12.2. System Check Plots

This appendix contains the following system validation distribution scans.

Scan Reference Number	Title
SYS/001	System Performance Check 2450 MHz Body 28 02 17

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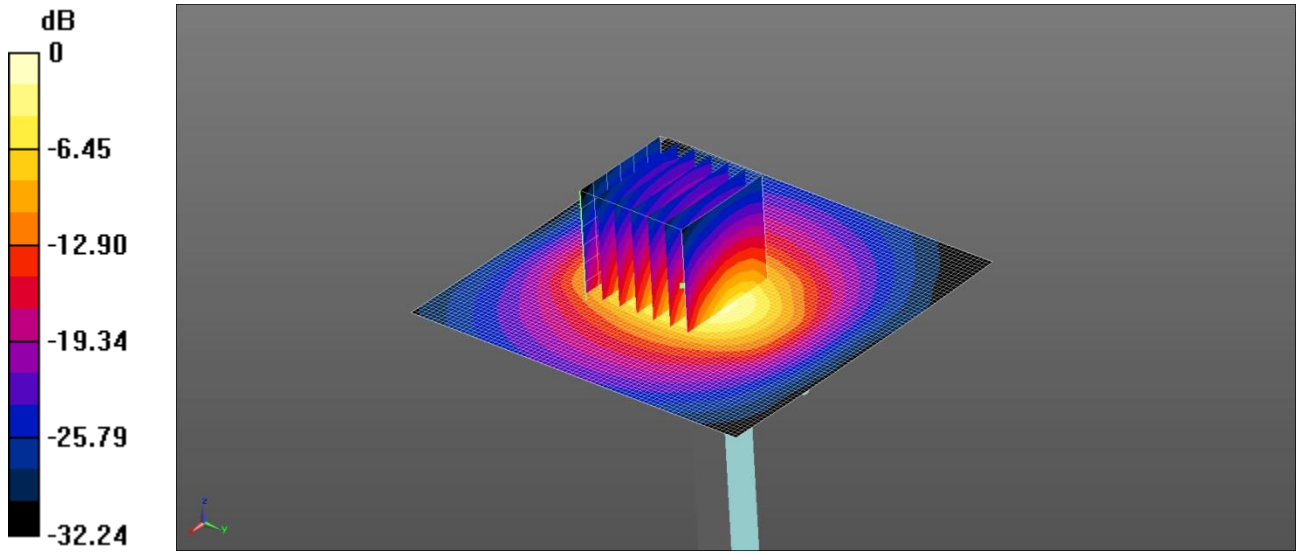
SYS/001: System Performance Check 2450 MHz Body 28 02 17

Date: 28/02/2017
DUT: D2450V2 - SN725; Type: D2450V2; Serial: SN725



0 dB = 16.2 W/kg = 12.11 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used: f = 2450 MHz; σ = 2.03 S/m; εr = 53.482; ρ = 1000 kg/m3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=250mW 2/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 16.2 W/kg

Configuration/d=10mm, Pin=250mW 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 81.09 V/m; Power Drift = -0.43 dB
Peak SAR (extrapolated) = 26.9 W/kg
SAR(1 g) = 12.9 W/kg; SAR(10 g) = 6.01 W/kg
Maximum value of SAR (measured) = 19.8 W/kg

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12.3. SAR Distribution Plots

This appendix contains the following SAR distribution scans.

Scan Reference Number	Title
SAR/001	Front Facing Phantom WLAN 2.4GHz CH7
SAR/002	Back Facing Phantom WLAN 2.4GHz CH7
SAR/003	Top Facing Phantom WLAN 2.4GHz CH7
SAR/004	Left Facing Phantom WLAN 2.4GHz CH7
SAR/005	Back Facing Phantom WLAN 2.4GHz CH1
SAR/006	Back Facing Phantom WLAN 2.4GHz CH11
SAR/007	Front Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH11
SAR/008	Back Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH11
SAR/009	Top Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH11
SAR/010	Right Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH11
SAR/011	Back Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH18
SAR/012	Back Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH26

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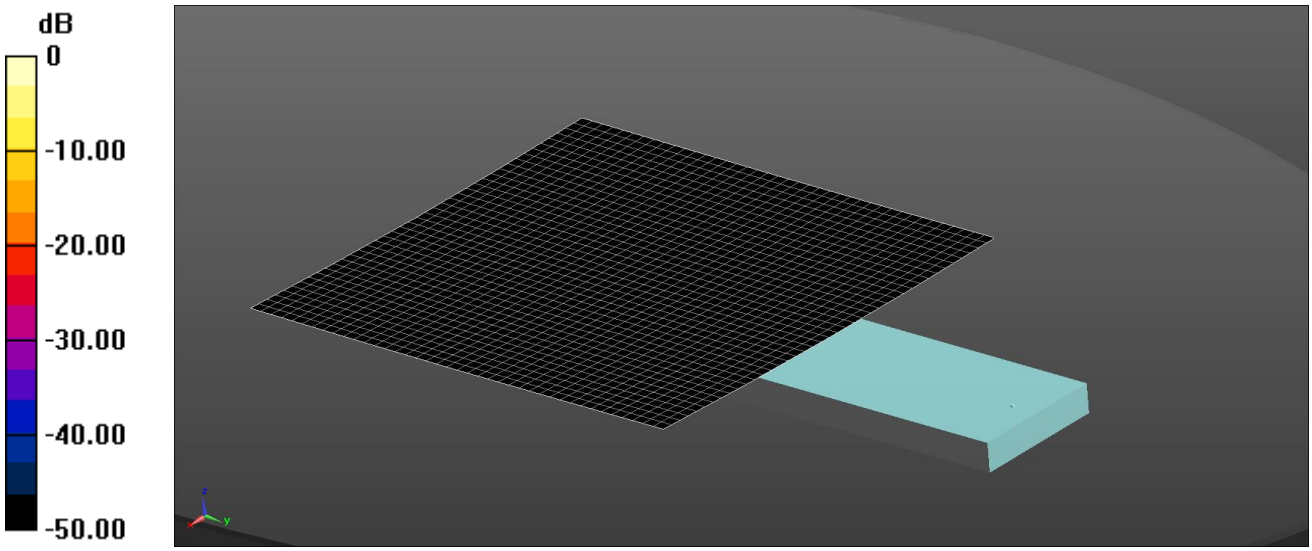
SAR/001: Front Facing Phantom WLAN 2.4GHz CH7

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0 W/kg = -999.00 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 2442 MHz;Duty Cycle: 1:6.65273
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2442 MHz; σ = 2.021 S/m; ε_r = 53.507; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)
Configuration/Front/DNU Area Scan (41x41x1): Interpolated grid: dx=4.000 mm, dy=4.000 mm
Maximum value of SAR (interpolated) = 0 W/kg

Note: No SAR level or peak was detected

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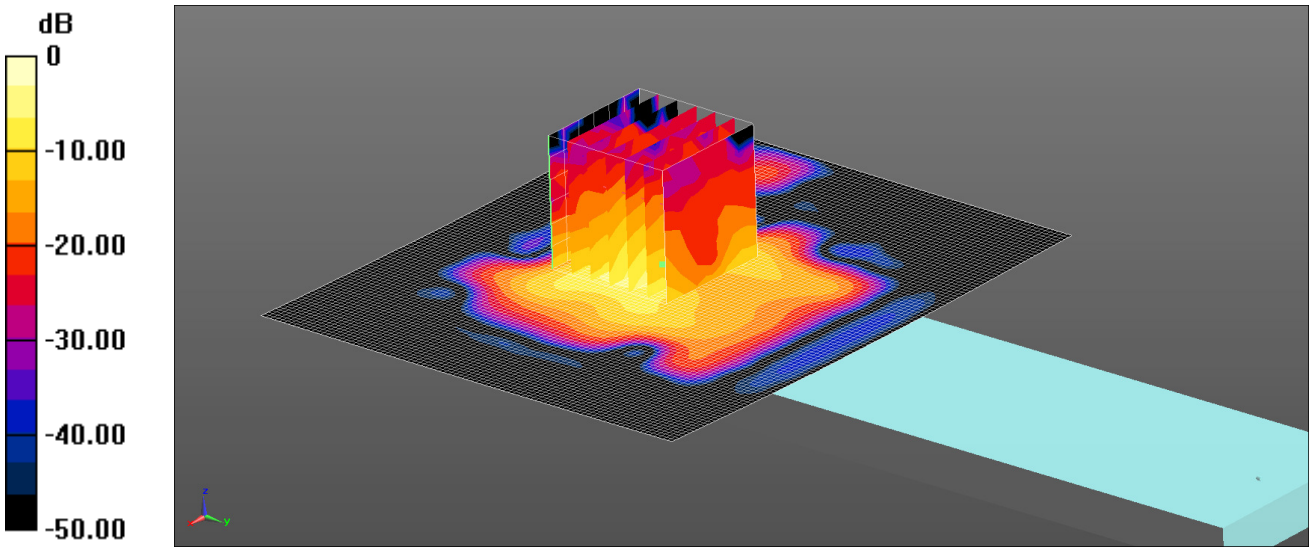
SAR/002: Back Facing Phantom WLAN 2.4GHz CH7

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0.295 W/kg = -5.31 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 2442 MHz;Duty Cycle: 1:6.65273
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2442 MHz; σ = 2.021 S/m; ε_r = 53.507; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back/Area Scan 2 (111x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.295 W/kg
Configuration/Back/Zoom Scan (7x7x7) 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.19 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.518 W/kg
SAR(1 g) = 0.137 W/kg; SAR(10 g) = 0.039 W/kg
Maximum value of SAR (measured) = 0.323 W/kg

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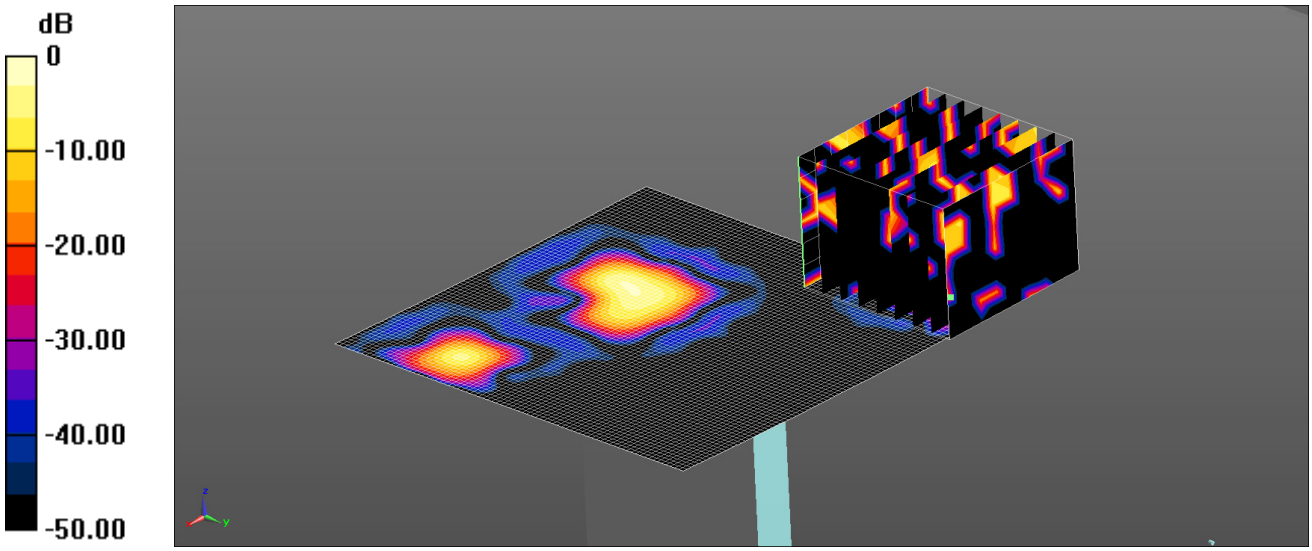
SAR/003: Top Facing Phantom WLAN 2.4GHz CH7

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0.0182 W/kg = -17.39 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 2442 MHz;Duty Cycle: 1:6.65273
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2442 MHz; σ = 2.021 S/m; ε_r = 53.507; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Top/Area Scan 2 (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0182 W/kg
Configuration/Top/Zoom Scan (7x7x7) 2 (9x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.7990 V/m; Power Drift = 4.11 dB
Peak SAR (extrapolated) = 0.00505 W/kg
SAR(1 g) = 7.6e-005 W/kg; SAR(10 g) = 7.69e-006 W/kg
Maximum value of SAR (measured) = 0.00505 W/kg

Note: SAR level measured is very low as equivalent to noise floor.

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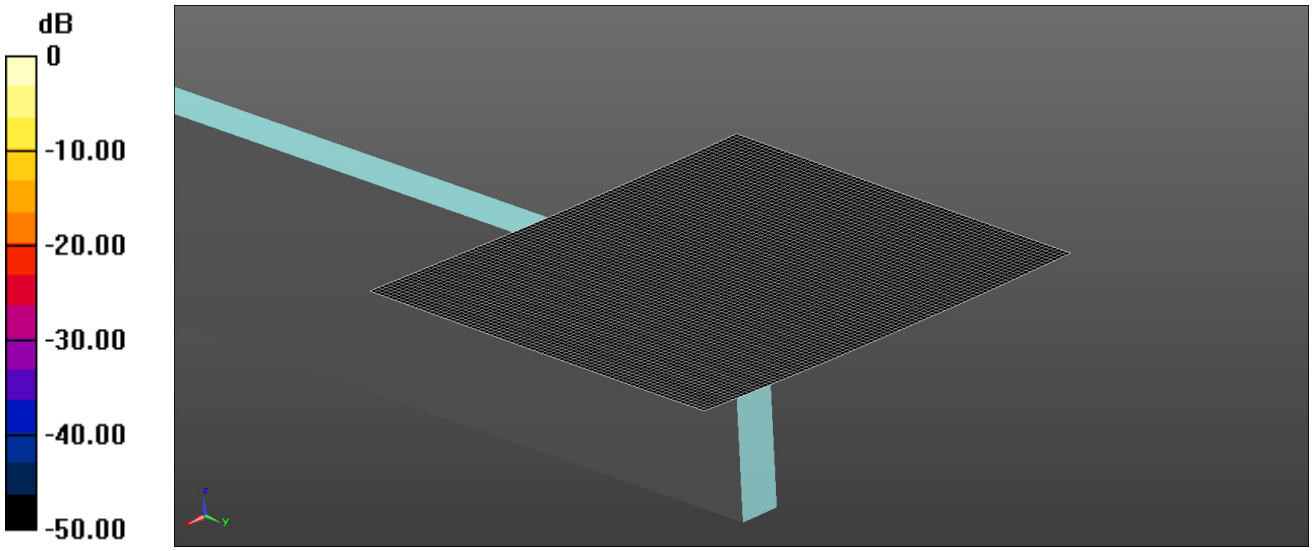
SAR/004: Left Facing Phantom WLAN 2.4GHz CH7

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0 W/kg = -999.00 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 2442 MHz;Duty Cycle: 1:6.65273
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2442 MHz; σ = 2.021 S/m; ε_r = 53.507; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Left/Area Scan 2 (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0 W/kg

Note: No SAR level or peak was detected

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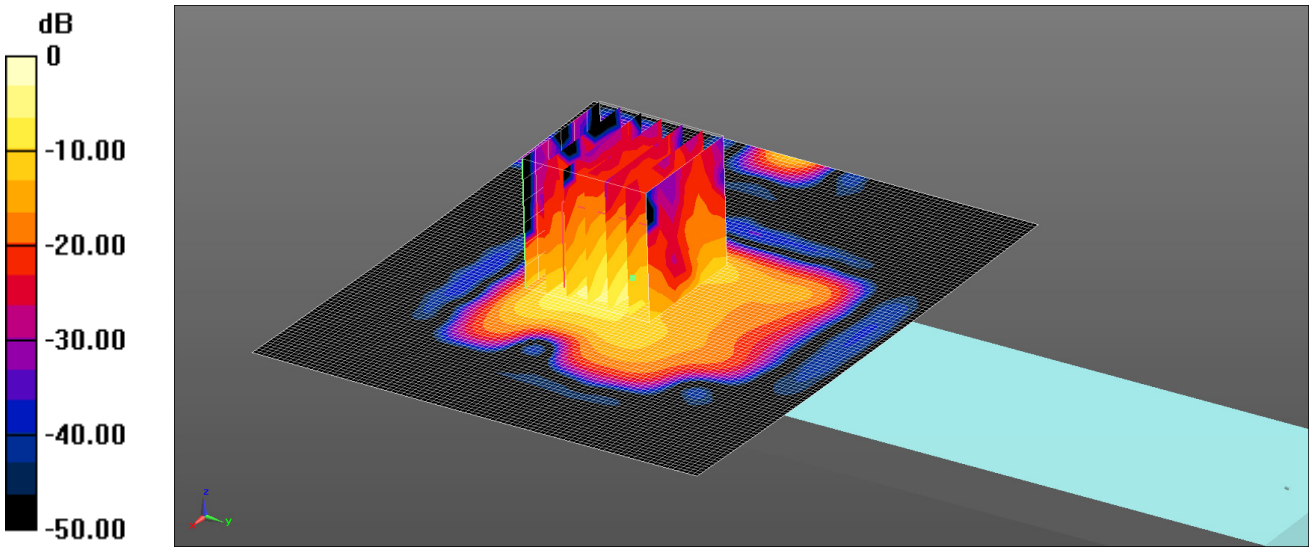
SAR/005: Back Facing Phantom WLAN 2.4GHz CH1

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0.341 W/kg = -4.67 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 2412 MHz;Duty Cycle: 1:6.65273
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2412 MHz; σ = 1.988 S/m; ε_r = 53.6; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back/Area Scan 2 (111x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.341 W/kg
Configuration/Back/Zoom Scan (7x7x7) 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.22 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.534 W/kg
SAR(1 g) = 0.140 W/kg; SAR(10 g) = 0.039 W/kg
Maximum value of SAR (measured) = 0.338 W/kg

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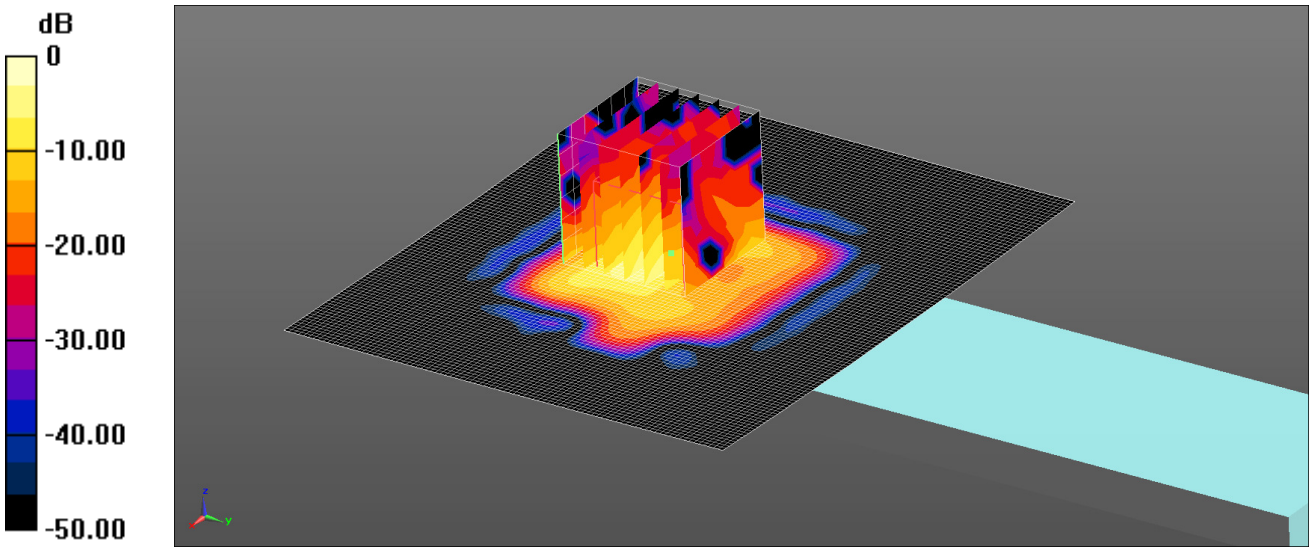
SAR/006: Back Facing Phantom WLAN 2.4GHz CH11

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0.230 W/kg = -6.38 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 2462 MHz;Duty Cycle: 1:6.65273
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2462 MHz; σ = 2.045 S/m; ε_r = 53.444; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back/Area Scan 2 (111x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.230 W/kg
Configuration/Back/Zoom Scan (7x7x7) 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.86 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.354 W/kg
SAR(1 g) = 0.093 W/kg; SAR(10 g) = 0.025 W/kg
Maximum value of SAR (measured) = 0.211 W/kg

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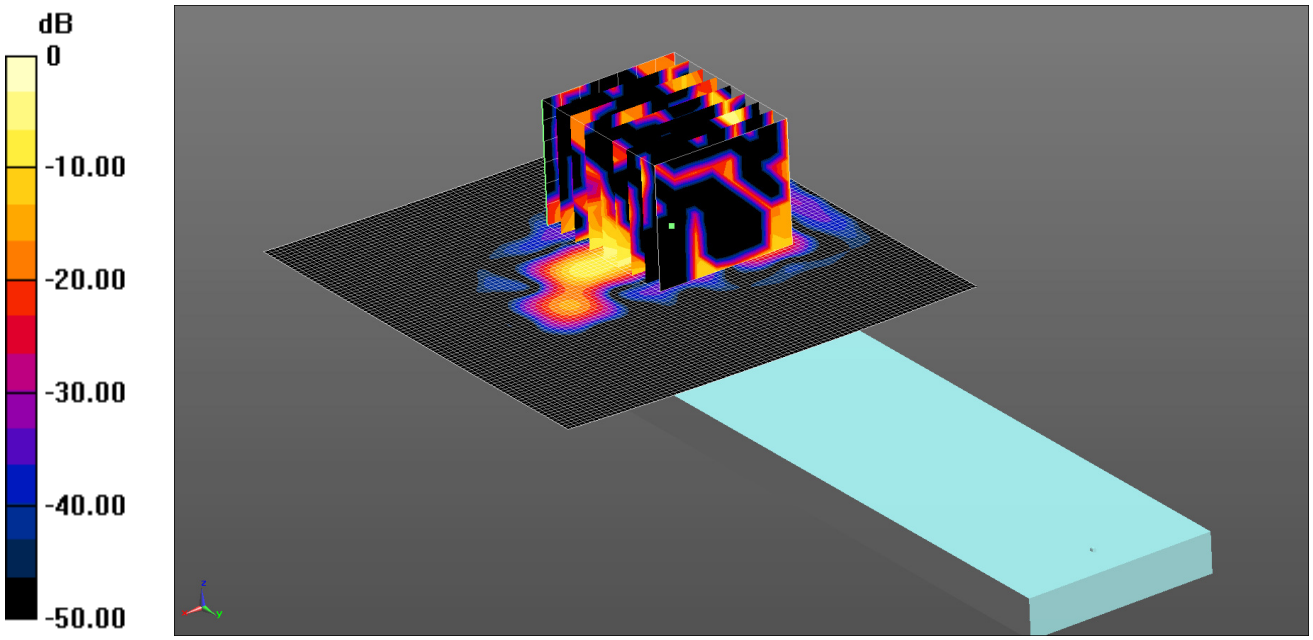
SAR/007: Front Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH11

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0.0351 W/kg = -14.55 dBW/kg

Communication System: UID 0, 6LoWPAN (0); Frequency: 2405 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2405 MHz; σ = 1.981 S/m; ε_r = 53.621; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Front/Area Scan 2 (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0351 W/kg
Configuration/Front/Zoom Scan (7x7x7) 2 (8x9x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.0430 W/kg
SAR(1 g) = 0.010 W/kg; SAR(10 g) = 0.00201 W/kg
Maximum value of SAR (measured) = 0.0284 W/kg

Note: SAR level measured is very low as equivalent to noise floor.

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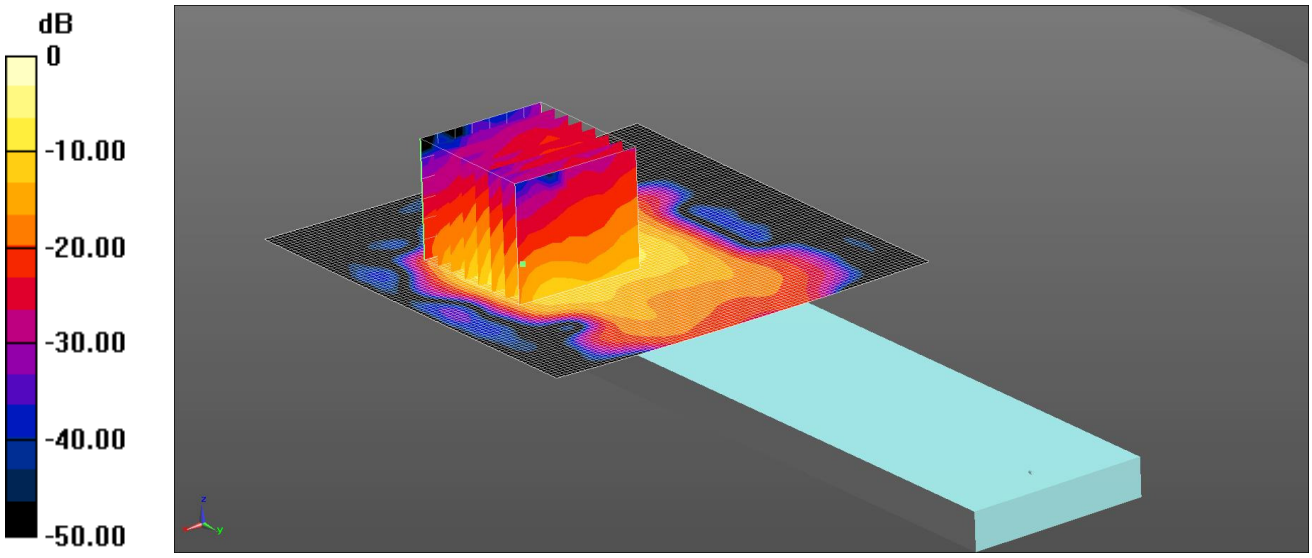
SAR/008: Back Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH11

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 1.40 W/kg = 1.48 dBW/kg

Communication System: UID 0, 6LoWPAN (0); Frequency: 2405 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2405 MHz; σ = 1.981 S/m; ε_r = 53.621; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back/Area Scan 2 (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.40 W/kg
Configuration/Back/Zoom Scan (7x7x7) 2 (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 26.58 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 2.98 W/kg
SAR(1 g) = 0.738 W/kg; SAR(10 g) = 0.204 W/kg
Maximum value of SAR (measured) = 1.67 W/kg

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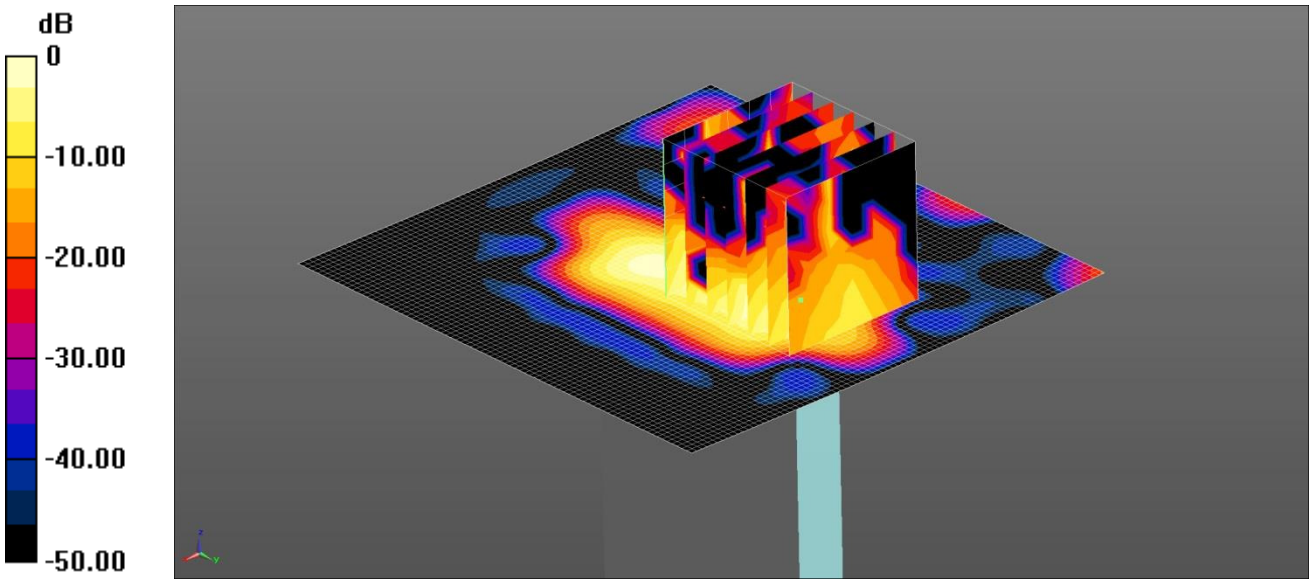
SAR/009: Top Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH11

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0.124 W/kg = -9.05 dBW/kg

Communication System: UID 0, 6LoWPAN (0); Frequency: 2405 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2405 MHz; σ = 1.981 S/m; ε_r = 53.621; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Top/Area Scan 2 (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.124 W/kg
Configuration/Top/Zoom Scan (7x7x7) 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.459 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.173 W/kg
SAR(1 g) = 0.046 W/kg; SAR(10 g) = 0.017 W/kg
Maximum value of SAR (measured) = 0.0833 W/kg

Note: SAR level measured is very low as equivalent to noise floor.

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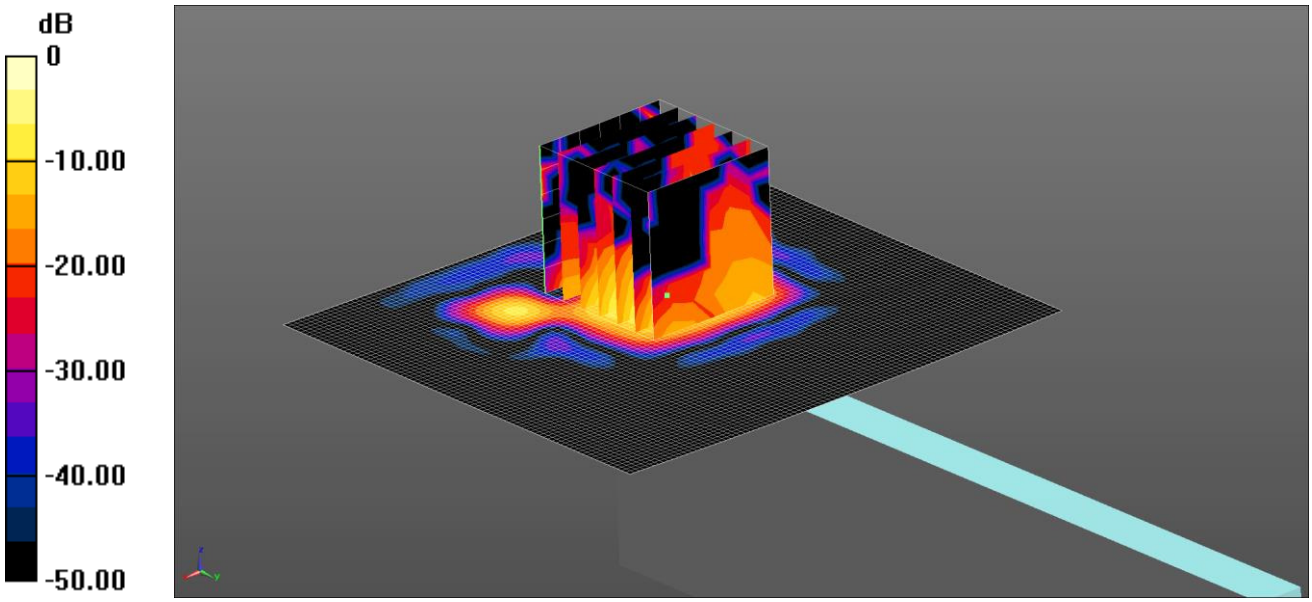
SAR/010: Right Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH11

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0.129 W/kg = -8.89 dBW/kg

Communication System: UID 0, 6LoWPAN (0); Frequency: 2405 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2405 MHz; σ = 1.981 S/m; ε_r = 53.621; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Right/Area Scan 2 (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.129 W/kg
Configuration/Right/Zoom Scan (7x7x7) 2 (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.296 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.299 W/kg
SAR(1 g) = 0.083 W/kg; SAR(10 g) = 0.022 W/kg
Maximum value of SAR (measured) = 0.146 W/kg

Note: SAR level measured is very low as equivalent to noise floor.

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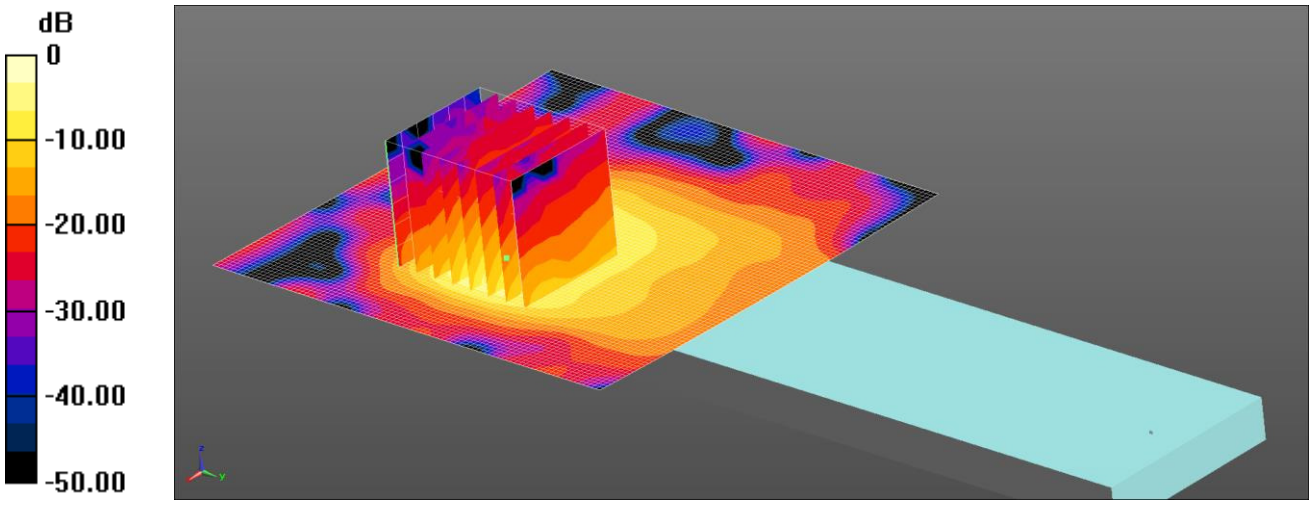
SAR/011: Back Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH18

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0.511 W/kg = -2.92 dBW/kg

Communication System: UID 0, 6LoWPAN (0); Frequency: 2440 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2440 MHz; σ = 2.019 S/m; ε_r = 53.513; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back/Area Scan 2 (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.511 W/kg
Configuration/Back/Zoom Scan (7x7x7) 2 (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 8.442 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 2.04 W/kg
SAR(1 g) = 0.509 W/kg; SAR(10 g) = 0.141 W/kg
Maximum value of SAR (measured) = 1.25 W/kg

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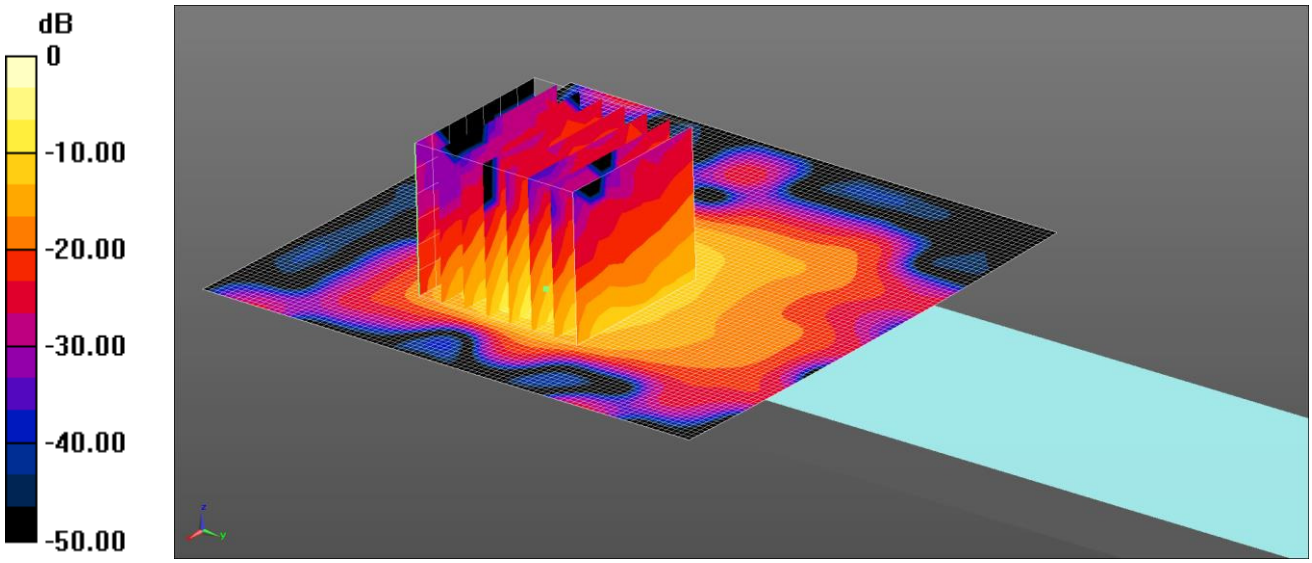
SAR/012: Back Facing Phantom IEEE 805.15.4 6LoWPAN 2.4GHz CH26

Date: 03/03/2017
DUT: Neeo Remote; Serial: MBA22



0 dB = 0.727 W/kg = -1.38 dBW/kg

Communication System: UID 0, 6LoWPAN (0); Frequency: 2480 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2480 MHz; σ = 2.067 S/m; ε_r = 53.388; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(7.28, 7.28, 7.28); Calibrated: 21/03/2016;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 25/04/2016
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back/Area Scan 2 (91x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.727 W/kg
Configuration/Back/Zoom Scan (7x7x7) 2 (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 7.220 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.342 W/kg; SAR(10 g) = 0.092 W/kg
Maximum value of SAR (measured) = 0.700 W/kg

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