

APPENDIX A. SAR System Verification Data

The plots for system verification with largest deviation for each SAR system combination are shown as follows.

Date/Time: 01/12/2014

Test Laboratory: Cerpass Lab

Dipole Calibration for Body Tissue Pin=250mW, dist=10mm, f=2450 MHz

DUT: Dipole 2450 MHz D2450V2; Type: SA AAD 245 BB

Communication System: CW; Frequency: 2450 MHz

Medium parameters used: $f = 2450$ MHz; $\sigma = 1.94$ S/m; $\epsilon_r = 52.72$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Meas. Ambient Temp (celsius) -22°C; Input power-250mW

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(7.63, 7.63, 7.63); Calibrated: 2014/5/23;
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1379; Calibrated: 2014/5/19
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Dipole Calibration for Body Tissue/ Pin=250mW, dist=10mm, f=2450MHz/Area Scan (4x6x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 10.4 W/kg

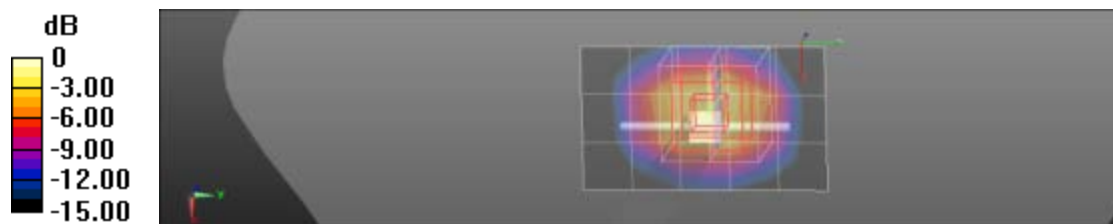
Configuration/Dipole Calibration for Body Tissue/ Pin=250mW, dist=10mm, f=2450MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 89.29 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 27.5 W/kg

SAR(1 g) = 12.8 W/kg; SAR(10 g) = 5.85 W/kg

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



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

Date/Time: 02/12/2014

Test Laboratory: Cerpass Lab

Dipole Calibration for Body Tissue Pin=100mW, dist=10mm, f=5200 MHz

DUT: Dipole 5200MHz D5GHzV2; Type: SA AAD 510 BB

Communication System: CW; Frequency: 5200 MHz

Medium parameters used: $f = 5200$ MHz; $\sigma = 5.28$ S/m; $\epsilon_r = 49.09$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Meas. Ambient Temp (celsius) -22°C; Input power-100mW

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.61, 4.61, 4.61); Calibrated: 2014/5/23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1379; Calibrated: 2014/5/19
- Phantom: ELI v5.0; Type: QDOVA002AA
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200

MHz/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 18.9 W/kg

Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5200

MHz/Zoom Scan (9x9x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 40.72 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 31.1 W/kg

SAR(1 g) = 7.45 W/kg; SAR(10 g) = 2.09 W/kg

Maximum value of SAR (measured) = 19.0 W/kg



0 dB = 19.0 W/kg = 12.79 dBW/kg

Date/Time: 03/12/2014

Test Laboratory: Cerpass Lab

Dipole Calibration for Body Tissue Pin=100mW, dist=10mm, f=5600 MHz

DUT: Dipole 5600MHz D5GHzV2; Type: SA AAD 510 BB

Communication System: CW; Frequency: 5600 MHz

Medium parameters used: $f = 5600$ MHz; $\sigma = 5.75$ S/m; $\epsilon_r = 48.49$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Meas. Ambient Temp (celsius) -22°C; Input power-100mW

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.23, 4.23, 4.23); Calibrated: 2014/5/23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1379; Calibrated: 2014/5/19
- Phantom: ELI v5.0; Type: QDOVA002AA
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600

MHz/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 21.0 W/kg

Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5600

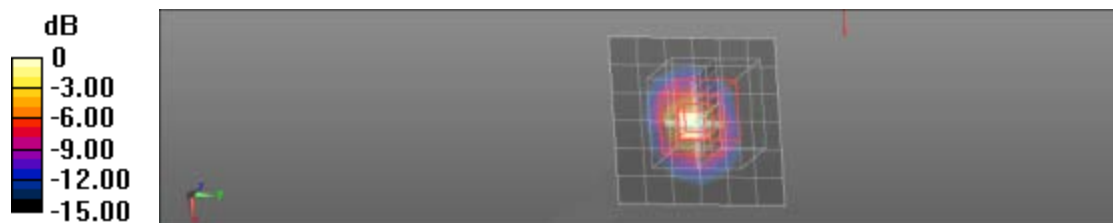
MHz/Zoom Scan (9x9x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 41.87 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 38.0 W/kg

SAR(1 g) = 8.4 W/kg; SAR(10 g) = 2.33 W/kg

Maximum value of SAR (measured) = 22.0 W/kg



0 dB = 22.0 W/kg = 13.42 dBW/kg

Date/Time: 04/12/2014

Test Laboratory: Cerpass Lab

Dipole Calibration for Body Tissue Pin=100mW, dist=10mm, f=5800 MHz

DUT: Dipole 5800MHz D5GHzV2; Type: SA AAD 510 BB

Communication System: CW; Frequency: 5800 MHz

Medium parameters used: $f = 5800$ MHz; $\sigma = 5.99$ S/m; $\epsilon_r = 48.23$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Meas. Ambient Temp (celsius) -22°C; Input power-100mW

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2007)

DASY Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.25, 4.25, 4.25); Calibrated: 2014/5/23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1379; Calibrated: 2014/5/19
- Phantom: ELI v5.0; Type: QDOVA002AA
- DASYS 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800

MHz/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 18.9 W/kg

Configuration/Dipole Calibration for Body Tissue/Pin=100mW, dist=10mm, f=5800

MHz/Zoom Scan (9x9x6)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm

Reference Value = 37.25 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 34.2 W/kg

SAR(1 g) = 7.24 W/kg; SAR(10 g) = 2.02 W/kg

Maximum value of SAR (measured) = 19.4 W/kg



0 dB = 19.4 W/kg = 12.88 dBW/kg

APPENDIX B. SAR measurement Data

The SAR plots for highest measured SAR in each exposure configuration, wireless mode and frequency band combination, and measured SAR > 1.5 W/kg are shown as follows.

Date/Time: 01/12/2014

Test Laboratory: Cerpass Lab

DUT: 802.11 a/b/g/n/ac+ BT 4.1 M.2 Type Card; Type: NFA344

Procedure Name: 802.11b 2437MHz Mid Body-Worn_Tablet_Edge 1_2Tx

CDD_0mm_SKU 1

Communication System Band: 802.11b; Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.928$ S/m; $\epsilon_r = 52.738$; $\rho = 1000$ kg/m³, Phantom section: Flat Section ; Tissue Temp(celsius)- 21°C

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3927; ConvF(7.63, 7.63, 7.63); Calibrated: 2014/5/23;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1379; Calibrated: 2014/5/19
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.8 (8);

Configuration/802.11b 2437MHz Mid Body-Worn_Tablet_Edge 1_2Tx

CDD_0mm_SKU 1/Area Scan (6x21x1): Measurement grid: dx=12mm, dy=12mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.690 W/kg

Configuration/802.11b 2437MHz Mid Body-Worn_Tablet_Edge 1_2Tx

CDD_0mm_SKU 1/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 11.89 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 0.866 W/kg

SAR(1 g) = 0.426 W/kg; SAR(10 g) = 0.218 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.647 W/kg

Configuration/802.11b 2437MHz Mid Body-Worn_Tablet_Edge 1_2Tx

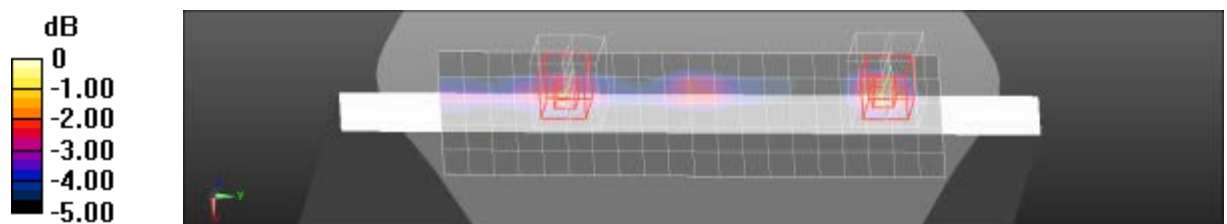
CDD_0mm_SKU 1/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm, Reference Value = 11.89 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.559 W/kg; SAR(10 g) = 0.262 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.866 W/kg



0 dB = 0.866 W/kg = -0.62 dBW/kg

Date/Time: 02/12/2014

Test Laboratory: Cerpass Lab

DUT: 802.11 a/b/g/n/ac+ BT 4.1 M.2 Type Card; Type: NFA345

Procedure Name: 802.11a 5240MHz Body-Worn_Tablet-Edge 1_Main_0mm_SKU 2

Communication System Band: 802.11a (20MHz); Frequency: 5240 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5240$ MHz; $\sigma = 5.368$ S/m; $\epsilon_r = 49.062$; $\rho = 1000$ kg/m³, Phantom section: Flat Section ; Tissue Temp(celsius)- 21°C

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.61, 4.61, 4.61); Calibrated: 2014/5/23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1379; Calibrated: 2014/5/19
- Phantom: ELI v5.0; Type: QDOVA002AA
- Measurement SW: DASYS2, Version 52.8 (8);

Configuration/802.11a 5240MHz Body-Worn_Tablet-Edge 1_Main_0mm_SKU 2/Area

Scan (7x13x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 2.22 W/kg

Configuration/802.11a 5240MHz Body-Worn_Tablet-Edge 1_Main_0mm_SKU

2/Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 0.8480 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 5.25 W/kg

SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.283 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 2.51 W/kg



0 dB = 2.51 W/kg = 4.00 dBW/kg

Date/Time: 02/12/2014

Test Laboratory: Cerpass Lab

DUT: 802.11 a/b/g/n/ac+ BT 4.1 M.2 Type Card; Type: NFA344

Procedure Name: 802.11a 5260MHz Body-Worn_Tablet-Edge1_2Tx CDD_0mm_SKU 1

Communication System Band: 802.11a (20MHz); Frequency: 5260 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5260$ MHz; $\sigma = 5.391$ S/m; $\epsilon_r = 48.996$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Tissue Temp(celsius)- 21 °C

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.61, 4.61, 4.61); Calibrated: 2014/5/23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1379; Calibrated: 2014/5/19
- Phantom: ELI v5.0; Type: QDOVA002AA
- Measurement SW: DASYS2, Version 52.8 (8);

Configuration/802.11a 5260MHz Body-Worn_Tablet-Edge 1_2Tx CDD_0mm_SKU

1/Area Scan (7x25x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 2.12 W/kg

Configuration/802.11a 5260MHz Body-Worn_Tablet-Edge 1_2Tx CDD_0mm_SKU

1/Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

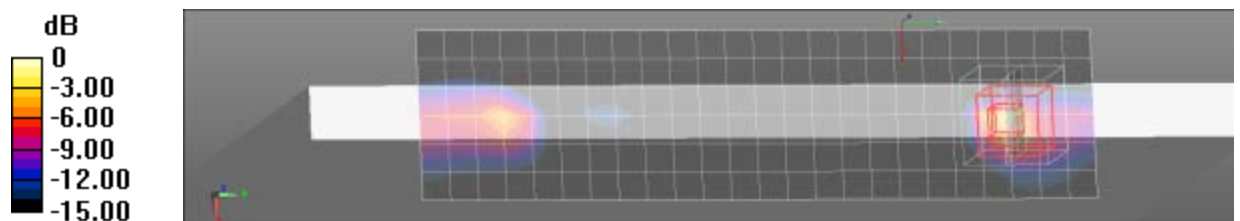
Reference Value = 1.876 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 5.62 W/kg

SAR(1 g) = 1.23 W/kg; SAR(10 g) = 0.296 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 2.79 W/kg



0 dB = 2.79 W/kg = 4.46 dBW/kg

Date/Time: 03/12/2014

Test Laboratory: Cerpass Lab

DUT: 802.11 a/b/g/n/ac+ BT 4.1 M.2 Type Card; Type: NFA344

Procedure Name: 802.11a 5520MHz Body-Worn_Tablet-Edge 1_2Tx CDD_0mm_SKU 1

Communication System Band: 802.11a (20MHz); Frequency: 5520 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5520$ MHz; $\sigma = 5.673$ S/m; $\epsilon_r = 48.582$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Tissue Temp(celsius)- 21 °C

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.3, 4.3, 4.3); Calibrated: 2014/5/23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1379; Calibrated: 2014/5/19
- Phantom: ELI v5.0; Type: QDOVA002AA
- Measurement SW: DASY52, Version 52.8 (8);

Configuration/802.11a 5520MHz Body-Worn_Tablet-Edge 1_2Tx CDD_0mm_SKU

1/Area Scan (7x25x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 2.72 W/kg

Configuration/802.11a 5520MHz Body-Worn_Tablet-Edge 1_2Tx CDD_0mm_SKU

1/Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

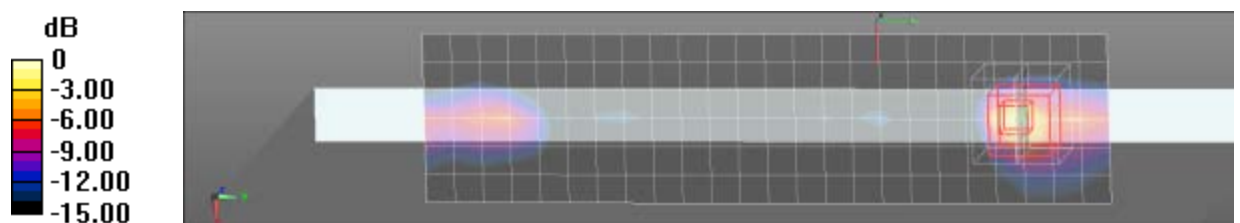
Reference Value = 2.548 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 6.40 W/kg

SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.336 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 3.06 W/kg



0 dB = 3.06 W/kg = 4.86 dBW/kg

Date/Time: 04/12/2014

Test Laboratory: Cerpass Lab

DUT: 802.11 a/b/g/n/ac+ BT 4.1 M.2 Type Card; Type: NFA345

Procedure Name: 802.11ac(20MHz) 5745MHz Body-Worn_Tablet-Edge

1_Main_0mm_SKU 2

Communication System Band: 802.11ac(20MHz); Frequency: 5745 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 5.936$ S/m; $\epsilon_r = 48.277$; $\rho = 1000$ kg/m³

Phantom section: Flat Section ; Tissue Temp(celsius)- 21 °C

Measurement Standard: DASYS (IEEE/IEC/ANSI C63.19-2011)

DASY5 Configuration:

- Probe: EX3DV4 - SN3927; ConvF(4.25, 4.25, 4.25); Calibrated: 2014/5/23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1379; Calibrated: 2014/5/19
- Phantom: ELI v5.0; Type: QDOVA002AA
- Measurement SW: DASY52, Version 52.8 (8);

Configuration/802.11ac(20MHz) 5745MHz Body-Worn_Tablet-Edge

1_Main_0mm_SKU 2/Area Scan (7x13x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 2.02 W/kg

Configuration/802.11ac(20MHz) 5745MHz Body-Worn_Tablet-Edge

1_Main_0mm_SKU 2/Zoom Scan (7x7x6)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=2mm

Reference Value = 1.683 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 5.78 W/kg

SAR(1 g) = 1.17 W/kg; SAR(10 g) = 0.291 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 2.65 W/kg



0 dB = 2.65 W/kg = 4.23 dBW/kg

APPENDIX C. Calibration Data for Probe, Dipole and DAE

Please refer to attached files.

APPENDIX D. Photographs of EUT and Setup

Please refer to attached files.