SAR EVALUATION REPORT

For

MAXWEST INTERNATIONAL LIMITED.

No.1,Longgang Road,Buji,Longgang,ShenzhenCity,Guangdong Province, P.R. China

FCC ID: 2AEN3NITROTAB9

Report Type: Original Report	**Product Type:** Phablet
Test Engineer:	Rocky Xiao
Report Number:	RDG151020002-20
Report Date:	2015-11-03
Reviewed By:	Jerry Zhang EMC Manager
Test Laboratory:	Bay Area Compliance Laboratories Corp. (Dongguan) No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China Tel: +86-769-86858888 Fax: +86-769-86858891 www.baclcorp.com.cn

Attestation of Test Results			
EUT Information	**Company Name**	MAXWEST INTERNATIONAL LIMITED.	
	EUT Description	Phablet	
	Product Name	Phablet	
	FCC ID	2AEN3NITROTAB9	
	Tested Model	Nitro Phablet 9	
	Serial Number	151020002	
	Test Date	2015-10-28,2015-10-30	
MODE		**Max. SAR Level(s) Reported(W/Kg)**	**Limit**
GSM 850	1g Head SAR	0.158	**SAR Limit = 1. 6 W/Kg** **SPLSR Limit= 0.04**
	1g Body SAR	1.508	
PCS 1900	1g Head SAR	0.066	
	1g Body SAR	0.965	
WCDMA 850	1g Head SAR	0.136	
	1g Body SAR	0.906	
WCDMA 1900	1g Head SAR	0.067	
	1g Body SAR	0.914	
Simultaneous	1g Head SAR	0.531	
	1g Body SAR	1.695 (SPLSR=0.01)	
Hotspot	1g Body SAR	1.695 (SPLSR=0.01)	
Applicable Standards	**ANSI / IEEE C95.1 : 2005** IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fileds,3 kHz to 300 GHz.		
	ANSI / IEEE C95.3 : 2002 IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to SuchFields,100 kHz—300 GHz.		
	FCC 47 CFR part 2.1093 Radiofrequency radiation exposure evaluation: portable devices		
	IEEE1528:2013 IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques		
	IEC 62209-2:2010 Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices-Human models, instrumentation, and procedures-Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)		
	KDB procedures KDB 447498 D01 General RF Exposure Guidance v05r02. KDB 648474 D04 Handset SAR v01r02. KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r03 KDB 865664 D02 RF Exposure Reporting v01r01 KDB 941225 D01 3G SAR Procedures v03 KDB 941225 D06 Hotspot Mode v02 KDB 616217 SAR for laptop and tablets v01r01		

Note: This wireless device has been shown to be capable of compliance for localized specific absorption rate (SAR) for General Population/Uncontrolled Exposure limits specified in ANSI/IEEE Standards and has been tested in accordance with the measurement procedures specified in IEEE 1528-2013 and RF exposure KDB procedures.

The results and statements contained in this report pertain only to the device(s) evaluated.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	RDG151020002-20	Original Report	2015-11-03

EUT DESCRIPTION

This report has been prepared on behalf of *MAXWEST INTERNATIONAL LIMITED.* and their product, Model: Nitro Phablet 9,or the EUT (Equipment under Test) as referred to in the rest of this report.

Technical Specification

Exposure Category:	Population / Uncontrolled
Antenna Type(s):	Internal Antenna
Body-Worn Accessories:	Headset
Face-Head Accessories:	None
Operation Mode :	GSM Voice, GPRS multi-slot class 12, WCDMA R99 (Voice + Data),HSUPA Rel 6,HSDPA Rel 7, DC-HSDPA Rel 8, HSPA+ Rel 6 WLAN Bluetooth
Frequency Band:	GSM 850: 824-849 MHz(TX) ; 869-894 MHz(RX) PCS 1900: 1850-1910 MHz(TX) ; 1930-1990 MHz(RX) WCDMA850: 824-849 MHz(TX) ; 869-894 MHz(RX) WCDMA1900: 1850-1910 MHz(TX) ; 1930-1990 MHz(RX) WLAN: 2412MHz-2462 MHz Bluetooth : 2402MHz-2480 MHz
Conducted RF Power:	GSM 850 : 33.4 dBm PCS 1900: 28.6 dBm WCDMA 850: 22.74 dBm WCDMA 1900: 22.62 dBm WLAN: 9.36 dBm Bluetooth: -2.66 dBm BLE:-8.6 dBm
Dimensions (L*W*H):	232 mm (L) x 133 mm (W) x 11 mm (H)
Power Source:	3.7 VDC Rechargeable Battery
Normal Operation:	Head and Body-worn

REFERENCE, STANDARDS, AND GUILDELINES

FCC:

The Report and Order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 1.6 mW/g as recommended by the ANSI/IEEE standard C95.1-1992 [6] for an uncontrolled environment (Paragraph 65). According to the Supplement C of OET Bulletin 65 "Evaluating Compliance with FCC Guide-lines for Human Exposure to Radio frequency Electromagnetic Fields", released on Jun 29, 2001 by the FCC, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in North America is 1.6 mW/g average over 1 gram of tissue mass.

CE:

The order requires routine SAR evaluation prior to equipment authorization of portable transmitter devices, including portable telephones. For consumer products, the applicable limit is 2 mW/g as recommended by EN62209-1 for an uncontrolled environment. According to the Standard, the device should be evaluated at maximum output power (radiated from the antenna) under "worst-case" conditions for normal or intended use, incorporating normal antenna operating positions, device peak performance frequencies and positions for maximum RF energy coupling.

This report describes the methodology and results of experiments performed on wireless data terminal. The objective was to determine if there is RF radiation and if radiation is found, what is the extent of radiation with respect to safety limits. SAR (Specific Absorption Rate) is the measure of RF exposure determined by the amount of RF energy absorbed by human body (or its parts) – to determine how the RF energy couples to the body or head which is a primary health concern for body worn devices. The limit below which the exposure to RF is considered safe by regulatory bodies in Europe is 2 mW/g average over 10 gram of tissue mass.

The test configurations were laid out on a specially designed test fixture to ensure the reproducibility of measurements. Each configuration was scanned for SAR. Analysis of each scan was carried out to characterize the above effects in the device.

SAR Limits

FCC Limit

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 1 g of tissue)	1.60	8.0
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

CE Limit

EXPOSURE LIMITS	SAR (W/kg)	
	(General Population / Uncontrolled Exposure Environment)	(Occupational / Controlled Exposure Environment)
Spatial Average (averaged over the whole body)	0.08	0.4
Spatial Peak (averaged over any 10 g of tissue)	2.0	10
Spatial Peak (hands/wrists/feet/ankles averaged over 10 g)	4.0	20.0

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

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

General Population/Uncontrolled environments Spatial Peak limit 1.6W/kg (FCC) & 2 W/kg (CE) applied to the EUT.

FACILITIES

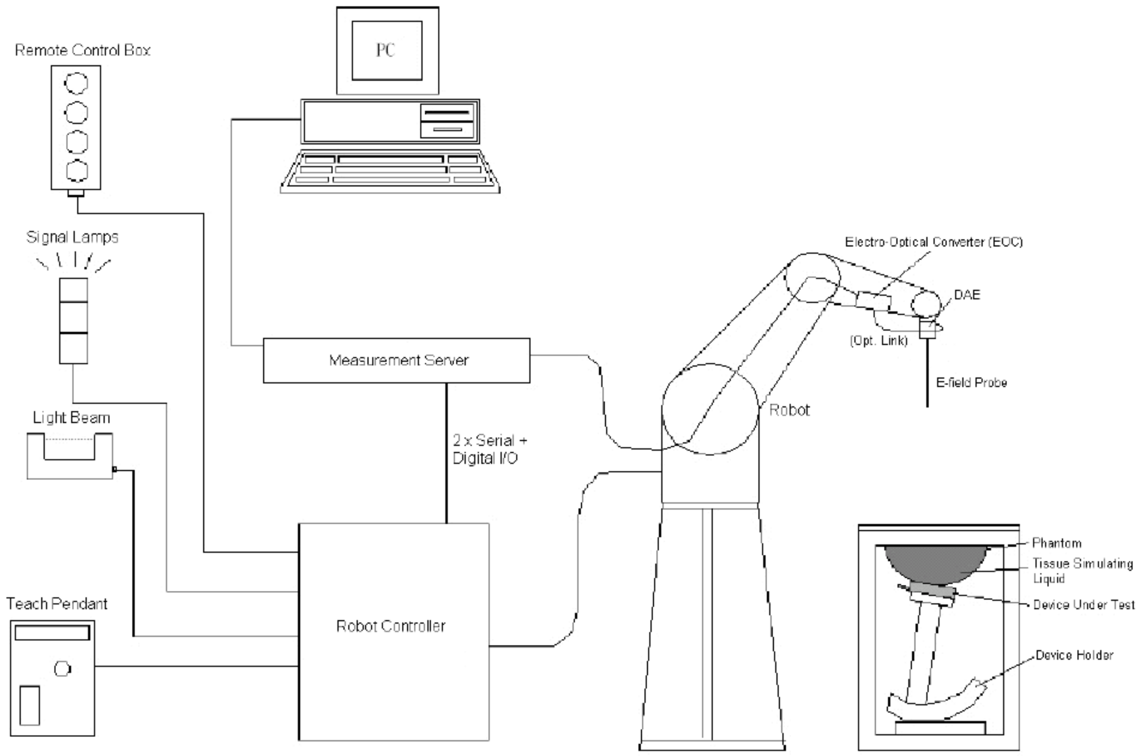
The Test site used by Bay Area Compliance Laboratories Corp. (Dongguan) to collect test data is located on the No.69 Pulongcun, Puxinhu Industrial Zone, Tangxia, Dongguan, Guangdong, China

DESCRIPTION OF TEST SYSTEM

These measurements were performed with the automated near-field scanning system DASY5 from Schmid & Partner Engineering AG (SPEAG) which is the Fifth generation of the system shown in the figure hereinafter:

DASY5 System Description

The DASY5 system for performing compliance tests consists of the following items:



- A standard high precision 6-axis robot (Staubli TX=RX family) with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal application, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running Win7 professional operating system and the DASY52 software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

DASY5 Measurement Server

The DASY5 measurement server is based on a PC/104 CPU board with a 400MHz Intel ULV Celeron, 128MB chip-disk and 128MB RAM. The necessary circuits for communication with the DAE4 (or DAE3) electronics box, as well as the 16 bit AD-converter system for optical detection and digital I/O interface are contained on the DASY5 I/O board, which is directly connected to the PC/104 bus of the CPU board.

The measurement server performs all real-time data evaluation of field measurements and surface detection, controls robot movements and handles safety operation. The PC operating system cannot interfere with these time critical processes. All connections are supervised by a watchdog, and disconnection of any of the cables to the measurement server will automatically disarm the robot and disable all program-controlled robot movements. Furthermore, the measurement server is equipped with an expansion port which is reserved for future applications. Please note that this expansion port does not have a standardized point out, and therefore only devices provided by SPEAG can be connected. Devices from any other supplier could seriously damage the measurement server.

Data Acquisition Electronics

The data acquisition electronics (DAE4) consist of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder with a control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information, as well as an optical uplink for commands and the clock.

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

The input impedance of both the DAE4 as well as of the DAE3 box is 200MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

EX3DV4 E-Field Probes

Frequency	10 MHz to > 6 GHz Linearity: ± 0.2 dB (30 MHz to 6 GHz)
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)
Dynamic Range	10 µW/g to > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 µW/g)
Dimensions	Overall length: 337 mm (Tip: 20 mm) Tip diameter: 2.5 mm (Body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm
Application	High precision dosimetric measurements in any exposure scenario (e.g., very strong gradient fields); the only probe that enables compliance testing for frequencies up to 6 GHz with precision of better 30%.
Compatibility	DASY3, DASY4, DASY52 SAR and higher, EASY4/MRI

SAM Twin Phantom

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

The phantom table for the DASY systems based on the TX90XL and RX160L robots have the size of 100 x 50 x 85 cm (L x W x H).
The phantom table for the compact DASY systems based on the RX60L robot have the size of 100 x 75 x 91 cm (L x W x H); these tables are reinforced for mounting of the robot onto the table.
For easy dislocation these tables have fork lift cut outs at the bottom.
The bottom plate contains three pairs of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. Only one device holder is necessary if two phantoms are used (e.g., for different liquids)

A white cover is provided to cover the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. Free space scans of devices on top of this phantom cover are possible. Three reference marks are provided on the phantom counter. These reference marks are used to teach the absolute phantom position relative to the robot.

Robots

The DASY5 system uses the high precision industrial robots TX90XL from Staubli SA (France). The TX robot family is the successor of the well known RX robot family and offers the same features important for our application:

- High precision (repeatability 0.02mm)
- High reliability (industrial design)
- Low maintenance costs (virtually maintenance free due to direct drive gears; no belt drives)
- Jerk-free straight movements (brushless synchrony motors; no stepper motors)
- Low ELF interference (motor control fields shielded via the closed metallic construction shields)

The above mentioned robots are controlled by the Staubli CS8c robot controllers. All information regarding the use and maintenance of the robot arm and the robot controller is contained on the CDs delivered along with the robot. Paper manuals are available upon request direct from Staubli.

Area Scans

Area scans are defined prior to the measurement process being executed with a user defined variable spacing between each measurement point (integral) allowing low uncertainty measurements to be conducted. Scans defined for FCC applications utilize a 15mm 2 step integral, with 1.5mm interpolation used to locate the peak SAR area used for zoom scan assessments.

Where the system identifies multiple SAR peaks (which are within 25% of peak value) the system will provide the user with the option of assessing each peak location individually for zoom scan averaging.

Zoom Scan (Cube Scan Averaging)

The averaging zoom scan volume utilized in the DASY5 software is in the shape of a cube and the side dimension of a 1 g or 10 g mass is dependent on the density of the liquid representing the simulated tissue. A density of 1000 kg/m^3 is used to represent the head and body tissue density and not the phantom liquid density, in order to be consistent with the definition of the liquid dielectric properties, i.e. the side length of the 1g cube is 10mm,with the side length of the 10g cube is 21.5mm.

When the cube intersects with the surface of the phantom, it is oriented so that 3 vertices touch the surface of the shell or the center of a face is tangent to the surface. The face of the cube closest to the surface is modified in order to conform to the tangent surface.

The zoom scan integer steps can be user defined so as to reduce uncertainty, but normal practice for typical test applications (including FCC) utilize a physical step of 7 x7 x 7 (5mmx5mmx5mm) providing a volume of 30 mm in the X & Y & Z axis.

Tissue Dielectric Parameters for Head and Body Phantoms

The head tissue dielectric parameters recommended by the IEEE SCC-34/SC-2 in P1528 have been incorporated in the following table. These head parameters are derived from planar layer models simulating the highest expected SAR for the dielectric properties and tissue thickness variations in a human head. Other head and body tissue parameters that have not been specified in P1528 are derived from the tissue dielectric parameters computed from the 4-Cole-Cole equations described in Reference [12] and extrapolated according to the head parameters specified in P1528.

Recommended Tissue Dielectric Parameters for Head and Body

Frequency (MHz)	Head Tissue		Body Tissue	
	εr	Ơ (S/m)	εr	Ơ (S/m)
150	52.3	0.76	61.9	0.80
300	45.3	0.87	58.2	0.92
450	43.5	0.87	56.7	0.94
835	41.5	0.90	55.2	0.97
900	41.5	0.97	55.0	1.05
915	41.5	0.98	55.0	1.06
1450	40.5	1.20	54.0	1.30
1610	40.3	1.29	53.8	1.40
1800-2000	40.0	1.40	53.3	1.52
2450	39.2	1.80	52.7	1.95
3000	38.5	2.40	52.0	2.73
5800	35.3	5.27	48.2	6.00

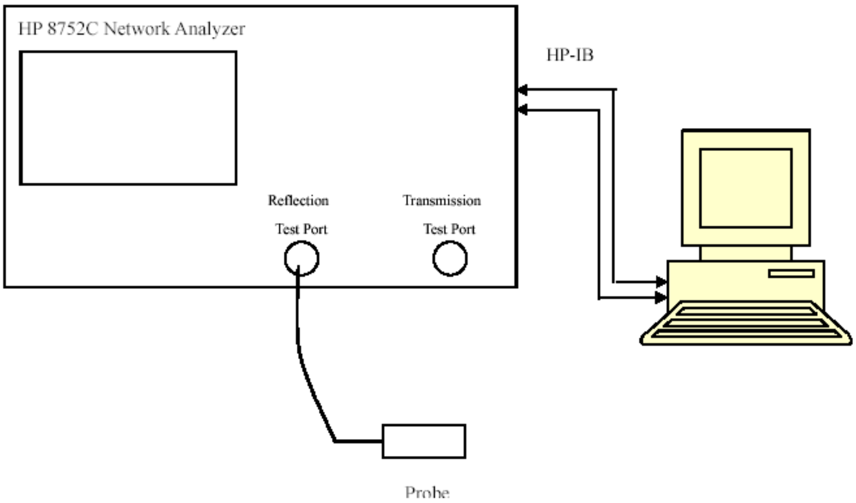
EQUIPMENT LIST AND CALIBRATION

Equipments List & Calibration Information

Equipment	Model	S/N	Calibration Date	Calibration Due Date
Robot	RX90	D03636	N/A	N/A
DASY5 Test Software	DASY52.8	N/A	N/A	N/A
DASY5 Measurement Server	DASY5 4.5.12	1470	N/A	N/A
Data Acquisition Electronics	DAE4	1459	2015/9/18	2016/9/18
E-Field Probe	EX3DV4	7329	2015/2/5	2016/2/5
Dipole, 835MHz	D835V1	453	2015/8/17	2018/8/17
Dipole,1900MHz	D1900V2	5d206	2015/7/14	2018/7/14
R&S, universal Radio Communication Tester	CMU200	105047	2014/11/20	2015/11/20
Mounting Device	MD4HHTV5	SD 000 H01 KA	N/A	N/A
Twin SAM	Twin SAM V5.0	1874	N/A	N/A
Simulated Tissue 835 MHz Head	TS-835-H	201504	Each Time	/
Simulated Tissue 835 MHz Body	TS-835-B	201505	Each Time	/
Simulated Tissue 1900 MHz Head	TS-1900-H	201506	Each Time	/
Simulated Tissue 1900 MHz Body	TS-1900-B	201507	Each Time	/
Network Analyzer	8752C	3140A02356	2015/6/3	2016/6/3
Dielectric probe kit	85070B	US33020324	2015/6/13	2016/6/13
Signal Generator	E4422B	MY41000355	2015/10/27	2016/10/27
Power Meter	EPM-441A	GB37481494	2014/11/3	2015/11/3
Power Meter Sensor	8481A	T-03-EM-127	2014/11/3	2015/11/3
Power Amplifier	5205PE	1015	N/A	N/A
Directional Coupler	488Z	N/A	N/A	N/A
Attenuator	20dB, 100W	N/A	N/A	N/A

SAR MEASUREMENT SYSTEM VERIFICATION

Liquid Verification



Liquid Verification Setup Block Diagram

Liquid Verification Results

Frequency	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	Δσ (S/m)	
824.2	Head	42.928	0.879	41.5	0.9	3.44	-2.33	±5
	Body	55.151	0.962	55.2	0.97	-0.09	-0.82	±5
826.4	Head	42.903	0.881	41.5	0.9	3.38	-2.11	±5
	Body	55.113	0.965	55.2	0.97	-0.16	-0.52	±5
836.6	Head	42.873	0.893	41.5	0.9	3.31	-0.78	±5
	Body	55.13	0.976	55.2	0.97	-0.13	0.62	±5
846.6	Head	42.814	0.897	41.5	0.9	3.17	-0.33	±5
	Body	54.997	0.986	55.2	0.97	-0.37	1.65	±5
848.8	Head	42.704	0.896	41.5	0.9	2.9	-0.44	±5
	Body	55.014	0.987	55.2	0.97	-0.34	1.75	±5

**Liquid Verification above was performed on 2015-10-28.*

Frequency	Liquid Type	Liquid Parameter		Target Value		Delta (%)		Tolerance (%)
		ε_r	σ (S/m)	ε_r	σ (S/m)	$\Delta\varepsilon_r$	Δσ (S/m)	
1850.2	Head	39.832	1.361	40	1.4	-0.42	-2.79	±5
	Body	55.296	1.477	53.3	1.52	3.74	-2.83	±5
1852.4	Head	39.847	1.355	40	1.4	-0.38	-3.21	±5
	Body	55.205	1.474	53.3	1.52	3.57	-3.03	±5
1880	Head	39.741	1.388	40	1.4	-0.65	-0.86	±5
	Body	53.737	1.542	53.3	1.52	0.82	1.45	±5
1907.6	Head	39.566	1.41	40	1.4	-1.08	0.71	±5
	Body	53.591	1.493	53.3	1.52	0.55	-1.78	±5
1909.8	Head	39.592	1.412	40	1.4	-1.02	0.86	±5
	Body	53.368	1.492	53.3	1.52	0.13	-1.84	±5

**Liquid Verification above was performed on 2015-10-30.*

Please refer to the following tables.

835 MHz Head			**835 MHz Body**		
Frequency (MHz)	**e'**	**e''**	**Frequency (MHz)**	**e'**	**e''**
824	42.9044	19.1889	824	55.1384	21.0359
824.5	42.9622	19.1539	824.5	55.1687	20.9228
825	42.9712	19.1499	825	55.1674	21.0121
825.5	42.8983	19.2061	825.5	55.1822	20.9481
826	42.902	19.1377	826	55.0971	21.0175
826.5	42.9032	19.1715	826.5	55.1173	20.9993
827	42.8989	19.1663	827	55.0477	20.9785
827.5	42.9019	19.1787	827.5	55.1609	20.9593
828	42.9521	19.2221	828	55.1431	20.9693
828.5	42.9156	19.1621	828.5	55.1864	21.03
829	42.9409	19.2274	829	55.1308	20.9196
829.5	42.945	19.1681	829.5	55.0681	20.911
830	43.0078	19.1676	830	55.0999	20.9493
830.5	42.9315	19.1903	830.5	55.0987	20.9956
831	42.9139	19.1899	831	55.0849	20.9704
831.5	42.877	19.1727	831.5	55.1433	20.9701
832	42.9528	19.2084	832	55.2091	20.9373
832.5	42.931	19.2117	832.5	55.0847	20.9323
833	42.9933	19.2051	833	55.1373	20.9054
833.5	42.9298	19.2448	833.5	55.1027	20.9359
834	42.88	19.2399	834	55.1689	21.0365
834.5	42.8936	19.2	834.5	55.1186	20.9466
835	42.9497	19.2477	835	55.0882	20.9466
835.5	42.92	19.1725	835.5	55.0677	20.9886
836	42.9204	19.1524	836	55.1281	20.9927
836.5	42.8751	19.1853	836.5	55.138	20.9689
837	42.8658	19.2061	837	55.0997	21.0051
837.5	42.9004	19.177	837.5	55.0164	20.9265
838	42.8528	19.2147	838	55.1028	20.9852
838.5	42.9122	19.1968	838.5	55.1661	21.013
839	42.9106	19.2043	839	55.0876	20.992
839.5	42.8936	19.156	839.5	55.0682	21.037
840	42.9343	19.1022	840	55.0663	20.9882
840.5	42.9042	19.0955	840.5	55.1893	20.9498
841	42.8911	19.2043	841	55.0735	20.9878
841.5	42.8786	19.1557	841.5	55.0185	20.9703
842	42.9042	19.1021	842	55.0875	20.948
842.5	42.81	19.1584	842.5	55.0059	20.9481
843	42.7937	19.0838	843	55.0583	20.9528
843.5	42.7936	19.0896	843.5	54.9951	20.9448
844	42.7926	19.0814	844	55.0939	20.9332
844.5	42.8785	19.0393	844.5	55.0629	21.047
845	42.7766	19.0779	845	55.0863	20.9679
845.5	42.8203	19.0742	845.5	55.0322	20.9343
846	42.8779	19.0149	846	55.0238	20.9736
846.5	42.824	19.0317	846.5	54.9954	20.929
847	42.7743	19.1007	847	55.004	20.962
847.5	42.748	18.9821	847.5	55.0349	20.9732
848	42.8209	18.9892	848	54.9868	21.0046
848.5	42.7019	19.0038	848.5	54.993	20.9209
849	42.705	18.9782	849	55.0274	20.9064

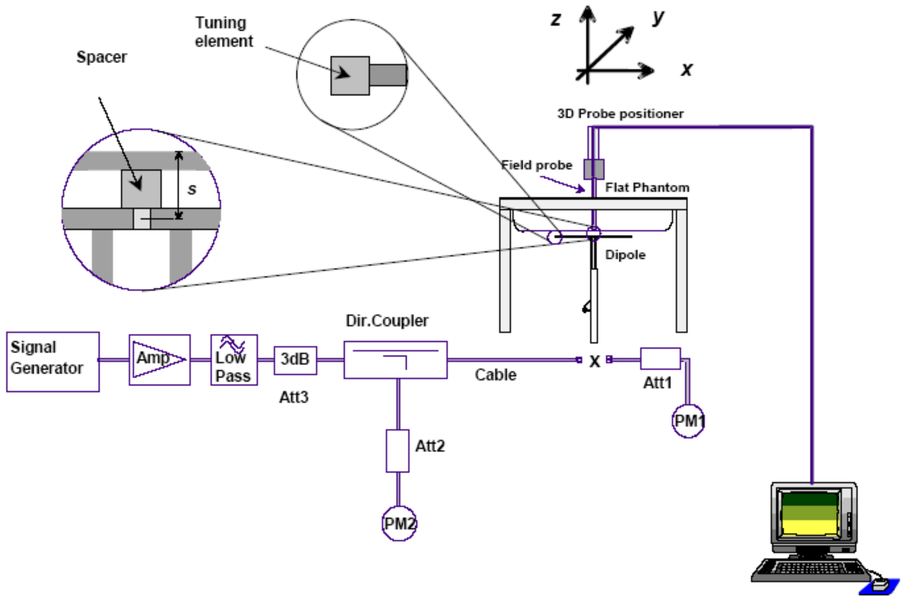
1900 MHz Head			1900 MHz Body		
Frequency (MHz)	e'	e''	Frequency (MHz)	e'	e''
1850	39.8175	13.2351	1850	55.2801	14.3555
1851	39.8911	13.1988	1851	55.3596	14.3554
1852	39.8571	13.1654	1852	55.2276	14.3427
1853	39.8315	13.1524	1853	55.1711	14.2738
1854	39.8787	13.1542	1854	55.0402	14.1983
1855	39.881	13.1985	1855	55.0734	14.2428
1856	39.84	13.1919	1856	54.9308	14.295
1857	39.9198	13.2186	1857	54.7279	14.2037
1858	39.8502	13.1835	1858	54.6437	14.1061
1859	39.8068	13.1845	1859	54.5836	14.048
1860	39.8442	13.2401	1860	54.4209	14.1548
1861	39.8579	13.2398	1861	54.4907	14.0958
1862	39.9038	13.2015	1862	54.3392	14.1193
1863	39.8103	13.1673	1863	54.2081	14.1291
1864	39.8069	13.1746	1864	54.1708	14.1371
1865	39.861	13.1946	1865	54.0806	14.1637
1866	39.8184	13.1969	1866	53.9833	14.1552
1867	39.8112	13.2189	1867	53.8883	14.1606
1868	39.807	13.2184	1868	53.8486	14.2378
1869	39.8478	13.2943	1869	53.7156	14.229
1870	39.8322	13.2593	1870	53.6653	14.2558
1871	39.8506	13.2116	1871	53.6115	14.2805
1872	39.8162	13.189	1872	53.7005	14.3495
1873	39.7979	13.17	1873	53.641	14.4298
1874	39.7365	13.2687	1874	53.6027	14.4314
1875	39.7989	13.2054	1875	53.6161	14.5013
1876	39.7593	13.2603	1876	53.6236	14.5646
1877	39.786	13.2218	1877	53.6695	14.6184
1878	39.7611	13.2141	1878	53.6105	14.6647
1879	39.7433	13.2172	1879	53.6554	14.6646
1880	39.7411	13.2771	1880	53.7366	14.7465
1881	39.7313	13.2348	1881	53.7717	14.7743
1882	39.7285	13.2923	1882	53.7469	14.7812
1883	39.7155	13.2898	1883	53.8156	14.7737
1884	39.7482	13.2358	1884	53.8677	14.7777
1885	39.7247	13.2897	1885	53.9786	14.8216
1886	39.692	13.293	1886	54.1126	14.7929
1887	39.6432	13.2734	1887	54.1925	14.7668
1888	39.6836	13.2737	1888	54.2725	14.8356
1889	39.6606	13.3405	1889	54.2288	14.7246
1890	39.6573	13.3398	1890	54.2581	14.7257
1891	39.6948	13.3095	1891	54.3129	14.7399
1892	39.6736	13.2921	1892	54.3912	14.7003
1893	39.6592	13.2849	1893	54.3822	14.6713
1894	39.6534	13.3045	1894	54.3033	14.6778
1895	39.626	13.2902	1895	54.3442	14.6184
1896	39.6618	13.2831	1896	54.459	14.486
1897	39.6353	13.2951	1897	54.423	14.4877
1898	39.6668	13.3193	1898	54.4289	14.4412
1899	39.667	13.2637	1899	54.2467	14.3828
1900	39.648	13.3277	1900	54.1886	14.3518

1900 MHz Head			1900 MHz Body		
Frequency (MHz)	**e'**	**e''**	**Frequency (MHz)**	**e'**	**e''**
1901	39.6432	13.3103	1901	54.1494	14.2824
1902	39.6276	13.3366	1902	54.0891	14.2171
1903	39.6211	13.2632	1903	53.9506	14.2106
1904	39.6281	13.3235	1904	53.8638	14.1262
1905	39.6445	13.3269	1905	53.7676	14.1312
1906	39.5997	13.3487	1906	53.6854	14.1257
1907	39.5497	13.2922	1907	53.6447	14.1235
1908	39.5773	13.2991	1908	53.5556	14.0428
1909	39.588	13.3344	1909	53.4446	14.0458
1910	39.5933	13.2836	1910	53.3487	14.0563

System Accuracy Verification

Prior to the assessment, the system validation kit was used to test whether the system was operating within its specifications of ±10%. The validation results are tabulated below. And also the corresponding SAR plot is attached as well in the SAR plots files.

System Verification Setup Block Diagram



System Accuracy Check Results

Date	Frequency Band	Liquid Type	Measured SAR (W/Kg)		Target Value (W/Kg)	Delta (%)	Tolerance (%)
2015-10-28	835	Head	1g	9.15	9.43	-2.97	±10
		Body	1g	9.52	9.55	-0.31	±10
2015-10-30	1900	Head	1g	40.1	40.7	-1.47	±10
		Body	1g	42.3	40.8	3.68	±10

*All SAR values are normalized to 1 Watt forward power.

SAR SYSTEM VALIDATION DATA

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

System Performance 835 MHz Head

DUT:D835V1; Type: 835 MHz; Serial:453

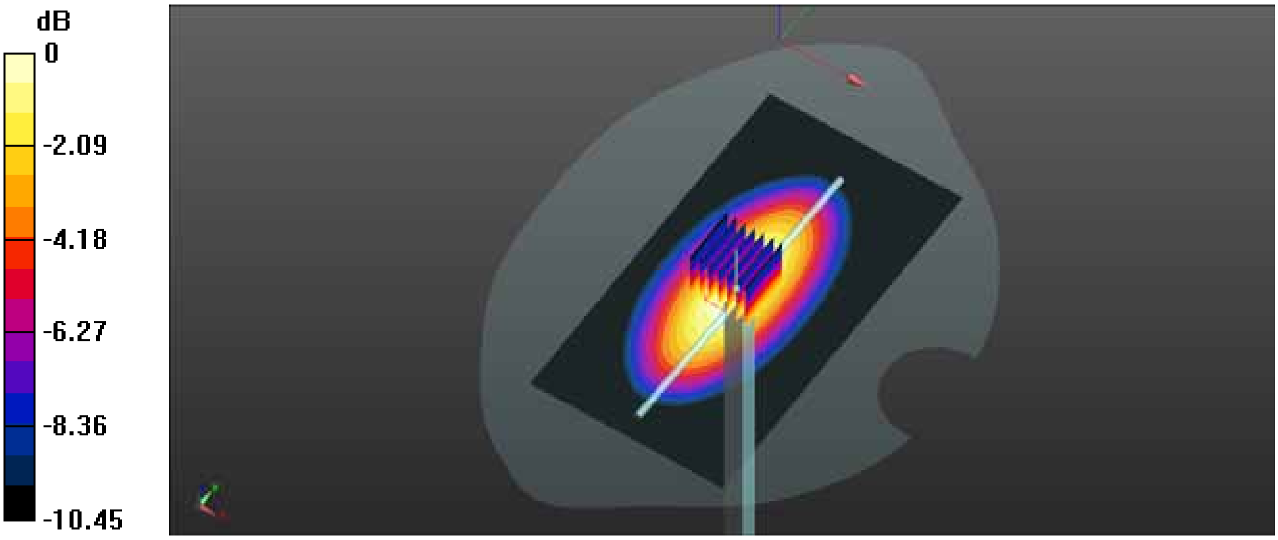
Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.894 S/m; ε_r = 42.95; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(9.52, 9.52, 9.52); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

System Performance 835 MHz Head /Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 11.2 W/kg

System Performance 835 MHz Head /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 112.7 V/m; Power Drift = 0.02dB
Peak SAR (extrapolated) = 14.5 W/kg
SAR(1 g) = 9.15 W/kg; SAR(10 g) = 6.20 W/kg
Maximum value of SAR (measured) =9.8 W/kg



0 dB = 9.8 W/kg = 9.91dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

System Performance 835 MHz Body

DUT:D835V1; Type: 835 MHz; Serial:453

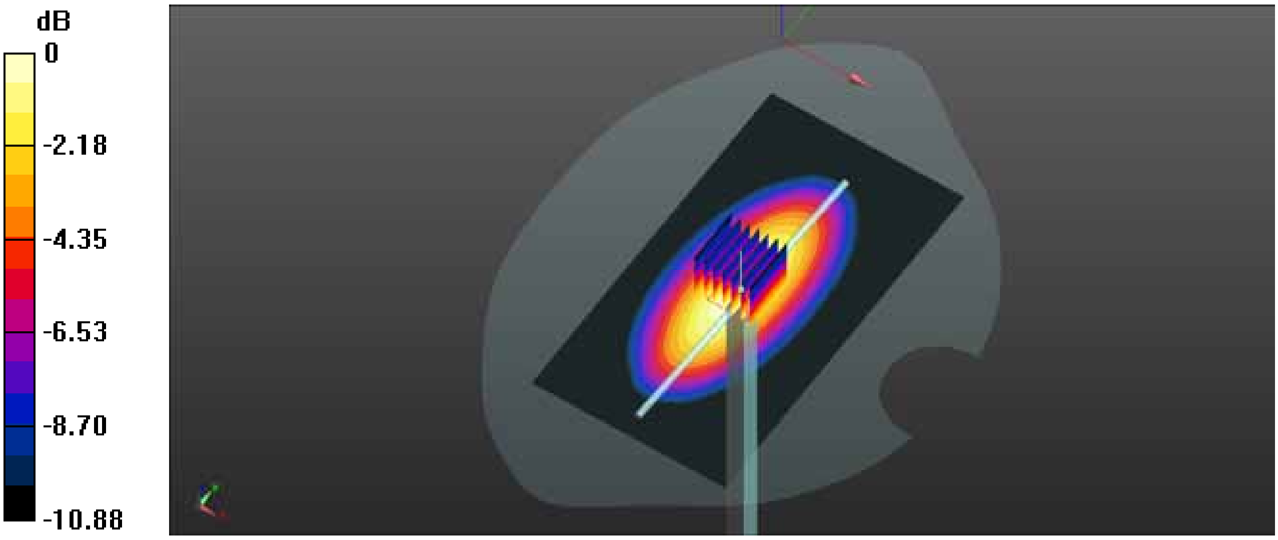
Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; σ = 0.973 S/m; ε_r = 55.088; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(9.17, 9.17, 9.17); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

System Performance 835 MHz Body /Area Scan (71x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 10.7W/kg

System Performance 835 MHz Body /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1066.4 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 14.9W/kg
SAR(1 g) = 9.52 W/kg; SAR(10 g) = 6.03 W/kg
Maximum value of SAR (measured) = 11.2 W/kg



0 dB = 11.2 W/kg = 10.49dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

System Performance 1900 MHz Head

DUT: D1900V2; Type: 1900 MHz; Serial: 5d206

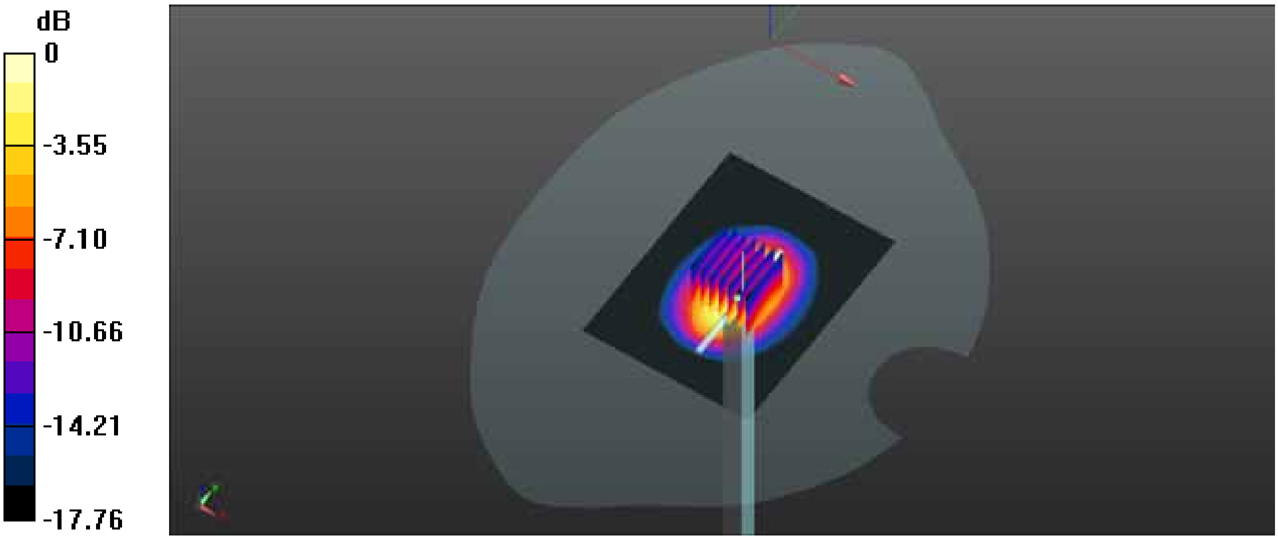
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.408 S/m; ε_r = 39.648; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(7.88, 7.88, 7.88); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

System Performance 1900 MHz Head /Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 47.4 W/kg

System Performance 1900 MHz Head /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 176.3 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 74.6 W/kg
SAR(1 g) = 40.1 W/kg; SAR(10 g) = 20.3 W/kg
Maximum value of SAR (measured) = 44.8 W/kg



0 dB = 44.8 W/kg = 16.51 dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

System Performance 1900 MHz Body

DUT: D1900V2; Type: 1900 MHz; Serial: 5d206

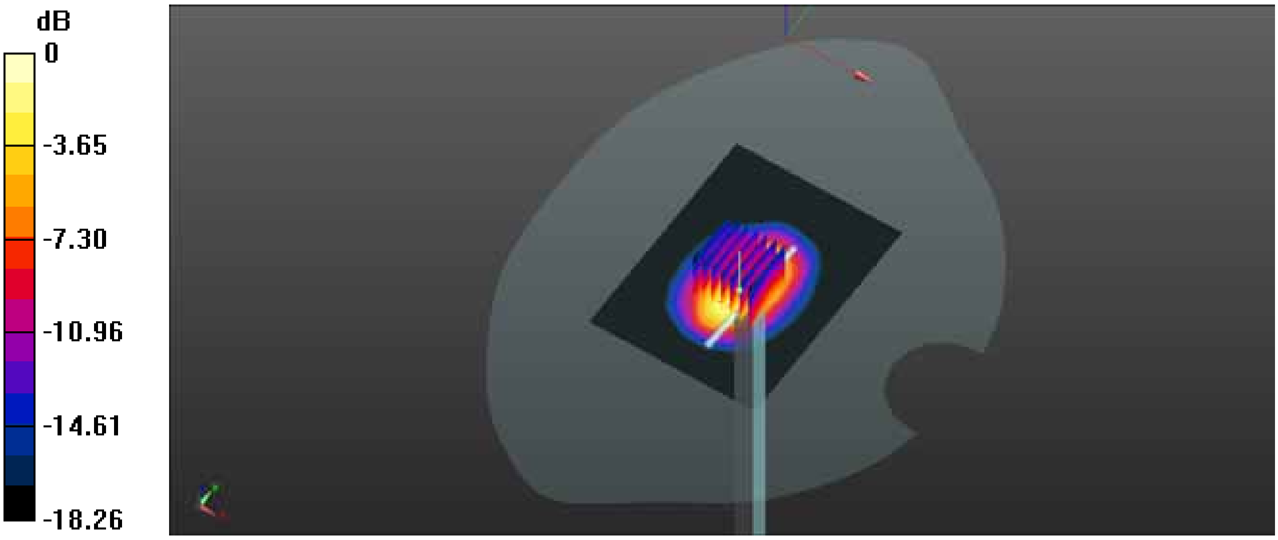
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.516 S/m; ε_r = 54.189; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(7.56, 7.56, 7.56); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

System Performance 1900 MHz Body /Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 48.1 W/kg

System Performance 1900 MHz Body /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 177.24V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 76.8 W/kg
SAR(1 g) = 42.3 W/kg; SAR(10 g) = 21.6W/kg
Maximum value of SAR (measured) = 46.5 W/kg



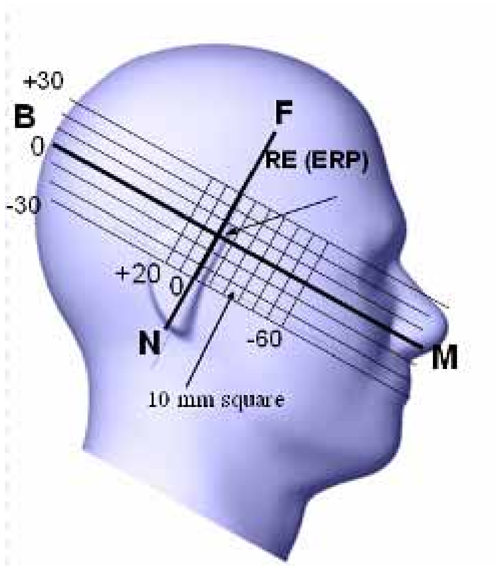
0 dB = 46.5 W/kg = 16.67 dBW/kg

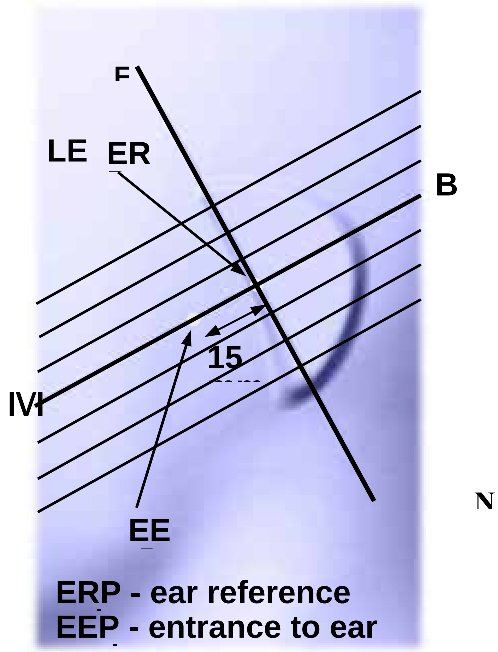
EUT TEST STRATEGY AND METHODOLOGY

Test Positions for Device Operating Next to a Person's Ear

This category includes most wireless handsets with fixed, retractable or internal antennas located toward the top half of the device, with or without a foldout, sliding or similar keypad cover. The handset should have its earpiece located within the upper ¼ of the device, either along the centerline or off-centered, as perceived by its users. This type of handset should be positioned in a normal operating position with the "test device reference point" located along the "vertical centerline" on the front of the device aligned to the "ear reference point". The "test device reference point" should be located at the same level as the center of the earpiece region. The "vertical centerline" should bisect the front surface of the handset at its top and bottom edges. A "ear reference point" is located on the outer surface of the head phantom on each ear spacer. It is located 1.5 cm above the center of the ear canal entrance in the "phantom reference plane" defined by the three lines joining the center of each "ear reference point" (left and right) and the tip of the mouth.

A handset should be initially positioned with the earpiece region pressed against the ear spacer of a head phantom. For the SCC-34/SC-2 head phantom, the device should be positioned parallel to the "N-F" line defined along the base of the ear spacer that contains the "ear reference point". For interim head phantoms, the device should be positioned parallel to the cheek for maximum RF energy coupling. The "test device reference point" is aligned to the "ear reference point" on the head phantom and the "vertical centerline" is aligned to the "phantom reference plane". This is called the "initial ear position". While maintaining these three alignments, the body of the handset is gradually adjusted to each of the following positions for evaluating SAR:





Cheek/Touch Position

The device is brought toward the mouth of the head phantom by pivoting against the "ear reference point" or along the "N-F" line for the SCC-34/SC-2 head phantom.

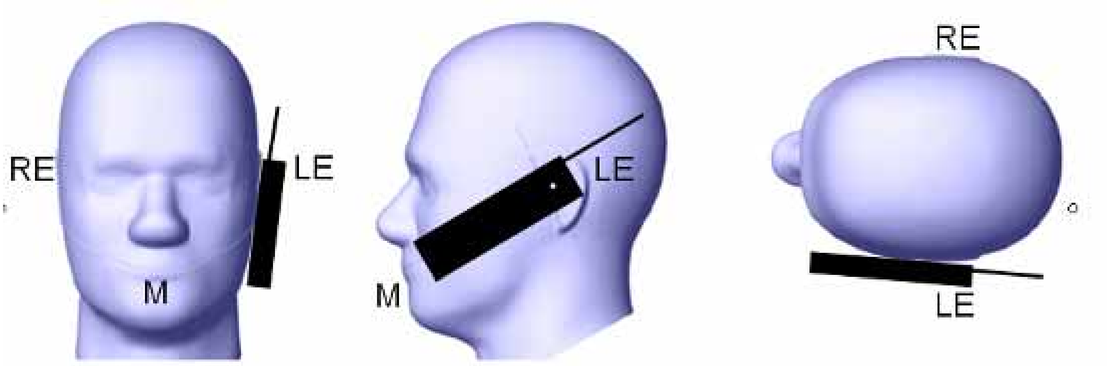
This test position is established:

When any point on the display, keypad or mouthpiece portions of the handset is in contact with the phantom.

(or) When any portion of a foldout, sliding or similar keypad cover opened to its intended self-adjusting normal use position is in contact with the cheek or mouth of the phantom.

For existing head phantoms – when the handset loses contact with the phantom at the pivoting point, rotation should continue until the device touches the cheek of the phantom or breaks its last contact from the ear spacer.

Cheek /Touch Position



Ear/Tilt Position

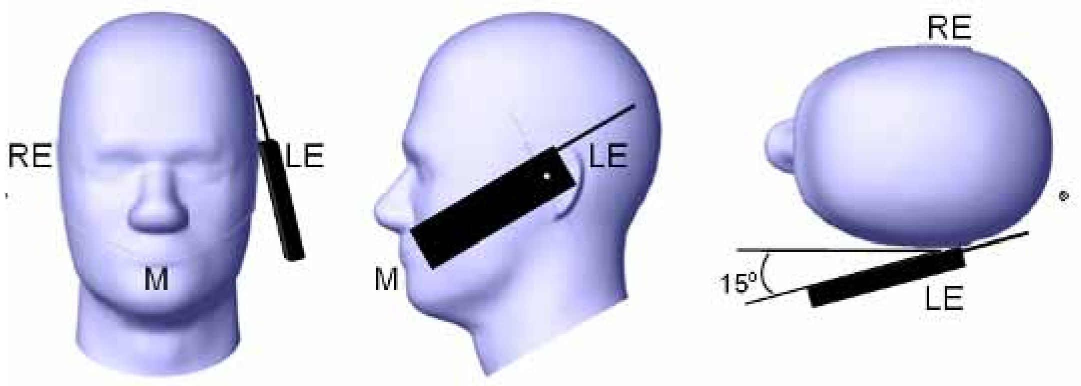
With the handset aligned in the "Cheek/Touch Position":

1) If the earpiece of the handset is not in full contact with the phantom's ear spacer (in the "Cheek/Touch position") and the peak SAR location for the "Cheek/Touch" position is located at the ear spacer region or corresponds to the earpiece region of the handset, the device should be returned to the "initial ear position" by rotating it away from the mouth until the earpiece is in full contact with the ear spacer.

2) (otherwise) The handset should be moved (translated) away from the cheek perpendicular to the line passes through both "ear reference points" (note: one of these ear reference points may not physically exist on a split head model) for approximate 2-3 cm. While it is in this position, the device handset is tilted away from the mouth with respect to the "test device reference point" until the inside angle between the vertical centerline on the front surface of the phone and the horizontal line passing through the ear reference point is by 15 80°. After the tilt, it is then moved (translated) back toward the head perpendicular to the line passes through both "ear reference points" until the device touches the phantom or the ear spacer. If the antenna touches the head first, the positioning process should be repeated with a tilt angle less than 15° so that the device and its antenna would touch the phantom simultaneously. This test position may require a device holder or positioner to achieve the translation and tilting with acceptable positioning repeatability.

If a device is also designed to transmit with its keypad cover closed for operating in the head position, such positions should also be considered in the SAR evaluation. The device should be tested on the left and right side of the head phantom in the "Cheek/Touch" and "Ear/Tilt" positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tilt/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s). If the transmission band of the test device is less than 10 MHz, testing at the high and low frequency channels is optional.

Ear /Tilt 15° Position



Test positions for body-worn and other configurations

Body-worn operating configurations should be tested with the belt-clips and holsters attached to the device and positioned against a flat phantom in normal use configurations. Devices with a headset output should be tested with a headset connected to the device. When multiple accessories that do not contain metallic components are supplied with the device, the device may be tested with only the accessory that dictates the closest spacing to the body. When multiple accessories that contain metallic components are supplied with the device, the device must be tested with each accessory that contains a unique metallic component. If multiple accessories share an identical metallic component (e.g., 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 must be tested.

Body-worn accessories may not always be supplied or available as options for some devices that are intended to be authorized for body-worn use. A separation distance of 1.5 cm between the back of the device and a flat phantom is recommended for testing body-worn SAR compliance under such circumstances. Other separation distances may be used, but they should not exceed 2.5 cm. In these cases, the device may use body-worn accessories that provide a separation distance greater than that tested for the device provided however that the accessory contains no metallic components.

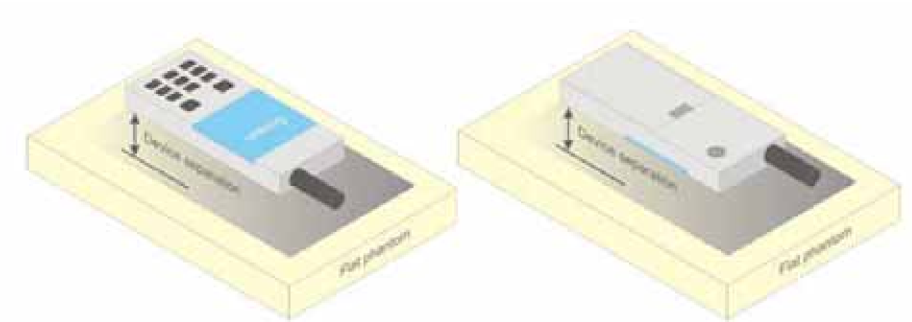


Figure 5 – Test positions for body-worn devices

SAR Evaluation Procedure

The evaluation was performed with the following procedure:

Step 1: Measurement of the SAR value at a fixed location above the ear point or central position was used as a reference value for assessing the power drop. The SAR at this point is measured at the start of the test and then again at the end of the testing.

Step 2: The SAR distribution at the exposed side of the head was measured at a distance of 4 mm from the inner surface of the shell. The area covered the entire dimension of the head or radiating structures of the EUT, the horizontal grid spacing was 15 mm x 15 mm, and the SAR distribution was determined by integrated grid of 1.5mm x 1.5mm. Based on these data, the area of the maximum absorption was determined by spline interpolation. The first Area Scan covers the entire dimension of the EUT to ensure that the hotspot was correctly identified.

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

1) The data at the surface were extrapolated, since the center of the dipoles is 1.2 mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.3 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.

2) The maximum interpolated value was searched with a straightforward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1 g or 10 g) were computed by 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 averages.

All neighboring volumes were evaluated until no neighboring volume with a higher average value was found.

Step 4: Re-measurement of the SAR value at the same location as in Step 1. If the value changed by more than 5%, the evaluation was repeated.

Test methodology

KDB 447498 D01 General RF Exposure Guidance v05r02.
KDB 648474 D04 Handset SAR v01r02.
KDB 865664 D01 SAR measurement 100 MHz to 6 GHz v01r03
KDB 865664 D02 RF Exposure Reporting v01r01
KDB 941225 D01 3G SAR Procedures v03
KDB 941225 D06 Hotspot Mode v02
KDB 616217 SAR for laptop and tablets v01r01

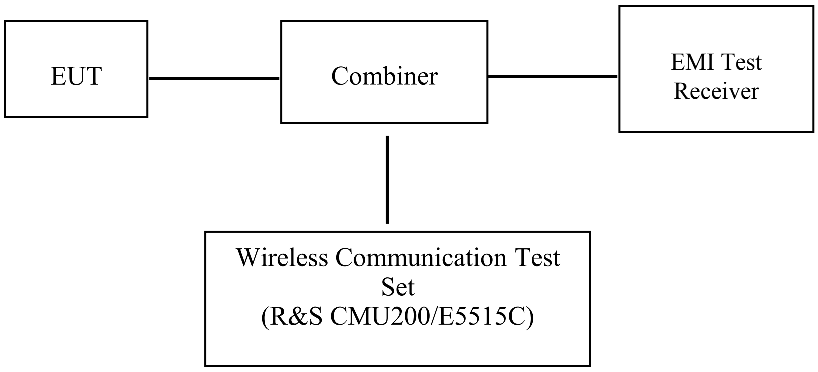
CONDUCTED OUTPUT POWER MEASUREMENT

Provision Applicable

The measured peak output power should be greater and within 5% than EMI measurement.

Test Procedure

The RF output of the transmitter was connected to the input of the EMI Test Receiver through sufficient attenuation.



GSM/WCDMA

Radio Configuration

The power measurement was configured by the Wireless Communication Test Set CMU200 for all Radio configurations except the HSPA+/DC-HSDPA configured by E5515C.

GSM

Function: Menu select > GSM Mobile Station > GSM 850/1900
Press Connection control to choose the different menus
Press RESET > choose all the reset all settings
Connection: Press Signal Off to turn off the signal and change settings
Network Support > GSM + only
MS Signal
    > 33 dBm for GSM 850
    > 30 dBm for PCS 1900
BS Signal: Enter the same channel number for TCH channel (test channel) and BCCH channel
Frequency Offset >+ 0 Hz
Mode > BCCH and TCH
BCCH Level > -85 dBm (May need to adjust if link is not stable)
BCCH Channel >choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]
Channel Type > Off
P0 > 4 dB
TCH > choose desired test channel
Hopping >Off
AF/RF: Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input
Connection: Press Signal on to turn on the signal and change settings

GPRS

Function: Menu select > GSM Mobile Station > GSM 850/1900
Press Connection control to choose the different menus
Press RESET > choose all the reset all settings
Connection: Press Signal Off to turn off the signal and change settings
Network Support > GSM + GPRS or GSM + EGSM
Main Service > Packet Data

Service selection > Test Mode A – Auto Slot Config. off
MS Signal: Press Slot Config Bottom on the right twice to select and change the number of time slots and power setting
> Slot configuration > Uplink/Gamma
> 33 dBm for GPRS 850
> 30 dBm for GPRS 1900
BS Signal: Enter the same channel number for TCH channel (test channel) and BCCH channel
Frequency Offset >+ 0 Hz
Mode >BCCH and TCH
BCCH Level >-85 dBm (May need to adjust if link is not stable)
BCCH Channel > choose desire test channel [Enter the same channel number for TCH channel (test channel) and BCCH channel]

Channel Type > Off
P0 > 4 dB
Slot Config > Unchanged (if already set under MS signal)
TCH > choose desired test channel
Hopping >Off
Main Timeslot >3
Network: Coding Scheme >CS4 (GPRS)
Bit Stream >2E9-1 PSR Bit Stream
AF/RF: Enter appropriate offsets for Ext. Att. Output and Ext. Att. Input
Connection: Press Signal on to turn on the signal and change settings

WCDMA Release 99

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification. The EUT has a nominal maximum output power of 24dBm (+1.7/-3.7).

WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	Power Control Algorithm	Algorithm2
	β_c/β_d	8/15

HSDPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

	Mode	HSDPA	HSDPA	HSDPA	HSDPA
	Subset	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	Power Control Algorithm	Algorithm2			
	β_c	2/15	12/15	15/15	15/15
	β_d	15/15	15/15	8/15	4/15
	β_d(SF)	64			
	β_c/β_d	2/15	12/15	15/8	15/4
	β_{hs}	4/15	24/15	30/15	30/15
	MPR(dB)	0	0	0.5	0.5
HSDPA Specific Settings	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback	4ms			
	CQI Repetition Factor	2			
	Ahs=βhs/ βc	30/15			

HSUPA

The following tests were conducted according to the test requirements outlines in section 5.2 of the 3GPP TS34.121-1 specification.

<table>
<tr><th rowspan="2"></th><th>Mode</th><th>HSUPA</th><th>HSUPA</th><th>HSUPA</th><th>HSUPA</th><th>HSUPA</th></tr>
<tr><th>Subset</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th></tr>
<tr><td rowspan="12">WCDMA General Settings</td><td>Loopback Mode</td><td colspan="5">Test Mode 1</td></tr>
<tr><td>Rel99 RMC</td><td colspan="5">12.2kbps RMC</td></tr>
<tr><td>HSDPA FRC</td><td colspan="5">H-Set1</td></tr>
<tr><td>HSUPA Test</td><td colspan="5">HSUPA Loopback</td></tr>
<tr><td>Power Control Algorithm</td><td colspan="5">Algorithm2</td></tr>
<tr><td>β_c</td><td>11/15</td><td>6/15</td><td>15/15</td><td>2/15</td><td>15/15</td></tr>
<tr><td>β_d</td><td>15/15</td><td>15/15</td><td>9/15</td><td>15/15</td><td>0</td></tr>
<tr><td>β_{ec}</td><td>209/225</td><td>12/15</td><td>30/15</td><td>2/15</td><td>5/15</td></tr>
<tr><td>β_c / β_d</td><td>11/15</td><td>6/15</td><td>15/9</td><td>2/15</td><td>-</td></tr>
<tr><td>β_{hs}</td><td>22/15</td><td>12/15</td><td>30/15</td><td>4/15</td><td>5/15</td></tr>
<tr><td>CM(dB)</td><td>1.0</td><td>3.0</td><td>2.0</td><td>3.0</td><td>1.0</td></tr>
<tr><td>MPR(dB)</td><td>0</td><td>2</td><td>1</td><td>2</td><td>0</td></tr>
<tr><td rowspan="7">HSDPA Specific Settings</td><td>DACK</td><td colspan="5">8</td></tr>
<tr><td>DNAK</td><td colspan="5">8</td></tr>
<tr><td>DCQI</td><td colspan="5">8</td></tr>
<tr><td>Ack-Nack repetition factor</td><td colspan="5">3</td></tr>
<tr><td>CQI Feedback</td><td colspan="5">4ms</td></tr>
<tr><td>CQI Repetition Factor</td><td colspan="5">2</td></tr>
<tr><td>$Ahs=\beta_{hs} / \beta_c$</td><td colspan="5">30/15</td></tr>
<tr><td rowspan="6">HSUPA Specific Settings</td><td>DE-DPCCH</td><td>6</td><td>8</td><td>8</td><td>5</td><td>7</td></tr>
<tr><td>DHARQ</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr>
<tr><td>AG Index</td><td>20</td><td>12</td><td>15</td><td>17</td><td>21</td></tr>
<tr><td>ETFCI</td><td>75</td><td>67</td><td>92</td><td>71</td><td>81</td></tr>
<tr><td>Associated Max UL Data Rate kbps</td><td>242.1</td><td>174.9</td><td>482.8</td><td>205.8</td><td>308.9</td></tr>
<tr><td>Reference E_FCls</td><td colspan="2">E-TFCI 11 E
E-TFCI PO 4
E-TFCI 67
E-TFCI PO 18
E-TFCI 71
E-TFCI PO23
E-TFCI 75
E-TFCI PO26
E-TFCI 81
E-TFCI PO 27</td><td>E-TFCI
11
E-TFCI
PO4
E-TFCI
92
E-TFCI
PO 18</td><td colspan="2">E-TFCI 11 E
E-TFCI PO 4
E-TFCI 67
E-TFCI PO 18
E-TFCI 71
E-TFCI PO23
E-TFCI 75
E-TFCI PO26
E-TFCI 81
E-TFCI PO 27</td></tr>
</table>

HSPA+

Sub-test	β_c (Note3)	β_d	β_{HS} (Note1)	β_{ec}	β_{ed} (2xSF2) (Note 4)	β_{ed} (2xSF4) (Note 4)	CM (dB) (Note 2)	MPR (dB) (Note 2)	AG Index (Note 4)	E-TFCI (Note 5)	E-TFCI (boost)
1	1	0	30/15	30/15	β_{ed}1: 30/15 β_{ed}2: 30/15	β_{ed}3: 24/15 β_{ed}4: 24/15	3.5	2.5	14	105	105

Note 1: Δ_{ACK}, Δ_{NACK} and Δ_{CQI} = 30/15 with β_{hs} = 30/15 * β_c .
Note 2: CM = 3.5 and the MPR is based on the relative CM difference, MPR = MAX(CM-1,0).
Note 3: DPDCH is not configured, therefore the β_c is set to 1 and β_d = 0 by default.
Note 4: β_{ed} can not be set directly; it is set by Absolute Grant Value.
Note 5: All the sub-tests require the UE to transmit 2SF2+2SF4 16QAM EDCH and they apply for UE using E-DPDCH category 7. E-DCH TTI is set to 2ms TTI and E-DCH table index = 2. To support these E-DCH configurations DPDCH is not allocated. The UE is signalled to use the extrapolation algorithm.

The following tests were conducted according to the test requirements in Table C.11.1.4 of 3GPP TS 34.121-1

DC-HSDPA

The following tests were conducted according to the test requirements in Table C.8.1.12 of 3GPP TS 34.121-1

Table C.8.1.12: Fixed Reference Channel H-Set 12

Parameter	Unit	Value
Nominal Avg. Inf. Bit Rate	kbps	60
Inter-TTI Distance	TTI's	1
Number of HARQ Processes	Processes	6
Information Bit Payload (N_{INF})	Bits	120
Number Code Blocks	Blocks	1
Binary Channel Bits Per TTI	Bits	960
Total Available SML's in UE	SML's	19200
Number of SML's per HARQ Proc.	SML's	3200
Coding Rate		0.15
Number of Physical Channel Codes	Codes	1
Modulation		QPSK

Note 1: The RMC is intended to be used for DC-HSDPA mode and both cells shall transmit with identical parameters as listed in the table.
Note 2: Maximum number of transmission is limited to 1, i.e., retransmission is not allowed. The redundancy and constellation version 0 shall be used.

Maximum Target Output Power

Max Target Power(dBm)			
Mode/Band	Channel		
	Low	Middle	High
GSM 850	33.5	33.5	33.5
GPRS 1 TX Slot	33.3	33.3	33.3
GPRS 2 TX Slot	32.2	32.2	32.2
GPRS 3 TX Slot	30.3	30.3	30.3
GPRS 4 TX Slot	29.5	29.5	29.5
PCS 1900	28.7	28.7	28.7
GPRS 1 TX Slot	28.7	28.7	28.7
GPRS 2 TX Slot	27.8	27.8	27.8
GPRS 3 TX Slot	26.1	26.1	26.1
GPRS 4 TX Slot	25.4	25.4	25.4
WCDMA850	22.8	22.8	22.8
HSDPA	21.8	21.8	21.8
HSUPA	21.8	21.8	21.8
DC-HSDPA	21.8	21.8	21.8
HSPA+	21.6	21.6	21.6
WCDMA1900	22.7	22.7	22.7
HSDPA	21.7	21.7	21.7
HSUPA	21.3	21.3	21.3
DC-HSDPA	21.2	21.2	21.2
HSPA+	21.2	21.2	21.2
WLAN	9.5	9.5	9.5
Bluetooth BDR/EDR	-2.6	-2.6	-2.6
Bluetooth LE	-8.5	-8.5	-8.5

Test Results:

GSM:

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)
GSM 850	128	824.2	**33.4**
	190	836.6	33.2
	251	848.8	33.2
PCS 1900	512	1850.2	**28.6**
	661	1880	28.3
	810	1909.8	28.2

GPRS:

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			1 slot	2 slots	3 slots	4 slots
GSM 850	128	824.2	33.2	32.11	30.18	29.42
	190	836.6	33.06	31.98	30.05	29.24
	251	848.8	33.04	32.02	30.04	29.17
PCS 1900	512	1850.2	28.56	27.74	26.04	25.32
	661	1880	28.26	27.47	25.91	25.22
	810	1909.8	28.17	27.33	25.91	25.31

For SAR, the time based average power is relevant, the difference in between depends on the duty cycle of the TDMA signal.

Number of Time slot	1	2	3	4
Duty Cycle	1:8	1:4	1:2.66	1:2
Time based Ave. power compared to slotted Ave. power	-9 dB	-6 dB	-4.25 dB	-3 dB
Crest Factor	8	4	2.66	2

The time based average power for GPRS

Band	Channel No.	Frequency (MHz)	Time based average Power (dBm)			
			1 slot	2 slot	3 slots	4 slots
GSM 850	128	824.2	24.2	26.11	25.93	**26.42**
	190	836.6	24.06	25.98	25.8	26.24
	251	848.8	24.04	26.02	25.79	26.17
PCS 1900	512	1850.2	19.56	21.74	21.79	**22.32**
	661	1880	19.26	21.47	21.66	22.22
	810	1909.8	19.17	21.33	21.66	22.31

Note:
1. Rohde & Schwarz Radio Communication Tester (CMU200) was used for the measurement of GSM peak and average output power for active timeslots.
2. For GSM voice, 1 timeslot has been activated with power level 5 (850 MHz band) and 0 (1900 MHz band).
3. For GPRS, 1, 2, 3 and 4 timeslots has been activated separately with power level 3(850 MHz band) and 3(1900 MHz band).

WCDMA:
Results (12.2kbps RMC)

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)
WCDMA 850	4132	826.4	22.3
	4183	836.6	**22.74**
	4233	846.6	21.94
WCDMA 1900	9262	1852.4	**22.62**
	9400	1880	22.48
	9538	1907.6	22.55

Results (HSDPA)

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			Subset 1	Subset 2	Subset 3	Subset 4
WCDMA 850	4132	826.4	21.2	21.26	21.19	21.25
	4183	836.6	21.69	21.74	21.67	21.69
	4233	846.6	20.89	20.82	20.85	20.96
WCDMA 1900	9262	1852.4	21.06	21.05	20.99	20.84
	9400	1880	21.59	21.61	21.53	21.52
	9538	1907.6	21.54	21.52	21.61	21.57

Results (HSUPA)

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)				
			Subset 1	Subset 2	Subset 3	Subset 4	Subset 5
WCDMA 850	4132	826.4	21.2	21.14	21.24	21.21	21.18
	4183	836.6	21.65	21.71	21.63	21.7	21.65
	4233	846.6	20.81	20.8	20.86	20.83	20.76
WCDMA1900	9262	1852.4	21.12	21.13	21.14	21.03	21.18
	9400	1880	21.13	21.05	21.15	21.12	21.14
	9538	1907.6	21.03	21.1	20.99	21.12	21.13

Results (DC-HSDPA):

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)			
			Subset 1	Subset 2	Subset 3	Subset 4
WCDMA 850	4132	826.4	20.97	21.05	20.99	20.89
	4183	836.6	21.58	21.62	21.68	21.63
	4233	846.6	20.79	20.83	20.69	20.87
WCDMA 1900	9262	1852.4	21.08	21.02	21.06	21.03
	9400	1880	21.11	21.12	21.14	21.02
	9538	1907.6	21.01	20.97	20.87	20.85

Results (HSPA+)

Band	Channel No.	Frequency (MHz)	RF Output Power (dBm)
WCDMA 850	4132	826.4	20.9
	4183	836.6	21.52
	4233	846.6	20.73
WCDMA 1900	9262	1852.4	21.04
	9400	1880	21.08
	9538	1907.6	20.96

Note:
1. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model 1.
2. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/HSPA+/DC-HSDPA when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.

Bluetooth

Mode	Channel No.	Channel frequency (MHz)	RF Output Power (dBm)
BDR(GFSK)	0	2402	-2.66
	39	2441	**-2.66**
	78	2480	-2.78
EDR(4-DQPSK)	0	2402	-3.27
	39	2441	-3.27
	78	2480	-3.27
EDR(8-DPSK)	0	2402	-3.27
	39	2441	-3.27
	78	2480	-3.27
Bluetooth LE	0	2402	-8.6
	19	2440	-8.87
	39	2480	-9.74

WLAN

Mode	Channel No.	Channel frequency (MHz)	RF Output Power (dBm)
802.11b	1	2412	9.28
	6	2437	8.89
	11	2462	8.42
802.11g	1	2412	8.89
	6	2437	**9.36**
	11	2462	8.67
802.11n HT20	1	2412	9.04
	6	2437	8.74
	11	2462	8.46
802.11n HT40	3	2422	7.54
	6	2437	7.12
	9	2452	7.30

Note:
The output power was tested under data rate 1Mbps for 802.11b, 6Mbps for 802.11g, 6.5Mbps for 802.11n HT20, 13.5Mbps for 802.11n HT40.

SAR MEASUREMENT RESULTS

This page summarizes the results of the performed dosimetric evaluation.

The EUT is capable of function as a WLAN to cellular mobile hotspot. Additional SAR test was performed according to KDB941225 D06. Test was performed with a separation of 1cm between the EUT and the flat phantom. The EUT was positioned for SAR tests with the front and back surfaces facing the edge. Each transmit band was utilized for SAR testing. The tested mode has been selected within each band that exhibits the highest time average output power.

SAR Test Data

Environmental Conditions

Temperature:	24-24.5 ℃	22-23 ℃
Relative Humidity:	30 %	30 %
ATM Pressure:	1011 mbar	1012 mbar
Test Date:	2015-10-28	2015-10-30

Testing was performed by Rocky Xiao

GSM 850:

EUT Position	Frequency (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Flat	824.2	GSM	-0.03	33.4	33.5	1.023	0.154	0.158	**1#**/
	836.6	GSM	0.06	33.2	33.5	1.072	0.141	0.151	/
	848.8	GSM	0.2	33.2	33.5	1.072	0.144	0.154	
Body-Back-Headset (0mm)	824.2	GSM	-0.05	33.4	33.5	1.023	1.22	1.248	/
	836.6	GSM	0.13	33.2	33.5	1.072	1.235	1.324	/
	848.8	GSM	-0.01	33.2	33.5	1.072	1.215	1.302	/
Body-Back (0mm)	824.2	GPRS	0.1	29.42	29.5	1.019	1.48	1.508	**2#**
	836.6	GPRS	0.16	29.24	29.5	1.062	1.374	1.459	/
	848.8	GPRS	0.07	29.17	29.5	1.079	1.342	1.448	/
Body-Right (0mm)	824.2	GPRS	/	/	/	/	/	/	/
	836.6	GPRS	-0.16	29.24	29.5	1.062	0.402	0.427	/
	848.8	GPRS	/	/	/	/	/	/	/
Body-Bottom (0mm)	824.2	GPRS	/	/	/	/	/	/	/
	836.6	GPRS	-0.05	29.24	29.5	1.062	0.674	0.718	/
	848.8	GPRS	/	/	/	/	/	/	/

Note:
1. When the 1-g SAR is ≤ 0.8W/Kg, testing for other channels are optional.
2. The EUT transmit and receive through the same GSM antenna while testing SAR.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
4. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.
5. The Multi-slot Classes of EUT is Class 12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 1DL+4UL is the worst case.

PCS Band:

EUT Position	Frequency (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Flat	1850.2	GSM	0.13	28.6	28.7	1.023	0.065	0.066	**3#**
	1880	GSM	0.2	28.3	28.7	1.096	0.059	0.065	/
	1909.8	GSM	0.05	28.2	28.7	1.122	0.056	0.063	/
Body-Back-Headset (0mm)	1850.2	GSM	0.11	28.6	28.7	1.023	0.762	0.78	/
	1880	GSM	-0.06	28.3	28.7	1.096	0.736	0.807	/
	1909.8	GSM	0.13	28.2	28.7	1.122	0.704	0.79	/
Body-Back (0mm)	1850.2	GPRS	-0.04	25.32	25.4	1.019	0.947	0.965	**4#**
	1880.0	GPRS	0.06	25.22	25.4	1.042	0.881	0.918	/
	1909.8	GPRS	0.19	25.31	25.4	1.021	0.926	0.945	
Body-Right (0mm)	1850.2	GPRS	/	/	/	/	/	/	/
	1880.0	GPRS	-0.04	25.22	25.4	1.042	0.249	0.259	/
	1909.8	GPRS	/	/	/	/	/	/	/
Body-Bottom (0mm)	1850.2	GPRS	/	/	/	/	/	/	/
	1880.0	GPRS	-0.1	25.22	25.4	1.042	0.41	0.444	/
	1909.8	GPRS	/	/	/	/	/	/	/

Note:
1. When the 1-g SAR is ≤ 0.8W/Kg, testing for other channels are optional.
2. The EUT transmit and receive through the same GSM antenna while testing SAR.
3. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.
4. When the maximum output power variation across the required test channels is > ½ dB, instead of the middle channel, the highest output power channel must be used.
5. The Multi-slot Classes of EUT is Class 12 which has maximum 4 Downlink slots and 4 Uplink slots, the maximum active slots is 5, when perform the multiple slots scan, 1DL+4UL is the worst case.

WCDMA 850 Band:

EUT Position	Frequency (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Flat	826.4	RMC	0.16	22.3	22.8	1.122	0.118	0.132	/
	836.6	RMC	-0.01	22.74	22.8	1.014	0.134	0.136	**5#**
	846.6	RCM	0.07	21.94	22.8	1.219	0.107	0.13	/
Body-Back (0mm)	826.4	RMC	0.02	22.3	22.8	1.122	0.78	0.875	/
	836.6	RMC	-0.02	22.74	22.8	1.014	0.893	0.906	**6#**
	846.6	RMC	0.14	21.94	22.8	1.219	0.719	0.876	/
Body-Right (0mm)	826.4	RMC	/	/	/	/	/	/	/
	836.6	RMC	-0.04	22.74	22.8	1.014	0.27	0.274	/
	846.6	RMC	/	/	/	/	/	/	/
Body-Bottom (0mm)	826.4	RMC	/	/	/	/	/	/	/
	836.6	RMC	-0.16	22.74	22.8	1.014	0.418	0.435	/
	846.6	RMC	/	/	/	/	/	/	/

Note:

1. When the 1-g SAR is≤ 0.8W/Kg, testing for other channels are optional.
2. The EUT transmit and receive through the same antenna while testing SAR.
3. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model.
4. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/HSPA+/DC-HSDPA when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.
5. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

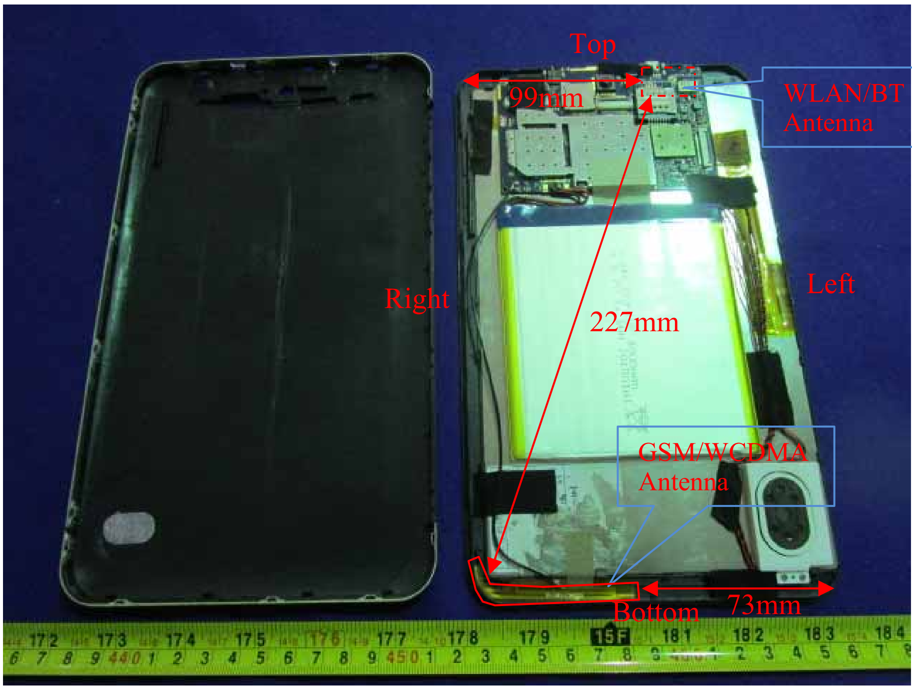
WCDMA 1900 Band:

EUT Position	Frequency (MHz)	Test Mode	Power Drift (dB)	Max. Meas. Power (dBm)	Max. Rated Power (dBm)	1g SAR (W/Kg)			
						Scaled Factor	Meas. SAR	Scaled SAR	Plot
Head Flat	1852.4	RMC	0.02	22.62	22.7	1.019	0.066	0.067	**7#**
	1880	RMC	0.07	22.48	22.7	1.052	0.061	0.064	/
	1907.6	RMC	0.17	22.55	22.7	1.035	0.062	0.064	/
Body-Back (0mm)	1852.4	RMC	0.1	22.62	22.7	1.019	0.897	0.914	**8#**
	1880.0	RMC	0.02	22.48	22.7	1.052	0.827	0.87	/
	1907.6	RMC	0.03	22.55	22.7	1.035	0.855	0.885	/
Body-Right (0mm)	1852.4	RMC	/	/	/	/	/	/	/
	1880.0	RMC	0.09	22.48	22.7	1.052	0.255	0.268	/
	1907.6	RMC	/	/	/	/	/	/	/
Body-Bottom (0mm)	1852.4	RMC	/	/	/	/	/	/	/
	1880.0	RMC	0.14	22.48	22.7	1.052	0.41	0.425	/
	1907.6	RMC	/	/	/	/	/	/	/

Note:
1. When the 1-g SAR is≤ 0.8W/Kg, testing for other channels are optional.
2. The EUT transmit and receive through the same antenna while testing SAR.
3. The default test configuration is to measure SAR with an established radio link between the EUT and a communication test set using a 12.2 kbps RMC (reference measurement Channel) Configured in Test Loop Model.
4. KDB 941225 D01-Body SAR is not required for HSDPA/HSUPA/HSPA+/DC-HSDPA when the maximum average output of each RF channel is less than ¼ dB higher than measured 12.2kbps RMC or the maximum SAR for 12.2kbps RMC is < 75% of SAR limit.
5. When SAR or MPE is not measured at the maximum power level allowed for production units, the results must be scaled to the maximum tune-up tolerance limit according to the power applied to the individual channels tested to determine compliance.

SAR SIMULTANEOUS TRANSMISSION DESCRIPTION

BT& WLAN and GSM&WCDMA Antennas Location:



Simultaneous Transmission:

Description of Simultaneous Transmit Capabilities			Antennas Distance (mm)
Transmitter Combination	Simultaneous?	Hotspot?	
GSM + WCDMA	×	×	0
GSM + Bluetooth	√	×	227
GSM + WLAN	√	√	227
WCDMA + Bluetooth	√	×	227
WCDMA + WLAN	√	√	227

Standalone SAR test exclusion considerations

Mode	Frequency (MHz)	Pavg (dBm)	Pavg (mW)	Distance (mm)	Calculated value	Threshold (1-g)	SAR Test Exclusion
WLAN	2462	9.5	8.91	0	2.8	3	YES
Bluetooth	2480	-2.6	0.55	0	0.2	3	YES

NOTE:
The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:
[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR and ≤7.5 for 10-g extremity SAR, where
1. f(GHz) is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion.

Standalone SAR estimation:

Mode	Frequency (MHz)	Pavg (dBm)	Pavg (mW)	Distance (mm)	Estimated 1-g (W/kg)
WLAN Head	2462	9.5	8.91	0	0.373
WLAN Body	2462	9.5	8.91	10	0.187
BT Head	2480	-2.6	0.55	0	0.027
BT Body	2480	-2.6	0.55	10	0.013

When standalone SAR test exclusion applies to an antenna that transmits simultaneously with other antennas, the standalone SAR must be estimated according to following to determine simultaneous transmission SAR test exclusion:
[(max. power of channel, including tune-up tolerance , mW)/(min. test separation distance, mm)] · [√f(GHz)/x]
W/kg for test separation distances ≤50 mm;
where x = 7.5 for 1-g SAR.
When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test Exclusion

Simultaneous and Hotspot SAR test exclusion considerations:

Mode(SAR1+SAR2)	Position	Reported SAR (W/kg)		ΣSAR < 1.6W/kg
		SAR1	SAR2	
GSM 850+BT	Head Flat	0.158	0.027	0.185
	Body-Back-Headset	1.324	0.013	1.337
	Body-Back	1.508	0.013	1.521
	Body-Right	0.427	0.013	0.44
	Body-Bottom	0.718	0.013	0.731
PCS 1900+BT	Head Flat	0.066	0.027	0.093
	Body-Back-Headset	0.807	0.013	0.82
	Body-Back	0.965	0.013	0.978
	Body-Right	0.259	0.013	0.272
	Body-Bottom	0.444	0.013	0.457
WCDMA 850+BT	Head Flat	0.136	0.027	0.163
	Body-Back	0.906	0.013	0.919
	Body-Right	0.274	0.013	0.287
	Body-Bottom	0.435	0.013	0.448
WCDMA 1900+BT	Head Flat	0.067	0.027	0.094
	Body-Back	0.914	0.013	0.927
	Body-Right	0.268	0.013	0.281
	Body-Bottom	0.425	0.013	0.438

Mode(SAR1+SAR2)	Position	Reported SAR (W/kg)		ΣSAR < 1.6W/kg
		SAR1	SAR2	
GSM 850+WLAN	Head Flat	0.158	0.373	0.531
	Body-Back-Headset	1.324	0.187	1.511
GSM 850+ WLAN(Hotspot)	Body-Bottom	1.508	0.187	**1.695** SPLSR
	Body-Right	0.427	0.187	0.614
	Body-Back	0.718	0.187	0.905
PCS 1900+ WLAN	Head Flat	0.066	0.373	0.439
	Body-Back-Headset	0.807	0.187	0.994
PCS 1900+ WLAN(Hotspot)	Body-Bottom	0.965	0.187	1.152
	Body-Right	0.259	0.187	0.446
	Body-Back	0.444	0.187	0.631
WCDMA 850+ WLAN	Head Flat	0.136	0.373	0.509
WCDMA 850+ WLAN(Hotspot)	Body-Bottom	0.906	0.187	1.093
	Body-Right	0.274	0.187	0.461
	Body-Back	0.435	0.187	0.622
WCDMA 1900+ WLAN	Head Flat	0.067	0.373	0.44
WCDMA 1900+ WLAN(Hotspot)	Body-Bottom	0.914	0.187	1.101
	Body-Right	0.268	0.187	0.455
	Body-Back	0.425	0.187	0.612

Note:
When the sum is greater than the SAR limit, the SAR to peak location separation ratio(SPLSR) was applied to determine if simultaneous transmission SAR test exclusion applies.

SPLSR:

Distance(Ri) = $[(x_1-x_2)^2+(y_1-y_2)^2+(z_1-z_2)^2]^{0.5}$=222 mm

SPLSR= $(SAR1 + SAR2)^{1.5}/Ri=(1.508+0.187)^{1.5}/222 = 0.01 < 0.04$

Conclusion:
Σ SAR < 1.6 W/kg therefore simultaneous transmission SAR with Volume Scans is **not** required.

SAR Plots (Summary of the Highest SAR Values)

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

Test Plot 1#:GSM 850 Head Low Channal

DUT: Phablet; Type: Nitro Phablet 9;

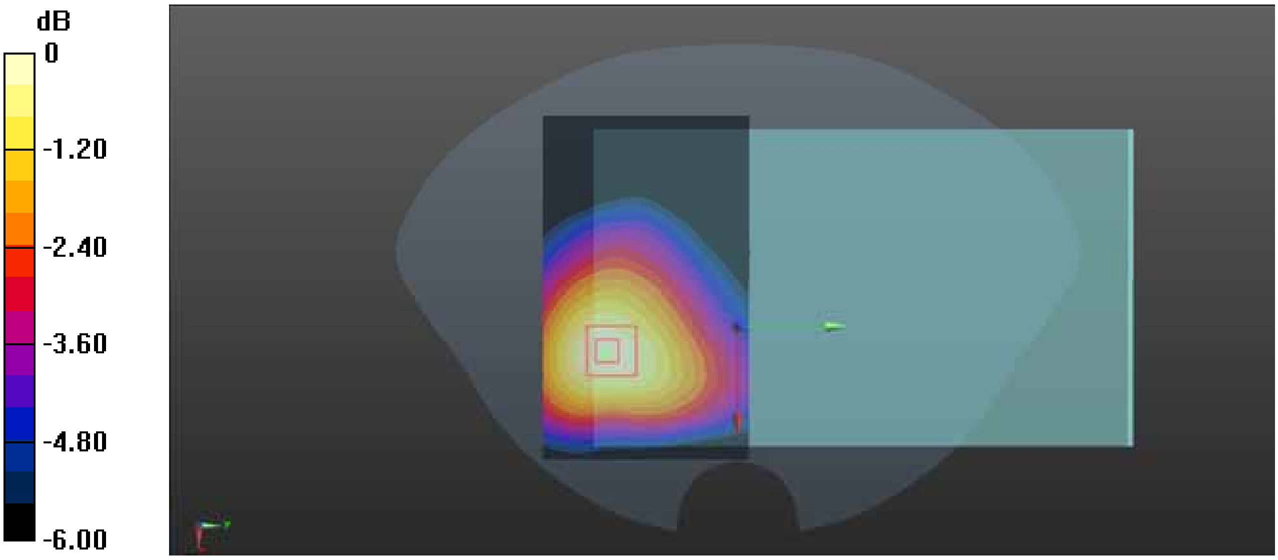
Communication System: Generic GSM; Frequency: 824.2 MHz;Duty Cycle: 1: 8
Medium parameters used: f = 824.2 MHz; σ = 0.879 S/m; ε_r = 42.928; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(9.17, 9.17, 9.17); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

Head/GSM 850 Flat/Area Scan (101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.162 W/kg

Head/GSM 850 Flat /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.902 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.205 W/kg
SAR(1 g) = 0.154 W/kg; SAR(10 g) = 0.112 W/kg
Maximum value of SAR (measured) = 0.163 W/kg



0 dB = 0.163 W/kg = -7.88 dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

Test Plot 2#:GSM 850 Back Low Channal

DUT: Phablet; Type: Nitro Phablet 9;

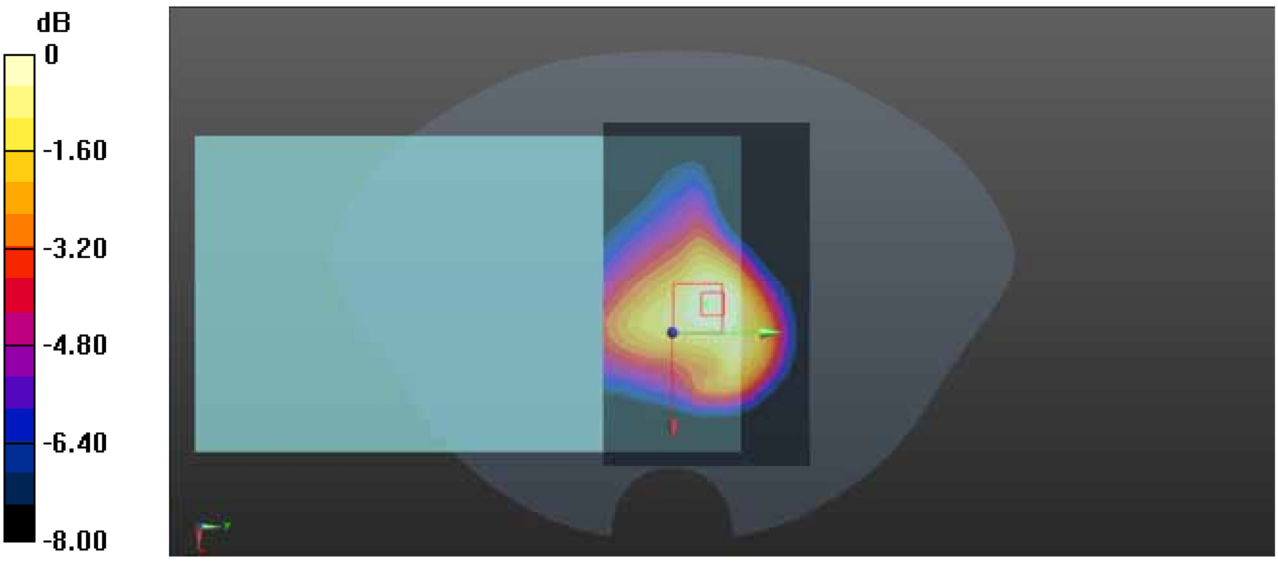
Communication System: Generic GPRS-4 SLOTS; Frequency: 824.2 MHz;Duty Cycle: 1:2
Medium parameters used: f = 824.2 MHz; σ = 0.962 S/m; ε_r = 55.151; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(9.17, 9.17, 9.17); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

Body/GSM 850 Back/Area Scan (101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.56 W/kg

Body/GSM 850 Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.34 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 2.15 W/kg
SAR(1 g) = 1.48 W/kg; SAR(10 g) = 1.03 W/kg
Maximum value of SAR (measured) = 1.58 W/kg



0 dB = 1.58 W/kg = 1.99 dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

Test Plot 3#:PCS 1900 Head Low Channal

DUT: Phablet; Type: Nitro Phablet 9;

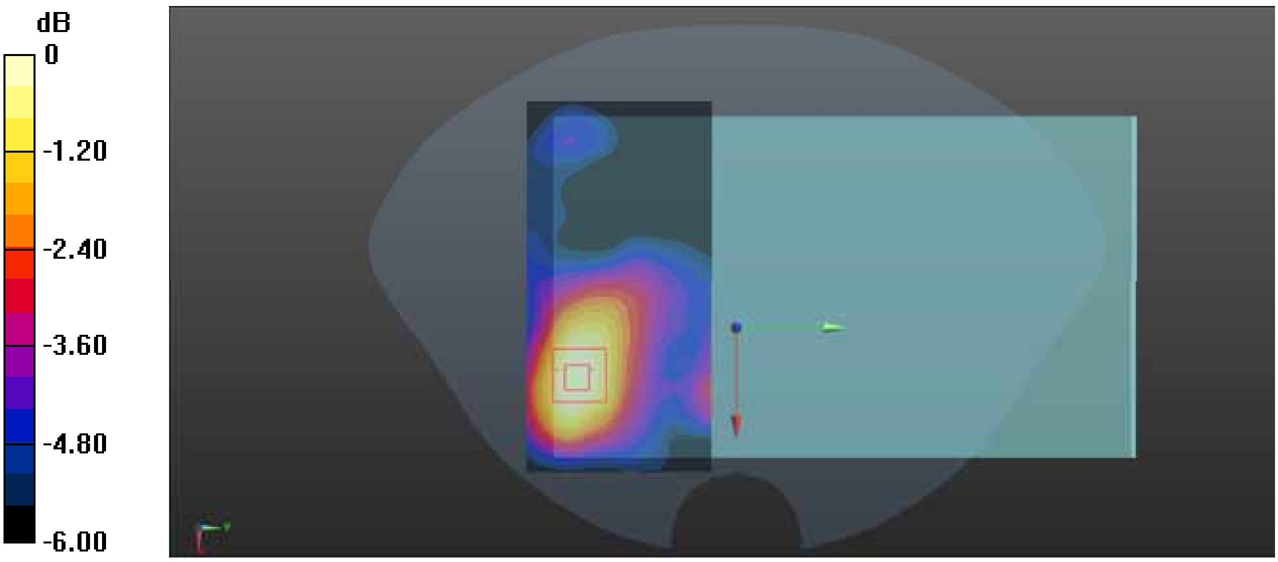
Communication System: Generic GSM; Frequency: 1850.2 MHz;Duty Cycle: 1:8
Medium parameters used: f = 1850.2 MHz; σ = 1.361 S/m; ε_r = 39.832; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(7.56, 7.56, 7.56); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

Head/PCS 1900 Flat /Area Scan (101x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0728 W/kg

Head/PCS 1900 Flat /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.811 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.105 W/kg
SAR(1 g) = 0.065 W/kg; SAR(10 g) = 0.039 W/kg
Maximum value of SAR (measured) = 0.0698 W/kg



0 dB = 0.0698 W/kg = -11.56 dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

Test Plot 4#:PCS 1900 Back Low Channal

DUT: Phablet; Type: Nitro Phablet 9;

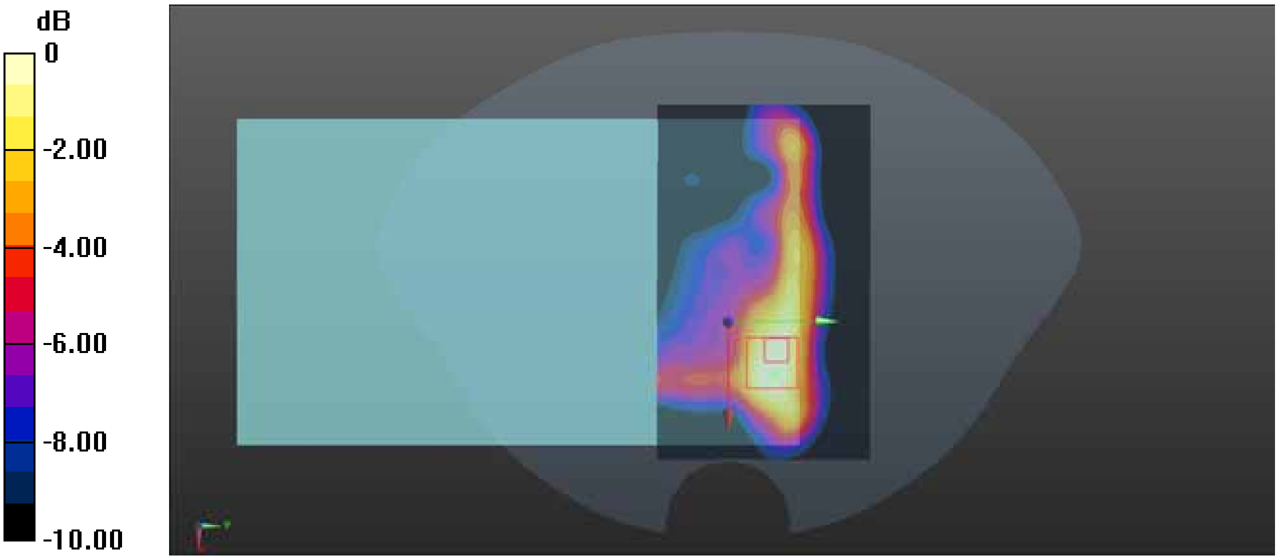
Communication System: Generic GPRS-4 SLOTS; Frequency: 1850.2 MHz;Duty Cycle: 1:2
Medium parameters used: f = 1850.2 MHz; σ = 1.477 S/m; ε_r = 55.296; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(7.56, 7.56, 7.56); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

Body/PCS 1900 Back/Area Scan (101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.11 W/kg

Body/PCS 1900 Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.34 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.90 W/kg
SAR(1 g) = 0.947 W/kg; SAR(10 g) = 0.498 W/kg
Maximum value of SAR (measured) = 1.07 W/kg



0 dB = 1.07 W/kg = 0.29 dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

Test Plot 5#:WCDMA 850 Head Middle Channal

DUT: Phablet; Type: Nitro Phablet 9;

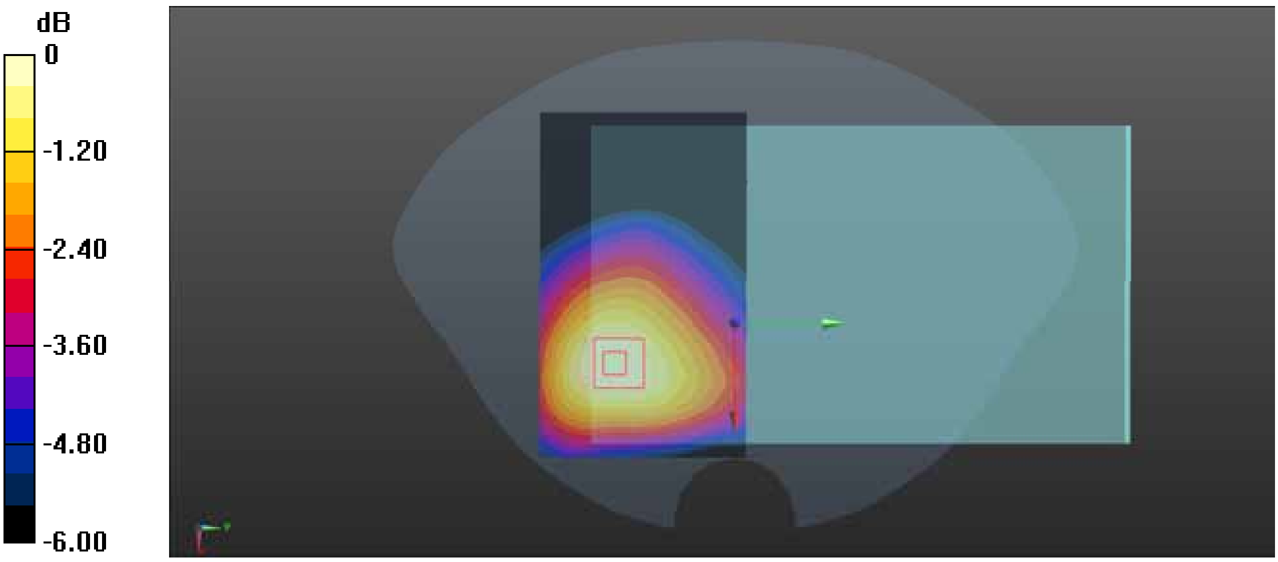
Communication System: BAND V; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.6 MHz; $\sigma = 0.893$ S/m; $\varepsilon_r = 42.873$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(9.17, 9.17, 9.17); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

Head/WCDMA 850 Flat /Area Scan (101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.142 W/kg

Head/WCDMA 850 Flat /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.883 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.178 W/kg
SAR(1 g) = 0.134 W/kg; SAR(10 g) = 0.098 W/kg
Maximum value of SAR (measured) = 0.141 W/kg



0 dB = 0.141 W/kg = -8.51 dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

Test Plot 6#:WCDMA 850 Back Middle Channal

DUT: Phablet; Type: Nitro Phablet 9;

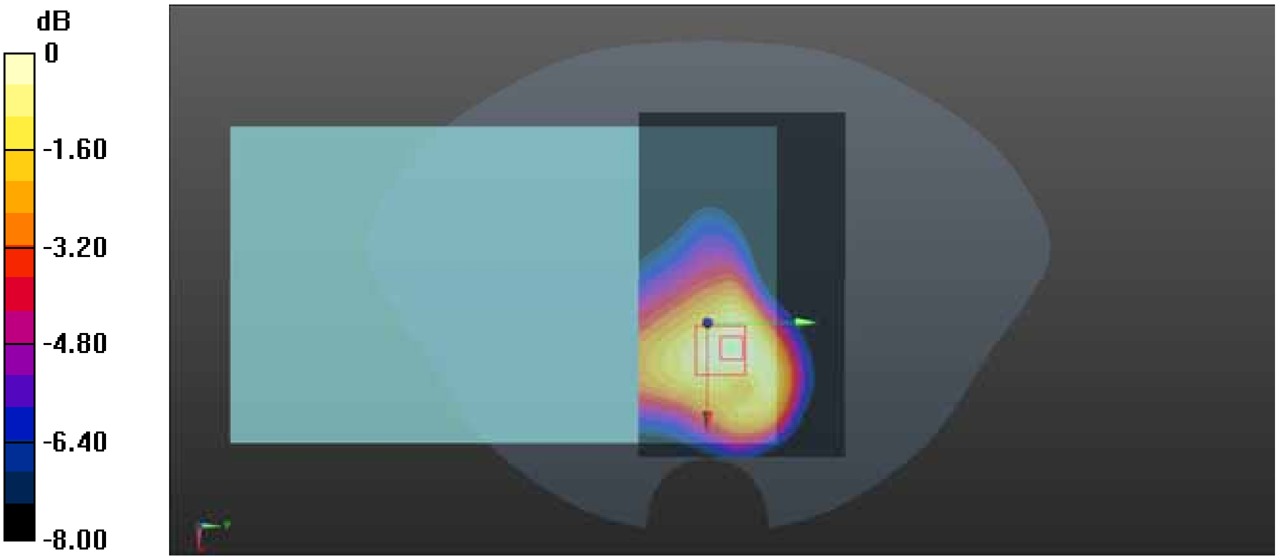
Communication System: BAND V; Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 836.6 MHz; σ = 0.976 S/m; ε_r = 55.13; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(9.17, 9.17, 9.17); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

Body/WCDMA 850 Back/Area Scan (101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.953 W/kg

Body/WCDMA 850 Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.17 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.893 W/kg; SAR(10 g) = 0.620 W/kg
Maximum value of SAR (measured) = 0.954 W/kg



0 dB = 0.954 W/kg = -0.20 dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

Test Plot 7#: WCDMA 1900 Head High Channal

DUT: Phablet; Type: Nitro Phablet 9;

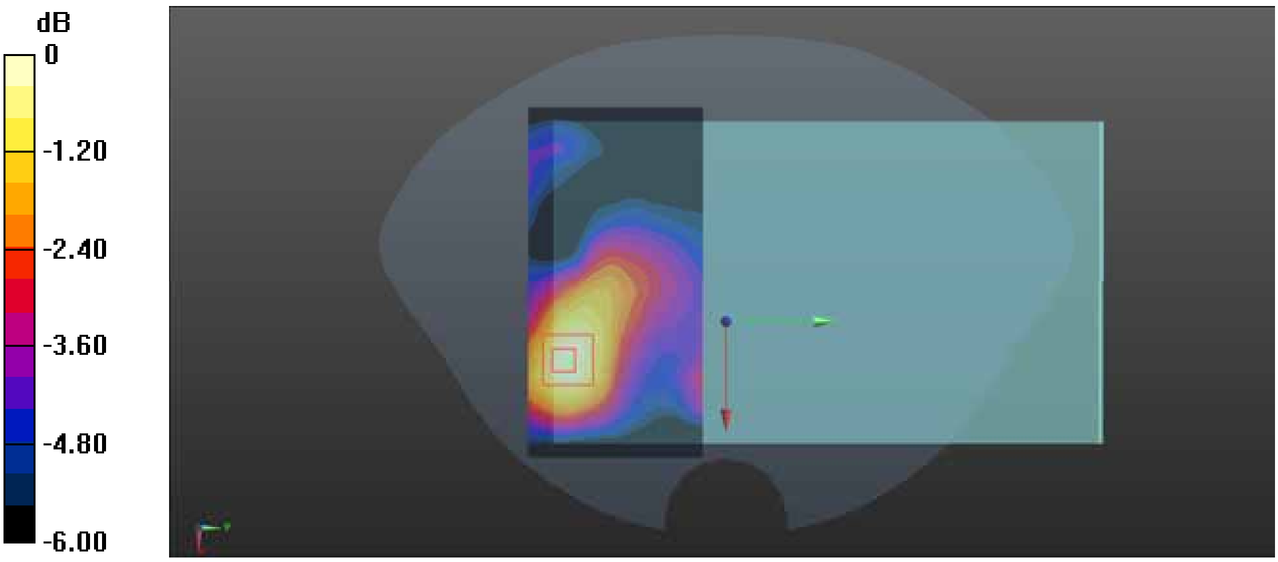
Communication System: BAND II; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1907.6 MHz; σ = 1.41 S/m; ε_r = 39.566; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(7.56, 7.56, 7.56); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

Head/WCDMA 1900 Flat /Area Scan (101x51x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.0705 W/kg

Head/WCDMA 1900 Flat /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.999 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.116 W/kg
SAR(1 g) = 0.066 W/kg; SAR(10 g) = 0.040 W/kg
Maximum value of SAR (measured) = 0.0722 W/kg



0 dB = 0.0722 W/kg = -11.41 dBW/kg

Test Laboratory: Bay Area Compliance Labs Corp.(Dongguan)

Test Plot 8#:WCDMA 1900 Back High Channal

DUT: Phablet; Type: Nitro Phablet 9;

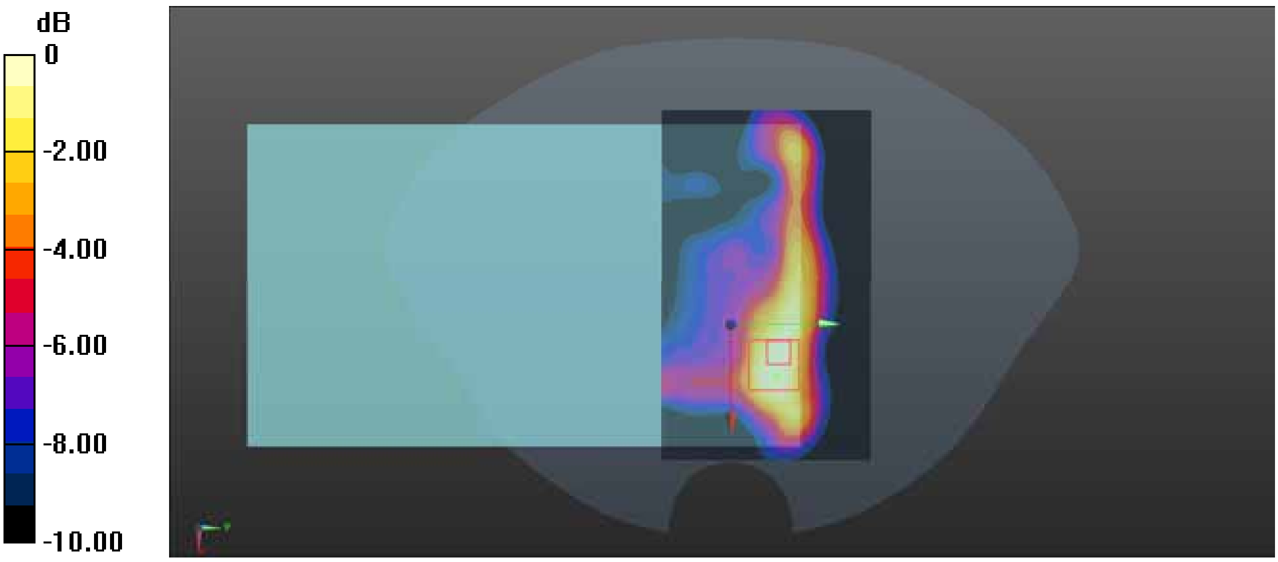
Communication System: BAND II; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1907.6 MHz; σ = 1.493 S/m; ε_r = 53.591; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7329; ConvF(7.56, 7.56, 7.56); Calibrated: 2015/2/5;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1459; Calibrated: 2015/9/18
- Phantom: SAM (30deg probe tilt) with CRP v5.0_20150321; Type: QD000P40CD; Serial: TP:1874
- Measurement SW: DASY52, Version 52.8 (8);

Body/WCDMA 1900 Back/Area Scan (101x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.02 W/kg

Body/WCDMA 1900 Back/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.03 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.85 W/kg
SAR(1 g) = 0.897 W/kg; SAR(10 g) = 0.459 W/kg
Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.02 W/kg = 0.09 dBW/kg

APPENDIX A MEASUREMENT UNCERTAINTY

The uncertainty budget has been determined for the measurement system and is given in the following Table.

Measurement uncertainty evaluation for IEEE1528-2013 SAR test

Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
Measurement system							
Probe calibration	6.55	N	1	1	1	6.6	6.6
Axial Isotropy	4.7	R	√3	1	1	2.7	2.7
Hemispherical Isotropy	9.6	R	√3	0	0	0.0	0.0
Boundary effect	1.0	R	√3	1	1	0.6	0.6
Linearity	4.7	R	√3	1	1	2.7	2.7
Detection limits	1.0	R	√3	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.0	R	√3	1	1	0.0	0.0
Integration time	0.0	R	√3	1	1	0.0	0.0
RF ambient conditions – noise	1.0	R	√3	1	1	0.6	0.6
RF ambient conditions–reflections	1.0	R	√3	1	1	0.6	0.6
Probe positioner mech. Restrictions	0.8	R	√3	1	1	0.5	0.5
Probe positioning with respect to phantom shell	6.7	R	√3	1	1	3.9	3.9
Post-processing	2.0	R	√3	1	1	1.2	1.2
Test sample related							
Test sample positioning	2.8	N	1	1	1	2.8	2.8
Device holder uncertainty	6.3	N	1	1	1	6.3	6.3
Drift of output power	5.0	R	√3	1	1	2.9	2.9
Phantom and set-up							
Phantom uncertainty (shape and thickness tolerances)	4.0	R	√3	1	1	2.3	2.3
Liquid conductivity target)	5.0	R	√3	0.64	0.43	1.8	1.2
Liquid conductivity meas.)	2.5	N	1	0.64	0.43	1.6	1.1
Liquid permittivity target)	5.0	R	√3	0.6	0.49	1.7	1.4
Liquid permittivity meas.)	2.5	N	1	0.6	0.49	1.5	1.2
Combined standard uncertainty		RSS				12.2	12.0
Expanded uncertainty 95 % confidence interval)						24.3	23.9

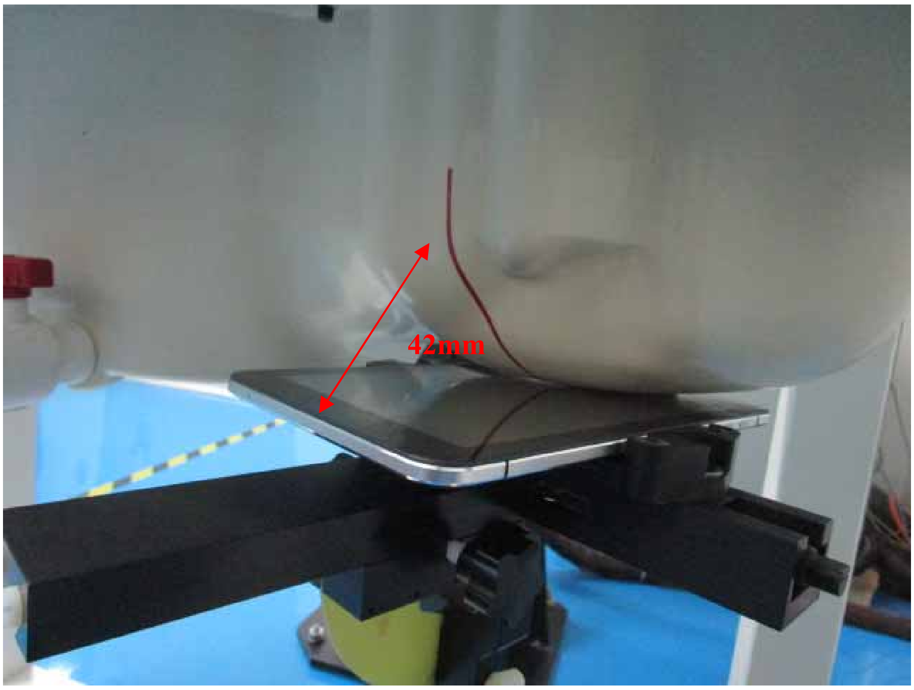
Measurement uncertainty evaluation for IEC62209-2 SAR test

Source of uncertainty	Tolerance/ uncertainty ± %	Probability distribution	Divisor	ci (1 g)	ci (10 g)	Standard uncertainty ± %, (1 g)	Standard uncertainty ± %, (10 g)
Measurement system							
Probe calibration	6.55	N	1	1	1	6.6	6.6
Axial Isotropy	4.7	R	√3	1	1	2.7	2.7
Hemispherical Isotropy	9.6	R	√3	0	0	0.0	0.0
Linearity	4.7	R	√3	1	1	2.7	2.7
Modulation Response	0.0	R	√3	1	1	0.0	0.0
Detection limits	1.0	R	√3	1	1	0.6	0.6
Boundary effect	1.0	R	√3	1	1	0.6	0.6
Readout electronics	0.3	N	1	1	1	0.3	0.3
Response time	0.0	R	√3	1	1	0.0	0.0
Integration time	0.0	R	√3	1	1	0.0	0.0
RF ambient conditions – noise	1.0	R	√3	1	1	0.6	0.6
RF ambient conditions–reflections	1.0	R	√3	1	1	0.6	0.6
Probe positioner mech. Restrictions	0.8	R	√3	1	1	0.5	0.5
Probe positioning with respect to phantom shell	6.7	R	√3	1	1	3.9	3.9
Post-processing	2.0	R	√3	1	1	1.2	1.2
Test sample related							
Device holder Uncertainty	6.3	N	1	1	1	6.3	6.3
Test sample positioning	2.8	N	1	1	1	2.8	2.8
Power scaling	4.5	R	√3	1	1	2.6	2.6
Drift of output power	5.0	R	√3	1	1	2.9	2.9
Phantom and set-up							
Phantom uncertainty (shape and thickness tolerances)	4.0	R	√3	1	1	2.3	2.3
Algorithm for correcting SAR for deviations in permittivity and conductivity	1.9	N	1	1	0.84	1.1	0.9
Liquid conductivity (meas.)	2.5	N	1	0.64	0.43	1.6	1.1
Liquid permittivity (meas.)	2.5	N	1	0.6	0.49	1.5	1.2
Temp. unc. - Conductivity	1.7	R	√3	0.78	0.71	0.8	0.7
Temp. unc. - Permittivity	0.3	R	√3	0.23	0.26	0.0	0.0
Combined standard uncertainty		RSS				12.2	12.1
Expanded uncertainty 95 % confidence interval)						24.5	24.2

APPENDIX B EUT TEST POSITION PHOTOS

Liquid depth ≥ 15cm

Left Head Cheek Setup Photo



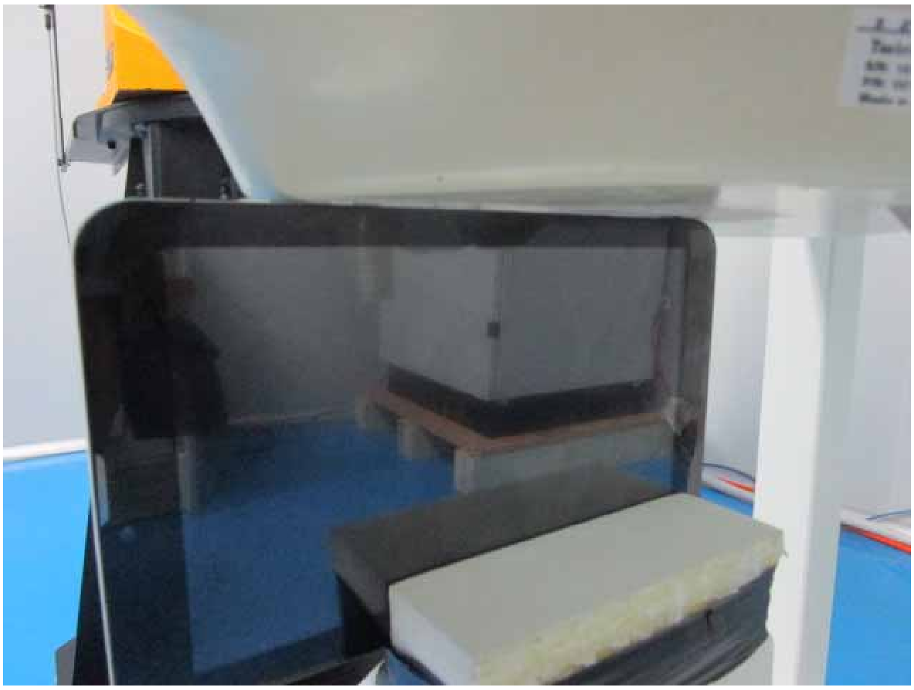
Head Flat Setup Photo

Body Worn Back Setup Photo(0mm)

Body Worn Headset Setup Photo(0mm)

Body Worn Bottom Setup Photo(0mm)

Body Worn Right Setup Photo(0mm)



APPENDIX C EUT PHOTOS

EUT–Front View

EUT–Back View

EUT–Side View-1

EUT–Side View-2

EUT – Cover off View

APPENDIX D CALIBRATION CERTIFICATES

Please Refer to the Attachment.

******* END OF REPORT *******