

ATTACHMENT Q – DIPOLE VALIDATION

■ Validation Data (835MHz Head)

Test Laboratory: HCT

835 Dipole Validation test: Input power(1W)

Liquid Temperature : 21.6℃

Date Tested : January 31, 2007

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: $f = 835 \text{ MHz}$; $\sigma = 0.877 \text{ mho/m}$; $\epsilon_r = 41.1$; $\rho = 1000 \text{ kg/m}^3$

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: DAE4 Sn447; Calibrated: 2006-11-17
- 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) = 10.5 mW/g

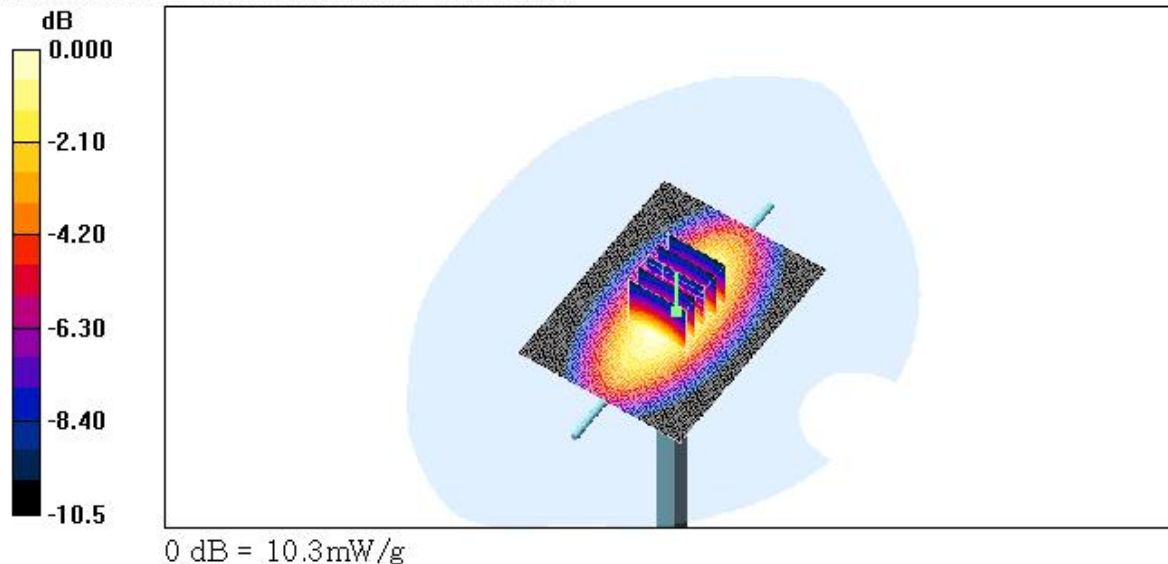
Validation 835 MHz/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $\Delta x = 8\text{mm}$, $\Delta y = 8\text{mm}$, $\Delta z = 5\text{mm}$

Reference Value = 112.2 V/m; Power Drift = -0.005 dB

Peak SAR (extrapolated) = 14.1 W/kg

SAR(1 g) = 9.56 mW/g; SAR(10 g) = 6.26 mW/g

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



■ Validation Data (1900MHz Head)

Test Laboratory: HCT

1900 Dipole Validation test: Input power(1W)

Liquid Temperature : 21.6 °C

Date Tested : January 31, 2007

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: $f = 1900 \text{ MHz}$; $\sigma = 1.45 \text{ mho/m}$; $\epsilon_r = 39.3$; $\rho = 1000 \text{ kg/m}^3$

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: DAE4 Sn447; Calibrated: 2006-11-17

- 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

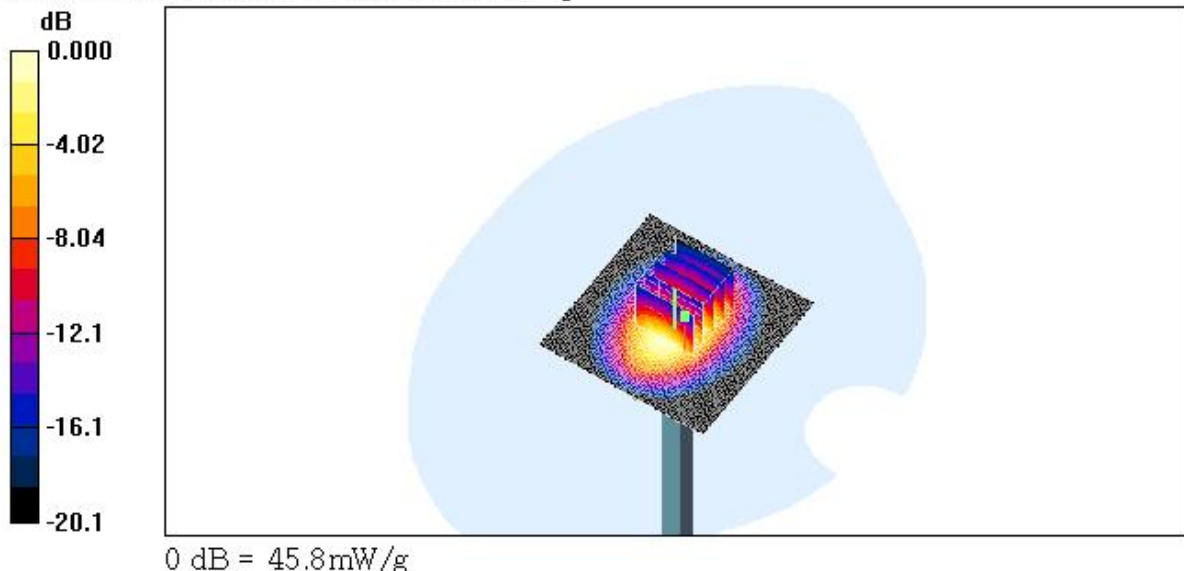
Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $\Delta x = 8\text{mm}$, $\Delta y = 8\text{mm}$, $\Delta z = 5\text{mm}$

Reference Value = 190.8 V/m; Power Drift = -0.043 dB

Peak SAR (extrapolated) = 72.5 W/kg

SAR(1 g) = 41 mW/g; SAR(10 g) = 21.2 mW/g

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



■ Dielectric Parameter (835MHz Head)**Title : SLT100Q****SubTitle : GSM835(Head)**

January 31, 2007 07:58 AM

Frequency	e'	e''
800.000000 MHz	41.5743	18.8655
805.000000 MHz	41.4440	18.8642
810.000000 MHz	41.4183	18.8458
815.000000 MHz	41.3082	18.8292
820.000000 MHz	41.2581	18.8127
825.000000 MHz	41.2393	18.8301
830.000000 MHz	41.1606	18.8376
835.000000 MHz	41.1133	18.8784
840.000000 MHz	41.1074	18.8761
845.000000 MHz	41.0922	18.8763
850.000000 MHz	41.0339	18.8679
855.000000 MHz	40.9778	18.9002
860.000000 MHz	40.9728	18.8564
865.000000 MHz	40.9197	18.8572
870.000000 MHz	40.8943	18.8806
875.000000 MHz	40.8976	18.8956
880.000000 MHz	40.7876	18.8475
885.000000 MHz	40.7106	18.8057
890.000000 MHz	40.6356	18.8187
895.000000 MHz	40.5888	18.7889
900.000000 MHz	40.5439	18.7294

■ Dielectric Parameter (1900MHz Head)**Title : SLT100Q****SubTitle : GSM1900(Head)**

January 31, 2007 02:32 PM

Frequency	e'	e''
1.800000000 GHz	39.7828	13.4917
1.810000000 GHz	39.7264	13.5122
1.820000000 GHz	39.6945	13.5209
1.830000000 GHz	39.6536	13.5082
1.840000000 GHz	39.6026	13.5411
1.850000000 GHz	39.5385	13.5703
1.860000000 GHz	39.4729	13.5706
1.870000000 GHz	39.4189	13.5972
1.880000000 GHz	39.3918	13.5980
1.890000000 GHz	39.3574	13.6424
1.900000000 GHz	39.3286	13.6981
1.910000000 GHz	39.3095	13.7297
1.920000000 GHz	39.2469	13.7239
1.930000000 GHz	39.2372	13.7525
1.940000000 GHz	39.1871	13.7629
1.950000000 GHz	39.1270	13.7741
1.960000000 GHz	39.0613	13.8158
1.970000000 GHz	38.9999	13.8169
1.980000000 GHz	38.9480	13.8531
1.990000000 GHz	38.9213	13.8904
2.000000000 GHz	38.8855	13.9164

■ Dielectric Parameter (835MHz Body)**Title : SLT100Q****SubTitle : GSM835(Body)**

January 31, 2007 11:20 AM

Frequency	e'	e''
800.000000 MHz	53.7184	21.3199
805.000000 MHz	53.6868	21.3410
810.000000 MHz	53.6256	21.3385
815.000000 MHz	53.5885	21.3052
820.000000 MHz	53.5164	21.3125
825.000000 MHz	53.4404	21.3047
830.000000 MHz	53.4747	21.3073
835.000000 MHz	53.3924	21.2911
840.000000 MHz	53.3273	21.2579
845.000000 MHz	53.3080	21.1976
850.000000 MHz	53.3506	21.2455
855.000000 MHz	53.3086	21.1504
860.000000 MHz	53.2527	21.1907
865.000000 MHz	53.2181	21.1691
870.000000 MHz	53.1761	21.0970
875.000000 MHz	53.1781	21.0835
880.000000 MHz	53.1550	21.0582
885.000000 MHz	53.0869	21.0238
890.000000 MHz	53.0050	21.0056
895.000000 MHz	53.0152	20.9786
900.000000 MHz	52.9386	20.9956

■ Dielectric Parameter (1900MHz Body)**Title : SLT100Q****SubTitle : GSM1900(Body)**

January 31, 2007 07:05 PM

Frequency	e'	e''
1.800000000 GHz	52.9100	13.7531
1.810000000 GHz	52.8724	13.8557
1.820000000 GHz	52.8594	13.9043
1.830000000 GHz	52.8138	13.9671
1.840000000 GHz	52.7748	14.0099
1.850000000 GHz	52.7257	14.0185
1.860000000 GHz	52.6620	14.0371
1.870000000 GHz	52.6220	14.0639
1.880000000 GHz	52.6057	14.0948
1.890000000 GHz	52.6104	14.1467
1.900000000 GHz	52.6215	14.2034
1.910000000 GHz	52.6013	14.2706
1.920000000 GHz	52.5153	14.3698
1.930000000 GHz	52.4487	14.4481
1.940000000 GHz	52.4028	14.5151
1.950000000 GHz	52.4055	14.5622
1.960000000 GHz	52.3667	14.6089
1.970000000 GHz	52.3661	14.6558
1.980000000 GHz	52.1797	14.6379
1.990000000 GHz	52.0383	14.6688
2.000000000 GHz	51.9665	14.6992