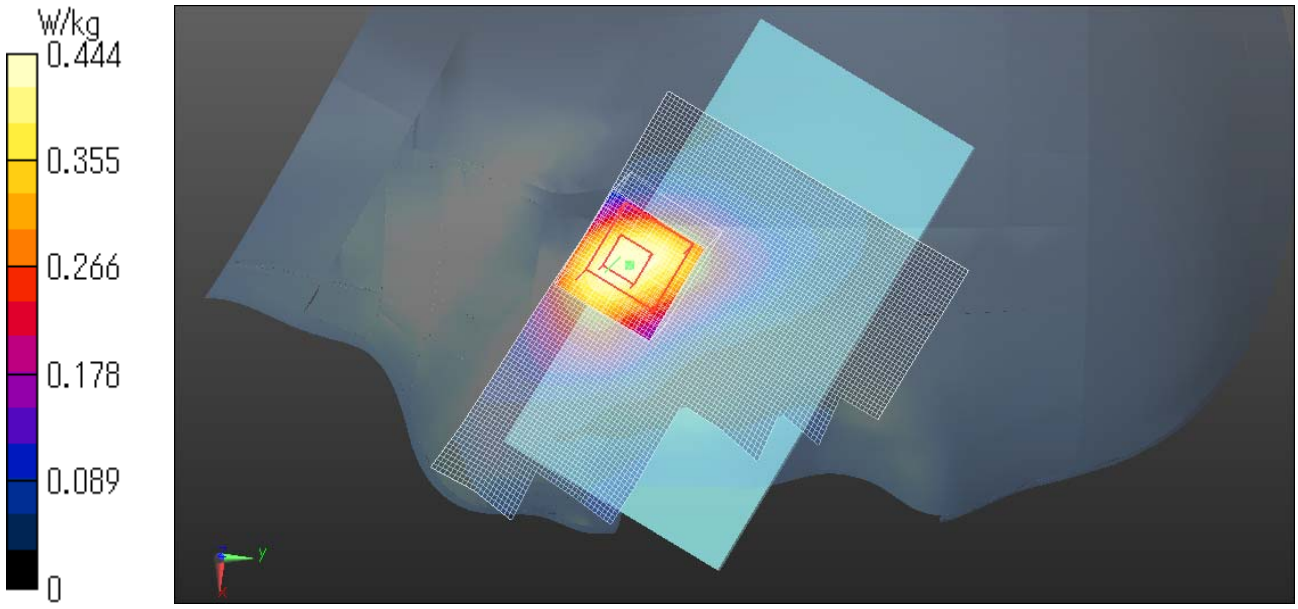
LTE 7 UL RB Allocation 50, UL RB Start 24 2510MHz Left cheek
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.934 S/m; ε_r = 38.989; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.11, 7.11, 7.11); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.458 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.36 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.616 W/kg
SAR(1 g) = 0.309 W/kg; SAR(10 g) = 0.165 W/kg
Maximum value of SAR (measured) = 0.444 W/kg

Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



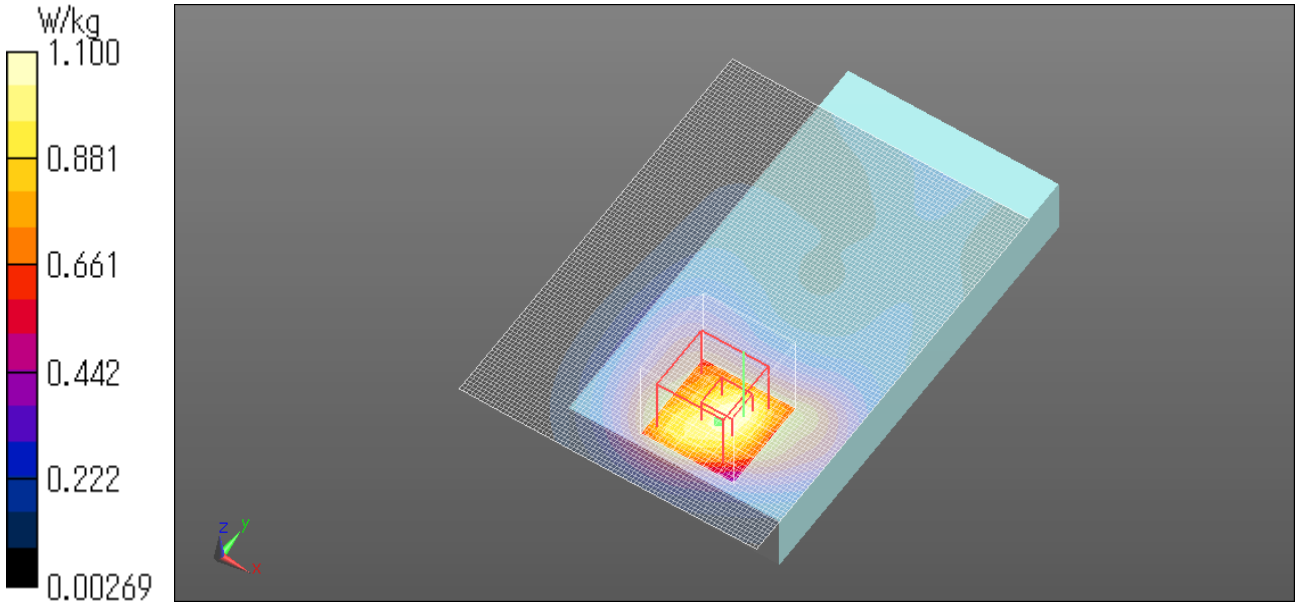
18. LTE Band VII Body

LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 49 2510MHz Front side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.069 S/m; ε_r = 51.067; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.10 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.86 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.54 W/kg
SAR(1 g) = 0.770 W/kg; SAR(10 g) = 0.414 W/kg
Maximum value of SAR (measured) = 1.10 W/kg

Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

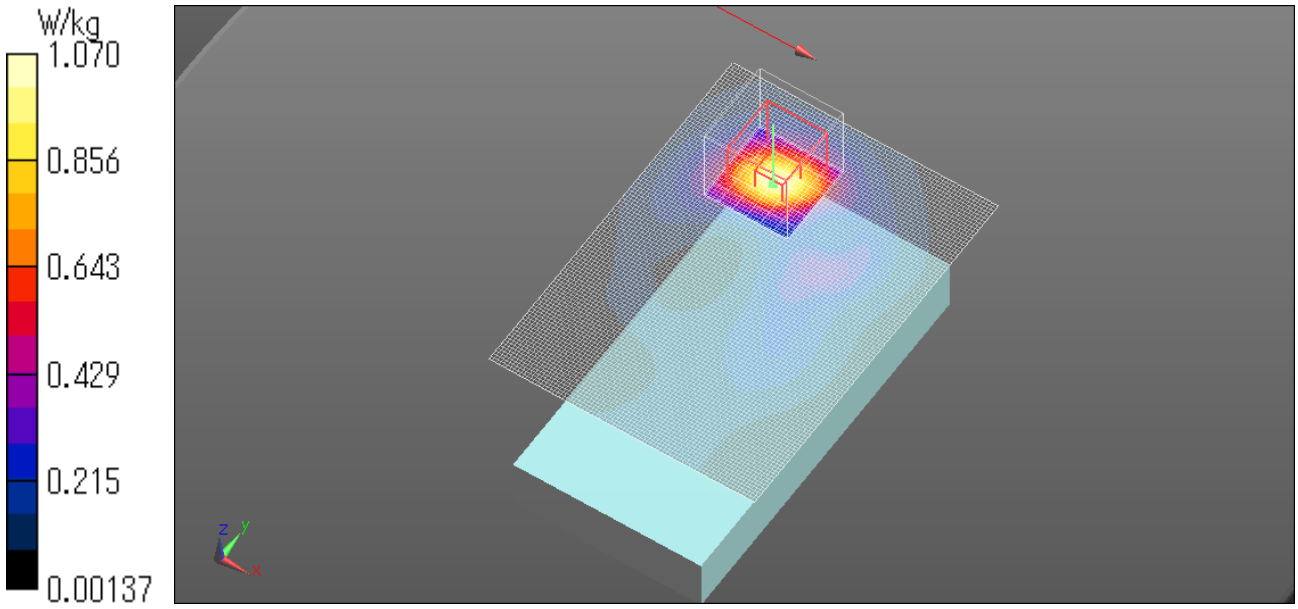


LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 49 2510MHz Rear side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.069 S/m; ε_r = 51.067; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.06 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.70 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.731 W/kg; SAR(10 g) = 0.355 W/kg
Maximum value of SAR (measured) = 1.07 W/kg

Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

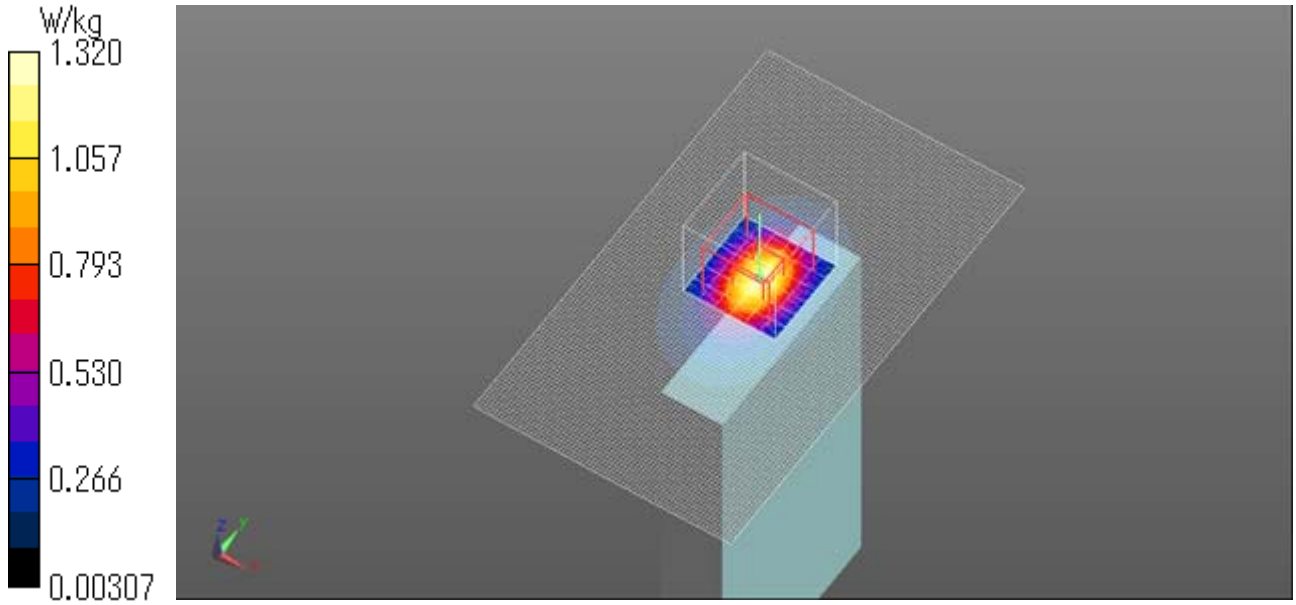


LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 0 2510MHz Bottom side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.069 S/m; ε_r = 51.067; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.35 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 25.54 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.80 W/kg
SAR(1 g) = 0.857 W/kg; SAR(10 g) = 0.385 W/kg
Maximum value of SAR (measured) = 1.32 W/kg

Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

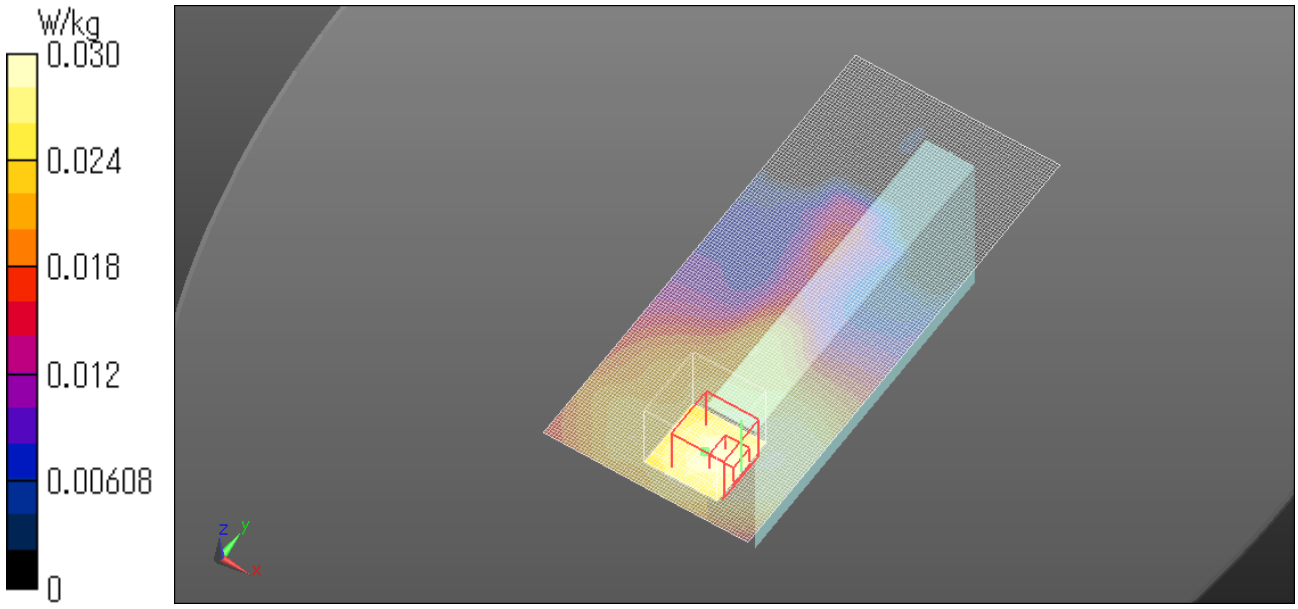


LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 0 2510MHz Left side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.069 S/m; ε_r = 51.067; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0292 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.739 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.0420 W/kg
SAR(1 g) = 0.021 W/kg; SAR(10 g) = 0.012 W/kg
Maximum value of SAR (measured) = 0.0304 W/kg

Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

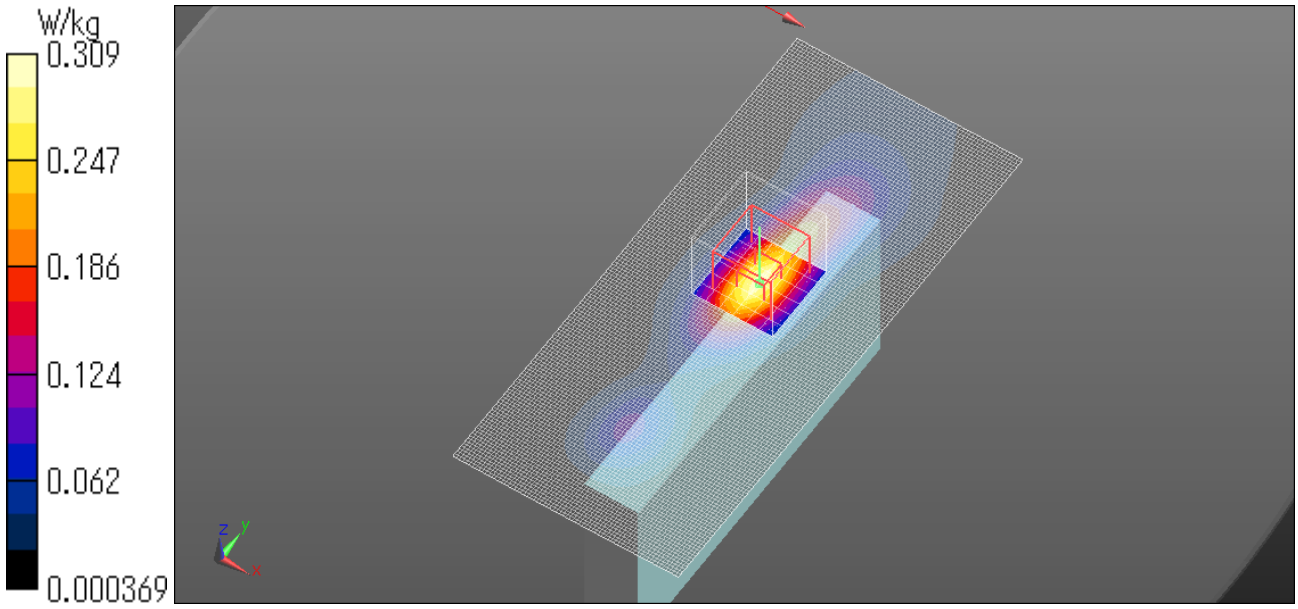


LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 0 2510MHz Right side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.069 S/m; ε_r = 51.067; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.309 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.36 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.417 W/kg
SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.099 W/kg
Maximum value of SAR (measured) = 0.309 W/kg

Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

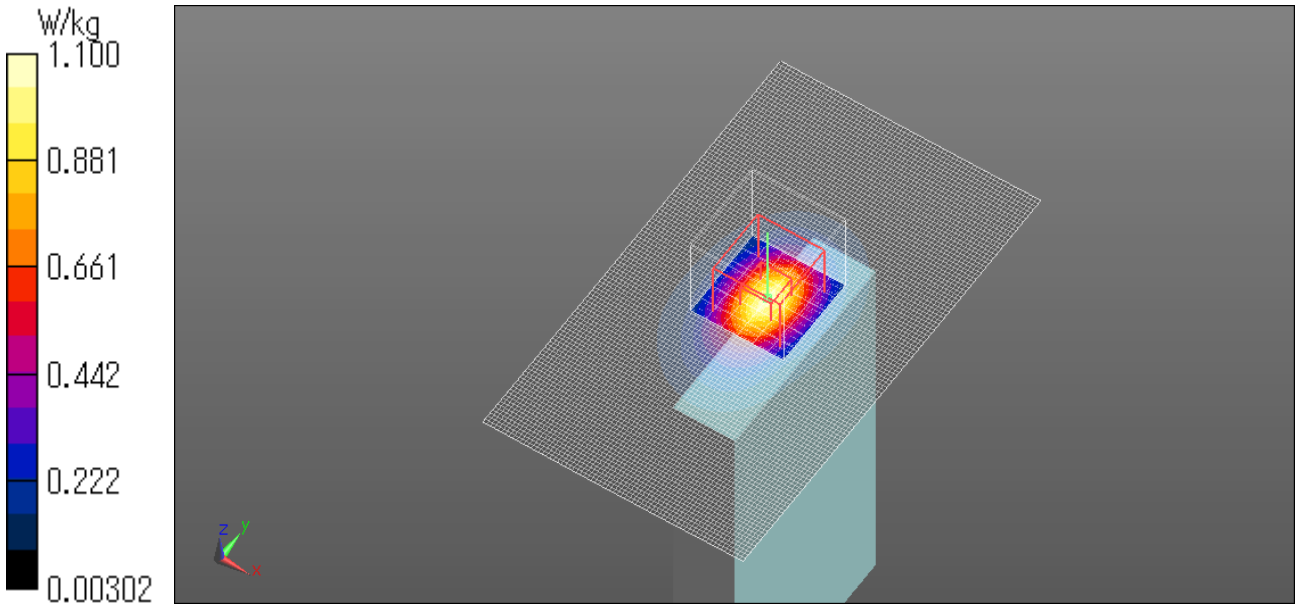


LTE VII QPSK 20MHz BW UL RB Allocation 50 UL RB Start 0 2510MHz Bottom side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.079 S/m; ε_r = 50.554; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.14 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.19 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.733 W/kg; SAR(10 g) = 0.342 W/kg
Maximum value of SAR (measured) = 1.10 W/kg

Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

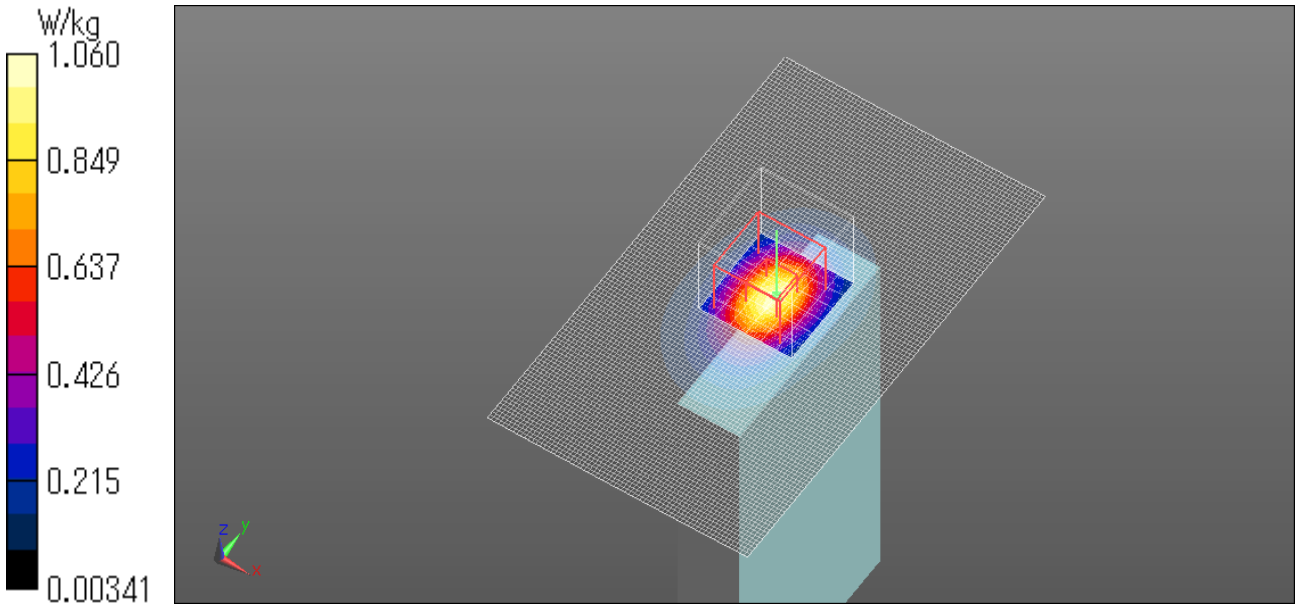


LTE VII QPSK 20MHz BW UL RB Allocation 100 UL RB Start 0 2510MHz Bottom side 10mm power reduction
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.079 S/m; ε_r = 50.554; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.09 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.74 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.709 W/kg; SAR(10 g) = 0.330 W/kg
Maximum value of SAR (measured) = 1.06 W/kg

Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

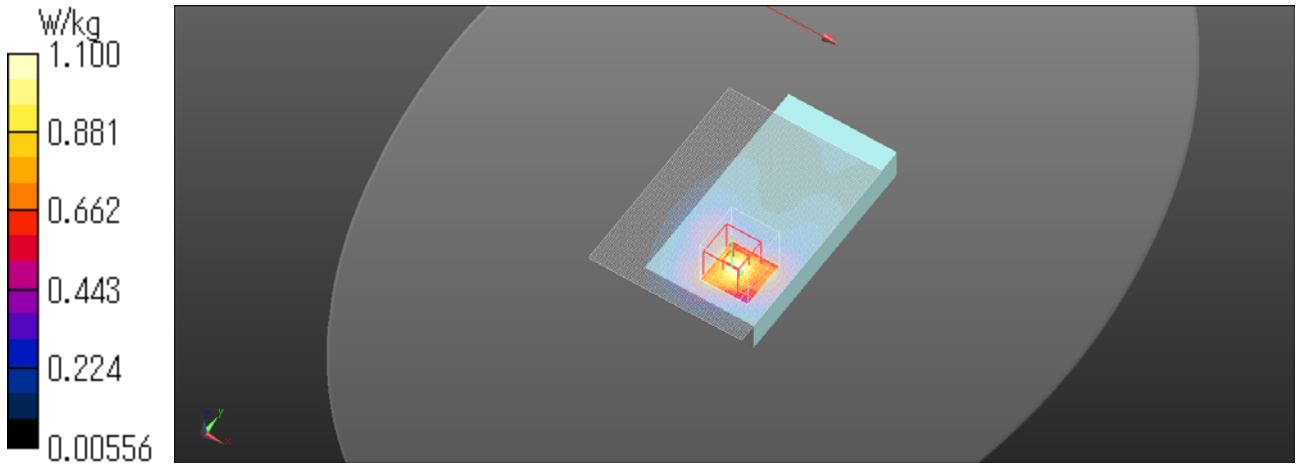


LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 99 2535MHz Front side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2535 MHz; σ = 2.111 S/m; ε_r = 50.469; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/Front 2/Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.08 W/kg

Configuration/Front 2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.95 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 0.760 W/kg; SAR(10 g) = 0.383 W/kg

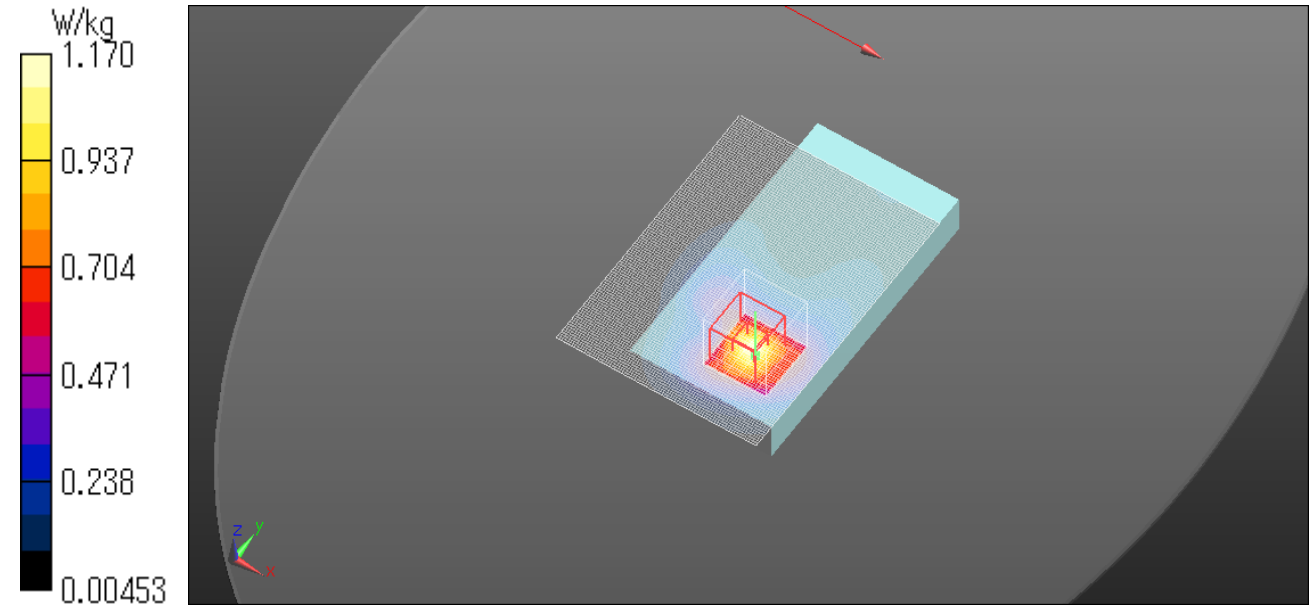
Maximum value of SAR (measured) = 1.10 W/kg
Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 99 2560MHz Front side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2560 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2560 MHz; σ = 2.144 S/m; ε_r = 50.361; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Configuration/Front/Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.12 W/kg

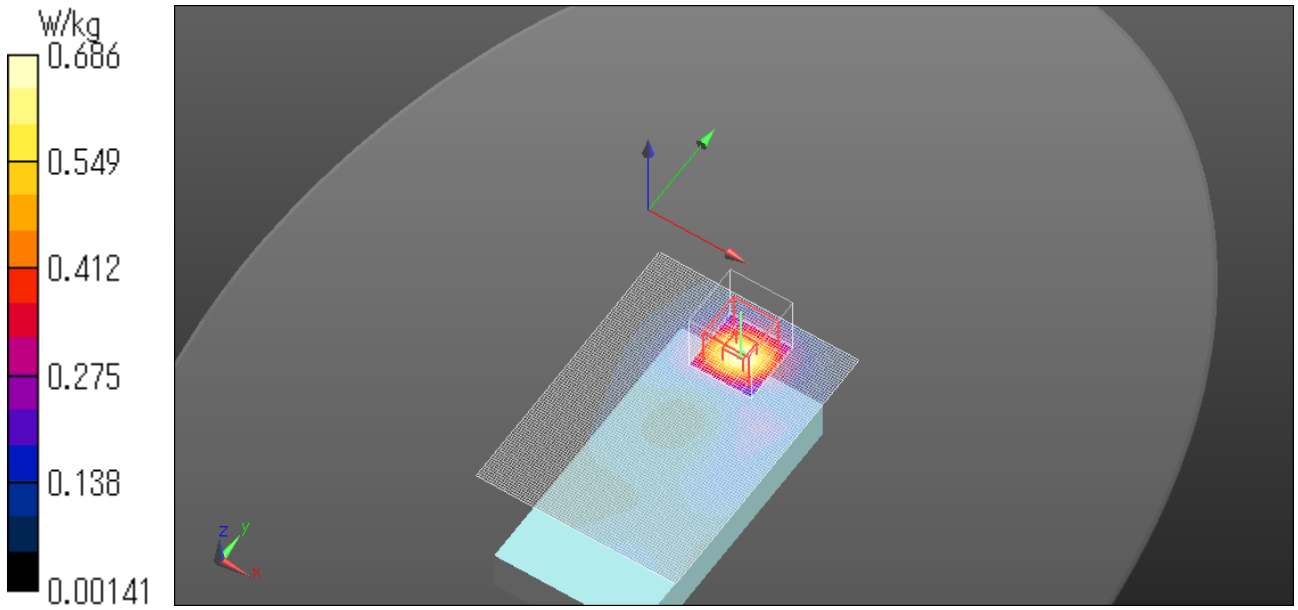
Configuration/Front/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.51 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.66 W/kg
SAR(1 g) = 0.787 W/kg; SAR(10 g) = 0.381 W/kg
Maximum value of SAR (measured) = 1.17 W/kg
Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 99 2535MHz Rear side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2535 MHz; σ = 2.111 S/m; ε_r = 50.469; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.695 W/kg

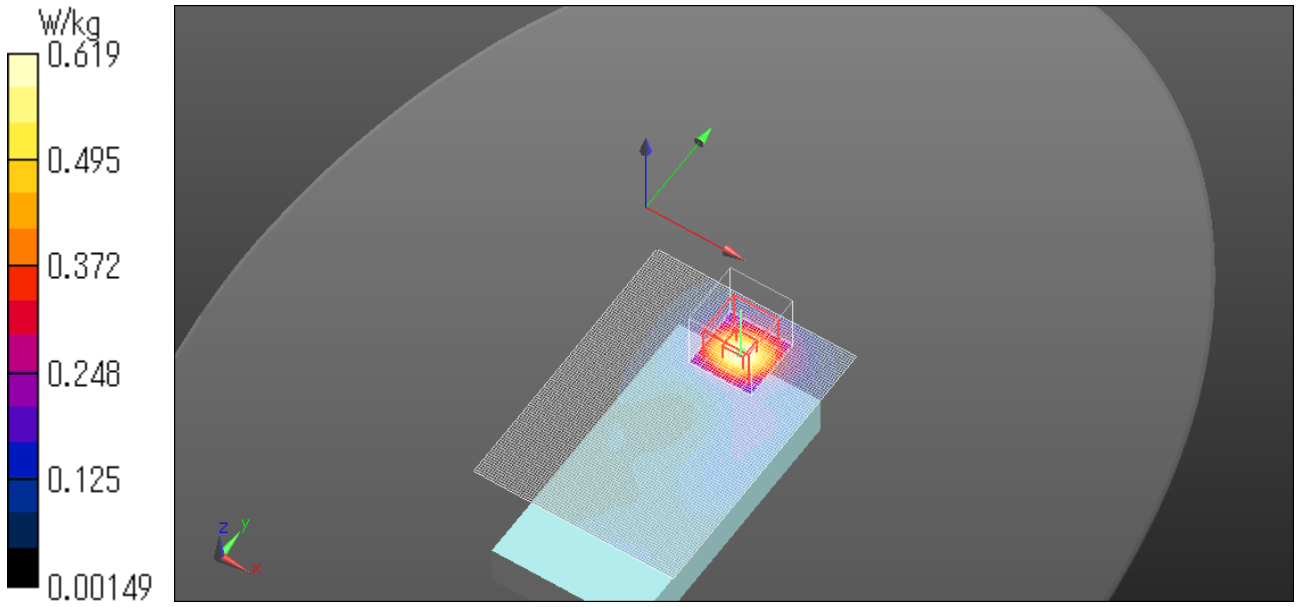
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.19 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.915 W/kg
SAR(1 g) = 0.472 W/kg; SAR(10 g) = 0.236 W/kg
Maximum value of SAR (measured) = 0.686 W/kg
Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 99 2560MHz Rear side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2560 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2560 MHz; σ = 2.144 S/m; ε_r = 50.361; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.628 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.12 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.826 W/kg
SAR(1 g) = 0.425 W/kg; SAR(10 g) = 0.212 W/kg
Maximum value of SAR (measured) = 0.619 W/kg
Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

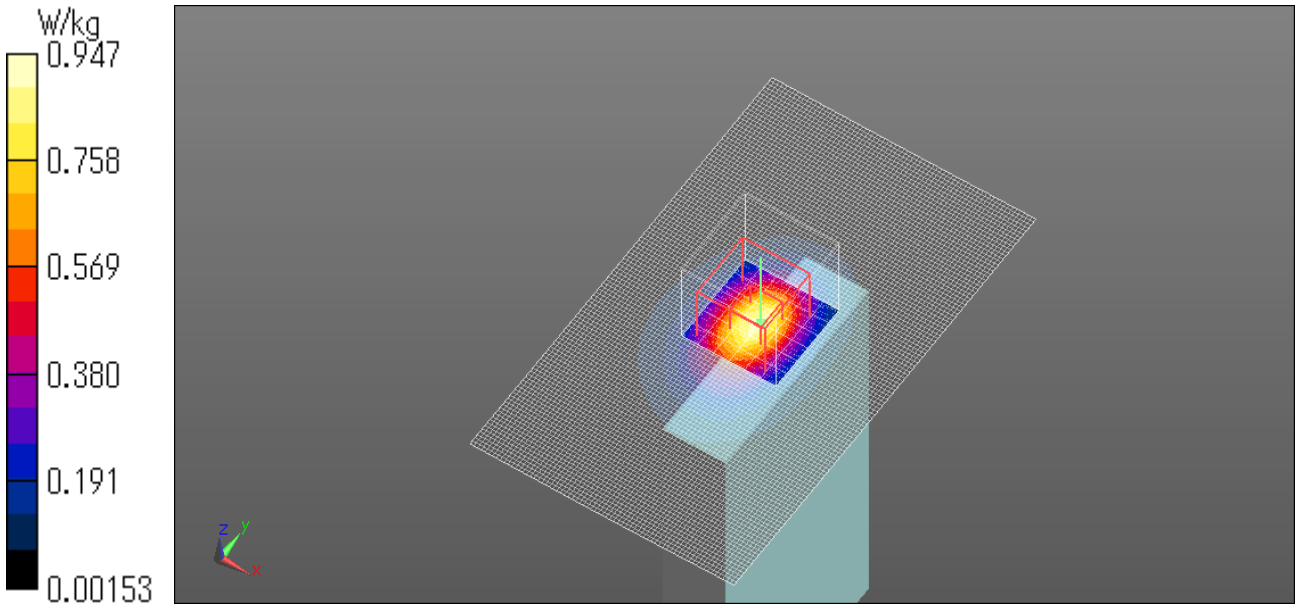


LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 99 2535MHz Bottom side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2535 MHz; σ = 2.111 S/m; ε_r = 50.469; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.963 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.18 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.630 W/kg; SAR(10 g) = 0.293 W/kg
Maximum value of SAR (measured) = 0.947 W/kg

Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

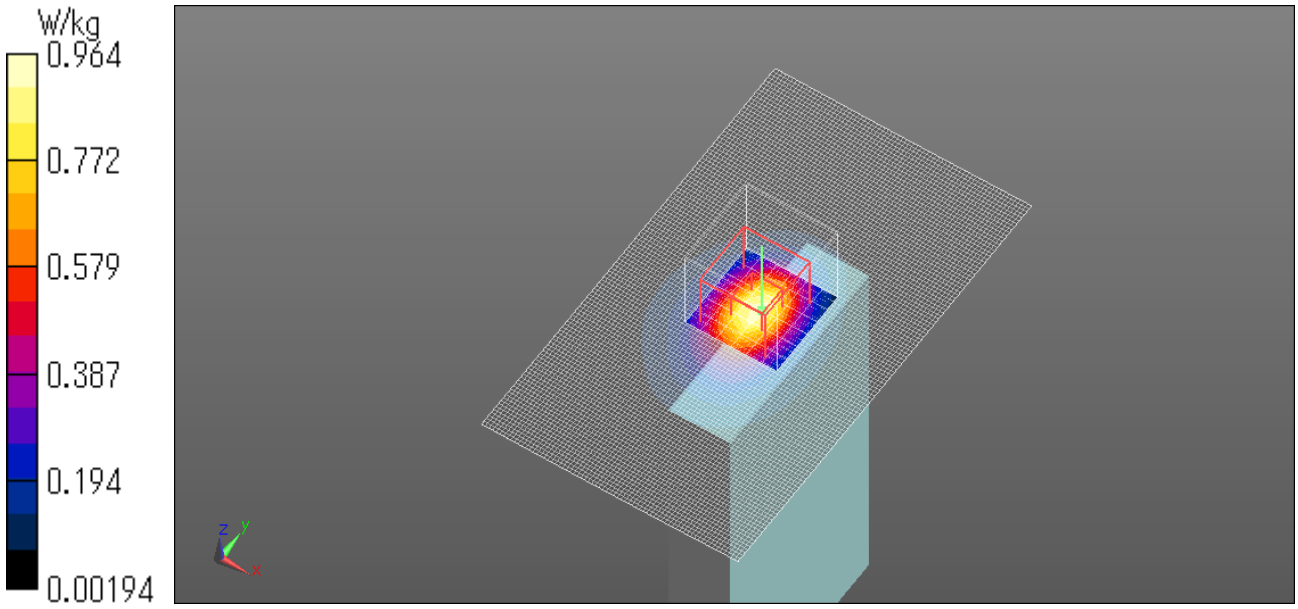


LTE VII QPSK 20MHz BW UL RB Allocation 1 UL RB Start 99 2560MHz Bottom side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2560 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2560 MHz; σ = 2.144 S/m; ε_r = 50.361; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.976 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.22 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.31 W/kg
SAR(1 g) = 0.648 W/kg; SAR(10 g) = 0.300 W/kg
Maximum value of SAR (measured) = 0.964 W/kg

Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

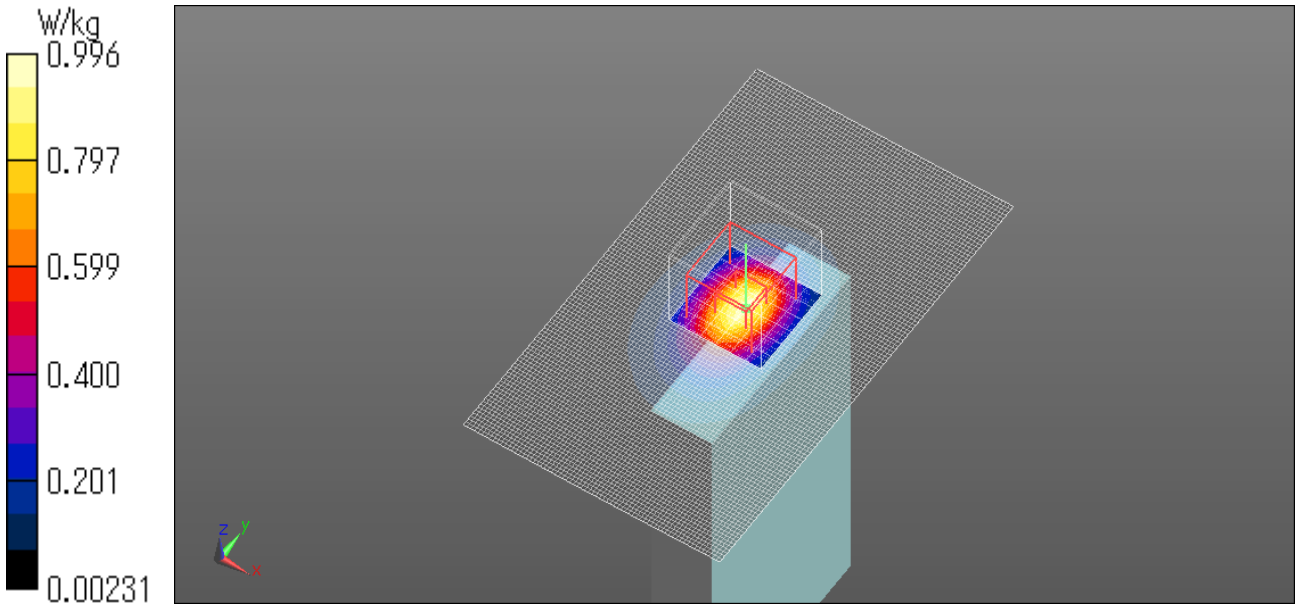


LTE VII QPSK 20MHz BW UL RB Allocation 50 UL RB Start 24 2535MHz Bottom side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2535 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2535 MHz; σ = 2.111 S/m; ε_r = 50.469; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.02 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.75 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.664 W/kg; SAR(10 g) = 0.308 W/kg
Maximum value of SAR (measured) = 0.996 W/kg

Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

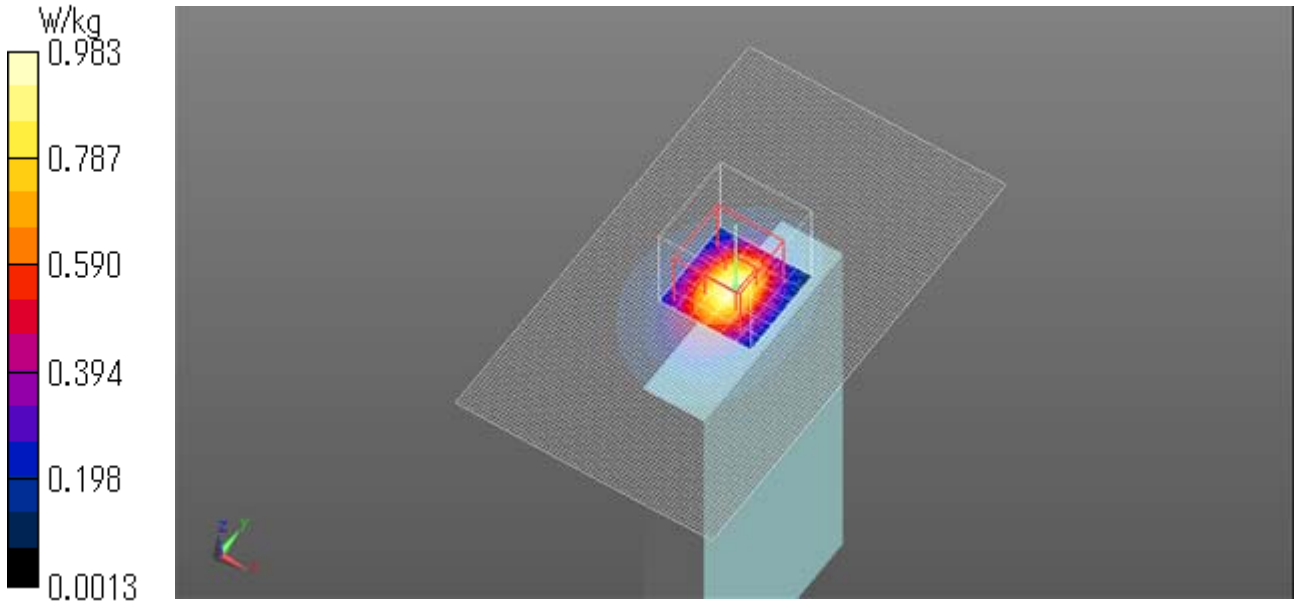


LTE VII QPSK 20MHz BW UL RB Allocation 50 UL RB Start 49 2560MHz Bottom side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2560 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2560 MHz; σ = 2.144 S/m; ε_r = 50.361; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.996 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.32 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.656 W/kg; SAR(10 g) = 0.302 W/kg
Maximum value of SAR (measured) = 0.983 W/kg

Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

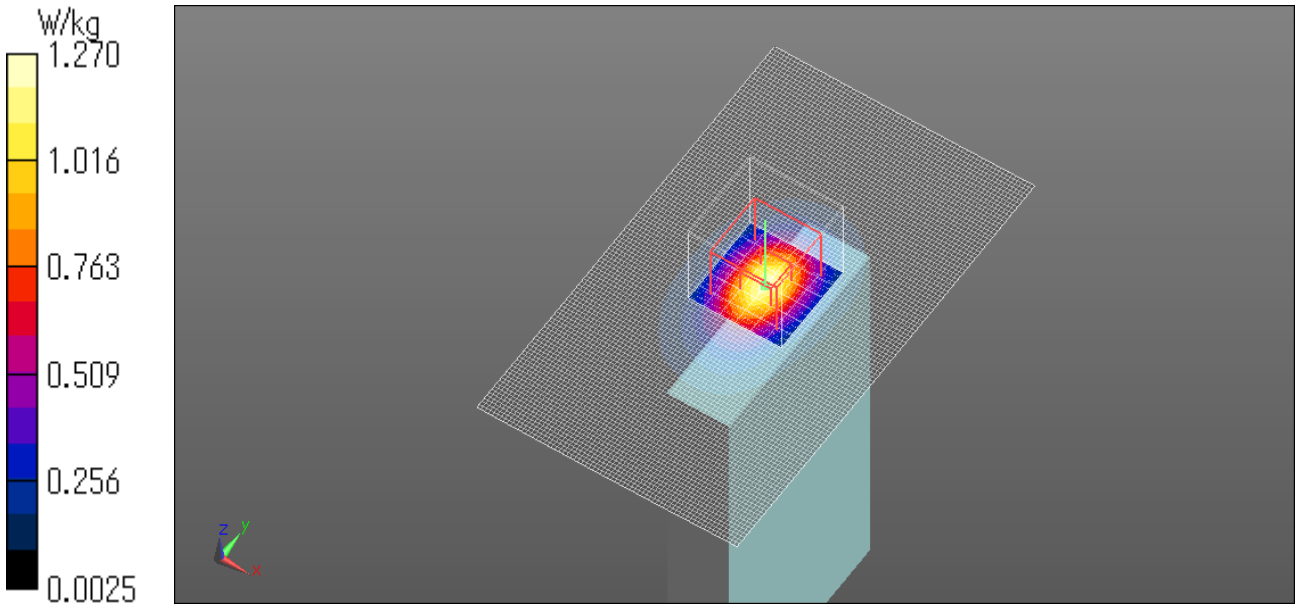


LTE VII QPSK 20MHz BW UL RB Allocation 50 UL RB Start 0 2510MHz Bottom side 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz); Frequency: 2510 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 2.079 S/m; ε_r = 50.554; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.31 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.92 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.70 W/kg
SAR(1 g) = 0.843 W/kg; SAR(10 g) = 0.388 W/kg
Maximum value of SAR (measured) = 1.27 W/kg

Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



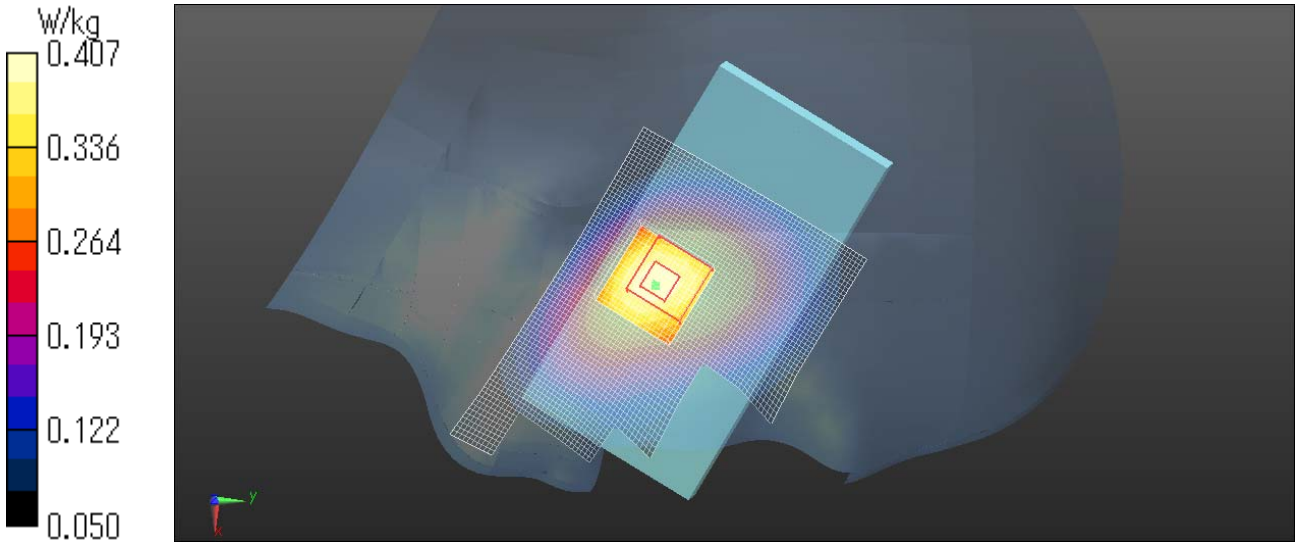
19. LTE Band XVII Head

LTE 17 UL RB Allocation 1, UL RB Start 49 709MHz Left cheek
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.885 S/m; ε_r = 41.455; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.409 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.59 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.465 W/kg
SAR(1 g) = 0.341 W/kg; SAR(10 g) = 0.252 W/kg
Maximum value of SAR (measured) = 0.407 W/kg

Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

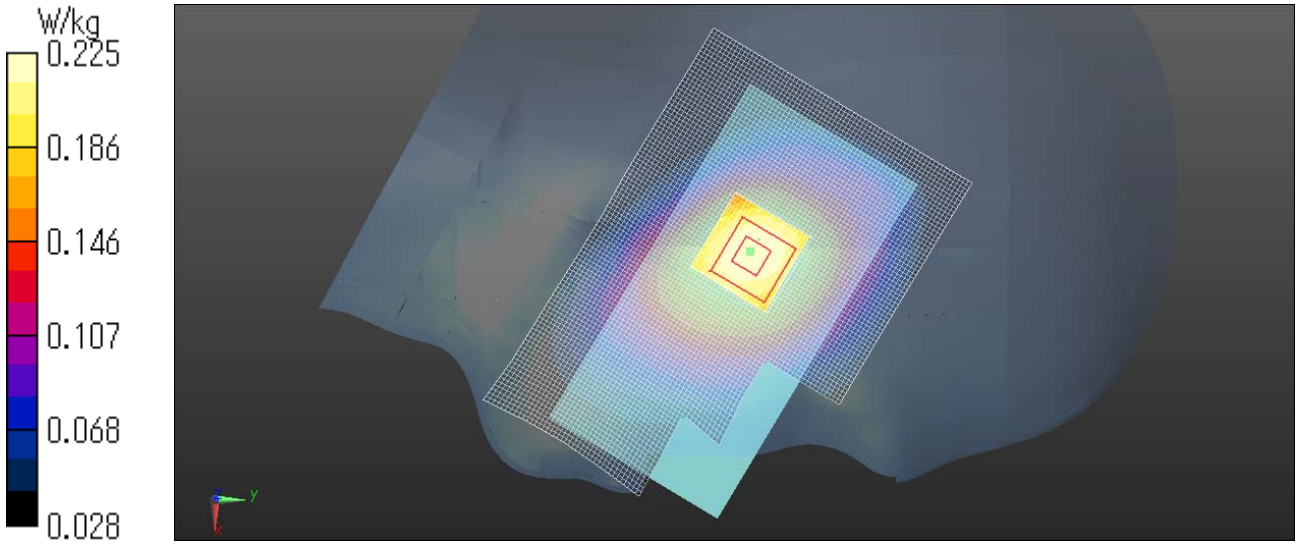


LTE 17 UL RB Allocation 1, UL RB Start 49 709MHz Left tilt
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.885 S/m; ε_r = 41.455; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.225 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.84 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.249 W/kg
SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.155 W/kg
Maximum value of SAR (measured) = 0.225 W/kg

Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

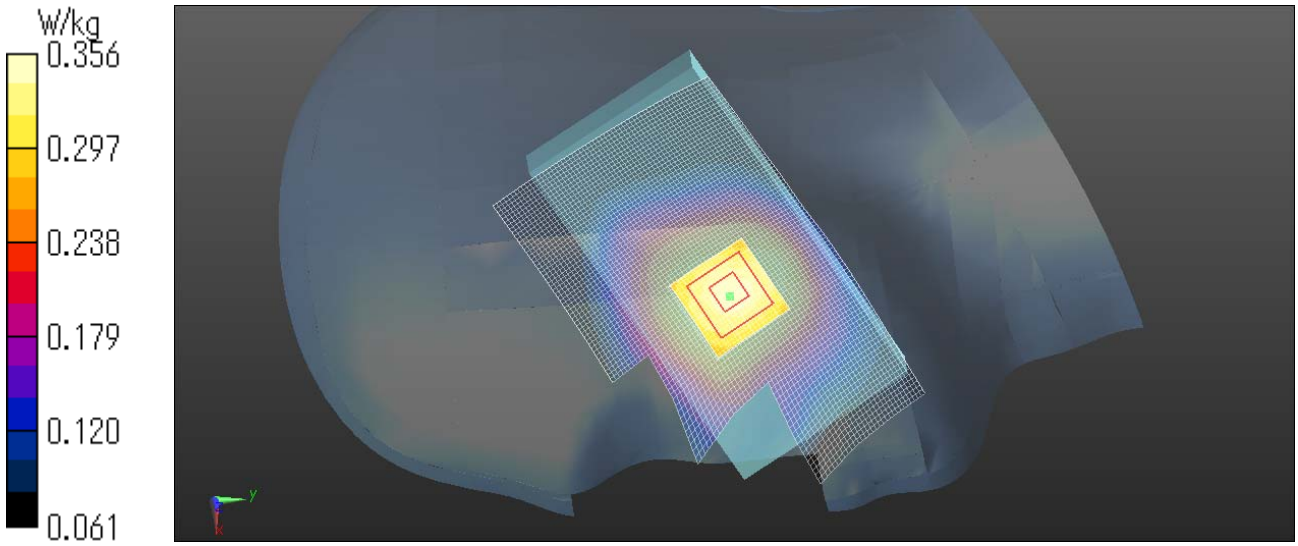


LTE 17 UL RB Allocation 1, UL RB Start 49 709MHz Right cheek
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.885 S/m; ε_r = 41.455; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.343 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.43 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.388 W/kg
SAR(1 g) = 0.312 W/kg; SAR(10 g) = 0.245 W/kg
Maximum value of SAR (measured) = 0.356 W/kg

Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

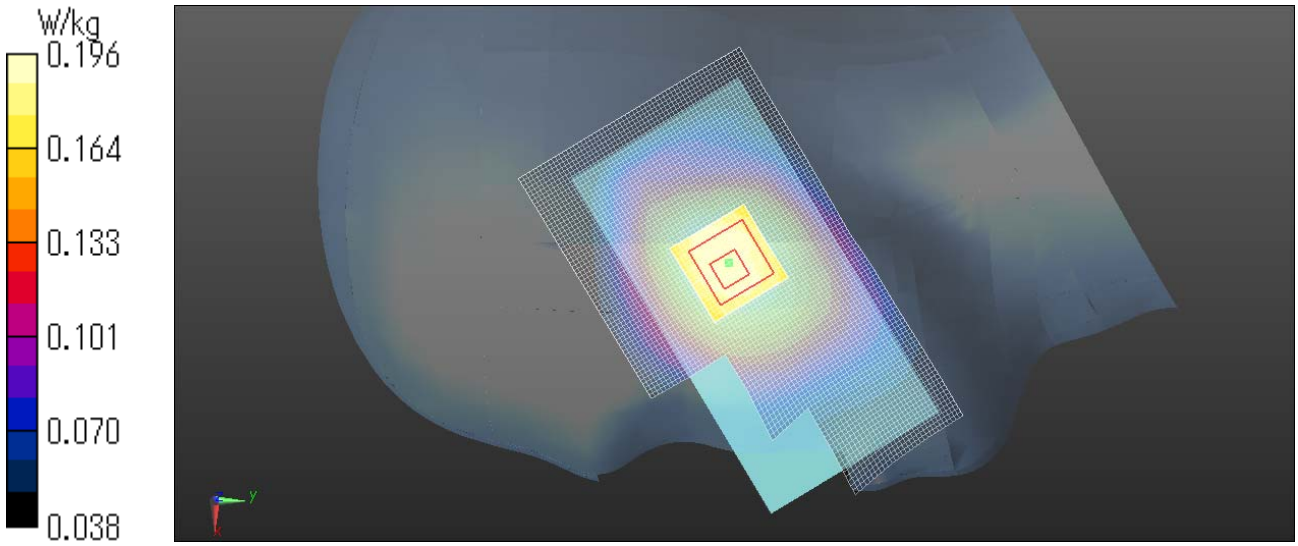


LTE 17 UL RB Allocation 1, UL RB Start 49 709MHz Right tilt
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.885 S/m; ε_r = 41.455; ρ = 1000 kg/m^3
Phantom section: Right Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (61x111x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.193 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.10 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.215 W/kg
SAR(1 g) = 0.173 W/kg; SAR(10 g) = 0.139 W/kg
Maximum value of SAR (measured) = 0.196 W/kg

Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

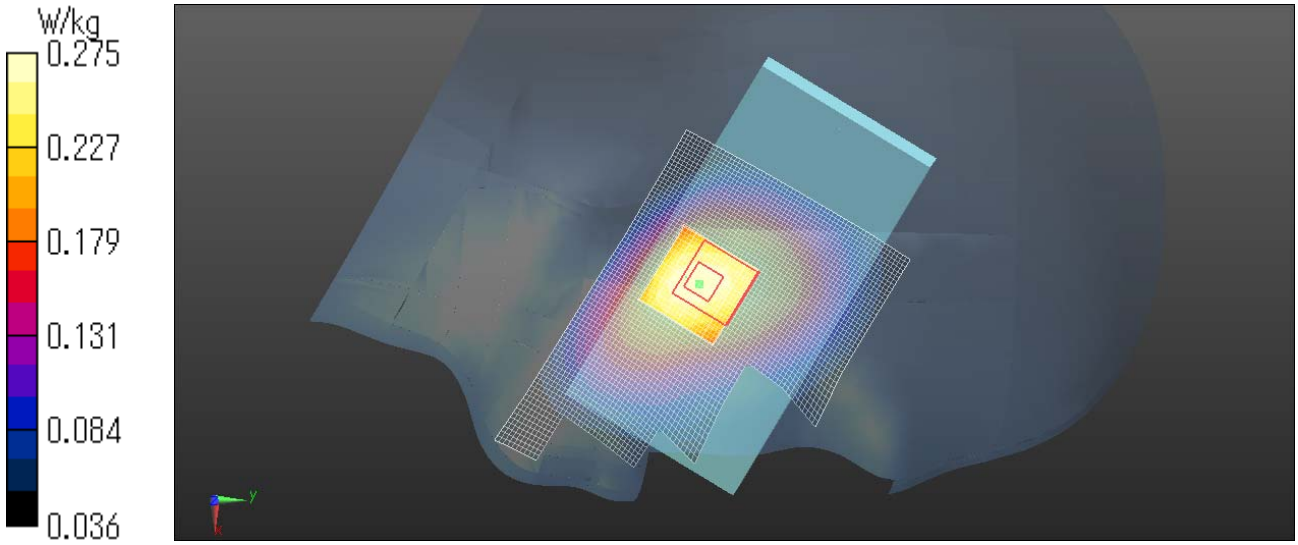


LTE 17 UL RB Allocation 25, UL RB Start 0 710MHz Left cheek
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 710 MHz; Duty Cycle: 1:1
Medium parameters used: f = 710 MHz; σ = 0.887 S/m; ε_r = 41.398; ρ = 1000 kg/m^3
Phantom section: Left Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (61x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.278 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.71 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.315 W/kg
SAR(1 g) = 0.232 W/kg; SAR(10 g) = 0.174 W/kg
Maximum value of SAR (measured) = 0.275 W/kg

Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

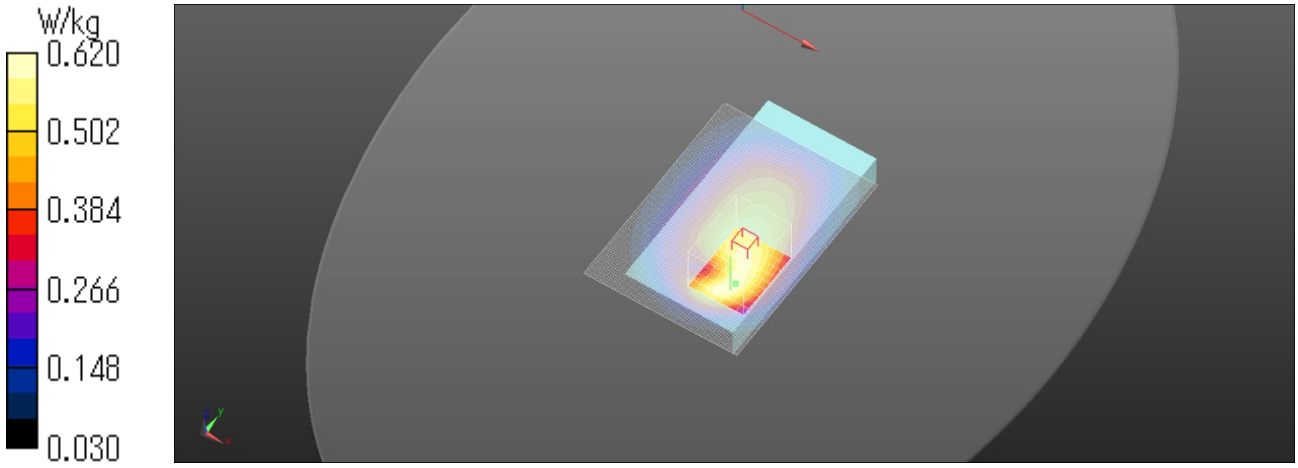


20. LTE Band XVII Body

LTE 17 UL RB Allocation 1, UL RB Start 49 709MHz Front 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.918 S/m; ε_r = 54.179; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.631 W/kg

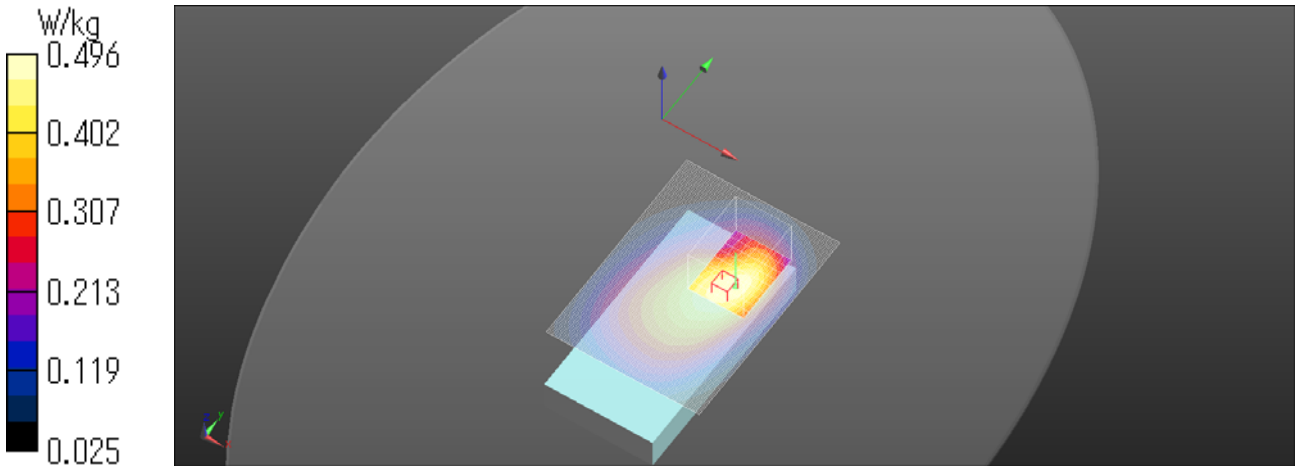
Zoom Scan (8x10x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.17 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.842 W/kg
SAR(1 g) = 0.482 W/kg
Maximum value of SAR (measured) = 0.620 W/kg
Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



LTE 17 UL RB Allocation 1, UL RB Start 49 709MHz Rear 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.918 S/m; ε_r = 54.179; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.503 W/kg

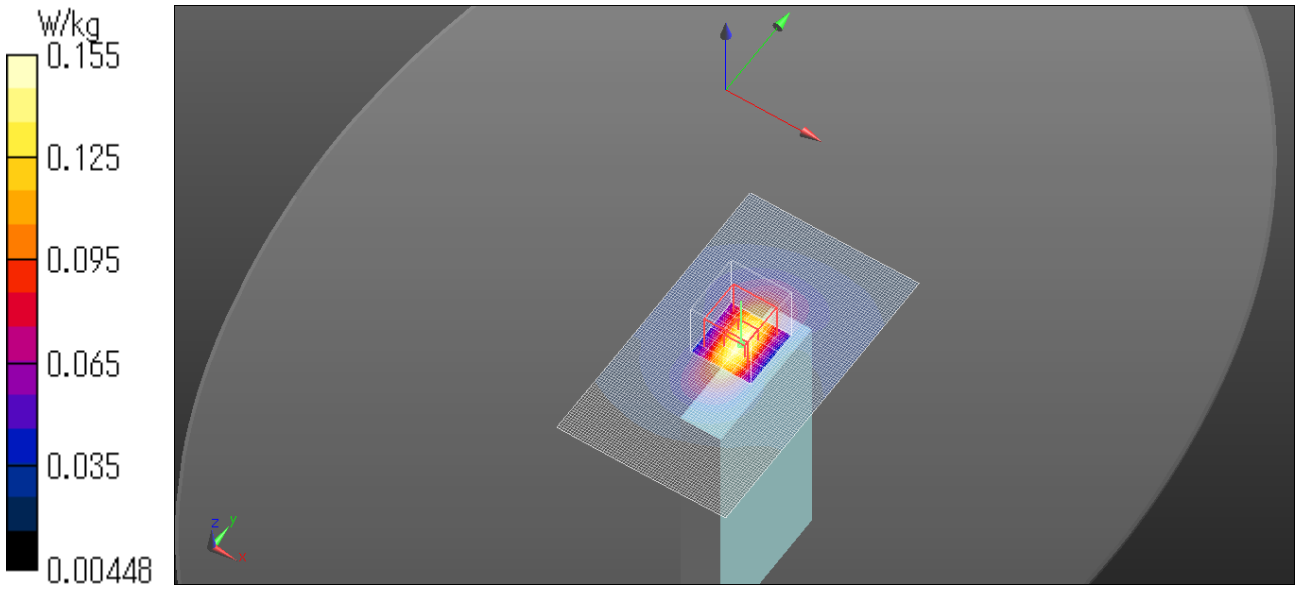
Zoom Scan (8x10x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.46 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.583 W/kg
SAR(1 g) = 0.409 W/kg
Maximum value of SAR (measured) = 0.496 W/kg
Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



LTE 17 UL RB Allocation 1, UL RB Start 49 709MHz Bottom 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.918 S/m; ε_r = 54.179; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (71x121x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.158 W/kg

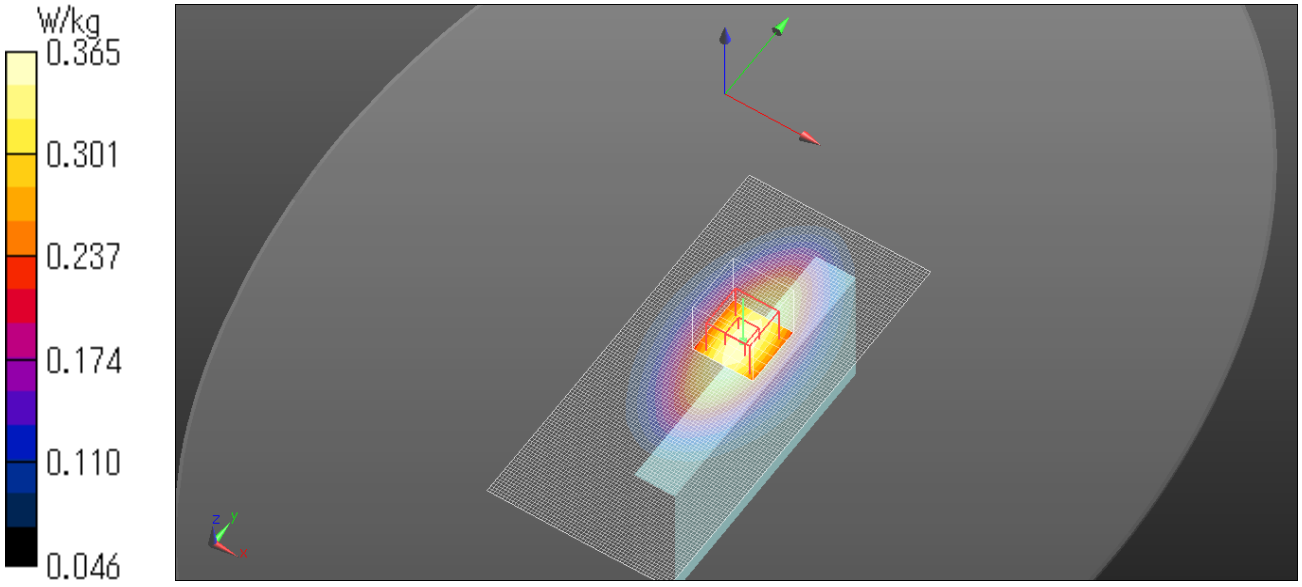
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.06 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.210 W/kg
SAR(1 g) = 0.106 W/kg; SAR(10 g) = 0.057 W/kg
Maximum value of SAR (measured) = 0.155 W/kg
Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



LTE 17 UL RB Allocation 1, UL RB Start 49 709MHz Left 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.918 S/m; ε_r = 54.179; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.367 W/kg

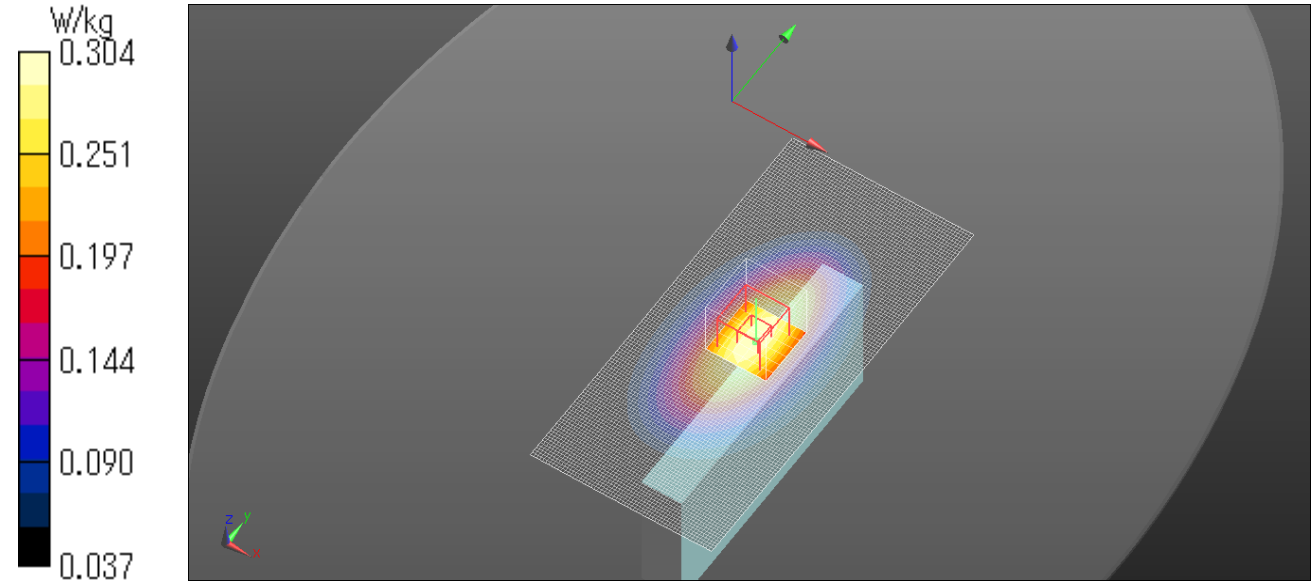
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.06 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.430 W/kg
SAR(1 g) = 0.295 W/kg; SAR(10 g) = 0.207 W/kg
Maximum value of SAR (measured) = 0.365 W/kg
Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



LTE 17 UL RB Allocation 1, UL RB Start 49 709MHz Right 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 709 MHz; Duty Cycle: 1:1
Medium parameters used: f = 709 MHz; σ = 0.918 S/m; ε_r = 54.179; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (61x131x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.306 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 18.29 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.358 W/kg
SAR(1 g) = 0.247 W/kg; SAR(10 g) = 0.173 W/kg
Maximum value of SAR (measured) = 0.304 W/kg
Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



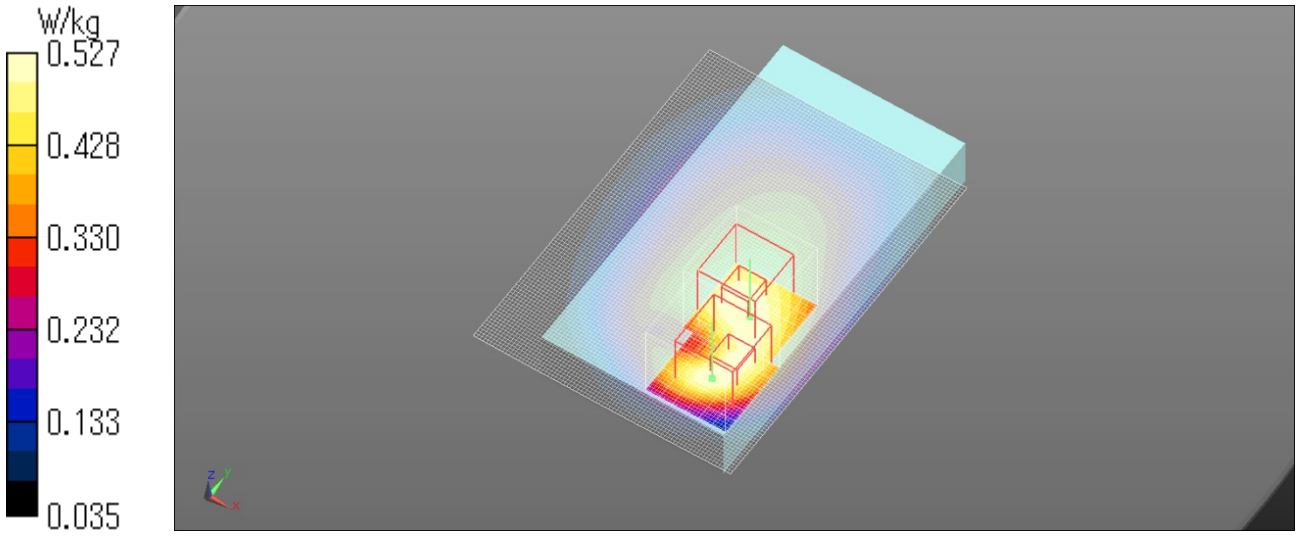
LTE 17 UL RB Allocation 25, UL RB Start 0 710MHz Front 10mm
Communication System: UID 0, Generic LTE (0); Communication System Band: Band 17, E-UTRA/FDD (704.0 - 716.0 MHz); Frequency: 710 MHz; Duty Cycle: 1:1
Medium parameters used: f = 710 MHz; σ = 0.92 S/m; ε_r = 54.137; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.78, 10.78, 10.78); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x111x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.544 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.52 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.660 W/kg
SAR(1 g) = 0.427 W/kg; SAR(10 g) = 0.301 W/kg
Maximum value of SAR (measured) = 0.527 W/kg

Zoom Scan 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.52 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.752 W/kg
SAR(1 g) = 0.388 W/kg; SAR(10 g) = 0.230 W/kg
Maximum value of SAR (measured) = 0.548 W/kg

Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



APPENDIX 2 : System Check

1. System check result Head 750MHz

(1) Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
4-Feb	24	30	HSL 750	23.5	750	εr	41.9	40.9	-2.4	+/-5
						σ [mho/m]	0.89	0.92	3.3	+/-5

εr: Relative Permittivity / σ : Coductivity
*1 The Target value is a parameter defined in IEEE1528.

(2) System check result (for IEEE1528

SYSTEM CHECK							
Date	Frequency [MHz]	SAR 1g [W/kg]			Deviation [%]	Limit [%]	Remark
		Forward Power Measured	Conversion 1W Calculation	Target Value(1W)			
4-Feb	750.00	2.01	8.04	8.49	-5.3	+/-10	*2

*2 The taget value is the parameter defined in IEEE1528

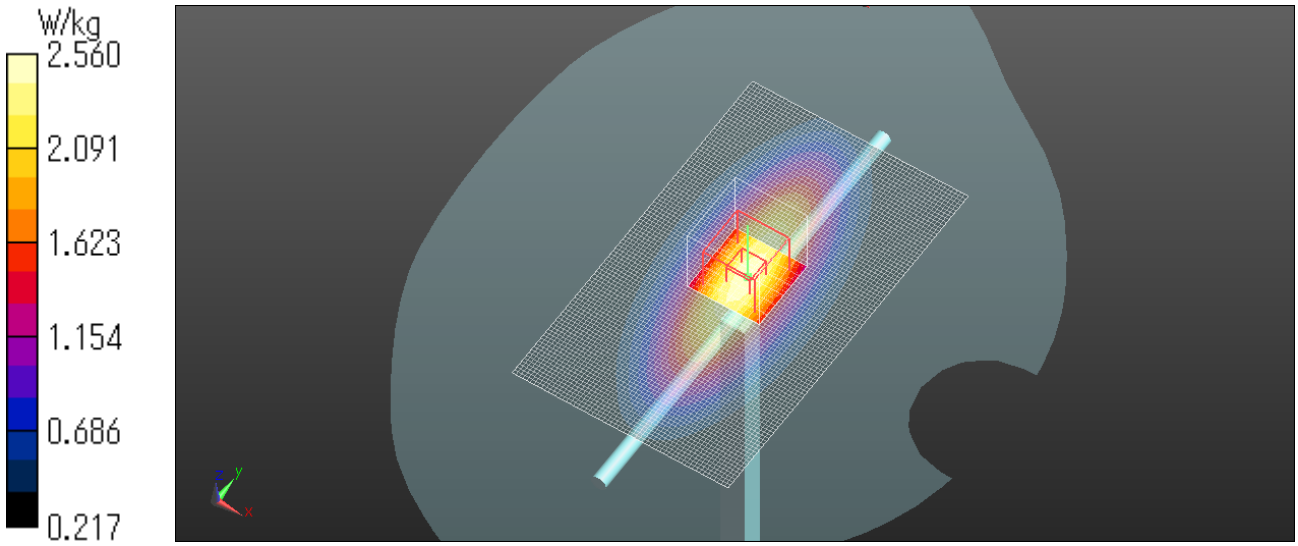
Head 750MHz System Check DATA / Forward Conducted Power : 250mW

Communication System: UID 0, CW (0); Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.919 S/m; ε_r = 40.882; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.44, 10.44, 10.44); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.56 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.99 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 3.02 W/kg
SAR(1 g) = 2.01 W/kg; SAR(10 g) = 1.31 W/kg
Maximum value of SAR (measured) = 2.56 W/kg

Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

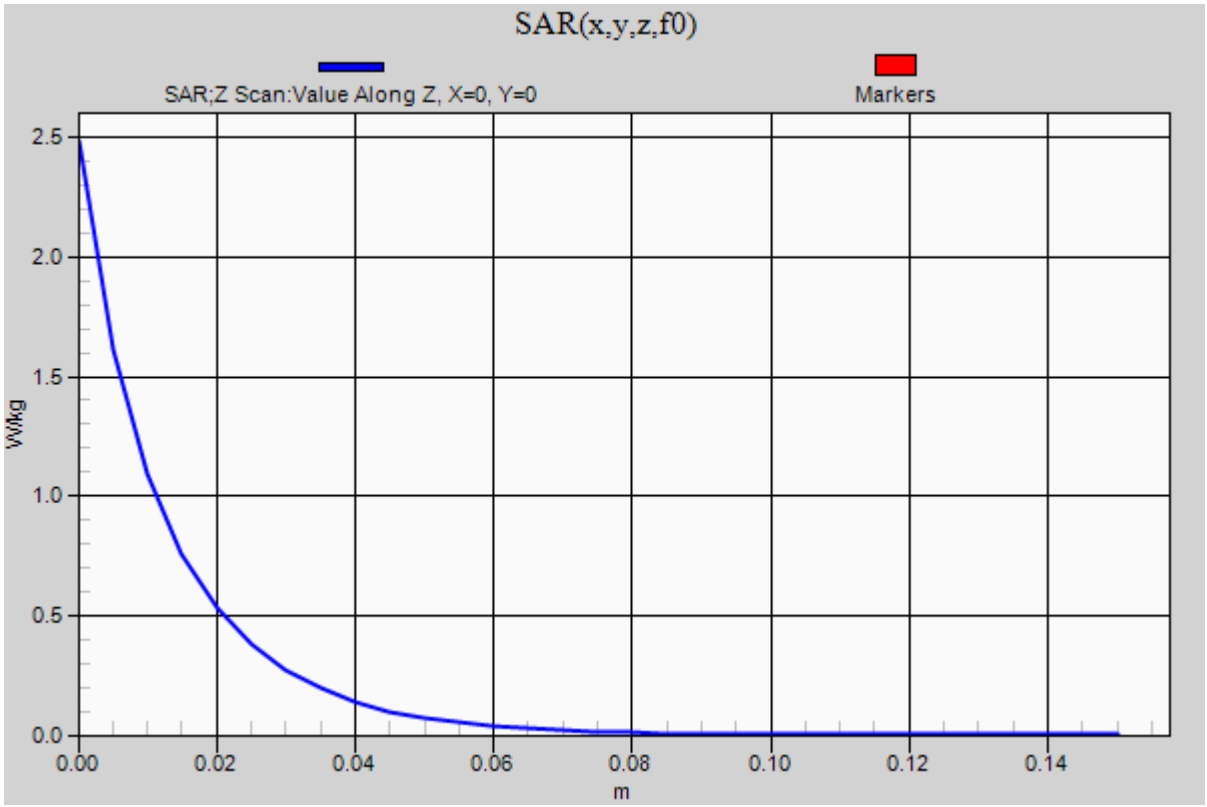


Head 750MHz System Check DATA / Forward Conducted Power : 250mW

Communication System: UID 0, CW (0); Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.919 S/m; ε_r = 40.882; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.44, 10.44, 10.44); Calibrated: 2014/06/13;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.48 W/kg

Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



2. System check result Body 750MHz

Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
4-Feb	24	30	HSL 750	23.5	750	εr	55.5	53.7	-3.3	+/-5
						σ [mho/m]	0.96	0.95	-0.7	+/-5

εr: Relative Permittivity / σ : Coductivity

*1 The Target value is a parameter defined in KDB865664D01.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*2	Measured	Deviation [%]	Limit*3 [%]
4-Feb	24	30	MSL 750	23.5	750	εr	55.6	53.7	-3.4	+/-6
						σ [mho/m]	0.96	0.95	-0.7	+/-6

εr: Relative Permittivity / σ : Coductivity

*2 The target value is the calibrated dipole Head TSL parameters. (D750V3 SN:1058, Measured Body TSL parameters)

*3 The limit is for deviation provided by manufacture.

System check result (1g SAR)

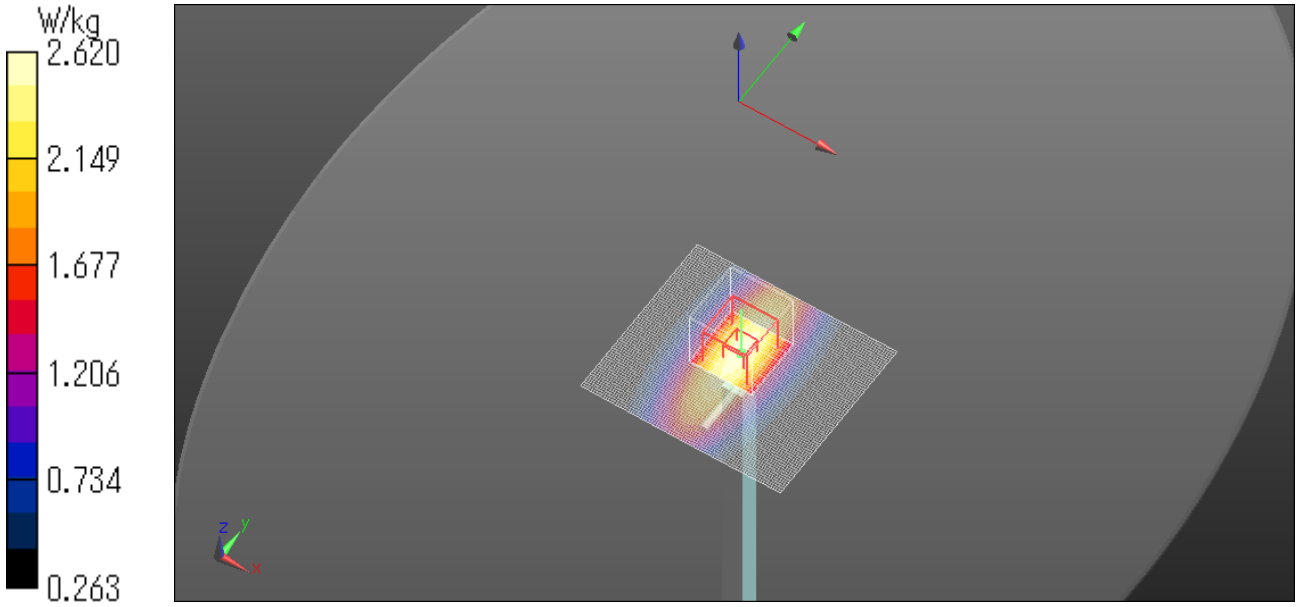
SYSTEM CHECK						
Date	Frequency [MHz]	SAR 1g [W/kg]				
		Forward Power 250mW Measured	Conversion 1W Calculation	Target 1W *5	Deviation [%]	Limit [%]
4-Feb	750.00	2.09	8.36	8.88	-5.9	+/-10

*5 The taget value is the parameter defined in 1g SAR (normalizes to 1W) in manufacturer calibrated dipole (D750V3 SN:1058)

Body 750MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.953 S/m; ε_r = 53.712; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.04, 10.04, 10.04); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 2.61 W/kg

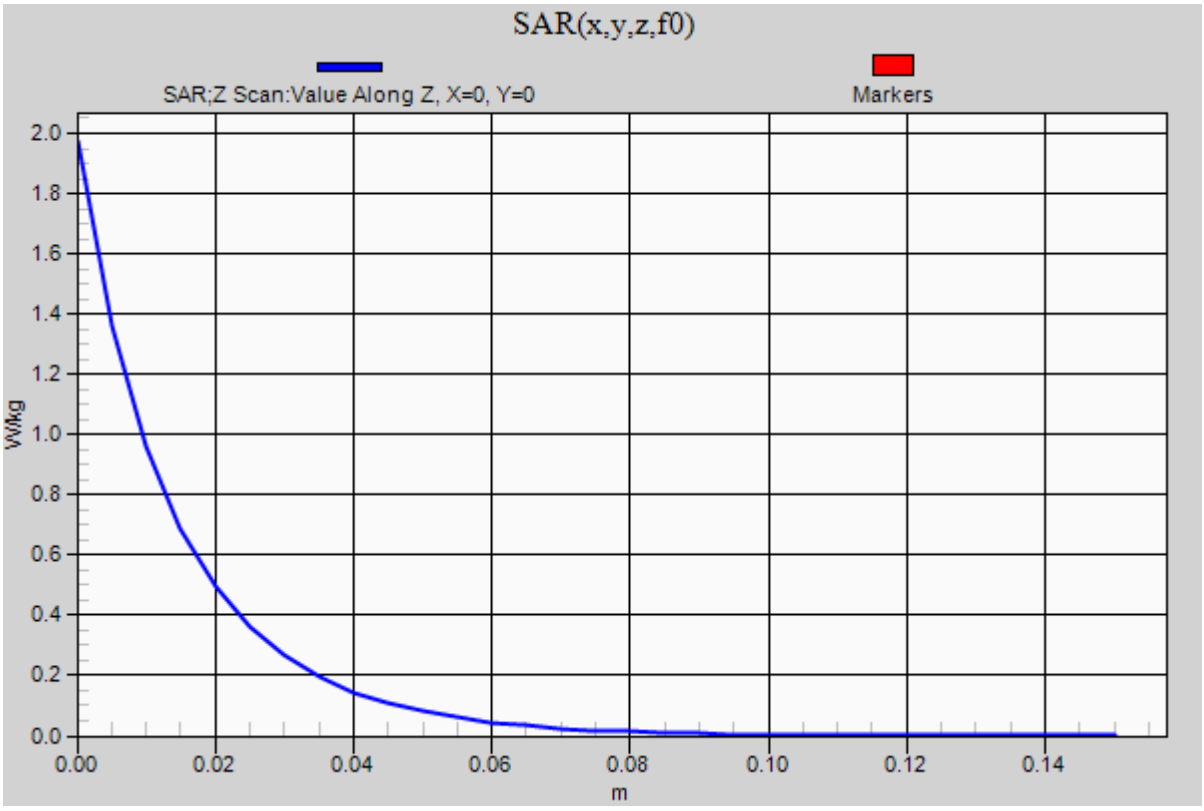
Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.16 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 3.07 W/kg
SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.39 W/kg
Maximum value of SAR (measured) = 2.62 W/kg
Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 750MHz System Check DATA / Forward Conducted Power : 250mW

Communication System: UID 0, CW (0); Communication System Band: D750 (750.0 MHz); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.953 S/m; ε_r = 53.712; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(10.04, 10.04, 10.04); Calibrated: 2014/06/13;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 1.97 W/kg
Date: 2015/02/04
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



3. System check result Head 900MHz

Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
17-Jan	24	46	HSL900	23.5	900	εr	41.5	42.3	1.8	+/-5
						σ [mho/m]	0.97	1.00	2.9	+/-5
17-Jan	24	46	HSL900	23.5	900	εr	41.5	42.3	1.8	+/-5
						σ [mho/m]	0.97	1.00	2.9	+/-5

εr: Relative Permittivity / σ : Coductivity
*1 The Target value is a parameter defined in IEEE1528.

System check result (for IEEE1528)

SYSTEM CHECK							
Date	Frequency [MHz]	SAR 1g [W/kg]					
		Forward Power Measured	Conversion 1W Calculation	Target Value(1W)	Deviation [%]	Limit [%]	Remark
17-Jan	900.00	2.89	11.56	10.80	7.0	+/-10	*2
17-Jan	900.00	2.83	11.32	10.80	4.8	+/-10	*2

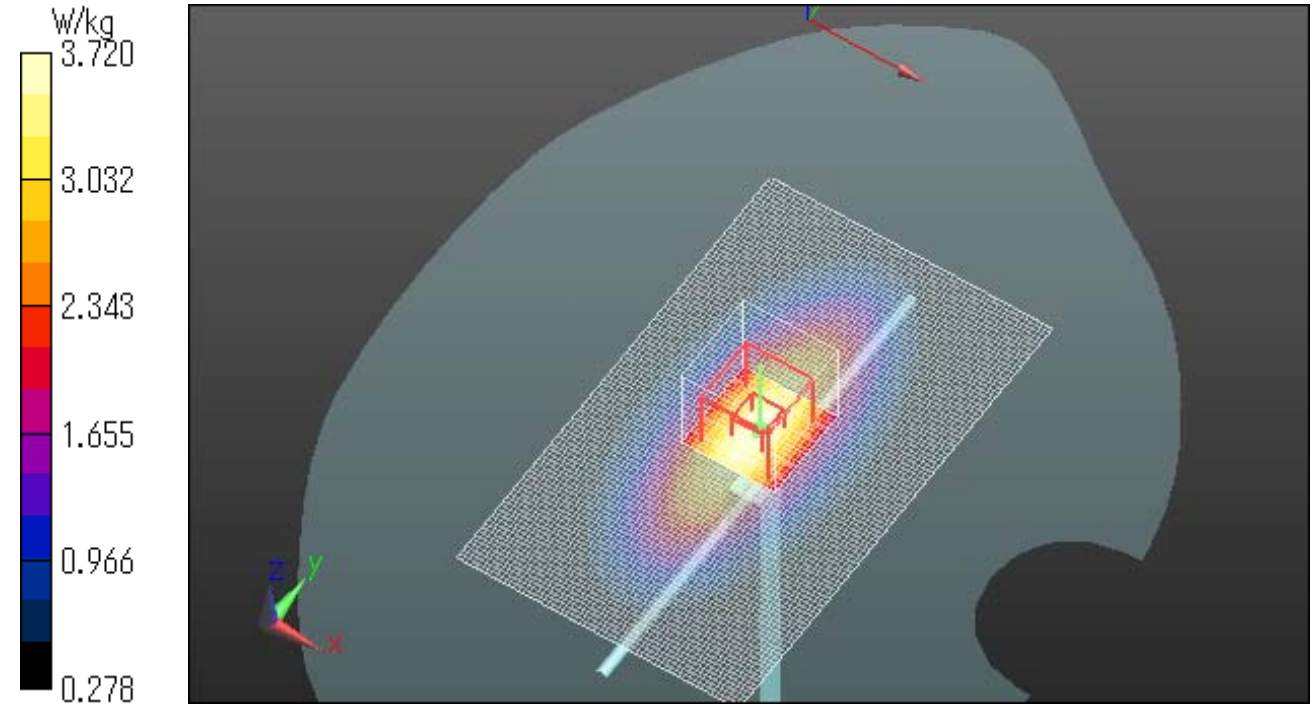
*2 The taget value is the parameter defined in IEEE1528

Head 900MHz System Check DATA / Forward Conducted Power : 250mW

Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 0.998 S/m; ε_r = 42.253; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(9.59, 9.59, 9.59); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

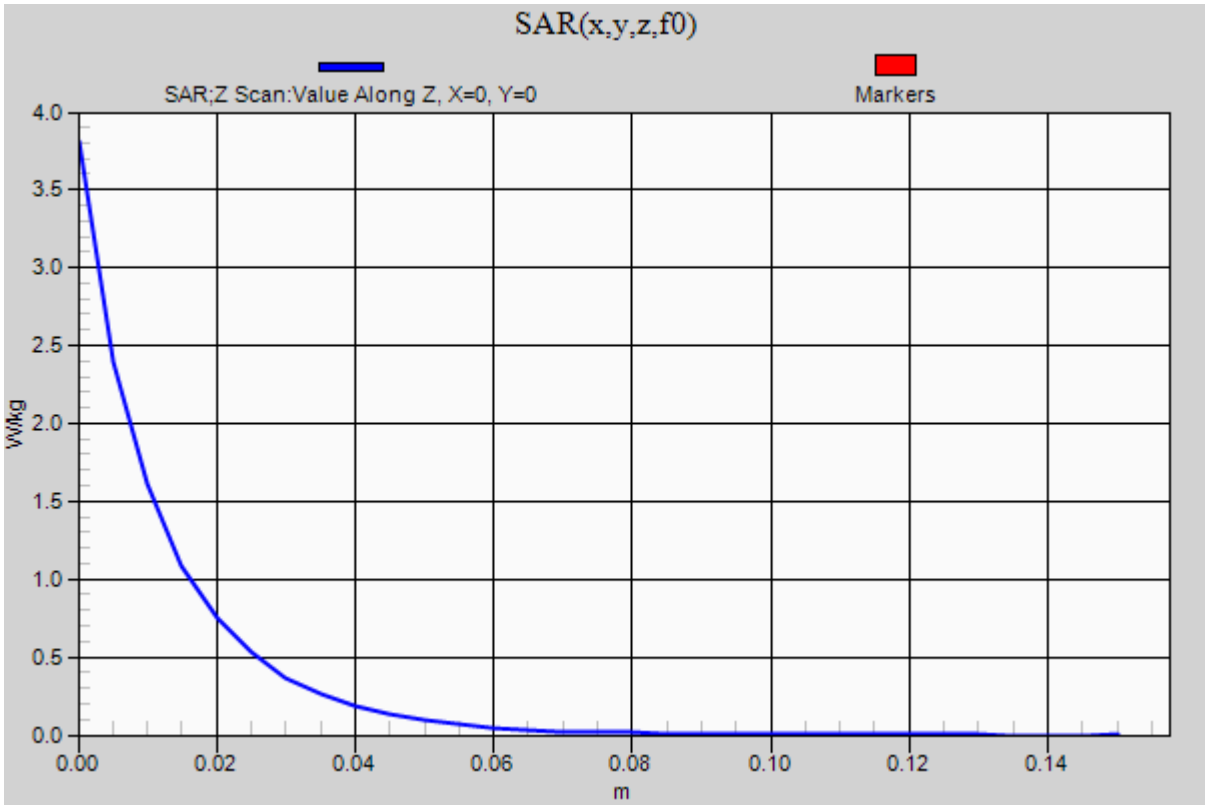
Area Scan (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.71 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 61.29 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 4.46 W/kg
SAR(1 g) = 2.89 W/kg; SAR(10 g) = 1.86 W/kg
Maximum value of SAR (measured) = 3.72 W/kg
Date: 2015/01/17
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 900MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 0.998 S/m; ε_r = 42.253; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(9.59, 9.59, 9.59); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

System Performance Check at Frequencies above 1 GHz/d=15mm, Pin=250 mW, dist=2.0mm (EX-Probe)/Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 3.81 W/kg
Date: 2015/01/17
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



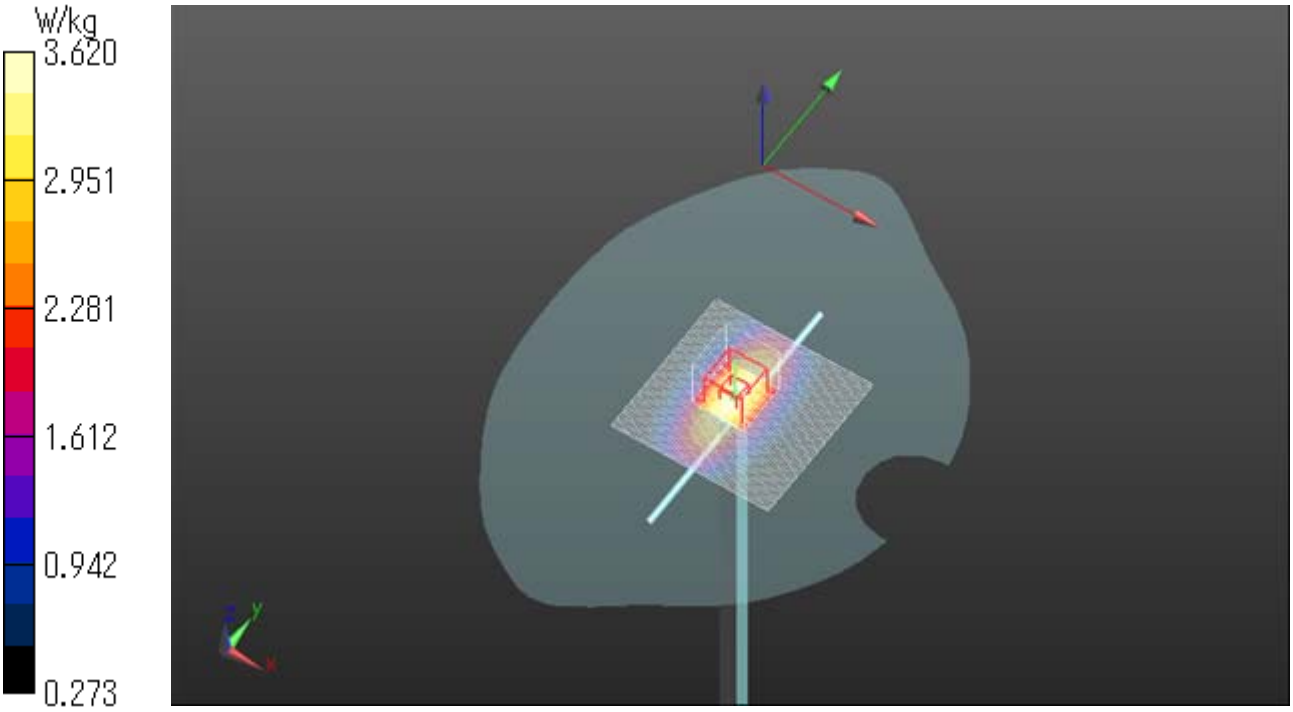
Head 900MHz System Check DATA / Forward Conducted Power : 250mW

Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 0.998 S/m; ε_r = 42.253; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3917; ConvF(9.57, 9.57, 9.57); Calibrated: 2014/05/14;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (20deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.58 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 62.05 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 4.32 W/kg
SAR(1 g) = 2.83 W/kg; SAR(10 g) = 1.82 W/kg
Maximum value of SAR (measured) = 3.62 W/kg

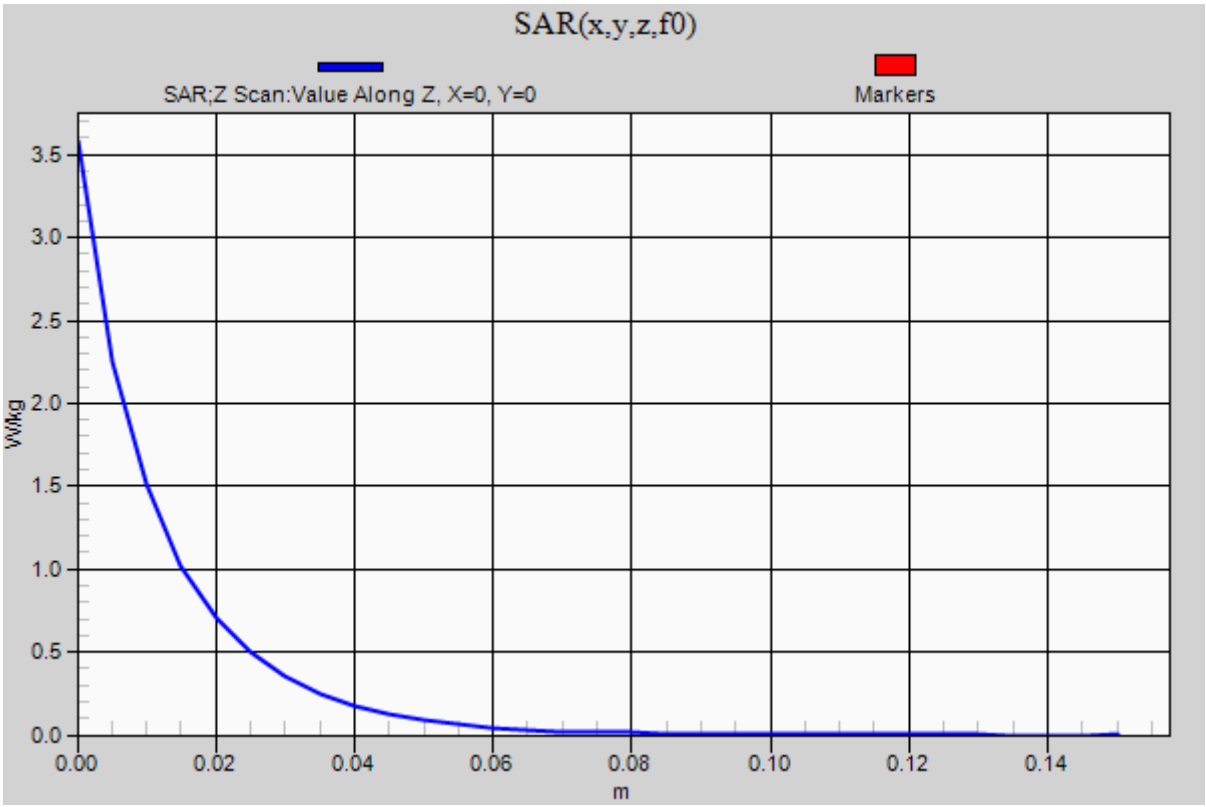
Date: 2015/0‘1/17
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 900MHz System Check DATA / Forward Conducted Power : 250mW

Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz; Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 0.998 S/m; ε_r = 42.253; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3917; ConvF(9.57, 9.57, 9.57); Calibrated: 2014/05/14;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (20deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 3.58 W/kg
Date: 2015/01/17
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



4. System check result Body 900MHz

Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value	Measured	Deviation [%]	Limit [%]	Remark
15-Jan	24.0	46	MSL 900	23.5	900	εr	55.0	54.0	-1.8	+/-5	*1
						σ [mho/m]	1.05	1.03	-1.9	+/-5	*1
27-Jan	24.0	40	MSL 900	23.5	900	εr	55.0	54.1	-1.6	+/-5	*1
						σ [mho/m]	1.05	1.04	-1.0	+/-5	*1
6-Feb	24.0	45	MSL 900	23.5	900	εr	55.0	53.4	-2.9	+/-5	*1
						σ [mho/m]	1.05	1.03	-1.8	+/-5	*1

εr: Relative Permittivity / σ : Coductivity

*1 The Target value is a parameter defined in KDB865664D01.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value	Measured	Deviation [%]	Limit [%]	Remark
15-Jan	24.0	46	MSL 900	23.5	900	εr	56.7	54.0	-4.8	+/-5	*2 *3
						σ [mho/m]	1.04	1.03	-1.0	+/-5	
27-Jan	24.0	40	MSL 900	23.5	900	εr	56.7	54.1	-4.6	+/-5	*2 *3
						σ [mho/m]	1.04	1.04	0.0	+/-5	
6-Feb	24.0	45	MSL 900	23.5	900	εr	56.7	53.4	-5.8	+/-5	*2 *3
						σ [mho/m]	1.04	1.03	-0.9	+/-5	

εr: Relative Permittivity / σ : Coductivity

*2 The target value is the calibrated dipole TSL parameters. (D900V2 SN:155, Measured Body TSL parameters)

*3 The limit is for deviation provided by manufacturer.

System Check result

SYSTEM CHECK						
Date	Frequency [MHz]	SAR 1g [W/kg]			Deviation [%]	Limit [%]
		Forward Power 250mW Measured	Conversion 1W Calculation	Target 1W *2		
15-Jan	900.00	2.67	10.68	10.60	0.8	+/-10
27-Jan	900.00	2.91	11.64	10.60	9.8	+/-10
6-Feb	900.00	2.61	10.44	10.60	-1.5	+/-10

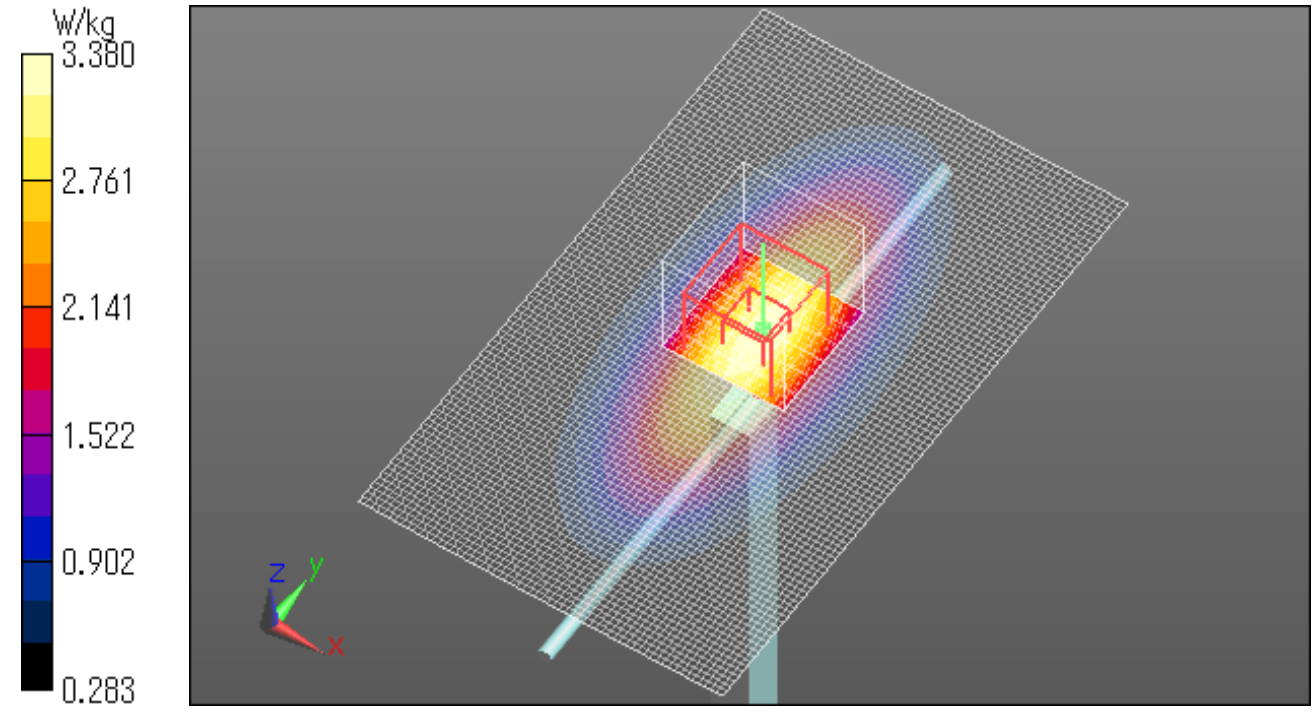
*4 The taget value is the parameter defined in SAR mesured x 4(2.65 x 4 = 10.6) in manufacturer calibrated dipole (D900V2 SN:155).

Body 900MHz System Check DATA / Forward Conducted Power : 250mW

Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1.032 S/m; ε_r = 53.996; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:
Probe: EX3DV4 - SN3917; ConvF(9.38, 9.38, 9.38); Calibrated: 2014/05/14;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Area Scan 2 (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.43 W/kg

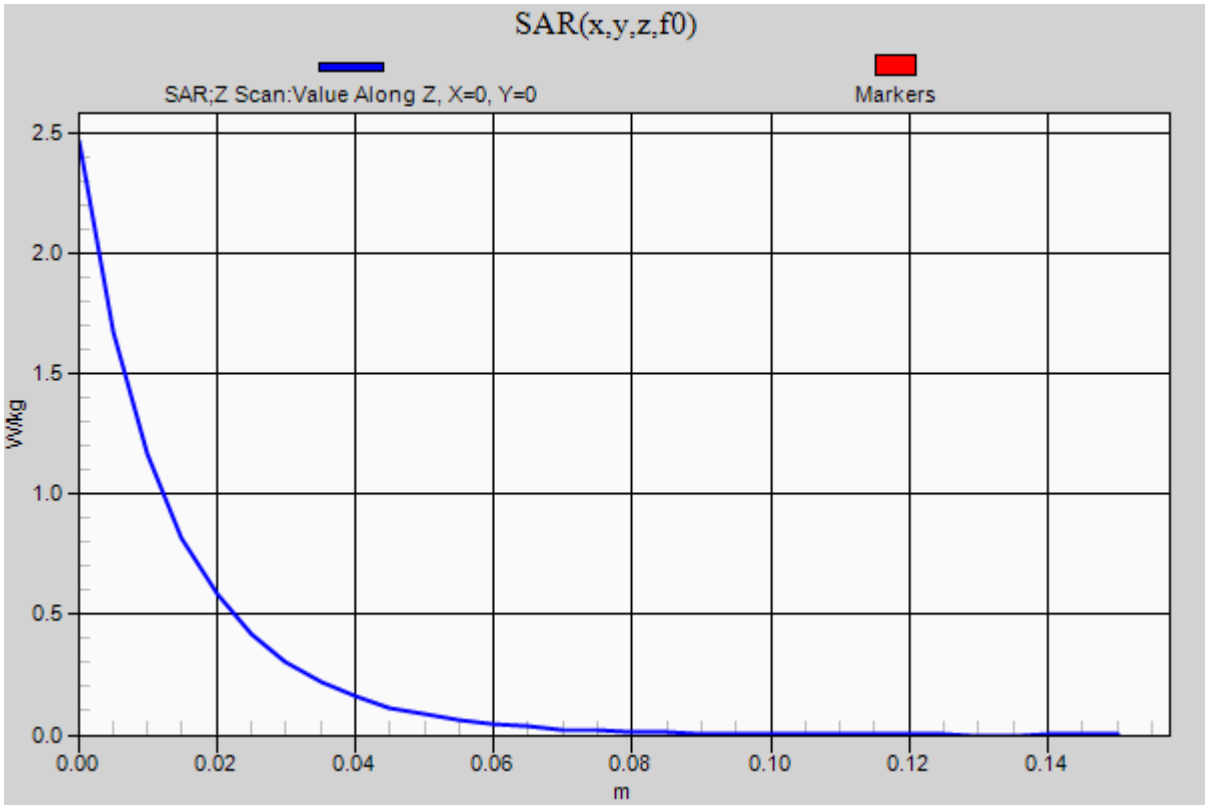
Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 58.25 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.99 W/kg
SAR(1 g) = 2.67 W/kg; SAR(10 g) = 1.74 W/kg
Maximum value of SAR (measured) = 3.38 W/kg
Date: 2015/01/15
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 900MHz System Check DATA / Forward Conducted Power : 250mW

Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1.032 S/m; ε_r = 53.996; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:
Probe: EX3DV4 - SN3917; ConvF(9.38, 9.38, 9.38); Calibrated: 2014/05/14;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

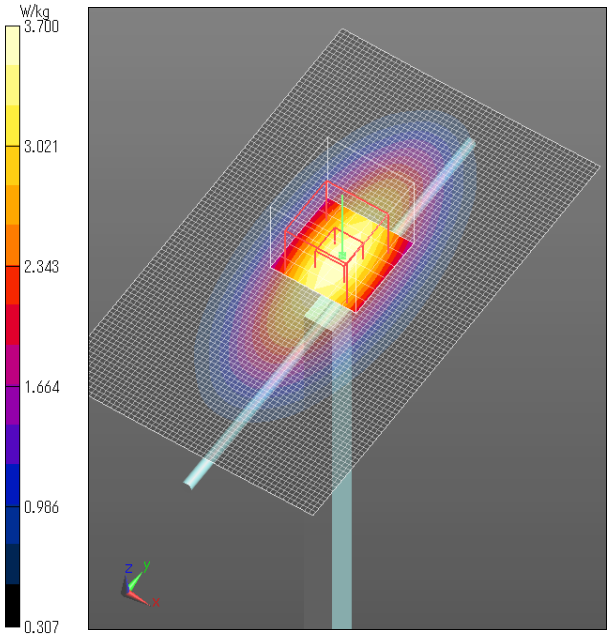
Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.46 W/kg
Date: 2015/01/15
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 900MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1.035 S/m; ε_r = 54.097; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(9.27, 9.27, 9.27); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

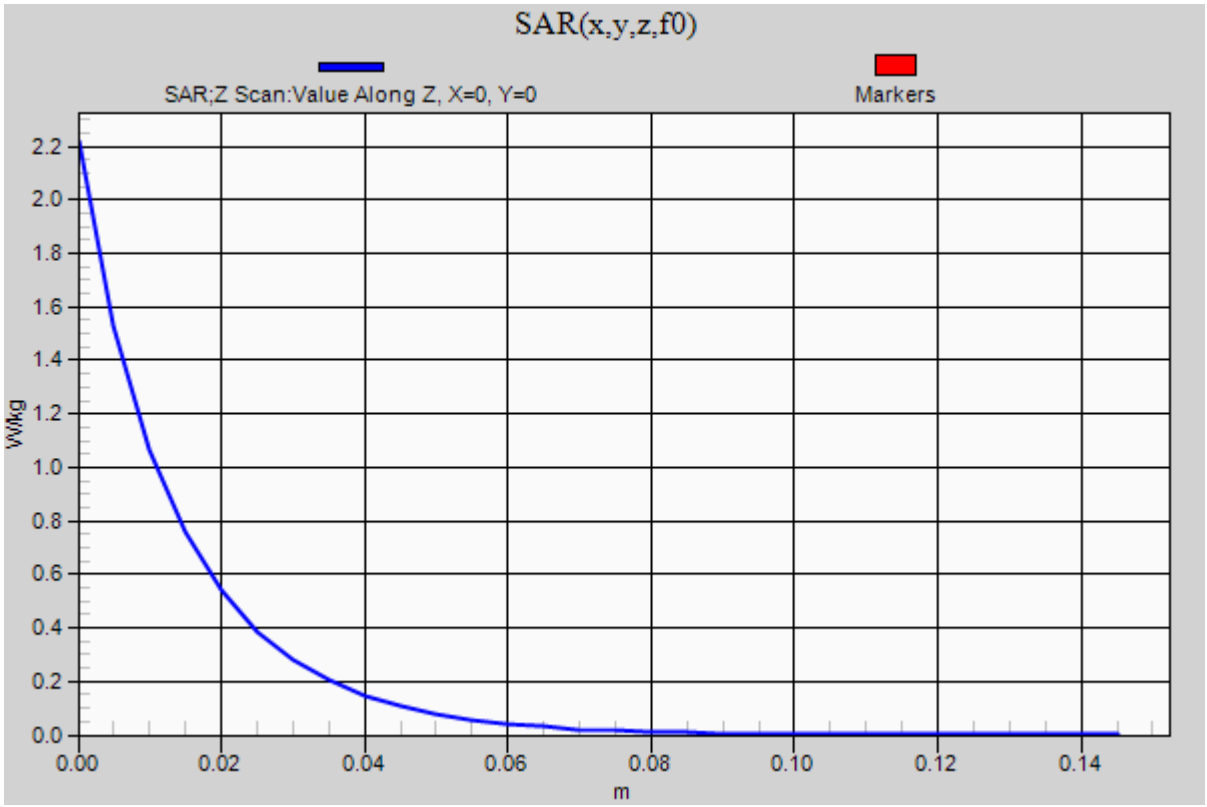
Area Scan 2 (61x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 3.75 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 60.52 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 4.40 W/kg
SAR(1 g) = 2.91 W/kg; SAR(10 g) = 1.89 W/kg
Maximum value of SAR (measured) = 3.70 W/kg
Date: 2015/01/27
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 900MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1.035 S/m; ε_r = 54.097; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(9.27, 9.27, 9.27); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

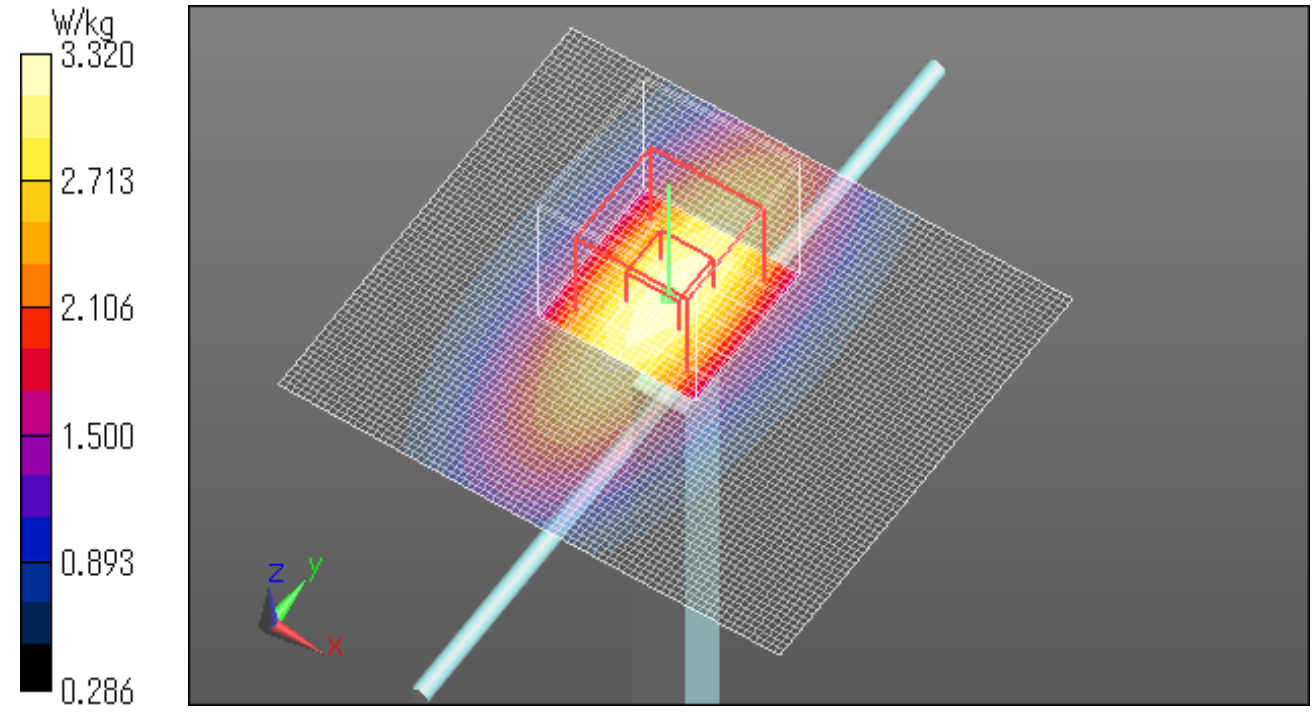
Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.22 W/kg
Date: 2015/01/27
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 900MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1.031 S/m; ε_r = 53.382; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3922; ConvF(9.77, 9.77, 9.77); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

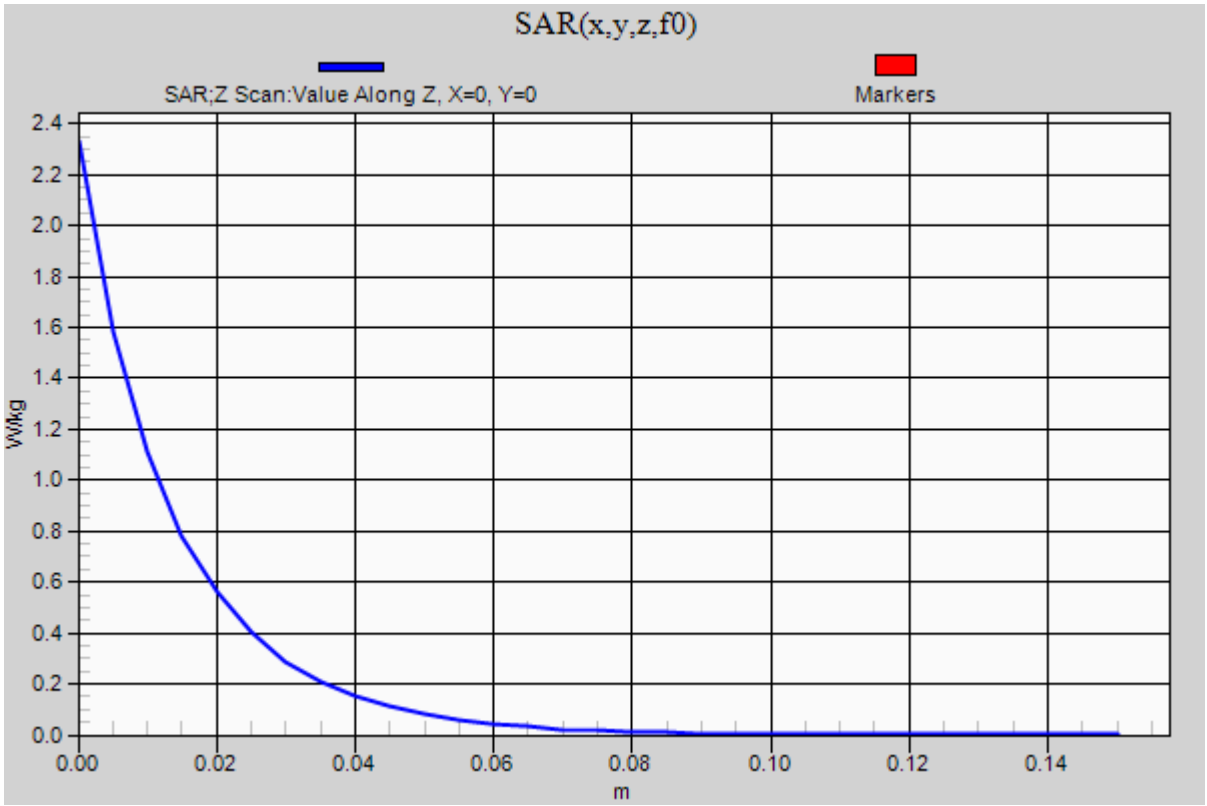
Area Scan (81x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 3.30 W/kg

Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 56.08 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.91 W/kg
SAR(1 g) = 2.61 W/kg; SAR(10 g) = 1.7 W/kg
Maximum value of SAR (measured) = 3.32 W/kg
Date: 2015/02/06
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 900MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D900 (900.0 MHz); Frequency: 900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 900 MHz; σ = 1.031 S/m; ε_r = 53.382; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3922; ConvF(9.77, 9.77, 9.77); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 2.33 W/kg
Date: 2015/02/06
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



5. System check result Head 1800MHz

(1)Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS										
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]
21-Jan	24.0	40	HSL 1800	23.5	1800	εr	40.0	38.8	-3.1	+/-5
						σ [mho/m]	1.40	1.38	-1.4	+/-5
23-Jan	24.0	46	HSL 1800	23.5	1800	εr	40.0	39.8	-0.4	+/-5
						σ [mho/m]	1.40	1.35	-3.8	+/-5
24-Jan	24.0	40	HSL 1800	23.0	1800	εr	40.0	39.7	-0.6	+/-5
						σ [mho/m]	1.40	1.42	1.6	+/-5
26-Jan	24.0	40	HSL 1800	23.0	1800	εr	40.0	40.1	0.3	+/-5
						σ [mho/m]	1.40	1.40	-0.2	+/-5
2-Feb	24.0	33	HSL 1800	23.0	1800	εr	40.0	39.2	-1.9	+/-5
						σ [mho/m]	1.40	1.43	2.4	+/-5

εr: Relative Permittivity / σ : Coductivity
*1 The Target value is a parameter defined in IEEE1528.

(2)System Check result

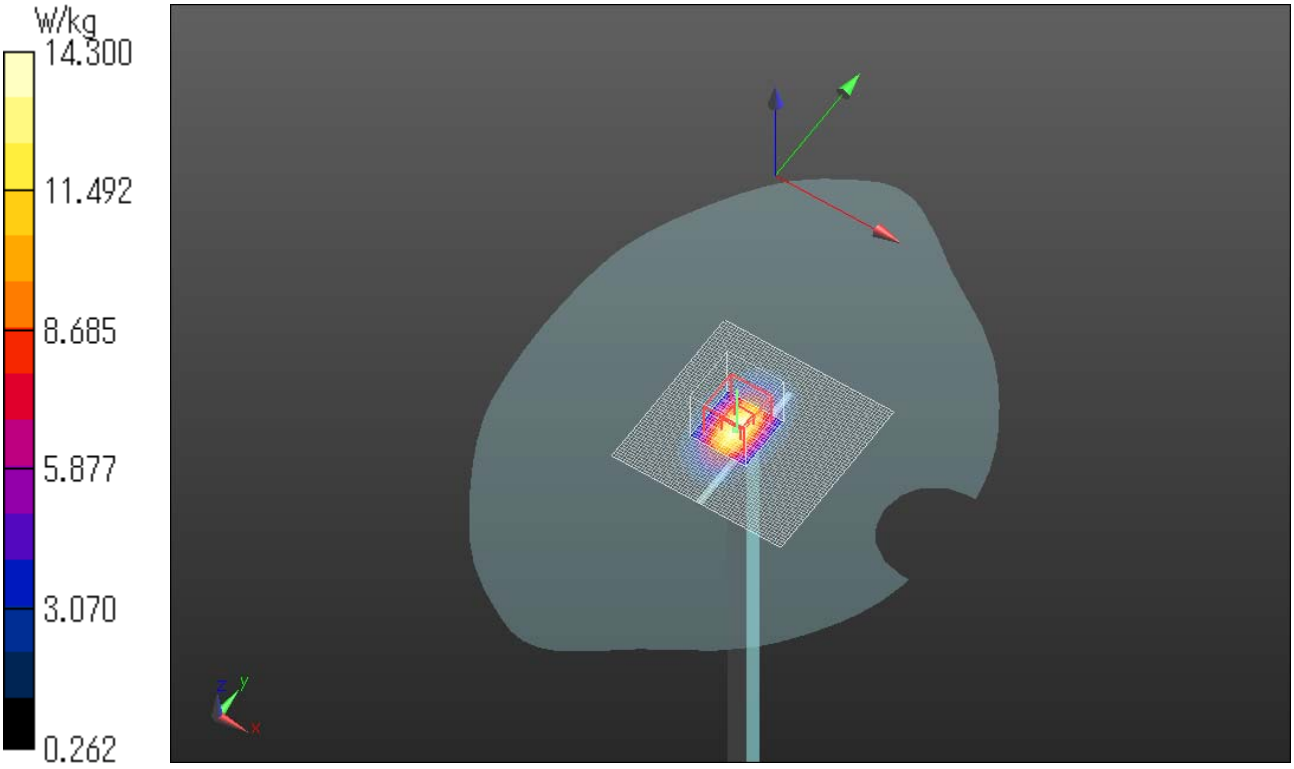
SYSTEM CHECK						
Date	Frequency [MHz]	SAR 10g [W/kg]		Target 1W *2	Deviation [%]	Limit [%]
		Forward Power 250mW Measured	Conversion 1W Calculation			
21-Jan	1800.00	9.91	39.64	38.40	3.2	+/-10
23-Jan	1800.00	8.99	35.96	38.40	-6.4	+/-10
24-Jan	1800.00	9.57	38.28	38.40	-0.3	+/-10
26-Jan	1800.00	9.41	37.64	38.40	-2.0	+/-10
2-Feb	1800.00	10.00	40.00	38.40	4.2	+/-10

*2 The taget value is the parameter defined in IEEE1528.

Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.381 S/m; ε_r = 38.754; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

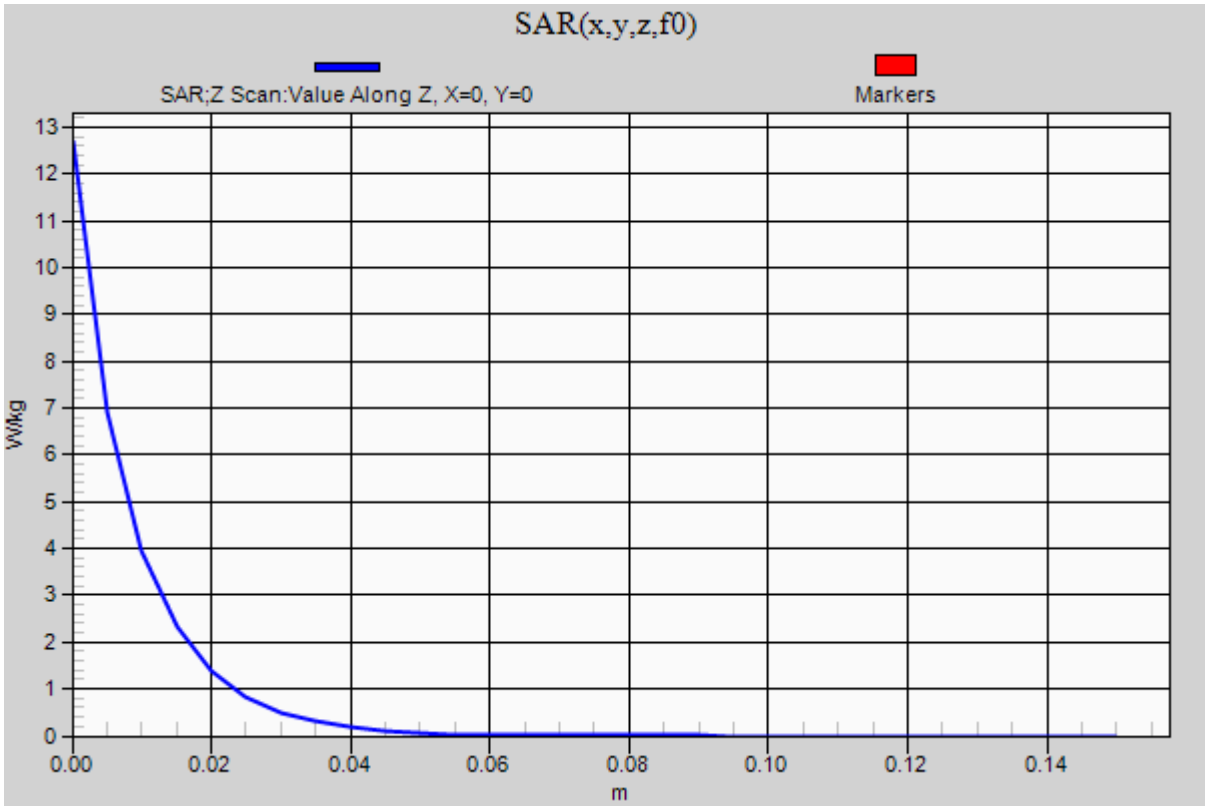
Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.1 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 101.4 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 9.91 W/kg; SAR(10 g) = 5.18 W/kg
Maximum value of SAR (measured) = 14.3 W/kg
Date: 2015/01/21
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.381 S/m; ε_r = 38.754; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

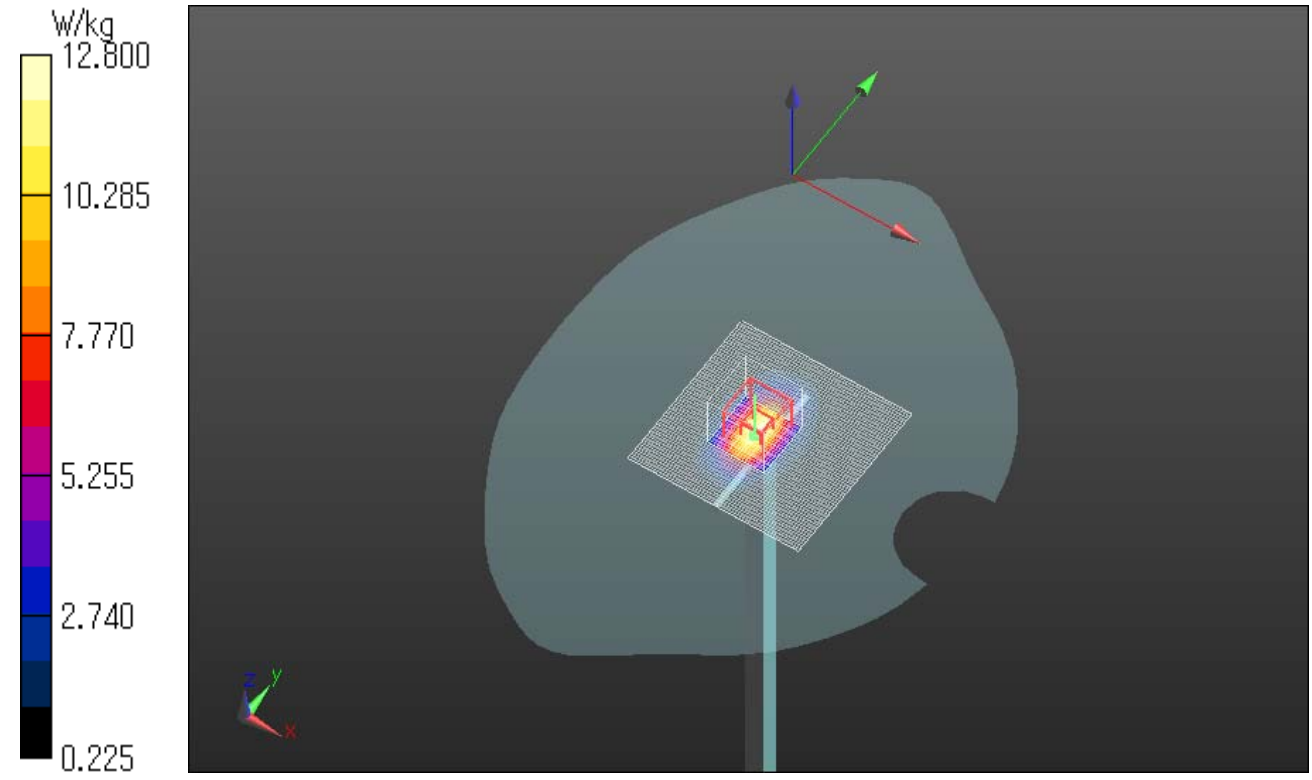
Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 12.7 W/kg
Date: 2015/01/21
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.347 S/m; ε_r = 39.849; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

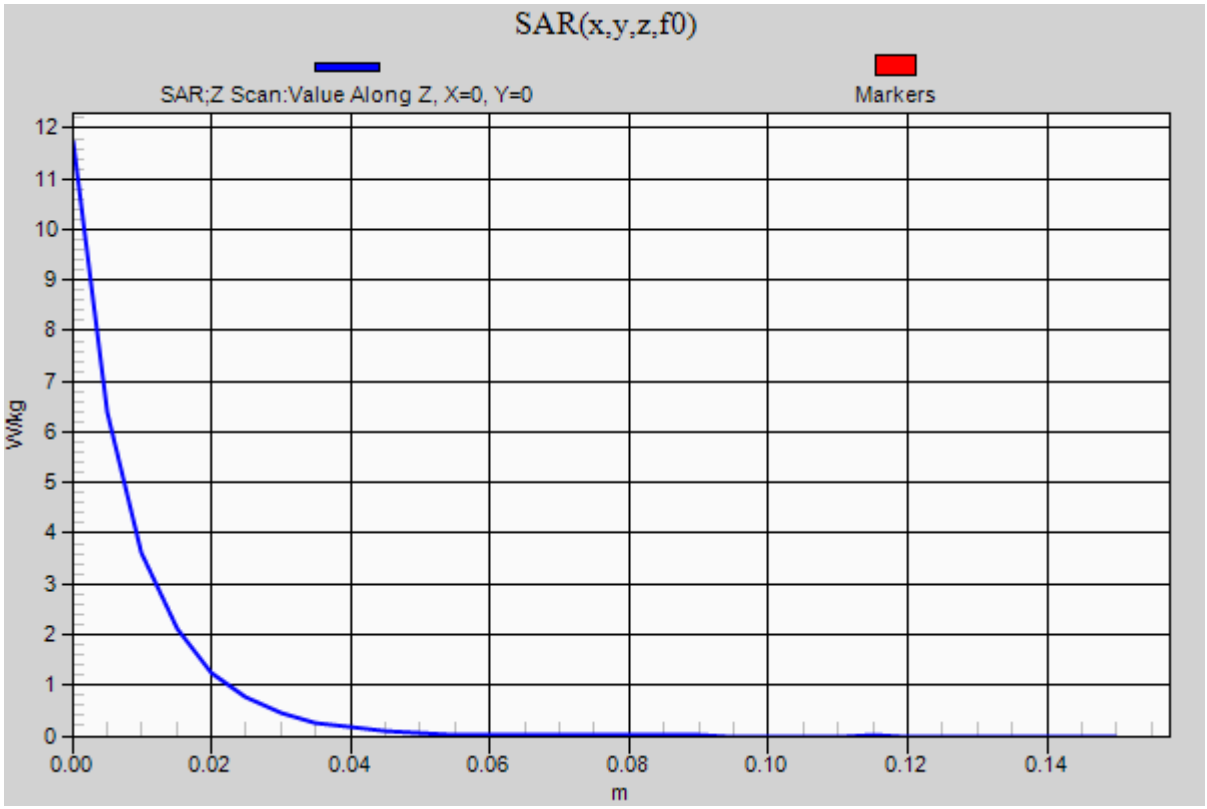
Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 12.8 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 99.48 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 16.4 W/kg
SAR(1 g) = 8.99 W/kg; SAR(10 g) = 4.72 W/kg
Maximum value of SAR (measured) = 12.8 W/kg
Date: 2015/01/23
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.347 S/m; ε_r = 39.849; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

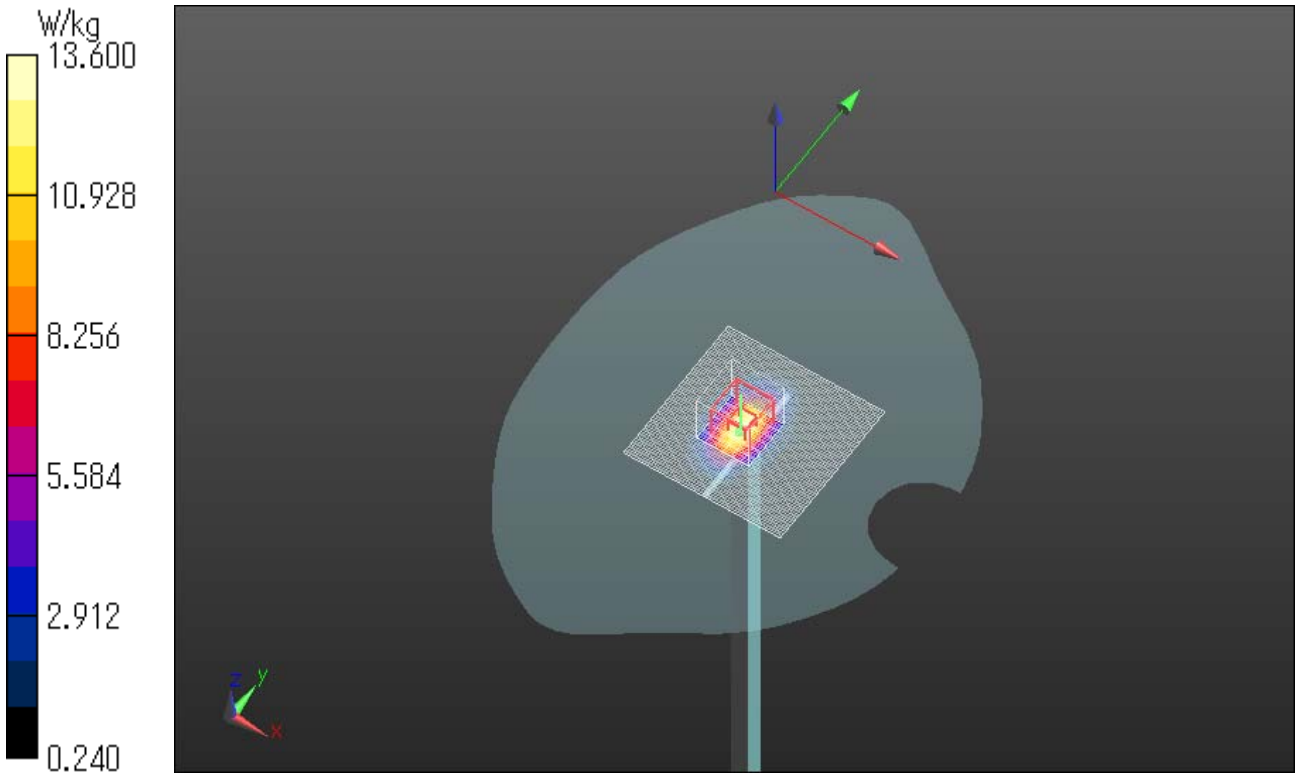
Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 11.7 W/kg
Date: 2015/01/23
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.422 S/m; ε_r = 39.742; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

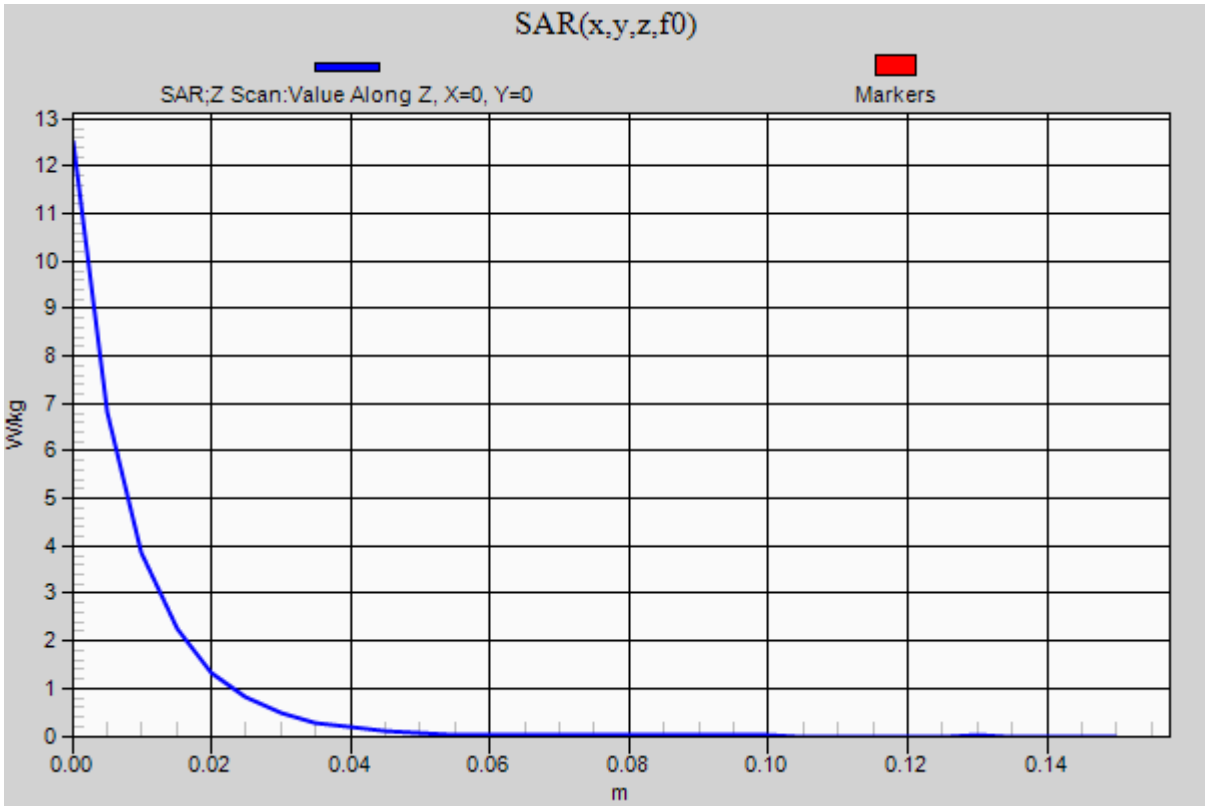
Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.7 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 99.88 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 17.5 W/kg
SAR(1 g) = 9.57 W/kg; SAR(10 g) = 5.03 W/kg
Maximum value of SAR (measured) = 13.6 W/kg
Date: 2015/01/24
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.422 S/m; ε_r = 39.742; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

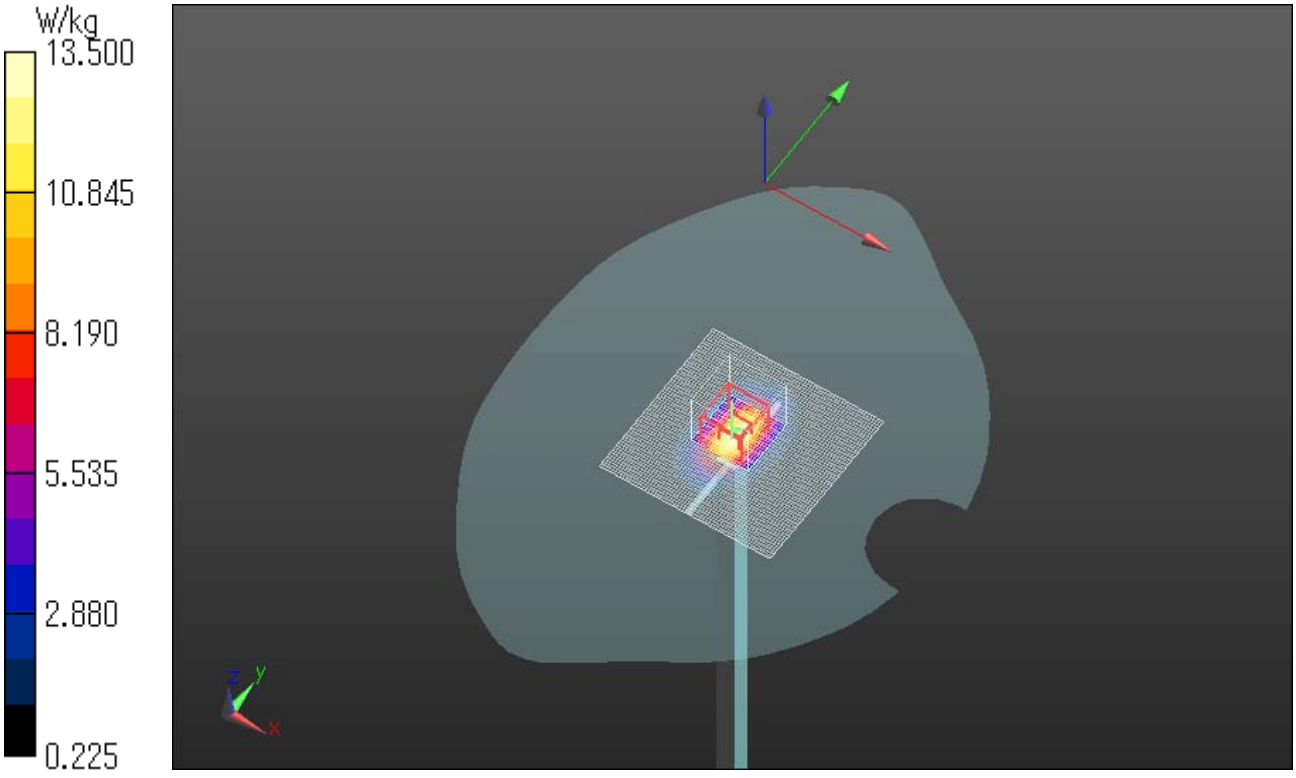
Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 12.5 W/kg
Date: 2015/01/24
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.397 S/m; ε_r = 40.101; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

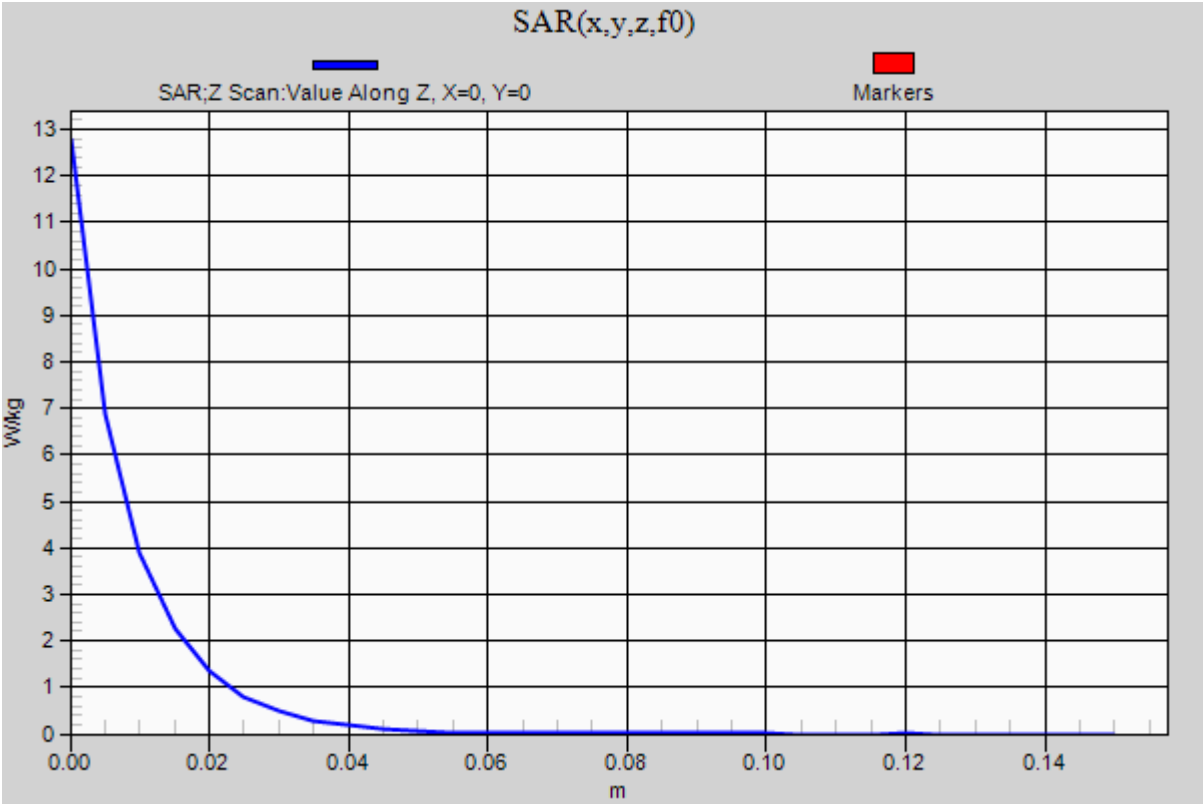
Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.4 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 100.1 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 17.2 W/kg
SAR(1 g) = 9.41 W/kg; SAR(10 g) = 4.92 W/kg
Maximum value of SAR (measured) = 13.5 W/kg
Date: 2015/01/26
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.397 S/m; ε_r = 40.101; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 12.8 W/kg
Date: 2015/01/26
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

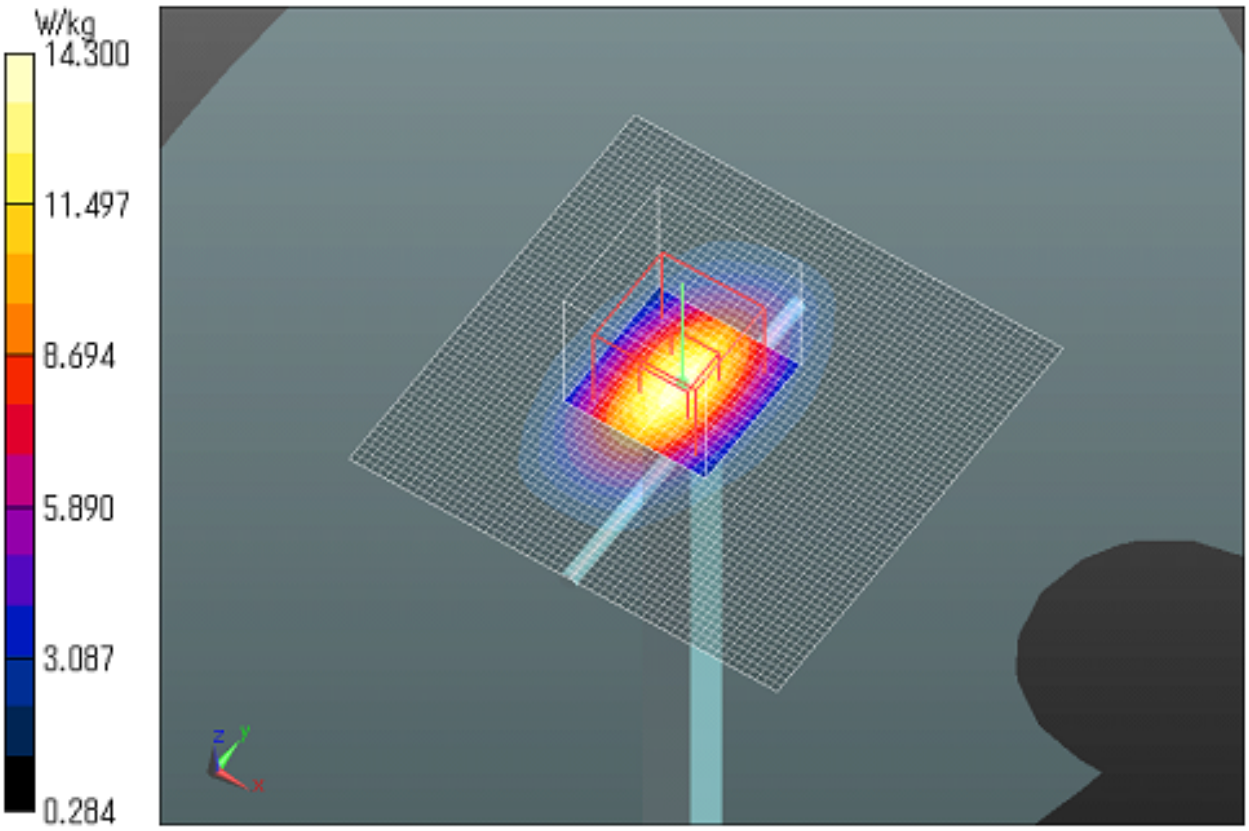


Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.434 S/m; ε_r = 39.233; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.0 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 101.0 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 18.1 W/kg
SAR(1 g) = 10 W/kg; SAR(10 g) = 5.28 W/kg
Maximum value of SAR (measured) = 14.3 W/kg

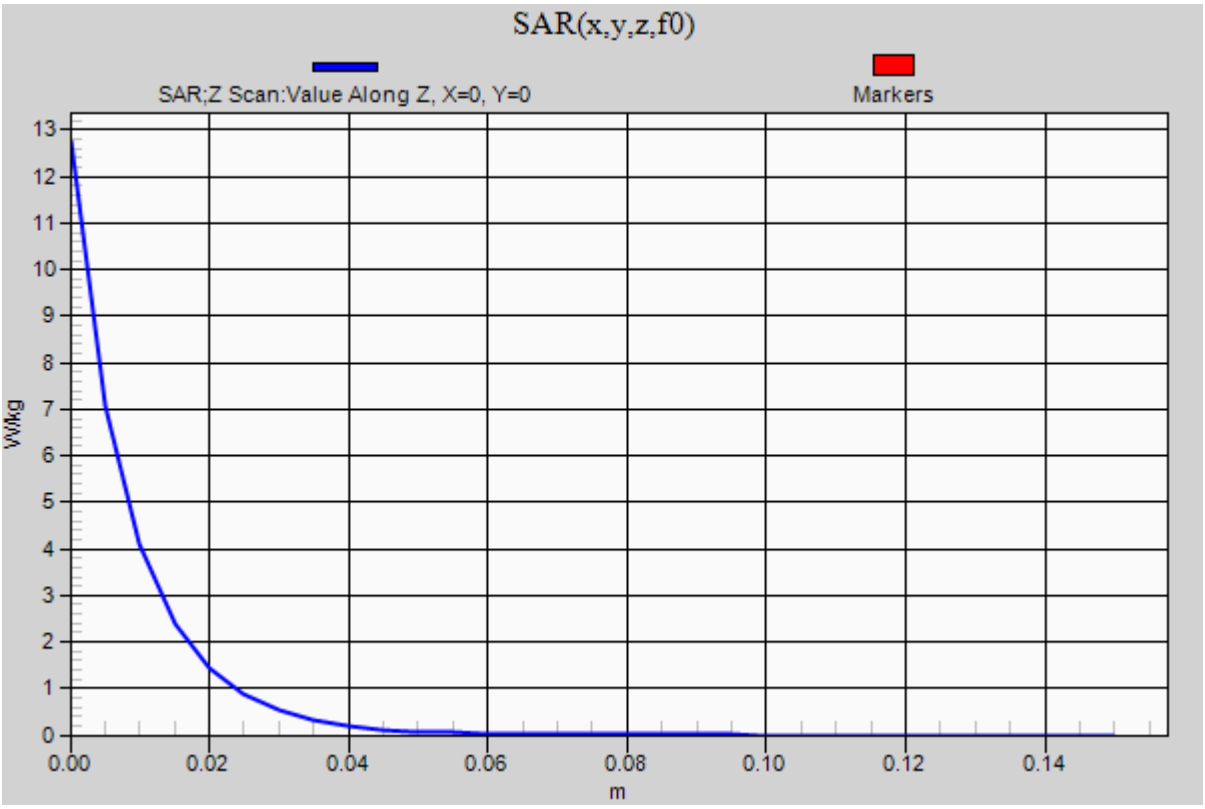
Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.434 S/m; ε_r = 39.233; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(8.08, 8.08, 8.08); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: SAM (30deg probe tilt) with CRP v4.0; Type: QD000P40CB; Serial: TP:1333
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 12.7 W/kg

Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



6. System check result Body 1800MHz

(1)Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value	Measured	Deviation [%]	Limit [%]	Remark
28-Jan	24.0	40	HSL 1800	23.5	1800	εr	53.3	51.2	-4.0	+/-5	*1
						σ [mho/m]	1.52	1.50	-1.6	+/-5	*1
29-Jan	24.0	39	HSL 1800	23.5	1800	εr	53.3	51.4	-3.6	+/-5	*1
						σ [mho/m]	1.52	1.48	-2.8	+/-5	*1
30-Jan	24.0	42	HSL 1800	23.5	1800	εr	53.3	52.0	-2.4	+/-5	*1
						σ [mho/m]	1.52	1.50	-1.6	+/-5	*1
3-Feb	24.0	40	HSL 1800	23.5	1800	εr	53.3	51.0	-4.3	+/-5	*1
						σ [mho/m]	1.52	1.49	-2.1	+/-5	*1

εr: Relative Permittivity / σ : Coductivity
*1 The Target value is a parameter defined in KDB865664D01.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value	Measured	Deviation [%]	Limit [%]	Remark
28-Jan	24.0	40	HSL 1800	23.5	1800	εr	52.6	51.2	-2.7	+/-5	*2 *3
						σ [mho/m]	1.51	1.50	-0.9	+/-5	
29-Jan	24.0	39	HSL 1800	23.5	1800	εr	52.6	51.4	-2.3	+/-5	*2 *3
						σ [mho/m]	1.51	1.48	-2.1	+/-5	
30-Jan	24.0	42	HSL 1800	23.5	1800	εr	52.6	52.0	-1.1	+/-5	*2 *3
						σ [mho/m]	1.51	1.50	-0.9	+/-5	
3-Feb	24.0	40	HSL 1800	23.5	1800	εr	52.6	51.0	-3.0	+/-5	*2 *3
						σ [mho/m]	1.51	1.49	-1.5	+/-5	

εr: Relative Permittivity / σ : Coductivity
*2 The target value is the calibrated dipole TSL parameters. (D1800V2 SN:2d040, Measured Body TSL parameters)
*3 The limit is for deviation provided by manufacturer.

(2)System Check result

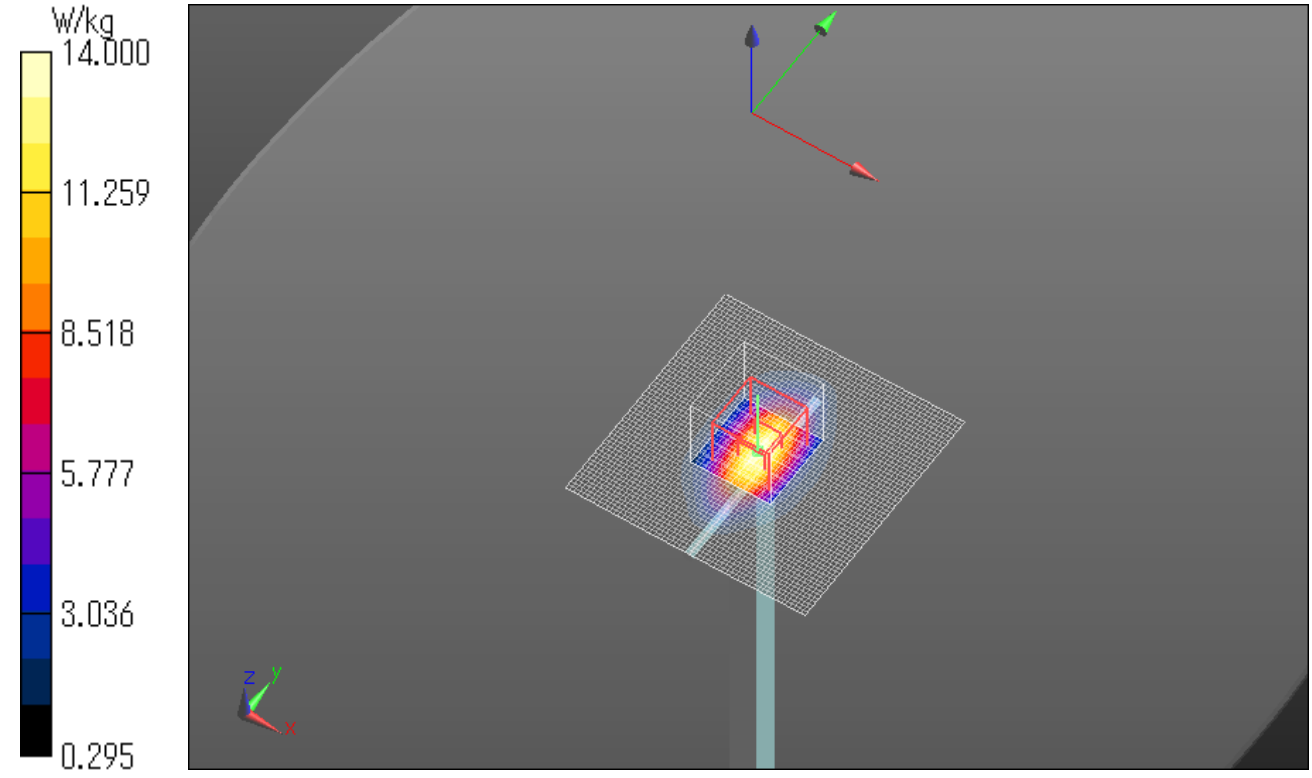
SYSTEM CHECK						
Date	Frequency [MHz]	SAR 1g [W/kg]			Deviation [%]	Limit [%]
		Forward Power 250mW Measured	Conversion 1W Calculation	Target 1W *2		
28-Jan	1800.00	9.89	39.56	38.96	1.5	+/-10
29-Jan	1800.00	9.76	39.04	38.96	0.2	+/-10
30-Jan	1800.00	9.50	38.00	38.96	-2.5	+/-10
3-Feb	1800.00	9.87	39.48	38.96	1.3	+/-10

*4 The taget value is the parameter defined in SAR mesured x 4(9.74 x 4 = 50.4) in manufacturer calibrated dipole (D1800V2 SN:2d040).

Body 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.496 S/m; εr = 51.174; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(7.77, 7.77, 7.77); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

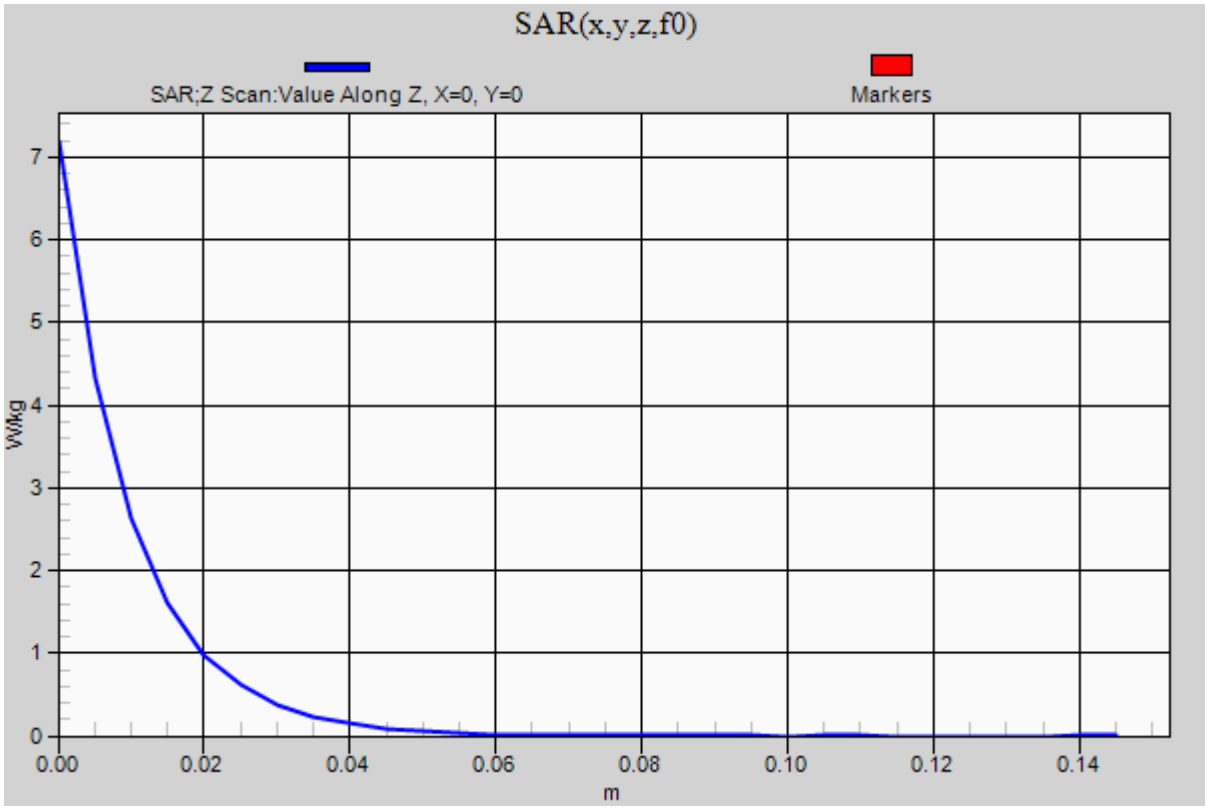
Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.1 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.42 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 18.0 W/kg
SAR(1 g) = 9.89 W/kg; SAR(10 g) = 5.19 W/kg
Maximum value of SAR (measured) = 14.0 W/kg
Date: 2015/01/28
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.496 S/m; ε_r = 51.174; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(7.77, 7.77, 7.77); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

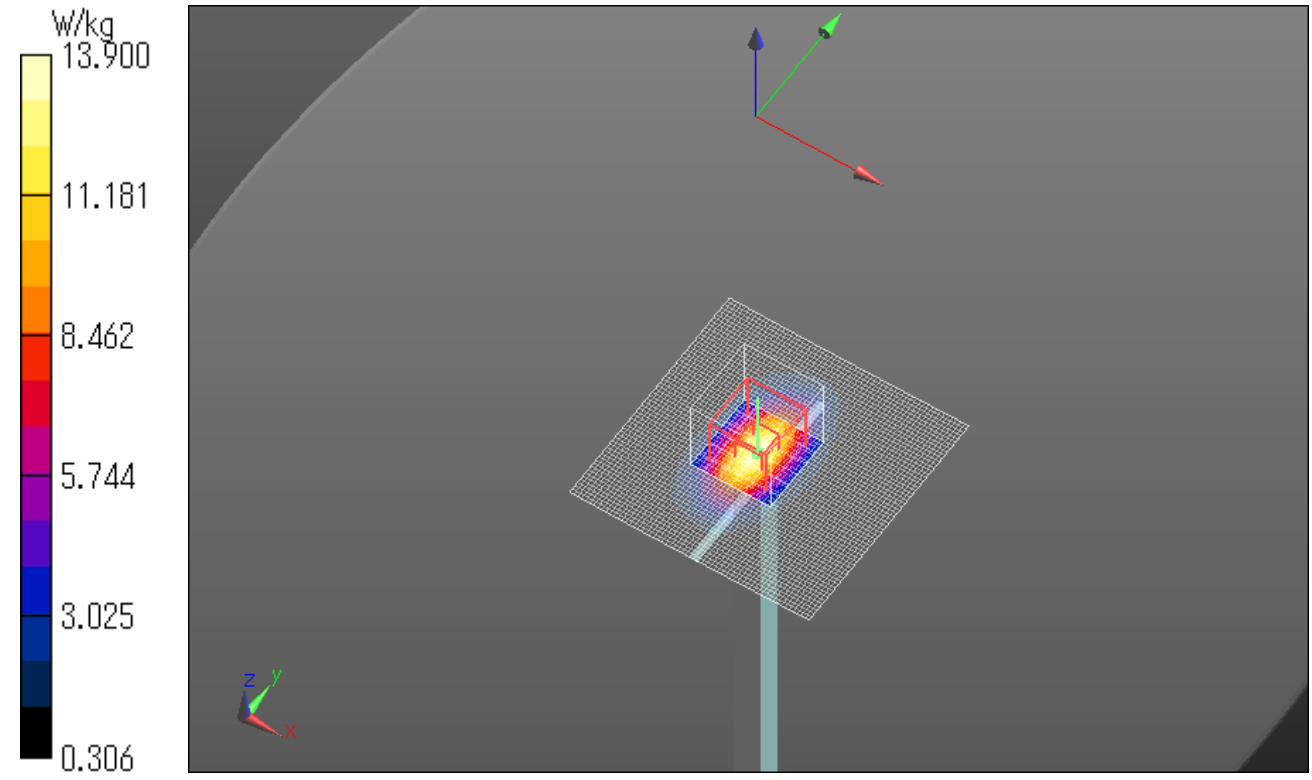
Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 7.19 W/kg
Date: 2015/01/28
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.478 S/m; εr = 51.4; ρ = 1000 kg/m3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(7.77, 7.77, 7.77); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

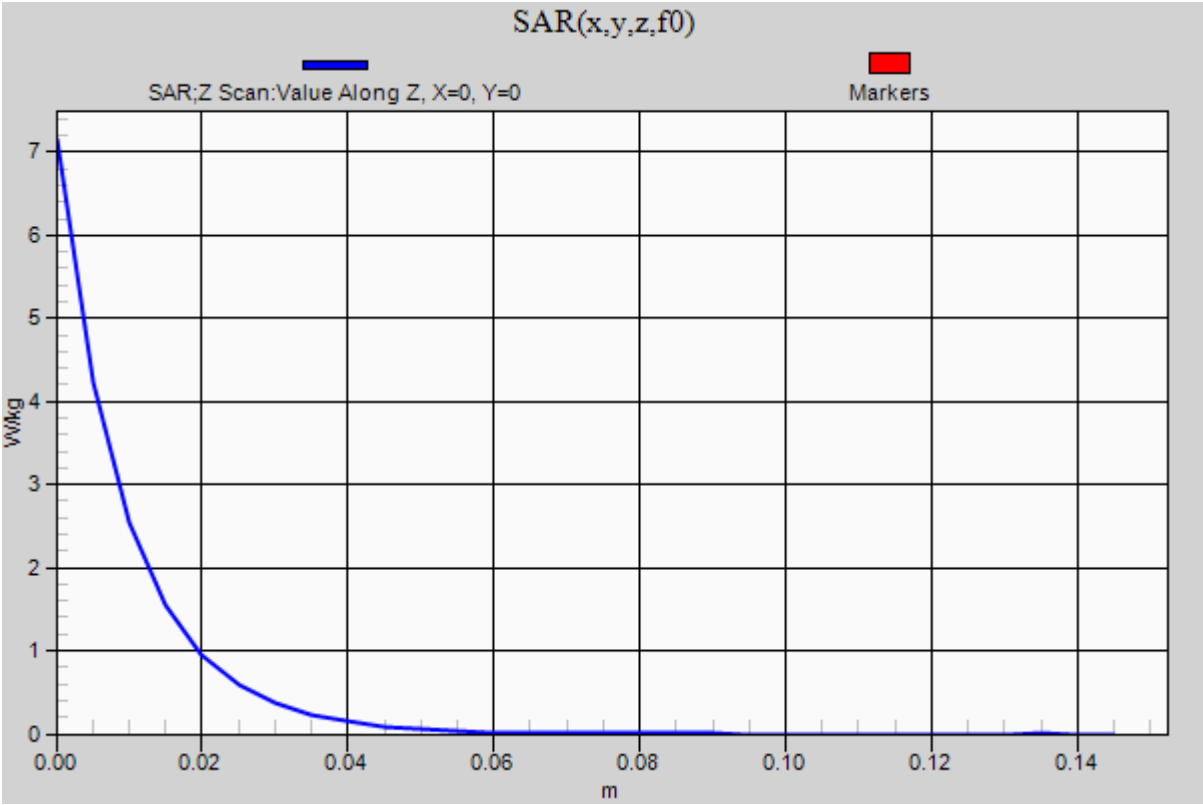
Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.8 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 98.84 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 17.6 W/kg
SAR(1 g) = 9.76 W/kg; SAR(10 g) = 5.15 W/kg
Maximum value of SAR (measured) = 13.9 W/kg
Date: 2015/01/29
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.478 S/m; ε_r = 51.4; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(7.77, 7.77, 7.77); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

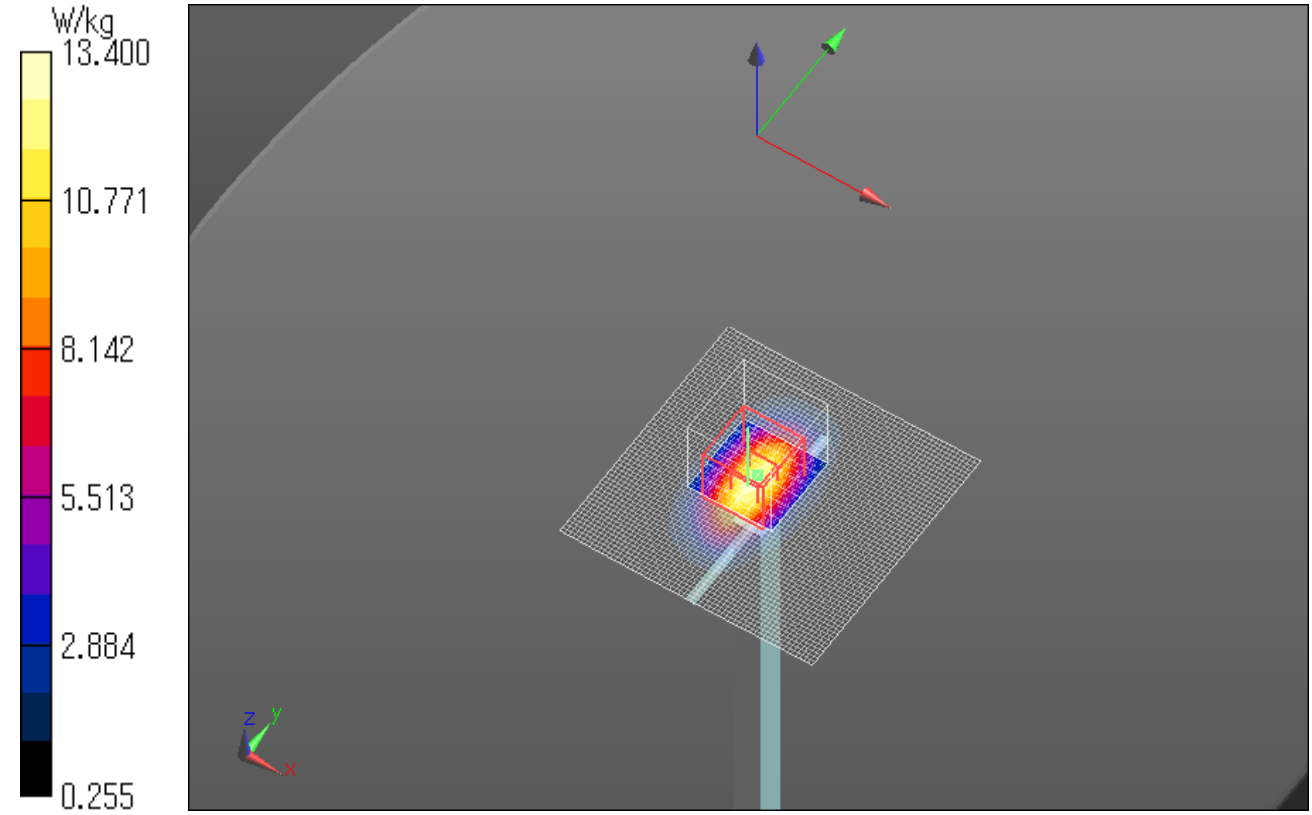
Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 7.15 W/kg
Date: 2015/01/29
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.496 S/m; ε_r = 52.002; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(7.77, 7.77, 7.77); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

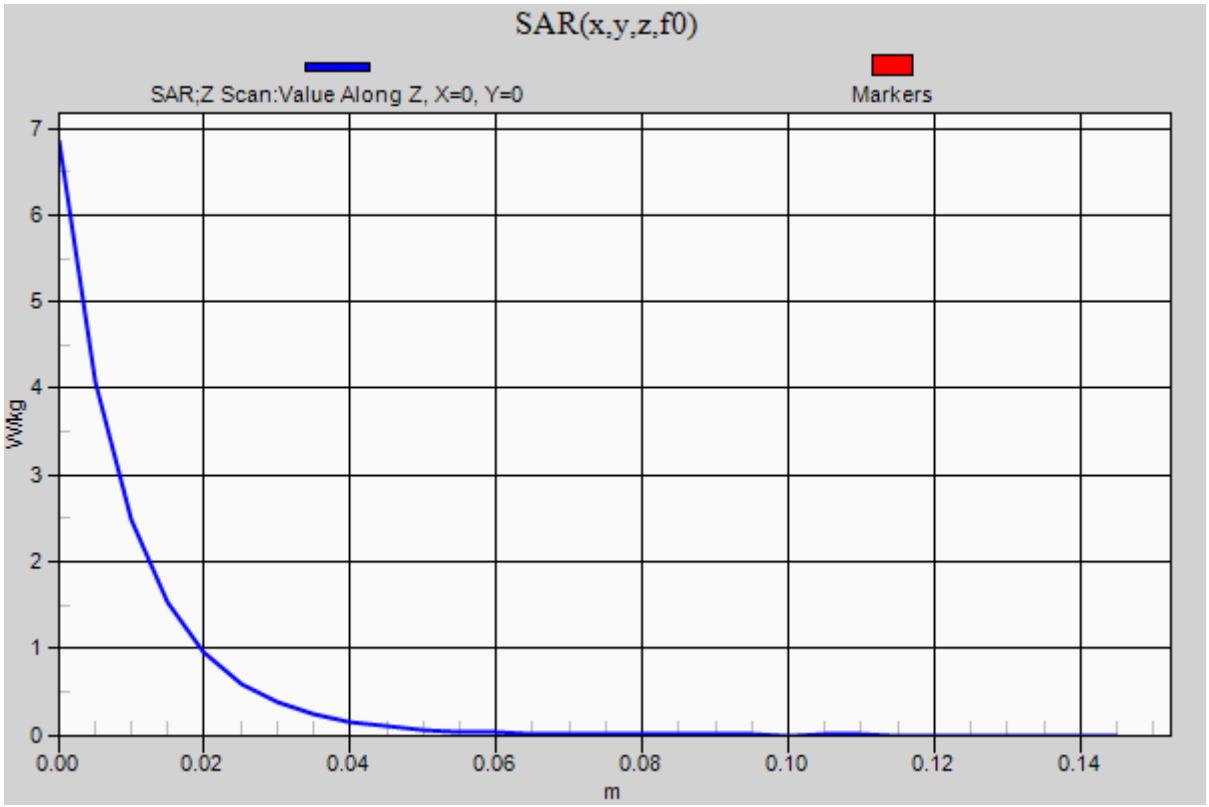
Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 14.3 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 95.09 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 17.1 W/kg
SAR(1 g) = 9.5 W/kg; SAR(10 g) = 5.03 W/kg
Maximum value of SAR (measured) = 13.4 W/kg
Date: 2015/01/30
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



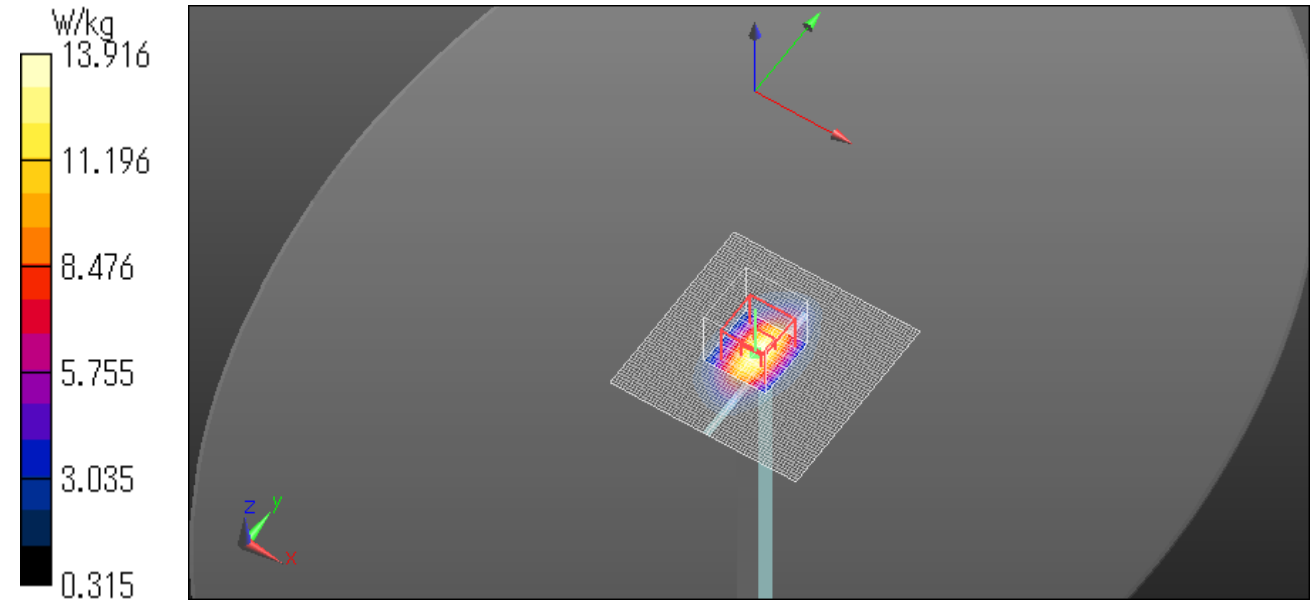
Body 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.496 S/m; ε_r = 52.002; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(7.77, 7.77, 7.77); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 6.85 W/kg
Date: 2015/01/30
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



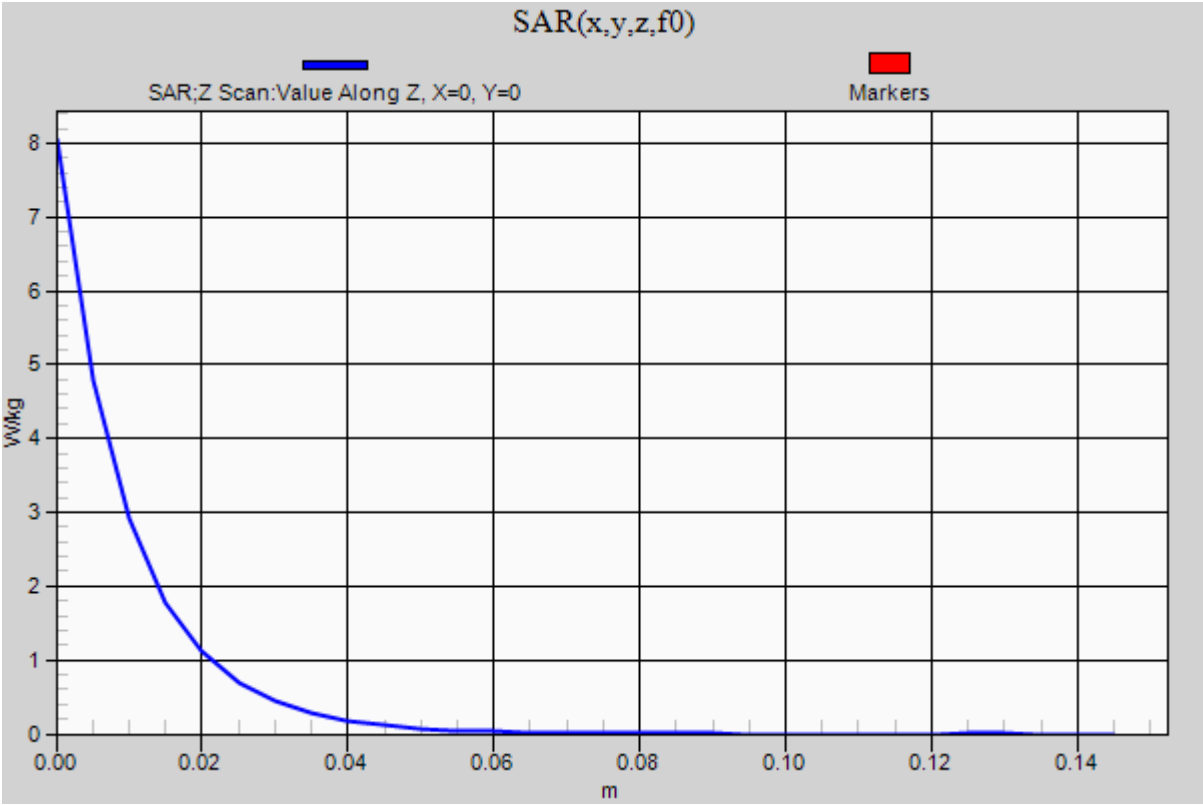
Body 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.488 S/m; ε_r = 51.004; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(7.77, 7.77, 7.77); Calibrated: 2014/12/16;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)
Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 13.9 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 98.46 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 9.87 W/kg; SAR(10 g) = 5.23 W/kg
Maximum value of SAR (measured) = 13.9 W/kg
Date: 2015/02/03
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 1800MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D1800 (1800.0 MHz); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.488 S/m; ε_r = 51.004; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY Configuration:
Probe: EX3DV4 - SN3825; ConvF(7.77, 7.77, 7.77); Calibrated: 2014/12/16;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn509; Calibrated: 2014/07/28
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1045
DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.04 W/kg
Date: 2015/02/03
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



7. System check result Body 2000MHz

Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]	Remark
30-Jan	24.0	42	HSL1950	23.5	2000	εr	53.3	51.7	-3.0	+/-5	*1
						σ [mho/m]	1.52	1.57	3.6	+/-5	

εr: Relative Permittivity / σ : Coductivity
*1 The Target value is a parameter defined in KDB865664D01.

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value*1	Measured	Deviation [%]	Limit [%]	Remark
30-Jan	24.0	42	HSL1950	23.5	2000	εr	52.9	51.7	-2.3	+/-6	*2 *3
						σ [mho/m]	1.53	1.57	2.9	+/-6	

εr: Relative Permittivity / σ : Coductivity
*2 The target value is the calibrated dipole TSL parameters. (D2000V2 SN:1029, Measured Head TSL parameters)
*3 The limit is for deviation provided by manufacturer.

System check result (1g SAR)

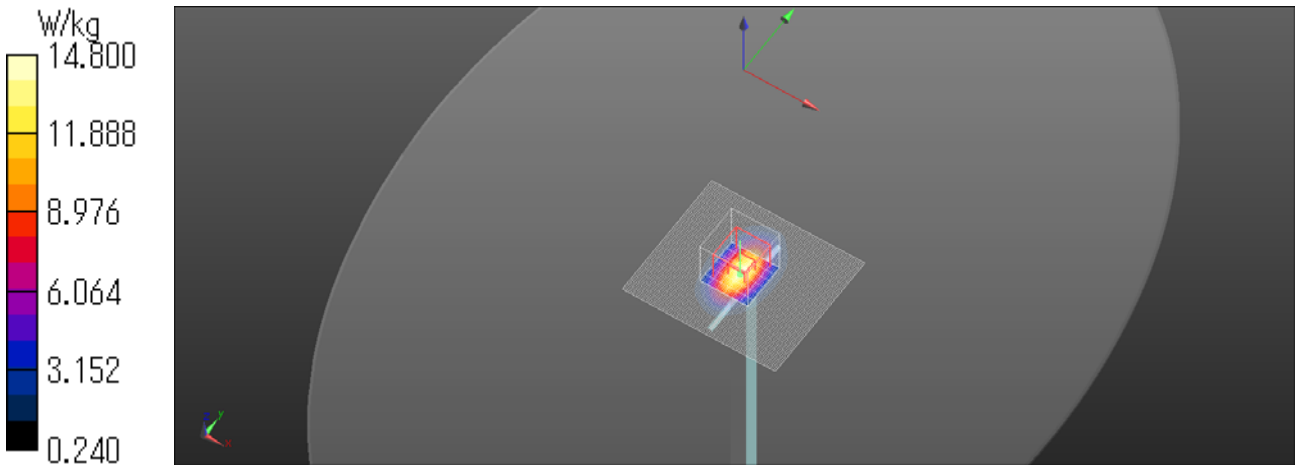
SYSTEM CHECK							
Date	Frequency [MHz]	SAR 1g [W/kg]					
		Forward Power 250mW Measured	Conversion 1W Calculation	Target 1W *4	Deviation [%]	Limit [%]	Remark
30-Jan	2000.00	10.30	41.20	40.00	3.0	+/-10	*4

*4 The taget value is the parameter defined in SAR mesured x 4(10 x 4 = 40) in manufacturer calibrated dipole (D2000V2 SN:1029).

Body 2000MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D2000 (2000.0 MHz); Frequency: 2000 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2000 MHz; σ = 1.574 S/m; ε_r = 51.682; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3917; ConvF(7.93, 7.93, 7.93); Calibrated: 2014/05/14;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1369; Calibrated: 2014/05/14
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1095
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

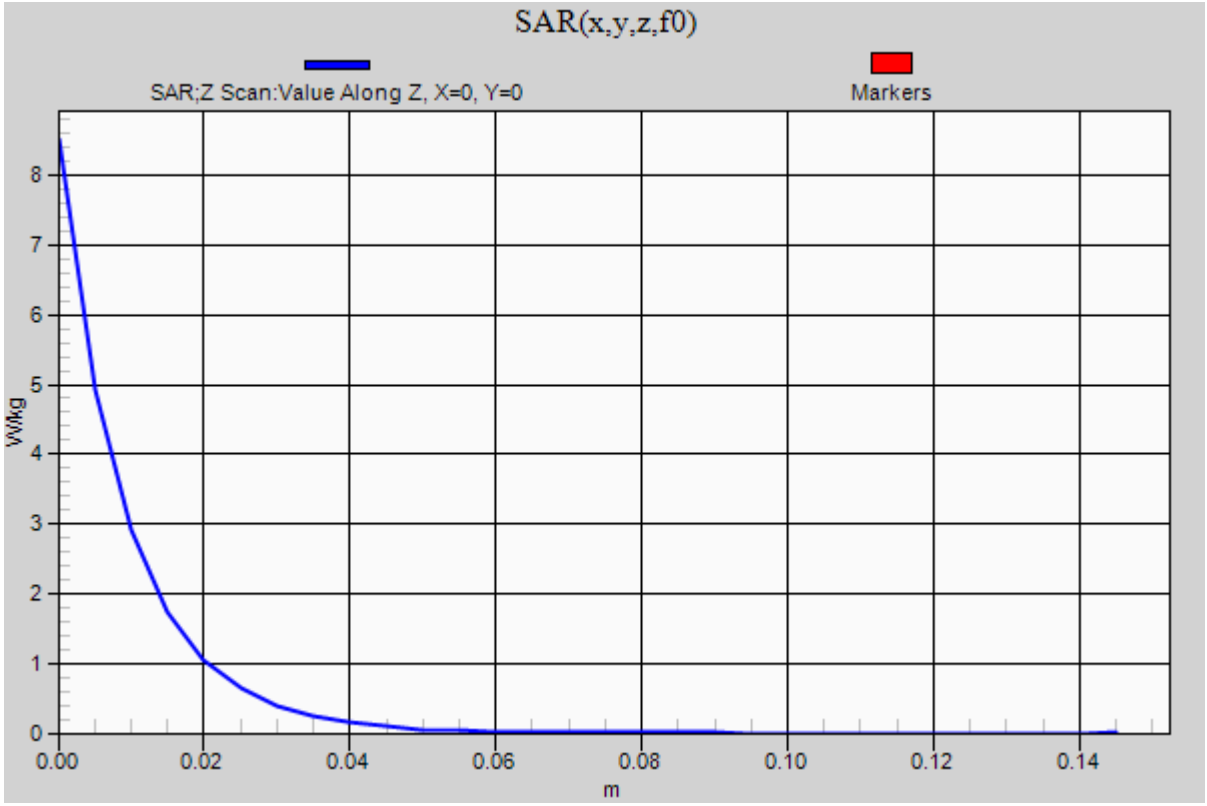
Area Scan (81x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 15.5 W/kg

Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 98.35 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 18.8 W/kg
SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.3 W/kg
Maximum value of SAR (measured) = 14.8 W/kg
Date: 2015/01/30
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 2000MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D2000 (2000.0 MHz); Frequency: 2000 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2000 MHz; σ = 1.574 S/m; ε_r = 51.682; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3917; ConvF(7.93, 7.93, 7.93); Calibrated: 2014/05/14;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn1369; Calibrated: 2014/05/14
Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB; Serial: TP:1095
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 8.51 W/kg
Date: 2015/01/30
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



8. System check result Head 2450MHz

(2) Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value	Measured	Deviation [%]	Limit [%]	Remark
1-Feb	24.0	33	HSL 2450	23.5	2450	εr	39.2	39.1	-0.2	+/-5	*1
						σ [mho/m]	1.80	1.84	2.4	+/-5	

εr: Relative Permittivity / σ : Coductivity
*1 The Target value is a parameter defined in KDB 865664D01.

(2) System check result (for IEEE1528)

SYSTEM CHECK							
Date	Frequency [MHz]	SAR 1g [W/kg]		Target Value(1W)	Deviation [%]	Limit [%]	Remark
		Forward Power Measured	Conversion 1W Calculation				
1-Feb	2450.00	14.3	57.2	52.4	9.2	+/-10	*2

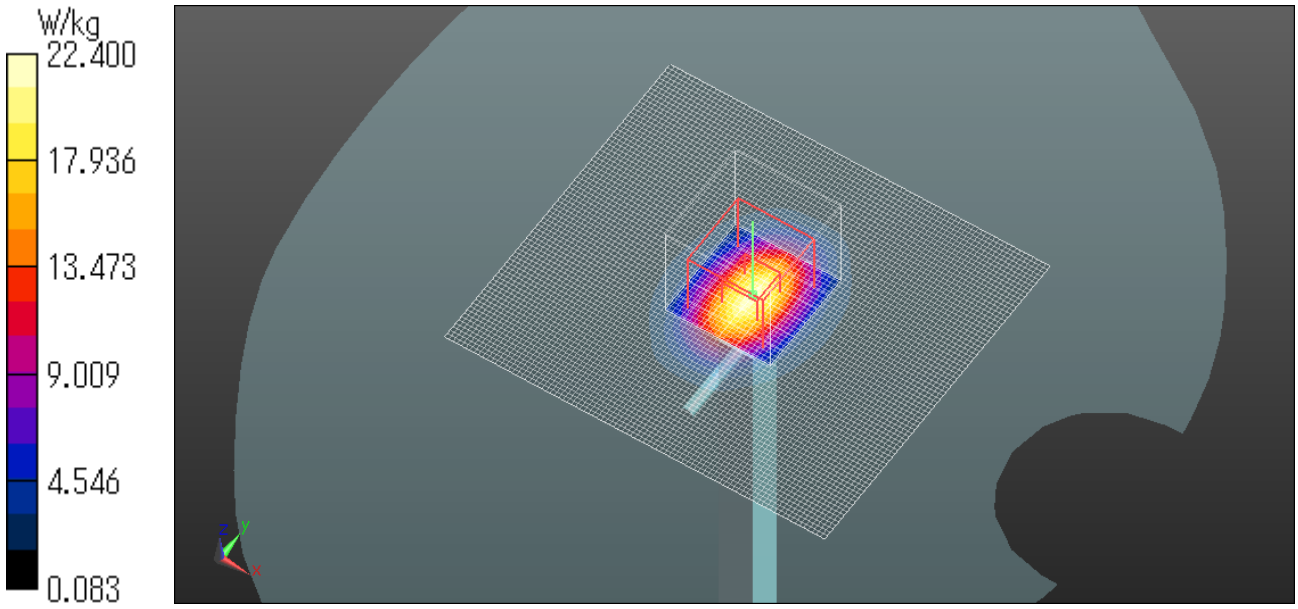
*2 The taget value is the parameter defined in IEEE1528

Head 2450MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.844 S/m; ε_r = 39.139; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.29, 7.29, 7.29); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 22.8 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 111.5 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 31.3 W/kg
SAR(1 g) = 14.3 W/kg; SAR(10 g) = 6.39 W/kg
Maximum value of SAR (measured) = 22.4 W/kg

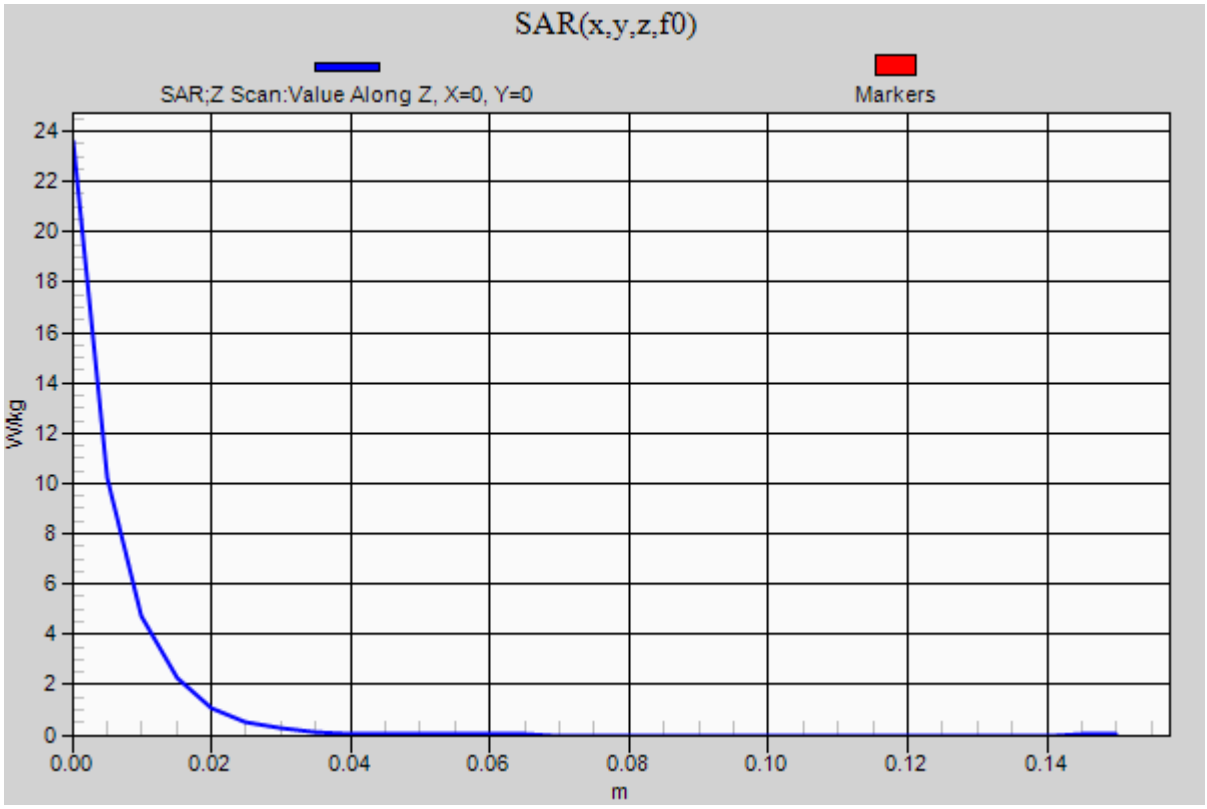
Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Head 2450MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.844 S/m; ε_r = 39.139; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.29, 7.29, 7.29); Calibrated: 2014/06/13;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: SAM Twin TP1762 (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1762
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 23.6 W/kg

Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



9. System check result Body 2450MHz

(3) Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value	Measured	Deviation [%]	Limit [%]	Remark
1-Feb	24.0	33	MSL 2450	23.5	2450	εr	52.7	51.2	-2.9	+/-5	*1
						σ [mho/m]	1.95	1.97	0.9	+/-5	
2-Feb	24.0	33	MSL 2450	23.5	2450	εr	52.7	50.7	-3.7	+/-5	*1
						σ [mho/m]	1.95	2.01	3.1	+/-5	

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value	Measured	Deviation [%]	Limit [%]	Remark
1-Feb	24.0	33	MSL 2450	23.5	2450	εr	52.2	51.2	-1.9	+/-6	*2 *3
						σ [mho/m]	2.00	1.97	-1.6	+/-6	
2-Feb	24.0	33	MSL 2450	23.5	2450	εr	52.2	50.7	-2.8	+/-6	*2 *3
						σ [mho/m]	2.00	2.01	0.5	+/-6	

εr: Relative Permittivity / σ : Coductivity
*2 The target value is the calibrated dipole Body TSL parameters. (D2450V2 SN:713, Measured Body TSL parameters)
*3 The limit is for deviation provided by manufacture.

(2) System check result (for calibration by manufacture)

SYSTEM CHECK							
Date	Frequency [MHz]	SAR 1g [W/kg]			Deviation [%]	Limit [%]	Remark
		Forward Power Measured	Conversion 1W Calculation	Target Value(1W)			
1-Feb	2450.00	13.1	52.4	50.4	4.0	+/-10	*4
2-Feb	2450.00	11.5	46.0	50.4	-8.7	+/-10	*4

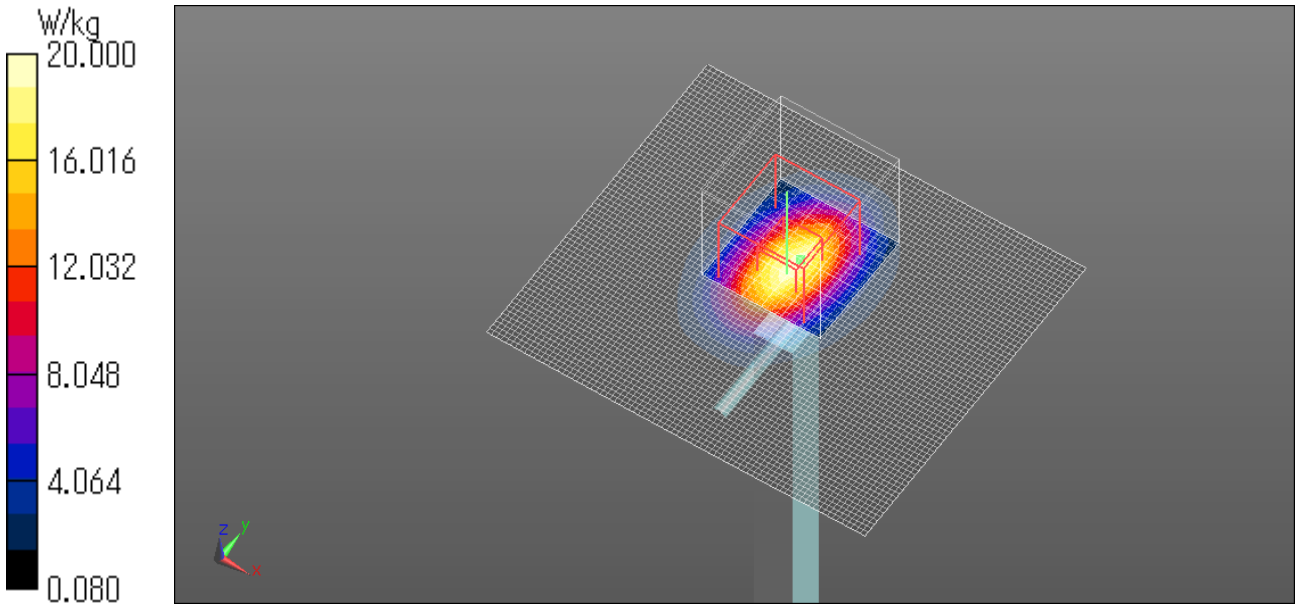
*4 The taget value is the parameter defined in SAR for SAR measured(12.6 * 4) in manufacturer calibrated dipole (D2450V2 SN:713)

Body 2450MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.968 S/m; ε_r = 51.189; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 20.9 W/kg

Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 96.68 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 27.8 W/kg
SAR(1 g) = 13.1 W/kg; SAR(10 g) = 5.93 W/kg
Maximum value of SAR (measured) = 20.0 W/kg

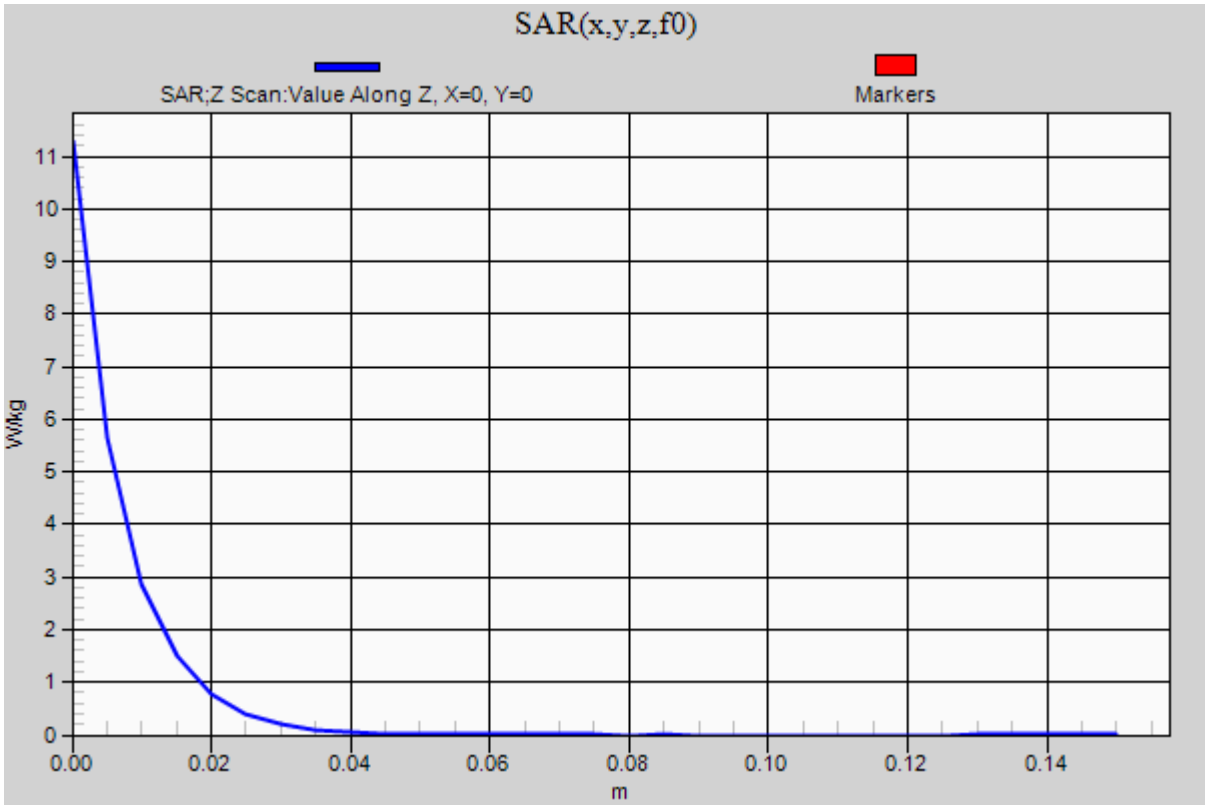
Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 2450MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.968 S/m; ε_r = 51.189; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/06/13;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 11.3 W/kg

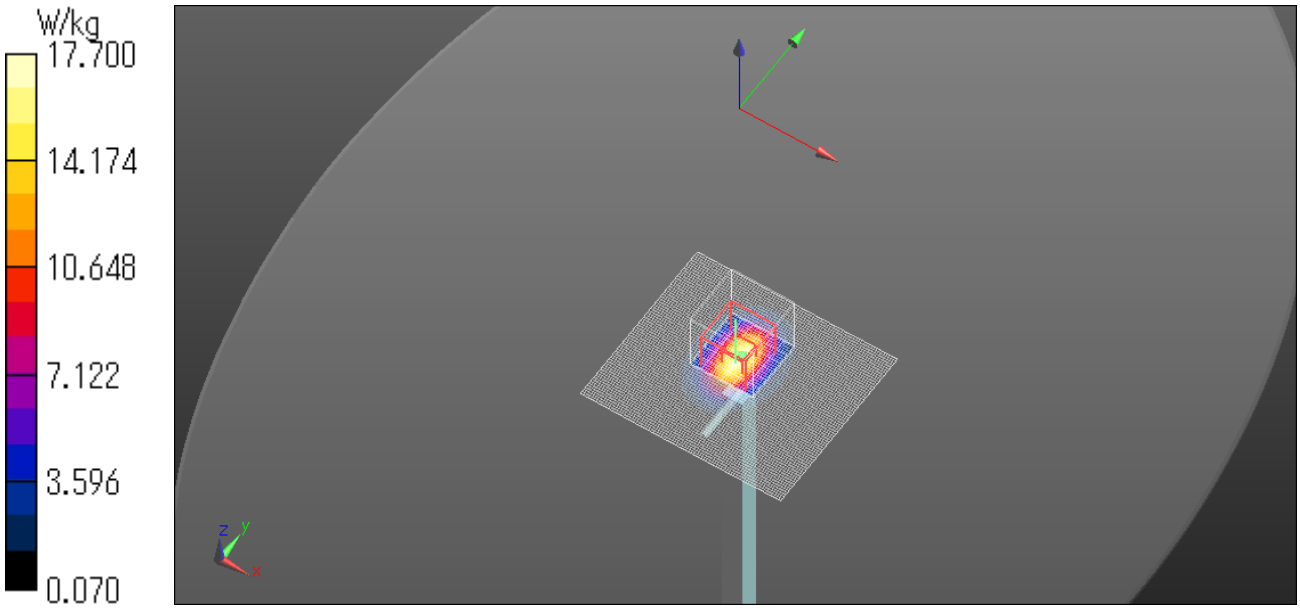
Date: 2015/02/01
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 2450MHz System Check DATA / Forward Conducted Power : 250mW
Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 2.01 S/m; ε_r = 50.726; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

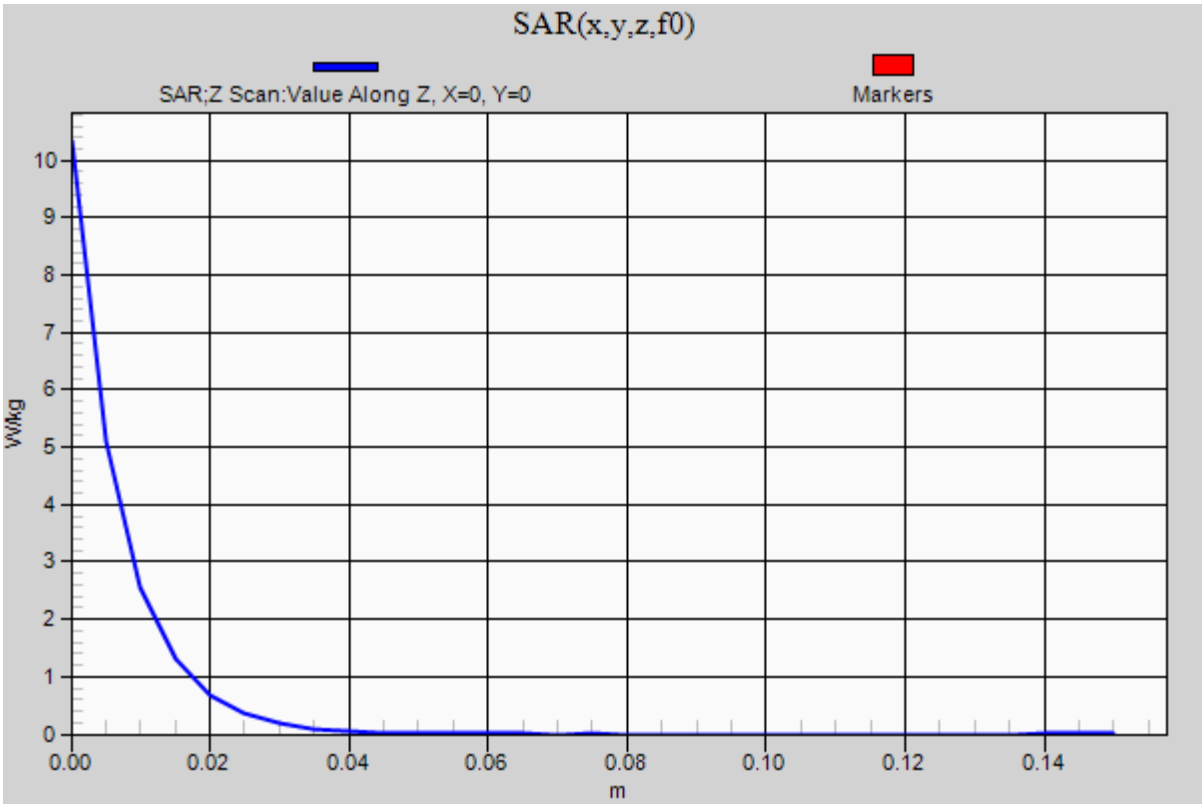
Area Scan (81x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 18.5 W/kg

Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 91.88 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 24.8 W/kg
SAR(1 g) = 11.5 W/kg; SAR(10 g) = 5.2 W/kg
Maximum value of SAR (measured) = 17.7 W/kg
Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 2450MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D2450 (2450.0 MHz); Frequency: 2450 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 2.01 S/m; ε_r = 50.726; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.36, 7.36, 7.36); Calibrated: 2014/06/13;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 10.3 W/kg
Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



10. System check result Body 2600MHz

(1) Simulated Tissue Liquid Parameter confirmation

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value	Measured	Deviation [%]	Limit [%]	Remark
2-Feb	24.0	33	MSL 2450	23.5	2450	εr	52.5	50.2	-4.3	+/-5	*1
						σ [mho/m]	2.16	2.20	1.8	+/-5	

DIELECTRIC PARAMETERS MEASUREMENT RESULTS											
Date	Ambient Temp. [deg.c]	Relative Humidity [%]	Liquid type	Liquid Temp. [deg.c]	Measured Frequency [MHz]	Parameters	Target Value	Measured	Deviation [%]	Limit [%]	Remark
2-Feb	24.0	33	MSL 2450	23.5	2450	εr	50.8	50.2	-1.1	+/-6	*2 *3
						σ [mho/m]	2.20	2.20	-0.1	+/-6	

εr: Relative Permittivity / σ : Coductivity
*2 The target value is the calibrated dipole Body TSL parameters. (D2600V2 SN:1030, Measured Body TSL parameters)
*3 The limit is for deviation provided by manufacture.

(2) System check result (for calibration by manufacture)

SYSTEM CHECK							
Date	Frequency [MHz]	SAR 1g [W/kg]		Target Value(1W)	Deviation [%]	Limit [%]	Remark
		Forward Power Measured	Conversion 1W Calculation				
2-Feb	2600.00	14.6	58.4	57.2	2.1	+/-10	*4

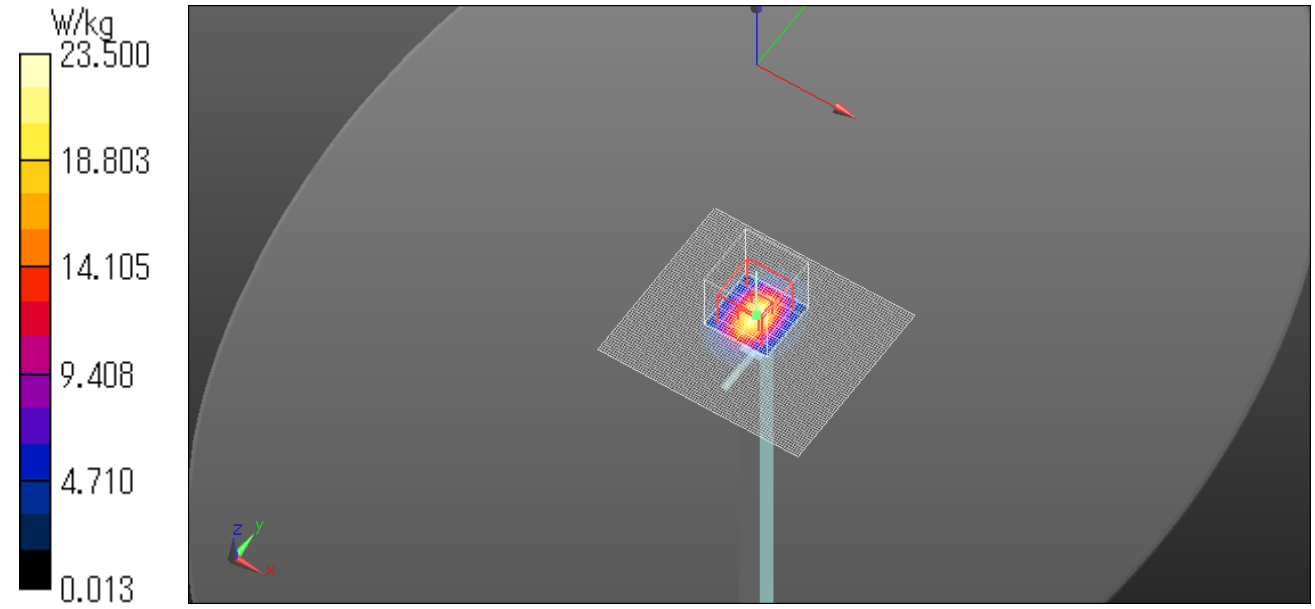
*4 The taget value is the parameter defined in SAR for SAR measured(12.6 * 4) in manufacturer calibrated dipole (D2600V2 SN:1030)

Body 2600MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.198 S/m; ε_r = 50.223; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Area Scan (81x71x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 23.5 W/kg

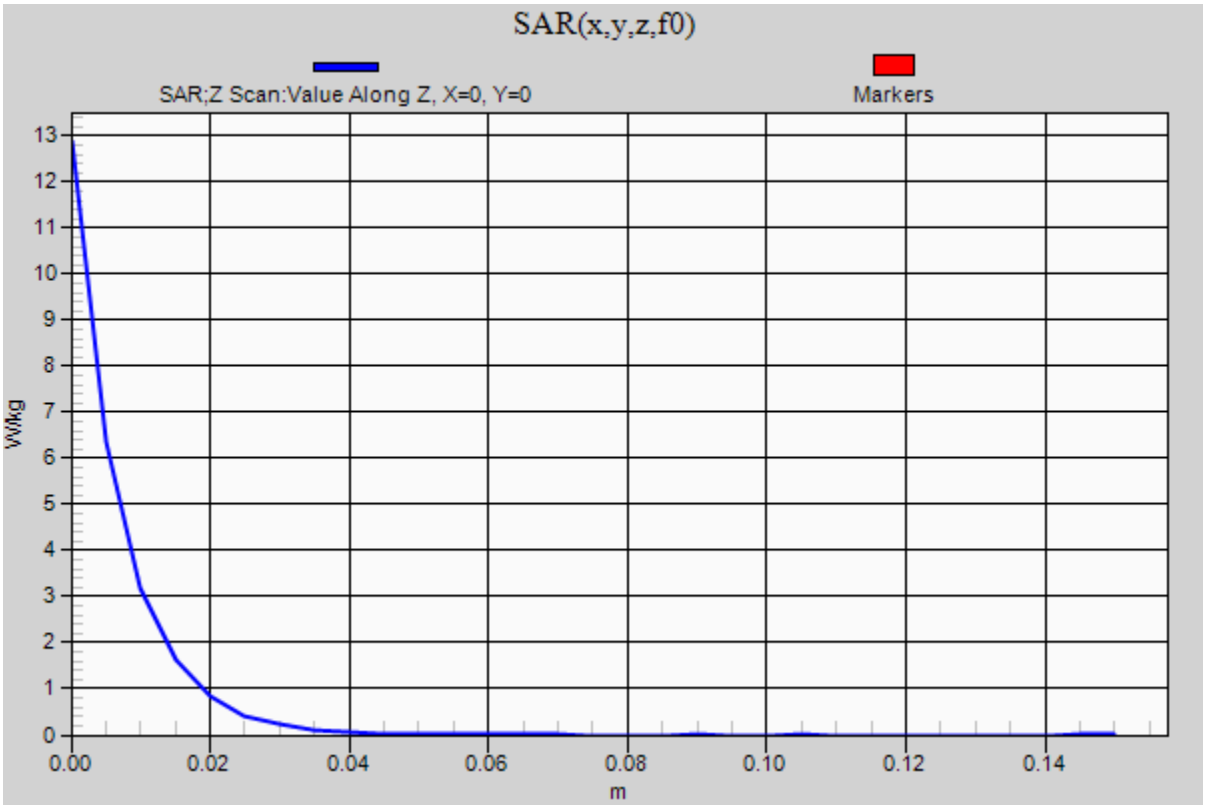
Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 97.73 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 31.8 W/kg
SAR(1 g) = 14.6 W/kg; SAR(10 g) = 6.4 W/kg
Maximum value of SAR (measured) = 22.9 W/kg

Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



Body 2600MHz System Check DATA / Forward Conducted Power : 250mW
Communication System: UID 0, CW (0); Communication System Band: D2600 (2600.0 MHz); Frequency: 2600 MHz;
Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.198 S/m; ε_r = 50.223; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)
DASY5 Configuration
Probe: EX3DV4 - SN3922; ConvF(7.13, 7.13, 7.13); Calibrated: 2014/06/13;
Sensor-Surface: 0mm (Fix Surface)
Electronics: DAE4 Sn1372; Calibrated: 2014/06/18
Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Z Scan (1x1x31): Measurement grid: dx=20mm, dy=20mm, dz=5mm
Maximum value of SAR (measured) = 12.9 W/kg
Date: 2015/02/02
Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



11. System Check Dipole (D750V3,S/N: 1058)

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client UL Japan (PTT)

Certificate No: D750V3-1058_May12

CALIBRATION CERTIFICATE

Object: D750V3 - SN: 1058

Calibration procedure(s): QA CAL-05.v8
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: May 10, 2012

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	05-Oct-11 (No. 217-01451)	Oct-12
Power sensor HP 8481A	US37292783	05-Oct-11 (No. 217-01451)	Oct-12
Reference 20 dB Attenuator	SN: 5058 (20k)	27-Mar-12 (No. 217-01530)	Apr-13
Type-N mismatch combination	SN: 5047.2 / 06327	27-Mar-12 (No. 217-01533)	Apr-13
Reference Probe ES3DV3	SN: 3205	30-Dec-11 (No. ES3-3205_Dec11)	Dec-12
DAE4	SN: 601	04-Jul-11 (No. DAE4-601_Jul11)	Jul-12

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power sensor HP 8481A	MY41092317	18-Oct-02 (in house check Oct-11)	In house check: Oct-13
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-11)	In house check: Oct-13
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-11)	In house check: Oct-12

	Name	Function	Signature
Calibrated by:	Claudio Laubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: May 10, 2012

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2003, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", December 2003
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) Federal Communications Commission Office of Engineering & Technology (FCC OET), "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields; Additional Information for Evaluating Compliance of Mobile and Portable Devices with FCC Limits for Human Exposure to Radiofrequency Emissions", Supplement C (Edition 01-01) to Bulletin 65

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.1
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	42.3 ± 6 %	0.92 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.16 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**8.44 mW /g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.41 mW / g
SAR for nominal Head TSL parameters	normalized to 1W	**5.53 mW /g ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Body TSL parameters	22.0 °C	55.5	0.96 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	55.6 ± 6 %	0.96 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.22 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**8.88 mW / g ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.46 mW / g
SAR for nominal Body TSL parameters	normalized to 1W	**5.84 mW / g ± 16.5 % (k=2)**

UL Japan, Inc.
Ise EMC Lab.
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Appendix

Antenna Parameters with Head TSL

Impedance, transformed to feed point	54.4 Ω - 1.3 jΩ
Return Loss	- 27.2 dB

Antenna Parameters with Body TSL

Impedance, transformed to feed point	49.9 Ω - 3.0 jΩ
Return Loss	- 30.4 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.037 ns

After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.
No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
Manufactured on	March 06, 2012

DASY5 Validation Report for Head TSL

Date: 10.05.2012

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1058

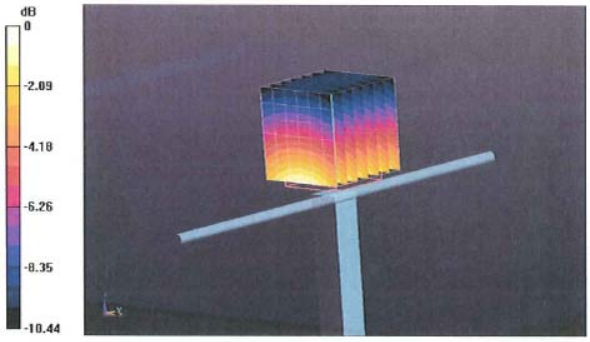
Communication System: CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.92 mho/m; ε_r = 42.3; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.33, 6.33, 6.33); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.1(838); SEMCAD X 14.6.5(6469)

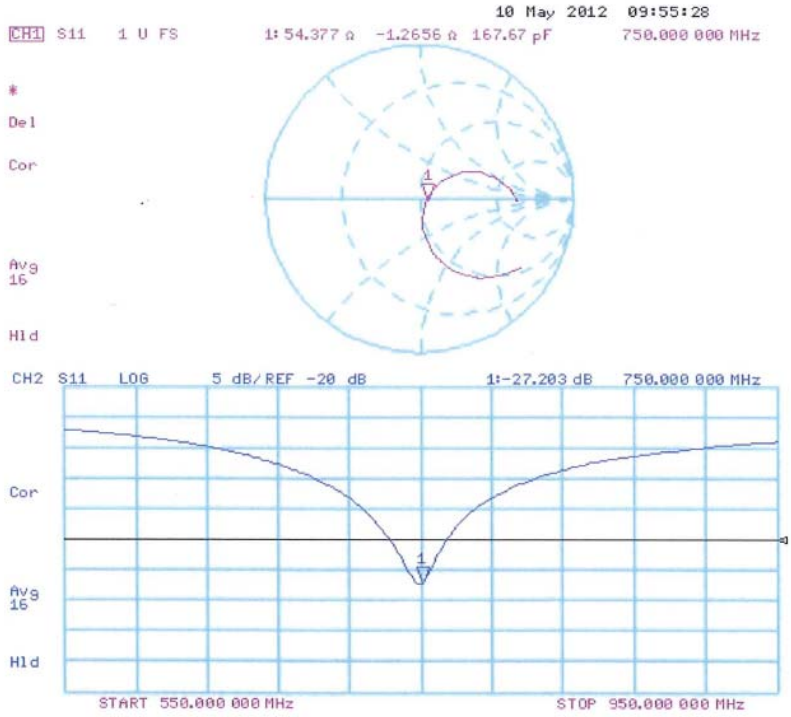
Dipole Calibration for Head Tissue/Pin=250mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.972 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 3.282 mW/g
SAR(1 g) = 2.16 mW/g; SAR(10 g) = 1.41 mW/g
Maximum value of SAR (measured) = 2.53 mW/g



0 dB = 2.53 mW/g = 8.06 dB mW/g

Impedance Measurement Plot for Head TSL



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DASY5 Validation Report for Body TSL

Date: 10.05.2012

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN: 1058

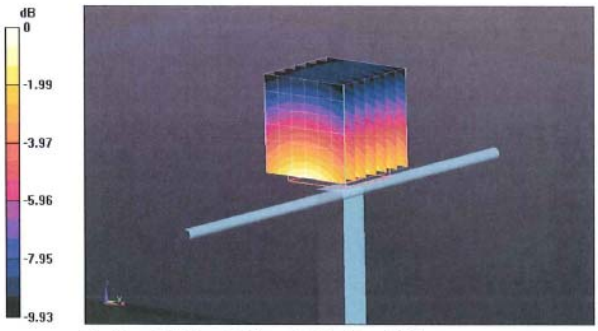
Communication System: CW; Frequency: 750 MHz
Medium parameters used: f = 750 MHz; σ = 0.96 mho/m; ε_r = 55.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY52 Configuration:

- Probe: ES3DV3 - SN3205; ConvF(6.12, 6.12, 6.12); Calibrated: 30.12.2011;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 04.07.2011
- Phantom: Flat Phantom 4.9L; Type: QD000P49AA; Serial: 1001
- DASY52 52.8.1(838); SEMCAD X 14.6.5(6469)

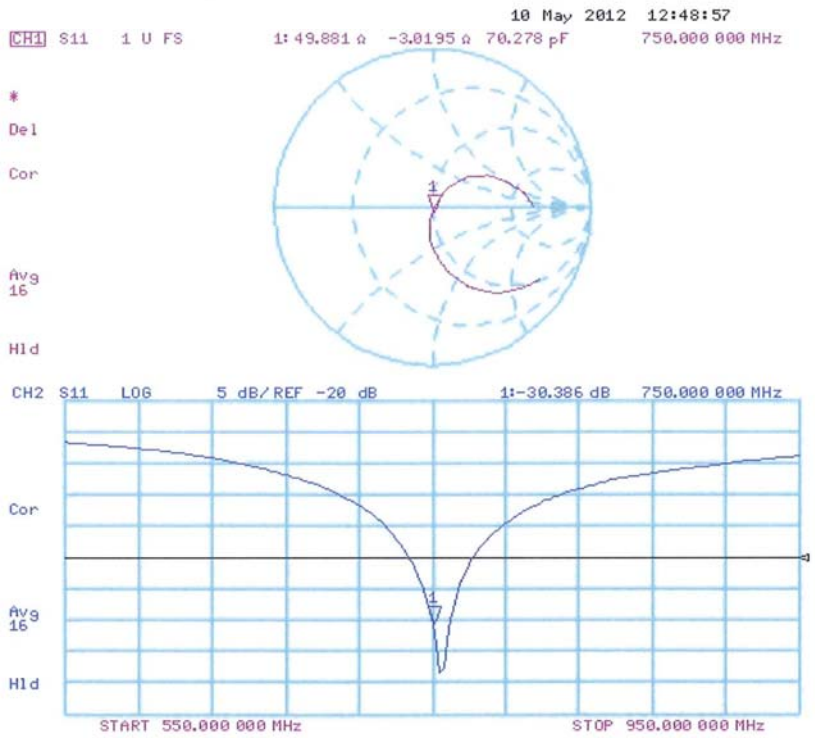
Dipole Calibration for Body Tissue/Pin=250mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.938 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.301 mW/g
SAR(1 g) = 2.22 mW/g; SAR(10 g) = 1.46 mW/g
Maximum value of SAR (measured) = 2.58 mW/g



0 dB = 2.58 mW/g = 8.23 dB mW/g

Impedance Measurement Plot for Body TSL



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D750V3 Calibration for Impedance and Return-loss

1. Test environment

Date	May 30, 2014		
Ambient Temperature	24.0 deg.C	Relative humidity	50%RH

2. Equipment used

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MNA-01	Network Analyzer	Agilent/HP	E8358A	US41080381	SAR	2013/09/09 * 12
MNCK-01	Type N Calibration Kit	Agilent	85032F	MY41495257	SAR	2013/09/07 * 12
EST-46	3.5mm ECONOMY CALIBRATION KIT	Agilent	85052D	MY43252869	SAR	2013/08/13 * 12
MDA-20	Dipole Antenna	Schmid&Partner Engineering AG	D750V3	1058	SAR	2012/05/10 * 12
MPSAM-04	SAM Phantom	Schmid&Partner Engineering AG	SAM Twin Phantom V4.0	1762	SAR	2013/06/18 * 12
MPF-04	2mmOval Flat Phantom ERI 4.0	Schmid&Partner Engineering AG	QDOVA 001B (ERI4.0)	1207	SAR	2013/06/18 * 12
MOS-31	Thermo-Hygrometer	Custom	CTH-201	-	SAR	2013/05/16 * 12
HSL750						Daily check
MSL750						Daily check
SAR room						Daily check

3. Test Result

Impeadance,Transformed to feed point	Head	Deviation	Tolerance	Result
Calibration (SPEAG) 2012/05/10	54.4 Ω-1.3jΩ	-	-	-
Calibration(ULJ)2014/5/30	52.42Ω+1.894jΩ	0.02Ω+3.194jΩ	+/-5Ω+/-5jΩ	Complied

Return loss	Head	Deviation	Tolerance	Result
Calibration (SPEAG) 2012/05/10	-27.2dB	-	-	-
Calibration(ULJ)2014/5/30	-30.45dB	-3.25dB	-27.2 *+/-20%	Complied

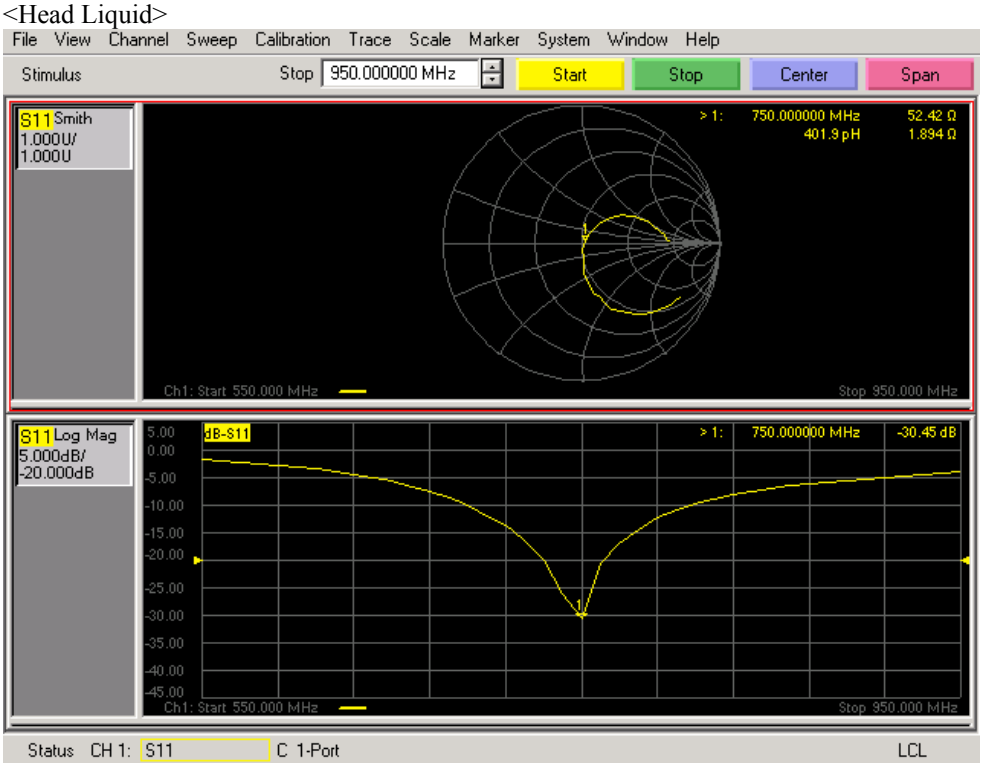
Impeadance,Transformed to feed point	Body	Deviation	Tolerance	Result
Calibration (SPEAG) 2012/05/10	49.9 Ω-3.0jΩ	-	-	-
Calibration(ULJ)2014/5/30	49.18Ω-3.461jΩ	-0.72Ω-0.461jΩ	+/-5Ω+/-5jΩ	Complied

Return loss	Body	Deviation	Tolerance	Result
Calibration (SPEAG) 2012/05/10	-30.4dB	-	-	-
Calibration(ULJ)2014/5/30	-28.91dB	1.49dB	-30.4 *+/-20%	Complied

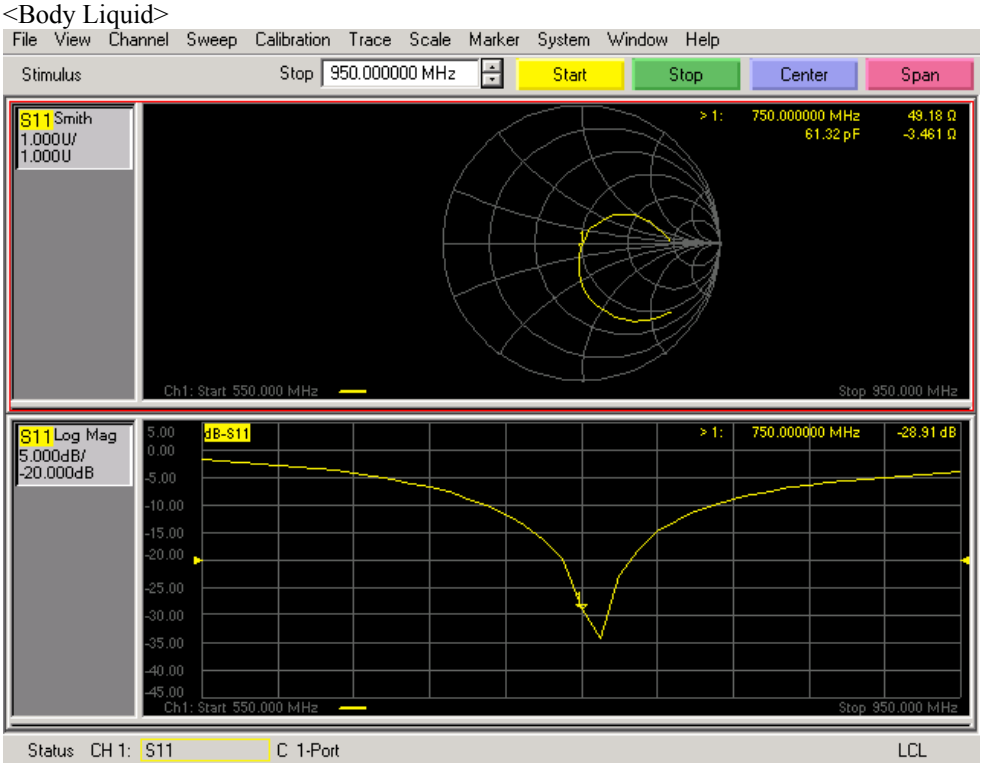
*Tolerance : According to the KDB450824D02

Measurement Plots

<Head Liquid>



<Body Liquid>



12. System Check Dipole (D900V2,S/N: 155)

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 108

Client **UL Japan (PTT)** Certificate No: **D900V2-155_Dec13**

CALIBRATION CERTIFICATE

Object D900V2 - SN: 155

Calibration procedure(s) QA CAL-05.v9
Calibration procedure for dipole validation kits above 700 MHz

Calibration date: December 06, 2013

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter EPM-442A	GB37480704	09-Oct-13 (No. 217-01827)	Oct-14
Power sensor HP 8481A	US37292783	09-Oct-13 (No. 217-01827)	Oct-14
Power sensor HP 8481A	MY41092317	09-Oct-13 (No. 217-01828)	Oct-14
Reference 20 dB Attenuator	SN: 5058 (20k)	04-Apr-13 (No. 217-01736)	Apr-14
Type-N mismatch combination	SN: 5047.3 / 06327	04-Apr-13 (No. 217-01739)	Apr-14
Reference Probe ES3DV3	SN: 3205	28-Dec-12 (No. ES3-3205_Dec12)	Dec-13
DAE4	SN: 601	25-Apr-13 (No. DAE4-601_Apr13)	Apr-14

Secondary Standards	ID #	Check Date (in house)	Scheduled Check
RF generator R&S SMT-06	100005	04-Aug-99 (in house check Oct-13)	In house check: Oct-15
Network Analyzer HP 8753E	US37390585 S4206	18-Oct-01 (in house check Oct-13)	In house check: Oct-14

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: December 10, 2013

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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C Service suisse d'étalonnage
S Servizio svizzero di taratura
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Accreditation No.: SCS 108

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, "Procedure to measure the Specific Absorption Rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)", February 2005
c) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

d) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY5	V52.8.7
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.97 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.7 ± 6 %	0.94 mho/m ± 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.62 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**10.7 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.68 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.83 W/kg ± 16.5 % (k=2)**

Body TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Body TSL parameters	22.0 °C	55.0	1.05 mho/m
Measured Body TSL parameters	(22.0 ± 0.2) °C	56.7 ± 6 %	1.04 mho/m ± 6 %
Body TSL temperature change during test	< 0.5 °C	----	----

SAR result with Body TSL

SAR averaged over 1 cm^3 (1 g) of Body TSL	Condition	
SAR measured	250 mW input power	2.65 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**10.7 W/kg ± 17.0 % (k=2)**

SAR averaged over 10 cm^3 (10 g) of Body TSL	condition	
SAR measured	250 mW input power	1.71 W/kg
SAR for nominal Body TSL parameters	normalized to 1W	**6.91 W/kg ± 16.5 % (k=2)**

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