

ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (1900MHz Head)

Dipole 1900 MHz

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

Probe: ET3DV6 - SN1609; ConvF(5.34,5.34,5.34); Crest factor: 1.0; Head 1900 MHz: $\sigma = 1.43 \text{ mho/m}$ $\epsilon_r = 38.5$ $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR (1g): 41.3 mW/g, SAR (10g): 20.8 mW/g

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

Powerdrift: -0.03 dB

Comment :

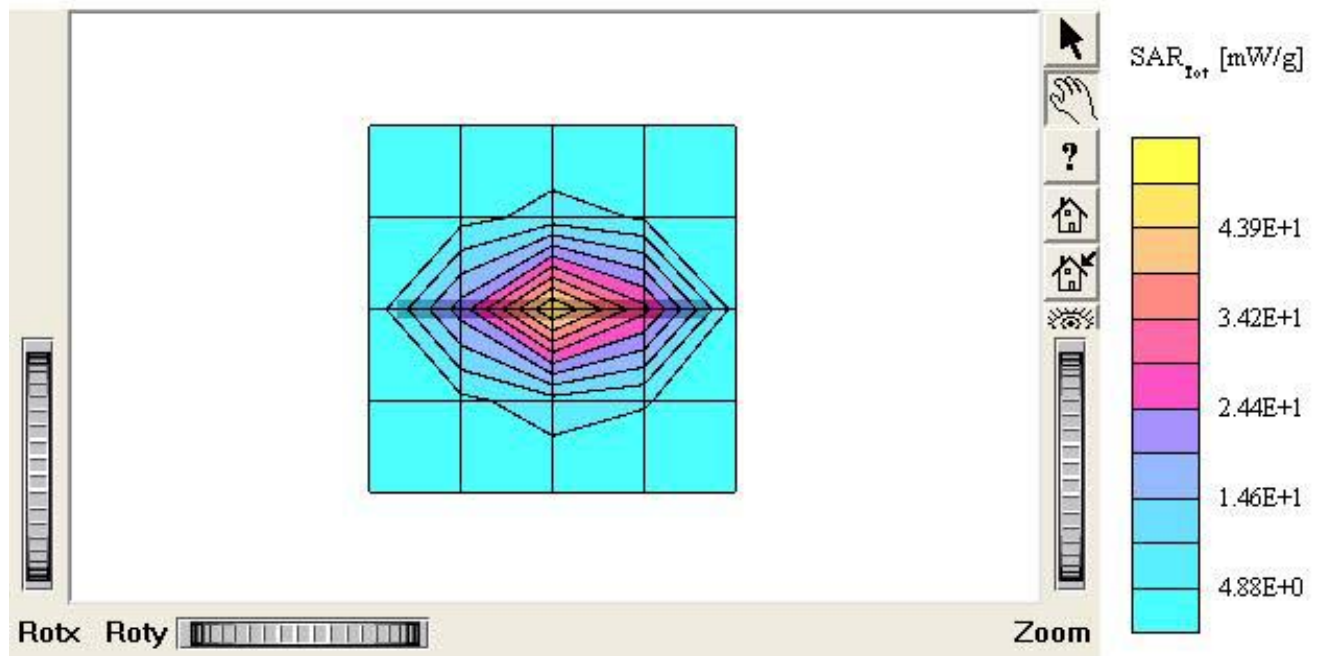
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)

Antenna Input Power : 30 dBm (1W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature: 21.8°C

Date Tested : June 15, 2005



Dipole 1900 MHz

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

Probe: ET3DV6 - SN1609; ConvF(5.34,5.34,5.34); Crest factor: 1.0; Head 1900 MHz: $\sigma = 1.43 \text{ mho/m}$ $\epsilon_r = 38.5$ $\rho = 1.00 \text{ g/cm}^3$

:

Z-Axis: $D_x = 0.0$, $D_y = 0.0$, $D_z = 5.0$

Comment :

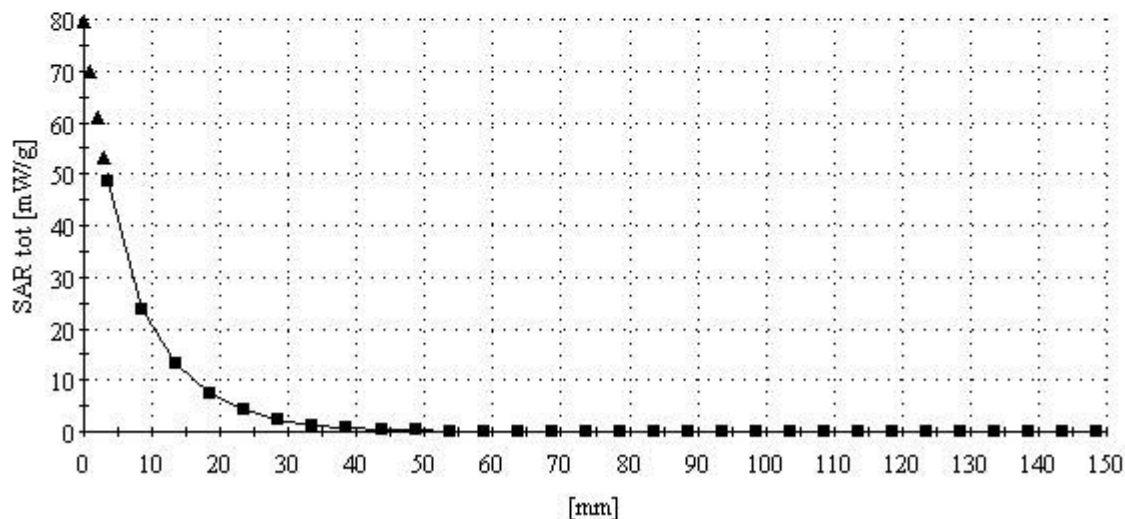
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)

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■ Dielectric Parameter (1900MHz Head)

Title : MP500**SubTitle : 1900MHz HEAD**

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Frequency	e'	e''
1.800000000 GHz	38.7745	13.2639
1.810000000 GHz	38.7507	13.3210
1.820000000 GHz	38.7140	13.3795
1.830000000 GHz	38.7128	13.4645
1.840000000 GHz	38.7589	13.5266
1.850000000 GHz	38.7234	13.5896
1.860000000 GHz	38.7362	13.6171
1.870000000 GHz	38.7099	13.6177
1.880000000 GHz	38.6982	13.6213
1.890000000 GHz	38.6084	13.5785
1.900000000 GHz	38.5299	13.5620
1.910000000 GHz	38.4448	13.5473
1.920000000 GHz	38.3795	13.5532
1.930000000 GHz	38.3268	13.5866
1.940000000 GHz	38.3303	13.6519
1.950000000 GHz	38.2903	13.7386
1.960000000 GHz	38.3360	13.8201
1.970000000 GHz	38.3359	13.9187
1.980000000 GHz	38.3098	13.9610
1.990000000 GHz	38.3485	13.9759
2.000000000 GHz	38.3058	13.9448

■ Dielectric Parameter (1900MHz Body)

Title : MP500**SubTitle : 1900MHz BODY**

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Frequency	e'	e''
1.800000000 GHz	53.4189	13.6610
1.810000000 GHz	53.3715	13.7115
1.820000000 GHz	53.3404	13.8025
1.830000000 GHz	53.3135	13.8462
1.840000000 GHz	53.2997	13.8856
1.850000000 GHz	53.2421	13.9064
1.860000000 GHz	53.1259	13.9405
1.870000000 GHz	53.0036	13.9776
1.880000000 GHz	52.8552	14.0432
1.890000000 GHz	52.6844	14.1051
1.900000000 GHz	52.5513	14.1305
1.910000000 GHz	52.4710	14.2386
1.920000000 GHz	52.3933	14.3233
1.930000000 GHz	52.3779	14.3909
1.940000000 GHz	52.3661	14.4445
1.950000000 GHz	52.3895	14.4833
1.960000000 GHz	52.3675	14.5215
1.970000000 GHz	52.3576	14.5628
1.980000000 GHz	52.3147	14.5599
1.990000000 GHz	52.2437	14.6313
2.000000000 GHz	52.1717	14.6395