

# Appendix A

## Detailed System Validation Results

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

Test Laboratory: SGS-SAR/HAC 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;  $\sigma = 1.003$  S/m;  $\epsilon_r = 56.301$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3962; ConvF(9.87, 9.87, 9.87); Calibrated: 2016/12/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1267; Calibrated: 2017/2/23
- Phantom: ELI v4.0; Type: ELI; Serial: 1123
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Body/d=15mm, Pin=250mW/Area Scan (7x13x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 3.05 W/kg

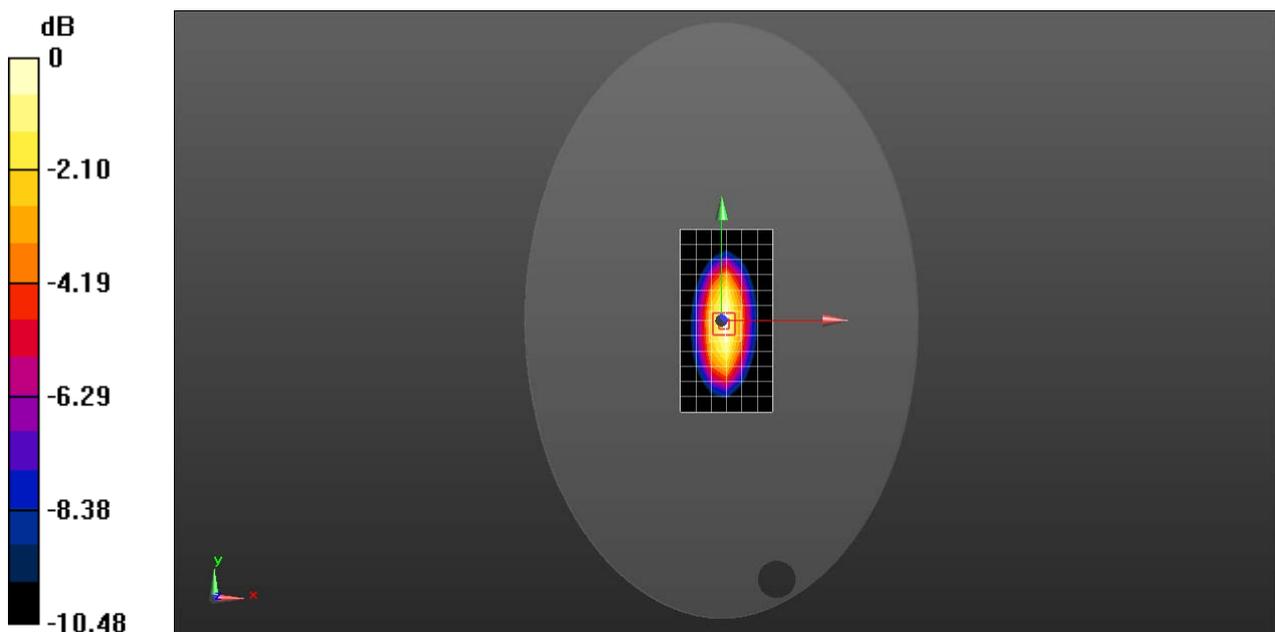
**Body/d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 51.21 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.69 W/kg

**SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.63 W/kg**

Maximum value of SAR (measured) = 3.14 W/kg



0 dB = 3.14 W/kg = 4.97 dBW/kg

Test Laboratory: SGS-SAR/HAC 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;  $\sigma = 0.992$  S/m;  $\epsilon_r = 56.316$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(8.8, 8.8, 8.8); Calibrated: 2017/1/13;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1374; Calibrated: 2016/8/23
- Phantom: ELI v4.0; Type: ELI; Serial: 1123
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Body/d=15mm, Pin=250mW/Area Scan (7x13x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 3.19 W/kg

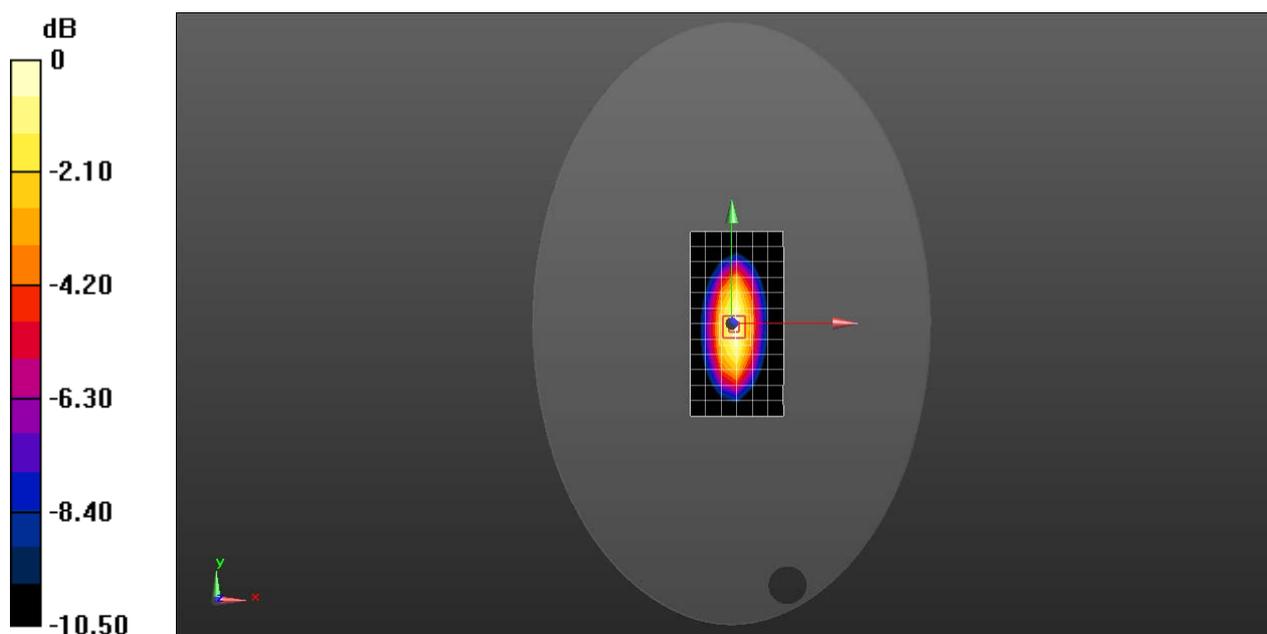
**Body/d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 52.58 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.88 W/kg

**SAR(1 g) = 2.6 W/kg; SAR(10 g) = 1.7 W/kg**

Maximum value of SAR (measured) = 3.29 W/kg



0 dB = 3.29 W/kg = 5.17 dBW/kg

Test Laboratory: SGS-SAR/HAC 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;  $\sigma = 1.537$  S/m;  $\epsilon_r = 53.088$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.36, 7.36, 7.36); Calibrated: 2017/1/13;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1374; Calibrated: 2016/8/23
- Phantom: ELI v4.0; 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:  $dx=15$ mm,  $dy=15$ mm

Maximum value of SAR (measured) = 12.5 W/kg

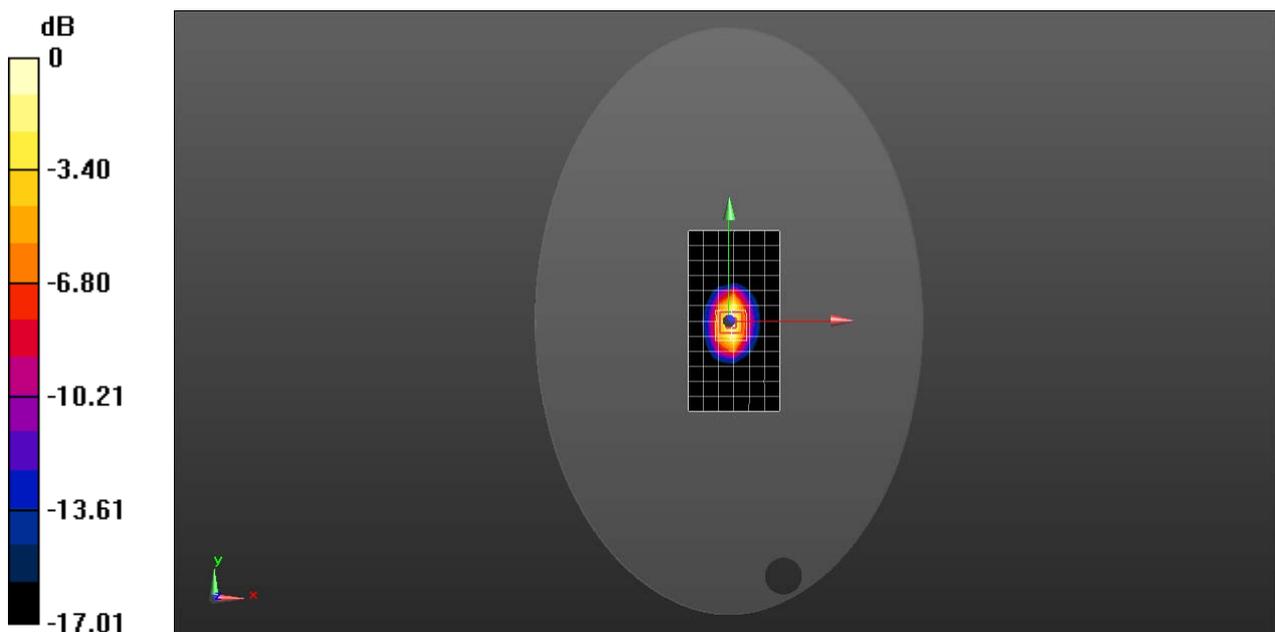
**Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 82.79 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 17.1 W/kg

**SAR(1 g) = 9.54 W/kg; SAR(10 g) = 5.05 W/kg**

Maximum value of SAR (measured) = 13.5 W/kg



0 dB = 13.5 W/kg = 11.30 dBW/kg

Test Laboratory: SGS-SAR/HAC 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;  $\sigma = 1.51$  S/m;  $\epsilon_r = 53.234$ ;  $\rho = 1000$  kg/m<sup>3</sup>

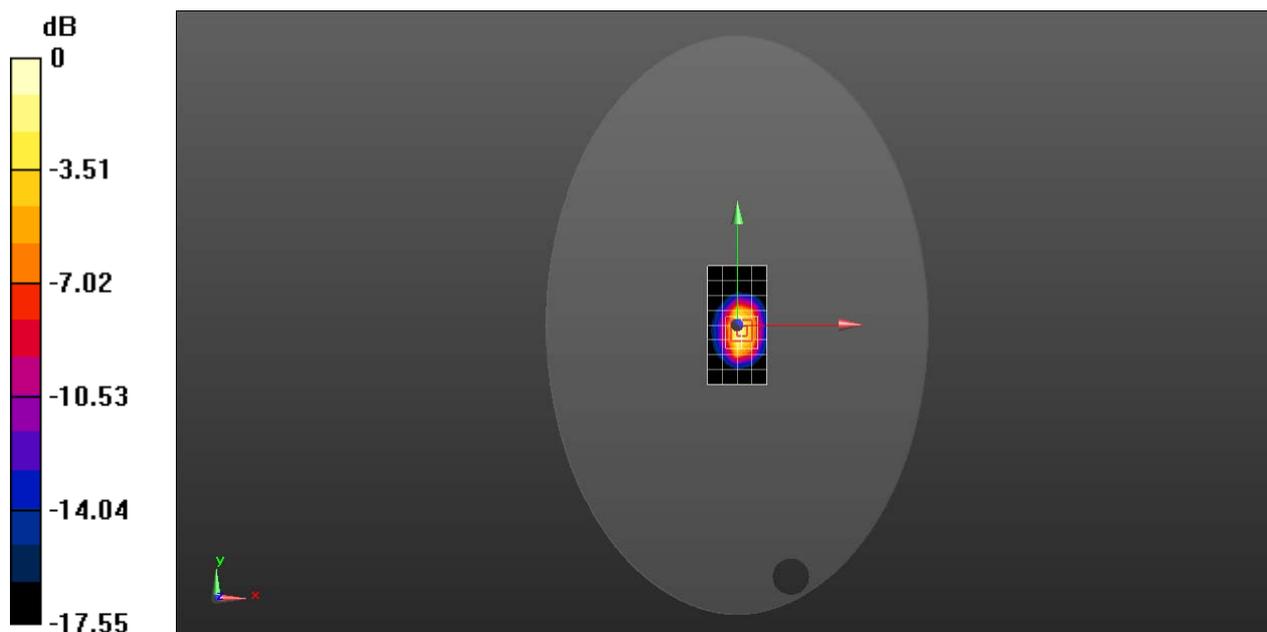
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3962; ConvF(7.82, 7.82, 7.82); Calibrated: 2016/12/19;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1267; Calibrated: 2017/2/23
- Phantom: ELI v4.0; Type: ELI; Serial: 1123
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Body/d=10mm, Pin=250mW/Area Scan (5x9x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 12.5 W/kg

**Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (5x5x7)/Cube 0:** Measurement grid:  
 $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 82.55 V/m; Power Drift = -0.01 dB  
Peak SAR (extrapolated) = 18.9 W/kg  
**SAR(1 g) = 10.8 W/kg; SAR(10 g) = 5.68 W/kg**  
Maximum value of SAR (measured) = 15.2 W/kg



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

Test Laboratory: SGS-SAR/HAC 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;  $\sigma = 1.513$  S/m;  $\epsilon_r = 53.19$ ;  $\rho = 1000$  kg/m<sup>3</sup>

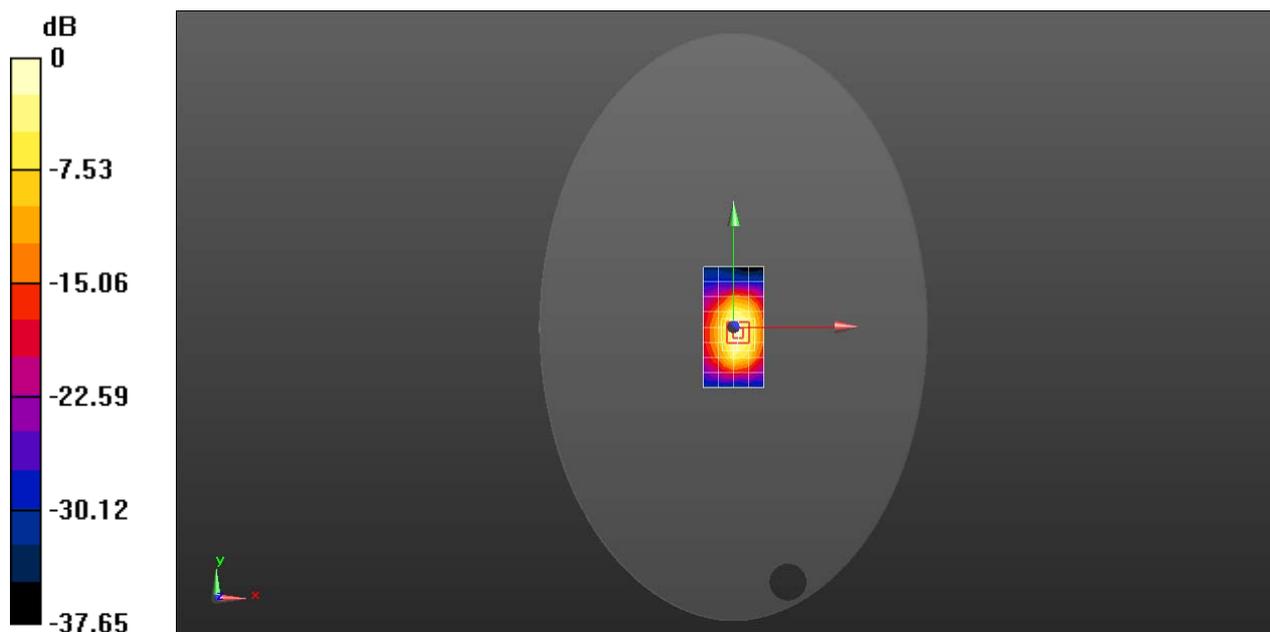
Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(7.06, 7.06, 7.06); Calibrated: 2017/1/13;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1374; Calibrated: 2016/8/23
- Phantom: ELI v4.0; Type: ELI; Serial: 1123
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Body/d=10mm, Pin=250mW/Area Scan (5x9x1):** Measurement grid:  $dx=15$ mm,  $dy=15$ mm  
Maximum value of SAR (measured) = 12.5 W/kg

**Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (5x5x7)/Cube 0:** Measurement grid:  
 $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm  
Reference Value = 82.51 V/m; Power Drift = -0.11 dB  
Peak SAR (extrapolated) = 18.9 W/kg  
**SAR(1 g) = 10.8 W/kg; SAR(10 g) = 5.67 W/kg**  
Maximum value of SAR (measured) = 15.2 W/kg



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

Test Laboratory: SGS-SAR/HAC 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;  $\sigma = 1.966$  S/m;  $\epsilon_r = 53.314$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(6.98, 6.98, 6.98); Calibrated: 2017/1/13;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1374; Calibrated: 2016/8/23
- Phantom: ELI v4.0; Type: ELI; Serial: 1123
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Body/d=10mm, Pin=250mW/Area Scan (10x14x1):** Measurement grid:  $dx=12$ mm,  $dy=12$ mm

Maximum value of SAR (measured) = 13.4 W/kg

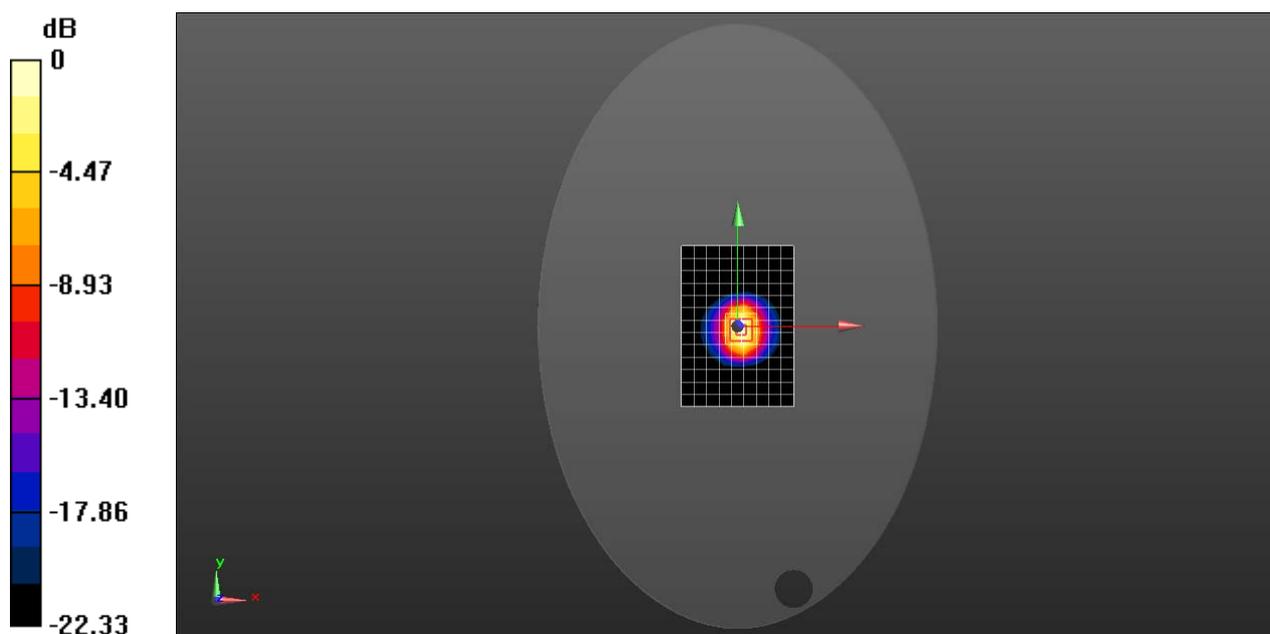
**Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 78.51 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 25.2 W/kg

**SAR(1 g) = 12.2 W/kg; SAR(10 g) = 5.59 W/kg**

Maximum value of SAR (measured) = 13.9 W/kg



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

Test Laboratory: SGS-SAR/HAC 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;  $\sigma = 2.132$  S/m;  $\epsilon_r = 52.944$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(6.83, 6.83, 6.83); Calibrated: 2017/1/13;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1374; Calibrated: 2016/8/23
- Phantom: ELI v4.0; Type: ELI; Serial: 1123
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Body/d=10mm, Pin=250mW/Area Scan (10x13x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm

Maximum value of SAR (measured) = 18.4 W/kg

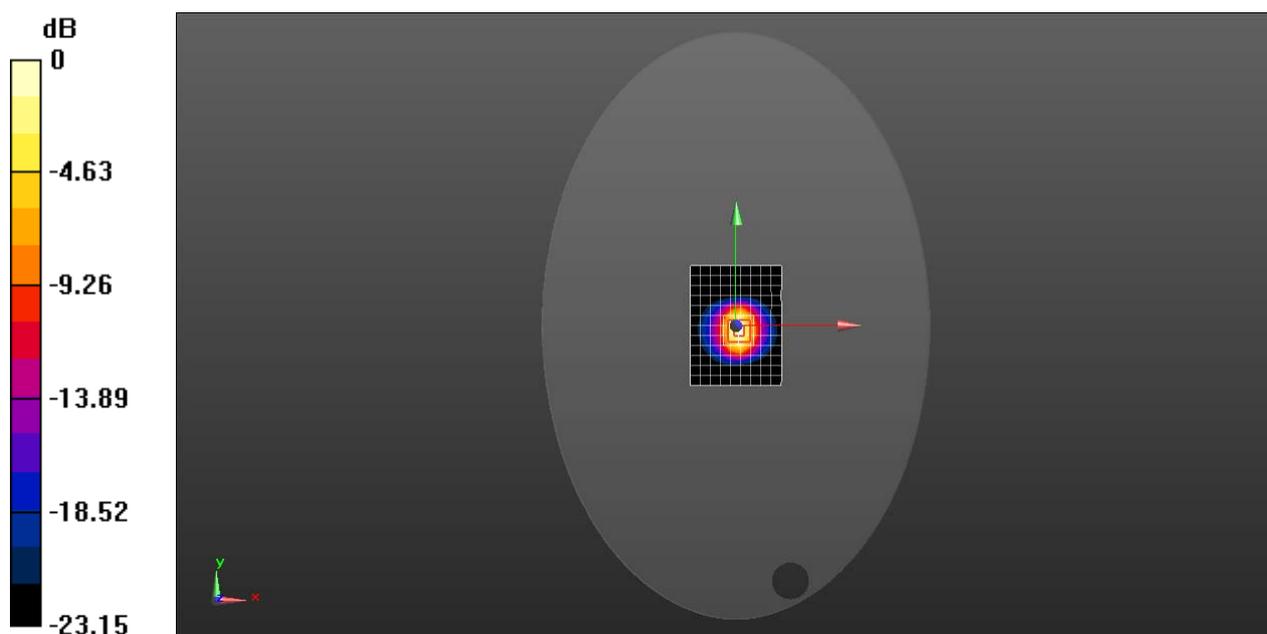
**Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 80.74 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 27.4 W/kg

**SAR(1 g) = 13.4 W/kg; SAR(10 g) = 5.97 W/kg**

Maximum value of SAR (measured) = 20.6 W/kg



0 dB = 20.6 W/kg = 13.14 dBW/kg

Test Laboratory: SGS-SAR/HAC 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;  $\sigma = 2.175$  S/m;  $\epsilon_r = 52.006$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3789; ConvF(6.83, 6.83, 6.83); Calibrated: 2017/1/13;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1374; Calibrated: 2016/8/23
- Phantom: ELI v4.0; Type: ELI; Serial: 1123
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

**Body/d=10mm, Pin=250mW/Area Scan (10x13x1):** Measurement grid:  $dx=10$ mm,  $dy=10$ mm

Maximum value of SAR (measured) = 18.7 W/kg

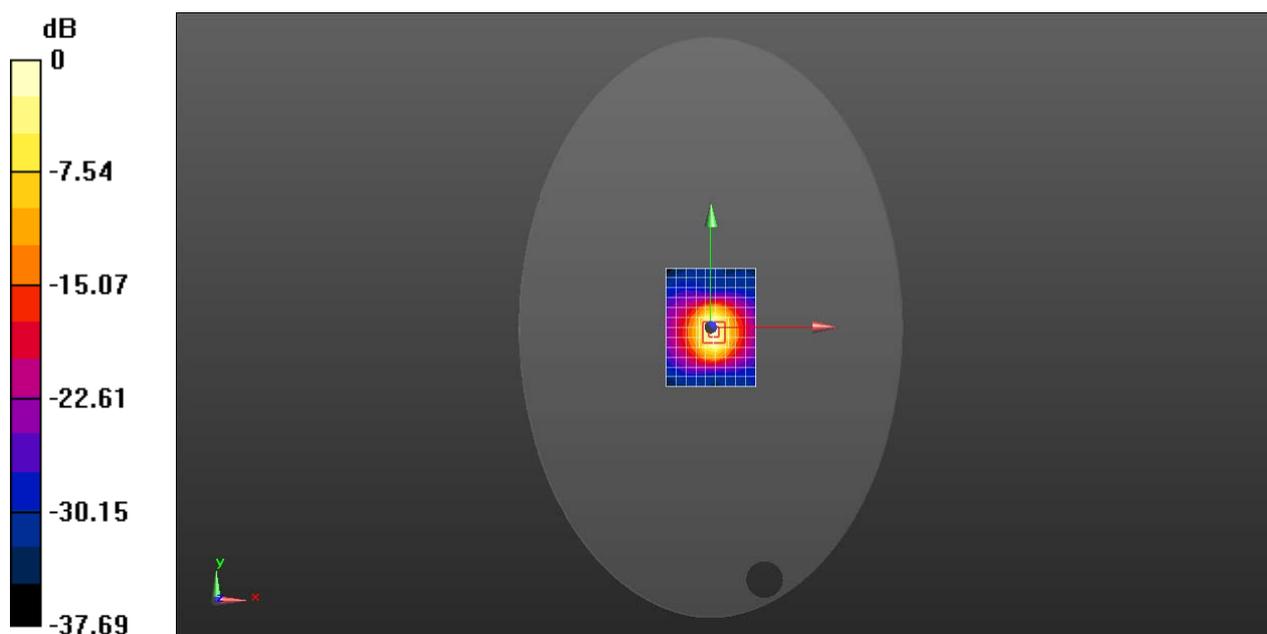
**Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 80.74 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 27.9 W/kg

**SAR(1 g) = 13.6 W/kg; SAR(10 g) = 6.1 W/kg**

Maximum value of SAR (measured) = 21.1 W/kg



0 dB = 21.1 W/kg = 13.24 dBW/kg