

## 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:  $s = 0.90 \text{ mho/m}$ ,  $\epsilon_r = 43.1$ ,  $\rho = 1.00 \text{ g/cm}^3$

Cubes (2): SAR (1g):  $9.87 \text{ mW/g} \pm 0.03 \text{ dB}$ , SAR (10g):  $6.31 \text{ mW/g} \pm 0.03 \text{ dB}$

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

: Powerdrift: 0.01 dB

Comment:

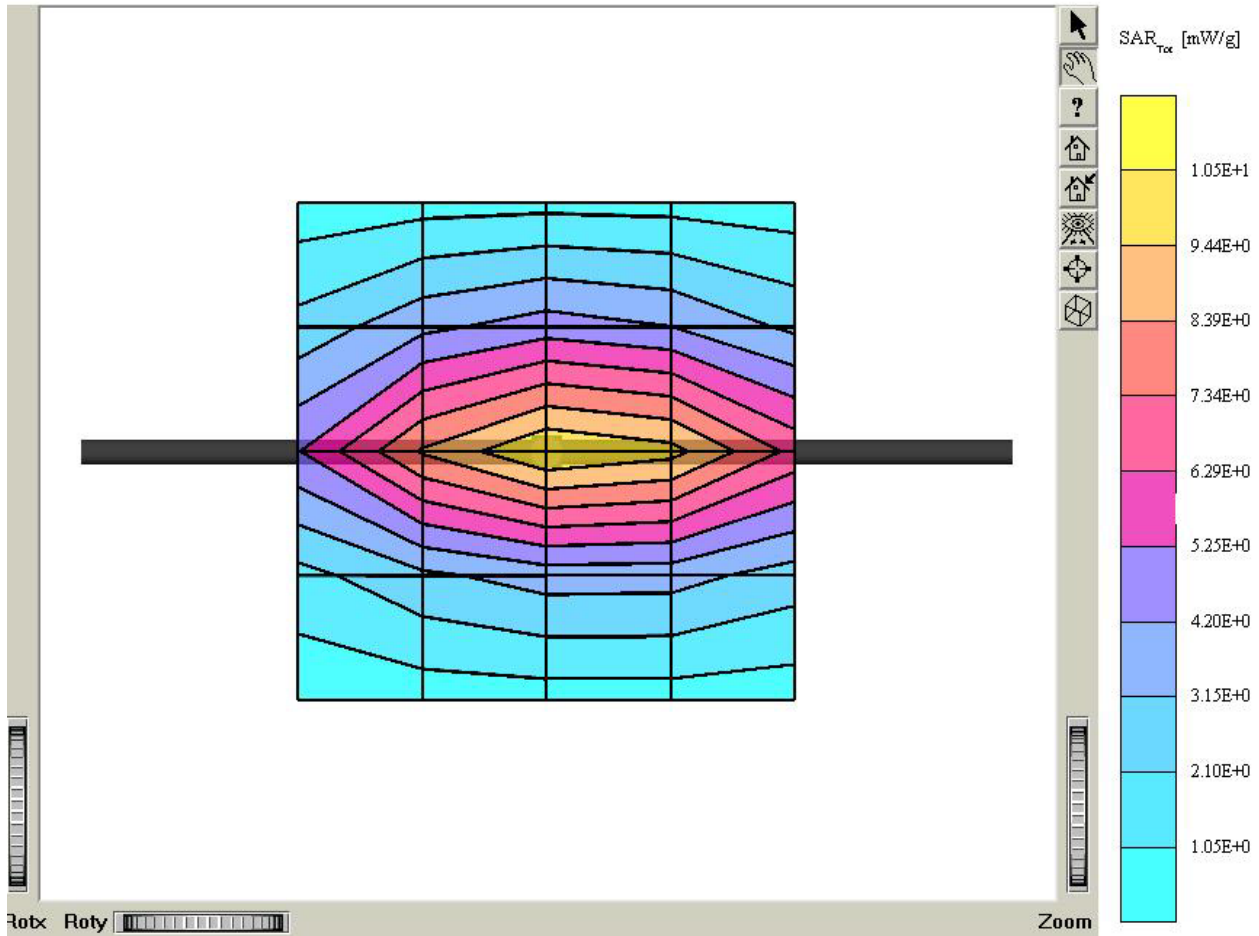
835MHz Brain Dipole Validation (D835V2/ S.N: 441)

Antenna Input Power: 30 dBm (1W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature : 21.5 °C

Date Tested: June 2, 2003



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

## Comment:

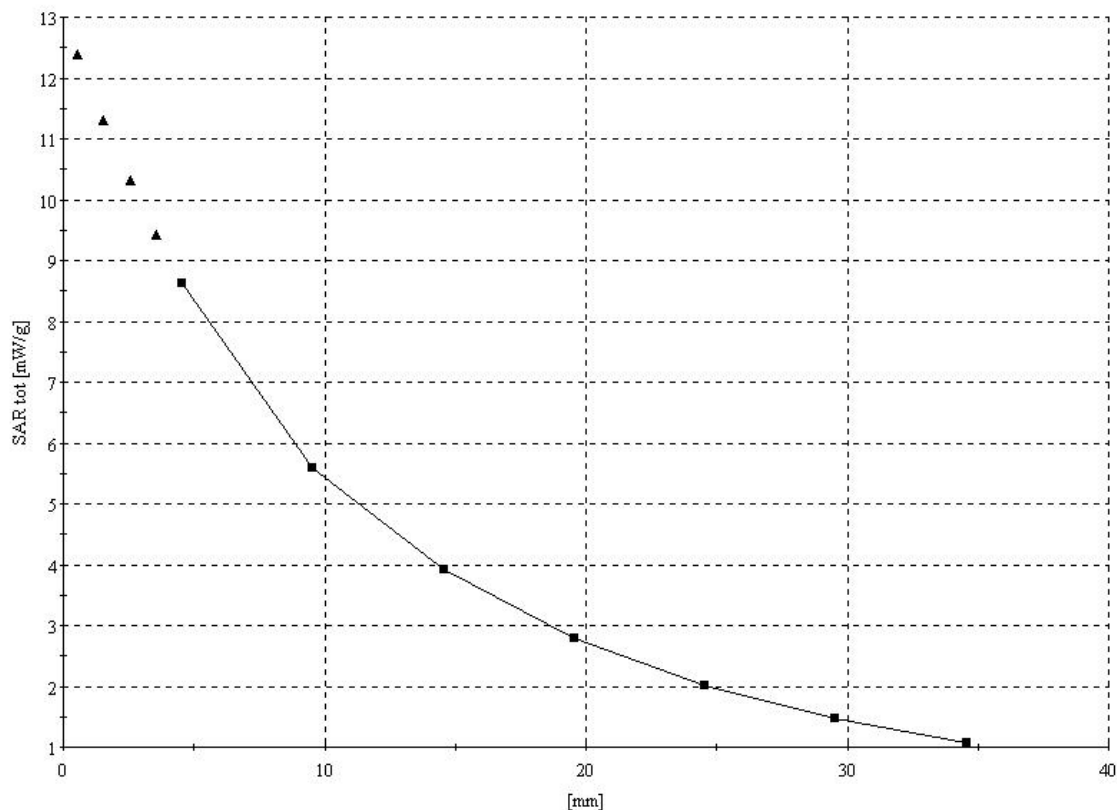
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## ■ Dielectric Parameter (835MHz Brain)

**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 |