

# Appendix B. Plots of SAR Measurement

The plots are shown as follows.

SPORTON INTERNATIONAL (KUNSHAN) INC.

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Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab

Date: 2011-11-2

#### #01 802.11b\_Face\_0 cm\_Ch11\_1M

**DUT: 181603** 

Communication System: WIFI; Frequency: 2462 MHz; Duty Cycle: 1:1.24

Medium: MSL 2450\_111101 Medium parameters used: f = 2462 MHz;  $\sigma = 2.027$  mho/m;  $\varepsilon_r =$ 

53.408;  $\rho = 1000 \text{ kg/m}^3$ 

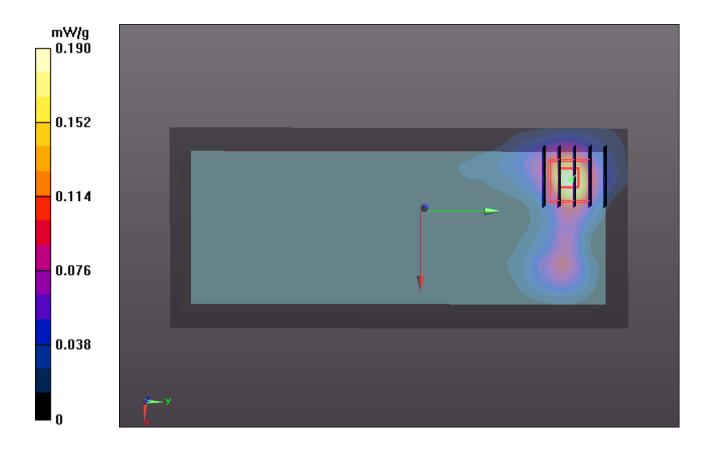
Ambient Temperature: 23.3 °C; Liquid Temperature: 21.4 °C

## DASY5 Configuration:

- Probe: ET3DV6 SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch11/Area Scan (71x161x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.190 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 1.249 V/m; Power Drift = 0.02 dB Peak SAR (extrapolated) = 0.522 W/kg SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.092 mW/g Maximum value of SAR (measured) = 0.224 mW/g



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#### #01 802.11b\_Face\_0 cm\_Ch11\_1M\_2D

**DUT: 181603** 

Communication System: WIFI; Frequency: 2462 MHz; Duty Cycle: 1:1.24

Medium: MSL 2450\_111101 Medium parameters used: f = 2462 MHz;  $\sigma = 2.027$  mho/m;  $\varepsilon_r =$ 

53.408;  $\rho = 1000 \text{ kg/m}^3$ 

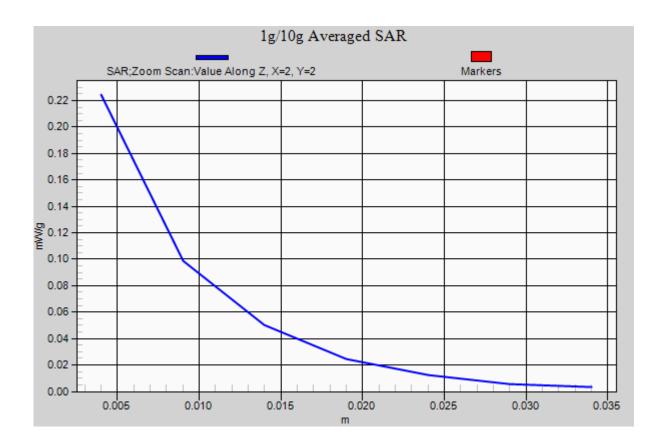
Ambient Temperature: 23.3 °C; Liquid Temperature: 21.4 °C

#### DASY5 Configuration:

- Probe: ET3DV6 SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

**Ch11/Area Scan (71x161x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.190 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 1.249 V/m; Power Drift = 0.02 dB Peak SAR (extrapolated) = 0.522 W/kg SAR(1 g) = 0.203 mW/g; SAR(10 g) = 0.092 mW/g Maximum value of SAR (measured) = 0.224 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2011-11-2

#### #02 802.11b\_Bottom\_0 cm\_Ch11\_1M

#### **DUT: 181603**

Communication System: WIFI; Frequency: 2462 MHz; Duty Cycle: 1:1.24

Medium: MSL 2450 111101 Medium parameters used: f = 2462 MHz;  $\sigma = 2.027$  mho/m;  $\varepsilon_r =$ 

53.408;  $\rho = 1000 \text{ kg/m}^3$ 

Ambient Temperature: 23.3 °C; Liquid Temperature: 21.4 °C

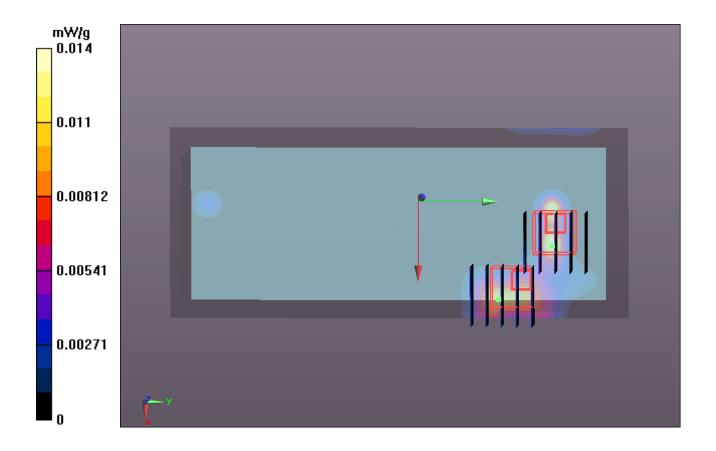
#### DASY5 Configuration:

- Probe: ET3DV6 SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011-5-20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1210; Calibrated: 2010-11-18
- Phantom: SAM3; Type: SAM; Serial: TP-1079
- Measurement SW: DASY52, Version 52.6 (2); SEMCAD X Version 14.4.5 (3634)

# **Ch11/Area Scan (71x161x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.014 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 0.230 V/m; Power Drift = 0.0081 dB Peak SAR (extrapolated) = 0.032 W/kg SAR(1 g) = 0.014 mW/g; SAR(10 g) = 0.00484 mW/g Maximum value of SAR (measured) = 0.017 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 0.230 V/m; Power Drift = 0.0081 dB Peak SAR (extrapolated) = 0.019 W/kg SAR(1 g) = 0.00485 mW/g; SAR(10 g) = 0.00261 mW/g Maximum value of SAR (measured) = 0.00666 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2011/12/15

### #03 802.11b\_Left Side\_0cm\_Ch11

#### **DUT: 181603**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111215 Medium parameters used: f = 2462 MHz;  $\sigma = 1.98$  mho/m;  $\varepsilon_r = 51.6$ ;  $\rho = 1000$ 

 $kg/m^3$ 

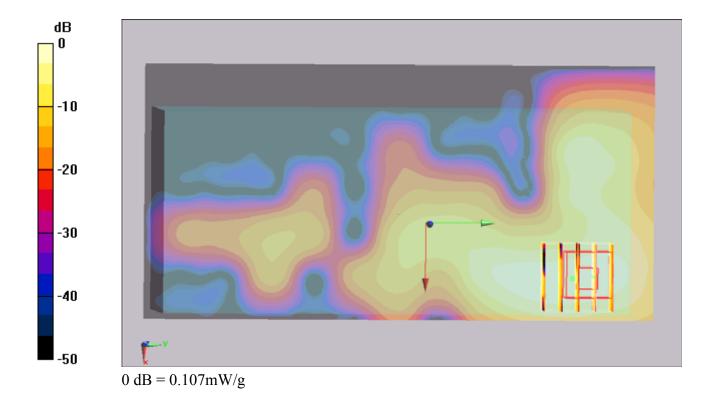
Ambient Temperature: 22.5; Liquid Temperature: 21.5

### DASY5 Configuration:

- Probe: ET3DV6 SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2011/6/17
- Phantom: ELI 4.0 Front; Type: QD 0VA 002 AA; Serial: TP-1131
- -; SEMCAD X Version 13.4 Build 125

# **Ch11/Area Scan (61x121x1):** Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 0.093 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 1.55 V/m; Power Drift = -0.094 dB Peak SAR (extrapolated) = 0.328 W/kg SAR(1 g) = 0.108 mW/g; SAR(10 g) = 0.047 mW/g Maximum value of SAR (measured) = 0.107 mW/g



Test Laboratory: Sporton International Inc. SAR/HAC Testing Lab Date: 2011/12/15

### #04 802.11b\_Right Side\_0cm\_Ch11

#### **DUT: 181603**

Communication System: 802.11b; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: MSL\_2450\_111215 Medium parameters used: f = 2462 MHz;  $\sigma = 1.98$  mho/m;  $\epsilon_r = 51.6$ ;  $\rho = 1000$ 

 $kg/m^3$ 

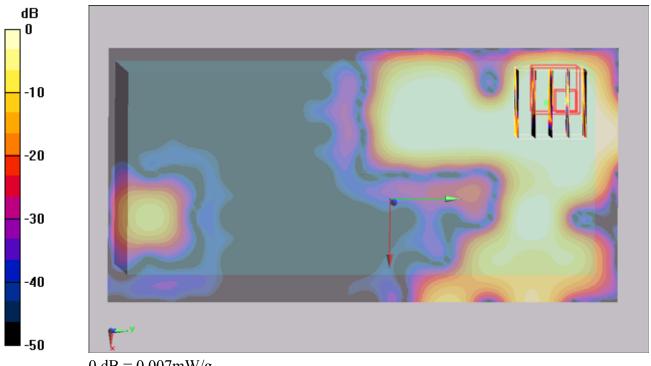
Ambient Temperature: 22.5; Liquid Temperature: 21.5

### DASY5 Configuration:

- Probe: ET3DV6 SN1787; ConvF(3.96, 3.96, 3.96); Calibrated: 2011/5/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1279; Calibrated: 2011/6/17
- Phantom: ELI 4.0 Front; Type: QD 0VA 002 AA; Serial: TP-1131
- -; SEMCAD X Version 13.4 Build 125

# **Ch11/Area Scan (61x121x1):** Measurement grid: dx=20mm, dy=20mm Maximum value of SAR (interpolated) = 0.064 mW/g

Ch11/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm Reference Value = 0.222 V/m; Power Drift = 0.15 dB Peak SAR (extrapolated) = 0.012 W/kg SAR(1 g) = 0.00194 mW/g; SAR(10 g) = 0.000399 mW/g Maximum value of SAR (measured) = 0.007 mW/g



0 dB = 0.007 mW/g

## #01 RFID\_Front\_0cm\_Ch50\_Earphone

#### DUT: 102535-01

Communication System: RFID; Frequency: 927.25 MHz; Duty Cycle: 1:1

Medium: MSL 900 111217 Medium parameters used : f = 927.25 MHz;  $\sigma = 1.09$  mho/m;  $\epsilon_r = 53.8$ ;

Date: 2011/12/17

 $\rho = 1000 \text{ kg/m}^3$ 

Ambient Temperature : 22.3 °C; Liquid Temperature : 21.3 °C

## DASY4 Configuration:

- Probe: EX3DV4 SN3792; ConvF(8.91, 8.91, 8.91); Calibrated: 2011/6/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2011/11/22
- Phantom: ELI 4.0 Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

# Ch50/Area Scan (81x161x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.007 mW/g

# Ch50/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.000 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.005 W/kg

SAR(1 g) = 0.00385 mW/g; SAR(10 g) = 0.00228 mW/g

Maximum value of SAR (measured) = 0.005 mW/g

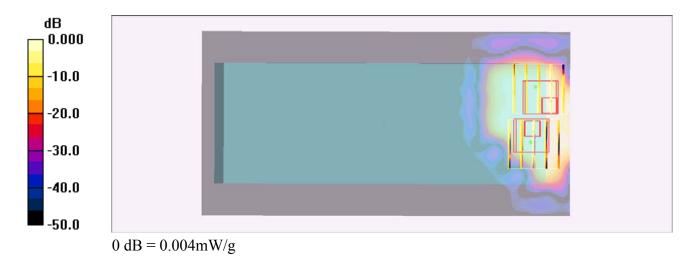
# Ch50/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.000 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.005 W/kg

SAR(1 g) = 0.00307 mW/g; SAR(10 g) = 0.00139 mW/g

Maximum value of SAR (measured) = 0.004 mW/g



## #02 RFID\_Back\_0cm\_Ch50\_Earphone

#### DUT: 102535-01

Communication System: RFID; Frequency: 927.25 MHz; Duty Cycle: 1:1

Medium: MSL 900 111217 Medium parameters used : f = 927.25 MHz;  $\sigma = 1.09$  mho/m;  $\epsilon_r = 53.8$ ;

Date: 2011/12/17

 $\rho = 1000 \text{ kg/m}^3$ 

Ambient Temperature: 22.3 °C; Liquid Temperature: 21.3 °C

#### DASY4 Configuration:

- Probe: EX3DV4 SN3792; ConvF(8.91, 8.91, 8.91); Calibrated: 2011/6/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2011/11/22
- Phantom: ELI 4.0 Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Ch50/Area Scan (81x161x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.105 mW/g

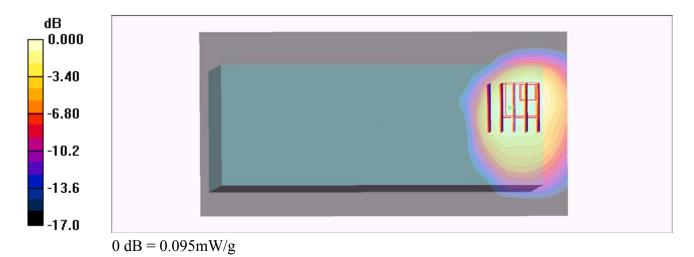
Ch50/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.000 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.192 W/kg

SAR(1 g) = 0.086 mW/g; SAR(10 g) = 0.050 mW/g

Maximum value of SAR (measured) = 0.095 mW/g



# #02 RFID\_Back\_0cm\_Ch50\_Earphone\_2D

**DUT: 102535-01** 

Communication System: RFID; Frequency: 927.25 MHz; Duty Cycle: 1:1

Medium: MSL 900 111217 Medium parameters used : f = 927.25 MHz;  $\sigma = 1.09$  mho/m;  $\epsilon_r = 53.8$ ;

Date: 2011/12/17

 $\rho = 1000 \text{ kg/m}^3$ 

Ambient Temperature : 22.3 °C; Liquid Temperature : 21.3 °C

DASY4 Configuration:

- Probe: EX3DV4 - SN3792; ConvF(8.91, 8.91, 8.91); Calibrated: 2011/6/20

- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2011/11/22
- Phantom: ELI 4.0 Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

**Ch50/Area Scan (81x161x1):** Measurement grid: dx=15mm, dy=15mm Maximum value of SAR (interpolated) = 0.105 mW/g

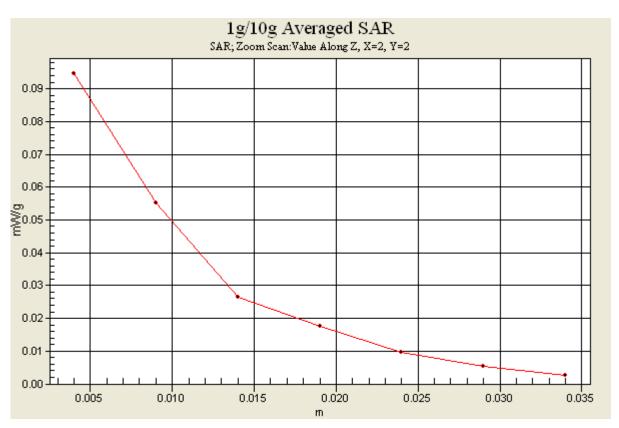
Ch50/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.000 V/m; Power Drift = 0.000 dB

Peak SAR (extrapolated) = 0.192 W/kg

SAR(1 g) = 0.086 mW/g; SAR(10 g) = 0.050 mW/g

Maximum value of SAR (measured) = 0.095 mW/g



# #03 RFID\_Left Side\_0cm\_Ch50\_Handle

#### DUT: 102535-01

Communication System: RFID; Frequency: 927.25 MHz; Duty Cycle: 1:1

Medium: MSL 900 111217 Medium parameters used : f = 927.25 MHz;  $\sigma = 1.09$  mho/m;  $\epsilon_r = 53.8$ ;

Date: 2011/12/17

 $\rho = 1000 \text{ kg/m}^3$ 

Ambient Temperature : 22.3 °C; Liquid Temperature : 21.3 °C

## DASY4 Configuration:

- Probe: EX3DV4 SN3792; ConvF(8.91, 8.91, 8.91); Calibrated: 2011/6/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2011/11/22
- Phantom: ELI 4.0 Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

# Ch50/Area Scan (111x161x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.023 mW/g

## Ch50/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.57 V/m; Power Drift = -0.072 dB

Peak SAR (extrapolated) = 0.041 W/kg

SAR(1 g) = 0.021 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.024 mW/g

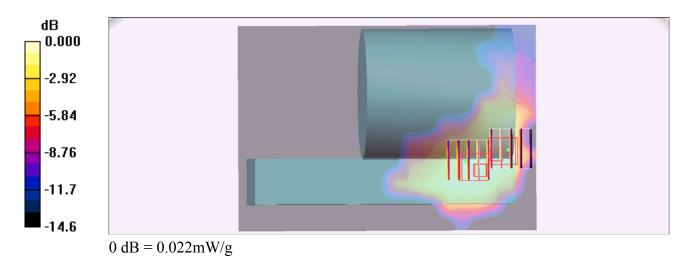
# Ch50/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.57 V/m; Power Drift = -0.072 dB

Peak SAR (extrapolated) = 0.030 W/kg

SAR(1 g) = 0.020 mW/g; SAR(10 g) = 0.012 mW/g

Maximum value of SAR (measured) = 0.022 mW/g



## #04 RFID\_Right Side\_0cm\_Ch50\_Earphone\_Handle

#### DUT: 102535-01

Communication System: RFID; Frequency: 927.25 MHz; Duty Cycle: 1:1

Medium: MSL 900 111217 Medium parameters used : f = 927.25 MHz;  $\sigma = 1.09$  mho/m;  $\varepsilon_r = 53.8$ ;

Date: 2011/12/17

 $\rho = 1000 \text{ kg/m}^3$ 

Ambient Temperature : 22.3 °C; Liquid Temperature : 21.3 °C

#### DASY4 Configuration:

- Probe: EX3DV4 SN3792; ConvF(8.91, 8.91, 8.91); Calibrated: 2011/6/20
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn778; Calibrated: 2011/11/22
- Phantom: ELI 4.0 Front; Type: QDOVA001BB; Serial: 1026
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

# Ch50/Area Scan (111x161x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (interpolated) = 0.031 mW/g

## Ch50/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.995 V/m; Power Drift = 0.081 dB

Peak SAR (extrapolated) = 0.058 W/kg

SAR(1 g) = 0.029 mW/g; SAR(10 g) = 0.019 mW/g

Maximum value of SAR (measured) = 0.032 mW/g

# Ch50/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.995 V/m; Power Drift = 0.081 dB

Peak SAR (extrapolated) = 0.040 W/kg

SAR(1 g) = 0.027 mW/g; SAR(10 g) = 0.015 mW/g

Maximum value of SAR (measured) = 0.031 mW/g

