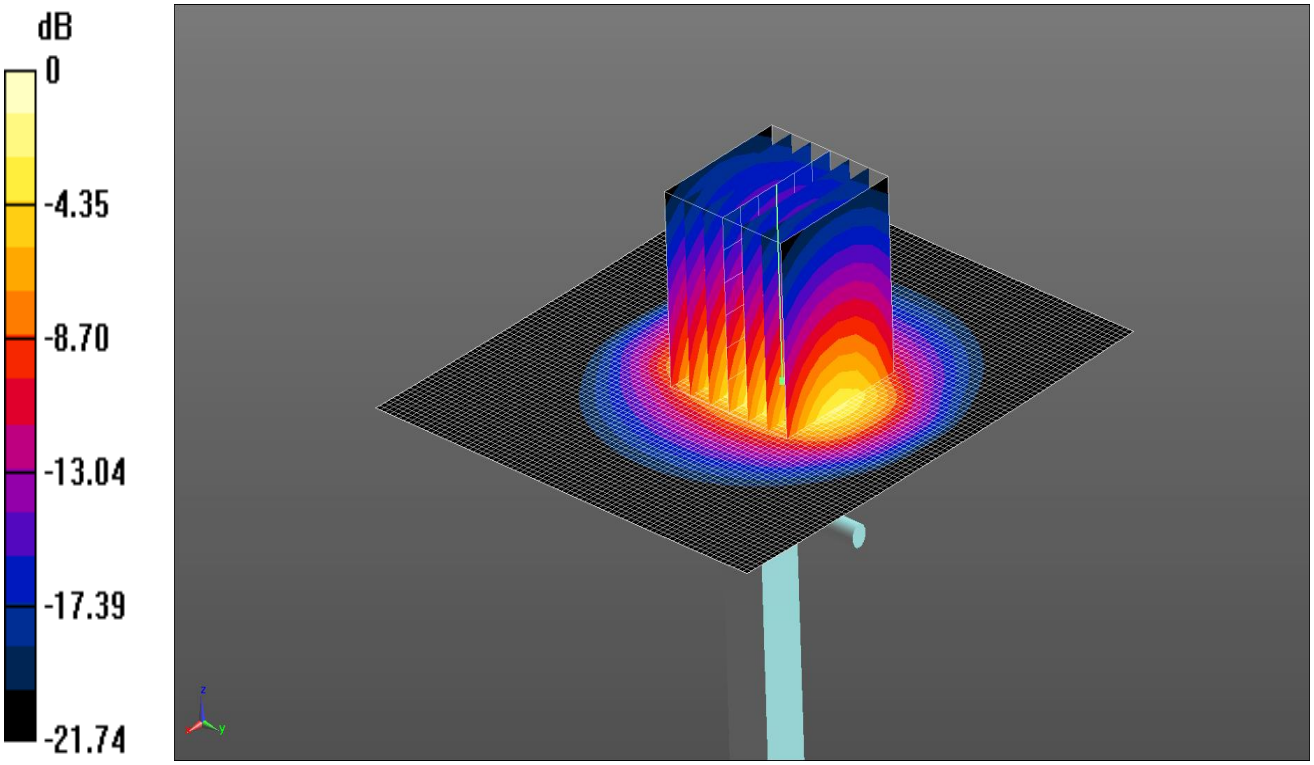
12.2. System Check Plots

This appendix contains the following system validation distribution scans.

Scan Reference Number	Title
SYS/001	System Check 2450 MHz Body 09 04 18 (Site 60)
SYS/002	System Check 2450 MHz Body 12 04 18 (Site 60)
SYS/003	System Check 2450 MHz Body 17 04 18 (Site 60)
SYS/004	System Check 2450 MHz Body 19 04 18 (Site 60)
SYS/005	System Check 2450 MHz Body 23 05 18 (Site 60)
SYS/006	System Check 2450 MHz Body 29 05 18 (Site 61)
SYS/007	System Check 5250 MHz Body 12 04 18 (Site 59)
SYS/008	System Check 5250 MHz Body 16 04 18 (Site 60)
SYS/009	System Check 5250 MHz Body 18 04 18 (Site 61)
SYS/010	System Check 5250 MHz Body 19 04 18 (Site 60)
SYS/011	System Check 5250 MHz Body 23 05 18 (Site 59)
SYS/012	System Check 5250 MHz Body 23 05 18 (Site 60)
SYS/013	System Check 5250 MHz Body 27 05 18 (Site 59)
SYS/014	System Check 5250 MHz Body 29 05 18 (Site 60)
SYS/015	System Check 5250 MHz Body 31 05 18 (Site 59)
SYS/016	System Check 5600 MHz Body 09 04 18 (Site 59)
SYS/017	System Check 5600 MHz Body 12 04 18 (Site 60)
SYS/018	System Check 5600 MHz Body 16 04 18 (Site 60)
SYS/019	System Check 5600 MHz Body 19 04 18 (Site 59)
SYS/020	System Check 5600 MHz Body 23 05 18 (Site 59)
SYS/021	System Check 5600 MHz Body 27 05 18 (Site 59)
SYS/022	System Check 5750 MHz Body 09 04 18 (Site 59)
SYS/023	System Check 5750 MHz Body 16 04 18 (Site 60)
SYS/024	System Check 5750 MHz Body 18 04 18 (Site 59)
SYS/025	System Check 5750 MHz Body 20 04 18 (Site 60)

SYS/001: System Check 2450 MHz Body 09 04 18 (Site 60)

Date: 09/04/2018
DUT: D2450V2 - SN725; Type: D2450V2; Serial: SN725

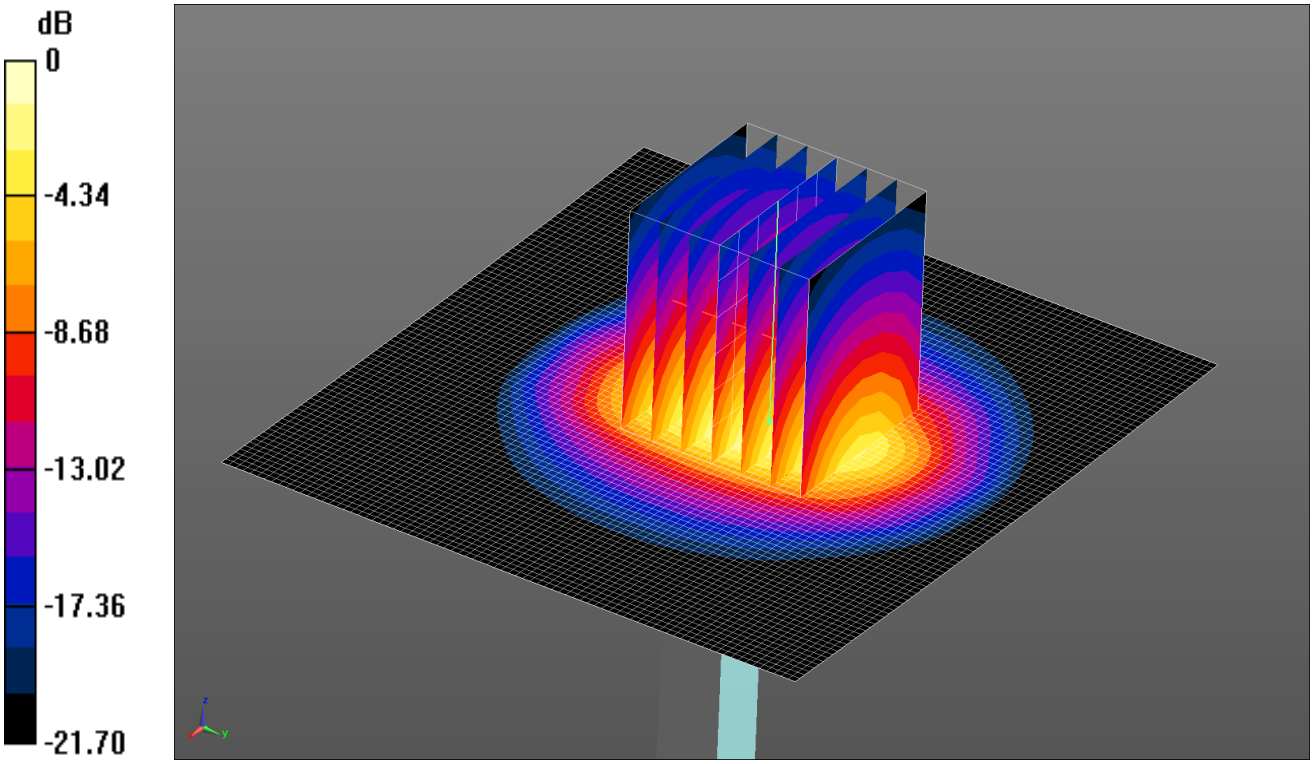


0 dB = 14.2 W/kg = 11.52 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used: f = 2450 MHz; σ = 2.009 S/m; ε_r = 51.499; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3995; ConvF(7.76, 7.76, 7.76); Calibrated: 04/05/2017;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 27/04/2017
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)
Configuration/Pin=250 mW, dist=10.0mm (ET-Probe) 2 2 2/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 16.0 W/kg
Configuration/Pin=250 mW, dist=10.0mm (ET-Probe) 2 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 81.45 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 25.2 W/kg
SAR(1 g) = 12.3 W/kg; SAR(10 g) = 5.69 W/kg
Maximum value of SAR (measured) = 14.2 W/kg

SYS/002: System Check 2450 MHz Body 12 04 18 (Site 60)

Date: 12/04/2018
DUT: D2450V2 - SN725; Type: D2450V2; Serial: SN725

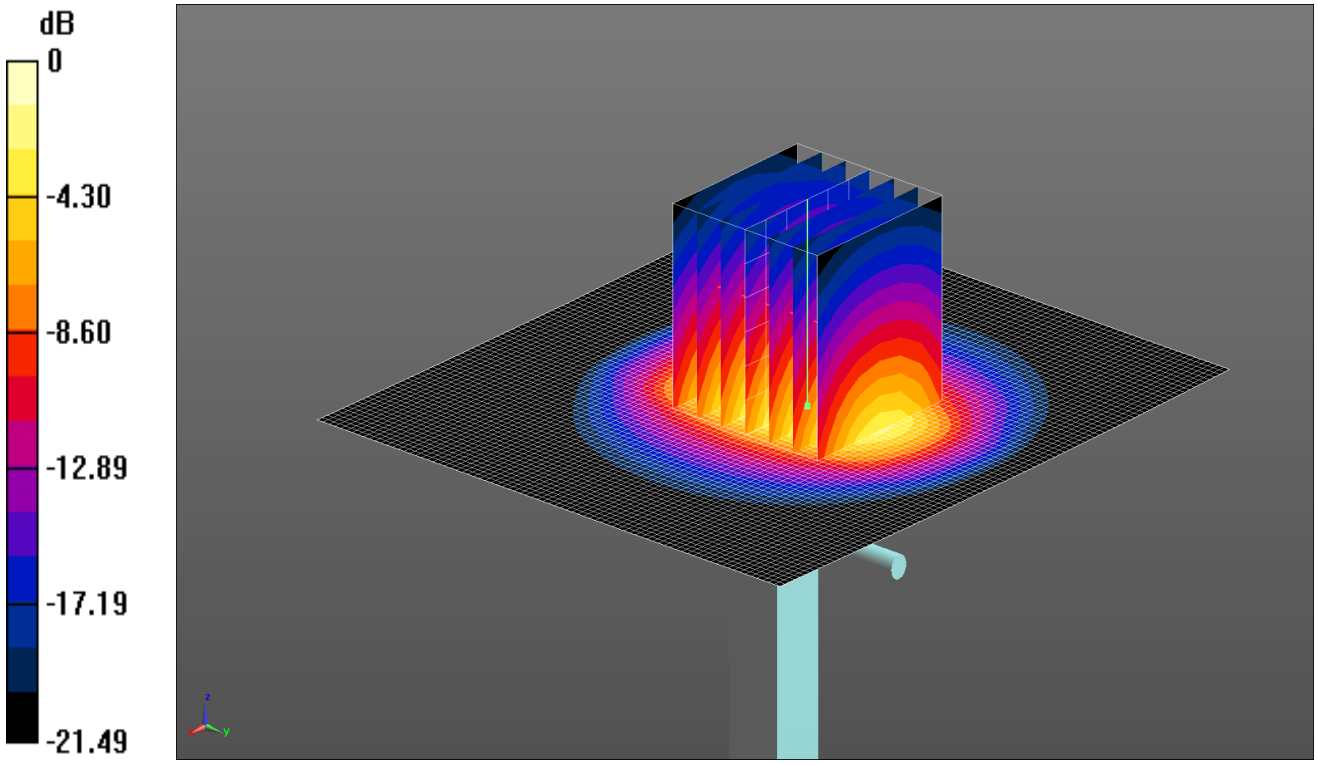


0 dB = 14.1 W/kg = 11.49 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used: f = 2450 MHz; σ = 1.911 S/m; ε_r = 51.257; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.2, 7.2, 7.2); Calibrated: 28/09/2017;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)
Configuration/Pin=250 mW, dist=10.0mm (ET-Probe)/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 15.0 W/kg
Configuration/Pin=250 mW, dist=10.0mm (ET-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 79.68 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 24.8 W/kg
SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.66 W/kg
Maximum value of SAR (measured) = 14.1 W/kg

SYS/003: System Check 2450 MHz Body 17 04 18 (Site 60)

Date: 17/04/2018
DUT: D2450V2 - SN725; Type: D2450V2; Serial: SN725



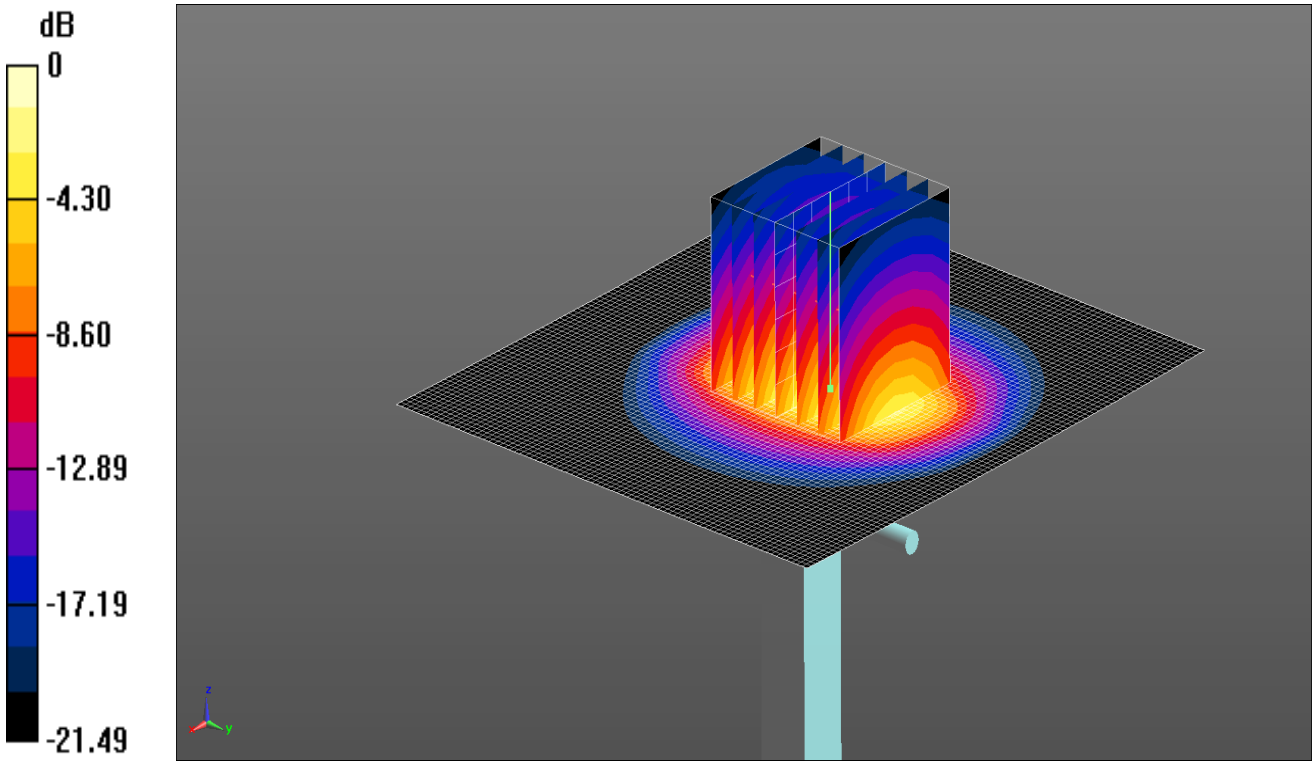
0 dB = 15.1 W/kg = 11.79 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2450 MHz; σ = 2.043 S/m; ε_r = 52.007; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.2, 7.2, 7.2); Calibrated: 28/09/2017;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/Pin=250 mW, dist=10.0mm (ET-Probe)/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 16.1 W/kg
Configuration/Pin=250 mW, dist=10.0mm (ET-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 81.88 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 26.7 W/kg
SAR(1 g) = 13.1 W/kg; SAR(10 g) = 6.07 W/kg
Maximum value of SAR (measured) = 15.1 W/kg

SYS/004: System Check 2450 MHz Body 19 04 18 (Site 60)

Date: 19/04/2018
DUT: D2450V2 - SN725; Type: D2450V2; Serial: SN725



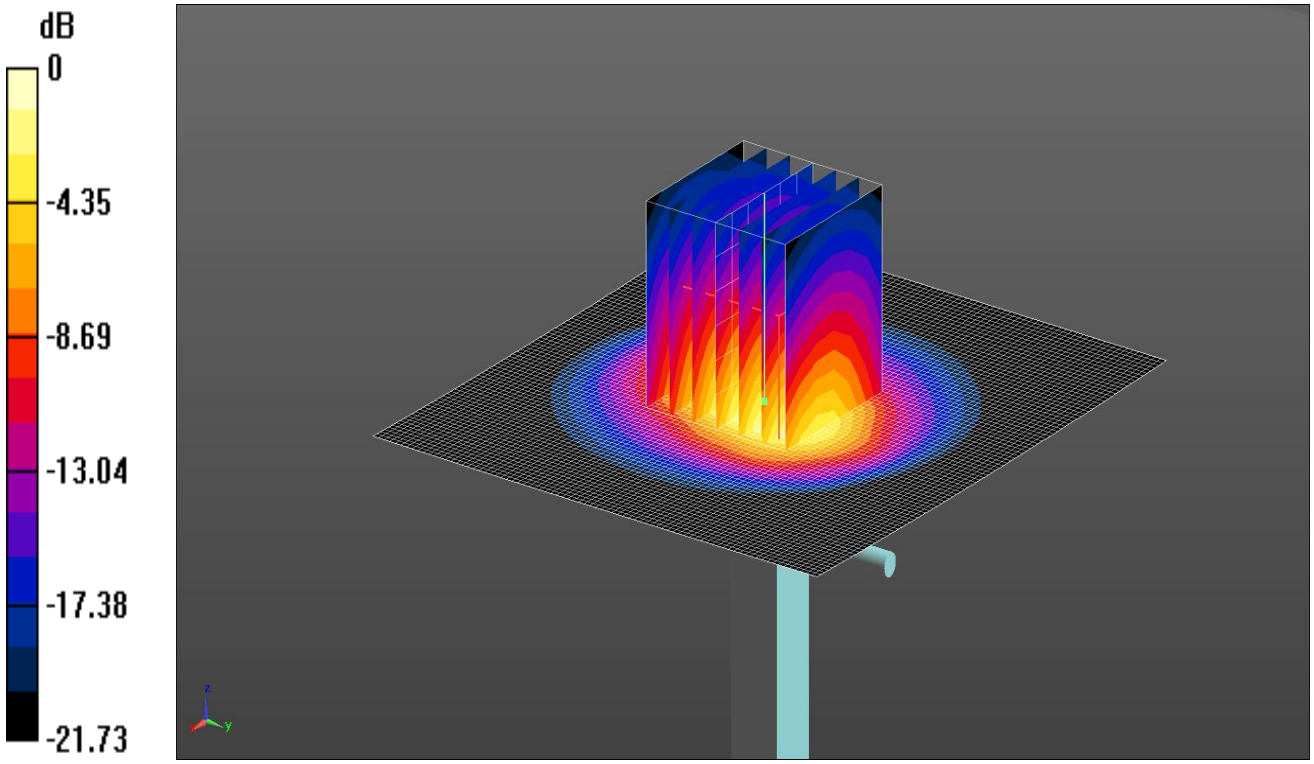
0 dB = 15.1 W/kg = 11.79 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used: f = 2450 MHz; σ = 2.043 S/m; ε_r = 52.007; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.2, 7.2, 7.2); Calibrated: 28/09/2017;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Pin=250 mW, dist=10.0mm (ET-Probe)/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 16.1 W/kg
Configuration/Pin=250 mW, dist=10.0mm (ET-Probe)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 81.88 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 26.7 W/kg
SAR(1 g) = 13.1 W/kg; SAR(10 g) = 6.07 W/kg
Maximum value of SAR (measured) = 15.1 W/kg

SYS/005: System Check 2450 MHz Body 23 05 18 (Site 60)

Date: 23/05/2018
DUT: D2450V2 - SN725; Type: D2450V2; Serial: SN725



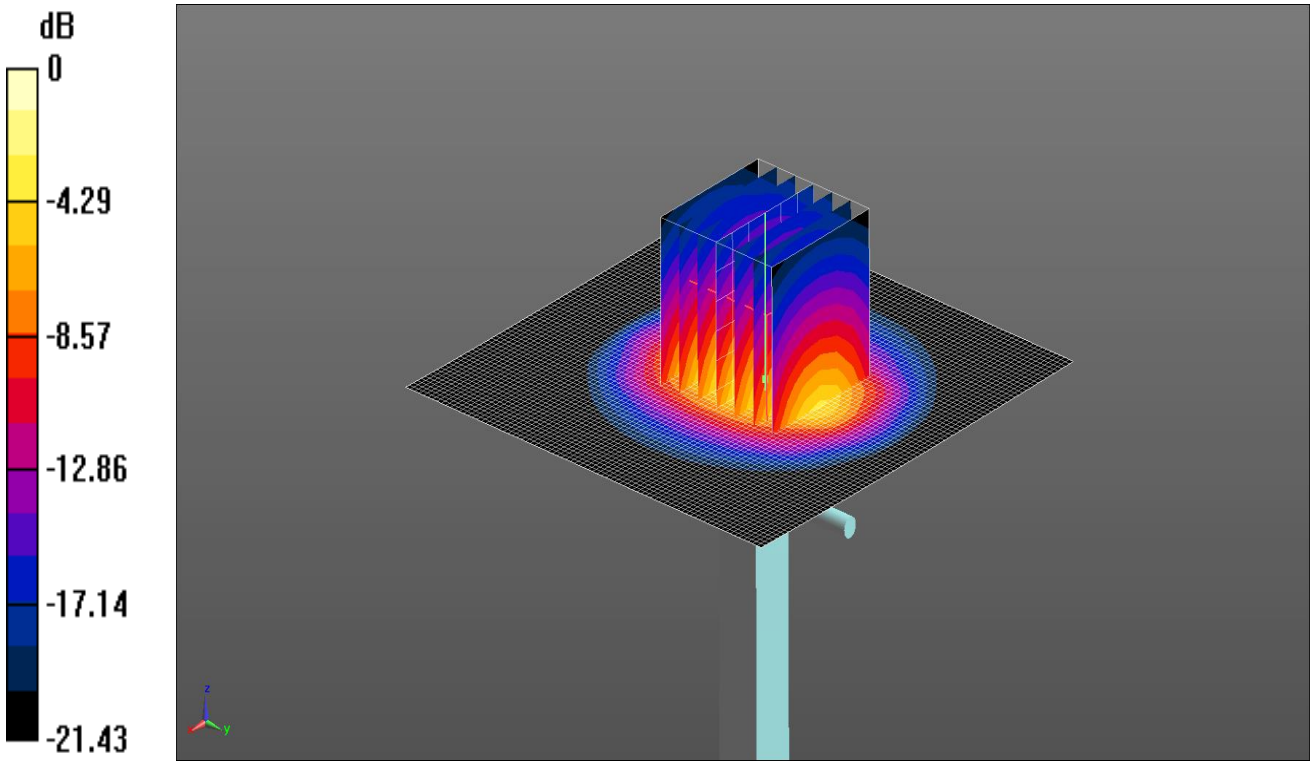
0 dB = 14.9 W/kg = 11.73 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used: f = 2450 MHz; σ = 1.992 S/m; ε_r = 51.951; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.2, 7.2, 7.2); Calibrated: 28/09/2017;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/Pin=250 mW, dist=10.0mm (ET-Probe)/Area Scan (91x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 15.4 W/kg
Configuration/Pin=250 mW, dist=10.0mm (ET-Probe)/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.46 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 26.3 W/kg
SAR(1 g) = 12.8 W/kg; SAR(10 g) = 5.95 W/kg
Maximum value of SAR (measured) = 14.9 W/kg

SYS/006: System Check 2450 MHz Body 29 05 18 (Site 61)

Date: 29/05/2018
DUT: D2450V2 - SN725; Type: D2450V2; Serial: SN725



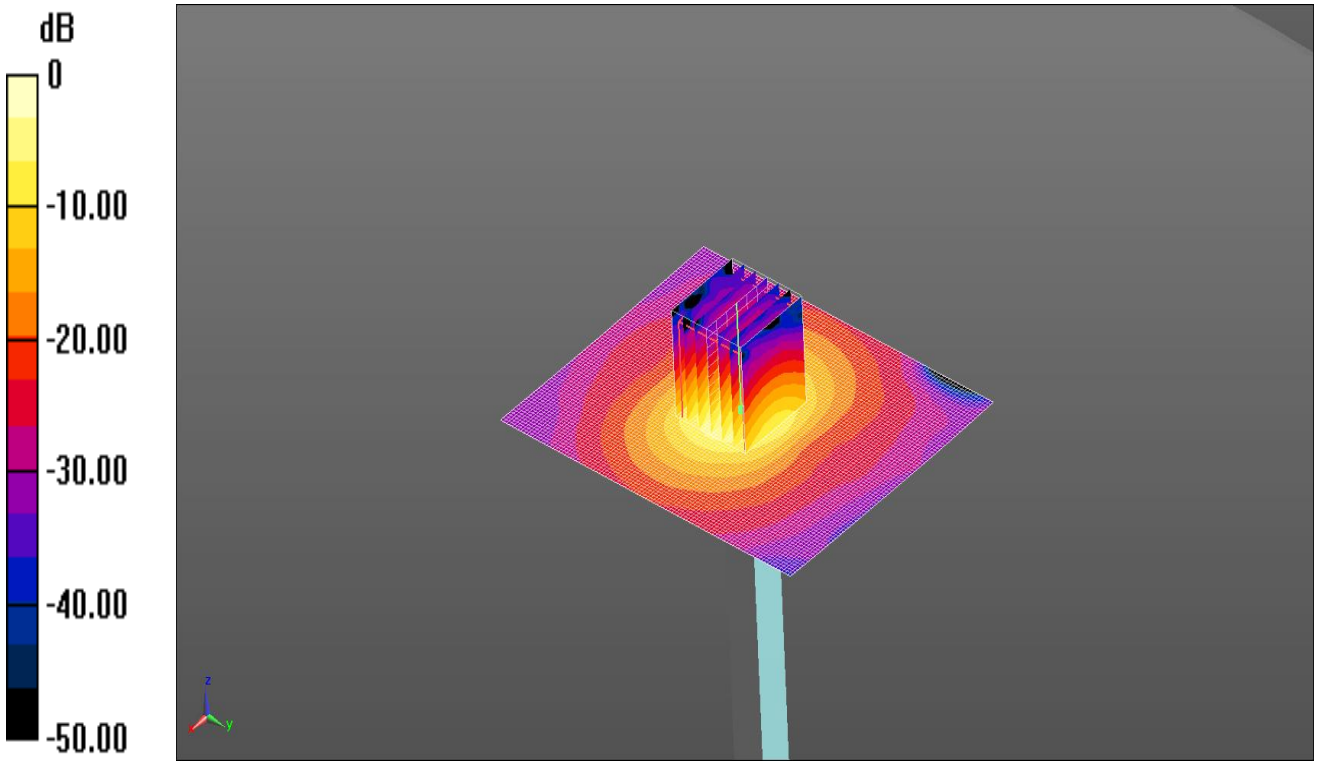
0 dB = 18.1 W/kg = 12.58 dBW/kg

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium: 2450 MSL Medium parameters used: f = 2450 MHz; σ = 2.042 S/m; ε_r = 52.534; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7497; ConvF(7.69, 7.69, 7.69); Calibrated: 16/03/2018;
- Sensor-Surface: 4mm (Mechanical Surface Detection), Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 19/09/2017
- Phantom: ELI v5.0 A; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=250mW 2 2/Area Scan (81x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 14.1 W/kg
Configuration/d=10mm, Pin=250mW 2 2/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 81.79 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 23.9 W/kg
SAR(1 g) = 11.9 W/kg; SAR(10 g) = 5.55 W/kg
Maximum value of SAR (measured) = 18.1 W/kg

SYS/007: System Check 5250 MHz Body 12 04 18 (Site 59)

Date: 12/04/2018
DUT: 5GHz Dipole SN:1016; Type: D5GHzV2; Serial: SN 1016



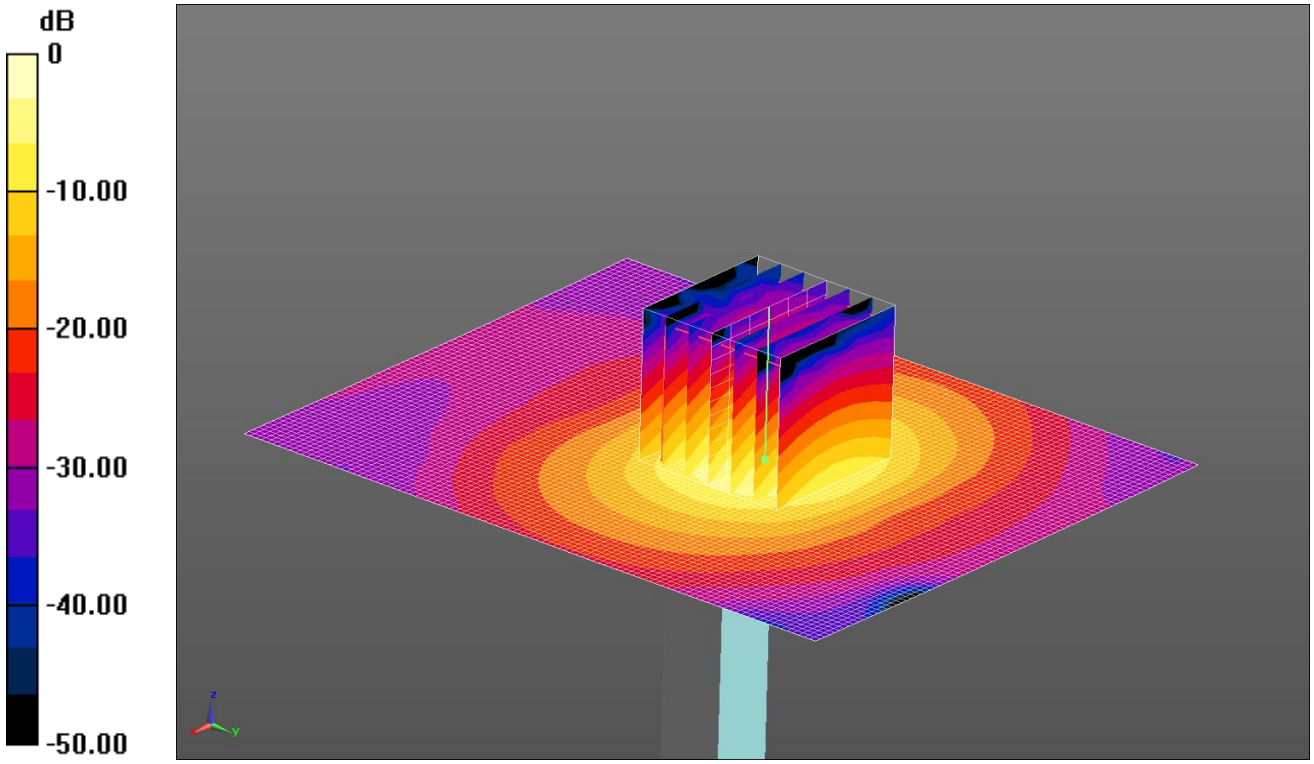
0 dB = 16.3 W/kg = 12.12 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: 5250/5600/5750 MHz MSL Medium parameters used (interpolated): f = 5250 MHz; σ = 5.442 S/m; ε_r = 49.25; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(4.76, 4.76, 4.76); Calibrated: 19/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn394; Calibrated: 12/05/2017
- Phantom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.5 W/kg
Configuration/d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 41.00 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 31.4 W/kg
SAR(1 g) = 7.71 W/kg; SAR(10 g) = 2.17 W/kg
Maximum value of SAR (measured) = 16.3 W/kg

SYS/008: System Check 5250 MHz Body 16 04 18 (Site 60)

Date: 16/04/2018
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



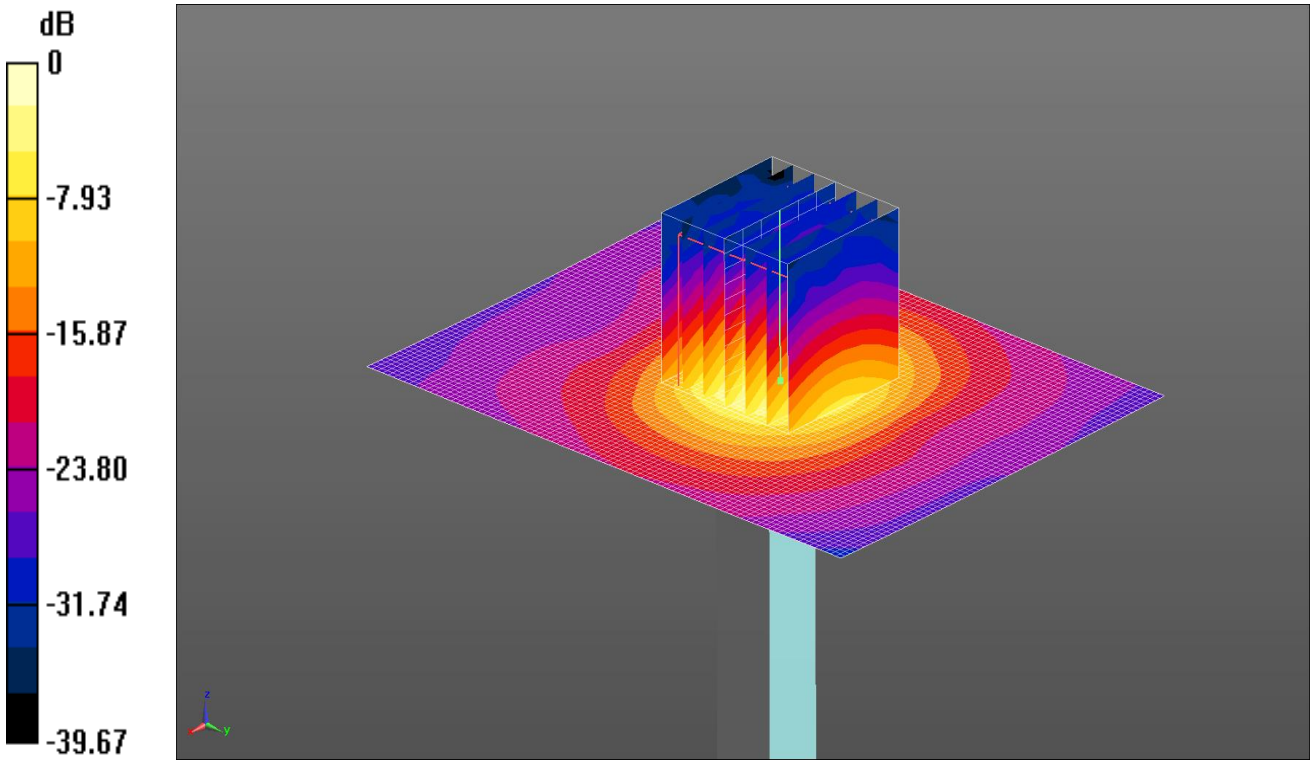
0 dB = 15.2 W/kg = 11.82 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: 5200,5600,5750 MHz MSL Medium parameters used: f = 5250 MHz; σ = 5.339 S/m; ε_r = 47.107; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(5, 5, 5); Calibrated: 28/09/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=100mW 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.4 W/kg
Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 40.06 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 31.1 W/kg
SAR(1 g) = 7.28 W/kg; SAR(10 g) = 2.05 W/kg
Maximum value of SAR (measured) = 15.2 W/kg

SYS/009: System Check 5250 MHz Body 18 04 18 (Site 61)

Date: 18/04/2018
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



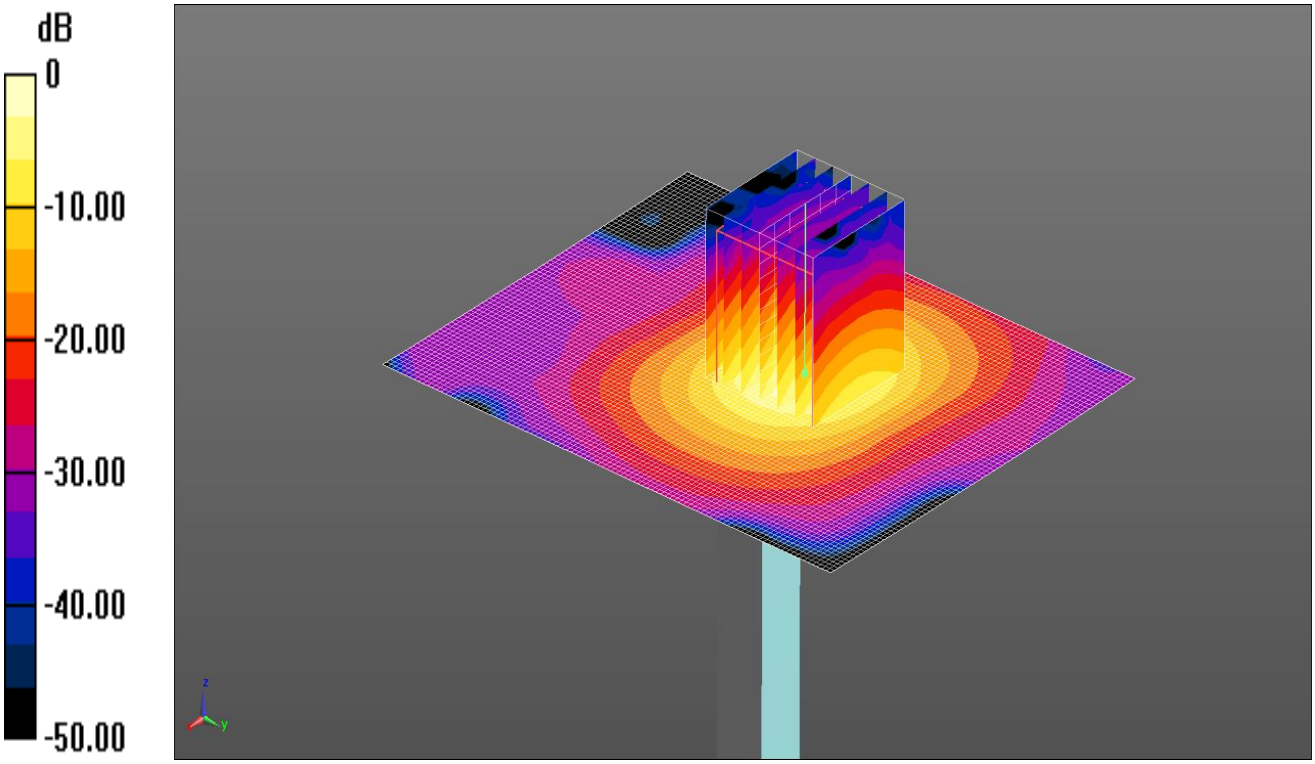
0 dB = 16.0 W/kg = 12.04 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: 5250/5600/5750 MSL Medium parameters used (interpolated): f = 5250 MHz; σ = 5.532 S/m; ε_r = 47.825; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7495; ConvF(5.1, 5.1, 5.1); Calibrated: 16/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn431; Calibrated: 08/11/2017
- Phantom: ELI v4.0 (20deg probe tilt); Type: QDOVA001BB;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW/Area Scan (71x91x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.9 W/kg
Configuration/d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 38.88 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 34.5 W/kg
SAR(1 g) = 7.56 W/kg; SAR(10 g) = 2.11 W/kg
Maximum value of SAR (measured) = 16.0 W/kg

SYS/010: System Check 5250 MHz Body 19 04 18 (Site 60)

Date: 19/04/2018
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



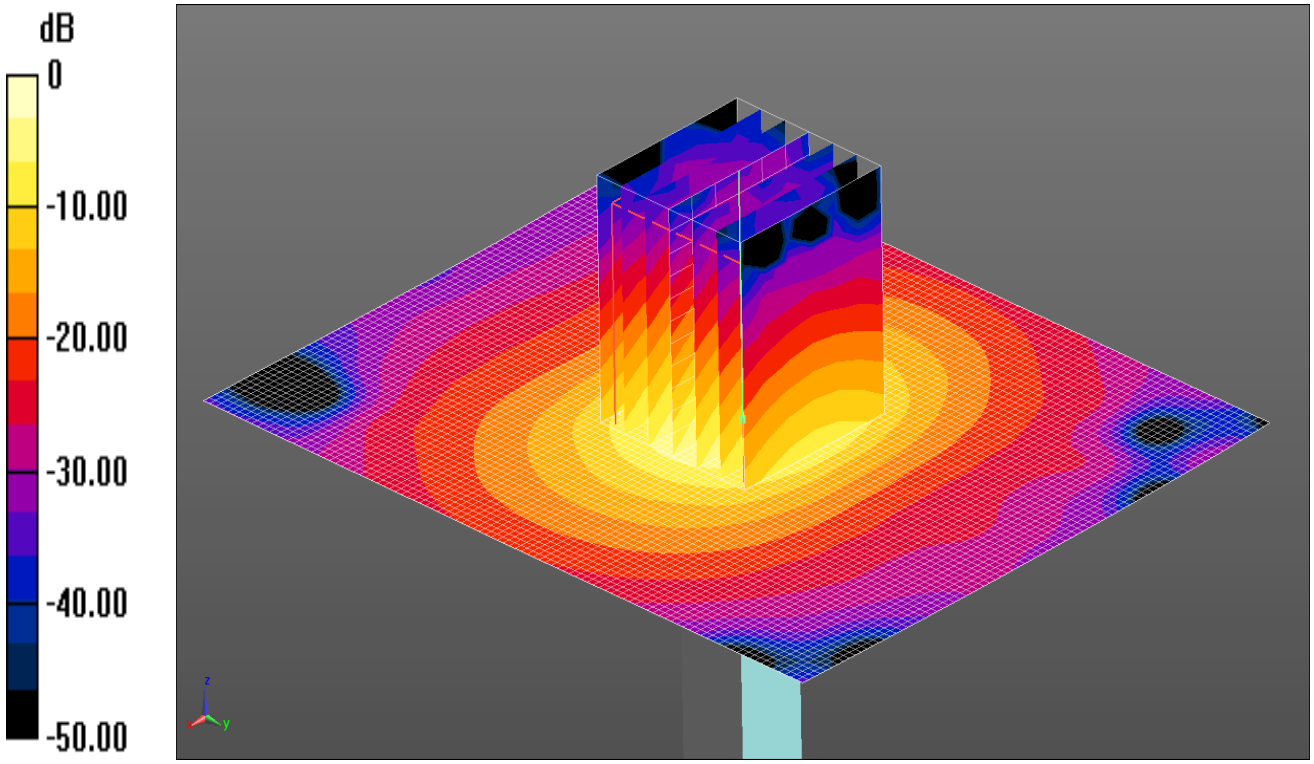
0 dB = 14.7 W/kg = 11.67 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: 5200,5600,5750 MHz MSL Medium parameters used (interpolated): f = 5250 MHz; σ = 5.153 S/m; ε_r = 46.629; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(5, 5, 5); Calibrated: 28/09/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.1 W/kg
Configuration/d=10mm, Pin=100mW 2/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 40.53 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 29.6 W/kg
SAR(1 g) = 7.1 W/kg; SAR(10 g) = 2.01 W/kg
Maximum value of SAR (measured) = 14.7 W/kg

SYS/011: System Check 5250 MHz Body 23 05 18 (Site 59)

Date: 23/05/2018
DUT: 5GHz Dipole SN:1016; Type: D5GHzV2; Serial: SN 1016



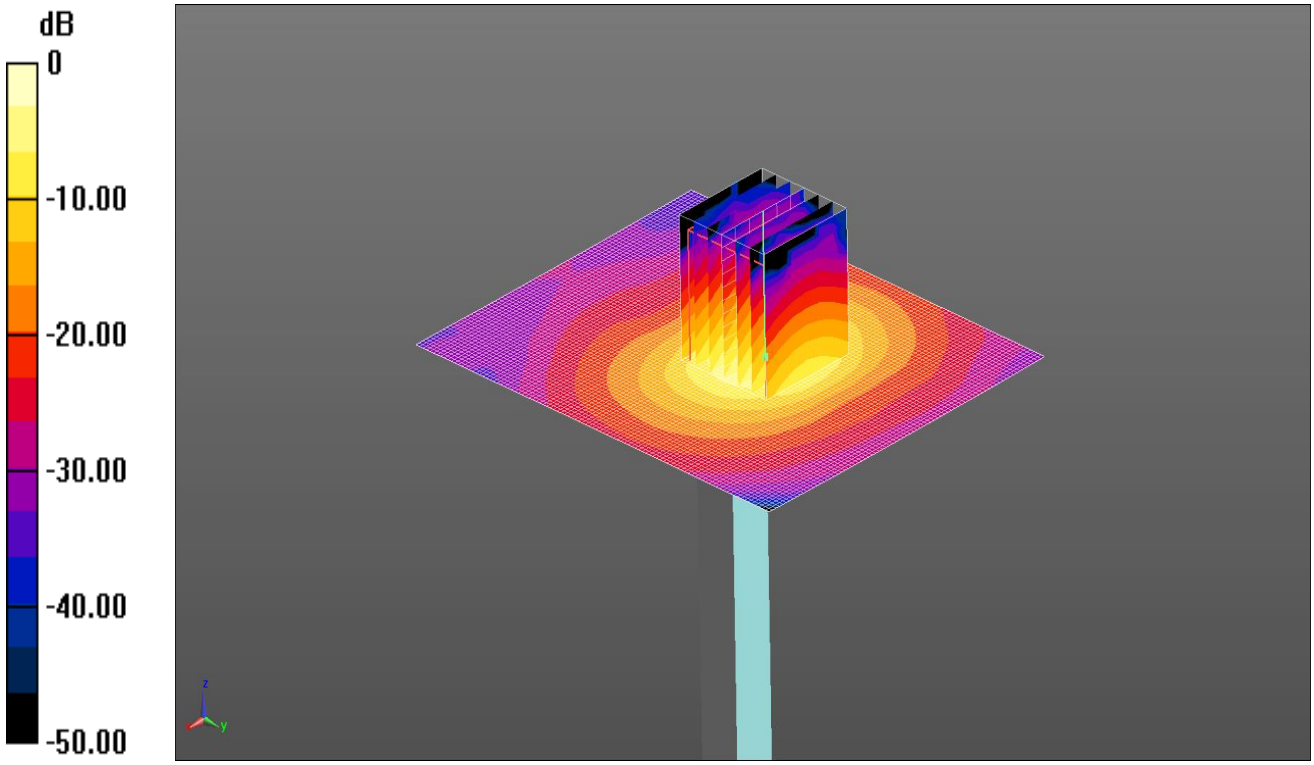
0 dB = 15.2 W/kg = 11.82 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5250 MHz; σ = 5.57 S/m; ε_r = 47.101; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7495; ConvF(5.1, 5.1, 5.1); Calibrated: 16/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 18/04/2018
- Phantom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/DNU d=10mm, Pin=100mW /Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.2 W/kg
Configuration/DNU d=10mm, Pin=100mW /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 38.59 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 31.9 W/kg
SAR(1 g) = 7.22 W/kg; SAR(10 g) = 2.02 W/kg
Maximum value of SAR (measured) = 15.2 W/kg

SYS/012: System Check 5250 MHz Body 23 05 18 (Site 60)

Date: 23/05/2018
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



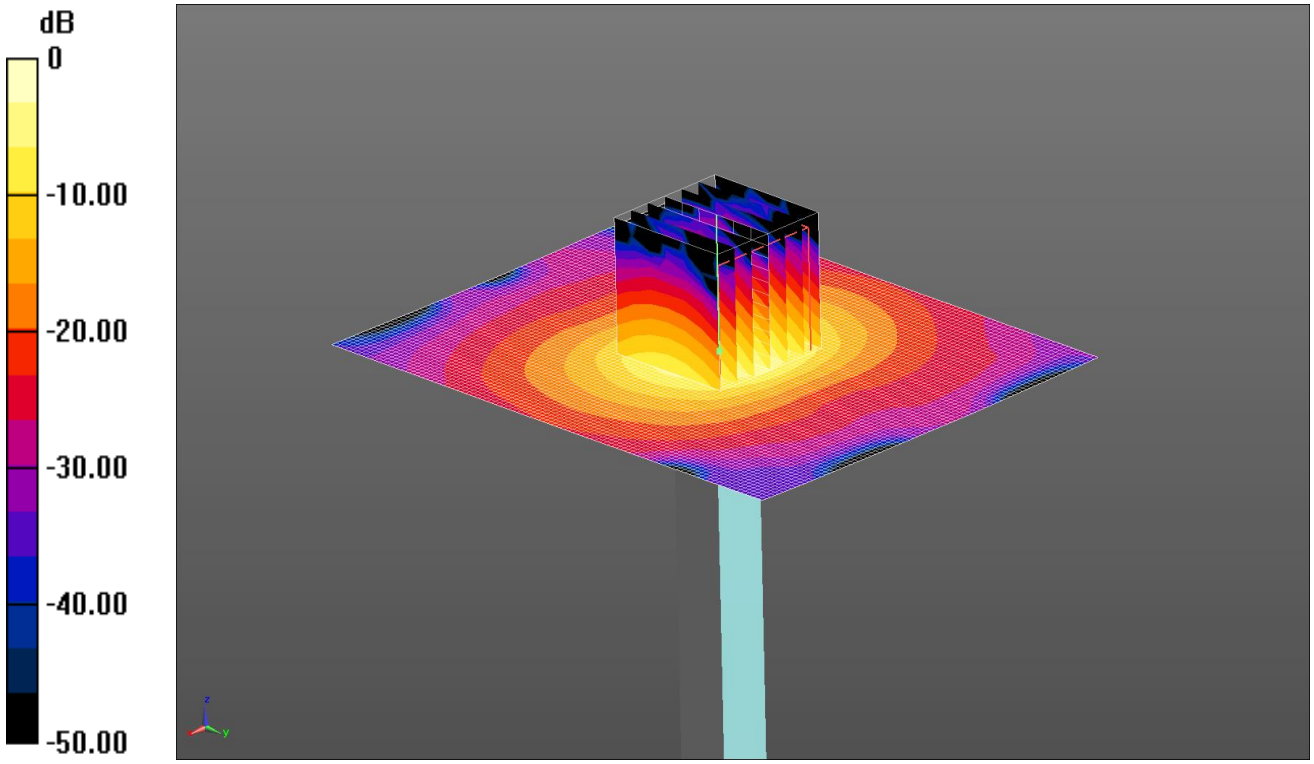
0 dB = 15.1 W/kg = 11.79 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: 5250 5600 MHz MSL Medium parameters used: f = 5250 MHz; σ = 5.431 S/m; ε_r = 47.206; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(5, 5, 5); Calibrated: 28/09/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW 2 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.498 W/kg
Configuration/d=10mm, Pin=100mW 2 2/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 9.510 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 31.4 W/kg
SAR(1 g) = 7.21 W/kg; SAR(10 g) = 2.01 W/kg
Maximum value of SAR (measured) = 15.1 W/kg

SYS/013: System Check 5250 MHz Body 27 05 18 (Site 59)

Date: 27/05/2018
DUT: 5GHz Dipole SN:1016; Type: D5GHzV2; Serial: SN 1016



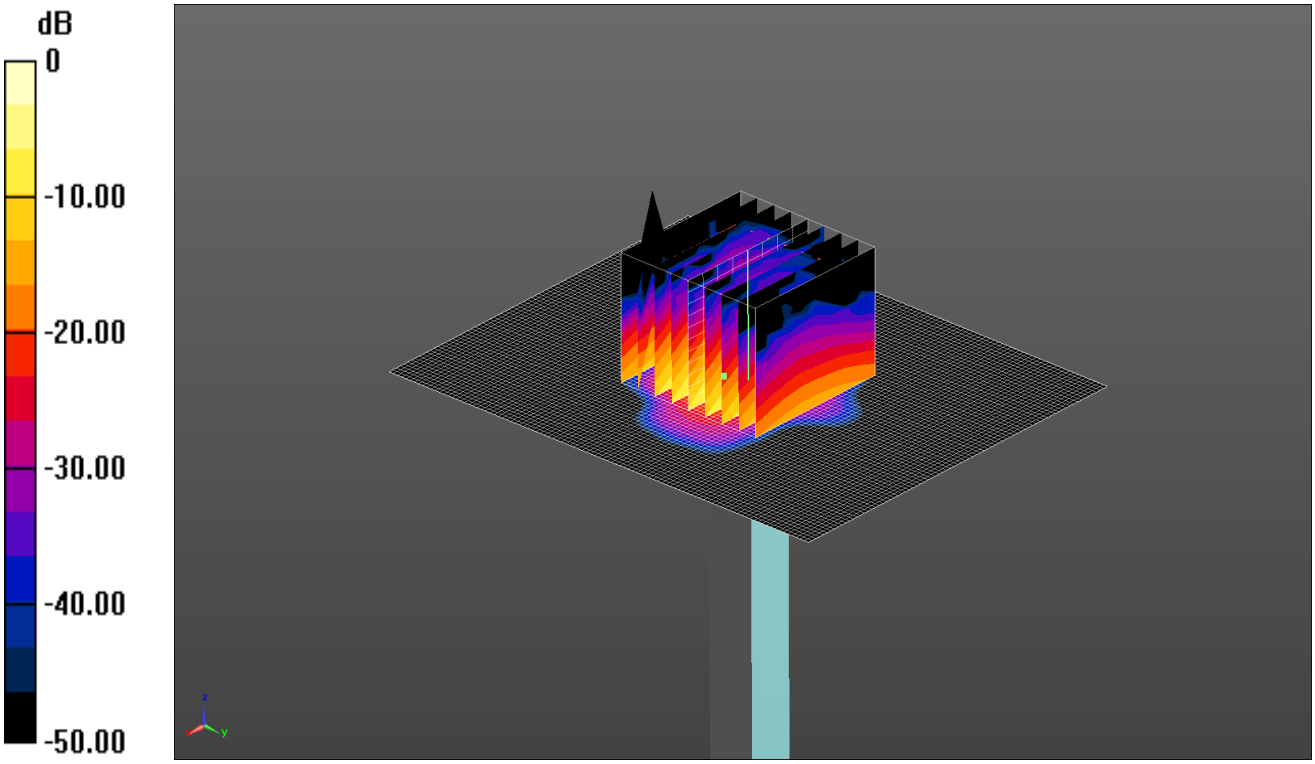
0 dB = 16.1 W/kg = 12.07 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: 5250/5600/5750 MHz MSL Medium parameters used: f = 5250 MHz; σ = 5.601 S/m; ε_r = 47.25; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7496; ConvF(5.09, 5.09, 5.09); Calibrated: 16/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 18/04/2018
- Phantom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.1 W/kg
Configuration/d=10mm, Pin=100mW/Zoom Scan 2 2 (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 40.82 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 34.0 W/kg
SAR(1 g) = 7.6 W/kg; SAR(10 g) = 2.12 W/kg
Maximum value of SAR (measured) = 16.1 W/kg

SYS/014: System Check 5250 MHz Body 29 05 18 (Site 60)

Date: 29/05/2018
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



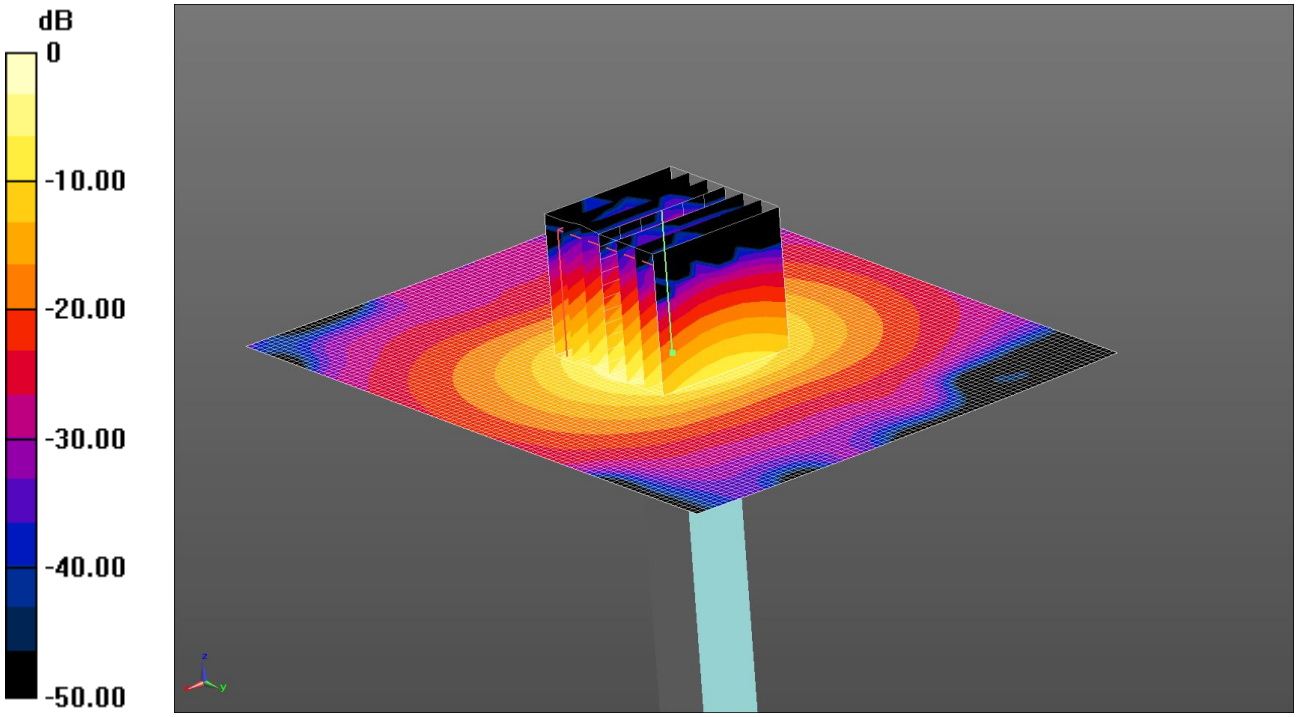
0 dB = 14.6 W/kg = 11.64 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: 2450 5250 5600 MHz MSL Medium parameters used: f = 5250 MHz; σ = 5.405 S/m; ε_r = 48.031; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(5, 5, 5); Calibrated: 28/09/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI V5.0 (20deg probe tilt); Type: QD OVA 002 Ax;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW 2 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.509 W/kg
Configuration/d=10mm, Pin=100mW 2 2/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 9.176 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 32.6 W/kg
SAR(1 g) = 7.07 W/kg; SAR(10 g) = 1.95 W/kg
Maximum value of SAR (measured) = 14.6 W/kg

SYS/015: System Check 5250 MHz Body 31 05 18 (Site 59)

Date: 31/05/2018
DUT: D5GHzV2 - SN1222; Type: D5GHzV2; Serial: SN1222



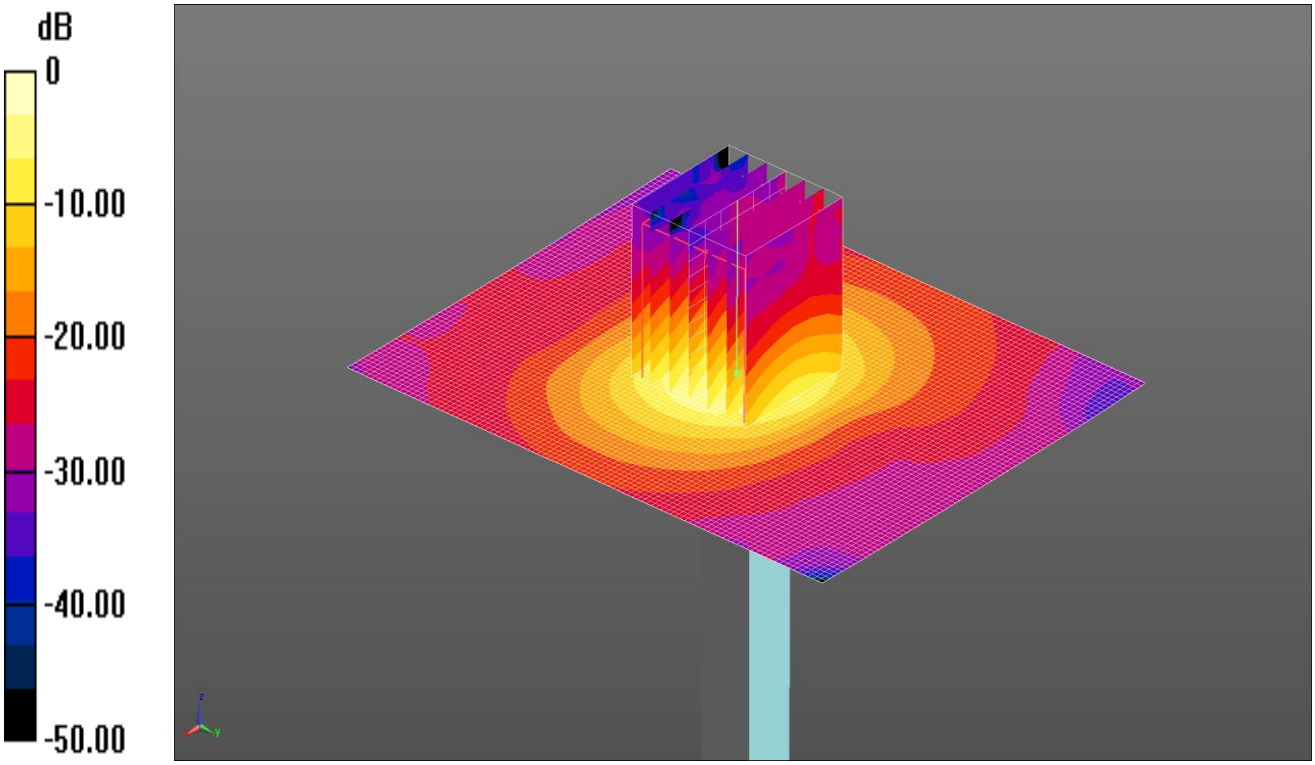
0 dB = 15.5 W/kg = 11.90 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium: 5250 MHz MSL Medium parameters used: f = 5250 MHz; σ = 5.568 S/m; ε_r = 47.022; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7496; ConvF(5.09, 5.09, 5.09); Calibrated: 16/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 18/04/2018
- Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
- ; SEMCAD X Version 14.6.10 (7417)
Configuration/d=10mm, Pin=100mW 3 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 15.6 W/kg

Configuration/d=10mm, Pin=100mW 3 2/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 39.15 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 32.4 W/kg
SAR(1 g) = 7.41 W/kg; SAR(10 g) = 2.07 W/kg
Maximum value of SAR (measured) = 15.5 W/kg

SYS/016: System Check 5600 MHz Body 09 04 18 (Site 59)

Date: 09/04/2018
DUT: 5GHz Dipole SN:1016; Type: D5GHzV2; Serial: SN 1016



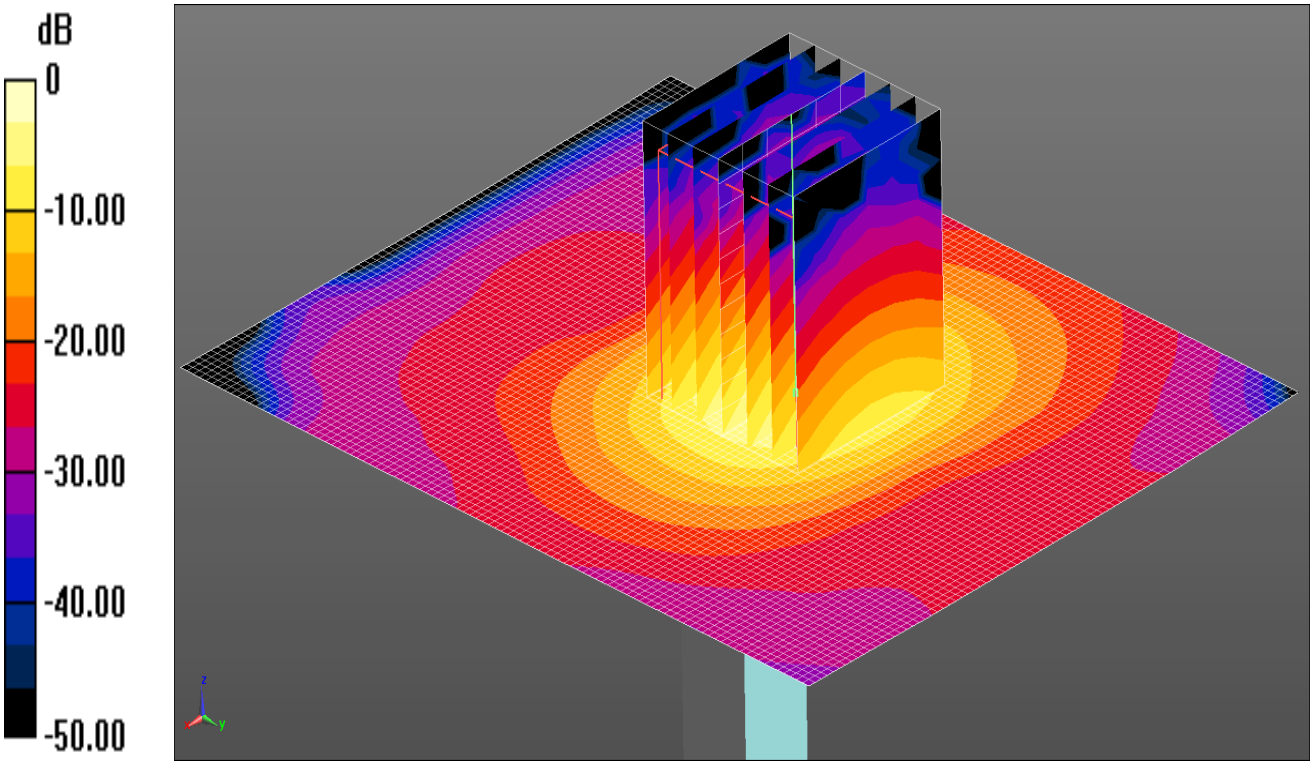
0 dB = 15.9 W/kg = 12.01 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: 2450/5600/5750 MHz MSL Medium parameters used: f = 5600 MHz; σ = 5.994 S/m; ε_r = 46.499; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(4.15, 4.15, 4.15); Calibrated: 19/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn394; Calibrated: 12/05/2017
- Phantom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW 2 2 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.4 W/kg
Configuration/d=10mm, Pin=100mW 2 2 2/Zoom Scan (7x7x12) 2 (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 37.95 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 33.3 W/kg
SAR(1 g) = 7.39 W/kg; SAR(10 g) = 2.05 W/kg
Maximum value of SAR (measured) = 15.9 W/kg

SYS/017: System Check 5600 MHz Body 12 04 18 (Site 60)

Date: 12/04/2018
DUT: D5GHzV2 - SN1222; Type: D5GHzV2; Serial: SN1222



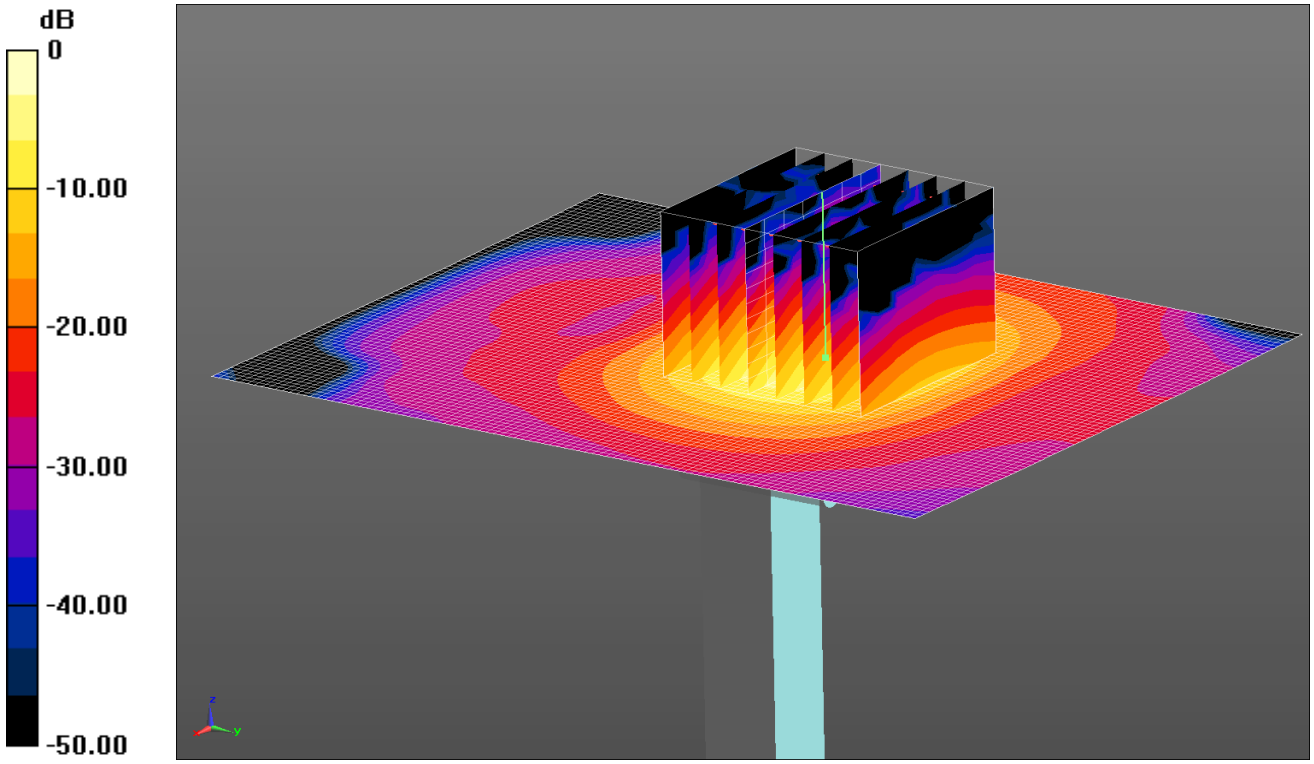
0 dB = 16.4 W/kg = 12.15 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: 2450,5250, 5600 & 5750 MHz MSL Medium parameters used: f = 5600 MHz; σ = 5.595 S/m; ε_r = 46.164; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(4.22, 4.22, 4.22); Calibrated: 28/09/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=100mW 2 2 2 2 2 2 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.3 W/kg
Configuration/d=10mm, Pin=100mW 2 2 2 2 2 2 2/Zoom Scan (7x7x12) (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 40.44 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 33.1 W/kg
SAR(1 g) = 7.73 W/kg; SAR(10 g) = 2.14 W/kg
Maximum value of SAR (measured) = 16.4 W/kg

SYS/018: System Check 5600 MHz Body 16 04 18 (Site 60)

Date: 16/04/2018
DUT: D5GHzV2 - SN1222; Type: D5GHzV2; Serial: SN1222

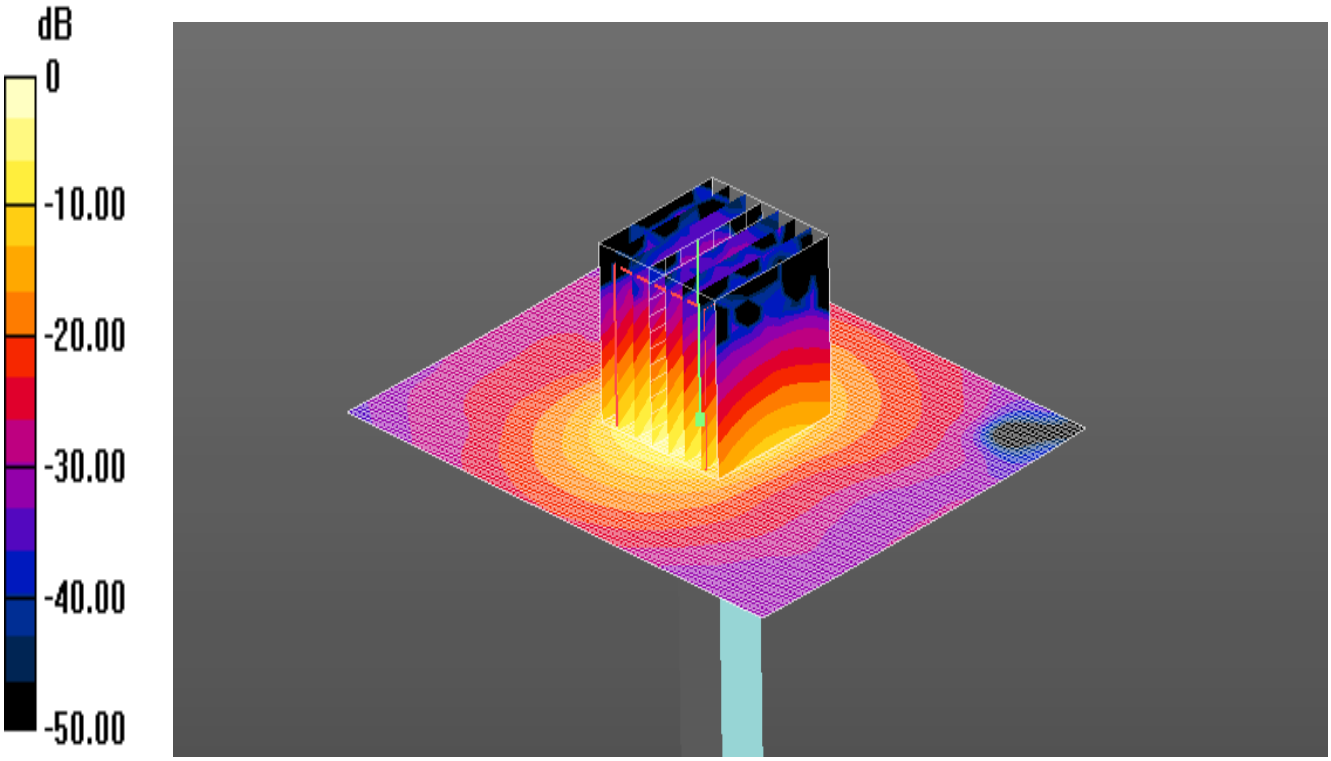


0 dB = 17.6 W/kg = 12.46 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: 5250, 5600 & 5750 MHz MSL Medium parameters used: f = 5600 MHz; σ = 5.827 S/m; ε_r = 46.445; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(4.22, 4.22, 4.22); Calibrated: 28/09/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)
Configuration/d=10mm, Pin=100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 17.9 W/kg
Configuration/d=10mm, Pin=100mW/Zoom Scan (7x7x12) (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 40.99 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 36.1 W/kg
SAR(1 g) = 8.2 W/kg; SAR(10 g) = 2.28 W/kg
Maximum value of SAR (measured) = 17.6 W/kg

SYS/019: System Check 5600 MHz Body 19 04 18 (Site 59)

Date: 19/04/2018
DUT: 5GHz Dipole SN:1016; Type: D5GHzV2; Serial: SN 1016

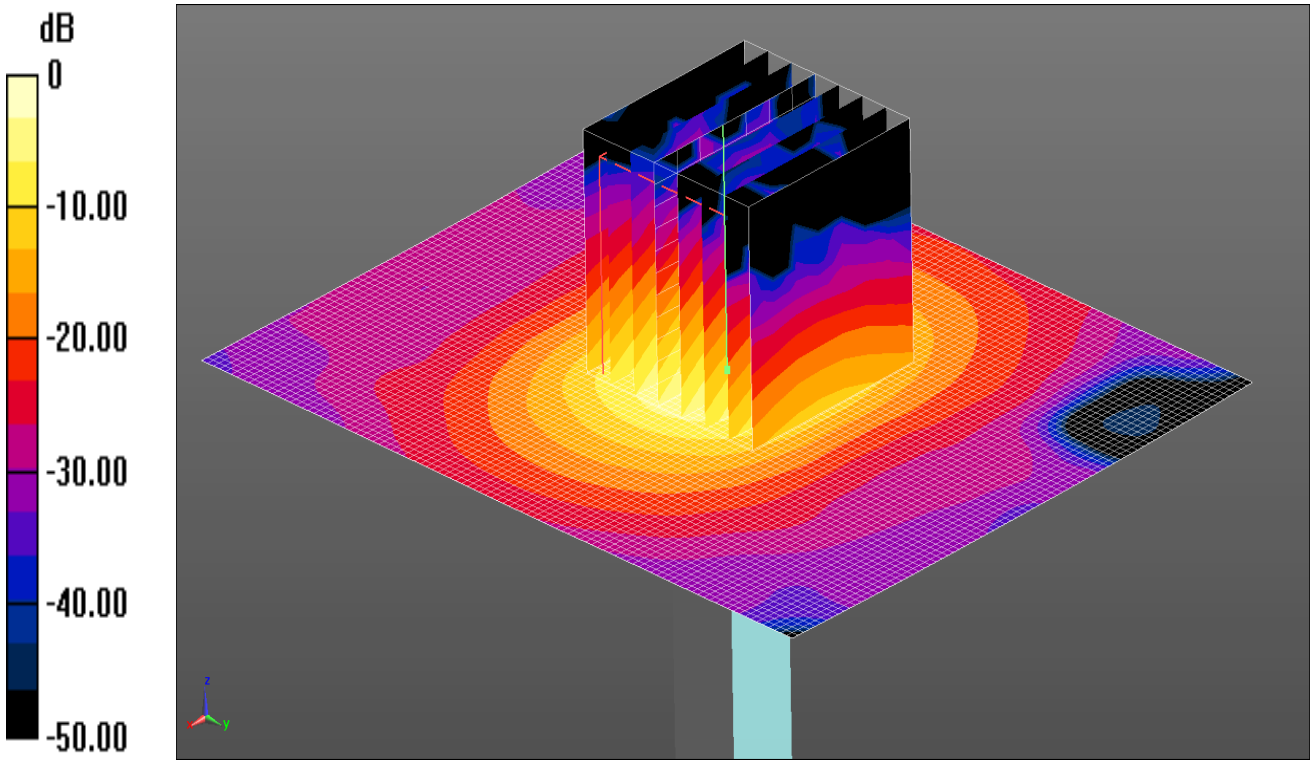


0 dB = 17.8 W/kg = 12.50 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: 5600/5750 MHz MSL Medium parameters used: f = 5600 MHz; σ = 5.839 S/m; ε_r = 46.573; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(4.15, 4.15, 4.15); Calibrated: 19/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn394; Calibrated: 12/05/2017
- Phantom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)
Configuration/d=10mm, Pin=100mW 2 2 2 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 18.6 W/kg
Configuration/d=10mm, Pin=100mW 2 2 2 2/Zoom Scan (7x7x12) 2 (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 40.48 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 36.5 W/kg
SAR(1 g) = 8.42 W/kg; SAR(10 g) = 2.34 W/kg
Maximum value of SAR (measured) = 17.8 W/kg

SYS/020: System Check 5600 MHz Body 23 05 18 (Site 59)

Date: 23/05/2018
DUT: 5GHz Dipole SN:1016; Type: D5GHzV2; Serial: SN 1016



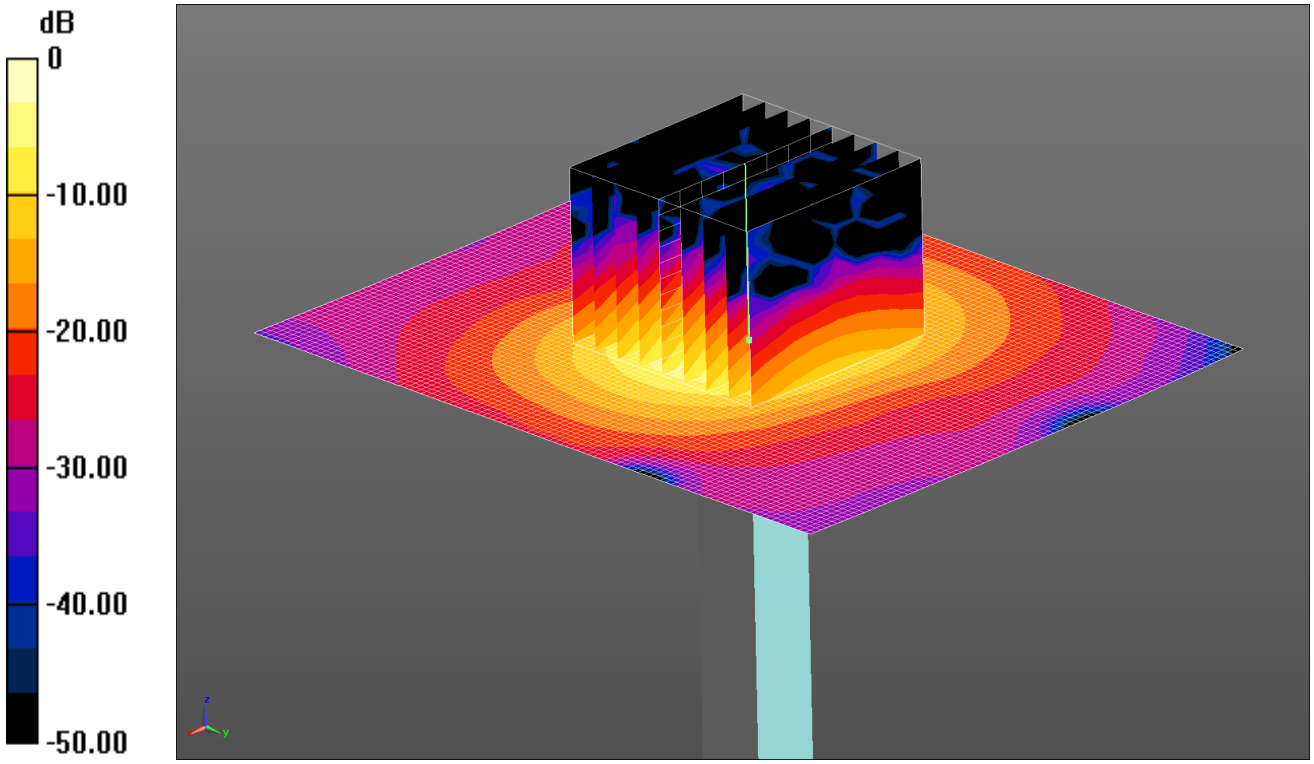
0 dB = 16.7 W/kg = 12.23 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: 5600/5750 MHz MSL Medium parameters used: f = 5600 MHz; σ = 5.926 S/m; ε_r = 46.46; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7495; ConvF(4.32, 4.32, 4.32); Calibrated: 16/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 18/04/2018
- Phantom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW /Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.9 W/kg
Configuration/d=10mm, Pin=100mW /Zoom Scan (7x7x12) 2 (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 38.62 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 36.4 W/kg
SAR(1 g) = 7.83 W/kg; SAR(10 g) = 2.18 W/kg
Maximum value of SAR (measured) = 16.7 W/kg

SYS/021: System Check 5600 MHz Body 27 05 18 (Site 59)

Date: 27/05/2018
DUT: 5GHz Dipole SN:1016; Type: D5GHzV2; Serial: SN 1016



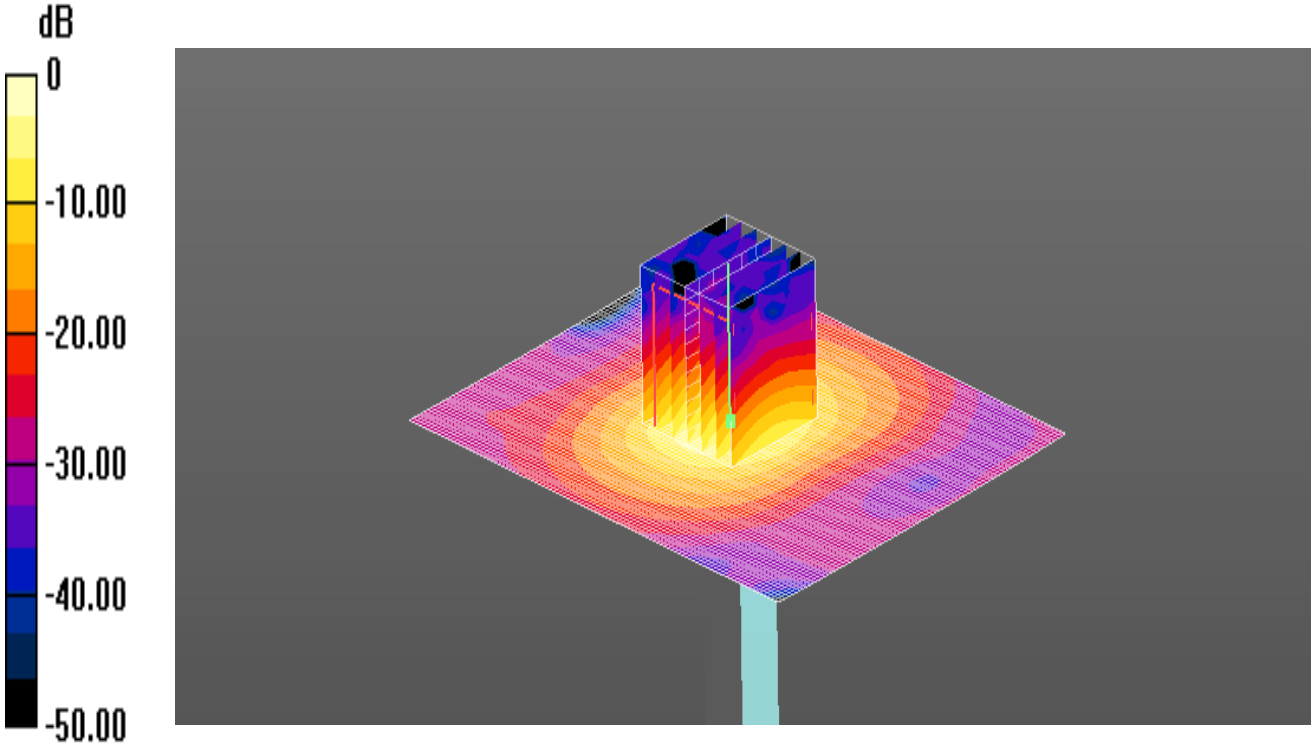
0 dB = 16.2 W/kg = 12.10 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium: 5600/5750 MHz MSL Medium parameters used: f = 5600 MHz; σ = 6.02 S/m; ε_r = 46.625; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7496; ConvF(4.32, 4.32, 4.32); Calibrated: 16/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 18/04/2018
- Phantom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW 2 2 2 2 2 2 2 2 2 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 23.5 W/kg
Configuration/d=10mm, Pin=100mW 2 2 2 2 2 2 2 2 2 2/Zoom Scan (7x7x12) 2 2 (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 45.65 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 36.3 W/kg
SAR(1 g) = 7.78 W/kg; SAR(10 g) = 2.15 W/kg
Maximum value of SAR (measured) = 16.2 W/kg

SYS/022: System Check 5750 MHz Body 09 04 18 (Site 59)

Date: 09/04/2018
DUT: 5GHz Dipole SN:1016; Type: D5GHzV2; Serial: SN 1016



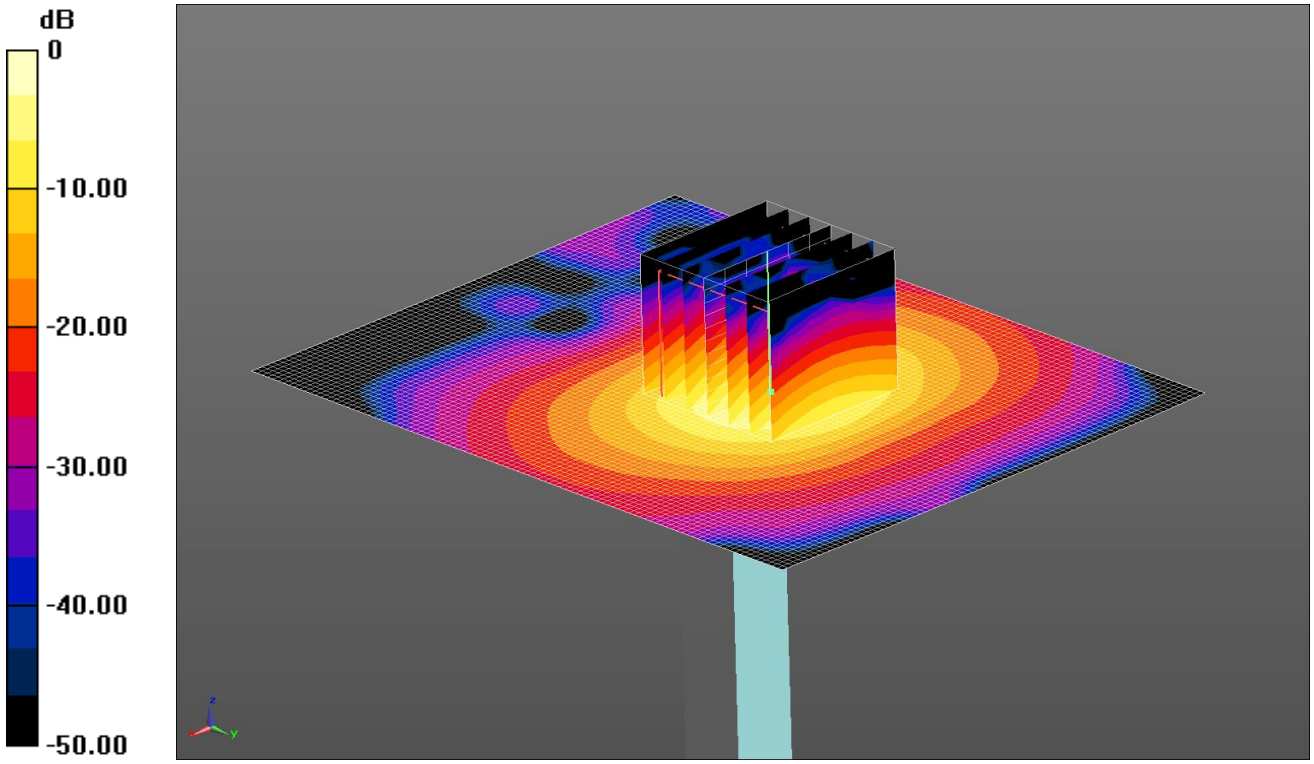
0 dB = 16.7 W/kg = 12.23 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: 2450/5600/5750 MHz MSL Medium parameters used: f = 5750 MHz; σ = 6.192 S/m; ε_r = 46.188; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(4.47, 4.47, 4.47); Calibrated: 19/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn394; Calibrated: 12/05/2017
- Phantom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW 2 2 2 2 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.6 W/kg
Configuration/d=10mm, Pin=100mW 2 2 2 2 2/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 36.29 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 36.4 W/kg
SAR(1 g) = 7.63 W/kg; SAR(10 g) = 2.12 W/kg
Maximum value of SAR (measured) = 16.7 W/kg

SYS/023: System Check 5750 MHz Body 16 04 18 (Site 60)

Date: 16/04/2018
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



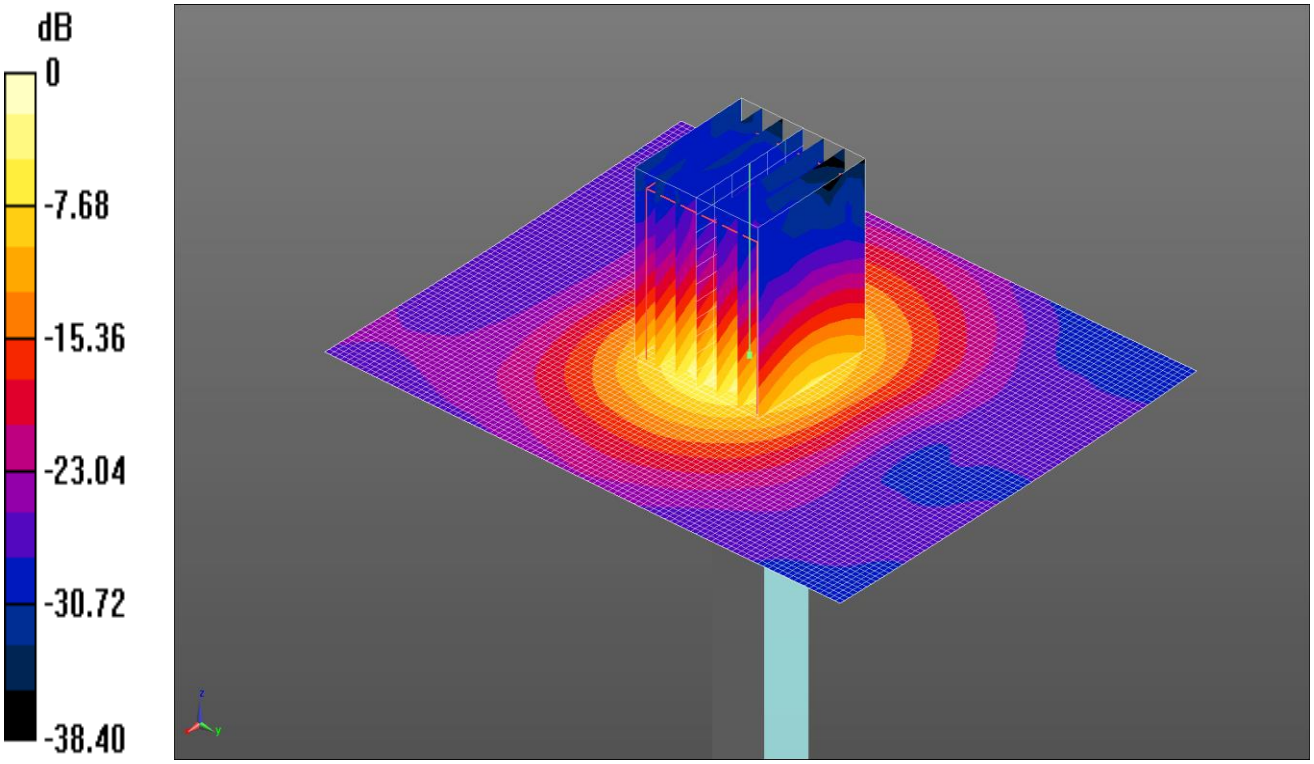
0 dB = 15.8 W/kg = 11.99 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: 5200,5600,5750 MHz MSL Medium parameters used: f = 5750 MHz; σ = 6.028 S/m; ε_r = 46.199; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(4.37, 4.37, 4.37); Calibrated: 28/09/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/d=10mm, Pin=100mW 2 2 2/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.1 W/kg
Configuration/d=10mm, Pin=100mW 2 2 2/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 28.56 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 33.1 W/kg
SAR(1 g) = 7.36 W/kg; SAR(10 g) = 2.05 W/kg
Maximum value of SAR (measured) = 15.8 W/kg

SYS/024: System Check 5750 MHz Body 18 04 18 (Site 59)

Date: 18/04/2018
DUT: 5GHz Dipole SN:1016; Type: D5GHzV2; Serial: SN 1016



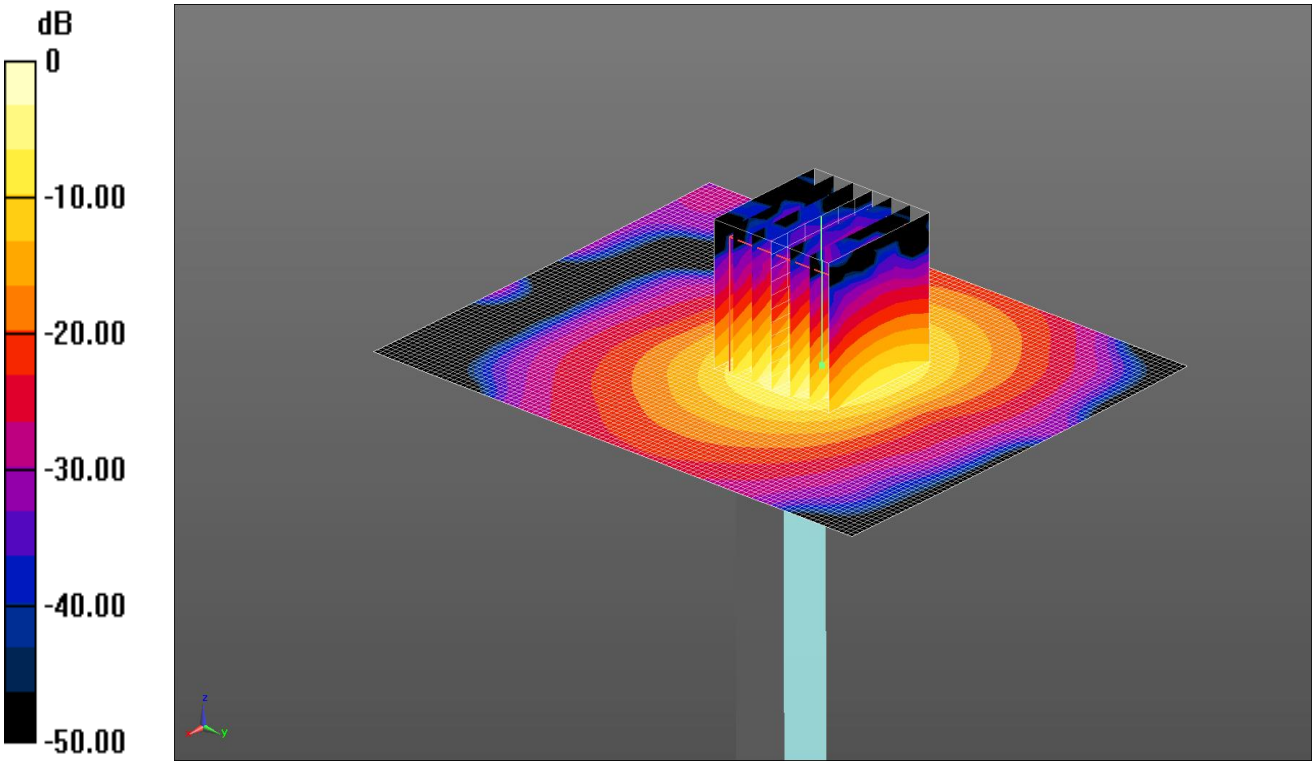
0 dB = 16.3 W/kg = 12.12 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: 5600/5750 MHz MSL Medium parameters used: f = 5750 MHz; σ = 6 S/m; ε_r = 46.209; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(4.47, 4.47, 4.47); Calibrated: 19/03/2018;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn394; Calibrated: 12/05/2017
- Phantom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/d=10mm, Pin=100mW/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.4 W/kg
Configuration/d=10mm, Pin=100mW/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 35.88 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 34.1 W/kg
SAR(1 g) = 7.5 W/kg; SAR(10 g) = 2.1 W/kg
Maximum value of SAR (measured) = 16.3 W/kg

SYS/025: System Check 5750 MHz Body 20 04 18 (Site 60)

Date: 20/04/2018
DUT: D5GHzV2 - SN1016; Type: D5GHzV2; Serial: SN1016



0 dB = 16.4 W/kg = 12.15 dBW/kg

Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium: 5250,5750 MHz MSL Medium parameters used: f = 5750 MHz; σ = 5.992 S/m; ε_r = 47.213; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(4.37, 4.37, 4.37); Calibrated: 28/09/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- Phantom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7417)

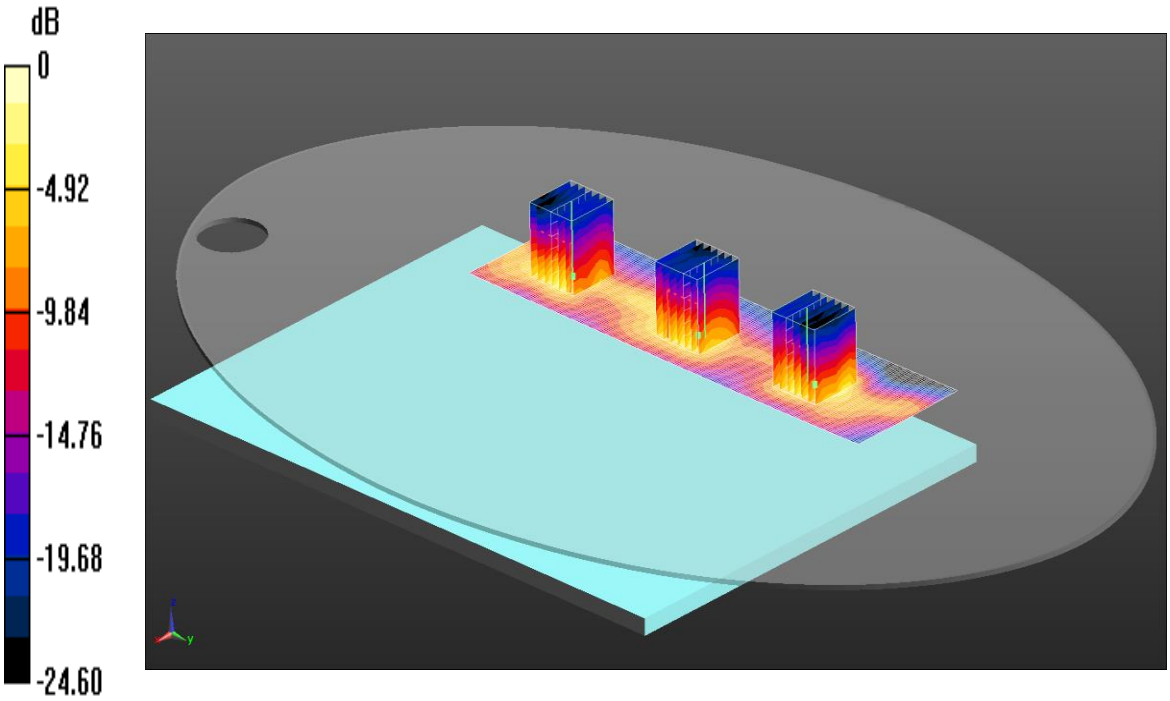
Configuration/d=10mm, Pin=100mW 3/Area Scan (81x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 16.4 W/kg
Configuration/d=10mm, Pin=100mW 3/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 38.10 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 34.2 W/kg
SAR(1 g) = 7.52 W/kg; SAR(10 g) = 2.09 W/kg
Maximum value of SAR (measured) = 16.4 W/kg

12.3. SAR Test Plots

Scan Reference Number	Title
SAR/001	Back 0mm WiFi 2.4 GHz 802.11n HT20 MIMO WF1+WF2+WF3 CH10
SAR/002	Back 0mm WiFi 5.2 GHz 802.11n HT20 MIMO WF1+WF2+WF3 CH44
SAR/003	Back 0mm WiFi 5.6 GHz 802.11n HT40 MIMO WF1+WF2+WF3 CH126
SAR/004	Back 0mm WiFi 5.8 GHz 802.11ac VHT80 MIMO WF1+WF2+WF3 CH155
SAR/005	Back 0mm BT DH5 SISO WF1 CH39
SAR/006	Back 0mm WiFi 2.4 GHz 802.11b SDB Main WF3 CH11
SAR/007	Back 0mm WiFi 5.2 GHz 802.11n HT40 SDB Main WF3 CH38
SAR/008	Back 0mm WiFi 5.6 GHz 802.11ac VHT80 SDB Main WF3 CH122
SAR/009	Back 0mm WiFi 5.8 GHz 802.11ac VHT80 SDB Main WF3 CH155

SAR/001: Back 0mm WiFi 2.4 GHz 802.11n HT20 MIMO WF1+WF2+WF3 CH10

Date: 30/05/2018
DUT: Apple Inc.; Type: FCC ID: BCGA1990; Model No.: A1990



0 dB = 1.02 W/kg = 0.09 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 2457 MHz;Duty Cycle: 1:1
Medium: 2450 MSL Medium parameters used (interpolated): f = 2457 MHz; σ = 2.048 S/m; ε_r = 52.515; ρ = 1000 kg/m^3
PhWFom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7497; ConvF(7.69, 7.69, 7.69); Calibrated: 16/03/2018;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn450; Calibrated: 19/09/2017
- PhWFom: ELI v5.0 A; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/Back 0mm WF1+WF2+WF3/Area Scan (61x231x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.01 W/kg

Configuration/Back 0mm WF1+WF2+WF3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.32 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.16 W/kg
SAR(1 g) = 0.756 W/kg; SAR(10 g) = 0.290 W/kg
Maximum value of SAR (measured) = 1.07 W/kg

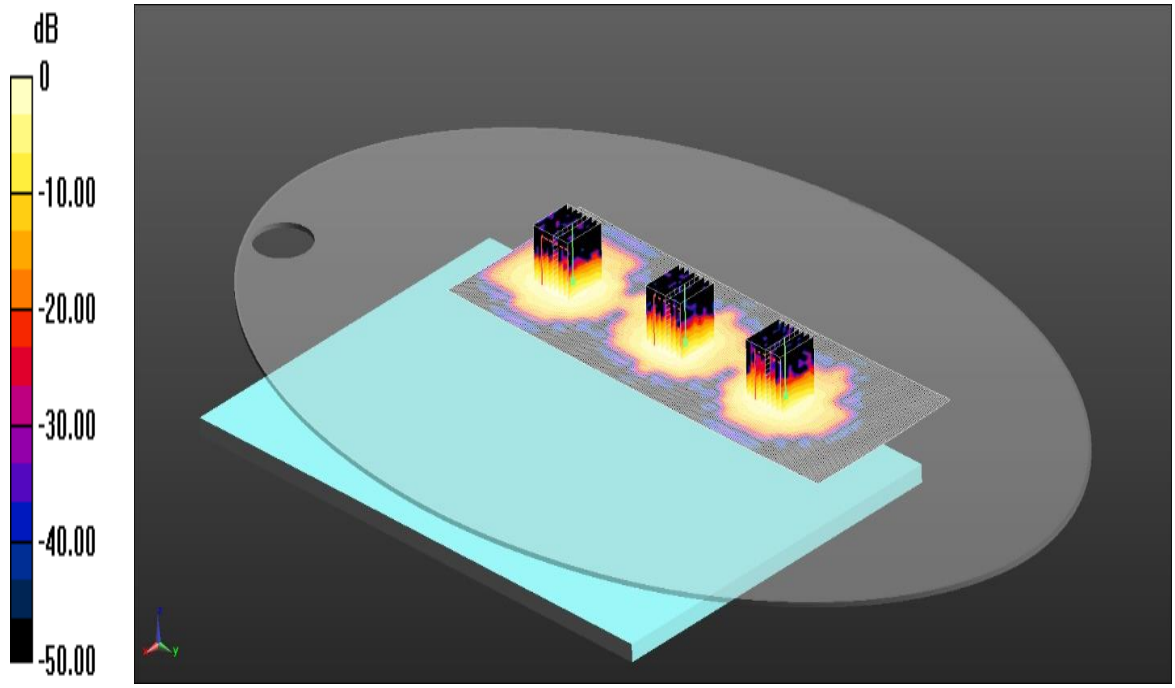
Configuration/Back 0mm WF1+WF2+WF3/Zoom Scan (7x7x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.32 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.18 W/kg
SAR(1 g) = 0.771 W/kg; SAR(10 g) = 0.306 W/kg
Maximum value of SAR (measured) = 1.13 W/kg

Configuration/Back 0mm WF1+WF2+WF3/Zoom Scan (7x7x7)/Cube 2: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.32 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.04 W/kg
SAR(1 g) = 0.742 W/kg; SAR(10 g) = 0.297 W/kg
Maximum value of SAR (measured) = 1.02 W/kg

Note: DASY system is configured to measure any secondary maxima that are within 2dB of the measured SAR level.

SAR/002: Back 0mm WiFi 5.2 GHz 802.11n HT20 MIMO WF1+WF2+WF3 CH44

Date: 30/05/2018
DUT: Apple Inc.; Type: FCC ID: BCGA1990; Model No.: A1990



0 dB = 0.957 W/kg = -0.19 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 5220 MHz;Duty Cycle: 1:1
Medium: 5250 MHz MSL Medium parameters used (interpolated): f = 5220 MHz; σ = 5.559 S/m; ε_r = 47.325; ρ = 1000 kg/m^3
PhWFom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7496; ConvF(5.09, 5.09, 5.09); Calibrated: 16/03/2018;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 18/04/2018
- PhWFom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/Back 0mm WF1+WF2+WF3 /Area Scan (111x301x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.33 W/kg

Configuration/Back 0mm WF1+WF2+WF3 /Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 13.58 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 3.51 W/kg
SAR(1 g) = 0.935 W/kg; SAR(10 g) = 0.313 W/kg
Maximum value of SAR (measured) = 1.39 W/kg

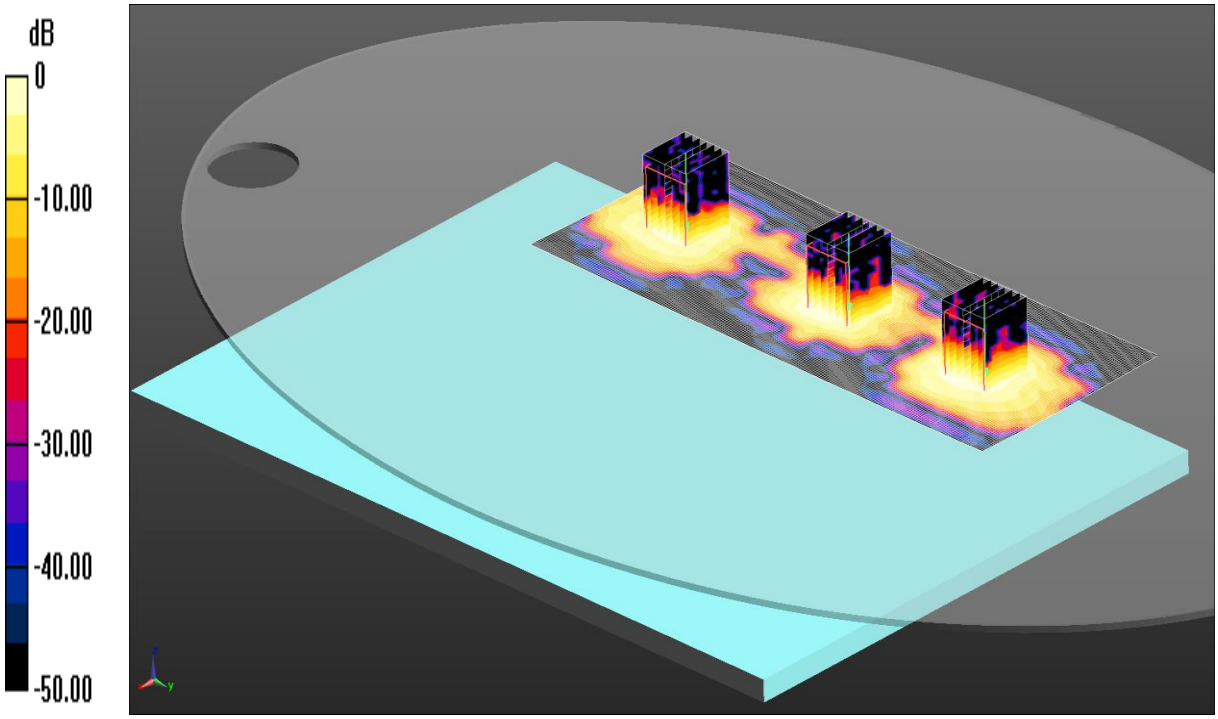
Configuration/Back 0mm WF1+WF2+WF3 /Zoom Scan (8x8x12)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 13.58 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 2.81 W/kg
SAR(1 g) = 0.782 W/kg; SAR(10 g) = 0.281 W/kg
Maximum value of SAR (measured) = 1.16 W/kg

Configuration/Back 0mm WF1+WF2+WF3 /Zoom Scan (8x8x12)/Cube 2: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 13.58 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 2.35 W/kg
SAR(1 g) = 0.652 W/kg; SAR(10 g) = 0.229 W/kg
Maximum value of SAR (measured) = 0.957 W/kg

Note: DASY system is configured to measure any secondary maxima that are within 2dB of the measured SAR level.

SAR/003: Back 0mm WiFi 5.6 GHz 802.11n HT40 MIMO WF1+WF2+WF3 CH126

Date: 29/05/2018
DUT: Apple Inc.; Type: FCC ID: BCGA1990; Model No.: A1990



0 dB = 0.920 W/kg = -0.36 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 5630 MHz;Duty Cycle: 1:1
Medium: 5600 MHz MSL Medium parameters used (interpolated): f = 5630 MHz; σ = 5.821 S/m; ε_r = 47.263; ρ = 1000 kg/m^3
PhWFom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN7496; ConvF(4.32, 4.32, 4.32); Calibrated: 16/03/2018;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1438; Calibrated: 18/04/2018
- PhWFom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/Back 0mm WF1+WF2+WF3 /Area Scan (101x251x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.25 W/kg

Configuration/Back 0mm WF1+WF2+WF3 /Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 14.60 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 3.21 W/kg
SAR(1 g) = 0.826 W/kg; SAR(10 g) = 0.276 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 1.23 W/kg

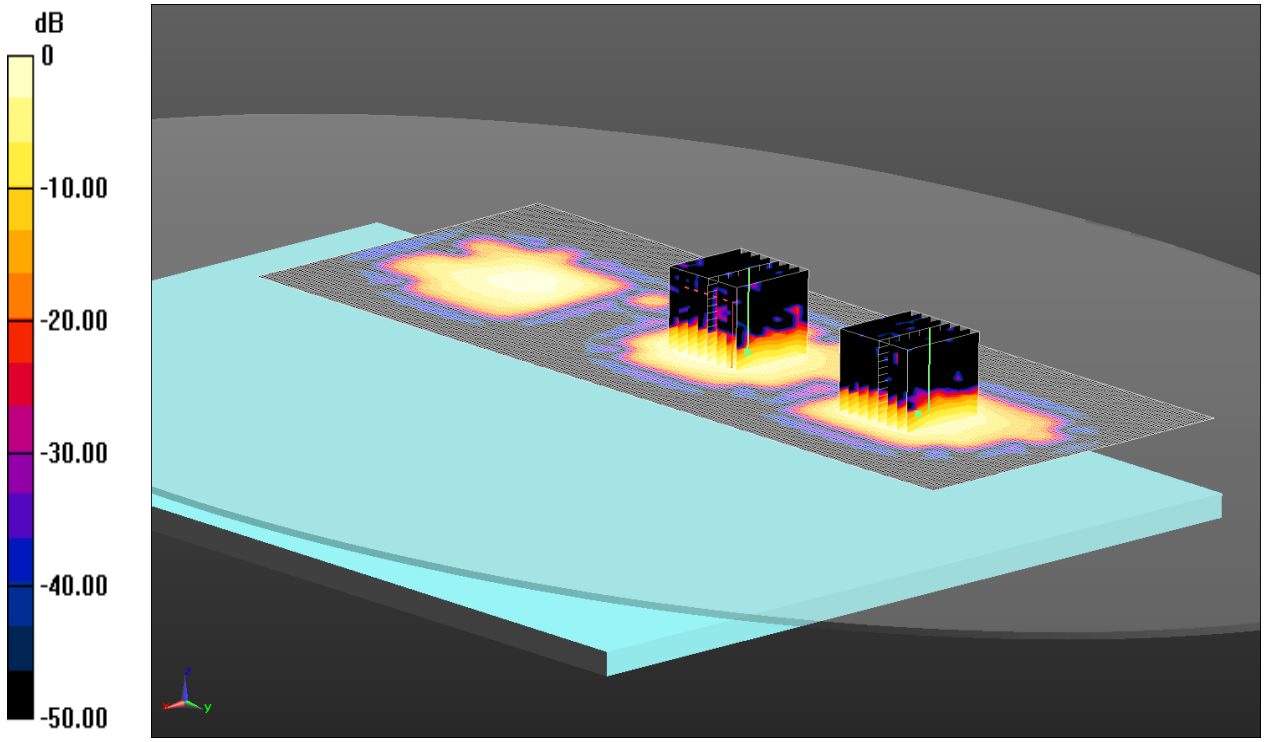
Configuration/Back 0mm WF1+WF2+WF3 /Zoom Scan (7x7x12)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 14.60 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 3.40 W/kg
SAR(1 g) = 0.855 W/kg; SAR(10 g) = 0.292 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 1.26 W/kg

Configuration/Back 0mm WF1+WF2+WF3 /Zoom Scan (7x7x12)/Cube 2: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 14.60 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 2.49 W/kg
SAR(1 g) = 0.615 W/kg; SAR(10 g) = 0.205 W/kg (SAR corrected for target medium)
Maximum value of SAR (measured) = 0.920 W/kg

Note: DASY system is configured to measure any secondary maxima that are within 2dB of the measured SAR level.

SAR/004: Back 0mm WiFi 5.8 GHz 802.11ac VHT80 MIMO WF1+WF2+WF3 CH155

Date: 17/04/2018
DUT: Apple Inc.; Type: FCC ID: BCGA1990; Model No.: A1990



0 dB = 0.863 W/kg = -0.64 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 5775 MHz;Duty Cycle: 1:1
Medium: 5200,5600,5750 MHz MSL Medium parameters used (interpolated): f = 5775 MHz; σ = 6.063 S/m; ε_r = 46.151; ρ = 1000 kg/m^3
PhWFom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(4.37, 4.37, 4.37); Calibrated: 28/09/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- PhWFom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back 0mm WF1+WF2+WF3 /Area Scan (111x281x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.25 W/kg

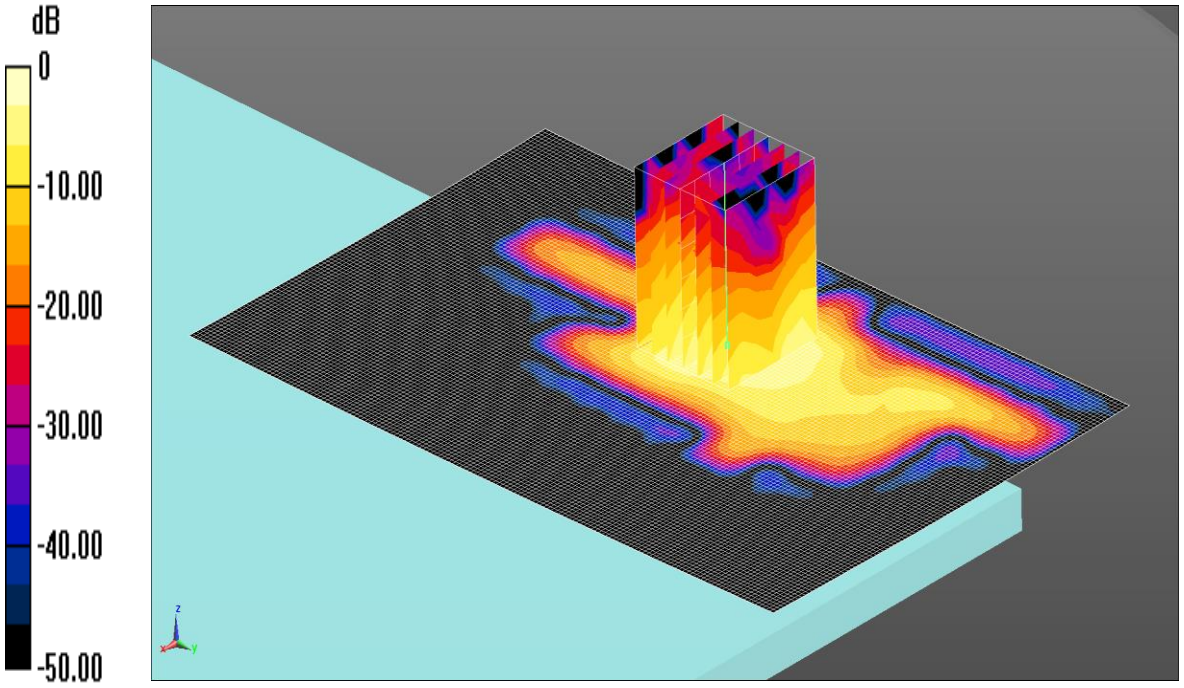
Configuration/Back 0mm WF1+WF2+WF3 /Zoom Scan (8x8x13)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 15.18 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 3.44 W/kg
SAR(1 g) = 0.871 W/kg; SAR(10 g) = 0.278 W/kg
Maximum value of SAR (measured) = 1.37 W/kg

Configuration/Back 0mm WF1+WF2+WF3 /Zoom Scan (8x8x13)/Cube 1: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 15.18 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 2.07 W/kg
SAR(1 g) = 0.569 W/kg; SAR(10 g) = 0.188 W/kg
Maximum value of SAR (measured) = 0.863 W/kg

Note: DASY system is configured to measure any secondary maxima that are within 2dB of the measured SAR level.

SAR/005: Back 0mm BT DH5 SISO WF1 CH39

Date: 12/04/2018
DUT: Apple Inc.; Type: FCC ID: BCGA1990; Model No.: A1990



0 dB = 0.338 W/kg = -4.71 dBW/kg

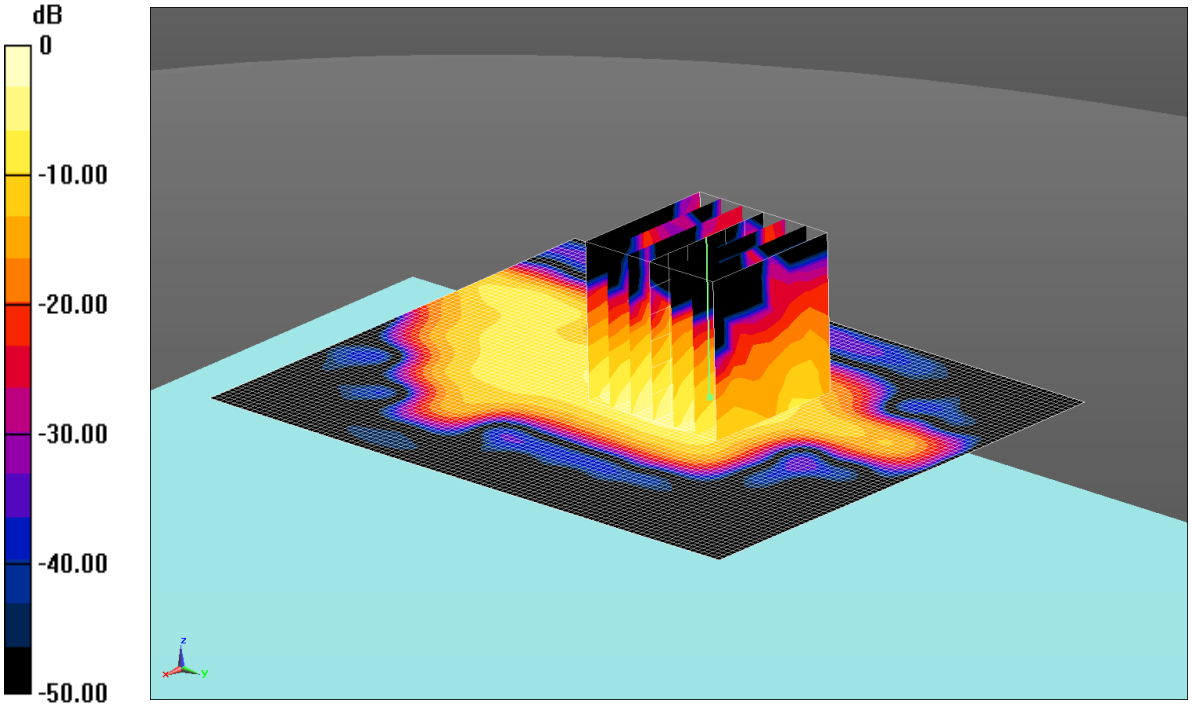
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.30617
Medium: 2450,5250, 5600 & 5750 MHz MSL Medium parameters used (interpolated): f = 2441 MHz; σ = 1.904 S/m; ε_r = 51.268; ρ = 1000 kg/m^3
PhWFom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.2, 7.2, 7.2); Calibrated: 28/09/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- PhWFom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back 0mm/Area Scan (101x161x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.295 W/kg

Configuration/Back 0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 13.28 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.663 W/kg
SAR(1 g) = 0.220 W/kg; SAR(10 g) = 0.077 W/kg
Maximum value of SAR (measured) = 0.338 W/kg

SAR/006: Back 0mm WiFi 2.4 GHz 802.11b SDB Main WF3 CH11

Date: 17/04/2018
DUT: Apple Inc.; Type: FCC ID: BCGA1990; Model No.: A1990



0 dB = 0.195 W/kg = -7.10 dBW/kg

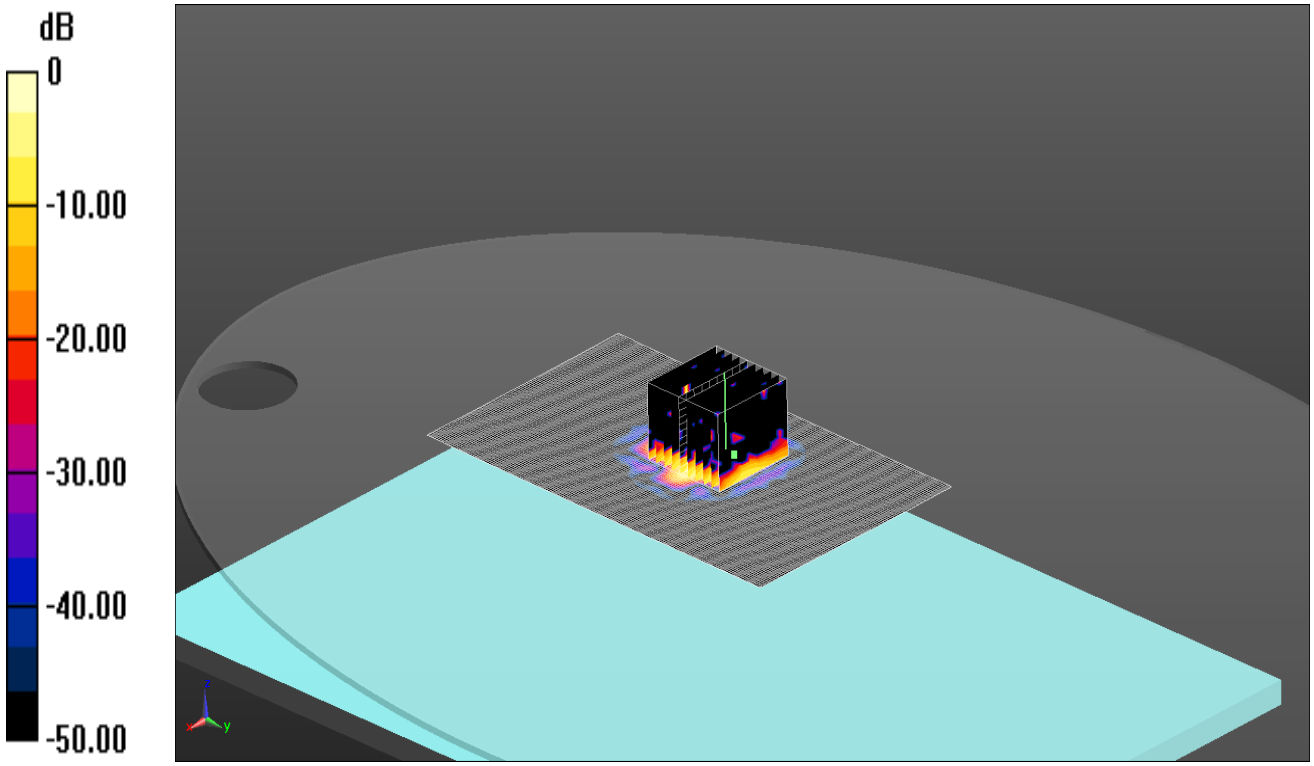
Communication System: UID 0, WLAN 802.11 (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium: 2450 MHz MSL Medium parameters used (interpolated): f = 2462 MHz; σ = 2.054 S/m; ε_r = 51.995; ρ = 1000 kg/m^3
PhWFom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(7.2, 7.2, 7.2); Calibrated: 28/09/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- PhWFom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back 0mm WF3/Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.160 W/kg

Configuration/Back 0mm WF3/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.399 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.375 W/kg
SAR(1 g) = 0.129 W/kg; SAR(10 g) = 0.046 W/kg
Maximum value of SAR (measured) = 0.195 W/kg

SAR/007: Back 0mm WiFi 5.2 GHz 802.11n HT40 SDB Main WF3 CH38

Date: 20/04/2018
DUT: Apple Inc.; Type: FCC ID: BCGA1990; Model No.: A1990



0 dB = 0.218 W/kg = -6.62 dBW/kg

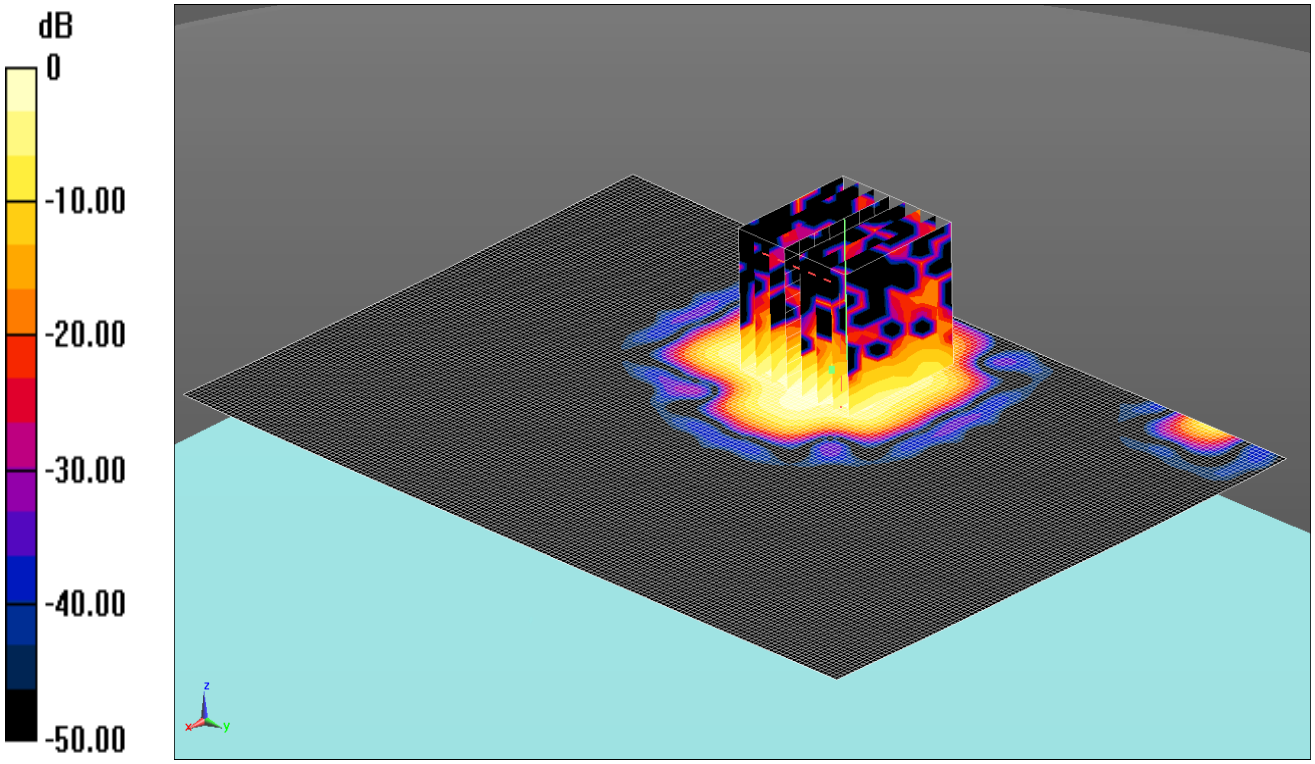
Communication System: UID 0, WLAN 802.11 (0); Frequency: 5190 MHz;Duty Cycle: 1:1
Medium: 5200&5750 MHz MSL Medium parameters used (interpolated): f = 5190 MHz; σ = 5.171 S/m; ε_r = 48.167; ρ = 1000 kg/m^3
PhWFom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3814; ConvF(5, 5, 5); Calibrated: 28/09/2017;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1435; Calibrated: 06/02/2018
- PhWFom: ELI v5.0 (30deg probe tilt); Type: QDOVA002AA; Serial: 1253
- ; SEMCAD X Version 14.6.10 (7372)

Configuration/Back 0mm WF3/Area Scan (101x171x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.316 W/kg

Configuration/Back 0mm WF3/Zoom Scan (10x10x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.596 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.120 W/kg; SAR(10 g) = 0.049 W/kg
Maximum value of SAR (measured) = 0.218 W/kg

SAR/008: Back 0mm WiFi 5.6 GHz 802.11ac VHT80 SDB Main WF3 CH122

Date: 19/04/2018
DUT: Apple Inc.; Type: FCC ID: BCGA1990; Model No.: A1990



0 dB = 0.259 W/kg = -5.87 dBW/kg

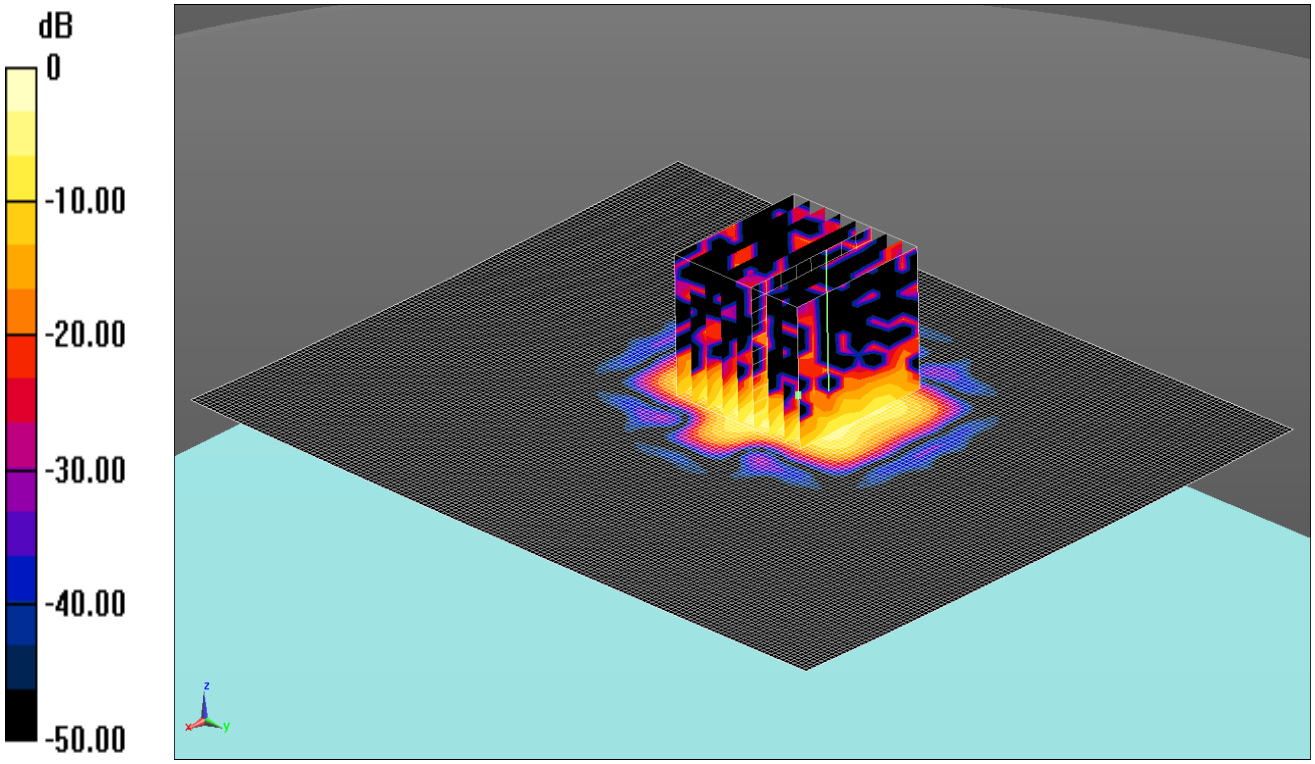
Communication System: UID 0, WLAN 802.11 (0); Frequency: 5610 MHz;Duty Cycle: 1:1
Medium: 5600/5750 MHz MSL Medium parameters used (interpolated): f = 5610 MHz; σ = 5.845 S/m; ε_r = 46.549; ρ = 1000 kg/m^3
PhWFom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(4.15, 4.15, 4.15); Calibrated: 19/03/2018;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn394; Calibrated: 12/05/2017
- PhWFom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/Back 0mm/Area Scan 2 (121x171x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.246 W/kg

Configuration/Back 0mm/Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 5.051 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.639 W/kg
SAR(1 g) = 0.167 W/kg; SAR(10 g) = 0.049 W/kg
Maximum value of SAR (measured) = 0.259 W/kg

SAR/009: Back 0mm WiFi 5.8 GHz 802.11ac VHT80 SDB Main WF3 CH155

Date: 19/04/2018
DUT: Apple Inc.; Type: FCC ID: BCGA1990; Model No.: A1990



0 dB = 0.267 W/kg = -5.73 dBW/kg

Communication System: UID 0, WLAN 802.11 (0); Frequency: 5775 MHz;Duty Cycle: 1:1
Medium: 5600/5750 MHz MSL Medium parameters used (interpolated): f = 5775 MHz; σ = 6.053 S/m; ε_r = 46.119; ρ = 1000 kg/m^3
PhWFom section: Flat Section
DASY4 Configuration:
- Probe: EX3DV4 - SN3994; ConvF(4.47, 4.47, 4.47); Calibrated: 19/03/2018;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn394; Calibrated: 12/05/2017
- PhWFom: ELI v5.0; Type: QDOVA002AA;
- ; SEMCAD X Version 14.6.10 (7417)

Configuration/Back 0mm/Area Scan (131x161x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.259 W/kg

Configuration/Back 0mm/Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 6.503 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 0.702 W/kg
SAR(1 g) = 0.177 W/kg; SAR(10 g) = 0.052 W/kg
Maximum value of SAR (measured) = 0.267 W/kg