



May 5, 2006

Supplement to SAR Test Report for Motorola portable cellular phone (FCC ID IHDT56GH1)

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Summary of FCC request for additional information.

There has been a request for additional SAR testing to be done in EV-DO mode for the CDMA Q Phone (FCC ID IHDT56FQ1). The requested information is addressed below.

7. Does the EUT employ EV-DO? If so, body-worn SAR should be repeated in EV-DO (Rev. 0 only) using the CDMA 2000 body-worn channel configuration that resulted in the highest SAR among the various Radio Configurations in this frequency band (that is, just a single SAR test for EV-DO, as a sanity check). If this EV-DO SAR is greater than the highest body-worn SAR in CDMA 2000, perform body-worn SAR for the other 2 channels (among the required H, M, L channels).

Response: See below.

EV-DO Data for Body Worn SAR Table

f (MHz)	Description	Conducted Output Power (dBm)	Body Worn			
			Back of phone 25 mm away from phantom			
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)
Digital 800MHz	Channel 1013	26.13				
	Channel 384	26.11	0.377	-0.02	0.38	19.2
	Channel 777	25.84				
Digital 1900MHz	Channel 25	25.10				
	Channel 600	25.09				
	Channel 1175	25.12	0.383	-0.20	0.40	19.8

Additions to Electrical Parameters Table from Section 4 of Original Report

f (MHz)	Tissue type	Limits / Measured	Dielectric Parameters		
			ϵ_r	σ (S/m)	Temp (°C)
835	Body	Measured, 11/1/2005	52.9	0.96	20.0
		Recommended Limits	55.2 ±5%	0.97 ±5%	18-25
1880	Body	Measured, 11/3/2005	51.5	1.58	19.8
		Recommended Limits	53.3 ±5%	1.52 ±5%	18-25

Additions to System Accuracy Verification Table From Section 5 of Original Report

f (MHz)	Description	SAR (W/kg), 1gram	Dielectric Parameters		Ambient Temp (°C)	Tissue Temp (°C)
			ϵ_r	σ (S/m)		
900	Measured, 21-Apr-06	11.4	41.3	0.98	21.1	20.0
	Recommended Limits	11.3	41.5 ±5%	0.97 ±5%	18-25	18-25
1800	Measured, 21-Apr-06	40.3	38.6	1.36	21.2	19.8
	Recommended Limits	38.1	40.0 ±5%	1.4 ±5%	18-25	18-25

Appendix 1 Supplement

SAR distribution comparison for the system accuracy verification

Date/Time: 4/21/2006 8:44:41 AM

Test Laboratory: Motorola

900MHz Validation

DUT: Dipole 900 MHz; Type: D900V2; Serial: D900V2 - SN:096;

Procedure Notes: 900 MHz System Performance Check / Dipole Sn# 096

PM1 Power = 200mW Refl.Pwr PM3 = -24.5dB [Sim.Temp@SPC](#) = 20*C Room Temp @ SPC = 21.1*C

Communication System: CW - Dipole; Frequency: 900 MHz; Communication System Channel Number: 4;
Duty Cycle: 1:1

Medium: VALIDATION Only; Medium parameters used: $f = 900$ MHz; $\sigma = 0.98$ mho/m; $\epsilon_r = 41.3$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3037; ConvF(6.07, 6.07, 6.07); Calibrated: 11/17/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 9/5/2005
- Phantom: R4: Sugar Water SAM; Type: SAM; Serial: TP-1131;
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Daily SPC Check/Dipole Area Scan (4x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.18 mW/g

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

Reference Value = 50.9 V/m; Power Drift = 0.025 dB

Peak SAR (extrapolated) = 3.44 W/kg

SAR(1 g) = 2.27 mW/g; SAR(10 g) = 1.45 mW/g

Maximum value of SAR (measured) = 2.46 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.9 V/m; Power Drift = 0.025 dB

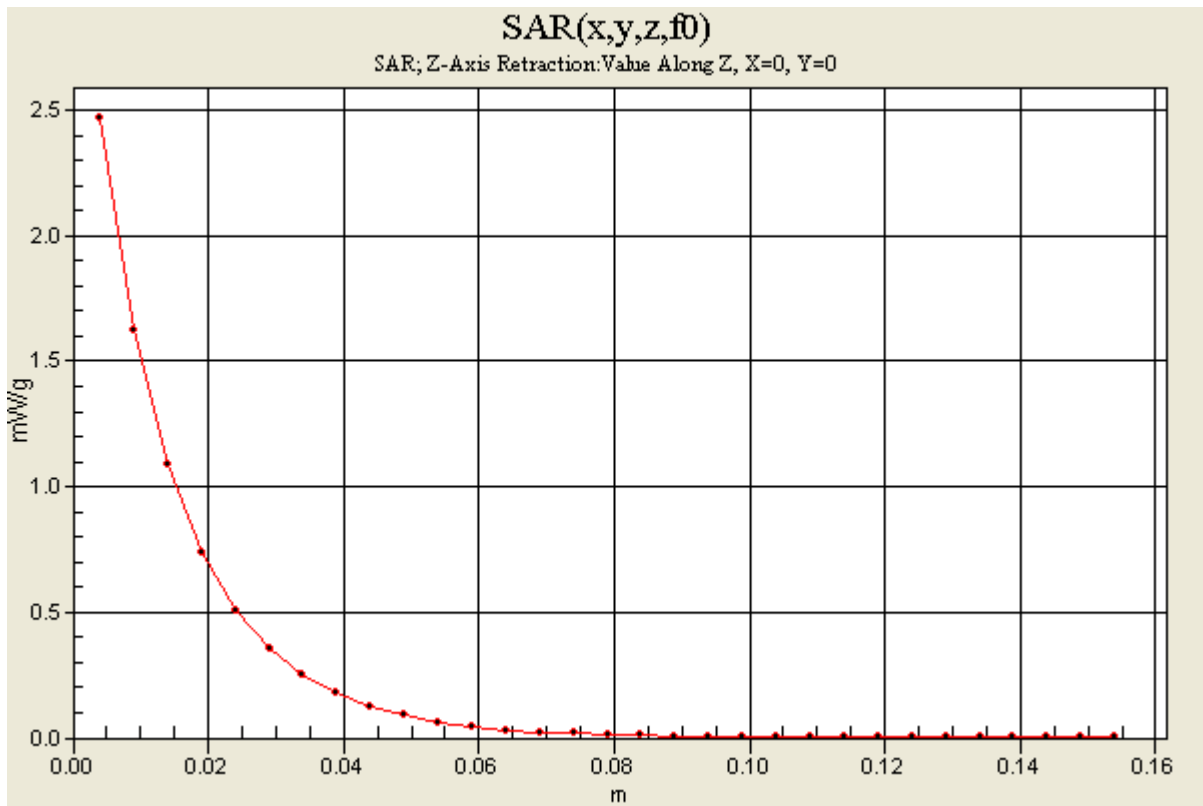
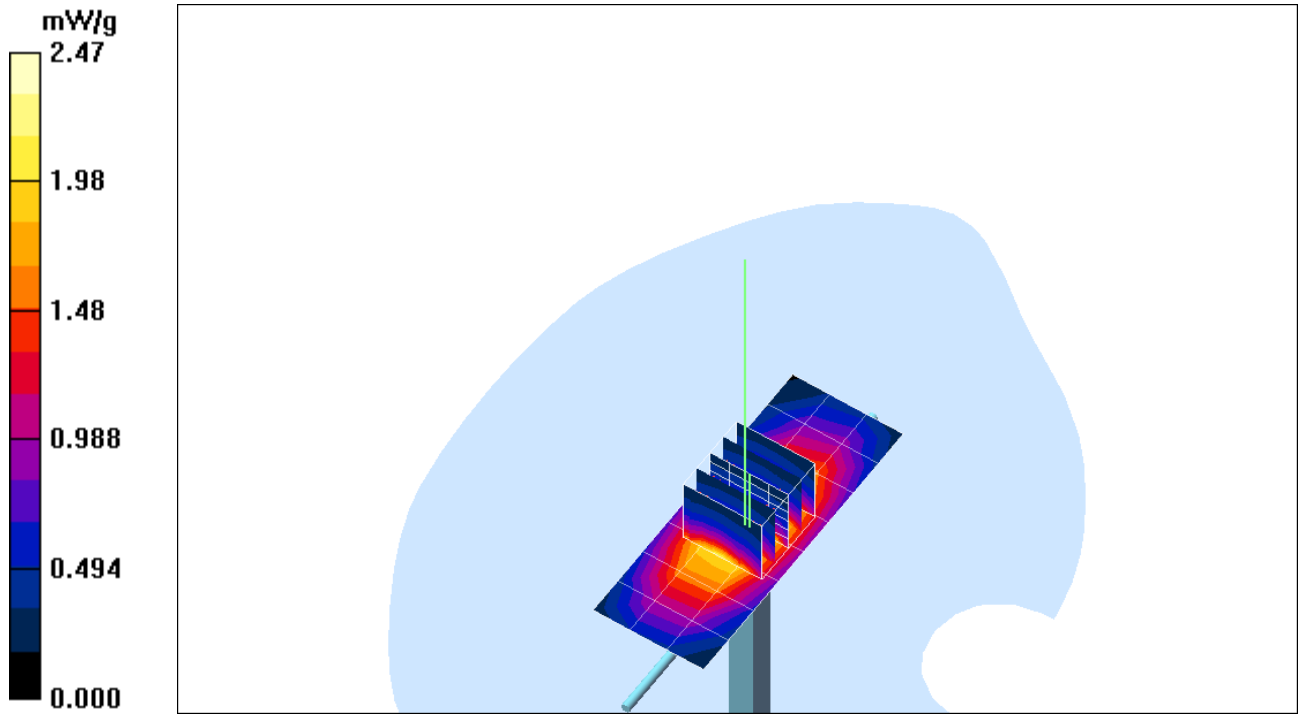
Peak SAR (extrapolated) = 3.50 W/kg

SAR(1 g) = 2.3 mW/g; SAR(10 g) = 1.47 mW/g

Maximum value of SAR (measured) = 2.40 mW/g

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

Maximum value of SAR (measured) = 2.47 mW/g



Date/Time: 4/21/2006 8:14:54 AM

Test Laboratory: Motorola

1800MHz Validation

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: D1800V2 - SN:272;

Procedure Notes: 1800 MHz System Performance Check / Dipole Sn# 272(TR)

PM1 Power = 200mW Refl.Pwr PM3 = -22.5dB Sim.Temp@SPC = 19.8*C Room Temp @ SPC = 21.2*C

Communication System: CW - Dipole; Frequency: 1800 MHz; Communication System Channel Number: 8; Duty Cycle: 1:1

Medium: VALIDATION Only; Medium parameters used: $f = 1800$ MHz; $\sigma = 1.36$ mho/m; $\epsilon_r = 38.6$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3037; ConvF(5.01, 5.01, 5.01); Calibrated: 11/17/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 9/5/2005
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

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

Maximum value of SAR (measured) = 7.64 mW/g

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

Reference Value = 81.7 V/m; Power Drift = -0.013 dB

Peak SAR (extrapolated) = 14.3 W/kg

SAR(1 g) = 8.07 mW/g; SAR(10 g) = 4.26 mW/g

Maximum value of SAR (measured) = 9.04 mW/g

Daily SPC Check/90-Degree 5x5x7 Cube (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 81.7 V/m; Power Drift = -0.013 dB

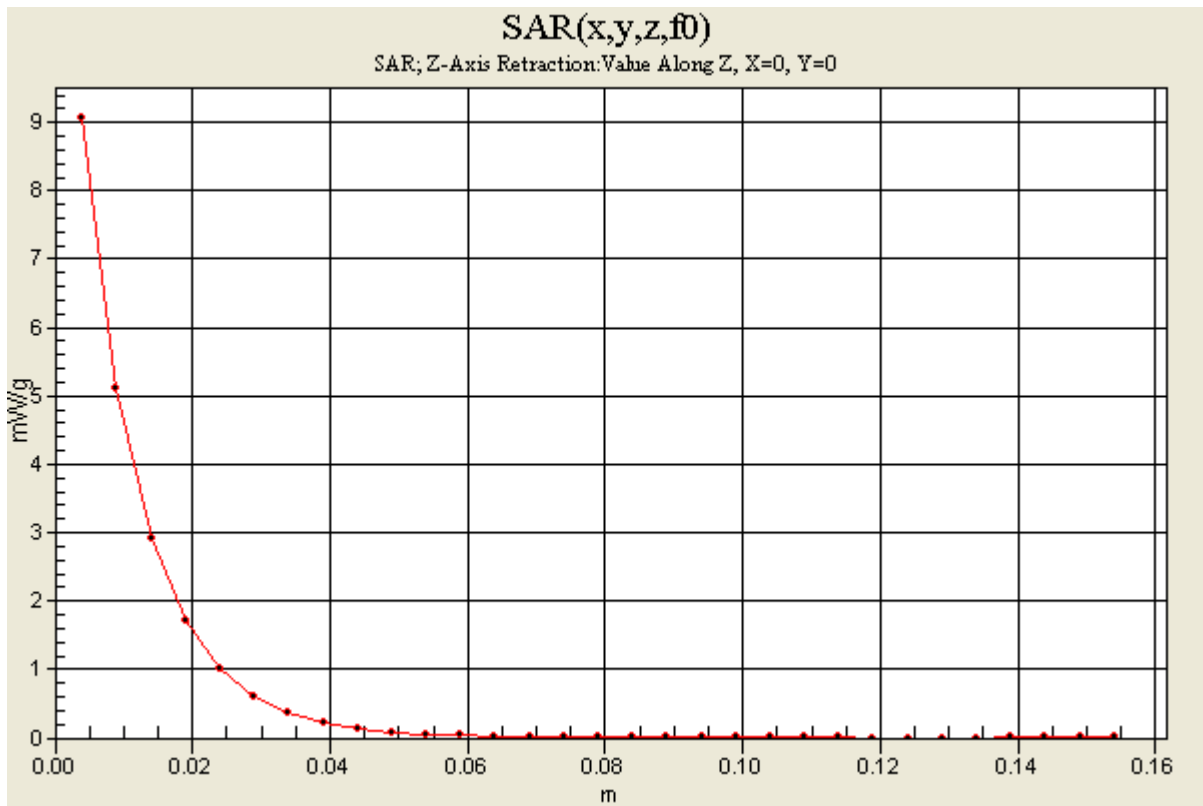
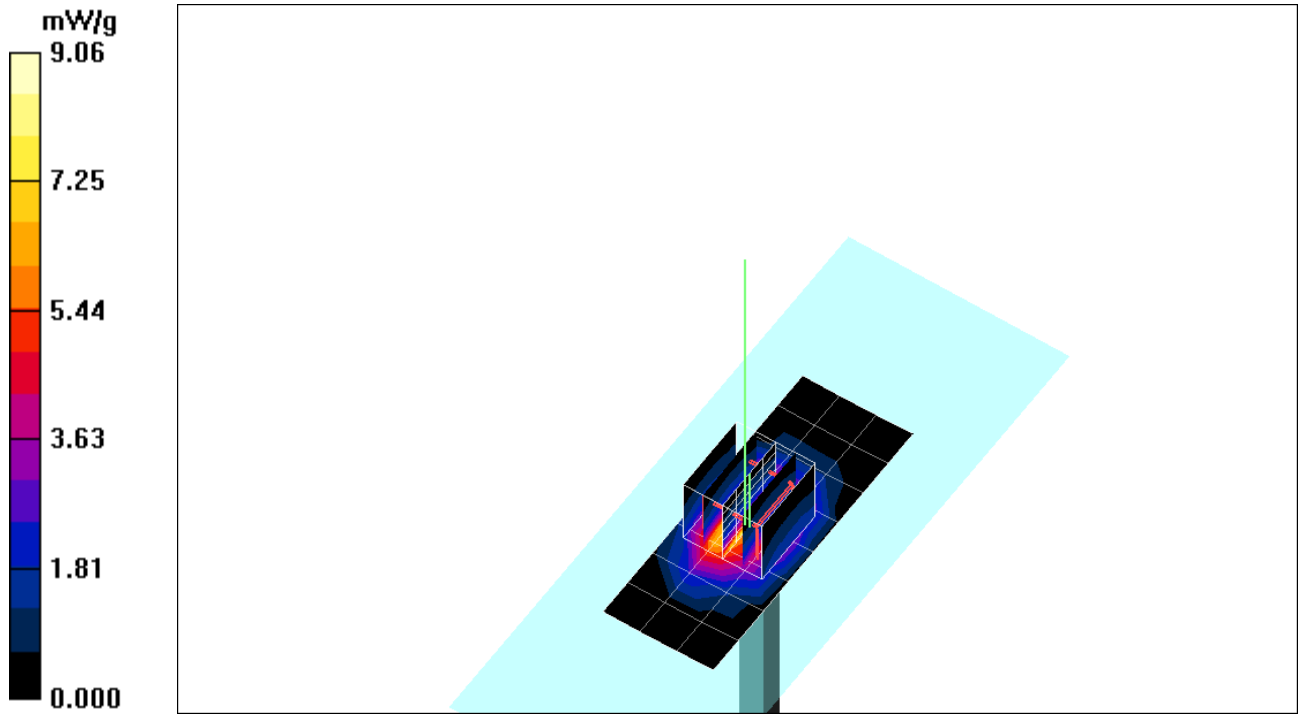
Peak SAR (extrapolated) = 14.2 W/kg

SAR(1 g) = 8.06 mW/g; SAR(10 g) = 4.27 mW/g

Maximum value of SAR (measured) = 8.94 mW/g

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

Maximum value of SAR (measured) = 9.06 mW/g



Appendix 2 Supplement

SAR distribution plots for Body Worn Configuration

Date/Time: 4/21/2006 5:33:00 PM

Test Laboratory: Motorola

EVDO Rev. 0 800MHz

Serial: 52744A07;

Procedure Notes: Pwr Step: All Up Bits Antenna Position: Internal Battery Model #: SNN5762A

Front of Phone 25mm from Flat Phantom

Communication System: CDMA 835; Frequency: 836.52 MHz; Communication System Channel Number: 384; Duty Cycle: 1:1

Medium: Low Freq Body; Medium parameters used: $f = 835$ MHz; $\sigma = 0.96$ mho/m; $\epsilon_r = 52.9$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3037; ConvF(5.93, 5.93, 5.93); Calibrated: 11/17/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 9/5/2005
- Phantom: R4 : Sect.1, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.404 mW/g

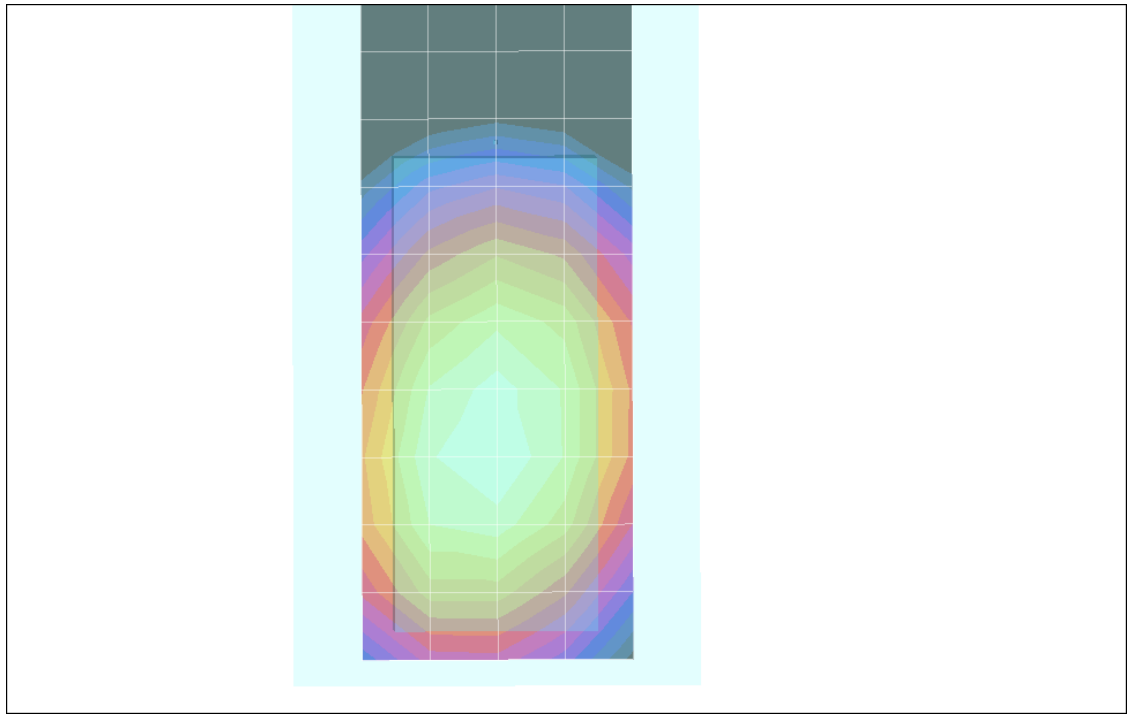
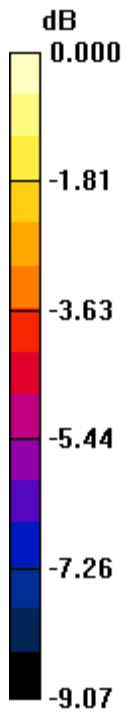
Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 19.4 V/m; Power Drift = -0.018 dB

Peak SAR (extrapolated) = 0.505 W/kg

SAR(1 g) = 0.377 mW/g; SAR(10 g) = 0.275 mW/g

Maximum value of SAR (measured) = 0.399 mW/g



0 dB = 0.399mW/g

Date/Time: 4/21/2006 6:05:44 PM

Test Laboratory: Motorola

EVDo Rev. 0 1900MHz

Serial: 52744A07;

Procedure Notes: Pwr Step: All Up Bits Antenna Position: Internal Battery Model #: SNN5765A

Front of Phone 25mm from Flat Phantom

Communication System: CDMA 1900; Frequency: 1908.75 MHz; Communication System Channel Number: 1175; Duty Cycle: 1:1

Medium: Regular Glycol Body; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.58$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³

DASY4 Configuration:

- Probe: ES3DV3 - SN3037; ConvF(4.65, 4.65, 4.65); Calibrated: 11/17/2005
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn376; Calibrated: 9/5/2005
- Phantom: R4 : Sect.2, Amy Twin; Type: Amy Twin Flat; Serial: n/a;
- Measurement SW: DASY4, V4.6 Build 23; Postprocessing SW: SEMCAD, V1.8 Build 160

Amy Twin Phone Template/Area Scan - Normal Extended Body (15mm) (16x7x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.406 mW/g

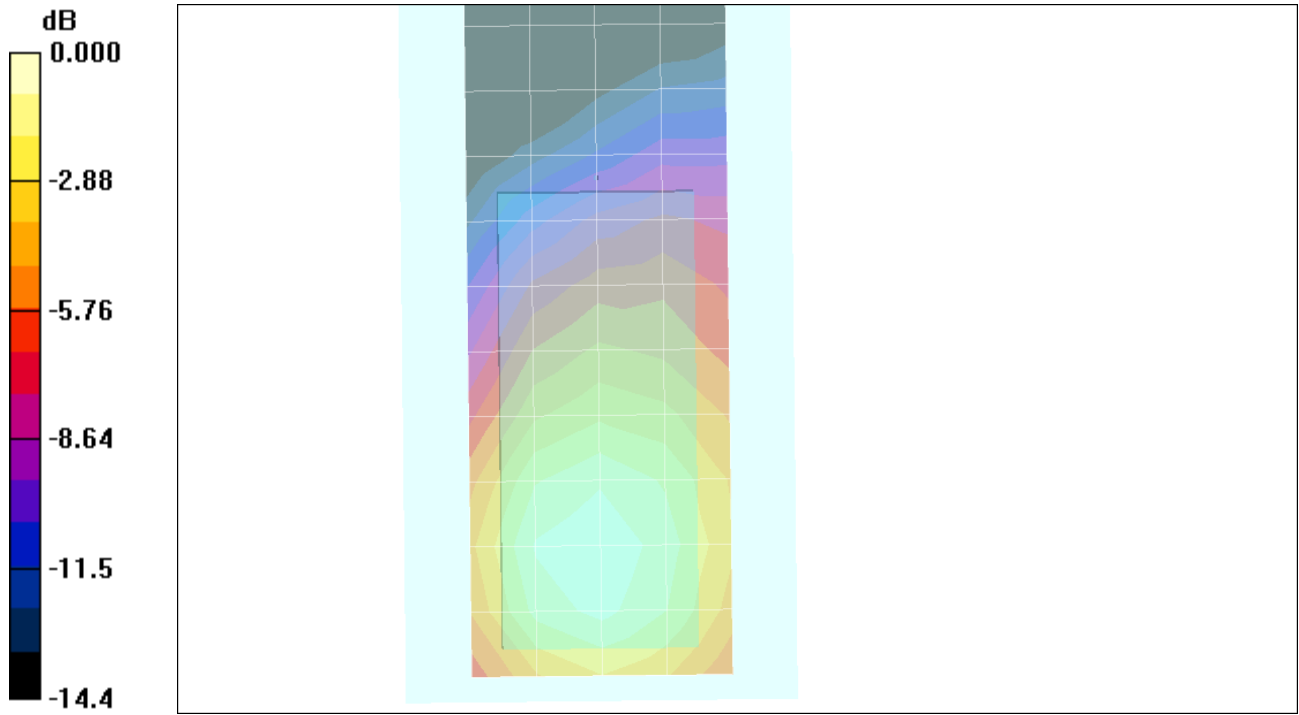
Amy Twin Phone Template/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 16.5 V/m; Power Drift = -0.200 dB

Peak SAR (extrapolated) = 0.589 W/kg

SAR(1 g) = 0.383 mW/g; SAR(10 g) = 0.242 mW/g

Maximum value of SAR (measured) = 0.413 mW/g



0 dB = 0.413mW/g