

ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (1900MHz Head)

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: $\sigma = 1.42 \text{ mho/m}$, $\epsilon_r = 38.6$, $\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR(1g): 40.1 mW/g, SAR(10g): 20.6 mW/g

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

Peak: 75.1 mW/g; Powerdrift: -0.18 dB

Comment :

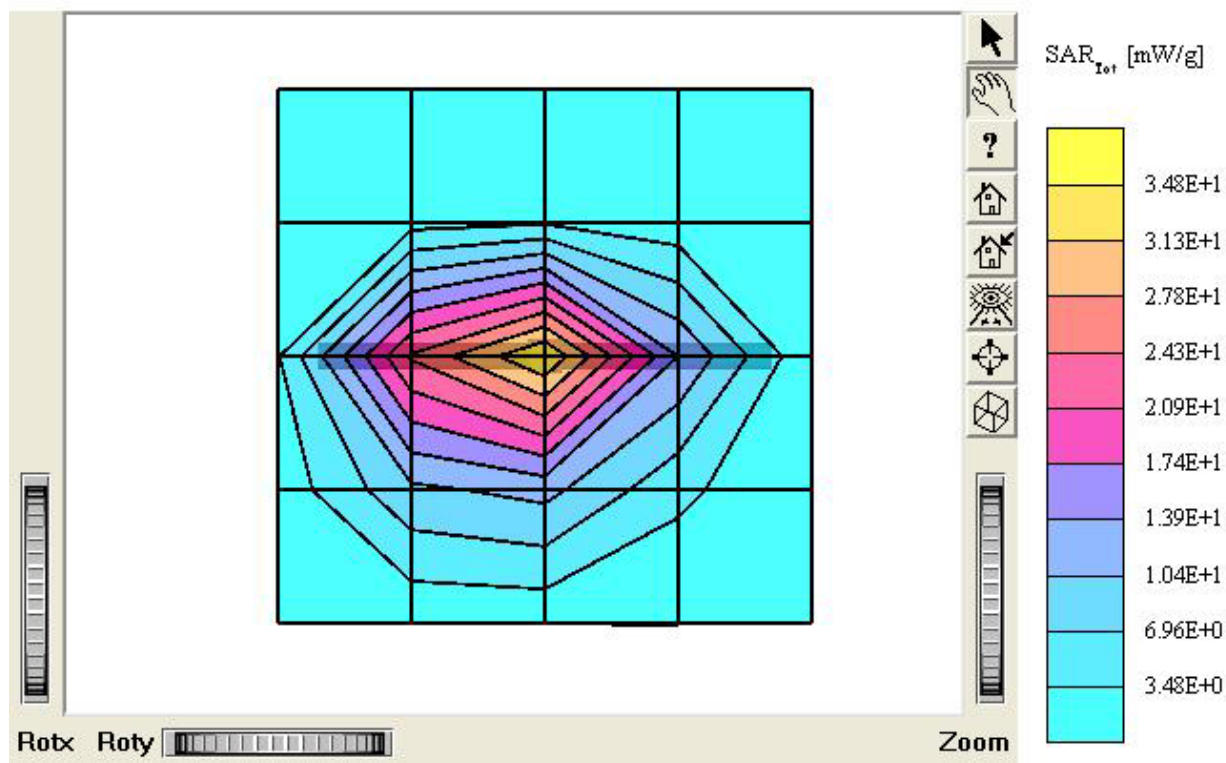
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)

Antenna Input Power : 30 dBm (1W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature: 21.5°C

Date Tested : October 31, 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: $\sigma = 1.42 \text{ mho/m}$ $\epsilon_r = 38.6$ $\rho = 1.00 \text{ g/cm}^3$

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

Comment :

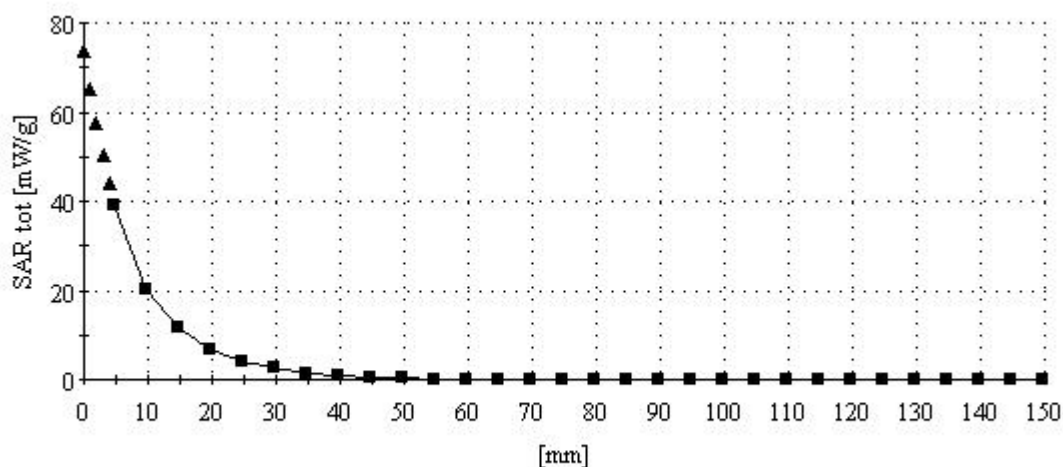
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 54032)

Antenna Input Power : 30 dBm (1W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature: 21.5°C

Date Tested : October 31, 2005



■ Dielectric Parameter (1900MHz Head)**Title : EZ500****SubTitle : GSM1900 Head**

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Frequency	e'	e''
1.800000000 GHz	38.7325	13.1924
1.810000000 GHz	38.6720	13.2386
1.820000000 GHz	38.6446	13.3129
1.830000000 GHz	38.6406	13.4388
1.840000000 GHz	38.6974	13.5038
1.850000000 GHz	38.7233	13.5598
1.860000000 GHz	38.7746	13.6116
1.870000000 GHz	38.7659	13.6072
1.880000000 GHz	38.7283	13.6028
1.890000000 GHz	38.6323	13.5313
1.900000000 GHz	38.5556	13.4990
1.910000000 GHz	38.4240	13.4665
1.920000000 GHz	38.3496	13.4958
1.930000000 GHz	38.2636	13.5183
1.940000000 GHz	38.2329	13.5850
1.950000000 GHz	38.2096	13.6935
1.960000000 GHz	38.2687	13.7873
1.970000000 GHz	38.2941	13.8989
1.980000000 GHz	38.3195	13.9489
1.990000000 GHz	38.3493	13.9638
2.000000000 GHz	38.3221	13.9342

■ Dielectric Parameter (1900MHz Body)

Title : EZ500**SubTitle : GSM1900 Body**

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Frequency	e'	e''
1.800000000 GHz	55.0368	13.5554
1.810000000 GHz	54.9798	13.6134
1.820000000 GHz	54.9625	13.6388
1.830000000 GHz	54.9030	13.6888
1.840000000 GHz	54.8908	13.6950
1.850000000 GHz	54.8220	13.7024
1.860000000 GHz	54.7962	13.7257
1.870000000 GHz	54.7418	13.7913
1.880000000 GHz	54.6982	13.8657
1.890000000 GHz	54.5702	13.9582
1.900000000 GHz	54.5203	14.0399
1.910000000 GHz	54.4528	14.1355
1.920000000 GHz	54.3930	14.2094
1.930000000 GHz	54.3801	14.2792
1.940000000 GHz	54.3632	14.3309
1.950000000 GHz	54.3927	14.3481
1.960000000 GHz	54.3820	14.3791
1.970000000 GHz	54.3760	14.3681
1.980000000 GHz	54.3598	14.3787
1.990000000 GHz	54.3153	14.4555
2.000000000 GHz	54.2201	14.4911