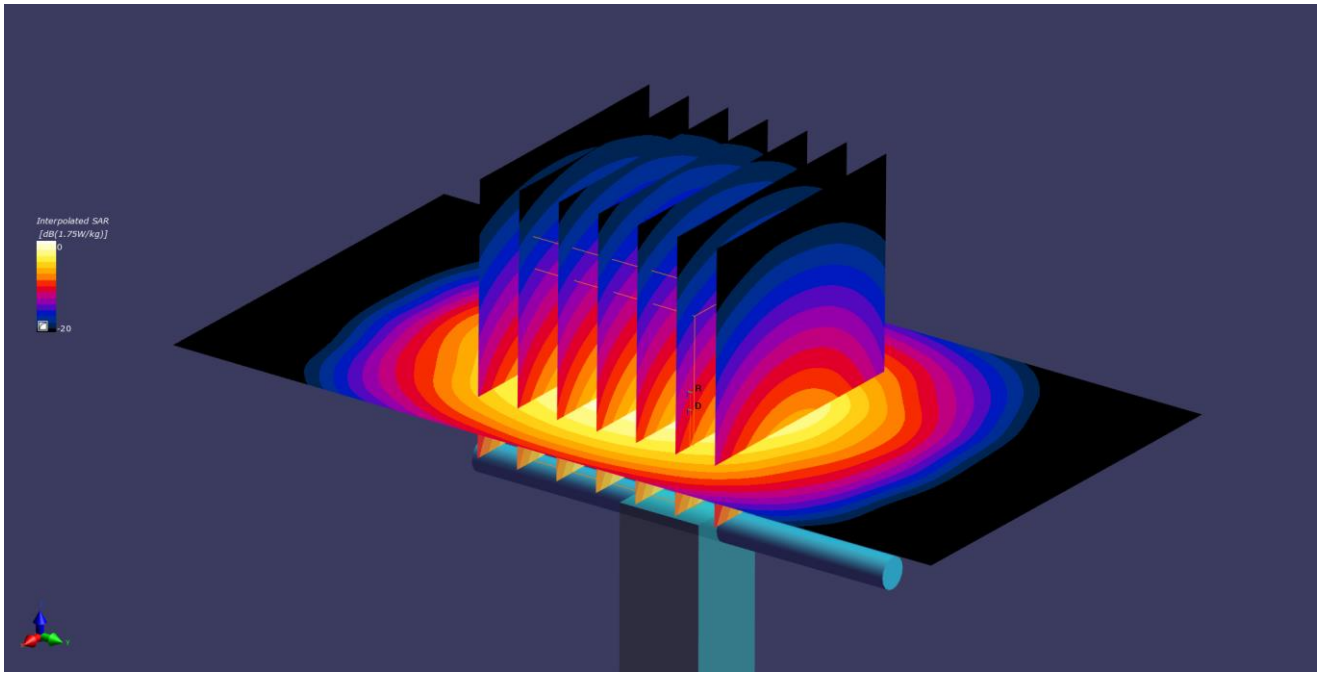
12.2. System Check Plots

This appendix contains the following system validation distribution scans.

Scan Reference Number	Title
SYS/001	System Check 2450MHz Body 11 03 19 (Site 61)
SYS/002	System Check 2450MHz Body 15 03 19 (Site 61)
SYS/003	System Check 5250MHz Body 07 03 19 (Site 60)
SYS/004	System Check 5250MHz Body 11 03 19 (Site 60)
SYS/005	System Check 5600MHz Body 11 03 19 (Site 60)
SYS/006	System Check 5750MHz Body 11 03 19 (Site 61)
SYS/007	System Check 5750MHz Body 15 03 19 (Site 61)

SYS/001: System Check 2450MHz Body 11 03 19 (Site 61)

Date: 11/03/2019
DUT: D2450V2; Type: D2450V2; Serial: SN725



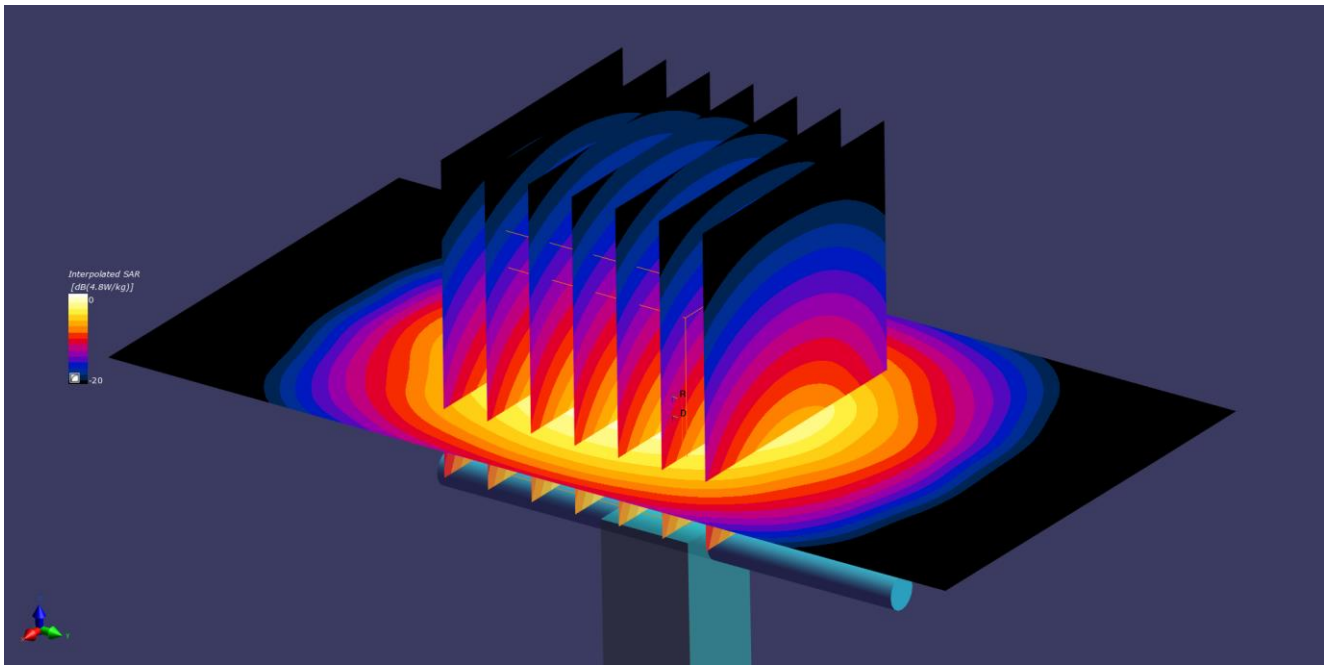
Communication System: Comm UID: 0 Frequency: 2450.0 MHz; ; Duty Cycle: 1.0
Medium: MSL-600-6000 Medium parameters used: f = 2450.0 MHz; σ = 2.04 S/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN7495; ConvF(7.75, 7.75, 7.75); Calibrated: 2018-03-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 2018-06-08
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: 1177

Area Scan (48.0x96.0): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (30.0x30.0x30.0): Measurement grid: dx=5.0mm, dy=5.0mm, dz=5.0mm
Reference Value = 1.83 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.14 W/kg

SYS/002: System Check 2450MHz Body 15 03 19 (Site 61)

Date: 15/03/2019
DUT: D2450V2; Type: D2450V2; Serial: SN725



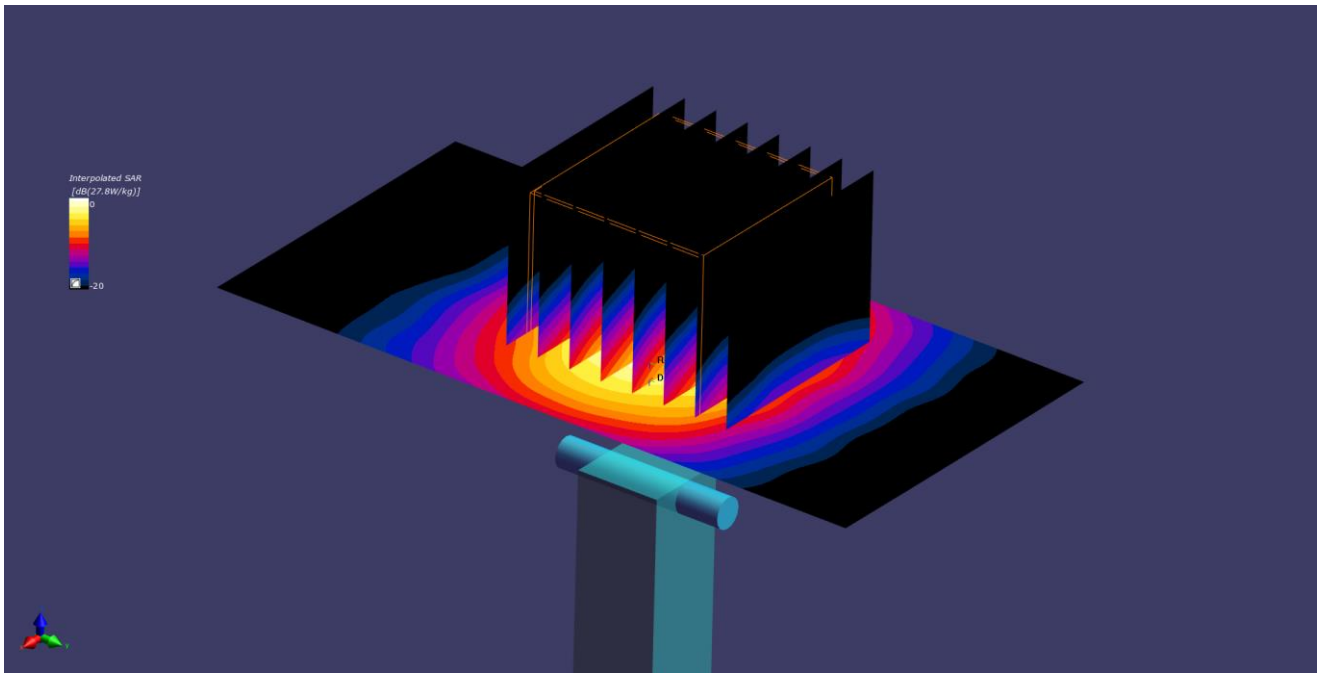
Communication System: Comm UID: 0 Frequency: 2450.0 MHz; ; Duty Cycle: 1.0
Medium: MSL-600-6000 Medium parameters used: f = 2450.0 MHz; σ = 2.03 S/m; ε_r = 53.4; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: ES3DV3 - SN3358; ConvF(4.52, 4.52, 4.52); Calibrated: 2019-01-21;
- Sensor-Surface: 3.0mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 2018-06-08
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: 1177

Area Scan (48.0x96.0): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (30.0x30.0x30.0): Measurement grid: dx=5.0mm, dy=5.0mm, dz=5.0mm
Reference Value = 1.68 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.16 W/kg

SYS/003: System Check 5250MHz Body 07 03 2019 (Site 60)

Date: 07/03/2019
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



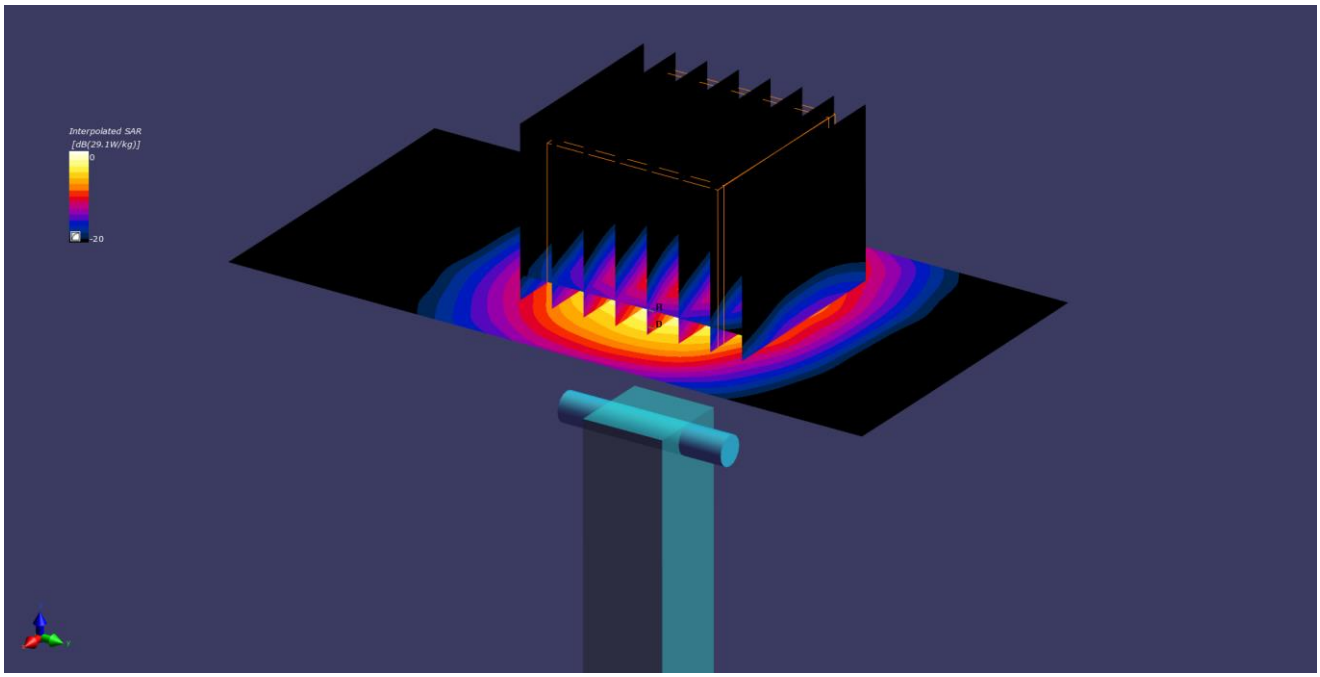
Communication System: Comm UID: 0 Frequency: 5250.0 MHz; ; Duty Cycle: 1.0
Medium: MBBL-600-6000 Medium parameters used: f = 5250.0 MHz; σ = 5.46 S/m; ε_r = 47.7; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN3995; ConvF(4.78, 4.78, 4.78); Calibrated: 2018-04-24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 2018-09-13
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: xxxx

Area Scan (40.0x80.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (22.0x22.0x22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm
Reference Value = 8.89 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 7.13 W/kg; SAR(10 g) = 2.00 W/kg

SYS/004: System Check 5250MHz Body 11 03 19 (Site 60)

Date: 11/03/2019
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



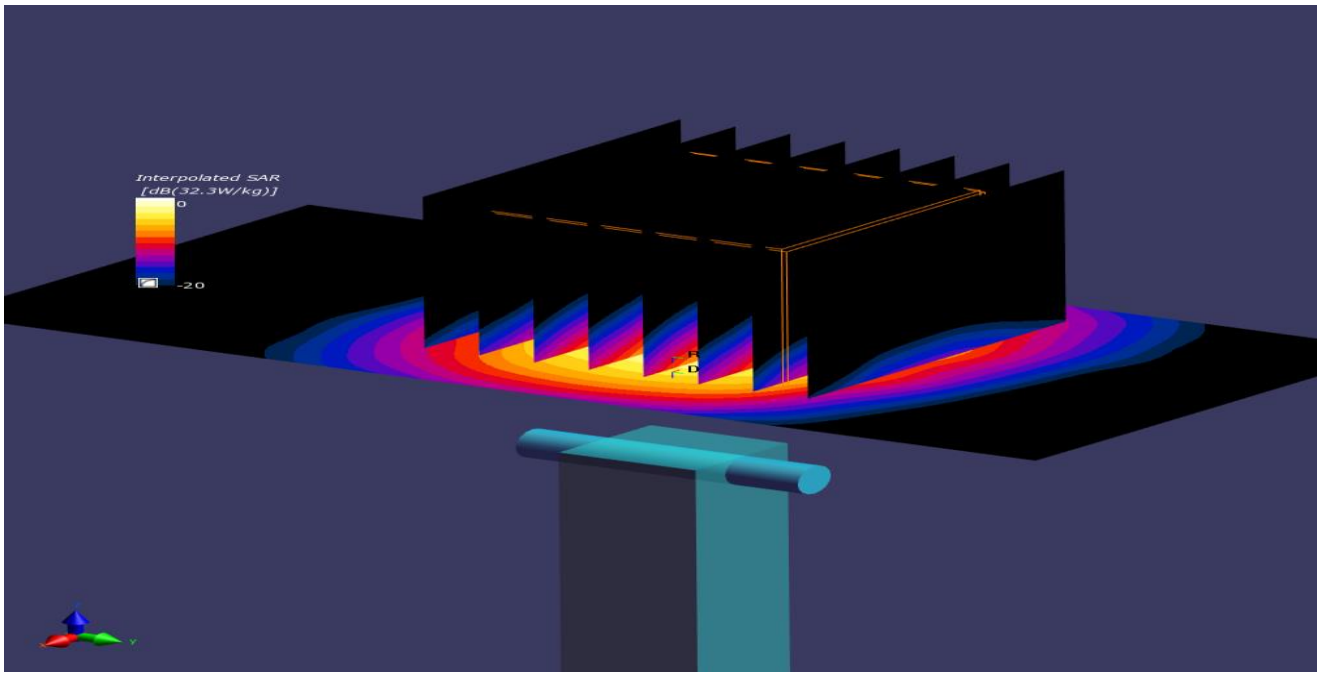
Communication System: Comm UID: 0 Frequency: 5250.0 MHz; ; Duty Cycle: 1.0
Medium: MBBL-600-6000 Medium parameters used: f = 5250.0 MHz; σ = 5.30 S/m; ε_r = 48.3; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN3995; ConvF(4.78, 4.78, 4.78); Calibrated: 2018-04-24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 2018-09-13
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: xxxx

Area Scan (40.0x80.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (24.0x24.0x22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm
Reference Value = 11.34 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 7.43 W/kg; SAR(10 g) = 2.09 W/kg

SYS/005: System Check 5600MHz Body 11 03 19 (Site 60)

Date: 12/03/2019
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



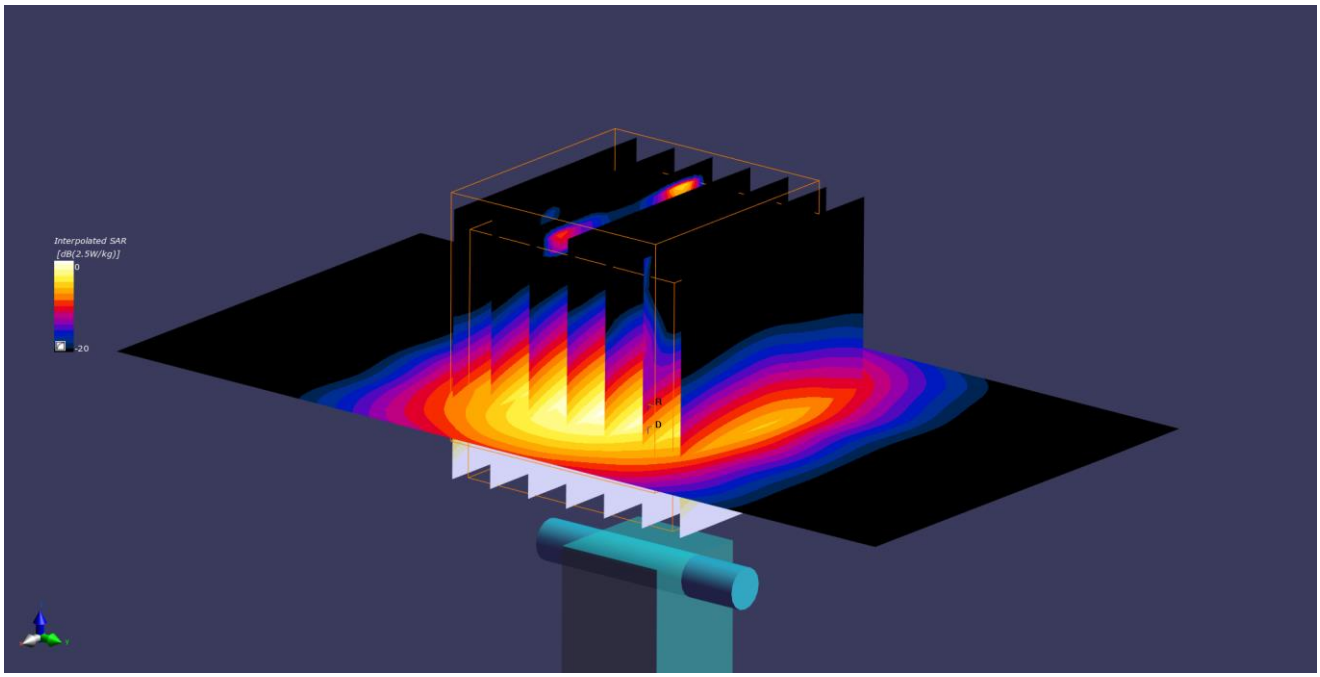
Communication System: Comm UID: 0 Frequency: 5600.0 MHz; ; Duty Cycle: 1.0
Medium: MBBL-600-6000 Medium parameters used: f = 5600.0 MHz; σ = 5.79 S/m; ε_r = 47.6; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN3995; ConvF(4.36, 4.36, 4.36); Calibrated: 2018-04-24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 2018-09-13
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: xxxx

Area Scan (40.0x80.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (24.0x24.0x22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm
Reference Value = 10.20 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 7.66 W/kg; SAR(10 g) = 2.13 W/kg

SYS/006: System Check 5750MHz Body 11 03 2019 (Site 61)

Date: 11/03/2019
DUT: D5GHzV2 - SN1222; Type: D5GHzV2; Serial: SN1222



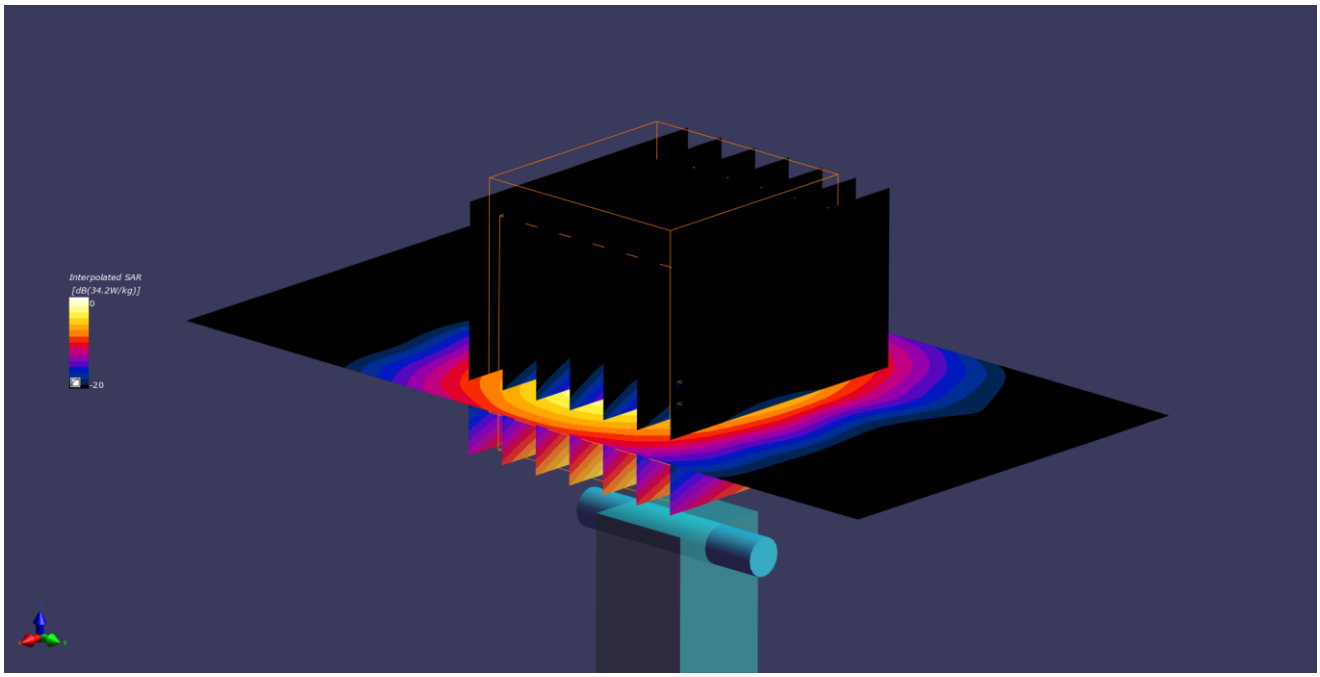
Communication System: Comm UID: 0 Frequency: 5750.0 MHz; ; Duty Cycle: 1.0
Medium: MBBL-600-6000 Medium parameters used: f = 5750.0 MHz; σ = 6.18 S/m; ε_r = 46.5; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN7495; ConvF(4.51, 4.51, 4.51); Calibrated: 2018-03-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 2018-06-08
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: 1177

Area Scan (40.0x80.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (22.0x22.0x22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm
Reference Value = 2.20 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 7.52 W/kg; SAR(10 g) = 2.10 W/kg

SYS/007 System Check 5750MHz Body 15 03 19 (Site 61)

Date: 15/03/2019
DUT: D5GHzV2 - SN1222; Type: D5GHzV2; Serial: SN1222



Communication System: Comm UID: 0 Frequency: 5750.0 MHz; ; Duty Cycle: 1.0
Medium: MBBL-600-6000 Medium parameters used: f = 5750.0 MHz; σ = 6.09 S/m; ε_r = 47.6; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN7495; ConvF(4.51, 4.51, 4.51); Calibrated: 2018-03-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 2018-06-08
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: 1177

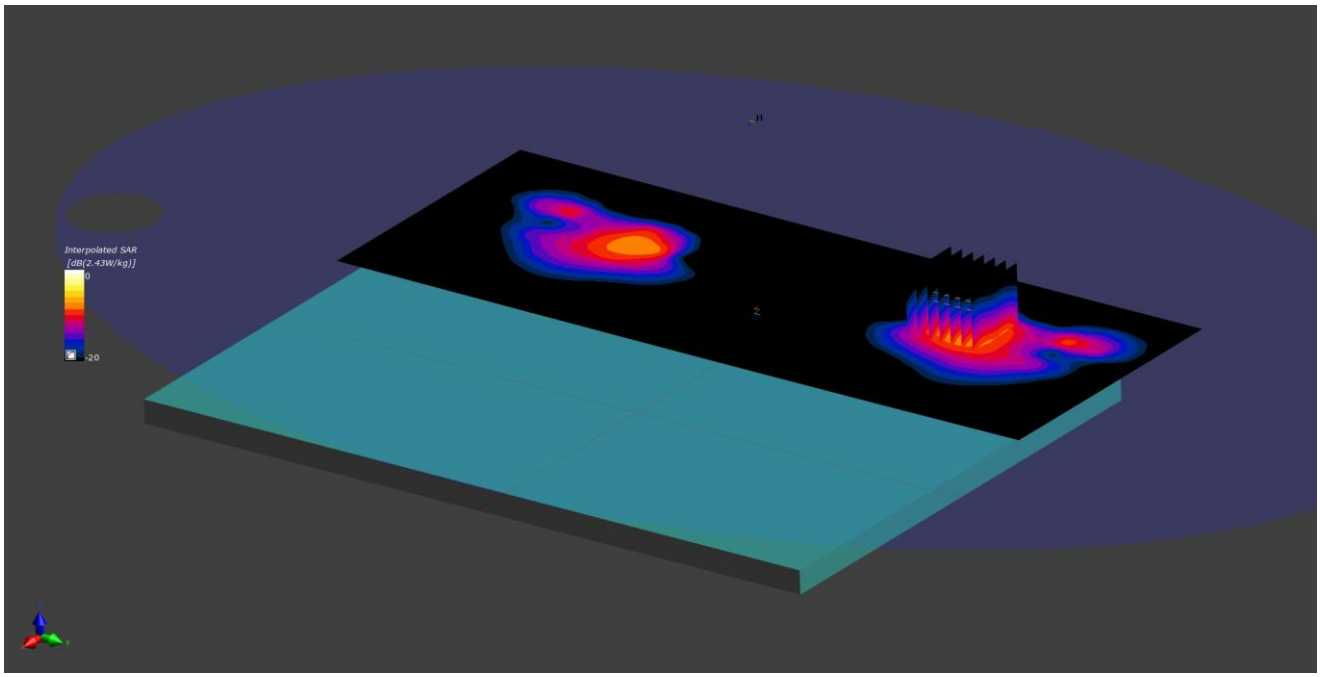
Area Scan (40.0x80.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (22.0x22.0x22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm
Reference Value = 2.61 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 7.67 W/kg; SAR(10 g) = 2.15 W/kg

12.3. SAR Test Plots

Scan Reference Number	Title
SAR/001	Back 0mm WiFi 2.4 GHz 802.11n HT20 MIMO Ant W1+WF2 CH10
SAR/002	Back 0mm WiFi 5.3 GHz 802.11ac VHT80 SISO ANT WF2 CH58
SAR/003	Back 0mm WiFi 5.6 GHz 802.11ac VHT80 SISO ANT WF2 CH106
SAR/004	Back 0mm WiFi 5.8 GHz 802.11ac VHT80 MIMO Ant WF1+WF2 CH155
SAR/005	Back 0mm BT (WiFi 5.0 GHz OFF) GFSK SISO WF1 CH78
SAR/006	Back 0mm BT (WiFi 5.0 GHz ON) GFSK SISO WF1 CH78

SAR/001: Back 0mm WiFi 2.4 GHz 802.11n HT20 MIMO Ant WF1+WF2 CH10

Date: 12/03/2019
DUT: Apple Inc.; Type: Laptop Device ; Model No: A2159



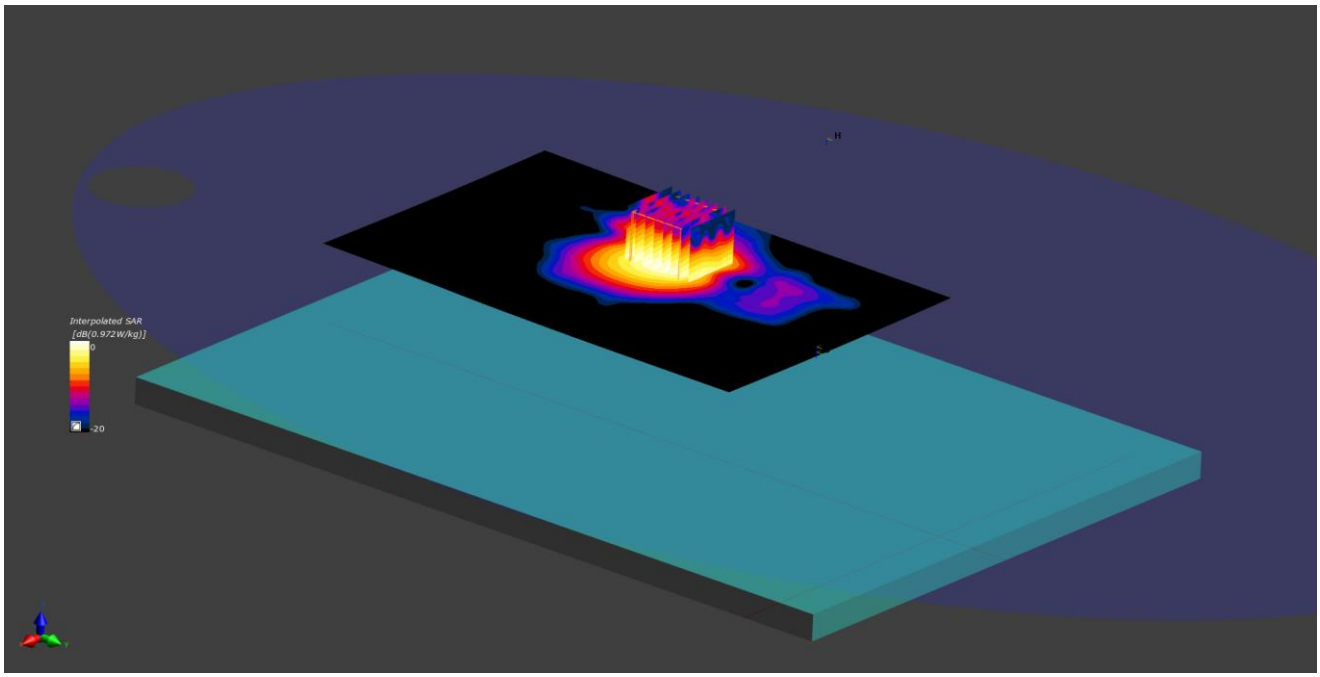
Communication System: WCDMA UID: 10196 Frequency: 2457.0 MHz; ; Duty Cycle: 1.0
Medium: MBBL-600-6000 Medium parameters used: f = 2457.0 MHz; σ = 2.04 S/m; ε_r = 52.7; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN7495; ConvF(7.75, 7.75, 7.75); Calibrated: 2018-03-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 2018-06-08
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: 1177

Area Scan (120.0x312.0): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (30.0x30.0x30.0): Measurement grid: dx=5.0mm, dy=5.0mm, dz=5.0mm
Reference Value = 0.64 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.926 W/kg; SAR(10 g) = 0.377 W/kg

SAR/002: Back 0mm WiFi 5.3 GHz 802.11ac VHT80 SISO ANT WF2 CH58

Date: 11/03/2019
DUT: Apple Inc.; Type: Laptop Device ; Model No: A1259



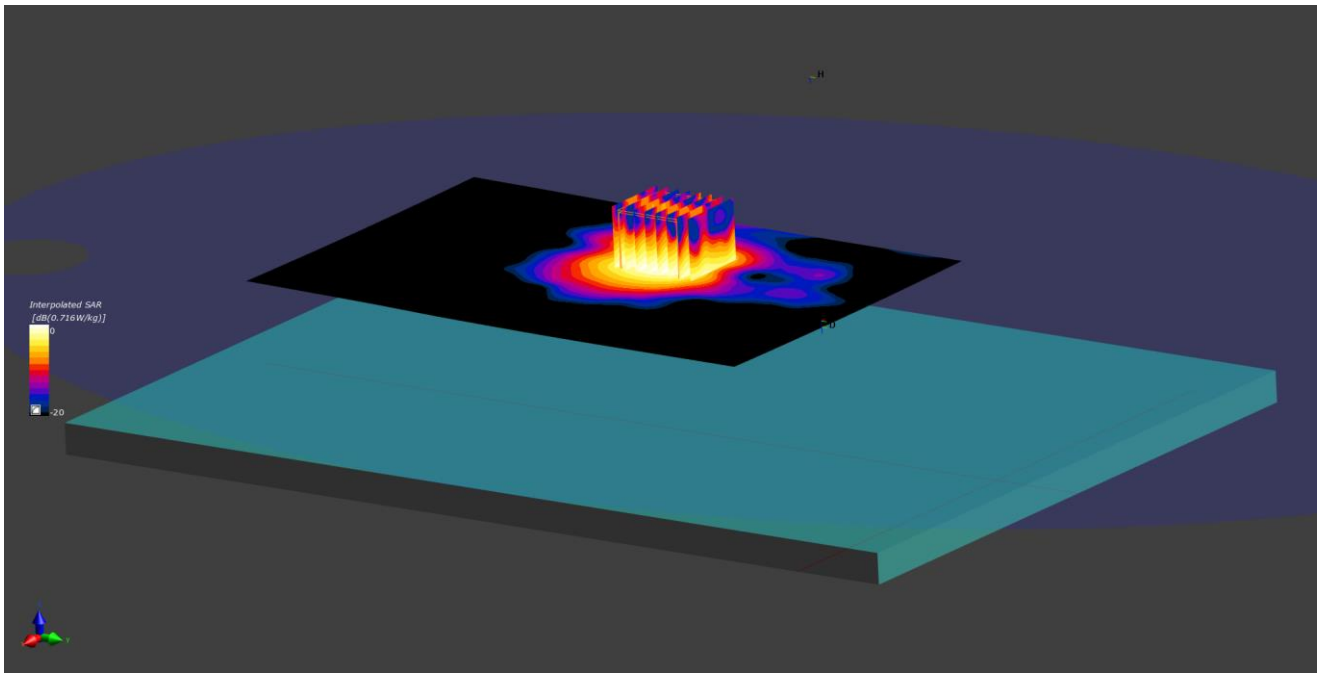
Communication System: WCDMA UID: 10544 Frequency: 5290.0 MHz; ; Duty Cycle: 0.99
Medium: MBBL-600-6000 Medium parameters used: f = 5290.0 MHz; σ = 5.35 S/m; ε_r = 48.2; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN3995; ConvF(4.78, 4.78, 4.78); Calibrated: 2018-04-24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 2018-09-13
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: xxxx

Area Scan (120.0x180.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (24.0x24.0x22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm
Reference Value = 1.08 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.837 W/kg; SAR(10 g) = 0.292 W/kg

SAR/003: Back 0mm WiFi 5.6 GHz 802.11ac VHT80 SISO ANT WF2 CH106

Date: 14/03/2019
DUT: Apple Inc.; Type: Laptop Device ; Model No: A2159



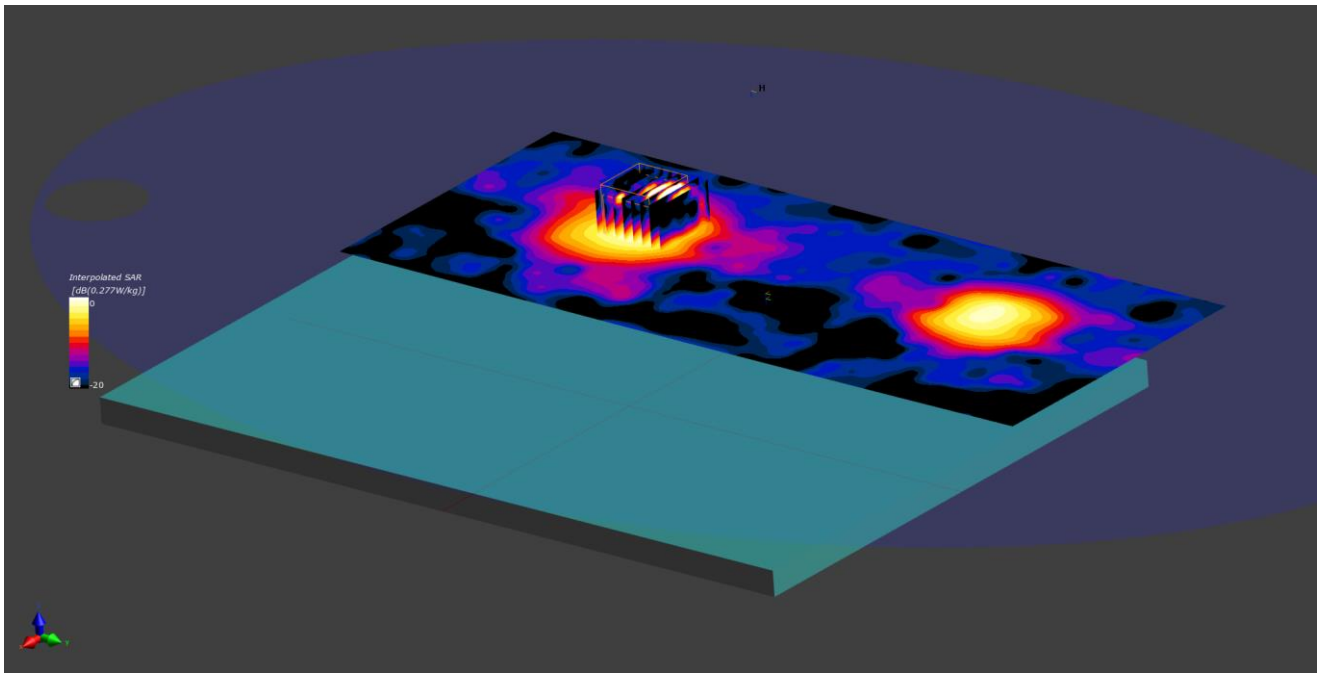
Communication System: WCDMA UID: 10544 Frequency: 5530.0 MHz; ; Duty Cycle: 0.99
Medium: MBBL-600-6000 Medium parameters used: f = 5530.0 MHz; σ = 5.69 S/m; ε_r = 47.7; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN3995; ConvF(4.36, 4.36, 4.36); Calibrated: 2018-04-24;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 2018-09-13
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: xxxx

Area Scan (120.0x180.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (24.0x24.0x22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=1.4mm
Reference Value = 0.77 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.256 W/kg

SAR/004: Back 0mm WiFi 5.8 GHz 802.11ac VHT80 MIMO Ant WF1+WF2 CH155

Date: 15/03/2019
DUT: Apple Inc.; Type: Laptop Device ; Model No: A2159



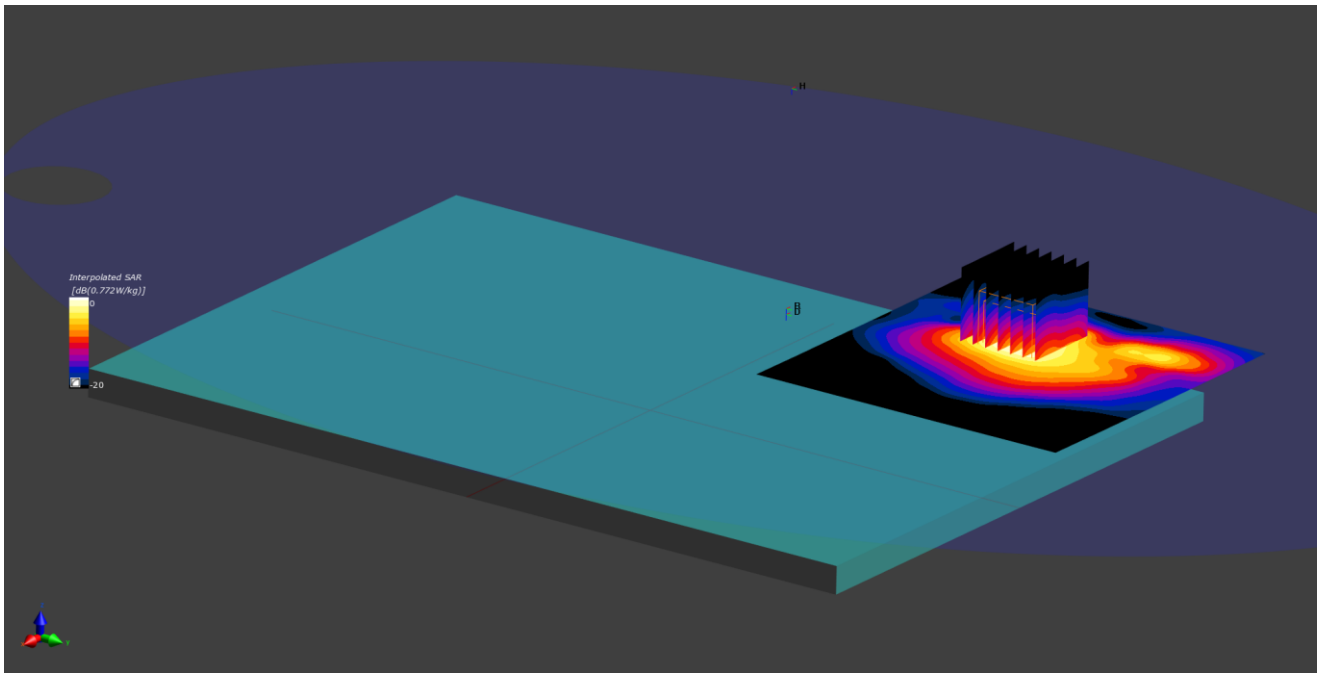
Communication System: WCDMA UID: 10544 Frequency: 5775.0 MHz; ; Duty Cycle: 0.99
Medium: MBBL-600-6000 Medium parameters used: f = 5775.0 MHz; σ = 6.12 S/m; ε_r = 47.7; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: EX3DV4 - SN7495; ConvF(4.51, 4.51, 4.51); Calibrated: 2018-03-16;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 2018-06-08
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: 1177

Area Scan (120.0x300.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (24.0x24.0x22.0): Measurement grid: dx=4.0mm, dy=4.0mm, dz=2.0mm
Reference Value = 0.27 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.879 W/kg; SAR(10 g) = 0.297 W/kg

SAR/005: Back 0mm BT (WiFi 5.0 GHz OFF) GFSK SISO WF1 CH78

Date: 18/03/2019
DUT: Apple Inc.; Type: Laptop Device ; Model No: A2159



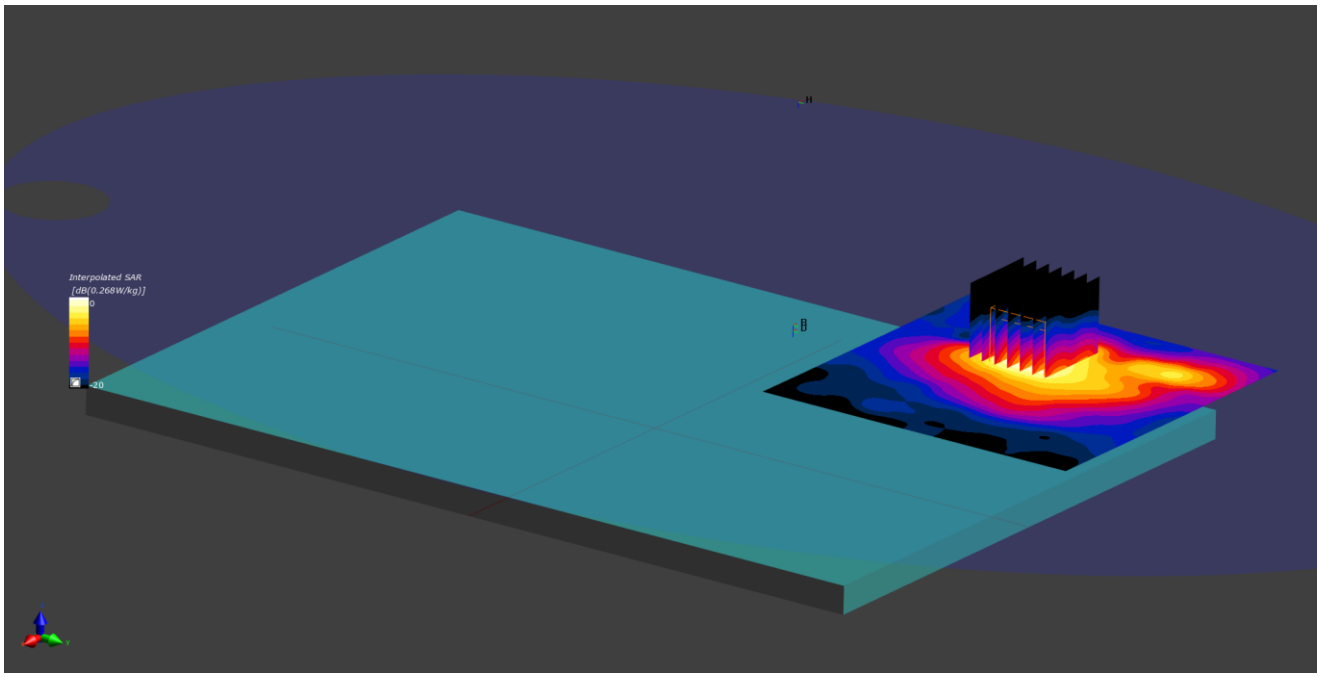
Communication System: WCDMA UID: 10032 Frequency: 2480.0 MHz; ; Duty Cycle: 0.77
Medium: MBBL-600-6000 Medium parameters used: f = 2480.0 MHz; σ = 2.06 S/m; ε_r = 53.3; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: ES3DV3 - SN3358; ConvF(4.52, 4.52, 4.52); Calibrated: 2019-01-21;
- Sensor-Surface: 3.0mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 2018-06-08
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: 1177

Area Scan (120.0x120.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (30.0x30.0x30.0): Measurement grid: dx=5.0mm, dy=5.0mm, dz=5.0mm
Reference Value = 0.19 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.316 W/kg; SAR(10 g) = 0.130 W/kg

SAR/006: Back 0mm BT (WiFi 5.0 GHz ON) GFSK SISO WF1 CH78

Date: 18/03/2019
DUT: Apple Inc.; Type: Laptop Device ; Model No: A2159



Communication System: WCDMA UID: 10032 Frequency: 2480.0 MHz; ; Duty Cycle: 0.77
Medium: MBBL-600-6000 Medium parameters used: f = 2480.0 MHz; σ = 2.06 S/m; ε_r = 53.3; ρ = 1000 kg/m^3
Phantom section: Flat

DASY6 Configuration:
- Probe: ES3DV3 - SN3358; ConvF(4.52, 4.52, 4.52); Calibrated: 2019-01-21;
- Sensor-Surface: 3.0mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 2018-06-08
- Phantom: Type: ELI V5.0 (20deg probe tilt); Serial: 1177

Area Scan (120.0x120.0): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.203 W/kg
Zoom Scan (30.0x30.0x30.0): Measurement grid: dx=5.0mm, dy=5.0mm, dz=5.0mm
Reference Value = 0.07 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.107 W/kg; SAR(10 g) = 0.043 W/kg