ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (835MHz Head)

Test Laboratory: HCT

900 Dipole Validation test: Input power(1W)
Liquid Temperature : 21.5 ℃
Date Tested : February 08, 2006

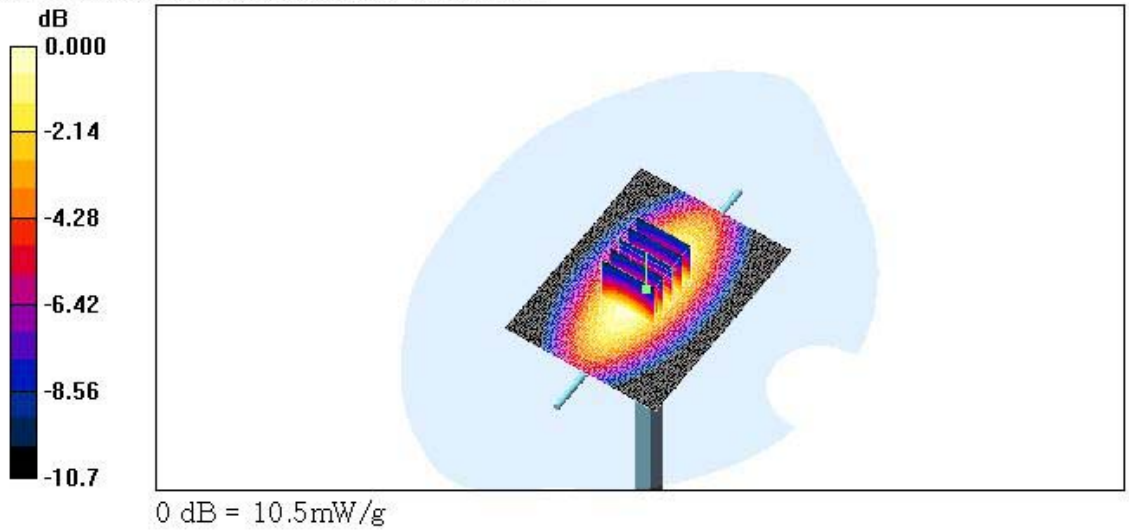
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:441
Program Name: Validation

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; $\sigma = 0.888$ mho/m; $\varepsilon_r = 42.5$; $\rho = 1000$ 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 (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 10.7 mW/g

Validation 835 MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 112.6 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 14.4 W/kg
SAR(1 g) = 9.76 mW/g; SAR(10 g) = 6.39 mW/g
Maximum value of SAR (measured) = 10.5 mW/g



0 dB = 10.5mW/g

■ Validation Data (1900MHz Head)

Test Laboratory: HCT

1900 Dipole Validation test: Input power(1W)
Liquid Temperature : 21.5 ℃
Date Tested : February 08, 2006

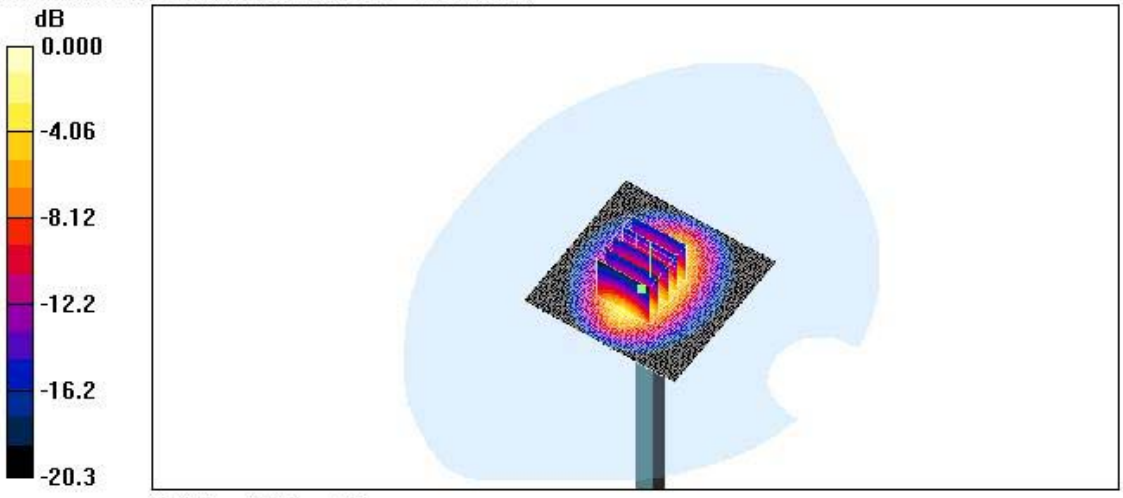
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d032
Program Name: Validation

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.45 mho/m; ε_r = 38.5; ρ = 1000 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=15mm, dy=15mm
Maximum value of SAR (interpolated) = 46.6 mW/g

Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 187.8 V/m; Power Drift = 0.033 dB
Peak SAR (extrapolated) = 73.4 W/kg
SAR(1 g) = 40.6 mW/g; SAR(10 g) = 20.8 mW/g
Maximum value of SAR (measured) = 45.4 mW/g



0 dB = 45.4mW/g

■ Dielectric Parameter (835MHz Head)

Title : NX9200

SubTitle : CDMA835 Head

February 08, 2006 08:35 AM

Frequency	e'	e''
800.000000 MHz	42.9697	19.0389
805.000000 MHz	42.9180	19.0333
810.000000 MHz	42.7961	19.0044
815.000000 MHz	42.7141	18.9972
820.000000 MHz	42.6535	19.0804
825.000000 MHz	42.6344	19.0608
830.000000 MHz	42.5438	19.1041
835.000000 MHz	42.4595	19.1086
840.000000 MHz	42.3696	19.1254
845.000000 MHz	42.3953	19.1403
850.000000 MHz	42.2967	19.1909
855.000000 MHz	42.2293	19.2012
860.000000 MHz	42.1737	19.1773
865.000000 MHz	42.1488	19.1856
870.000000 MHz	42.0480	19.1756
875.000000 MHz	42.0565	19.1538
880.000000 MHz	41.9712	19.1551
885.000000 MHz	41.8931	19.1091
890.000000 MHz	41.8881	19.0369
895.000000 MHz	41.8208	18.9890
900.000000 MHz	41.7689	18.9569

■ Dielectric Parameter (1900MHz Body)

Frequency	e'	e''
800.000000 MHz	55.0914	21.1428
805.000000 MHz	55.0655	21.1351
810.000000 MHz	54.9796	21.1152
815.000000 MHz	54.9394	21.1240
820.000000 MHz	54.9385	21.1297
825.000000 MHz	54.8757	21.1466
830.000000 MHz	54.7639	21.1927
835.000000 MHz	54.7185	21.2032
840.000000 MHz	54.7538	21.2496
845.000000 MHz	54.7054	21.3046
850.000000 MHz	54.6689	21.3001
855.000000 MHz	54.6583	21.2748
860.000000 MHz	54.5761	21.2878
865.000000 MHz	54.5982	21.3149
870.000000 MHz	54.5450	21.2844
875.000000 MHz	54.4630	21.2601
880.000000 MHz	54.4220	21.2416
885.000000 MHz	54.3480	21.2044
890.000000 MHz	54.2983	21.1053
895.000000 MHz	54.2210	21.0549
900.000000 MHz	54.1139	21.0065

■ Dielectric Parameter (1900MHz Head)

Title : NX9200

SubTitle : PCS1900 Head

February 03, 2006 10:40 AM

Frequency	e'	e''
1.800000000 GHz	38.8589	13.5096
1.810000000 GHz	38.8425	13.5523
1.820000000 GHz	38.8283	13.5515
1.830000000 GHz	38.8210	13.5705
1.840000000 GHz	38.7981	13.5868
1.850000000 GHz	38.7751	13.6061
1.860000000 GHz	38.7240	13.6068
1.870000000 GHz	38.6755	13.6150
1.880000000 GHz	38.6108	13.6720
1.890000000 GHz	38.5348	13.6652
1.900000000 GHz	38.4830	13.7147
1.910000000 GHz	38.4184	13.7223
1.920000000 GHz	38.4120	13.7556
1.930000000 GHz	38.3989	13.7812
1.940000000 GHz	38.4076	13.8164
1.950000000 GHz	38.3535	13.8386
1.960000000 GHz	38.3515	13.8627
1.970000000 GHz	38.3317	13.9214
1.980000000 GHz	38.2807	13.9565
1.990000000 GHz	38.2382	13.9399
2.000000000 GHz	38.1854	13.9419

■ Dielectric Parameter (1900MHz Body)

Title : NX9200

SubTitle : PCS1900 Body

February 03, 2006 03:50 PM

Frequency	e'	e''
1.800000000 GHz	52.0113	13.7625
1.810000000 GHz	52.0059	13.8310
1.820000000 GHz	51.9796	13.9102
1.830000000 GHz	51.9277	13.9648
1.840000000 GHz	51.8992	14.0068
1.850000000 GHz	51.8365	14.0358
1.860000000 GHz	51.7596	14.0706
1.870000000 GHz	51.6784	14.1348
1.880000000 GHz	51.5914	14.1655
1.890000000 GHz	51.4931	14.2213
1.900000000 GHz	51.4634	14.2561
1.910000000 GHz	51.3948	14.3366
1.920000000 GHz	51.3682	14.4296
1.930000000 GHz	51.3603	14.4778
1.940000000 GHz	51.3344	14.5352
1.950000000 GHz	51.3520	14.6029
1.960000000 GHz	51.2945	14.6327
1.970000000 GHz	51.2698	14.6614
1.980000000 GHz	51.2495	14.6968
1.990000000 GHz	51.1510	14.7414
2.000000000 GHz	51.0895	14.7629