

Date: 2024-09-02

52_FR1 n41_100M_QPSK_1RB_1Offset_Top Side_15mm_Ch518598

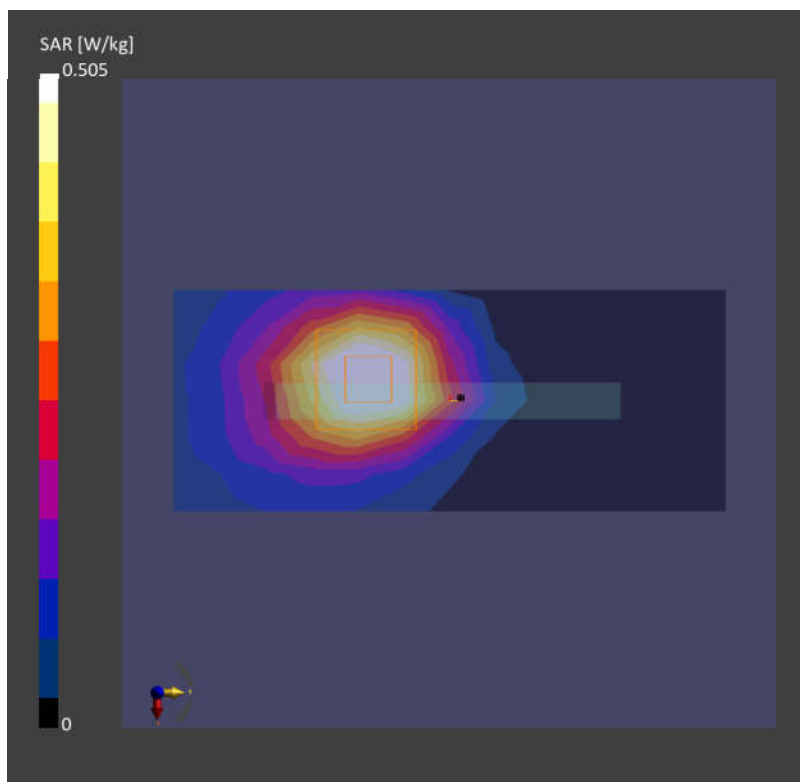
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)
AntennaCfg:SISO; Frequency: 2592.990 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f=2592.990$ MHz; $\sigma=1.95$ S/m; $\epsilon_r=40.4$
Ambient Temperature: 23.3°C; Liquid Temperature: 22.8°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.84, 7.77, 7.69); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 TDD, 10866-AAF

Area Scan (48.0 mm x 120.0 mm): Measurement Grid: 8.0 mm x 10.0 mm
SAR (1g) = 0.473 W/kg; SAR (10g) = 0.242 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm
Power Drift = -0.05 dB
SAR (1g) = 0.505 W/kg; SAR (10g) = 0.265 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 83.3 %



Date: 2024-07-29

53_LTE Band 42_20M_QPSK_1RB_0Offset_Back_10mm_Ch42190

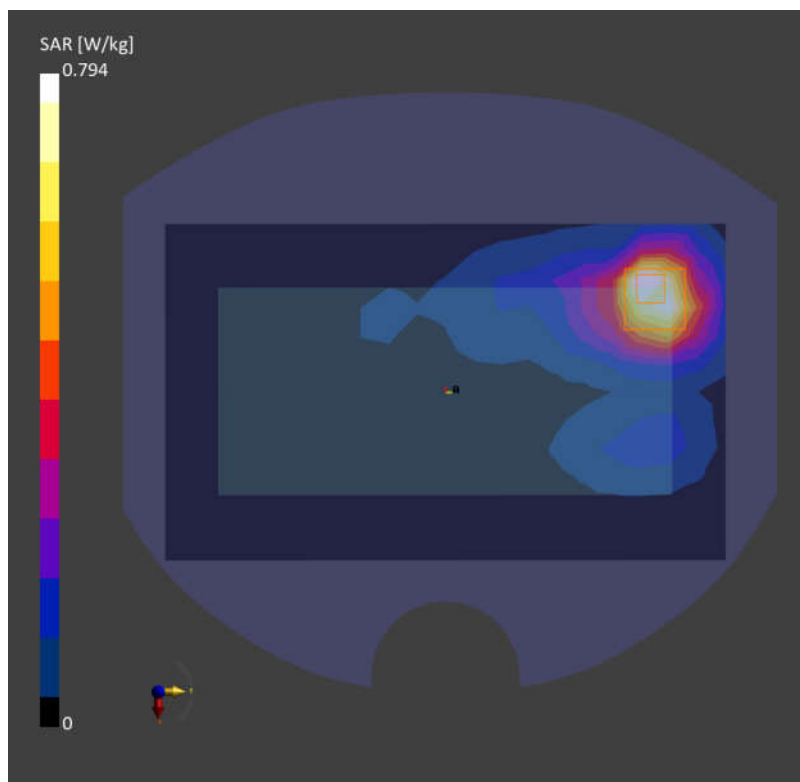
Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)
AntennaCfg:SISO; Frequency: 3460.000 MHz; Duty Cycle: 1:1.59
Medium: HSL Medium parameters used: $f = 3460.000$ MHz; $\sigma = 2.77$ S/m; $\epsilon_r = 38.8$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.33, 7.26, 7.22); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-TDD, 10435-AAG

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.766 W/kg; SAR (10g) = 0.309 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = -0.03 dB
SAR (1g) = 0.794 W/kg; SAR (10g) = 0.331 W/kg
Smallest distance from peaks to all points 3 dB below = 9.9 mm
Ratio of SAR at M2 to SAR at M1 = 78.4 %



Date: 2024-07-29

54_LTE Band 48_20M_QPSK_1RB_0Offset_Back_10mm_Ch55340

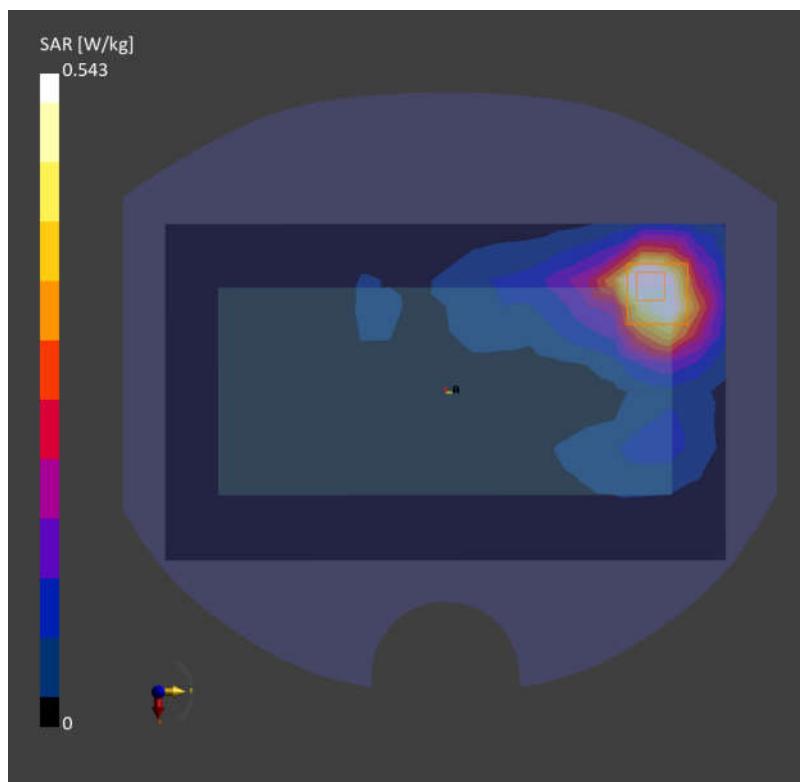
Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)
AntennaCfg:SISO; Frequency: 3560.000 MHz; Duty Cycle: 1:1.59
Medium: HSL Medium parameters used: $f = 3560.000$ MHz; $\sigma = 2.86$ S/m; $\epsilon_r = 38.6$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.33, 7.26, 7.22); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-TDD, 10172-CAH

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.510 W/kg; SAR (10g) = 0.228 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = -0.09 dB
SAR (1g) = 0.543 W/kg; SAR (10g) = 0.243 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 78.1 %



Date: 2024-07-30

55_FR1 n48_40M_QPSK_50RB_28Offset_Top Side_10mm_Ch641666

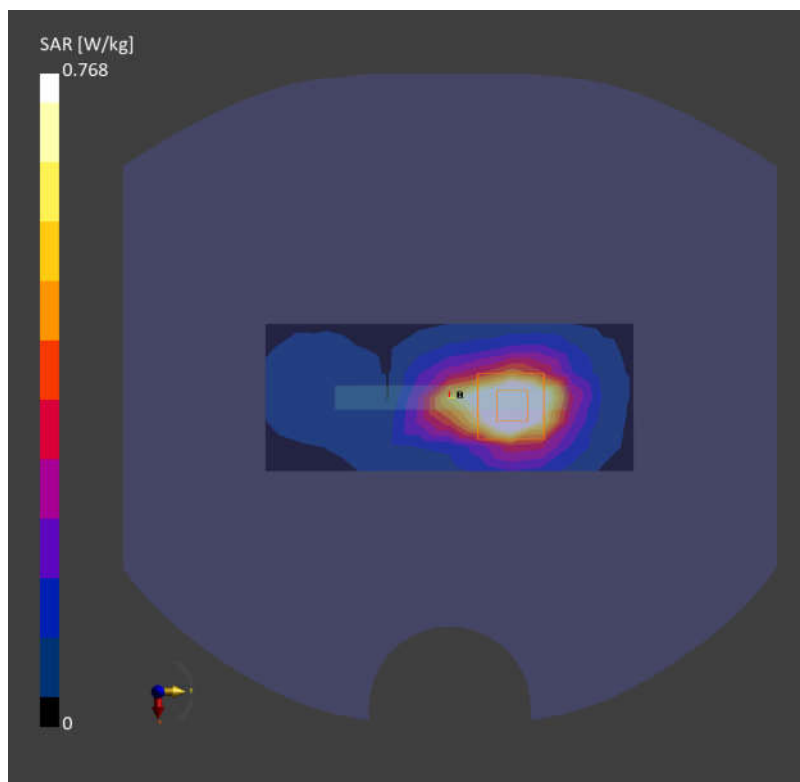
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)
AntennaCfg:SISO; Frequency: 3624.990 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 3624.990$ MHz; $\sigma = 3.00$ S/m; $\epsilon_r = 38.2$
Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.27, 7.2, 7.17); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 TDD, 10866-AAF

Area Scan (48.0 mm x 120.0 mm): Measurement Grid: 8.0 mm x 10.0 mm
SAR (1g) = 0.729 W/kg; SAR (10g) = 0.338 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = -0.03 dB
SAR (1g) = 0.768 W/kg; SAR (10g) = 0.354 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 77.5 %



Date: 2024-07-29

56_FR1 n77 HPUE_100M_QPSK_1RB_1Offset_Top Side_15mm_Ch633334

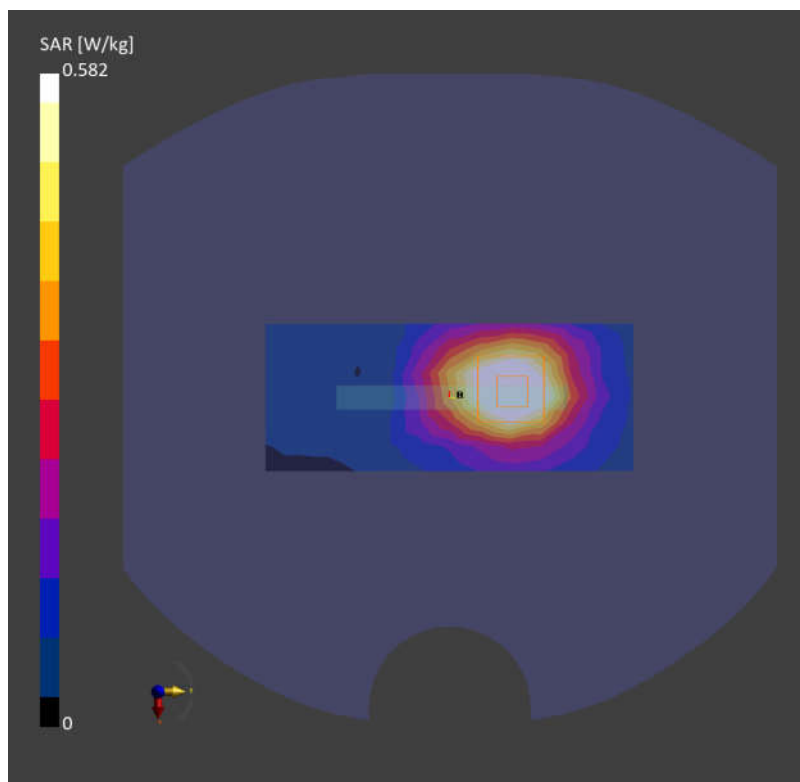
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)
AntennaCfg:SISO; Frequency: 3500.010 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 3500.010$ MHz; $\sigma = 2.81$ S/m; $\epsilon_r = 38.7$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.33, 7.26, 7.22); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 TDD, 10866-AAF

Area Scan (48.0 mm x 120.0 mm): Measurement Grid: 8.0 mm x 10.0 mm
SAR (1g) = 0.565 W/kg; SAR (10g) = 0.269 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = -0.09 dB
SAR (1g) = 0.582 W/kg; SAR (10g) = 0.282 W/kg
Smallest distance from peaks to all points 3 dB below = 12.1 mm
Ratio of SAR at M2 to SAR at M1 = 79.8 %



Date: 2024-07-30

57_FR1 n78 HPUE_100M_QPSK_1RB_1Offset_Top Side_15mm_Ch650000

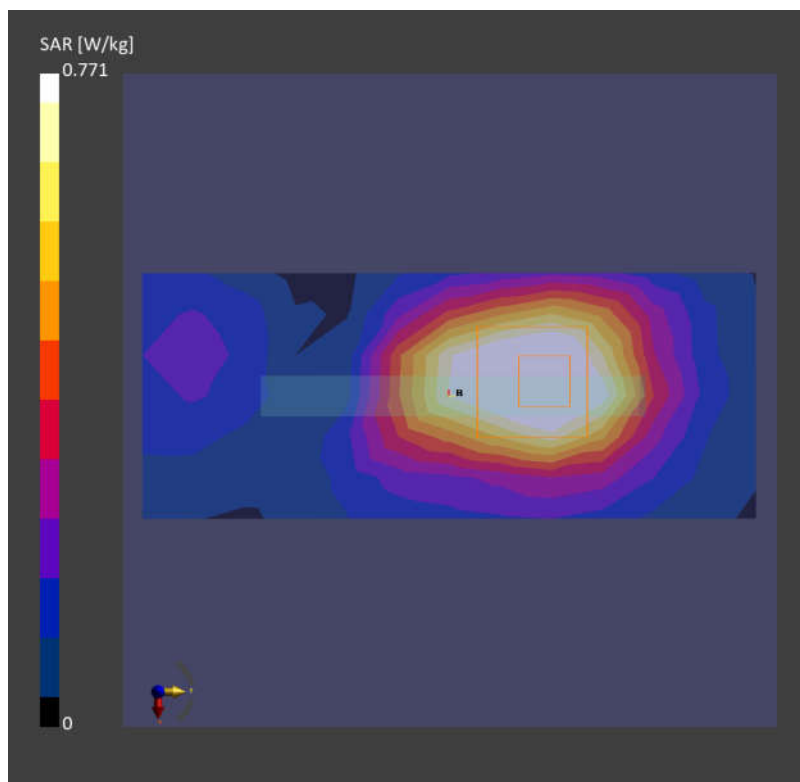
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)
AntennaCfg:SISO; Frequency: 3750.000 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 3750.000$ MHz; $\sigma = 3.11$ S/m; $\epsilon_r = 38.1$
Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.27, 7.2, 7.17); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 TDD, 10866-AAF

Area Scan (48.0 mm x 120.0 mm): Measurement Grid: 8.0 mm x 10.0 mm
SAR (1g) = 0.729 W/kg; SAR (10g) = 0.342 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = 0.18 dB
SAR (1g) = 0.771 W/kg; SAR (10g) = 0.370 W/kg
Smallest distance from peaks to all points 3 dB below = 13.1 mm
Ratio of SAR at M2 to SAR at M1 = 78.9 %



Date: 2024-08-01

58_WLAN2.4GHz_802.11b 1Mbps_Top Side_10mm_Ch6

Communication System: IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)

Frequency: 2437.000 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 2437.000$ MHz; $\sigma = 1.73$ S/m; $\epsilon_r = 39.4$

Ambient Temperature: 23.1°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.91, 7.86, 7.76); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WLAN, 10315-AAB

Area Scan (48.0 mm x 120.0 mm): Measurement Grid: 8.0 mm x 10.0 mm

SAR (1g) = 0.291 W/kg; SAR (10g) = 0.153 W/kg;

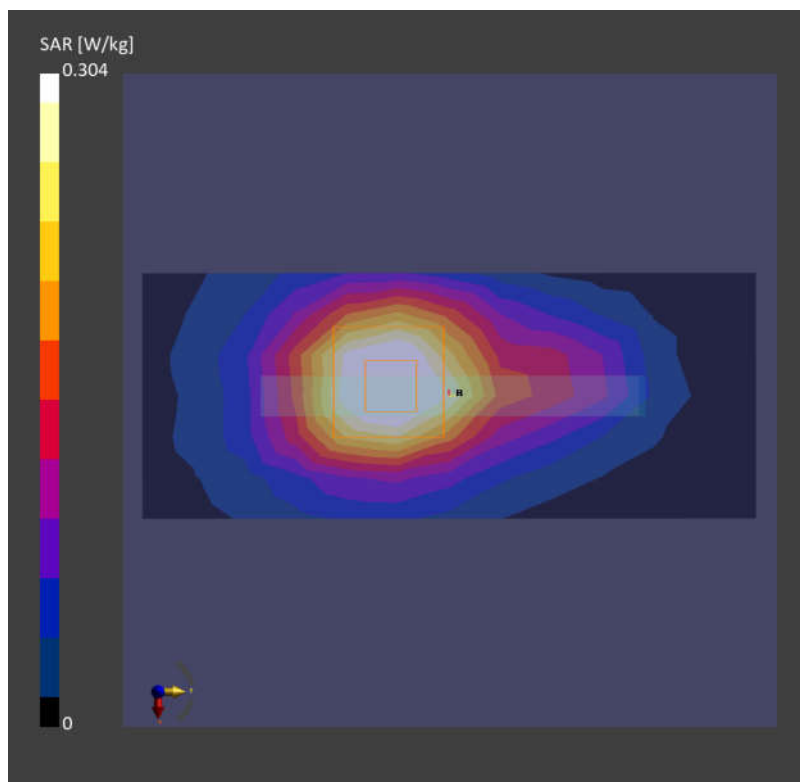
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm

Power Drift = 0.02 dB

SAR (1g) = 0.304 W/kg; SAR (10g) = 0.165 W/kg

Smallest distance from peaks to all points 3 dB below = 11.7 mm

Ratio of SAR at M2 to SAR at M1 = 84.2 %



Date: 2024-08-01

59_Bluetooth_1Mbps_Top Side_10mm_Ch78

Communication System: IEEE 802.15.1 Bluetooth (GFSK, DH5)

Frequency: 2480.000 MHz; DutyCycle: 1:1.306

Medium: HSL Medium parameters used: $f = 2480.000$ MHz; $\sigma = 1.79$ S/m; $\epsilon_r = 39.3$

Ambient Temperature: 23.1°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.91, 7.86, 7.76); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: Bluetooth, 10032-CAA

Area Scan (48.0 mm x 120.0 mm): Measurement Grid: 8.0 mm x 10.0 mm

SAR (1g) = 0.039 W/kg; SAR (10g) = 0.020 W/kg;

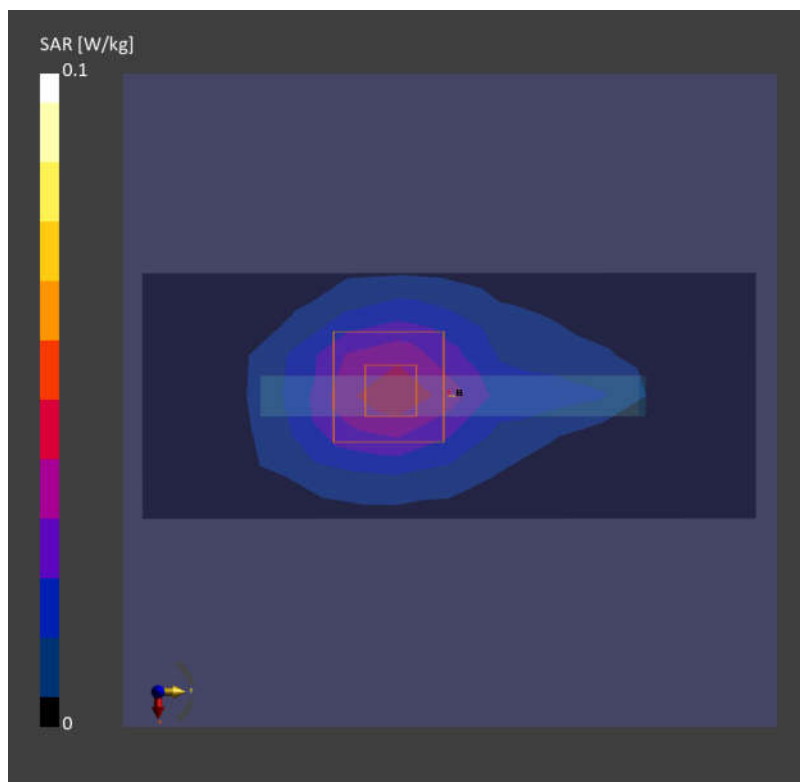
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm

Power Drift = -0.02 dB

SAR (1g) = 0.038 W/kg; SAR (10g) = 0.021 W/kg

Smallest distance from peaks to all points 3 dB below = 10.2 mm

Ratio of SAR at M2 to SAR at M1 = 85.8 %



Date: 2024-08-02

60_WLAN5GHz_802.11a 6Mbps_Top Side_10mm_Ch40

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)

Frequency: 5200.000 MHz; Duty Cycle: 1:1.031

Medium: HSL Medium parameters used: $f = 5200.000$ MHz; $\sigma = 4.52$ S/m; $\epsilon_r = 35.8$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(5.99, 5.85, 5.81); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WLAN, 10317-AAE

Area Scan (48.0 mm x 120.0 mm): Measurement Grid: 8.0 mm x 10.0 mm

SAR (1g) = 0.332 W/kg; SAR (10g) = 0.124 W/kg;

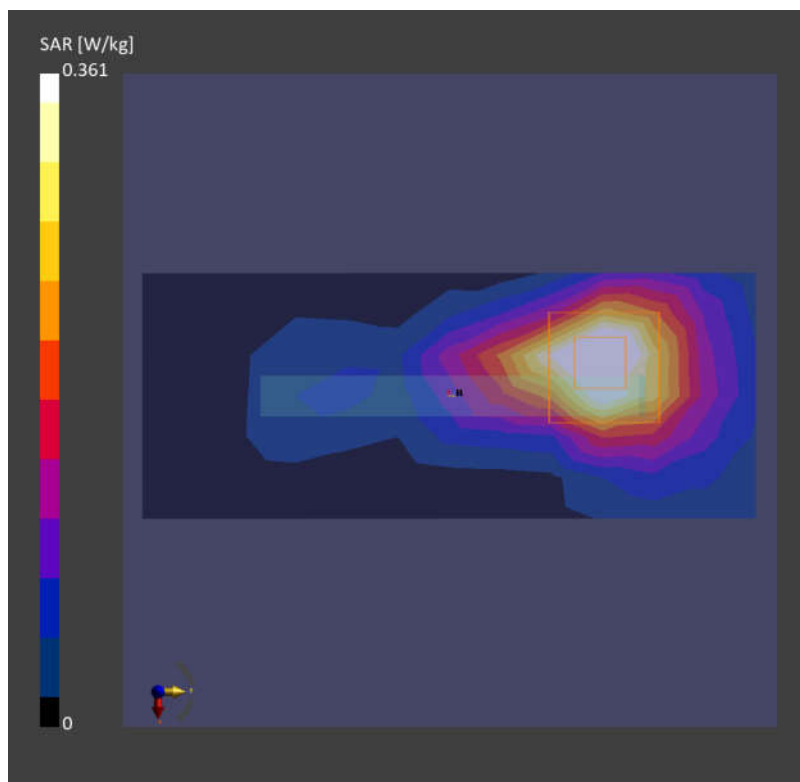
Zoom Scan (24.0 mm x 22.0 mm x 22.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = -0.09 dB

SAR (1g) = 0.361 W/kg; SAR (10g) = 0.133 W/kg

Smallest distance from peaks to all points 3 dB below = 8.0 mm

Ratio of SAR at M2 to SAR at M1 = 68.7 %



Date: 2024-08-04

61_WLAN5GHz_802.11a 6Mbps_Front_10mm_Ch157

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)

Frequency: 5785.000 MHz; Duty Cycle: 1:1.031

Medium: HSL Medium parameters used: $f = 5785.000$ MHz; $\sigma = 5.14$ S/m; $\epsilon_r = 34.8$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(5.42, 5.2, 5.18); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WLAN, 10317-AAE

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm

SAR (1g) = 0.455 W/kg; SAR (10g) = 0.175 W/kg;

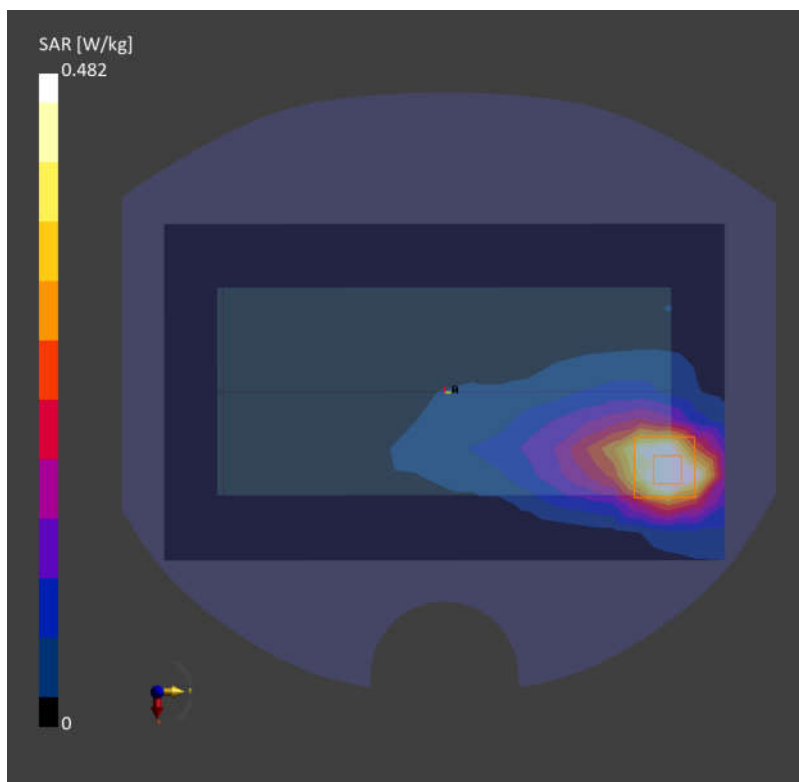
Zoom Scan (24.0 mm x 22.0 mm x 22.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = 0.05 dB

SAR (1g) = 0.482 W/kg; SAR (10g) = 0.181 W/kg

Smallest distance from peaks to all points 3 dB below = 9.4 mm

Ratio of SAR at M2 to SAR at M1 = 61.7 %



Date: 2024-07-26

62_LTE Band 12_10M_QPSK_1RB_0Offset_Back_10mm_Ch23095

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)

AntennaCfg:SISO; Frequency: 707.500 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 707.500$ MHz; $\sigma = 0.863$ S/m; $\epsilon_r = 42.6$

Ambient Temperature: 23.3°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(9.76, 10.11, 9.77); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-FDD, 10175-CAH

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm

SAR (1g) = 0.238 W/kg; SAR (10g) = 0.171 W/kg;

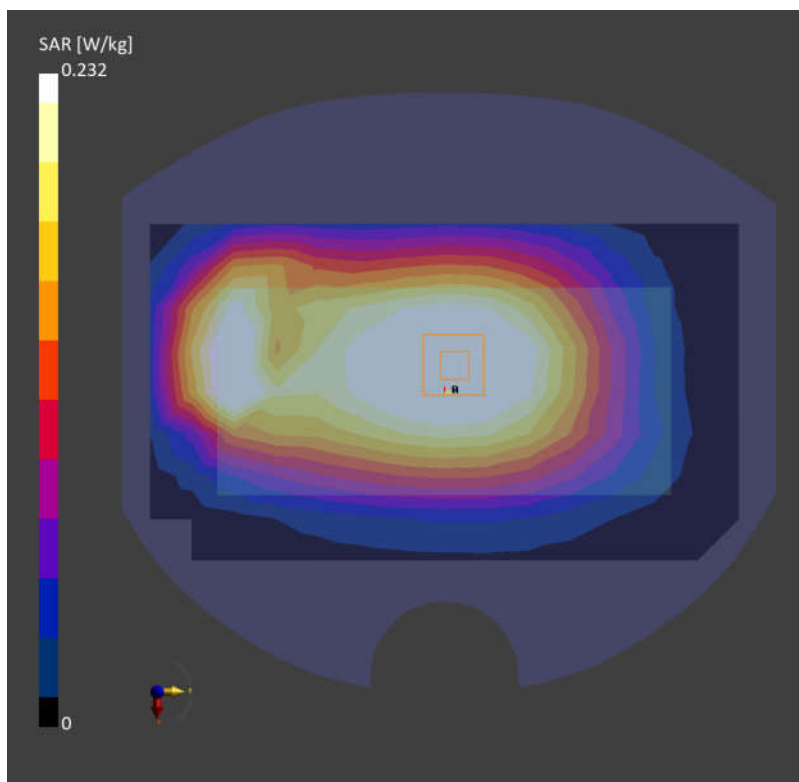
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm

Power Drift = 0.05 dB

SAR (1g) = 0.232 W/kg; SAR (10g) = 0.142 W/kg

Smallest distance from peaks to all points 3 dB below = 14.4 mm

Ratio of SAR at M2 to SAR at M1 = 84.4 %



Date: 2024-07-26

63_LTE Band 13_10M_QPSK_1RB_0Offset_Back_10mm_Ch23230

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)

AntennaCfg:SISO; Frequency: 782.000 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 782.000$ MHz; $\sigma = 0.916$ S/m; $\epsilon_r = 42.0$

Ambient Temperature: 23.3°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(9.76, 10.11, 9.77); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-FDD, 10175-CAH

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm

SAR (1g) = 0.193 W/kg; SAR (10g) = 0.128 W/kg;

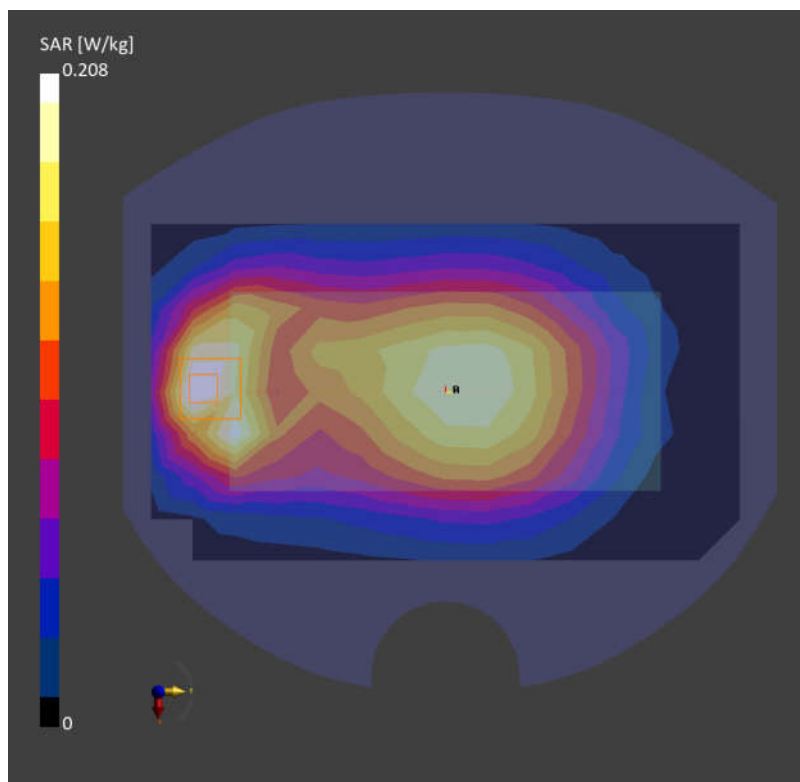
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm

Power Drift = -0.04 dB

SAR (1g) = 0.208 W/kg; SAR (10g) = 0.123 W/kg

Smallest distance from peaks to all points 3 dB below = 12.1 mm

Ratio of SAR at M2 to SAR at M1 = 86.3 %



Date: 2024-07-26

64_GSM850_GPRS (4 Tx slots)_Back_10mm_Ch189

Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)

Frequency: 836.400 MHz; Duty Cycle: 1:2.08

Medium: HSL Medium parameters used: $f = 836.400$ MHz; $\sigma = 0.974$ S/m; $\epsilon_r = 40.4$

Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(9.83, 9.58, 9.35); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: GSM, 10028-DAC

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm

SAR (1g) = 0.391 W/kg; SAR (10g) = 0.257 W/kg;

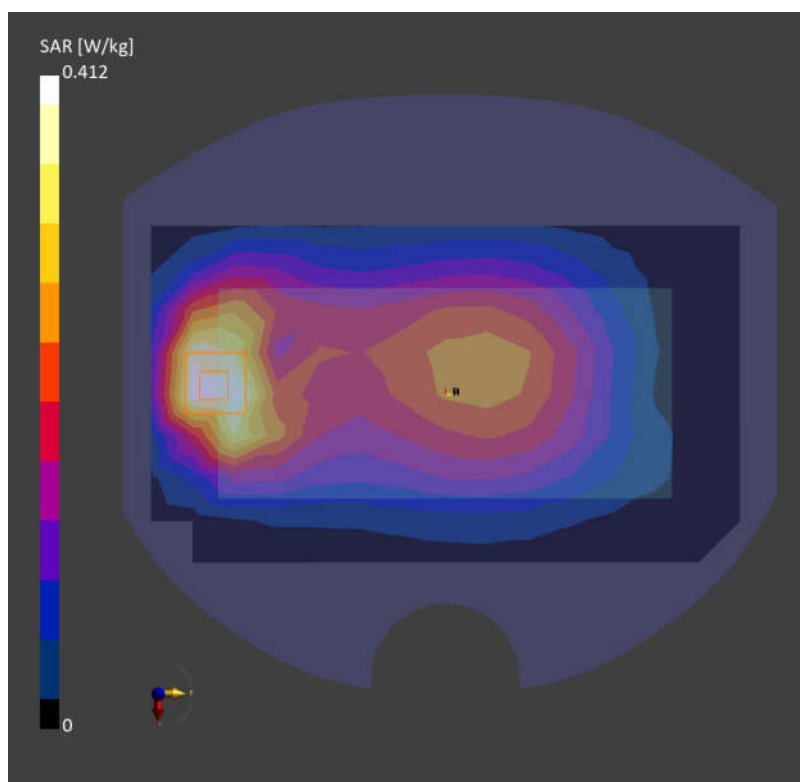
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm

Power Drift = -0.13 dB

SAR (1g) = 0.412 W/kg; SAR (10g) = 0.244 W/kg

Smallest distance from peaks to all points 3 dB below = 11.9 mm

Ratio of SAR at M2 to SAR at M1 = 86.2 %



Date: 2024-07-26

65_WCDMA V_RMC 12.2Kbps_Back_10mm_Ch4182

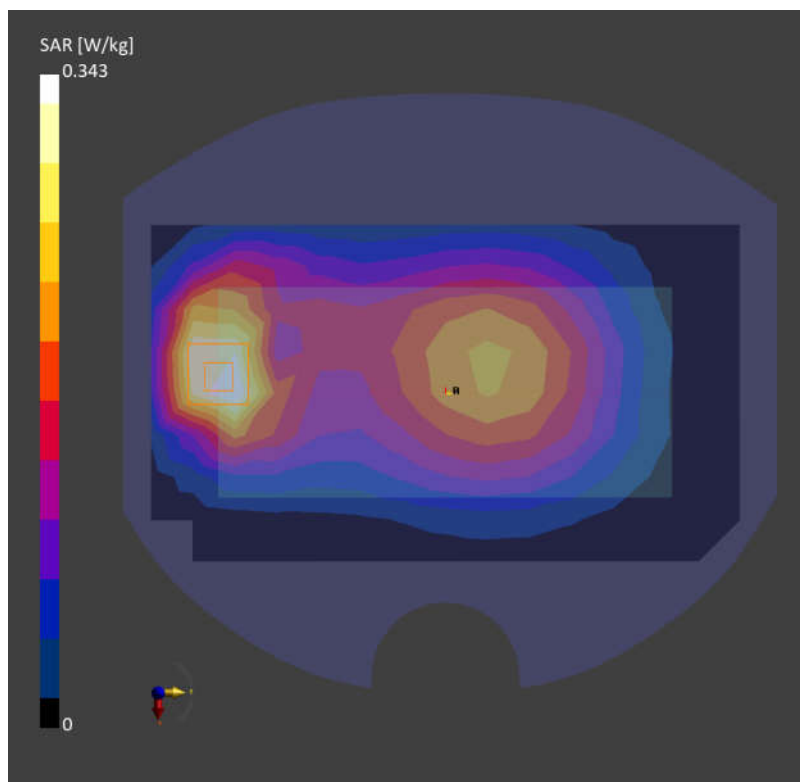
Communication System: UMTS-FDD (WCDMA); Frequency: 836.400 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 836.400$ MHz; $\sigma = 0.974$ S/m; $\epsilon_r = 40.4$
Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(9.83, 9.58, 9.35); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WCDMA, 10011-CAC

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm
SAR (1g) = 0.324 W/kg; SAR (10g) = 0.213 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm
Power Drift = 0.05 dB
SAR (1g) = 0.343 W/kg; SAR (10g) = 0.202 W/kg
Smallest distance from peaks to all points 3 dB below = 10.8 mm
Ratio of SAR at M2 to SAR at M1 = 86.2 %



Date: 2024-07-26

66_LTE Band 5_10M_QPSK_1RB_0Offset_Back_10mm_Ch20525

Communication System: LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)

AntennaCfg:SISO; Frequency: 836.500 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 836.500$ MHz; $\sigma = 0.934$ S/m; $\epsilon_r = 41.8$

Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(9.83, 9.58, 9.35); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-FDD, 10175-CAH

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm

SAR (1g) = 0.253 W/kg; SAR (10g) = 0.167 W/kg;

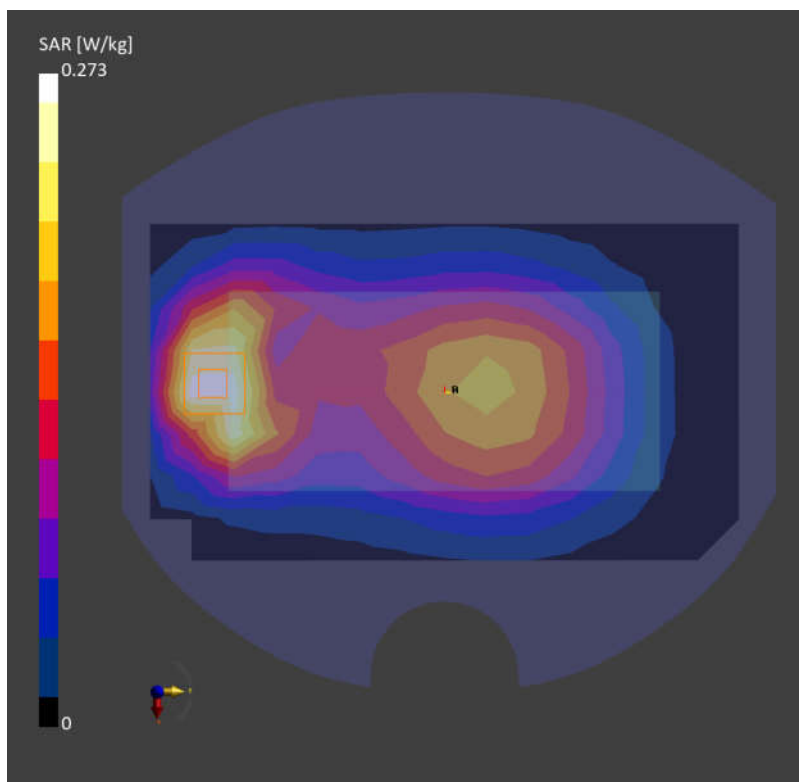
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm

Power Drift = -0.14 dB

SAR (1g) = 0.273 W/kg; SAR (10g) = 0.162 W/kg

Smallest distance from peaks to all points 3 dB below = 11.1 mm

Ratio of SAR at M2 to SAR at M1 = 85.2 %



Date: 2024-07-26

67_LTE Band 26_15M_QPSK_1RB_0Offset_Back_10mm_Ch26865

Communication System: LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)

AntennaCfg:SISO; Frequency: 831.500 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 831.500$ MHz; $\sigma = 0.932$ S/m; $\epsilon_r = 41.8$

Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(9.83, 9.58, 9.35); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-FDD, 10181-CAF

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm

SAR (1g) = 0.320 W/kg; SAR (10g) = 0.212 W/kg;

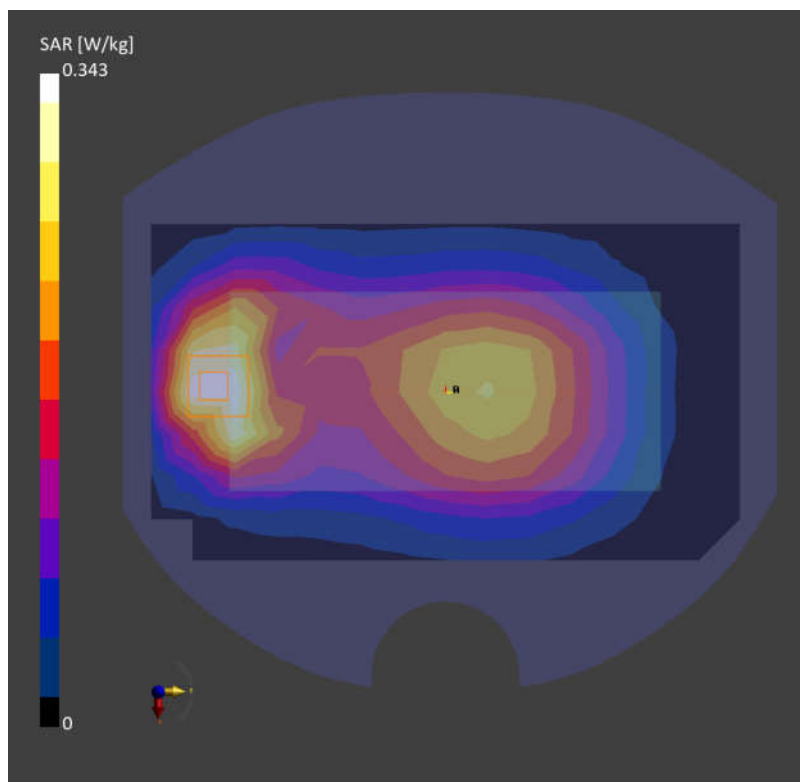
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm

Power Drift = 0.03 dB

SAR (1g) = 0.343 W/kg; SAR (10g) = 0.204 W/kg

Smallest distance from peaks to all points 3 dB below = 11.4 mm

Ratio of SAR at M2 to SAR at M1 = 85.1 %



Date: 2024-07-26

68_FR1 n5_20M_QPSK_50RB_28Offset_Back_10mm_Ch167300

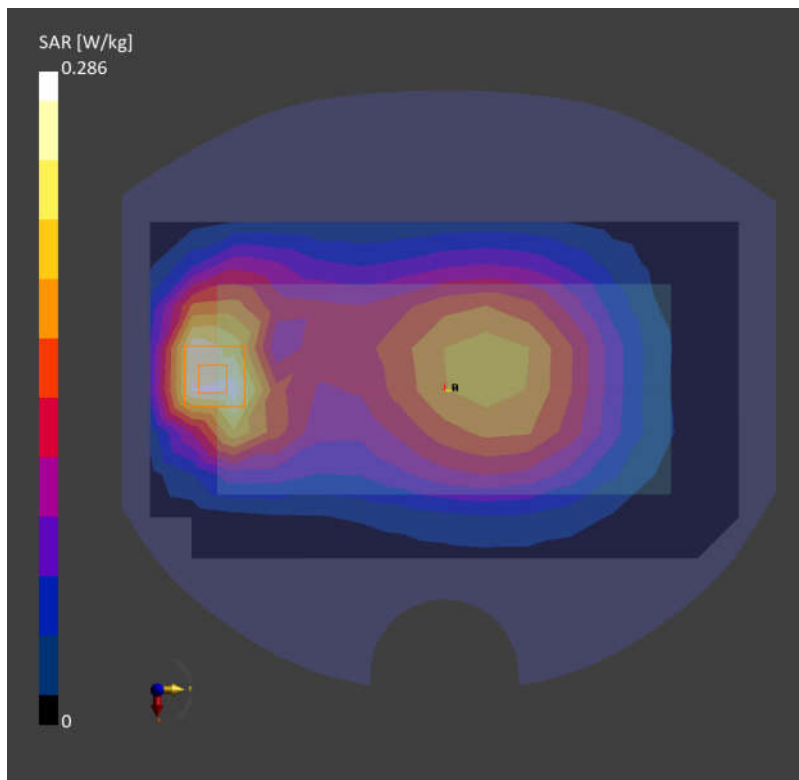
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 20 MHz, QPSK, 15 kHz)
AntennaCfg:SISO; Frequency: 836.500 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 836.500$ MHz; $\sigma = 0.974$ S/m; $\epsilon_r = 40.4$
Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(9.83, 9.58, 9.35); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 FDD, 10931-AAC

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm
SAR (1g) = 0.262 W/kg; SAR (10g) = 0.172 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm
Power Drift = -0.15 dB
SAR (1g) = 0.286 W/kg; SAR (10g) = 0.168 W/kg
Smallest distance from peaks to all points 3 dB below = 11.9 mm
Ratio of SAR at M2 to SAR at M1 = 84.0 %



Date: 2024-07-27

69_WCDMA IV_RMC 12.2Kbps_Back_15mm_Ch1413

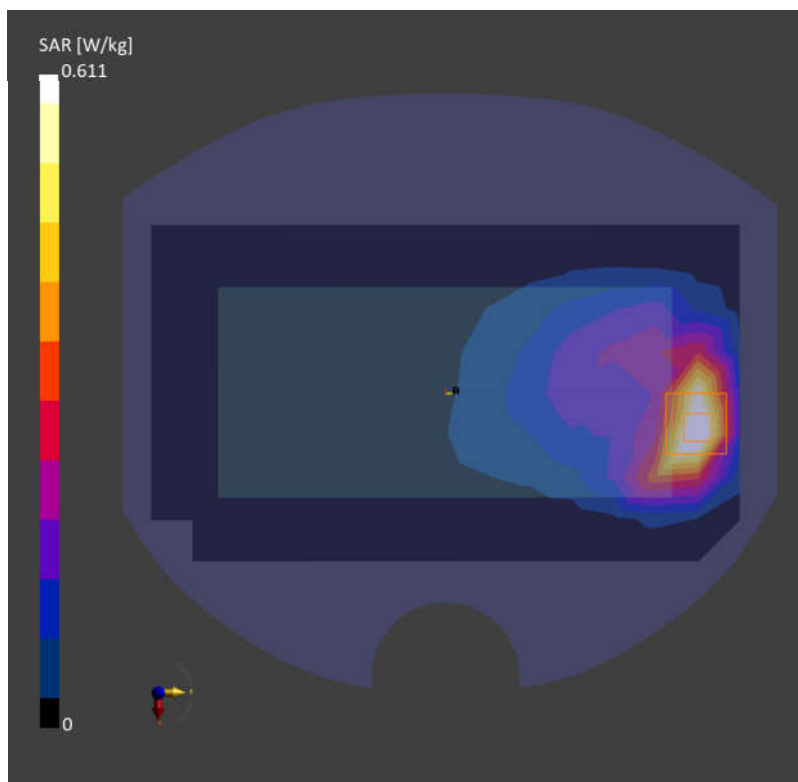
Communication System: UMTS-FDD (WCDMA); Frequency: 1732.600 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 1732.600$ MHz; $\sigma = 1.38$ S/m; $\epsilon_r = 38.5$
Ambient Temperature: 23.4°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(8.64, 8.47, 8.41); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WCDMA, 10011-CAC

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm
SAR (1g) = 0.567 W/kg; SAR (10g) = 0.249 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm
Power Drift = -0.01 dB
SAR (1g) = 0.611 W/kg; SAR (10g) = 0.281 W/kg
Smallest distance from peaks to all points 3 dB below = 8.4 mm
Ratio of SAR at M2 to SAR at M1 = 85.5 %



Date: 2024-07-27

70_LTE Band 4_20M_QPSK_1RB_0Offset_Back_15mm_Ch20175

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)

AntennaCfg:SISO; Frequency: 1732.500 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 1732.500$ MHz; $\sigma = 1.38$ S/m; $\epsilon_r = 38.5$

Ambient Temperature: 23.4°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(8.64, 8.47, 8.41); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-FDD, 10169-CAF

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm

SAR (1g) = 0.530 W/kg; SAR (10g) = 0.274 W/kg;

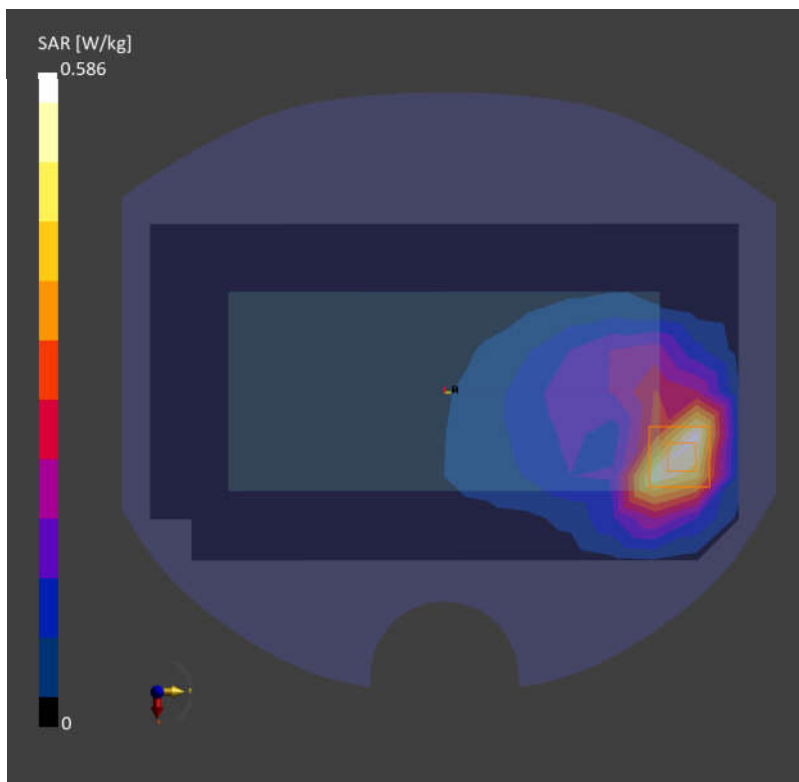
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm

Power Drift = -0.08 dB

SAR (1g) = 0.586 W/kg; SAR (10g) = 0.282 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 86.7 %



Date: 2024-07-27

71_LTE Band 66_20M_QPSK_1RB_0Offset_Back_15mm_Ch132322

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)

AntennaCfg:SISO; Frequency: 1745.000 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 1745.000$ MHz; $\sigma = 1.39$ S/m; $\epsilon_r = 38.5$

Ambient Temperature: 23.4°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(8.64, 8.47, 8.41); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-FDD, 10169-CAF

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm

SAR (1g) = 0.529 W/kg; SAR (10g) = 0.291 W/kg;

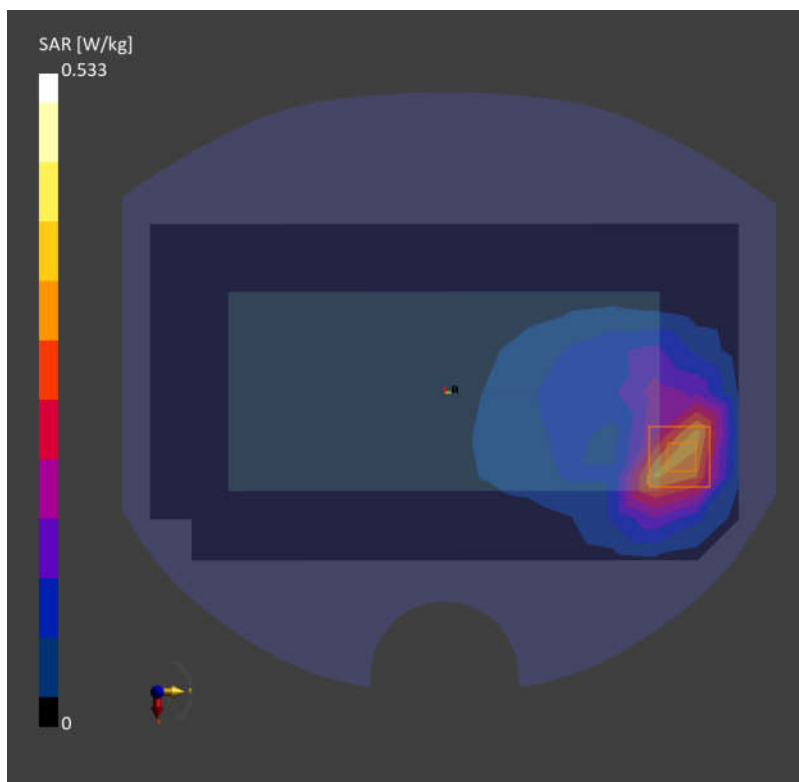
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm

Power Drift = -0.05 dB

SAR (1g) = 0.533 W/kg; SAR (10g) = 0.292 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 87.9 %



Date: 2024-07-27

72_FR1 n66_40M_QPSK_1RB_1Offset_Back_15mm_Ch349000

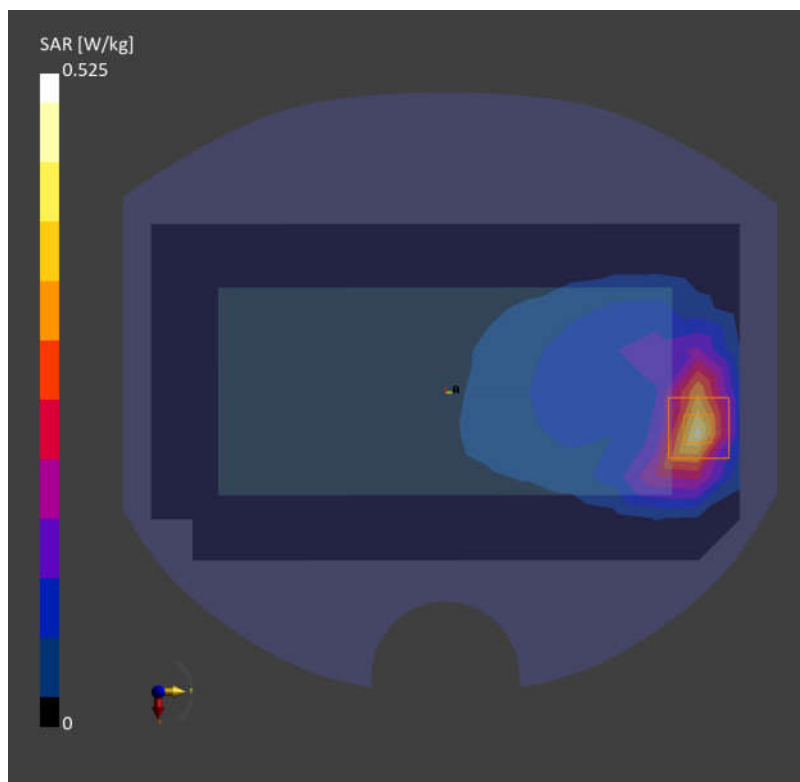
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 15 kHz)
AntennaCfg:SISO; Frequency: 1745.000 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 1745.000$ MHz; $\sigma = 1.39$ S/m; $\epsilon_r = 38.5$
Ambient Temperature: 23.4°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(8.64, 8.47, 8.41); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 FDD, 10934-AAC

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm
SAR (1g) = 0.456 W/kg; SAR (10g) = 0.239 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm
Power Drift = 0.10 dB
SAR (1g) = 0.525 W/kg; SAR (10g) = 0.262 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 85.6 %



Date: 2024-07-27

73_GSM1900_GPRS (4 Tx slots)_Back_10mm_Ch661

Communication System: GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)

Frequency: 1880.000 MHz; Duty Cycle: 1:2.08

Medium: HSL Medium parameters used: $f = 1880.000$ MHz; $\sigma = 1.45$ S/m; $\epsilon_r = 38.3$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(8.29, 8.18, 8.09); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: GSM, 10028-DAC

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm

SAR (1g) = 0.327 W/kg; SAR (10g) = 0.188 W/kg;

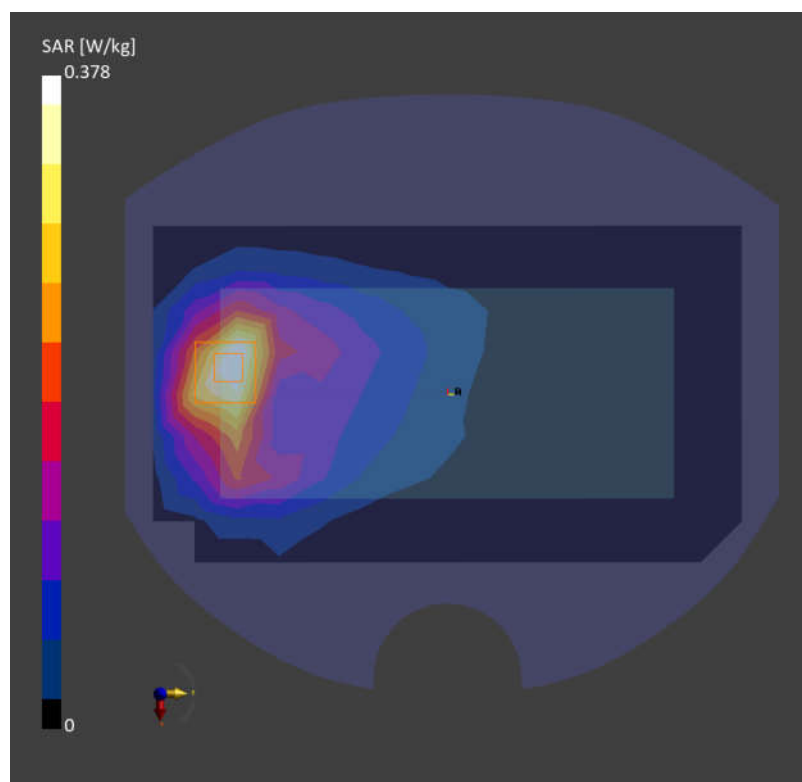
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm

Power Drift = -0.07 dB

SAR (1g) = 0.378 W/kg; SAR (10g) = 0.214 W/kg

Smallest distance from peaks to all points 3 dB below = 10.3 mm

Ratio of SAR at M2 to SAR at M1 = 84.5 %



Date: 2024-07-27

74_WCDMA II_RMC 12.2Kbps_Back_15mm_Ch9400

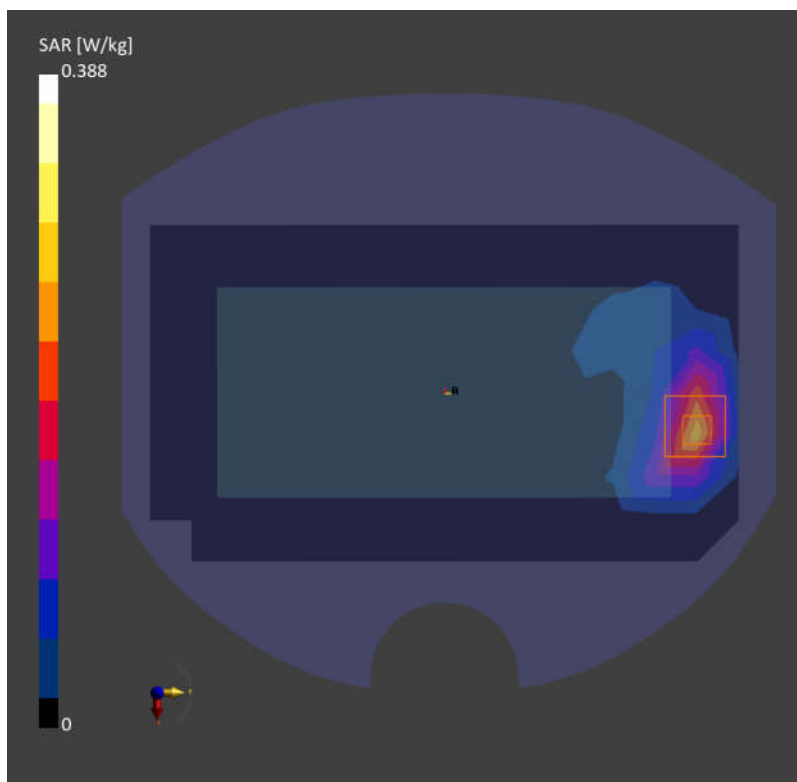
Communication System: UMTS-FDD (WCDMA); Frequency: 1880.000 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 1880.000$ MHz; $\sigma = 1.45$ S/m; $\epsilon_r = 38.3$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(8.29, 8.18, 8.09); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WCDMA, 10011-CAC

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm
SAR (1g) = 0.321 W/kg; SAR (10g) = 0.145 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm
Power Drift = -0.08 dB
SAR (1g) = 0.388 W/kg; SAR (10g) = 0.162 W/kg
Smallest distance from peaks to all points 3 dB below = 8.5 mm
Ratio of SAR at M2 to SAR at M1 = 85.9 %



Date: 2024-07-27

75_LTE Band 2_20M_QPSK_1RB_0Offset_Back_15mm_Ch18900

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)

AntennaCfg:SISO; Frequency: 1880.000 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 1880.000$ MHz; $\sigma = 1.45$ S/m; $\epsilon_r = 38.3$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(8.29, 8.18, 8.09); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-FDD, 10169-CAF

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm

SAR (1g) = 0.289 W/kg; SAR (10g) = 0.167 W/kg;

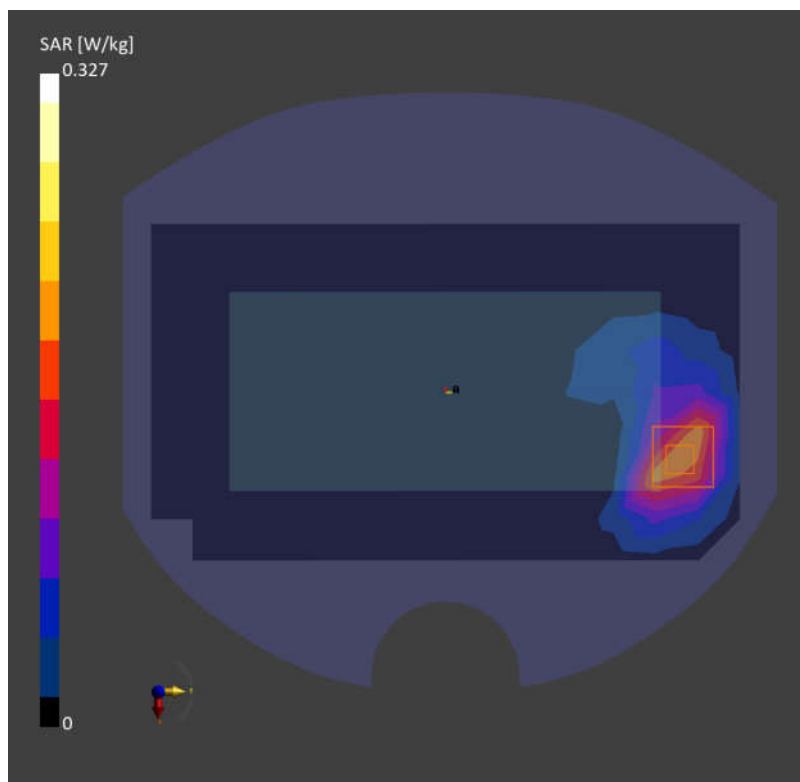
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm

Power Drift = 0.16 dB

SAR (1g) = 0.327 W/kg; SAR (10g) = 0.173 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 87.8 %



Date: 2024-07-27

76_FR1 n2_20M_QPSK_50RB_28Offset_Back_10mm_Ch376000

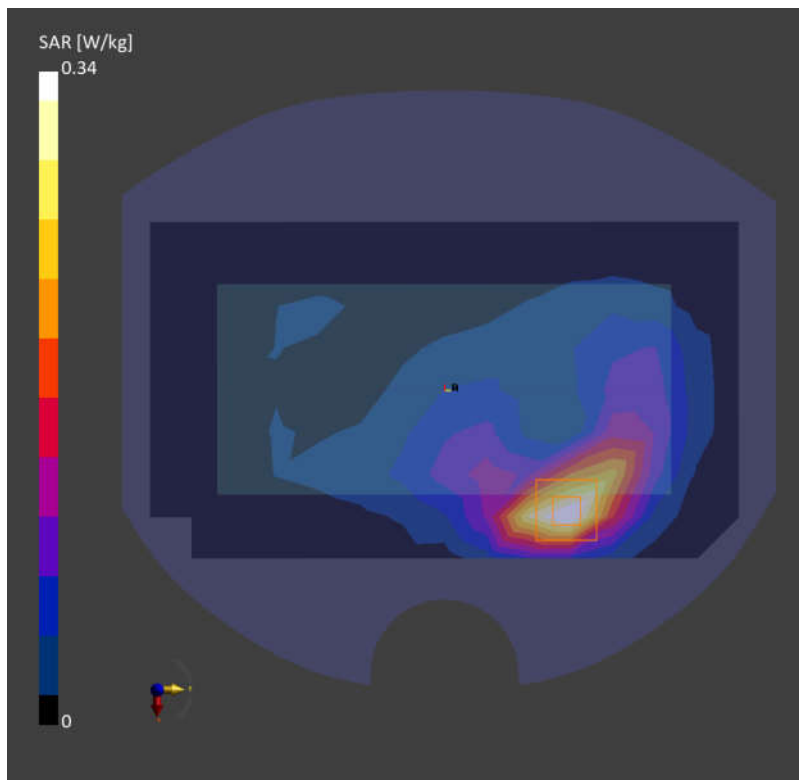
Communication System: 5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)
AntennaCfg:SISO; Frequency: 1880.000 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 1880.000$ MHz; $\sigma = 1.47$ S/m; $\epsilon_r = 38.2$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(8.29, 8.18, 8.09); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 FDD, 10939-AAC

Area Scan (120.0 mm x 210.0 mm): Measurement Grid: 15.0 mm x 15.0 mm
SAR (1g) = 0.288 W/kg; SAR (10g) = 0.157 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 6.0 mm x 6.0 mm x 1.5 mm
Power Drift = -0.15 dB
SAR (1g) = 0.340 W/kg; SAR (10g) = 0.189 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 85.2 %



Date: 2024-07-28

77_LTE Band 7_20M_QPSK_1RB_0Offset_Back_15mm_Ch21100

Communication System: LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)

AntennaCfg:SISO; Frequency: 2535.000 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 2535.000$ MHz; $\sigma = 1.80$ S/m; $\epsilon_r = 39.2$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.84, 7.77, 7.69); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-FDD, 10169-CAF

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm

SAR (1g) = 0.320 W/kg; SAR (10g) = 0.171 W/kg;

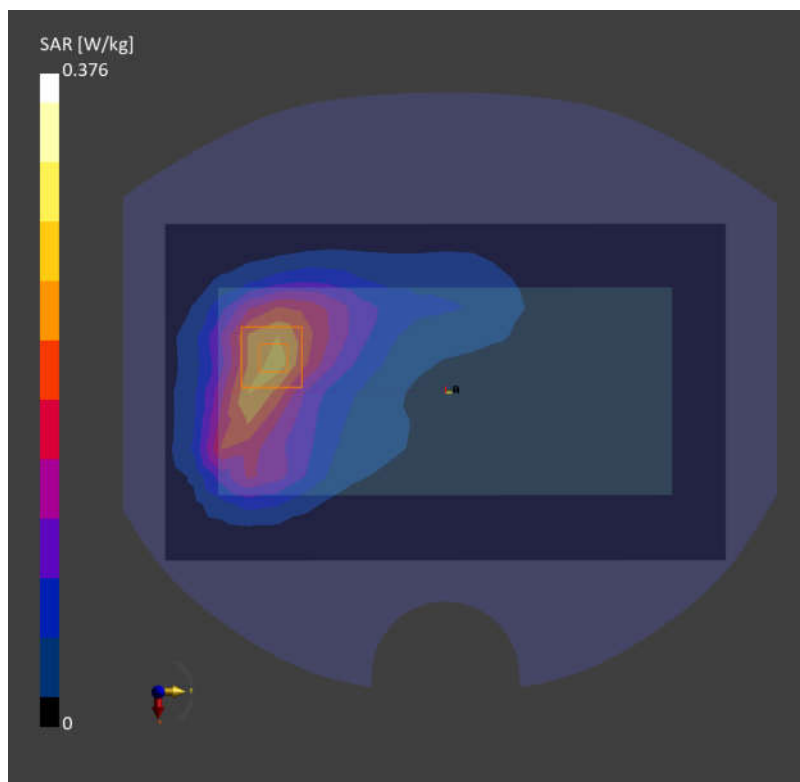
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm

Power Drift = 0.18 dB

SAR (1g) = 0.376 W/kg; SAR (10g) = 0.182 W/kg

Smallest distance from peaks to all points 3 dB below = 16.2 mm

Ratio of SAR at M2 to SAR at M1 = 93.5 %



Date: 2024-07-28

78_LTE Band 38_20M_QPSK_1RB_0Offset_Back_15mm_Ch38000

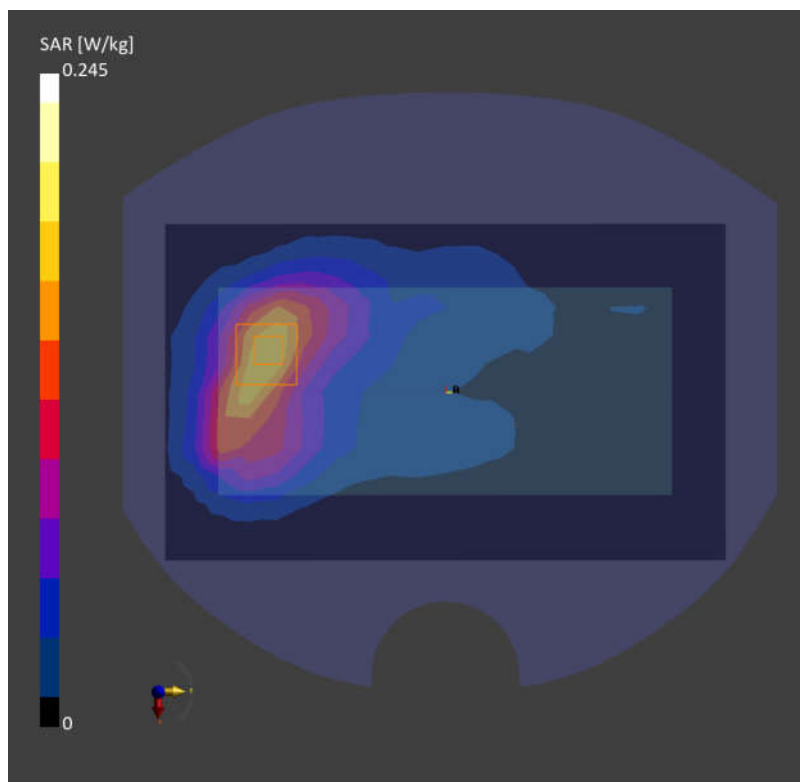
Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)
AntennaCfg:SISO; Frequency: 2595.000 MHz; Duty Cycle: 1:1.59
Medium: HSL Medium parameters used: $f = 2595.000$ MHz; $\sigma = 1.87$ S/m; $\epsilon_r = 39.2$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.84, 7.77, 7.69); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-TDD, 10435-AAG

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.241 W/kg; SAR (10g) = 0.132 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm
Power Drift = -0.18 dB
SAR (1g) = 0.245 W/kg; SAR (10g) = 0.136 W/kg
Smallest distance from peaks to all points 3 dB below = 15.7 mm
Ratio of SAR at M2 to SAR at M1 = 86.2 %



Date: 2024-07-28

79_LTE Band 41_20M_QPSK_1RB_0Offset_Back_15mm_Ch40620

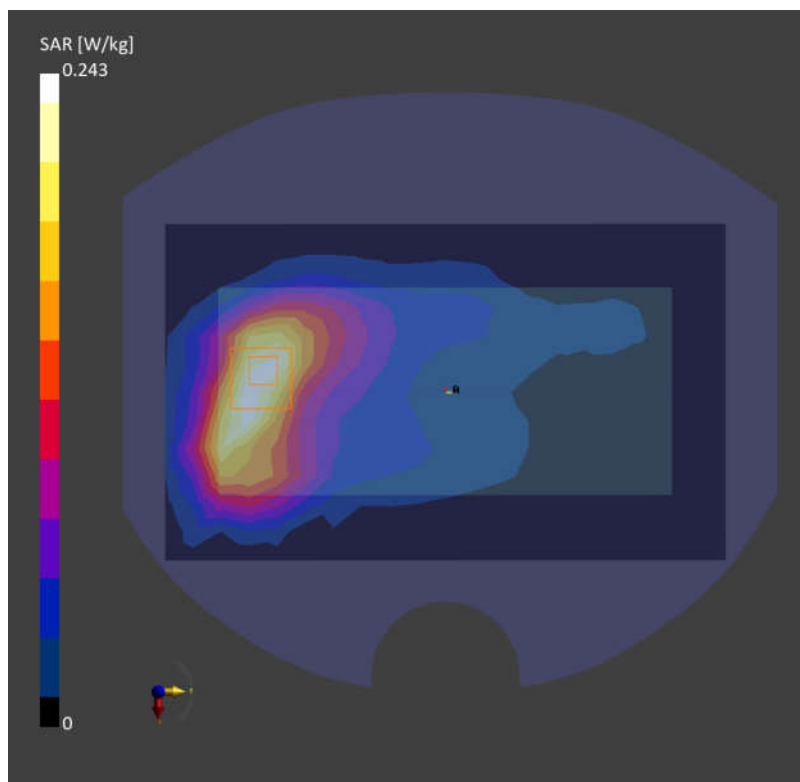
Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)
AntennaCfg:SISO; Frequency: 2593.000 MHz; Duty Cycle: 1:1.59
Medium: HSL Medium parameters used: $f = 2593.000$ MHz; $\sigma = 1.87$ S/m; $\epsilon_r = 39.2$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.84, 7.77, 7.69); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-TDD, 10151-CAH

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.193 W/kg; SAR (10g) = 0.126 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm
Power Drift = -0.17 dB
SAR (1g) = 0.243 W/kg; SAR (10g) = 0.133 W/kg
Smallest distance from peaks to all points 3 dB below = 12.7 mm
Ratio of SAR at M2 to SAR at M1 = 86.9 %



Date: 2024-07-28

80_FR1 n7_50M_QPSK_1RB_268Offset_Back_15mm_Ch507000

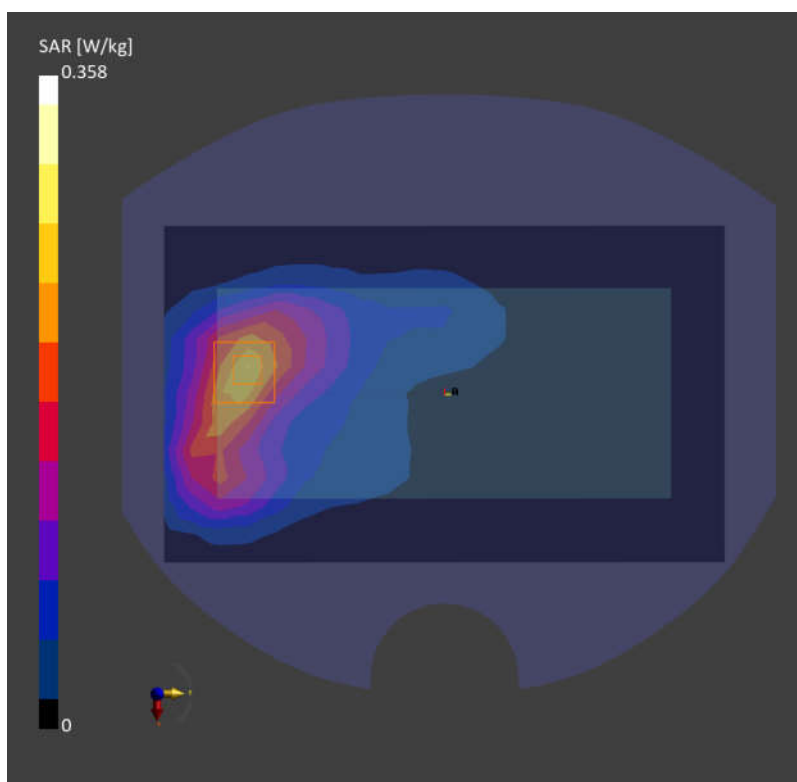
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 50 MHz, QPSK, 15 kHz)
AntennaCfg:SISO; Frequency: 2535.000 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 2535.000$ MHz; $\sigma = 1.89$ S/m; $\epsilon_r = 37.3$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.84, 7.77, 7.69); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 FDD, 10943-AAD

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.316 W/kg; SAR (10g) = 0.168 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm
Power Drift = -0.04 dB
SAR (1g) = 0.358 W/kg; SAR (10g) = 0.172 W/kg
Smallest distance from peaks to all points 3 dB below = 17.5 mm
Ratio of SAR at M2 to SAR at M1 = 86.5 %



Date: 2024-07-28

81_FR1 n38_40M_QPSK_1RB_1Offset_Back_15mm_Ch519000

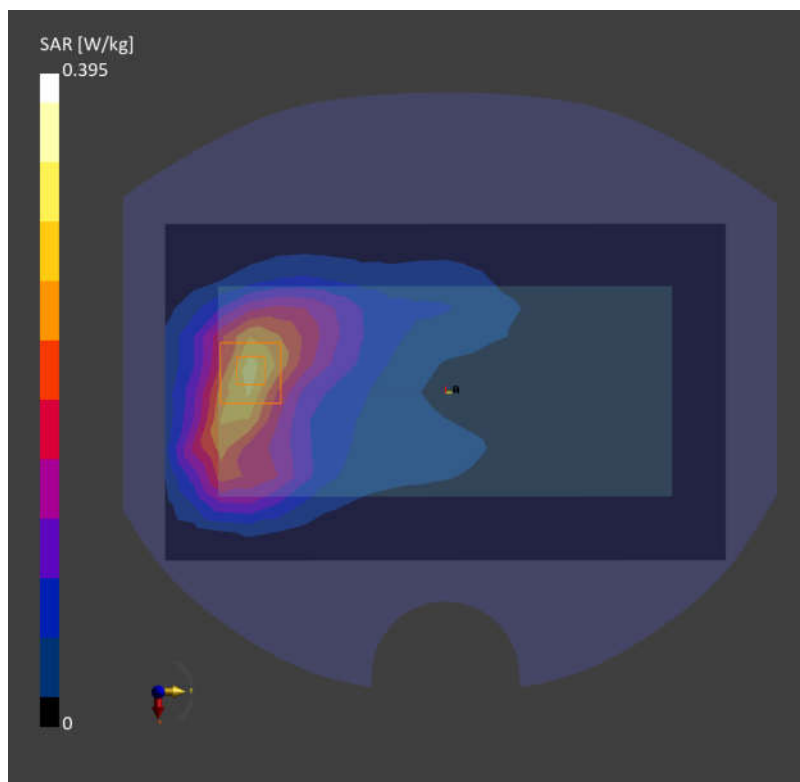
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz)
AntennaCfg:SISO; Frequency: 2595.000 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 2595.000$ MHz; $\sigma = 1.93$ S/m; $\epsilon_r = 37.2$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.84, 7.77, 7.69); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 TDD, 10903-AAD

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.349 W/kg; SAR (10g) = 0.185 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm
Power Drift = -0.03 dB
SAR (1g) = 0.395 W/kg; SAR (10g) = 0.196 W/kg
Smallest distance from peaks to all points 3 dB below = 17.0 mm
Ratio of SAR at M2 to SAR at M1 = 84.4 %



Date: 2024-07-28

82_FR1 n41_100M_QPSK_1RB_1Offset_Back_15mm_Ch518598

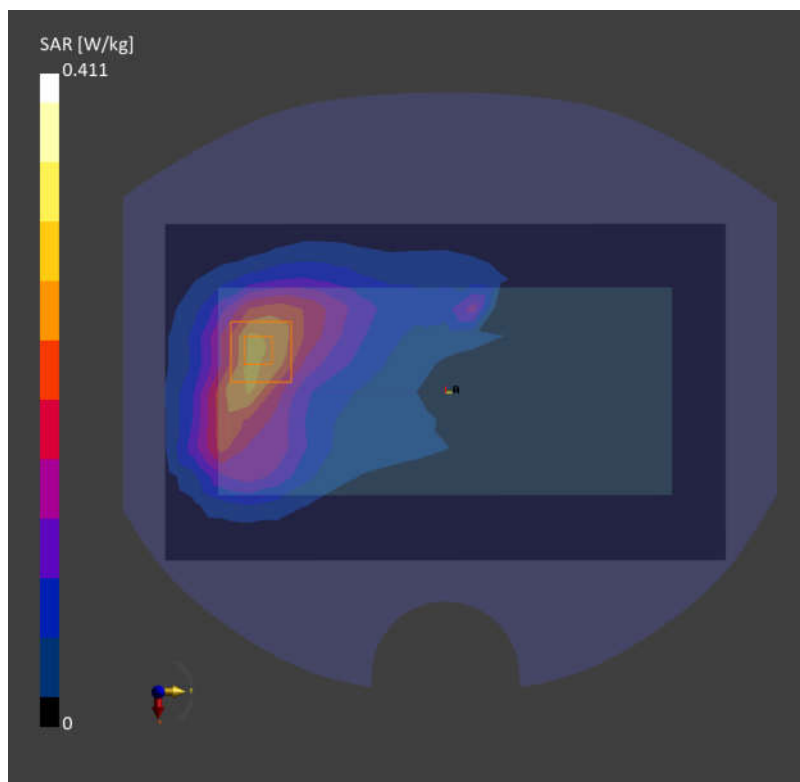
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)
AntennaCfg:SISO; Frequency: 2592.990 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 2592.990$ MHz; $\sigma = 1.87$ S/m; $\epsilon_r = 39.2$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.84, 7.77, 7.69); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 TDD, 10866-AAF

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.398 W/kg; SAR (10g) = 0.181 W/kg;

Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm
Power Drift = 0.03 dB
SAR (1g) = 0.411 W/kg; SAR (10g) = 0.193 W/kg
Smallest distance from peaks to all points 3 dB below = 15.7 mm
Ratio of SAR at M2 to SAR at M1 = 85.3 %



Date: 2024-07-29

83_LTE Band 42_20M_QPSK_1RB_0Offset_Back_10mm_Ch42190

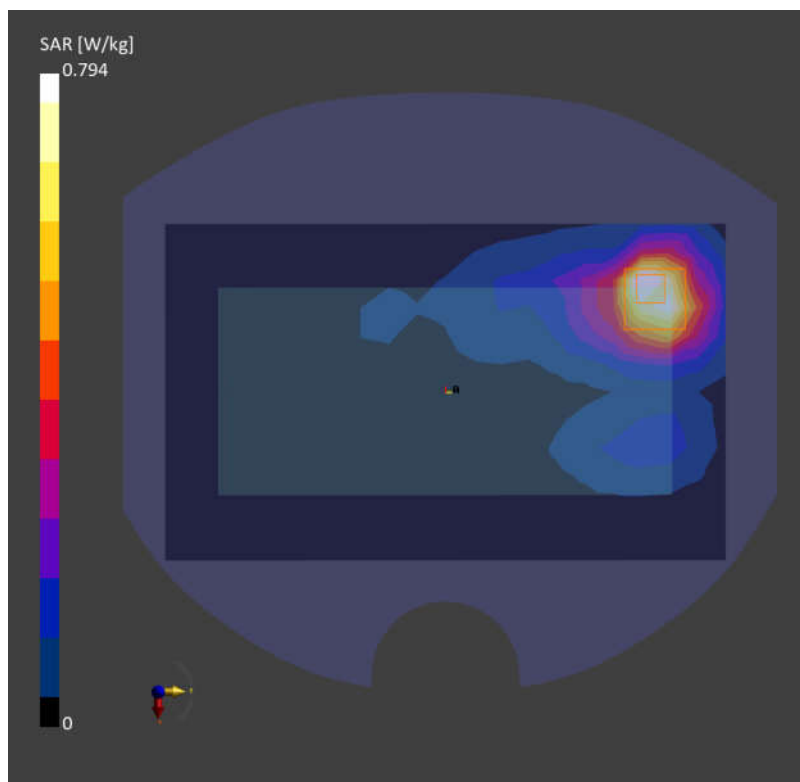
Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)
AntennaCfg:SISO; Frequency: 3460.000 MHz; Duty Cycle: 1:1.59
Medium: HSL Medium parameters used: $f = 3460.000$ MHz; $\sigma = 2.77$ S/m; $\epsilon_r = 38.8$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.33, 7.26, 7.22); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-TDD, 10435-AAG

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.766 W/kg; SAR (10g) = 0.309 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = -0.03 dB
SAR (1g) = 0.794 W/kg; SAR (10g) = 0.331 W/kg
Smallest distance from peaks to all points 3 dB below = 9.9 mm
Ratio of SAR at M2 to SAR at M1 = 78.4 %



Date: 2024-07-29

84_LTE Band 48_20M_QPSK_1RB_0Offset_Back_10mm_Ch55340

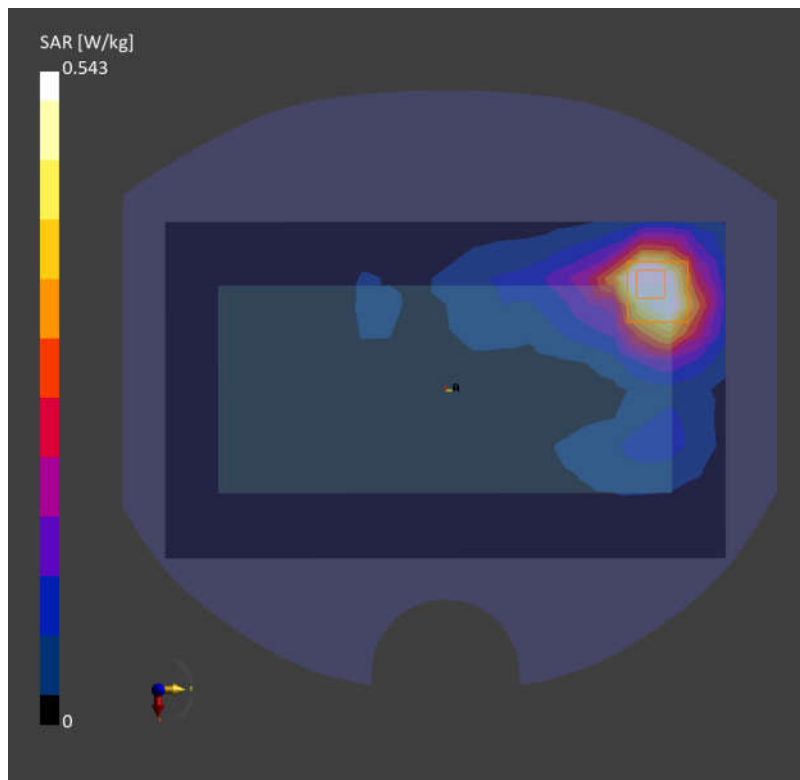
Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9)
 AntennaCfg:SISO; Frequency: 3560.000 MHz; Duty Cycle: 1:1.59
 Medium: HSL Medium parameters used: $f = 3560.000$ MHz; $\sigma = 2.86$ S/m; $\epsilon_r = 38.6$
 Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.33, 7.26, 7.22); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: LTE-TDD, 10172-CAH

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
 SAR (1g) = 0.510 W/kg; SAR (10g) = 0.228 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
 Power Drift = -0.09 dB
 SAR (1g) = 0.543 W/kg; SAR (10g) = 0.243 W/kg
 Smallest distance from peaks to all points 3 dB below = 10.7 mm
 Ratio of SAR at M2 to SAR at M1 = 78.1 %



Date: 2024-07-30

85_FR1 n48_40M_QPSK_1RB_1Offset_Back_10mm_Ch641666

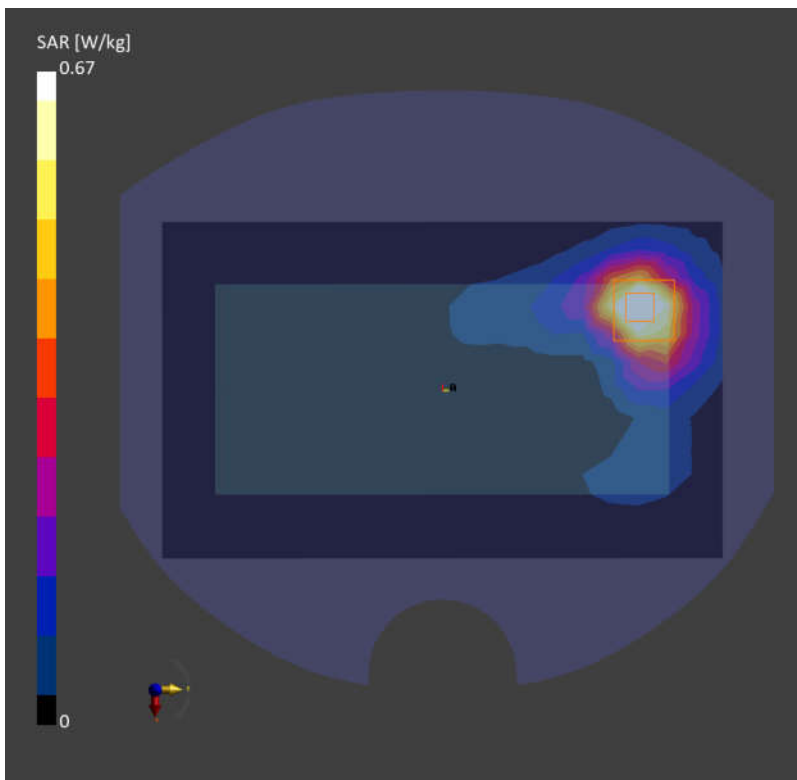
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)
AntennaCfg:SISO; Frequency: 3624.990 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 3624.990$ MHz; $\sigma = 3.00$ S/m; $\epsilon_r = 38.2$
Ambient Temperature: 23.1°C; Liquid Temperature: 22.6°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.27, 7.2, 7.17); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 TDD, 10866-AAF

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.654 W/kg; SAR (10g) = 0.273 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = -0.08 dB
SAR (1g) = 0.670 W/kg; SAR (10g) = 0.288 W/kg
Smallest distance from peaks to all points 3 dB below = 8.7 mm
Ratio of SAR at M2 to SAR at M1 = 77.9 %



Date: 2024-07-29

86_FR1 n77 HPUE_100M_QPSK_1RB_1Offset_Back_15mm_Ch633334

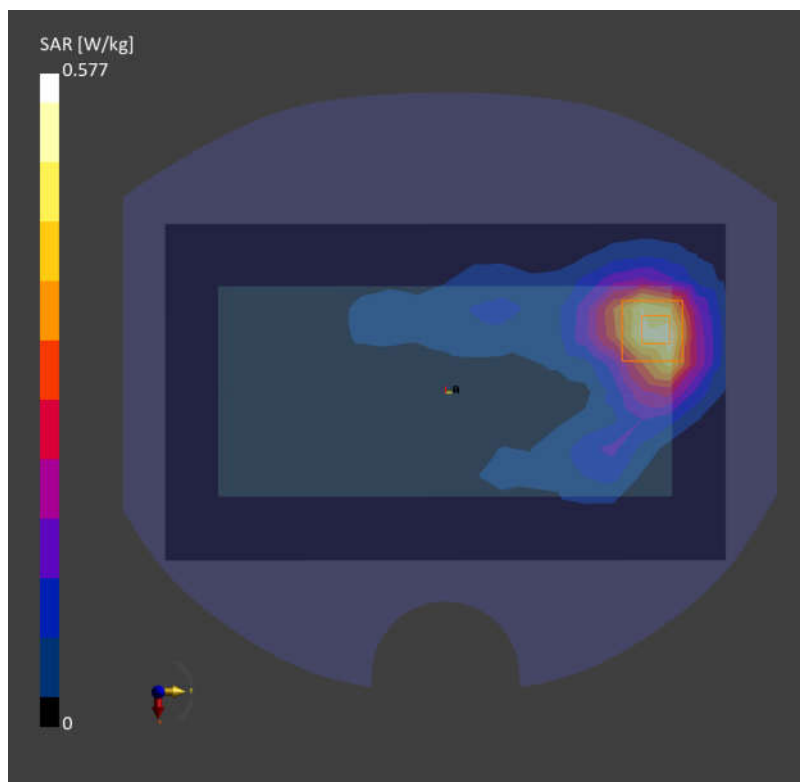
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)
AntennaCfg:SISO; Frequency: 3500.010 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 3500.010$ MHz; $\sigma = 2.81$ S/m; $\epsilon_r = 38.7$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.33, 7.26, 7.22); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 TDD, 10917-AAD

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.528 W/kg; SAR (10g) = 0.273 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = 0.02 dB
SAR (1g) = 0.577 W/kg; SAR (10g) = 0.288 W/kg
Smallest distance from peaks to all points 3 dB below = 11.5 mm
Ratio of SAR at M2 to SAR at M1 = 79.7 %



Date: 2024-07-29

87_FR1 n78 HPUE_100M_QPSK_1RB_1Offset_Back_15mm_Ch633334

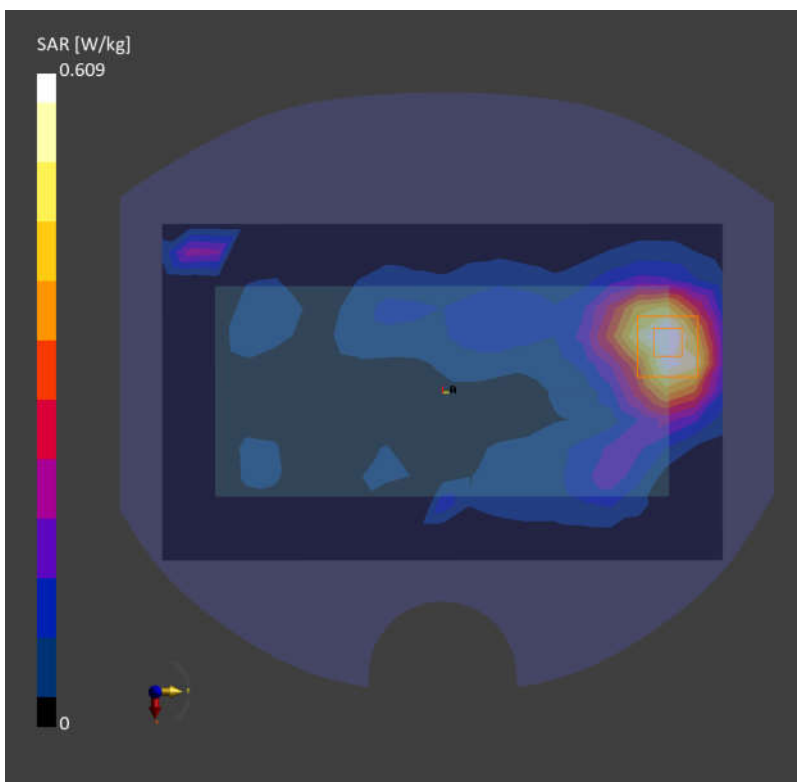
Communication System: 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)
AntennaCfg:SISO; Frequency: 3500.010 MHz; Duty Cycle: 1:1
Medium: HSL Medium parameters used: $f = 3500.010$ MHz; $\sigma = 2.81$ S/m; $\epsilon_r = 38.7$
Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.33, 7.26, 7.22); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: 5G NR FR1 TDD, 10868-AAF

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm
SAR (1g) = 0.585 W/kg; SAR (10g) = 0.283 W/kg;

Zoom Scan (28.0 mm x 28.0 mm x 28.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm
Power Drift = 0.01 dB
SAR (1g) = 0.609 W/kg; SAR (10g) = 0.292 W/kg
Smallest distance from peaks to all points 3 dB below = 12.1 mm
Ratio of SAR at M2 to SAR at M1 = 79.8 %



Date: 2024-08-01

88_WLAN2.4GHz_802.11b 1Mbps_Back_10mm_Ch6

Communication System: IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 96pc duty cycle)

Frequency: 2437.000 MHz; Duty Cycle: 1:1

Medium: HSL Medium parameters used: $f = 2437.000$ MHz; $\sigma = 1.73$ S/m; $\epsilon_r = 39.4$

Ambient Temperature: 23.1°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.91, 7.86, 7.76); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WLAN, 10315-AAB

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm

SAR (1g) = 0.187 W/kg; SAR (10g) = 0.104 W/kg;

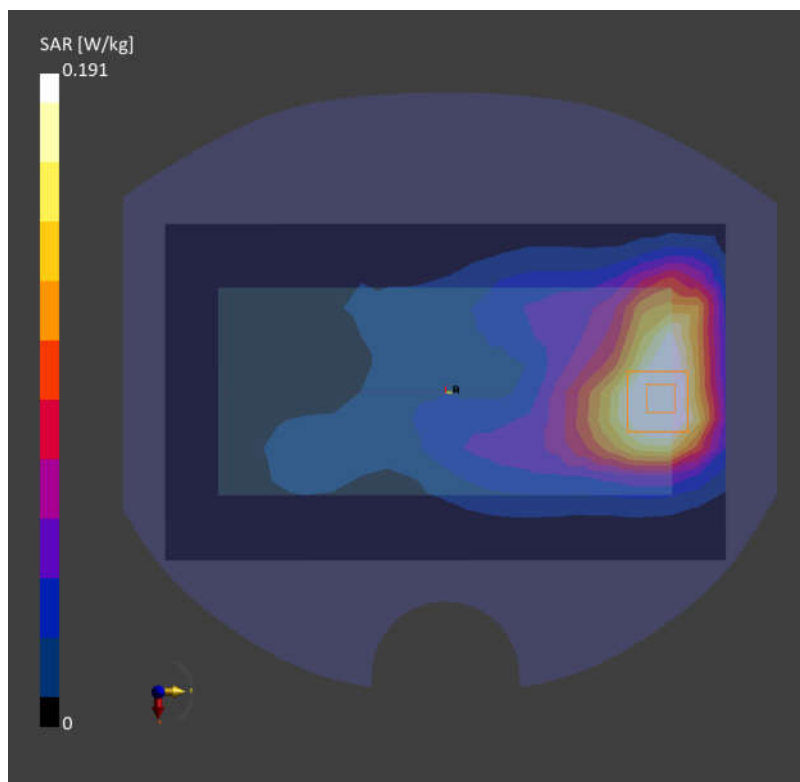
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm

Power Drift = -0.19 dB

SAR (1g) = 0.191 W/kg; SAR (10g) = 0.113 W/kg

Smallest distance from peaks to all points 3 dB below = 15.3 mm

Ratio of SAR at M2 to SAR at M1 = 85.6 %



Date: 2024-08-01

89_Bluetooth_1Mbps_Back_10mm_Ch78

Communication System: IEEE 802.15.1 Bluetooth (GFSK, DH5)

Frequency: 2480.000 MHz; DutyCycle: 1:1.306

Medium: HSL Medium parameters used: $f = 2480.000$ MHz; $\sigma = 1.79$ S/m; $\epsilon_r = 39.3$

Ambient Temperature: 23.1°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(7.91, 7.86, 7.76); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: Bluetooth, 10032-CAA

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm

SAR (1g) = 0.021 W/kg; SAR (10g) = 0.011 W/kg;

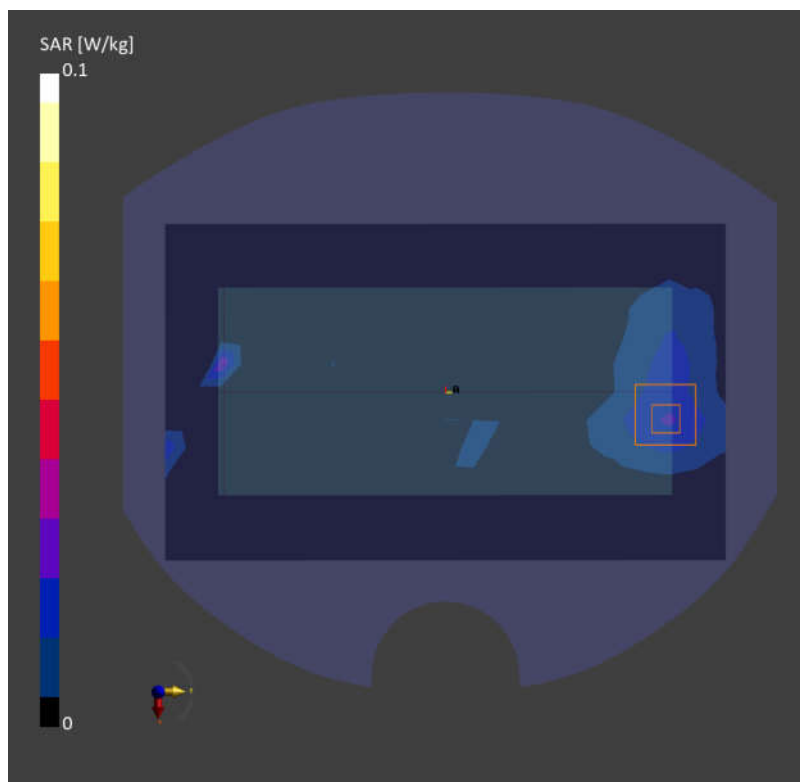
Zoom Scan (30.0 mm x 30.0 mm x 30.0 mm): Measurement Grid: 5.0 mm x 5.0 mm x 1.5 mm

Power Drift = 0.09 dB

SAR (1g) = 0.002 W/kg; SAR (10g) = 0.001 W/kg

Smallest distance from peaks to all points 3 dB below = 5.5 mm

Ratio of SAR at M2 to SAR at M1 = 90.9 %



Date: 2024-08-02

90_WLAN5GHz_802.11a 6Mbps_Front_10mm_Ch60

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)

Frequency: 5300.000 MHz; Duty Cycle: 1:1.031

Medium: HSL Medium parameters used: $f = 5300.000$ MHz; $\sigma = 4.63$ S/m; $\epsilon_r = 35.6$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(5.99, 5.85, 5.81); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WLAN, 10317-AAE

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm

SAR (1g) = 0.186 W/kg; SAR (10g) = 0.072 W/kg;

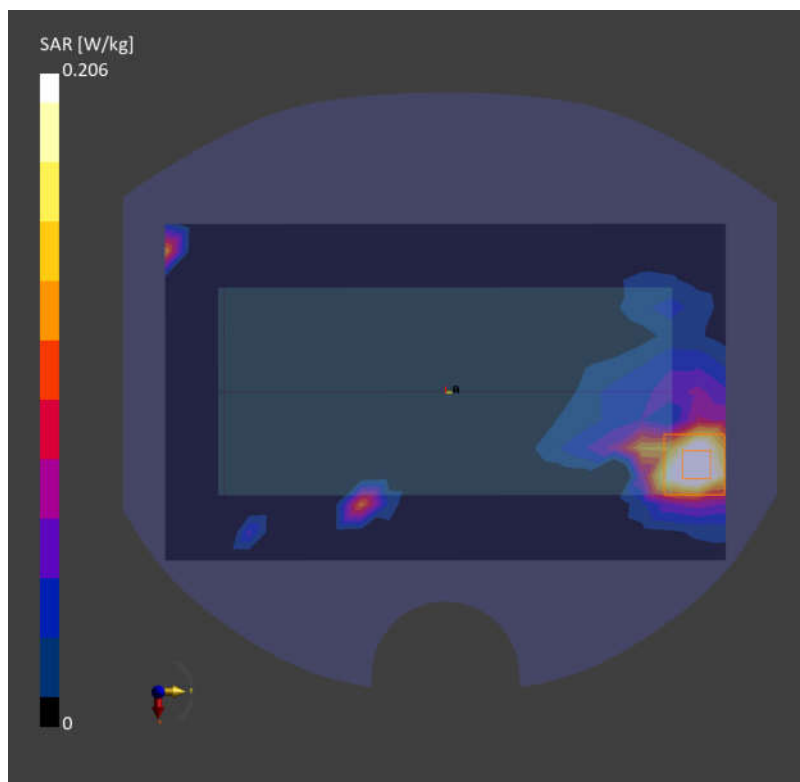
Zoom Scan (24.0 mm x 22.0 mm x 22.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = 0.09 dB

SAR (1g) = 0.206 W/kg; SAR (10g) = 0.075 W/kg

Smallest distance from peaks to all points 3 dB below = 8.1 mm

Ratio of SAR at M2 to SAR at M1 = 68.0 %



Date: 2024-08-04

91_WLAN5GHz_802.11a 6Mbps_Front_10mm_Ch144

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)

Frequency: 5720.000 MHz; Duty Cycle: 1:1.031

Medium: HSL Medium parameters used: $f = 5720.000$ MHz; $\sigma = 5.08$ S/m; $\epsilon_r = 34.9$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(5.42, 5.2, 5.18); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WLAN, 10317-AAE

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm

SAR (1g) = 0.372 W/kg; SAR (10g) = 0.144 W/kg;

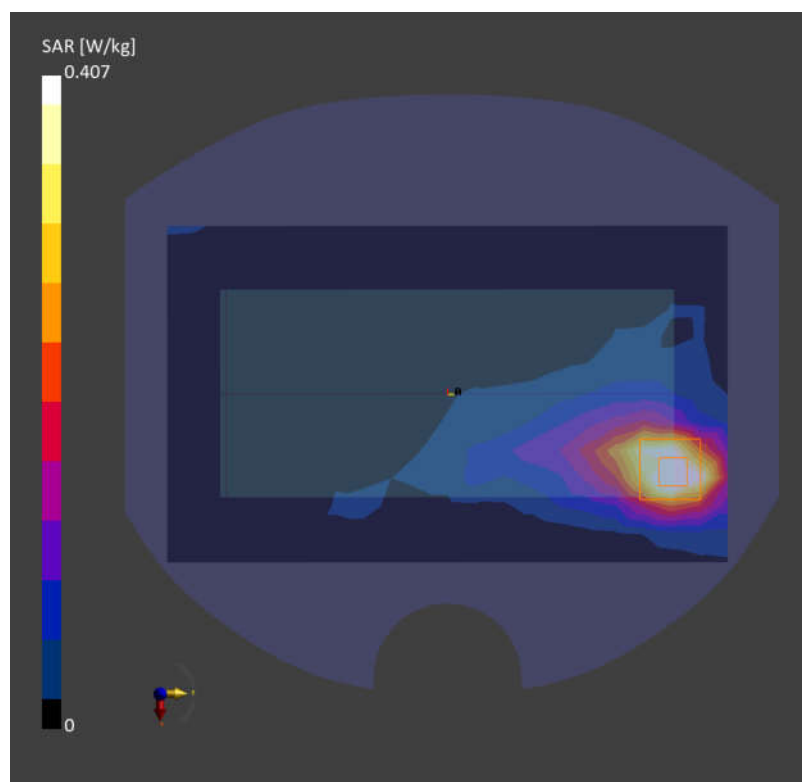
Zoom Scan (24.0 mm x 22.0 mm x 22.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = -0.03 dB

SAR (1g) = 0.407 W/kg; SAR (10g) = 0.157 W/kg

Smallest distance from peaks to all points 3 dB below = 9.4 mm

Ratio of SAR at M2 to SAR at M1 = 64.9 %



Date: 2024-08-04

92_WLAN5GHz_802.11a 6Mbps_Front_10mm_Ch157

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)

Frequency: 5785.000 MHz; Duty Cycle: 1:1.031

Medium: HSL Medium parameters used: $f = 5785.000$ MHz; $\sigma = 5.14$ S/m; $\epsilon_r = 34.8$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(5.42, 5.2, 5.18); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WLAN, 10317-AAE

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm

SAR (1g) = 0.455 W/kg; SAR (10g) = 0.175 W/kg;

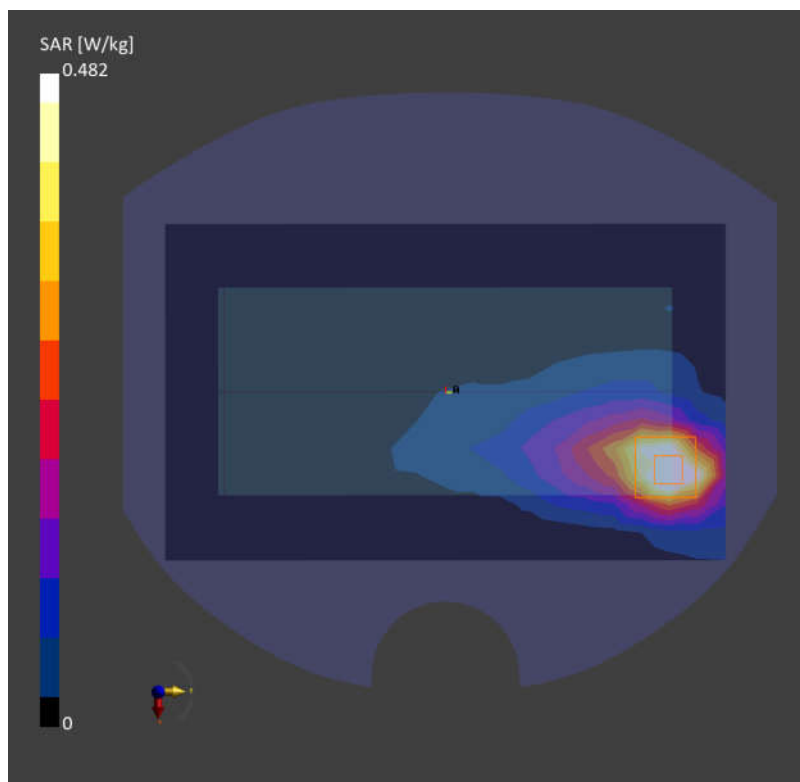
Zoom Scan (24.0 mm x 22.0 mm x 22.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = 0.05 dB

SAR (1g) = 0.482 W/kg; SAR (10g) = 0.181 W/kg

Smallest distance from peaks to all points 3 dB below = 9.4 mm

Ratio of SAR at M2 to SAR at M1 = 61.7 %



Date: 2024-08-02

93_WLAN5GHz_802.11a 6Mbps_Top Side_0mm_Ch60

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)

Frequency: 5300.000 MHz; Duty Cycle: 1:1.031

Medium: HSL Medium parameters used: $f = 5300.000$ MHz; $\sigma = 4.63$ S/m; $\epsilon_r = 35.6$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.7°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(5.99, 5.85, 5.81); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WLAN, 10317-AAE

Area Scan (48.0 mm x 120.0 mm): Measurement Grid: 8.0 mm x 10.0 mm

SAR (1g) = 2.73 W/kg; SAR (10g) = 0.703 W/kg;

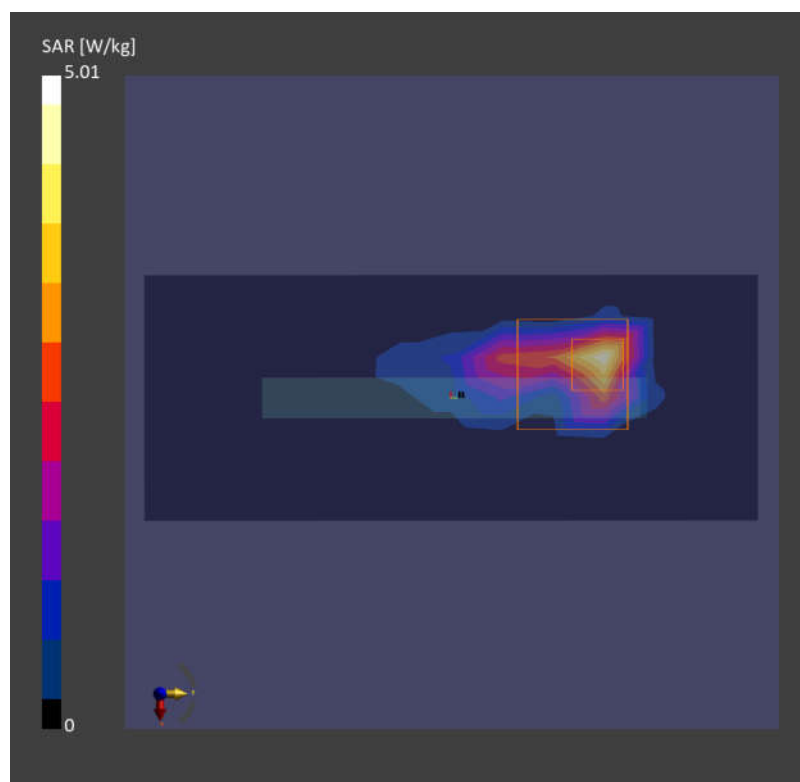
Zoom Scan (24.0 mm x 22.0 mm x 22.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = -0.12 dB

SAR (1g) = 5.01 W/kg; SAR (10g) = 1.07 W/kg

Smallest distance from peaks to all points 3 dB below = 4.0 mm

Ratio of SAR at M2 to SAR at M1 = 70.5 %



Date: 2024-08-04

94_WLAN5GHz_802.11a 6Mbps_Front_0mm_Ch144

Communication System: IEEE 802.11a WiFi 5 GHz (OFDM, 6 Mbps, 96pc duty cycle)

Frequency: 5720.000 MHz; Duty Cycle: 1:1.031

Medium: HSL Medium parameters used: $f = 5720.000$ MHz; $\sigma = 5.08$ S/m; $\epsilon_r = 34.9$

Ambient Temperature: 23.2°C; Liquid Temperature: 22.9°C

DASY6 Configuration:

- Probe: EX3DV4 - SN7729; ConvF(5.42, 5.2, 5.18); Calibrated: 2024-01-22
- Sensor-Surface: 1.4 mm
- Electronics: DAE4 Sn1303; Calibrated: 2023-11-20
- Phantom: Twin-SAM V8.0 (30deg probe tilt); Serial: 2024; Section: Flat
- Measurement Software: 16.4.0.5005
- UID: WLAN, 10317-AAE

Area Scan (120.0 mm x 200.0 mm): Measurement Grid: 10.0 mm x 10.0 mm

SAR (1g) = 3.06 W/kg; SAR (10g) = 0.948 W/kg;

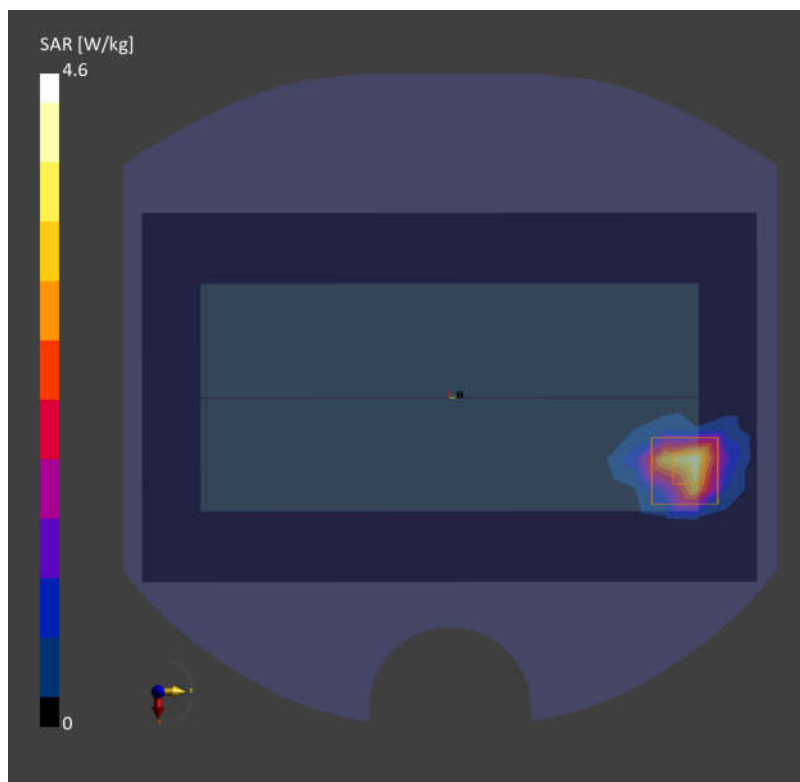
Zoom Scan (24.0 mm x 22.0 mm x 22.0 mm): Measurement Grid: 4.0 mm x 4.0 mm x 1.4 mm

Power Drift = -0.08 dB

SAR (1g) = 4.60 W/kg; SAR (10g) = 1.36 W/kg

Smallest distance from peaks to all points 3 dB below = 5.6 mm

Ratio of SAR at M2 to SAR at M1 = 62.1 %





Appendix C. DASY Calibration Certificate

The DASY calibration certificates are shown as follows.

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

The Swiss Accreditation Service is one of the signatories to the EA
Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **Sporton**

Certificate No: **D750V3-1087_Feb22**

CALIBRATION CERTIFICATE

Object **D750V3 - SN:1087**

Calibration procedure(s) **QA CAL-05.v11
Calibration Procedure for SAR Validation Sources between 0.7-3 GHz**

Calibration date: **February 24, 2022**

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	09-Apr-21 (No. 217-03291/03292)	Apr-22
Power sensor NRP-Z91	SN: 103244	09-Apr-21 (No. 217-03291)	Apr-22
Power sensor NRP-Z91	SN: 103245	09-Apr-21 (No. 217-03292)	Apr-22
Reference 20 dB Attenuator	SN: BH9394 (20k)	09-Apr-21 (No. 217-03343)	Apr-22
Type-N mismatch combination	SN: 310982 / 06327	09-Apr-21 (No. 217-03344)	Apr-22
Reference Probe EX3DV4	SN: 7349	31-Dec-21 (No. EX3-7349_Dec21)	Dec-22
DAE4	SN: 601	01-Nov-21 (No. DAE4-601_Nov21)	Nov-22
Secondary Standards	ID #	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB39512475	30-Oct-14 (in house check Oct-20)	In house check: Oct-22
Power sensor HP 8481A	SN: US37292783	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
Power sensor HP 8481A	SN: MY41093315	07-Oct-15 (in house check Oct-20)	In house check: Oct-22
RF generator R&S SMT-06	SN: 100972	15-Jun-15 (in house check Oct-20)	In house check: Oct-22
Network Analyzer Agilent E8358A	SN: US41080477	31-Mar-14 (in house check Oct-20)	In house check: Oct-22

Calibrated by:	Name Joanna Lleshaj	Function Laboratory Technician	Signature
Approved by:	Niels Kuster	Quality Manager	

Issued: March 2, 2022

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

**Calibration Laboratory of
Schmid & Partner
Engineering AG**
Zeughausstrasse 43, 8004 Zurich, Switzerland



S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)

Accreditation No.: **SCS 0108**

The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM x,y,z
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- IEC/IEEE 62209-1528, "Measurement Procedure For The Assessment Of Specific Absorption Rate Of Human Exposure To Radio Frequency Fields From Hand-Held And Body-Worn Wireless Communication Devices - Part 1528: Human Models, Instrumentation And Procedures (Frequency Range of 4 MHz to 10 GHz)", October 2020.
- KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- DASY System Handbook

Methods Applied and Interpretation of Parameters:

- Measurement Conditions:** Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- Antenna Parameters with TSL:** The source is mounted in a touch configuration below the center marking of the flat phantom.
- Return Loss:** This parameter is measured with the source positioned under the liquid filled phantom (as described in the measurement condition clause). The Return Loss ensures low reflected power. No uncertainty required.
- SAR measured:** SAR measured at the stated antenna input power.
- SAR normalized:** SAR as measured, normalized to an input power of 1 W at the antenna connector.
- SAR for nominal TSL parameters:** The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k=2$, which for a normal distribution corresponds to a coverage probability of approximately 95%.

Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Modular Flat Phantom	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	750 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.9	0.89 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	42.4 $\pm$ 6 %	0.89 mho/m $\pm$ 6 %
Head TSL temperature change during test	< 0.5 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.14 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	8.58 W/kg $\pm$ 17.0 % (k=2)

SAR averaged over 10 cm³ (10 g) of Head TSL	condition	
SAR measured	250 mW input power	1.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	5.65 W/kg $\pm$ 16.5 % (k=2)

Appendix (Additional assessments outside the scope of SCS 0108)**Antenna Parameters with Head TSL**

Impedance, transformed to feed point	52.6 Ω - 2.5 j Ω
Return Loss	- 29.1 dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.034 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feedpoint can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feedpoint may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 24.02.2022

Test Laboratory: SPEAG, Zurich, Switzerland

DUT: Dipole 750 MHz; Type: D750V3; Serial: D750V3 - SN:1087

Communication System: UID 0 - CW; Frequency: 750 MHz

Medium parameters used: $f = 750$ MHz; $\sigma = 0.89$ S/m; $\epsilon_r = 42.4$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2011)

DASY52 Configuration:

- Probe: EX3DV4 - SN7349; ConvF(10.11, 10.11, 10.11) @ 750 MHz; Calibrated: 31.12.2021
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn601; Calibrated: 01.11.2021
- Phantom: Flat Phantom 4.9 (front); Type: QD 00L P49 AA; Serial: 1001
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration for Head Tissue/Pin=250 mW, d=15mm/Zoom Scan (7x7x7)/Cube 0:

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

Reference Value = 59.64 V/m; Power Drift = -0.03 dB

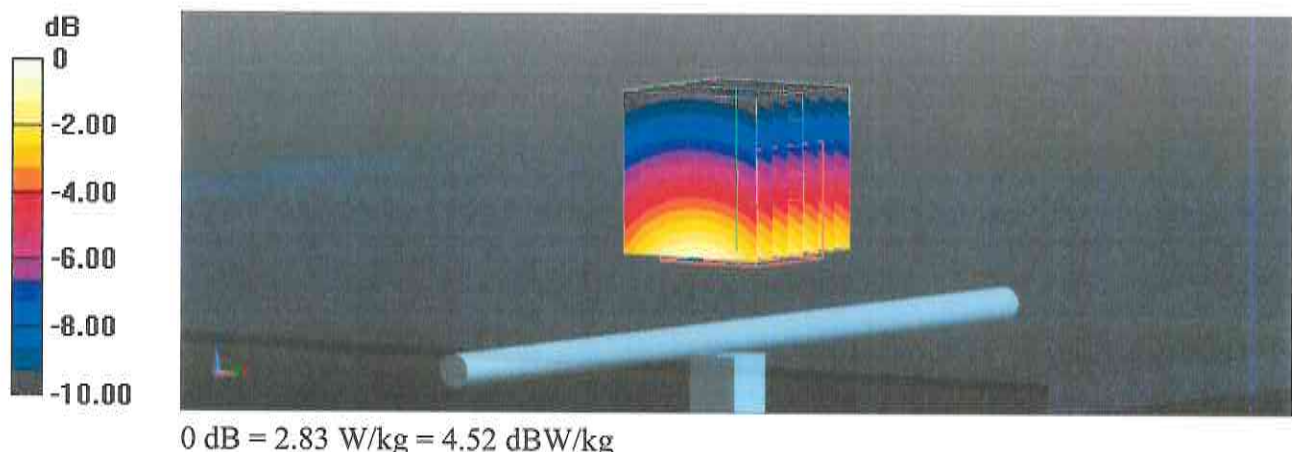
Peak SAR (extrapolated) = 3.22 W/kg

SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.41 W/kg

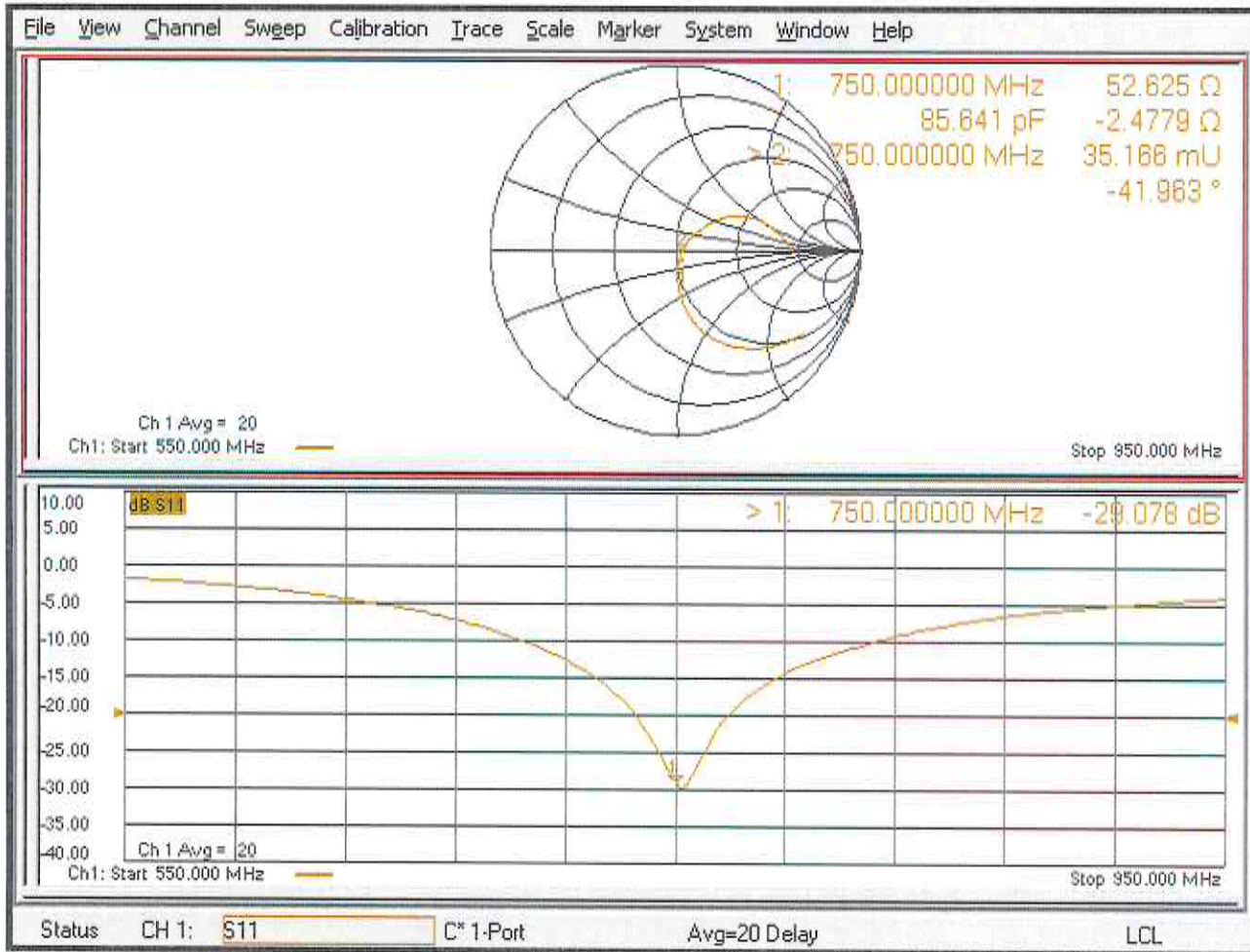
Smallest distance from peaks to all points 3 dB below = 17 mm

Ratio of SAR at M2 to SAR at M1 = 66.5%

Maximum value of SAR (measured) = 2.83 W/kg



Impedance Measurement Plot for Head TSL



D750V3, Serial No. 1087 Extended Dipole Calibrations

If dipoles are verified in return loss ($< -20\text{dB}$, within 20% of prior calibration), and in impedance (within 5 ohm of prior calibration), the annual calibration is not necessary and the calibration interval can be extended.

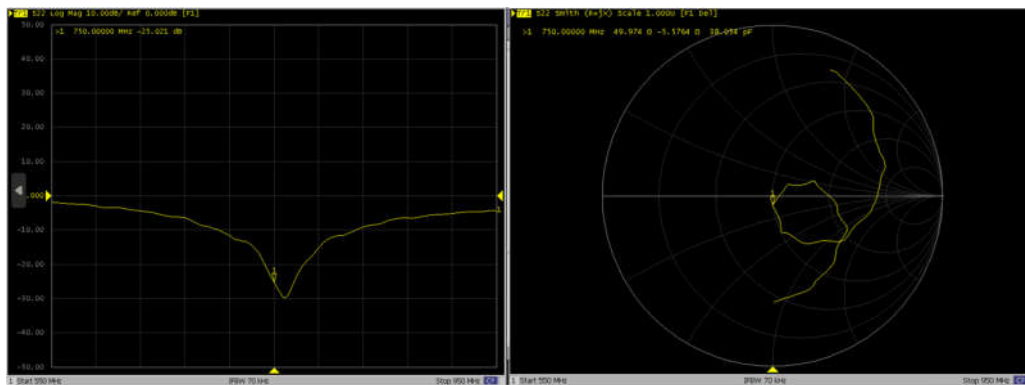
D750V3 – serial no. 1087						
750 Head						
Date of Measurement	Return-Loss (dB)	Delta (%)	Real Impedance (ohm)	Delta (ohm)	Imaginary Impedance (ohm)	Delta (ohm)
2022.2.24	-29.078		52.625		-2.4779	
2023.2.23	-25.021	-13.95	49.974	2.651	-5.5764	3.0985
2024.2.23	-27.142	-6.66	53.849	-1.224	-1.9335	-0.5444

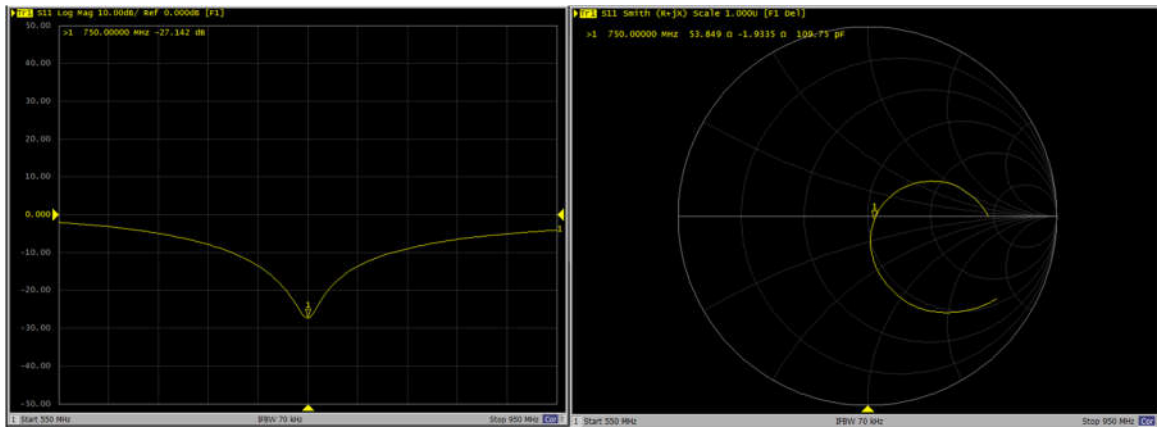
<Justification of the extended calibration>

The return loss is $< -20\text{dB}$, within 20% of prior calibration; the impedance is within 5 ohm of prior calibration. Therefore the verification result should support extended calibration.

Dipole Verification Data> D750V3, serial no. 1087

750MHz – Head-2023.2.23



750MHz – Head-2024.2.23

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Client

Sporton

Certificate No: Z22-60301

CALIBRATION CERTIFICATE

Object D835V2 - SN: 4d091

Calibration Procedure(s) FF-Z11-003-01
Calibration Procedures for dipole validation kits

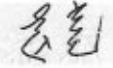
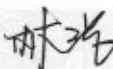
Calibration date: August 19, 2022

This calibration Certificate documents the traceability to national standards, which realize the physical units of measurements (SI). The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22±3)°C and humidity<70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Power Meter NRP2	106277	24-Sep-21 (CTTL, No.J21X08326)	Sep-22
Power sensor NRP8S	104291	24-Sep-21 (CTTL, No.J21X08326)	Sep-22
Reference Probe EX3DV4	SN 7464	26-Jan-22(SPEAG,No.EX3-7464_Jan22)	Jan-23
DAE4	SN 1556	12-Jan-22(CTTL-SPEAG,No.Z22-60007)	Jan-23
Secondary Standards	ID #	Cal Date (Calibrated by, Certificate No.)	Scheduled Calibration
Signal Generator E4438C	MY49071430	13-Jan-22 (CTTL, No.J22X00409)	Jan-23
Network Analyzer E5071C	MY46110673	14-Jan-22 (CTTL, No.J22X00406)	Jan-23

	Name	Function	Signature
Calibrated by:	Zhao Jing	SAR Test Engineer	
Reviewed by:	Lin Hao	SAR Test Engineer	
Approved by:	Qi Dianyuan	SAR Project Leader	

Issued: August 23, 2022

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.



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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORM _{x,y,z}
N/A	not applicable or not measured

Calibration is Performed According to the Following Standards:

- a) IEC/IEEE 62209-1528, "Measurement Procedure for The Assessment of Specific Absorption Rate of Human Exposure to Radio Frequency Fields from Hand-held and Body-mounted Wireless Communication Devices- Part 1528: Human Models, Instrumentation and Procedures (Frequency range of 4 MHz to 10 GHz)", October 2020
- b) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Additional Documentation:

- c) DASY4/5 System Handbook

Methods Applied and Interpretation of Parameters:

- *Measurement Conditions:* Further details are available from the Validation Report at the end of the certificate. All figures stated in the certificate are valid at the frequency indicated.
- *Antenna Parameters with TSL:* The dipole is mounted with the spacer to position its feed point exactly below the center marking of the flat phantom section, with the arms oriented parallel to the body axis.
- *Feed Point Impedance and Return Loss:* These parameters are measured with the dipole positioned under the liquid filled phantom. The impedance stated is transformed from the measurement at the SMA connector to the feed point. The Return Loss ensures low reflected power. No uncertainty required.
- *Electrical Delay:* One-way delay between the SMA connector and the antenna feed point. No uncertainty required.
- *SAR measured:* SAR measured at the stated antenna input power.
- *SAR normalized:* SAR as measured, normalized to an input power of 1 W at the antenna connector.
- *SAR for nominal TSL parameters:* The measured TSL parameters are used to calculate the nominal SAR result.

The reported uncertainty of measurement is stated as the standard uncertainty of Measurement multiplied by the coverage factor $k=2$, which for a normal distribution Corresponds to a coverage probability of approximately 95%.



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Measurement Conditions

DASY system configuration, as far as not given on page 1.

DASY Version	DASY52	V52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	15 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	835 MHz $\pm$ 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	Permittivity	Conductivity
Nominal Head TSL parameters	22.0 °C	41.5	0.90 mho/m
Measured Head TSL parameters	(22.0 $\pm$ 0.2) °C	41.3 $\pm$ 6 %	0.92 mho/m $\pm$ 6 %
Head TSL temperature change during test	<1.0 °C	—	—

SAR result with Head TSL

SAR averaged over 1 cm³ (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.41 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	9.45 W/kg $\pm$ 18.8 % (k=2)
SAR averaged over 10 cm³ (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.58 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	6.22 W/kg $\pm$ 18.7 % (k=2)



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<http://www.caict.ac.cn>**Appendix (Additional assessments outside the scope of CNAS L0570)****Antenna Parameters with Head TSL**

Impedance, transformed to feed point	46.7 Ω - 8.91j Ω
Return Loss	- 20.2dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.303 ns
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After long term use with 100W radiated power, only a slight warming of the dipole near the feed-point can be measured.

The dipole is made of standard semirigid coaxial cable. The center conductor of the feeding line is directly connected to the second arm of the dipole. The antenna is therefore short-circuited for DC-signals. On some of the dipoles, small end caps are added to the dipole arms in order to improve matching when loaded according to the position as explained in the "Measurement Conditions" paragraph. The SAR data are not affected by this change. The overall dipole length is still according to the Standard.

No excessive force must be applied to the dipole arms, because they might bend or the soldered connections near the feed-point may be damaged.

Additional EUT Data

Manufactured by	SPEAG
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DASY5 Validation Report for Head TSL

Date: 2022-08-19

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d091

Communication System: UID 0, CW; Frequency: 835 MHz; Duty Cycle: 1:1

Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.922 \text{ S/m}$; $\epsilon_r = 41.25$; $\rho = 1000 \text{ kg/m}^3$

Phantom section: Right Section

Measurement Standard: DASY5 (IEEE/IEC/ANSI C63.19-2007)

DASY5 Configuration:

- Probe: EX3DV4 - SN7464; ConvF(9.96, 9.96, 9.96) @ 835 MHz; Calibrated: 2022-01-26
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2022-01-12
- Phantom: MFP_V5.1C (20deg probe tilt); Type: QD 000 P51 Cx; Serial: 1062
- DASY52 52.10.4(1535); SEMCAD X 14.6.14(7501)

Dipole Calibration/Zoom Scan (7x7x7) (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 56.54 V/m; Power Drift = 0.01 dB

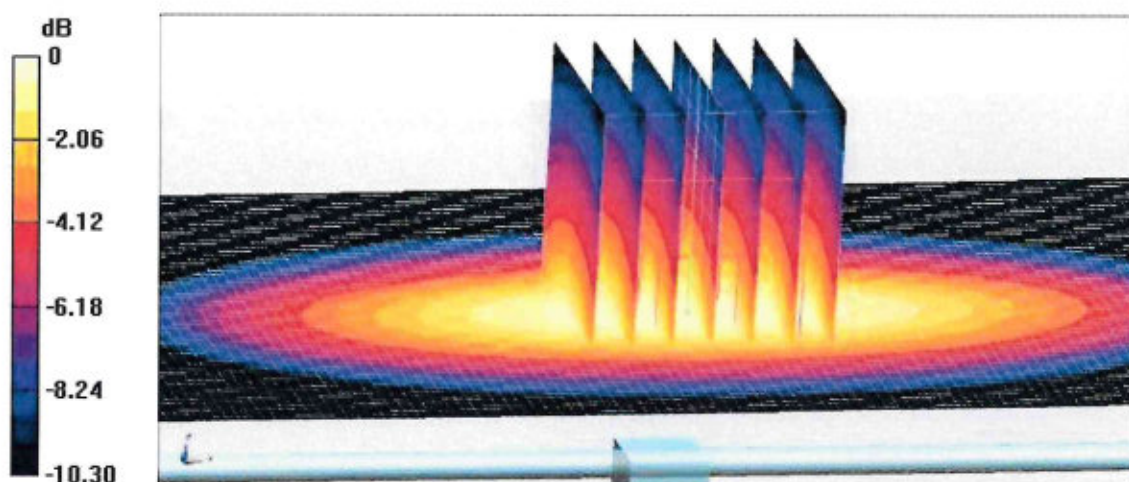
Peak SAR (extrapolated) = 3.60 W/kg

SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.58 W/kg

Smallest distance from peaks to all points 3 dB below = 18.6 mm

Ratio of SAR at M2 to SAR at M1 = 67%

Maximum value of SAR (measured) = 3.20 W/kg


0 dB = 3.20 W/kg = 5.05 dBW/kg



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Impedance Measurement Plot for Head TSL

