

Appendix B - SAR Measurement

Test Laboratory: TUV Inc.

Date: 2024/10/30

01_WLAN2.4GHz_802.11b 1Mbps_Horizontal Up_5mm_Ch1

DUT: EW-7822UNX

Communication System: WLAN; Frequency: 2412 MHz; Duty Cycle: 1:1.070

Medium: HSL2450_241030 Medium parameters used: $f = 2412$ MHz; $\sigma = 1.78$ S/m; $\epsilon_r = 40.255$; $\rho = 1000$

kg/m³

Ambient Temperature : 23.7 °C; Liquid Temperature : 22.8°C

DASY Configuration:

- Electronics: DAE4 Sn855; Calibrated: 2024/4/22
- Probe: EX3DV4 - SN7400; ConvF(7.67, 7.67, 7.67) @ 2412 MHz; Calibrated: 2024/4/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = -19.0, 31.0$
- Phantom: Right_Twin-SAM V4.0 (20deg probe tilt); Type: QD 000 P40 CC; Serial: TP-1467
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Area Scan (7x8x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 0.143 W/kg

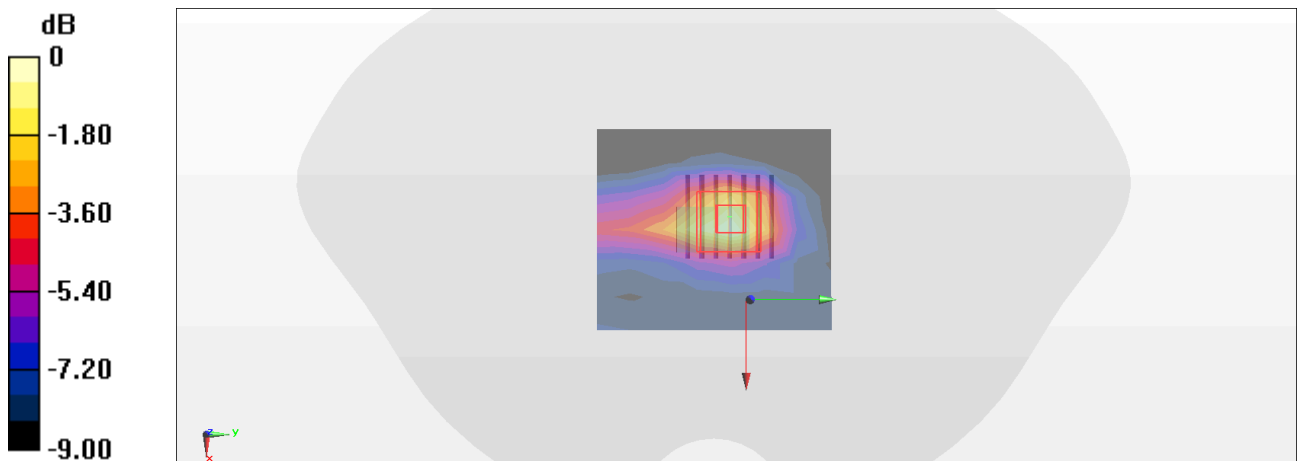
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 6.225 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.175 W/kg

SAR(1 g) = 0.094 W/kg; SAR(10 g) = 0.051 W/kg

Maximum value of SAR (measured) = 0.140 W/kg



0 dB = 0.140 W/kg = -8.54 dBW/kg

13_WLAN5GHz_802.11a 6Mbps_Vertical Front_5mm_Ch60**DUT: EW-7822UNX**

Communication System: WLAN; Frequency: 5300 MHz; Duty Cycle: 1:040

Medium: HSL5G_241101 Medium parameters used: $f = 5300$ MHz; $\sigma = 4.61$ S/m; $\epsilon_r = 35.535$; $\rho = 1000$ kg/m³

Ambient Temperature : 23.4 °C; Liquid Temperature : 22.6°C

DASY Configuration:

- Electronics: DAE4 Sn855; Calibrated: 2024/4/22
- Probe: EX3DV4 - SN7400; ConvF(5.05, 5.05, 5.05) @ 5300 MHz; Calibrated: 2024/4/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = -19.0, 23.0$
- Phantom: Right_Twin-SAM V4.0 (20deg probe tilt); Type: QD 000 P40 CC; Serial: TP-1467
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Area Scan (8x9x1): Measurement grid: $dx=10$ mm, $dy=10$ mm

Maximum value of SAR (measured) = 0.285 W/kg

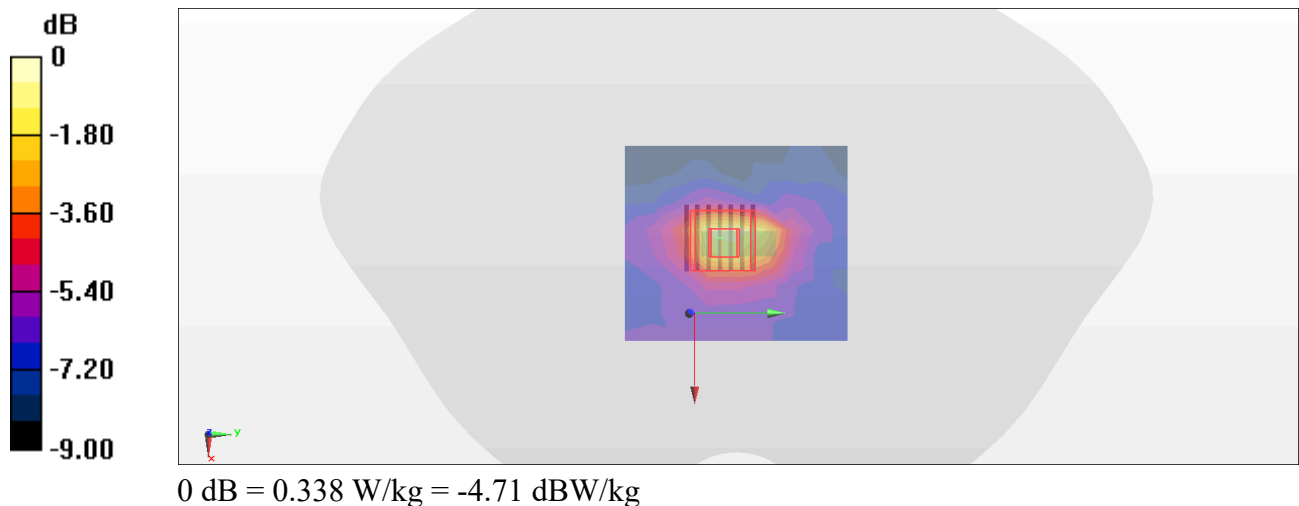
Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm

Reference Value = 5.336 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 0.543 W/kg

SAR(1 g) = 0.175 W/kg; SAR(10 g) = 0.080 W/kg

Maximum value of SAR (measured) = 0.338 W/kg



29_WLAN5GHz_802.11a 6Mbps_Vertical Back_5mm_Ch116

DUT: EW-7822UNX

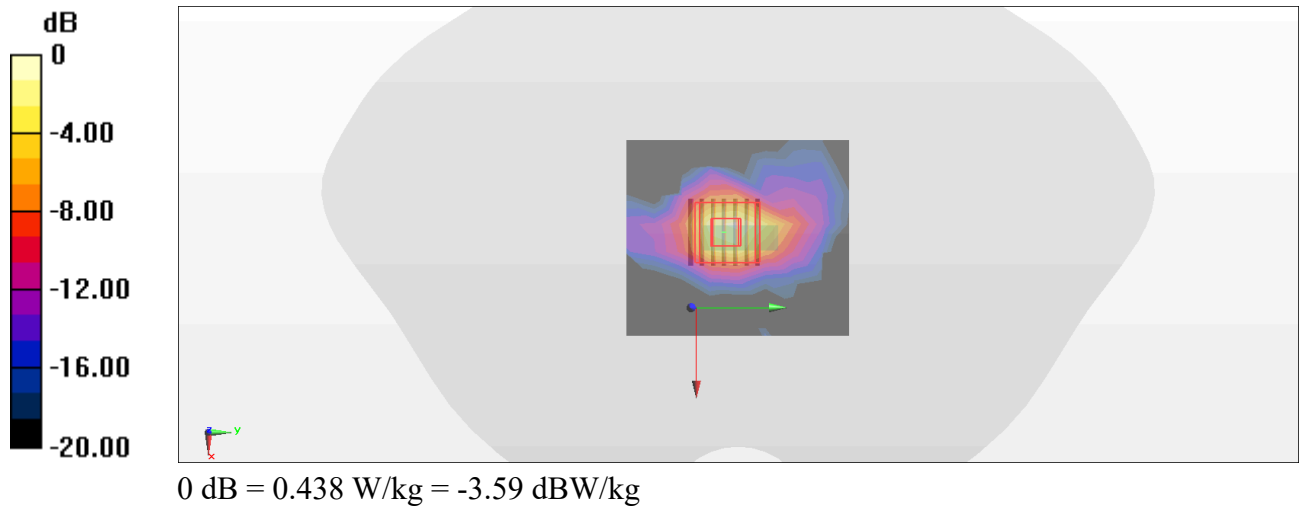
Communication System: WLAN; Frequency: 5580 MHz; Duty Cycle: 1:1.040
Medium: HSL5G_241101 Medium parameters used: $f = 5580 \text{ MHz}$; $\sigma = 4.886 \text{ S/m}$; $\epsilon_r = 35.072$; $\rho = 1000 \text{ kg/m}^3$
Ambient Temperature : 23.4 °C; Liquid Temperature : 22.6°C

DASY Configuration:

- Electronics: DAE4 Sn855; Calibrated: 2024/4/22
- Probe: EX3DV4 - SN7400; ConvF(4.74, 4.74, 4.74) @ 5580 MHz; Calibrated: 2024/4/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = -19.0, 23.0$
- Phantom: Right_Twin-SAM V4.0 (20deg probe tilt); Type: QD 000 P40 CC; Serial: TP-1467
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Area Scan (8x9x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 0.360 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
Reference Value = 3.109 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.690 W/kg
SAR(1 g) = 0.177 W/kg; SAR(10 g) = 0.050 W/kg
Maximum value of SAR (measured) = 0.438 W/kg



39_WLAN5GHz_802.11a 6Mbps_Vertical Back_5mm_Ch149

DUT: EW-7822UNX

Communication System: WLAN; Frequency: 5745 MHz; Duty Cycle: 1:1.040
Medium: HSL5G_241101 Medium parameters used: $f = 5745 \text{ MHz}$; $\sigma = 5.061 \text{ S/m}$; $\epsilon_r = 34.767$; $\rho = 1000 \text{ kg/m}^3$
Ambient Temperature : 23.4 °C; Liquid Temperature : 22.6°C

DASY Configuration:

- Electronics: DAE4 Sn855; Calibrated: 2024/4/22
- Probe: EX3DV4 - SN7400; ConvF(4.77, 4.77, 4.77) @ 5745 MHz; Calibrated: 2024/4/25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection), $z = -19.0, 23.0$
- Phantom: Right_Twin-SAM V4.0 (20deg probe tilt); Type: QD 000 P40 CC; Serial: TP-1467
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Area Scan (8x9x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 0.417 W/kg

Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
Reference Value = 3.712 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.844 W/kg
SAR(1 g) = 0.215 W/kg; SAR(10 g) = 0.061 W/kg
Maximum value of SAR (measured) = 0.525 W/kg

