



Appendix B. SAR Measurement Plots

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Test Laboratory: HUAWEI SAR/HAC Lab

E8231s-81 GSM850 GPRS 3TS 251CH Front Side 5mm

DUT: E8231s-81; Type: HUAWEI Wingle E8231; Serial: SAR2

Communication System: UID 0, HW-GSM\GPRS\EGPRS-3TS (0); Frequency: 848.8 MHz; Duty Cycle: 1:2.77013

Medium parameters used: $f = 849$ MHz; $\sigma = 0.956$ S/m; $\epsilon_r = 54.282$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(6.12, 6.12, 6.12); Calibrated: 2014-9-24;
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn852; Calibrated: 2014-4-30
- Phantom: SAM3; Type: SAM; Serial: TP-1597
- DASY52 52.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.795 W/kg

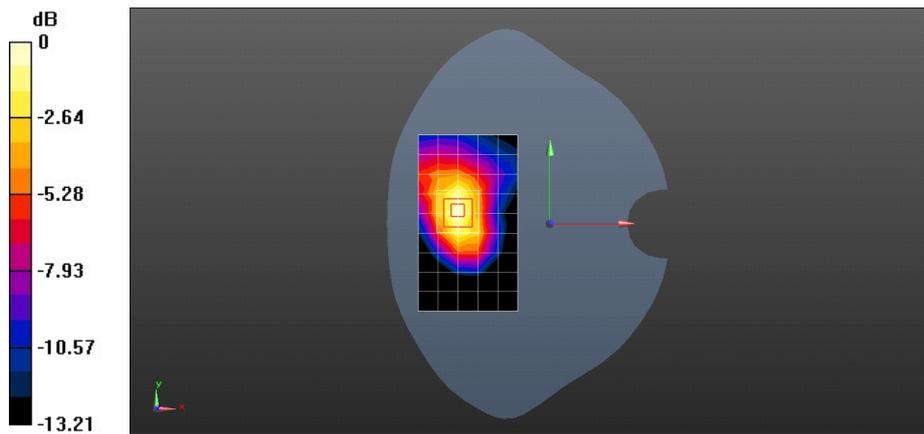
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 3.404 V/m; Power Drift = -0.11 dB

Peak SAR (extrapolated) = 1.10 W/kg

SAR(1 g) = 0.714 W/kg; SAR(10 g) = 0.433 W/kg

Maximum value of SAR (measured) = 0.785 W/kg



0 dB = 0.785 W/kg = -1.05 dBW/kg

Test Laboratory: HUAWEI SAR/HAC Lab

E8231s-81 GSM1900 GPRS 2TS 810CH Front Side 5mm

DUT: E8231s-81; Type: HUAWEI Wingle E8231; Serial: SAR2

Communication System: UID 0, HW-GSM\GPRS\EGPRS-2TS (0); Frequency: 1909.8 MHz; Duty Cycle: 1:4.10015

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.508$ S/m; $\epsilon_r = 52.596$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(4.72, 4.72, 4.72); Calibrated: 2014-9-24;
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn852; Calibrated: 2014-4-30
- Phantom: SAM4; Type: SAM; Serial: TP-1620
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.713 W/kg

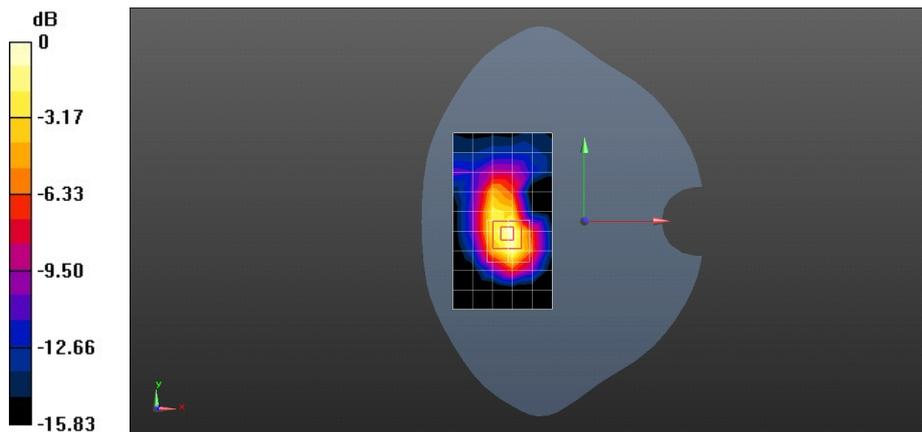
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 3.342 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.15 W/kg

SAR(1 g) = 0.710 W/kg; SAR(10 g) = 0.399 W/kg

Maximum value of SAR (measured) = 0.773 W/kg



0 dB = 0.773 W/kg = -1.12 dBW/kg

Test Laboratory: HUAWEI SAR/HAC Lab

E8231s-81 UMTS Band II 9538CH Back Side 5mm

DUT: E8231s-81; Type: HUAWEI Wingle E8231; Serial: SAR2

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.515$ S/m; $\epsilon_r = 52.546$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(4.72, 4.72, 4.72); Calibrated: 2014-9-24;
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn852; Calibrated: 2014-4-30
- Phantom: SAM4; Type: SAM; Serial: TP-1620
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.740 W/kg

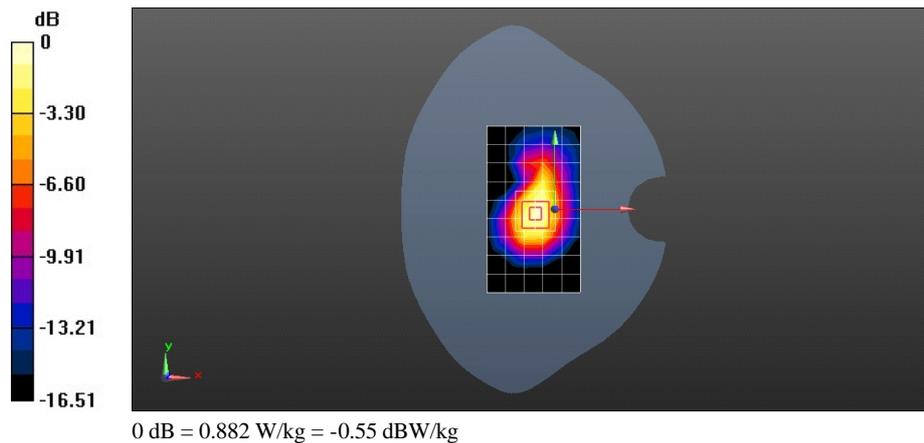
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 23.90 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 1.29 W/kg

SAR(1 g) = 0.810 W/kg; SAR(10 g) = 0.471 W/kg

Maximum value of SAR (measured) = 0.882 W/kg



Test Laboratory: HUAWEI SAR/HAC Lab

E8231s-81 UMTS Band II 9538CH Back Side 5mm-repeated

DUT: E8231s-81; Type: HUAWEI Wingle E8231; Serial: SAR2

Communication System: UID 0, HW-UMTS-FDD(WCDMA) (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1908$ MHz; $\sigma = 1.515$ S/m; $\epsilon_r = 52.546$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(4.72, 4.72, 4.72); Calibrated: 2014-9-24;
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn852; Calibrated: 2014-4-30
- Phantom: SAM4; Type: SAM; Serial: TP-1620
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (6x10x1): Measurement grid: $dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 0.789 W/kg

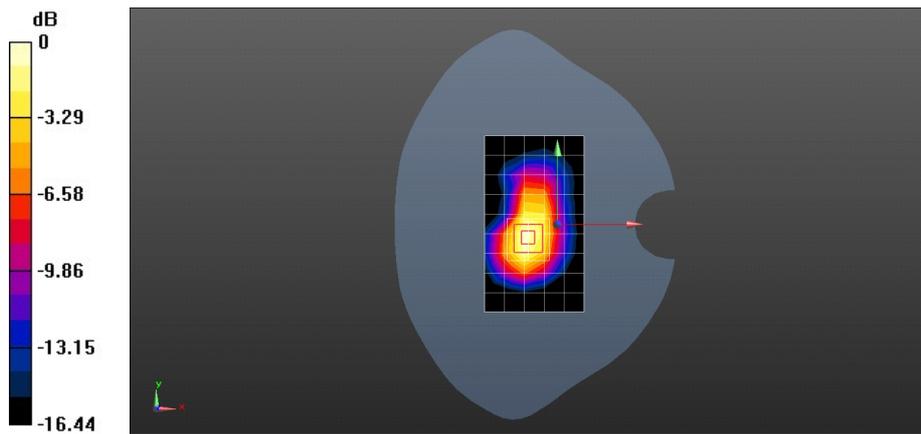
Configuration/Body/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 21.95 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 1.21 W/kg

SAR(1 g) = 0.768 W/kg; SAR(10 g) = 0.443 W/kg

Maximum value of SAR (measured) = 0.846 W/kg



0 dB = 0.846 W/kg = -0.73 dBW/kg

Test Laboratory: HUAWEI SAR/HAC Lab

E8231s-81 WiFi 802.11b 1CH Front Side 5mm

DUT: E8231s-81; Type: HUAWEI Wingle E8231; Serial: SAR2

Communication System: UID 0, WiFi(802.11a/b/g/n/ac) (0); Frequency: 2412 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2412$ MHz; $\sigma = 1.887$ S/m; $\epsilon_r = 51.228$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3168; ConvF(4.29, 4.29, 4.29); Calibrated: 2014-9-24;
- Sensor-Surface: 4mm (Mechanical Surface Detection), $z = 2.0, 32.0$
- Electronics: DAE4 Sn852; Calibrated: 2014-4-30
- Phantom: SAM4; Type: SAM; Serial: TP-1620
- DASY52 52.8.8(1222); SEMCAD X 14.6.10(7331)

Configuration/Body/Area Scan (7x12x1): Measurement grid: $dx=12$ mm, $dy=12$ mm

Maximum value of SAR (measured) = 0.398 W/kg

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

Reference Value = 1.535 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 0.713 W/kg

SAR(1 g) = 0.368 W/kg; SAR(10 g) = 0.184 W/kg

Maximum value of SAR (measured) = 0.409 W/kg

