Appendix F

Detailed System Check Results

1. System Performance Check
System Performance Check 835 MHz Head
System Performance Check 835 MHz Body
System Performance Check 1750 MHz Head
System Performance Check 1750 MHz Body
System Performance Check 1900MHz Head
System Performance Check 1900MHz Body
System Performance Check 2300MHz Head
System Performance Check 2300MHz Body
System Performance Check 2450 MHz Head
System Performance Check 2450 MHz Body
System Performance Check 2600 MHz Head
System Performance Check 2600 MHz Body

Date: 2019-01-25

Test Laboratory: SGS-SAR Lab

System Performance Check 835 MHz Head

DUT: D835V2; Type: D835V2; Serial: 4d105

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1

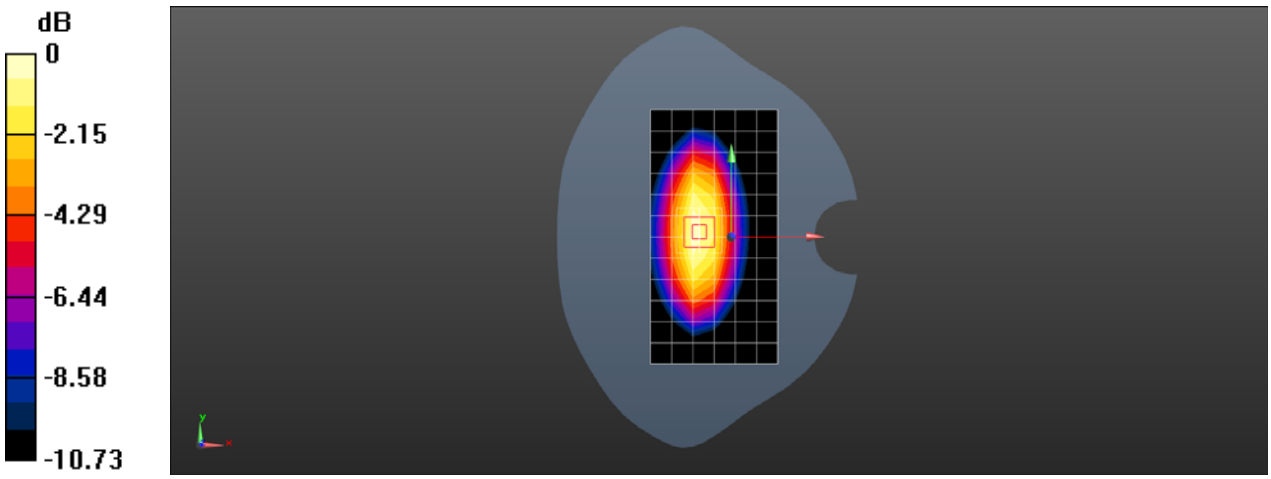
Medium: HSL900;Medium parameters used: f = 835 MHz; σ = 0.885 S/m; ε_r = 43.061; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.66, 8.66, 8.66); Calibrated: 2018-02-08;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn896; Calibrated: 2018-11-08
- Phantom: SAM 1; Type: SAM; Serial: 1283
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=15mm, Pin=250mW/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.93 W/kg

Body/d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 52.11 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.66 W/kg
SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.54 W/kg
Maximum value of SAR (measured) = 3.10 W/kg



0 dB = 3.10 W/kg = 4.91 dBW/kg

Date: 2019-01-21

Test Laboratory: SGS-SAR Lab

System Performance Check 835 MHz Body

DUT: D835V2; Type: D835V2; Serial: 4d105

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1

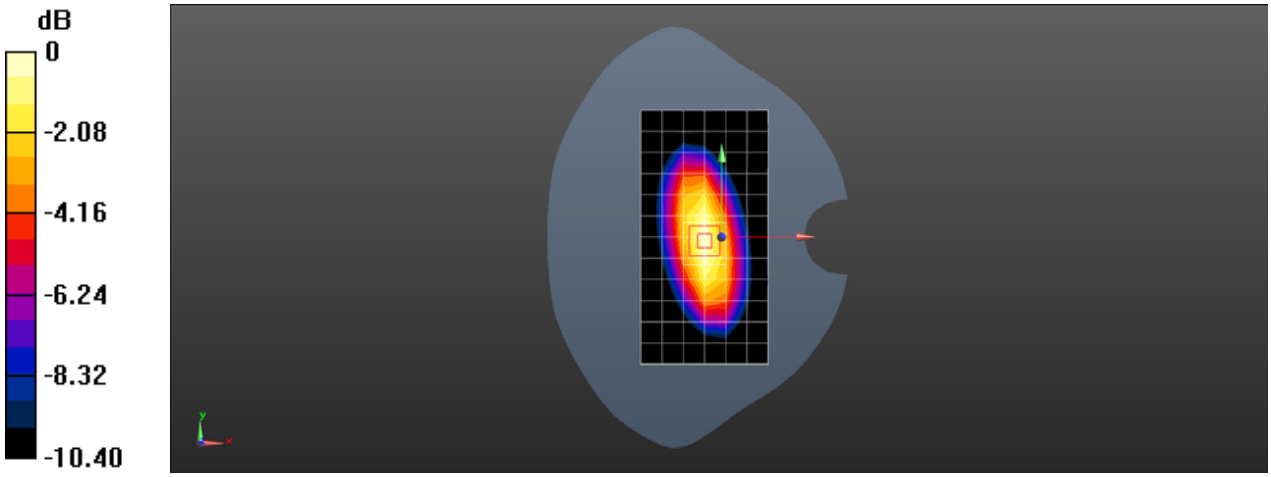
Medium: MSL835;Medium parameters used: f = 835 MHz; σ = 0.98 S/m; ε_r = 56.996; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.84, 8.84, 8.84); Calibrated: 2018-02-08;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn896; Calibrated: 2018-11-08
- Phantom: SAM 2; Type: SAM; Serial: 1913
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=15mm, Pin=250mW/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.16 W/kg

Body/d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 50.84 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.65 W/kg
SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.62 W/kg



0 dB = 3.10 W/kg = 4.91 dBW/kg

Date: 2019-01-28

Test Laboratory: SGS-SAR Lab

System Performance Check 1750 MHz Head

DUT: D1750V2; Type: D1750V2; Serial: 1149

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1

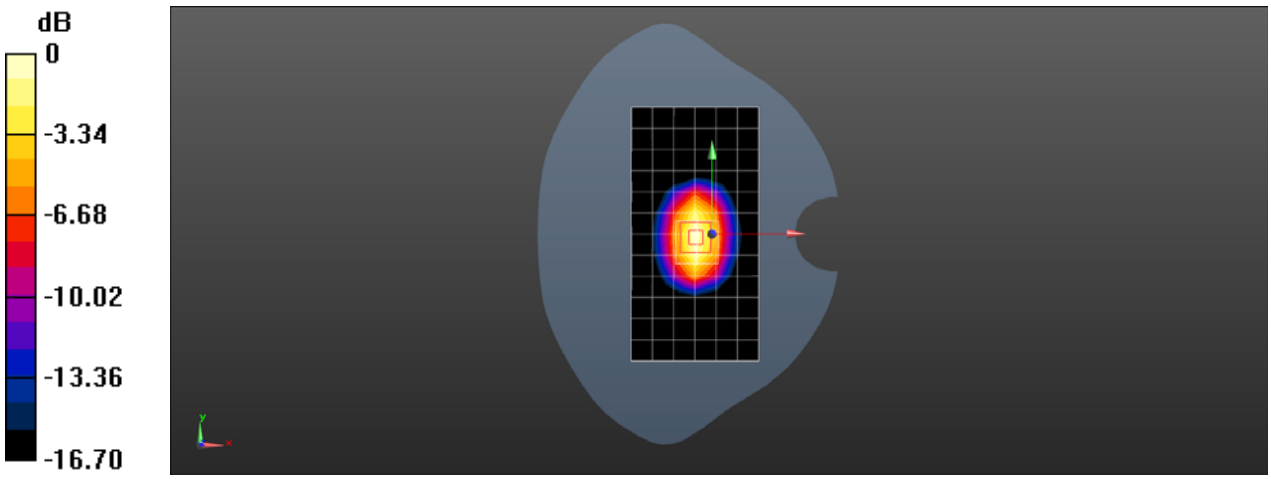
Medium: HSL1750;Medium parameters used: f = 1750 MHz; σ = 1.333 S/m; ε_r = 39.548; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.92, 8.92, 8.92); Calibrated: 2018-09-30;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn896; Calibrated: 2018-11-08
- Phantom: SAM 2; Type: SAM; Serial: 1913
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 9.75 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 76.61 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 16.0 W/kg
SAR(1 g) = 8.81 W/kg; SAR(10 g) = 4.71 W/kg
Maximum value of SAR (measured) = 9.81 W/kg



0 dB = 9.89 W/kg = 9.95 dBW/kg

Date: 2019-01-28

Test Laboratory: SGS-SAR Lab

System Performance Check 1750 MHz Body

DUT: D1750V2; Type: D1750V2; Serial: 1149

Communication System: UID 0, CW (0); Frequency: 1750 MHz;Duty Cycle: 1:1

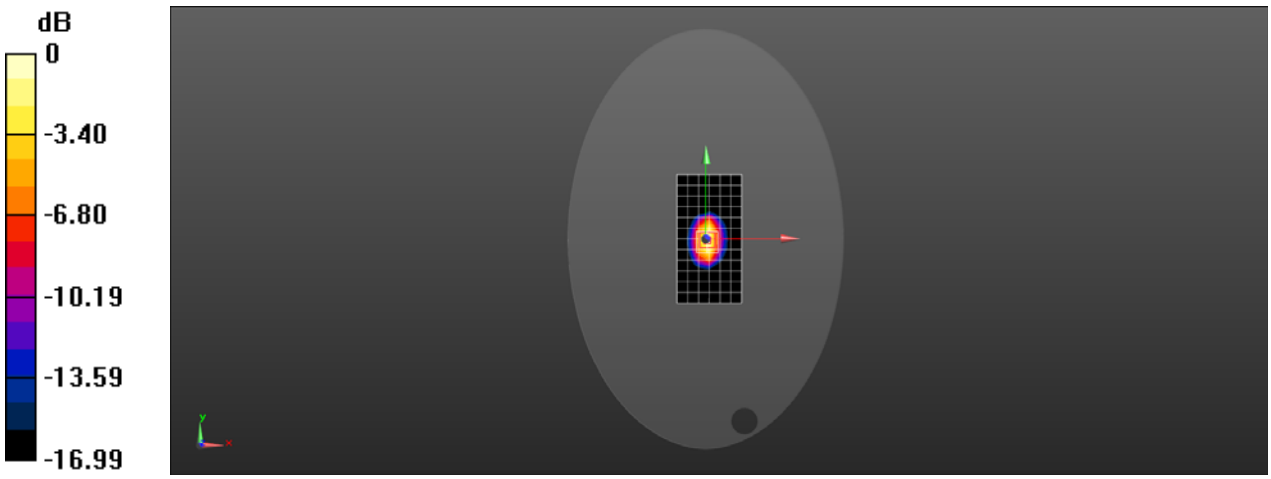
Medium: MSL1750;Medium parameters used: f = 1750 MHz; σ = 1.438 S/m; ε_r = 54.513; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.51, 8.51, 8.51); Calibrated: 2018-09-30;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn896; Calibrated: 2018-11-08
- Phantom: ELI V5.0; Type: ELI; Serial: 1123
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (7x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 11.7 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 82.82 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 16.0 W/kg
SAR(1 g) = 8.93 W/kg; SAR(10 g) = 4.73 W/kg
Maximum value of SAR (measured) = 12.6 W/kg



0 dB = 12.6 W/kg = 11.00 dBW/kg

Date: 2019-01-27

Test Laboratory: SGS-SAR Lab

System Performance Check 1900 MHz Head

DUT: D1900V2; Type: D1900V2; Serial: 5d028

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1

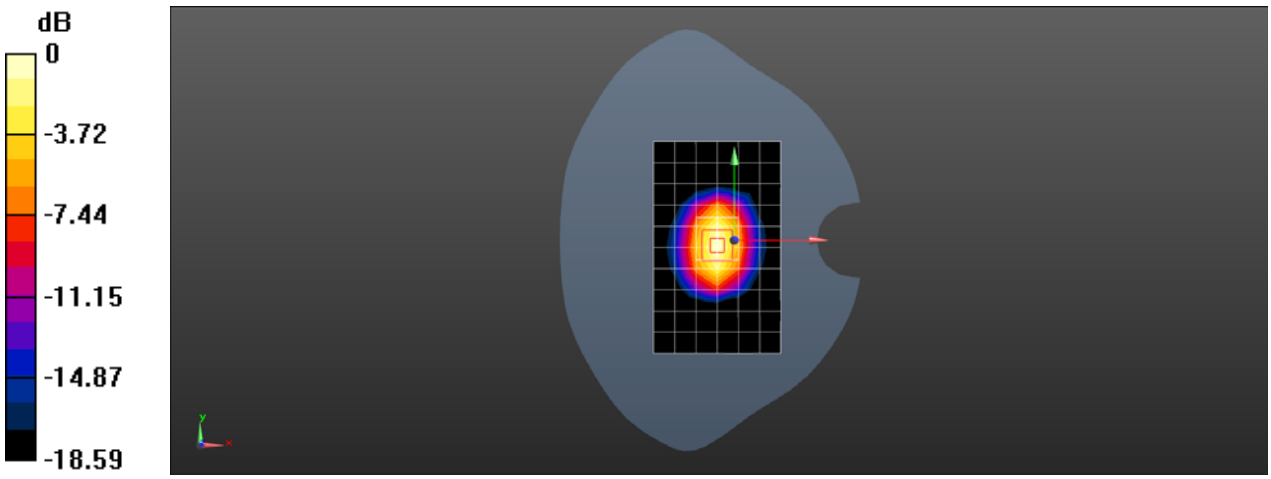
Medium: HSL1900;Medium parameters used: f = 1900 MHz; σ = 1.385 S/m; ε_r = 38.847; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.51, 8.51, 8.51); Calibrated: 2018-09-30;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn896; Calibrated: 2018-11-08
- Phantom: SAM 2; Type: SAM; Serial: 1913
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 12.4 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 84.20 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 19.5 W/kg
SAR(1 g) = 10.2 W/kg; SAR(10 g) = 5.36 W/kg
Maximum value of SAR (measured) = 12.4 W/kg



0 dB = 11.5 W/kg = 10.61 dBW/kg

Date: 2019-03-17

Test Laboratory: SGS-SAR Lab

System Performance Check 1900 MHz Body

DUT: D1900V2; Type: D1900V2; Serial: 5d028

Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1

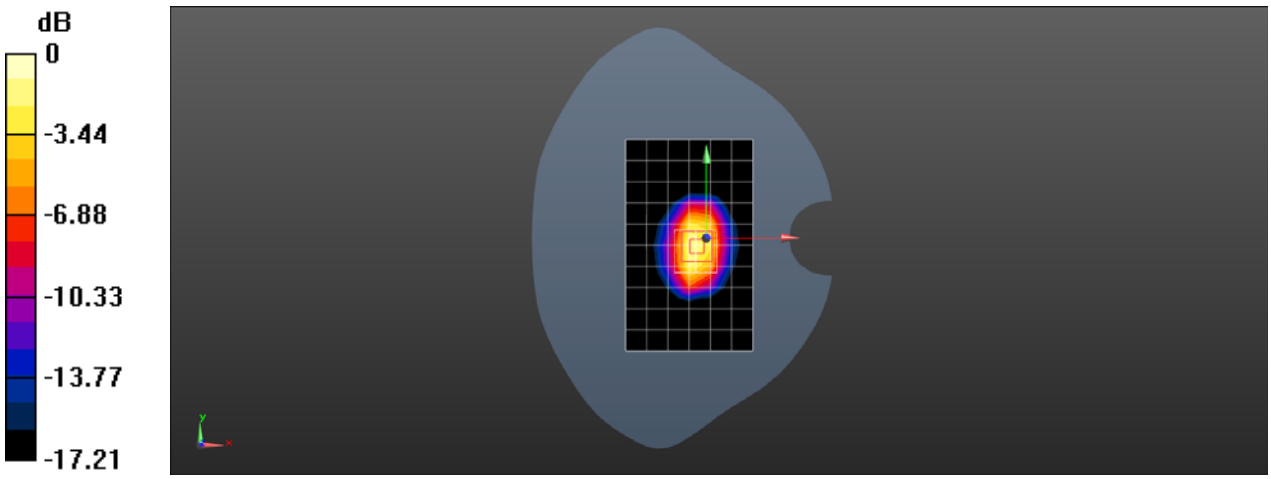
Medium: MSL1900;Medium parameters used: f = 1900 MHz; σ = 1.51 S/m; ε_r = 53.234; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3962; ConvF(8.02, 8.02, 8.02); Calibrated: 2019-02-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn896; Calibrated: 2018-11-08
- Phantom: SAM 2; Type: SAM; Serial: 1913
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 11.5 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 60.09 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 18.3 W/kg
SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.46 W/kg
Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.4 W/kg = 11.58 dBW/kg

Date: 2019-03-02

Test Laboratory: SGS-SAR Lab

System Performance Check 2300MHz Head

DUT: D2300V2; Type: D2300V2; Serial: 1072

Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1

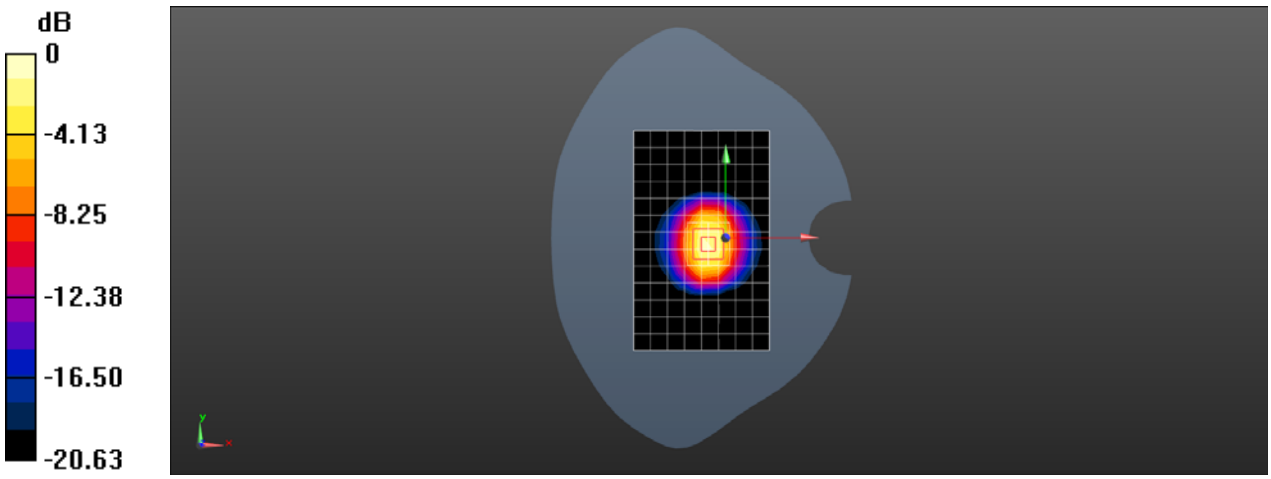
Medium: HSL2300;Medium parameters used: f = 2300 MHz; σ = 1.635 S/m; ε_r = 38.785; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.33, 7.33, 7.33); Calibrated: 2018-11-22;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn1428; Calibrated: 2019-01-11
- Phantom: SAM 4; Type: SAM; Serial: 1640
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (9x14x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 11.3 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 83.00 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 24.6 W/kg
SAR(1 g) = 12.6 W/kg; SAR(10 g) = 5.88 W/kg
Maximum value of SAR (measured) = 13.9 W/kg



0 dB = 13.9 W/kg = 11.43 dBW/kg

Date: 2019-03-03

Test Laboratory: SGS-SAR Lab

System Performance Check 2300MHz Body

DUT: D2300V2; Type: D2300V2; Serial: 1072

Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1

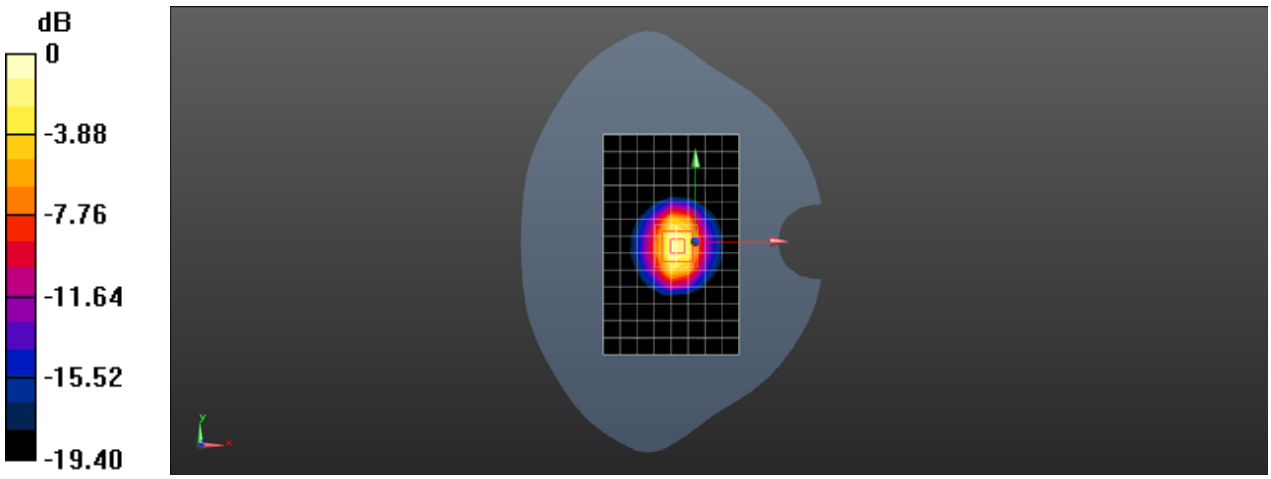
Medium: MSL2300;Medium parameters used: f = 2300 MHz; σ = 1.741 S/m; ε_r = 51.957; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(7.26, 7.26, 7.26); Calibrated: 2018-11-22;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn1428; Calibrated: 2019-01-11
- Phantom: SAM 3; Type: SAM; Serial: 1912
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (9x14x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 13.6 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 80.31 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 21.6 W/kg
SAR(1 g) = 11.3 W/kg; SAR(10 g) = 5.53 W/kg
Maximum value of SAR (measured) = 16.7 W/kg



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

Date: 2019-03-15

Test Laboratory: SGS-SAR Lab

System Performance Check 2450MHz Head

DUT: D2450V2; Type: D2450V2; Serial: 733

Communication System: UID 0, CW; Frequency: 2450 MHz;Duty Cycle: 1:1

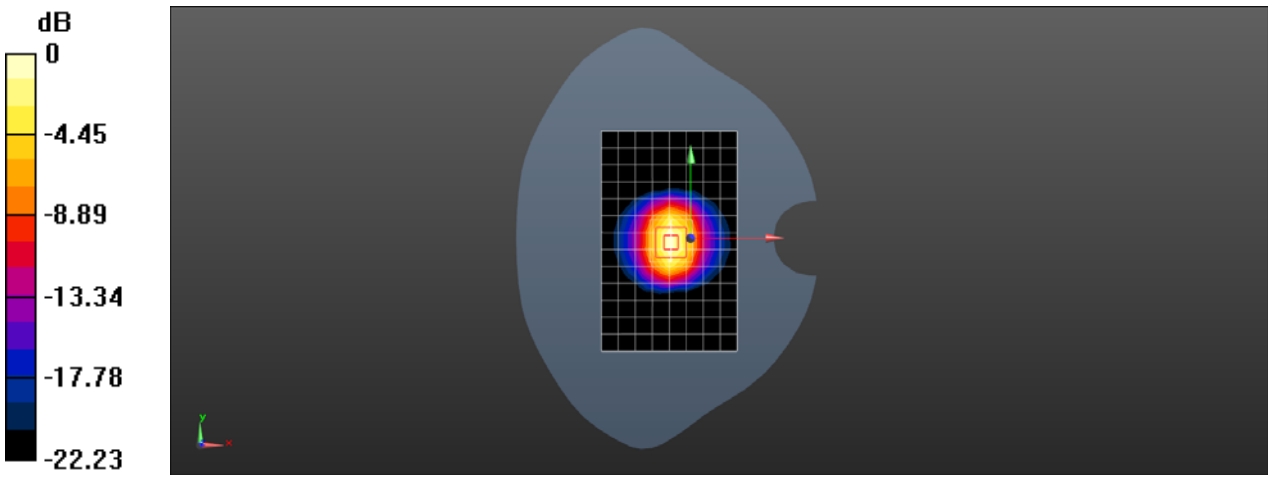
Medium: HSL2450;Medium parameters used: f = 2450 MHz; σ = 1.741 S/m; ε_r = 38.95; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3962; ConvF(7.58, 7.58, 7.58); Calibrated: 2019-02-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn896; Calibrated: 2018-11-08
- Phantom: SAM 1; Type: SAM; Serial: 1283
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (9x14x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 13.4 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 86.46 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 26.7 W/kg
SAR(1 g) = 12.5 W/kg; SAR(10 g) = 5.86 W/kg
Maximum value of SAR (measured) = 14.4 W/kg



0 dB = 14.5 W/kg = 11.61 dBW/kg

Date: 2019-03-16

Test Laboratory: SGS-SAR Lab

System Performance Check 2450MHz Body

DUT: D2450V2; Type: D2450V2; Serial: 733

Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1

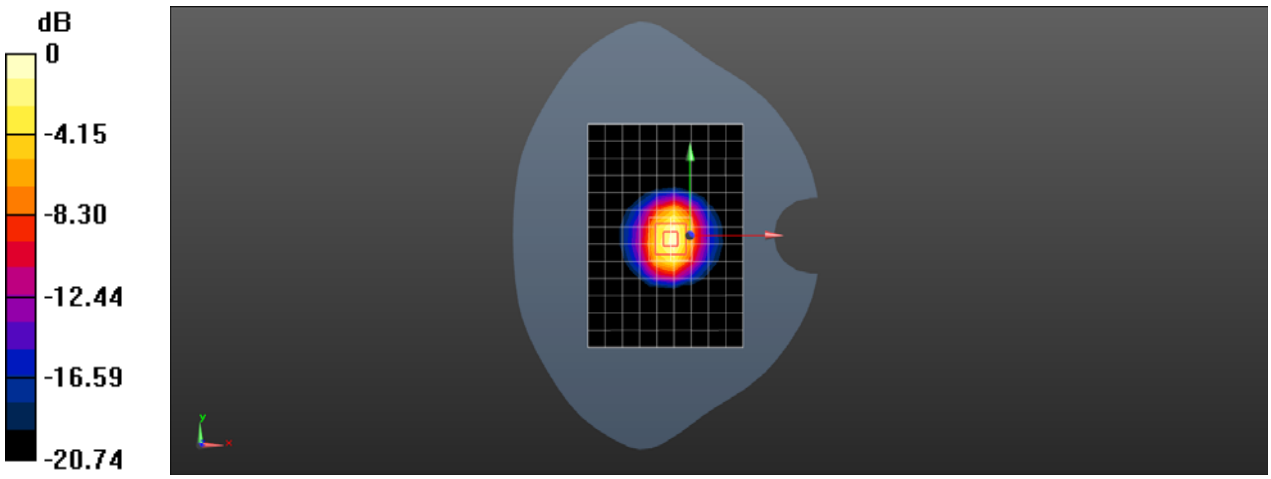
Medium: MSL2450;Medium parameters used: f = 2450 MHz; σ = 1.904 S/m; ε_r = 51.632; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3962; ConvF(7.7, 7.7, 7.7); Calibrated: 2019-02-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn896; Calibrated: 2018-11-08
- Phantom: SAM 2; Type: SAM; Serial: 1913
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (10x14x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 13.0 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 79.74 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 24.4 W/kg
SAR(1 g) = 12.5 W/kg; SAR(10 g) = 5.72 W/kg
Maximum value of SAR (measured) = 14.1 W/kg



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

Date: 2019-03-03

Test Laboratory: SGS-SAR Lab

System Performance Check 2600MHz Head

DUT: D2600V2; Type: D2600V2; Serial: 1125

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1

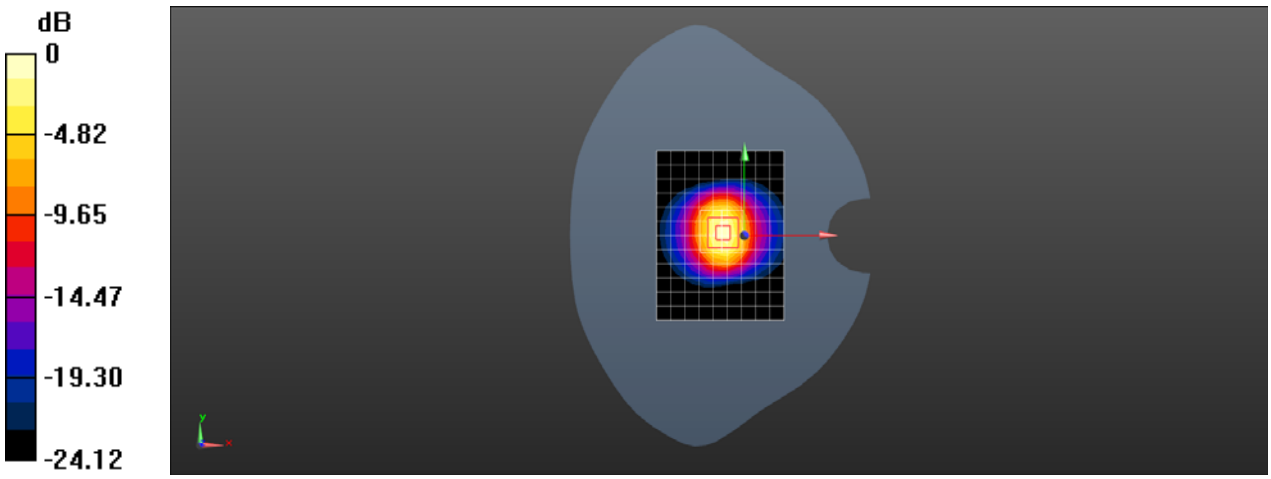
Medium: HSL2600;Medium parameters used: f = 2600 MHz; σ = 1.964 S/m; ε_r = 37.711; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.8, 6.8, 6.8); Calibrated: 2018-11-22;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn1428; Calibrated: 2019-01-11
- Phantom: SAM 4; Type: SAM; Serial: 1640
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (10x13x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 14.2 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 88.32 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 31.3 W/kg
SAR(1 g) = 13.8 W/kg; SAR(10 g) = 6.11 W/kg
Maximum value of SAR (measured) = 15.8 W/kg



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

Date: 2019-03-05

Test Laboratory: SGS-SAR Lab

System Performance Check 2600MHz Body

DUT: D2600V2; Type: D2600V2; Serial: 1125

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1

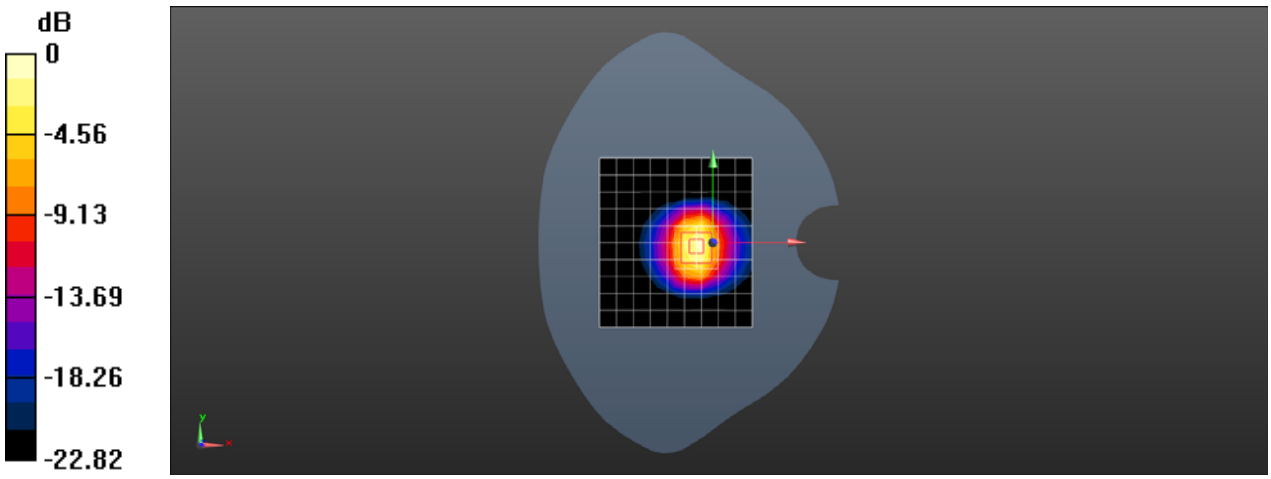
Medium: MSL2600;Medium parameters used: f = 2600 MHz; σ = 2.055 S/m; ε_r = 51.124; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3717; ConvF(6.99, 6.99, 6.99); Calibrated: 2018-11-22;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), z = -2.0, 31.0
- Electronics: DAE4 Sn1428; Calibrated: 2019-01-11
- Phantom: SAM 3; Type: SAM; Serial: 1912
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Body/d=10mm, Pin=250mW/Area Scan (10x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 16.6 W/kg

Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 76.35 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 26.1 W/kg
SAR(1 g) = 12.6 W/kg; SAR(10 g) = 5.79 W/kg
Maximum value of SAR (measured) = 19.6 W/kg



0 dB = 19.6 W/kg = 12.92 dBW/kg