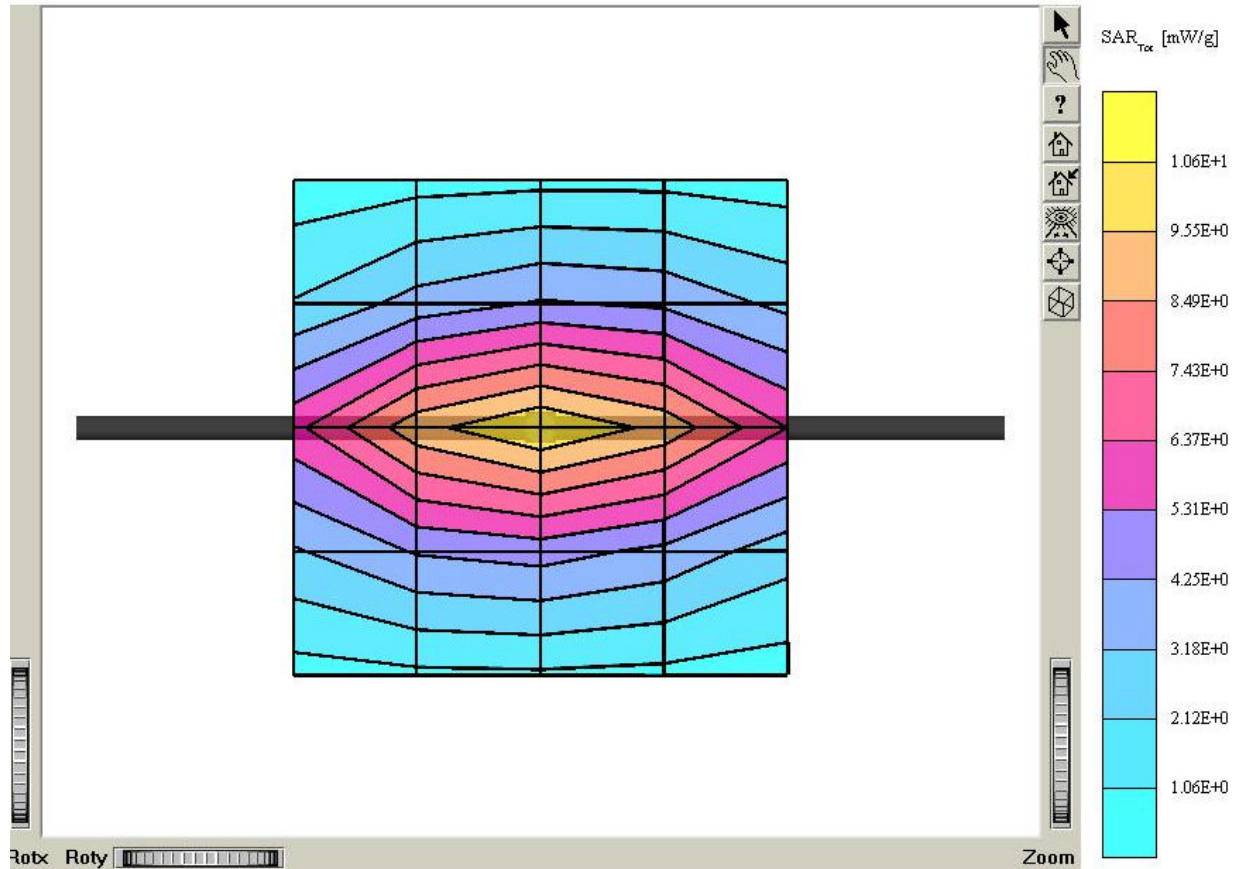


Validation Data (835MHz Brain)

Dipole 835 MHz

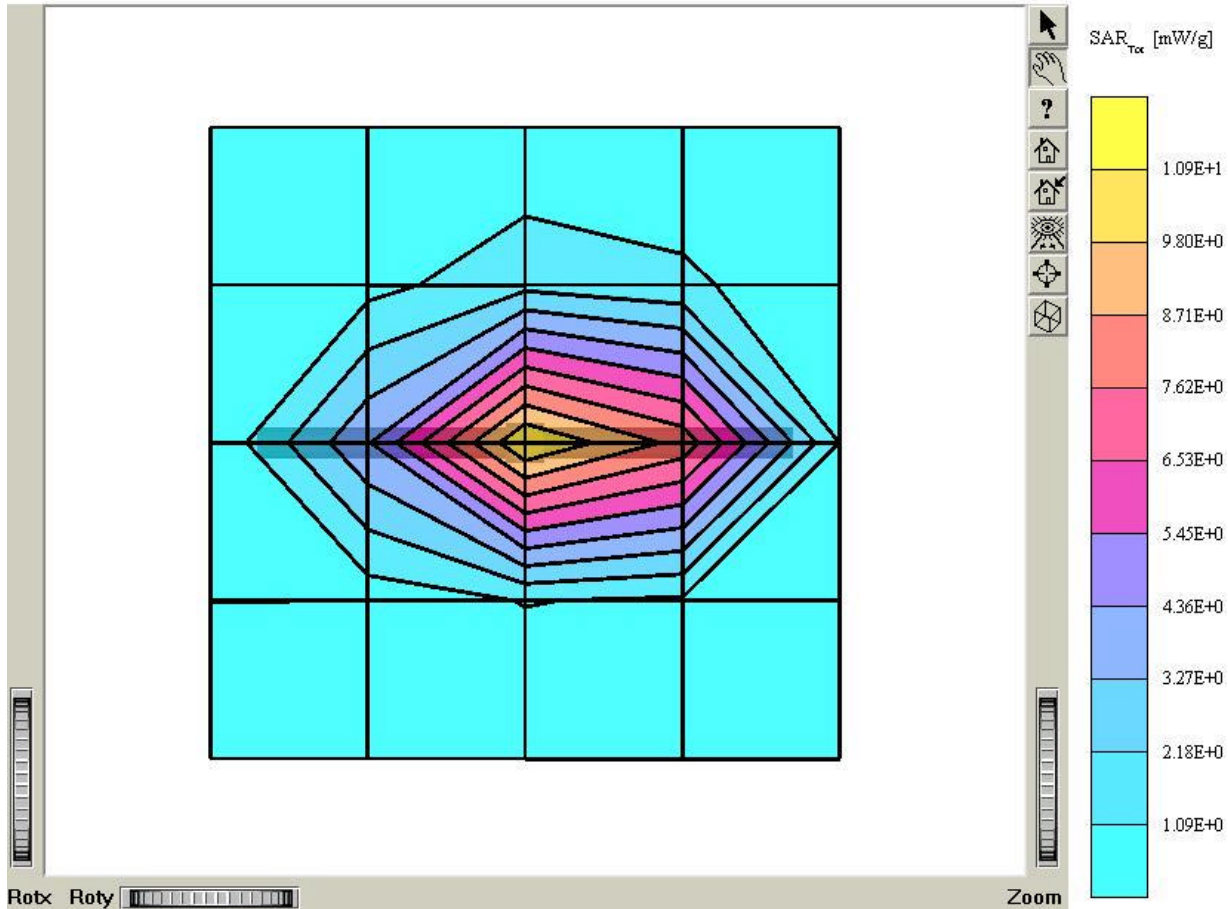
SAM 1 Phantom: Flat Section; Position: (90°,90°); Frequency: 835 MHz
 Probe: ET3DV6 - SN1609; ConvF(6.50,6.50,6.50); Crest factor: 1.0; Brain 835 MHz: $s = 0.90 \text{ mho/m}$, $\epsilon_r = 42.7$, $\rho = 1.00 \text{ g/cm}^3$
 Cubes (2): SAR (1g): $9.83 \text{ mW/g} \pm 0.01 \text{ dB}$, SAR (10g): $6.27 \text{ mW/g} \pm 0.01 \text{ dB}$
 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 : 21.4 °C
 Date Tested: February 11, 2003



Validation Data (1900MHz Brain)

Dipole 1900 MHz

SAM II Phantom: Flat Section: Position: (90°,90°); Frequency: 1900 MHz
 Probe: ET3DV6 - SN1609; ConvF(5.40,5.40,5.40); Crest factor: 1.0; Brain 1900 MHz: $s = 1.42 \text{ mho/m}$, $\epsilon_r = 38.8$, $\rho = 1.00 \text{ g/cm}^3$
 Cubes (2): SAR (1g): $10.2 \text{ mW/g} \pm 0.00 \text{ dB}$, SAR (10g): $5.09 \text{ mW/g} \pm 0.01 \text{ dB}$
 Coarse: $D_x = 20.0$, $D_y = 20.0$, $D_z = 10.0$
 : Powerdrift: -0.02 dB
 Comment:
 1900MHz Brain Dipole Validation (D1900V2/ S.N: 5d017)
 Antenna Input Power: 24dBm (0.25W)
 HCT Co., Ltd. Brain Tissue Simulating Liquid
 Liquid Temperature : 21.7°C
 Date Tested: February 12, 2003



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: $s = 0.90 \text{ mho/m}$, $\epsilon_r = 42.7$, $r = 1.00 \text{ g/cm}^3$

Cubes (2): SAR (1g): $9.83 \text{ mW/g} \pm 0.01 \text{ dB}$, SAR (10g): $6.27 \text{ mW/g} \pm 0.01 \text{ dB}$

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

.

Comment:

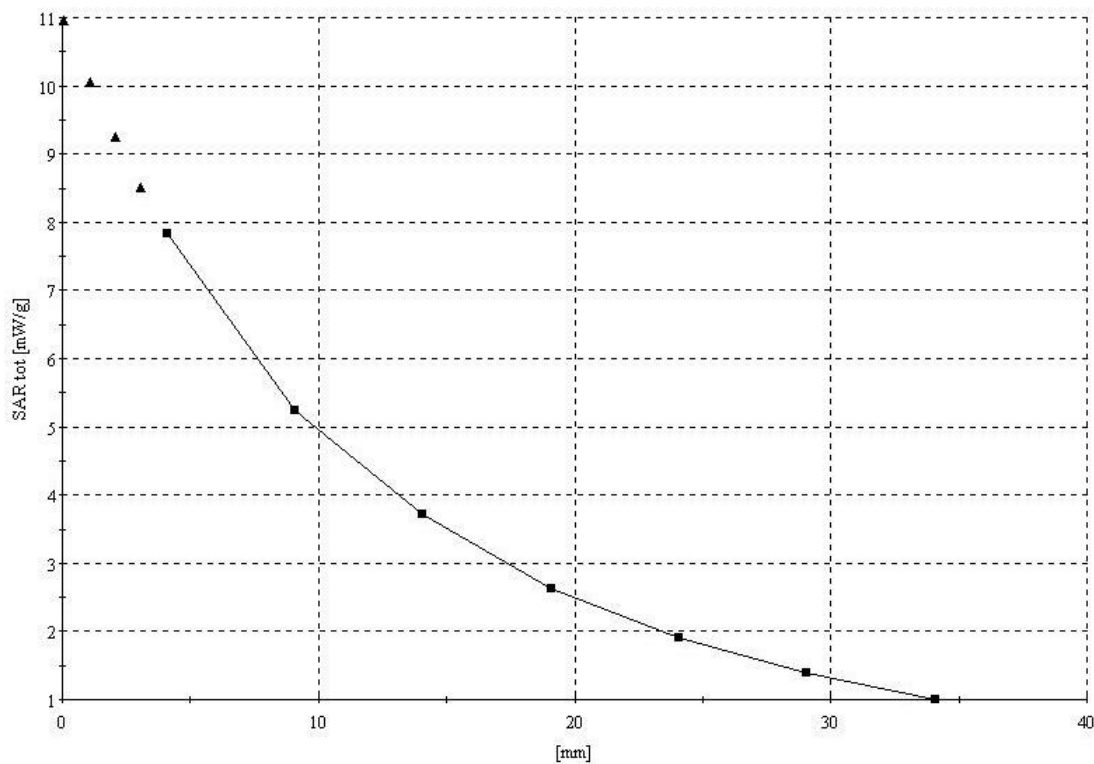
835MHz Brain Dipole Validation (D835V2/ S.N: 441)

Antenna Input Power: 30 dBm (1W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature : 21.4 °C

Date Tested: February 11, 2003



Dipole 1900 MHz

SAM II Phantom: Flat Section; Position: (90°, 90°); Frequency: 1900 MHz
 Probe: ET3DV6 - SN1609; ConvF(5.40,5.40,5.40); Crest factor: 1.0; Brain 1900 MHz: $s = 1.42 \text{ mho/m}$, $\epsilon_r = 38.8$, $\rho = 1.00 \text{ g/cm}^3$
 Cubes (2): SAR (1g): $10.2 \text{ mW/g} \pm 0.00 \text{ dB}$, SAR (10g): $5.09 \text{ mW/g} \pm 0.01 \text{ dB}$
 Cube 5x5x7: $D_x = 8.0$, $D_y = 8.0$, $D_z = 5.0$

Comment:

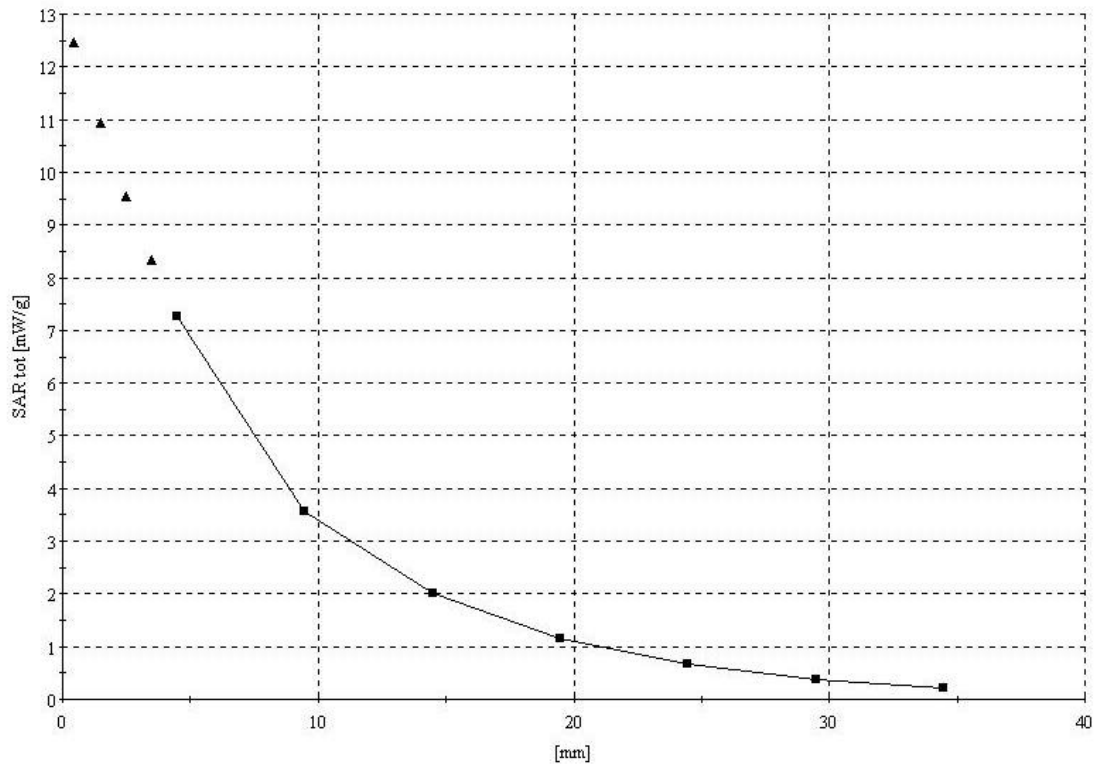
1900MHz Brain Dipole Validation (D1900V2/ S.N: 5d017)

Antenna Input Power: 24dBm (0.25W)

HCT Co., Ltd. Brain Tissue Simulating Liquid

Liquid Temperature : 21.7 °C

Date Tested: February 12, 2003



! Dielectric Parameter (835MHz Brain)

Title: TDC-8100

SubTitle: 835MHz Brain

February 11, 2003 03:24 AM

Frequency	e'	e''
800.000000 MHz	43.3490	19.3040
805.000000 MHz	43.2469	19.2776
810.000000 MHz	43.1447	19.2843
815.000000 MHz	43.0326	19.3264
820.000000 MHz	42.9816	19.2761
825.000000 MHz	42.8563	19.2424
830.000000 MHz	42.7494	19.2677
835.000000 MHz	42.6573	19.2837
840.000000 MHz	42.5664	19.2261
845.000000 MHz	42.5384	19.1302
850.000000 MHz	42.4739	19.0147
855.000000 MHz	42.5107	18.8915
860.000000 MHz	42.4684	18.8850
865.000000 MHz	42.4699	18.8860
870.000000 MHz	42.4542	18.8615
875.000000 MHz	42.4258	18.8611
880.000000 MHz	42.3644	18.9161
885.000000 MHz	42.2592	18.8886
890.000000 MHz	42.2303	18.9436
895.000000 MHz	42.0882	18.9180
900.000000 MHz	42.0976	18.8965

Dielectric Parameter (1900MHz Brain)**Title:TDC-8100****SubTitle: 1900MHz Brain**

February 12, 2003 09:14 AM

Frequency	e'	e''
1.700000000 GHz	39.5824	12.9428
1.710000000 GHz	39.6355	12.9988
1.720000000 GHz	39.6968	13.0831
1.730000000 GHz	39.7755	13.1097
1.740000000 GHz	39.7965	13.1258
1.750000000 GHz	39.7579	13.0966
1.760000000 GHz	39.6564	13.0528
1.770000000 GHz	39.5309	13.0488
1.780000000 GHz	39.3819	13.0383
1.790000000 GHz	39.2296	13.0551
1.800000000 GHz	39.1274	13.1274
1.810000000 GHz	39.0595	13.2035
1.820000000 GHz	39.1086	13.2815
1.830000000 GHz	39.1536	13.3851
1.840000000 GHz	39.2252	13.4656
1.850000000 GHz	39.2410	13.4775
1.860000000 GHz	39.2804	13.4922
1.870000000 GHz	39.2321	13.4894
1.880000000 GHz	39.1493	13.4726
1.890000000 GHz	39.0054	13.4415
1.900000000 GHz	38.8304	13.4340
1.910000000 GHz	38.6858	13.4440
1.920000000 GHz	38.5990	13.4920
1.930000000 GHz	38.5560	13.5420
1.940000000 GHz	38.5629	13.6364
1.950000000 GHz	38.6094	13.7080
1.960000000 GHz	38.6807	13.7980
1.970000000 GHz	38.7395	13.8573
1.980000000 GHz	38.7586	13.8628
1.990000000 GHz	38.7390	13.8526
2.000000000 GHz	38.5979	13.8065

Dielectric Parameter (835MHz Muscle)

Title: TDC-810

SubTitle: 835MHz Body

February 11, 2002 10:15 AM

Frequency	ϵ'	ϵ''
800.000000 MHz	53.7470	20.6854
805.000000 MHz	53.6466	20.6940
810.000000 MHz	53.5423	20.6704
815.000000 MHz	53.4496	20.7384
820.000000 MHz	53.3971	20.7418
825.000000 MHz	53.3223	20.7255
830.000000 MHz	53.2558	20.7286
835.000000 MHz	53.1681	20.6846
840.000000 MHz	53.1462	20.6831
845.000000 MHz	53.1085	20.6655
850.000000 MHz	53.0616	20.6351
855.000000 MHz	53.0126	20.6112
860.000000 MHz	52.9397	20.6072
865.000000 MHz	52.9092	20.5983
870.000000 MHz	52.8835	20.5718
875.000000 MHz	52.8272	20.5463
880.000000 MHz	52.7944	20.5386
885.000000 MHz	52.7388	20.5238
890.000000 MHz	52.6877	20.5181
895.000000 MHz	52.6216	20.4974
900.000000 MHz	52.5338	20.4854

Dielectric Parameter (1900MHz Muscle)

Title: TDC-8100

SubTitle: 1900MHz Body

February 12, 2003 09:32 AM

Frequency	e'	e''
1.700000000 GHz	53.4948	14.2626
1.710000000 GHz	53.4839	14.2887
1.720000000 GHz	53.4224	14.3047
1.730000000 GHz	53.4484	14.3482
1.740000000 GHz	53.3658	14.3604
1.750000000 GHz	53.3156	14.3385
1.760000000 GHz	53.2637	14.3738
1.770000000 GHz	53.2364	14.3923
1.780000000 GHz	53.1991	14.4269
1.790000000 GHz	53.1522	14.4735
1.800000000 GHz	53.1275	14.5050
1.810000000 GHz	53.1067	14.5554
1.820000000 GHz	53.0446	14.5979
1.830000000 GHz	53.0099	14.6315
1.840000000 GHz	52.9443	14.6817
1.850000000 GHz	52.9341	14.7053
1.860000000 GHz	52.9239	14.7472
1.870000000 GHz	52.8567	14.7965
1.880000000 GHz	52.8211	14.8216
1.890000000 GHz	52.7854	14.8326
1.900000000 GHz	52.7487	14.8485
1.910000000 GHz	52.7373	14.8780
1.920000000 GHz	52.6888	14.9128
1.930000000 GHz	52.6197	14.9270
1.940000000 GHz	52.5888	14.9647
1.950000000 GHz	52.5701	15.0094
1.960000000 GHz	52.5434	15.0474
1.970000000 GHz	52.5248	15.1072
1.980000000 GHz	52.4932	15.1358
1.990000000 GHz	52.4830	15.1772
2.000000000 GHz	52.4610	15.2119