

Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/6

P01 802.11b_Left Side_0.5cm_Ch6_Antenna 0

DUT: EUT

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

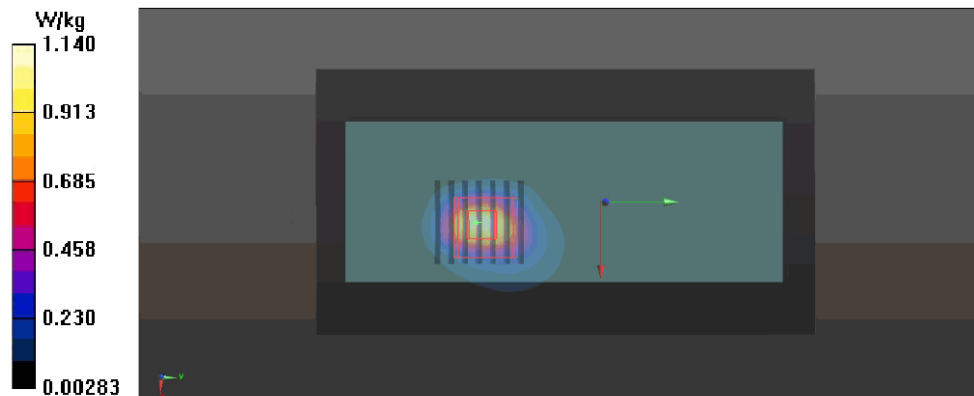
Medium: H2450 Medium parameters used: $f = 2437 \text{ MHz}$; $\sigma = 1.815 \text{ S/m}$; $\epsilon_r = 37.977$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(7.8, 7.8, 7.8) @ 2437 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x151x1):** Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
Maximum value of SAR (interpolated) = 1.14 W/kg

- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
Reference Value = 3.985 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.635 W/kg; SAR(10 g) = 0.275 W/kg
Maximum value of SAR (measured) = 1.10 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/13

P02 802.11a_Right Side_0.5cm_Ch40_Antenna 1

DUT: EUT

Communication System: 802.11a; Frequency: 5200 MHz; Duty Cycle: 1:1

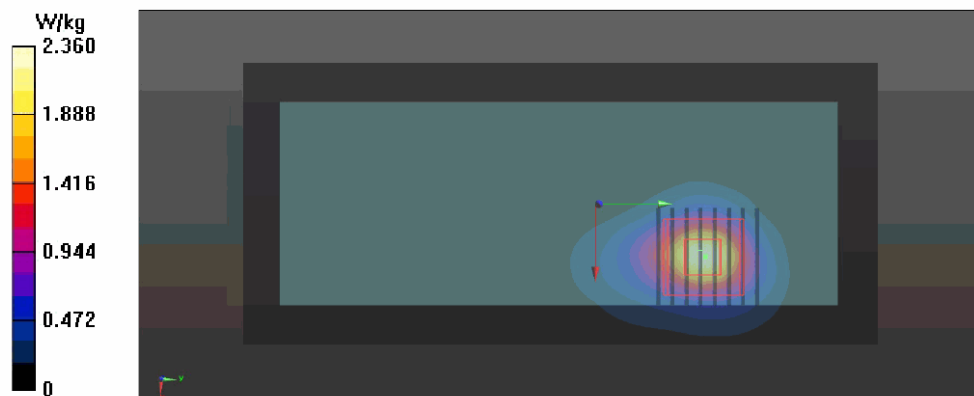
Medium: H5G Medium parameters used: $f = 5200$ MHz; $\sigma = 4.685$ S/m; $\epsilon_r = 36.381$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(5.39, 5.39, 5.39) @ 5200 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x181x1):** Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 2.36 W/kg

- **Zoom Scan (8x8x7)/Cube 0:** Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm
Reference Value = 3.247 V/m; Power Drift = -0.83 dB
Peak SAR (extrapolated) = 3.69 W/kg
SAR(1 g) = 1.03 W/kg; SAR(10 g) = 0.360 W/kg
Maximum value of SAR (measured) = 2.24 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/14

P03 802.11a_Right Side_0.5cm_Ch157_Antenna 1

DUT: EUT

Communication System: 802.11a; Frequency: 5785 MHz; Duty Cycle: 1:1

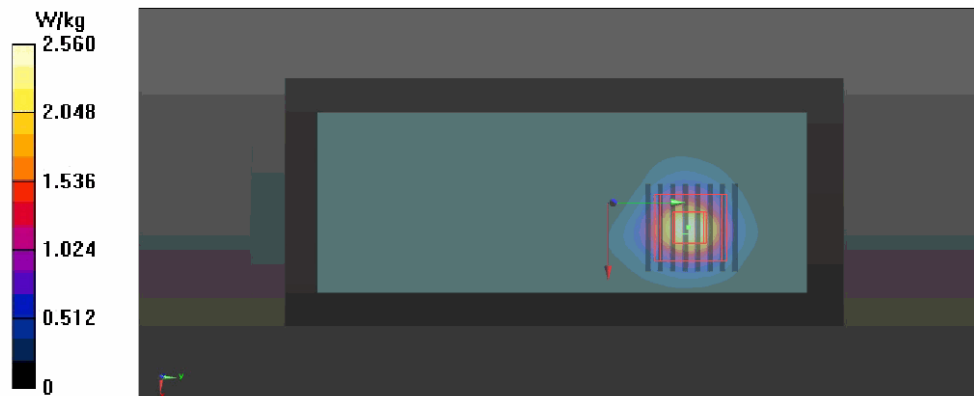
Medium: H5G Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 5.286 \text{ S/m}$; $\epsilon_r = 35.524$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(4.95, 4.95, 4.95) @ 5785 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x181x1):** Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
Maximum value of SAR (interpolated) = 2.56 W/kg

- **Zoom Scan (8x8x7)/Cube 0:** Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
Reference Value = 1.255 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 4.23 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.346 W/kg
Maximum value of SAR (measured) = 2.40 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/10

P04 SRD-2.4G_3M_Outside of antenna_0.5cm_Ch Mid_Antenna 1_Degree 180

DUT: EUT

Communication System: SDR; Frequency: 2437.5 MHz; Duty Cycle: 1:1

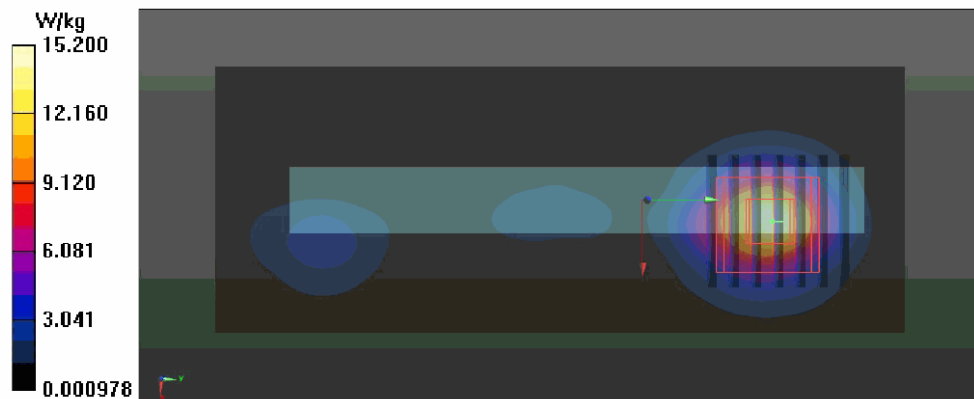
Medium: H2450 Medium parameters used: $f = 2437.5 \text{ MHz}$; $\sigma = 1.816 \text{ S/m}$; $\epsilon_r = 37.999$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(7.8, 7.8, 7.8) @ 2437.5 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (51x131x1):** Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
Maximum value of SAR (interpolated) = 15.2 W/kg

- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
Reference Value = 31.82 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 18.3 W/kg
SAR(1 g) = 8.96 W/kg; SAR(10 g) = 4.06 W/kg
Maximum value of SAR (measured) = 14.8 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/9

P05 SDR-5.8G_3M_Top Side_0.5cm_Ch Mid_antenna 2

DUT: EUT

Communication System: SDR; Frequency: 5787.5 MHz; Duty Cycle: 1:1

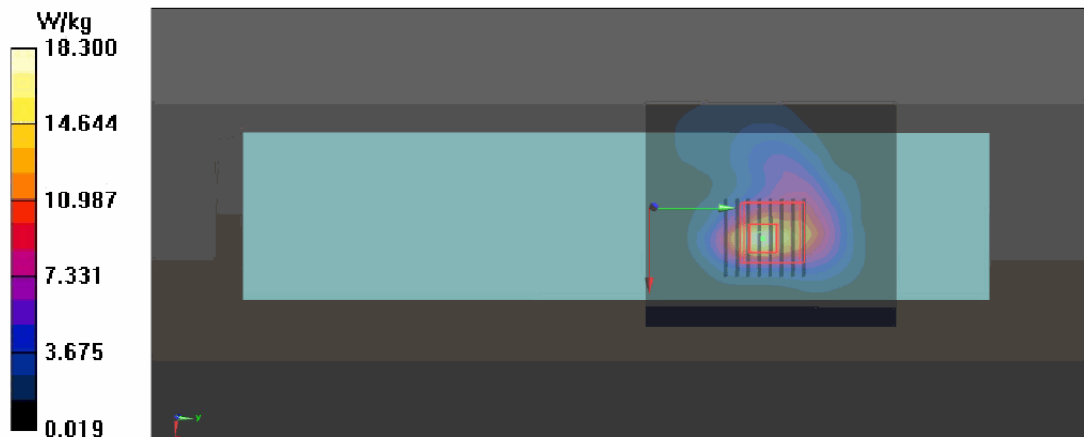
Medium: H5G Medium parameters used : $f = 5787.5$ MHz; $\sigma = 5.289$ S/m; $\epsilon_r = 35.52$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(4.95, 4.95, 4.95) @ 5787.5 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x91x1):** Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.3 W/kg

- **Zoom Scan (8x8x7)/Cube 0:** Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 9.512 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 27.8 W/kg
SAR(1 g) = 6.73 W/kg; SAR(10 g) = 2.52 W/kg
Maximum value of SAR (measured) = 15.5 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/6

P06 BT_DH5_Left Side_0.5cm_Ch High_Antenna 0

DUT: EUT

Communication System: BT; Frequency: 2480 MHz; Duty Cycle: 1:1

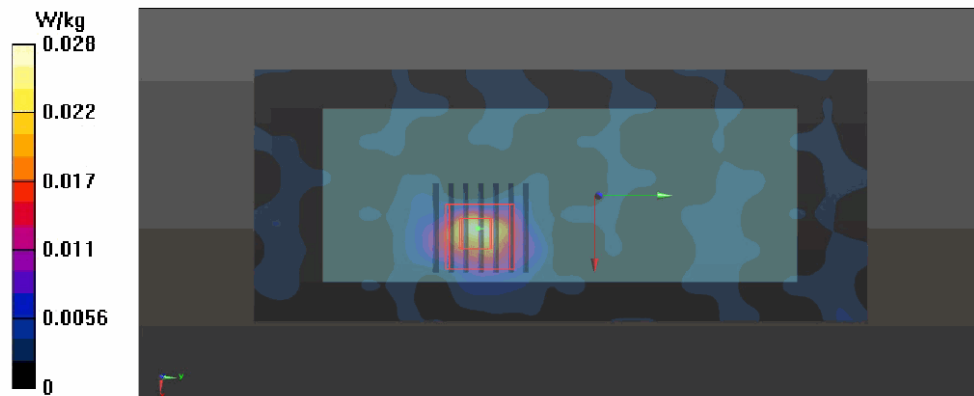
Medium: H2450 Medium parameters used: $f = 2480$ MHz; $\sigma = 1.853$ S/m; $\epsilon_r = 37.915$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(7.8, 7.8, 7.8) @ 2480 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (71x171x1):** Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 0.0280 W/kg

- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
Reference Value = 0.7650 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.0280 W/kg
SAR(1 g) = 0.013 W/kg; SAR(10 g) = 0.00547 W/kg
Maximum value of SAR (measured) = 0.0220 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/6

P07 802.11b_Left Side_0cm_Ch6_Antenna 0

DUT: EUT

Communication System: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

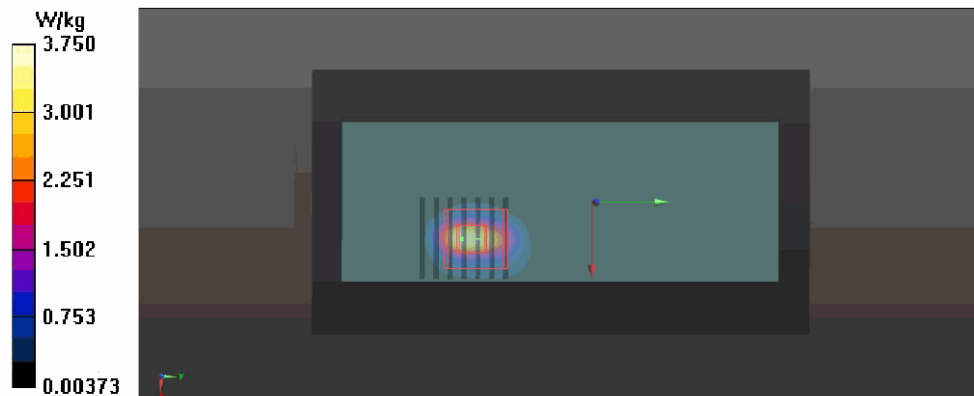
Medium: H2450 Medium parameters used: $f = 2437$ MHz; $\sigma = 1.815$ S/m; $\epsilon_r = 37.977$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(7.8, 7.8, 7.8) @ 2437 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x151x1):** Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 3.75 W/kg

- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
Reference Value = 1.776 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 4.34 W/kg
SAR(1 g) = 1.67 W/kg; SAR(10 g) = 0.638 W/kg
Maximum value of SAR (measured) = 3.26 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/13

P02 802.11a_Right Side_0cm_Ch40_Antenna 1

DUT: EUT

Communication System: 802.11a; Frequency: 5200 MHz; Duty Cycle: 1:1

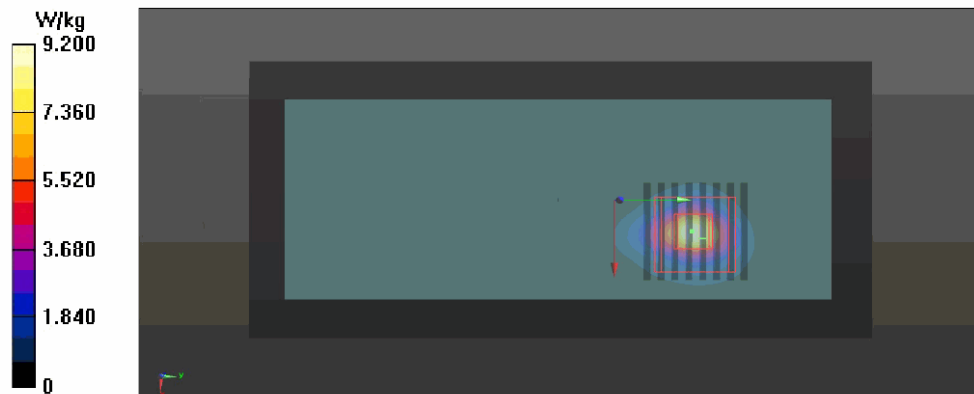
Medium: H5G Medium parameters used: $f = 5200$ MHz; $\sigma = 4.685$ S/m; $\epsilon_r = 36.381$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(5.39, 5.39, 5.39) @ 5200 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x181x1):** Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 9.20 W/kg

- **Zoom Scan (8x8x7)/Cube 0:** Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm
Reference Value = 2.236 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 14.3 W/kg
SAR(1 g) = 3.58 W/kg; SAR(10 g) = 1.01 W/kg
Maximum value of SAR (measured) = 8.39 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/14

P09 802.11a_Right Side_0cm_Ch157_Antenna 1

DUT: EUT

Communication System: 802.11a; Frequency: 5785 MHz; Duty Cycle: 1:1

Medium: H5G Medium parameters used: $f = 5785 \text{ MHz}$; $\sigma = 5.286 \text{ S/m}$; $\epsilon_r = 35.524$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

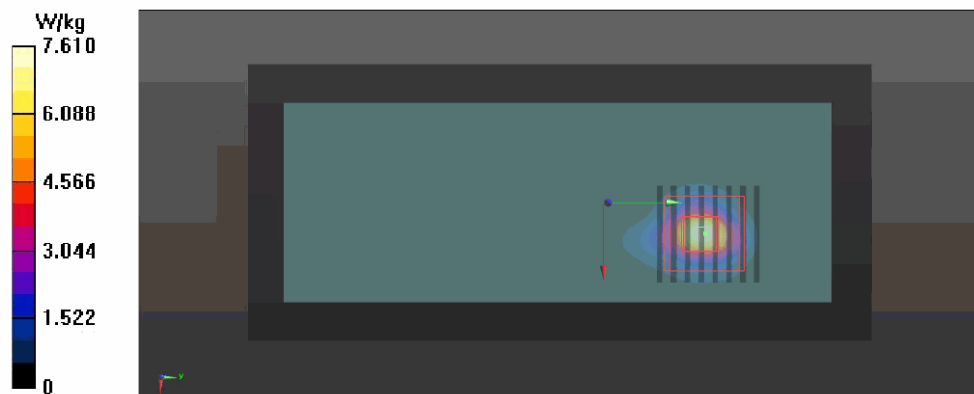
- Probe: EX3DV4 - SN7506; ConvF(4.95, 4.95, 4.95) @ 5785 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x181x1):** Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
Maximum value of SAR (interpolated) = 7.61 W/kg

- **Zoom Scan (8x8x7)/Cube 0:** Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
Reference Value = 1.390 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 13.1 W/kg

SAR(1 g) = 2.86 W/kg; SAR(10 g) = 0.774 W/kg

Maximum value of SAR (measured) = 7.16 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/10

P10 SRD-2.4G_3M_Outside of antenna_0cm_Ch Mid_antenna 1_Degree 180

DUT: EUT

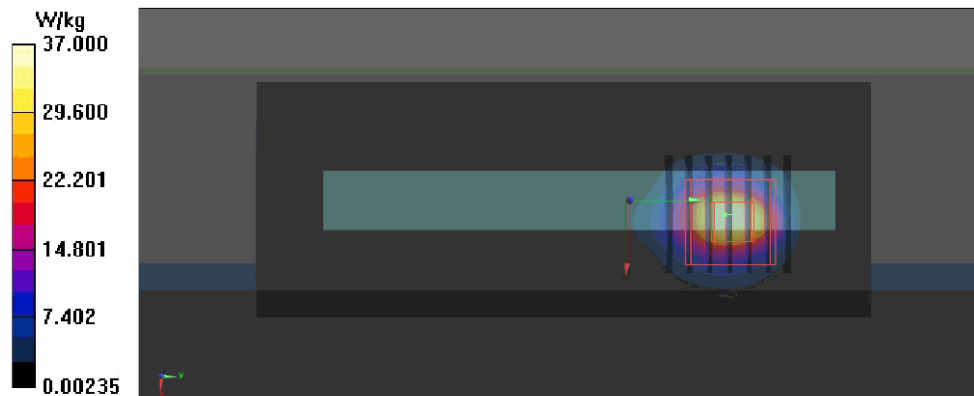
Communication System: SDR; Frequency: 2437.5 MHz; Duty Cycle: 1:1
Medium: H2450 Medium parameters used: $f = 2437.5 \text{ MHz}$; $\sigma = 1.816 \text{ S/m}$; $\epsilon_r = 37.999$; $\rho = 1000 \text{ kg/m}^3$

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(7.8, 7.8, 7.8) @ 2437.5 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (51x131x1):** Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
Maximum value of SAR (interpolated) = 37.0 W/kg

- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
Reference Value = 18.37 V/m ; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 49.1 W/kg
SAR(1 g) = 21.4 W/kg ; SAR(10 g) = 8.77 W/kg
Maximum value of SAR (measured) = 36.2 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/9

P11 SDR-5.8G_3M_Top Side_0cm_Ch Mid_antenna 2

DUT: EUT

Communication System: SDR; Frequency: 5787.5 MHz; Duty Cycle: 1:1

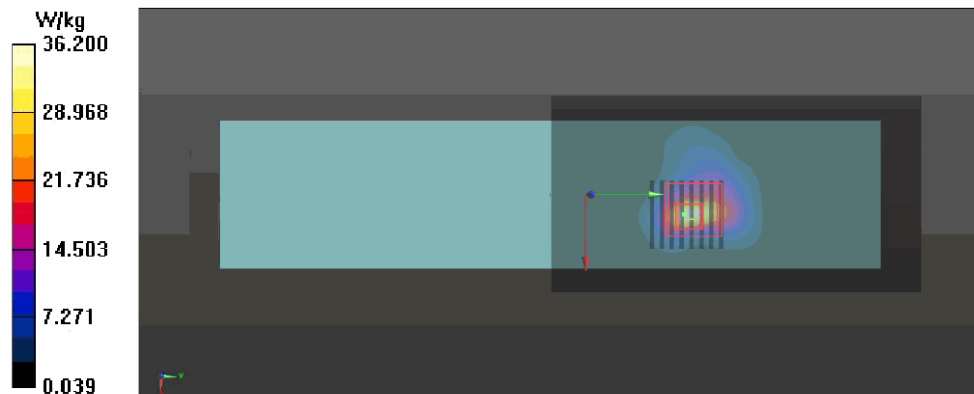
Medium: H5G Medium parameters used: $f = 5787.5$ MHz; $\sigma = 5.289$ S/m; $\epsilon_r = 35.519$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(4.95, 4.95, 4.95) @ 5787.5 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (81x151x1):** Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 36.2 W/kg

- **Zoom Scan (8x8x7)/Cube 0:** Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm
Reference Value = 7.335 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 66.2 W/kg
SAR(1 g) = 13.2 W/kg; SAR(10 g) = 4.4 W/kg
Maximum value of SAR (measured) = 32.8 W/kg



Test Laboratory: TÜV Rheinland IoT Excellence Center

Date: 2021/12/6

P12 BT_DH5_Left Side_0cm_Ch78_Antenna 0

DUT: EUT

Communication System: BT; Frequency: 2480 MHz; Duty Cycle: 1:1

Medium: H2450 Medium parameters used: $f = 2480$ MHz; $\sigma = 1.853$ S/m; $\epsilon_r = 37.915$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Probe: EX3DV4 - SN7506; ConvF(7.8, 7.8, 7.8) @ 2480 MHz; Calibrated: 2021/5/26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1557; Calibrated: 2021/5/20
- Phantom: ELI V8.0; Type: QD OVA 004 Ax; Serial: 2094
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- **Area Scan (71x171x1):** Interpolated grid: $dx=1.200$ mm, $dy=1.200$ mm
Maximum value of SAR (interpolated) = 0.0519 W/kg

- **Zoom Scan (7x7x7)/Cube 0:** Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.0630 W/kg
SAR(1 g) = 0.025 W/kg; SAR(10 g) = 0.00543 W/kg
Maximum value of SAR (measured) = 0.0492 W/kg

