

ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (835MHz Head)

835 Dipole Validation test: Input power(1W)

Liquid Temperature : 21.6 °C

Date Tested : November 10, 2005

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.88 \text{ mho/m}$; $\epsilon_r = 41.9$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1607; ConvF(6.18, 6.18, 6.18); Calibrated: 2005-08-30

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn614; Calibrated: 2005-04-21

- Phantom: SAM 835/900 MHz; Type: SAM

Validation 835 MHz/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 10.6 mW/g

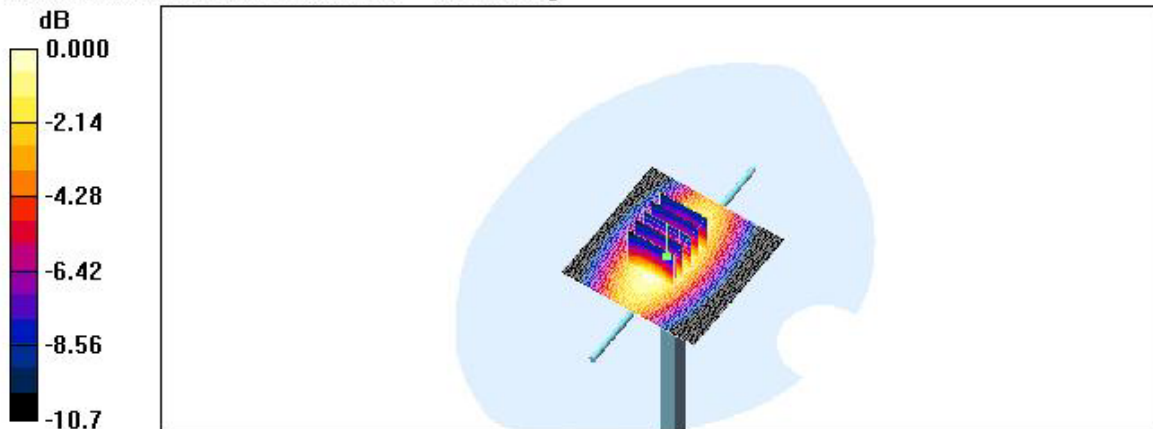
Validation 835 MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 112.7 V/m; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 14.3 W/kg

SAR(1 g) = 9.74 mW/g; SAR(10 g) = 6.39 mW/g

Maximum value of SAR (measured) = 10.4 mW/g



0 dB = 10.4mW/g

■ Validation Data (1900MHz Head)

1900 Dipole Validation test: Input power(1W)

Liquid Temperature : 21.4 °C

Date Tested : November 11, 2005

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.45 \text{ mho/m}$; $\epsilon_r = 40$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1607; ConvF(5.14, 5.14, 5.14); Calibrated: 2005-08-30

- Sensor-Surface: 4mm (Mechanical Surface Detection)

- Electronics: DAE4 Sn614; Calibrated: 2005-04-21

- Phantom: SAM 1800/1900 MHz; Type: SAM

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (interpolated) = 47.6 mW/g

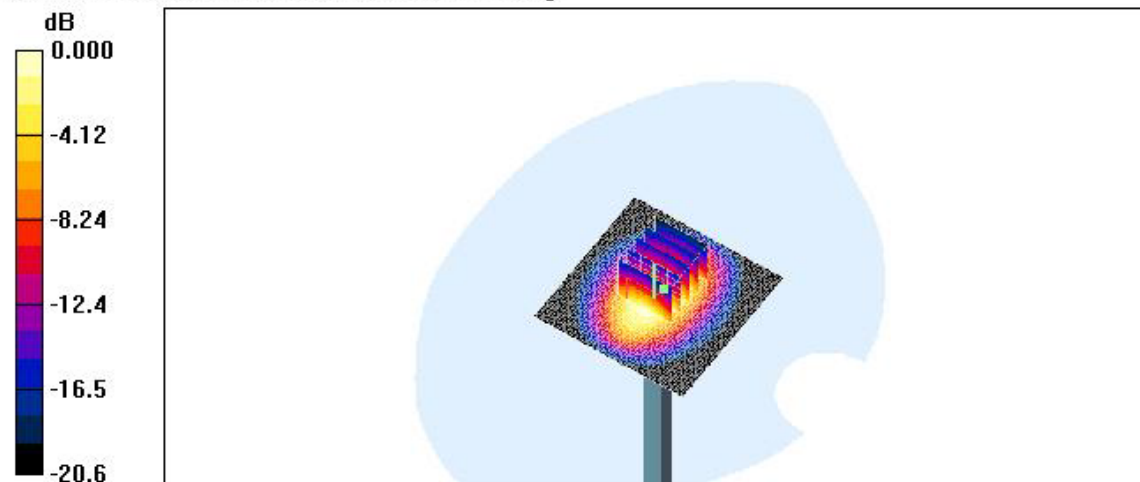
Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 196.9 V/m; Power Drift = -0.039 dB

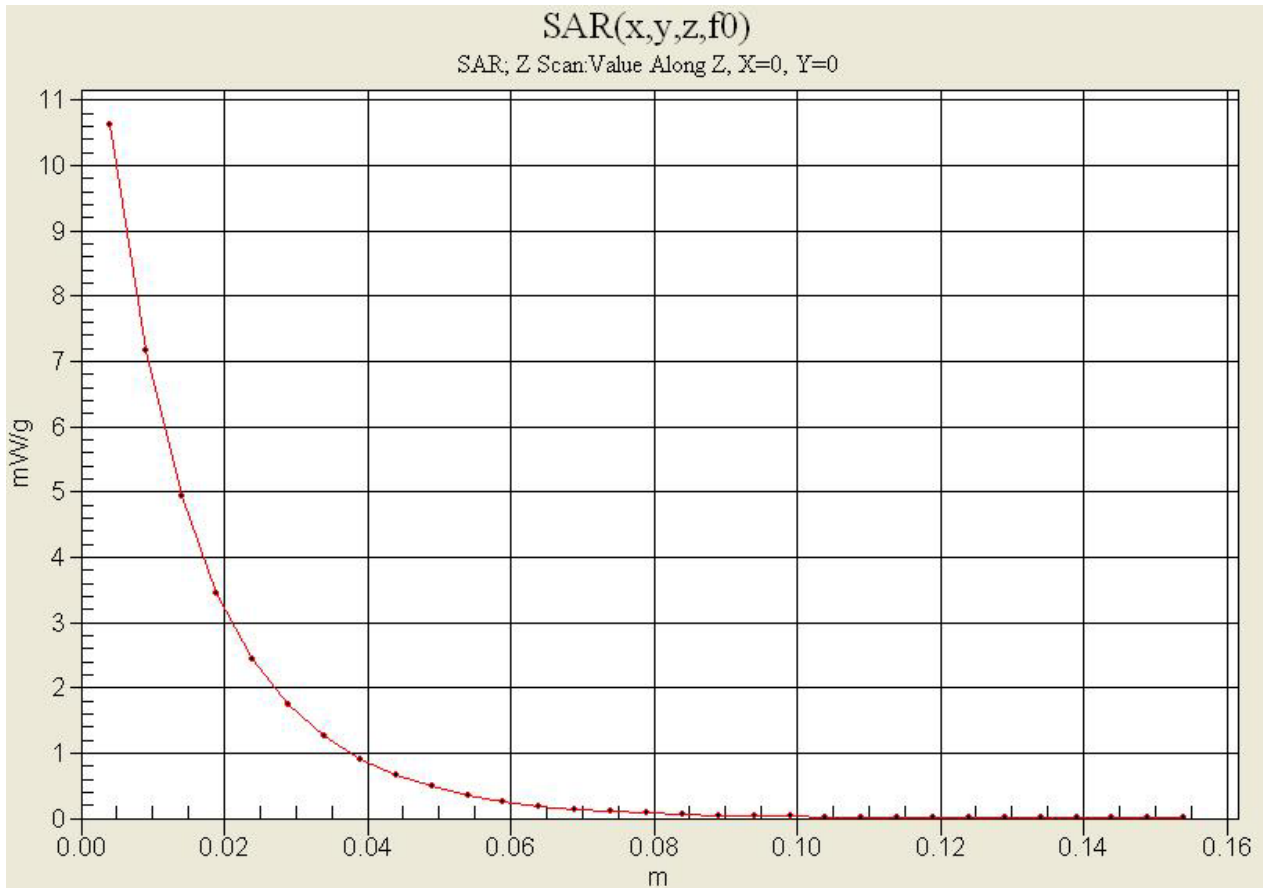
Peak SAR (extrapolated) = 74.7 W/kg

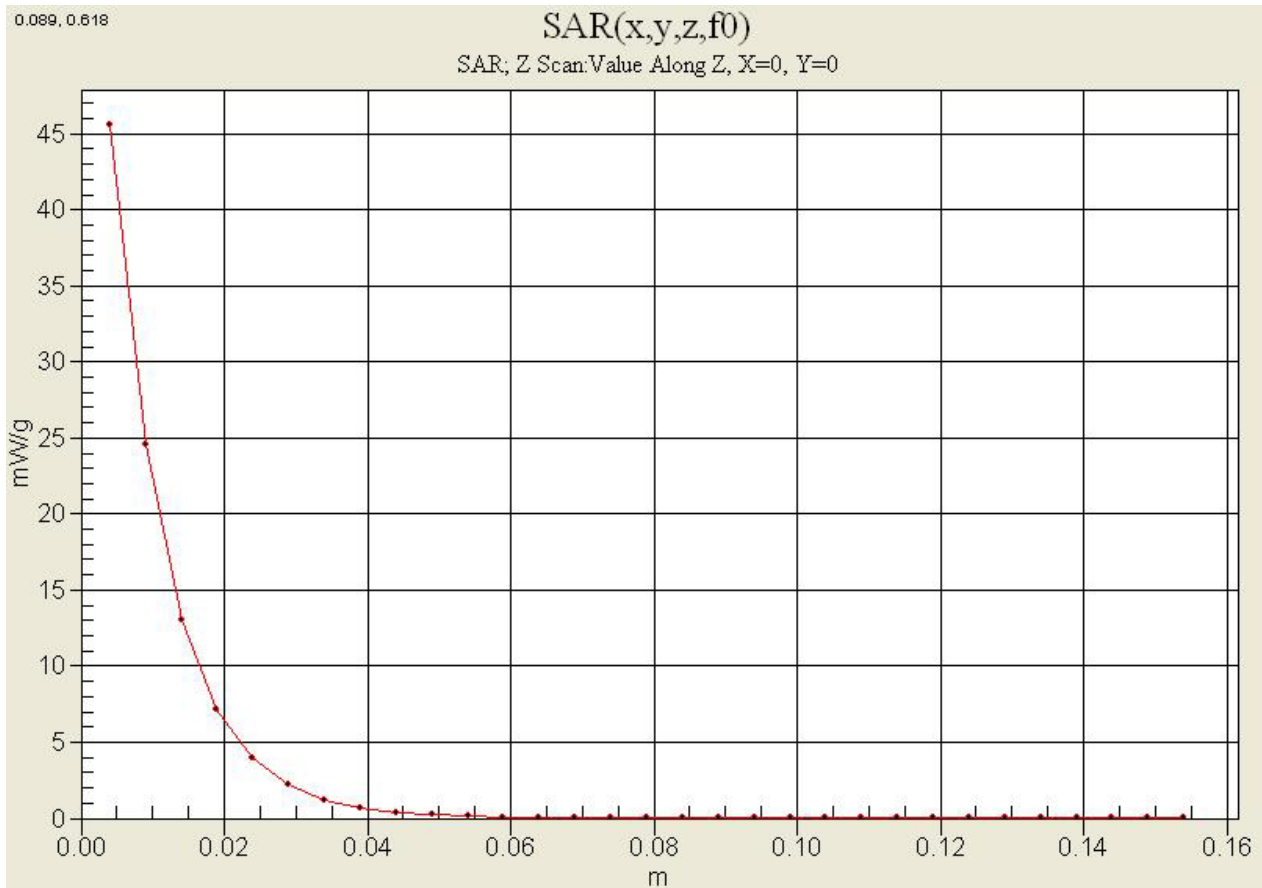
SAR(1 g) = 40.8 mW/g; SAR(10 g) = 20.8 mW/g

Maximum value of SAR (measured) = 45.8 mW/g



0 dB = 45.8mW/g





■ Dielectric Parameter (835MHz Head)

Title : CDM7025

SubTitle : CDMA835 HEAD

November 10, 2005 09:20 AM

Frequency	e'	e''
800.000000 MHz	42.6371	18.9784
805.000000 MHz	42.5806	18.9105
810.000000 MHz	42.4271	18.9564
815.000000 MHz	42.3371	18.9526
820.000000 MHz	42.2867	18.8954
825.000000 MHz	42.1771	18.9458
830.000000 MHz	42.0651	18.9439
835.000000 MHz	41.9068	18.9397
840.000000 MHz	41.8085	18.9192
845.000000 MHz	41.7143	18.9085
850.000000 MHz	41.6652	18.9061
855.000000 MHz	41.5747	18.8641
860.000000 MHz	41.5329	18.8805
865.000000 MHz	41.4597	18.9264
870.000000 MHz	41.4073	18.8645
875.000000 MHz	41.2855	18.8741
880.000000 MHz	41.2974	18.8197
885.000000 MHz	41.1926	18.8451
890.000000 MHz	41.1768	18.8293
895.000000 MHz	41.1493	18.7724
900.000000 MHz	41.1422	18.7495

■ Dielectric Parameter (1900MHz Head)

Title : CDM7025

SubTitle : PCS1900 HEAD

November 11, 2005 09:02 AM

Frequency	e'	e''
1.800000000 GHz	40.4424	13.3206
1.810000000 GHz	40.3508	13.3819
1.820000000 GHz	40.3329	13.4556
1.830000000 GHz	40.2673	13.5528
1.840000000 GHz	40.2847	13.6435
1.850000000 GHz	40.2863	13.7497
1.860000000 GHz	40.2491	13.8255
1.870000000 GHz	40.2101	13.8294
1.880000000 GHz	40.1561	13.8131
1.890000000 GHz	40.1143	13.7441
1.900000000 GHz	40.0427	13.7071
1.910000000 GHz	39.9586	13.6820
1.920000000 GHz	39.9020	13.6516
1.930000000 GHz	39.8381	13.6772
1.940000000 GHz	39.7779	13.7334
1.950000000 GHz	39.7084	13.8405
1.960000000 GHz	39.7045	13.9277
1.970000000 GHz	39.6853	14.0607
1.980000000 GHz	39.6740	14.1318
1.990000000 GHz	39.6831	14.1475
2.000000000 GHz	39.6643	14.1643

■ Dielectric Parameter (835MHz Body)

Title : CDM7025

SubTitle : CDMA835 BODY

November 10, 2005 01:45 PM

Frequency	e'	e''
800.000000 MHz	53.6671	21.8275
805.000000 MHz	53.5423	21.6409
810.000000 MHz	53.5049	21.5727
815.000000 MHz	53.4441	21.4684
820.000000 MHz	53.3601	21.4071
825.000000 MHz	53.2988	21.3441
830.000000 MHz	53.2266	21.2636
835.000000 MHz	53.1677	21.2178
840.000000 MHz	53.0894	21.2673
845.000000 MHz	53.0862	21.2784
850.000000 MHz	52.9921	21.2464
855.000000 MHz	53.0236	21.2878
860.000000 MHz	52.9807	21.3884
865.000000 MHz	52.9310	21.4371
870.000000 MHz	52.9048	21.4873
875.000000 MHz	52.8796	21.5368
880.000000 MHz	52.8588	21.5948
885.000000 MHz	52.8261	21.6039
890.000000 MHz	52.7503	21.6081
895.000000 MHz	52.7193	21.5745
900.000000 MHz	52.6637	21.5297

■ Dielectric Parameter (1900MHz Body)

Title : CDM7025

SubTitle : PCS1900 BODY

November 11, 2005 09:02 AM

Frequency	e'	e''
1.800000000 GHz	53.0224	13.7070
1.810000000 GHz	53.0113	13.7860
1.820000000 GHz	53.0275	13.8809
1.830000000 GHz	52.9947	13.9461
1.840000000 GHz	53.0243	13.9887
1.850000000 GHz	53.0846	14.0471
1.860000000 GHz	53.1423	14.0636
1.870000000 GHz	53.2526	14.1077
1.880000000 GHz	53.2740	14.1519
1.890000000 GHz	53.2912	14.1812
1.900000000 GHz	53.2853	14.1952
1.910000000 GHz	53.2738	14.2364
1.920000000 GHz	53.2543	14.3291
1.930000000 GHz	53.2519	14.3947
1.940000000 GHz	53.2275	14.4961
1.950000000 GHz	53.1657	14.5749
1.960000000 GHz	53.0854	14.6318
1.970000000 GHz	53.0499	14.6646
1.980000000 GHz	52.9770	14.6794
1.990000000 GHz	52.8847	14.7249
2.000000000 GHz	52.8072	14.7312