

## ATTACHMENT Q – DIPOLE VALIDATION

## Validation Data (1900MHz Head)

Test Laboratory: HCT

1900 Dipole Validation test: Input power(1W)  
Liquid Temperature : 21.6°C  
Date Tested : January 8, 2007

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

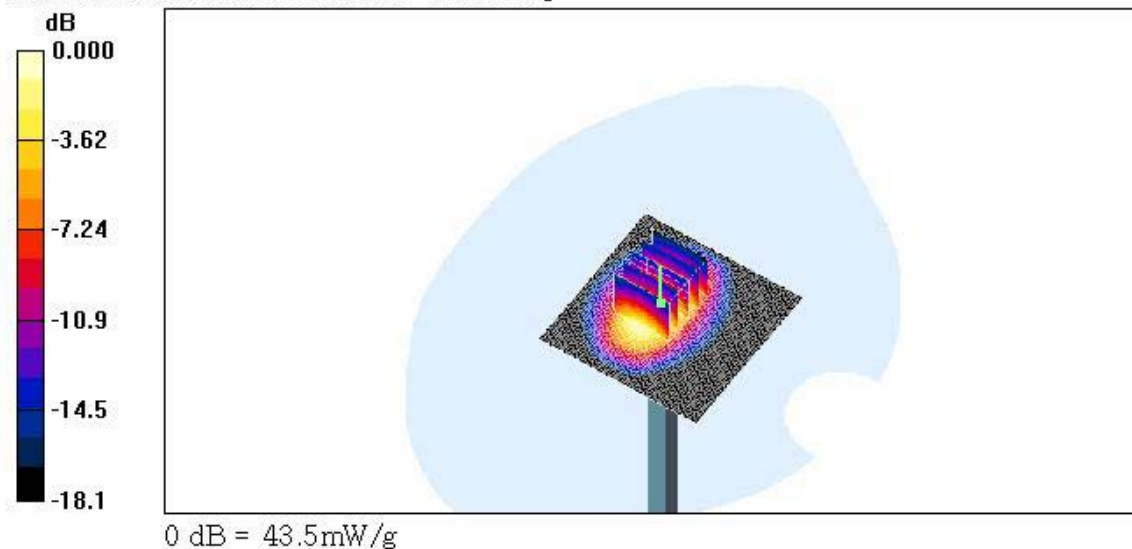
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1  
Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.41$  mho/m;  $\epsilon_r = 39.1$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section ; Measurement SW: DASY4, V4.6 Build 23

DASY4 Configuration:

- Probe: ET3DV6 - SN1609; ConvF(5.16, 5.16, 5.16); Calibrated: 2006-03-23
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2006-11-15
- Phantom: SAM 1800/1900 MHz; Type: SAM

**Validation 1900MHz/Area Scan (61x61x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (interpolated) = 47.8 mW/g

**Validation 1900MHz/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 176.5 V/m; Power Drift = -0.010 dB  
Peak SAR (extrapolated) = 69.0 W/kg  
**SAR(1 g) = 39.1 mW/g; SAR(10 g) = 20.6 mW/g**  
Maximum value of SAR (measured) = 43.5 mW/g



Dielectric Parameter (1900MHz Head)

Title : PX130

SubTitle : PCS1900(HEAD)

January 09, 2007 09:56 AM

Frequency	e'	e''
1.800000000 GHz	39.5229	13.1018
1.810000000 GHz	39.5018	13.1122
1.820000000 GHz	39.4368	13.1281
1.830000000 GHz	39.3838	13.1220
1.840000000 GHz	39.3427	13.1629
1.850000000 GHz	39.2604	13.1784
1.860000000 GHz	39.1866	13.1861
1.870000000 GHz	39.1564	13.2237
1.880000000 GHz	39.1577	13.2386
1.890000000 GHz	39.1175	13.2705
1.900000000 GHz	39.0968	13.3315
1.910000000 GHz	39.0698	13.3433
1.920000000 GHz	39.0334	13.3523
1.930000000 GHz	38.9988	13.3809
1.940000000 GHz	38.9782	13.3975
1.950000000 GHz	38.8904	13.3992
1.960000000 GHz	38.8255	13.4478
1.970000000 GHz	38.8029	13.4430
1.980000000 GHz	38.7400	13.4995
1.990000000 GHz	38.7068	13.4933
2.000000000 GHz	38.6828	13.5477

Dielectric Parameter (1900MHz Body)

Title : PX130

SubTitle : PCS1900(BODY)

January 09, 2007 12:20 PM

Frequency	e'	e''
1.850000000 GHz	53.7515	14.9379
1.855000000 GHz	53.7310	14.9372
1.860000000 GHz	53.6978	14.9630
1.865000000 GHz	53.6300	14.9907
1.870000000 GHz	53.5599	14.9950
1.875000000 GHz	53.5116	14.9982
1.880000000 GHz	53.4748	14.9691
1.885000000 GHz	53.4047	14.9597
1.890000000 GHz	53.3832	14.9466
1.895000000 GHz	53.3445	14.9385
1.900000000 GHz	53.2845	14.9428
1.905000000 GHz	53.2531	14.9614
1.910000000 GHz	53.2186	14.9170
1.915000000 GHz	53.1935	14.9375
1.920000000 GHz	53.1885	14.9320
1.925000000 GHz	53.2237	14.9807
1.930000000 GHz	53.1960	14.9892
1.935000000 GHz	53.2322	15.0220
1.940000000 GHz	53.2118	15.0605
1.945000000 GHz	53.1976	15.0932
1.950000000 GHz	53.2117	15.1358