

# Appendix A

## Detailed System Validation Results

1. System Performance Check
System Performance Check 835MHz Head
System Performance Check 1900MHz Head

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: HSL835; Medium parameters used:  $f = 835$  MHz;  $\sigma = 0.89$  S/m;  $\epsilon_r = 40.972$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3982; ConvF(10.32, 10.32, 10.32); Calibrated: 2018/4/10;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1428; Calibrated: 2018/1/17
- Phantom: Twin phantom; Type: SAM1; Serial: 1141
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Body/d=15mm, Pin=250mW/Area Scan (61x121x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 3.09 W/kg

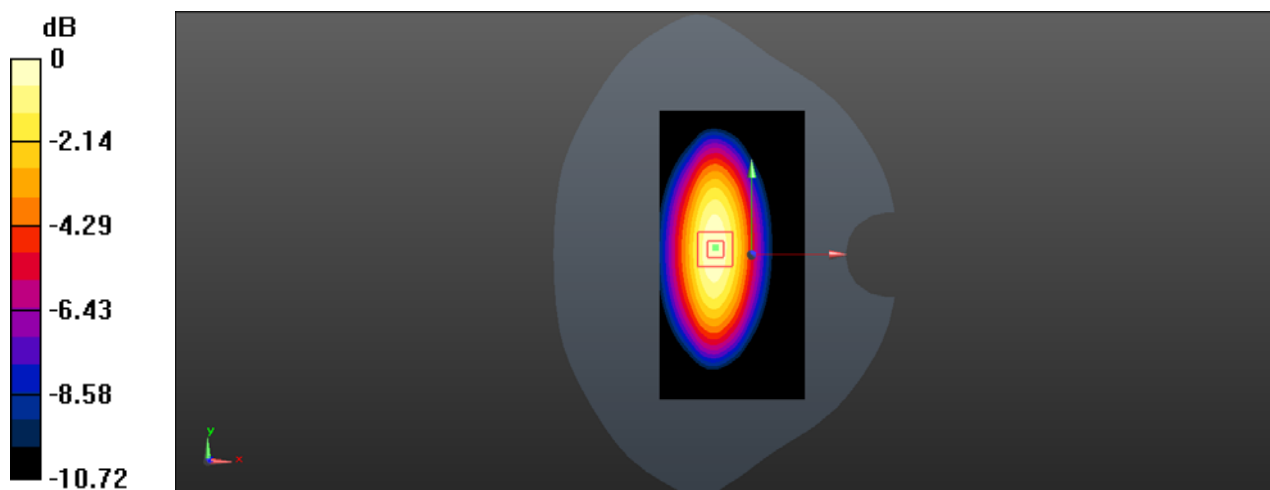
**Body/d=15mm, Pin=250mW/Zoom Scan (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 52.11 V/m; Power Drift = 0.06 dB

Peak SAR (extrapolated) = 3.68 W/kg

**SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.59 W/kg**

Maximum value of SAR (measured) = 3.11 W/kg



0 dB = 3.11 W/kg = 4.93 dBW/kg

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;  $\sigma = 0.98$  S/m;  $\epsilon_r = 53.955$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3982; ConvF(10.36, 10.36, 10.36); Calibrated: 2018/4/10;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1428; Calibrated: 2018/1/17
- Phantom: ELI5; Type: ELI5; Serial: 1143
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Body/d=15mm, Pin=250mW/Area Scan (61x121x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 3.04 W/kg

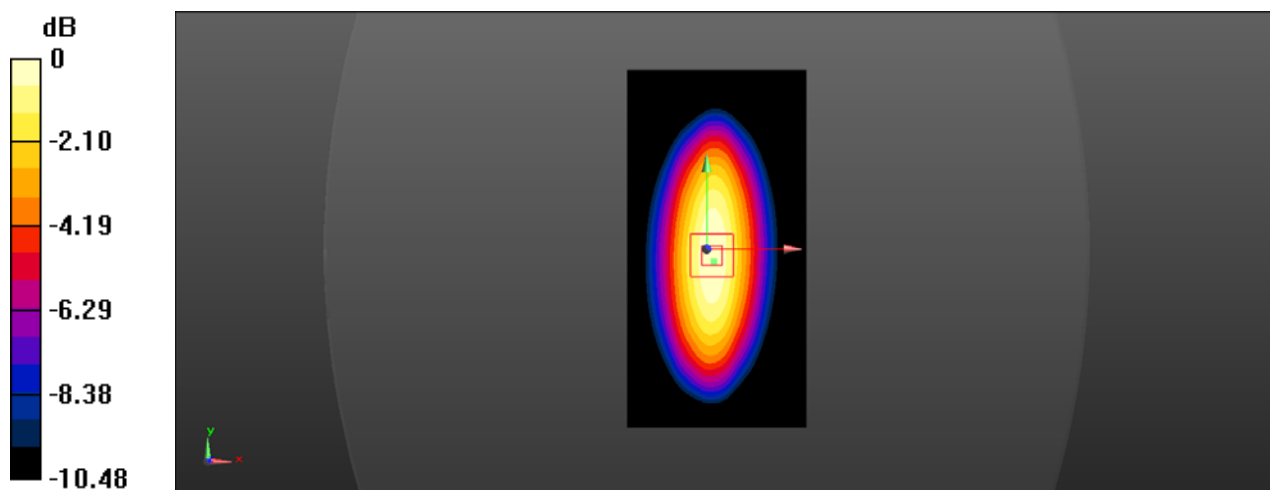
**Body/d=15mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

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

Peak SAR (extrapolated) = 3.61 W/kg

**SAR(1 g) = 2.43 W/kg; SAR(10 g) = 1.59 W/kg**

Maximum value of SAR (measured) = 3.07 W/kg



0 dB = 3.07 W/kg = 4.87 dBW/kg

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;  $\sigma = 1.373$  S/m;  $\epsilon_r = 40.58$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.75, 8.75, 8.75); Calibrated: 2017/8/24;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = 1.0, 31.0$
- Electronics: DAE4 Sn1267; Calibrated: 2017/11/28
- Phantom: Twin Phantom; Type: SAM1; Serial: 1824
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Body/d=10mm, Pin=250mW/Area Scan (61x101x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 11.5 W/kg

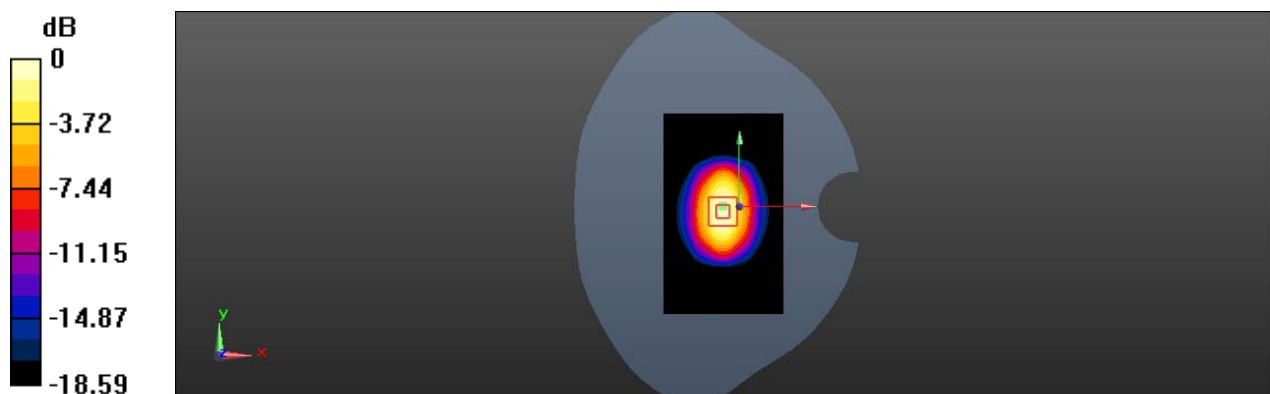
**Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 84.33 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 19.4 W/kg

**SAR(1 g) = 10.3 W/kg; SAR(10 g) = 5.25 W/kg**

Maximum value of SAR (measured) = 11.4 W/kg



0 dB = 11.4 W/kg = 10.57 dBW/kg

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;  $\sigma = 1.502$  S/m;  $\epsilon_r = 51.834$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3923; ConvF(8.44, 8.44, 8.44); Calibrated: 2017/8/24;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1267; Calibrated: 2017/11/28
- Phantom: ELI v5.0; Type: ELI V5.0 ; Serial: TP:1239
- DASY52 52.8.8(1258); SEMCAD X 14.6.10(7373)

**Body/d=10mm, Pin=250mW/Area Scan (41x81x1):** Interpolated grid:  $dx=1.500$  mm,  $dy=1.500$  mm

Maximum value of SAR (interpolated) = 16.1 W/kg

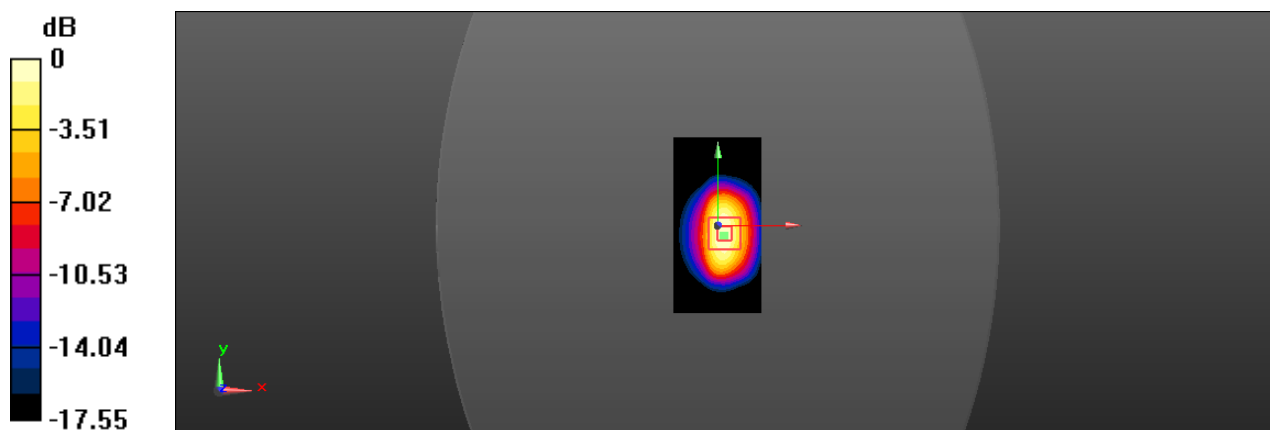
**Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (5x5x7)/Cube 0:** Measurement grid:  $dx=8$ mm,  $dy=8$ mm,  $dz=5$ mm

Reference Value = 82.65 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 18.9 W/kg

**SAR(1 g) = 10.6 W/kg; SAR(10 g) = 5.63 W/kg**

Maximum value of SAR (measured) = 15.1 W/kg



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