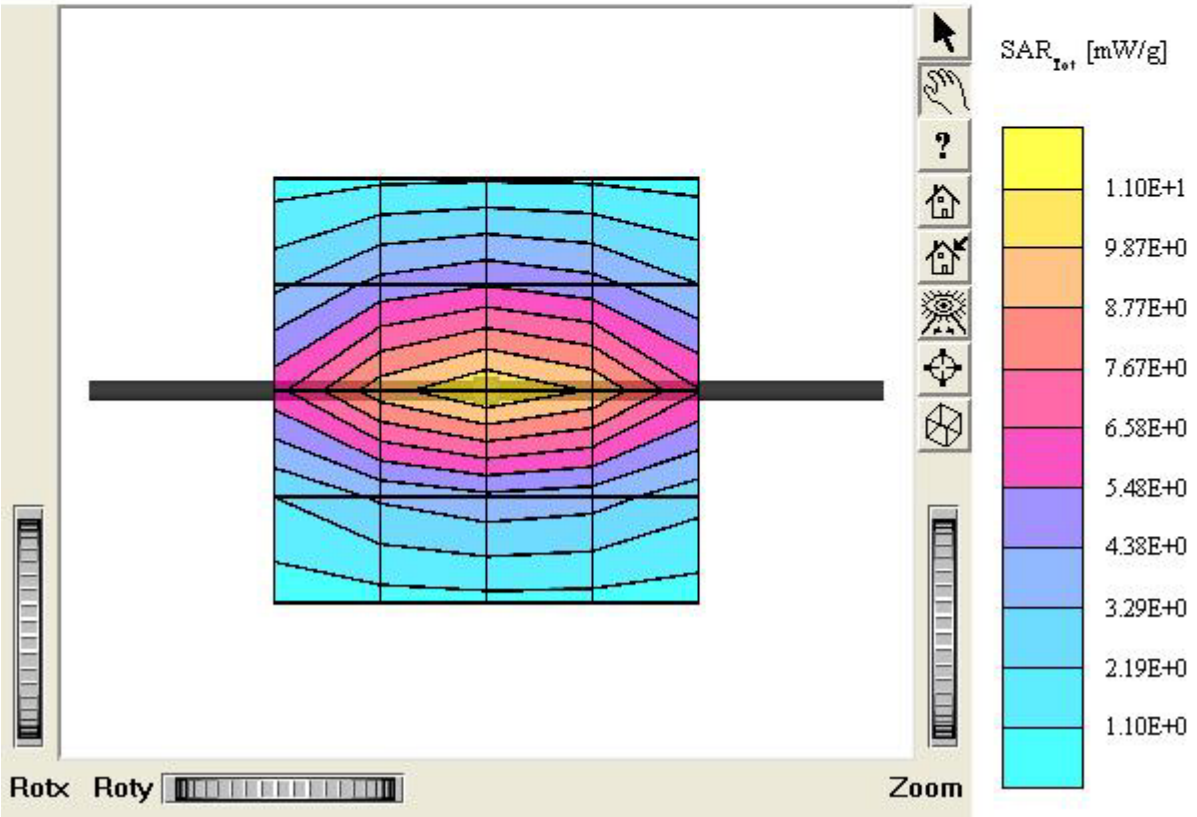
ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (835MHz Brain)

Dipole 835 MHz

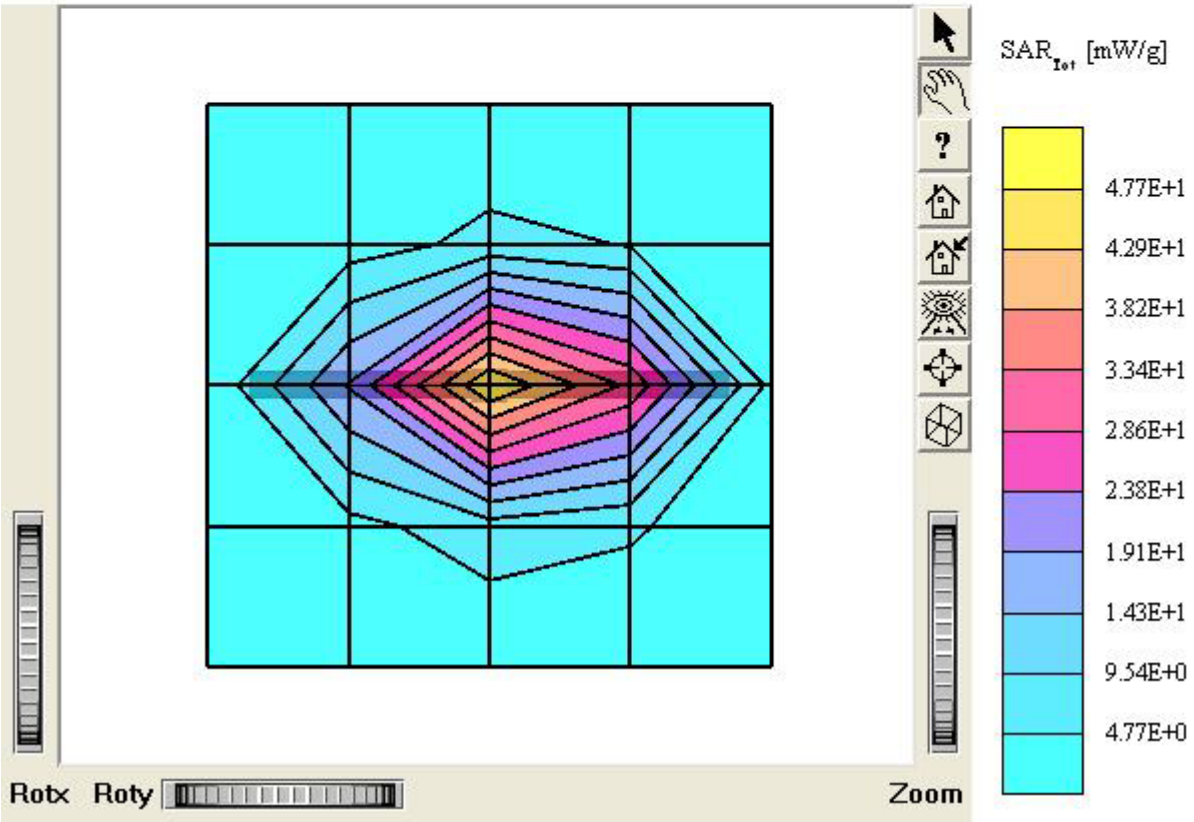
SAM I Phantom; Flat Section; Position: (90°,90°); Frequency: 835 MHz
Probe: ET3DV6 - SN1609; ConvF(6.63,6.63,6.63); Crest factor: 1.0; Brain 835 MHz: σ = 0.88 mho/m ε_r = 42.3 ρ = 1.00 g/cm^3
Cubes (2): SAR (1g): 10.3 mW/g ± 0.01 dB, SAR (10g): 6.62 mW/g ± 0.01 dB
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Powerdrift: -0.07 dB
Comment:
835MHz Brain Dipole Validation (D835V2/ S.N: 441)
Antenna Input Power: 30 dBm (1 W)
HCT Co., Ltd. Brain Tissue Simulating Liquid
Liquid Temperature: 21.2℃
Date Tested : March 22, 2005



■ Validation Data (1900MHz Brain)

Dipole 1900 MHz

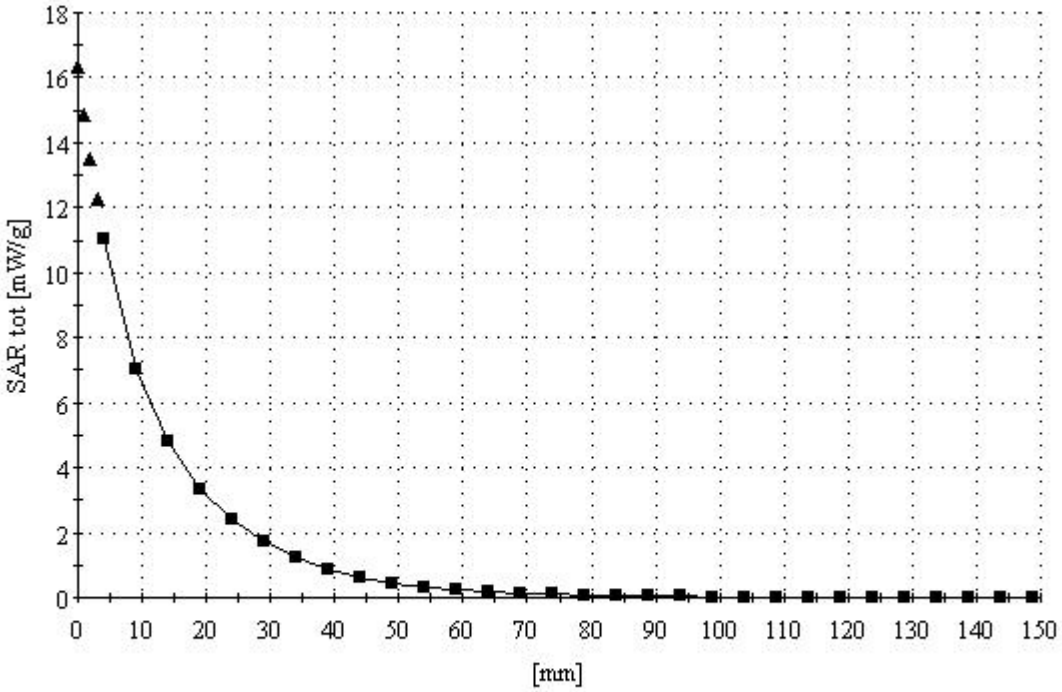
SAM II Phantom; Flat Section; Position: (90°,90°); Frequency: 1900 MHz
Probe: ET3DV6 - SN1609; ConvF(5.34,5.34,5.34); Crest factor: 1.0; Brain 1900 MHz: σ = 1.41 mho/m ε_r = 40.3 ρ = 1.00 g/cm^3
Cubes (2): SAR (1g): 41.5 mW/g ± 0.02 dB, SAR (10g): 20.7 mW/g ± 0.04 dB
Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0
Powerdrift: 0.07 dB
Comment:
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)
Antenna Input Power: 30 dBm (1 W)
HCT Co., Ltd. Brain Tissue Simulating Liquid
Liquid Temperature: 21.2℃
Date Tested : March 22, 2005



Dipole 835 MHz

SAM I Phantom; Section; Position: ; Frequency: 835 MHz
Probe: ET3DV6 - SN1609; ConvF(6.63,6.63,6.63); Crest factor: 1.0; Brain 835 MHz: σ = 0.88 mho/m ε_r = 42.3 ρ = 1.00 g/cm^3
:
Z-Axis: Dx = 0.0, Dy = 0.0, Dz = 5.0

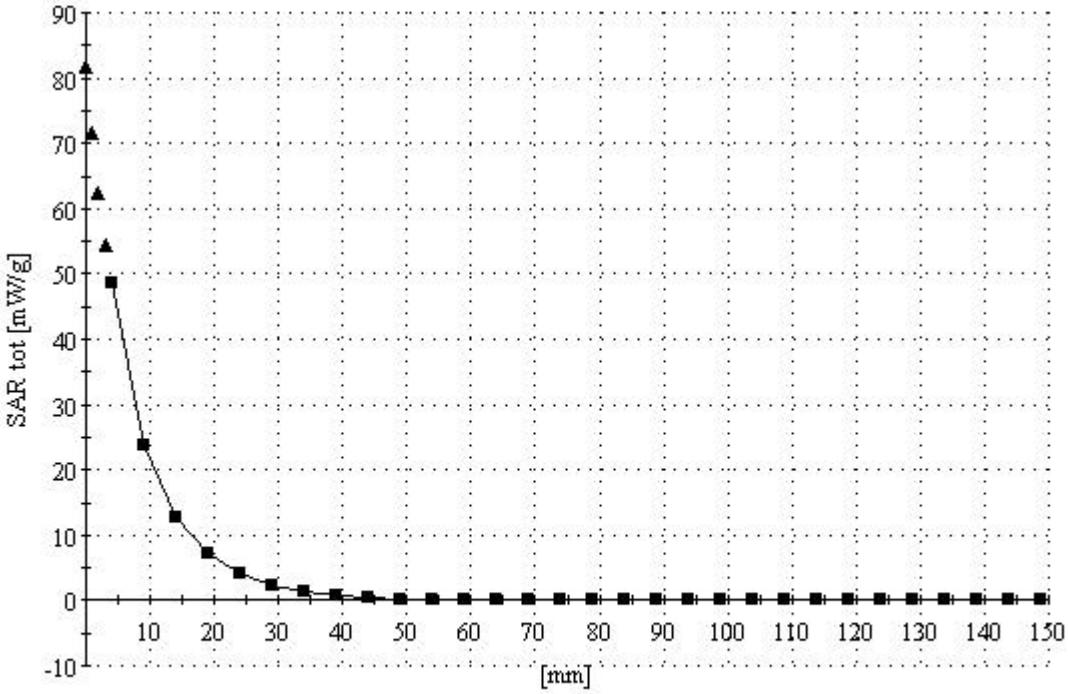
Comment:
835MHz Brain Dipole Validation (D835V2/ S.N: 441)
Antenna Input Power: 30 dBm (1 W)
HCT Co., Ltd. Brain Tissue Simulating Liquid
Liquid Temperature: 21.2℃
Date Tested : March 22, 2005



Dipole 1900 MHz

SAM II Phantom; Section; Position: ; Frequency: 1900 MHz
Probe: ET3DV6 - SN1609; ConvF(5.34,5.34,5.34); Crest factor: 1.0; Brain 1900 MHz: σ = 1.41 mho/m ε_r = 40.3 ρ = 1.00 g/cm^3
:
Z-Axis: Dx = 0.0, Dy = 0.0, Dz = 5.0

Comment:
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)
Antenna Input Power: 30 dBm (1 W)
HCT Co., Ltd. Brain Tissue Simulating Liquid
Liquid Temperature: 21.2℃
Date Tested : March 22, 2005



■ Dielectric Parameter (835MHz Brain)

Title : S610
SubTitle : GSM850 Brain
March 22, 2005 09:06 AM

Frequency	e'	e''
800.000000 MHz	43.0847	18.8653
805.000000 MHz	42.9849	18.8846
810.000000 MHz	42.8313	18.8221
815.000000 MHz	42.7076	18.8596
820.000000 MHz	42.6385	18.9138
825.000000 MHz	42.5174	18.9294
830.000000 MHz	42.4210	18.9699
835.000000 MHz	42.3261	19.0099
840.000000 MHz	42.2631	19.0826
845.000000 MHz	42.2796	19.1007
850.000000 MHz	42.2253	19.1596
855.000000 MHz	42.1789	19.2055
860.000000 MHz	42.1792	19.1962
865.000000 MHz	42.1544	19.2045
870.000000 MHz	42.1115	19.2180
875.000000 MHz	42.1329	19.1718
880.000000 MHz	42.0932	19.1743
885.000000 MHz	42.0389	19.1258
890.000000 MHz	42.0351	19.0927
895.000000 MHz	41.9961	18.9758
900.000000 MHz	41.9169	18.9219

■ Dielectric Parameter (1900MHz Brain)

Title : S610
SubTitle : GSM1900 Brain
March 22, 2005 09:24 AM

Frequency	e'	e''
1.800000000 GHz	40.7848	13.0034
1.810000000 GHz	40.7138	13.0422
1.820000000 GHz	40.6840	13.0858
1.830000000 GHz	40.6158	13.1385
1.840000000 GHz	40.5788	13.1471
1.850000000 GHz	40.5467	13.2135
1.860000000 GHz	40.4859	13.2376
1.870000000 GHz	40.4660	13.2809
1.880000000 GHz	40.4052	13.3054
1.890000000 GHz	40.3663	13.3340
1.900000000 GHz	40.2882	13.3464
1.910000000 GHz	40.2118	13.3730
1.920000000 GHz	40.1697	13.4044
1.930000000 GHz	40.0756	13.4227
1.940000000 GHz	40.0494	13.4559
1.950000000 GHz	39.9904	13.4695
1.960000000 GHz	39.9654	13.5584
1.970000000 GHz	39.9261	13.5975
1.980000000 GHz	39.9185	13.6508
1.990000000 GHz	39.8532	13.6695
2.000000000 GHz	39.8344	13.7068

■ Dielectric Parameter (835MHz Muscle)

Title : S610
SubTitle : GSM850 Body
March 22, 2005 01:47 PM

Frequency	e'	e''
800.000000 MHz	54.3919	20.7767
805.000000 MHz	54.3087	20.7936
810.000000 MHz	54.3012	20.8286
815.000000 MHz	54.2035	20.8281
820.000000 MHz	54.1707	20.8326
825.000000 MHz	54.0643	20.8302
830.000000 MHz	53.9610	20.8770
835.000000 MHz	53.8888	20.8684
840.000000 MHz	53.7819	20.8508
845.000000 MHz	53.7053	20.8227
850.000000 MHz	53.6194	20.7660
855.000000 MHz	53.6116	20.7999
860.000000 MHz	53.5149	20.7374
865.000000 MHz	53.5112	20.7481
870.000000 MHz	53.4718	20.7186
875.000000 MHz	53.4013	20.7171
880.000000 MHz	53.3984	20.6953
885.000000 MHz	53.3484	20.6863
890.000000 MHz	53.3756	20.6844
895.000000 MHz	53.3562	20.6688
900.000000 MHz	53.3248	20.6475

■ Dielectric Parameter (1900MHz Muscle)

Title : S610
SubTitle : GSM1900 Body
March 22, 2005 01:02 PM

Frequency	e'	e''
1.800000000 GHz	51.3675	14.6551
1.810000000 GHz	51.3230	14.6665
1.820000000 GHz	51.2784	14.7140
1.830000000 GHz	51.2743	14.7777
1.840000000 GHz	51.2552	14.8042
1.850000000 GHz	51.2204	14.8476
1.860000000 GHz	51.1771	14.8913
1.870000000 GHz	51.1487	14.9084
1.880000000 GHz	51.1060	14.9523
1.890000000 GHz	50.9991	14.9280
1.900000000 GHz	50.9557	14.9381
1.910000000 GHz	50.8991	14.9072
1.920000000 GHz	50.8375	14.9414
1.930000000 GHz	50.8037	14.9693
1.940000000 GHz	50.7494	15.0157
1.950000000 GHz	50.6967	15.0894
1.960000000 GHz	50.6929	15.1444
1.970000000 GHz	50.6819	15.1814
1.980000000 GHz	50.6671	15.2043
1.990000000 GHz	50.6170	15.2525
2.000000000 GHz	50.5765	15.2359