

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 : August 17, 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; $\sigma = 1.45$ mho/m; $\epsilon_r = 40$; $\rho = 1000$ kg/m³

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

DASY4 Configuration:

- Probe: ET3DV6 - SN1607; ConvF(5.14, 5.14, 5.14); Calibrated: 2005-08-30
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2006-03-17
- Phantom: SAM 1800/1900 MHz; Type: SAM

Dipole 1900MHz Validation/Area Scan (61x61x1): Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (interpolated) = 44.0 mW/g

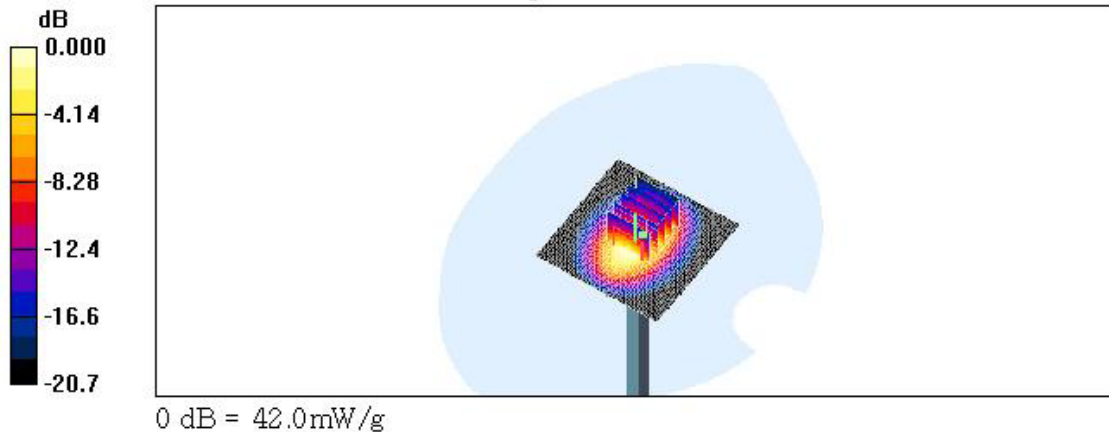
Dipole 1900MHz Validation/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 170.5 V/m; Power Drift = 0.059 dB

Peak SAR (extrapolated) = 87.8 W/kg

SAR(1 g) = 39.1 mW/g; SAR(10 g) = 19.2 mW/g

Maximum value of SAR (measured) = 42.0 mW/g



■ Dielectric Parameter (1900MHz Head)**Title : PCS1400VM****SubTitle : PCS1900(Head)**

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Frequency	e'	e''
1.800000000 GHz	40.4322	13.3636
1.810000000 GHz	40.3755	13.4217
1.820000000 GHz	40.3271	13.4806
1.830000000 GHz	40.2753	13.5753
1.840000000 GHz	40.2952	13.6795
1.850000000 GHz	40.2811	13.7895
1.860000000 GHz	40.2475	13.8325
1.870000000 GHz	40.2074	13.8584
1.880000000 GHz	40.1599	13.8378
1.890000000 GHz	40.1209	13.7730
1.900000000 GHz	40.0464	13.7407
1.910000000 GHz	39.9847	13.7129
1.920000000 GHz	39.8710	13.6957
1.930000000 GHz	39.8184	13.7198
1.940000000 GHz	39.7921	13.7865
1.950000000 GHz	39.7399	13.8523
1.960000000 GHz	39.7394	13.9580
1.970000000 GHz	39.6976	14.0703
1.980000000 GHz	39.6917	14.1495
1.990000000 GHz	39.6830	14.1299
2.000000000 GHz	39.6323	14.1475

■ Dielectric Parameter (1900MHz Body)**Title : PCS1400VM****SubTitle : PCS1900(Body)**

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Frequency	e'	e''
1.800000000 GHz	53.1633	14.1819
1.810000000 GHz	53.0995	14.2185
1.820000000 GHz	53.0998	14.2759
1.830000000 GHz	53.0626	14.3628
1.840000000 GHz	53.0654	14.4217
1.850000000 GHz	53.0459	14.5186
1.860000000 GHz	52.9553	14.5372
1.870000000 GHz	52.9232	14.5293
1.880000000 GHz	52.8859	14.5302
1.890000000 GHz	52.8446	14.5608
1.900000000 GHz	52.7745	14.5380
1.910000000 GHz	52.7258	14.5327
1.920000000 GHz	52.6358	14.5479
1.930000000 GHz	52.6217	14.5843
1.940000000 GHz	52.6097	14.6441
1.950000000 GHz	52.5592	14.7186
1.960000000 GHz	52.5648	14.7732
1.970000000 GHz	52.5505	14.8504
1.980000000 GHz	52.5181	14.8798
1.990000000 GHz	52.5020	14.8975
2.000000000 GHz	52.4608	14.9325