12. System Performance Check

12.1 General System Check Procedure

System performance check scans were performed prior to testing of each different medium used. Prior to installing a body medium, a system check scan is performed using a corresponding body medium. A validation dipole antenna was selected that roughly matched the center frequency of the band being tested. A CW sine wave with a matching frequency is then applied to the antenna from a signal generator through an amplifier for a power level of 250 mW (20 dBm). Measured data is scaled to 30 dBm to correspond with values provided by manufacturer's calibration data. System performance check SAR has a tolerance of ±10%.

If testing of a particular frequency band took more than one day, a new validation scan was done prior to commencing with testing for the subsequent day.

12.2 System Performance Check Data

Table 12-1 shows system check data for the respective days of the test program.

Table 12-1 SAR System Check Data Gobi2000 Test Program (Body TSL)

		1 g SAR (mW/g)			
Date	**Frequency (MHz)**	**Measured**	**Scaled to 30 dBm**	**Target**	**Difference (%)**
11/04/09	900	1.02	10.2	9.8	+4.1%
11/05/09	1900	3.81	38.1	39.5	-3.5%

The following pages show system check plots for the respective days of the test program.

12.3 835 MHz System Check

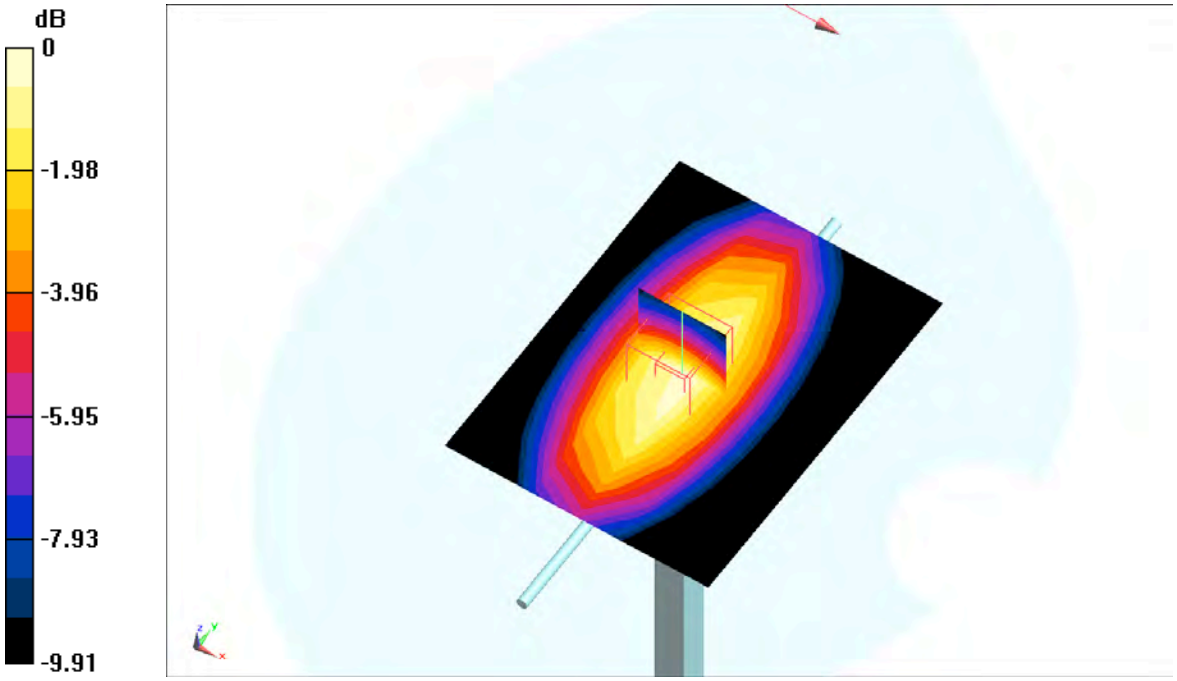
Date/Time: 11/4/2009 11:33:56 AMDate/Time: 11/4/2009 11:40:22 AM
Test Laboratory: QUALCOMM Incorporated
File Name: 20091104_Val835_20dBm.da5
DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:xxx
Program Name: System Performance Check at 835 MHz
Communication System: CW; Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.945 mho/m; ε_r = 54.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1733; ConvF(6.41, 6.41, 6.41); Calibrated: 9/17/2008
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn566; Calibrated: 4/20/2009
- Phantom: SAM with CRP; Type: SAM; Serial: 209
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

d=15mm, Pin=20 dBm, dist=4.0mm (ET-Probe)/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.983 mW/g

d=15mm, Pin=20 dBm, dist=4.0mm (ET-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 34.3 V/m; Power Drift = -0.157 dB
Peak SAR (extrapolated) = 1.32 W/kg
SAR(1 g) = 1.02 mW/g; SAR(10 g) = 0.655 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.01 mW/g



0 dB = 1.01mW/g

12.4 1900 MHz System Check

Date/Time: 11/5/2009 10:13:51 AMDate/Time: 11/5/2009 10:20:13 AM

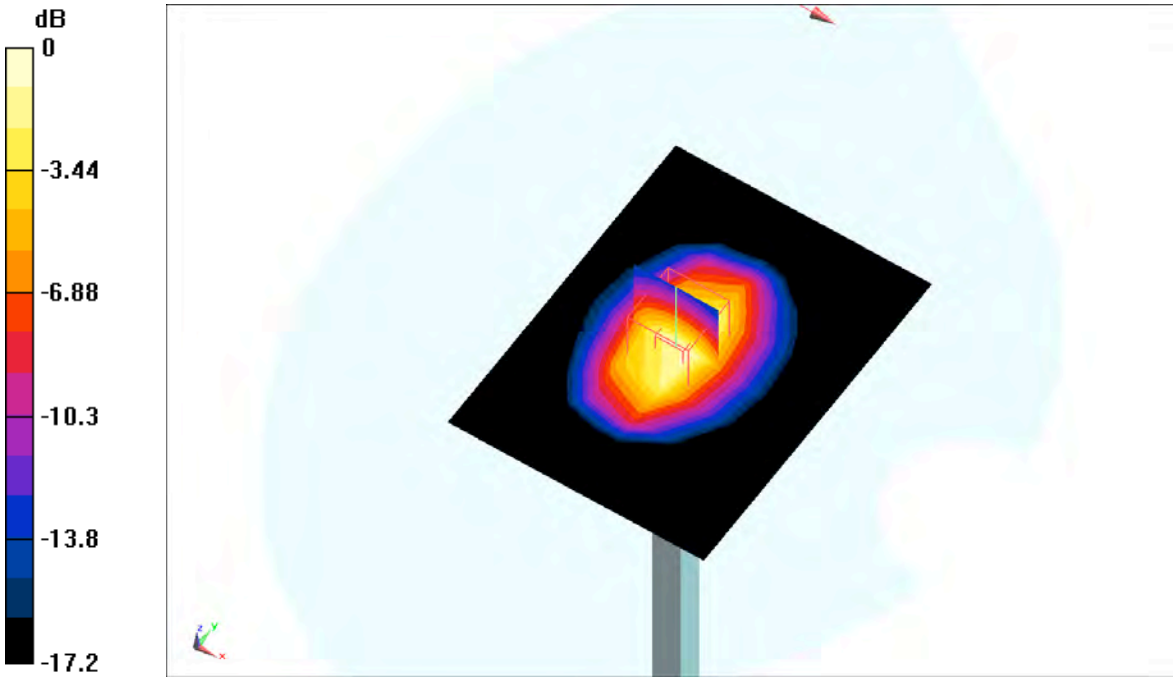
Test Laboratory: QUALCOMM Incorporated
File Name: 20091105_Val1900_20dBm.da5
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:xxx
Program Name: System Performance Check at 1900MHz
Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1900 MHz; σ = 1.51 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1733; ConvF(4.54, 4.54, 4.54); Calibrated: 9/15/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn566; Calibrated: 4/20/2009
- Phantom: SAM with CRP; Type: SAM; Serial: 209
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

d=15mm, Pin=20dBm, dist=4.0mm (ET-Probe)/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 3.89 mW/g

d=15mm, Pin=20dBm, dist=4.0mm (ET-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 59.1 V/m; Power Drift = 0.0017 dB
Peak SAR (extrapolated) = 5.93 W/kg
SAR(1 g) = 3.81 mW/g; SAR(10 g) = 2.07 mW/g

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.36 mW/g



0 dB = 4.36mW/g

13. SAR Plot Reports

The following pages show DASY5-generated data and plots.

13.1 GPRS-2UL (Cell band)

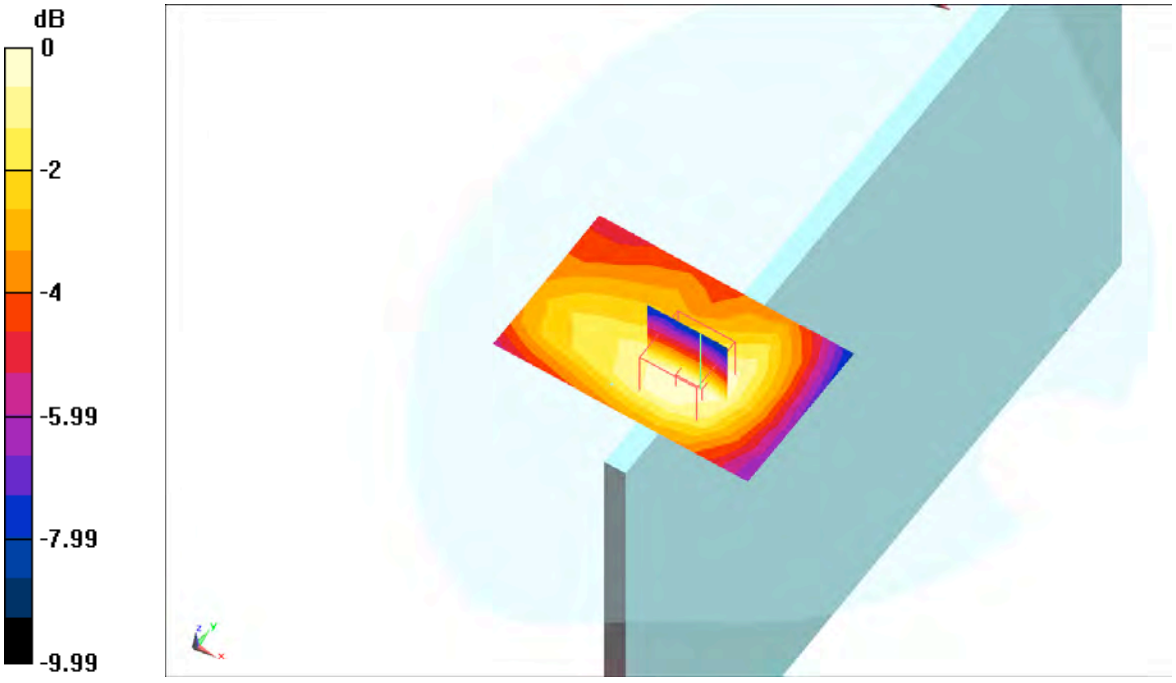
Date/Time: 11/4/2009 2:13:36 PMDate/Time: 11/4/2009 2:19:10 PM
Test Laboratory: QUALCOMM Incorporated
File Name: 20091104_GOBI2000-MK1_GPRS2UL-850.da5
DUT: Lenovo MK1/Gobi2000; Type: Laptop; Serial: 1S3506XXXLRL3172
Program Name: Compliance Testing: P1528 Protocol (Flat section)
Communication System: US GSM-GPRS850-2UL; Frequency: 824.2 MHz;Duty Cycle: 1:4.1
Medium parameters used (extrapolated): f = 824.2 MHz; σ = 0.934 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1733; ConvF(6.18, 6.18, 6.18); Calibrated: 9/15/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn566; Calibrated: 4/20/2009
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Laptop - Low/Area Scan (9x6x1): Measurement grid: dx=12mm, dy=12mm

Info: Extrapolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.031 mW/g

Laptop - Low/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.86 V/m; Power Drift = -0.174 dB
Peak SAR (extrapolated) = 0.039 W/kg
SAR(1 g) = 0.028 mW/g; SAR(10 g) = 0.019 mW/g

Info: Extrapolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.030 mW/g



0 dB = 0.030mW/g

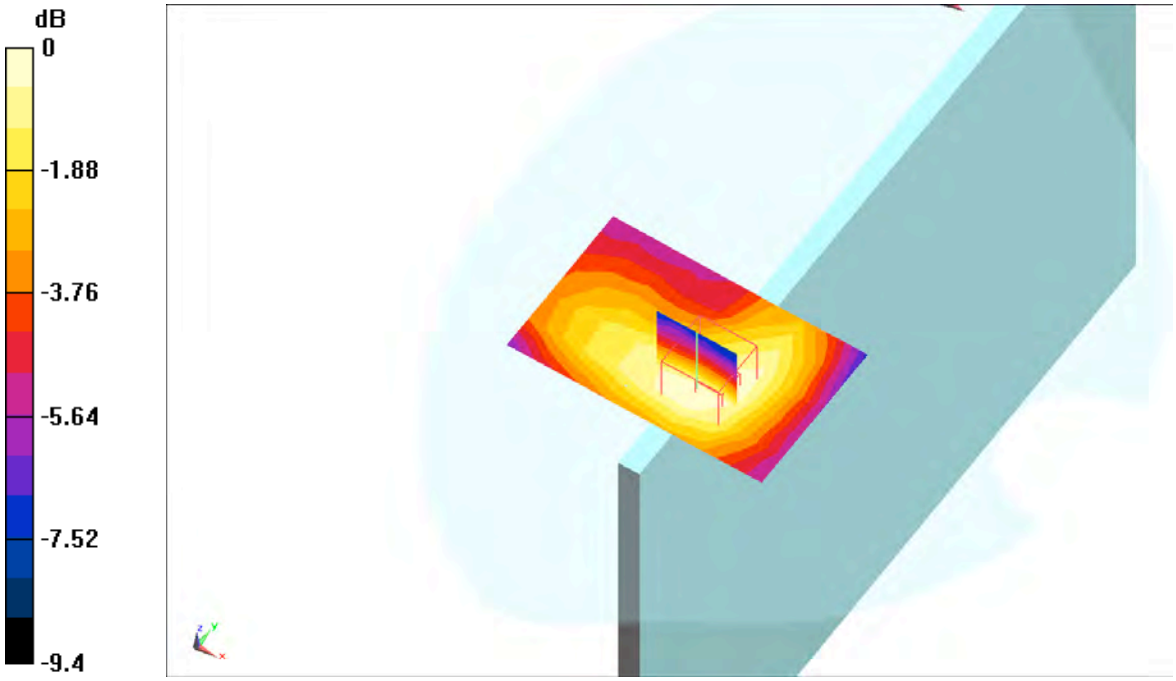
Date/Time: 11/4/2009 2:40:28 PMDate/Time: 11/4/2009 2:46:02 PM
Test Laboratory: QUALCOMM Incorporated
File Name: 20091104_GOBI2000-MK1_GPRS2UL-850.da5
DUT: Lenovo MK1/Gobi2000; Type: Laptop; Serial: 1S3506XXXLRL3172
Program Name: Compliance Testing: P1528 Protocol (Flat section)
Communication System: US GSM-GPRS850-2UL; Frequency: 836.6 MHz;Duty Cycle: 1:4.1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.948 mho/m; ε_r = 55.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1733; ConvF(6.18, 6.18, 6.18); Calibrated: 9/15/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn566; Calibrated: 4/20/2009
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Laptop - Middle/Area Scan (9x6x1): Measurement grid: dx=12mm, dy=12mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.024 mW/g

Laptop - Middle/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.52 V/m; Power Drift = 0.561 dB
Peak SAR (extrapolated) = 0.030 W/kg
SAR(1 g) = 0.022 mW/g; SAR(10 g) = 0.016 mW/g

Info: Interpolated medium parameters used for SAR evaluation.



0 dB = 0.024mW/g

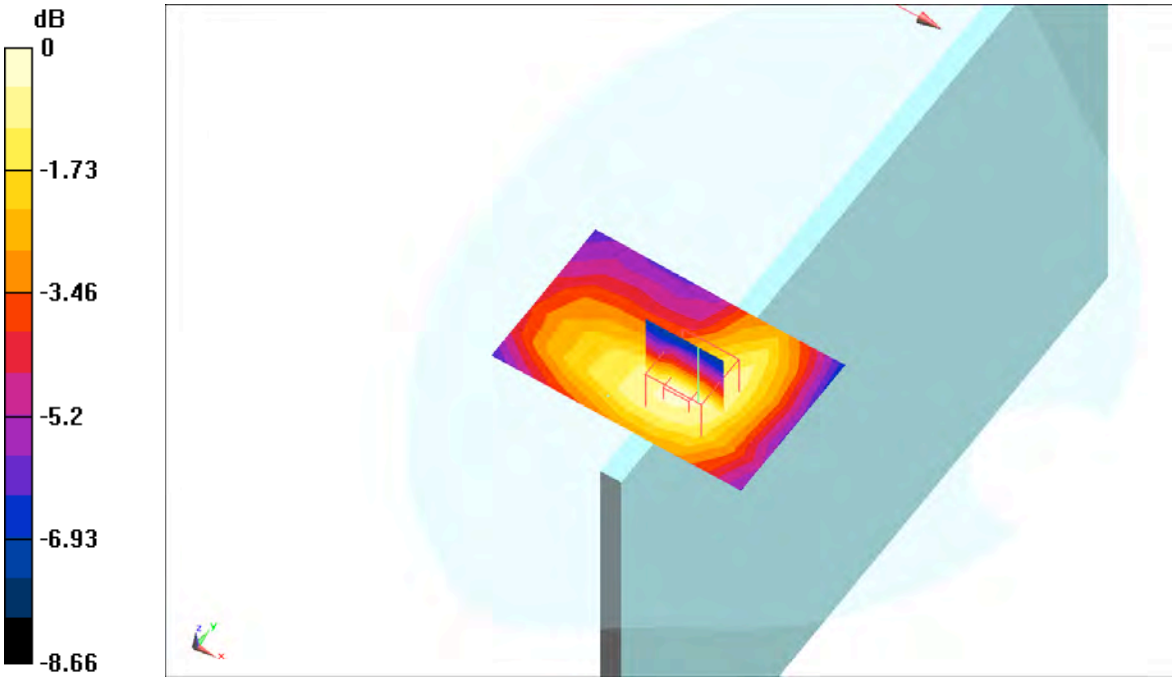
Date/Time: 11/4/2009 3:01:42 PMDate/Time: 11/4/2009 3:07:16 PM
Test Laboratory: QUALCOMM Incorporated
File Name: 20091104_GOBI2000-MK1_GPRS2UL-850.da5
DUT: Lenovo MK1/Gobi2000; Type: Laptop; Serial: 1S3506XXXLRL3172
Program Name: Compliance Testing: P1528 Protocol (Flat section)
Communication System: US GSM-GPRS850-2UL; Frequency: 848.8 MHz;Duty Cycle: 1:4.1
Medium parameters used (extrapolated): f = 848.8 MHz; σ = 0.959 mho/m; ε_r = 55.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1733; ConvF(6.18, 6.18, 6.18); Calibrated: 9/15/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn566; Calibrated: 4/20/2009
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Laptop position- High/Area Scan (9x6x1): Measurement grid: dx=12mm, dy=12mm

Info: Extrapolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.025 mW/g

Laptop position- High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.78 V/m; Power Drift = -0.218 dB
Peak SAR (extrapolated) = 0.032 W/kg
SAR(1 g) = 0.024 mW/g; SAR(10 g) = 0.017 mW/g

Info: Extrapolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.026 mW/g



0 dB = 0.026mW/g

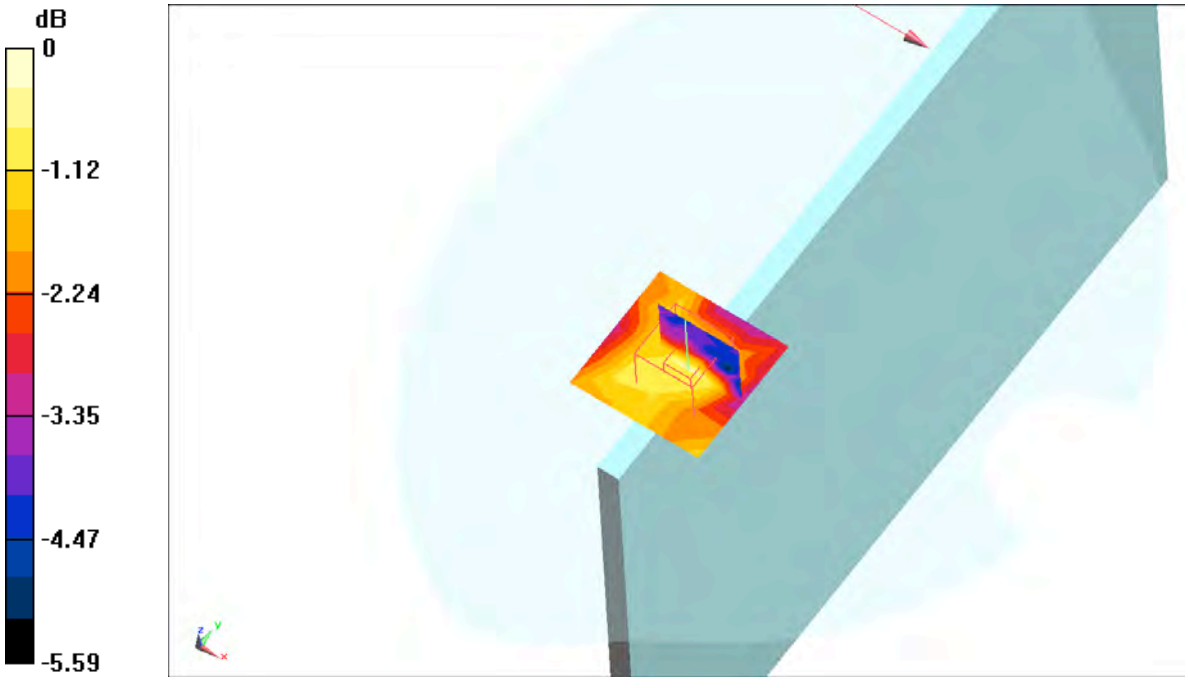
13.2 EV-DO r0 (PCS band)

Date/Time: 11/5/2009 11:55:13 AMDate/Time: 11/5/2009 11:57:48 AM
Test Laboratory: QUALCOMM Incorporated
File Name: 20091105_GOBI2000-MK1_EVDOr0-PCS.da5
DUT: Lenovo MK1/Gobi2000; Type: Laptop; Serial: 1S3506XXXLRL3172
Program Name: Compliance Testing: P1528 Protocol (Left-Hand Side)
Communication System: CDMA PCS; Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1851.25 MHz; σ = 1.45 mho/m; ε_r = 52.5; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1733; ConvF(4.54, 4.54, 4.54); Calibrated: 9/15/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn566; Calibrated: 4/20/2009
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Lapheld - Low/Area Scan (5x5x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.00512 mW/g

Lapheld - Low/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.02 V/m; Power Drift = -0.659 dB
Peak SAR (extrapolated) = 0.00697 W/kg
SAR(1 g) = 0.00545 mW/g; SAR(10 g) = 0.00412 mW/g

Warning: Maximum averaged SAR over 10 g is located on the boundary of the measurement cube. This cube might not incorporate the absolute averaged SAR. Please consider a refinement of the Area Scan measurement.
Maximum value of SAR (measured) = 0.0063 mW/g

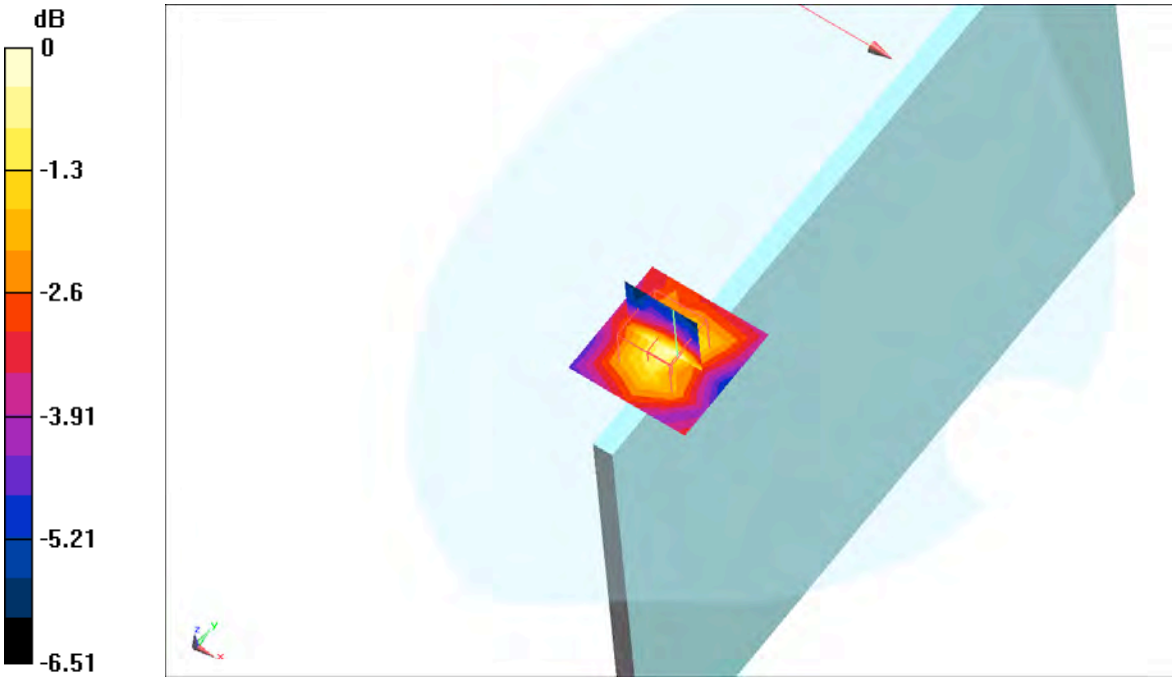


0 dB = 0.0063mW/g

Date/Time: 11/5/2009 11:36:47 AMDate/Time: 11/5/2009 11:39:22 AM
Test Laboratory: QUALCOMM Incorporated
File Name: 20091105_GOBI2000-MK1_EVDOr0-PCS.da5
DUT: Lenovo MK1/Gobi2000; Type: Laptop; Serial: 1S3506XXXLRL3172
Program Name: Compliance Testing: P1528 Protocol (Left-Hand Side)
Communication System: CDMA PCS; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.48 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1733; ConvF(4.54, 4.54, 4.54); Calibrated: 9/15/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn566; Calibrated: 4/20/2009
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Lapheld - Middle/Area Scan (5x5x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.00929 mW/g

Lapheld - Middle/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2 V/m; Power Drift = -0.045 dB
Peak SAR (extrapolated) = 0.016 W/kg
SAR(1 g) = 0.00923 mW/g; SAR(10 g) = 0.0062 mW/g
Maximum value of SAR (measured) = 0.010 mW/g

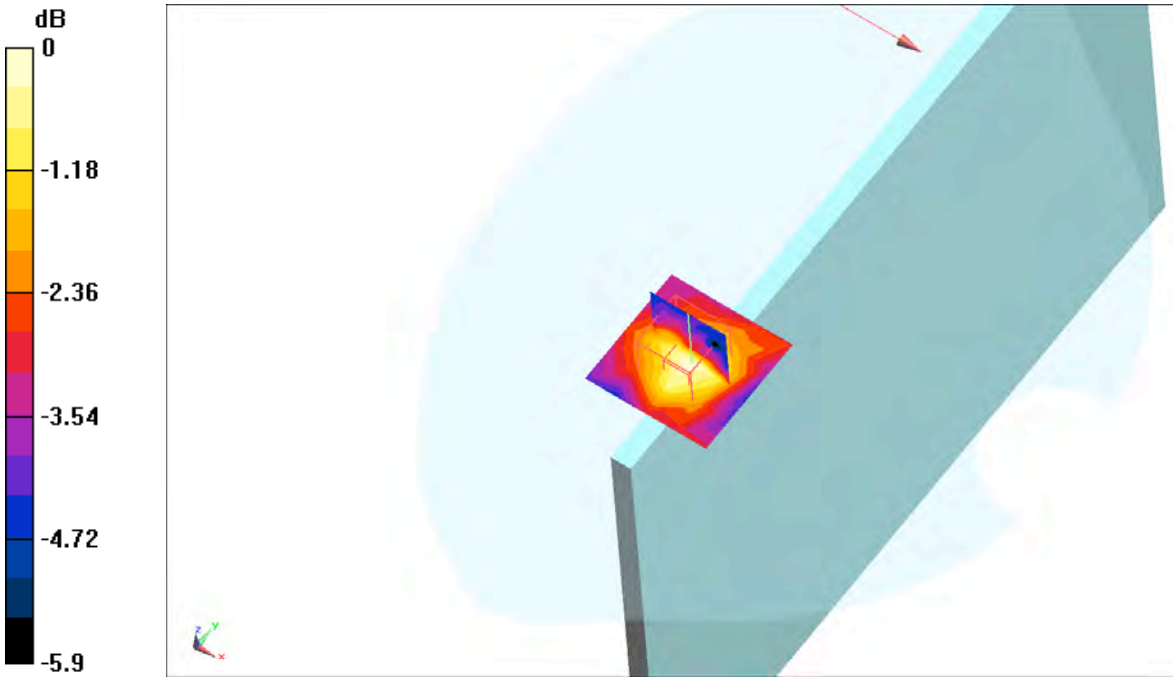


0 dB = 0.010mW/g

Date/Time: 11/5/2009 1:05:20 PMDate/Time: 11/5/2009 1:07:55 PM
Test Laboratory: QUALCOMM Incorporated
File Name: 20091105_GOBI2000-MK1_EVDOr0-PCS.da5
DUT: Lenovo MK1/Gobi2000; Type: Laptop; Serial: 1S3506XXXLRL3172
Program Name: Compliance Testing: P1528 Protocol (Left-Hand Side)
Communication System: CDMA PCS; Frequency: 1908.75 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1908.75 MHz; σ = 1.52 mho/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: ET3DV6 - SN1733; ConvF(4.54, 4.54, 4.54); Calibrated: 9/15/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn566; Calibrated: 4/20/2009
- Phantom: SAM with CRP; Type: SAM;
- Measurement SW: DASY5, V5.0 Build 120; SEMCAD X Version 13.4 Build 45

Lapheld - High/Area Scan (5x5x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.00701 mW/g

Lapheld - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.79 V/m; Power Drift = -0.144 dB
Peak SAR (extrapolated) = 0.011 W/kg
SAR(1 g) = 0.00641 mW/g; SAR(10 g) = 0.00464 mW/g
Maximum value of SAR (measured) = 0.00699 mW/g



0 dB = 0.00699mW/g