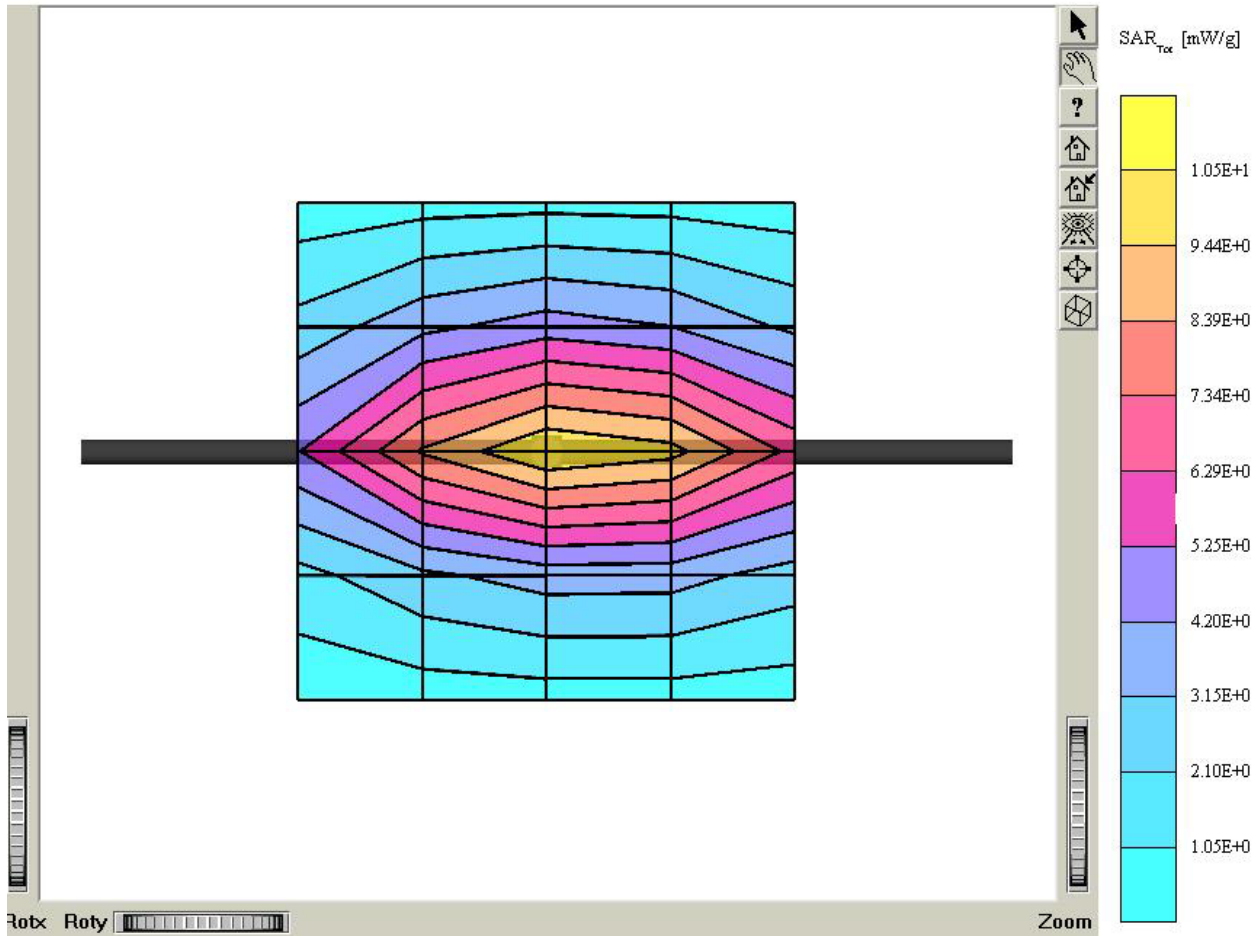


ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (835MHz Brain)

Dipole 835 MHz

SAM II Phantom: Flat Section; Position: (90°,90°); Frequency: 835 MHz
Probe: ET3D V6 - SN1609; ConvF(6.50,6.50,6.50); Crest factor: 1.0; Brain 835 MHz: $s = 0.90 \text{ mho/m}$, $e_r = 43.1$, $r = 1.00 \text{ g/cm}^3$
Cubes (2): SAR (1g): $9.87 \text{ mW/g} \pm 0.03 \text{ dB}$, SAR (10g): $6.31 \text{ mW/g} \pm 0.03 \text{ dB}$
Coarse: $D_x = 20.0$, $D_y = 20.0$, $D_z = 10.0$
: Powerdrift: 0.01 dB
Comment:
835MHz Brain Dipole Validation (D835V2/ S.N: 441)
Antenna Input Power: 30 dBm (1W)
HCT Co., Ltd. Brain Tissue Simulating Liquid
Liquid Temperature : 21.5 °C
Date Tested: June 2, 2003

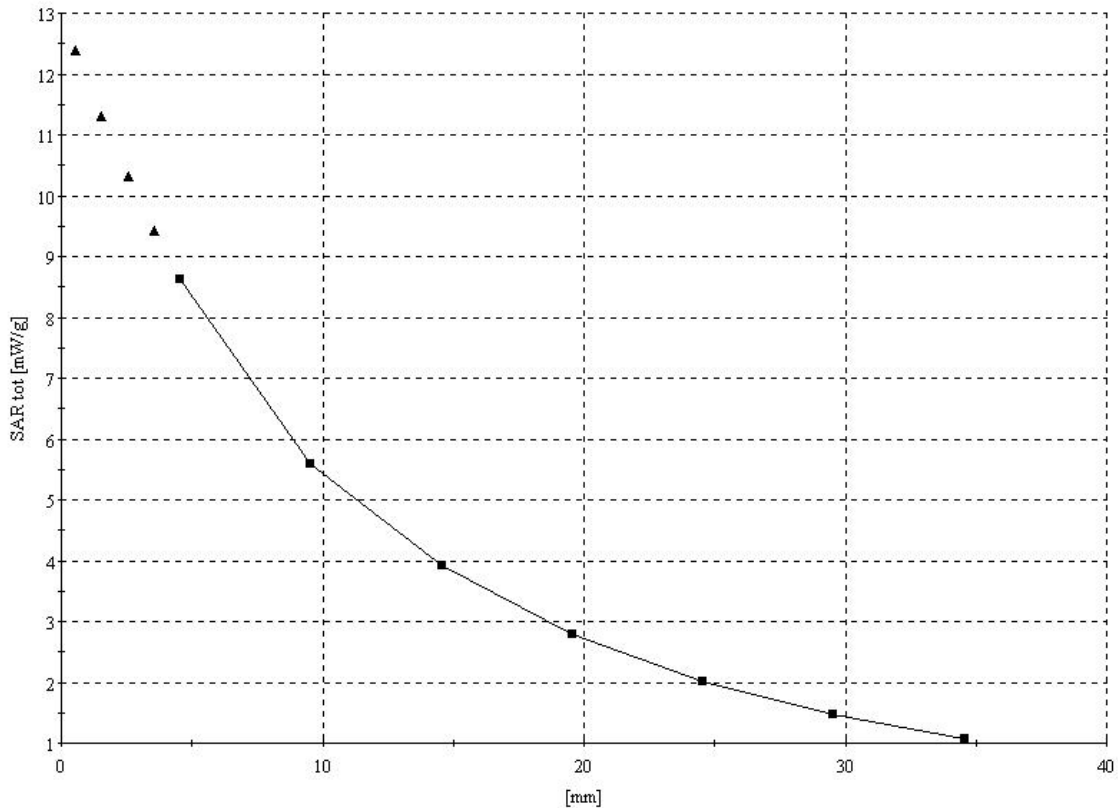


Dipole 835 MHz

SAM II 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: $s = 0.90 \text{ mho/m}$, $\epsilon_r = 43.1$, $\rho = 1.00 \text{ g/cm}^3$
Cubes (2): SAR (1g): $9.87 \text{ mW/g} \pm 0.03 \text{ dB}$, SAR (10g): $6.31 \text{ mW/g} \pm 0.03 \text{ dB}$
Cube 5x5x7: $D_x = 8.0$, $D_y = 8.0$, $D_z = 5.0$

Comment:

835MHz Brain Dipole Validation (D835V2/ S.N: 441)
Antenna Input Power: 30 dBm (1W)
HCT Co., Ltd. Brain Tissue Simulating Liquid
Liquid Temperature : 21.5 °C
Date Tested: June 2, 2003



■ Dielectric Parameter (835MHz Brain)

Title: WLL
SubTitle: 835 Brain
June 02, 2003 09:34 AM

Frequency	e'	e''
800.000000 MHz	43.5642	19.3310
805.000000 MHz	43.5141	19.3001
810.000000 MHz	43.4606	19.2922
815.000000 MHz	43.3967	19.3198
820.000000 MHz	43.3275	19.3059
825.000000 MHz	43.2236	19.3343
830.000000 MHz	43.2380	19.3073
835.000000 MHz	43.0948	19.3368
840.000000 MHz	43.0310	19.3434
845.000000 MHz	42.9955	19.2999
850.000000 MHz	42.9392	19.3255
855.000000 MHz	42.9087	19.3641
860.000000 MHz	42.8319	19.3129
865.000000 MHz	42.7994	19.2698
870.000000 MHz	42.7741	19.2147
875.000000 MHz	42.7458	19.2831
880.000000 MHz	42.6961	19.2611
885.000000 MHz	42.6403	19.2160
890.000000 MHz	42.5877	19.1957
895.000000 MHz	42.5472	19.1469
900.000000 MHz	42.4766	19.1278

■ Dielectric Parameter (835MHz Body)

Title: WLL
SubTitle: 835 Body
June 02, 2003 09:55 AM

Frequency	e'	e''
800.000000 MHz	54.5138	20.4157
805.000000 MHz	54.4660	20.4099
810.000000 MHz	54.3722	20.3982
815.000000 MHz	54.2998	20.3793
820.000000 MHz	54.2456	20.3764
825.000000 MHz	54.1391	20.3482
830.000000 MHz	54.0167	20.3928
835.000000 MHz	53.9680	20.3336
840.000000 MHz	53.8914	20.2853
845.000000 MHz	53.8922	20.2960
850.000000 MHz	53.8508	20.2787
855.000000 MHz	53.8233	20.2671
860.000000 MHz	53.7613	20.2471
865.000000 MHz	53.7694	20.2116
870.000000 MHz	53.7012	20.2264
875.000000 MHz	53.7694	20.2474
880.000000 MHz	53.6789	20.2123
885.000000 MHz	53.6507	20.1853
890.000000 MHz	53.6444	20.2129
895.000000 MHz	53.5816	20.1734
900.000000 MHz	53.5625	20.1900