

## 17.6 SAR test plots for LTE Band 4

### LTE Band4 Edge1 0mm QPSK 1732.5MHz Allocation1 Start49 power reduction

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.45$  S/m;  $\epsilon_r = 52.415$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2017/06/13

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207

Measurement SW: DASYS2, 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) = 1.02 W/kg

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

Reference Value = 28.43 V/m; Power Drift = -0.02 dB

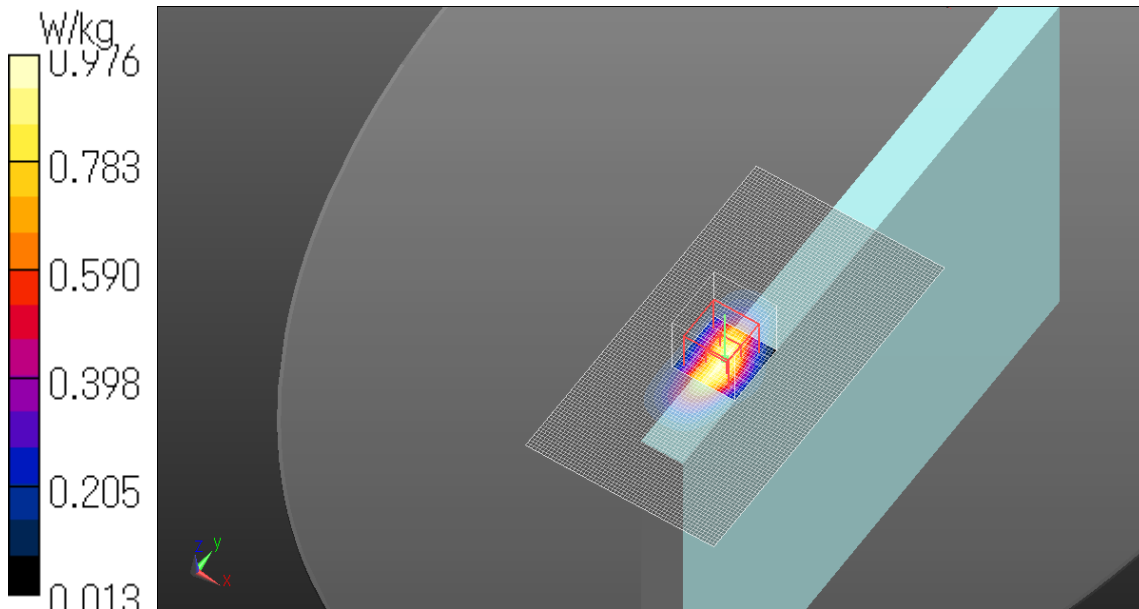
Peak SAR (extrapolated) = 1.27 W/kg

**SAR(1 g) = 0.672 W/kg; SAR(10 g) = 0.343 W/kg**

Maximum value of SAR (measured) = 0.976 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**LTE Band4 Edge1 0mm QPSK 1720MHz Allocation50 Start24 power reduction**

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.438$  S/m;  $\epsilon_r = 52.457$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2017/06/13

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207

Measurement SW: DASYS2, 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) = 1.06 W/kg

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

Reference Value = 29.01 V/m; Power Drift = -0.16 dB

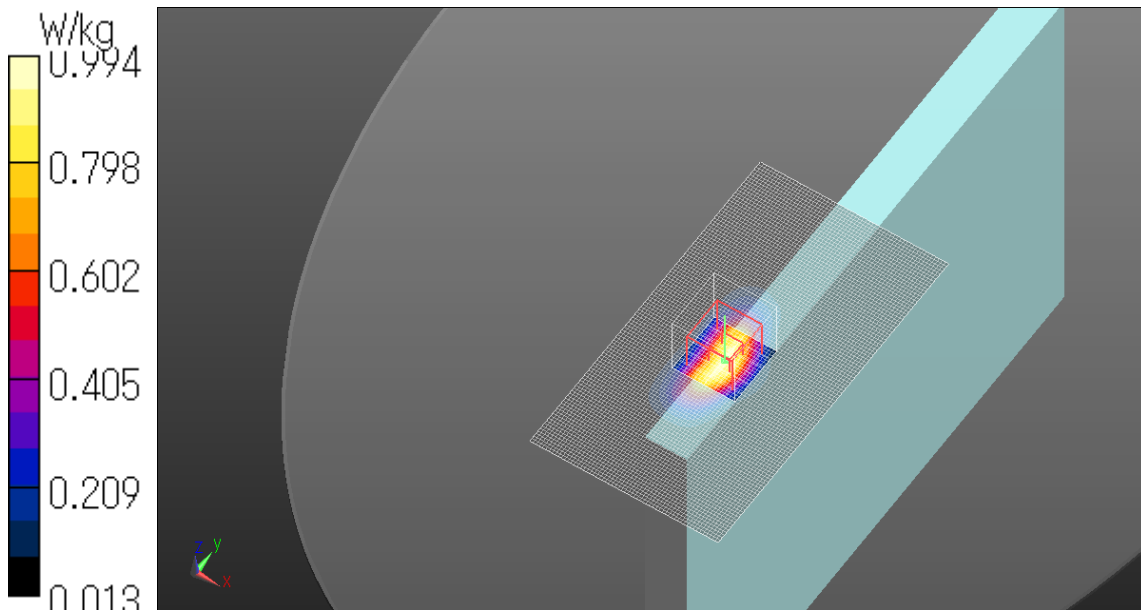
Peak SAR (extrapolated) = 1.33 W/kg

**SAR(1 g) = 0.692 W/kg; SAR(10 g) = 0.354 W/kg**

Maximum value of SAR (measured) = 0.994 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**LTE Band4 Rear 0mm QPSK 1732.5MHz Allocation1 Start49 power reduction**

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.45$  S/m;  $\epsilon_r = 52.415$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2017/06/13

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207

Measurement SW: DASYS5, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Area Scan (51x111x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.551 W/kg

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

Reference Value = 19.37 V/m; Power Drift = -0.01 dB

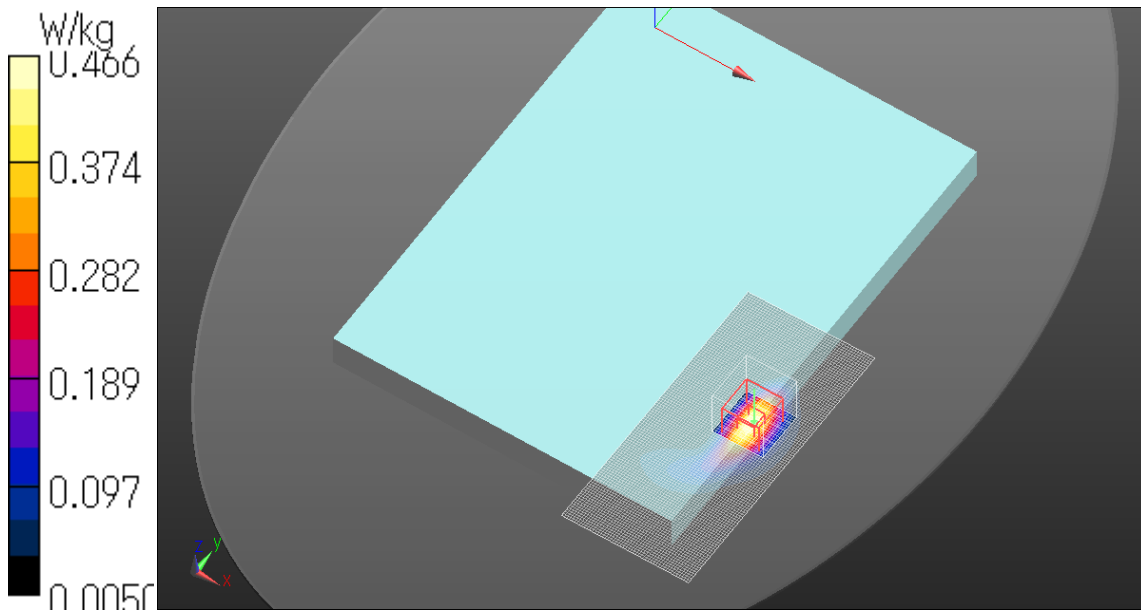
Peak SAR (extrapolated) = 0.625 W/kg

**SAR(1 g) = 0.342 W/kg; SAR(10 g) = 0.175 W/kg**

Maximum value of SAR (measured) = 0.466 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**LTE Band4 Rear 0mm QPSK 1720MHz Allocation50 Start24 power reduction**

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.438$  S/m;  $\epsilon_r = 52.457$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2017/06/13

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207

Measurement SW: DASYS5, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Area Scan (51x111x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.527 W/kg

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

Reference Value = 19.04 V/m; Power Drift = -0.05 dB

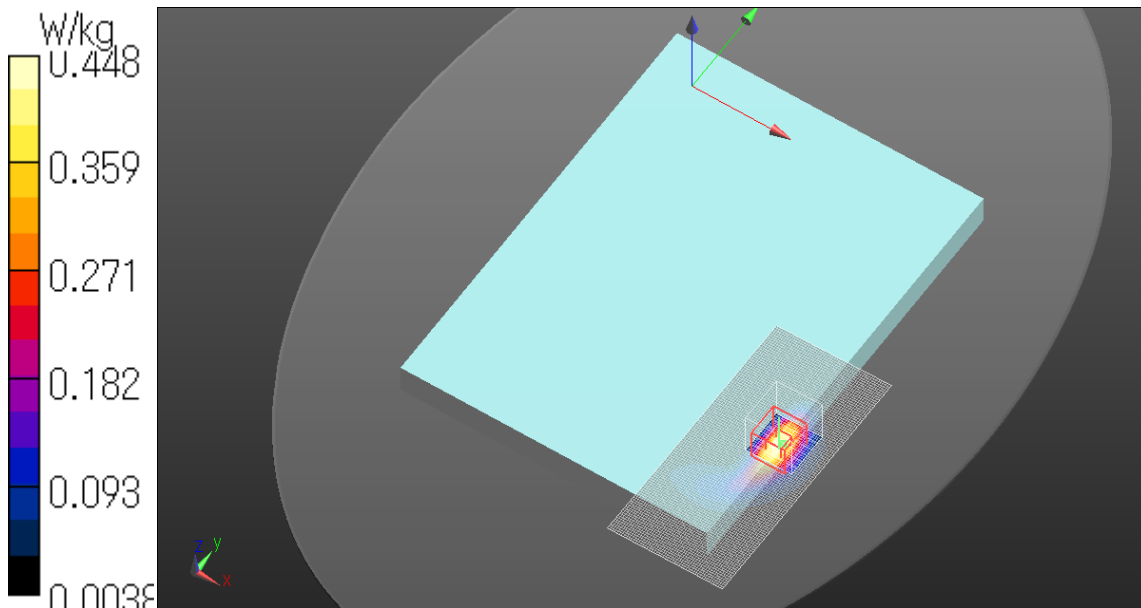
Peak SAR (extrapolated) = 0.598 W/kg

**SAR(1 g) = 0.329 W/kg; SAR(10 g) = 0.170 W/kg**

Maximum value of SAR (measured) = 0.448 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**LTE Band4 Edge1 24mm QPSK 1732.5MHz Allocation1 Start49**

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.45$  S/m;  $\epsilon_r = 52.415$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2017/06/13

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207

Measurement SW: DASYS5, 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) = 0.603 W/kg

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

Reference Value = 22.02 V/m; Power Drift = 0.10 dB

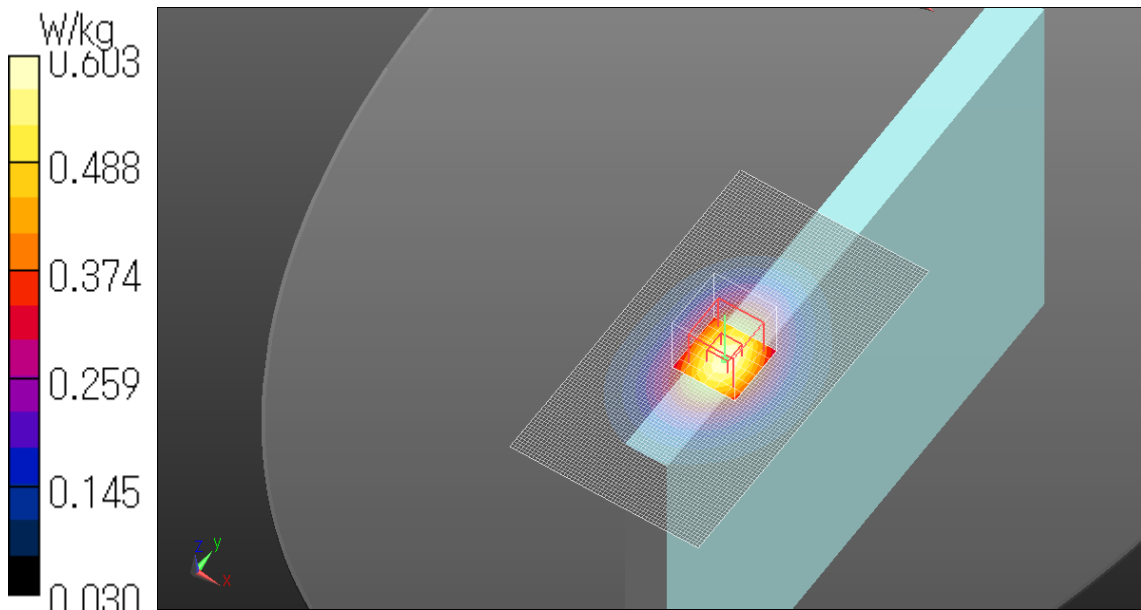
Peak SAR (extrapolated) = 0.712 W/kg

**SAR(1 g) = 0.473 W/kg; SAR(10 g) = 0.300 W/kg**

Maximum value of SAR (measured) = 0.603 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**LTE Band4 Edge1 24mm QPSK 1732.5MHz Allocation50 Start24**

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.45$  S/m;  $\epsilon_r = 52.415$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2017/06/13

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207

Measurement SW: DASYS2, 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) = 0.514 W/kg

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

Reference Value = 20.24 V/m; Power Drift = -0.02 dB

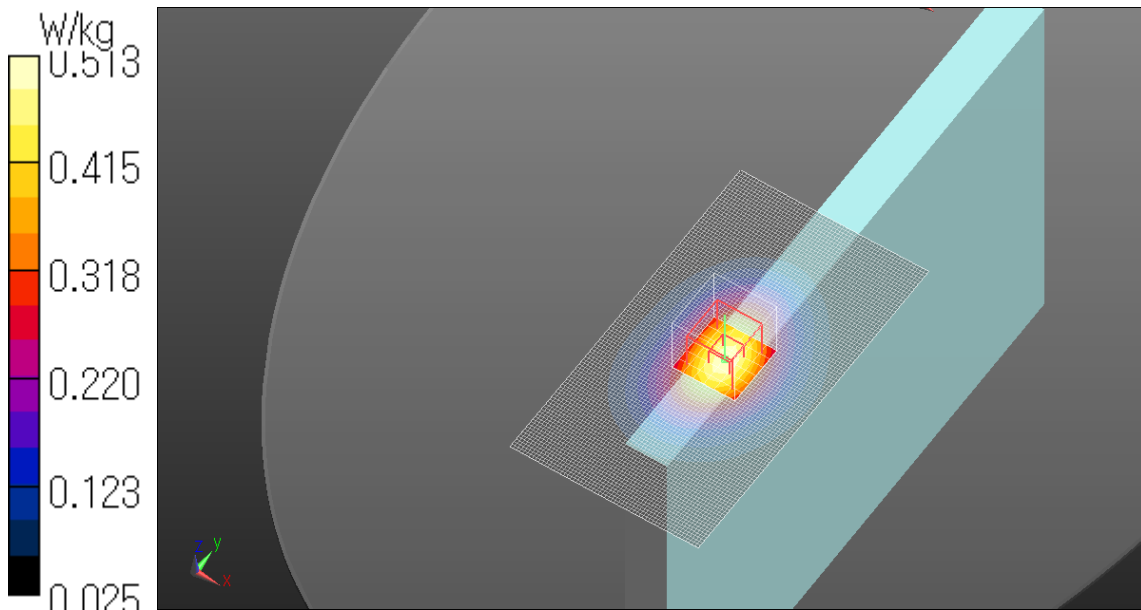
Peak SAR (extrapolated) = 0.608 W/kg

**SAR(1 g) = 0.401 W/kg; SAR(10 g) = 0.254 W/kg**

Maximum value of SAR (measured) = 0.513 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**LTE Band4 Edge4 0mm QPSK 1732.5MHz Allocation1 Start49**

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.45$  S/m;  $\epsilon_r = 52.415$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2017/06/13

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207

Measurement SW: DASYS5, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Area Scan (51x91x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.644 W/kg

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

Reference Value = 22.25 V/m; Power Drift = -0.07 dB

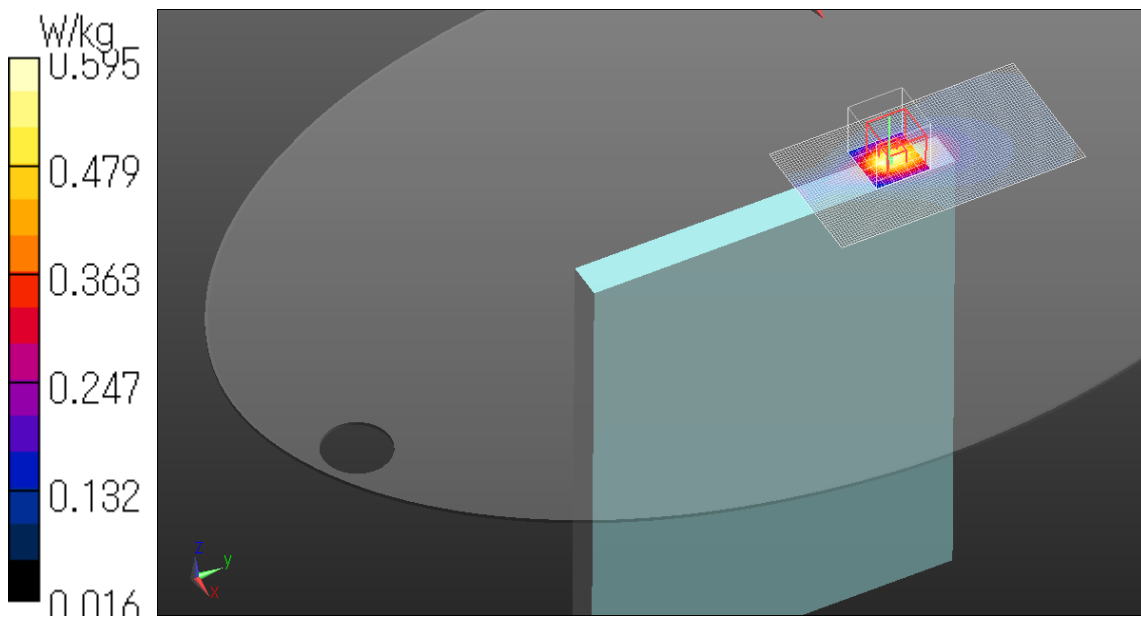
Peak SAR (extrapolated) = 0.780 W/kg

**SAR(1 g) = 0.423 W/kg; SAR(10 g) = 0.233 W/kg**

Maximum value of SAR (measured) = 0.595 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**LTE Band4 Edge4 0mm QPSK 1732.5MHz Allocation50 Start24**

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.45$  S/m;  $\epsilon_r = 52.415$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2017/06/13

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207

Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Area Scan (51x91x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.552 W/kg

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

Reference Value = 20.60 V/m; Power Drift = -0.03 dB

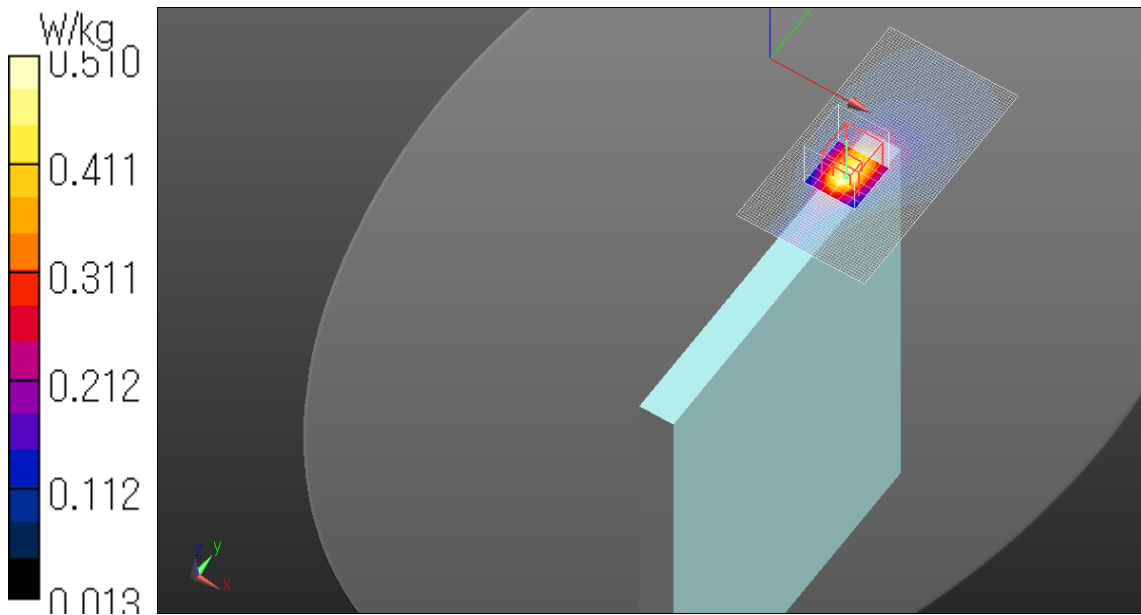
Peak SAR (extrapolated) = 0.677 W/kg

**SAR(1 g) = 0.362 W/kg; SAR(10 g) = 0.200 W/kg**

Maximum value of SAR (measured) = 0.510 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.





**LTE Band4 Rear 19mm QPSK 1732.5MHz Allocation1 Start49**

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz; Duty Cycle: 1:1  
Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.45$  S/m;  $\epsilon_r = 52.415$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Phantom section: Flat Section  
Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)  
DASY5 Configuration  
Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;  
Sensor-Surface: 2mm (Mechanical Surface Detection)  
Electronics: DAE4 Sn1372; Calibrated: 2017/06/13  
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 (51x111x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.383 W/kg

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

Reference Value = 17.23 V/m; Power Drift = -0.11 dB

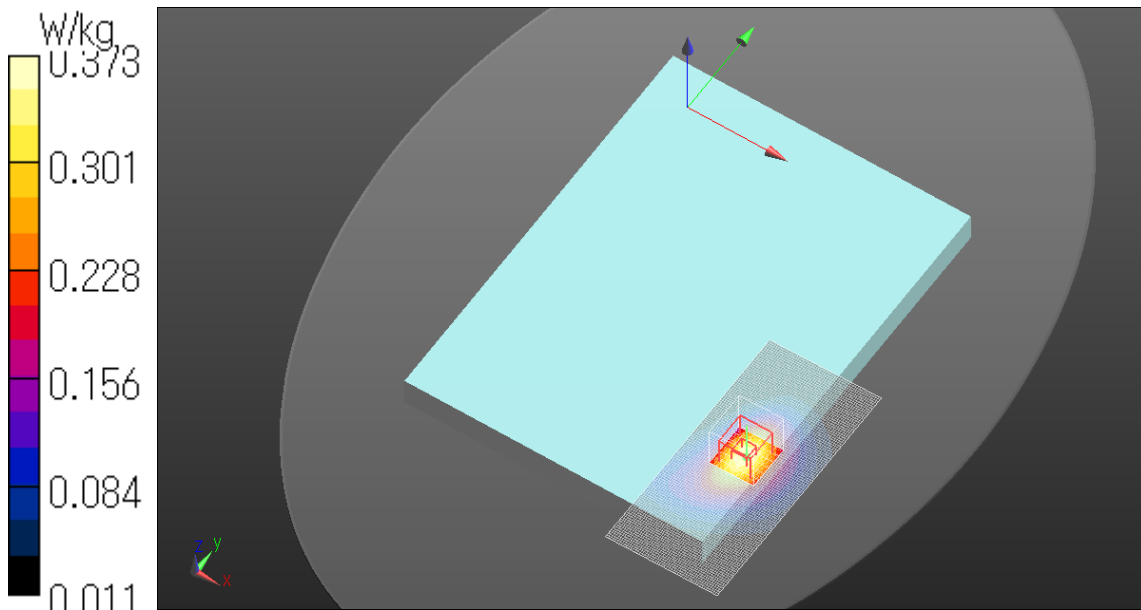
Peak SAR (extrapolated) = 0.445 W/kg

**SAR(1 g) = 0.292 W/kg; SAR(10 g) = 0.183 W/kg**

Maximum value of SAR (measured) = 0.373 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.



**LTE Band4 Rear 19mm QPSK 1732.5MHz Allocation50 Start24**

Communication System: UID 0, Generic LTE (0); Communication System Band: Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz); Frequency: 1732.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated):  $f = 1732.5$  MHz;  $\sigma = 1.45$  S/m;  $\epsilon_r = 52.415$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

Measurement Standard: DASYS5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration

Probe: EX3DV4 - SN7372; ConvF(8.06, 8.06, 8.06); Calibrated: 2017/04/20;

Sensor-Surface: 2mm (Mechanical Surface Detection)

Electronics: DAE4 Sn1372; Calibrated: 2017/06/13

Phantom: ELI v5.0 TP1207 (30deg probe tilt); Type: QDOVA002AA; Serial: TP:1207

Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

**Area Scan (51x111x1):** Interpolated grid: dx=1.500 mm, dy=1.500 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 = 15.49 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 0.354 W/kg

**SAR(1 g) = 0.233 W/kg; SAR(10 g) = 0.147 W/kg**

Maximum value of SAR (measured) = 0.297 W/kg

Date: 2017/10/24

Ambient Temp. : 24.0 degree.C. Liquid Temp.; 23.5 degree.C.

