

ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (835MHz Brain)

Test Laboratory: HCT

835 Dipole Validation test: Input power(1W)

Liquid Temperature : 21.5℃

Date Tested : July 04, 2006

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:441

Program Name: Validation

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

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.875 \text{ mho/m}$; $\epsilon_r = 40.8$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 44

DASY4 Configuration:

- Probe: ET3DV6 - SN1607; ConvF(6.18, 6.18, 6.18); Calibrated: 2005-08-30
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2006-03-17
- Phantom: SAM 835/900 MHz; Type: SAM

Validation 835 MHz/Area Scan (61x81x1): Measurement grid: $\Delta x = 15\text{mm}$, $\Delta y = 15\text{mm}$

Maximum value of SAR (interpolated) = 10.3 mW/g

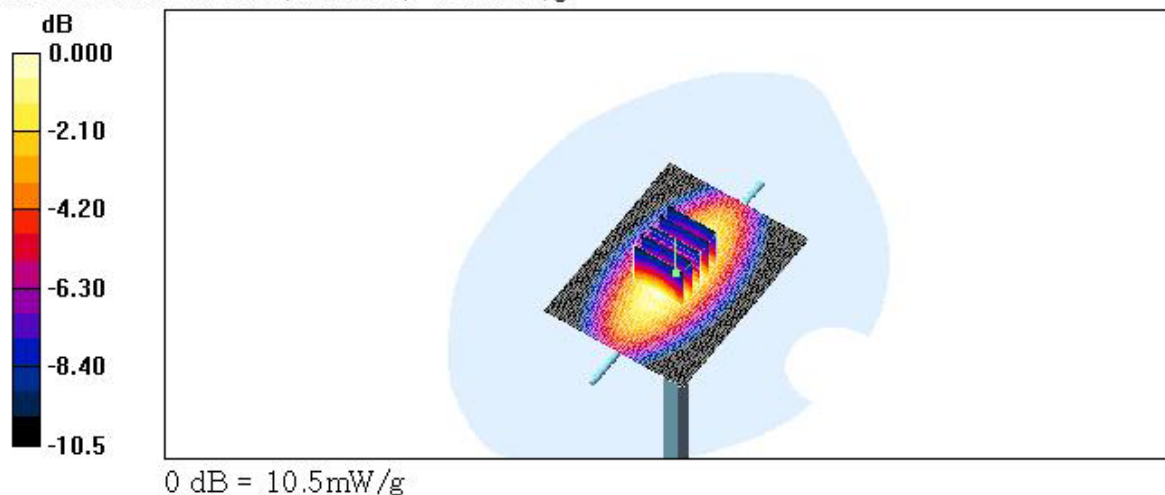
Validation 835 MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $\Delta x = 8\text{mm}$, $\Delta y = 8\text{mm}$, $\Delta z = 5\text{mm}$

Reference Value = 112.5 V/m; Power Drift = -0.025 dB

Peak SAR (extrapolated) = 14.3 W/kg

SAR(1 g) = 9.67 mW/g; SAR(10 g) = 6.31 mW/g

Maximum value of SAR (measured) = 10.5 mW/g



■ Validation Data (1900MHz Brain)

Test Laboratory: HCT

1900 Dipole Validation test: Input power(1W)

Liquid Temperature : 21.6 °C

Date Tested : July 05, 2006

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d032

Program Name: Validation

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

Medium parameters used: $f = 1900$ MHz; $\sigma = 1.46$ mho/m; $\epsilon_r = 38.2$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Measurement SW: DASY4, V4.7 Build 44

DASY4 Configuration:

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

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

- Electronics: DAE3 Sn446; Calibrated: 2006-03-17

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

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: $\Delta x = 15$ mm, $\Delta y = 15$ mm

Maximum value of SAR (interpolated) = 47.7 mW/g

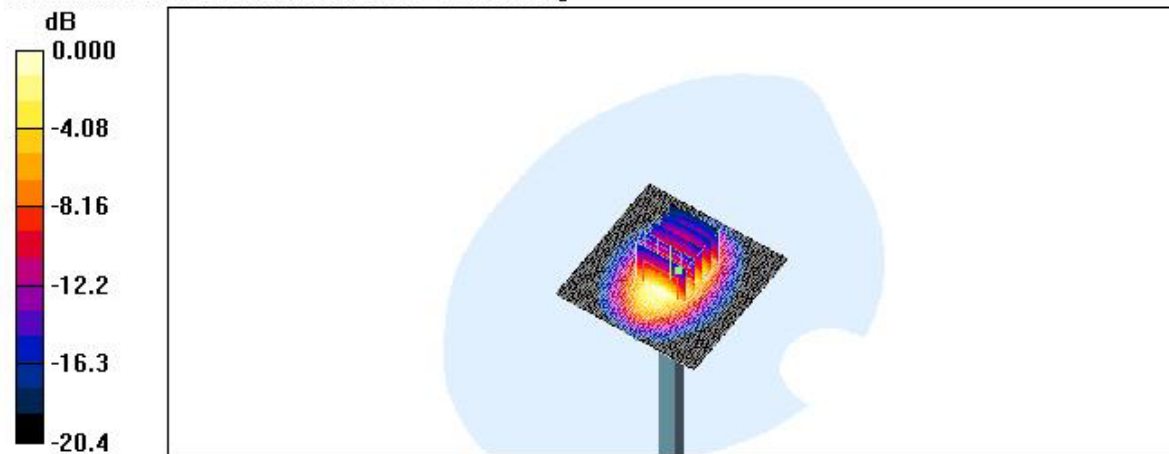
Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $\Delta x = 8$ mm, $\Delta y = 8$ mm, $\Delta z = 5$ mm

Reference Value = 176.0 V/m; Power Drift = -0.029 dB

Peak SAR (extrapolated) = 89.7 W/kg

SAR(1 g) = 40.5 mW/g; SAR(10 g) = 20.1 mW/g

Maximum value of SAR (measured) = 43.7 mW/g



0 dB = 43.7mW/g

■ Dielectric Parameter (835MHz Brain)

Title : TX-215

SubTitle : CDMA835 Head

July 04, 2006 08:50 AM

Frequency	e'	e''
800.000000 MHz	41.2086	18.8765
805.000000 MHz	41.1132	18.8774
810.000000 MHz	41.0785	18.8194
815.000000 MHz	41.0234	18.8422
820.000000 MHz	40.9834	18.8184
825.000000 MHz	40.9133	18.8558
830.000000 MHz	40.8197	18.7839
835.000000 MHz	40.8184	18.8341
840.000000 MHz	40.8042	18.8352
845.000000 MHz	40.7701	18.8002
850.000000 MHz	40.7368	18.7653
855.000000 MHz	40.6359	18.7806
860.000000 MHz	40.6337	18.7785
865.000000 MHz	40.5689	18.7330
870.000000 MHz	40.5517	18.7454
875.000000 MHz	40.4991	18.7376
880.000000 MHz	40.4387	18.7171
885.000000 MHz	40.3272	18.7067
890.000000 MHz	40.2769	18.7139
895.000000 MHz	40.1952	18.6957
900.000000 MHz	40.1223	18.6359

■ Dielectric Parameter (835MHz Body)**Title : TX-215****SubTitle : CDMA835 Body**

July 04, 2006 12:46 PM

Frequency	e'	e''
800.000000 MHz	57.2939	20.6920
805.000000 MHz	57.2420	20.6764
810.000000 MHz	57.1265	20.6395
815.000000 MHz	57.1739	20.6998
820.000000 MHz	57.0886	20.6464
825.000000 MHz	56.9956	20.6863
830.000000 MHz	56.8762	20.6527
835.000000 MHz	56.8710	20.7091
840.000000 MHz	56.8405	20.6971
845.000000 MHz	56.8354	20.7192
850.000000 MHz	56.8688	20.7807
855.000000 MHz	56.8349	20.7802
860.000000 MHz	56.7964	20.7380
865.000000 MHz	56.8523	20.7667
870.000000 MHz	56.7964	20.7315
875.000000 MHz	56.7677	20.7341
880.000000 MHz	56.7303	20.6865
885.000000 MHz	56.7147	20.6250
890.000000 MHz	56.7032	20.5728
895.000000 MHz	56.6915	20.5314
900.000000 MHz	56.6257	20.4600

■ Dielectric Parameter (1900MHz Head)

Title : TX-215

SubTitle : PCS1900 Head

July 05, 2006 09:10 AM

Frequency	e'	e''
1.800000000 GHz	38.6269	13.5974
1.810000000 GHz	38.6014	13.6284
1.820000000 GHz	38.5506	13.6502
1.830000000 GHz	38.5250	13.6870
1.840000000 GHz	38.4903	13.6816
1.850000000 GHz	38.4494	13.7187
1.860000000 GHz	38.4015	13.7423
1.870000000 GHz	38.3773	13.7784
1.880000000 GHz	38.3135	13.7911
1.890000000 GHz	38.2641	13.8014
1.900000000 GHz	38.2388	13.8059
1.910000000 GHz	38.2070	13.8176
1.920000000 GHz	38.1509	13.8356
1.930000000 GHz	38.1423	13.8623
1.940000000 GHz	38.0943	13.8756
1.950000000 GHz	38.0484	13.8675
1.960000000 GHz	37.9881	13.8949
1.970000000 GHz	37.9946	13.9208
1.980000000 GHz	37.9423	13.9436
1.990000000 GHz	37.8931	13.9876
2.000000000 GHz	37.9013	13.9978

■ Dielectric Parameter (1900MHz Body)

Title : TX-215

SubTitle : PCS1900 Body

July 05, 2006 01:10 PM

Frequency	e'	e''
1.800000000 GHz	53.2158	14.2680
1.810000000 GHz	53.2002	14.3134
1.820000000 GHz	53.1631	14.3484
1.830000000 GHz	53.1176	14.4129
1.840000000 GHz	53.1002	14.4529
1.850000000 GHz	53.0803	14.5245
1.860000000 GHz	52.9738	14.5498
1.870000000 GHz	52.9340	14.5779
1.880000000 GHz	52.9249	14.6297
1.890000000 GHz	52.8369	14.6005
1.900000000 GHz	52.7653	14.6154
1.910000000 GHz	52.7445	14.6243
1.920000000 GHz	52.6581	14.6507
1.930000000 GHz	52.6237	14.6803
1.940000000 GHz	52.5987	14.6869
1.950000000 GHz	52.5450	14.7500
1.960000000 GHz	52.5286	14.7964
1.970000000 GHz	52.5500	14.8653
1.980000000 GHz	52.5085	14.8925
1.990000000 GHz	52.4884	14.9287
2.000000000 GHz	52.4489	14.9729