



# **Appendix A**

## **Detailed System Validation Results**

1. System Performance Check
System Performance Check 2450MHz Body
System Performance Check 5250MHz Body
System Performance Check 5600MHz Body
System Performance Check 5750MHz Body

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;  $\sigma = 1.998$  S/m;  $\epsilon_r = 52.708$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3962; ConvF(7.78, 7.78, 7.78); Calibrated: 2018-1-11;
- Sensor-Surface: 2mm (Mechanical Surface Detection),  $z = -2.0, 31.0$
- Electronics: DAE4 Sn1374; Calibrated: 2017-8-31
- Phantom: ELI V5.0; Type: ELI; Serial: 1123
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

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

Maximum value of SAR (measured) = 14.2 W/kg

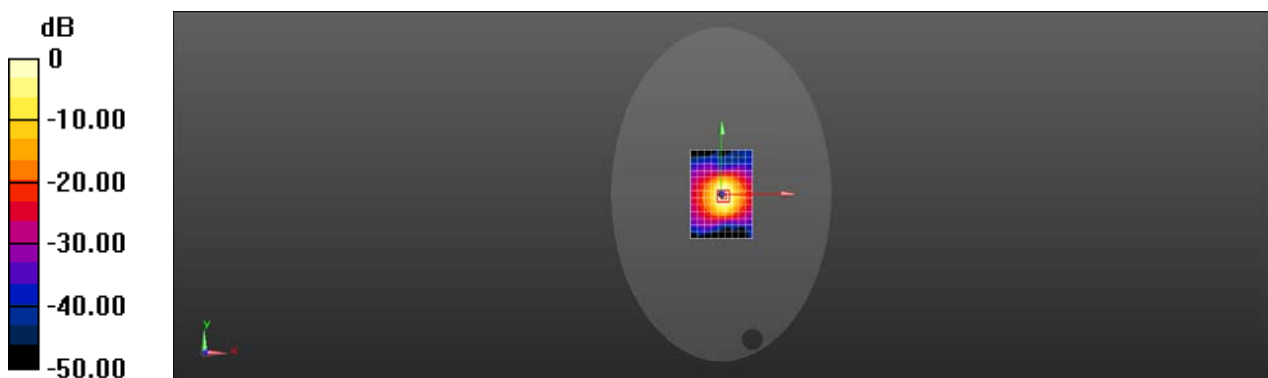
**Body/d=10mm, Pin=250mW/Zoom Scan (7x7x7) (7x7x7)/Cube 0:** Measurement grid:  $dx=5$ mm,  $dy=5$ mm,  $dz=5$ mm

Reference Value = 80.343 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 26.6 W/kg

**SAR(1 g) = 12.9 W/kg; SAR(10 g) = 5.93 W/kg**

Maximum value of SAR (measured) = 14.7 W/kg



0 dB = 14.2 W/kg = 11.54 dBW/kg

Test Laboratory: SGS-SAR Lab

## System Performance Check 5.25GHz Body

**DUT: D5GHzV2; Type: D5GHzV2; Serial: 1165**

Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1

Medium: MSL5GHz; Medium parameters used:  $f = 5250$  MHz;  $\sigma = 5.426$  S/m;  $\epsilon_r = 48.122$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3962; ConvF(5.22, 5.22, 5.22); Calibrated: 2018-1-11;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = -2.0, 23.0$
- Electronics: DAE4 Sn1374; Calibrated: 2017-8-31
- Phantom: ELI V5.0; Type: ELI; Serial: 1123
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**Body/d=10mm, Pin=100mW, f=5250 MHz/Area Scan (10x10x1):** Measurement grid:

$dx=10$ mm,  $dy=10$ mm

Maximum value of SAR (measured) = 21.7 W/kg

**Body/d=10mm, Pin=100mW, f=5250 MHz/Zoom Scan (4x4x1.4mm, graded),**

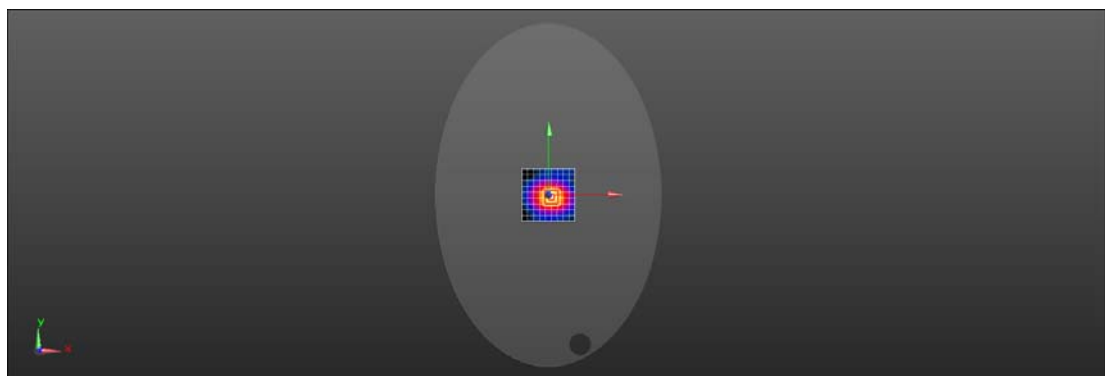
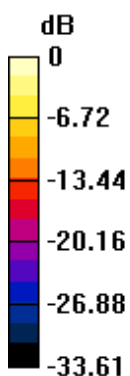
**dist=1.4mm (8x8x7)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 53.793 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 36.3 W/kg

**SAR(1 g) = 8.1 W/kg; SAR(10 g) = 2.25 W/kg**

Maximum value of SAR (measured) = 20.0 W/kg



0 dB = 21.7 W/kg = 13.37 dBW/kg

Test Laboratory: SGS-SAR Lab

## System Performance Check 5.6GHz Body

**DUT: D5GHzV2; Type: D5GHzV2; Serial: 1165**

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1

Medium: MSL5GHz; Medium parameters used:  $f = 5600$  MHz;  $\sigma = 5.85$  S/m;  $\epsilon_r = 47.19$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3962; ConvF(4.45, 4.45, 4.45); Calibrated: 2018-1-11;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = -2.0, 23.0$
- Electronics: DAE4 Sn1374; Calibrated: 2017-8-31
- Phantom: ELI V5.0; Type: ELI; Serial: 1123
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**Body/d=10mm, Pin=100mW, f=5600 MHz/Area Scan (10x10x1):** Measurement grid:

$dx=10$ mm,  $dy=10$ mm

Maximum value of SAR (measured) = 23.2 W/kg

**Body/d=10mm, Pin=100mW, f=5600 MHz/Zoom Scan (4x4x1.4mm, graded),**

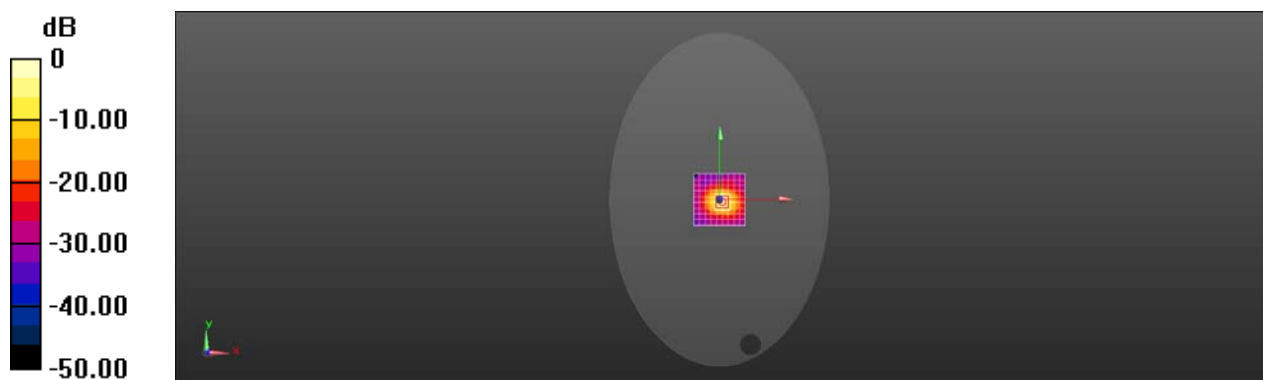
**dist=1.4mm (8x8x7)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 54.394 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 39.7 W/kg

**SAR(1 g) = 8.49 W/kg; SAR(10 g) = 2.35 W/kg**

Maximum value of SAR (measured) = 21.2 W/kg



0 dB = 23.2 W/kg = 13.66 dBW/kg

Test Laboratory: SGS-SAR Lab

## System Performance Check 5.75GHz Body

**DUT: D5GHzV2; Type: D5GHzV2; Serial: 1165**

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1

Medium: MSL5GHz; Medium parameters used:  $f = 5750$  MHz;  $\sigma = 6.017$  S/m;  $\epsilon_r = 46.85$ ;  $\rho = 1000$  kg/m<sup>3</sup>

Phantom section: Flat Section

DASY 5 Configuration:

- Probe: EX3DV4 - SN3962; ConvF(4.59, 4.59, 4.59); Calibrated: 2018-1-11;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection),  $z = -2.0, 23.0$
- Electronics: DAE4 Sn1374; Calibrated: 2017-8-31
- Phantom: ELI V5.0; Type: ELI; Serial: 1123
- DASY52 52.8.7(1137); SEMCAD X 14.6.10(7164)

**Body/d=10mm, Pin=100mW, f=5750 MHz/Area Scan (10x10x1):** Measurement grid:

$dx=10$ mm,  $dy=10$ mm

Maximum value of SAR (measured) = 20.1 W/kg

**Body/d=10mm, Pin=100mW, f=5750 MHz/Zoom Scan (4x4x1.4mm, graded),**

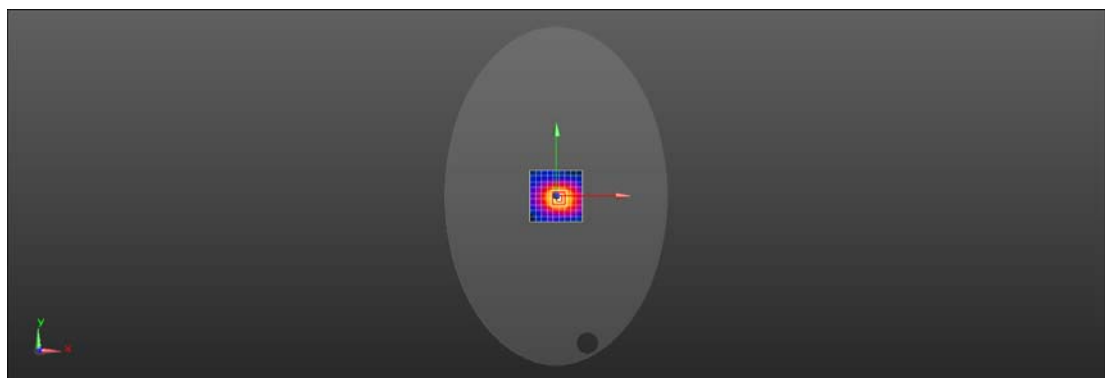
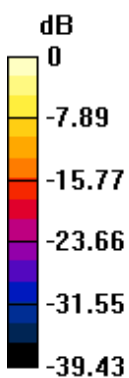
**dist=1.4mm (8x8x7)/Cube 0:** Measurement grid:  $dx=4$ mm,  $dy=4$ mm,  $dz=1.4$ mm

Reference Value = 51.652 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 35.9 W/kg

**SAR(1 g) = 7.41 W/kg; SAR(10 g) = 2.05 W/kg**

Maximum value of SAR (measured) = 18.6 W/kg



0 dB = 20.1 W/kg = 13.04 dBW/kg