ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (835MHz Head)

Test Laboratory: HCT

835 Dipole Validation test: Input power(1W)
Liquid Temperature : 21.7℃
Date Tested : August 30, 2006

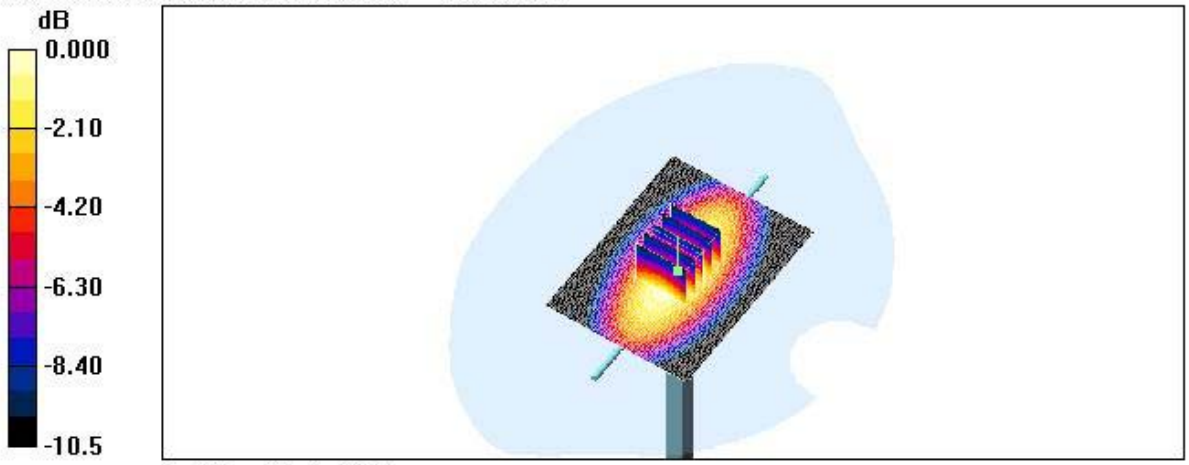
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:441

Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used: f = 835 MHz; $\sigma = 0.874$ mho/m; $\varepsilon_r = 40.8$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section ;Measurement SW: DASY4, V4.6 Build 23

DASY4 Configuration:
- Probe: ET3DV6 - SN1609; ConvF(6.85, 6.85, 6.85); Calibrated: 2006-03-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn447; Calibrated: 2005-11-30
- Phantom: SAM 835/900 MHz; Type: SAM

Validatoin 835 MHz/Area Scan (61x81x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 10.5 mW/g

Validatoin 835 MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 113.0 V/m; Power Drift = -0.012 dB
Peak SAR (extrapolated) = 14.2 W/kg
SAR(1 g) = 9.66 mW/g; SAR(10 g) = 6.34 mW/g
Maximum value of SAR (measured) = 10.4 mW/g



0 dB = 10.4mW/g

■ Validation Data (1900MHz Head)

Test Laboratory: HCT

1900 Dipole Validation test: Input power(1W)
Liquid Temperature : 21.8℃
Date Tested : August 31, 2006

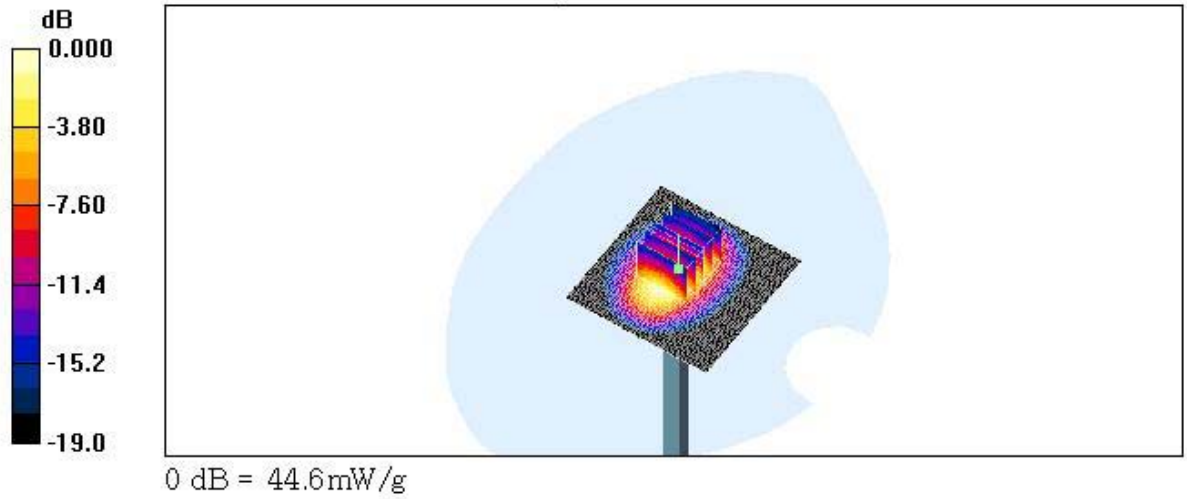
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d032
Program Name: System Performance Check at 1900 MHz

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; $\sigma = 1.45$ mho/m; $\varepsilon_r = 40$; $\rho = 1000$ kg/m^3
Phantom section: Flat Section ;Measurement SW: DASY4, V4.6 Build 23

DASY4 Configuration:
- Probe: ET3DV6 - SN1609; ConvF(5.16, 5.16, 5.16); Calibrated: 2006-03-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn447; Calibrated: 2005-11-30
- Phantom: SAM with CRP 1800MHz; Type: SAM

Validation 1900MHz/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (interpolated) = 48.7 mW/g

Validation 1900MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 186.0 V/m; Power Drift = -0.022 dB
Peak SAR (extrapolated) = 72.8 W/kg
SAR(1 g) = 40.2 mW/g; SAR(10 g) = 20.8 mW/g
Maximum value of SAR (measured) = 44.6 mW/g



0 dB = 44.6mW/g

■ Dielectric Parameter (835MHz Head)

Title : EZ600D
SubTitle : GSM835(HEAD)
August 30, 2006 08:20 AM

Frequency	e'	e''
800.000000 MHz	41.1600	18.8569
805.000000 MHz	41.0803	18.8754
810.000000 MHz	40.9984	18.8409
815.000000 MHz	40.9503	18.8086
820.000000 MHz	40.9331	18.7895
825.000000 MHz	40.8753	18.8133
830.000000 MHz	40.7957	18.8115
835.000000 MHz	40.7688	18.8059
840.000000 MHz	40.7477	18.8195
845.000000 MHz	40.7541	18.7424
850.000000 MHz	40.6549	18.7676
855.000000 MHz	40.5898	18.7627
860.000000 MHz	40.5662	18.7566
865.000000 MHz	40.5715	18.7424
870.000000 MHz	40.4861	18.7641
875.000000 MHz	40.4911	18.7096
880.000000 MHz	40.3705	18.7066
885.000000 MHz	40.2864	18.7035
890.000000 MHz	40.2257	18.7088
895.000000 MHz	40.1337	18.6541
900.000000 MHz	40.0781	18.6192

■ Dielectric Parameter (1900MHz Head)

Title : EZ600D

SubTitle : GSM1900(HEAD)

August 31, 2006 09:05 AM

Frequency	e'	e''
1.800000000 GHz	40.3799	13.3285
1.810000000 GHz	40.3214	13.3788
1.820000000 GHz	40.2736	13.4437
1.830000000 GHz	40.2334	13.5862
1.840000000 GHz	40.2463	13.6889
1.850000000 GHz	40.2326	13.7898
1.860000000 GHz	40.2073	13.8459
1.870000000 GHz	40.1979	13.8341
1.880000000 GHz	40.1251	13.8118
1.890000000 GHz	40.0861	13.7562
1.900000000 GHz	40.0126	13.7116
1.910000000 GHz	39.9338	13.6622
1.920000000 GHz	39.8203	13.6453
1.930000000 GHz	39.7795	13.6649
1.940000000 GHz	39.7432	13.7799
1.950000000 GHz	39.6937	13.8768
1.960000000 GHz	39.6886	13.9709
1.970000000 GHz	39.6770	14.1017
1.980000000 GHz	39.6829	14.1673
1.990000000 GHz	39.6743	14.1741
2.000000000 GHz	39.6636	14.1677

■ Dielectric Parameter (835MHz Body)

Frequency	e'	e''
800.000000 MHz	54.1216	21.4636
805.000000 MHz	54.0165	21.4406
810.000000 MHz	54.0009	21.4429
815.000000 MHz	53.9727	21.4383
820.000000 MHz	53.9019	21.3594
825.000000 MHz	53.8004	21.3314
830.000000 MHz	53.8085	21.3420
835.000000 MHz	53.7697	21.2976
840.000000 MHz	53.7282	21.2435
845.000000 MHz	53.6789	21.2257
850.000000 MHz	53.6451	21.1587
855.000000 MHz	53.6346	21.0945
860.000000 MHz	53.5795	21.1121
865.000000 MHz	53.4926	21.0987
870.000000 MHz	53.4677	21.0194
875.000000 MHz	53.4445	21.0413
880.000000 MHz	53.4142	21.0285
885.000000 MHz	53.3615	20.9822
890.000000 MHz	53.2786	21.0058
895.000000 MHz	53.2658	20.9762
900.000000 MHz	53.2046	20.9551

■ Dielectric Parameter (1900MHz Body)

Title : EZ600D
SubTitle : GSM1900(BODY)
August 31, 2006 01:20 PM

Frequency	e'	e''
1.800000000 GHz	52.9966	13.8453
1.810000000 GHz	52.9662	13.9013
1.820000000 GHz	52.9636	13.9367
1.830000000 GHz	52.9009	13.9632
1.840000000 GHz	52.8941	13.9770
1.850000000 GHz	52.8538	13.9917
1.860000000 GHz	52.7820	14.0096
1.870000000 GHz	52.7513	14.0671
1.880000000 GHz	52.6784	14.1594
1.890000000 GHz	52.5928	14.1952
1.900000000 GHz	52.6044	14.2875
1.910000000 GHz	52.5699	14.3861
1.920000000 GHz	52.5986	14.4446
1.930000000 GHz	52.6072	14.5217
1.940000000 GHz	52.6220	14.5565
1.950000000 GHz	52.6214	14.5804
1.960000000 GHz	52.5866	14.5969
1.970000000 GHz	52.5414	14.6272
1.980000000 GHz	52.5020	14.6162
1.990000000 GHz	52.4016	14.6644
2.000000000 GHz	52.3396	14.7053