Appendix B. – SAR Test Plots

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.7 ℃
Ambient Temperature:	21.8 ℃
Test Date:	11/05/2021
Plot No.:	1

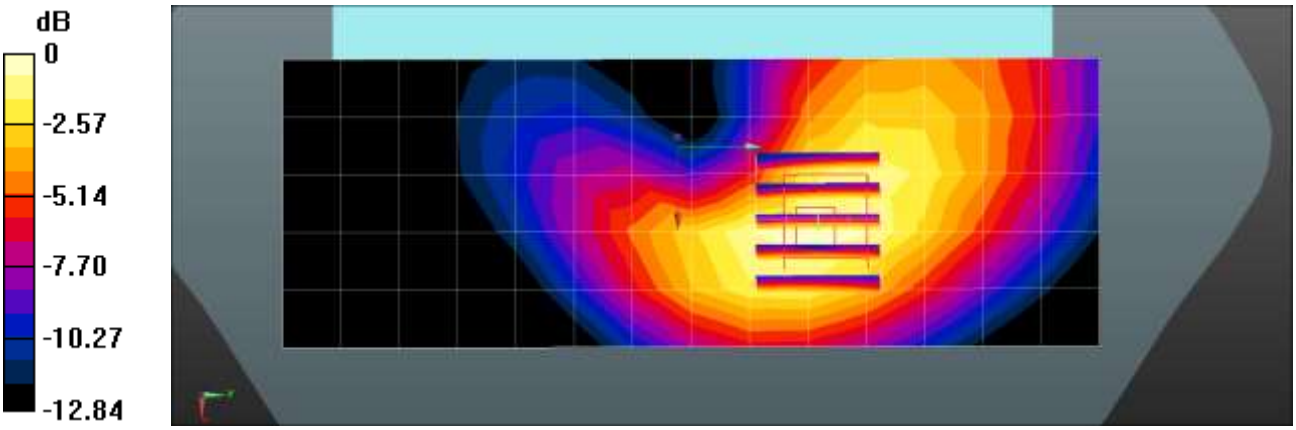
Communication System: UID 0, GSM850 GPRS 2TX (0); Frequency: 836.6 MHz;Duty Cycle: 1:4.14954
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.916 S/m; ε_r = 40.533; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.66, 9.66, 9.66) @ 836.6 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM850 2Tx Body Rear 190ch/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.593 W/kg

GSM850 2Tx Body Rear 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.09 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.656 W/kg
SAR(1 g) = 0.442 W/kg; SAR(10 g) = 0.293 W/kg
Maximum value of SAR (measured) = 0.581 W/kg



0 dB = 0.581 W/kg = -2.36 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	22.0 ℃
Ambient Temperature:	22.1 ℃
Test Date:	11/10/2021
Plot No.:	2

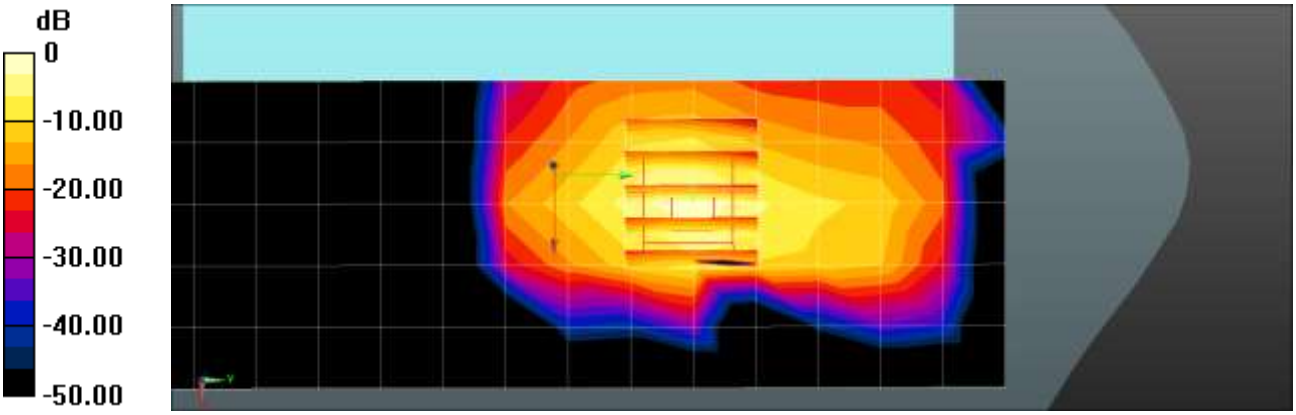
Communication System: UID 0, GSM 1900 2TX (0); Frequency: 1880 MHz;Duty Cycle: 1:4.14954
Medium parameters used: f = 1880 MHz; σ = 1.427 S/m; ε_r = 41.381; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.08, 8.08, 8.08) @ 1880 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM1900 2Tx Body Rear 661ch Grip/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.66 W/kg

GSM1900 2Tx Body Rear 661ch Grip/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.967 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 2.38 W/kg
SAR(1 g) = 0.908 W/kg; SAR(10 g) = 0.361 W/kg
Maximum value of SAR (measured) = 1.73 W/kg



0 dB = 1.73 W/kg = 2.38 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	22.0 ℃
Ambient Temperature:	22.1 ℃
Test Date:	11/10/2021
Plot No.:	3

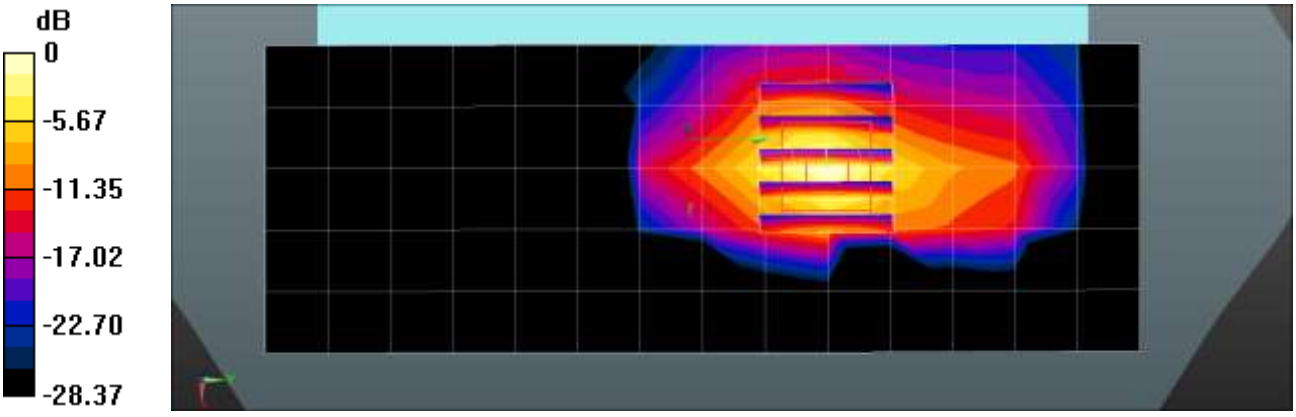
Communication System: UID 0, GSM 1900 2TX (0); Frequency: 1850.2 MHz;Duty Cycle: 1:4.14954
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.396 S/m; ε_r = 41.504; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.08, 8.08, 8.08) @ 1850.2 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

GSM1900 2Tx Body Rear 512ch Grip/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.80 W/kg

GSM1900 2Tx Body Rear 512ch Grip/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.693 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.45 W/kg
SAR(1 g) = 0.905 W/kg; SAR(10 g) = 0.362 W/kg
Maximum value of SAR (measured) = 1.76 W/kg



0 dB = 1.76 W/kg = 2.46 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.9 ℃
Ambient Temperature:	22.0 ℃
Test Date:	11/08/2021
Plot No.:	4

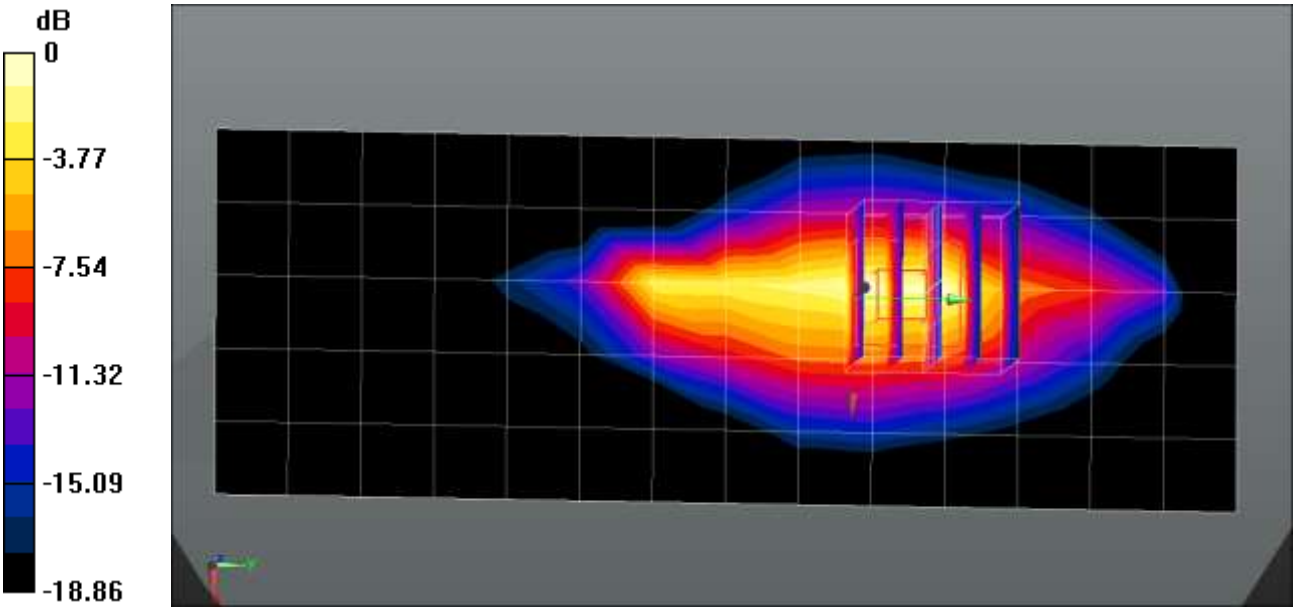
Communication System: UID 0, UMTS850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.915 S/m; ε_r = 40.502; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.66, 9.66, 9.66) @ 836.6 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

UMTS Band 5 Body Top 4183ch/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.915 W/kg

UMTS Band 5 Body Top 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.42 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.557 W/kg; SAR(10 g) = 0.269 W/kg
Maximum value of SAR (measured) = 1.07 W/kg



0 dB = 1.07 W/kg = 0.29 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	20.8 ℃
Ambient Temperature:	20.9 ℃
Test Date:	11/19/2021
Plot No.:	5

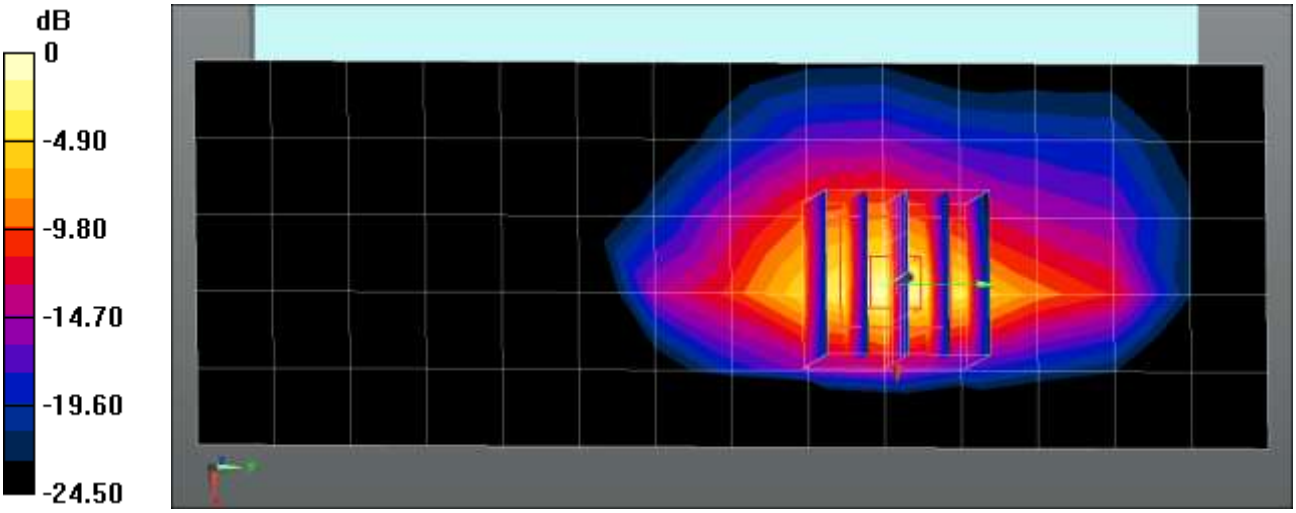
Communication System: UID 0, UMTS IV (0); Frequency: 1752.8 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.8 MHz; σ = 1.327 S/m; ε_r = 41.344; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.12, 8.12, 8.12) @ 1752.8 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

UMTS Band 4 Body Rear 1513ch/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.21 W/kg

UMTS Band 4 Body Rear 1513ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.82 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.72 W/kg
SAR(1 g) = 1.09 W/kg; SAR(10 g) = 0.422 W/kg
Maximum value of SAR (measured) = 2.71 W/kg



0 dB = 2.71 W/kg = 4.33 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	20.6 ℃
Ambient Temperature:	20.7 ℃
Test Date:	11/18/2021
Plot No.:	6

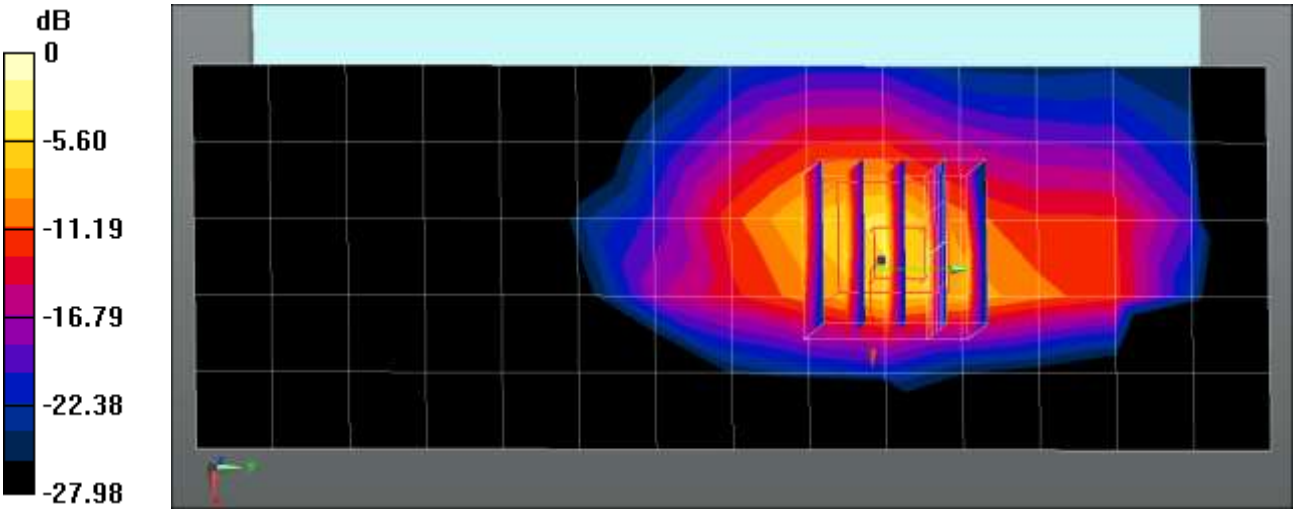
Communication System: UID 0, UMTS1900 (0); Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.397 S/m; ε_r = 41.337; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.08, 8.08, 8.08) @ 1907.6 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

UMTS Band 2 Body Rear 9538ch/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.853 W/kg

UMTS Band 2 Body Rear 9538ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.336 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 3.74 W/kg
SAR(1 g) = 1.02 W/kg; SAR(10 g) = 0.387 W/kg
Maximum value of SAR (measured) = 2.61 W/kg



0 dB = 2.61 W/kg = 4.17 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.4 ℃
Ambient Temperature:	21.5 ℃
Test Date:	11/25/2021
Plot No.:	7

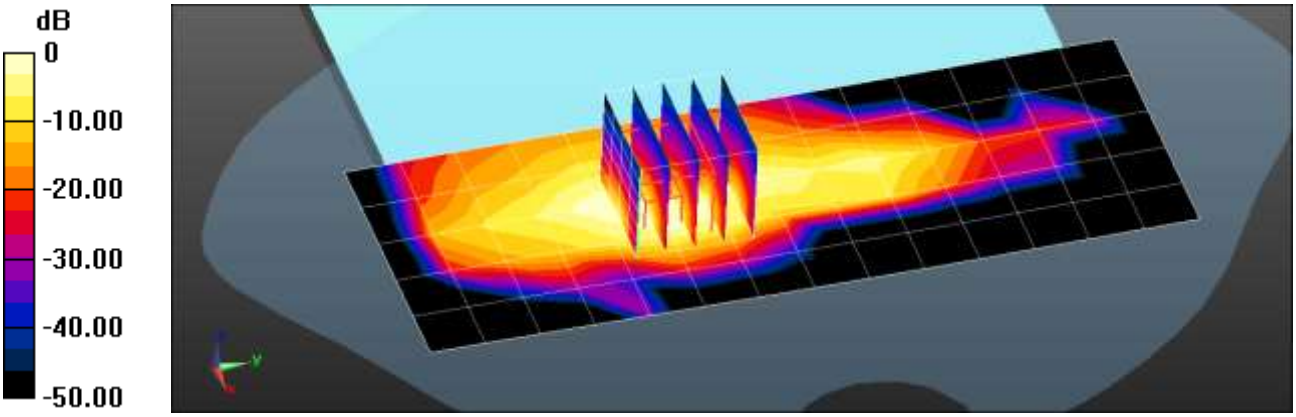
Communication System: UID 0, LTE Band 2 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.411 S/m; ε_r = 41.442; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.08, 8.08, 8.08) @ 1880 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 2 Body Rear QPSK 20MHz 1RB 99offset 18900ch Grip 0mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.665 W/kg

LTE Band 2 Body Rear QPSK 20MHz 1RB 99offset 18900ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.75 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.60 W/kg
SAR(1 g) = 0.609 W/kg; SAR(10 g) = 0.249 W/kg
Maximum value of SAR (measured) = 1.30 W/kg



0 dB = 0.665 W/kg = -1.77 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	20.8 ℃
Ambient Temperature:	20.9 ℃
Test Date:	11/19/2021
Plot No.:	8

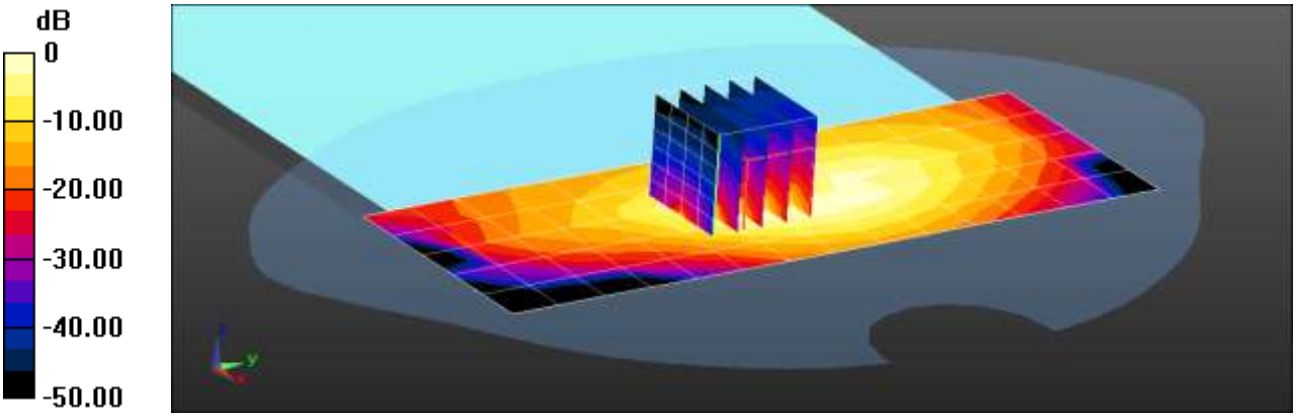
Communication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.86 S/m; ε_r = 43.131; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.81, 9.81, 9.81) @ 707.5 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 12 Body Rear QPSK 10MHz 1RB 0offset 23095ch Grip 0mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.531 W/kg

LTE Band 12 Body Rear QPSK 10MHz 1RB 0offset 23095ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.94 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 3.67 W/kg
SAR(1 g) = 0.630 W/kg; SAR(10 g) = 0.239 W/kg
Maximum value of SAR (measured) = 1.98 W/kg



0 dB = 0.531 W/kg = -2.75 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	22.5 ℃
Ambient Temperature:	22.6 ℃
Test Date:	11/04/2021
Plot No.:	9

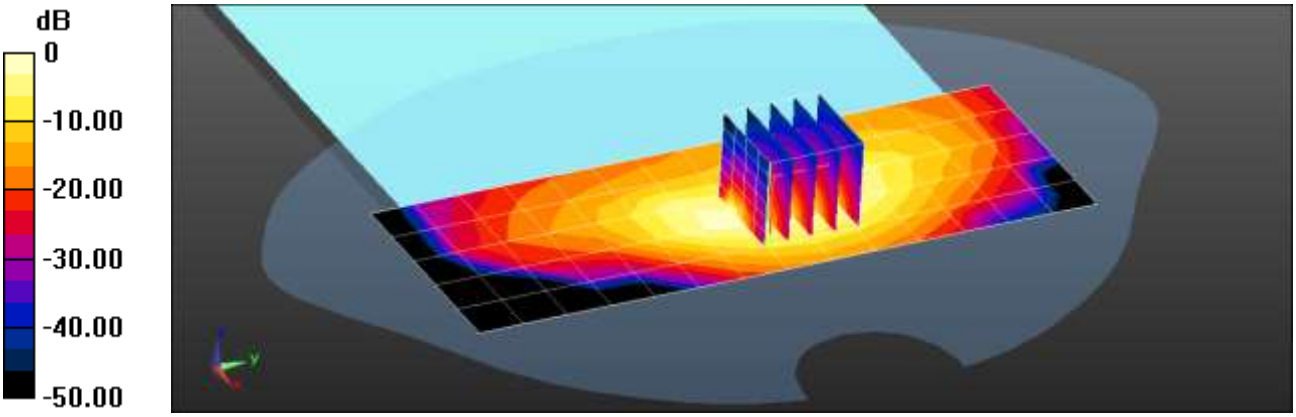
Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.905 S/m; ε_r = 42.096; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.81, 9.81, 9.81) @ 782 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 13 Body Rear QPSK 10MHz 25RB 0offset 23230ch Grip 0mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.712 W/kg

LTE Band 13 Body Rear QPSK 10MHz 25RB 0offset 23230ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.63 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.57 W/kg
SAR(1 g) = 0.591 W/kg; SAR(10 g) = 0.282 W/kg
Maximum value of SAR (measured) = 1.48 W/kg



0 dB = 0.712 W/kg = -1.47 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	20.6 ℃
Ambient Temperature:	20.7 ℃
Test Date:	11/04/2021
Plot No.:	10

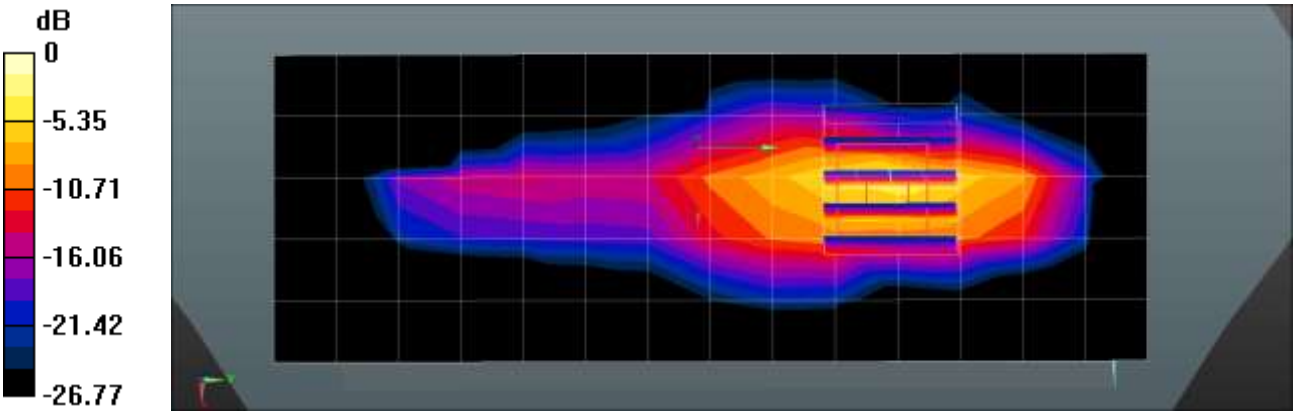
Communication System: UID 0, LTE Band 25 (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1905 MHz; σ = 1.423 S/m; ε_r = 40.889; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.08, 8.08, 8.08) @ 1905 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 25 Body Top QPSK 20MHz 1RB 49offset 26590ch/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.939 W/kg

LTE Band 25 Body Top QPSK 20MHz 1RB 49offset 26590ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.64 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 2.90 W/kg
SAR(1 g) = 0.824 W/kg; SAR(10 g) = 0.294 W/kg
Maximum value of SAR (measured) = 2.10 W/kg



0 dB = 2.10 W/kg = 3.22 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.4 ℃
Ambient Temperature:	21.5 ℃
Test Date:	11/25/2021
Plot No.:	11

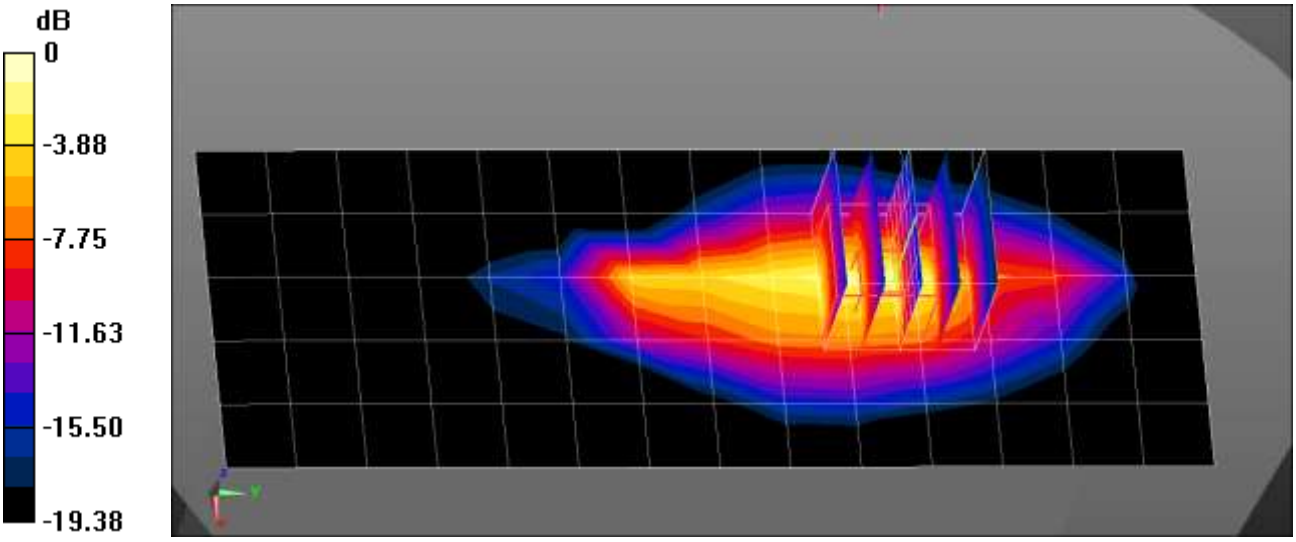
Communication System: UID 0, LTE Band 26 (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.934 S/m; ε_r = 40.572; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.66, 9.66, 9.66) @ 831.5 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 26 Body Top QPSK 15MHz 36RB 39offset 26865ch Grip 0mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.784 W/kg

LTE Band 26 Body Top QPSK 15MHz 36RB 39offset 26865ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.06 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 0.538 W/kg; SAR(10 g) = 0.255 W/kg
Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 1.06 W/kg = 0.25 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.2 ℃
Test Date:	11/19/2021
Plot No.:	12

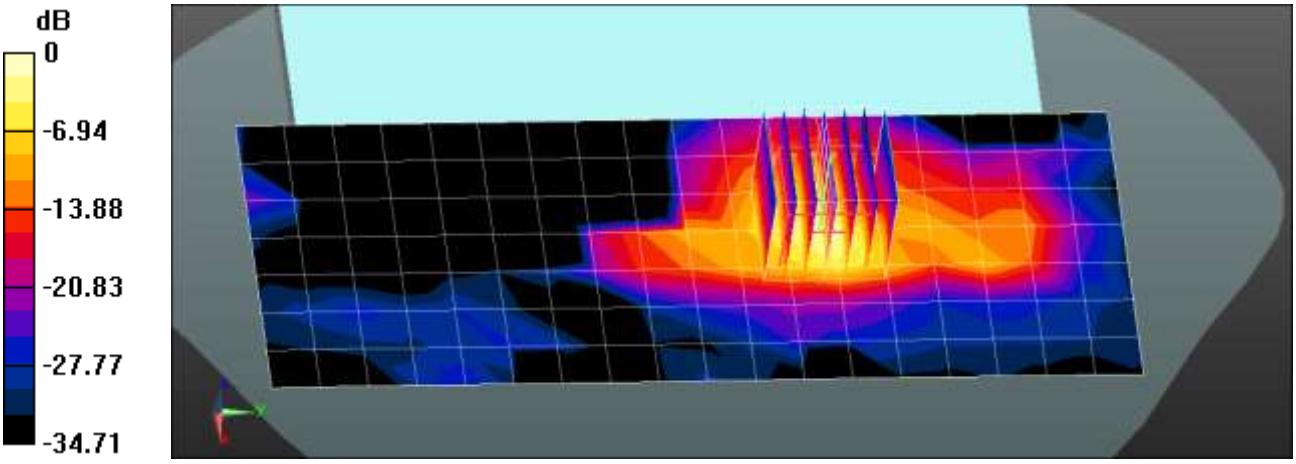
Communication System: UID 0, LTE Band 41 (0); Frequency: 2680 MHz;Duty Cycle: 1:1.58016
Medium parameters used: f = 2680 MHz; σ = 2.02 S/m; ε_r = 39.496; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(7.87, 7.87, 7.87) @ 2680 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 41 Body Rear QPSK 20MHz 1RB 49offset 41490ch/Area Scan (8x19x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.08 W/kg

LTE Band 41 Body Rear QPSK 20MHz 1RB 49offset 41490ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.943 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 2.10 W/kg
SAR(1 g) = 0.641 W/kg; SAR(10 g) = 0.220 W/kg
Maximum value of SAR (measured) = 1.35 W/kg



0 dB = 1.35 W/kg = 1.30 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	11/22/2021
Plot No.:	13

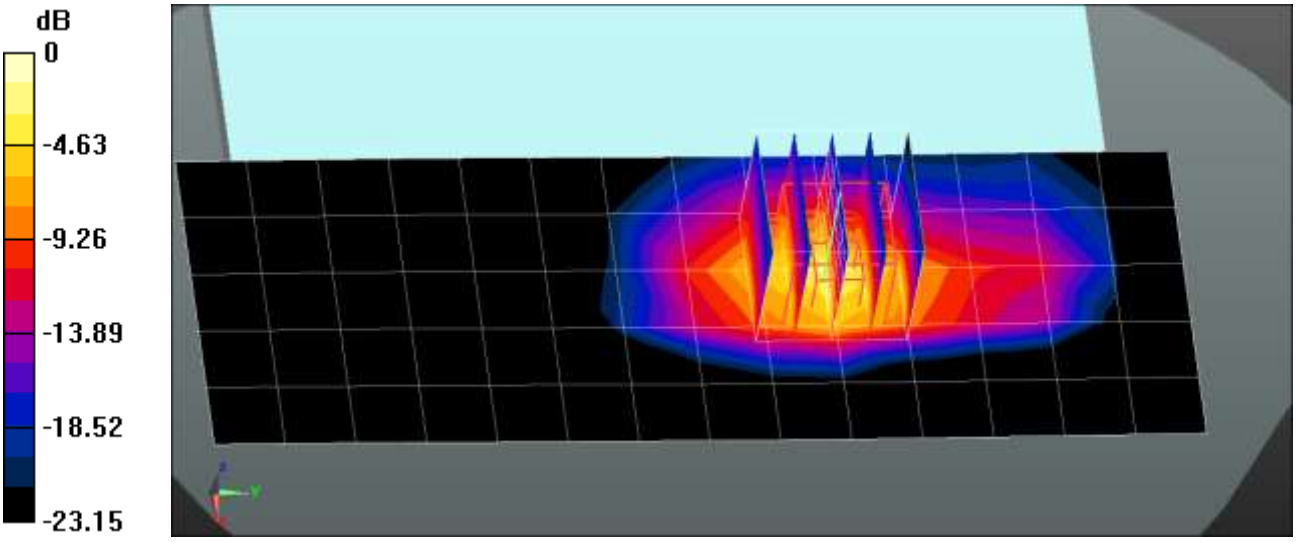
Communication System: UID 0, LTE 66 (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.357 S/m; ε_r = 41.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.12, 8.12, 8.12) @ 1770 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 66 Body Rear QPSK 20MHz 50RB 25offset 132572ch/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.32 W/kg

LTE Band 66 Body Rear QPSK 20MHz 50RB 25offset 132572ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.98 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 3.13 W/kg
SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.488 W/kg
Maximum value of SAR (measured) = 2.33 W/kg



0 dB = 2.33 W/kg = 3.67 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	22.2 ℃
Ambient Temperature:	22.3 ℃
Test Date:	11/16/2021
Plot No.:	14

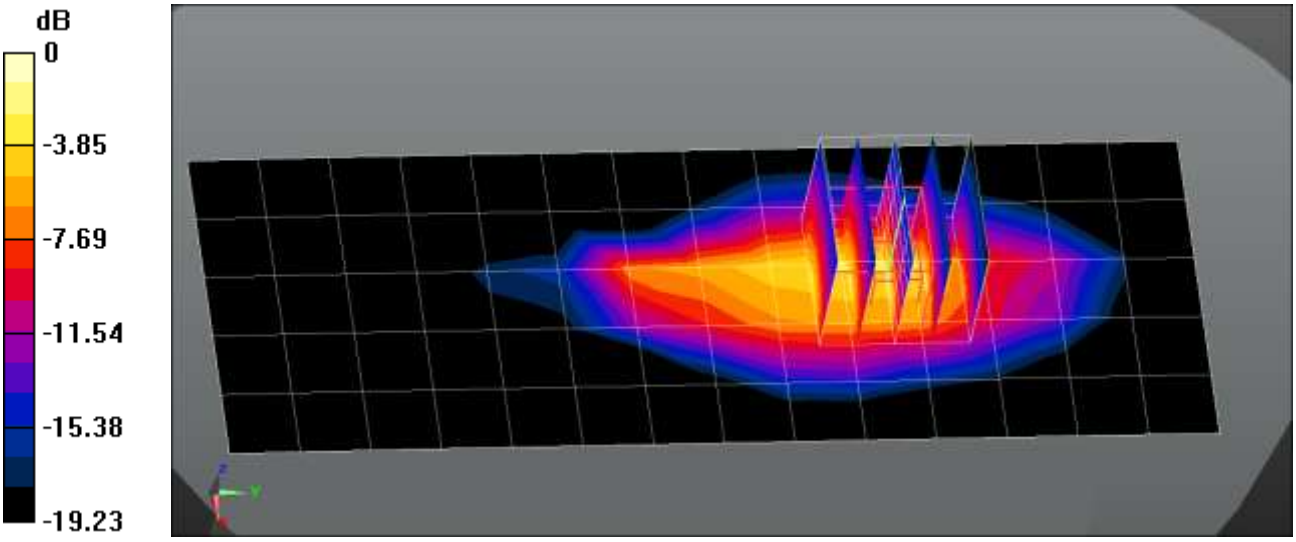
Communication System: UID 0, NR n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.938 S/m; ε_r = 40.625; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.66, 9.66, 9.66) @ 836.5 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR Band n5 Body Top DFT-s QPSK 20MHz 1RB 104offset 167300ch Grip 0mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.356 W/kg

NR Band n5 Body Top DFT-s QPSK 20MHz 1RB 104offset 167300ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.35 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.366 W/kg; SAR(10 g) = 0.170 W/kg
Maximum value of SAR (measured) = 0.763 W/kg



0 dB = 0.763 W/kg = -1.17 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	11/24/2021
Plot No.:	15

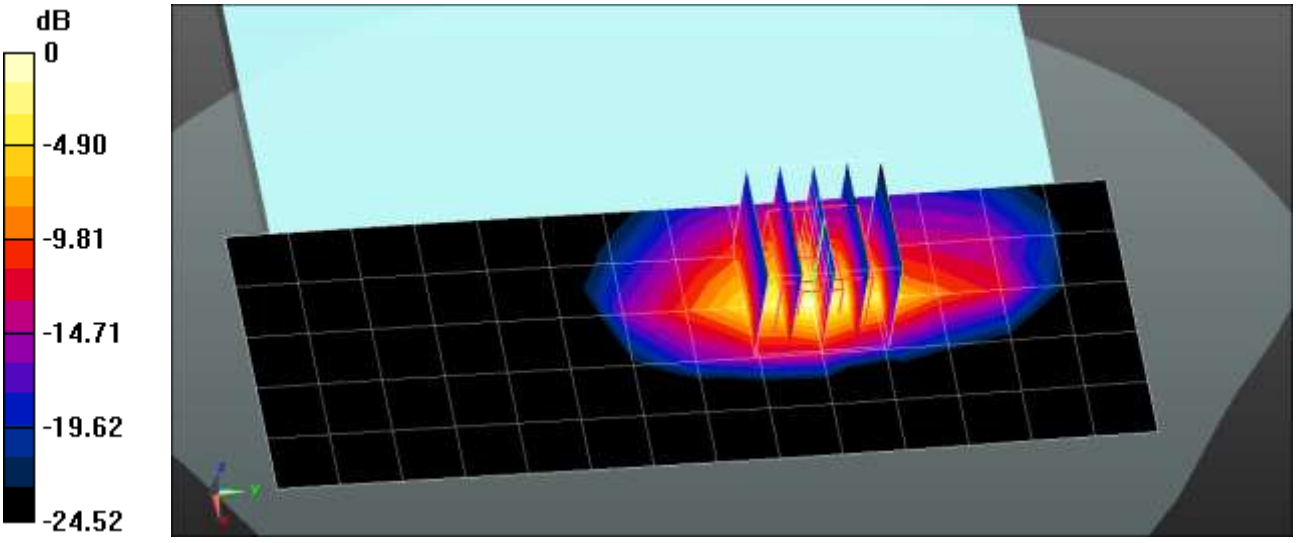
Communication System: UID 0, NR Band n66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.312 S/m; ε_r = 41.396; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.12, 8.12, 8.12) @ 1745 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR Band n66 Body Rear CP QPSK 20MHz 1RB 1offset 349000ch Grip 0mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.06 W/kg

NR Band n66 Body Rear CP QPSK 20MHz 1RB 1offset 349000ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.40 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 3.30 W/kg
SAR(1 g) = 0.981 W/kg; SAR(10 g) = 0.380 W/kg
Maximum value of SAR (measured) = 2.39 W/kg



0 dB = 2.39 W/kg = 3.78 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	11/12/2021
Plot No.:	16

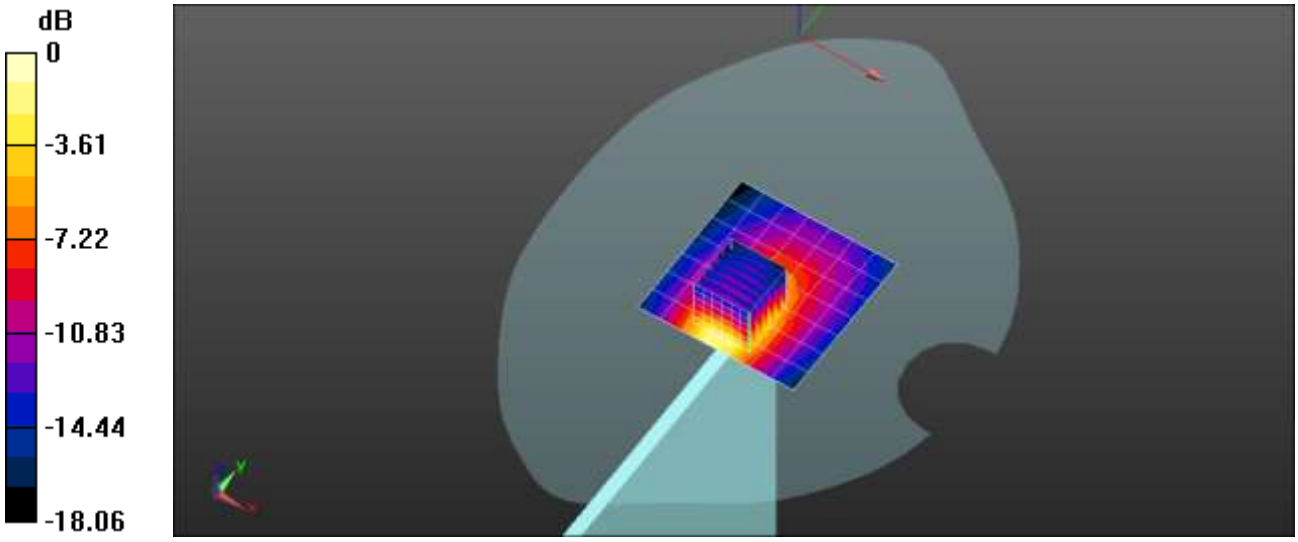
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.812 S/m; ε_r = 38.925; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(7.96, 7.96, 7.96) @ 2437 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11b Body Right 1Mbps 6ch/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.727 W/kg

802.11b Body Right 1Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.87 V/m; Power Drift = -0.69 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.523 W/kg; SAR(10 g) = 0.247 W/kg
Maximum value of SAR (measured) = 0.917 W/kg



0 dB = 0.727 W/kg = −1.38 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	11/12/2021
Plot No.:	17

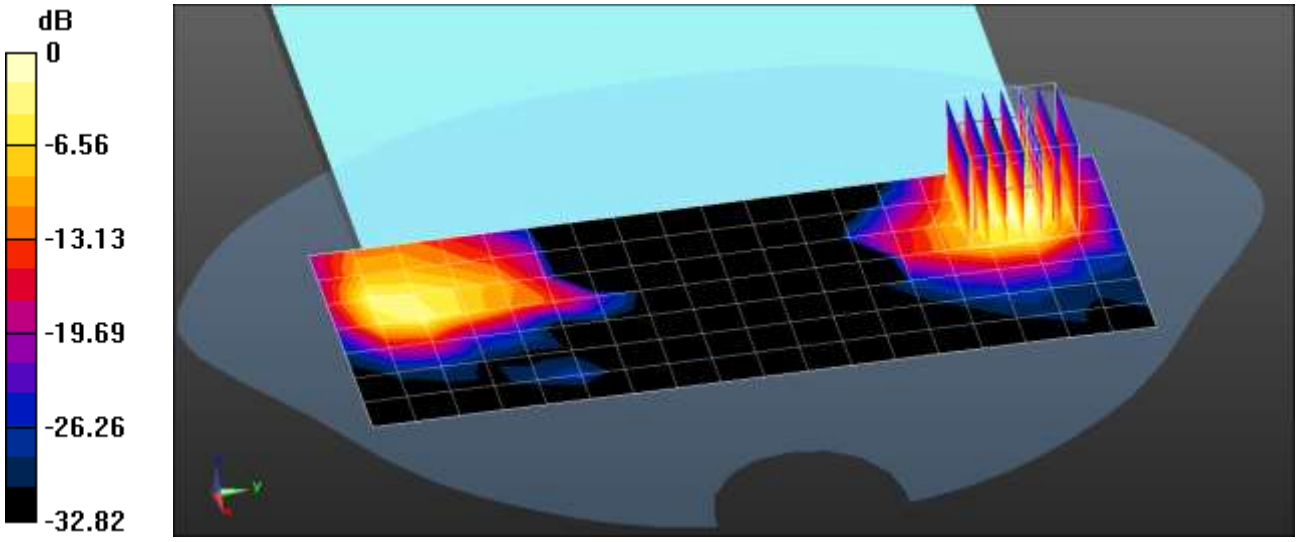
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.812 S/m; ε_r = 38.925; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(7.96, 7.96, 7.96) @ 2437 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11b Body Rear 1Mbps 6ch/Area Scan (8x19x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.51 W/kg

802.11b Body Rear 1Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 2.50 W/kg
SAR(1 g) = 0.767 W/kg; SAR(10 g) = 0.323 W/kg
Maximum value of SAR (measured) = 1.59 W/kg



0 dB = 1.59 W/kg = 2.01 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	20.8 ℃
Ambient Temperature:	20.9 ℃
Test Date:	11/11/2021
Plot No.:	18

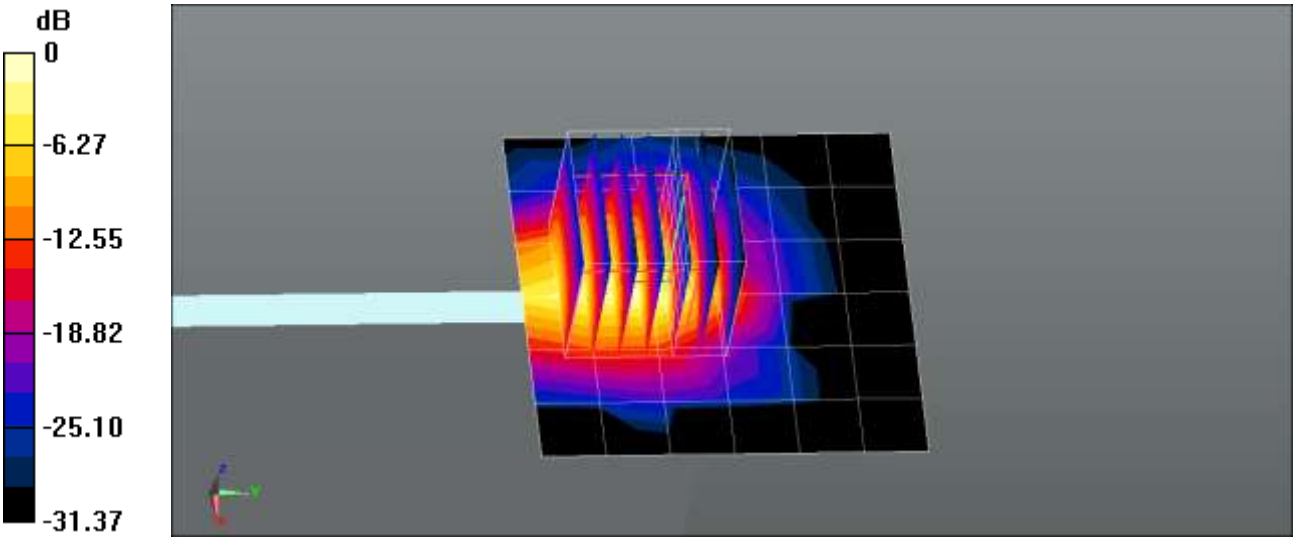
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.81 S/m; ε_r = 38.916; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(7.96, 7.96, 7.96) @ 2437 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11b Body Left 1Mbps 6ch/Area Scan (7x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.19 W/kg

802.11b Body Left 1Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.74 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 2.38 W/kg
SAR(1 g) = 0.556 W/kg; SAR(10 g) = 0.187 W/kg
Maximum value of SAR (measured) = 1.40 W/kg



0 dB = 1.40 W/kg = 1.46 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.0 ℃
Ambient Temperature:	21.1 ℃
Test Date:	11/19/2021
Plot No.:	19

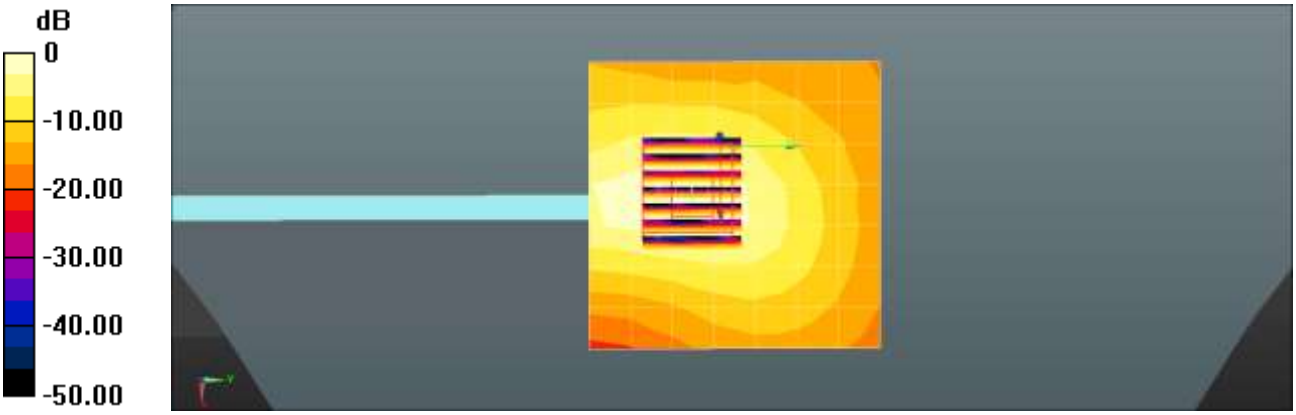
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5845 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5845 MHz; σ = 5.231 S/m; ε_r = 36.18; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(5.05, 5.05, 5.05) @ 5845 MHz; Calibrated: 2021-04-20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2021-02-19
- Phantom: SAM with CRP v5.0_Right; Type: QD000P40CD; Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11a Body Right 6Mbps 169ch/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.68 W/kg

802.11a Body Right 6Mbps 169ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 18.05 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.57 W/kg
SAR(1 g) = 0.853 W/kg; SAR(10 g) = 0.311 W/kg
Maximum value of SAR (measured) = 2.04 W/kg



0 dB = 2.04 W/kg = 3.10 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	22.2 ℃
Ambient Temperature:	22.3 ℃
Test Date:	11/17/2021
Plot No.:	20

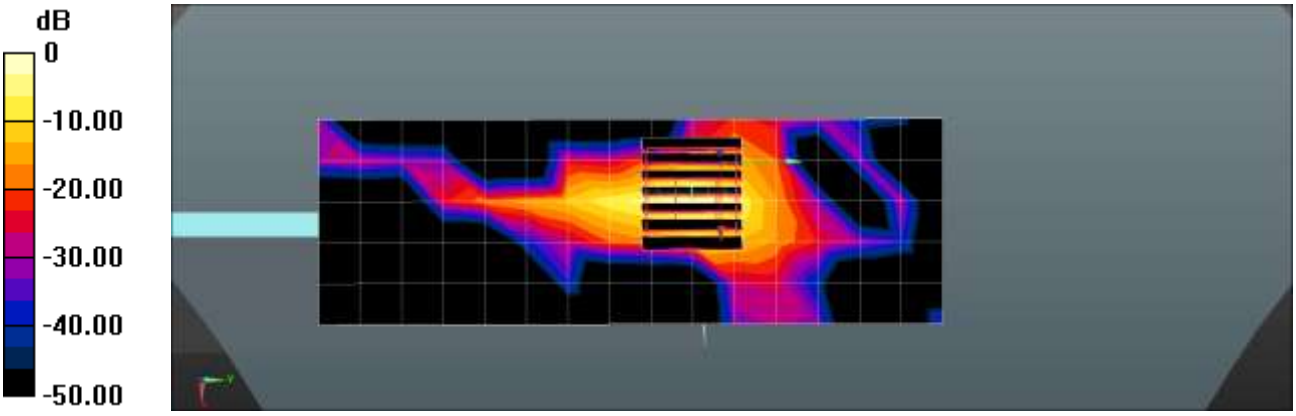
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5855 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5855 MHz; σ = 5.208 S/m; ε_r = 36.441; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(5.05, 5.05, 5.05) @ 5855 MHz; Calibrated: 2021-04-20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2021-02-19
- Phantom: SAM with CRP v5.0_Right; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11ac80 Body Right MCS0 171ch/Area Scan (6x16x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.97 W/kg

802.11ac80 Body Right MCS0 171ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 9.153 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 4.57 W/kg
SAR(1 g) = 0.595 W/kg; SAR(10 g) = 0.124 W/kg
Maximum value of SAR (measured) = 2.07 W/kg



0 dB = 2.07 W/kg = 3.16 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.2 ℃
Ambient Temperature:	21.3 ℃
Test Date:	11/22/2021
Plot No.:	21

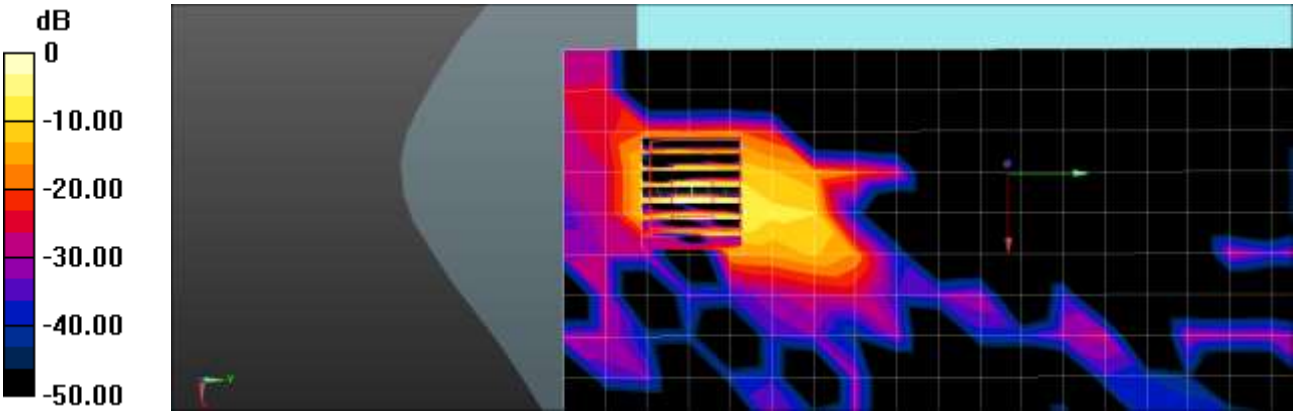
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5775 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5775 MHz; σ = 5.348 S/m; ε_r = 36.224; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(5.05, 5.05, 5.05) @ 5775 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11ac80 Body Rear MCS0 155ch/Area Scan (10x23x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.55 W/kg

802.11ac80 Body Rear MCS0 155ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 3.94 W/kg
SAR(1 g) = 0.465 W/kg; SAR(10 g) = 0.087 W/kg
Maximum value of SAR (measured) = 1.57 W/kg



0 dB = 1.57 W/kg = 1.96 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	22.0 ℃
Ambient Temperature:	22.1 ℃
Test Date:	11/17/2021
Plot No.:	22

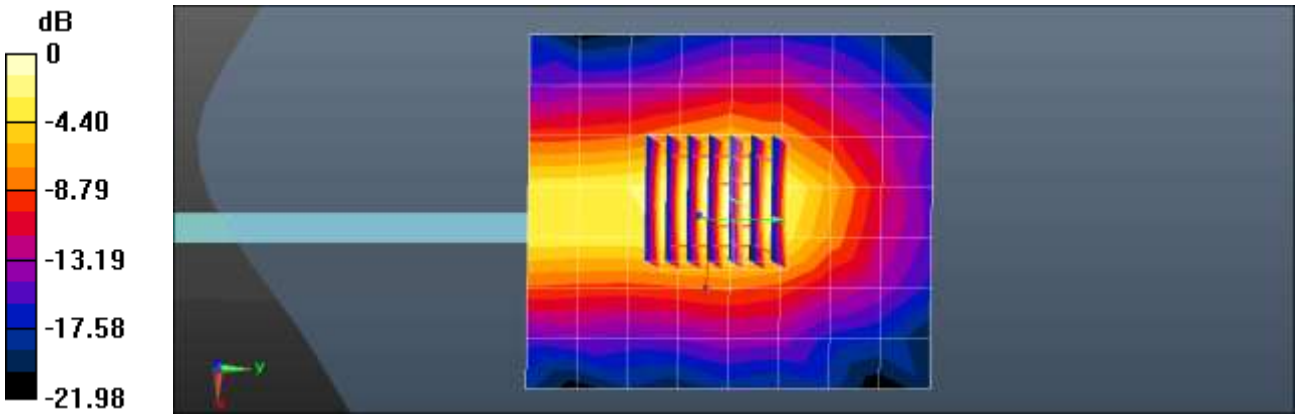
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.302
Medium parameters used (interpolated): f = 2441 MHz; σ = 1.814 S/m; ε_r = 37.87; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2441 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn911; Calibrated: 2021-03-22
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Body Left DH5 39ch/Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.140 W/kg

Bluetooth Body Left DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.397 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.272 W/kg
SAR(1 g) = 0.124 W/kg; SAR(10 g) = 0.058 W/kg
Maximum value of SAR (measured) = 0.163 W/kg



0 dB = 0.163 W/kg = -7.88 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.2 ℃
Test Date:	11/16/2021
Plot No.:	23

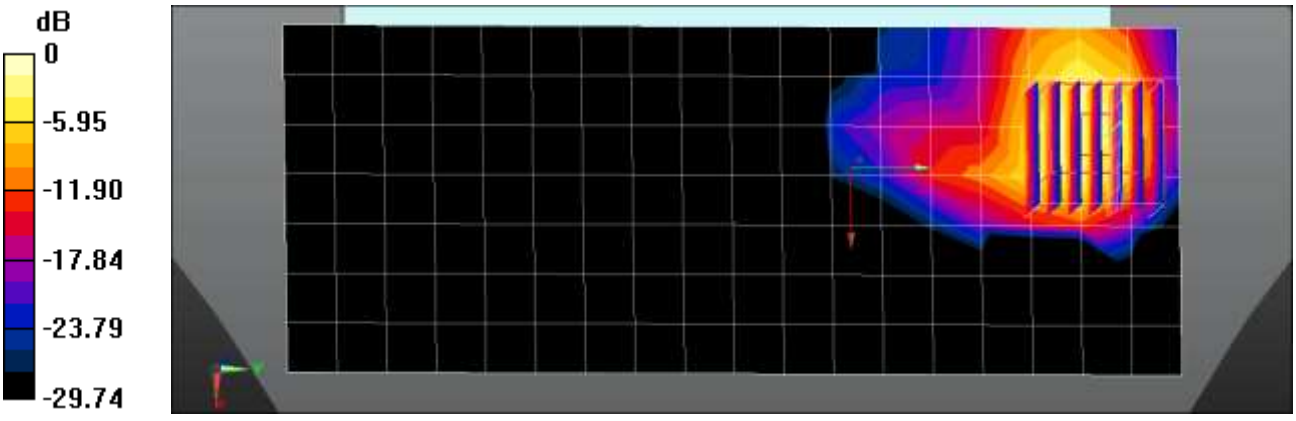
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.302
Medium parameters used (interpolated): f = 2441 MHz; σ = 1.815 S/m; ε_r = 37.87; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2441 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn911; Calibrated: 2021-03-22
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Body Rear 3DH5 39ch/Area Scan (8x19x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.442 W/kg

Bluetooth Body Rear 3DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.447 W/kg; SAR(10 g) = 0.174 W/kg
Maximum value of SAR (measured) = 0.668 W/kg



0 dB = 0.668 W/kg = -1.75 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Tablet
Liquid Temperature:	21.1 ℃
Ambient Temperature:	21.2 ℃
Test Date:	11/16/2021
Plot No.:	24

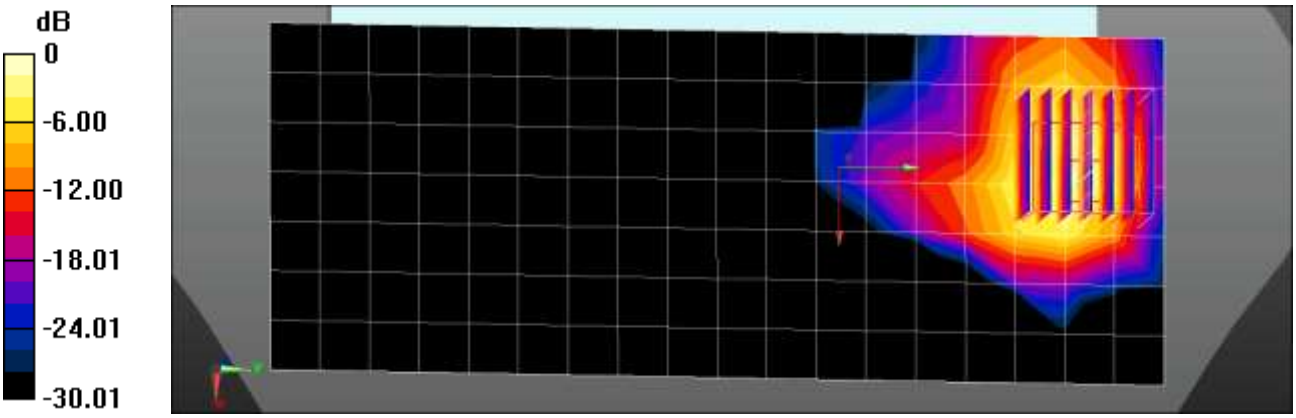
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.302
Medium parameters used (interpolated): f = 2441 MHz; σ = 1.815 S/m; ε_r = 37.87; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2441 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn911; Calibrated: 2021-03-22
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Body Rear DH5 39ch/Area Scan (8x19x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.336 W/kg

Bluetooth Body Rear DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.967 W/kg
SAR(1 g) = 0.308 W/kg; SAR(10 g) = 0.125 W/kg
Maximum value of SAR (measured) = 0.433 W/kg



0 dB = 0.433 W/kg = -3.64 dBW/kg

Appendix C. – Dipole Verification Plots

■ Verification Data (750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.8 ℃
Test Date: 11/19/2021

DUT: Dipole 750 MHz D750V3; Type: D750V3;

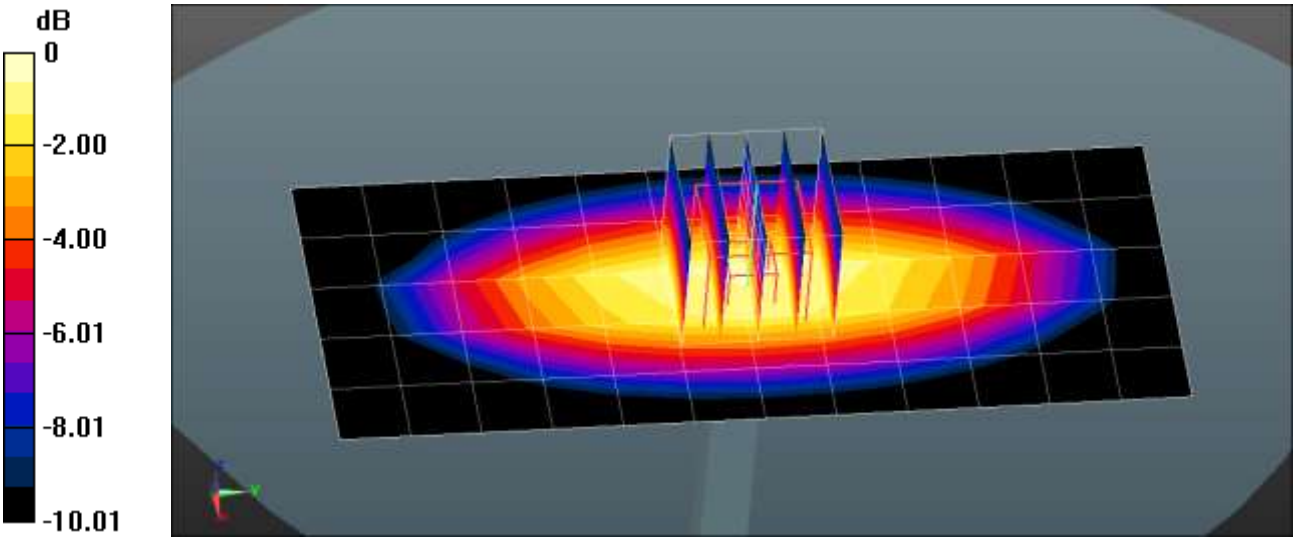
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.9 S/m; ε_r = 42.521; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.81, 9.81, 9.81) @ 750 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/750MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.500 W/kg

Dipole/750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.57 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.620 W/kg
SAR(1 g) = 0.415 W/kg; SAR(10 g) = 0.277 W/kg
Maximum value of SAR (measured) = 0.551 W/kg



0 dB = 0.551 W/kg = -2.59 dBW/kg

■ Verification Data (750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.5 ℃
Test Date: 11/04/2021

DUT: Dipole 750 MHz D750V3; Type: D750V3;

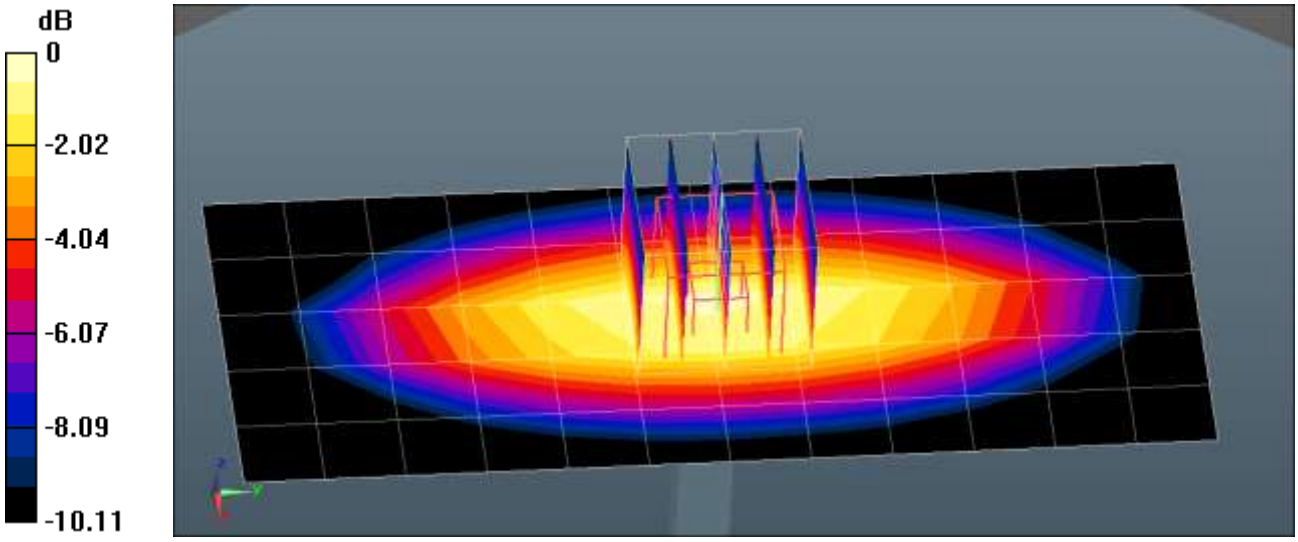
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.876 S/m; ε_r = 42.523; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.81, 9.81, 9.81) @ 750 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/750MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.488 W/kg

Dipole/750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.60 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.604 W/kg
SAR(1 g) = 0.404 W/kg; SAR(10 g) = 0.270 W/kg
Maximum value of SAR (measured) = 0.534 W/kg



0 dB = 0.534 W/kg = -2.72 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.7 ℃
Test Date: 11/05/2021

DUT: Dipole 835 MHz D835V2; Type: D835V2;

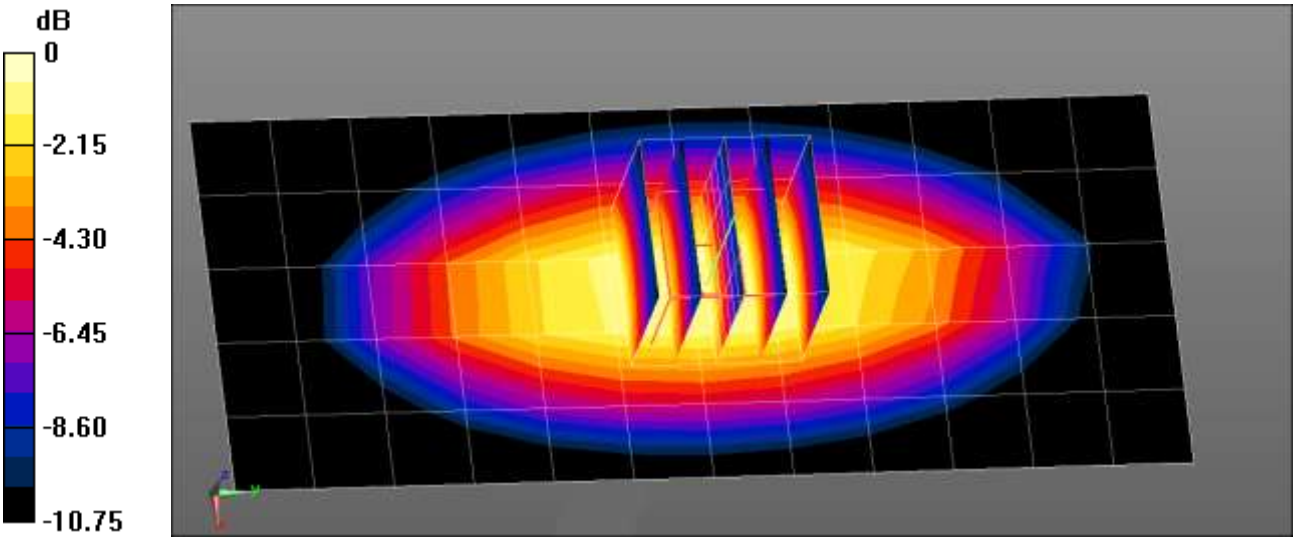
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.915 S/m; ε_r = 40.541; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.66, 9.66, 9.66) @ 835 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.560 W/kg

Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.88 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.735 W/kg
SAR(1 g) = 0.487 W/kg; SAR(10 g) = 0.318 W/kg
Maximum value of SAR (measured) = 0.652 W/kg



0 dB = 0.652 W/kg = -1.86 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.9 ℃
Test Date: 11/08/2021

DUT: Dipole 835 MHz D835V2; Type: D835V2;

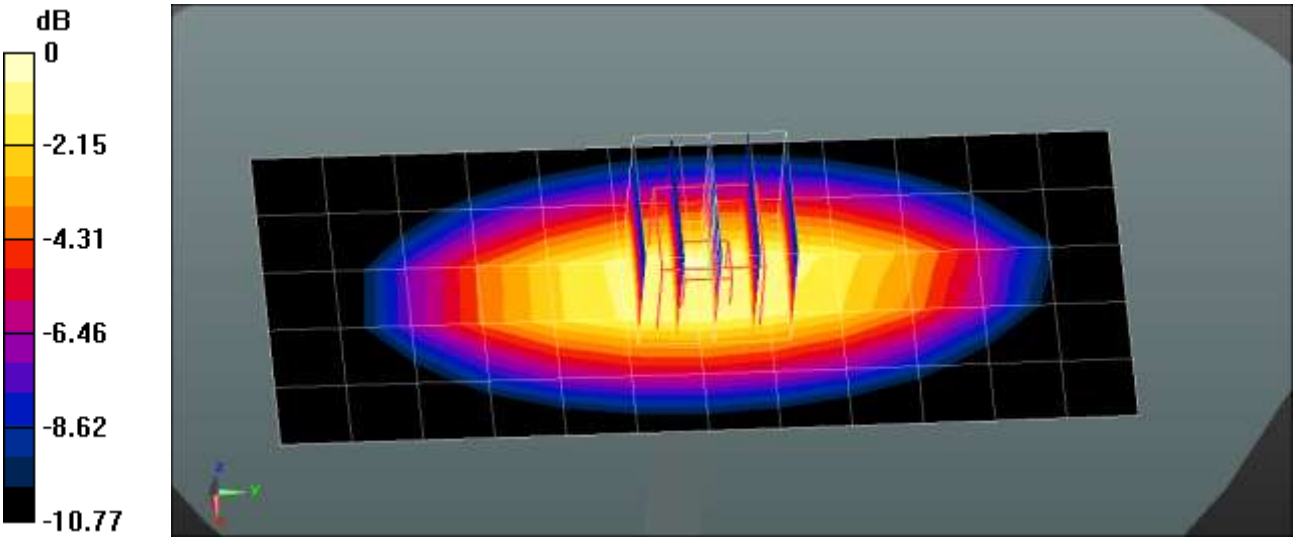
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.914 S/m; ε_r = 40.528; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.66, 9.66, 9.66) @ 835 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.561 W/kg

Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.85 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.731 W/kg
SAR(1 g) = 0.485 W/kg; SAR(10 g) = 0.317 W/kg
Maximum value of SAR (measured) = 0.649 W/kg



0 dB = 0.649 W/kg = -1.88 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.4 ℃
Test Date: 11/25/2021

DUT: Dipole 835 MHz D835V2; Type: D835V2;

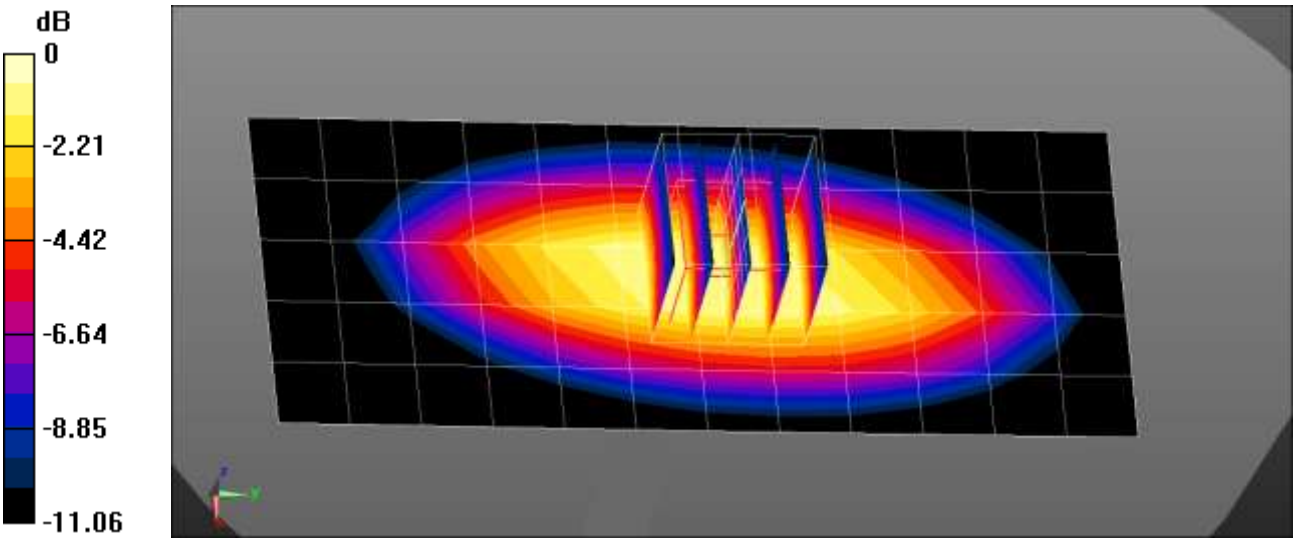
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.937 S/m; ε_r = 40.521; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.66, 9.66, 9.66) @ 835 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC; Serial: 1070
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.557 W/kg

Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.94 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.763 W/kg
SAR(1 g) = 0.485 W/kg; SAR(10 g) = 0.312 W/kg
Maximum value of SAR (measured) = 0.665 W/kg



0 dB = 0.665 W/kg = -1.77 dBW/kg

■ Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.8 ℃
Test Date:	11/19/2021

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2;

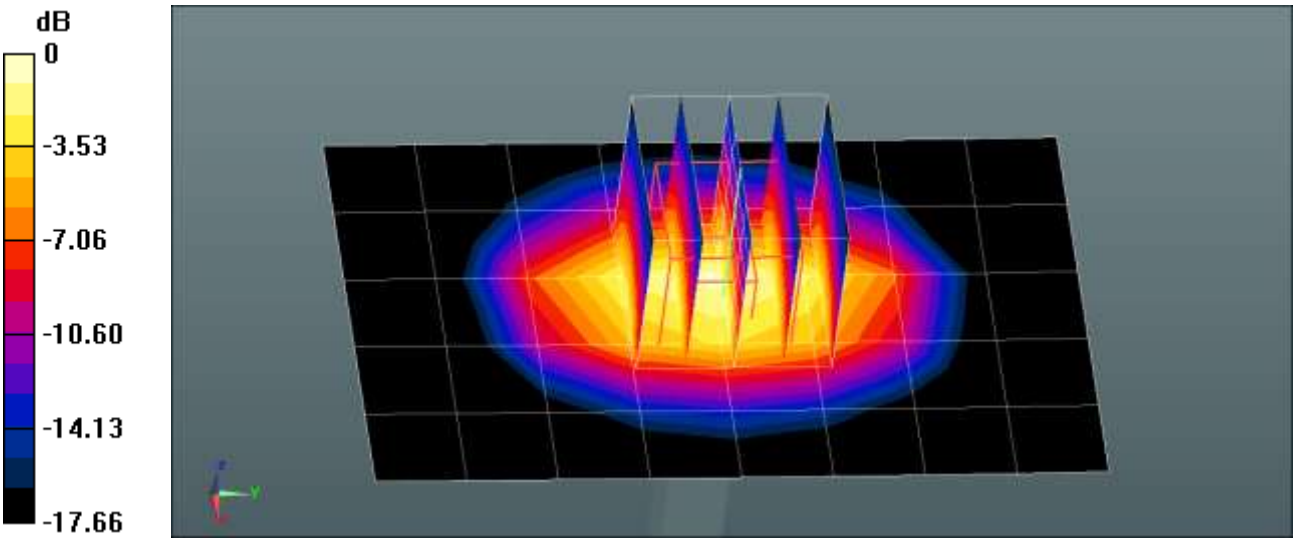
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.368 S/m; ε_r = 41.122; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.12, 8.12, 8.12) @ 1800 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/1800MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.65 W/kg

Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.67 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 3.62 W/kg
SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.04 W/kg
Maximum value of SAR (measured) = 3.08 W/kg



0 dB = 3.08 W/kg = 4.89 dBW/kg

■ Verification Data (1 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.2 ℃
Test Date: 11/22/2021

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2;

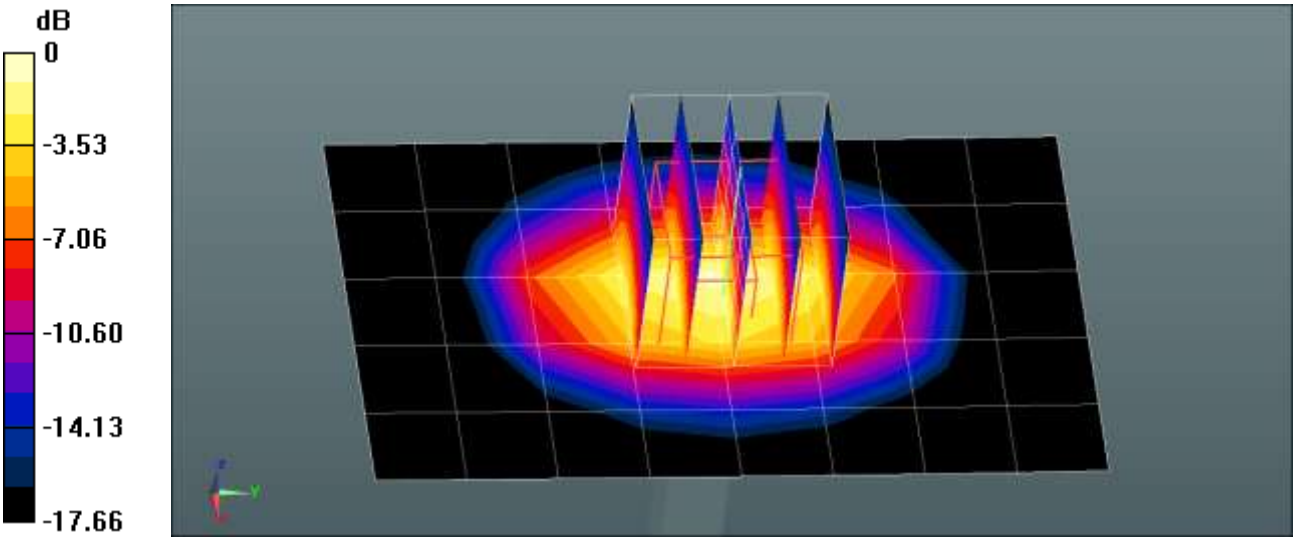
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.368 S/m; ε_r = 41.122; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.12, 8.12, 8.12) @ 1800 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/1800MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.65 W/kg

Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.67 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 3.62 W/kg
SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.04 W/kg
Maximum value of SAR (measured) = 3.08 W/kg



0 dB = 3.08 W/kg = 4.89 dBW/kg

■ Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.0 ℃
Test Date:	11/10/2021

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2;

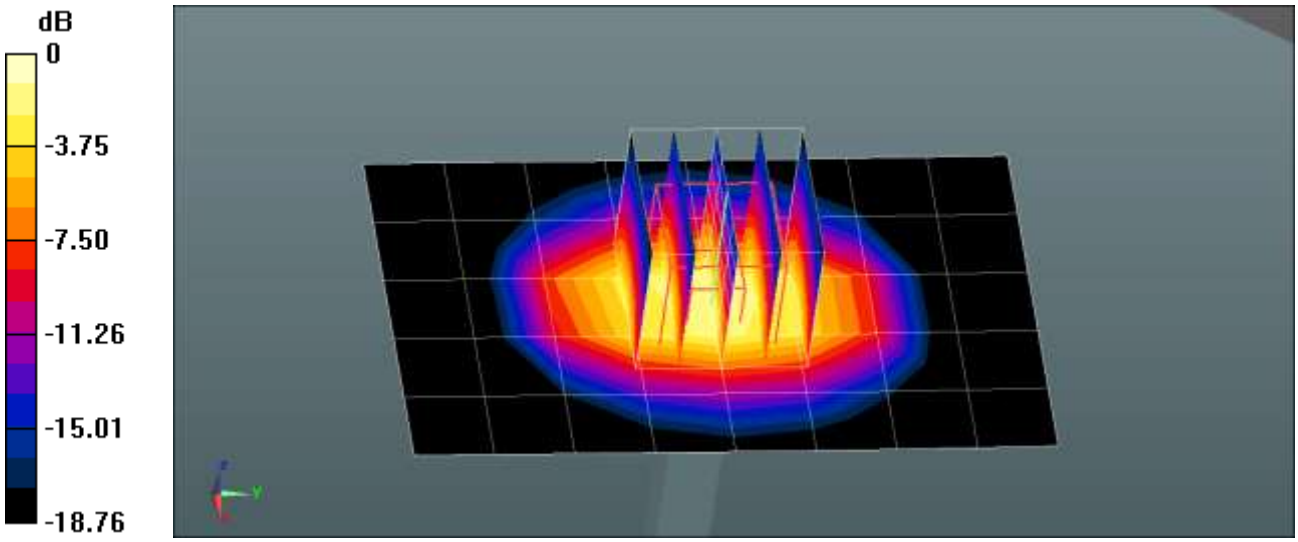
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.448 S/m; ε_r = 41.345; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.08, 8.08, 8.08) @ 1900 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/1900MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.44 W/kg

Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 50.59 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 4.15 W/kg
SAR(1 g) = 2.17 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 3.46 W/kg



0 dB = 3.46 W/kg = 5.39 dBW/kg

■ Verification Data (1 900 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.6 ℃
Test Date: 11/18/2021

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2;

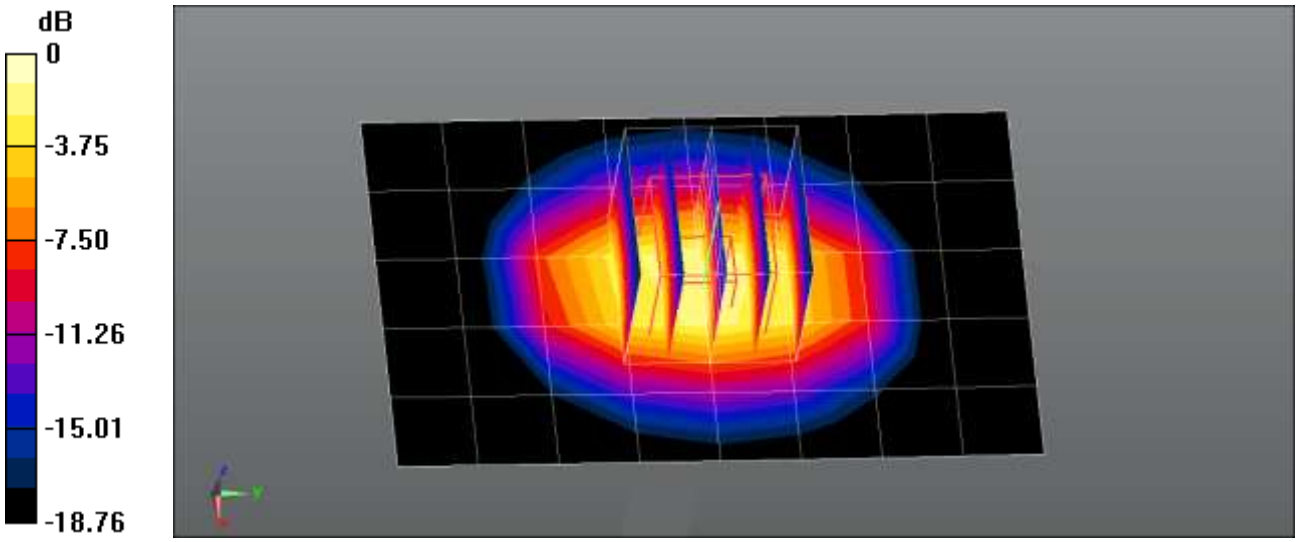
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.388 S/m; ε_r = 41.395; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.08, 8.08, 8.08) @ 1900 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/1900MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.34 W/kg

Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 50.59 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.98 W/kg
SAR(1 g) = 2.08 W/kg; SAR(10 g) = 1.07 W/kg
Maximum value of SAR (measured) = 3.31 W/kg



0 dB = 3.31 W/kg = 5.20 dBW/kg

■ Verification Data (1 900 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.4 ℃
Test Date: 11/25/2021

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial:

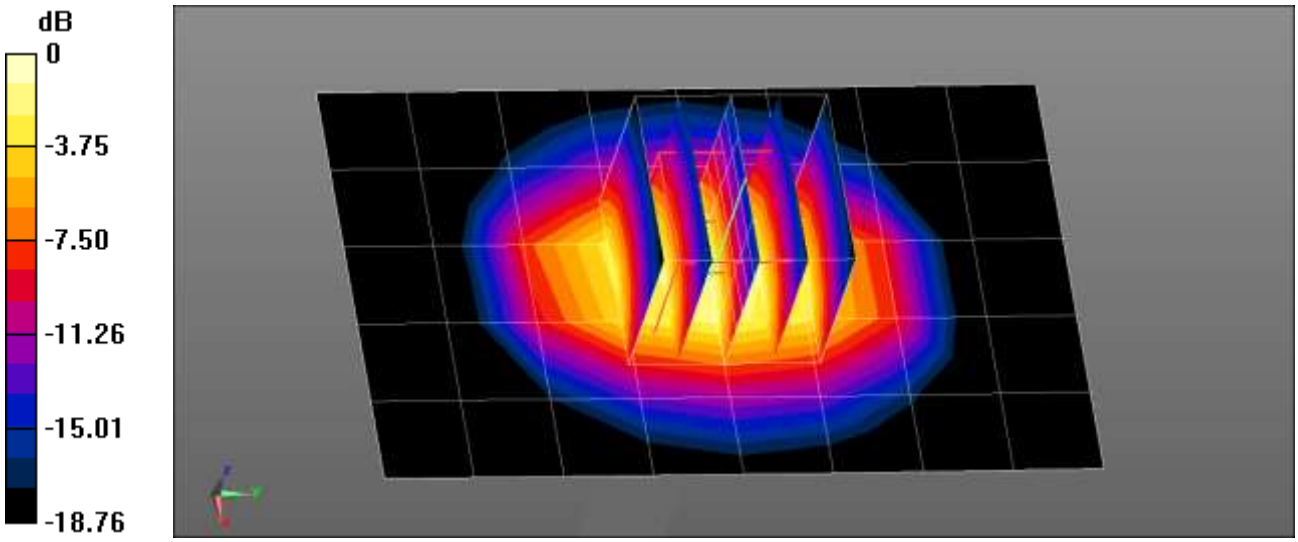
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.428 S/m; ε_r = 41.401; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.08, 8.08, 8.08) @ 1900 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD; Serial: 1803
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/1900MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.41 W/kg

Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 50.59 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 4.09 W/kg
SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.1 W/kg
Maximum value of SAR (measured) = 3.41 W/kg



0 dB = 3.41 W/kg = 5.33 dBW/kg

■ Verification Data (1 900 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.6 ℃
Test Date: 11/04/2021

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2;

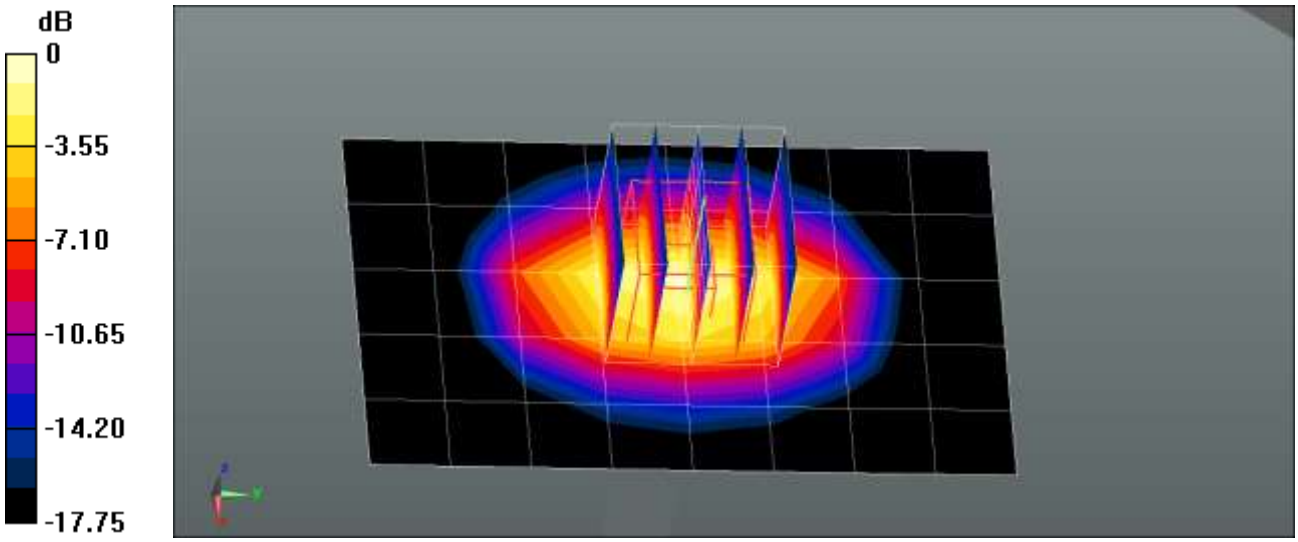
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.415 S/m; ε_r = 40.884; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.08, 8.08, 8.08) @ 1900 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/1900MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.83 W/kg

Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.86 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 3.90 W/kg
SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.09 W/kg
Maximum value of SAR (measured) = 3.28 W/kg



0 dB = 3.28 W/kg = 5.16 dBW/kg

■ Verification Data (2 450 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.8 ℃
Test Date: 11/11/2021

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2;

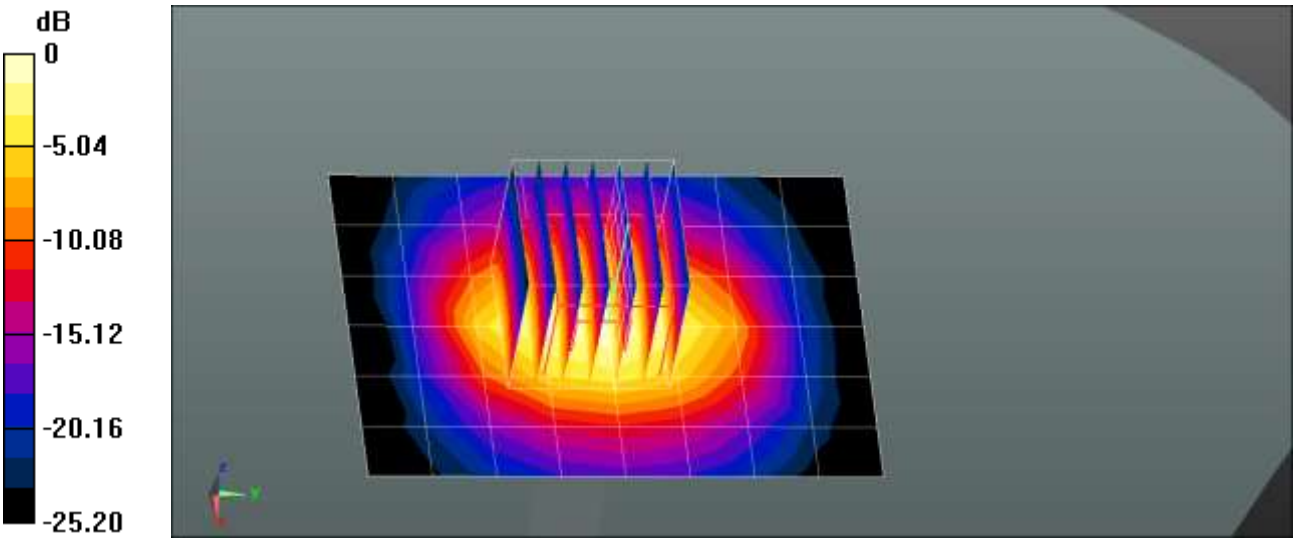
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.83 S/m; ε_r = 38.868; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(7.96, 7.96, 7.96) @ 2450 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/2450MHz Head Verification/Area Scan (7x9x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.39 W/kg

Dipole/2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.82 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 5.59 W/kg
SAR(1 g) = 2.51 W/kg; SAR(10 g) = 1.13 W/kg
Maximum value of SAR (measured) = 4.36 W/kg



0 dB = 4.36 W/kg = 6.39 dBW/kg

■ **Verification Data (2 450 ㎒ Head)**

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	11/12/2021

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2;

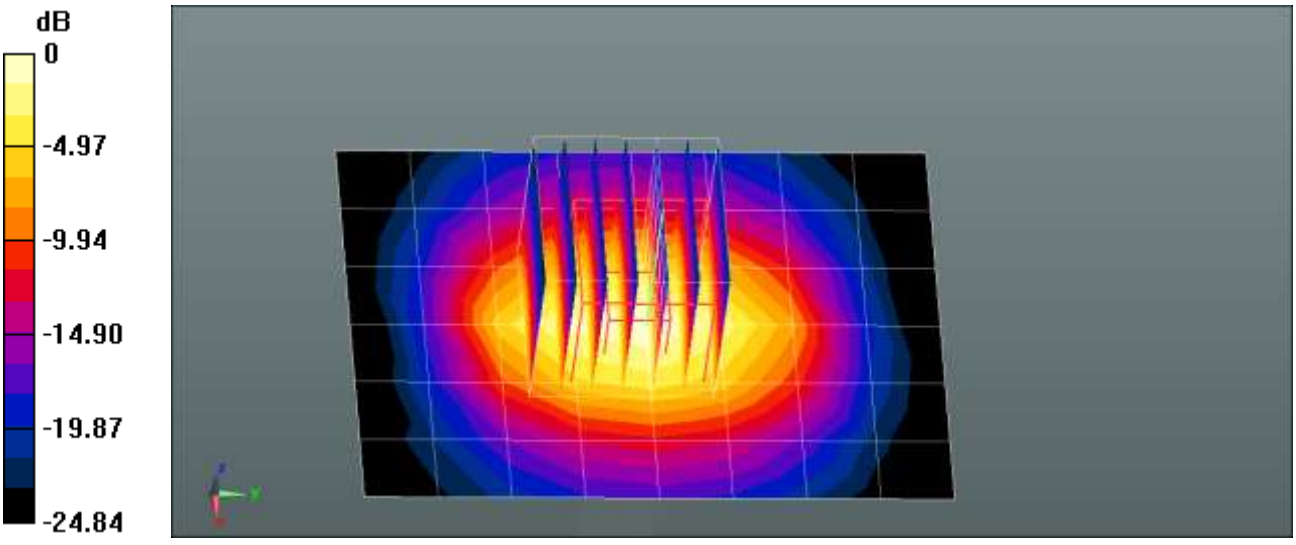
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.824 S/m; ε_r = 38.871; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(7.96, 7.96, 7.96) @ 2450 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/2450MHz Head Verification/Area Scan (7x9x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.35 W/kg

Dipole/2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.95 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 5.59 W/kg
SAR(1 g) = 2.5 W/kg; SAR(10 g) = 1.12 W/kg
Maximum value of SAR (measured) = 4.37 W/kg



0 dB = 4.37 W/kg = 6.40 dBW/kg

■ Verification Data (2 450 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 11/16/2021

DUT: D2450V2 - SN965; Type: D2450V2;

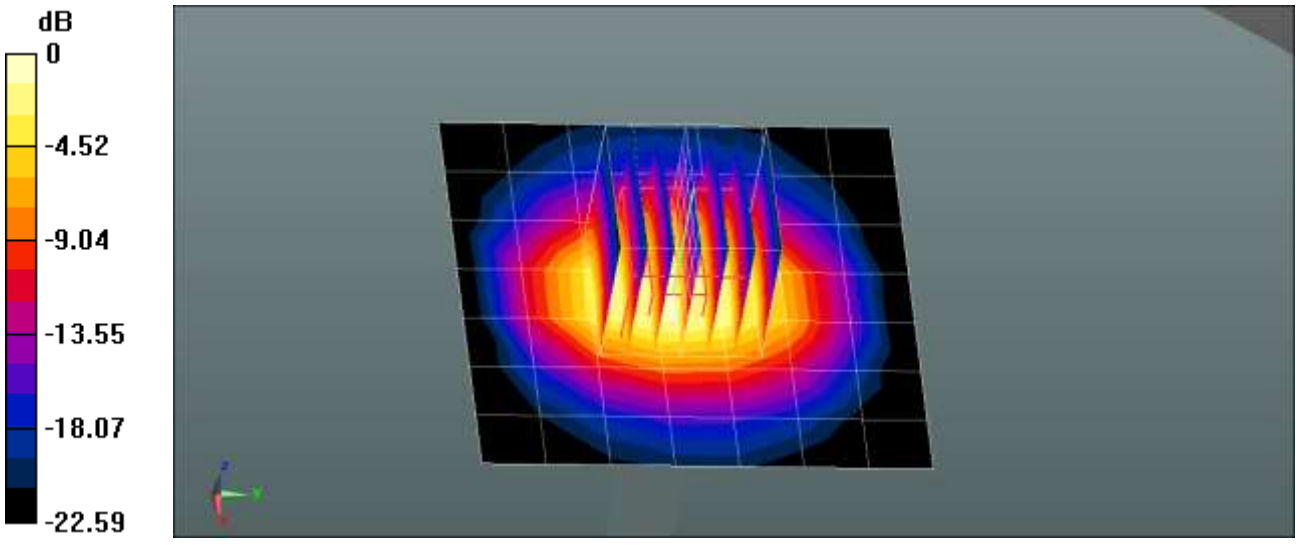
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.828 S/m; ε_r = 37.901; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2450 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn911; Calibrated: 2021-03-22
- Phantom: SAM with CRP v5.0_2020_06_09; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/2450MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.31 W/kg

Dipole/2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 40.92 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 5.68 W/kg
SAR(1 g) = 2.6 W/kg; SAR(10 g) = 1.18 W/kg
Maximum value of SAR (measured) = 2.97 W/kg



0 dB = 2.97 W/kg = 4.73 dBW/kg

■ Verification Data (2 450 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 11/17/2021

DUT: D2450V2 - SN965; Type: D2450V2;

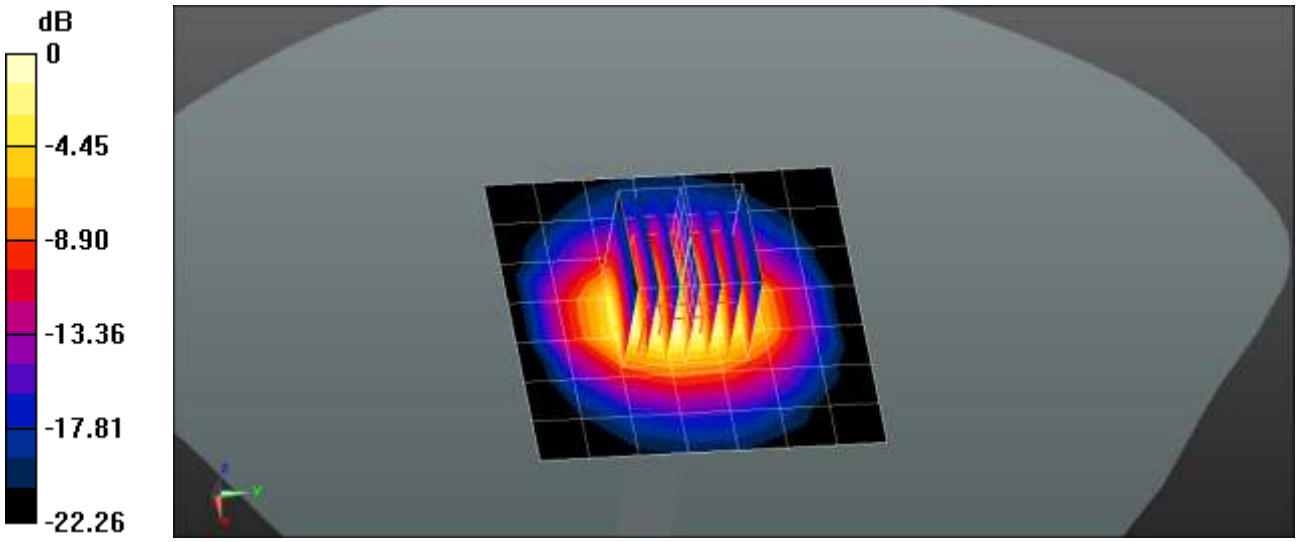
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.83 S/m; ε_r = 37.883; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2450 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn911; Calibrated: 2021-03-22
- Phantom: SAM with CRP v5.0_2020_06_09; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/2450MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.32 W/kg

Dipole/2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 40.64 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 5.67 W/kg
SAR(1 g) = 2.6 W/kg; SAR(10 g) = 1.18 W/kg
Maximum value of SAR (measured) = 2.97 W/kg



0 dB = 2.97 W/kg = 4.73 dBW/kg

■ Verification Data (2 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 11/19/2021

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2;

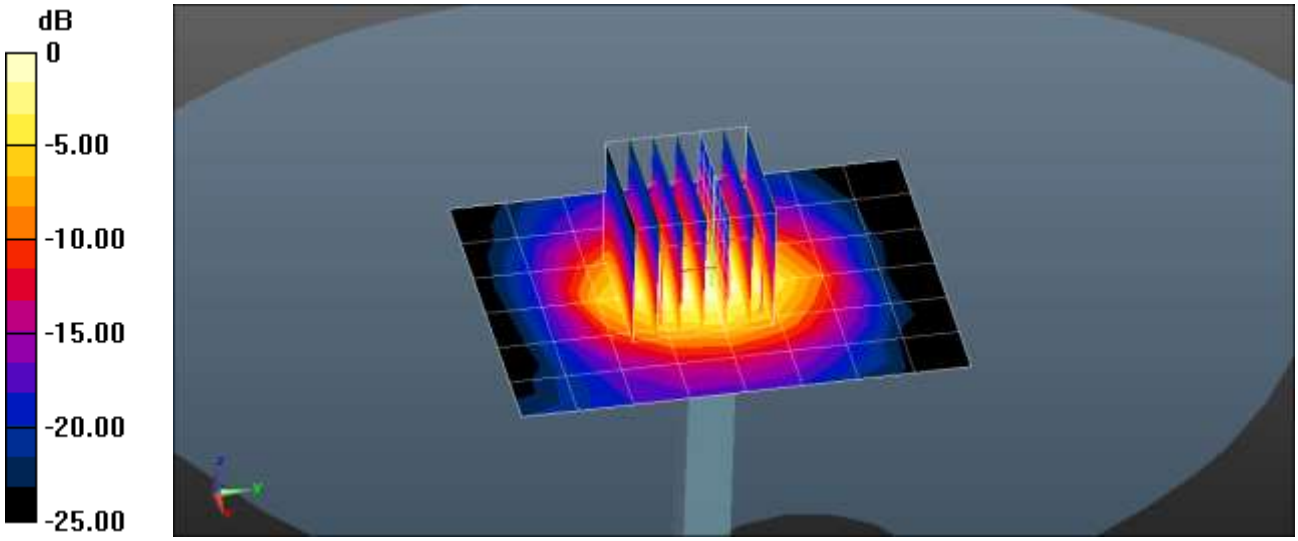
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.944 S/m; ε_r = 39.78; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(7.87, 7.87, 7.87) @ 2600 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Front); Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/2600MHz Head Verification/Area Scan (7x9x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.86 W/kg

Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.13 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 6.30 W/kg
SAR(1 g) = 2.73 W/kg; SAR(10 g) = 1.2 W/kg
Maximum value of SAR (measured) = 4.82 W/kg



0 dB = 4.82 W/kg = 6.83 dBW/kg

■ **Verification Data (5 250 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.7 ℃
Test Date: 11/23/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

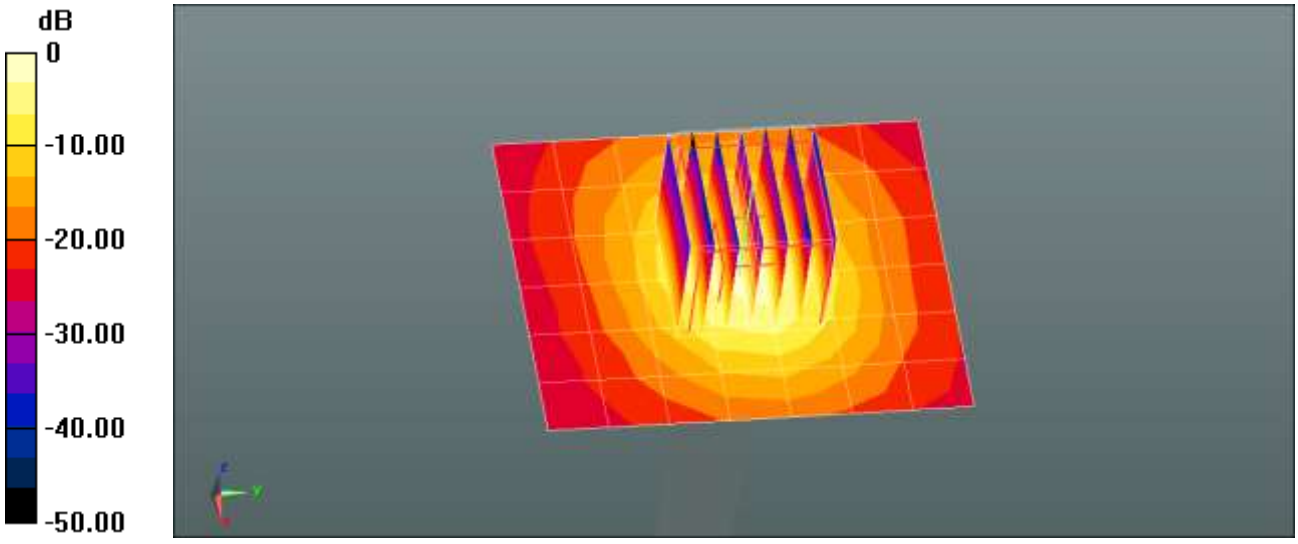
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.879 S/m; ε_r = 36.867; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(5.55, 5.55, 5.55) @ 5250 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5250MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.02 W/kg

Dipole/5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.13 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 15.9 W/kg
SAR(1 g) = 3.99 W/kg; SAR(10 g) = 1.16 W/kg
Maximum value of SAR (measured) = 9.92 W/kg



0 dB = 9.92 W/kg = 9.97 dBW/kg

■ **Verification Data (5 600 ㎒ Head)**

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.4 ℃
Test Date:	11/24/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

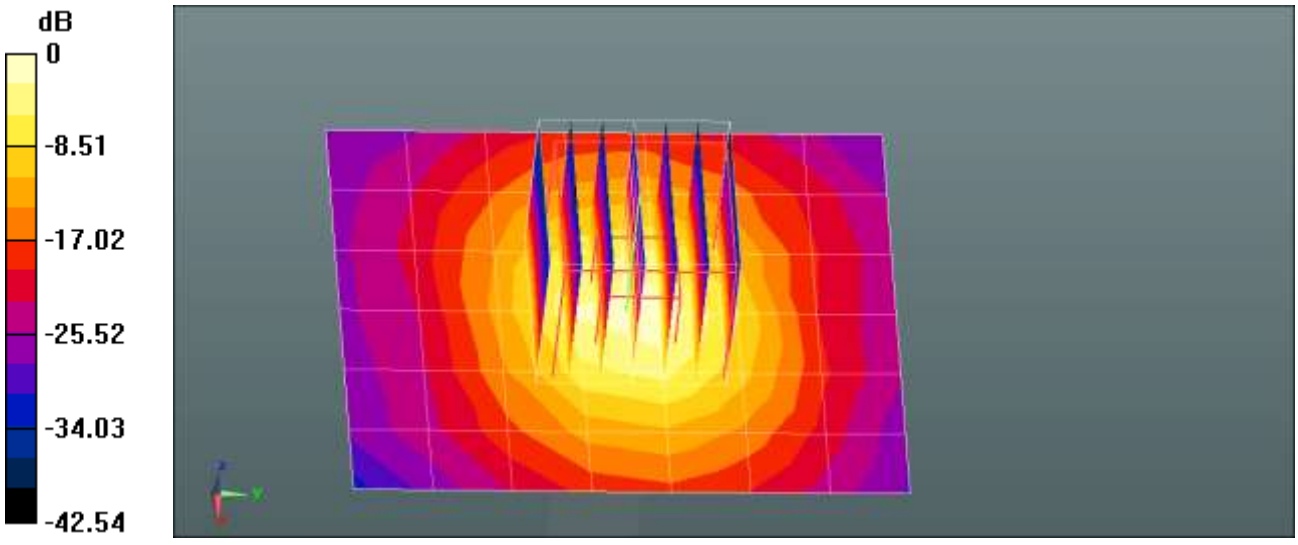
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.169 S/m; ε_r = 36.836; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(4.95, 4.95, 4.95) @ 5600 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5600MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.2 W/kg

Dipole/5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.58 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 18.8 W/kg
SAR(1 g) = 4.33 W/kg; SAR(10 g) = 1.23 W/kg
Maximum value of SAR (measured) = 11.1 W/kg



0 dB = 11.1 W/kg = 10.45 dBW/kg

■ **Verification Data (5 750 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.2 ℃
Test Date: 11/25/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

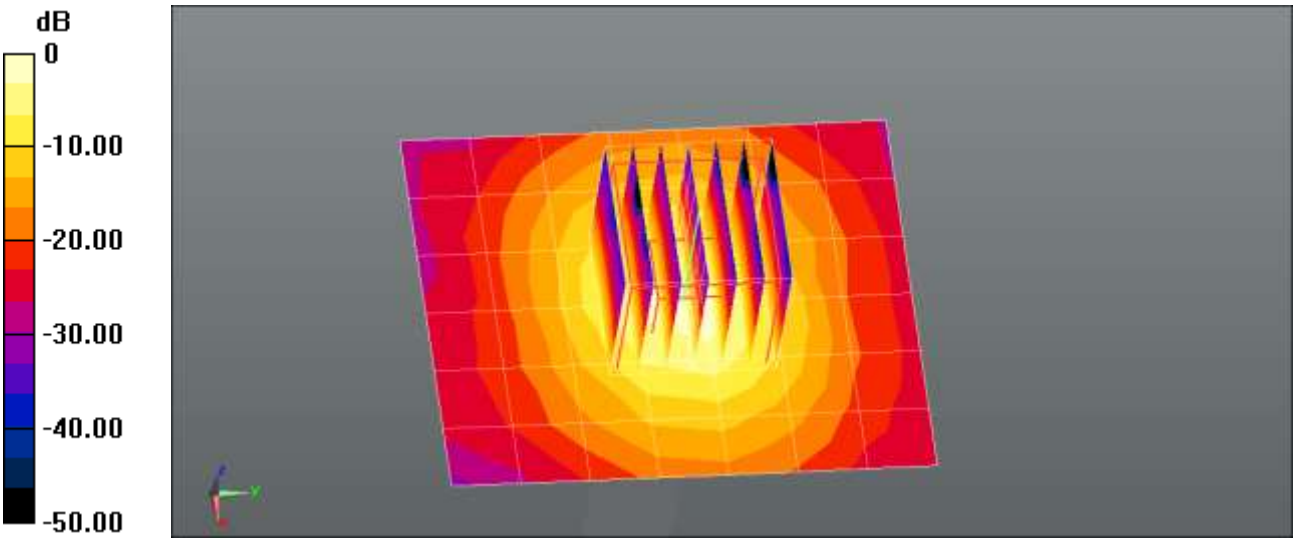
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.171 S/m; ε_r = 36.361; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(5.05, 5.05, 5.05) @ 5750 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5750MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.43 W/kg

Dipole/5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.44 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 17.3 W/kg
SAR(1 g) = 3.9 W/kg; SAR(10 g) = 1.12 W/kg
Maximum value of SAR (measured) = 10.2 W/kg



0 dB = 10.2 W/kg = 10.09 dBW/kg

■ **Verification Data (5 250 ㎒ Head)**

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	11/15/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

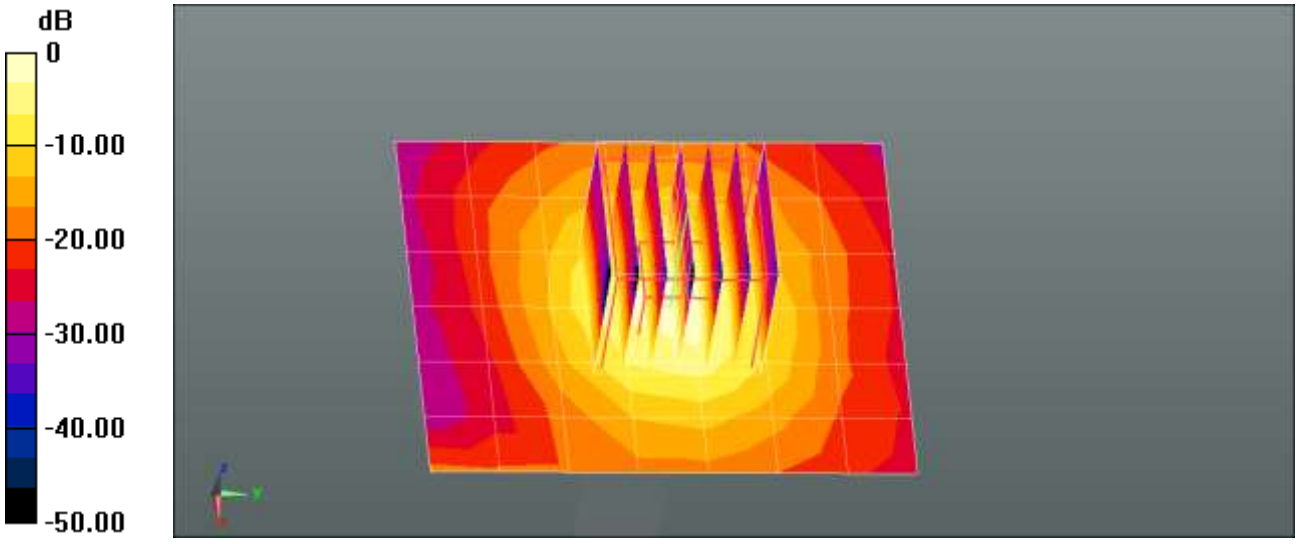
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.705 S/m; ε_r = 37.19; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(5.55, 5.55, 5.55) @ 5250 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD; Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5250MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.96 W/kg

Dipole/5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 51.18 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 15.5 W/kg
SAR(1 g) = 3.83 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 9.73 W/kg



0 dB = 9.73 W/kg = 9.88 dBW/kg

■ **Verification Data (5 600 ㎒ Head)**

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.2 ℃
Test Date:	11/16/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

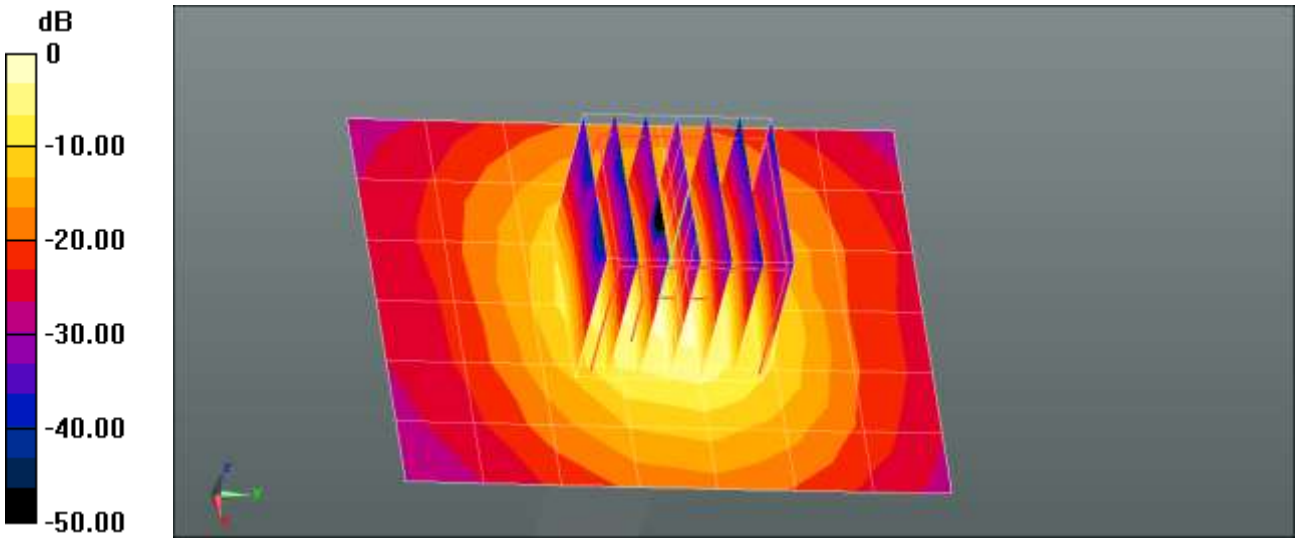
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.028 S/m; ε_r = 36.505; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(4.95, 4.95, 4.95) @ 5600 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5600MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.71 W/kg

Dipole/5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.01 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 18.0 W/kg
SAR(1 g) = 4.19 W/kg; SAR(10 g) = 1.2 W/kg
Maximum value of SAR (measured) = 10.7 W/kg



0 dB = 10.7 W/kg = 10.29 dBW/kg

■ Verification Data (5 750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.6 ℃
Test Date: 11/17/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

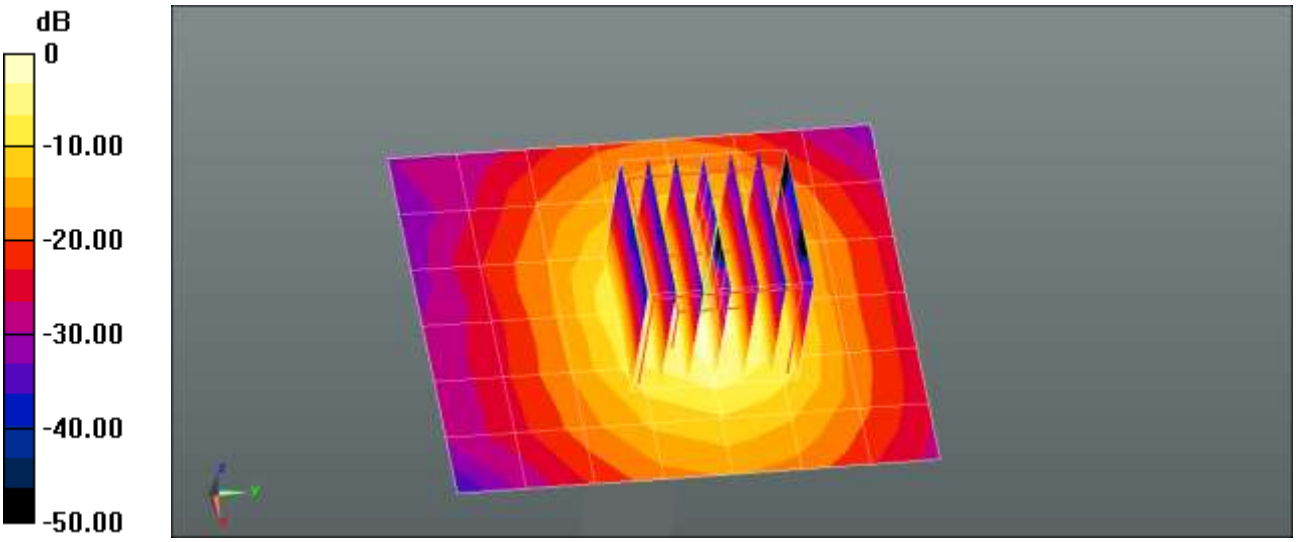
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.261 S/m; ε_r = 36.544; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(5.05, 5.05, 5.05) @ 5750 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5750MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.3 W/kg

Dipole/5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 43.66 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 18.6 W/kg
SAR(1 g) = 4.17 W/kg; SAR(10 g) = 1.19 W/kg
Maximum value of SAR (measured) = 11.0 W/kg



0 dB = 11.0 W/kg = 10.41 dBW/kg

■ Verification Data (5 250 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 11/18/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

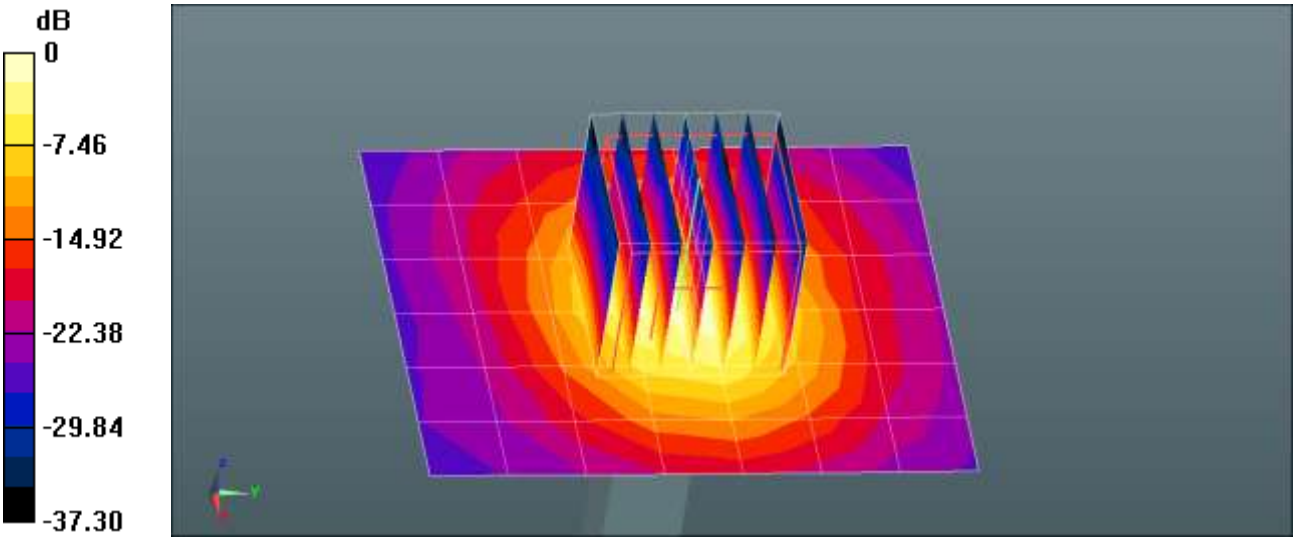
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.8 S/m; ε_r = 36.824; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(5.55, 5.55, 5.55) @ 5250 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5250MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.76 W/kg

Dipole/5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.18 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 15.8 W/kg
SAR(1 g) = 3.92 W/kg; SAR(10 g) = 1.13 W/kg
Maximum value of SAR (measured) = 9.80 W/kg



0 dB = 9.80 W/kg = 9.91 dBW/kg

■ Verification Data (5 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 11/19/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

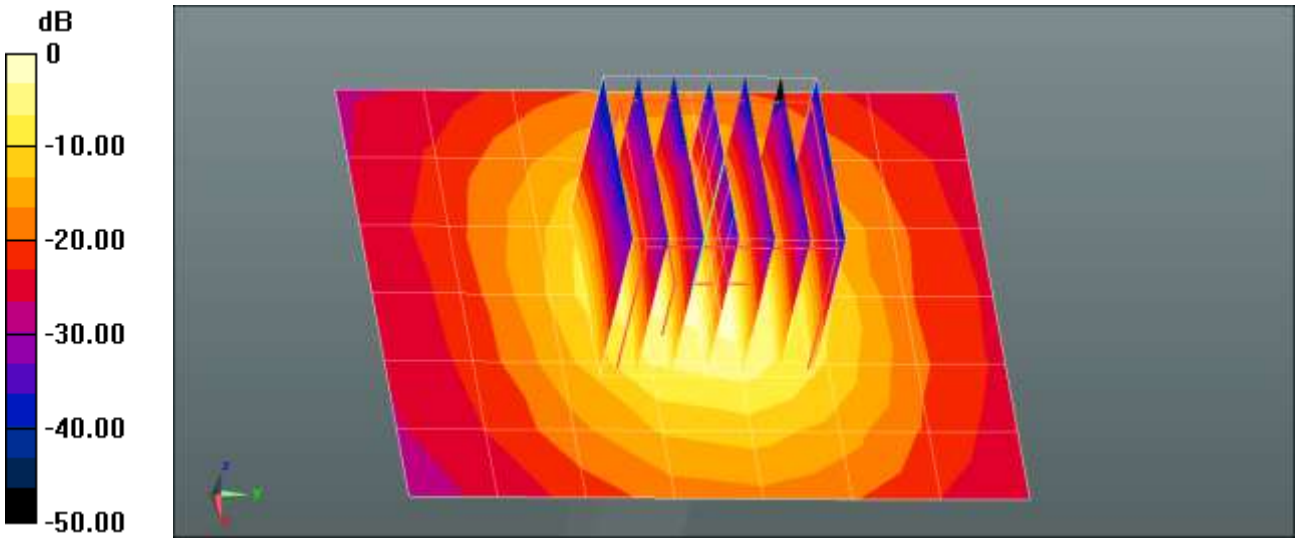
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.05 S/m; ε_r = 36.554; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(4.95, 4.95, 4.95) @ 5600 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5600MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.83 W/kg

Dipole/5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.20 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 18.3 W/kg
SAR(1 g) = 4.22 W/kg; SAR(10 g) = 1.2 W/kg
Maximum value of SAR (measured) = 10.8 W/kg



0 dB = 10.8 W/kg = 10.33 dBW/kg

■ **Verification Data (5 750 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.2 ℃
Test Date: 11/22/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

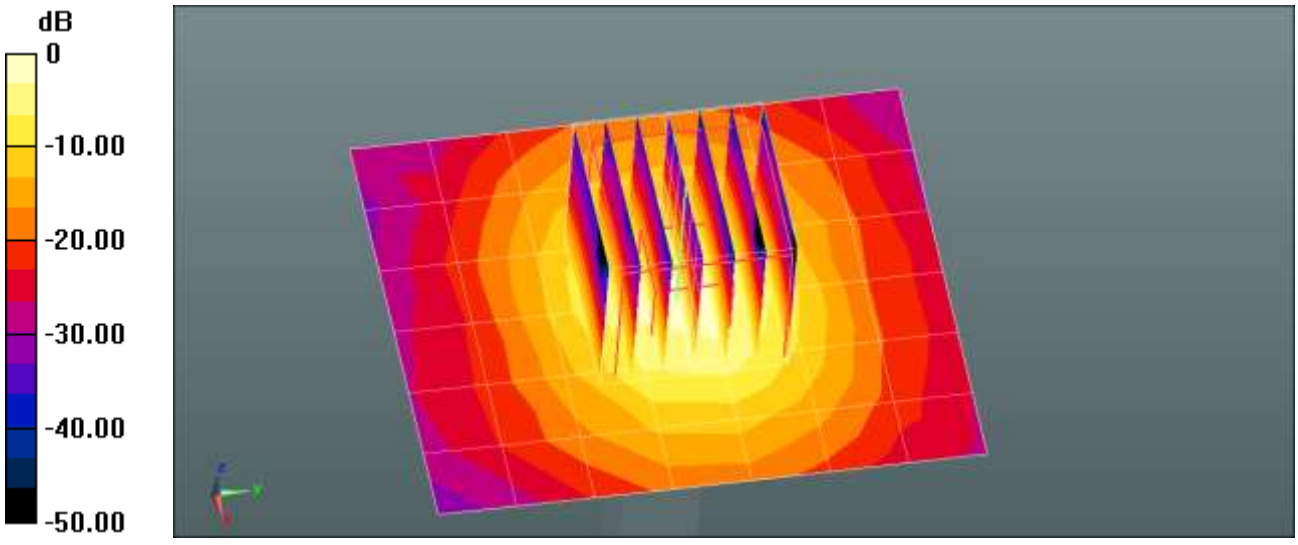
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.291 S/m; ε_r = 36.238; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7679; ConvF(5.05, 5.05, 5.05) @ 5750 MHz; Calibrated: 2021-09-10
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2021-02-22
- Phantom: SAM with CRP v5.0(Right)_2014_03_05; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5750MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.46 W/kg

Dipole/5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.47 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 17.8 W/kg
SAR(1 g) = 4.02 W/kg; SAR(10 g) = 1.15 W/kg
Maximum value of SAR (measured) = 10.5 W/kg



0 dB = 10.5 W/kg = 10.21 dBW/kg

■ **Verification Data (5 800 ㎒ Head)**

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.2 ℃
Test Date:	11/17/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

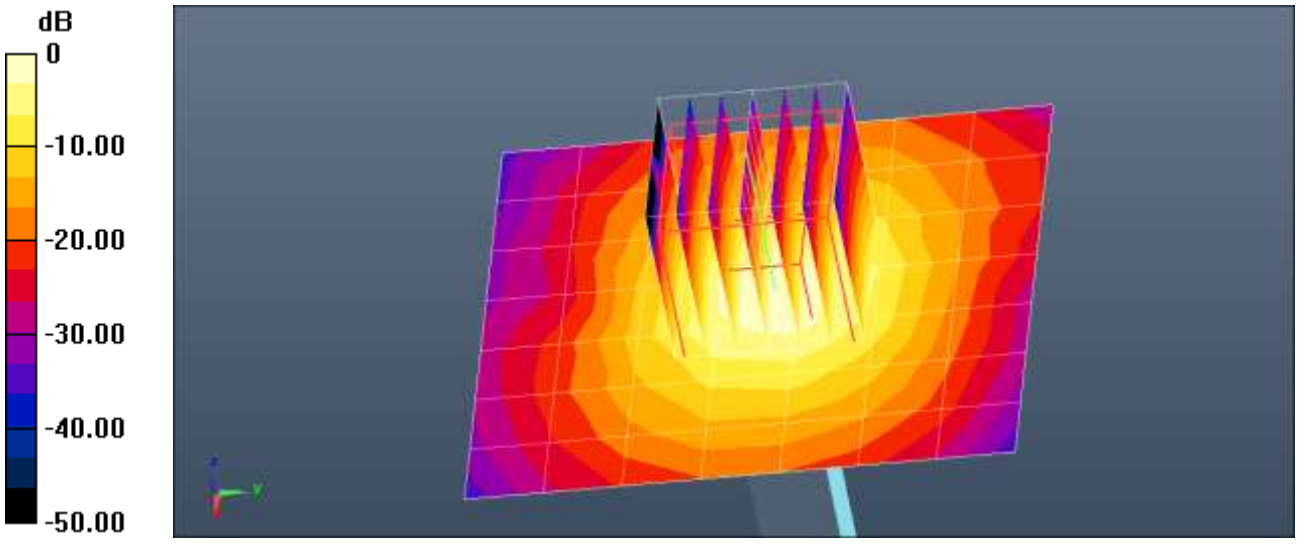
Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.305 S/m; ε_r = 36.998; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(5.05, 5.05, 5.05) @ 5800 MHz; Calibrated: 2021-04-20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2021-02-19
- Phantom: SAM with CRP v5.0_Right; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5800MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 7.68 W/kg

Dipole/5800MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 44.44 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 16.0 W/kg
SAR(1 g) = 4.01 W/kg; SAR(10 g) = 1.29 W/kg
Maximum value of SAR (measured) = 9.43 W/kg



0 dB = 9.43 W/kg = 9.75 dBW/kg

■ **Verification Data (5 800 ㎒ Head)**

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.0 ℃
Test Date:	11/18/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

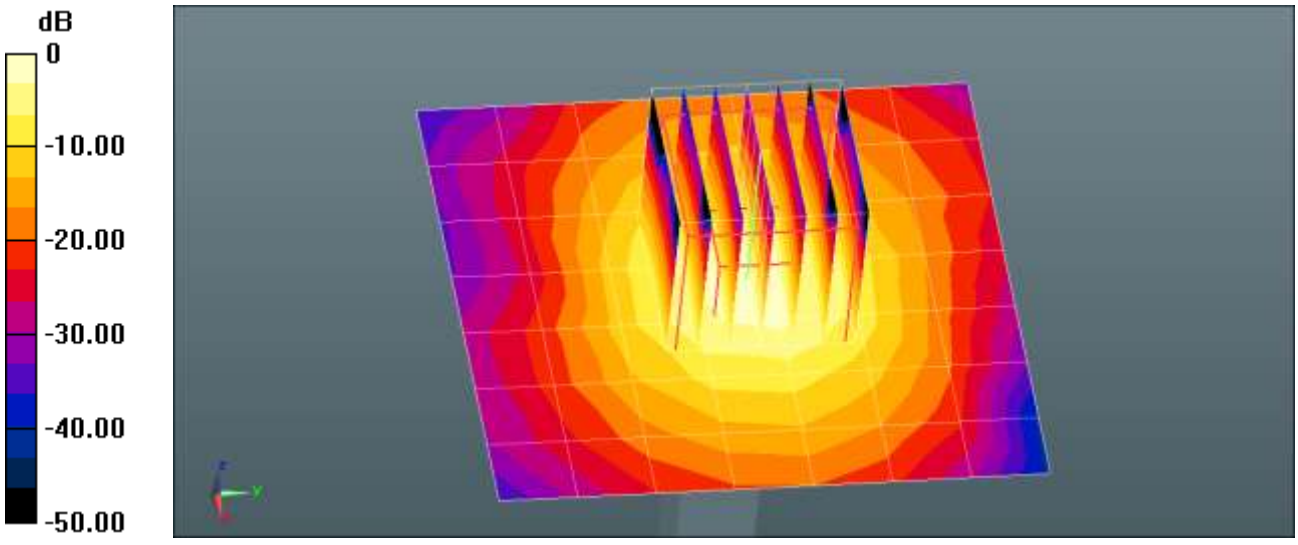
Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.279 S/m; ε_r = 36.82; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(5.05, 5.05, 5.05) @ 5800 MHz; Calibrated: 2021-04-20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2021-02-19
- Phantom: SAM with CRP v5.0_Right; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5800MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 7.48 W/kg

Dipole/5800MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 44.57 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 15.8 W/kg
SAR(1 g) = 3.95 W/kg; SAR(10 g) = 1.27 W/kg
Maximum value of SAR (measured) = 9.47 W/kg



0 dB = 9.47 W/kg = 9.76 dBW/kg

■ **Verification Data (5 800 ㎒ Head)**

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	11/19/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

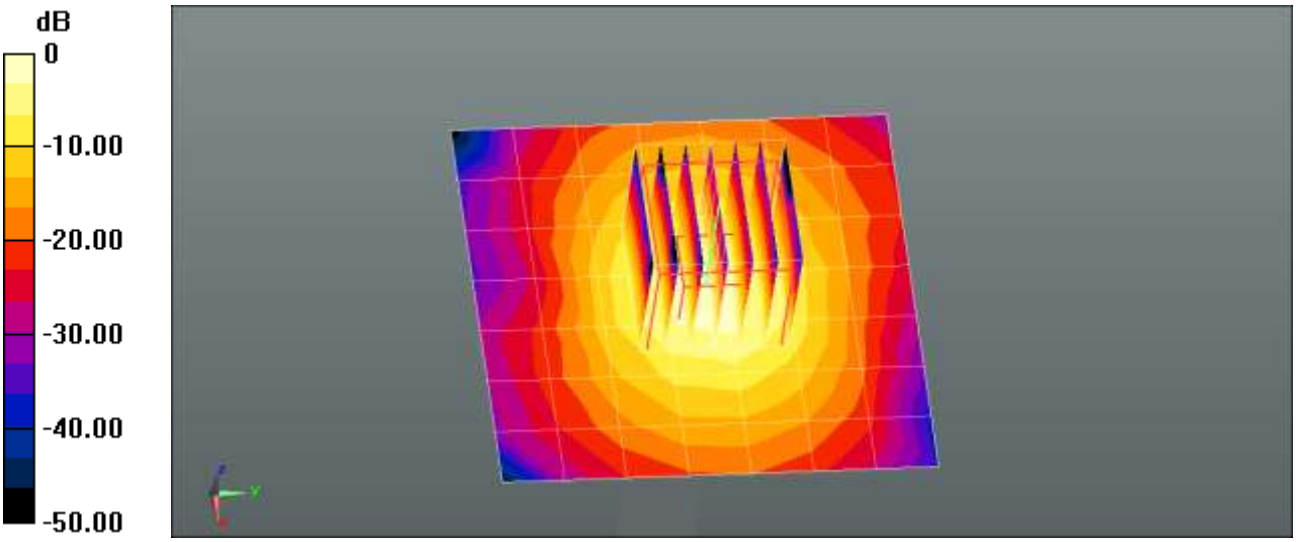
Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.201 S/m; ε_r = 36.474; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(5.05, 5.05, 5.05) @ 5800 MHz; Calibrated: 2021-04-20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2021-02-19
- Phantom: SAM with CRP v5.0_Right; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/5800MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 7.53 W/kg

Dipole/5800MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 44.49 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 15.6 W/kg
SAR(1 g) = 3.9 W/kg; SAR(10 g) = 1.25 W/kg
Maximum value of SAR (measured) = 9.00 W/kg



0 dB = 9.00 W/kg = 9.54 dBW/kg

- 5G NR SUB 6

■ **Verification Data (835 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.2 ℃
Test Date: 11/16/2021

DUT: Dipole 835 MHz D835V2;

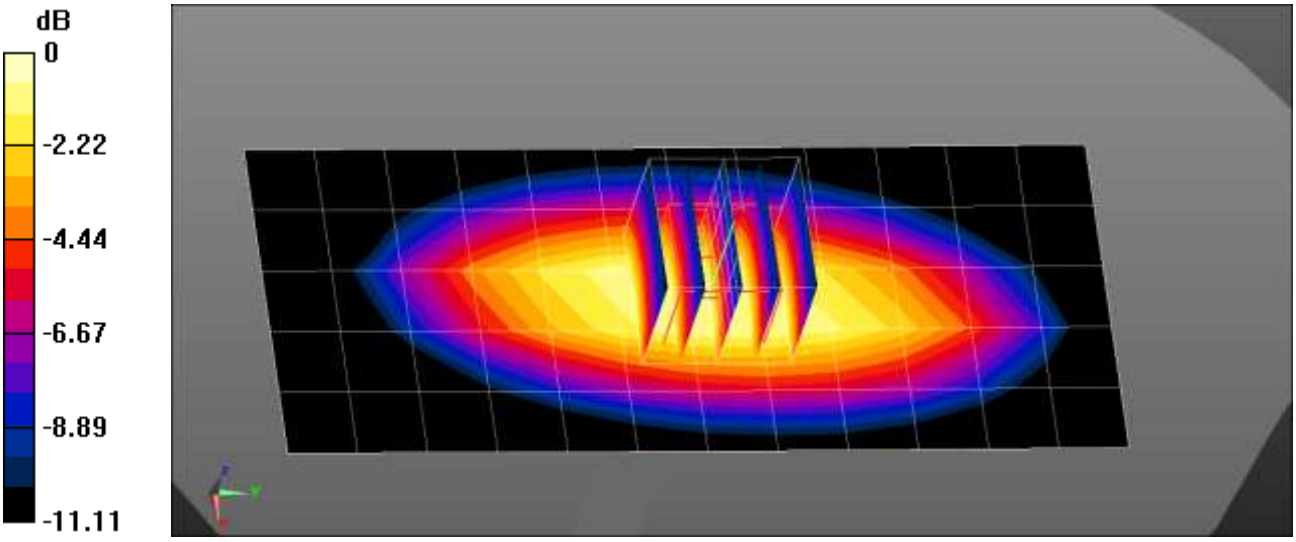
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.937 S/m; ε_r = 40.651; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(9.66, 9.66, 9.66) @ 835 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Right_20170913; Type: QD000P40CC;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.552 W/kg

Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.83 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.766 W/kg
SAR(1 g) = 0.485 W/kg; SAR(10 g) = 0.313 W/kg
Maximum value of SAR (measured) = 0.667 W/kg



0 dB = 0.667 W/kg = -1.76 dBW/kg

■ Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	11/24/2021

DUT: Dipole 1800 MHz D1800V2;

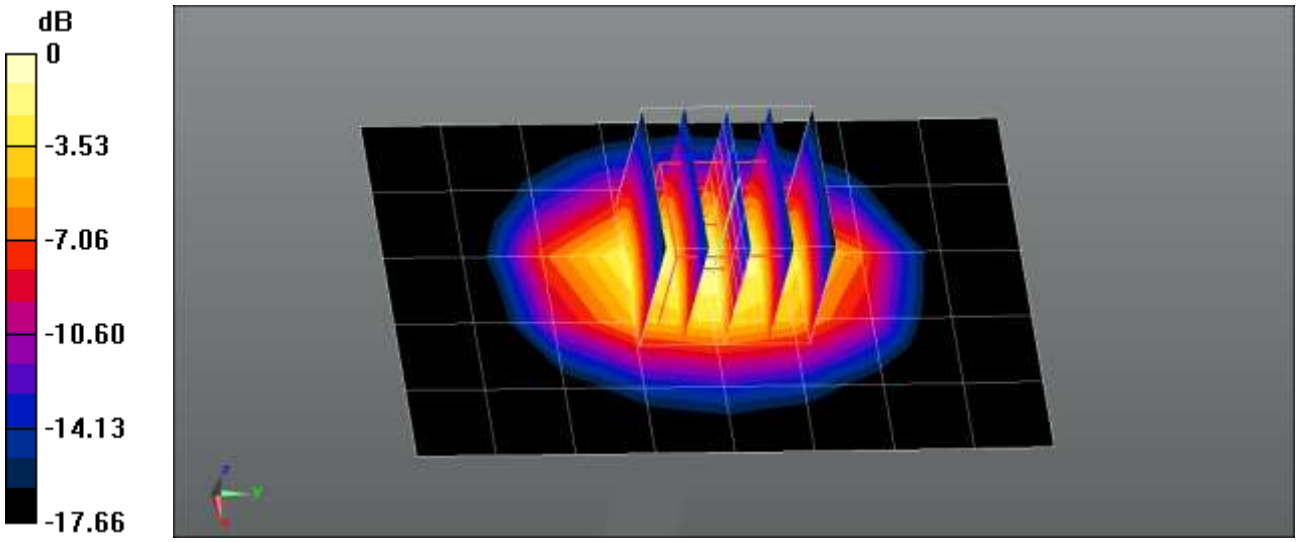
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.366 S/m; ε_r = 41.135; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.12, 8.12, 8.12) @ 1800 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913; Type: QD000P40CD;
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Dipole/1800MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.65 W/kg

Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.67 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 3.61 W/kg
SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.04 W/kg
Maximum value of SAR (measured) = 3.07 W/kg



0 dB = 3.07 W/kg = 4.87 dBW/kg

- Hybrid SPLSR/Volume (Rear)

■ **Verification Data (750 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.3 ℃
Test Date: 11/25/2021

Measurement Report for Device, , , CW, Channel 0 (750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	750.0, 0	9.97	0.880	42.5

Hardware Setup

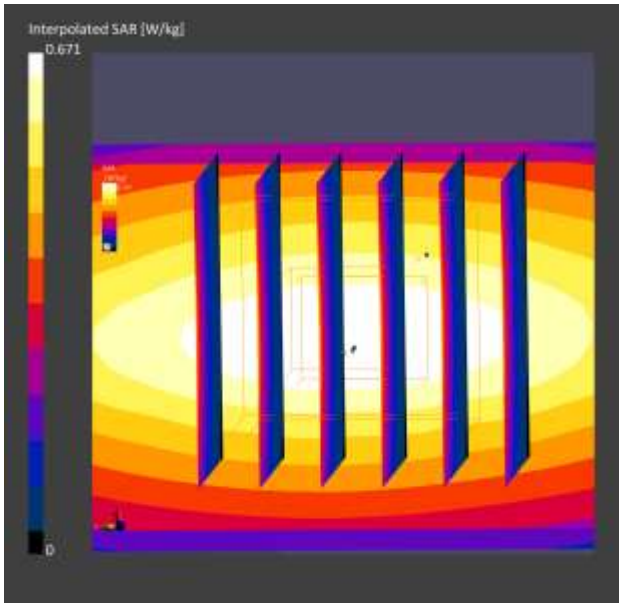
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.473	0.420
psSAR10g [W/Kg]	0.311	0.274
Power Drift [dB]	0.01	-0.01



■ Verification Data (750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.3 ℃
Test Date: 11/25/2021

Measurement Report for Device, , , CW, Channel 0 (750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	750.0, 0	9.97	0.884	42.6

Hardware Setup

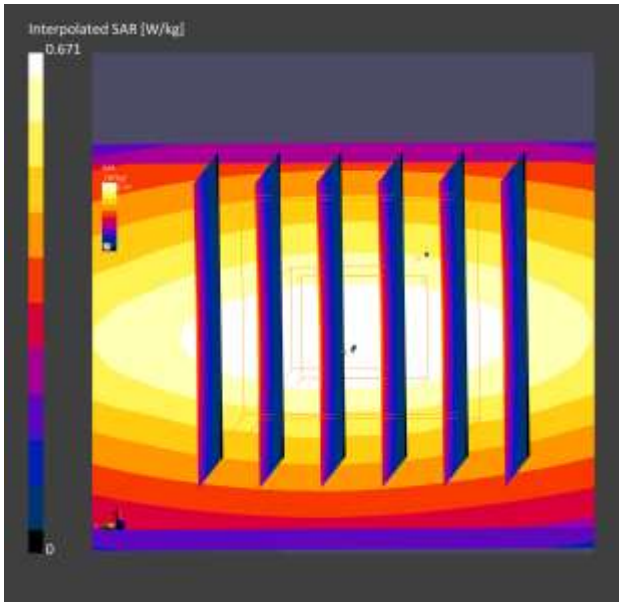
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.428	0.428
psSAR10g [W/Kg]	0.285	0.279
Power Drift [dB]	-0.16	-0.19



■ Verification Data (835 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.8 ℃
Test Date: 11/29/2021

Measurement Report for Device, , , CW, Channel 0 (835.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,	835.0, 0	9.63	0.930	40.6

Hardware Setup

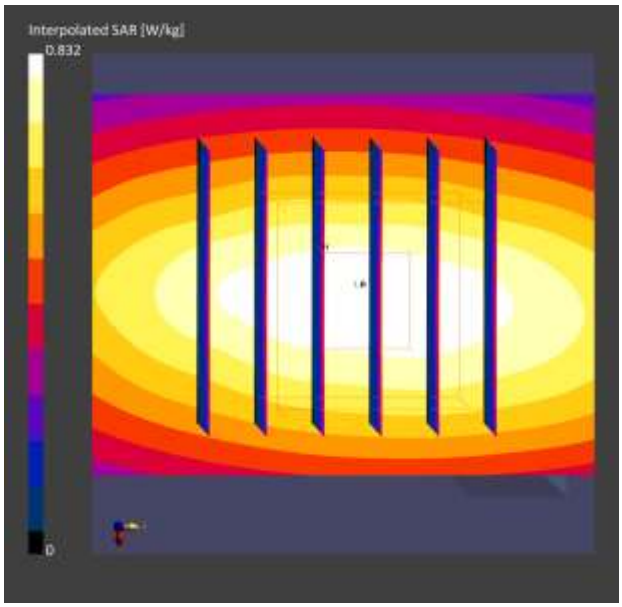
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.472	0.478
psSAR10g [W/Kg]	0.313	0.309
Power Drift [dB]	-0.11	-0.10



■ Verification Data (835 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.3 ℃
Test Date: 11/25/2021

Measurement Report for Device, CW, Channel 0 (835.0MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	, 835.0, 0	9.63	0.930	40.4

Hardware Setup

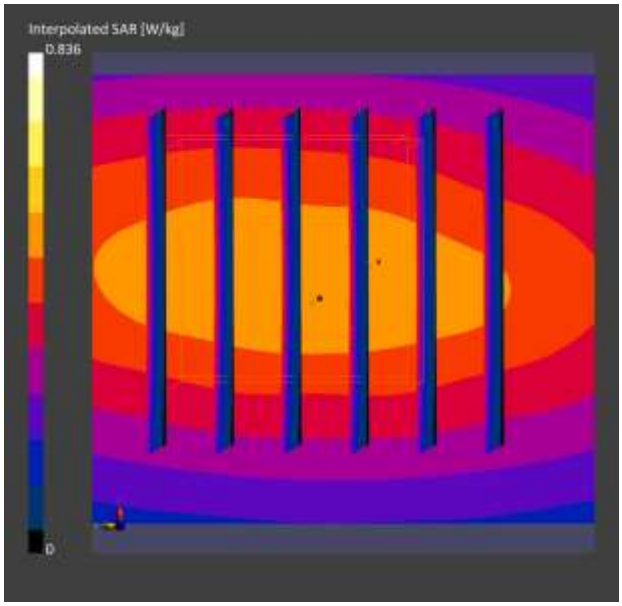
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.477	0.481
psSAR10g [W/Kg]	0.316	0.311
Power Drift [dB]	-0.16	-0.29



■ Verification Data (1 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.4 ℃
Test Date: 11/24/2021

Measurement Report for Device, , , CW, Channel 0 (1800.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL ,	1800.0, 0	8.63	1.38	41.1

Hardware Setup

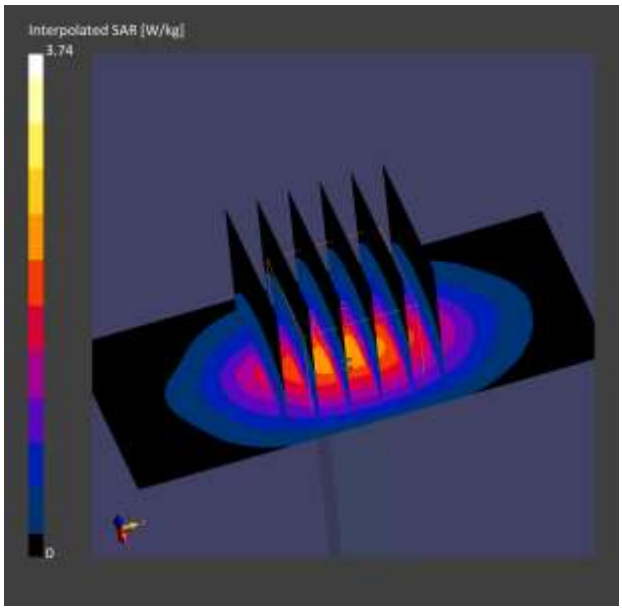
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	1.97	1.94
psSAR10g [W/Kg]	1.04	1.01
Power Drift [dB]	-0.21	-0.27



■ Verification Data (1 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.6 ℃
Test Date: 11/30/2021

Measurement Report for Device, , , CW, Channel 0 (1800.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL ,	1800.0, 0	8.63	1.42	41.2

Hardware Setup

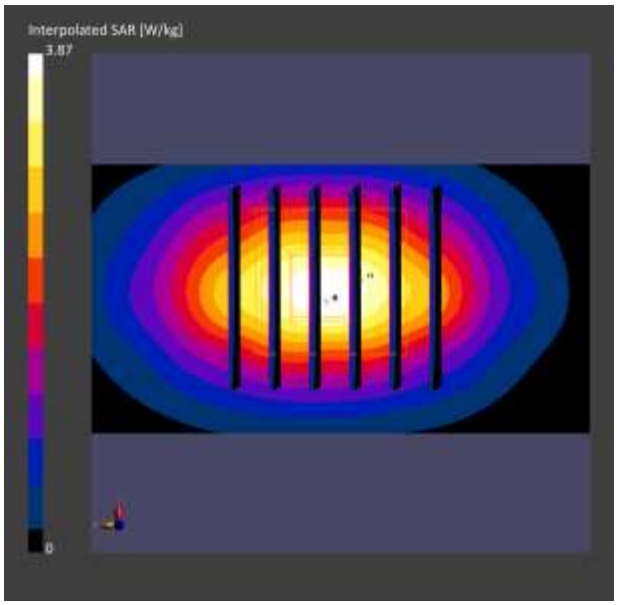
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	1.98	2.00
psSAR10g [W/Kg]	1.05	1.04
Power Drift [dB]	-0.13	-0.19



■ Verification Data (1 900 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.6 ℃
Test Date: 11/30/2021
Measurement Report for Device, , , CW, Channel 0 (1900.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	1900.0, 0	8.38	1.45	41.4

Hardware Setup

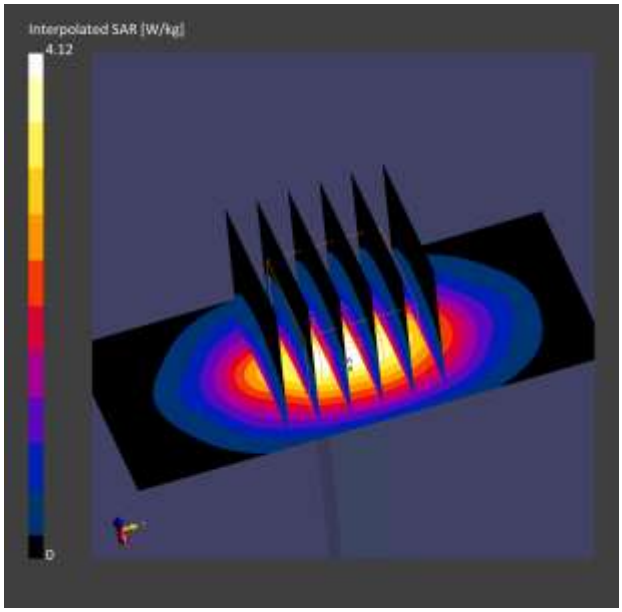
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
Date	2021-12-03, 11:22	2021-12-03, 11:26
psSAR1g [W/Kg]	2.05	2.05
psSAR10g [W/Kg]	1.07	1.06
Power Drift [dB]	-0.10	-0.23



■ Verification Data (1 900 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.6 ℃
Test Date: 11/30/2021

Measurement Report for Device, , , CW, Channel 0 (1900.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	1900.0, 0	8.38	1.40	41.4

Hardware Setup

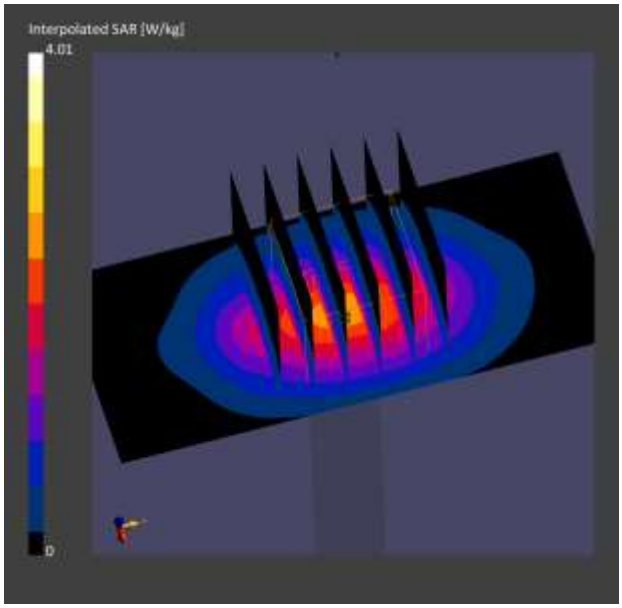
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.5
MAIA	N/A	N/A

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.00	1.99
psSAR10g [W/Kg]	1.04	1.03
Power Drift [dB]	-0.17	-0.21



■ Verification Data (2 450 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.0 ℃
Test Date: 11/26/2021

Measurement Report for Device, , , CW, Channel 0 (2450.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	2450.0, 0	7.62	1.80	38.7

Hardware Setup

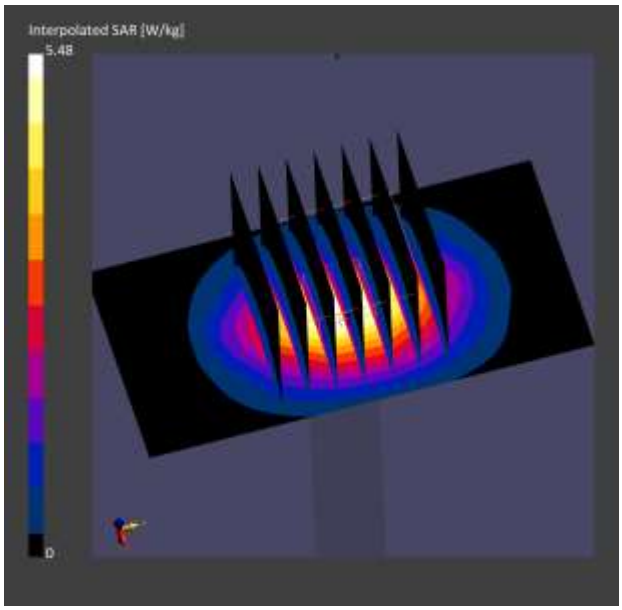
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.64	2.58
psSAR10g [W/Kg]	1.23	1.20
Power Drift [dB]	-0.08	-0.26



■ Verification Data (5 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.4 ℃
Test Date: 11/24/2021

Measurement Report for Device, , , CW, Channel 0 (5600.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	5600.0, 0	4.85	5.02	35.9

Hardware Setup

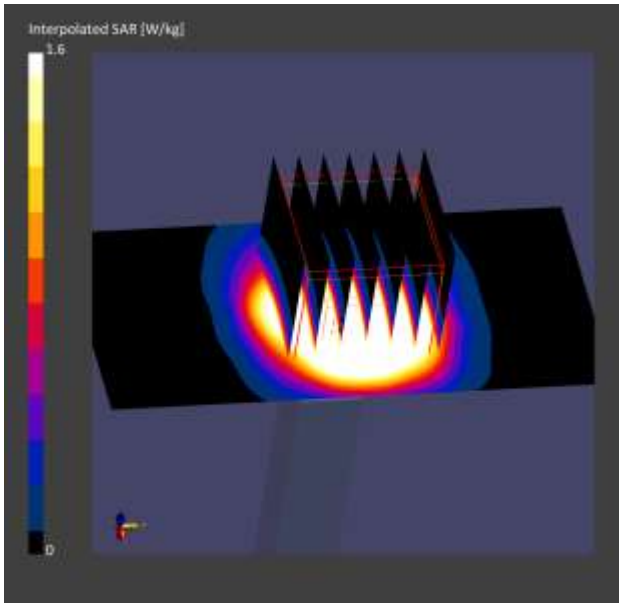
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.94	4.39
psSAR10g [W/Kg]	1.19	1.29
Power Drift [dB]	0.05	-0.10



■ Verification Data (6 500 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.4 ℃
Test Date: 11/24/2021

Measurement Report for Device, , , CW, Channel 0 (6500.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	6500.0, 0	5.7	6.28	33.9

Hardware Setup

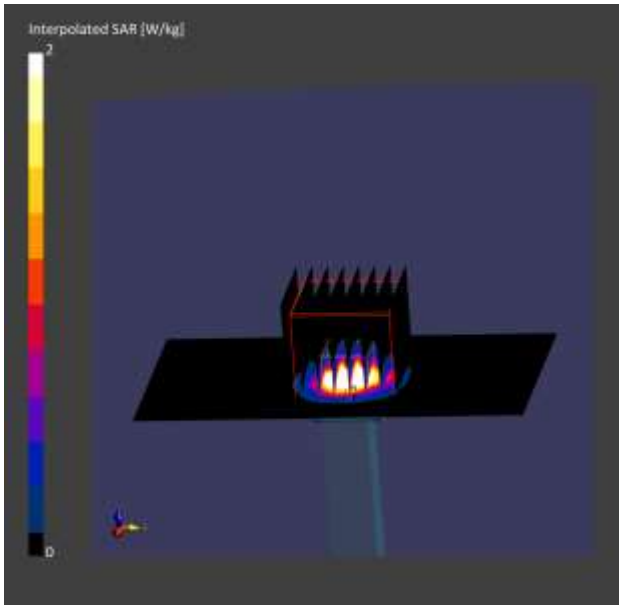
Phantom	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 85.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.52	2.90
psSAR10g [W/Kg]	0.512	0.554
Power Drift [dB]	0.04	-0.10



- Hybrid SPLSR/Volume (Top)

■ **Verification Data (750 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 11/26/2021

Measurement Report for Device, , , CW, Channel 0 (750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	750.0, 0	10.79	0.879	42.6

Hardware Setup

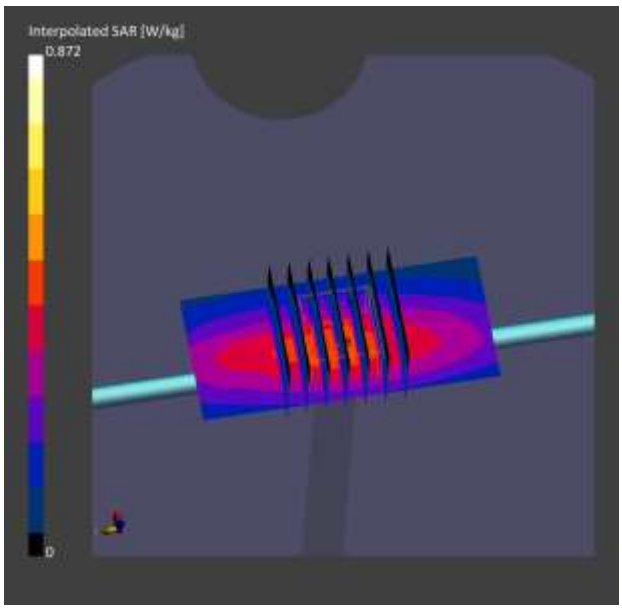
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.440	0.434
psSAR10g [W/Kg]	0.283	0.263
Power Drift [dB]	0.17	0.02



■ Verification Data (835 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 11/26/2021

Measurement Report for Device, , , CW, Channel 0 (835.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	835.0, 0	10.54	0.934	41.1

Hardware Setup

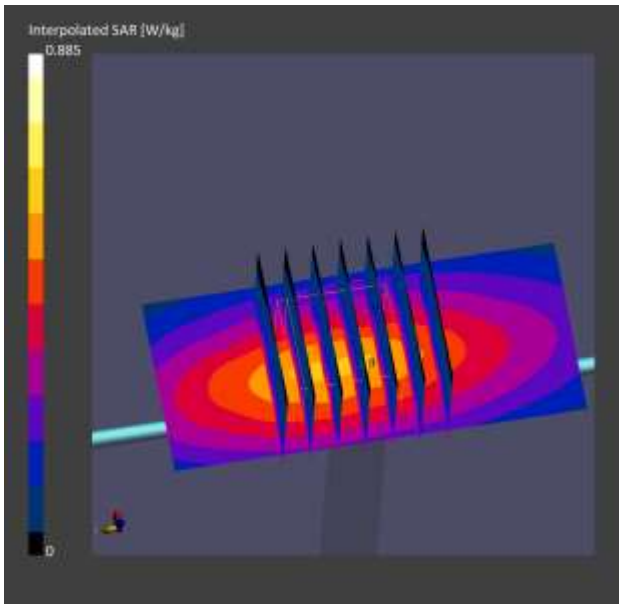
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.525	0.495
psSAR10g [W/Kg]	0.340	0.312
Power Drift [dB]	0.17	-0.31



■ Verification Data (1 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.7 ℃
Test Date: 11/30/2021

Measurement Report for Device, , , CW, Channel 0 (1800.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	1800.0, 0	9.4	1.42	41.1

Hardware Setup

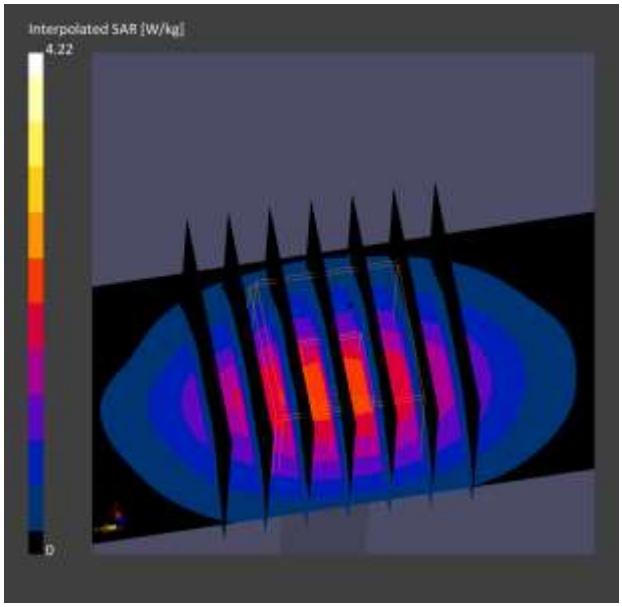
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	1.96	1.88
psSAR10g [W/Kg]	1.04	0.979
Power Drift [dB]	-0.02	-0.26



■ Verification Data (1 900 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.7 ℃
Test Date: 11/30/2021

Measurement Report for Device, , , CW, Channel 0 (1900.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	1900.0, 0	9.15	1.41	41.4

Hardware Setup

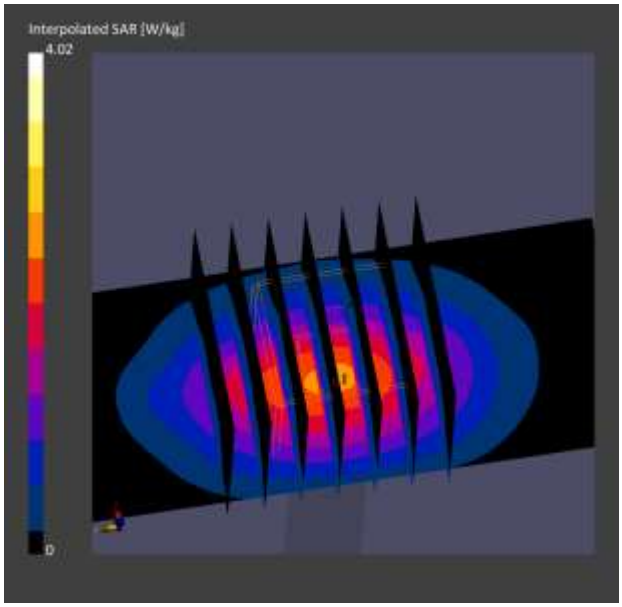
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	1.97	1.84
psSAR10g [W/Kg]	1.05	0.971
Power Drift [dB]	-0.14	-0.36



■ Verification Data (2 450 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.5 ℃
Test Date: 11/24/2021

Measurement Report for Device, , , CW, Channel 0 (2450.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	2450.0, 0	8.49	1.86	38.9

Hardware Setup

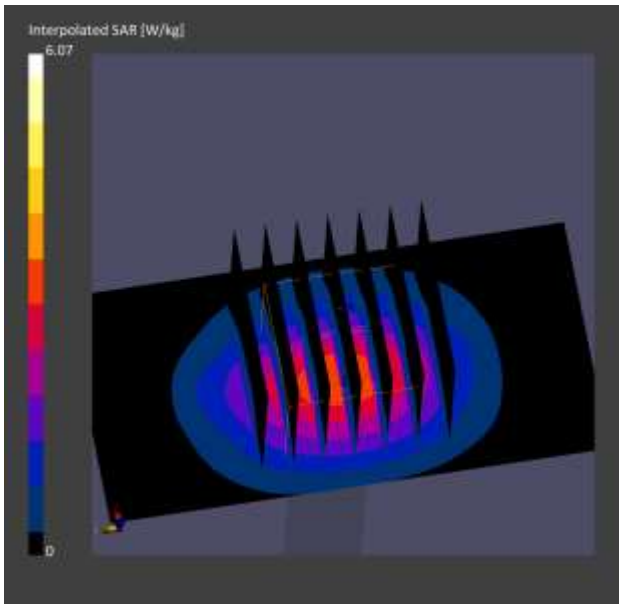
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 80.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.73	2.55
psSAR10g [W/Kg]	1.30	1.21
Power Drift [dB]	-0.11	-0.26



■ **Verification Data (6 500 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.4 ℃
Test Date: 11/24/2021

Measurement Report for Device, CW, Channel 0 (6500.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	6500.0, 0	5.7	6.28	33.9

Hardware Setup

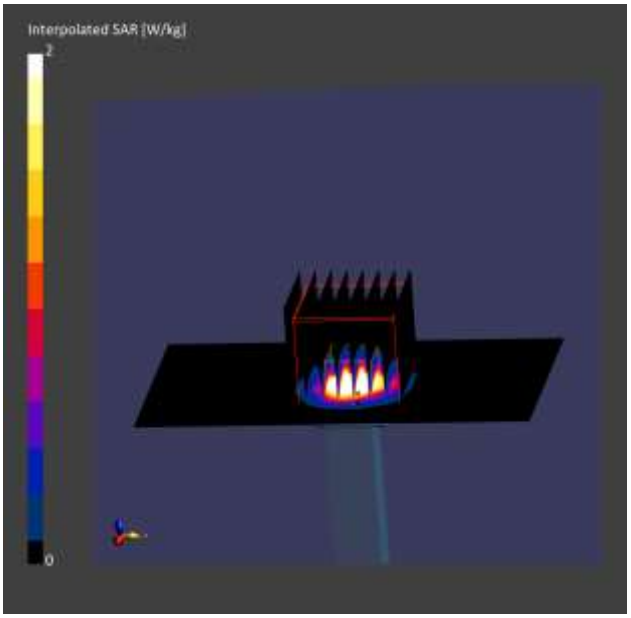
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V4.0 (20deg probe tilt) - xxxx	HBBL-600-10000 Charge:xxxx, 2021-Dec-03	EX3DV4 - SN3968, 2021-09-29	DAE4 Sn868, 2021-09-27

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	51.0 x 85.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Grading Ratio	1.5	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.52	2.90
psSAR10g [W/Kg]	0.512	0.554
Power Drift [dB]	0.04	-0.10



Appendix D. – SAR Tissue Characterization

The brain and muscle mixtures consist of a viscous gel using hydrox-ethyl cellulose (HEC) gelling agent and saline solution (see Table 3.1). Preservation with a bacteriacide is added and visual inspection is made to make sure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the desired tissue. The mixture characterizations used for the brain and muscle tissue simulating liquids are according to the data by C. Gabriel and G. Harts grove.

Ingredients (% by weight)	Frequency (㎒)											
	750		835		1 750		1 900		2 450 – 2 700		3500 - 5 800	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	41.1	51.7	40.45	53.06	52.6	68.8	54.9	70.17	71.88	73.2	65.52	78.66
Salt (NaCl)	1.4	0.9	1.45	0.94	0.4	0.2	0.18	0.39	0.16	0.1	0.0	0.0
Sugar	57.0	47.2	57.0	44.9	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
HEC	0.2	0	1.0	1.0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
Bactericide	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0
Triton X-100	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.97	0.0	17.24	10.67
DGBE	0.0	0.0	0.0	0.0	47	31	44.92	29.44	7.99	26.7	0.0	0.0
Diethylene glycol hexyl ether	-	-	-	-	-	-	-	-	-	-	-	-

Salt:	99 % Pure Sodium Chloride	Sugar:	98 % Pure Sucrose
Water:	De-ionized, 16M resistivity	HEC:	Hydroxyethyl Cellulose
DGBE:	99 % Di(ethylene glycol) butyl ether,[2-(2-butoxyethoxy) ethanol]		
Triton X-100(ultra-pure):	Polyethylene glycol mono[4-(1,1,3,3-tetramethylbutyl)phenyl] ether		

Composition of the Tissue Equivalent Matter

Appendix E. – SAR System Validation

Per FCC KCB 865664 D02v01r02, SAR system validation status should be document to confirm measurement accuracy. The SAR systems (including SAR probes, system components and software versions) used for this device were validated against its performance specifications prior to the SAR measurements. Reference dipoles were used with the required tissue- equivalent media for system validation, according to the procedures outlined in IEEE 1528-2013 and FCC KDB 865664 D01v01r04. Since SAR probe calibrations are frequency dependent, each probe calibration point was validated at a frequency within the valid frequency range of the probe calibration point, using the system that normally operates with the probe for routine SAR measurements and according to the required tissue-equivalent media.
A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

SAR System No.	Probe	Probe Type	Probe Calibration Point		Dipole	Date	Dielectric Parameters		CW Validation			Modulation Validation		
							Measured Permittivity	Measured Conductivity	Sensitivity	Probe Linearity	Probe Isotropy	MOD. Type	Duty Factor	PAR
15	3972	EX3DV4	Head	750	1014	2021-07-09	41.7	0.87	PASS	PASS	PASS	N/A	N/A	N/A
15	3972	EX3DV4	Head	835	4d165	2021-09-20	41.6	0.92	PASS	PASS	PASS	GMSK	PASS	N/A
15	3972	EX3DV4	Head	835	4d165	2021-09-20	41.6	0.92	PASS	PASS	PASS	N/A	N/A	N/A
15	3972	EX3DV4	Head	1750	2d015	2021-08-30	40.2	1.39	PASS	PASS	PASS	GMSK	PASS	N/A
15	3972	EX3DV4	Head	1750	2d015	2021-08-30	40.2	1.39	PASS	PASS	PASS	N/A	N/A	N/A
15	3972	EX3DV4	Head	1900	5d032	2021-06-22	39.8	1.41	PASS	PASS	PASS	GMSK	PASS	N/A
15	3972	EX3DV4	Head	1900	5d032	2021-06-22	39.8	1.41	PASS	PASS	PASS	N/A	N/A	N/A
16	7679	EX3DV4	Head	2450	965	2021-10-22	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
5	3076	ES3DV3	Head	2450	965	2021-08-23	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
14	7679	EX3DV4	Head	2600	1106	2021-10-22	39.1	1.94	PASS	PASS	PASS	TDD	PASS	N/A
14	7679	EX3DV4	Head	5250	1107	2021-09-30	35.8	4.65	PASS	PASS	PASS	OFDM	N/A	PASS
14	7679	EX3DV4	Head	5600	1107	2021-09-30	35.4	5.02	PASS	PASS	PASS	OFDM	N/A	PASS
14	7679	EX3DV4	Head	5750	1107	2021-09-30	35.3	5.18	PASS	PASS	PASS	OFDM	N/A	PASS
13	7654	EX3DV4	Head	750	1014	2021-07-09	41.7	0.87	PASS	PASS	PASS	N/A	N/A	N/A
13	7654	EX3DV4	Head	835	4d165	2021-09-20	41.6	0.92	PASS	PASS	PASS	N/A	N/A	N/A
13	7654	EX3DV4	Head	1750	2d015	2021-08-30	40.2	1.39	PASS	PASS	PASS	N/A	N/A	N/A
13	7654	EX3DV4	Head	1900	5d032	2021-06-22	39.8	1.41	PASS	PASS	PASS	N/A	N/A	N/A
13	7654	EX3DV4	Head	2450	965	2021-07-23	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
9	3968	EX3DV4	Head	750	1014	2021-10-15	41.7	0.87	PASS	PASS	PASS	N/A	N/A	N/A
9	3968	EX3DV4	Head	835	4d165	2021-10-28	41.6	0.92	PASS	PASS	PASS	N/A	N/A	N/A
9	3968	EX3DV4	Head	1750	2d015	2021-10-27	40.2	1.39	PASS	PASS	PASS	N/A	N/A	N/A
9	3968	EX3DV4	Head	1900	5d032	2021-10-14	39.8	1.41	PASS	PASS	PASS	N/A	N/A	N/A
9	3968	EX3DV4	Head	2450	965	2021-10-19	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
9	3968	EX3DV4	Head	5600	1107	2021-10-25	35.4	5.02	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary 1g

Note;
All measurement were performed using probes calibrated for CW signal only. Modulations in the table above represent test configurations for which the measurement system has been validated per FCC KDB Publication 865664 D01v01r04. SAR system were validated for modulated signals with a periodic duty cycle, such as GMSK, or with a high peak to average ratio (>5 dB), such as OFDM according to KDB 865664 D01v01r04.