7.92	7.86

9.4 LTE

SAR testing was performed according to the FCC KDB 941225 D05 publication.

The JYCPREMIAV developed base on MPR. The MPR is mandatory.

The device will not operate with any other MPR setting than that stated in the table as indicated.

SAR Testing was performed using a CMW500. UE transmits with Maximum output power during SAR testing.

A-MPR has been disabled for all SAR tests by setting NS=01 on the R&S CMW500.

MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to 3GPP TS36.101 Section 6.2.3 -6.2.5 under Table 6.2.3-1. The differences noted are not cases of implemented MPR but rather associated with measurement uncertainty and allowable tolerances per 3 GPP standard and the manufacturer. See section 0 For MPR targets.

Network Signalling value	Requirements (sub-clause)	E-UTRA Band	Channel bandwidth (MHz)	Resources Blocks	A-MPR (dB)
NS_01	NA	NA	NA	NA	NA
NS_03	6.6.2.2.1	2, 4,10, 35, 36	3	>5	≤ 1
	6.6.2.2.1	2, 4,10, 35,36	5	>6	≤ 1
	6.6.2.2.1	2, 4,10, 35,36	10	>6	≤ 1
	6.6.2.2.1	2, 4,10,35,36	15	>8	≤ 1
	6.6.2.2.1	2, 4,10,35, 36	20	>10	≤ 1
NS_04	6.6.2.2.2	TBD	TBD	TBD	
NS_05	6.6.3.3.1	1	10,15,20	≥ 50 for QPSK	≤ 1
NS_06	6.6.2.2.3	12, 13, 14, 17	1.4, 3, 5, 10	n/a	n/a
NS_07	6.6.2.2.3 6.6.3.3.2	13	10	Table 6.2.4-2	Table 6.2.4-2
..					
NS_32	-	-	-	-	-

9.4.1 LTE Band13 10 MHz

Target Power : 22.3 dBm

Turn-up Tolerance : - 1.5dB/ + 0.7dB

Bandwidth	UL Channel	UL Freq.(MHz)	Modulation	RB Size	RB Offset	Max.Average Power (dBm)	Target MPR (dB)	Measured Power reduction (dB)
10 MHz	23230	782	QPSK	1	0	22.98	0	0.00
				1	49	22.97	0	0.01
				25	12	21.90	1	1.08
				50	0	21.85	1	1.13
			16QAM	1	0	21.81	1	1.17
				1	49	21.82	1	1.16
				25	12	20.79	2	2.19
				50	0	20.68	2	2.30

LTE Conducted output powers

Note;

The EUT enables maximum power reduction in accordance with 3GPP 36.101. The MPR settings are configured during the manufacture process and are not configurable by the network, carrier, or end user.

9.5. SVLTE/SVDO RF Conducted Power

The EUT uses a power reduction technique where the data mode transmit power is reduced a predetermined amount based on the voice transmit power. As voice 1x power approaches maximum transmit power, the data mode transmit power is reduced a configured magnitude. For low voice 1x power levels, there is no restriction on the data mode transmit power. Although this device supports SVDO/SVLTE power reduction, initial SAR evaluation will use the max. output power without power reduction. If the SVDO and SVLTE mode of operation can achieve SAR compliance without power reduction, SVDO and SVLTE with reduced power will not be performed. However, if during SAR evaluation, it is determined that power reduction is required to achieve SAR compliance; test report will include the output power used during final SAR evaluation.

Mode	Voice Average Power 1x(dBm)	Maximum EVDO Average Power (dBm)
SVDO	P<15.5	24 (Limited)
	P≥15.5	19 (Limited)
Mode	**Voice Average Power 1x (dBm)**	**Maximum LTE Average Power (dBm)**
SVLTE	P<18.5	23 (Limited)
	P≥18.5	19 (Limited)

Power reduction Settings

9.5.1 SVDO

SVDO: CDMA 1xRTT(BC0) to EVDO rev 0 BC0 BC1

CDAM BC0 850 1xRTT		BC0 850 1xEVDO			BC1 1900 1xEVDO		
		Output Power[dBm]			Output Power[dBm]		
ch #	Output Power [dBm]	low 1013	Middle 384	high 777	low 25	Middle 600	high 1175
Low_1013	15	24.21	24.19	24.18	24.24	24.06	24.29
	16	19.04	19.05	19.06	19.06	19.01	19.07
Middle_384	15	24.2	24.19	24.19	24.23	24.07	24.29
	16	19.05	19.03	19.01	19.08	19.03	19.06
High_777	15	24.21	24.18	24.19	24.24	24.06	24.27
	16	19.04	19.02	19.06	19.03	19.01	19.05

SVDO: CDMA 1xRTT(BC1) to EVDO rev 0 BC0 BC1

CDAM BC1 1900 1xRTT		BC0 850 1xEVDO			BC1 1900 1xEVDO		
		Output Power[dBm]			Output Power[dBm]		
ch #	Output Power [dBm]	low 1013	Middle 384	high 777	low 25	Middle 600	high 1175
low-25	15	24.21	24.19	24.18	24.22	24.07	24.28
	16	19.07	19.08	19.06	19.11	19.01	19.07
Middle_600	15	24.2	24.18	24.17	24.24	24.06	24.27
	16	19.05	19.07	19.03	19.1	19	19.09
High_1175	15	24.2	24.2	24.18	24.23	24.06	24.28
	16	19.05	19.05	19.05	19.11	19.01	19.1

9.5.2 SVLTE

SV-LTE: CDMA 1xRTT(B0) to SV-LTE Band13 (QPSK, 16QAM)

CDMA BC0 850 1xRTT		QPSK				16QAM			
		Output Power[dBm]				Output Power[dBm]			
ch #	Output Power [dBm]	1RB 0offset	1RB 49offset	25RB 13offset	50RB	1RB 0offset	1RB 49offset	25RB 13offset	50RB
low-1013	18	22.98	22.97	21.9	21.84	21.81	21.83	20.8	20.69
	19	19.02	19.03	19.02	19	19.1	19.02	18.97	18.89
Middle_384	18	22.97	22.96	21.89	21.85	21.82	21.82	20.79	20.68
	19	19.04	19.07	19.02	19.01	19	19.03	19	18.98
High_777	18	22.98	22.97	21.9	21.83	21.81	21.82	20.78	20.68
	19	19.05	19.04	19.01	19.01	19.02	19.04	18.99	18.99

SV-LTE: CDMA 1xRTT(BC1) to SV-LTE Band13 (QPSK, 16QAM)

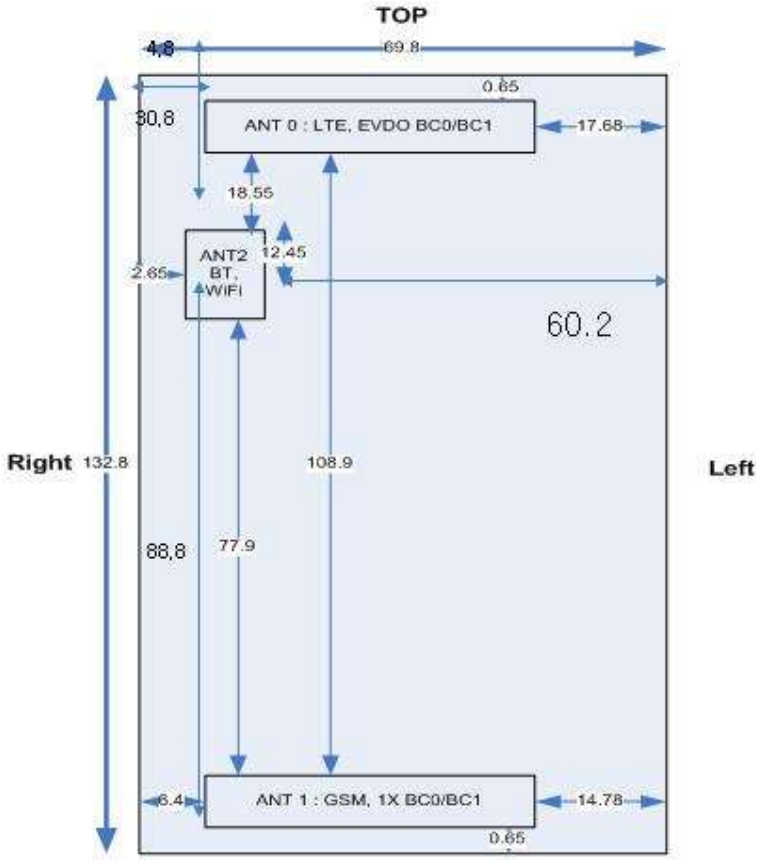
CDMA BC1 1900 1xRTT		QPSK				16QAM			
		Output Power[dBm]				Output Power[dBm]			
ch #	Output Power [dBm]	1RB,0 offset	1RB, 49 offset	25RB, 13 offset	50RB	1RB,0 offset	1RB, 49 offset	25RB, 13 offset	50RB
low-25	18	22.98	22.99	21.9	21.85	21.82	21.8	20.79	20.68
	19	19.07	19.12	19.03	19.02	19.04	19.02	18.99	18.98
Middle_600	18	23	22.97	21.9	21.83	21.81	21.82	20.79	20.69
	19	19.13	19.08	19.05	19.01	19.01	19.05	18.98	18.97
High_1175	18	22.98	22.97	21.92	21.85	21.81	21.84	20.78	20.68
	19	19.11	19.07	19.02	19	19.02	19.03	19	18.87

10. SAR Test configuration & Antenna Information

10.1 SAR Test configurations for Mobile Hotspot

Mode	Back	Front	Left	Right	Bottom	Top
835 CDMA	Yes	Yes	No	No	No	No
835 EVDO	Yes	Yes	Yes	Yes	No	Yes
1900 PCS	Yes	Yes	No	No	No	No
1900 EVDO	Yes	Yes	Yes	Yes	No	Yes
850 GSM	Yes	Yes	Yes	Yes	Yes	No
1900 GSM	Yes	Yes	Yes	Yes	Yes	No
LTE B13	Yes	Yes	Yes	Yes	No	Yes
WLAN	Yes	Yes	Yes	No	No	No

10.2 Antenna and Device Information



[Rear side View, Unit: mm]

Note;

Per KDB 941225 D06 hotspot procedures, we performed the SAR testing at 1 cm from the top & bottom surfaces and also from side edges with a transmitting antenna ≤ 2.5 cm from an edge.

Table 10.1 Definition of Antennas

Antenna	Antenna Use
0	- LTE band13 (TX/Primary RX) - CDMA 850/1900 : EVDO Rev. A (TX/Primary RX)
1	- GSM 850/1900 (TX/RX) - CDMA 850/1900 : 1x (TX/RX) - CDMA 850/1900 : EVDO Rev.0 (Diversity RX) - CDMA 850/1900 : EVDO Rev. A (Diversity RX)
2	WLAN/BT

10.3 Simultaneous Transmission Paths

Possible Transmission paths for the DUT are shown in below and are color-coded to indicate communication modes which share the same path. Modes which share the same transmission path cannot transmit simultaneously with one another.

10.4 SAR Exposure Conditions

Head Operation				
Mode	Band (MHz)	ANT 0	ANT 1	ANT 2
CDMA Voice(1xRTT)	835	No	Yes	No
CDMA Voice(1xRTT)	1900	No	Yes	No
EVDO	835	Yes	No	No
EVDO	1900	Yes	No	No
LTE Data	750	Yes	No	No
SVDO(Voice & Data)	835/835	Yes	Yes	No
SVDO(Voice & Data)	835/1900	Yes	Yes	No
SVDO(Voice & Data)	1900/835	Yes	Yes	No
SVDO(Voice & Data)	1900/1900	Yes	Yes	No
SVLTE(Voice & Data)	835/ 750	Yes	Yes	No
SVLTE(Voice & Data)	1900/ 750	Yes	Yes	No
GSM Voice	850	Yes	No	No
GSM Voice	1900	Yes	No	No
Wi-Fi	2400/5000	No	No	Yes
BT	2400	No	No	Yes
Body-worn Operation				
Mode	Band	ANT 0	ANT 1	ANT 2
CDMA Voice(1xRTT)	835	No	Yes	No
CDMA Voice(1xRTT)	1900	No	Yes	No
EVDO	835	Yes	No	No
EVDO	1900	Yes	No	No
LTE Data	750	Yes	No	No
SVDO(Voice & Data)	835/835	Yes	Yes	No
SVDO(Voice & Data)	835/1900	Yes	Yes	No
SVDO(Voice & Data)	1900/835	Yes	Yes	No
SVDO(Voice & Data)	1900/1900	Yes	Yes	No
SVLTE(Voice & Data)	835/ 750	Yes	Yes	No
SVLTE(Voice & Data)	1900/ 750	Yes	Yes	No
GPRS	850	No	Yes	No
GPRS	1900	No	Yes	No
Wi-Fi	2400/5000	No	No	Yes
BT	2400	No	No	Yes
Wireless Router/ Hotspot Operation				
Separation Distance = 1 cm				
Mode	Band	ANT 0	ANT 1	ANT 2
EVDO Data+Wi-Fi	835	Yes	No	Yes
EVDO Data+Wi-Fi	1900	Yes	No	Yes
GPRS + WiFi	850			
GPRS + WiFi	1900			
LTE Data+Wi-Fi	750	Yes	No	Yes
SVDO(Voice & Data)+Wi-Fi	835/835/2450	Yes	Yes	Yes
SVDO(Voice & Data)+Wi-Fi	835/1900/2450	Yes	Yes	Yes
SVDO(Voice & Data)+Wi-Fi	1900/835/2450	Yes	Yes	Yes
SVDO(Voice & Data)+Wi-Fi	1900/1900/2450	Yes	Yes	Yes
SVLTE(Voice & Data)+Wi-Fi	835/750/2450	Yes	Yes	Yes
SVLTE(Voice & Data)+Wi-Fi	1900/750/2450	Yes	Yes	Yes

11. SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas

11.1 SAR Evaluation Considerations

These procedures were followed according to FCC "SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas", May 2008. The procedures are applicable to phones with built-in unlicensed transmitters, such as 802.11 a/b/g and Bluetooth devices.

	2.45	5.15 - 5.35	5.47 - 5.85	GHz
P_{Ref}	12	6	5	mW
Device output power should be rounded to the nearest mW to compare with values specified in this				

Table. 11.1 Output Power Thresholds for Unlicensed Transmitters

	Individual Transmitter	Simultaneous Transmission
Licensed Transmitters	Routine evaluation required	SAR not required: Unlicensed only o when stand-alone 1-g SAR is not required and antenna is ≥ 5 cm from other antennas Licensed & Unlicensed o when the sum of the 1-g SAR is < 1.6 W/kg for all simultaneous transmitting antennas o when SAR to peak location separation ratio of simultaneous transmitting antenna pair is < 0.3 SAR required: Licensed & Unlicensed antenna pairs with SAR to peak location separation ratio ≥ 0.3; test is only required for the configuration that results in the highest SAR in stand-alone configuration for each wireless mode and exposure condition Note: simultaneous transmission exposure conditions for head and body can be different for different style phones; therefore, different test requirements may apply
Unlicensed Transmitters	When there is no simultaneous transmission – o output ≤ 60/f: SAR not required o output > 60/f: stand-alone SAR required When there is simultaneous transmission – Stand-alone SAR not required when o output ≤ 2·P_{Ref} and antenna is ≥ 5.0 cm from other antennas o output ≤ P_{Ref} and antenna is ≥ 2.5 cm from other antennas o output ≤ P_{Ref} and antenna is < 2.5 cm from other antennas, each with either output power ≤ P_{Ref} or 1-g SAR < 1.2 W/kg Otherwise stand-alone SAR is required When stand-alone SAR is required o test SAR on highest output channel for each wireless mode and exposure condition o if SAR for highest output channel is > 50% of SAR limit, evaluate all channels according to normal procedures	
Jaw, Mouth and Nose	Flat phantom SAR required o when measurement is required in tight regions of SAM and it is not feasible or the results can be questionable due to probe tilt, calibration, positioning and orientation issues o position rectangular and clam-shell phones according to flat phantom procedures and conduct SAR measurements for these specific locations	When simultaneous transmission SAR testing is required, contact the FCC Laboratory for interim guidance.

Table. 11.2 SAR Evaluation Requirements for Cellphones with Multiple Transmitters

FCC ID: JYCPREMIAV

BT Max. RF output power: 11.86 mW

11.2 Simultaneous Transmission Conditions

No.	Capable TX Configuration	Head	Body-worn	Hotspot	Note
		SAR	SAR	SAR	
1	CDMA BC0 Voice + 2.4 GHz Wi-Fi	✓	✓	-	WI-FI Hotspot
2	CDMA BC1 Voice + 2.4 GHz Wi-Fi	✓	✓	-	WI-FI Hotspot
3	CDMA BC0 EVDO+ 2.4 GHz Wi-Fi	-	✓	✓	WI-FI Hotspot
4	CDMA BC1 EVDO+ 2.4 GHz Wi-Fi	-	✓	✓	WI-FI Hotspot
5	CDMA BC0 Voice + 5 GHz Wi-Fi	✓	✓	-	
6	CDMA BC1 Voice + 5 GHz Wi-Fi	✓	✓	-	
7	CDMA BC0 EVDO + 5 GHz Wi-Fi	✓	✓	-	
8	CDMA BC1 EVDO + 5 GHz Wi-Fi	✓	✓	-	
9	LTE B13 + Wi-Fi data	-	✓	✓	WI-FI Hotspot
10	GSM850 Voice+ 2.4 GHz Wi-Fi	-	✓	-	WI-FI Hotspot
11	GSM1900 Voice+ 2.4 GHz Wi-Fi	-	✓	-	WI-FI Hotspot
12	GSM850 GPRS/EDGE Data + 2.4 GHz Wi-Fi	-	-	✓	WI-FI Hotspot
13	GSM1900 GPRS/EDGE Data + 2.4 GHz Wi-Fi	-	-	✓	WI-FI Hotspot
14	GSM850 Voice+ 5 GHz Wi-Fi	-	✓	-	
15	GSM1900 Voice+ 5 GHz Wi-Fi	-	✓	-	
16	GSM850 GPRS/EDGE Data + 5 GHz Wi-Fi	-	✓	-	
17	GSM1900 GPRS/EDGE Data + 5 GHz Wi-Fi	-	✓	-	
18	CDMA BC0 Voice + CDMA BC0 EVDO	✓	✓	-	SVDO
19	CDMA BC0 Voice + CDMA BC1 EVDO	✓	✓	-	SVDO
20	CDMA BC0 Voice + LTE B13	✓	✓	-	SVLTE
21	CDMA BC1 Voice + CDMA BC0 EVDO	✓	✓	-	SVDO
22	CDMA BC1 Voice + CDMA BC1 EVDO	✓	✓	-	SVDO
23	CDMA BC1 Voice + LTE B13	✓	✓	-	SVLTE
24	CDMA BC0 Voice + CDMA BC0 EVDO + 2.4 GHz Wi-Fi	✓	✓	✓	WI-FI Hotspot + SVDO
25	CDMA BC0 Voice + CDMA BC1 EVDO + 2.4 GHz Wi-Fi	✓	✓	✓	WI-FI Hotspot + SVDO
26	CDMA BC0 Voice + LTE B13 + 2.4 GHz Wi-Fi	✓	✓	✓	WI-FI Hotspot + SVLTE
27	CDMA BC1 Voice + CDMA BC0 EVDO+ 2.4 GHz Wi-Fi	✓	✓	✓	WI-FI Hotspot + SVDO
28	CDMA BC1 Voice + CDMA BC1 EVDO+ 2.4 GHz Wi-Fi	✓	✓	✓	WI-FI Hotspot + SVDO
29	CDMA BC1 Voice + LTE B13+ 2.4 GHz Wi-Fi	✓	✓	✓	WI-FI Hotspot + SVLTE
30	CDMA BC0 Voice + CDMA BC0 EVDO + 5 GHz Wi-Fi	✓	✓	-	
31	CDMA BC0 Voice + CDMA BC1 EVDO + 5 GHz Wi-Fi	✓	✓	-	
32	CDMA BC0 Voice + LTE B13 + 5 GHz Wi-Fi	✓	✓	-	
33	CDMA BC1 Voice + CDMA BC0 EVDO+ 5 GHz Wi-Fi	✓	✓	-	
34	CDMA BC1 Voice + CDMA BC1 EVDO+ 5 GHz Wi-Fi	✓	✓	-	
35	CDMA BC1 Voice + LTE B13+ 5 GHz Wi-Fi	✓	✓	-	

* BT and WLAN are not simultaneous transmission.
* CDMA EVDO and LTE are not simultaneous transmission.
* VOIP support (LTE, EVDO, WiFi 2.4GHz, WiFi 5GHz).
*Hotspot support (GPRS, LTE, EVDO,WiFi 2.4GHz).
* SVLTE, SVDO is supported.

11.3 SAR Summation Scenario

CDMA Voice + EVDO Data + WLAN VoIP Simultaneous Transmission for Held to Ear

Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO835 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO835 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.256	0.691	0.285	1.232	Head SAR	Left Cheek	0.146	0.691	0.285	1.122
	Left Tilt	0.176	0.572	0.048	0.796		Left Tilt	0.067	0.572	0.048	0.687
	Right Cheek	0.302	0.499	0.143	0.944		Right Cheek	0.171	0.499	0.143	0.813
	Right Tilt	0.227	0.44	0.025	0.692		Right Tilt	0.067	0.44	0.025	0.532
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO1900 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO1900 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.256	0.943	0.285	1.484	Head SAR	Left Cheek	0.146	0.943	0.285	1.374
	Left Tilt	0.176	1.03	0.048	1.254		Left Tilt	0.067	1.03	0.048	1.145
	Right Cheek	0.302	0.756	0.143	1.201		Right Cheek	0.171	0.756	0.143	1.07
	Right Tilt	0.227	0.839	0.025	1.091		Right Tilt	0.067	0.839	0.025	0.931
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO835 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO835 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.256	0.691	0.145	1.092	Head SAR	Left Cheek	0.146	0.691	0.145	0.982
	Left Tilt	0.176	0.572	0.122	0.87		Left Tilt	0.067	0.572	0.122	0.761
	Right Cheek	0.302	0.499	0.067	0.868		Right Cheek	0.171	0.499	0.067	0.737
	Right Tilt	0.227	0.44	0.118	0.785		Right Tilt	0.067	0.44	0.118	0.625
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO1900 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO1900 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.256	0.943	0.145	1.344	Head SAR	Left Cheek	0.146	0.943	0.145	1.234
	Left Tilt	0.176	1.03	0.122	1.328		Left Tilt	0.067	1.03	0.122	1.219
	Right Cheek	0.302	0.756	0.067	1.125		Right Cheek	0.171	0.756	0.067	0.994
	Right Tilt	0.227	0.839	0.118	1.184		Right Tilt	0.067	0.839	0.118	1.024

GSM Voice + WLAN VoIP Simultaneous Transmission for Held to Ear

Simultaneous TX	configuration	GSM850 SAR(W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	GSM1900 SAR(W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.224	0.285	0.509	Head SAR	Left Cheek	0.04	0.285	0.325
	Left Tilt	0.152	0.048	0.2		Left Tilt	0.022	0.048	0.07
	Right Cheek	0.237	0.143	0.38		Right Cheek	0.061	0.143	0.204
	Right Tilt	0.171	0.025	0.196		Right Tilt	0.027	0.025	0.052
Simultaneous TX	configuration	GSM850 SAR(W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	GSM1900 SAR(W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.224	0.145	0.369	Head SAR	Left Cheek	0.04	0.145	0.185
	Left Tilt	0.152	0.122	0.274		Left Tilt	0.022	0.122	0.144
	Right Cheek	0.237	0.067	0.304		Right Cheek	0.061	0.067	0.128
	Right Tilt	0.171	0.118	0.289		Right Tilt	0.027	0.118	0.145

CDMA Voice + LTE Data + WLAN VoIP Simultaneous Transmission for Held to Ear

Simultaneous TX	configuration	CDMA835 SAR(W/kg)	LTE SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	LTE SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.256	0.902	0.285	1.443	Head SAR	Left Cheek	0.146	0.902	0.285	1.333
	Left Tilt	0.176	0.821	0.048	1.045		Left Tilt	0.067	0.821	0.048	0.936
	Right Cheek	0.302	0.643	0.143	1.088		Right Cheek	0.171	0.643	0.143	0.957
	Right Tilt	0.227	0.497	0.025	0.749		Right Tilt	0.067	0.497	0.025	0.589
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	LTE SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	LTE SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.256	0.902	0.145	1.303	Head SAR	Left Cheek	0.146	0.902	0.145	1.193
	Left Tilt	0.176	0.821	0.122	1.119		Left Tilt	0.067	0.821	0.122	1.01
	Right Cheek	0.302	0.643	0.067	1.012		Right Cheek	0.171	0.643	0.067	0.881
	Right Tilt	0.227	0.497	0.118	0.842		Right Tilt	0.067	0.497	0.118	0.682

CDMA + EVDO Data + WLAN Simultaneous Transmission for Body with Hotspot (1.0 cm)

Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO835 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO835 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.334	0.184	0.902	Body SAR	Rear	0.758	0.334	0.184	1.276
	Front	0.361	0.187	0.057	0.605		Front	0.373	0.187	0.057	0.617
	Left	-	0.126	0.00278	0.1288		Left	-	0.126	0.00278	0.1288
	Right	-	0.222	-	0.222		Right	-	0.222	-	0.222
	Top	-	0.229	-	0.229		Top	-	0.229	-	0.229
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO1900 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO1900 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.347	0.184	0.915	Body SAR	Rear	0.758	0.347	0.184	1.289
	Front	0.361	0.215	0.057	0.633		Front	0.373	0.215	0.057	0.645
	Left	-	0.049	0.00278	0.0518		Left	-	0.049	0.00278	0.0518
	Right	-	0.025	-	0.025		Right	-	0.025	-	0.025
	Top	-	0.421	-	0.421		Top	-	0.421	-	0.421
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO835 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO835 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.334	0.246	0.964	Body SAR	Rear	0.758	0.334	0.246	1.338
	Front	0.361	0.187	0.038	0.586		Front	0.373	0.187	0.038	0.598
	Left	-	0.126	-	0.126		Left	-	0.126	-	0.126
	Right	-	0.222	-	0.222		Right	-	0.222	-	0.222
	Top	-	0.229	-	0.229		Top	-	0.229	-	0.229
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO1900 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO1900 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.347	0.246	0.977	Body SAR	Rear	0.758	0.347	0.246	1.351
	Front	0.361	0.215	0.038	0.614		Front	0.373	0.215	0.038	0.626
	Left	-	0.049	-	0.049		Left	-	0.049	-	0.049
	Right	-	0.025	-	0.025		Right	-	0.025	-	0.025
	Top	-	0.421	-	0.421		Top	-	0.421	-	0.421

GPRS Data + WLAN Simultaneous Transmission for Body with Hotspot (1.0 cm)

Simultaneous TX	configuration	GPRS850 SAR(W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	GPRS1900 SAR(W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.472	0.184	0.656	Body SAR	Rear	0.58	0.184	0.764
	Front	0.453	0.057	0.51		Front	0.319	0.057	0.376
	Left	0.431	0.00278	0.4338		Left	0.05	0.00278	0.0528
	Right	0.351	-	0.351		Right	0.061	-	0.061
	Top	-	-	0		Top	-	-	0
	Bottom	0.174	-	0.174		Bottom	0.598	-	0.598

Simultaneous Transmission Summation for Body-Worn (1.0cm)

Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO835 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO835 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.334	0.184	0.902	Body SAR	Rear	0.758	0.334	0.184	1.276
	Front	0.361	0.187	0.057	0.605		Front	0.373	0.187	0.057	0.617
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO1900 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO1900 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.347	0.184	0.915	Body SAR	Rear	0.758	0.347	0.184	1.289
	Front	0.361	0.215	0.057	0.633		Front	0.373	0.215	0.057	0.645
Simultaneous TX	configuration	GPRS850 SAR(W/kg)		2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	GPRS1900 SAR(W/kg)		2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.472		0.184	0.656	Body SAR	Rear	0.58		0.184	0.764
	Front	0.453		0.057	0.51		Front	0.319		0.057	0.376
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	LTE B13 SAR(W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	LTE B13 SAR(W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.428	0.184	0.996	Body SAR	Rear	0.758	0.428	0.184	1.37
	Front	0.361	0.296	0.057	0.714		Front	0.373	0.296	0.057	0.726

Simultaneous Transmission Summation for Body-Worn (1.0cm)

Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO835 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO835 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.334	0.246	0.964	Body SAR	Rear	0.758	0.334	0.246	1.338
	Front	0.361	0.187	0.038	0.586		Front	0.373	0.187	0.038	0.598
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO1900 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO1900 SAR (W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.347	0.246	0.977	Body SAR	Rear	0.758	0.347	0.246	1.351
	Front	0.361	0.215	0.038	0.614		Front	0.373	0.215	0.038	0.626
Simultaneous TX	configuration	GPRS850 SAR(W/kg)		5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	GPRS1900 SAR(W/kg)		5G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.472		0.246	0.718	Body SAR	Rear	0.58		0.246	0.826
	Front	0.453		0.038	0.491		Front	0.319		0.038	0.357
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	LTE B13 SAR(W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	LTE B13 SAR(W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.428	0.246	1.058	Body SAR	Rear	0.758	0.428	0.246	1.432
	Front	0.361	0.296	0.038	0.695		Front	0.373	0.296	0.038	0.707

CDMA +LTE Data + WLAN Simultaneous Transmission for Body with Hotspot (1.0 cm)

Simultaneous TX	configuration	CDMA835 SAR(W/kg)	LTE SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)	Simultaneous TX	configuration	PCS1900 SAR(W/kg)	LTE SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.384	0.428	0.184	0.996	Body SAR	Rear	0.758	0.428	0.184	1.37
	Front	0.361	0.296	0.057	0.714		Front	0.373	0.296	0.057	0.726
	Left	-	0.22	0.00278	0.2228		Left	-	0.22	0.00278	0.2228
	Right	-	0.42	-	0.42		Right	-	0.42	-	0.42
	Top	-	0.365	-	0.365		Top	-	0.365	-	0.365
	Bottom	-	-	-	0		Bottom	-	-	-	0

SAR scaling Consideration for Simultaneous Transmission

SAR Summation

Simultaneous TX	configuration	CDMA835 SAR(W/kg)	EVDO1900 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.256	0.943	0.285	1.484
Simultaneous TX	configuration	CDMA835 SAR(W/kg)	LTE SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.256	0.902	0.285	1.443
Simultaneous TX	configuration	PCS1900 SAR(W/kg)	EVDO1900 SAR (W/kg)	2.4G WIFI SAR (W/kg)	∑SAR (W/kg)
Head SAR	Left Cheek	0.146	0.943	0.285	1.374
Simultaneous TX	configuration	PCS1900 SAR(W/kg)	LTE B13 SAR(W/kg)	5G WIFI SAR (W/kg)	∑SAR (W/kg)
Body SAR	Rear	0.758	0.428	0.246	1.432

Scaled SAR Summation

Simultaneous TX	configuration	CDMA835 Scaled SAR(W/kg)	EVDO1900 Scaled SAR (W/kg)	2.4G WIFI Scaled SAR (W/kg)	∑ Scaled SAR (W/kg)
Head SAR	Left Cheek	0.288	0.967	0.287	1.542
Simultaneous TX	configuration	CDMA835 Scaled SAR(W/kg)	LTE Scaled SAR (W/kg)	2.4G WIFI Scaled SAR (W/kg)	∑ Scaled SAR (W/kg)
Head SAR	Left Cheek	0.288	0.908	0.287	1.483
Simultaneous TX	configuration	PCS1900 Scaled SAR(W/kg)	EVDO1900 Scaled SAR (W/kg)	2.4G WIFI Scaled SAR (W/kg)	∑ Scaled SAR (W/kg)
Head SAR	Left Cheek	0.156	0.967	0.287	1.41
Simultaneous TX	configuration	PCS1900 Scaled SAR(W/kg)	LTE B13 Scaled SAR(W/kg)	5G WIFI Scaled SAR (W/kg)	∑ Scaled SAR (W/kg)
Body SAR	Rear	0.829	0.43	0.334	1.593

Note: The greatest deviation in measured output power below the maximum of output power tune-up limit across all transmit modes is 0.74 dBm. Applying a scale-down based on this value to the SAR limit of 1.6 W/kg results in a value of 1.353 W/kg and used as the criteria to applying scaled SAR on simultaneous transmission condition. In other words, for Simultaneous Transmission Cases with Sum of SAR values < 1.353 W/kg, SAR scaling was not applied.

11.4 Simultaneous Transmission Conclusion

The above tables represent the worst-case simultaneous transmission scenarios possibility with this device.

The conducted output power level of the BT transmitter is less than P_{ref}, the BT antenna is less than 2.5 cm from the other antenna, and licensed Transmitter SAR is less than 1.2 W/kg, therefore, a stand-alone BT SAR evaluation is not required.

12. SAR TEST DATA SUMMARY

12.1 Measurement Results (CDMA835/EVDO835 Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	SAR(mW/g)
MHz	Channel						
836.52	384 (Mid)	CDMA835	23.89	-0.07	Standard	Left Ear	0.256
836.52	384 (Mid)	CDMA835	23.89	-0.140	Standard	Left Tilt 15°	0.176
836.52	384 (Mid)	CDMA835	23.89	0.055	Standard	Right Ear	0.302
836.52	384 (Mid)	CDMA835	23.89	0.053	Standard	Right Tilt 15°	0.227
836.52	384 (Mid)	CDMA835	23.89	0.099	Extended	Right Ear	*0.300
836.52	384 (Mid)	CDMA835	23.89	0.130	Wireless charging	Right Ear	**0.298
836.52	384 (Mid)	EVDO	24.19	0.181	Standard	Left Ear	0.691
836.52	384 (Mid)	EVDO	24.19	-0.109	Standard	Left Tilt 15°	0.583
836.52	384 (Mid)	EVDO	24.19	0.021	Standard	Right Ear	0.499
836.52	384 (Mid)	EVDO	24.19	-0.063	Standard	Right Tilt 15°	0.440
836.52	384 (Mid)	EVDO	24.19	0.079	Extended	Left Ear	*0.684
836.52	384 (Mid)	EVDO	24.19	0.177	Wireless charging	Left Ear	**0.680
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population					**Head 1.6 W/kg (mW/g)** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☒ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
8 CDMA Head SAR was tested under RC3/SO55.
9 EVDO SAR was tested under EVDO Rev.0 RTAP.
10 *SAR testing was performed at worst case SAR with Extended battery.
11 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.2 Measurement Results (PCS1900/EVDO1900 Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	SAR(mW/g)
MHz	Channel						
1 880.00	600 (Mid)	PCS1900	24.11	-0.059	Standard	Left Ear	0.146
1 880.00	600 (Mid)	PCS1900	24.11	-0.021	Standard	Left Tilt 15°	0.067
1 880.00	600 (Mid)	PCS1900	24.11	-0.19	Standard	Right Ear	0.171
1 880.00	600 (Mid)	PCS1900	24.11	0.042	Standard	Right Tilt 15°	0.067
1 880.00	600 (Mid)	PCS1900	24.11	0.037	Extended	Right Ear	*0.166
1 880.00	600 (Mid)	PCS1900	24.11	0.072	Wireless charging	Right Ear	**0.161
1 851.25	25(Low)	EVDO	24.24	0.032	Standard	Left Ear	0.924
1 880.00	600 (Mid)	EVDO	24.06	0.087	Standard	Left Ear	0.897
1 908.75	1175(High)	EVDO	24.29	0.168	Standard	Left Ear	0.943
1 851.25	25(Low)	EVDO	24.24	-0.109	Standard	Left Tilt 15°	1.00
1 880.00	600 (Mid)	EVDO	24.06	0.104	Standard	Left Tilt 15°	0.976
1 908.75	1175(High)	EVDO	24.29	-0.022	Standard	Left Tilt 15°	1.03
1 880.00	600 (Mid)	EVDO	24.06	-0.151	Standard	Right Ear	0.756
1 851.25	25(Low)	EVDO	24.06	-0.04	Standard	Right Tilt 15°	0.802
1 880.00	600 (Mid)	EVDO	24.29	-0.037	Standard	Right Tilt 15°	0.839
1 908.75	1175(High)	EVDO	24.06	0.117	Standard	Right Tilt 15°	0.813
1 908.75	1175(High)	EVDO	24.06	-0.019	Extended	Left Tilt 15°	*1.03
1 908.75	1175(High)	EVDO	24.06	0.02	Wireless charging	Left Tilt 15°	**0.996
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population					**Head 1.6 W/kg (mW/g)** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☒ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
8 CDMA Head SAR was tested under RC3/SO55.
9 EVDO SAR was tested under EVDO Rev.0 RTAP.
10 *SAR testing was performed at worst case SAR with Extended battery.
11 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.3 Measurement Results (GSM850 Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	SAR(mW/g)
MHz	Channel						
836.6	190 (Mid)	GSM850	32.50	-0.015	Standard	Left Ear	0.224
			32.50	-0.065	Standard	Left Tilt 15°	0.152
			32.50	-0.044	Standard	Right Ear	0.237
			32.50	-0.128	Standard	Right Tilt 15°	0.171
			32.50	-0.04	Extended	Right Ear	*0.230
			32.50	0.005	Wireless charging	Right Ear	**0.226
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						**Head 1.6 W/kg (mW/g)** Averaged over 1 gram	

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☒ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
8 *SAR testing was performed at worst case SAR with Extended battery.
9 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.4 Measurement Results (GSM1900 Head SAR)

Frequency		Modulation	ConductedPower (dBm)	Power Drift (dB)	Battery	Phantom Position	SAR(mW/g)
MHz	Channel						
1 880.0	661 (Mid)	GSM1900	29.54	0.083	Standard	Left Ear	0.04
			29.54	0.081	Standard	Left Tilt 15°	0.022
			29.54	0.021	Standard	Right Ear	0.061
			29.54	-0.135	Standard	Right Tilt 15°	0.027
			29.54	0.076	Extended	Right Ear	*0.052
			29.54	-0.033	Wireless charging	Right Ear	**0.055
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						**Head 1.6 W/kg (mW/g)** Averaged over 1 gram	

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☒ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
8 *SAR testing was performed at worst case SAR with Extended battery.
9 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.5 Measurement Results (LTE Band13 QPSK Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	RB Size	RB Offset	Phantom Position	SAR(mW/g)	MPR
MHz	Channel								
782	23230	QPSK	21.90	0.065	25	12	Left Ear	0.621	1
782	23230	QPSK	22.98	0.023	1	0	Left Ear	0.884	0
782	23230	QPSK	22.97	0.019	1	49	Left Ear	0.902	0
782	23230	QPSK	21.90	0.08	25	12	Left Tilt 15°	0.562	1
782	23230	QPSK	22.98	-0.09	1	0	Left Tilt 15°	0.821	0
782	23230	QPSK	22.97	-0.1	1	49	Left Tilt 15°	0.813	0
782	23230	QPSK	21.90	0.052	25	12	Right Ear	0.428	1
782	23230	QPSK	22.98	-0.053	1	0	Right Ear	0.643	0
782	23230	QPSK	22.97	-0.081	1	49	Right Ear	0.643	0
782	23230	QPSK	21.90	0.106	25	12	Right Tilt 15°	0.330	1
782	23230	QPSK	22.98	-0.059	1	0	Right Tilt 15°	0.497	0
782	23230	QPSK	22.97	0.001	1	49	Right Tilt 15°	0.495	0
782	23230	QPSK	22.97	-0.105	1	49	Left Ear	*0.867	0
782	23230	QPSK	22.97	0.09	1	49	Left Ear	**0.434	0
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							**Head 1.6 W/kg (mW/g) Averaged over 1 gram**		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☒ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 KDB 941225 D05 SAR for LTE Devices v01 was followed.
- QPSK with 50% RB is required for the largest channel Bandwidth.
- QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
- 16QAM with 50% RB is required for the largest channel Bandwidth.
- 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
- 100% RB allocation is not required since SAR is not > 1.45 W/kg.

8 *SAR testing was performed at worst case SAR with Extended battery.
9 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.6 Measurement Results (LTE Band13 16QAM Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	RB Size	RB Offset	Phantom Position	SAR(mW/g)	MPR
MHz	Channe								
782	23230	16QAM	20.79	0.104	25	12	Left Ear	0.475	2
782	23230	16QAM	21.81	0.027	1	0	Left Ear	0.685	1
782	23230	16QAM	21.82	0.004	1	49	Left Ear	0.702	1
782	23230	16QAM	20.79	0.089	25	12	Left Tilt 15°	0.438	2
782	23230	16QAM	21.81	-0.081	1	0	Left Tilt 15°	0.627	1
782	23230	16QAM	21.82	-0.071	1	49	Left Tilt 15°	0.649	1
782	23230	16QAM	20.79	0.03	25	12	Right Ear	0.335	2
782	23230	16QAM	21.81	0.037	1	0	Right Ear	0.487	1
782	23230	16QAM	21.82	0.004	1	49	Right Ear	0.510	1
782	23230	16QAM	20.79	0.072	25	12	Right Tilt 15°	0.259	2
782	23230	16QAM	21.81	-0.02	1	0	Right Tilt 15°	0.391	1
782	23230	16QAM	21.82	0.041	1	49	Right Tilt 15°	0.380	1

ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population	Head 1.6 W/kg (mW/g) Averaged over 1 gram

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☐ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 KDB 941225 D05 SAR for LTE Devices v01 was followed.
- QPSK with 50% RB is required for the largest channel Bandwidth.
- QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
- 16QAM with 50% RB is required for the largest channel Bandwidth.
- 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
- 100% RB allocation is not required since SAR is not > 1.45 W/kg.

12.7 Measurement Results (802.11b/g/n Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	SAR(mW/g)
MHz	Channel						
2 412	1(Low)	802.11b	16.97	-0.032	Standard	Left Ear	0.285
2 412	1(Low)	802.11b	16.97	-0.093	Standard	Left Tilt 15°	0.048
2 412	1(Low)	802.11b	16.97	-0.062	Standard	Right Ear	0.143
2 412	1(Low)	802.11b	16.97	-0.057	Standard	Right Tilt 15	0.025
2 412	1(Low)	802.11b	16.97	0.104	Extended	Left Ear	*0.118
2 412	1(Low)	802.11b	16.97	0.094	Wireless charging	Left Ear	**0.212
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						**Head 1.6 W/kg (mW/g)** Averaged over 1 gram	

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].

2 All modes of operation were investigated and the worst-case are reported.

3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.

4 Tissue parameters and temperatures are listed on the SAR plot.

5 Battery Type ☒ Standard ☒ Extended ☐ Slim
Batteries are fully charged for all readings.

6 Test Signal Call Mode ☒ Manual Test cord ☐ Base Station Simulator

7 IEEE 802.11g(including 802.11n) SAR testing is required when the conducted powers are equal to or greater than 0.25 dB Than the conducted powers in IEEE 802.11b.

8 For 2.4GHz WLAN, Highest average power channel for the lowest data rate was selected for SAR evaluation based on KDB 248227. Other channels are not necessary because 1g-average SAR < 0.8 W/Kg and peak SAR < 1.6W/Kg per KDB 248227.

9 *SAR testing was performed at worst case SAR with Extended battery.

10 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.8 Measurement Results (802.11a/n 5GHz Head SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Battery	Phantom Position	Data Rate	SAR(mW/g)
MHz	Channel							
5 240	48	802.11a	11.55	-0.08	Standard	Left Ear	6Mbps	0.145
5 240	48	802.11a	11.55	0.080	Standard	Left Tilt 15°	6Mbps	0.099
5 240	48	802.11a	11.55	-0.018	Standard	Right Ear	6Mbps	0.059
5 240	48	802.11a	11.55.	-0.020	Standard	Right Tilt 15	6Mbps	0.051
5 240	48	802.11a	11.63.	-0.04	Extended	Left Ear	6Mbps	*0.143
5 240	48	802.11a	11.63.	-0.09	Wireless charging	Left Tilt 15°	6Mbps	**0.118
5 260	52	802.11a	11.63.	0.087	Standard	Left Ear	6Mbps	0.131
5 260	52	802.11a	11.63.	0.10	Standard	Left Tilt 15°	6Mbps	0.122
5 260	52	802.11a	13.76	0.07	Standard	Right Ear	6Mbps	0.067
5 260	52	802.11a	13.76	0.125	Standard	Right Tilt 15	6Mbps	0.056
5 260	52	802.11a	13.76	-0.07	Extended	Left Ear	6Mbps	**0.113
5 260	52	802.11a	13.76	0.023	Wireless charging	Left Tilt 15°	6Mbps	*0.113
5 600	120	802.11a	11.67	0.09	Standard	Left Ear	6Mbps	0.100
5 600	120	802.11a	11.67	0.08	Standard	Left Tilt 15°	6Mbps	0.049
5 600	120	802.11a	11.67	-0.006	Standard	Right Ear	6Mbps	0.048
5 600	120	802.11a	11.67	0.094	Standard	Right Tilt 15	6Mbps	0.018
5 600	120	802.11a	11.55	-0.098	Extended	Left Ear	6Mbps	*0.089
5 600	120	802.11a	11.55	-0.064	Wireless charging	Left Tilt 15°	6Mbps	**0.081
5785	157	802.11a	11.55	0.074	Standard	Left Ear	6Mbps	0.106
5785	157	802.11a	11.55.	0.061	Standard	Left Tilt 15°	6Mbps	0.028
5785	157	802.11a	11.63.	-0.049	Standard	Right Ear	6Mbps	0.042
5785	157	802.11a	11.63.	0.05	Standard	Right Tilt 15	6Mbps	0.00396
5785	157	802.11a	11.63.	0.08	Extended	Left Ear	6Mbps	*0.106
5785	157	802.11a	11.63.	-0.04	Wireless charging	Left Tilt 15°	6Mbps	**0.103
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						**Head 1.6 W/kg (mW/g)** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☐ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☒ Manual Test cord ☐ Base Station Simulator
7 Highest average RF output power channel for the lowest data rate were selected for SAR testing. IEEE 802.11(including 802.11n) SAR testing is required when the conducted powers are equal to or greater than 0.25 dB than the conducted powers in IEEE 802.11a.
8 When Hotspot is enabled, 5 GHz Bands are disabled
9 *SAR testing was performed at worst case SAR with Extended battery.
10 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.9 Measurement Results (CDMA835/EVDO Body-worn SAR)

Frequency		Modulation	ConductedPower (dBm)	Power Drift (dB)	Configuration	Battery	Separation Distance	SAR(mW/g)
MHz	Channel							
836.52	384 (Mid)	CDMA835	23.88	-0.147	Rear	Standard	1.0 cm	0.384
836.52	384 (Mid)	CDMA835	23.88	-0.027	Front	Standard	1.0 cm	0.361
836.52	384 (Mid)	CDMA835	23.88	-0.062	Rear	Extended	1.0 cm	*0.299
836.52	384 (Mid)	CDMA835	23.88	-0.016	Rear	Wireless charging	1.0 cm	**0.326
836.52	384 (Mid)	EVDO	24.19	-0.065	Rear	Standard	1.0 cm	0.334
836.52	384 (Mid)	EVDO	24.19	0.042	Front	Standard	1.0 cm	0.187
836.52	384 (Mid)	EVDO	24.19	0.022	Left	Standard	1.0 cm	0.126
836.52	384 (Mid)	EVDO	24.19	0.079	Right	Standard	1.0 cm	0.222
836.52	384 (Mid)	EVDO	24.19	-0.116	Top	Standard	1.0 cm	0.229
836.52	384 (Mid)	EVDO	24.19	0.160	Rear	Extended	1.0 cm	*0.172
836.52	384 (Mid)	EVDO	24.19	-0.008	Rear	Wireless charging	1.0 cm	**0.255
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						**Body 1.6 W/kg (mW/g)** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☒ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 Test Configuration ☐ With Holster ☒ Without Holster
8 Body SAR was tested under RC3/SO32 FCH only.
9 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
10 *SAR testing was performed at worst case SAR with Extended battery.
11 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.10 Measurement Results(PCS1900/EVDO Body-worn SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Battery	Separation Distance	SAR(mW/g)
MHz	Channel							
1 880.00	600 (Mid)	PCS1900	24.01	-0.077	Rear	Standard	1.0 cm	0.758
1 880.00	600 (Mid)	PCS1900	24.01	0.128	Front	Standard	1.0 cm	0.373
1 880.00	600 (Mid)	PCS1900	24.01	-0.135	Rear	Extended	1.0 cm	*0.392
1 880.00	600 (Mid)	PCS1900	24.01	-0.157	Rear	Wireless charging	1.0 cm	**0.448
1 880.00	600 (Mid)	EVDO	24.06	0.095	Rear	Standard	1.0 cm	0.347
1 880.00	600 (Mid)	EVDO	24.06	0.09	Front	Standard	1.0 cm	0.215
1 880.00	600 (Mid)	EVDO	24.06	0.022	Left	Standard	1.0 cm	0.049
1 880.00	600 (Mid)	EVDO	24.06	0.116	Right	Standard	1.0 cm	0.025
1 880.00	600 (Mid)	EVDO	24.06	0.070	Top	Standard	1.0 cm	0.421
1 880.00	600 (Mid)	EVDO	24.06	-0.051	Rear	Extended	1.0 cm	*0.229
1 880.00	600 (Mid)	EVDO	24.06	-0.101	Rear	Wireless charging	1.0 cm	**0.239
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						**Body 1.6 W/kg (mW/g)** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☐ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 Test Configuration ☐ With Holster ☒ Without Holster
8 Body SAR was tested under RC3/SO32 FCH only.
9 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
10 *SAR testing was performed at worst case SAR with Extended battery.
11 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.11 Measurement Results (GSM850 Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Battery	Separation Distance	SAR(mW/g)
MHz	Channel							
836.6	190 (Mid)	GPRS 2Tx	31.41	-0.083	Rear	Standard	1.0 cm	0.472
836.6	190 (Mid)	GPRS 2Tx	31.41	-0.082	Front	Standard	1.0 cm	0.453
836.6	190 (Mid)	GPRS 2Tx	31.41	0.096	Left	Standard	1.0 cm	0.431
836.6	190 (Mid)	GPRS 2Tx	31.41	-0.078	Right	Standard	1.0 cm	0.351
836.6	190 (Mid)	GPRS 2Tx	31.41	0.029	Bottom	Standard	1.0 cm	0.174
836.6	190 (Mid)	GPRS 2Tx	31.41	-0.065	Rear	Extended	1.0 cm	*0.434
836.6	190 (Mid)	GPRS 2Tx	31.41	-0.021	Rear	Wireless charging	1.0 cm	**0.445
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						**Body 1.6 W/kg (mW/g)** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-body position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☒ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 Test Configuration ☐ With Holster ☒ Without Holster
8 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
9 For body SAR testing, the EUT was set in GPRS multi-slot class10 with 2uplink slots for GSM850 due to maximum source-based time-averaged output power.
According to the KDB 941225 D03 SAR test reduction GSM/GPRS/EDGE, the maximum output power configuration were chosen for Body SAR testing.
10 *SAR testing was performed at worst case SAR with Extended battery.
11 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.12 Measurement Results (GSM1900 Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Battery	Separation Distance	SAR(mW/g)
MHz	Channel							
1 880.0	661 (Mid)	GPRS 2Tx	28.43	0.075	Rear	Standard	1.0 cm	0.580
1 880.0	661 (Mid)	GPRS 2Tx	28.43	0.06	Front	Standard	1.0 cm	0.319
1 880.0	661 (Mid)	GPRS 2Tx	28.43	-0.014	Left	Standard	1.0 cm	0.05
1 880.0	661 (Mid)	GPRS 2Tx	28.43	0.187	Right	Standard	1.0 cm	0.061
1 880.0	661 (Mid)	GPRS 2Tx	28.43	-0.038	Bottom	Standard	1.0 cm	0.598
1 880.0	661 (Mid)	GPRS 2Tx	28.43	0.099	Rear	Extended	1.0 cm	*0.282
1 880.0	661 (Mid)	GPRS 2Tx	28.43	0.004	Rear	Wireless charging	1.0 cm	**0.320
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						**Body 1.6 W/kg (mW/g)** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-body position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☒ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 Test Configuration ☐ With Holster ☒ Without Holster
8 Justification for reduced test configurations: per FCC/OET Supplement C (July, 2001), if the SAR measured at the middle channel for each test configuration (Left, right, cheek/touch, tilt/ear, extended and retracted) is at least 3.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).
9 For body SAR testing, the EUT was set in GPRS multi-slot class10 with 2uplink slots for GSM1900 due to maximum source-based time-averaged output power.
According to the KDB 941225 D03 SAR test reduction GSM/GPRS/EDGE, the maximum output power configuration were chosen for Body SAR testing.
10 *SAR testing was performed at worst case SAR with Extended battery.
11 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.13 Measurement Results (LTE Band13 QPSK Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	SAR(mW/g)	MPR
MHz	Channel									
782	23230	QPSK	21.90	0.067	Rear	25	12	1.0 cm	0.283	1
782	23230	QPSK	22.98	-0.009	Rear	1	0	1.0 cm	0.428	0
782	23230	QPSK	22.97	0.025	Rear	1	49	1.0 cm	0.370	0
782	23230	QPSK	21.90	-0.022	Front	25	12	1.0 cm	0.196	1
782	23230	QPSK	22.98	-0.051	Front	1	0	1.0 cm	0.296	0
782	23230	QPSK	22.97	-0.144	Front	1	49	1.0 cm	0.281	0
782	23230	QPSK	21.90	0.129	Left	25	12	1.0 cm	0.128	1
782	23230	QPSK	22.98	-0.076	Left	1	0	1.0 cm	0.127	0
782	23230	QPSK	22.97	-0.130	Left	1	49	1.0 cm	0.220	0
782	23230	QPSK	21.90	0.085	Right	25	12	1.0 cm	0.298	1
782	23230	QPSK	22.98	-0.049	Right	1	0	1.0 cm	0.417	0
782	23230	QPSK	22.97	-0.039	Right	1	49	1.0 cm	0.420	0
782	23230	QPSK	21.90	0.022	Top	25	12	1.0 cm	0.239	1
782	23230	QPSK	22.98	-0.059	Top	1	0	1.0 cm	0.321	0
782	23230	QPSK	22.97	0.019	Top	1	49	1.0 cm	0.365	0
782	23230	QPSK	21.90	0.011	Rear	1	49	1.0 cm	*0.338	0
782	23230	QPSK	22.98	-0.096	Rear	1	49	1.0 cm	**0.348	0
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								**Body 1.6 W/kg (mW/g) ** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☒Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 KDB 941225 D05 SAR for LTE Devices v01 was followed.
- QPSK with 50% RB is required for the largest channel Bandwidth.
- QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
- 16QAM with 50% RB is required for the largest channel Bandwidth.
- 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
- 100% RB allocation is not required since SAR is not > 1.45 W/kg.

8 *SAR testing was performed at worst case SAR with Extended battery.
9 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.14 Measurement Results (LTE Band13 16QAM Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	RB Size	RB Offset	Separation Distance	SAR(mW/g)	MPR
MHz	Channel									
782	23230	16QAM	20.79	-0.009	Rear	25	12	1.0 cm	0.233	2
782	23230	16QAM	21.81	-0.018	Rear	1	0	1.0 cm	0.326	1
782	23230	16QAM	21.82	0.040	Rear	1	49	1.0 cm	0.287	1
782	23230	16QAM	20.79	0.072	Front	25	12	1.0 cm	0.159	2
782	23230	16QAM	21.81	-0.003	Front	1	0	1.0 cm	0.233	1
782	23230	16QAM	21.82	0.108	Front	1	49	1.0 cm	0.214	1
782	23230	16QAM	20.79	0.020	Left	25	12	1.0 cm	0.123	2
782	23230	16QAM	21.81	-0.079	Left	1	0	1.0 cm	0.179	1
782	23230	16QAM	21.82	0.035	Left	1	49	1.0 cm	0.171	1
782	23230	16QAM	20.79	0.020	Right	25	12	1.0 cm	0.232	2
782	23230	16QAM	21.81	0.006	Right	1	0	1.0 cm	0.316	1
782	23230	16QAM	21.82	0.083	Right	1	49	1.0 cm	0.314	1
782	23230	16QAM	20.79	0.017	Top	25	12	1.0 cm	0.181	2
782	23230	16QAM	21.81	-0.046	Top	1	0	1.0 cm	0.256	1
782	23230	16QAM	21.82	0.094	Top	1	49	1.0 cm	0.281	1
\ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								**Body 1.6 W/kg (mW/g) Averaged over 1 gram**		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☐ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☐ Manual Test cord ☒ Base Station Simulator
7 KDB 941225 D05 SAR for LTE Devices v01 was followed.
- QPSK with 50% RB is required for the largest channel Bandwidth.
- QPSK with 1 RB for both channel edges are required for the largest channel Bandwidth.
- 16QAM with 50% RB is required for the largest channel Bandwidth.
- 16QAM with 1 RB for both channel edges are required for the largest channel Bandwidth.
- 100% RB allocation is not required since SAR is not > 1.45 W/kg.

12.15 Measurement Results (802.11b/g/n Hotspot SAR)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Battery	Separation Distance	Data Rate	SAR(mW/g)
MHz	Channel								
2 412	1(Low)	802.11b	16.97	0.09	Rear	Standard	1.0 cm	1 Mbps	0.184
2 412	1(Low)	802.11b	16.97	-0.021	Front	Standard	1.0 cm	1 Mbps	0.057
2 412	1(Low)	802.11b	16.97	0.096	Left	Standard	1.0 cm	1 Mbps	0.00278
2 412	1(Low)	802.11b	16.97	-0.020	Rear	Extended	1.0 cm	1 Mbps	*0.015
2 412	1(Low)	802.11b	16.97	-0.009	Rear	Wireless charging	1.0 cm	1 Mbps	**0.147
ANSI/ IEEE C95.1 1992 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							**Body 1.6 W/kg (mW/g)** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☐ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☒ Manual Test code ☐ Base Station Simulator
7 IEEE 802.11g(including 802.11n) SAR testing is required when the conducted powers are equal to or greater than 0.25 dB Than the conducted powers in IEEE 802.11b.
8 For 2.4GHz WLAN, Highest average power channel for the lowest data rate was selected for SAR evaluation based on KDB 248227. Other channels are not necessary because 1g-average SAR < 0.8 W/Kg and peak SAR < 1.6W/Kg per KDB 248227.
9 *SAR testing was performed at worst case SAR with Extended battery.
10 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

12.16 Measurement Results (802.11a/n 5GHz Body-Worn)

Frequency		Modulation	Conducted Power (dBm)	Power Drift (dB)	Configuration	Separation Distance	Data Rate	SAR(mW/g)
MHz	Channel							
5 240	48	802.11a	11.55	0.06	Rear	1.0 cm	6Mbps	0.015
5 240	48	802.11a	11.55	-0.043	Front	1.0 cm	6Mbps	0.00199
5 240	48	802.11a	11.55	0.086	Extended	1.0 cm	6Mbps	*0.00741
5 240	48	802.11a	11.55.	0.07	Wireless charging	1.0 cm	6Mbps	**0.00732
5 260	52	802.11a	11.63.	0.02	Rear	1.0 cm	6Mbps	0.012
5 260	52	802.11a	11.63.	0.03	Front	1.0 cm	6Mbps	0.00292
5 260	52	802.11a	11.63.	-0.04	Extended	1.0 cm	6Mbps	*0.00699
5 260	52	802.11a	11.63.	-0.06	Wireless charging	1.0 cm	6Mbps	*0.00652
5 600	120	802.11a	13.76	0.05	Rear	1.0 cm	6Mbps	0.181
5 600	120	802.11a	13.76	0.009	Front	1.0 cm	6Mbps	0.02
5 600	120	802.11a	13.76	0.019	Extended	1.0 cm	6Mbps	*0.016
5 600	120	802.11a	13.76	0.02	Wireless charging	1.0 cm	6Mbps	**0.168
5 785	157	802.11a	11.67	0.03	Rear	1.0 cm	6Mbps	0.246
5 785	157	802.11a	11.67	-0.031	Front	1.0 cm	6Mbps	0.038
5 785	157	802.11a	11.67	0.04	Extended	1.0 cm	6Mbps	*0.186
5 785	157	802.11a	11.67	0.032	Wireless charging	1.0 cm	6Mbps	**0.175
ANSI/ IEEE C95.1 - 1992– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population						**Body 1.6 W/kg (mW/g)** Averaged over 1 gram		

NOTES:

1 The test data reported are the worst-case SAR value with the antenna-head position set in a typical configuration. Test procedures used are according to FCC/OET Bulletin 65, Supplement C [July 2001].
2 All modes of operation were investigated and the worst-case are reported.
3 Measured Depth of Simulating Tissue is 15.0 cm ± 0.2 cm.
4 Tissue parameters and temperatures are listed on the SAR plot.
5 Battery Type ☒ Standard ☐ Extended ☐ Slim
Batteries are fully charged for all readings.
6 Test Signal Call Mode ☒ Manual Test cord ☐ Base Station Simulator
7 Highest average RF output power channel for the lowest data rate were selected for SAR testing. IEEE 802.11(including 802.11n) SAR testing is required when the conducted powers are equal to or greater than 0.25 dB than the conducted powers in IEEE 802.11a.
8 When Hotspot is enabled, 5 GHz Bands are disabled
9 *SAR testing was performed at worst case SAR with Extended battery.
10 **SAR testing was performed at worst case SAR with Wireless charging battery cover.

13. Scaled SAR Values to the Maximum tune-up tolerances

The following measured results were scaled to the maximum tune-up tolerances,according to the output power of the channel tested for the highest measured results in each frequency band

Test Configuration		Mode	Ch #	Freq (MHz)	Power(dBm)		SAR(W/kg)	
					Max. Tune-up limit	Measured	Measured	Scaled
HEAD	Right Touch	CDMA835	384	836.52	24.4	23.89	0.302	0.340
BODY	Rear	CDMA835	384	836.52	24.4	23.88	0.384	0.433
HEAD	Left Touch	EVDO835	384	836.52	24.4	24.19	0.691	0.725
BODY	Rear	EVDO835	384	836.52	24.4	24.19	0.334	0.351
HEAD	Right Touch	PCS1900	600	1880.0	24.4	24.11	0.171	0.183
BODY	Rear	PCS1900	600	1880.0	24.4	24.01	0.758	0.829
HEAD	Left Tilt	EVDO1900	1175	1908.75	24.4	24.29	1.03	1.056
BODY	Front	EVDO1900	600	1880.0	24.4	24.06	0.347	0.375
HEAD	Right Touch	GSM850	190	836.6	33.0	32.50	0.237	0.266
BODY	Front	GSM850(GPRS)	190	836.6	31.0	31.41	0.472	0.429
HEAD	Left Touch	GSM1900	661	1880.0	30	29.54	0.061	0.068
BODY	Front	GSM1900(GPRS)	661	1880.0	28	28.43	0.598	0.542
HEAD	Left Touch	LTE 13	23230	782	23	22.97	0.902	0.908
BODY	Rear	LTE 13	23230	782	23	22.98	0.428	0.430
HEAD	Left Touch	2.4 GHz WiFi	1	2412	17	16.97	0.285	0.287
BODY	Rear	2.4 GHz WiFi	1	2412	17	16.97	0.184	0.185
HEAD	Right Touch	5 GHz WiFi	48	5240	13	11.55	0.145	0.202
BODY	Rear	5 GHz WiFi	157	5785	13	11.67	0.246	0.334

14. CONCLUSION

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 1992.

These measurements are taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests.

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Attachment 1. – SAR Test Plots

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

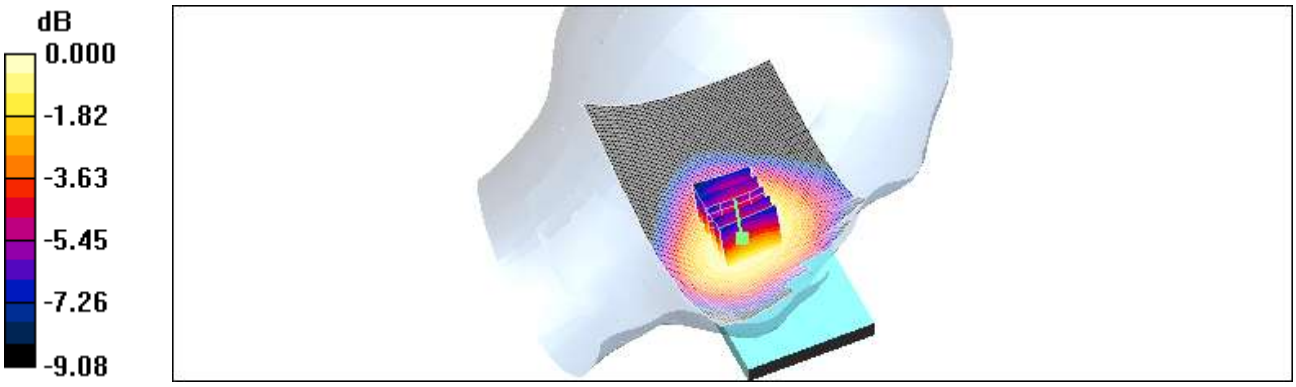
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Touch 1XRTT 384/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.269 mW/g

Left Touch 1XRTT 384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.41 V/m; Power Drift = -0.070 dB
Peak SAR (extrapolated) = 0.322 W/kg
SAR(1 g) = 0.256 mW/g; SAR(10 g) = 0.194 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.269 mW/g



0 dB = 0.269mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

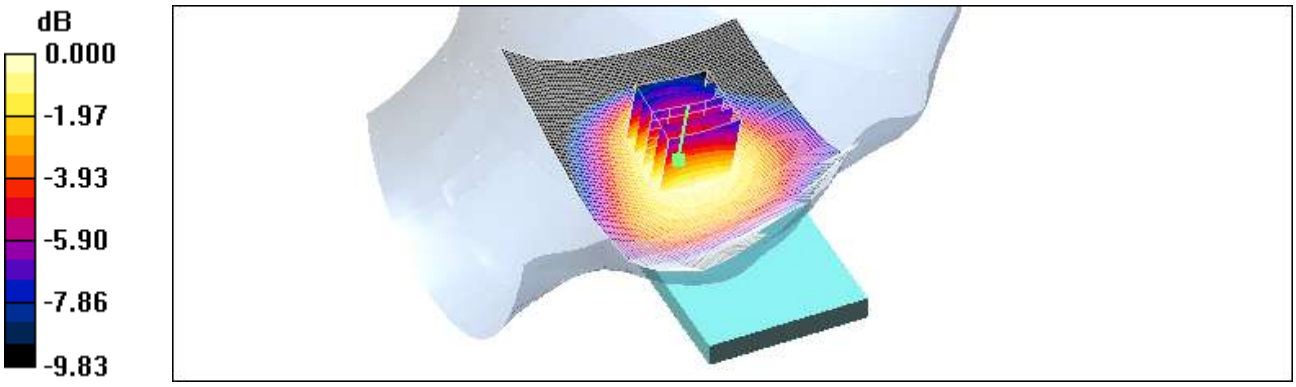
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Tilt 1XRTT 384/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.187 mW/g

Left Tilt 1XRTT 384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.8 V/m; Power Drift = -0.140 dB
Peak SAR (extrapolated) = 0.219 W/kg
SAR(1 g) = 0.176 mW/g; SAR(10 g) = 0.133 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.185 mW/g



0 dB = 0.185mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

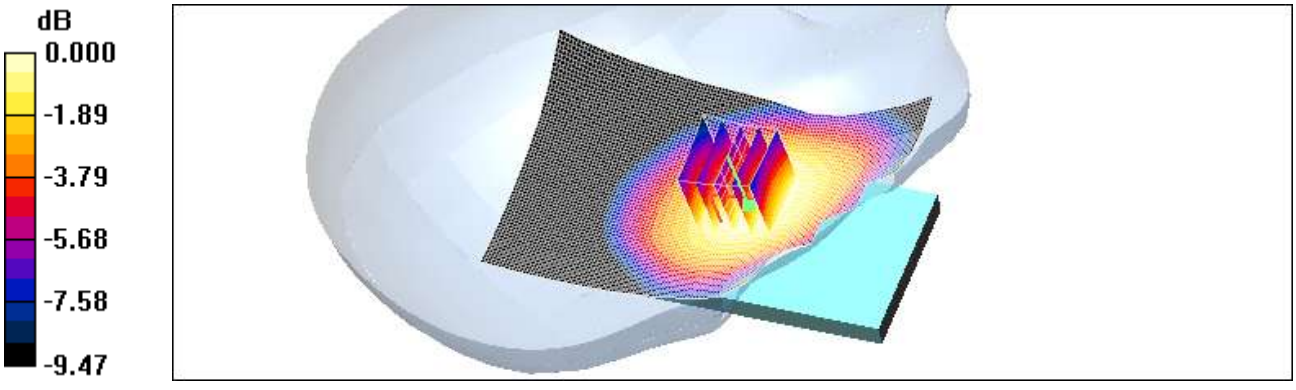
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right Touch 1XRTT 384/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.321 mW/g

Right Touch 1XRTT 384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.42 V/m; Power Drift = 0.055 dB
Peak SAR (extrapolated) = 0.386 W/kg
SAR(1 g) = 0.302 mW/g; SAR(10 g) = 0.230 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.317 mW/g



0 dB = 0.317mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

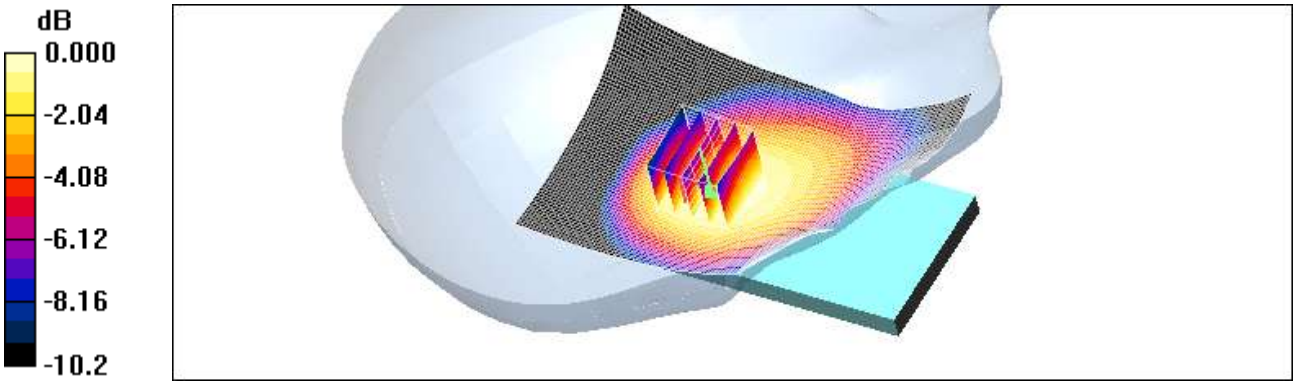
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right Tilt 1XRTT 384/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.240 mW/g

Right Tilt 1XRTT 384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.5 V/m; Power Drift = 0.053 dB
Peak SAR (extrapolated) = 0.281 W/kg
SAR(1 g) = 0.227 mW/g; SAR(10 g) = 0.172 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.239 mW/g



0 dB = 0.239mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012
Option extended Battery

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

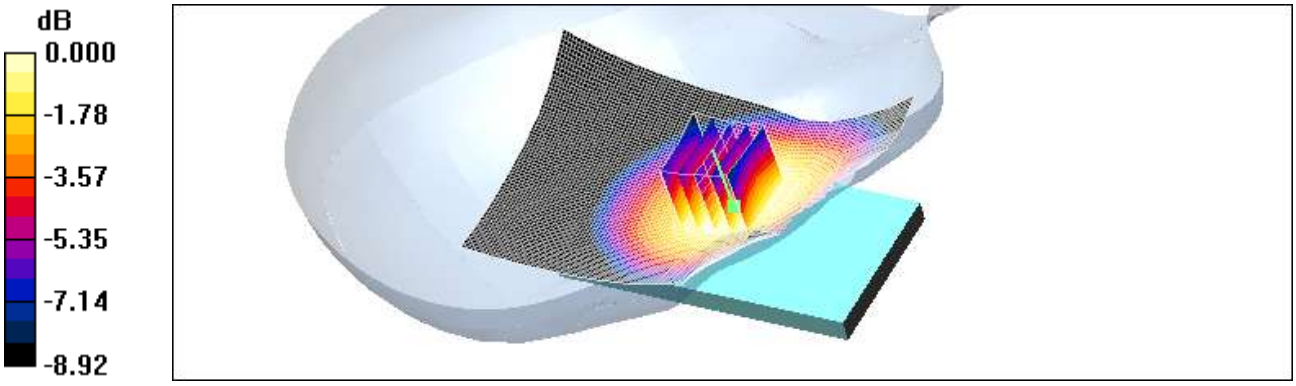
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right Touch 1XRTT 384 Extended Battery/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.315 mW/g

Right Touch 1XRTT 384 Extended Battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.38 V/m; Power Drift = 0.099 dB
Peak SAR (extrapolated) = 0.383 W/kg
SAR(1 g) = 0.300 mW/g; SAR(10 g) = 0.229 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.311 mW/g



0 dB = 0.311mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.4 ℃
Test Date:	May 28, 2012
Option	Wireless chager cover

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

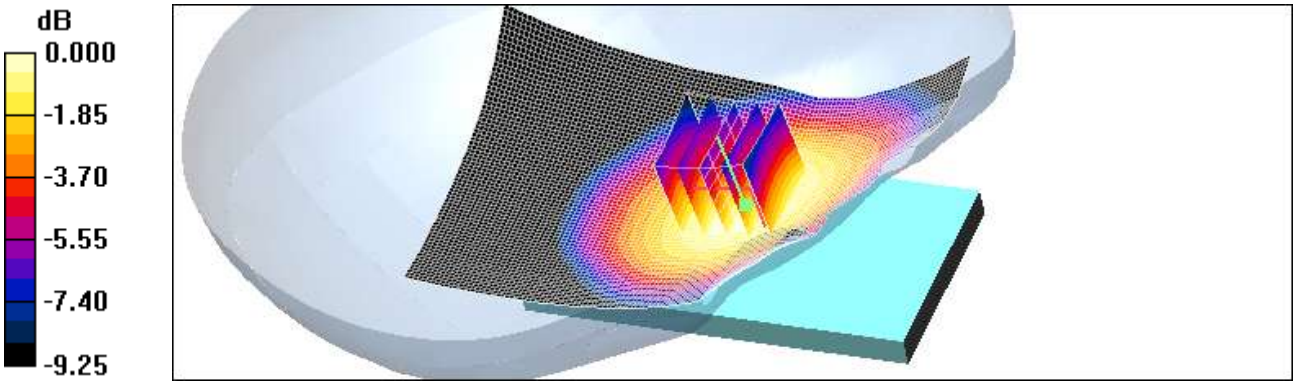
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right Touch 1XRTT 384 Wireless charger cover/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.310 mW/g

Right Touch 1XRTT 384 Wireless charger cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.55 V/m; Power Drift = 0.130 dB
Peak SAR (extrapolated) = 0.375 W/kg
SAR(1 g) = 0.298 mW/g; SAR(10 g) = 0.225 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.316 mW/g



0 dB = 0.316mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

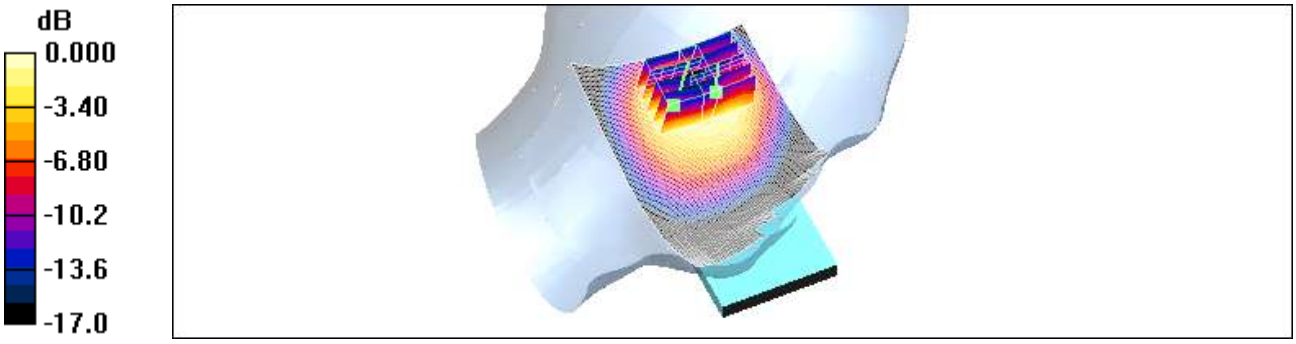
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Touch EVDO 384 /Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.834 mW/g

Left Touch EVDO 384 /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.3 V/m; Power Drift = 0.181 dB
Peak SAR (extrapolated) = 1.68 W/kg
SAR(1 g) = 0.691 mW/g; SAR(10 g) = 0.345 mW/g
Maximum value of SAR (measured) = 0.766 mW/g

Left Touch EVDO 384 Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.3 V/m; Power Drift = 0.181 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 0.679 mW/g; SAR(10 g) = 0.339 mW/g
Maximum value of SAR (measured) = 0.759 mW/g



0 dB = 0.759mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

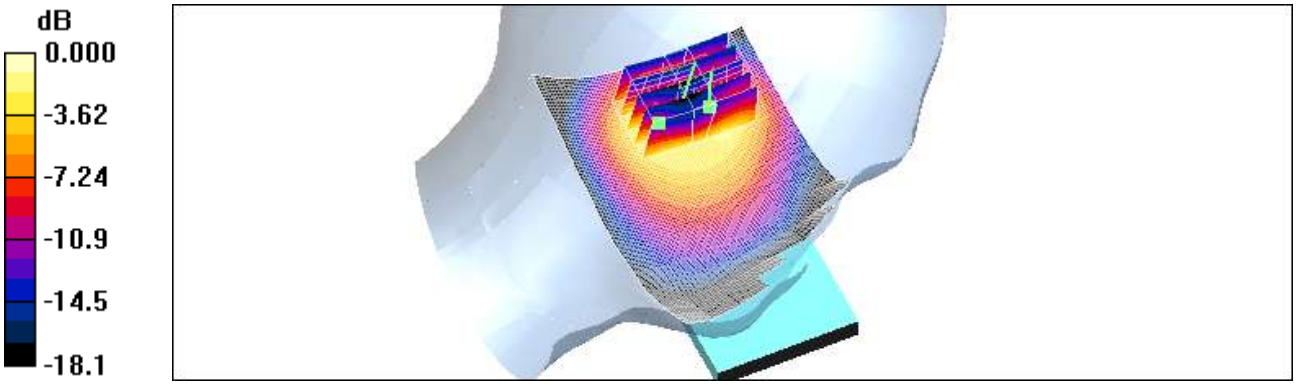
Left Tilt EVDO 384/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.658 mW/g

Left Tilt EVDO 384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.6 V/m; Power Drift = -0.109 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.572 mW/g; SAR(10 g) = 0.280 mW/g

Maximum value of SAR (measured) = 0.660 mW/g

Left Tilt EVDO 384/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.6 V/m; Power Drift = -0.109 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.583 mW/g; SAR(10 g) = 0.281 mW/g
Maximum value of SAR (measured) = 0.650 mW/g



0 dB = 0.650mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

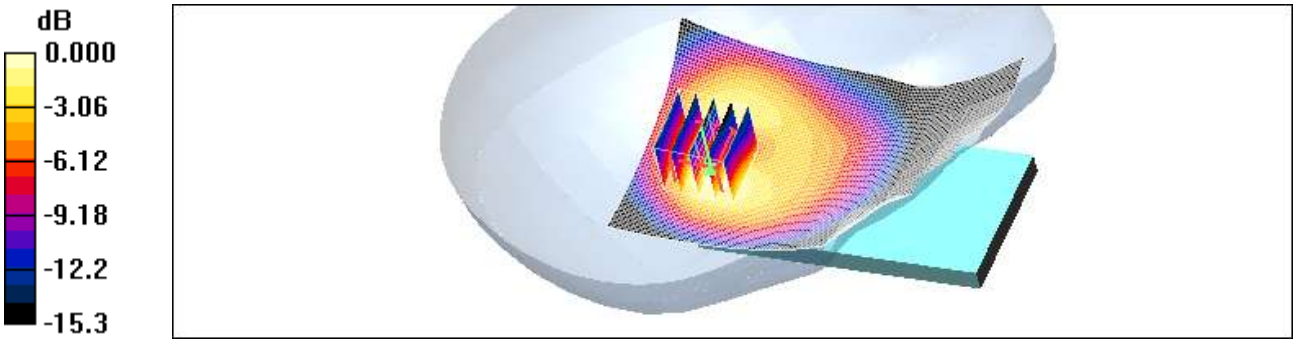
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right Touch EVDO 384/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.536 mW/g

Right Touch EVDO 384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.4 V/m; Power Drift = 0.021 dB
Peak SAR (extrapolated) = 1.03 W/kg
SAR(1 g) = 0.499 mW/g; SAR(10 g) = 0.265 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.536 mW/g



0 dB = 0.536mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

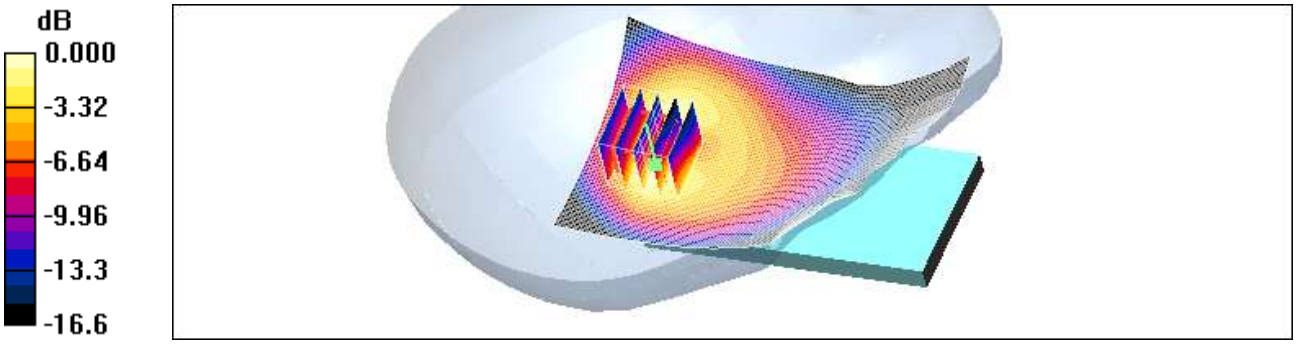
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right tilt EVDO 384/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.471 mW/g

Right tilt EVDO 384/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.4 V/m; Power Drift = -0.063 dB
Peak SAR (extrapolated) = 0.926 W/kg
SAR(1 g) = 0.440 mW/g; SAR(10 g) = 0.225 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.481 mW/g



0 dB = 0.481mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.4 ℃
Test Date:	May 28, 2012
Option	Extended Battery

DUT: ADR930LVW; Type: bar; Serial: #1

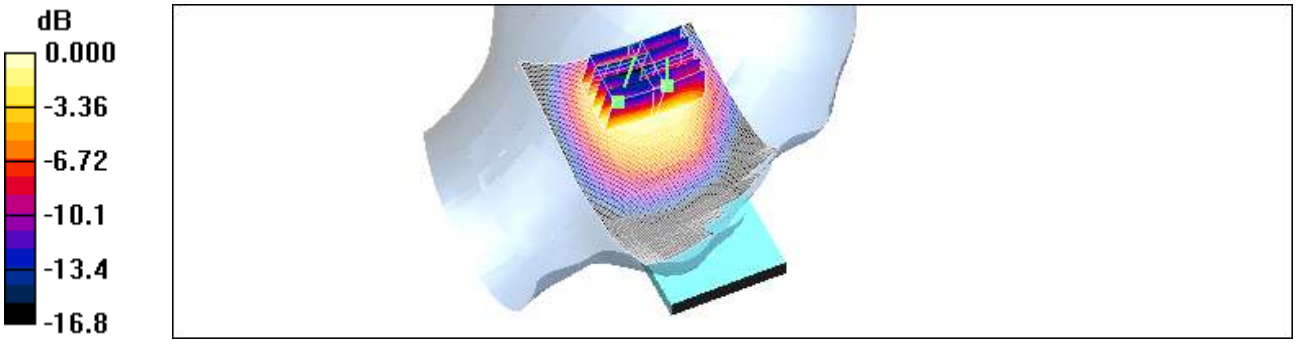
Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Touch EVDO 384 Extended Battery/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.831 mW/g

Left Touch EVDO 384 Extended Battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.7 V/m; Power Drift = 0.079 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.684 mW/g; SAR(10 g) = 0.347 mW/g
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.813 mW/g

Left Touch EVDO 384 Extended Battery/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.7 V/m; Power Drift = 0.079 dB
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 0.667 mW/g; SAR(10 g) = 0.328 mW/g
Maximum value of SAR (measured) = 0.733 mW/g



0 dB = 0.733mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.4 ℃
Test Date:	May 28, 2012
Option	Wireless charger cover

DUT: ADR930LVW; Type: bar; Serial: #1

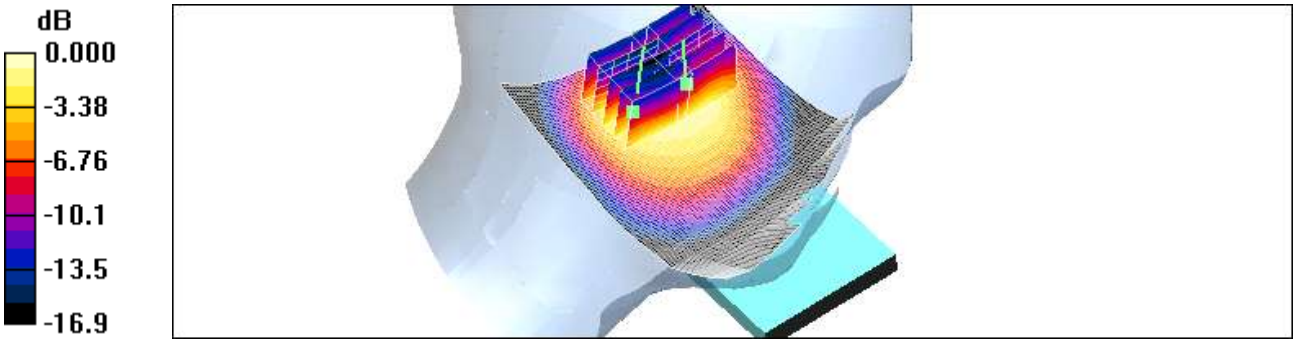
Communication System: CDMA 835MHz FCC; Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Touch EVDO 384 Wireless charger cover/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.800 mW/g
Left Touch EVDO 384 Wireless charger cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.4 V/m; Power Drift = 0.177 dB
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 0.680 mW/g; SAR(10 g) = 0.346 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.791 mW/g

Left Touch EVDO 384 Wireless charger cover/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.4 V/m; Power Drift = 0.177 dB
Peak SAR (extrapolated) = 1.53 W/kg
SAR(1 g) = 0.656 mW/g; SAR(10 g) = 0.323 mW/g
Maximum value of SAR (measured) = 0.737 mW/g



0 dB = 0.737mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

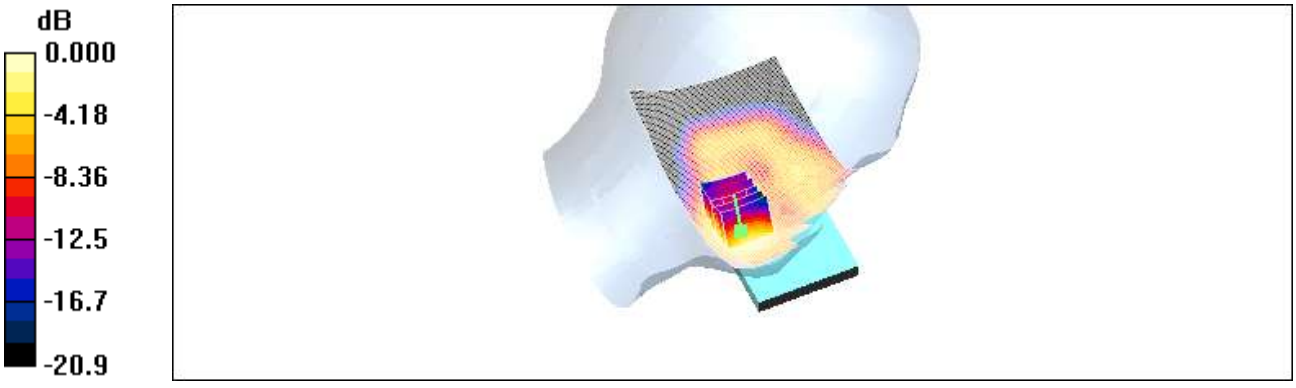
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Touch 1xRTT 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.156 mW/g

Left Touch 1xRTT 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.97 V/m; Power Drift = -0.059 dB
Peak SAR (extrapolated) = 0.250 W/kg
SAR(1 g) = 0.146 mW/g; SAR(10 g) = 0.084 mW/g
Maximum value of SAR (measured) = 0.161 mW/g



0 dB = 0.161mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

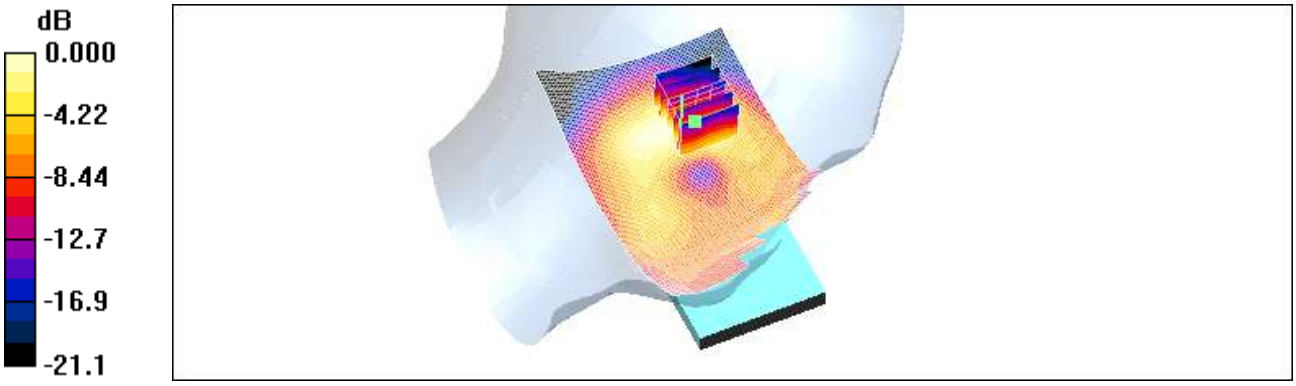
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Tilt 1xRTT 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.082 mW/g

Left Tilt 1xRTT 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.60 V/m; Power Drift = -0.021 dB
Peak SAR (extrapolated) = 0.122 W/kg
SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.037 mW/g
Maximum value of SAR (measured) = 0.073 mW/g



0 dB = 0.073mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

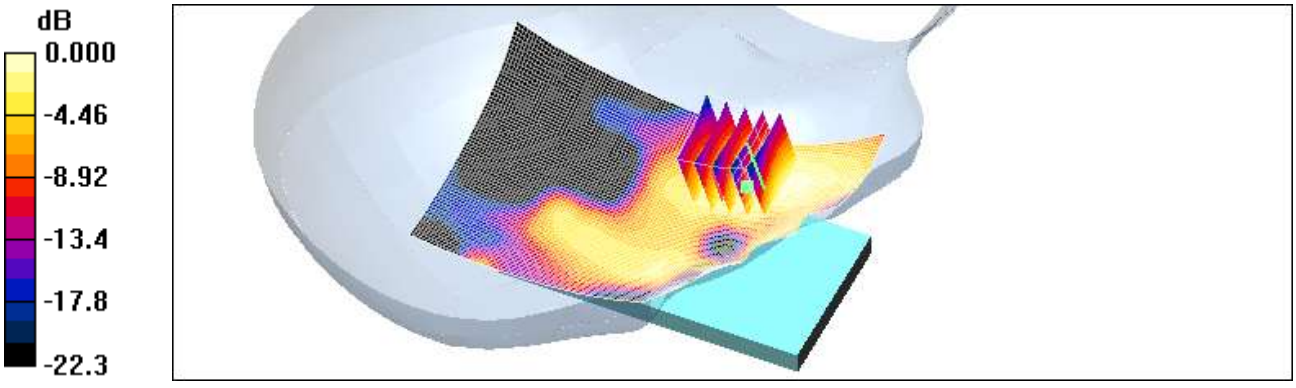
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Touch 1xRTT 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.189 mW/g

Right Touch 1xRTT 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.94 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.285 W/kg
SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.098 mW/g
Maximum value of SAR (measured) = 0.185 mW/g



0 dB = 0.185mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

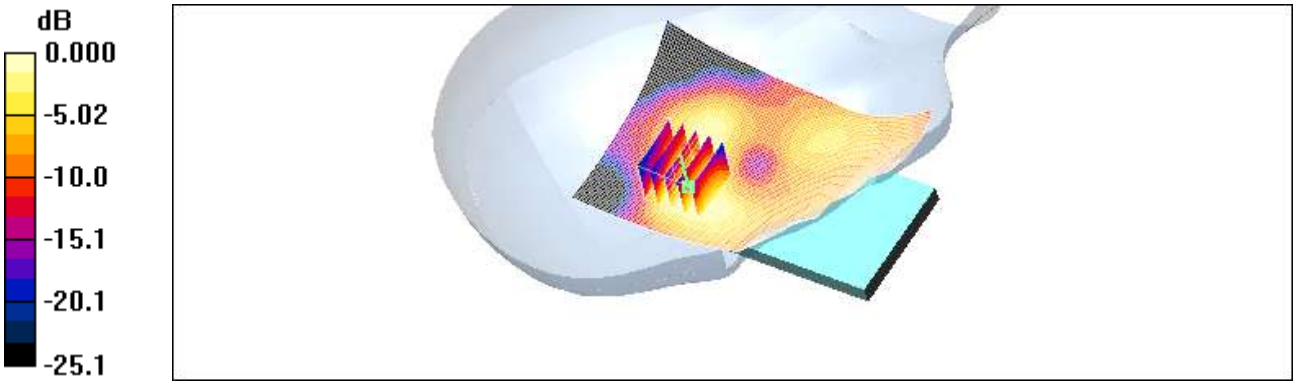
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Tilt 1xRTT 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.086 mW/g

Right Tilt 1xRTT 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.35 V/m; Power Drift = 0.042 dB
Peak SAR (extrapolated) = 0.121 W/kg
SAR(1 g) = 0.067 mW/g; SAR(10 g) = 0.037 mW/g
Maximum value of SAR (measured) = 0.071 mW/g



0 dB = 0.071mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.3 ℃
Test Date:	May 30, 2012
Option	Extended Battery

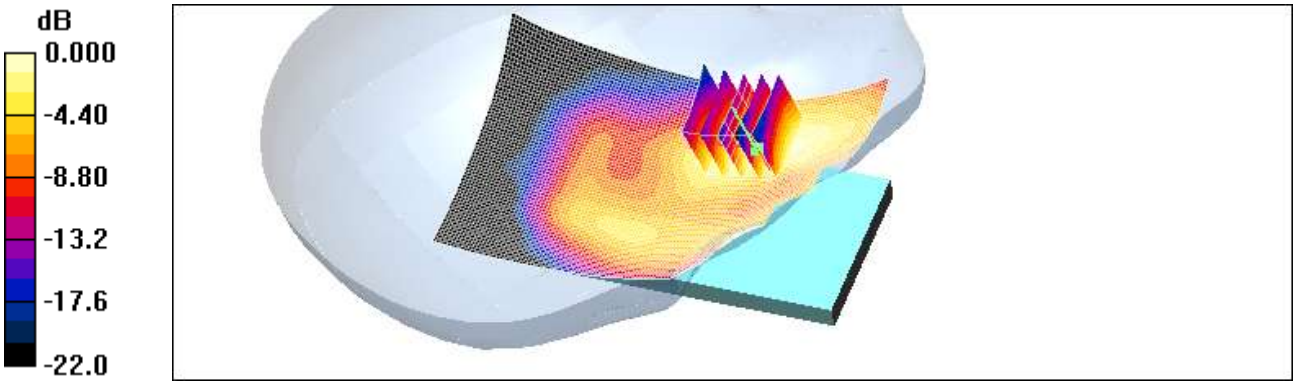
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Touch 1xRTT Extended Battery 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.190 mW/g

Right Touch 1xRTT Extended Battery 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.13 V/m; Power Drift = 0.037 dB
Peak SAR (extrapolated) = 0.278 W/kg
SAR(1 g) = 0.166 mW/g; SAR(10 g) = 0.094 mW/g
Maximum value of SAR (measured) = 0.183 mW/g



0 dB = 0.183mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.3 ℃
Test Date:	May 30, 2012
Option	Wireless charger cover

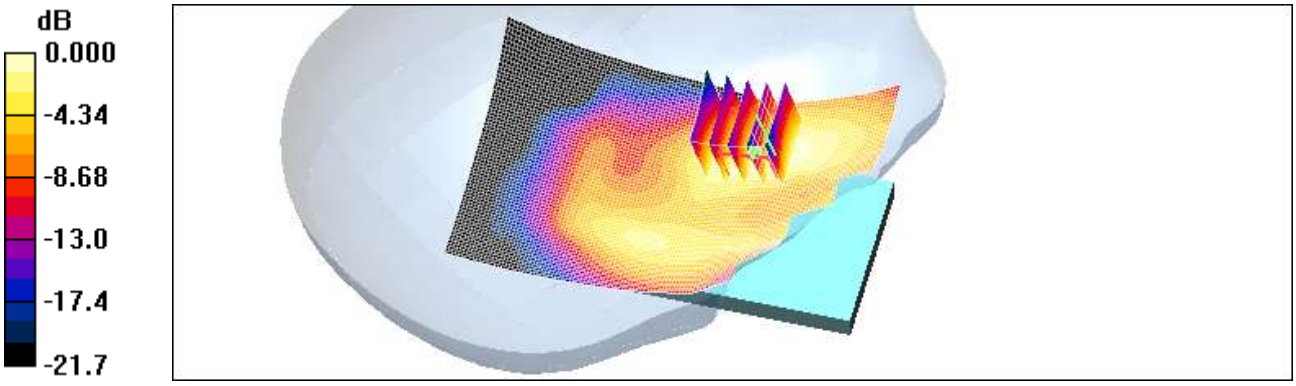
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Touch 1xRTT Wireless charger cover 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.193 mW/g

Right Touch 1xRTT Wireless charger cover 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.19 V/m; Power Drift = 0.072 dB
Peak SAR (extrapolated) = 0.272 W/kg
SAR(1 g) = 0.161 mW/g; SAR(10 g) = 0.091 mW/g
Maximum value of SAR (measured) = 0.176 mW/g



0 dB = 0.176mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.36 mho/m; ε_r = 41.1; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

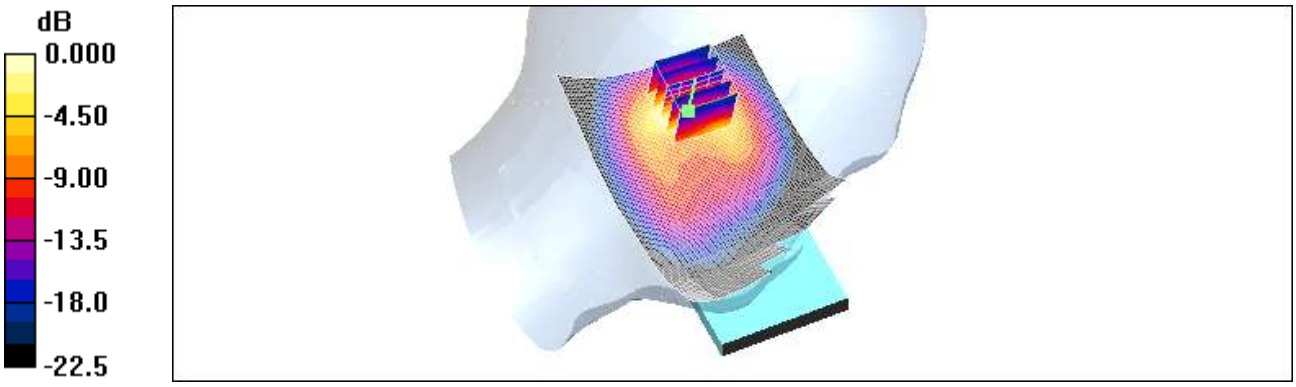
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Touch EVDO 25/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.03 mW/g

Left Touch EVDO 25/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.86 V/m; Power Drift = 0.032 dB
Peak SAR (extrapolated) = 1.93 W/kg
SAR(1 g) = 0.924 mW/g; SAR(10 g) = 0.431 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.07 mW/g



0 dB = 1.07mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

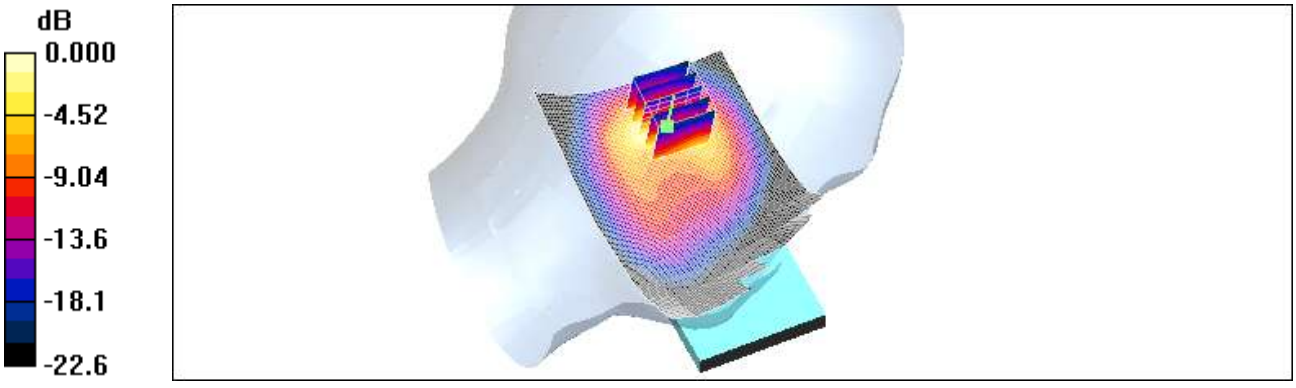
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Touch EVDO 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.03 mW/g

Left Touch EVDO 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.59 V/m; Power Drift = 0.087 dB
Peak SAR (extrapolated) = 1.87 W/kg
SAR(1 g) = 0.897 mW/g; SAR(10 g) = 0.421 mW/g
Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1908.75 MHz; σ = 1.41 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

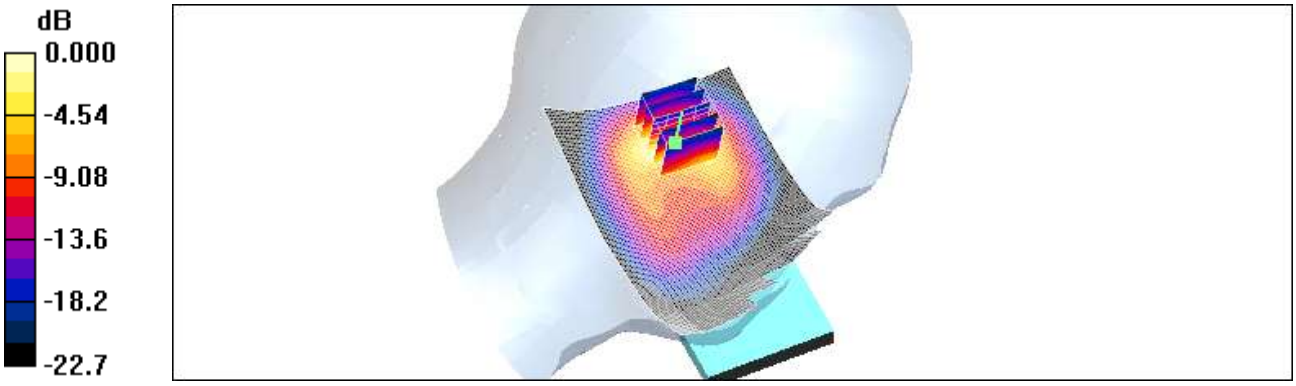
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Touch EVDO 1175/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.07 mW/g

Left Touch EVDO 1175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.37 V/m; Power Drift = 0.168 dB
Peak SAR (extrapolated) = 2.00 W/kg
SAR(1 g) = 0.943 mW/g; SAR(10 g) = 0.439 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.07 mW/g



0 dB = 1.07mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.36 mho/m; ε_r = 41.1; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

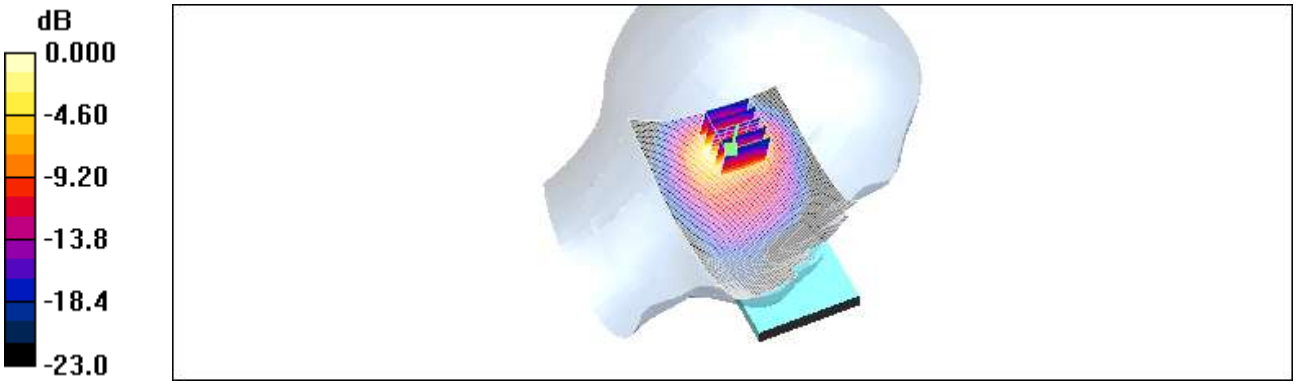
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Tilt EVDO 25/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.10 mW/g

Left Tilt EVDO 25/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.47 V/m; Power Drift = -0.109 dB
Peak SAR (extrapolated) = 2.08 W/kg
SAR(1 g) = 1 mW/g; SAR(10 g) = 0.463 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.18 mW/g



0 dB = 1.18mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

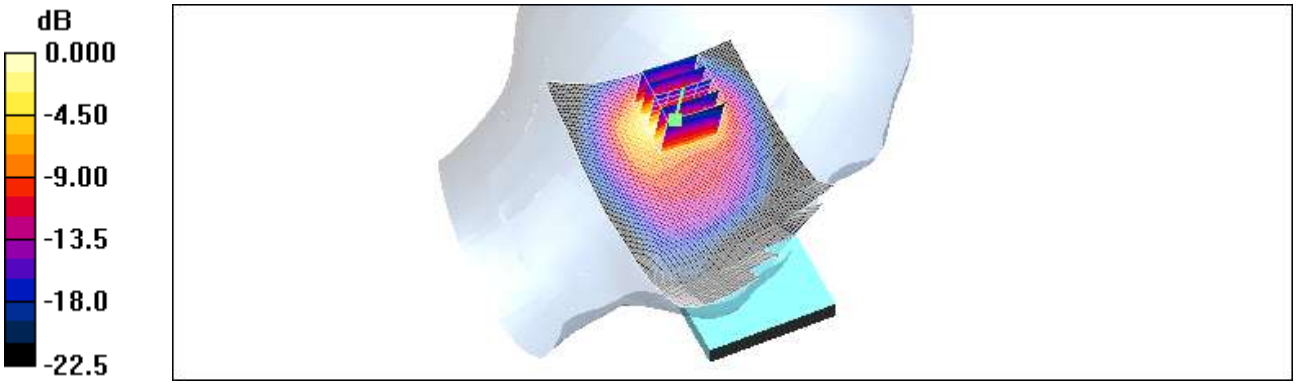
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Tilt EVDO 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.09 mW/g

Left Tilt EVDO 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.21 V/m; Power Drift = 0.104 dB
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 0.976 mW/g; SAR(10 g) = 0.455 mW/g
Maximum value of SAR (measured) = 1.10 mW/g



0 dB = 1.10mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1908.75 MHz; σ = 1.41 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

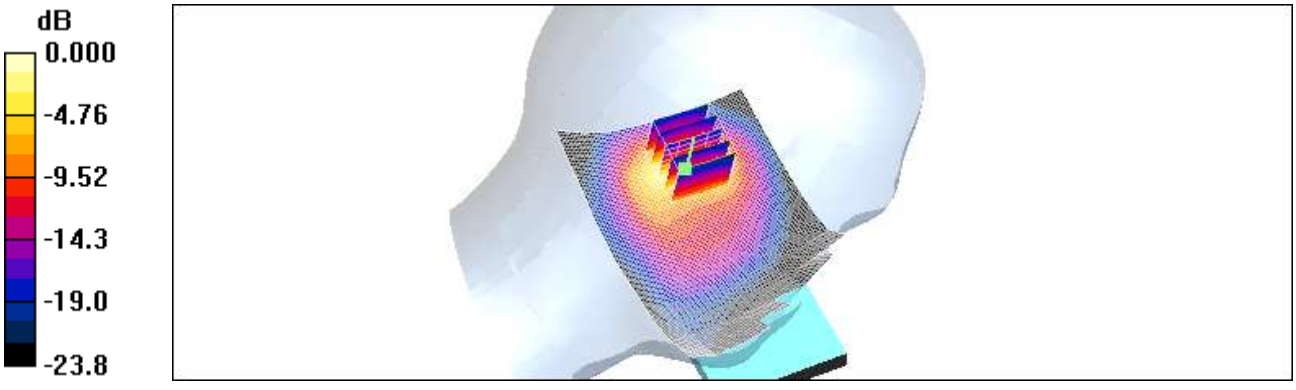
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Tilt EVDO 1175/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.16 mW/g

Left Tilt EVDO 1175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.28 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 2.20 W/kg
SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.467 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.18 mW/g



0 dB = 1.18mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

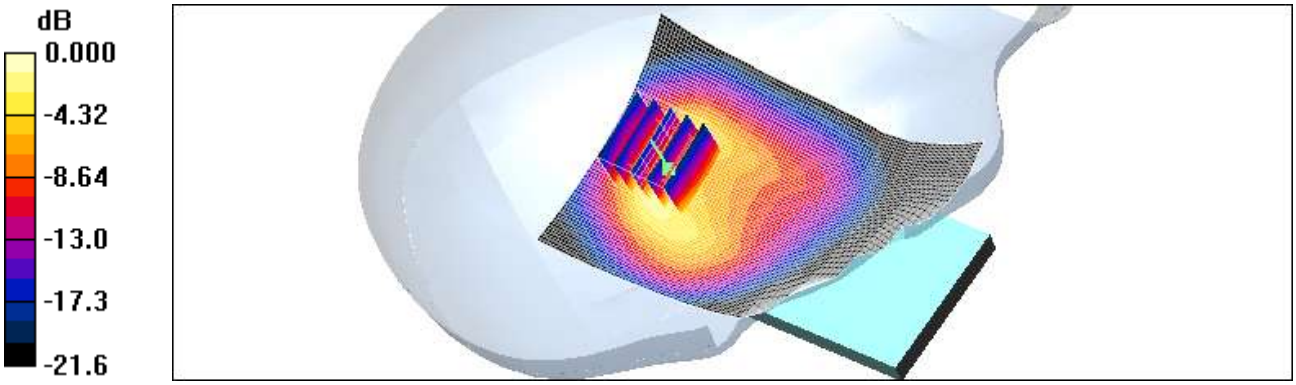
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Touch EVDO 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.868 mW/g

Right Touch EVDO 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.7 V/m; Power Drift = -0.151 dB
Peak SAR (extrapolated) = 1.59 W/kg
SAR(1 g) = 0.756 mW/g; SAR(10 g) = 0.357 mW/g
Maximum value of SAR (measured) = 0.888 mW/g



0 dB = 0.888mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.36 mho/m; ε_r = 41.1; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

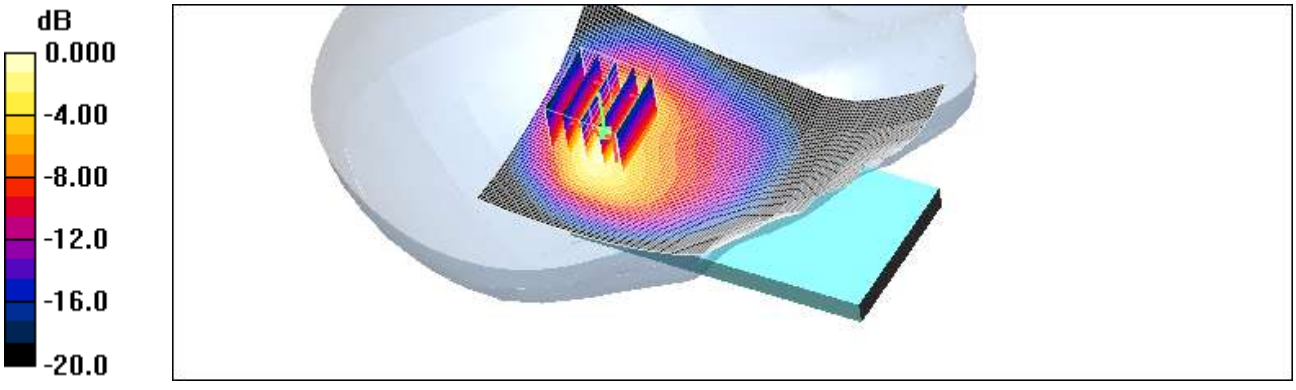
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Tilt EVDO 25/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.884 mW/g

Right Tilt EVDO 25/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.2 V/m; Power Drift = -0.040 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 0.802 mW/g; SAR(10 g) = 0.398 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.909 mW/g



0 dB = 0.909mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

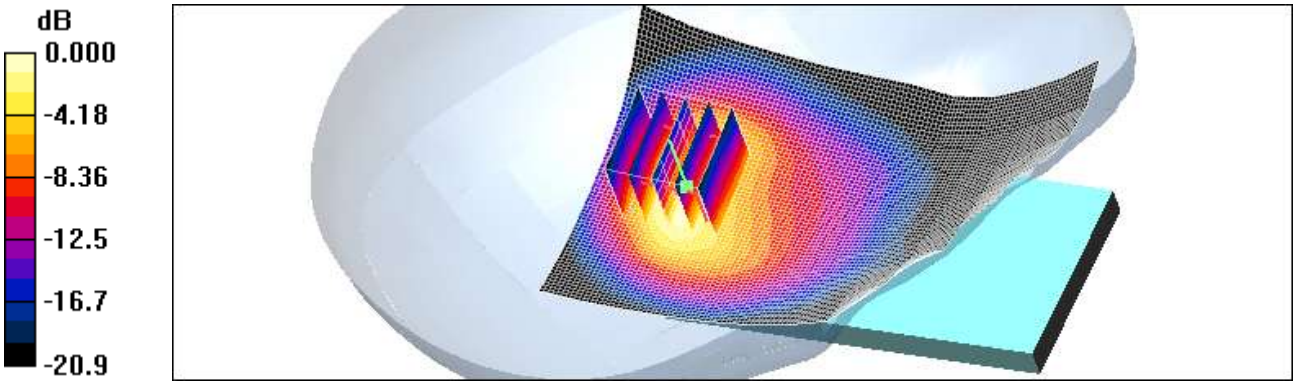
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Tilt EVDO 600/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.01 mW/g

Right Tilt EVDO 600/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.6 V/m; Power Drift = -0.037 dB
Peak SAR (extrapolated) = 1.71 W/kg
SAR(1 g) = 0.839 mW/g; SAR(10 g) = 0.407 mW/g
Maximum value of SAR (measured) = 0.956 mW/g



0 dB = 0.956mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: May 30, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1908.75 MHz; σ = 1.41 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

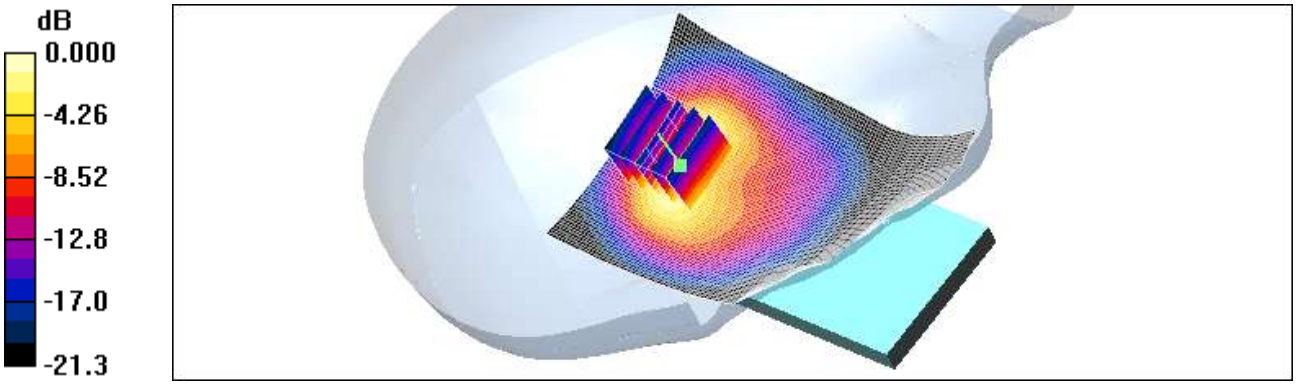
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Tilt EVDO 1175/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.902 mW/g

Right Tilt EVDO 1175/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.4 V/m; Power Drift = 0.117 dB
Peak SAR (extrapolated) = 1.65 W/kg
SAR(1 g) = 0.813 mW/g; SAR(10 g) = 0.394 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.918 mW/g



0 dB = 0.918mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.3 ℃
Test Date:	May 30, 2012
Option	Extended Battery

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1908.75 MHz; σ = 1.41 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

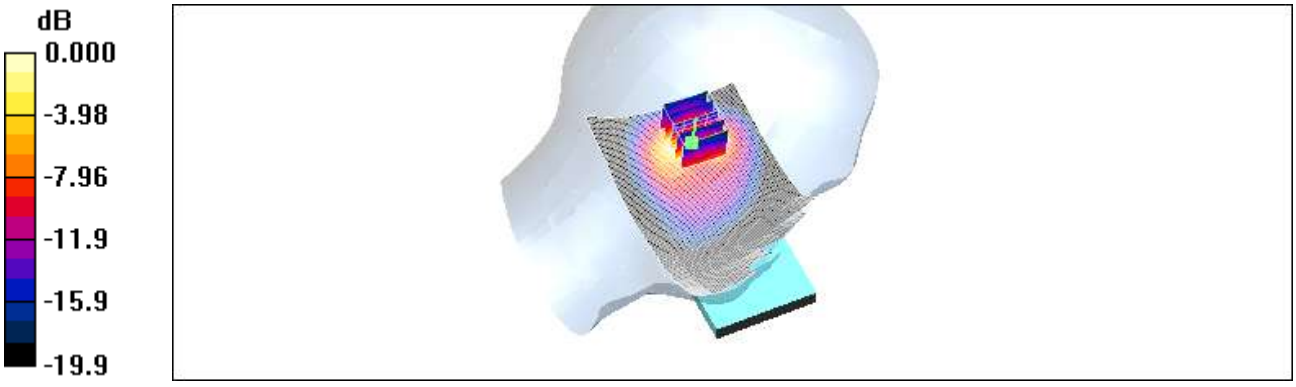
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Tilt EVDO 1175 Extended Battery/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.20 mW/g

Left Tilt EVDO 1175 Extended Battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.3 V/m; Power Drift = -0.019 dB
Peak SAR (extrapolated) = 1.99 W/kg
SAR(1 g) = 1.03 mW/g; SAR(10 g) = 0.488 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.19 mW/g



0 dB = 1.19mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.3 ℃
Test Date:	May 30, 2012
Option	Wireless charger cover

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: PCS 1900MHz FCC; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1908.75 MHz; σ = 1.41 mho/m; ε_r = 40.8; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

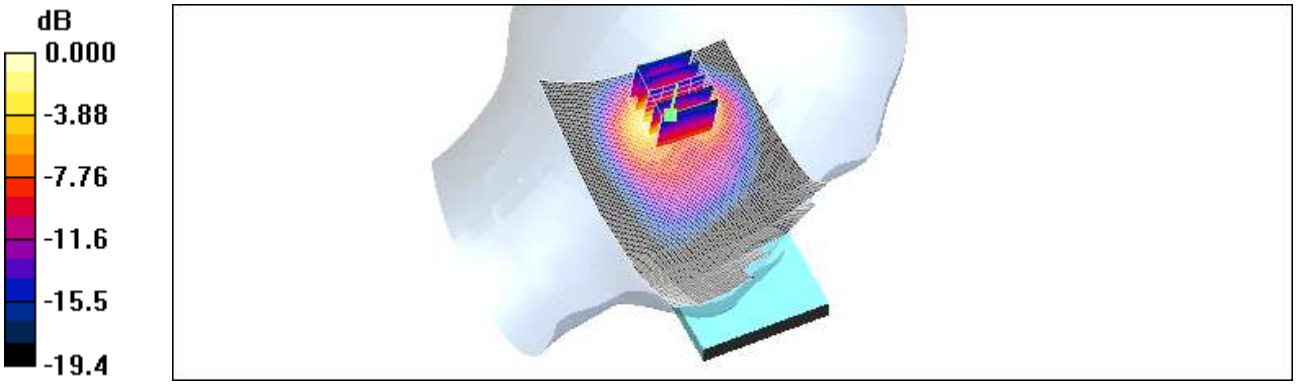
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Tilt EVDO 1175 Wireless charger cover/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.14 mW/g

Left Tilt EVDO 1175 Wireless charger cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.6 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.89 W/kg
SAR(1 g) = 0.996 mW/g; SAR(10 g) = 0.482 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.12 mW/g



0 dB = 1.12mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

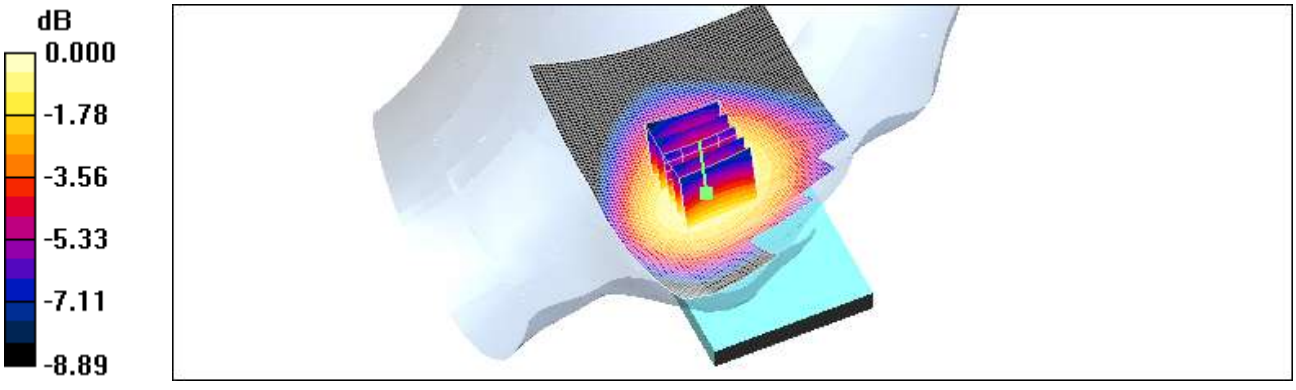
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left touch 190/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.240 mW/g

Left touch 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.0 V/m; Power Drift = -0.015 dB
Peak SAR (extrapolated) = 0.279 W/kg
SAR(1 g) = 0.224 mW/g; SAR(10 g) = 0.170 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.236 mW/g



0 dB = 0.236mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

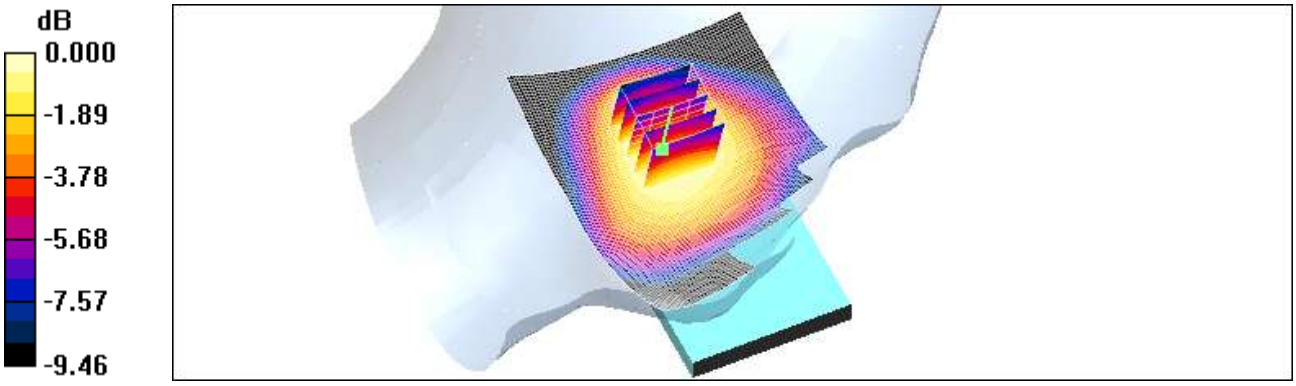
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left tilt 190/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.161 mW/g

Left tilt 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.9 V/m; Power Drift = -0.065 dB
Peak SAR (extrapolated) = 0.189 W/kg
SAR(1 g) = 0.152 mW/g; SAR(10 g) = 0.115 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.161 mW/g



0 dB = 0.161mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

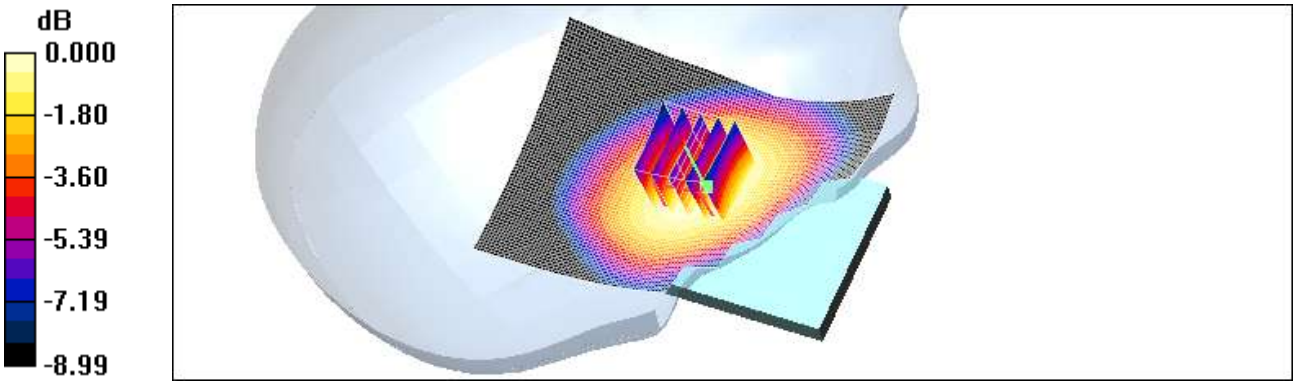
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right touch 190/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.252 mW/g

Right touch 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.5 V/m; Power Drift = -0.044 dB
Peak SAR (extrapolated) = 0.294 W/kg
SAR(1 g) = 0.237 mW/g; SAR(10 g) = 0.180 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.247 mW/g



0 dB = 0.247mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

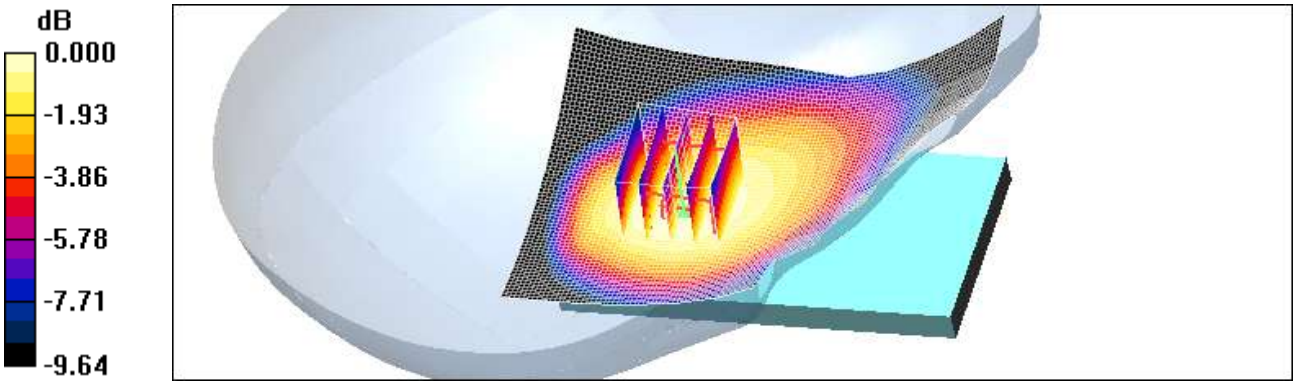
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right tilt 190/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.184 mW/g

Right tilt 190/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.7 V/m; Power Drift = -0.128 dB
Peak SAR (extrapolated) = 0.210 W/kg
SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.129 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.179 mW/g



0 dB = 0.179mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.2 ℃
Ambient Temperature: 21.4 ℃
Test Date: May 28, 2012
Option Extended Battery

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

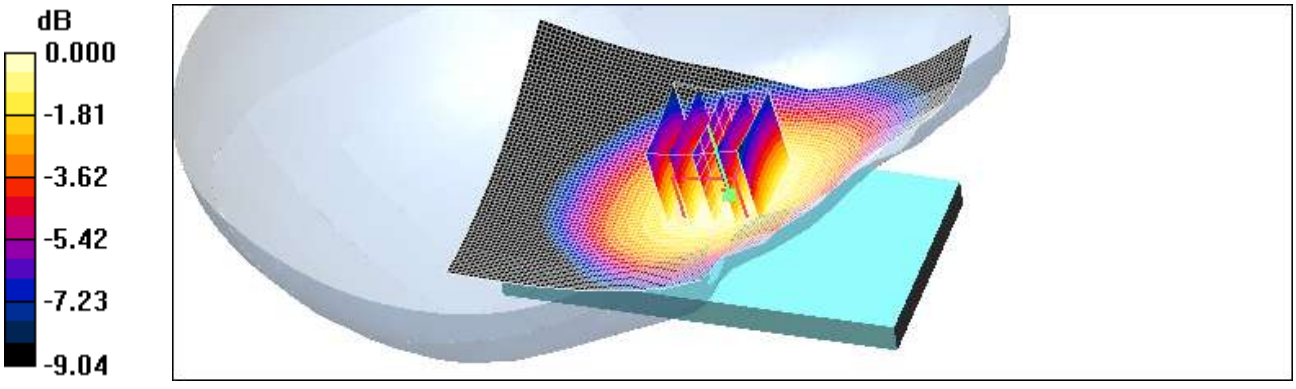
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right touch 190 Extended Battery/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.245 mW/g

Right touch 190 Extended Battery/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.4 V/m; Power Drift = -0.040 dB
Peak SAR (extrapolated) = 0.291 W/kg
SAR(1 g) = 0.230 mW/g; SAR(10 g) = 0.175 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.242 mW/g



0 dB = 0.242mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.4 ℃
Test Date:	May 28, 2012
Option	Wireless charger cover

DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 850; Frequency: 836.6 MHz;Duty Cycle: 1:8.3
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.875 mho/m; ε_r = 39.9; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

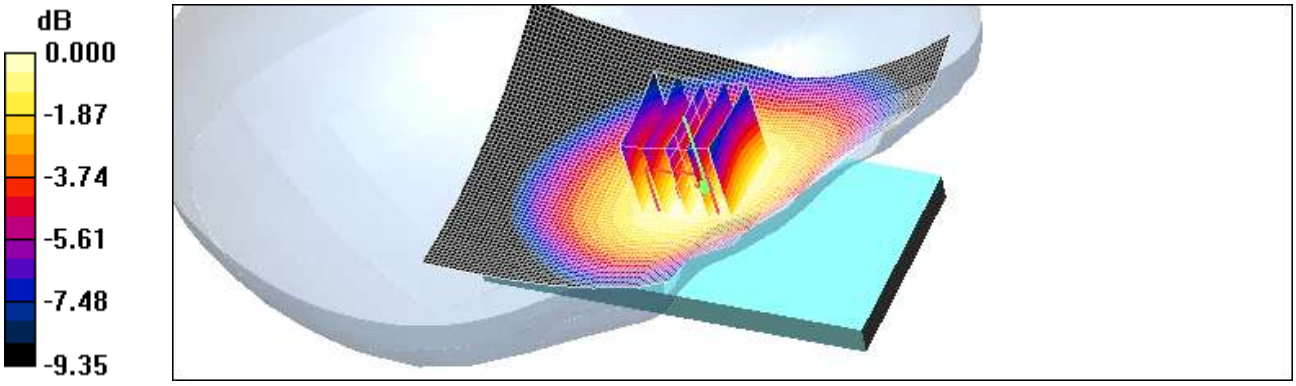
DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(8.93, 8.93, 8.93); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right touch 190 Wireless charger cover/Area Scan (71x101x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.237 mW/g

Right touch 190 Wireless charger cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.1 V/m; Power Drift = 0.005 dB
Peak SAR (extrapolated) = 0.281 W/kg
SAR(1 g) = 0.226 mW/g; SAR(10 g) = 0.171 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.237 mW/g



0 dB = 0.237mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.3 ℃
Ambient Temperature: 21.5 ℃
Test Date: May 30, 2012

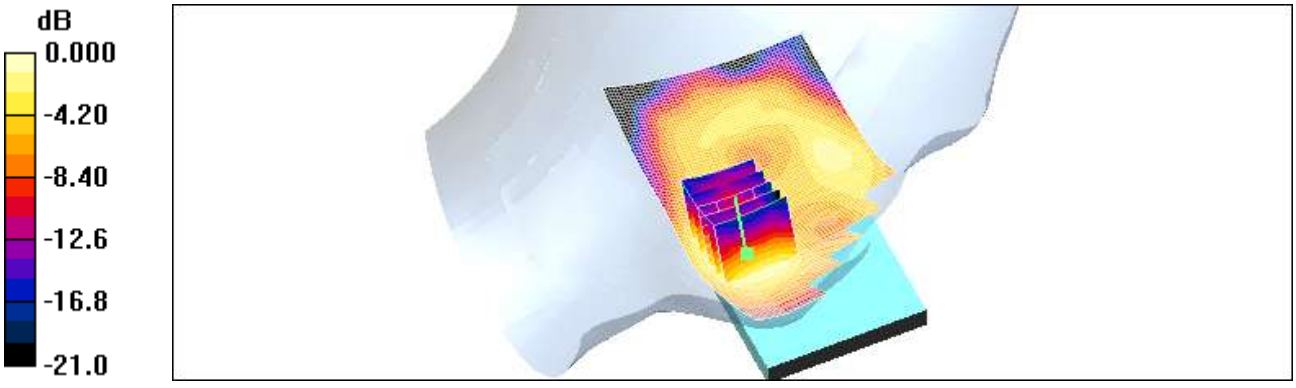
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Touch 661/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.043 mW/g

Left Touch 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.17 V/m; Power Drift = 0.083 dB
Peak SAR (extrapolated) = 0.069 W/kg
SAR(1 g) = 0.040 mW/g; SAR(10 g) = 0.023 mW/g
Maximum value of SAR (measured) = 0.044 mW/g



0 dB = 0.044mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.3 ℃
Ambient Temperature: 21.5 ℃
Test Date: May 30, 2012

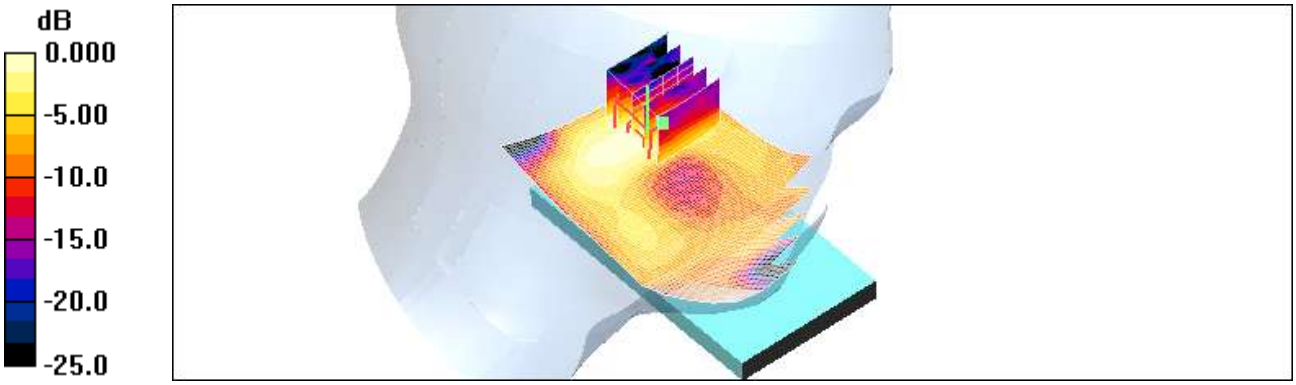
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Left Tilt 661/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.029 mW/g

Left Tilt 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.37 V/m; Power Drift =0.081 dB
Peak SAR (extrapolated) = 0.039 W/kg
SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.011 mW/g
Maximum value of SAR (measured) = 0.025 mW/g



0 dB = 0.025mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.3 ℃
Ambient Temperature: 21.5 ℃
Test Date: May 30, 2012

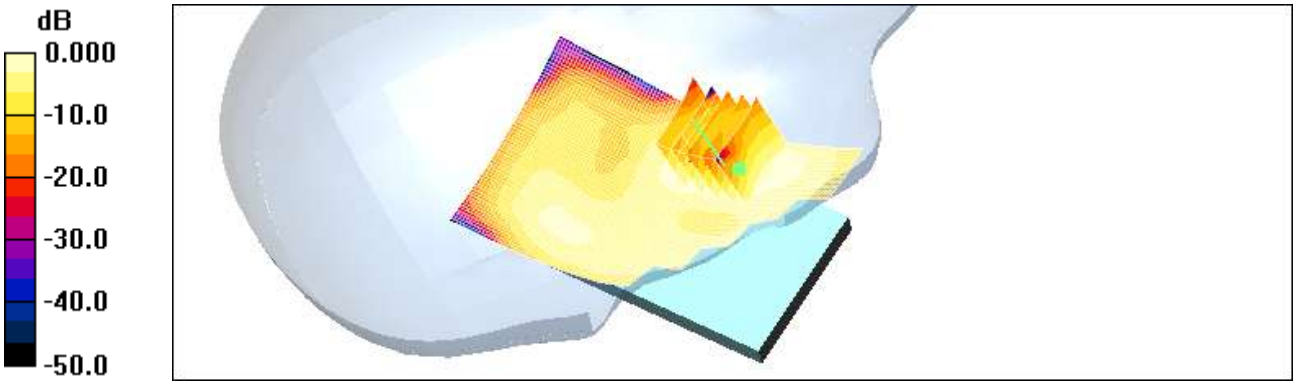
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Touch 661/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.068 mW/g

Right Touch 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.04 V/m; Power Drift = 0.021 dB
Peak SAR (extrapolated) = 0.104 W/kg
SAR(1 g) = 0.061 mW/g; SAR(10 g) = 0.035 mW/g
Maximum value of SAR (measured) = 0.067 mW/g



0 dB = 0.067mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.3 ℃
Ambient Temperature: 21.5 ℃
Test Date: May 30, 2012

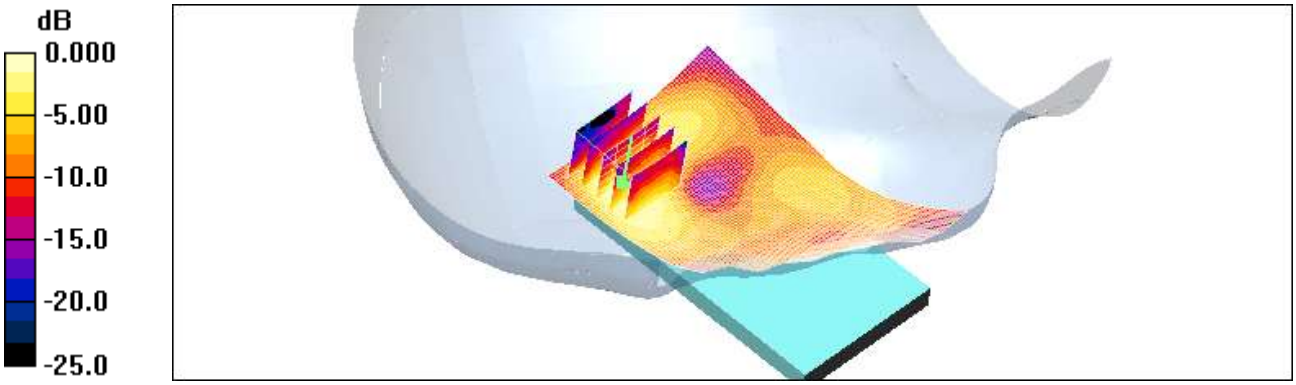
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Tilt 661/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.035 mW/g

Right Tilt 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.25 V/m; Power Drift = -0.135 dB
Peak SAR (extrapolated) = 0.045 W/kg
SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.014 mW/g
Maximum value of SAR (measured) = 0.030 mW/g



0 dB = 0.030mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.3 ℃
Ambient Temperature:	21.5 ℃
Test Date:	May 30, 2012
Option	Extended

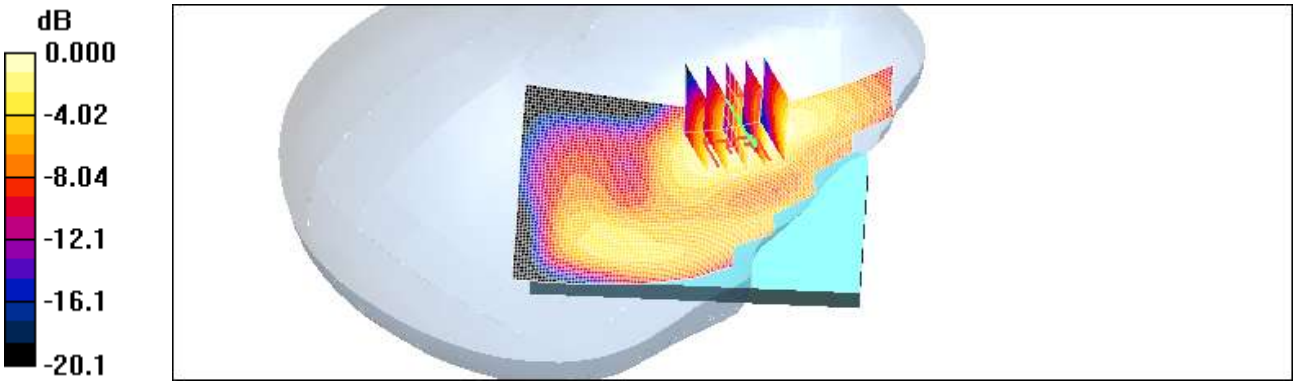
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Touch 661/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.056 mW/g

Right Touch 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.88 V/m; Power Drift = 0.076 dB
Peak SAR (extrapolated) = 0.083 W/kg
SAR(1 g) = 0.052 mW/g; SAR(10 g) = 0.031 mW/g
Maximum value of SAR (measured) = 0.058 mW/g



0 dB = 0.058mW/g

Test Laboratory:	HCT CO., LTD
EUT Type:	CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature:	21.3 ℃
Ambient Temperature:	21.5 ℃
Test Date:	May 30, 2012
Option	Wireless charger cover

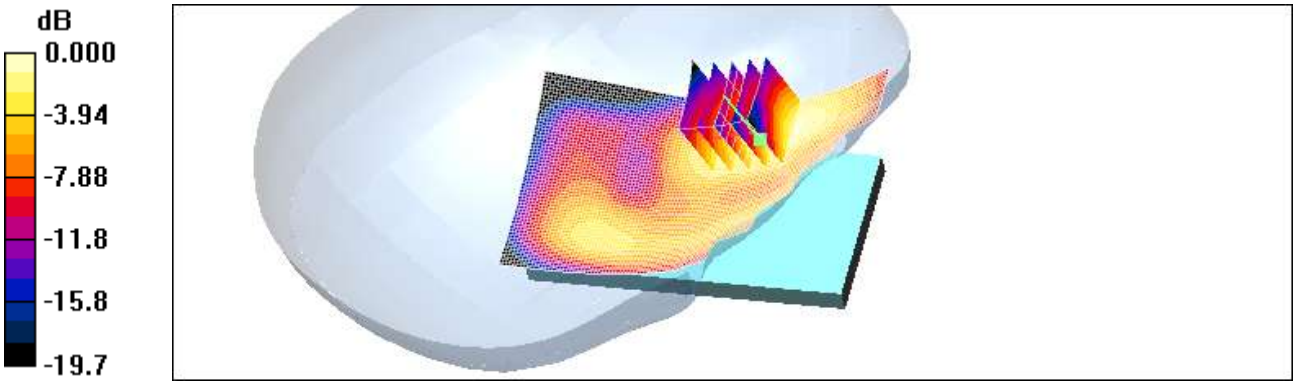
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: GSM 1900; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium parameters used: f = 1880 MHz; σ = 1.38 mho/m; ε_r = 41; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(7.6, 7.6, 7.6); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 1800/1900 MHz; Type: SAM

Right Touch 661/Area Scan (61x101x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.062 mW/g

Right Touch 661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.84 V/m; Power Drift = -0.033 dB
Peak SAR (extrapolated) = 0.088 W/kg
SAR(1 g) = 0.055 mW/g; SAR(10 g) = 0.033 mW/g
Maximum value of SAR (measured) = 0.061 mW/g



0 dB = 0.061mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

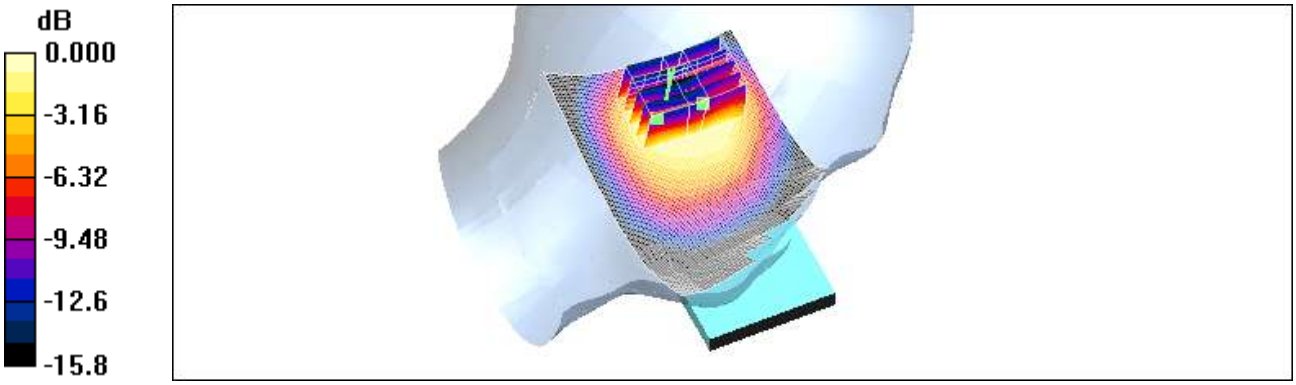
Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Touch 10MHz 25RB 12offset QPSK 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.734 mW/g

Left Touch 10MHz 25RB 12offset QPSK 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.0 V/m; Power Drift = 0.065 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.621 mW/g; SAR(10 g) = 0.321 mW/g
Maximum value of SAR (measured) = 0.672 mW/g

Left Touch 10MHz 25RB 12offset QPSK 23230/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.0 V/m; Power Drift = 0.065 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.592 mW/g; SAR(10 g) = 0.308 mW/g
Maximum value of SAR (measured) = 0.654 mW/g



0 dB = 0.654mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

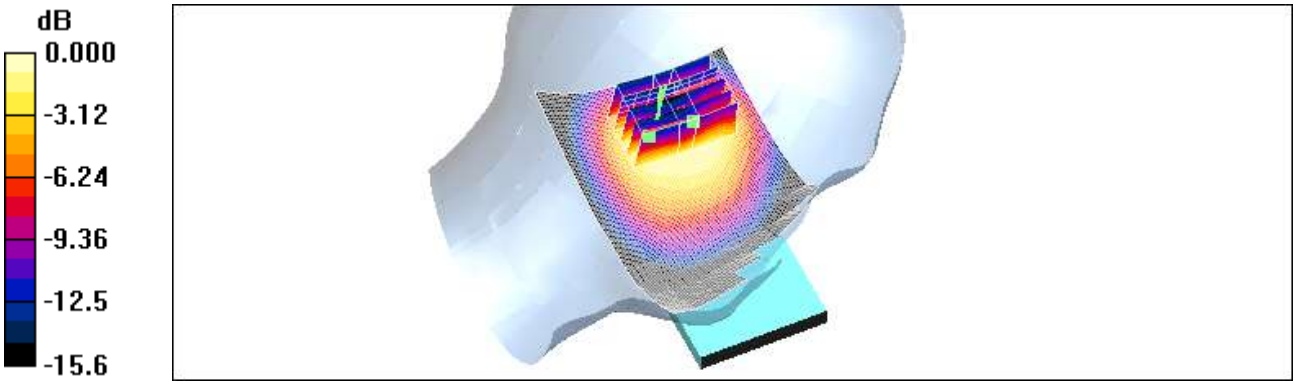
Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Touch 10MHz 1RB 0offset QPSK 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.04 mW/g

Left Touch 10MHz 1RB 0offset QPSK 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.6 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 0.884 mW/g; SAR(10 g) = 0.455 mW/g
Maximum value of SAR (measured) = 0.938 mW/g

Left Touch 10MHz 1RB 0offset QPSK 23230/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.6 V/m; Power Drift = 0.023 dB
Peak SAR (extrapolated) = 1.91 W/kg
SAR(1 g) = 0.830 mW/g; SAR(10 g) = 0.435 mW/g
Maximum value of SAR (measured) = 0.915 mW/g



0 dB = 0.915mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

DUT: ADR930LVW; Type: bar; Serial: #1

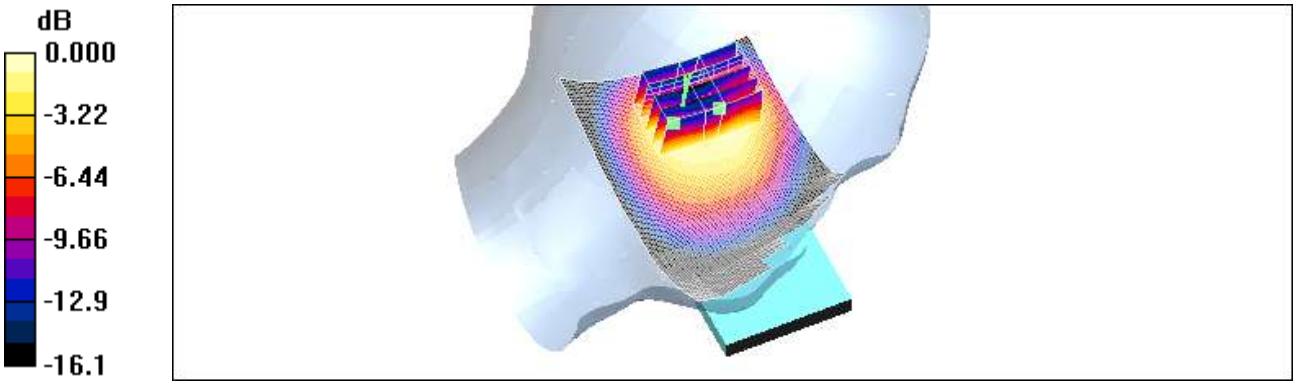
Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Touch 10MHz 1RB 49offset QPSK 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 1.08 mW/g

Left Touch 10MHz 1RB 49offset QPSK 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.5 V/m; Power Drift = 0.019 dB
Peak SAR (extrapolated) = 2.07 W/kg
SAR(1 g) = 0.902 mW/g; SAR(10 g) = 0.463 mW/g
Maximum value of SAR (measured) = 0.959 mW/g

Left Touch 10MHz 1RB 49offset QPSK 23230/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.5 V/m; Power Drift = 0.019 dB
Peak SAR (extrapolated) = 1.96 W/kg
SAR(1 g) = 0.854 mW/g; SAR(10 g) = 0.441 mW/g
Maximum value of SAR (measured) = 0.948 mW/g



0 dB = 0.948mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

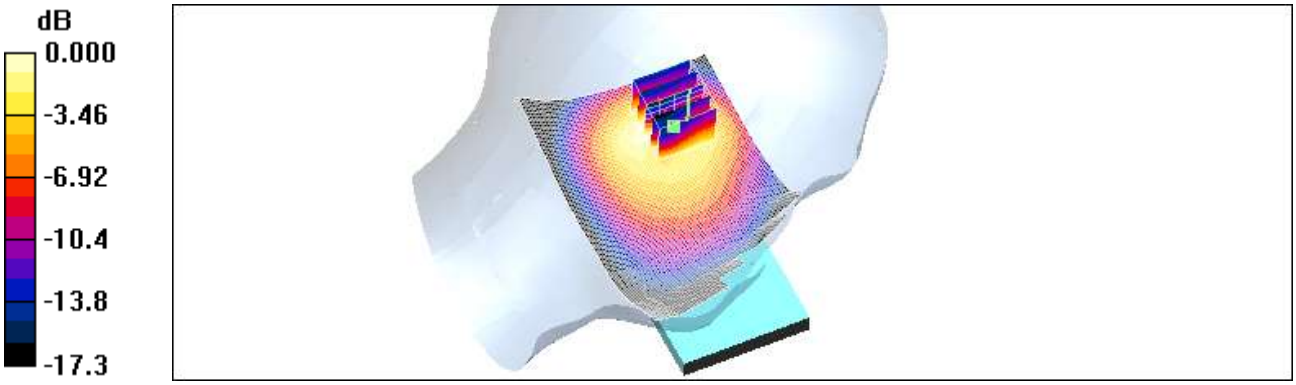
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Tilt 10MHz 25RB 12offset QPSK 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.671 mW/g

Left Tilt 10MHz 25RB 12offset QPSK 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.0 V/m; Power Drift = 0.080 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.562 mW/g; SAR(10 g) = 0.274 mW/g
Maximum value of SAR (measured) = 0.630 mW/g



0 dB = 0.630mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

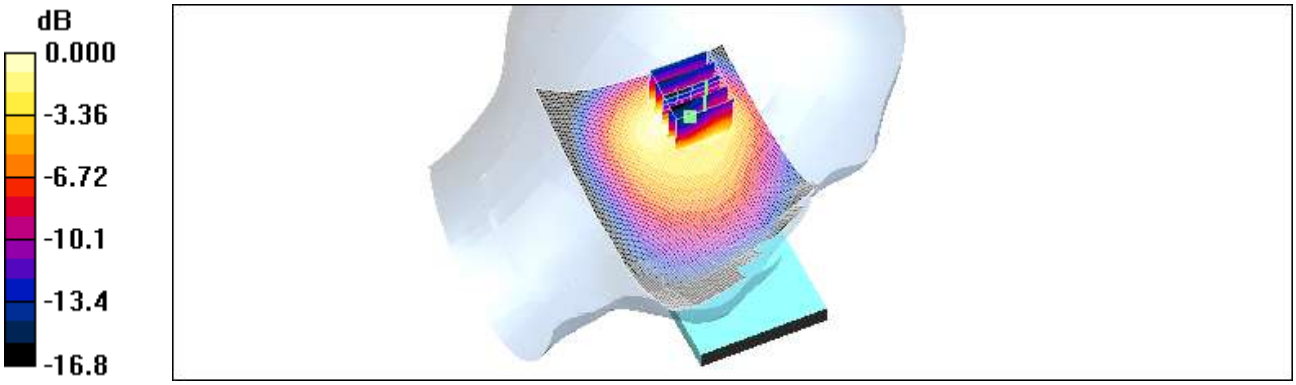
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Tilt 10MHz 1RB 0offset QPSK 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.977 mW/g

Left Tilt 10MHz 1RB 0offset QPSK 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.3 V/m; Power Drift = -0.090 dB
Peak SAR (extrapolated) = 2.02 W/kg
SAR(1 g) = 0.821 mW/g; SAR(10 g) = 0.405 mW/g
Maximum value of SAR (measured) = 0.911 mW/g



0 dB = 0.911mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

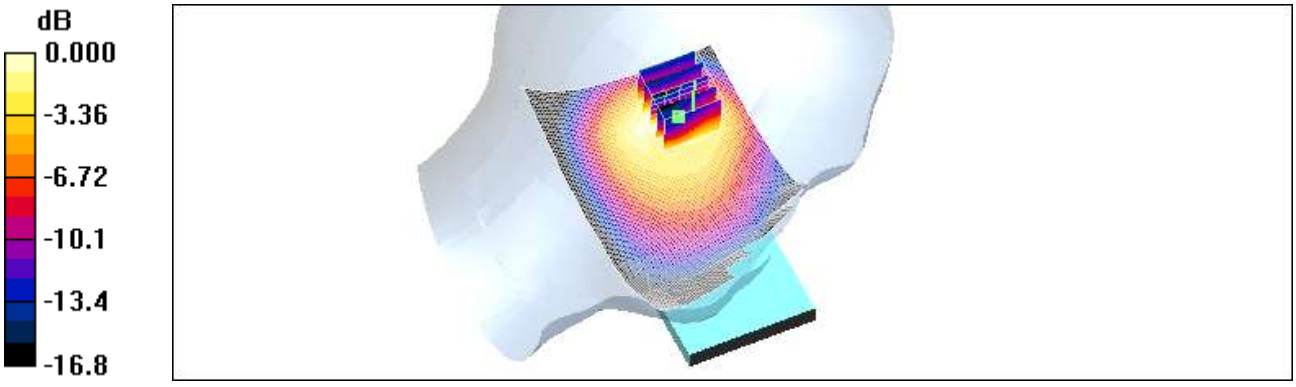
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Left Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Left Tilt 10MHz 1RB 49offset QPSK 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.968 mW/g

Left Tilt 10MHz 1RB 49offset QPSK 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.6 V/m; Power Drift = -0.100 dB
Peak SAR (extrapolated) = 2.00 W/kg
SAR(1 g) = 0.813 mW/g; SAR(10 g) = 0.402 mW/g
Maximum value of SAR (measured) = 0.902 mW/g



0 dB = 0.902mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

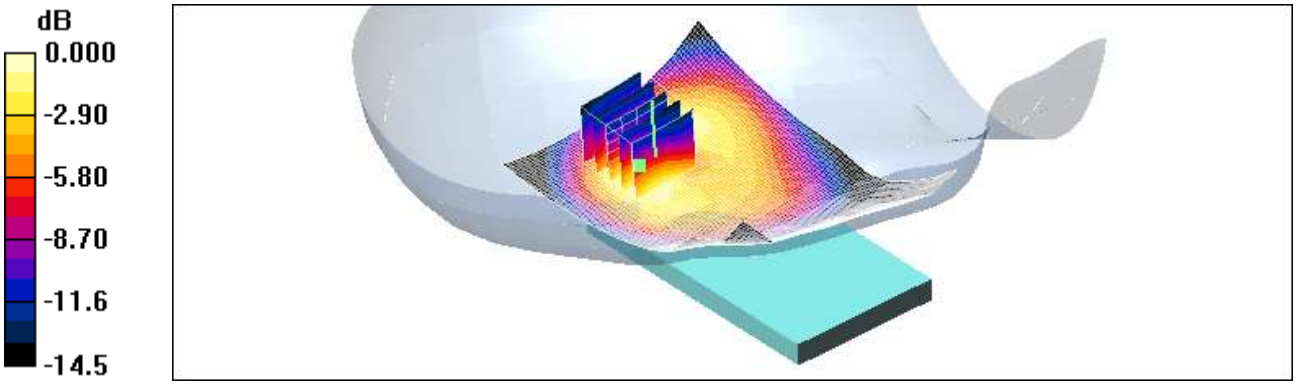
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right touch 10MHz QPSK 25RB 12offset 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.479 mW/g

Right touch 10MHz QPSK 25RB 12offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.1 V/m; Power Drift = 0.052 dB
Peak SAR (extrapolated) = 0.832 W/kg
SAR(1 g) = 0.428 mW/g; SAR(10 g) = 0.240 mW/g
Maximum value of SAR (measured) = 0.464 mW/g



0 dB = 0.464mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

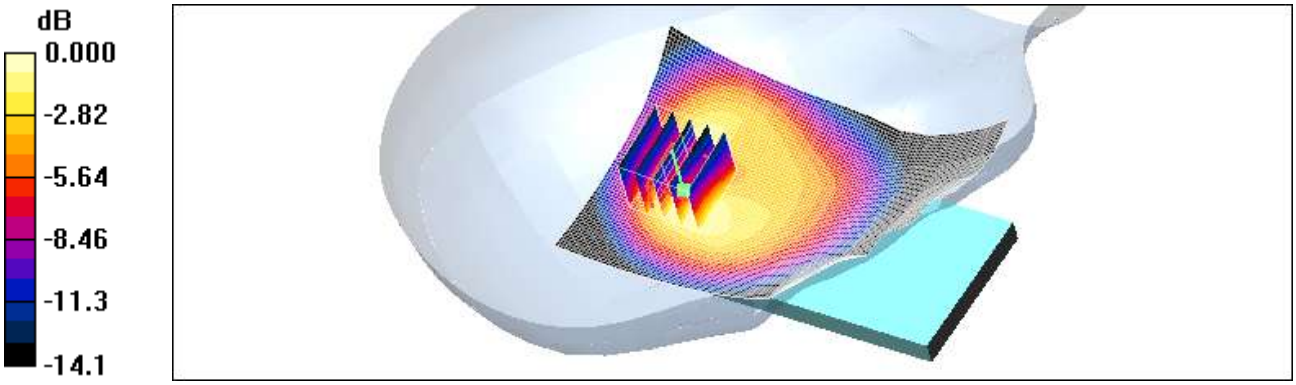
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right touch 10MHz QPSK 1RB 0offset 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.672 mW/g

Right touch 10MHz QPSK 1RB 0offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.9 V/m; Power Drift = -0.053 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.643 mW/g; SAR(10 g) = 0.359 mW/g
Maximum value of SAR (measured) = 0.703 mW/g



0 dB = 0.703mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

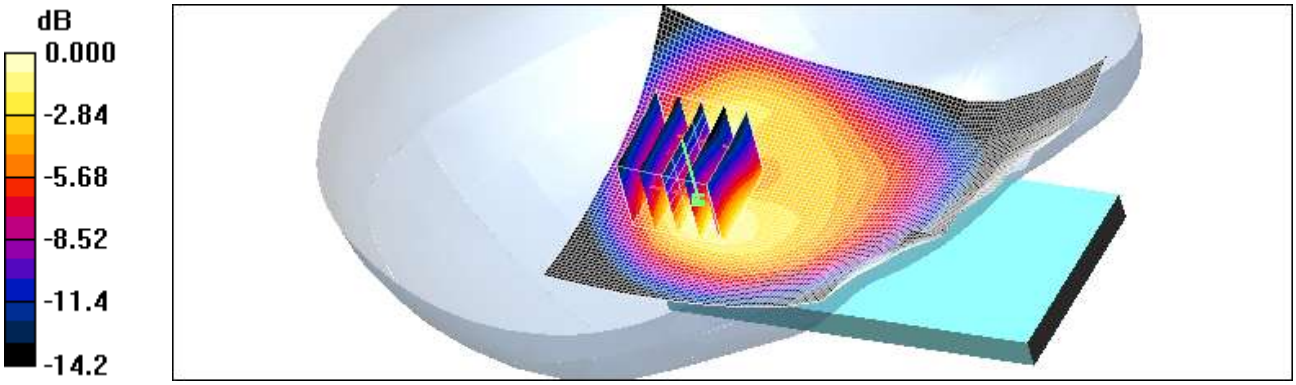
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right touch 10MHz QPSK 1RB 49offset 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.669 mW/g

Right touch 10MHz QPSK 1RB 49offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.7 V/m; Power Drift = -0.081 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.643 mW/g; SAR(10 g) = 0.353 mW/g
Maximum value of SAR (measured) = 0.708 mW/g



0 dB = 0.708mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

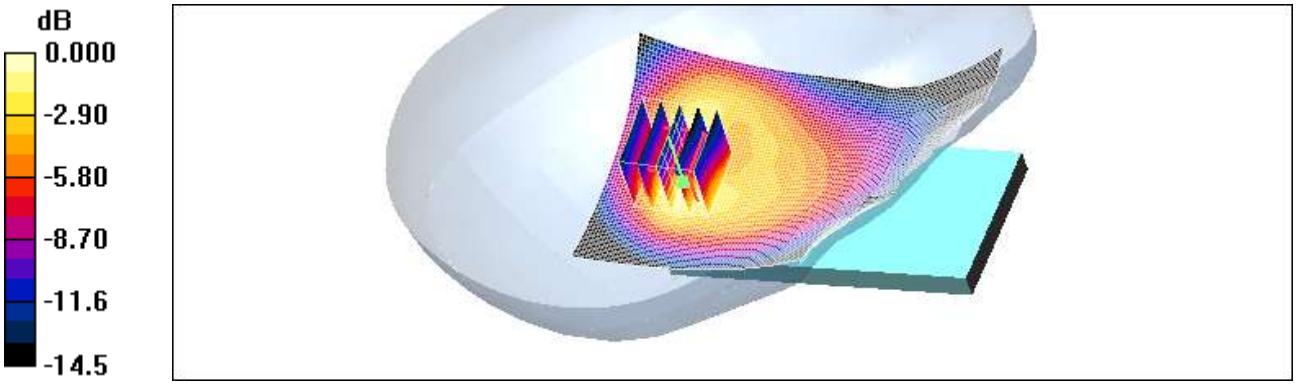
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right tilt 10MHz QPSK 25RB 12offset 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.350 mW/g

Right tilt 10MHz QPSK 25RB 12offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.1 V/m; Power Drift = 0.106 dB
Peak SAR (extrapolated) = 0.660 W/kg
SAR(1 g) = 0.330 mW/g; SAR(10 g) = 0.176 mW/g
Maximum value of SAR (measured) = 0.364 mW/g



0 dB = 0.364mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

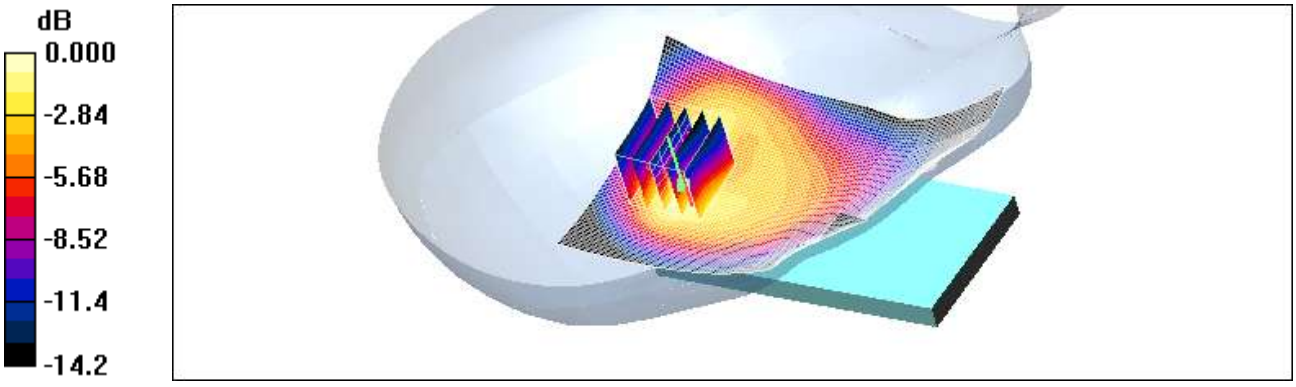
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right tilt 10MHz QPSK 1RB 0offset 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.533 mW/g

Right tilt 10MHz QPSK 1RB 0offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.0 V/m; Power Drift = -0.059 dB
Peak SAR (extrapolated) = 0.983 W/kg
SAR(1 g) = 0.497 mW/g; SAR(10 g) = 0.269 mW/g
Maximum value of SAR (measured) = 0.541 mW/g



0 dB = 0.541mW/g

Test Laboratory: HCT CO., LTD
EUT Type: CDMA/GSM/LTE Phone with BT/WLAN/NFC
Liquid Temperature: 21.1 ℃
Ambient Temperature: 21.3 ℃
Test Date: Jun. 2, 2012

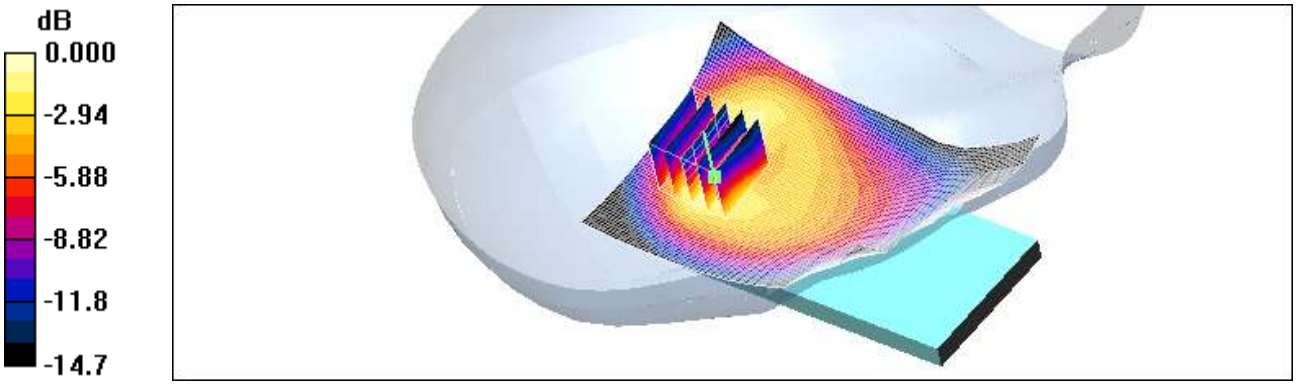
DUT: ADR930LVW; Type: bar; Serial: #1

Communication System: LTE; Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used: f = 782.5 MHz; σ = 0.895 mho/m; ε_r = 41.7; ρ = 1000 kg/m^3
Phantom section: Right Section ; Measurement SW: DASY4, V4.7 Build 71; Postprocessing SW: SEMCAD, V1.8 Build 184

DASY4 Configuration:
- Probe: EX3DV4 - SN3797; ConvF(9.29, 9.29, 9.29); Calibrated: 2011-07-25
- Sensor-Surface: 2.5mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn466; Calibrated: 2012-02-21
- Phantom: SAM 835/900 MHz; Type: SAM

Right tilt 10MHz QPSK 1RB 49offset 23230/Area Scan (71x111x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 0.526 mW/g

Right tilt 10MHz QPSK 1RB 49offset 23230/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.4 V/m; Power Drift = 0.001 dB
Peak SAR (extrapolated) = 0.991 W/kg
SAR(1 g) = 0.495 mW/g; SAR(10 g) = 0.264 mW/g
Maximum value of SAR (measured) = 0.540 mW/g



0 dB = 0.540mW/g