

Appendix for the SAR Test Report

Dosimetric Assessment of the Handheld Device WK60-XS from Pfreundt

(FCC ID: 2AITQWK60XS / IC: 21743-WK60XS)

According to the FCC Requirements SAR Distribution Plots

August 30, 2016

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The test results only relate to the items tested.

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SAR Distribution Plots

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [WK60XS_b_wlan_ch6_1M_top1.da4](#)

DUT: PFREUNDT; Type: WK60 XS; Serial: Prototyp10_000001
Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3860; ConvF(7.52, 7.52, 7.52); Calibrated: 18.09.2015
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 16.09.2015
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (9x16x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 1.50 mW/g

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

Reference Value = 27.7 V/m; Power Drift = -0.023 dB

Peak SAR (extrapolated) = 2.82 W/kg

SAR(1 g) = 1.31 mW/g; SAR(10 g) = 0.585 mW/g

Maximum value of SAR (measured) = 1.49 mW/g

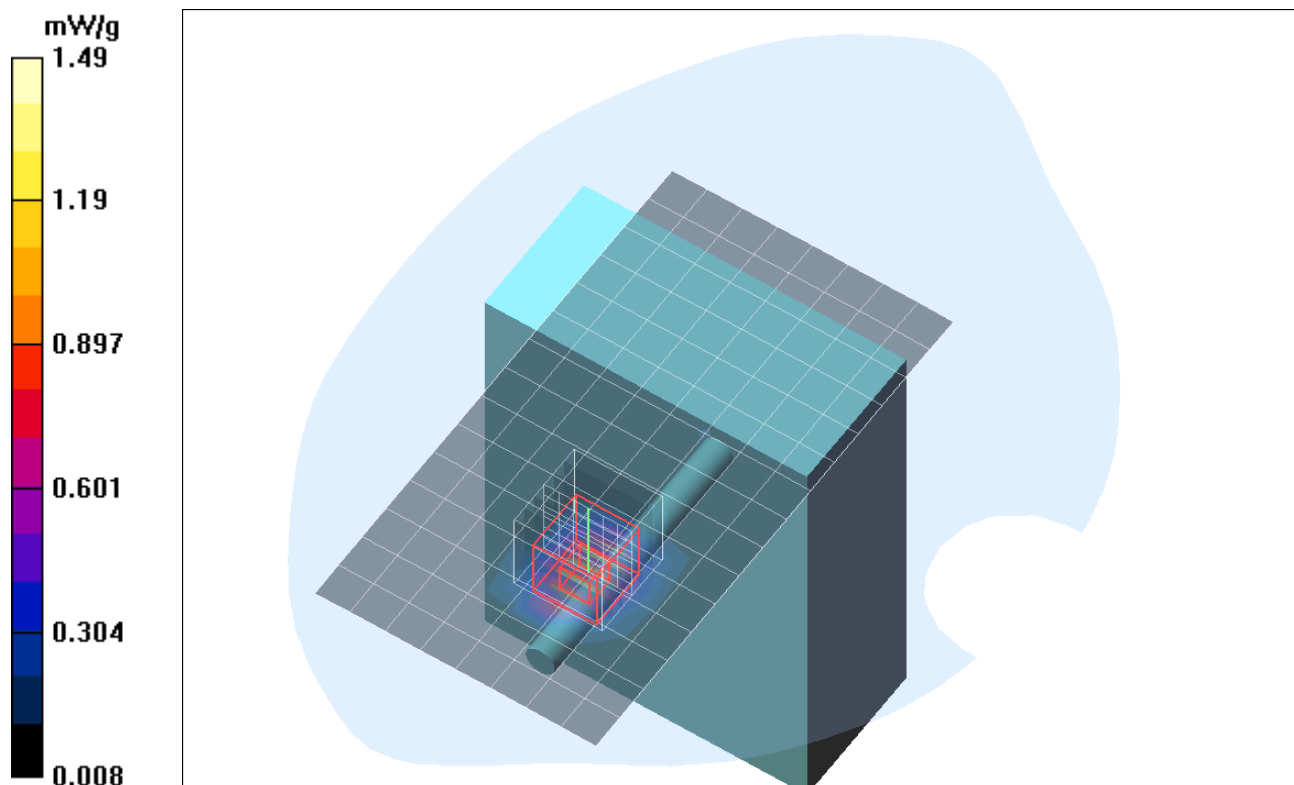


Fig. 1: SAR distribution for IEEE802.11 b (1 MBit/s), channel 6, top side of the device towards the phantom, 0mm distance, antenna rotated forward.

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [WK60XS_b_wlan_ch6_1M_top2r.da4](#)

DUT: PFREUNDT; Type: WK60 XS; Serial: Prototyp10_000001
Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3860; ConvF(7.52, 7.52, 7.52); Calibrated: 18.09.2015
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 16.09.2015
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (9x14x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.54 mW/g

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

Reference Value = 28.0 V/m; Power Drift = -0.067 dB

Peak SAR (extrapolated) = 2.97 W/kg

SAR(1 g) = 1.37 mW/g; SAR(10 g) = 0.592 mW/g

Maximum value of SAR (measured) = 1.56 mW/g

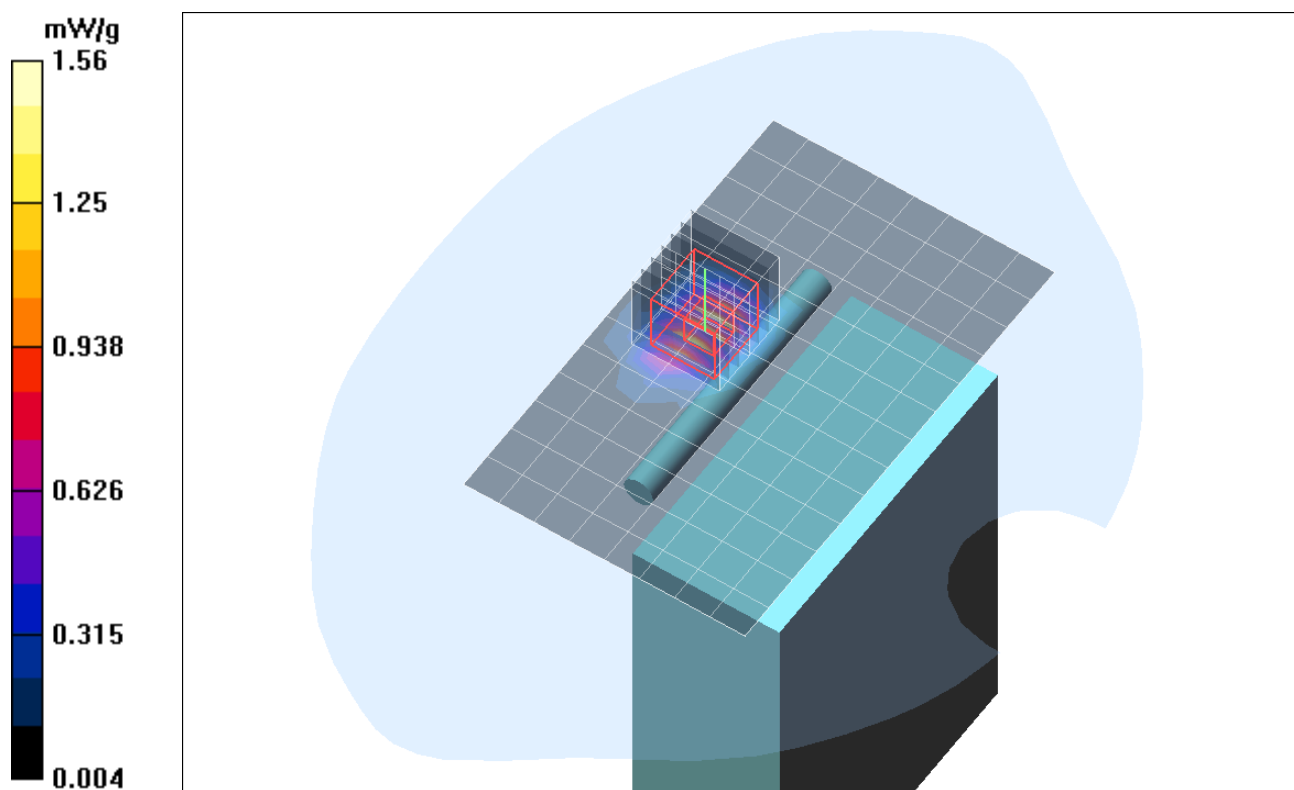


Fig. 2: SAR distribution for IEEE802.11 b (1 MBit/s), channel 6, top side of the device towards the phantom, 0mm distance, antenna rotated right.

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [WK60XS_b_wlan_ch6_1M_top3l.da4](#)

DUT: PFREUNDT; Type: WK60 XS; Serial: Prototyp10_000001
Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3860; ConvF(7.52, 7.52, 7.52); Calibrated: 18.09.2015
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 16.09.2015
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (9x14x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.32 mW/g

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

Reference Value = 26.4 V/m; Power Drift = -0.132 dB

Peak SAR (extrapolated) = 2.94 W/kg

SAR(1 g) = 1.37 mW/g; SAR(10 g) = 0.610 mW/g

Maximum value of SAR (measured) = 1.58 mW/g

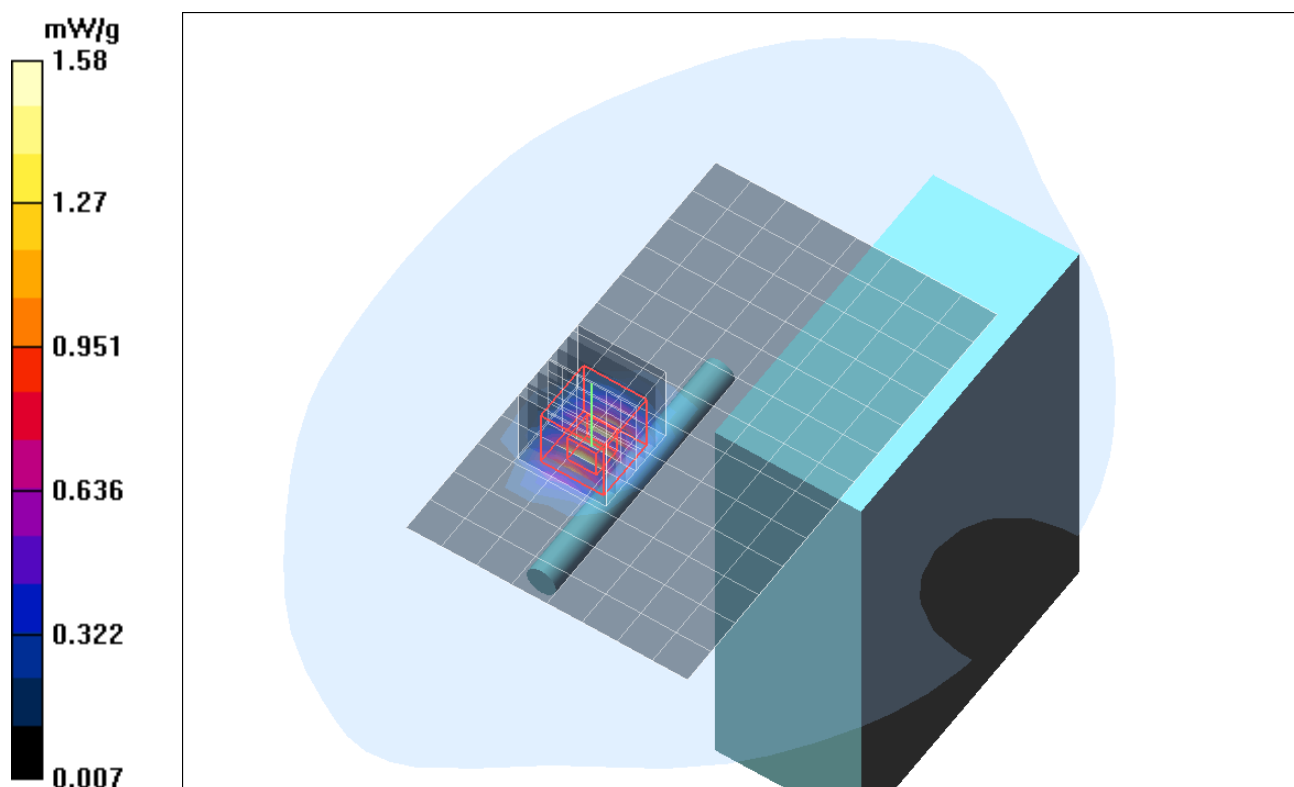


Fig. 3: SAR distribution for IEEE802.11 b (1 MBit/s), channel 6, top side of the device towards the phantom, 0mm distance, antenna rotated left.

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [WK60XS b wlan ch6 1M left 1l.da4](#)

DUT: PFREUNDT; Type: WK60 XS; Serial: Prototyp10_000001
Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3860; ConvF(7.52, 7.52, 7.52); Calibrated: 18.09.2015
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 16.09.2015
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (9x15x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 0.596 mW/g

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

Reference Value = 17.6 V/m; Power Drift = 0.009 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.579 mW/g; SAR(10 g) = 0.284 mW/g

Maximum value of SAR (measured) = 0.648 mW/g

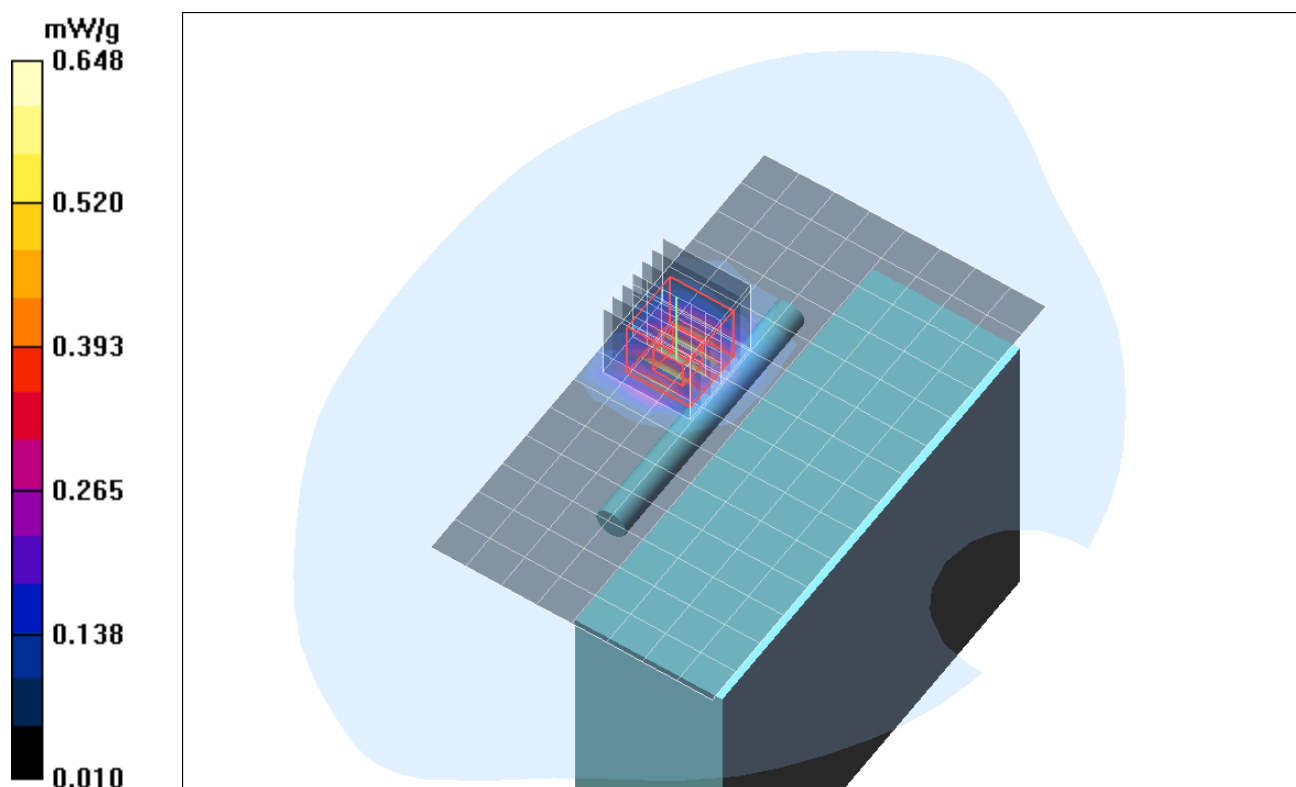


Fig. 4: SAR distribution for IEEE802.11 b (1 MBit/s), channel 6, left side of the device towards the phantom, 0mm distance, antenna rotated down.

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [WK60XS b wlan ch6 1M left 2r.da4](#)

DUT: PFREUNDT; Type: WK60 XS; Serial: Prototyp10_000001
Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3860; ConvF(7.52, 7.52, 7.52); Calibrated: 18.09.2015
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 16.09.2015
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.575 mW/g

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

Reference Value = 17.2 V/m; Power Drift = 0.033 dB

Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.551 mW/g; SAR(10 g) = 0.269 mW/g

Maximum value of SAR (measured) = 0.618 mW/g

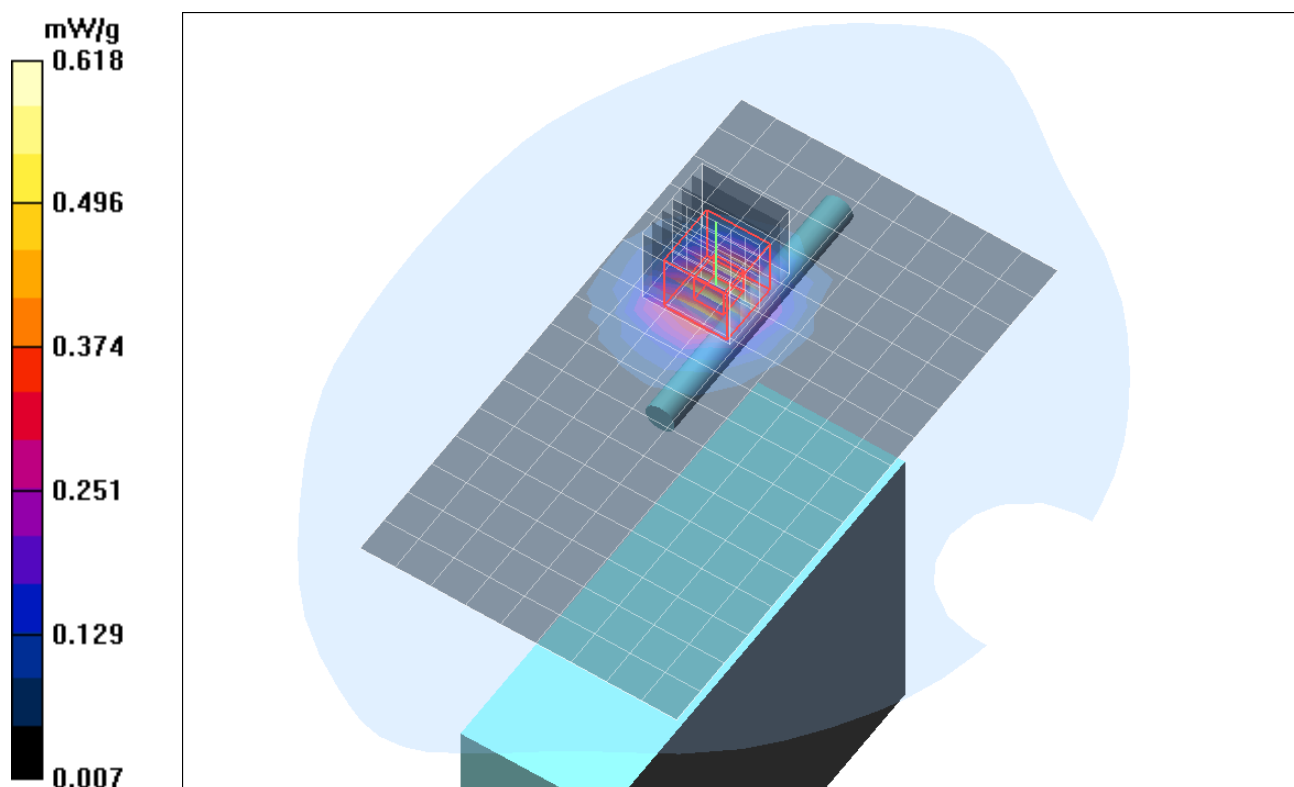


Fig. 5: SAR distribution for IEEE802.11 b (1 MBit/s), channel 6, left side of the device towards the phantom, 0mm distance, antenna rotated up.

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [WK60XS_b_wlan_ch6_1M_right1r.da4](#)

DUT: PFREUNDT; Type: WK60 XS; Serial: Prototyp10_000001
Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2437$ MHz; $\sigma = 1.97$ mho/m; $\epsilon_r = 51.5$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3860; ConvF(7.52, 7.52, 7.52); Calibrated: 18.09.2015
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 16.09.2015
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (9x11x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.098 mW/g

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

Reference Value = 5.48 V/m; Power Drift = -0.176 dB

Peak SAR (extrapolated) = 0.188 W/kg

SAR(1 g) = 0.096 mW/g; SAR(10 g) = 0.050 mW/g

Maximum value of SAR (measured) = 0.103 mW/g

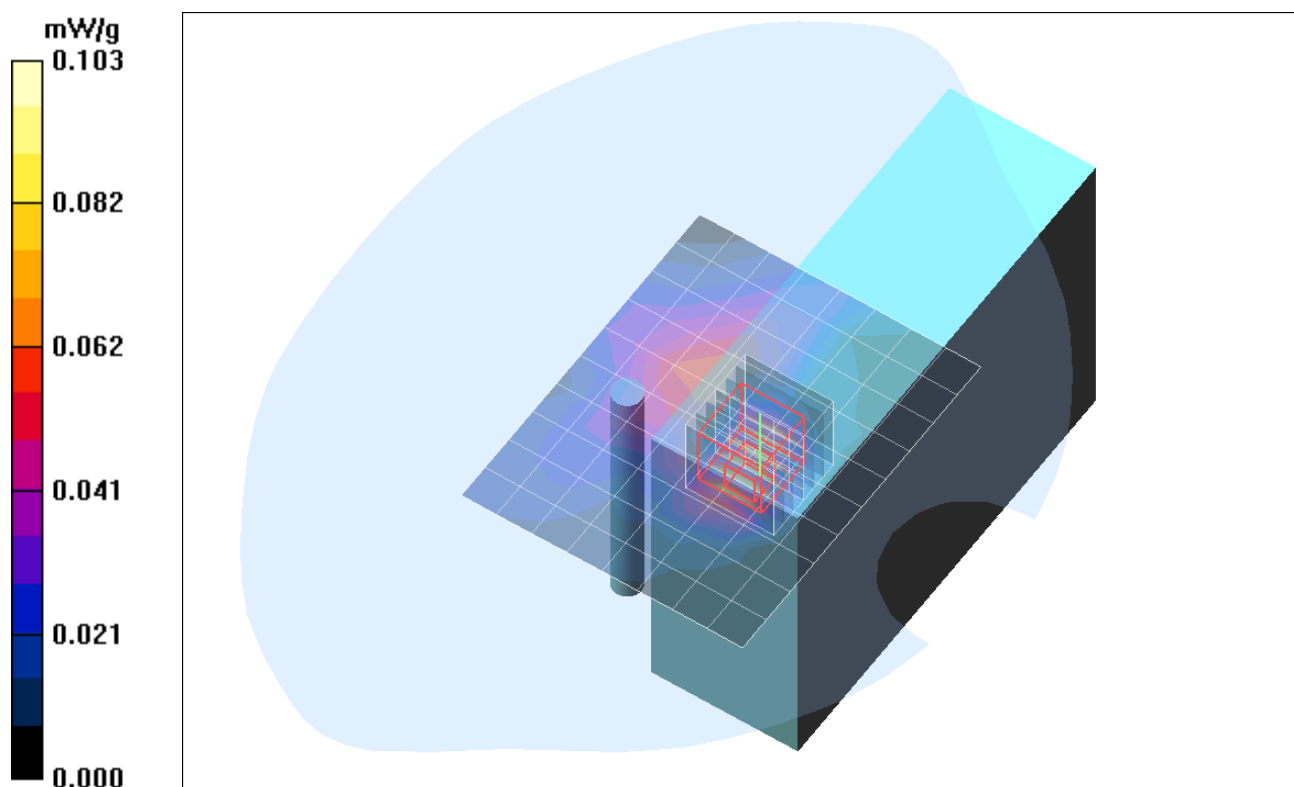


Fig. 6: SAR distribution for IEEE802.11 b (1 MBit/s), channel 6, right side of the device towards the phantom, 0mm distance, antenna rotated right.

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [WK60XS_b_wlan_ch1_1M_top3l.da4](#)

DUT: PFREUNDT; Type: WK60 XS; Serial: Prototyp10_000001
Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2412 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2412$ MHz; $\sigma = 1.93$ mho/m; $\epsilon_r = 51.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3860; ConvF(7.52, 7.52, 7.52); Calibrated: 18.09.2015
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 16.09.2015
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (9x14x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.32 mW/g

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

Reference Value = 26.4 V/m; Power Drift = -0.090 dB

Peak SAR (extrapolated) = 2.93 W/kg

SAR(1 g) = 1.38 mW/g; SAR(10 g) = 0.613 mW/g

Maximum value of SAR (measured) = 1.58 mW/g

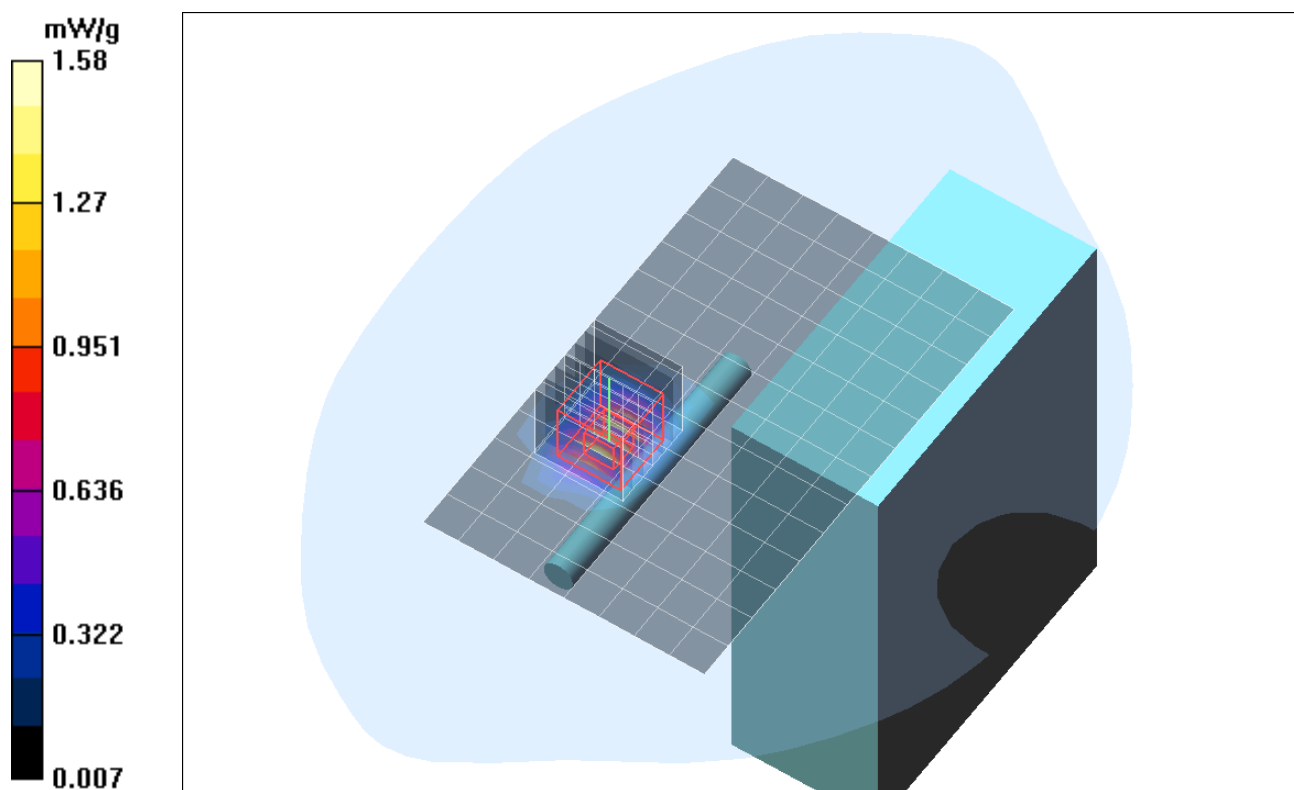


Fig. 7: SAR distribution for IEEE802.11 b (1 MBit/s), channel 1, top side of the device towards the phantom, 0mm distance, antenna rotated left.

Test Laboratory: IMST GmbH, DASY Blue (I); File Name: [WK60XS_b_wlan_ch11_1M_top3l.da4](#)

DUT: PFREUNDT; Type: WK60 XS; Serial: Prototyp10_000001
Program Name: IEEE 802.11 b

Communication System: WLAN 2450; Frequency: 2462 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.99$ mho/m; $\epsilon_r = 51.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY4 Configuration:

- Probe: EX3DV4 - SN3860; ConvF(7.52, 7.52, 7.52); Calibrated: 18.09.2015
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn631; Calibrated: 16.09.2015
- Phantom: SAM Glycol 1176; Type: Speag; Serial: 1176
- Measurement SW: DASY4, V4.7 Build 80; Postprocessing SW: SEMCAD, V1.8 Build 186

Body/Area Scan (9x14x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 1.31 mW/g

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

Reference Value = 25.8 V/m; Power Drift = -0.074 dB

Peak SAR (extrapolated) = 2.94 W/kg

SAR(1 g) = 1.36 mW/g; SAR(10 g) = 0.600 mW/g

Maximum value of SAR (measured) = 1.56 mW/g

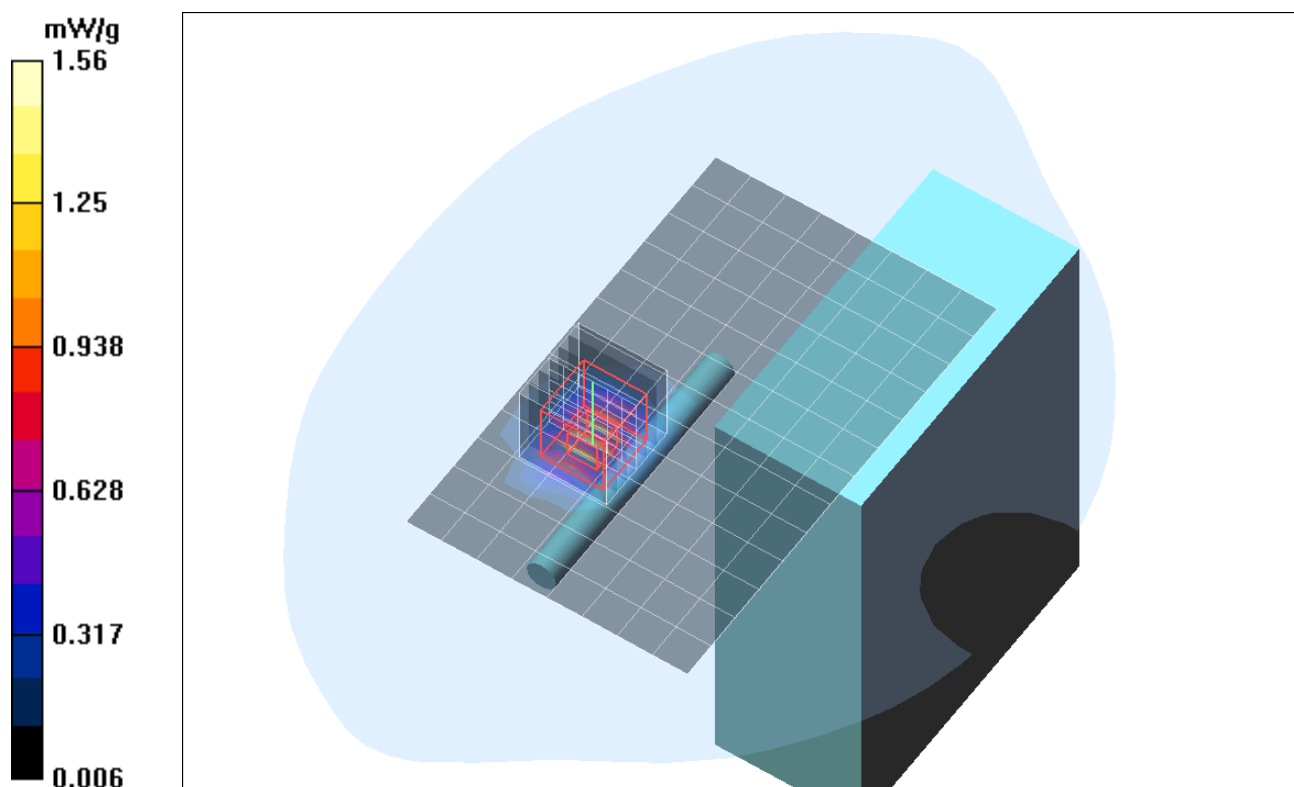


Fig. 8: SAR distribution for IEEE802.11 b (1 MBit/s), channel 11, top side of the device towards the phantom, 0mm distance, antenna rotated left.