

### 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: 2021/10/18

### S01 System Check\_H1900\_211018

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

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

Medium: H16T20N1\_1018 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.463$  S/m;  $\epsilon_r = 38.787$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.17, 8.17, 8.17) @ 1900 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 4.61 W/kg

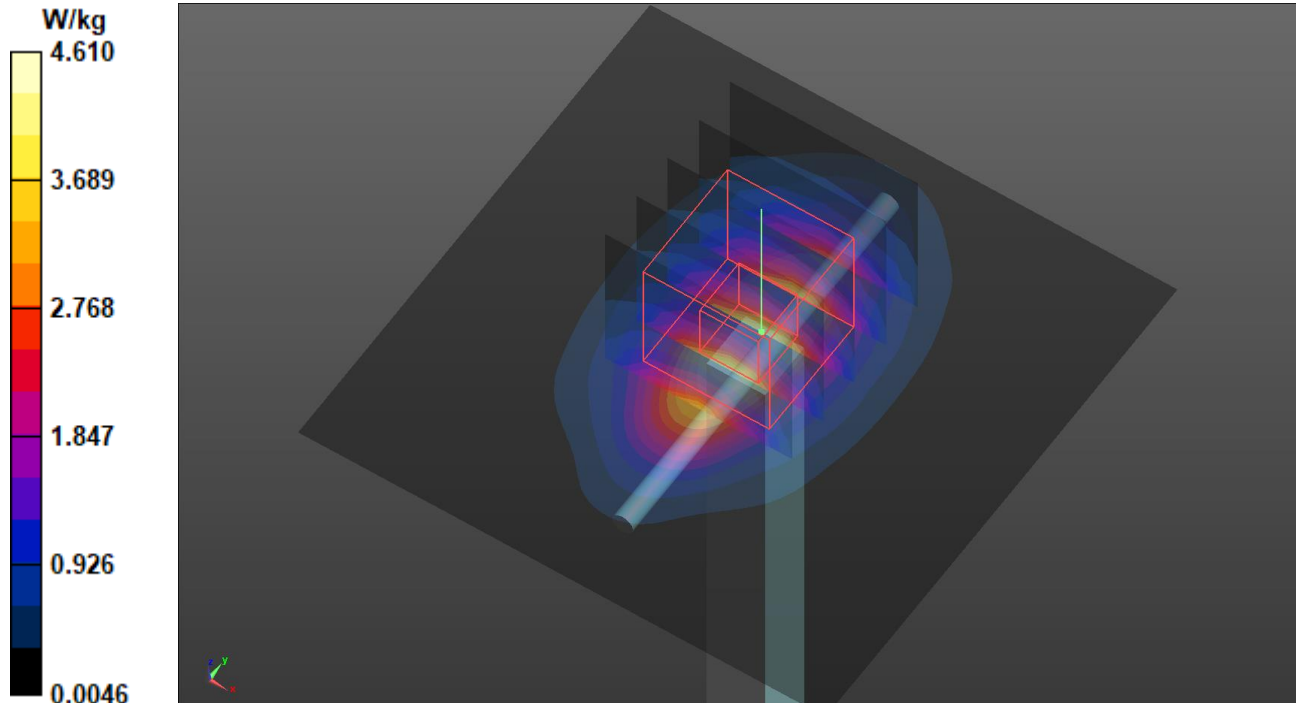
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 56.61 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 5.35 W/kg

**SAR(1 g) = 2.24 W/kg; SAR(10 g) = 1.04 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.43 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/18

### S02 System Check\_H1750\_211018

**DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1111**

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

Medium: H16T20N1\_1018 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.373$  S/m;  $\epsilon_r = 39.069$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °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 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 2.71 W/kg

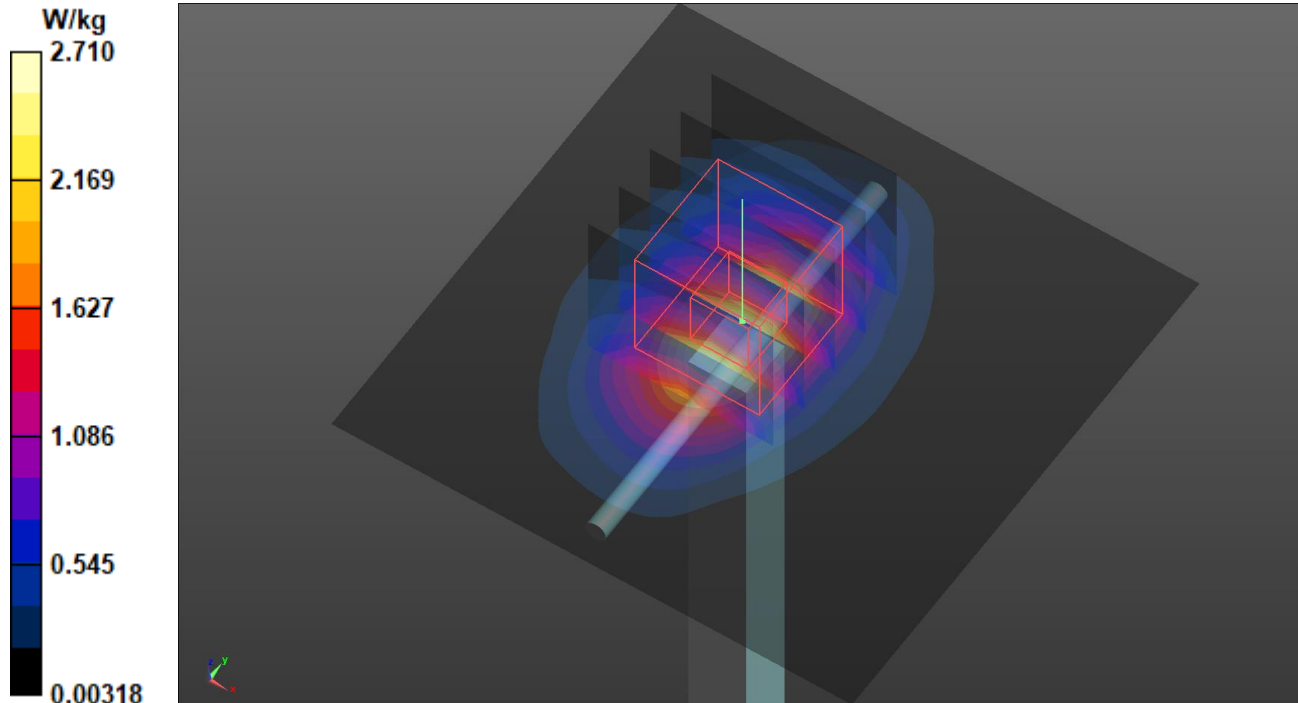
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 40.64 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 3.28 W/kg

**SAR(1 g) = 1.79 W/kg; SAR(10 g) = 0.961 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 2.77 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/18

### S03 System Check\_H835\_211018

**DUT: Dipole 835 MHz; Type: D835V2; SN: 4d092**

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

Medium: H07T10N1\_1018 Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.919$  S/m;  $\epsilon_r = 41.768$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.83, 9.83, 9.83) @ 835 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 0.351 W/kg

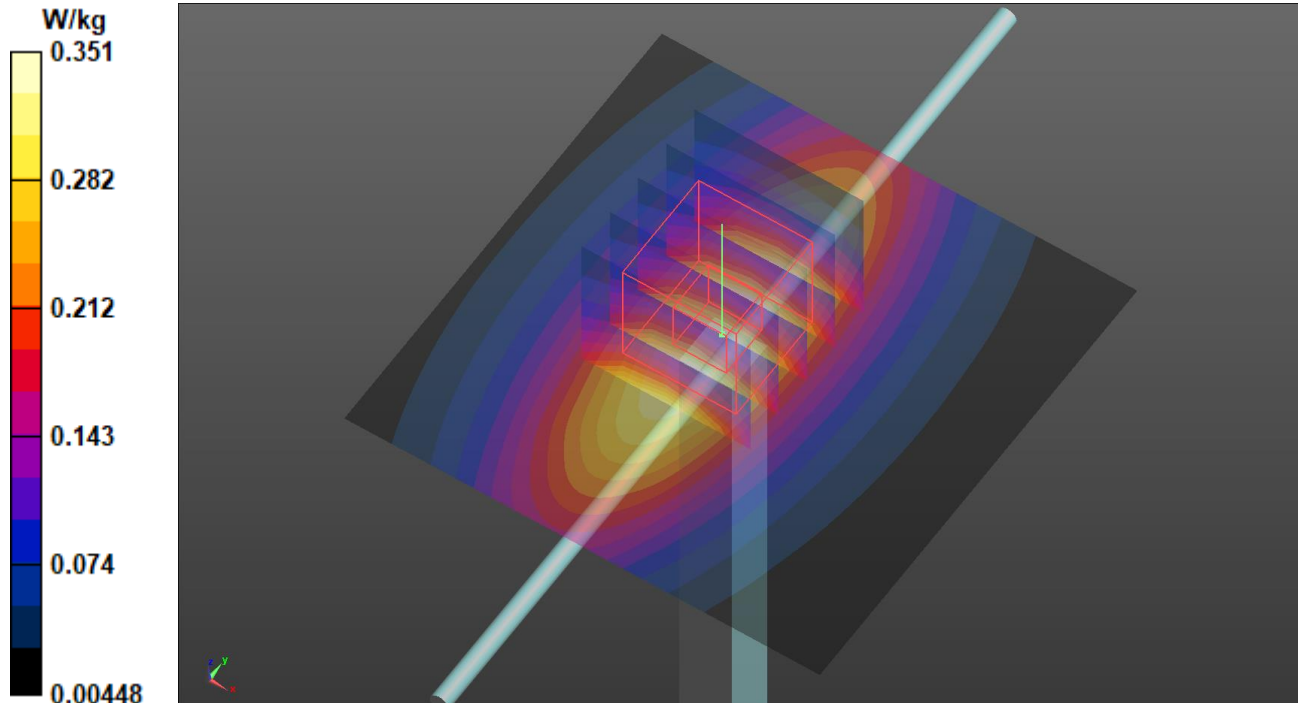
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.66 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.401 W/kg

**SAR(1 g) = 0.651 W/kg; SAR(10 g) = 0.303 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.356 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

### S04 System Check\_H1750\_211019

**DUT: Dipole 1750 MHz; Type: D1750V2; SN: 1111**

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

Medium: H16T20N1\_1019 Medium parameters used:  $f = 1750$  MHz;  $\sigma = 1.324$  S/m;  $\epsilon_r = 40.865$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °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 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 2.69 W/kg

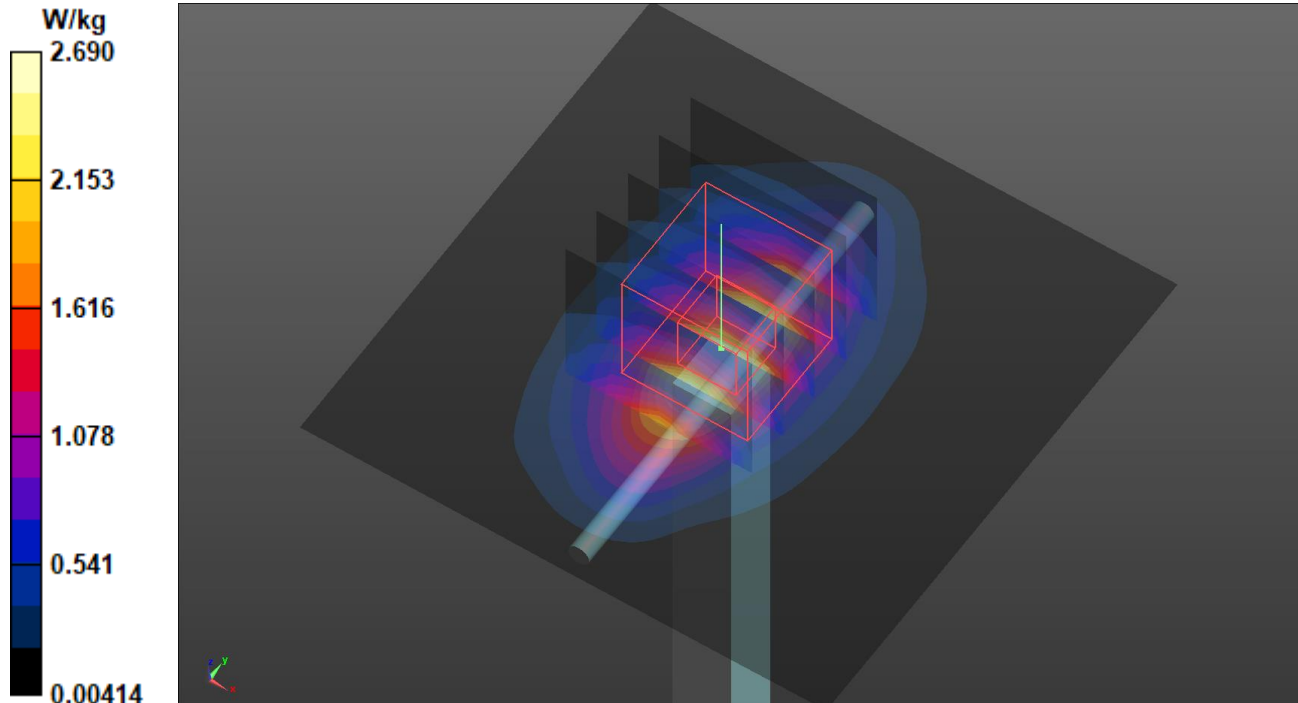
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 45.73 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 3.19 W/kg

**SAR(1 g) = 1.8 W/kg; SAR(10 g) = 0.947 W/kg** (SAR corrected for target medium)

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



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/18

### S05 System Check\_H835\_211018

**DUT: Dipole 835 MHz; Type: D835V2; SN: 4d092**

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

Medium: H07T10N1\_1018 Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.919$  S/m;  $\epsilon_r = 41.768$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.83, 9.83, 9.83) @ 835 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 0.351 W/kg

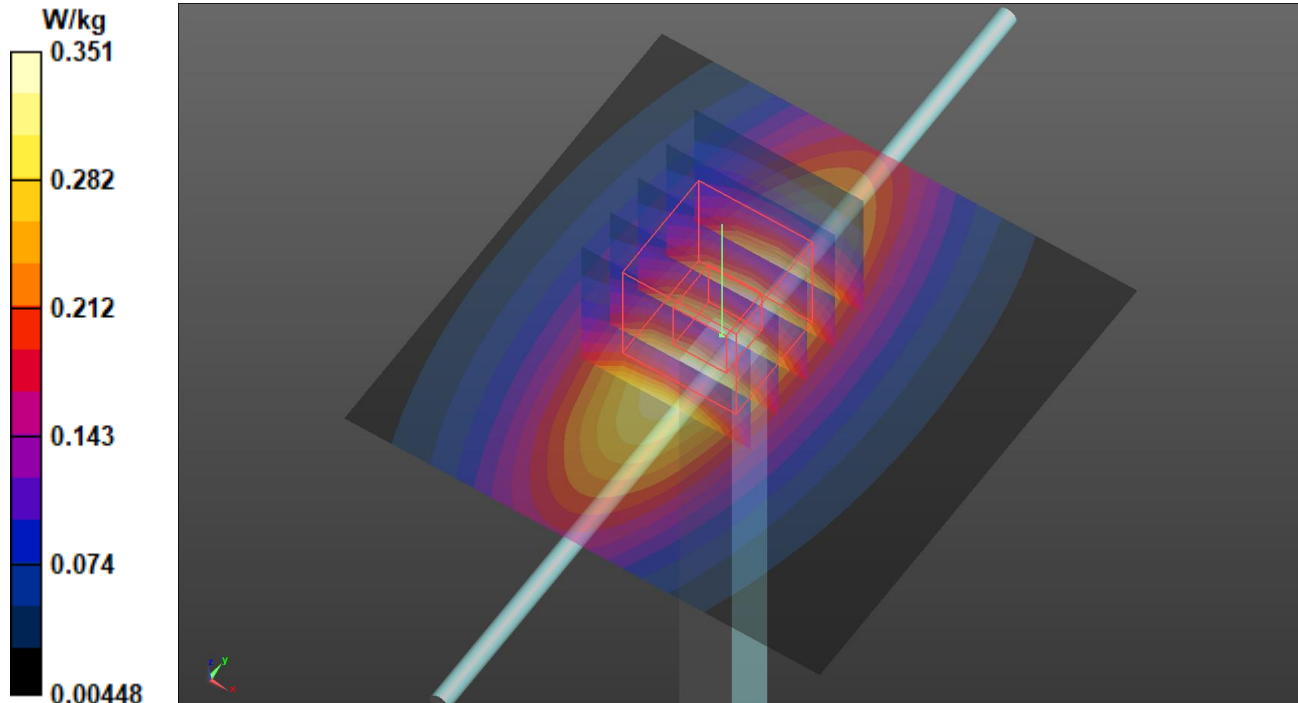
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.66 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.401 W/kg

**SAR(1 g) = 0.651 W/kg; SAR(10 g) = 0.303 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.356 W/kg



## Plots of System Verification

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Date: 2021/10/19

### S06 System Check\_H2600\_211019

**DUT: Dipole 2600 MHz; Type: D2600V2; SN: 1020**

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: H19T27N1\_1019 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.016$  S/m;  $\epsilon_r = 37.567$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.57, 7.57, 7.57) @ 2600 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 5.06 W/kg

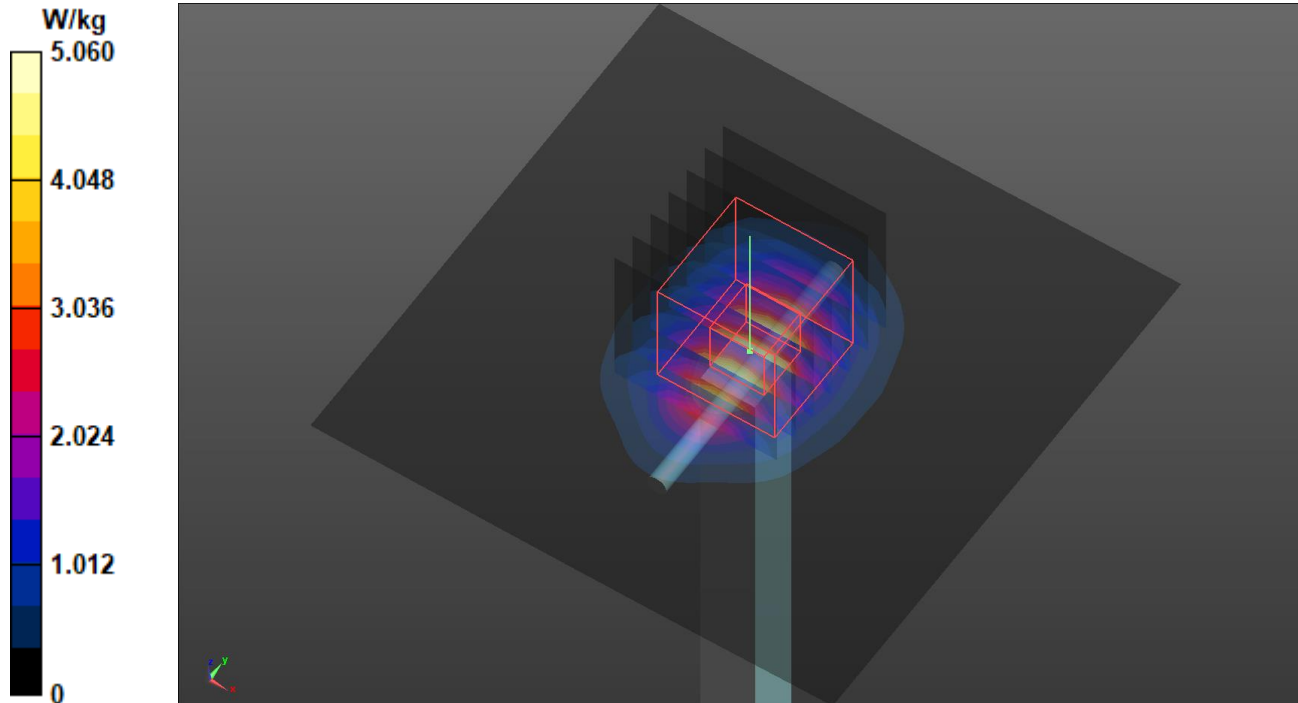
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.47 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 6.33 W/kg

**SAR(1 g) = 2.9 W/kg; SAR(10 g) = 1.31 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.09 W/kg



## Plots of System Verification

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Date: 2021/10/19

### S07 System Check\_H750\_211019

**DUT: Dipole 750 MHz; Type: D750V3; SN: 1078**

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

Medium: H06T09N1\_1019 Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.902$  S/m;  $\epsilon_r = 41.563$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.92, 9.92, 9.92) @ 750 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 0.543 W/kg

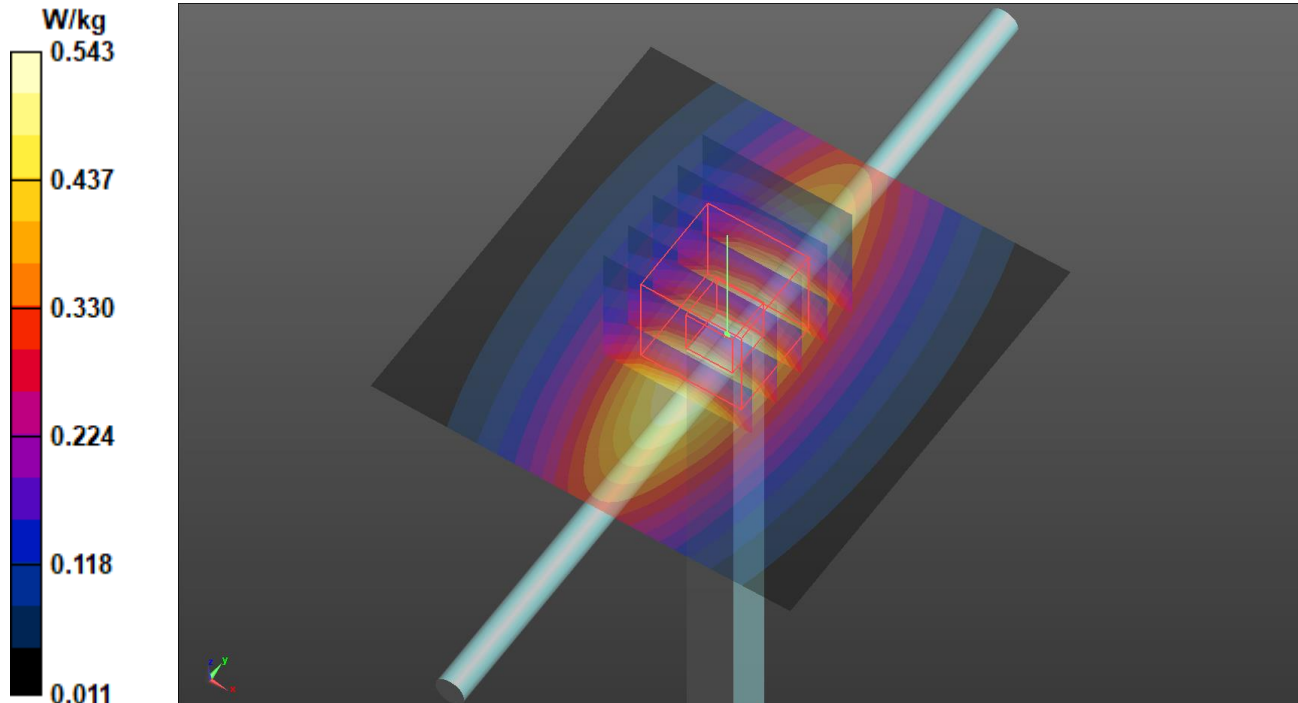
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.42 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.620 W/kg

**SAR(1 g) = 0.404 W/kg; SAR(10 g) = 0.265 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.548 W/kg





## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

### S08 System Check\_H750\_211019

**DUT: Dipole 750 MHz; Type: D750V3; SN: 1078**

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

Medium: H06T09N1\_1019 Medium parameters used:  $f = 750$  MHz;  $\sigma = 0.902$  S/m;  $\epsilon_r = 41.563$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.92, 9.92, 9.92) @ 750 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 0.543 W/kg

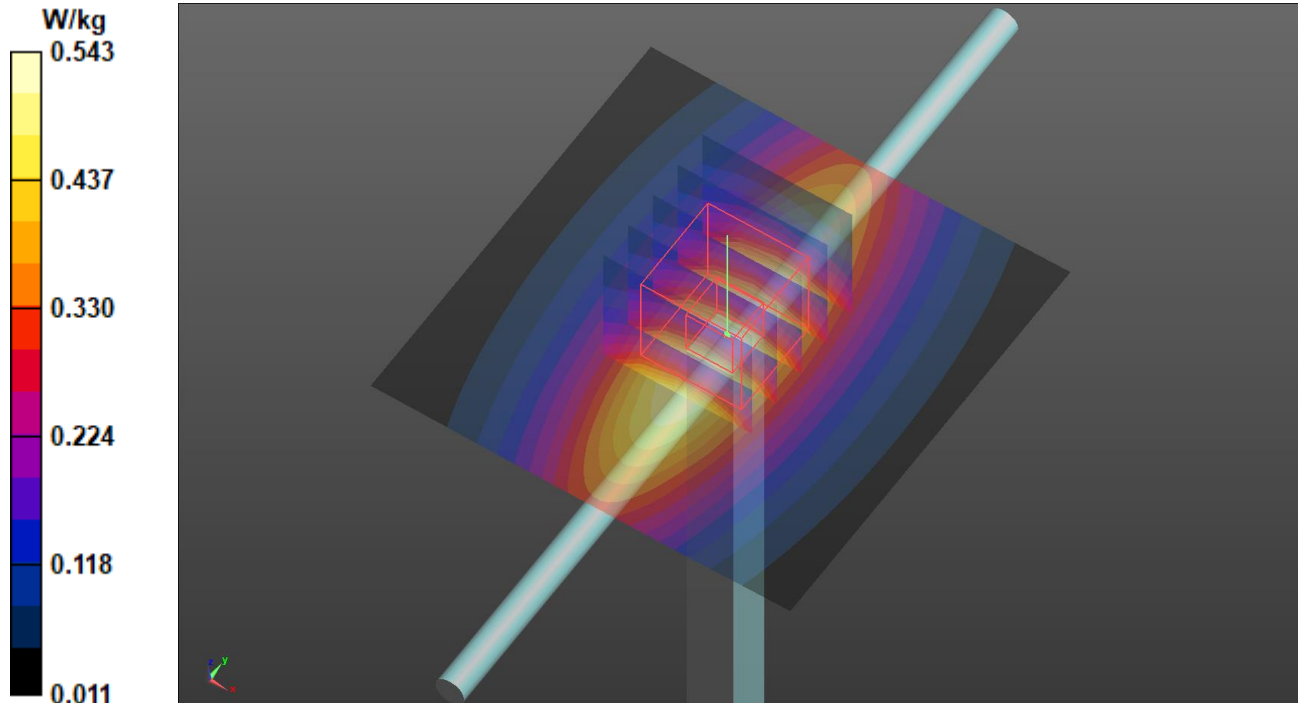
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.42 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 0.620 W/kg

**SAR(1 g) = 0.404 W/kg; SAR(10 g) = 0.265 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.548 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

### S09 System Check\_H1900\_211019

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

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

Medium: H16T20N1\_1019 Medium parameters used:  $f = 1900$  MHz;  $\sigma = 1.453$  S/m;  $\epsilon_r = 40.45$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.17, 8.17, 8.17) @ 1900 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 3.11 W/kg

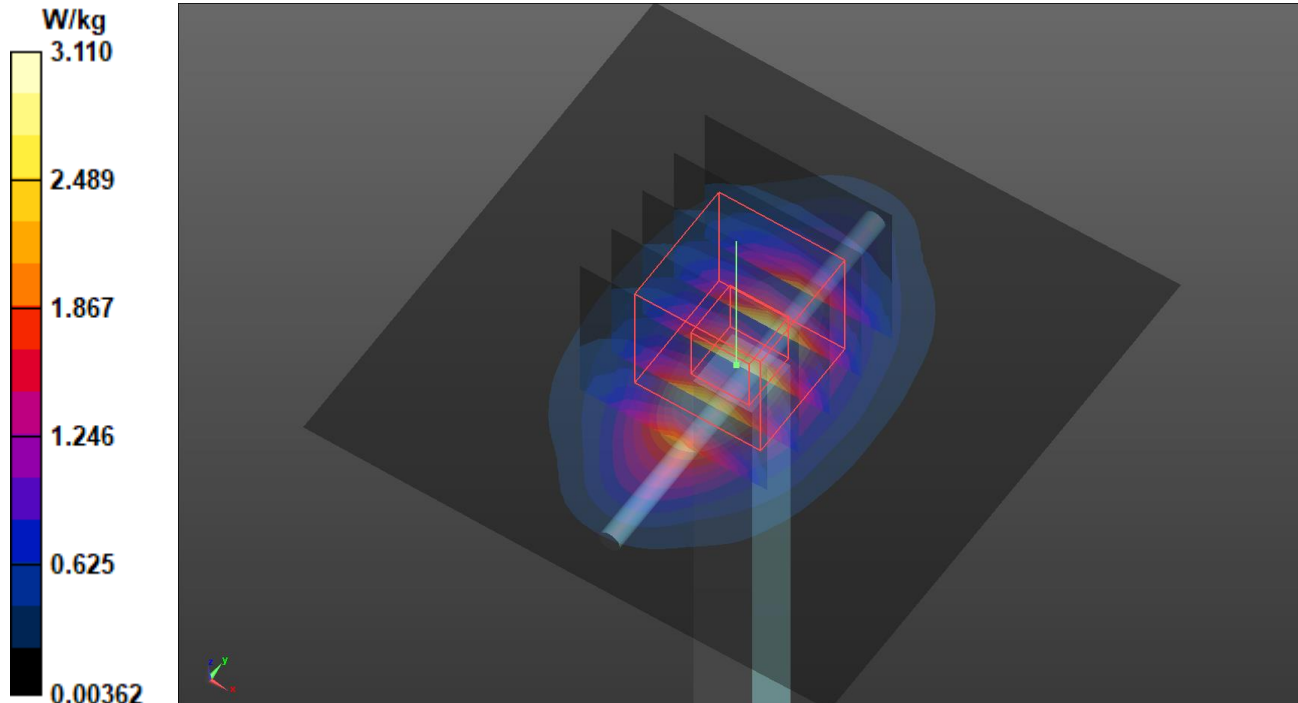
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 47.79 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 3.76 W/kg

**SAR(1 g) = 1.95 W/kg; SAR(10 g) = 1.02 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 3.13 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/18

### S10 System Check\_H835\_211018

**DUT: Dipole 835 MHz; Type: D835V2; SN: 4d092**

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

Medium: H07T10N1\_1018 Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.919$  S/m;  $\epsilon_r = 41.768$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.83, 9.83, 9.83) @ 835 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 0.351 W/kg

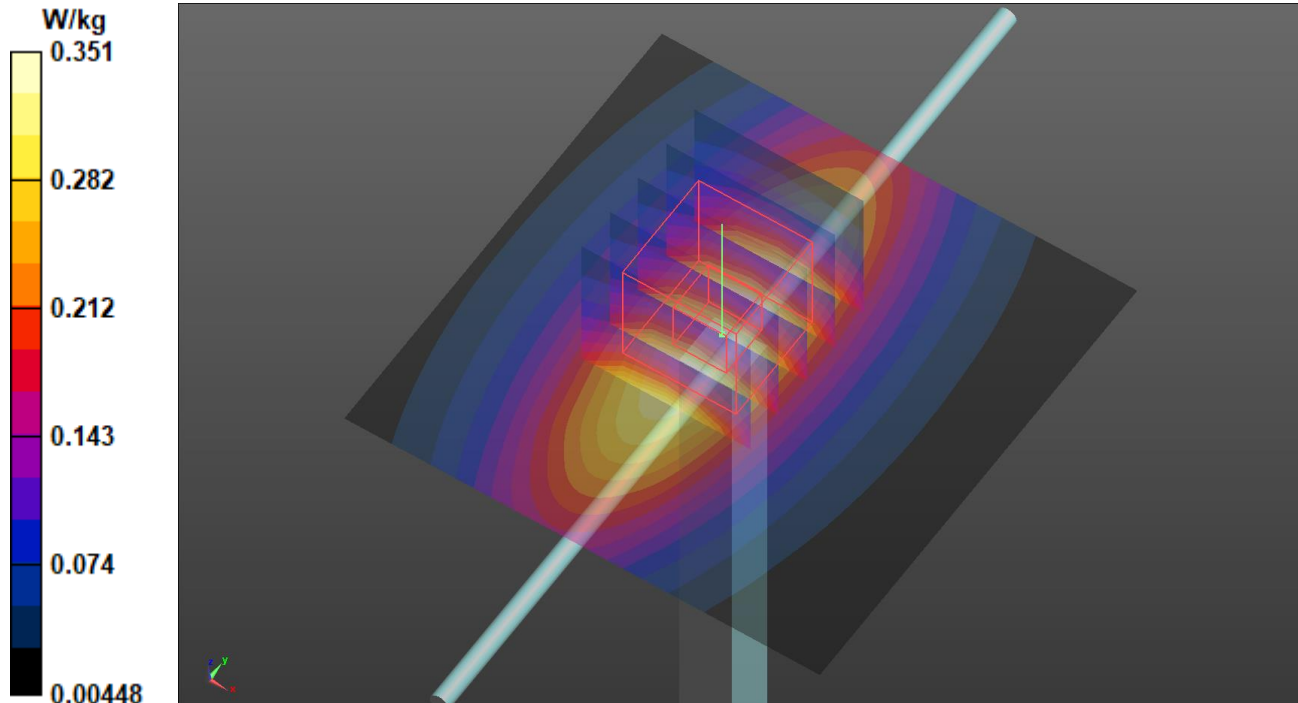
**Pin=50mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.66 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.401 W/kg

**SAR(1 g) = 0.651 W/kg; SAR(10 g) = 0.303 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 0.356 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

### S11 System Check\_H2600\_211019

**DUT: Dipole 2600 MHz; Type: D2600V2; SN: 1020**

Communication System: UID 0, CW; Frequency: 2600 MHz; Duty Cycle: 1:1

Medium: H19T27N1\_1019 Medium parameters used:  $f = 2600$  MHz;  $\sigma = 2.016$  S/m;  $\epsilon_r = 37.567$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.57, 7.57, 7.57) @ 2600 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 5.06 W/kg

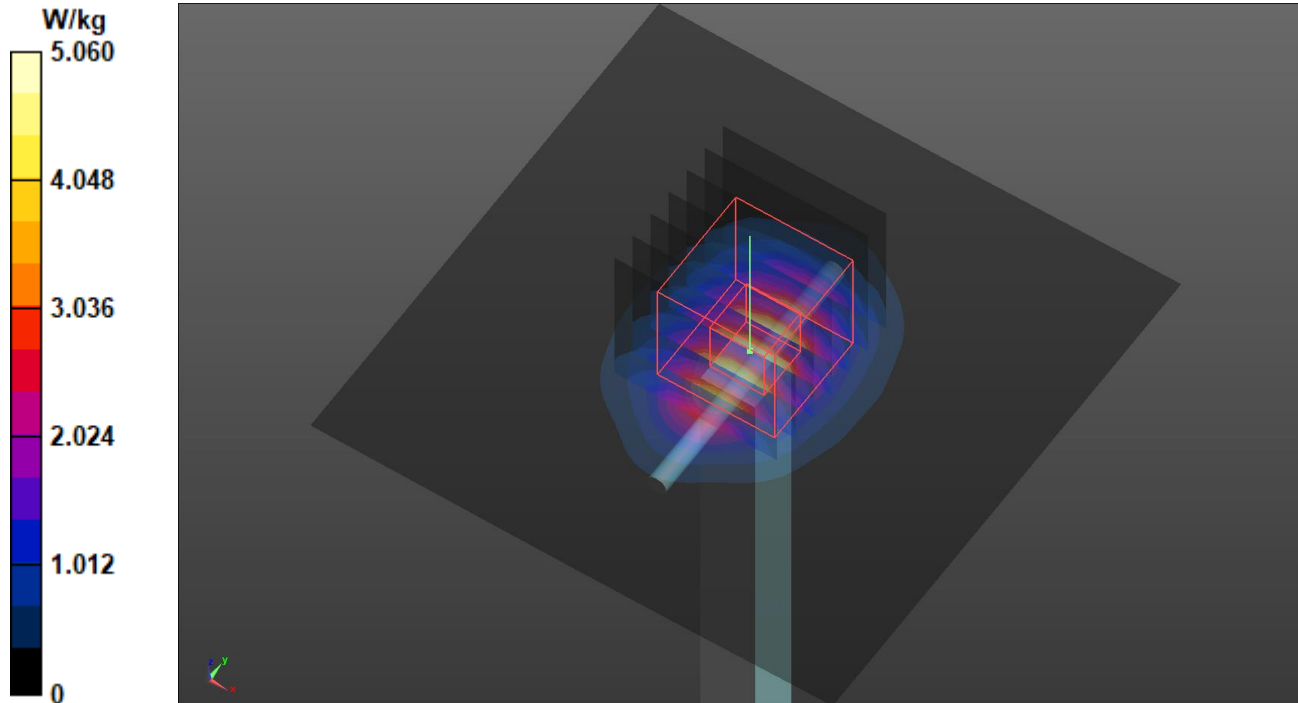
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.47 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 6.33 W/kg

**SAR(1 g) = 2.9 W/kg; SAR(10 g) = 1.31 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 5.09 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

### S12 System Check\_H2450\_211019

**DUT: Dipole 2450 MHz; Type: D2450V2; SN: 835**

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

Medium: H19T27N1\_1019 Medium parameters used (interpolated):  $f = 2450$  MHz;  $\sigma = 1.864$  S/m;  $\epsilon_r = 38.07$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.77, 7.77, 7.77) @ 2450 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 4.61 W/kg

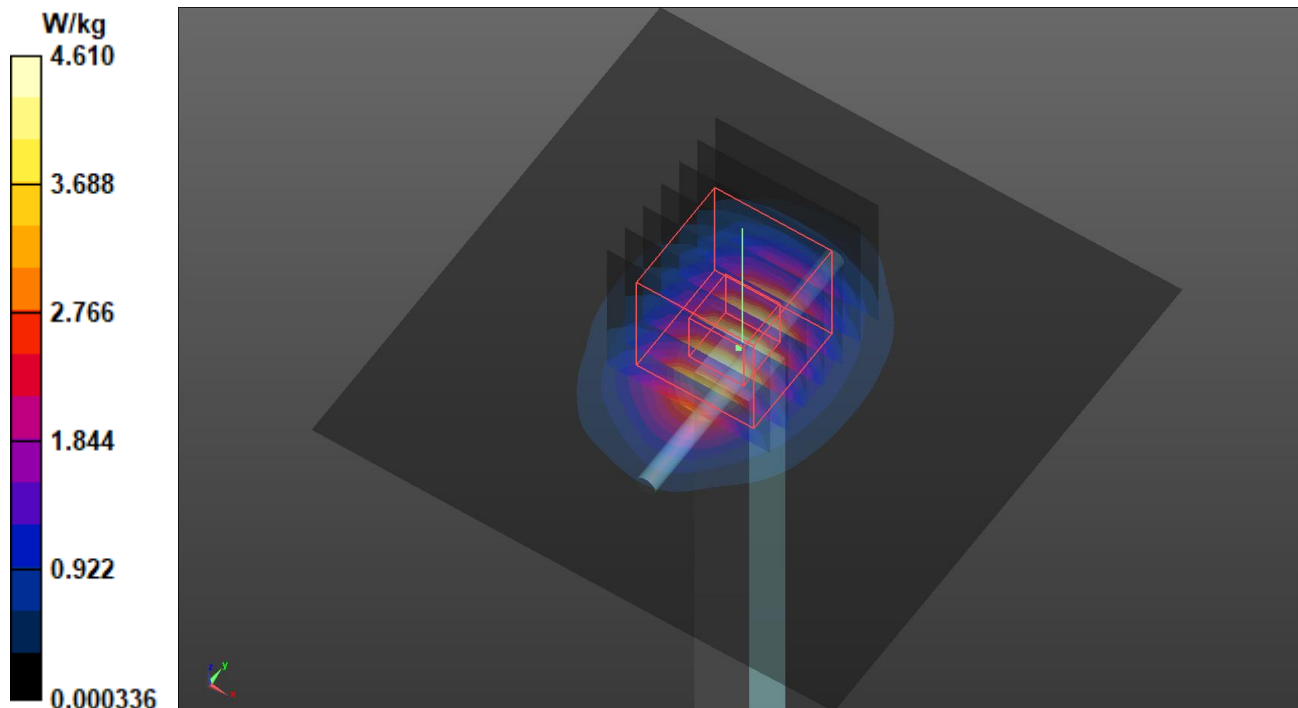
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.30 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 5.82 W/kg

**SAR(1 g) = 2.75 W/kg; SAR(10 g) = 1.3 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.68 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/21

### S13 System Check\_H5250\_211021

**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

Communication System: UID 0, CW; Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: H34T60N1\_1021 Medium parameters used (interpolated):  $f = 5250$  MHz;  $\sigma = 4.903$  S/m;  $\epsilon_r = 36.001$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5.45, 5.45, 5.45) @ 5250 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.96 W/kg

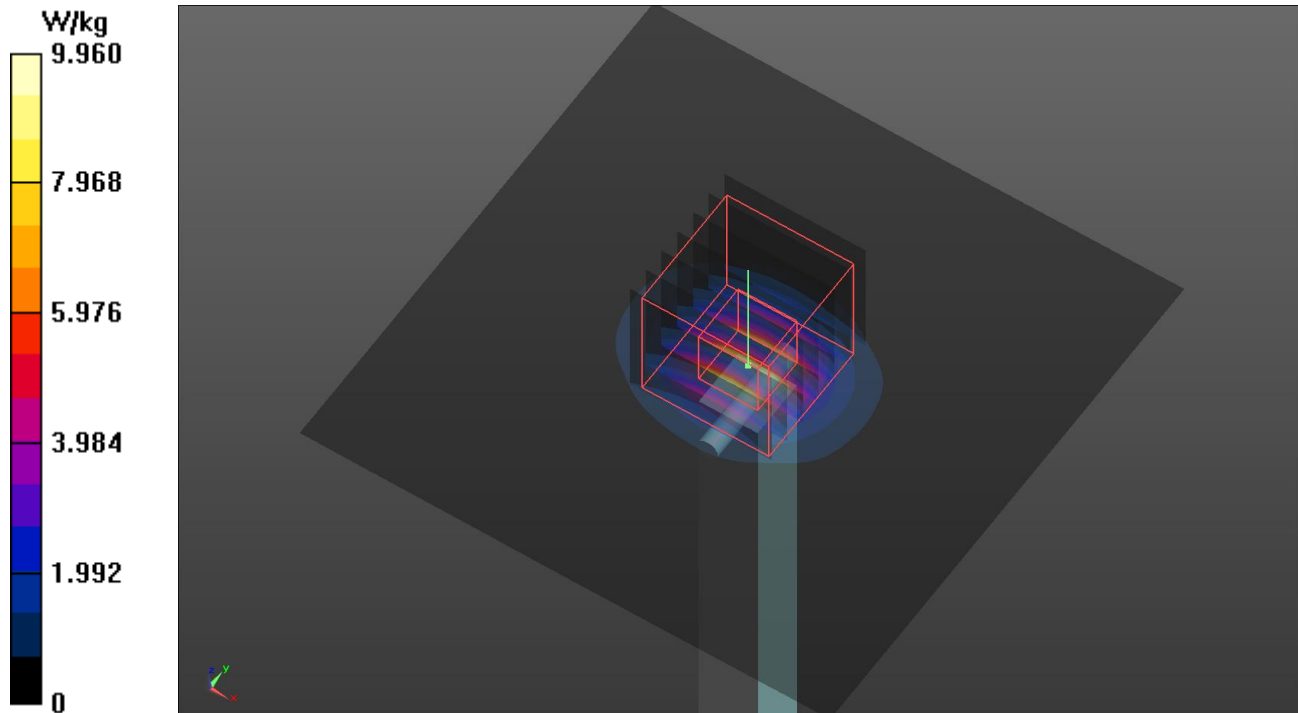
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 51.66 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 17.2 W/kg

**SAR(1 g) = 4.27 W/kg; SAR(10 g) = 1.23 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.8 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/21

### S14 System Check\_H5600\_211021

**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: H34T60N1\_1021 Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.248$  S/m;  $\epsilon_r = 35.454$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(4.8, 4.8, 4.8) @ 5600 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.99 W/kg

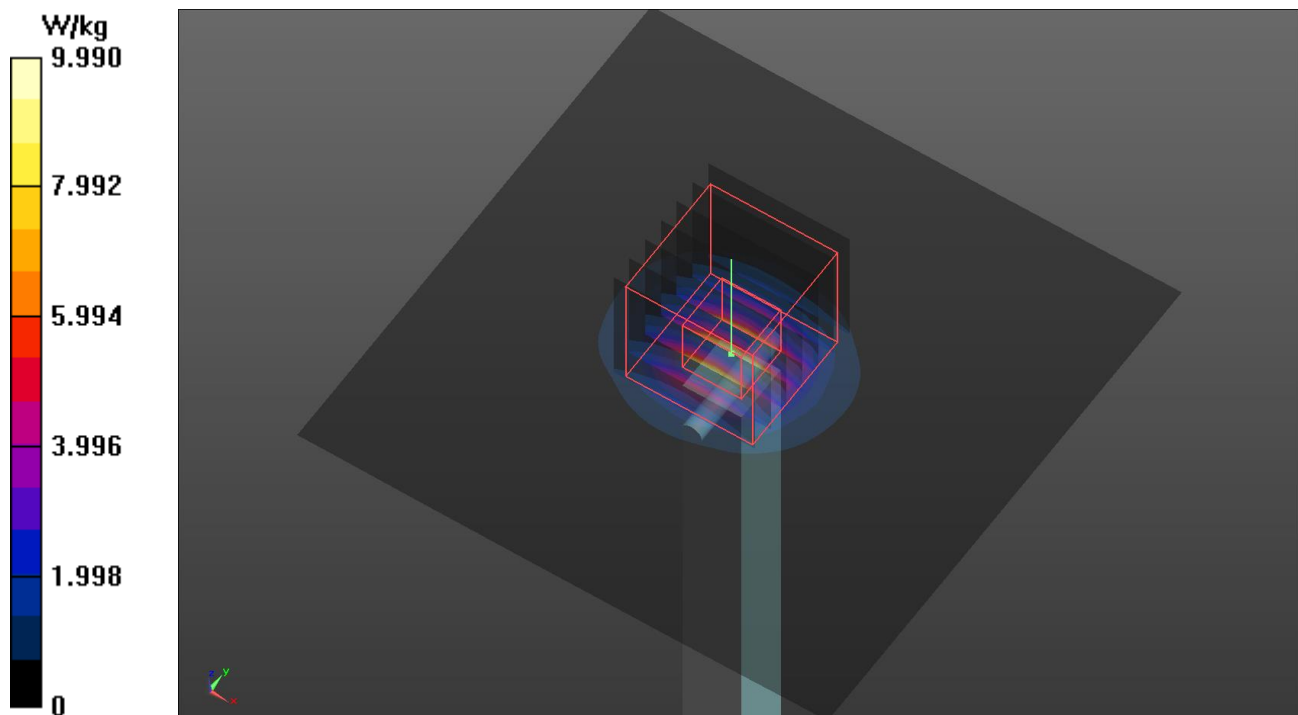
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.82 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 17.7 W/kg

**SAR(1 g) = 4.22 W/kg; SAR(10 g) = 1.25 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.7 W/kg



## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/21

### S15 System Check\_H5750\_211021

**DUT: Dipole 5 GHz; Type: D5GHzV2; SN: 1019**

Communication System: UID 0, CW; Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: H34T60N1\_1021 Medium parameters used:  $f = 5750$  MHz;  $\sigma = 5.413$  S/m;  $\epsilon_r = 35.103$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5, 5, 5) @ 5750 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

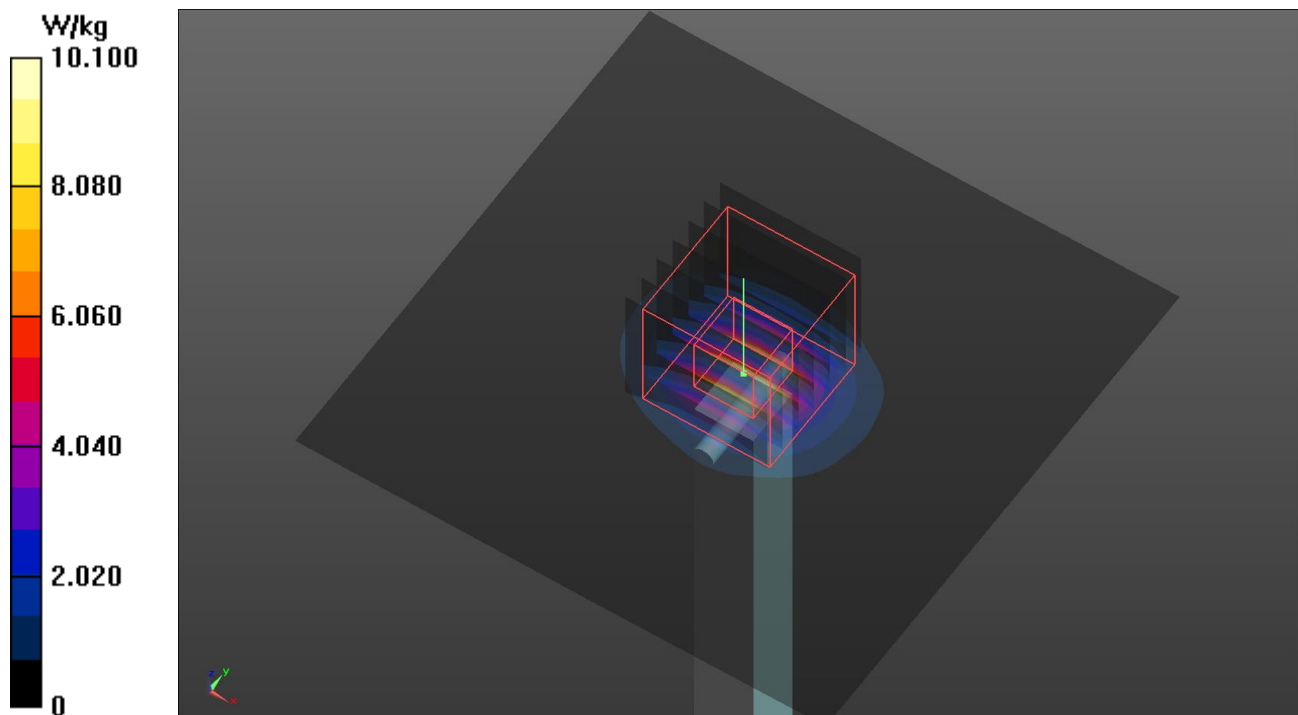
**Configuration/Pin=50mW/Area Scan (91x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 10.1 W/kg

**Configuration/Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 48.76 V/m; Power Drift = -0.18 dB

Peak SAR (extrapolated) = 18.7 W/kg

**SAR(1 g) = 4.06 W/kg; SAR(10 g) = 1.16 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 10.8 W/kg





## Plots of System Verification

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/21

### S16 System Check\_H2450\_211021

**DUT: Dipole 2450 MHz; Type: D2450V2; SN: 835**

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

Medium: H19T27N2\_1021 Medium parameters used:  $f = 2450$  MHz;  $\sigma = 1.791$  S/m;  $\epsilon_r = 37.828$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.9, 7.9, 7.9) @ 2450 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- 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) = 4.22 W/kg

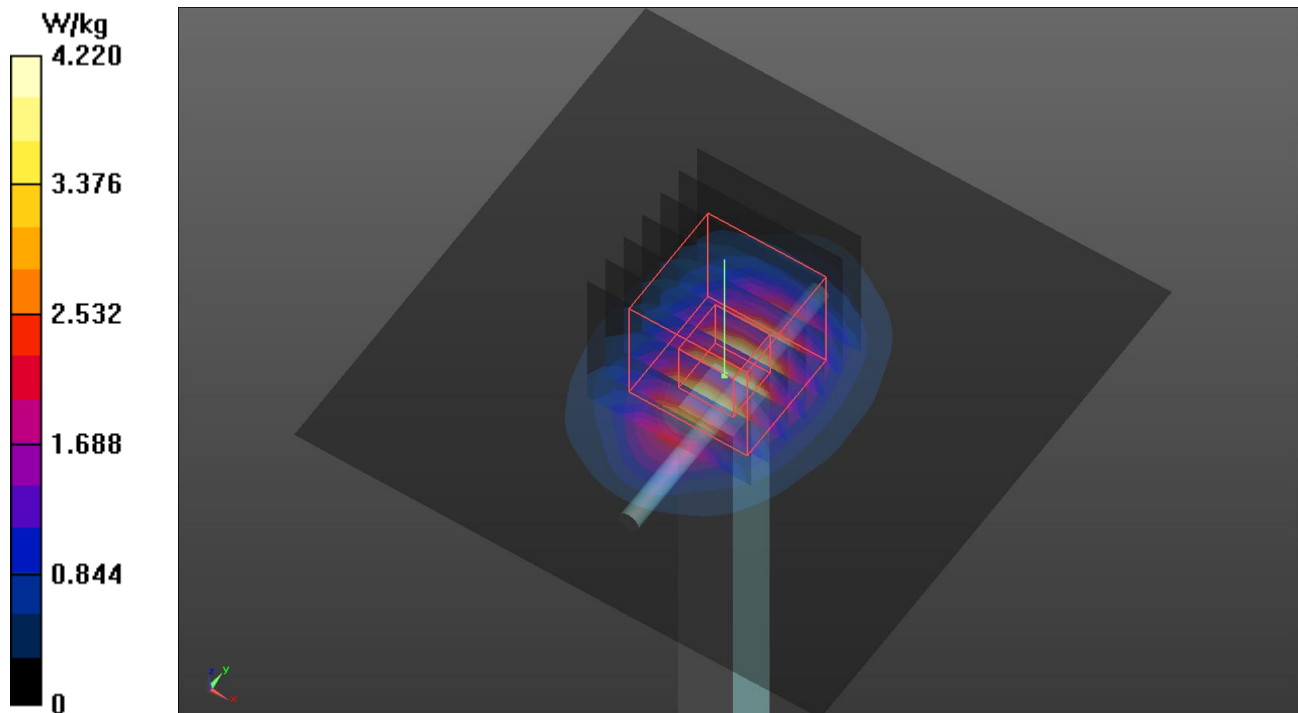
**Pin=50mW/Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 50.27 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 5.29 W/kg

**SAR(1 g) = 2.52 W/kg; SAR(10 g) = 1.17 W/kg** (SAR corrected for target medium)

Maximum value of SAR (measured) = 4.28 W/kg



### 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: 2021/10/18

### P01 WCDMA II\_RMC12.2K\_Left Side\_0mm\_Ch9262

#### DUT: BICM-WTW-P21090832

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1852.4 MHz; Duty Cycle: 1:1.95  
 Medium: H16T20N1\_1018 Medium parameters used (interpolated):  $f = 1852.4$  MHz;  $\sigma = 1.433$  S/m;  $\epsilon_r = 38.849$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

#### DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.17, 8.17, 8.17) @ 1852.4 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 1.67 W/kg

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

Reference Value = 33.72 V/m; Power Drift = -0.04 dB

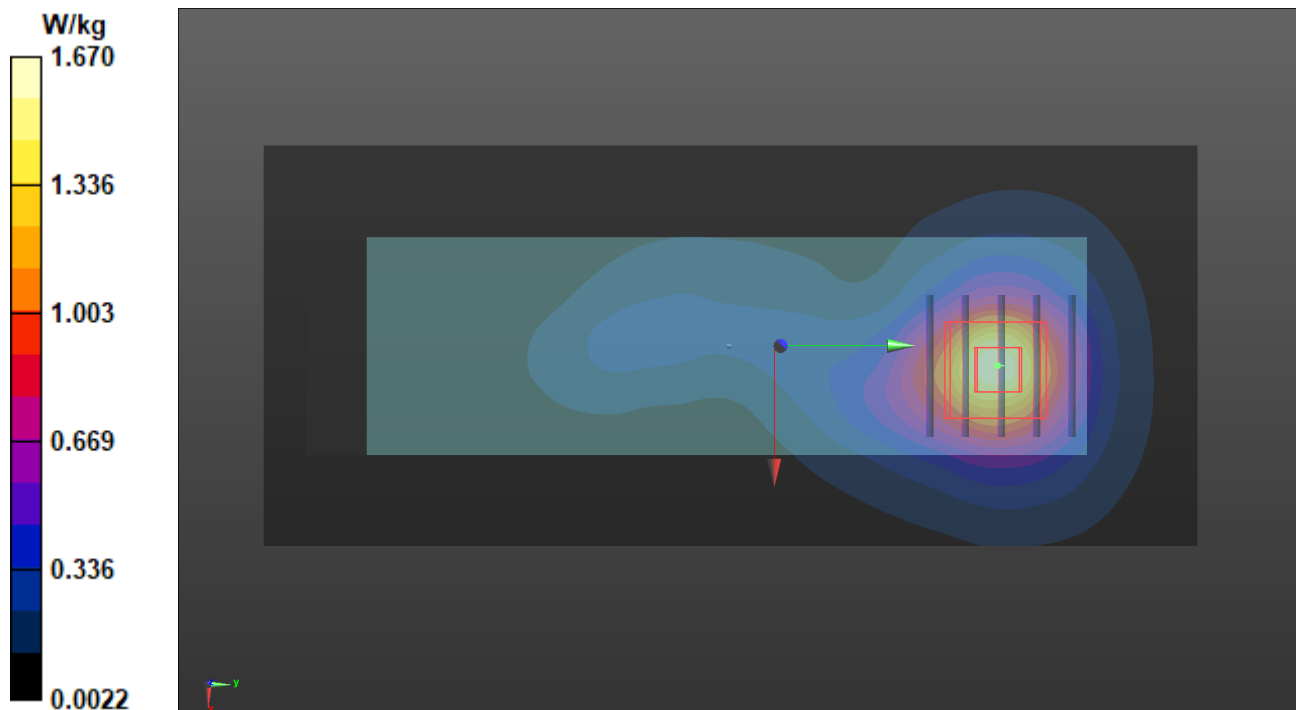
Peak SAR (extrapolated) = 2.02 W/kg

**SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.583 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 13.7 mm

Ratio of SAR at M2 to SAR at M1 = 55.3%

Maximum value of SAR (measured) = 1.69 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/18

**P02 WCDMA IV\_RMC12.2K\_Top Side\_0mm\_Ch1312**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 1712.4 MHz; Duty Cycle: 1:1.95  
 Medium: H16T20N1\_1018 Medium parameters used (interpolated):  $f = 1712.4$  MHz;  $\sigma = 1.352$  S/m;  $\epsilon_r = 39.116$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.54, 8.54, 8.54) @ 1712.4 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (71x191x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Maximum value of SAR (interpolated) = 1.64 W/kg

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

Reference Value = 34.39 V/m; Power Drift = 0.04 dB

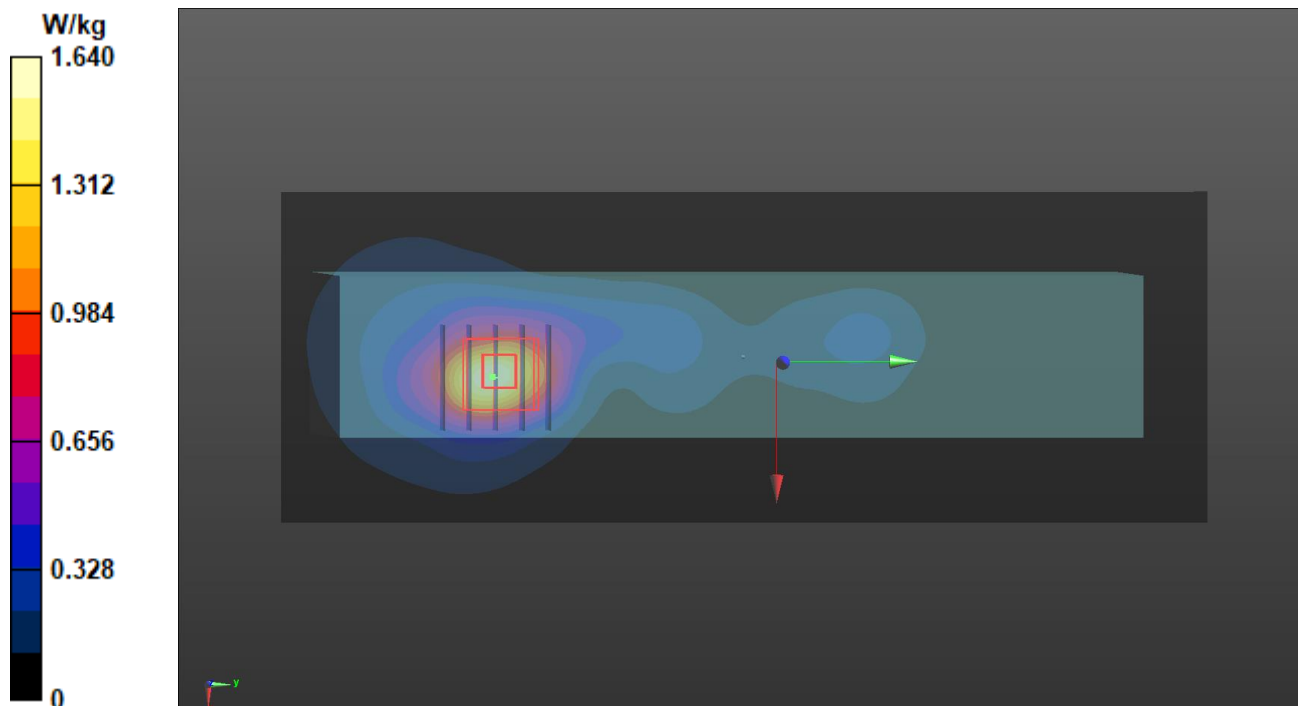
Peak SAR (extrapolated) = 2.16 W/kg

**SAR(1 g) = 1.22 W/kg; SAR(10 g) = 0.669 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 58%

Maximum value of SAR (measured) = 1.77 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/18

**P03 WCDMA V\_RMC12.2K\_Left Side\_0mm\_Ch4132**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10011 - CAB, UMTS-FDD (WCDMA); Frequency: 826.4 MHz; Duty Cycle: 1:1.95  
 Medium: H07T10N1\_1018 Medium parameters used (interpolated):  $f = 826.4$  MHz;  $\sigma = 0.911$  S/m;  $\epsilon_r = 41.878$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.83, 9.83, 9.83) @ 826.4 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 0.595 W/kg

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

Reference Value = 26.55 V/m; Power Drift = 0.01 dB

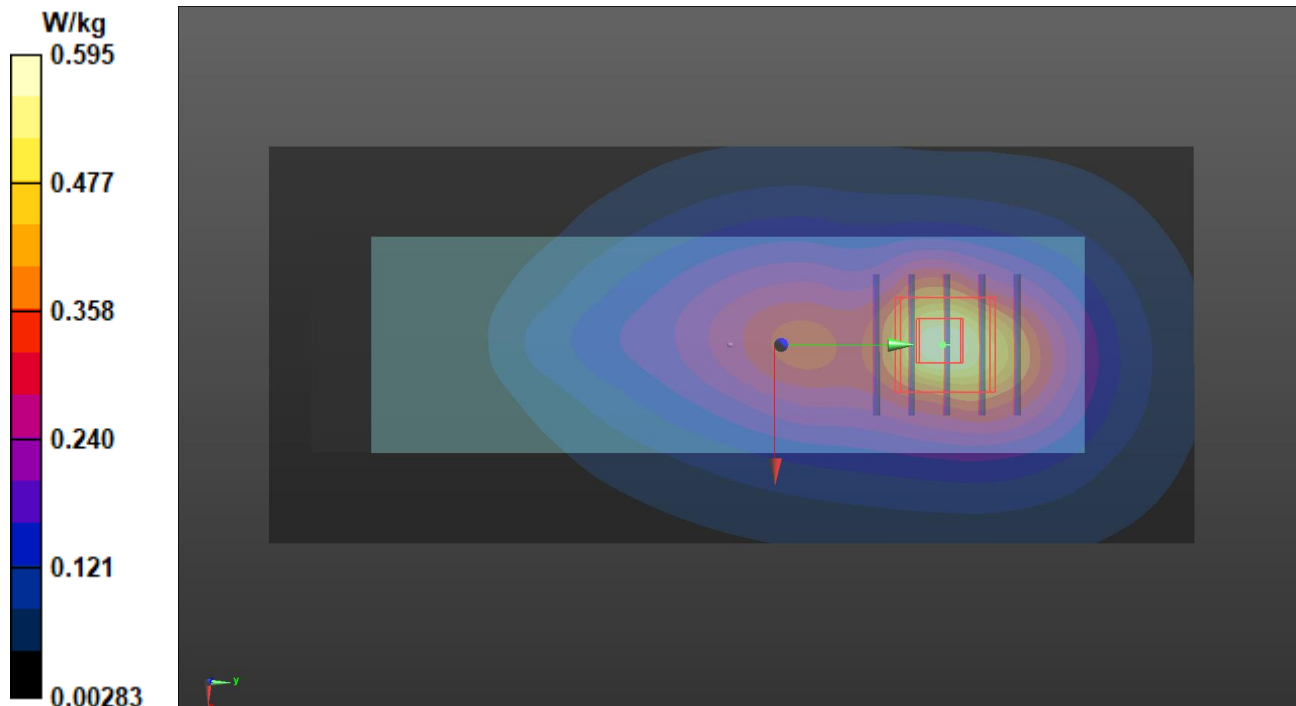
Peak SAR (extrapolated) = 0.710 W/kg

**SAR(1 g) = 0.398 W/kg; SAR(10 g) = 0.203 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 15.2 mm

Ratio of SAR at M2 to SAR at M1 = 56.7%

Maximum value of SAR (measured) = 0.590 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

**P04 LTE 4 \_QPSK20M\_Top Side\_0mm\_Ch20050\_1RB\_OS0**

**DUT: BICM-WTW-P21090832**

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

Medium: H16T20N1\_1019 Medium parameters used:  $f = 1720$  MHz;  $\sigma = 1.302$  S/m;  $\epsilon_r = 40.948$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Ambient Temperature : 23.3 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.54, 8.54, 8.54) @ 1720 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (71x191x1):** Interpolated grid: dx=1.500 mm, dy=1.500 mm  
 Maximum value of SAR (interpolated) = 1.52 W/kg

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

Reference Value = 35.07 V/m; Power Drift = 0.01 dB

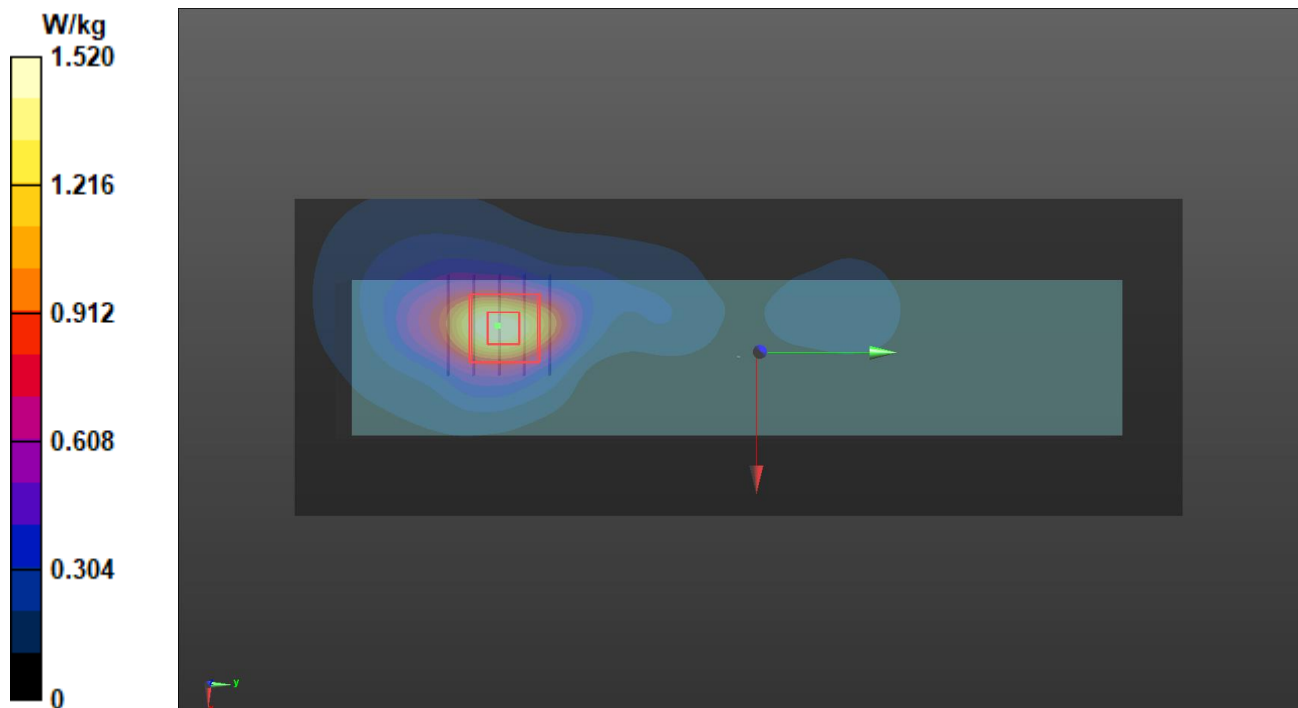
Peak SAR (extrapolated) = 1.90 W/kg

**SAR(1 g) = 1.11 W/kg; SAR(10 g) = 0.601 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 57.3%

Maximum value of SAR (measured) = 1.59 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/18

**P05 LTE 5\_QPSK10M\_Left Side\_0mm\_Ch20450\_1RB\_OS0**

**DUT: BICM-WTW-P21090832**

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

Medium: H07T10N1\_1018 Medium parameters used:  $f = 829$  MHz;  $\sigma = 0.913$  S/m;  $\epsilon_r = 41.846$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.83, 9.83, 9.83) @ 829 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 0.528 W/kg

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

Reference Value = 25.11 V/m; Power Drift = 0.02 dB

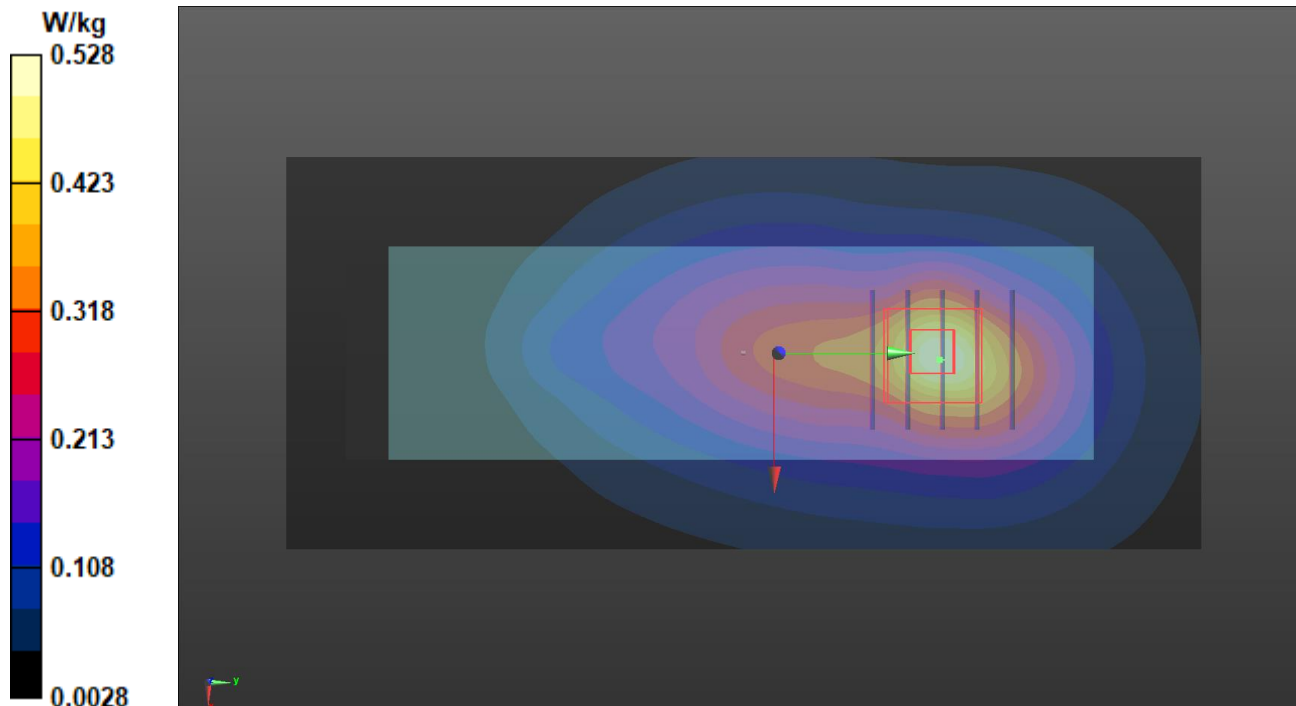
Peak SAR (extrapolated) = 0.632 W/kg

**SAR(1 g) = 0.360 W/kg; SAR(10 g) = 0.215 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 16 mm

Ratio of SAR at M2 to SAR at M1 = 58%

Maximum value of SAR (measured) = 0.520 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

**P06 LTE 7 \_QPSK20M\_Top Side\_0mm\_Ch21100\_1RB\_OS0**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10169 - CAE, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2535 MHz; Duty Cycle: 1:3.74

Medium: H19T27N1\_1019 Medium parameters used (interpolated):  $f = 2535$  MHz;  $\sigma = 1.948$  S/m;  $\epsilon_r = 37.802$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.57, 7.57, 7.57) @ 2535 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (91x241x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 0.577 W/kg

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

Reference Value = 17.53 V/m; Power Drift = 0.01 dB

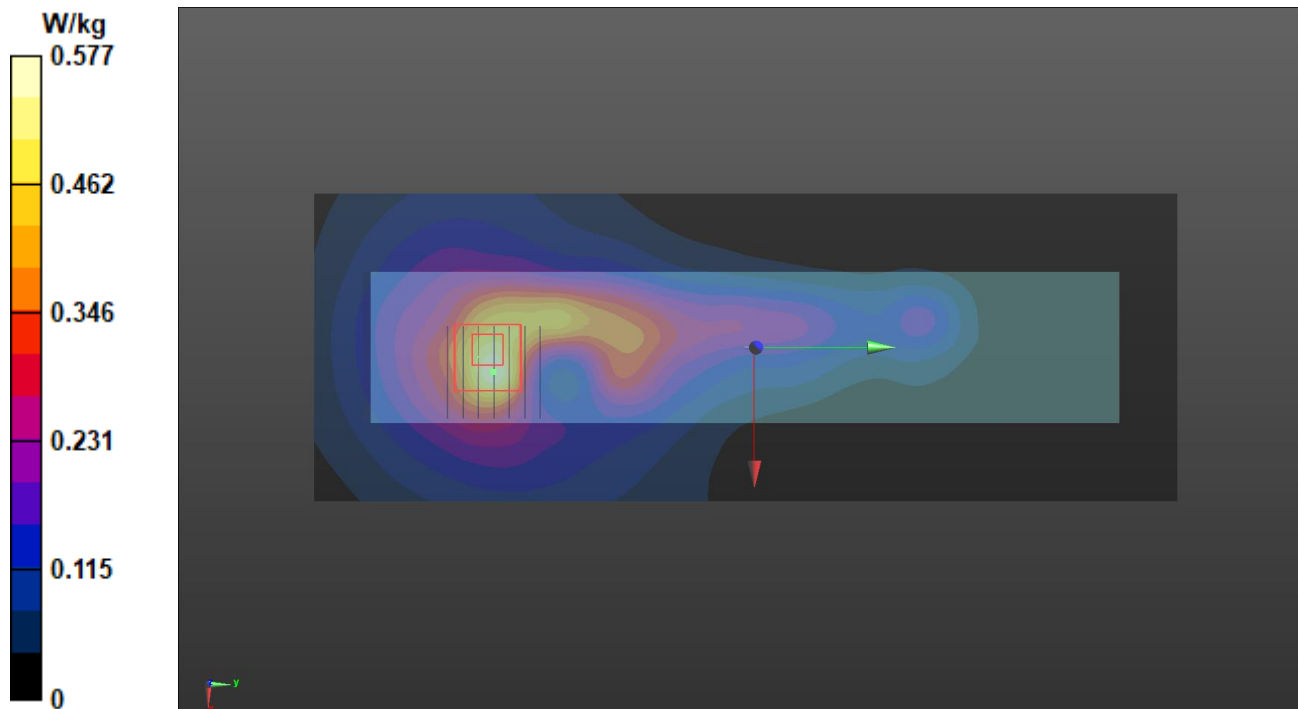
Peak SAR (extrapolated) = 1.24 W/kg

**SAR(1 g) = 0.599 W/kg; SAR(10 g) = 0.232 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 = 51.4%

Maximum value of SAR (measured) = 0.949 W/kg





## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

**P07 LTE 12\_QPSK10M\_Left Side\_0mm\_Ch23095\_1RB\_OS0**

**DUT: BICM-WTW-P21090832**

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\_1019 Medium parameters used (interpolated):  $f = 707.5$  MHz;  $\sigma = 0.886$  S/m;  $\epsilon_r = 41.676$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.92, 9.92, 9.92) @ 707.5 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 0.426 W/kg

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

Reference Value = 22.95 V/m; Power Drift = -0.02 dB

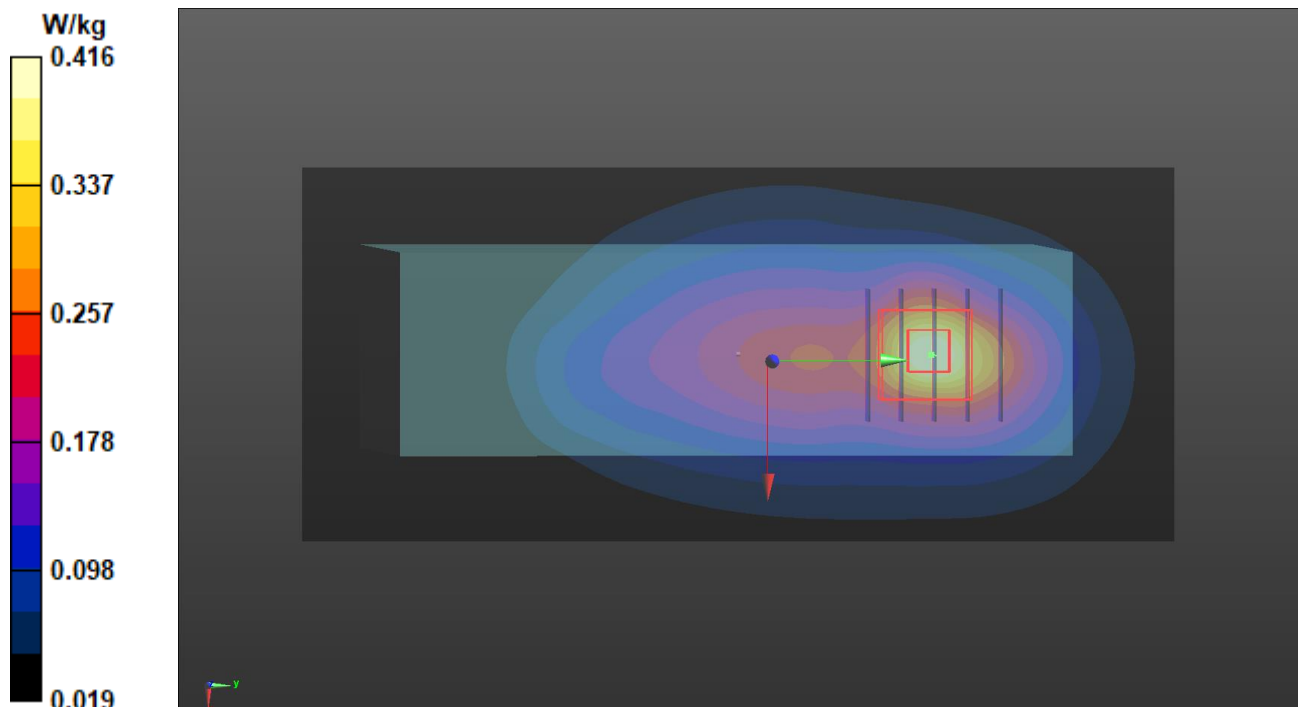
Peak SAR (extrapolated) = 0.502 W/kg

**SAR(1 g) = 0.281 W/kg; SAR(10 g) = 0.169 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 14.5 mm

Ratio of SAR at M2 to SAR at M1 = 56.8%

Maximum value of SAR (measured) = 0.416 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

**P08 LTE 13\_QPSK10M\_Left Side\_0mm\_Ch23230\_1RB\_OS0**

**DUT: BICM-WTW-P21090832**

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

Medium: H06T09N1\_1019 Medium parameters used:  $f = 782 \text{ MHz}$ ;  $\sigma = 0.913 \text{ S/m}$ ;  $\epsilon_r = 41.467$ ;  $\rho = 1000 \text{ kg/m}^3$   
 Ambient Temperature :  $23.4 \text{ }^\circ\text{C}$  ; Liquid Temperature :  $23.1 \text{ }^\circ\text{C}$

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.92, 9.92, 9.92) @ 782 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (61x141x1):** Interpolated grid:  $dx=1.500 \text{ mm}$ ,  $dy=1.500 \text{ mm}$   
 Maximum value of SAR (interpolated) =  $0.432 \text{ W/kg}$

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

Reference Value =  $22.29 \text{ V/m}$ ; Power Drift =  $0.02 \text{ dB}$

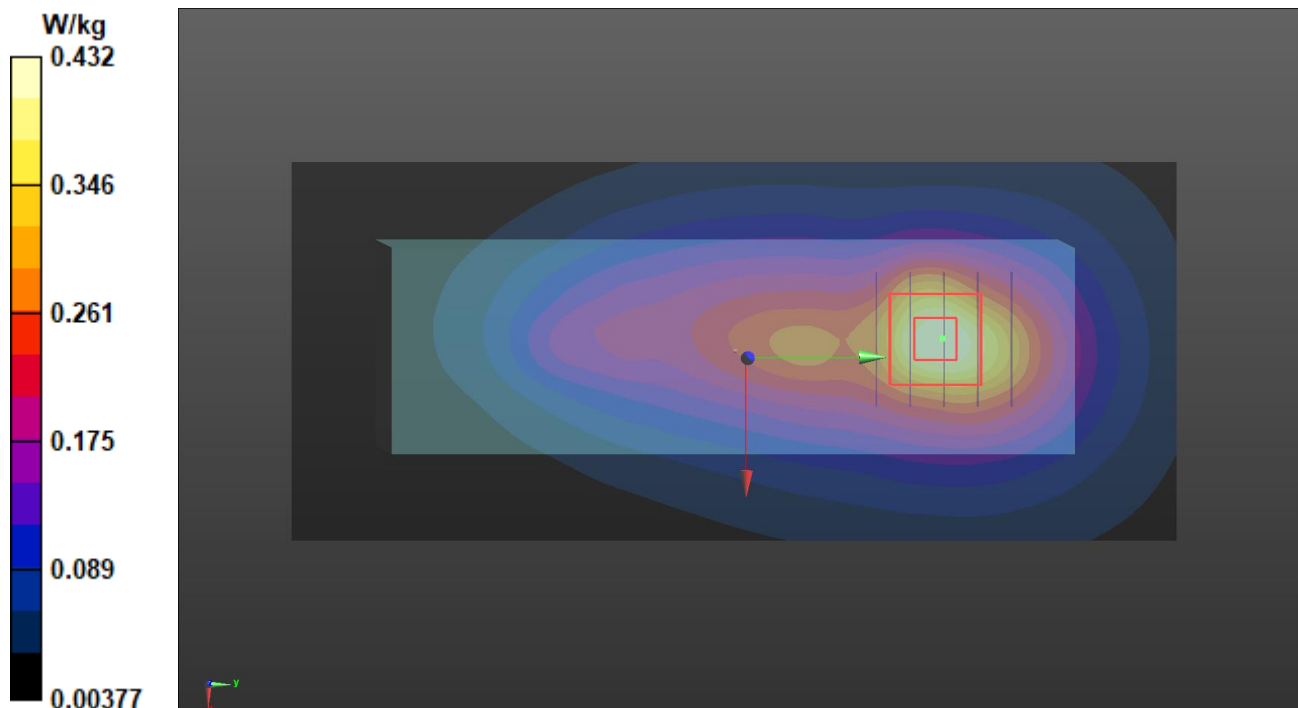
Peak SAR (extrapolated) =  $0.516 \text{ W/kg}$

**SAR(1 g) =  $0.310 \text{ W/kg}$ ; SAR(10 g) =  $0.197 \text{ W/kg}$**  (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below =  $17.2 \text{ mm}$

Ratio of SAR at M2 to SAR at M1 =  $61.6\%$

Maximum value of SAR (measured) =  $0.438 \text{ W/kg}$



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

**P09 LTE 25\_QPSK20M\_Left Side\_0mm\_Ch26140\_1RB\_OS0**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10175 - CAG, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 1860 MHz; Duty Cycle: 1:3.74

Medium: H16T20N1\_1019 Medium parameters used:  $f = 1860$  MHz;  $\sigma = 1.423$  S/m;  $\epsilon_r = 40.523$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(8.17, 8.17, 8.17) @ 1860 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 1.68 W/kg

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

Reference Value = 34.60 V/m; Power Drift = -0.07 dB

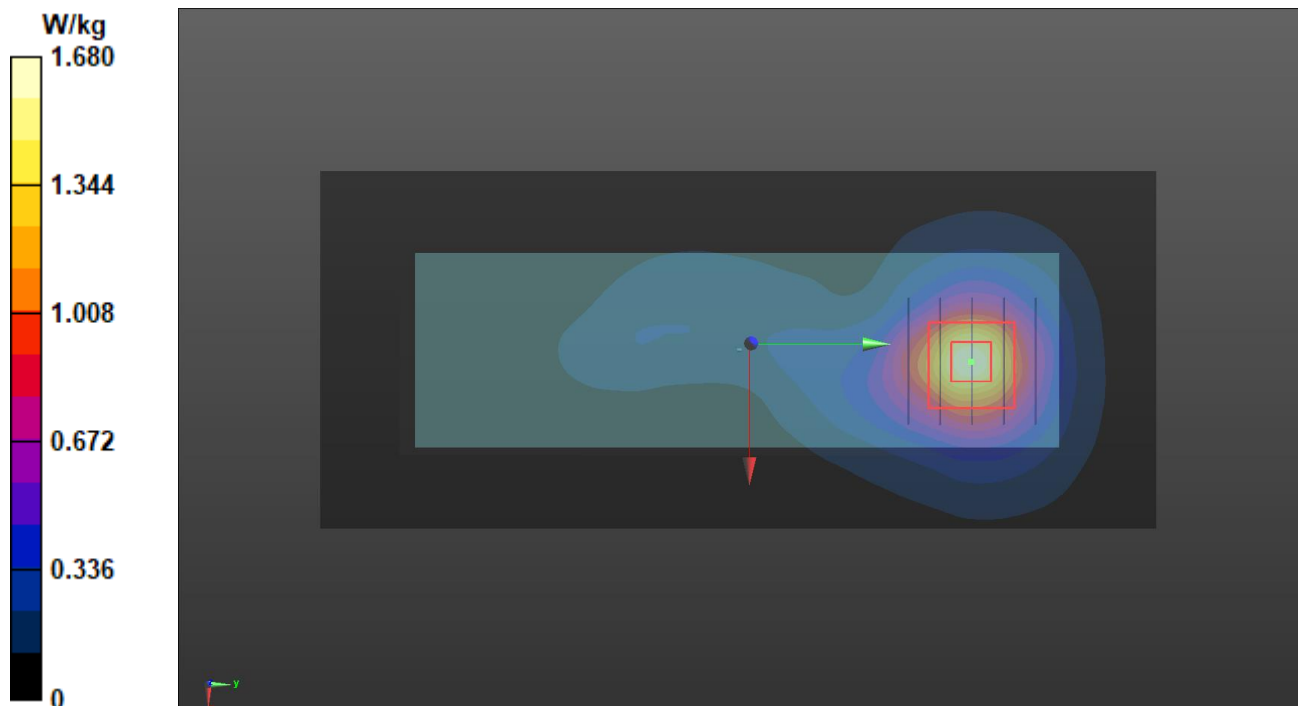
Peak SAR (extrapolated) = 1.98 W/kg

**SAR(1 g) = 1.08 W/kg; SAR(10 g) = 0.522 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 13.2 mm

Ratio of SAR at M2 to SAR at M1 = 55.8%

Maximum value of SAR (measured) = 1.66 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/18

**P10 LTE 26\_QPSK15M\_Left Side\_0mm\_Ch26865\_1RB\_OS0**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10181 - CAE, LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK); Frequency: 831.5 MHz; Duty Cycle: 1:3.734

Medium: H07T10N1\_1018 Medium parameters used (interpolated):  $f = 831.5$  MHz;  $\sigma = 0.916$  S/m;  $\epsilon_r = 41.812$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(9.83, 9.83, 9.83) @ 831.5 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 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) = 0.544 W/kg

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

Reference Value = 25.45 V/m; Power Drift = 0.01 dB

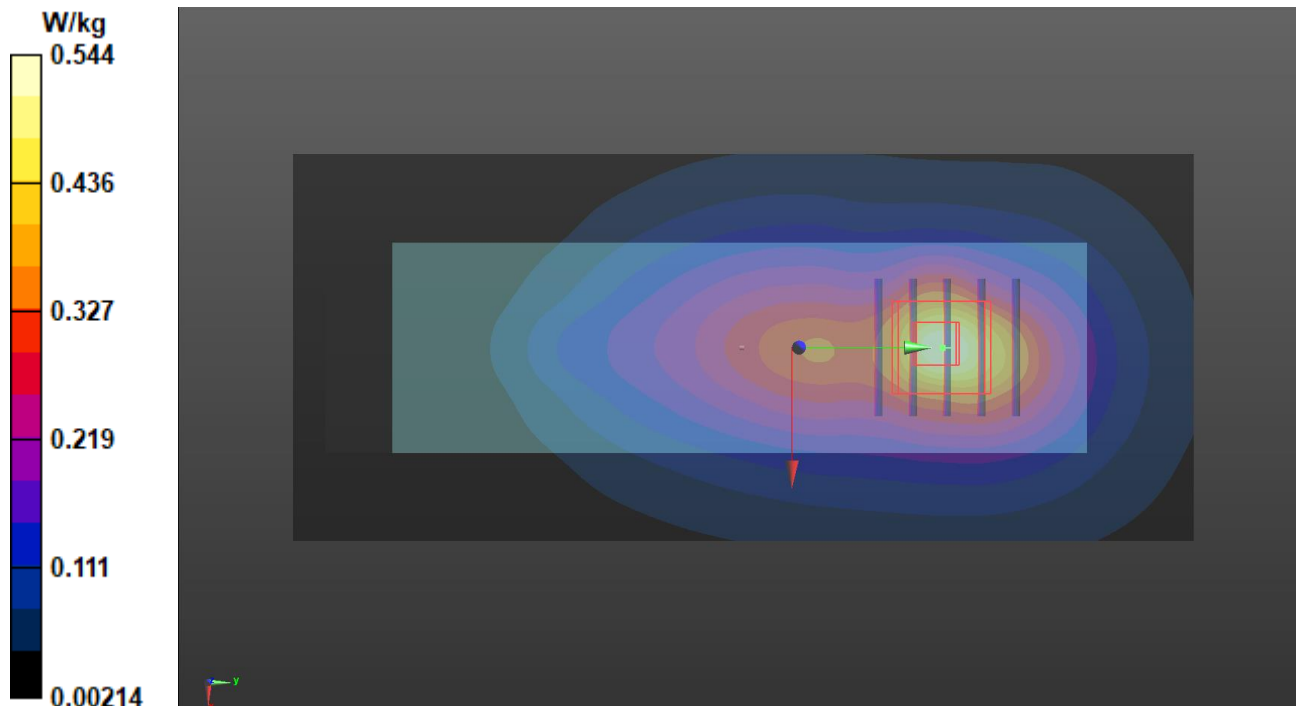
Peak SAR (extrapolated) = 0.652 W/kg

**SAR(1 g) = 0.369 W/kg; SAR(10 g) = 0.213 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 14.5 mm

Ratio of SAR at M2 to SAR at M1 = 57.5%

Maximum value of SAR (measured) = 0.541 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

**P11 LTE 41\_QPSK20M\_Top Side\_0mm\_Ch41490\_1RB\_OS0**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10172 - CAG, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2680 MHz; Duty Cycle: 1:8.33

Medium: H19T27N1\_1019 Medium parameters used:  $f = 2680$  MHz;  $\sigma = 2.102$  S/m;  $\epsilon_r = 37.294$ ;  $\rho = 1000$  kg/m<sup>3</sup>  
 Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.57, 7.57, 7.57) @ 2680 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (91x241x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
 Maximum value of SAR (interpolated) = 0.663 W/kg

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

Reference Value = 18.22 V/m; Power Drift = 0.14 dB

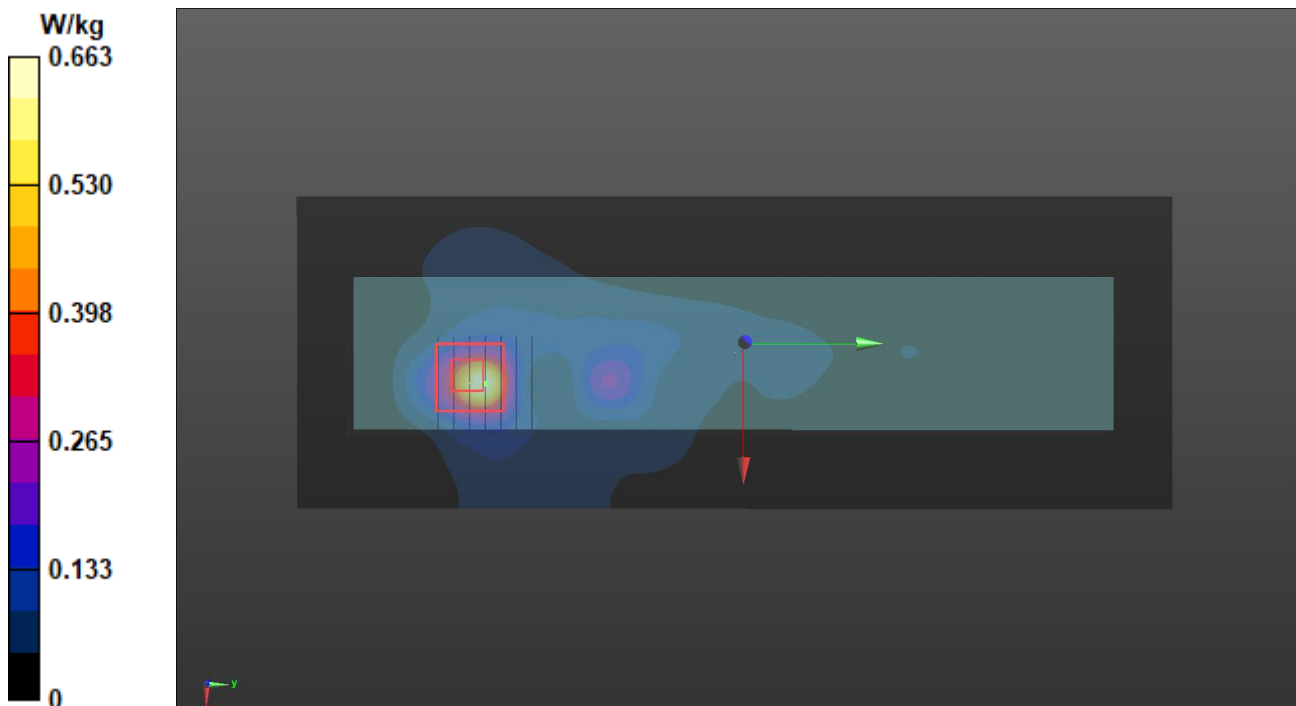
Peak SAR (extrapolated) = 1.07 W/kg

**SAR(1 g) = 0.452 W/kg; SAR(10 g) = 0.172 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 7 mm

Ratio of SAR at M2 to SAR at M1 = 47.9%

Maximum value of SAR (measured) = 0.779 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/19

**P12 WLAN2.4G\_802.11b\_Bottom Side\_0mm\_Ch6\_Ant 1**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10012 - CAB, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps); Frequency: 2437 MHz; Duty Cycle: 1:1.01

Medium: H19T27N1\_1019 Medium parameters used (interpolated):  $f = 2437$  MHz;  $\sigma = 1.852$  S/m;  $\epsilon_r = 38.129$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Ambient Temperature : 23.4 °C ; Liquid Temperature : 23.1 °C

DASY5 Configuration:

- Probe: EX3DV4 - SN3650; ConvF(7.77, 7.77, 7.77) @ 2437 MHz; Calibrated: 2021/03/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn861; Calibrated: 2021/04/14
- Phantom: ELI V5.0 1204; Type: QD OVA 002 AA;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (91x241x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm

Maximum value of SAR (interpolated) = 1.25 W/kg

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

Reference Value = 23.75 V/m; Power Drift = 0.07 dB

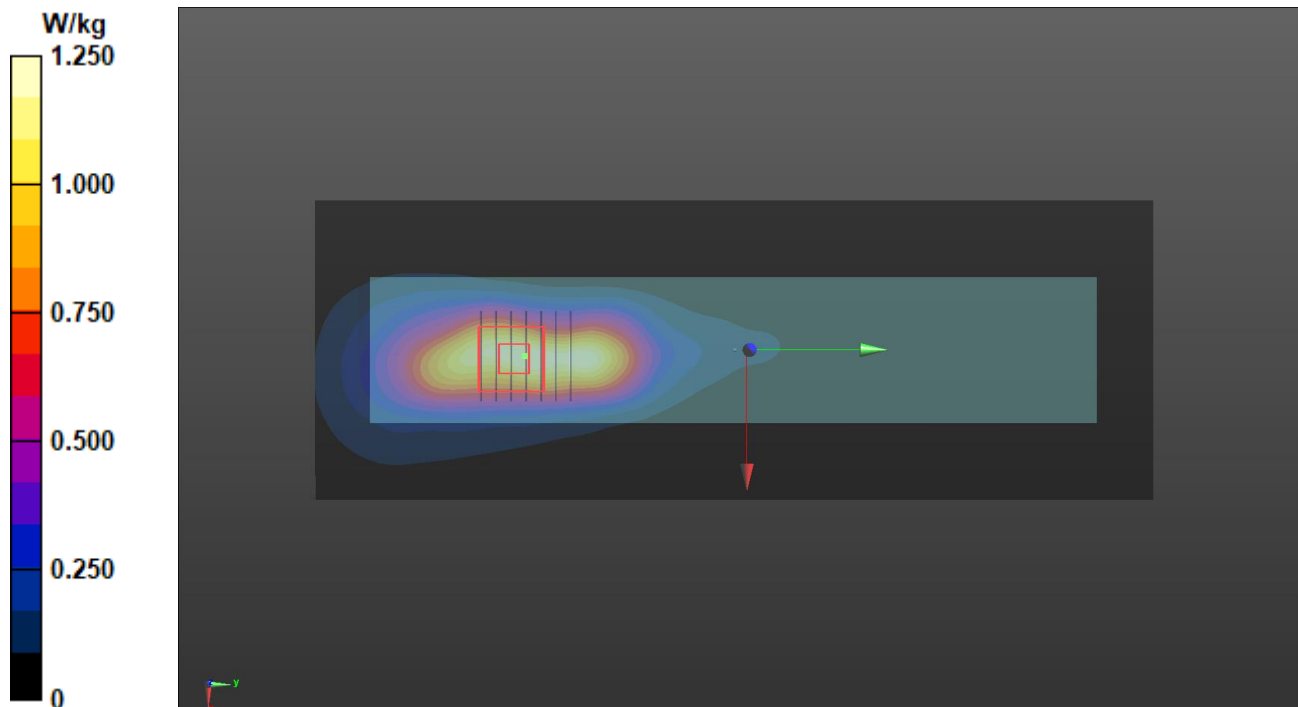
Peak SAR (extrapolated) = 2.45 W/kg

**SAR(1 g) = 1.16 W/kg; SAR(10 g) = 0.560 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 = 47.8%

Maximum value of SAR (measured) = 1.99 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/21

**P13 WLAN5.3G\_802.11a\_Bottom Side\_0mm\_Ch60\_Ant 1**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10591 - AAC, IEEE 802.11n (HT Mixed, 20MHz, MCS0); Frequency: 5300 MHz; Duty Cycle: 1:1.01

Medium: H34T60N1\_1021 Medium parameters used (interpolated):  $f = 5300$  MHz;  $\sigma = 4.94$  S/m;  $\epsilon_r = 35.836$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5.45, 5.45, 5.45) @ 5300 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**ConfiguraArea Scan (101x281x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 6.09 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 33.18 V/m; Power Drift = 0.16 dB

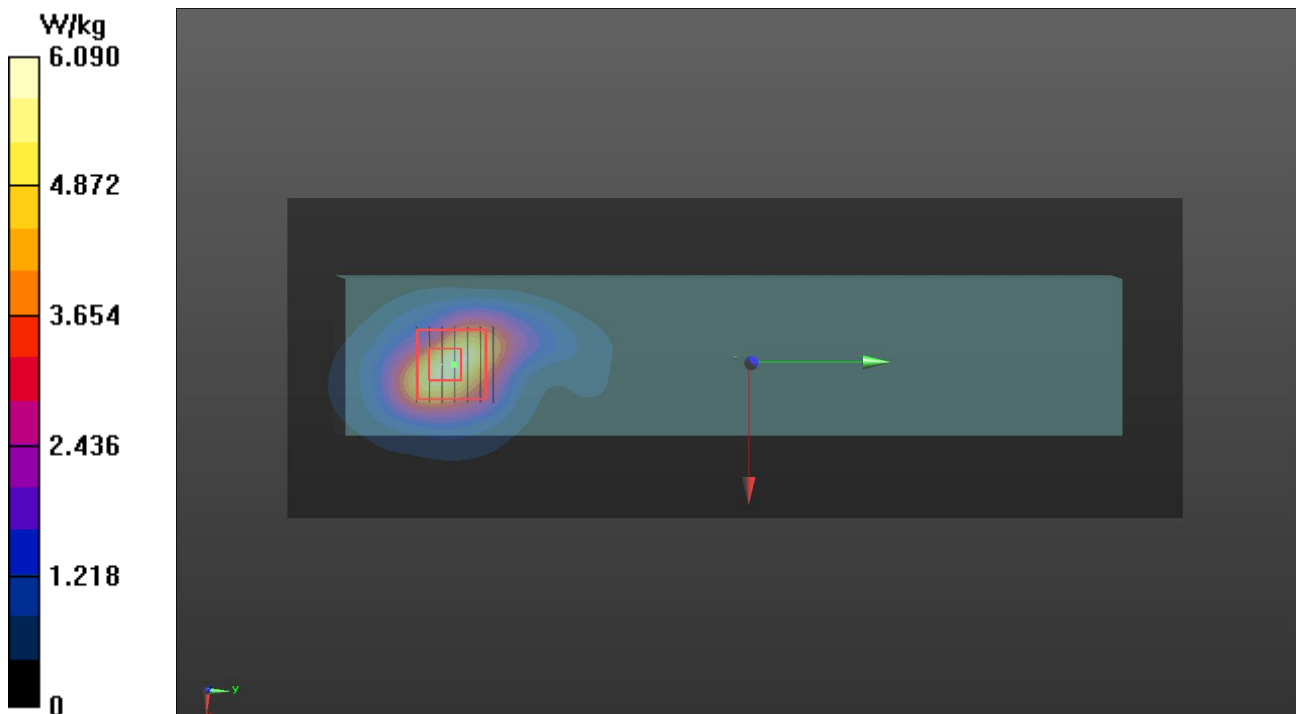
Peak SAR (extrapolated) = 12.3 W/kg

**SAR(1 g) = 3.61 W/kg; SAR(10 g) = 1.42 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 10.4 mm

Ratio of SAR at M2 to SAR at M1 = 67.1%

Maximum value of SAR (measured) = 7.81 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/21

**P14 WLAN5.6G\_802.11n HT40\_Bottom Side\_0mm\_Ch110\_Ant 0+1**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10599 - AAC, IEEE 802.11n (HT Mixed, 40MHz, MCS0); Frequency: 5550 MHz; Duty Cycle: 1:1.02

Medium: H34T60N1\_1021 Medium parameters used:  $f = 5550$  MHz;  $\sigma = 5.215$  S/m;  $\epsilon_r = 35.474$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(4.8, 4.8, 4.8) @ 5550 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (101x281x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 4.62 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 26.80 V/m; Power Drift = -0.17 dB

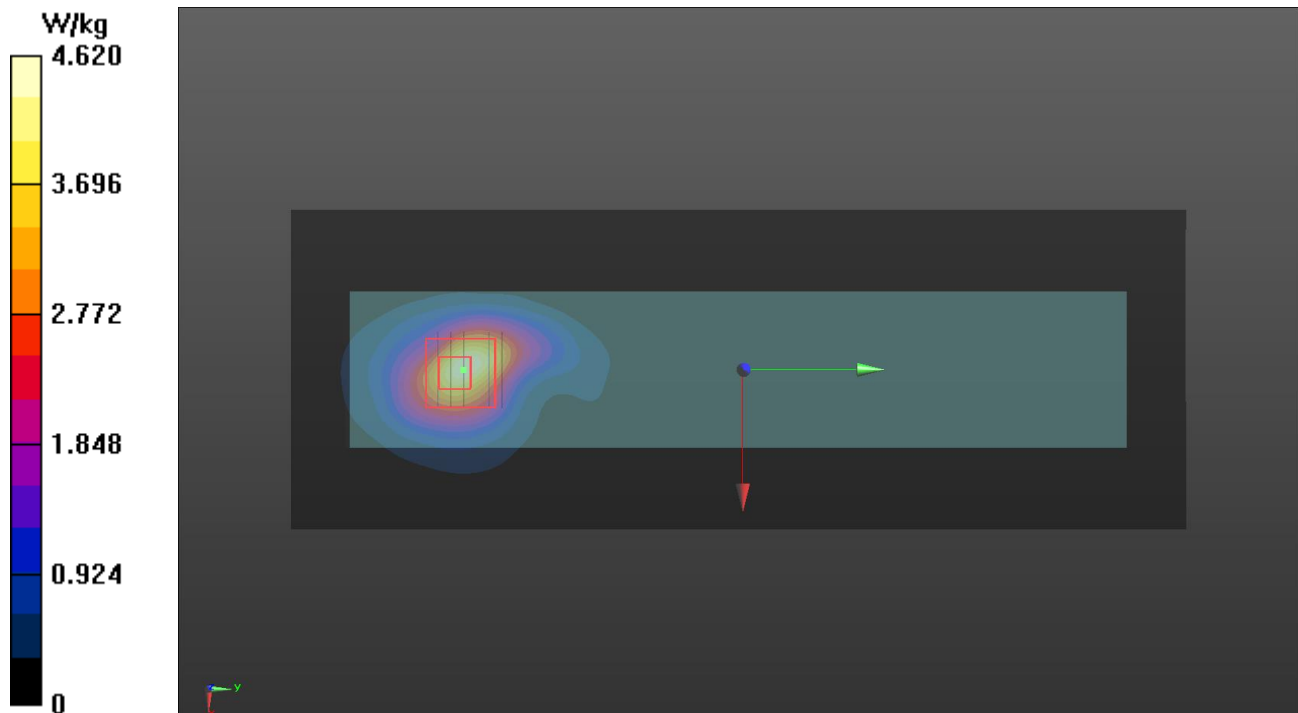
Peak SAR (extrapolated) = 8.11 W/kg

**SAR(1 g) = 2.3 W/kg; SAR(10 g) = 0.924 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 = 64.3%

Maximum value of SAR (measured) = 5.23 W/kg





## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/21

**P15 WLAN5.8G\_802.11a\_Bottom Side\_0mm\_Ch149\_Ant 1**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10317 - AAD, IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps); Frequency: 5745 MHz; Duty Cycle: 1:1.01

Medium: H34T60N1\_1021 Medium parameters used (interpolated):  $f = 5745$  MHz;  $\sigma = 5.405$  S/m;  $\epsilon_r = 35.114$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(5, 5, 5) @ 5745 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (101x281x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm  
Maximum value of SAR (interpolated) = 10.6 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm  
Reference Value = 40.03 V/m; Power Drift = -0.11 dB

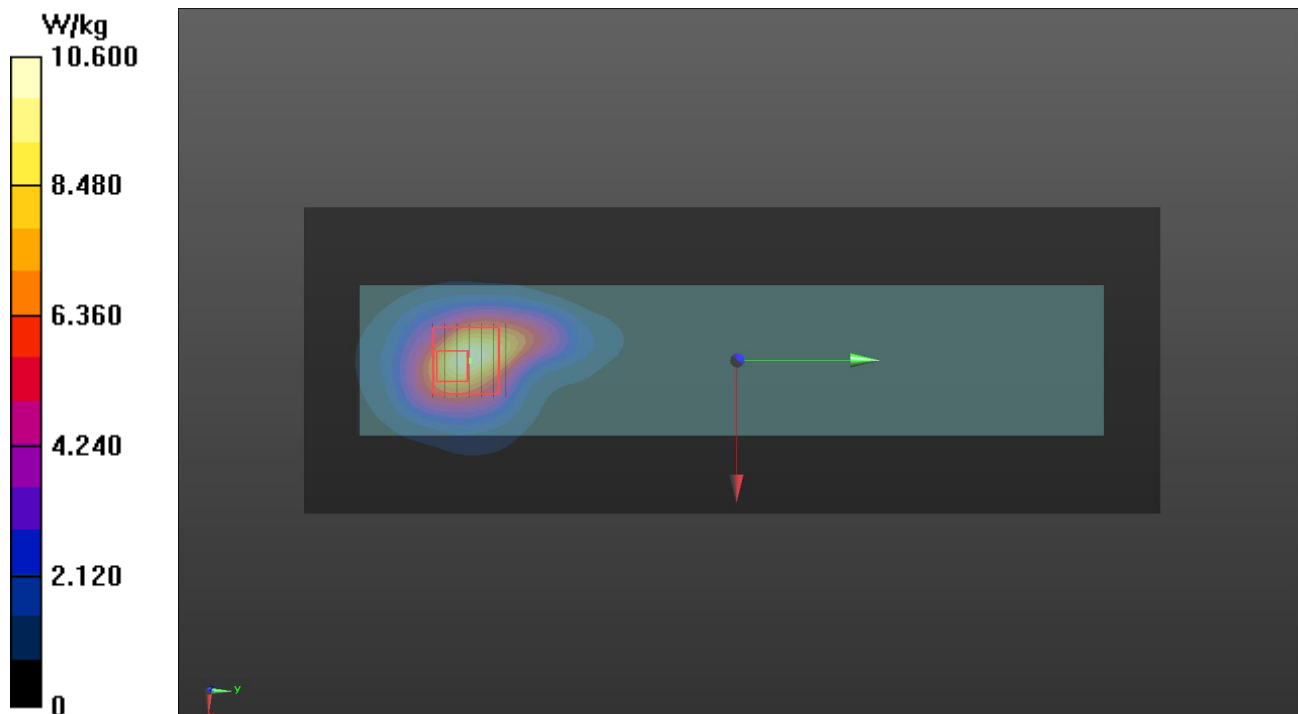
Peak SAR (extrapolated) = 21.4 W/kg

**SAR(1 g) = 5.39 W/kg; SAR(10 g) = 2.05 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 10 mm

Ratio of SAR at M2 to SAR at M1 = 63.7%

Maximum value of SAR (measured) = 12.2 W/kg



## Plots of Measurement

Test Laboratory: Bureau Veritas ADT SAR/HAC Testing Lab

Date: 2021/10/21

**P16 BT\_BR\_EDR\_Right Side\_0mm\_Ch39\_Ant 0**

**DUT: BICM-WTW-P21090832**

Communication System: UID 10032 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2441 MHz; Duty Cycle: 1:1.29

Medium: H19T27N2\_1021 Medium parameters used (interpolated):  $f = 2441$  MHz;  $\sigma = 1.786$  S/m;  $\epsilon_r = 37.847$ ;  $\rho = 1000$  kg/m<sup>3</sup>

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7555; ConvF(7.9, 7.9, 7.9) @ 2441 MHz; Calibrated: 2021/09/27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1590; Calibrated: 2021/09/20
- Phantom: ELI Phantom\_1043; Type: QD OVA 002 Ax;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

**Area Scan (81x181x1):** Interpolated grid: dx=1.200 mm, dy=1.200 mm  
Maximum value of SAR (interpolated) = 0.158 W/kg

**Zoom Scan (7x7x7)/Cube 0:** Measurement grid: dx=5mm, dy=5mm, dz=5mm  
Reference Value = 8.856 V/m; Power Drift = -0.01 dB

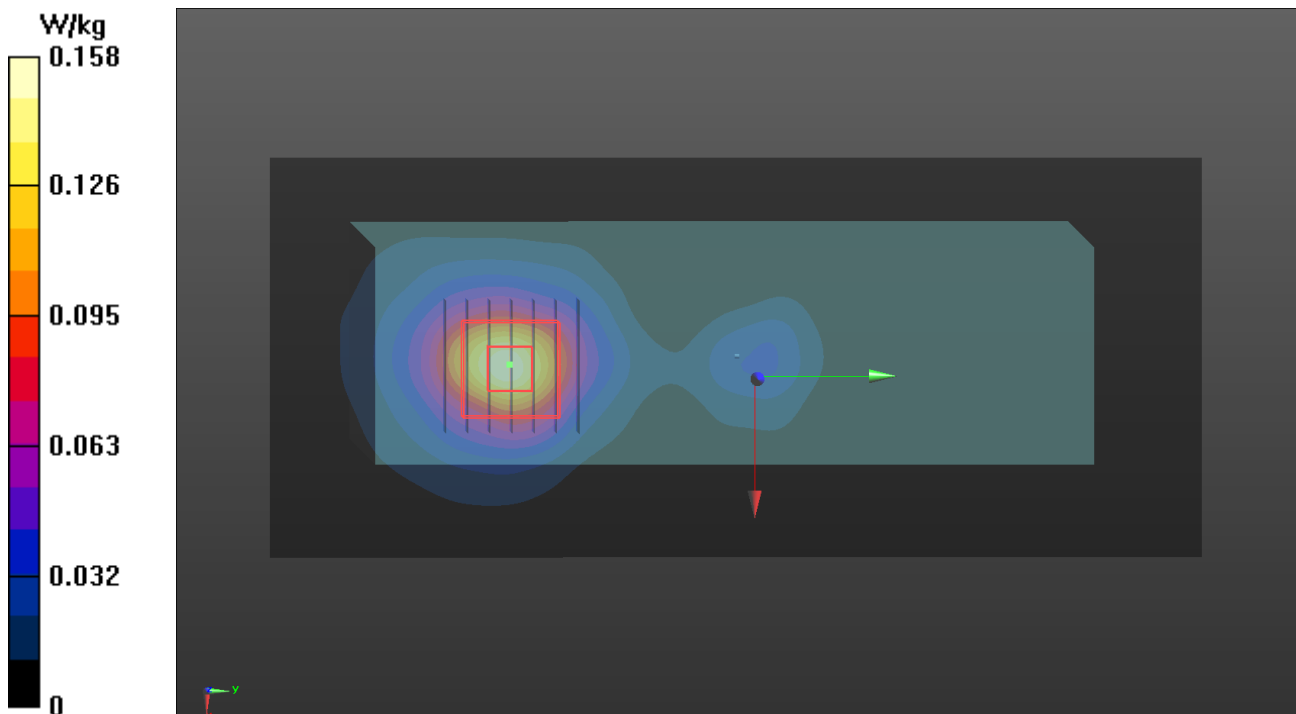
Peak SAR (extrapolated) = 0.191 W/kg

**SAR(1 g) = 0.096 W/kg; SAR(10 g) = 0.048 W/kg** (SAR corrected for target medium)

Smallest distance from peaks to all points 3 dB below = 12 mm

Ratio of SAR at M2 to SAR at M1 = 50.5%

Maximum value of SAR (measured) = 0.153 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  $\pm 10$  % of the target values. Liquid temperature during the SAR testing has kept within  $\pm 2$  °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			Date	System Validation					Note			
Plot No.	Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ε <sub>r</sub> )	Targeted Conductivity (σ)	Targeted Permittivity (ε <sub>r</sub> )	Deviation Conductivity (σ)	Deviation Permittivity (ε <sub>r</sub> )	Sensitivity Range	Probe Linearity	Probe Isotropy	Modulation Type	Duty Factor	PAR		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)
S01	1900	23.1	1.463	38.787	1.4	40	4.50	-3.03	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 18, 2021	1900	21.10	1.04	20.75	-1.66	5d036	3650	861	17
S02	1750	23.1	1.373	39.069	1.37	40.1	0.22	-2.57	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 18, 2021	1750	19.00	0.961	19.17	0.92	1111	3650	861	17
S03	835	23.1	0.919	41.768	0.9	41.5	2.11	0.65	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 18, 2021	835	6.11	0.303	6.05	-1.05	4d092	3650	861	17
S04	1750	23.1	1.324	40.865	1.37	40.1	-3.36	1.91	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 19, 2021	1750	19.00	0.947	18.90	-0.55	1111	3650	861	17
S05	835	23.1	0.919	41.768	0.9	41.5	2.11	0.65	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 18, 2021	835	6.11	0.303	6.05	-1.05	4d092	3650	861	17
S06	2600	23.1	2.016	37.567	1.96	39	2.86	-3.67	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 19, 2021	2600	25.70	1.31	26.14	1.70	1020	3650	861	17
S07	750	23.1	0.902	41.563	0.89	41.9	1.35	-0.80	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 19, 2021	750	5.59	0.265	5.29	-5.41	1078	3650	861	17
S08	750	23.1	0.902	41.563	0.89	41.9	1.35	-0.80	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 19, 2021	750	5.59	0.265	5.29	-5.41	1078	3650	861	17
S09	1900	23.1	1.453	40.45	1.4	40	3.79	1.13	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 19, 2021	1900	21.10	1.02	20.35	-3.55	5d036	3650	861	17
S10	835	23.1	0.919	41.768	0.9	41.5	2.11	0.65	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 18, 2021	835	6.11	0.303	6.05	-1.05	4d092	3650	861	17
S11	2600	23.1	2.016	37.567	1.96	39	2.86	-3.67	Pass	Pass	Pass	N/A	N/A	N/A	Oct. 19, 2021	2600	25.70	1.31	26.14	1.70	1020	3650	861	17
S12	2450	23.1	1.864	38.07	1.8	39.2	3.56	-2.88	Pass	Pass	Pass	OFDM	N/A	Pass	Oct. 19, 2021	2450	23.90	1.3	25.94	8.53	835	3650	861	17
S13	5250	23.2	4.903	36.001	4.71	35.9	4.10	0.28	Pass	Pass	Pass	OFDM	N/A	Pass	Oct. 21, 2021	5250	23.00	1.23	24.54	6.70	1019	7555	1590	17
S14	5600	23.2	5.248	35.454	5.07	35.5	3.51	-0.13	Pass	Pass	Pass	OFDM	N/A	Pass	Oct. 21, 2021	5600	23.30	1.25	24.94	7.04	1019	7555	1590	17
S15	5750	23.2	5.413	35.103	5.22	35.4	3.70	-0.84	Pass	Pass	Pass	OFDM	N/A	Pass	Oct. 21, 2021	5750	22.40	1.16	23.15	3.33	1019	7555	1590	17
S16	2450	23.2	1.791	37.828	1.8	39.2	-0.50	-3.50	Pass	Pass	Pass	OFDM	N/A	Pass	Oct. 21, 2021	2450	23.90	1.17	23.34	-2.32	835	7555	1590	17

## **Annex D. Maximum Target Conducted Power**

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

<b>WCDMA Max. Tune-up Power (Full)</b>		
<b>Mode</b>	<b>RMC 12.2K</b>	<b>HSDPA DC-HSDPA HSUPA</b>
	<b>Maximum Target Power</b>	<b>Maximum Target Power</b>
WCDMA Band II	24.0	23.0
WCDMA Band IV	24.0	23.0
WCDMA Band V	24.0	23.0

<b>LTE Max. Tune-up Power (Full)</b>		
<b>Mode</b>	<b>QPSK</b>	<b>16QAM</b>
	<b>Maximum Target Power</b>	<b>Maximum Target Power</b>
LTE 2	24.0	23.0
LTE 4	24.0	23.0
LTE 5	24.0	23.0
LTE 7	23.0	22.0
LTE 12	24.0	23.0
LTE 13	24.0	23.0
LTE 25	24.0	23.0
LTE 26	24.0	23.0
LTE 41	23.0	22.0

WLAN Tune-up Power (Full)							
WLAN 2.4GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11b	1	2412	19.5	20.0			
	6	2437	21.0	21.0			
	11	2462	20.0	21.0			
	12	2467	18.0	18.0			
	13	2472	15.0	14.5			
802.11g	1	2412	16.5	17.0			
	6	2437	21.0	21.0			
	11	2462	17.0	16.5			
	12	2467	14.0	14.0			
	13	2472	-5.5	-5.5			
802.11n HT20	1	2412	16.0	16.5	16.0	16.0	19.0
	6	2437	20.5	21.0	20.5	20.5	23.5
	11	2462	16.0	16.5	16.0	16.0	19.0
	12	2467	13.5	14.0	12.5	12.5	15.5
	13	2472	-5.5	-5.5	-8.5	-8.5	-5.5
802.11n HT40	3	2422	14.0	13.5	13.5	13.5	16.5
	6	2437	16.0	16.0	16.0	16.0	19.0
	9	2452	14.5	14.5	14.5	14.5	17.5
	10	2457	14.5	14.5	14.5	14.5	17.5
	11	2462	14.5	14.5	14.5	14.5	17.5



WLAN Tune-up Power (Full)				
Bluetooth				
Mode	Channel	Frequency	Ant 0 Max Tune-up	
BR / EDR	0	2402	11.5	
	39	2441	11.5	
	78	2480	11.5	
LE	0	2402	10.0	
	19	2440	10.0	
	39	2480	10.0	

WLAN Tune-up Power (Full)							
WLAN 5.2GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	36	5180	17.5	17.5			
	40	5200	20.5	20.5			
	44	5220	21.0	21.0			
	48	5240	21.0	21.0			
802.11n HT20	36	5180	17.0	17.5	17.0	17.0	20.0
	40	5200	20.0	20.5	20.0	20.0	23.0
	44	5220	21.0	21.0	21.0	21.0	24.0
	48	5240	21.0	21.0	21.0	21.0	24.0
802.11n HT40	38	5190	18.0	17.5	17.5	17.5	20.5
	46	5230	19.5	18.5	18.5	18.5	21.5
802.11ac VHT80	42	5210	18.0	18.0	18.0	18.0	21.0

WLAN Tune-up Power (Full)							
WLAN 5.3GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	52	5260	21.0	21.5			
	56	5280	21.0	21.5			
	60	5300	21.0	21.5			
	64	5320	17.5	17.0			
802.11n HT20	52	5260	21.0	21.5	21.0	21.0	24.0
	56	5280	21.0	21.0	21.0	21.0	24.0
	60	5300	21.0	21.0	21.0	21.0	24.0
	64	5320	17.0	17.5	17.0	17.0	20.0
802.11n HT40	54	5270	18.5	18.5	18.5	18.5	21.5
	62	5310	15.5	15.5	15.5	15.5	18.5
802.11ac VHT80	58	5290	16.5	16.0	16.0	16.0	19.0
802.11ac VHT160	50	5250	13.0	13.5	13.0	13.0	16.0

WLAN Tune-up Power (Full)							
WLAN 5.6GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	100	5500	18.5	17.5			
	116	5580	21.0	21.5			
	120	5600	21.0	21.5			
	124	5620	21.0	21.5			
	132	5660	21.0	21.5			
	140	5700	19.0	18.5			
802.11n HT20	144	5720	19.0	18.5	16.5	16.5	19.5
	100	5500	16.5	18.5	21.0	21.0	24.0
	116	5580	21.0	21.5	21.0	21.0	24.0
	120	5600	21.0	21.5	21.0	21.0	24.0
	124	5620	21.0	21.5	21.0	21.0	24.0
	132	5660	21.0	21.5	21.0	21.0	24.0
802.11n HT40	140	5700	18.5	19.0	18.5	18.5	21.5
	144	5720	18.5	19.0	18.5	18.5	21.5
	102	5510	17.5	18.0	17.5	17.5	20.5
	110	5550	21.5	21.5	21.5	21.5	24.5
	118	5590	21.5	21.5	21.5	21.5	24.5
	126	5630	21.5	21.5	21.5	21.5	24.5
802.11ac VHT80	134	5670	18.5	19.0	18.5	18.5	21.5
	142	5710	18.5	19.0	18.5	18.5	21.5
	106	5530	18.5	17.5	17.5	17.5	20.5
802.11ac VHT160	122	5610	20.5	20.0	20.0	20.0	23.0
	138	5690	21.0	21.0	21.0	21.0	24.0
802.11ac VHT160	114	5570	15.0	15.0	15.0	15.0	18.0

WLAN Tune-up Power (Full)							
WLAN 5.8GHz							
Mode	Channel	Frequency	SISO Ant 0 Max Tune up	SISO Ant 1 Max Tune up	MIMO Ant 0 Tune up	MIMO Ant 1 Tune up	MIMO Ant 0+1 Max Tune up
802.11a	149	5745	22.0	22.0			
	153	5765	22.0	22.0			
	157	5785	21.5	21.5			
	161	5805	21.5	21.5			
	165	5825	21.5	21.5			
802.11n HT20	149	5745	22.0	21.0	21.0	21.0	24.0
	153	5765	22.0	21.5	21.5	21.5	24.5
	157	5785	21.5	21.5	21.5	21.5	24.5
	161	5805	21.5	21.5	21.5	21.5	24.5
	165	5825	21.5	21.5	21.5	21.5	24.5
802.11n HT40	151	5755	19.5	19.5	19.5	19.5	22.5
	159	5795	20.0	20.5	20.5	20.5	23.5
802.11ac VHT80	155	5775	18.5	18.5	18.5	18.5	21.5

## **Annex E. Measured Conducted Power Result**

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

<b>Band</b>	<b>WCDMA Band II</b>			<b>WCDMA Band IV</b>			<b>WCDMA Band V</b>			<b>3GPP MPR (dB)</b>
<b>Channel</b>	<b>9262</b>	<b>9400</b>	<b>9538</b>	<b>1312</b>	<b>1413</b>	<b>1513</b>	<b>4132</b>	<b>4182</b>	<b>4233</b>	
<b>Frequency (MHz)</b>	<b>1852.4</b>	<b>1880.0</b>	<b>1907.6</b>	<b>1712.4</b>	<b>1732.6</b>	<b>1752.6</b>	<b>826.4</b>	<b>836.4</b>	<b>846.6</b>	
RMC 12.2K	23.01	<b>23.09</b>	22.97	23.19	<b>23.36</b>	23.31	<b>22.59</b>	22.48	22.56	-
HSDPA Subtest-1	21.96	21.98	21.94	22.22	22.14	22.12	21.16	21.11	21.16	0
HSDPA Subtest-2	21.99	22.01	21.97	22.26	22.18	22.16	21.21	21.16	21.21	0
HSDPA Subtest-3	21.47	21.49	21.45	21.76	21.68	21.66	20.70	20.65	20.70	0.5
HSDPA Subtest-4	21.47	21.49	21.45	21.76	21.68	21.66	20.70	20.65	20.70	0.5
DC-HSDPA Subtest-1	21.94	21.96	21.92	22.13	22.05	22.03	21.14	21.09	21.14	0
DC-HSDPA Subtest-2	21.97	21.99	21.95	22.21	22.13	22.11	21.18	21.13	21.18	0
DC-HSDPA Subtest-3	21.42	21.44	21.40	22.09	22.01	21.99	20.67	20.62	20.67	0.5
DC-HSDPA Subtest-4	21.41	21.43	21.39	21.75	21.67	21.65	20.67	20.62	20.67	0.5
HSUPA Subtest-1	21.72	21.74	21.70	21.90	21.82	21.80	21.11	21.05	21.10	0
HSUPA Subtest-2	20.95	20.97	20.93	20.96	20.88	20.86	20.24	20.19	20.24	2
HSUPA Subtest-3	20.66	20.68	20.64	20.93	20.85	20.83	20.13	20.08	20.13	1
HSUPA Subtest-4	20.92	20.94	20.90	20.99	20.91	20.89	20.16	20.11	20.16	2
HSUPA Subtest-5	22.09	22.11	22.07	22.29	22.21	22.19	21.26	21.21	21.26	0

**LTE Band 2**

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		18700	18900	19100				Channel		18675	18900	19125	
		Frequency (MHz)		1860.0	1880.0	1900.0				Frequency (MHz)		1857.5	1880.0	1902.5	
20M	QPSK	1	0	23.23	22.97	22.82	0	15M	QPSK	1	0	23.18	22.90	22.75	0
		1	50	23.19	23.17	23.10	0			1	37	23.14	23.11	23.04	0
		1	99	22.70	22.68	22.61	0			1	74	22.63	22.61	22.53	0
		50	0	21.90	21.88	21.81	1			36	0	21.81	21.78	21.69	1
		50	25	21.86	21.84	21.77	1			36	19	21.75	21.72	21.63	1
		50	50	21.86	21.84	21.77	1			36	39	21.75	21.72	21.63	1
	100	0	21.90	21.88	21.81	1	75		0	21.81	21.78	21.69	1		
	16QAM	1	0	22.28	22.00	21.83	1		16QAM	1	0	22.23	21.91	21.75	1
		1	50	22.24	22.22	22.13	1			1	37	22.18	22.13	22.05	1
		1	99	21.70	21.68	21.61	1			1	74	21.62	21.59	21.51	1
		50	0	20.90	20.86	20.78	2			36	0	20.79	20.76	20.63	2
		50	25	20.83	20.81	20.72	2			36	19	20.72	20.68	20.57	2
		50	50	20.83	20.81	20.72	2			36	39	20.72	20.68	20.57	2
	100	0	20.90	20.86	20.78	2	75		0	20.79	20.76	20.63	2		
10M	QPSK	1	0	23.12	22.80	22.64	0	5M	QPSK	1	0	23.08	22.78	22.63	0
		1	24	23.07	23.03	22.96	0			1	12	23.04	23.00	22.92	0
		1	49	22.52	22.49	22.41	0			1	24	22.49	22.45	22.37	0
		25	0	21.70	21.66	21.52	1			12	0	21.62	21.56	21.40	1
		25	12	21.62	21.58	21.47	1			12	6	21.51	21.46	21.34	1
		25	25	21.62	21.58	21.47	1			12	13	21.51	21.46	21.34	1
	50	0	21.70	21.66	21.52	1	25		0	21.62	21.56	21.40	1		
	16QAM	1	0	22.18	21.86	21.68	1		16QAM	1	0	22.12	21.77	21.57	1
		1	24	22.13	22.10	22.00	1			1	12	22.06	22.01	21.93	1
		1	49	21.56	21.53	21.44	1			1	24	21.44	21.38	21.31	1
		25	0	20.71	20.64	20.49	2			12	0	20.59	20.53	20.39	2
		25	12	20.60	20.56	20.43	2			12	6	20.48	20.44	20.29	2
		25	25	20.60	20.56	20.43	2			12	13	20.48	20.44	20.29	2
	50	0	20.71	20.64	20.49	2	25		0	20.59	20.53	20.39	2		
3M	QPSK	1	0	23.02	22.67	22.48	0	1.4M	QPSK	1	0	22.98	22.66	22.49	0
		1	7	22.95	22.91	22.81	0			1	2	22.94	22.91	22.82	0
		1	14	22.34	22.31	22.22	0			1	5	22.34	22.28	22.19	0
		8	0	21.49	21.44	21.28	1			3	0	22.23	22.36	22.16	0
		8	3	21.39	21.34	21.20	1			3	1	22.18	22.11	22.05	0
		8	7	21.39	21.34	21.20	1			3	3	22.09	22.15	22.12	0
	15	0	21.49	21.44	21.28	1	6		0	21.43	21.36	21.14	1		
	16QAM	1	0	22.07	21.74	21.56	1		16QAM	1	0	22.02	21.67	21.48	1
		1	7	22.01	21.96	21.88	1			1	2	21.96	21.93	21.81	1
		1	14	21.43	21.34	21.24	1			1	5	21.35	21.32	21.22	1
		8	0	20.52	20.45	20.27	2			3	0	21.18	21.14	21.08	1
		8	3	20.38	20.31	20.17	2			3	1	21.15	21.09	21.22	1
		8	7	20.38	20.31	20.17	2			3	3	21.21	21.18	21.18	1
	15	0	20.52	20.45	20.27	2	6		0	20.48	20.40	20.08	2		



LTE Band 4

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)			
		Channel		20050	20175	20300				Channel		20025	20175	20325				
		Frequency (MHz)		1720.0	1732.5	1745.0				Frequency (MHz)		1717.5	1732.5	1747.5				
20M	QPSK	1	0	23.28	23.14	23.13	0	15M	QPSK	1	0	23.22	23.08	23.07	0			
		1	50	23.12	23.03	23.04	0			1	37	23.05	22.96	22.97	0			
		1	99	22.84	22.75	22.76	0			1	74	22.77	22.67	22.68	0			
		50	0	22.21	22.12	22.13	1			36	0	22.12	22.02	22.04	1			
		50	25	22.10	22.01	22.02	1			36	19	22.00	21.87	21.88	1			
		50	50	22.07	21.98	21.99	1			36	39	21.97	21.83	21.84	1			
	100	0	22.15	22.06	22.07	1	75		0	22.06	21.94	21.97	1					
	16QAM	1	0	22.33	22.19	22.17	1		16QAM	1	0	22.28	22.13	22.12	1			
		1	50	22.16	22.06	22.08	1			1	37	22.10	21.98	22.01	1			
		1	99	21.87	21.76	21.79	1			1	74	21.77	21.65	21.68	1			
		50	0	21.22	21.12	21.13	2			36	0	21.10	20.99	21.01	2			
		50	25	21.10	20.97	20.99	2			36	19	20.96	20.81	20.84	2			
		50	50	21.06	20.93	20.94	2			36	39	20.91	20.78	20.79	2			
	100	0	21.15	21.04	21.06	2	75		0	21.04	20.88	20.91	2					
10M	QPSK	1	0	23.18	23.04	23.03	0	5M	QPSK	1	0	23.13	22.97	22.96	0			
		1	24	22.97	22.87	22.89	0			1	12	22.94	22.81	22.85	0			
		1	49	22.67	22.58	22.59	0			1	24	22.59	22.48	22.51	0			
		25	0	22.04	21.91	21.94	1			12	0	21.92	21.78	21.81	1			
		25	12	21.89	21.76	21.77	1			12	6	21.75	21.57	21.63	1			
		25	25	21.85	21.71	21.73	1			12	13	21.72	21.53	21.55	1			
	50	0	21.97	21.81	21.85	1	25		0	21.83	21.69	21.72	1					
	16QAM	1	0	22.22	22.07	22.06	1		16QAM	1	0	22.18	22.03	22.00	1			
		1	24	22.03	21.92	21.93	1			1	12	21.98	21.87	21.88	1			
		1	49	21.73	21.60	21.64	1			1	24	21.67	21.55	21.57	1			
		25	0	21.05	20.92	20.94	2			12	0	20.99	20.83	20.85	2			
		25	12	20.89	20.74	20.76	2			12	6	20.79	20.56	20.61	2			
		25	25	20.85	20.65	20.69	2			12	13	20.72	20.50	20.53	2			
	50	0	20.98	20.81	20.85	2	25		0	20.90	20.67	20.72	2					
3M	QPSK	1	0	19965	20175	20385	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)			
		Channel		19965	20175	20385				Channel		19957	20175	20393				
		Frequency (MHz)		1711.5	1732.5	1753.5				Frequency (MHz)		1710.7	1732.5	1754.3				
		1	0	23.08	22.93	22.90				0	1.4M	QPSK	1	0	23.03	22.89	22.85	0
		1	7	22.86	22.72	22.75				0			1	2	22.83	22.67	22.72	0
		1	14	22.52	22.37	22.41				0			1	5	22.46	22.32	22.33	0
	8	0	21.82	21.67	21.70	1			3	0			22.34	22.29	22.21	0		
	8	3	21.62	21.44	21.48	1			3	1			22.43	22.32	22.23	0		
	8	7	21.59	21.39	21.41	1			3	3			22.15	22.09	22.24	0		
	15	0	21.74	21.54	21.59	1			6	0		21.66	21.43	21.49	1			
	16QAM	1	0	22.13	21.96	21.92			1	16QAM		1	0	22.08	21.93	21.90	1	
		1	7	21.87	21.74	21.77			1			1	2	21.86	21.71	21.77	1	
		1	14	21.52	21.41	21.44			1			1	5	21.49	21.34	21.38	1	
		8	0	20.85	20.67	20.72			2			3	0	21.38	21.37	21.43	1	
8		3	20.64	20.44	20.46	2	3	1	21.23			21.32	21.22	1				
8		7	20.58	20.34	20.38	2	3	3	21.26			21.12	21.11	1				
15	0	20.76	20.53	20.58	2	6	0	20.68	20.41	20.46		2						

LTE Band 5																
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	
		Channel		20450	20525	20600				Channel		20425	20525	20625		
		Frequency (MHz)		829.0	836.5	844.0				Frequency (MHz)		826.5	836.5	846.5		
10M	QPSK	1	0	22.56	22.69	22.29	0	5M	QPSK	1	0	22.51	22.64	22.23	0	
		1	24	22.46	22.53	22.27	0			1	12	22.40	22.48	22.20	0	
		1	49	22.26	22.33	22.07	0			1	24	22.18	22.27	22.02	0	
		25	0	21.40	21.47	21.21	1			12	0	21.21	21.29	21.12	1	
		25	12	21.32	21.39	21.13	1			12	6	21.31	21.38	21.07	1	
		25	25	21.32	21.39	21.13	1			12	13	21.21	21.29	21.08	1	
	16QAM	16QAM	50	0	21.24	21.31	21.05		1	25	0	21.10	21.18	21.07	1	
			1	0	21.61	21.74	21.33		1	1	0	21.53	21.69	21.24	1	
			1	24	21.51	21.58	21.31		1	1	12	21.43	21.50	21.21	1	
			1	49	21.30	21.38	21.10		1	1	24	21.19	21.28	21.05	1	
			25	0	20.30	20.38	20.08		2	12	0	20.19	20.29	20.13	2	
			25	12	20.42	20.49	20.17		2	12	6	20.31	20.38	20.05	2	
			25	25	20.30	20.38	20.08		2	12	13	20.19	20.29	20.08	2	
			50	0	20.20	20.28	20.01		2	25	0	20.09	20.17	20.16	2	

LTE Band 7																
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	
		Channel		20850	21100	21350				Channel		20825	21100	21375		
		Frequency (MHz)		2510.0	2535.0	2560.0				Frequency (MHz)		2507.5	2535.0	2562.5		
20M	QPSK	1	0	21.76	22.07	21.62	0	15M	QPSK	1	0	21.68	22.02	21.54	0	
		1	50	21.98	22.03	21.89	0			1	37	21.92	21.97	21.82	0	
		1	99	21.59	21.64	21.50	0			1	74	21.50	21.56	21.41	0	
		50	0	20.90	20.95	20.81	1			36	0	20.66	20.74	20.55	1	
		50	25	20.79	20.84	20.70	1			36	19	20.80	20.86	20.69	1	
		50	50	20.86	20.91	20.77	1			36	39	20.76	20.82	20.63	1	
	16QAM	16QAM	100	0	20.84	20.89	20.75		1	75	0	20.74	20.79	20.60	1	
			1	0	20.78	21.12	20.63		1	1	0	20.71	21.07	20.57	1	
			1	50	21.00	21.07	20.91		1	1	37	20.96	21.02	20.85	1	
			1	99	20.60	20.66	20.50		1	1	74	20.52	20.59	20.42	1	
			50	0	19.75	19.82	19.65		2	36	0	19.61	19.68	19.50	2	
			50	25	19.89	19.95	19.77		2	36	19	19.78	19.85	19.64	2	
			50	50	19.85	19.90	19.72		2	36	39	19.71	19.81	19.57	2	
			100	0	19.82	19.88	19.70		2	75	0	19.68	19.75	19.55	2	

LTE Band 5																
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	
		Channel		20800	21100	21400				Channel		20775	21100	21425		
		Frequency (MHz)		2505.0	2535.0	2565.0				Frequency (MHz)		2502.5	2535.0	2567.5		
10M	QPSK	1	0	21.60	21.96	21.46	0	5M	QPSK	1	0	21.55	21.91	21.39	0	
		1	24	21.85	21.92	21.75	0			1	12	21.80	21.86	21.69	0	
		1	49	21.42	21.48	21.32	0			1	24	21.34	21.41	21.24	0	
		25	0	20.54	20.61	20.41	1			12	0	20.40	20.51	20.26	1	
		25	12	20.69	20.76	20.56	1			12	6	20.60	20.67	20.43	1	
		25	25	20.63	20.71	20.50	1			12	13	20.53	20.62	20.36	1	
	16QAM	16QAM	50	0	20.61	20.67	20.47		1	25	0	20.51	20.57	20.31	1	
			1	0	20.65	21.01	20.48		1	1	0	20.56	20.97	20.40	1	
			1	24	20.90	20.95	20.79		1	1	12	20.82	20.91	20.71	1	
			1	49	20.44	20.51	20.33		1	1	24	20.34	20.43	20.21	1	
			25	0	19.49	19.58	19.36		2	12	0	19.34	19.46	19.21	2	
			25	12	19.69	19.78	19.52		2	12	6	19.55	19.62	19.38	2	
			25	25	19.61	19.73	19.45		2	12	13	19.49	19.58	19.30	2	
			50	0	19.58	19.67	19.42		2	25	0	19.46	19.53	19.28	2	

LTE Band 12															
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		23060	23095	23130				Channel		23035	23095	23155	
		Frequency (MHz)		704.0	707.5	711.0				Frequency (MHz)		701.5	707.5	713.5	
10M	QPSK	1	0	23.05	23.03	23.03	0	5M	QPSK	1	0	23.00	22.98	22.98	0
		1	24	23.03	23.01	23.02	0			1	12	22.98	22.95	22.96	0
		1	49	22.97	22.95	22.96	0			1	24	22.90	22.85	22.87	0
		25	0	22.03	21.96	21.97	1			12	0	21.84	21.81	21.82	1
		25	12	21.98	22.01	22.02	1			12	6	21.93	21.91	21.92	1
		25	25	21.99	21.97	21.98	1			12	13	21.86	21.82	21.84	1
	16QAM	16QAM	50	0	22.01	21.99	22.00		1	25	0	21.90	21.86	21.88	1
			1	0	22.09	22.07	22.07		1	1	0	22.05	22.02	22.02	1
			1	24	22.07	22.03	22.04		1	1	12	22.02	21.93	21.95	1
			1	49	21.98	21.95	21.96		1	1	24	21.89	21.83	21.86	1
			25	0	20.94	20.91	20.93		2	12	0	20.81	20.76	20.79	2
			25	12	21.03	21.00	21.02		2	12	6	20.91	20.88	20.90	2
			25	25	20.97	20.92	20.94		2	12	13	20.84	20.77	20.81	2
			50	0	21.00	20.97	20.99		2	25	0	20.87	20.84	20.85	2

LTE Band 13															
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		23205	23230	23165				Channel		23017	23095	23173	
		Frequency (MHz)		700.5	707.5	714.5				Frequency (MHz)		699.7	707.5	715.3	
3M	QPSK	1	0	22.93	22.90	22.90	0	1.4M	QPSK	1	0	22.90	22.86	22.86	0
		1	7	22.90	22.84	22.86	0			1	2	22.86	22.78	22.81	0
		1	14	22.80	22.76	22.79	0			1	5	22.74	22.68	22.70	0
		8	0	21.72	21.67	21.70	1			3	0	22.61	22.51	22.53	0
		8	3	21.83	21.78	21.81	1			3	1	22.59	22.52	22.57	0
		8	7	21.73	21.69	21.72	1			3	3	22.48	22.44	22.49	0
	16QAM	16QAM	15	0	21.78	21.73	21.76		1	6	0	21.69	21.65	21.67	1
			1	0	22.00	21.98	21.98		1	1	0	21.94	21.90	21.90	1
			1	7	21.98	21.89	21.92		1	1	2	21.90	21.80	21.84	1
			1	14	21.82	21.77	21.80		1	1	5	21.75	21.69	21.72	1
			8	0	20.67	20.61	20.63		2	3	0	21.55	21.47	21.51	1
			8	3	20.84	20.78	20.81		2	3	1	21.57	21.71	21.69	1
			8	7	20.71	20.63	20.67		2	3	3	21.52	21.49	21.55	1
			15	0	20.77	20.71	20.75		2	6	0	20.67	20.62	20.65	2

LTE Band 25

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26140	26365	26590				Channel		26115	26365	26615	
		Frequency (MHz)		1860.0	1882.5	1905.0				Frequency (MHz)		1857.5	1882.5	1907.5	
20M	QPSK	1	0	23.01	23.02	23.12	0	15M	QPSK	1	0	22.96	22.97	23.07	0
		1	50	22.95	22.94	23.00	0			1	37	22.89	22.88	22.95	0
		1	99	22.60	22.59	22.65	0			1	74	22.52	22.51	22.59	0
		50	0	21.82	21.81	21.97	1			36	0	21.67	21.66	21.73	1
		50	25	21.92	21.91	21.88	1			36	19	21.83	21.82	21.89	1
		50	50	21.85	21.84	21.90	1			36	39	21.71	21.70	21.80	1
		100	0	21.90	21.89	21.95	1			75	0	21.80	21.76	21.87	1
	16QAM	1	0	22.06	22.07	22.17	1		1	0	21.98	22.02	22.12	1	
		1	50	21.99	21.98	22.05	1		1	37	21.91	21.88	21.96	1	
		1	99	21.63	21.62	21.68	1		1	74	21.52	21.50	21.57	1	
		50	0	20.78	20.76	20.85	2		36	0	20.65	20.62	20.71	2	
		50	25	20.93	20.91	20.99	2		36	19	20.81	20.80	20.87	2	
		50	50	20.82	20.80	20.89	2		36	39	20.69	20.68	20.78	2	
		100	0	20.89	20.87	20.96	2		75	0	20.79	20.75	20.85	2	
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26090	26365	26640				Channel		26065	26365	26665	
		Frequency (MHz)		2855.0	1882.5	1910.0				Frequency (MHz)		1852.5	1882.5	1912.5	
10M	QPSK	1	0	22.90	22.92	23.02	0	5M	QPSK	1	0	22.85	22.86	22.97	0
		1	24	22.80	22.79	22.88	0			1	12	22.74	22.72	22.82	0
		1	49	22.43	22.42	22.50	0			1	24	22.36	22.34	22.43	0
		25	0	21.54	21.51	21.62	1			12	0	21.39	21.36	21.48	1
		25	12	21.72	21.71	21.79	1			12	6	21.62	21.60	21.69	1
		25	25	21.59	21.57	21.68	1			12	13	21.45	21.44	21.57	1
		50	0	21.69	21.65	21.77	1			25	0	21.57	21.53	21.67	1
	16QAM	1	0	21.96	21.97	22.07	1		1	0	21.83	21.85	21.99	1	
		1	24	21.83	21.81	21.93	1		1	12	21.73	21.71	21.81	1	
		1	49	21.41	21.39	21.51	1		1	24	21.33	21.31	21.41	1	
		25	0	20.49	20.47	20.57	2		12	0	20.35	20.33	20.46	2	
		25	12	20.69	20.66	20.77	2		12	6	20.63	20.59	20.69	2	
		25	25	20.53	20.52	20.64	2		12	13	20.43	20.39	20.52	2	
		50	0	20.65	20.61	20.73	2		25	0	20.54	20.50	20.67	2	
BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26055	26365	26675				Channel		26047	26365	26683	
		Frequency (MHz)		1851.5	1882.5	1913.5				Frequency (MHz)		1850.7	1882.5	1914.3	
3M	QPSK	1	0	22.92	22.94	22.90	0	1.4M	QPSK	1	0	22.82	22.99	22.95	0
		1	7	22.89	22.87	22.77	0			1	2	22.92	22.81	22.91	0
		1	14	22.51	22.41	22.55	0			1	5	22.54	22.48	22.54	0
		8	0	21.71	21.64	21.65	1			3	0	22.62	22.65	22.72	0
		8	3	21.82	21.76	21.86	1			3	1	22.85	22.70	22.87	0
		8	7	21.73	21.74	21.77	1			3	3	22.75	22.75	22.81	0
		15	0	21.77	21.73	21.88	1			6	0	21.71	21.76	21.76	1
	16QAM	1	0	21.98	21.79	21.84	1		1	0	21.80	21.93	21.92	1	
		1	7	21.71	21.71	21.74	1		1	2	21.80	21.78	21.87	1	
		1	14	21.44	21.41	21.49	1		1	5	21.42	21.41	21.55	1	
		8	0	20.68	20.55	20.79	2		3	0	21.52	21.56	21.71	1	
		8	3	20.70	20.65	20.86	2		3	1	21.85	21.82	21.88	1	
		8	7	20.58	20.70	20.74	2		3	3	21.63	21.79	21.74	1	
		15	0	20.81	20.69	20.77	2		6	0	20.69	20.66	20.79	2	

LTE Band 26

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26765	26865	26965				Channel		26740	26865	26990	
		Frequency (MHz)		821.5	831.5	841.5				Frequency (MHz)		819.0	831.5	844.0	
15M	QPSK	1	0	22.75	22.85	22.59	0	10M	QPSK	1	0	22.69	22.80	22.53	0
		1	37	22.41	22.33	22.14	0			1	24	22.33	22.24	22.05	0
		1	74	22.54	22.46	22.27	0			1	49	22.47	22.38	22.18	0
		36	0	21.59	21.71	21.52	1			25	0	21.51	21.42	21.22	1
		36	19	21.61	21.53	21.34	1			25	12	21.50	21.41	21.20	1
		36	39	21.59	21.62	21.43	1			25	25	21.59	21.51	21.31	1
	75	0	21.51	21.59	21.40	1	50		0	21.48	21.39	21.17	1		
	16QAM	1	0	21.80	21.90	21.64	1		16QAM	1	0	21.75	21.85	21.59	1
		1	37	21.45	21.35	21.15	1			1	24	21.38	21.28	21.07	1
		1	74	21.58	21.50	21.28	1			1	49	21.54	21.44	21.21	1
		36	0	20.62	20.52	20.31	2			25	0	20.51	20.40	20.16	2
		36	19	20.60	20.51	20.30	2			25	12	20.50	20.37	20.15	2
		36	39	20.71	20.63	20.40	2			25	25	20.62	20.53	20.25	2
		75	0	20.57	20.49	20.28	2			50	0	20.45	20.35	20.12	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26715	26865	27015				Channel		26705	26865	27025	
		Frequency (MHz)		816.5	831.5	846.5				Frequency (MHz)		815.5	831.5	847.5	
5M	QPSK	1	0	22.63	22.74	22.47	0	3M	QPSK	1	0	22.57	22.69	22.40	0
		1	12	22.25	22.15	22.06	0			1	7	22.19	22.10	22.09	0
		1	24	22.40	22.32	22.09	0			1	14	22.35	22.26	22.03	0
		12	0	21.39	21.29	21.07	1			8	0	21.33	21.20	21.14	1
		12	6	21.38	21.28	21.04	1			8	3	21.29	21.18	21.05	1
		12	13	21.51	21.41	21.16	1			8	7	21.43	21.34	21.04	1
	25	0	21.35	21.25	21.02	1	15		0	21.26	21.16	21.12	1		
	16QAM	1	0	21.69	21.80	21.51	1		16QAM	1	0	21.61	21.72	21.42	1
		1	12	21.28	21.20	21.09	1			1	7	21.22	21.11	21.08	1
		1	24	21.44	21.35	21.14	1			1	14	21.37	21.28	21.03	1
		12	0	20.46	20.31	20.06	2			8	0	20.31	20.19	20.09	2
		12	6	20.43	20.30	20.12	2			8	3	20.28	20.16	20.02	2
		12	13	20.55	20.47	20.15	2			8	7	20.44	20.34	20.04	2
		25	0	20.38	20.26	20.27	2			15	0	20.24	20.14	20.07	2

BW	MCS Index	RB Size	RB Offset	Low	Mid	High	3GPP MPR (dB)
		Channel		26697	26865	27033	
		Frequency (MHz)		814.7	831.5	848.3	
1.4M	QPSK	1	0	22.55	22.65	22.38	0
		1	2	22.12	22.23	22.06	0
		1	5	22.29	22.19	22.02	0
		3	0	22.09	22.07	22.01	0
		3	1	22.08	22.11	22.02	0
		3	3	22.17	22.25	22.11	0
	16QAM	6	0	21.16	21.15	21.09	1
		1	0	21.59	21.70	21.42	1
		1	2	21.15	21.07	21.03	1
		1	5	21.34	21.23	21.19	1
		3	0	21.19	21.27	21.13	1
		3	1	21.14	21.22	21.16	1
		3	3	21.05	21.14	21.09	1
		6	0	20.16	20.26	20.16	2

**LTE Band 41**

BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High	3GPP MPR (dB)	BW	MCS Index	RB Size	RB Offset	Low	Mid	Mid	Mid	High	3GPP MPR (dB)
		Channel		39750	40185	40620	41055	41490				Channel		39725	40173	40620	41068	41515	
		Frequency (MHz)		2506.0	2549.5	2593.0	2636.5	2680.0				Frequency (MHz)		2503.5	2548.3	2593.0	2637.8	2682.5	
20M	QPSK	1	0	21.47	21.51	21.59	21.47	21.91	0	15M	QPSK	1	0	21.45	21.46	21.49	21.46	21.84	0
		1	50	21.63	21.65	21.71	21.63	21.90	0			1	37	21.65	21.71	21.70	21.67	21.82	0
		1	99	21.35	21.37	21.43	21.35	21.62	0			1	74	21.32	21.36	21.37	21.31	21.62	0
		50	0	20.60	20.62	20.68	20.60	20.92	1			36	0	20.50	20.52	20.68	20.55	20.79	1
		50	25	20.58	20.60	20.66	20.58	20.85	1			36	19	20.55	20.50	20.64	20.49	20.85	1
		50	50	20.65	20.67	20.73	20.65	20.83	1			36	39	20.55	20.58	20.66	20.64	20.87	1
	100	0	20.57	20.59	20.65	20.57	20.84	1	75		0	20.47	20.51	20.57	20.50	20.78	1		
	16QAM	1	0	20.40	20.49	20.58	20.46	20.83	1		16QAM	1	0	20.40	20.45	20.56	20.45	20.87	1
		1	50	20.65	20.66	20.73	20.64	20.92	1			1	37	20.68	20.71	20.76	20.71	20.99	1
		1	99	20.31	20.33	20.43	20.26	20.53	1			1	74	20.27	20.31	20.34	20.29	20.56	1
		50	0	19.58	19.60	19.67	19.55	19.87	2			36	0	19.56	19.59	19.68	19.51	19.79	2
		50	25	19.52	19.55	19.59	19.49	19.77	2			36	19	19.58	19.53	19.65	19.49	19.79	2
		50	50	19.63	19.67	19.68	19.59	19.85	2			36	39	19.61	19.61	19.63	19.59	19.89	2
	100	0	19.47	19.51	19.61	19.56	19.83	2	75		0	19.48	19.50	19.59	19.47	19.77	2		
10M	QPSK	1	0	21.37	21.36	21.48	21.38	21.76	0	5M	QPSK	1	0	21.47	21.43	21.47	21.43	21.80	0
		1	24	21.69	21.65	21.70	21.69	21.84	0			1	12	21.65	21.60	21.64	21.58	21.88	0
		1	49	21.22	21.24	21.30	21.23	21.53	0			1	24	21.24	21.23	21.32	21.26	21.56	0
16QAM	QPSK	25	0	20.50	20.50	20.52	20.51	20.82	1	16QAM	QPSK	12	0	20.49	20.48	20.64	20.53	20.77	1
		25	12	20.47	20.59	20.49	20.55	20.83	1			12	6	20.53	20.53	20.49	20.41	20.69	1
		25	25	20.56	20.61	20.66	20.57	20.83	1			12	13	20.51	20.55	20.61	20.55	20.76	1
		50	0	20.49	20.44	20.57	20.45	20.79	1			25	0	20.45	20.42	20.53	20.51	20.78	1
		1	0	20.37	20.49	20.48	20.36	20.85	1			16QAM	16QAM	1	0	20.36	20.44	20.45	20.37
	1	24	20.54	20.64	20.78	20.56	20.85	1	1		12			20.64	20.66	20.70	20.62	20.88	1
	1	49	20.17	20.29	20.29	20.31	20.53	1	1		24			20.30	20.21	20.30	20.20	20.57	1
	25	0	19.53	19.52	19.55	19.49	19.78	2	12		0			19.48	19.48	19.66	19.48	19.79	2
	25	12	19.41	19.52	19.58	19.41	19.67	2	12		6			19.47	19.50	19.51	19.47	19.73	2
	25	25	19.49	19.50	19.61	19.55	19.91	2	12		13	19.49	19.62	19.64	19.61	19.88	2		
50	0	19.48	19.49	19.58	19.45	19.75	2	25	0	19.49	19.51	19.53	19.48	19.75	2				

**Power Measurements for Intra-Band Contiguous Downlink CA**

CA Combination	PCC								SCC1				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_2C	2	20	18700	1860	1	0	700	1940	2	20	898	1959.8	23.22	23.23
CA_7C	7	20	21001	2525.1	1	0	3001	2645.1	7	20	3199	2664.9	22.05	22.07
CA_41C	41	20	41292	2660.2	1	0	41292	2660.2	41	20	41490	2680	21.88	21.91

**Power Measurements for Intra-Band Non-Contiguous Downlink CA**

CA Combination	PCC								SCC1				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_7A_7A	7	20	20850	2510	1	0	2850	2630	7	20	3350	2680	22.04	22.07
CA_41A_41A	41	20	39750	2506	1	0	39750	2506	41	20	41490	2680	21.85	21.91

**Power Measurements for Inter-Band Downlink CA**

CA Combination	PCC								SCC1				Power	
	LTE Band	BW (MHz)	UL Channel	UL Freq. (MHz)	RB Size	RB Offset	DL Channel	DL Freq. (MHz)	LTE Band	BW (MHz)	DL Channel	DL Freq. (MHz)	Tx Power with DL-CA Active (dBm)	Single Carrier Tx Power (dBm)
CA_2A_5A	2	20	18700	18600	1	0	700	1940	5	10	2525	881.5	23.17	23.23
CA_2A_12A	2	20	18700	18600	1	0	700	1940	12	10	5095	737.5	23.17	23.23
CA_2A_13A	2	20	18700	18600	1	0	700	1940	13	10	5230	751	23.15	23.23
CA_2A_29A	2	20	18700	18600	1	0	700	1940	29	10	9715	722.5	23.19	23.23
CA_4A_5A	4	20	20050	1720	1	0	2050	2120	5	10	2525	881.5	23.23	23.28
CA_4A_12A	4	20	20050	1720	1	0	2050	2120	12	10	5095	737.5	23.22	23.28
CA_4A_13A	4	20	20050	1720	1	0	2050	2120	13	10	5230	751	23.23	23.28
CA_4A_29A	4	20	20050	1720	1	0	2050	2120	29	10	9715	722.5	23.20	23.28

WLAN Conducted Power (Full)			
WLAN2.4GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11b	1	2412	19.43
	6	2437	20.91
	11	2462	19.99
	12	2467	17.93
	13	2472	14.94



WLAN Conducted Power (Full)			
WLAN2.4GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11b	1	2412	19.99
	6	2437	20.95
	11	2462	20.85
	12	2467	17.95
	13	2472	14.45

WLAN Conducted Power (Full)					
WLAN2.4GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11n HT20	1	2412	15.86	15.81	18.85
	6	2437	19.31	19.22	22.28
	11	2462	16.00	15.80	18.91
	12	2467	12.44	12.43	15.45
	13	2472	-8.49	-8.37	-5.42

WLAN Conducted Power (Full)			
WLAN 5.3GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	52	5260	20.83
	56	5280	20.82
	60	5300	20.9
	64	5320	16.85

WLAN Conducted Power (Full)			
WLAN 5.3GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	52	5260	21.35
	56	5280	21.32
	60	5300	21.4
	64	5320	16.78

WLAN Conducted Power (Full)					
WLAN 5.3GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11n HT20	52	5260	20.48	20.62	23.56
	56	5280	20.57	20.6	23.6
	60	5300	20.73	20.93	23.84
	64	5320	16.89	16.93	19.92

WLAN Conducted Power (Full)			
WLAN 5.6GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11n HT40	102	5510	17.45
	110	5550	21.4
	118	5590	21.35
	126	5630	21.35
	134	5670	18.44
	142	5710	18.41

WLAN Conducted Power (Full)			
WLAN 5.6GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11n HT40	102	5510	17.99
	110	5550	21.37
	118	5590	21.35
	126	5630	21.3
	134	5670	18.99
	142	5710	18.87

WLAN Conducted Power (Full)					
WLAN 5.6GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11n HT40	102	5510	17.43	17.45	20.45
	110	5550	21.19	20.3	23.78
	118	5590	20.85	20.56	23.72
	126	5630	20.57	20.85	23.72
	134	5670	18.4	18.4	21.41
	142	5710	18.42	18.38	21.41



WLAN Conducted Power (Full)			
WLAN 5.8GHz Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
802.11a	149	5745	21.99
	153	5765	21.97
	157	5785	21.35
	161	5805	21.32
	165	5825	21.25

WLAN Conducted Power (Full)			
WLAN 5.8GHz Ant 1			
Mode	Channel	Frequency	SISO Ant 1 Avg. Power
802.11a	149	5745	21.99
	153	5765	21.9
	157	5785	21.39
	161	5805	21.5
	165	5825	21.38

WLAN Conducted Power (Full)					
WLAN 5.8GHz Ant 0+1					
Mode	Channel	Frequency	MIMO Ant 0 Avg. Power	MIMO Ant 1 Avg. Power	MIMO Ant 0+1 Avg. Power
802.11n HT20	149	5745	20.51	21.37	23.97
	153	5765	20.61	21.5	24.09
	157	5785	20.71	21.4	24.08
	161	5805	20.49	21.48	24.02
	165	5825	20.55	21.4	24.01

WLAN Conducted Power (Full)			
Bluetooth Ant 0			
Mode	Channel	Frequency	SISO Ant 0 Avg. Power
BR / EDR	0	2402	9.66
	39	2441	10.22
	78	2480	11.28
LE	0	2402	8.01
	19	2440	8.03
	39	2480	8.46

## **Annex F. SAR Test Result**

SAR Results for Extremity Exposure Condition.

**Note:**

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

### Extremity SAR Test Result

System & Position								DUT & Accessory	SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Ant Status	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)
1	WCDMA II	RMC12.2K	Left Side	0	9262			Ant 0	-	1.00	24.00	23.01	1.26	-0.04	0.583	0.73
2	WCDMA IV	RMC12.2K	Top Side	0	1312			Ant 0	-	1.00	24.00	23.19	1.21	0.04	0.669	0.81
3	WCDMA V	RMC12.2K	Left Side	0	4132			Ant 0	-	1.00	24.00	22.59	1.38	0.01	0.203	0.28
4	LTE 4	QPSK20M	Top Side	0	20050	1	0	Ant 0	-	1.00	24.00	23.28	1.18	0.01	0.601	0.71
5	LTE 5	QPSK10M	Left Side	0	20450	1	0	Ant 0	-	1.00	24.00	22.56	1.39	0.02	0.215	0.30
6	LTE 7	QPSK20M	Top Side	0	21100	1	0	Ant 0	-	1.00	23.00	22.07	1.24	0.01	0.232	0.29
7	LTE 12	QPSK10M	Left Side	0	23095	1	0	Ant 0	-	1.00	24.00	23.03	1.25	-0.02	0.169	0.21
8	LTE 13	QPSK10M	Left Side	0	23230	1	0	Ant 0	-	1.00	24.00	22.82	1.31	0.02	0.197	0.26
9	LTE 25	QPSK20M	Left Side	0	26140	1	0	Ant 0	-	1.00	24.00	23.01	1.26	-0.07	0.522	0.66
10	LTE 26	QPSK15M	Left Side	0	26865	1	0	Ant 0	-	1.00	24.00	22.85	1.30	0.01	0.213	0.28
11	LTE 41	QPSK20M	Top Side	0	41490	1	0	Ant 0	-	1.00	23.00	21.91	1.29	0.14	0.172	0.22

**Extremity SAR Test Result**

System & Position								DUT & Accessory		SAR						
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Ant Status	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)
	WLAN2.4G	802.11b	Rear Face	0	6			Ant 0	98.80	1.01	21.00	20.91	1.02	-0.05	0.12	0.12
	WLAN2.4G	802.11b	Left Side	0	6			Ant 0	98.80	1.01	21.00	20.91	1.02	0	<0.001	0.00
	WLAN2.4G	802.11b	Right Side	0	6			Ant 0	98.80	1.01	21.00	20.91	1.02	0.17	0.54	0.56
	WLAN2.4G	802.11b	Top Side	0	6			Ant 0	98.80	1.01	21.00	20.91	1.02	-0.06	0.194	0.20
	WLAN2.4G	802.11b	Bottom Side	0	6			Ant 0	98.80	1.01	21.00	20.91	1.02	0	<0.001	0.00
	WLAN2.4G	802.11b	Rear Face	0	6			Ant 1	98.80	1.01	21.00	20.95	1.01	0.09	0.066	0.07
	WLAN2.4G	802.11b	Left Side	0	6			Ant 1	98.80	1.01	21.00	20.95	1.01	0	<0.001	0.00
	WLAN2.4G	802.11b	Right Side	0	6			Ant 1	98.80	1.01	21.00	20.95	1.01	0.02	0.509	0.52
	WLAN2.4G	802.11b	Top Side	0	6			Ant 1	98.80	1.01	21.00	20.95	1.01	0	<0.001	0.00
12	WLAN2.4G	802.11b	Bottom Side	0	6			Ant 1	98.80	1.01	21.00	20.95	1.01	0.07	0.56	0.57
	WLAN2.4G	802.11n HT20	Rear Face	0	6			Ant 0+1	99.06	1.01	23.50	22.28	1.32	0.06	0.081	0.11
	WLAN2.4G	802.11n HT20	Left Side	0	6			Ant 0+1	99.06	1.01	23.50	22.28	1.32	0	<0.001	0.00
	WLAN2.4G	802.11n HT20	Right Side	0	6			Ant 0+1	99.06	1.01	23.50	22.28	1.32	0.08	0.35	0.47
	WLAN2.4G	802.11n HT20	Top Side	0	6			Ant 0+1	99.06	1.01	23.50	22.28	1.32	-0.14	0.226	0.30
	WLAN2.4G	802.11n HT20	Bottom Side	0	6			Ant 0+1	99.06	1.01	23.50	22.28	1.32	0.11	0.391	0.52
	WLAN2.4G	802.11b	Bottom Side	0	1			Ant 1	98.80	1.01	20.00	19.99	1.00	0.12	0.532	0.54
	WLAN2.4G	802.11b	Bottom Side	0	11			Ant 1	98.80	1.01	21.00	20.85	1.04	-0.07	0.53	0.56
	WLAN2.4G	802.11b	Bottom Side	0	12			Ant 1	98.80	1.01	18.00	17.95	1.01	-0.03	0.428	0.44
	WLAN2.4G	802.11b	Bottom Side	0	13			Ant 1	98.80	1.01	14.50	14.45	1.01	0.12	0.438	0.45
	WLAN5.3G	802.11a	Rear Face	0	60			Ant 0	98.90	1.01	21.00	20.90	1.02	-0.16	0.122	0.13
	WLAN5.3G	802.11a	Left Side	0	60			Ant 0	98.90	1.01	21.00	20.90	1.02	0	<0.001	0.00
	WLAN5.3G	802.11a	Right Side	0	60			Ant 0	98.90	1.01	21.00	20.90	1.02	-0.03	0.878	0.90
	WLAN5.3G	802.11a	Top Side	0	60			Ant 0	98.90	1.01	21.00	20.90	1.02	-0.16	0.578	0.60
	WLAN5.3G	802.11a	Bottom Side	0	60			Ant 0	98.90	1.01	21.00	20.90	1.02	0	<0.001	0.00
	WLAN5.3G	802.11a	Rear Face	0	60			Ant 1	98.90	1.01	21.50	21.40	1.02	0.05	0.145	0.15
	WLAN5.3G	802.11a	Left Side	0	60			Ant 1	98.90	1.01	21.50	21.40	1.02	0	<0.001	0.00
	WLAN5.3G	802.11a	Right Side	0	60			Ant 1	98.90	1.01	21.50	21.40	1.02	0.02	0.507	0.52
	WLAN5.3G	802.11a	Top Side	0	60			Ant 1	98.90	1.01	21.50	21.40	1.02	0	<0.001	0.00
13	WLAN5.3G	802.11a	Bottom Side	0	60			Ant 1	98.90	1.01	21.50	21.40	1.02	0.16	1.42	1.46
	WLAN5.3G	802.11n HT20	Rear Face	0	60			Ant 0+1	98.40	1.02	24.00	23.84	1.04	-0.1	0.128	0.14
	WLAN5.3G	802.11n HT20	Left Side	0	60			Ant 0+1	98.40	1.02	24.00	23.84	1.04	0	<0.001	0.00
	WLAN5.3G	802.11n HT20	Right Side	0	60			Ant 0+1	98.40	1.02	24.00	23.84	1.04	-0.13	1.23	1.30
	WLAN5.3G	802.11n HT20	Top Side	0	60			Ant 0+1	98.40	1.02	24.00	23.84	1.04	-0.11	0.625	0.66
	WLAN5.3G	802.11n HT20	Bottom Side	0	60			Ant 0+1	98.40	1.02	24.00	23.84	1.04	0.15	0.834	0.88
	WLAN5.3G	802.11a	Bottom Side	0	52			Ant 1	98.90	1.01	21.50	21.35	1.04	-0.17	1.28	1.34
	WLAN5.3G	802.11a	Bottom Side	0	56			Ant 1	98.90	1.01	21.50	21.32	1.04	0.04	1.29	1.36
	WLAN5.3G	802.11a	Bottom Side	0	64			Ant 1	98.90	1.01	17.00	16.78	1.05	-0.05	0.575	0.61

**Extremity SAR Test Result**

System & Position								DUT & Accessory		SAR						
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Ant Status	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)
	WLAN5.6G	802.11n HT40	Rear Face	0	110			Ant 0	98.70	1.01	21.50	21.40	1.02	-0.08	0.099	0.10
	WLAN5.6G	802.11n HT40	Left Side	0	110			Ant 0	98.70	1.01	21.50	21.40	1.02	0	<0.001	0.00
	WLAN5.6G	802.11n HT40	Right Side	0	110			Ant 0	98.70	1.01	21.50	21.40	1.02	0.17	0.708	0.73
	WLAN5.6G	802.11n HT40	Top Side	0	110			Ant 0	98.70	1.01	21.50	21.40	1.02	0.09	0.326	0.34
	WLAN5.6G	802.11n HT40	Bottom Side	0	110			Ant 0	98.70	1.01	21.50	21.40	1.02	0	<0.001	0.00
	WLAN5.6G	802.11n HT40	Rear Face	0	110			Ant 1	98.60	1.01	21.50	21.37	1.03	0.07	0.091	0.09
	WLAN5.6G	802.11n HT40	Left Side	0	110			Ant 1	98.60	1.01	21.50	21.37	1.03	0	<0.001	0.00
	WLAN5.6G	802.11n HT40	Right Side	0	110			Ant 1	98.60	1.01	21.50	21.37	1.03	-0.02	0.331	0.34
	WLAN5.6G	802.11n HT40	Top Side	0	110			Ant 1	98.60	1.01	21.50	21.37	1.03	0	<0.001	0.00
	WLAN5.6G	802.11n HT40	Bottom Side	0	110			Ant 1	98.60	1.01	21.50	21.37	1.03	-0.14	0.847	0.88
	WLAN5.6G	802.11n HT40	Rear Face	0	110			Ant 0+1	98.40	1.02	24.50	23.78	1.18	0.14	0.08	0.10
	WLAN5.6G	802.11n HT40	Left Side	0	110			Ant 0+1	98.40	1.02	24.50	23.78	1.18	0	<0.001	0.00
	WLAN5.6G	802.11n HT40	Right Side	0	110			Ant 0+1	98.40	1.02	24.50	23.78	1.18	0.18	0.471	0.57
	WLAN5.6G	802.11n HT40	Top Side	0	110			Ant 0+1	98.40	1.02	24.50	23.78	1.18	-0.01	0.2	0.24
14	WLAN5.6G	802.11n HT40	Bottom Side	0	110			Ant 0+1	98.40	1.02	24.50	23.78	1.18	-0.17	0.924	1.11
	WLAN5.6G	802.11n HT40	Bottom Side	0	102			Ant 0+1	98.40	1.02	20.50	20.45	1.01	-0.15	0.667	0.69
	WLAN5.6G	802.11n HT40	Bottom Side	0	118			Ant 0+1	98.40	1.02	24.50	23.72	1.20	0.14	0.898	1.10
	WLAN5.6G	802.11n HT40	Bottom Side	0	126			Ant 0+1	98.40	1.02	24.50	23.72	1.20	-0.01	0.867	1.06
	WLAN5.6G	802.11n HT40	Bottom Side	0	134			Ant 0+1	98.40	1.02	21.50	21.41	1.02	0.01	0.585	0.61
	WLAN5.6G	802.11n HT40	Bottom Side	0	142			Ant 0+1	98.40	1.02	21.50	21.41	1.02	-0.02	0.739	0.77
	WLAN5.8G	802.11a	Rear Face	0	149			Ant 0	98.90	1.01	22.00	21.99	1.00	-0.16	0.102	0.10
	WLAN5.8G	802.11a	Left Side	0	149			Ant 0	98.90	1.01	22.00	21.99	1.00	0	<0.001	0.00
	WLAN5.8G	802.11a	Right Side	0	149			Ant 0	98.90	1.01	22.00	21.99	1.00	-0.1	0.702	0.71
	WLAN5.8G	802.11a	Top Side	0	149			Ant 0	98.90	1.01	22.00	21.99	1.00	0.15	0.301	0.30
	WLAN5.8G	802.11a	Bottom Side	0	149			Ant 0	98.90	1.01	22.00	21.99	1.00	0	<0.001	0.00
	WLAN5.8G	802.11a	Rear Face	0	149			Ant 1	98.90	1.01	22.00	21.99	1.00	-0.15	0.157	0.16
	WLAN5.8G	802.11a	Left Side	0	149			Ant 1	98.90	1.01	22.00	21.99	1.00	0	<0.001	0.00
	WLAN5.8G	802.11a	Right Side	0	149			Ant 1	98.90	1.01	22.00	21.99	1.00	-0.05	0.552	0.56
	WLAN5.8G	802.11a	Top Side	0	149			Ant 1	98.90	1.01	22.00	21.99	1.00	0	<0.001	0.00
15	WLAN5.8G	802.11a	Bottom Side	0	149			Ant 1	98.90	1.01	22.00	21.99	1.00	-0.11	2.05	2.07
	WLAN5.8G	802.11n HT20	Rear Face	0	153			Ant 0+1	97.14	1.03	24.50	24.09	1.10	0.08	0.126	0.14
	WLAN5.8G	802.11n HT20	Left Side	0	153			Ant 0+1	97.14	1.03	24.50	24.09	1.10	0	<0.001	0.00
	WLAN5.8G	802.11n HT20	Right Side	0	153			Ant 0+1	97.14	1.03	24.50	24.09	1.10	-0.15	1.03	1.17
	WLAN5.8G	802.11n HT20	Top Side	0	153			Ant 0+1	97.14	1.03	24.50	24.09	1.10	0.03	0.418	0.47
	WLAN5.8G	802.11n HT20	Bottom Side	0	153			Ant 0+1	97.14	1.03	24.50	24.09	1.10	0.06	1.3	1.47
	WLAN5.8G	802.11a	Bottom Side	0	153			Ant 1	98.90	1.01	22.00	21.90	1.02	0.13	1.7	1.75
	WLAN5.8G	802.11a	Bottom Side	0	157			Ant 1	98.90	1.01	21.50	21.39	1.03	-0.1	1.76	1.83
	WLAN5.8G	802.11a	Bottom Side	0	161			Ant 1	98.90	1.01	21.50	21.50	1.00	-0.15	1.62	1.64
	WLAN5.8G	802.11a	Bottom Side	0	165			Ant 1	98.90	1.01	21.50	21.38	1.03	0.17	1.73	1.80
	WLAN5.8G	802.11a	Bottom Side	0	149			Ant 1	0.00	1.00	0.00	0.00	1	0.02	2.03	2.03



### Extremity SAR Test Result

System & Position								DUT & Accessory	SAR							
Plot No.	Band	Mode	Test Position	Separation Distance (mm)	Channel	RB#	RB offset	Ant Status	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)
	BT	BR / EDR	Rear Face	0	78			Ant 0	77.60	1.29	11.50	11.28	1.05	0	<0.001	0.00
	BT	BR / EDR	Left Side	0	78			Ant 0	77.60	1.29	11.50	11.28	1.05	0	<0.001	0.00
	BT	BR / EDR	Right Side	0	78			Ant 0	77.60	1.29	11.50	11.28	1.05	-0.15	0.046	0.06
	BT	BR / EDR	Top Side	0	78			Ant 0	77.60	1.29	11.50	11.28	1.05	0	<0.001	0.00
	BT	BR / EDR	Bottom Side	0	78			Ant 0	77.60	1.29	11.50	11.28	1.05	0	<0.001	0.00
	BT	BR / EDR	Right Side	0	0			Ant 0	77.60	1.29	11.50	9.66	1.53	-0.04	0.035	0.07
16	BT	BR / EDR	Right Side	0	39			Ant 0	77.60	1.29	11.50	10.22	1.34	-0.01	0.048	0.08

## **Annex G. SAR Measurement Variability**

Since all the measured SAR<sub>10g</sub> are less than 2.0 W/kg, the repeated measurement is not required.



## **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	Extremity Exposure Condition
A	MAX WWAN + WLAN 2.4G_Ant 1 + BT_Ant 0	Yes
B	MAX WWAN + WLAN 5G_Ant 1 + BT_Ant 0	Yes
C	MAX WWAN + WLAN 5G_MIMO + BT_Ant 0	Yes

#### Notes

1. The WLAN 2.4G and WLAN 5G cannot transmit simultaneously.
2. The WLAN and Bluetooth cannot transmit simultaneously.

Simultaneous Transmission SAR Evaluation (Extremity)

Band	Position	1	2	3	4	5	A(1+2+5)	B(1+3+5)	C(1+4+5)
		Max WWAN	WLAN 2.4GHz Ant 1	WLAN 5GHz Ant 1	WLAN 5GHz Ant 0+1	BT Ant 0	Summing result 10g SAR W/kg	Summing result 10g SAR W/kg	Summing result 10g SAR W/kg
		10g SAR W/kg	10g SAR W/kg	10g SAR W/kg	10g SAR W/kg	10g SAR W/kg			
WCDMA II	Rear Face	0.28	0.07	0.16	0.14	0.00	0.35	0.44	0.42
	Left Side	0.73	0.00	0.00	0.00	0.00	0.73	0.73	0.73
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.50	0.00	0.00	0.66	0.00	0.50	0.50	1.16
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
WCDMA IV	Rear Face	0.18	0.07	0.16	0.14	0.00	0.25	0.34	0.32
	Left Side	0.38	0.00	0.00	0.00	0.00	0.38	0.38	0.38
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.81	0.00	0.00	0.66	0.00	0.81	0.81	1.47
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
WCDMA V	Rear Face	0.22	0.07	0.16	0.14	0.00	0.29	0.38	0.36
	Left Side	0.28	0.00	0.00	0.00	0.00	0.28	0.28	0.28
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.18	0.00	0.00	0.66	0.00	0.18	0.18	0.84
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
LTE 4	Rear Face	0.13	0.07	0.16	0.14	0.00	0.20	0.29	0.27
	Left Side	0.28	0.00	0.00	0.00	0.00	0.28	0.28	0.28
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.71	0.00	0.00	0.66	0.00	0.71	0.71	1.37
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
LTE 5	Rear Face	0.25	0.07	0.16	0.14	0.00	0.32	0.41	0.39
	Left Side	0.30	0.00	0.00	0.00	0.00	0.30	0.30	0.30
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.17	0.00	0.00	0.66	0.00	0.17	0.17	0.83
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
LTE 7	Rear Face	0.10	0.07	0.16	0.14	0.00	0.17	0.26	0.24
	Left Side	0.29	0.00	0.00	0.00	0.00	0.29	0.29	0.29
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.29	0.00	0.00	0.66	0.00	0.29	0.29	0.95
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
LTE 12	Rear Face	0.13	0.07	0.16	0.14	0.00	0.20	0.29	0.27
	Left Side	0.21	0.00	0.00	0.00	0.00	0.21	0.21	0.21
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.12	0.00	0.00	0.66	0.00	0.12	0.12	0.78
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
LTE 13	Rear Face	0.22	0.07	0.16	0.14	0.00	0.29	0.38	0.36
	Left Side	0.26	0.00	0.00	0.00	0.00	0.26	0.26	0.26
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.17	0.00	0.00	0.66	0.00	0.17	0.17	0.83
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
LTE 25	Rear Face	0.23	0.07	0.16	0.14	0.00	0.30	0.39	0.37
	Left Side	0.66	0.00	0.00	0.00	0.00	0.66	0.66	0.66
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.40	0.00	0.00	0.66	0.00	0.40	0.40	1.06
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
LTE 26	Rear Face	0.26	0.07	0.16	0.14	0.00	0.33	0.42	0.40
	Left Side	0.28	0.00	0.00	0.00	0.00	0.28	0.28	0.28
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.17	0.00	0.00	0.66	0.00	0.17	0.17	0.83
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47
LTE 41	Rear Face	0.03	0.07	0.16	0.14	0.00	0.10	0.19	0.17
	Left Side	0.06	0.00	0.00	0.00	0.00	0.06	0.06	0.06
	Right Side	1.00	0.52	0.56	1.30	0.08	1.60	1.64	2.38
	Top Side	0.22	0.00	0.00	0.66	0.00	0.22	0.22	0.88
	Bottom Side	1.00	0.57	2.07	1.47	0.00	1.57	3.07	2.47

## **Annex I. SAR to Peak Location Separation Ratio Analysis.**

Since sum of simultaneous transmission SAR is less than the SAR limit for Extremity SAR<sub>10g</sub> 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	1078	Jun. 21, 2021	1 Year
System Validation Dipole	SPEAG	D835V2	4d092	Jun. 23, 2021	1 Year
System Validation Dipole	SPEAG	D1750V2	1111	Apr. 14, 2021	1 Year
System Validation Dipole	SPEAG	D1900V2	5d036	Jan. 22, 2021	1 Year
System Validation Dipole	SPEAG	D2450V2	835	Jun. 22, 2021	1 Year
System Validation Dipole	SPEAG	D2600V2	1020	Aug. 17, 2021	1 Year
System Validation Dipole	SPEAG	D5GHzV2	1019	Mar. 19, 2021	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	7555	Sep. 27, 2021	1 Year
Dosimetric E-Field Probe	SPEAG	EX3DV4	3650	Mar. 26, 2021	1 Year
Data Acquisition Electronics	SPEAG	DAE4	861	Apr. 14, 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
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>



Time-domain plot for Bluetooth transmission signal

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

$$\text{Duty Factor} = \text{Pulse Width} / \text{Total Period} = (20.83 - 17.92) / (21.67 - 17.92) = 77.60\%$$