Test Laboratory: BTL Inc. Date: 2019/3/26

T01 GSM850_GPRS12_Ch251_Front Face_0.5cm

DUT: Tracker;

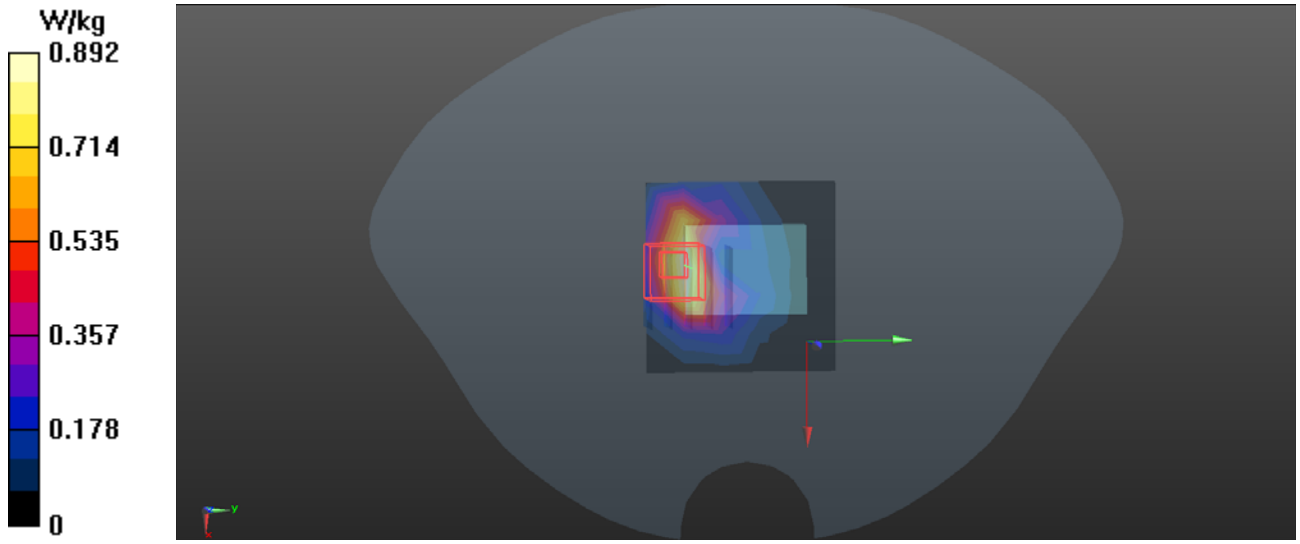
Communication System: UID 0, Generic GSM (0); Frequency: 848.6 MHz; Duty Cycle: 1:8.30042
Medium parameters used: f = 849 MHz; σ = 0.992 S/m; ε_r = 53.92; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.0 ℃

DASY Configuration:

- Probe: EX3DV4 - SN7520; ConvF(9.6, 9.6, 9.6); Calibrated: 2018/11/5;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection (Locations From Previous Scan Used)), Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1561; Calibrated: 2018/11/7
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.892 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.12 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.607 W/kg; SAR(10 g) = 0.300 W/kg
Maximum value of SAR (measured) = 0.917 W/kg



Test Laboratory: BTL Inc. Date: 2019/3/26

T10 GSM1900_GPRS12_Ch512_Front Face_0.5cm

DUT: NB-IOT Tracker;

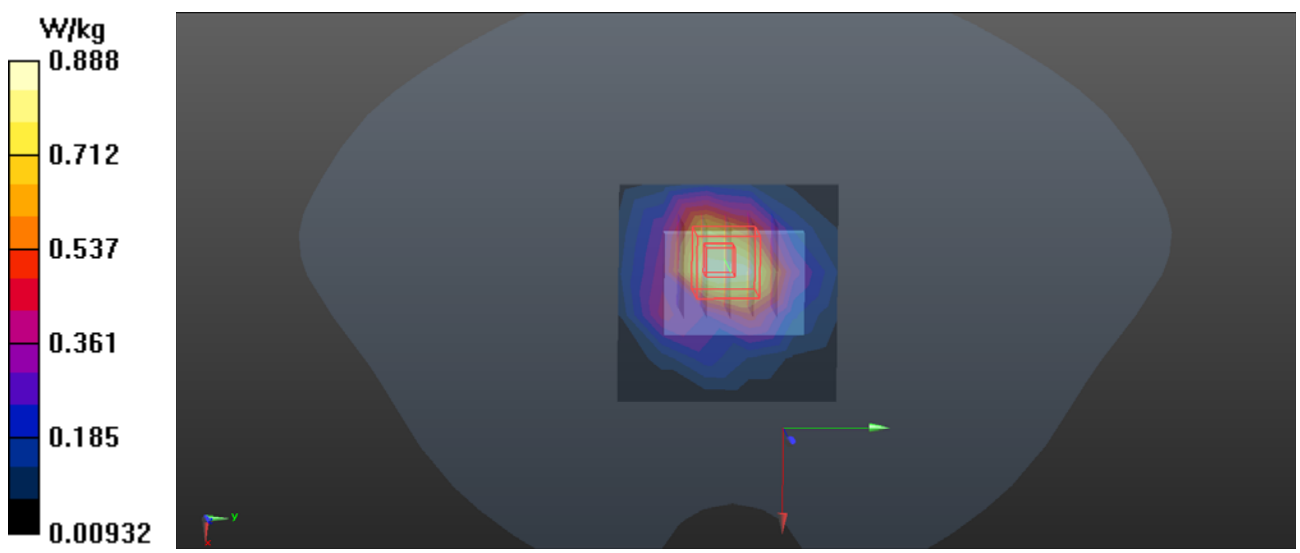
Communication System: UID 0, GPRS 12 (0); Frequency: 1850.2 MHz; Duty Cycle: 1:1.99986
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.51 S/m; ε_r = 53.423; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN7520; ConvF(7.84, 7.84, 7.84); Calibrated: 2018/11/5;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1561; Calibrated: 2018/11/7
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.888 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.68 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.718 W/kg; SAR(10 g) = 0.414 W/kg
Maximum value of SAR (measured) = 0.942 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/3

T56 LTE B2_CatM1_QPSK20M_Ch18700_1RB Offset 0_NB Index 0_Front Face_0.5cm

DUT: NB-IOT Tracker;

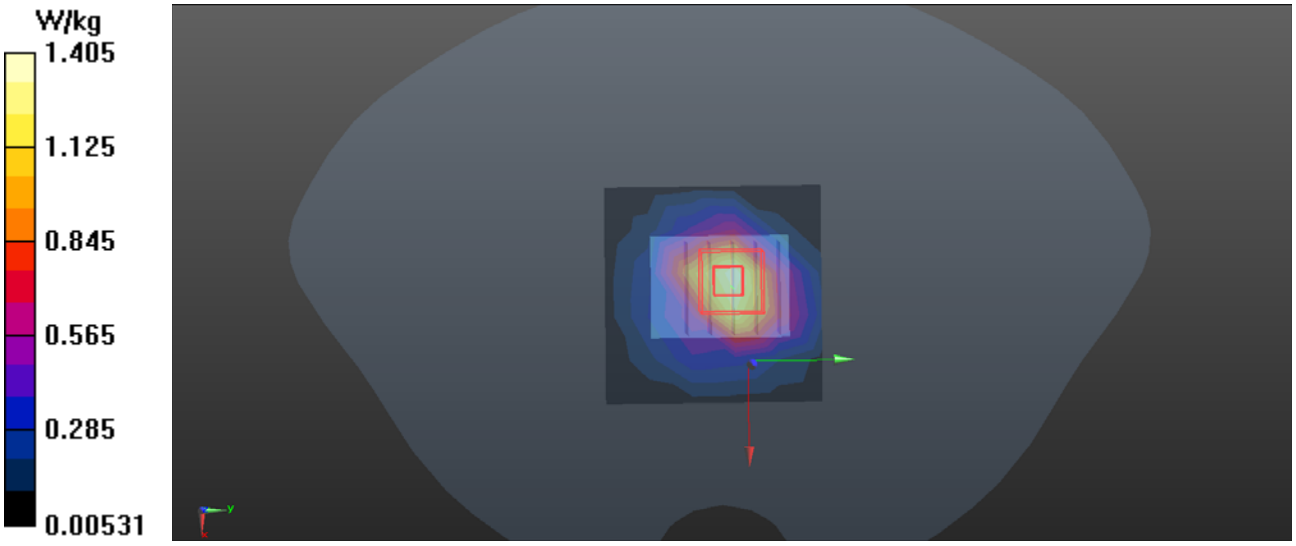
Communication System: UID 0, Generic LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.516 S/m; ε_r = 53.694; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(7.93, 7.93, 7.93); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.40 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.47 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 1.75 W/kg
SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.678 W/kg
Maximum value of SAR (measured) = 1.53 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/8

T65 LTE B2_CatM1_QPSK20M_Ch18900_3RB Offset 0_NB Index 0_Front Face_0.5cm

DUT: NB-IOT Tracker;

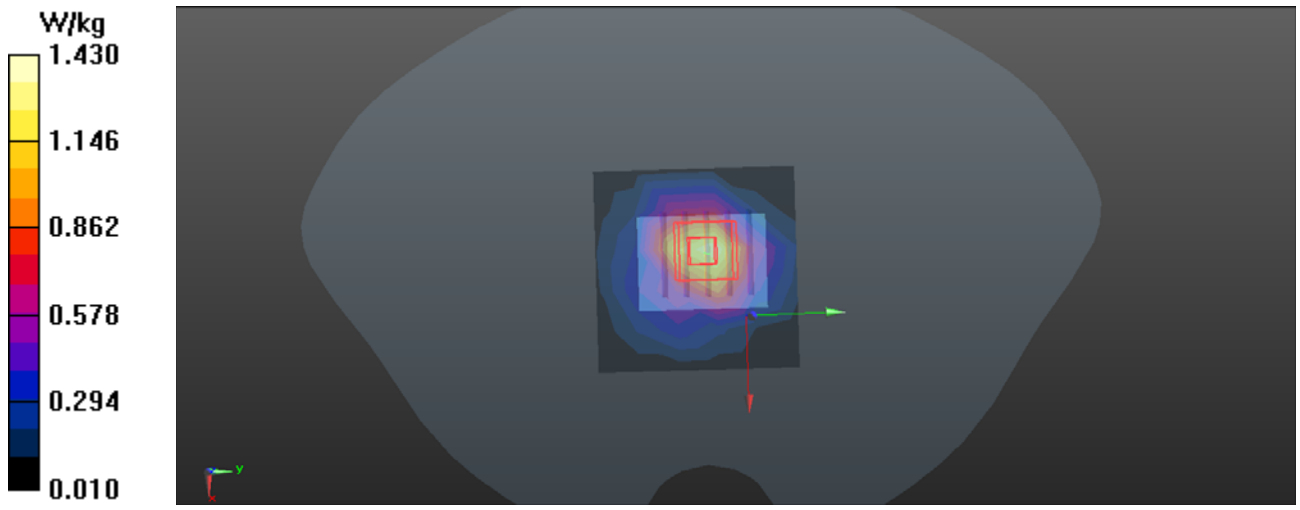
Communication System: UID 0, Generic LTE (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.536 S/m; ε_r = 53.64; ρ = 1000 kg/m^3
Ambient Temperature：23.0 ℃; Liquid Temperature：22.1 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(7.93, 7.93, 7.93); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.36 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.60 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 1.05 W/kg; SAR(10 g) = 0.615 W/kg
Maximum value of SAR (measured) = 1.43 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/3

T102 LTE B2_CatM1_QPSK20M_Ch18700_6RB Offset 0_NB Index 0_Front Face_0.5cm

DUT: NB-IOT Tracker;

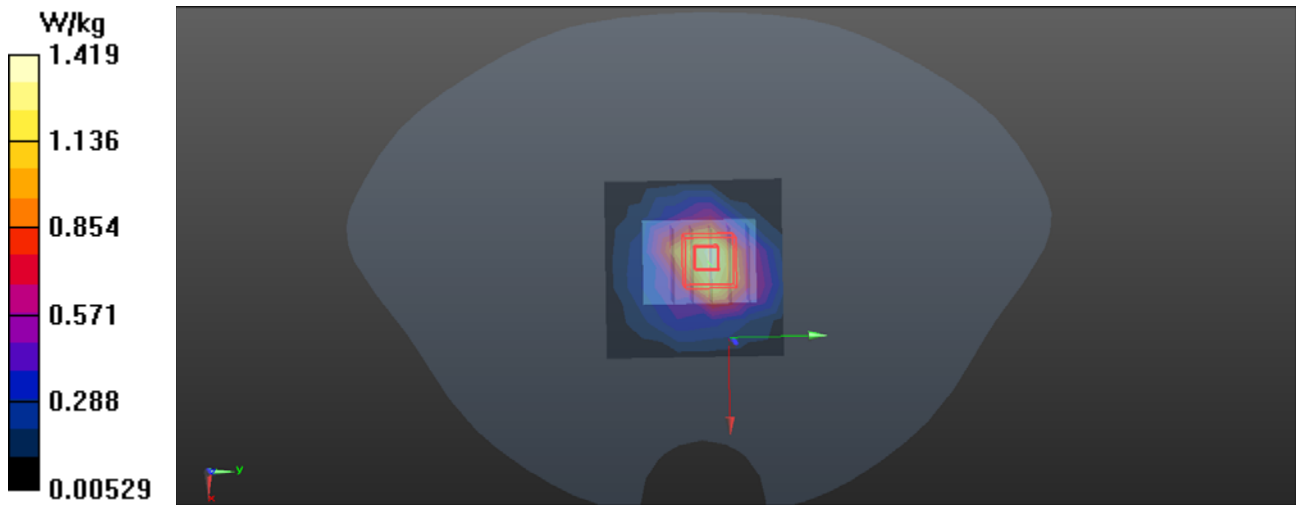
Communication System: UID 0, Generic LTE (0); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.516 S/m; ε_r = 53.694; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(7.93, 7.93, 7.93); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.42 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.04 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 1.73 W/kg
SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.661 W/kg
Maximum value of SAR (measured) = 1.52 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/9

T68 LTE B4_CatM1_QPSK20M_Ch20050_1RB Offset 0_NB Index 0_Front Face_0.5cm

DUT: NB-IOT Tracker;

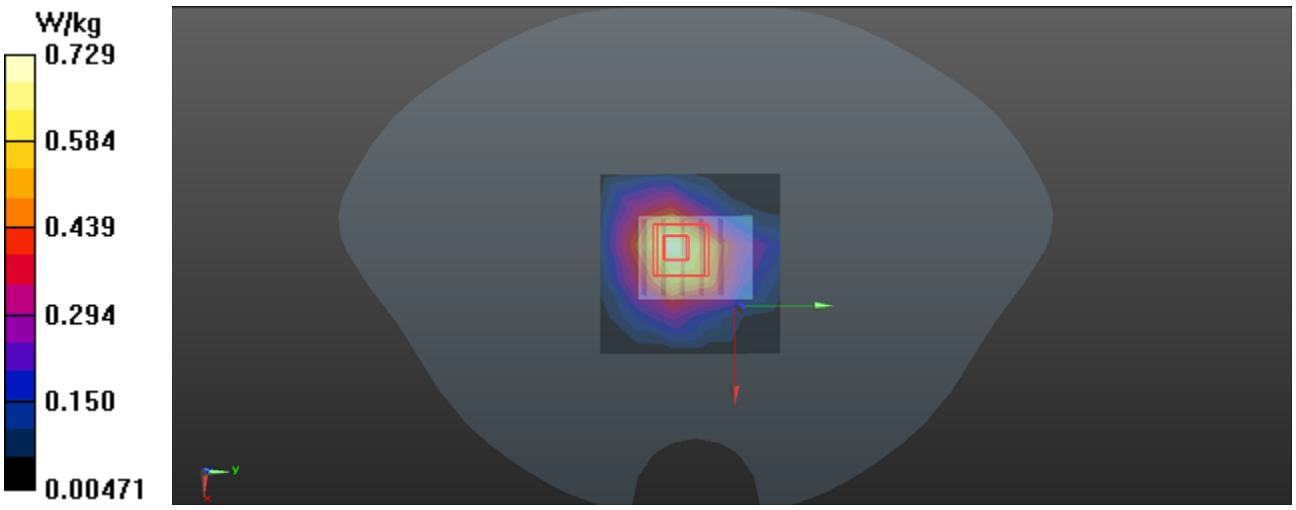
Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.455 S/m; ε_r = 54.836; ρ = 1000 kg/m^3
Ambient Temperature：23.0 ℃; Liquid Temperature：22.1 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(8.24, 8.24, 8.24); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.729 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.40 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.868 W/kg
SAR(1 g) = 0.594 W/kg; SAR(10 g) = 0.370 W/kg
Maximum value of SAR (measured) = 0.757 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/9

T77 LTE B4_CatM1_QPSK20M_Ch20050_3RB Offset 0_NB Index 0_Front Face_0.5cm

DUT: NB-IOT Tracker;

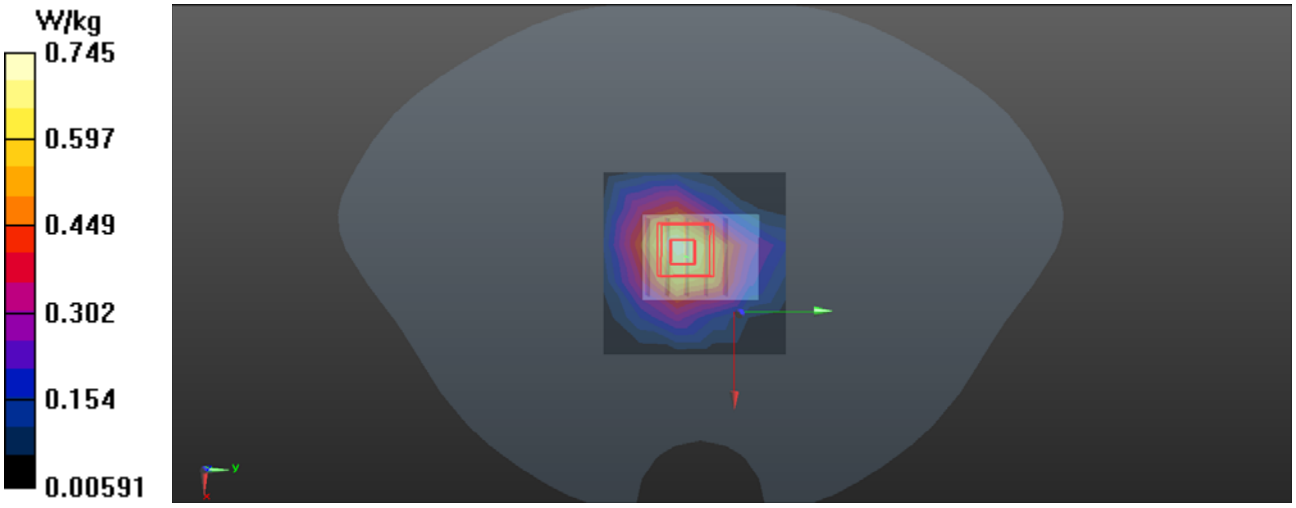
Communication System: UID 0, Generic LTE (0); Frequency: 1720 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.455 S/m; ε_r = 54.836; ρ = 1000 kg/m^3
Ambient Temperature：23.0 ℃; Liquid Temperature：22.1 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(8.24, 8.24, 8.24); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.745 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.94 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.879 W/kg
SAR(1 g) = 0.593 W/kg; SAR(10 g) = 0.368 W/kg
Maximum value of SAR (measured) = 0.764 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/8

T95 LTE B12_CatM1_QPSK10M_Ch23095_3RB Offset 0_NB Index 0_Front Face_0.5cm

DUT: NB-IOT Tracker;

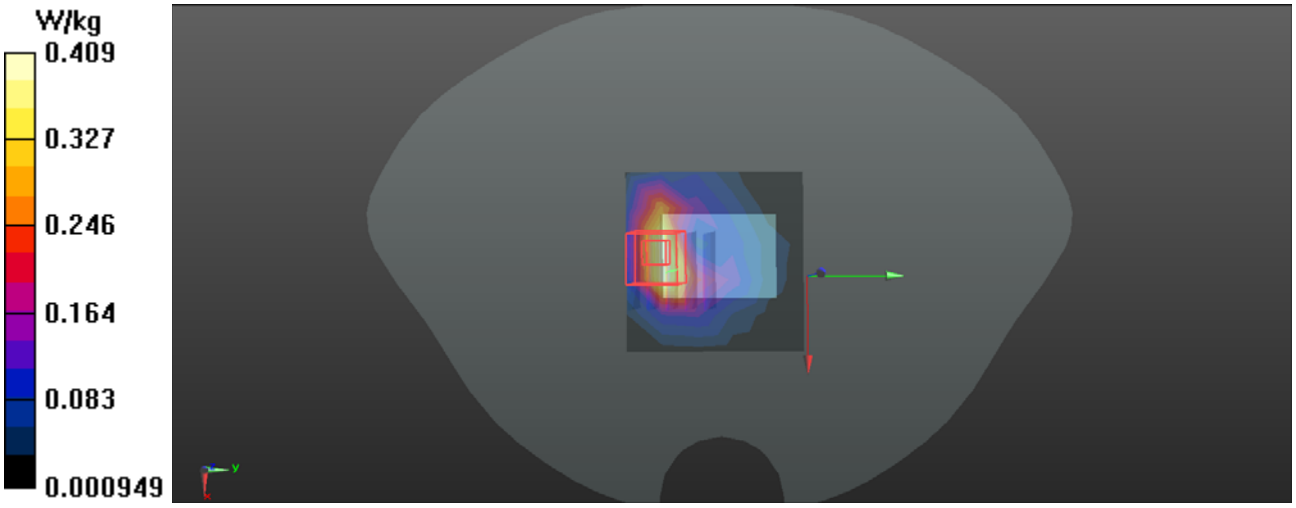
Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.919 S/m; ε_r = 56.898; ρ = 1000 kg/m^3
Ambient Temperature：23.0 ℃; Liquid Temperature：22.1 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(10.1, 10.1, 10.1); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.409 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.22 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.543 W/kg
SAR(1 g) = 0.246 W/kg; SAR(10 g) = 0.120 W/kg
Maximum value of SAR (measured) = 0.375 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/8

T86 LTE B12_CatM1_QPSK10M_Ch23095_1RB Offset 0_NB Index 0_Front Face_0.5cm

DUT: NB-IOT Tracker;

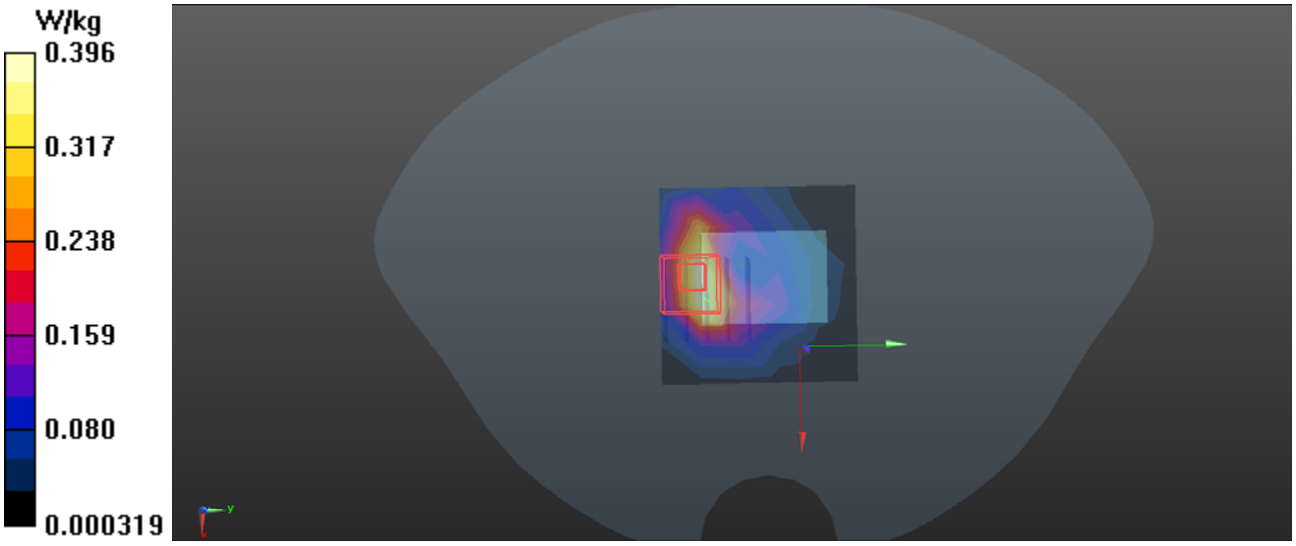
Communication System: UID 0, Generic LTE (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.919 S/m; ε_r = 56.898; ρ = 1000 kg/m^3
Ambient Temperature：23.0 ℃; Liquid Temperature：22.1 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(10.1, 10.1, 10.1); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.396 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.26 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.533 W/kg
SAR(1 g) = 0.244 W/kg; SAR(10 g) = 0.120 W/kg
Maximum value of SAR (measured) = 0.369 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/3

T209 LTE B2_NB1_QPSK15KHz_Ch19199_3@3_Front Face_0.5cm

DUT: Tracker;

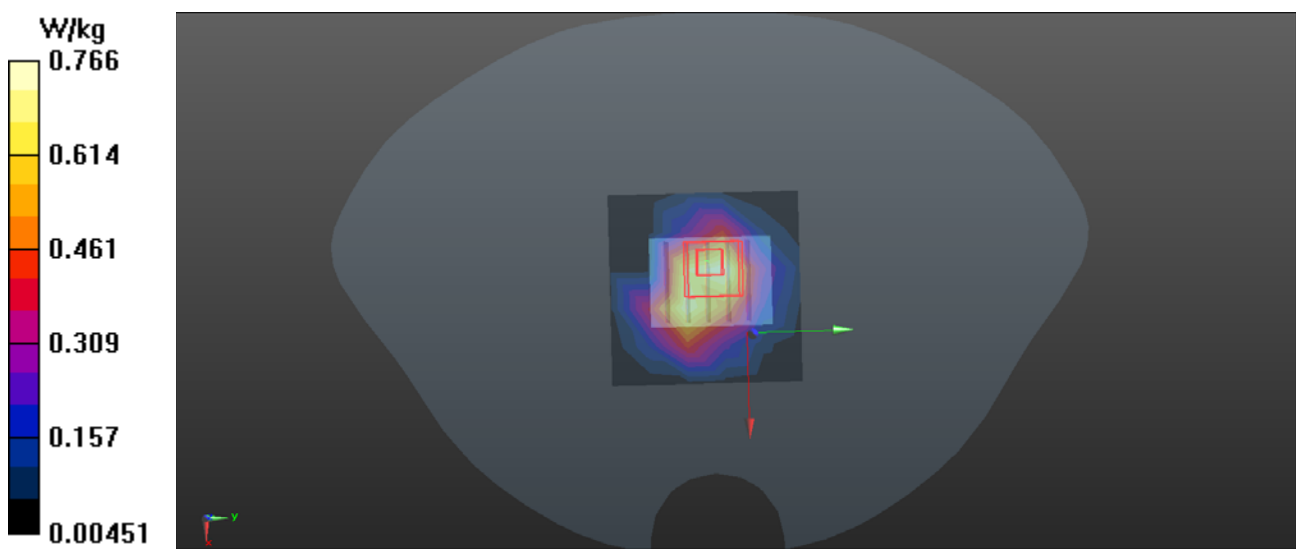
Communication System: UID 0, Generic LTE (0); Frequency: 1909.9 MHz; Duty Cycle: 1:1
Medium parameters used: f = 1910 MHz; σ = 1.565 S/m; ε_r = 53.581; ρ = 1000 kg/m^3
Ambient Temperature：23.2 ℃; Liquid Temperature：22.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(7.93, 7.93, 7.93); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.766 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.19 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.678 W/kg; SAR(10 g) = 0.371 W/kg
Maximum value of SAR (measured) = 0.928 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/3

T227 LTE B4_NB1_QPSK15KHz_Ch19951_3@3_Front Face_0.5cm

DUT: Tracker;

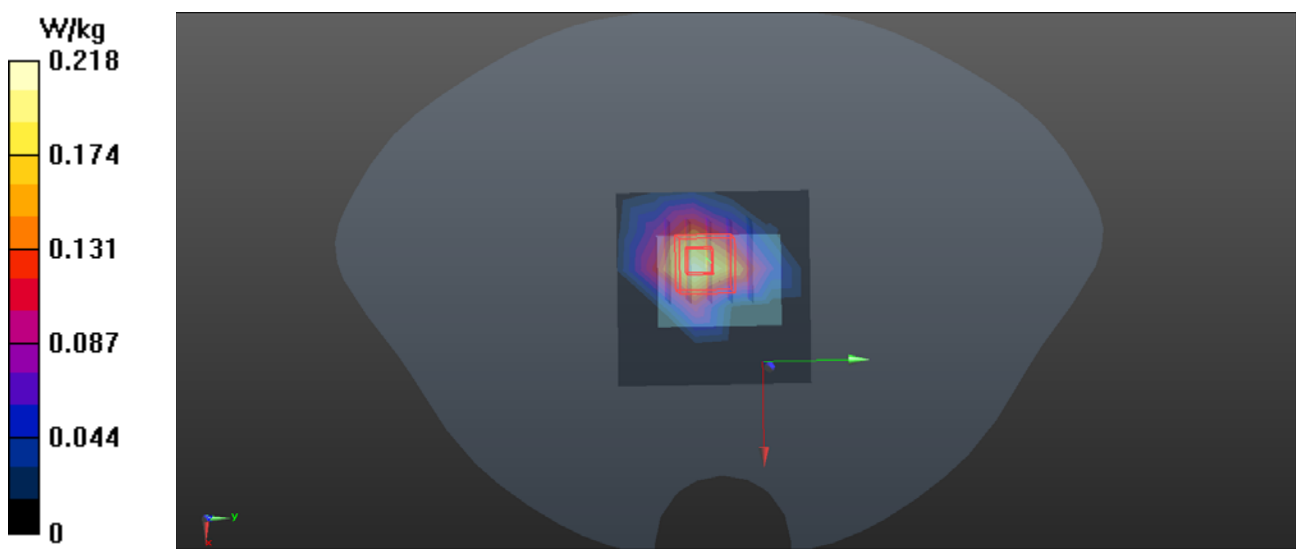
Communication System: UID 0, Generic LTE (0); Frequency: 1710.1 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1710.1 MHz; σ = 1.451 S/m; ε_r = 54.521; ρ = 1000 kg/m^3
Ambient Temperature：23.1 ℃; Liquid Temperature：22.2 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(8.24, 8.24, 8.24); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.218 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.471 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.269 W/kg
SAR(1 g) = 0.177 W/kg; SAR(10 g) = 0.105 W/kg
Maximum value of SAR (measured) = 0.240 W/kg



Test Laboratory: BTL Inc. Date: 2019/4/8

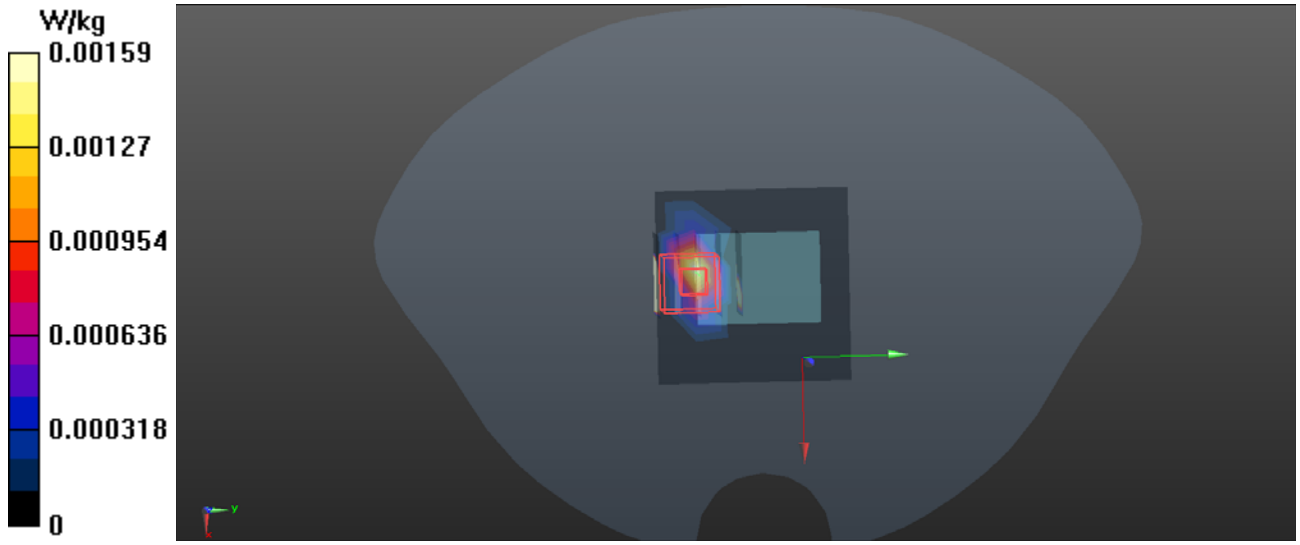
T245 LTE B12_NB1_QPSK15KHz_Ch23011_3@3_Front Face_0.5cm

DUT: Tracker;

Communication System: UID 0, Generic LTE (0); Frequency: 699.1 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): f = 699.1 MHz; σ = 0.912 S/m; ε_r = 56.988; ρ = 1000 kg/m^3
Ambient Temperature：23.0 ℃; Liquid Temperature：22.5 ℃

DASY Configuration:

- Probe: EX3DV4 - SN3901; ConvF(10.1, 10.1, 10.1); Calibrated: 2018/9/27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -19.0, 31.0
- Electronics: DAE4 Sn1486; Calibrated: 2018/9/18
- Phantom: SAM Twin Phantom V5.0; Type: QD 000 P40 C; Serial: TP-1897
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

Area Scan (6x6x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.00159 W/kg

Zoom Scan (5x5x4)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.139 W/kg
SAR(1 g) = 0.035 W/kg; SAR(10 g) = 0.00897 W/kg
Maximum value of SAR (measured) = 0.0463 W/kg