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APPENDIX A: SAR DISTRIBUTION COMPARISON FOR ACCURACY VERIFICATION

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Date/Time: 03/09/2009 12:10:00 AM

Test Laboratory: RIM TESTING SERVICES

File Name:

[DipoleValidation_835MHz_Amb_Tem_22.5_Liq_Tem_22.1_C_09_03_09.da4](#)

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:446

Program Name: System Performance Check at 835 MHz

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.864 \text{ mho/m}$; $\epsilon_r = 39.6$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1642; ConvF(6.06, 6.06, 6.06); Calibrated: 12/01/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement

grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 109.4 V/m ; Power Drift = -0.017 dB

Peak SAR (extrapolated) = 12.9 W/kg

SAR(1 g) = 8.94 mW/g; SAR(10 g) = 5.91 mW/g

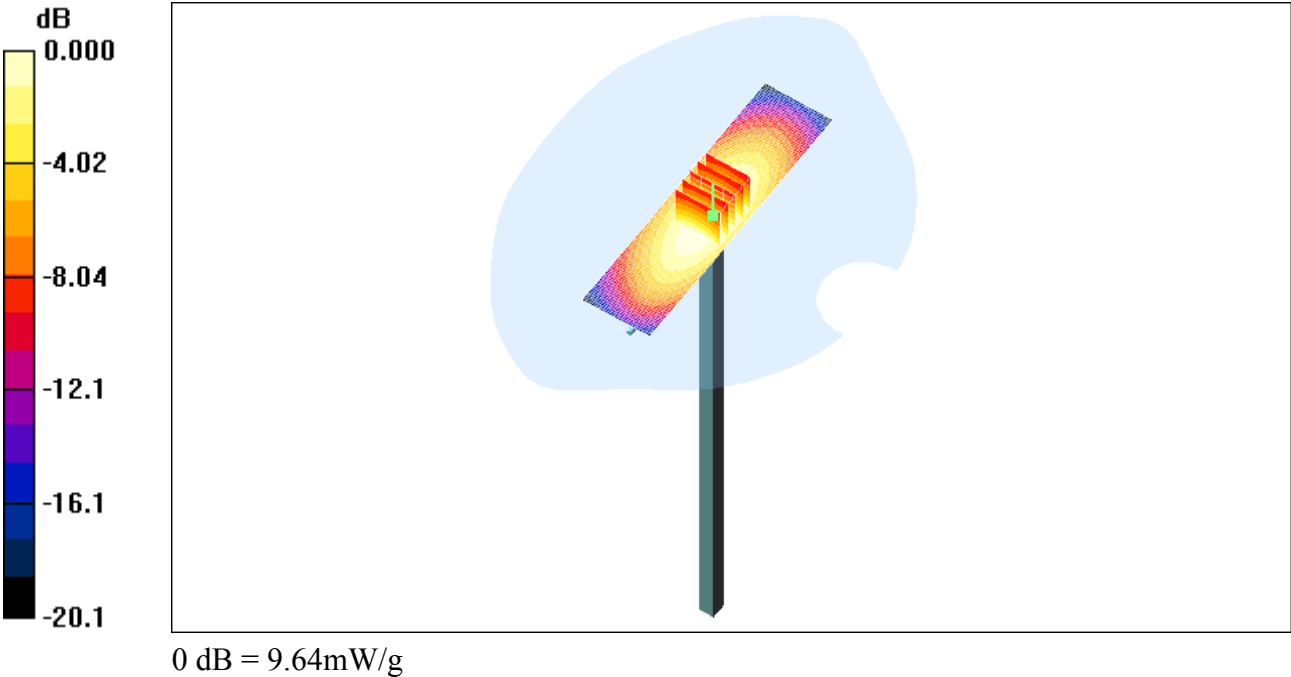
Maximum value of SAR (measured) = 9.67 mW/g

d=15mm, Pin=1000mW/Area Scan (31x121x1): Measurement grid: $dx=15\text{mm}$,

$dy=15\text{mm}$

Maximum value of SAR (interpolated) = 9.64 mW/g

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Date/Time: 25/09/2009 12:48:01 AM

Test Laboratory: RIM TESTING SERVICES

File Name:

[DipoleValidation_835MHz_Amb_Tem_24.3_Liq_Tem_22.2_C_09_25_09.da4](#)

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN:446

Program Name: System Performance Check at 835 MHz

Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.884 \text{ mho/m}$; $\epsilon_r = 41.1$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1642; ConvF(6.06, 6.06, 6.06); Calibrated: 12/01/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement

grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 110.4 V/m ; Power Drift = 0.014 dB

Peak SAR (extrapolated) = 13.4 W/kg

SAR(1 g) = 9.27 mW/g ; SAR(10 g) = 6.11 mW/g

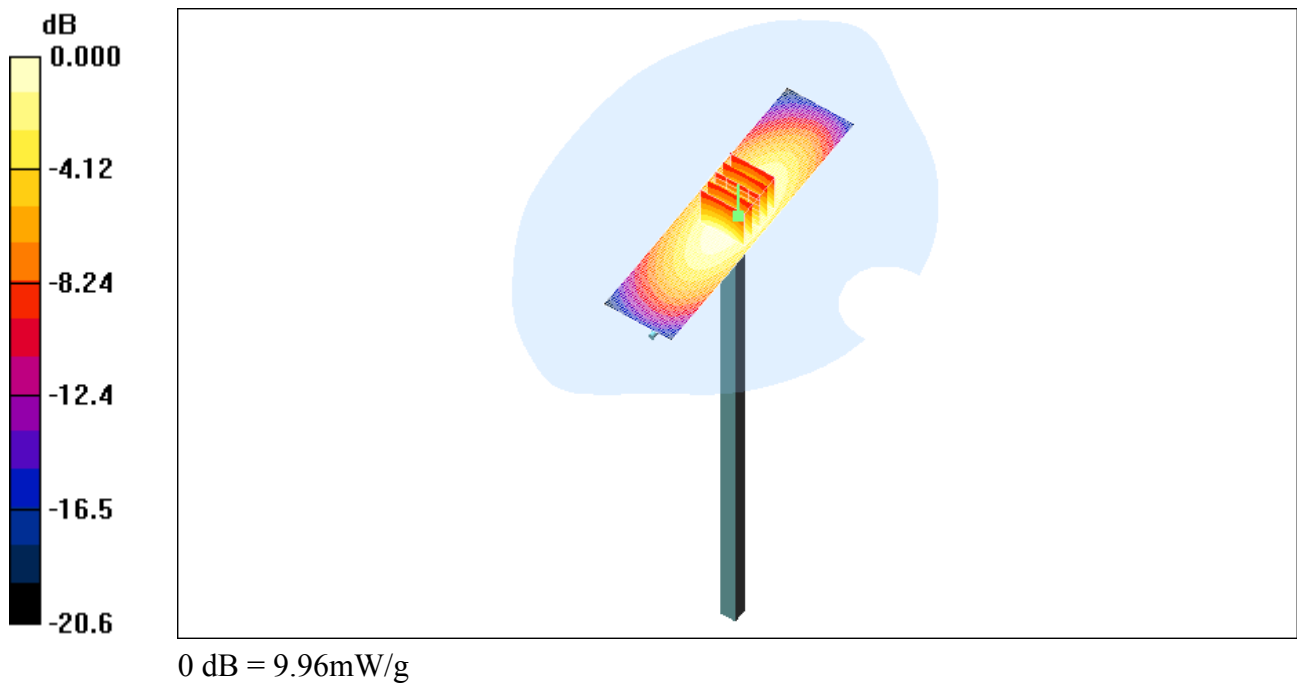
Maximum value of SAR (measured) = 10.0 mW/g

d=15mm, Pin=1000mW/Area Scan (31x121x1): Measurement grid: $dx=15\text{mm}$,

$dy=15\text{mm}$

Maximum value of SAR (interpolated) = 9.96 mW/g

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Date/Time: 01/09/2009 6:03:17 PM

Test Laboratory: RIM TESTING SERVICES

File Name:

[DipoleValidation 1900MHz Amb Tem 22.7 Liq Tem 22.1 C 09 01 09.da4](#)

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:545

Program Name: System Performance Check at 1900 MHz

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

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.45 \text{ mho/m}$; $\epsilon_r = 38.4$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1642; ConvF(5.14, 5.14, 5.14); Calibrated: 12/01/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement

grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 182.1 V/m ; Power Drift = -0.019 dB

Peak SAR (extrapolated) = 66.2 W/kg

SAR(1 g) = 39.1 mW/g ; SAR(10 g) = 20.8 mW/g

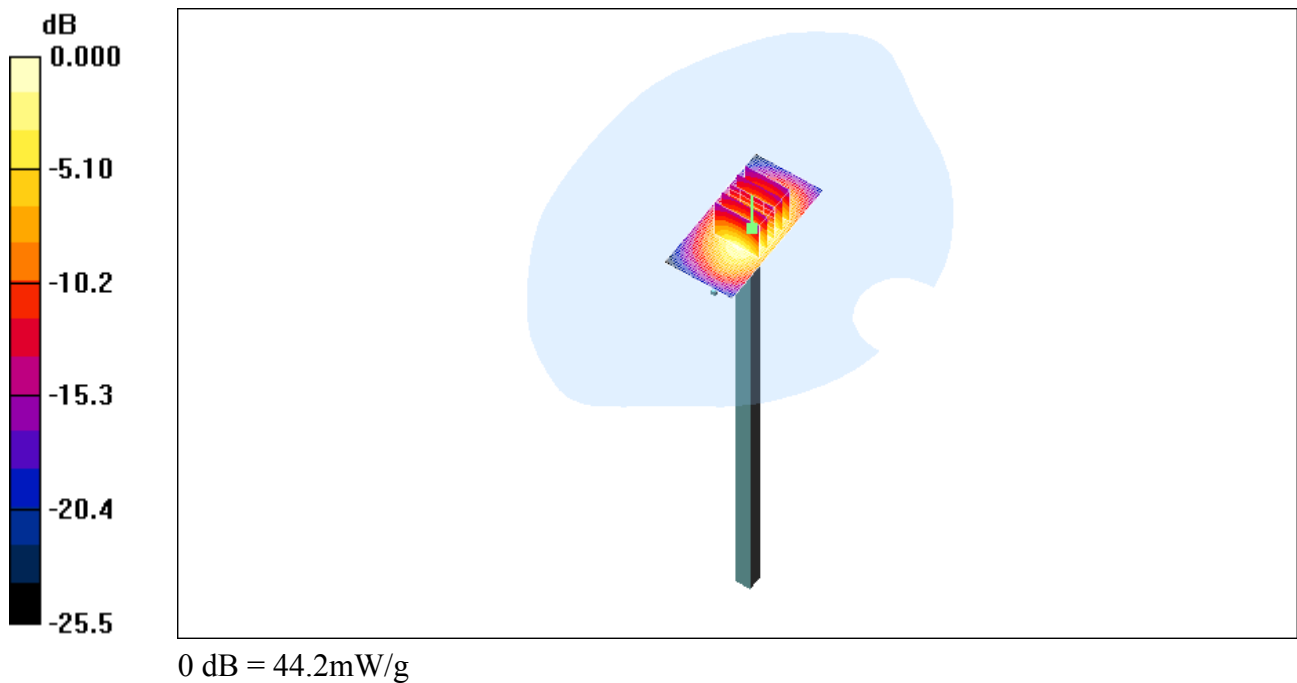
Maximum value of SAR (measured) = 44.2 mW/g

d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: $dx=15\text{mm}$,

$dy=15\text{mm}$

Maximum value of SAR (interpolated) = 44.2 mW/g

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Date/Time: 24/09/2009 6:57:05 PM

Test Laboratory: RIM TESTING SERVICES

File Name:

[DipoleValidation_1900MHz_Amb_Tem_23.2_Liq_Tem_22.0_C_09_24_09.da4](#)

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: D1900V2 - SN:545

Program Name: System Performance Check at 1900 MHz

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

Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.4 \text{ mho/m}$; $\epsilon_r = 40.7$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1642; ConvF(5.14, 5.14, 5.14); Calibrated: 12/01/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement

grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 177.0 V/m ; Power Drift = 0.095 dB

Peak SAR (extrapolated) = 63.8 W/kg

SAR(1 g) = 37 mW/g ; SAR(10 g) = 19.4 mW/g

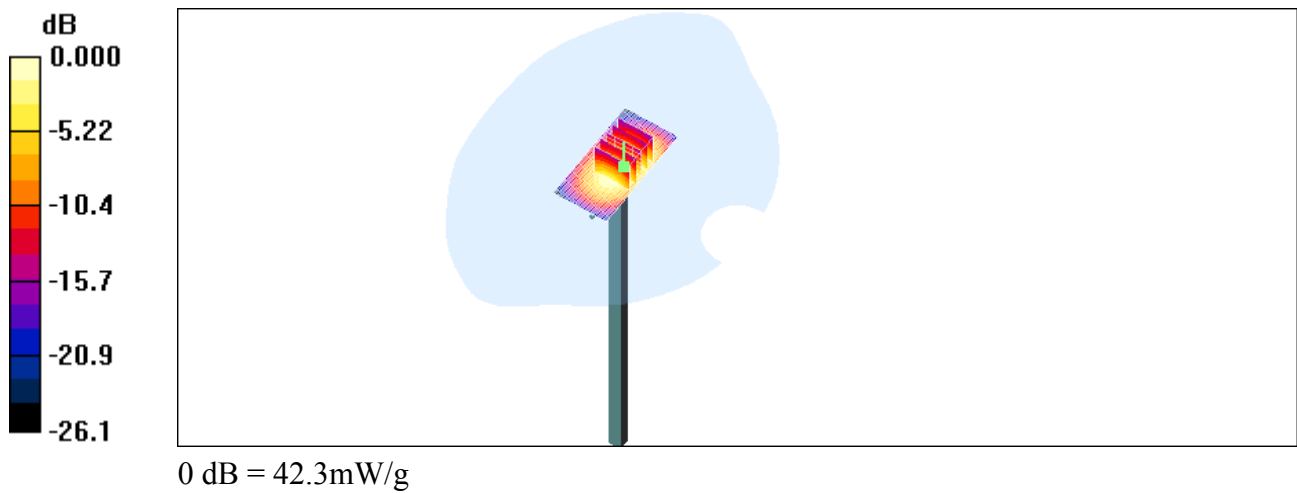
Maximum value of SAR (measured) = 42.2 mW/g

d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: $dx=15\text{mm}$,

$dy=15\text{mm}$

Maximum value of SAR (interpolated) = 42.3 mW/g

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Date/Time: 03/09/2009 10:15:15 PM

Test Laboratory: RIM TESTING SERVICES

File Name:

[DipoleValidation 2450MHz Amb Tem 23.2 Liq Tem 21.9 C 09 03 09.da4](#)

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:747

Program Name: System Performance Check at 1900 MHz

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.88 \text{ mho/m}$; $\epsilon_r = 37.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1642; ConvF(4.54, 4.54, 4.54); Calibrated: 12/01/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement

grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 191.4 V/m ; Power Drift = -0.011 dB

Peak SAR (extrapolated) = 129.4 W/kg

SAR(1 g) = 58.4 mW/g ; SAR(10 g) = 27.1 mW/g

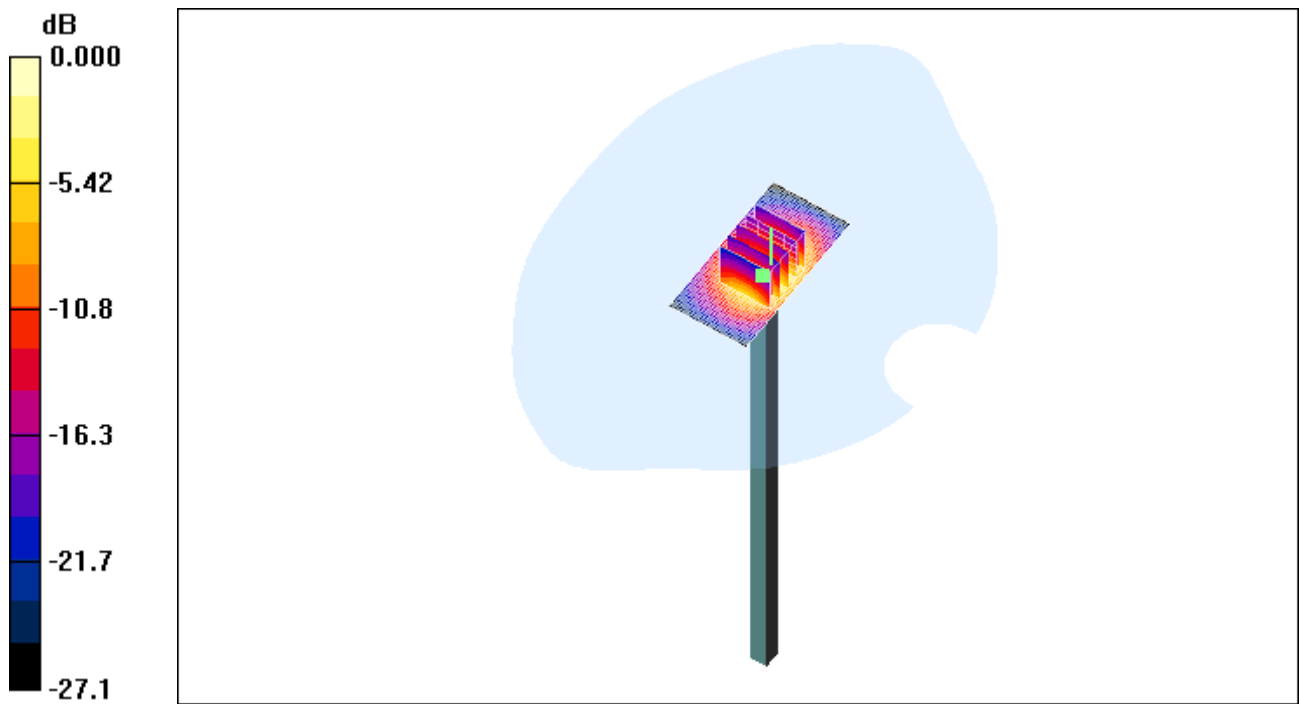
Maximum value of SAR (measured) = 63.5 mW/g

d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: $dx=15\text{mm}$,

$dy=15\text{mm}$

Maximum value of SAR (interpolated) = 69.4 mW/g

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0 dB = 69.4mW/g

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Date/Time: 28/09/2009 8:32:35 PM

Test Laboratory: RIM TESTING SERVICES

File Name:

[DipoleValidation_2450MHz_Amb_Tem_24.2_Liq_Tem_22.1_C_09_28_09.da4](#)

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: D2450V2 - SN:747

Program Name: System Performance Check at 1900 MHz

Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.88 \text{ mho/m}$; $\epsilon_r = 37.5$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY4 Configuration:

- Probe: ET3DV6 - SN1642; ConvF(4.54, 4.54, 4.54); Calibrated: 12/01/2009
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn472; Calibrated: 03/03/2009
- Phantom: SAM 1; Type: SAM 4.0; Serial: 1076
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

d=15mm, Pin=1000mW/Zoom Scan (5x5x7) 2 (5x5x7)/Cube 0: Measurement

grid: $dx=7.5\text{mm}$, $dy=7.5\text{mm}$, $dz=5\text{mm}$

Reference Value = 194.3 V/m ; Power Drift = -0.015 dB

Peak SAR (extrapolated) = 130.9 W/kg

SAR(1 g) = 58.4 mW/g ; SAR(10 g) = 26.9 mW/g

Maximum value of SAR (measured) = 64.9 mW/g

d=15mm, Pin=1000mW/Area Scan (31x61x1): Measurement grid: $dx=15\text{mm}$,

$dy=15\text{mm}$

Maximum value of SAR (interpolated) = 69.8 mW/g

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