



TEST REPORT FROM RADIO FREQUENCY INVESTIGATION LTD.

Test of: Sendo Ltd.
M551 Dual Band Mobile Handset with PHF and Case Accessory

To: OET Bulletin 65 Supplement C: (2001-01)

Measurements were performed on the DASY4 System.

Test Report Serial No:
RFI/SARB2/RP45446JD06A

RADIO FREQUENCY INVESTIGATION LTD.

SAR DISTRIBUTION SCANS

S.No. RFI/SARB2/RP45446JD06A

Operations Department

Test Of: Sendo Ltd.

M551 Dual Band Mobile Handset with PHF and Case Accessory

To: OET Bulletin 65 Supplement C: (2001-01)

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RADIO FREQUENCY INVESTIGATION LTD.

SAR DISTRIBUTION SCANS
S.No. RFI/SARB2/RP45446JD06A

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Test Of: Sendo Ltd.

M551 Dual Band Mobile Handset with PHF and Case Accessory

To: OET Bulletin 65 Supplement C: (2001-01)

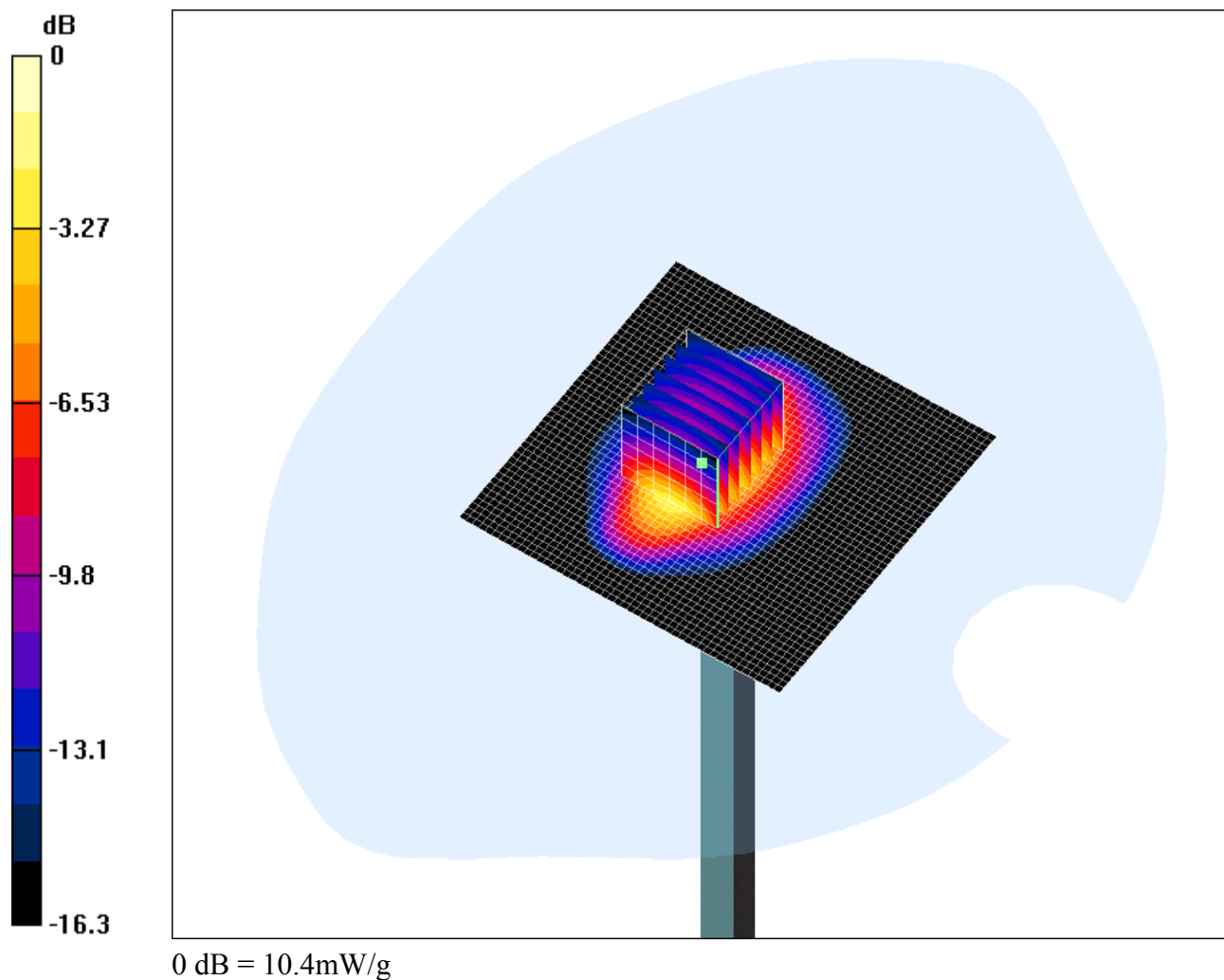
SAR Distribution Scans

Plot Number	Title
001	LHS_Tilt_660
002	LHS_Tilt_850
003	LHS_Touch_660
004	LHS_Touch_850
005	LHS_Worstcase_High_660
006	LHS_Worstcase_High_850
007	RHS_Right_512
008	RHS_Tilt_660
009	RHS_Tilt_850
010	RHS_Touch_660
011	RHS_Touch_810
012	RHS_Touch_850
013	System Performance Check_D850
014	System Performance Check_D1900
015	Validation 1900
016	Validation 850

Date: 16/12/03

45446/JD06/Validation_006

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: SN2d009

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

Medium: 1900MSL ($\sigma = 1.50143$ mho/m, $\epsilon_r = 52.148$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.6, 4.6, 4.6); Calibrated: 29/07/2003

- Sensor-Surface: 4mm (Mechanical Surface Detection)

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)

- Electronics: DAE3 Sn450; Calibrated: 19/05/2003

- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 76 V/m

Power Drift = 0.3 dB

Maximum value of SAR = 10.4 mW/g

d=10mm, Pin=250mW/Zoom Scan 7x7x7 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 15.6 W/kg

SAR(1 g) = 9.39 mW/g; SAR(10 g) = 5.05 mW/g

Reference Value = 76 V/m

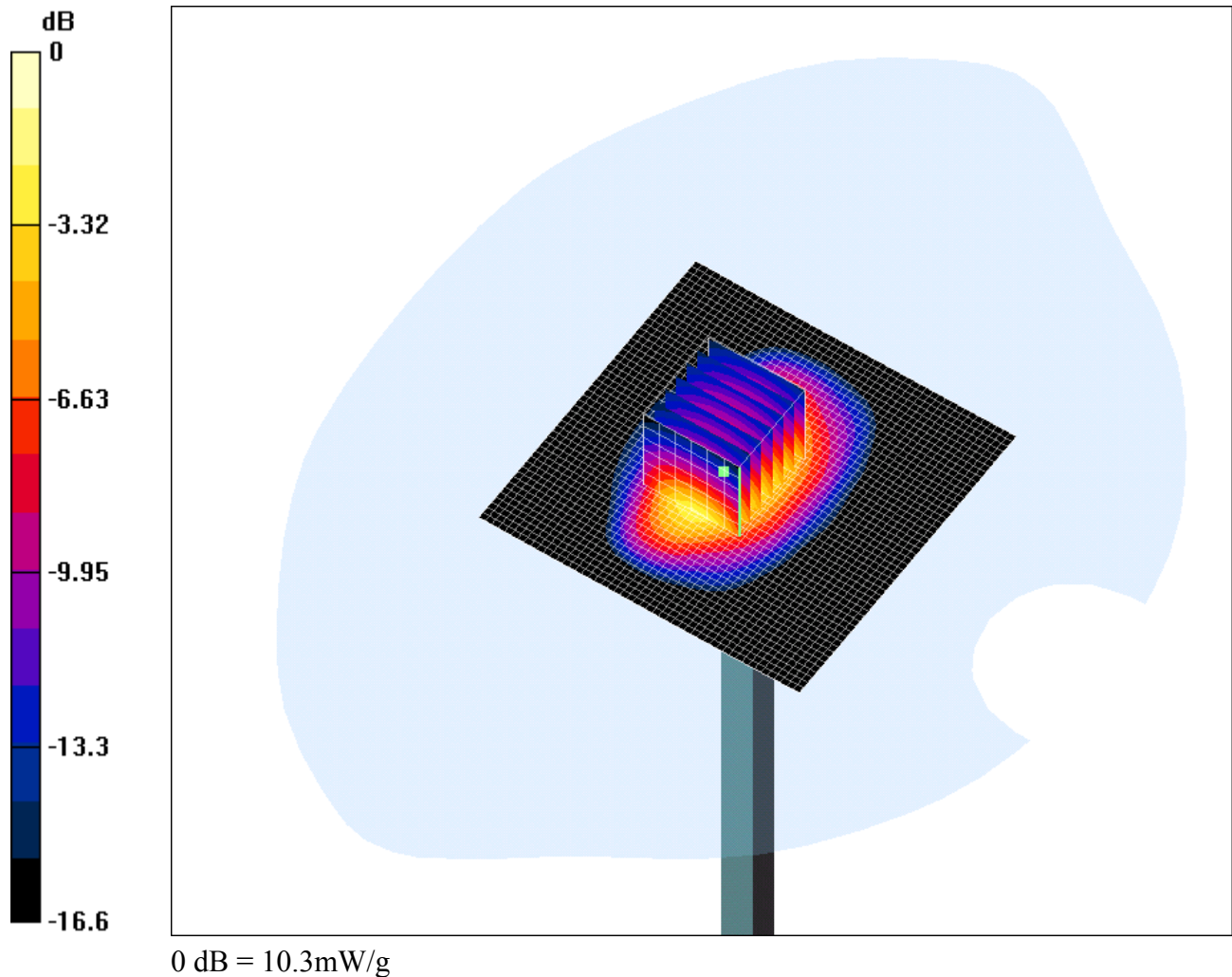
Power Drift = 0.3 dB

Maximum value of SAR = 10.4 mW/g

Date: 12/15/03

45446/JD06/Validation_005

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: Dipole 1800 MHz; Type: D1800V2; Serial: SN2d009

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

Medium: 1900MSL ($\sigma = 1.50143$ mho/m, $\epsilon_r = 52.148$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.6, 4.6, 4.6); Calibrated: 29/07/2003

- Sensor-Surface: 4mm (Mechanical Surface Detection)

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)

- Electronics: DAE3 Sn450; Calibrated: 19/05/2003

- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197

- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 83.6 V/m

Power Drift = 0.01 dB

Maximum value of SAR = 10.8 mW/g

d=10mm, Pin=250mW/Zoom Scan 7x7x7 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 15.6 W/kg

SAR(1 g) = 9.27 mW/g; SAR(10 g) = 4.93 mW/g

Reference Value = 83.6 V/m

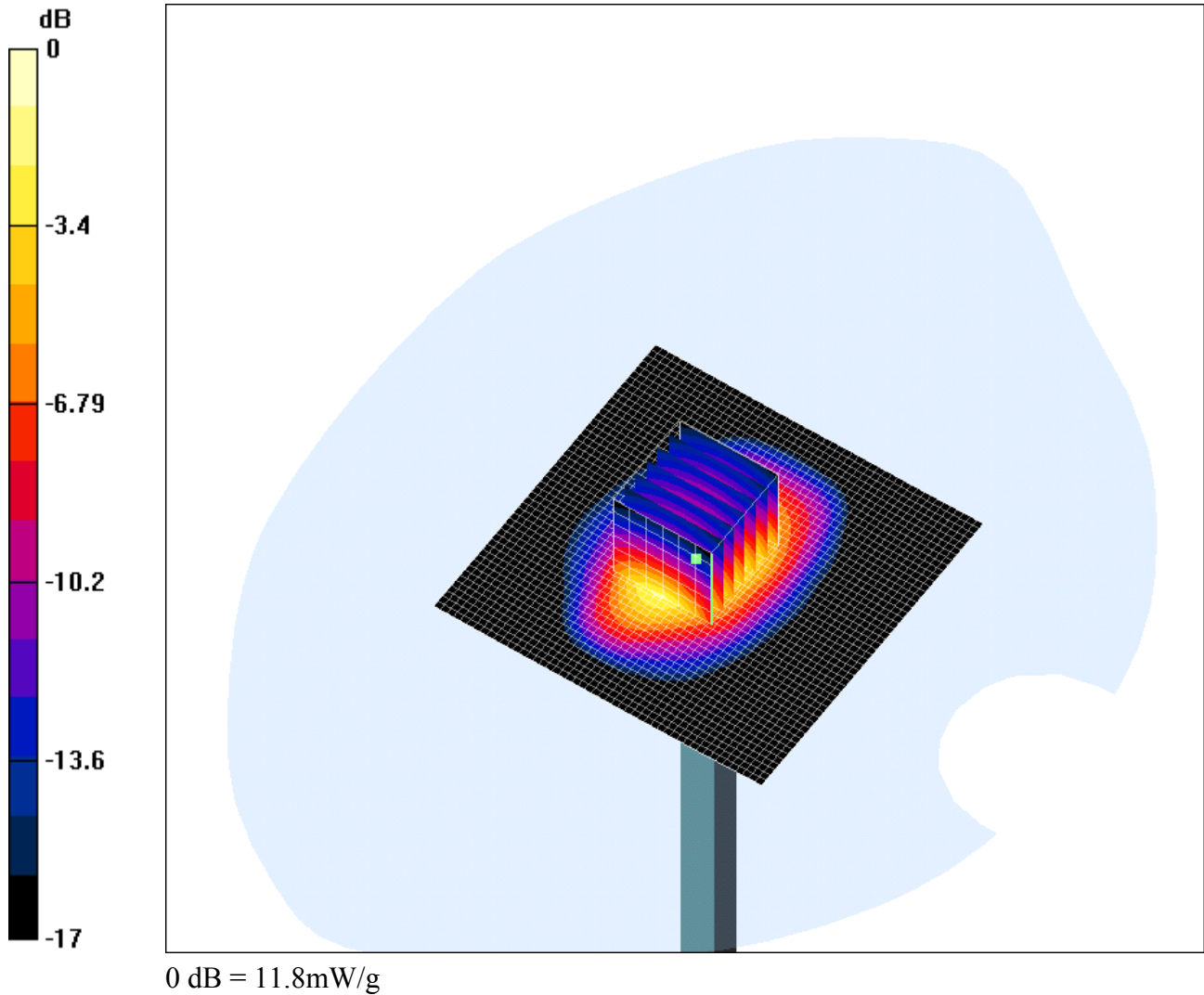
Power Drift = 0.01 dB

Maximum value of SAR = 10.3 mW/g

Date: 15/12/03

45446/JD06/Validation_004

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: SN540

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

Medium: 1900MHz HSL ($\sigma = 1.43677$ mho/m, $\epsilon_r = 39.7924$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.8, 4.8, 4.8); Calibrated: 29/07/2003

- Sensor-Surface: 4mm (Mechanical Surface Detection)

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)

- Electronics: DAE3 Sn450; Calibrated: 19/05/2003

- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 92.2 V/m

Power Drift = -0.03 dB

Maximum value of SAR = 12.8 mW/g

d=10mm, Pin=250mW/Zoom Scan 7x7x7 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 17.9 W/kg

SAR(1 g) = 10.5 mW/g; SAR(10 g) = 5.52 mW/g

Reference Value = 92.2 V/m

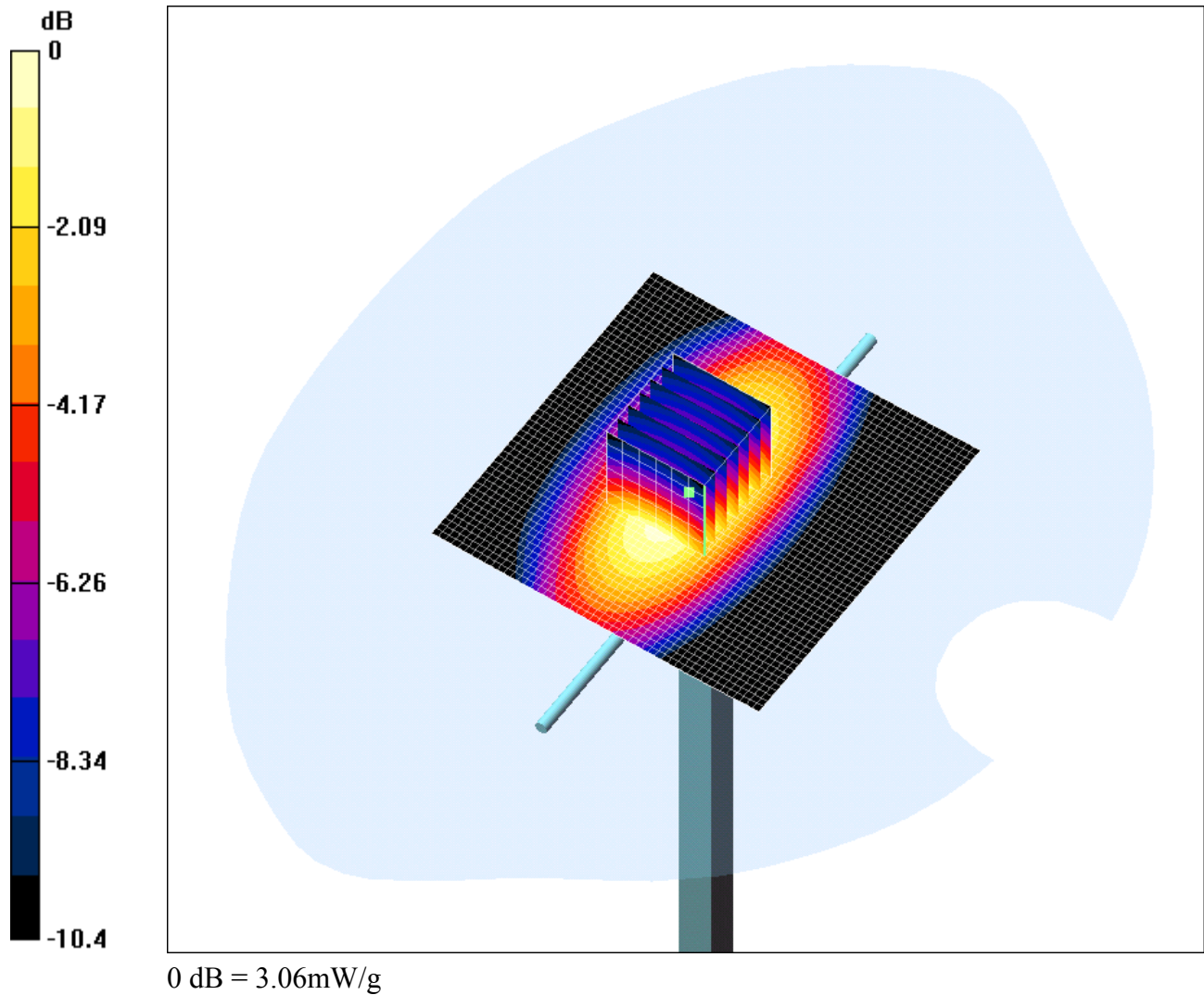
Power Drift = -0.03 dB

Maximum value of SAR = 11.8 mW/g

Date: 13/12/03

Validation_002

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: Dipole 900 MHz; Type: D900V2; Serial: SN124

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 850MHz MSL ($\sigma = 0.981241$ mho/m, $\epsilon_r = 52.7667$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.2, 6.2, 6.2); Calibrated: 29/07/2003

- Sensor-Surface: 4mm (Mechanical Surface Detection)

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)

- Electronics: DAE3 Sn450; Calibrated: 19/05/2003

- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 56.6 V/m

Power Drift = 0.06 dB

Maximum value of SAR = 3.04 mW/g

d=10mm, Pin=250mW/Zoom Scan 7x7x7 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 4.07 W/kg

SAR(1 g) = 2.84 mW/g; SAR(10 g) = 1.84 mW/g

Reference Value = 56.6 V/m

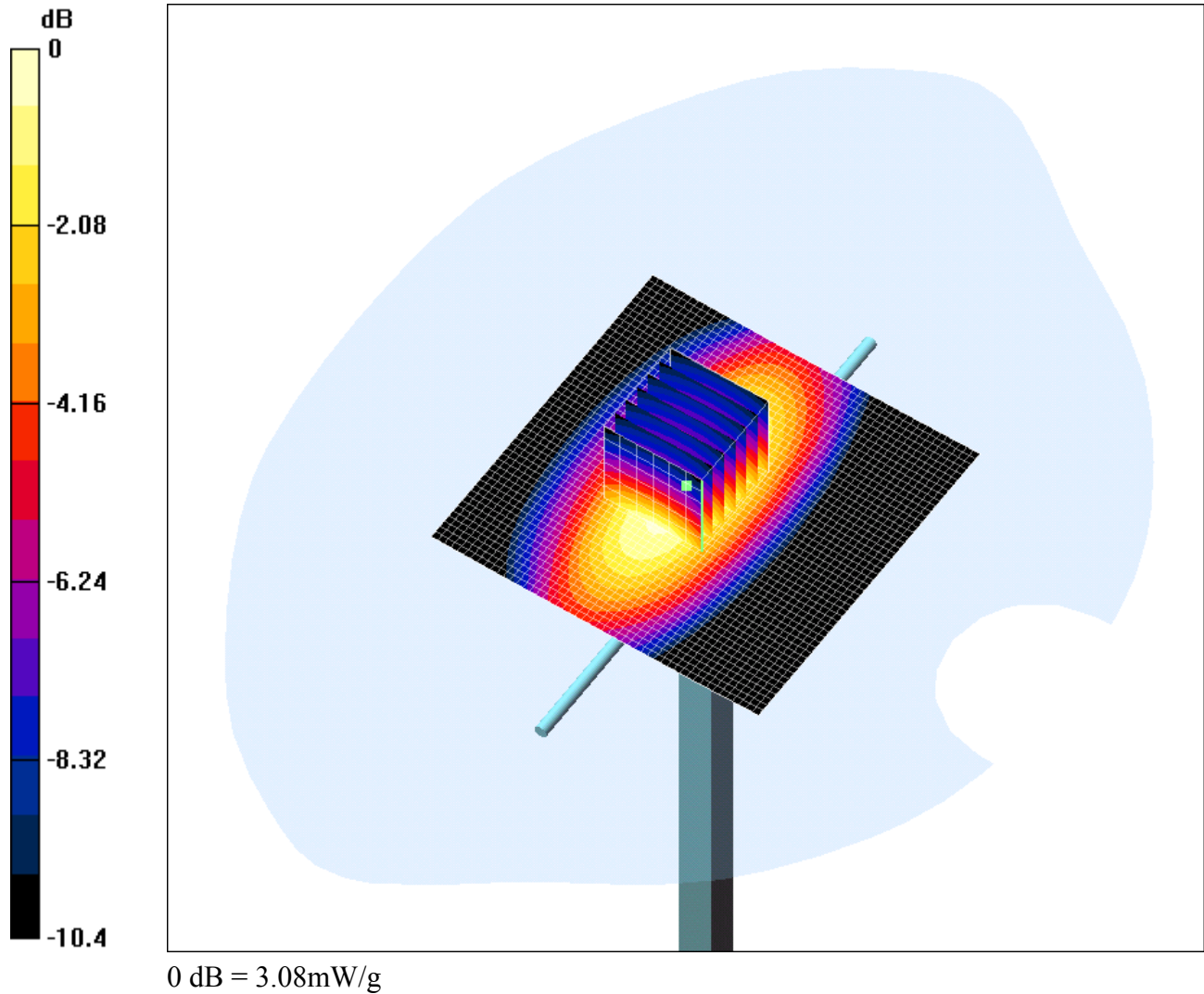
Power Drift = 0.06 dB

Maximum value of SAR = 3.06 mW/g

Date: 14/12/03

Validation_003

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: Dipole 900 MHz; Type: D900V2; Serial: SN124

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 850MHz MSL ($\sigma = 0.981241$ mho/m, $\epsilon_r = 52.7667$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.2, 6.2, 6.2); Calibrated: 29/07/2003

- Sensor-Surface: 4mm (Mechanical Surface Detection)

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)

- Electronics: DAE3 Sn450; Calibrated: 19/05/2003

- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 55.1 V/m

Power Drift = 0.3 dB

Maximum value of SAR = 2.93 mW/g

d=10mm, Pin=250mW/Zoom Scan 7x7x7 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 4.11 W/kg

SAR(1 g) = 2.86 mW/g; SAR(10 g) = 1.86 mW/g

Reference Value = 55.1 V/m

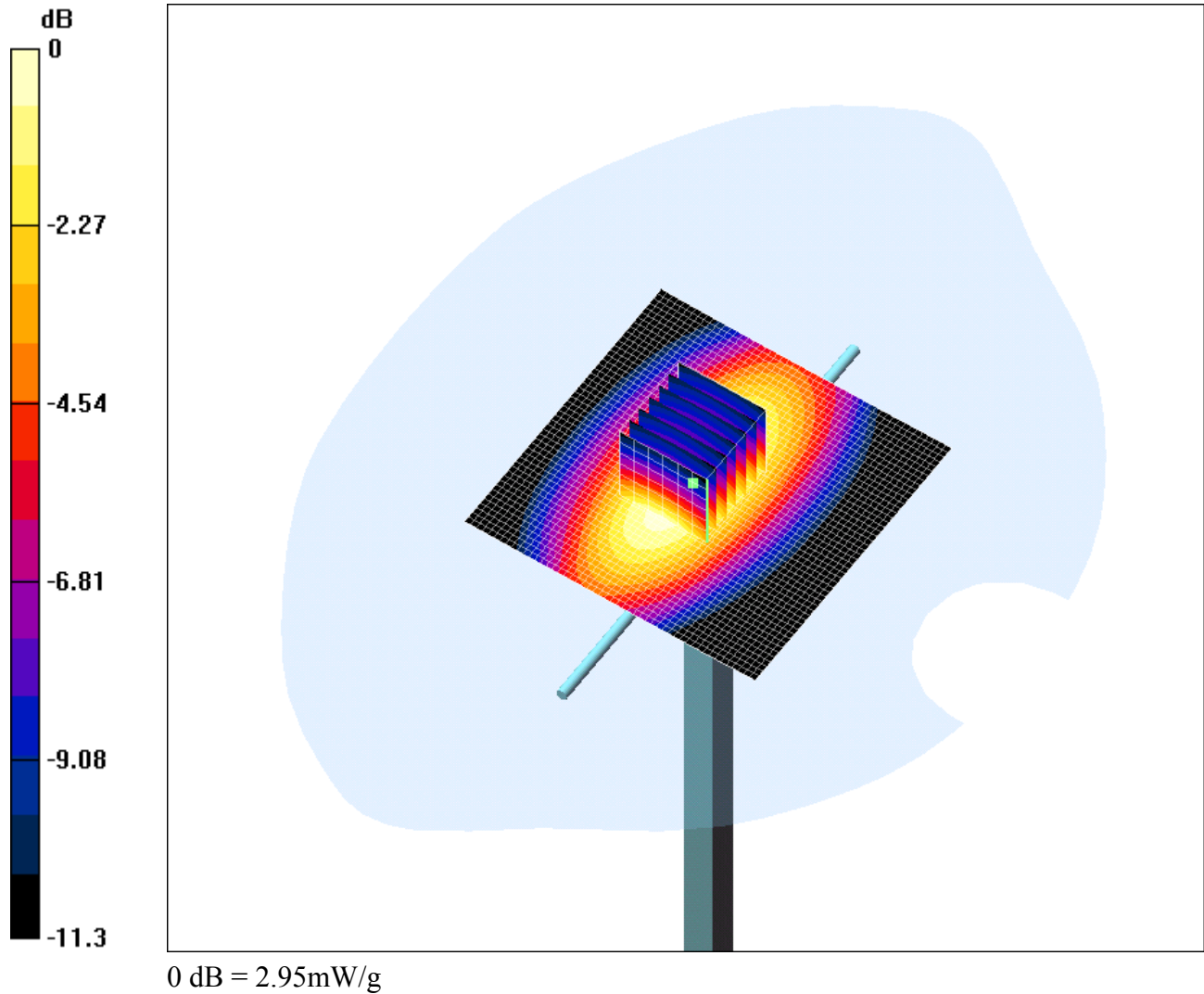
Power Drift = 0.3 dB

Maximum value of SAR = 3.08 mW/g

Date: 13/12/03

Validation_001

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: Dipole 900 MHz; Type: D900V2; Serial: SN124

Communication System: CW; Frequency: 900 MHz; Duty Cycle: 1:1

Medium: 900MHz HSL ($\sigma = 0.978958$ mho/m, $\epsilon_r = 41.0744$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(6.3, 6.3, 6.3); Calibrated: 29/07/2003

- Sensor-Surface: 4mm (Mechanical Surface Detection)

Sensor-Surface: 4mm (Mechanical And Optical Surface Detection)

- Electronics: DAE3 Sn450; Calibrated: 19/05/2003

- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

d=10mm, Pin=250mW/Area Scan (51x51x1): Measurement grid: dx=20mm, dy=20mm

Reference Value = 55 V/m

Power Drift = 0.2 dB

Maximum value of SAR = 2.92 mW/g

d=10mm, Pin=250mW/Zoom Scan 7x7x7 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 4.05 W/kg

SAR(1 g) = 2.76 mW/g; SAR(10 g) = 1.75 mW/g

Reference Value = 55 V/m

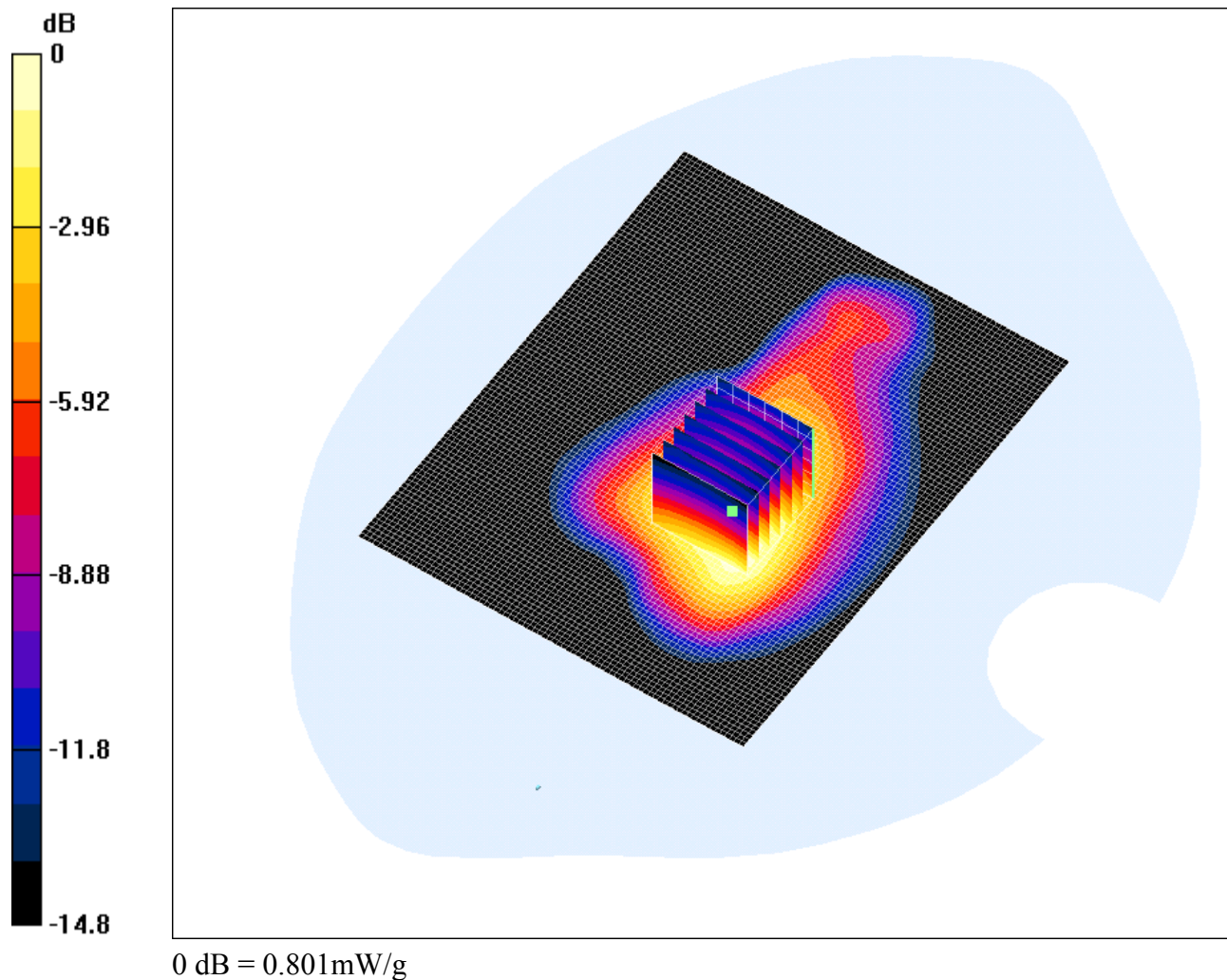
Power Drift = 0.2 dB

Maximum value of SAR = 2.95 mW/g

Date: 16/12/03

45446/JD06/036

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.50143$ mho/m, $\epsilon_r = 52.148$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.6, 4.6, 4.6); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Rear of Handset in Case with Clip on Hook and PHF (18mm Distance) High/Area Scan (101x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 21.4 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.793 mW/g

Rear of Handset in Case with Clip on Hook and PHF (18mm Distance) High/Zoom Scan (7x7x7)

(7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 1.25 W/kg

SAR(1 g) = 0.745 mW/g ; SAR(10 g) = 0.437 mW/g

Reference Value = 21.4 V/m

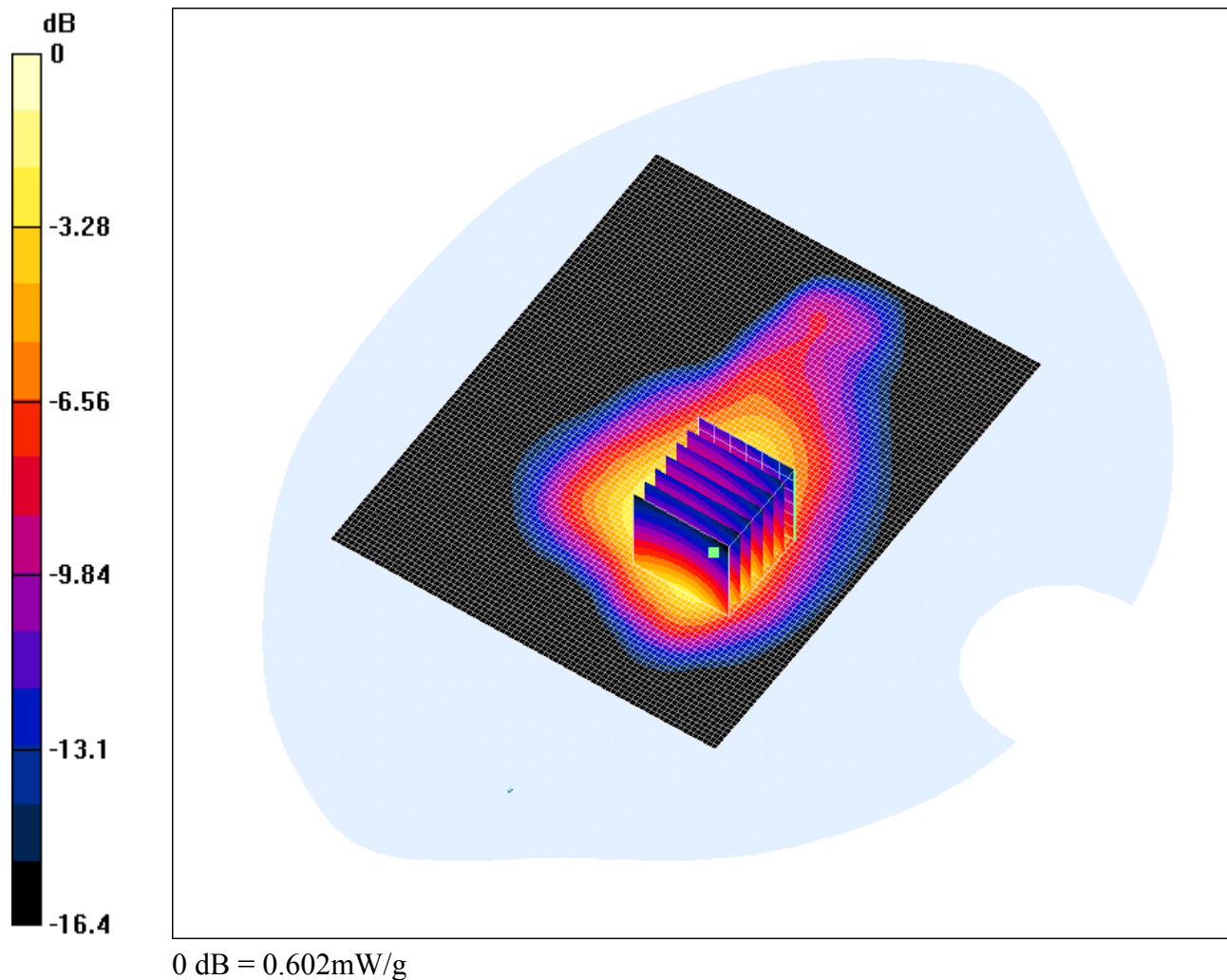
Power Drift = -0.02 dB

Maximum value of SAR = 0.801 mW/g

Date: 16/12/03

45446/JD06/035

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1850.2 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.45969$ mho/m, $\epsilon_r = 52.2415$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Rear of Handset in Case with Clip on Hook and PHF (18mm Distance) Low/Area Scan (101x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 17.1 V/m

Power Drift = -0.08 dB

Maximum value of SAR = 0.607 mW/g

Rear of Handset in Case with Clip on Hook and PHF (18mm Distance) Low/Zoom Scan (7x7x7)

(7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 0.918 W/kg

SAR(1 g) = 0.553 mW/g ; SAR(10 g) = 0.325 mW/g

Reference Value = 17.1 V/m

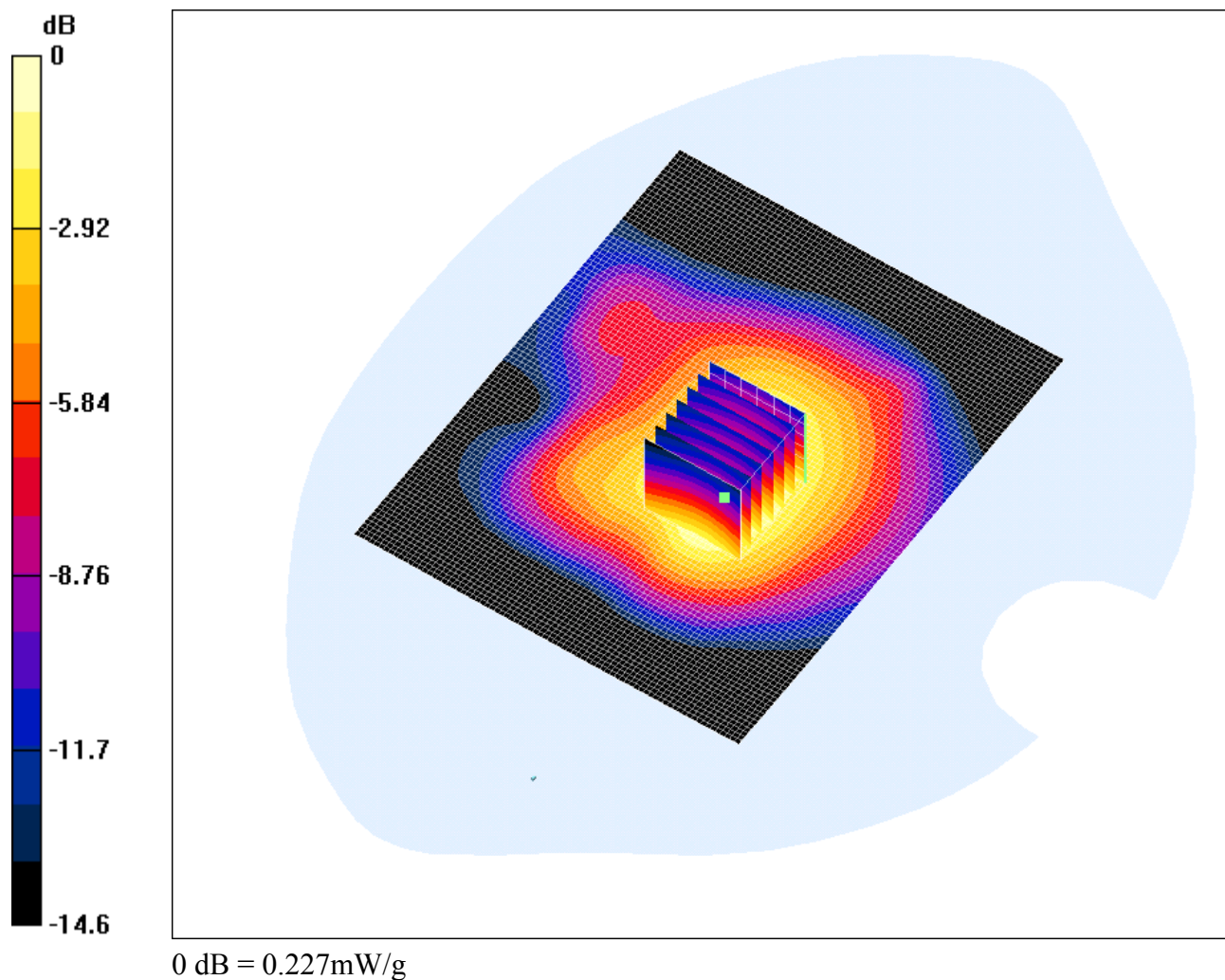
Power Drift = -0.08 dB

Maximum value of SAR = 0.602 mW/g

Date: 16/12/03

45446/JD06/034

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Display of Closed Handset with PHF (15mm Distance)/Area Scan (101x81x1): Measurement grid:

dx=15mm, dy=15mm

Reference Value = 12.3 V/m

Power Drift = 0.05 dB

Maximum value of SAR = 0.226 mW/g

Display of Closed Handset with PHF (15mm Distance)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.315 W/kg

SAR(1 g) = 0.208 mW/g; SAR(10 g) = 0.129 mW/g

Reference Value = 12.3 V/m

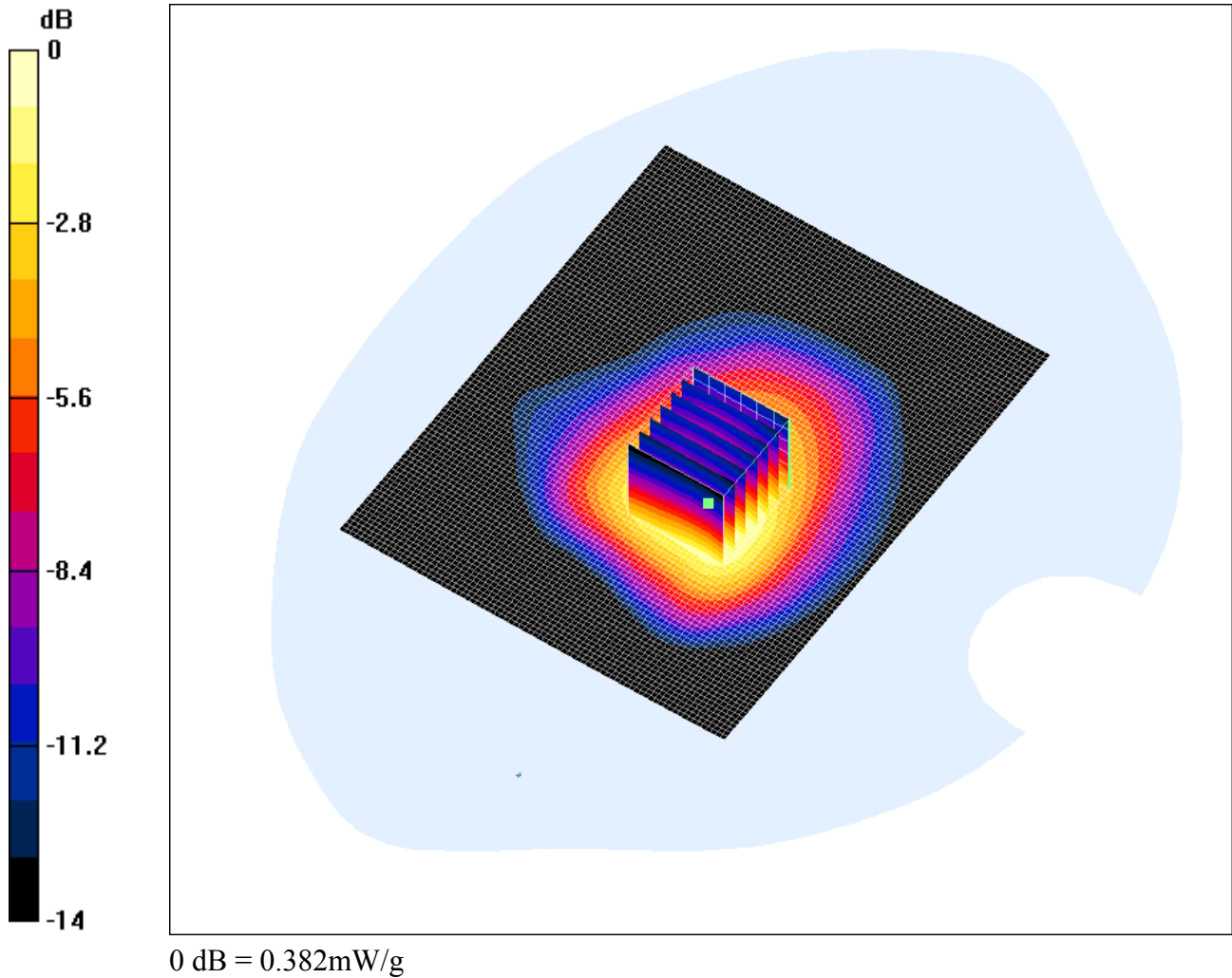
Power Drift = 0.05 dB

Maximum value of SAR = 0.227 mW/g

Date: 16/12/03

45446/JD06/033

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Rear of Closed Handset with PHF (15mm Distance)/Area Scan (101x81x1): Measurement grid:

dx=15mm, dy=15mm

Reference Value = 14.8 V/m

Power Drift = -0.02 dB

Maximum value of SAR = 0.392 mW/g

Rear of Closed Handset with PHF (15mm Distance)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.563 W/kg

SAR(1 g) = 0.358 mW/g; SAR(10 g) = 0.218 mW/g

Reference Value = 14.8 V/m

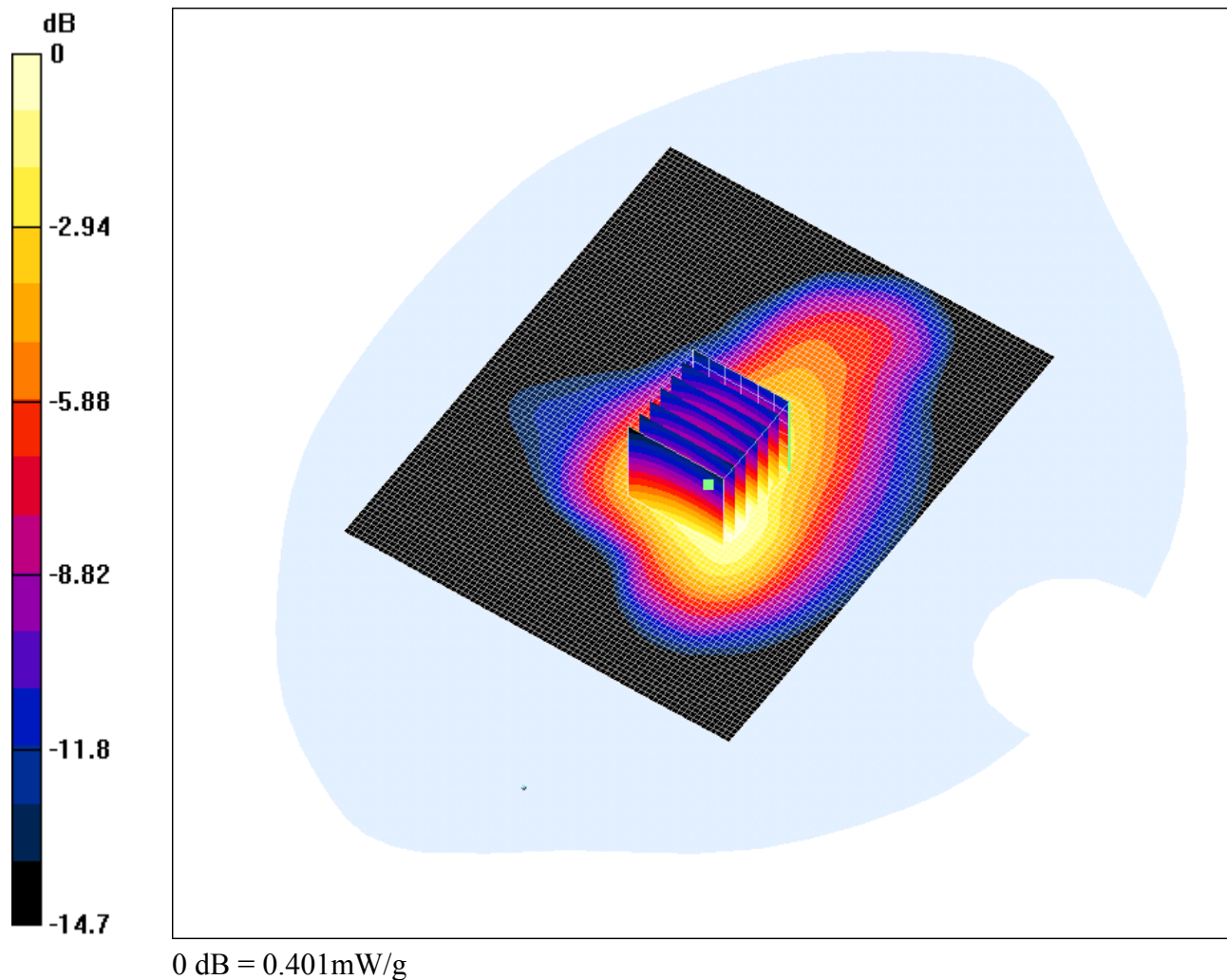
Power Drift = -0.02 dB

Maximum value of SAR = 0.382 mW/g

Date: 16/12/03

45446/JD06/032

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

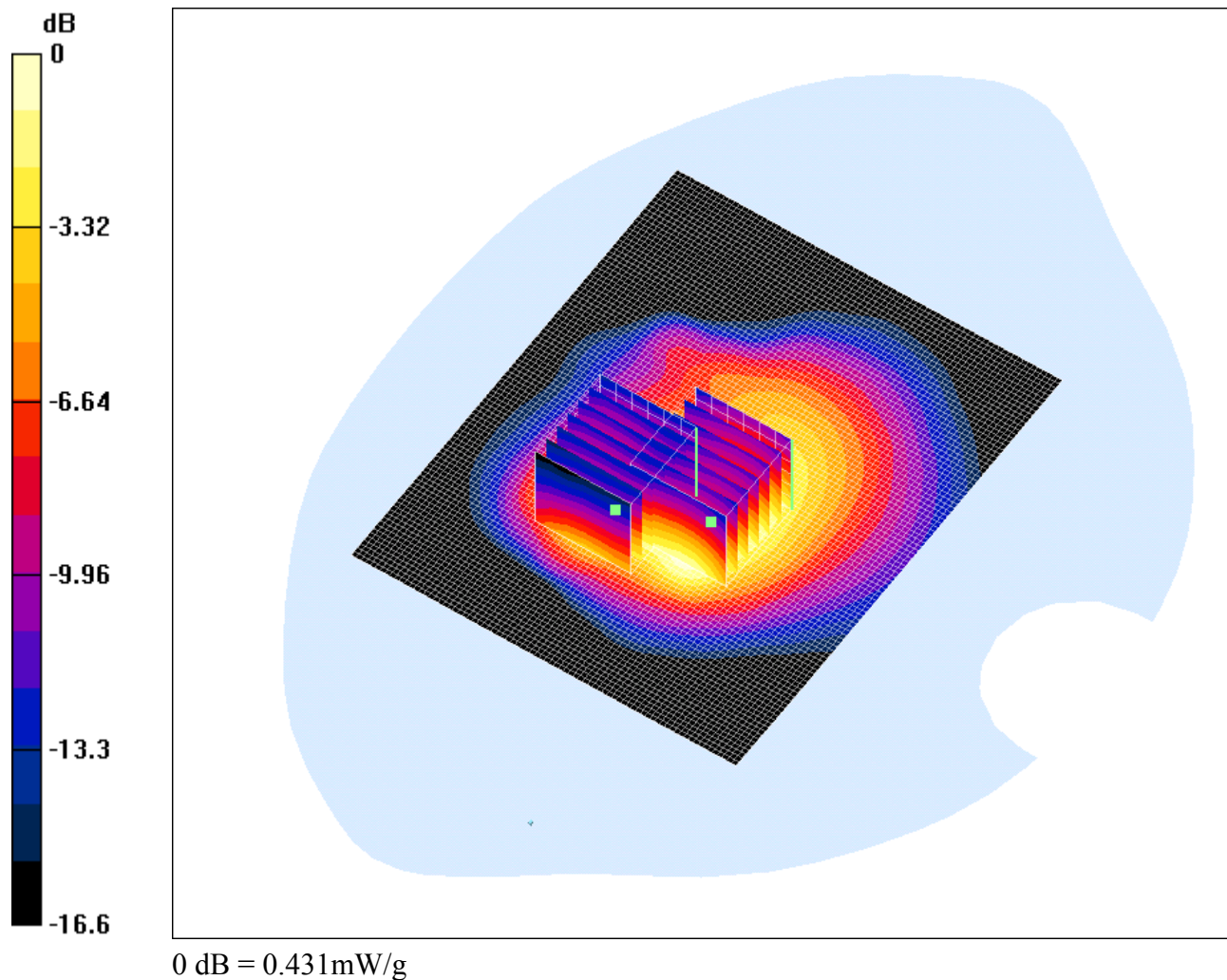
- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Rear of Handset in Case with Clip on Hook, Accessory Strap and PHF (20mm Distance)/Area Scan**(101x81x1):** Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$ Reference Value = 16.6 V/m Power Drift = -0.08 dB Maximum value of SAR = 0.395 mW/g **Rear of Handset in Case with Clip on Hook, Accessory Strap and PHF (20mm Distance)/Zoom Scan****(7x7x7) (7x7x7)/Cube 0:** Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$ Peak SAR (extrapolated) = 0.599 W/kg SAR(1 g) = 0.375 mW/g ; SAR(10 g) = 0.226 mW/g Reference Value = 16.6 V/m Power Drift = -0.08 dB Maximum value of SAR = 0.401 mW/g

Date: 16/12/03

45446/JD06/031

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Display of Handset in Case with Clip on Hook and PHF (25mm Distance)/Area Scan (101x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 17.5 V/m

Power Drift = 0.05 dB

Maximum value of SAR = 0.494 mW/g

Display of Handset in Case with Clip on Hook and PHF (25mm Distance)/Zoom Scan (7x7x7)

(7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 0.725 W/kg

SAR(1 g) = 0.435 mW/g ; SAR(10 g) = 0.263 mW/g

Reference Value = 17.5 V/m

Power Drift = 0.05 dB

Maximum value of SAR = 0.466 mW/g

Display of Handset in Case with Clip on Hook and PHF (25mm Distance)/Zoom Scan (7x7x7)

(7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 0.684 W/kg

SAR(1 g) = 0.397 mW/g ; SAR(10 g) = 0.23 mW/g

Reference Value = 17.5 V/m

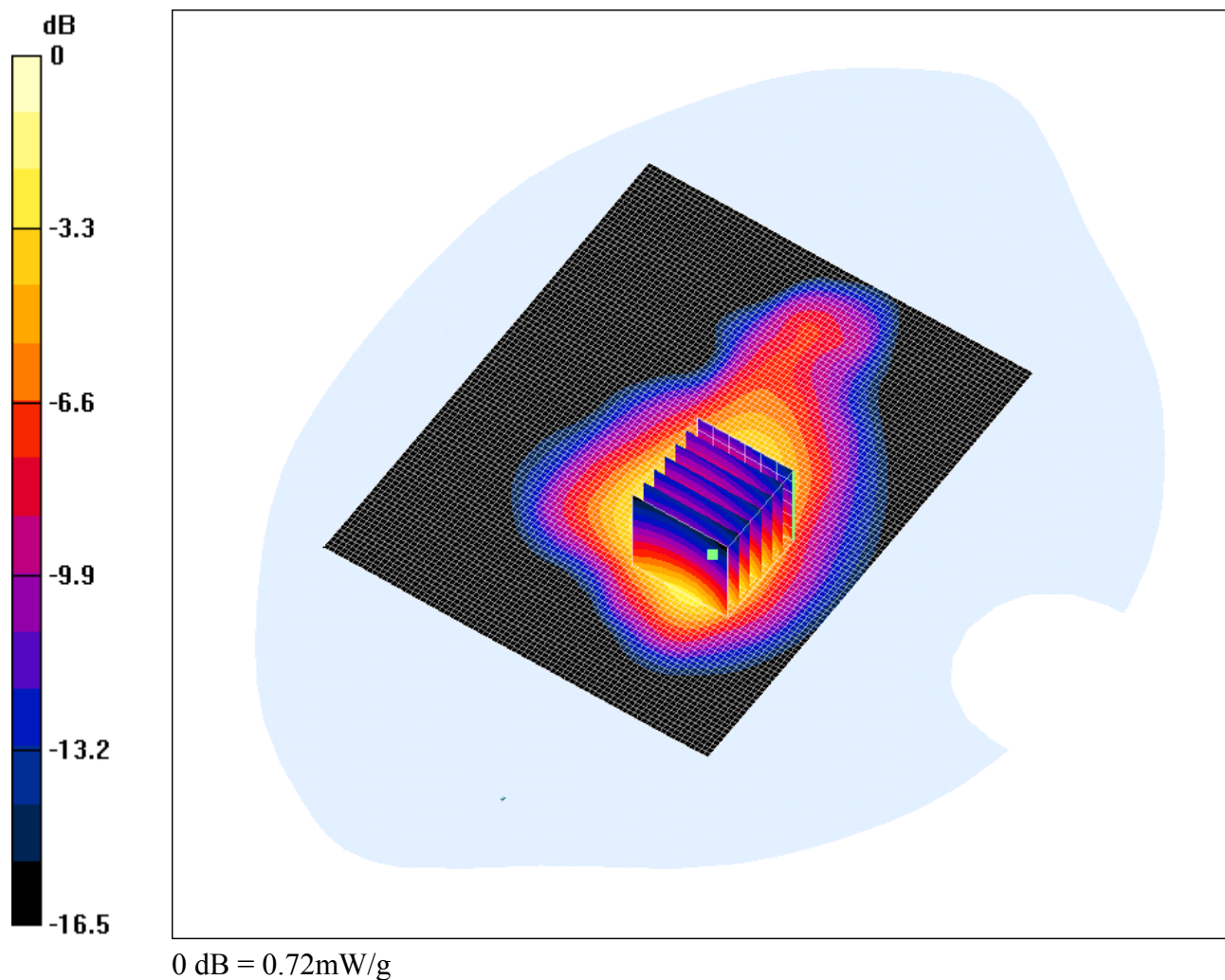
Power Drift = 0.05 dB

Maximum value of SAR = 0.431 mW/g

Date: 16/12/03

45446/JD06/030

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Rear of Handset in Case with Clip on Hook and PHF (18mm Distance)/Area Scan (101x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 19.9 V/m

Power Drift = -0.2 dB

Maximum value of SAR = 0.733 mW/g

**Rear of Handset in Case with Clip on Hook and PHF (18mm Distance)/Zoom Scan (7x7x7)
(7x7x7)/Cube 0:**

Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 1.11 W/kg

SAR(1 g) = 0.662 mW/g ; SAR(10 g) = 0.384 mW/g

Reference Value = 19.9 V/m

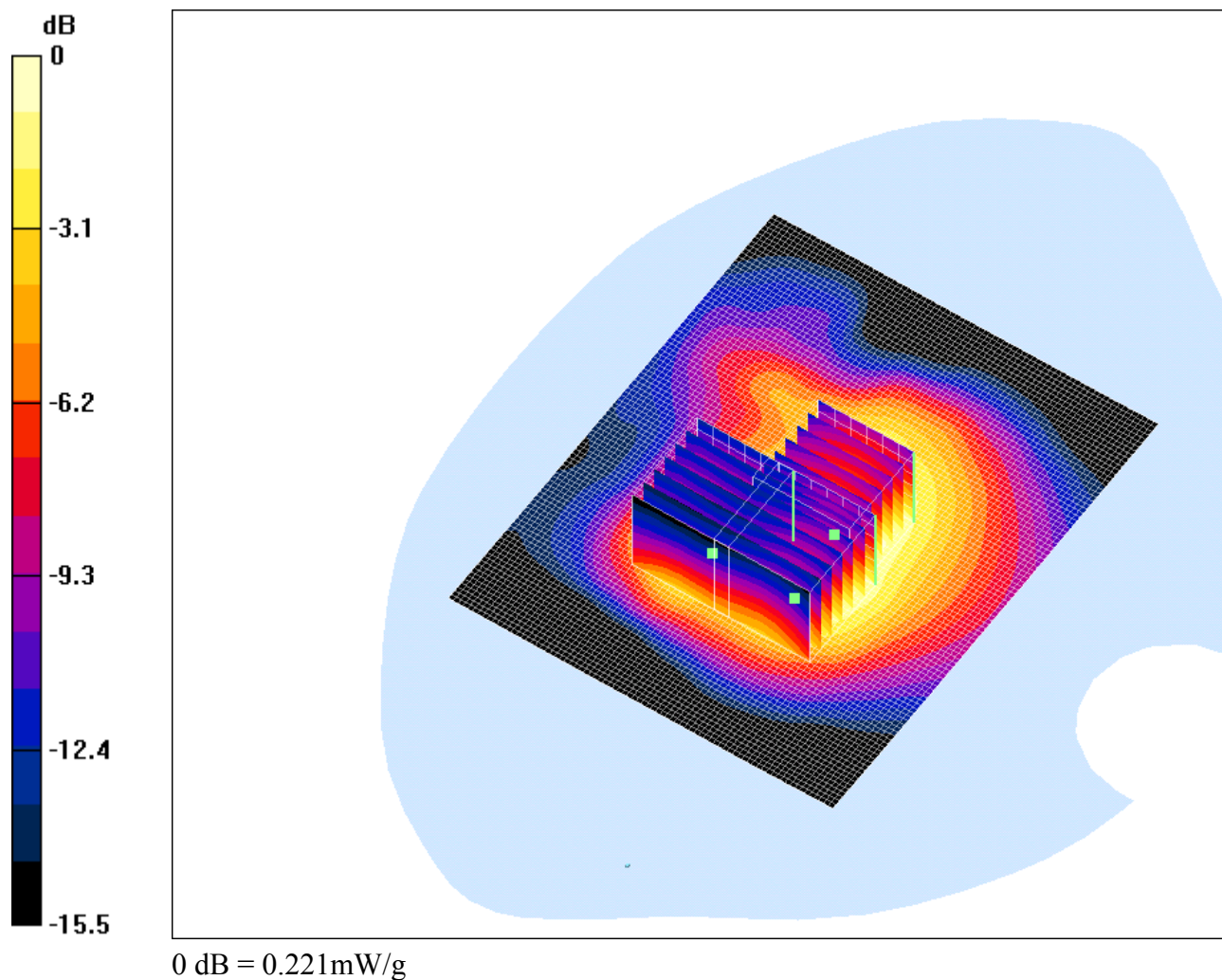
Power Drift = -0.2 dB

Maximum value of SAR = 0.72 mW/g

Date: 16/12/03

45446/JD06/029

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Display of Handset in Case with Clip in Pouch and PHF (25mm Distance)/Area Scan (101x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 14.4 V/m

Power Drift = -0.07 dB

Maximum value of SAR = 0.279 mW/g

Display of Handset in Case with Clip in Pouch and PHF (25mm Distance)/Zoom Scan (7x7x7)

(7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 0.395 W/kg

SAR(1 g) = 0.259 mW/g ; SAR(10 g) = 0.162 mW/g

Reference Value = 14.4 V/m

Power Drift = -0.07 dB

Maximum value of SAR = 0.28 mW/g

Display of Handset in Case with Clip in Pouch and PHF (25mm Distance)/Zoom Scan (7x7x7)

(7x7x7)/Cube 1: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 0.318 W/kg

SAR(1 g) = 0.209 mW/g ; SAR(10 g) = 0.125 mW/g

Reference Value = 14.4 V/m

Power Drift = -0.07 dB

Maximum value of SAR = 0.238 mW/g

Display of Handset in Case with Clip in Pouch and PHF (25mm Distance)/Zoom Scan (7x7x7)

(7x7x7)/Cube 2: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 0.302 W/kg

SAR(1 g) = 0.177 mW/g ; SAR(10 g) = 0.107 mW/g

Reference Value = 14.4 V/m

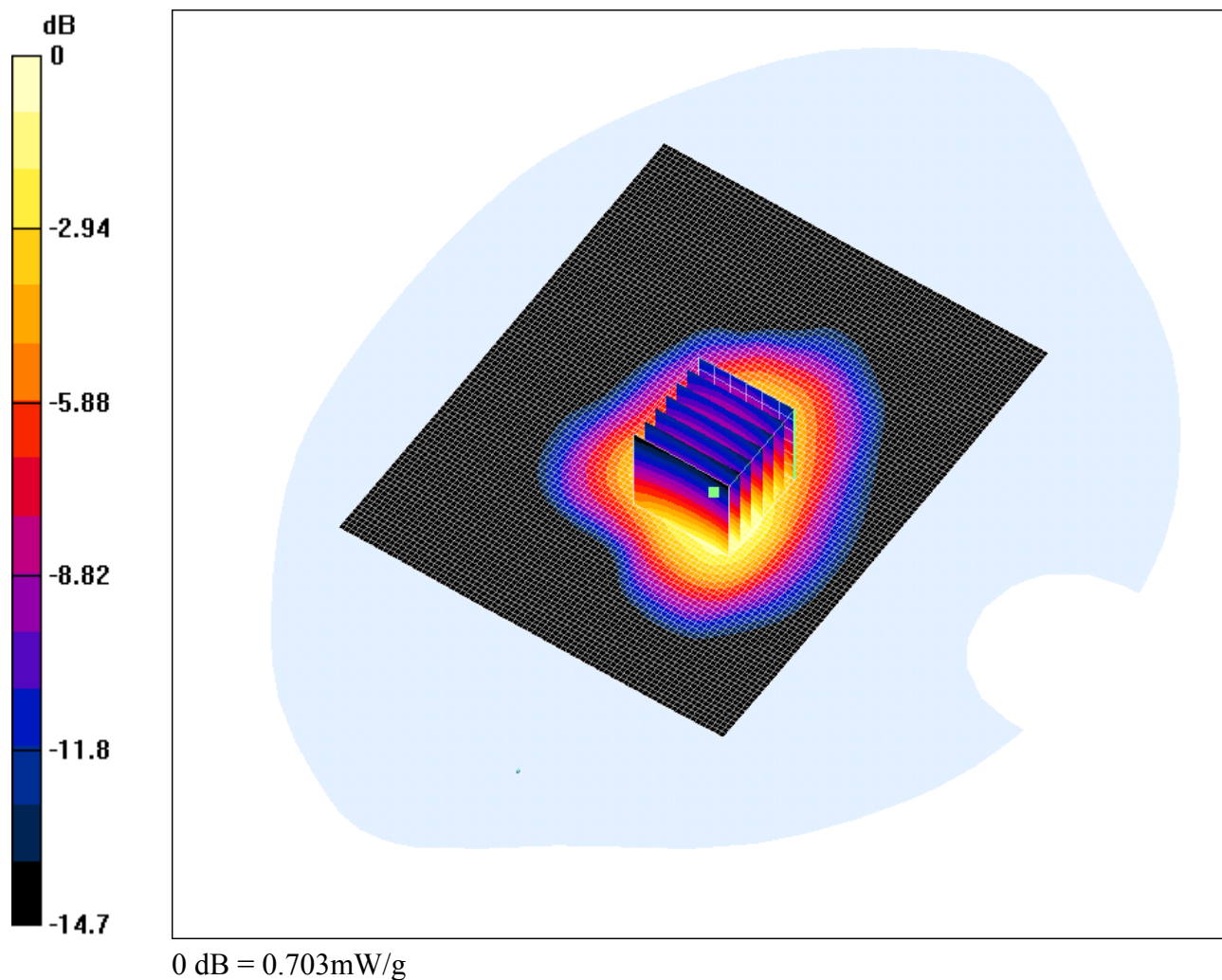
Power Drift = -0.07 dB

Maximum value of SAR = 0.221 mW/g

Date: 16/12/03

45446/JD06/028

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Rear of Handset in Case with Clip in Pouch and PHF (15mm Distance)/Area Scan (101x81x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Reference Value = 21.5 V/m

Power Drift = -0.08 dB

Maximum value of SAR = 0.67 mW/g

Rear of Handset in Case with Clip in Pouch and PHF (15mm Distance)/Zoom Scan (7x7x7)

(7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Peak SAR (extrapolated) = 1.06 W/kg

SAR(1 g) = 0.642 mW/g ; SAR(10 g) = 0.382 mW/g

Reference Value = 21.5 V/m

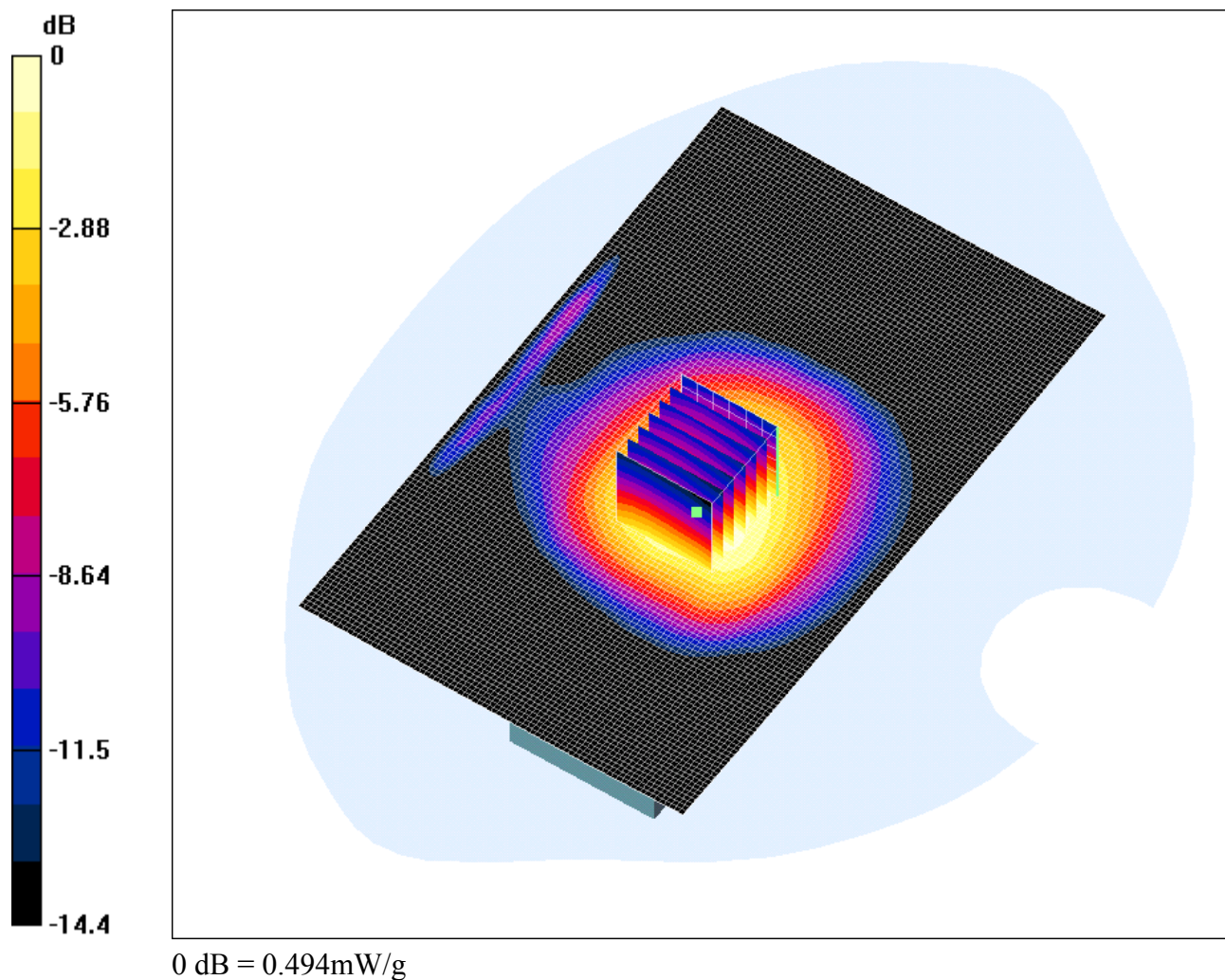
Power Drift = -0.08 dB

Maximum value of SAR = 0.703 mW/g

Date: 16/12/03

45446/JD06/027

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Display of Handset Facing Phantom With PHF (15mm Distance)/Area Scan (131x81x1): Measurement

grid: dx=15mm, dy=15mm

Reference Value = 16.7 V/m

Power Drift = 0.005 dB

Maximum value of SAR = 0.513 mW/g

Display of Handset Facing Phantom With PHF (15mm Distance)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.721 W/kg

SAR(1 g) = 0.463 mW/g; SAR(10 g) = 0.292 mW/g

Reference Value = 16.7 V/m

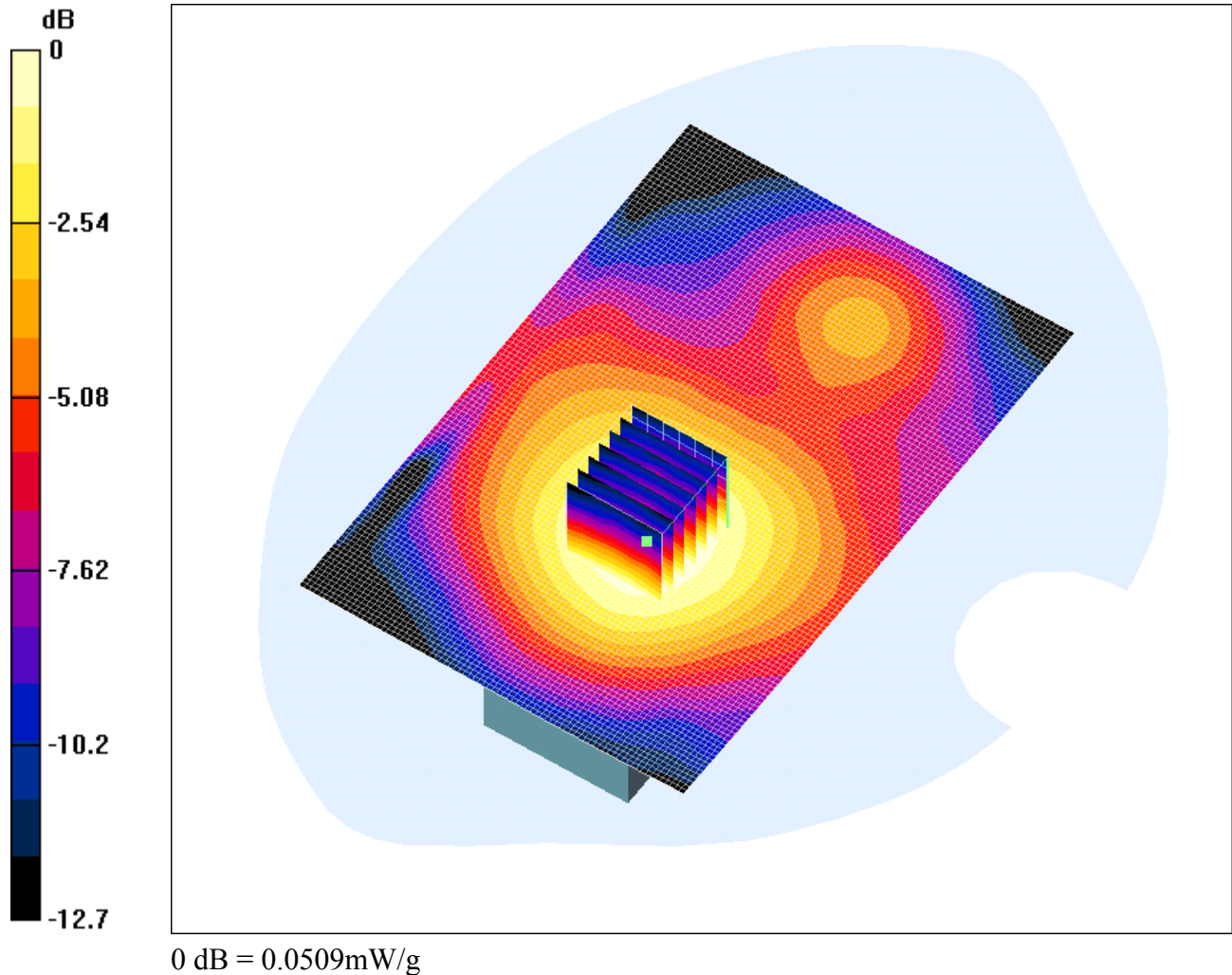
Power Drift = 0.005 dB

Maximum value of SAR = 0.494 mW/g

Date: 16/12/03

45446/JD06/026

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Display of Handset Facing Phantom (15mm Distance)/Area Scan (121x81x1): Measurement grid:

dx=15mm, dy=15mm

Reference Value = 4.79 V/m

Power Drift = -0.1 dB

Maximum value of SAR = 0.0509 mW/g

Display of Handset Facing Phantom (15mm Distance)/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.0703 W/kg

SAR(1 g) = 0.0482 mW/g; SAR(10 g) = 0.0315 mW/g

Reference Value = 4.79 V/m

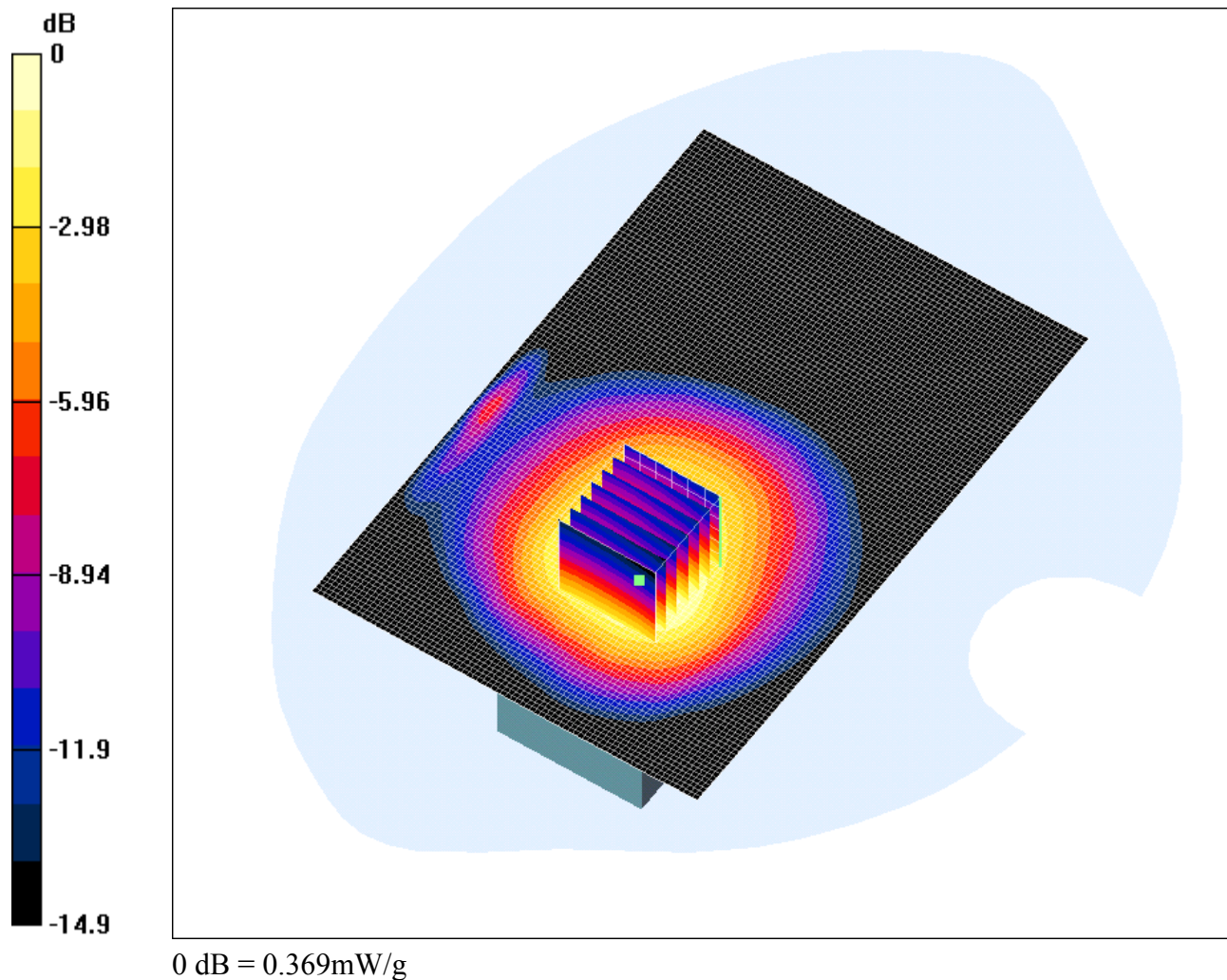
Power Drift = -0.1 dB

Maximum value of SAR = 0.0509 mW/g

Date: 16/12/03

45446/JD06/025

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1879.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MSL ($\sigma = 1.4801$ mho/m, $\epsilon_r = 52.1966$, $\rho = 1000$ kg/m³)

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.7, 4.7, 4.7); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Rear of Handset Facing Phantom (15mm Distance)/Area Scan (121x81x1): Measurement grid:

dx=15mm, dy=15mm

Reference Value = 9.11 V/m

Power Drift = -0.06 dB

Maximum value of SAR = 0.395 mW/g

Rear of Handset Facing Phantom (15mm Distance)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.551 W/kg

SAR(1 g) = 0.349 mW/g; SAR(10 g) = 0.22 mW/g

Reference Value = 9.11 V/m

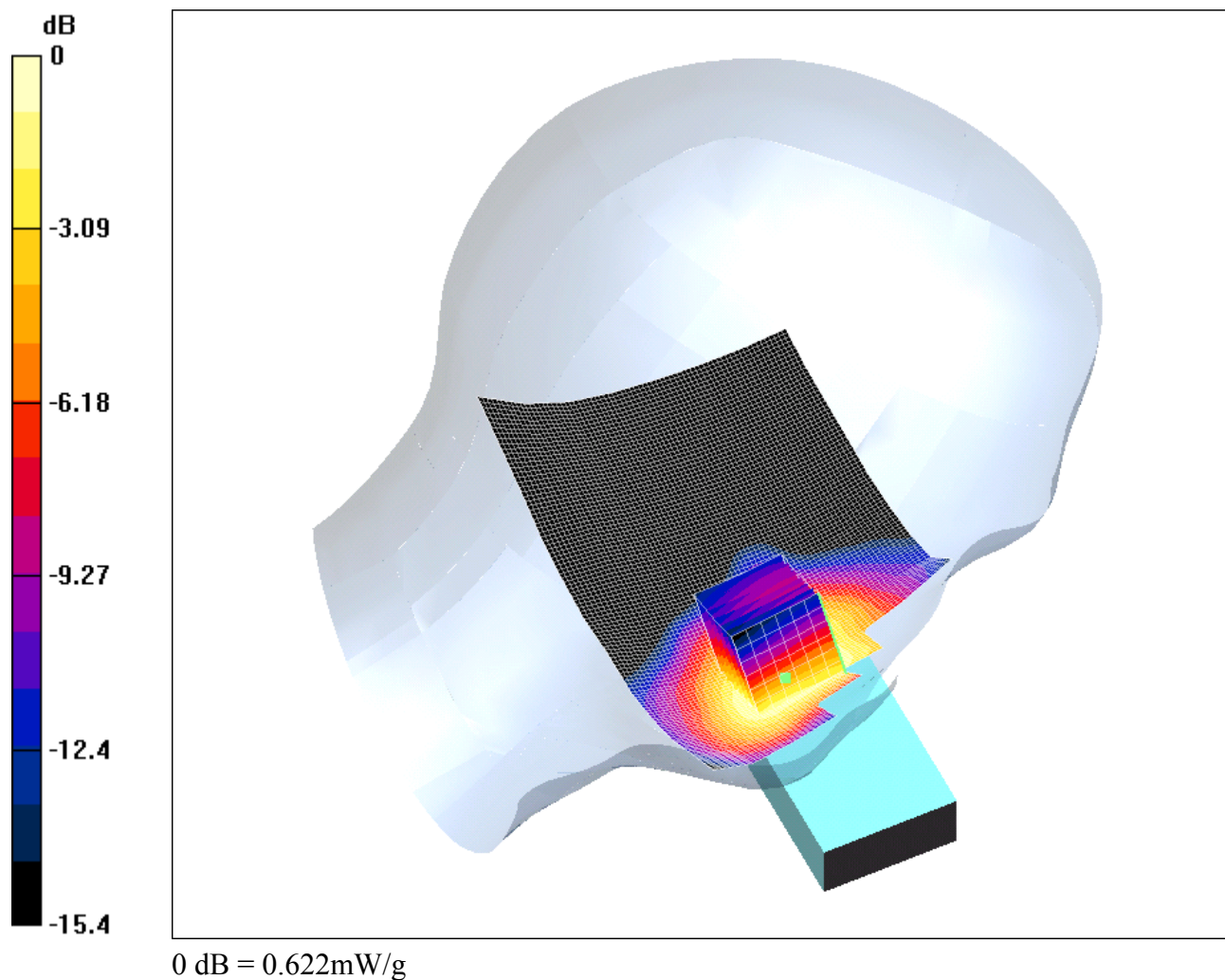
Power Drift = -0.06 dB

Maximum value of SAR = 0.369 mW/g

Date: 15/12/03

45446/JD06/024

Test Laboratory: RADIO FREQUENCY INVESTIGATION LTD.

DUT: S551; Type: S551; Serial: 004400252898455

Communication System: DCS 1900; Frequency: 1909.8 MHz; Duty Cycle: 1:8.3

Medium: 1900MHz HSL ($\sigma = 1.43677$ mho/m, $\epsilon_r = 39.7924$, $\rho = 1000$ kg/m³)

Phantom section: Left Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1528; ConvF(4.8, 4.8, 4.8); Calibrated: 29/07/2003
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn450; Calibrated: 19/05/2003
- Phantom: SAM 12b; Type: SAM 4.0; Serial: TP:1197
- Measurement SW: DASY4, V4.1 Build 47; Postprocessing SW: SEMCAD, V1.6 Build 116

Touch position - High/Area Scan 2 (71x131x1): Measurement grid: dx=15mm, dy=15mm

Reference Value = 2.25 V/m

Power Drift = -0.06 dB

Maximum value of SAR = 0.622 mW/g

Touch position - High/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Peak SAR (extrapolated) = 0.853 W/kg

SAR(1 g) = 0.578 mW/g; SAR(10 g) = 0.369 mW/g

Reference Value = 2.25 V/m

Power Drift = -0.06 dB

Maximum value of SAR = 0.622 mW/g