Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/17

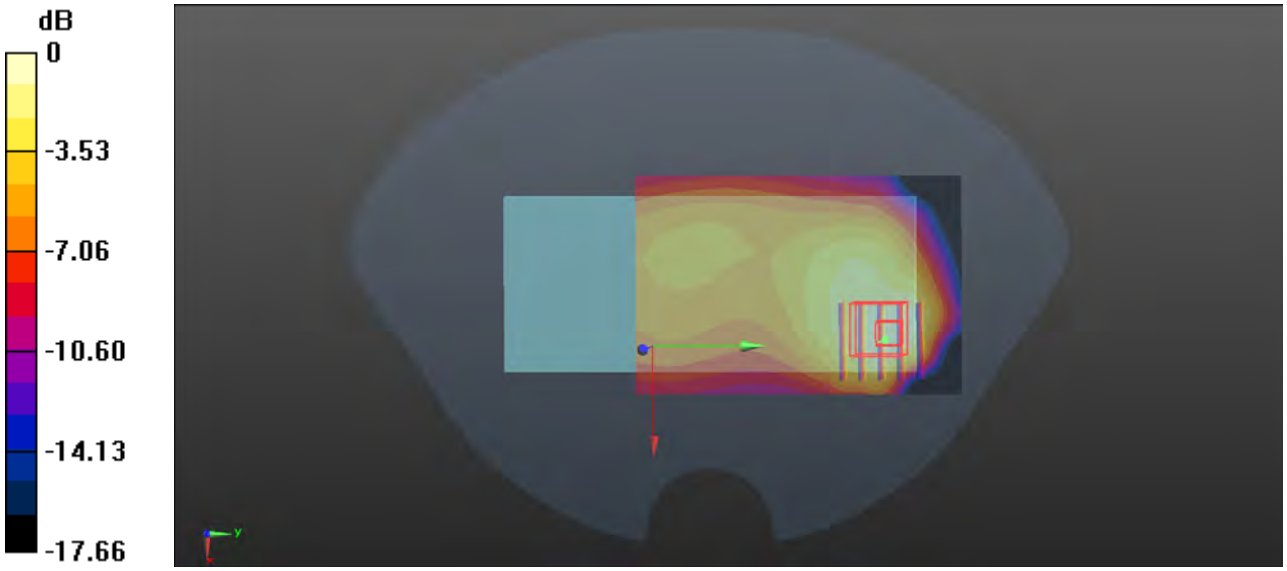
P17 GSM850_GPRS 4Tx Slot_Rear Face_1cm_Ch251

Communication System: GPRS 4Tx-slot; Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium: HSL835_1017 Medium parameters used: f = 849 MHz; σ = 0.906 S/m; ε_r = 41.379; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(9.47, 9.47, 9.47) @ 848.8 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.360 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.54 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.452 W/kg
SAR(1 g) = 0.246 W/kg; SAR(10 g) = 0.142 W/kg
Smallest distance from peaks to all points 3 dB below = 10.2 mm
Ratio of SAR at M2 to SAR at M1 = 56.4%
Maximum value of SAR (measured) = 0.337 W/kg



0 dB = 0.337 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/19

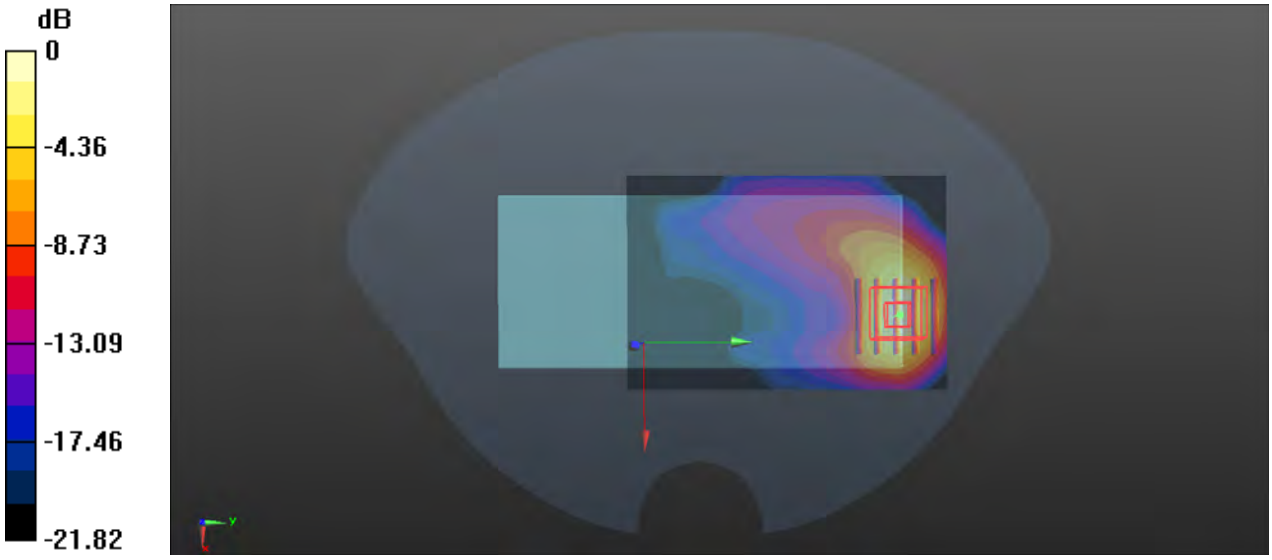
P18 GSM1900_GPRS 1Tx Slot_Rear Face_1cm_Ch810

Communication System: GPRS 1Tx-slot; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900_1019 Medium parameters used: f = 1910 MHz; σ = 1.446 S/m; ε_r = 39.701; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.97, 7.97, 7.97) @ 1909.8 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.667 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.860 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.903 W/kg
SAR(1 g) = 0.489 W/kg; SAR(10 g) = 0.241 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 55.5%
Maximum value of SAR (measured) = 0.709 W/kg



0 dB = 0.709 W/kg

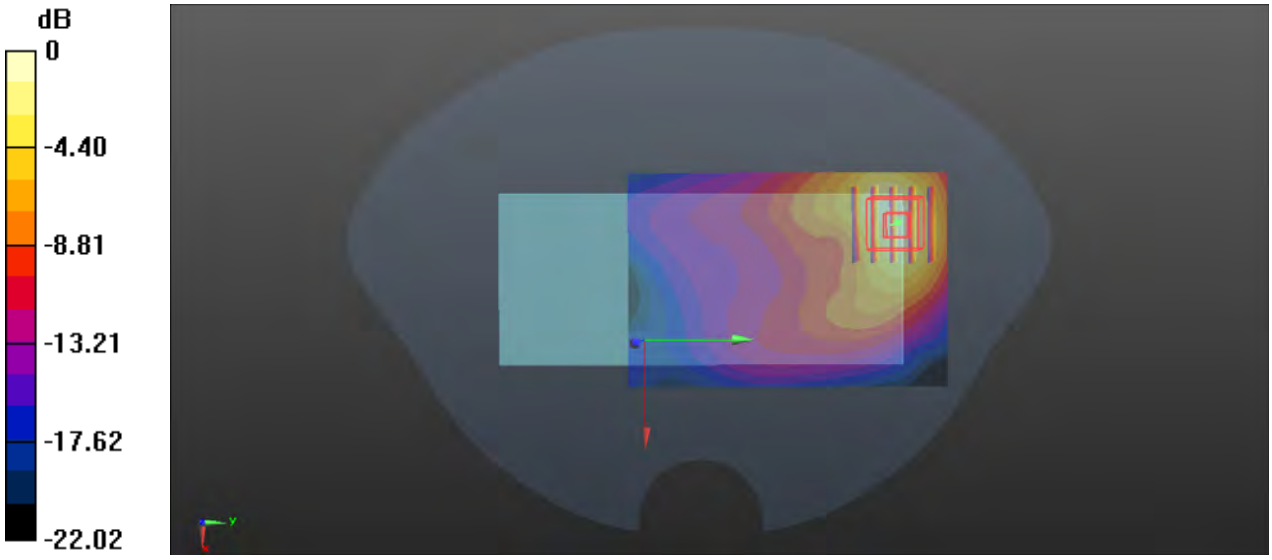
P19 WCDMA II_RMC12.2K_Front Face_1.1cm_Ch9538

Communication System: WCDMA; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium: HSL1900_1019 Medium parameters used: f = 1908 MHz; σ = 1.444 S/m; ε_r = 39.71; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.97, 7.97, 7.97) @ 1907.6 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.808 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.852 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.639 W/kg; SAR(10 g) = 0.340 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 57.9%
Maximum value of SAR (measured) = 0.895 W/kg



0 dB = 0.895 W/kg

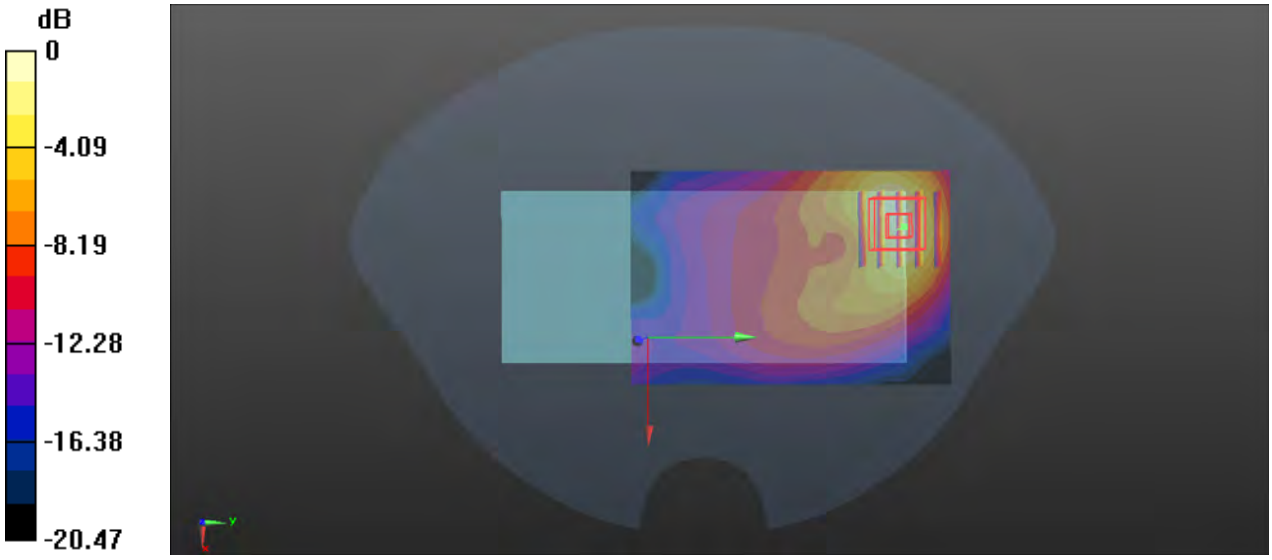
P20 WCDMA IV_RMC12.2K_Front Face_1.1cm_Ch1413

Communication System: WCDMA; Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: HSL1750_1018 Medium parameters used: f = 1733 MHz; σ = 1.329 S/m; ε_r = 41.876; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(8.31, 8.31, 8.31) @ 1732.6 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.666 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.727 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.939 W/kg
SAR(1 g) = 0.548 W/kg; SAR(10 g) = 0.292 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 60.4%
Maximum value of SAR (measured) = 0.746 W/kg



0 dB = 0.746 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/17

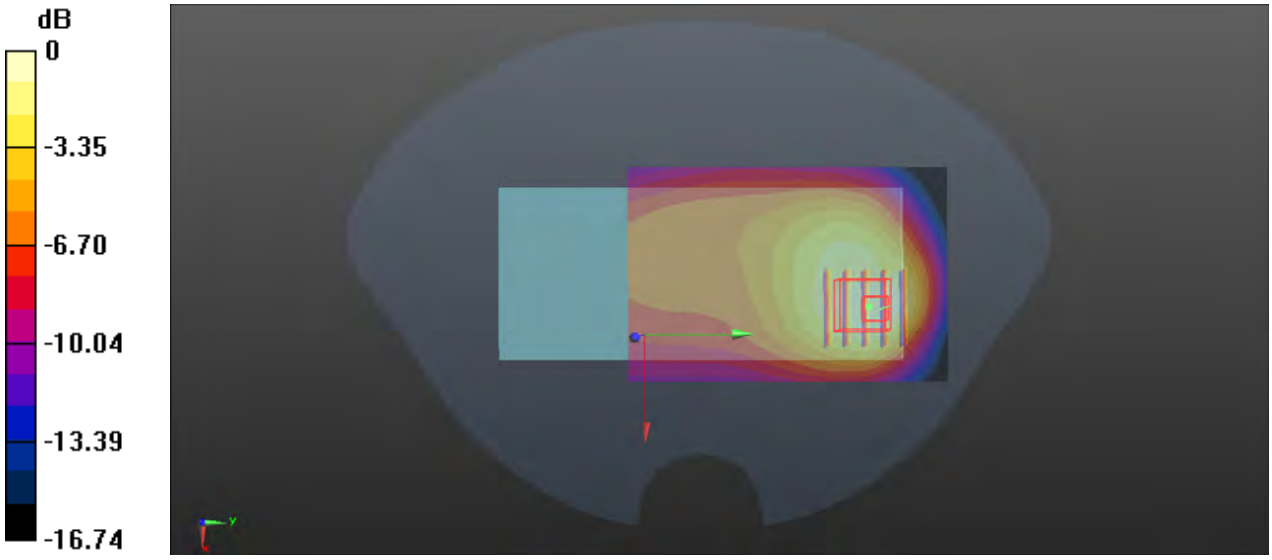
P21 WCDMA V_RMC12.2K_Rear Face_1cm_Ch4233

Communication System: WCDMA; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: HSL835_1017 Medium parameters used: f = 847 MHz; σ = 0.904 S/m; ε_r = 41.403; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(9.47, 9.47, 9.47) @ 846.6 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.532 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.10 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.660 W/kg
SAR(1 g) = 0.365 W/kg; SAR(10 g) = 0.218 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 53.9%
Maximum value of SAR (measured) = 0.495 W/kg



0 dB = 0.495 W/kg

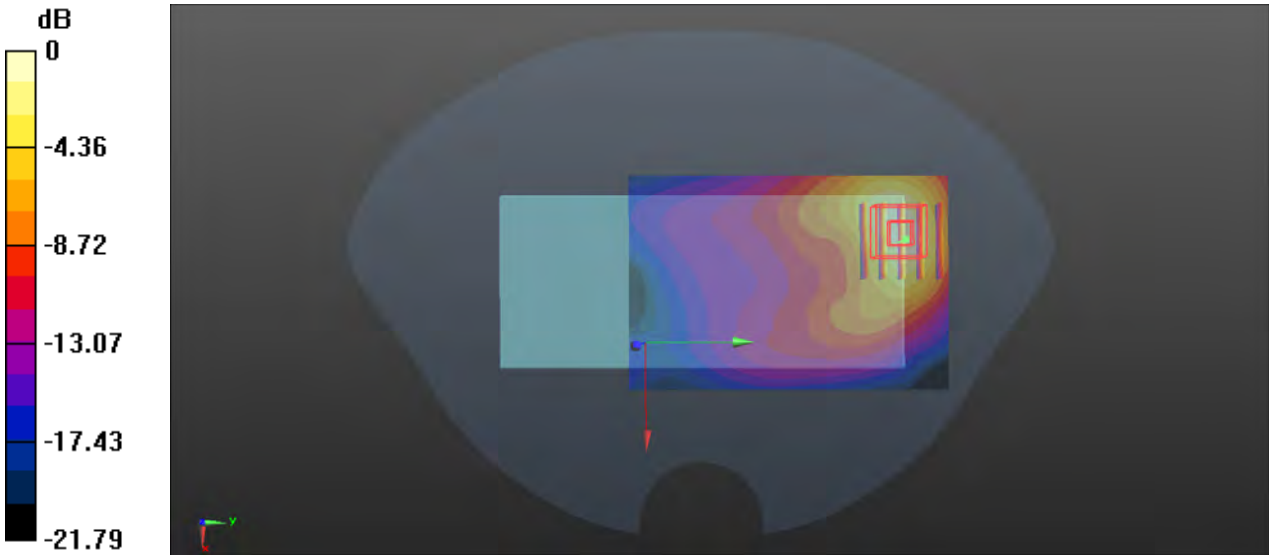
P22 LTE Band 2_QPSK20M_Front Face_1.1cm_Ch19100_1RB_OS50

Communication System: LTE; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL1900_1019 Medium parameters used: f = 1900 MHz; σ = 1.436 S/m; ε_r = 39.743; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.97, 7.97, 7.97) @ 1900 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.825 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.820 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.340 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 58.4%
Maximum value of SAR (measured) = 0.875 W/kg



0 dB = 0.875 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2024/10/17

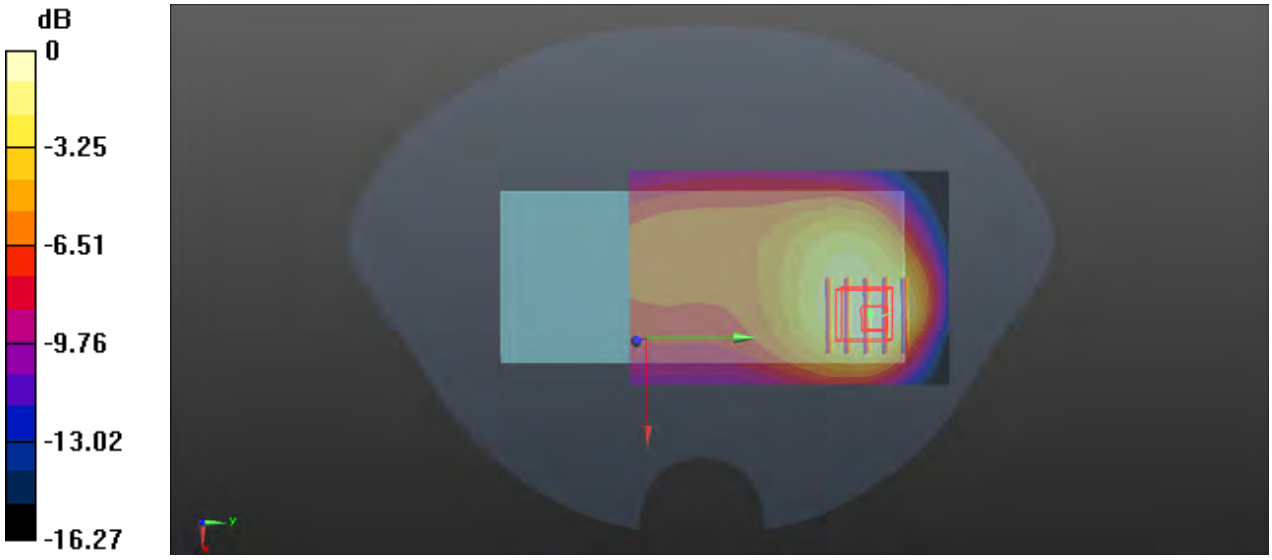
P23 LTE Band 5_QPSK10M_Rear Face_1cm_Ch20600_1RB_OS24

Communication System: LTE; Frequency: 844 MHz;Duty Cycle: 1:1
Medium: HSL835_1017 Medium parameters used: f = 844 MHz; σ = 0.901 S/m; ε_r = 41.439; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(9.47, 9.47, 9.47) @ 844 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.541 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.98 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.680 W/kg
SAR(1 g) = 0.376 W/kg; SAR(10 g) = 0.224 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 53.8%
Maximum value of SAR (measured) = 0.506 W/kg



0 dB = 0.506 W/kg

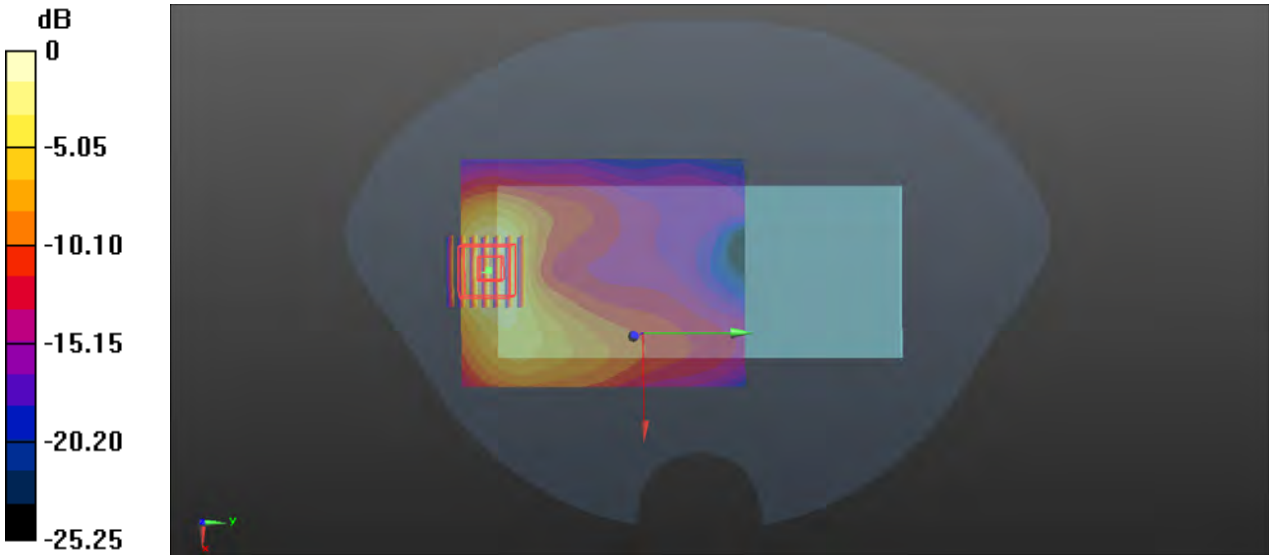
P24 LTE Band 7_QPSK20M_Front Face_1.1cm_Ch21350_50RB_OS25

Communication System: LTE; Frequency: 2560 MHz;Duty Cycle: 1:1
Medium: HSL2600_1020 Medium parameters used: f = 2560 MHz; σ = 1.995 S/m; ε_r = 39.075; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.31, 7.31, 7.31) @ 2560 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.01 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.385 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.682 W/kg; SAR(10 g) = 0.322 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 50.6%
Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 1.01 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2024/10/20

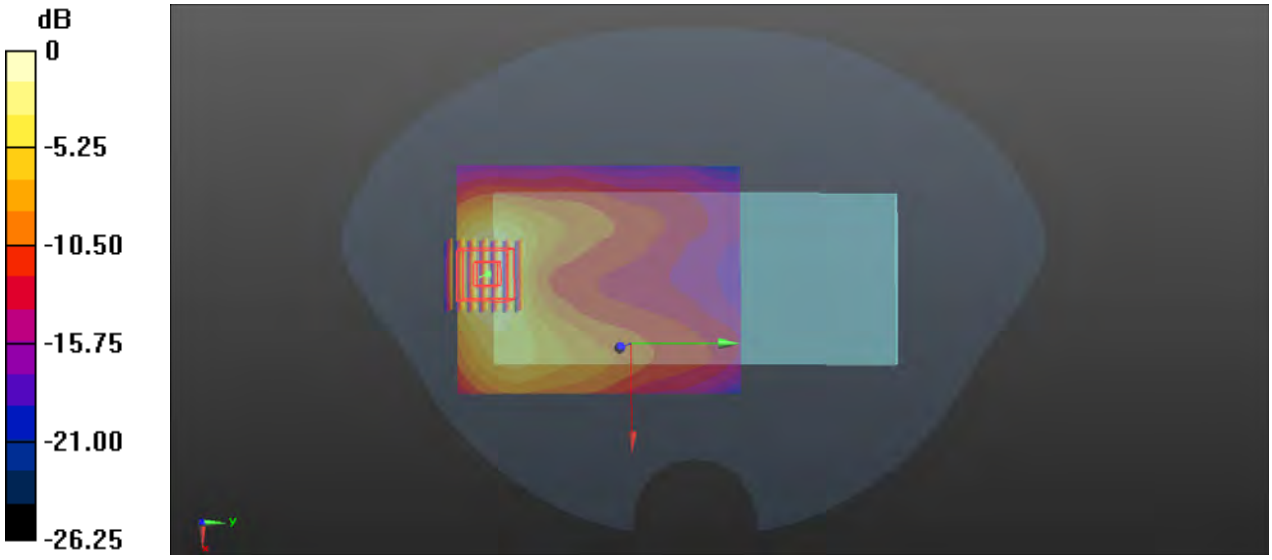
P25 LTE Band 38_QPSK20M_Front Face_1.1cm_Ch38000_1RB_OS50

Communication System: LTE TDD; Frequency: 2595 MHz;Duty Cycle: 1:1.59
Medium: HSL2600_1020 Medium parameters used: f = 2595 MHz; σ = 2.033 S/m; ε_r = 38.951; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.31, 7.31, 7.31) @ 2595 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.868 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.861 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.584 W/kg; SAR(10 g) = 0.277 W/kg
Smallest distance from peaks to all points 3 dB below = 9.5 mm
Ratio of SAR at M2 to SAR at M1 = 49.2%
Maximum value of SAR (measured) = 0.884 W/kg



0 dB = 0.884 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2024/10/20

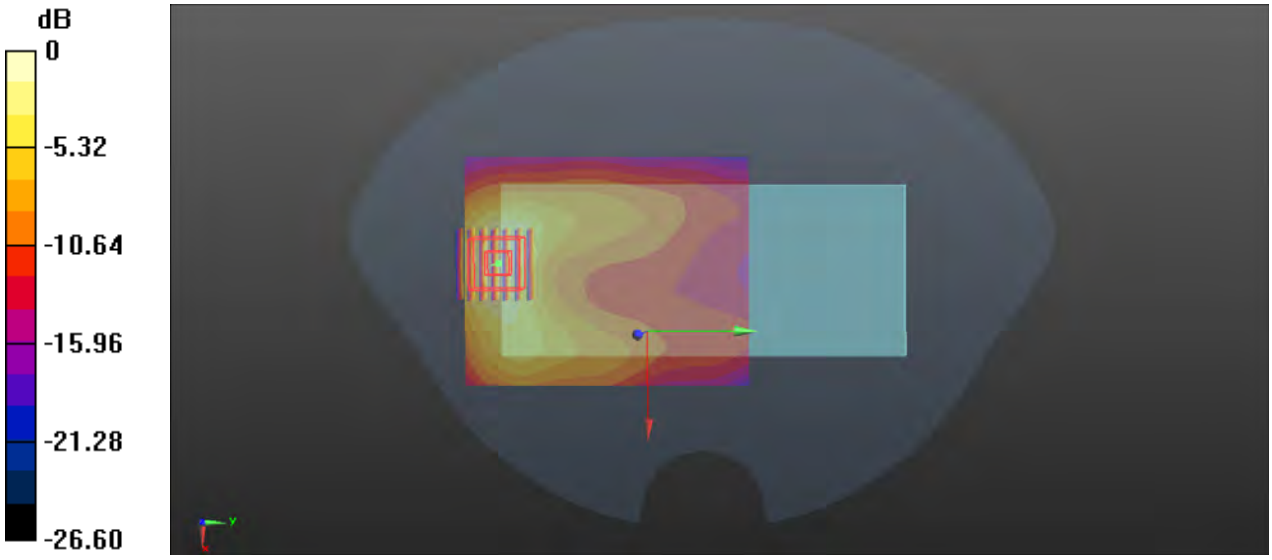
P26 LTE Band 41_QPSK20M_Front Face_1.1cm_Ch41055_1RB_OS50

Communication System: LTE TDD; Frequency: 2636.5 MHz;Duty Cycle: 1:1.59
Medium: HSL2600_1020 Medium parameters used: f = 2637 MHz; σ = 2.081 S/m; ε_r = 38.798; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.31, 7.31, 7.31) @ 2636.5 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.982 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.092 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 0.667 W/kg; SAR(10 g) = 0.318 W/kg
Smallest distance from peaks to all points 3 dB below = 10.4 mm
Ratio of SAR at M2 to SAR at M1 = 48.4%
Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.02 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2024/10/18

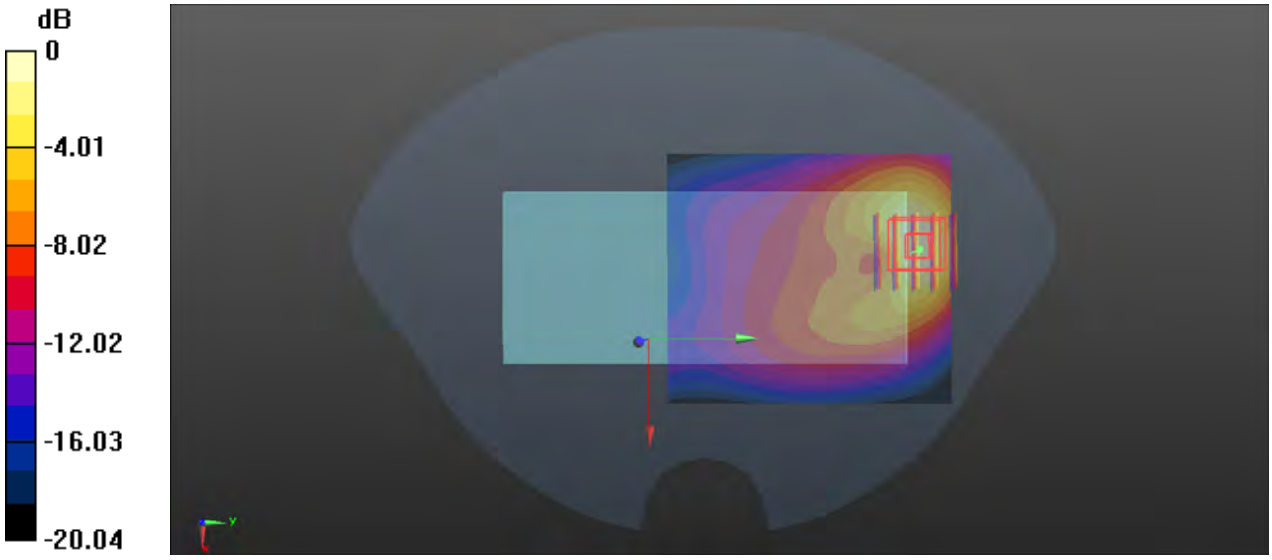
P27 LTE Band 66_QPSK20M_Front Face_1.1cm_Ch132072_50RB_OS25

Communication System: LTE; Frequency: 1720 MHz;Duty Cycle: 1:1
Medium: HSL1750_1018 Medium parameters used: f = 1720 MHz; σ = 1.315 S/m; ε_r = 41.917; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(8.31, 8.31, 8.31) @ 1720 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (71x81x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.682 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.891 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.846 W/kg
SAR(1 g) = 0.500 W/kg; SAR(10 g) = 0.270 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 60.3%
Maximum value of SAR (measured) = 0.688 W/kg



0 dB = 0.688 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/21

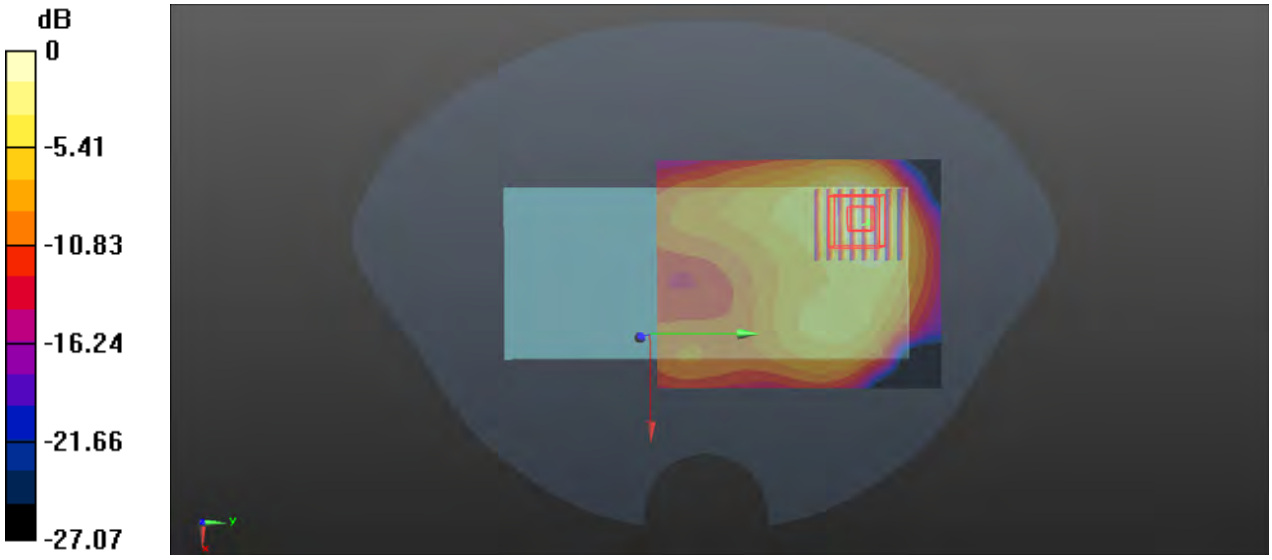
P28 WLAN 2.4GHz_802.11b _Rear Face_1cm_Ch11

Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1.005
Medium: HSL2450_1021 Medium parameters used: f = 2462 MHz; σ = 1.802 S/m; ε_r = 39.142; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃； Liquid Temperature：22.3℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.46, 7.46, 7.46) @ 2462 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.203 W/kg

- Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.811 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.278 W/kg
SAR(1 g) = 0.134 W/kg; SAR(10 g) = 0.067 W/kg
Smallest distance from peaks to all points 3 dB below = 11.7 mm
Ratio of SAR at M2 to SAR at M1 = 46.7%
Maximum value of SAR (measured) = 0.197 W/kg



0 dB = 0.197 W/kg

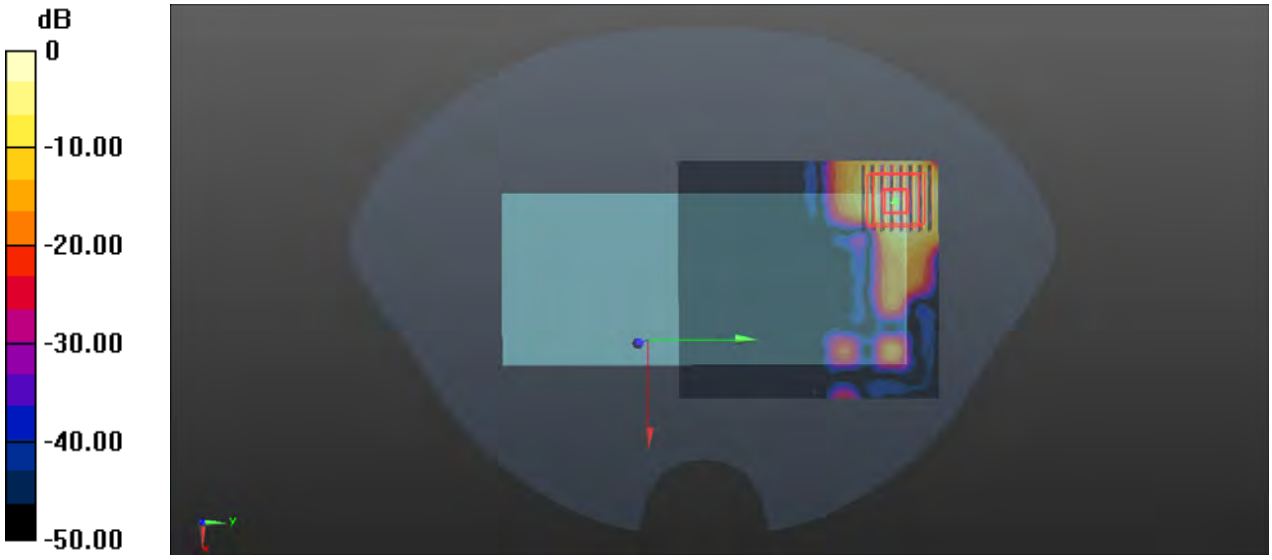
P29 WLAN 5GHz_802.11n-HT20_Rear Face_1cm_Ch64

Communication System: 802.11n_HT20; Frequency: 5320 MHz;Duty Cycle: 1:1.075
Medium: HSL5G_1022 Medium parameters used: f = 5320 MHz; σ = 4.812 S/m; ε_r = 36.154; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃； Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(5.16, 5.16, 5.16) @ 5320 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (101x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.458 W/kg

- Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.766 W/kg
SAR(1 g) = 0.204 W/kg; SAR(10 g) = 0.062 W/kg
Smallest distance from peaks to all points 3 dB below = 7.9 mm
Ratio of SAR at M2 to SAR at M1 = 53.6%
Maximum value of SAR (measured) = 0.411 W/kg



0 dB = 0.411 W/kg

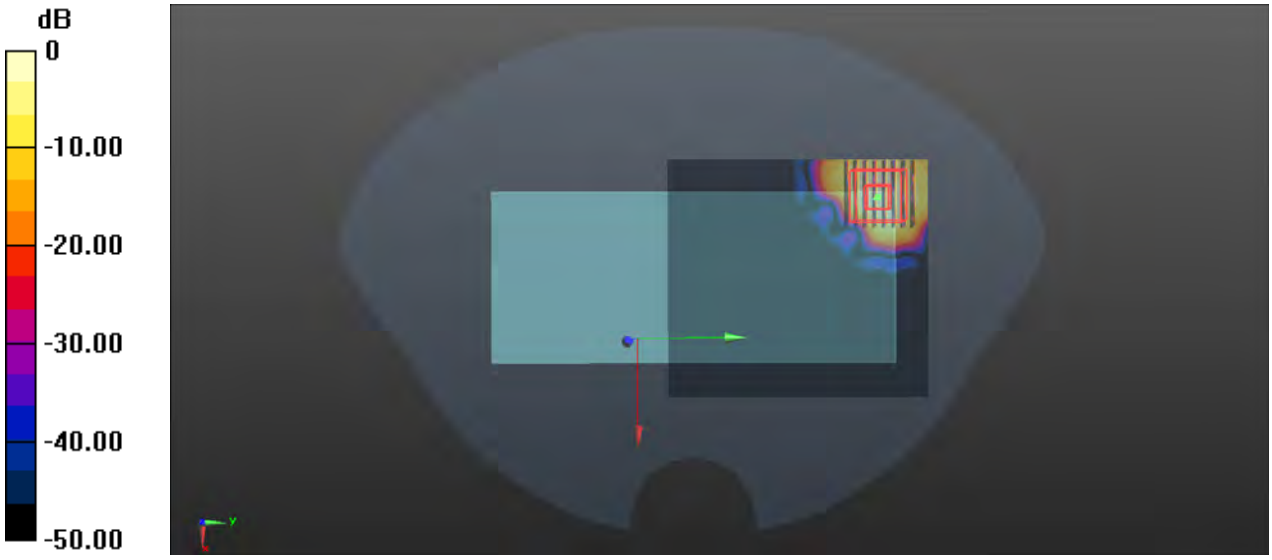
P30 WLAN 5GHz_802.11n-HT20_Rear Face_1cm_Ch140

Communication System: 802.11n_HT20; Frequency: 5700 MHz;Duty Cycle: 1:1.075
Medium: HSL5G_1022 Medium parameters used: f = 5700 MHz; σ = 5.208 S/m; ε_r = 35.587; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.3℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(4.56, 4.56, 4.56) @ 5700 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (101x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.434 W/kg

- Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.670 W/kg
SAR(1 g) = 0.162 W/kg; SAR(10 g) = 0.049 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 48.9%
Maximum value of SAR (measured) = 0.358 W/kg



0 dB = 0.358 W/kg

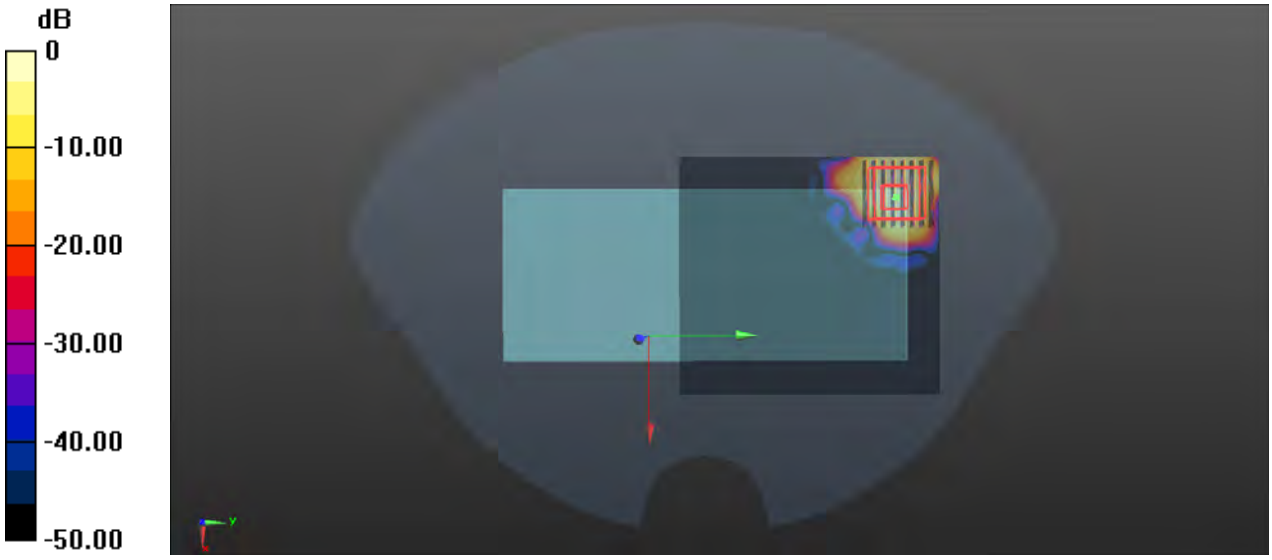
P31 WLAN 5GHz_802.11ac-VHT80_Rear Face_1cm_Ch155

Communication System: 802.11ac_VHT80; Frequency: 5775 MHz;Duty Cycle: 1:1.14
Medium: HSL5G_1022 Medium parameters used: f = 5775 MHz; σ = 5.285 S/m; ε_r = 35.495; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(4.62, 4.62, 4.62) @ 5775 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (101x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.304 W/kg

- Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.467 W/kg
SAR(1 g) = 0.111 W/kg; SAR(10 g) = 0.033 W/kg
Smallest distance from peaks to all points 3 dB below = 8.2 mm
Ratio of SAR at M2 to SAR at M1 = 49.5%
Maximum value of SAR (measured) = 0.255 W/kg



0 dB = 0.255 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/21

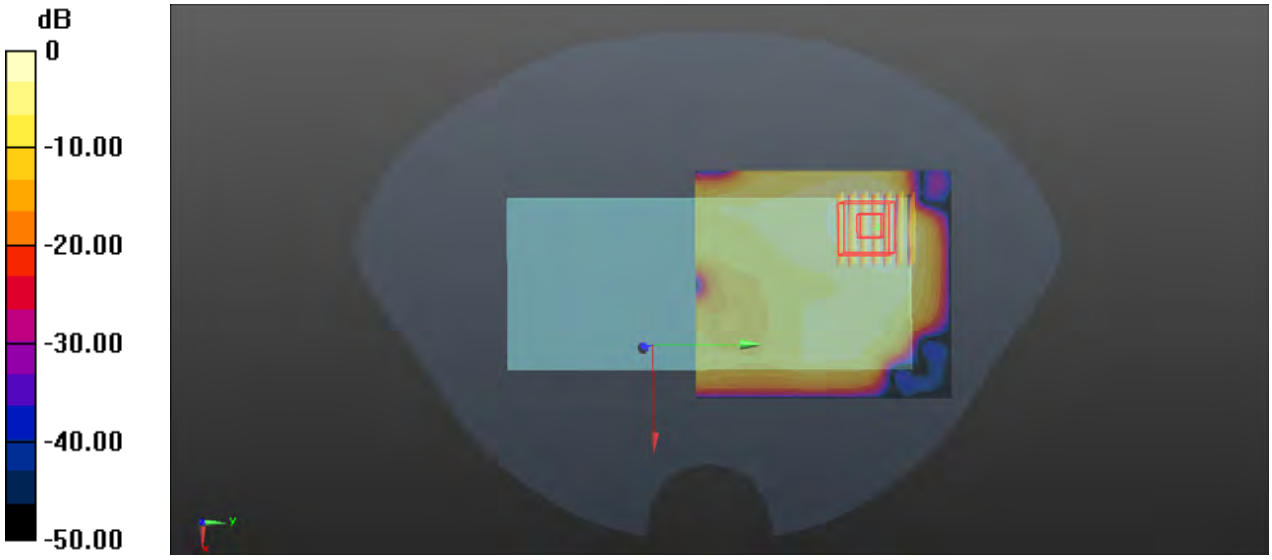
P32 Bluetooth_GFSK_Rear Face_1cm_Ch78

Communication System: BT; Frequency: 2480 MHz;Duty Cycle: 1:1.304
Medium: HSL2450_1021 Medium parameters used: f = 2480 MHz; σ = 1.82 S/m; ε_r = 39.084; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃； Liquid Temperature：22.3℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.46, 7.46, 7.46) @ 2480 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0870 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.457 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.106 W/kg
SAR(1 g) = 0.051 W/kg; SAR(10 g) = 0.024 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 47.4%
Maximum value of SAR (measured) = 0.0759 W/kg



0 dB = 0.0759 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/17

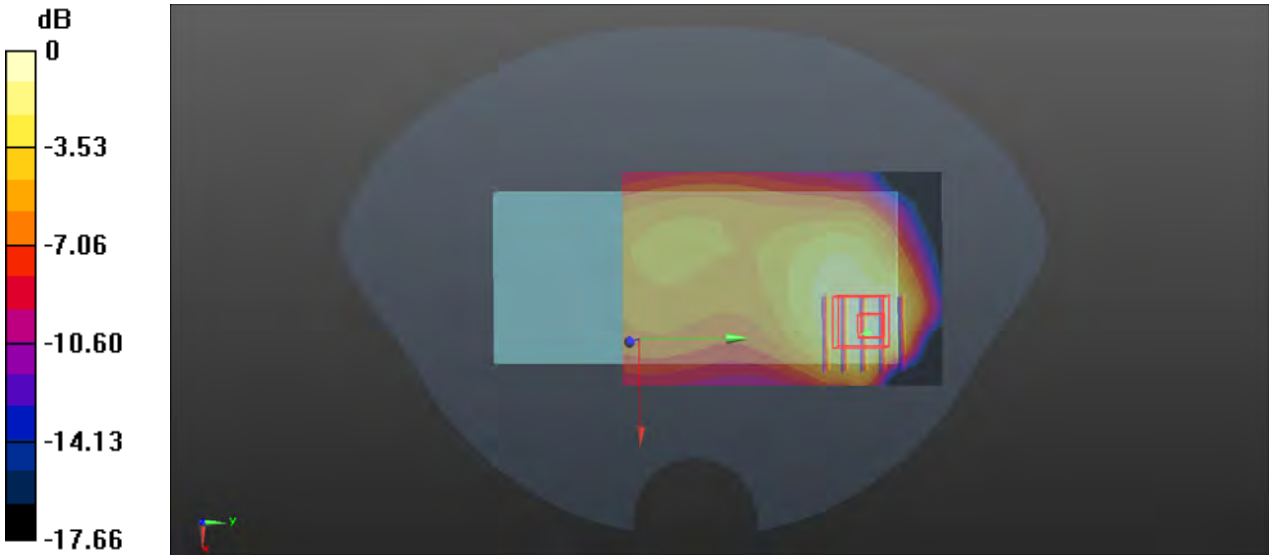
P33 GSM850_GPRS 4Tx Slot_Rear Face_1cm_Ch251

Communication System: GPRS 4Tx-slot; Frequency: 848.8 MHz;Duty Cycle: 1:2.08
Medium: HSL835_1017 Medium parameters used: f = 849 MHz; σ = 0.906 S/m; ε_r = 41.379; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(9.47, 9.47, 9.47) @ 848.8 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.360 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.54 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.452 W/kg
SAR(1 g) = 0.246 W/kg; SAR(10 g) = 0.142 W/kg
Smallest distance from peaks to all points 3 dB below = 10.2 mm
Ratio of SAR at M2 to SAR at M1 = 56.4%
Maximum value of SAR (measured) = 0.337 W/kg



0 dB = 0.337 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/19

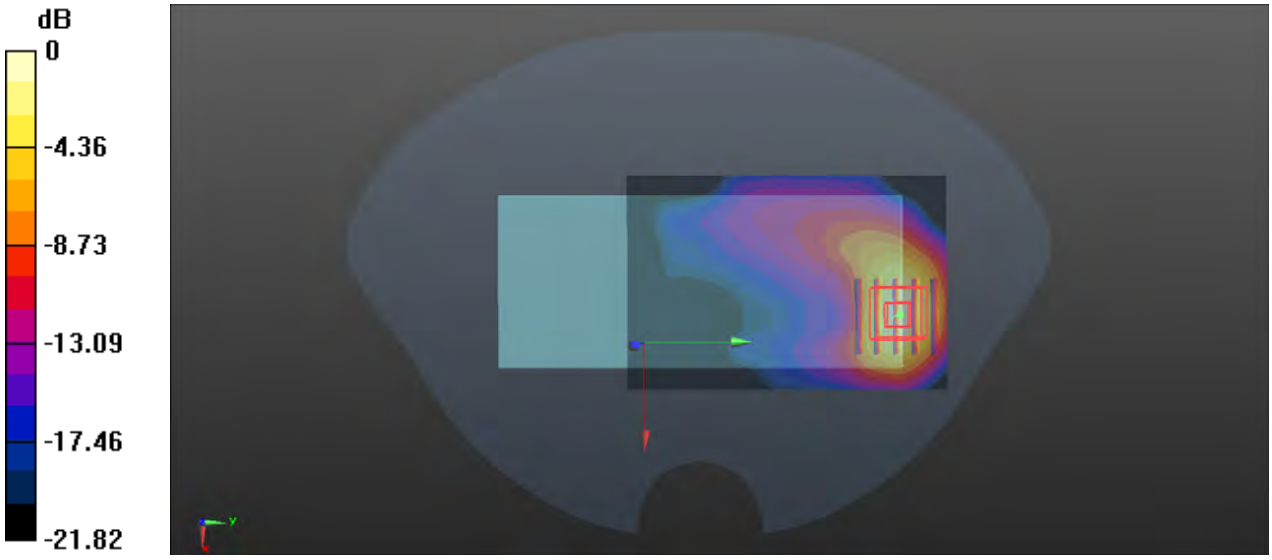
P34 GSM1900_GPRS 1Tx Slot_Rear Face_1cm_Ch810

Communication System: GPRS 1Tx-slot; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900_1019 Medium parameters used: f = 1910 MHz; σ = 1.446 S/m; ε_r = 39.701; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.97, 7.97, 7.97) @ 1909.8 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.667 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.860 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.903 W/kg
SAR(1 g) = 0.489 W/kg; SAR(10 g) = 0.241 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 55.5%
Maximum value of SAR (measured) = 0.709 W/kg



0 dB = 0.709 W/kg

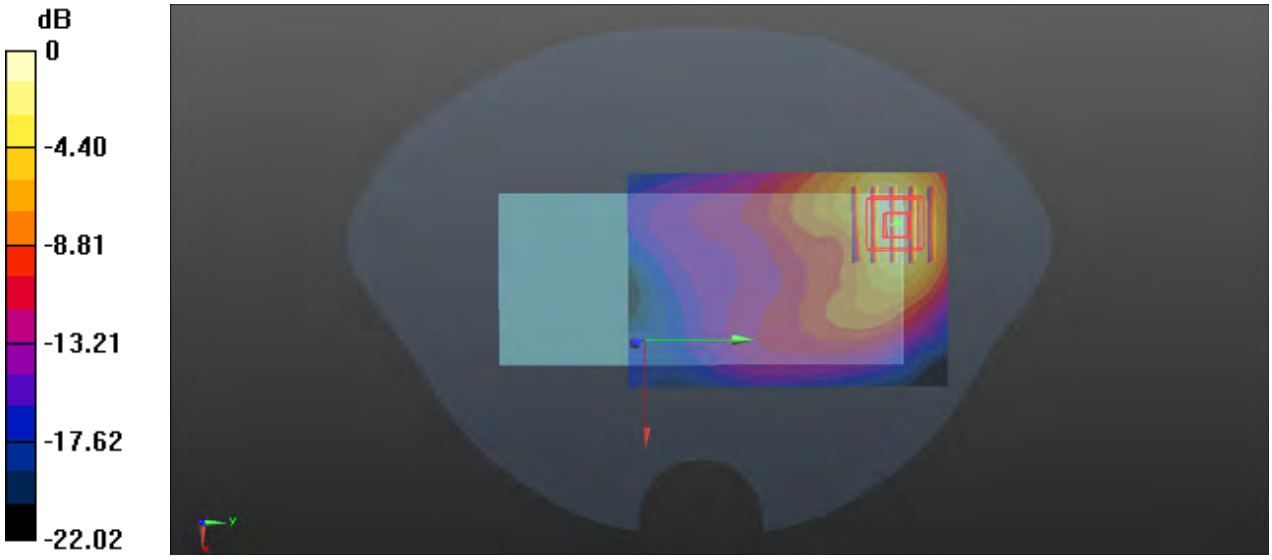
P35 WCDMA II_RMC12.2K_Front Face_1.1cm_Ch9538

Communication System: WCDMA; Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium: HSL1900_1019 Medium parameters used: f = 1908 MHz; σ = 1.444 S/m; ε_r = 39.71; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.97, 7.97, 7.97) @ 1907.6 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.808 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.852 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.639 W/kg; SAR(10 g) = 0.340 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 57.9%
Maximum value of SAR (measured) = 0.895 W/kg



0 dB = 0.895 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2024/10/18

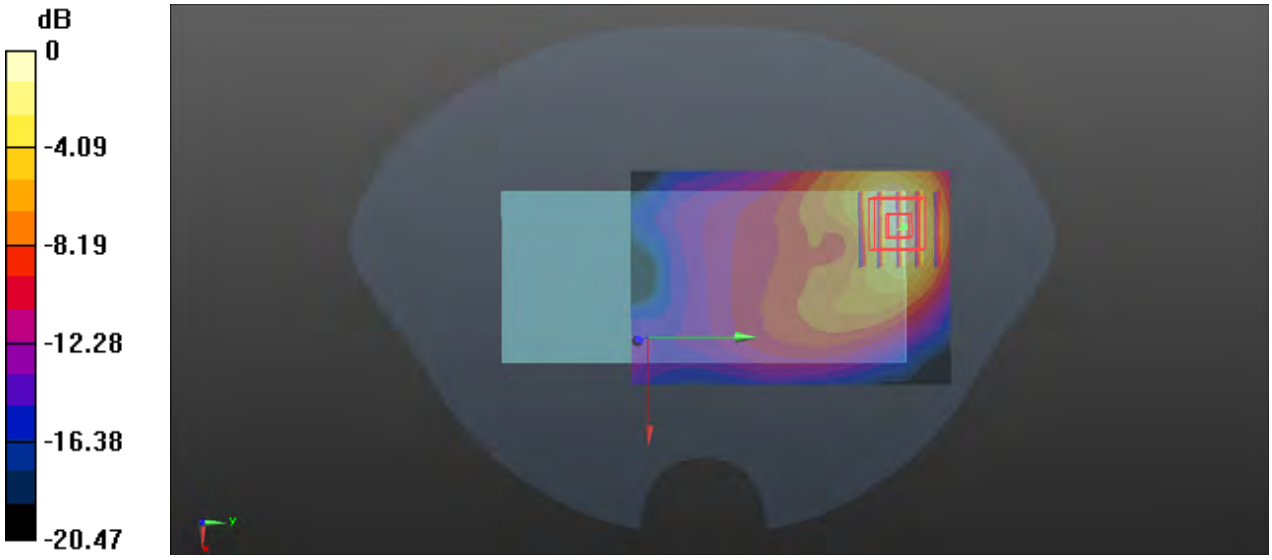
P36 WCDMA IV_RMC12.2K_Front Face_1.1cm_Ch1413

Communication System: WCDMA; Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: HSL1750_1018 Medium parameters used: f = 1733 MHz; σ = 1.329 S/m; ε_r = 41.876; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(8.31, 8.31, 8.31) @ 1732.6 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.666 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.727 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.939 W/kg
SAR(1 g) = 0.548 W/kg; SAR(10 g) = 0.292 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 60.4%
Maximum value of SAR (measured) = 0.746 W/kg



0 dB = 0.746 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/17

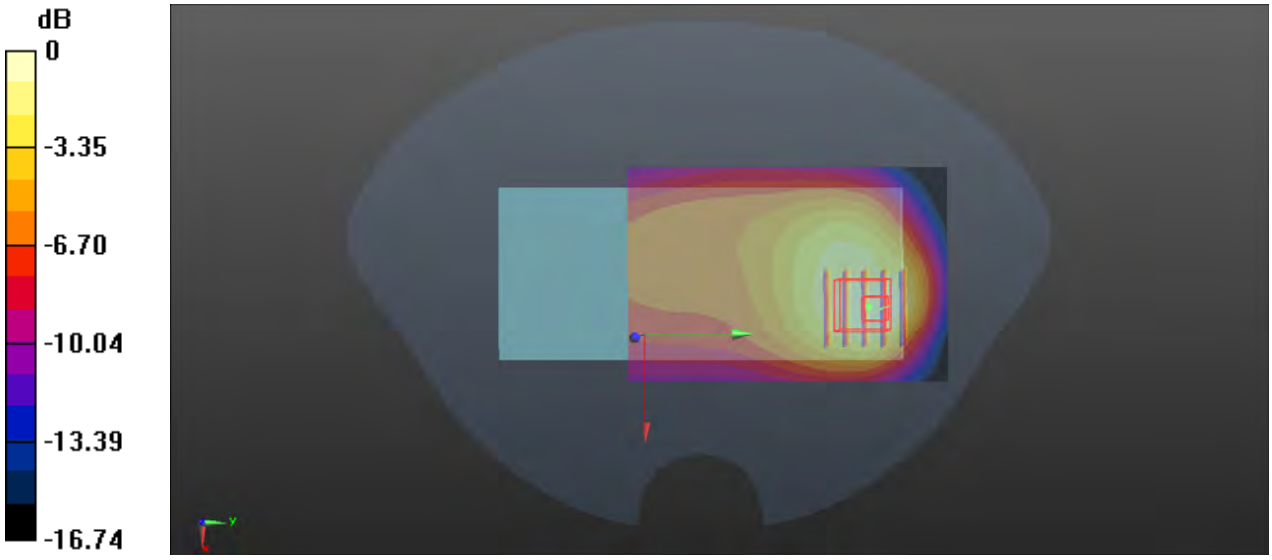
P37 WCDMA V_RMC12.2K_Rear Face_1cm_Ch4233

Communication System: WCDMA; Frequency: 846.6 MHz;Duty Cycle: 1:1
Medium: HSL835_1017 Medium parameters used: f = 847 MHz; σ = 0.904 S/m; ε_r = 41.403; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(9.47, 9.47, 9.47) @ 846.6 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.532 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.10 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.660 W/kg
SAR(1 g) = 0.365 W/kg; SAR(10 g) = 0.218 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 53.9%
Maximum value of SAR (measured) = 0.495 W/kg



0 dB = 0.495 W/kg

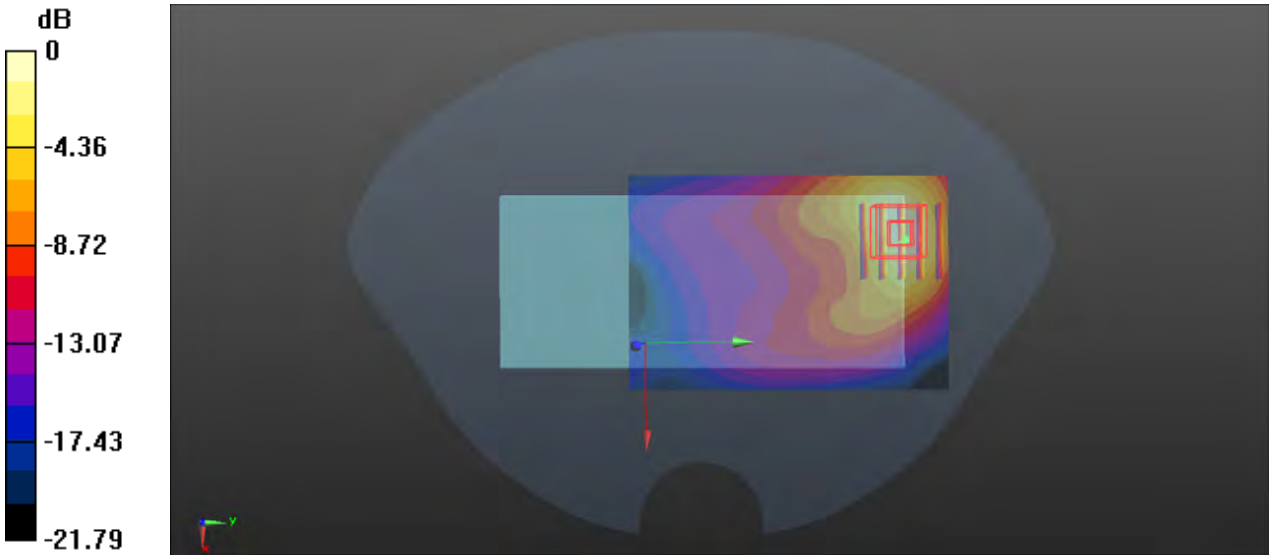
P38 LTE Band 2_QPSK20M_Front Face_1.1cm_Ch19100_1RB_OS50

Communication System: LTE; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium: HSL1900_1019 Medium parameters used: f = 1900 MHz; σ = 1.436 S/m; ε_r = 39.743; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.97, 7.97, 7.97) @ 1900 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.825 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.820 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.340 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 58.4%
Maximum value of SAR (measured) = 0.875 W/kg



0 dB = 0.875 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2024/10/17

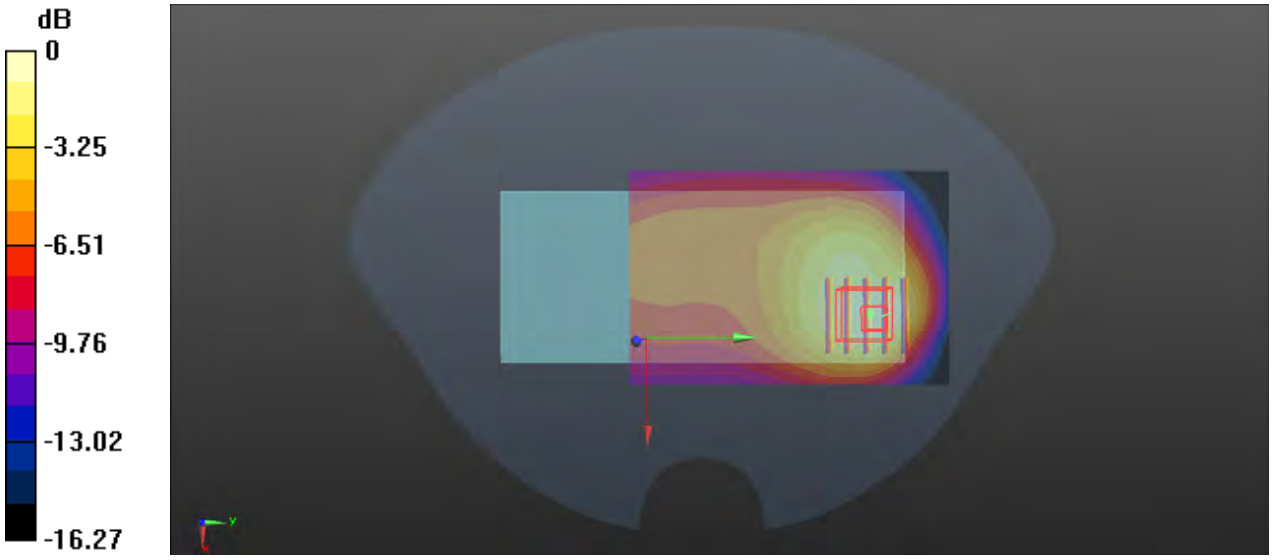
P39 LTE Band 5_QPSK10M_Rear Face_1cm_Ch20600_1RB_OS24

Communication System: LTE; Frequency: 844 MHz;Duty Cycle: 1:1
Medium: HSL835_1017 Medium parameters used: f = 844 MHz; σ = 0.901 S/m; ε_r = 41.439; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.6℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(9.47, 9.47, 9.47) @ 844 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (61x91x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.541 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.98 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.680 W/kg
SAR(1 g) = 0.376 W/kg; SAR(10 g) = 0.224 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 53.8%
Maximum value of SAR (measured) = 0.506 W/kg



0 dB = 0.506 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2024/10/20

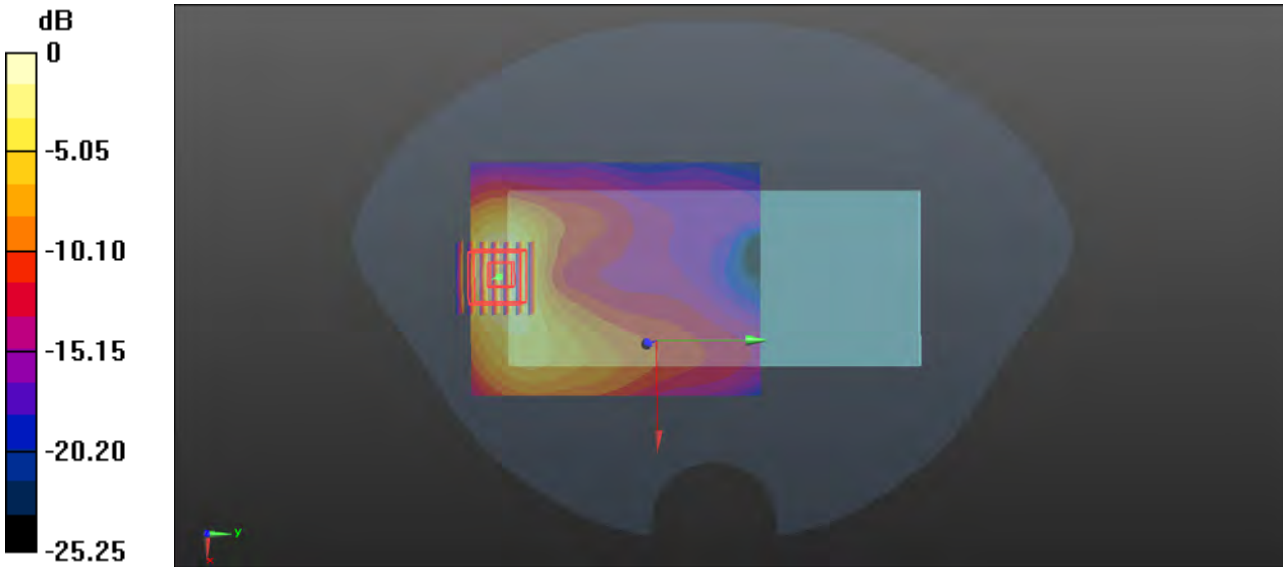
P40 LTE Band 7_QPSK20M_Front Face_1.1cm_Ch21350_50RB_OS25

Communication System: LTE; Frequency: 2560 MHz;Duty Cycle: 1:1
Medium: HSL2600_1020 Medium parameters used: f = 2560 MHz; σ = 1.995 S/m; ε_r = 39.075; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.31, 7.31, 7.31) @ 2560 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 1.01 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.385 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.682 W/kg; SAR(10 g) = 0.322 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 50.6%
Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 1.01 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2024/10/20

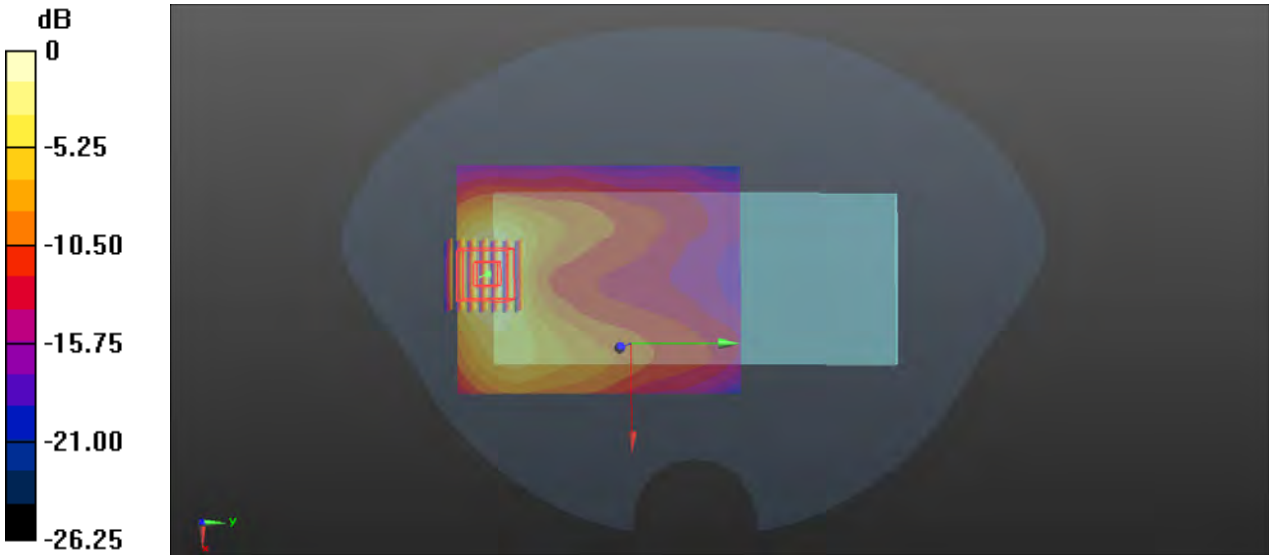
P41 LTE Band 38_QPSK20M_Front Face_1.1cm_Ch38000_1RB_OS50

Communication System: LTE TDD; Frequency: 2595 MHz;Duty Cycle: 1:1.59
Medium: HSL2600_1020 Medium parameters used: f = 2595 MHz; σ = 2.033 S/m; ε_r = 38.951; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.31, 7.31, 7.31) @ 2595 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.868 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.861 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.584 W/kg; SAR(10 g) = 0.277 W/kg
Smallest distance from peaks to all points 3 dB below = 9.5 mm
Ratio of SAR at M2 to SAR at M1 = 49.2%
Maximum value of SAR (measured) = 0.884 W/kg



0 dB = 0.884 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab Date: 2024/10/20

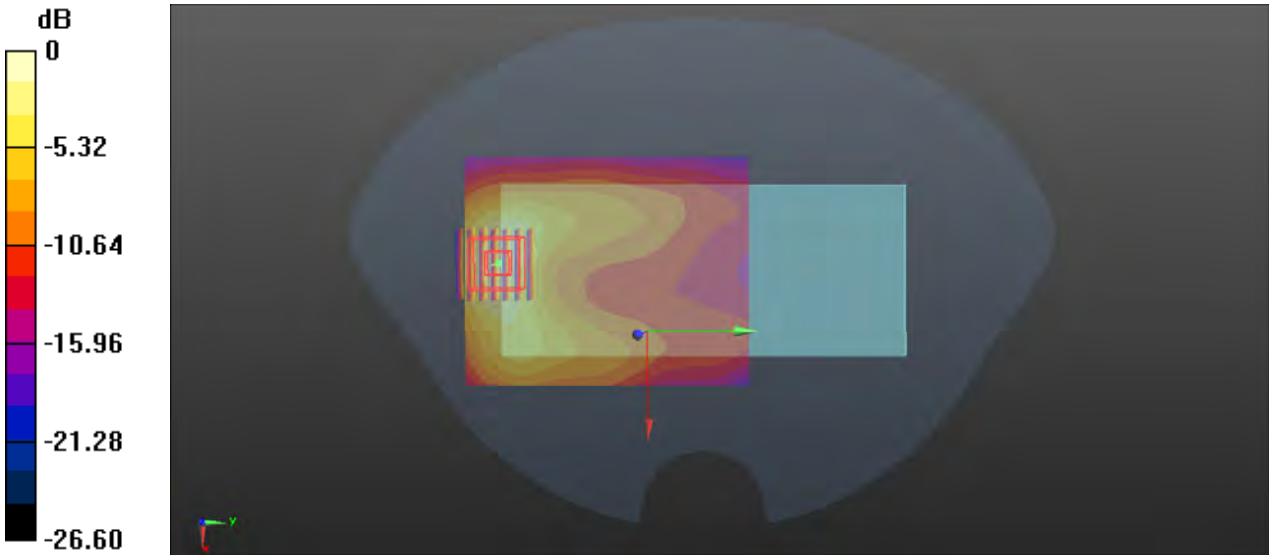
P42 LTE Band 41_QPSK20M_Front Face_1.1cm_Ch41055_1RB_OS50

Communication System: LTE TDD; Frequency: 2636.5 MHz;Duty Cycle: 1:1.59
Medium: HSL2600_1020 Medium parameters used: f = 2637 MHz; σ = 2.081 S/m; ε_r = 38.798; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.31, 7.31, 7.31) @ 2636.5 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.982 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.092 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 0.667 W/kg; SAR(10 g) = 0.318 W/kg
Smallest distance from peaks to all points 3 dB below = 10.4 mm
Ratio of SAR at M2 to SAR at M1 = 48.4%
Maximum value of SAR (measured) = 1.02 W/kg



0 dB = 1.02 W/kg

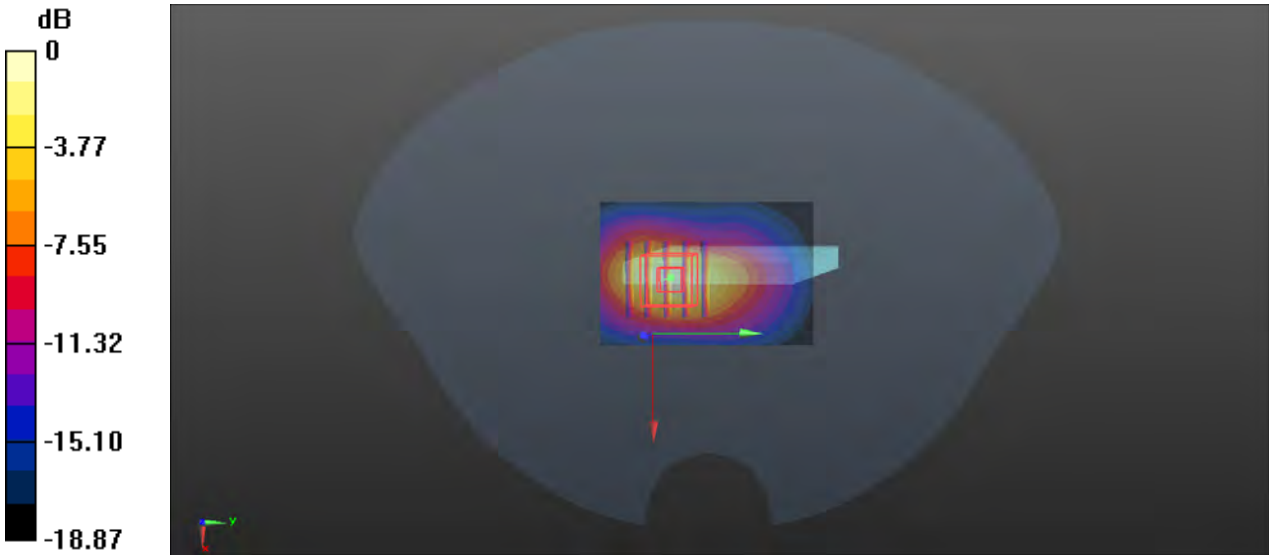
P43 LTE Band 66_QPSK20M_Top Side_1cm_Ch132322_100RB_OS0

Communication System: LTE; Frequency: 1745 MHz;Duty Cycle: 1:1
Medium: HSL1750_1018 Medium parameters used: f = 1745 MHz; σ = 1.34 S/m; ε_r = 41.844; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(8.31, 8.31, 8.31) @ 1745 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x61x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 0.770 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.23 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.986 W/kg
SAR(1 g) = 0.551 W/kg; SAR(10 g) = 0.278 W/kg
Smallest distance from peaks to all points 3 dB below = 9.3 mm
Ratio of SAR at M2 to SAR at M1 = 57.3%
Maximum value of SAR (measured) = 0.784 W/kg



0 dB = 0.784 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/21

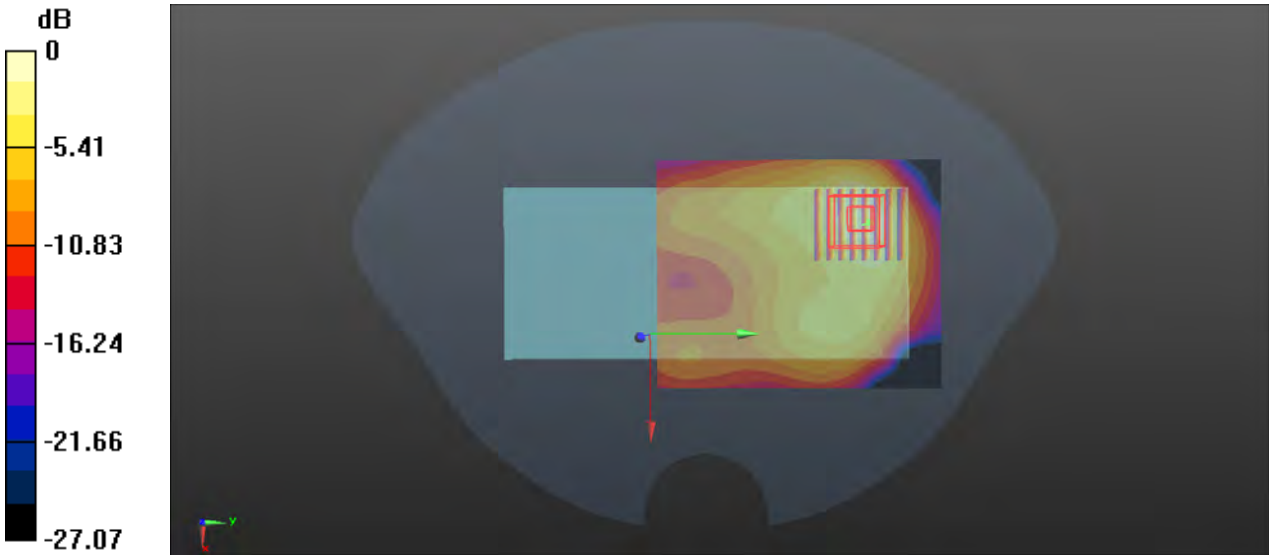
P44 WLAN 2.4GHz_802.11b _Rear Face_1cm_Ch11

Communication System: 802.11b; Frequency: 2462 MHz;Duty Cycle: 1:1.005
Medium: HSL2450_1021 Medium parameters used: f = 2462 MHz; σ = 1.802 S/m; ε_r = 39.142; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃； Liquid Temperature：22.3℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.46, 7.46, 7.46) @ 2462 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.203 W/kg

- Zoom Scan (7x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.811 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.278 W/kg
SAR(1 g) = 0.134 W/kg; SAR(10 g) = 0.067 W/kg
Smallest distance from peaks to all points 3 dB below = 11.7 mm
Ratio of SAR at M2 to SAR at M1 = 46.7%
Maximum value of SAR (measured) = 0.197 W/kg



0 dB = 0.197 W/kg

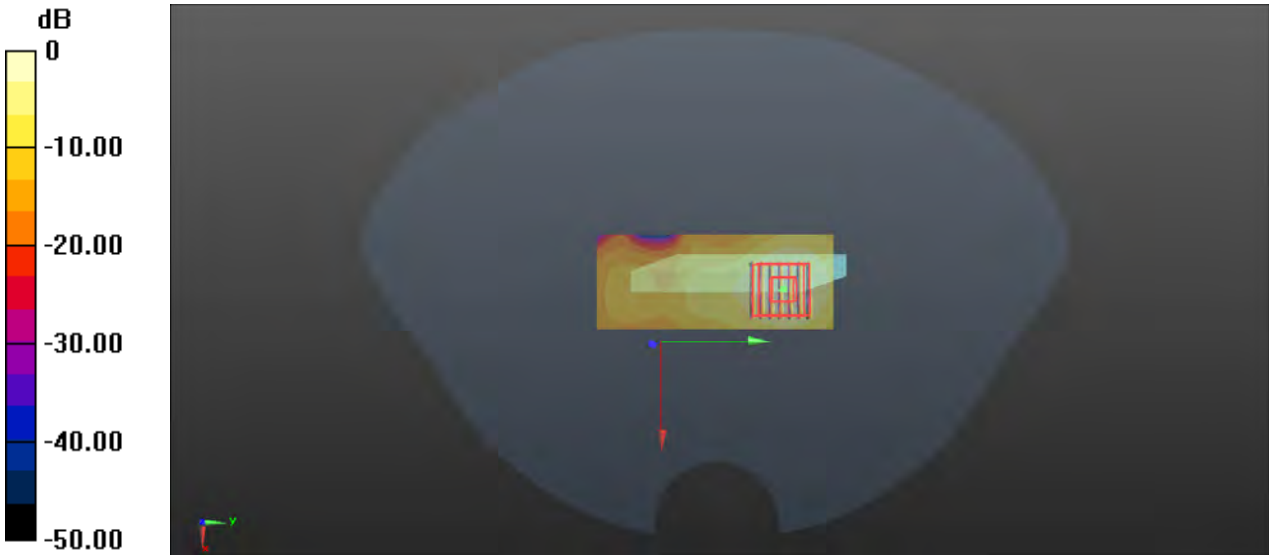
P45 WLAN 5GHz_802.11ac-VHT80_Top Side_1cm_Ch42

Communication System: 802.11ac_VHT80; Frequency: 5210 MHz;Duty Cycle: 1:1.14
Medium: HSL5G_1022 Medium parameters used: f = 5210 MHz; σ = 4.699 S/m; ε_r = 36.318; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃； Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(5.16, 5.16, 5.16) @ 5210 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.362 W/kg

- Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 3.547 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.648 W/kg
SAR(1 g) = 0.170 W/kg; SAR(10 g) = 0.056 W/kg
Smallest distance from peaks to all points 3 dB below = 9.3 mm
Ratio of SAR at M2 to SAR at M1 = 54.3%
Maximum value of SAR (measured) = 0.331 W/kg



0 dB = 0.331 W/kg

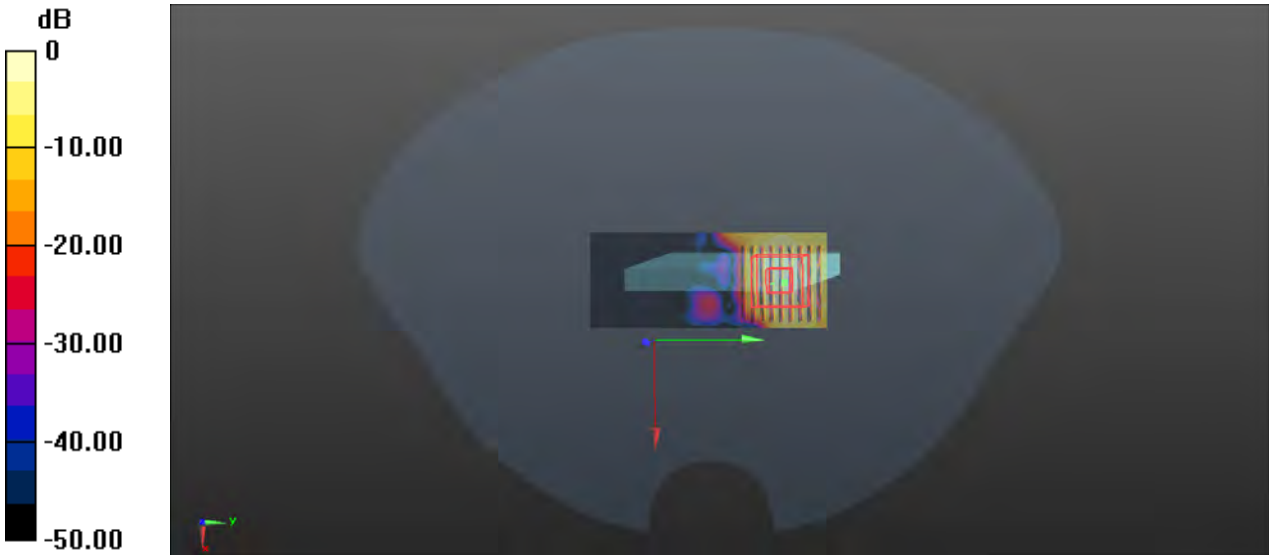
P46 WLAN 5GHz_802.11ac-VHT80_Top Side_1cm_Ch155

Communication System: 802.11ac_VHT80; Frequency: 5775 MHz;Duty Cycle: 1:1.14
Medium: HSL5G_1022 Medium parameters used: f = 5775 MHz; σ = 5.285 S/m; ε_r = 35.495; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(4.62, 4.62, 4.62) @ 5775 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x101x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 0.252 W/kg

- Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.474 W/kg
SAR(1 g) = 0.116 W/kg; SAR(10 g) = 0.037 W/kg
Smallest distance from peaks to all points 3 dB below = 8.6 mm
Ratio of SAR at M2 to SAR at M1 = 48.7%
Maximum value of SAR (measured) = 0.234 W/kg



0 dB = 0.234 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/21

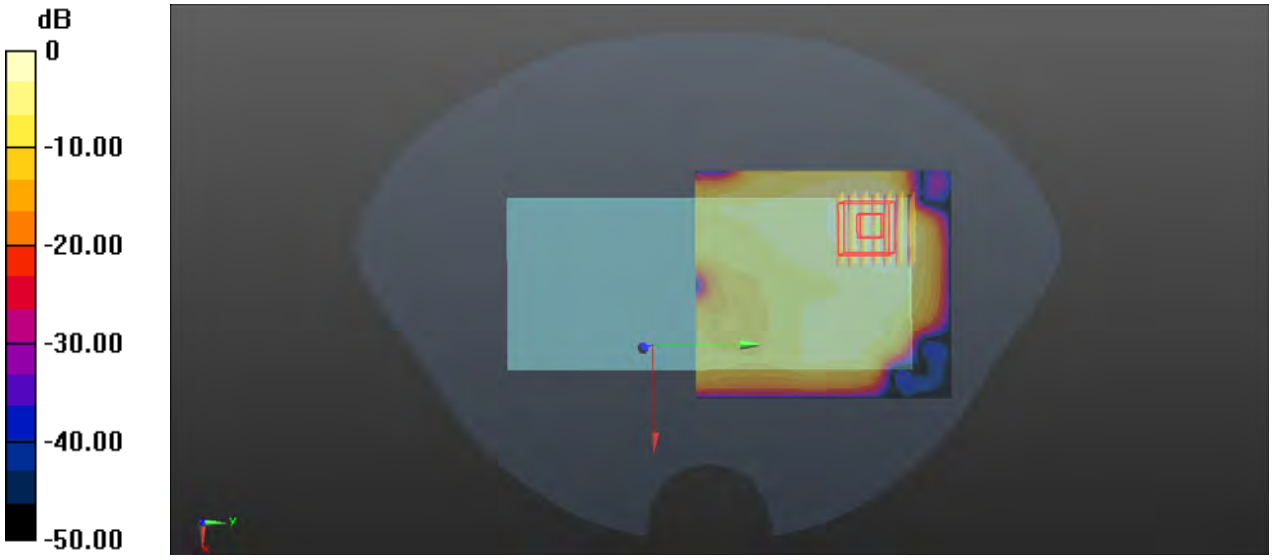
P47 Bluetooth_GFSK_Rear Face_1cm_Ch78

Communication System: BT; Frequency: 2480 MHz;Duty Cycle: 1:1.304
Medium: HSL2450_1021 Medium parameters used: f = 2480 MHz; σ = 1.82 S/m; ε_r = 39.084; ρ = 1000 kg/m^3
Ambient Temperature：23.6℃； Liquid Temperature：22.3℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.46, 7.46, 7.46) @ 2480 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (81x91x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.0870 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.457 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.106 W/kg
SAR(1 g) = 0.051 W/kg; SAR(10 g) = 0.024 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 47.4%
Maximum value of SAR (measured) = 0.0759 W/kg



0 dB = 0.0759 W/kg

Test Laboratory: ritt 7 Layers SAR/HAC Testing Lab

Date: 2024/10/19

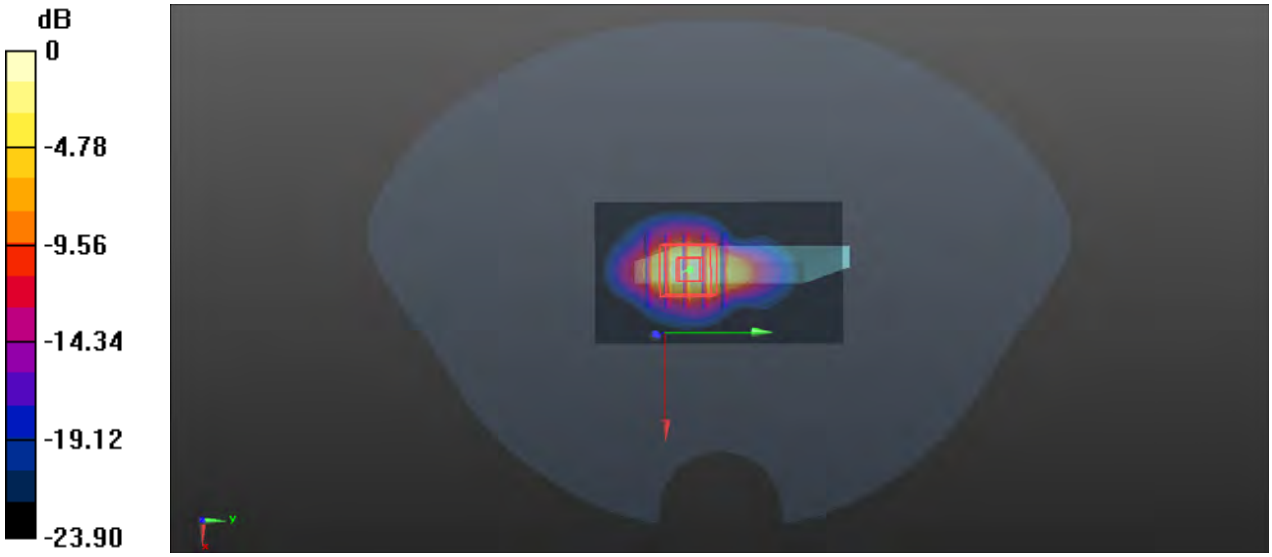
P48 GSM1900_GPRS 1Tx Slot_Top Side_0cm_Ch810

Communication System: GPRS 1Tx-slot; Frequency: 1909.8 MHz;Duty Cycle: 1:8.3
Medium: HSL1900_1019 Medium parameters used: f = 1910 MHz; σ = 1.446 S/m; ε_r = 39.701; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.97, 7.97, 7.97) @ 1909.8 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 5.91 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 52.50 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 7.57 W/kg
SAR(1 g) = 3.17 W/kg; SAR(10 g) = 1.27 W/kg
Smallest distance from peaks to all points 3 dB below = 5.8 mm
Ratio of SAR at M2 to SAR at M1 = 41.1%
Maximum value of SAR (measured) = 5.65 W/kg



0 dB = 5.65 W/kg

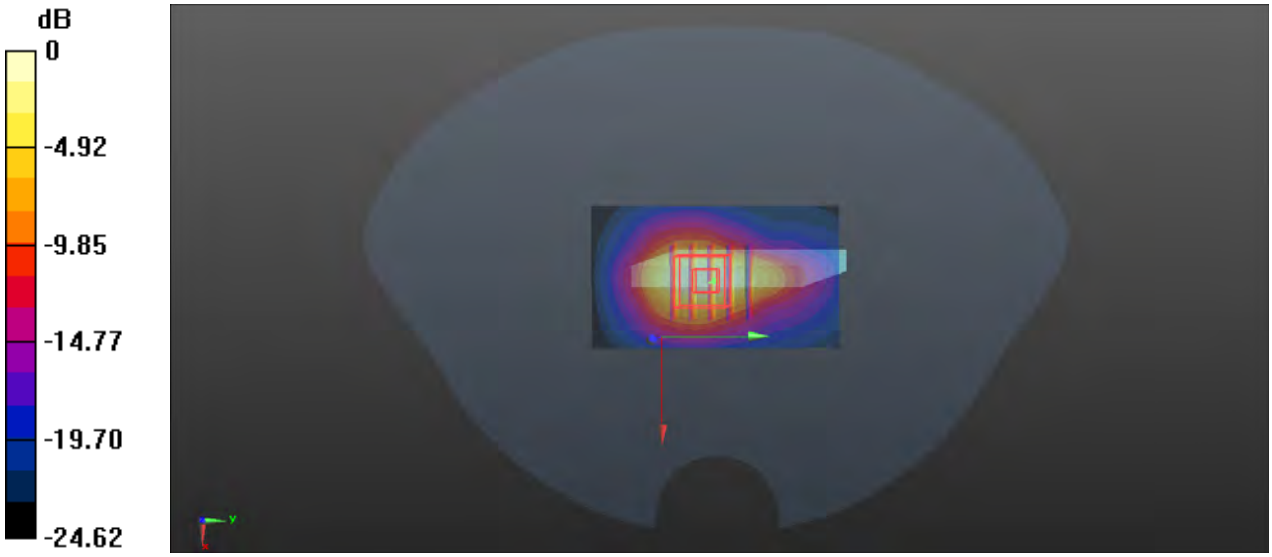
P49 WCDMA II_RMC12.2K_Bottom Side_0cm_Ch9400

Communication System: WCDMA; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL1900_1019 Medium parameters used: f = 1880 MHz; σ = 1.416 S/m; ε_r = 39.837; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.97, 7.97, 7.97) @ 1880 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.50 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.45 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 5.43 W/kg
SAR(1 g) = 2.69 W/kg; SAR(10 g) = 1.26 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 50.1%
Maximum value of SAR (measured) = 4.08 W/kg



0 dB = 4.08 W/kg

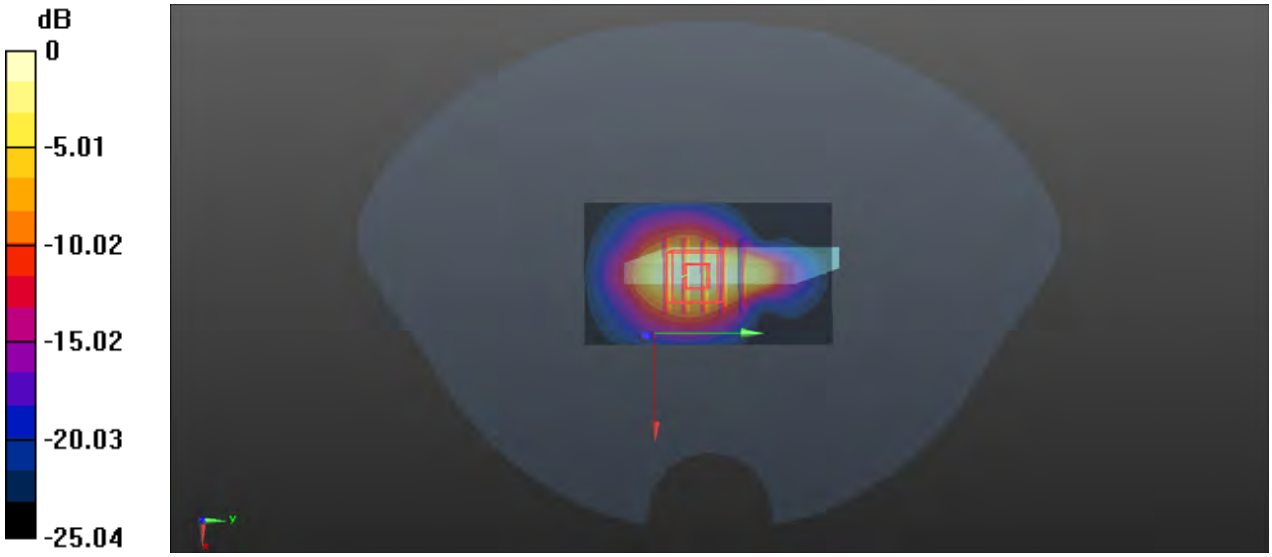
P50 WCDMA IV_RMC12.2K_Bottom Side_0cm_Ch1413

Communication System: WCDMA; Frequency: 1732.6 MHz;Duty Cycle: 1:1
Medium: HSL1750_1018 Medium parameters used: f = 1733 MHz; σ = 1.329 S/m; ε_r = 41.876; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(8.31, 8.31, 8.31) @ 1732.6 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.51 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.63 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 5.01 W/kg
SAR(1 g) = 2.56 W/kg; SAR(10 g) = 1.22 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 50.4%
Maximum value of SAR (measured) = 3.91 W/kg



0 dB = 3.91 W/kg

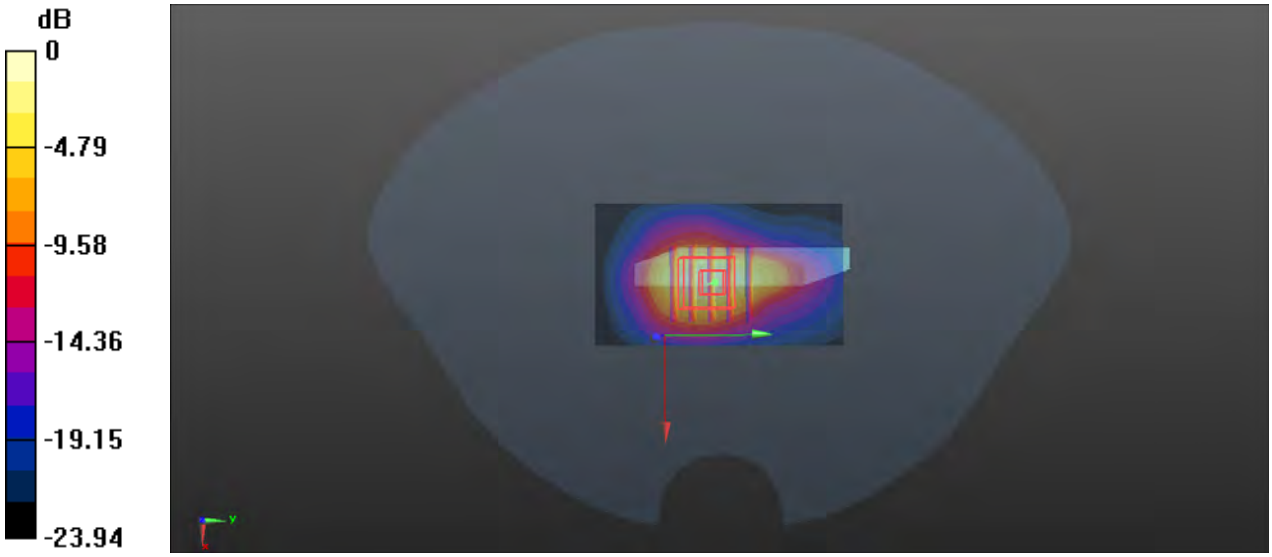
P51 LTE Band 2_QPSK20M_Bottom Side_0cm_Ch18900_50RB_OS25

Communication System: LTE; Frequency: 1880 MHz;Duty Cycle: 1:1
Medium: HSL1900_1019 Medium parameters used: f = 1880 MHz; σ = 1.416 S/m; ε_r = 39.837; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.97, 7.97, 7.97) @ 1880 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 4.38 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 51.34 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 5.50 W/kg
SAR(1 g) = 2.66 W/kg; SAR(10 g) = 1.24 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 48.5%
Maximum value of SAR (measured) = 4.20 W/kg



0 dB = 4.20 W/kg

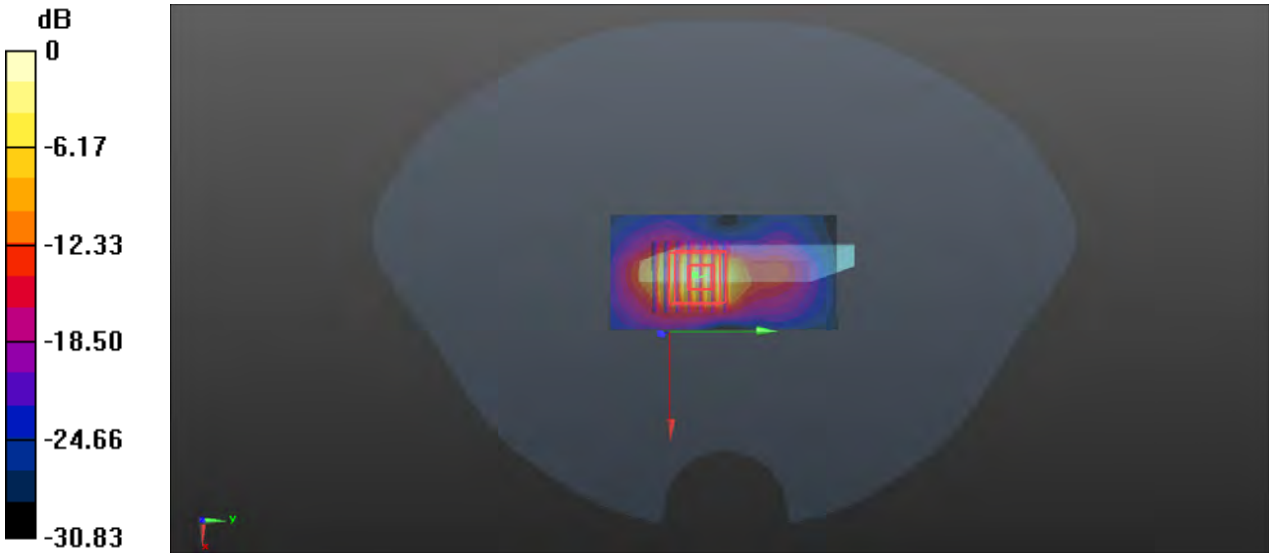
P52 LTE Band 7_QPSK20M_Top Side_0cm_Ch20850_50RB_OS50

Communication System: LTE; Frequency: 2510 MHz;Duty Cycle: 1:1
Medium: HSL2600_1020 Medium parameters used: f = 2510 MHz; σ = 1.94 S/m; ε_r = 39.277; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.46, 7.46, 7.46) @ 2510 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 4.90 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.91 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 7.69 W/kg
SAR(1 g) = 2.88 W/kg; SAR(10 g) = 0.988 W/kg
Smallest distance from peaks to all points 3 dB below = 5.1 mm
Ratio of SAR at M2 to SAR at M1 = 42.2%
Maximum value of SAR (measured) = 5.05 W/kg



0 dB = 5.05 W/kg

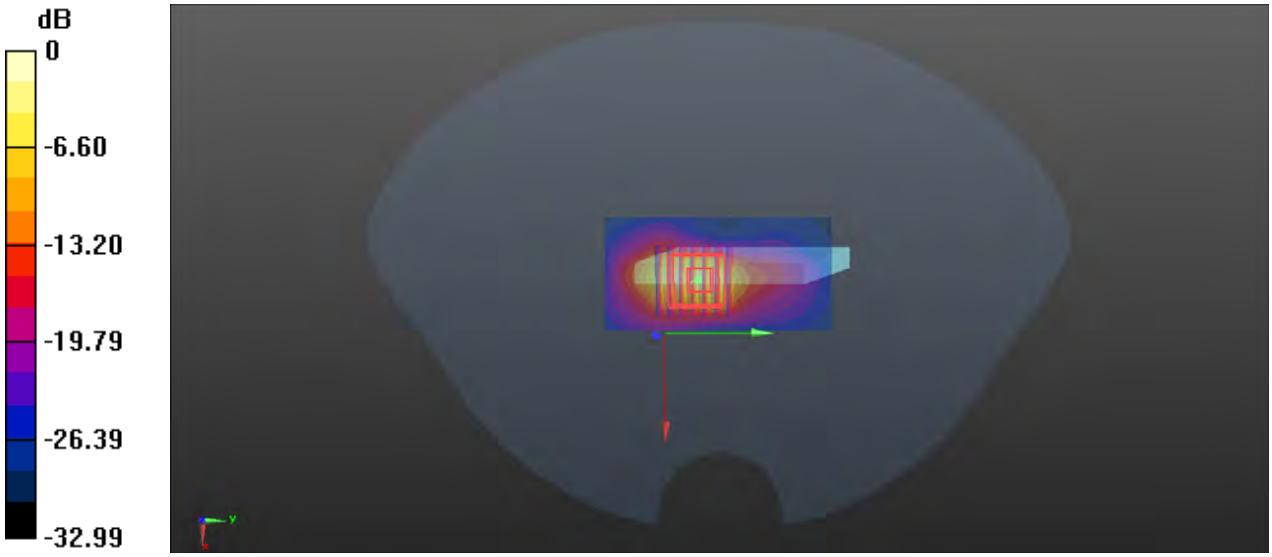
P53 LTE Band 38_QPSK20M_Top Side_0cm_Ch38000_50RB_OS25

Communication System: LTE TDD; Frequency: 2595 MHz;Duty Cycle: 1:1.59
Medium: HSL2600_1020 Medium parameters used: f = 2595 MHz; σ = 2.033 S/m; ε_r = 38.951; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.31, 7.31, 7.31) @ 2595 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 4.51 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 37.89 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 7.62 W/kg
SAR(1 g) = 2.78 W/kg; SAR(10 g) = 0.933 W/kg
Smallest distance from peaks to all points 3 dB below = 5.1 mm
Ratio of SAR at M2 to SAR at M1 = 40%
Maximum value of SAR (measured) = 5.23 W/kg



0 dB = 5.23 W/kg

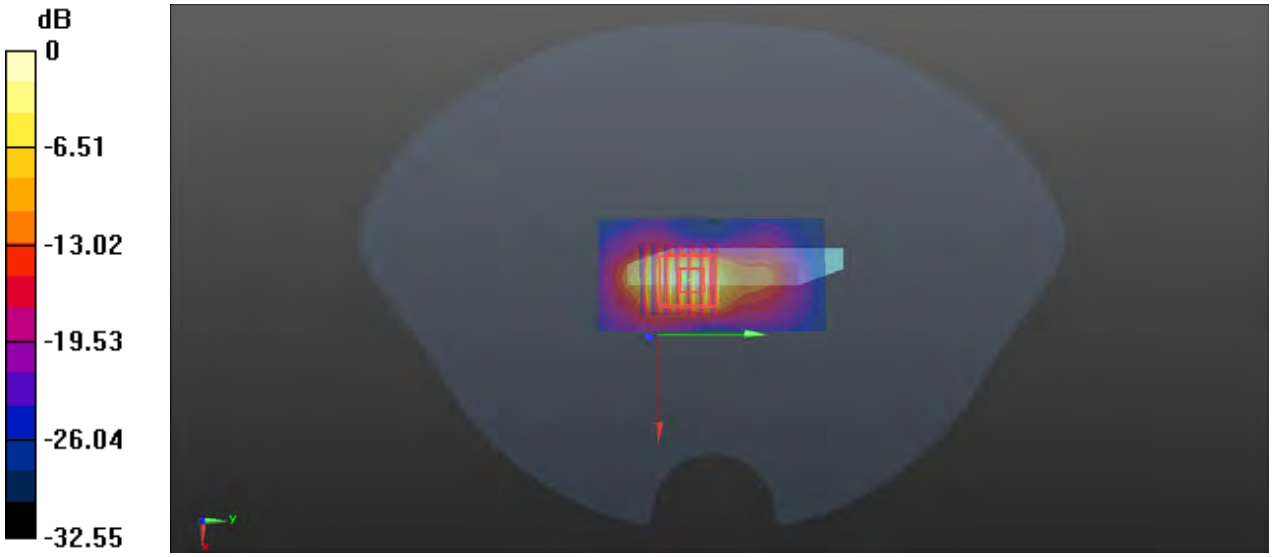
P54 LTE Band 41_QPSK20M_Top Side_0cm_Ch39750_50RB_OS25

Communication System: LTE TDD; Frequency: 2506 MHz;Duty Cycle: 1:1.59
Medium: HSL2600_1020 Medium parameters used: f = 2506 MHz; σ = 1.935 S/m; ε_r = 39.293; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.5℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(7.46, 7.46, 7.46) @ 2506 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x81x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 5.17 W/kg

- Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 39.55 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 8.20 W/kg
SAR(1 g) = 3.06 W/kg; SAR(10 g) = 1.05 W/kg
Smallest distance from peaks to all points 3 dB below = 5 mm
Ratio of SAR at M2 to SAR at M1 = 41.9%
Maximum value of SAR (measured) = 5.38 W/kg



0 dB = 5.38 W/kg

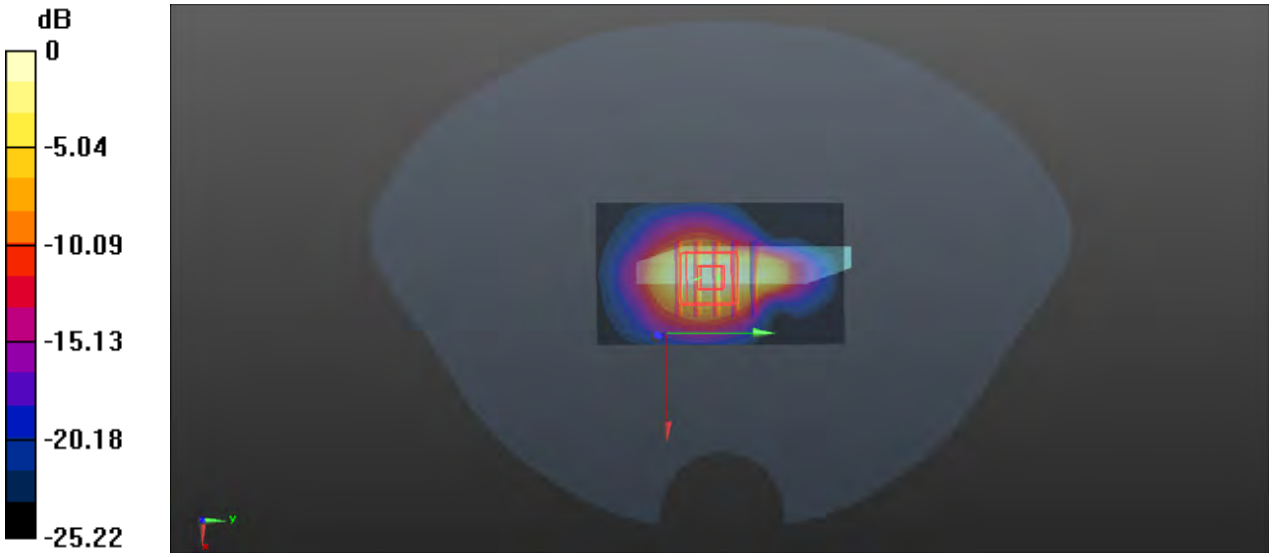
P55 LTE Band 66_QPSK20M_Bottom Side_0cm_Ch132072_50RB_OS25

Communication System: LTE; Frequency: 1720 MHz;Duty Cycle: 1:1
Medium: HSL1750_1018 Medium parameters used: f = 1720 MHz; σ = 1.315 S/m; ε_r = 41.917; ρ = 1000 kg/m^3
Ambient Temperature：23.5℃； Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(8.31, 8.31, 8.31) @ 1720 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (41x71x1): Interpolated grid: dx=1.500 mm, dy=1.500 mm
Maximum value of SAR (interpolated) = 5.37 W/kg

- Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 59.89 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 6.18 W/kg
SAR(1 g) = 3.14 W/kg; SAR(10 g) = 1.49 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 50.1%
Maximum value of SAR (measured) = 4.70 W/kg



0 dB = 4.70 W/kg

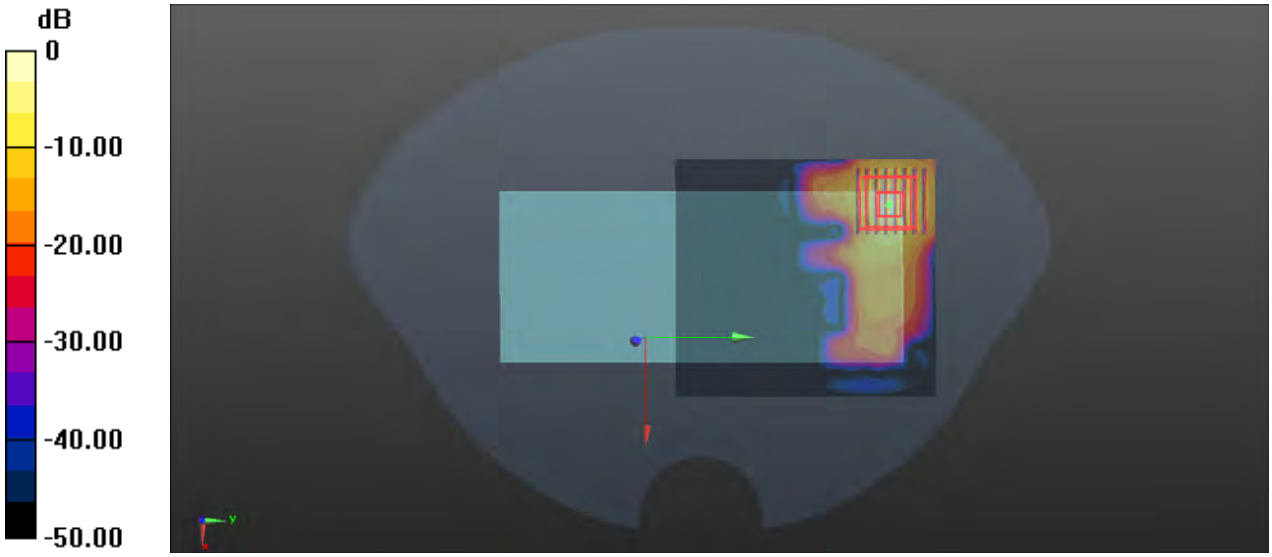
P56 WLAN 5GHz_802.11n-HT20_Rear Face_0cm_Ch64

Communication System: 802.11n_HT20; Frequency: 5320 MHz;Duty Cycle: 1:1.075
Medium: HSL5G_1022 Medium parameters used: f = 5320 MHz; σ = 4.812 S/m; ε_r = 36.154; ρ = 1000 kg/m^3
Ambient Temperature：23.3℃； Liquid Temperature：22.4℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(5.16, 5.16, 5.16) @ 5320 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (101x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.79 W/kg

- Zoom Scan (8x8x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0.2720 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 3.59 W/kg
SAR(1 g) = 0.809 W/kg; SAR(10 g) = 0.199 W/kg
Smallest distance from peaks to all points 3 dB below = 5.7 mm
Ratio of SAR at M2 to SAR at M1 = 54.8%
Maximum value of SAR (measured) = 1.82 W/kg



0 dB = 1.82 W/kg

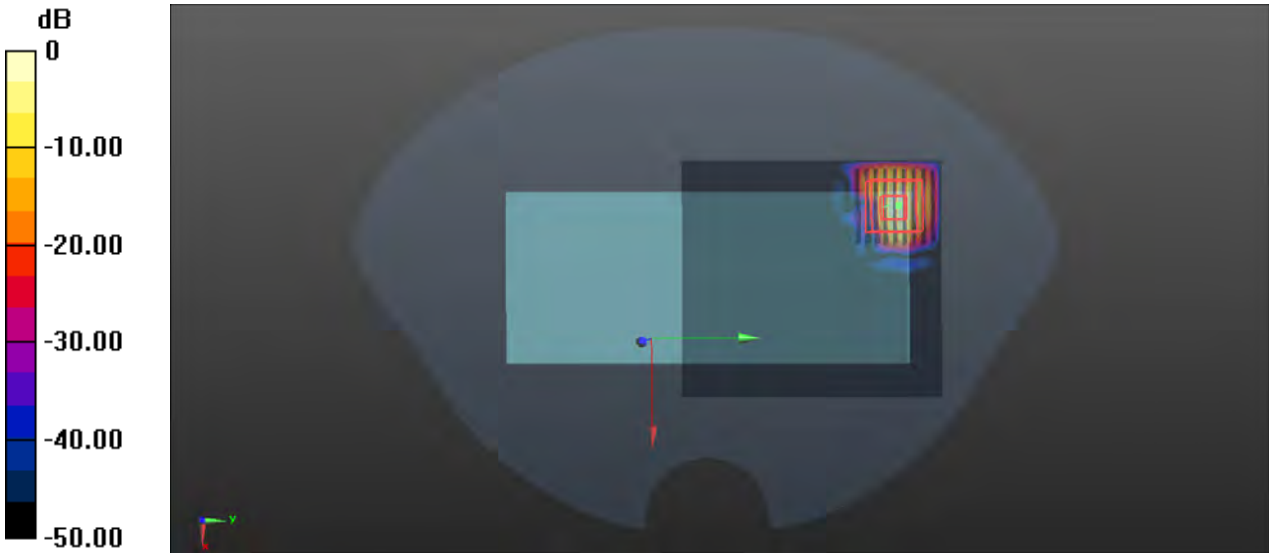
P57 WLAN 5GHz_802.11n-HT20_Rear Face_0cm_Ch140

Communication System: 802.11n_HT20; Frequency: 5700 MHz;Duty Cycle: 1:1.075
Medium: HSL5G_1022 Medium parameters used: f = 5700 MHz; σ = 5.208 S/m; ε_r = 35.587; ρ = 1000 kg/m^3
Ambient Temperature：23.4℃； Liquid Temperature：22.3℃

DASY5 Configuration:
- Probe: EX3DV4 - SN3873; ConvF(4.56, 4.56, 4.56) @ 5700 MHz; Calibrated: 2024/09/29
- Sensor-Surface: 2mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1389; Calibrated: 2023/11/03
- Phantom: SAM (30deg probe tilt) with CRP v5.0; Type: QD000P40CD; Serial: TP:1781
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

- Area Scan (101x111x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 3.03 W/kg

- Zoom Scan (9x9x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 4.66 W/kg
SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.208 W/kg
Smallest distance from peaks to all points 3 dB below = 4.8 mm
Ratio of SAR at M2 to SAR at M1 = 50.7%
Maximum value of SAR (measured) = 2.37 W/kg



0 dB = 2.37 W/kg

Appendix C. Calibration Certificate for Probe and Dipole

The SPEAG calibration certificates are shown as follows.

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Client **B.V.ADT** **Certificate No: 24J02Z000324**

CALIBRATION CERTIFICATE

Object	D835V2 - SN: 4d139
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	June 16, 2024

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	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7307	28-May-24(SPEAG, No. EX-7307_May24)	May-25
DAE4	SN 1556	03-Jan-24(CTTL-SPEAG, No.24J02Z80002)	Jan-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

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

Issued: June 22, 2024

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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 ± 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 ± 0.2) °C	41.0 ± 6 %	0.88 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	2.36 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**9.57 W/kg ± 18.8 % (*k*=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	1.56 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**6.31 W/kg ± 18.7 % (*k*=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	49.3Ω- 2.76jΩ
Return Loss	- 30.8dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.298 ns

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: 2024-06-16

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 835 MHz; Type: D835V2; Serial: D835V2 - SN: 4d139

Communication System: UID 0, CW; Frequency: 835 MHz

Medium parameters used: f = 835 MHz; σ = 0.88 S/m; ε_r = 40.97; ρ = 1000 kg/m^3

Phantom section: Right Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7307; ConvF(9.48, 9.4, 10) @ 835 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2024-01-03
- 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=5mm, dy=5mm, dz=5mm

Reference Value = 59.29 V/m; Power Drift = -0.02 dB

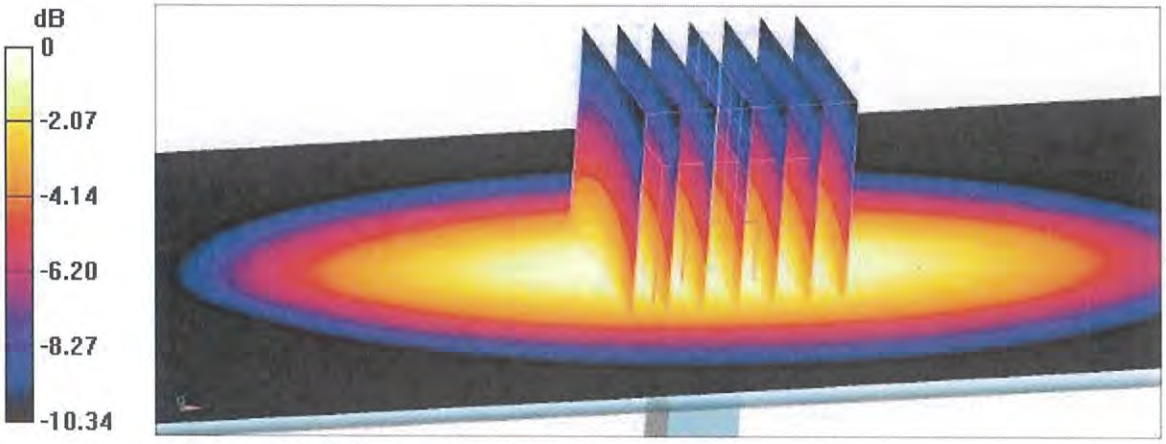
Peak SAR (extrapolated) = 3.39 W/kg

SAR(1 g) = 2.36 W/kg; SAR(10 g) = 1.56 W/kg

Smallest distance from peaks to all points 3 dB below = 16.6 mm

Ratio of SAR at M2 to SAR at M1 = 69.5%

Maximum value of SAR (measured) = 3.09 W/kg



0 dB = 3.09 W/kg = 4.90 dBW/kg

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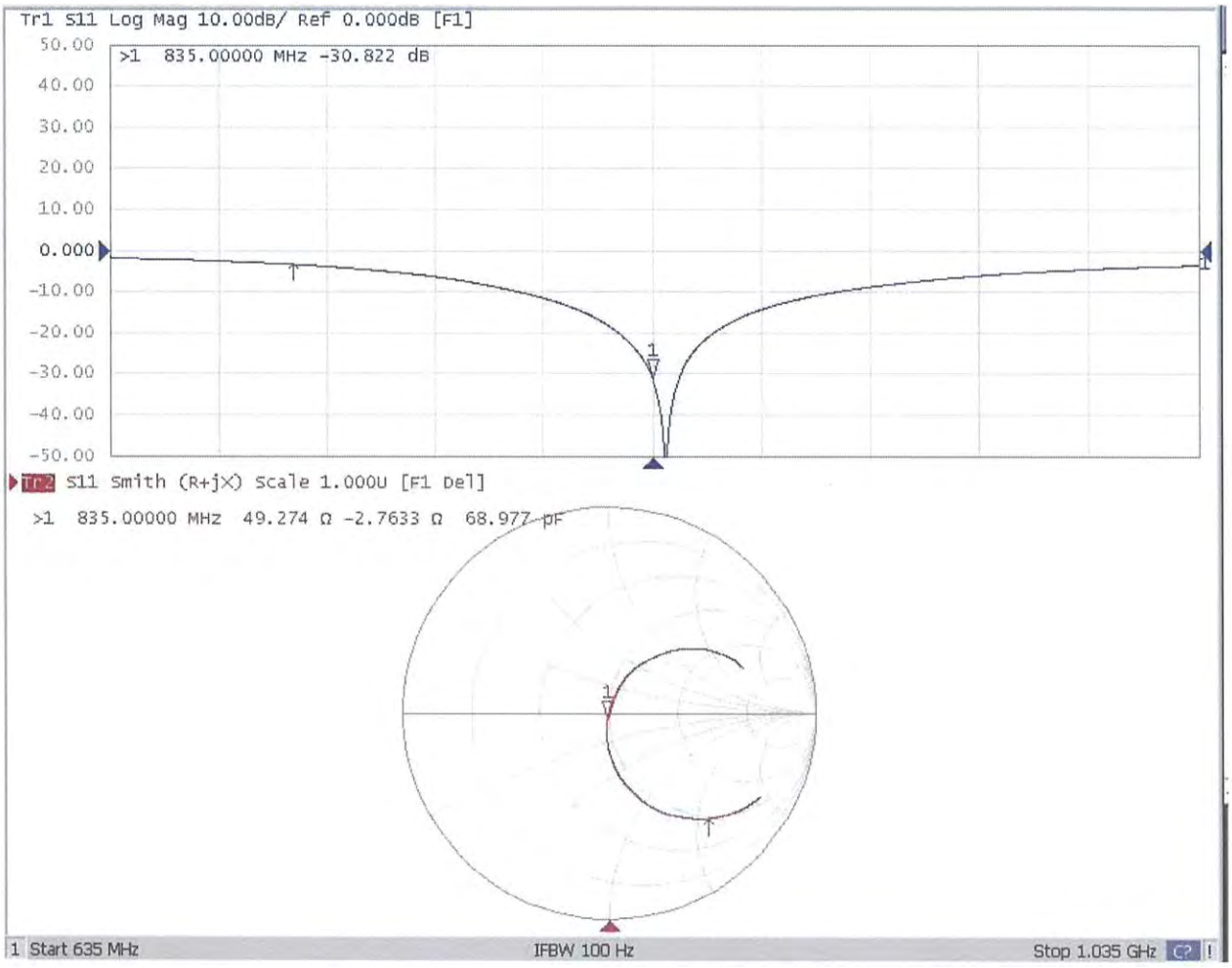
Impedance Measurement Plot for Head TSL



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Client **B.V.ADT** **Certificate No: 24J02Z000326**

CALIBRATION CERTIFICATE

Object	D1750V2 - SN: 1071
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	June 17, 2024

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	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7307	28-May-24(SPEAG, No. EX-7307_May24)	May-25
DAE4	SN 1556	03-Jan-24(CTTL-SPEAG, No.24J02Z80002)	Jan-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

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

Issued: June 22, 2024

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Glossary:

TSL	tissue simulating liquid
ConvF	sensitivity in TSL / NORMx,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	52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1750 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	40.1	1.37 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	40.7 ± 6 %	1.40 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.17 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**36.3 W/kg ± 18.8 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	4.92 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**19.5 W/kg ± 18.7 % (k=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	47.8Ω- 0.77jΩ
Return Loss	- 32.3dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.126 ns

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: 2024-06-17

Test Laboratory: CTTL, Beijing, China

DUT: Dipole 1750 MHz; Type: D1750V2; Serial: D1750V2 - SN: 1071

Communication System: UID 0, CW; Frequency: 1750 MHz; Duty Cycle: 1:1

Medium parameters used: f = 1750 MHz; σ = 1.401 S/m; ε_r = 40.73; ρ = 1000 kg/m^3

Phantom section: Right Section

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

DASY5 Configuration:

- Probe: EX3DV4 - SN7307; ConvF(7.9, 7.9, 8.54) @ 1750 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1556; Calibrated: 2024-01-03
- 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=5mm, dy=5mm, dz=5mm

Reference Value = 95.64 V/m; Power Drift = -0.01 dB

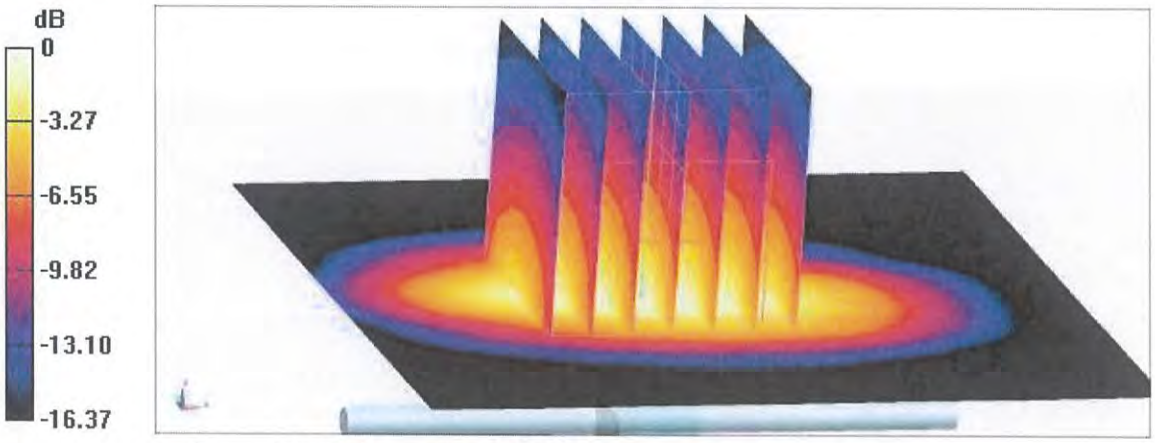
Peak SAR (extrapolated) = 16.3 W/kg

SAR(1 g) = 9.17 W/kg; SAR(10 g) = 4.92 W/kg

Smallest distance from peaks to all points 3 dB below = 9.5 mm

Ratio of SAR at M2 to SAR at M1 = 56.9%

Maximum value of SAR (measured) = 13.9 W/kg



0 dB = 13.9 W/kg = 11.43 dBW/kg

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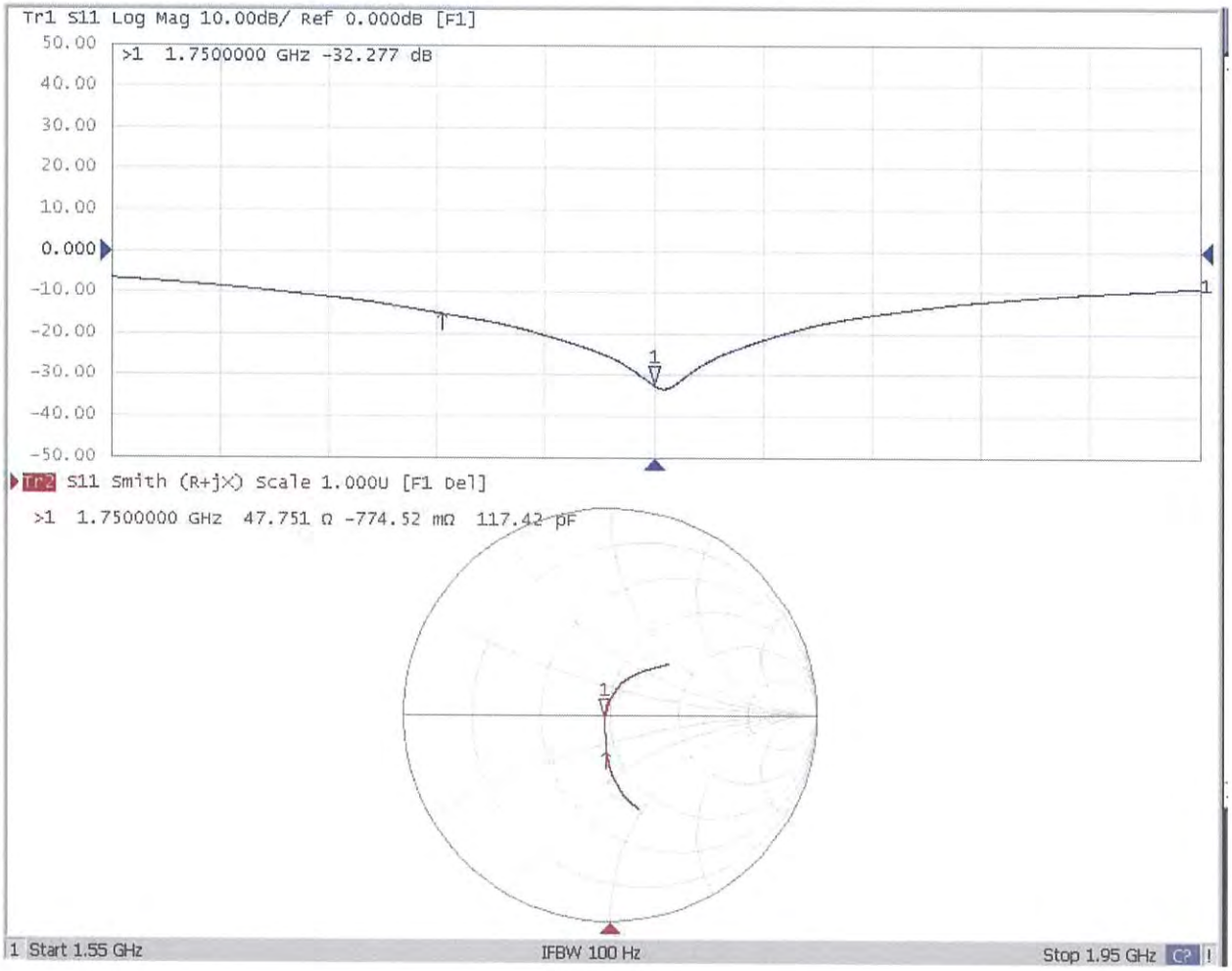
Impedance Measurement Plot for Head TSL



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CNAS L0570

CAICT

Client: B.V.ADT **Certificate No: 24J02Z000327**

CALIBRATION CERTIFICATE

Object	D1900V2 - SN: 5d159
Calibration Procedure(s)	FF-Z11-003-01 Calibration Procedures for dipole validation kits
Calibration date:	June 15, 2024

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	106276	17-May-24 (CTTL, No. J24X04107)	May-25
Power sensor NRP6A	101369	17-May-24 (CTTL, No. J24X04107)	May-25
Reference Probe EX3DV4	SN 7307	28-May-24(SPEAG, No. EX-7307_May24)	May-25
DAE4	SN 1556	03-Jan-24(CTTL-SPEAG, No.24J02Z80002)	Jan-25
Secondary Standards	**ID #**	**Cal Date (Calibrated by, Certificate No.)**	**Scheduled Calibration**
Signal Generator E4438C	MY49071430	25-Dec-23 (CTTL, No. J23X13426)	Dec-24
NetworkAnalyzer E5071C	MY46110673	25-Dec-23 (CTTL, No. J23X13425)	Dec-24
OCP DAK-3.5(weighted)	1040	22-Jan-24(SPEAG, No.OCP-DAK3.5-1040_Jan24)	Jan-25

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

Issued: June 22, 2024

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 / NORMx,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	52.10.4
Extrapolation	Advanced Extrapolation	
Phantom	Triple Flat Phantom 5.1C	
Distance Dipole Center - TSL	10 mm	with Spacer
Zoom Scan Resolution	dx, dy, dz = 5 mm	
Frequency	1900 MHz ± 1 MHz	

Head TSL parameters

The following parameters and calculations were applied.

	Temperature	**Permittivity**	**Conductivity**
Nominal Head TSL parameters	22.0 °C	40.0	1.40 mho/m
Measured Head TSL parameters	(22.0 ± 0.2) °C	41.2 ± 6 %	1.41 mho/m ± 6 %
Head TSL temperature change during test	<1.0 °C	----	----

SAR result with Head TSL

SAR averaged over 1 cm^3 (1 g) of Head TSL	Condition	
SAR measured	250 mW input power	9.92 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**39.8 W/kg ± 18.8 % (k=2)**
SAR averaged over 10 cm^3 (10 g) of Head TSL	Condition	
SAR measured	250 mW input power	5.21 W/kg
SAR for nominal Head TSL parameters	normalized to 1W	**20.9 W/kg ± 18.7 % (k=2)**

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Appendix (Additional assessments outside the scope of CNAS L0570)

Antenna Parameters with Head TSL

Impedance, transformed to feed point	51.2Ω+ 7.48jΩ
Return Loss	- 22.5dB

General Antenna Parameters and Design

Electrical Delay (one direction)	1.107 ns

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