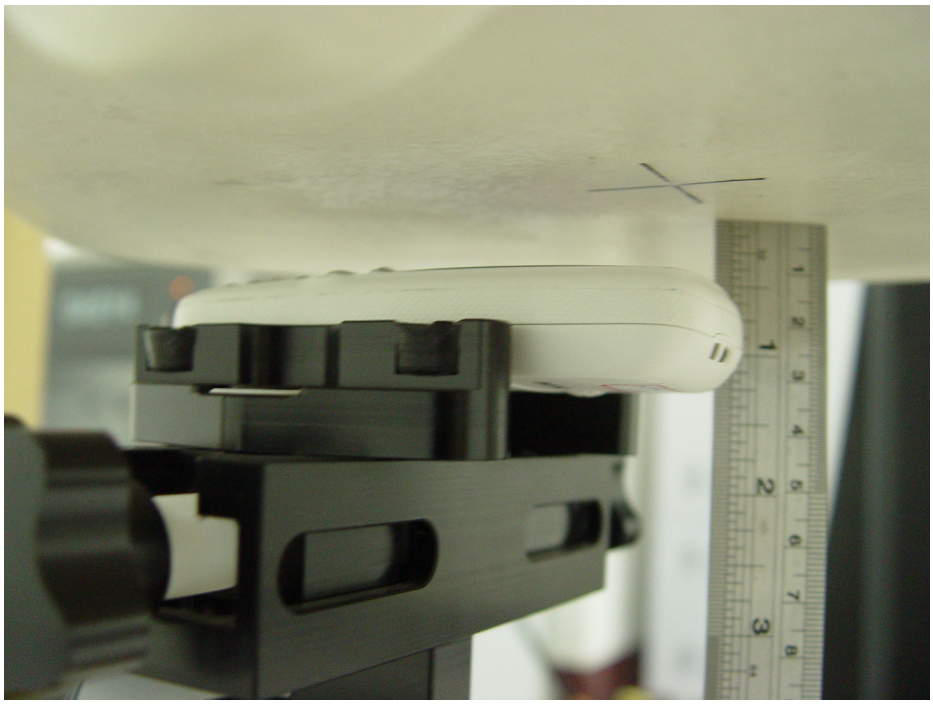


Fig. 9.7 Body Worn-keypad up

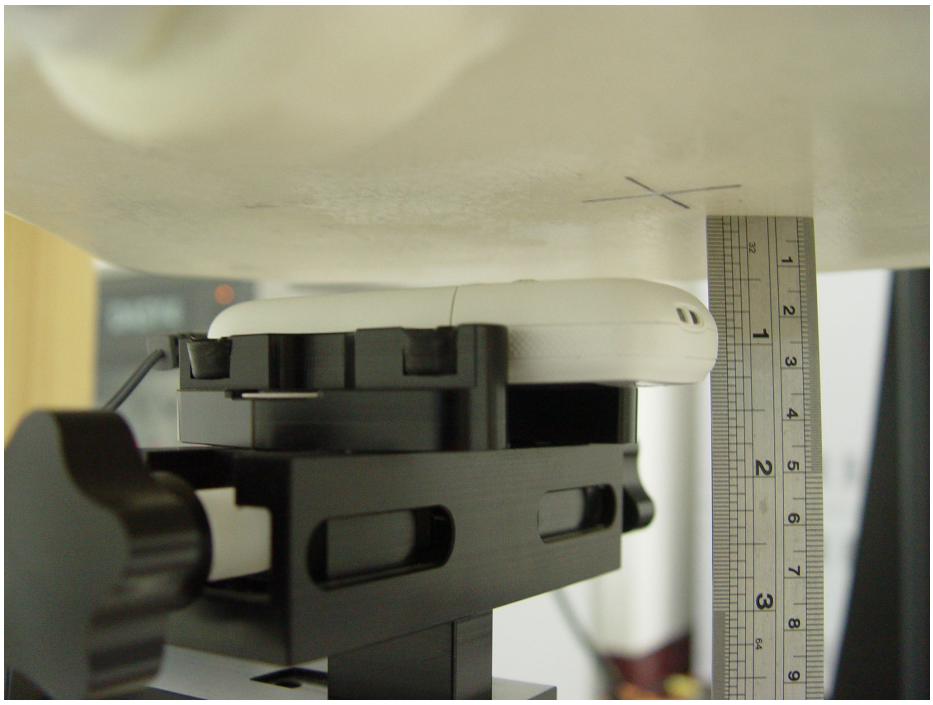


Fig. 9.8 Body Worn-keypad down

10. Measurement Procedures

The measurement procedures are as follows:

- Linking DUT with base station emulator CMU200 in middle channel for PCS band
- Setting PCL=0 for PCS on CMU200 to allow DUT to radiate maximum output power
- Measuring output power through RF cable and power meter
- Placing the DUT in the positions described in the last section
- Setting scan area, grid size and other setting on the DASY4 software
- Taking data for the lowest, middle, and highest channel on each testing position

According to the IEEE P1528 draft standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- Power reference measurement
- Area scan
- Zoom scan
- Power reference measurement

10.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the IEEE1528-200X standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY4 software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

Base on the Draft: SCC-34, SC-2, WG-2-Computational Dosimetry, IEEE P1528/D0.0 (Draft recommended Practice for Determining the Spatial-Peal Specific Absorption Rate (SAR) Associated with the Use of Wireless Handset-Computational techniques), a new algorithm has been implemented. The spatial-peak SAR can be computed over any required mass.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose , the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the postprocessing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- extraction of the measured data (grid and values) from the Zoom Scan
- calculation of the SAR value at every measurement point based on all stored data (A/D values

and measurement parameters)
- generation of a high-resolution mesh within the measured volume

- interpolation of all measured values form the measurement grid to the high-resolution grid
- extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- calculation of the averaged SAR within masses of 1g and 10g

10.2 Scan Procedures

First **Area Scan** is used to locate the approximate location(s) of the local peak SAR value(s). The measurement grid within an **Area Scan** is defined by the grid extent, grid step size and grid offset. Next, in order to determine the EM field distribution in a three-dimensional spatial extension, **Zoom Scan** is required. The **Zoom Scan** measures 5x5x7 points with step size 8, 8 and 5 mm. The **Zoom Scan** is performed around the highest E-field value to determine the averaged SAR-distribution over 1 g.

10.3 SAR Averaged Methods

In DASY4, the interpolation and extrapolation are both based on the modified Quadratic Shepard's method. The interpolation scheme combines a least-square fitted function method and a weighted average method which are the two basic types of computational interpolation and approximation.
Extrapolation routines are used to obtain SAR values between the lowest measurement points and the inner phantom surface. The extrapolation distance is determined by the surface detection distance and the probe sensor offset. The uncertainty increases with the extrapolation distance. To keep the uncertainty within 1% for the 1 g and 10 g cubes, the extrapolation distance should not be larger then 5 mm.

11. SAR Test Results

11.1 Right Cheek

Bands	Chan.	Freq. (MHz)	Modulation type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
PCS	512 (Low)	1850.2	GMSK	30.25	-0.1	0.475	1.6	Pass
	661 (Mid)	1880.0	GMSK	30.32	-0.1	0.337	1.6	Pass
	810 (High)	1909.8	GMSK	30.18	0	0.286	1.6	Pass

11.2 Right Tilted

Bands	Chan.	Freq. (MHz)	Modulation type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
PCS	512 (Low)	1850.2	GMSK	30.25	0	0.537	1.6	Pass
	661 (Mid)	1880.0	GMSK	30.32	-0.1	0.379	1.6	Pass
	810 (High)	1909.8	GMSK	30.18	0	0.312	1.6	Pass

11.3 Left Cheek

Bands	Chan.	Freq. (MHz)	Modulation type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
PCS	**512 (Low)**	**1850.2**	**GMSK**	**30.25**	**-0.1**	**0.683**	**1.6**	**Pass**
	661 (Mid)	1880.0	GMSK	30.32	-0.1	0.491	1.6	Pass
	810 (High)	1909.8	GMSK	30.18	-0.1	0.389	1.6	Pass

11.4 Left Tilted

Bands	Chan.	Freq. (MHz)	Modulation type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
PCS	512 (Low)	1850.2	GMSK	30.25	0.009	0.667	1.6	Pass
	661 (Mid)	1880.0	GMSK	30.32	0	0.463	1.6	Pass
	810 (High)	1909.8	GMSK	30.18	-0.1	0.379	1.6	Pass

11.5 Body Worn-keypad up

Bands	Chan.	Freq. (MHz)	Modulation type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
PCS	512 (Low)	1850.2	GMSK	30.25	-	-	1.6	Pass
	661 (Mid)	1880.0	GMSK	30.32	0	0.125	1.6	Pass
	810 (High)	1909.8	GMSK	30.18	-	-	1.6	Pass

11.6 Body Worn-keypad down

Bands	Chan.	Freq. (MHz)	Modulation type	Conducted Power (dBm)	Power Drift (dB)	Measured 1g SAR (W/kg)	Limits (W/Kg)	Results
PCS	**512 (Low)**	**1850.2**	**GMSK**	**30.25**	**0**	**1.13**	**1.6**	**Pass**
	661 (Mid)	1880.0	GMSK	30.32	0	0.888	1.6	Pass
	810 (High)	1909.8	GMSK	30.18	-0.1	0.713	1.6	Pass

12.References

[1] FCC 47 CFR Part 2 “Frequency Allocations and Radio Treaty Matters; General Rules and Regulations”
[2] IEEE Std. 1528-200X, Draft CD 1.1 “ Recommended Practice for Determining the Spatial-Peak Specific Absorption Rate (SAR) in the Human Body Due to Wireless Communications Devices: Experimental Techniques”, December 2002
[3] Supplement C (Edition 01-10) to OET Bulletin 65 (Edition 97-01), “Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to RF Emissions”, June 2001
[4] IEEE Std. C95.3, “IEEE Recommended Practice for the Meaurement of Potentially Hazardous Electromagnetic Fields-RF and Microwave”, 1991
[5] IEEE Std. C95.1, “IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz”, 1999
[6] Robert J. Renka, “Multivariate Interpolation Of Large Sets Of Scattered Data”, University of Noth Texas ACM Transactions on Mathematical Software, vol. 14, no. 2, June 1988, pp. 139-148
[7] DAYS4 System Handbook

Appendix A - System Performance Check Data

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/15/04 21:31:14

System Check_Head_1900MHz_20040615

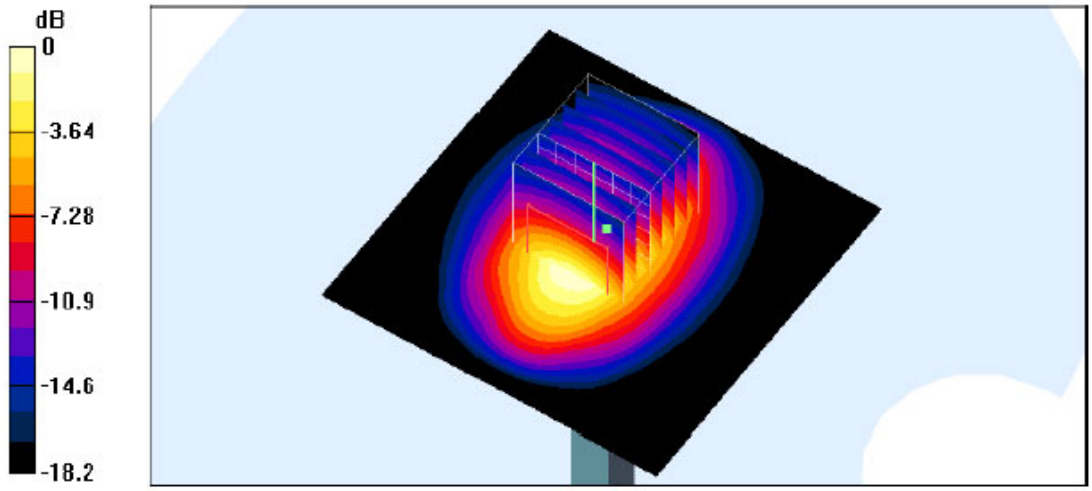
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d041

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL_1900 Medium parameters used: f = 1900 MHz; σ = 1.43 mho/m; ε_r = 39.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5.3, 5.3, 5.3); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 58.6 V/m; Power Drift = -0.0 dB
Maximum value of SAR (interpolated) = 4.97 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.6 V/m; Power Drift = -0.0 dB
Maximum value of SAR (measured) = 4.53 mW/g
Peak SAR (extrapolated) = 6.97 W/kg
SAR(1 g) = 3.98 mW/g; SAR(10 g) = 2.1 mW/g



0 dB = 4.53mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/14/04 21:28:45

System Check_Body_1900MHz_20040524

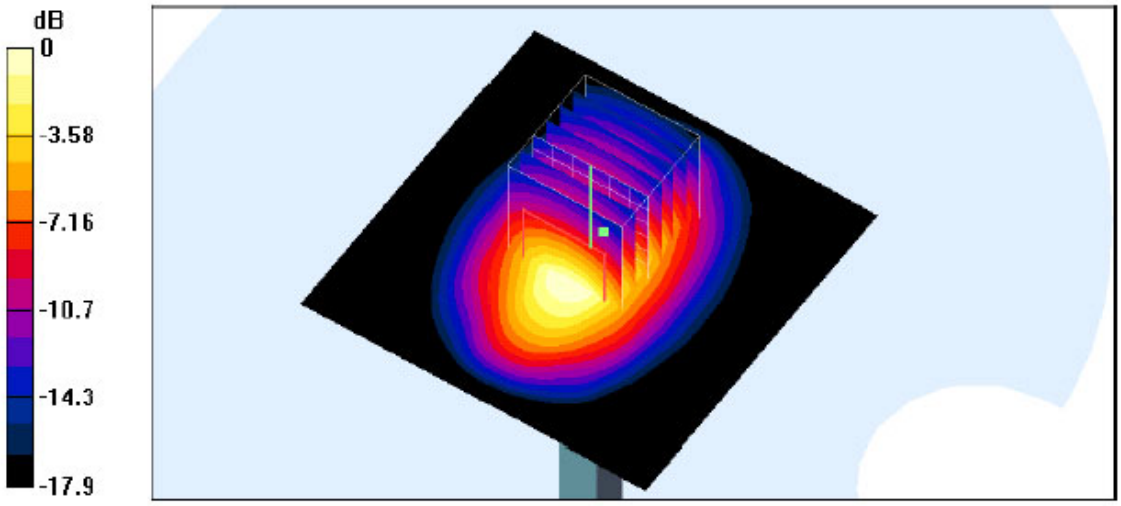
DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:5d041

Communication System: CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: MSL_1900 Medium parameters used: f = 1900 MHz; σ = 1.54 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5, 5, 5); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Pin=100mW/Area Scan (61x61x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 58.3 V/m; Power Drift = -0.1 dB
Maximum value of SAR (interpolated) = 4.88 mW/g

Pin=100mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.3 V/m; Power Drift = -0.1 dB
Maximum value of SAR (measured) = 4.52 mW/g
Peak SAR (extrapolated) = 6.78 W/kg
SAR(1 g) = 3.99 mW/g; SAR(10 g) = 2.14 mW/g



0 dB = 4.52mW/g

Appendix B - SAR Measurement Data

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/15/04 21:49:43

Right Cheek_PCS CH512_20040615

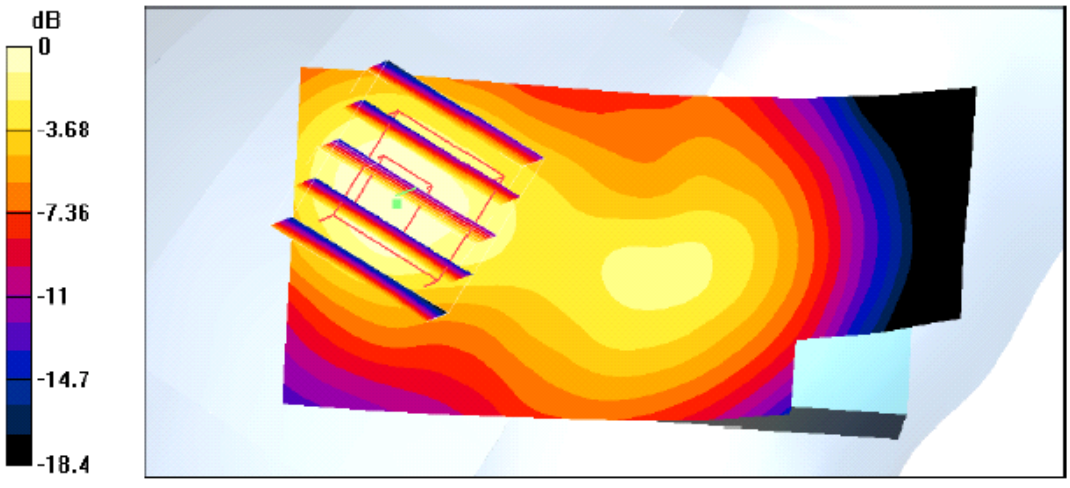
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL_1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.38 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5.3, 5.3, 5.3); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch512/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 18.7 V/m; Power Drift = -0.1 dB
Maximum value of SAR (interpolated) = 0.554 mW/g

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.7 V/m; Power Drift = -0.1 dB
Maximum value of SAR (measured) = 0.526 mW/g
Peak SAR (extrapolated) = 0.768 W/kg
SAR(1 g) = 0.475 mW/g; SAR(10 g) = 0.272 mW/g



0 dB = 0.526mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/15/04 22:47:32

Right Titled_PCS CH512_20040615

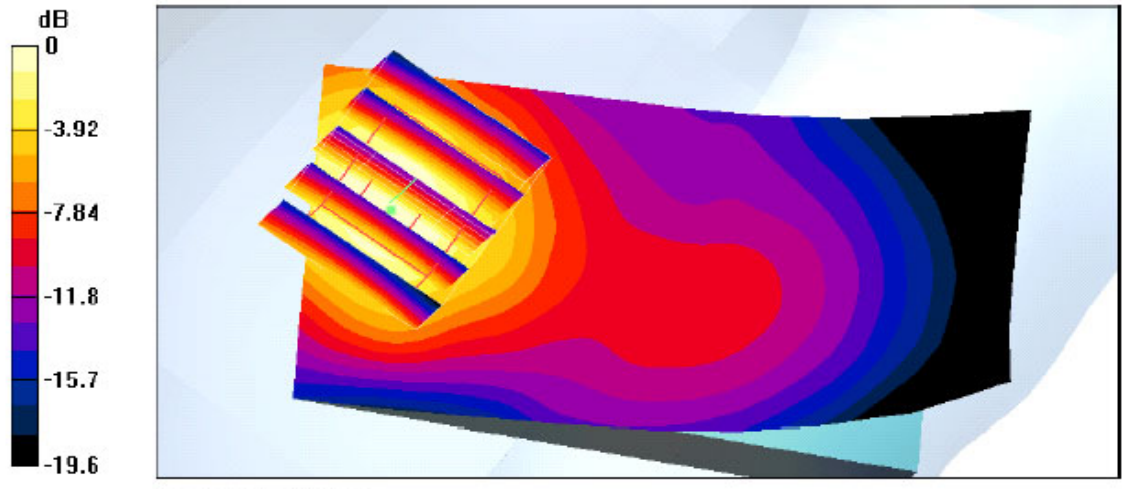
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL_1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.38 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5.3, 5.3, 5.3); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch512/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 20.6 V/m; Power Drift = -0.0 dB
Maximum value of SAR (interpolated) = 0.624 mW/g

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.6 V/m; Power Drift = -0.0 dB
Maximum value of SAR (measured) = 0.603 mW/g
Peak SAR (extrapolated) = 0.903 W/kg
SAR(1 g) = 0.537 mW/g; SAR(10 g) = 0.291 mW/g



0 dB = 0.603mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/15/04 23:28:02

Left Cheek_PCS CH512_20040615

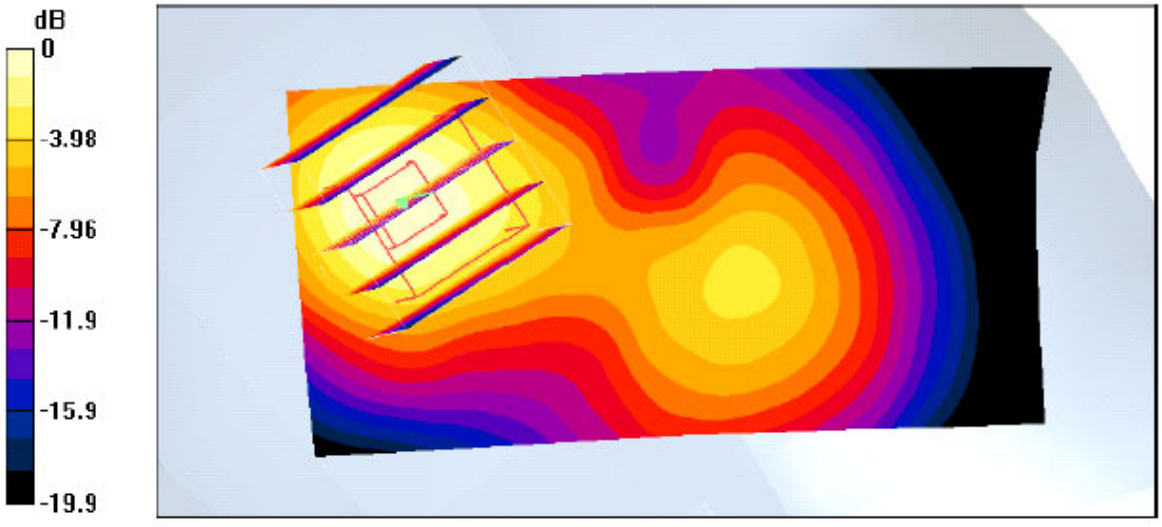
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL_1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.38 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5.3, 5.3, 5.3); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch512/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 20.9 V/m; Power Drift = -0.1 dB
Maximum value of SAR (interpolated) = 0.815 mW/g

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.9 V/m; Power Drift = -0.1 dB
Maximum value of SAR (measured) = 0.767 mW/g
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.683 mW/g; SAR(10 g) = 0.364 mW/g



0 dB = 0.767mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/16/04 00:05:40

Left Tilted_PCS CH512_20040615

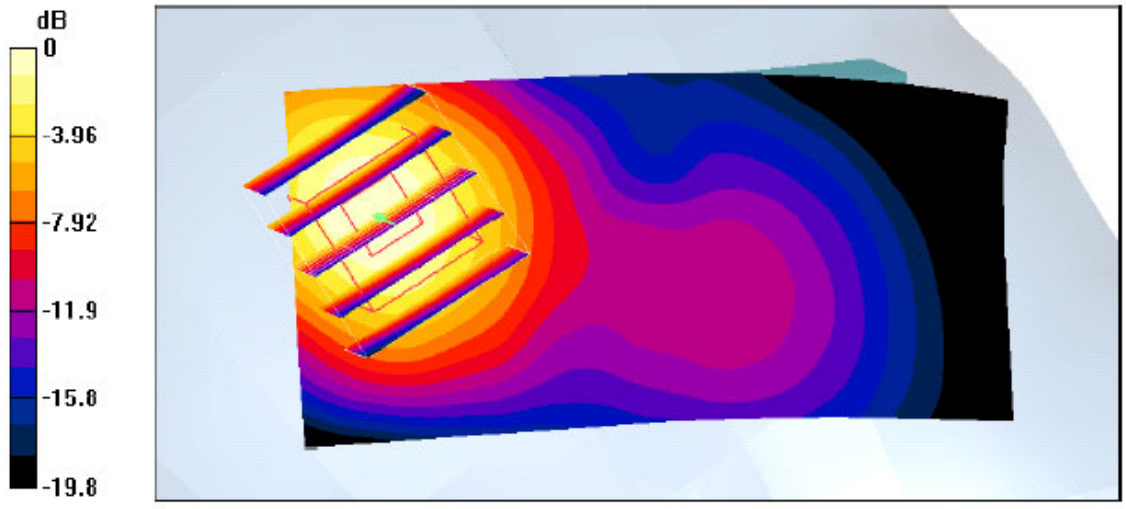
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL_1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.38 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5.3, 5.3, 5.3); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch512/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 22.3 V/m; Power Drift = 0.009 dB
Maximum value of SAR (interpolated) = 0.782 mW/g

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.3 V/m; Power Drift = 0.009 dB
Maximum value of SAR (measured) = 0.749 mW/g
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.667 mW/g; SAR(10 g) = 0.352 mW/g



0 dB = 0.749mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/15/04 23:28:02

Left Cheek_PCS CH512_20040615

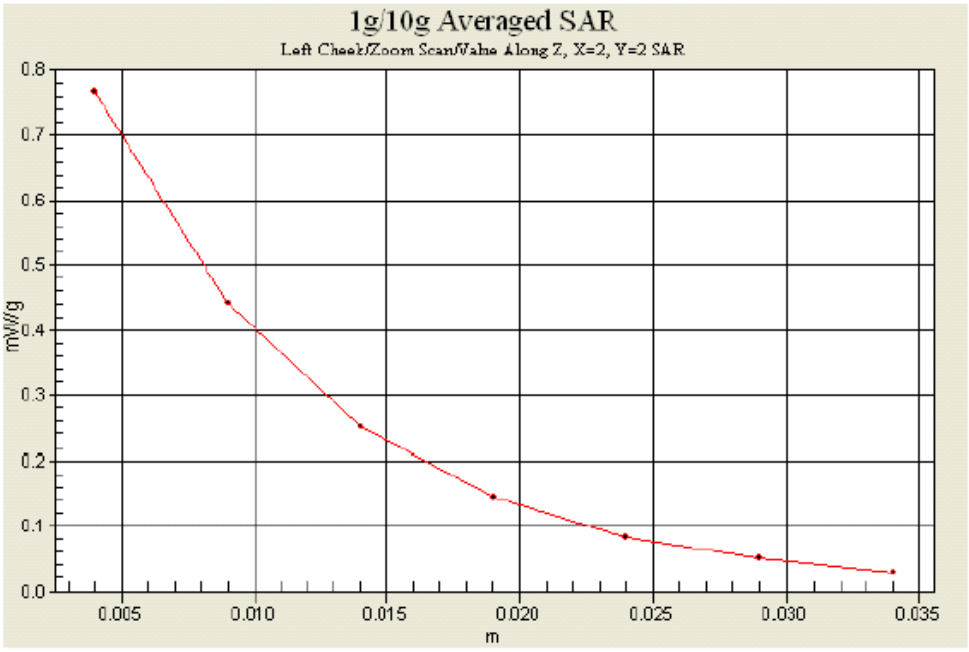
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: HSL_1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.38 mho/m; ε_r = 39.3; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5.3, 5.3, 5.3); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch512/Area Scan (41x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 20.9 V/m; Power Drift = -0.1 dB
Maximum value of SAR (interpolated) = 0.815 mW/g

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.9 V/m; Power Drift = -0.1 dB
Maximum value of SAR (measured) = 0.767 mW/g
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.683 mW/g; SAR(10 g) = 0.364 mW/g



Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/14/04 22:51:33

Body_PCS Ch661_Keypad Up With 1.5cm Gap _20040614

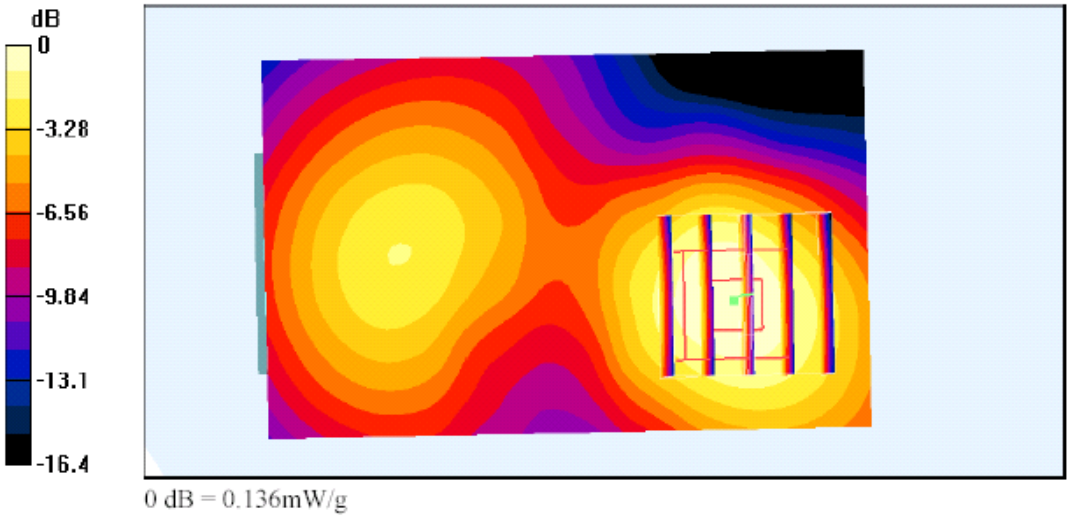
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: MSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5, 5, 5); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch661/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 9.02 V/m; Power Drift = 0.0 dB
Maximum value of SAR (interpolated) = 0.140 mW/g

Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.02 V/m; Power Drift = 0.0 dB
Maximum value of SAR (measured) = 0.136 mW/g
Peak SAR (extrapolated) = 0.198 W/kg
SAR(1 g) = 0.125 mW/g; SAR(10 g) = 0.075 mW/g



0 dB = 0.136mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/14/04 22:22:31

Body_PCS Ch512_Keypad Down With 1.5cm Gap _20040614

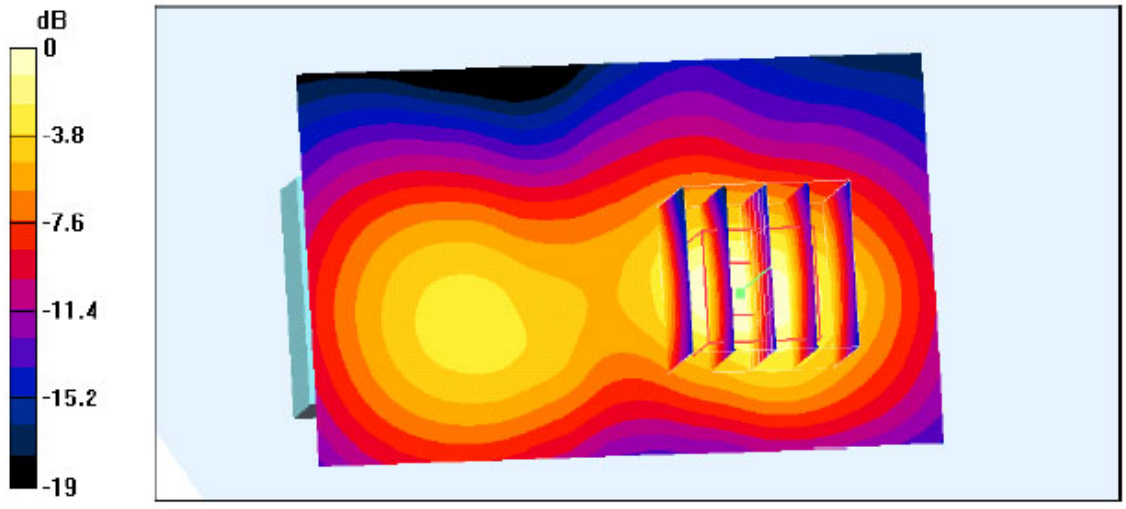
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: MSL_1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.49 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5, 5, 5); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch512/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 24 V/m; Power Drift = -0.0 dB
Maximum value of SAR (interpolated) = 1.24 mW/g

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24 V/m; Power Drift = -0.0 dB
Maximum value of SAR (measured) = 1.25 mW/g
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.604 mW/g



0 dB = 1.25mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/14/04 21:52:13

Body_PCS Ch661_Keypad Down With 1.5cm Gap _20040614

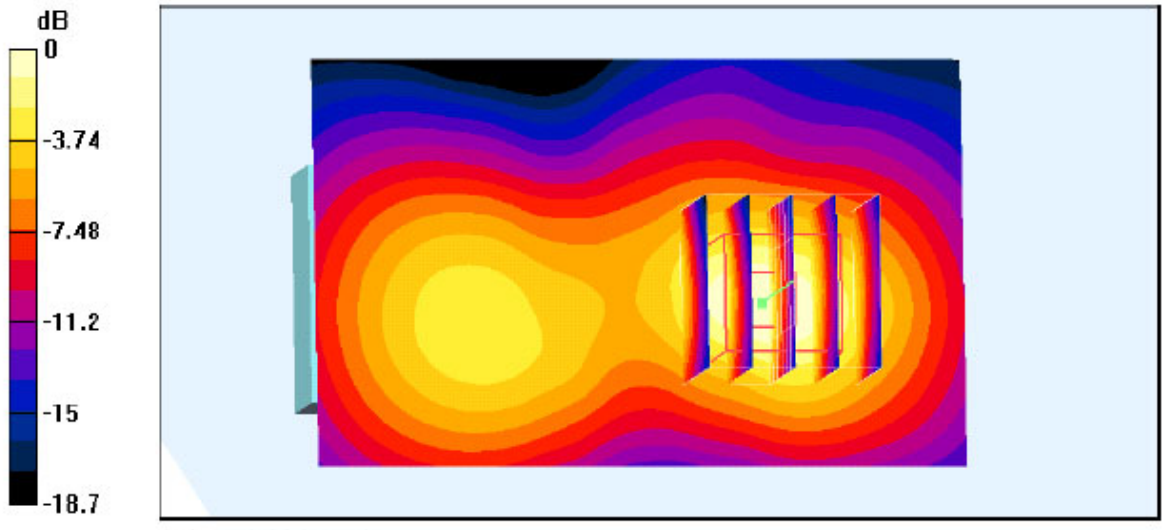
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1880 MHz;Duty Cycle: 1:8.3
Medium: MSL_1900 Medium parameters used: f = 1880 MHz; σ = 1.52 mho/m; ε_r = 52.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5, 5, 5); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch661/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 21.7 V/m; Power Drift = -0.0 dB
Maximum value of SAR (interpolated) = 0.975 mW/g

Ch661/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.7 V/m; Power Drift = -0.0 dB
Maximum value of SAR (measured) = 0.994 mW/g
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 0.888 mW/g; SAR(10 g) = 0.477 mW/g



0 dB = 0.994mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/14/04 22:34:49

Body_PCS Ch810_Keypad Down With 1.5cm Gap _20040614

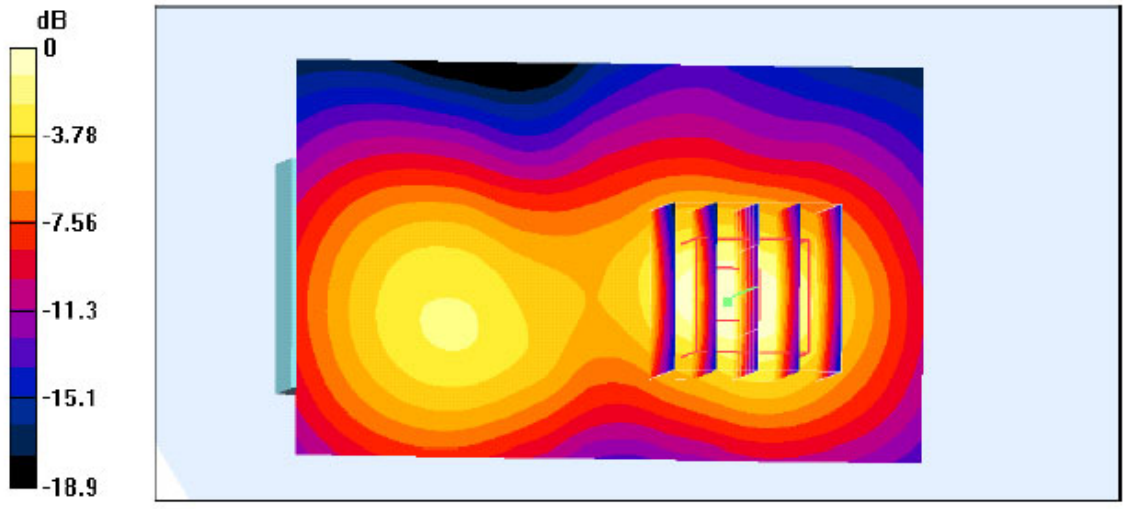
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: MSL_1900 Medium parameters used (interpolated): f = 1909.8 MHz; σ = 1.55 mho/m; ε_r = 52; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5, 5, 5); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch810/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 19.4 V/m; Power Drift = -0.1 dB
Maximum value of SAR (interpolated) = 0.785 mW/g

Ch810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.4 V/m; Power Drift = -0.1 dB
Maximum value of SAR (measured) = 0.791 mW/g
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.713 mW/g; SAR(10 g) = 0.385 mW/g



0 dB = 0.791mW/g

Test Laboratory: Sporton International Inc. SAR Testing Lab Date/Time: 06/14/04 22:22:31

Body_PCS Ch512_Keypad Down With 1.5cm Gap _20040614

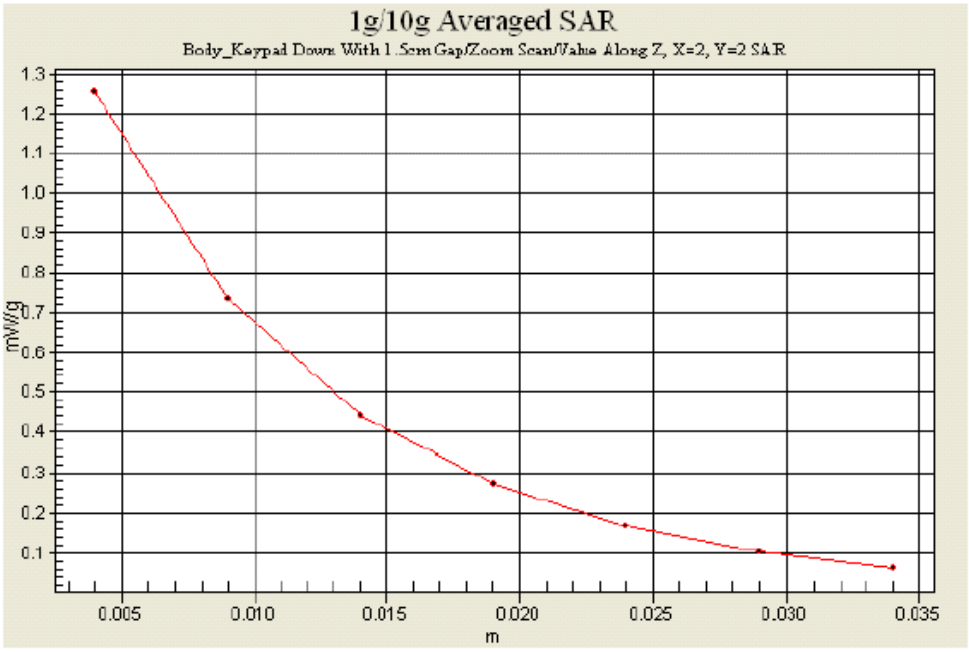
DUT: BenQ M100(56F52); Type: Mobile Phone; Serial: 449281670000010

Communication System: PCS; Frequency: 1850.2 MHz;Duty Cycle: 1:8.3
Medium: MSL_1900 Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.49 mho/m; ε_r = 52.3; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY4 Configuration:
- Probe: ET3DV6 - SN1788; ConvF(5, 5, 5); Calibrated: 8/29/2003
- Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)
- Electronics: DAE3 Sn577; Calibrated: 11/21/2003
- Phantom: SAM 12; Type: QD 000 P40 C; Serial: TP-1150
- Measurement SW: DASY4, V4.2 Build 44; Postprocessing SW: SEMCAD, V1.8 Build 112

Ch512/Area Scan (51x81x1): Measurement grid: dx=15mm, dy=15mm
Reference Value = 24 V/m; Power Drift = -0.0 dB
Maximum value of SAR (interpolated) = 1.24 mW/g

Ch512/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24 V/m; Power Drift = -0.0 dB
Maximum value of SAR (measured) = 1.25 mW/g
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 1.13 mW/g; SAR(10 g) = 0.604 mW/g



Appendix C – Calibration Data

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

Client Sproton Int. (Auden)

CALIBRATION CERTIFICATE

Object(s) D1900V2 - SN:5d041

Calibration procedure(s) QA CAL-05 v2
Calibration procedure for dipole validation kits

Calibration date: February 17, 2004

Condition of the calibrated item In Tolerance (according to the specific calibration document)

This calibration statement documents traceability of M&TE used in the calibration procedures and conformity of the procedures with the ISO/IEC 17025 international standard.

All calibrations have been conducted in the closed laboratory facility: environment temperature 22 +/- 2 degrees Celsius and humidity < 75%.

Calibration Equipment used (M&TE critical for calibration)

Model Type	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power meter EPM E442	GB37480704	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8481A	US37292783	6-Nov-03 (METAS, No. 252-0254)	Nov-04
Power sensor HP 8481A	MY41092317	18-Oct-02 (Agilent, No. 20021018)	Oct-04
RF generator R&S SML-03	100698	27-Mar-2002 (R&S, No. 20-92389)	In house check: Mar-05
Network Analyzer HP 8753E	US37390585	18-Oct-01 (SPEAG, In house check Nov-03)	In house check: Oct 05

	Name	Function	Signature
Calibrated by:	Judith Mueller	Technician	
Approved by:	Katja Pokovic	Laboratory Director	

Date issued: February 18, 2004

This calibration certificate is issued as an intermediate solution until the accreditation process (based on ISO/IEC 17025 International Standard) for Calibration Laboratory of Schmid & Partner Engineering AG is completed.

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Schmid & Partner Engineering AG

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DASY

Dipole Validation Kit

Type: D1900V2

Serial: 5d041

Manufactured: July 4, 2003
Calibrated: February 17, 2004