

Test Laboratory: Cetecom Inc. SAR 1 Lab

#### DUT: Rufus; Type: phone; Serial: cuff

Communication System: UID 0, 802.11bgn\_100% Duty Cycle (0); Frequency: 2412 MHz

Medium: MBBL1900-3800\_Batch 130619-1

Medium parameters used: f = 2412 MHz;  $\sigma = 1.985$  S/m;  $\varepsilon_r = 53.05$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Kathy; Air Temperature: 21.3C; Medium Temperature: 22.5C; Comments: ;

#### **DASY Configuration:**

• Probe: ES3DV3 - SN3244; ConvF(4.38, 4.38, 4.38); Calibrated: 4/28/2016;

• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0

• Electronics: DAE4 Sn1265; Calibrated: 5/11/2016

• Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1092

• DASY52 52.8.8(1222);

# **Flat-Section/Back 0mm\_b\_Ch 1/Area Scan (8x11x1):** Measurement grid: dx=12mm, dy=12mm Maximum value of SAR (measured) = 0.282 W/kg

## Flat-Section/Back 0mm\_b\_Ch 1/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm,

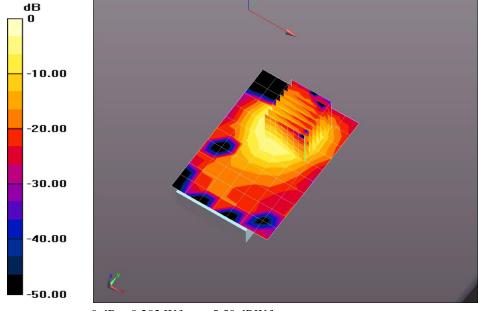
dz=5mm

Reference Value = 12.46 V/m; Power Drift = 0.08 dB

Peak SAR (extrapolated) = 0.629 W/kg

SAR(1 g) = 0.277 W/kg; SAR(10 g) = 0.131 W/kg

Maximum value of SAR (measured) = 0.364 W/kg



0 dB = 0.282 W/kg = -5.50 dBW/kg

Plot 2 Date/Time: 11/17/2016 8:30:08 AM

Test Laboratory: Cetecom Inc. SAR 1 Lab

#### DUT: Rufus; Type: phone; Serial: cuff

Communication System: UID 0, 802.11bgn\_100% Duty Cycle (0); Frequency: 2402 MHz

Medium: MBBL1900-3800\_Batch 130619-1

Medium parameters used: f = 2402 MHz;  $\sigma = 1.959$  S/m;  $\varepsilon_r = 52.438$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Kathy; Air Temperature: 22.4C; Medium Temperature: 21.5C; Comments: ;

#### **DASY Configuration:**

• Probe: ES3DV3 - SN3244; ConvF(4.38, 4.38, 4.38); Calibrated: 4/28/2016;

• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0

• Electronics: DAE4 Sn1265; Calibrated: 5/11/2016

• Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1092

• DASY52 52.8.8(1222);

# **Flat-Section 4/Back 0mm\_BT\_Ch 0/Area Scan (8x11x1):** Measurement grid: dx=12mm, dy=12mm Maximum value of SAR (measured) = 0.236 W/kg

## Flat-Section 4/Back 0mm\_BT\_Ch 0/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm,

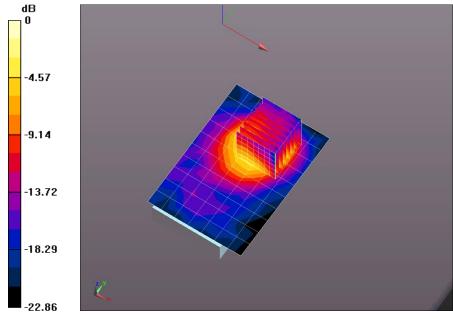
dz=5mm

Reference Value = 11.24 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.475 W/kg

SAR(1 g) = 0.213 W/kg; SAR(10 g) = 0.103 W/kg

Maximum value of SAR (measured) = 0.279 W/kg



0 dB = 0.236 W/kg = -6.27 dBW/kg



Plot 3 Date/Time: 11/15/2016 3:55:14 PM

Test Laboratory: Cetecom Inc. SAR 1 Lab

#### DUT: Rufus; Type: phone; Serial: cuff

Communication System: UID 0, 802.11bgn\_100% Duty Cycle (0); Frequency: 2422 MHz

Medium: MBBL1900-3800\_Batch 130619-1

Medium parameters used: f = 2422 MHz;  $\sigma = 1.978$  S/m;  $\varepsilon_r = 53.051$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Kathy; Air Temperature: 22C; Medium Temperature: 22.5C; Comments: ;

#### **DASY Configuration:**

Probe: ES3DV3 - SN3244; ConvF(4.38, 4.38, 4.38); Calibrated: 4/28/2016;

• Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0

• Electronics: DAE4 Sn1265; Calibrated: 5/11/2016

• Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1092

• DASY52 52.8.8(1222);

## Flat-Section/Back 0mm\_BW 40MHz\_Lower Ch 2/Area Scan (8x11x1): Measurement grid: dx=12mm,

dv=12mm

Maximum value of SAR (measured) = 0.284 W/kg

### Flat-Section/Back 0mm\_BW 40MHz\_Lower Ch 2/Zoom Scan (8x8x7)/Cube 0: Measurement grid:

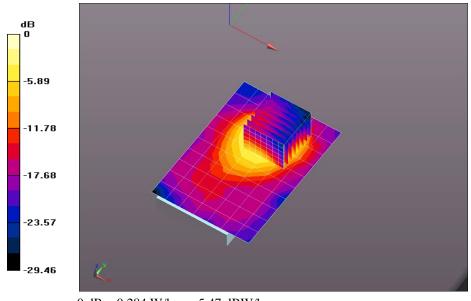
dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.55 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.536 W/kg

SAR(1 g) = 0.233 W/kg; SAR(10 g) = 0.113 W/kg

Maximum value of SAR (measured) = 0.310 W/kg



0 dB = 0.284 W/kg = -5.47 dBW/kg



Test Laboratory: Cetecom Inc. SAR 1 Lab

DUT: Rufus; Type: phone; Serial: cuff

Communication System: UID 0, 802.11bgn\_100% Duty Cycle (0); Frequency: 2412 MHz

Medium: HBBL1900-3800 Batch 130605-1

Medium parameters used: f = 2412 MHz;  $\sigma = 1.819$  S/m;  $\varepsilon_r = 38.62$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Kathy; Air Temperature: 22.7C; Medium Temperature: 22.5C; Comments: ;

#### **DASY Configuration:**

• Probe: ES3DV3 - SN3244; ConvF(4.63, 4.63, 4.63); Calibrated: 4/28/2016;

• Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0

• Electronics: DAE4 Sn1265; Calibrated: 5/11/2016

• Phantom: SAM; Type: QD 000 P40 CC; Serial: 1592

• DASY52 52.8.8(1222);

# **Flat-Section 3/Front 10mm\_b\_Ch 1/Area Scan (7x11x1):** Measurement grid: dx=12mm, dy=12mm Maximum value of SAR (measured) = 0.0422 W/kg

## Flat-Section 3/Front 10mm\_b\_Ch 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.102 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.0520 W/kg

SAR(1 g) = 0.030 W/kg; SAR(10 g) = 0.019 W/kg

Maximum value of SAR (measured) = 0.0362 W/kg

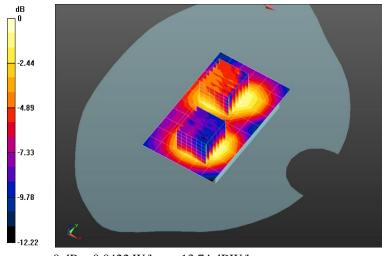
## Flat-Section 3/Front 10mm\_b\_Ch 1/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.102 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 0.0570 W/kg

#### SAR(1 g) = 0.034 W/kg; SAR(10 g) = 0.022 W/kg

Maximum value of SAR (measured) = 0.0401 W/kg



0 dB = 0.0422 W/kg = -13.74 dBW/kg



Plot 5 Date/Time: 11/18/2016 2:31:36 PM

Test Laboratory: Cetecom Inc. SAR 1 Lab

**DUT:** Rufus; Type: phone; Serial: cuff

Communication System: UID 0, 802.11bgn\_100% Duty Cycle (0); Frequency: 2402 MHz

Medium: HBBL1900-3800\_Batch 130605-1

Medium parameters used: f = 2402 MHz;  $\sigma = 1.809$  S/m;  $\varepsilon_r = 38.649$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Kathy; Air Temperature: 23.5C; Medium Temperature: 22.5C; Comments: ;

#### **DASY Configuration:**

• Probe: ES3DV3 - SN3244; ConvF(4.63, 4.63, 4.63); Calibrated: 4/28/2016;

- Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0
- Electronics: DAE4 Sn1265; Calibrated: 5/11/2016
- Phantom: SAM; Type: QD 000 P40 CC; Serial: 1592
- DASY52 52.8.8(1222);

# Flat-Section 3/Front 10mm\_BT\_ Ch 0/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm Maximum value of SAR (measured) = 0.0293 W/kg

## Flat-Section 3/Front 10mm\_BT\_ Ch 0/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm,

dy=5mm, dz=5mm

Reference Value = 4.246 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 0.0470 W/kg

SAR(1 g) = 0.027 W/kg; SAR(10 g) = 0.016 W/kg

Maximum value of SAR (measured) = 0.0325 W/kg

## Flat-Section 3/Front 10mm\_BT\_ Ch 0/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm,

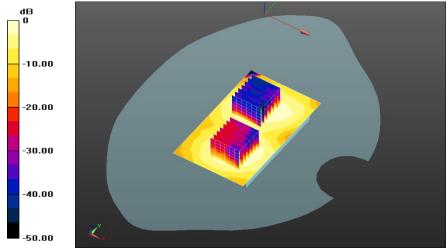
dy=5mm, dz=5mm

Reference Value = 4.246 V/m; Power Drift = 0.20 dB

Peak SAR (extrapolated) = 0.0490 W/kg

#### SAR(1 g) = 0.029 W/kg; SAR(10 g) = 0.018 W/kg

Maximum value of SAR (measured) = 0.0339 W/kg



0 dB = 0.0293 W/kg = -15.34 dBW/kg

Plot 6 Date/Time: 11/16/2016 9:09:34 AM

Test Laboratory: Cetecom Inc. SAR 1 Lab

#### DUT: Rufus; Type: phone; Serial: cuff

Communication System: UID 0, 802.11bgn\_100% Duty Cycle (0); Frequency: 2422 MHz

Medium: HBBL1900-3800\_Batch 130605-1

Medium parameters used: f = 2422 MHz;  $\sigma = 1.823$  S/m;  $\varepsilon_r = 37.588$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: Kathy; Air Temperature: 23.6C; Medium Temperature: 21.6C; Comments: ;

#### **DASY Configuration:**

Probe: ES3DV3 - SN3244; ConvF(4.63, 4.63, 4.63); Calibrated: 4/28/2016;

• Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0

• Electronics: DAE4 Sn1265; Calibrated: 5/11/2016

Phantom: SAM; Type: QD 000 P40 CC; Serial: 1592

• DASY52 52.8.8(1222);

#### Flat-Section 2/Front 10mm\_BW 40MHz\_Lower Ch 2/Area Scan (7x11x1): Measurement grid:

dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.0361 W/kg

#### Flat-Section 2/Front 10mm\_BW 40MHz\_Lower Ch 2/Zoom Scan (9x8x7)/Cube 0: Measurement

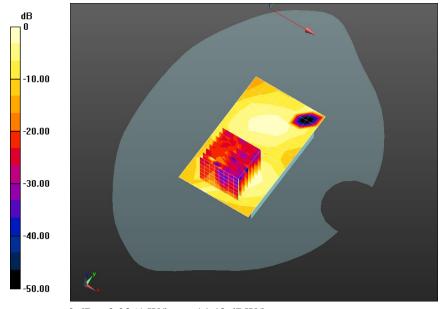
grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.899 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 0.0410 W/kg

SAR(1 g) = 0.020 W/kg; SAR(10 g) = 0.011 W/kg

Maximum value of SAR (measured) = 0.0407 W/kg



0 dB = 0.0361 W/kg = -14.43 dBW/kg



Plot 7 Date/Time: 11/15/2016 3:11:27 PM

Test Laboratory: Cetecom Inc. SAR 1 Lab

#### DUT: Dipole 2450 MHz - D2450V2 - SN859\_April 2016; Type: D2450V2; Serial: D2450V2 - SN:859

Communication System: UID 10000, CW; Frequency: 2450 MHz

Medium: HBBL1900-3800\_Batch 130605-1

Medium parameters used: f = 2450 MHz;  $\sigma = 1.871$  S/m;  $\varepsilon_r = 37.456$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: kathy; Air Temperature: 21.5C; Medium Temperature: 22.5C; Comments: ;

#### **DASY Configuration:**

Probe: ES3DV3 - SN3244; ConvF(4.63, 4.63, 4.63); Calibrated: 4/28/2016;

Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0

Electronics: DAE4 Sn1265; Calibrated: 5/11/2016

Phantom: SAM; Type: QD 000 P40 CC; Serial: 1592

DASY52 52.8.8(1222);

## System Performance Check/d=10mm, Pin=0.1W/Area Scan (6x6x1): Measurement grid: dx=12mm,

dy=12mm

Maximum value of SAR (measured) = 5.95 W/kg

### System Performance Check/d=10mm, Pin=0.1W/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

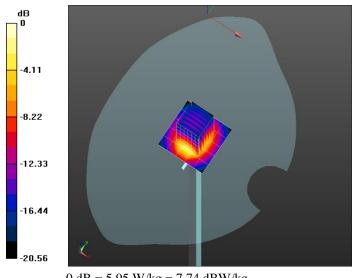
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 66.50 V/m; Power Drift = -0.19 dB

Peak SAR (extrapolated) = 11.7 W/kg

SAR(1 g) = 5.6 W/kg; SAR(10 g) = 2.6 W/kg

Maximum value of SAR (measured) = 7.35 W/kg



0 dB = 5.95 W/kg = 7.74 dBW/kg

Plot 8 Date/Time: 11/17/2016 4:35:46 PM

Test Laboratory: Cetecom Inc. SAR 1 Lab

#### DUT: Dipole 2450 MHz - D2450V2 - SN859\_April 2016; Type: D2450V2; Serial: D2450V2 - SN:859

Communication System: UID 10000, CW; Frequency: 2450 MHz

Medium: HBBL1900-3800\_Batch 130605-1

Medium parameters used: f = 2450 MHz;  $\sigma = 1.858 \text{ S/m}$ ;  $\varepsilon_r = 38.496$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: kathy; Air Temperature: 22.5C; Medium Temperature: 22.7C; Comments: ;

#### **DASY Configuration:**

• Probe: ES3DV3 - SN3244; ConvF(4.63, 4.63, 4.63); Calibrated: 4/28/2016;

• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0

• Electronics: DAE4 Sn1265; Calibrated: 5/11/2016

• Phantom: SAM; Type: QD 000 P40 CC; Serial: 1592

• DASY52 52.8.8(1222);

## System Performance Check/d=10mm, Pin=0.1W/Area Scan (6x6x1): Measurement grid: dx=12mm,

dy=12mm

Maximum value of SAR (measured) = 4.60 W/kg

### System Performance Check/d=10mm, Pin=0.1W/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

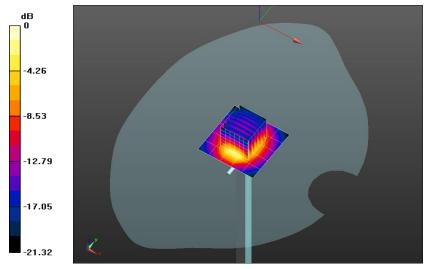
Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 61.34 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 9.90 W/kg

SAR(1 g) = 4.82 W/kg; SAR(10 g) = 2.23 W/kg

Maximum value of SAR (measured) = 6.41 W/kg



0 dB = 4.60 W/kg = 6.63 dBW/kg



Test Laboratory: Cetecom Inc. SAR 1 Lab

#### DUT: Dipole 2450 MHz - D2450V2 - SN859\_April 2016; Type: D2450V2; Serial: D2450V2 - SN:859

Communication System: UID 10000, CW; Frequency: 2450 MHz

Medium: MBBL1900-3800 Batch 130619-1

Medium parameters used: f = 2450 MHz;  $\sigma = 2.019 \text{ S/m}$ ;  $\varepsilon_r = 52.91$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: kathy; Air Temperature: 21.6C; Medium Temperature: 22.5C; Comments: ;

#### **DASY Configuration:**

Probe: ES3DV3 - SN3244; ConvF(4.38, 4.38, 4.38); Calibrated: 4/28/2016;

• Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0

• Electronics: DAE4 Sn1265; Calibrated: 5/11/2016

• Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1092

• DASY52 52.8.8(1222);

### System Performance Check/d=10mm, Pin=0.1W/Area Scan (6x6x1): Measurement grid: dx=12mm,

dy=12mm

Maximum value of SAR (measured) = 5.44 W/kg

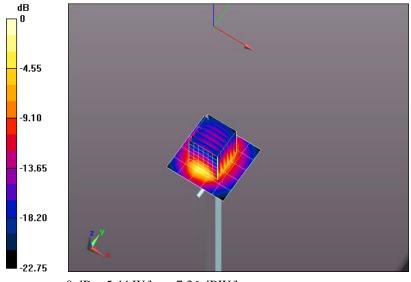
### System Performance Check/d=10mm, Pin=0.1W/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm Reference Value = 58.96 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 5.3 W/kg; SAR(10 g) = 2.47 W/kg

Maximum value of SAR (measured) = 6.96 W/kg



0 dB = 5.44 W/kg = 7.36 dBW/kg



Test Laboratory: Cetecom Inc. SAR 1 Lab

#### DUT: Dipole 2450 MHz - D2450V2 - SN859\_April 2016; Type: D2450V2; Serial: D2450V2 - SN:859

Communication System: UID 10000, CW; Frequency: 2450 MHz

Medium: MBBL1900-3800\_Batch 130619-1

Medium parameters used: f = 2450 MHz;  $\sigma = 2.002 \text{ S/m}$ ;  $\varepsilon_r = 52.265$ ;  $\rho = 1000 \text{ kg/m}^3$ 

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

Procedure Notes: Test Technician: kathy; Air Temperature: 23.1C; Medium Temperature: 22.2C; Comments: ;

#### **DASY Configuration:**

Probe: ES3DV3 - SN3244; ConvF(4.38, 4.38, 4.38); Calibrated: 4/28/2016;

• Sensor-Surface: 3mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 3mm (Mechanical Surface Detection), z = 2.0, 32.0

• Electronics: DAE4 Sn1265; Calibrated: 5/11/2016

• Phantom: ELI 4.0; Type: QDOVA001BA; Serial: 1092

• DASY52 52.8.8(1222);

### System Performance Check/d=10mm, Pin=0.1W/Area Scan (6x6x1): Measurement grid: dx=12mm,

dy=12mm

Maximum value of SAR (measured) = 4.79 W/kg

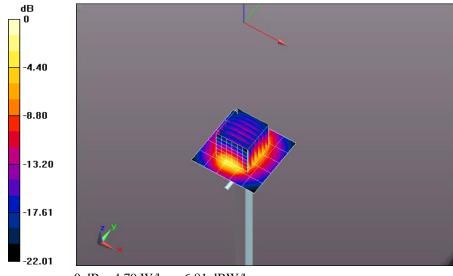
## System Performance Check/d=10mm, Pin=0.1W/Zoom Scan (7x7x7) (7x7x7)/Cube 0:

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

Reference Value = 57.54 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 9.88 W/kg

SAR(1 g) = 4.78 W/kg; SAR(10 g) = 2.24 W/kgMaximum value of SAR (measured) = 6.29 W/kg



0 dB = 4.79 W/kg = 6.81 dBW/kg