

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: $\sigma = 1.44 \text{ mho/m}$, $\epsilon_r = 38.5$

$\rho = 1.00 \text{ g/cm}^3$

Cube 5x5x7: SAR(1g): 39.7 mW/g, SAR(10g): 20.6 mW/g

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

Powerdrift: -0.02 dB

Comment :

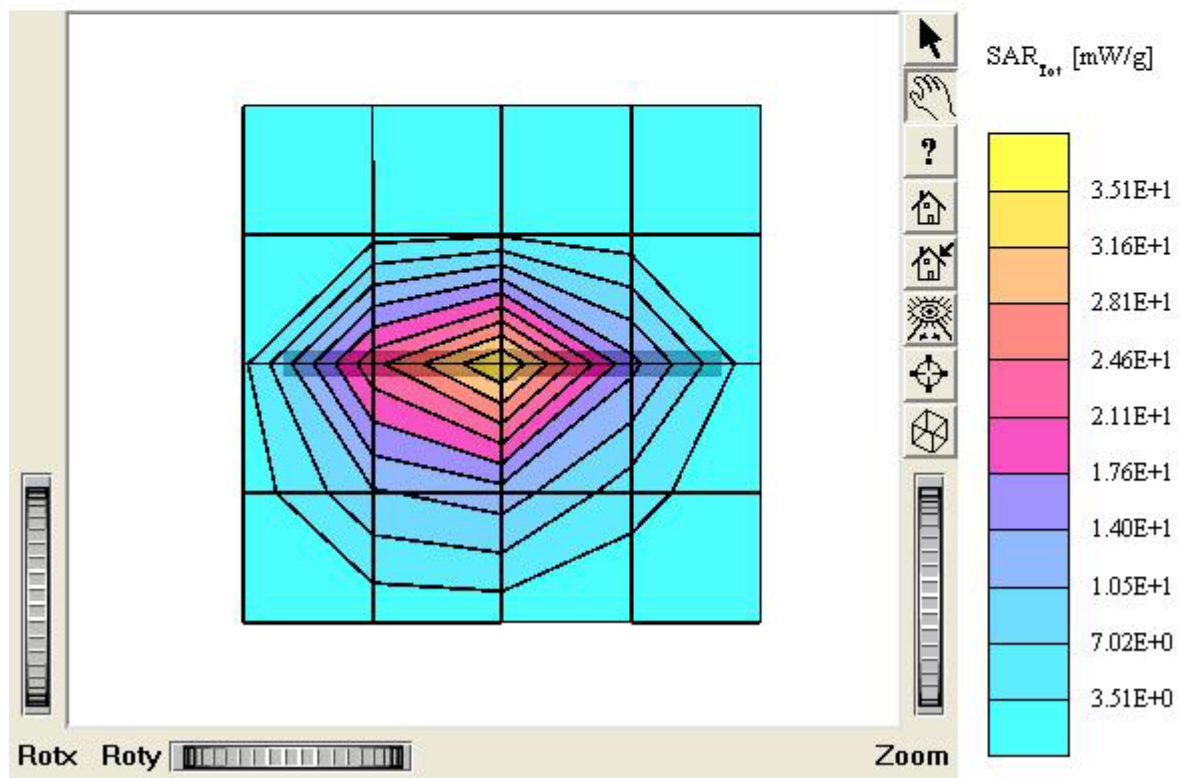
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)

Antenna Input Power : 30 dBm (1W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature : 21.5 °C

Date Tested : February 16, 2006



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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: $\sigma = 1.44 \text{ mho/m}$ $\epsilon_r = 38.5$ $\rho = 1.00 \text{ g/cm}^3$

:

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

Comment :

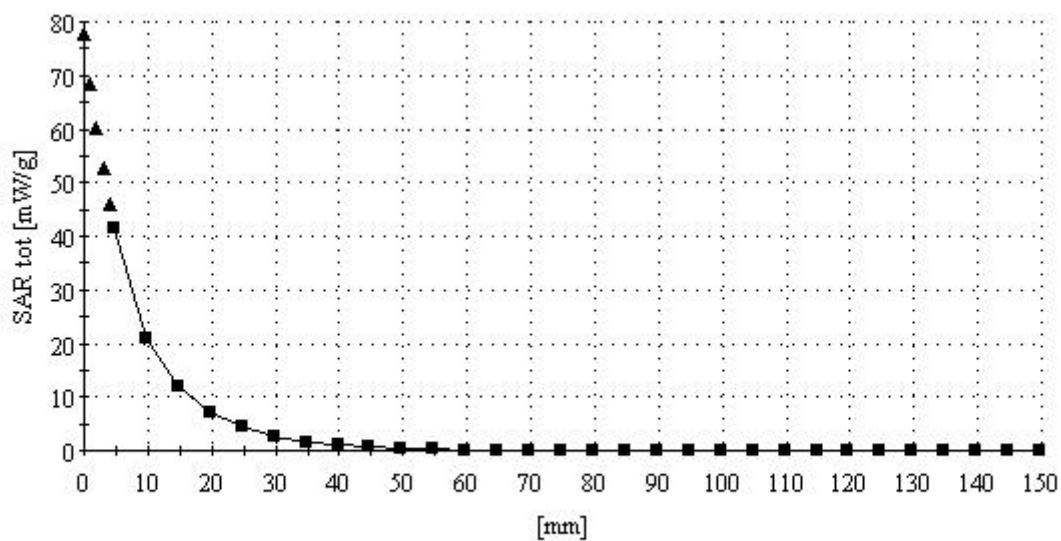
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■ Dielectric Parameter (1900MHz Head)

Title : SL900**SubTitle : GSM1900 Head**

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Frequency	e'	e''
1.800000000 GHz	38.7295	13.4228
1.810000000 GHz	38.6663	13.4579
1.820000000 GHz	38.3805	13.4632
1.830000000 GHz	38.3856	13.5425
1.840000000 GHz	38.5497	13.6609
1.850000000 GHz	38.6756	13.7377
1.860000000 GHz	38.7030	13.7684
1.870000000 GHz	38.6793	13.7672
1.880000000 GHz	38.6485	13.7674
1.890000000 GHz	38.5595	13.7150
1.900000000 GHz	38.4611	13.6840
1.910000000 GHz	38.3878	13.6825
1.920000000 GHz	37.1894	13.3258
1.930000000 GHz	38.1266	13.7048
1.940000000 GHz	38.1135	13.7849
1.950000000 GHz	37.9836	13.8151
1.960000000 GHz	37.8805	13.8436
1.970000000 GHz	38.2246	14.0359
1.980000000 GHz	38.2101	14.0684
1.990000000 GHz	38.2004	14.0656
2.000000000 GHz	38.2193	14.0702

■ Dielectric Parameter (1900MHz Body)

Title : SL900**SubTitle : GSM1900 Body**

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Frequency	e'	e''
1.800000000 GHz	53.6124	13.7987
1.810000000 GHz	53.6119	13.8726
1.820000000 GHz	53.5695	13.9213
1.830000000 GHz	53.5343	13.9344
1.840000000 GHz	53.4855	13.9383
1.850000000 GHz	53.4249	13.9314
1.860000000 GHz	53.3503	13.9633
1.870000000 GHz	53.2779	14.0195
1.880000000 GHz	53.2251	14.0984
1.890000000 GHz	53.1508	14.1830
1.900000000 GHz	53.1305	14.2839
1.910000000 GHz	53.0801	14.3730
1.920000000 GHz	53.0617	14.4508
1.930000000 GHz	53.0219	14.4799
1.940000000 GHz	53.0048	14.5424
1.950000000 GHz	52.9674	14.5699
1.960000000 GHz	52.8999	14.5828
1.970000000 GHz	52.8765	14.5904
1.980000000 GHz	52.8062	14.5892
1.990000000 GHz	52.7306	14.6447
2.000000000 GHz	52.6493	14.6884