

ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (1900MHz Brain)

Dipole 1900 MHz

SAM II Phantom, Flat Section; Position: (90°,90°); Frequency: 1900 MHz

Probe: ET3DV6 - SN1798; ConvF(5.27,5.27,5.27); Crest factor: 1.0; Head 1900 MHz: $\sigma = 1.44 \text{ mho/m}$ $\epsilon_r = 38.6 \rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 40.4 mW/g, SAR (10g): 20.8 mW/g

Coarse: Dx = 20.0, Dy = 20.0, Dz = 10.0

Powerdrift: -0.08 dB

Comment :

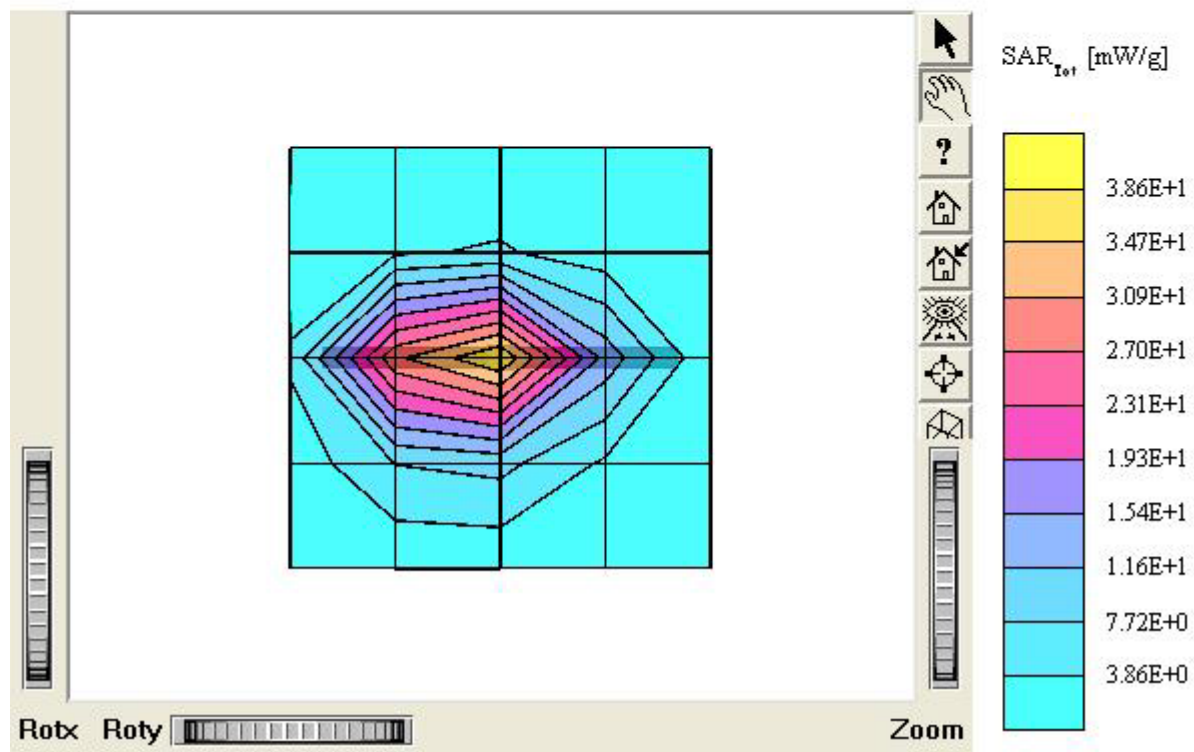
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)

Antenna Input Power: 30 dBm (1 W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature : 21.3 °C

Date Tested : December 22, 2005



Dipole 1900 MHz

SAM II Phantom; Section; Position: ; Frequency: 1900 MHz

Probe: ET3DV6 - SN1798; ConvF(5.27,5.27,5.27); Crest factor: 1.0; Head 1900 MHz: $\sigma = 1.44 \text{ mho/m}$ $\epsilon_r = 38.6$ $\rho = 1.00 \text{ g/cm}^3$

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

Comment :

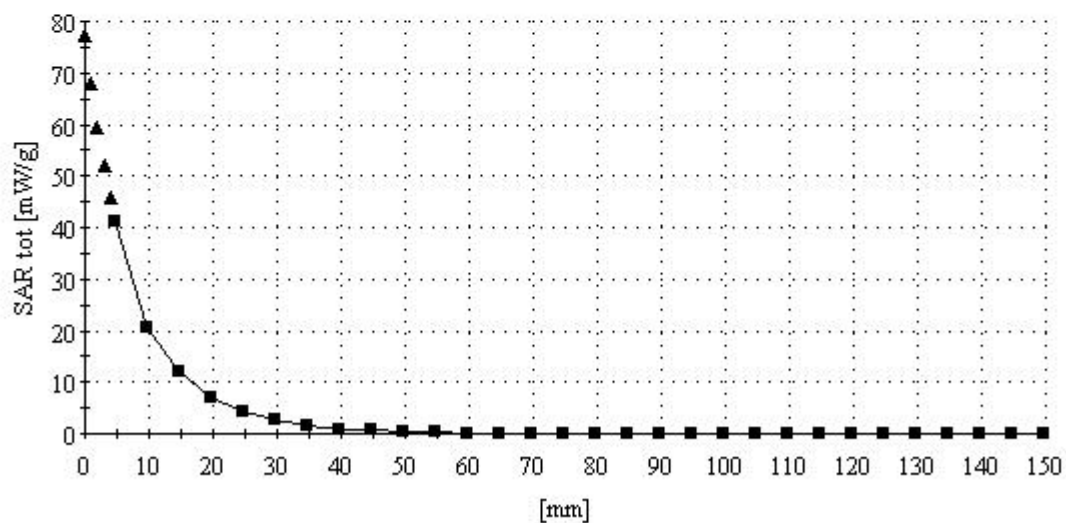
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)

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■ Dielectric Parameter (1900MHz Head)

Title : C1500**SubTitle : GSM1900 Head**

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Frequency	e'	e''
1.800000000 GHz	38.8873	13.4144
1.810000000 GHz	38.8888	13.4526
1.820000000 GHz	38.8507	13.4781
1.830000000 GHz	38.8242	13.5207
1.840000000 GHz	38.8240	13.5502
1.850000000 GHz	38.8013	13.5902
1.860000000 GHz	38.7529	13.6249
1.870000000 GHz	38.7311	13.6136
1.880000000 GHz	38.6897	13.6413
1.890000000 GHz	38.6091	13.6371
1.900000000 GHz	38.5572	13.6393
1.910000000 GHz	38.5112	13.6352
1.920000000 GHz	38.4585	13.6797
1.930000000 GHz	38.4382	13.7038
1.940000000 GHz	38.4283	13.7566
1.950000000 GHz	38.3982	13.7985
1.960000000 GHz	38.4112	13.8422
1.970000000 GHz	38.3821	13.9183
1.980000000 GHz	38.3483	13.9305
1.990000000 GHz	38.3502	13.9516
2.000000000 GHz	38.2898	13.9379

■ Dielectric Parameter (1900MHz Body)

Title : C1500**SubTitle : GSM1900 Body**

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Frequency	e'	e''
1.800000000 GHz	51.4155	13.6625
1.810000000 GHz	51.3860	13.7367
1.820000000 GHz	51.3756	13.8055
1.830000000 GHz	51.2869	13.8838
1.840000000 GHz	51.2700	13.9228
1.850000000 GHz	51.1862	13.9556
1.860000000 GHz	51.1420	13.9869
1.870000000 GHz	51.1004	14.0232
1.880000000 GHz	51.0488	14.0863
1.890000000 GHz	50.9687	14.1182
1.900000000 GHz	50.9284	14.1652
1.910000000 GHz	50.8914	14.2377
1.920000000 GHz	50.8888	14.3188
1.930000000 GHz	50.9047	14.3904
1.940000000 GHz	50.8514	14.4570
1.950000000 GHz	50.8505	14.5050
1.960000000 GHz	50.7811	14.5411
1.970000000 GHz	50.7466	14.5672
1.980000000 GHz	50.7162	14.5690
1.990000000 GHz	50.6250	14.6443
2.000000000 GHz	50.5725	14.6567