

**MOTOROLA**

Portable Cellular Phone SAR Test Report

Tests Requested By: Motorola Mobility, Inc.
600 N. US Highway 45
Libertyville, IL 60048

Test Report #: 24700-1F Rev. D
Date of Report: Oct-03-2011
Date of Test: Aug-23-2011 to Sep-28-2011
FCC ID #: IHDP56ME2
Generic Name: M0C2E

Test Laboratory: Motorola Mobility, Inc. - ADR Test Services Laboratory
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This laboratory is accredited to ISO/IEC 17025-2005 to perform the following tests:

Accreditation:



2404

Tests:

Electromagnetic Specific Absorption Rate

Procedures:

IEC 62209-1

RSS-102

IEEE 1528 - 2003

FCC OET Bulletin 65 (including Supplement C)

Australian Communications Authority Radio

Communications (Electromagnetic Radiation –
Human Exposure) Standard 2003

CENELEC EN 50360

ARIB Std. T-56 (2002)

On the following products or types of products:

Wireless Communications Devices (Examples): Two Way Radios; Portable Phones (including Cellular, Licensed Non-Broadcast and PCS); Low Frequency Readers; and Pagers

Statement of Compliance:

Motorola declares under its sole responsibility that the portable cellular telephone model to which this declaration relates, is in conformity with the appropriate General Population/Uncontrolled RF exposure standards, recommendations and guidelines (FCC 47 CFR §2.1093) as well as with CENELEC en50360:2001 and ANSI / IEEE C95.1. It also declares that the product was tested in accordance with IEEE 1528 / CENELEC EN62209-1 (2006), as well as other appropriate measurement standards, guidelines and recommended practices. Any deviations from these standards, guidelines and recommended practices are noted below:

Motorola's ISO 17025 accreditation scope does not currently include SAR testing in the 5 GHz band. Therefore, SAR testing performed in this band was performed outside of our ISO 17025 accreditation. The general procedures and guidelines provided within; FCC KDB 248227 D01, FCC KDB 648474 D01, FCC KDB 865664 D01 and IEC 62209-2 were utilized for testing.

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This test report shall not be reproduced except in full, without written approval of the laboratory. The results and statements contained herein relate only to the items tested. The names of individuals involved may be mentioned only in connection with the statements or results from this report. Motorola encourages all feedback, both positive and negative, on this test report.

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Appendix 4: SAR distribution plots for Lapdock Accessory Test Results

Appendix 5: SAR distribution plots for Mobile Hotspot Test Results

Appendix 6: Measurement Uncertainty Budget

Appendix 7: Probe Calibration Certificate

Appendix 8: Dipole Characterization Certificate

Revision History

Revision Version	Date	Notes
Rev. 0	Sep-29-2011	Initial report release.
Rev. A	Oct-03-2011	Responses to TCB inquiry. Add Simultaneous Transmit evaluation for Lapdock use.
Rev. B	Oct-12-2011	Updated Head and Body 2.5 GHz WiFi measurements. Added Additional Plots for Mobile Hotspot. Corrected BT power level indicated in Section 2.2
Rev. C	Oct-13-2011	Corrected Typos on column headers on page 16 and included additional plots, per request.
Rev. D	Oct-14-2011	Added statement about condition of 5 GHz simulated tissue.

1. Introduction

The Motorola Mobility ADR Test Services Laboratory has performed measurements of the maximum potential exposure to the user of the portable cellular phone covered by this test report. The Specific Absorption Rate (SAR) of this product was measured. The portable cellular phone was tested in accordance with [1], [4] and [5]. The SAR values measured for the portable cellular phone are below the maximum recommended levels of 1.6 W/kg in a 1 g average set in [3] and 2.0 W/kg in a 10 g average set in [2].

For ANSI / IEEE C95.1 (1 g), the final stand-alone SAR readings for this phone are given in the table below. For ANSI / IEEE C95.1 (1 g), the final simultaneous-transmission SAR readings for this phone are 0.68 W/kg for head-adjacent use and 1.34 W/kg for body-worn use. These measurements were performed using a Dasy4™ v4.7 system manufactured by Schmid & Partner Engineering AG (SPEAG), of Zurich Switzerland.

Transmit Band	Head SAR (1 g ^W/kg)	Body SAR (1 g ^W/kg)	Mobile Hotspot SAR (1 g ^W/kg)
GSM 850	0.37	0.34	0.58
GSM 1900	0.19	0.14	0.67
WCDMA 850	0.40	0.48	0.77
WCDMA 1900	0.42	0.13	1.11
Wi-Fi 2.45 GHz	0.21	0.03	0.23
Wi-Fi 5.2 GHz	0.26	0.14	N/A
Wi-Fi 5.3 GHz	0.10	0.09	N/A
Wi-Fi 5.6 GHz	0.01	0.00	N/A
Wi-Fi 5.8 GHz	0.18	0.08	N/A

2. Description of the Device Under Test

2.1 Antenna description

GSM/WCDMA (800/1900 MHz) Antenna

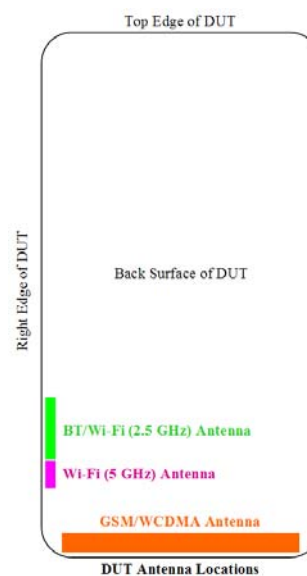
Type	Internal	
Location	Bottom Rear of Transceiver	
Dimensions	Width	1.3 mm
	Length	53.5 mm

Bluetooth/Wi-Fi (2.5 GHz) Antenna

Type	Internal	
Location	Right-Edge Rear of Transceiver	
Dimensions	Width	0.5 mm
	Length	16.2 mm

Wi-Fi (5 GHz) Antenna

Type	Internal	
Location	Right-Edge Rear of Transceiver	
Dimensions	Width	0.5 mm
	Length	3.9 mm



2.2 Device Signaling¹

Serial Number(s) (Functional Use)	LS3A280035 LS3A290053 LS3A2X0004 LS3A2K0003	(GSM/WCDMA conducted power measurements, GSM/WCDMA/Wi-Fi head/body/mobile hotspot SAR testing) (5.2 GHz, 5.3 GHz, 5.8 GHz SAR testing) (5.6 GHz SAR testing) (Wi-Fi conducted power measurements)
Production Unit or Identical Prototype (47 CFR §2.908)	Identical Prototype	
Device Category	Portable (Mobile Station Class B)	
RF Exposure Limits	General Population / Uncontrolled	

Mode(s) of Operation	Modulation Mode(s)	Maximum Output Power Setting	Duty Cycle	Transmitting Frequency Range(s)
GSM 850	GMSK	33.5 dBm	1:8	824.2 - 848.8 MHz
GSM 1900	GMSK	31.0 dBm	1:8	1850.2 - 1909.8 MHz
WCDMA 850	QPSK	24.0 dBm	1:1	826.4 - 846.6 MHz
WCDMA 1900	QPSK	24.0 dBm	1:1	1852.4 - 1907.6 MHz
Wi-Fi 802.11b/g/n	BPSK	16.15 dBm	1:1	2412.0 - 2462.5 MHz
Wi-Fi 802.11a/n	BPSK	11.41 dBm	1:1	5180.0 - 5240.0 MHz, 5260.0 - 5320.0 MHz, 5500.0 - 5700.0 MHz, 5745.0 - 5805.0 MHz
Bluetooth	GFSK	9.57 dBm	1:1	2402.0 - 2483.5 MHz

GSM Data Functionality	GPRS/EDGE Class 12 (4 uplink timeslots; 4 downlink timeslots; 5 total timeslots per frame)
	Class B (DTM not supported)

Mode(s) of Operation	GPRS/EDGE 850				GPRS/EDGE 1900			
Modulation	GMSK				GMSK			
Maximum Output Power Setting (dBm)	33.5	30.5	28.8	27.5	31.0	28.0	26.5	25.0
Time Average Output Power Setting (dBm)	24.5	24.5	24.6	24.5	22.0	22.0	22.3	22.0
Duty Cycle	1:8	2:8	3:8	4:8	1:8	2:8	3:8	4:8
Transmitting Frequency Range(s)	824.2 - 848.8 MHz				1850.2 - 1909.8 MHz			

Mode(s) of Operation	EDGE 850				EDGE 1900			
Modulation	8PSK				8PSK			
Maximum Output Power Setting (dBm)	28.6	25.6	23.9	22.6	27.8	24.8	23.1	21.8
Time Average Output Power Setting (dBm)	19.6	19.6	19.7	19.6	18.8	18.8	18.9	18.8
Duty Cycle	1:8	2:8	3:8	4:8	1:8	2:8	3:8	4:8
Transmitting Frequency Range(s)	824.2 - 848.8 MHz				1850.2 - 1909.8 MHz			

¹ **Bolded** entries indicate data mode configurations of highest time-average power output per band and data mode type, and thus were utilized for SAR testing in this report.

2.2.1 Power limit reduction schemes

For specified modes of operation, the DUT utilizes reduced maximum power limits to maintain compliance to SAR exposure limits. Complete descriptions of the following functionalities are provided in the Operational Description contained within Exhibit 12. The implementations to trigger the reductions in power require the device to be radiating, which prevents conducted power measurements of these functionalities without modification of the DUT.

The DUT utilizes reduced limits for the maximum WCDMA 1900 band transmit power on the high channel range when the mobile hotspot functionality is enabled. A table of the reduced limits used for testing is given below.

Mode(s) of Operation	WCDMA 1900		
Test Channel	9262	9400	9538
Channel Ranges	9262-9367	9368-9455	9456-9538
Maximum Output Power Setting (dBm)	24.0	24.0	24.0
Reduced Maximum Output Power Setting (dBm)	24.0	24.0	22.0
Duty Cycle	1:1	1:1	1:1

2.3 Device Conducted Power Measurements

2.3.1 GSM modes

Band	Channel	Conducted power (dBm) for GSM modes ²								
		GSM CS Voice (1 Slot)	GPRS PS Data (1 Slot)	GPRS PS Data (2 Slots)	GPRS PS Data (3 Slots) ³	GPRS PS Data (4 Slots)	EDGE PS Data (1 Slot)	EDGE PS Data (2 Slots)	EDGE PS Data (3 Slots)	EDGE PS Data (4 Slots)
GSM 850	128	33.41	33.54	30.55	28.79	27.70	28.56	25.57	23.65	22.49
	190	33.41	33.55	30.47	28.77	27.57	28.40	25.71	23.64	22.56
	251	33.30	33.45	30.44	28.77	27.52	28.55	25.62	23.78	22.69
GSM 1900	512	31.16	31.04	28.19	26.61	25.08	27.66	24.60	22.96	21.62
	661	31.20	31.06	28.02	26.30	24.92	27.72	24.60	22.87	21.62
	810	31.00	31.07	28.14	26.57	25.04	27.87	24.88	23.11	22.01

² CS Voice denotes circuit-switched transmission for voice calling, and PS Data denotes packet-switched transmission for data sessions.

³ **Bolded** entries indicate data mode configurations of highest time-average power output per band and data mode type, and thus were utilized for SAR testing in this report.

2.3.2 WCDMA modes

Per the “SAR Measurement Procedures for 3G Devices” released in October, 2007, 12.2 kbps RMC, 12.2 kbps AMR, HS-DPCCH Sub-test 1-4, and E-DCH Sub-test 1-5 modes were considered. The conducted power measurements (per section 5.2 of 3GPP TS 34.121) for each mode are shown in the table below.

Band	Channel	Conducted power (dBm) for WCDMA modes		Conducted Power (dBm) for WCDMA – HSDPA (Rel 5) Modes				Conducted Power (dBm) for WCDMA – HSPA (HSUPA/HSDPA-Rel 6) Modes				
		RMC	AMR	Subtest 1	Subtest 2	Subtest 3	Subtest 4	Subtest 1	Subtest 2	Subtest 3	Subtest 4	Subtest 5
WCDMA 850	4132	23.87	23.87	23.96	23.97	23.98	23.96	23.93	23.93	23.94	23.94	23.97
	4180	23.83	23.88	23.88	23.98	23.93	24.01	23.92	23.96	23.91	23.95	23.94
	4233	23.90	24.02	24.01	24.02	23.97	24.06	23.95	24.01	23.98	24.00	23.97
WCDMA 1900	9262	24.10	24.05	24.05	23.94	24.12	24.00	24.16	24.01	24.14	24.01	24.10
	9400	23.87	23.66	23.84	23.83	23.81	23.78	23.81	23.78	23.81	23.77	23.83
	9538	23.83	23.88	23.79	23.89	23.82	23.92	23.79	23.92	23.81	23.87	23.82

Maximum Power Reduction (MPR)

According to 3GPP 25.101 sub-clause 6.2.2, the maximum output power is allowed to be reduced by following the table.

Table 6.1A: UE maximum output power with HS-DPCCH and E-DCH

UE transmit channel configuration	CM (dB)	MPR (dB)
For all combinations of; DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH	$0 \leq CM \leq 3.5$	MAX (CM-1, 0)
Note 1: CM = 1 for $\beta_c/\beta_d = 12/15$, $\beta_{hs}/\beta_c = 24/15$. For all other combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH the MPR is based on the relative CM difference.		

The device supports MPR to solve linearity issues (ACLR or SEM) due to the higher peak-to-average ratios (PAR) of the HSUPA signal. This prevents saturating the full range of the TX DAC inside of device and provides a reduced power output to the RF transceiver chip according to the Cubic Metric (a function of the combinations of DPDCH, DPCCH, HS-DPCCH, E-DPDCH and E-DPCCH).

When E-DPDCH channels are present, the beta gains on those channels are reduced first to try to get the power under the allowed limit. If the beta gains are lowered as far as possible, then a hard limiting is applied at the maximum allowed level.

The SW currently recalculates the cubic metric every time the beta gains on the E-DPDCH are reduced. The cubic metric will likely get lower each time this is done. However, there is no reported reduction of maximum output power in the HSUPA mode since the device also provides a mechanism to compensate for the power back-off by increasing the gain of TX_AGC in the transceiver (PA) device.

The end effect is that the DUT output power is identical to the case where there is no MPR in the device.

2.3.3 Wi-Fi 802.11 modes

Per “SAR Measurement Procedures for 802.11 a/b/g Transmitters” (FCC KDB 248227), power measurements were performed for 802.11 operational modes. The average conducted power measurements for each mode are shown in the tables below.

Justification for reduced test configurations for WiFi channels per KDB pub 248227 and April FCC/TCB Meeting Notes:

- For 2.4 GHz, highest average RF output power channel for the lowest data rate were selected for SAR evaluation. 802.11g & n modes were not investigated since the average output powers were not greater than 0.25 dB than that of the corresponding channel in the lowest data rate IEEE 802.11b.
- For 5 GHz, highest average RF output power channel for the lowest data rate in each sub-band were selected for SAR evaluation. Other channels were not investigated since the average output powers were not greater than 0.25 dB than that of the corresponding channel in the lowest data rate tested.

Mode	Freq [MHz]	Channel	Conducted Power [dBm]			
			Data Rate [Mbps]			
			1	2	5.5	11
802.11b	2412	1	15.25	15.27	15.26	15.34
802.11b	2437	6	15.62	15.68	15.67	15.63
802.11b	2462	11	16.15	16.08	16.14	16.09

Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11g	2412	1	15.11	15.11	14.02	14.02	12.11	12.14	12.10	12.06
802.11g	2437	6	15.60	15.55	14.50	14.52	12.58	12.54	12.56	12.70
802.11g	2462	11	15.91	15.85	14.84	14.96	12.90	12.93	12.90	13.08

Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 800 ns Guard Interval							
			6.5	13	20	26	39	52	58	65
802.11n	2412	1	13.45	13.95	13.91	12.10	12.09	11.95	12.10	9.55
802.11n	2437	6	13.89	14.55	14.44	12.60	12.65	12.61	12.50	10.00
802.11n	2462	11	14.30	14.76	14.74	13.06	12.89	12.88	12.89	10.49

Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 400 ns Guard Interval							
			7.2	14.4	22	29	43	58	65	72
802.11n	2412	1	13.46	13.89	13.90	12.08	12.05	11.98	11.98	9.63
802.11n	2437	6	13.93	14.53	14.47	12.61	12.67	12.59	12.50	10.10
802.11n	2462	11	14.33	14.74	14.83	12.96	12.85	12.82	12.82	10.47

Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11a	5180	36	11.09	11.07	11.02	11.10	10.98	11.00	11.09	10.97
802.11a	5200	40	11.00	11.05	11.01	10.92	10.86	10.86	10.92	10.90
802.11a	5220	44	10.87	10.90	10.90	10.89	10.87	10.80	10.89	10.85
802.11a	5240	48	10.89	10.86	10.82	10.87	10.75	10.84	10.81	10.81
Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 800 ns Guard Interval							
			6.5	13	20	26	39	52	58	65
802.11n	5180	36	11.05	11.06	11.08	11.16	11.18	11.12	11.14	11.22
802.11n	5200	40	11.01	11.01	11.07	11.09	11.09	11.08	11.05	11.17
802.11n	5220	44	11.03	11.02	10.98	11.04	11.05	11.05	11.00	11.13
802.11n	5240	48	10.99	10.94	10.97	11.07	11.03	11.00	11.05	11.11
Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 400 ns Guard Interval							
			7.2	14.4	22	29	43	58	65	72
802.11n	5180	36	10.92	10.91	10.92	11.06	10.97	10.94	10.91	11.00
802.11n	5200	40	10.86	10.77	10.81	10.90	10.88	10.87	10.82	10.94
802.11n	5220	44	10.83	10.79	10.78	10.87	10.85	10.85	10.86	10.93
802.11n	5240	48	10.84	10.79	10.77	10.84	10.88	10.80	10.82	10.94
Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11a	5260	52	10.96	10.93	10.97	10.98	10.93	10.95	10.95	10.97
802.11a	5280	56	10.92	10.90	10.94	10.95	10.90	10.86	10.90	10.98
802.11a	5300	60	10.93	10.95	10.98	11.02	10.97	10.92	10.98	10.97
802.11a	5320	64	10.97	10.97	10.98	10.96	10.89	10.90	10.91	10.95
Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 800 ns Guard Interval							
			6.5	13	20	26	39	52	58	65
802.11n	5260	52	11.02	11.08	11.06	11.15	11.11	11.09	11.04	11.18
802.11n	5280	56	11.00	11.05	11.06	11.13	11.14	11.06	11.07	11.15
802.11n	5300	60	11.05	11.02	11.01	11.09	11.10	11.07	11.05	11.18
802.11n	5320	64	11.00	11.01	11.06	11.08	11.07	11.04	11.08	11.15
Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 400 ns Guard Interval							
			7.2	14.4	22	29	43	58	65	72
802.11n	5260	52	10.87	10.85	10.88	10.95	10.93	10.89	10.90	10.96
802.11n	5280	56	10.88	10.82	10.81	10.95	10.93	10.87	10.94	11.01
802.11n	5300	60	10.87	10.87	10.86	10.90	10.92	10.82	10.85	10.96
802.11n	5320	64	10.84	10.85	10.77	10.86	10.89	10.84	10.88	10.93

Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11a	5500	100	10.97	10.92	11.04	11.05	10.99	10.99	10.98	10.98
802.11a	5520	104	10.99	11.00	10.99	10.96	10.90	10.96	10.89	10.84
802.11a	5540	108	10.80	10.82	10.87	10.83	10.74	10.74	10.77	10.78
802.11a	5560	112	10.77	10.74	10.78	10.80	10.73	10.68	10.73	10.84
802.11a	5580	116	10.74	10.86	10.84	10.88	10.82	10.85	10.87	10.84
802.11a	5600	120	10.89	10.83	10.78	10.83	10.78	10.76	10.77	10.82
802.11a	5620	124	10.81	10.82	10.82	10.84	10.72	10.66	10.75	10.68
802.11a	5640	128	10.75	10.77	10.73	10.75	10.65	10.70	10.71	10.69
802.11a	5660	132	10.66	10.73	10.67	10.76	10.60	10.63	10.71	10.69
802.11a	5680	136	10.63	10.64	10.71	10.69	10.64	10.59	10.70	10.65
802.11a	5700	140	10.62	10.66	10.71	10.65	10.61	10.64	10.62	10.65
Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 800 ns Guard Interval							
			6.5	13	20	26	39	52	58	65
802.11n	5500	100	11.25	11.33	11.25	11.35	11.32	11.26	11.25	11.39
802.11n	5520	104	11.23	11.22	11.23	11.36	11.29	11.24	11.26	11.35
802.11n	5540	108	11.22	11.27	11.25	11.29	11.29	11.24	11.23	11.36
802.11n	5560	112	11.24	11.22	11.18	11.29	11.30	11.25	11.24	11.36
802.11n	5580	116	11.16	11.18	11.22	11.24	11.31	11.24	11.20	11.30
802.11n	5600	120	11.14	11.15	11.17	11.17	11.20	11.13	11.18	11.27
802.11n	5620	124	11.05	11.07	11.19	11.14	11.11	11.12	11.17	11.25
802.11n	5640	128	11.06	11.05	11.08	11.10	11.15	11.08	11.09	11.16
802.11n	5660	132	11.04	11.03	11.04	11.07	11.12	11.02	11.03	11.15
802.11n	5680	136	10.96	10.95	10.99	11.06	11.07	10.99	11.02	11.12
802.11n	5700	140	10.90	10.95	10.97	11.02	11.04	10.99	10.97	11.08
Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 400 ns Guard Interval							
			7.2	14.4	22	29	43	58	65	72
802.11n	5500	100	11.06	11.07	11.08	11.11	11.16	11.08	11.05	11.22
802.11n	5520	104	10.97	11.00	11.01	11.08	11.02	11.18	11.00	11.05
802.11n	5540	108	10.99	11.03	11.00	11.04	11.02	11.09	11.04	11.11
802.11n	5560	112	11.24	11.22	11.19	11.33	11.36	11.30	11.31	11.41
802.11n	5580	116	11.21	11.25	11.20	11.23	11.31	11.21	11.24	11.32
802.11n	5600	120	11.13	11.18	11.12	11.25	11.22	11.16	11.19	11.29
802.11n	5620	124	11.14	11.11	11.15	11.16	11.19	11.12	11.15	11.25
802.11n	5640	128	11.06	11.06	11.09	11.15	11.17	11.09	11.11	11.25
802.11n	5660	132	11.06	11.06	11.05	11.15	11.15	11.10	11.08	11.20
802.11n	5680	136	10.99	11.00	11.03	11.09	11.12	11.07	11.03	11.14
802.11n	5700	140	10.99	10.96	10.97	11.08	11.10	11.02	11.01	11.13

Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps]							
			6	9	12	18	24	36	48	54
802.11a	5745	149	10.50	10.45	10.52	10.49	10.45	10.40	10.48	10.52
802.11a	5765	153	10.51	10.48	10.54	10.59	10.42	10.45	10.42	10.44
802.11a	5785	157	10.55	10.57	10.50	10.46	10.40	10.39	10.45	10.40
802.11a	5805	161	10.52	10.49	10.42	10.50	10.45	10.40	10.40	10.47
802.11a	5825	165	10.49	10.42	10.47	10.50	10.39	10.40	10.35	10.43
Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 800 ns Guard Interval							
			6.5	13	20	26	39	52	58	65
802.11n	5745	149	10.81	10.77	10.75	10.86	10.87	10.77	10.81	10.94
802.11n	5765	153	10.78	10.80	10.72	10.84	10.88	10.80	10.81	10.91
802.11n	5785	157	10.76	10.75	10.74	10.78	10.82	10.76	10.75	10.88
802.11n	5805	161	10.71	10.74	10.68	10.79	10.82	10.78	10.79	10.90
802.11n	5825	165	10.73	10.77	10.71	10.85	10.83	10.79	10.75	10.90
Mode	Freq [MHz]	Channel	Conducted Power [dBm]							
			Data Rate [Mbps] 400 ns Guard Interval							
			7.2	14.4	22	29	43	58	65	72
802.11n	5745	149	10.87	10.85	10.80	10.92	10.89	10.85	10.84	11.00
802.11n	5765	153	10.80	10.80	10.79	10.86	10.91	10.85	10.86	10.97
802.11n	5785	157	10.80	10.79	10.79	10.89	10.92	10.79	10.78	10.98
802.11n	5805	161	10.81	10.81	10.82	10.86	10.88	10.81	10.80	10.92
802.11n	5825	165	10.25	10.30	10.27	10.37	10.33	10.37	10.31	10.46

3. Test Equipment Used

3.1 Dosimetric System

The Motorola Mobility ADR Test Services Laboratory utilizes a Dosimetric Assessment System (Dasy4™ v4.7) manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. All the SAR measurements are taken within a shielded enclosure. The overall 10 g RSS uncertainty of the measurement system is $\pm 10.8\%$ (K=1) with an expanded uncertainty of $\pm 21.6\%$ (K=2). The overall 1 g RSS uncertainty of the measurement system is $\pm 11.1\%$ (K=1) with an expanded uncertainty of $\pm 22.2\%$ (K=2). The measurement uncertainty budget is given in Appendix 6. Per IEEE 1528, this uncertainty budget is applicable to the SAR range of 0.4 W/kg to 10 W/kg.

The list of calibrated equipment used for the measurements is shown in the following table.

Description	Serial Number	Cal Date	Cal Due Date
DASY4™ DAE V1	434	Jan-13-2011	Jan-13-2012
E-Field Probe ES3DV3	3115	Jan-12-2011	Jan-12-2012
DASY4™ DAE V1	699	Sep-20-2010	Sep-20-2011
DASY4™ DAE V1	702	Apr-14-2011	Apr-14-2012
E-Field Probe ES3DV3	3184	Mar-11-2011	Mar-11-2012
DASY4™ DAE V1	440	Nov-11-2010	Nov-11-2011
E-Field Probe EX3DV4	3728	May-20-2011	May-20-2012
E-Field Probe ES3DV3	3124	Aug-23-2011	Aug-23-2012
DASY4™ DAE V1	376	Aug-31-2011	Aug-31-2012
S.A.M. Phantom used for 800/1900 MHz	TP-1136		
S.A.M. Phantom used for 800 MHz	TP-1235		
S.A.M. Phantom used for 1800/1900/2450 MHz	TP-1131		
S.A.M. Phantom used for 2450 MHz	TP-1319		
S.A.M. Phantom used for 5-6 GHz	TP-1153		
Dipole Validation Kit, DV835V2	422TR	Mar-18-2011	Mar-18-2012
Dipole Validation Kit, DV835V2	436TR	Mar-18-2011	Mar-18-2012
Dipole Validation Kit, DV1800V2	250TR	Mar-17-2011	Mar-17-2012
Dipole Validation Kit, DV1800V2	259TR	Mar-17-2011	Mar-17-2012
Dipole Validation Kit, DV1800V2	271TR	Mar-08-2011	Mar-08-2012
Dipole Validation Kit, DV2450V2	863	Mar-17-2011	Mar-17-2012
Dipole Validation Kit, DV2450V2	766	Jul-15-2011	Jul-15-2012
Dipole Validation Kit, D5GHzV2	1098	Jan-07-2011	Jan-07-2012

3.2 Additional Equipment

Description	Serial Number	Cal Date	Cal Due Date
Signal Generator HP8648C	3847A04982	Nov-18-2009	Nov-18-2011
Power Meter E4419B	GB39510900	Mar-28-2011	Mar-28-2013
Power Sensor #1 - E9301A	US39211007	Aug-16-2011	Aug-16-2012
Power Sensor #2 - E9301A	US39211008	Aug-16-2011	Aug-16-2012
Signal Generator HP8648C	3847A04632	Aug-13-2011	Aug-13-2013
Power Meter E4419B	GB39511087	Dec-22-2009	Dec-22-2011
Power Sensor #1 - E9301A	US39211006	Oct-25-2010	Oct-25-2011
Power Sensor #2 - E9301A	US39210934	Oct-25-2010	Oct-25-2011
Signal Generator HP8648C	3847A04843	Mar-28-2011	Mar-28-2013
Power Meter E4419B	GB39511084	Mar-28-2011	Mar-28-2013
Power Sensor #1 - E9301A	US39210929	Mar-31-2011	Mar-31-2012
Power Sensor #2 - E9301A	US39210930	Mar-31-2011	Mar-31-2012
Network Analyzer HP8753ES	US39171846	May-19-2011	May-19-2012
Dielectric Probe Kit HP85070C	US99360070		

4. Electrical parameters of the tissue simulating liquid

Prior to conducting SAR measurements, the relative permittivity, ϵ_r , and the conductivity, σ , of the tissue simulating liquids were measured with a HP85070 Dielectric Probe Kit. These values, along with the temperature of the simulated tissue are shown in the table below. The recommended limits for permittivity and conductivity are also shown. A mass density of $\rho = 1 \text{ g/cm}^3$ was entered into the system in all the cases. It can be seen that the measured parameters are within tolerance of the recommended limits specified in [1] and [5].

E-field probes calibrated at 1810 MHz were used for "1900 MHz" band (1850 MHz - 1910 MHz) SAR measurements. FCC KDB 450824 provides additional requirements on page 3 of 6 for SAR testing that is performed with probe calibration points that are more than 50 MHz removed from the measured bands. The KDB requires; "(2) When nominal tissue dielectric parameters are specified in the probe calibration data, the tissue dielectric parameters measured for routine measurements should be less than the target ϵ_r and higher than the target Sigma values to minimize SAR underestimations". The 1900 MHz simulated tissues listed below meet these criteria.

f (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			ϵ_r	σ (S/m)	Temp (°C)
835	Head	Measured, Aug-23-2011	40.6	0.91	18.4
		Measured, Sep-07-2011	41.9	0.91	20.7
		Recommended Limits	41.5 $\pm$ 5%	0.90 $\pm$ 5%	18-25
	Body	Measured, Aug-28-2011	54.1	0.97	19.2
		Measured, Sep-09-2011	53.8	0.98	20.7
		Measured, Sep-17-2011	55.3	0.97	20.2
		Measured, Sep-19-2011	55.7	0.99	20.3
		Measured, Sep-29-2011	55.3	0.98	20.1
		Recommended Limits	55.2 $\pm$ 5%	0.97 $\pm$ 5%	18-25
1880	Head	Measured, Aug-23-2011	39.9	1.47	18.6
		Measured, Aug-24-2011	39.5	1.47	19.1
		Measured, Sep-03-2011	38.0	1.46	19.0
		Recommended Limits	40.0 $\pm$ 5%	1.40 $\pm$ 5%	18-25
	Body	Measured, Aug-25-2011	51.0	1.57	19.2
		Measured, Aug-27-2011	50.7	1.59	19.3
		Measured, Sep-03-2011	50.7	1.57	19.2
		Measured, Sep-18-2011	50.9	1.59	19.8
		Measured, Sep-19-2011	51.4	1.59	20.1
		Recommended Limits	53.3 $\pm$ 5%	1.52 $\pm$ 5%	18-25
2450	Head	Measured, Sep-20-2011	38.8	1.86	20.2
		Measured, Oct-04-2011	37.6	1.89	20.1
		Measured, Oct-12-2011	37.4	1.84	20.3
		Recommended Limits	39.2 $\pm$ 5%	1.80 $\pm$ 5%	18-25
	Body	Measured, Sep-19-2011	52.0	1.96	20.3
		Measured, Sep-20-2011	52.4	1.98	20.5
		Measured, Oct-12-2011	50.3	1.92	20.5
		Recommended Limits	52.7 $\pm$ 5%	1.95 $\pm$ 5%	18-25
5210	Head	Measured, Sep-23-2011	36.6	4.95	20.2
		Recommended Limits	36.0 $\pm$ 10%	4.66 $\pm$ 10%	18-25
	Body	Measured, Sep-22-2011	48.8	5.93	20.1
		Recommended Limits	49.0 $\pm$ 10%	5.31 $\pm$ 10%	18-25
5290	Head	Measured, Sep-24-2011	35.8	4.99	19.9
		Recommended Limits	35.9 $\pm$ 10%	4.74 $\pm$ 10%	18-25
	Body	Measured, Sep-22-2011	48.6	6.05	19.9
		Recommended Limits	48.9 $\pm$ 10%	5.41 $\pm$ 10%	18-25
5600	Head	Measured, Sep-27-2011	34.8	5.36	20.1
		Recommended Limits	35.5 $\pm$ 10%	5.06 $\pm$ 10%	18-25
	Body	Measured, Sep-27-2011	47.8	6.48	20
		Recommended Limits	48.5 $\pm$ 10%	5.77 $\pm$ 10%	18-25
5785	Head	Measured, Sep-24-2011	34.9	5.56	20.2
		Recommended Limits	35.4 $\pm$ 10%	5.25 $\pm$ 10%	18-25
	Body	Measured, Sep-22-2011	47.5	6.79	19.9
		Recommended Limits	48.2 $\pm$ 10%	5.98 $\pm$ 10%	18-25

The list of ingredients and the percent composition used for the simulated tissues are indicated in the table below.

Ingredient	782 / 835 / 900 MHz Head	782 / 835 / 900 MHz Body	1800 MHz / 1900 MHz Head	1800 MHz / 1900 MHz Body	2450 MHz Head	2450 MHz Body
Sugar	57	44.9	--	--	--	--
DGBE	--	--	47	30.8	--	30
Diacetin	--	--	--	--	51	--
Water	40.45	53.06	52.62	68.8	48.75	70
Salt	1.45	0.94	0.38	0.4	0.15	--
HEC	1	1	--	--	--	--
Bact.	0.1	0.1	--	--	0.1	--

All 5.2 GHz and 5.8 GHz SAR testing was performed using HSL 3500/5800 and MSL 3500/5800 tissue simulating liquids from Schmid & Partner Engineering AG. Prior to conducting SAR measurements, the relative permittivity, ϵ_r , and the conductivity, σ , of the liquids was measured. The conductivity of the purchased liquids was determined to be at the high compared to the target parameter. SPEAG is investigating why the values consistently measure high. Since they measured on the conservative side of the target window, all subsequent 5.2 GHz and 5.8 GHz SAR tests were also on the conservative side of their uncertainty window.

5. System Accuracy Verifications

A system accuracy verification of the DASY4™ was performed using the measurement equipment listed in Section 3.1. The daily system accuracy verification occurs within the flat section of the SAM phantom.

A SAR measurement was performed to verify the measured SAR was within $\pm 10\%$ from the target SAR indicated in Appendix 7. These frequencies are within $\pm 10\%$ of the compliance test mid-band frequency as required in [1] and [5]. The test was conducted on the same days as the measurement of the DUT. Recommended limits for permittivity and conductivity, specified in [5], are shown in the table below. The obtained results from the system accuracy verification are also displayed in the table below. SAR values are normalized to 1 W forward power delivered to the dipole. It is seen that the system is operating within its specification, as the results are within acceptable tolerance of the reference values. The distributions of SAR compare well with those of the reference measurements (see Appendix 1). For frequencies below 3 GHz, the simulated tissue depth was verified to be $15.0 \text{ cm} \pm 0.5 \text{ cm}$. For frequencies above 3 GHz, the simulated tissue depth was verified to be $10 \text{ cm} \pm 0.5 \text{ cm}$. Z-axis scans showing the SAR penetration are also included in Appendix 1. All system accuracy verifications were performed within 24 hours of SAR testing. The same phantoms, simulated tissue and test equipment were used for these verifications and the SAR testing.

System Accuracy Verification Measurements for Head SAR Measurements							
f (MHz)	Description	Measured SAR (W/kg), 1 gram	Normalized SAR (W/kg), 1 gram	Dielectric Parameters		Ambient Temp (°C)	Tissue Temp (°C)
				ϵ_r	σ (S/m)		
835	Measured, Aug-23-2011	2.00	10.00	40.6	0.91	20.8	18.4
	Recommended Limits	2.42	9.73	41.5 $\pm 5\%$	0.90 $\pm 5\%$	18-25	18-25
	Measured, Sep-07-2011	1.95	9.75	41.9	0.91	21.1	20.5
	Recommended Limits	2.32	9.33	41.5 $\pm 5\%$	0.90 $\pm 5\%$	18-25	18-25
1800	Measured, Aug-23-2011	7.69	38.45	40.3	1.38	20.4	18.2
	Measured, Aug-24-2011	7.77	38.85	39.9	1.38	21.0	19.3
	Measured, Sep-02-2011	7.95	39.75	38.4	1.37	20.8	19.0
	Recommended Limits	9.47	38.6	40.0 $\pm 5\%$	1.40 $\pm 5\%$	18-25	18-25
2450	Measured, Sep-20-2011	11.2	56.0	38.8	1.86	21.1	20.3
	Recommended Limits	13.3	54.2	39.2 $\pm 5\%$	1.80 $\pm 5\%$	18-25	18-25
	Measured, Oct-4-2011	10.9	54.5	37.6	1.89	21.1	20.6
	Recommended Limits	13.2	53.8	39.2 $\pm 5\%$	1.80 $\pm 5\%$	18-25	18-25
	Measured, Oct-12-2011	10.9	54.5	37.4	1.84	21.3	20.7
	Recommended Limits	13.9	54.8	39.2 $\pm 5\%$	1.80 $\pm 5\%$	18-25	18-25
5200	Measured, Sep-23-2011	8.59	85.9	36.6	4.94	21.2	20.5
	Measured, Sep-24-2011	8.96	89.6	36.0	4.89	21.5	20.3
	Recommended Limits	8.25	82.5	36.0 $\pm 10\%$	4.65 $\pm 10\%$	18-25	18-25
5800	Measured, Sep-24-2011	9.02	90.2	34.8	5.58	21.5	20.3
	Measured, Sep-27-2011	8.89	88.9	34.4	5.59	21.2	20.6
	Recommended Limits	8.22	82.2	35.4 $\pm 10\%$	5.27 $\pm 10\%$	18-25	18-25

The following probe conversion factors were used on the E-Field probe(s) used with the system accuracy verification measurements for head SAR measurements:

Description	Serial Number	f (MHz)	Conversion Factor	Cal Cert pg #
E-Field Probe ES3DV3	3115	835	5.87	5 of 11
		2450	4.39	5 of 11
E-Field Probe ES3DV3	3184	835	6.11	5 of 11
		1810	5.11	5 of 11
E-Field Probe EX3DV4	3728	2450	4.48	5 of 11
		5200	4.64	5 of 11
E-Field Probe ES3DV3	3124	5800	4.13	5 of 11
		2450	4.40	5 of 11

System Accuracy Verification Measurements for Body SAR Measurements							
f (MHz)	Description	Measured SAR (W/kg), 1 gram	Normalized SAR (W/kg), 1 gram	Dielectric Parameters		Ambient Temp (°C)	Tissue Temp (°C)
				ϵ_r	σ (S/m)		
835	Measured, Aug-28-2011	2.01	10.05	54.1	0.97	21.0	19.2
	Recommended Limits	2.56	10.1	55.2 ±5%	0.97 ±5%	18-25	18-25
	Measured, Sep-09-2011	1.90	9.50	53.8	0.98	21.2	19.7
	Measured, Sep-17-2011	1.86	9.30	55.3	0.97	21.1	20.2
	Measured, Sep-19-2011	1.99	9.95	55.7	0.99	21.1	20.0
	Measured, Sep-29-2011	1.99	9.95	55.3	0.98	21.4	20.2
	Recommended Limits	2.49	9.77	55.2 ±5%	0.97 ±5%	18-25	18-25
1800	Measured, Aug-25-2011	8.23	41.15	51.7	1.50	21.2	18.5
	Recommended Limits	9.25	37.9	53.3 ±5%	1.52 ±5%	18-25	18-25
	Measured, Aug-27-2011	7.87	39.35	51.0	1.49	21.0	19.3
	Measured, Sep-03-2011	7.92	39.60	51.1	1.48	21.3	19.2
	Recommended Limits	9.15	37.5	53.3 ±5%	1.52 ±5%	18-25	18-25
	Measured, Sep-18-2011	7.50	37.50	51.2	1.49	21.1	19.6
	Measured, Sep-19-2011	8.08	40.40	51.7	1.49	21.3	19.6
	Recommended Limits	9.08	37.2	53.3 ±5%	1.52 ±5%	18-25	18-25
	Measured, Sep-28-2011	7.85	39.25	51.6	1.48	21.3	20.9
2450	Recommended Limits	9.41	38.5	53.3 ±5%	1.52 ±5%	18-25	18-25
	Measured, Sep-19-2011	11.50	57.50	52.0	1.96	21.1	20.2
	Recommended Limits	13.2	52.8	52.7 ±5%	1.95 ±5%	18-25	18-25
	Measured, Oct-4-2011	11.2	56.0	50.4	1.96	21.2	20.6
	Recommended Limits	12.8	51.3	52.7 ±5%	1.95 ±5%	18-25	18-25
	Measured, Oct-12-2011	10.2	51.0	50.3	1.92	21.3	20.7
5200	Recommended Limits	12.8	50.4	52.7 ±5%	1.95 ±5%	18-25	18-25
	Measured, Sep-22-2011	8.18	81.8	48.8	5.91	20.9	20.3
	Recommended Limits	7.75	77.5	49.0 ±10%	5.30 ±10%	18-25	18-25
5800	Measured, Sep-22-2011	7.88	78.8	47.4	6.81	20.9	20.3
	Measured, Sep-27-2011	7.61	76.1	47.4	6.78	21.3	20.5
	Recommended Limits	7.31	73.1	48.2 ±10%	6.00 ±10%	18-25	18-25

The following probe conversion factors were used on the E-Field probe(s) used with the system accuracy verification measurements for body SAR measurements:

Description	Serial Number	f (MHz)	Conversion Factor	Cal Cert pg #
E-Field Probe ES3DV3	3115	835	5.88	6 of 11
		1810	4.61	6 of 11
		2450	4.12	6 of 11
E-Field Probe ES3DV3	3184	835	6.10	6 of 11
		1810	4.90	6 of 11
		2450	4.33	6 of 11
E-Field Probe EX3DV4	3728	5200	4.16	6 of 11
		5800	3.76	6 of 11
E-Field Probe ES3DV3	3124	2450	4.21	6 of 11

6. Test Results

For GSM and WCDMA modes, the test sample was operated using an actual transmission through a base station simulator. Wi-Fi testing was conducted using manufacturer test mode software, per guidance given in FCC KDB 248227. The base station simulator or test software was set up for the proper channels, transmitter power levels and transmit modes of operation.

The phone was tested in the configurations stipulated in [1], [4] and [5]. The phone was positioned into these configurations using the device holder supplied with the DASY4™ SAR measurement system. The default settings for the “coarse” and “cube” scans were chosen and used for measurements. The grid spacing of the coarse scan was set to 15 mm or less as shown in the SAR plots included in Appendices 2 through 5. Please refer to the DASY4™ manual for additional information on SAR scanning procedures and algorithms used.

The Cellular Phone model covered by this report has the following battery options:

Model SNN5899A - 1800 mAH battery

This battery was used to do all of the SAR testing. The phone was placed in the SAR measurement system with a fully charged battery.

6.1 Head Adjacent Test Results

The SAR results shown in tables 1 through 4 are maximum SAR values averaged over 1 gram of phantom tissue, to demonstrate compliance to [3] and also over 10 grams of phantom tissue, to demonstrate compliance to [6]. Also shown are the temperature of the simulated tissue after the test, the measured drift, the measured conducted output power levels, power reduction amount (when applicable), the measured SAR corrected for probe calibration (when applicable), and the extrapolated SAR. The exact method of extrapolation is:

$$\text{Extrapolated SAR} = (\text{Measured or Corrected SAR}) * 10^{(-\text{drift}/10)}$$

The SAR reported at the end of the measurement process by the DASY4™ measurement system can be scaled up by the measured drift to determine the SAR at the beginning of the measurement process. This is the most conservative SAR because it corresponds to the average output power at the beginning of the SAR test. This extrapolation has been done because when the DUT is operating properly it may exhibit a slump in radiated power and SAR over time. This is verified by measuring the SAR drift after the test.

The left head and right head SAR contour distributions are similar. Because of this similarity, the cheek/touch and 15° tilt test conditions with the highest SAR values in each band are indicated as bold numbers in the following tables and are included in Appendix 2. All other test conditions measured lower SAR values than those included in Appendix 2.

The SAR measurements were performed using the SAM phantoms listed in section 3.1. Since the same phantoms and simulated tissue were used for the system accuracy verification and the device SAR measurements, the Z-axis scans included in Appendix 1 are applicable for verification of simulated tissue depth.

The following probe conversion factors were used on the E-Field probe(s) used for head-adjacent measurements:

Description	Serial Number	f (MHz)	Conversion Factor	Cal Cert pg #
E-Field Probe ES3DV3	3115	835	5.87	5 of 11
		2450	4.39	5 of 11
E-Field Probe ES3DV3	3184	835	6.11	5 of 11
		1810	5.11	5 of 11
		2450	4.48	5 of 11
E-Field Probe EX3DV4	3728	5200	4.64	5 of 11
		5300	4.34	5 of 11
		5600	4.01	5 of 11
		5800	4.13	5 of 11

Left Head Cheek Position															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GSM 850, CS Voice	SNN5899A	128												
			190	18.2	-0.127	33.41		0.25		0.26	0.331		0.34		
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	19.8	-0.206	23.83		0.269		0.28	0.349		0.37		
1880	GSM 1900, CS Voice	SNN5899A	4233												
			512												
			661	19.6	0.032	31.20		0.051		0.05	0.085		0.09		
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	810												
			9262												
2450	802.11b, 1 Mbps	SNN5899A	9400	18.0	0.011	23.87		0.102		0.10	0.167		0.17		
			9538												
			1												
5210	802.11a, 6 Mbps	SNN5899A	6												
			11	20.6	-0.29	16.15		0.00351		0.04	0.0598		0.06		
			36	20.3	0.127	11.09		0.00		0.00	0.0432		0.04		
5290	802.11n, 7.2 Mbps	SNN5899A	60	19.9	-0.194	11.05		0.00		0.00	0.0242		0.03		
5600	802.11n, 7.2 Mbps	SNN5899A	100	20.0	0.00	11.25		0.00		0.00	0.00		0.00		
5785	802.11n, 6.5 Mbps	SNN5899A	149	19.8	0.167	11.05		0.0367		0.04	0.116		0.12		

Table 1: SAR measurement results at the highest possible output power, measured in a head cheek position against the ICNIRP and ANSI SAR Limit.

Right Head Cheek Position															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GSM 850, CS Voice	SNN5899A	128												
			190	18.2	-0.100	33.41		0.255		0.26	0.357		0.37	5x5x7	96
			251												
	GPRS 850, PS Data 3 Uplots	SNN5899A	190	20.0	-0.290	28.77		0.193		0.21	0.286		0.31		
			4132												
1880	WCDMA 850, 12.2 kbps RMC	SNN5899A	4180	19.8	0.117	23.83		0.288		0.29	0.400		0.40	5x5x7	97
			4233												
	GSM 1900, CS Voice	SNN5899A	512												
			661	20.2	0.098	31.20		0.109		0.11	0.187		0.19	5x5x7	98
			810												
2450	802.11b, 1 Mbps	SNN5899A	661	20.0	0.089	26.30		0.064		0.06	0.111		0.11		
			9262												
			9400	18.1	0.162	23.87		0.241		0.24	0.417		0.42	5x5x7	99
5210	802.11a, 6 Mbps	SNN5899A	9538												
			1	20.0	0.025	15.25		0.054		0.05	0.106		0.11		
			6	20.2	0.203	15.62		0.078		0.08	0.156		0.16		
5290	802.11n, 7.2 Mbps	SNN5899A	11	20.0	0.153	16.15		0.104		0.10	0.209		0.21	5x5x7	100
5600	802.11n, 7.2 Mbps	SNN5899A	36	19.7	-0.667	11.09		0.0671		0.08	0.222		0.26	7x7x7	101
5785	802.11n, 6.5 Mbps	SNN5899A	60	19.6	-0.358	11.05		0.0279		0.03	0.0911		0.10	7x7x7	102
	802.11n, 7.2 Mbps	SNN5899A	100	20.4	0.00	11.25		0.0023		0.00	0.0101		0.01	7x7x7	103
	802.11n, 6.5 Mbps	SNN5899A	149	19.8	0.088	10.87		0.0565		0.06	0.183		0.18	7x7x7	104

Table 2: SAR measurement results at the highest possible output power, measured in a head cheek position against the ICNIRP and ANSI SAR Limit.

Left Head 15° Tilt Position															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GSM 850, CS Voice	SNN5899A	128												
			190	18.2	-0.051	33.41		0.168		0.17	0.223		0.23	5x5x7	105
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	19.9	0.106	19.9		0.176		0.18	0.229		0.23		
1880	GSM 1900, CS Voice	SNN5899A	4233												
			512												
			661	19.6	-0.016	31.20		0.026		0.03	0.046		0.05	5x5x7	107
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	810												
			9262												
2450	802.11b, 1 Mbps	SNN5899A	9400	18.0	0.124	23.87		0.057		0.06	0.099		0.10	5x5x7	108
			9538												
			1												
5210	802.11a, 6 Mbps	SNN5899A	6												
			11	20.2	0.0774	16.15		0.0444		0.04	0.0762		0.08	5x5x7	109
			36	20.2	-0.204	11.09		0.0094		0.01	0.0375		0.04	7x7x12	110
5290	802.11n, 7.2 Mbps	SNN5899A	60	19.7	-0.151	11.05		0.000		0.00	0.0003		0.00	7x7x12	111
5600	802.11n, 7.2 Mbps	SNN5899A	100	20.0	0.00	11.25		0.00		0.00	0.00		0.00		
5785	802.11n, 6.5 Mbps	SNN5899A	149	19.8	-0.175	10.87		0.0187		0.02	0.0938		0.10	7x7x12	113

Table 3: SAR measurement results at the highest possible output power, measured in a head tilt position against the ICNIRP and ANSI SAR Limit.

Right Head 15° Tilt Position															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GSM 850, CS Voice	SNN5899A	128												
			190	18.2	0.017	33.41		0.162		0.16	0.213		0.21		
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	20.2	0.100	23.83		0.199		0.20	0.259		0.26	5x5x7	106
1880	GSM 1900, CS Voice	SNN5899A	4233												
			512												
			661	20.1	-0.408	31.20		0.023		0.03	0.040		0.04		
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	810												
			9262												
2450	802.11b, 1 Mbps	SNN5899A	9400	18.0	0.121	23.87		0.053		0.05	0.090		0.09		
			9538												
			1												
5210	802.11a, 6 Mbps	SNN5899A	6												
			11	20.2	0.0643	16.15		0.0166		0.02	0.0297		0.03		
			36	19.7	-0.349	11.09		0.0085		0.01	0.0327		0.04		
5290	802.11n, 7.2 Mbps	SNN5899A	60	19.6	-0.168	11.05		0.0085		0.01	0.0259		0.03		
5600	802.11n, 7.2 Mbps	SNN5899A	100	20.4	0.00	11.25		0.00		0.00	0.00		0.00	7x7x12	112
5785	802.11n, 6.5 Mbps	SNN5899A	149	19.7	-0.259	10.87		0.0081		0.01	0.0376		0.04		

Table 4: SAR measurement results at the highest possible output power, measured in a head tilt position against the ICNIRP and ANSI SAR Limit.

6.2 Body Worn Test Results

The SAR results shown in tables 5 and 6 are maximum SAR values averaged over 1 gram of phantom tissue, to demonstrate compliance to [3] and also over 10 grams of phantom tissue, to demonstrate compliance to [6]. Also shown are the temperature of the simulated tissue after the test, the measured drift, the measured conducted output power levels, power reduction amount (when applicable), the measured SAR corrected for probe calibration (when applicable), and the extrapolated SAR. The exact method of extrapolation is:

$$\text{Extrapolated SAR} = (\text{Measured or Corrected SAR}) * 10^{(-\text{drift}/10)}$$

The SAR reported at the end of the measurement process by the DASY4™ measurement system can be scaled up by the measured drift to determine the SAR at the beginning of the measurement process. This is the most conservative SAR because it corresponds to the average output power at the beginning of the SAR test. This extrapolation has been done because when the DUT is operating properly it may exhibit a slump in radiated power and SAR over time. This is verified by measuring the SAR drift after the test.

The test conditions that produced the highest SAR values in each band are indicated as bold numbers in the following tables and are included in Appendix 3. All other test conditions measured lower SAR values than those included in Appendix 3.

A SPEAG™ MFP V5.1 C Triple Modular Phantom was used for the body-worn tests. The triple modular phantom consists of three identical modules that can be installed and removed separately without emptying the liquid. Each module of the triple phantom is constructed of glass-fiber reinforced vinylester (VG-GF) with a thickness at the bottom of 2.0 mm. It measures 29.2 cm(long) by 17.8 cm(wide) by 17.8 cm(tall). Alternately, a “flat” phantom was used for the body-worn tests. This “flat” phantom is made out of 1” thick natural High Density Polyethylene with a thickness at the bottom of 2.0 mm. It measures 52.7 cm(long) by 26.7 cm(wide) by 21.2 cm(tall).

The simulated tissue depth was verified to be 15.0 cm ± 0.5 cm for frequencies less than 3 GHz, or 10.0 cm ± 0.5 cm for frequencies greater than 3 GHz. The same device holder described in section 6 was used for positioning the phone. Functional accessories were divided into two categories, the ones with metal components and the ones with non-metal components. For non-metallic component accessories, testing was performed on the accessory that displayed the closest proximity to the flat phantom. Each metallic component accessory, if any, was checked for uniqueness of metal component so that each is tested with the device. If multiple accessories shared an identical metal component, only the accessory that dictates the closest spacing to the body was tested. The cellular phone was tested with a headset connected to the device for all body-worn SAR measurements.

There are no body-worn accessories available for this phone at the time of testing thus the device was tested per the Supplement C testing guidelines for devices that do not have body-worn accessories. A separation distance of 25 mm between the device and the flat phantom was used for testing body-worn SAR. The chosen separation distance of 25 mm is utilized in order to support any case or holder accessories offered or to be offered by Motorola for this product. The device was tested with the front and back of the device facing the phantom. Both sides of the device were tested for Body SAR for the purpose of including the SAR evaluation for body-worn accessories that support the device with the front side facing the user.

The cellular phone was also tested in data mode operations. For these tests, a separation distance of 25 mm between the device and the flat phantom was used. The device was tested in the worst-case SAR position and channel configuration from the voice-mode body-worn testing for the data modes.

The following probe conversion factors were used on the E-Field probe(s) used for the body-worn measurements:

Description	Serial Number	f (MHz)	Conversion Factor	Cal Cert pg #
E-Field Probe ES3DV3	3115	835	5.88	6 of 11
E-Field Probe ES3DV3	3184	1810	4.90	6 of 11
		2450	4.33	6 of 11
E-Field Probe EX3DV4	3728	5200	4.16	6 of 11
		5300	3.91	6 of 11
		5600	3.41	6 of 11
		5800	3.76	6 of 11

Body-Worn, Front of Phone 25 mm from Phantom																
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot		
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page	
835	GSM 850, CS Voice	SNN5899A	128													
			190	18.1	-0.121	33.41		0.127		0.13	0.168		0.17			
			251													
	GPRS 850, PS Data 3 Uplots	SNN5899A	190	20.0	0.106	28.77		0.254		0.25	0.336		0.34	5x5x7	115	
	EDGE 850, PS Data 3 Uplots	SNN5899A	190	20.0	0.085	23.64		0.086		0.09	0.113		0.11			
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132													
			4180	20.2	-0.056	23.83		0.352		0.36	0.470		0.48	5x5x7	116	
4233																
1880	GSM 1900, CS Voice	SNN5899A	512													
			661	19.0	-0.073	31.20		0.047		0.05	0.075		0.08			
			810													
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	9262													
			9400	19.0	0.066	23.87		0.066		0.07	0.108		0.11			
2450	802.11b, 1 Mbps	SNN5899A	1													
			6													
			11	20.5	-0.037	16.15		0.0184		0.02	0.0342		0.03			
5210	802.11a, 6 Mbps	SNN5899A	36	19.8	-0.026	11.09		0.0459		0.05	0.12		0.12			
5290	802.11n, 7.2 Mbps	SNN5899A	60	19.7	-0.319	11.05		0.0208		0.02	0.0508		0.05			
5600	802.11n, 7.2 Mbps	SNN5899A	100	20.3	0.00	11.25		0.00		0.00	0.00		0.00			
5785	802.11n, 6.5 Mbps	SNN5899A	149	20.2	-0.0232	10.87		0.0281		0.03	0.0695		0.07			

Table 5: SAR measurement results at the highest possible output power, measured in a body-worn position against the ICNIRP and ANSI SAR Limit.

Body-Worn, Back of Phone 25 mm from Phantom															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GSM 850, CS Voice	SNN5899A	128												
			190	18.0	-0.092	33.41		0.101		0.10	0.134		0.14		
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	20.2	-0.052	23.83		0.299		0.30	0.399		0.40		
			4233												
1880	GSM 1900, CS Voice	SNN5899A	512												
			661	19.0	-0.115	31.20		0.086		0.09	0.140		0.14	5x5x7	117
			810												
	GPRS 1900, PS Data 3 Uplots	SNN5899A	661	20.2	-0.157	26.30		0.052		0.05	0.084		0.09		
			EDGE 1900, PS Data 3 Uplots	SNN5899A	661	20.2	0.070	22.87		0.026		0.03	0.043		0.04
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	9262												
			9400	19.0	0.049	23.87		0.082		0.08	0.132		0.13	5x5x7	118
			9538												
2450	802.11b, 1 Mbps	SNN5899A	1	20.5	-0.484	15.25		0.00559		0.01	0.0116		0.01		
			6	20.2	-0.129	15.62		0.012		0.01	0.021		0.02		
			11	20.5	-0.157	16.15		0.0152		0.02	0.0262		0.03	5x5x7	119
5210	802.11a, 6 Mbps	SNN5899A	36	20.0	-0.13	11.09		0.058		0.06	0.137		0.14	7x7x7	120
5290	802.11n, 7.2 Mbps	SNN5899A	60	19.8	-0.416	11.05		0.037		0.04	0.083		0.09	7x7x7	121
5600	802.11n, 7.2 Mbps	SNN5899A	100	20.3	-3.08	11.25		0.00		0.00	0.0005		0.00	7x7x7	122
5785	802.11n, 6.5 Mbps	SNN5899A	149	20.2	0.0532	10.87		0.021		0.02	0.081		0.08	7x7x7	123

Table 6: SAR measurement results at the highest possible output power, measured in a body-worn position against the ICNIRP and ANSI SAR Limit.

6.3 Lapdock Accessory Test Results

The DUT supports the use of the Motorola Lapdock™. The SAR results above were utilized to determine the channel that results in the highest measured SAR value when in proximity of the user's body. SAR testing was performed with the DUT placed into the Lapdock™ and the Lapdock™ placed for testing per FCC KDB 616217. For GSM and WCDMA modes, the test sample was operated using an actual transmission through a base station simulator. Wi-Fi testing was conducted using manufacturer test mode software, per guidance given in FCC KDB 248227. The base station simulator or test software was set up for the proper channels, transmitter power levels and transmit modes of operation.

The Motorola Lapdock supports the use of data modes within the phone for a data connection to the Internet. While the phone is attached to the Lapdock, the phone is still able to make and receive calls. These calls can be simultaneous to the data transmission, if the technology in the phone supports this (eg: WiFi and GSM). An evaluation of the simultaneous transmitter SAR is provided in section 6.5. The 5 GHz WiFi modes (802.11a/n) do not operate in with Lapdock.

The SAR results shown in table 7 are maximum SAR values averaged over 1 gram of phantom tissue, to demonstrate compliance to [3] and also over 10 grams of phantom tissue, to demonstrate compliance to [6]. Also shown are the temperature of the simulated tissue after the test, the measured drift, the measured conducted output power levels, power reduction amount (when applicable), the measured SAR corrected for probe calibration (when applicable), and the extrapolated SAR. The exact method of extrapolation is:

$$\text{Extrapolated SAR} = (\text{Measured or Corrected SAR}) * 10^{(-\text{drift}/10)}$$

The SAR reported at the end of the measurement process by the DASY4™ measurement system can be scaled up by the measured drift to determine the SAR at the beginning of the measurement process. This is the most conservative SAR because it corresponds to the average output power at the beginning of the SAR test. This extrapolation has been done because when the DUT is operating properly it may exhibit a slump in radiated power and SAR over time. This is verified by measuring the SAR drift after the test.

The test conditions that produced the highest SAR values in each band are indicated as bold numbers in the following tables and are included in Appendix 4.

The SAR measurements were performed using the flat section of the SAM phantoms listed in section 3.1. The simulated tissue depth was verified to be 15.0 cm ± 0.5 cm. The DUT and Lapdock™ were placed using a Laptop Extension Kit available from SPEAG™ that facilitates the testing of larger devices according to IEC 62209-2 (e.g., laptops, cameras, etc.). The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the Mounting Device in place of the phone positioner. The extension is fully compatible with the Twin-SAM Phantoms.

The following probe conversion factors were used on the E-Field probe(s) used for the Lapdock™ body measurements:

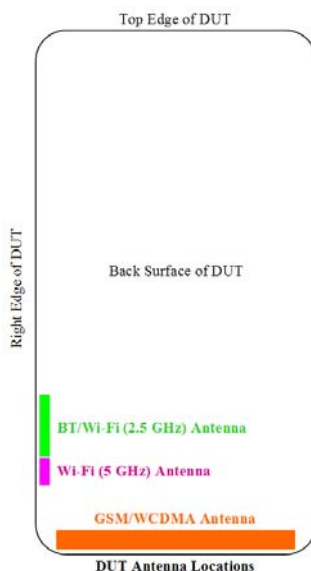
Description	Serial Number	f (MHz)	Conversion Factor	Cal Cert pg #
E-Field Probe ES3DV3	3115	835	5.88	6 of 11
		1810	4.61	6 of 11
		2450	4.12	6 of 11

Lapdock against Body, Bottom Surface of Lapdock 0 mm from Phantom, Screen opened 90 degrees															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GPRS 850, PS Data 3 Uplots	SNN5899A	128												
			190	20.0	0.007	28.77		0.144		0.14	0.216		0.22	5x5x7	125
			251												
	GSM 850, CS Voice	SNN5899A	128												
			190	20.7	-0.145	33.41		0.101		0.01	0.189		0.20		
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	20.0	-0.170	23.83		0.210		0.22	0.315		0.33	5x5x7	126
			4233												
1880	GPRS 1900, PS Data 3 Uplots	SNN5899A	512												
			661	20.0	0.013	26.30		0.036		0.04	0.064		0.06	5x5x7	127
			810												
	GSM 1900, CS Voice	SNN5899A	512												
			661	20.0	20.0	31.20		0.0314		0.03	0.0541		0.05		
			810												
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	9262												
			9400	20.0	-0.148	23.87		0.094		0.10	0.166		0.17	5x5x7	128
			9538												
2450	802.11b, 1 Mbps	SNN5899A	1												
			6												
			11	20.2	-0.135	15.62		0.00513		0.01	0.00891		0.01	5x5x7	129

Table 7: SAR measurement results at the highest possible output power, measured against the ICNIRP and ANSI SAR Limit.

6.4 Mobile Hotspot Test Results

The DUT is capable of functioning as a Wi-Fi to Cellular mobile hotspot. Additional SAR testing was performed according to the test guidelines provided per FCC KDB 941225 D06. Testing was performed with a separation of 1 cm between the DUT and the “flat” phantom. The DUT was positioned for SAR tests with the front and back surfaces facing the phantom, and also with the edges facing the phantom in which the transmitting antenna is less than 2.5 cm from the edge.



Mobile Hotspot Edges/Surfaces for SAR testing						
Mode	Top	Bottom	Left	Right	Front	Back
GSM/WCDMA	NO	YES	YES	YES	YES	YES
Wi-Fi	NO	YES	NO	YES	YES	YES

The SAR results shown in tables 8 through 12 are maximum SAR values averaged over 1 gram of phantom tissue, to demonstrate compliance to [3] and also over 10 grams of phantom tissue, to demonstrate compliance to [6]. Also shown are the temperature of the simulated tissue after the test, the measured drift, the measured conducted output power levels, power reduction amount (when applicable), the measured SAR corrected for probe calibration (when applicable), and the extrapolated SAR. The exact method of extrapolation is:

$$\text{Extrapolated SAR} = (\text{Measured or Corrected SAR}) * 10^{(-\text{drift}/10)}$$

The SAR reported at the end of the measurement process by the DASY4™ measurement system can be scaled up by the measured drift to determine the SAR at the beginning of the measurement process. This is the most conservative SAR because it corresponds to the average output power at the beginning of the SAR test. This extrapolation has been done because when the DUT is operating properly it may exhibit a slump in radiated power and SAR over time. This is verified by measuring the SAR drift after the test.

The DUT utilizes a reduced limit for the maximum transmit power when the mobile hotspot functionality is enabled, as described above in 2.2.2. A complete description of this functionality is provided in the “Operational Description” contained within Exhibit 12.

The mobile Hotspot functionality will only operate using the 2.45 GHz WiFi modes and the cellular modes. The firmware does not support the use of the 5 GHz WiFi modes as part of the mobile Hotspot.

The test conditions that produced the highest SAR values in each band are indicated as bold numbers in the following tables and are included in Appendix 5. All other test conditions measured lower SAR values than those included in Appendix 5.

A SPEAG™ MFP V5.1 C Triple Modular Phantom was used for the mobile hotspot tests. The triple modular phantom consists of three identical modules that can be installed and removed separately without emptying the liquid. Each module of the triple phantom is constructed of glass-fiber reinforced vinylester (VG-GF) with a thickness at the bottom of 2.0 mm. It measures 29.2 cm(long) by 17.8 cm(wide) by 17.8 cm(tall). Alternately, a “flat” phantom was used for the mobile hotspot tests. This “flat” phantom is made out of 1” thick natural High Density Polyethylene with a thickness at the bottom of 2.0 mm. It measures 52.7 cm(long) by 26.7 cm(wide) by 21.2 cm(tall).

The simulated tissue depth was verified to be 15.0 cm ± 0.5 cm for frequencies below 3 GHz, , or 10.0 cm ± 0.5 cm for frequencies greater than 3 GHz. The same device holder described in section 6 was used for positioning the phone.

The following probe conversion factors were used on the E-Field probe(s) used for the mobile hotspot measurements:

Description	Serial Number	f (MHz)	Conversion Factor	Cal Cert pg #
E-Field Probe ES3DV3	3115	1810	4.61	6 of 11
		2450	4.12	6 of 11
E-Field Probe ES3DV3	3184	835	6.10	6 of 11
		1810	4.90	6 of 11

Mobile Hotspot, Bottom Edge of Phone 10 mm from Phantom															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GPRS 850, PS Data 3 Uplots	SNN5899A	128												
			190	20.1	-0.12	28.77		0.0178		0.02	0.0288		0.03	5x5x7	131
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	20.2	0.141	23.83		0.024		0.02	0.039		0.04	5x5x7	132
			4233												
1880	GPRS 1900, PS Data 3 Uplots	SNN5899A	512												
			661	19.0	0.0428	26.30		0.283		0.28	0.575		0.58	5x5x7	133
			810												
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	9262	20.1	0.0421	24.10		0.424		0.42	0.843		0.84		
			9400	20.1	0.0161	23.87		0.58		0.58	1.16		1.16	5x5x7	134
			9538	20.2	0.0848	23.83	2.0	0.501		0.50	0.977		0.98		
2450	802.11b, 1 Mbps	SNN5899A	1												
			6												
			11	20.2	-0.13	16.5		0.0123		0.01	0.0225		0.02	5x5x7	135

Table 8: SAR measurement results at the highest possible output power, measured against the ICNIRP and ANSI SAR Limit.

Mobile Hotspot, Left Edge of Phone 10 mm from Phantom															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GPRS 850, PS Data 3 Uplots	SNN5899A	128												
			190	20.1	-0.0914	28.77		0.23		0.23	0.329		0.34	5x5x7	136
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	20.3	-0.030	23.83		0.418		0.42	0.603		0.61	5x5x7	137
			4233												
1880	GPRS 1900, PS Data 3 Uplots	SNN5899A	512												
			661	19.0	-0.004	26.30		0.0092		0.01	0.0161		0.02	5x5x7	138
			810												
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	9262												
			9400	20.2	-0.094	23.87		0.0197		0.02	0.0332		0.03	5x5x7	139
			9538												

Table 9: SAR measurement results at the highest possible output power, measured against the ICNIRP and ANSI SAR Limit.

Mobile Hotspot, Right Edge of Phone 10 mm from Phantom															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GPRS 850, PS Data 3 Uplots	SNN5899A	128												
			190	20.1	-0.0493	28.77		0.192		0.19	0.274		0.28	5x5x7	140
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	19.0	0.012	23.83		0.227		0.23	0.326		0.33	5x5x7	141
			4233												
1880	GPRS 1900, PS Data 3 Uplots	SNN5899A	512												
			661	19.0	-0.060	26.30		0.0455		0.05	0.0763		0.08	5x5x7	142
			810												
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	9262												
			9400	20.2	0.12	23.87		0.103		0.10	0.171		0.17	5x5x7	143
			9538												
2450	802.11b, 1 Mbps	SNN5899A	1												
			6												
			11	20.5	0.027	16.15		0.0979		0.10	0.21		0.21	5x5x7	144

Table 10: SAR measurement results at the highest possible output power, measured against the ICNIRP and ANSI SAR Limit.

Mobile Hotspot, Front Surface of Phone 10 mm from Phantom															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GPRS 850, PS Data 3 Uplots	SNN5899A	128												
			190	20.1	-0.0156	28.77		0.405		0.41	0.518		0.52	5x5x7	145
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	19.0	0.025	23.83		0.535		0.54	0.695		0.70	5x5x7	146
			4233												
1880	GPRS 1900, PS Data 3 Uplots	SNN5899A	512												
			661	19.0	-0.287	26.30		0.293		0.31	0.592		0.63	5x5x7	147
			810												
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	9262	19.6	0.0466	24.10		0.448		0.45	0.856		0.86		
			9400	19.6	0.0567	23.87		0.578		0.58	1.11		1.11	5x5x7	148
			9538	20.2	0.0161	23.83	2.0	0.416		0.42	0.805		0.81		
2450	802.11b, 1 Mbps	SNN5899A	1												
			6												
			11	20.5	-0.067	16.15		0.0934		0.09	0.187		0.19	5x5x7	149

Table 11: SAR measurement results at the highest possible output power, measured against the ICNIRP and ANSI SAR Limit.

Mobile Hotspot, Back Surface of Phone 10 mm from Phantom															
f (MHz)	Mode	Battery/ Accessory	Channel	Temp (°C)	Drift (dB)	DUT Power		10 g SAR value			1 g SAR value			Test Plot	
						Measured (dBm)	Power Reduction (dB)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Measured (W/kg)	Corrected (W/kg)	Extrapolated (W/kg)	Grid	Plot Page
835	GPRS 850, PS Data 3 Uplots	SNN5899A	128												
			190	20.1	-0.0348	28.77		0.439		0.44	0.567		0.57	5x5x7	150
			251												
	WCDMA 850, 12.2 kbps RMC	SNN5899A	4132												
			4180	19.0	-0.120	23.83		0.563		0.56	0.752		0.77	5x5x7	151
			4233												
1880	GPRS 1900, PS Data 3 Uplots	SNN5899A	512												
			661	19.0	0.303	26.30		0.25		0.25	0.493		0.49	5x5x7	152
			810												
	WCDMA 1900, 12.2 kbps RMC	SNN5899A	9262	20.5	0.000	24.10		0.371		0.37	0.679		0.68		
			9400	19.6	0.17	23.87		0.584		0.58	1.11		1.11	5x5x7	153
			9538	20.0	0.0617	23.83	2.0	0.417		0.42	0.788		0.79		
2450	802.11b, 1 Mbps	SNN5899A	1	20.2	-0.079	15.25		0.036		0.04	0.074		0.08		
			6	20.5	-0.010	15.62		0.070		0.07	0.143		0.14		
			11	20.2	-0.069	16.15		0.108		0.11	0.223		0.23	5x5x7	154

Table 12: SAR measurement results at the highest possible output power, measured against the ICNIRP and ANSI SAR Limit.

6.5 Description and Evaluation of Simultaneous Transmitters

Per "SAR Evaluation Considerations for Handsets with Multiple Transmitters and Antennas" (FCC KDB 648474), the necessity of stand-alone and simultaneous SAR testing was evaluated for the licensed and unlicensed transmitters of the device under test.

By device design the GSM and WCDMA transmitters may operate simultaneously with either the Wi-Fi 802.11 transmitter or the Bluetooth transmitter. The separation distance between the Wi-Fi 802.11/Bluetooth antenna and the main antenna is 1.76 cm. Pictorial representation of the antenna locations and separation distances are given in Exhibit 7d.

The Bluetooth transmitter of the device under test can be excluded from stand-alone and simultaneous SAR evaluation, per the **bolded** requirements from FCC KDB 648474, as follows. Note that Bluetooth mode is not intended for use in configurations against the head or during mobile hotspot operation, and this evaluation considers only the body-worn configuration.

1. The highest output conducted power measured for Bluetooth on the device under test is 9.06 mW [**≤ 12 mW**]
2. The separation distance between the Bluetooth antenna and the CDMA antenna is 2.34 cm [**< 2.5 cm**]
3. The highest 1-g Body-Worn SAR values for the other transmitters are:
GSM 850 (0.34 W/kg); GSM 1900 (0.14 W/kg); WCDMA 850 (0.48 W/kg); WCDMA 1900 (0.13 W/kg) [**$< 1.2 \text{ W/kg}$**]

The Wi-Fi and the Bluetooth cannot transmit simultaneously, so there is no co-location test requirement for Wi-Fi and Bluetooth. GSM supports voice and data transmission, though not simultaneously. WCDMA supports voice and data transmission simultaneously.

Description of Simultaneous Transmit Capabilities				
Transmitter Combinations		Scenario Supported?	Supported for Mobile Hotspot?	Notes
#1	GSM (CS Voice) + GSM (PS Data)	No	No	DUT system architecture does not support simultaneous voice and data (except on WCDMA), multiple voice channels, or multiple data channels during a single session on the cellular network.
#2	WCDMA (Voice) + WCDMA (Data)	Yes	Yes	
#3	GSM (CS Voice) + WCDMA (Data)	No	No	
#4	WCDMA (Voice) + GSM (PS Data)	No	No	
#5	GSM (PS Data) + WCDMA (Data)	No	No	
#6	GSM (CS Voice) + WCDMA (Voice)	No	No	Supported for voice plus background data.
#7	GSM (CS Voice) + Wi-Fi	Yes	No	
#8	WCDMA (Voice) + Wi-Fi	Yes	No	Supported for mobile hotspot operation.
#9	GSM (PS Data) + Wi-Fi	Yes	Yes	
#10	WCDMA (Data) + Wi-Fi	Yes	Yes	

For the transmitters requiring stand-alone SAR testing (GSM, WCDMA, and Wi-Fi 802.11), the KDB guidelines direct that if the sum of the 1 g SAR measured for the simultaneously transmitting antennas is less than the SAR limit, SAR measurement for simultaneous transmission is not required. Further, if the SAR-to-peak-location separation ratio for two simultaneously transmitting antennas is less than 0.3 then SAR measurement for simultaneous transmission is likewise not required. Evaluations of the head, body, and mobile hotspot simultaneous SAR summations for the worst-case SAR transmitter configurations are presented in the tables below.

The following SAR summations for simultaneous evaluation are provided to demonstrate a GSM or WCDMA voice link with a simultaneous data link on Wi-Fi.

Evaluations for Simultaneous SAR, Head and Body positions														
	Transmitter Stand-Alone 1 g SAR Values (W/kg)						1 g SAR Summations (W/kg)							
Transmitter Combination							#7	#7	#8	#8	#7	#7	#8	#8
Band Position	GSM 850	GSM 1900	WCDMA 850	WCDMA 1900	Wi-Fi 2450	Wi-Fi 5 GHz	GSM 850 + Wi-Fi 2450	GSM 1900 + Wi-Fi 2450	WCDMA 850 + Wi-Fi 2450	WCDMA 1900 + Wi-Fi 2450	GSM 850 + Wi-Fi 5 GHz	GSM 1900 + Wi-Fi 5 GHz	WCDMA 850 + Wi-Fi 5 GHz	WCDMA 1900 + Wi-Fi 5 GHz
Left Head Cheek	0.34	0.09	0.37	0.17	0.06	0.12	0.40	0.15	0.43	0.23	0.46	0.21	0.49	0.29
Left Head 15° Tilt	0.23	0.05	0.23	0.10	0.04	0.10	0.27	0.09	0.27	0.14	0.33	0.15	0.33	0.20
Right Head Cheek	0.37	0.19	0.40	0.42	0.21	0.26	0.58	0.40	0.61	0.63	0.63	0.45	0.66	0.68
Right Head 15° Tilt	0.21	0.04	0.26	0.09	0.02	0.04	0.23	0.06	0.28	0.11	0.25	0.08	0.30	0.13
Body Worn, Front of Phone 25 mm from Phantom	0.17	0.08	0.48	0.11	0.03	0.12	0.20	0.11	0.51	0.14	0.29	0.20	0.60	0.23
Body Worn, Back of Phone 25 mm from Phantom	0.14	0.14	0.40	0.13	0.02	0.14	0.16	0.16	0.42	0.15	0.28	0.28	0.54	0.27

The following Mobile Hotspot (10 mm separation) position SAR summations for simultaneous evaluation are provided to demonstrate a data link (over GSM or WCDMA) with a simultaneous data link on Wi-Fi (to client devices).

Evaluations for Simultaneous SAR, Mobile Hotspot (10 mm separation) positions Mobile Hotspot functionality enabled									
	Transmitter Stand-Alone 1 g SAR Values (W/kg)					1 g SAR Summations (W/kg)			
Transmitter Combination						#9	#9	#10	#10
Band Position	GSM 850	GSM 1900	WCDMA 850	WCDMA 1900	Wi-Fi 2450	GSM 850 +Wi-Fi 2450	GSM 1900 + Wi-Fi 2450	WCDMA 850 +Wi-Fi 2450	WCDMA 1900 +Wi-Fi 2450
Bottom Edge of DUT 10 mm from Phantom	0.03	0.58	0.04	1.16	0.01	0.04	0.59	0.05	1.17
Right Edge of DUT 10 mm from Phantom	0.28	0.08	0.33	0.17	0.13	0.41	0.21	0.46	0.30
Left Edge of DUT 10 mm from Phantom	0.34	0.02	0.61	0.03	N/A	0.34	0.02	0.61	0.03
Front Surface of DUT 10 mm from Phantom	0.58	0.67	0.70	1.11	0.14	0.72	0.81	0.84	1.25
Back Surface of DUT 10 mm from Phantom	0.64	0.49	0.77	1.11	0.23	0.87	0.72	1.00	1.34

As no summation of transmitter SAR values results in a value greater than the compliance limit, no measurements for simultaneous SAR are required.

The following LapDock position SAR summations for simultaneous evaluation are provided to demonstrate a data link (over WiFi) with a simultaneous voice call (over GSM, WCDMA), and additionally evaluations for mobile hotspot connections (WiFi connected to one of the cellular data modes).

Evaluations for Simultaneous SAR, LapDock Position			
Transmit Mode	SAR (W/Kg)	2.45 GHz WiFi SAR (W/Kg)	1 g SAR Summations (W/kg)
GSM 850	0.20	0.01	0.21
GPRS 850	0.22	0.01	0.22
WCDMA 850	0.33	0.01	0.34
GSM 1900	0.05	0.01	0.06
GPRS 1900	0.06	0.01	0.07
WCDMA 1900	0.17	0.01	0.18

References

- [1] CENELEC, en62209-1:2006 “Human Exposure to Radio Frequency Fields From Hand - Held and Body - Mounted Wireless Communication Devices – Human Models, Instrumentation, and Procedures”
- [2] CENELEC, en50360:2001 “Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz – 3 GHz)”.
- [3] ANSI / IEEE, C95.1 1992 Edition “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”
- [4] FCC OET Bulletin 65 Supplement C 01-01
- [5] IEEE 1528 2003 Edition “IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques”
- [6] ICNIRP Guidelines “Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300 GHz)”

Appendix 1

SAR distribution comparisons for System Accuracy Verifications

System Accuracy Verification Measurements for Head SAR Measurements

Date/Time: 8/23/2011 7:12:30 AM

Test Laboratory: Motorola - Aug-23-2011 835 MHz Head

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 436TR; FCC ID: IHDP56ME2

Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 436TR; Input Power = 200 mW

Sim.Temp@meas = 18.4°C; Sim.Temp@SPC = 18.4°C; Room Temp @ SPC = 20.8°C

Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue*

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 40.6$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.11, 6.11, 6.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1235;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: $dx=10\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 2.15 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

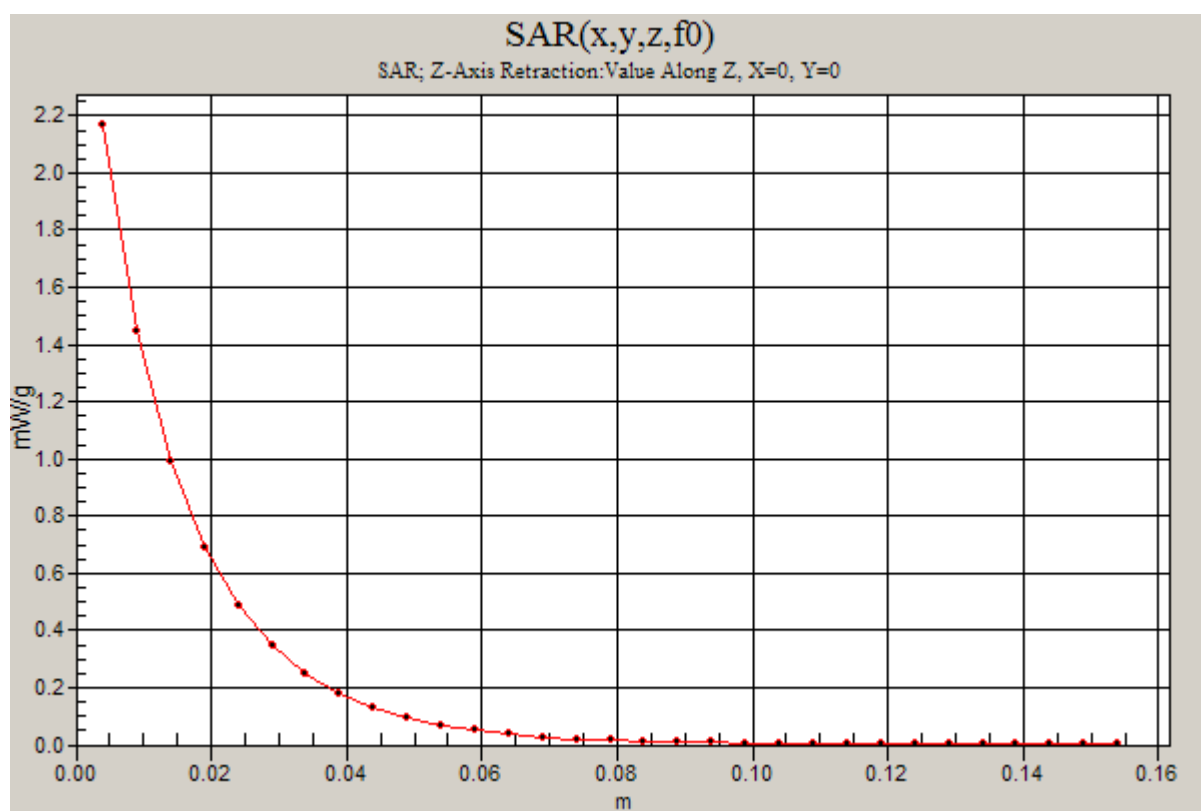
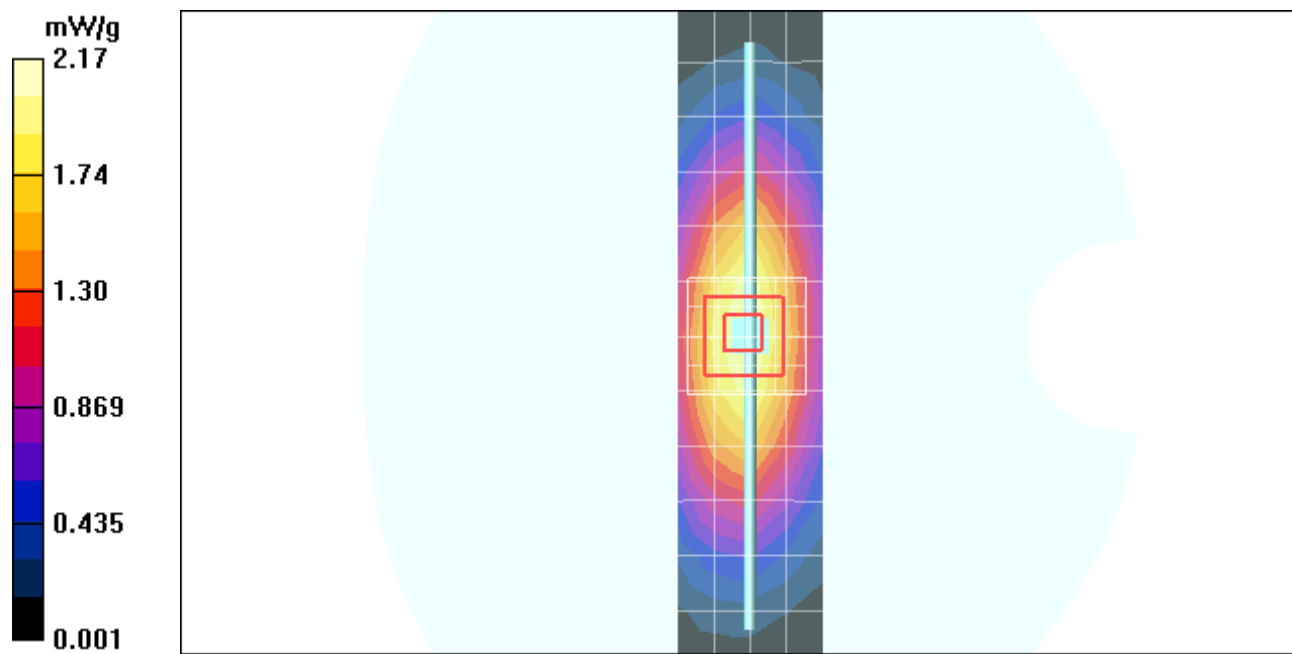
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 49.0 V/m; Power Drift = -0.010 dB; Peak SAR (extrapolated) = 2.98 W/kg

SAR(1 g) = 2 mW/g; SAR(10 g) = 1.3 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$; Maximum value of SAR (measured) = 2.17 mW/g



Date/Time: 9/7/2011 5:26:41 PM

Test Laboratory: Motorola - Sep-07-2011 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 422TR; FCC ID: IHDP56ME2

Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 422TR; Input Power = 200 mW

Sim.Temp@meas = 20.7°C; Sim.Temp@SPC = 20.5°C; Room Temp @ SPC = 21.1°C

Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue*

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 41.9$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.87, 5.87, 5.87); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 SUGAR SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: $dx=10\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 2.09 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

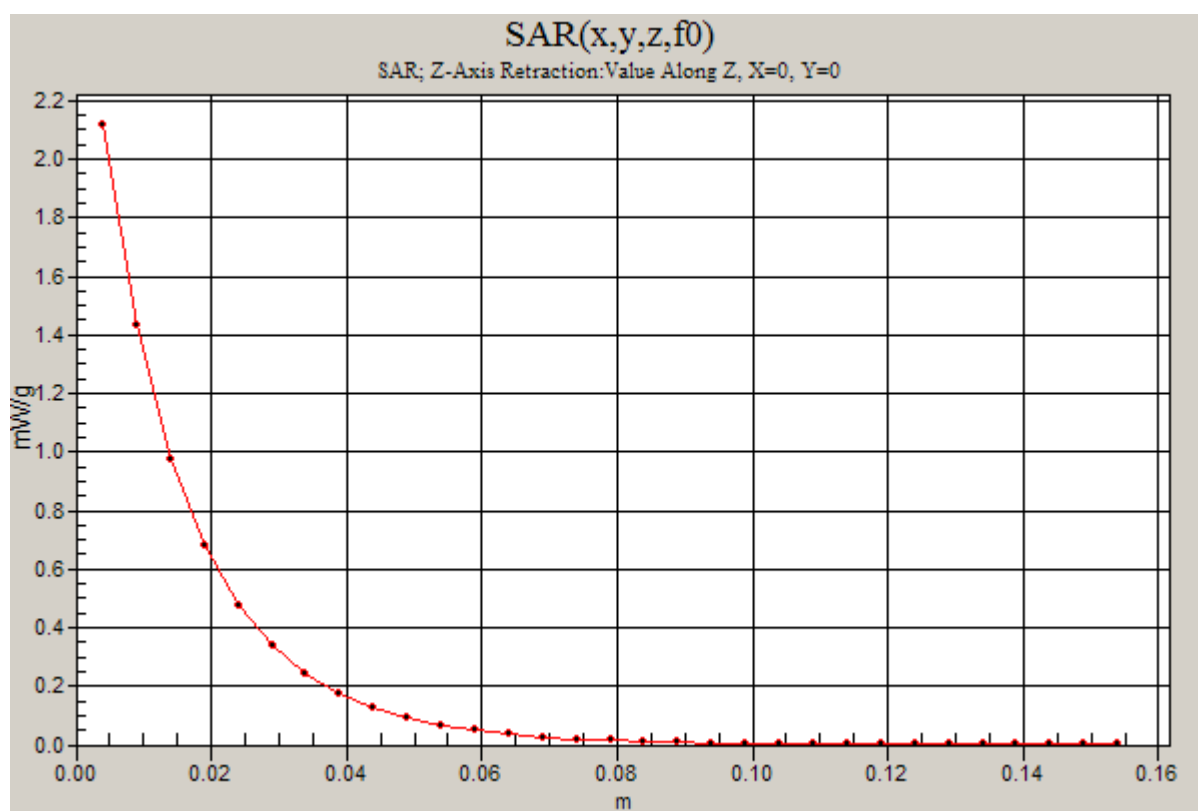
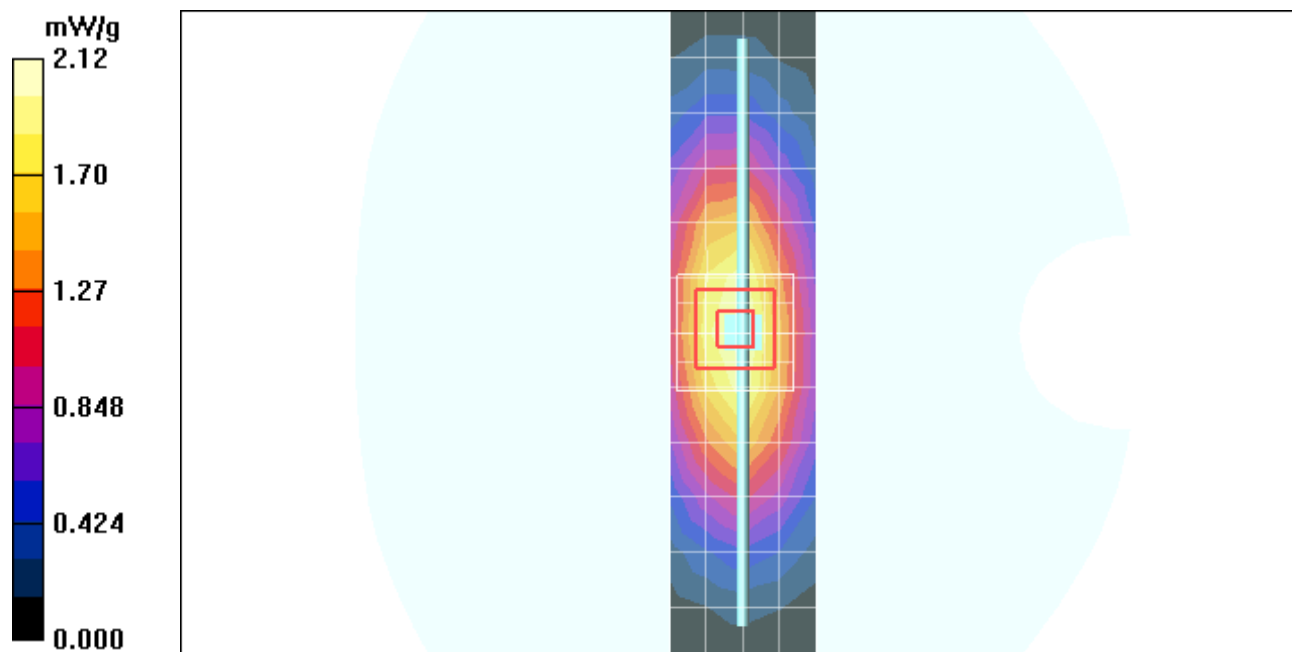
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 48.9 V/m; Power Drift = -0.005 dB; Peak SAR (extrapolated) = 2.87 W/kg

SAR(1 g) = 1.95 mW/g; SAR(10 g) = 1.28 mW/g; Maximum value of SAR (measured) = 2.12 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$



Date/Time: 8/23/2011 8:30:56 PM

Test Laboratory: Motorola - Aug-23-2011 1800 MHz Head

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 259TR; FCC ID: IHDP56ME2

Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 259TR; Input Power = 200 mW

Sim.Temp@meas = 18.6°C; Sim.Temp@SPC = 18.2°C; Room Temp @ SPC = 20.4°C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue*

Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.38 \text{ mho/m}$; $\epsilon_r = 40.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(5.11, 5.11, 5.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1136;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: $dx=10\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 8.54 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

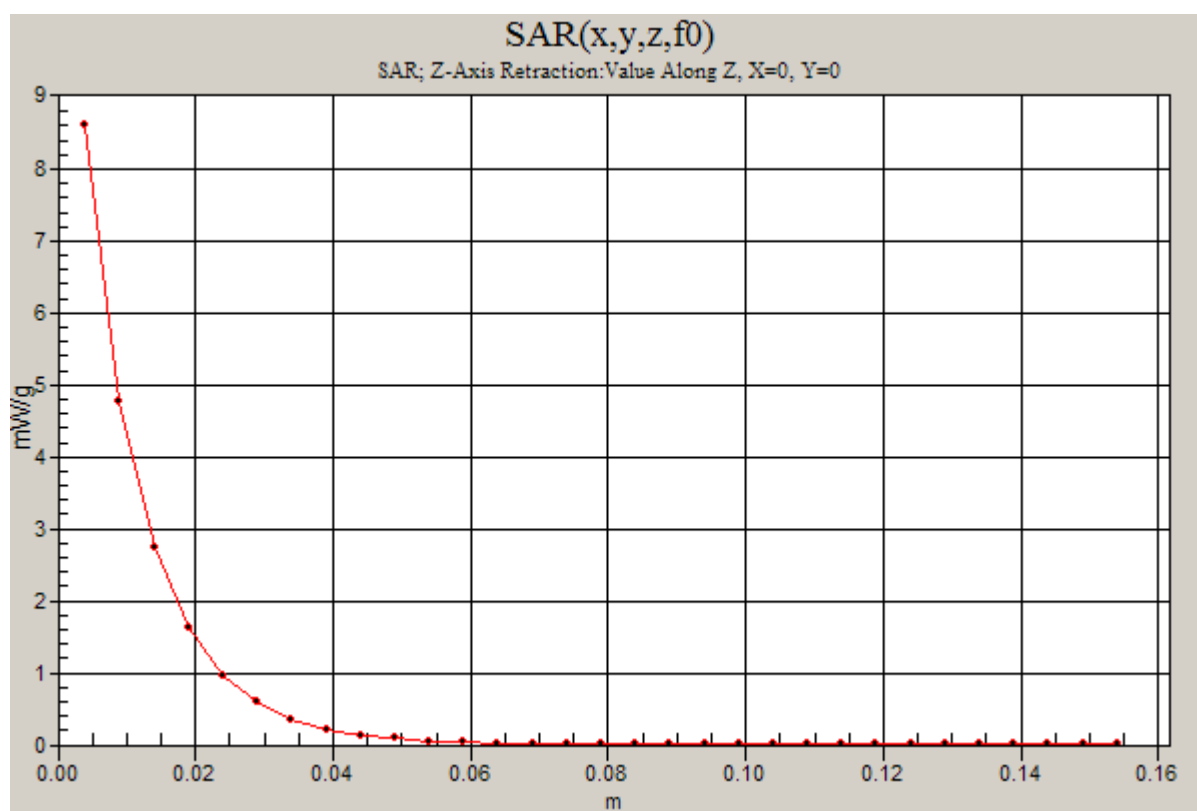
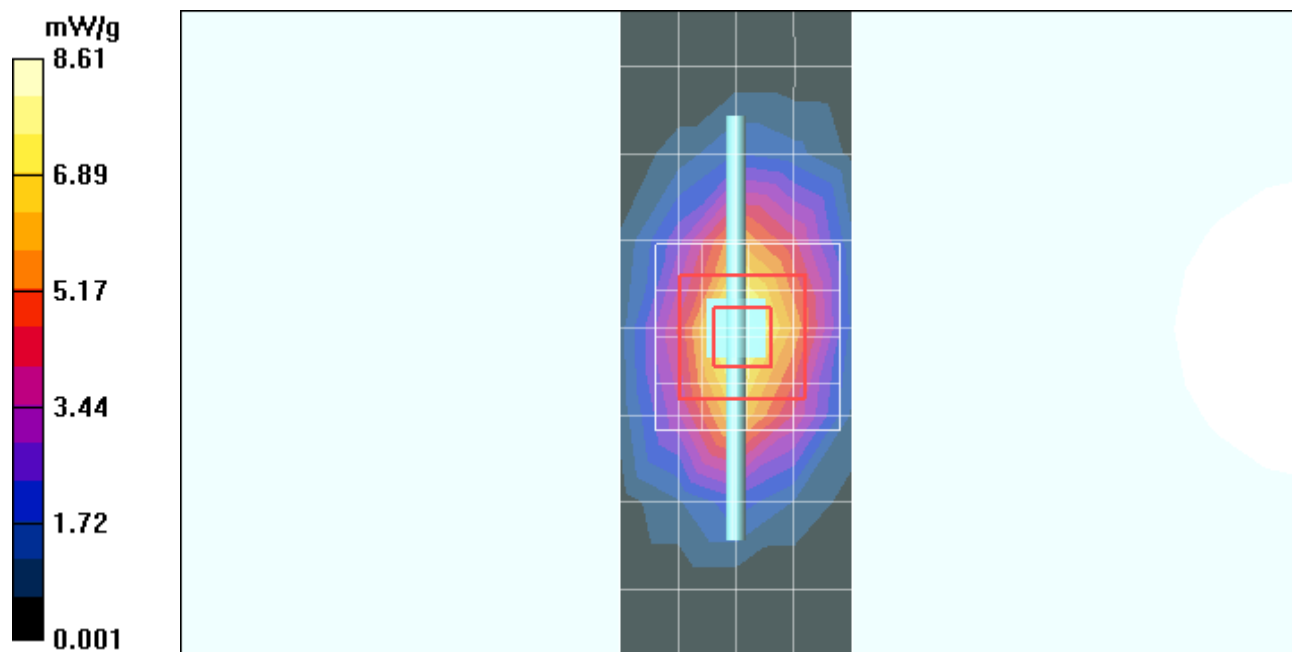
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 79.6 V/m; Power Drift = -0.034 dB; Peak SAR (extrapolated) = 14.3 W/kg

SAR(1 g) = 7.69 mW/g; SAR(10 g) = 4.02 mW/g; Maximum value of SAR (measured) = 8.62 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$; Maximum value of SAR (measured) = 8.61 mW/g



Date/Time: 8/24/2011 3:22:22 PM

Test Laboratory: Motorola - Aug-24-2011 1800 MHz Head

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 259TR; FCC ID: IHDP56ME2

Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 259TR; Input Power = 200 mW

Sim.Temp@meas = 19.1°C; Sim.Temp@SPC = 19.3°C; Room Temp @ SPC = 21.0°C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue*

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.38$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(5.11, 5.11, 5.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1136;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: dx=10mm, dy=15mm; Maximum value of SAR (measured) = 8.58 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

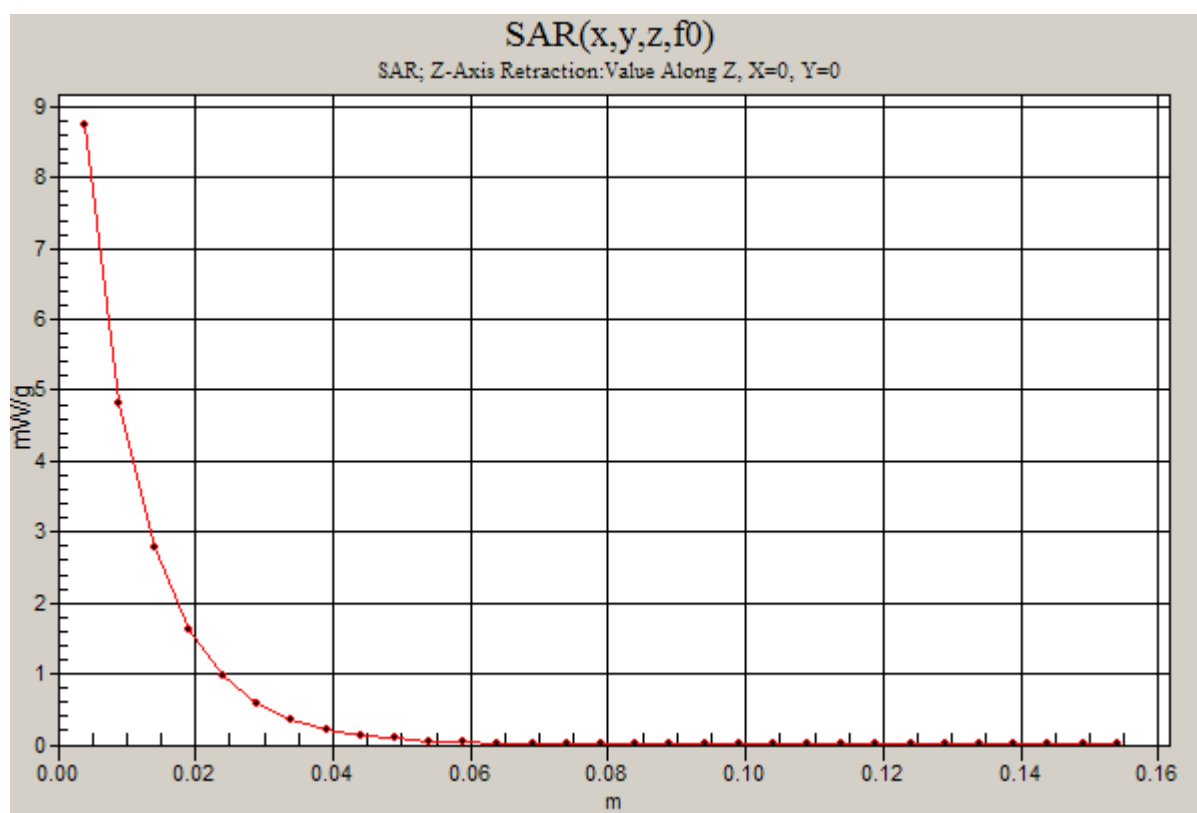
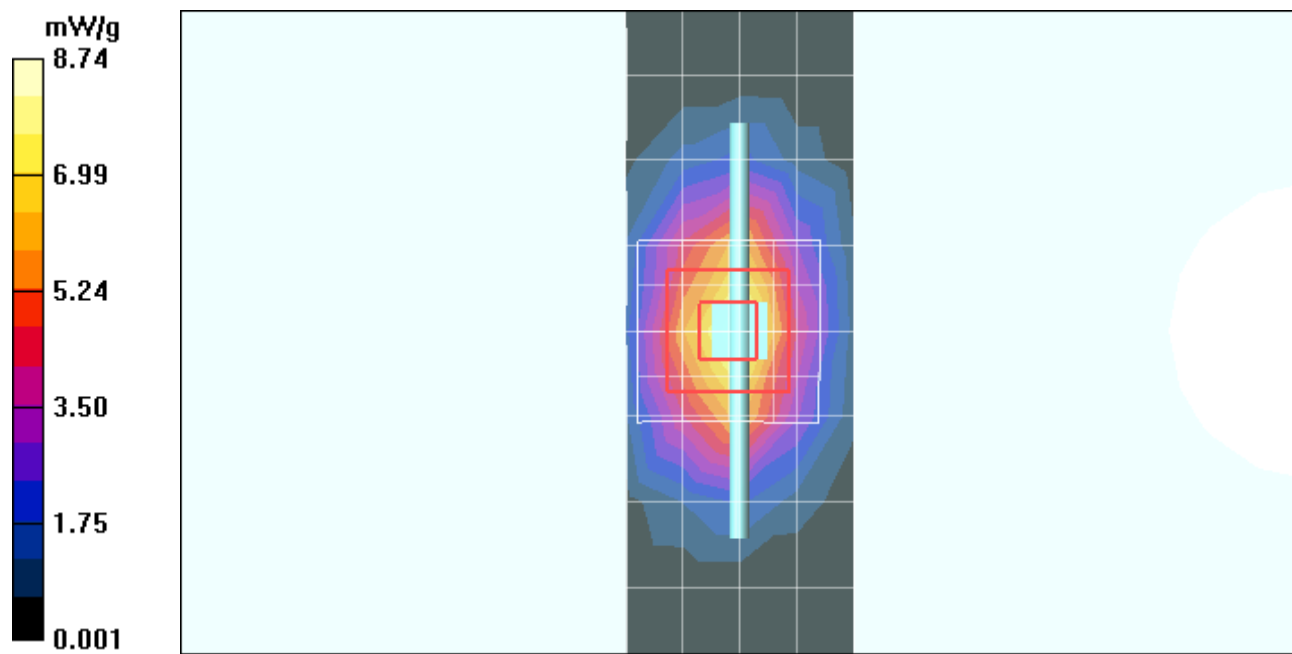
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 79.8 V/m; Power Drift = 0.001 dB; Peak SAR (extrapolated) = 14.5 W/kg

SAR(1 g) = 7.77 mW/g; SAR(10 g) = 4.06 mW/g; Maximum value of SAR (measured) = 8.71 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 8.74 mW/g



Date/Time: 9/2/2011 7:03:01 AM

Test Laboratory: Motorola - Sep-02-2011 1800 MHz Head

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 259TR; FCC ID: IHDP56ME2

Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 259TR; Input Power = 200 mW

Sim.Temp@meas = 19.0°C; Sim.Temp@SPC = 19.0°C; Room Temp @ SPC = 20.8°C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue*

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.37$ mho/m; $\epsilon_r = 38.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(5.11, 5.11, 5.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 6.80 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

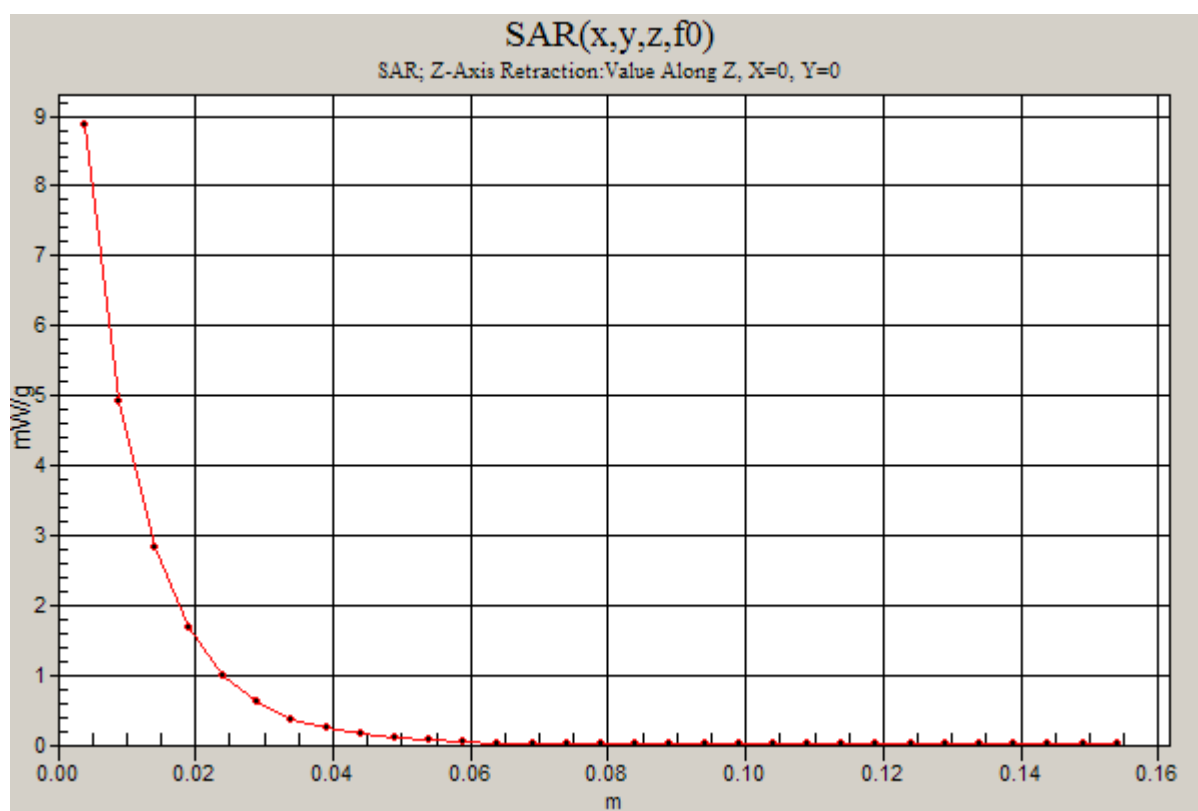
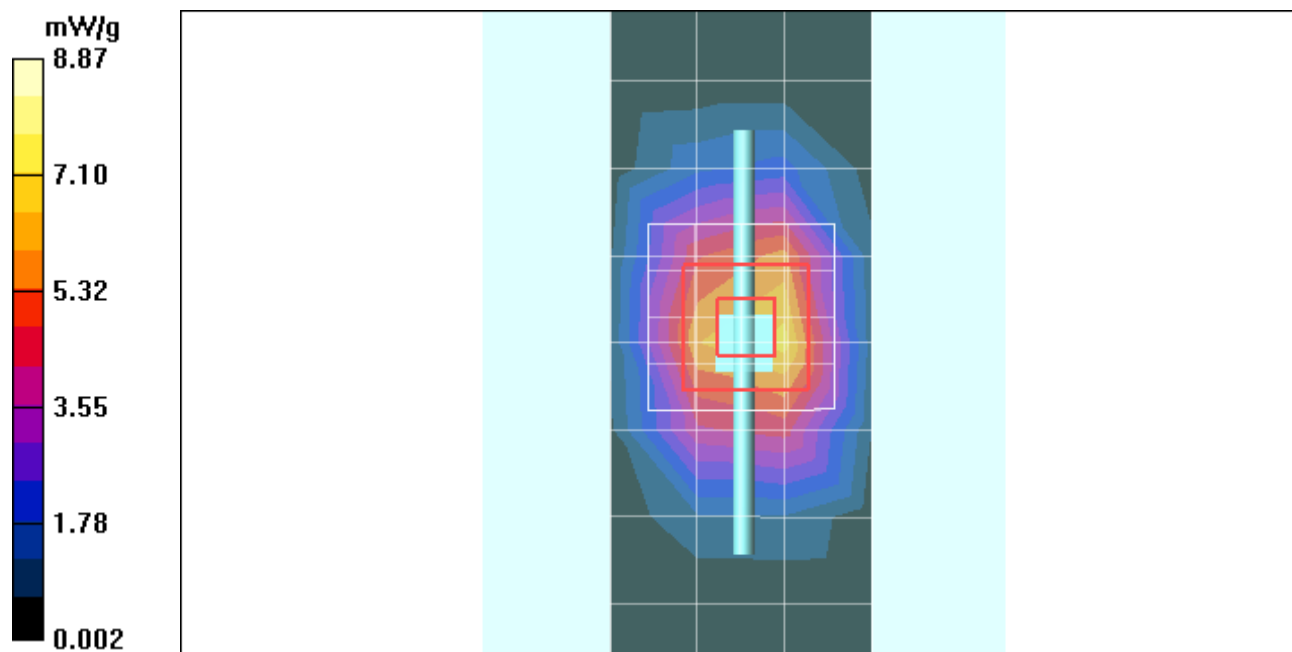
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 81.4 V/m; Power Drift = -0.004 dB; Peak SAR (extrapolated) = 14.6 W/kg

SAR(1 g) = 7.95 mW/g; SAR(10 g) = 4.18 mW/g; Maximum value of SAR (measured) = 8.79 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 8.87 mW/g



Date/Time: 9/20/2011 9:46:34 AM

Test Laboratory: Motorola - Sep-20-2011 2450 MHz Head

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 863; FCC ID: IHDP56ME2

Procedure Notes: 2450 MHz System Performance Check; Dipole Sn# 863; Input Power = 200 mW

Sim.Temp@meas = 20.2°C; Sim.Temp@SPC = 20.3°C; Room Temp @ SPC = 21.1°C

Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue*

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.39, 4.39, 4.39); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: dx=10mm, dy=15mm; Maximum value of SAR (measured) = 12.7 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

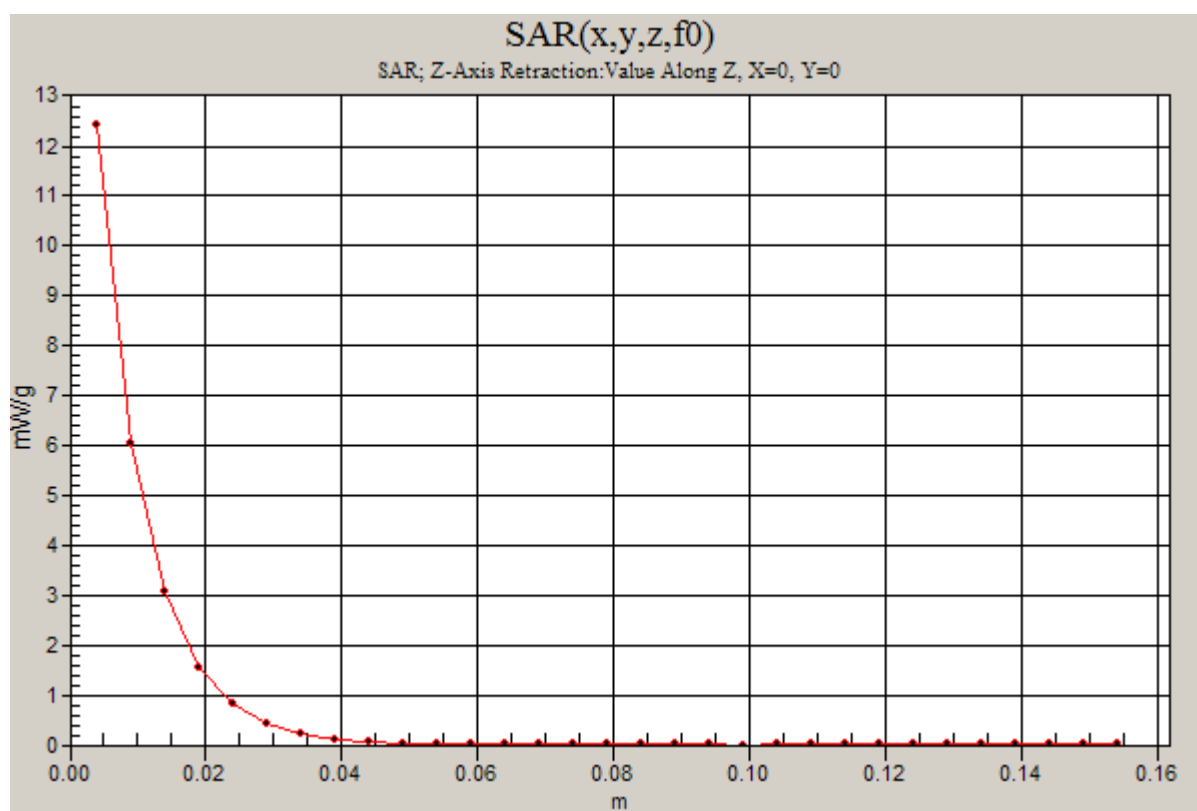
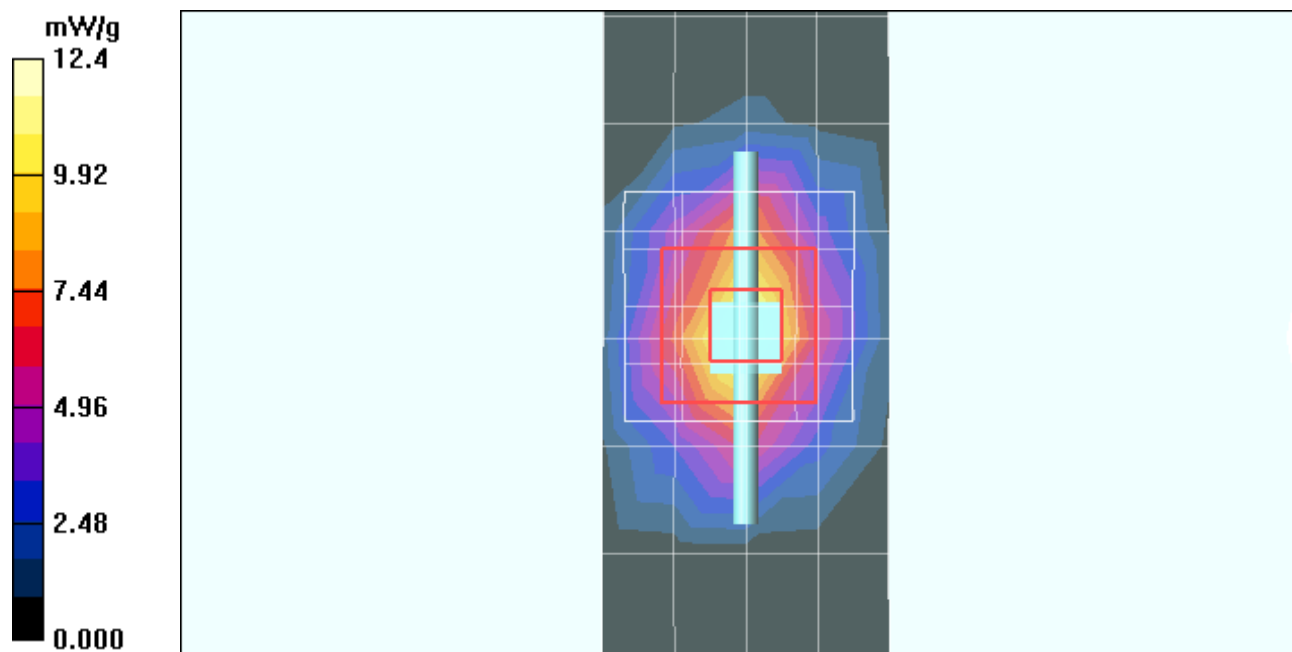
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 84.0 V/m; Power Drift = -0.191 dB; Peak SAR (extrapolated) = 24.1 W/kg

SAR(1 g) = 11.2 mW/g; SAR(10 g) = 5.19 mW/g; Maximum value of SAR (measured) = 12.5 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 12.4 mW/g



Test Laboratory: Motorola Mobility 2450 MHz System Performance Check

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:740

Procedure Notes: PM1 Power = 200 mW Refl.Pwr PM3 = -31.8dB [Sim.Temp@SPC](#) = 20.6°C Room Temp @ SPC = 21.1°C

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.89 \text{ mho/m}$; $\epsilon_r = 37.6$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.4, 4.4, 4.4); Calibrated: 8/23/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#1 - Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1319;
- SEMCAD X Version 14.4.5 (3634)

DASY5, SAM - System Performance Check Template, Rev.2 (12-Sept-11)/Daily SPC

Check/Dipole Area Scan (5x15x1): Measurement grid: $dx=10\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 12.258 mW/g

DASY5, SAM - System Performance Check Template, Rev.2 (12-Sept-11)/Daily SPC Check/0-

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

Reference Value = 82.868 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 23.070 W/kg

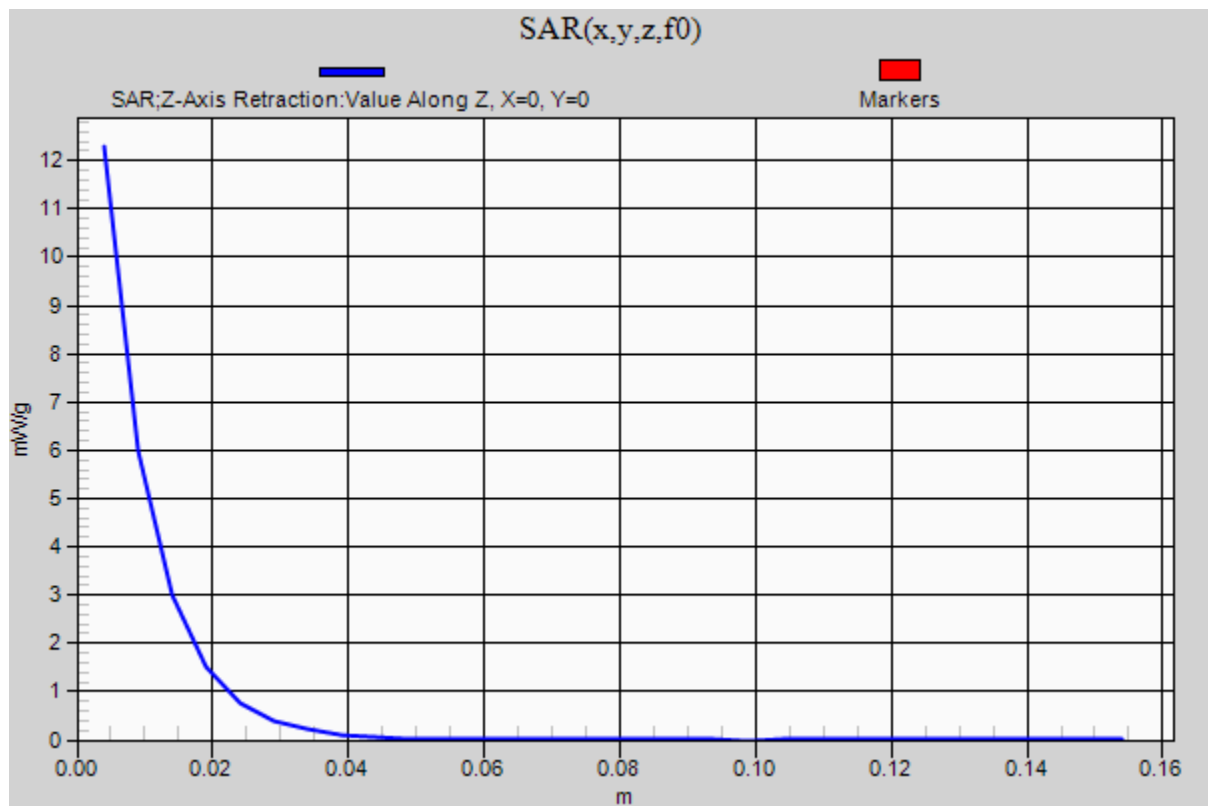
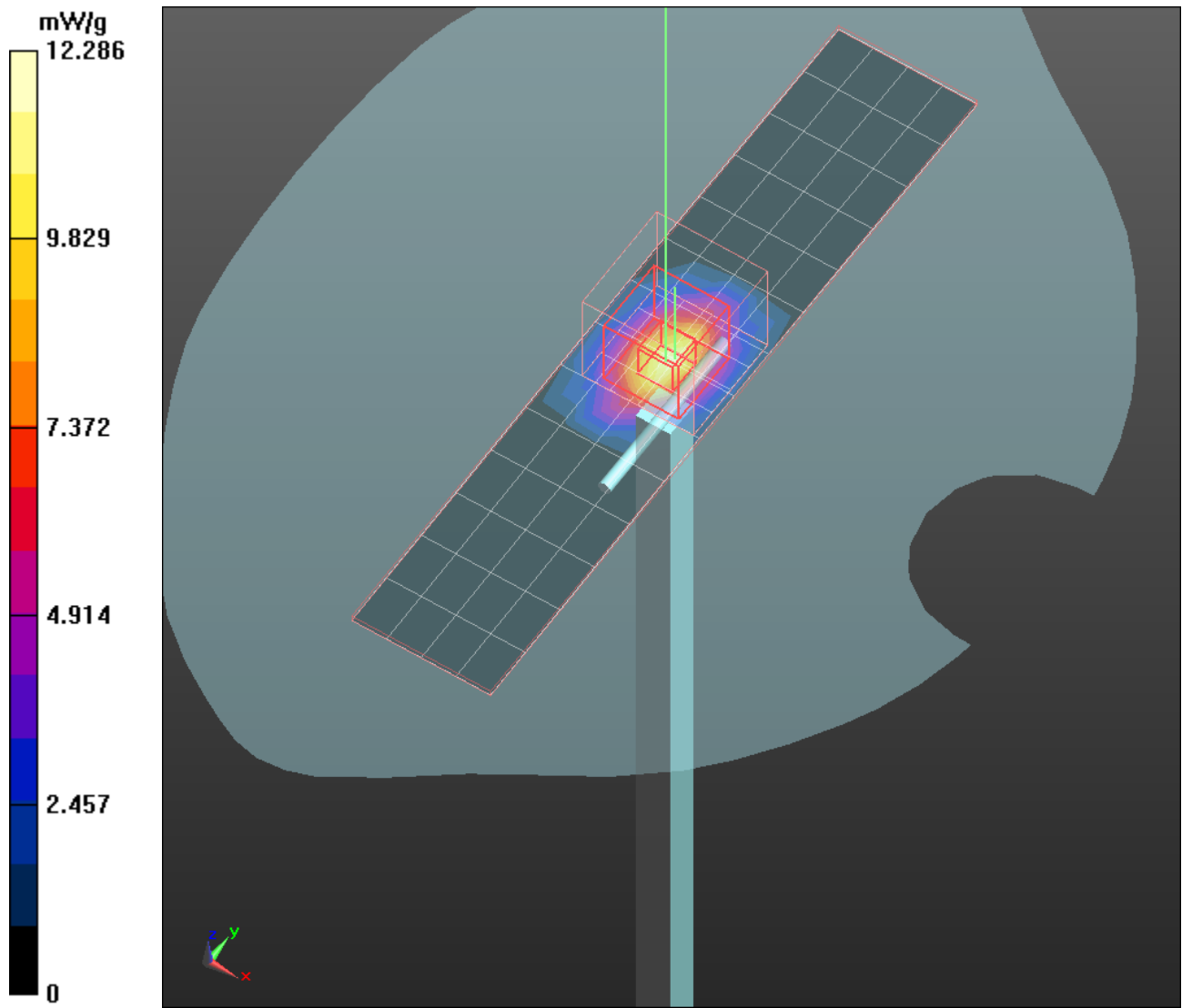
SAR(1 g) = 10.9 mW/g; SAR(10 g) = 5.02 mW/g

Maximum value of SAR (measured) = 12.059 mW/g

DASY5, SAM - System Performance Check Template, Rev.2 (12-Sept-11)/Daily SPC

Check/Z-Axis Retraction (1x1x31): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$

Maximum value of SAR (measured) = 12.286 mW/g



Test Laboratory: Motorola 2450 MHz System Performance Check

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:766

Procedure Notes: PM1 Power = 200 mW Refl.Pwr PM3 = -21.3dB [Sim.Temp@SPC](#) = 20.7°C Room Temp @ SPC = 21.3°C

Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.84 \text{ mho/m}$; $\epsilon_r = 37.4$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.48, 4.48, 4.48); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1136;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1): Measurement grid: $dx=10\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 12.3 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

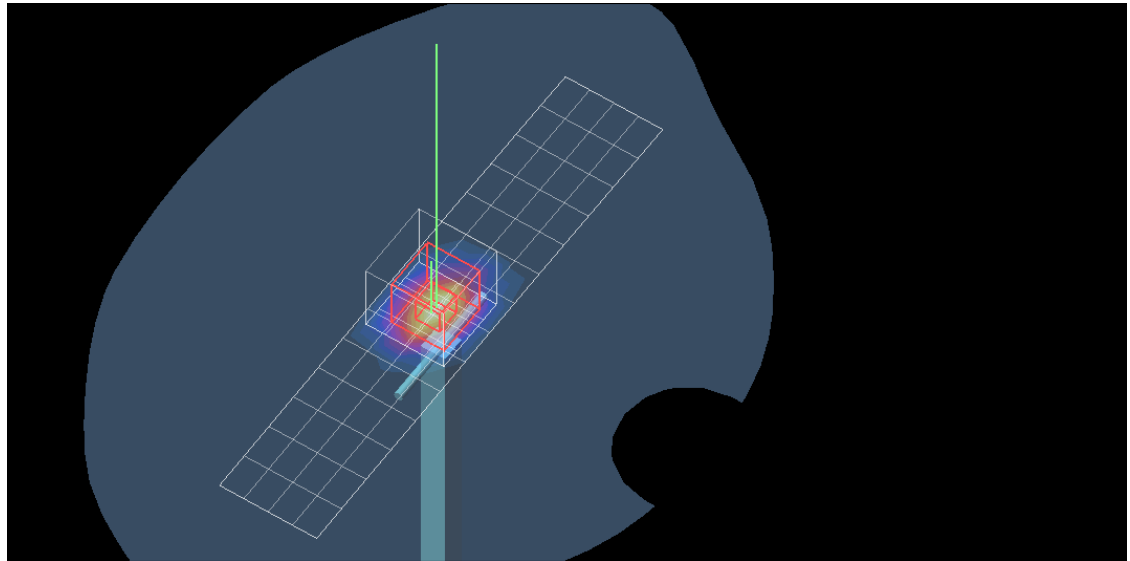
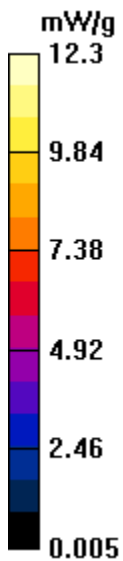
Reference Value = 82.9 V/m; Power Drift = -0.010 dB

Peak SAR (extrapolated) = 23.0 W/kg

SAR(1 g) = 10.9 mW/g; SAR(10 g) = 5.07 mW/g

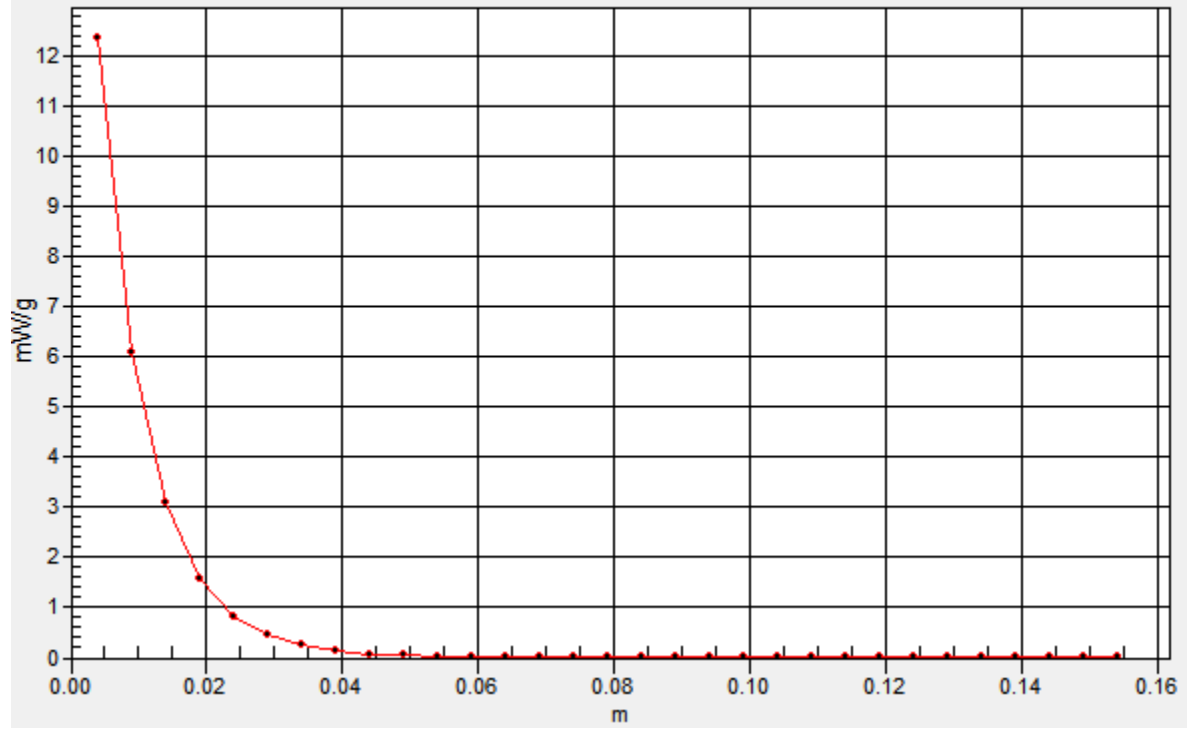
Maximum value of SAR (measured) = 12.2 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$



SAR(x,y,z,f0)

SAR; Z-Axis Retraction: Value Along Z, X=0, Y=0



Test Laboratory: Motorola 5200 MHz System Performance Check - Head Tissue

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1098

Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -20.10 dB Sim.Temp@SPC = 20.5C Room Temp @ SPC = 21.2C

Communication System: CW - Dipole; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 5200$ MHz; $\sigma = 4.94$ mho/m; $\epsilon_r = 36.6$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.64, 4.64, 4.64); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (22x5x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 17.6 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

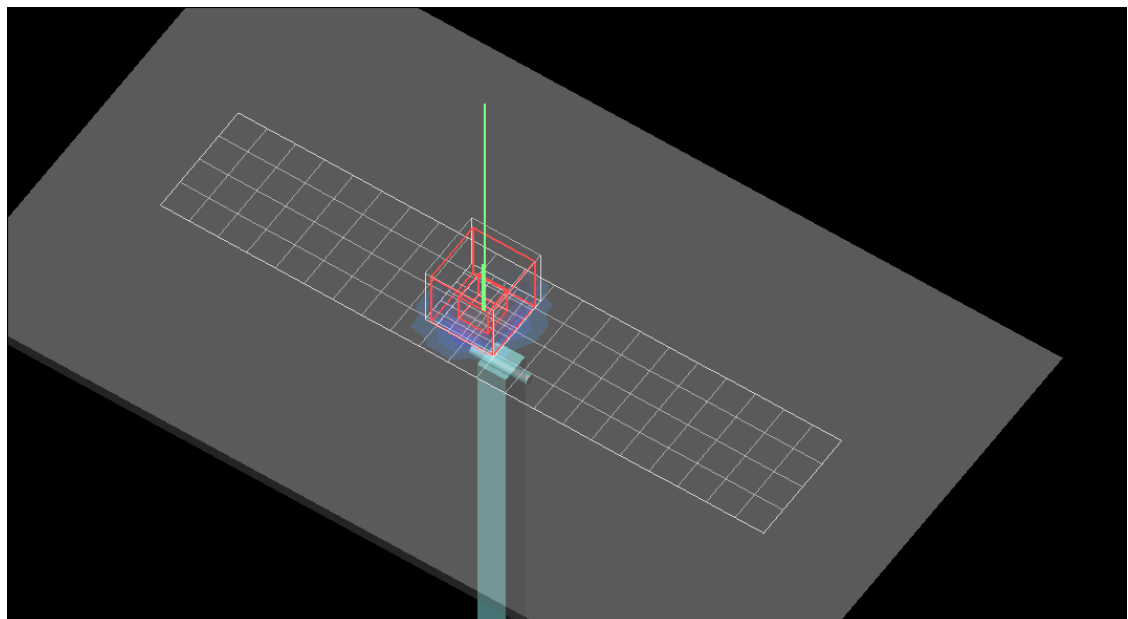
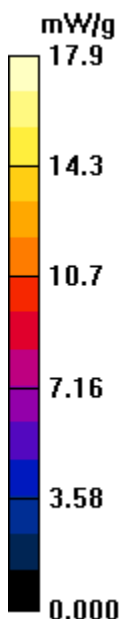
Reference Value = 50.0 V/m; Power Drift = 0.044 dB

Peak SAR (extrapolated) = 33.2 W/kg

SAR(1 g) = 8.59 mW/g; SAR(10 g) = 2.46 mW/g

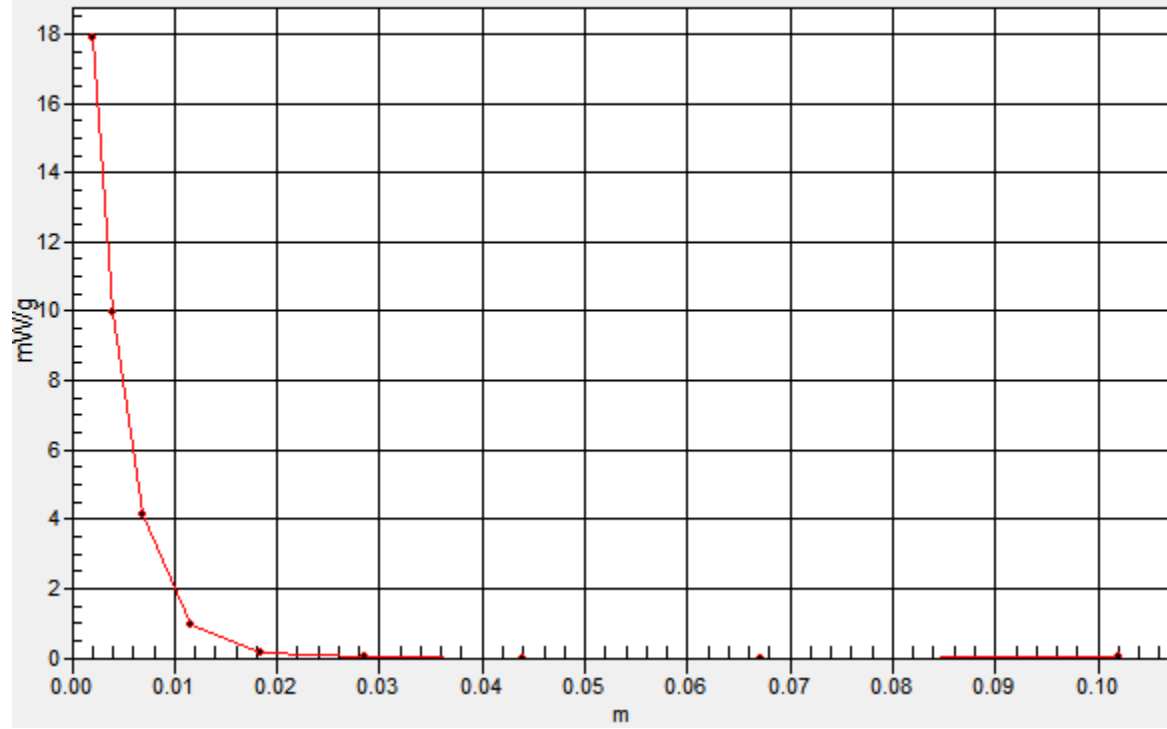
Maximum value of SAR (measured) = 17.9 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: dx=20mm, dy=20mm, dz=2mm



SAR(x,y,z,f0)

SAR; Z-Axis Retraction, Graded 1.5: Value Along Z, X=0, Y=0



Test Laboratory: Motorola 5200 MHz System Performance Check - Head Tissue

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1098

Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -19.05 dB [Sim.Temp@SPC](#) = 20.3C Room Temp @ SPC = 21.5C

Communication System: CW - Dipole; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 4.89 \text{ mho/m}$; $\epsilon_r = 36$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.64, 4.64, 4.64); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz HEAD SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x22x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 11.9 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 58.7 V/m; Power Drift = 0.192 dB

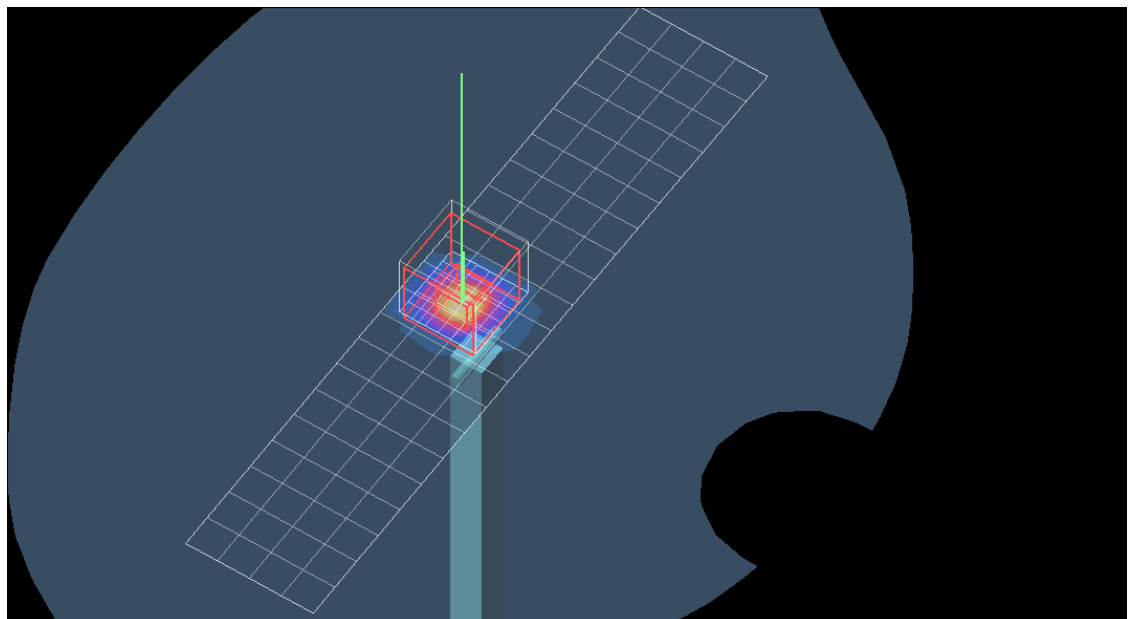
Peak SAR (extrapolated) = 34.4 W/kg

SAR(1 g) = 8.96 mW/g; SAR(10 g) = 2.57 mW/g

Maximum value of SAR (measured) = 18.5 mW/g

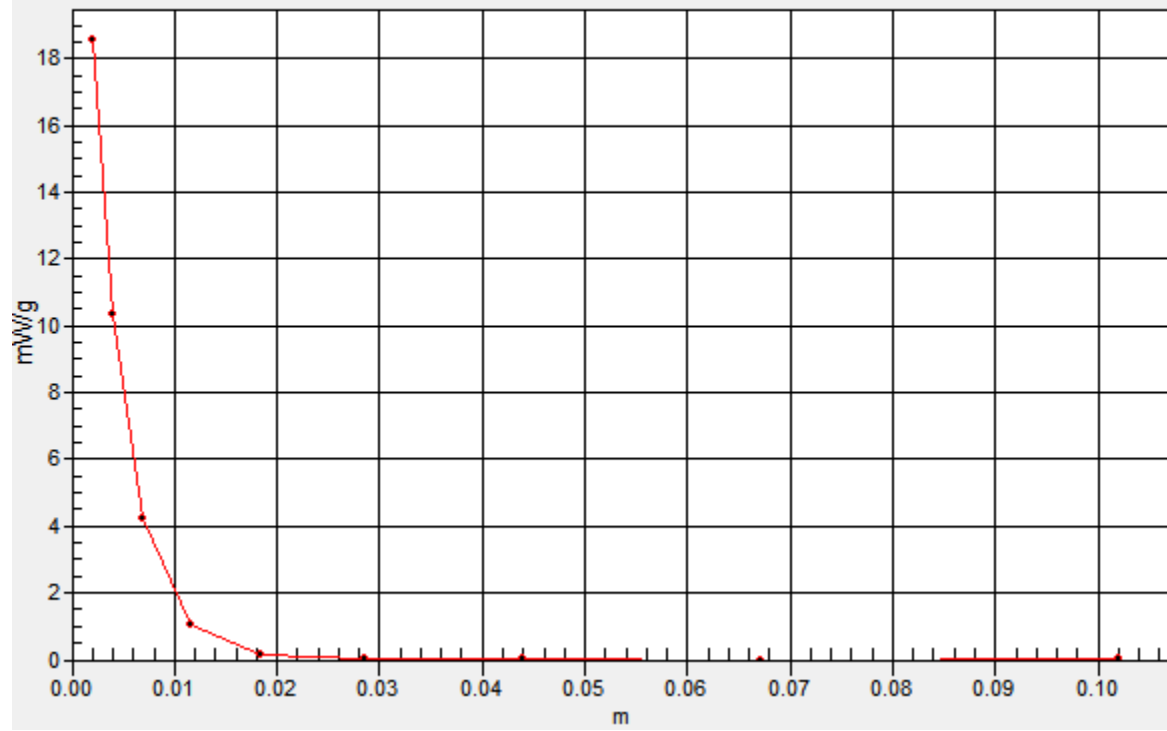
Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=2\text{mm}$

Maximum value of SAR (measured) = 18.6 mW/g



SAR(x,y,z,f0)

SAR; Z-Axis Retraction, Graded 1.5: Value Along Z, X=0, Y=0



Test Laboratory: Motorola 5800 MHz System Performance Check - Head Tissue

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1098

Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -19.05 dB [Sim.Temp@SPC](#) = 20.3C Room Temp @ SPC = 21.5C

Communication System: CW - Dipole; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 5.58 \text{ mho/m}$; $\epsilon_r = 34.8$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.13, 4.13, 4.13); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz HEAD SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x22x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 12.4 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 57.1 V/m; Power Drift = 0.193 dB

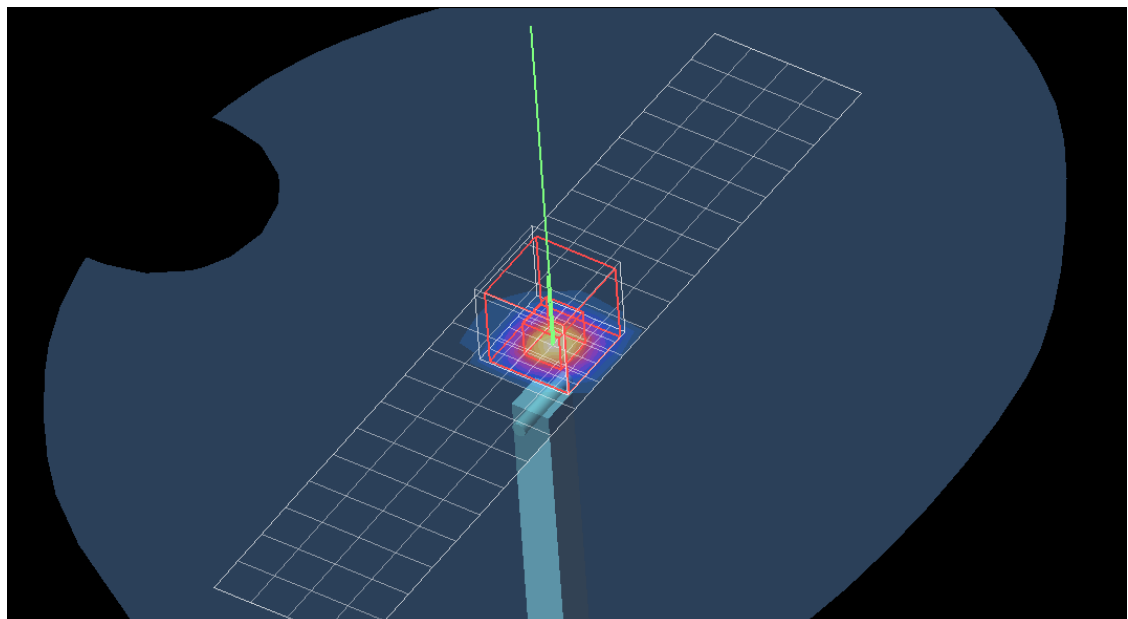
Peak SAR (extrapolated) = 38.1 W/kg

SAR(1 g) = 9.02 mW/g; SAR(10 g) = 2.57 mW/g

Maximum value of SAR (measured) = 18.9 mW/g

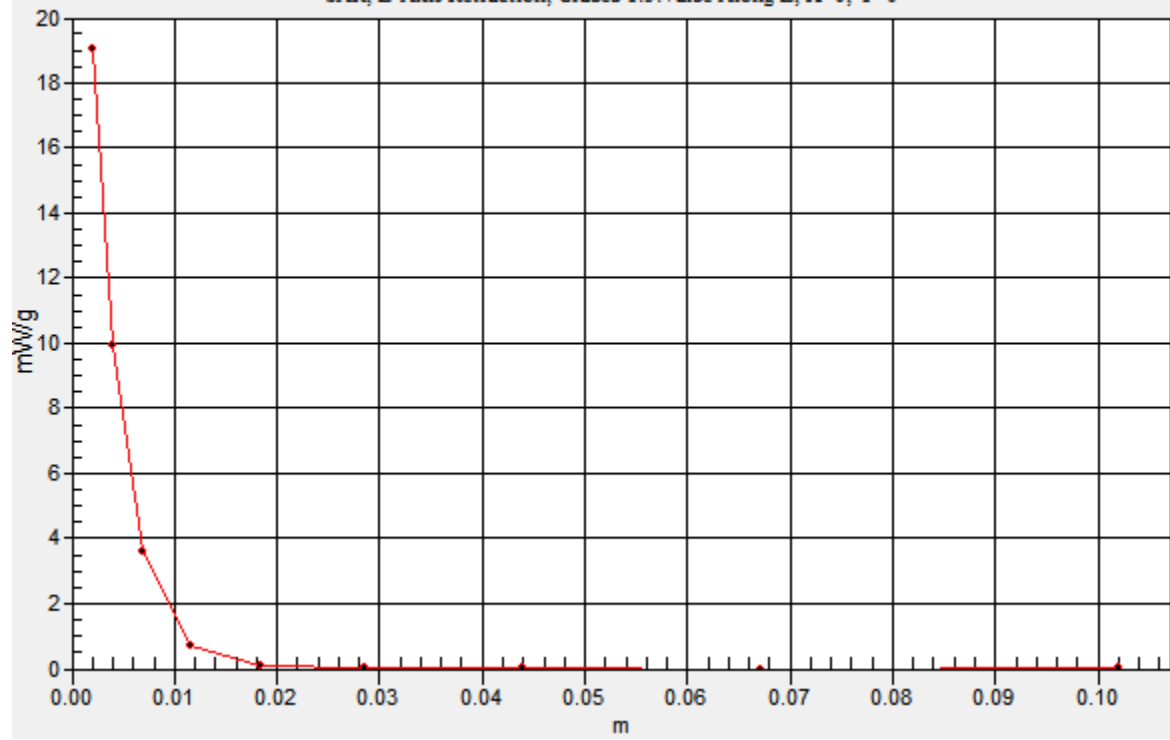
Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=2\text{mm}$

Maximum value of SAR (measured) = 19.0 mW/g



SAR(x,y,z,f0)

SAR; Z-Axis Retraction, Graded 1.5: Value Along Z, X=0, Y=0



Test Laboratory: Motorola 5800 MHz System Performance Check - Head Tissue

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1098

Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -22.30 dB [Sim.Temp@SPC](#) = 20.6C Room Temp @ SPC = 21.2C

Communication System: CW - Dipole; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: Validation *HEAD Tissue* ; Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 5.59 \text{ mho/m}$; $\epsilon_r = 34.4$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.13, 4.13, 4.13); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3 5GHz HEAD SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x22x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 12.0 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 51.9 V/m; Power Drift = 0.118 dB

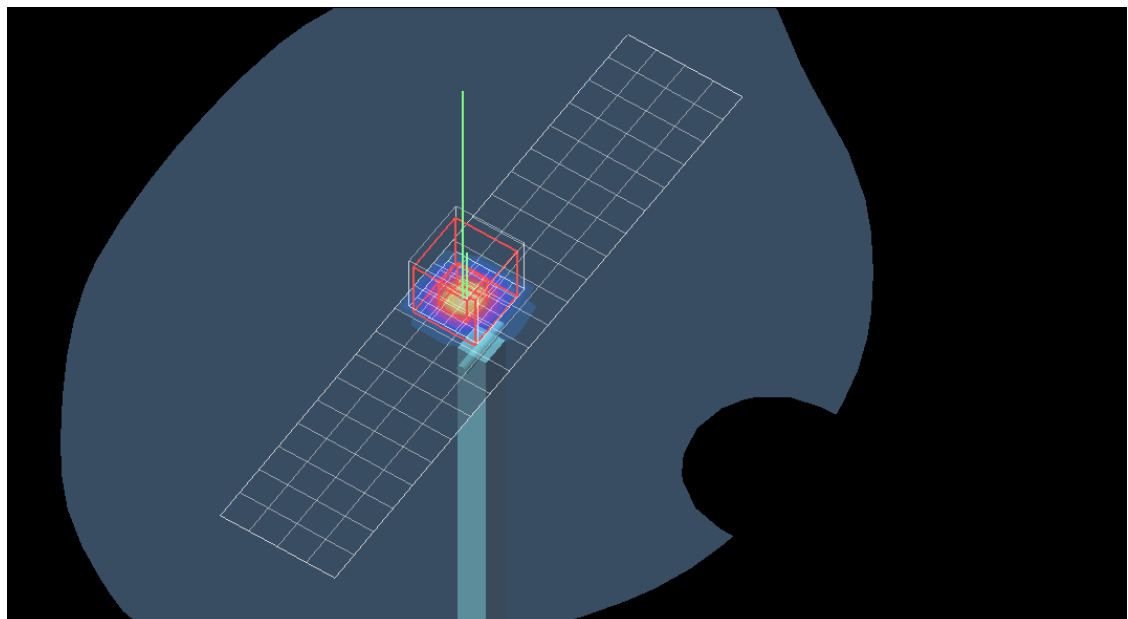
Peak SAR (extrapolated) = 37.5 W/kg

SAR(1 g) = 8.89 mW/g; SAR(10 g) = 2.53 mW/g

Maximum value of SAR (measured) = 18.8 mW/g

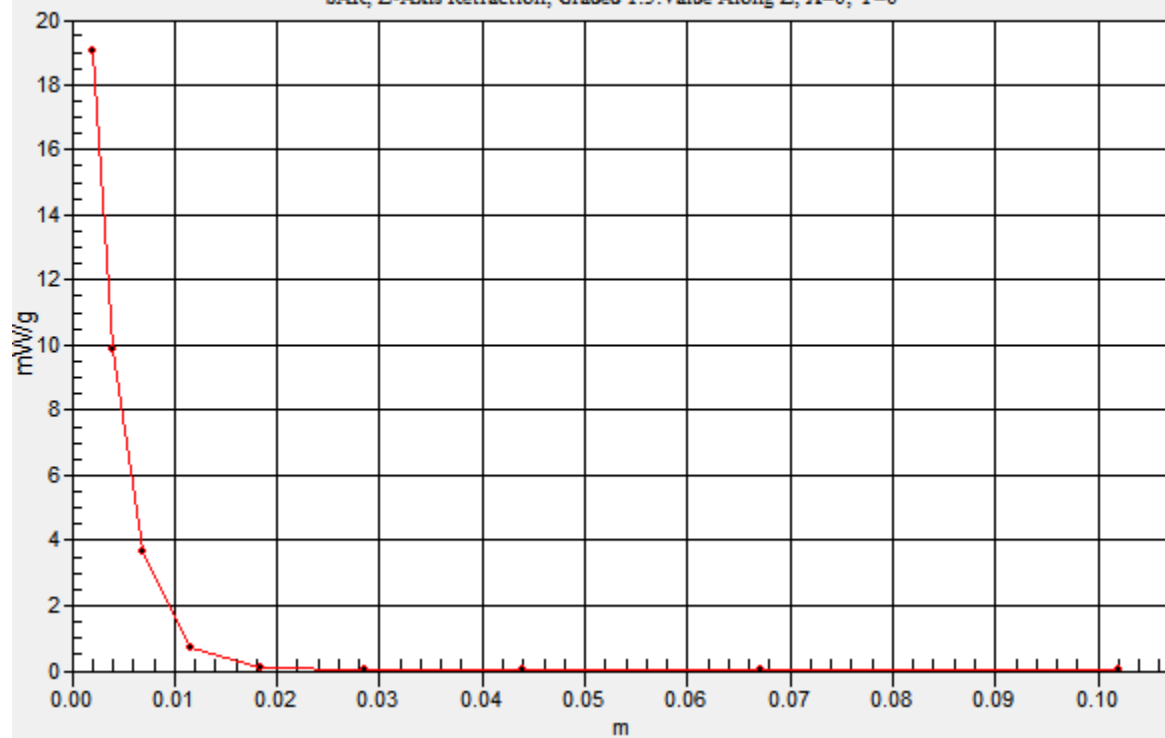
Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=2\text{mm}$

Maximum value of SAR (measured) = 19.0 mW/g



SAR(x,y,z,f0)

SAR; Z-Axis Retraction, Graded 1.5: Value Along Z, X=0, Y=0



System Accuracy Verification Measurements for Body SAR Measurements

Date/Time: 8/28/2011 6:27:43 AM

Test Laboratory: Motorola - Aug-28-2011 835 MHz Body

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 436TR; FCC ID: IHDP56ME2

Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 436TR; Input Power = 200 mW

Sim.Temp@meas = 19.2°C; Sim.Temp@SPC = 19.2°C; Room Temp @ SPC = 21.0°C

Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue*

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 54.1$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 1.87 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

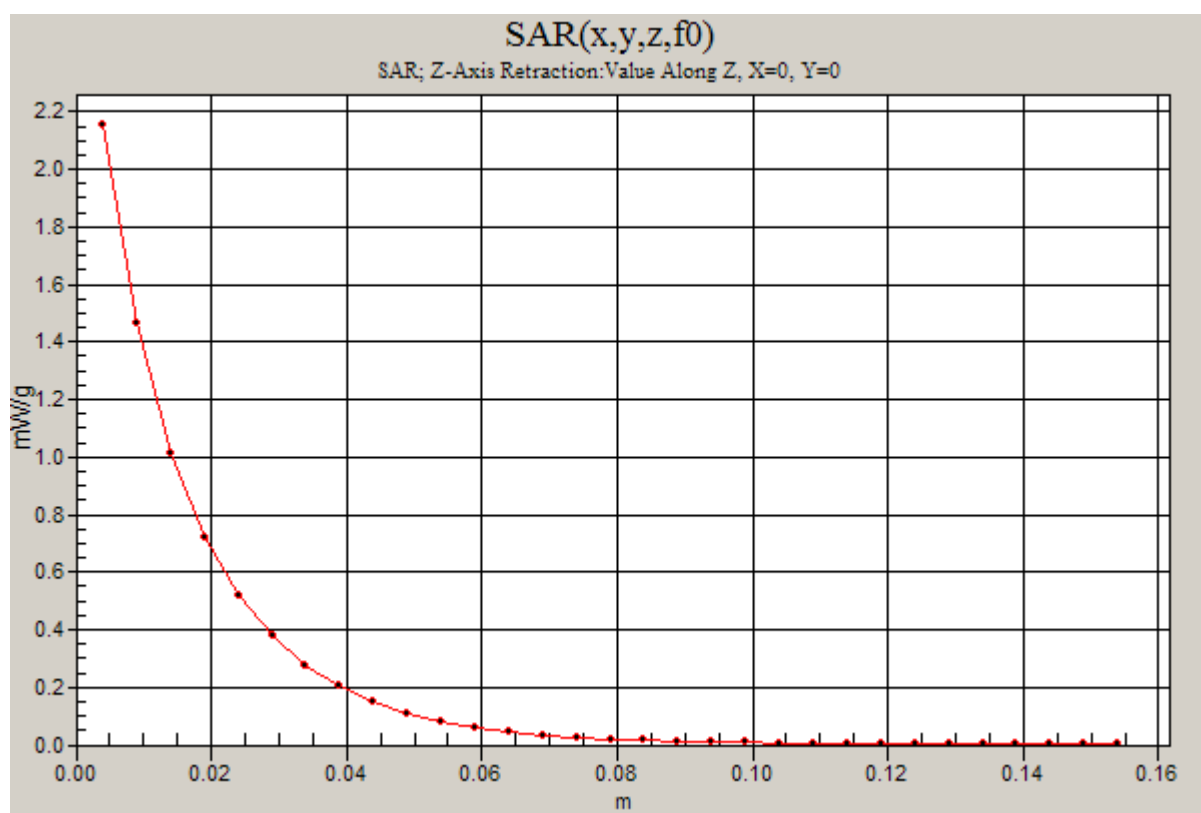
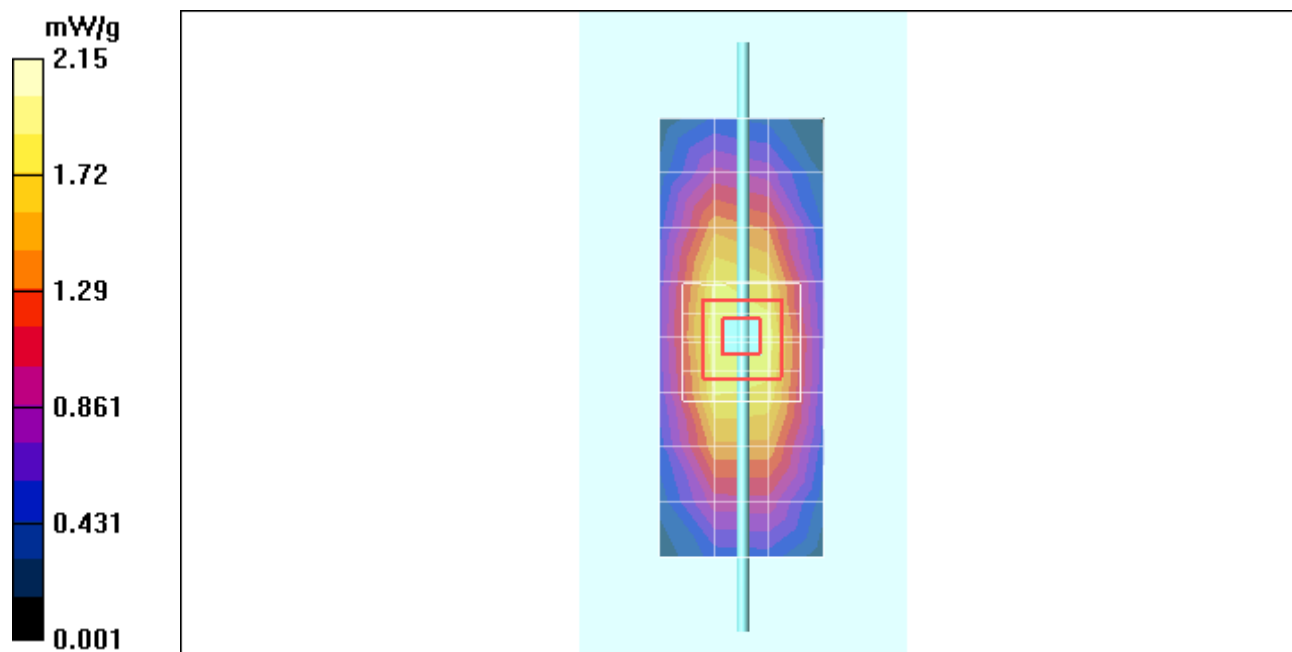
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 47.7 V/m; Power Drift = 0.005 dB; Peak SAR (extrapolated) = 2.99 W/kg

SAR(1 g) = 2.01 mW/g; SAR(10 g) = 1.31 mW/g; Maximum value of SAR (measured) = 2.16 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$; Maximum value of SAR (measured) = 2.15 mW/g



Date/Time: 9/9/2011 9:10:57 AM

Test Laboratory: Motorola - Sep-09-2011 835 MHz Body

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 422TR; FCC ID: IHDP56ME2

Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 422TR; Input Power = 200 mW

Sim.Temp@meas = 20.7°C; Sim.Temp@SPC = 19.7°C; Room Temp @ SPC = 21.2°C

Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue*

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 53.8$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.88, 5.88, 5.88); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#_6 - Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: N/A;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x15x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 1.79 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

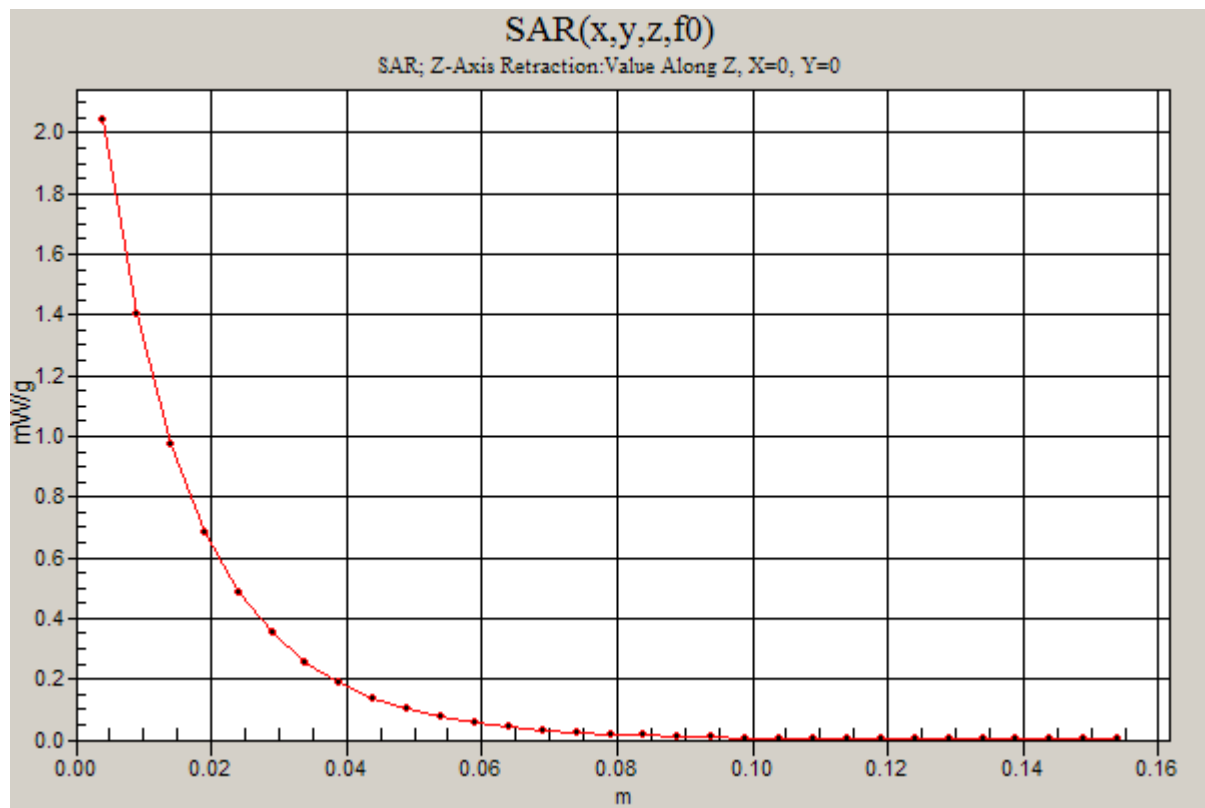
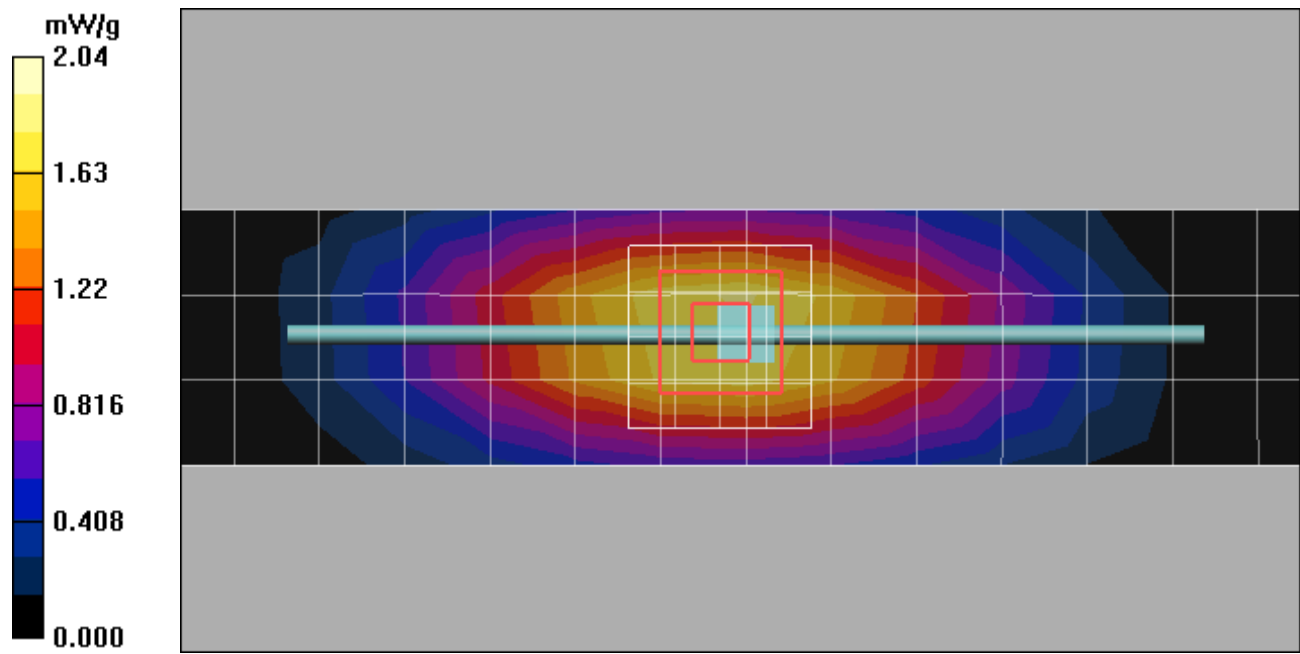
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 46.4 V/m; Power Drift = -0.117 dB; Peak SAR (extrapolated) = 2.73 W/kg

SAR(1 g) = 1.9 mW/g; SAR(10 g) = 1.25 mW/g; Maximum value of SAR (measured) = 2.05 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$; Maximum value of SAR (measured) = 2.04 mW/g



Date/Time: 9/17/2011 5:35:07 AM

Test Laboratory: Motorola - Sep-17-2011 835 MHz Body

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 422TR; FCC ID: IHDP56ME2

Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 422TR; Input Power = 200 mW

Sim.Temp@meas = 20.2°C; Sim.Temp@SPC = 20.2°C; Room Temp @ SPC = 21.1°C

Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue*

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.88, 5.88, 5.88); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#6 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x15x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 1.95 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

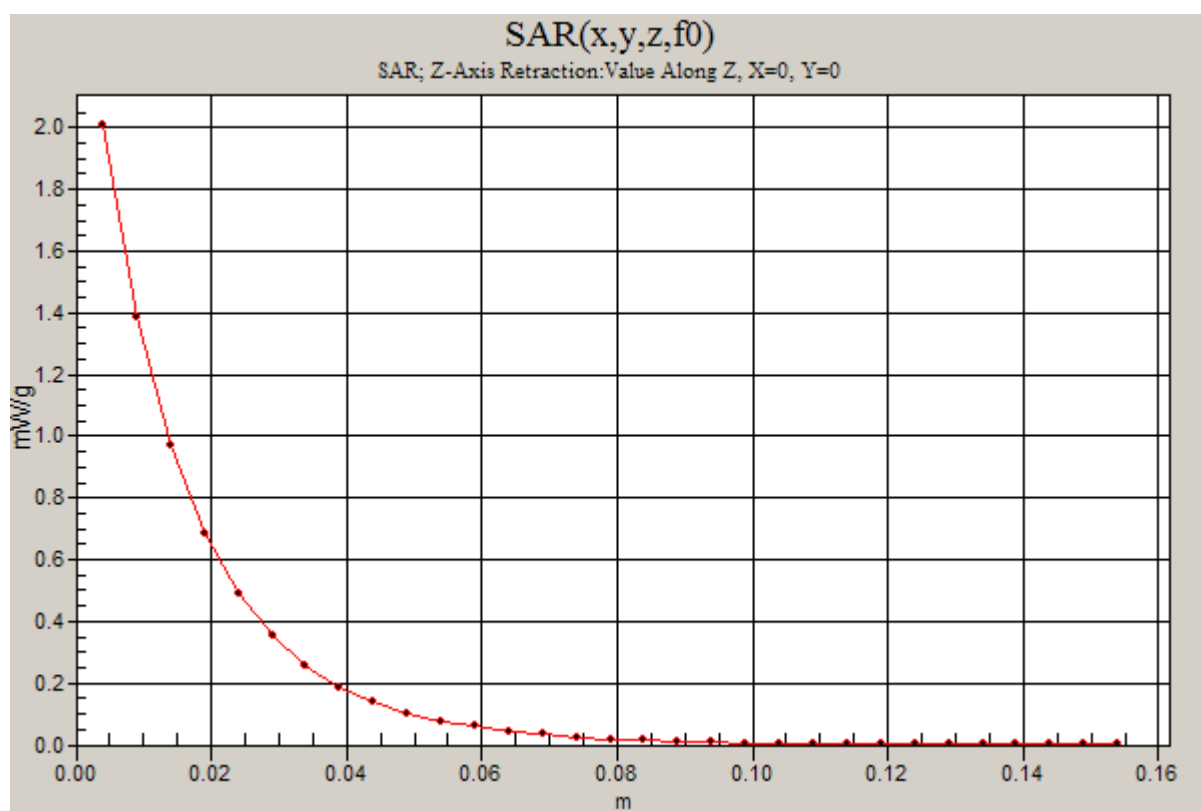
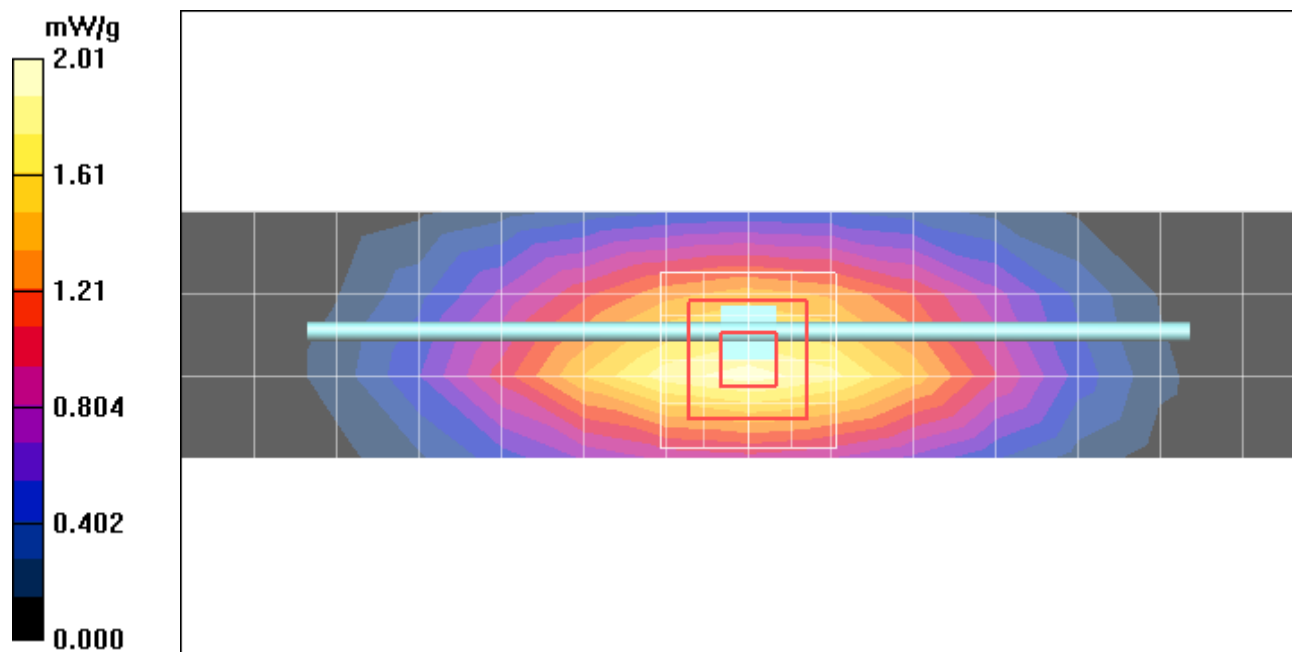
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 45.0 V/m; Power Drift = -0.018 dB; Peak SAR (extrapolated) = 2.68 W/kg

SAR(1 g) = 1.86 mW/g; SAR(10 g) = 1.23 mW/g; Maximum value of SAR (measured) = 2.01 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$



Date/Time: 9/19/2011 5:30:12 PM

Test Laboratory: Motorola - Sep-19-2011 835 MHz

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 422TR; FCC ID: IHDP56ME2

Procedure Notes: 835 MHz System Performance Check; Dipole Sn# 422TR; Input Power = 200 mW

Sim.Temp@meas = 20.3°C; Sim.Temp@SPC = 20.0°C; Room Temp @ SPC = 21.1°C

Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *big BODY Tissue*

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.99 \text{ mho/m}$; $\epsilon_r = 55.7$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.88, 5.88, 5.88); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: $dx=10\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 2.10 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

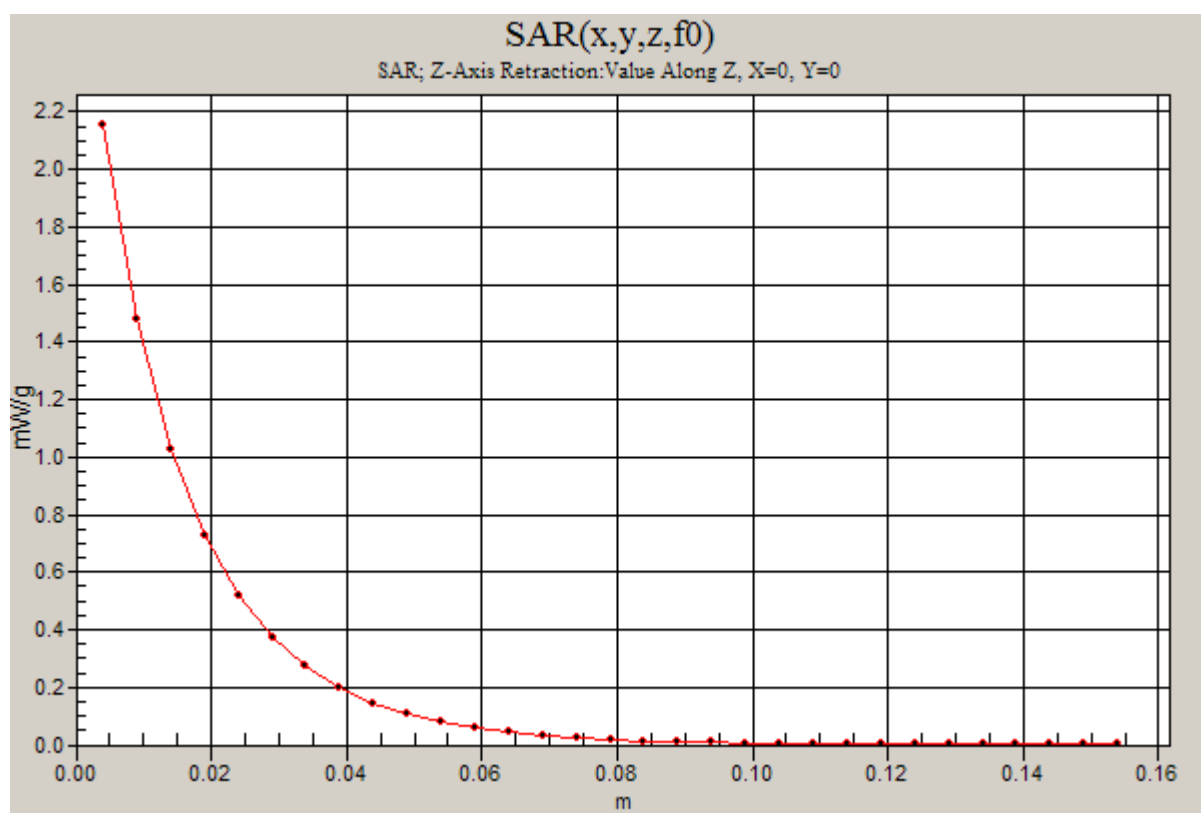
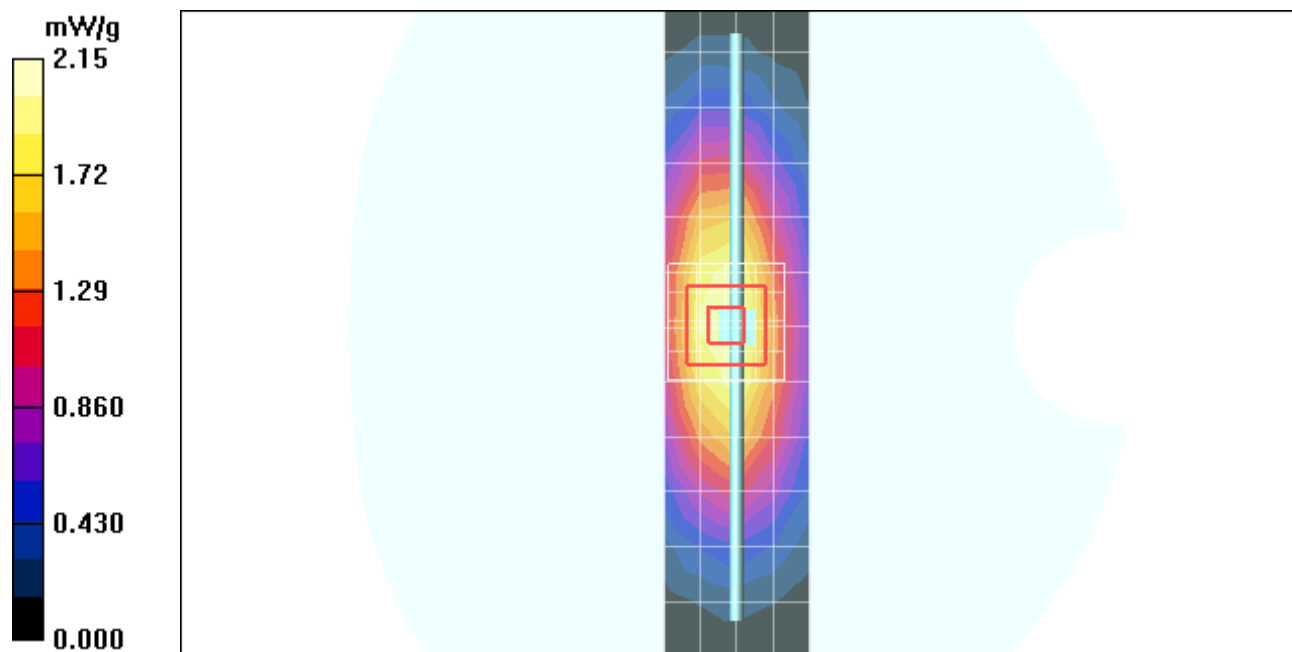
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 46.8 V/m; Power Drift = 0.005 dB; Peak SAR (extrapolated) = 2.88 W/kg

SAR(1 g) = 1.99 mW/g; SAR(10 g) = 1.31 mW/g; Maximum value of SAR (measured) = 2.16 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$; Maximum value of SAR (measured) = 2.15 mW/g



Test Laboratory: Motorola

835 MHz System Performance Check - Body Tissue

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:436

Procedure Notes: PM1 Power = 200 mW Refl.Pwr PM3 = -20.34 dB [Sim.Temp@SPC](#) = 20.2 Room Temp @ SPC = 21.4

Communication System: CW - Dipole; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.87 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

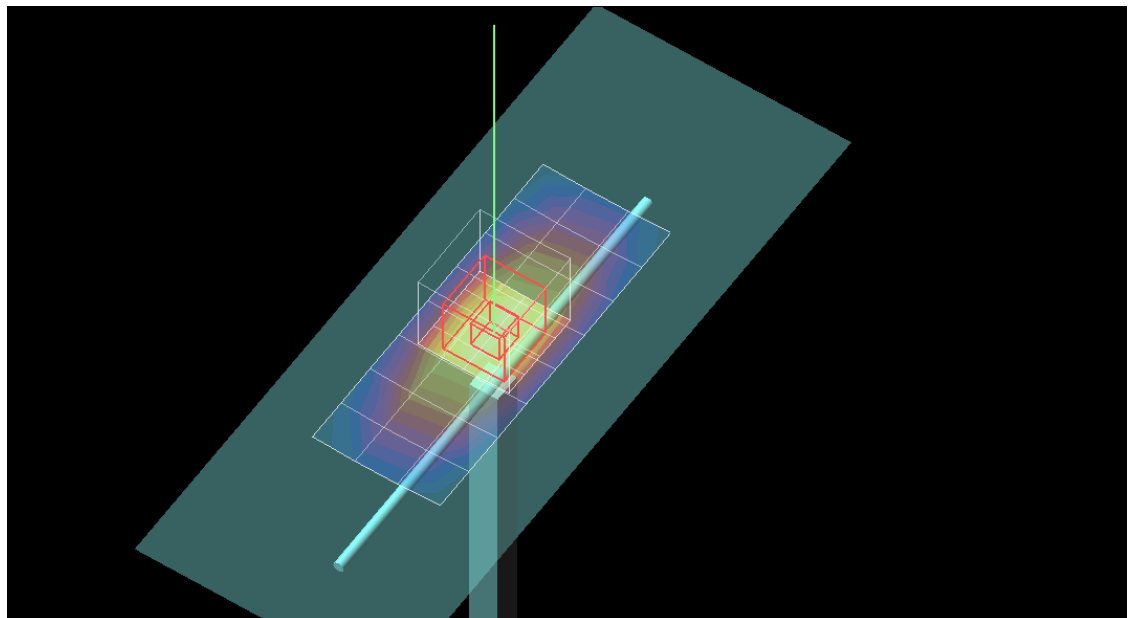
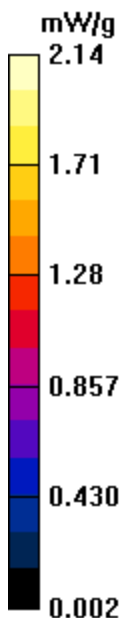
Reference Value = 47.4 V/m; Power Drift = -0.024 dB

Peak SAR (extrapolated) = 2.91 W/kg

SAR(1 g) = 1.99 mW/g; SAR(10 g) = 1.31 mW/g

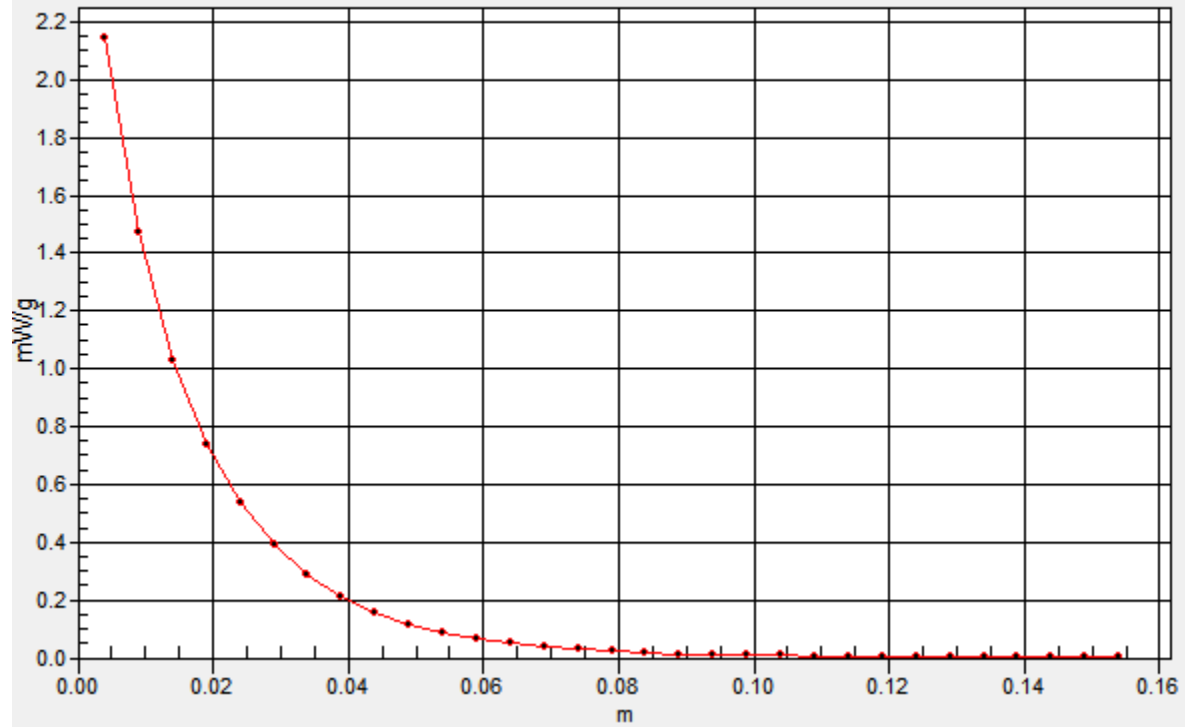
Maximum value of SAR (measured) = 2.14 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$



SAR(x,y,z,f0)

SAR; Z-Axis Retraction: Value Along Z, X=0, Y=0



Date/Time: 8/25/2011 12:18:05 AM

Test Laboratory: Motorola - Aug-25-2011 1800 MHz Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 271TR; FCC ID: IHDP56ME2

Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 271TR; Input Power = 200 mW

Sim.Temp@meas = 19.0°C; Sim.Temp@SPC = 18.5°C; Room Temp @ SPC = 21.2°C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue*

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.5$ mho/m; $\epsilon_r = 51.7$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 7.73 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

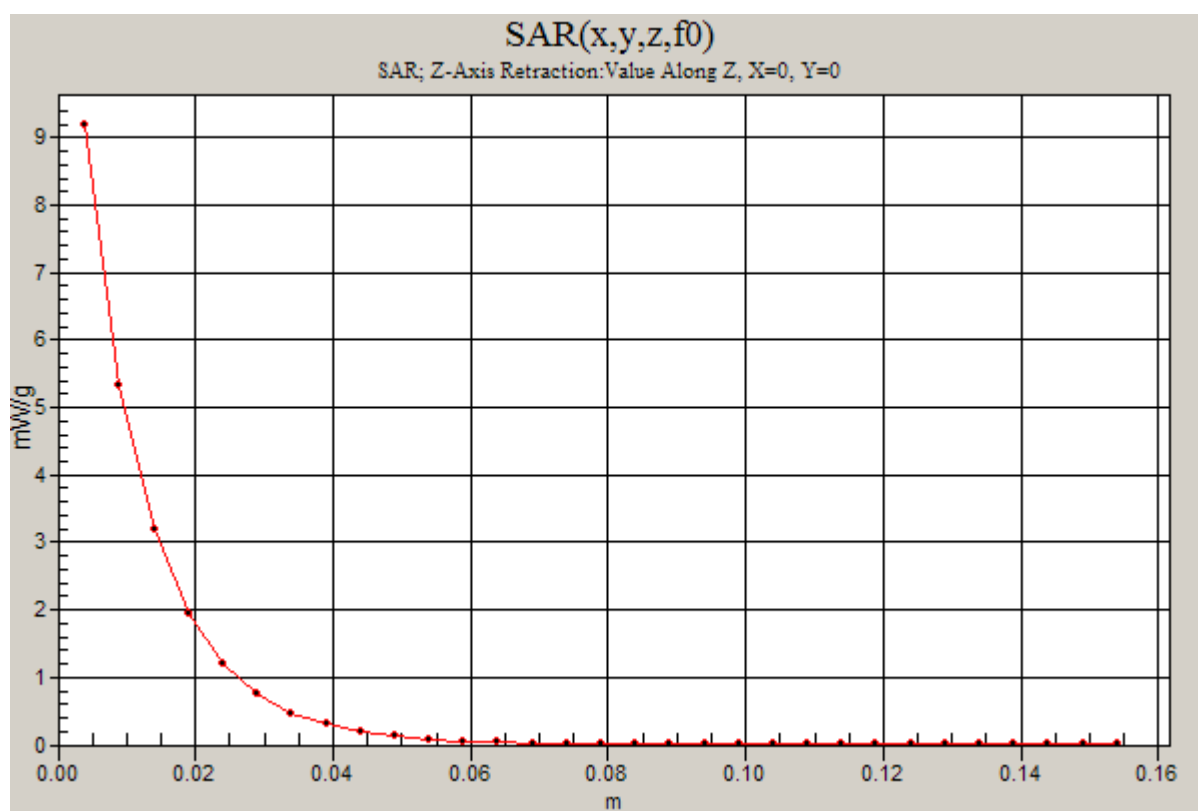
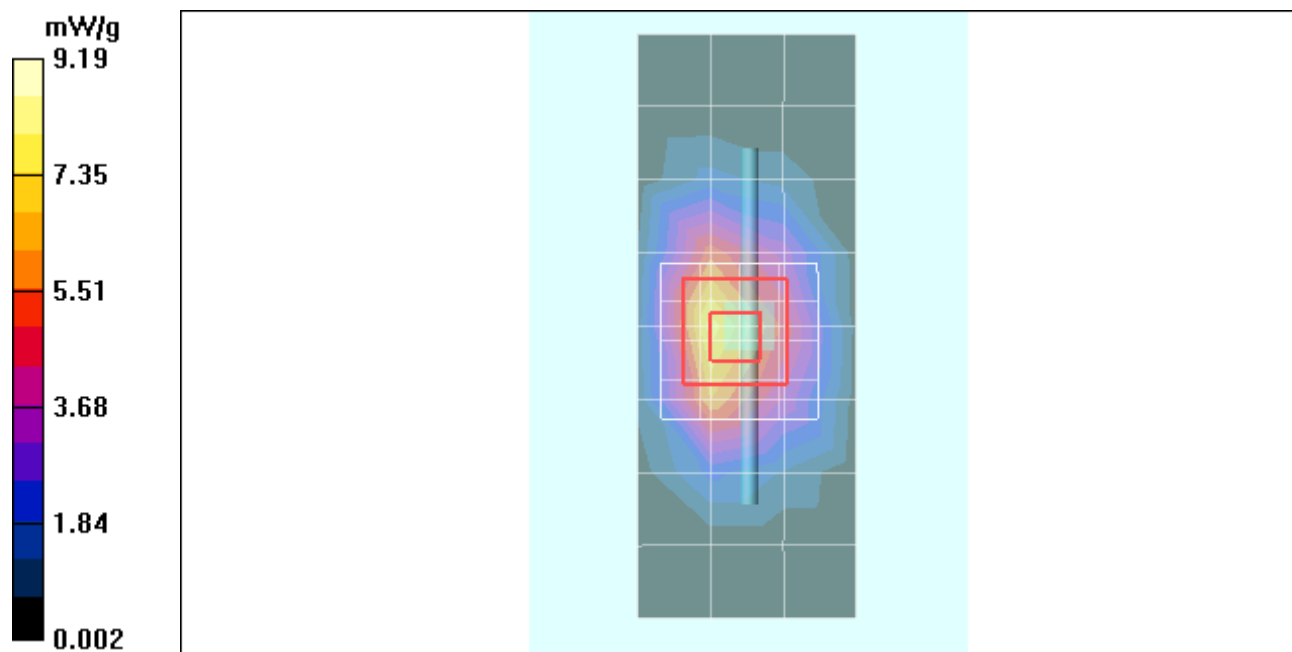
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 77.2 V/m; Power Drift = -0.002 dB; Peak SAR (extrapolated) = 14.6 W/kg

SAR(1 g) = 8.23 mW/g; SAR(10 g) = 4.36 mW/g; Maximum value of SAR (measured) = 9.21 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 9.19 mW/g



Date/Time: 8/27/2011 9:39:21 AM

Test Laboratory: Motorola - Aug-27-2011 1800 MHz Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 259TR; FCC ID: IHDP56ME2

Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 259TR; Input Power = 200 mW

Sim.Temp@meas = 19.3°C; Sim.Temp@SPC = 19.3°C; Room Temp @ SPC = 21.0°C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue*

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.49$ mho/m; $\epsilon_r = 51$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 5.93 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

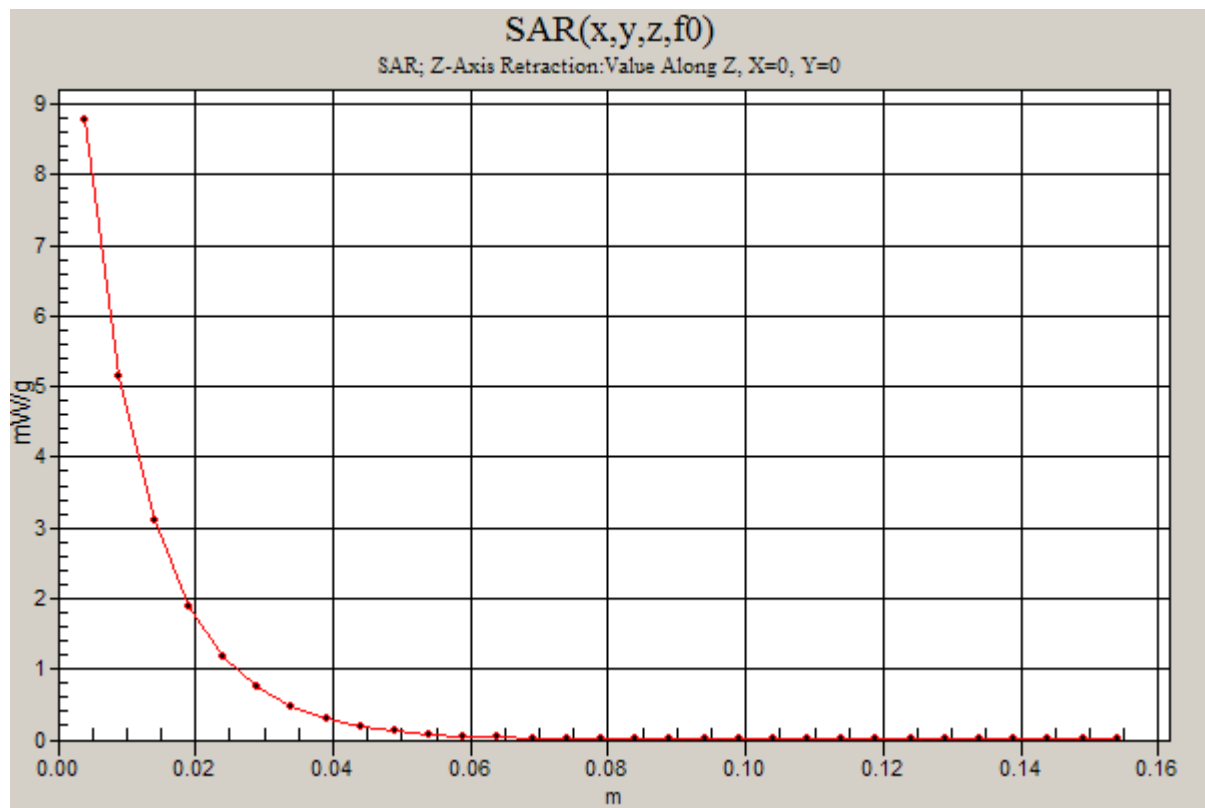
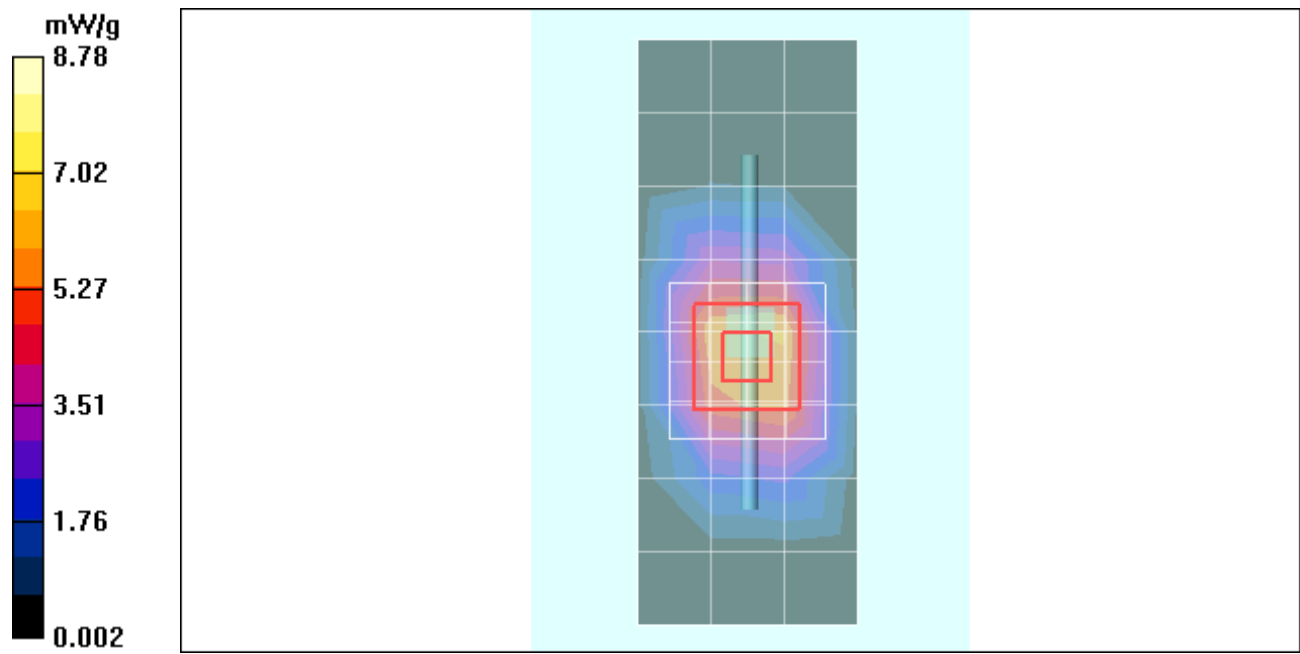
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 77.4 V/m; Power Drift = 0.010 dB; Peak SAR (extrapolated) = 13.9 W/kg

SAR(1 g) = 7.87 mW/g; SAR(10 g) = 4.18 mW/g; Maximum value of SAR (measured) = 8.85 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 8.78 mW/g



Date/Time: 9/3/2011 6:33:40 AM

Test Laboratory: Motorola - Sep-03-2011 1800 MHz Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 259TR; FCC ID: IHDP56ME2

Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 259TR; Input Power = 200 mW

Sim.Temp@meas = 19.2°C; Sim.Temp@SPC = 19.2°C; Room Temp @ SPC = 21.3°C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue*

Medium parameters used: $f = 1800$ MHz; $\sigma = 1.48$ mho/m; $\epsilon_r = 51.1$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1):

Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 7.04 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

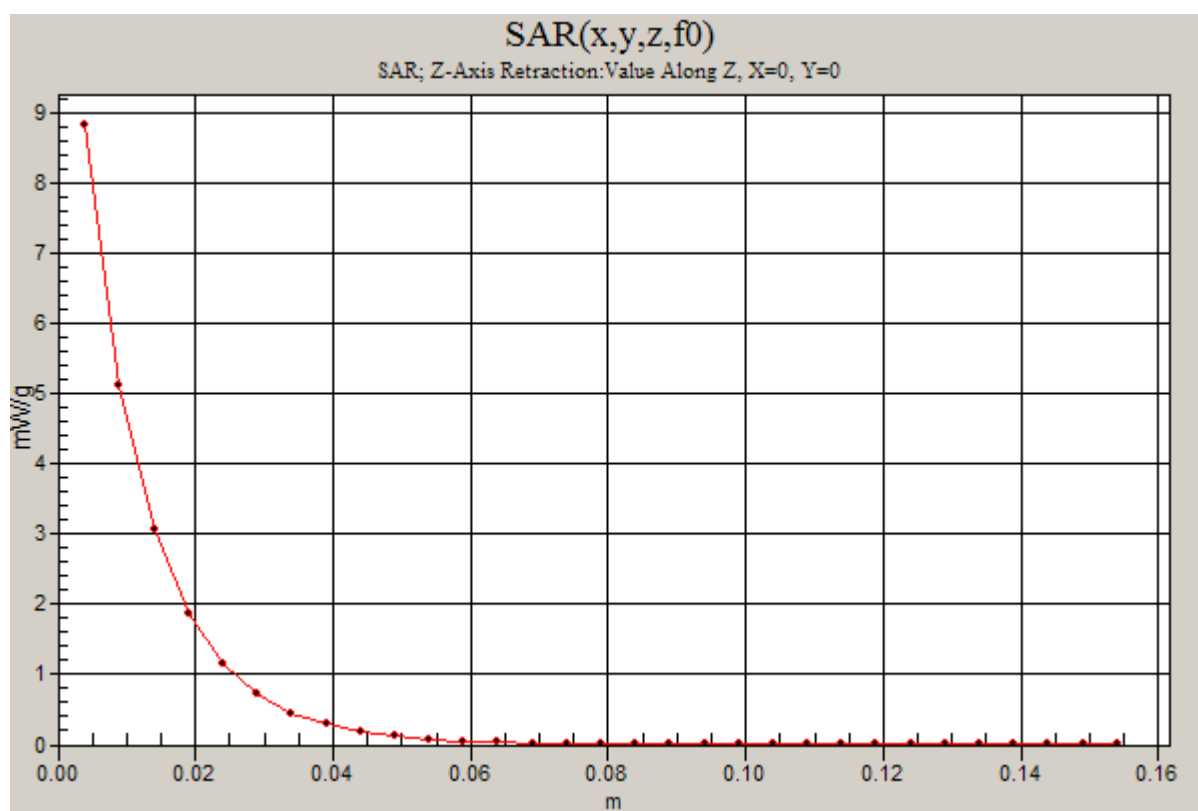
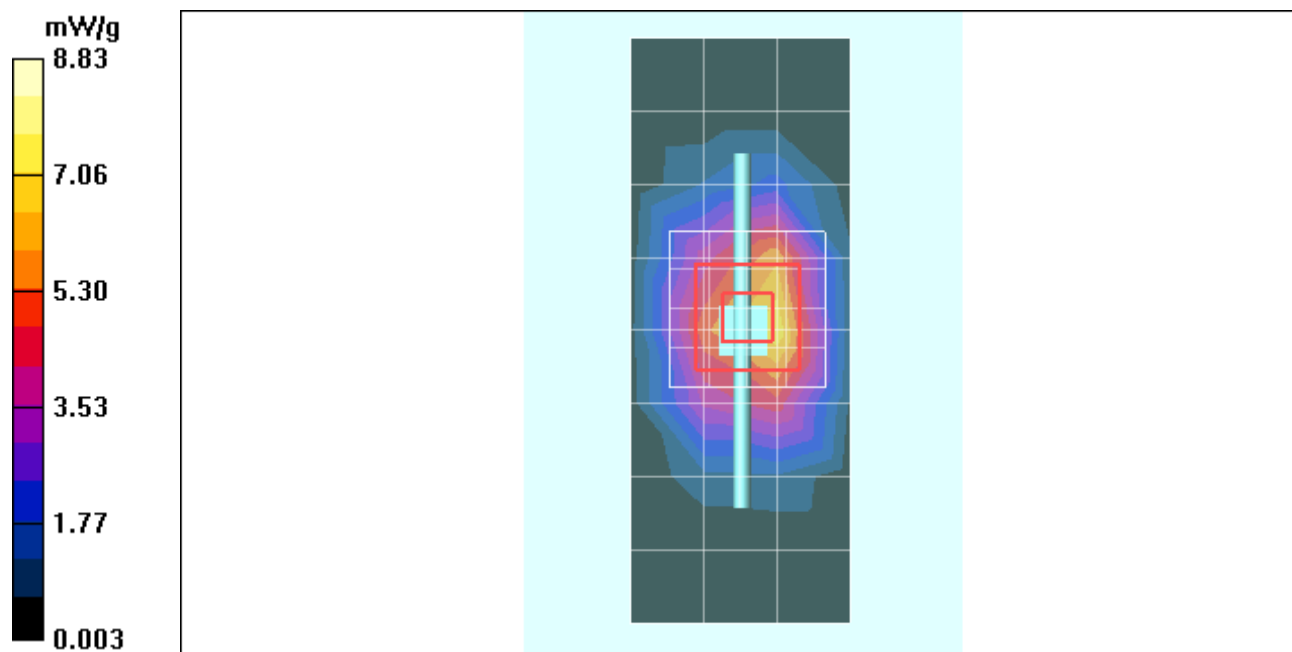
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 78.4 V/m; Power Drift = 0.004 dB; Peak SAR (extrapolated) = 14.1 W/kg

SAR(1 g) = 7.92 mW/g; SAR(10 g) = 4.2 mW/g; Maximum value of SAR (measured) = 8.89 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: dx=20mm, dy=20mm, dz=5mm; Maximum value of SAR (measured) = 8.83 mW/g



Date/Time: 9/18/2011 11:28:40 AM

Test Laboratory: Motorola - Sep-18-2011 1800 MHz Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 250TR; FCC ID: IHDP56ME2

Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 250TR; Input Power = 200 mW

Sim.Temp@meas = 19.8°C; Sim.Temp@SPC = 19.6°C; Room Temp @ SPC = 21.1°C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue*

Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 51.2$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.61, 4.61, 4.61); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#6 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (4x15x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 6.66 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0:

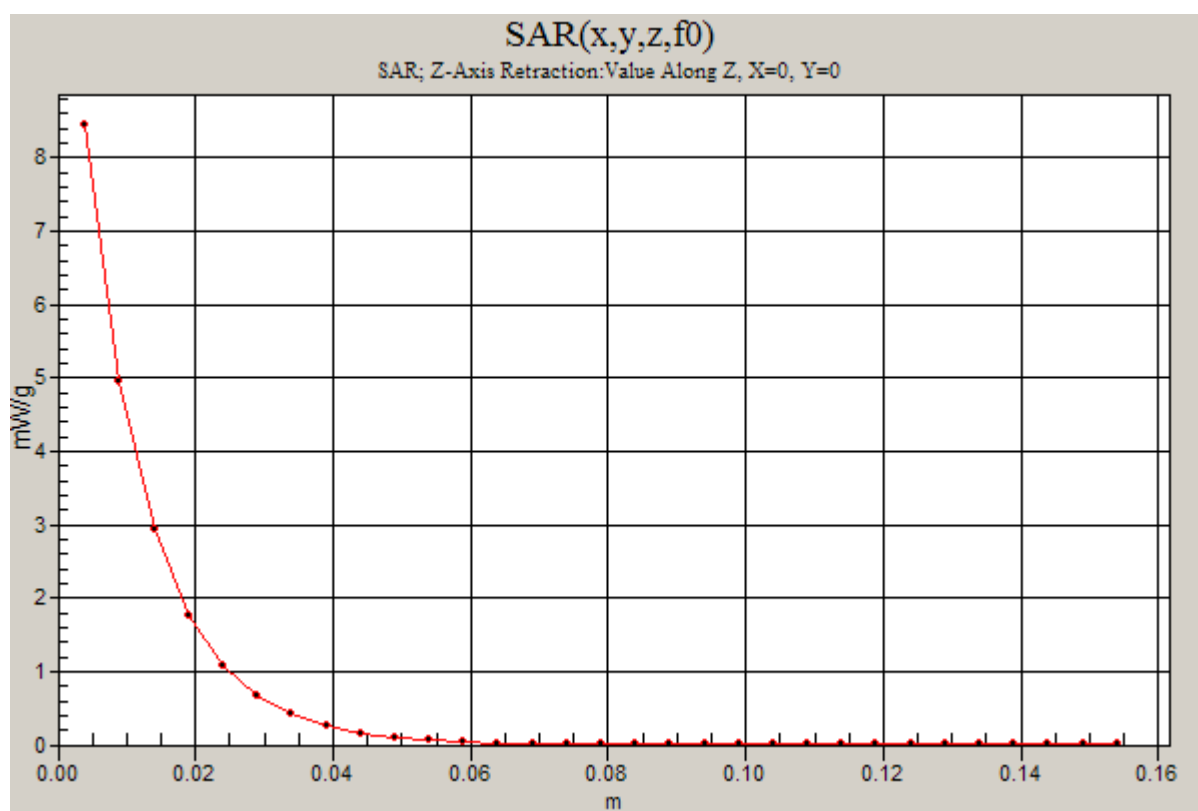
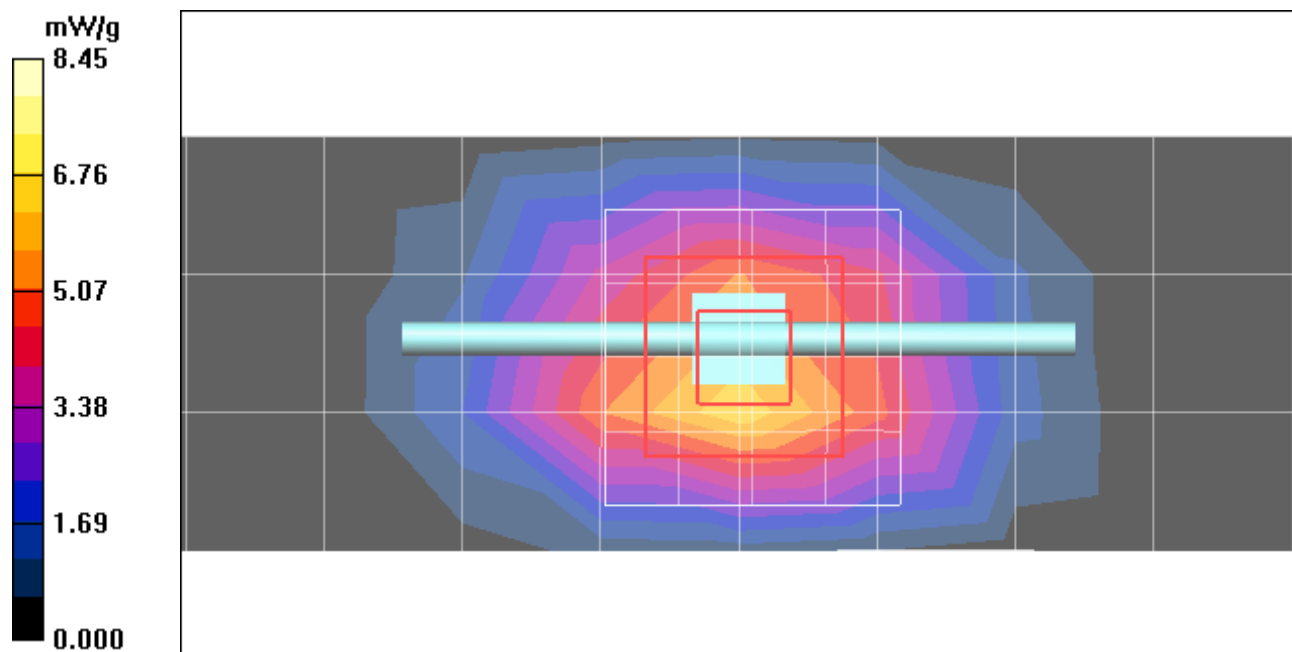
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 76.6 V/m; Power Drift = -0.059 dB; Peak SAR (extrapolated) = 12.9 W/kg

SAR(1 g) = 7.5 mW/g; SAR(10 g) = 4.01 mW/g; Maximum value of SAR (measured) = 8.49 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$; Maximum value of SAR (measured) = 8.45 mW/g



Date/Time: 9/19/2011 1:36:55 PM

Test Laboratory: Motorola - Sep-19-2011 1800 MHz Body

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN: 250TR; FCC ID: IHDP56ME2

Procedure Notes: 1800 MHz System Performance Check; Dipole Sn# 250TR; Input Power = 200 mW

Sim.Temp@meas = 20.1°C; Sim.Temp@SPC = 19.6°C; Room Temp @ SPC = 21.3°C

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue*

Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.49 \text{ mho/m}$; $\epsilon_r = 51.7$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.61, 4.61, 4.61); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: $dx=10\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 9.10 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

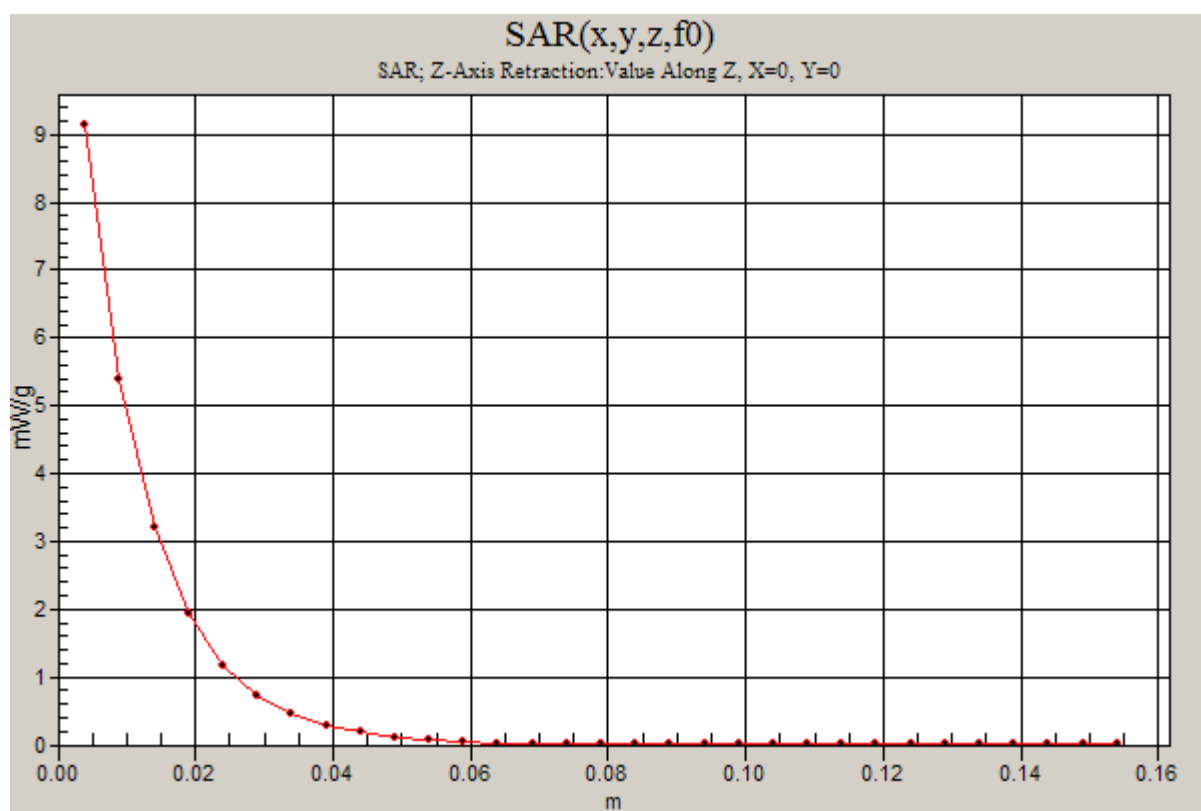
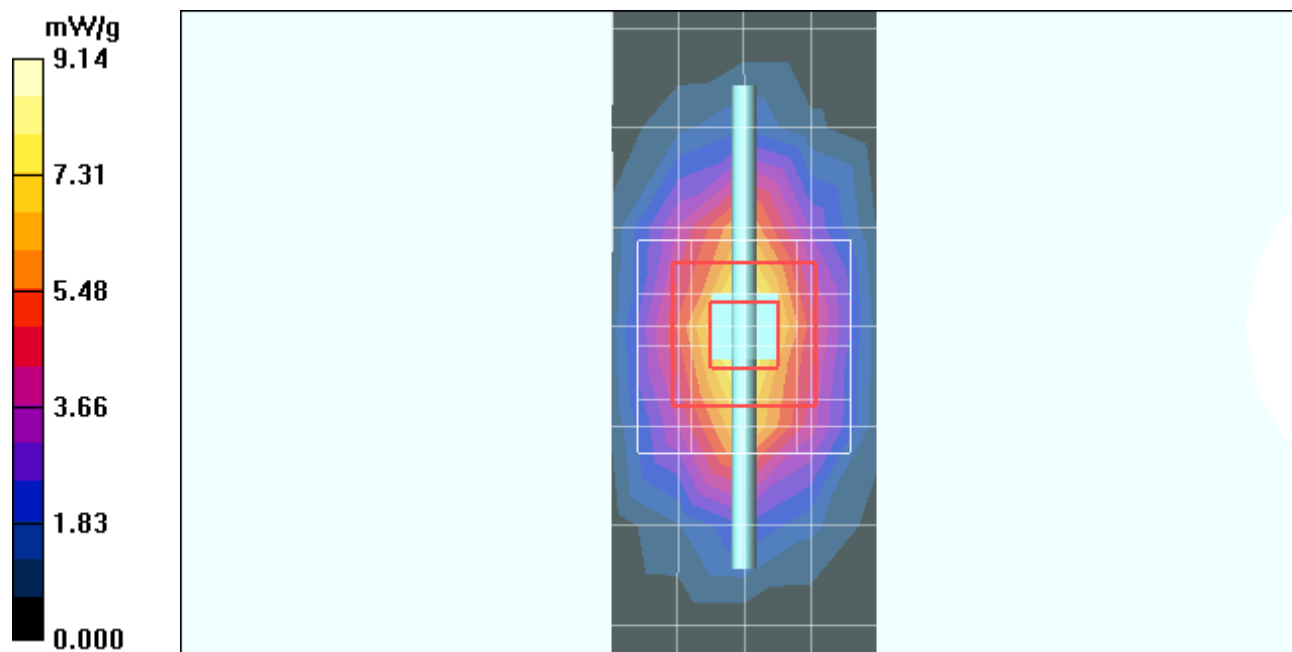
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 80.7 V/m; Power Drift = -0.033 dB; Peak SAR (extrapolated) = 13.9 W/kg

SAR(1 g) = 8.08 mW/g; SAR(10 g) = 4.31 mW/g; Maximum value of SAR (measured) = 9.11 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$; Maximum value of SAR (measured) = 9.14 mW/g



Date/Time: 9/19/2011 7:59:13 PM

Test Laboratory: Motorola - Sep-19-2011 2450 MHz Body

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN: 863; FCC ID: IHDP56ME2

Procedure Notes: 2450 MHz System Performance Check; Dipole Sn# 863; Input Power = 200 mW

Sim.Temp@meas = 20.5°C; Sim.Temp@SPC = 20.2°C; Room Temp @ SPC = 21.1°C

Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue*

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.96 \text{ mho/m}$; $\epsilon_r = 52$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.12, 4.12, 4.12); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (5x15x1):

Measurement grid: $dx=10\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 12.9 mW/g

Daily SPC Check/0-Degree, 5x5x7 Cube (5x5x7)/Cube 0:

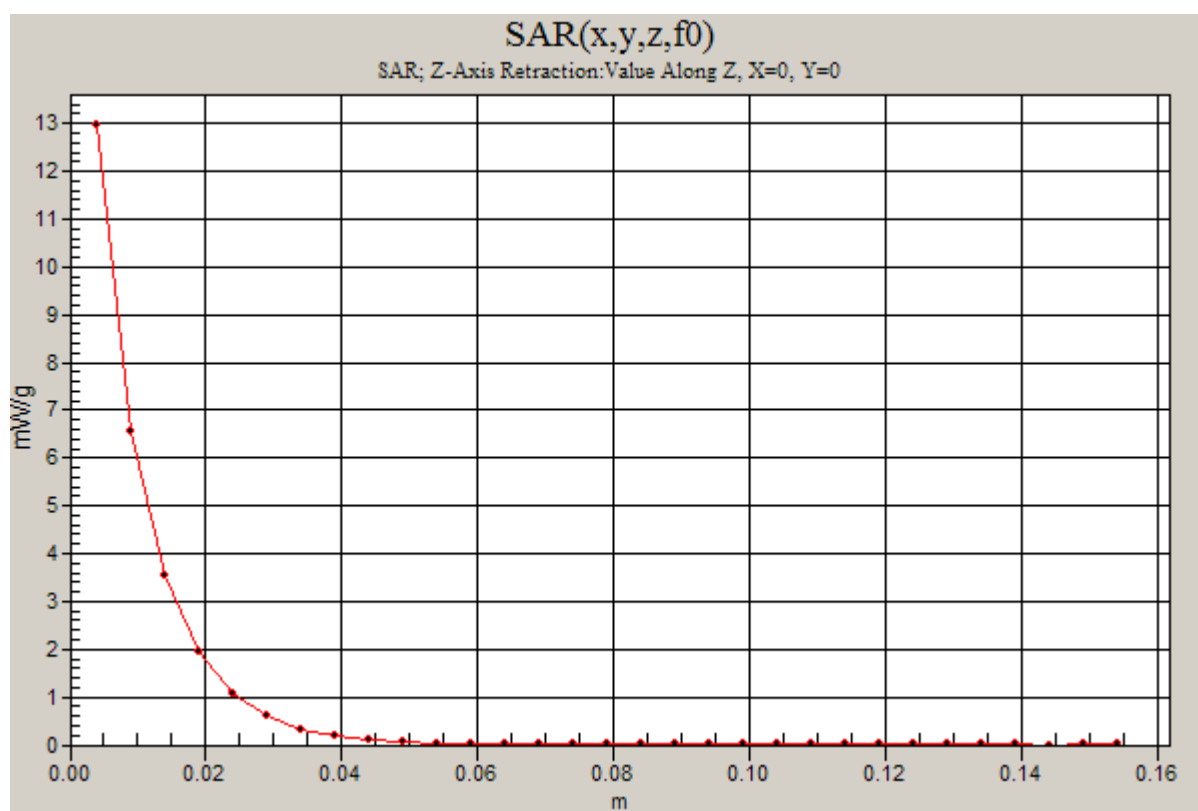
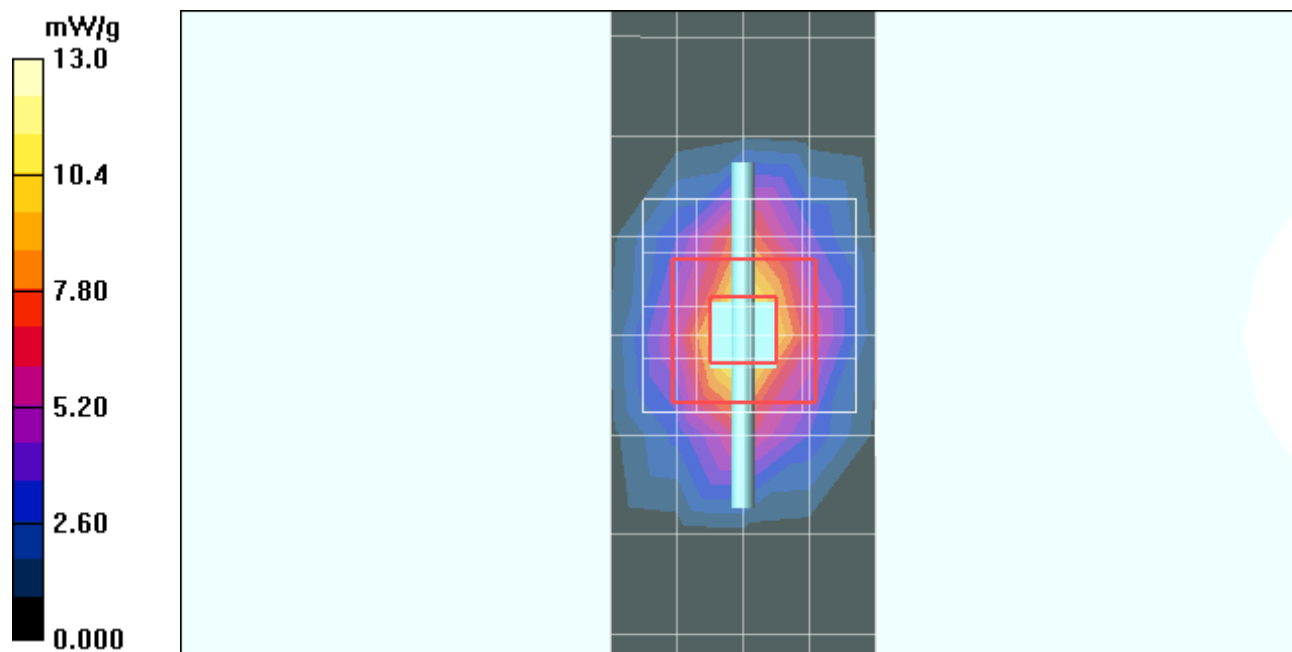
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 80.7 V/m; Power Drift = -0.002 dB; Peak SAR (extrapolated) = 24.6 W/kg

SAR(1 g) = 11.5 mW/g; SAR(10 g) = 5.3 mW/g; Maximum value of SAR (measured) = 12.6 mW/g

Daily SPC Check/Z-Axis Retraction (1x1x31):

Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$; Maximum value of SAR (measured) = 13.0 mW/g



Test Laboratory: Motorola Mobility 2450 MHz System Performance Check - Body Tissue

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:740

Procedure Notes: PM1 Power = 200 mW Refl.Pwr PM3 = -24dB [Sim.Temp@SPC](#) = 20.6°C Room Temp @ SPC = 21.2°C

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.21, 4.21, 4.21); Calibrated: 8/23/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.3); Type: QD 000 P51 CA; Serial: n/a;
- ; SEMCAD X Version 14.4.5 (3634)

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Dipole Area Scan (4x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 8.766 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 80.036 V/m; Power Drift = -0.005 dB

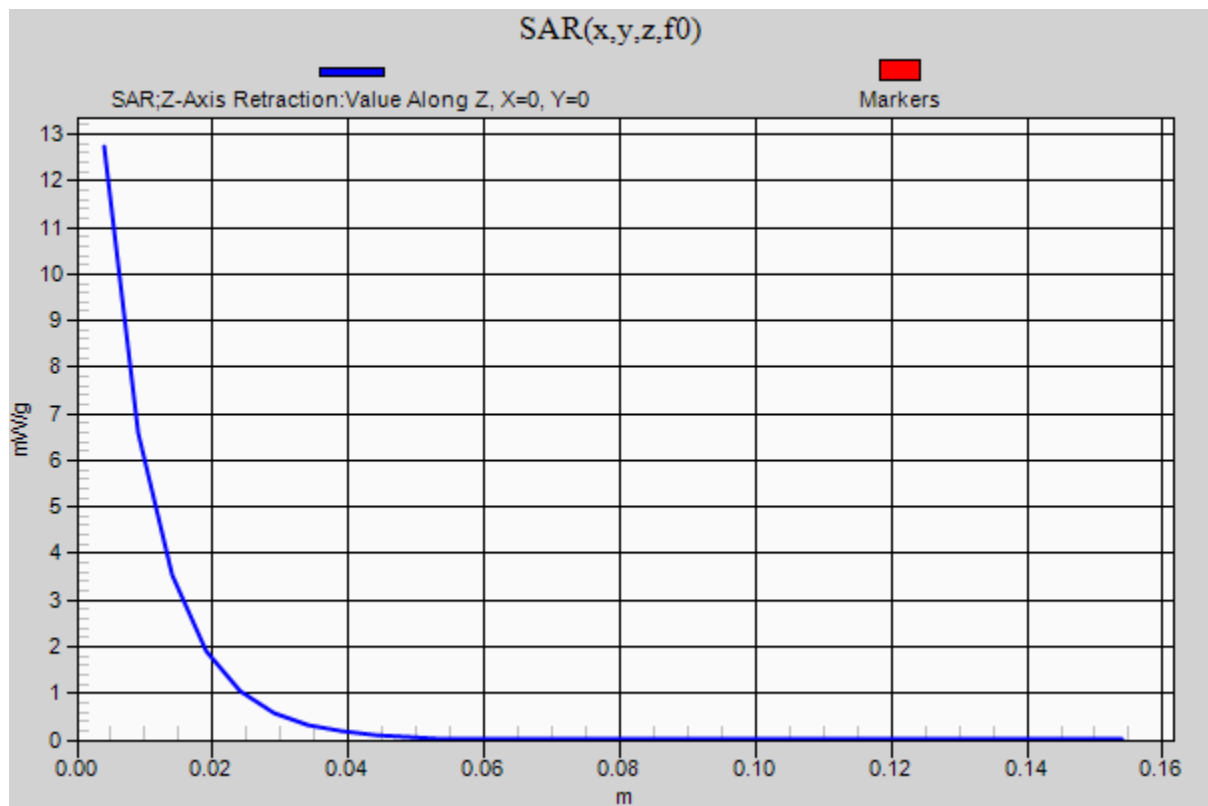
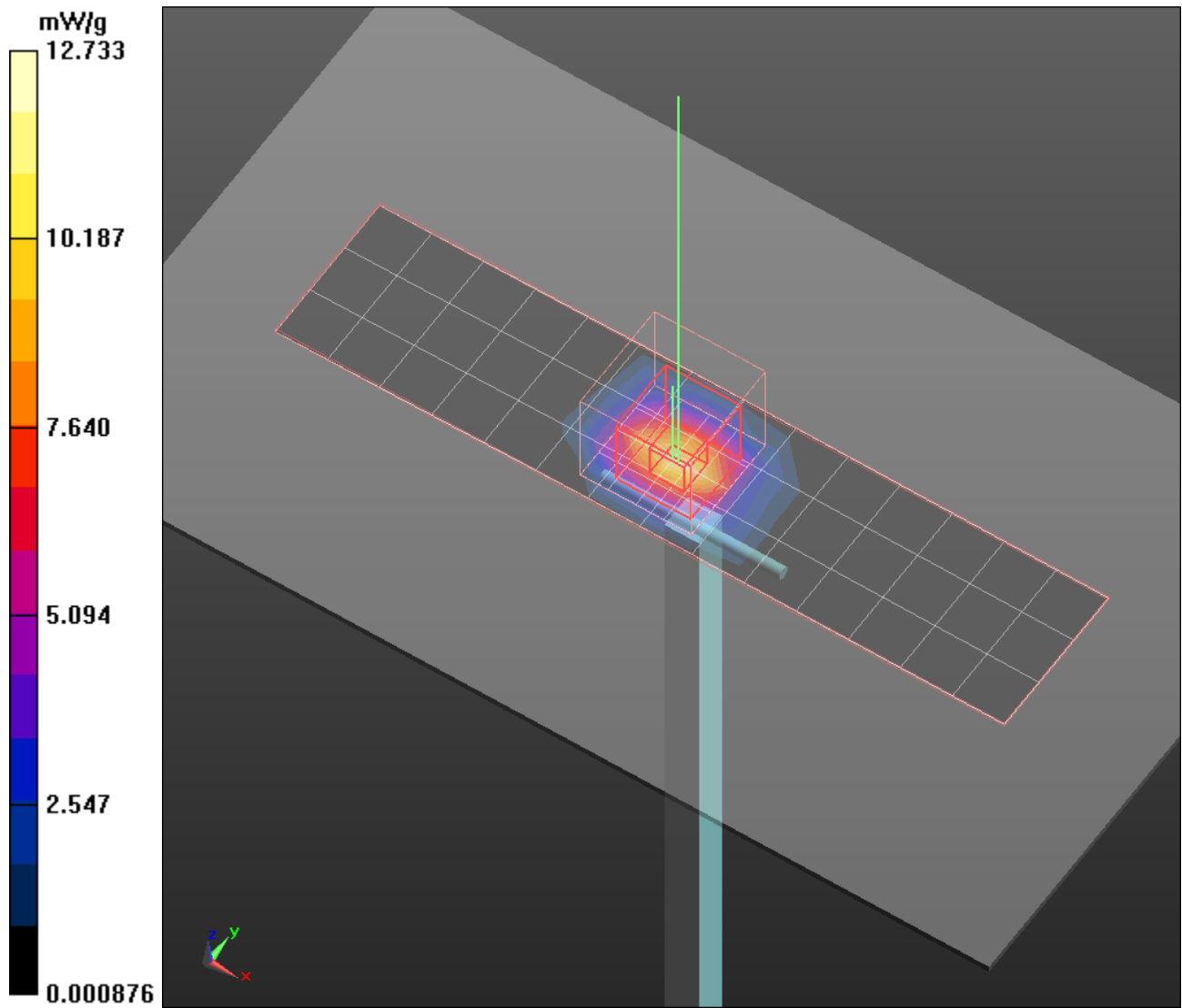
Peak SAR (extrapolated) = 22.706 W/kg

SAR(1 g) = 11.2 mW/g; SAR(10 g) = 5.24 mW/g

Maximum value of SAR (measured) = 12.678 mW/g

DASY5, Triple Flat System Performance Check Template - Rev.3 (19-Sept-11)/Daily SPC Check/Z-Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 12.733 mW/g



Test Laboratory: Motorola 2450 MHz System Performance Check

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:766

Procedure Notes: PM1 Power = 200 mW Pwr PM3 = -21.3dB [Sim.Temp@SPC](#) = 20.7°C Room Temp @ SPC = 21.3°C

Communication System: CW - Dipole; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.92 \text{ mho/m}$; $\epsilon_r = 50.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.33, 4.33, 4.33); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2_Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 9.56 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 77.8 V/m; Power Drift = -0.030 dB

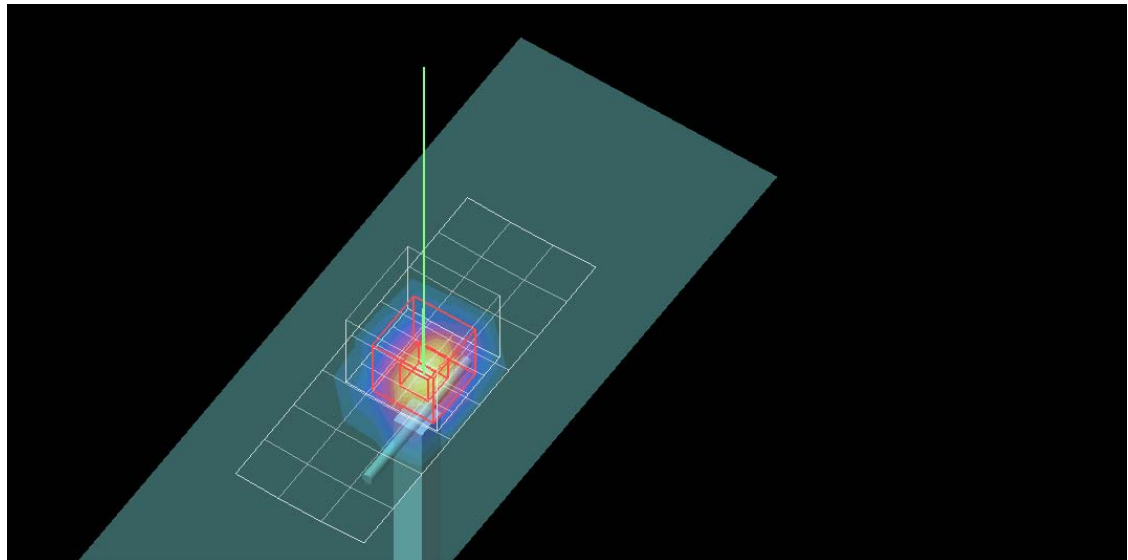
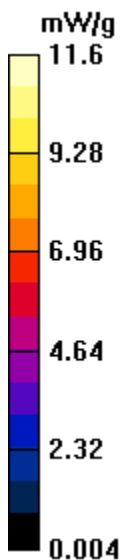
Peak SAR (extrapolated) = 20.5 W/kg

SAR(1 g) = 10.2 mW/g; SAR(10 g) = 4.79 mW/g

Maximum value of SAR (measured) = 11.5 mW/g

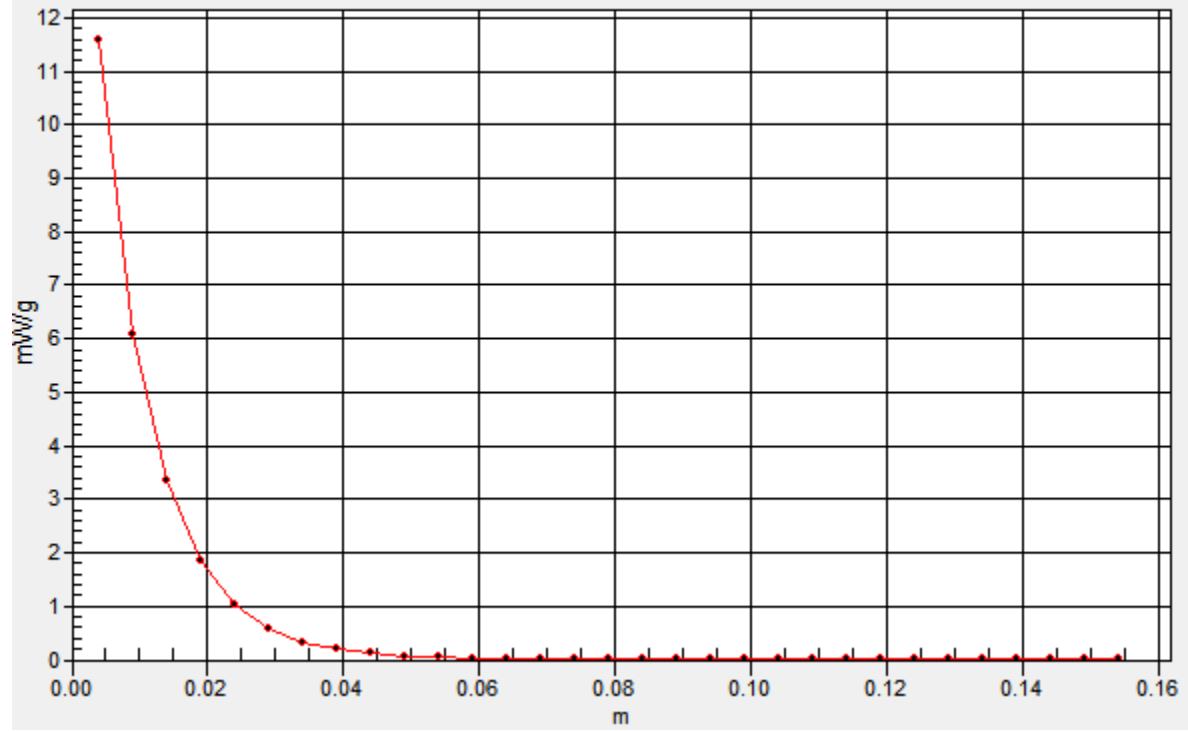
Daily SPC Check/Z-Axis Retraction (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm

Maximum value of SAR (measured) = 11.6 mW/g



SAR(x,y,z,f0)

SAR; Z-Axis Retraction: Value Along Z, X=0, Y=0



Test Laboratory: Motorola 1800 MHz System Performance Check - Body Tissue

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:271TR

Procedure Notes: PM1 Power = 200 mW Refl.Pwr PM3 = -19.77dB [Sim.Temp@SPC](#) = 20.9 Room Temp @ SPC = 21.3

Communication System: CW - Dipole; Frequency: 1800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.48 \text{ mho/m}$; $\epsilon_r = 51.6$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (9x4x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 6.22 mW/g

Daily SPC Check/0-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 78.3 V/m; Power Drift = -0.022 dB

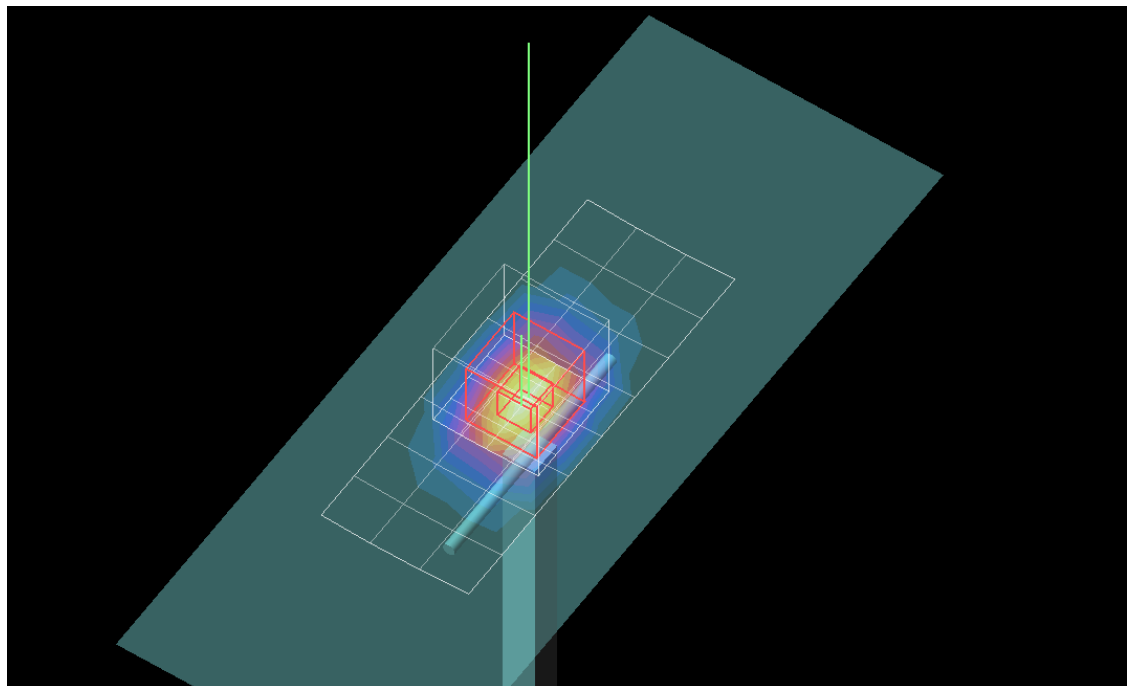
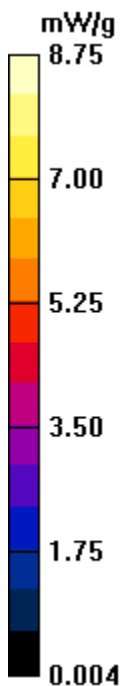
Peak SAR (extrapolated) = 13.7 W/kg

SAR(1 g) = 7.85 mW/g; SAR(10 g) = 4.2 mW/g

Maximum value of SAR (measured) = 8.81 mW/g

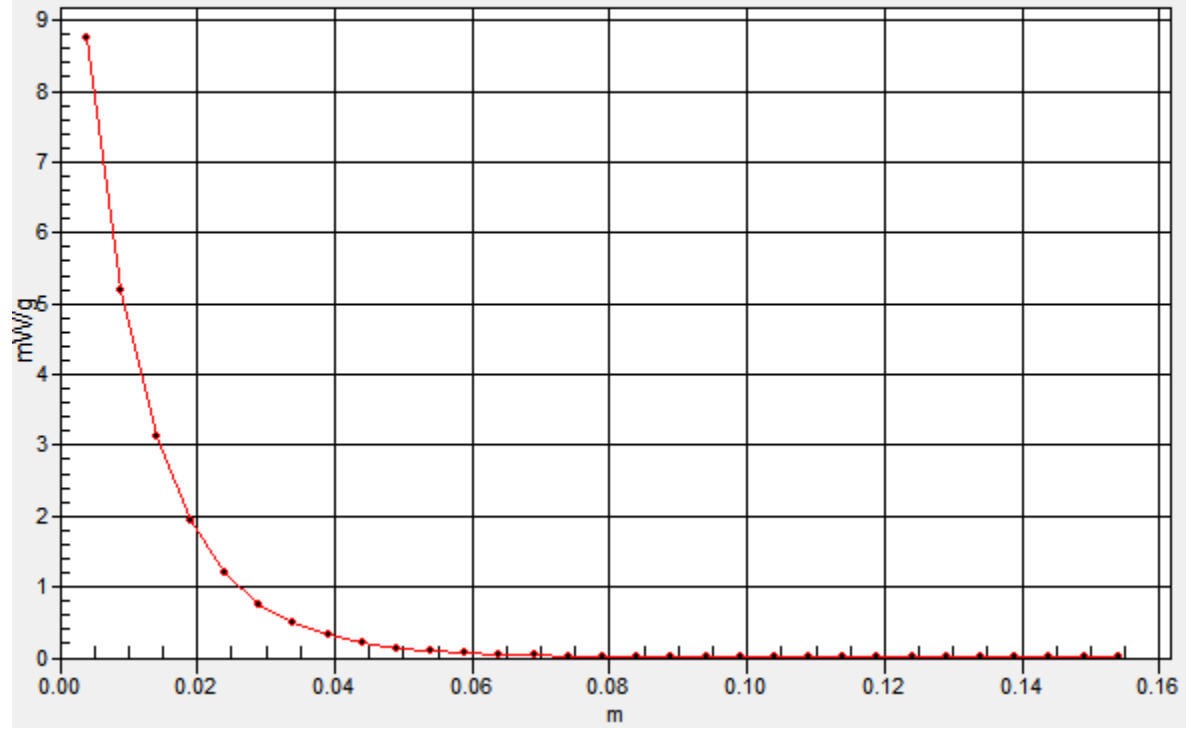
Daily SPC Check/Z-Axis Retraction (1x1x31): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=5\text{mm}$

Maximum value of SAR (measured) = 8.75 mW/g



SAR(x,y,z,f0)

SAR; Z-Axis Retraction: Value Along Z, X=0, Y=0



Test Laboratory: Motorola 5200 MHz System Performance Check - Body Tissue

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1098

Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -20.70 dB [Sim.Temp@SPC](#) = 20.3C Room Temp @ SPC = 20.9C

Communication System: CW - Dipole; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 5200 \text{ MHz}$; $\sigma = 5.91 \text{ mho/m}$; $\epsilon_r = 48.8$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.16, 4.16, 4.16); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (22x5x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 14.5 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

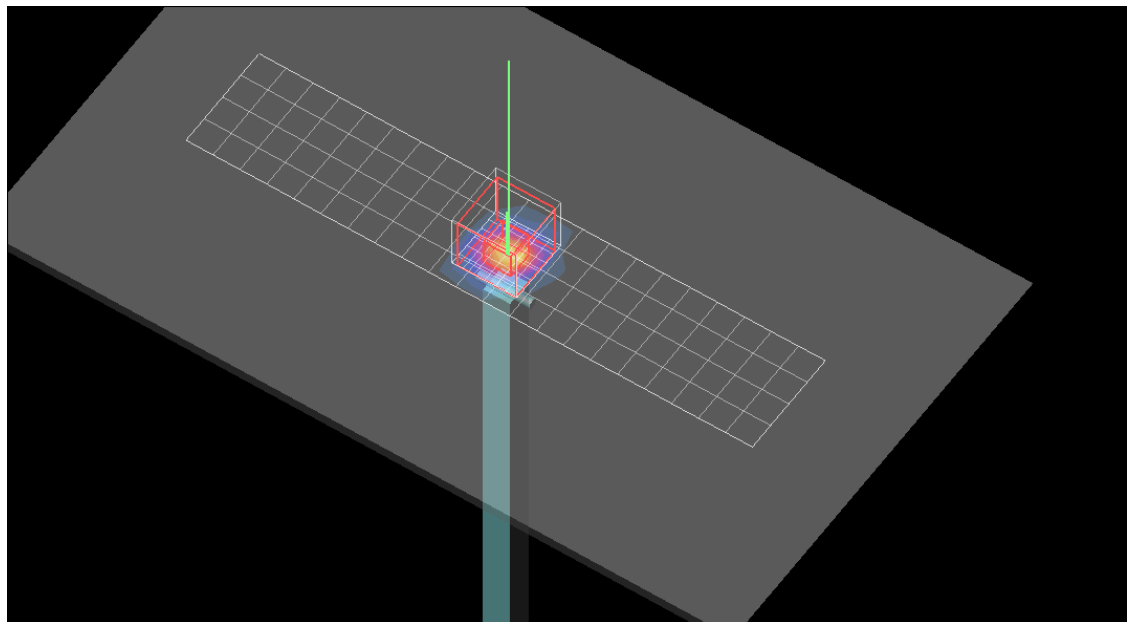
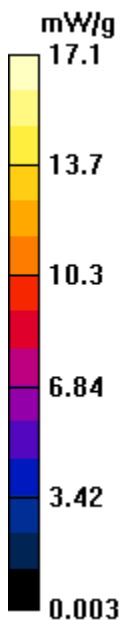
Reference Value = 58.4 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 31.2 W/kg

SAR(1 g) = 8.18 mW/g; SAR(10 g) = 2.31 mW/g

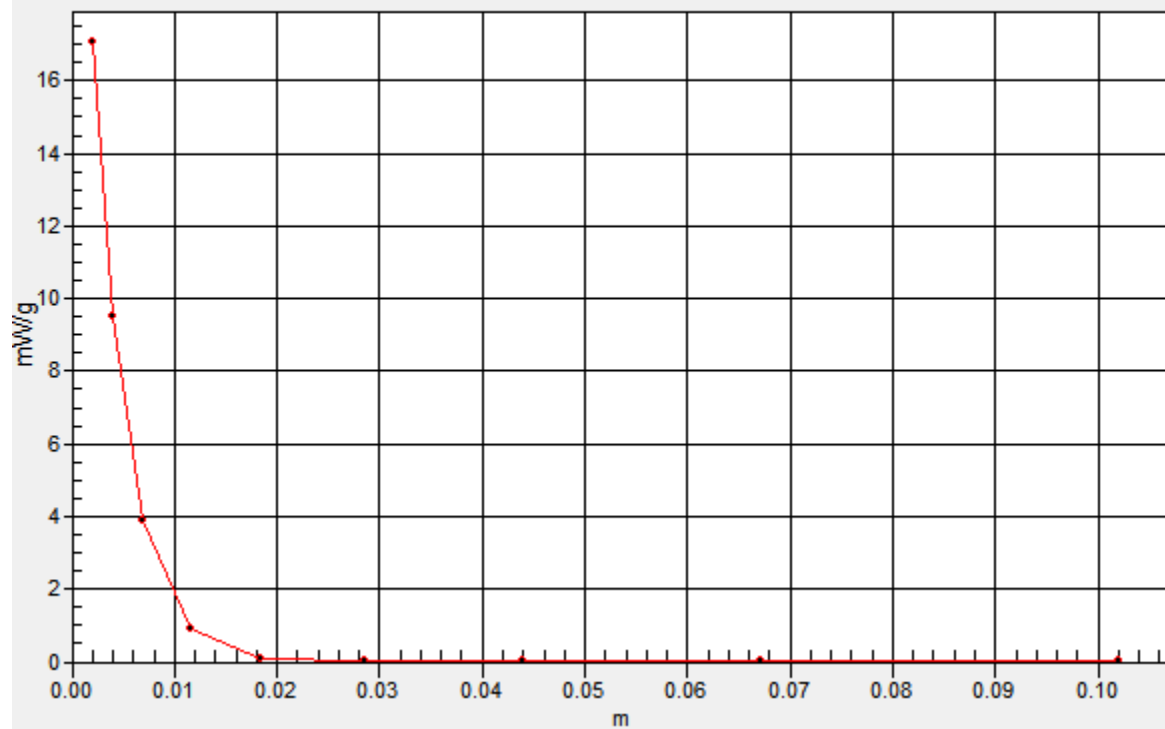
Maximum value of SAR (measured) = 17.1 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=2\text{mm}$



SAR(x,y,z,f0)

SAR; Z-Axis Retraction, Graded 1.5: Value Along Z, X=0, Y=0



Test Laboratory: Motorola 5800 MHz System Performance Check - Body Tissue

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1098

Procedure Notes: Power = 100 mW Refl.Pwr PM3 = -21.15 dB [Sim.Temp@SPC](#) = 20.3C Room Temp @ SPC = 20.9C

Communication System: CW - Dipole; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.81 \text{ mho/m}$; $\epsilon_r = 47.4$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(3.76, 3.76, 3.76); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (22x5x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 14.4 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 54.4 V/m; Power Drift = -0.057 dB

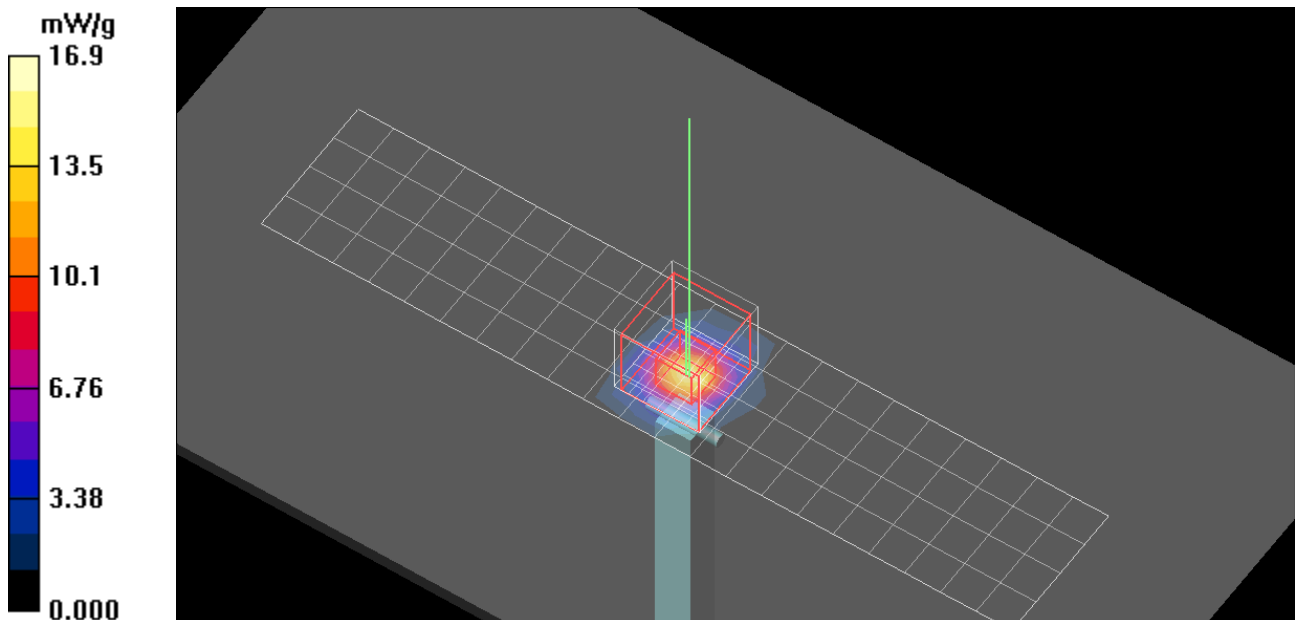
Peak SAR (extrapolated) = 32.8 W/kg

SAR(1 g) = 7.88 mW/g; SAR(10 g) = 2.22 mW/g

Maximum value of SAR (measured) = 16.8 mW/g

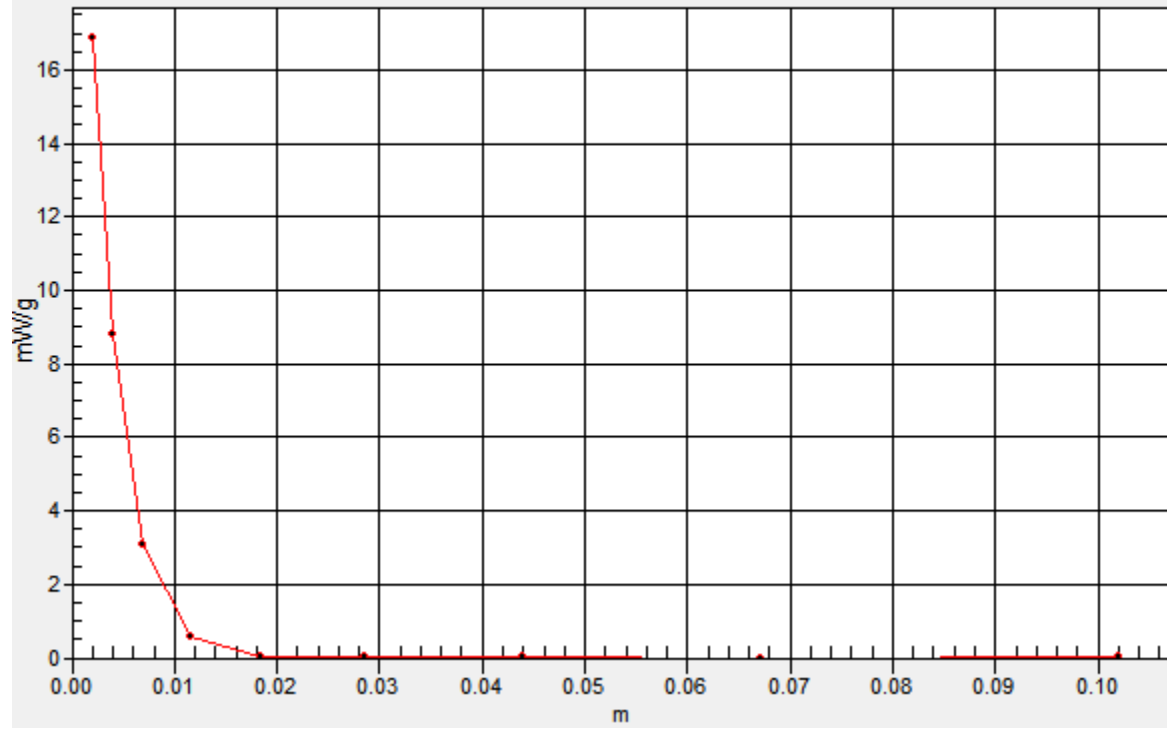
Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=2\text{mm}$

Maximum value of SAR (measured) = 16.9 mW/g



SAR(x,y,z,f0)

SAR; Z-Axis Retraction, Graded 1.5: Value Along Z, X=0, Y=0



Test Laboratory: Motorola 5800 MHz System Performance Check - Body Tissue

DUT: Dipole 5-6GHz; Type: D5GHzV2; Serial: D5GHzV2 - SN:1098

Procedure Notes: PM1 Power = 100 mW Refl.Pwr PM3 = -21.40 dB [Sim.Temp@SPC](#) = 20.5C Room Temp @ SPC = 21.3C

Communication System: CW - Dipole; Frequency: 5800 MHz; Duty Cycle: 1:1

Medium: Validation *BODY Tissue* ; Medium parameters used: $f = 5800 \text{ MHz}$; $\sigma = 6.78 \text{ mho/m}$; $\epsilon_r = 47.4$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(3.76, 3.76, 3.76); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3 Triple Flat Phantom 5.1C (Rev.3); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Daily SPC Check/Dipole Area Scan (22x5x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 15.6 mW/g

Daily SPC Check/0-Degree, 7x7x12 Cube (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

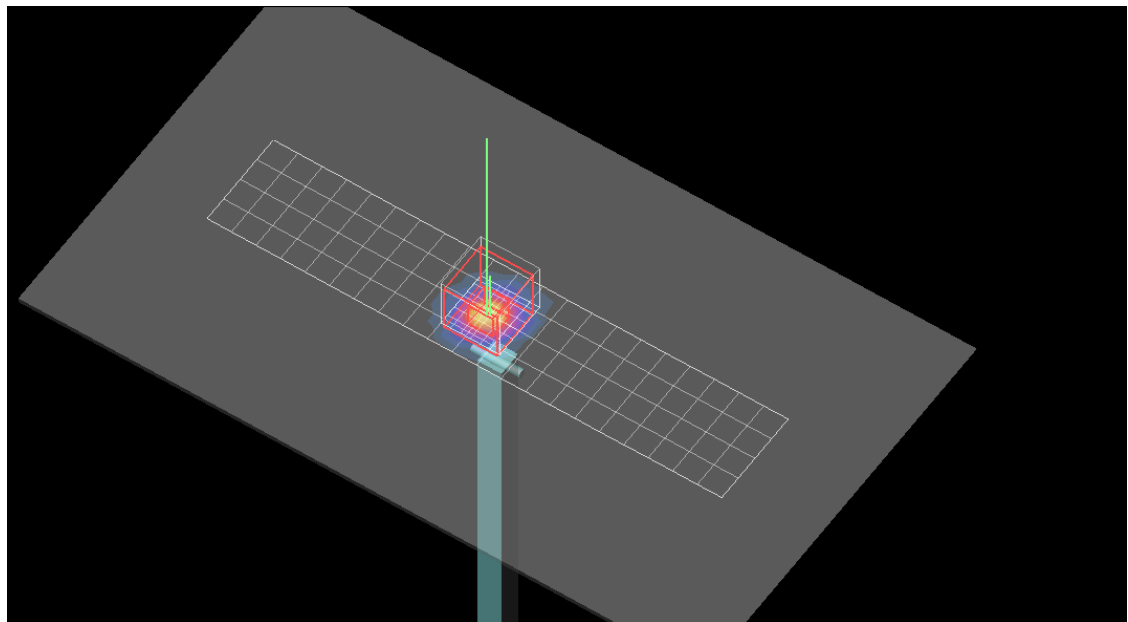
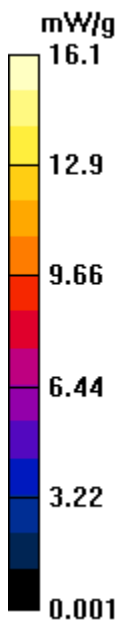
Reference Value = 52.6 V/m; Power Drift = -0.153 dB

Peak SAR (extrapolated) = 31.3 W/kg

SAR(1 g) = 7.61 mW/g; SAR(10 g) = 2.15 mW/g

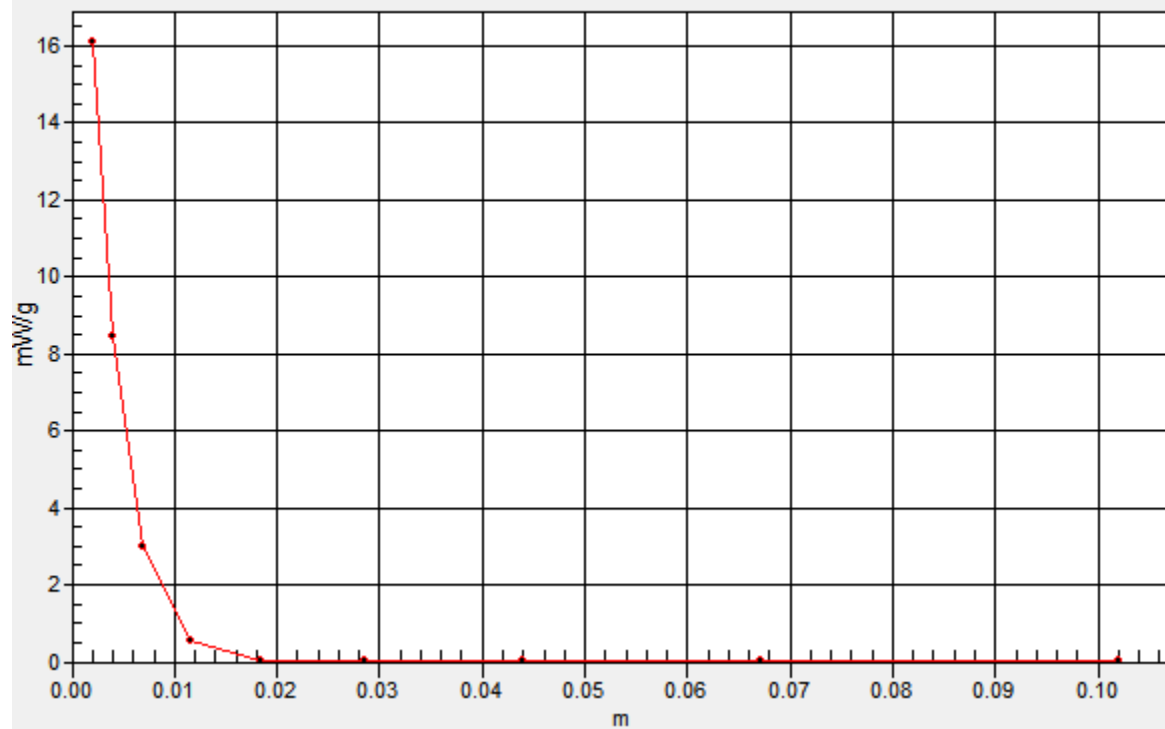
Maximum value of SAR (measured) = 16.1 mW/g

Daily SPC Check/Z-Axis Retraction, Graded 1.5 (1x1x9): Measurement grid: $dx=20\text{mm}$, $dy=20\text{mm}$, $dz=2\text{mm}$



SAR(x,y,z,f0)

SAR; Z-Axis Retraction, Graded 1.5: Value Along Z, X=0, Y=0



Appendix 2

SAR distribution plots for Head Adjacent Test Results

Date/Time: 8/23/2011 4:46:08 PM

Test Laboratory: Motorola - GSM 850 Cheek

Serial: LS3A280035 ; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 5; Antenna Position: Internal; Accessory Model #: N/A

Battery Model #: Internal; DEVICE POSITION (cheek or rotated): Cheek

Communication System: GSM 850; Frequency: 836.6 MHz; Channel Number: 190; Duty Cycle: 1:8.3

Medium: Low Freq Head

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 40.6$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.11, 6.11, 6.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 _ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1235;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal (15mm) (7x17x1):

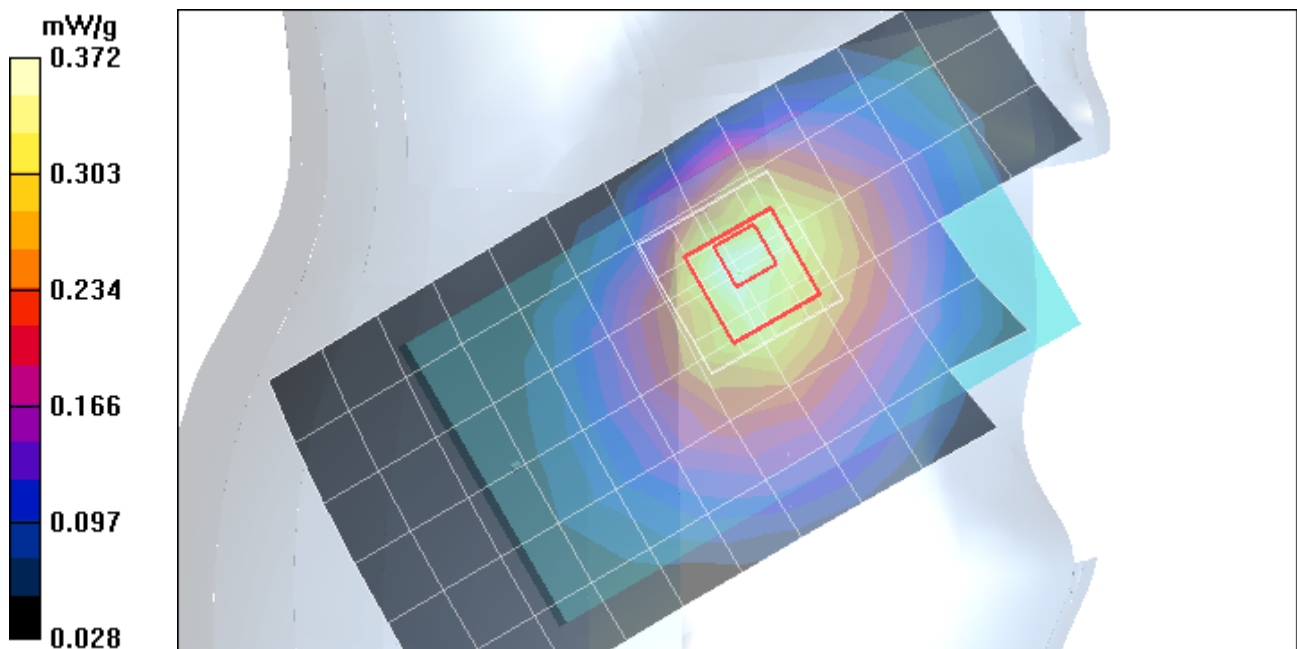
Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 0.375 mW/g

Right Head Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 20.2 V/m; Power Drift = -0.100 dB; Peak SAR (extrapolated) = 0.503 W/kg

SAR(1 g) = 0.357 mW/g; SAR(10 g) = 0.255 mW/g; Maximum value of SAR (measured) = 0.372 mW/g



Date/Time: 9/7/2011 10:42:08 PM

Test Laboratory: Motorola - WCDMA 850 Cheek

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: All Up Bits; Antenna Position: Internal; Accessory Model #: N/A

Battery Model #: Internal; DEVICE POSITION (cheek or rotated): Cheek

Communication System: WCDMA 850; Frequency: 836 MHz; Channel Number: 4180; Duty Cycle: 1:1

Medium: Low Freq Head

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 41.9$; $\rho = 1000 \text{ kg/m}^3$

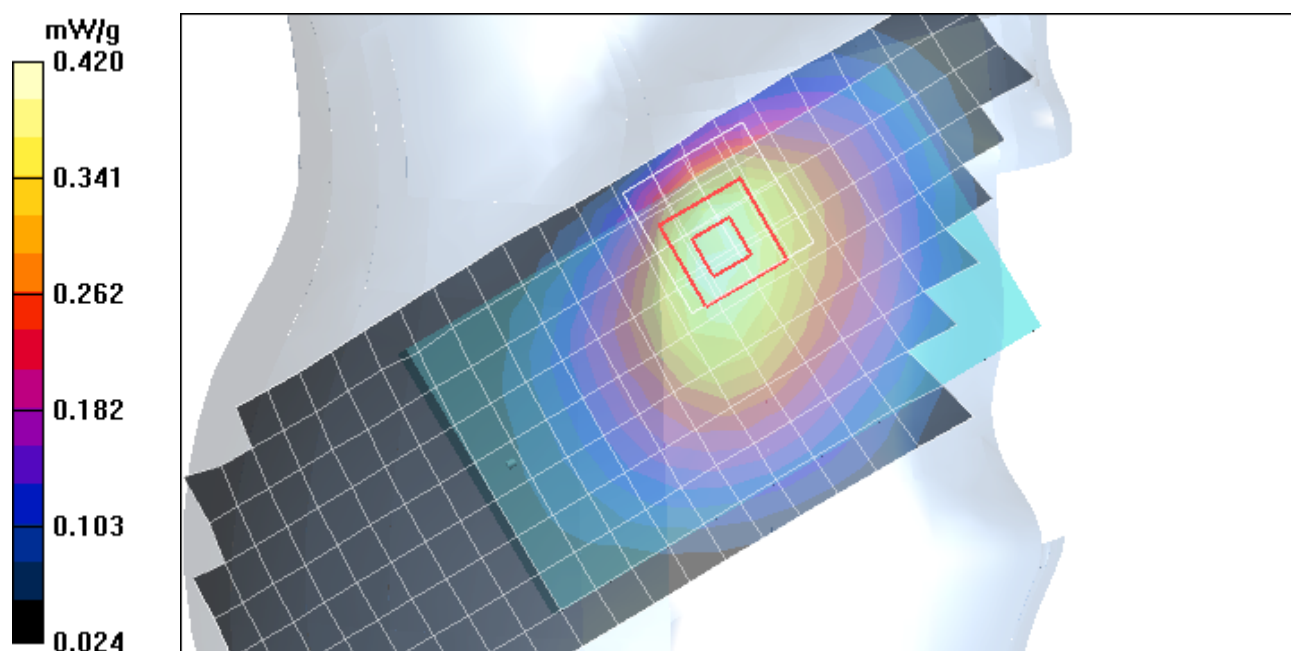
DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.87, 5.87, 5.87); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 SUGAR SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal Extended (10mm) (10x25x1):

Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$; Maximum value of SAR (measured) = 0.417 mW/g

Right Head Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$ Reference Value = 20.9 V/m ; Power Drift = 0.117 dB ; Peak SAR (extrapolated) = 0.529 W/kg **SAR(1 g) = 0.400 mW/g ; SAR(10 g) = 0.288 mW/g ; Maximum value of SAR (measured) = 0.420 mW/g** 

Date/Time: 9/2/2011 9:40:11 PM

Test Laboratory: Motorola - GSM 1900 Cheek

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 0; Antenna Position: Internal; Accessory Model #: N/A

Battery Model #: Internal; DEVICE POSITION (cheek or rotated): Cheek

Communication System: GSM 1900; Frequency: 1880 MHz; Channel Number: 661; Duty Cycle: 1:8.3

Medium: Regular Glycol Head 1750/1880

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(5.11, 5.11, 5.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1136;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal Extended (15mm) (7x17x1):

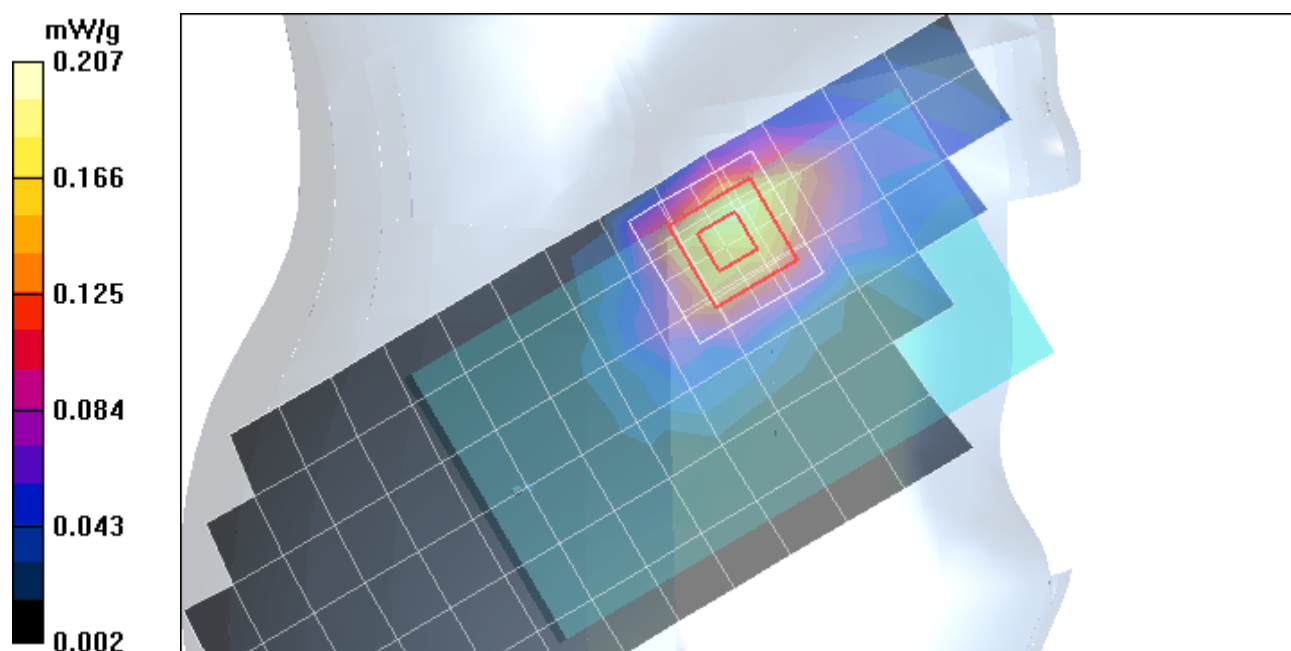
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.189 mW/g

Right Head Template/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 8.10 V/m; Power Drift = 0.098 dB; Peak SAR (extrapolated) = 0.305 W/kg

SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.109 mW/g; Maximum value of SAR (measured) = 0.207 mW/g



Date/Time: 8/24/2011 12:57:20 AM

Test Laboratory: Motorola - WCDMA 1900 Cheek

Serial: LS3A280035 ; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: All up Bits; Antenna Position: Internal; Accessory Model #: N/A

Battery Model #: Internal; DEVICE POSITION (cheek or rotated): Cheek

Communication System: WCDMA 1900; Frequency: 1880 MHz; Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Head 1750/1880

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.47$ mho/m; $\epsilon_r = 39.9$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(5.11, 5.11, 5.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1136;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal (15mm) (7x17x1):

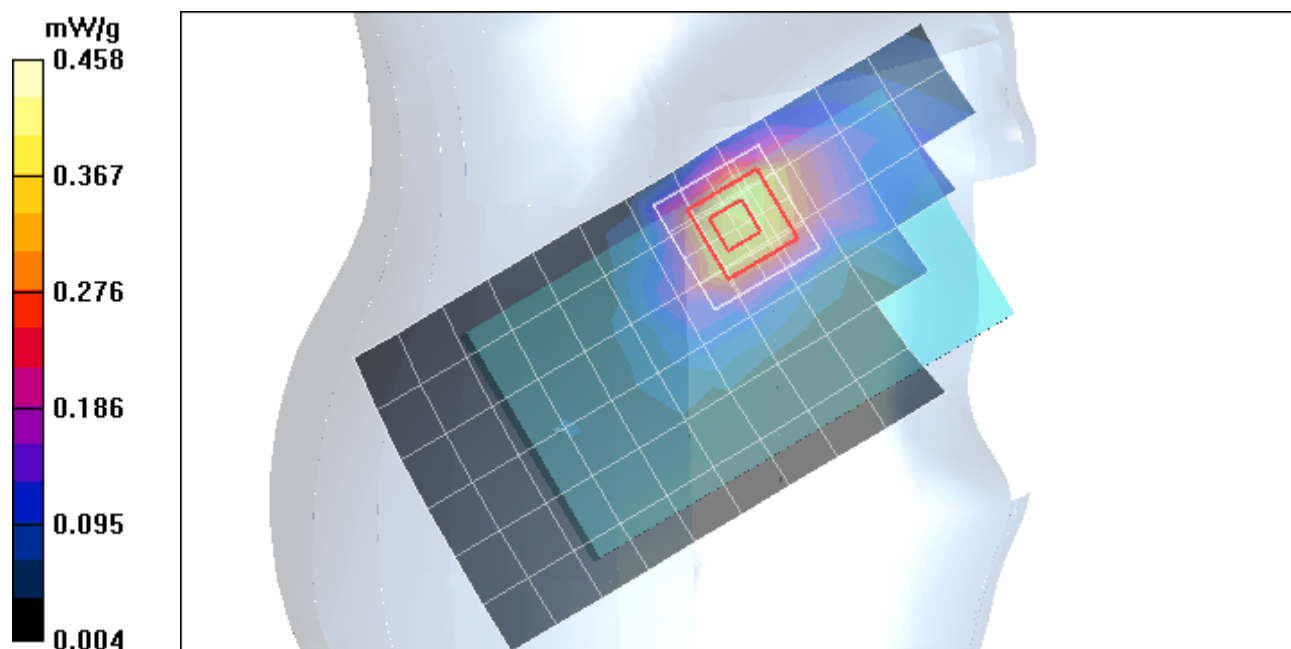
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.383 mW/g

Right Head Template/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 12.7 V/m; Power Drift = 0.162 dB; Peak SAR (extrapolated) = 0.690 W/kg

SAR(1 g) = 0.417 mW/g; SAR(10 g) = 0.241 mW/g; Maximum value of SAR (measured) = 0.458 mW/g



Date/Time: 9/20/2011 1:59:55 PM

Test Laboratory: Motorola - Wi-Fi 2450 Cheek

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: N/A; Antenna Position: Internal; Accessory Model #: N/A

Battery Model #: Internal; DEVICE POSITION : Cheek

Device Mode: 802.11b mode, 1 Mbps data rate

Communication System: Wi-Fi 2450; Frequency: 2462 MHz; Channel Number: 11; Duty Cycle: 1:1

Medium: 2450 Glycol Head

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.86$ mho/m; $\epsilon_r = 38.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.39, 4.39, 4.39); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal (15mm) (7x17x1):

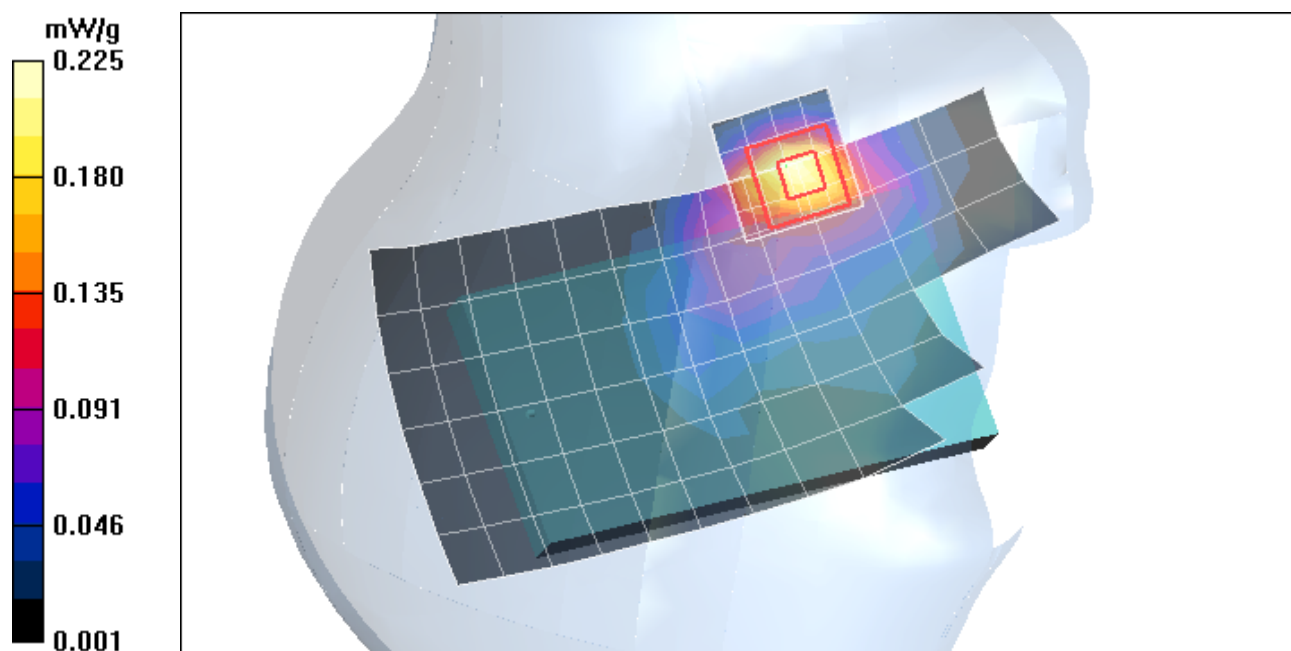
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.225 mW/g

Right Head Template/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 6.29 V/m; Power Drift = 0.153 dB; Peak SAR (extrapolated) = 0.428 W/kg

SAR(1 g) = 0.209 mW/g; SAR(10 g) = 0.104 mW/g;



Test Laboratory: Motorola 5GHz WiFi 5210 MHz Right Head Cheek

DUT: Serial: LS3A290053, FCC ID: IHDP56ME2

Procedure Notes: 802.11a Data Rate: 6Mbps Battery Model #: Internal DEVICE POSITION (cheek or rotated): Cheek

Communication System: 5210MHz Band - 802.11a; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: $f = 5210 \text{ MHz}$; $\sigma = 4.95 \text{ mho/m}$; $\epsilon_r = 36.6$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.64, 4.64, 4.64); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz HEAD SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 0.445 mW/g

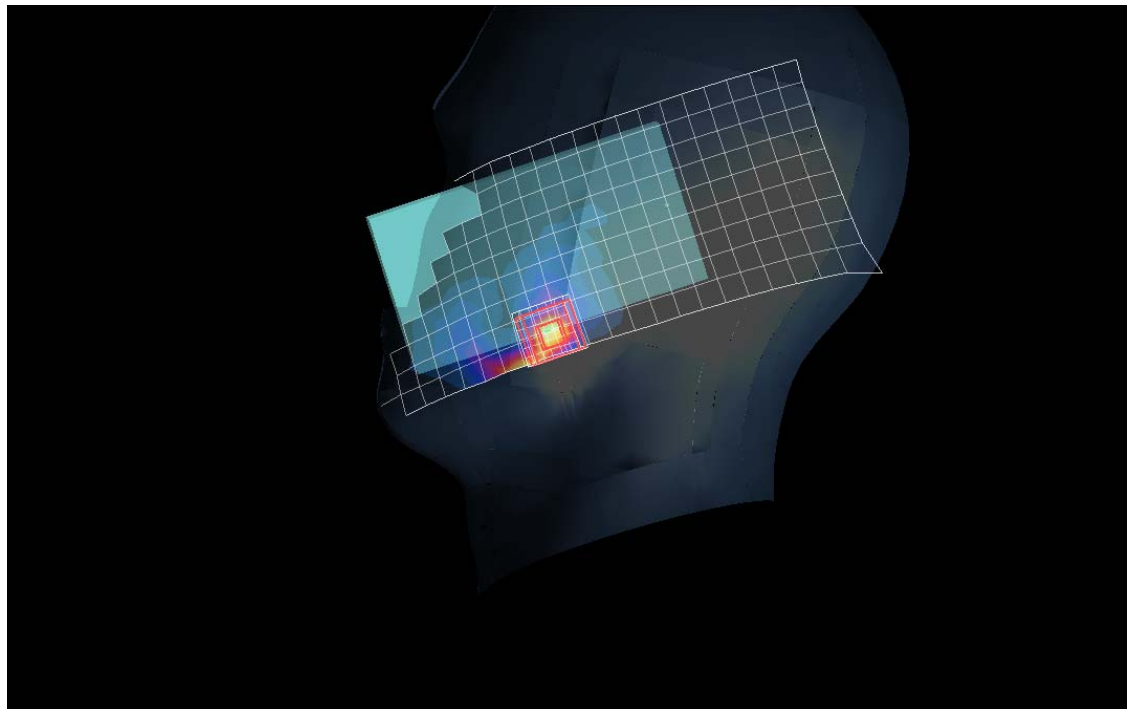
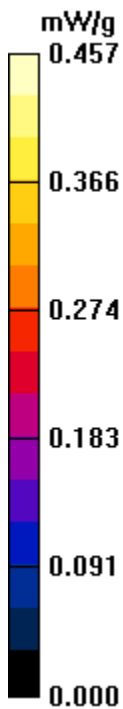
Right Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 4.86 V/m; Power Drift = -0.667 dB

Peak SAR (extrapolated) = 0.922 W/kg

SAR(1 g) = 0.222 mW/g; SAR(10 g) = 0.067 mW/g

Maximum value of SAR (measured) = 0.457 mW/g



Test Laboratory: Motorola 5GHz WiFi 5290 MHz Right Head Cheek

DUT: SpyderU - Phone 7; Type: Tablet; Serial: LS3A290053

Procedure Notes: 802.11n 7.2 Mbps Battery Model #: INTERNAL DEVICE POSITION: CHEEK

Communication System: 5290MHz Band - 802.11a; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: $f = 5290 \text{ MHz}$; $\sigma = 4.99 \text{ mho/m}$; $\epsilon_r = 35.8$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.34, 4.34, 4.34); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz HEAD SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 0.181 mW/g

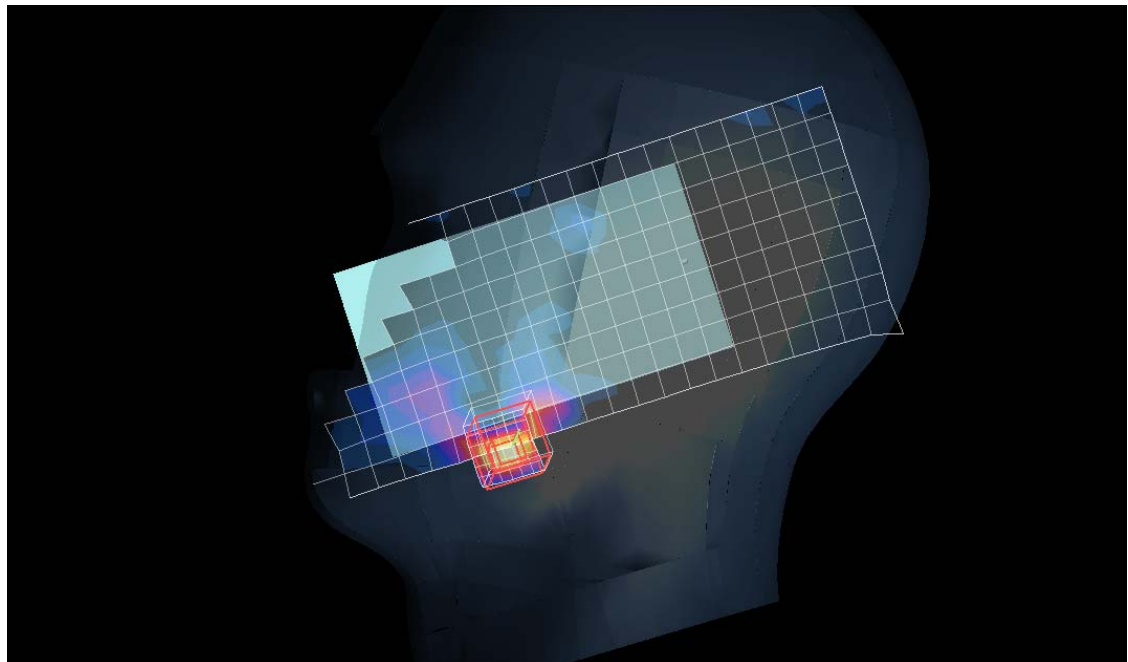
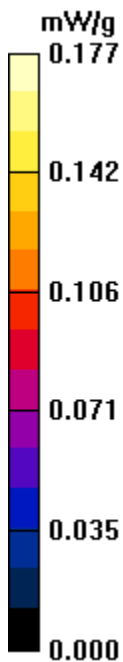
Right Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 3.86 V/m; Power Drift = -0.358 dB

Peak SAR (extrapolated) = 1.42 W/kg

SAR(1 g) = 0.091 mW/g; SAR(10 g) = 0.028 mW/g

Maximum value of SAR (measured) = 0.177 mW/g



Test Laboratory: Motorola 5GHz WiFi 5600 MHz Right Head Cheek

DUT: Serial: LS3A2X0004, FCC ID: IHP56ME2

Procedure Notes: 802.11n 7.2 Mbps Battery Model #: INTERNAL DEVICE POSITION: CHEEK

Communication System: 5600MHz Band - 802.11a; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: $f = 5600 \text{ MHz}$; $\sigma = 5.36 \text{ mho/m}$; $\epsilon_r = 34.8$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.01, 4.01, 4.01); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3 5GHz HEAD SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

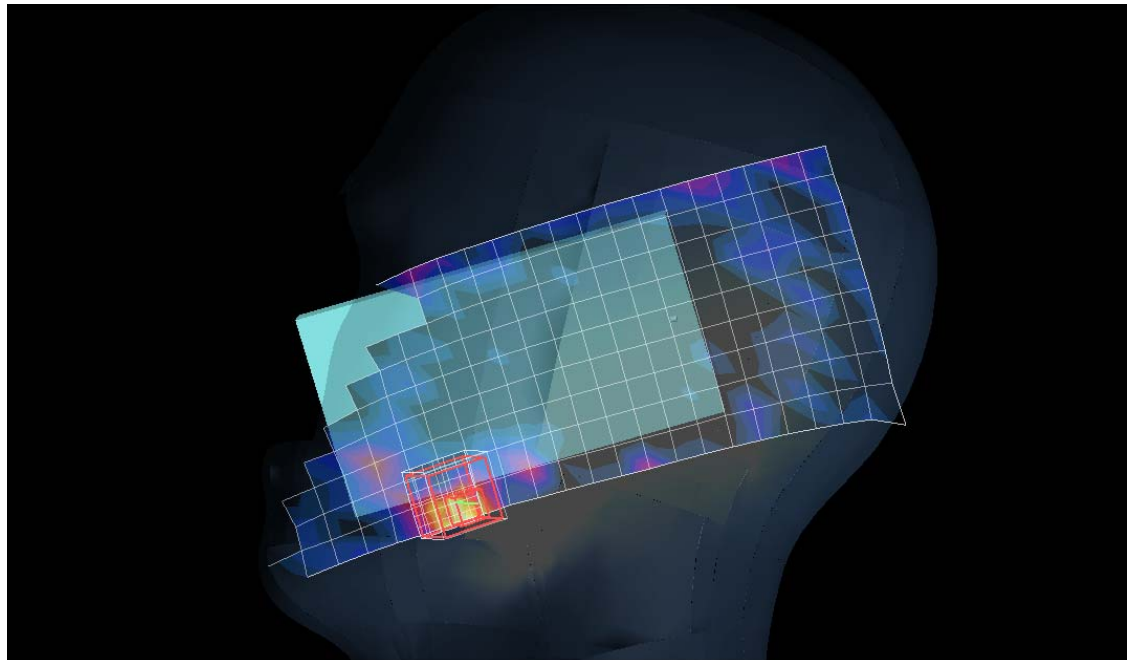
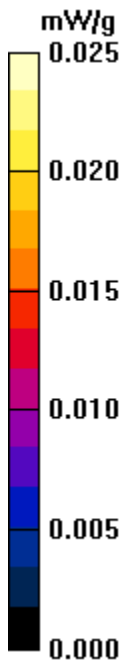
Right Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 0.025 mW/g

Right Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 1.27 V/m; Power Drift = -999.0 dB

Peak SAR (extrapolated) = 0.145 W/kg

SAR(1 g) = 0.010 mW/g; SAR(10 g) = 0.00232 mW/g



Test Laboratory: Motorola 5GHz WiFi 5785 MHz Right Head Cheek

DUT: Serial: LS3A290053, FCC ID: IHDP56ME2

Procedure Notes: 802.11n 6.5 Mbps Battery Model #: INTERNAL DEVICE POSITION: CHEEK

Communication System: 5785MHz Band - 802.11a; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 5.56 \text{ mho/m}$; $\epsilon_r = 34.9$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.13, 4.13, 4.13); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz HEAD SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 0.372 mW/g

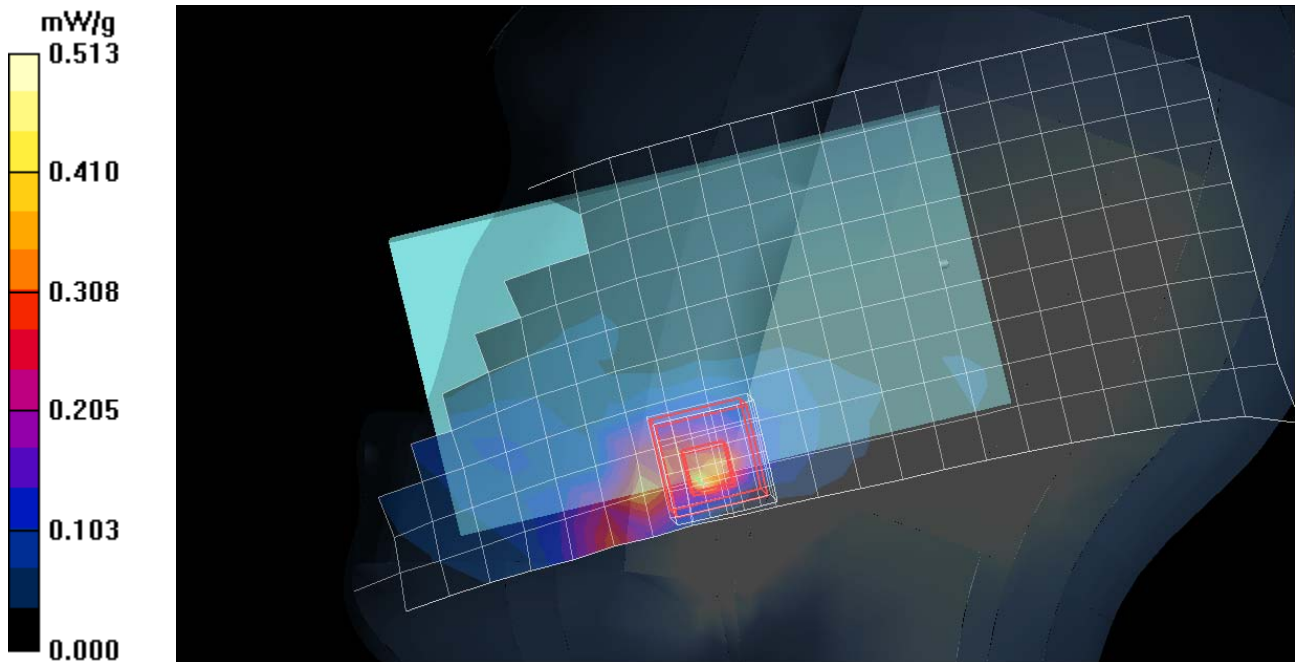
Right Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 4.79 V/m; Power Drift = 0.089 dB

Peak SAR (extrapolated) = 1.000 W/kg

SAR(1 g) = 0.183 mW/g; SAR(10 g) = 0.057 mW/g

Maximum value of SAR (measured) = 0.513 mW/g



Date/Time: 8/23/2011 3:30:03 PM

Test Laboratory: Motorola - GSM 850 Tilt

Serial: LS3A280035 ; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 5; Antenna Position: Internal; Accessory Model #: N/A

Battery Model #: Internal; DEVICE POSITION (cheek or rotated): Tilt

Communication System: GSM 850; Frequency: 836.6 MHz; Channel Number: 190; Duty Cycle: 1:8.3

Medium: Low Freq Head

Medium parameters used: $f = 835$ MHz; $\sigma = 0.91$ mho/m; $\epsilon_r = 40.6$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.11, 6.11, 6.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 _ Sugar SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1235;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1):

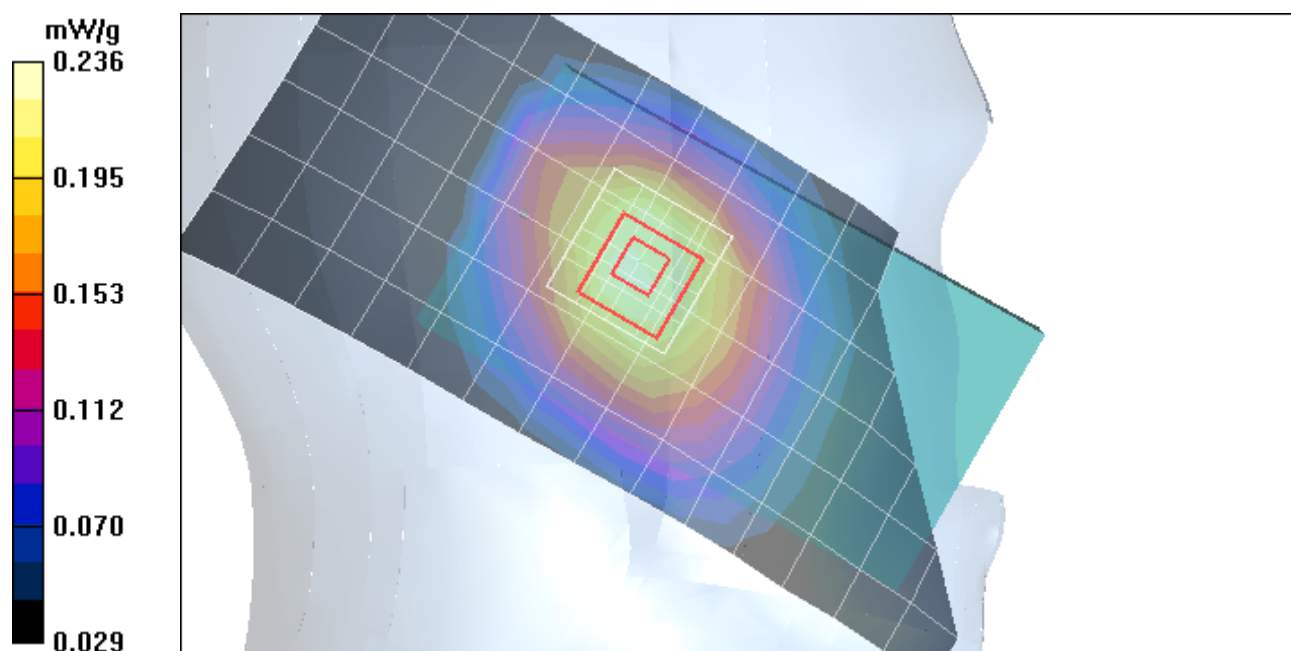
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.230 mW/g

Left Head Template/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 15.6 V/m; Power Drift = -0.051 dB; Peak SAR (extrapolated) = 0.282 W/kg

SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.168 mW/g; Maximum value of SAR (measured) = 0.236 mW/g



Date/Time: 9/7/2011 11:21:42 PM

Test Laboratory: Motorola - WCDMA 850 Tilt

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: All Up Bits; Antenna Position: Internal; Accessory Model #: N/A

Battery Model #: Internal; DEVICE POSITION (cheek or rotated): Rotated

Communication System: WCDMA 850; Frequency: 836 MHz; Channel Number: 4180; Duty Cycle: 1:1

Medium: Low Freq Head

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.91 \text{ mho/m}$; $\epsilon_r = 41.9$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.87, 5.87, 5.87); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 SUGAR SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal Extended (10mm) (10x25x1):

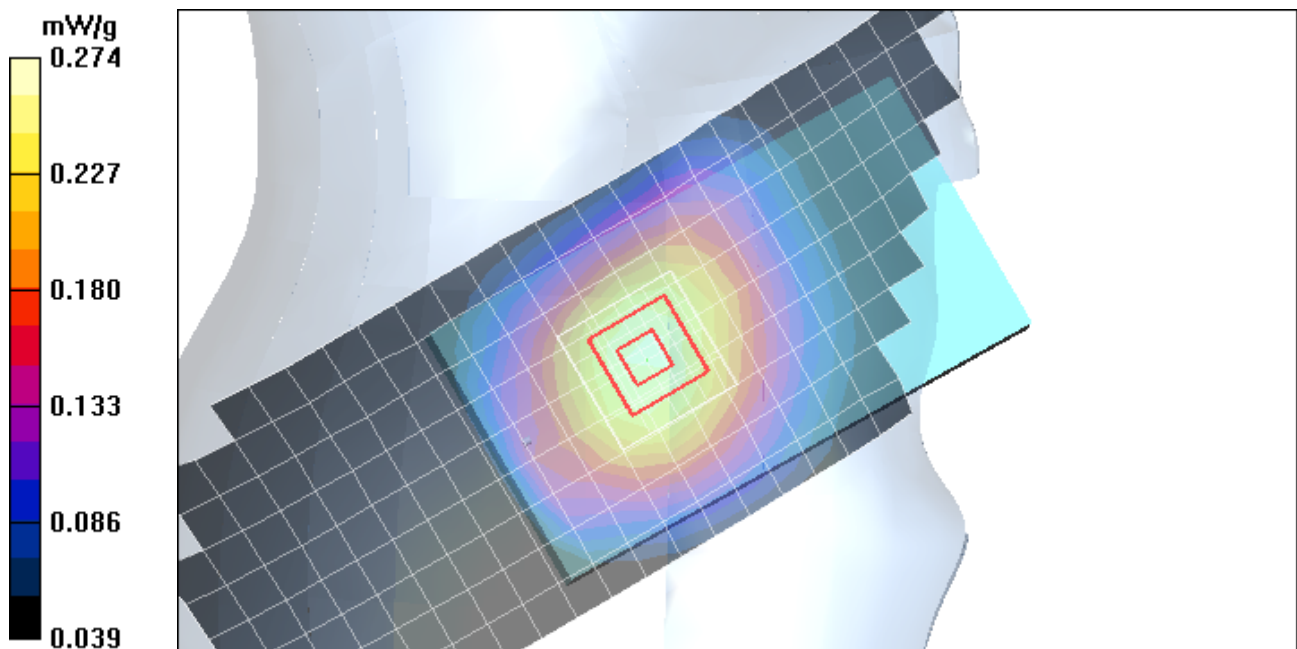
Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$; Maximum value of SAR (measured) = 0.265 mW/g

Right Head Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.8 V/m; Power Drift = 0.100 dB; Peak SAR (extrapolated) = 0.315 W/kg

SAR(1 g) = 0.259 mW/g; SAR(10 g) = 0.199 mW/g; Maximum value of SAR (measured) = 0.274 mW/g



Test Laboratory: Motorola GSM 1900 Tilt

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 0 Battery Model #: Internal DEVICE POSITION: 15 Degree Tilt

Communication System: GSM 1900; Frequency: 1880 MHz; Duty Cycle: 1:8.3

Medium: Regular Glycol Head 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(5.11, 5.11, 5.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1136;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal Extended (15mm) (7x17x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.049 mW/g

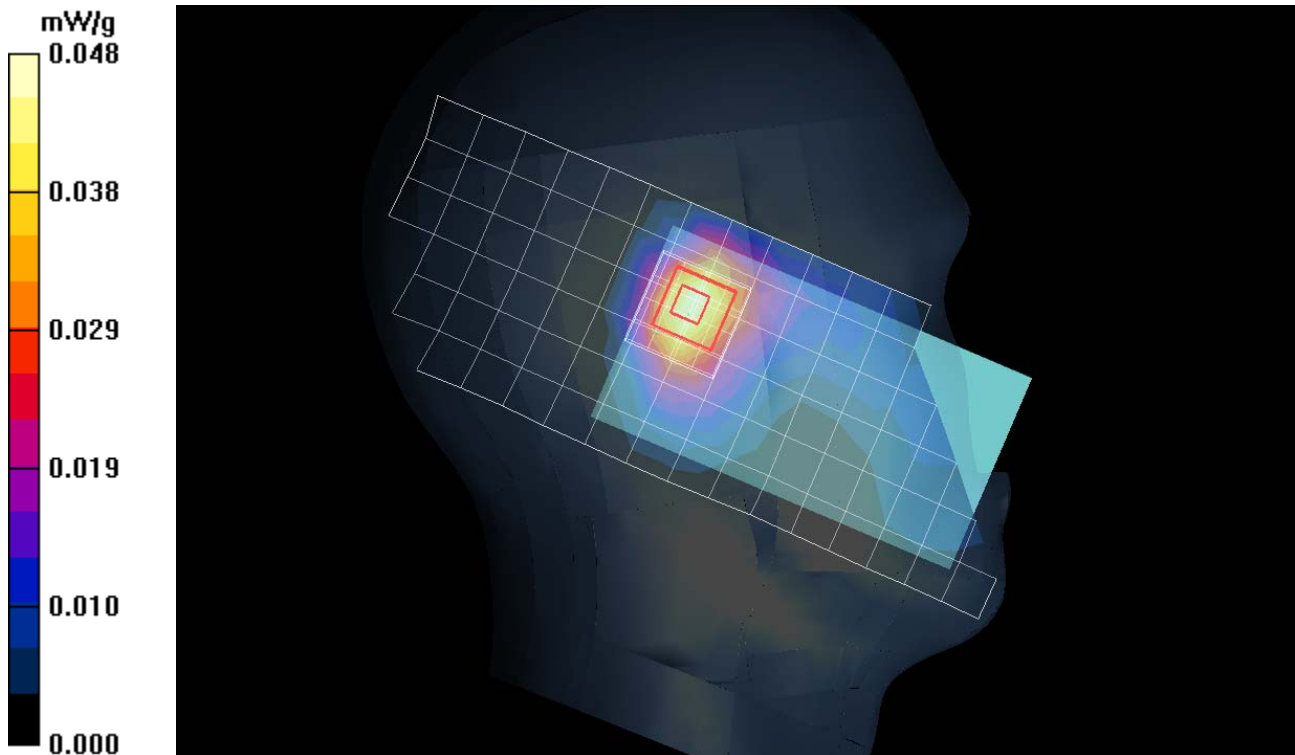
Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.41 V/m; Power Drift = -0.016 dB

Peak SAR (extrapolated) = 0.076 W/kg

SAR(1 g) = 0.046 mW/g; SAR(10 g) = 0.026 mW/g

Maximum value of SAR (measured) = 0.048 mW/g



Date/Time: 8/24/2011 5:10:45 PM

Test Laboratory: Motorola - WCDMA 1900 Tilt

Serial: LS3A280035 ; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: All up Bits; Antenna Position: Internal; Accessory Model #: N/A

Battery Model #: Internal; DEVICE POSITION (cheek or rotated): Tilt

Communication System: WCDMA 1900; Frequency: 1880 MHz; Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Head 1750/1880

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.47 \text{ mho/m}$; $\epsilon_r = 39.5$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(5.11, 5.11, 5.11); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1136;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1):

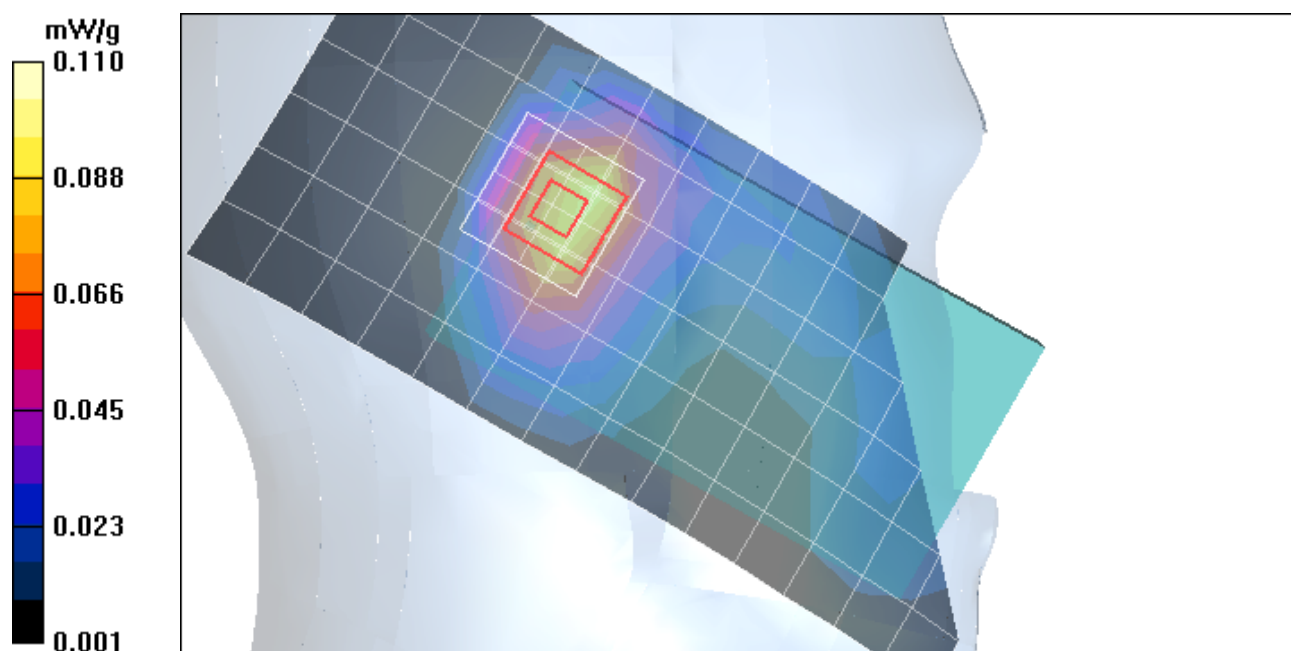
Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 0.095 mW/g

Left Head Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.43 V/m; Power Drift = 0.124 dB; Peak SAR (extrapolated) = 0.167 W/kg

SAR(1 g) = 0.099 mW/g; SAR(10 g) = 0.057 mW/g; Maximum value of SAR (measured) = 0.110 mW/g



Test Laboratory: Motorola 2450 MHz WiFi 15 Degree Tilt

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: 802.11b 1Mbps Battery Model #: INTERNAL Test Configuration: 15 Degree TILT

Communication System: Wi-Fi 2450; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: 2450 Glycol Head; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.84$ mho/m; $\epsilon_r = 37.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.48, 4.48, 4.48); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1136;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (15mm) (7x17x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.083 mW/g

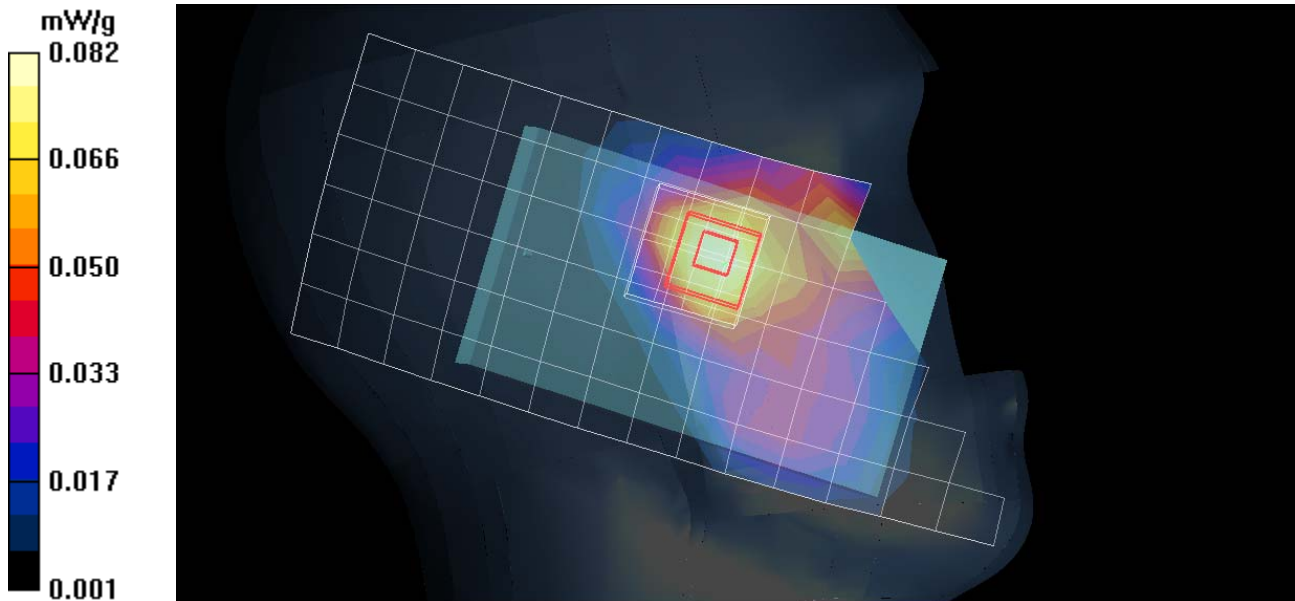
Left Head Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.49 V/m; Power Drift = 0.077 dB

Peak SAR (extrapolated) = 0.130 W/kg

SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.044 mW/g

Maximum value of SAR (measured) = 0.082 mW/g



Test Laboratory: Motorola Mobility 5210 MHz 15 Degree Tilt

DUT: Serial: LS3A290053, FCC ID: IHDP56ME2

Procedure Notes: 802.11a Date Rate: 6 Mbps Chn 36 Battery Model # Internal Device Position: TILTED

Communication System: 5210MHz Band - 802.11a; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: $f = 5210 \text{ MHz}$; $\sigma = 4.95 \text{ mho/m}$; $\epsilon_r = 36.6$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.64, 4.64, 4.64); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.105 mW/g

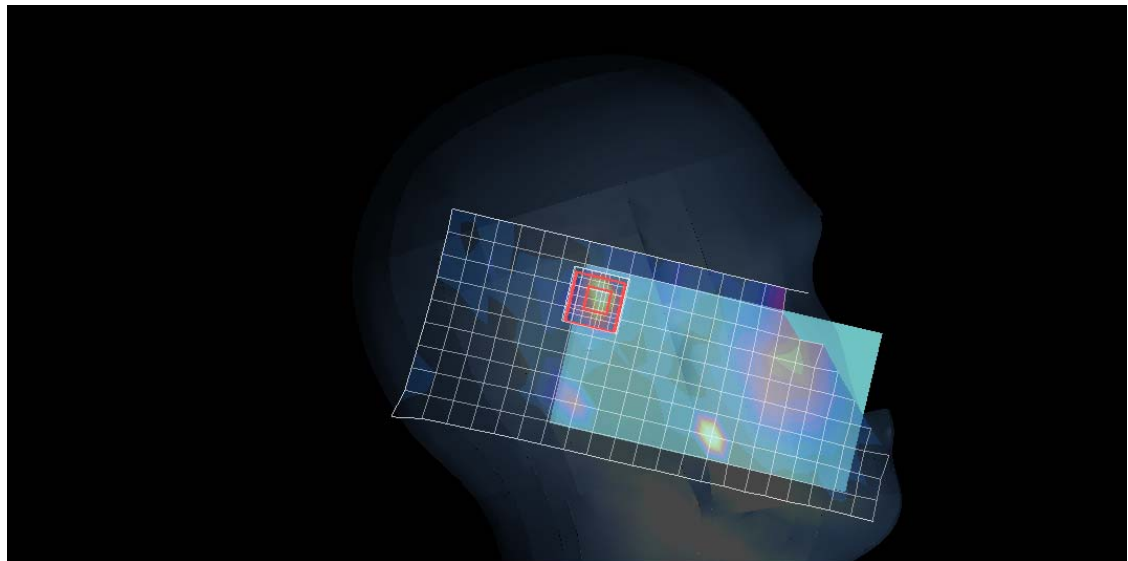
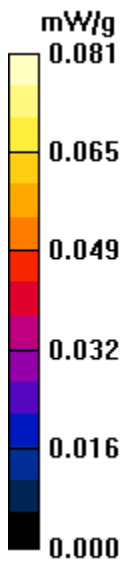
Left Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 3.23 V/m; Power Drift = -0.204 dB

Peak SAR (extrapolated) = 0.137 W/kg

SAR(1 g) = 0.038 mW/g; SAR(10 g) = 0.00943 mW/g

Maximum value of SAR (measured) = 0.081 mW/g



Test Laboratory: Motorola Mobility 5290 MHz 15 Degree Tilt

DUT: Serial: LS3A290053, FCC ID: IHDP56ME2

Procedure Notes: 802.11a Battery Model #: INTERNAL DEVICE POSITION: TILTED TESTER INITIALS: DD

Communication System: 5290MHz Band - 802.11a; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: $f = 5290 \text{ MHz}$; $\sigma = 4.99 \text{ mho/m}$; $\epsilon_r = 35.8$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.34, 4.34, 4.34); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz HEAD SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 0.046 mW/g

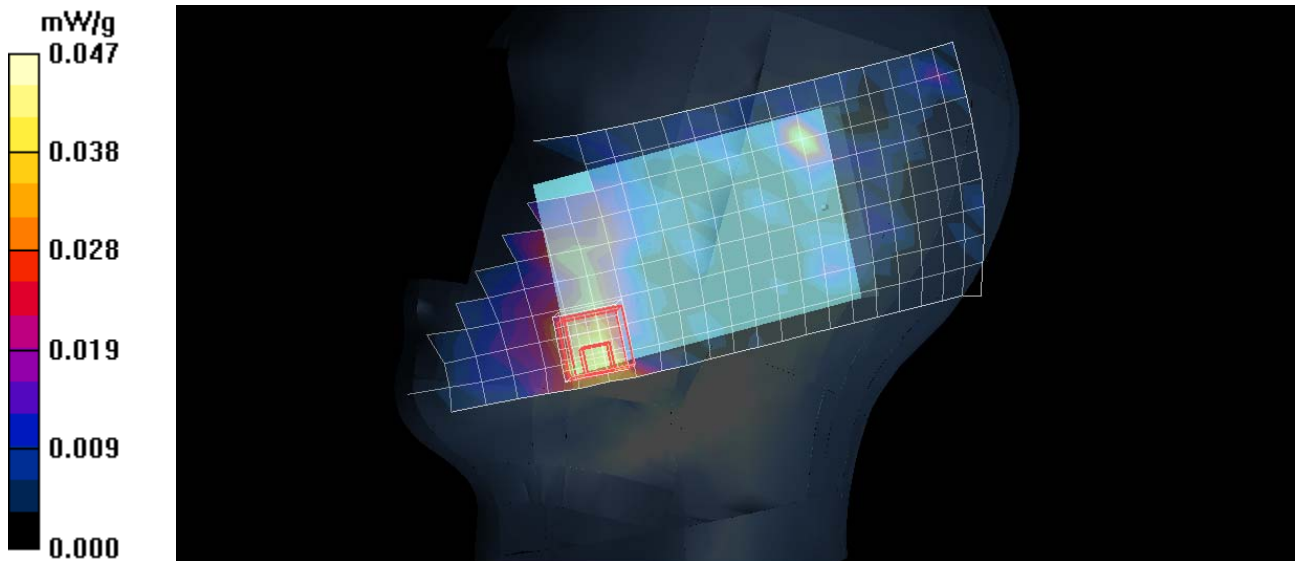
Right Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 2.88 V/m; Power Drift = -0.168 dB

Peak SAR (extrapolated) = 0.283 W/kg

SAR(1 g) = 0.026 mW/g; SAR(10 g) = 0.00848 mW/g

Maximum value of SAR (measured) = 0.047 mW/g



Test Laboratory: Motorola Mobility 5600 MHz 15 Degree Tilt

DUT: Serial: LS3A2X0004, FCC ID: IHDP56ME2

Procedure Notes: 802.11a 7.2 Mbps Battery Model #: INTERNAL DEVICE POSITION: TILTED

Communication System: 5600MHz Band - 802.11a; Frequency: 5500 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: $f = 5600$ MHz; $\sigma = 5.36$ mho/m; $\epsilon_r = 34.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.01, 4.01, 4.01); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3 5GHz HEAD SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Right Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.066 mW/g

Right Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

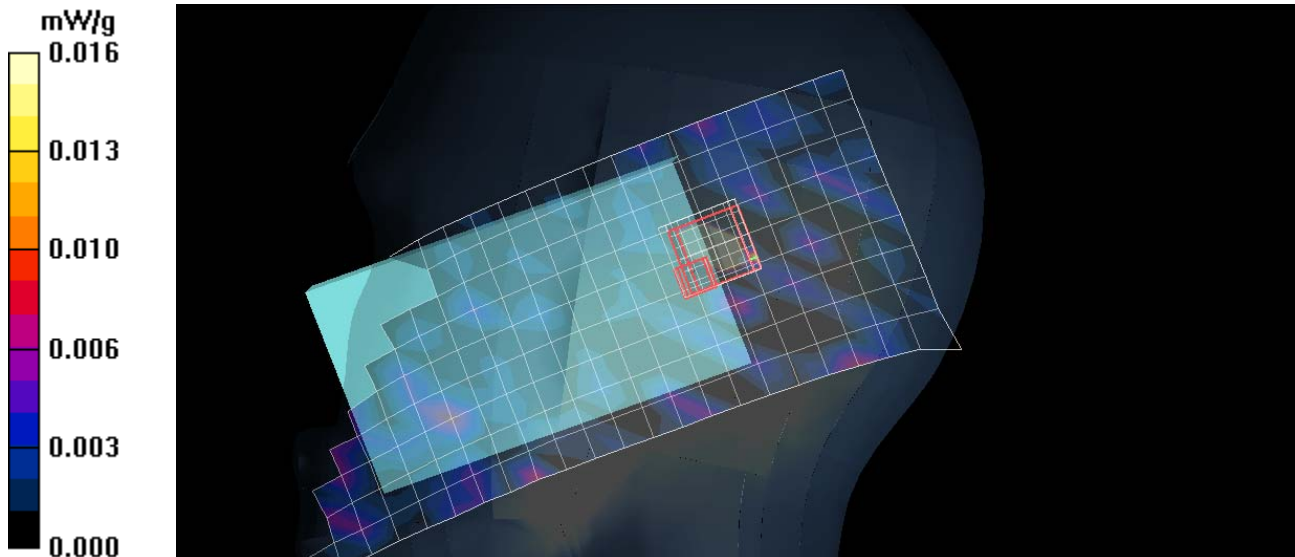
Reference Value = 0.608 V/m; Power Drift = 3.63 dB

Peak SAR (extrapolated) = 0.016 W/kg

SAR(1 g) = 8.5e-005 mW/g; SAR(10 g) = 5.42e-006 mW/g

Warning: Maximum averaged SAR over 1 g is located on the boundary of the measurement cube.

Maximum value of SAR (measured) = 0.016 mW/g



Test Laboratory: Motorola Mobility 5745 MHz 15 Degree Tilt

DUT: Serial: LS3A290053, FCC ID: IHDP56ME2

Procedure Notes: 802.11a 6.5 Mbps Chn 149 Battery Model #: INTERNAL DEVICE POSITION: TILTED

Communication System: 5785MHz Band - 802.11a; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue HEAD; Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 5.64 \text{ mho/m}$; $\epsilon_r = 35.5$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.13, 4.13, 4.13); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3, 5-6GHz SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1153;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Left Head Template/Area Scan - Normal (10mm) (10x25x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$

Maximum value of SAR (measured) = 0.231 mW/g

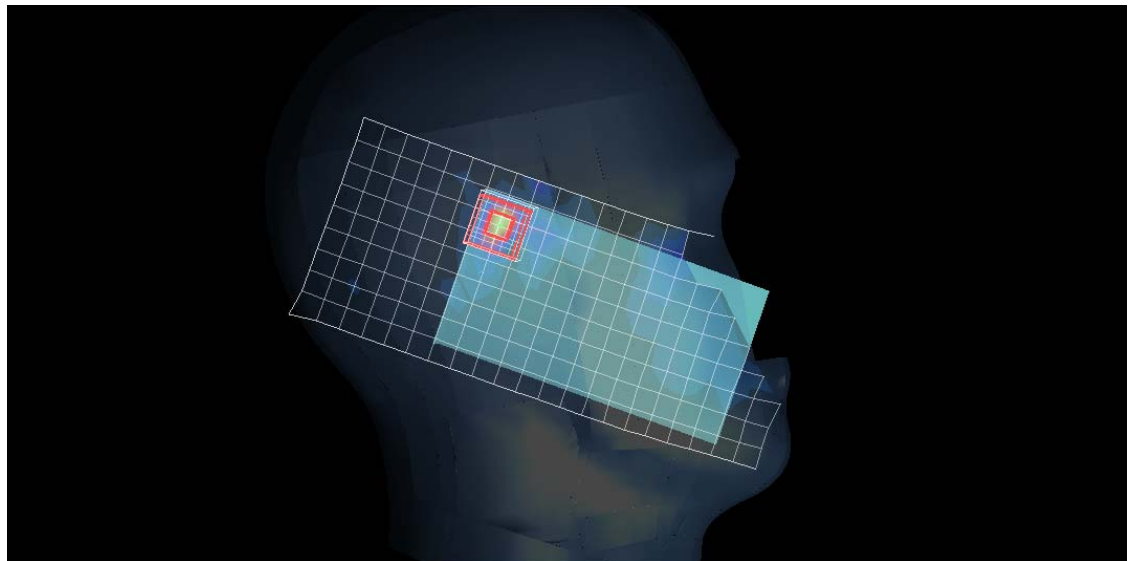
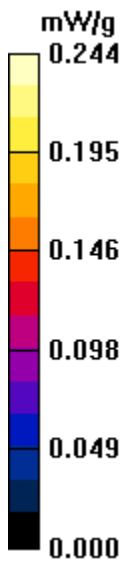
Left Head Template/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=2\text{mm}$

Reference Value = 4.44 V/m; Power Drift = -0.175 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.094 mW/g; SAR(10 g) = 0.019 mW/g

Maximum value of SAR (measured) = 0.244 mW/g



Appendix 3

SAR distribution plots for Body Worn Test Results

Date/Time: 9/17/2011 8:10:27 AM

Test Laboratory: Motorola - GSM 850 Body-Worn

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 5; Antenna Position: Internal; Battery Model #: Internal

Device Position: Body Worn, Front of Phone 25 mm from Phantom

Communication System: GPRS 850 CI 11; Frequency: 836.6 MHz; Channel Number: 190; Duty Cycle: 1:2.76

Medium: Low Freq Body

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.88, 5.88, 5.88); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#6 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (14x9x1):

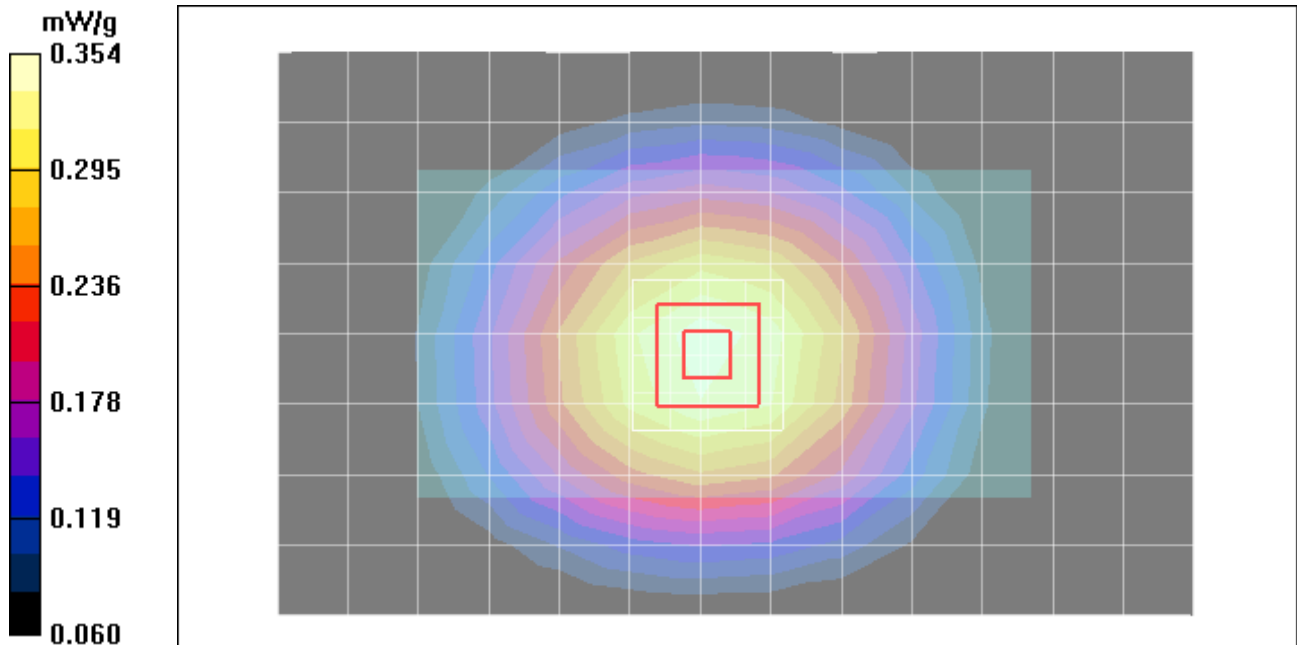
Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 0.347 mW/g

Triple Flat Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.6 V/m ; Power Drift = 0.106 dB ; Peak SAR (extrapolated) = 0.419 W/kg

SAR(1 g) = 0.336 mW/g ; SAR(10 g) = 0.254 mW/g ; Maximum value of SAR (measured) = 0.354 mW/g



Date/Time: 9/9/2011 9:47:01 AM

Test Laboratory: Motorola - WCDMA 850 Body-Worn

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: All up Bits; Antenna Position: Internal; Battery Model #: Internal

Device Position: Body Worn, Front of Phone 25 mm from Phantom

Communication System: WCDMA 850; Frequency: 836 MHz; Channel Number: 4180; Duty Cycle: 1:1

Medium: Low Freq Body

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 53.8$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.88, 5.88, 5.88); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#_6 - Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1; Serial: N/A;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Triple Flat Phone Template/Area Scan - Normal Body (15mm) (12x8x1):

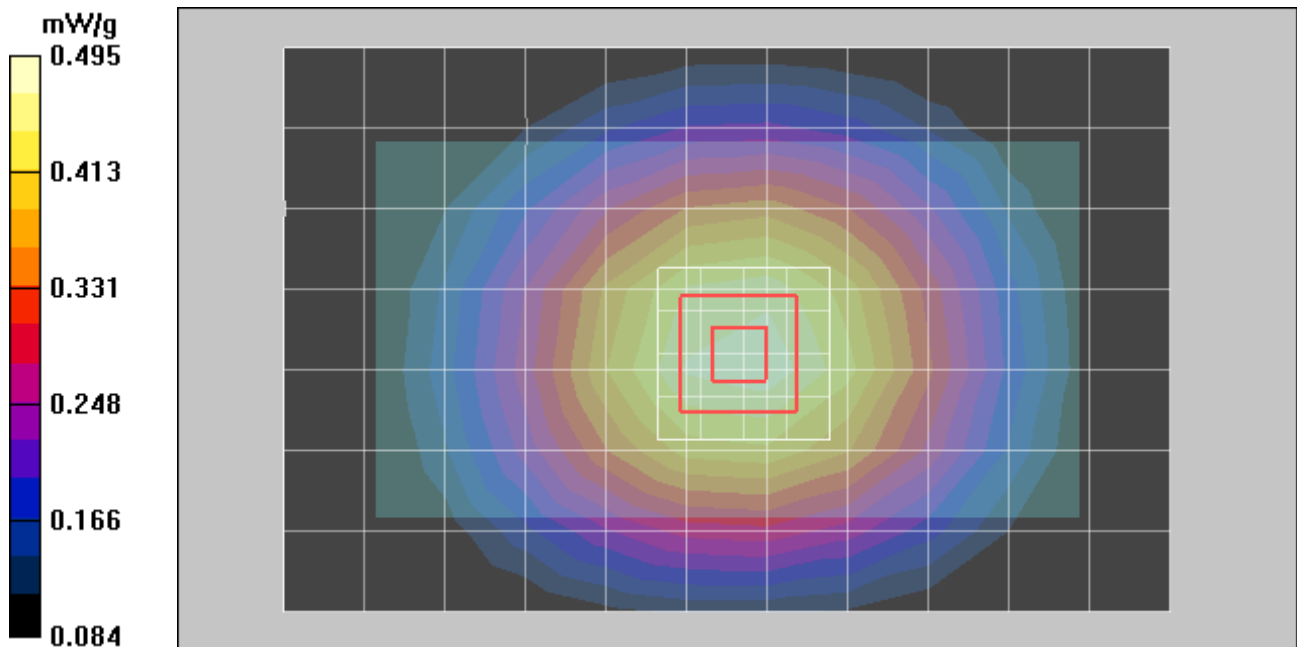
Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 0.489 mW/g

Triple Flat Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 22.3 V/m ; Power Drift = -0.056 dB ; Peak SAR (extrapolated) = 0.589 W/kg

SAR(1 g) = 0.470 mW/g ; SAR(10 g) = 0.352 mW/g ; Maximum value of SAR (measured) = 0.495 mW/g



Date/Time: 9/3/2011 9:04:08 AM

Test Laboratory: Motorola - GSM 1900 Body-Worn

Serial: LS3A280035 ; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 0; Antenna Position: Internal; Battery Model #: Internal

Device Position: Body worn, Back of Phone 25 mm from Phantom

Communication System: GSM 1900; Frequency: 1880 MHz; Channel Number: 661; Duty Cycle: 1:8.3

Medium: Regular Glycol Body 1750/1880

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.57$ mho/m; $\epsilon_r = 50.7$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 _ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1):

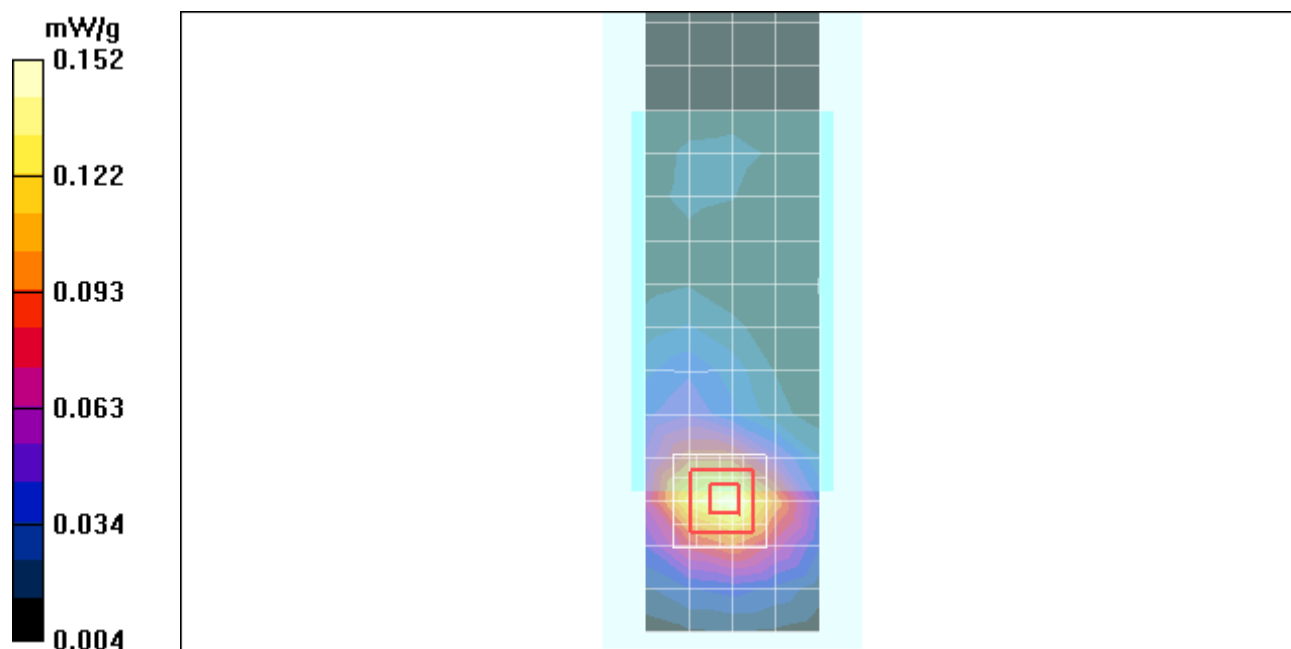
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.152 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 8.71 V/m; Power Drift = -0.115 dB; Peak SAR (extrapolated) = 0.216 W/kg

SAR(1 g) = 0.140 mW/g; SAR(10 g) = 0.086 mW/g



Date/Time: 8/25/2011 8:54:25 AM

Test Laboratory: Motorola - WCDMA 1900 Body-Worn

Serial: LS3A280035 ; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: All up Bits; Antenna Position: Internal; Battery Model #: Internal

Device Position: Body Worn, Back of Phone 25 mm from Phantom

Communication System: WCDMA 1900; Frequency: 1880 MHz; Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880

Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.57 \text{ mho/m}$; $\epsilon_r = 51$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 _ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1):

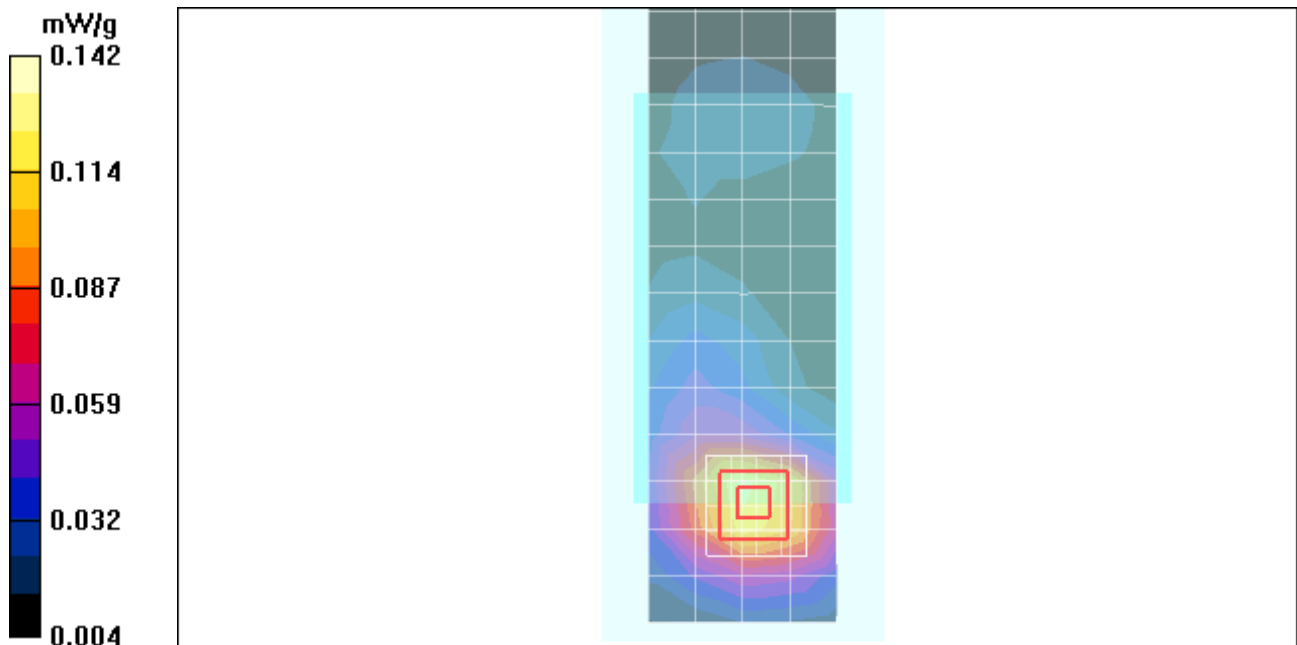
Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$; Maximum value of SAR (measured) = 0.128 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 9.38 V/m ; Power Drift = 0.049 dB ; Peak SAR (extrapolated) = 0.200 W/kg

SAR(1 g) = 0.132 mW/g ; SAR(10 g) = 0.082 mW/g ; Maximum value of SAR (measured) = 0.142 mW/g



Test Laboratory: Motorola Mobility 2450 MHz WiFi Body Worn

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 802.11b 1Mbps Chn 11 Battery Model #: INTERNAL Test Configuration = Front Surface 25mm from Phantom

Communication System: Wi-Fi 2450; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: 2450 Glycol Body; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.12, 4.12, 4.12); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Area Scan - Normal Body (15mm) (13x8x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.037 mW/g

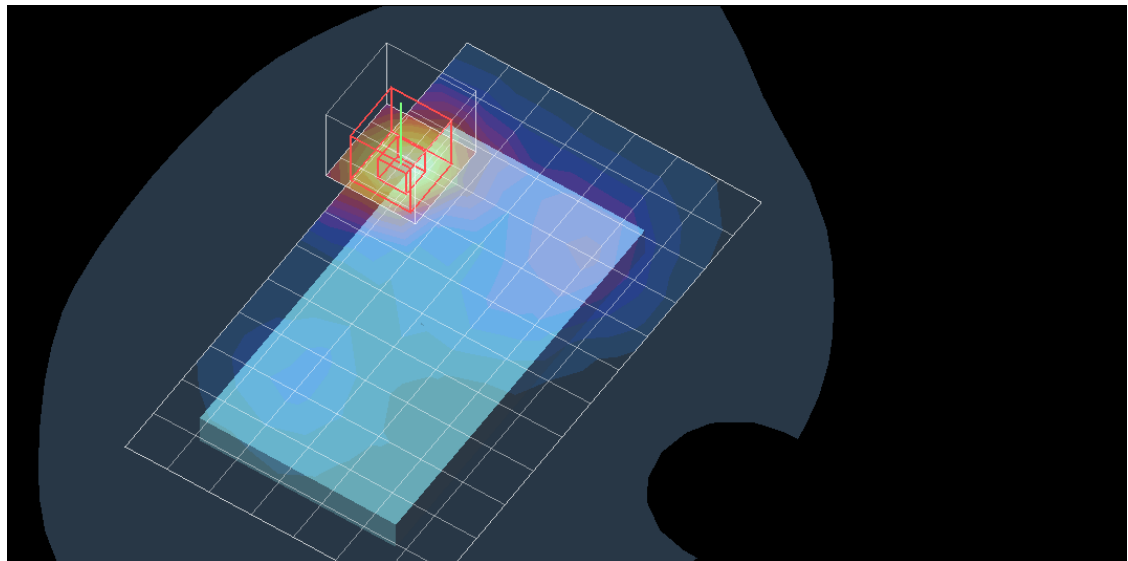
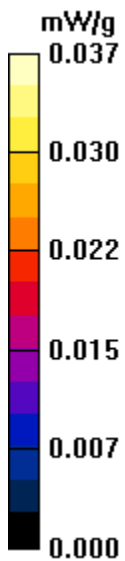
SAM Phone Against Flat Section/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.61 V/m; Power Drift = -0.037 dB

Peak SAR (extrapolated) = 0.065 W/kg

SAR(1 g) = 0.034 mW/g; SAR(10 g) = 0.018 mW/g



Test Laboratory: Motorola 5GHz WiFi 5210 MHz Body Worn

DUT: Serial: LS3A290053, FCC ID: IHDP56ME2

Procedure Notes: 802.11a 6 Mbps Battery Model #: INTERNAL Test Configuration = BACK of Phone 25mm from Phantom

Communication System: 5210MHz Band - 802.11a; Frequency: 5180 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue BODY; Medium parameters used: $f = 5210$ MHz; $\sigma = 5.93$ mho/m; $\epsilon_r = 48.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(4.16, 4.16, 4.16); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

TRIPLE Flat Phone Against Flat Section/Phone Area Scan - Normal Body (10mm) (17x10x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.309 mW/g

TRIPLE Flat Phone Against Flat Section/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0:

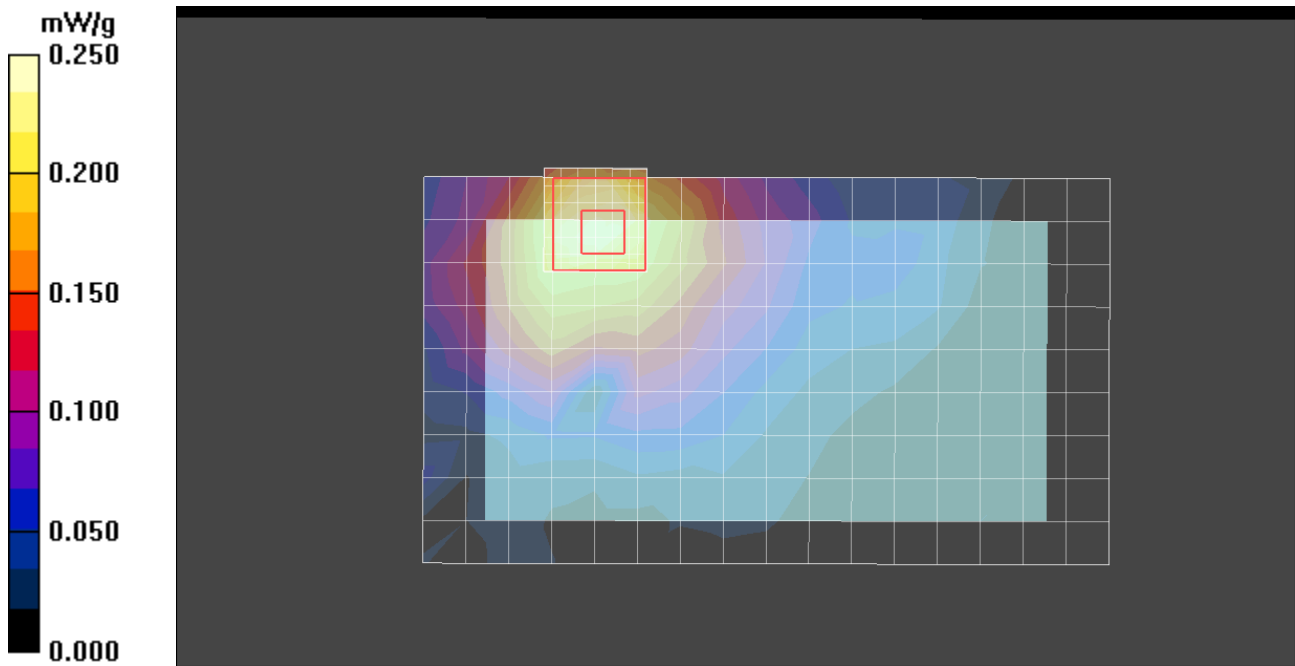
Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 6.90 V/m; Power Drift = -0.130 dB

Peak SAR (extrapolated) = 0.448 W/kg

SAR(1 g) = 0.137 mW/g; SAR(10 g) = 0.058 mW/g

Maximum value of SAR (measured) = 0.250 mW/g



Test Laboratory: Motorola 5GHz WiFi 5290 MHz Body Worn

DUT: Serial: LS3A290053, FCC ID: IHDP56ME2

Procedure Notes: 802.11n 7.2 Mbps Battery Model #: Internal Test Configuration: Back of Phone 25mm from Phantom

Communication System: 5290MHz Band - 802.11a; Frequency: 5300 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue BODY; Medium parameters used: $f = 5290$ MHz; $\sigma = 6.05$ mho/m; $\epsilon_r = 48.6$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(3.91, 3.91, 3.91); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

TRIPLE Flat Phone Against Flat Section/Phone Area Scan - Normal Body (10mm) (17x10x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.139 mW/g

TRIPLE Flat Phone Against Flat Section/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0:

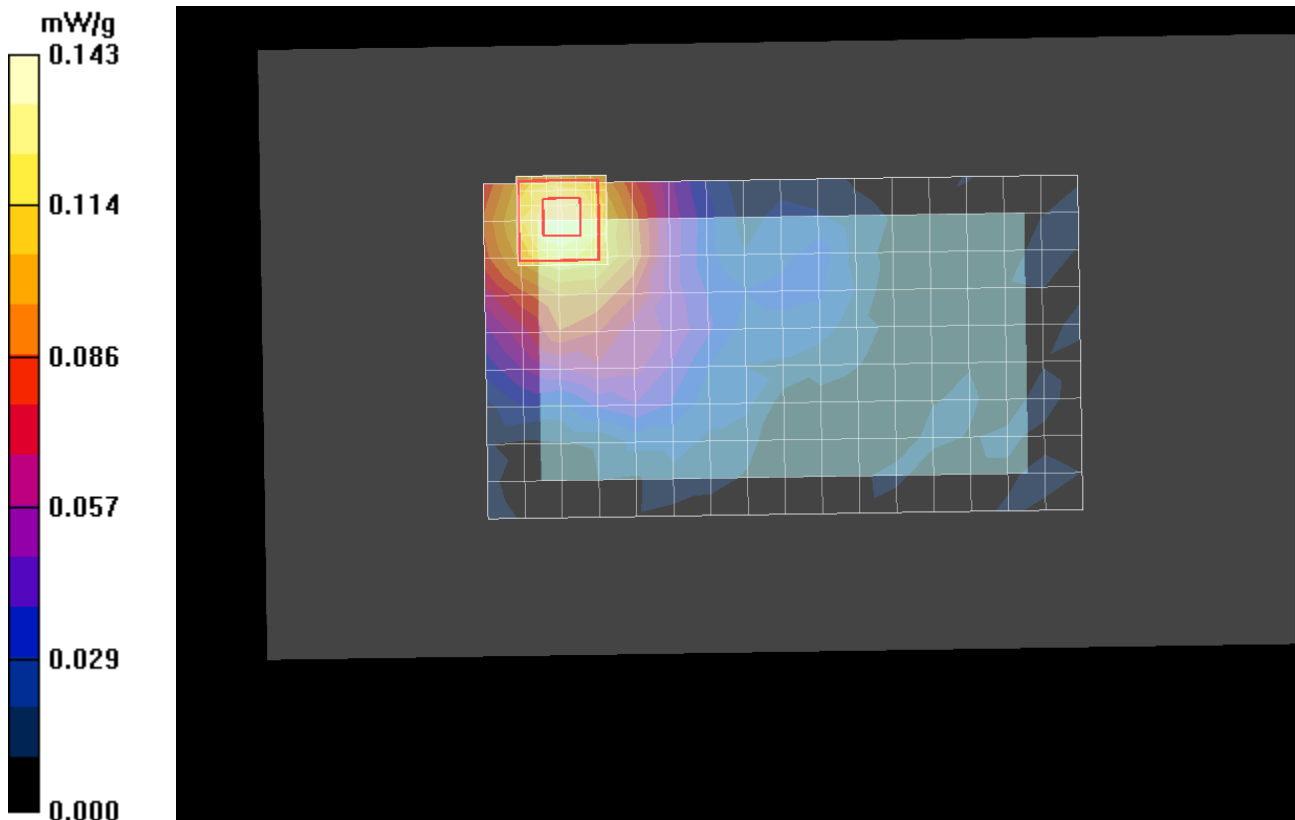
Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 5.36 V/m; Power Drift = -0.416 dB

Peak SAR (extrapolated) = 0.307 W/kg

SAR(1 g) = 0.083 mW/g; SAR(10 g) = 0.037 mW/g

Maximum value of SAR (measured) = 0.143 mW/g



Test Laboratory: Motorola 5GHz WiFi 5600 MHz Body Worn

DUT:Serial: LS3A2X0004, FCC ID: IHDP56ME2

Procedure Notes: 802.11n 7.2 Mbps Battery Model #: INTERNAL Test Configuration: BACK OF PHONE 25MM FROM PHANTOM

Communication System: 5600MHz Band - 802.11a; Frequency: 5500 MHz;Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue BODY; Medium parameters used: $f = 5600$ MHz; $\sigma = 6.48$ mho/m; $\epsilon_r = 47.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(3.41, 3.41, 3.41); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R3 Triple Flat Phantom 5.1C (Rev.3); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

TRIPLE Flat Phone Against Flat Section/Phone Area Scan - Normal Body (10mm) (17x10x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.049 mW/g

TRIPLE Flat Phone Against Flat Section/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0:

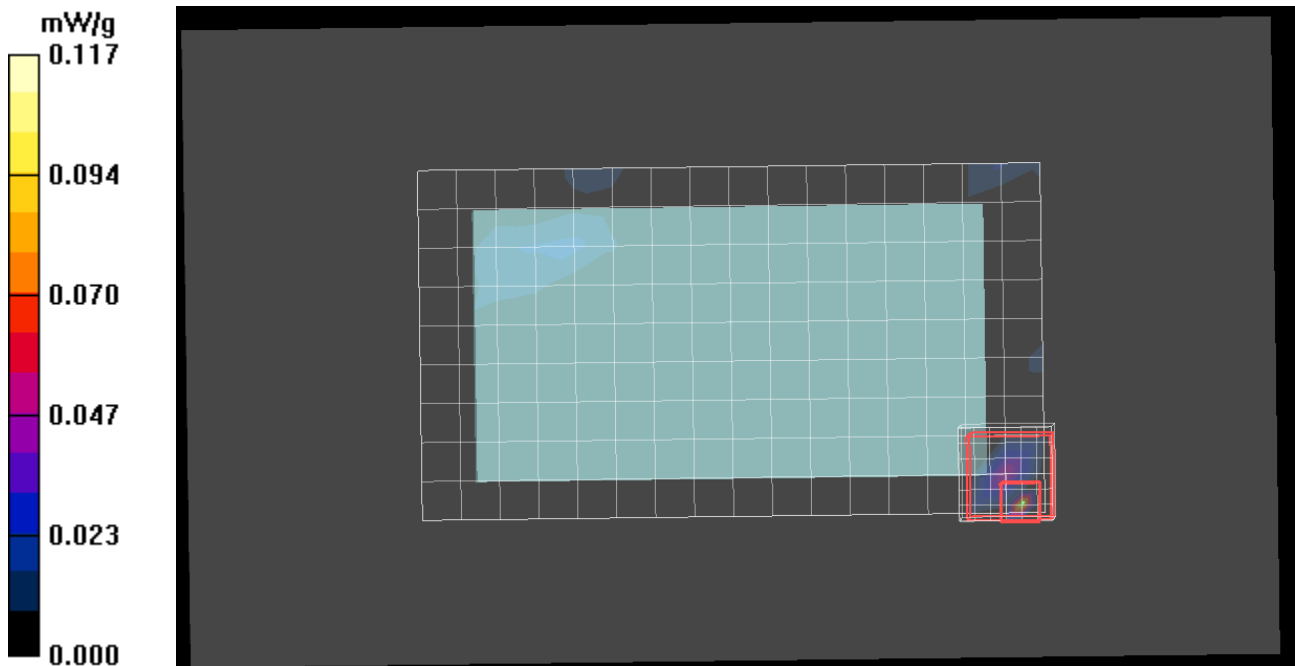
Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 1.93 V/m; Power Drift = -3.08 dB

Peak SAR (extrapolated) = 0.117 W/kg

SAR(1 g) = 0.000537 mW/g; SAR(10 g) = 5.38e-005 mW/g

Maximum value of SAR (measured) = 0.117 mW/g



Test Laboratory: Motorola 5GHz WiFi 5785 MHz Body Worn

DUT: Serial: LS3A290053, FCC ID: IHDP56ME2

Procedure Notes: 802.11n 6.5 Mbps Battery Model #: INTERNAL Test Configuration = BACK of Phone 25mm from Phantom

Communication System: 5785MHz Band - 802.11a; Frequency: 5745 MHz; Duty Cycle: 1:1

Medium: 5-6 GHz SPEAG Tissue BODY; Medium parameters used: $f = 5785$ MHz; $\sigma = 6.79$ mho/m; $\epsilon_r = 47.5$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: EX3DV4 - SN3728; ConvF(3.76, 3.76, 3.76); Calibrated: 5/20/2011
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn440; Calibrated: 11/11/2010
- Phantom: R#3 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

TRIPLE Flat Phone Against Flat Section/Phone Area Scan - Normal Body (10mm) (17x10x1):

Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.114 mW/g

TRIPLE Flat Phone Against Flat Section/7x7x12 Zoom Scan (5-6GHz) (7x7x6)/Cube 0:

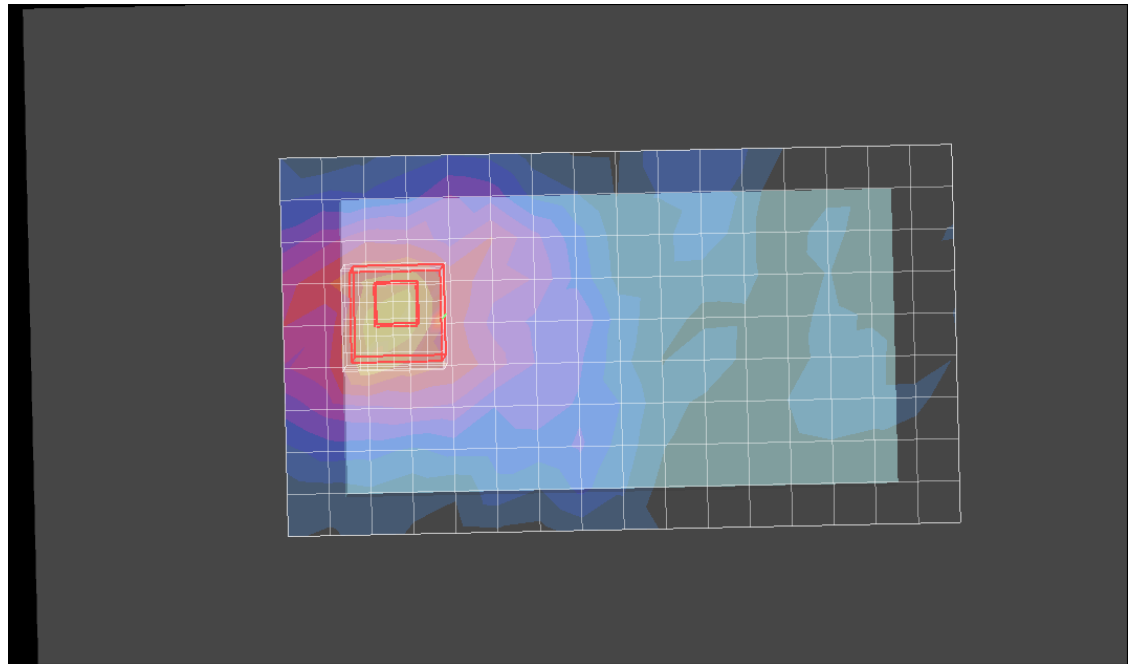
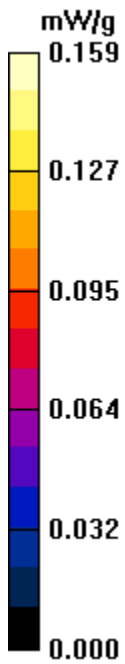
Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 4.25 V/m; Power Drift = 0.053 dB

Peak SAR (extrapolated) = 0.987 W/kg

SAR(1 g) = 0.081 mW/g; SAR(10 g) = 0.021 mW/g

Maximum value of SAR (measured) = 0.159 mW/g



Appendix 4

SAR distribution plots for Lapdock Accessory Test Results

Date/Time: 9/19/2011 6:21:00 PM

Test Laboratory: Motorola - GSM 850 with Lapdock

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 5; Antenna Position: Internal; Battery Model #: Internal

Device Position: Body-Adjacent with Lapdock, Bottom Surface 0 mm from Phantom

Communication System: GPRS 850 CI 11; Frequency: 836.6 MHz; Channel Number: 190; Duty Cycle: 1:2.76

Medium: Big Body

Medium parameters used: $f = 835$ MHz; $\sigma = 0.99$ mho/m; $\epsilon_r = 55.7$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.88, 5.88, 5.88); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Tablet Long Edge Area Scan - Body (15mm) (21x8x1):

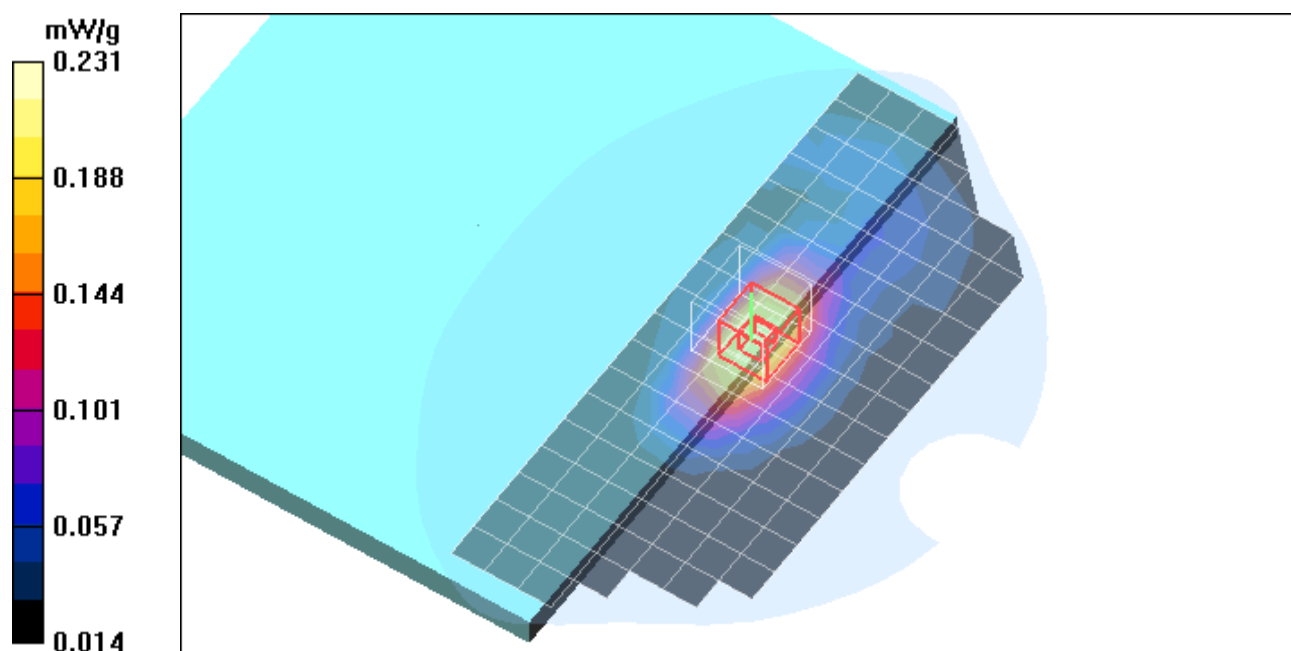
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.209 mW/g

SAM Phone Against Flat Section/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 15.4 V/m; Power Drift = 0.007 dB; Peak SAR (extrapolated) = 0.305 W/kg

SAR(1 g) = 0.216 mW/g; SAR(10 g) = 0.144 mW/g; Maximum value of SAR (measured) = 0.231 mW/g



Date/Time: 9/19/2011 5:56:32 PM

Test Laboratory: Motorola - WCDMA 850 with Lapdock

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: All up Bits; Antenna Position: Internal; Battery Model #: Internal

Device Position: Body-Adjacent with Lapdock, Bottom Surface 0 mm from Phantom

Communication System: WCDMA 850; Frequency: 836 MHz; Channel Number: 4180; Duty Cycle: 1:1

Medium: Big Body

Medium parameters used: $f = 835$ MHz; $\sigma = 0.99$ mho/m; $\epsilon_r = 55.7$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.88, 5.88, 5.88); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Tablet Long Edge Area Scan - Body (15mm) (21x8x1):

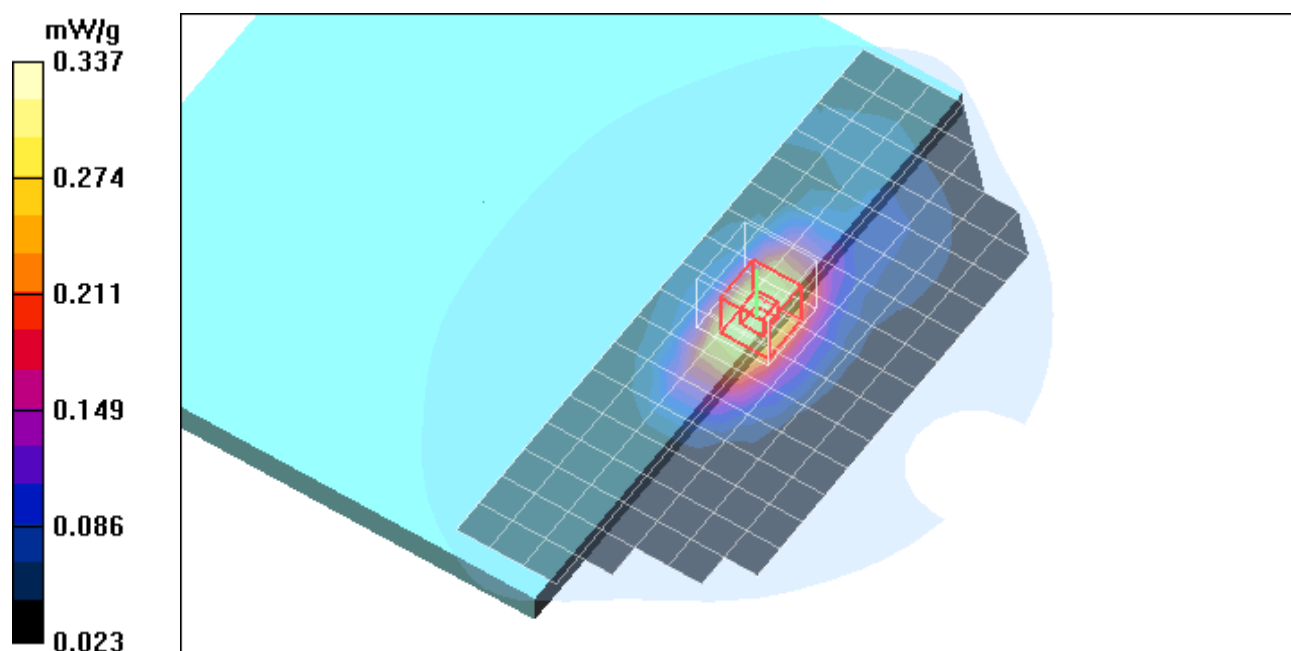
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.298 mW/g

SAM Phone Against Flat Section/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 18.9 V/m; Power Drift = -0.170 dB; Peak SAR (extrapolated) = 0.443 W/kg

SAR(1 g) = 0.315 mW/g; SAR(10 g) = 0.210 mW/g; Maximum value of SAR (measured) = 0.337 mW/g



Date/Time: 9/19/2011 2:45:29 PM

Test Laboratory: Motorola - GSM 1900 with Lapdock

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 0; Antenna Position: Internal; Battery Model #: Internal

Device Position: Body-Adjacent with Lapdock, Bottom Surface 0 mm from Phantom

Communication System: GPRS 1900 CI 11; Frequency: 1880 MHz; Channel Number: 661; Duty Cycle: 1:2.76

Medium: Regular Glycol Body 1750/1880

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 51.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.61, 4.61, 4.61); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Tablet Long Edge Area Scan - Body (15mm) (21x8x1):

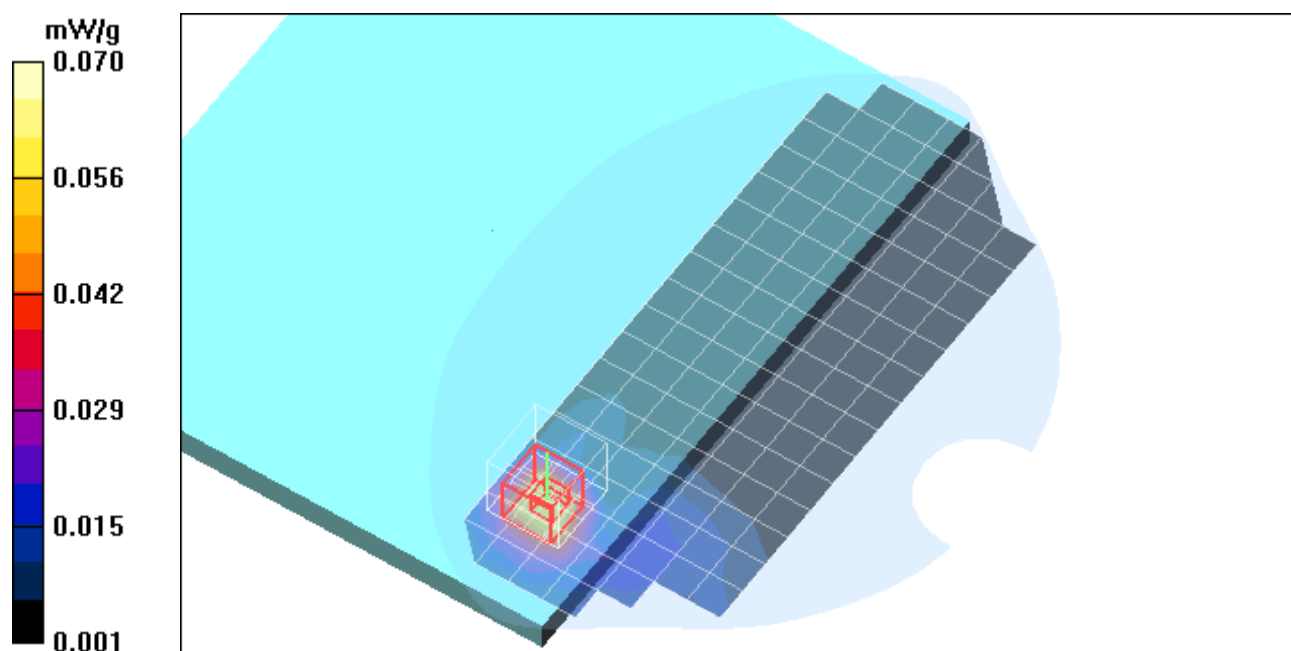
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.055 mW/g

SAM Phone Against Flat Section/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 3.02 V/m; Power Drift = 0.013 dB; Peak SAR (extrapolated) = 0.103 W/kg

SAR(1 g) = 0.064 mW/g; SAR(10 g) = 0.036 mW/g; Maximum value of SAR (measured) = 0.070 mW/g



Date/Time: 9/19/2011 4:57:41 PM

Test Laboratory: Motorola - WCDMA 1900 with Lapdock

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: All up bits; Antenna Position: Internal; Battery Model #: Internal

Device Position: Body-Adjacent with Lapdock, Bottom Surface 0 mm from Phantom

Communication System: WCDMA 1900; Frequency: 1880 MHz; Channel Number: 9400; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 51.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.61, 4.61, 4.61); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Tablet Long Edge Area Scan - Body (15mm) (21x8x1):

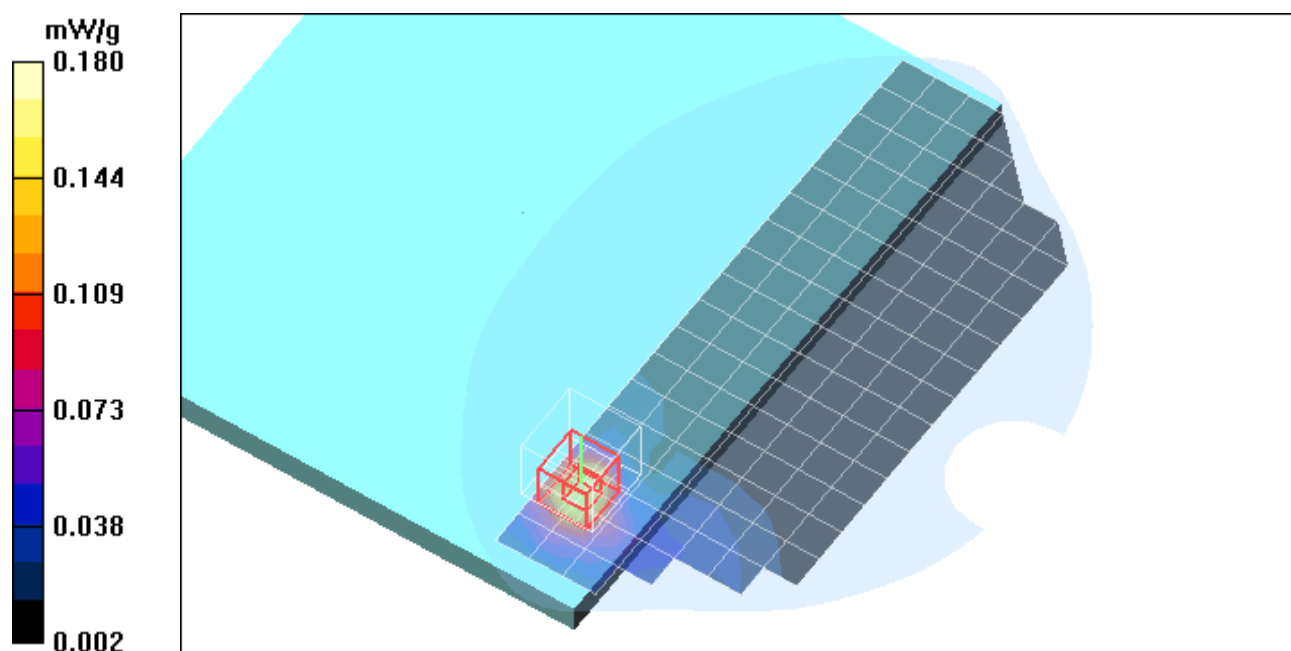
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.161 mW/g

SAM Phone Against Flat Section/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 4.86 V/m; Power Drift = -0.148 dB; Peak SAR (extrapolated) = 0.267 W/kg

SAR(1 g) = 0.166 mW/g; SAR(10 g) = 0.094 mW/g; Maximum value of SAR (measured) = 0.180 mW/g



Date/Time: 9/19/2011 8:32:28 PM

Test Laboratory: Motorola - Wi-Fi 2450 with Lapdock

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: Antenna Position: Internal; Battery Model #: Internal

Device Position: Body-Adjacent with Lapdock, Bottom Surface 0 mm from Phantom

Device Mode: 802.11b mode, 1 Mbps data rate

Communication System: Wi-Fi 2450; Frequency: 2462 MHz; Channel Number: 11; Duty Cycle: 1:1

Medium: 2450 Glycol Body

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 52$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.12, 4.12, 4.12); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Tablet Long Edge Area Scan - Body (15mm) (21x8x1):

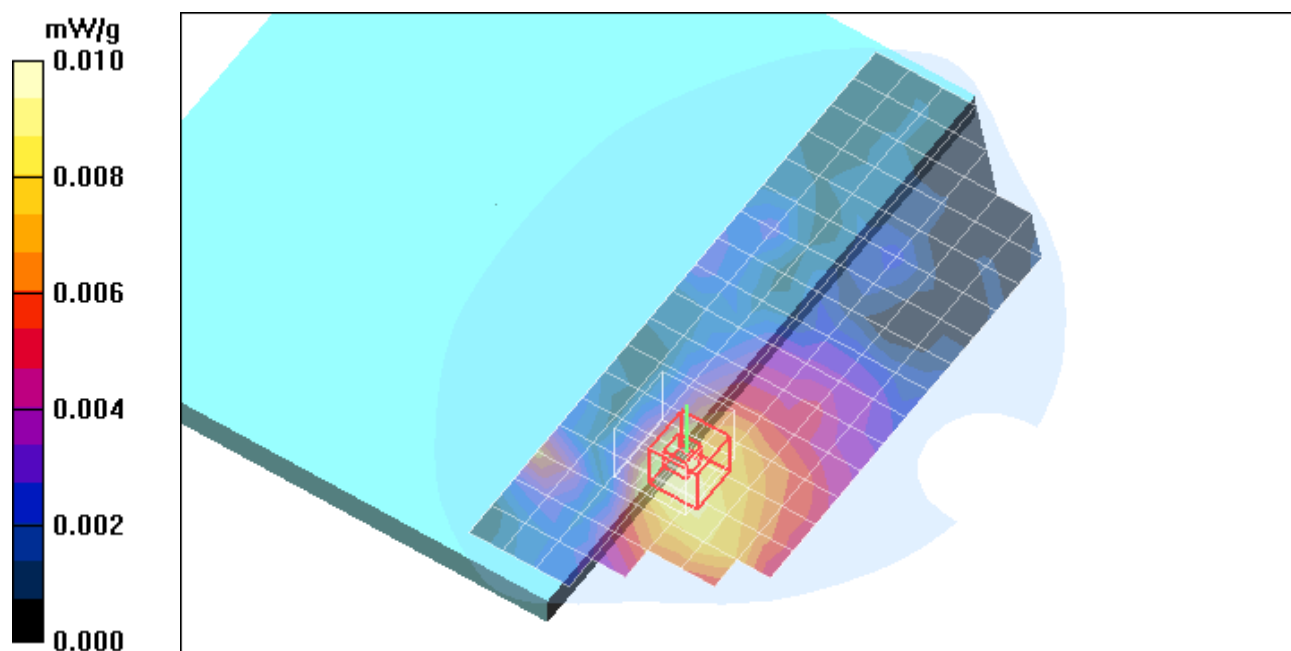
Measurement grid: $dx=15$ mm, $dy=15$ mm; Maximum value of SAR (measured) = 0.009 mW/g

SAM Phone Against Flat Section/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 2.05 V/m; Power Drift = -0.135 dB; Peak SAR (extrapolated) = 0.021 W/kg

SAR(1 g) = 0.00891 mW/g; SAR(10 g) = 0.00513 mW/g; Maximum value of SAR (measured) = 0.010 mW/g



Appendix 5

SAR distribution plots for Mobile Hotspot Test Results

Test Laboratory: Motorola GPRS 850 Mobile Hotspot - Bottom Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 5 Battery Model #: INTERNAL Test Configuration = BOTTOM EDGE OF PHONE
10MM FROM PHANTOM

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:2.76

Medium: Low Freq Body; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid:
 $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.032 mW/g

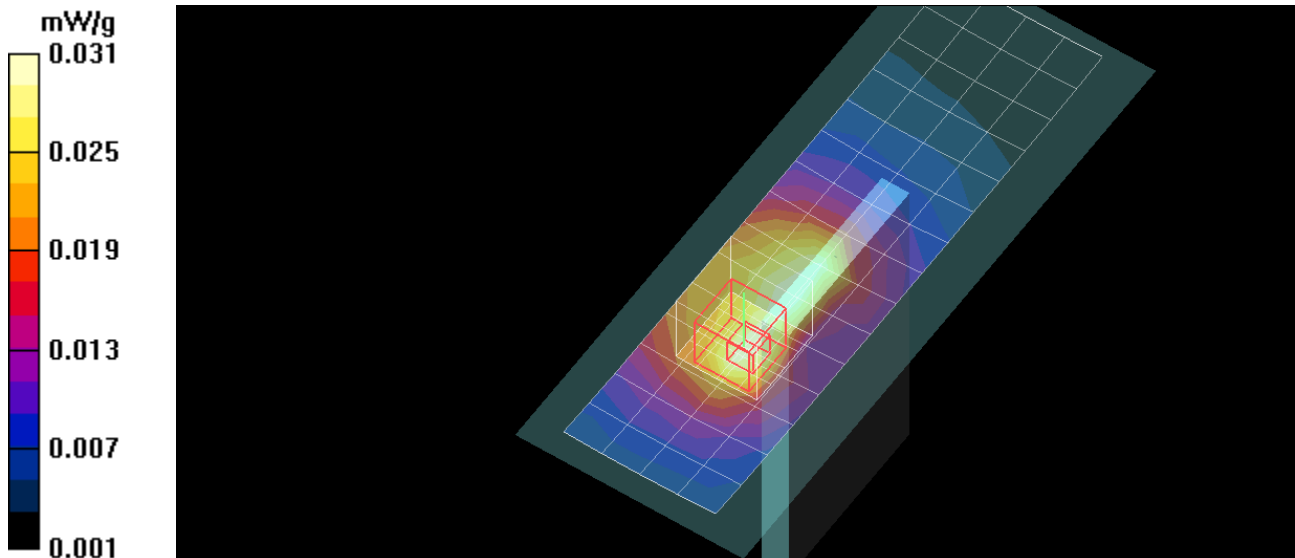
Amy Twin Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$,
 $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 5.80 V/m; Power Drift = -0.120 dB

Peak SAR (extrapolated) = 0.050 W/kg

SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.018 mW/g

Maximum value of SAR (measured) = 0.031 mW/g



Test Laboratory: Motorola Mobility WCDMA 850 Mobile Hotspot - Bottom Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: ALL UP BITS Battery Model #: INTERNAL Test Configuration = bottom edge 10mm from phantom

Communication System: 3G-WCDMA 850; Frequency: 836 MHz; Duty Cycle: 1:1

Medium: Low Freq Body; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 53.8$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.88, 5.88, 5.88); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#_6 - Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Triple Flat Phone Template/Tablet Short Edge Area Scan - Body (15mm) (15x6x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.040 mW/g

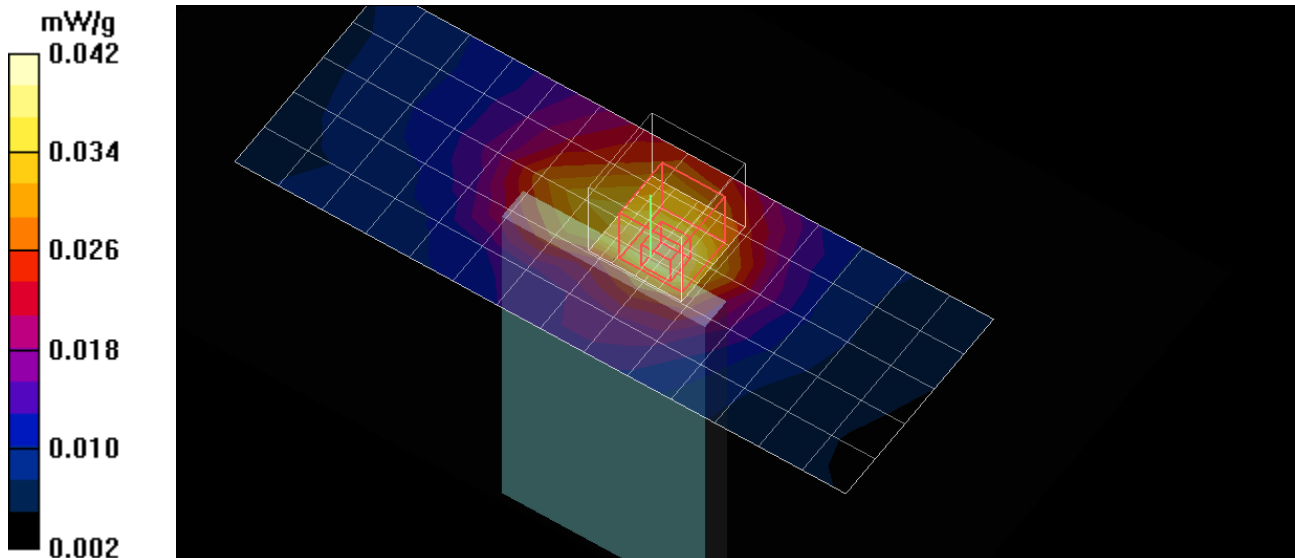
Triple Flat Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 6.49 V/m; Power Drift = 0.141 dB

Peak SAR (extrapolated) = 0.068 W/kg

SAR(1 g) = 0.039 mW/g; SAR(10 g) = 0.024 mW/g

Maximum value of SAR (measured) = 0.042 mW/g



Test Laboratory: Motorola Mobility - GPRS 1900 Mobile Hotspot - Bottom Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 0 Battery Model #:internal Test Configuration = BOTTOM EDGE OF PHONE 10MM FROM PHANTOM

Communication System: GPRS 1900 - Class 8; Frequency: 1880 MHz; Duty Cycle: 1:2.76

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 50.7$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.399 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm,

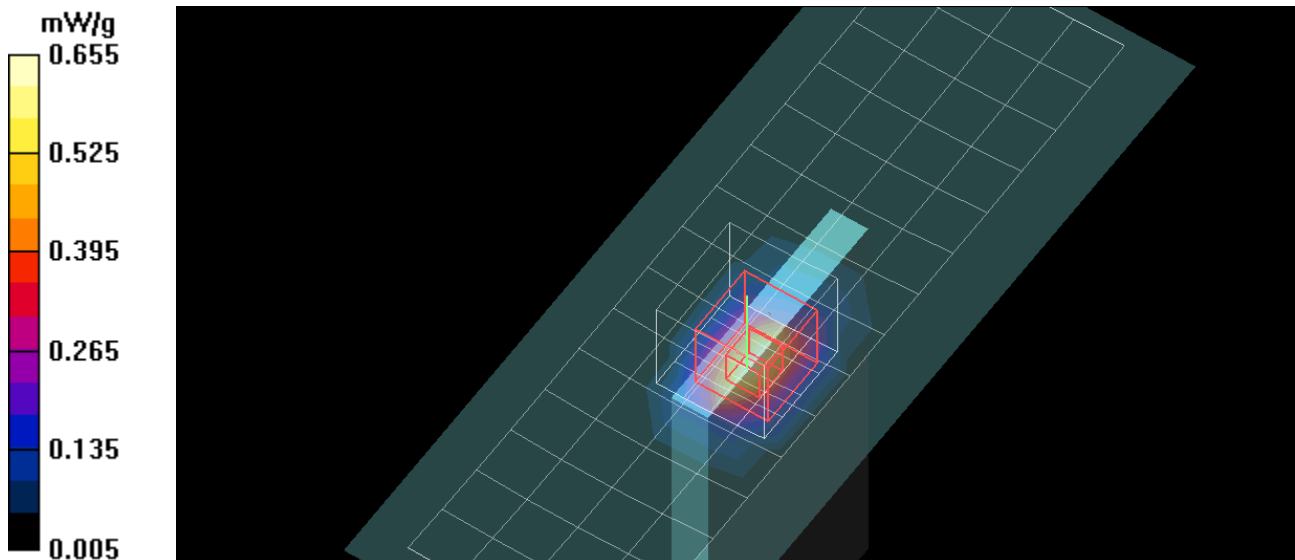
dy=8mm, dz=5mm

Reference Value = 15.6 V/m; Power Drift = 0.043 dB

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.575 mW/g; SAR(10 g) = 0.283 mW/g

Maximum value of SAR (measured) = 0.655 mW/g



Test Laboratory: Motorola WCDMA 1900 Mobile Hotspot - Bottom Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: ALWAYS UP Battery Model #: INTERNAL Test Configuration =BODY, BOTTOM
EDGE OF PHONE 10MM FROM PHANTOM

Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 51.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.23 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm,

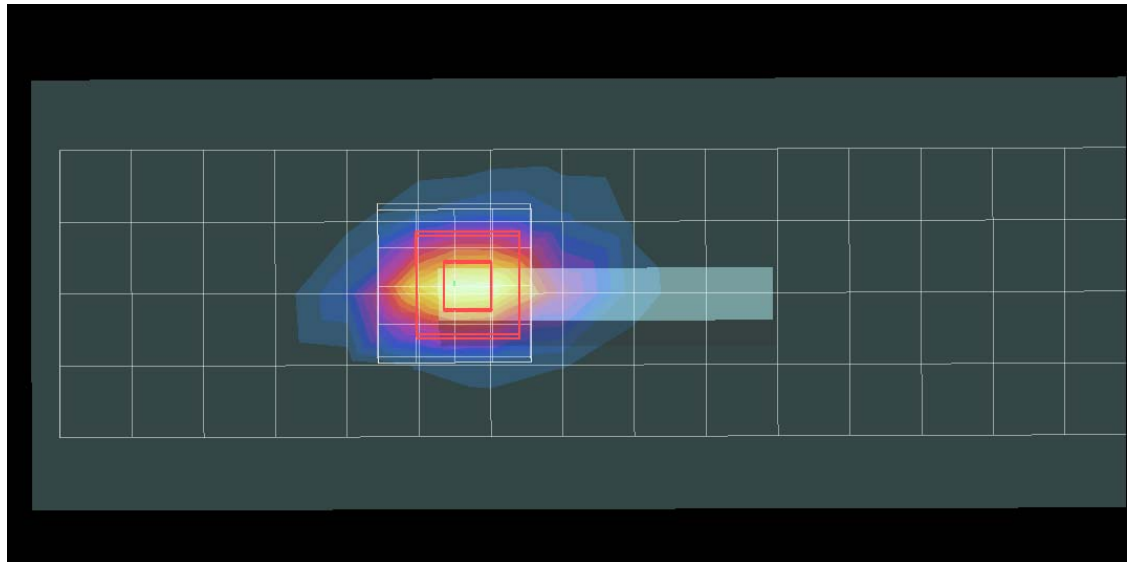
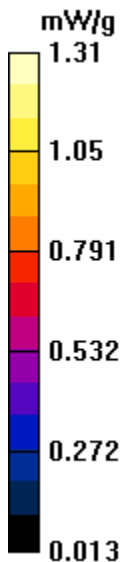
dy=8mm, dz=5mm

Reference Value = 27.1 V/m; Power Drift = 0.016 dB

Peak SAR (extrapolated) = 2.08 W/kg

SAR(1 g) = 1.16 mW/g; SAR(10 g) = 0.580 mW/g

Maximum value of SAR (measured) = 1.31 mW/g



Test Laboratory: Motorola Mobility 2450 MHz WiFi Mobile Hotspot - Bottom Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: 802.11b 1 Mbps Chn 11 Battery Model #: INTERNAL Test Configuration = Bottom Edge
10mm from Phantom

Communication System: IEEE 802.11b WiFi 2.4 GHz; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: 2450 Glycol Body; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.21, 4.21, 4.21); Calibrated: 8/23/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.3); Type: QD 000 P51 CA; Serial: n/a;
- SEMCAD X Version 14.4.5 (3634)

DASY5, Triple Flat Phone Template - Rev.3 (19-Sept-11)/Triple Flat Phone Template/Area Scan -

Normal Body (15mm) (12x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.024 mW/g

DASY5, Triple Flat Phone Template - Rev.3 (19-Sept-11)/Triple Flat Phone Template/5x5x7 Zoom

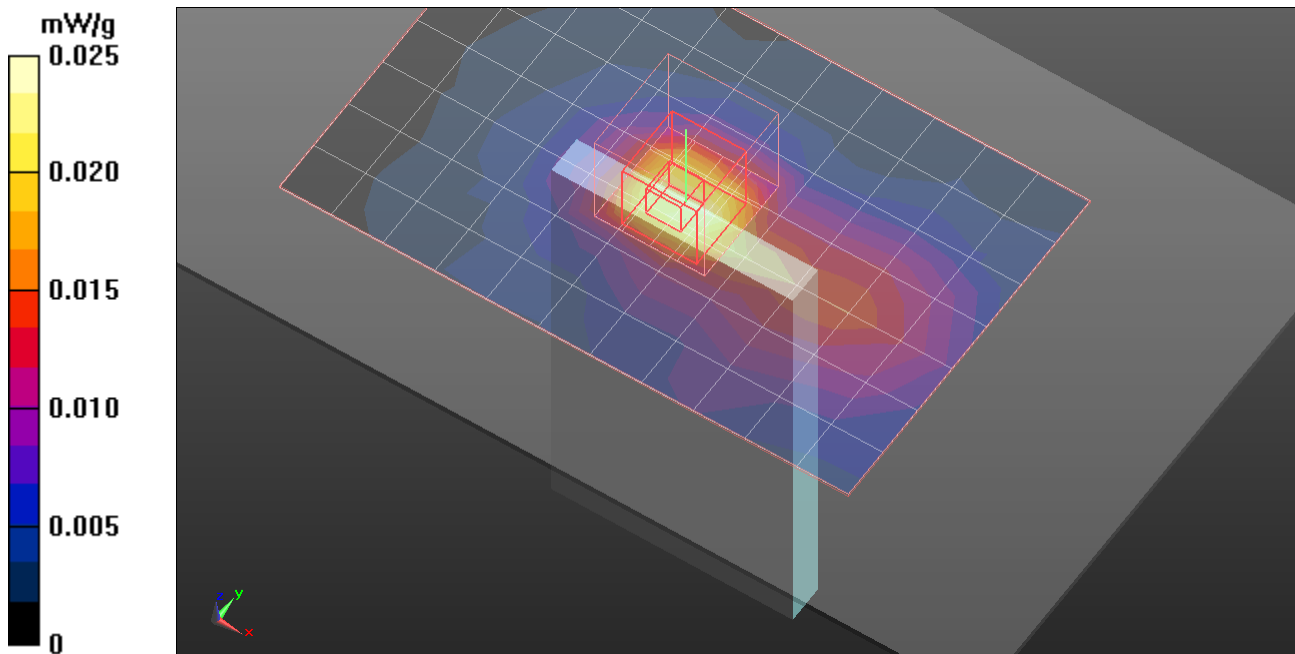
Scan (≤ 3 GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.285 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.041 W/kg

SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.025 mW/g



Test Laboratory: Motorola GPRS 850 Mobile Hotspot - Left Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 5 Battery Model #: INTERNAL Test Configuration = LEFT EDGE OF PHONE 10MM FROM PHANTOM

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:2.76

Medium: Low Freq Body; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.353 mW/g

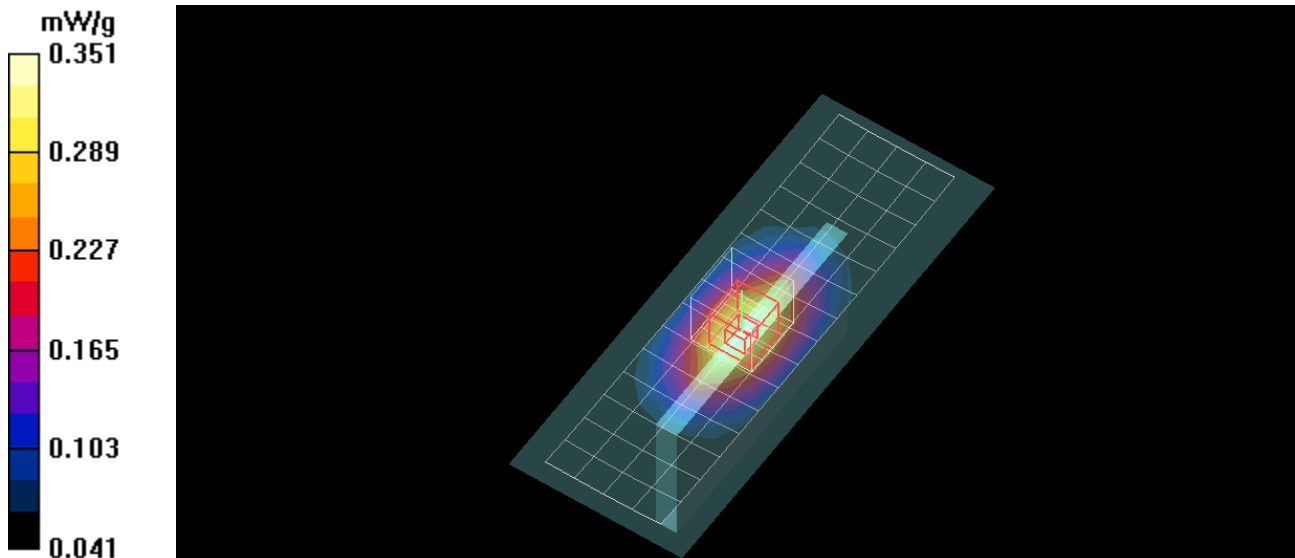
Amy Twin Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.6 V/m; Power Drift = -0.091 dB

Peak SAR (extrapolated) = 0.451 W/kg

SAR(1 g) = 0.329 mW/g; SAR(10 g) = 0.230 mW/g

Maximum value of SAR (measured) = 0.351 mW/g



Test Laboratory: Motorola Mobility - WCDMA 850 Mobile Hotspot - Left Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: ALL UP BITS Battery Model #: INTERNAL Test Configuration = left edge 10mm from phantom

Communication System: 3G-WCDMA 850; Frequency: 836 MHz; Duty Cycle: 1:1

Medium: Low Freq Body; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 53.8$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(5.88, 5.88, 5.88); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#_6 - Triple Flat Phantom 5.1; Type: Triple Flat Phantom 5.1;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Triple Flat Phone Template/Tablet Short Edge Area Scan - Body (15mm) (15x6x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.623 mW/g

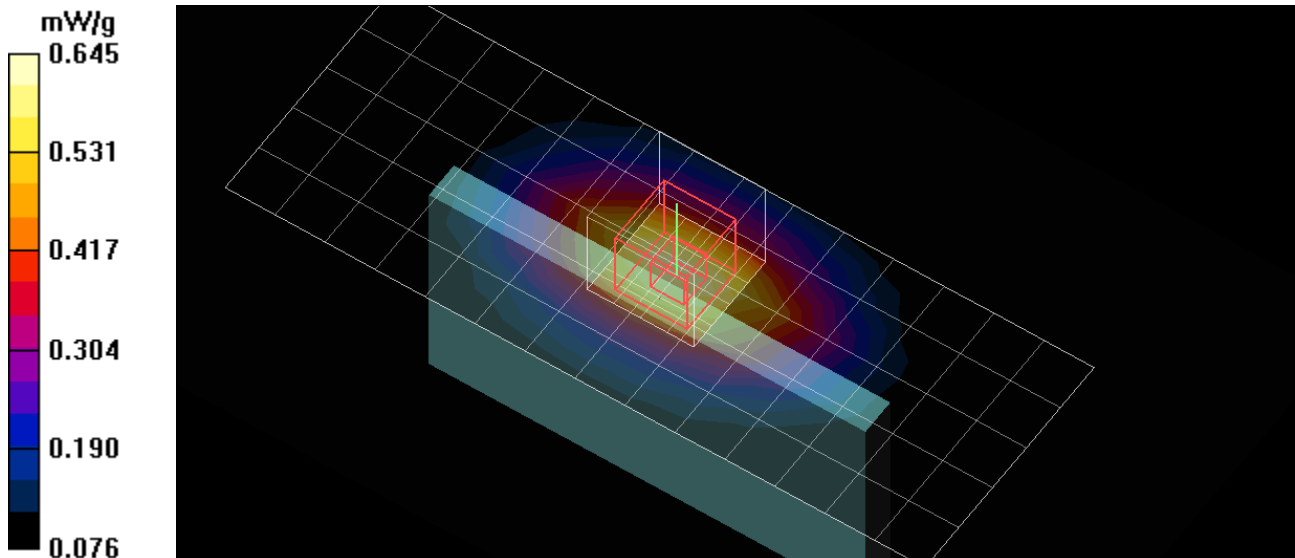
Triple Flat Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 25.3 V/m; Power Drift = -0.030 dB

Peak SAR (extrapolated) = 0.826 W/kg

SAR(1 g) = 0.603 mW/g; SAR(10 g) = 0.418 mW/g

Maximum value of SAR (measured) = 0.645 mW/g



Test Laboratory: Motorola GPRS 1900 Mobile Hotspot - Left Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 0 Battery Model #:internal Test Configuration = LEFT EDGE OF PHONE 10MM FROM PHANTOM

Communication System: GPRS 1900 - Class 8; Frequency: 1880 MHz; Duty Cycle: 1:2.76

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 50.7$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.017 mW/g

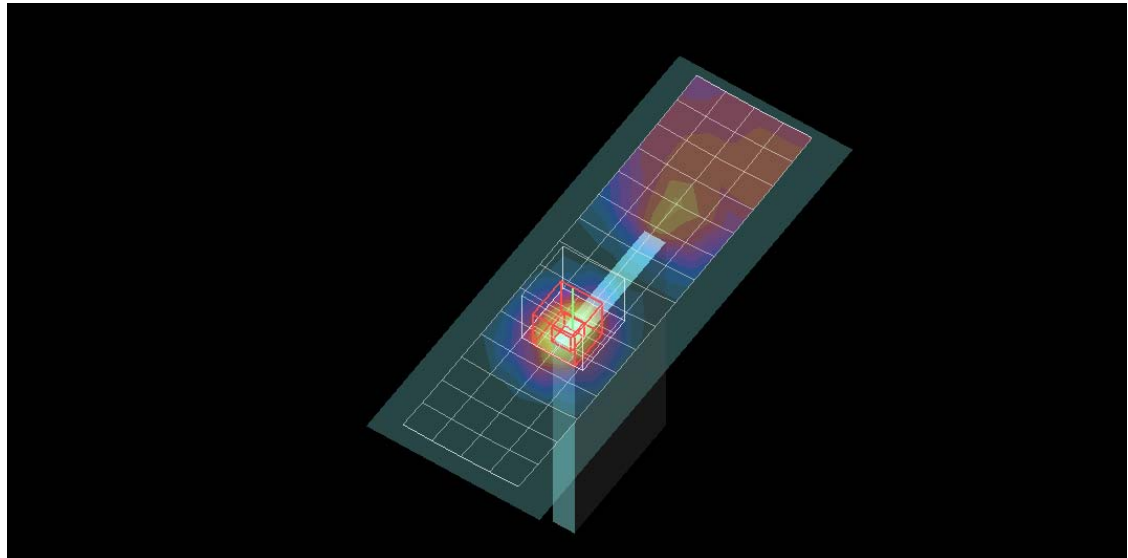
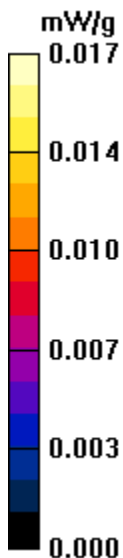
Amy Twin Phone Template/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm,

dy=8mm, dz=5mm

Reference Value = 3.09 V/m; Power Drift = -0.004 dB

Peak SAR (extrapolated) = 0.026 W/kg

SAR(1 g) = 0.016 mW/g; SAR(10 g) = 0.00916 mW/g



Test Laboratory: Motorola Mobility - WCDMA 1900 Mobile Hotspot - Left Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: ALL UP BITS Battery Model #: INTERNAL Test Configuration = Left Edge 10mm from Phantom

Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 50.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.61, 4.61, 4.61); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#6 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Triple Flat Phone Template/Area Scan - Extended Phone (15mm) (18x8x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.033 mW/g

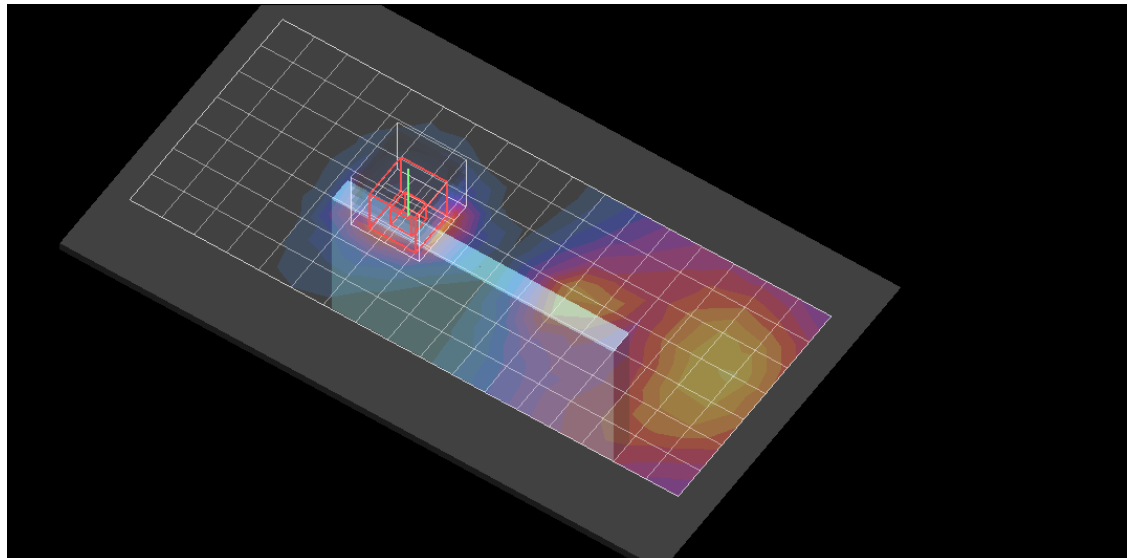
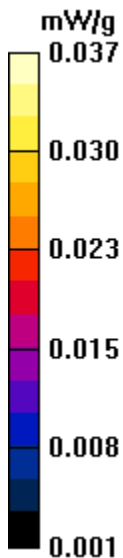
Triple Flat Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.61 V/m; Power Drift = -0.094 dB

Peak SAR (extrapolated) = 0.052 W/kg

SAR(1 g) = 0.033 mW/g; SAR(10 g) = 0.020 mW/g

Maximum value of SAR (measured) = 0.037 mW/g



Test Laboratory: Motorola GPRS 850 Mobile Hotspot - Right Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 5 Battery Model #: INTERNAL Test Configuration = RIGHT EDGE OF PHONE 10MM FROM PHANTOM

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:2.76

Medium: Low Freq Body; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.275 mW/g

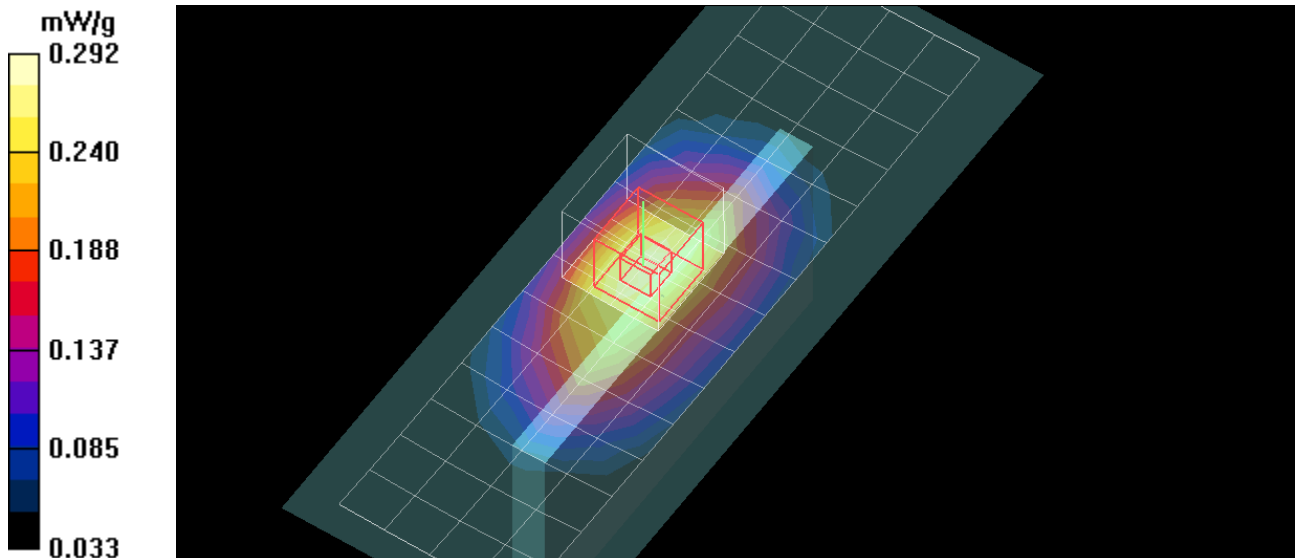
Amy Twin Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 16.9 V/m; Power Drift = -0.049 dB

Peak SAR (extrapolated) = 0.379 W/kg

SAR(1 g) = 0.274 mW/g; SAR(10 g) = 0.192 mW/g

Maximum value of SAR (measured) = 0.292 mW/g



Test Laboratory: Motorola Mobility - WCDMA 850 Mobile Hotspot - Right Edge

DUT: Serial: LS3A280035, FC ID: IHDP56ME2

Procedure Notes: Pwr Step: always up Battery Model #:internal Test Configuration = RIGHT EDGE OF PHONE
10MM FROM PHANTOM

Communication System: 3G-WCDMA 850; Frequency: 836 MHz; Duty Cycle: 1:1

Medium: Low Freq Body; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 54.1$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid:
 $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.325 mW/g

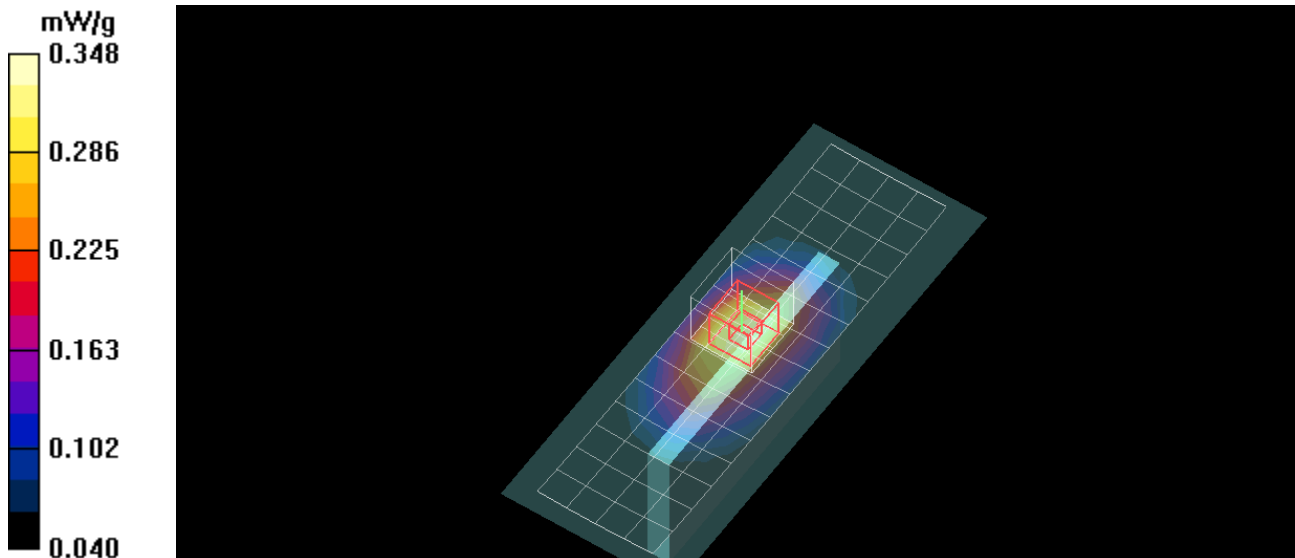
Amy Twin Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$,
 $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 18.7 V/m; Power Drift = 0.012 dB

Peak SAR (extrapolated) = 0.459 W/kg

SAR(1 g) = 0.326 mW/g; SAR(10 g) = 0.227 mW/g

Maximum value of SAR (measured) = 0.348 mW/g



Test Laboratory: Motorola Mobility - GPRS 1900 Mobile Hotspot - Right Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 0 Battery Model #:internal Test Configuration = RIGHT EDGE OF PHONE 10MM FROM PHANTOM

Communication System: GPRS 1900 - Class 8; Frequency: 1880 MHz; Duty Cycle: 1:2.76

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 50.7$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.080 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm,

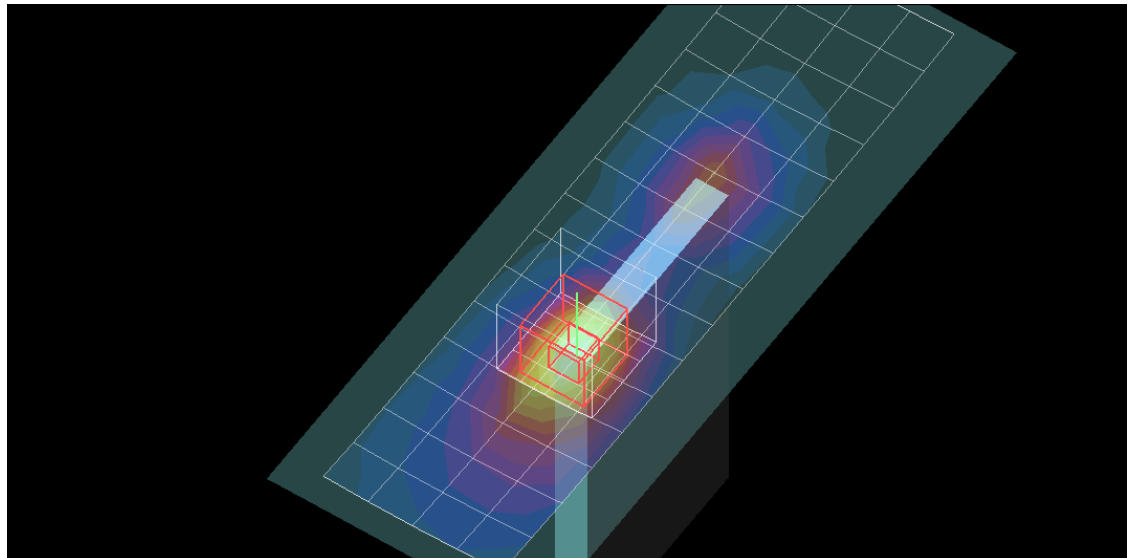
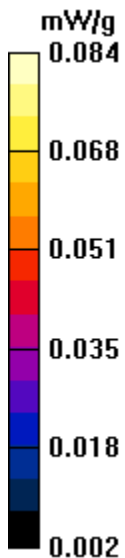
dy=8mm, dz=5mm

Reference Value = 6.93 V/m; Power Drift = -0.060 dB

Peak SAR (extrapolated) = 0.117 W/kg

SAR(1 g) = 0.076 mW/g; SAR(10 g) = 0.045 mW/g

Maximum value of SAR (measured) = 0.084 mW/g



Test Laboratory: Motorola Mobility - WCDMA 1900 Mobile Hotspot - Right Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: ALL UP BITS Battery Model #: INTERNAL Test Configuration = Right Edge 10mm from Phantom

Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 50.8$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.61, 4.61, 4.61); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#6 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Triple Flat Phone Template/Area Scan - Extended Phone (15mm) (18x8x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.158 mW/g

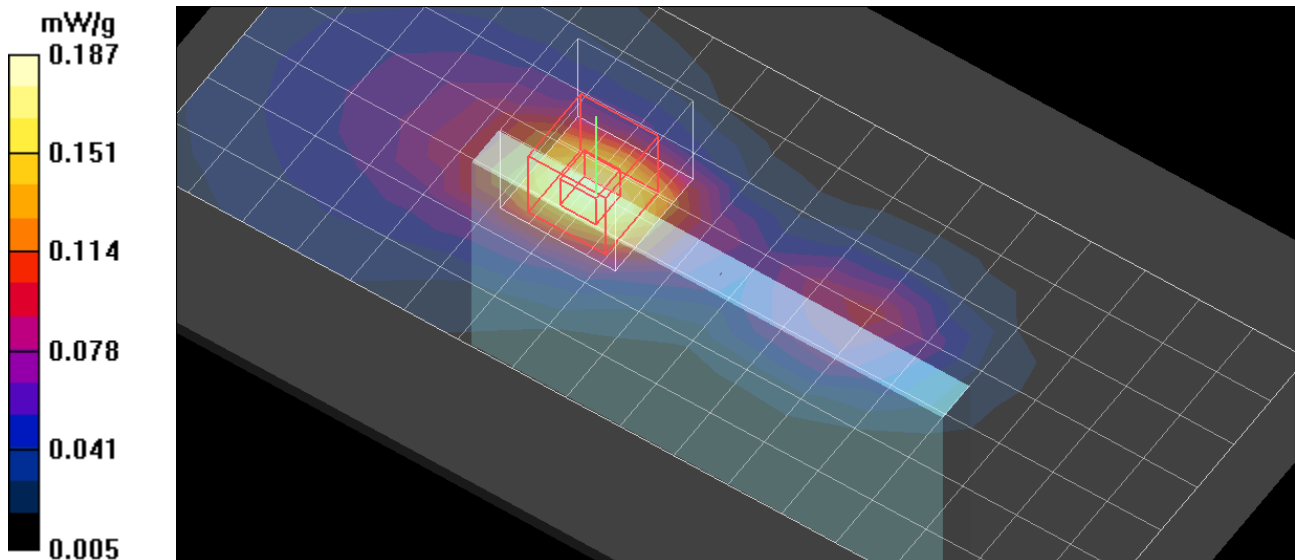
Triple Flat Phone Template/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 10.7 V/m; Power Drift = 0.120 dB

Peak SAR (extrapolated) = 0.265 W/kg

SAR(1 g) = 0.171 mW/g; SAR(10 g) = 0.103 mW/g

Maximum value of SAR (measured) = 0.187 mW/g



Test Laboratory: Motorola Mobility - 2450 MHz WiFi Mobile Hotspot - Right Edge

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: 802.11b 1 Mbps Chn 11 Battery Model #: INTERNAL Test Configuration = Right Edge 10mm from Phantom

Communication System: IEEE 802.11b WiFi 2.4 GHz; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: 2450 Glycol Body; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.21, 4.21, 4.21); Calibrated: 8/23/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.3); Type: QD 000 P51 CA; Serial: n/a;
- SEMCAD X Version 14.4.5 (3634)

DASY5, Triple Flat Phone Template - Rev.3 (19-Sept-11)/Triple Flat Phone Template/Area Scan -

Normal Body (15mm) (12x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.217 mW/g

DASY5, Triple Flat Phone Template - Rev.3 (19-Sept-11)/Triple Flat Phone Template/5x5x7 Zoom

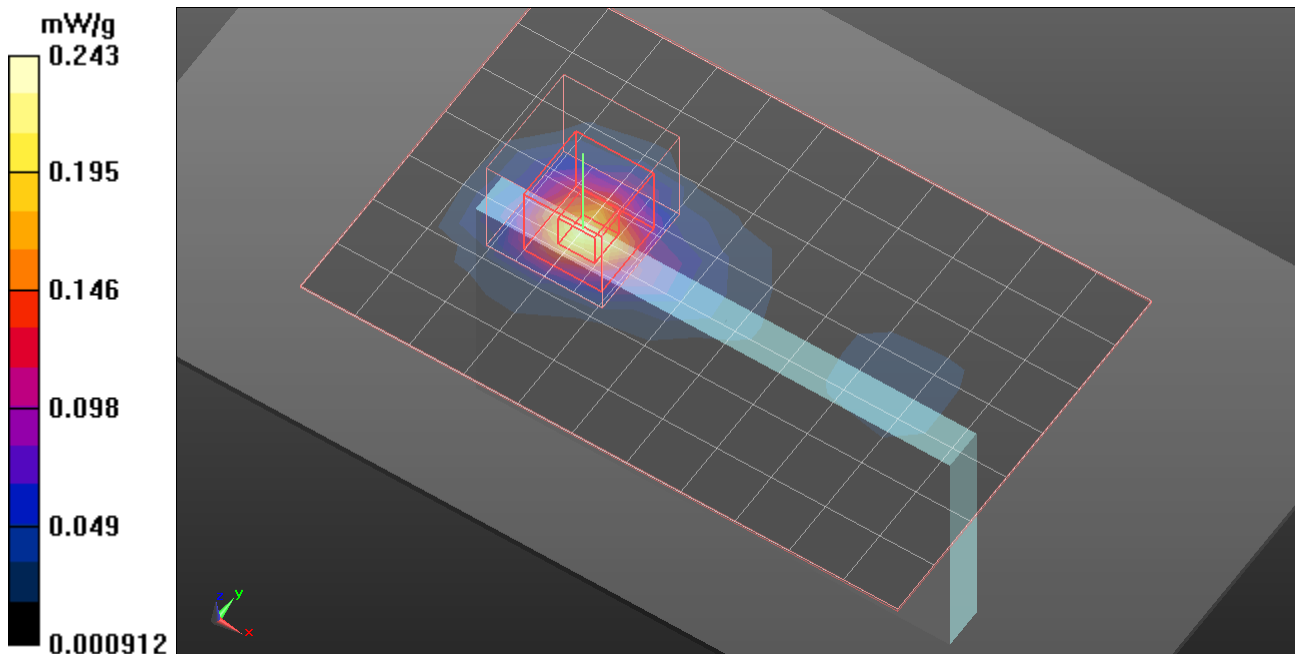
Scan (≤ 3 GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.493 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.422 W/kg

SAR(1 g) = 0.210 mW/g; SAR(10 g) = 0.098 mW/g

Maximum value of SAR (measured) = 0.243 mW/g



Test Laboratory: Motorola Mobility GPRS 850 Mobile Hotspot - Front Surface

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 5 Battery Model #: INTERNAL Test Configuration = FRONT OF PHONE 10MM FROM PHANTOM

Communication System: GSM 850; Frequency: 836.6 MHz; Duty Cycle: 1:2.76

Medium: Low Freq Body; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.542 mW/g

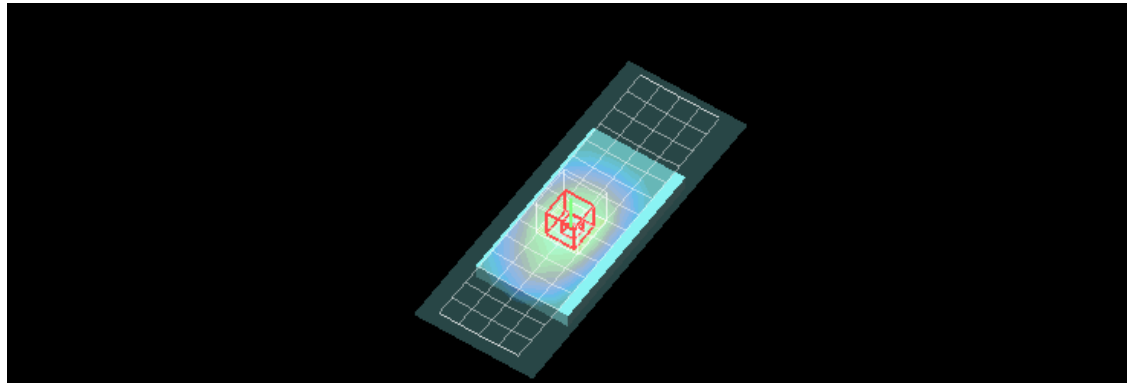
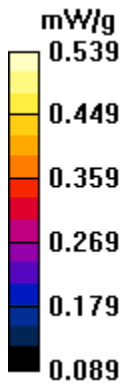
Amy Twin Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.3 V/m; Power Drift = -0.014 dB

Peak SAR (extrapolated) = 0.623 W/kg

SAR(1 g) = 0.518 mW/g; SAR(10 g) = 0.405 mW/g

Maximum value of SAR (measured) = 0.539 mW/g



Test Laboratory: Motorola Mobility - WCDMA 850 Mobile Hotspot - Front Surface

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: always up Battery Model #:internal Test Configuration = FRONT OF PHONE 10MM FROM PHANTOM

Communication System: 3G-WCDMA 850; Frequency: 836 MHz; Duty Cycle: 1:1

Medium: Low Freq Body; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.97 \text{ mho/m}$; $\epsilon_r = 54.1$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.714 mW/g

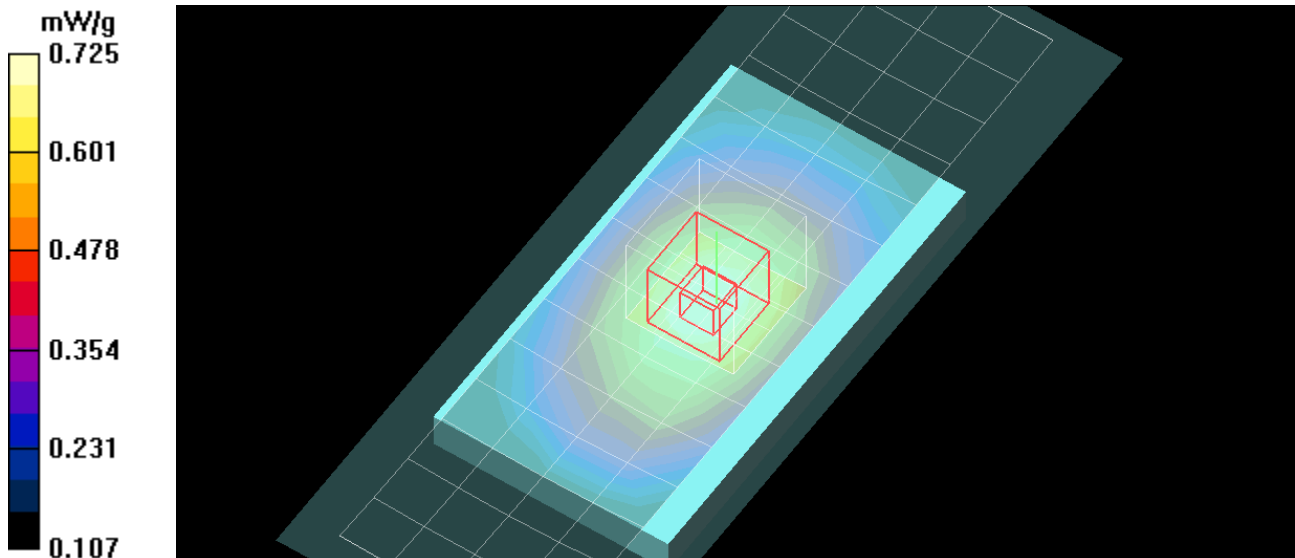
Amy Twin Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.7 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 0.856 W/kg

SAR(1 g) = 0.695 mW/g; SAR(10 g) = 0.535 mW/g

Maximum value of SAR (measured) = 0.725 mW/g



Test Laboratory: Motorola GPRS 1900 Mobile Hotspot - Front Surface

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 0 Battery Model #:internal Test Configuration =GPRS CLASS 11 (3 Uplot) BODY, FRONT OF PHONE 10MM FROM PHANTOM

Communication System: GPRS 1900 - Class 11; Frequency: 1880 MHz;Duty Cycle: 1:2.76

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 50.7$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.663 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm,

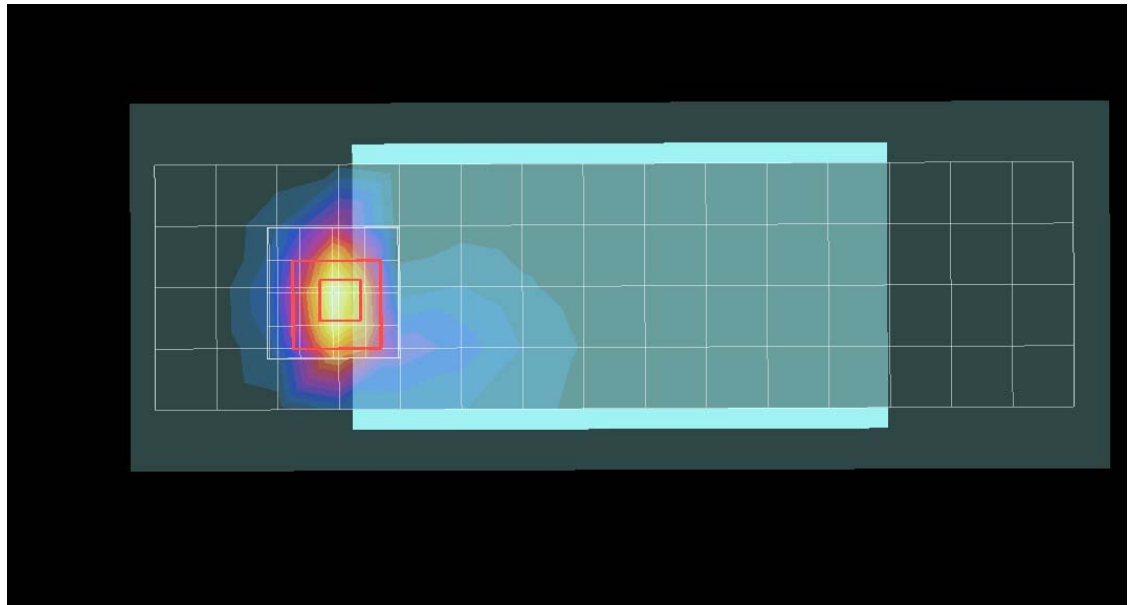
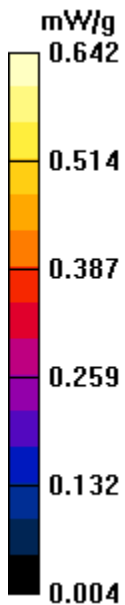
$dy=8$ mm, $dz=5$ mm

Reference Value = 13.4 V/m; Power Drift = -0.280 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.592 mW/g; SAR(10 g) = 0.293 mW/g

Maximum value of SAR (measured) = 0.642 mW/g



Test Laboratory: Motorola Mobility - WCDMA 1900 Mobile Hotspot - Front Surface

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: ALL UP BITS Battery Model #: INTERNAL Test Configuration = Front Surface 10mm from Phantom

Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 50.9$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.61, 4.61, 4.61); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#6 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Triple Flat Phone Template/Area Scan - Extended Phone (15mm) (18x8x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.983 mW/g

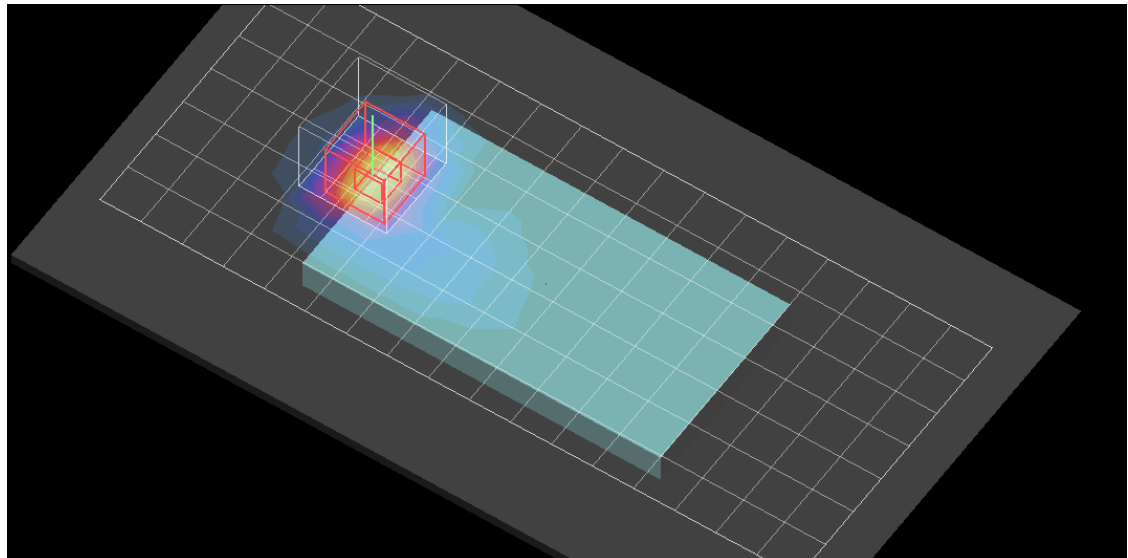
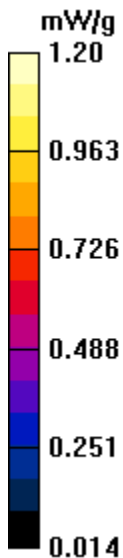
Triple Flat Phone Template/5x5x7 Zoom Scan (≤ 3 GHz) (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 18.4 V/m; Power Drift = 0.057 dB

Peak SAR (extrapolated) = 1.91 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.578 mW/g

Maximum value of SAR (measured) = 1.20 mW/g



Test Laboratory: Motorola Mobility - 2450 MHz WiFi Mobile Hotspot Front Surface

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: 802.11b 1 Mbps Chn 11 Battery Model #: INTERNAL Test Configuration = Front Surface
10mm from Phantom

Communication System: IEEE 802.11b WiFi 2.4 GHz; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: 2450 Glycol Body; Medium parameters used: $f = 2450$ MHz; $\sigma = 1.96$ mho/m; $\epsilon_r = 50.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3124; ConvF(4.21, 4.21, 4.21); Calibrated: 8/23/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 8/31/2011
- Phantom: R#-1, Triple Flat Phantom 5.1C (Rev.3); Type: QD 000 P51 CA; Serial: n/a;
- SEMCAD X Version 14.4.5 (3634)

DASY5, Triple Flat Phone Template - Rev.3 (19-Sept-11)/Triple Flat Phone Template/Area Scan -

Normal Body (15mm) (12x8x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.183 mW/g

DASY5, Triple Flat Phone Template - Rev.3 (19-Sept-11)/Triple Flat Phone Template/5x5x7 Zoom

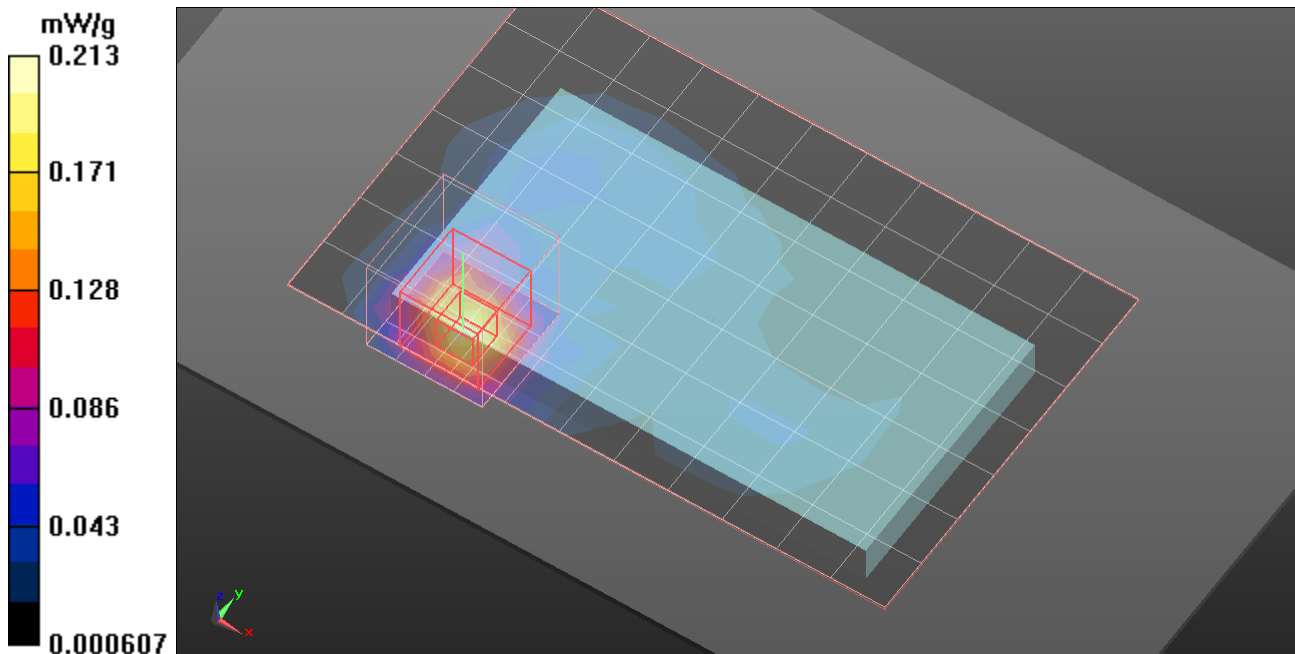
Scan (≤ 3 GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.913 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.368 W/kg

SAR(1 g) = 0.187 mW/g; SAR(10 g) = 0.093 mW/g

Maximum value of SAR (measured) = 0.213 mW/g



Test Laboratory: Motorola GPRS 850 Mobile Hotspot - Back Surface

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 5 Battery Model #: INTERNAL Test Configuration =GPRS Class 11 (3 Upslot) BODY, BACK OF PHONE 10MM FROM PHANTOM

Communication System: GPRS 850 - Class 11; Frequency: 836.6 MHz; Duty Cycle: 1:2.76

Medium: Low Freq Body; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.98 \text{ mho/m}$; $\epsilon_r = 55.3$; $\rho = 1000 \text{ kg/m}^3$

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn702; Calibrated: 4/14/2011
- Phantom: R#2_ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.591 mW/g

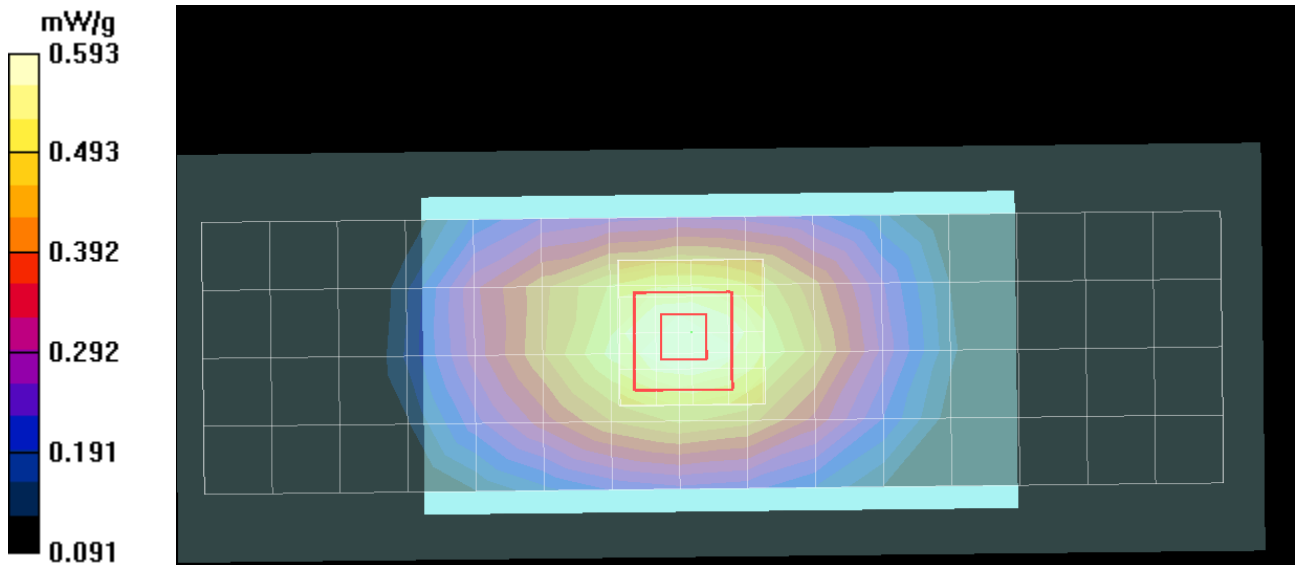
Amy Twin Phone Template/5x5x7 Zoom Scan ($\leq 3\text{GHz}$) (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.1 V/m; Power Drift = -0.032 dB

Peak SAR (extrapolated) = 0.682 W/kg

SAR(1 g) = 0.567 mW/g; SAR(10 g) = 0.439 mW/g

Maximum value of SAR (measured) = 0.593 mW/g



Date/Time: 8/28/2011 10:37:44 AM

Test Laboratory: Motorola - WCDMA 850 Mobile Hotspot - Back

Serial: LS3A280035 ; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: All up Bits; Antenna Position: Internal; Battery Model #: Internal

Device Position: Mobile Hotspot (Body-Adjacent) position, Back of Phone 10 mm from Phantom

Communication System: WCDMA 850; Frequency: 836 MHz; Channel Number: 4180; Duty Cycle: 1:1

Medium: Low Freq Body

Medium parameters used: $f = 835$ MHz; $\sigma = 0.97$ mho/m; $\epsilon_r = 54.1$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(6.1, 6.1, 6.1); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2 _ Section 2, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1):

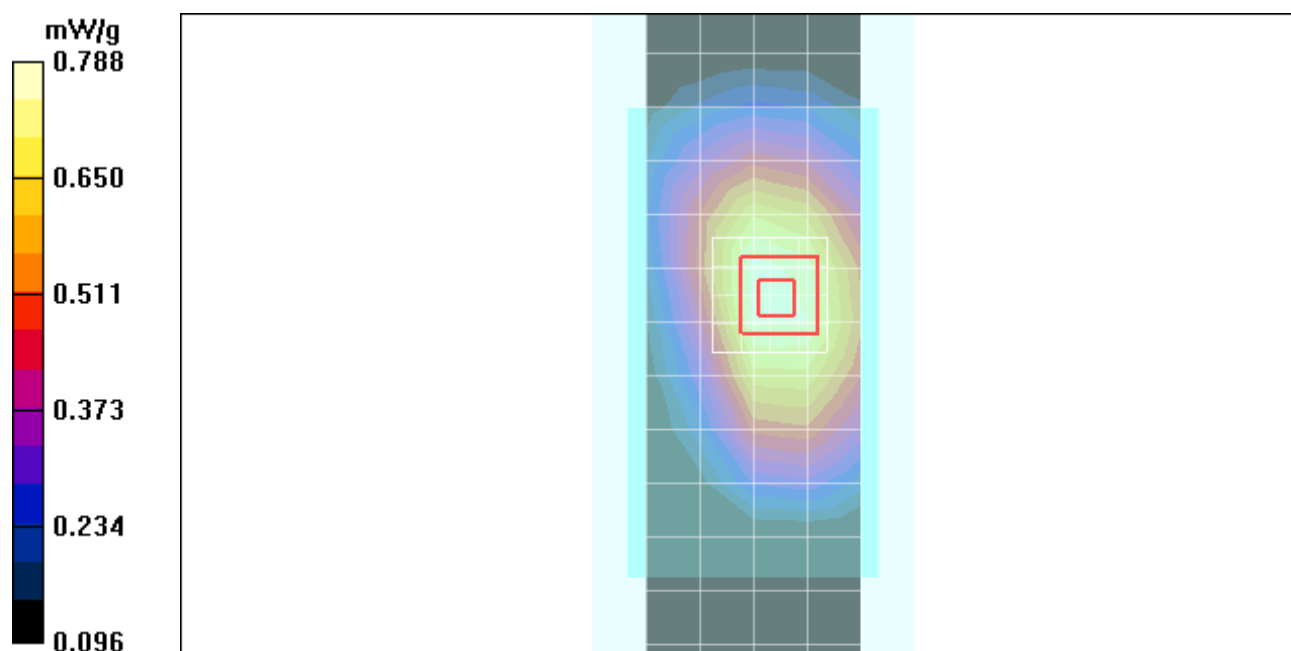
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.766 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.5 V/m; Power Drift = -0.120 dB; Peak SAR (extrapolated) = 0.958 W/kg

SAR(1 g) = 0.752 mW/g; SAR(10 g) = 0.563 mW/g; Maximum value of SAR (measured) = 0.788 mW/g



Test Laboratory: Motorola Mobility - GPRS 1900 Mobile Hotspot - Back Surface

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: 0 Battery Model #:internal Test Configuration = BACK OF PHONE 10MM FROM PHANTOM

Communication System: GPRS 1900 - Class 8; Frequency: 1880 MHz; Duty Cycle: 1:2.76

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 50.7$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3184; ConvF(4.9, 4.9, 4.9); Calibrated: 3/11/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn699; Calibrated: 9/20/2010
- Phantom: R#2_ Section 1, Amy Twin, Rev3 (3-Feb-10); Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.403 mW/g

Amy Twin Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm,

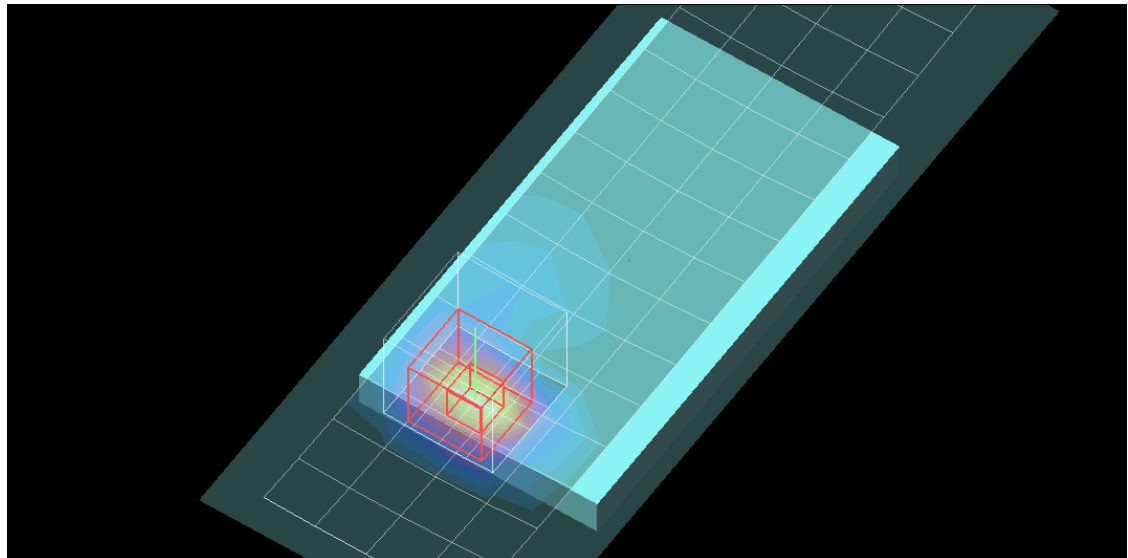
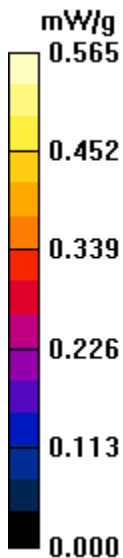
dy=8mm, dz=5mm

Reference Value = 12.1 V/m; Power Drift = 0.303 dB

Peak SAR (extrapolated) = 0.880 W/kg

SAR(1 g) = 0.493 mW/g; SAR(10 g) = 0.250 mW/g

Maximum value of SAR (measured) = 0.565 mW/g



Test Laboratory: Motorola Mobility - WCDMA 1900 Mobile Hotspot - Back Surface

DUT: Serial: LS3A280035, FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: ALL UP BITS Battery Model #: INTERNAL Test Configuration = Back Surface 10mm from Phantom

Communication System: 3G/WCDMA 1900; Frequency: 1880 MHz; Duty Cycle: 1:1

Medium: Regular Glycol Body 1750/1880; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.59$ mho/m; $\epsilon_r = 50.9$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.61, 4.61, 4.61); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#6 - Triple Flat Phantom 5.1C (rev.2); Type: QD 000 P51 CA; Serial: n/a;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Triple Flat Phone Template/Area Scan - Extended Phone (15mm) (18x8x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.17 mW/g

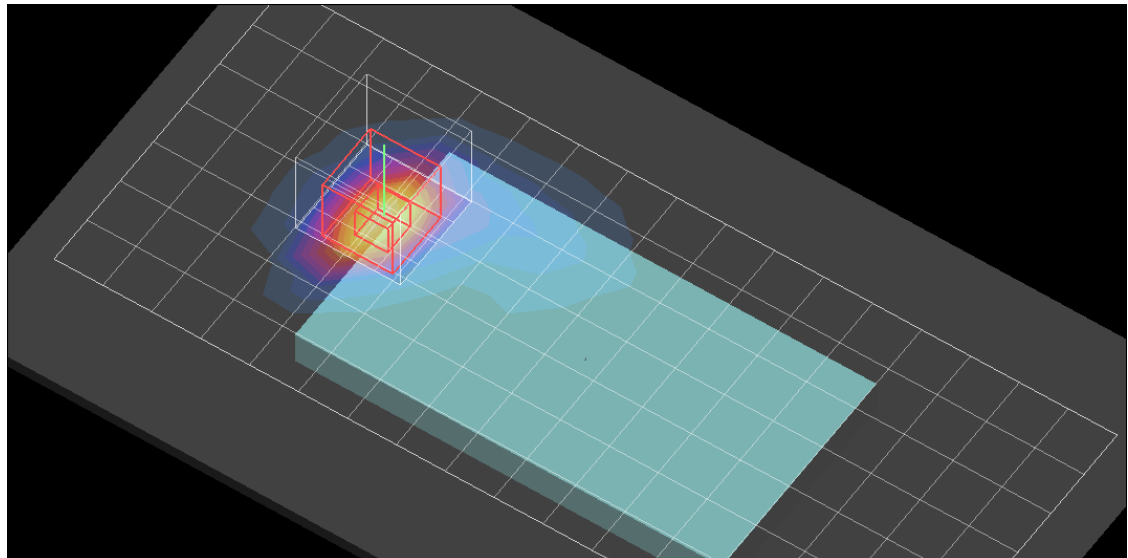
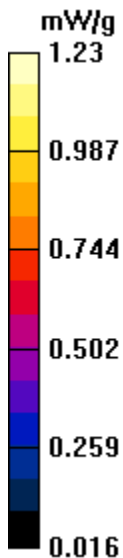
Triple Flat Phone Template/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 21.0 V/m; Power Drift = 0.170 dB

Peak SAR (extrapolated) = 1.88 W/kg

SAR(1 g) = 1.11 mW/g; SAR(10 g) = 0.584 mW/g

Maximum value of SAR (measured) = 1.23 mW/g



Date/Time: 9/20/2011 9:01:06 AM

Test Laboratory: Motorola - Wi-Fi 2450 Mobile Hotspot - Back

Serial: LS3A280035; FCC ID: IHDP56ME2

Procedure Notes: Pwr Step: N/A; Antenna Position: Internal; Battery Model #: Internal

Device Position: Mobile Hotspot (Body-Adjacent) position, Back of Phone 10 mm from Phantom

Device Mode: 802.11b mode, 1 Mbps data rate

Communication System: Wi-Fi 2450; Frequency: 2462 MHz; Channel Number: 11; Duty Cycle: 1:1

Medium: 2450 Glycol Body

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.98$ mho/m; $\epsilon_r = 52.4$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3115; ConvF(4.12, 4.12, 4.12); Calibrated: 1/12/2011
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn434; Calibrated: 1/13/2011
- Phantom: R#-6 Glycol SAM (extended range), Rev.1 (25-Mar-05); Type: SAM v4.0; Serial: TP-1131;
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

SAM Phone Against Flat Section/Area Scan - Normal Body (15mm) (13x8x1):

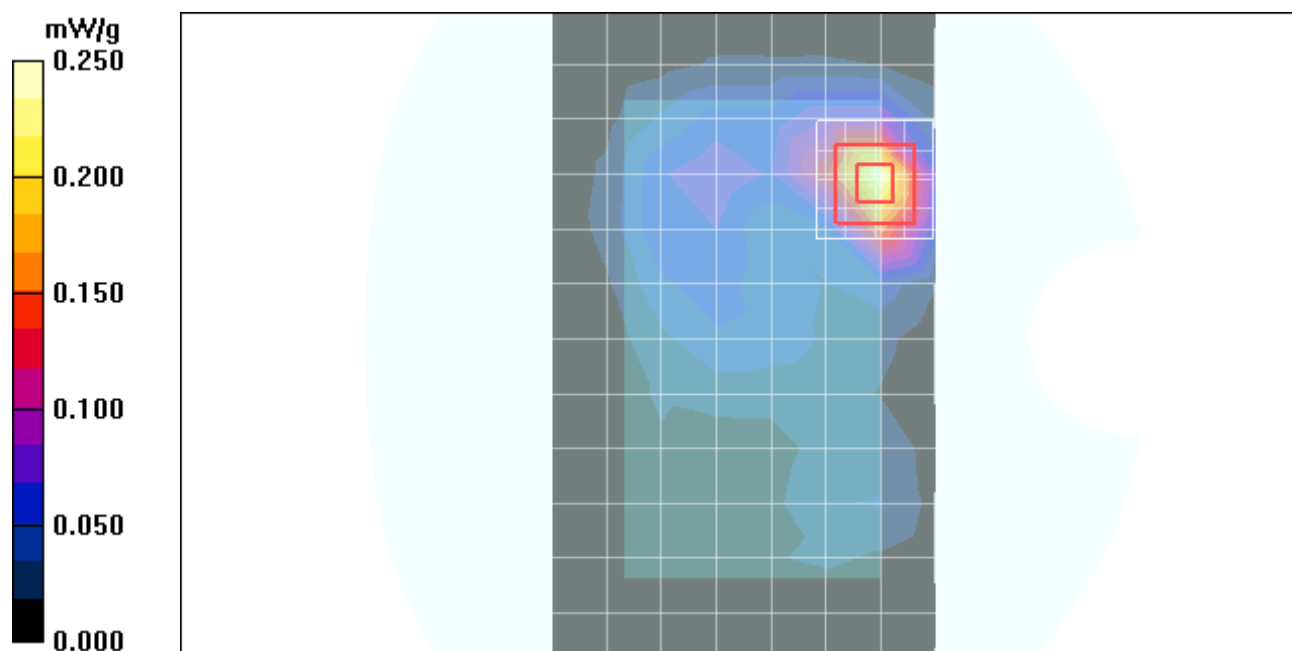
Measurement grid: dx=15mm, dy=15mm; Maximum value of SAR (measured) = 0.241 mW/g

SAM Phone Against Flat Section/5x5x7 Zoom Scan (<=3GHz) (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.9 V/m; Power Drift = -0.069 dB; Peak SAR (extrapolated) = 0.459 W/kg

SAR(1 g) = 0.223 mW/g; SAR(10 g) = 0.108 mW/g; Maximum value of SAR (measured) = 0.250 mW/g



Appendix 6

Measurement Uncertainty Budget

Uncertainty Budget for Device Under Test, for 735 MHz to 2 GHz

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	$e = f(d,k)$	<i>f</i>	<i>g</i>	$h = c \times f / e$	$i = c \times g / e$	<i>k</i>
Uncertainty Component	Description IEEE1528(2003) / IEC62209-1(2005)	Tol. (± %)	Prob Dist	Div.	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	1 g <i>u_i</i> (±%)	10 g <i>u_i</i> (±%)	<i>v_i</i>
Measurement System									
Probe Calibration [ES3DV3]	E.2.1 / 7.2.1	5.5	N	1.00	1	1	5.5	5.5	∞
Axial Isotropy	E.2.2 / 7.2.1.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Hemispherical Isotropy	E.2.2 / 7.2.1.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3 / 7.2.1.5	1.0	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4 / 7.2.1.3	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5 / 7.2.1.4	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6 / 7.2.1.6	0.3	N	1.00	1	1	0.3	0.3	∞
Response Time	E.2.7 / 7.2.1.7	1.1	R	1.73	1	1	0.6	0.6	∞
Integration Time	E.2.8 / 7.2.1.8	1.1	R	1.73	1	1	0.6	0.6	∞
RF Ambient Conditions - Noise	E.6.1 / 7.2.3.6	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1 / 7.2.3.6	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mech. Tolerance	E.6.2 / 7.2.2.1	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t Phantom	E.6.3 / 7.2.2.3	1.4	R	1.73	1	1	0.8	0.8	∞
Max. SAR Evaluation (ext., int., avg.)	E.5 / 7.2.4	3.4	R	1.73	1	1	2.0	2.0	∞
Test sample Related									
Test Sample Positioning	E.4.2 / 7.2.2.4	3.4	N	1.00	1	1	3.4	3.4	79
Device Holder Uncertainty	E.4.1 / 7.2.2.4.2	4.5	N	1.00	1	1	4.5	4.5	11
SAR drift	6.6.2 / 7.2.3.5	0.0	R	1.73	1	1	0.0	0.0	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1 / 7.2.2.2	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2 / 7.2.3.3	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measurement)	E.3.3 / 7.2.3.3	2.5	N	1.00	0.64	0.43	1.6	1.1	6
Liquid Permittivity (target)	E.3.2 / 7.2.3.4	5.0	R	1.73	0.6	0.49	1.7	1.4	∞
Liquid Permittivity (measurement)	E.3.2 / 7.2.3.4	2.3	N	1.00	0.6	0.49	1.4	1.1	6
Combined Standard Uncertainty			RSS				11	11	338
Expanded Uncertainty (95% CONFIDENCE LEVEL)			<i>k</i> =2				22	21	

Uncertainty Budget for Device Under Test, for 2 GHz to 3 GHz

<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	$e = f(d,k)$	<i>f</i>	<i>g</i>	$h = c \times f / e$	$i = c \times g / e$	<i>k</i>
Uncertainty Component	Description IEEE1528(2003) / IEC62209-1(2005)	Tol. (± %)	Prob Dist	Div.	<i>c_i</i> (1 g)	<i>c_i</i> (10 g)	1 g <i>u_i</i> (±%)	10 g <i>u_i</i> (±%)	<i>v_i</i>
Measurement System									
Probe Calibration [ES3DV3]	E.2.1 / 7.2.1	5.5	N	1.00	1	1	5.5	5.5	∞
Axial Isotropy	E.2.2 / 7.2.1.2	4.7	R	1.73	0.707	0.707	1.9	1.9	∞
Hemispherical Isotropy	E.2.2 / 7.2.1.2	9.6	R	1.73	0.707	0.707	3.9	3.9	∞
Boundary Effect	E.2.3 / 7.2.1.5	1.0	R	1.73	1	1	0.6	0.6	∞
Linearity	E.2.4 / 7.2.1.3	4.7	R	1.73	1	1	2.7	2.7	∞
System Detection Limits	E.2.5 / 7.2.1.4	1.0	R	1.73	1	1	0.6	0.6	∞
Readout Electronics	E.2.6 / 7.2.1.6	0.3	N	1.00	1	1	0.3	0.3	∞
Response Time	E.2.7 / 7.2.1.7	1.1	R	1.73	1	1	0.6	0.6	∞
Integration Time	E.2.8 / 7.2.1.8	1.1	R	1.73	1	1	0.6	0.6	∞
RF Ambient Conditions - Noise	E.6.1 / 7.2.3.6	3.0	R	1.73	1	1	1.7	1.7	∞
RF Ambient Conditions - Reflections	E.6.1 / 7.2.3.6	3.0	R	1.73	1	1	1.7	1.7	∞
Probe Positioner Mech. Tolerance	E.6.2 / 7.2.2.1	0.4	R	1.73	1	1	0.2	0.2	∞
Probe Positioning w.r.t Phantom	E.6.3 / 7.2.2.3	1.4	R	1.73	1	1	0.8	0.8	∞
Max. SAR Evaluation (ext., int., avg.)	E.5 / 7.2.4	3.4	R	1.73	1	1	2.0	2.0	∞
Test sample Related									
Test Sample Positioning	E.4.2 / 7.2.2.4	3.4	N	1.00	1	1	3.4	3.4	79
Device Holder Uncertainty	E.4.1 / 7.2.2.4.2	4.5	N	1.00	1	1	4.5	4.5	11
SAR drift	6.6.2 / 7.2.3.5	0.0	R	1.73	1	1	0.0	0.0	∞
Phantom and Tissue Parameters									
Phantom Uncertainty	E.3.1 / 7.2.2.2	4.0	R	1.73	1	1	2.3	2.3	∞
Liquid Conductivity (target)	E.3.2 / 7.2.3.3	5.0	R	1.73	0.64	0.43	1.8	1.2	∞
Liquid Conductivity (measurement)	E.3.3 / 7.2.3.3	2.5	N	1.00	0.64	0.43	1.6	1.1	6
Liquid Permittivity (target)	E.3.2 / 7.2.3.4	10.0	R	1.73	0.6	0.49	3.5	2.8	∞
Liquid Permittivity (measurement)	E.3.2 / 7.2.3.4	2.3	N	1.00	0.6	0.49	1.4	1.1	6
Combined Standard Uncertainty			RSS				11	11	392
Expanded Uncertainty (95% CONFIDENCE LEVEL)			<i>k</i> =2				22	22	