

## **Appendix 1 – System Performance Check Plots**

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

## System Performance Check

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 714**

Frequency: 2450 MHz; Duty Cycle: 1:1

Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.944$  S/m;  $\epsilon_r = 52.187$ ;  $\rho = 1000$  kg/m<sup>3</sup>

DASY5 Configuration:

- Probe: EX3DV4 - SN3808; ConvF(6.92, 6.92, 6.92); Calibrated: 9/15/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/7/2014
- Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1063
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Dipole/Input 250 mW/Area Scan (9x9x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 19.8 W/kg

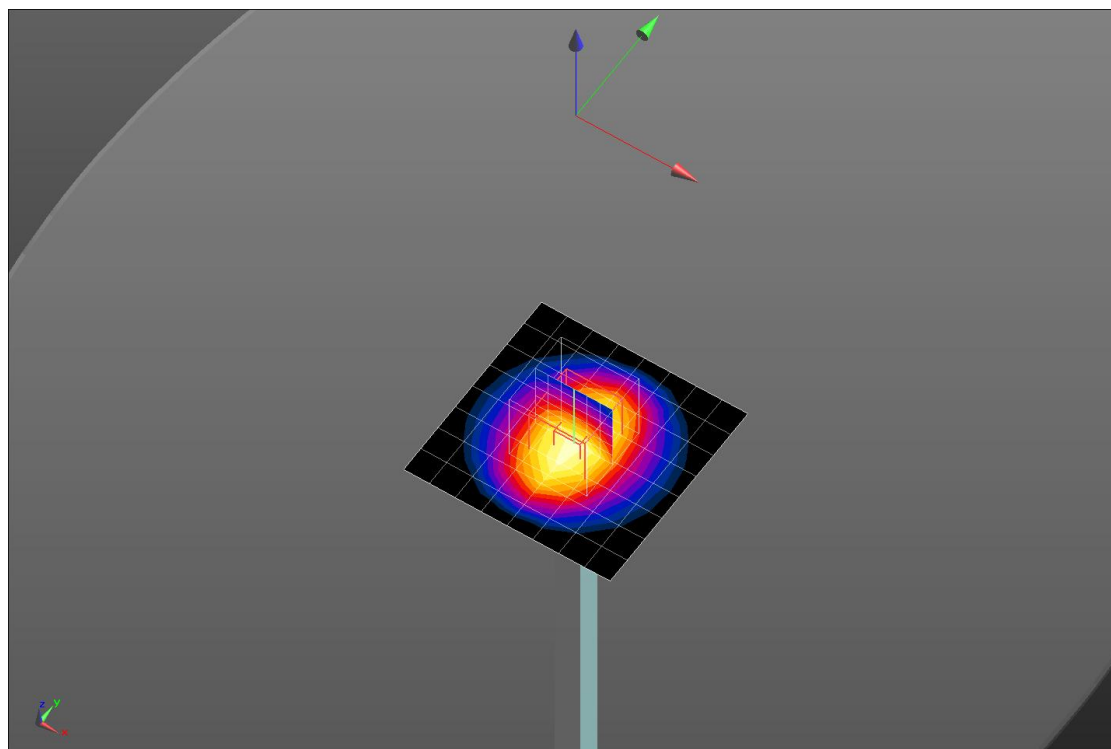
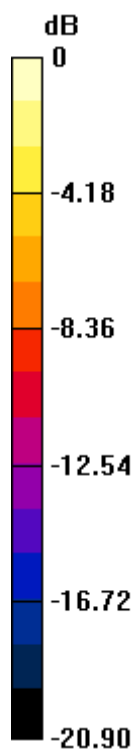
**Dipole/Input 250 mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 101.9 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 26.5 W/kg

**SAR(1 g) = 13 W/kg; SAR(10 g) = 6.14 W/kg**

Maximum value of SAR (measured) = 19.9 W/kg



0 dB = 19.9 W/kg = 12.99 dBW/kg

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## System Performance Check

**DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 714**

Frequency: 2450 MHz; Duty Cycle: 1:1

Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C

Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.844$  S/m;  $\epsilon_r = 38.473$ ;  $\rho = 1000$  kg/m<sup>3</sup>

DASY5 Configuration:

- Probe: EX3DV4 - SN3808; ConvF(6.99, 6.99, 6.99); Calibrated: 9/15/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/7/2014
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Dipole/Input 250 mW/Area Scan (9x9x1):** Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 19.9 W/kg

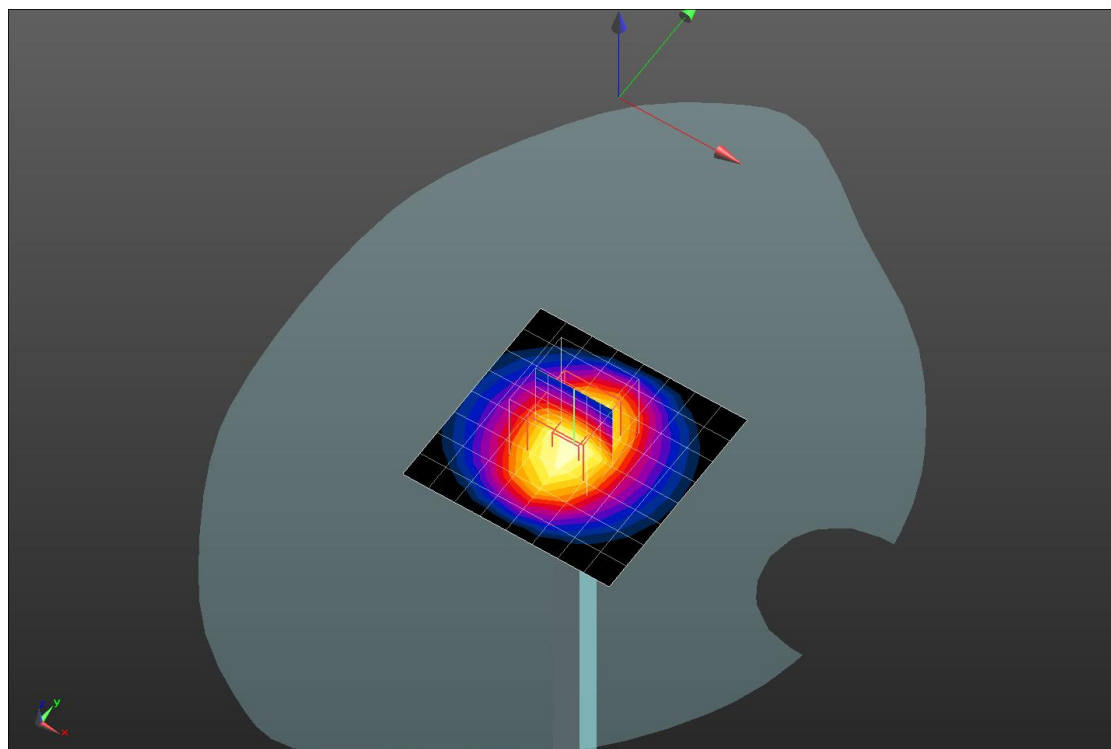
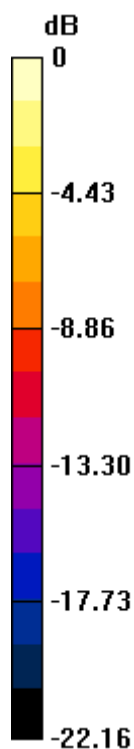
**Dipole/Input 250 mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 104.9 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 27.3 W/kg

**SAR(1 g) = 13 W/kg; SAR(10 g) = 6.03 W/kg**

Maximum value of SAR (measured) = 20.1 W/kg



0 dB = 20.1 W/kg = 13.03 dBW/kg

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## System Performance Check

**DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d081**

Frequency: 835 MHz; Duty Cycle: 1:1

Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.907 \text{ S/m}$ ;  $\epsilon_r = 41.999$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: ET3DV6 - SN1679; ConvF(6.36, 6.36, 6.36); Calibrated: 8/15/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/7/2014
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Dipole/Input 250 mW/Area Scan (9x9x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.52 W/kg

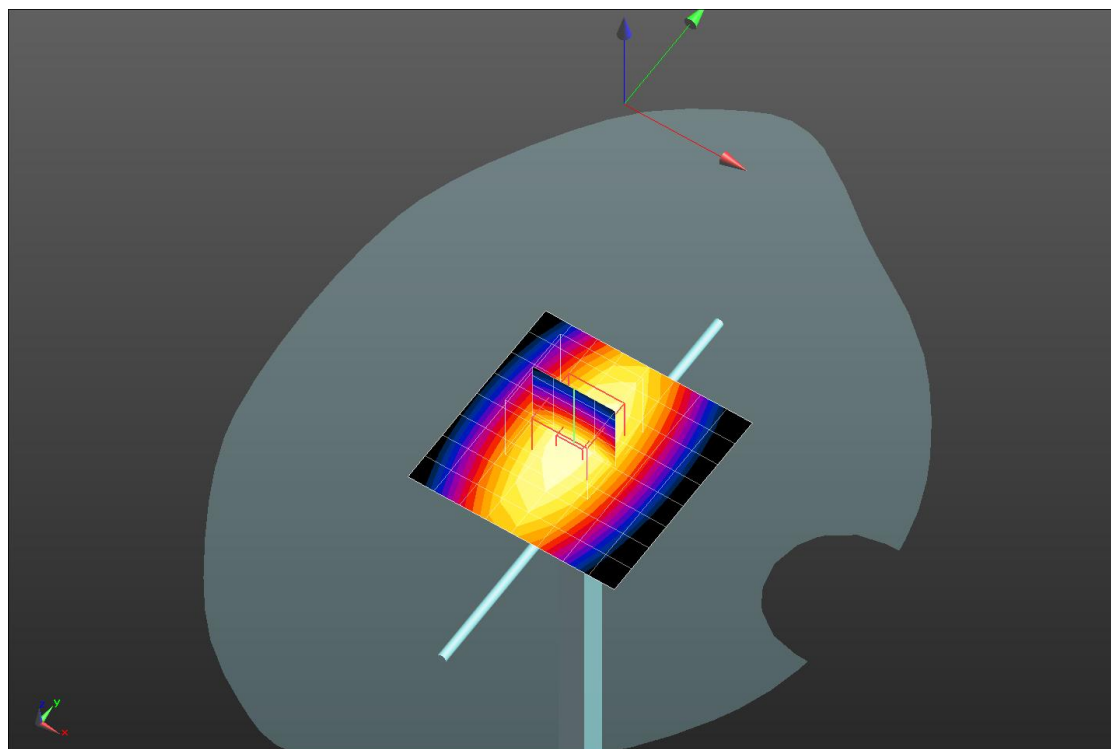
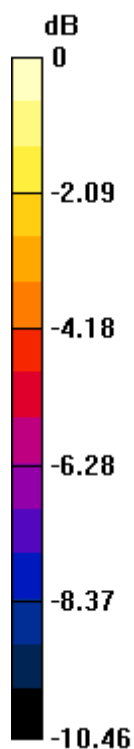
**Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 54.92 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 3.40 W/kg

**SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.55 W/kg**

Maximum value of SAR (measured) = 2.56 W/kg



0 dB = 2.56 W/kg = 4.08 dBW/kg

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## System Performance Check

**DUT: Dipole 750 MHz; Type: D750V3; Serial: 1124**

Frequency: 750 MHz; Duty Cycle: 1:1

Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.9 \text{ S/m}$ ;  $\epsilon_r = 42.691$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: ET3DV6 - SN1679; ConvF(6.65, 6.65, 6.65); Calibrated: 8/15/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/7/2014
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Dipole/Input 250 mW/Area Scan (9x9x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.20 W/kg

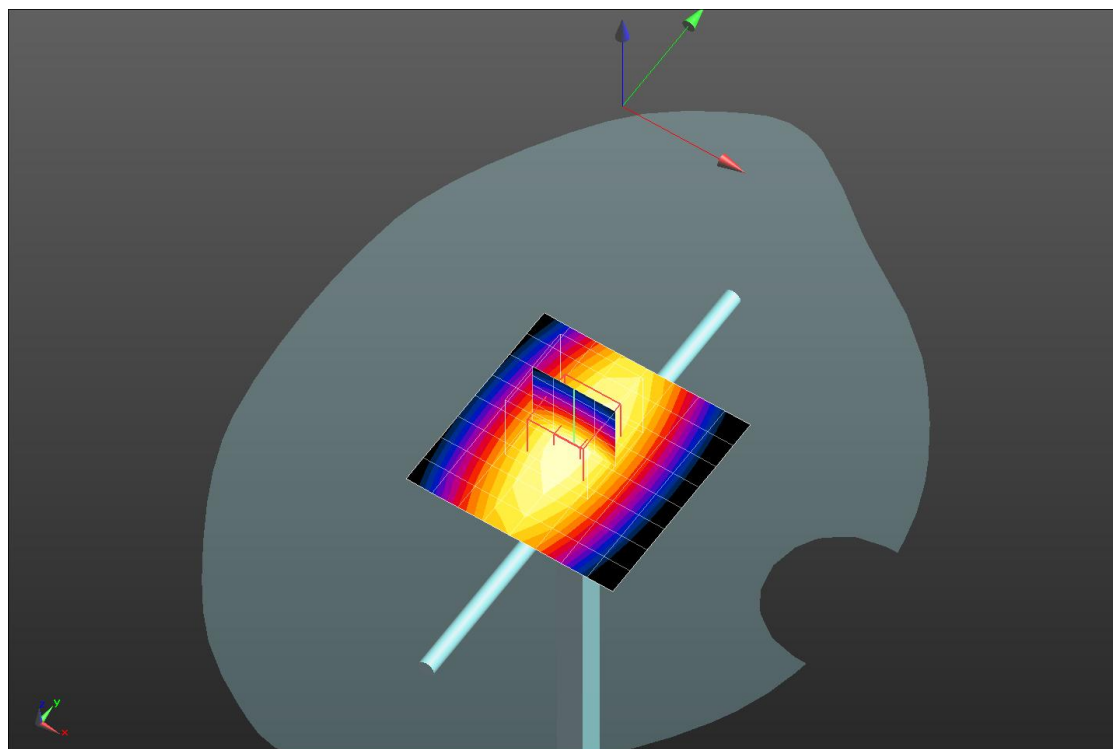
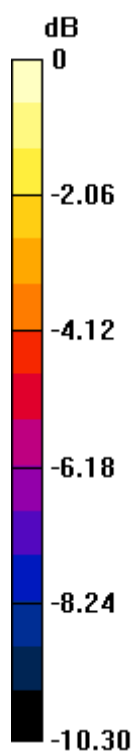
**Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 51.48 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 3.04 W/kg

**SAR(1 g) = 2.08 W/kg; SAR(10 g) = 1.37 W/kg**

Maximum value of SAR (measured) = 2.25 W/kg



0 dB = 2.25 W/kg = 3.52 dBW/kg

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## System Performance Check

**DUT: Dipole 835 MHz; Type: D835V2; Serial: 4d081**

Frequency: 835 MHz; Duty Cycle: 1:1

Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C

Medium parameters used:  $f = 835 \text{ MHz}$ ;  $\sigma = 0.982 \text{ S/m}$ ;  $\epsilon_r = 55.252$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: ET3DV6 - SN1679; ConvF(6.11, 6.11, 6.11); Calibrated: 8/15/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/7/2014
- Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1063
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Dipole/Input 250 mW/Area Scan (9x9x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.60 W/kg

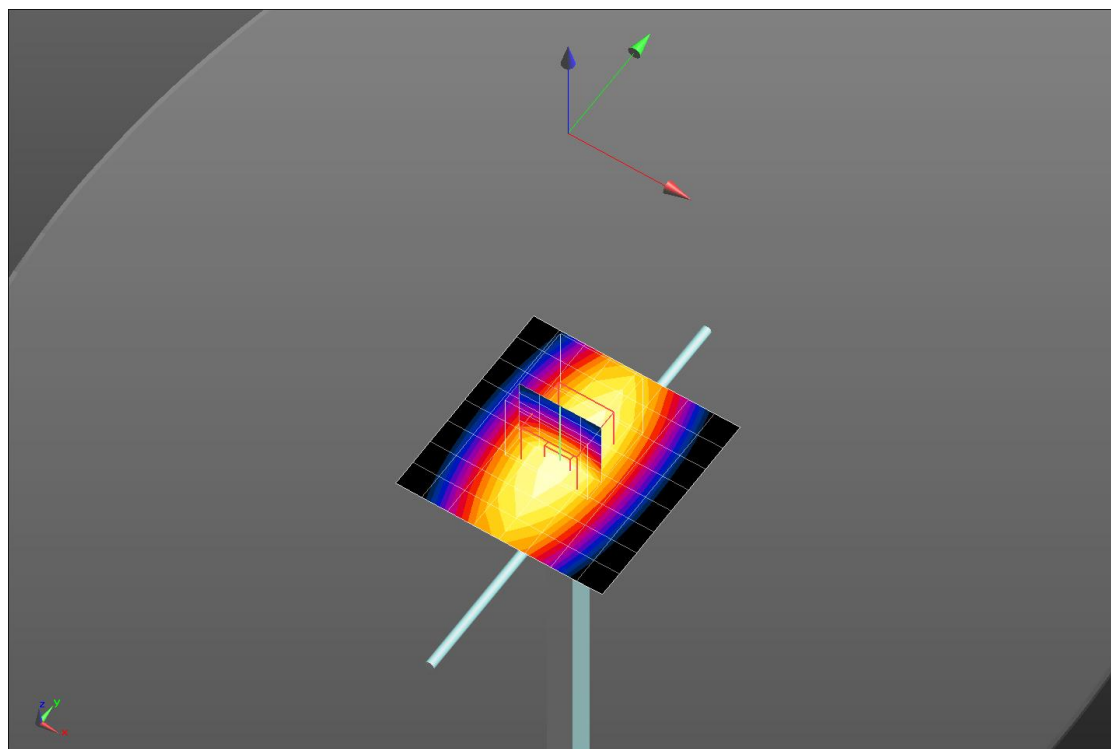
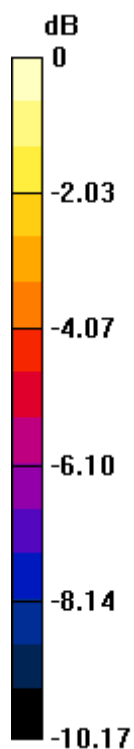
**Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 54.11 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.38 W/kg

**SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.62 W/kg**

Maximum value of SAR (measured) = 2.63 W/kg



0 dB = 2.63 W/kg = 4.20 dBW/kg

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## System Performance Check

**DUT: Dipole 750 MHz; Type: D750V3; Serial: 1124**

Frequency: 750 MHz; Duty Cycle: 1:1

Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C

Medium parameters used:  $f = 750 \text{ MHz}$ ;  $\sigma = 0.974 \text{ S/m}$ ;  $\epsilon_r = 56.197$ ;  $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: ET3DV6 - SN1679; ConvF(6.22, 6.22, 6.22); Calibrated: 8/15/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/7/2014
- Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1063
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Dipole/Input 250 mW/Area Scan (9x9x1):** Measurement grid:  $dx=10\text{mm}$ ,  $dy=10\text{mm}$

Maximum value of SAR (measured) = 2.44 W/kg

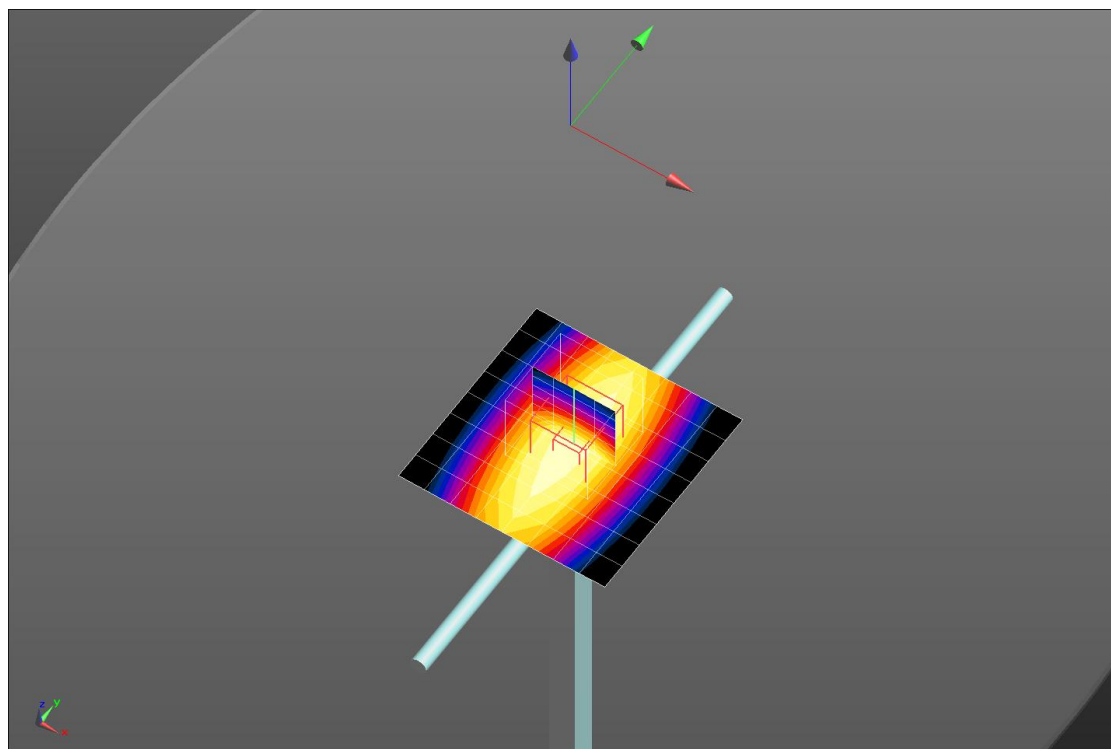
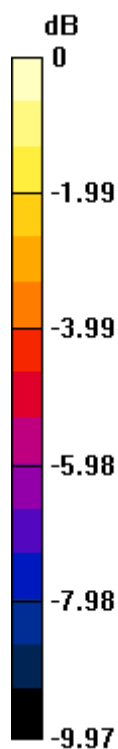
**Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8\text{mm}$ ,  $dy=8\text{mm}$ ,  $dz=5\text{mm}$

Reference Value = 52.01 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.25 W/kg

**SAR(1 g) = 2.25 W/kg; SAR(10 g) = 1.5 W/kg**

Maximum value of SAR (measured) = 2.41 W/kg



0 dB = 2.41 W/kg = 3.82 dBW/kg