

Appendix A.16 SAR Test Plots for LTE TDD Hotspot

Date: 2018-07-10

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [LTE_Band_41_20MHz_PCC_CH40620_1RB_0_Offset_QPSK_Bottom_Hotspot.da53:0](#)

Ambient Temp : 23.2 °C Tissue Temp : 21.9 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 41 (0); Frequency: 2593 MHz; Duty Cycle: 1:1.57979
Medium parameters used (interpolated): $f = 2593$ MHz; $\sigma = 2.235$ S/m; $\epsilon_r = 51.442$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band

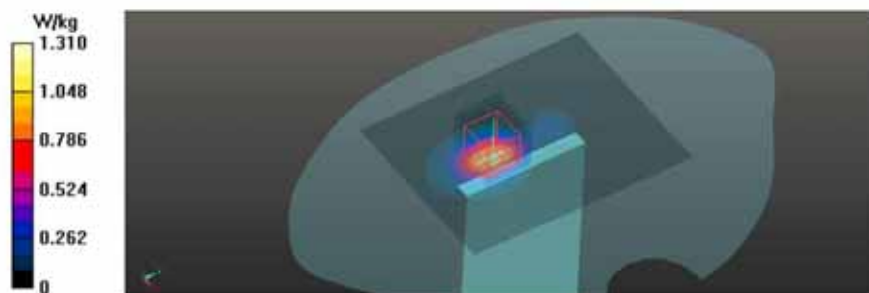
41_20MHz_PCC_CH40620_1RB_0_SCC_CH40422_1RB_99_QPSK_Bottom_Hotspot/Area Scan (111x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 1.31 W/kg

Body/LTE Band

41_20MHz_PCC_CH40620_1RB_0_SCC_CH40422_1RB_99_QPSK_Bottom_Hotspot/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.088 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 1.82 W/kg
SAR(1 g) = 0.880 W/kg; SAR(10 g) = 0.411 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.45 W/kg



Date: 2018-07-10

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [LTE Band 41_20MHz_PCC_CH40620_1RB_0_Offset_QPSK_Bottom_Hotspot_With_Cover_da53:0](#)

Ambient Temp : 23.2 °C Tissue Temp : 21.9 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 41 (0); Frequency: 2593 MHz; Duty Cycle: 1:1.57979
Medium parameters used (interpolated): $f = 2593$ MHz; $\sigma = 2.235$ S/m; $\epsilon_r = 51.442$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band

41_20MHz_PCC_CH40620_1RB_0_SCC_CH40422_1RB_99_QPSK_Bottom_Hotspot_With_Cover/Area Scan (111x141x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

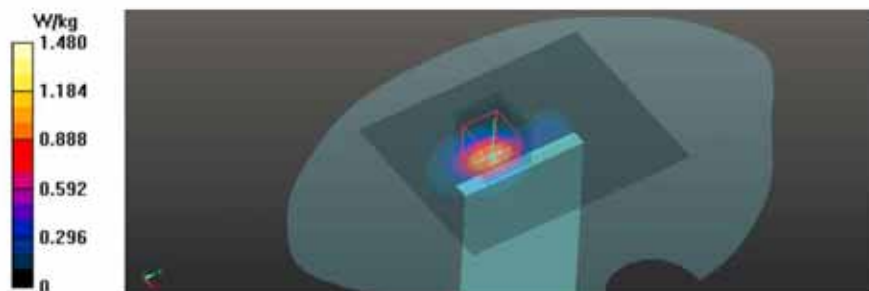
Info: [Interpolated medium parameters used for SAR evaluation.](#)
Maximum value of SAR (interpolated) = 1.48 W/kg

Body/LTE Band

41_20MHz_PCC_CH40620_1RB_0_SCC_CH40422_1RB_99_QPSK_Bottom_Hotspot_With_Cover/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.080 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.83 W/kg
SAR(1 g) = 0.885 W/kg; SAR(10 g) = 0.413 W/kg

Info: [Interpolated medium parameters used for SAR evaluation.](#)
Maximum value of SAR (measured) = 1.47 W/kg



Appendix A.17 SAR Test Plots for WLAN Hotspot

Date: 2018-07-07

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [WLAN 2.4GHz_802.11b_Top_CH6_Ant2_Hotspot.da53:0](#)

Ambient Temp : 23.1 °C Tissue Temp : 22.5 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.952$ S/m; $\epsilon_r = 51.885$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.99, 7.99, 7.99); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN 2.4GHz_802.11b_Top_CH6_Ant2_Hotspot/Area Scan (81x121x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.486 W/kg

Body/WLAN 2.4GHz_802.11b_Top_CH6_Ant2_Hotspot/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm

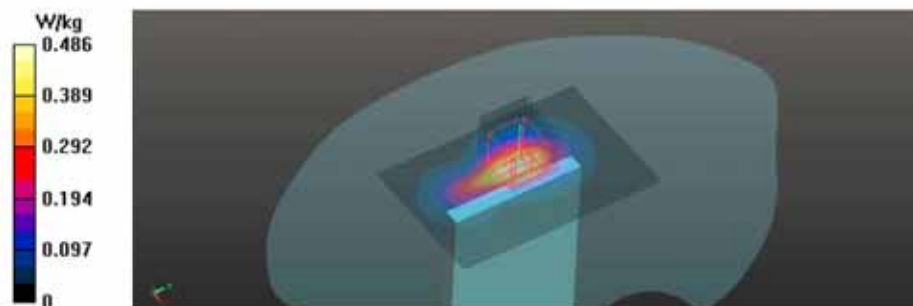
Reference Value = 4.388 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.582 W/kg

SAR(1 g) = 0.310 W/kg; SAR(10 g) = 0.165 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.477 W/kg



Date: 2018-07-13

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [WLAN 5.8GHz_802.11a_Rear_CH157_Ant1_Hotspot.da53:0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5785 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 5785 \text{ MHz}$; $\sigma = 5.911 \text{ S/m}$; $\epsilon_r = 46.251$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

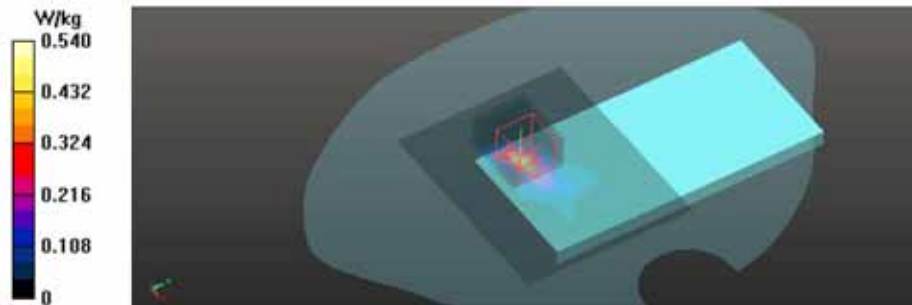
DASY52 Configuration:
- Probe: EX3DV4 - SN3986; ConvF(4.24, 4.24, 4.24); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN 5.8GHz_802.11a_Rear_CH157_Ant1_Hotspot/Area Scan (121x101x1):
Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Info: [Interpolated medium parameters used for SAR evaluation.](#)
Maximum value of SAR (interpolated) = 0.540 W/kg

Body/WLAN 5.8GHz_802.11a_Rear_CH157_Ant1_Hotspot/Zoom Scan (10x9x7)/Cube
0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
Reference Value = 2.695 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.902 W/kg
SAR(1 g) = 0.195 W/kg; SAR(10 g) = 0.050 W/kg

Info: [Interpolated medium parameters used for SAR evaluation.](#)
Maximum value of SAR (measured) = 0.560 W/kg



Date: 2018-07-13

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [WLAN 5.8GHz_802.11a_Rear_CH157_Ant2_Hotspot.da53-0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5785 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 5.911$ S/m; $\epsilon_r = 46.251$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(4.24, 4.24, 4.24); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN 5.8GHz_802.11a_Rear_CH157_Ant2_Hotspot/Area Scan (121x101x1):

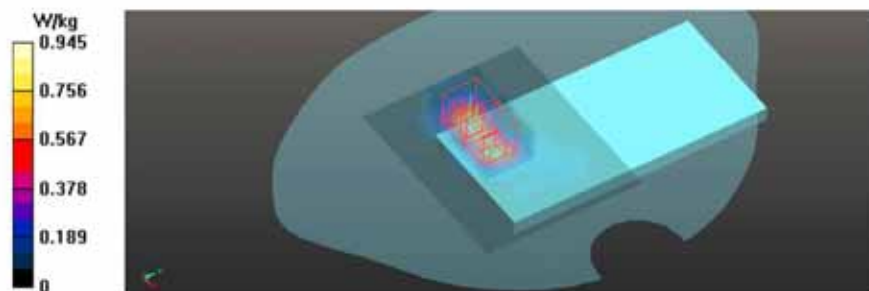
Interpolated grid: dx=1.000 mm, dy=1.000 mm
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 0.945 W/kg

Body/WLAN 5.8GHz_802.11a_Rear_CH157_Ant2_Hotspot/Zoom Scan (9x9x7)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 5.061 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 1.55 W/kg
SAR(1 g) = 0.398 W/kg; SAR(10 g) = 0.141 W/kg
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.949 W/kg

Body/WLAN 5.8GHz_802.11a_Rear_CH157_Ant2_Hotspot/Zoom Scan (9x9x7)/Cube 1:

Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 5.061 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.359 W/kg; SAR(10 g) = 0.130 W/kg
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.903 W/kg



Date: 2018-07-11

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [WLAN 2.4GHz 802.11b Top CH6 Ant2 Hotspot With Cover.da53-0](#)

Ambient Temp : 23.5 °C Tissue Temp : 22.1 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, WLAN 2.45GHz (0); Frequency: 2437 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.915$ S/m; $\epsilon_r = 52.63$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.99, 7.99, 7.99); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN 2.4GHz 802.11b Top_CH6_Ant2_Hotspot_With Cover/Area Scan (81x121x1):

Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.270 W/kg

Body/WLAN 2.4GHz 802.11b Top_CH6_Ant2_Hotspot_With Cover/Zoom Scan (7x9x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

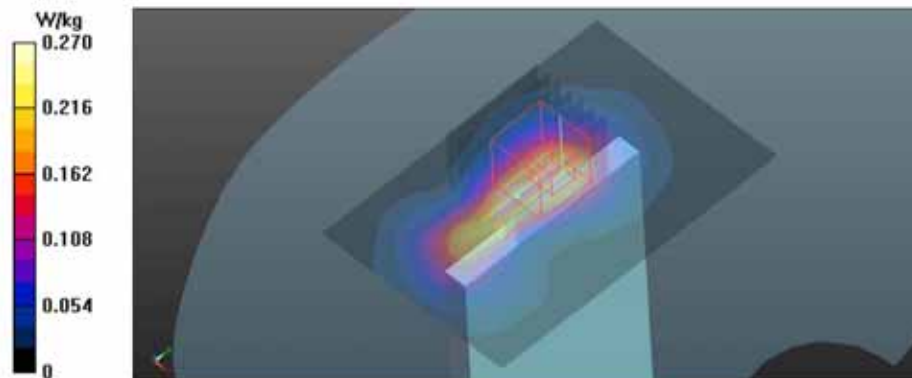
Reference Value = 3.994 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 0.365 W/kg

SAR(1 g) = 0.183 W/kg; SAR(10 g) = 0.095 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.292 W/kg



Date: 2018-07-13

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [WLAN 5.8GHz_802.11a_Rear_CH157_Ant1_Hotspot_With_Cover.da53-0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5785 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5785 \text{ MHz}$; $\sigma = 5.911 \text{ S/m}$; $\epsilon_r = 46.251$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(4.24, 4.24, 4.24); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN 5.8GHz_802.11a_Rear_CH157_Ant1_Hotspot_With_Cover/Area Scan (121x101x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.378 W/kg

Body/WLAN 5.8GHz_802.11a_Rear_CH157_Ant1_Hotspot_With_Cover/Zoom Scan (10x9x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

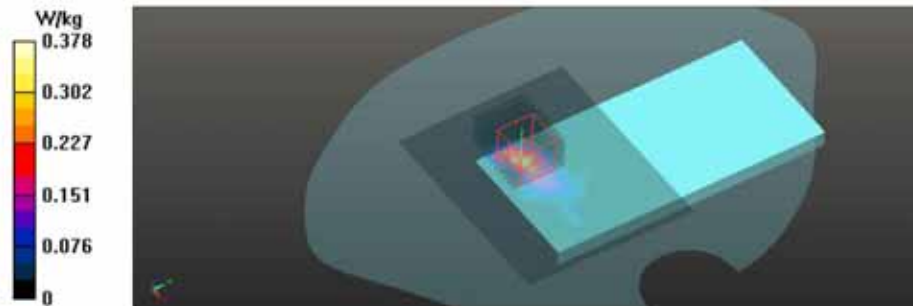
Reference Value = 2.496 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 0.674 W/kg

SAR(1 g) = 0.149 W/kg; SAR(10 g) = 0.040 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.423 W/kg



Date: 2018-07-13

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [WLAN 5.8GHz_802.11a_Rear_CH157_Ant2_Hotspot_With Cover.da53:0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5785 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 5.911$ S/m; $\epsilon_r = 46.251$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(4.24, 4.24, 4.24); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN 5.8GHz_802.11a_Rear_CH157_Ant2_Hotspot_With Cover/Area Scan (121x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 0.515 W/kg

Body/WLAN 5.8GHz_802.11a_Rear_CH157_Ant2_Hotspot_With Cover/Zoom Scan (9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

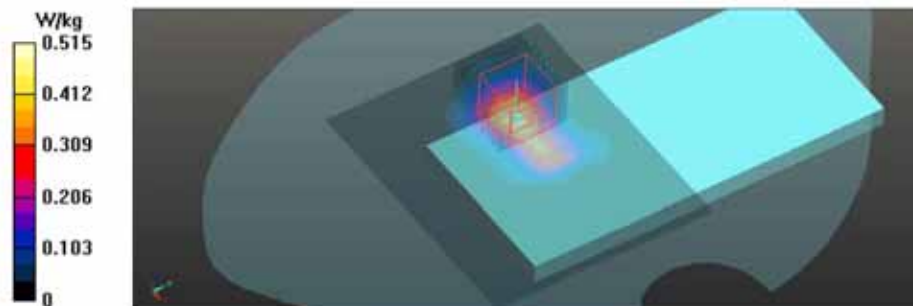
Reference Value = 6.882 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 0.801 W/kg

SAR(1 g) = 0.203 W/kg; SAR(10 g) = 0.071 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 0.503 W/kg



Appendix A.18 SAR Test Plots for Bluetooth Hotspot

Date: 2018-07-07

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [Bluetooth_GFSK_DH5_Front_CH78_Hotspot.da53:0](#)

Ambient Temp : 23.1 °C Tissue Temp : 22.5 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

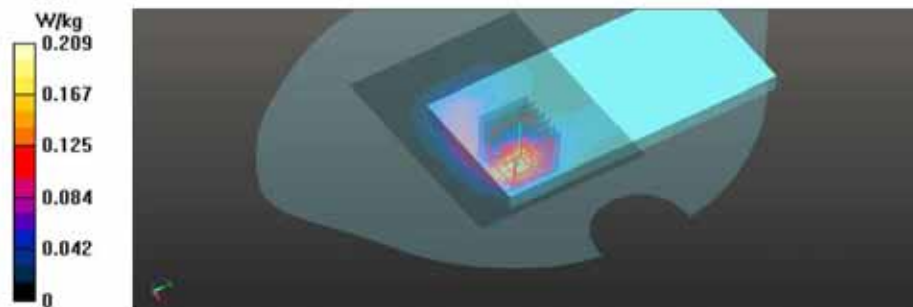
Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2480$ MHz; $\sigma = 1.999$ S/m; $\epsilon_r = 51.781$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.99, 7.99, 7.99); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/Bluetooth_GFSK_DH5_Front_CH78_Hotspot/Area Scan (121x101x1): Interpolated
grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.209 W/kg

Body/Bluetooth_GFSK_DH5_Front_CH78_Hotspot/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.608 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.218 W/kg
SAR(1 g) = 0.104 W/kg; SAR(10 g) = 0.048 W/kg
Maximum value of SAR (measured) = 0.172 W/kg



Date: 2018-07-07

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [Bluetooth_GFSK_DH5_Front_CH78_With_Cover_Hotspot.da53:0](#)

Ambient Temp : 23.1 °C Tissue Temp : 22.5 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

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

Medium parameters used: $f = 2480$ MHz; $\sigma = 1.999$ S/m; $\epsilon_r = 51.781$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.99, 7.99, 7.99); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/Bluetooth_GFSK_DH5_Front_CH78_With_Cover_Hotspot/Area Scan
(121x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 0.0768 W/kg

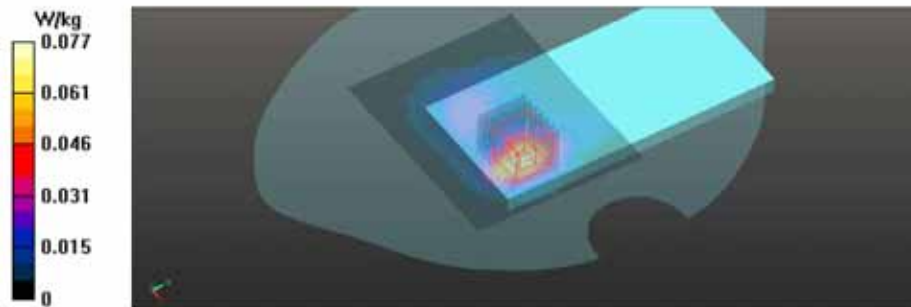
Body/Bluetooth_GFSK_DH5_Front_CH78_With_Cover_Hotspot/Zoom Scan
(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 2.602 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 0.100 W/kg

SAR(1 g) = 0.048 W/kg; SAR(10 g) = 0.023 W/kg

Maximum value of SAR (measured) = 0.0788 W/kg



Appendix A.19 SAR Test Plots for GSM/UMTS/CDMA Phablet

Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: GPRS 1900_Bottom_CH512_3TX_Phablet.da53:0

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, GPRS1900 3TX (0); Frequency: 1850.2 MHz; Duty Cycle: 1:2.77013

Medium parameters used (interpolated): $f = 1850.2$ MHz; $\sigma = 1.481$ S/m; $\epsilon_r = 53.55$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/GPRS 1900_Bottom_CH512_3TX_Phablet/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 4.87 W/kg

Body/GPRS 1900_Bottom_CH512_3TX_Phablet/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

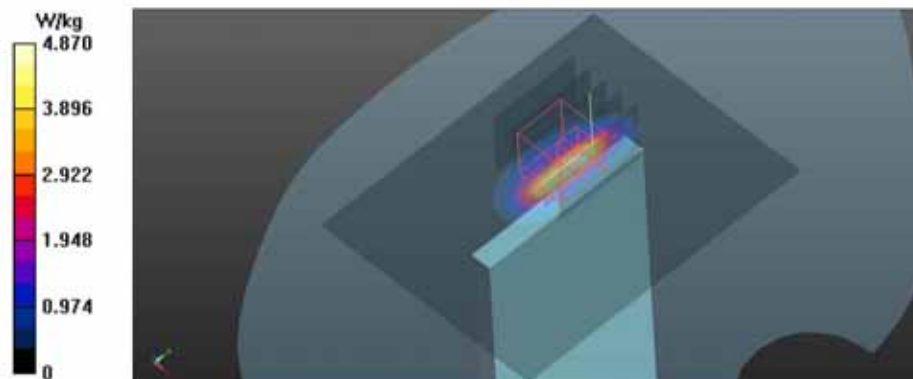
Reference Value = 12.28 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 6.61 W/kg

SAR(1 g) = 2.65 W/kg; SAR(10 g) = 1.26 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 5.08 W/kg



Date: 2018-07-05

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [UMTS 1750_Bottom_CH1312_Phablet.da53-0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, WCDMA4 (0); Frequency: 1712.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.446$ S/m; $\epsilon_r = 55.387$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.87, 8.87, 8.87); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/UMTS 1750_Bottom_CH1312_Phablet/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 9.71 W/kg

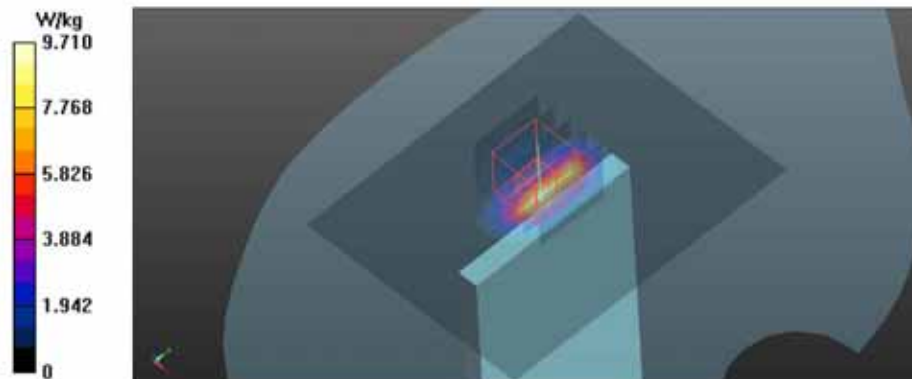
Body/UMTS 1750_Bottom_CH1312_Phablet/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.01 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 10.1 W/kg

SAR(1 g) = 4.88 W/kg; SAR(10 g) = 2.28 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 6.80 W/kg



Date: 2018-07-05

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [UMTS 1750_Rear_CH1412_Phablet.da53:0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, WCDMA4 (0); Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.469$ S/m; $\epsilon_r = 55.323$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.87, 8.87, 8.87); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/UMTS 1750_Rear_CH1412_Phablet/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 4.16 W/kg

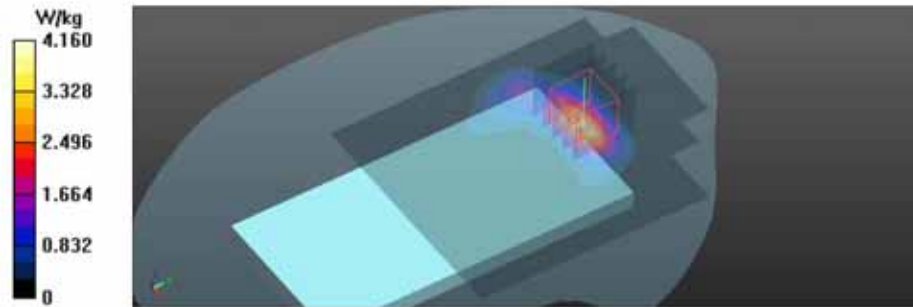
Body/UMTS 1750_Rear_CH1412_Phablet/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 4.727 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 5.32 W/kg

SAR(1 g) = 2.82 W/kg; SAR(10 g) = 1.44 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 4.55 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [UMTS 1900_Bottom_CH9400_Phablet da53:0](#)

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

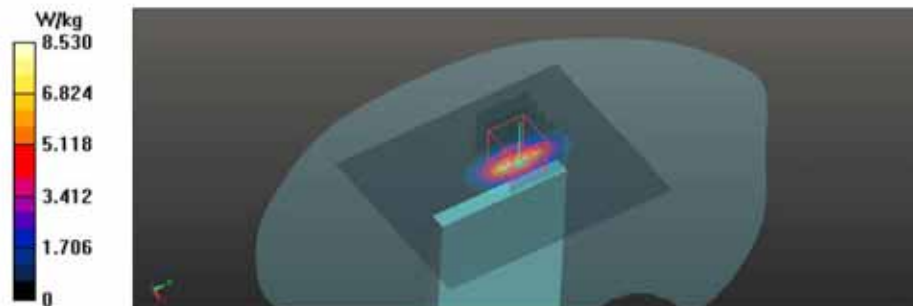
Communication System: UID 0, WCDMA2 (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ S/m; $\epsilon_r = 53.41$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/UMTS 1900_Bottom_CH9400_Phablet/Area Scan (71x91x1): Interpolated grid:
 $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 8.53 W/kg

Body/UMTS 1900_Bottom_CH9400_Phablet/Zoom Scan (5x5x7)/Cube 0: Measurement
grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 3.208 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 10.3 W/kg
SAR(1 g) = 5.15 W/kg; SAR(10 g) = 2.39 W/kg
Maximum value of SAR (measured) = 8.62 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [UMTS 1900_Rear_CH9400_Phablet.da53-0](#)

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, WCDMA2 (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ S/m; $\epsilon_r = 53.41$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/UMTS 1900_Rear_CH9400_Phablet/Area Scan (81x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 4.25 W/kg

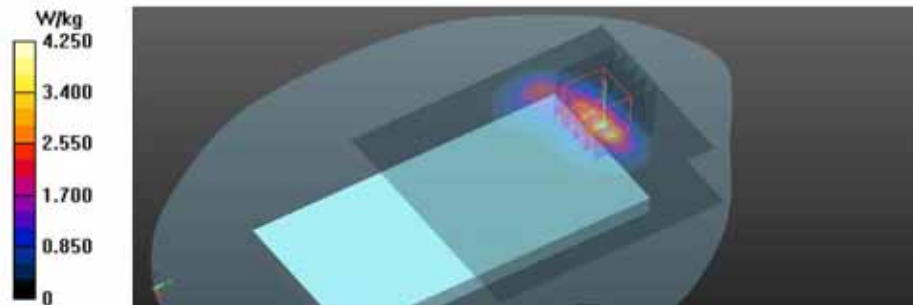
Body/UMTS 1900_Rear_CH9400_Phablet/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.378 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 5.34 W/kg

SAR(1 g) = 2.79 W/kg; SAR(10 g) = 1.42 W/kg

Maximum value of SAR (measured) = 4.43 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [CDMA PCS Bottom CH1175 Phablet.da53-0](#)

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, CDMA PCS 1xRTT/EVDO (0); Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1909$ MHz; $\sigma = 1.544$ S/m; $\epsilon_r = 53.292$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/CDMA PCS_Bottom_CH1175_Phablet/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 9.82 W/kg

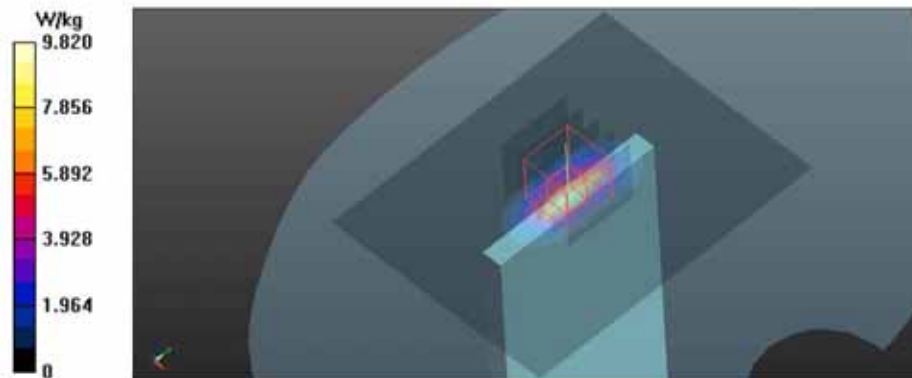
Body/CDMA PCS_Bottom_CH1175_Phablet/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.488 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 10.6 W/kg

SAR(1 g) = 5.27 W/kg; SAR(10 g) = 2.42 W/kg

Maximum value of SAR (measured) = 8.92 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: CDMA PCS_Rear_CH600_Phablet.da53-0

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, CDMA PCS 1xRTT/EVDO (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ S/m; $\epsilon_r = 53.41$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/CDMA PCS_Rear_CH600_Phablet/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 4.86 W/kg

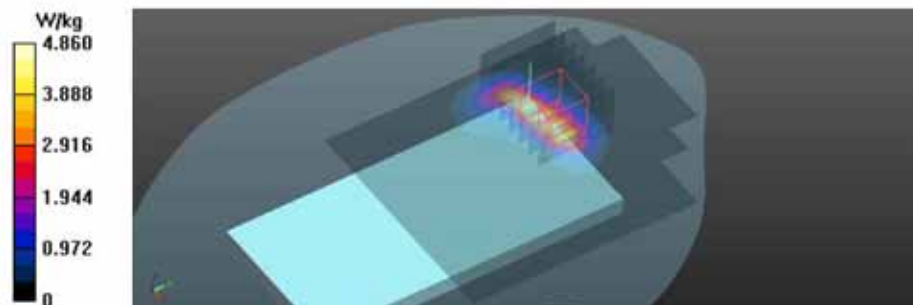
Body/CDMA PCS_Rear_CH600_Phablet/Zoom Scan (7x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.224 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 5.80 W/kg

SAR(1 g) = 3.04 W/kg; SAR(10 g) = 1.55 W/kg

Maximum value of SAR (measured) = 4.33 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [GPRS 1900_Bottom_CH512_3TX_Phablet_With Cover da53:0](#)

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, GPRS1900 3TX (0); Frequency: 1850.2 MHz; Duty Cycle: 1:2.77013

Medium parameters used (interpolated): $f = 1850.2 \text{ MHz}$; $\sigma = 1.481 \text{ S/m}$; $\epsilon_r = 53.55$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/GPRS 1900_Bottom_CH512_3TX_Phablet_With Cover/Area Scan (71x91x1): Interpolated grid:
 $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 4.20 W/kg

Body/GPRS 1900_Bottom_CH512_3TX_Phablet_With Cover/Zoom Scan (5x5x7)/Cube 0: Measurement

grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

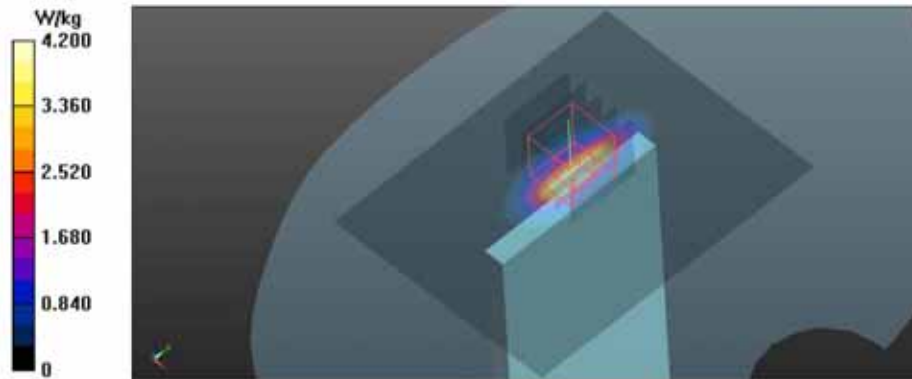
Reference Value = 12.30 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 5.00 W/kg

SAR(1 g) = 2.54 W/kg; SAR(10 g) = 1.19 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.22 W/kg



Date: 2018-07-05

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: [UMTS 1750_Bottom_CH1312_Phablet_With_Cover.da53:0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, WCDMA4 (0); Frequency: 1712.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1712.4$ MHz; $\sigma = 1.446$ S/m; $\epsilon_r = 55.387$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.87, 8.87, 8.87); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/UMTS 1750_Bottom_CH1312_Phablet_With_Cover/Area Scan (71x91x1): Interpolated grid:
 $dx=1.500$ mm, $dy=1.500$ mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 10.0 W/kg

Body/UMTS 1750_Bottom_CH1312_Phablet_With_Cover/Zoom Scan (6x5x7)/Cube 0: Measurement grid:

$dx=8$ mm, $dy=8$ mm, $dz=5$ mm

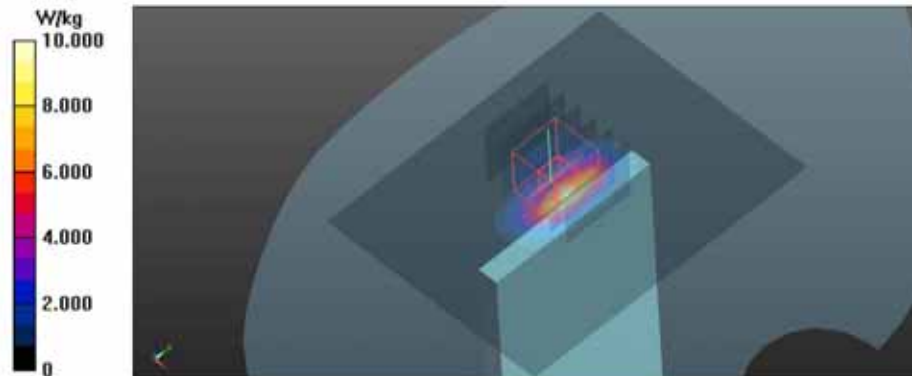
Reference Value = 9.953 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 10.1 W/kg

SAR(1 g) = 4.94 W/kg; SAR(10 g) = 2.3 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 7.12 W/kg



Date: 2018-07-05

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [UMTS 1750_Rear_CH1412_Phablet_With Cover.da53-0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, WCDMA4 (0); Frequency: 1732.4 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.469$ S/m; $\epsilon_r = 55.323$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.87, 8.87, 8.87); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/UMTS 1750_Rear_CH1412_Phablet_With Cover/Area Scan (81x101x1): Interpolated grid:
dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 2.80 W/kg

Body/UMTS 1750_Rear_CH1412_Phablet_With Cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid:
dx=8mm, dy=8mm, dz=5mm

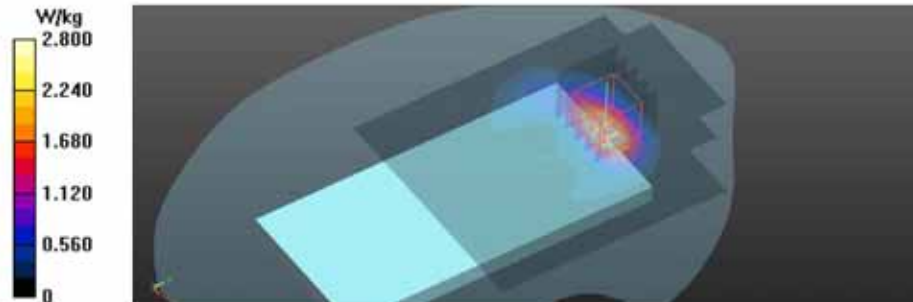
Reference Value = 4.058 V/m; Power Drift = -0.05 dB

Peak SAR (extrapolated) = 3.64 W/kg

SAR(1 g) = 2.08 W/kg; SAR(10 g) = 1.1 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 3.14 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: UMTS 1900_Bottom_CH9400_Phablet_With_Cover.da53-0

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, WCDMA2 (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ S/m; $\epsilon_r = 53.41$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/UMTS 1900_Bottom_CH9400_Phablet_With_Cover/Area Scan (71x91x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 9.26 W/kg

Body/UMTS 1900_Bottom_CH9400_Phablet_With_Cover/Zoom Scan (5x5x7)/Cube 0:

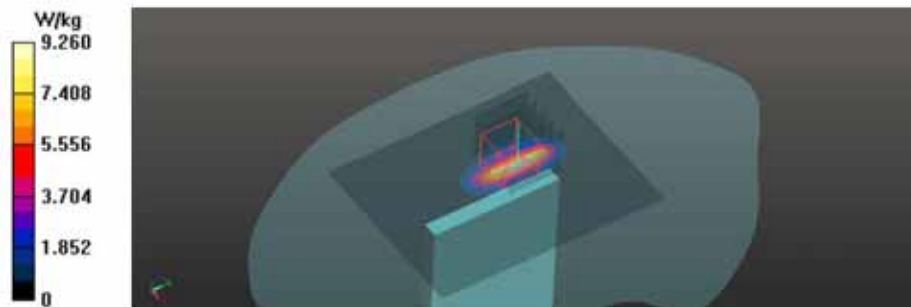
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.171 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 9.77 W/kg

SAR(1 g) = 4.69 W/kg; SAR(10 g) = 2.23 W/kg

Maximum value of SAR (measured) = 8.23 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [UMTS 1900 Rear CH9400 Phablet With Cover.da53-0](#)

Ambient Temp : 23.8 °C Tissue Temp : 22.5 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, WCDMA2 (0); Frequency: 1880 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ S/m; $\epsilon_r = 53.41$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/UMTS 1900_Rear_CH9400_Phablet_With Cover/Area Scan (81x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Maximum value of SAR (interpolated) = 2.68 W/kg

Body/UMTS 1900_Rear_CH9400_Phablet_With Cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

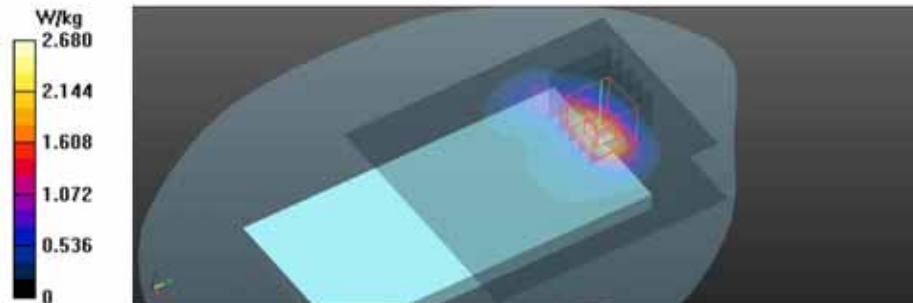
dx=8mm, dy=8mm, dz=5mm

Reference Value = 3.792 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.52 W/kg

SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.05 W/kg

Maximum value of SAR (measured) = 2.99 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: CDMA PCS_Bottom_CH1175_Phablet_With_Cover.da53-0

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

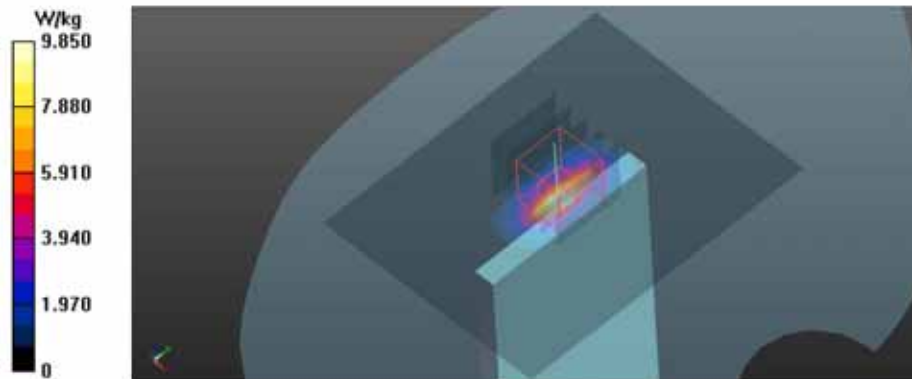
Communication System: UID 0, CDMA PCS 1xRTT/EVDO (0); Frequency: 1908.75 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1909$ MHz; $\sigma = 1.544$ S/m; $\epsilon_r = 53.292$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/CDMA PCS_Bottom_CH1175_Phablet_With_Cover/Area Scan (71x91x1): Interpolated grid:
 $dx=1.500$ mm, $dy=1.500$ mm
Maximum value of SAR (interpolated) = 9.85 W/kg

Body/CDMA PCS_Bottom_CH1175_Phablet_With_Cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid:
 $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 7.454 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 10.6 W/kg
SAR(1 g) = 5.26 W/kg; SAR(10 g) = 2.43 W/kg
Maximum value of SAR (measured) = 8.92 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: CDMA PCS_Rear_CH600_Phablet_With_Cover.da53:0

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, CDMA PCS 1xRTT/EVDO (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.514$ S/m; $\epsilon_r = 53.41$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/CDMA PCS_Rear_CH600_Phablet_With_Cover/Area Scan (81x101x1): Interpolated grid:

$dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 2.68 W/kg

Body/CDMA PCS_Rear_CH600_Phablet_With_Cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

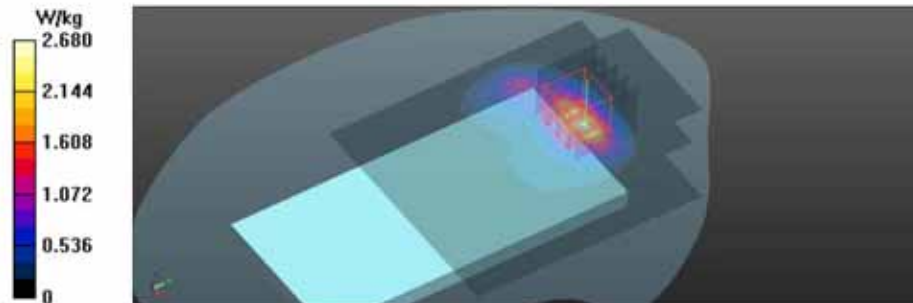
$dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 3.348 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 3.31 W/kg

SAR(1 g) = 1.85 W/kg; SAR(10 g) = 0.977 W/kg

Maximum value of SAR (measured) = 2.77 W/kg



Appendix A.20 SAR Test Plots for LTE FDD Phablet

Date: 2018-07-05

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: LTE Band 66_20MHz_50RB_0 Offset_QPSK_Bottom_CH132072_Phablet da53.0

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 66 (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720$ MHz; $\sigma = 1.455$ S/m; $\epsilon_r = 55.361$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.87, 8.87, 8.87); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 66_20MHz_50RB_0 Offset_QPSK_Bottom_CH132072_Phablet/Area Scan (71x91x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Maximum value of SAR (interpolated) = 10.6 W/kg

Body/LTE Band 66_20MHz_50RB_0 Offset_QPSK_Bottom_CH132072_Phablet/Zoom Scan

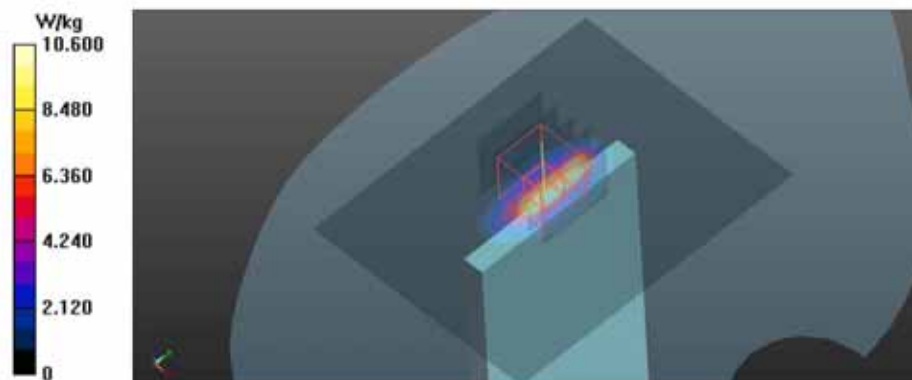
(5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 7.379 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 10.1 W/kg

SAR(1 g) = 4.99 W/kg; SAR(10 g) = 2.34 W/kg

Maximum value of SAR (measured) = 8.49 W/kg



Date: 2018-07-05

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 66_20MHz_50RB_0 Offset_QPSK_Rear_CH132322_Phablet.da53.0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 66 (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.483$ S/m; $\epsilon_r = 55.266$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.87, 8.87, 8.87); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 66_20MHz_50RB_0 Offset_QPSK_Rear_CH132322_Phablet/Area Scan

(81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 4.50 W/kg

Body/LTE Band 66_20MHz_50RB_0 Offset_QPSK_Rear_CH132322_Phablet/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

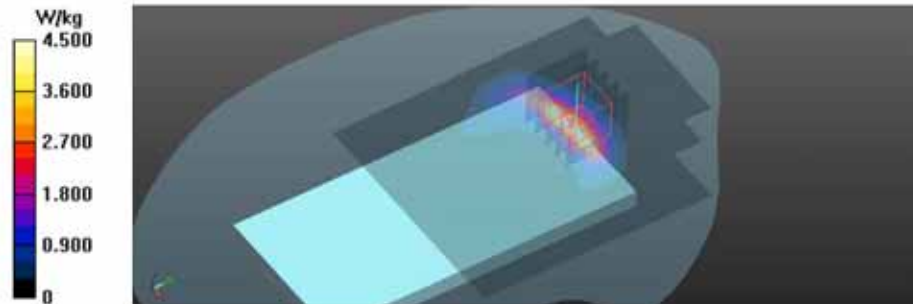
Reference Value = 3.205 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 5.12 W/kg

SAR(1 g) = 2.74 W/kg; SAR(10 g) = 1.39 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.37 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: LTE Band 25_20MHz_1RB_0 Offset_QPSK_Bottom_CH26590_Phablet.da53:0

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.54$ S/m; $\epsilon_r = 53.308$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 25_20MHz_1RB_0 Offset_QPSK_Bottom_CH26590_Phablet/Area Scan (71x91x1):

Interpolated grid: $dx=1.500$ mm, $dy=1.500$ mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 8.95 W/kg

Body/LTE Band 25_20MHz_1RB_0 Offset_QPSK_Bottom_CH26590_Phablet/Zoom Scan

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

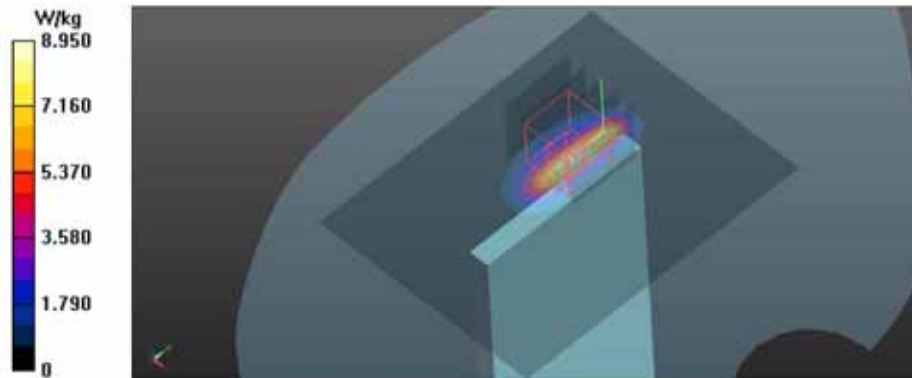
Reference Value = 2.656 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 13.0 W/kg

SAR(1 g) = 4.91 W/kg; SAR(10 g) = 2.33 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.64 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 25_20MHz_50RB_0 Offset_QPSK_Rear_CH26590_Phablet.da53:0](#)

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.54$ S/m; $\epsilon_r = 53.308$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 25_20MHz_50RB_0 Offset_QPSK_Rear_CH26590_Phablet/Area Scan (81x101x1):

Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 4.16 W/kg

Body/LTE Band 25_20MHz_50RB_0 Offset_QPSK_Rear_CH26590_Phablet/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

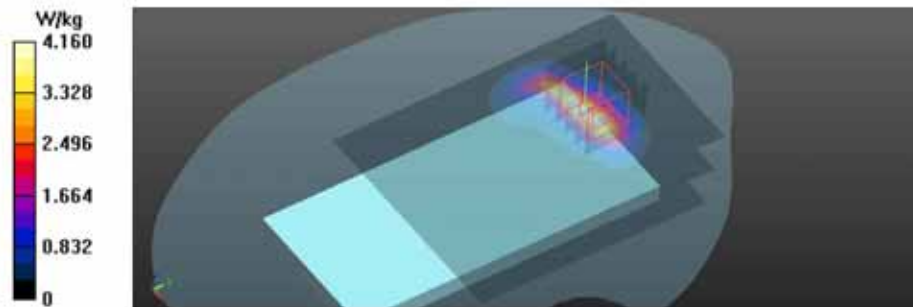
Reference Value = 2.460 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 5.34 W/kg

SAR(1 g) = 2.79 W/kg; SAR(10 g) = 1.41 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 4.51 W/kg



Date: 2018-07-10

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 7 20MHz 1RB 0 Offset QPSK Bottom CH20850 Ant B Phablet.da53/0](#)

Ambient Temp : 23.2 °C Tissue Temp : 21.9 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 7 (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510$ MHz; $\sigma = 2.089$ S/m; $\epsilon_r = 51.465$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1 430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0 TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 7 20MHz 1RB 0 Offset QPSK Bottom CH20850 Ant

B Phablet/Area Scan (111x141x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 14.4 W/kg

Body/LTE Band 7 20MHz 1RB 0 Offset QPSK Bottom CH20850 Ant

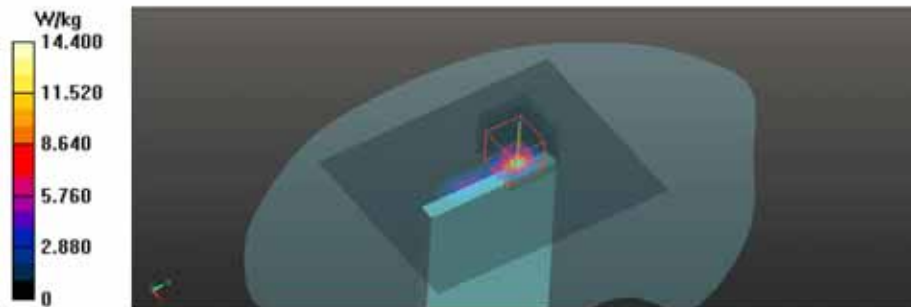
B Phablet/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 2.790 V/m; Power Drift = -0.20 dB

Peak SAR (extrapolated) = 19.6 W/kg

SAR(1 g) = 6.06 W/kg; SAR(10 g) = 1.94 W/kg

Maximum value of SAR (measured) = 12.7 W/kg



Date: 2018-07-10

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 7 20MHz_50RB_0 Offset_QPSK_Rear_CH21100_Ant B_Phablet.da53:0](#)

Ambient Temp : 23.2 °C Tissue Temp : 21.9 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 7 (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 2.146$ S/m; $\epsilon_r = 51.384$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1 430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 7 20MHz_50RB_0 Offset_QPSK_Rear_CH21100_Ant
B_Phablet/Area Scan (121x151x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 9.28 W/kg

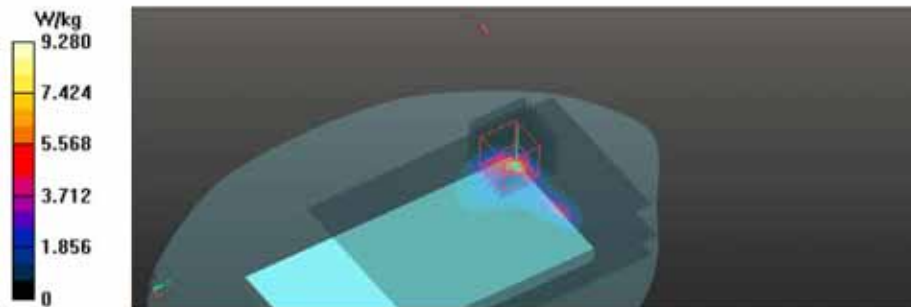
Body/LTE Band 7 20MHz_50RB_0 Offset_QPSK_Rear_CH21100_Ant
B_Phablet/Zoom Scan (7x8x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 3.215 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 10.7 W/kg

SAR(1 g) = 3.28 W/kg; SAR(10 g) = 1.23 W/kg

Maximum value of SAR (measured) = 7.87 W/kg



Date: 2018-07-11

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: LTE Band 30_10MHz_25RB_0 Offset_QPSK_Rear_CH27710_Ant A_Phablet da53:0

Ambient Temp : 23.5 °C Tissue Temp : 22.1 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2310$ MHz; $\sigma = 1.786$ S/m; $\epsilon_r = 52.906$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3933; ConvF(8.26, 8.26, 8.26); Calibrated: 2017-09-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1 430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 30_10MHz_25RB_0 Offset_QPSK_Rear_CH27710_Ant

A_Phablet/Area Scan (121x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 9.93 W/kg

Body/LTE Band 30_10MHz_25RB_0 Offset_QPSK_Rear_CH27710_Ant

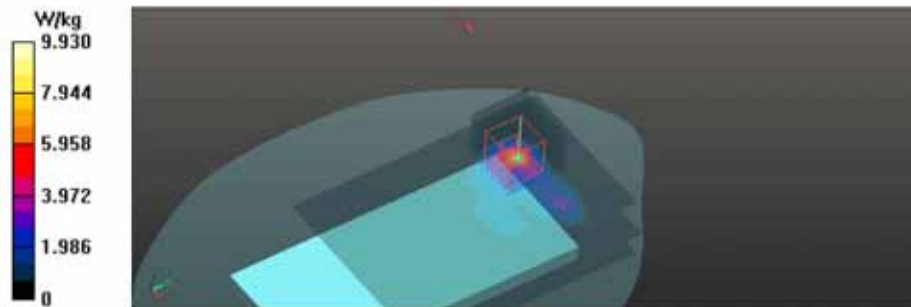
A_Phablet/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.593 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 14.1 W/kg

SAR(1 g) = 4.35 W/kg; SAR(10 g) = 1.67 W/kg

Maximum value of SAR (measured) = 9.52 W/kg



Date: 2018-07-05

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 66_20MHz_50RB_0 Offset_QPSK_Bottom_CH132072_Phablet_With_Cover.da53:0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 66 (0); Frequency: 1720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 1720 \text{ MHz}$; $\sigma = 1.455 \text{ S/m}$; $\epsilon_r = 55.361$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.87, 8.87, 8.87); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 66_20MHz_50RB_0 Offset_QPSK_Bottom_CH132072_Phablet_With_Cover/Area
Scan (71x91x1): Interpolated grid: $dx=1.500 \text{ mm}$, $dy=1.500 \text{ mm}$

Maximum value of SAR (interpolated) = 8.74 W/kg

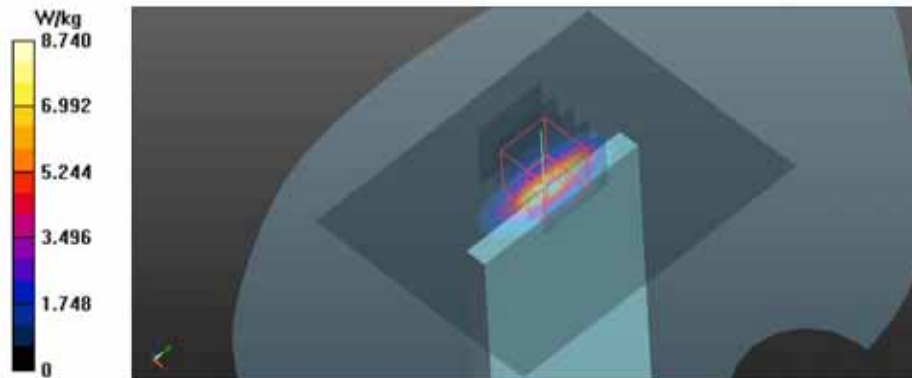
Body/LTE Band 66_20MHz_50RB_0 Offset_QPSK_Bottom_CH132072_Phablet_With_Cover/Zoom
Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 1.793 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 9.84 W/kg

SAR(1 g) = 4.89 W/kg; SAR(10 g) = 2.29 W/kg

Maximum value of SAR (measured) = 8.12 W/kg



Date: 2018-07-05

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 66_20MHz_50RB_0 Offset_QPSK_Rear_CH132322_Phablet_With_Cover.da53.0](#)

Ambient Temp : 23.3 °C Tissue Temp : 22.1 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 66 (0); Frequency: 1745 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.483$ S/m; $\epsilon_r = 55.266$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.87, 8.87, 8.87); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 66_20MHz_50RB_0 Offset_QPSK_Rear_CH132322_Phablet_With_Cover/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 3.03 W/kg

Body/LTE Band 66_20MHz_50RB_0 Offset_QPSK_Rear_CH132322_Phablet_With_Cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

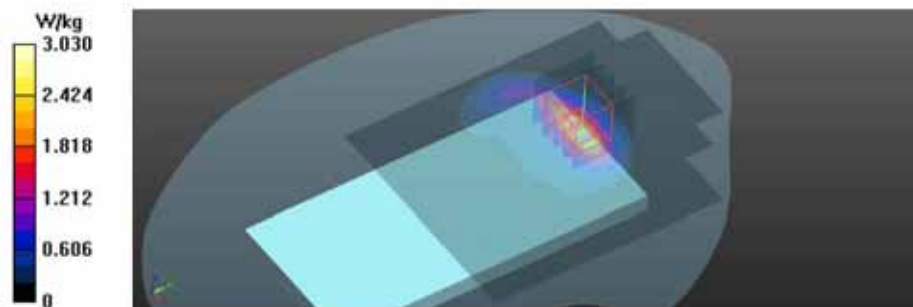
Reference Value = 5.308 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 3.53 W/kg

SAR(1 g) = 2 W/kg; SAR(10 g) = 1.06 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 3.02 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 25_20MHz_IRB_0_Offset_QPSK_Bottom_CH26590_Phablet_With_Cover.da53:0](#)

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.54$ S/m; $\epsilon_r = 53.308$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP:1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 25_20MHz_IRB_0_Offset_QPSK_Bottom_CH26590_Phablet_With_Cover/Area Scan (71x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 8.72 W/kg

Body/LTE Band 25_20MHz_IRB_0_Offset_QPSK_Bottom_CH26590_Phablet_With_Cover/Zoom

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

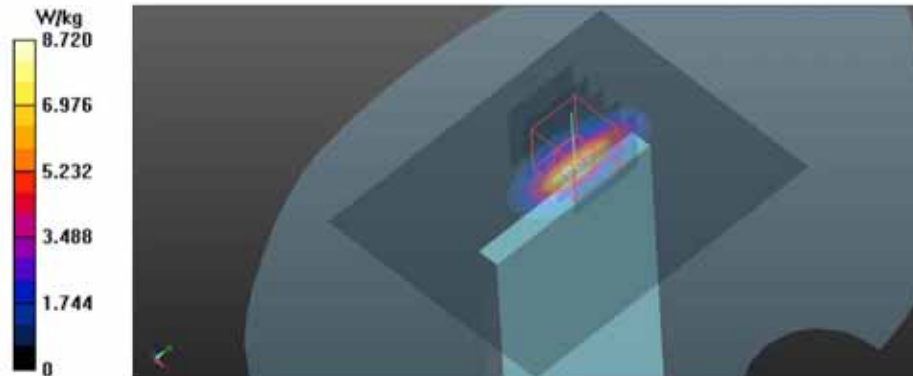
Reference Value = 3.507 V/m; Power Drift = -0.14 dB

Peak SAR (extrapolated) = 10.2 W/kg

SAR(1 g) = 5.06 W/kg; SAR(10 g) = 2.34 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 8.55 W/kg



Date: 2018-07-03

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 25_20MHz_50RB_0 Offset_QPSK_Rear_CH26590_Phablet_With_Cover.da53-0](#)

Ambient Temp : 23.5 °C Tissue Temp : 22.4 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.54$ S/m; $\epsilon_r = 53.308$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(8.39, 8.39, 8.39); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP; Type: SAM; Serial: TP1720
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 25_20MHz_50RB_0 Offset_QPSK_Rear_CH26590_Phablet_With_Cover/Area Scan (81x101x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 2.86 W/kg

Body/LTE Band 25_20MHz_50RB_0 Offset_QPSK_Rear_CH26590_Phablet_With_Cover/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

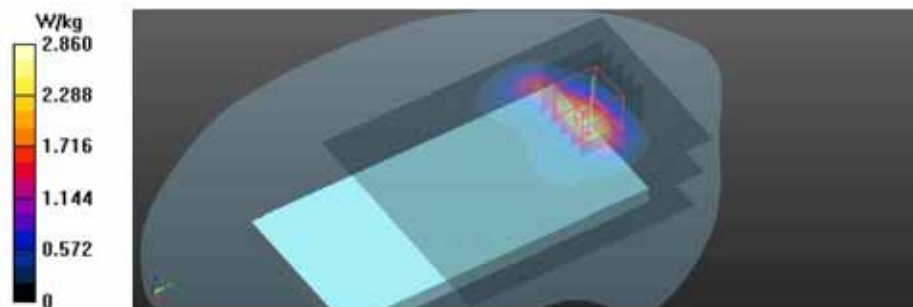
Reference Value = 2.946 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 3.58 W/kg

SAR(1 g) = 1.99 W/kg; SAR(10 g) = 1.05 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 3.08 W/kg



Date: 2018-07-10

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: LTE Band 7 20MHz 1RB 0 Offset QPSK Bottom CH20850 Ant B Phablet With Cover.da53.0

Ambient Temp : 23.2 °C Tissue Temp : 21.9 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 7 (0); Frequency: 2510 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2510$ MHz; $\sigma = 2.089$ S/m; $\epsilon_r = 51.465$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 7 20MHz 1RB 0 Offset QPSK Bottom CH20850 Ant

B Phablet With Cover/Area Scan (111x141x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Maximum value of SAR (interpolated) = 17.0 W/kg

Body/LTE Band 7 20MHz 1RB 0 Offset QPSK Bottom CH20850 Ant

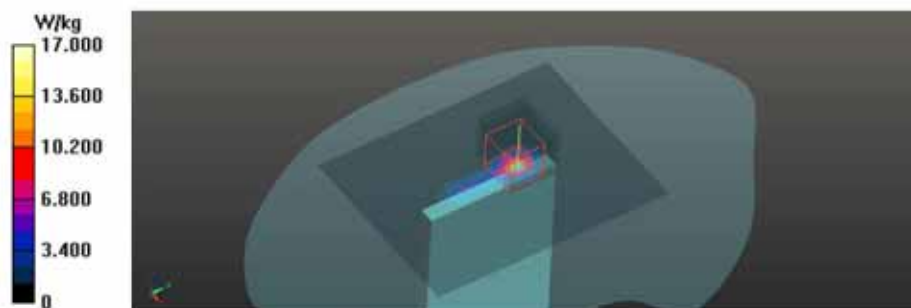
B Phablet With Cover/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 2.756 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 20.1 W/kg

SAR(1 g) = 6.07 W/kg; SAR(10 g) = 1.93 W/kg

Maximum value of SAR (measured) = 13.7 W/kg



Date: 2018-07-10

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: LTE Band 7 20MHz 50RB 0 Offset QPSK Rear CH21100 Ant B Phablet With Cover.da53.0

Ambient Temp : 23.2 °C Tissue Temp : 21.9 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 7 (0); Frequency: 2535 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 2535$ MHz; $\sigma = 2.146$ S/m; $\epsilon_r = 51.384$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 7 20MHz 50RB 0 Offset QPSK Rear CH21100 Ant

B Phablet With Cover/Area Scan (121x151x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

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

Body/LTE Band 7 20MHz 50RB 0 Offset QPSK Rear CH21100 Ant

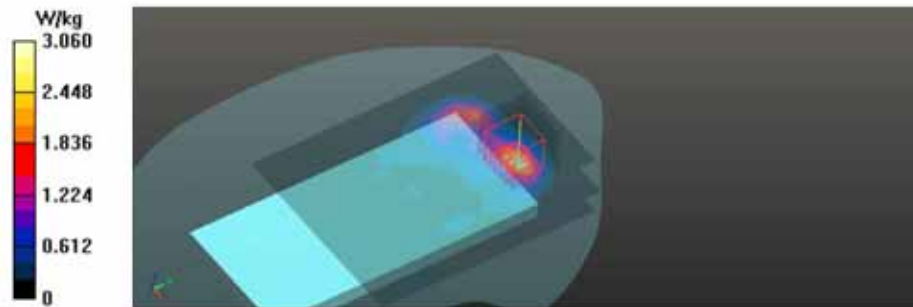
B Phablet With Cover/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 5.063 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 4.05 W/kg

SAR(1 g) = 1.76 W/kg; SAR(10 g) = 0.750 W/kg

Maximum value of SAR (measured) = 3.19 W/kg



Date: 2018-07-11

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: LTE Band 30_10MHz_25RB_0 Offset_QPSK_Rear_CH27710_Ant A_Phablet With Cover.da53.0

Ambient Temp : 23.5 °C Tissue Temp : 22.1 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2310$ MHz; $\sigma = 1.786$ S/m; $\epsilon_r = 52.906$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3933; ConvF(8.26, 8.26, 8.26); Calibrated: 2017-09-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 30_10MHz_25RB_0 Offset_QPSK_Rear_CH27710_Ant

A_Phablet_With Cover/Area Scan (121x151x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm
Maximum value of SAR (interpolated) = 5.04 W/kg

Body/LTE Band 30_10MHz_25RB_0 Offset_QPSK_Rear_CH27710_Ant

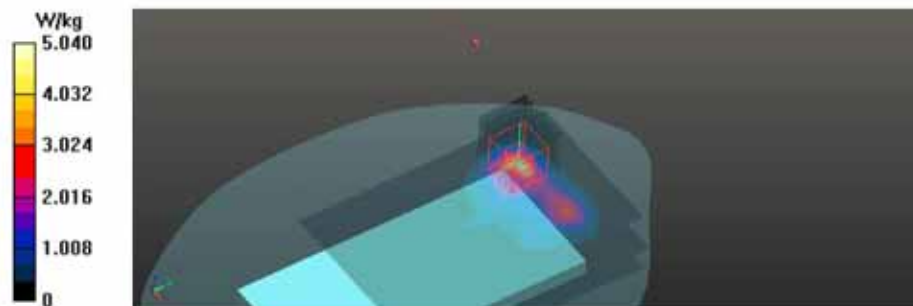
A_Phablet_With Cover/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

Reference Value = 5.534 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 6.62 W/kg

SAR(1 g) = 2.52 W/kg; SAR(10 g) = 1.06 W/kg

Maximum value of SAR (measured) = 5.08 W/kg



Appendix A.21 SAR Test Plots for LTE TDD Phablet

Date: 2018-07-10

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 41_20MHz_50RB_50 Offset_QPSK_Bottom_CH39750_Phablet.da53:0](#)

Ambient Temp : 23.2 °C Tissue Temp : 21.9 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 41 (0); Frequency: 2506 MHz; Duty Cycle: 1:1.58016

Medium parameters used (interpolated): $f = 2506$ MHz; $\sigma = 2.082$ S/m; $\epsilon_r = 51.483$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1 430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 41_20MHz_50RB_50 Offset_QPSK_Bottom_CH39750_Phablet/Area Scan (111x141x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 18.1 W/kg

Body/LTE Band 41_20MHz_50RB_50 Offset_QPSK_Bottom_CH39750_Phablet/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm

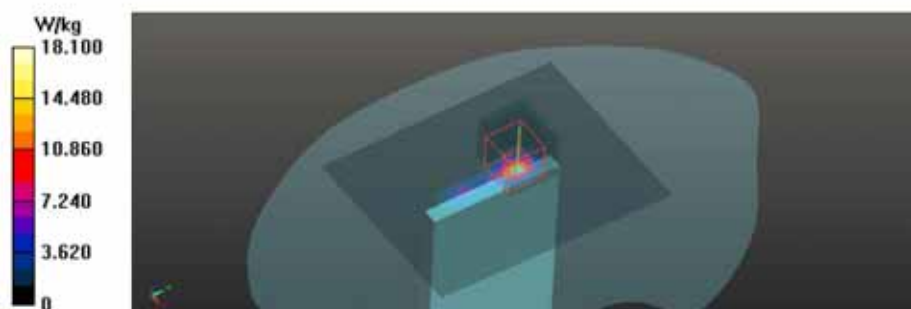
Reference Value = 2.641 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 24.1 W/kg

SAR(1 g) = 7.43 W/kg; SAR(10 g) = 2.37 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 17.1 W/kg



Date: 2018-07-10

Test Laboratory : SGS Korea (Gunpo Laboratory)
File Name: LTE Band 41_20MHz_50RB_50 Offset_QPSK_Bottom_CH39750_Phablet_With_Cover.da53.0

Ambient Temp : 23.2 °C Tissue Temp : 21.9 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 41 (0); Frequency: 2506 MHz; Duty Cycle: 1:1.58016
Medium parameters used (interpolated): $f = 2506$ MHz; $\sigma = 2.082$ S/m; $\epsilon_r = 51.483$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

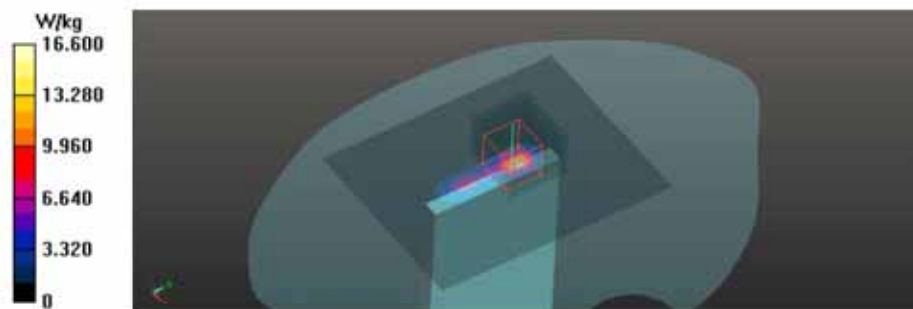
- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM with CRP v5.0_TP-1721; Type: QD000P40CD; Serial: TP-1721
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 41_20MHz_50RB_50 Offset_QPSK_Bottom_CH39750_Phablet_With_Cover/Area Scan (111x141x1): Interpolated grid: $dx=1.000$ mm, $dy=1.000$ mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 16.6 W/kg

Body/LTE Band 41_20MHz_50RB_50 Offset_QPSK_Bottom_CH39750_Phablet_With_Cover/Zoom Scan (8x8x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
Reference Value = 4.610 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 21.7 W/kg
SAR(1 g) = 6.76 W/kg; SAR(10 g) = 2.19 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 13.1 W/kg



Date: 2018-07-20

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 41_20MHz_1RB_99 Offset_QPSK_Rear_CH39750_Phablet.da53:0](#)

Ambient Temp : 23.8 °C Tissue Temp : 22.5 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, LTE Band 41 (0); Frequency: 2506 MHz; Duty Cycle: 1:1.58016
Medium parameters used (interpolated): $f = 2506$ MHz; $\sigma = 2.09$ S/m; $\epsilon_r = 52.089$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY52 Configuration:

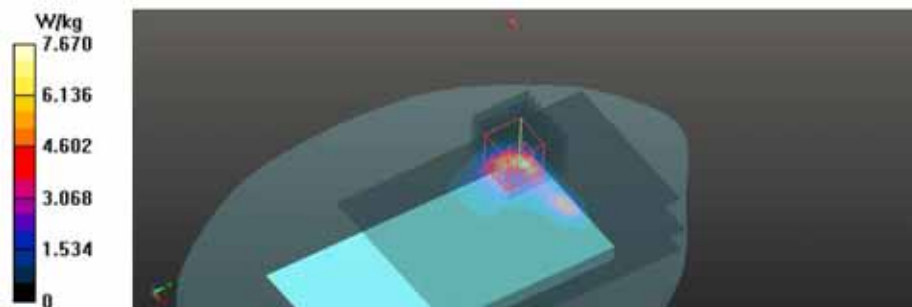
- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1 430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 41_20MHz_1RB_99 Offset_QPSK_Rear_CH39750_Phablet/Area Scan (121x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (interpolated) = 7.67 W/kg

Body/LTE Band 41_20MHz_1RB_99 Offset_QPSK_Rear_CH39750_Phablet/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.785 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 11.3 W/kg
SAR(1 g) = 3.48 W/kg; SAR(10 g) = 1.38 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 8.07 W/kg



Date: 2018-07-20

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [LTE Band 41_20MHz_1RB_99 Offset_QPSK_Rear_CH39750_Phablet_With Cover.da53-0](#)

Ambient Temp : 23.8 °C Tissue Temp : 22.5 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, LTE Band 41 (0); Frequency: 2506 MHz; Duty Cycle: 1:1.58016

Medium parameters used (interpolated): $f = 2506$ MHz; $\sigma = 2.09$ S/m; $\epsilon_r = 52.089$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(7.85, 7.85, 7.85); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/LTE Band 41_20MHz_1RB_99 Offset_QPSK_Rear_CH39750_Phablet_With Cover/Area Scan (121x151x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 3.76 W/kg

Body/LTE Band 41_20MHz_1RB_99 Offset_QPSK_Rear_CH39750_Phablet_With Cover/Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 3.649 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 4.53 W/kg

SAR(1 g) = 1.8 W/kg; SAR(10 g) = 0.866 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 3.32 W/kg

Body/LTE Band 41_20MHz_1RB_99 Offset_QPSK_Rear_CH39750_Phablet_With Cover/Zoom Scan (7x8x7)/Cube 1: Measurement grid: dx=5mm, dy=5mm, dz=5mm

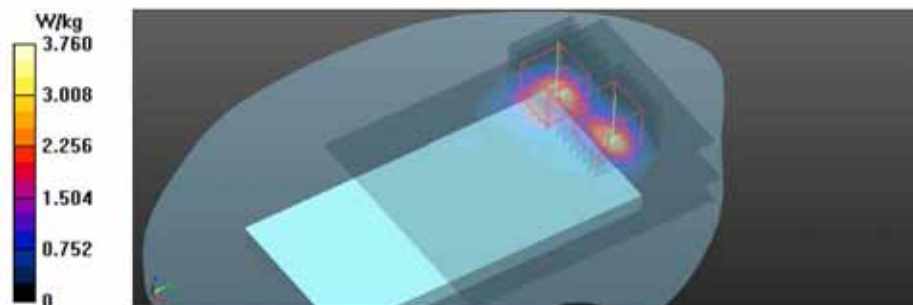
Reference Value = 3.649 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 4.67 W/kg

SAR(1 g) = 2.01 W/kg; SAR(10 g) = 0.864 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 3.63 W/kg



Appendix A.22 SAR Test Plots for WLAN Phablet

Date: 2018-07-12

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [WLAN_5.3GHz_802.11a_Rear_CH60_Ant2_Phablet.da53.0](#)

Ambient Temp : 23.1 °C Tissue Temp : 21.9 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5300$ MHz; $\sigma = 5.359$ S/m; $\epsilon_r = 49.417$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(4.58, 4.58, 4.58); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN_5.3GHz_802.11a_Rear_CH60_Ant2_Phablet/Area Scan (121x101x1): Interpolated
grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 16.1 W/kg

Body/WLAN_5.3GHz_802.11a_Rear_CH60_Ant2_Phablet/Zoom Scan (8x8x7)/Cube 0:

Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

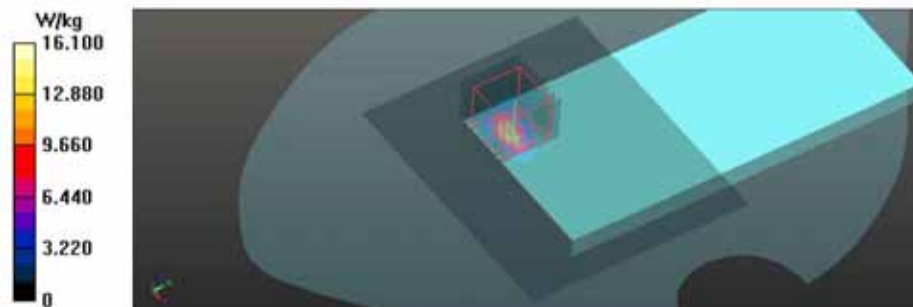
Reference Value = 6.567 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 43.0 W/kg

SAR(1 g) = 6.31 W/kg; SAR(10 g) = 1.44 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 23.4 W/kg



Date: 2018-07-12

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: WLAN 5.6GHz_802.11a_Rear_CH144_Ant2_Phablet.da53-0

Ambient Temp : 23.1 °C Tissue Temp : 21.9 °C

DUT: SM-N960U; Type: Portable Handset; Serial: R38K40917LP

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5720$ MHz; $\sigma = 5.762$ S/m; $\epsilon_r = 47.062$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(4.24, 4.24, 4.24); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN 5.6GHz_802.11a_Rear_CH144_Ant2_Phablet/Area Scan (121x101x1): Interpolated

grid: dx=1.000 mm, dy=1.000 mm

Maximum value of SAR (interpolated) = 11.5 W/kg

Body/WLAN 5.6GHz_802.11a_Rear_CH144_Ant2_Phablet/Zoom Scan (9x9x7)/Cube 0:

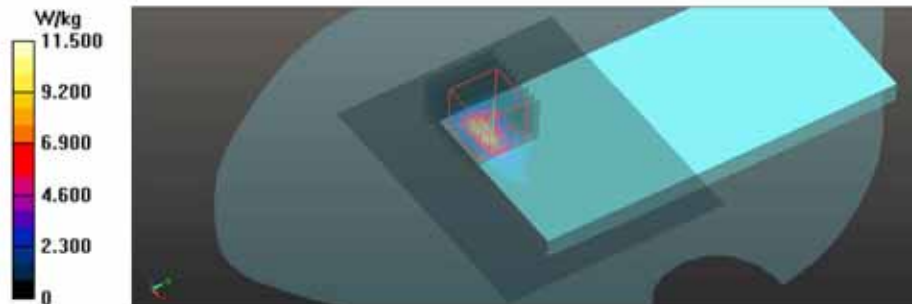
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 8.373 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 29.4 W/kg

SAR(1 g) = 4.8 W/kg; SAR(10 g) = 1.16 W/kg

Maximum value of SAR (measured) = 16.4 W/kg



Date: 2018-07-12

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: WLAN_5.3GHz_802.11a_Rear_CH60_Ant2_Phablet_With_Cover.da53:0

Ambient Temp : 23.1 °C Tissue Temp : 21.9 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5300 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 5300$ MHz; $\sigma = 5.359$ S/m; $\epsilon_r = 49.417$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(4.58, 4.58, 4.58); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN_5.3GHz_802.11a_Rear_CH60_Ant2_Phablet_With_Cover/Area Scan (121x101x1):

Interpolated grid: dx=1.000 mm, dy=1.000 mm

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (interpolated) = 10.1 W/kg

Body/WLAN_5.3GHz_802.11a_Rear_CH60_Ant2_Phablet_With_Cover/Zoom Scan

(9x9x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

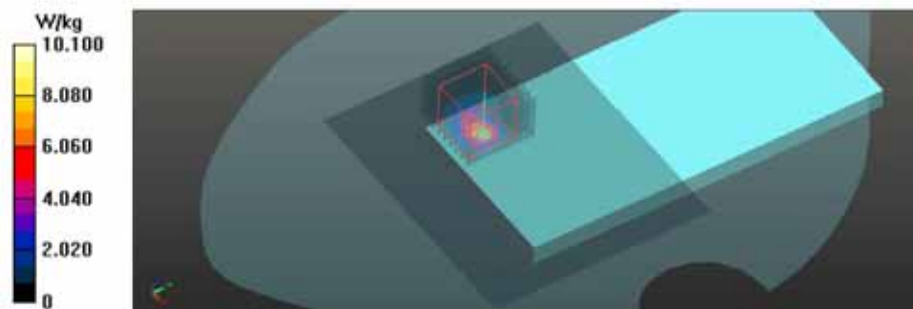
Reference Value = 4.569 V/m; Power Drift = -0.12 dB

Peak SAR (extrapolated) = 17.7 W/kg

SAR(1 g) = 3.5 W/kg; SAR(10 g) = 0.856 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Maximum value of SAR (measured) = 9.32 W/kg



Date: 2018-07-12

Test Laboratory : SGS Korea (Gunpo Laboratory)

File Name: [WLAN 5.6GHz_802.11a_Rear_CH144_Ant2_Phablet_With_Cover.da53:0](#)

Ambient Temp : 23.1 °C Tissue Temp : 21.9 °C

DUT: SM-N960U & EF-NN960; Type: Portable Handset & LED View Cover; Serial: R38K40917LP & R37K36R1MAXHB3

Communication System: UID 0, 5GHz WLAN (0); Frequency: 5720 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 5720 \text{ MHz}$; $\sigma = 5.762 \text{ S/m}$; $\epsilon_r = 47.062$; $\rho = 1000 \text{ kg/m}^3$

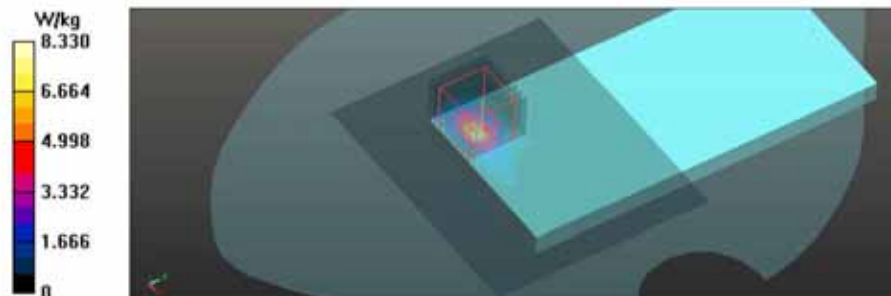
Phantom section: Flat Section

DASY52 Configuration:

- Probe: EX3DV4 - SN3986; ConvF(4.24, 4.24, 4.24); Calibrated: 2018-03-23;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sni 430; Calibrated: 2018-03-16
- Phantom: SAM Phantom TP-1645; Type: SAM Phantom; Serial: TP-1645
- DASY52 52.10.0(1446)SEMCAD X 14.6.10(7417)

Body/WLAN 5.6GHz_802.11a_Rear_CH144_Ant2_Phablet_With_Cover/Area Scan
(121x101x1): Interpolated grid: $dx=1.000 \text{ mm}$, $dy=1.000 \text{ mm}$
Maximum value of SAR (interpolated) = 8.33 W/kg

Body/WLAN 5.6GHz_802.11a_Rear_CH144_Ant2_Phablet_With_Cover/Zoom Scan
(8x8x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
Reference Value = 6.714 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 16.0 W/kg
SAR(1 g) = 3.03 W/kg; SAR(10 g) = 0.744 W/kg
Maximum value of SAR (measured) = 9.00 W/kg



-THE END-