Exhibit 11: SAR Test Report: IHDT56ZZ2

Date of test:	12/19/2000-1/6/2001
Laboratory:	Motorola Personal Communications Sector Product Safety Laboratory 2001 N. Division Room: AS228 Harvard, Illinois 60033
Test Responsible:	Steven Hauswirth Staff Engineer
Accreditation:	ISO Guide 25 Accredited Lab, A2LA certificate #1651-01
Statement of Compliance:	Motorola declares under its sole responsibility that portable cellular telephone FCC ID IHDT56ZZ2 to which this declaration relates, is in conformity with the appropriate RF exposure standards, recommendations and guidelines. It also declares that the product was tested in accordance with the appropriate measurement standards, guidelines and recommended practices. Any deviations from these standards, guidelines and recommended practices are noted below:

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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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1. Introduction

The Motorola Personal Communications Sector Product Safety Laboratory has performed measurements of the maximum potential exposure to the user of portable cellular phone FCC ID IHDT56ZZ2. The Specific Absorption Rate (SAR) of this product was measured. The portable cellular phone was tested in accordance with the latest available test guidelines. The SAR values found for the portable cellular phone (FCC ID IHDT56ZZ2) are below the maximum recommended levels of 1.6 W/kg. Detailed procedures of the test are described in the *Motorola Exhibit 11 Reference SAR Test Report*.

2. Description of the Device Under Test

Antenna description

Type	Extendable whip
Location	Right Side
Configuration	Helix with 800MHz output power cutback when antenna is retracted.

Device description

FCC ID Number	IHDT56ZZ2				
Serial numbers	77596CEB				
Mode(s) of Operation	AMPS800	AMPS800	CDMA800	CDMA800	CDMA1900
Modulation Mode(s)	AMPS	AMPS	CDMA	CDMA	CDMA
Maximum Output Power Setting	27.3dBm (Ant Ext)	26.8dBm(Ant Ret)	25.0dBm (Ant Ext)	24.5dBm(Ant Ret)	24.3dBm
Duty Cycle	1:01	1:01	1:01	1:01	1:01
Transmitting Frequency Rang(s)	824-849MHz	824-849MHz	824-849MHz	824-849MHz	1851-1909MHz

3. Test Results

The SAR results shown in tables 1 and 2 are maximum SAR values averaged over 1 gram of phantom tissue. Also shown are the measured conducted output powers and the temperature of the test facility during the test.

The test sample was operated in a test mode that allows control of the transmitter without the need to place actual phone calls. For the purposes of this test the unit is commanded to test mode and manually set to the proper channel, transmitter power level and transmit mode of operation. The phone was then placed in the SAR measurement system with a fully charged battery.

A full data set output of the test conditions with the highest SAR values from the Dasy™ measurement system is included as appendix 2 and 3. The test conditions included are indicated as bold numbers in the following table. All other test conditions measured lower SAR values than those included. There are two available body worn accessories available for this test sample. Both are plastic “belt-clips”. The body worn SAR was evaluated for only the plastic belt-clip that provided the least separation distance to the phantom. The other belt-clip provided greater separation distance and is made completely of plastic (there is no metal content).

f (MHz)	Description	Conducted Output Power (dBm)	SAR, 1g (W/kg) Left Head Ant Ext	Left Head Ant Ret	Right Head Ant Ext	Right Head Ant Ret
Analog 800MHz	**Channel 991**	27.20 Ant Ext/ 26.70 Ant Ret	**0.56**	**0.84**	0.39	0.53
	Channel 384	27.30 Ant Ext/ 26.80 Ant Ret	0.40	0.53	0.25	0.29
	Channel 799	27.32 Ant Ext/ 26.82 Ant Ret	0.38	0.55	0.24	0.37
Digital 800MHz	**Channel 1013**	24.92 Ant Ext/ 24.42 Ant Ret	0.17	0.63	0.17	0.32
	Channel 384	25.02 Ant Ext/ 24.52 Ant Ret	0.11	0.38	0.14	0.24
	Channel 779	24.94 Ant Ext/ 24.44 Ant Ret	0.19	0.45	0.13	0.28
Digital 1900MHz	**Channel 25**	23.44	**1.12**	0.65	0.62	0.40
	Channel 600	23.45	0.89	**0.88**	0.43	0.44
	Channel 1175	23.58	0.55	0.83	0.30	0.47

Table 1: SAR measurement results for the portable cellular telephone FCC ID IHDT56ZZ2 at highest possible output power. Measured against the head.

f (MHz)	Description	Conducted Output Power (dBm)	SAR, 1g (W/kg) Plastic Belt Clip Ant Ext	Plastic Belt Clip Ant Ret
Analog 800MHz	**Channel 991**	27.20 Ant Ext/ 26.70 Ant Ret	**0.33**	**0.53**
	Channel 384	27.30 Ant Ext/ 26.80 Ant Ret	0.20	0.35
	Channel 799	27.32 Ant Ext/ 26.82 Ant Ret	0.21	0.38
Digital 800MHz	**Channel 1013**	24.92 Ant Ext/ 24.42 Ant Ret		0.41
	Channel 384	25.02 Ant Ext/ 24.52 Ant Ret		
	Channel 779	24.94 Ant Ext/ 24.44 Ant Ret	0.13	
Digital 1900MHz	**Channel 25**	23.44	**0.22**	**0.42**
	Channel 600	23.45	0.12	0.41
	Channel 1175	23.58	0.10	0.27

Table 2: SAR measurement results for the portable cellular telephone FCC ID IHDT56ZZ2 at highest possible output power. Measured against the body.

4. Test Equipment Used

4.1 Dosimetric System

The Motorola Personal Communications Sector Product Safety Laboratory utilizes a Dosimetric Assessment System (Dasy3™) SAR measurement system manufactured by Schmid & Partner Engineering AG (SPEAG™), of Zurich Switzerland. The overall RSS uncertainty of the measurement system is ±12.0% (K=1).

Description	Serial Number	Cal Due Date
DASY3 DAE V1	SN385	5/01
E-Field Probe ETDV6	SN1390	2/01
Dipole Validation Kit, DV835V2	SN416	2/02
Dipole Validation Kit, DV1800V2	SN259	1/02
Dipole Validation Kit, DV1800V2	SN246	8/01

4.2 Additional Equipment

Description	Serial Number	Cal Due Date
Signal Generator HP8648C	3847A04810	11/15/02
Power Meter E4419B	GB39511087	11/14/01
Power Sensor E9301A	US39211007	11/28/01

5. 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 HP85070 Dielectric Probe Kit These values are shown in the table below. The mass density, ρ, used by the dosimetric system is also given. Recommended limits for maximum permittivity, minimum conductivity and maximum mass density are also shown. These come from the Federal Communication Commission, "Tissue Dielectric Properties" web site at http://www.fcc.gov/fcc-bin/dielec.sh. It is seen that the measured parameters are satisfactory for compliance testing.

f (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			e_r	s (S/m)	r (g/cm^3)
836	**Head**	**Measured,** 1/10/01	44.78	0.90	1.00
		Recommended Limits	46.25	0.73	1.03
	Body	**Measured,** 1/15/01	50.63	1.08	1.00
		Recommended Limits	56.21	0.93	1.04
1880	**Head**	**Measured,** 12/19/00	40.75	1.42	1.00
		Recommended Limits	43.41	1.19	1.03
	Body	**Measured,** 1/16/01	49.02	1.70	1.00
		Recommended Limits	54.33	1.43	1.04

6. System Accuracy Verification

A system accuracy verification of the DASY3 was performed using the measurement equipment listed in Section 4. The test was conducted on the same day as the measurement of the DUT. The obtained results are displayed in the table below. The distributions of SAR compare well with those of the reference measurements (see Appendix 1).

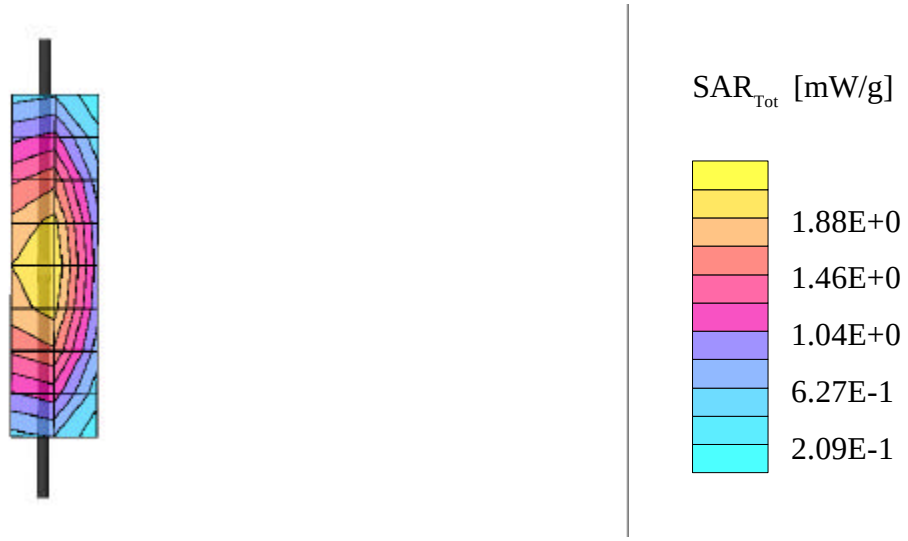
f (MHz)	Description	SAR (W/kg), 1gram	Dielectric Parameters		Temp (°C)
			e_r	s (S/m)	
836	**Measured**	8.65	42.58	0.81	22.0
	Recommended Limits	8.55	44.30	0.80	NA
836	**Measured**	8.56	42.65	0.81	20.4
	Recommended Limits	8.55	44.30	0.80	NA
1800	**Measured**	39.76	39.40	1.75	20.4
	Recommended Limits	38.39	41.20	1.68	NA
1800	**Measured**	38.37	39.89	1.72	22
	Recommended Limits	39.27	41.10	1.69	NA

Appendix 1

SAR distribution comparison for the system accuracy verification

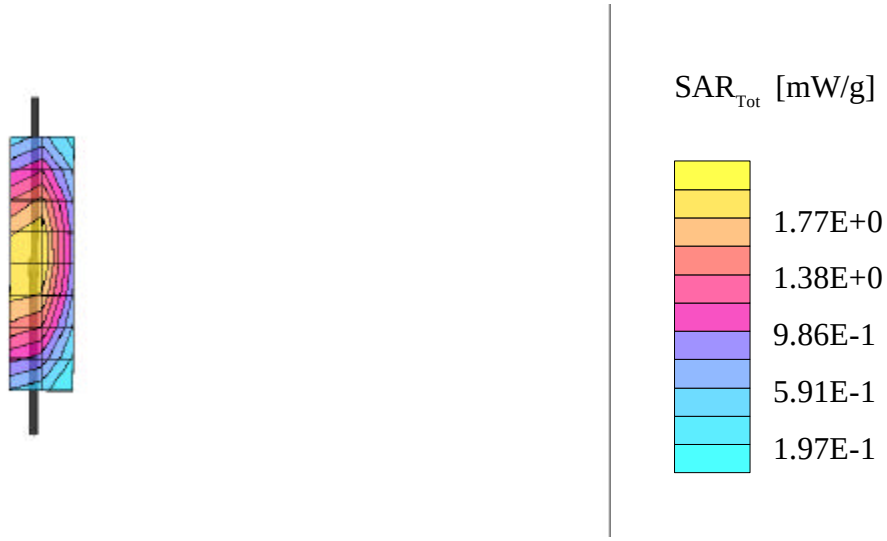
Dipole 835 MHz

835 MHz Dipole Validation / Dipole Sn# 416 / Forward Power =252mW / Temp at time of measurement = 22
Amy Twin Optics OFF; Section 1
Probe: ET3DV6 - SN1390 - Validation; ConvF(6.75,6.75,6.75); Crest factor: 1.0; Validation 835 MHz: σ = 0.81 mho/m ε_r = 42.6 ρ = 1.00 g/cm^3
Cubes (2): Peak: 3.34 mW/g ± 0.03 dB, SAR (1g): 2.18 mW/g ± 0.03 dB, SAR (10g): 1.44 mW/g ± 0.03 dB, (Worst-case extrapolation)



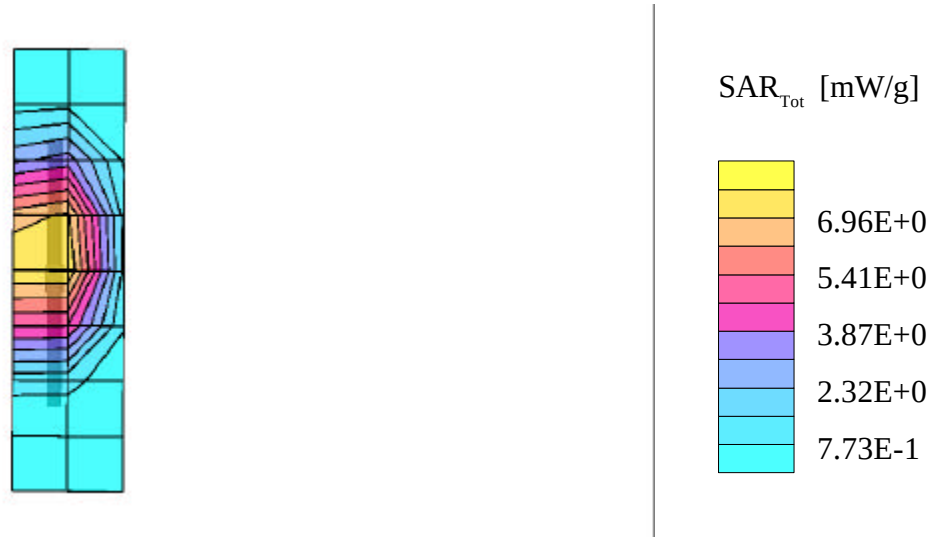
Dipole 835 MHz

835 MHz Dipole Validation / Dipole Sn# 416 / Forward Power =249mW / Temp at time of measurement = 20.4
Amy Twin Optics OFF; Section 1
Probe: ET3DV6 - SN1390 - Validation; ConvF(6.75,6.75,6.75); Crest factor: 1.0; Validation 835 MHz: σ = 0.81 mho/m ε_r = 42.6 ρ = 1.00 g/cm^3
Cubes (2): Peak: 3.28 mW/g ± 0.06 dB, SAR (1g): 2.14 mW/g ± 0.05 dB, SAR (10g): 1.41 mW/g ± 0.05 dB, (Worst-case extrapolation)



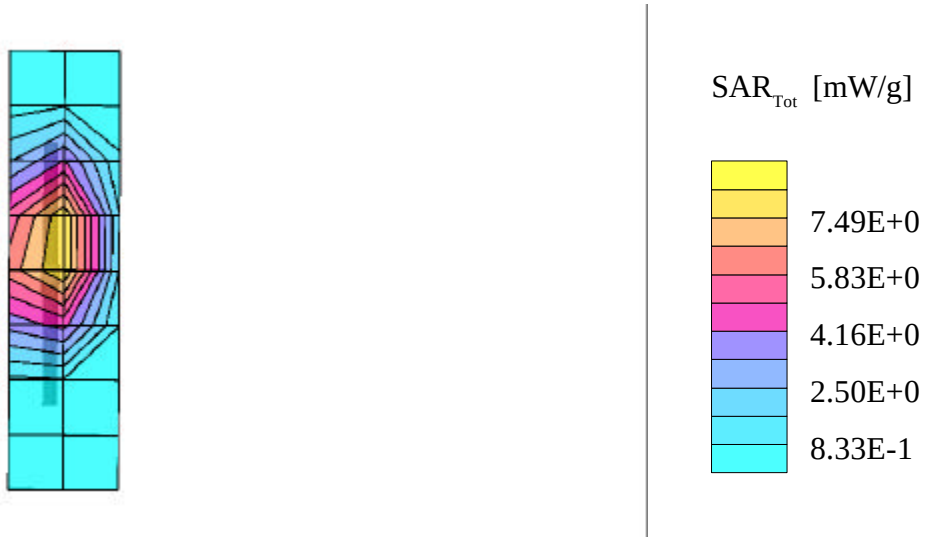
Dipole 1800 MHz

1800 MHz Dipole Validation / Dipole Sn# 246 / Forward Power = 251mW / Temp at time of measurement = 69
Amy Twin Optics OFF; Section 1
Probe: ET3DV6 - SN1390 - Validation; ConvF(5.94,5.94,5.94); Crest factor: 1.0; Validation 1800 MHz: σ = 1.75 mho/m ε_r = 39.4 ρ = 1.00 g/cm^3
Cubes (2): Peak: 19.6 mW/g ± 0.08 dB, SAR (1g): 9.98 mW/g ± 0.07 dB, SAR (10g): 5.00 mW/g ± 0.06 dB, (Worst-case extrapolation)



Dipole 1800 MHz

1800 MHz Dipole Validation / Dipole Sn#259 / Forward Power =250mW / Temp at time of measurement =22
Amy Twin Optics OFF; Section 1
Probe: ET3DV6 - SN1390 - Validation; ConvF(5.94,5.94,5.94); Crest factor: 1.0; Validation 1800 MHz: σ = 1.72 mho/m ε_r = 39.9 ρ = 1.00 g/cm^3
Cubes (2): Peak: 18.5 mW/g ± 0.10 dB, SAR (1g): 9.63 mW/g ± 0.08 dB, SAR (10g): 4.90 mW/g ± 0.06 dB, (Worst-case extrapolation)

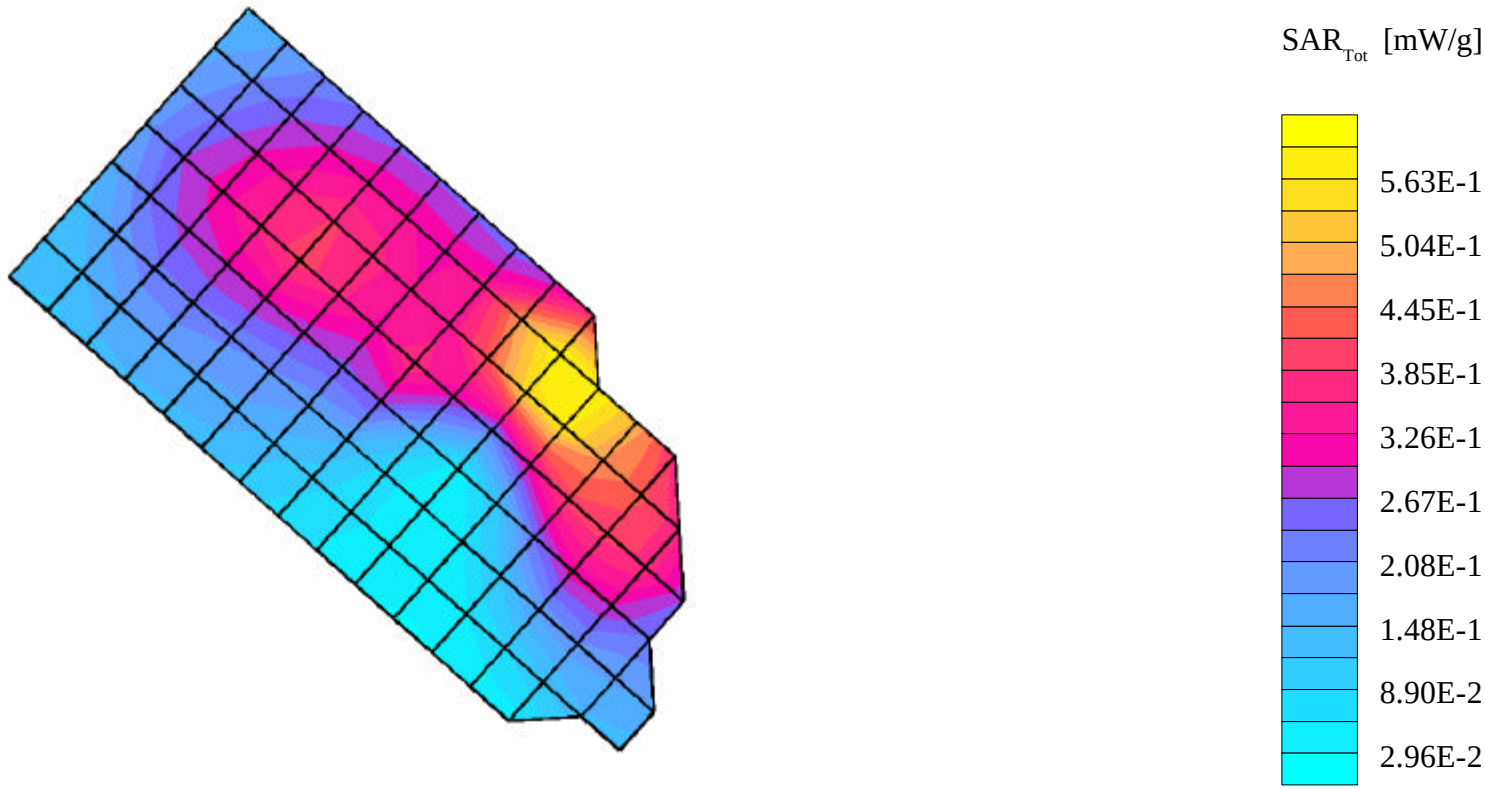


Appendix 2

SAR distribution plots for Phantom Head Adjacent Use

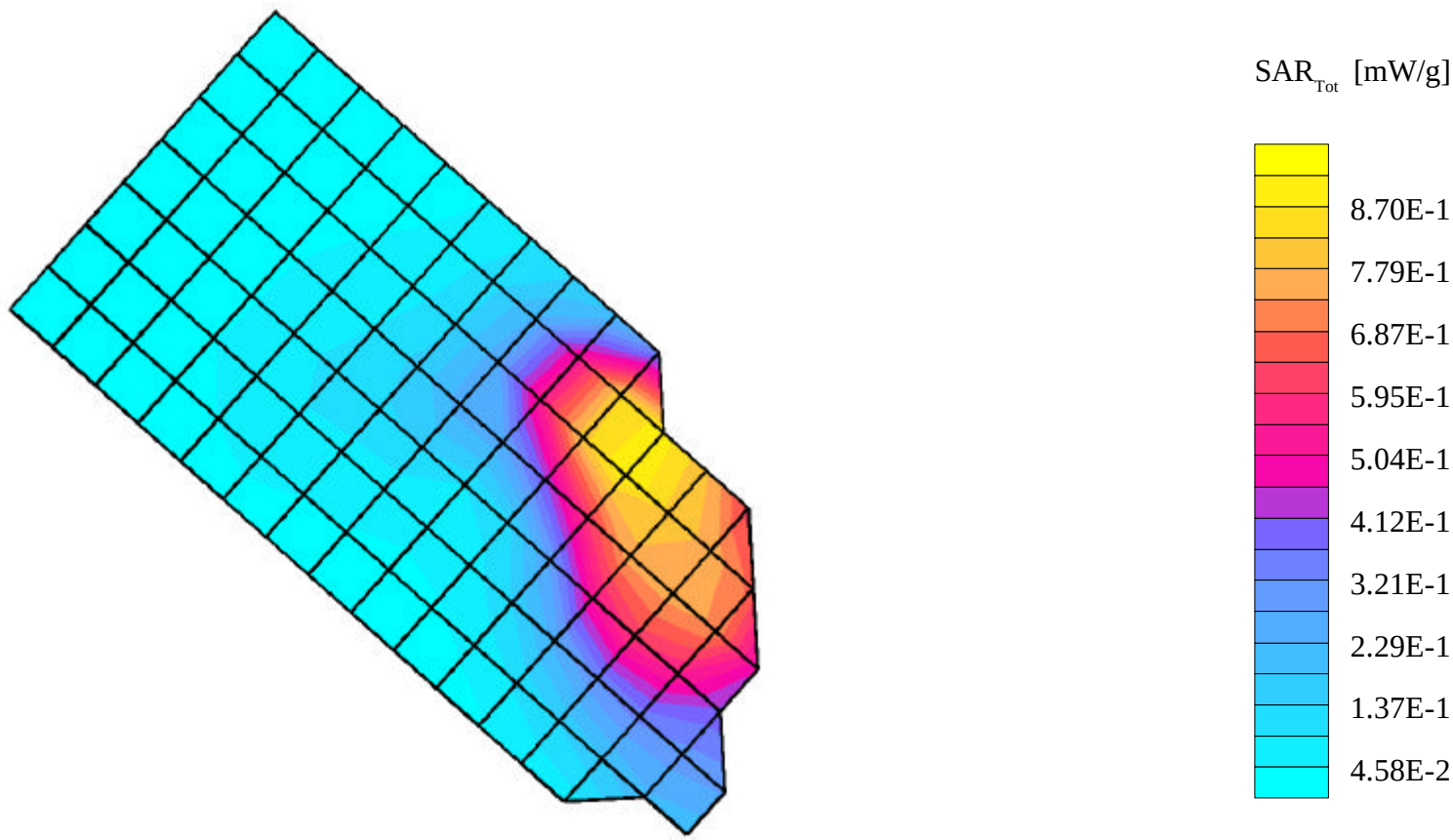
s/n 77596CEB

CH# 991 / Pwr Step: 2 / Antenna Position: Extended / Type of Modulation: 800 Analog
Left Head (Barney) Phantom; Left Head Section; Position: (80°,180°); Frequency: 824 MHz
Probe: ET3DV6 - SN1390 - Head (Sugar Water); ConvF(6.75,6.75,6.75); Crest factor: 1.0; Head 835 MHz: σ = 0.90 mho/m ε_r = 44.8 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 0.563 mW/g, SAR (10g): 0.370 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Penetration depth: 12.6 (11.5, 14.2) [mm]
Powerdrift: 0.04 dB



s/n 77596CEB

CH# 991 / Pwr Step: 2 / Antenna Position: Retracted / Type of Modulation: 800 Analog
Left Head (Barney) Phantom; Left Head Section; Position: (80°,180°); Frequency: 824 MHz
Probe: ET3DV6 - SN1390 - Head (Sugar Water); ConvF(6.75,6.75,6.75); Crest factor: 1.0; Head 835 MHz: σ = 0.90 mho/m ε_r = 44.8 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 0.838 mW/g, SAR (10g): 0.556 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Penetration depth: 13.6 (11.9, 15.8) [mm]
Powerdrift: 0.17 dB



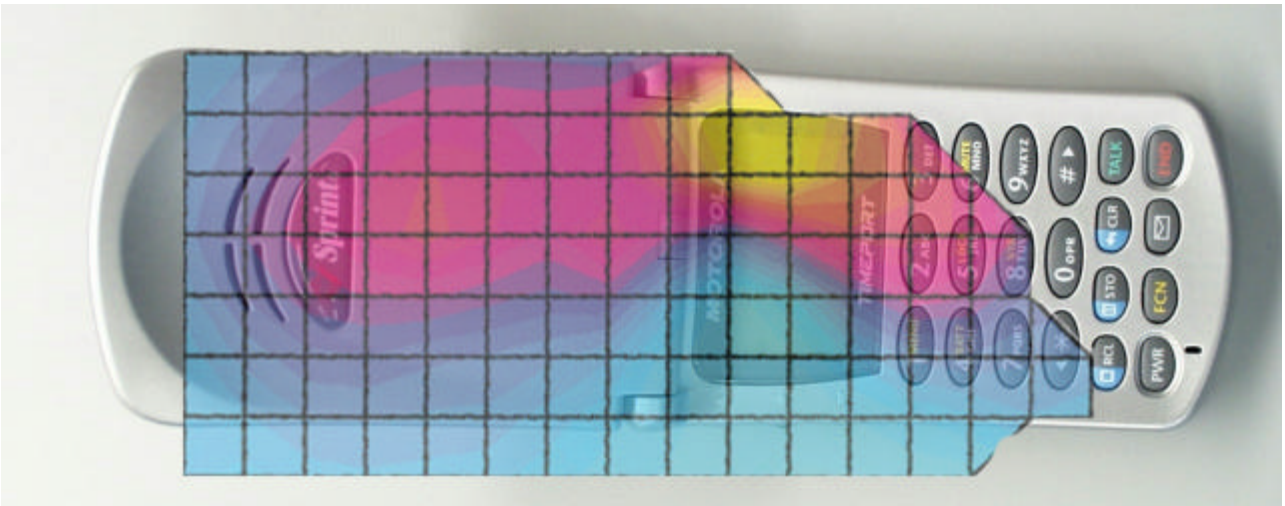


Figure 1. Typical 800MHz AMPS with Antenna Extended Contour Plot Overlaid on Front of Phone.

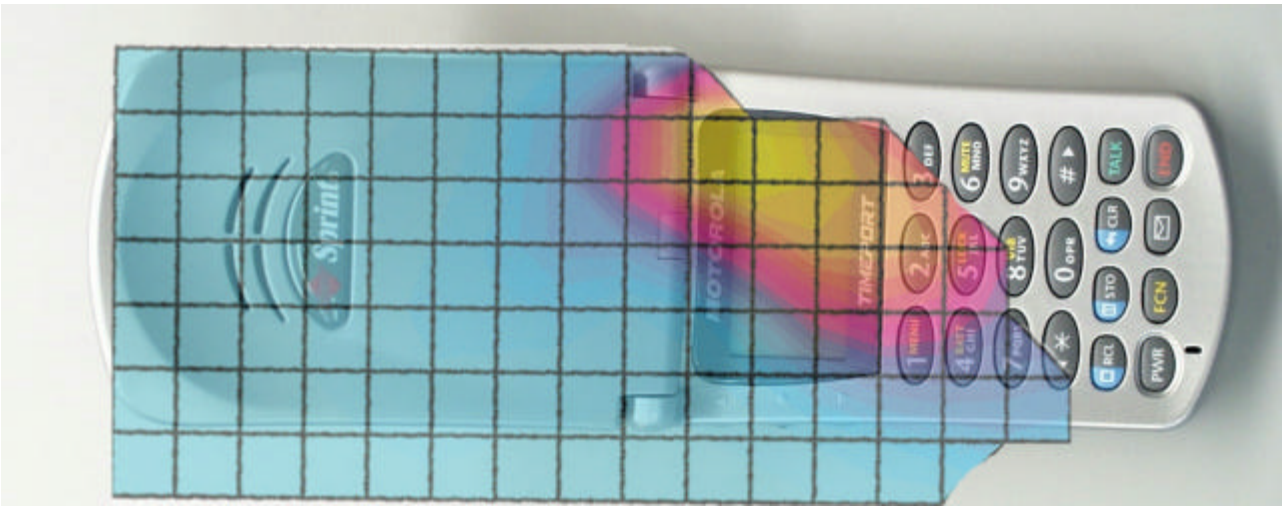
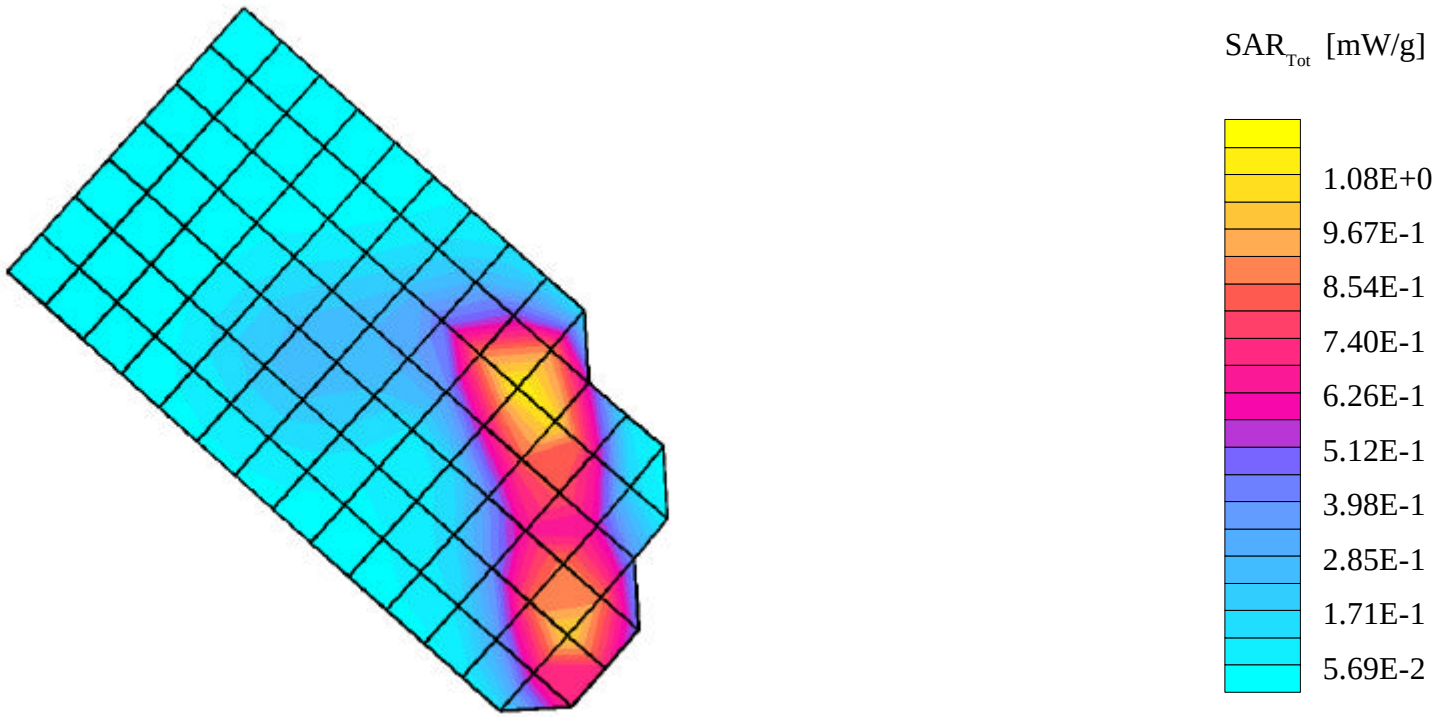


Figure 2. Typical 800MHz AMPS with Antenna Retracted Contour Plot Overlaid on Front of Phone.

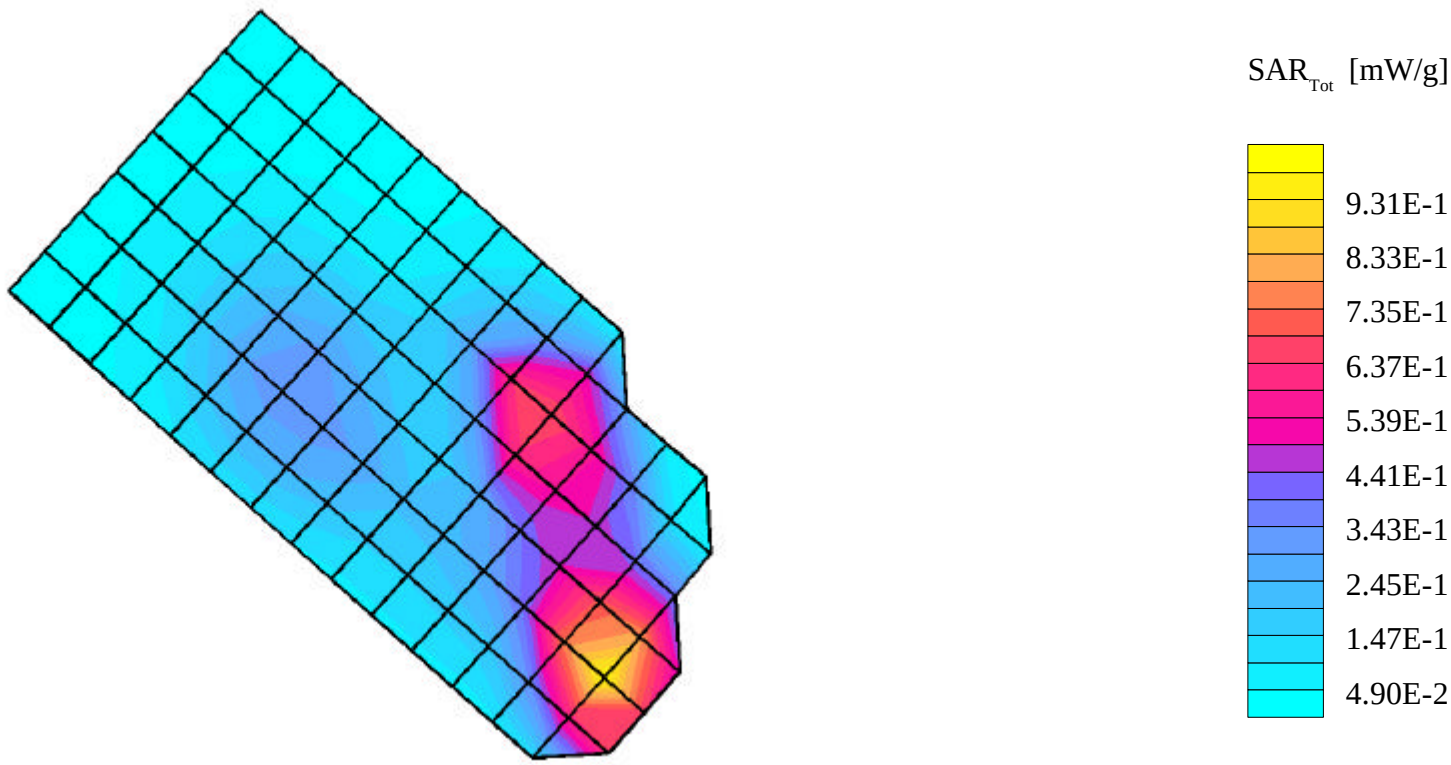
s/n 77596CEB

Ch# 25 / Pwr Step: Over the Air / Antenna Position: Extended / Type of Modulation: 1900 CDMA
Left Head (Desi) Phantom; Left Head Section; Position: (80°,180°); Frequency: 1851 MHz
Probe: ET3DV6 - SN1390 - Head (Glycol); ConvF(5.37,5.37,5.37); Crest factor: 1.0; Head Glycol 1900 MHz: σ = 1.42 mho/m ε_r = 40.8 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 1.12 mW/g, SAR (10g): 0.614 mW/g, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Penetration depth: 8.6 (7.7, 10.3) [mm]
Powerdrift: 0.09 dB



s/n 77596CEB

Ch# 600 / Pwr Step: Over the Air / Antenna Position: Retracted / Type of Modulation: 1900 CDMA
Left Head (Desi) Phantom; Left Head Section; Position: (80°,180°); Frequency: 1880 MHz
Probe: ET3DV6 - SN1390 - Head (Glycol); ConvF(5.37,5.37,5.37); Crest factor: 1.0; Head Glycol 1900 MHz: σ = 1.42 mho/m ε_r = 40.8 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 0.881 mW/g, SAR (10g): 0.533 mW/g * Max outside, (Worst-case extrapolation)
Coarse: Dx = 10.0, Dy = 10.0, Dz = 10.0
Penetration depth: 10.5 (10.4, 10.8) [mm]
Powerdrift: 0.01 dB



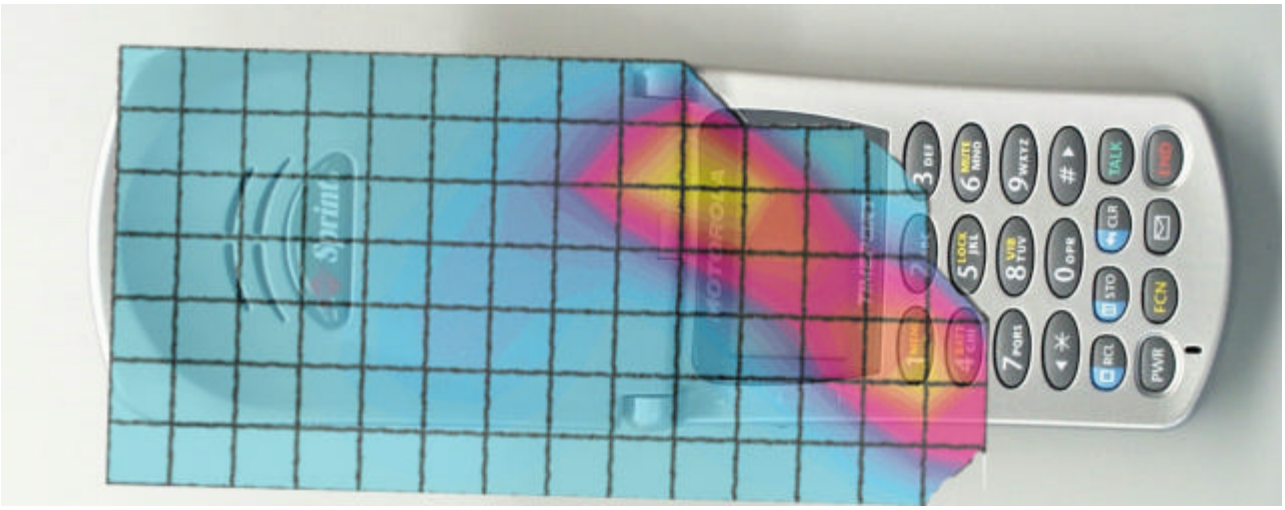


Figure 3. Typical 1900MHz CDMA with Antenna Extended Contour Plot Overlaid on Front of Phone.

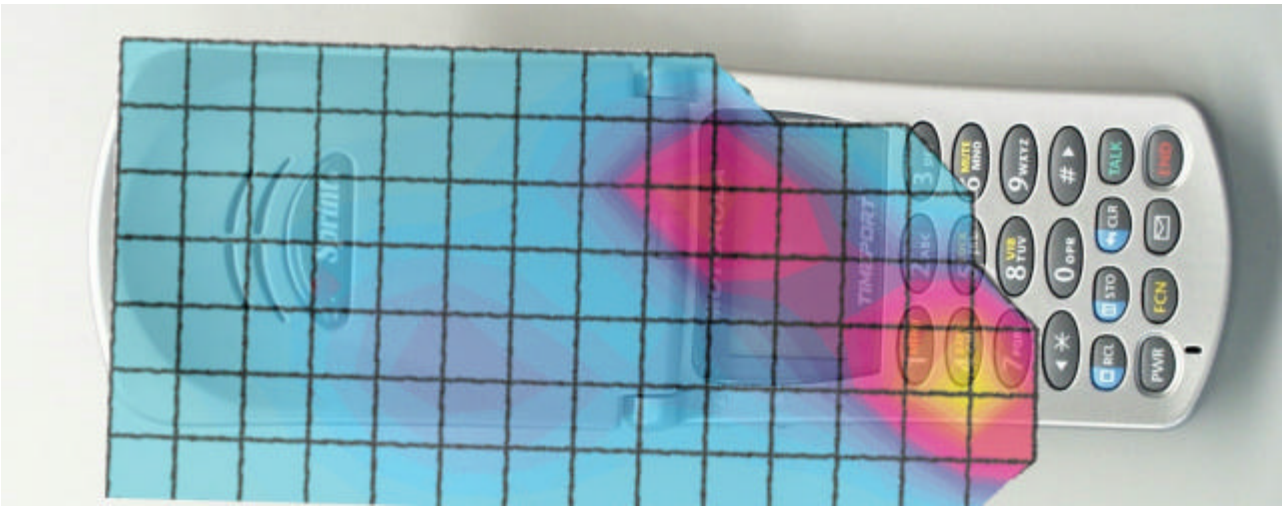


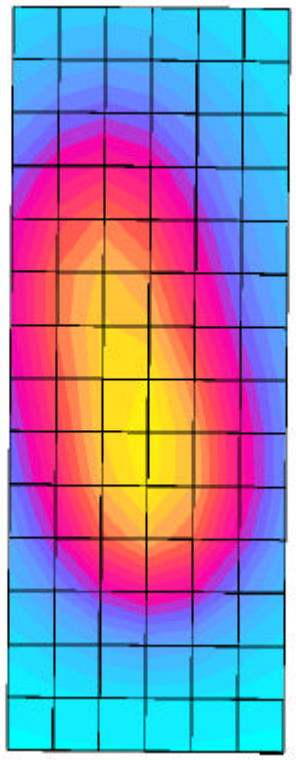
Figure 4. Typical 1900MHz CDMA with Antenna Retracted Contour Plot Overlaid on Front of Phone.

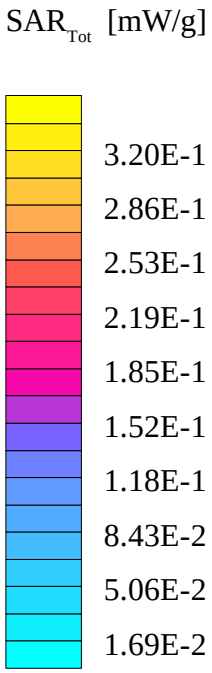
Appendix 3

SAR distribution plots for Body Worn Configuration

s/n 77596CEB

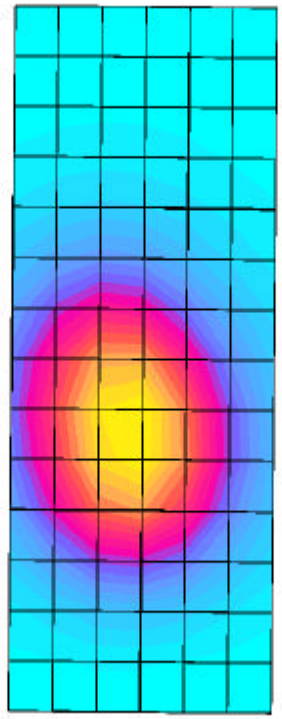
Ch# 991 / Pwr Step: 02 / Antenna Position:EXTENDED / Type of Modulation:800 ANALOG
Amy Twin Optics OFF Phantom; Section2 Section; Position: (0°,0°); Frequency: 824 MHz
Probe: ET3DV6 - SN1390 - Muscle (Sugar Water); ConvF(6.70,6.70,6.70); Crest factor: 1.0; Muscle 835 MHz: σ = 1.08 mho/m ε_r = 50.6 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 0.328 mW/g, SAR (10g): 0.232 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 13.0, Dz = 10.0
Penetration depth: 15.2 (13.7, 16.9) [mm]
Powerdrift: 0.08 dB

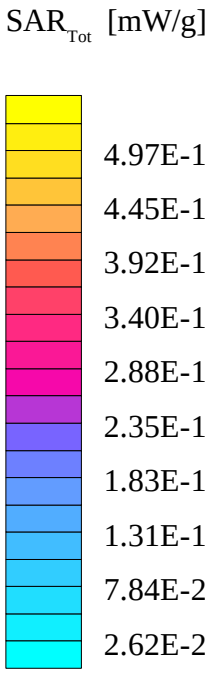




s/n 77596CEB

Ch# 991 / Pwr Step: 02 / Antenna Position:RETRACTED / Type of Modulation:800 ANALOG
Amy Twin Optics OFF Phantom; Section2 Section; Position: (0°,0°); Frequency: 824 MHz
Probe: ET3DV6 - SN1390 - Muscle (Sugar Water); ConvF(6.70,6.70,6.70); Crest factor: 1.0; Muscle 835 MHz: σ = 1.08 mho/m ε_r = 50.6 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 0.526 mW/g, SAR (10g): 0.367 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 13.0, Dz = 10.0
Penetration depth: 15.0 (13.4, 16.6) [mm]
Powerdrift: 0.09 dB





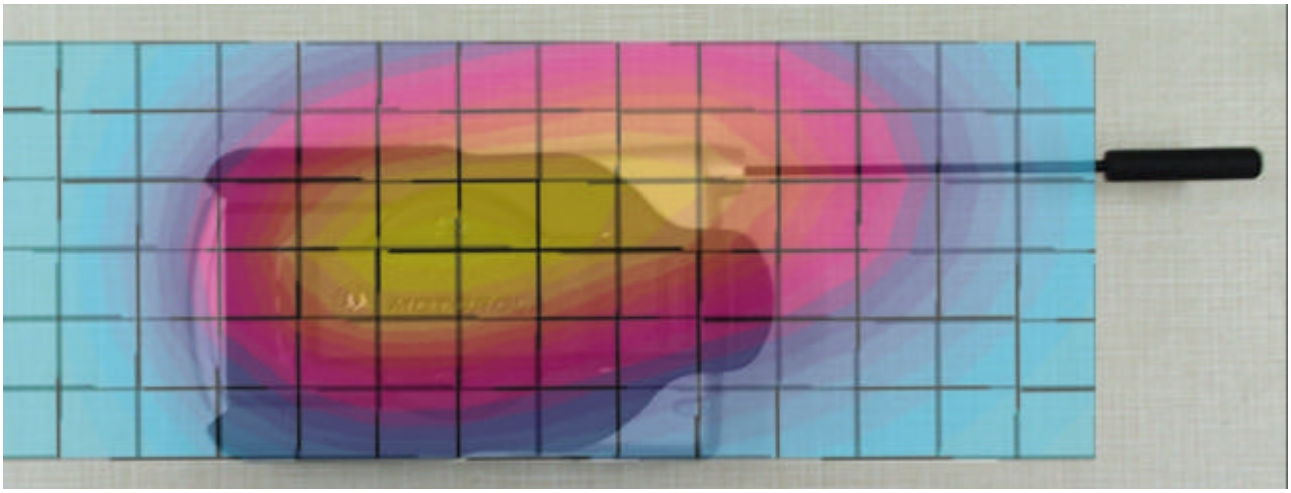


Figure 5. Typical 800MHz with Antenna Extended Contour Plot Overlaid on Body Worn Accessory

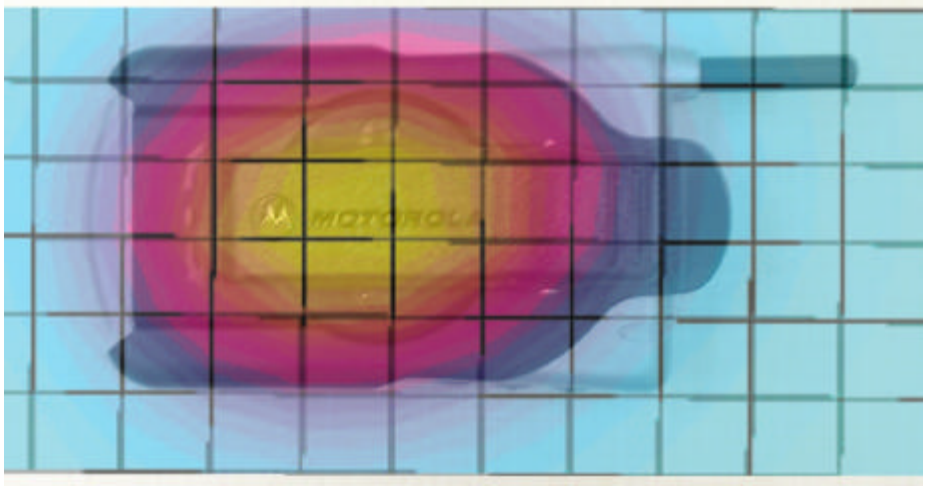
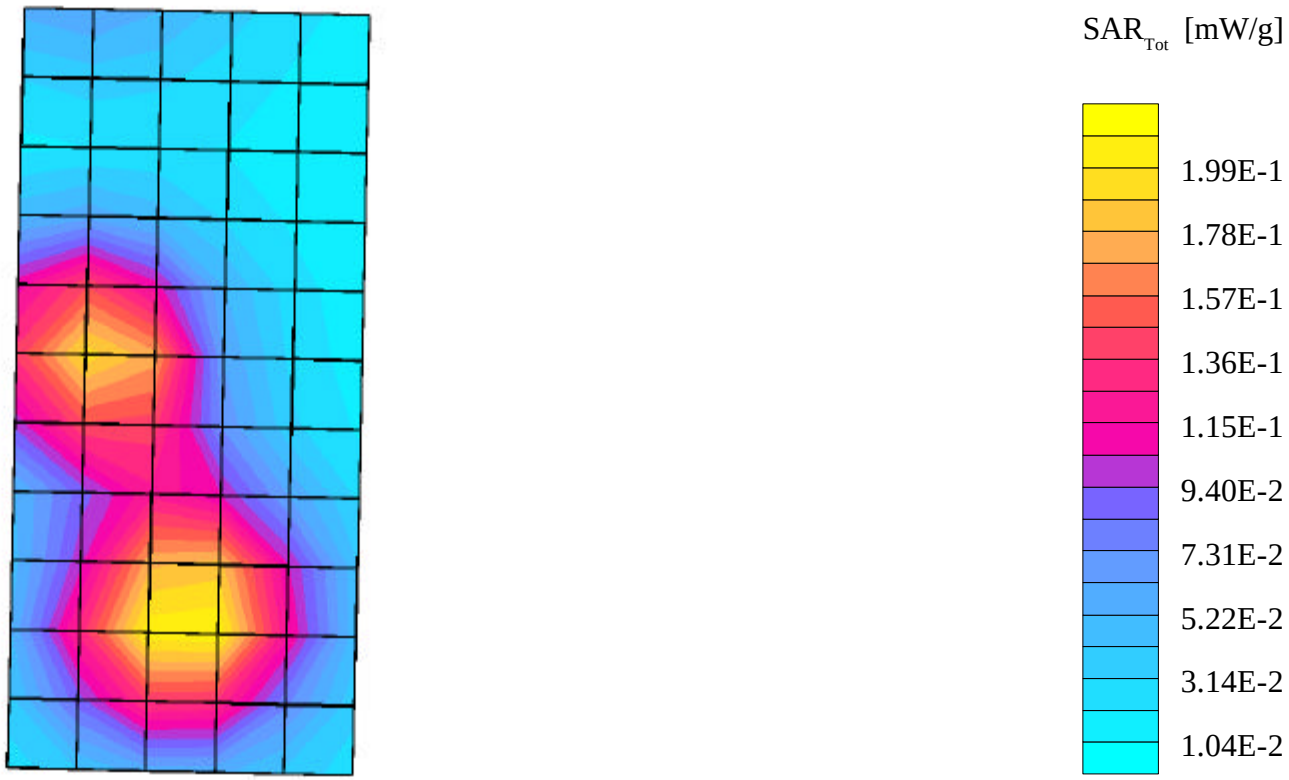


Figure 6. Typical 800MHz with Antenna Retracted Contour Plot Overlaid on Body Worn Accessory

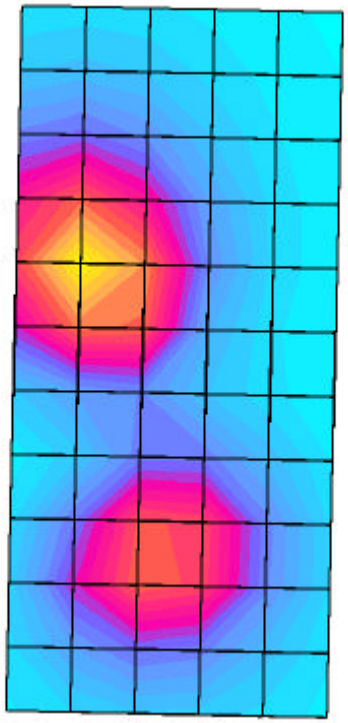
s/n 77596CEB

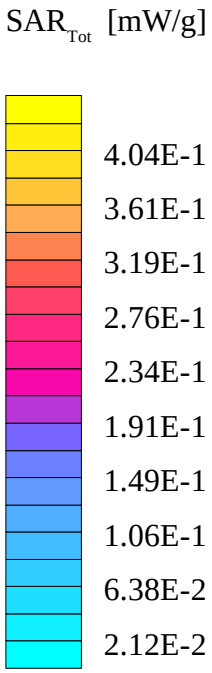
Ch# 25 / Pwr Step: Over the Air / Antenna Position: Extended / Type of Modulation: 1900 CDMA
Amy Twin Optics OFF Phantom; Section 1 Section; Position: (0°,0°); Frequency: 1851 MHz
Probe: ET3DV6 - SN1390- Muscle (Glycol); ConvF(5.09,5.09,5.09); Crest factor: 1.0; Muscle Glycol 1900 MHz: σ = 1.70 mho/m ε_r = 49.0 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 0.217 mW/g, SAR (10g): 0.135 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0
Penetration depth: 11.0 (9.5, 13.1) [mm]
Powerdrift: 0.04 dB



s/n 77596CEB

Ch# 25 / Pwr Step: Over the Air / Antenna Position: Retracted / Type of Modulation: 1900 CDMA
Amy Twin Optics OFF Phantom; Section 1 Section; Position: (0°,0°); Frequency: 1851 MHz
Probe: ET3DV6 - SN1390- Muscle (Glycol); ConvF(5.09,5.09,5.09); Crest factor: 1.0; Muscle Glycol 1900 MHz: σ = 1.70 mho/m ε_r = 49.0 ρ = 1.00 g/cm^3
Cube 5x5x7: SAR (1g): 0.421 mW/g, SAR (10g): 0.251 mW/g, (Worst-case extrapolation)
Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0
Penetration depth: 9.7 (8.7, 11.4) [mm]
Powerdrift: 0.01 dB





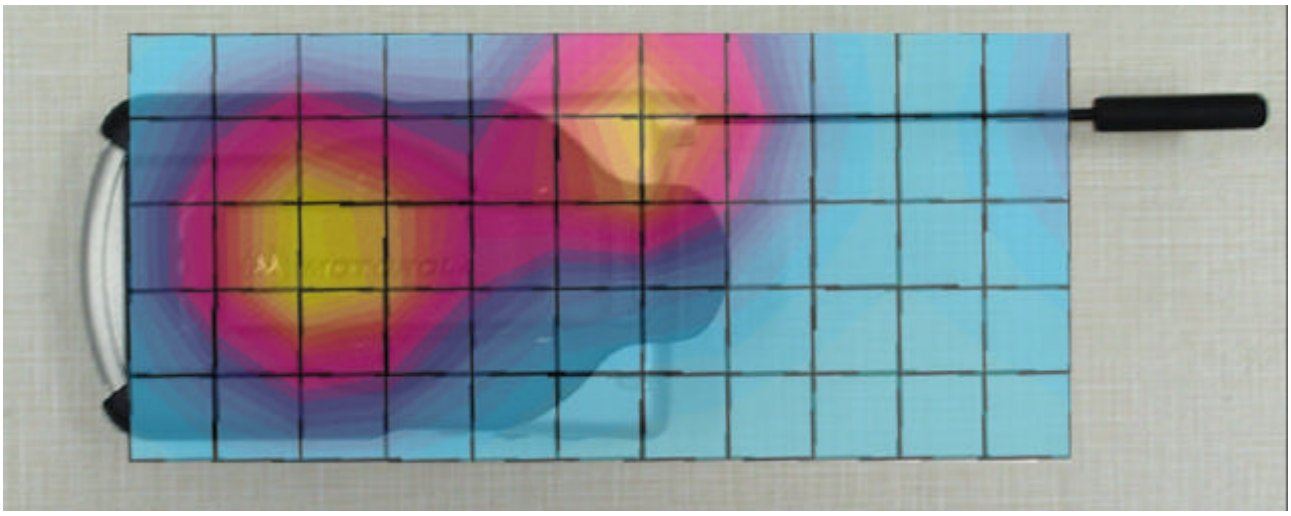


Figure 7. Typical 1900MHz CDMA with Antenna Extended Contour Plot Overlaid on Body Worn Accessory

Figure 8. Typical 1900MHz with Antenna Retracted Contour Plot Overlaid on Body Worn Accessory

Figure 9. Separation Distance Provided by Body Worn Accessory with Antenna Extended.

Figure 10. Separation Distance Provided by Body Worn Accessory with Antenna Retracted.

Appendix 4

Photographs of the device under test

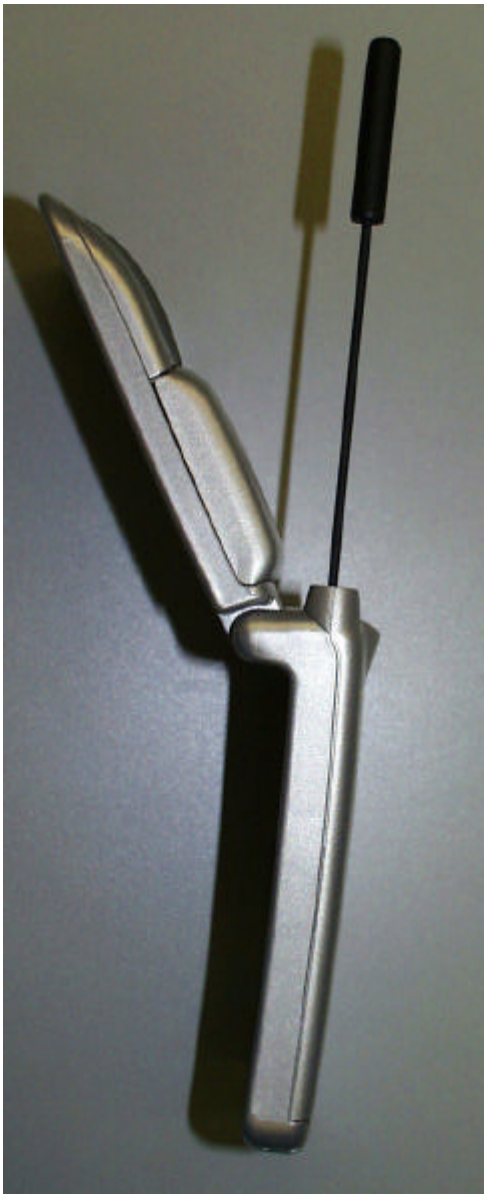


Figure 11. Side of Phone with Antenna Extended

Figure 12. Side of Phone with Antenna Retracted

Figure 13. Front of Phone

Figure 14. Phone in Supplied Belt Clip against Phantom

Figure 15. Phone against Head Phantom with Antenna Extended

Figure 16. Phone against Head Phantom with Antenna Retracted