

Annex A. Plots of System Verification

The plots for system verification are shown as follows.

Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S01 System Check_H1900_211130

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1130 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.464$ S/m; $\epsilon_r = 38.847$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.27, 8.27, 8.27) @ 1900 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.15 W/kg

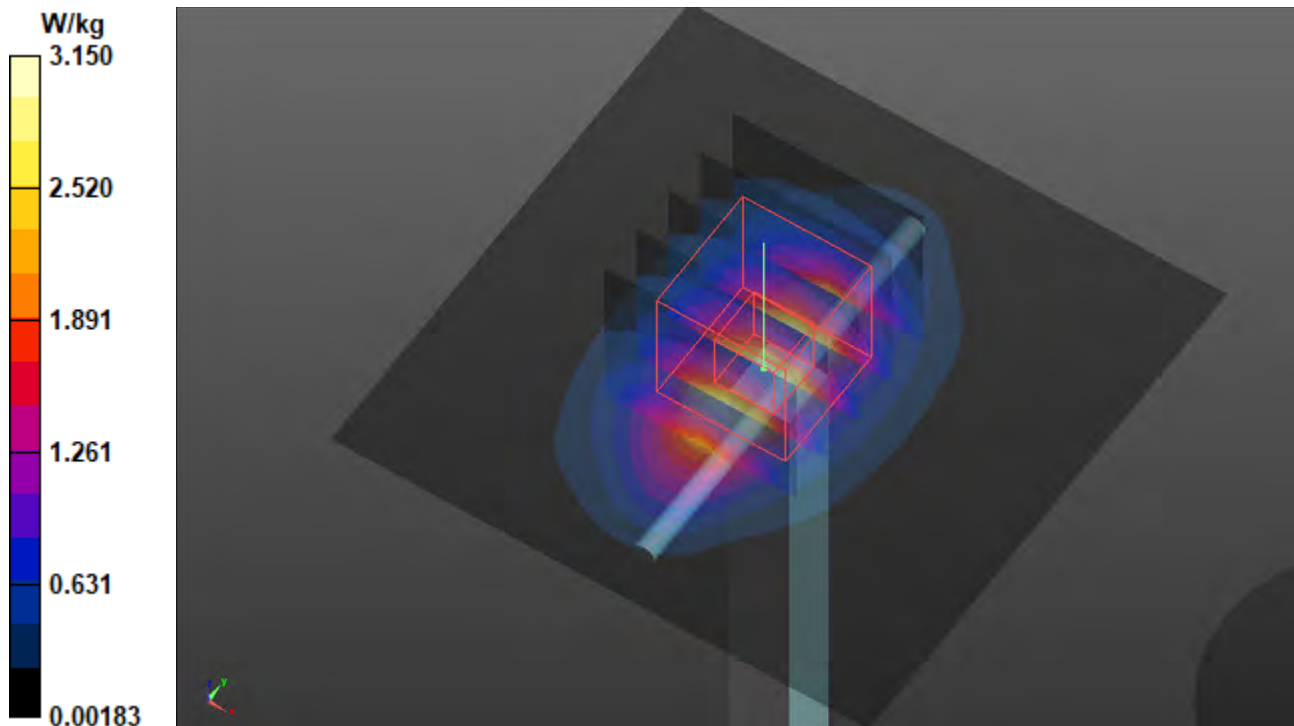
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 48.52 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.85 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.27 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S02 System Check_H1750_211130

DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1130 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.372$ S/m; $\epsilon_r = 39.12$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.55, 8.55, 8.55) @ 1750 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.88 W/kg

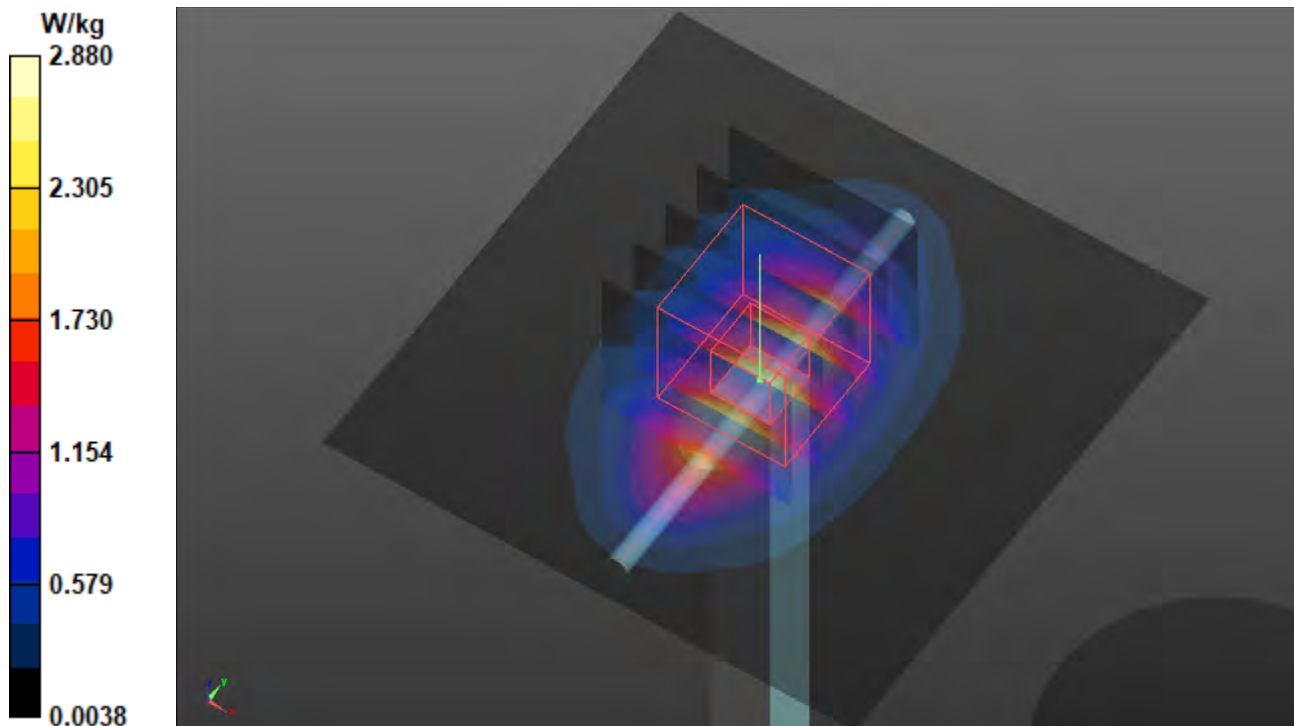
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 47.24 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 3.37 W/kg

SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.984 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.84 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S03 System Check_H835_211130

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d121

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: H07T10N1_1130 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.934 \text{ S/m}$; $\epsilon_r = 40.425$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $23.3 \text{ }^\circ\text{C}$; Liquid Temperature : $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.5, 10.5, 10.5) @ 835 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.625 W/kg

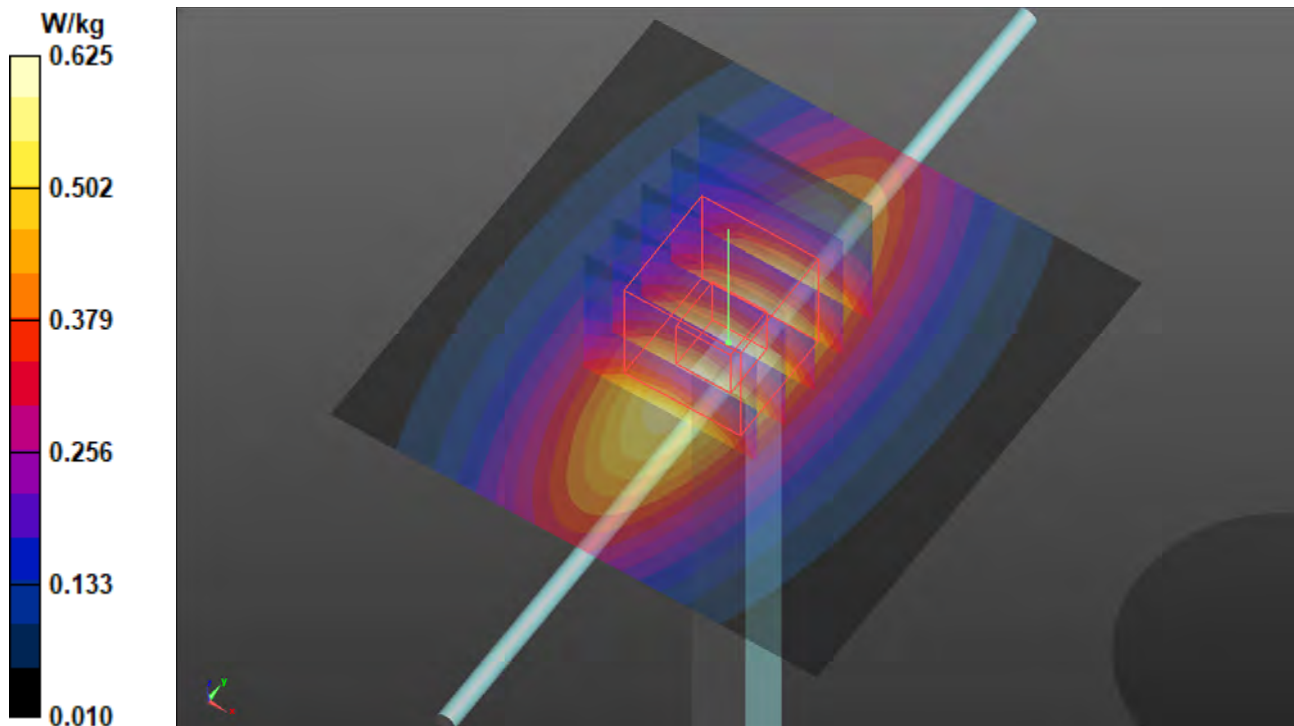
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.00 V/m ; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.718 W/kg

SAR(1 g) = 0.474 W/kg ; SAR(10 g) = 0.319 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.641 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S04 System Check_H1900_211130

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1130 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.464$ S/m; $\epsilon_r = 38.847$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.27, 8.27, 8.27) @ 1900 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.15 W/kg

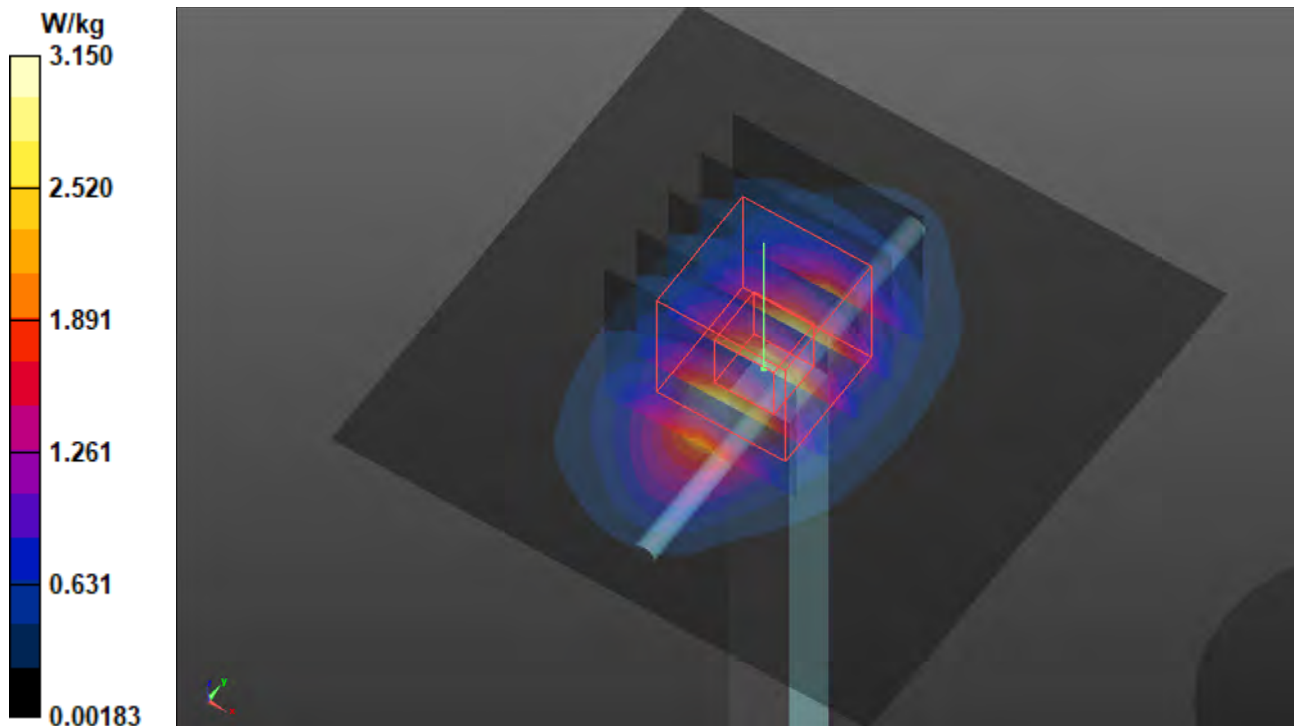
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 48.52 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.85 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.27 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S05 System Check_H1750_211130

DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1130 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.372$ S/m; $\epsilon_r = 39.12$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.55, 8.55, 8.55) @ 1750 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.88 W/kg

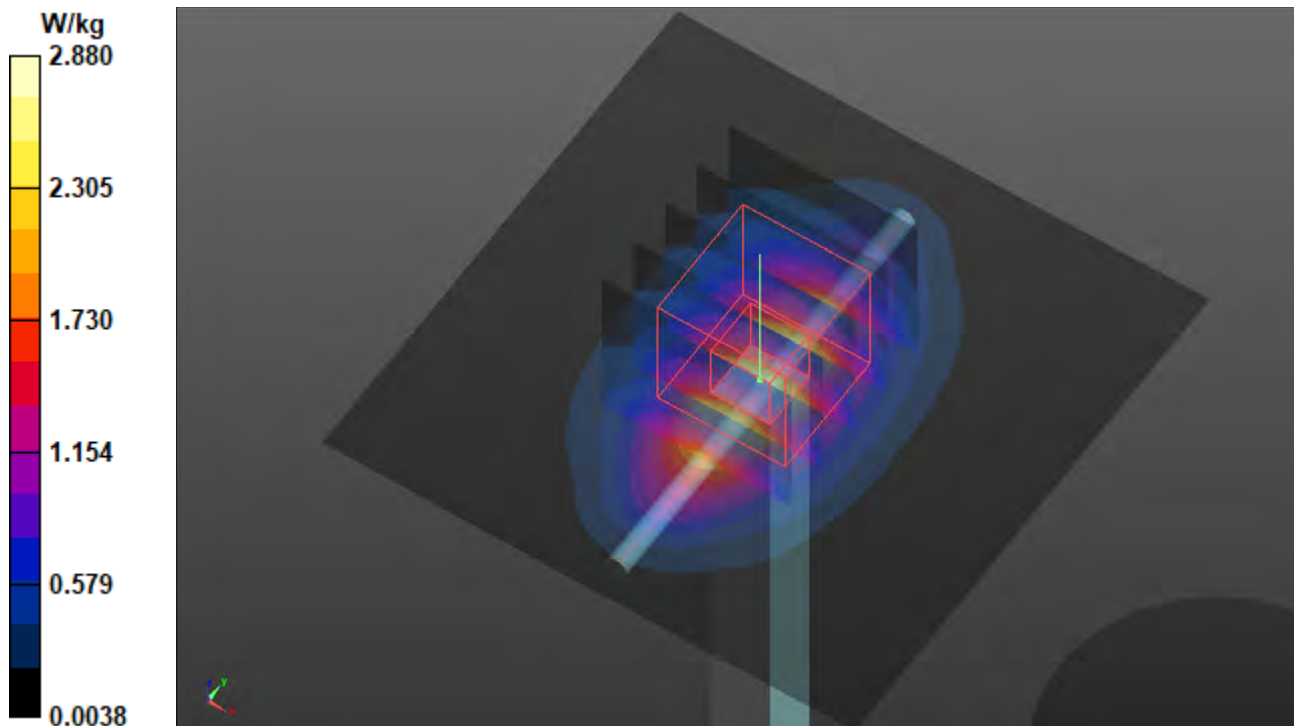
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 47.24 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 3.37 W/kg

SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.984 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.84 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S06 System Check_H835_211130

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d121

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: H07T10N1_1130 Medium parameters used: $f = 835$ MHz; $\sigma = 0.934$ S/m; $\epsilon_r = 40.425$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.5, 10.5, 10.5) @ 835 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.625 W/kg

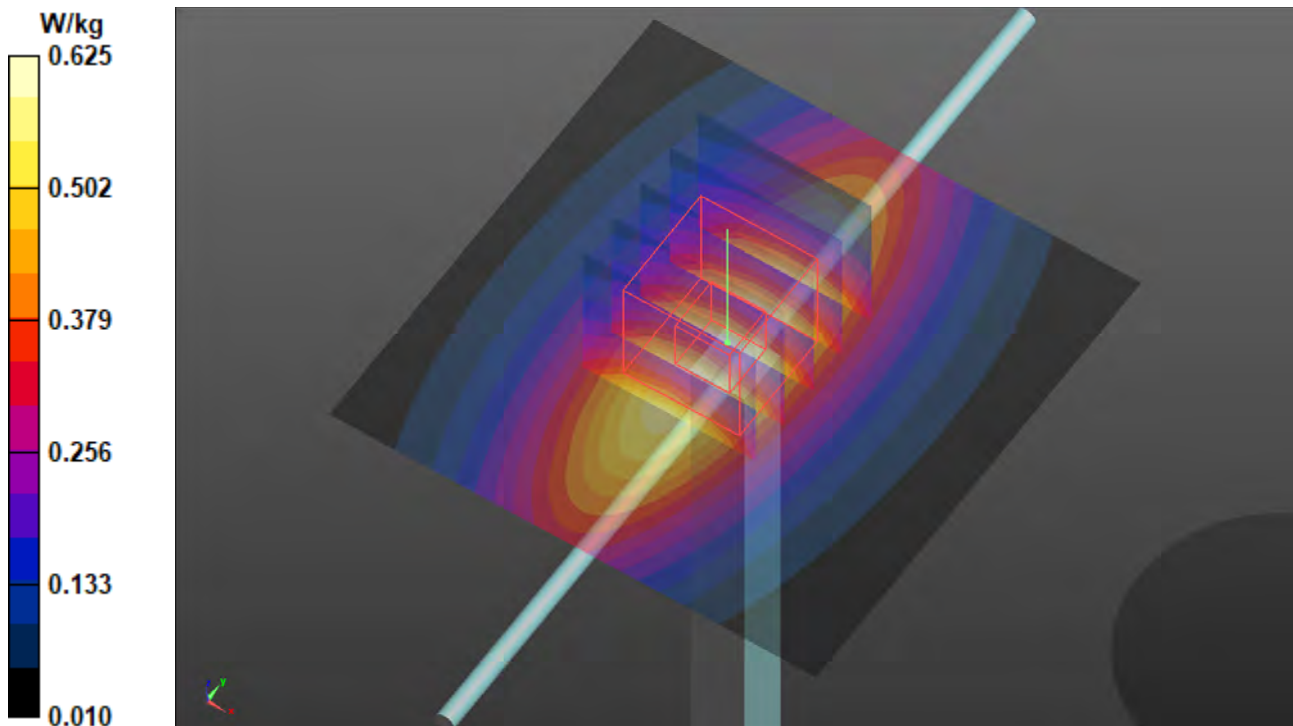
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 27.00 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.718 W/kg

SAR(1 g) = 0.474 W/kg; SAR(10 g) = 0.319 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.641 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S07 System Check_H750_211130

DUT: Dipole 750 MHz; Type: D750V3; SN: 1013

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: H06T09N1_1130 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 41.582$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $23.3 \text{ }^\circ\text{C}$; Liquid Temperature : $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.69, 10.69, 10.69) @ 750 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.512 W/kg

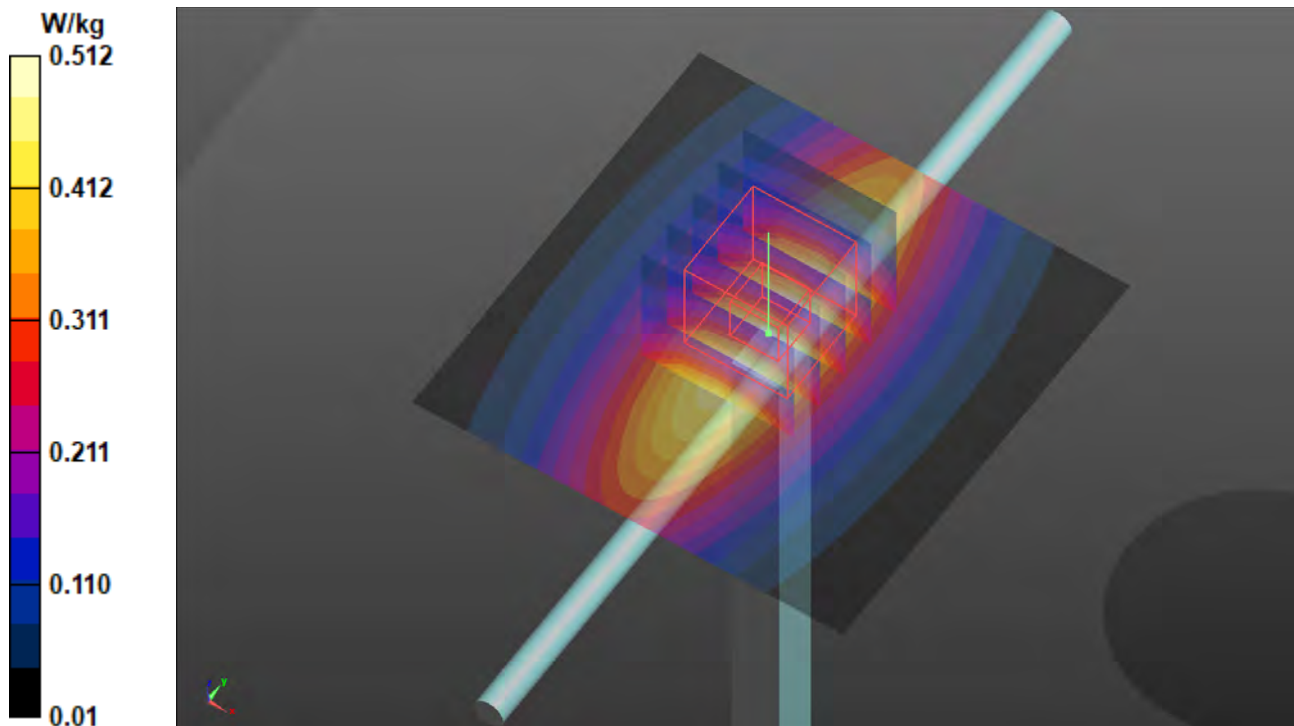
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.93 V/m ; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.573 W/kg

SAR(1 g) = 0.442 W/kg ; SAR(10 g) = 0.283 W/kg (SAR corrected for target medium)

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



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S08 System Check_H750_211130

DUT: Dipole 750 MHz; Type: D750V3; SN: 1013

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: H06T09N1_1130 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 41.582$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $23.3 \text{ }^\circ\text{C}$; Liquid Temperature : $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.69, 10.69, 10.69) @ 750 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.512 W/kg

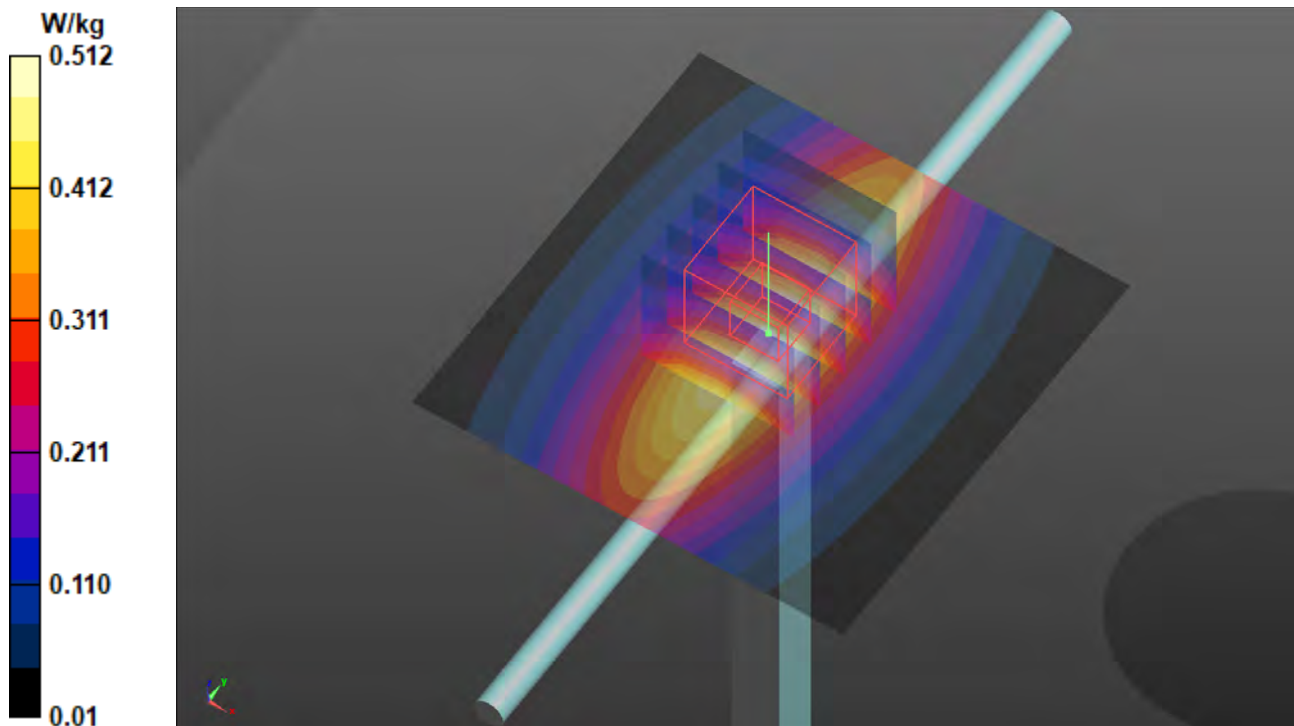
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.93 V/m ; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.573 W/kg

SAR(1 g) = 0.442 W/kg ; SAR(10 g) = 0.283 W/kg (SAR corrected for target medium)

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



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/12/07

S10 System Check_H1750_211207

DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1207 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.329$ S/m; $\epsilon_r = 41.231$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5°C ; Liquid Temperature : 23.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.54, 8.54, 8.54) @ 1750 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 2.78 W/kg

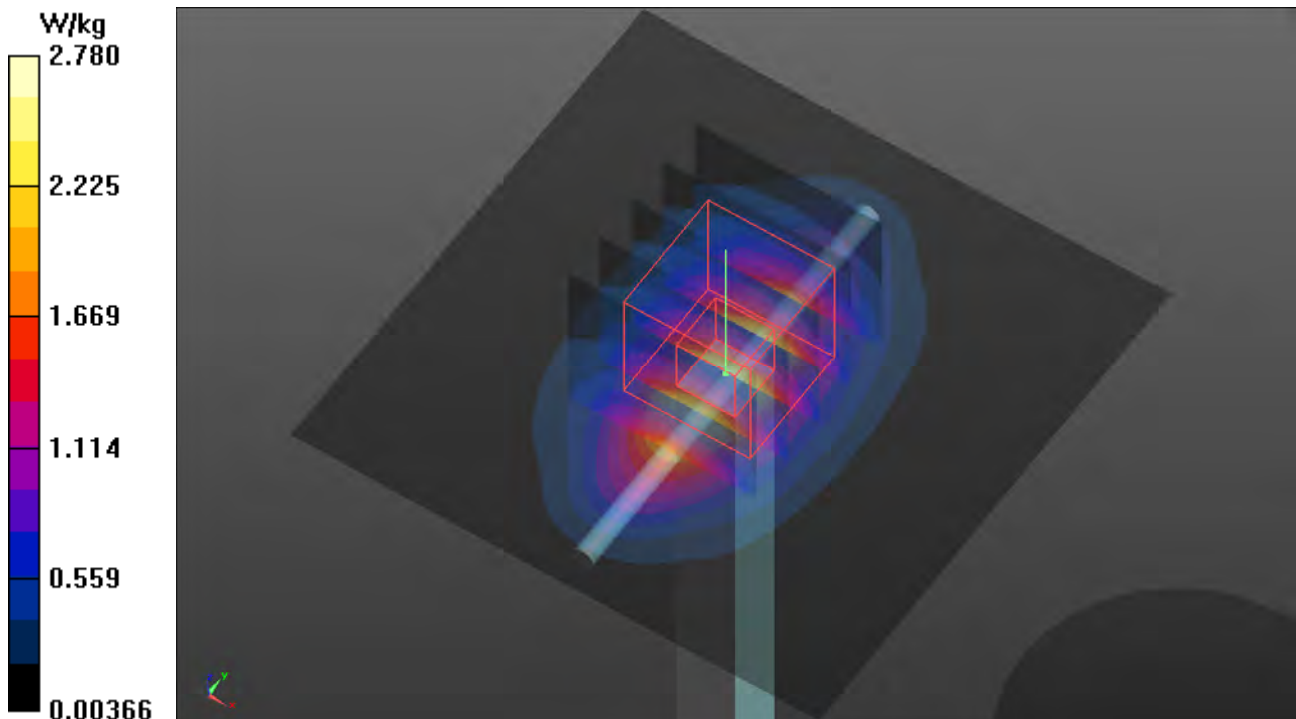
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 47.22 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 3.26 W/kg

SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.970 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.75 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S12 System Check_H2450_211130

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1_1130 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.881$ S/m; $\epsilon_r = 38.845$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.61, 7.61, 7.61) @ 2450 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 3.92 W/kg

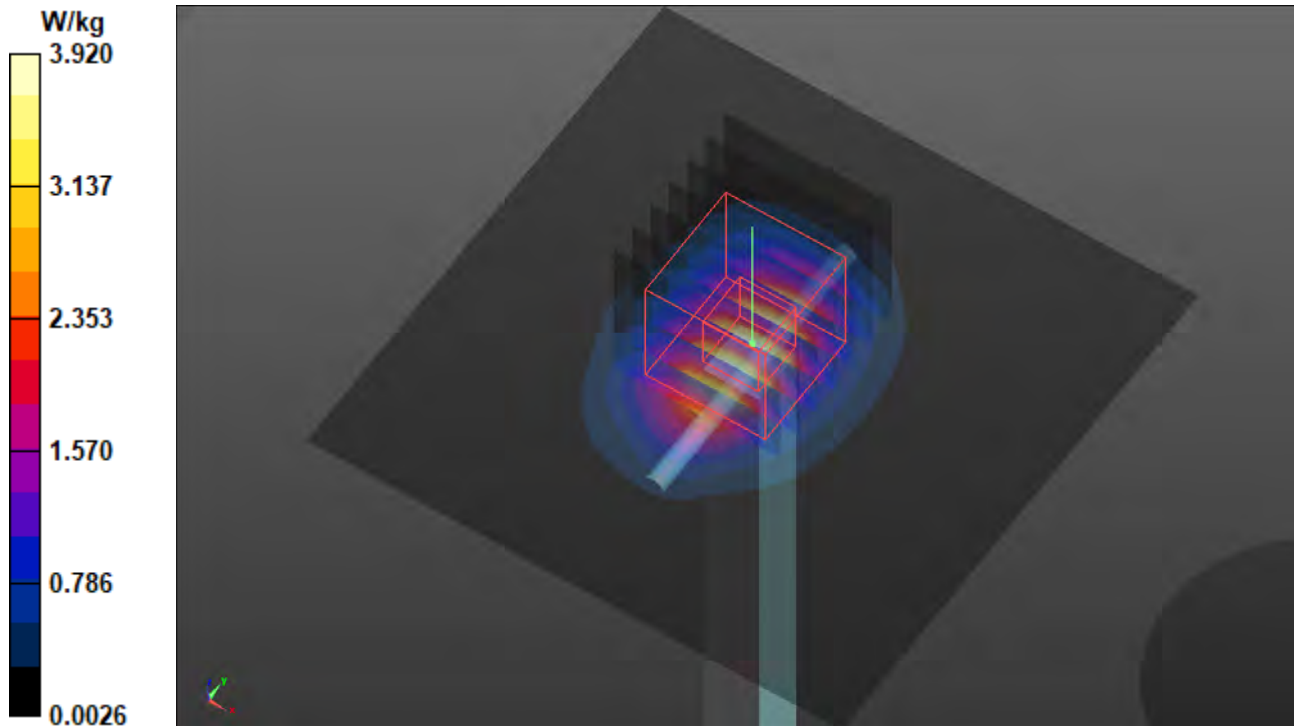
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 45.77 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 4.98 W/kg

SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.08 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.99 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/12/03

S13 System Check_H2450_211203

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1_1203 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.877$ S/m; $\epsilon_r = 39.271$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.61, 7.61, 7.61) @ 2450 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 3.89 W/kg

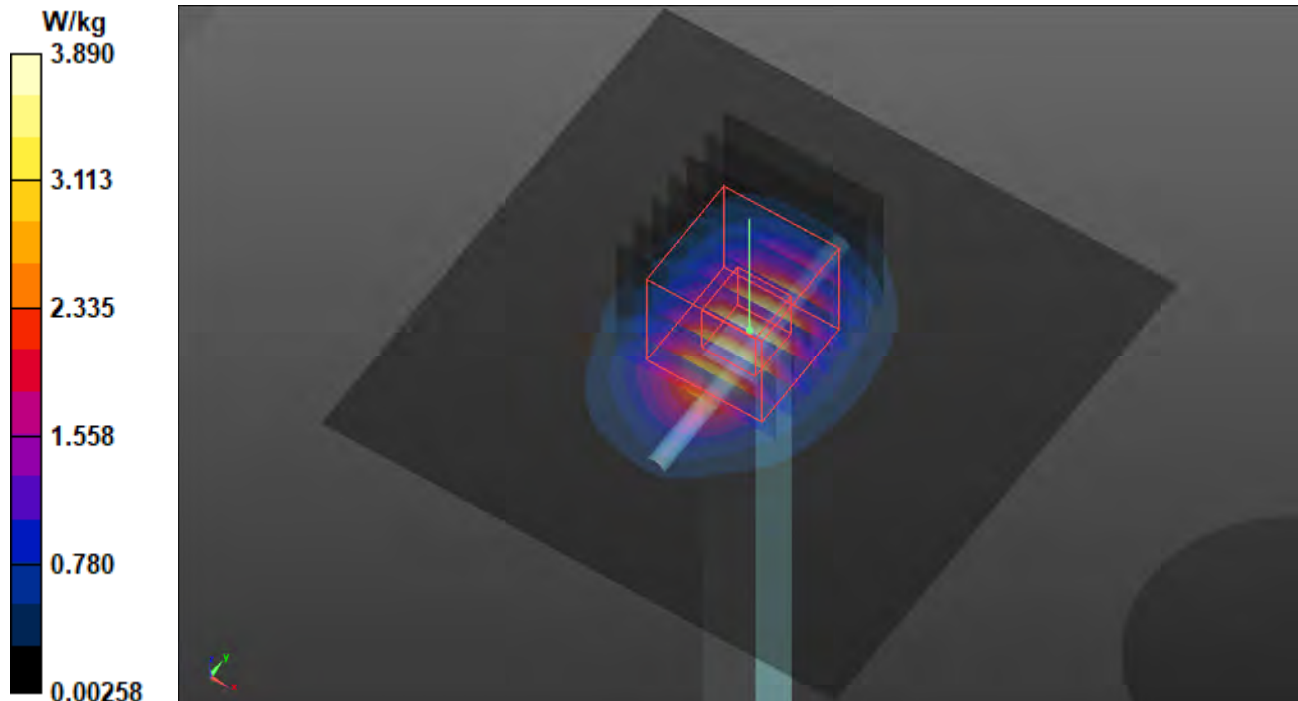
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 45.77 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 4.95 W/kg

SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.96 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S14 System Check_H1900_211130

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1130 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.464$ S/m; $\epsilon_r = 38.847$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.27, 8.27, 8.27) @ 1900 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 3.15 W/kg

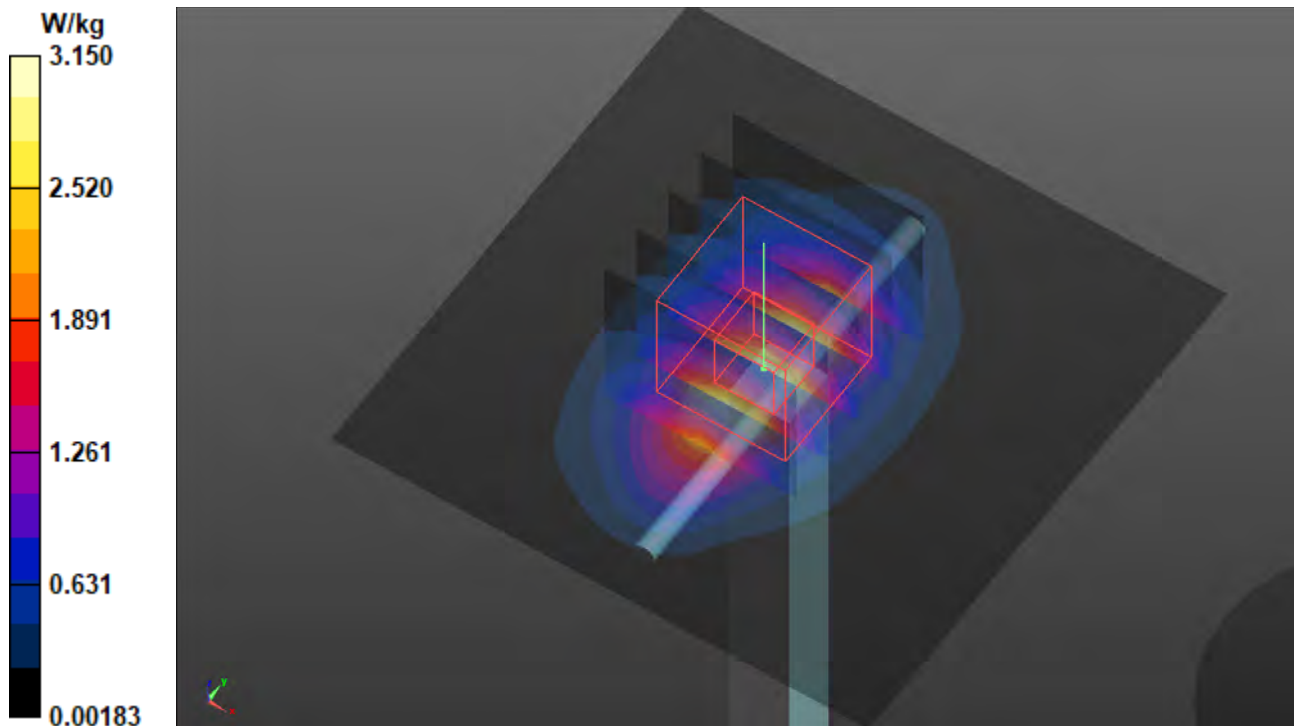
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 48.52 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.85 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.27 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S15 System Check_H1750_211130

DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1130 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.372$ S/m; $\epsilon_r = 39.12$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.55, 8.55, 8.55) @ 1750 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 2.88 W/kg

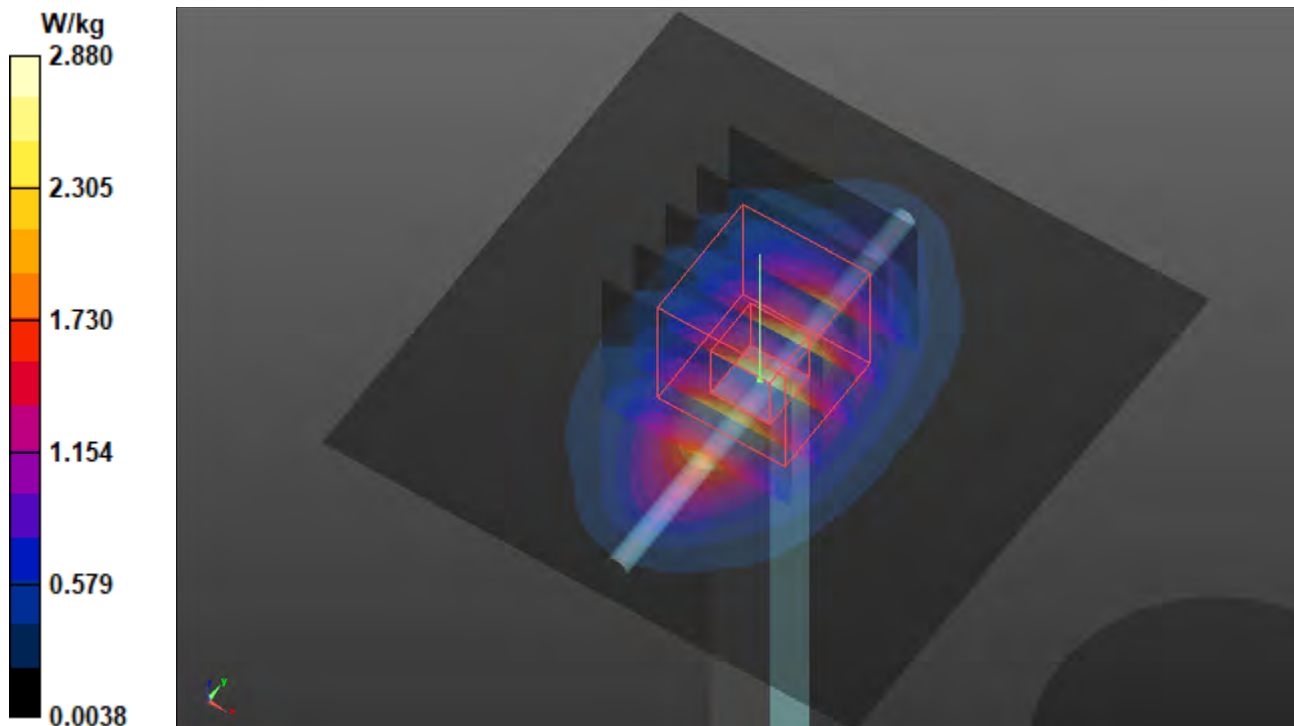
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 47.24 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 3.37 W/kg

SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.984 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.84 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S16 System Check_H835_211130

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d121

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: H07T10N1_1130 Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.934 \text{ S/m}$; $\epsilon_r = 40.425$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $23.3 \text{ }^\circ\text{C}$; Liquid Temperature : $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.5, 10.5, 10.5) @ 835 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.625 W/kg

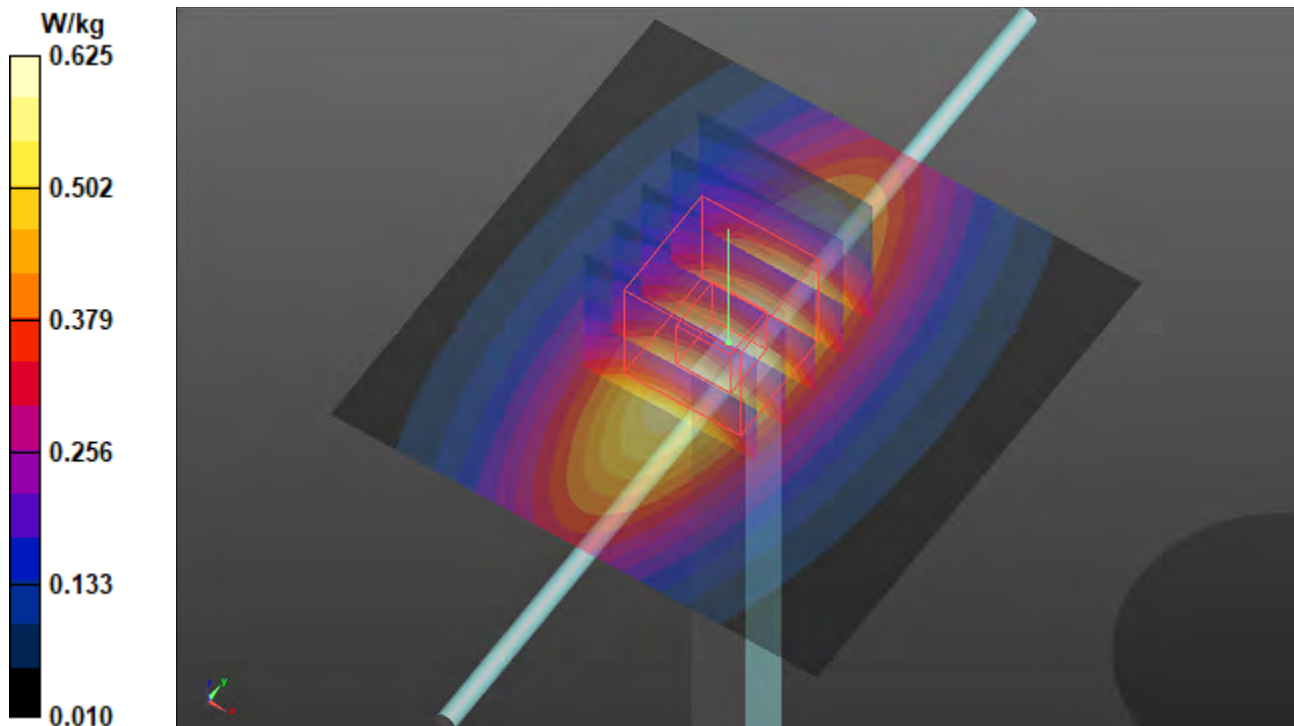
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.00 V/m ; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.718 W/kg

SAR(1 g) = 0.474 W/kg ; SAR(10 g) = 0.319 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.641 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S17 System Check_H1900_211130

DUT: Dipole 1900 MHz; Type: D1900V2; SN: 5d036

Communication System: UID 0, CW; Frequency: 1900 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1130 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.464$ S/m; $\epsilon_r = 38.847$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.27, 8.27, 8.27) @ 1900 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 3.15 W/kg

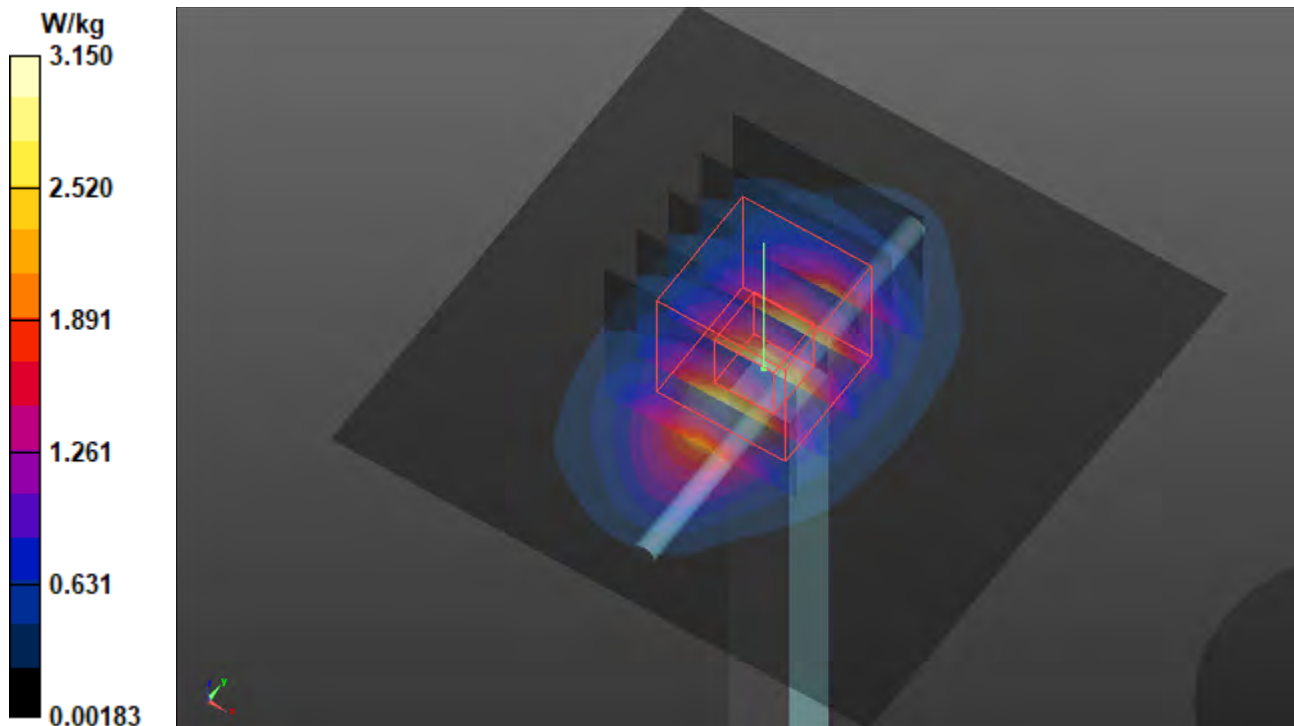
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 48.52 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.85 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.27 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S18 System Check_H1750_211130

DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1130 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.372$ S/m; $\epsilon_r = 39.12$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.55, 8.55, 8.55) @ 1750 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.88 W/kg

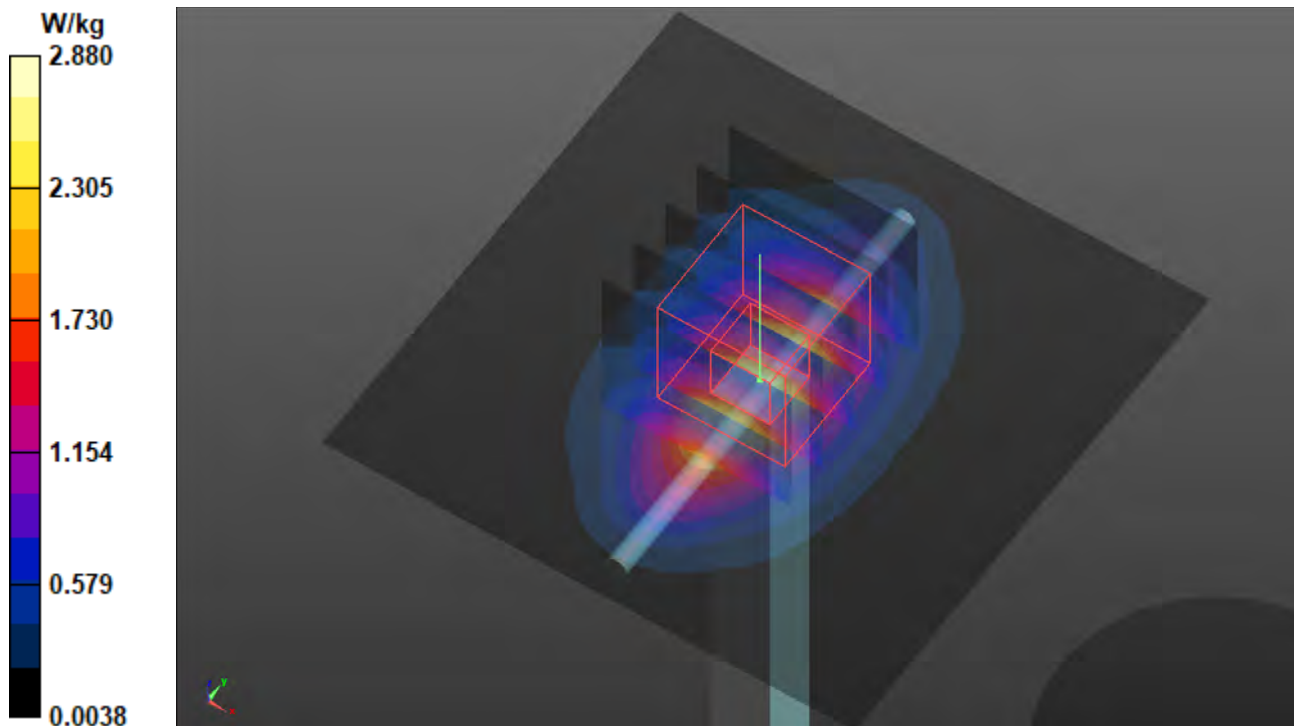
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 47.24 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 3.37 W/kg

SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.984 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.84 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S19 System Check_H835_211130

DUT: Dipole 835 MHz; Type: D835V2; SN: 4d121

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium: H07T10N1_1130 Medium parameters used: $f = 835$ MHz; $\sigma = 0.934$ S/m; $\epsilon_r = 40.425$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.5, 10.5, 10.5) @ 835 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 0.625 W/kg

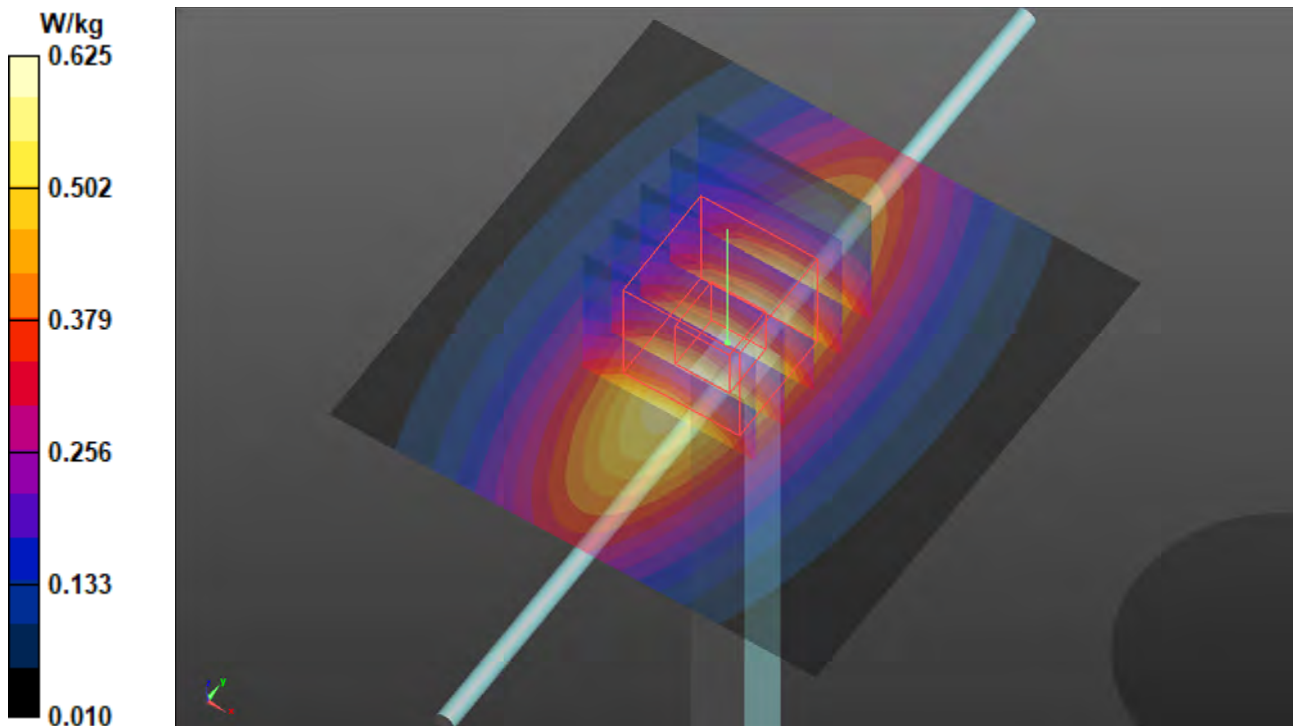
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 27.00 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.718 W/kg

SAR(1 g) = 0.474 W/kg; SAR(10 g) = 0.319 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.641 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S20 System Check_H750_211130

DUT: Dipole 750 MHz; Type: D750V3; SN: 1013

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: H06T09N1_1130 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 41.582$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $23.3 \text{ }^\circ\text{C}$; Liquid Temperature : $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.69, 10.69, 10.69) @ 750 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.512 W/kg

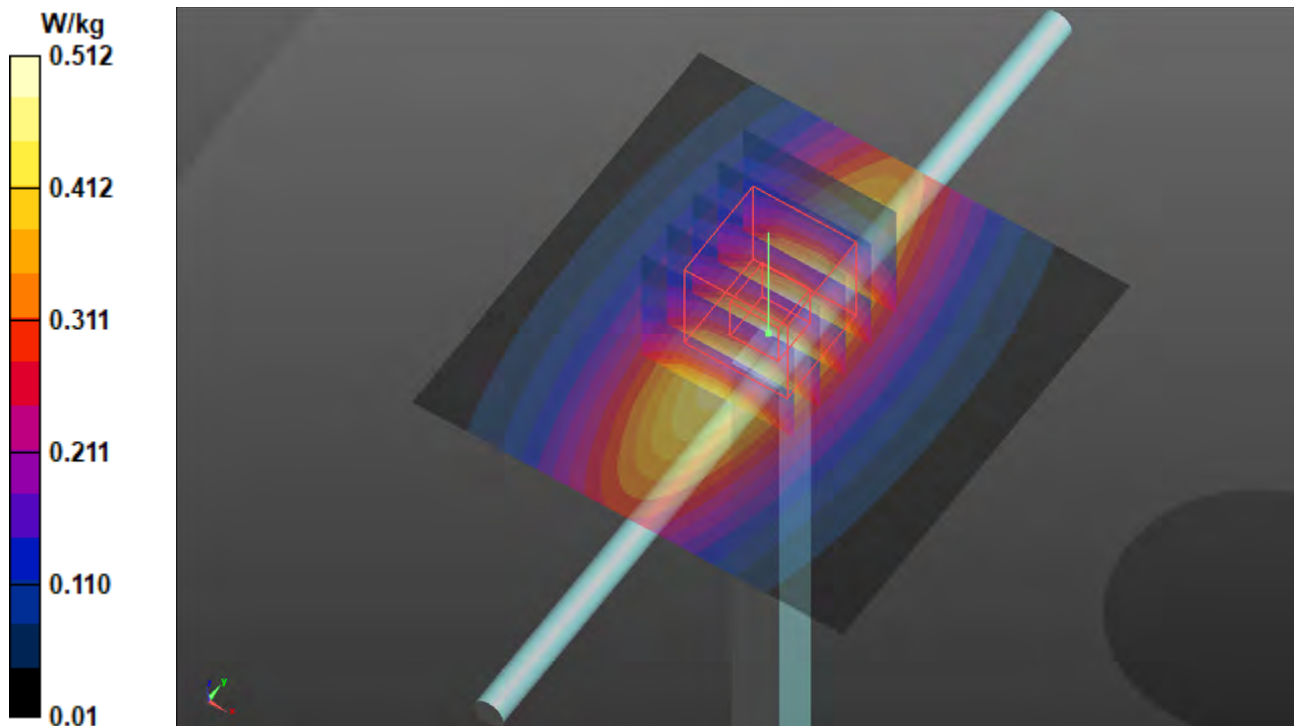
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.93 V/m ; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.573 W/kg

SAR(1 g) = 0.442 W/kg ; SAR(10 g) = 0.283 W/kg (SAR corrected for target medium)

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



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S21 System Check_H750_211130

DUT: Dipole 750 MHz; Type: D750V3; SN: 1013

Communication System: UID 0, CW; Frequency: 750 MHz; Duty Cycle: 1:1

Medium: H06T09N1_1130 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.902 \text{ S/m}$; $\epsilon_r = 41.582$; $\rho = 1000 \text{ kg/m}^3$

Ambient Temperature : $23.3 \text{ }^\circ\text{C}$; Liquid Temperature : $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.69, 10.69, 10.69) @ 750 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 0.512 W/kg

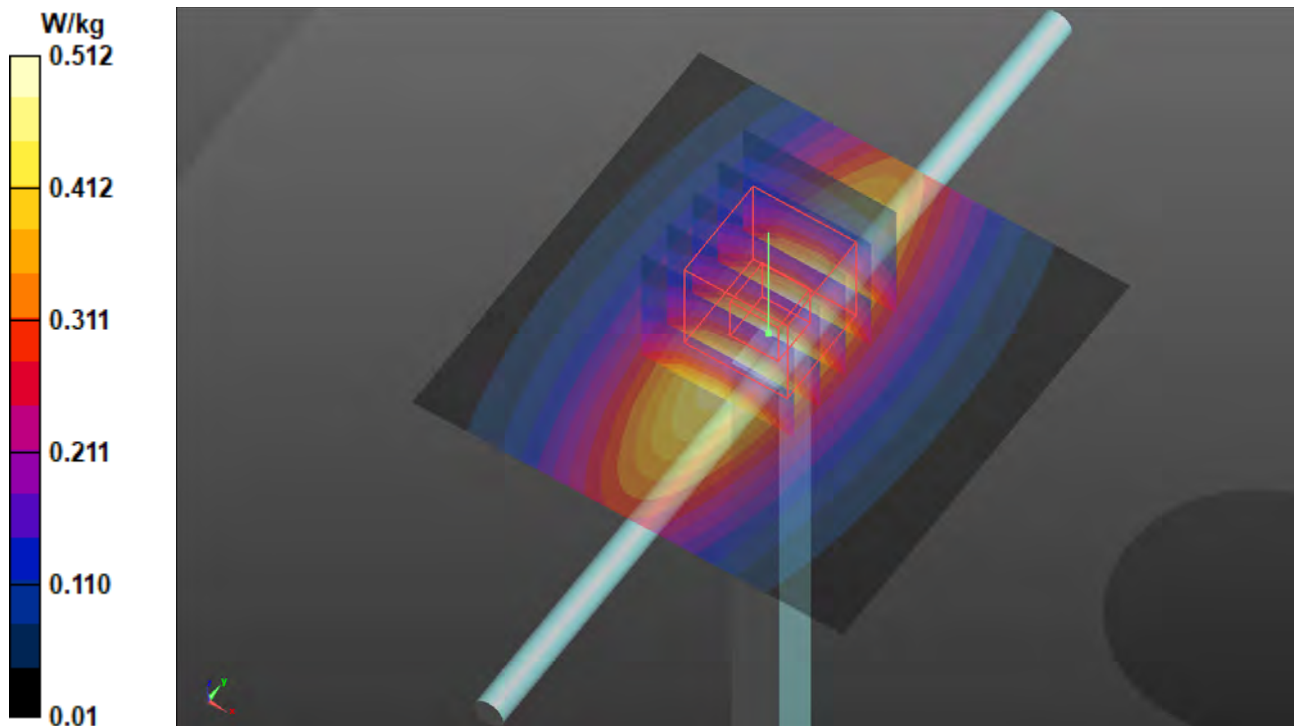
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 24.93 V/m ; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 0.573 W/kg

SAR(1 g) = 0.442 W/kg ; SAR(10 g) = 0.283 W/kg (SAR corrected for target medium)

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



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/12/07

S23 System Check_H1750_211207

DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1055

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium: H16T20N1_1207 Medium parameters used: $f = 1750$ MHz; $\sigma = 1.329$ S/m; $\epsilon_r = 41.231$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5°C ; Liquid Temperature : 23.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.54, 8.54, 8.54) @ 1750 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (61x61x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 2.78 W/kg

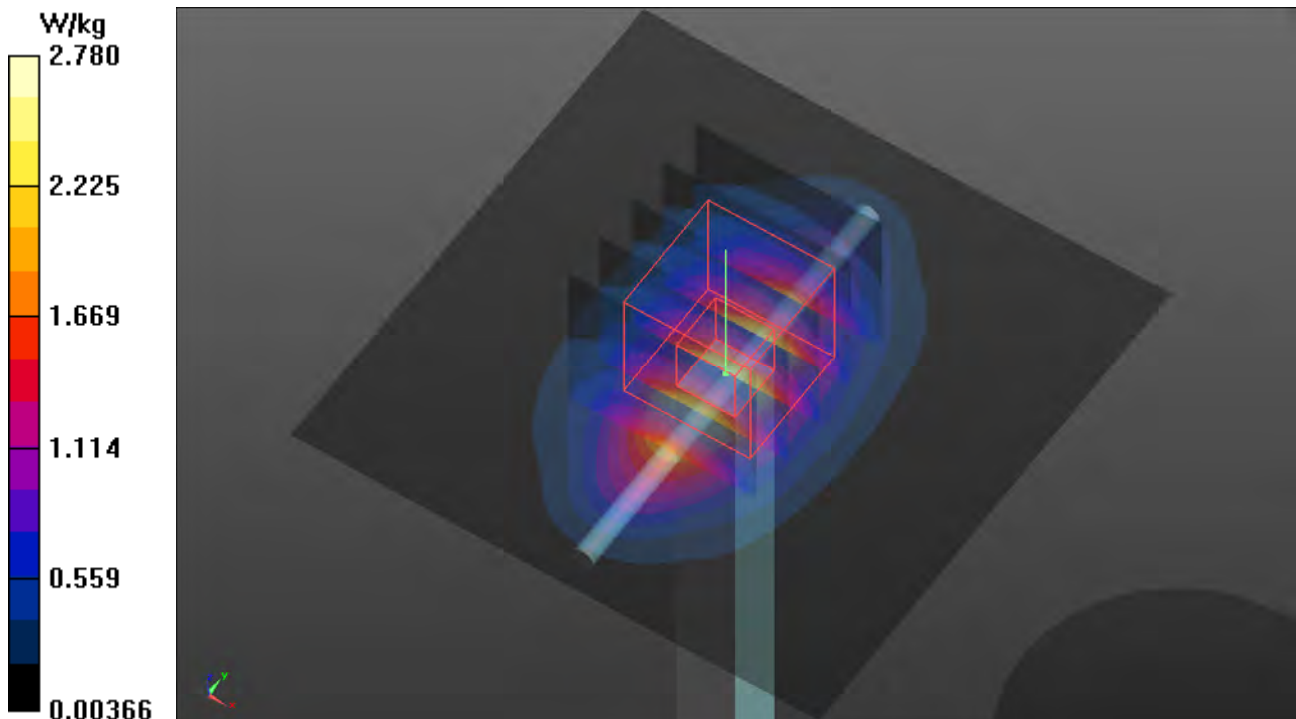
Pin=50mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 47.22 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 3.26 W/kg

SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.970 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.75 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

S25 System Check_H2450_211130

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1_1130 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.881$ S/m; $\epsilon_r = 38.845$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.61, 7.61, 7.61) @ 2450 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 3.92 W/kg

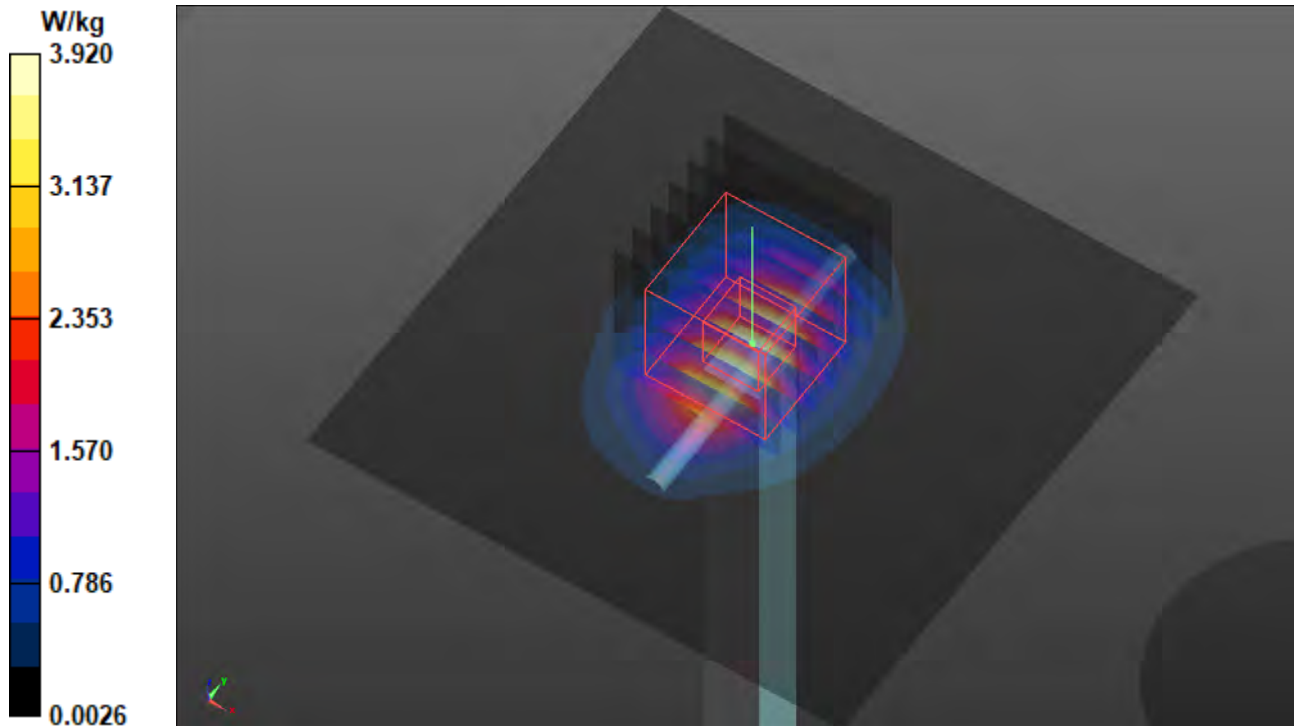
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 45.77 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 4.98 W/kg

SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.08 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.99 W/kg



Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/12/03

S26 System Check_H2450_211203

DUT: Dipole 2450 MHz; Type: D2450V2; SN: 737

Communication System: UID 0, CW; Frequency: 2450 MHz; Duty Cycle: 1:1

Medium: H19T27N1_1203 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.877$ S/m; $\epsilon_r = 39.271$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.61, 7.61, 7.61) @ 2450 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Pin=50mW/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 3.89 W/kg

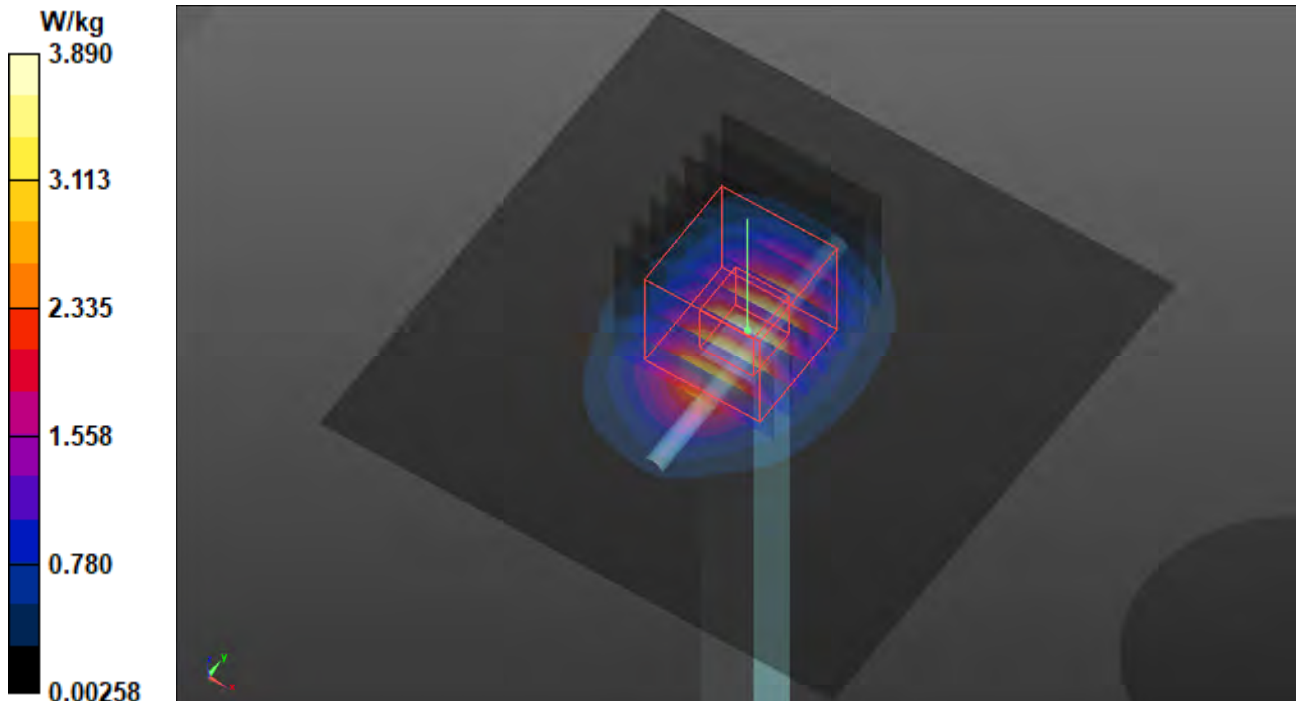
Pin=50mW/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 45.77 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 4.95 W/kg

SAR(1 g) = 2.39 W/kg; SAR(10 g) = 1.11 W/kg (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.96 W/kg



Plots of Measurement

Annex B. Plots of Measurement

The SAR plots for highest measured SAR in each exposure configuration, wireless mode and frequency band combination are shown as follows.

Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P01 WCDMA II_RMC12.2K_Rear Face_15mm_Ch9538

DUT: BBGM-WTW-P21116005

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1907.6 MHz; Duty Cycle: 1:1.95
Medium: H16T20N1_1130 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.467$ S/m; $\epsilon_r = 38.85$; $\rho = 1000$ kg/m³
Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.27, 8.27, 8.27) @ 1907.6 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.467 W/kg

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

Reference Value = 8.597 V/m; Power Drift = 0.09 dB

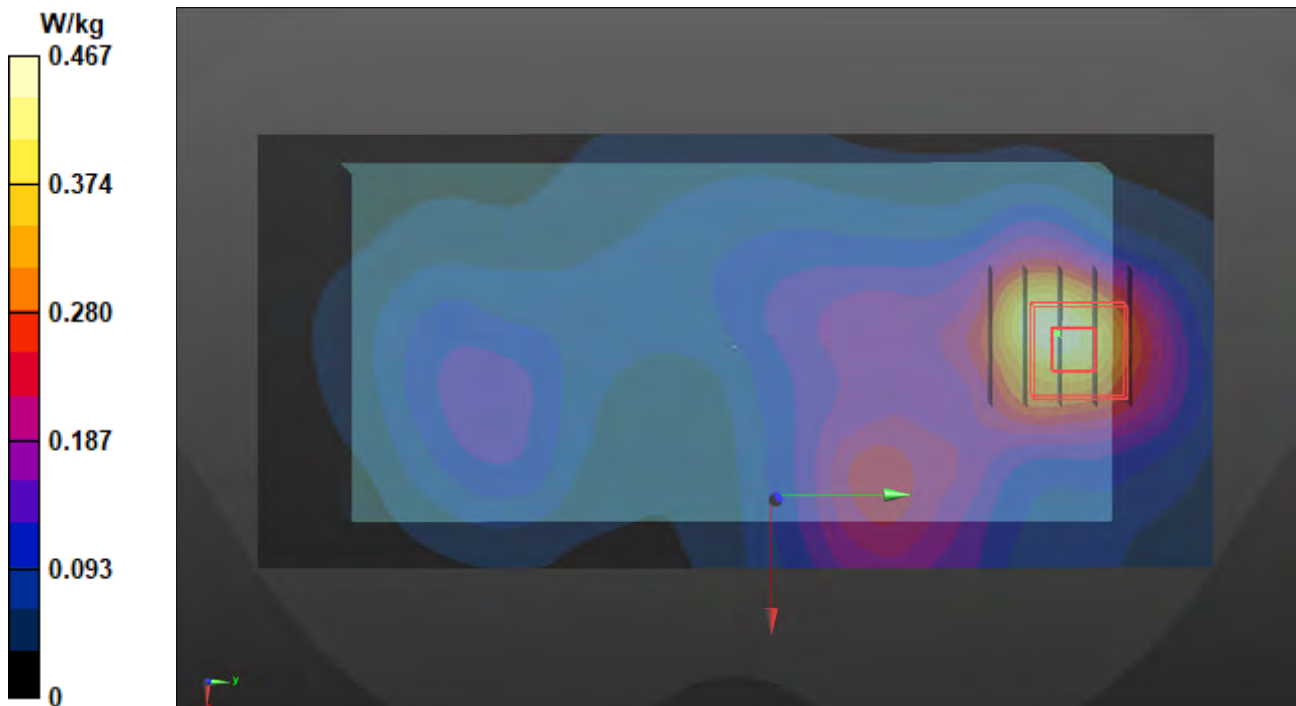
Peak SAR (extrapolated) = 0.158 W/kg

SAR(1 g) = 0.092 W/kg; SAR(10 g) = 0.057 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 20 mm

Ratio of SAR at M2 to SAR at M1 = 58.3%

Maximum value of SAR (measured) = 0.133 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P02 WCDMA IV_RMC12.2K_Rear Face_15mm_Ch1312

DUT: BBGM-WTW-P21116005

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1712.4 MHz; Duty Cycle: 1:1.95
Medium: H16T20N1_1130 Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.351$ S/m; $\epsilon_r = 39.175$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.55, 8.55, 8.55) @ 1712.4 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x151x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.215 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 12.23 V/m; Power Drift = -0.04 dB

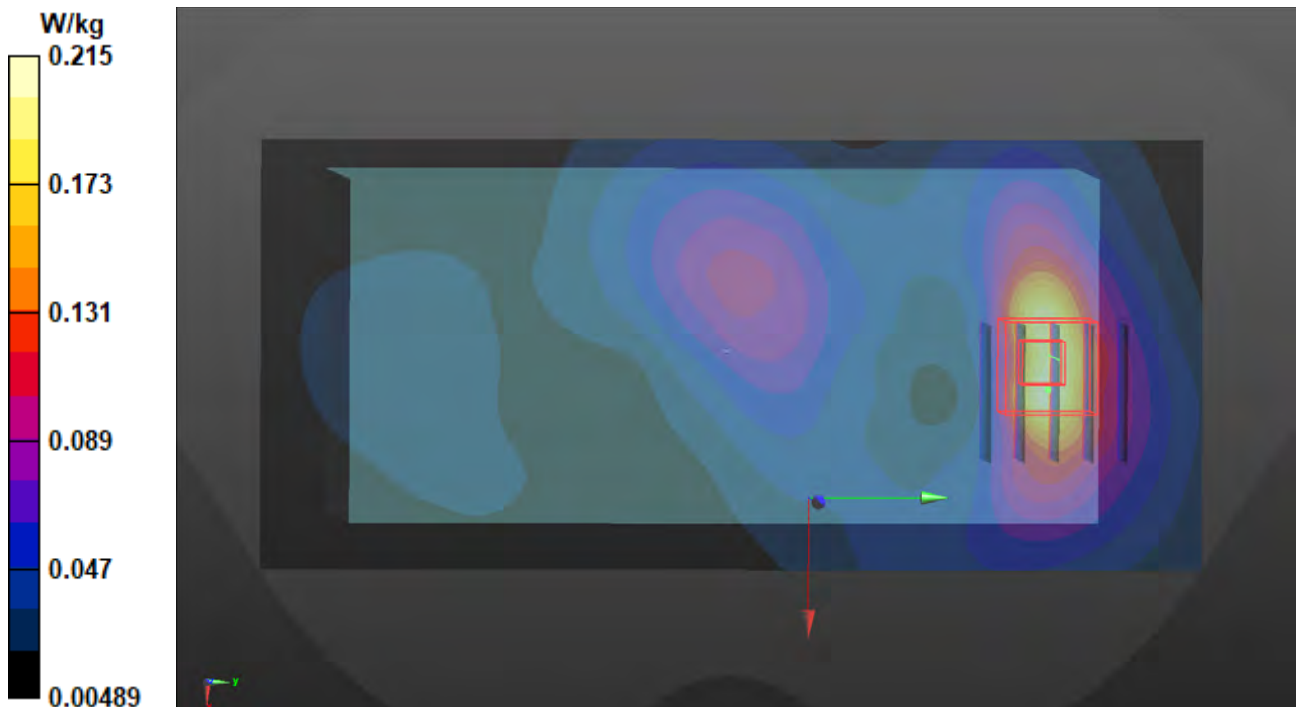
Peak SAR (extrapolated) = 0.244 W/kg

SAR(1 g) = 0.151 W/kg; SAR(10 g) = 0.089 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 11.3 mm

Ratio of SAR at M2 to SAR at M1 = 62.6%

Maximum value of SAR (measured) = 0.206 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P03 WCDMA V_RMC12.2K_Rear Face_15mm_Ch4132

DUT: BBGM-WTW-P21116005

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 826.4 MHz; Duty Cycle: 1:1.95
Medium: H07T10N1_1130 Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.93$ S/m; $\epsilon_r = 40.472$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.5, 10.5, 10.5) @ 826.4 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.247 W/kg

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

Reference Value = 16.66 V/m; Power Drift = -0.07 dB

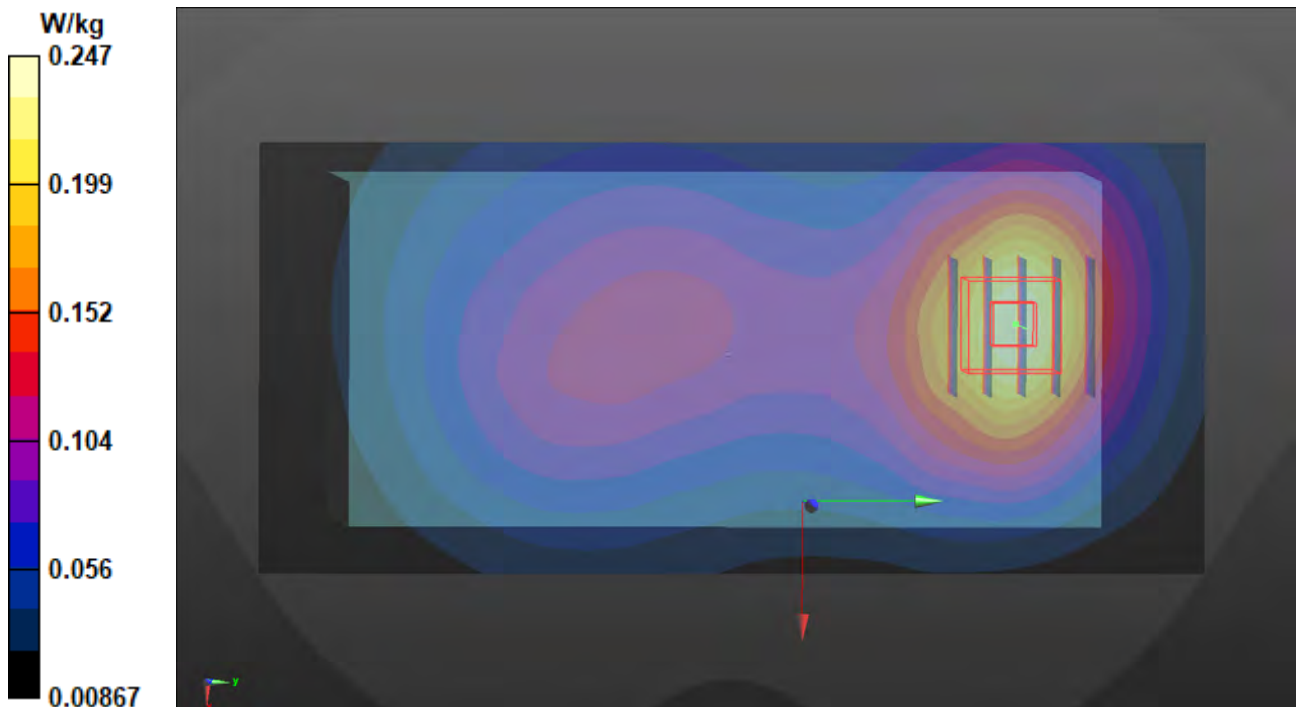
Peak SAR (extrapolated) = 0.270 W/kg

SAR(1 g) = 0.180 W/kg; SAR(10 g) = 0.124 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 68.3%

Maximum value of SAR (measured) = 0.241 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P04 LTE 2_QPSK20M_Rear Face_15mm_Ch19100_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10169 - CAE, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1900 MHz; Duty Cycle: 1:3.74

Medium: H16T20N1_1130 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.464$ S/m; $\epsilon_r = 38.847$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.27, 8.27, 8.27) @ 1900 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.102 W/kg

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

Reference Value = 8.084 V/m; Power Drift = -0.10 dB

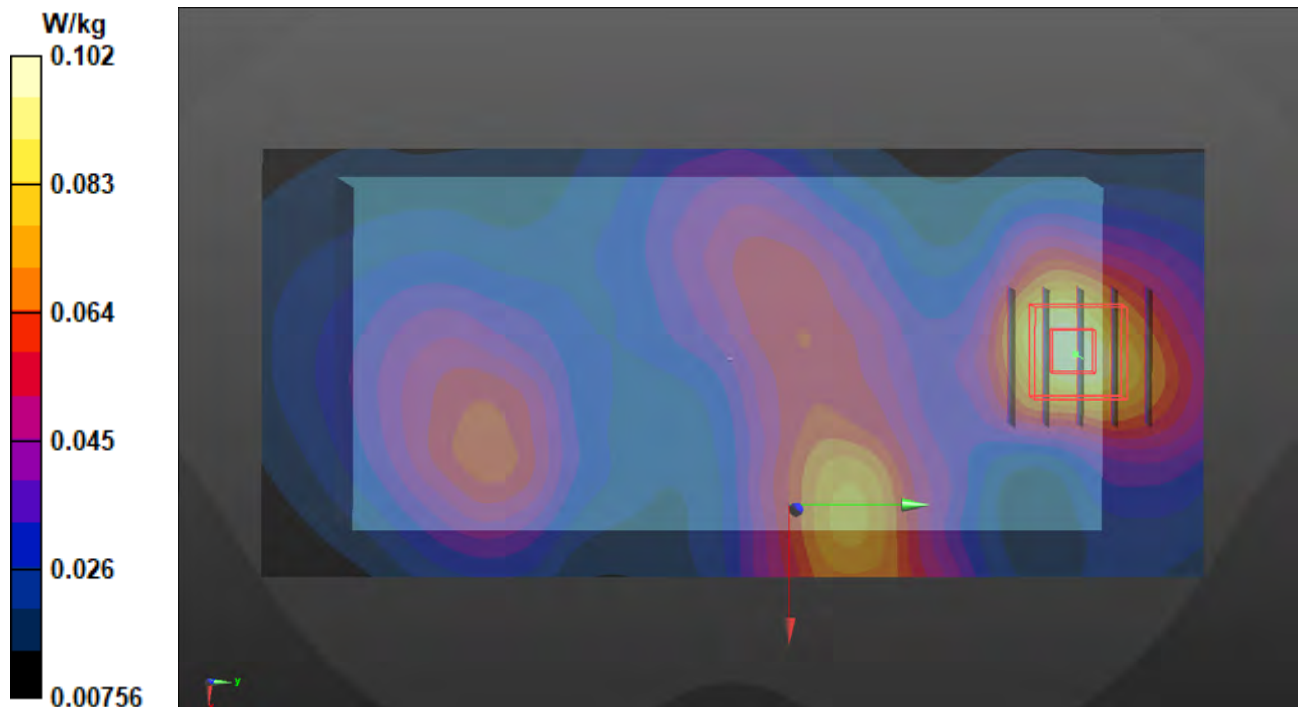
Peak SAR (extrapolated) = 0.117 W/kg

SAR(1 g) = 0.069 W/kg; SAR(10 g) = 0.043 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 20.9 mm

Ratio of SAR at M2 to SAR at M1 = 60.6%

Maximum value of SAR (measured) = 0.100 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P05 LTE 4_QPSK20M_Rear Face_15mm_Ch20050_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10169 - CAE, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1720 MHz; Duty Cycle: 1:3.74

Medium: H16T20N1_1130 Medium parameters used: $f = 1720$ MHz; $\sigma = 1.357$ S/m; $\epsilon_r = 39.178$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.55, 8.55, 8.55) @ 1720 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.158 W/kg

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

Reference Value = 10.29 V/m; Power Drift = -0.08 dB

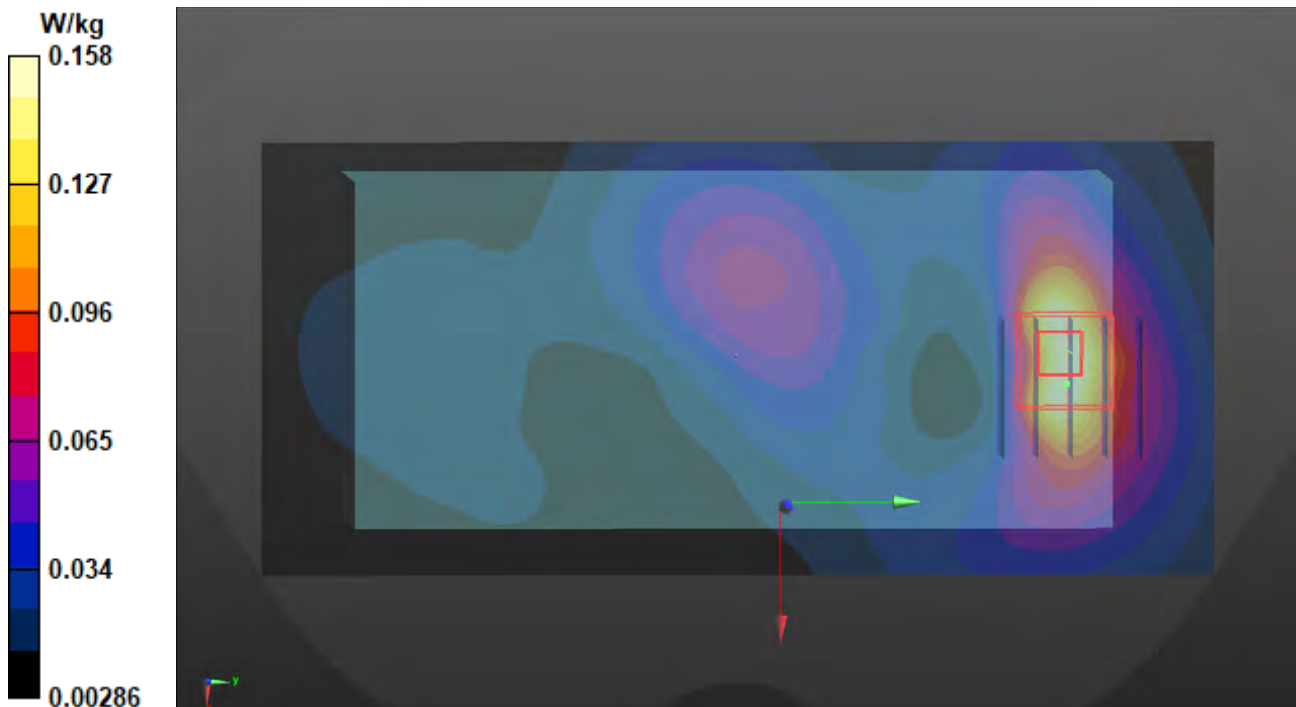
Peak SAR (extrapolated) = 0.174 W/kg

SAR(1 g) = 0.107 W/kg; SAR(10 g) = 0.064 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 12.2 mm

Ratio of SAR at M2 to SAR at M1 = 62.2%

Maximum value of SAR (measured) = 0.148 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P06 LTE 5_QPSK10M_Rear Face_15mm_Ch20450_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10175 - CAG, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 829 MHz; Duty Cycle: 1:3.74

Medium: H07T10N1_1130 Medium parameters used: $f = 829$ MHz; $\sigma = 0.931$ S/m; $\epsilon_r = 40.458$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.5, 10.5, 10.5) @ 829 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 0.195 W/kg

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

Reference Value = 15.10 V/m; Power Drift = -0.16 dB

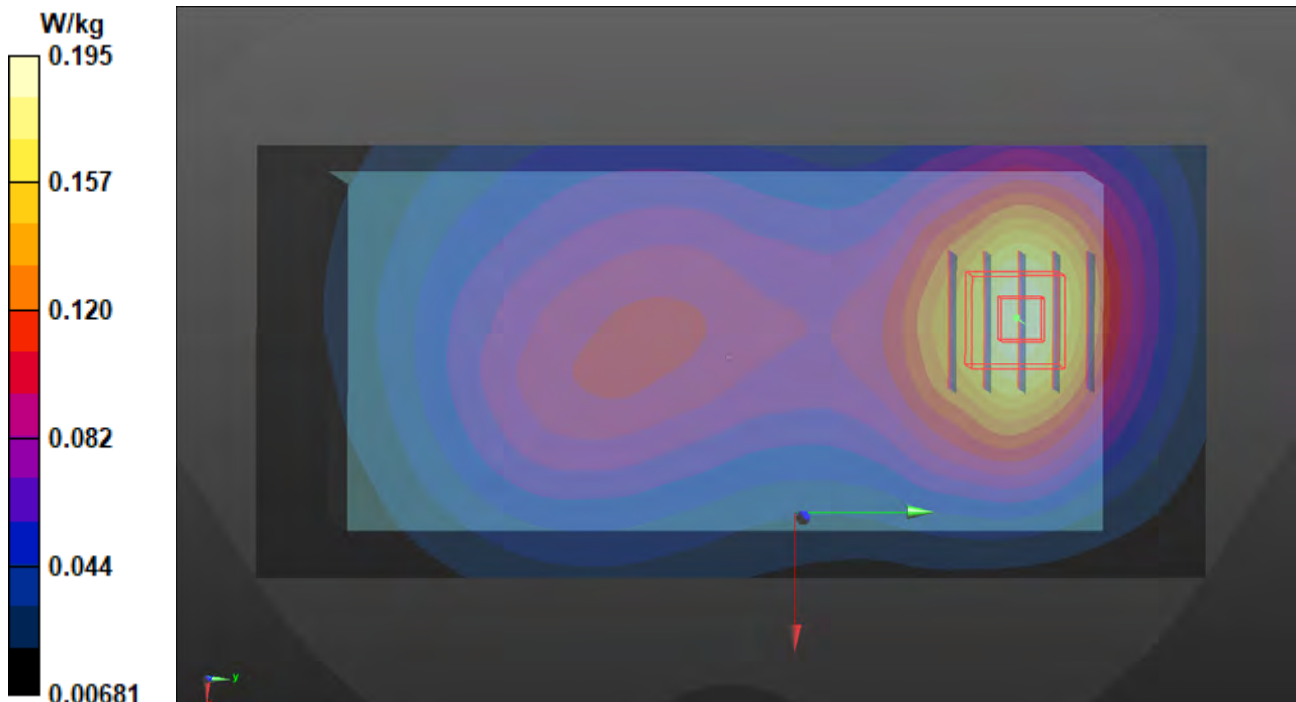
Peak SAR (extrapolated) = 0.216 W/kg

SAR(1 g) = 0.144 W/kg; SAR(10 g) = 0.099 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 68.3%

Maximum value of SAR (measured) = 0.193 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P07 LTE 12_QPSK10M_Rear Face_15mm_Ch23130_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10175 - CAG, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 711 MHz; Duty Cycle: 1:3.74

Medium: H06T09N1_1130 Medium parameters used: $f = 711$ MHz; $\sigma = 0.887$ S/m; $\epsilon_r = 41.682$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.69, 10.69, 10.69) @ 711 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x151x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.099 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 10.17 V/m; Power Drift = 0.05 dB

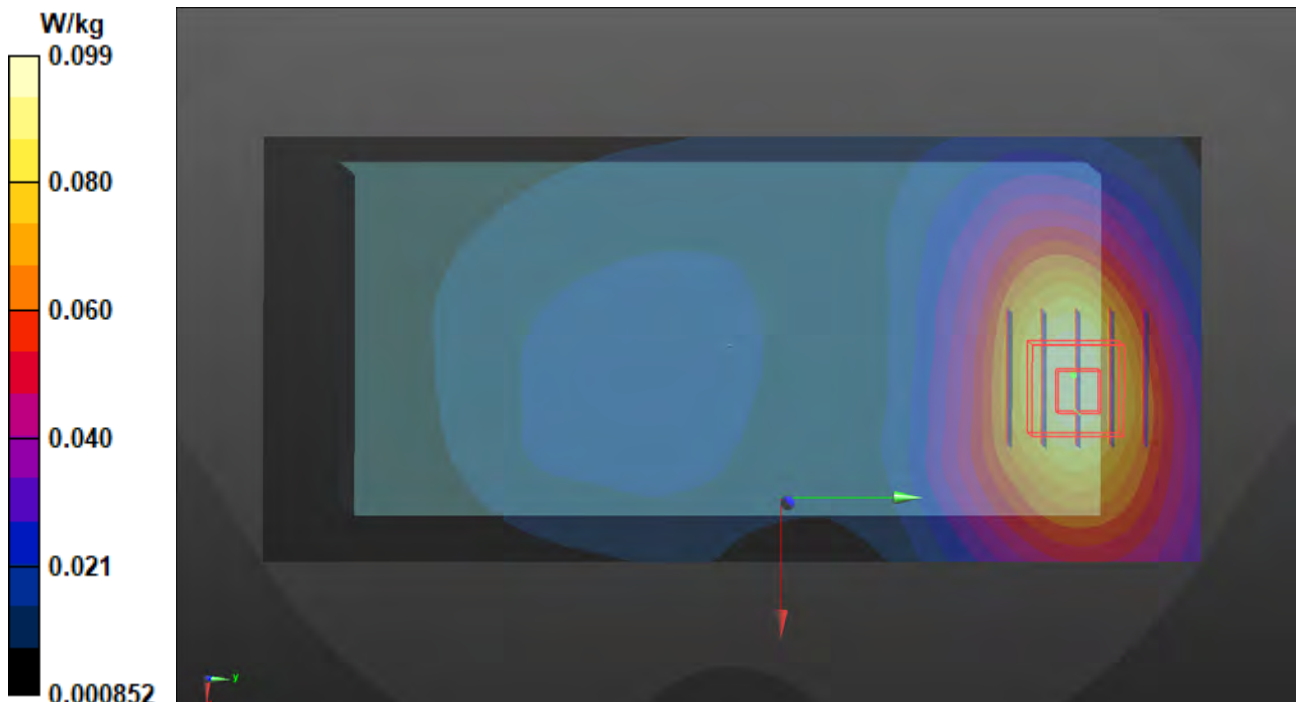
Peak SAR (extrapolated) = 0.118 W/kg

SAR(1 g) = 0.084 W/kg; SAR(10 g) = 0.058 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 70.7%

Maximum value of SAR (measured) = 0.107 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P08 LTE 13_QPSK10M_Rear Face_15mm_Ch23230_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10175 - CAG, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 782 MHz; Duty Cycle: 1:3.74

Medium: H06T09N1_1130 Medium parameters used: $f = 782$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 41.476$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.69, 10.69, 10.69) @ 782 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x151x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.128 W/kg

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

Reference Value = 12.23 V/m; Power Drift = -0.16 dB

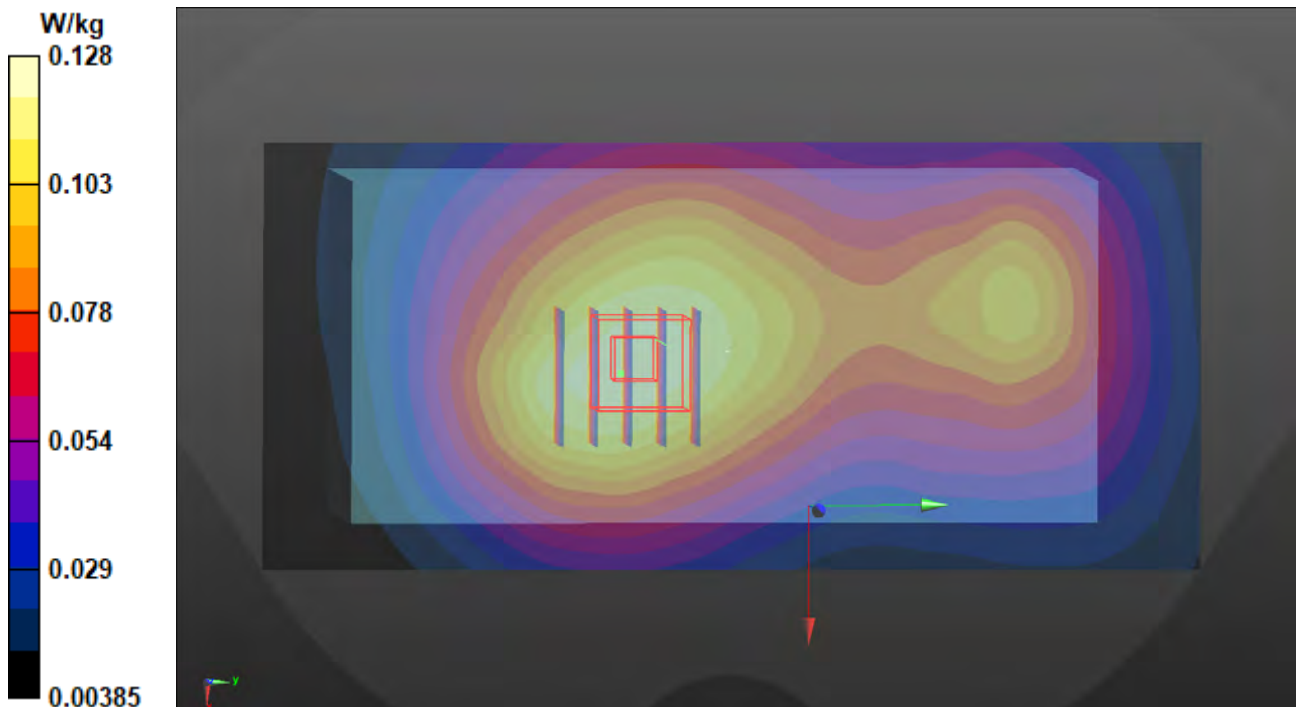
Peak SAR (extrapolated) = 0.131 W/kg

SAR(1 g) = 0.097 W/kg; SAR(10 g) = 0.075 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 74%

Maximum value of SAR (measured) = 0.120 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/12/07

P10 LTE 66_QPSK20M_Rear Face_15mm_Ch132322_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10169 - CAE, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1745 MHz; Duty Cycle: 1:3.74

Medium: H16T20N1_1207 Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.324$ S/m; $\epsilon_r = 41.243$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5°C ; Liquid Temperature : 23.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.54, 8.54, 8.54) @ 1745 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (71x151x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 0.129 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 9.088 V/m; Power Drift = -0.03 dB

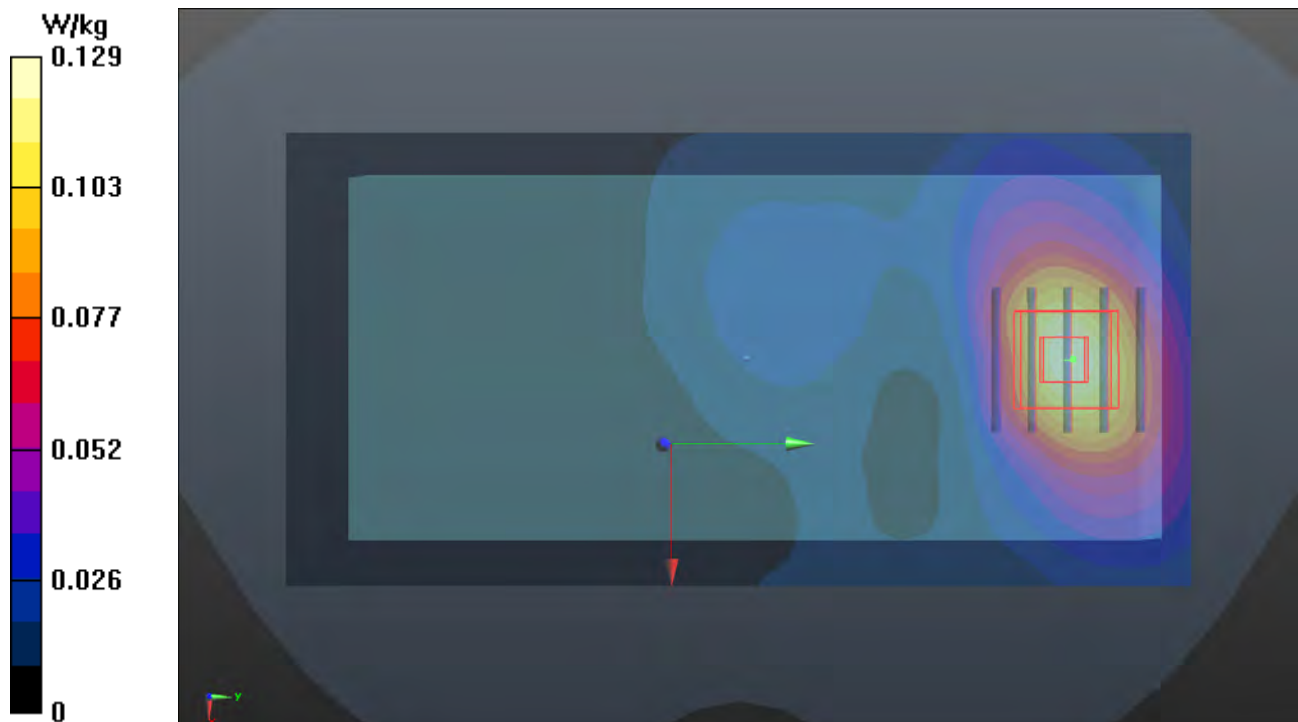
Peak SAR (extrapolated) = 0.160 W/kg

SAR(1 g) = 0.096 W/kg; SAR(10 g) = 0.055 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 12.8 mm

Ratio of SAR at M2 to SAR at M1 = 59.1%

Maximum value of SAR (measured) = 0.133 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P12 WLAN2.4G_802.11b_Rear Face_15mm_Ch11_Ant 0

DUT: BBGM-WTW-P21116005

Communication System: UID 10012 - CAB, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps); Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: H19T27N1_1130 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.902$ S/m; $\epsilon_r = 38.799$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.61, 7.61, 7.61) @ 2462 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x171x1): Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm

Maximum value of SAR (interpolated) = 0.087 W/kg

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

Reference Value = 4.694 V/m; Power Drift = -0.01 dB

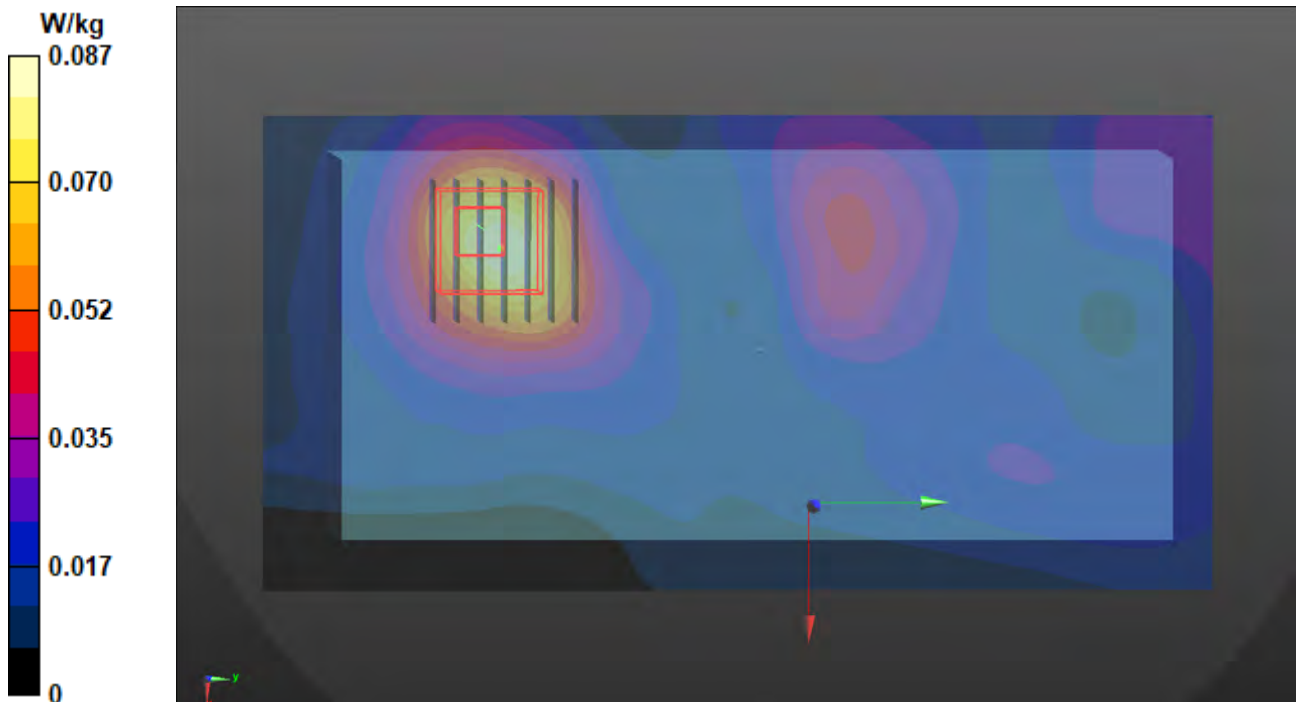
Peak SAR (extrapolated) = 0.0570 W/kg

SAR(1 g) = 0.00661 W/kg; SAR(10 g) = 0.00185 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 52%

Maximum value of SAR (measured) = 0.0472 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/12/03

P13 BT_BDR_Rear Face_15mm_Ch78_Ant 0

DUT: BBGM-WTW-P21116005

Communication System: UID 10032 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2480 MHz; Duty Cycle: 1:1.3

Medium: H19T27N1_1203 Medium parameters used: $f = 2480$ MHz; $\sigma = 1.877$ S/m; $\epsilon_r = 39.271$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

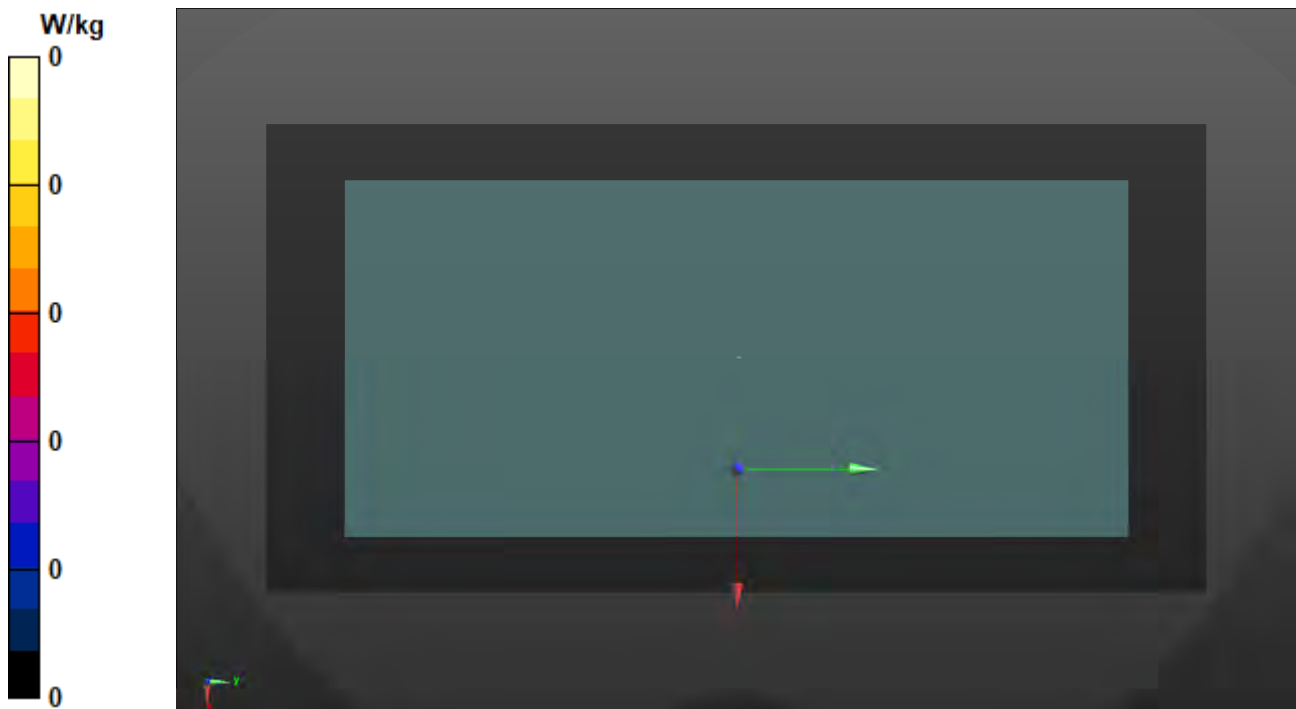
DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.61, 7.61, 7.61) @ 2480 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x181x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Fast SAR: SAR(1 g) = 0 W/kg; SAR(10 g) = 0 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P14 WCDMA II_RMC12.2K_Left Side_0mm_Ch9538

DUT: BBGM-WTW-P21116005

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1907.6 MHz; Duty Cycle: 1:1.95
Medium: H16T20N1_1130 Medium parameters used: $f = 1908$ MHz; $\sigma = 1.467$ S/m; $\epsilon_r = 38.85$; $\rho = 1000$ kg/m³
Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.27, 8.27, 8.27) @ 1907.6 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 7.39 W/kg

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

Reference Value = 65.01 V/m; Power Drift = -0.07 dB

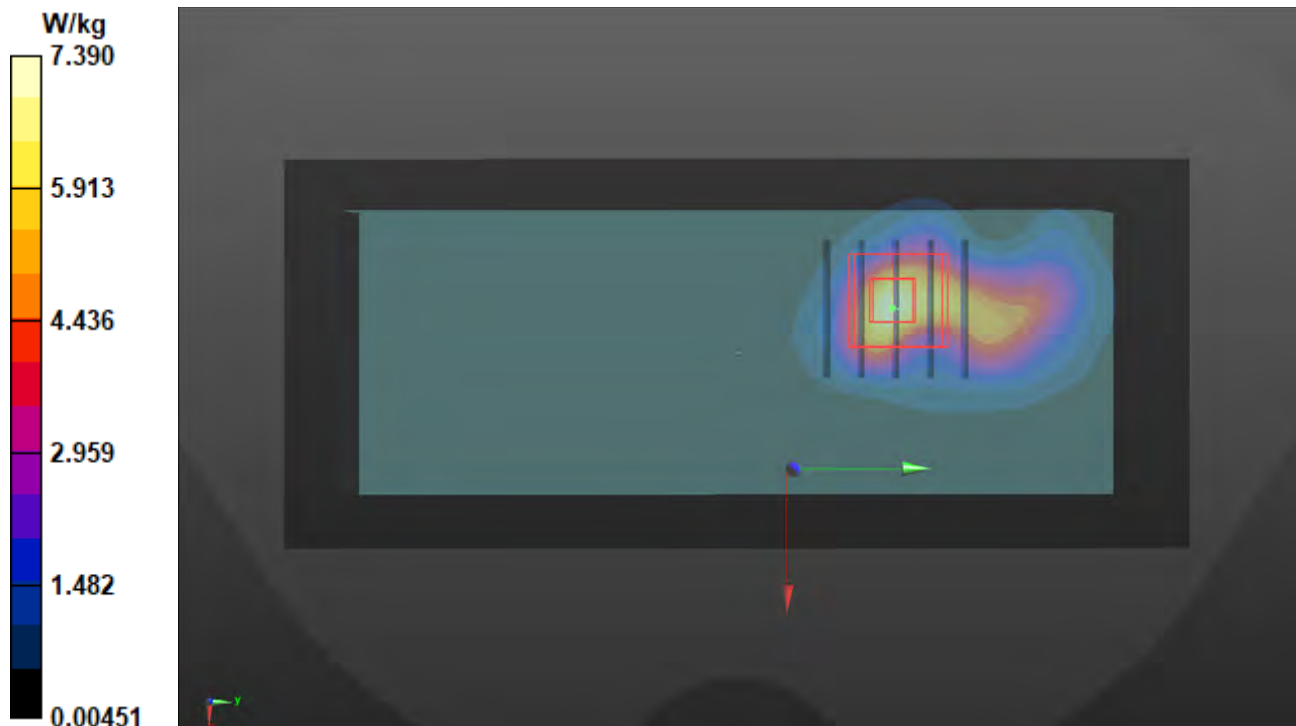
Peak SAR (extrapolated) = 11.5 W/kg

SAR(1 g) = 5.04 W/kg; SAR(10 g) = 2.19 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 9.2 mm

Ratio of SAR at M2 to SAR at M1 = 48.4%

Maximum value of SAR (measured) = 9.34 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P15 WCDMA IV_RMC12.2K_Left Side_0mm_Ch1513

DUT: BBGM-WTW-P21116005

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1752.6 MHz; Duty Cycle: 1:1.95
Medium: H16T20N1_1130 Medium parameters used: $f = 1753$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 39.123$; $\rho = 1000$ kg/m³
Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.55, 8.55, 8.55) @ 1752.6 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 7.62 W/kg

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

Reference Value = 66.48 V/m; Power Drift = -0.13 dB

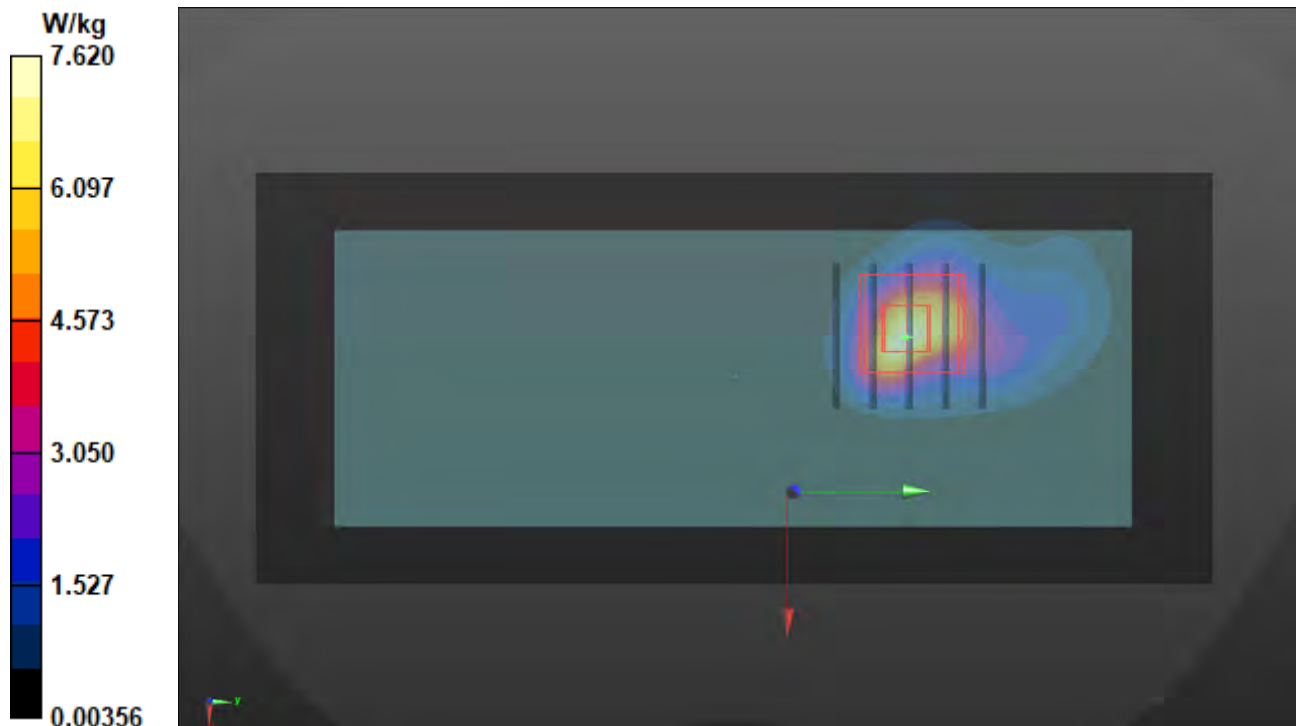
Peak SAR (extrapolated) = 9.43 W/kg

SAR(1 g) = 4.61 W/kg; SAR(10 g) = 2.12 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.2 mm

Ratio of SAR at M2 to SAR at M1 = 52.7%

Maximum value of SAR (measured) = 7.49 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P16 WCDMA V_RMC12.2K_Left Side_0mm_Ch4132

DUT: BBGM-WTW-P21116005

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 826.4 MHz; Duty Cycle: 1:1.95
Medium: H07T10N1_1130 Medium parameters used (interpolated): $f = 826.4$ MHz; $\sigma = 0.93$ S/m; $\epsilon_r = 40.472$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.5, 10.5, 10.5) @ 826.4 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 1.48 W/kg

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

Reference Value = 41.26 V/m; Power Drift = -0.05 dB

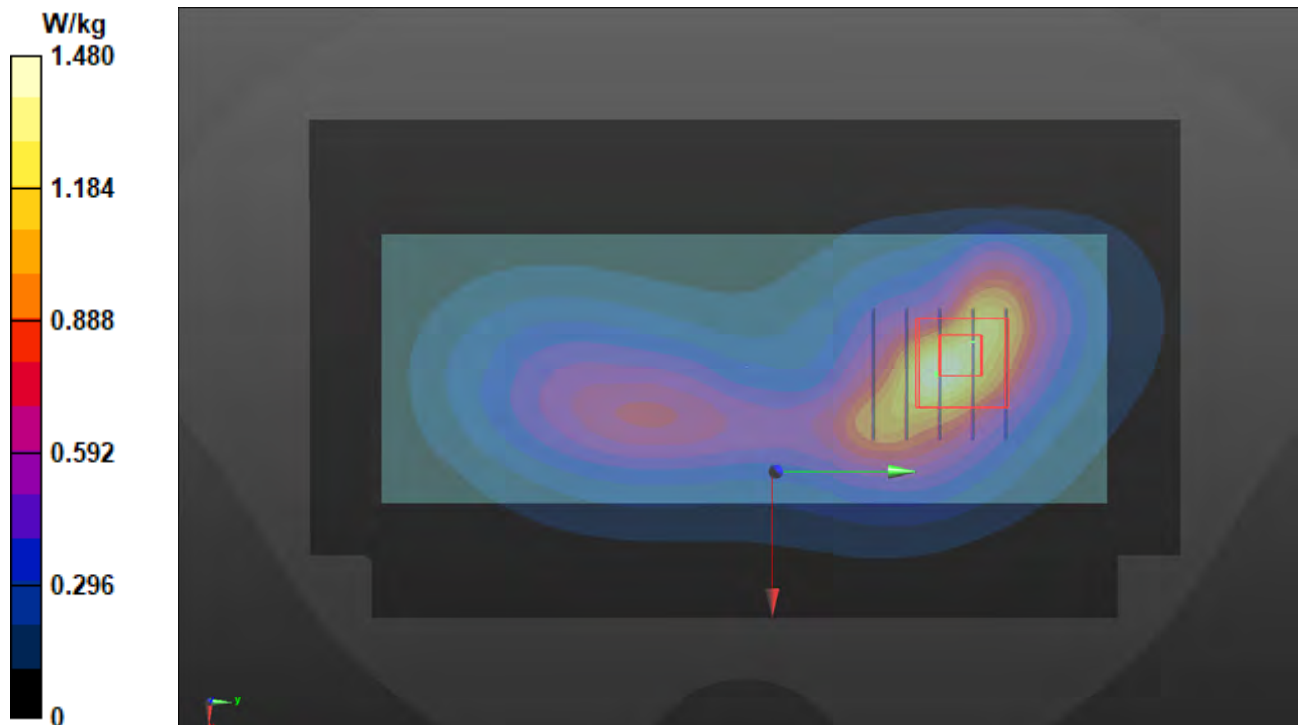
Peak SAR (extrapolated) = 1.91 W/kg

SAR(1 g) = 0.910 W/kg; SAR(10 g) = 0.510 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 49.7%

Maximum value of SAR (measured) = 1.43 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P17 LTE 2_QPSK20M_Left Side_0mm_Ch19100_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10169 - CAE, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1900 MHz; Duty Cycle: 1:3.74

Medium: H16T20N1_1130 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.464$ S/m; $\epsilon_r = 38.847$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.27, 8.27, 8.27) @ 1900 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 7.876 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 71.66 V/m; Power Drift = -0.07 dB

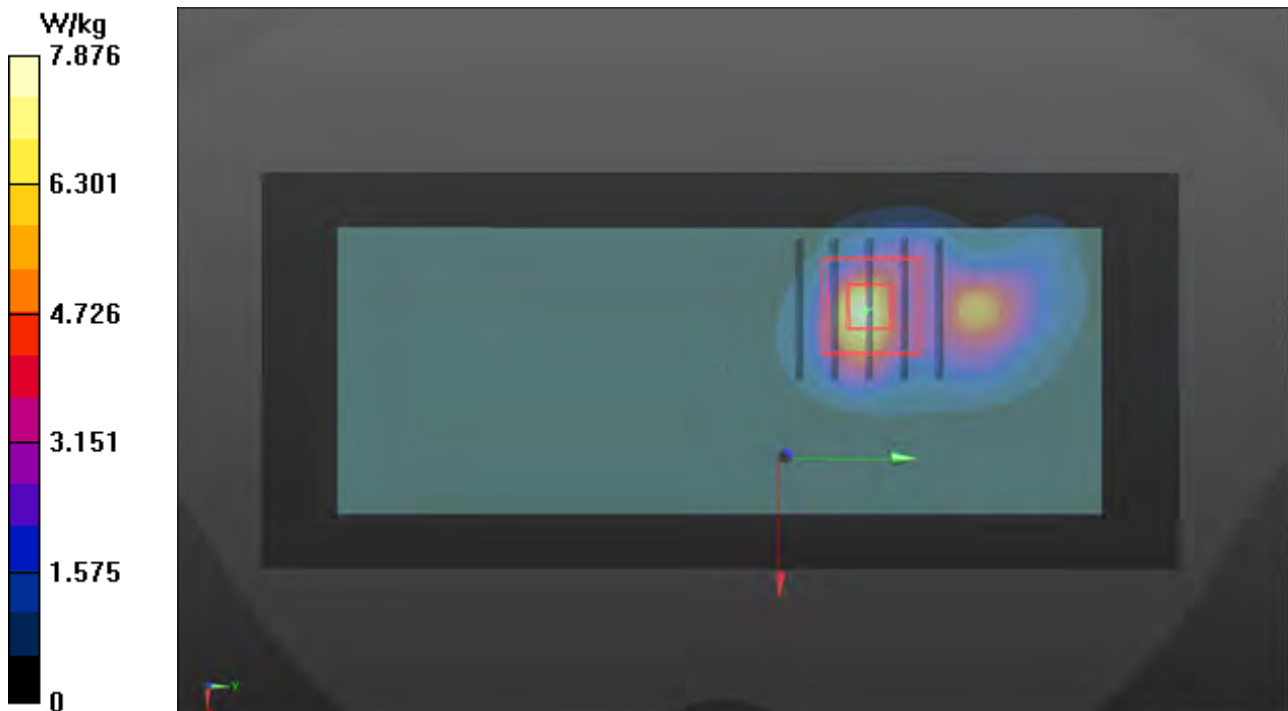
Peak SAR (extrapolated) = 10.9 W/kg

SAR(1 g) = 4.85 W/kg; SAR(10 g) = 2.11 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.8 mm

Ratio of SAR at M2 to SAR at M1 = 50.2%

Maximum value of SAR (measured) = 8.77 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P18 LTE 4_QPSK20M_Left Side_0mm_Ch20050_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10169 - CAE, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1720 MHz; Duty Cycle: 1:3.74

Medium: H16T20N1_1130 Medium parameters used: $f = 1720$ MHz; $\sigma = 1.357$ S/m; $\epsilon_r = 39.178$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(8.55, 8.55, 8.55) @ 1720 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 6.56 W/kg

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

Reference Value = 60.00 V/m; Power Drift = -0.05 dB

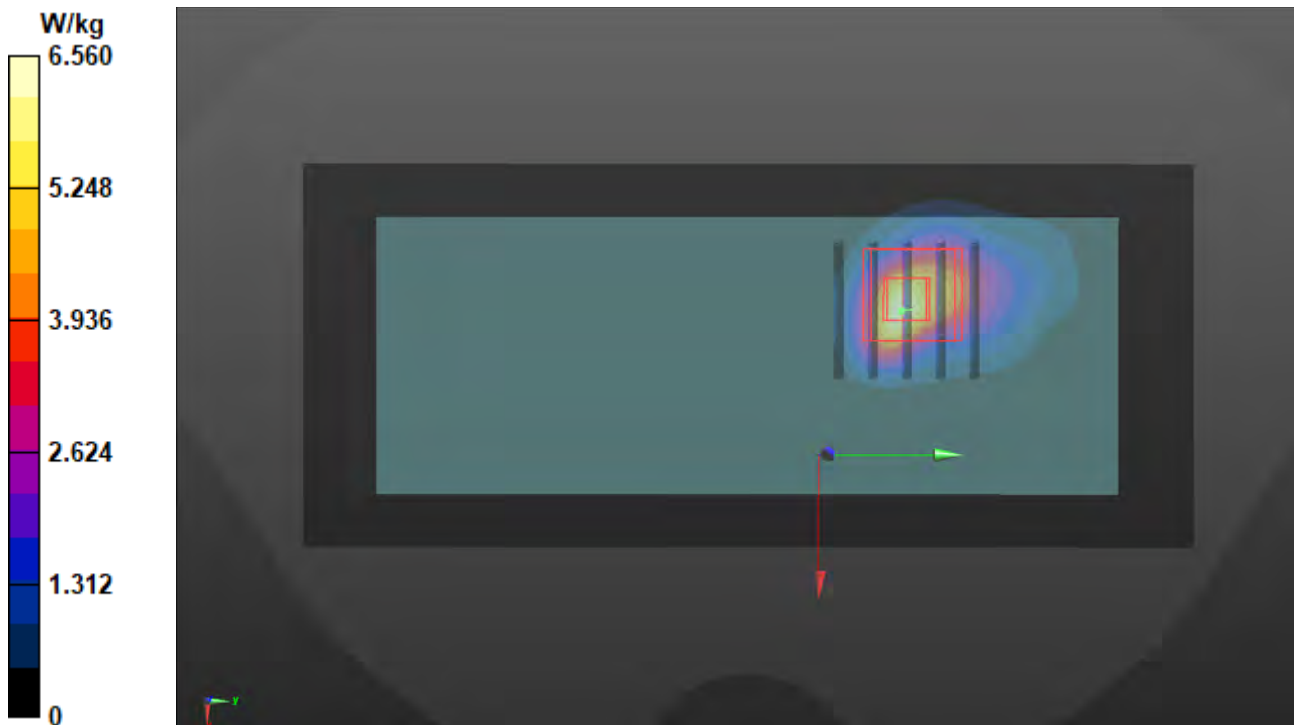
Peak SAR (extrapolated) = 7.34 W/kg

SAR(1 g) = 3.65 W/kg; SAR(10 g) = 1.73 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 9.1 mm

Ratio of SAR at M2 to SAR at M1 = 53.3%

Maximum value of SAR (measured) = 5.62 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P19 LTE 5_QPSK10M_Left Side_0mm_Ch20450_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10175 - CAG, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 829 MHz; Duty Cycle: 1:3.74

Medium: H07T10N1_1130 Medium parameters used: $f = 829$ MHz; $\sigma = 0.931$ S/m; $\epsilon_r = 40.458$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.5, 10.5, 10.5) @ 829 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.209 W/kg

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

Reference Value = 38.29 V/m; Power Drift = -0.02 dB

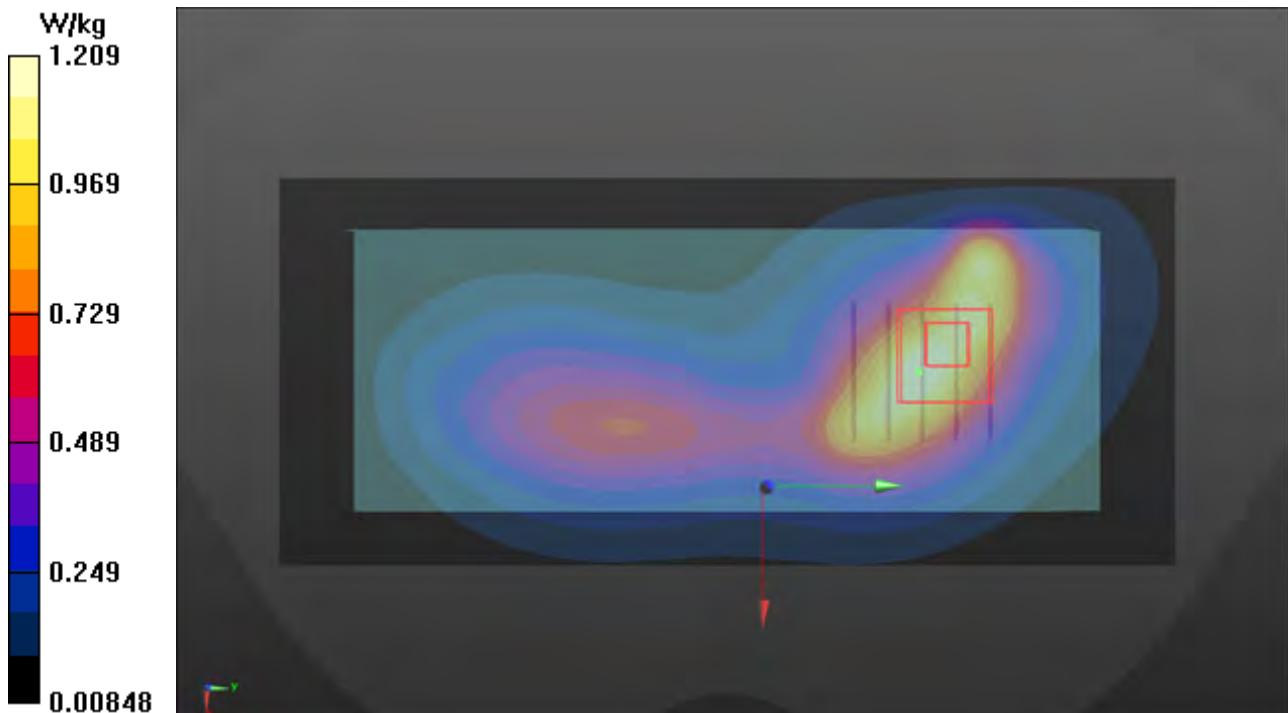
Peak SAR (extrapolated) = 1.88 W/kg

SAR(1 g) = 0.879 W/kg; SAR(10 g) = 0.490 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 10.2 mm

Ratio of SAR at M2 to SAR at M1 = 49.6%

Maximum value of SAR (measured) = 1.43 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P20 LTE 12_QPSK10M_Left Side_0mm_Ch23095_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10175 - CAG, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 707.5 MHz; Duty Cycle: 1:3.74

Medium: H06T09N1_1130 Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.886$ S/m; $\epsilon_r = 41.696$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.69, 10.69, 10.69) @ 707.5 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 2.09 W/kg

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

Reference Value = 50.09 V/m; Power Drift = 0.01 dB

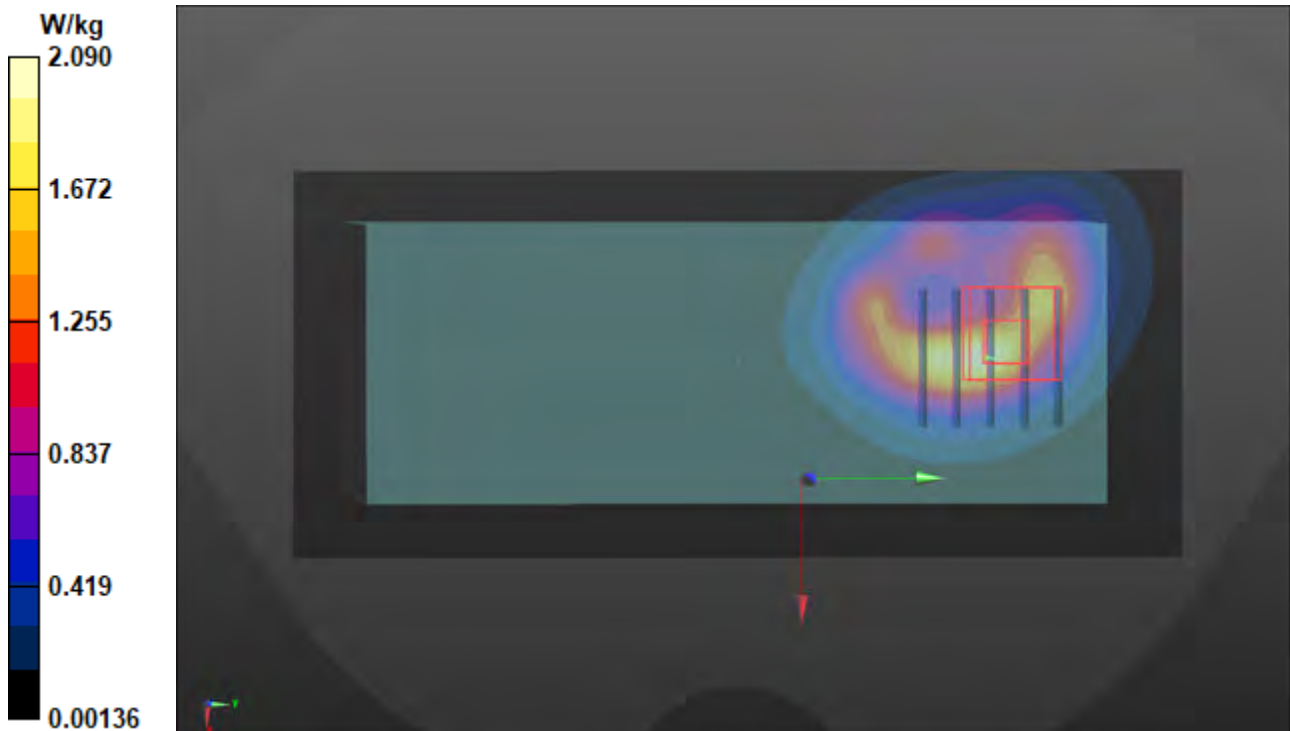
Peak SAR (extrapolated) = 2.77 W/kg

SAR(1 g) = 1.34 W/kg; SAR(10 g) = 0.705 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.5 mm

Ratio of SAR at M2 to SAR at M1 = 48.3%

Maximum value of SAR (measured) = 2.22 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P21 LTE 13_QPSK10M_Left Side_0mm_Ch23230_1RB_OS0

DUT: BBGM-WTW-P21116005

Communication System: UID 10175 - CAG, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 782 MHz; Duty Cycle: 1:3.74

Medium: H07T10N1_1130 Medium parameters used: $f = 782$ MHz; $\sigma = 0.913$ S/m; $\epsilon_r = 40.64$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(10.69, 10.69, 10.69) @ 782 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x141x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 1.44 W/kg

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

Reference Value = 41.51 V/m; Power Drift = 0.01 dB

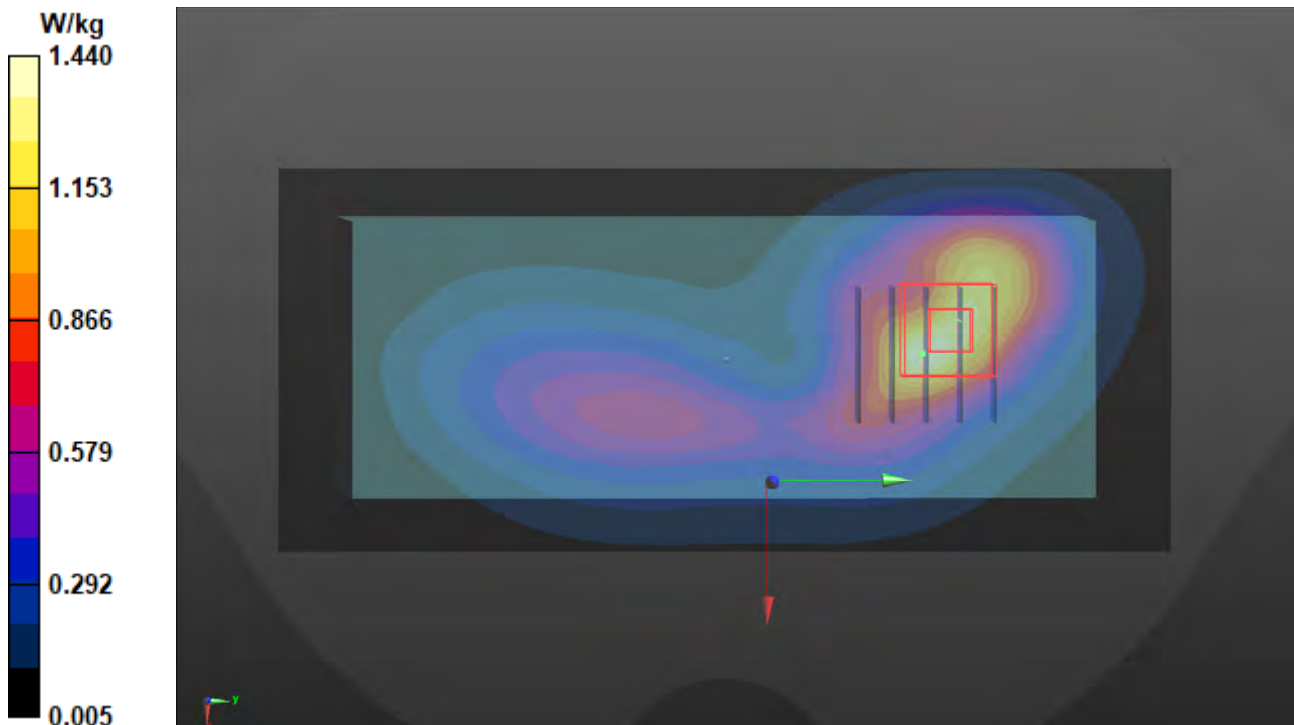
Peak SAR (extrapolated) = 1.98 W/kg

SAR(1 g) = 0.973 W/kg; SAR(10 g) = 0.536 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 52.2%

Maximum value of SAR (measured) = 1.53 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/12/07

P23 LTE 66_QPSK20M_Left Side_0mm_Ch132322_1RB_OS0

DUT: P21116005

Communication System: UID 10169 - CAE, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1745 MHz; Duty Cycle: 1:3.74

Medium: H16T20N1_1207 Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.324$ S/m; $\epsilon_r = 41.243$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.5°C ; Liquid Temperature : 23.2°C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.54, 8.54, 8.54) @ 1745 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: Twin SAM Phantom_1653; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (61x141x1): Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 6.18 W/kg

Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 66.85 V/m; Power Drift = -0.06 dB

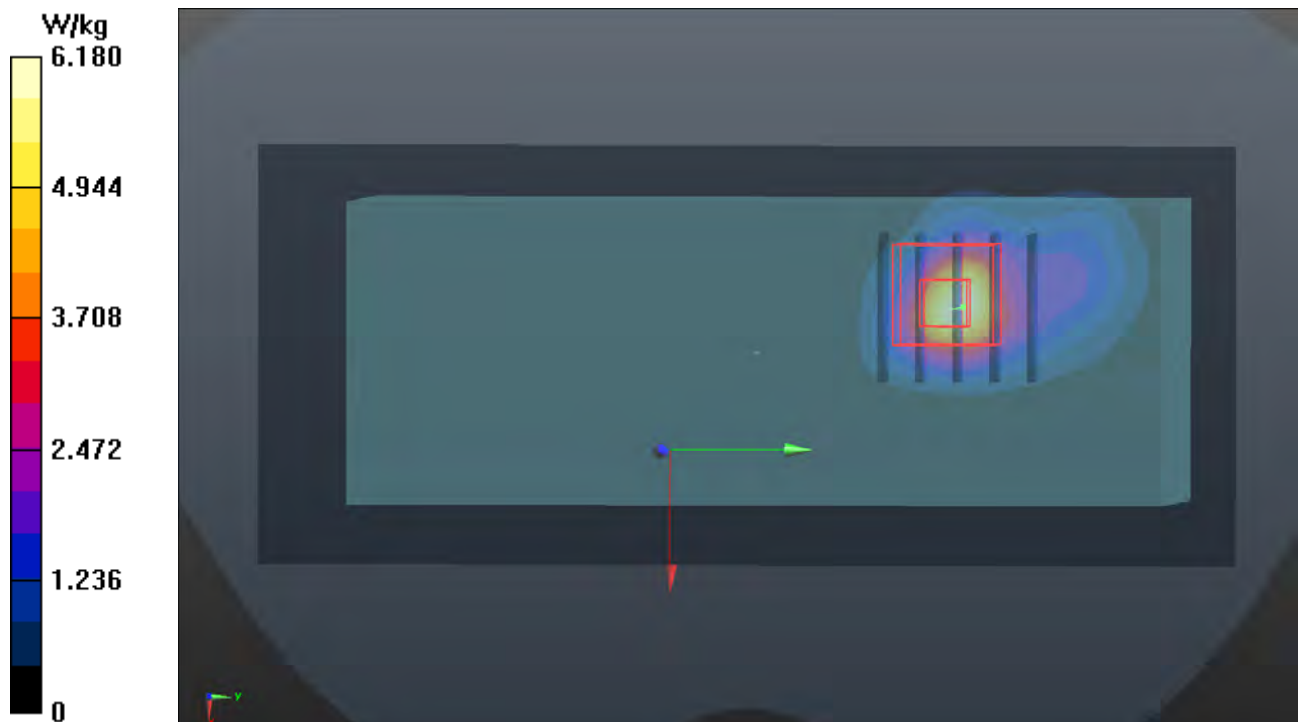
Peak SAR (extrapolated) = 7.67 W/kg

SAR(1 g) = 3.75 W/kg; SAR(10 g) = 1.68 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 8.2 mm

Ratio of SAR at M2 to SAR at M1 = 47.7%

Maximum value of SAR (measured) = 5.47 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/11/30

P25 WLAN2.4G_802.11b_Right Side_0mm_Ch11_Ant 0

DUT: BBGM-WTW-P21116005

Communication System: UID 10012 - CAB, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps); Frequency: 2462 MHz; Duty Cycle: 1:1

Medium: H19T27N1_1130 Medium parameters used: $f = 2462$ MHz; $\sigma = 1.902$ S/m; $\epsilon_r = 38.799$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.61, 7.61, 7.61) @ 2462 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (81x171x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 0.743 W/kg

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

Reference Value = 18.33 V/m; Power Drift = -0.01 dB

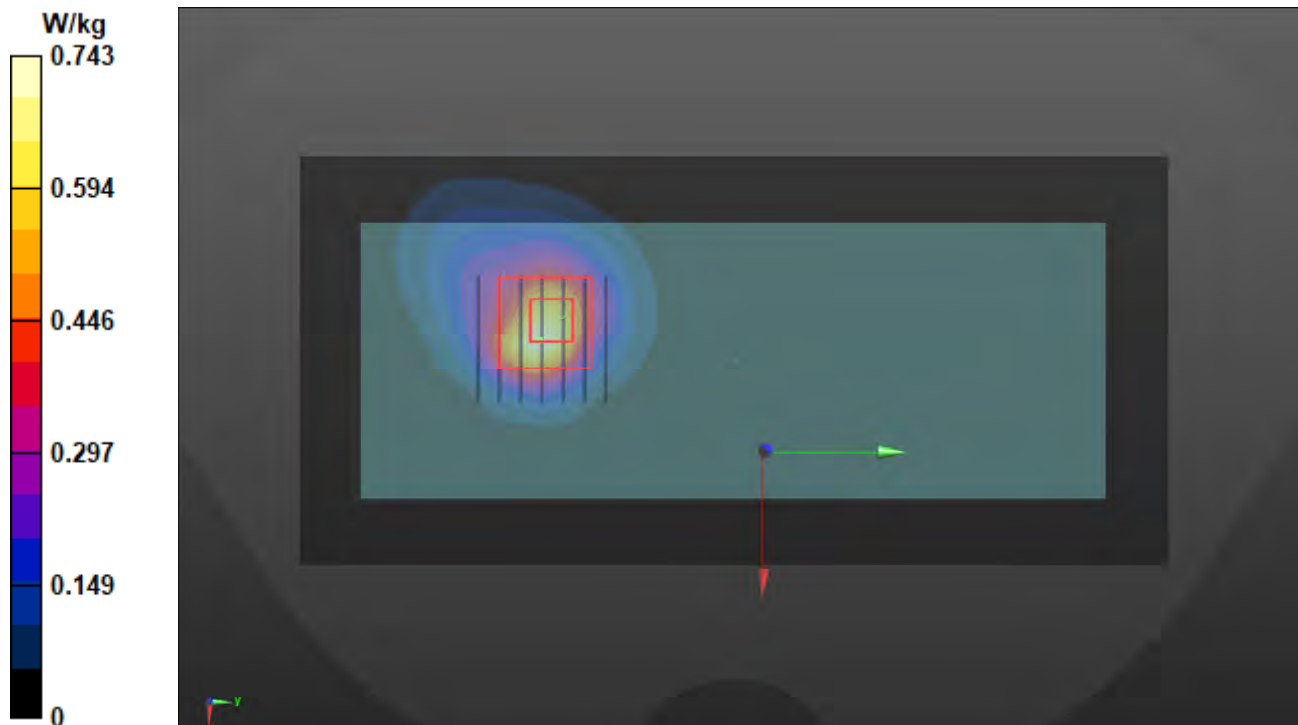
Peak SAR (extrapolated) = 0.761 W/kg

SAR(1 g) = 0.355 W/kg; SAR(10 g) = 0.183 W/kg (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 9.4 mm

Ratio of SAR at M2 to SAR at M1 = 58.1%

Maximum value of SAR (measured) = 0.600 W/kg



Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/12/03

P26 BT_BDR_Right Side_0mm_Ch78_Ant 0

DUT: BBGM-WTW-P21116005

Communication System: UID 10032 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2480 MHz; Duty Cycle: 1:1.3

Medium: H19T27N1_1203 Medium parameters used: $f = 2480$ MHz; $\sigma = 1.877$ S/m; $\epsilon_r = 39.271$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.2 °C

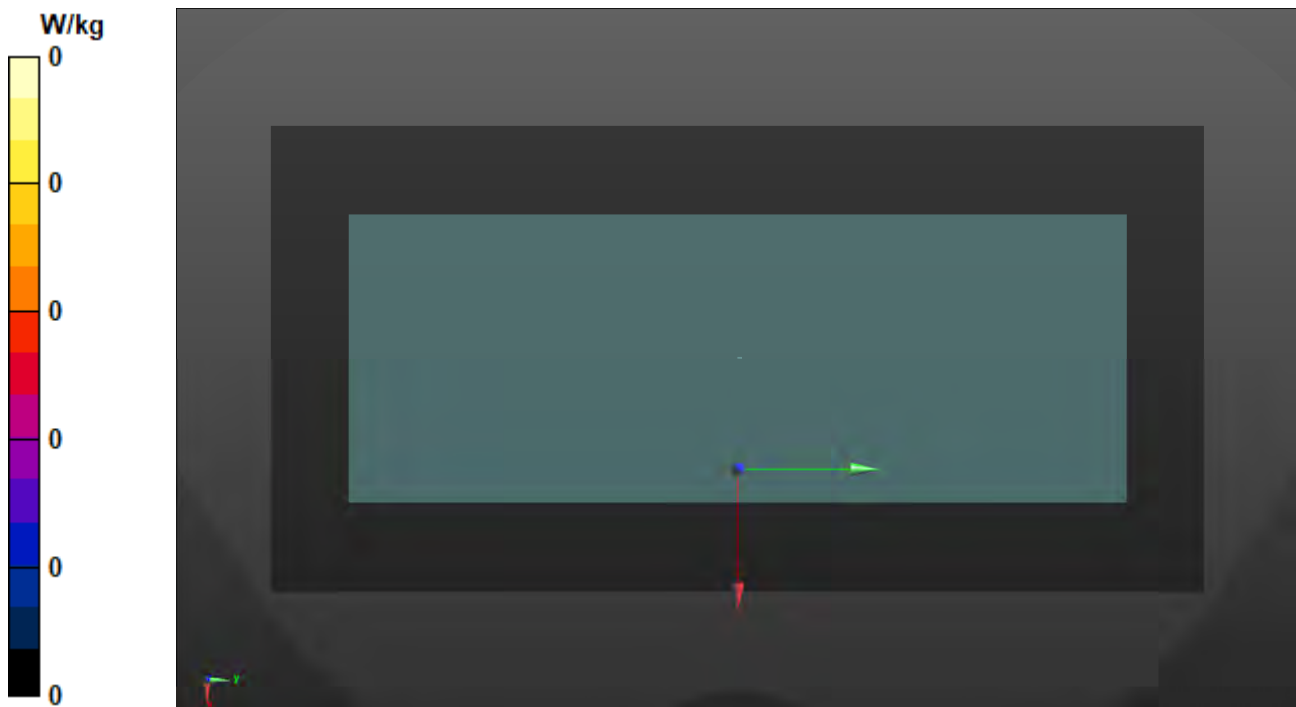
DASY5 Configuration:

- Probe: EX3DV4 - SN7537; ConvF(7.61, 7.61, 7.61) @ 2480 MHz; Calibrated: 2021/04/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1585; Calibrated: 2021/04/15
- Phantom: Twin-SAM V8.0_1988; Type: QD 000 P41 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Area Scan (91x181x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm

Fast SAR: SAR(1 g) = 0 W/kg; SAR(10 g) = 0 W/kg (SAR corrected for target medium)

Maximum value of SAR (interpolated) = 0 W/kg



Annex C. Tissue & System Verification

The measuring results for tissue simulating liquid and system check are shown as below.

Note:

1. For Section 4.3, the dielectric properties of the tissue simulating liquid have been measured within 24 hours before the SAR testing and within ± 10 % of the target values. Liquid temperature during the SAR testing has kept within ± 2 °C.
2. For Section 4.4, The SAR measurement system was validated according to procedures in KDB 865664 D01. The validation status in tabulated summary is as below.
3. For Section 4.5, Comparing to the reference SAR value provided by SPEAG in dipole calibration certificate, the deviation of system check results is within its specification of 10 %. The result indicates the system check can meet the variation criterion and the plots please refer to Annex A of this report.

Tissue Verification									Validation for CW			Validation for Modulation				System Validation					Note			
Plot No.	Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Targeted Conductivity (σ)	Targeted Permittivity (ε _r)	Deviation Conductivity (σ)	Deviation Permittivity (ε _r)	Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR	Date	Frequency (MHz)	Targeted 1g SAR (W/kg)	Measured 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N	Output Power (dB)
S01	1900	23.1	1.464	38.847	1.4	40	4.57	-2.88	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	1900	40.40	2.07	41.30	2.23	5d036	7537	1585	17
S02	1750	23.1	1.372	39.12	1.37	40.1	0.15	-2.44	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	1750	35.80	1.83	36.51	1.99	1055	7537	1585	17
S03	835	23.1	0.934	40.425	0.9	41.5	3.78	-2.59	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	835	9.58	0.474	9.46	-1.28	4d121	7537	1585	17
S04	1900	23.1	1.464	38.847	1.4	40	4.57	-2.88	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	1900	40.40	2.07	41.30	2.23	5d036	7537	1585	17
S05	1750	23.1	1.372	39.12	1.37	40.1	0.15	-2.44	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	1750	35.80	1.83	36.51	1.99	1055	7537	1585	17
S06	835	23.1	0.934	40.425	0.9	41.5	3.78	-2.59	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	835	9.58	0.474	9.46	-1.28	4d121	7537	1585	17
S07	750	23.1	0.902	41.582	0.9	42	0.22	-1.00	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	750	8.56	0.442	8.82	3.03	1013	7537	1585	17
S08	750	23.1	0.902	41.582	0.9	42	0.22	-1.00	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	750	8.56	0.442	8.82	3.03	1013	7537	1585	17
S10	1750	23.2	1.329	41.231	1.37	40.1	-2.99	2.82	Pass	Pass	Pass	N/A	N/A	N/A	Dec. 07, 2021	1750	35.80	1.83	36.51	1.99	1055	3650	1590	17
S12	2450	23.1	1.881	38.845	1.8	39.2	4.50	-0.91	Pass	Pass	Pass	OFDM	N/A	Pass	Nov. 30, 2021	2450	52.60	2.43	48.48	-7.82	737	7537	1585	17
S13	2450	23.2	1.877	39.271	1.8	39.2	4.28	0.18	Pass	Pass	Pass	OFDM	N/A	Pass	Dec. 03, 2021	2450	52.60	2.39	47.69	-9.34	737	7537	1585	17

Tissue Verification									Validation for CW			Validation for Modulation				System Validation					Note			
Plot No.	Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε _r)	Targeted Conductivity (σ)	Targeted Permittivity (ε _r)	Deviation Conductivity (σ)	Deviation Permittivity (ε _r)	Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR	Date	Frequency (MHz)	Targeted 10g SAR (W/kg)	Measured 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)	Dipole S/N	Probe S/N	DAE S/N	Output Power (dB)
S14	1900	23.1	1.464	38.847	1.4	40	4.57	-2.88	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	1900	21.10	1.11	22.15	4.96	5d036	7537	1585	17
S15	1750	23.1	1.372	39.12	1.37	40.1	0.15	-2.44	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	1750	18.60	0.984	19.63	5.56	1055	7537	1585	17
S16	835	23.1	0.934	40.425	0.9	41.5	3.78	-2.59	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	835	6.19	0.319	6.36	2.83	4d121	7537	1585	17
S17	1900	23.1	1.464	38.847	1.4	40	4.57	-2.88	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	1900	21.10	1.11	22.15	4.96	5d036	7537	1585	17
S18	1750	23.1	1.372	39.12	1.37	40.1	0.15	-2.44	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	1750	18.60	0.984	19.63	5.56	1055	7537	1585	17
S19	835	23.1	0.934	40.425	0.9	41.5	3.78	-2.59	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	835	6.19	0.319	6.36	2.83	4d121	7537	1585	17
S20	750	23.1	0.902	41.582	0.9	42	0.22	-1.00	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	750	5.62	0.283	5.65	0.47	1013	7537	1585	17
S21	750	23.1	0.902	41.582	0.9	42	0.22	-1.00	Pass	Pass	Pass	N/A	N/A	N/A	Nov. 30, 2021	750	5.62	0.283	5.65	0.47	1013	7537	1585	17
S23	1750	23.2	1.329	41.231	1.37	40.1	-2.99	2.82	Pass	Pass	Pass	N/A	N/A	N/A	Dec. 07, 2021	1750	18.60	0.97	19.35	4.05	1055	3650	1590	17
S25	2450	23.1	1.881	38.845	1.8	39.2	4.50	-0.91	Pass	Pass	Pass	OFDM	N/A	Pass	Nov. 30, 2021	2450	23.90	1.08	21.55	-9.84	737	7537	1585	17
S26	2450	23.2	1.877	39.271	1.8	39.2	4.28	0.18	Pass	Pass	Pass	OFDM	N/A	Pass	Dec. 03, 2021	2450	23.90	1.11	22.15	-7.33	737	7537	1585	17

Annex D. Maximum Target Conducted Power

The maximum conducted average power (Unit: dBm) including tune-up tolerance is shown as below.

WCDMA Max. Tune-up Power (Full)		
Mode	RMC 12.2K	HSDPA DC-HSDPA HSUPA
	Maximum Target Power	Maximum Target Power
WCDMA Band II	23.5	22.5
WCDMA Band IV	23.5	22.5
WCDMA Band V	23.5	22.5

LTE Max. Tune-up Power (Full)		
Mode	QPSK	16QAM
	Maximum Target Power	Maximum Target Power
LTE 2	23.5	22.5
LTE 4	23.0	22.0
LTE 5	23.5	22.5
LTE 12	23.5	22.5
LTE 13	24.0	23.0
LTE 66	24.0	23.0

WLAN Tune-up Power (Full)			
WLAN 2.4GHz			
Mode	Channel	Frequency	SISO Ant 0 Max Tune up
802.11b	1	2412	15.0
	6	2437	15.0
	11	2462	15.0
802.11g	1	2412	14.0
	6	2437	14.0
	11	2462	14.0
802.11n HT20	1	2412	13.0
	6	2437	13.0
	11	2462	13.0

WLAN Tune-up Power (Full)			
Bluetooth			
Mode	Channel	Frequency	Ant 0 Max Tune-up
BR / EDR	0	2402	9.0
	39	2441	10.0
	78	2480	10.0

Annex E. Measured Conducted Power Result

The measuring conducted power (Unit: dBm) are shown as below.

WCDMA Conducted Power (Full)									
Band	WCDMA II			WCDMA IV			WCDMA V		
TX Channel	9262	9400	9538	1312	1413	1513	4132	4182	4233
Rx Channel	9662	9800	9938	1537	1638	1738	4357	4407	4458
Frequency	1852.4	1880	1907.6	1712.4	1732.6	1752.6	826.4	836.4	846.6
RMC 12.2K	23.18	23.36	23.19	23.47	23.49	23.45	23.49	23.23	23.08
HSDPA Subtest-1	22.39	22.46	22.43	22.48	22.49	22.43	22.44	22.43	22.29
HSDPA Subtest-2	22.38	22.47	22.43	22.47	22.48	22.49	22.40	22.48	22.29
HSDPA Subtest-3	21.99	22.00	21.96	21.92	21.96	21.94	21.92	21.93	21.84
HSDPA Subtest-4	21.98	21.98	21.95	21.89	21.92	21.88	22.00	21.94	21.83
DC-HSDPA Subtest-1	21.69	21.66	21.73	22.21	21.95	21.85	21.74	21.63	21.59
DC-HSDPA Subtest-2	21.58	21.77	21.63	21.82	22.09	21.69	21.60	21.78	21.49
DC-HSDPA Subtest-3	21.19	21.24	21.26	21.33	21.53	21.32	21.22	21.23	21.14
DC-HSDPA Subtest-4	21.28	21.33	21.15	21.42	21.62	21.21	21.30	21.32	21.03
HSUPA Subtest-1	21.90	21.84	22.10	22.47	22.48	22.44	22.06	21.85	22.45
HSUPA Subtest-2	20.40	20.19	19.89	20.46	20.48	20.44	20.49	20.47	20.41
HSUPA Subtest-3	20.92	21.08	20.97	21.31	21.22	21.19	21.00	21.25	21.09
HSUPA Subtest-4	20.48	20.34	20.33	20.46	20.49	20.42	20.48	20.38	20.28
HSUPA Subtest-5	22.40	22.50	22.30	22.39	22.44	22.41	22.50	22.41	22.40

LTE Conducted Power (Full)							
LTE Band 2							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		18700	18900	19100	
		Frequency (MHz)		1860	1880	1900	
20M	QPSK	1	0	23.22	23.31	23.29	0
		1	50	23.14	23.23	23.21	0
		1	99	23.18	23.27	23.25	0
		50	0	22.28	22.37	22.35	1
		50	25	22.20	22.29	22.27	1
		50	50	22.16	22.25	22.23	1
		100	0	22.14	22.23	22.21	1
20M	16QAM	1	0	22.24	22.33	22.31	1
		1	50	22.17	22.26	22.24	1
		1	99	22.14	22.23	22.21	1
		50	0	21.23	21.32	21.30	2
		50	25	21.19	21.28	21.26	2
		50	50	21.15	21.24	21.22	2
		100	0	21.16	21.25	21.23	2
BW	MCS Index	Channel		18675	18900	19125	3GPP MPR
		Frequency (MHz)		1857.5	1880	1902.5	
15M	QPSK	1	0	23.20	23.26	23.20	0
		1	37	23.13	23.14	23.17	0
		1	74	23.12	23.26	23.18	0
		36	0	22.19	22.35	22.26	1
		36	19	22.15	22.25	22.18	1
		36	39	22.12	22.20	22.21	1
		75	0	22.14	22.14	22.16	1
15M	16QAM	1	0	22.22	22.31	22.21	1
		1	37	22.14	22.16	22.14	1
		1	74	22.08	22.13	22.18	1
		36	0	21.21	21.24	21.29	2
		36	19	21.18	21.21	21.21	2
		36	39	21.06	21.16	21.13	2
		75	0	21.07	21.16	21.20	2

LTE Conducted Power (Full)							
LTE Band 2							
BW	MCS Index	Channel		18650	18900	19150	3GPP MPR
		Frequency (MHz)		1855	1880	1905	
10M	QPSK	1	0	23.13	23.21	23.20	0
		1	24	22.95	23.06	23.18	0
		1	49	23.03	23.10	23.18	0
		25	0	22.20	22.33	22.17	1
		25	12	22.11	22.20	22.12	1
		25	25	22.10	22.07	22.19	1
		50	0	22.03	22.01	22.11	1
10M	16QAM	1	0	22.04	22.18	22.20	1
		1	24	21.95	22.26	22.07	1
		1	49	21.97	22.14	21.99	1
		25	0	21.09	21.16	21.24	2
		25	12	21.03	21.10	21.12	2
		25	25	20.96	21.08	21.02	2
		50	0	21.06	21.06	21.16	2
BW	MCS Index	Channel		18625	18900	19175	3GPP MPR
		Frequency (MHz)		1852.5	1880	1907.5	
5M	QPSK	1	0	23.05	23.17	23.16	0
		1	12	23.03	23.15	22.95	0
		1	24	23.02	23.05	23.08	0
		12	0	22.26	22.30	22.06	1
		12	6	22.09	22.17	22.04	1
		12	13	22.11	22.15	22.08	1
		25	0	21.98	22.09	21.96	1
5M	16QAM	1	0	22.17	22.19	22.13	1
		1	12	22.02	22.06	22.10	1
		1	24	22.05	22.16	22.13	1
		12	0	21.16	21.15	21.15	2
		12	6	21.08	21.24	21.19	2
		12	13	20.98	21.18	21.15	2
		25	0	20.95	21.12	21.05	2

LTE Conducted Power (Full)							
LTE Band 2							
BW	MCS Index	Channel		18615	18900	19185	3GPP MPR
		Frequency (MHz)		1851.5	1880	1908.5	
3M	QPSK	1	0	23.21	23.20	23.15	0
		1	7	22.97	23.14	23.14	0
		1	14	23.09	23.15	23.12	0
		8	0	22.14	22.28	22.17	1
		8	3	22.08	22.25	22.20	1
		8	7	21.98	22.11	22.08	1
		15	0	22.06	22.12	21.97	1
3M	16QAM	1	0	22.22	22.18	22.13	1
		1	7	21.97	22.20	22.05	1
		1	14	22.09	22.09	22.02	1
		8	0	21.11	21.20	21.12	2
		8	3	21.07	21.25	21.11	2
		8	7	21.05	21.15	21.01	2
		15	0	21.11	21.06	21.09	2
BW	MCS Index	Channel		18607	18900	19193	3GPP MPR
		Frequency (MHz)		1850.7	1880	1909.3	
1.4M	QPSK	1	0	23.08	23.16	23.17	0
		1	2	22.92	23.05	23.03	0
		1	5	22.99	23.13	23.15	0
		3	0	23.21	23.22	23.15	0
		3	1	23.07	23.15	23.15	0
		3	3	23.07	23.11	23.17	0
		6	0	22.05	22.08	22.18	1
1.4M	16QAM	1	0	22.13	22.25	22.21	1
		1	2	22.02	22.22	22.19	1
		1	5	21.95	22.13	22.13	1
		3	0	22.23	22.18	22.21	1
		3	1	22.04	22.13	22.08	1
		3	3	22.09	22.08	22.07	1
		6	0	20.97	21.14	21.12	2

LTE Conducted Power (Full)							
LTE Band 4							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20050	20175	20300	
		Frequency (MHz)		1720	1732.5	1745	
20M	QPSK	1	0	22.76	22.69	22.67	0
		1	50	22.63	22.56	22.54	0
		1	99	22.44	22.37	22.35	0
		50	0	21.71	21.64	21.62	1
		50	25	21.69	21.62	21.60	1
		50	50	21.66	21.59	21.57	1
		100	0	21.62	21.55	21.53	1
20M	16QAM	1	0	21.68	21.61	21.59	1
		1	50	21.64	21.57	21.55	1
		1	99	21.59	21.52	21.50	1
		50	0	20.73	20.66	20.64	2
		50	25	20.70	20.63	20.61	2
		50	50	20.64	20.57	20.55	2
		100	0	20.66	20.59	20.57	2
BW	MCS Index	Channel		20025	20175	20325	3GPP MPR
		Frequency (MHz)		1717.5	1732.5	1747.5	
15M	QPSK	1	0	22.72	22.62	22.66	0
		1	37	22.59	22.55	22.45	0
		1	74	22.34	22.35	22.30	0
		36	0	21.63	21.63	21.53	1
		36	19	21.59	21.52	21.60	1
		36	39	21.57	21.51	21.53	1
		75	0	21.59	21.45	21.53	1
15M	16QAM	1	0	21.64	21.53	21.52	1
		1	37	21.57	21.47	21.55	1
		1	74	21.54	21.52	21.48	1
		36	0	20.71	20.58	20.58	2
		36	19	20.70	20.62	20.58	2
		36	39	20.58	20.56	20.55	2
		75	0	20.56	20.56	20.57	2

LTE Conducted Power (Full)							
LTE Band 4							
BW	MCS Index	Channel		20000	20175	20350	3GPP MPR
		Frequency (MHz)		1715	1732.5	1750	
10M	QPSK	1	0	22.69	22.54	22.55	0
		1	24	22.42	22.43	22.54	0
		1	49	22.30	22.23	22.31	0
		25	0	21.55	21.56	21.45	1
		25	12	21.54	21.50	21.50	1
		25	25	21.61	21.57	21.48	1
		50	0	21.45	21.38	21.38	1
10M	16QAM	1	0	21.50	21.46	21.45	1
		1	24	21.64	21.39	21.36	1
		1	49	21.54	21.42	21.35	1
		25	0	20.61	20.60	20.41	2
		25	12	20.56	20.55	20.39	2
		25	25	20.50	20.51	20.36	2
		50	0	20.65	20.53	20.47	2
BW	MCS Index	Channel		19975	20175	20375	3GPP MPR
		Frequency (MHz)		1712.5	1732.5	1752.5	
5M	QPSK	1	0	22.67	22.46	22.52	0
		1	12	22.48	22.44	22.40	0
		1	24	22.24	22.27	22.16	0
		12	0	21.60	21.58	21.49	1
		12	6	21.66	21.48	21.38	1
		12	13	21.53	21.54	21.32	1
		25	0	21.40	21.52	21.37	1
5M	16QAM	1	0	21.59	21.49	21.44	1
		1	12	21.44	21.38	21.42	1
		1	24	21.38	21.31	21.38	1
		12	0	20.57	20.52	20.51	2
		12	6	20.49	20.48	20.43	2
		12	13	20.54	20.53	20.41	2
		25	0	20.48	20.38	20.39	2

LTE Conducted Power (Full)							
LTE Band 4							
BW	MCS Index	Channel		19965	20175	20385	3GPP MPR
		Frequency (MHz)		1711.5	1732.5	1753.5	
3M	QPSK	1	0	22.56	22.65	22.56	0
		1	7	22.57	22.55	22.39	0
		1	14	22.33	22.26	22.26	0
		8	0	21.56	21.53	21.49	1
		8	3	21.53	21.60	21.52	1
		8	7	21.53	21.49	21.54	1
		15	0	21.43	21.45	21.33	1
3M	16QAM	1	0	21.47	21.53	21.41	1
		1	7	21.57	21.35	21.37	1
		1	14	21.56	21.40	21.38	1
		8	0	20.68	20.58	20.46	2
		8	3	20.56	20.47	20.46	2
		8	7	20.61	20.51	20.41	2
		15	0	20.56	20.46	20.51	2
BW	MCS Index	Channel		19957	20175	20393	3GPP MPR
		Frequency (MHz)		1710.7	1732.5	1754.3	
1.4M	QPSK	1	0	22.63	22.57	22.52	0
		1	2	22.55	22.55	22.29	0
		1	5	22.20	22.19	22.18	0
		3	0	22.61	22.44	22.48	0
		3	1	22.57	22.47	22.47	0
		3	3	22.53	22.41	22.40	0
		6	0	21.48	21.39	21.32	1
1.4M	16QAM	1	0	21.60	21.41	21.47	1
		1	2	21.48	21.47	21.42	1
		1	5	21.43	21.36	21.30	1
		3	0	21.64	21.50	21.45	1
		3	1	21.65	21.47	21.45	1
		3	3	21.50	21.45	21.53	1
		6	0	20.43	20.49	20.51	2

LTE Conducted Power (Full)							
LTE Band 5							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		20450	20525	20600	
		Frequency (MHz)		829	836.5	844	
10M	QPSK	1	0	23.31	23.13	23.16	0
		1	24	23.24	23.06	23.09	0
		1	49	23.05	22.87	22.90	0
		25	0	22.41	22.23	22.26	1
		25	12	22.28	22.10	22.13	1
		25	25	22.21	22.03	22.06	1
		50	0	22.22	22.04	22.07	1
10M	16QAM	1	0	22.09	21.91	21.94	1
		1	24	22.24	22.06	22.09	1
		1	49	21.95	21.77	21.80	1
		25	0	21.46	21.28	21.31	2
		25	12	21.33	21.15	21.18	2
		25	25	21.27	21.09	21.12	2
		50	0	21.29	21.11	21.14	2
BW	MCS Index	Channel		20425	20525	20625	3GPP MPR
		Frequency (MHz)		826.5	836.5	846.5	
5M	QPSK	1	0	23.24	23.13	23.11	0
		1	12	23.19	22.98	23.08	0
		1	24	23.02	22.78	22.87	0
		12	0	22.34	22.21	22.17	1
		12	6	22.22	22.07	22.07	1
		12	13	22.21	21.95	21.99	1
		25	0	22.14	22.04	21.97	1
5M	16QAM	1	0	22.01	21.82	21.89	1
		1	12	22.14	22.03	22.09	1
		1	24	21.85	21.73	21.74	1
		12	0	21.44	21.18	21.27	2
		12	6	21.29	21.05	21.13	2
		12	13	21.20	21.06	21.03	2
		25	0	21.26	21.11	21.12	2

LTE Conducted Power (Full)							
LTE Band 5							
BW	MCS Index	Channel		20415	20525	20635	3GPP MPR
		Frequency (MHz)		825.5	836.5	847.5	
3M	QPSK	1	0	23.17	22.94	23.06	0
		1	7	23.09	22.81	23.00	0
		1	14	22.84	22.73	22.73	0
		8	0	22.27	22.23	22.20	1
		8	3	22.16	22.03	22.08	1
		8	7	22.10	21.89	21.95	1
		15	0	22.09	21.99	21.97	1
3M	16QAM	1	0	21.89	21.85	21.75	1
		1	7	22.20	21.94	22.03	1
		1	14	21.86	21.58	21.58	1
		8	0	21.45	21.14	21.20	2
		8	3	21.18	20.98	21.06	2
		8	7	21.18	21.02	20.99	2
		15	0	21.07	20.86	20.94	2
BW	MCS Index	Channel		20407	20525	20643	3GPP MPR
		Frequency (MHz)		824.7	836.5	848.3	
1.4M	QPSK	1	0	23.19	22.98	23.07	0
		1	2	23.09	22.93	23.00	0
		1	5	22.90	22.69	22.62	0
		3	0	22.35	22.05	22.12	0
		3	1	22.16	22.02	21.96	0
		3	3	22.12	21.99	21.91	0
		6	0	22.03	21.89	21.79	1
1.4M	16QAM	1	0	21.96	21.75	21.77	1
		1	2	22.08	21.91	21.88	1
		1	5	21.88	21.65	21.74	1
		3	0	21.37	21.10	21.18	1
		3	1	21.21	21.00	20.94	1
		3	3	21.17	20.93	20.94	1
		6	0	21.18	20.91	21.04	2

LTE Conducted Power (Full)							
LTE Band 12							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		23060	23095	23130	
		Frequency (MHz)		704	707.5	711	
10M	QPSK	1	0	23.16	23.47	23.27	0
		1	24	23.08	23.39	23.19	0
		1	49	22.90	23.21	23.01	0
		25	0	22.15	22.46	22.26	1
		25	12	22.11	22.42	22.22	1
		25	25	22.06	22.37	22.17	1
		50	0	22.10	22.41	22.21	1
10M	16QAM	1	0	22.11	22.42	22.22	1
		1	24	22.06	22.37	22.17	1
		1	49	22.04	22.35	22.15	1
		25	0	21.14	21.45	21.25	2
		25	12	21.11	21.42	21.22	2
		25	25	21.06	21.37	21.17	2
		50	0	21.08	21.39	21.19	2
BW	MCS Index	Channel		23035	23095	23155	3GPP MPR
		Frequency (MHz)		701.5	707.5	713.5	
5M	QPSK	1	0	23.15	23.44	23.17	0
		1	12	23.00	23.33	23.16	0
		1	24	22.82	23.18	22.98	0
		12	0	22.11	22.37	22.20	1
		12	6	22.04	22.38	22.14	1
		12	13	22.03	22.28	22.09	1
		25	0	22.04	22.38	22.17	1
5M	16QAM	1	0	22.01	22.33	22.14	1
		1	12	22.00	22.37	22.08	1
		1	24	22.01	22.26	22.10	1
		12	0	21.04	21.37	21.24	2
		12	6	21.09	21.39	21.20	2
		12	13	21.00	21.36	21.12	2
		25	0	21.04	21.37	21.17	2

LTE Conducted Power (Full)							
LTE Band 12							
BW	MCS Index	Channel		23025	23095	23165	3GPP MPR
		Frequency (MHz)		700.5	707.5	714.5	
3M	QPSK	1	0	23.03	23.27	23.11	0
		1	7	22.89	23.26	23.01	0
		1	14	22.72	23.18	22.80	0
		8	0	22.00	22.35	22.22	1
		8	3	21.96	22.22	22.12	1
		8	7	21.96	22.29	22.04	1
		15	0	21.99	22.37	22.09	1
3M	16QAM	1	0	21.98	22.38	22.00	1
		1	7	21.92	22.32	22.09	1
		1	14	21.79	22.25	22.09	1
		8	0	21.10	21.40	21.18	2
		8	3	21.08	21.32	21.07	2
		8	7	20.91	21.26	21.00	2
		15	0	21.04	21.14	21.06	2
BW	MCS Index	Channel		23017	23095	23173	3GPP MPR
		Frequency (MHz)		699.7	707.5	715.3	
1.4M	QPSK	1	0	23.12	23.28	23.00	0
		1	2	22.96	23.21	22.93	0
		1	5	22.72	22.99	22.83	0
		3	0	21.98	22.31	22.12	0
		3	1	22.09	22.20	22.00	0
		3	3	21.90	22.32	21.94	0
		6	0	21.96	22.24	21.99	1
1.4M	16QAM	1	0	22.05	22.32	22.06	1
		1	2	21.90	22.27	22.08	1
		1	5	21.83	22.21	22.00	1
		3	0	21.08	21.34	21.11	1
		3	1	21.01	21.35	21.09	1
		3	3	20.93	21.14	21.07	1
		6	0	20.92	21.24	21.05	2

LTE Conducted Power (Full)							
LTE Band 13							
BW	MCS Index	RB Size	RB Offset		Mid		3GPP MPR (dB)
		Channel			23230		
		Frequency (MHz)			782		
10M	QPSK	1	0		23.77		0
		1	24		23.75		0
		1	49		23.72		0
		25	0		22.81		1
		25	12		22.75		1
		25	25		22.71		1
		50	0		22.73		1
10M	16QAM	1	0		22.77		1
		1	24		22.72		1
		1	49		22.68		1
		25	0		21.75		2
		25	12		21.72		2
		25	25		21.69		2
		50	0		21.71		2
BW	MCS Index	Channel		23205	23230	23255	3GPP MPR
		Frequency (MHz)		779.5	782	784.5	
5M	QPSK	1	0	23.57	23.64	23.61	0
		1	12	23.54	23.61	23.58	0
		1	24	23.49	23.56	23.53	0
		12	0	22.61	22.68	22.65	1
		12	6	22.58	22.65	22.62	1
		12	13	22.54	22.61	22.58	1
		25	0	22.56	22.63	22.60	1
5M	16QAM	1	0	22.59	22.66	22.63	1
		1	12	22.54	22.61	22.58	1
		1	24	22.48	22.55	22.52	1
		12	0	21.62	21.69	21.66	2
		12	6	21.59	21.66	21.63	2
		12	13	21.55	21.62	21.59	2
		25	0	21.57	21.64	21.61	2

LTE Conducted Power (Full)							
LTE Band 66							
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		132072	132322	132572	
		Frequency (MHz)		1720	1745	1770	
20M	QPSK	1	0	23.65	23.97	23.33	0
		1	50	23.25	23.32	23.28	0
		1	99	23.05	23.15	23.14	0
		50	0	21.94	22.01	21.95	1
		50	25	21.88	21.97	21.88	1
		50	50	21.80	21.88	21.78	1
		100	0	21.81	21.86	21.76	1
20M	16QAM	1	0	21.96	22.03	21.95	1
		1	50	22.04	22.09	22.07	1
		1	99	21.77	21.84	21.81	1
		50	0	21.12	21.13	21.11	2
		50	25	21.06	21.09	21.00	2
		50	50	21.11	21.11	21.07	2
		100	0	20.92	21.00	20.91	2
BW	MCS Index	Channel		132047	132322	132597	3GPP MPR
		Frequency (MHz)		1717.5	1745	1772.5	
15M	QPSK	1	0	23.59	23.90	23.29	0
		1	37	23.20	23.24	23.21	0
		1	74	23.04	23.14	23.12	0
		36	0	21.84	21.91	21.93	1
		36	19	21.81	21.94	21.78	1
		36	39	21.73	21.79	21.77	1
		75	0	21.71	21.83	21.67	1
15M	16QAM	1	0	21.87	22.01	21.88	1
		1	37	22.02	22.01	22.01	1
		1	74	21.74	21.79	21.76	1
		36	0	21.04	21.13	21.11	2
		36	19	21.04	21.02	20.90	2
		36	39	21.10	21.09	21.07	2
		75	0	20.84	21.00	20.83	2

LTE Conducted Power (Full)							
LTE Band 66							
BW	MCS Index	Channel		132022	132322	132622	3GPP MPR
		Frequency (MHz)		1715	1745	1775	
10M	QPSK	1	0	23.65	23.91	23.33	0
		1	24	23.23	23.23	23.20	0
		1	49	23.03	23.06	23.06	0
		25	0	21.84	21.99	21.86	1
		25	12	21.87	21.97	21.78	1
		25	25	21.75	21.79	21.75	1
		50	0	21.80	21.83	21.69	1
10M	16QAM	1	0	21.93	22.03	21.92	1
		1	24	21.97	22.01	22.03	1
		1	49	21.69	21.75	21.75	1
		25	0	21.11	21.12	21.11	2
		25	12	20.99	21.05	20.91	2
		25	25	21.02	21.03	20.98	2
		50	0	20.91	20.93	20.82	2
BW	MCS Index	Channel		131997	132322	132647	3GPP MPR
		Frequency (MHz)		1712.5	1745	1777.5	
5M	QPSK	1	0	23.58	23.92	23.33	0
		1	12	23.20	23.24	23.23	0
		1	24	23.00	23.13	23.07	0
		12	0	21.94	21.94	21.90	1
		12	6	21.82	21.94	21.78	1
		12	13	21.77	21.88	21.70	1
		25	0	21.76	21.81	21.71	1
5M	16QAM	1	0	21.93	21.96	21.90	1
		1	12	21.96	22.05	22.05	1
		1	24	21.76	21.83	21.74	1
		12	0	21.09	21.07	21.10	2
		12	6	20.98	21.01	20.92	2
		12	13	21.04	21.03	20.99	2
		25	0	20.86	20.97	20.84	2

LTE Conducted Power (Full)							
LTE Band 66							
BW	MCS Index	Channel		131987	132322	132657	3GPP MPR
		Frequency (MHz)		1711.5	1745	1778.5	
3M	QPSK	1	0	23.63	23.90	23.24	0
		1	7	23.21	23.25	23.27	0
		1	14	22.99	23.13	23.09	0
		8	0	21.89	22.00	21.92	1
		8	3	21.78	21.90	21.88	1
		8	7	21.72	21.83	21.76	1
		15	0	21.72	21.81	21.73	1
3M	16QAM	1	0	21.94	21.97	21.91	1
		1	7	21.96	22.06	22.05	1
		1	14	21.71	21.83	21.73	1
		8	0	21.09	21.10	21.10	2
		8	3	21.00	21.01	20.96	2
		8	7	21.06	21.05	21.07	2
		15	0	20.91	20.93	20.84	2
BW	MCS Index	Channel		131979	132322	132665	3GPP MPR
		Frequency (MHz)		1710.7	1745	1779.3	
1.4M	QPSK	1	0	23.51	23.84	23.24	0
		1	2	23.11	23.07	23.21	0
		1	5	22.90	23.08	22.98	0
		3	0	22.87	22.85	22.76	0
		3	1	22.75	22.76	22.80	0
		3	3	22.57	22.84	22.63	0
		6	0	21.70	21.72	21.56	1
1.4M	16QAM	1	0	21.95	21.95	21.75	1
		1	2	21.99	21.96	22.06	1
		1	5	21.65	21.66	21.70	1
		3	0	21.95	22.12	22.08	1
		3	1	21.88	21.94	21.82	1
		3	3	22.06	21.97	21.87	1
		6	0	20.86	20.90	20.70	2

WLAN Conducted Power (Full)			
WLAN2.4GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11b	1	2412	14.28
	6	2437	14.62
	11	2462	14.38
802.11g	1	2412	13.65
	6	2437	13.47
	11	2462	13.91
802.11n HT20	1	2412	12.56
	6	2437	12.63
	11	2462	12.79

Bluetooth Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
BR / EDR	0	2402	8.1
	39	2441	8.33
	78	2480	8.66

Annex F. SAR Test Result

SAR Results for Body / Extremity Exposure Condition.

Note:

1. SAR testing for WLAN was performed on the maximum power mode.
2. SAR testing for LTE was performed on the maximum power mode.
3. The "< 0.001" means there is no SAR value or the SAR is too low to be measured.

Body SAR Test Result

System & Position								SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-1g (W/kg)	Scaled SAR-1g (W/kg)
	WCDMA II	RMC12.2K	Rear Face	15	9400			-	1.00	23.50	23.36	1.03	0.03	0.059	0.06
	WCDMA II	RMC12.2K	Rear Face	15	9262			-	1.00	23.50	23.18	1.08	-0.11	0.071	0.08
1	WCDMA II	RMC12.2K	Rear Face	15	9538			-	1.00	23.50	23.19	1.07	0.09	0.092	0.10
	WCDMA IV	RMC12.2K	Rear Face	15	1413			-	1.00	23.50	23.49	1.00	0.02	0.117	0.12
2	WCDMA IV	RMC12.2K	Rear Face	15	1312			-	1.00	23.50	23.47	1.01	-0.04	0.151	0.15
	WCDMA IV	RMC12.2K	Rear Face	15	1513			-	1.00	23.50	23.45	1.01	-0.05	0.093	0.09
3	WCDMA V	RMC12.2K	Rear Face	15	4132			-	1.00	23.50	23.49	1.00	-0.07	0.18	0.18
	WCDMA V	RMC12.2K	Rear Face	15	4182			-	1.00	23.50	23.23	1.06	0.08	0.164	0.17
	WCDMA V	RMC12.2K	Rear Face	15	4233			-	1.00	23.50	23.08	1.10	-0.11	0.156	0.17
	LTE 2	QPSK20M	Rear Face	15	18900	1	0	-	1.00	23.50	23.31	1.04	0.03	0.058	0.06
	LTE 2	QPSK20M	Rear Face	15	18900	50	0	-	1.00	22.50	22.37	1.03	-0.12	0.048	0.05
	LTE 2	QPSK20M	Rear Face	15	18700	1	0	-	1.00	23.50	23.22	1.07	0.05	0.046	0.05
4	LTE 2	QPSK20M	Rear Face	15	19100	1	0	-	1.00	23.50	23.29	1.05	-0.1	0.069	0.07
5	LTE 4	QPSK20M	Rear Face	15	20050	1	0	-	1.00	23.00	22.76	1.06	-0.08	0.107	0.11
	LTE 4	QPSK20M	Rear Face	15	20050	50	0	-	1.00	22.00	21.71	1.07	0.03	0.075	0.08
	LTE 4	QPSK20M	Rear Face	15	20175	1	0	-	1.00	23.00	22.69	1.07	-0.11	0.086	0.09
	LTE 4	QPSK20M	Rear Face	15	20300	1	0	-	1.00	23.00	22.67	1.08	0.02	0.075	0.08
6	LTE 5	QPSK10M	Rear Face	15	20450	1	0	-	1.00	23.50	23.31	1.04	-0.16	0.144	0.15
	LTE 5	QPSK10M	Rear Face	15	20450	25	0	-	1.00	22.50	22.41	1.02	0.11	0.116	0.12
	LTE 5	QPSK10M	Rear Face	15	20525	1	0	-	1.00	23.50	23.13	1.09	0.02	0.132	0.14
	LTE 5	QPSK10M	Rear Face	15	20600	1	0	-	1.00	23.50	23.16	1.08	-0.05	0.131	0.14
	LTE 12	QPSK10M	Rear Face	15	23095	1	0	-	1.00	23.50	23.47	1.01	0.07	0.076	0.08
	LTE 12	QPSK10M	Rear Face	15	23095	25	0	-	1.00	22.50	22.46	1.01	-0.12	0.065	0.07
	LTE 12	QPSK10M	Rear Face	15	23060	1	0	-	1.00	23.50	23.16	1.08	0.03	0.065	0.07
7	LTE 12	QPSK10M	Rear Face	15	23130	1	0	-	1.00	23.50	23.27	1.05	0.05	0.084	0.09
8	LTE 13	QPSK10M	Rear Face	15	23230	1	0	-	1.00	24.00	23.77	1.05	-0.16	0.097	0.10
	LTE 13	QPSK10M	Rear Face	15	23230	25	0	-	1.00	23.00	22.81	1.04	0.11	0.087	0.09
10	LTE 66	QPSK20M	Rear Face	15	132322	1	0	-	1.00	24.00	23.97	1.01	-0.03	0.096	0.10
	LTE 66	QPSK20M	Rear Face	15	132322	50	0	-	1.00	23.00	22.01	1.26	0.03	0.054	0.07
	LTE 66	QPSK20M	Rear Face	15	132072	1	0	-	1.00	24.00	23.65	1.08	-0.04	0.077	0.08
	LTE 66	QPSK20M	Rear Face	15	132572	1	0	-	1.00	24.00	23.33	1.17	-0.1	0.056	0.07
12	WLAN2.4G	802.11b	Rear Face	15	11			99.90	1.00	15.00	14.38	1.15	-0.01	0.00661	0.01
13	BT	BDR	Rear Face	15	78			76.80	1.30	10.00	8.66	1.36	0	<0.001	0.00

Extremity SAR Test Result																
System & Position								SAR								
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-10g (W/kg)	Scaled SAR-10g (W/kg)	
	WCDMA II	RMC12.2K	Rear Face	0	9400			-	1.00	23.50	23.36	1.03	-0.05	0.248	0.26	
	WCDMA II	RMC12.2K	Left Side	0	9400			-	1.00	23.50	23.36	1.03	0.17	2.06	2.12	
	WCDMA II	RMC12.2K	Right Side	0	9400			-	1.00	23.50	23.36	1.03	-0.14	0.322	0.33	
	WCDMA II	RMC12.2K	Left Side	0	9262			-	1.00	23.50	23.18	1.08	0.03	2.13	2.30	
14	WCDMA II	RMC12.2K	Left Side	0	9538			-	1.00	23.50	23.19	1.07	-0.07	2.19	2.34	
	WCDMA II	RMC12.2K	Left Side	0	9538			-	1.00	23.50	23.19	1.07	0.08	2.09	2.24	
	WCDMA IV	RMC12.2K	Rear Face	0	1413			-	1.00	23.50	23.49	1.00	-0.07	0.227	0.23	
	WCDMA IV	RMC12.2K	Left Side	0	1413			-	1.00	23.50	23.49	1.00	0	2.08	2.08	
	WCDMA IV	RMC12.2K	Right Side	0	1413			-	1.00	23.50	23.49	1.00	0.08	0.307	0.31	
	WCDMA IV	RMC12.2K	Left Side	0	1312			-	1.00	23.50	23.47	1.01	0.03	2.06	2.08	
15	WCDMA IV	RMC12.2K	Left Side	0	1513			-	1.00	23.50	23.45	1.01	-0.13	2.12	2.14	
	WCDMA IV	RMC12.2K	Left Side	0	1513			-	1.00	23.50	23.45	1.01	0.11	2.08	2.10	
	WCDMA V	RMC12.2K	Rear Face	0	4132			-	1.00	23.50	23.49	1.00	0.03	0.392	0.39	
16	WCDMA V	RMC12.2K	Left Side	0	4132			-	1.00	23.50	23.49	1.00	-0.05	0.51	0.51	
	WCDMA V	RMC12.2K	Right Side	0	4132			-	1.00	23.50	23.49	1.00	-0.08	0.215	0.22	
	WCDMA V	RMC12.2K	Left Side	0	4182			-	1.00	23.50	23.23	1.06	0.05	0.428	0.45	
	WCDMA V	RMC12.2K	Left Side	0	4233			-	1.00	23.50	23.08	1.10	0.11	0.395	0.43	
	LTE 2	QPSK20M	Rear Face	0	18900	1	0	-	1.00	23.50	23.31	1.04	-0.19	0.234	0.24	
	LTE 2	QPSK20M	Left Side	0	18900	1	0	-	1.00	23.50	23.31	1.04	0.16	2.06	2.14	
	LTE 2	QPSK20M	Right Side	0	18900	1	0	-	1.00	23.50	23.31	1.04	-0.15	0.298	0.31	
	LTE 2	QPSK20M	Rear Face	0	18900	50	0	-	1.00	22.50	22.37	1.03	0.04	0.185	0.19	
	LTE 2	QPSK20M	Left Side	0	18900	50	0	-	1.00	22.50	22.37	1.03	-0.1	1.7	1.75	
	LTE 2	QPSK20M	Right Side	0	18900	50	0	-	1.00	22.50	22.37	1.03	0.13	0.243	0.25	
	LTE 2	QPSK20M	Left Side	0	18900	100	0	-	1.00	22.50	22.23	1.06	-0.01	1.66	1.76	
	LTE 2	QPSK20M	Left Side	0	18700	1	0	-	1.00	23.50	23.22	1.07	-0.16	1.89	2.02	
17	LTE 2	QPSK20M	Left Side	0	19100	1	0	-	1.00	23.50	23.29	1.05	-0.07	2.11	2.22	
	LTE 2	QPSK20M	Left Side	0	19100	1	0	-	1.00	23.50	23.29	1.05	0.08	2.02	2.12	
	LTE 4	QPSK20M	Rear Face	0	20050	1	0	-	1.00	23.00	22.76	1.06	0.08	0.239	0.25	
18	LTE 4	QPSK20M	Left Side	0	20050	1	0	-	1.00	23.00	22.76	1.06	-0.05	1.73	1.83	
	LTE 4	QPSK20M	Right Side	0	20050	1	0	-	1.00	23.00	22.76	1.06	0.08	0.335	0.36	
	LTE 4	QPSK20M	Rear Face	0	20050	50	0	-	1.00	22.00	21.71	1.07	-0.17	0.175	0.19	
	LTE 4	QPSK20M	Left Side	0	20050	50	0	-	1.00	22.00	21.71	1.07	-0.07	1.36	1.46	
	LTE 4	QPSK20M	Right Side	0	20050	50	0	-	1.00	22.00	21.71	1.07	-0.12	0.249	0.27	
	LTE 4	QPSK20M	Left Side	0	20175	1	0	-	1.00	23.00	22.69	1.07	0.14	1.64	1.75	
	LTE 4	QPSK20M	Left Side	0	20300	1	0	-	1.00	23.00	22.67	1.08	0.06	1.69	1.83	

Extremity SAR Test Result																
System & Position								SAR								
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Duty Cycle	Crest Factor	Max. Tune-up Power (dBm)	Measured Conducted Power (dBm)	Scaling Factor	Power Drift (dB)	Measured SAR-10g (W/kg)	Scaled SAR-10g (W/kg)	
	LTE 5	QPSK10M	Rear Face	0	20450	1	0	-	1.00	23.50	23.31	1.04	0.03	0.414	0.43	
19	LTE 5	QPSK10M	Left Side	0	20450	1	0	-	1.00	23.50	23.31	1.04	-0.02	0.49	0.51	
	LTE 5	QPSK10M	Right Side	0	20450	1	0	-	1.00	23.50	23.31	1.04	0.16	0.218	0.23	
	LTE 5	QPSK10M	Rear Face	0	20450	25	0	-	1.00	22.50	22.41	1.02	-0.09	0.334	0.34	
	LTE 5	QPSK10M	Left Side	0	20450	25	0	-	1.00	22.50	22.41	1.02	0.09	0.405	0.41	
	LTE 5	QPSK10M	Right Side	0	20450	25	0	-	1.00	22.50	22.41	1.02	-0.08	0.187	0.19	
	LTE 5	QPSK10M	Left Side	0	20525	1	0	-	1.00	23.50	23.13	1.09	0.17	0.211	0.23	
	LTE 5	QPSK10M	Left Side	0	20600	1	0	-	1.00	23.50	23.16	1.08	-0.14	0.208	0.22	
	LTE 12	QPSK10M	Rear Face	0	23095	1	0	-	1.00	23.50	23.47	1.01	-0.07	0.239	0.24	
20	LTE 12	QPSK10M	Left Side	0	23095	1	0	-	1.00	23.50	23.47	1.01	0.01	0.705	0.71	
	LTE 12	QPSK10M	Right Side	0	23095	1	0	-	1.00	23.50	23.47	1.01	0.1	0.085	0.09	
	LTE 12	QPSK10M	Rear Face	0	23095	25	0	-	1.00	22.50	22.46	1.01	0.02	0.192	0.19	
	LTE 12	QPSK10M	Left Side	0	23095	25	0	-	1.00	22.50	22.46	1.01	-0.03	0.567	0.57	
	LTE 12	QPSK10M	Right Side	0	23095	25	0	-	1.00	22.50	22.46	1.01	-0.16	0.064	0.06	
	LTE 12	QPSK10M	Left Side	0	23060	1	0	-	1.00	23.50	23.16	1.08	-0.05	0.646	0.70	
	LTE 12	QPSK10M	Left Side	0	23130	1	0	-	1.00	23.50	23.27	1.05	-0.02	0.679	0.71	
	LTE 13	QPSK10M	Rear Face	0	23230	1	0	-	1.00	24.00	23.77	1.05	0.05	0.283	0.30	
21	LTE 13	QPSK10M	Left Side	0	23230	1	0	-	1.00	24.00	23.77	1.05	0.01	0.536	0.56	
	LTE 13	QPSK10M	Right Side	0	23230	1	0	-	1.00	24.00	23.77	1.05	0.18	0.231	0.24	
	LTE 13	QPSK10M	Rear Face	0	23230	25	0	-	1.00	23.00	22.81	1.04	0.15	0.251	0.26	
	LTE 13	QPSK10M	Left Side	0	23230	25	0	-	1.00	23.00	22.81	1.04	0.13	0.472	0.49	
	LTE 13	QPSK10M	Right Side	0	23230	25	0	-	1.00	23.00	22.81	1.04	0.1	0.201	0.21	
	LTE 66	QPSK20M	Rear Face	0	132322	1	0	-	1.00	24.00	23.97	1.01	0.06	0.175	0.18	
23	LTE 66	QPSK20M	Left Side	0	132322	1	0	-	1.00	24.00	23.97	1.01	-0.06	1.68	1.70	
	LTE 66	QPSK20M	Right Side	0	132322	1	0	-	1.00	24.00	23.97	1.01	-0.07	0.269	0.27	
	LTE 66	QPSK20M	Rear Face	0	132322	50	0	-	1.00	23.00	22.01	1.26	-0.11	0.132	0.17	
	LTE 66	QPSK20M	Left Side	0	132322	50	0	-	1.00	23.00	22.01	1.26	0.05	1.16	1.46	
	LTE 66	QPSK20M	Right Side	0	132322	50	0	-	1.00	23.00	22.01	1.26	-0.03	0.211	0.27	
	LTE 66	QPSK20M	Left Side	0	132072	1	0	-	1.00	24.00	23.65	1.08	0.04	1.28	1.38	
	LTE 66	QPSK20M	Left Side	0	132572	1	0	-	1.00	24.00	23.33	1.17	-0.11	1.41	1.65	
25	WLAN2.4G	802.11b	Right Side	0	11			99.90	1.00	15.00	14.38	1.15	-0.01	0.183	0.21	
26	BT	BDR	Right Side	0	78			76.80	1.30	10.00	8.66	1.36	0	<0.001	0.00	

Annex G. SAR Measurement Variability

SAR repeated measurement are shown as below.

Repeat SAR							
Plot	Band	Mode	Test Position	Ch.	Original Measured SAR-10g (W/kg)	1st Repeated SAR-10g (W/kg)	L/S Ratio
R14	WCDMA II	RMC12.2K	Left Side	9538	2.19	2.09	1.05
R15	WCDMA IV	RMC12.2K	Left Side	1513	2.12	2.08	1.02
R17	LTE 2	QPSK20M	Left Side	19100	2.11	2.02	1.04

Annex H. Analysis of Simultaneous Transmission SAR.

The analysis of simultaneous transmission SAR are shown as below.

<Possibilities of Simultaneous Transmission>

The simultaneous transmission possibilities for this device are listed as below.

Simultaneous TX Combination	Capable Transmit Configurations	Body Exposure Condition	Extremity Exposure Condition
A	MAX WWAN + WLAN 2.4G	Yes	Yes
B	MAX WWAN + BT	Yes	Yes

Notes

1. The WLAN and Bluetooth cannot transmit simultaneously.

Simultaneous Transmission SAR Evaluation (Body)						
Band	Position	1	2	3	A(1+2)	B(1+3)
		Max WWAN	WLAN 2.4GHz Ant 0	BT Ant 0	Summing result 1g SAR W/kg	Summing result 1g SAR W/kg
		1g SAR W/kg	1g SAR W/kg	1g SAR W/kg		
WCDMA II	Rear Face	0.10	0.01	0.00	0.11	0.10
WCDMA IV	Rear Face	0.15	0.01	0.00	0.16	0.15
WCDMA V	Rear Face	0.18	0.01	0.00	0.19	0.18
LTE 2	Rear Face	0.07	0.01	0.00	0.08	0.07
LTE 4	Rear Face	0.11	0.01	0.00	0.12	0.11
LTE 5	Rear Face	0.15	0.01	0.00	0.16	0.15
LTE 12	Rear Face	0.09	0.01	0.00	0.10	0.09
LTE 13	Rear Face	0.10	0.01	0.00	0.11	0.10
LTE 66	Rear Face	0.10	0.01	0.00	0.11	0.10

Simultaneous Transmission SAR Evaluation (Extremity)						
Band	Position	1	2	3	A(1+2)	B(1+3)
		Max WWAN	WLAN 2.4GHz Ant 0	BT Ant 0	Summing result	Summing result
		10g SAR W/kg	10g SAR W/kg	10g SAR W/kg	10g SAR W/kg	10g SAR W/kg
WCDMA II	Rear Face	0.26	0.00	0.00	0.26	0.26
	Left Side	2.34	0.00	0.00	2.34	2.34
	Right Side	0.33	0.38	0.00	0.71	0.33
WCDMA IV	Rear Face	0.23	0.00	0.00	0.23	0.23
	Left Side	2.14	0.00	0.00	2.14	2.14
	Right Side	0.31	0.38	0.00	0.69	0.31
WCDMA V	Rear Face	0.39	0.00	0.00	0.39	0.39
	Left Side	0.51	0.00	0.00	0.51	0.51
	Right Side	0.22	0.38	0.00	0.60	0.22
LTE 2	Rear Face	0.24	0.00	0.00	0.24	0.24
	Left Side	2.22	0.00	0.00	2.22	2.22
	Right Side	0.31	0.38	0.00	0.69	0.31
LTE 4	Rear Face	0.25	0.00	0.00	0.25	0.25
	Left Side	1.83	0.00	0.00	1.83	1.83
	Right Side	0.36	0.38	0.00	0.74	0.36
LTE 5	Rear Face	0.43	0.00	0.00	0.43	0.43
	Left Side	0.51	0.00	0.00	0.51	0.51
	Right Side	0.23	0.38	0.00	0.61	0.23
LTE 12	Rear Face	0.24	0.00	0.00	0.24	0.24
	Left Side	0.71	0.00	0.00	0.71	0.71
	Right Side	0.09	0.38	0.00	0.47	0.09
LTE 13	Rear Face	0.30	0.00	0.00	0.30	0.30
	Left Side	0.56	0.00	0.00	0.56	0.56
	Right Side	0.24	0.38	0.00	0.62	0.24
LTE 66	Rear Face	0.18	0.00	0.00	0.18	0.18
	Left Side	1.70	0.00	0.00	1.70	1.70
	Right Side	0.27	0.38	0.00	0.65	0.27

Annex I. SAR to Peak Location Separation Ratio Analysis.

Since sum of simultaneous transmission SAR is less than the SAR limit for Body / Head : SAR_{1g} 1.6 W/kg ;
Extremity SAR_{10g} 4.0 W/kg. There is no requirement for SAR to Peak Location Separation Ratio Analysis.

Annex J. Calibration of Test Equipment List

Calibration of Test Equipment List are shown as below.

Equipment for SAR Test

Equipment	Manufacturer	Model	SN	Cal. Date	Cal. Interval
System Validation Dipole	SPEAG	D750V3	1013	Aug. 31, 2021	1 Year
System Validation Dipole	SPEAG	D835V2	4d121	Aug. 31, 2021	1 Year
System Validation Dipole	SPEAG	D1750V2	1055	Sep. 02, 2021	1 Year
System Validation Dipole	SPEAG	D1900V2	5d036	Jan. 22, 2021	1 Year
System Validation Dipole	SPEAG	D2450V2	737	Aug. 26, 2021	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7537	Apr. 26, 2021	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3650	Mar. 26, 2021	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1585	Apr. 15, 2021	1 Year
Data Acquisition Electronics	SPEAG	DAE4	1590	Sep. 20, 2021	1 Year
Universal Radio Communication Tester	Anritsu	MT8821C	6201381727	Aug. 24, 2021	1 Year
Spectrum Analyzer	R&S	FSL6	102006	Apr. 06, 2021	1 Year
Universal Wireless Test Set	Anritsu	MT8870A/MU887000A	6201699387	Sep. 22, 2021	1 Year
Thermometer	YFE	YF-160A	191100743	Apr. 12, 2021	1 Year
Dielectric Assessment Kit	SPEAG	DAKS-3.5	1151	Jul. 14, 2021	1 Year
Powersource1	SPEAG	SE_UMS_160 BA	4010	Jul. 13, 2021	1 Year

Annex K. Considerations Related to Bluetooth for Setup and Testing

This device has installed Bluetooth engineering testing software which can provide continuous transmitting RF signal. During Bluetooth SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

The Bluetooth call box has been used during SAR measurement and the EUT was set to DH5 mode at the maximum output power. Its duty factor was calculated as below and the measured SAR for Bluetooth would be scaled to the 100% transmission duty factor to determine compliance.

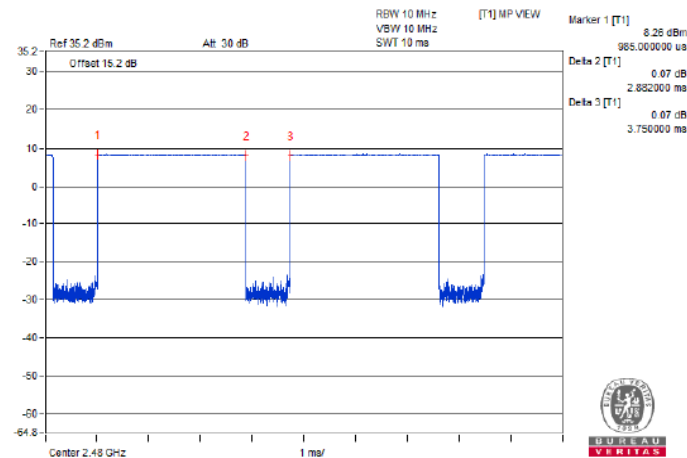
The duty factor of Bluetooth signal are shown as below.

<Time-domain plot for Bluetooth transmission signal>

<Considerations Related to Bluetooth for Setup and Testing>

This device has installed Bluetooth engineering testing software which can provide continuous transmitting RF signal. During Bluetooth SAR testing, this device was operated to transmit continuously at the maximum transmission duty with specified transmission mode, operating frequency, lowest data rate, and maximum output power.

The Bluetooth call box has been used during SAR measurement and the EUT was set to DH5 mode at the maximum output power. Its duty factor was calculated as below and the measured SAR for Bluetooth would be scaled to the 100% transmission duty factor to determine compliance.



Time-domain plot for Bluetooth transmission signal

The duty factor of Bluetooth signal has been calculated as following.

$$\text{Duty Factor} = \text{Pulse Width} / \text{Total Period} = 2.88\text{ms} / 3.75\text{ms} = 76.8 \%$$