



19 April, 2004

Supplement to SAR Test Report for Motorola portable cellular phone (FCC ID IHDT56DH1)

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Summary of request for additional information

There was a request for additional information regarding Motorola's SAR Test Report for Motorola portable cellular phone (FCC ID IHDT56DH1). The requested information is addressed below in the same numbering sequence received.

1. Test results are presented for Analog 800 MHz operation and Digital 1900 MHz operation. Was the 800 MHz CDMA mode tested?

Response: Please see the SAR results for the 800MHz CDMA mode below:

f (MHz)	Description	Conducted Output Power (dBm)	Leather Case: Model # EL81001 with Belt Clip Model # SYN8763A								
			Ant Extended				Ant Retracted				
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	
Digital 800MHz	Channel 1013	24.58									
	Channel 384	24.49	0.533	0.05	0.53	20.3	0.373	0.0	0.37	20.7	
	Channel 779	24.53									

Table 1: SAR measurement results for the portable cellular telephone FCC ID IHDT56DH1 at highest possible output power. Measured against the body.

f (MHz)	Description	Conducted Output Power (dBm)	Leather Case: Model # EL81001 with Belt Clip Model # SYN8631A								
			Ant Extended				Ant Retracted				
			Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	Measured (W/kg)	Drift (dB)	Extrapolated (W/kg)	Simulate Temp (°C)	
Digital 800MHz	Channel 1013	24.58									
	Channel 384	24.49	0.284	-0.06	0.29	20.7	0.181	0.06	0.18	20.7	
	Channel 779	24.53									

Table 2: SAR measurement results for the portable cellular telephone FCC ID IHDT56DH1 at highest possible output power. Measured against the body

Additional System Accuracy Verification

f (MHz)	Description	SAR (W/kg), 1gram	Dielectric Parameters		Ambient Temp (°C)	Tissue Temp (°C)
			ϵ_r	σ (S/m)		
835	Measured, 19-Apr-04	10.2	42.5	0.92	21	20.8
	Recommended Limits	10.0	41.5 ±5%	0.90 ±5%	18-25	18-25

2. The Dipole Validation Data Table (p.5) has data for the 2/13 900 MHz test transposed with the data from the 2/17 900 MHz test.

Response: Agreed. Corrected table is given below:

<i>f</i> (MHz)	Description	SAR (W/kg), 1gram	Dielectric Parameters		Ambient Temp (°C)	Tissue Temp (°C)
			ϵ_r	σ (S/m)		
900	Measured, 11-Feb-04	11.8	41.4	0.98	21	21.7
	Measured, 13-Feb-04	11.4	41.5	0.98	22	22.2
	Measured, 17-Feb-04	11.6	42.2	0.98	21	21.2
	Recommended Limits	11.6	41.5 ±5%	0.97 ±5%	18-25	18-25
1800	Measured, 11-Feb-04	40.2	38.7	1.35	21	21.5
	Measured, 13-Feb-04	40.8	39.0	1.35	22	21.7
	Recommended Limits	39.7	40.0 ±5%	1.4 ±5%	18-25	18-25

Appendix 1

SAR distribution plots for Phantom Body Worn Use

s/n: 333A0056

Ch# 384 / Pwr Step: AlwaysUp(OTA)

Antenna Position: Ext

Type of Modulation: CDMA800

Battery Model #: SNN5725A

Accessory Model # = EL81001 and Belt clip model# SYN8631A

Amy Twin Phantom Rev.4 (22Aug02) Phantom; section 1 Section; Position: (0°,0°); Frequency: 837 MHz

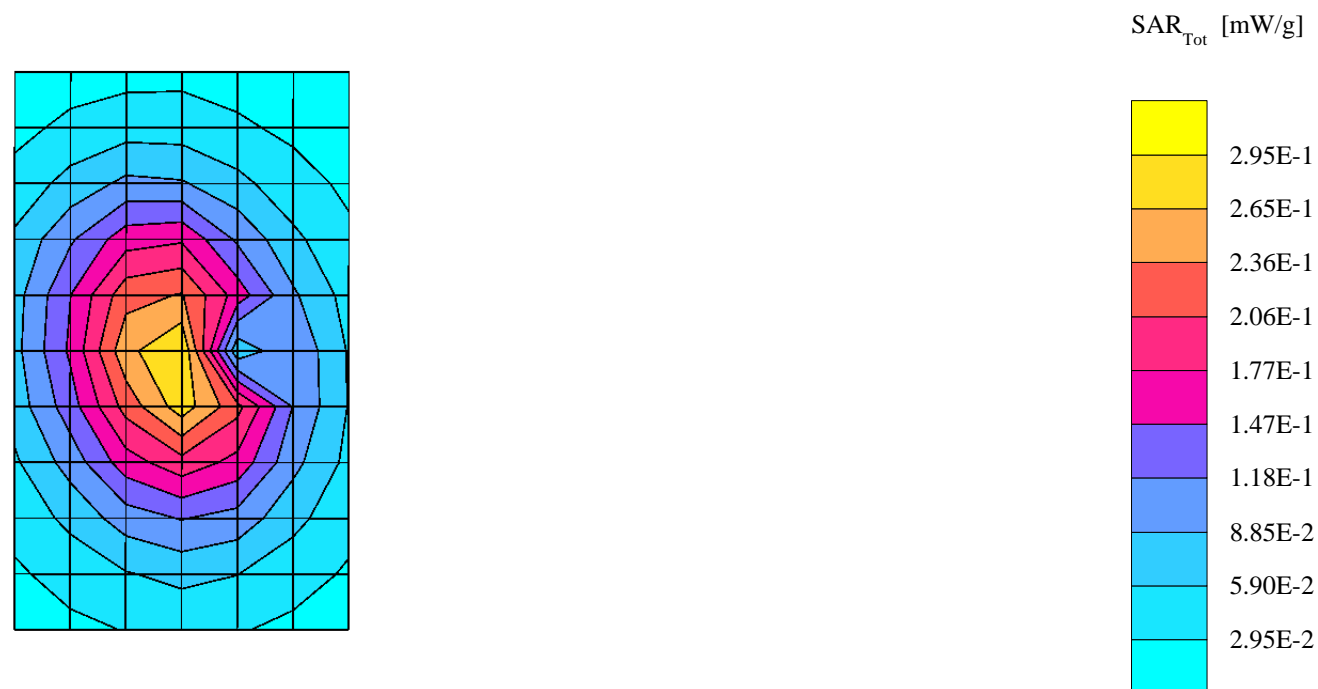
Probe: ET3DV6 - SN1515 - FCC Body; ConvF(6.30,6.30,6.30); Crest factor: 1.0; 835 MHz Head & Body: $\sigma = 0.99$ mho/m $\epsilon_r = 55.7$ $\rho = 1.00$ g/cm³

Cube 7x7x7: SAR (1g): 0.284 mW/g, SAR (10g): 0.204 mW/g, (Worst-case extrapolation)

Coarse: Dx = 15.0, Dy = 15.0, Dz = 10.0

Penetration depth: 16.9 (15.6, 18.3) [mm]

Powerdrift: -0.06 dB



Appendix 2

SAR distribution comparison for the system accuracy verification

Dipole 835 MHz

900 MHz System Performance Check / Dipole Sn# 421tr

PM1 Power =200mW Refl.Pwr PM3= -25.371dB

Sim.Temp@meas=20.98°C Sim.Temp@SPC = 20.8°C Room Temp @ SPC =21°C

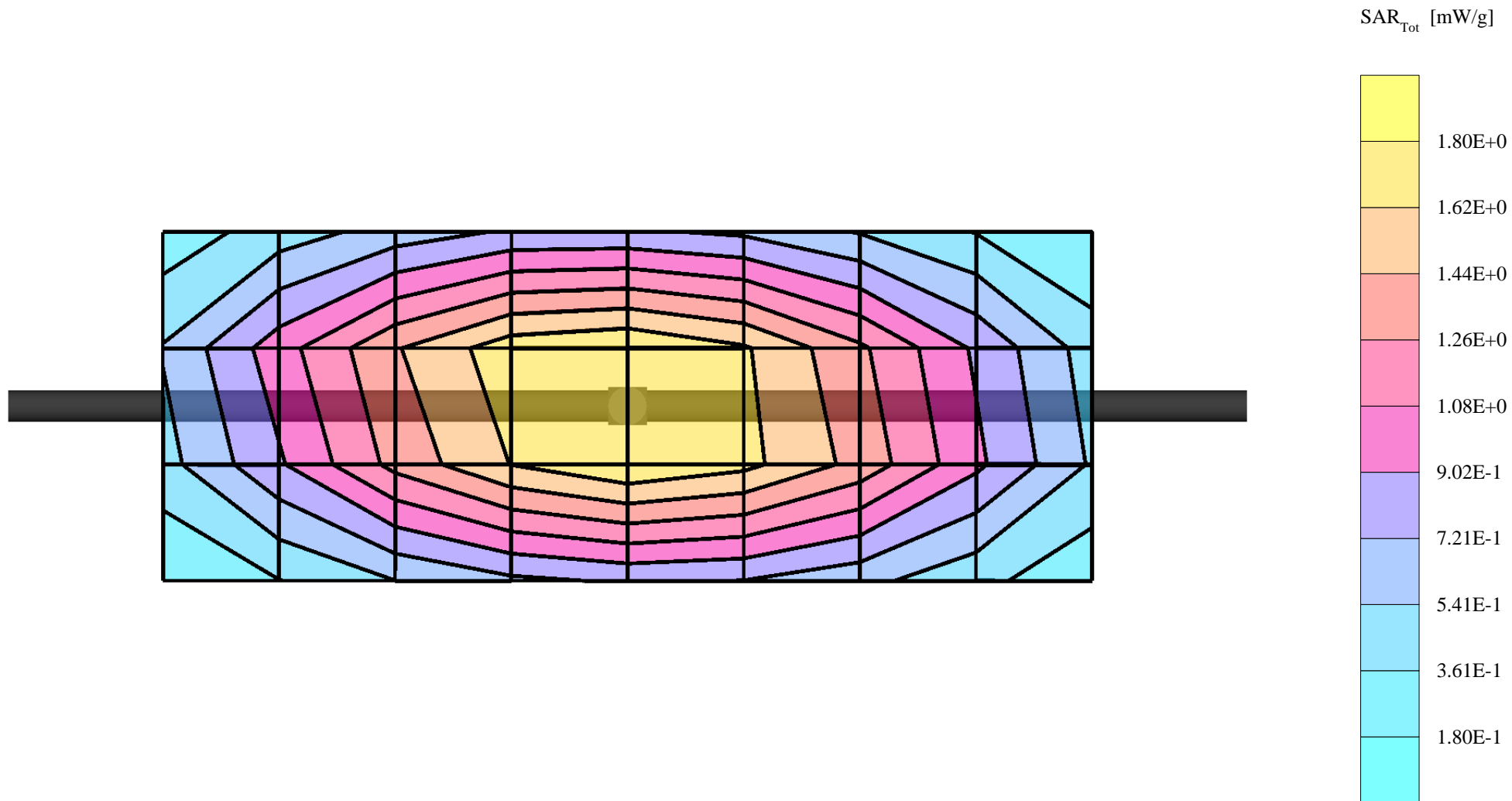
R#8 SUGAR TP-1168 SAM Expanded (Rev. 2)-9Jan03; Flat

Probe: ET3DV6 - SN1515 - Validation.2; ConvF(6.50,6.50,6.50); Crest factor: 1.0; 835 MHz VALIDATION: $\sigma = 0.92$ mho/m $\epsilon_r = 42.5$ $\rho = 1.00$ g/cm³

Cubes (2): Peak: 3.20 mW/g ± 0.03 dB, SAR (1g): 2.04 mW/g ± 0.03 dB, SAR (10g): 1.31 mW/g ± 0.02 dB, (Worst-case extrapolation)

Penetration depth: 12.0 (11.0, 13.3) [mm]

Powerdrift: -0.05 dB



Dipole 835 MHz

900 MHz System Performance Check / Dipole Sn# 421tr

PM1 Power =200mW Refl.Pwr PM3= -25.371dB

Sim.Temp@meas=21°C Sim.Temp@SPC = 20.8°C Room Temp @ SPC =21°C

R#8 SUGAR TP-1168 SAM Expanded (Rev. 2)-9Jan03 Phantom; Section; Position: ; Frequency: 835 MHz

Probe: ET3DV6 - SN1515 - Validation.2; ConvF(6.50,6.50,6.50); Crest factor: 1.0; 835 MHz VALIDATION: $\sigma = 0.92$ mho/m $\epsilon_r = 42.5$ $\rho = 1.00$ g/cm³

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Z-Axis: Dx = 0.0, Dy = 0.0, Dz = 5.0

Penetration depth: 12.0 (11.0, 13.3) [mm]

