Appendix 1 – System Performance Check Plots

Date: 10/20/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

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 MHz; σ = 0.983 S/m; ε_r = 54.696; ρ = 1000 kg/m^3

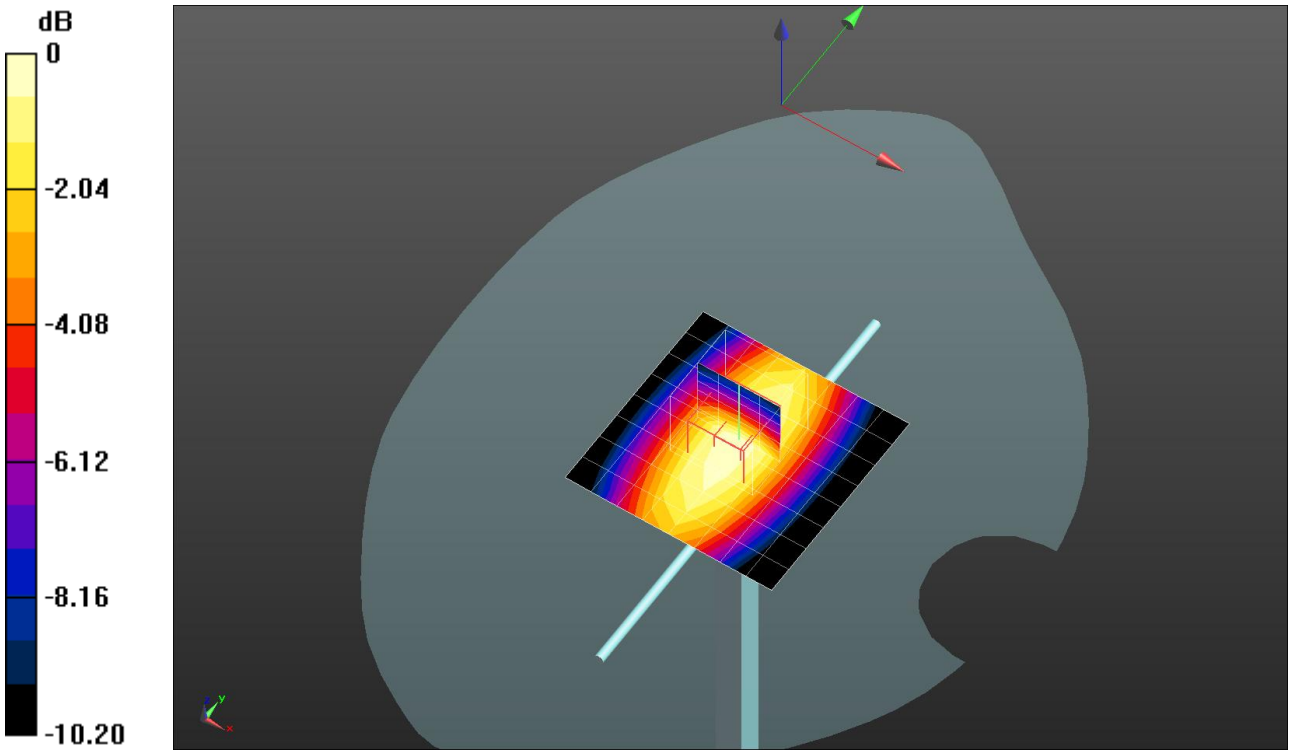
DASY5 Configuration:
- Probe: ET3DV6 - SN1679; ConvF(6.33, 6.33, 6.33); Calibrated: 8/12/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/7/2014
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

Maximum value of SAR (measured) = 2.55 W/kg

Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 53.18 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 3.36 W/kg
SAR(1 g) = 2.37 W/kg; SAR(10 g) = 1.57 W/kg
Maximum value of SAR (measured) = 2.58 W/kg



0 dB = 2.58 W/kg = 4.12 dBW/kg

Date: 10/21/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

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 MHz; σ = 0.986 S/m; ε_r = 54.785; ρ = 1000 kg/m^3

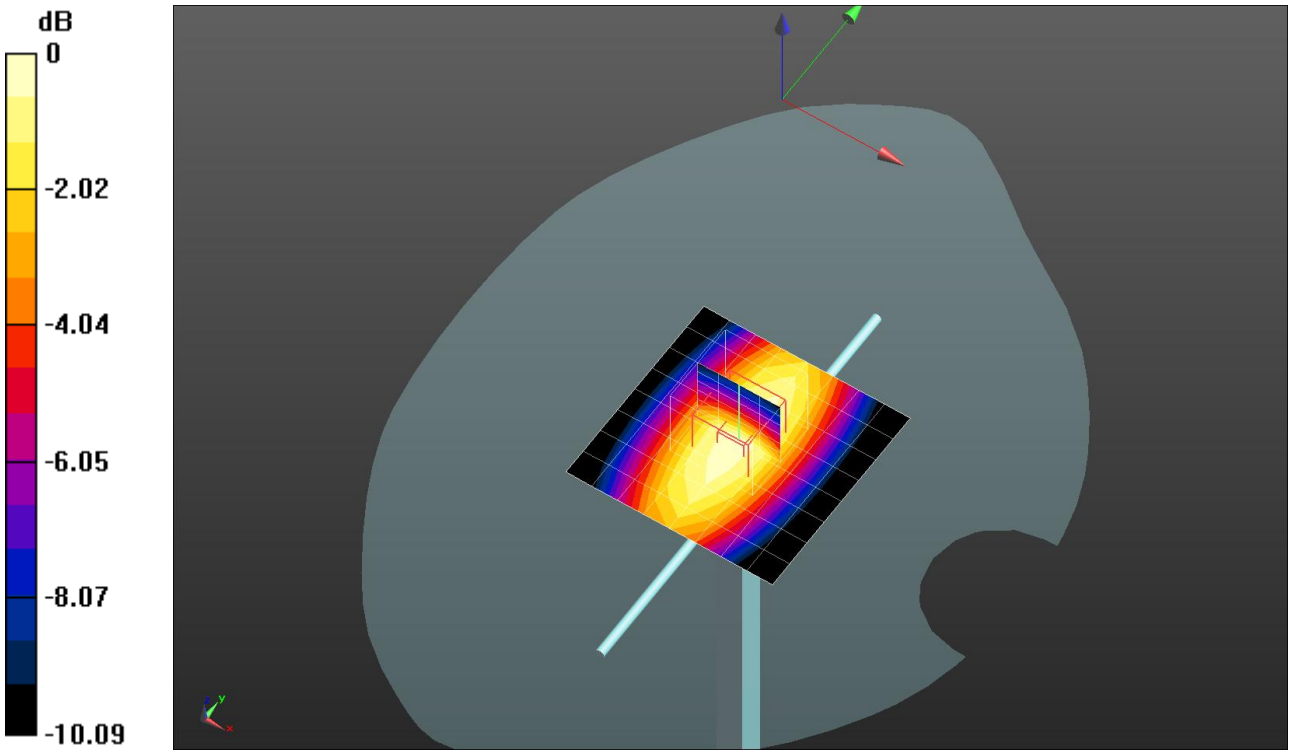
DASY5 Configuration:
- Probe: ET3DV6 - SN1679; ConvF(6.33, 6.33, 6.33); Calibrated: 8/12/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/7/2014
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

Maximum value of SAR (measured) = 2.53 W/kg

Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 52.72 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.32 W/kg
SAR(1 g) = 2.35 W/kg; SAR(10 g) = 1.56 W/kg
Maximum value of SAR (measured) = 2.55 W/kg



0 dB = 2.55 W/kg = 4.07 dBW/kg

Date: 10/22/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

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 MHz; σ = 0.923 S/m; ε_r = 42.325; ρ = 1000 kg/m^3

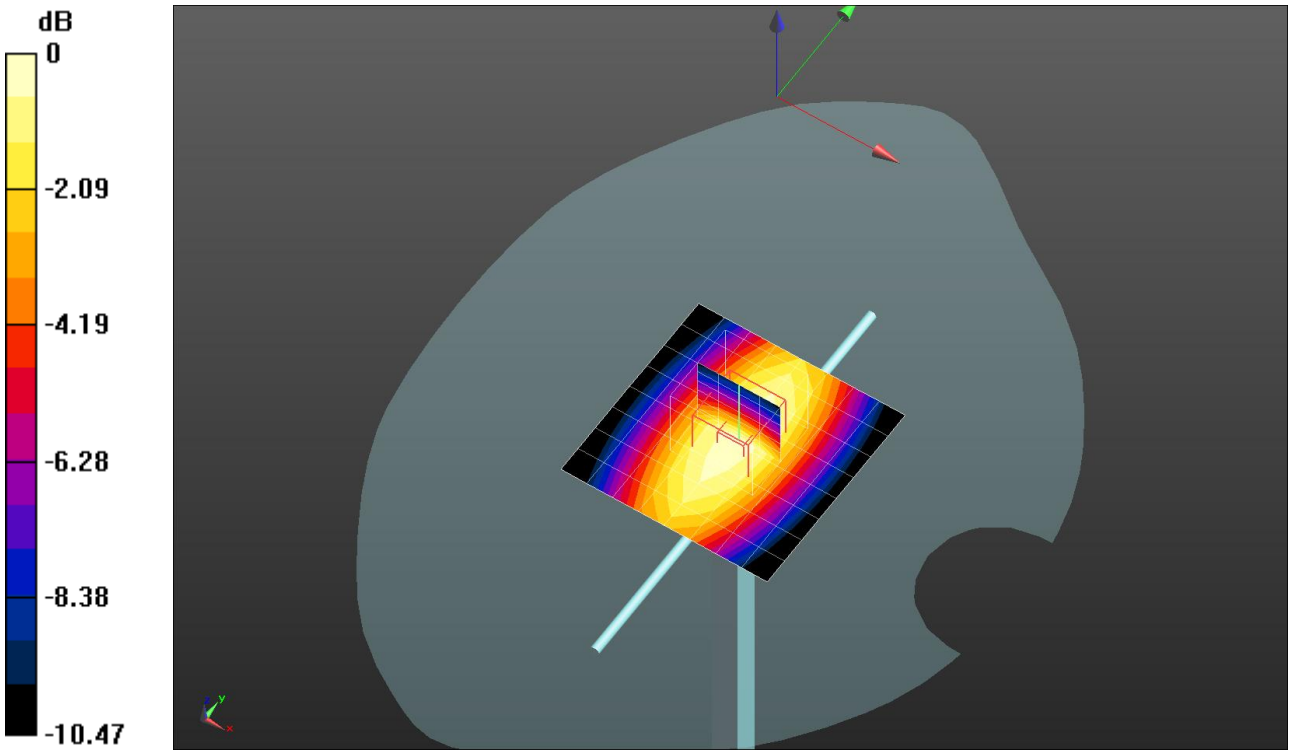
DASY5 Configuration:
- Probe: ET3DV6 - SN1679; ConvF(6.4, 6.4, 6.4); Calibrated: 8/12/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/7/2014
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

Maximum value of SAR (measured) = 2.53 W/kg

Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 54.62 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 3.42 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

Date: 10/29/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d112

Frequency: 1900 MHz;Duty Cycle: 1:1
Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C
Medium parameters used: f = 1900 MHz; σ = 1.408 S/m; ε_r = 40.261; ρ = 1000 kg/m^3

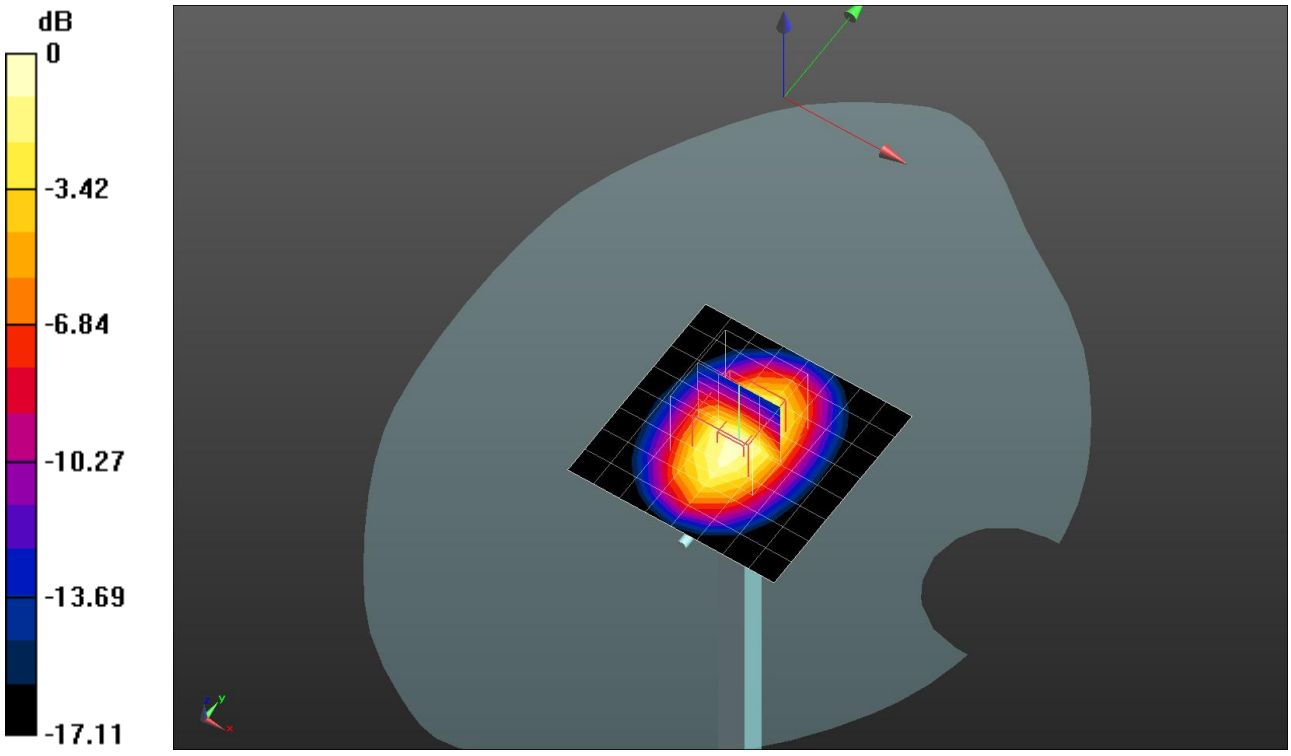
DASY5 Configuration:
- Probe: ET3DV6 - SN1679; ConvF(5.08, 5.08, 5.08); Calibrated: 8/12/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn516; Calibrated: 4/24/2015
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); 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) = 11.2 W/kg

Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 94.07 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 16.8 W/kg
SAR(1 g) = 9.92 W/kg; SAR(10 g) = 5.28 W/kg
Maximum value of SAR (measured) = 11.3 W/kg



0 dB = 11.3 W/kg = 10.53 dBW/kg

Date: 10/29/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 1900 MHz; Type: D1900V2; Serial: 5d112

Frequency: 1900 MHz;Duty Cycle: 1:1
Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C
Medium parameters used: f = 1900 MHz; σ = 1.532 S/m; ε_r = 53.472; ρ = 1000 kg/m^3

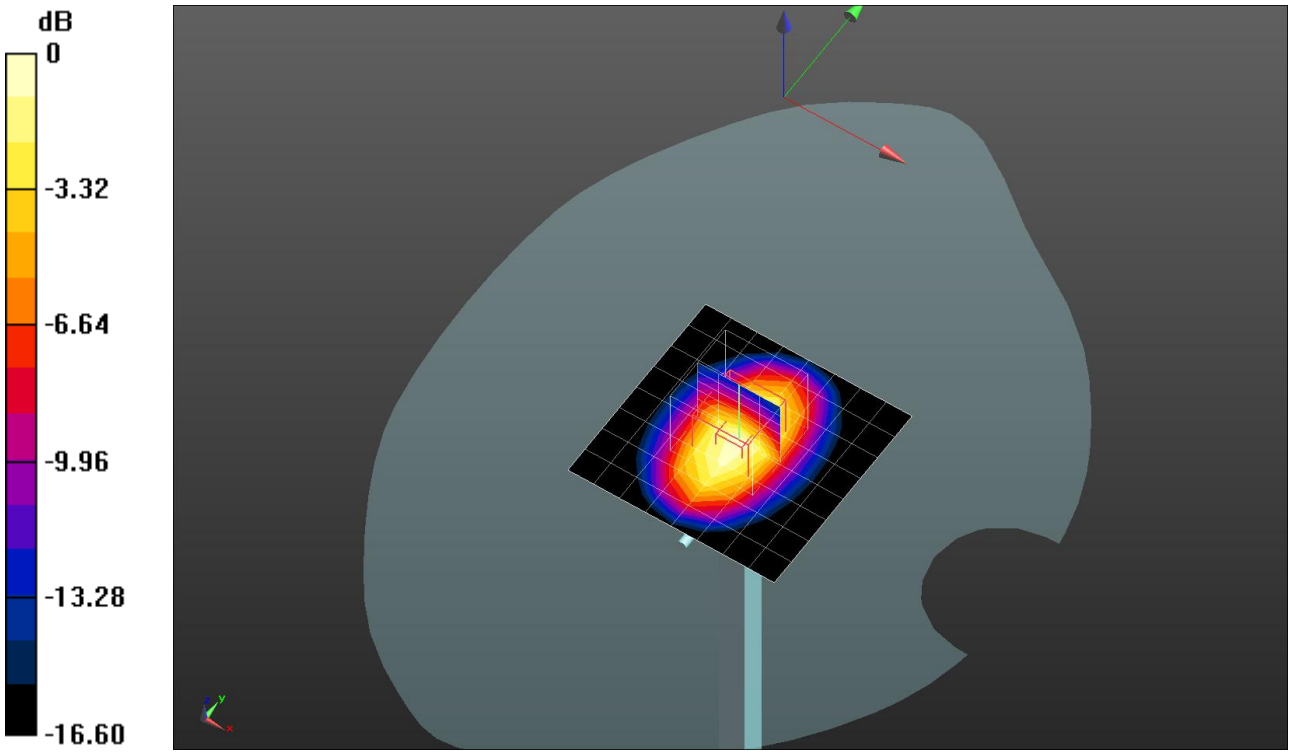
DASY5 Configuration:
- Probe: ET3DV6 - SN1679; ConvF(4.6, 4.6, 4.6); Calibrated: 8/12/2015;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn516; Calibrated: 4/24/2015
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

Maximum value of SAR (measured) = 11.3 W/kg

Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 93.33 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 16.1 W/kg
SAR(1 g) = 10.1 W/kg; SAR(10 g) = 5.43 W/kg
Maximum value of SAR (measured) = 11.4 W/kg



0 dB = 11.4 W/kg = 10.57 dBW/kg

Date: 10/30/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 894

Frequency: 2450 MHz;Duty Cycle: 1:1
Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C
Medium parameters used: f = 2450 MHz; σ = 1.863 S/m; ε_r = 38.949; ρ = 1000 kg/m^3

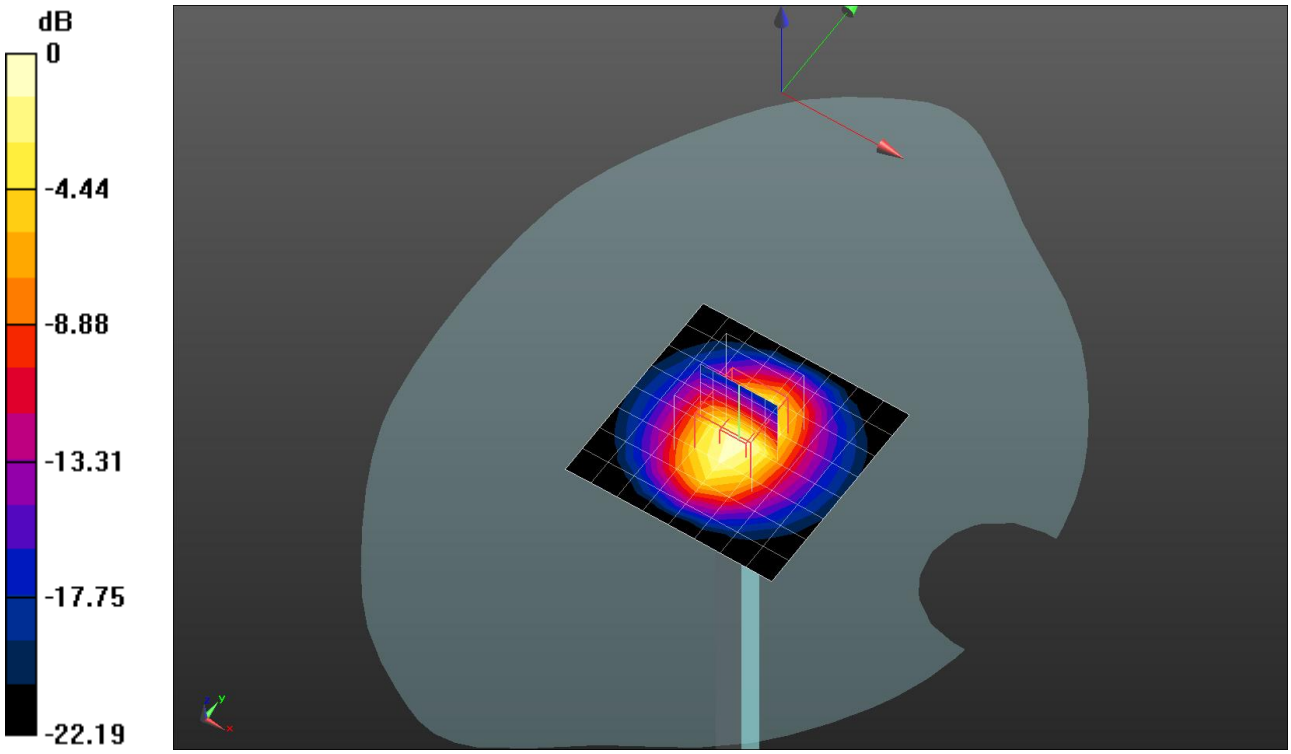
DASY5 Configuration:
- Probe: EX3DV4 - SN7321; ConvF(7, 7, 7); Calibrated: 8/18/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn516; Calibrated: 4/24/2015
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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

Maximum value of SAR (measured) = 20.2 W/kg

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

Reference Value = 106.2 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 27.7 W/kg
SAR(1 g) = 13.3 W/kg; SAR(10 g) = 6.16 W/kg
Maximum value of SAR (measured) = 20.4 W/kg



0 dB = 20.4 W/kg = 13.10 dBW/kg

Date: 10/30/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

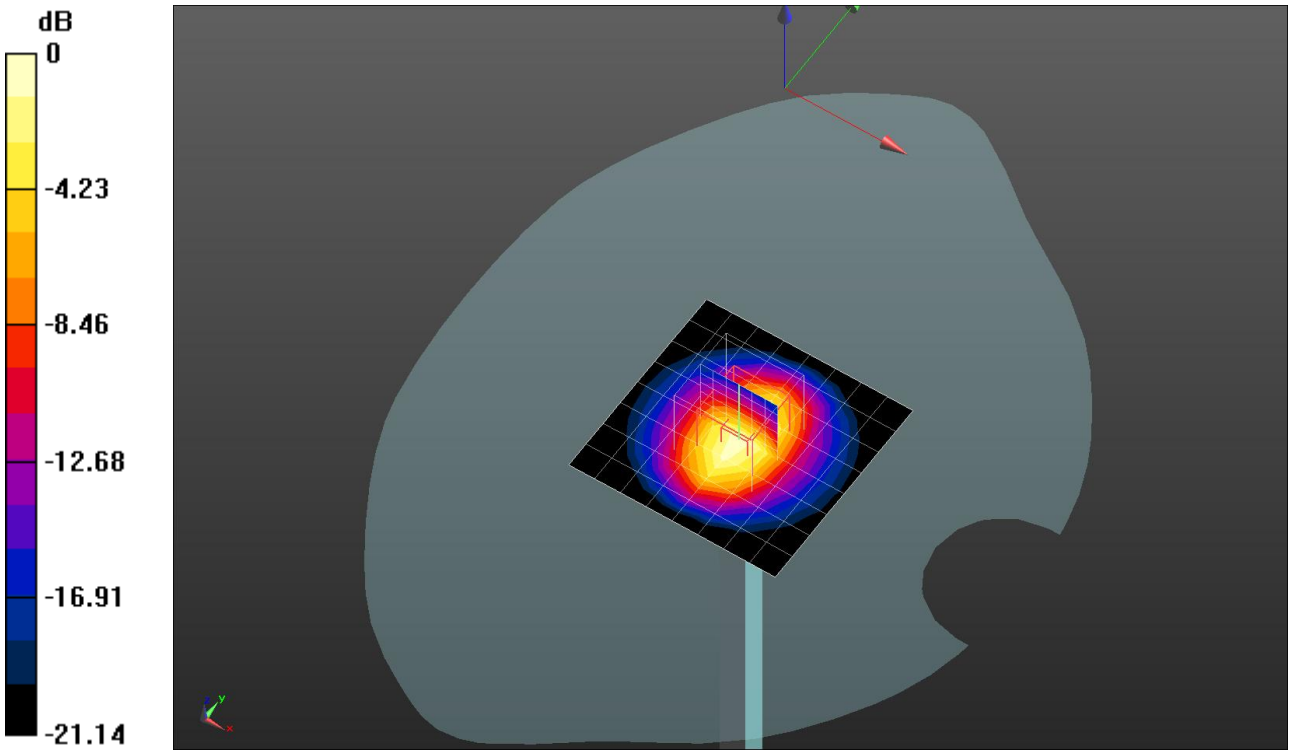
DUT: Dipole 2450 MHz; Type: D2450V2; Serial: 894

Frequency: 2450 MHz;Duty Cycle: 1:1
Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C
Medium parameters used: f = 2450 MHz; σ = 1.949 S/m; ε_r = 52.297; ρ = 1000 kg/m^3

DASY5 Configuration:
- Probe: EX3DV4 - SN7321; ConvF(7.09, 7.09, 7.09); Calibrated: 8/18/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn516; Calibrated: 4/24/2015
- 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) = 18.7 W/kg

Dipole/Input 250 mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 100.2 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 24.6 W/kg
SAR(1 g) = 12.5 W/kg; SAR(10 g) = 5.89 W/kg
Maximum value of SAR (measured) = 18.5 W/kg



0 dB = 18.5 W/kg = 12.67 dBW/kg

Date: 11/5/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1111

Frequency: 5250 MHz;Duty Cycle: 1:1
Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C
Medium parameters used: f = 5250 MHz; σ = 4.627 S/m; ε_r = 36.278; ρ = 1000 kg/m^3

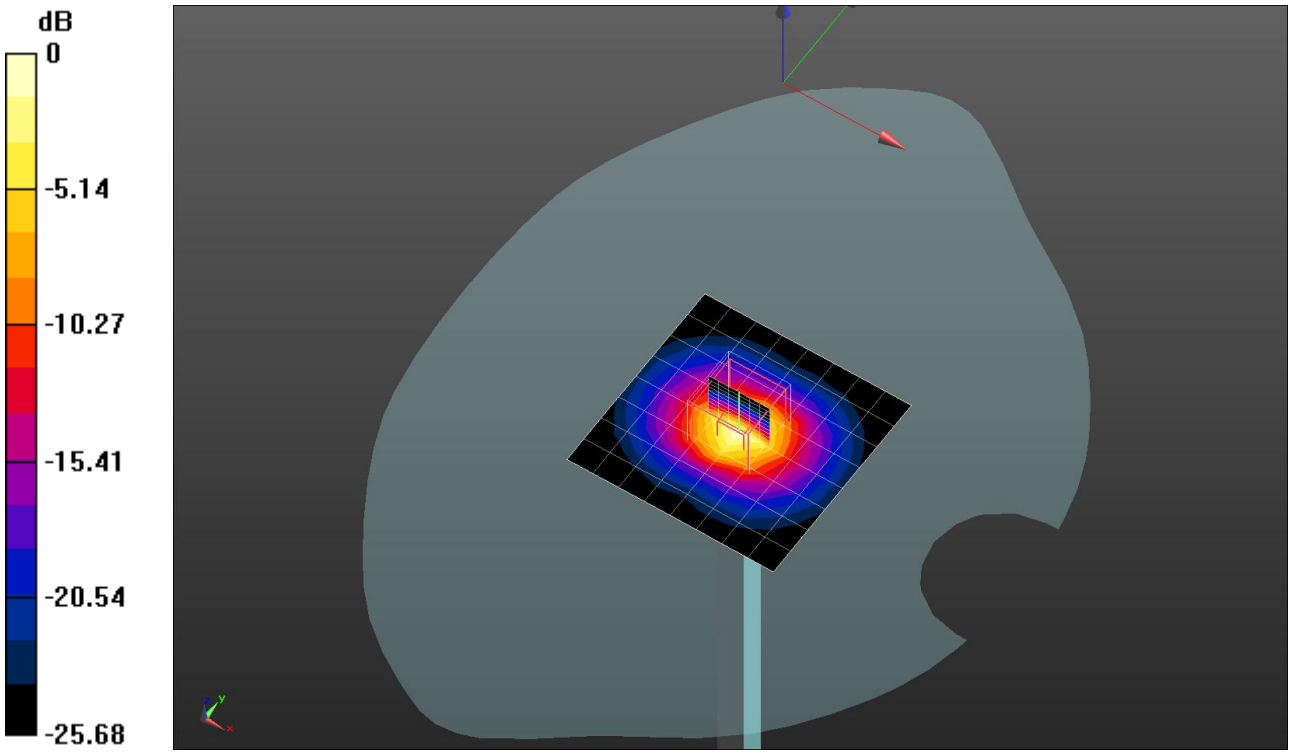
DASY5 Configuration:
- Probe: EX3DV4 - SN7321; ConvF(5.16, 5.16, 5.16); Calibrated: 8/18/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn516; Calibrated: 4/24/2015
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Dipole/Input 100 mW/Area Scan (9x9x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 16.8 W/kg

Dipole/Input 100 mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 63.06 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 33.5 W/kg
SAR(1 g) = 7.95 W/kg; SAR(10 g) = 2.29 W/kg
Maximum value of SAR (measured) = 16.2 W/kg



0 dB = 16.2 W/kg = 12.10 dBW/kg

Date: 11/5/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1111

Frequency: 5600 MHz;Duty Cycle: 1:1
Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C
Medium parameters used: f = 5600 MHz; σ = 4.969 S/m; ε_r = 35.802; ρ = 1000 kg/m^3

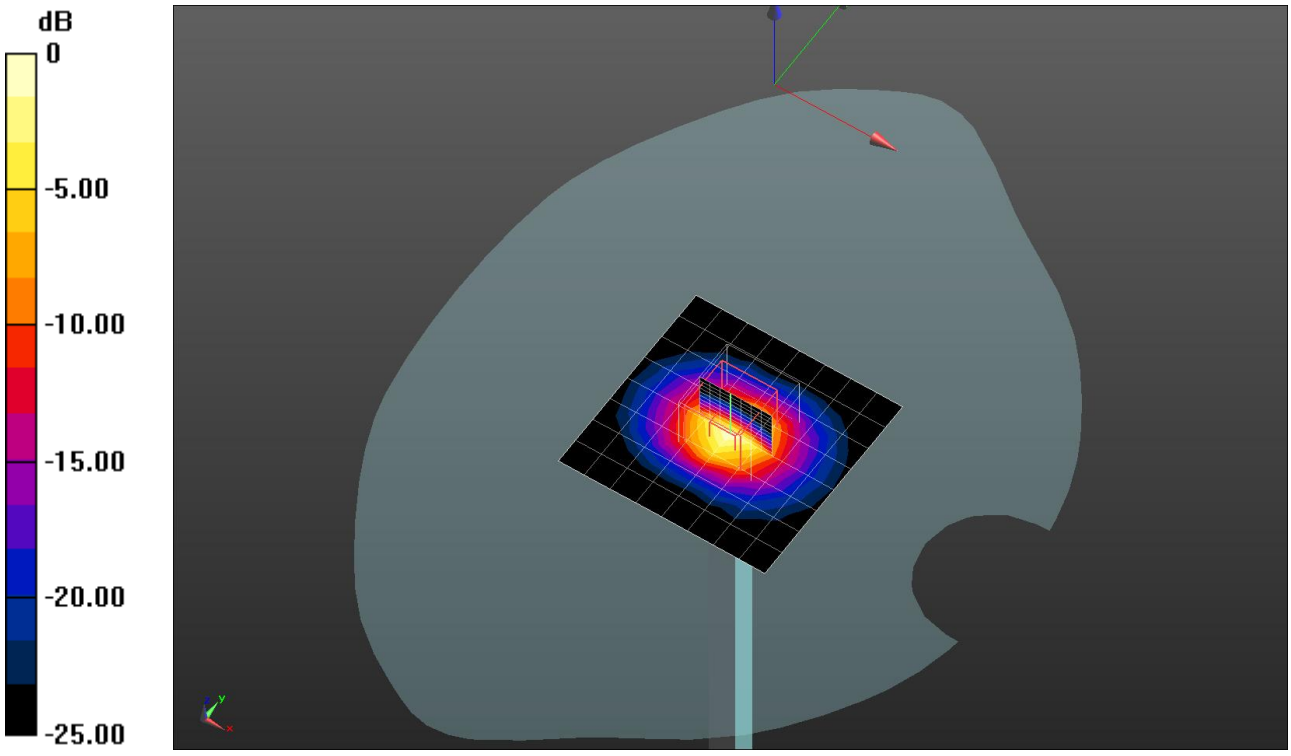
DASY5 Configuration:
- Probe: EX3DV4 - SN7321; ConvF(4.45, 4.45, 4.45); Calibrated: 8/18/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn516; Calibrated: 4/24/2015
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Dipole/Input 100 mW/Area Scan (9x9x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 18.2 W/kg

Dipole/Input 100 mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 63.41 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 35.5 W/kg
SAR(1 g) = 8.36 W/kg; SAR(10 g) = 2.39 W/kg
Maximum value of SAR (measured) = 17.4 W/kg



0 dB = 17.4 W/kg = 12.41 dBW/kg

Date: 11/6/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1111

Frequency: 5250 MHz;Duty Cycle: 1:1
Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C
Medium parameters used: f = 5250 MHz; σ = 5.472 S/m; ε_r = 48.059; ρ = 1000 kg/m^3

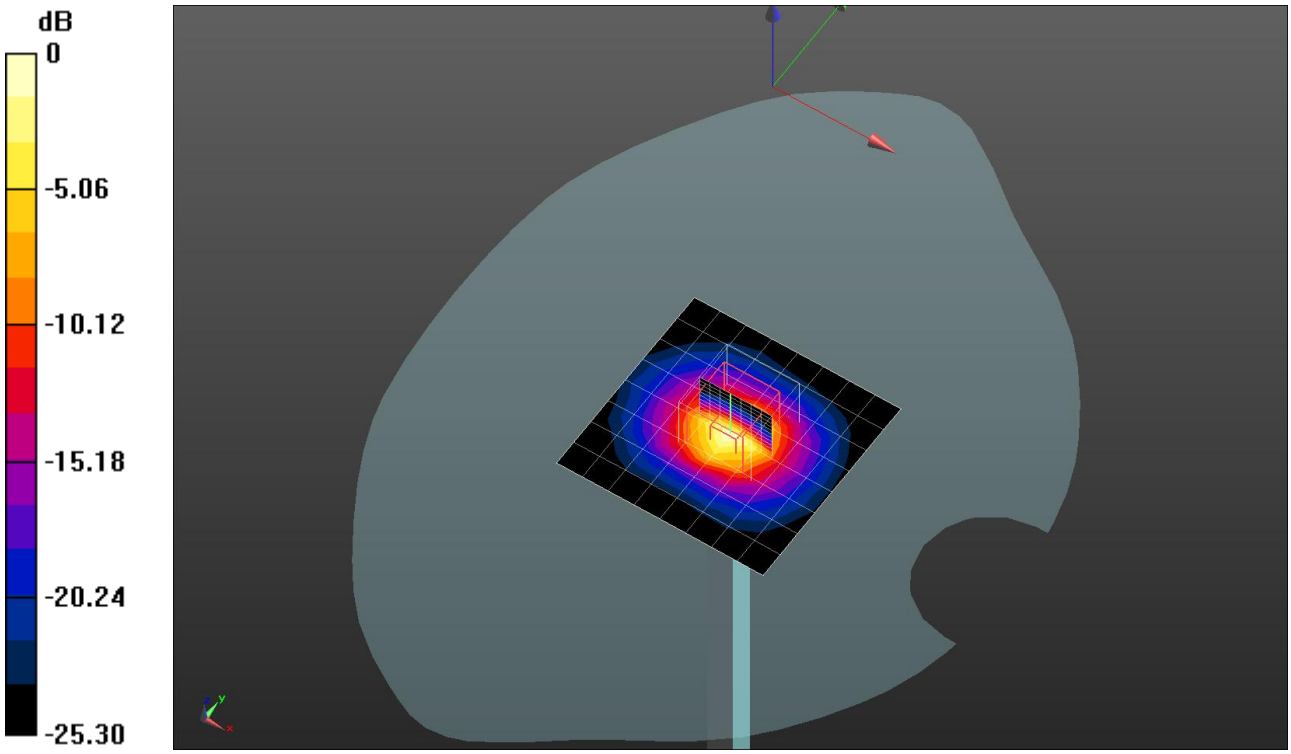
DASY5 Configuration:
- Probe: EX3DV4 - SN7321; ConvF(4.34, 4.34, 4.34); Calibrated: 8/18/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn516; Calibrated: 4/24/2015
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Dipole/Input 100 mW/Area Scan (9x9x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 15.5 W/kg

Dipole/Input 100 mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 57.69 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 30.9 W/kg
SAR(1 g) = 7.48 W/kg; SAR(10 g) = 2.12 W/kg
Maximum value of SAR (measured) = 15.6 W/kg



0 dB = 15.6 W/kg = 11.93 dBW/kg

Date: 11/6/2015

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1111

Frequency: 5600 MHz;Duty Cycle: 1:1
Room Ambient Temperature: 24.0°C; Liquid Temperature: 23.0°C
Medium parameters used: f = 5600 MHz; σ = 5.918 S/m; ε_r = 47.496; ρ = 1000 kg/m^3

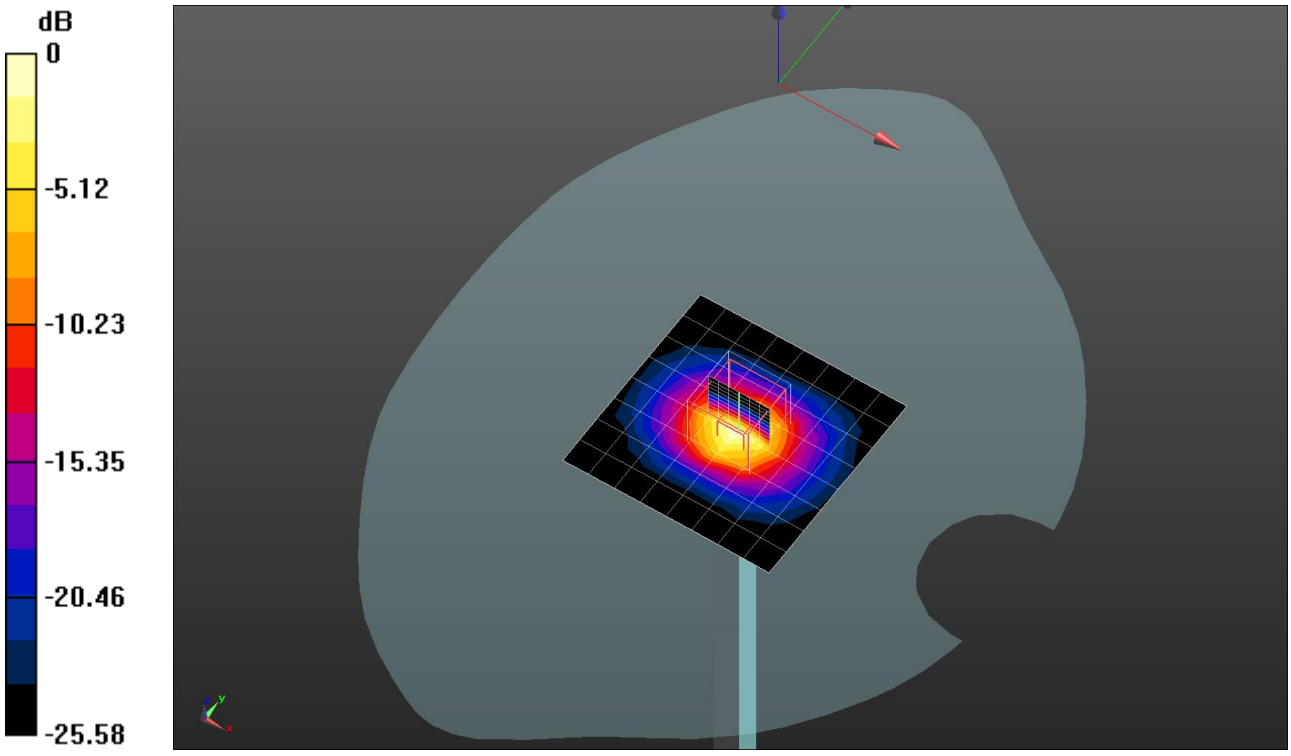
DASY5 Configuration:
- Probe: EX3DV4 - SN7321; ConvF(3.75, 3.75, 3.75); Calibrated: 8/18/2015;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn516; Calibrated: 4/24/2015
- Phantom: SAM v4.0 SN1194; Type: QD000P40CA; Serial: TP 1194
- Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Dipole/Input 100 mW/Area Scan (9x9x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 16.8 W/kg

Dipole/Input 100 mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 58.39 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 33.1 W/kg
SAR(1 g) = 7.93 W/kg; SAR(10 g) = 2.23 W/kg
Maximum value of SAR (measured) = 16.8 W/kg



0 dB = 16.8 W/kg = 12.25 dBW/kg