

Appendix B:SAR Measurement results Plots

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Test Laboratory: CTI SAR Lab

BT GFSK 79CH Back Side 0mm

DUT: Intelligent Automotive Detection Tool ; Type: NA; Serial: NA

Communication System: UID 0, Bluetooth (0); Communication System Band: Bluetooth 3.0; Frequency: 2480 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2480$ MHz; $\sigma = 1.793$ S/m; $\epsilon_r = 40.651$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(7.67, 7.67, 7.67); Calibrated: 2/3/2021;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 1/8/2021
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (11x10x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 0.0433 W/kg

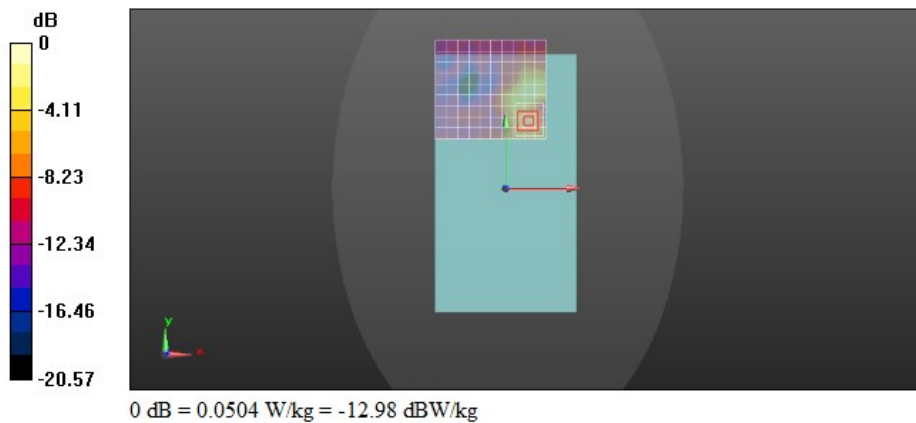
Configuration/Body/Zoom Scan (7x8x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 1.099 V/m; Power Drift = 0.00dB

Peak SAR (extrapolated) = 0.0620 W/kg

SAR(1 g) = 0.031 W/kg; SAR(10 g) = 0.014 W/kg

Maximum value of SAR (measured) = 0.0504 W/kg



Test Laboratory: CTI SAR Lab

BT 4DQPSK(2DH5) 79CH Back Side 0mm

DUT: Intelligent Automotive Detection Tool; Type: NA; Serial: NA

Communication System: UID 0, Bluetooth (0); Communication System Band: Bluetooth 3.0; Frequency: 2480 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2480$ MHz; $\sigma = 1.793$ S/m; $\epsilon_r = 40.651$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(7.67, 7.67, 7.67); Calibrated: 2/3/2021;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 1/8/2021
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (13x10x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 0.0176 W/kg

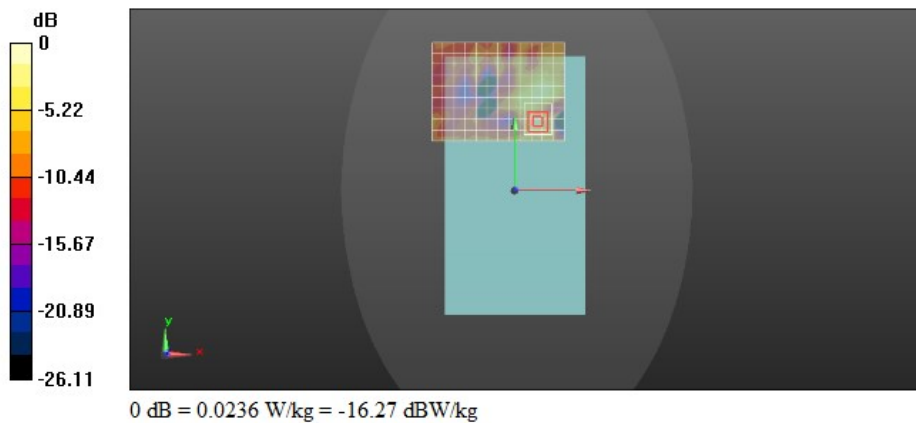
Configuration/Body/Zoom Scan (7x8x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 0.6230 V/m; Power Drift = -0.55 dB

Peak SAR (extrapolated) = 0.0280 W/kg

SAR(1 g) = 0.014 W/kg; SAR(10 g) = 0.00655 W/kg

Maximum value of SAR (measured) = 0.0236 W/kg



Test Laboratory: CTI SAR Lab

BT 8DPSK 79CH Back Side 0mm**DUT: Intelligent Automotive Detection Tool; Type: NA; Serial: NA**

Communication System: UID 0, Bluetooth (0); Communication System Band: Bluetooth 3.0; Frequency: 2480 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2480$ MHz; $\sigma = 1.793$ S/m; $\epsilon_r = 40.651$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(7.67, 7.67, 7.67); Calibrated: 2/3/2021;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 1/8/2021
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (13x10x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 0.0249 W/kg

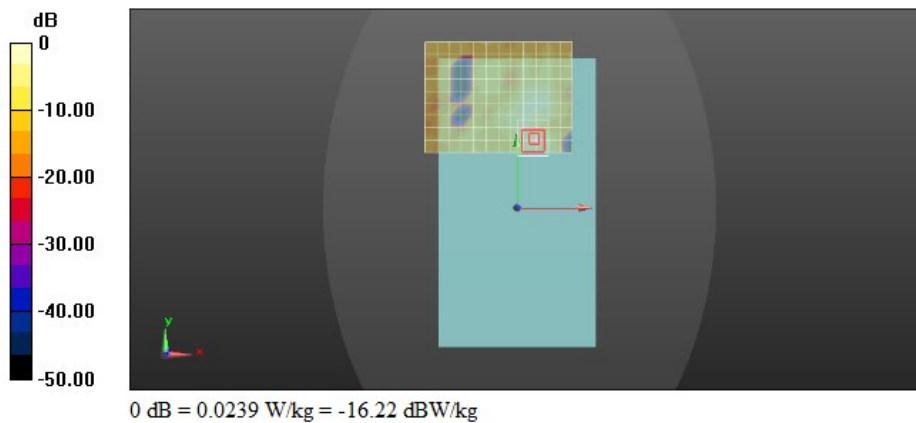
Configuration/Body/Zoom Scan (7x8x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 0 V/m; Power Drift = 0.00 dB

Peak SAR (extrapolated) = 0.0300 W/kg

SAR(1 g) = 0.015 W/kg; SAR(10 g) = 0.00669 W/kg

Maximum value of SAR (measured) = 0.0239 W/kg



Test Laboratory: CTI SAR Lab

WiFi 802.11b 11CH Back Side 0mm**DUT: Intelligent Automotive Detection Tool; Type: NA; Serial: NA**

Communication System: UID 0, WiFi 802.11 a/b/g/n/ac (0); Communication System Band: WiFi; Frequency: 2462 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2462$ MHz; $\sigma = 1.761$ S/m; $\epsilon_r = 40.733$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(7.67, 7.67, 7.67); Calibrated: 2/3/2021;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 1/8/2021
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (12x11x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 0.135 W/kg

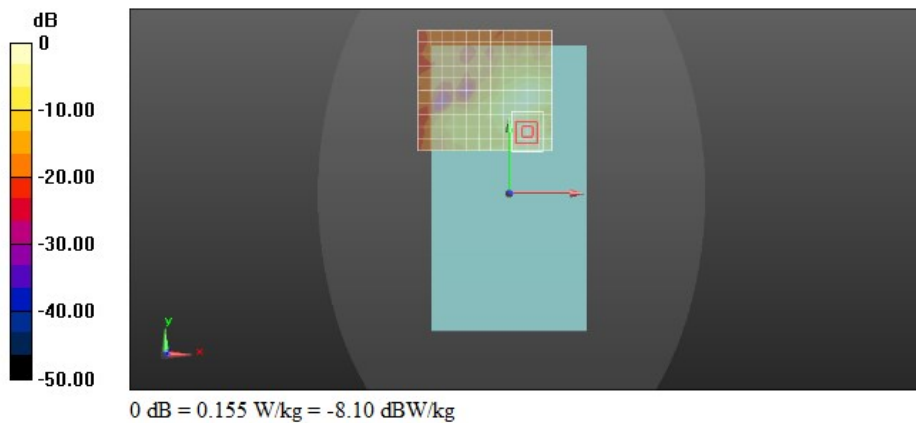
Configuration/Body/Zoom Scan (7x9x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 1.479 V/m; Power Drift = 1.30 dB

Peak SAR (extrapolated) = 0.189 W/kg

SAR(1 g) = 0.095 W/kg; SAR(10 g) = 0.045 W/kg

Maximum value of SAR (measured) = 0.155 W/kg



Test Laboratory: CTI SAR Lab

802.11a 40CH Back Side 0mm

DUT: Intelligent Automotive Detection Tool ; Type: NA; Serial: NA

Communication System: UID 0, WiFi 802.11 a/b/g/n/ac (0); Communication System Band: WiFi 5.2G; Frequency: 5200 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5200$ MHz; $\sigma = 4.618$ S/m; $\epsilon_r = 35.101$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(5.44, 5.44, 5.44); Calibrated: 2/3/2021;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 1/8/2021
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (11x10x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.806 W/kg

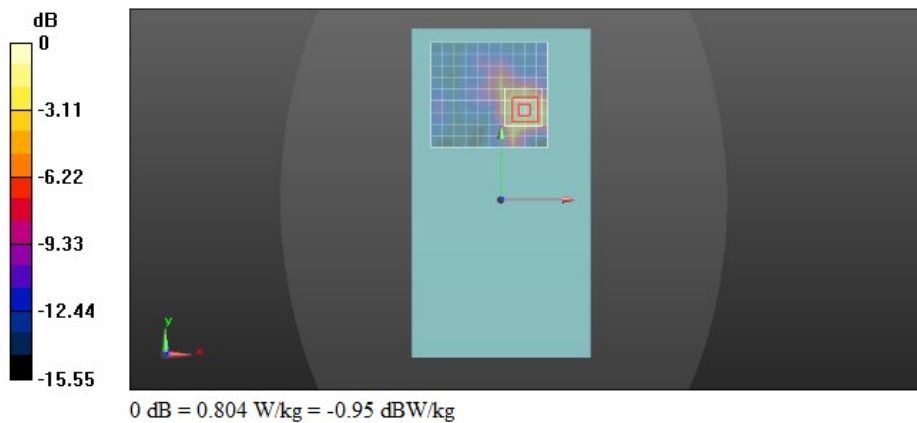
Configuration/Body/Zoom Scan (9x9x16)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 1.729 V/m; Power Drift = 1.52 dB

Peak SAR (extrapolated) = 1.19 W/kg

SAR(1 g) = 0.401 W/kg; SAR(10 g) = 0.178 W/kg

Maximum value of SAR (measured) = 0.804 W/kg



Test Laboratory: CTI SAR Lab

802.11a 165CH Back Side 0mm**DUT: Immobilizer Programmer ; Type: NA; Serial: NA**

Communication System: UID 0, WiFi 802.11 a/b/g/n/ac (0); Communication System Band: WiFi 5.8G; Frequency: 5825 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5825$ MHz; $\sigma = 5.417$ S/m; $\epsilon_r = 35.217$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7328; ConvF(4.85, 4.85, 4.85); Calibrated: 2/3/2021;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = 1.0, 31.0$
- Electronics: DAE4 Sn1458; Calibrated: 1/8/2021
- Phantom: ELI v6.0; Type: QDOVA003AA; Serial: 2024
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (12x11x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 1.09 W/kg

Configuration/Body/Zoom Scan (9x9x16)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=2$ mm

Reference Value = 2.654 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 1.73 W/kg

SAR(1 g) = 0.478 W/kg; SAR(10 g) = 0.208 W/kg

Maximum value of SAR (measured) = 1.06 W/kg

