

## APPENDIX D - TEST SYSTEM VERIFICATIONS SCANS

### Liquid Measurement Result

Testing was performed by Jimmy Nguyen 2008-08-27.

Simulant	Freq. [MHz]	Parameters	Liquid Temp. [°C]	Target Value	Measured Value	Deviation [%]	Limits [%]
Head	835	$\epsilon_r$	22	41.5	41.6	0.24	$\pm 5$
		$\sigma$	22	0.90	0.91	1.11	$\pm 5$
		1g SAR	22	9.5	10.10	6.32	$\pm 10$

$\epsilon_r$  = relative permittivity,  $\sigma$  = conductivity and  $\rho=1000\text{kg/m}^3$

Simulant	Freq. [MHz]	Parameters	Liquid Temp. [°C]	Target Value	Measured Value	Deviation [%]	Limits [%]
Head	1900	$\epsilon_r$	22	40.0	40.2	0.50	$\pm 5$
		$\sigma$	22	1.4	1.35	-3.57	$\pm 5$
		1g SAR	22	39.7	40.6	2.27	$\pm 10$

$\epsilon_r$  = relative permittivity,  $\sigma$  = conductivity and  $\rho=1000\text{kg/m}^3$

## Test Laboratory: Bay Area Compliance Lab Corp. (BACL)

### System Performance Check 835 MHz Head

#### Dipole 900 MHz; Type: D900V2; SN: 122

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.91 \text{ mho/m}$ ;  $\epsilon_r = 41.6$ ;  $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1604; ConvF(6.82, 6.82, 6.82); Calibrated: 8/28/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn456; Calibrated: 11/8/2007
- Phantom: SAM with CRP; Type: Twin SAM; Serial: TP-1032
- Measurement SW: DASY4, V4.7 Build 71; Post processing SW: SEMCAD, V1.8 Build 184

**d=15mm, Pin=0.5W/Area Scan (61x121x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 5.27 mW/g

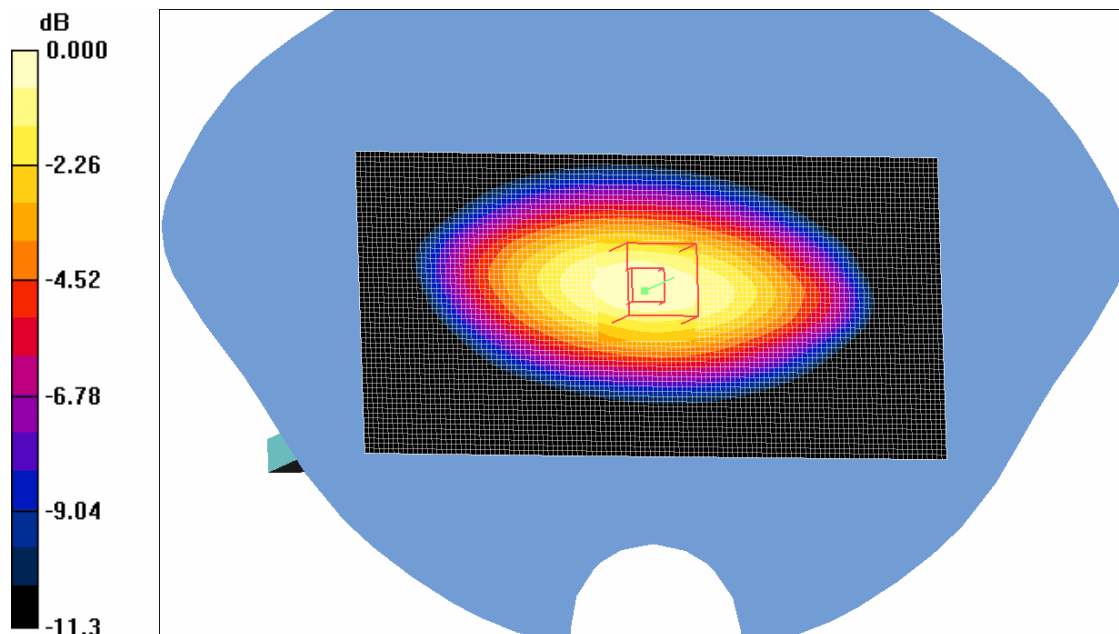
**d=15mm, Pin=0.5W/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 81.4 V/m; Power Drift = -0.046 dB

Peak SAR (extrapolated) = 8.01 W/kg

**SAR (1 g) = 5.05 mW/g; SAR (10 g) = 3.19 mW/g**

Maximum value of SAR (measured) = 5.51 mW/g



0 dB = 5.51 mW/g

### 835 MHz System Validation

**Test Laboratory: Bay Area Compliance Lab Corp. (BACL)****System Performance Check 1900 MHz Head****Dipole 1800 MHz; Type: D-1800-S-1; Serial: BCL-049**

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.35$  mho/m;  $\epsilon_r = 40.2$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

**DASY4 Configuration:**

- Probe: ET3DV6 - SN1604; ConvF(5.21, 5.21, 5.21); Calibrated: 8/28/2007
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn456; Calibrated: 11/8/2007
- Phantom: SAM with CRP; Type: Twin SAM; Serial: TP-1032
- Measurement SW: DASY4, V4.7 Build 71; Post processing SW: SEMCAD, V1.8 Build 184

**d =10 mm, Pin = 0.5W/Area Scan (51x91x1):** Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 25.8 mW/g

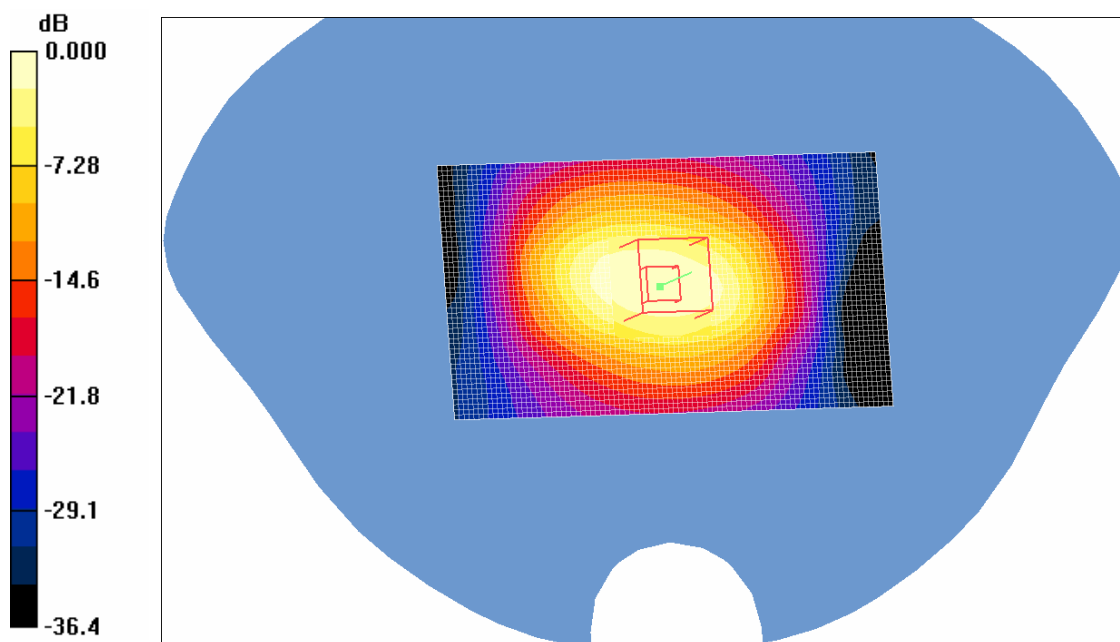
**d =10 mm, Pin = 0.5W/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 138.1 V/m; Power Drift = 0.019 dB

Peak SAR (extrapolated) = 35.8 W/kg

**SAR (1 g) = 20.3 mW/g; SAR (10 g) = 10.5 mW/g**

Maximum value of SAR (measured) = 22.6 mW/g



0 dB = 22.6 mW/g

**1900 MHz System Validation**