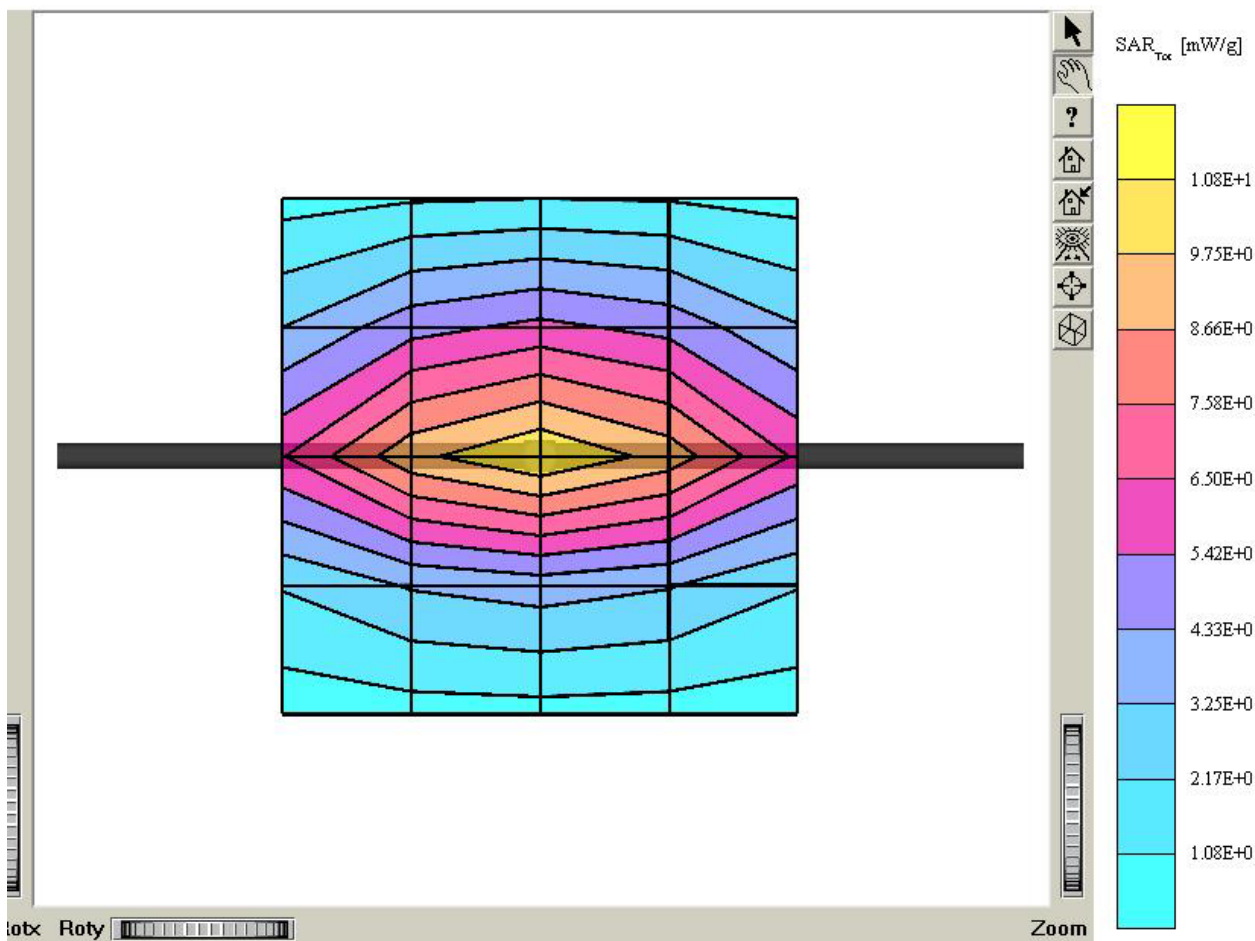


ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (835MHz Brain)

Dipole 835 MHz

SAM I Phantom; Flat Section; Position: (90°, 90°); Frequency: 835 MHz
Probe: ET3DV6 - SN1609; ConvF(6.50,6.50,6.50); Crest factor: 1.0; Brain 835 MHz: $s = 0.89$ mho/m $\epsilon_r = 41.2$ $\rho = 1.00$ g/cm³
Cubes (2): SAR (1g): 10.2 mW/g ± 0.01 dB, SAR (10g): 6.47 mW/g ± 0.01 dB; Worst-case extrapolation
Coarse: $D_x = 20.0$, $D_y = 20.0$, $D_z = 10.0$
: Powerdrift: 0.02 dB
Comment:
for $f < 1$ GHz (15 mm spacer)
835MHz Brain Dipole Validation (D835V2/ S.N: 441)
Antenna Input Power: 30dBm (1W)
HCT Co., Ltd. Brain Tissue Simulating Liquid
Liquid Temperature : 21.7 °C
Date Tested: January 28, 2003



■ Validation Data (835MHz Brain)

Dipole 835 MHz

SAM 1 Phantom: Flat Section; Position: (90°,90°); Frequency: 835 MHz

Probe: ET3DV6 - SN1609; ConvF(6.50,6.50,6.50); Crest factor: 1.0; Brain 835 MHz: $s = 0.89 \text{ mho/m}$, $e_r = 41.2$, $r = 1.00 \text{ g/cm}^3$

Cubes (2): SAR (1g): $10.2 \text{ mW/g} \pm 0.01 \text{ dB}$, SAR (10g): $6.47 \text{ mW/g} \pm 0.01 \text{ dB}$; Worst-case extrapolation

Cube 5x5x7: $D_x = 8.0$, $D_y = 8.0$, $D_z = 5.0$

.

Comment:

for $f < 1 \text{ GHz}$ (15 mm spacer)

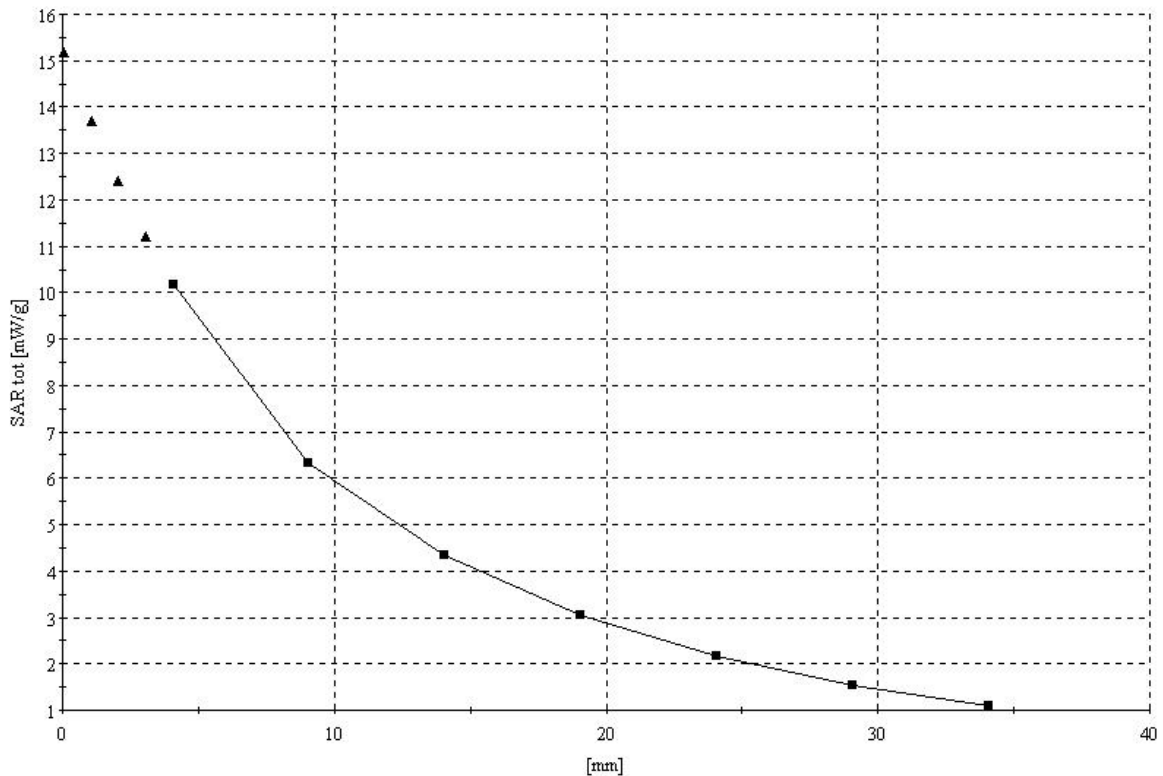
835MHz Brain Dipole Validation (D835V2/ S.N: 441)

Antenna Input Power: 30dBm (1W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature : 21.7 °C

Date Tested: January 28, 2003



■ Dielectric Parameter (835MHz Brain)

Title: HORIZON**SubTitle: 835MHz Brain**

January 29, 2003 09:23 AM

Frequency	e'	e''
800.000000 MHz	41.7148	19.1861
805.000000 MHz	41.6270	19.1822
810.000000 MHz	41.5834	19.1773
815.000000 MHz	41.4827	19.1560
820.000000 MHz	41.4455	19.1285
825.000000 MHz	41.3196	19.1416
830.000000 MHz	41.3031	19.1249
835.000000 MHz	41.2100	19.1137
840.000000 MHz	41.0989	19.1081
845.000000 MHz	41.0706	19.0589
850.000000 MHz	41.0495	19.0702
855.000000 MHz	40.9324	19.0674
860.000000 MHz	40.9278	19.0945
865.000000 MHz	40.8671	19.0659
870.000000 MHz	40.7899	19.0831
875.000000 MHz	40.7872	19.0385
880.000000 MHz	40.7139	19.0448
885.000000 MHz	40.6290	19.0245
890.000000 MHz	40.6049	18.9871
895.000000 MHz	40.5220	18.9672
900.000000 MHz	40.4700	18.9485

■ Dielectric Parameter (835MHz Body)

Title: HORIZON**SubTitle: 835MHz Body**

January 29, 2003 09:13 AM

Frequency	e'	e''
800.000000 MHz	54.6387	20.0653
805.000000 MHz	54.5810	20.0530
810.000000 MHz	54.5527	20.1032
815.000000 MHz	54.4873	20.1551
820.000000 MHz	54.3853	20.2089
825.000000 MHz	54.2584	20.2495
830.000000 MHz	54.1541	20.2709
835.000000 MHz	54.0224	20.2423
840.000000 MHz	53.9777	20.1933
845.000000 MHz	53.9518	20.1488
850.000000 MHz	53.9153	20.1030
855.000000 MHz	53.8895	20.0698
860.000000 MHz	53.8739	20.0329
865.000000 MHz	53.8320	20.0381
870.000000 MHz	53.8730	20.0064
875.000000 MHz	53.8053	19.9950
880.000000 MHz	53.7956	19.9666
885.000000 MHz	53.7826	19.9554
890.000000 MHz	53.7086	19.9469
895.000000 MHz	53.6675	19.9259
900.000000 MHz	53.6342	19.9227