

ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (1900MHz Head)

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: $s = 1.45$

$\rho_{\text{mho/m}}$ $\epsilon_r = 39.0$ $\rho = 1.00 \text{ g/cm}^3$

Cubes (2): SAR (1g): $42.3 \text{ mW/g} \pm 0.04 \text{ dB}$, SAR (10g): $21.4 \text{ mW/g} \pm 0.03 \text{ dB}$

Coarse: $D_x = 20.0$, $D_y = 20.0$, $D_z = 10.0$

Powerdrift: 0.04 dB

Comment:

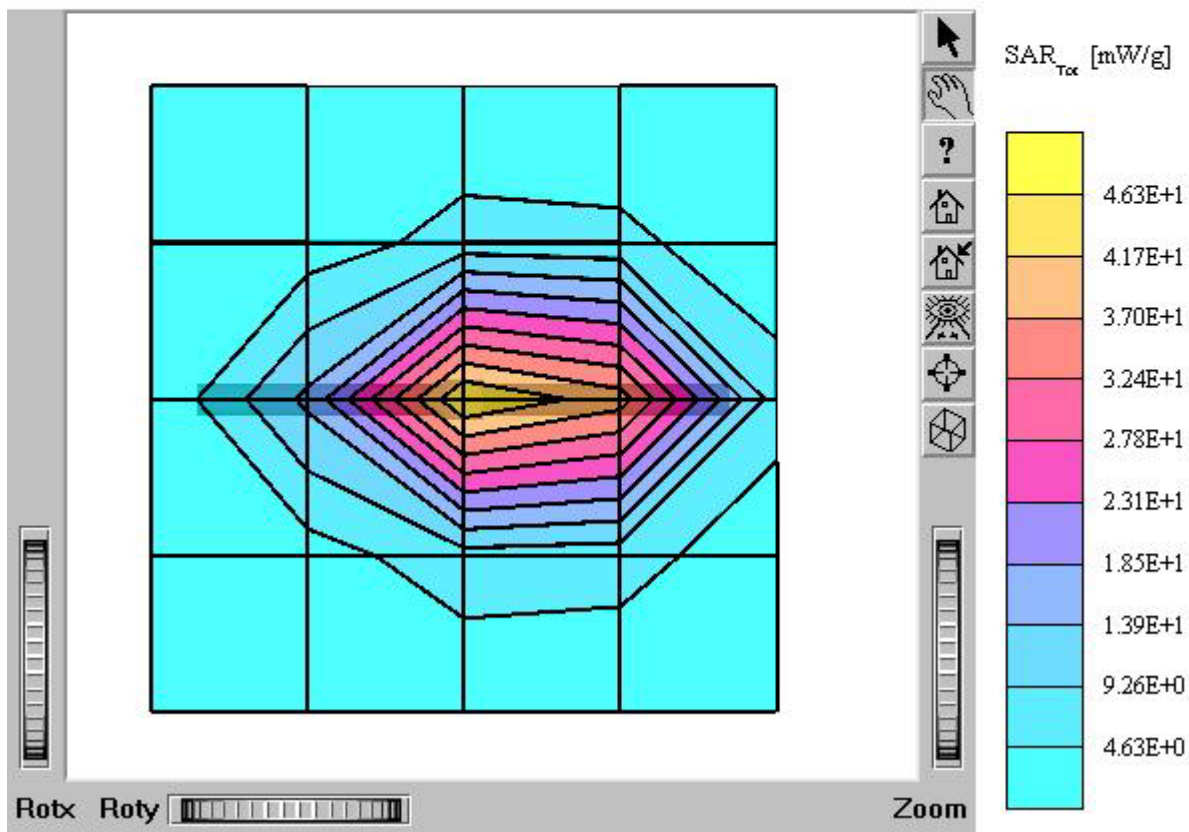
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)

Antenna Input Power : 30 dBm (1W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature: 21.2°C

Date Tested : March 27, 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: $s = 1.45$
 $\rho = 39.0$ g/cm³

:

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

Comment:

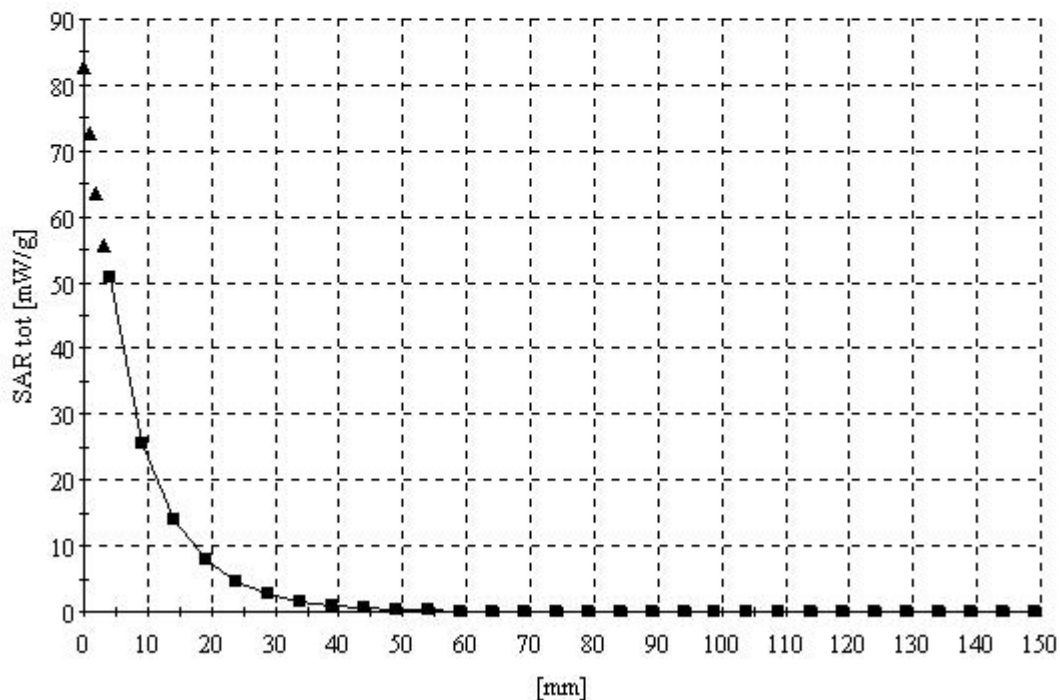
1900 MHz Brain Dipole Validation (D1900V2/ S.N: 5d032)

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■ Dielectric Parameter (1900MHz Head)

Title : EZ100**SubTitle : GSM1900 Head**

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Frequency	e'	e''
1.800000000 GHz	39.3723	13.5379
1.810000000 GHz	39.3457	13.5603
1.820000000 GHz	39.2876	13.5986
1.830000000 GHz	39.2783	13.6256
1.840000000 GHz	39.2557	13.6635
1.850000000 GHz	39.2237	13.6741
1.860000000 GHz	39.2064	13.7116
1.870000000 GHz	39.1358	13.7193
1.880000000 GHz	39.1095	13.7624
1.890000000 GHz	39.0357	13.7609
1.900000000 GHz	38.9992	13.7838
1.910000000 GHz	38.9354	13.7946
1.920000000 GHz	38.9142	13.8053
1.930000000 GHz	38.8954	13.8322
1.940000000 GHz	38.8732	13.8937
1.950000000 GHz	38.8423	13.9165
1.960000000 GHz	38.8545	13.9497
1.970000000 GHz	38.8272	14.0288
1.980000000 GHz	38.7605	14.0632
1.990000000 GHz	38.7839	14.0769
2.000000000 GHz	38.7145	14.0815

■ Dielectric Parameter (1900MHz Body)

Title : EZ100**SubTitle : GSM1900 BODY**

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Frequency	e'	e''
1.800000000 GHz	52.3457	13.8528
1.810000000 GHz	52.3583	13.9293
1.820000000 GHz	52.3703	13.9522
1.830000000 GHz	52.3359	13.9898
1.840000000 GHz	52.3548	13.9666
1.850000000 GHz	52.2864	14.0020
1.860000000 GHz	52.2063	14.0015
1.870000000 GHz	52.1669	14.0410
1.880000000 GHz	52.1295	14.1006
1.890000000 GHz	52.0773	14.1772
1.900000000 GHz	52.0552	14.2487
1.910000000 GHz	52.1023	14.3150
1.920000000 GHz	52.1498	14.3949
1.930000000 GHz	52.2307	14.4615
1.940000000 GHz	52.2970	14.4904
1.950000000 GHz	52.4383	14.5277
1.960000000 GHz	52.5003	14.5552
1.970000000 GHz	52.5802	14.5538
1.980000000 GHz	52.6625	14.5492
1.990000000 GHz	52.6464	14.5989
2.000000000 GHz	52.6374	14.6164