

ATTACHMENT C – DIPOLE VALIDATION

■ Validation Data (835MHz Head)

Test Laboratory: HCT

835 Dipole Validation test: Input power(1W)

Liquid Temperature : 21.5℃

Date Tested : November 25, 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: $f = 835 \text{ MHz}$; $\sigma = 0.872 \text{ mho/m}$; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1798; ConvF(6.73, 6.73, 6.73); Calibrated: 2006-08-25

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

- Electronics: DAE3 Sn479; Calibrated: 2006-02-23

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

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

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

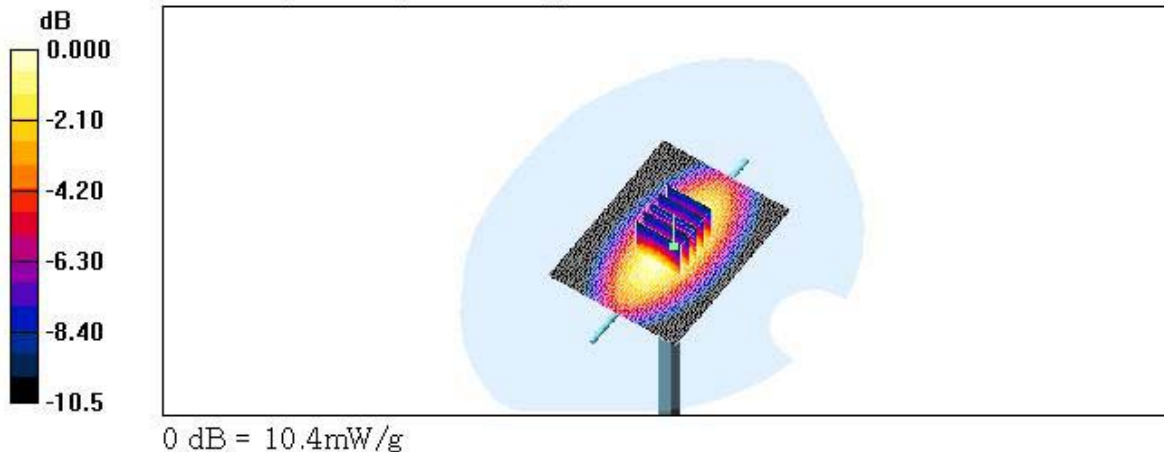
Validation 835 MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 112.0 V/m; Power Drift = 0.069 dB

Peak SAR (extrapolated) = 14.3 W/kg

SAR(1 g) = 9.67 mW/g; SAR(10 g) = 6.34 mW/g

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



■ Validation Data (1900MHz Head)

Test Laboratory: HCT

1900 Dipole Validation test: Input power(1W)

Liquid Temperature : 21.5℃

Date Tested : November 25, 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: $f = 1900 \text{ MHz}$; $\sigma = 1.45 \text{ mho/m}$; $\epsilon_r = 38.3$; $\rho = 1000 \text{ kg/m}^3$

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1798; ConvF(5.6, 5.6, 5.6); Calibrated: 2006-08-25

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

- Electronics: DAE3 Sn479; Calibrated: 2006-02-23

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

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

Maximum value of SAR (interpolated) = 49.4 mW/g

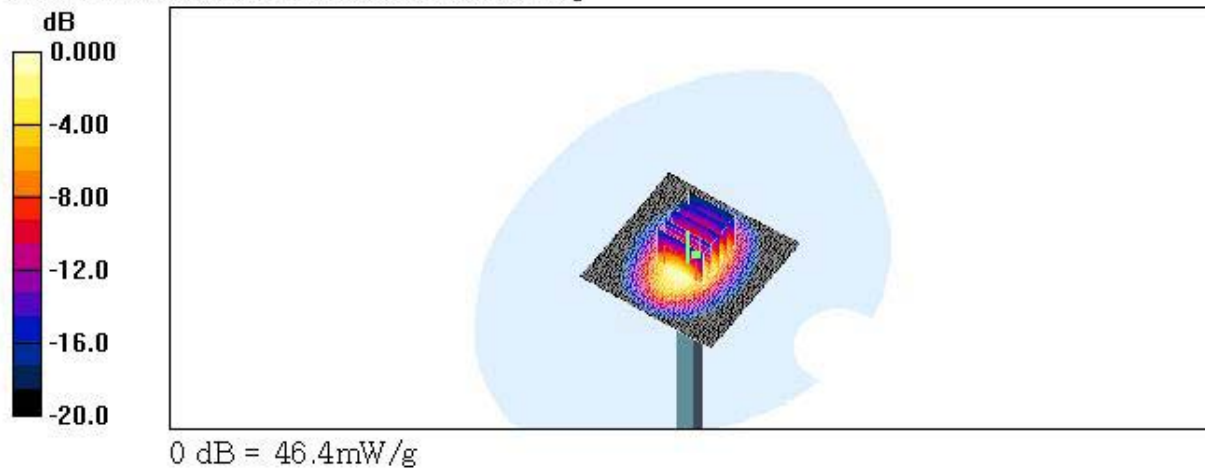
Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $\Delta x = 8\text{mm}$, $\Delta y = 8\text{mm}$, $\Delta z = 5\text{mm}$

Reference Value = 192.2 V/m; Power Drift = -0.039 dB

Peak SAR (extrapolated) = 73.1 W/kg

SAR(1 g) = 41.4 mW/g; SAR(10 g) = 21.4 mW/g

Maximum value of SAR (measured) = 46.4 mW/g



■ Dielectric Parameter (835MHz Head)

Title : G'zOne TYPE-S

SubTitle : CDMA835(Head)

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Frequency	e'	e''
800.000000 MHz	41.1195	18.8677
805.000000 MHz	41.0092	18.8513
810.000000 MHz	41.0031	18.8182
815.000000 MHz	40.9450	18.7887
820.000000 MHz	40.8661	18.7970
825.000000 MHz	40.8797	18.8491
830.000000 MHz	40.8046	18.7670
835.000000 MHz	40.7483	18.7696
840.000000 MHz	40.7257	18.8151
845.000000 MHz	40.7113	18.7750
850.000000 MHz	40.6724	18.7936
855.000000 MHz	40.5654	18.7490
860.000000 MHz	40.5662	18.7566
865.000000 MHz	40.5326	18.7127
870.000000 MHz	40.4969	18.7306
875.000000 MHz	40.4458	18.7628
880.000000 MHz	40.3612	18.7092
885.000000 MHz	40.2857	18.6837
890.000000 MHz	40.2257	18.7088
895.000000 MHz	40.1520	18.6488
900.000000 MHz	40.0845	18.6075

■ Dielectric Parameter (835MHz Body)

Title : G'zOne TYPE-S

SubTitle : CDMA835(Body)

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Frequency	e'	e''
800.000000 MHz	53.7493	21.3433
805.000000 MHz	53.6909	21.3849
810.000000 MHz	53.6728	21.3445
815.000000 MHz	53.6360	21.3445
820.000000 MHz	53.5426	21.2920
825.000000 MHz	53.4869	21.3103
830.000000 MHz	53.4747	21.3074
835.000000 MHz	53.3986	21.2778
840.000000 MHz	53.3590	21.2245
845.000000 MHz	53.3413	21.2291
850.000000 MHz	53.3234	21.2011
855.000000 MHz	53.3086	21.1504
860.000000 MHz	53.2541	21.1363
865.000000 MHz	53.1734	21.1643
870.000000 MHz	53.1304	21.0607
875.000000 MHz	53.1553	21.0655
880.000000 MHz	53.1144	21.0630
885.000000 MHz	53.0344	21.0385
890.000000 MHz	52.9718	21.0288
895.000000 MHz	52.9492	21.0249
900.000000 MHz	52.8428	20.9909

■ Dielectric Parameter (1900MHz Head)**Title : G'zOne TYPE-S****SubTitle : PCS1900(Head)**

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Frequency	e'	e''
1.800000000 GHz	38.6073	13.4403
1.810000000 GHz	38.5685	13.4855
1.820000000 GHz	38.6283	13.5532
1.830000000 GHz	38.6899	13.6068
1.840000000 GHz	38.7494	13.6549
1.850000000 GHz	38.7603	13.6508
1.860000000 GHz	38.7521	13.6432
1.870000000 GHz	38.6937	13.6544
1.880000000 GHz	38.5667	13.6339
1.890000000 GHz	38.3987	13.6839
1.900000000 GHz	38.2610	13.6983
1.910000000 GHz	38.1272	13.7260
1.920000000 GHz	38.0530	13.7907
1.930000000 GHz	38.0535	13.8414
1.940000000 GHz	38.1037	13.9047
1.950000000 GHz	38.1554	13.9545
1.960000000 GHz	38.2347	13.9863
1.970000000 GHz	38.2610	13.9839
1.980000000 GHz	38.2494	13.9620
1.990000000 GHz	38.1797	13.9255
2.000000000 GHz	38.0499	13.9198

■ Dielectric Parameter (1900MHz Body)**Title : G'zOne TYPE-S****SubTitle : PCS1900(Body)**

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Frequency	e'	e''
1.800000000 GHz	51.6785	14.3481
1.810000000 GHz	51.7027	14.3757
1.820000000 GHz	51.7326	14.4375
1.830000000 GHz	51.7961	14.4773
1.840000000 GHz	51.8444	14.5220
1.850000000 GHz	51.9224	14.5405
1.860000000 GHz	51.9101	14.5398
1.870000000 GHz	51.9501	14.5397
1.880000000 GHz	51.9472	14.5339
1.890000000 GHz	51.9276	14.5681
1.900000000 GHz	51.8883	14.5662
1.910000000 GHz	51.8655	14.5928
1.920000000 GHz	51.8528	14.6285
1.930000000 GHz	51.8345	14.6836
1.940000000 GHz	51.8783	14.7142
1.950000000 GHz	51.9146	14.7191
1.960000000 GHz	51.9600	14.7474
1.970000000 GHz	52.0100	14.7672
1.980000000 GHz	52.0580	14.8172
1.990000000 GHz	52.0296	14.7809
2.000000000 GHz	52.0618	14.7877