Appendix B:SAR Measurement results Plots

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GSM850
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WCDMA Band V
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WiFi 2.4G

Date/Time: 12/25/2017 9:24:04 AM

Test Laboratory: CTI SAR Lab

Smart POS Terminal GSM850 GPRS 2TS 190CH Back Side 0mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

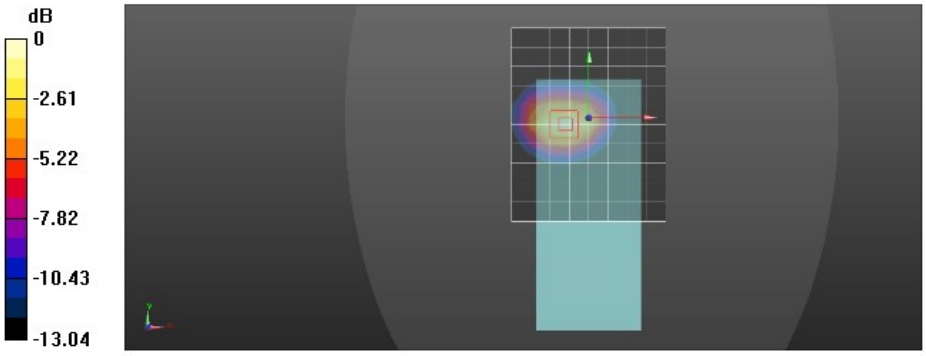
Communication System: UID 0, GPRS 2TS (0); Communication System Band: GSM850 GPRS 2TS; Frequency: 836.6 MHz;Duty Cycle: 1:4.10015
Medium parameters used: f = 837 MHz; σ = 0.962 S/m; ε_r = 53.654; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(10.19, 10.19, 10.19); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.55 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.72 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 4.42 W/kg
SAR(1 g) = 2.64 W/kg; SAR(10 g) = 1.56 W/kg
Maximum value of SAR (measured) = 3.59 W/kg



0 dB = 3.59 W/kg = 5.55 dBW/kg

Date/Time: 12/25/2017 11:36:53 AM

Test Laboratory: CTI SAR Lab

Smart POS Terminal GSM850 GPRS 2TS 251CH Back Side 5mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

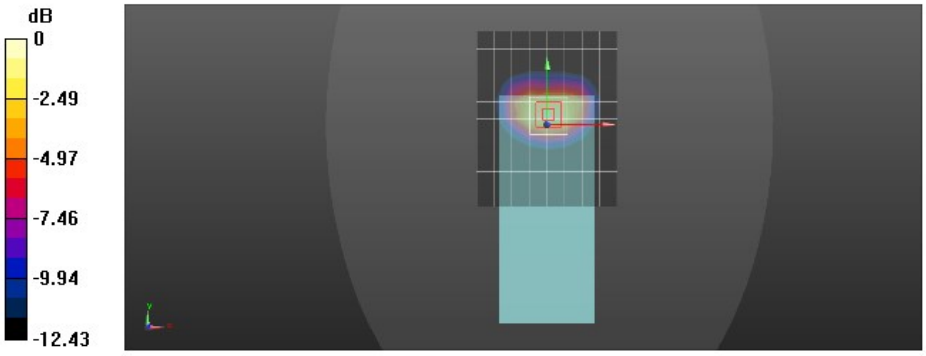
Communication System: UID 0, GPRS 2TS (0); Communication System Band: GSM850 GPRS 2TS; Frequency: 848.8 MHz;Duty Cycle: 1:4.10015
Medium parameters used: f = 849 MHz; σ = 0.971 S/m; ε_r = 53.527; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(10.19, 10.19, 10.19); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.51 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.25 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 2.08 W/kg
SAR(1 g) = 1.25 W/kg; SAR(10 g) = 0.749 W/kg
Maximum value of SAR (measured) = 1.65 W/kg



0 dB = 1.65 W/kg = 2.17 dBW/kg

Date/Time: 12/21/2017 9:30:49 AM

Test Laboratory: CTI SAR Lab

Smart POS Terminal GSM1900 GPRS 2TS 661CH Back Side 0mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

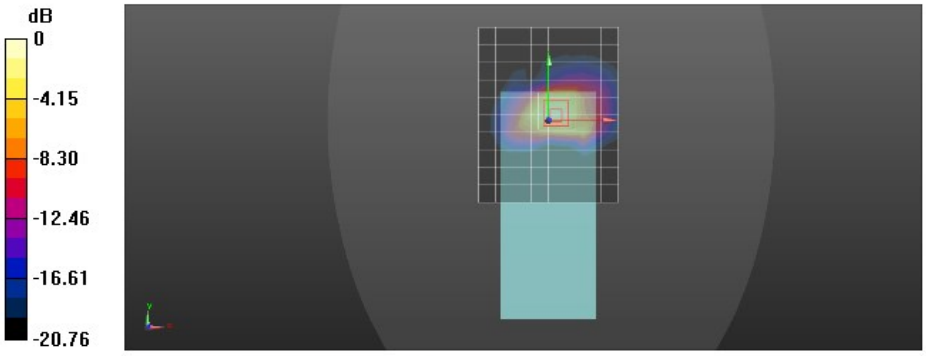
Communication System: UID 0, GPRS 2TS (0); Communication System Band: GSM1900 GPRS 2TS; Frequency: 1880 MHz;Duty Cycle: 1:4.10015
Medium parameters used: f = 1880 MHz; σ = 1.503 S/m; ε_r = 52.368; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(8.02, 8.02, 8.02); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.994 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.60 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.895 W/kg; SAR(10 g) = 0.517 W/kg
Maximum value of SAR (measured) = 1.11 W/kg



0 dB = 1.11 W/kg = 0.45 dBW/kg

Date/Time: 12/21/2017 11:42:01 AM

Test Laboratory: CTI SAR Lab

Smart POS Terminal GSM1900 GPRS 2TS 810CH Back Side 5mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

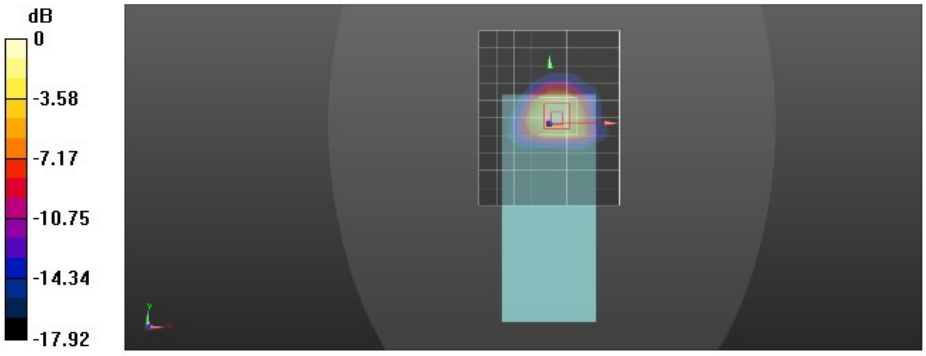
Communication System: UID 0, GPRS 2TS (0); Communication System Band: GSM1900 GPRS 2TS; Frequency: 1909.8 MHz;Duty Cycle: 1:4.10015
Medium parameters used: f = 1910 MHz; σ = 1.537 S/m; ε_r = 52.342; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(8.02, 8.02, 8.02); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.36 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.39 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.74 W/kg
SAR(1 g) = 1.15 W/kg; SAR(10 g) = 0.681 W/kg
Maximum value of SAR (measured) = 1.44 W/kg



0 dB = 1.44 W/kg = 1.58 dBW/kg

Date/Time: 12/25/2017 1:25:24 PM

Test Laboratory: CTI SAR Lab

Smart POS Terminal UMTS Band V 4182CH Back Side 0mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

Communication System: UID 0, UMTS-FDD(WCDMA) (0); Communication System Band: Band V; Frequency: 836.4 MHz;Duty Cycle: 1:2.18776
Medium parameters used (interpolated): f = 836.4 MHz; σ = 0.962 S/m; ε_r = 53.642; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

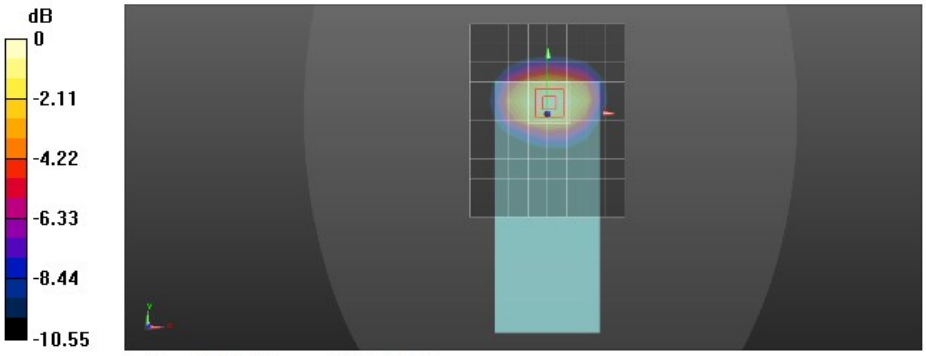
- Probe: EX3DV4 - SN7328; ConvF(10.19, 10.19, 10.19); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x11x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.281 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.03 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.320 W/kg
SAR(1 g) = 0.236 W/kg; SAR(10 g) = 0.163 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.283 W/kg



0 dB = 0.283 W/kg = -5.48 dBW/kg

Date/Time: 12/25/2017 3:35:48 PM

Test Laboratory: CTI SAR Lab

Smart POS Terminal UMTS Band V 4233CH Back Side 5mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

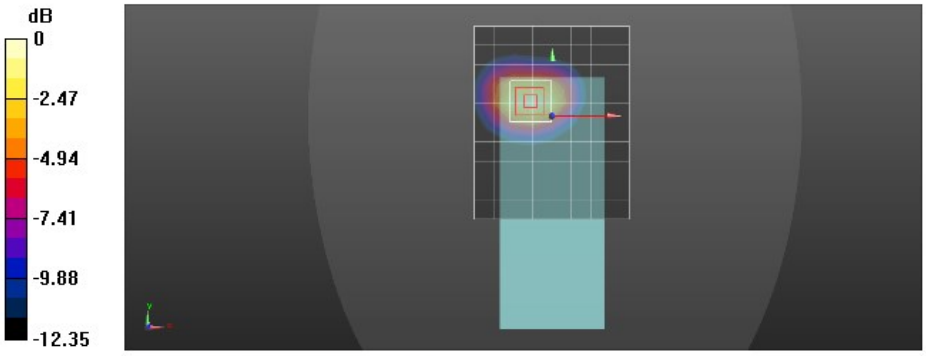
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Communication System Band: Band V; Frequency: 846.6 MHz;Duty Cycle: 1:2.18776
Medium parameters used: f = 847 MHz; σ = 0.967 S/m; ε_r = 53.606; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(10.19, 10.19, 10.19); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.31 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.26 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.618 W/kg
Maximum value of SAR (measured) = 1.33 W/kg



0 dB = 1.33 W/kg = 1.24 dBW/kg

Date/Time: 12/21/2017 1:31:29 PM

Test Laboratory: CTI SAR Lab

Smart POS Terminal UMTS Band II 9400CH Back Side 0mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

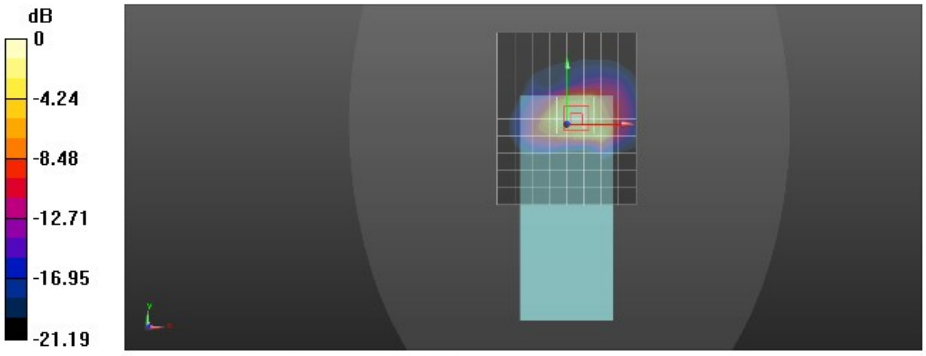
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Communication System Band: Band II; Frequency: 1880 MHz;Duty Cycle: 1:2.18776
Medium parameters used: f = 1880 MHz; σ = 1.503 S/m; ε_r = 52.368; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(8.02, 8.02, 8.02); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.595 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.64 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.833 W/kg
SAR(1 g) = 0.532 W/kg; SAR(10 g) = 0.305 W/kg
Maximum value of SAR (measured) = 0.668 W/kg



0 dB = 0.668 W/kg = -1.75 dBW/kg

Date/Time: 12/21/2017 3:21:41 PM

Test Laboratory: CTI SAR Lab

Smart POS Terminal UMTS Band II 9400CH Back Side 5mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

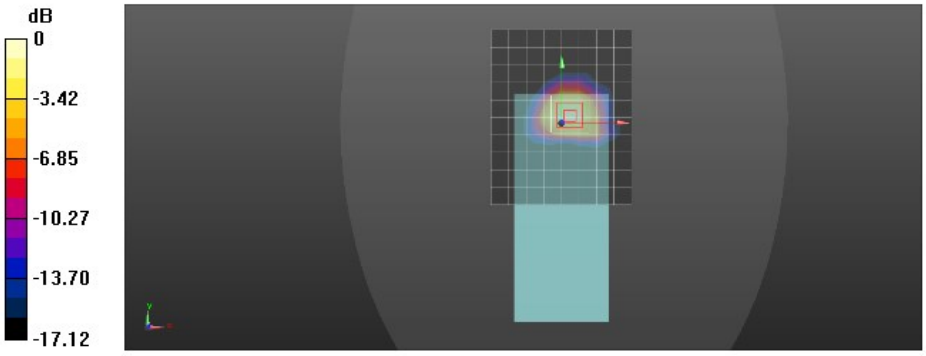
Communication System: UID 0, UMTS-FDD(WCDMA) (0); Communication System Band: Band II; Frequency: 1880 MHz;Duty Cycle: 1:2.18776
Medium parameters used: f = 1880 MHz; σ = 1.503 S/m; ε_r = 52.368; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(8.02, 8.02, 8.02); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (9x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.703 W/kg

Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.72 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.934 W/kg
SAR(1 g) = 0.610 W/kg; SAR(10 g) = 0.362 W/kg
Maximum value of SAR (measured) = 0.758 W/kg



0 dB = 0.758 W/kg = -1.20 dBW/kg

Date/Time: 12/19/2017 1:18:02 PM

Test Laboratory: CTI SAR Lab

Smart POS Terminal WiFi 802.11b 6CH Right Side 0mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

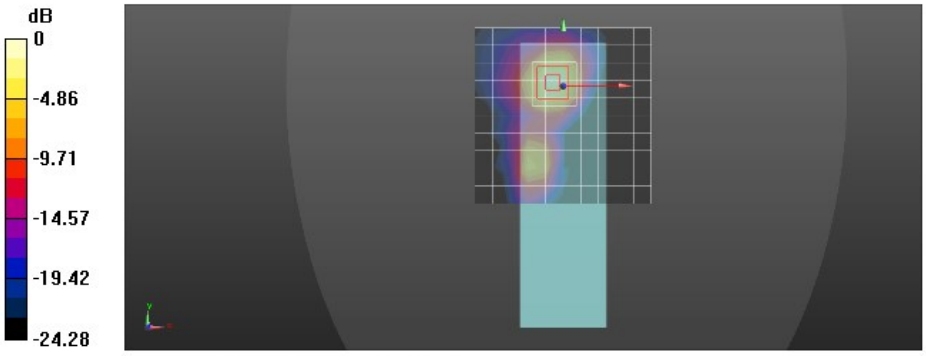
Communication System: UID 0, WiFi 802.11 a/b/g/n/ac (0); Communication System Band: WiFi; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.913 S/m; ε_r = 52.123; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(7.61, 7.61, 7.61); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (11x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.558 W/kg

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.26 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.865 W/kg
SAR(1 g) = 0.463 W/kg; SAR(10 g) = 0.220 W/kg
Maximum value of SAR (measured) = 0.670 W/kg



0 dB = 0.670 W/kg = -1.74 dBW/kg

Date/Time: 12/19/2017 2:33:43 PM

Test Laboratory: CTI SAR Lab

Smart POS Terminal WiFi 802.11b 6CH Front Side 5mm

DUT: Smart POS Terminal; Type: AP02; Serial: NA

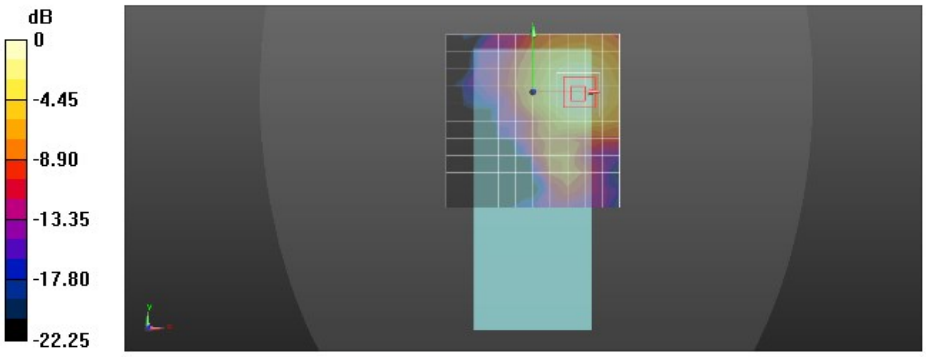
Communication System: UID 0, WiFi 802.11 a/b/g/n/ac (0); Communication System Band: WiFi; Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2437 MHz; σ = 1.913 S/m; ε_r = 52.123; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(7.61, 7.61, 7.61); Calibrated: 2/28/2017;
- Sensor-Surface: 2mm (Mechanical Surface Detection), z = 1.0, 31.0
- Electronics: DAE4 Sn1458; Calibrated: 2/22/2017
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (11x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0615 W/kg

Configuration/Body/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.677 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.0820 W/kg
SAR(1 g) = 0.050 W/kg; SAR(10 g) = 0.029 W/kg
Maximum value of SAR (measured) = 0.0664 W/kg



0 dB = 0.0664 W/kg = -11.78 dBW/kg