

Appendix 1 – System Performance Check Plots

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: $f = 835 \text{ MHz}$; $\sigma = 0.927 \text{ S/m}$; $\epsilon_r = 42.426$; $\rho = 1000 \text{ kg/m}^3$

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: 11/27/2013
- 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) = 2.58 W/kg

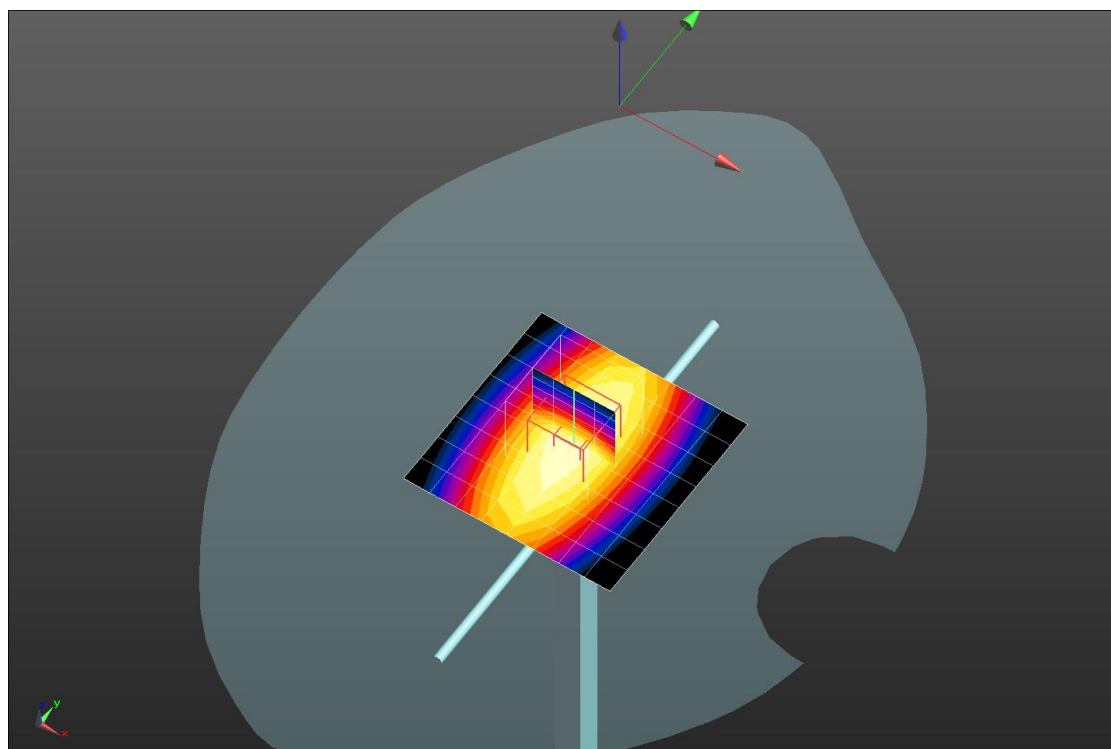
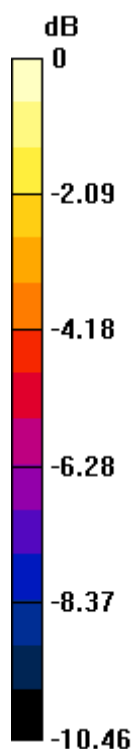
Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 54.78 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 3.47 W/kg

SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.58 W/kg

Maximum value of SAR (measured) = 2.61 W/kg



0 dB = 2.61 W/kg = 4.17 dBW/kg

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: $f = 835 \text{ MHz}$; $\sigma = 0.984 \text{ S/m}$; $\epsilon_r = 54.7$; $\rho = 1000 \text{ kg/m}^3$

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: 11/27/2013
- 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) = 2.63 W/kg

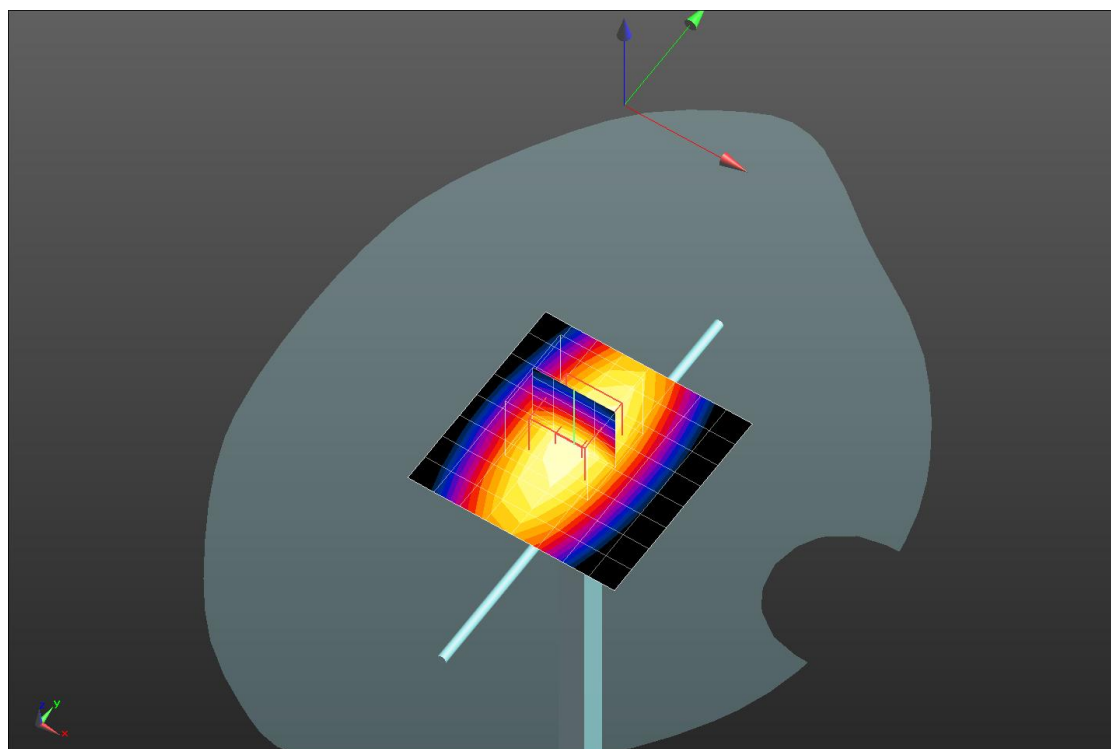
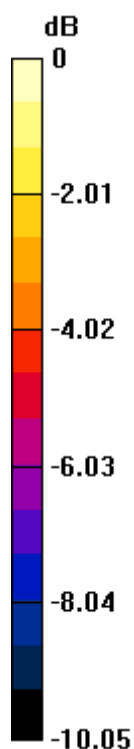
Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 54.16 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 3.45 W/kg

SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.65 W/kg

Maximum value of SAR (measured) = 2.70 W/kg



0 dB = 2.70 W/kg = 4.31 dBW/kg

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; $\sigma = 1.422$ S/m; $\epsilon_r = 39.375$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: ET3DV6 - SN1679; ConvF(5.08, 5.08, 5.08); Calibrated: 8/15/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 10.5 W/kg

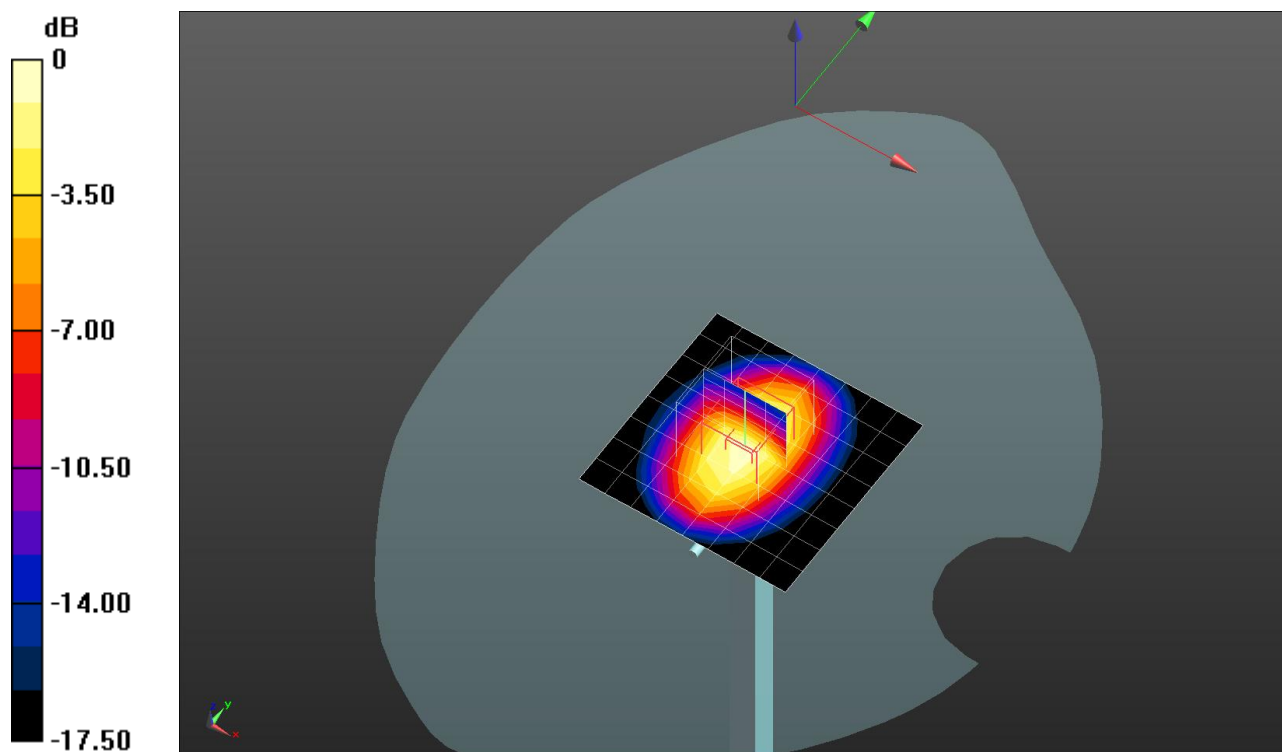
Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 89.71 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 17.4 W/kg

SAR(1 g) = 9.82 W/kg; SAR(10 g) = 5.17 W/kg

Maximum value of SAR (measured) = 11.1 W/kg



0 dB = 11.1 W/kg = 10.45 dBW/kg

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; $\sigma = 1.551$ S/m; $\epsilon_r = 52.939$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: ET3DV6 - SN1679; ConvF(4.53, 4.53, 4.53); Calibrated: 8/15/2014;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 10.7 W/kg

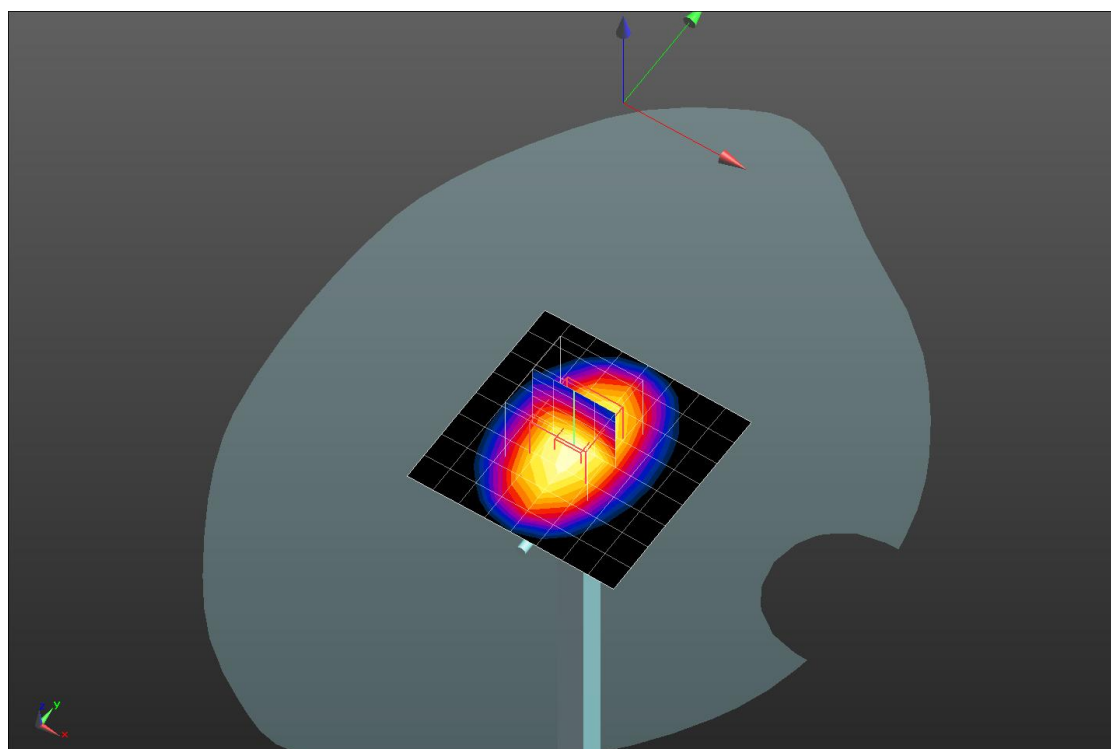
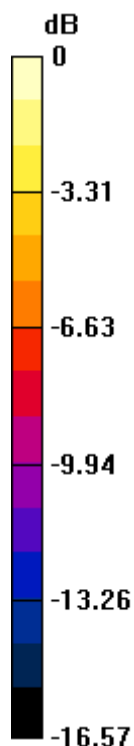
Dipole/Input 250 mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 88.91 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 15.0 W/kg

SAR(1 g) = 9.49 W/kg; SAR(10 g) = 5.17 W/kg

Maximum value of SAR (measured) = 10.6 W/kg



0 dB = 10.6 W/kg = 10.25 dBW/kg

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; $\sigma = 1.824$ S/m; $\epsilon_r = 39.261$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN3540; ConvF(7.4, 7.4, 7.4); Calibrated: 5/9/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 19.3 W/kg

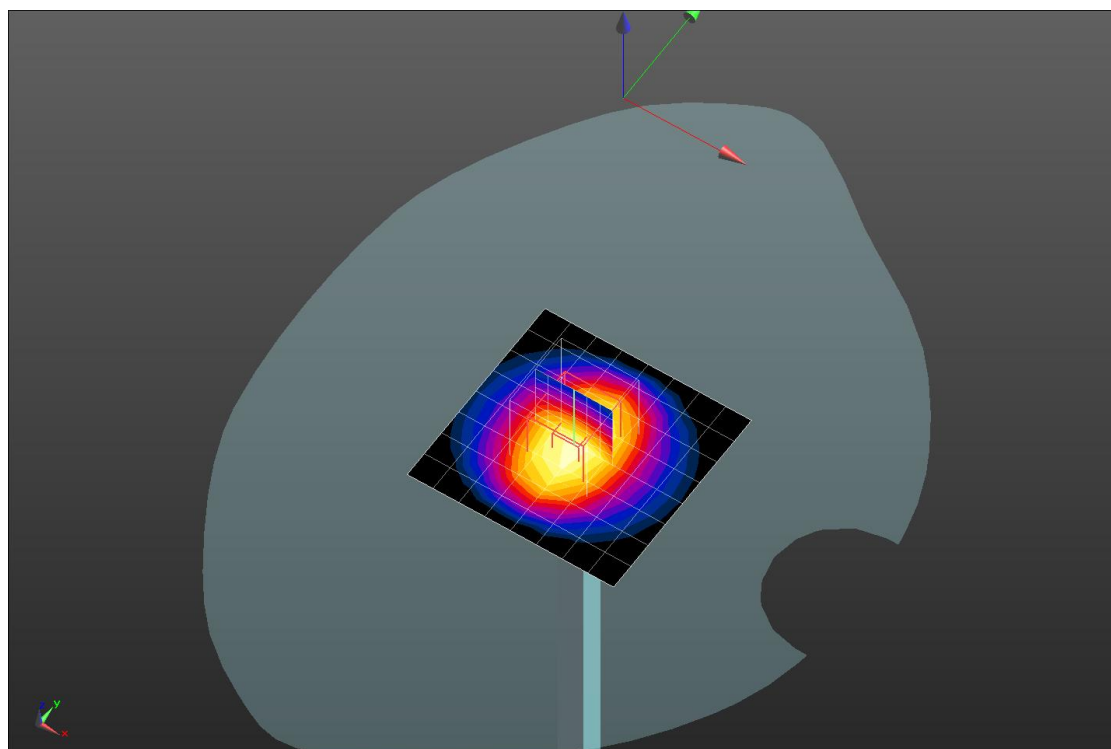
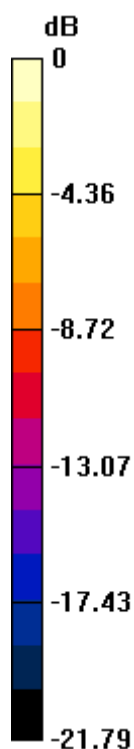
Dipole/Input 250 mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 105.1 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 26.5 W/kg

SAR(1 g) = 13 W/kg; SAR(10 g) = 6.1 W/kg

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



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

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; $\sigma = 1.94$ S/m; $\epsilon_r = 52.379$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN3540; ConvF(7.73, 7.73, 7.73); Calibrated: 5/9/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 17.7 W/kg

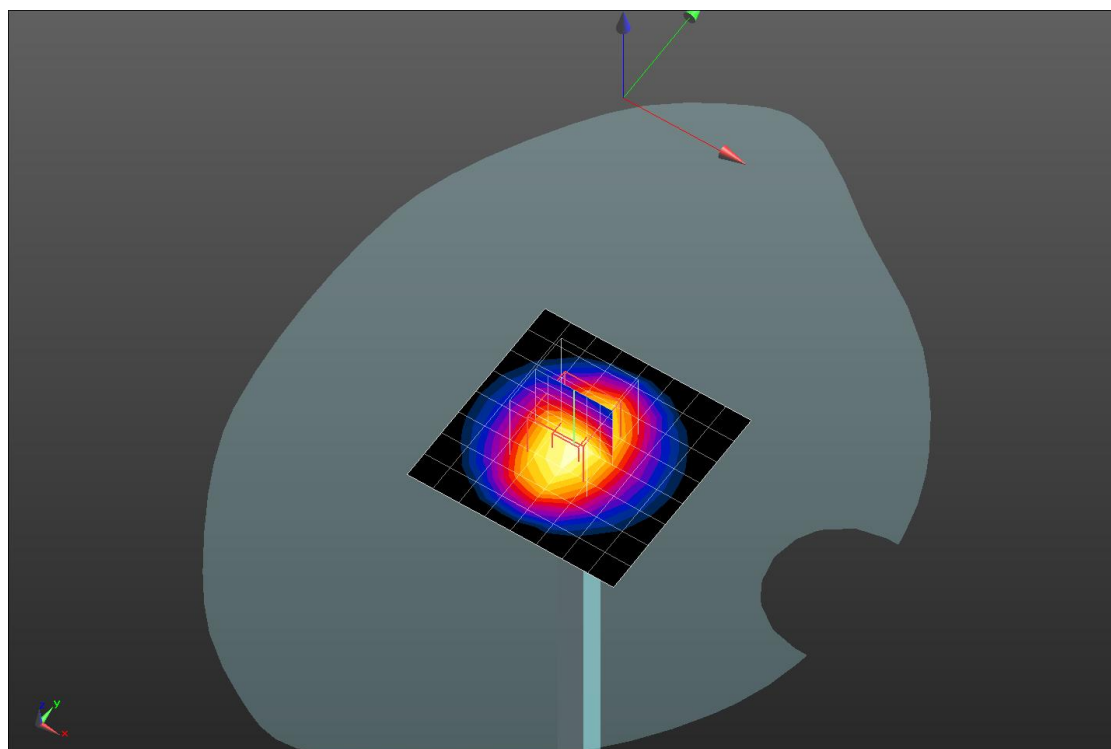
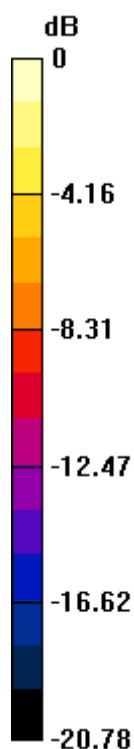
Dipole/Input 250 mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 97.06 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 24.6 W/kg

SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.79 W/kg

Maximum value of SAR (measured) = 18.6 W/kg



0 dB = 18.6 W/kg = 12.70 dBW/kg

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1039

Frequency: 5200 MHz; Duty Cycle: 1:1

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

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.451$ S/m; $\epsilon_r = 47.663$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN3540; ConvF(3.98, 3.98, 3.98); Calibrated: 5/9/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 38.7 W/kg

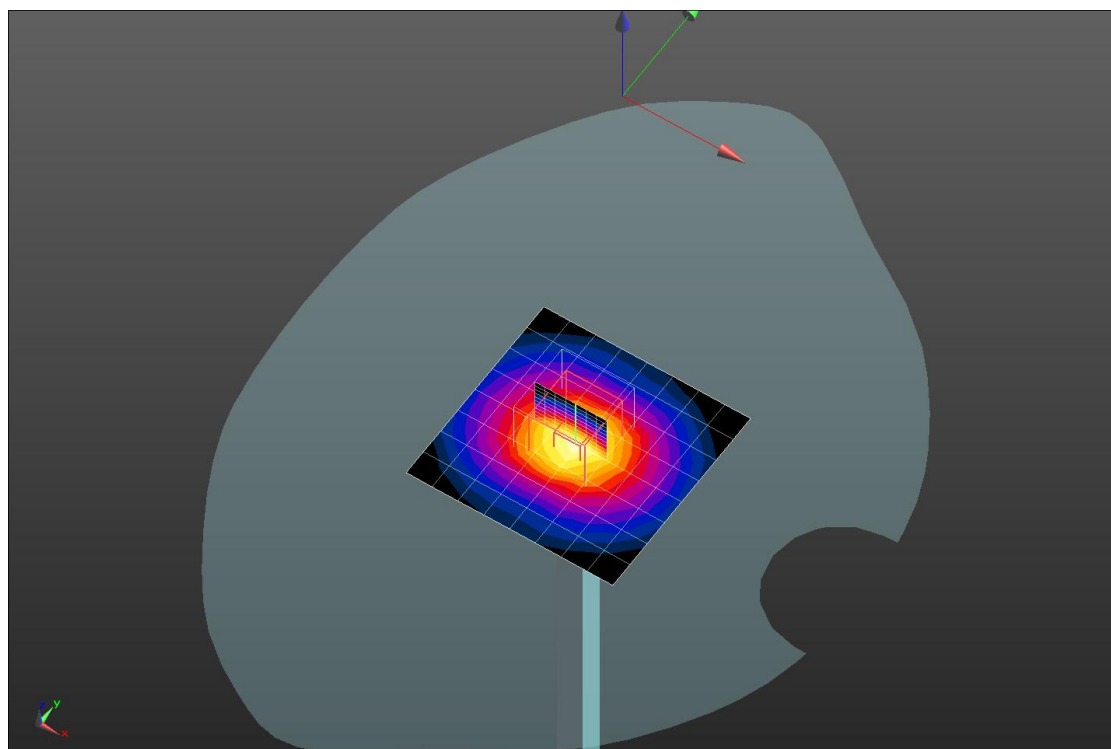
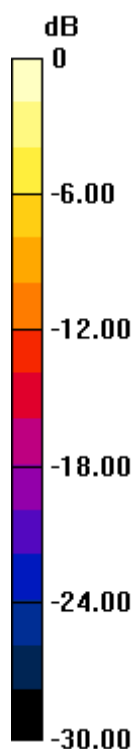
Dipole/Input 250 mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 91.66 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 75.8 W/kg

SAR(1 g) = 19.3 W/kg; SAR(10 g) = 5.53 W/kg

Maximum value of SAR (measured) = 39.9 W/kg



0 dB = 39.9 W/kg = 16.01 dBW/kg

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1039

Frequency: 5300 MHz; Duty Cycle: 1:1

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

Medium parameters used: $f = 5300$ MHz; $\sigma = 5.586$ S/m; $\epsilon_r = 47.509$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN3540; ConvF(3.81, 3.81, 3.81); Calibrated: 5/9/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 40.8 W/kg

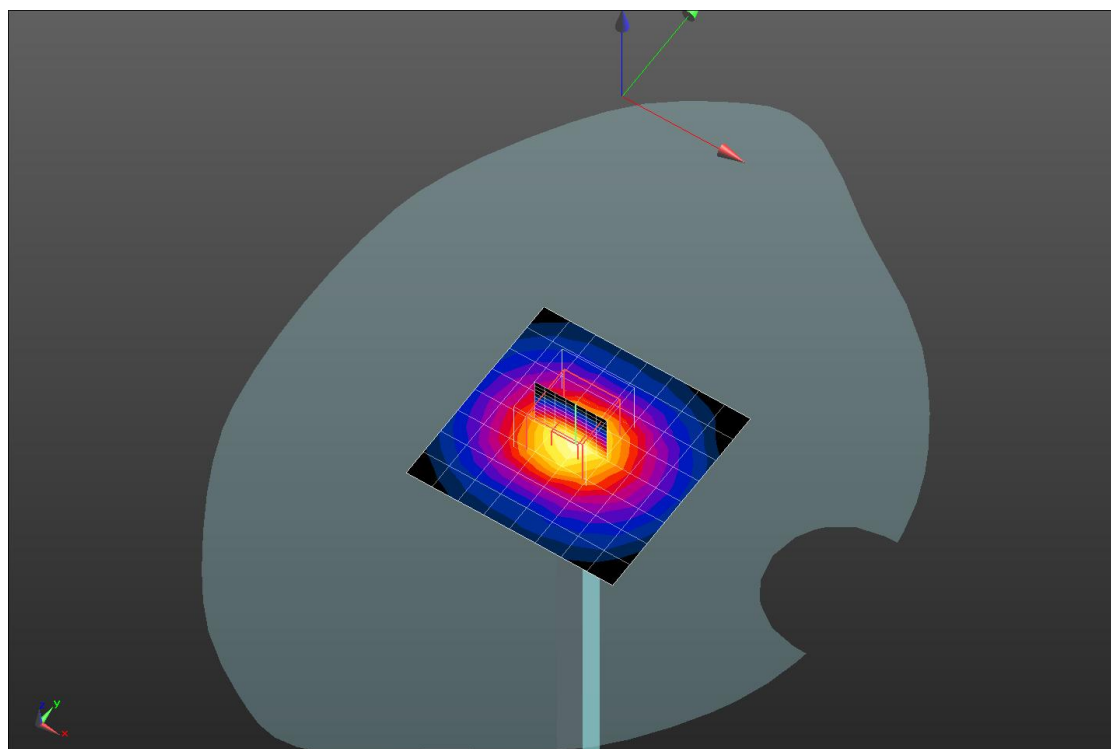
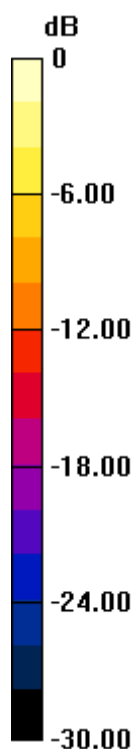
Dipole/Input 250 mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 94.18 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 79.3 W/kg

SAR(1 g) = 20 W/kg; SAR(10 g) = 5.66 W/kg

Maximum value of SAR (measured) = 42.5 W/kg



0 dB = 42.5 W/kg = 16.28 dBW/kg

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1039

Frequency: 5600 MHz; Duty Cycle: 1:1

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

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.954$ S/m; $\epsilon_r = 46.998$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN3540; ConvF(3.5, 3.5, 3.5); Calibrated: 5/9/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 43.7 W/kg

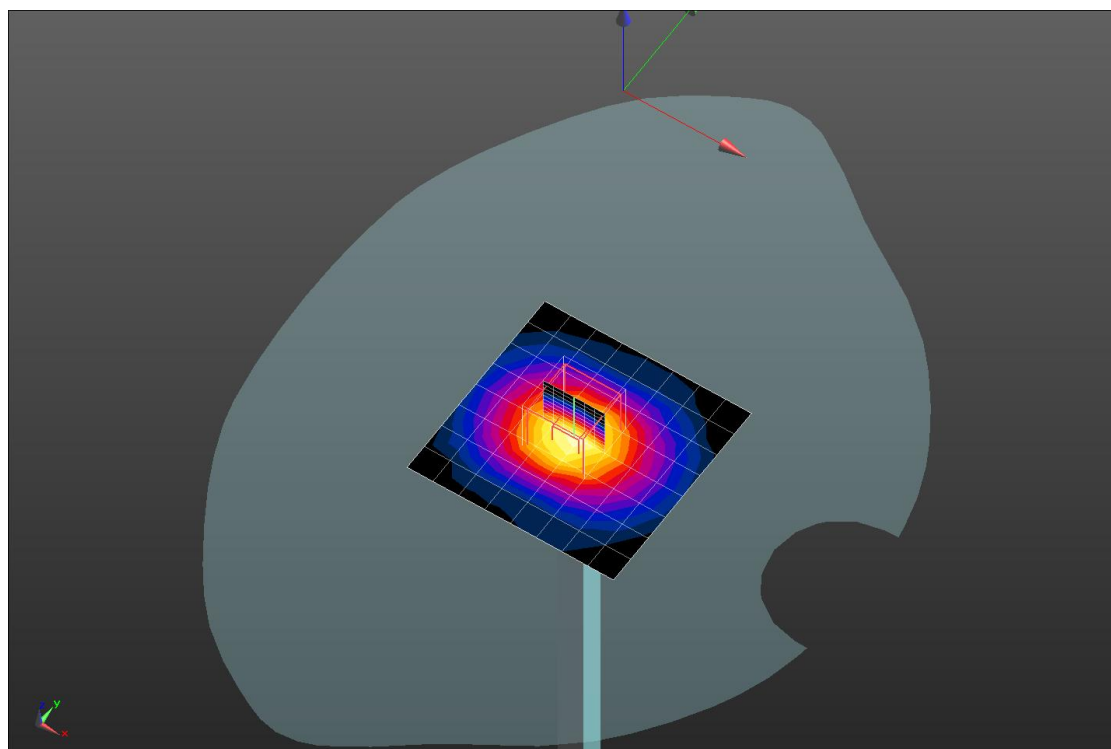
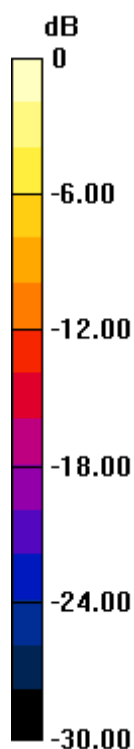
Dipole/Input 250 mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 91.98 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 87.5 W/kg

SAR(1 g) = 21.2 W/kg; SAR(10 g) = 5.96 W/kg

Maximum value of SAR (measured) = 44.7 W/kg



0 dB = 44.7 W/kg = 16.50 dBW/kg

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1039

Frequency: 5200 MHz; Duty Cycle: 1:1

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

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.636$ S/m; $\epsilon_r = 36.331$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN3540; ConvF(4.8, 4.8, 4.8); Calibrated: 5/9/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 38.1 W/kg

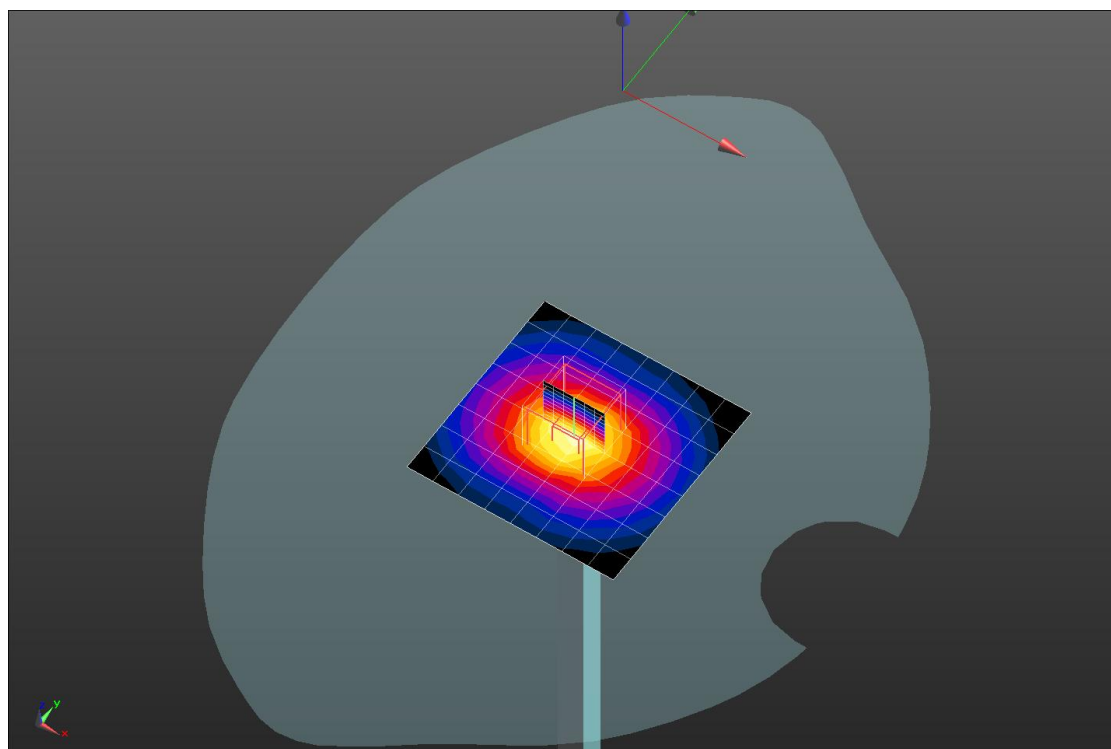
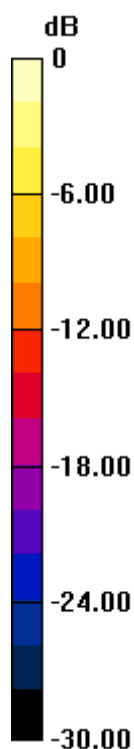
Dipole/Input 250 mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 97.92 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 82.9 W/kg

SAR(1 g) = 20 W/kg; SAR(10 g) = 5.78 W/kg

Maximum value of SAR (measured) = 41.3 W/kg



0 dB = 41.3 W/kg = 16.16 dBW/kg

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1039

Frequency: 5300 MHz; Duty Cycle: 1:1

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

Medium parameters used: $f = 5300$ MHz; $\sigma = 4.738$ S/m; $\epsilon_r = 36.173$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN3540; ConvF(4.51, 4.51, 4.51); Calibrated: 5/9/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 42.0 W/kg

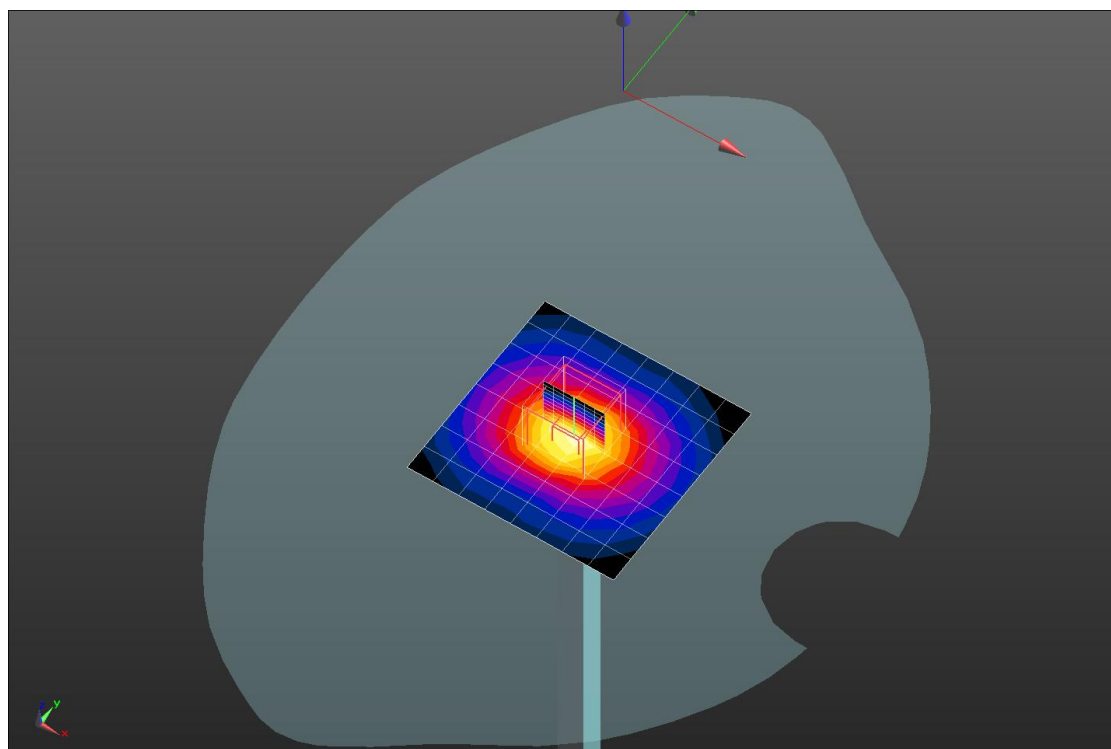
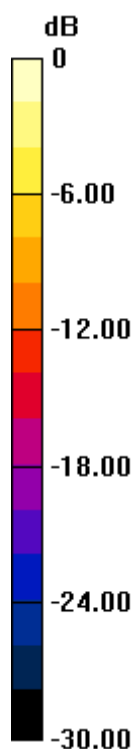
Dipole/Input 250 mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 100.5 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 89.6 W/kg

SAR(1 g) = 21.7 W/kg; SAR(10 g) = 6.19 W/kg

Maximum value of SAR (measured) = 45.3 W/kg



0 dB = 45.3 W/kg = 16.56 dBW/kg

Test Laboratory: JAPAN QUALITY ASSURANCE ORGANIZATION

System Performance Check

DUT: Dipole 5 GHz; Type: D5GHzV2; Serial: 1039

Frequency: 5600 MHz; Duty Cycle: 1:1

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

Medium parameters used: $f = 5600$ MHz; $\sigma = 5$ S/m; $\epsilon_r = 35.856$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN3540; ConvF(4.16, 4.16, 4.16); Calibrated: 5/9/2014;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn508; Calibrated: 11/27/2013
- 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) = 45.2 W/kg

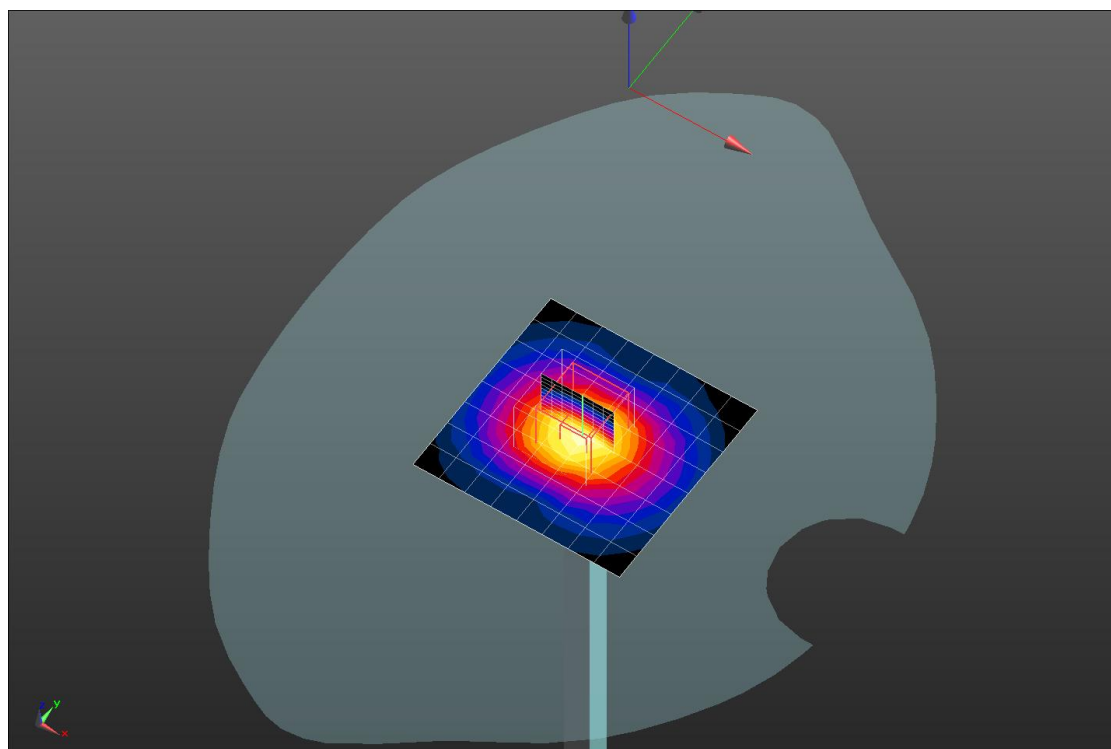
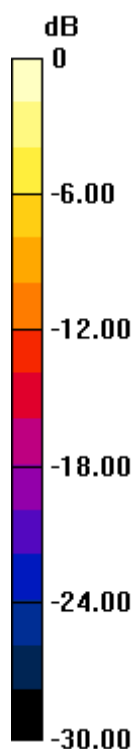
Dipole/Input 250 mW/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 102.9 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 90.0 W/kg

SAR(1 g) = 21.5 W/kg; SAR(10 g) = 6.19 W/kg

Maximum value of SAR (measured) = 44.6 W/kg



0 dB = 44.6 W/kg = 16.49 dBW/kg