Appendix

Appendix B. – SAR Test Plots

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.6℃
Ambient Temperature:	20.8℃
Test Date:	08/13/2020
Plot No.:	1

DUT: SM-G781U; Type: Bar

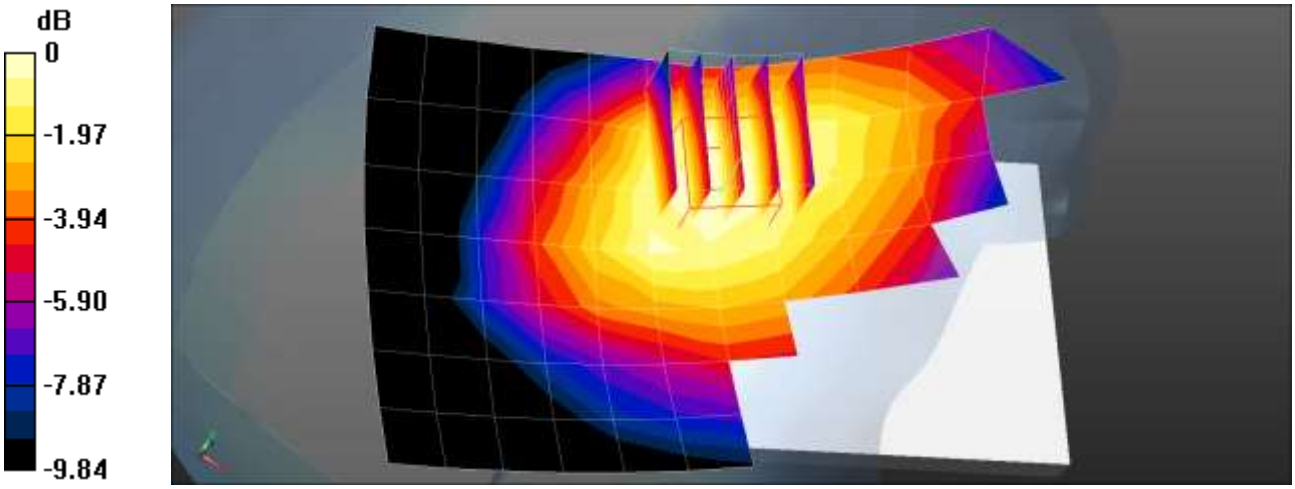
Communication System: UID 0, CDMA BC10 (FCC) (0); Frequency: 820 MHz;Duty Cycle: 1:1
Medium parameters used: f = 820 MHz; σ = 0.919 S/m; ε_r = 42.868; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96) @ 820 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC10 Head Right Touch SO55 RC3 560ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.294 W/kg

CDMA BC10 Head Right Touch SO55 RC3 560ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.073 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.369 W/kg
SAR(1 g) = 0.285 W/kg; SAR(10 g) = 0.221 W/kg
Maximum value of SAR (measured) = 0.295 W/kg



0 dB = 0.295 W/kg = -5.30 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.2℃
Test Date:	08/04/2020
Plot No.:	2

DUT: SM-G781U; Type: Bar

Communication System: UID 0, CDMA (0); Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.912 S/m; ε_r = 42.466; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 836.52 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC0 Head Right Touch EVDO Rev. A 384ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.228 W/kg

CDMA BC0 Head Right Touch EVDO Rev. A 384ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.244 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.257 W/kg
SAR(1 g) = 0.202 W/kg; SAR(10 g) = 0.156 W/kg
Maximum value of SAR (measured) = 0.239 W/kg

0 dB = 0.228 W/kg = -6.42 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.8℃
Test Date:	08/12/2020
Plot No.:	3

DUT: SM-G781U; Type: Bar

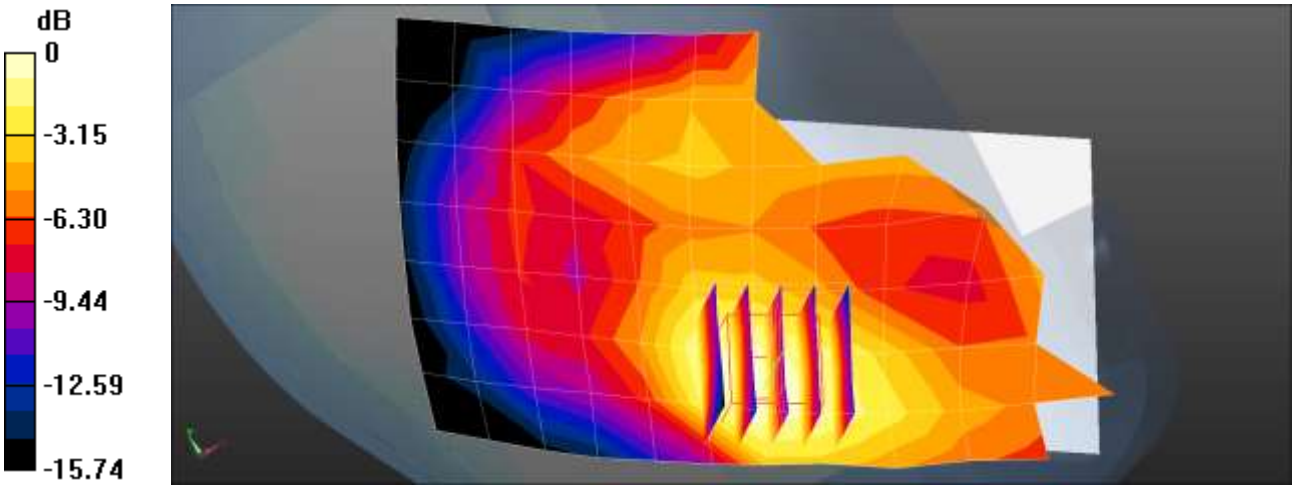
Communication System: UID 0, CDMA BC1(1900MHz) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.369 S/m; ε_r = 40.062; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1880 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC1 Head Left Touch EvDO Rev.A 600ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.118 W/kg

CDMA BC1 Head Left Touch EvDO Rev.A 600ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.559 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.175 W/kg
SAR(1 g) = 0.122 W/kg; SAR(10 g) = 0.078 W/kg
Maximum value of SAR (measured) = 0.132 W/kg



0 dB = 0.132 W/kg = -8.79 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	08/03/2020
Plot No.:	4

DUT: SM-G781U; Type: Bar

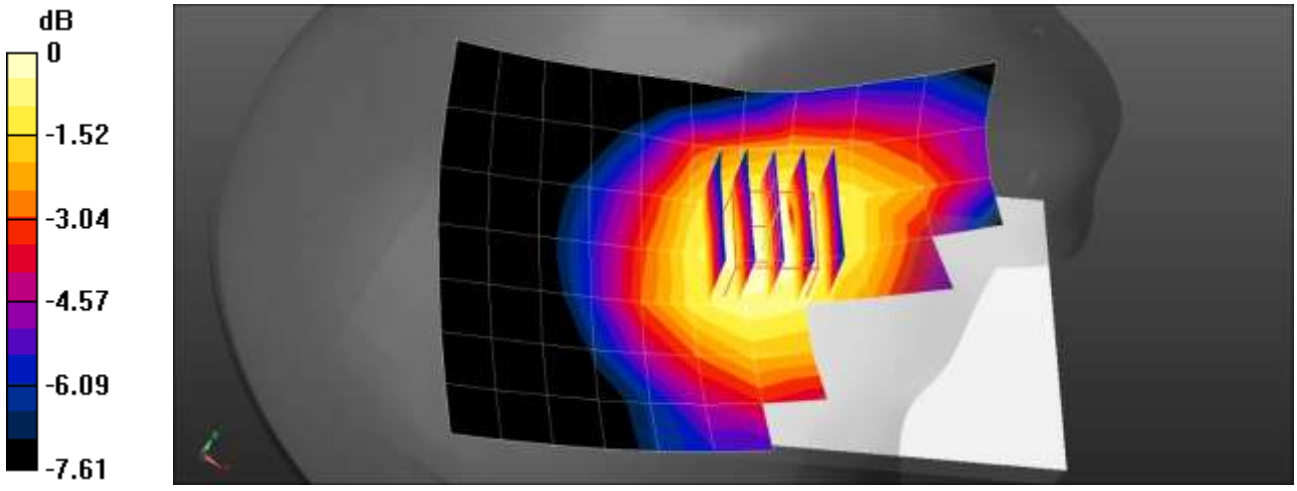
Communication System: UID 0, GSM 850 2Tx (0); Frequency: 836.6 MHz;Duty Cycle: 1:4.14954
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.921 S/m; ε_r = 42.679; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 836.6 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

GSM 850 Head Right Touch 2Tx 190ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.227 W/kg

GSM 850 Head Right Touch 2Tx 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.350 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.286 W/kg
SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.148 W/kg
Maximum value of SAR (measured) = 0.226 W/kg



0 dB = 0.226 W/kg = -6.46 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.0℃
Ambient Temperature: 21.2℃
Test Date: 08/13/2020
Plot No.: 5

DUT: SM-G781U; Type: Bar

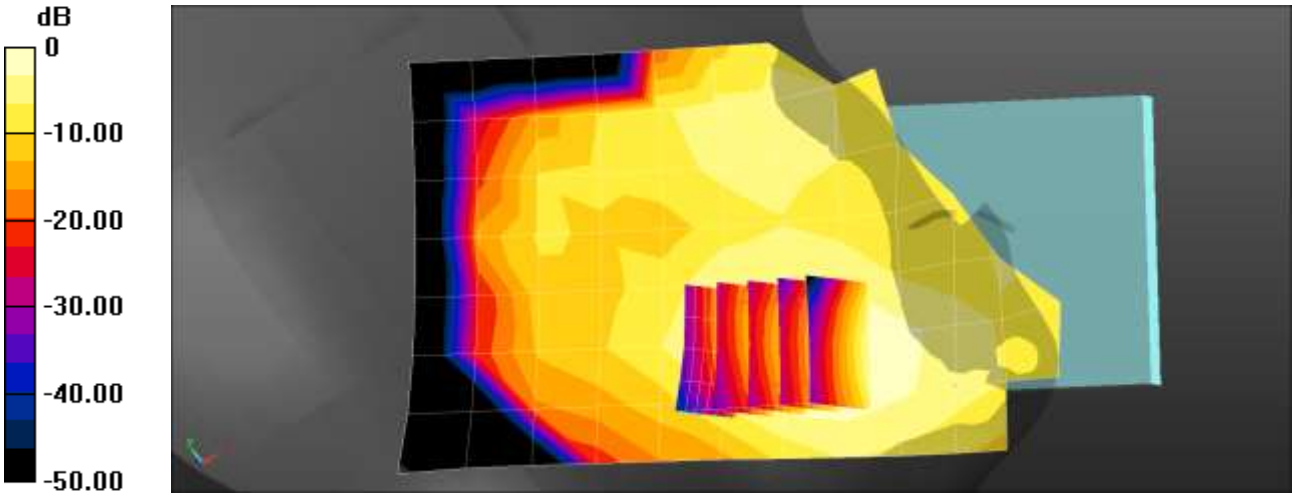
Communication System: UID 0, GSM 1900 3Tx (0); Frequency: 1880 MHz;Duty Cycle: 1:2.77013
Medium parameters used: f = 1880 MHz; σ = 1.411 S/m; ε_r = 39.942; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1880 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Head Left Touch 3Tx 661ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0737 W/kg

GSM1900 Head Left Touch 3Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.474 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.100 W/kg
SAR(1 g) = 0.056 W/kg; SAR(10 g) = 0.032 W/kg
Maximum value of SAR (measured) = 0.0790 W/kg



0 dB = 0.0737 W/kg = -11.32 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	19.4℃
Ambient Temperature:	19.5℃
Test Date:	08/25/2020
Plot No.:	6

DUT: SM-G781U; Type: Bar

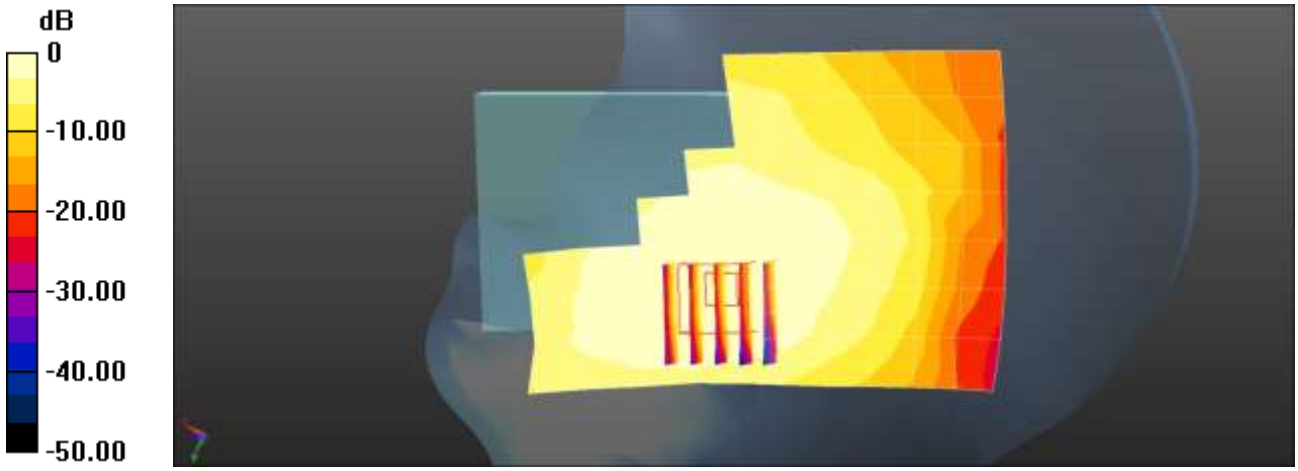
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.915 S/m; ε_r = 42.727; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.6 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 5 Head Right Touch 4183ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.201 W/kg

WCDMA Band 5 Head Right Touch 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.803 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.217 W/kg
SAR(1 g) = 0.181 W/kg; SAR(10 g) = 0.140 W/kg
Maximum value of SAR (measured) = 0.206 W/kg



0 dB = 0.201 W/kg = -6.97 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.9℃
Test Date:	08/20/2020
Plot No.:	7

DUT: SM-G781U; Type: Bar

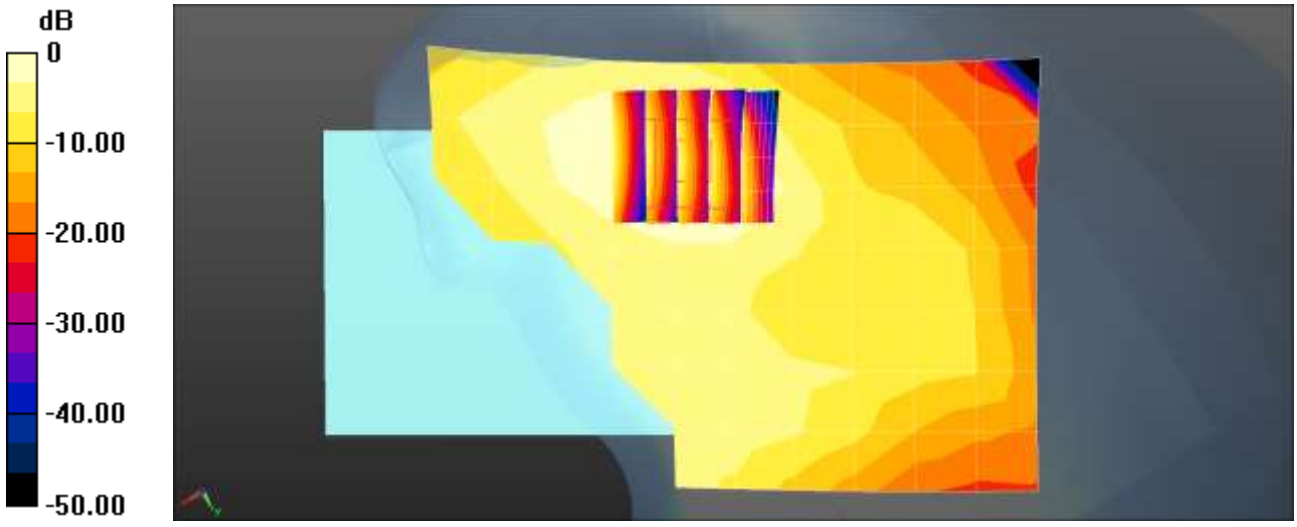
Communication System: UID 0, WCDMA 1700 (0); Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.315 S/m; ε_r = 40.169; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1732.4 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 4 Head Left Touch 1412ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0804 W/kg

WCDMA Band 4 Head Left Touch 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.863 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.105 W/kg
SAR(1 g) = 0.070 W/kg; SAR(10 g) = 0.045 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 69.9%
Maximum value of SAR (measured) = 0.0923 W/kg



0 dB = 0.0804 W/kg = -10.95 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.4℃
Test Date:	08/20/2020
Plot No.:	8

DUT: SM-G781U; Type: Bar

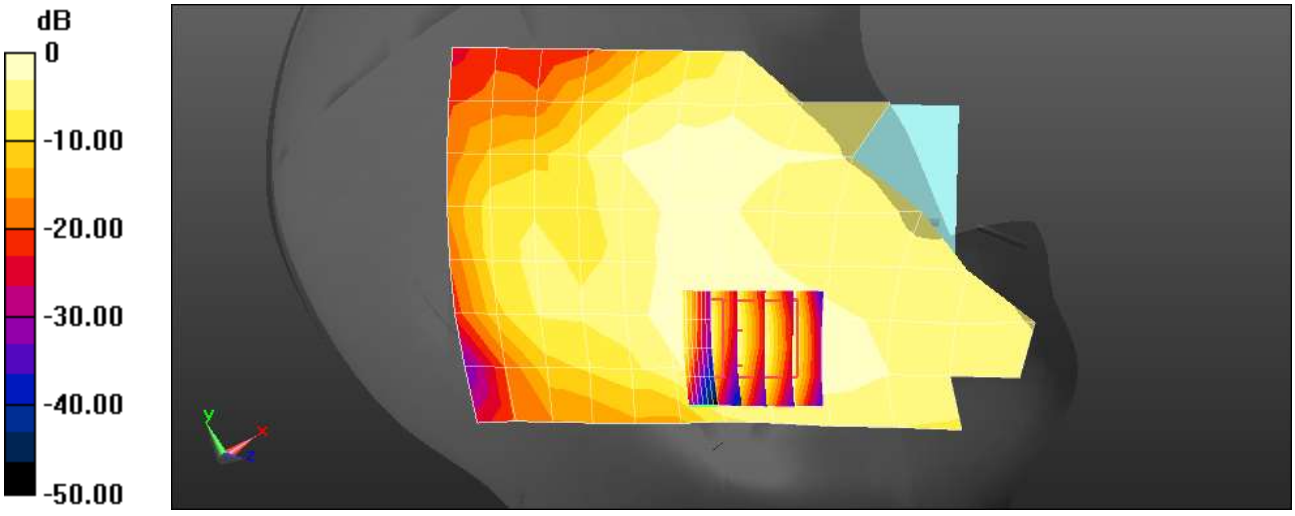
Communication System: UID 0, WCDMA Band 2 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.433 S/m; ε_r = 40.061; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1880 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 2 Head Left Touch 9400ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0853 W/kg

WCDMA Band 2 Head Left Touch 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.936 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.124 W/kg
SAR(1 g) = 0.085 W/kg; SAR(10 g) = 0.054 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 70.9%
Maximum value of SAR (measured) = 0.0982 W/kg



0 dB = 0.0853 W/kg = -10.69 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.8℃
Ambient Temperature:	21.9℃
Test Date:	08/20/2020
Plot No.:	9

DUT: SM-G781U; Type: Bar

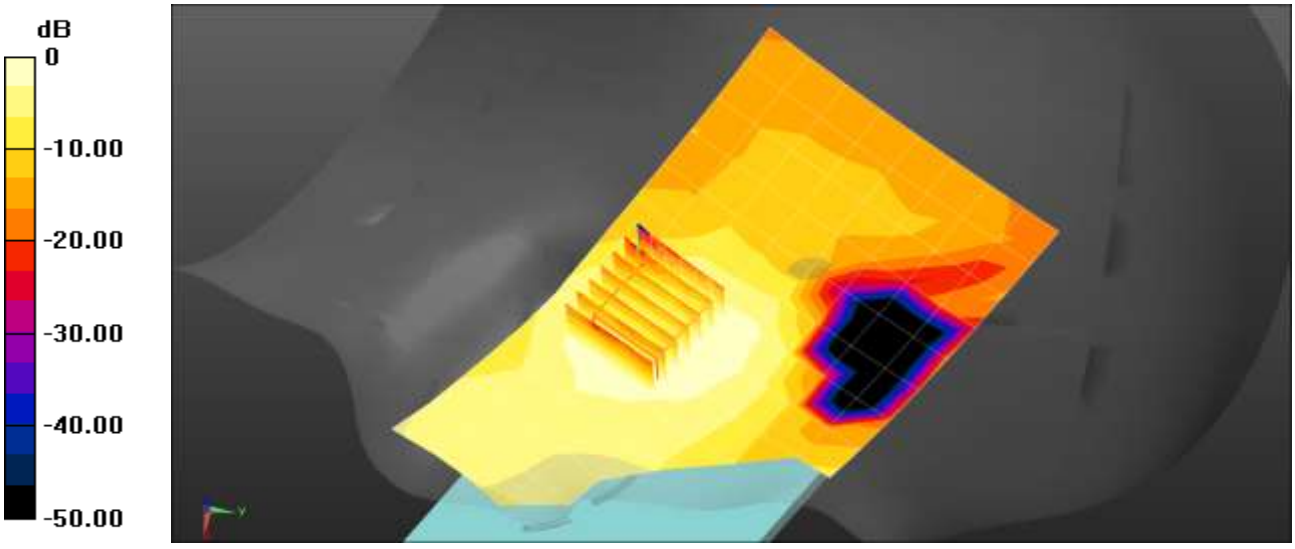
Communication System: UID 0, LTE Band7 (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.873 S/m; ε_r = 40.115; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2510 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 7 Head Left Touch QPSK 20MHz 1RB 0offset 20850ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0868 W/kg

LTE Band 7 Head Left Touch QPSK 20MHz 1RB 0offset 20850ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.143 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.121 W/kg
SAR(1 g) = 0.063 W/kg; SAR(10 g) = 0.034 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 55.6%
Maximum value of SAR (measured) = 0.0960 W/kg



0 dB = 0.0868 W/kg = -10.62 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.7℃
Ambient Temperature:	22.8℃
Test Date:	07/22/2020
Plot No.:	10

DUT: SM-G781U; Type: Bar

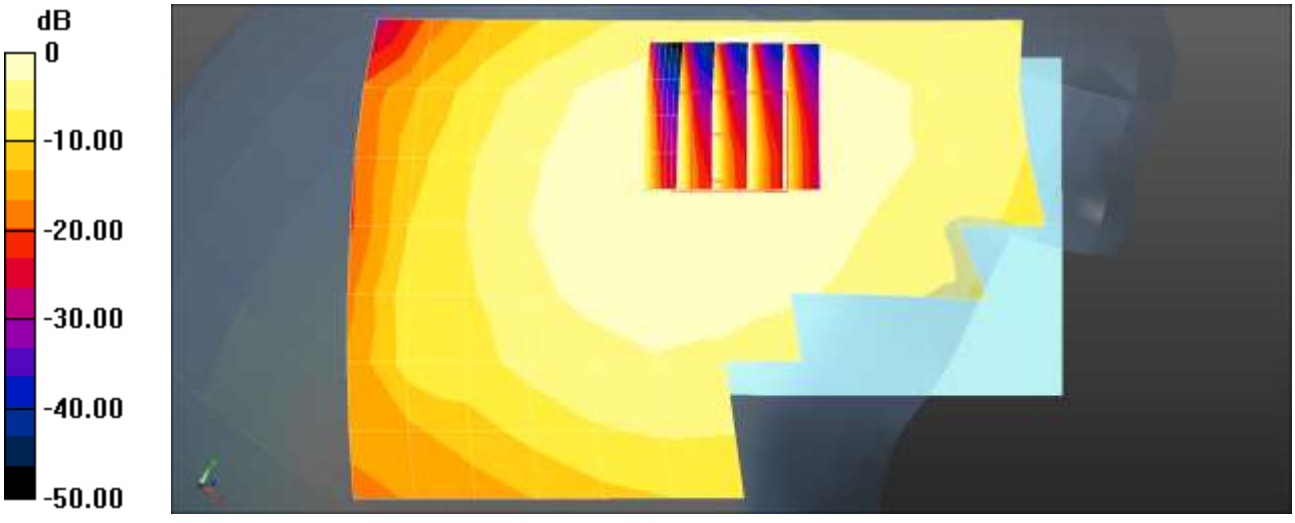
Communication System: UID 0, LTE 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.852 S/m; ε_r = 42.686; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 707.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 12 Head Right Touch QPSK 10MHz 1RB 49offset 23095ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.190 W/kg

LTE band 12 Head Right Touch QPSK 10MHz 1RB 49offset 23095ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.421 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.200 W/kg
SAR(1 g) = 0.163 W/kg; SAR(10 g) = 0.124 W/kg
Smallest distance from peaks to all points 3 dB below = 28.1 mm
Ratio of SAR at M2 to SAR at M1 = 81.4%
Maximum value of SAR (measured) = 0.190 W/kg



0 dB = 0.190 W/kg = -7.20 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.5℃
Ambient Temperature:	21.6℃
Test Date:	07/23/2020
Plot No.:	11

DUT: SM-G781U; Type: Bar

Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.928 S/m; ε_r = 41.638; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 782 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 13 Head Right Touch QPSK 10MHz 1RB 49offset 23230ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.249 W/kg

LTE band 13 Head Right Touch QPSK 10MHz 1RB 49offset 23230ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.119 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.264 W/kg
SAR(1 g) = 0.217 W/kg; SAR(10 g) = 0.163 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 82.7%
Maximum value of SAR (measured) = 0.250 W/kg

0 dB = 0.249 W/kg = -6.04 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.5℃
Ambient Temperature:	20.6℃
Test Date:	07/24/2020
Plot No.:	12

DUT: SM-G781U; Type: Bar

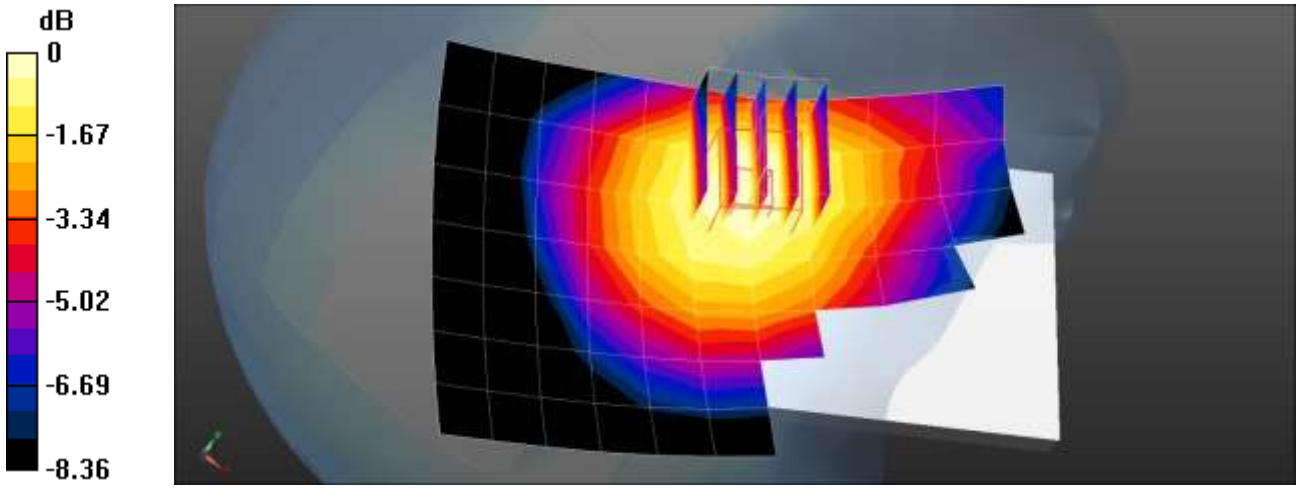
Communication System: UID 0, LTE 14 (0); Frequency: 793 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 793 MHz; σ = 0.925 S/m; ε_r = 41.929; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 793 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 14 Head Right Touch QPSK 10MHz 1RB 0offset 23330ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.239 W/kg

LTE band 14 Head Right Touch QPSK 10MHz 1RB 0offset 23330ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.904 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.249 W/kg
SAR(1 g) = 0.207 W/kg; SAR(10 g) = 0.156 W/kg
Maximum value of SAR (measured) = 0.239 W/kg



0 dB = 0.239 W/kg = -6.22 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4℃
Ambient Temperature:	20.6℃
Test Date:	08/18/2020
Plot No.:	13

DUT: SM-G781U; Type: Bar

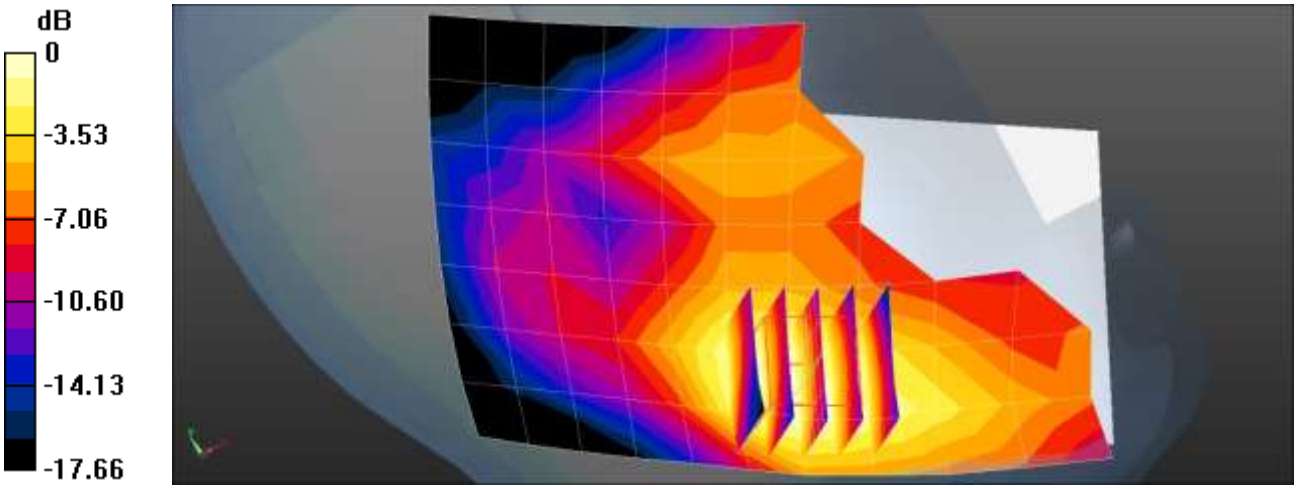
Communication System: UID 0, LTE Band 25 (0); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.395 S/m; ε_r = 40.116; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.31, 8.31, 8.31) @ 1860 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 25 Head Left Touch QPSK 20MHz 1RB 0offset 26140ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.208 W/kg

LTE Band 25 Head Left Touch QPSK 20MHz 1RB 0offset 26140ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.794 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.241 W/kg
SAR(1 g) = 0.156 W/kg; SAR(10 g) = 0.097 W/kg
Maximum value of SAR (measured) = 0.211 W/kg



0 dB = 0.211 W/kg = -6.76 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.5℃
Ambient Temperature:	20.6℃
Test Date:	08/21/2020
Plot No.:	14

DUT: SM-G781U; Type: Bar

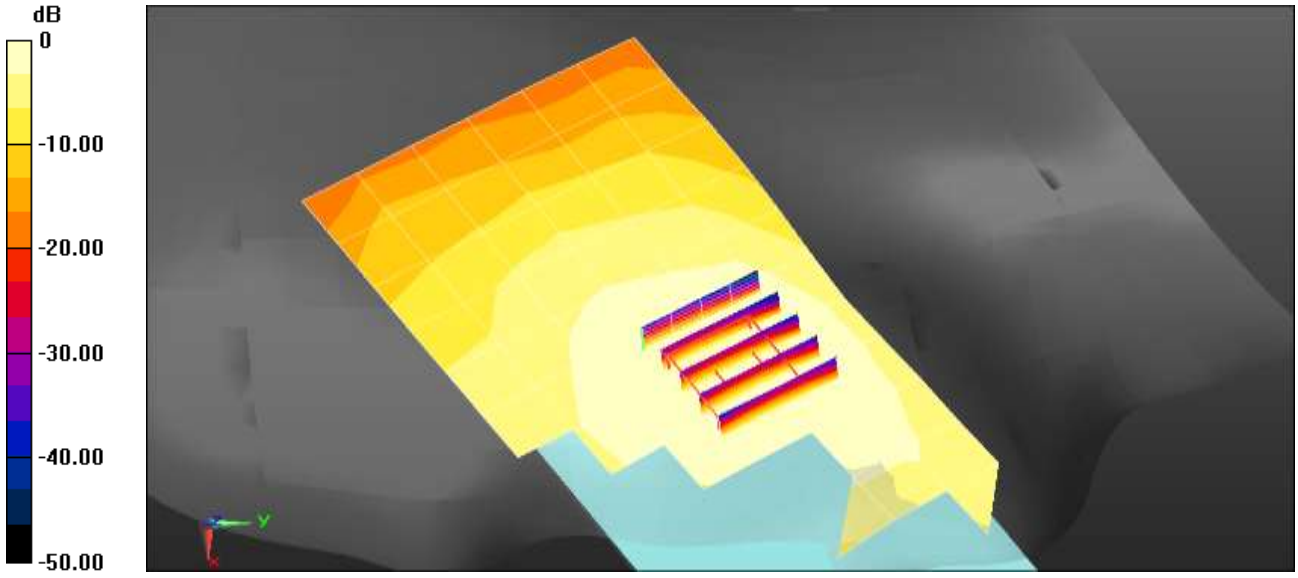
Communication System: UID 0, LTE 26 (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.944 S/m; ε_r = 42.807; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 831.5 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE26 Head Right Touch QPSK 15MHz 1RB 0offset 26865ch/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.211 W/kg

LTE26 Head Right Touch QPSK 15MHz 1RB 0offset 26865ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.789 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.225 W/kg
SAR(1 g) = 0.180 W/kg; SAR(10 g) = 0.141 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 79.9%
Maximum value of SAR (measured) = 0.211 W/kg



0 dB = 0.211 W/kg = -6.75 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.2℃
Test Date:	08/04/2020
Plot No.:	15

DUT: SM-G781U; Type: Bar

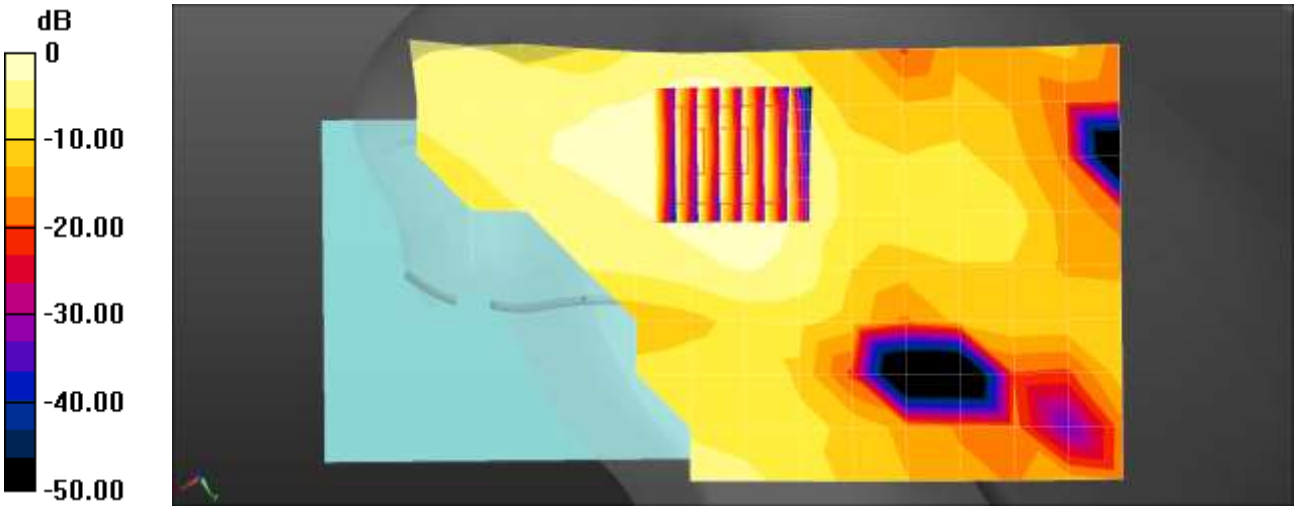
Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.648 S/m; ε_r = 40.979; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 30 Head Left Touch QPSK 10MHz 1RB 0offset 27710ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0591 W/kg

LTE Band 30 Head Left Touch QPSK 10MHz 1RB 0offset 27710ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.519 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.0740 W/kg
SAR(1 g) = 0.041 W/kg; SAR(10 g) = 0.023 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 54.9%
Maximum value of SAR (measured) = 0.0602 W/kg



0 dB = 0.0591 W/kg = -12.28 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.1℃
Test Date:	08/10/2020
Plot No.:	16

DUT: SM-G781U; Type: Bar

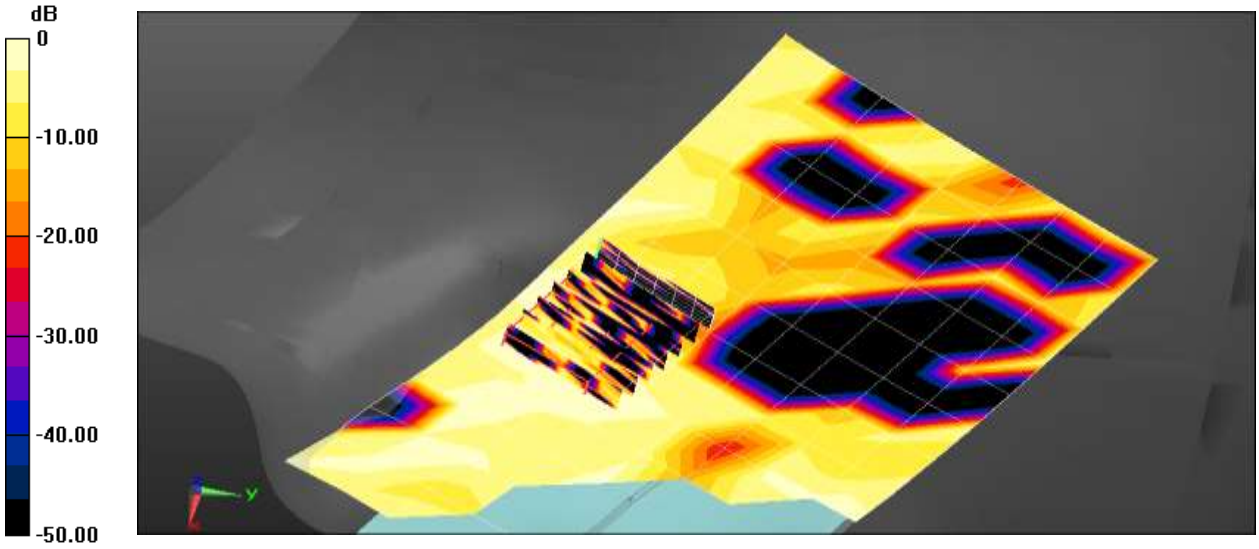
Communication System: UID 0, LTE Band 40 (0); Frequency: 2310 MHz;Duty Cycle: 1:1.58125
Medium parameters used: f = 2310 MHz; σ = 1.637 S/m; ε_r = 41.163; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 40 Head Left Touch QPSK 10MHz 1RB 24offset 38750ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.00430 W/kg

LTE Band 40 Head Left Touch QPSK 10MHz 1RB 24offset 38750ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.00707 W/kg
SAR(1 g) = 0.00105 W/kg; SAR(10 g) = 0.000314 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 43.3%
Maximum value of SAR (measured) = 0.00330 W/kg



0 dB = 0.00430 W/kg = -23.67 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.2℃
Test Date:	08/11/2020
Plot No.:	17

DUT: SM-G781U; Type: Bar

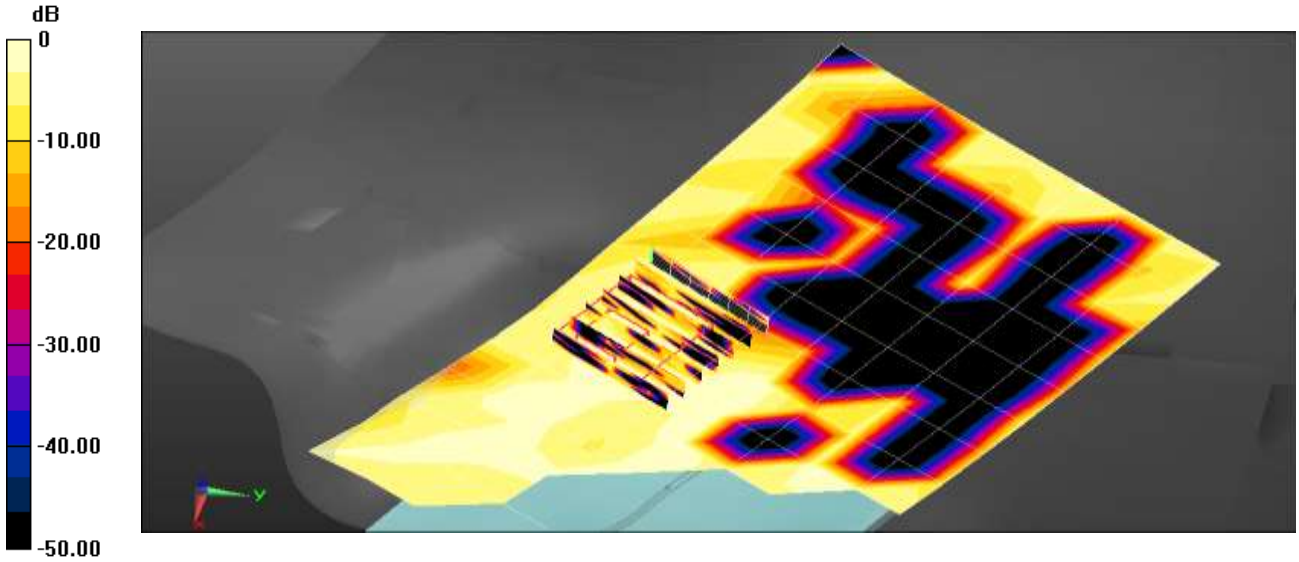
Communication System: UID 0, LTE Band 40 (0); Frequency: 2355 MHz;Duty Cycle: 1:1.58125
Medium parameters used (interpolated): f = 2355 MHz; σ = 1.694 S/m; ε_r = 40.971; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2355 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 40 Head Left Touch QPSK 10MHz 1RB 24offset 39200ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.00454 W/kg

LTE Band 40 Head Left Touch QPSK 10MHz 1RB 24offset 39200ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.00660 W/kg
SAR(1 g) = 0.000947 W/kg; SAR(10 g) = 0.000212 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 35.5%
Maximum value of SAR (measured) = 0.00439 W/kg



0 dB = 0.00454 W/kg = -23.43 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.1℃
Ambient Temperature:	20.2℃
Test Date:	08/26/2020
Plot No.:	18

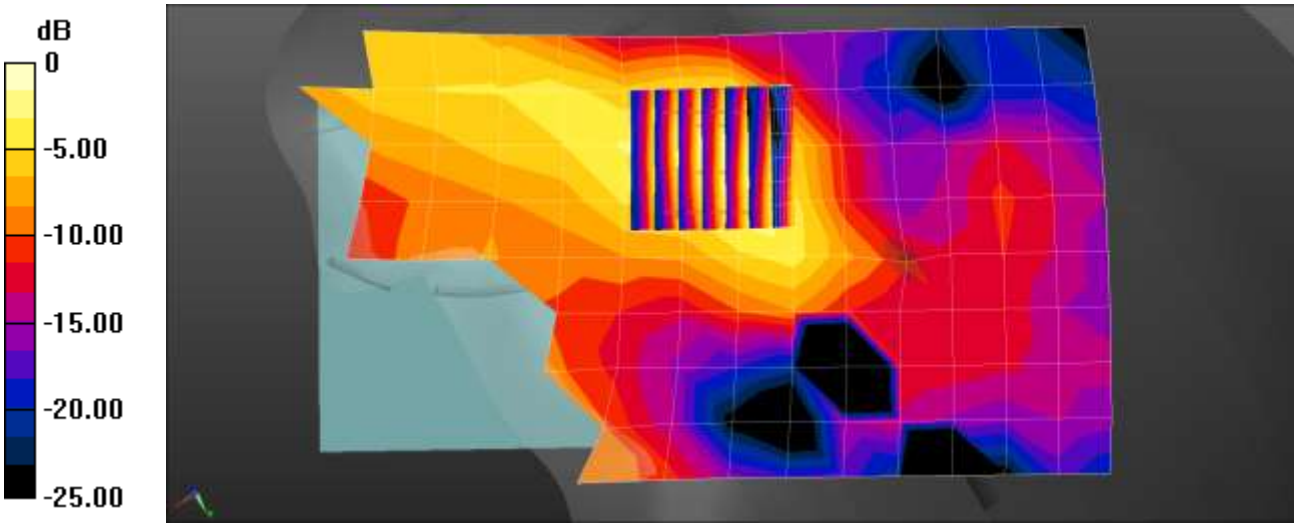
DUT: SM-G781U; Type: Bar

Communication System: UID 0, LTE Band41 (0); Frequency: 2506 MHz; Duty Cycle: 1:2.31 Medium parameters used (interpolated): f = 2506 MHz; σ = 1.863 S/m; εr = 38.256; ρ = 1000 kg/m3
Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5) @ 2506 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 41 (PC2) Head Left Touch QPSK 20MHz 1RB 99offset 39750ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.126 W/kg
LTE Band 41 (PC2) Head Left Touch QPSK 20MHz 1RB 99offset 39750ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.379 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.241 W/kg
SAR(1 g) = 0.106 W/kg; SAR(10 g) = 0.046 W/kg
Smallest distance from peaks to all points 3 dB below = 8.8 mm
Ratio of SAR at M2 to SAR at M1 = 45.6%
Maximum value of SAR (measured) = 0.139 W/kg



0 dB = 0.139 W/kg = -8.57 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.2℃
Ambient Temperature:	20.5℃
Test Date:	08/19/2020
Plot No.:	19

DUT: SM-G781U; Type: Bar

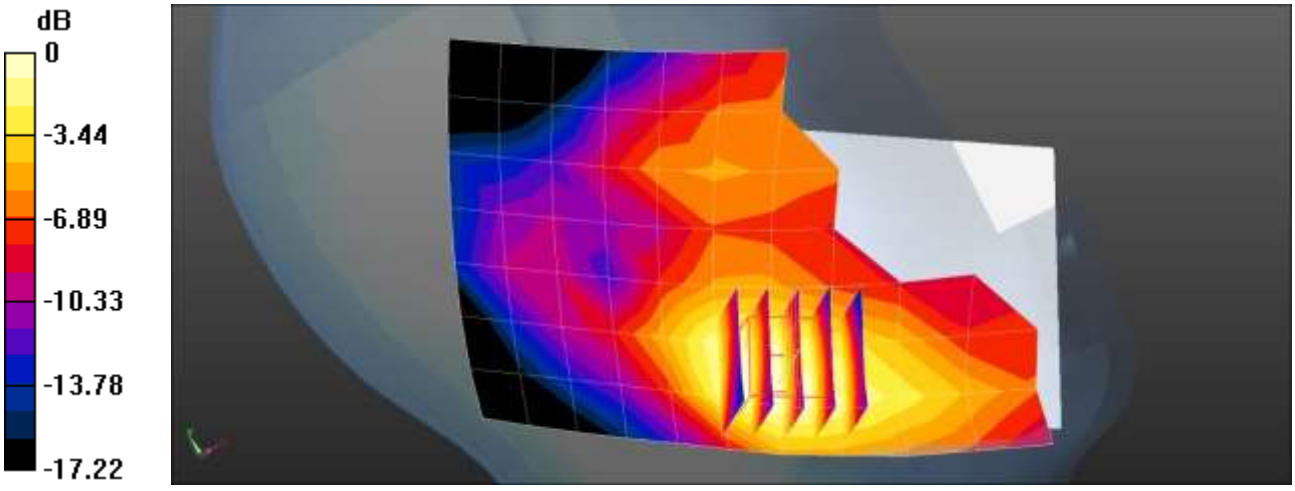
Communication System: UID 0, LTE Band 66(20MHz FCC) (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.356 S/m; ε_r = 40.218; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1770 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 66 Head Left Touch QPSK 20MHz 1RB 49offset 132572ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.165 W/kg

LTE Band 66 Head Left Touch QPSK 20MHz 1RB 49offset 132572ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.739 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.190 W/kg
SAR(1 g) = 0.127 W/kg; SAR(10 g) = 0.080 W/kg
Maximum value of SAR (measured) = 0.169 W/kg



0 dB = 0.169 W/kg = -7.72 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	23.1℃
Ambient Temperature:	23.3℃
Test Date:	07/28/2020
Plot No.:	20

DUT: SM-G781U; Type: Bar

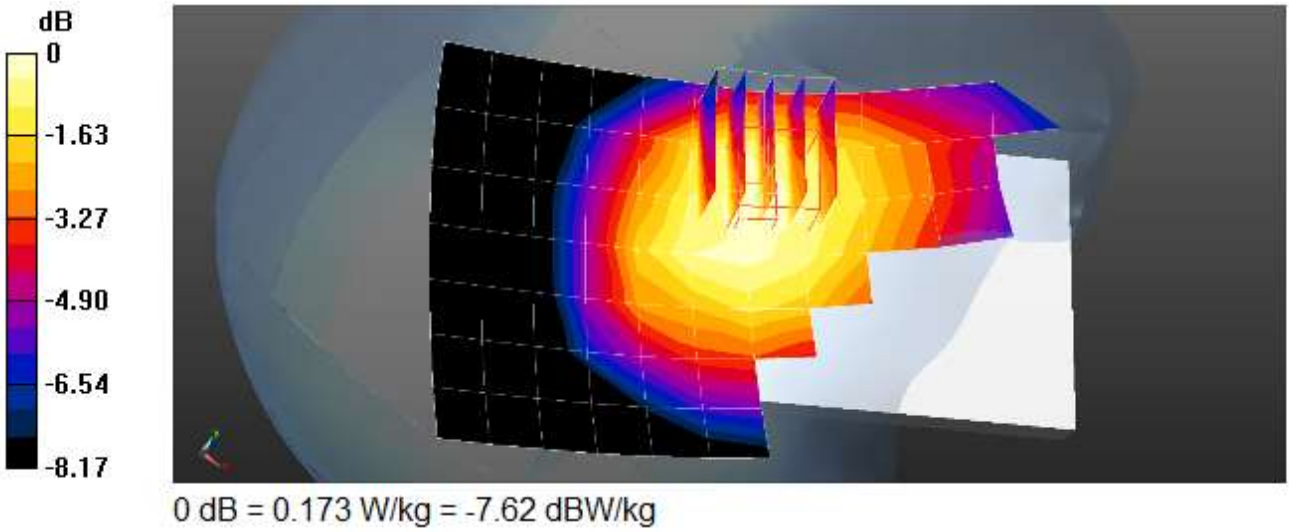
Communication System: UID 0, LTE 71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.864 S/m; ε_r = 43.199; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 683 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 71 Head Right Touch QPSK 20MHz 1RB 0offset 133297ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.166 W/kg

LTE band 71 Head Right Touch QPSK 20MHz 1RB 0offset 133297ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.168 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.186 W/kg
SAR(1 g) = 0.147 W/kg; SAR(10 g) = 0.113 W/kg
Maximum value of SAR (measured) = 0.173 W/kg



0 dB = 0.173 W/kg = -7.62 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.1℃
Ambient Temperature:	20.2℃
Test Date:	08/24/2020
Plot No.:	21

DUT: SM-G781U; Type: Bar

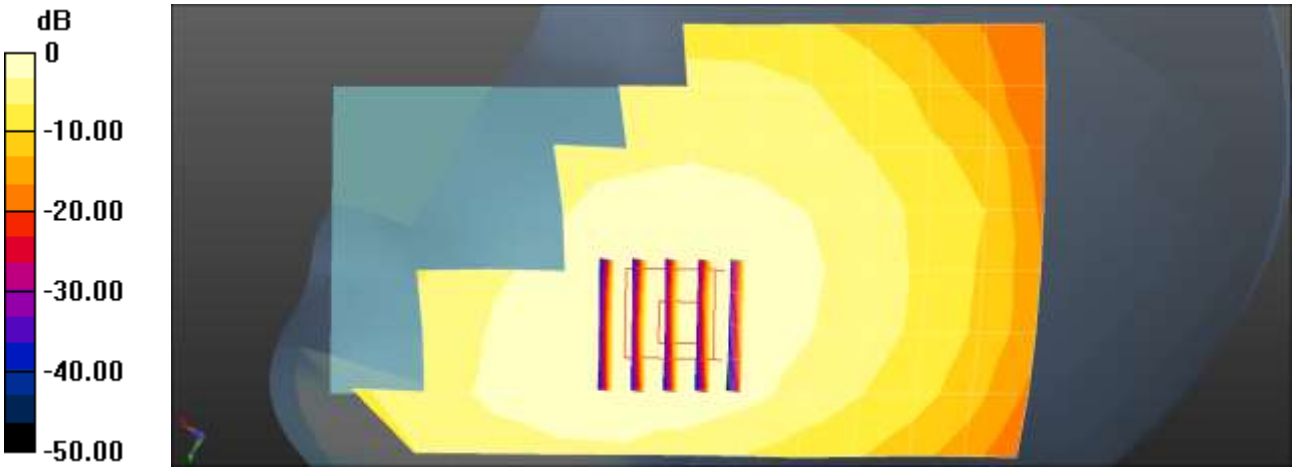
Communication System: UID 0, NR Band n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.921 S/m; ε_r = 42.678; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

NR n5 Head Right Touch DFT-s QPSK 20MHz 1RB 53offset 167300ch/Area Scan (8x13x1):
Measurement grid: dx=15mm, dy=15mmMaximum value of SAR (measured) = 0.221 W/kg

NR n5 Head Right Touch DFT-s QPSK 20MHz 1RB 53offset 167300ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.087 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.235 W/kg
SAR(1 g) = 0.192 W/kg; SAR(10 g) = 0.149 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 81.4%
Maximum value of SAR (measured) = 0.224 W/kg



0 dB = 0.221 W/kg = −6.57 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4℃
Ambient Temperature:	20.7℃
Test Date:	08/24/2020
Plot No.:	22

DUT: SM-G781U; Type: Bar

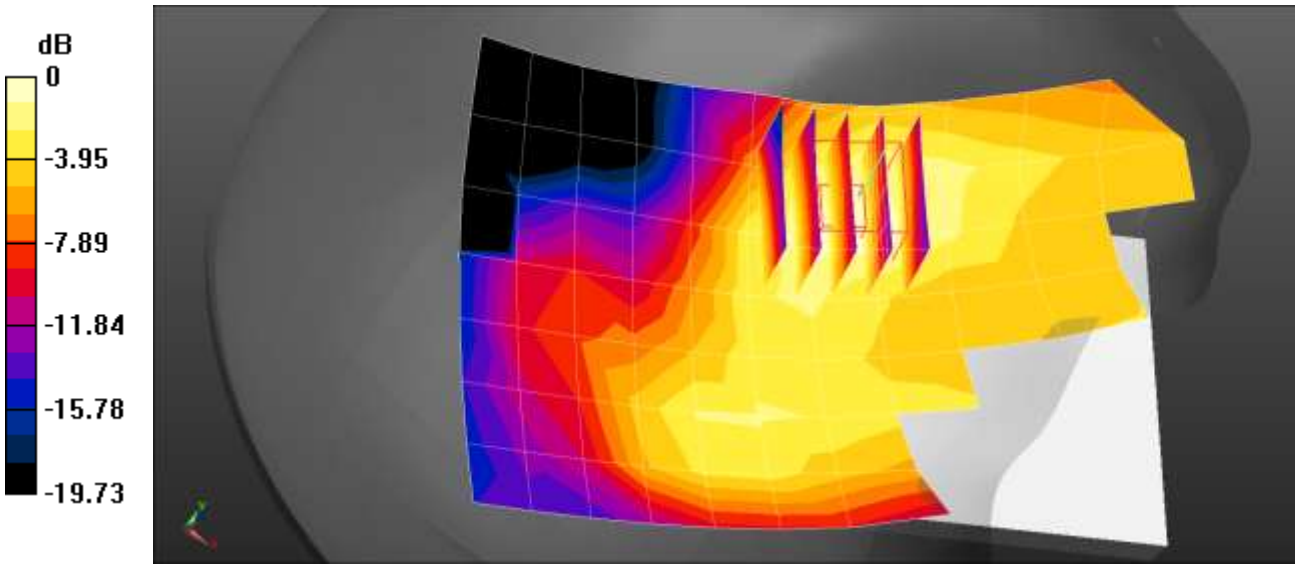
Communication System: UID 0, 5G NR (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1905 MHz; σ = 1.452 S/m; ε_r = 39.967; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1905 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 25 Head Right Touch QPSK 20MHz 1RB 53offset 381000ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.122 W/kg

NR Band 25 Head Right Touch QPSK 20MHz 1RB 53offset 381000ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.990 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.186 W/kg
SAR(1 g) = 0.113 W/kg; SAR(10 g) = 0.068 W/kg
Maximum value of SAR (measured) = 0.130 W/kg



0 dB = 0.130 W/kg = -8.86 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	08/18/2020
Plot No.:	23

DUT: SM-G781U; Type: Bar

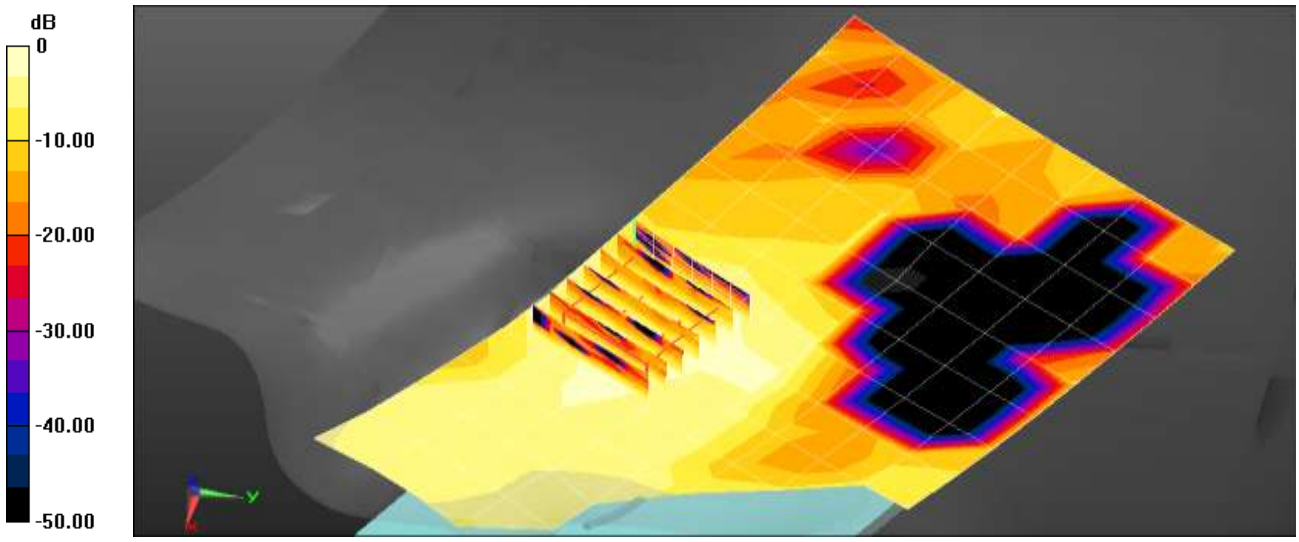
Communication System: UID 0, NR band n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:4.0
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.976 S/m; ε_r = 40.257; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2592.99 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

NR 41 Head Left Touch QPSK 100MHz 1RB 1offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0333 W/kg

NR 41 Head Left Touch QPSK 100MHz 1RB 1offset 518598ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.7060 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.0440 W/kg
SAR(1 g) = 0.019 W/kg; SAR(10 g) = 0.00739 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 44.1%
Maximum value of SAR (measured) = 0.0327 W/kg



0 dB = 0.0333 W/kg = -14.77 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.2℃
Ambient Temperature:	22.4℃
Test Date:	08/06/2020
Plot No.:	24

DUT: SM-G781U; Type: Bar

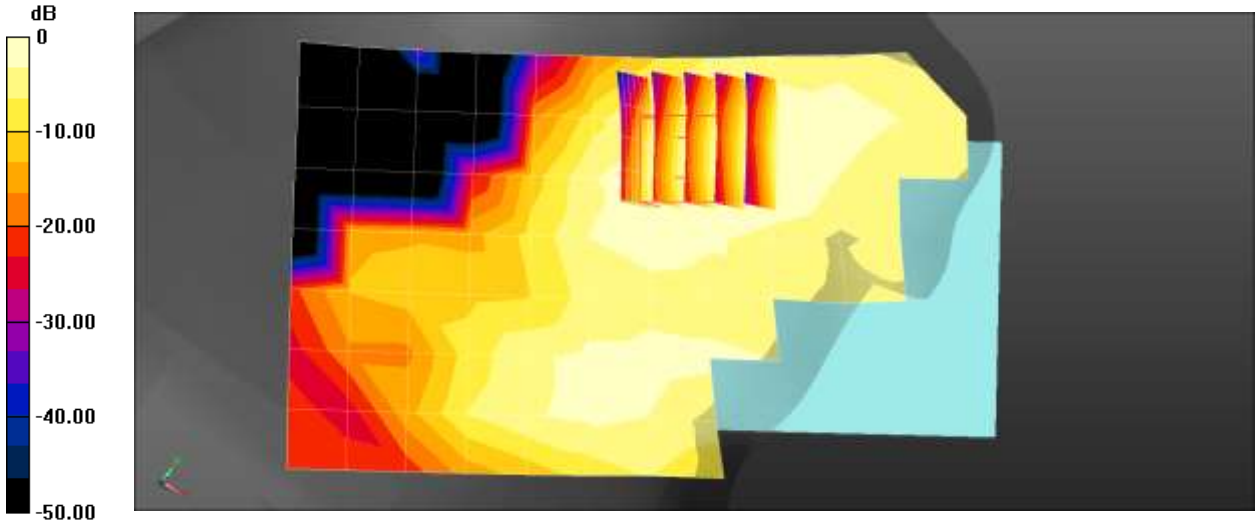
Communication System: UID 0, 5G NR (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.354 S/m; ε_r = 40.15; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1770 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 66 Head Right Touch QPSK 20MHz 50RB 28offset 354000ch/Area Scan (8x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0855 W/kg

NR Band 66 Head Right Touch QPSK 20MHz 50RB 28offset 354000ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.336 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.115 W/kg
SAR(1 g) = 0.073 W/kg; SAR(10 g) = 0.046 W/kg
Smallest distance from peaks to all points 3 dB below = 10.9 mm
Ratio of SAR at M2 to SAR at M1 = 63.2%
Maximum value of SAR (measured) = 0.0964 W/kg



0 dB = 0.0855 W/kg = -10.68 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.9℃
Ambient Temperature:	21.0℃
Test Date:	08/11/2020
Plot No.:	25

DUT: SM-G781U; Type: Bar

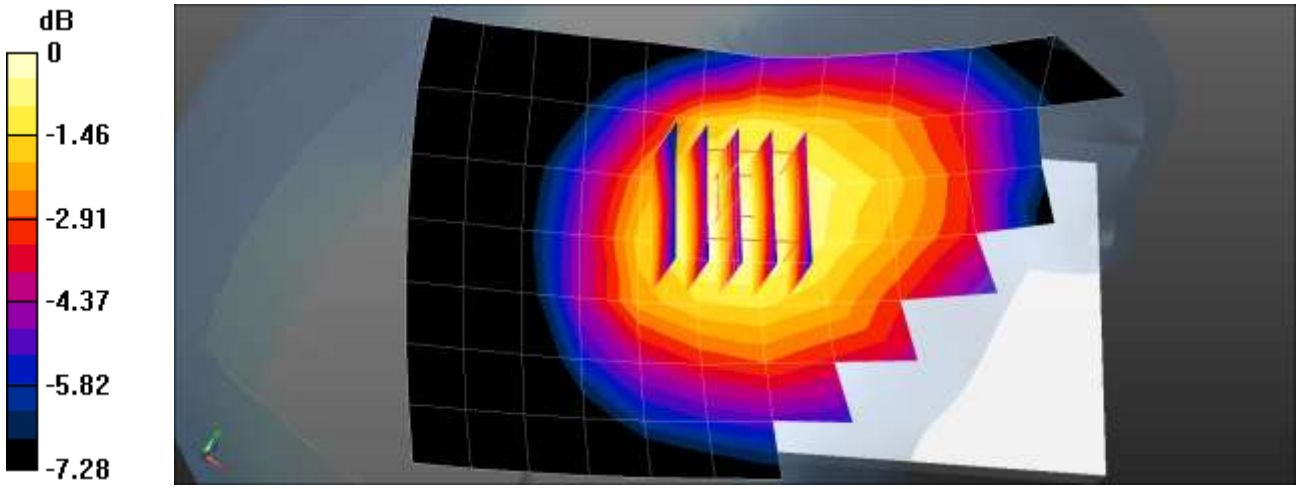
Communication System: UID 0, NR n71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.867 S/m; ε_r = 43.41; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(7.22, 7.22, 7.22) @ 680.5 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

NR Band n71 Head Right Touch QPSK 20MHz 1RB 53offset 136100ch/Area Scan (8x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.188 W/kg

NR Band n71 Head Right Touch QPSK 20MHz 1RB 53offset 136100ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.589 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.223 W/kg
SAR(1 g) = 0.188 W/kg; SAR(10 g) = 0.153 W/kg
Maximum value of SAR (measured) = 0.195 W/kg



0 dB = 0.195 W/kg = -7.10 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.1℃
Test Date:	08/10/2020
Plot No.:	26

DUT: SM-G781U; Type: Bar

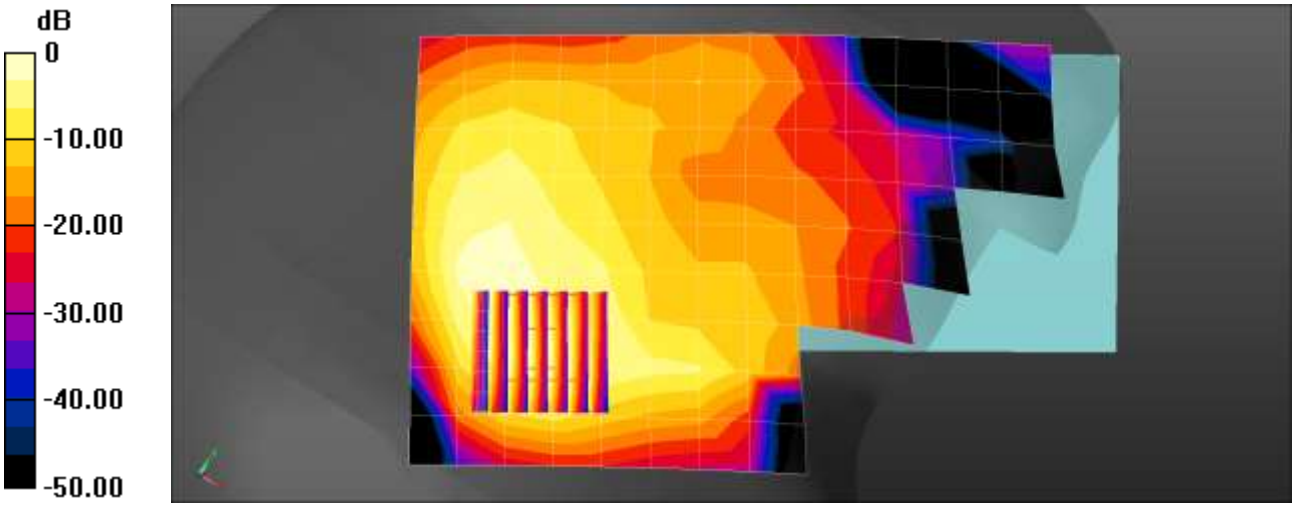
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.766 S/m; ε_r = 40.143; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2412 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

802.11b Head Right Touch 1Mbps 1ch MIMO/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.854 W/kg

802.11b Head Right Touch 1Mbps 1ch MIMO/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.57 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 0.582 W/kg; SAR(10 g) = 0.256 W/kg
Smallest distance from peaks to all points 3 dB below = 7.1 mm
Ratio of SAR at M2 to SAR at M1 = 41.2%
Maximum value of SAR (measured) = 1.10 W/kg



0 dB = 0.854 W/kg = -0.69 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.6℃
Ambient Temperature:	20.9℃
Test Date:	08/14/2020
Plot No.:	27

DUT: SM-G781U; Type: Bar

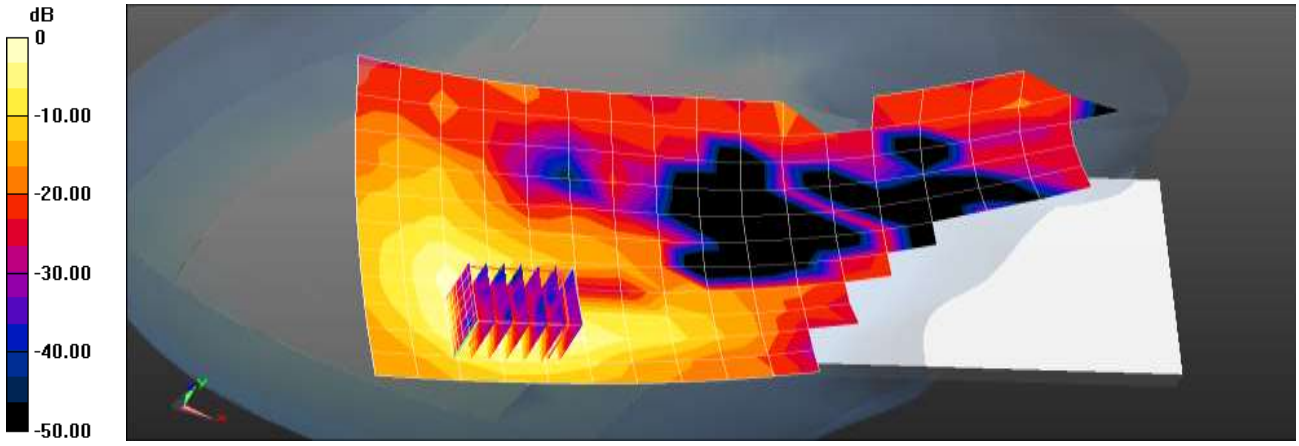
Communication System: UID 0, WiFI5GHz ac80 (0); Frequency: 5290 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5290 MHz; σ = 4.637 S/m; ε_r = 36.923; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.74, 4.74, 4.74) @ 5290 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

802.11ac80 Head Right Touch MCS0 58ch/Area Scan (12x20x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.572 W/kg

802.11ac80 Head Right Touch MCS0 58ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 5.208 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.227 W/kg; SAR(10 g) = 0.077 W/kg
Smallest distance from peaks to all points 3 dB below = 4.9 mm
Ratio of SAR at M2 to SAR at M1 = 60.1%
Maximum value of SAR (measured) = 0.607 W/kg



0 dB = 0.572 W/kg = −2.43 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.9℃
Test Date:	08/05/2020
Plot No.:	28

DUT: SM-G781U; Type: Bar

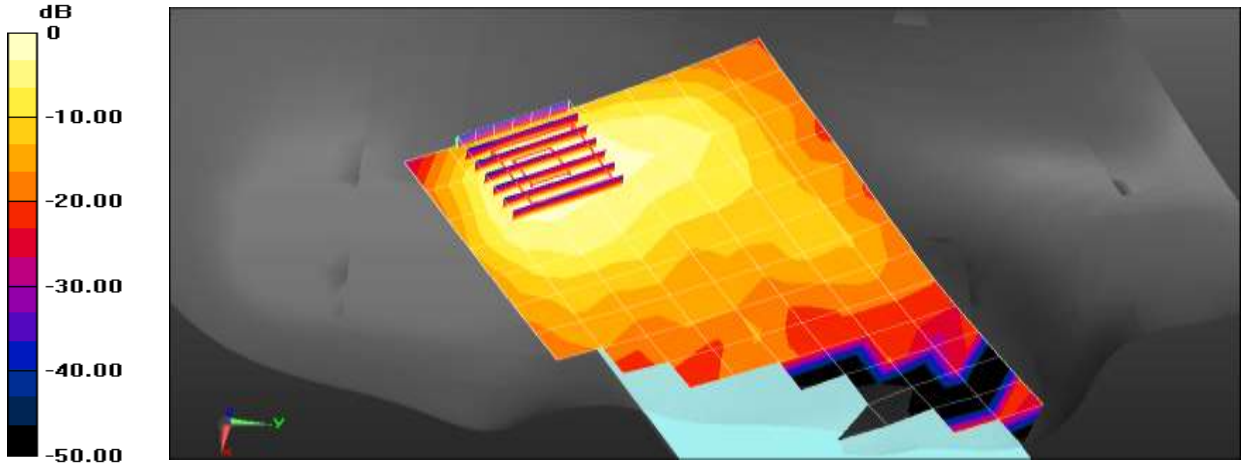
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.302
Medium parameters used (interpolated): f = 2441 MHz; σ = 1.796 S/m; ε_r = 40.654; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.35, 7.35, 7.35) @ 2441 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Head Right Touch DH5 39ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.209 W/kg

Bluetooth Head Right Touch DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.187 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.448 W/kg
SAR(1 g) = 0.163 W/kg; SAR(10 g) = 0.067 W/kg
Smallest distance from peaks to all points 3 dB below = 7 mm
Ratio of SAR at M2 to SAR at M1 = 36.8%
Maximum value of SAR (measured) = 0.328 W/kg



0 dB = 0.209 W/kg = −6.79 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.6℃
Ambient Temperature:	20.8℃
Test Date:	08/13/2020
Plot No.:	29

DUT: SM-G781U; Type: Bar

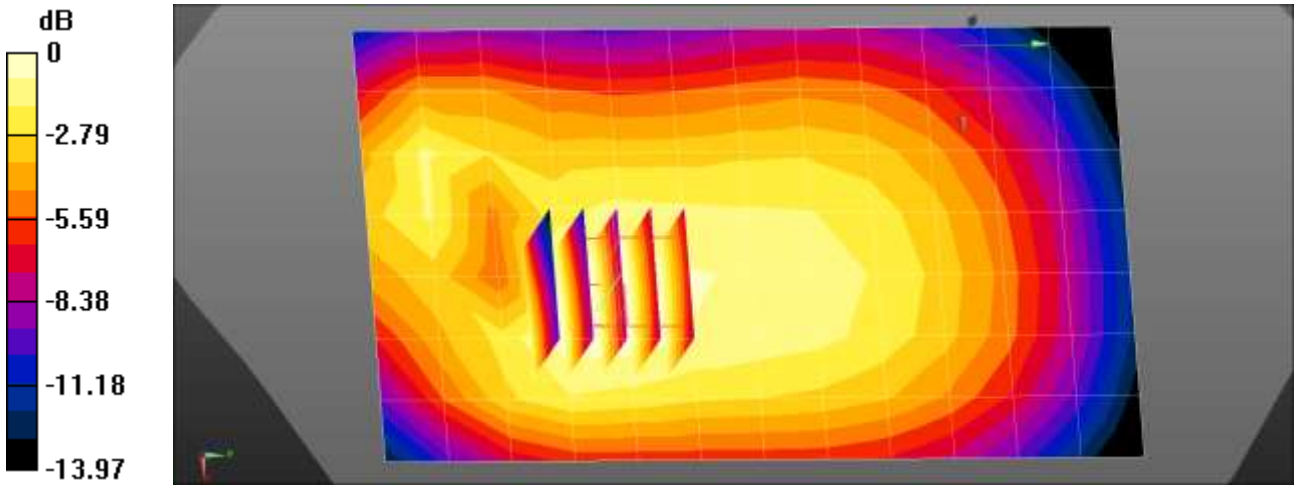
Communication System: UID 0, CDMA BC10 (FCC) (0); Frequency: 820 MHz;Duty Cycle: 1:1
Medium parameters used: f = 820 MHz; σ = 0.919 S/m; ε_r = 42.868; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96) @ 820 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC10 Body-worn Front EvDO Rev.A 560ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.433 W/kg

CDMA BC10 Body-worn Front EvDO Rev.A 560ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.67 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.571 W/kg
SAR(1 g) = 0.432 W/kg; SAR(10 g) = 0.313 W/kg
Maximum value of SAR (measured) = 0.459 W/kg



0 dB = 0.459 W/kg = -3.38 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.2℃
Test Date:	08/04/2020
Plot No.:	30

DUT: SM-G781U; Type: Bar

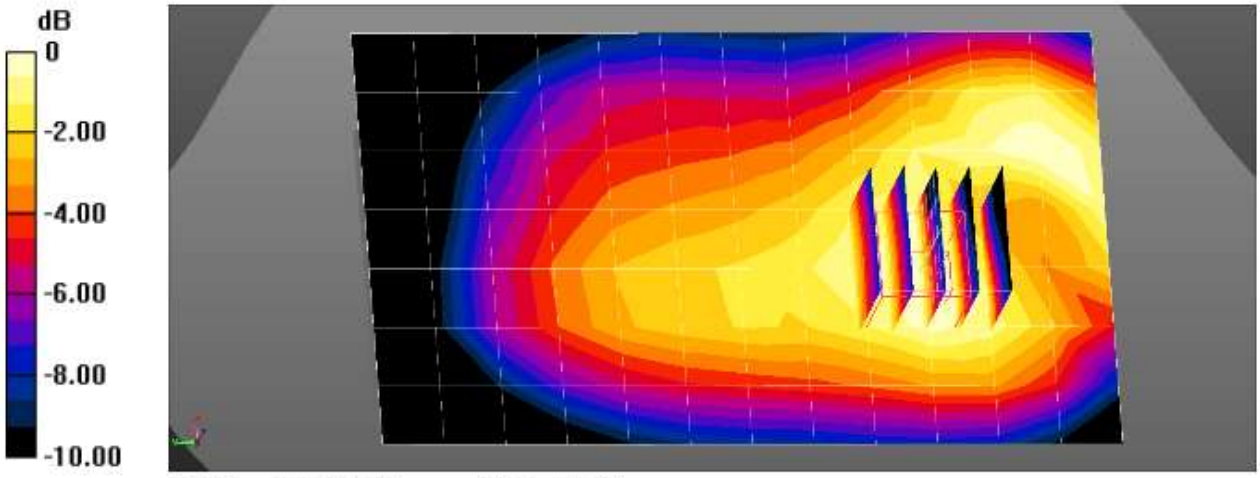
Communication System: UID 0, CDMA (0); Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.912 S/m; ε_r = 42.466; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 836.52 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC0 Body Worn Rear RC3 / TDSO SO32 384ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.411 W/kg

CDMA BC0 Body Worn Rear RC3 / TDSO SO32 384ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.64 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.447 W/kg
SAR(1 g) = 0.314 W/kg; SAR(10 g) = 0.220 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 71.2%
Maximum value of SAR (measured) = 0.398 W/kg



0 dB = 0.398 W/kg = -4.00 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.8℃
Test Date:	08/12/2020
Plot No.:	31

DUT: SM-G781U; Type: Bar

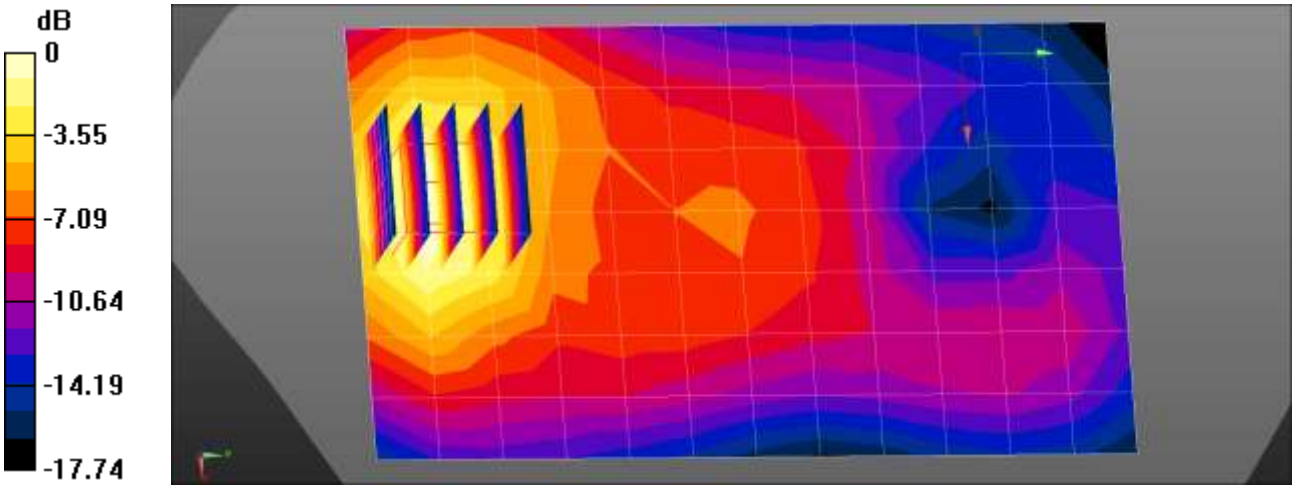
Communication System: UID 0, CDMA BC1(1900MHz) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.369 S/m; ε_r = 40.062; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1880 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC1 BodyWorn Rear EvDO Rev.A 600ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.623 W/kg

CDMA BC1 BodyWorn Rear EvDO Rev.A 600ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.549 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.932 W/kg
SAR(1 g) = 0.580 W/kg; SAR(10 g) = 0.340 W/kg
Maximum value of SAR (measured) = 0.637 W/kg



0 dB = 0.623 W/kg = −2.06 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	08/03/2020
Plot No.:	32

DUT: SM-G781U; Type: Bar

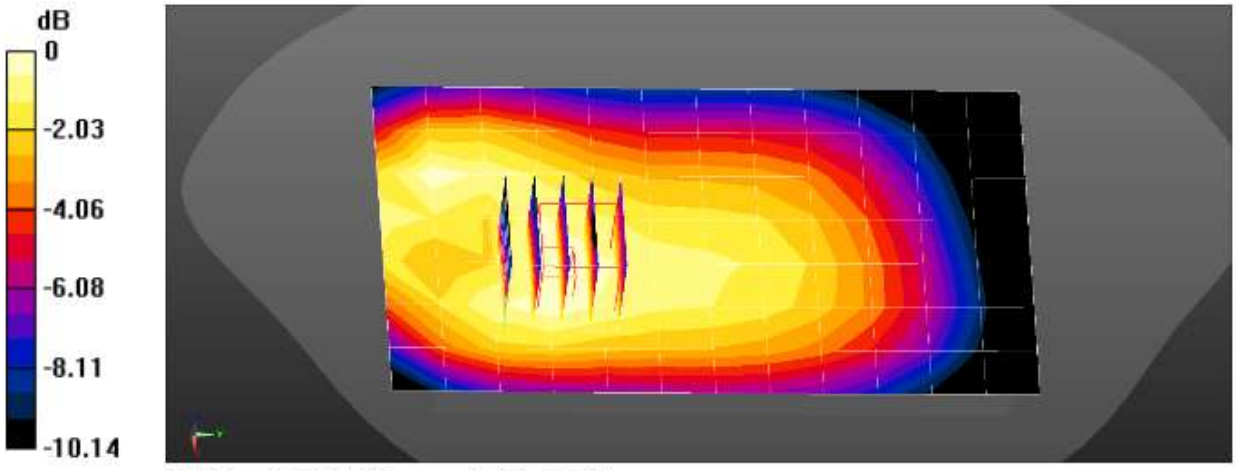
Communication System: UID 0, GSM 850 2Tx (0); Frequency: 836.6 MHz;Duty Cycle: 1:4.14954
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.917 S/m; ε_r = 42.726; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 836.6 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

GSM 850 Body Front 2Tx 190ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.351 W/kg

GSM 850 Body Front 2Tx 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.60 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.400 W/kg
SAR(1 g) = 0.288 W/kg; SAR(10 g) = 0.208 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 69.2%
Maximum value of SAR (measured) = 0.356 W/kg



0 dB = 0.356 W/kg = -4.49 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.0℃
Ambient Temperature: 21.2℃
Test Date: 08/13/2020
Plot No.: 33

DUT: SM-G781U; Type: Bar

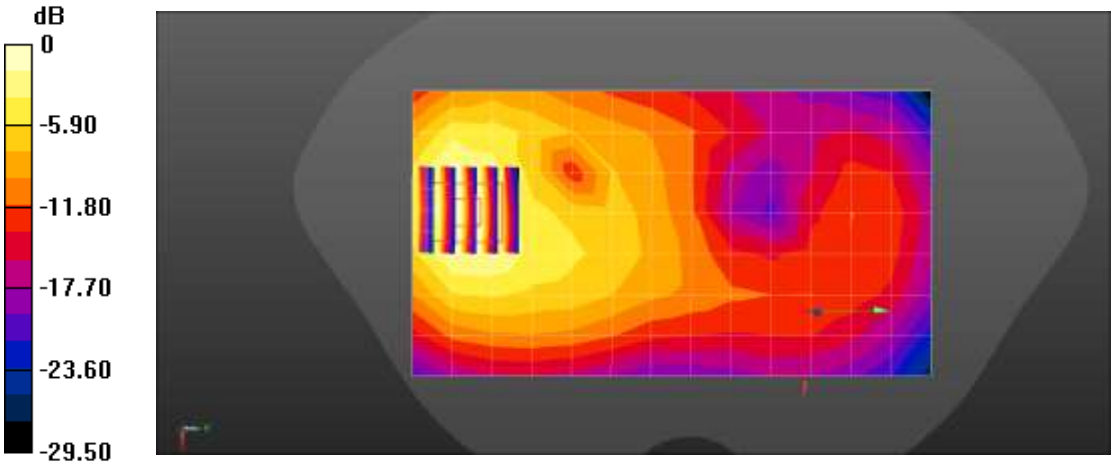
Communication System: UID 0, GSM 1900 3Tx (0); Frequency: 1880 MHz;Duty Cycle: 1:2.77013
Medium parameters used: f = 1880 MHz; σ = 1.411 S/m; ε_r = 39.942; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1880 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Body Rear 3Tx 661ch Bodyworn/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.532 W/kg

GSM1900 Body Rear 3Tx 661ch Bodyworn/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.652 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.652 W/kg
SAR(1 g) = 0.401 W/kg; SAR(10 g) = 0.238 W/kg
Smallest distance from peaks to all points 3 dB below = 14.3 mm
Ratio of SAR at M2 to SAR at M1 = 61.9%
Maximum value of SAR (measured) = 0.567 W/kg



0 dB = 0.532 W/kg = −2.74 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 19.4℃
Ambient Temperature: 19.5℃
Test Date: 08/25/2020
Plot No.: 34

DUT: SM-G781U; Type: Bar

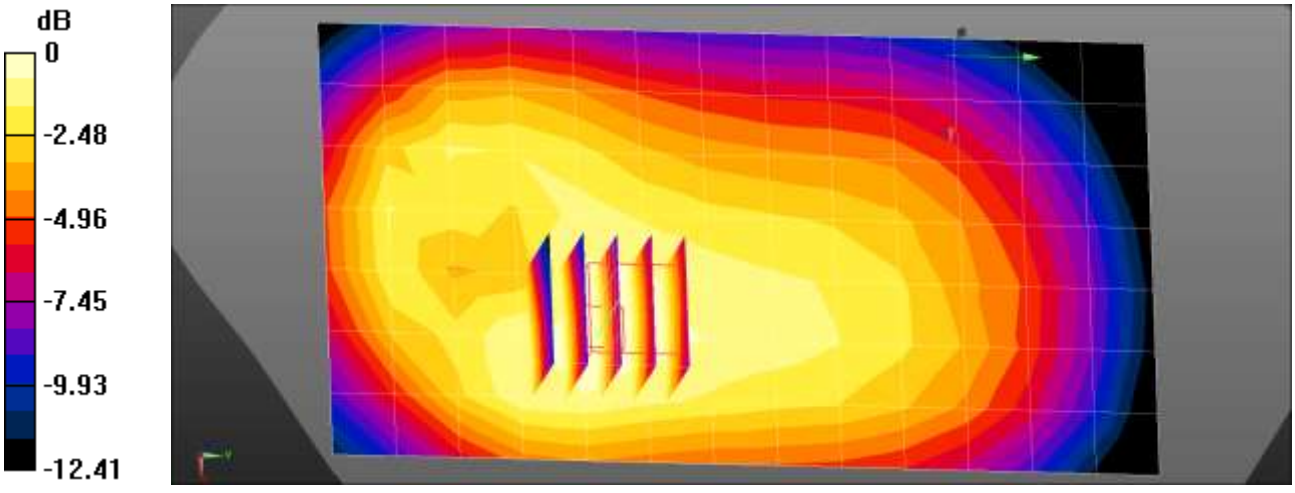
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.915 S/m; ε_r = 42.727; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.6 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 5 Body-worn Front 4183ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.291 W/kg

WCDMA Band 5 Body-worn Front 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.13 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.303 W/kg
SAR(1 g) = 0.237 W/kg; SAR(10 g) = 0.173 W/kg
Maximum value of SAR (measured) = 0.286 W/kg



0 dB = 0.286 W/kg = -5.44 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone

Liquid Temperature: 20.7℃
Ambient Temperature: 20.9℃
Test Date: 08/20/2020
Plot No.: 35

DUT: SM-G781U; Type: Bar

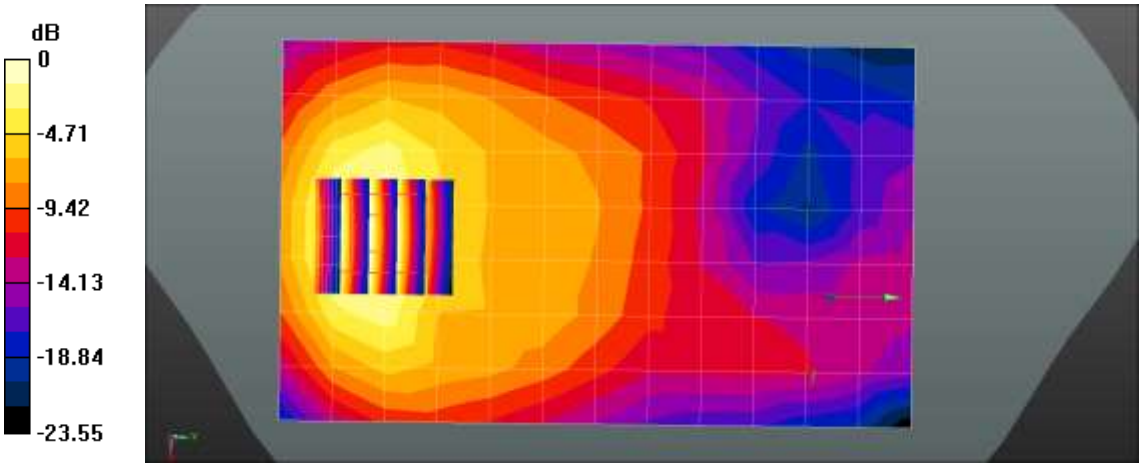
Communication System: UID 0, WCDMA 1700 (0); Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.315 S/m; ε_r = 40.169; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1732.4 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 4 Body Worn Rear 1412ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.276 W/kg

WCDMA Band 4 Body Worn Rear 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.265 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.356 W/kg
SAR(1 g) = 0.217 W/kg; SAR(10 g) = 0.127 W/kg
Smallest distance from peaks to all points 3 dB below = 14.4 mm
Ratio of SAR at M2 to SAR at M1 = 61.3%
Maximum value of SAR (measured) = 0.308 W/kg



0 dB = 0.276 W/kg = −5.58 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone

Liquid Temperature: 21.3℃
Ambient Temperature: 21.4℃
Test Date: 08/20/2020
Plot No.: 36

DUT: SM-G781U; Type: Bar

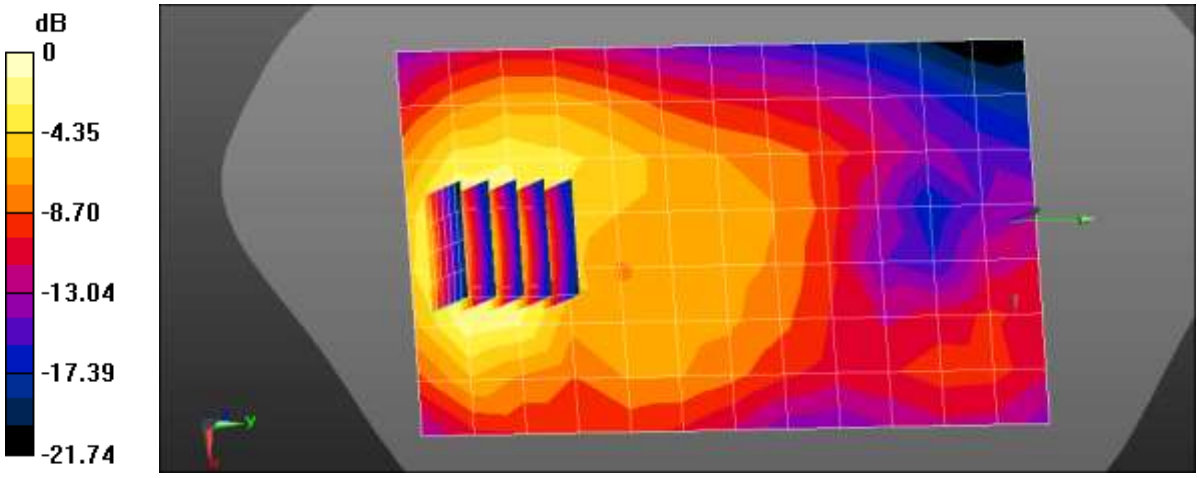
Communication System: UID 0, WCDMA Band 2 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.433 S/m; ε_r = 40.061; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1880 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 2 Body Rear 9400ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.512 W/kg

WCDMA Band 2 Body Rear 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.979 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.816 W/kg
SAR(1 g) = 0.482 W/kg; SAR(10 g) = 0.280 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 59.2%
Maximum value of SAR (measured) = 0.589 W/kg



0 dB = 0.512 W/kg = −2.90 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone

Liquid Temperature: 21.8℃
Ambient Temperature: 21.9℃
Test Date: 08/20/2020
Plot No.: 37

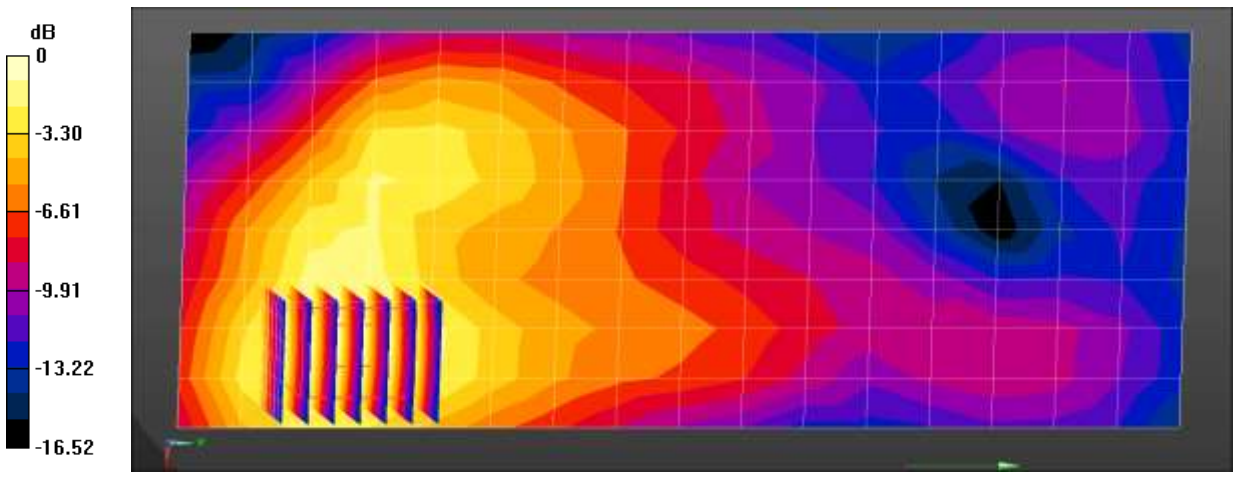
DUT: SM-G781U; Type: Bar

Communication System: UID 0, LTE Band7 (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.873 S/m; ε_r = 40.115; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2510 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 7 Body Worn Rear QPSK 20MHz 1RB 0offset 20850ch/Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.231 W/kg
LTE Band 7 Body Worn Rear QPSK 20MHz 1RB 0offset 20850ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.905 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.309 W/kg
SAR(1 g) = 0.156 W/kg; SAR(10 g) = 0.082 W/kg
Smallest distance from peaks to all points 3 dB below = 15.7 mm
Ratio of SAR at M2 to SAR at M1 = 49.2%
Maximum value of SAR (measured) = 0.249 W/kg



0 dB = 0.231 W/kg = −6.36 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone

Liquid Temperature: 22.7℃
Ambient Temperature: 22.8℃
Test Date: 07/22/2020
Plot No.: 38

DUT: SM-G781U; Type: Bar

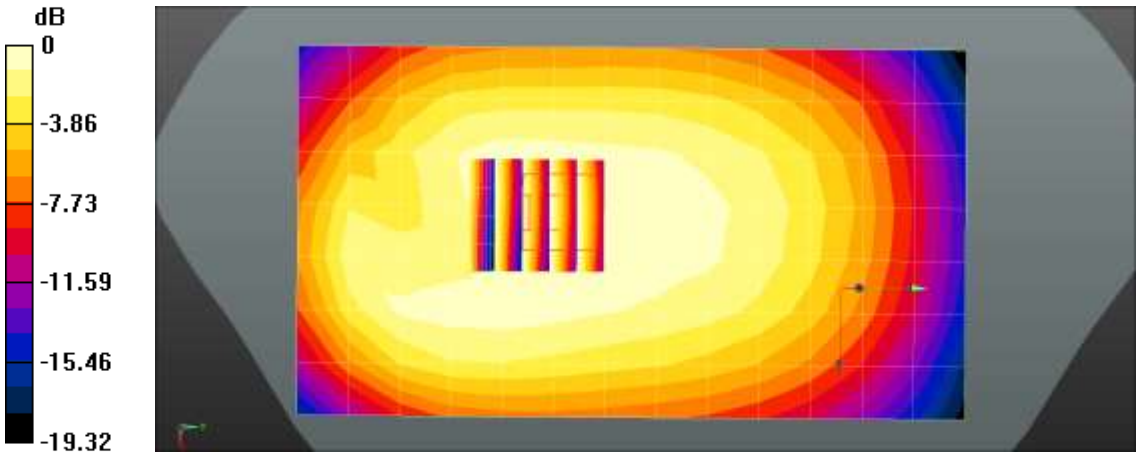
Communication System: UID 0, LTE 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.852 S/m; ε_r = 42.686; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 707.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 12 Body Worn Rear QPSK 10MHz 1RB 49offset 23095ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.307 W/kg

LTE band 12 Body Worn Rear QPSK 10MHz 1RB 49offset 23095ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.84 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.337 W/kg
SAR(1 g) = 0.264 W/kg; SAR(10 g) = 0.202 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 77.2%
Maximum value of SAR (measured) = 0.314 W/kg



0 dB = 0.307 W/kg = −5.13 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.5℃
Ambient Temperature:	21.6℃
Test Date:	07/23/2020
Plot No.:	39

DUT: SM-G781U; Type: Bar

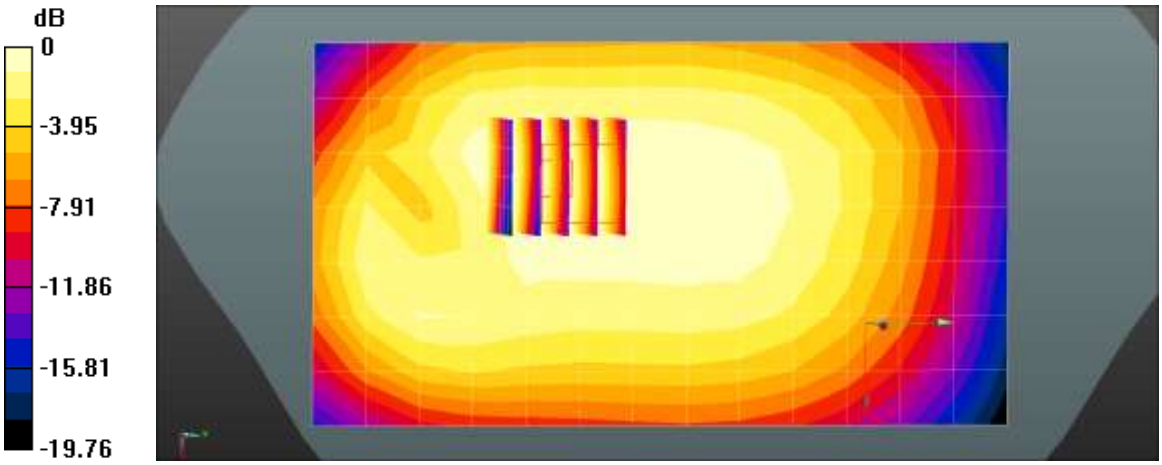
Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.928 S/m; ε_r = 41.638; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 782 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 13 Body Worn Rear QPSK 10MHz 1RB 0offset 23230ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.356 W/kg

LTE band 13 Body Worn Rear QPSK 10MHz 1RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.74 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.395 W/kg
SAR(1 g) = 0.303 W/kg; SAR(10 g) = 0.227 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 77.2%
Maximum value of SAR (measured) = 0.365 W/kg



0 dB = 0.356 W/kg = −4.49 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.5℃
Ambient Temperature: 20.6℃
Test Date: 07/24/2020
Plot No.: 40

DUT: SM-G781U; Type: Bar

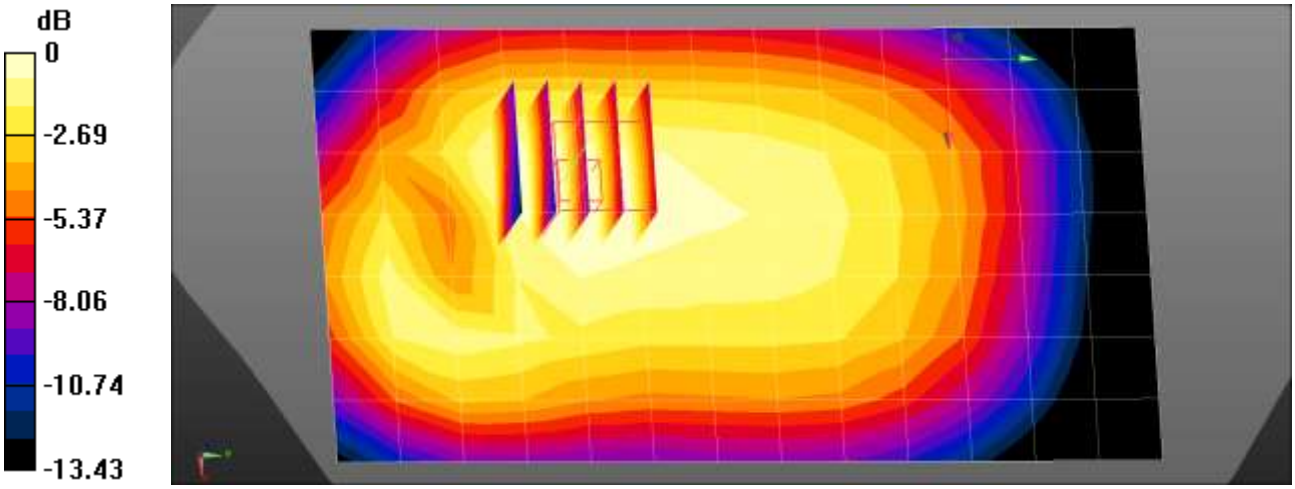
Communication System: UID 0, LTE 14 (0); Frequency: 793 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 793 MHz; σ = 0.925 S/m; ε_r = 41.929; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 793 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 14 Body Worn Rear QPSK 10MHz 1RB 0offset 23330ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.359 W/kg

LTE band 14 Body Worn Rear QPSK 10MHz 1RB 0offset 23330ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.50 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.398 W/kg
SAR(1 g) = 0.301 W/kg; SAR(10 g) = 0.222 W/kg
Maximum value of SAR (measured) = 0.366 W/kg



0 dB = 0.366 W/kg = −4.37 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
Liquid Temperature: 20.4℃
Ambient Temperature: 20.6℃
Test Date: 08/18/2020
Plot No.: 41

DUT: SM-G781U; Type: Bar

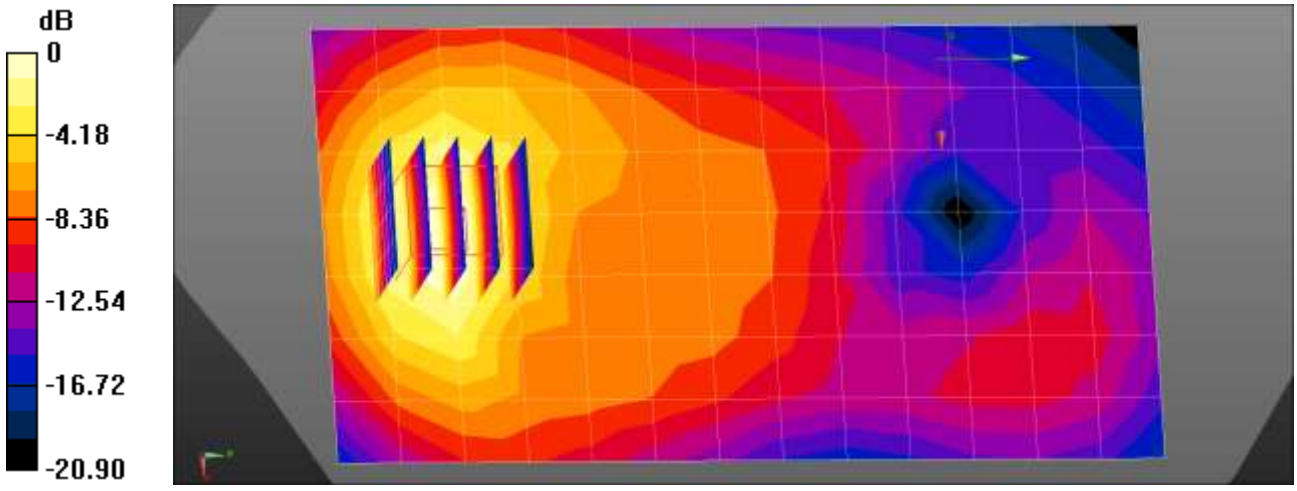
Communication System: UID 0, LTE Band 25 (0); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.395 S/m; ε_r = 40.116; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.31, 8.31, 8.31) @ 1860 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 25 BodyWorn Rear QPSK 20MHz 1RB 0offset 26140ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.819 W/kg

LTE Band 25 BodyWorn Rear QPSK 20MHz 1RB 0offset 26140ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.763 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.597 W/kg; SAR(10 g) = 0.346 W/kg
Maximum value of SAR (measured) = 0.864 W/kg



0 dB = 0.819 W/kg = −0.87 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone

Liquid Temperature: 20.5℃
Ambient Temperature: 20.6℃
Test Date: 08/21/2020
Plot No.: 42

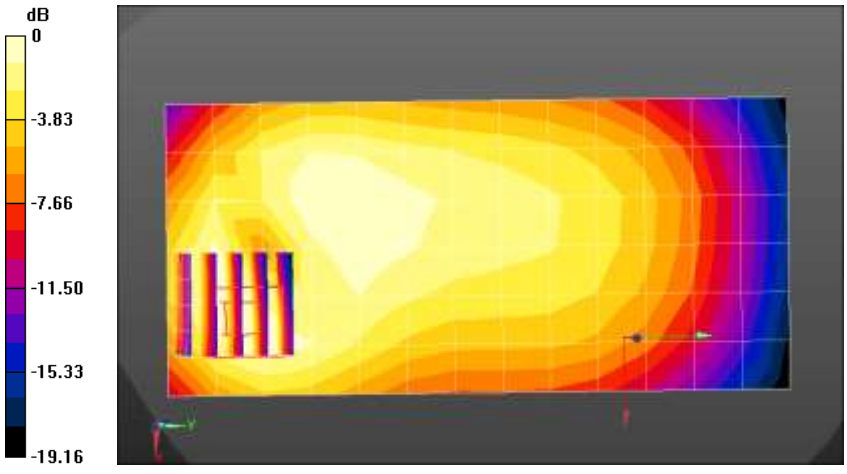
DUT: SM-G781U; Type: Bar

Communication System: UID 0, LTE 26 (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.944 S/m; ε_r = 42.807; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 831.5 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE26 Body Rear worn QPSK 15MHz 1RB 0offset 26865ch/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.415 W/kg
LTE26 Body Rear worn QPSK 15MHz 1RB 0offset 26865ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.21 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.505 W/kg
SAR(1 g) = 0.311 W/kg; SAR(10 g) = 0.190 W/kg
Smallest distance from peaks to all points 3 dB below = 14.3 mm
Ratio of SAR at M2 to SAR at M1 = 62.2%
Maximum value of SAR (measured) = 0.428 W/kg



0 dB = 0.415 W/kg = −3.81 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.1℃

Ambient Temperature: 21.2℃
Test Date: 08/04/2020
Plot No.: 43

DUT: SM-G781U; Type: Bar

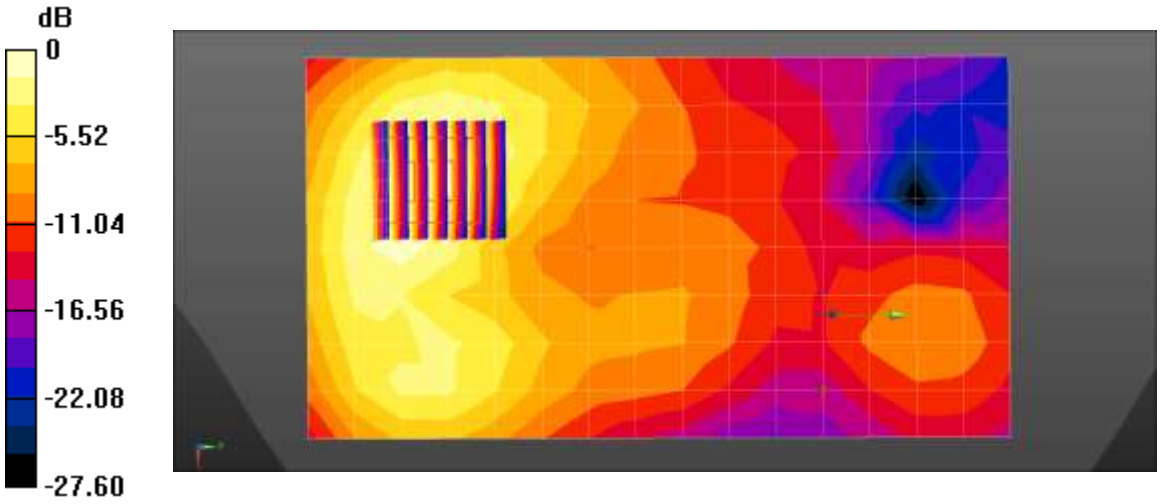
Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.648 S/m; ε_r = 40.979; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 30 Body Rear QPSK 10MHz 1RB 0offset 27710ch Body Worn/Area Scan (9x16x1):
Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.271 W/kg

LTE Band 30 Body Rear QPSK 10MHz 1RB 0offset 27710ch Body Worn/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.910 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.368 W/kg
SAR(1 g) = 0.199 W/kg; SAR(10 g) = 0.109 W/kg
Smallest distance from peaks to all points 3 dB below = 14.4 mm
Ratio of SAR at M2 to SAR at M1 = 53.4%
Maximum value of SAR (measured) = 0.303 W/kg



0 dB = 0.271 W/kg = −5.67 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.0℃

Ambient Temperature: 21.1℃
Test Date: 08/10/2020
Plot No.: 44

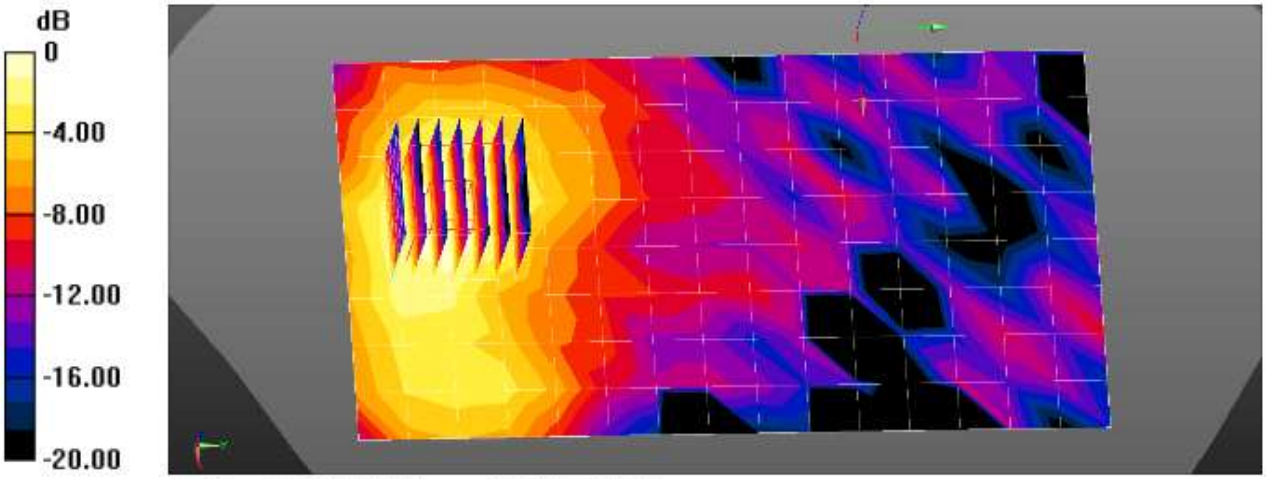
DUT: SM-G781U; Type: Bar

Communication System: UID 0, LTE Band 40 (0); Frequency: 2310 MHz;Duty Cycle: 1:1.58125
Medium parameters used: f = 2310 MHz; σ = 1.637 S/m; ε_r = 41.163; ρ = 1000 kg/m^3
Phantom section: Flat Section
DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 40 Body Rear QPSK 10MHz 1RB 24offset 38750ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0239 W/kg

LTE Band 40 Body Rear QPSK 10MHz 1RB 24offset 38750ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.3920 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.0300 W/kg
SAR(1 g) = 0.015 W/kg; SAR(10 g) = 0.00814 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 49.3%
Maximum value of SAR (measured) = 0.0241 W/kg



0 dB = 0.0241 W/kg = -16.18 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.2℃
Test Date:	08/11/2020
Plot No.:	45

DUT: SM-G781U; Type: Bar

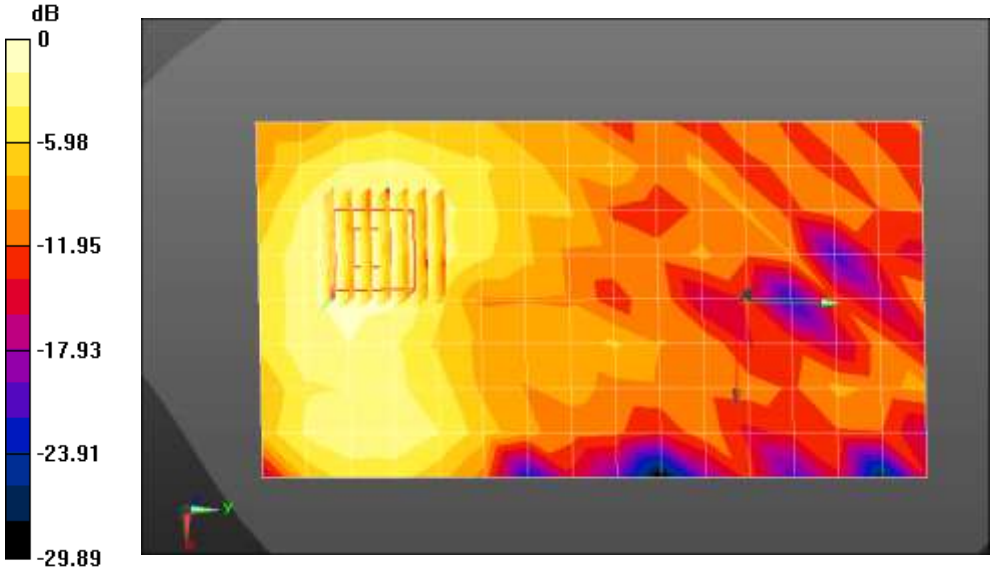
Communication System: UID 0, LTE Band 40 (0); Frequency: 2355 MHz;Duty Cycle: 1:1.58125
Medium parameters used (interpolated): f = 2355 MHz; σ = 1.694 S/m; ε_r = 40.971; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2355 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 40 Body Worn Rear QPSK 10MHz 1RB 24offset 39200ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0225 W/kg

LTE Band 40 Body Worn Rear QPSK 10MHz 1RB 24offset 39200ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.0280 W/kg
SAR(1 g) = 0.015 W/kg; SAR(10 g) = 0.00798 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 50.2%
Maximum value of SAR (measured) = 0.0224 W/kg



0 dB = 0.0225 W/kg = −16.49 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.3℃
Ambient Temperature:	20.6℃
Test Date:	08/26/2020
Plot No.:	46

DUT: SM-G781U; Type: Bar

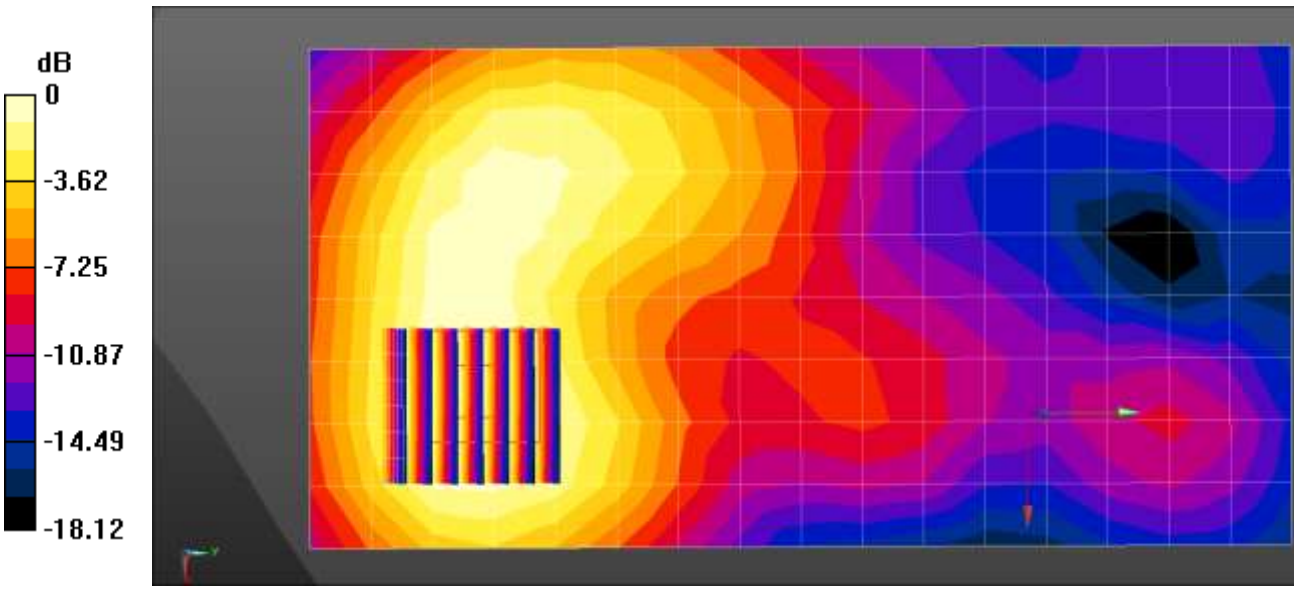
Communication System: UID 0, LTE Band41 (0); Frequency: 2506 MHz;Duty Cycle: 1:2.31
Medium parameters used (interpolated): f = 2506 MHz; σ = 1.851 S/m; ε_r = 39.223; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2506 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 41 (PC2) Body Worn Rear QPSK 20MHz 1RB 99offset 39750ch HPUE/Area Scan (9x17x1):
Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.414 W/kg

LTE Band 41 (PC2) Body Worn Rear QPSK 20MHz 1RB 99offset 39750ch HPUE/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.925 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.571 W/kg
SAR(1 g) = 0.291 W/kg; SAR(10 g) = 0.158 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 48.6%
Maximumvalue of SAR (measured) = 0.457 W/kg



0 dB = 0.414 W/kg = -3.83 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.2℃
Ambient Temperature:	20.5℃
Test Date:	08/19/2020
Plot No.:	47

DUT: SM-G781U; Type: Bar

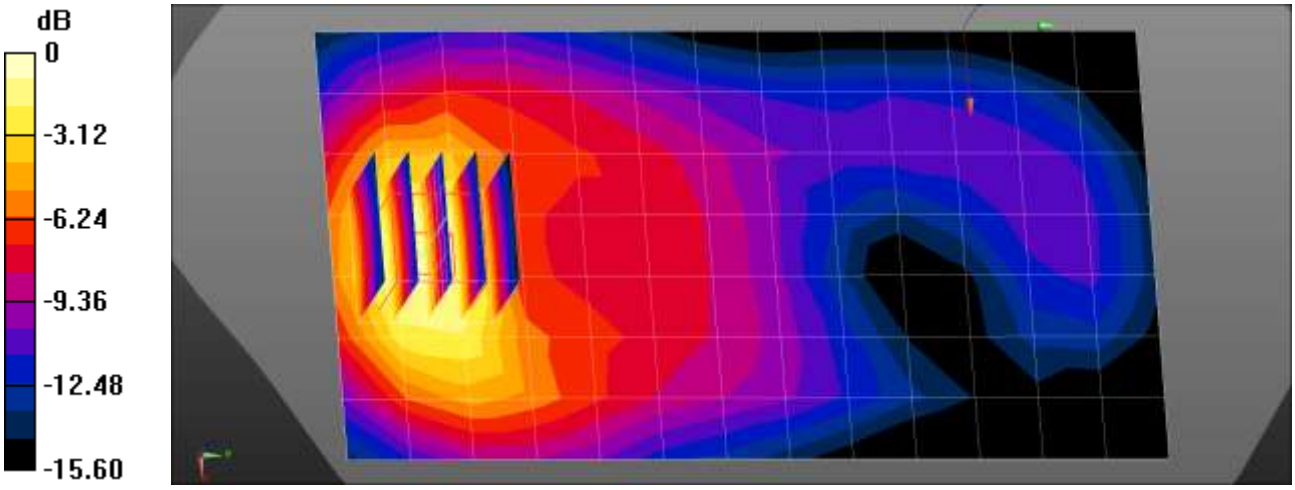
Communication System: UID 0, LTE Band 66(20MHz FCC) (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.356 S/m; ε_r = 40.218; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1770 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 66 BodyWorn Front QPSK 20MHz 1RB 49offset 132572ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.576 W/kg

LTE Band 66 BodyWorn Front QPSK 20MHz 1RB 49offset 132572ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 7.107 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.796 W/kg
SAR(1 g) = 0.482 W/kg; SAR(10 g) = 0.279 W/kg
Maximum value of SAR (measured) = 0.681 W/kg



0 dB = 0.681 W/kg = −1.67 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	23.1℃
Ambient Temperature:	23.3℃
Test Date:	07/28/2020
Plot No.:	48

DUT: SM-G781U; Type: Bar

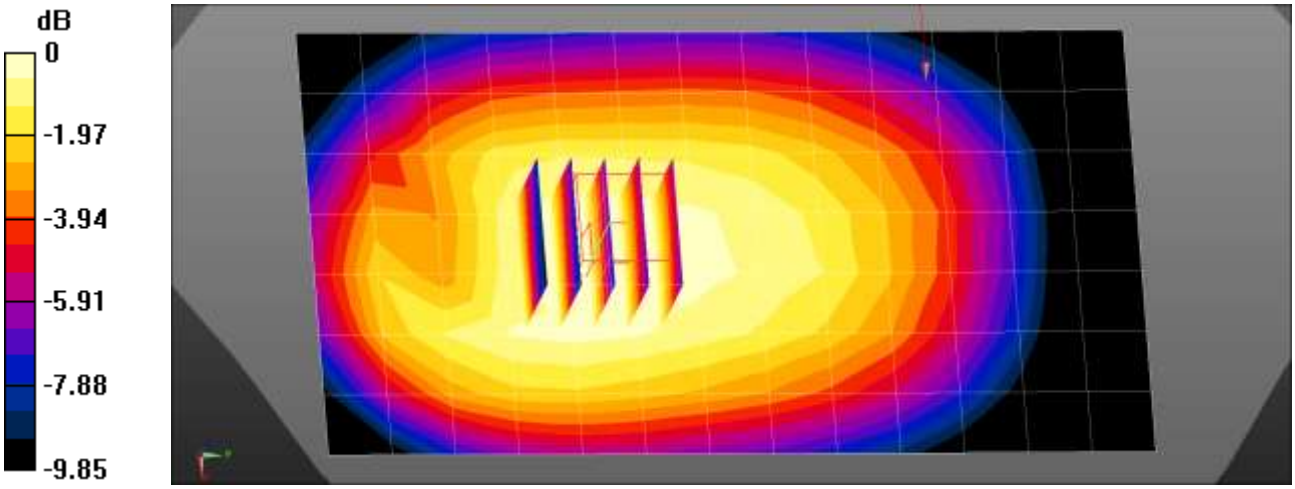
Communication System: UID 0, LTE 71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.864 S/m; ε_r = 43.199; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 683 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 71 Body Worn Rear QPSK 20MHz 1RB 0offset 133297ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.305 W/kg

LTE band 71 Body Worn Rear QPSK 20MHz 1RB 0offset 133297ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.47 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.332 W/kg
SAR(1 g) = 0.262 W/kg; SAR(10 g) = 0.203 W/kg
Maximum value of SAR (measured) = 0.309 W/kg



0 dB = 0.309 W/kg = −5.10 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.1℃
Ambient Temperature:	20.2℃
Test Date:	08/24/2020
Plot No.:	49

DUT: SM-G781U; Type: Bar

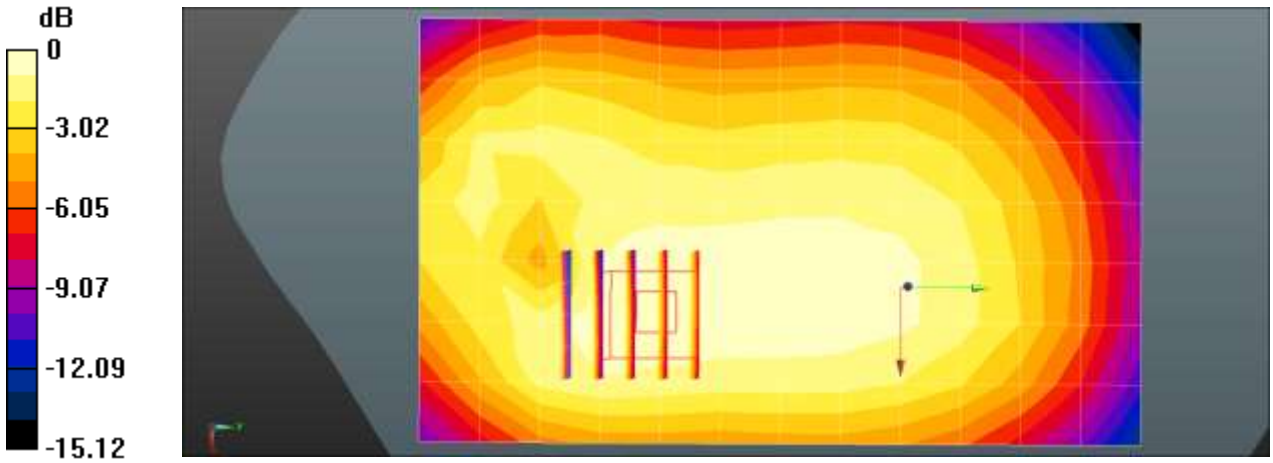
Communication System: UID 0, NR Band n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.921 S/m; ε_r = 42.678; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

NR n5 Body Front DFT-s QPSK 20MHz 1RB 53offset 167300ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.210 W/kg

NR n5 Body Front DFT-s QPSK 20MHz 1RB 53offset 167300ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.76 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.228 W/kg
SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.131 W/kg
Smallest distance from peaks to all points 3 dB below = 23.8 mm
Ratio of SAR at M2 to SAR at M1 = 76.9%
Maximum value of SAR (measured) = 0.212 W/kg



0 dB = 0.210 W/kg = -6.77 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4℃
Ambient Temperature:	20.7℃
Test Date:	08/24/2020
Plot No.:	50

DUT: SM-G781U; Type: Bar

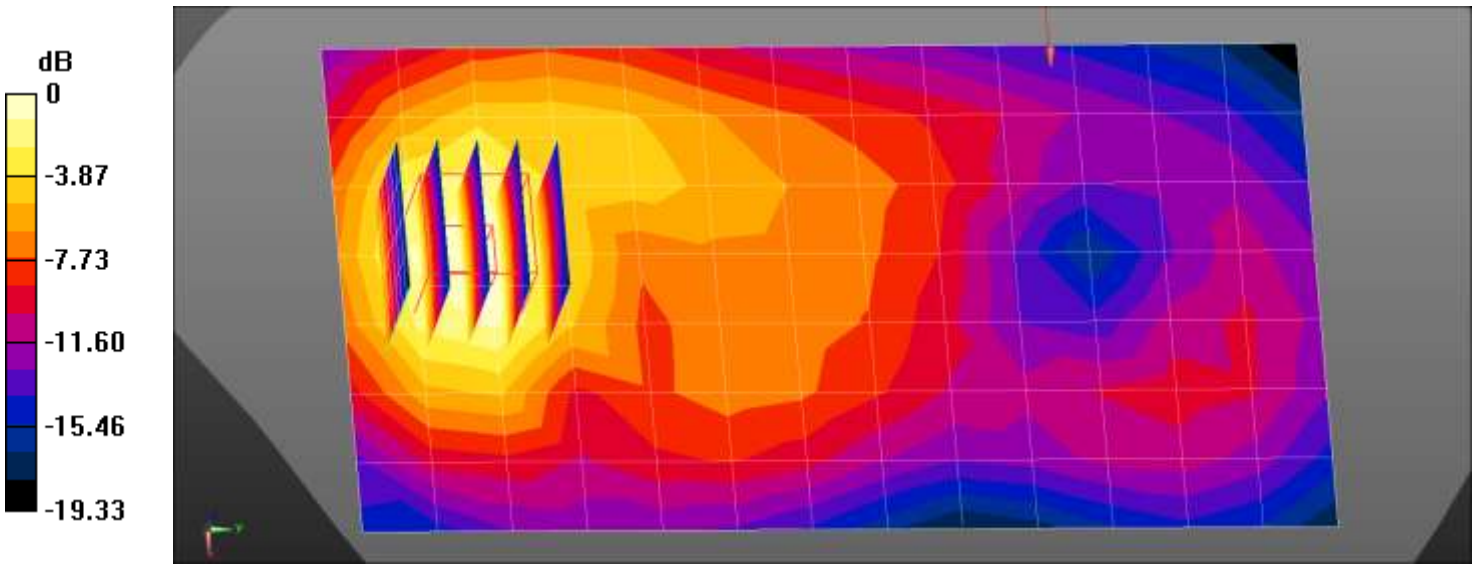
Communication System: UID 0, 5G NR (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1905 MHz; σ = 1.452 S/m; ε_r = 39.967; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1905 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 25 Body Rear QPSK 20MHz 1RB 53offset 381000ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.632 W/kg

NR Band 25 Body Rear QPSK 20MHz 1RB 53offset 381000ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.082 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.984 W/kg
SAR(1 g) = 0.565 W/kg; SAR(10 g) = 0.320 W/kg
Maximum value of SAR (measured) = 0.687 W/kg



0 dB = 0.632 W/kg = -1.99 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	08/18/2020
Plot No.:	51

DUT: SM-G781U; Type: Bar

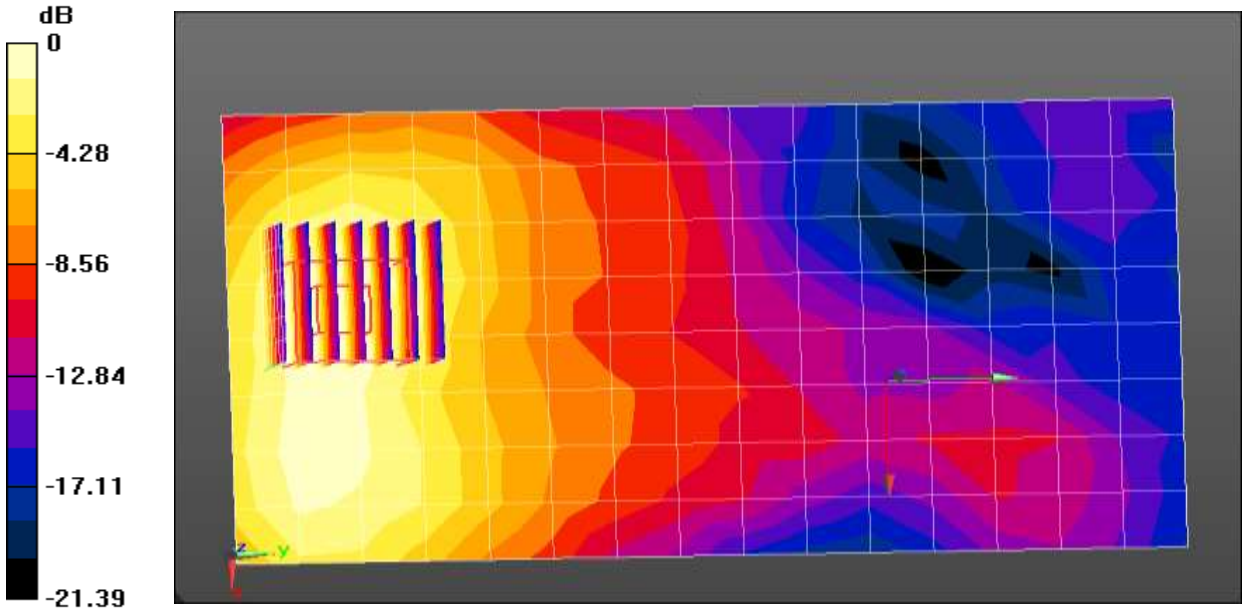
Communication System: UID 0, NR band n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:4.0
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.976 S/m; ε_r = 40.257; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2592.99 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

NR 41 Body-worn Rear QPSK 100MHz 135RB 69offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.164 W/kg

NR 41 Body-worn Rear QPSK 100MHz 135RB 69offset 518598ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.729 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.221 W/kg
SAR(1 g) = 0.107 W/kg; SAR(10 g) = 0.056 W/kg
Smallest distance from peaks to all points 3 dB below = 16.2 mm
Ratio of SAR at M2 to SAR at M1 = 45.8%
Maximum value of SAR (measured) = 0.173 W/kg



0 dB = 0.164 W/kg = -7.85 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.2℃
Ambient Temperature:	22.4℃
Test Date:	08/06/2020
Plot No.:	52

DUT: SM-G781U; Type: Bar

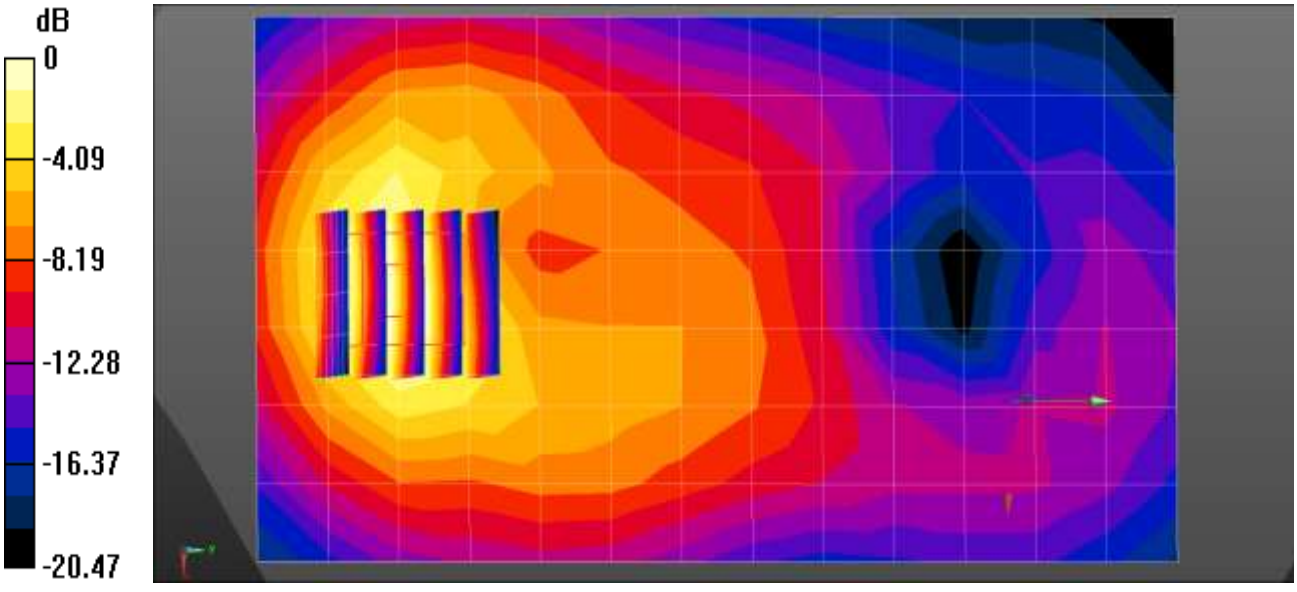
Communication System: UID 0, 5G NR (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.354 S/m; ε_r = 40.15; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1770 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 66 Body Worn Rear QPSK 20MHz 50RB 28offset 354000ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.652 W/kg

NR Band 66 Body Worn Rear QPSK 20MHz 50RB 28offset 354000ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.631 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.825 W/kg
SAR(1 g) = 0.495 W/kg; SAR(10 g) = 0.285 W/kg
Smallest distance from peaks to all points 3 dB below = 12.9 mm
Ratio of SAR at M2 to SAR at M1 = 60.7%
Maximum value of SAR (measured) = 0.712 W/kg



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

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.9℃
Ambient Temperature:	21.0℃
Test Date:	08/11/2020
Plot No.:	53

DUT: SM-G781U; Type: Bar

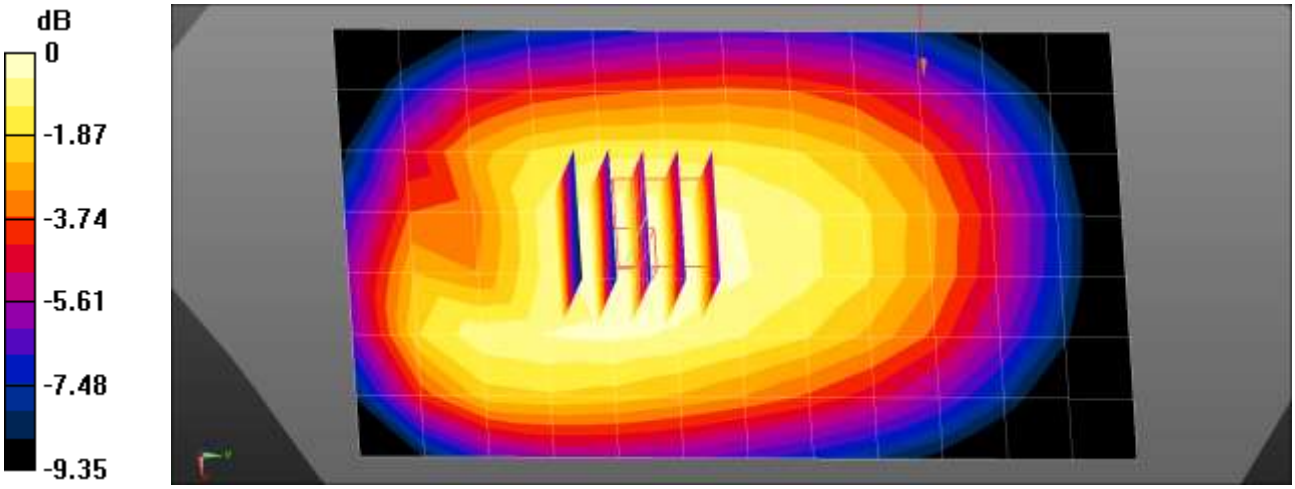
Communication System: UID 0, NR n71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.867 S/m; ε_r = 43.41; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(7.22, 7.22, 7.22) @ 680.5 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 71 Body-worn Rear DFT-s QPSK 20MHz 1RB 53offset 136100ch/Area Scan (8x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.299 W/kg

NR Band 71 Body-worn Rear DFT-s QPSK 20MHz 1RB 53offset 136100ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.81 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.372 W/kg
SAR(1 g) = 0.287 W/kg; SAR(10 g) = 0.222 W/kg
Maximum value of SAR (measured) = 0.300 W/kg



0 dB = 0.300 W/kg = -5.23 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.9℃
Ambient Temperature: 21.0℃
Test Date: 08/12/2020
Plot No.: 54

DUT: SM-G781U; Type: Bar

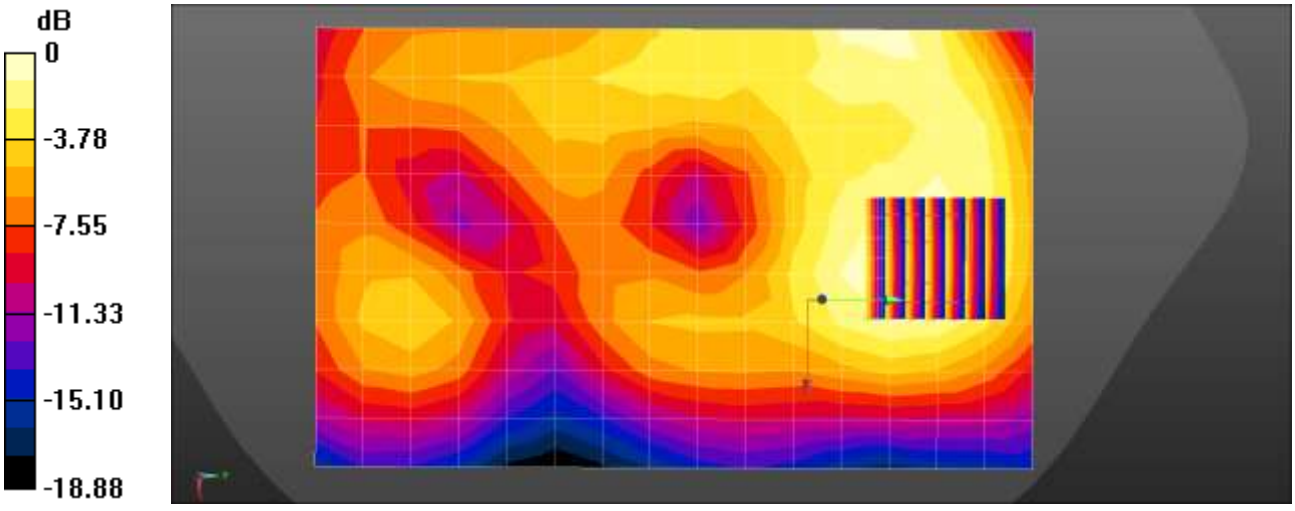
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.766 S/m; ε_r = 40.143; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2412 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

802.11b BodyWorn Rear 1Mbps 1ch MIMO/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.299 W/kg

802.11b BodyWorn Rear 1Mbps 1ch MIMO/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.648 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.375 W/kg
SAR(1 g) = 0.201 W/kg; SAR(10 g) = 0.113 W/kg
Smallest distance from peaks to all points 3 dB below = 19.2 mm
Ratio of SAR at M2 to SAR at M1 = 52%
Maximum value of SAR (measured) = 0.304 W/kg



0 dB = 0.299 W/kg = -5.25 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
Liquid Temperature: 20.6℃
Ambient Temperature: 20.9℃
Test Date: 08/14/2020
Plot No.: 55

DUT: SM-G781U; Type: Bar

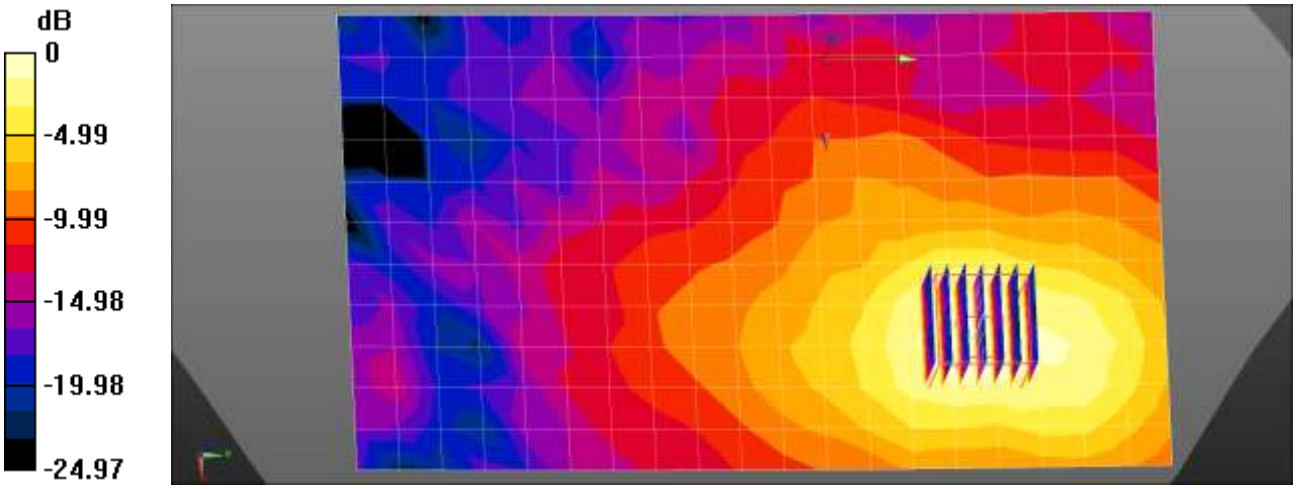
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5745 MHz; σ = 5.134 S/m; ε_r = 36.27; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.37, 4.37, 4.37) @ 5745 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

802.11a20 Body Rear 6Mbps 149ch/Area Scan (12x20x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.520 W/kg

802.11a20 Body Rear 6Mbps 149ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 3.482 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.955 W/kg
SAR(1 g) = 0.243 W/kg; SAR(10 g) = 0.103 W/kg
Maximum value of SAR (measured) = 0.539 W/kg



0 dB = 0.539 W/kg = -2.68 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.9℃
Test Date:	08/05/2020
Plot No.:	56

DUT: SM-G781U; Type: Bar

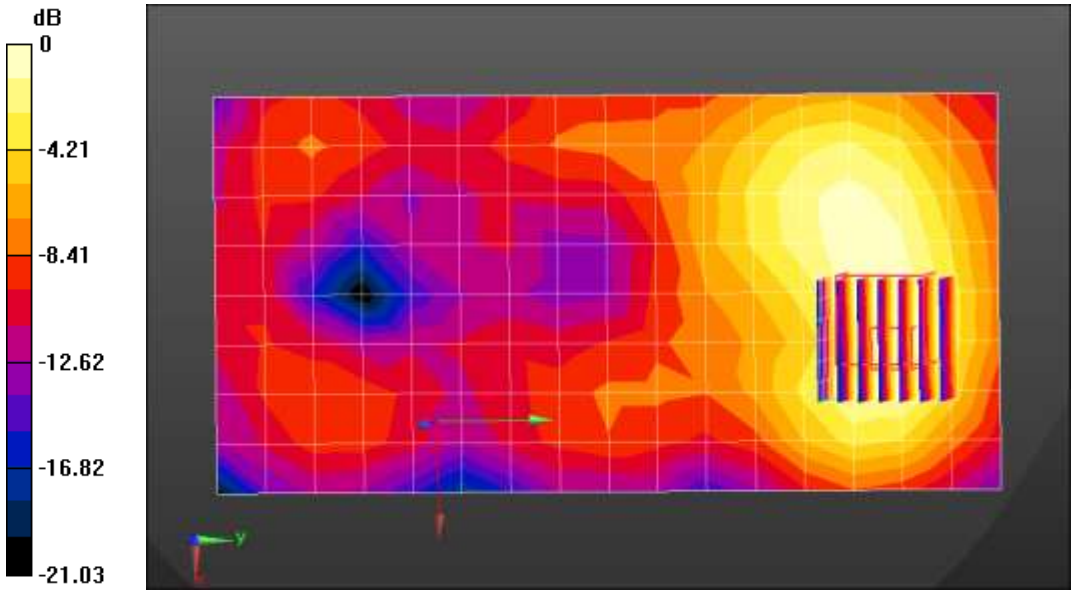
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.302
Medium parameters used (interpolated): f = 2441 MHz; σ = 1.796 S/m; ε_r = 40.654; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.35, 7.35, 7.35) @ 2441 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Body Rear DH5 39ch body worn/Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.117 W/kg

Bluetooth Body Rear DH5 39ch body worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.158 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.147 W/kg
SAR(1 g) = 0.071 W/kg; SAR(10 g) = 0.037 W/kg
Smallest distance from peaks to all points 3 dB below = 12.4 mm
Ratio of SAR at M2 to SAR at M1 = 47.1%
Maximum value of SAR (measured) = 0.116 W/kg



0 dB = 0.117 W/kg = -9.32 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.6℃
Ambient Temperature:	20.8℃
Test Date:	08/13/2020
Plot No.:	57

DUT: SM-G781U; Type: Bar

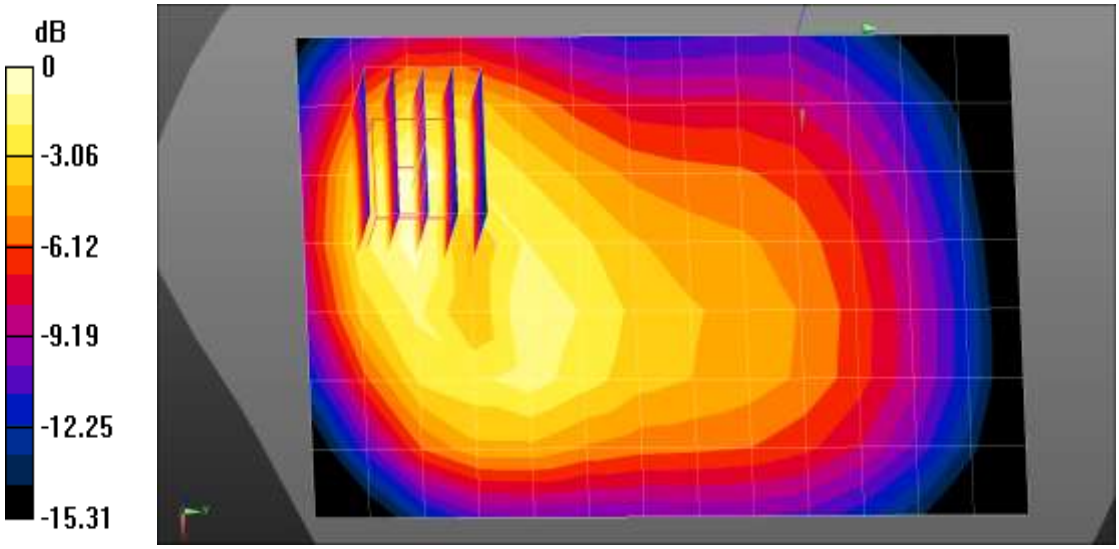
Communication System: UID 0, CDMA BC10 (FCC) (0); Frequency: 817.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 817.25 MHz; σ = 0.916 S/m; ε_r = 42.901; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96) @ 817.25 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC10 Body Front EvDO Rev.0 450ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.824 W/kg

CDMA BC10 Body Front EvDO Rev.0 450ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.32 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.777 W/kg; SAR(10 g) = 0.449 W/kg
Maximum value of SAR (measured) = 0.848 W/kg



0 dB = 0.848 W/kg = -0.72 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.2℃
Test Date:	08/04/2020
Plot No.:	58

DUT: SM-G781U; Type: Bar

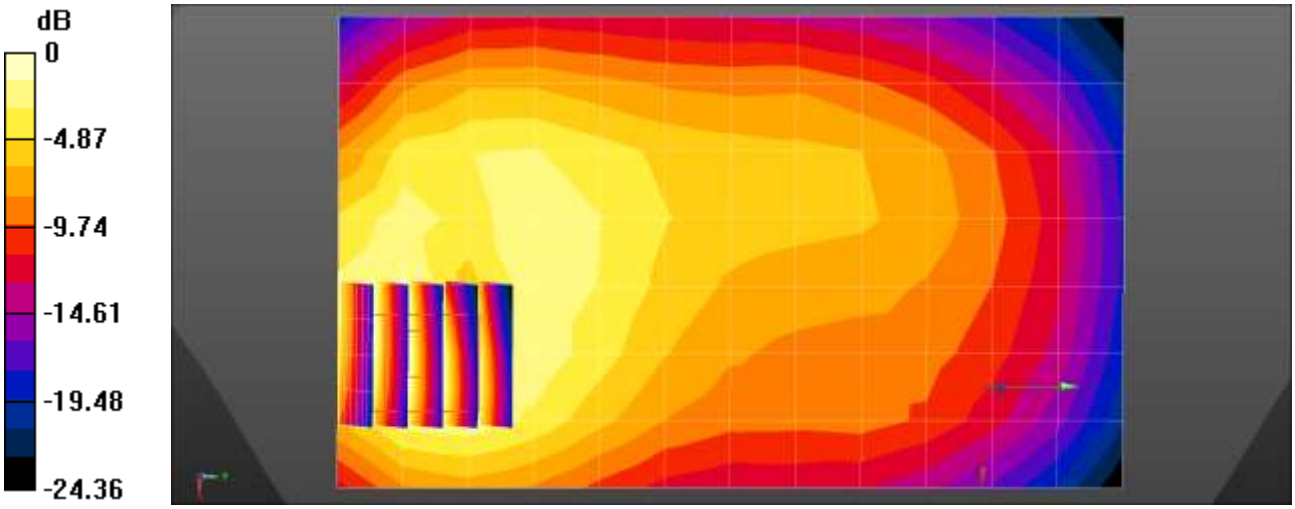
Communication System: UID 0, CDMA (0); Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.912 S/m; ε_r = 42.466; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 836.52 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC0 Body Rear EvDO Rev.0 384ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.951 W/kg

CDMA BC0 Body Rear EvDO Rev.0 384ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.02 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 1.11 W/kg
SAR(1 g) = 0.643 W/kg; SAR(10 g) = 0.376 W/kg
Smallest distance from peaks to all points 3 dB below = 11.5 mm
Ratio of SAR at M2 to SAR at M1 = 57.3%
Maximum value of SAR (measured) = 0.939 W/kg



0 dB = 0.951 W/kg = -0.22 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.8℃
Test Date:	08/12/2020
Plot No.:	59

DUT: SM-G781U; Type: Bar

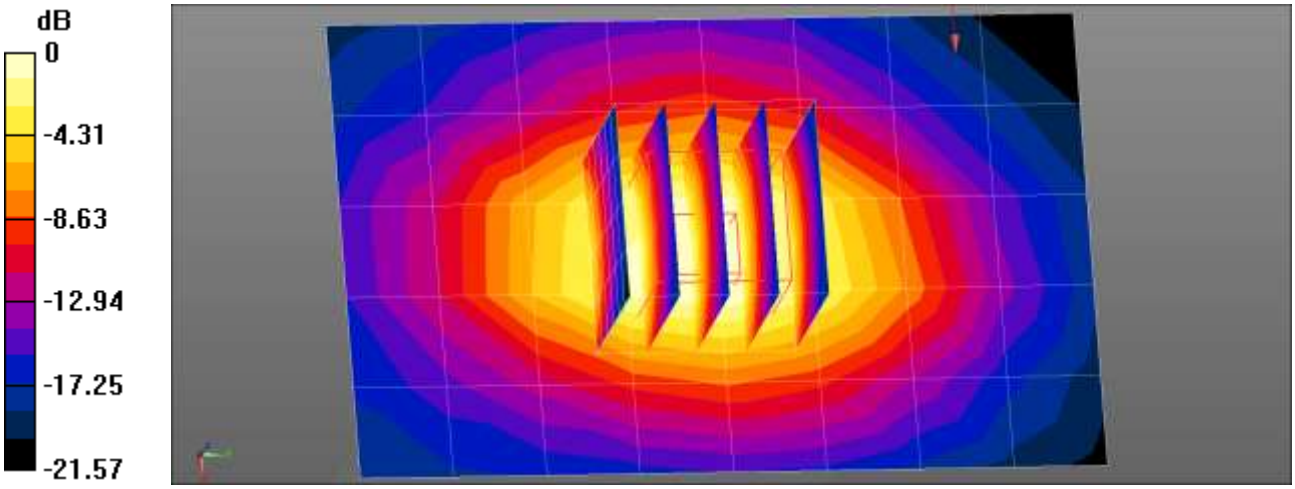
Communication System: UID 0, CDMA BC1(1900MHz) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.369 S/m; ε_r = 40.062; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1880 MHz; Calibrated: 2020-02-26V
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC1 Body Bottom EvDO Rev.0 600ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.649 W/kg

CDMA BC1 Body Bottom EvDO Rev.0 600ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.90 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.24 W/kg
SAR(1 g) = 0.737 W/kg; SAR(10 g) = 0.392 W/kg
Maximum value of SAR (measured) = 0.832 W/kg



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

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	08/03/2020
Plot No.:	60

DUT: SM-G781U; Type: Bar

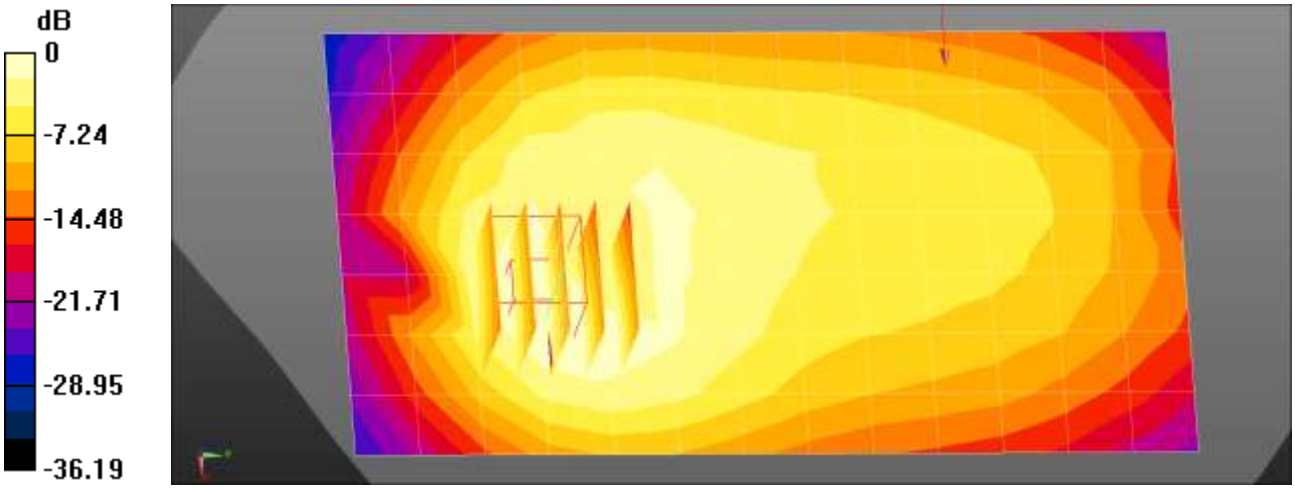
Communication System: UID 0, GSM 850 2Tx (0); Frequency: 836.6 MHz;Duty Cycle: 1:4.14954
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.917 S/m; ε_r = 42.726; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 836.6 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (2);

GSM 850 Body Rear 2Tx 190ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.08 W/kg

GSM 850 Body Rear 2Tx 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.16 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.791 W/kg; SAR(10 g) = 0.431 W/kg
Maximum value of SAR (measured) = 1.15 W/kg



0 dB = 1.15 W/kg = 0.61 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.2℃
Test Date:	08/13/2020
Plot No.:	61

DUT: SM-G781U; Type: Bar

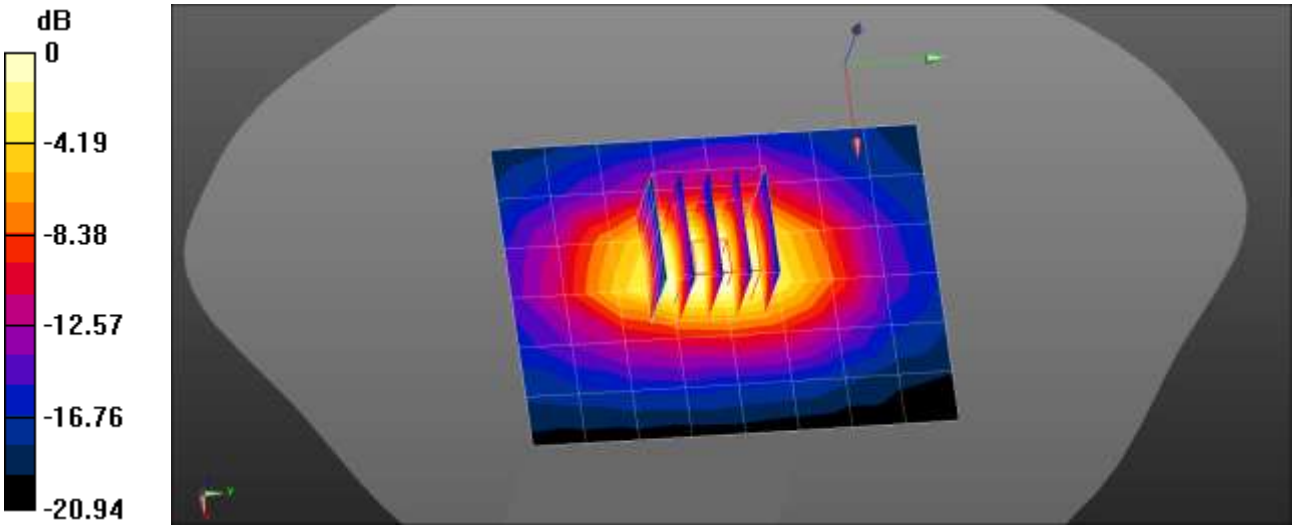
Communication System: UID 0, GSM 1900 3Tx (0); Frequency: 1880 MHz;Duty Cycle: 1:2.77013
Medium parameters used: f = 1880 MHz; σ = 1.411 S/m; ε_r = 39.942; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1880 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Body Bottom 3Tx 661ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.649 W/kg

GSM1900 Body Bottom 3Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.45 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.971 W/kg
SAR(1 g) = 0.546 W/kg; SAR(10 g) = 0.291 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 57.4%
Maximum value of SAR (measured) = 0.816 W/kg



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

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	19.4℃
Ambient Temperature:	19.5℃
Test Date:	08/25/2020
Plot No.:	62

DUT: SM-G781U; Type: Bar

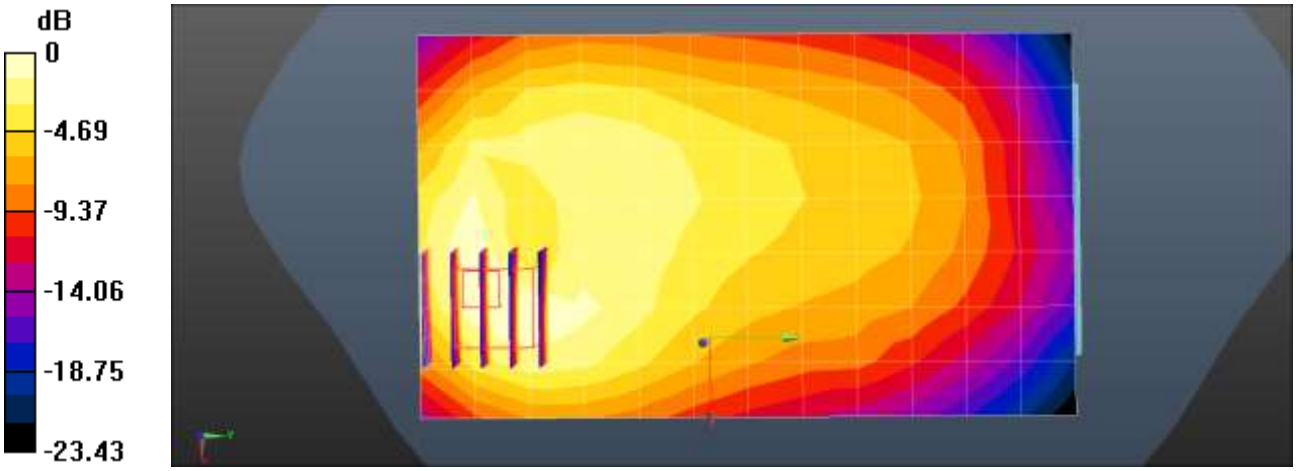
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.915 S/m; ε_r = 42.727; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.6 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 5 Body Rear 4183ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.597 W/kg

WCDMA Band 5 Body Rear 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.10 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.707 W/kg
SAR(1 g) = 0.440 W/kg; SAR(10 g) = 0.270 W/kg
Smallest distance from peaks to all points 3 dB below = 10.2 mm
Ratio of SAR at M2 to SAR at M1 = 63.1%
Maximum value of SAR (measured) = 0.601 W/kg



0 dB = 0.597 W/kg = −2.24 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.9℃
Test Date:	08/20/2020
Plot No.:	63

DUT: SM-G781U; Type: Bar

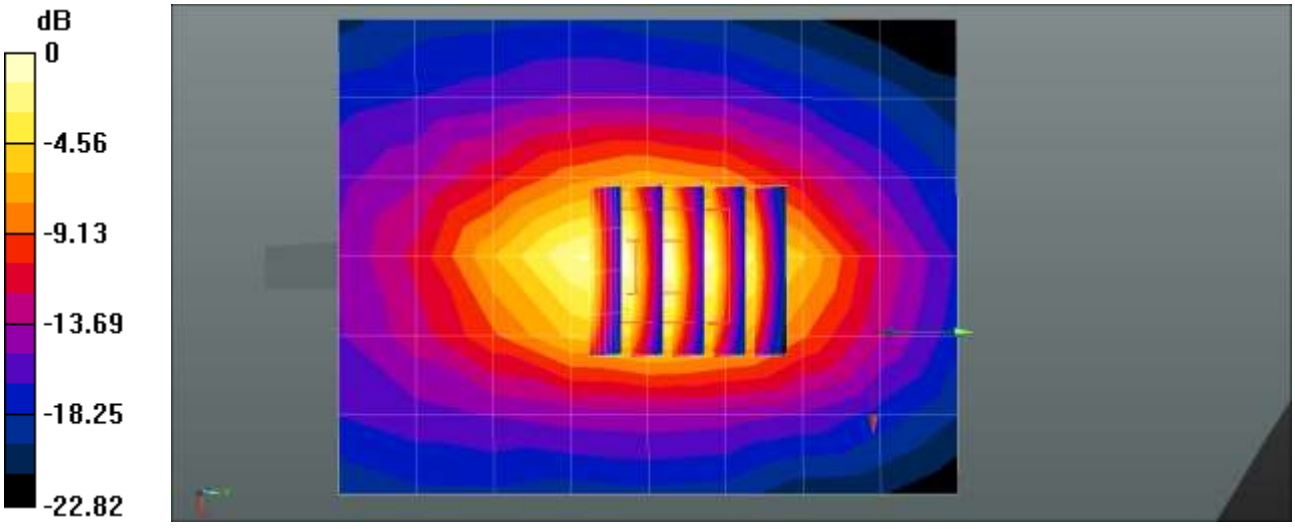
Communication System: UID 0, WCDMA 1700 (0); Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.315 S/m; ε_r = 40.169; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1732.4 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 4 Body Bottom 1412ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.800 W/kg

WCDMA Band 4 Body Bottom 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.61 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 0.987 W/kg
SAR(1 g) = 0.554 W/kg; SAR(10 g) = 0.297 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 57%
Maximum value of SAR (measured) = 0.817 W/kg



0 dB = 0.800 W/kg = -0.97 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.4℃
Test Date:	08/20/2020
Plot No.:	64

DUT: SM-G781U; Type: Bar

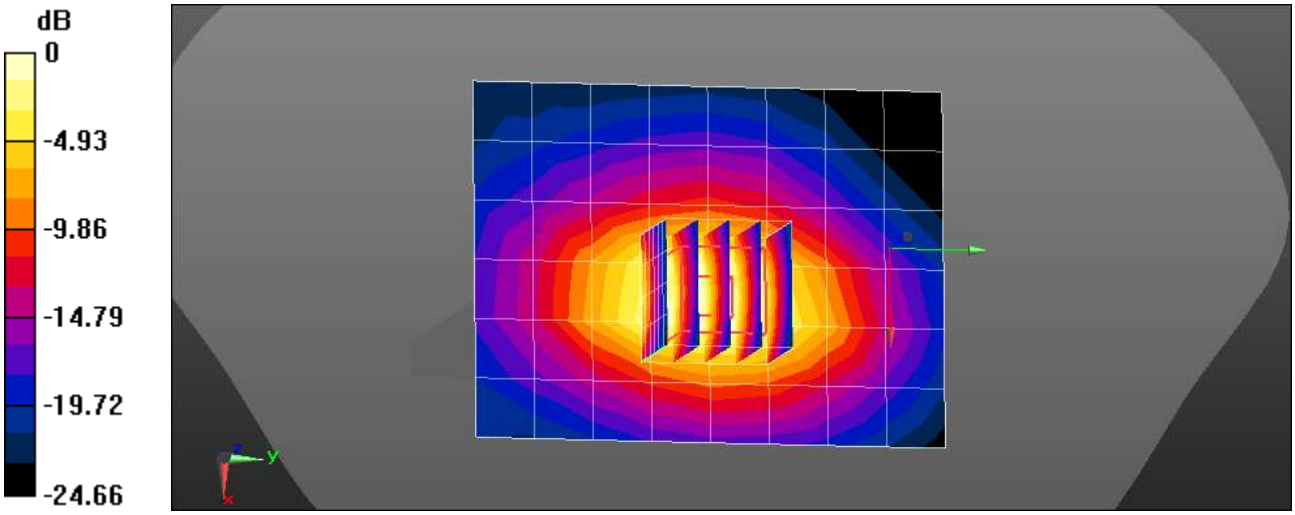
Communication System: UID 0, WCDMA Band 2 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.433 S/m; ε_r = 40.061; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1880 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 2 Body Bottom 9400ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.686 W/kg

WCDMA Band 2 Body Bottom 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.23 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.677 W/kg; SAR(10 g) = 0.354 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 57.9%
Maximum value of SAR (measured) = 0.852 W/kg



0 dB = 0.686 W/kg = -1.64 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.8℃
Ambient Temperature:	21.9℃
Test Date:	08/20/2020
Plot No.:	65

DUT: SM-G781U; Type: Bar

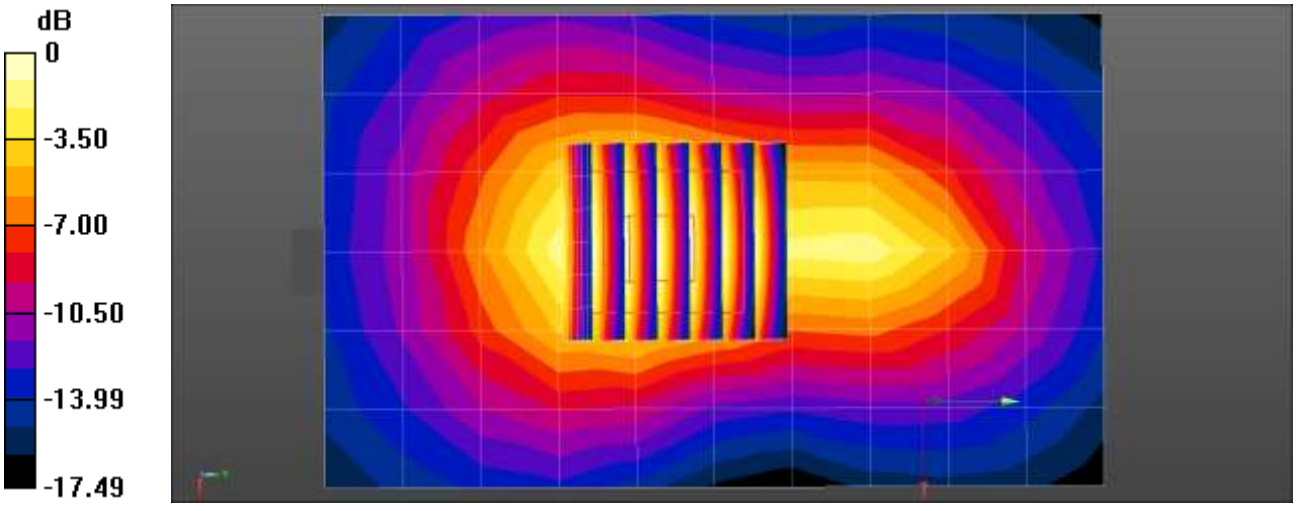
Communication System: UID 0, LTE Band7 (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.873 S/m; ε_r = 40.115; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2510 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 7 Body Bottom QPSK 20MHz 1RB 0offset 20850ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.838 W/kg

LTE Band 7 Body Bottom QPSK 20MHz 1RB 0offset 20850ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.55 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.512 W/kg; SAR(10 g) = 0.252 W/kg
Smallest distance from peaks to all points 3 dB below = 10.8 mm
Ratio of SAR at M2 to SAR at M1 = 48%
Maximum value of SAR (measured) = 0.840 W/kg



0 dB = 0.838 W/kg = -0.77 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.7℃
Ambient Temperature:	22.8℃
Test Date:	07/22/2020
Plot No.:	66

DUT: SM-G781U; Type: Bar

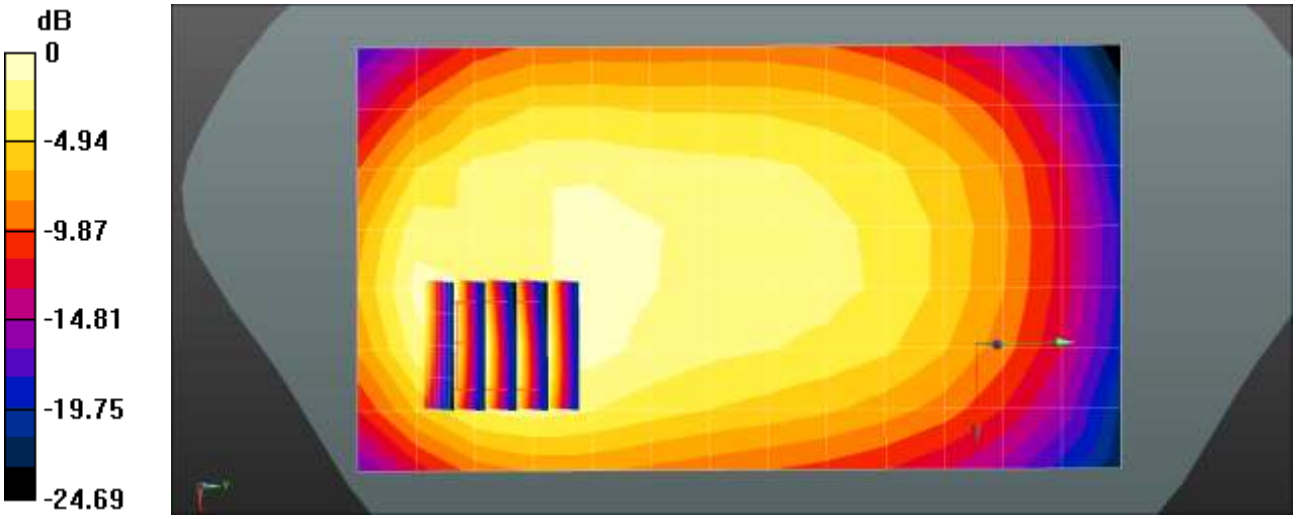
Communication System: UID 0, LTE 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.852 S/m; ε_r = 42.686; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 707.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 12 Body Rear QPSK 10MHz 1RB 49offset 23095ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.476 W/kg

LTE band 12 Body Rear QPSK 10MHz 1RB 49offset 23095ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.00 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.594 W/kg
SAR(1 g) = 0.337 W/kg; SAR(10 g) = 0.199 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 55.8%
Maximum value of SAR (measured) = 0.497 W/kg



0 dB = 0.476 W/kg = -3.22 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.5℃
Ambient Temperature:	21.6℃
Test Date:	07/23/2020
Plot No.:	67

DUT: SM-G781U; Type: Bar

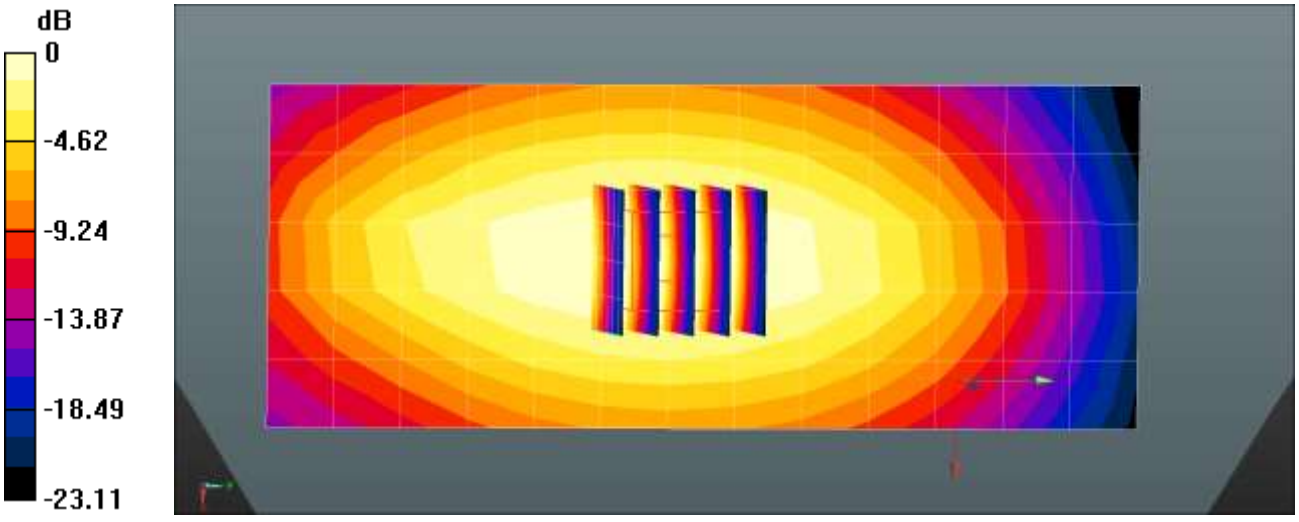
Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.928 S/m; ε_r = 41.638; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 782 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 13 Body Right QPSK 10MHz 1RB 0offset 23230ch/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.541 W/kg

LTE band 13 Body Right QPSK 10MHz 1RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.14 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.676 W/kg
SAR(1 g) = 0.467 W/kg; SAR(10 g) = 0.322 W/kg
Maximum value of SAR (measured) = 0.607 W/kg



0 dB = 0.541 W/kg = -2.67 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.5℃
Ambient Temperature:	20.6℃
Test Date:	07/24/2020
Plot No.:	68

DUT: SM-G781U; Type: Bar

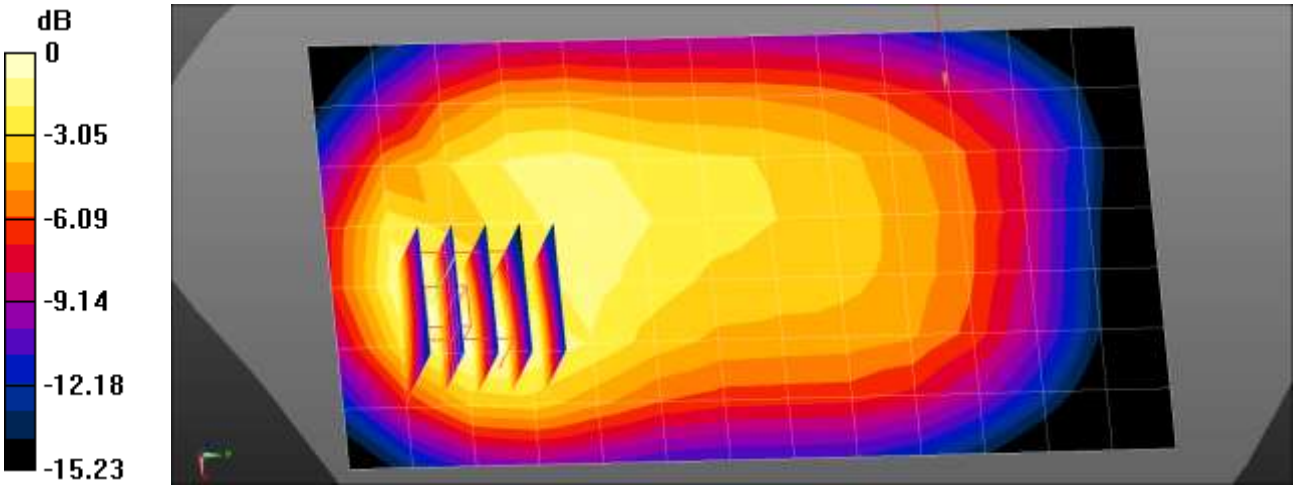
Communication System: UID 0, LTE 14 (0); Frequency: 793 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 793 MHz; σ = 0.925 S/m; ε_r = 41.929; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 793 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 14 Body Rear QPSK 10MHz 1RB 0offset 23330ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.588 W/kg

LTE band 14 Body Rear QPSK 10MHz 1RB 0offset 23330ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.81 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.724 W/kg
SAR(1 g) = 0.421 W/kg; SAR(10 g) = 0.247 W/kg
Maximum value of SAR (measured) = 0.613 W/kg



0 dB = 0.613 W/kg = -2.13 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.1℃
Ambient Temperature:	20.3℃
Test Date:	08/21/2020
Plot No.:	69

DUT: SM-G781U; Type: Bar

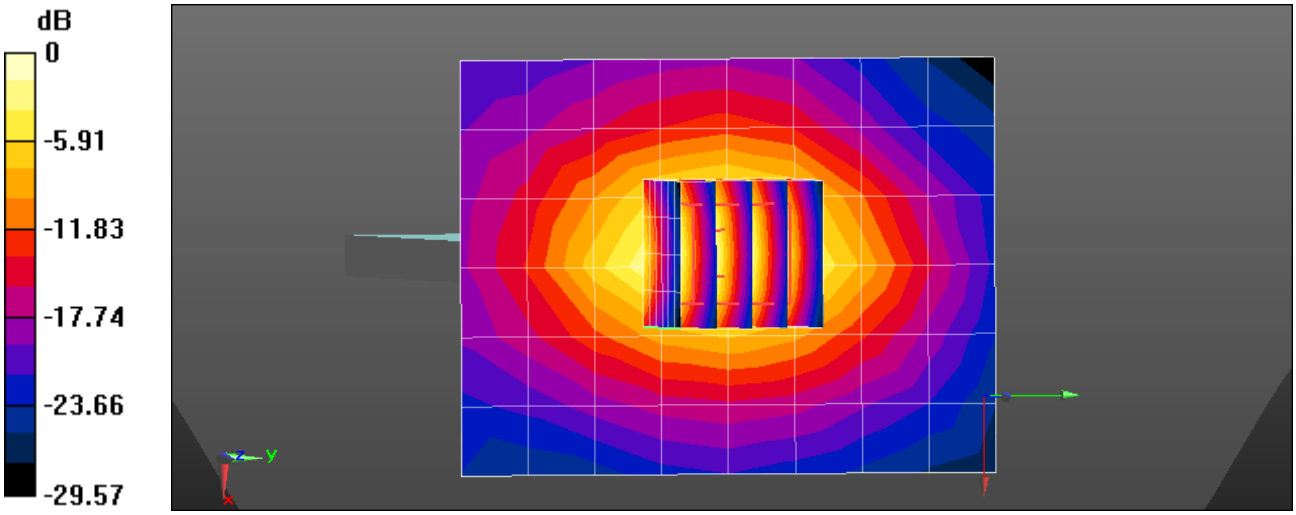
Communication System: UID 0, LTE Band 25 (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1905 MHz; σ = 1.452 S/m; ε_r = 39.952; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1905 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band25 Body Bottom QPSK 20MHz 50RB 49offset 26590ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.768 W/kg

LTE Band25 Body Bottom QPSK 20MHz 50RB 49offset 26590ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.70 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.640 W/kg; SAR(10 g) = 0.330 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 55.9%
Maximum value of SAR (measured) = 0.809 W/kg



0 dB = 0.768 W/kg = -1.14 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.5℃
Ambient Temperature:	20.6℃
Test Date:	08/21/2020
Plot No.:	70

DUT: SM-G781U; Type: Bar

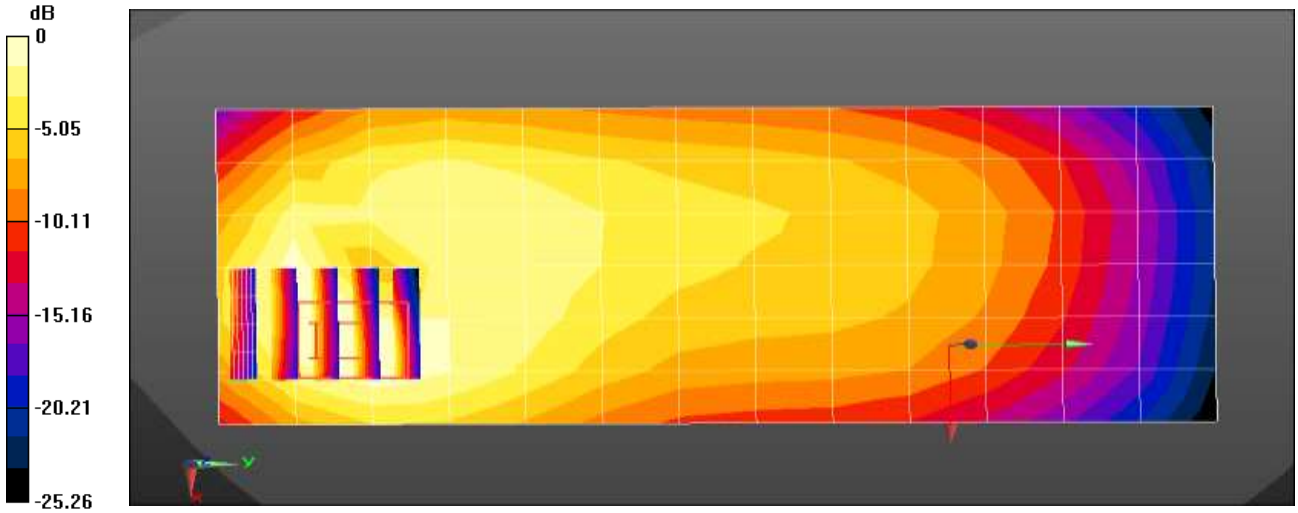
Communication System: UID 0, LTE 26 (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.944 S/m; ε_r = 42.807; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 831.5 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE26 Body Rear QPSK 15MHz 1RB 0offset 26865ch/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.865 W/kg

LTE26 Body Rear QPSK 15MHz 1RB 0offset 26865ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.57 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.656 W/kg; SAR(10 g) = 0.382 W/kg
Smallest distance from peaks to all points 3 dB below = 12.2 mm
Ratio of SAR at M2 to SAR at M1 = 58.1%
Maximum value of SAR (measured) = 0.943 W/kg



0 dB = 0.865 W/kg = -0.63 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.2℃
Test Date:	08/04/2020
Plot No.:	71

DUT: SM-G781U; Type: Bar

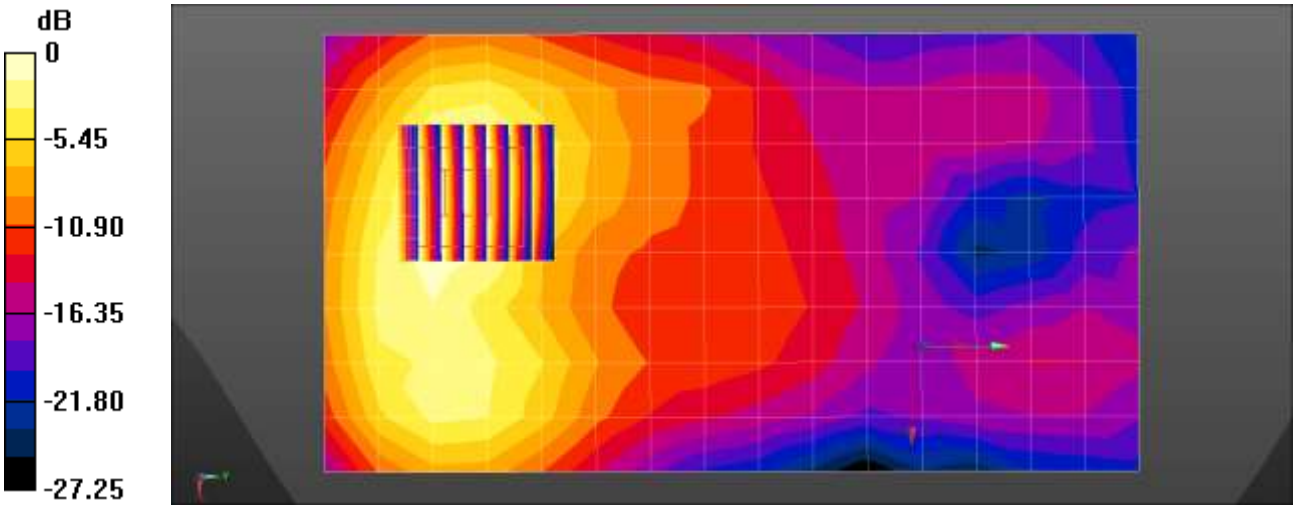
Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.648 S/m; ε_r = 40.979; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 30 Body Rear QPSK 10MHz 25RB 12offset 27710ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.336 W/kg

LTE Band 30 Body Rear QPSK 10MHz 25RB 12offset 27710ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.446 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.464 W/kg
SAR(1 g) = 0.240 W/kg; SAR(10 g) = 0.127 W/kg
Smallest distance from peaks to all points 3 dB below = 12.4 mm
Ratio of SAR at M2 to SAR at M1 = 51.4%
Maximum value of SAR (measured) = 0.378 W/kg



0 dB = 0.336 W/kg = -4.74 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.1℃
Test Date:	08/10/2020
Plot No.:	72

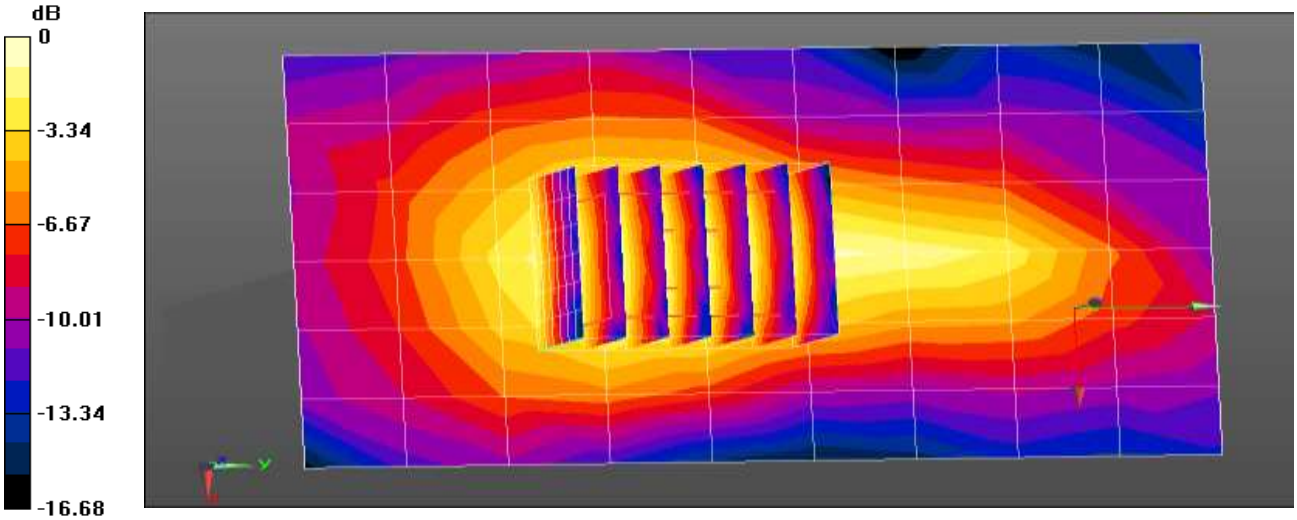
DUT: SM-G781U; Type: Bar

Communication System: UID 0, LTE Band 40 (0); Frequency: 2310 MHz;Duty Cycle: 1:1.58125
Medium parameters used: f = 2310 MHz; σ = 1.637 S/m; ε_r = 41.163; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 40 Body Bottom QPSK 10MHz 1RB 24offset 38750ch/Area Scan (7x10x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0388 W/kg
LTE Band 40 Body Bottom QPSK 10MHz 1RB 24offset 38750ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.790 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.0480 W/kg
SAR(1 g) = 0.025 W/kg; SAR(10 g) = 0.013 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 49.3%
Maximum value of SAR (measured) = 0.0393 W/kg



0 dB = 0.0388 W/kg = -14.11 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.2℃
Test Date:	08/11/2020
Plot No.:	73

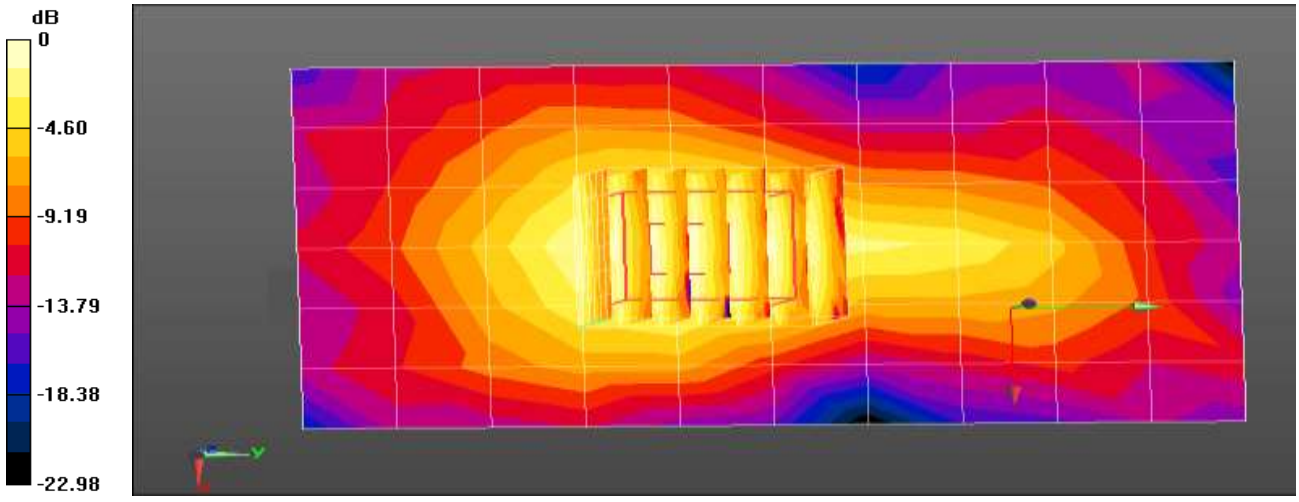
DUT: SM-G781U; Type: Bar

Communication System: UID 0, LTE Band 40 (0); Frequency: 2355 MHz;Duty Cycle: 1:1.58125
Medium parameters used (interpolated): f = 2355 MHz; σ = 1.694 S/m; ε_r = 40.971; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2355 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 40 Body Bottom QPSK 10MHz 25RB 12offset 39200ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0507 W/kg
LTE Band 40 Body Bottom QPSK 10MHz 25RB 12offset 39200ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.060 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.0630 W/kg
SAR(1 g) = 0.031 W/kg; SAR(10 g) = 0.015 W/kg
Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
Ratio of SAR at M2 to SAR at M1 = 48.5%
Maximum value of SAR (measured) = 0.0500 W/kg



0 dB = 0.0507 W/kg = -12.95 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.3℃
Ambient Temperature:	20.6℃
Test Date:	08/26/2020
Plot No.:	74

DUT: SM-G781U; Type: Bar

Communication System: UID 0, LTE Band41 (0); Frequency: 2680 MHz;Duty Cycle: 1:1.58016
Medium parameters used: f = 2680 MHz; σ = 2.029 S/m; ε_r = 38.582; ρ = 1000 kg/m^3
Phantom section: Flat Section

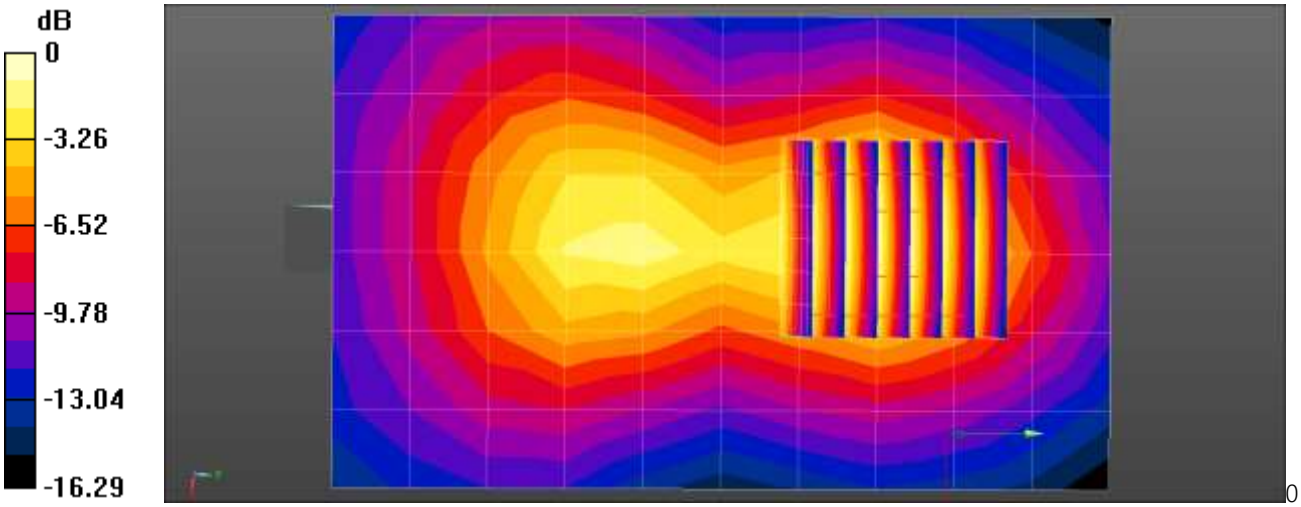
DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2680 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 41 Body Bottom QPSK 20MHz 50RB 25offset 41490ch/Area Scan (7x11x1) :Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.662 W/kg

LTE Band 41 Body Bottom QPSK 20MHz 50RB 25offset t 41490ch /Zoom Scan (7x7x7)/Cube 0:
Reference Value = 13.56 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.887 W/kg
SAR(1 g) = 0.377 W/kg; SAR(10 g) = 0.168 W/kg
Smallest distance from peaks to all points 3 dB below = 10.8 mm
Ratio of SAR at M2 to SAR at M1 = 41.9%
Maximum value of SAR (measured) = 0.669 W/kg



0 dB = 0.662 W/kg = -1.79 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.3℃
Test Date:	08/20/2020
Plot No.:	75

DUT: SM-G781U; Type: Bar

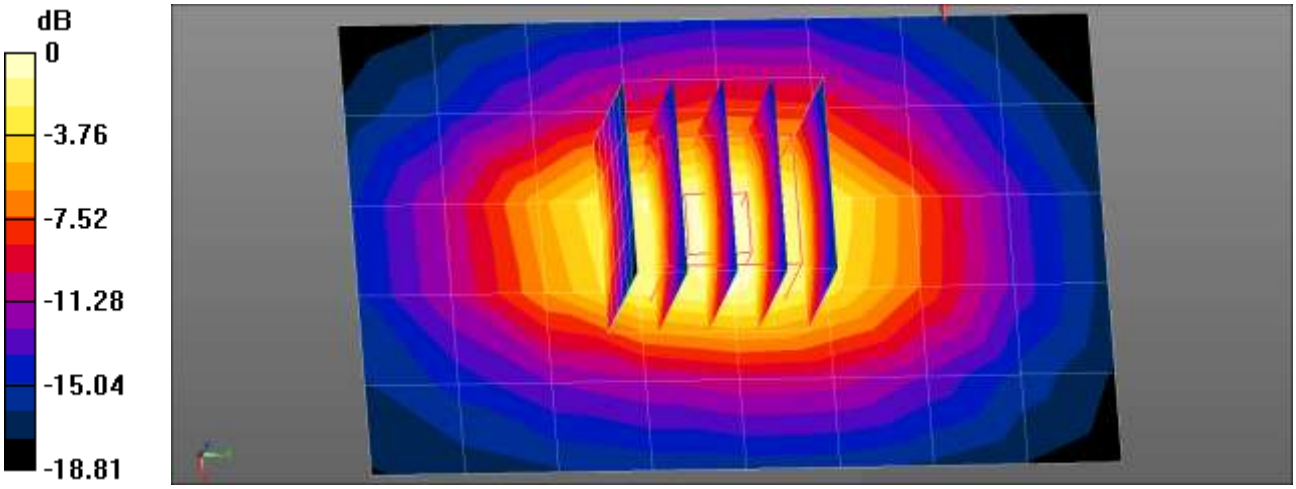
Communication System: UID 0, LTE 66 (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.301 S/m; ε_r = 39.892; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.91, 5.91, 5.91) @ 1720 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 66 Body Bottom QPSK 20MHz 50RB 25offset 132072ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.698 W/kg

LTE Band 66 Body Bottom QPSK 20MHz 50RB 25offset 132072ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.10 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.24 W/kg
SAR(1 g) = 0.778 W/kg; SAR(10 g) = 0.429 W/kg
Maximum value of SAR (measured) = 0.874 W/kg



0 dB = 0.698 W/kg = -1.56 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 23.1℃
Ambient Temperature: 23.3℃
Test Date: 07/28/2020
Plot No.: 76

DUT: SM-G781U; Type: Bar

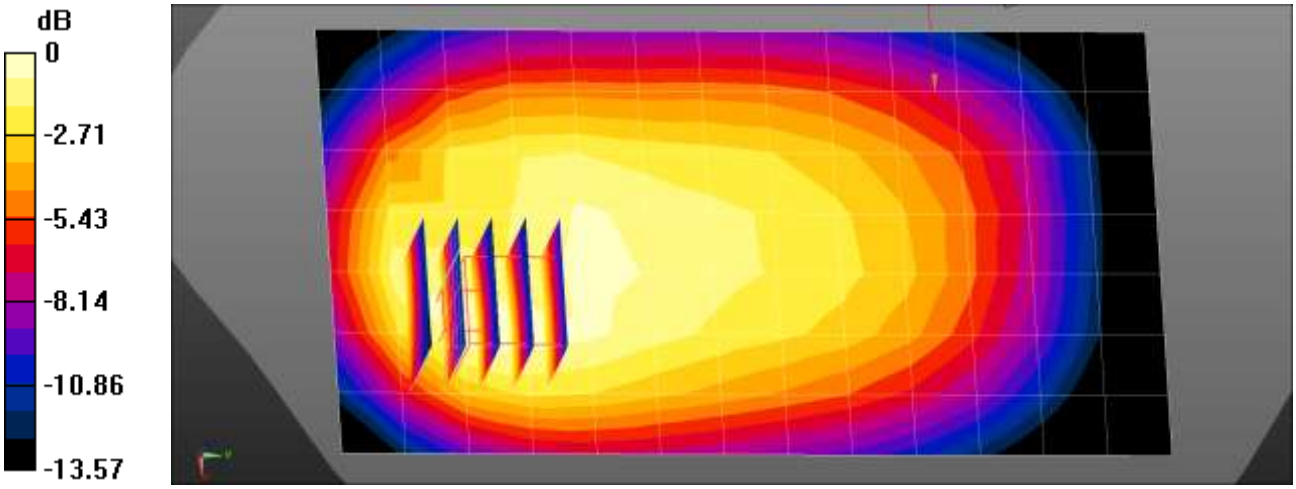
Communication System: UID 0, LTE 71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.864 S/m; ε_r = 43.199; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 683 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

LTE band 71 Body Rear QPSK 20MHz 1RB 0offset 133297ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.450 W/kg

LTE band 71 Body Rear QPSK 20MHz 1RB 0offset 133297ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.74 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.553 W/kg
SAR(1 g) = 0.314 W/kg; SAR(10 g) = 0.197 W/kg
Maximum value of SAR (measured) = 0.464 W/kg



0 dB = 0.464 W/kg = -3.33 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.1℃
Ambient Temperature:	20.2℃
Test Date:	08/24/2020
Plot No.:	77

DUT: SM-G781U; Type: Bar

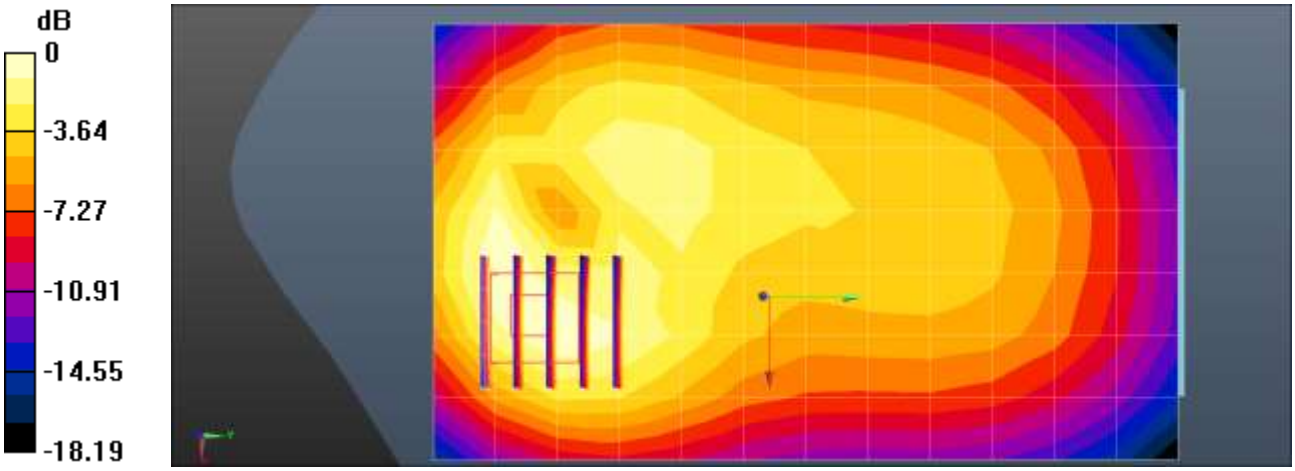
Communication System: UID 0, NR Band n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.921 S/m; ε_r = 42.678; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

NR n5 Body Rear DFT-s QPSK 20MHz 1RB 53offset 167300ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.468 W/kg

NR n5 Body Rear DFT-s QPSK 20MHz 1RB 53offset 167300ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.52 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.573 W/kg
SAR(1 g) = 0.352 W/kg; SAR(10 g) = 0.213 W/kg
Smallest distance from peaks to all points 3 dB below = 12.9 mm
Ratio of SAR at M2 to SAR at M1 = 59.7%
Maximum value of SAR (measured) = 0.484 W/kg



0 dB = 0.468 W/kg = −3.30 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4℃
Ambient Temperature:	20.7℃
Test Date:	08/24/2020
Plot No.:	78

DUT: SM-G781U; Type: Bar

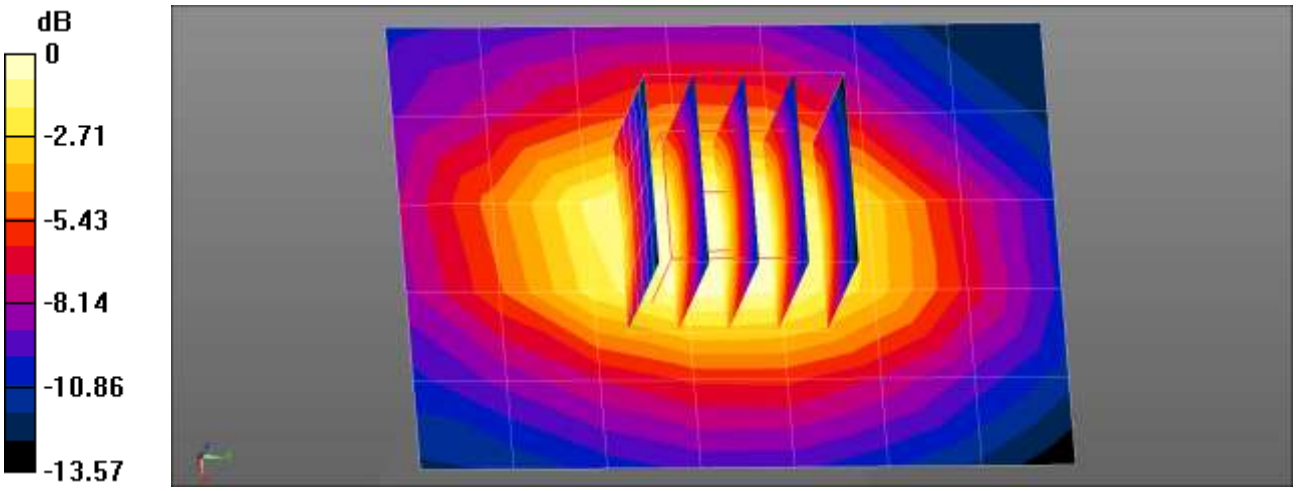
Communication System: UID 0, 5G NR (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1905 MHz; σ = 1.452 S/m; ε_r = 39.967; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1905 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 25 Body Bottom QPSK 20MHz 1RB 53offset 381000ch/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.716 W/kg

NR Band 25 Body Bottom QPSK 20MHz 1RB 53offset 381000ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.57 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.781 W/kg; SAR(10 g) = 0.400 W/kg
Maximum value of SAR (measured) = 0.987 W/kg



0 dB = 0.716 W/kg = -1.45 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	08/18/2020
Plot No.:	79

DUT: SM-G781U; Type: Bar

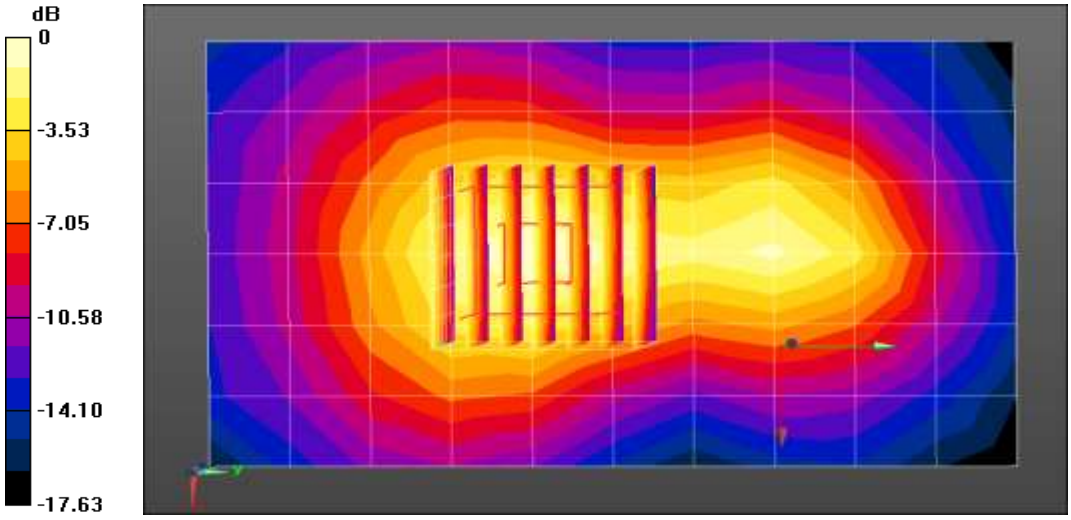
Communication System: UID 0, NR band n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:4.0
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.976 S/m; ε_r = 40.257; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2592.99 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

NR 41 Body Bottom QPSK 100MHz 1RB 1offset 518598ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.213 W/kg

NR 41 Body Bottom QPSK 100MHz 1RB 1offset 518598ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 9.657 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.270 W/kg
SAR(1 g) = 0.127 W/kg; SAR(10 g) = 0.062 W/kg
Maximum value of SAR (measured) = 0.212 W/kg



0 dB = 0.213 W/kg = -6.72 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.2℃
Ambient Temperature:	22.4℃
Test Date:	08/06/2020
Plot No.:	80

DUT: SM-G781U; Type: Bar

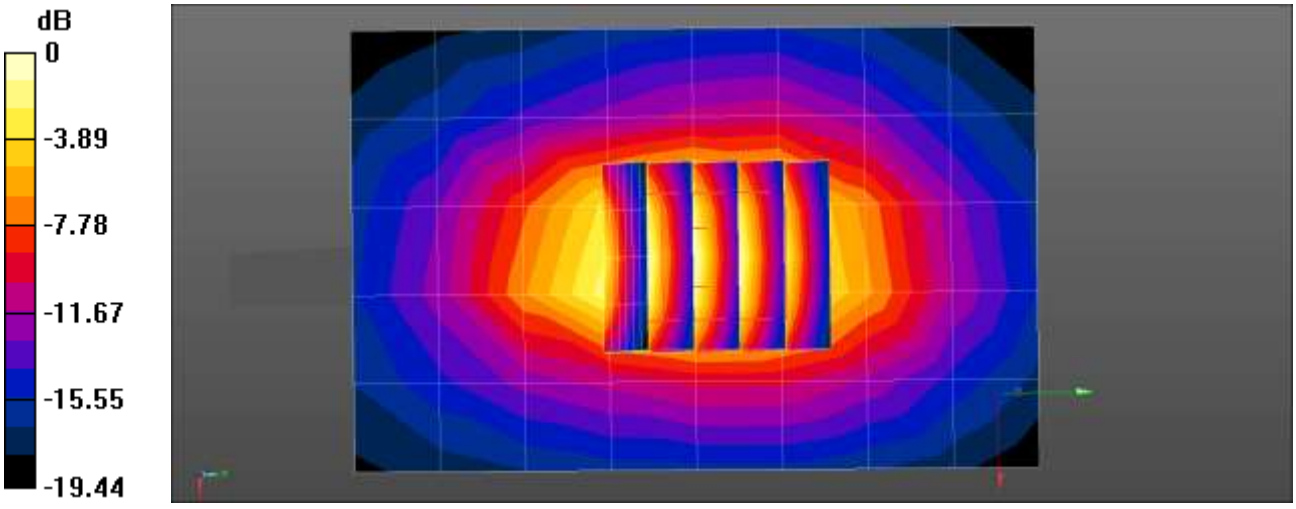
Communication System: UID 0, 5G NR (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.307 S/m; ε_r = 40.285; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1720 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 66 Body Bottom QPSK 20MHz 1RB 1offset 344000ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.876 W/kg

NR Band 66 Body Bottom QPSK 20MHz 1RB 1offset 344000ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.58 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.35 W/kg
SAR(1 g) = 0.771 W/kg; SAR(10 g) = 0.413 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 58.9%
Maximum value of SAR (measured) = 1.15 W/kg



0 dB = 0.876 W/kg = -0.57 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.9℃
Ambient Temperature:	21.0℃
Test Date:	08/11/2020
Plot No.:	81

DUT: SM-G781U; Type: Bar

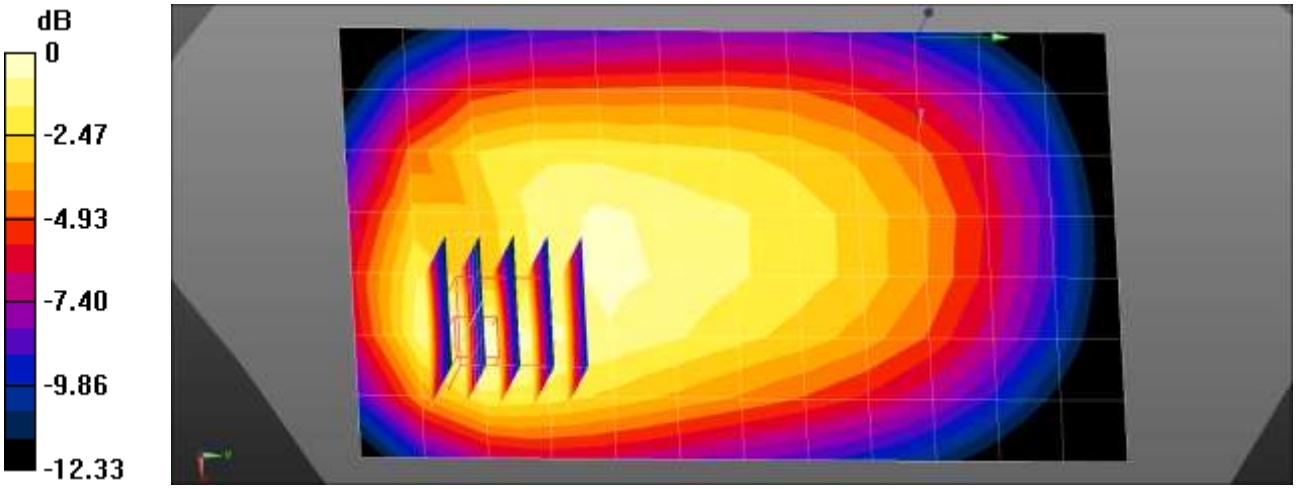
Communication System: UID 0, NR n71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.867 S/m; ε_r = 43.41; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(7.22, 7.22, 7.22) @ 680.5 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 71 Body Rear DFT-s QPSK 20MHz 50RB 28offset 136100ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.407 W/kg

NR Band 71 Body Rear DFT-s QPSK 20MHz 50RB 28offset 136100ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.86 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.674 W/kg
SAR(1 g) = 0.389 W/kg; SAR(10 g) = 0.234 W/kg
Maximum value of SAR (measured) = 0.426 W/kg



0 dB = 0.426 W/kg = -3.71 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.1℃
Test Date:	08/10/2020
Plot No.:	82

DUT: SM-G781U; Type: Bar

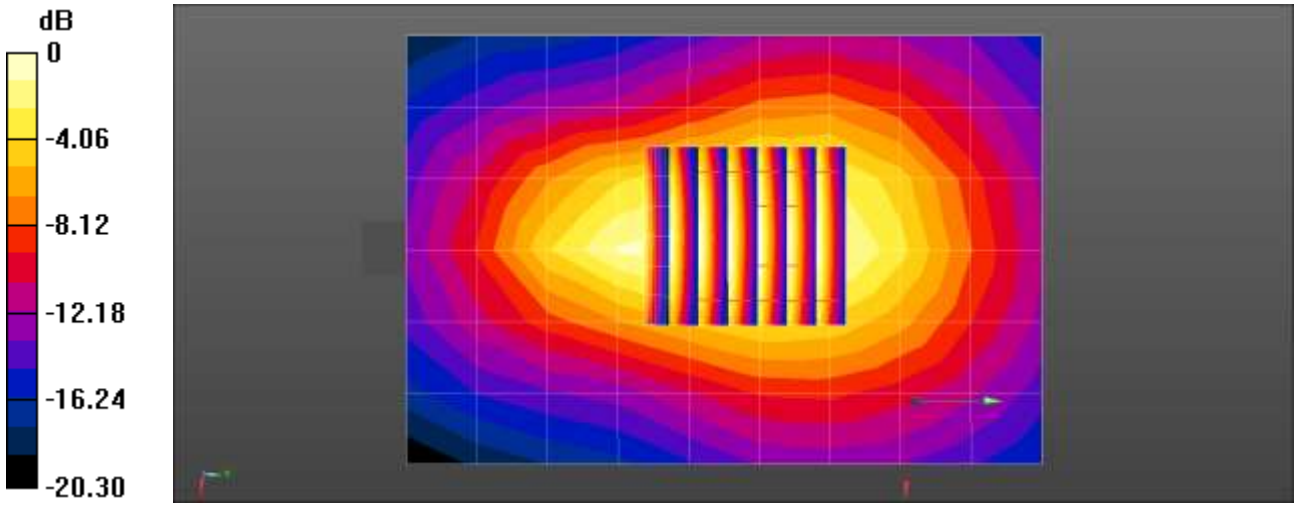
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.765 S/m; ε_r = 40.765; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2412 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

802.11b Body Top 1Mbps 1ch Ant1/Area Scan (7x10x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.01 W/kg

802.11b Body Top 1Mbps 1ch Ant1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.00 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 1.27 W/kg
SAR(1 g) = 0.631 W/kg; SAR(10 g) = 0.317 W/kg
Smallest distance from peaks to all points 3 dB below = 11.7 mm
Ratio of SAR at M2 to SAR at M1 = 49%
Maximum value of SAR (measured) = 1.03 W/kg



0 dB = 1.01 W/kg = 0.02 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.6℃
Ambient Temperature: 20.9℃
Test Date: 08/14/2020
Plot No.: 83

DUT: SM-G781U; Type: Bar

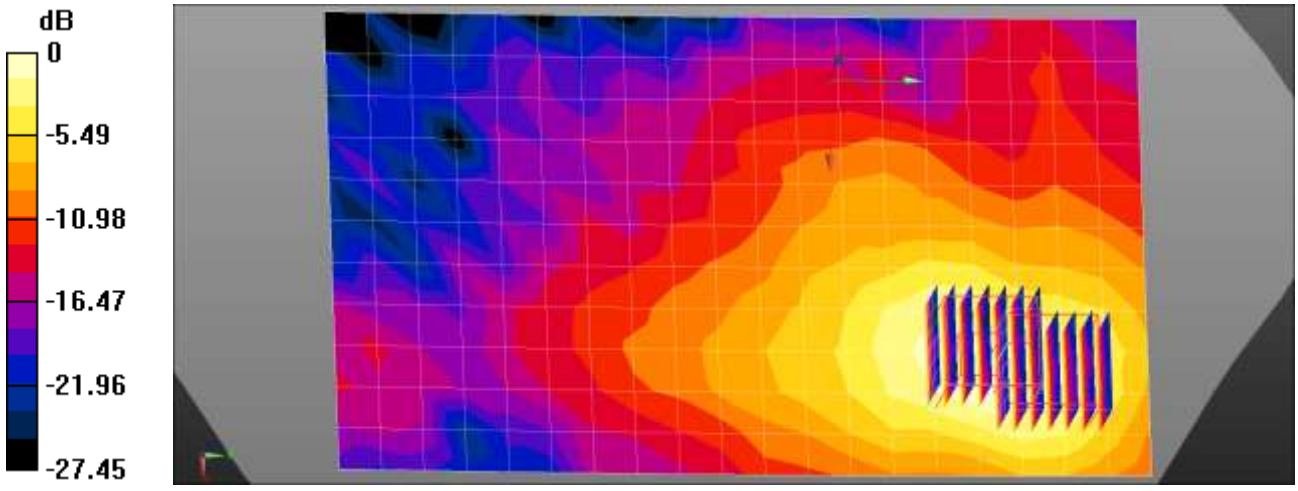
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5745 MHz; σ = 5.134 S/m; ε_r = 36.27; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.37, 4.37, 4.37) @ 5745 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

802.11a Body Rear 6Mbps 149ch/Area Scan (12x20x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.877 W/kg

802.11a Body Rear 6Mbps 149ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 3.936 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 1.61 W/kg
SAR(1 g) = 0.389 W/kg; SAR(10 g) = 0.156 W/kg
Maximum value of SAR (measured) = 0.911 W/kg



0 dB = 0.834 W/kg = -0.79 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.7℃
Ambient Temperature: 20.9℃
Test Date: 08/05/2020
Plot No.: 84

DUT: SM-G781U; Type: Bar

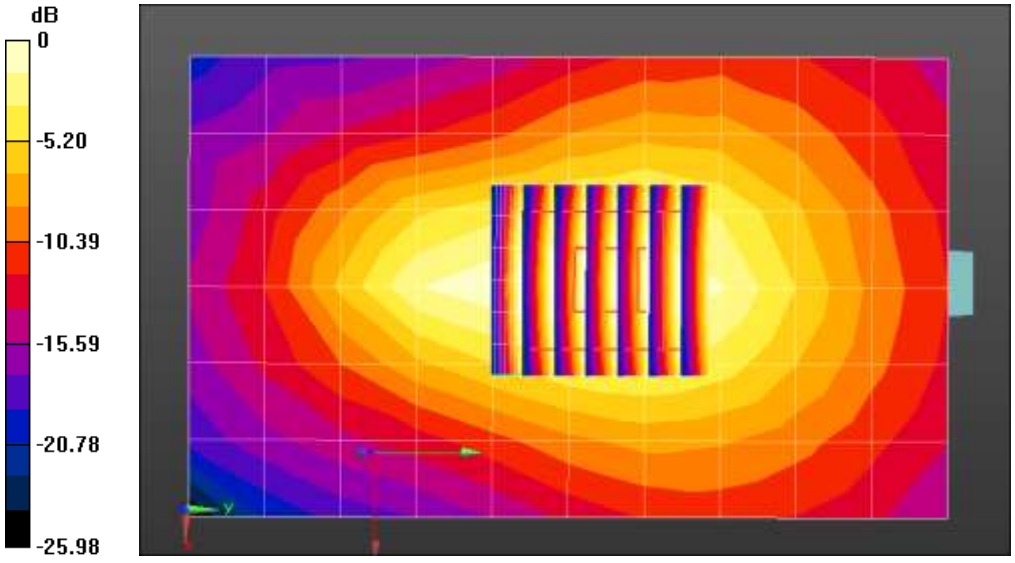
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz;Duty Cycle: 1:1.302
Medium parameters used (interpolated): f = 2441 MHz; σ = 1.796 S/m; ε_r = 40.654; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.35, 7.35, 7.35) @ 2441 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Body Top DH5 39ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.424 W/kg

Bluetooth Body Top DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.81 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.546 W/kg
SAR(1 g) = 0.270 W/kg; SAR(10 g) = 0.137 W/kg
Smallest distance from peaks to all points 3 dB below = 12 mm
Ratio of SAR at M2 to SAR at M1 = 48.5%
Maximum value of SAR (measured) = 0.438 W/kg



0 dB = 0.424 W/kg = -3.72 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.8℃
Test Date:	08/12/2020
Plot No.:	85

DUT: SM-G781U; Type: Bar

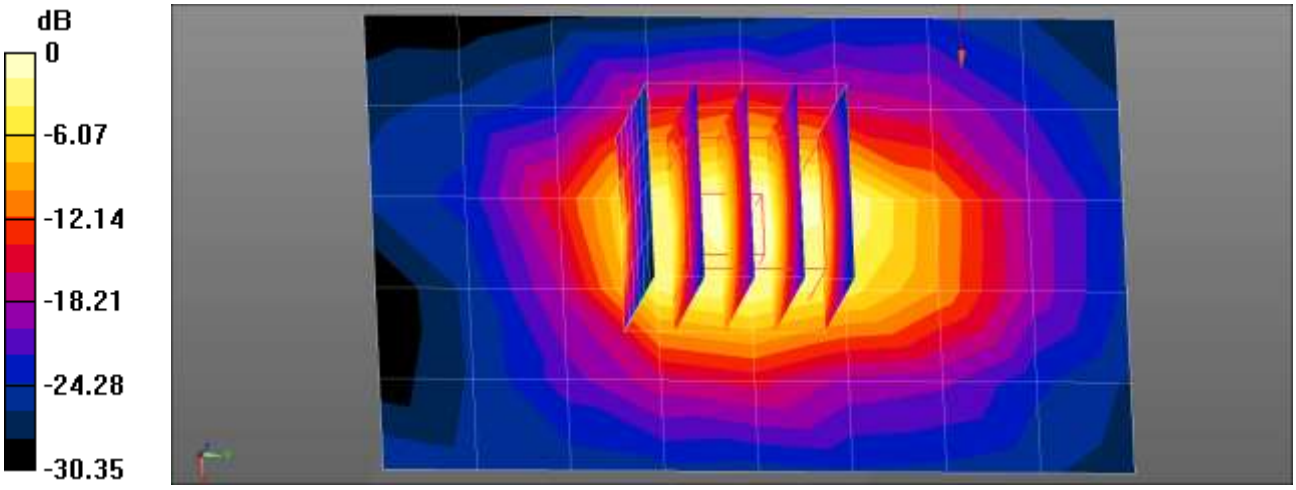
Communication System: UID 0, CDMA BC1(1900MHz) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.369 S/m; ε_r = 40.062; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1880 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC1 Body Bottom EvDO Rev.0 600ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.24 W/kg

CDMA BC1 Body Bottom EvDO Rev.0 600ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.00 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 4.99 W/kg
SAR(1 g) = 2.61 W/kg; SAR(10 g) = 1.22 W/kg
Maximum value of SAR (measured) = 3.11 W/kg



0 dB = 2.24 W/kg = 3.51 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.6℃
Ambient Temperature:	22.7℃
Test Date:	08/14/2020
Plot No.:	86

DUT: SM-G781U; Type: Bar

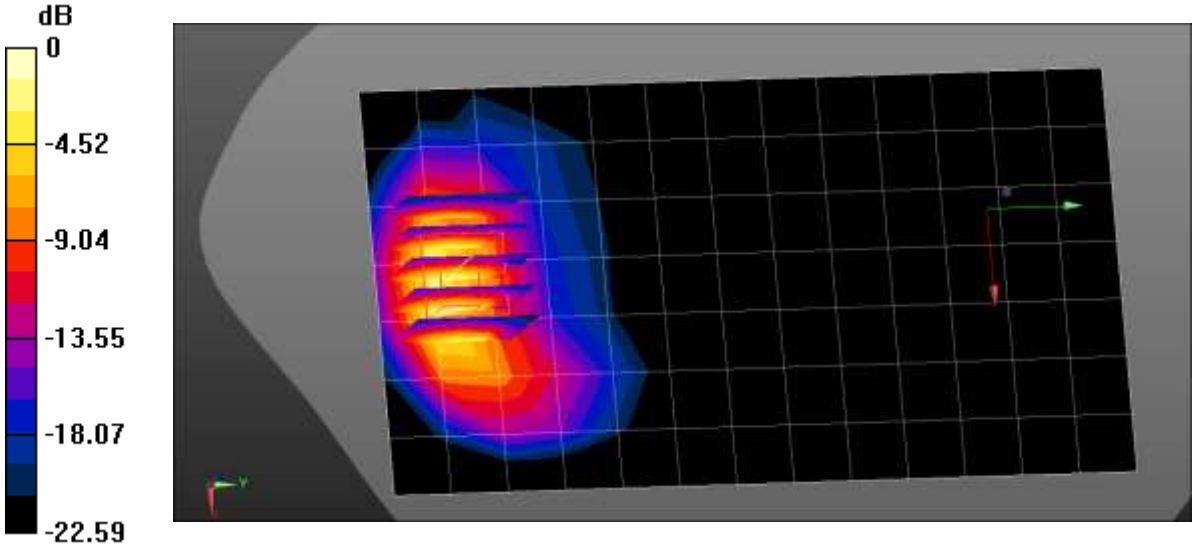
Communication System: UID 0, GSM 1900 3Tx (0); Frequency: 1880 MHz;Duty Cycle: 1:2.77013
Medium parameters used: f = 1880 MHz; σ = 1.431 S/m; ε_r = 39.726; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1880 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Body Front 3Tx 661ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.02 W/kg

GSM1900 Body Front 3Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 5.10 W/kg
SAR(1 g) = 2.22 W/kg; SAR(10 g) = 0.963 W/kg
Maximum value of SAR (measured) = 3.33 W/kg



0 dB = 3.33 W/kg = 5.22 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.5℃
Ambient Temperature:	21.8℃
Test Date:	08/21/2020
Plot No.:	87

DUT: SM-G781U; Type: Bar

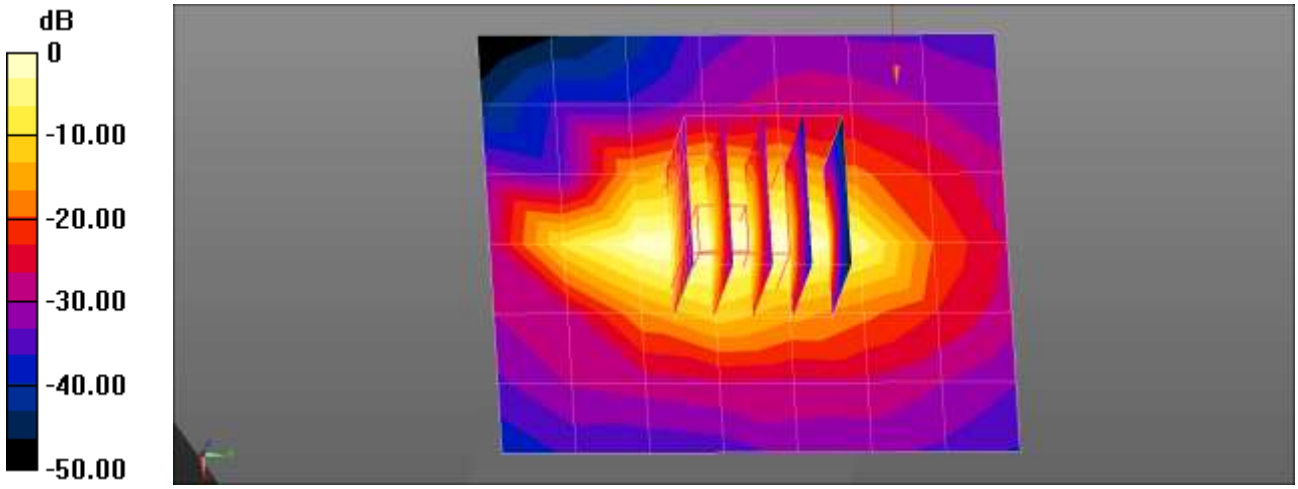
Communication System: UID 0, WCDMA IV (0); Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.398 S/m; ε_r = 39.785; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1732.4 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band4 Body Bottom 1412ch/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 4.51 W/kg

WCDMA Band4 Body Bottom 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 59.77 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 6.03 W/kg
SAR(1 g) = 2.45 W/kg; SAR(10 g) = 1.09 W/kg
Maximum value of SAR (measured) = 4.65 W/kg



0 dB = 4.51 W/kg = 6.54 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.4℃
Test Date:	08/20/2020
Plot No.:	88

DUT: SM-G781U; Type: Bar

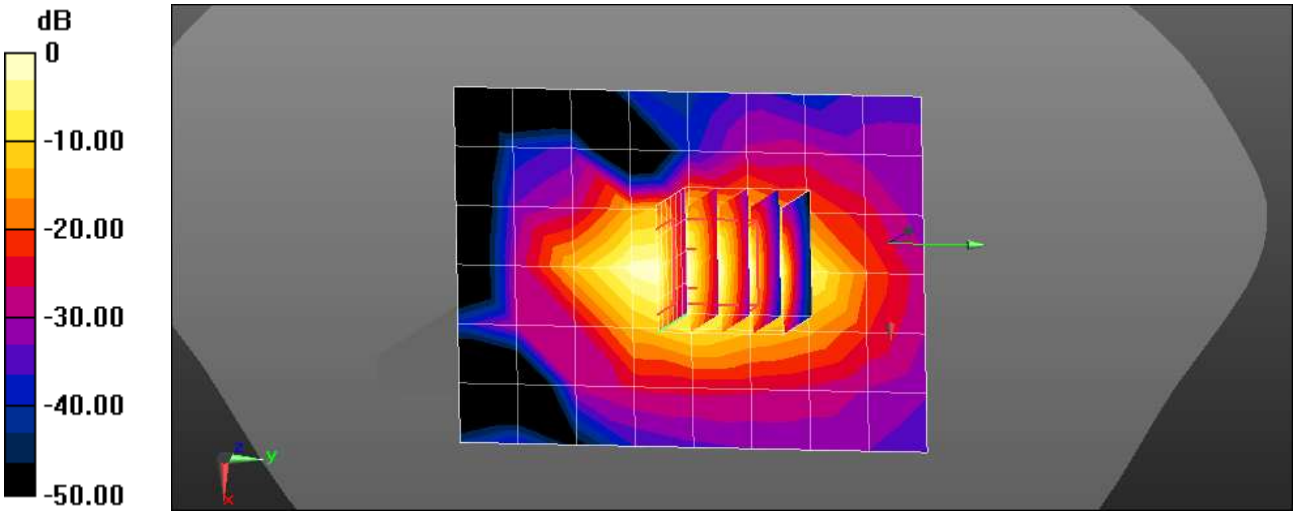
Communication System: UID 0, WCDMA Band 2 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.433 S/m; ε_r = 40.061; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1880 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 2 Body Bottom 9400ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.95 W/kg

WCDMA Band 2 Body Bottom 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.67 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 4.58 W/kg
SAR(1 g) = 2.17 W/kg; SAR(10 g) = 0.950 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 49.1%
Maximum value of SAR (measured) = 2.95 W/kg



0 dB = 2.95 W/kg = 4.70 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.1℃
Ambient Temperature:	20.3℃
Test Date:	08/21/2020
Plot No.:	89

DUT: SM-G781U; Type: Bar

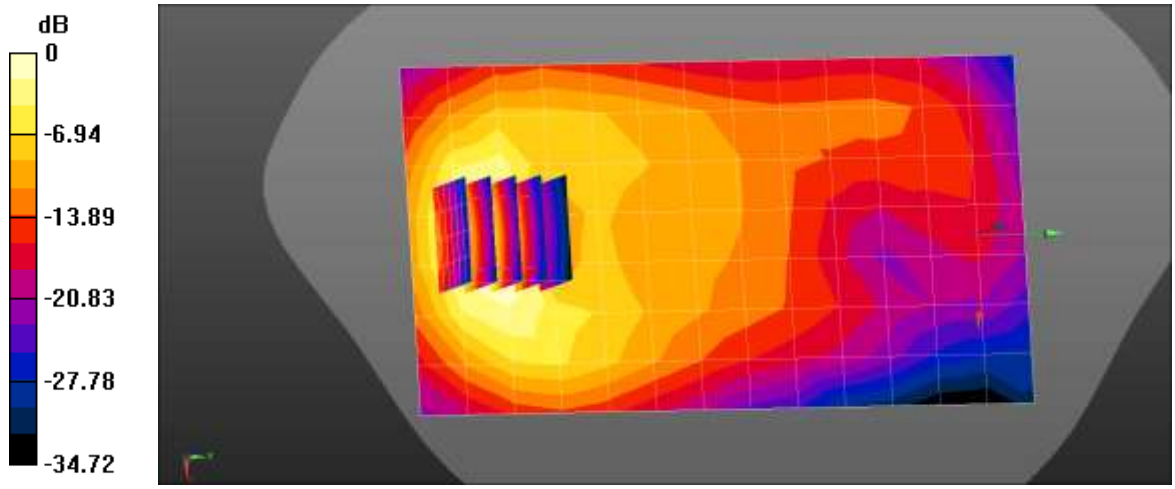
Communication System: UID 0, LTE Band 25 (0); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.414 S/m; ε_r = 40.147; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1860 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band25 Body Front QPSK 20MHz 1RB 0offset 26140ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.59 W/kg

LTE Band25 Body Front QPSK 20MHz 1RB 0offset 26140ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.240 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.44 W/kg
SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.903 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 55.3%
Maximum value of SAR (measured) = 2.35 W/kg



0 dB = 1.59 W/kg = 2.02 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.1℃
Test Date:	08/21/2020
Plot No.:	90

DUT: SM-G781U; Type: Bar

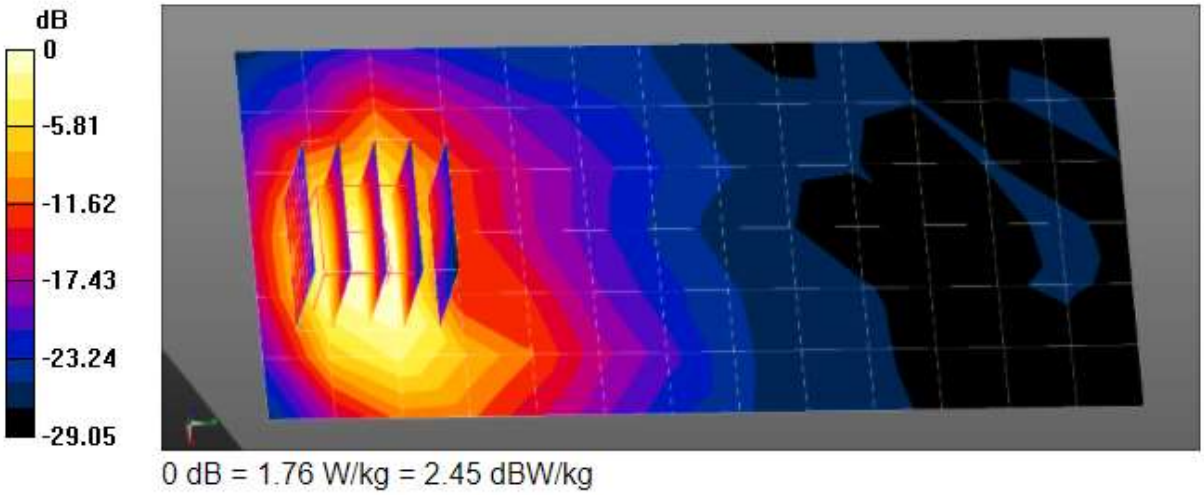
Communication System: UID 0, LTE 66 (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.356 S/m; ε_r = 40.214; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.91, 5.91, 5.91) @ 1770 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 66 Body Front QPSK Front QPSK 20MHz 50RB 25offset 132572ch grip 0mm/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.76 W/kg

LTE Band 66 Body Front QPSK 20MHz 50RB 25offset 132572ch grip 0mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 1.843 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 5.36 W/kg
SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.07 W/kg
Maximum value of SAR (measured) = 3.05 W/kg



0 dB = 1.76 W/kg = 2.45 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.1℃
Ambient Temperature:	20.3℃
Test Date:	08/21/2020
Plot No.:	91

DUT: SM-G781U; Type: Bar

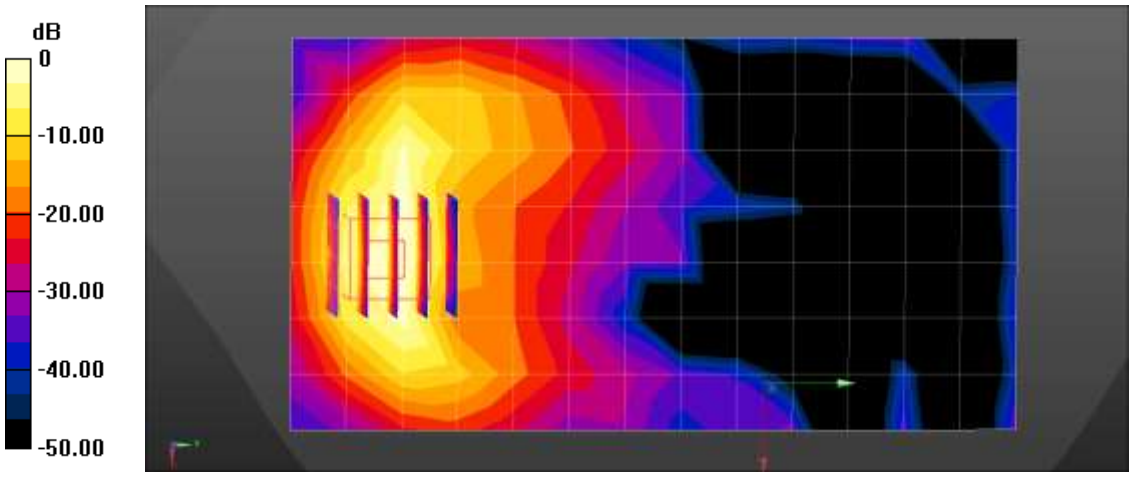
Communication System: UID 0, 5G NR (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1905 MHz; σ = 1.453 S/m; ε_r = 39.948; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1905 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 25 Body Front QPSK 20MHz 50RB 0offset 381000ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.81 W/kg

NR Band 25 Body Front QPSK 20MHz 50RB 0offset 381000ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 5.61 W/kg
SAR(1 g) = 2.47 W/kg; SAR(10 g) = 1.04 W/kg
Smallest distance from peaks to all points 3 dB below = 6.4 mm
Ratio of SAR at M2 to SAR at M1 = 44%
Maximum value of SAR (measured) = 3.65 W/kg



0 dB = 2.81 W/kg = 4.49 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	08/07/2020
Plot No.:	92

DUT: SM-G781U; Type: Bar

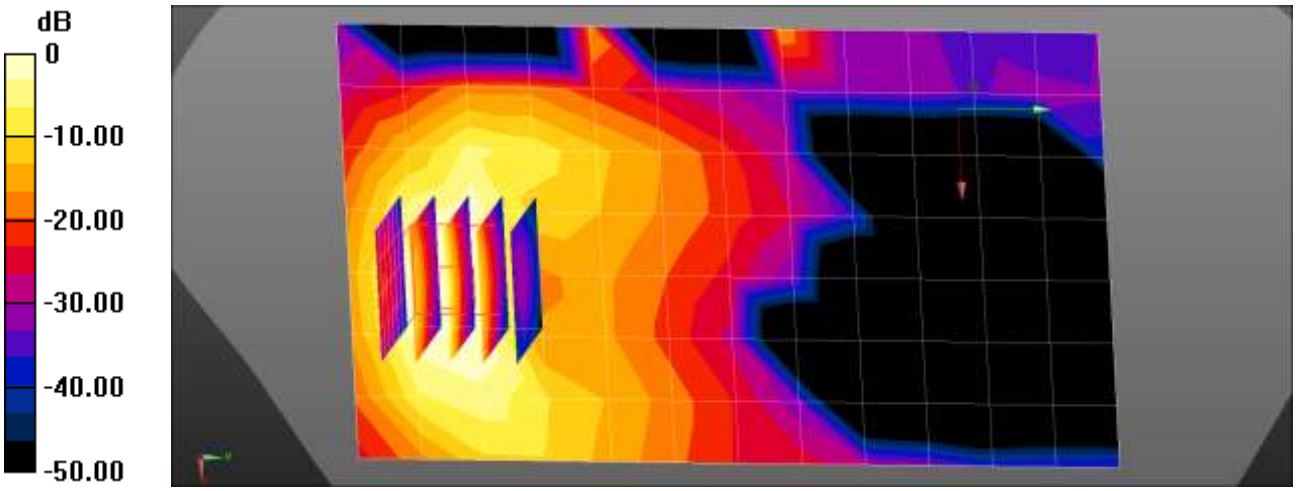
Communication System: UID 0, 5G NR (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.354 S/m; ε_r = 40.15; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1770 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 66 Phablet Front CP QPSK 20MHz 1RB 1offset 354000ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.35 W/kg

NR Band 66 Phablet Front CP QPSK 20MHz 1RB 1offset 354000ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 6.48 W/kg
SAR(1 g) = 3.17 W/kg; SAR(10 g) = 1.41 W/kg
Maximum value of SAR (measured) = 5.44 W/kg



0 dB = 2.35 W/kg = 3.72 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.6℃
Ambient Temperature:	20.9℃
Test Date:	08/14/2020
Plot No.:	93

DUT: SM-G781U; Type: Bar

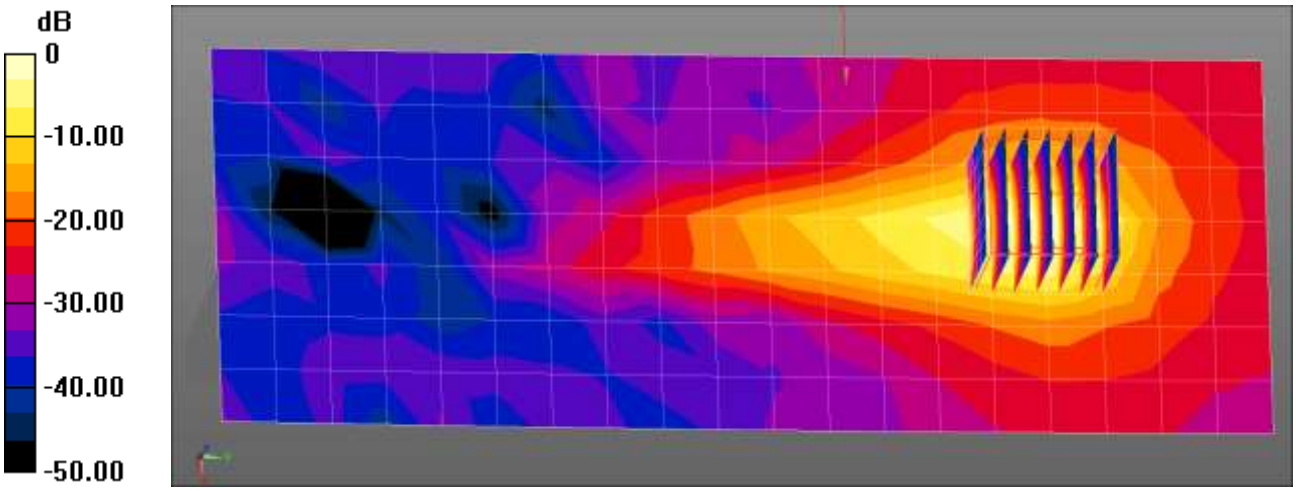
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5300 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5300 MHz; σ = 4.648 S/m; ε_r = 36.91; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.74, 4.74, 4.74) @ 5300 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

802.11a20 Body Left 6Mbps 60ch/Area Scan (8x20x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 12.5 W/kg

802.11a20 Body Left 6Mbps 60ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 11.42 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 37.5 W/kg
SAR(1 g) = 6.11 W/kg; SAR(10 g) = 1.5 W/kg
Maximum value of SAR (measured) = 17.3 W/kg



0 dB = 12.5 W/kg = 10.97 dBW/kg

Appendix C. – Dipole Verification Plots

Verification Data (750 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	07/22/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

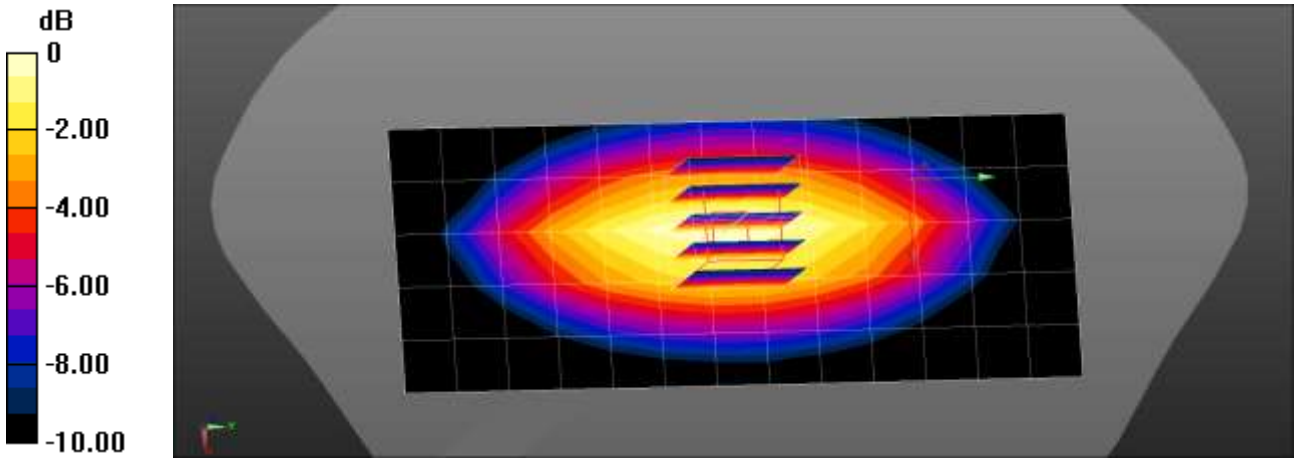
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.896 S/m; ε_r = 42.14; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 750 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.521 W/kg

750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.39 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.590 W/kg
SAR(1 g) = 0.403 W/kg; SAR(10 g) = 0.269 W/kg
Smallest distance from peaks to all points 3 dB below = 18.7 mm
Ratio of SAR at M2 to SAR at M1 = 68.1%
Maximum value of SAR (measured) = 0.530 W/kg



0 dB = 0.530 W/kg = -2.76 dBW/kg

Verification Data (750 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.5 ℃
Test Date:	07/23/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

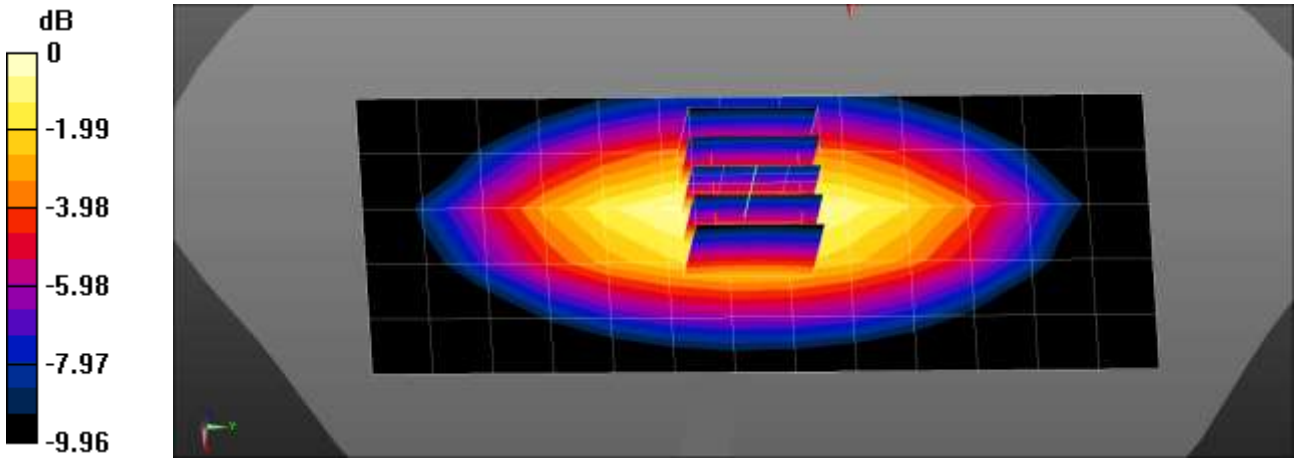
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.895 S/m; ε_r = 42.109; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 750 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.511 W/kg

750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.70 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.585 W/kg
SAR(1 g) = 0.402 W/kg; SAR(10 g) = 0.269 W/kg
Smallest distance from peaks to all points 3 dB below = 22.6 mm
Ratio of SAR at M2 to SAR at M1 = 68.4%
Maximum value of SAR (measured) = 0.527 W/kg



0 dB = 0.527 W/kg = -2.78 dBW/kg

Verification Data (750 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.5 ℃
Test Date:	07/24/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

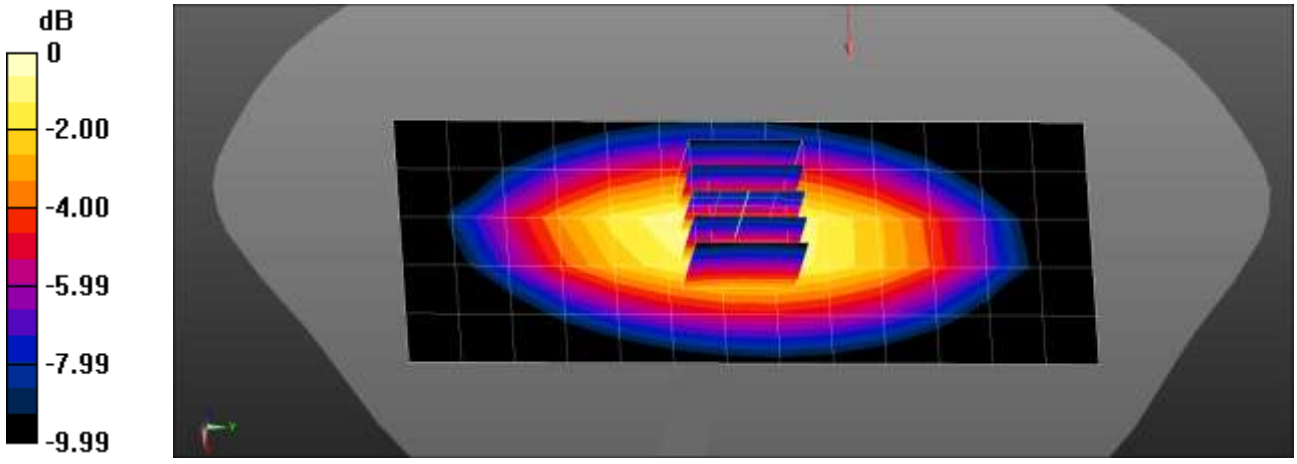
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.883 S/m; ε_r = 42.492; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 750 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.461 W/kg

750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.65 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.578 W/kg
SAR(1 g) = 0.398 W/kg; SAR(10 g) = 0.266 W/kg
Smallest distance from peaks to all points 3 dB below = 21.5 mm
Ratio of SAR at M2 to SAR at M1 = 68.5%
Maximum value of SAR (measured) = 0.522 W/kg



0 dB = 0.522 W/kg = -2.82 dBW/kg

Verification Data (750 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	23.1 ℃
Test Date:	07/28/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

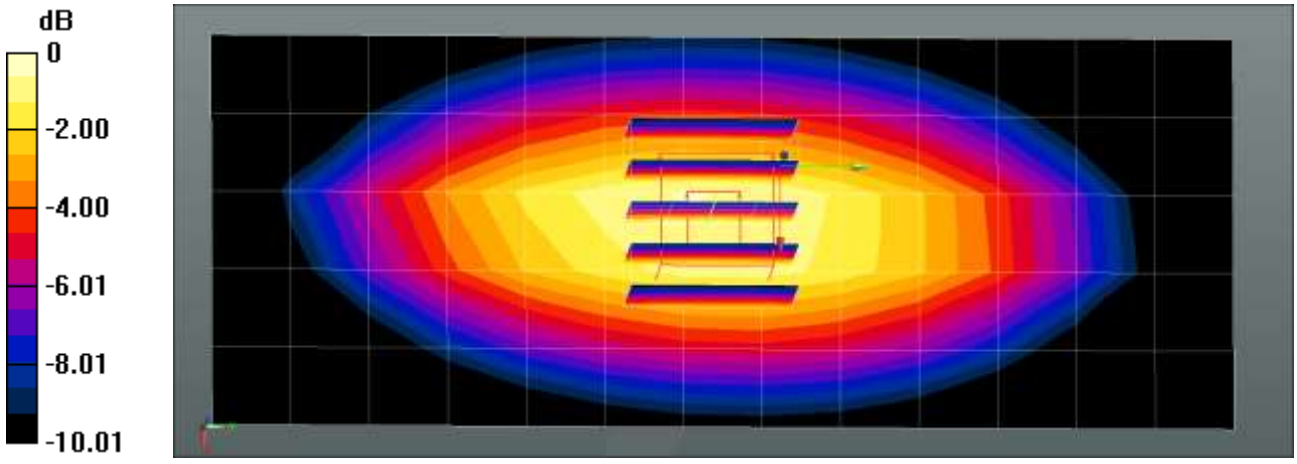
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.923 S/m; ε_r = 42.063; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 750 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.478 W/kg

750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.36 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.608 W/kg
SAR(1 g) = 0.417 W/kg; SAR(10 g) = 0.279 W/kg
Smallest distance from peaks to all points 3 dB below = 20.5 mm
Ratio of SAR at M2 to SAR at M1 = 68.3%
Maximum value of SAR (measured) = 0.549 W/kg



0 dB = 0.549 W/kg = -2.60 dBW/kg

Verification Data (750 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.9 ℃
Test Date:	08/11/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

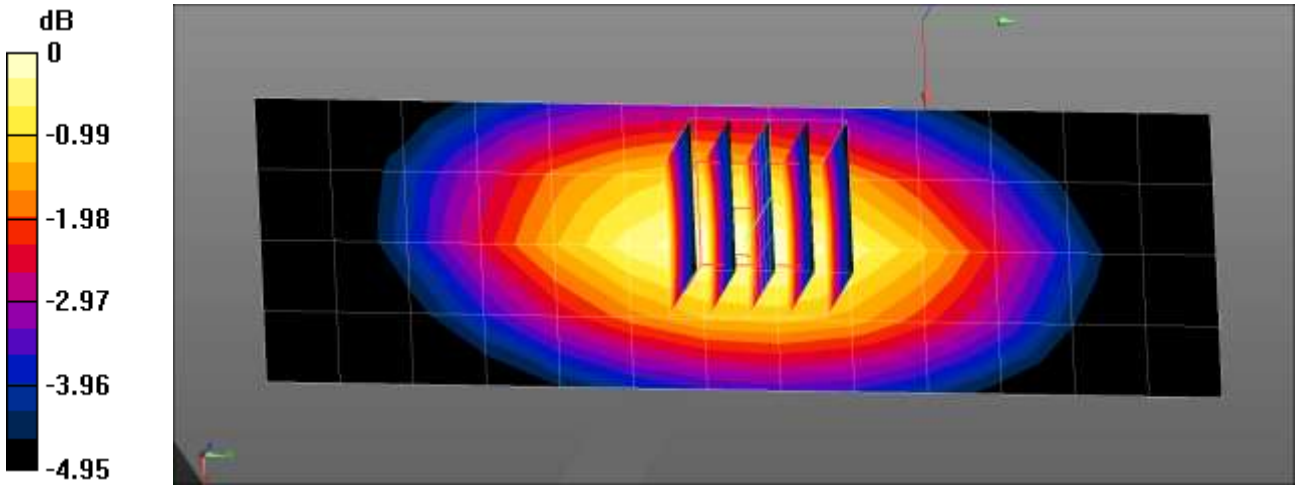
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.931 S/m; ε_r = 42.289; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(7.22, 7.22, 7.22) @ 750 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification(NR n71)/Area Scan (5x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.433 W/kg

750MHz Head Verification(NR n71)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.34 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.508 W/kg
SAR(1 g) = 0.413 W/kg; SAR(10 g) = 0.321 W/kg
Maximum value of SAR (measured) = 0.434 W/kg



0 dB = 0.434 W/kg = −3.63 dBW/kg

Verification Data (835 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	08/04/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

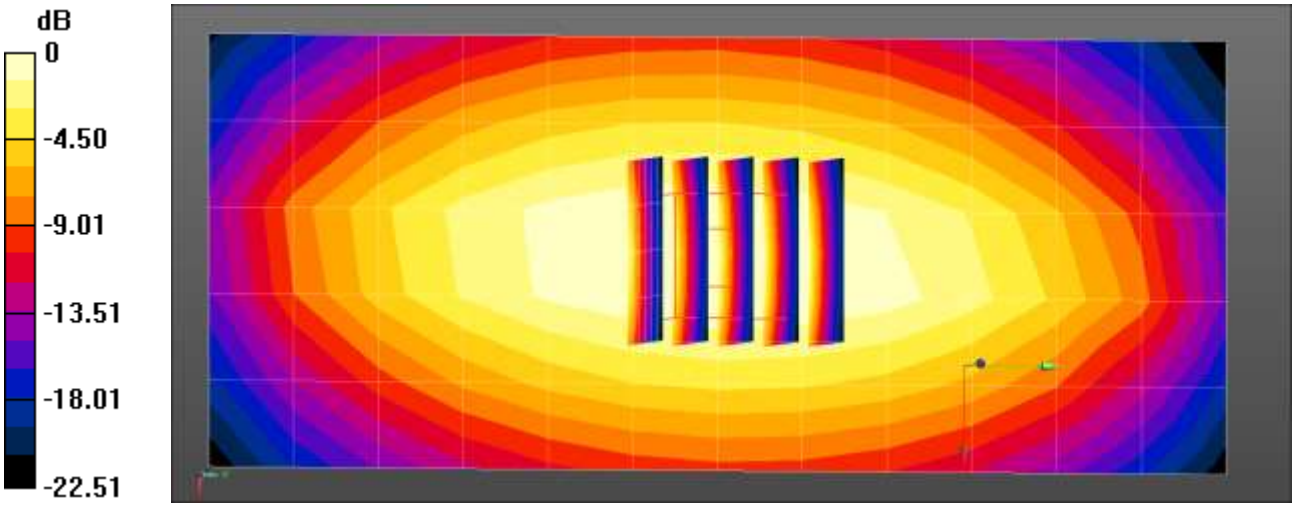
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.911 S/m; ε_r = 42.472; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 835 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.537 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.53 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.708 W/kg
SAR(1 g) = 0.468 W/kg; SAR(10 g) = 0.308 W/kg
Smallest distance from peaks to all points 3 dB below = 16.3 mm
Ratio of SAR at M2 to SAR at M1 = 65.9%
Maximum value of SAR (measured) = 0.627 W/kg



0 dB = 0.537 W/kg = -2.70 dBW/kg

Verification Data (835 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.6 ℃
Test Date:	08/13/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

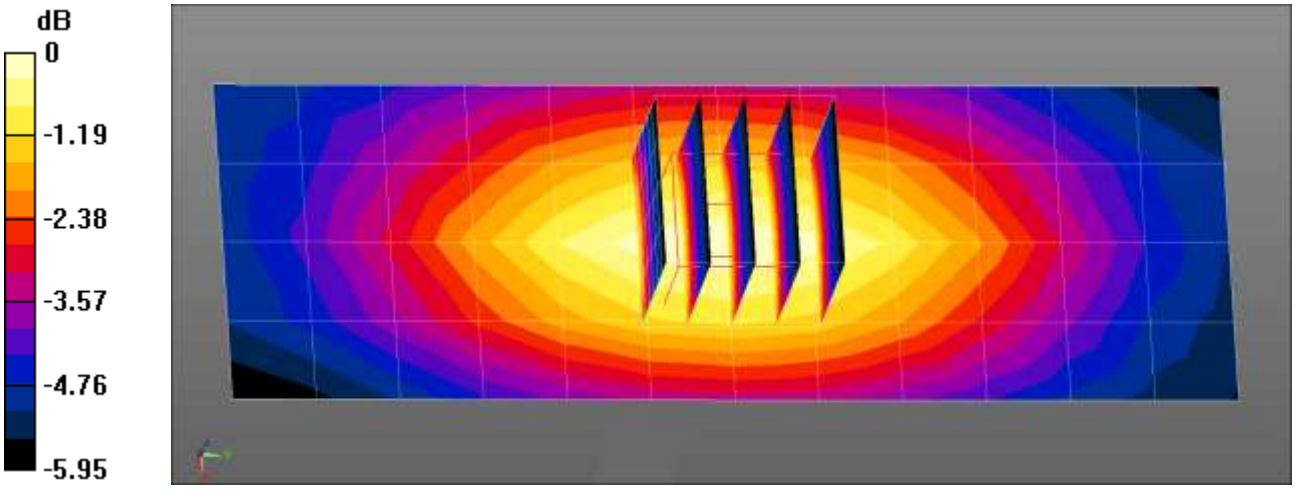
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.933 S/m; ε_r = 42.706; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96) @ 835 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.533 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.15 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.593 W/kg
SAR(1 g) = 0.481 W/kg; SAR(10 g) = 0.377 W/kg
Maximum value of SAR (measured) = 0.507 W/kg



0 dB = 0.533 W/kg = -2.73 dBW/kg

Verification Data (835 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.1 ℃
Test Date:	08/03/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

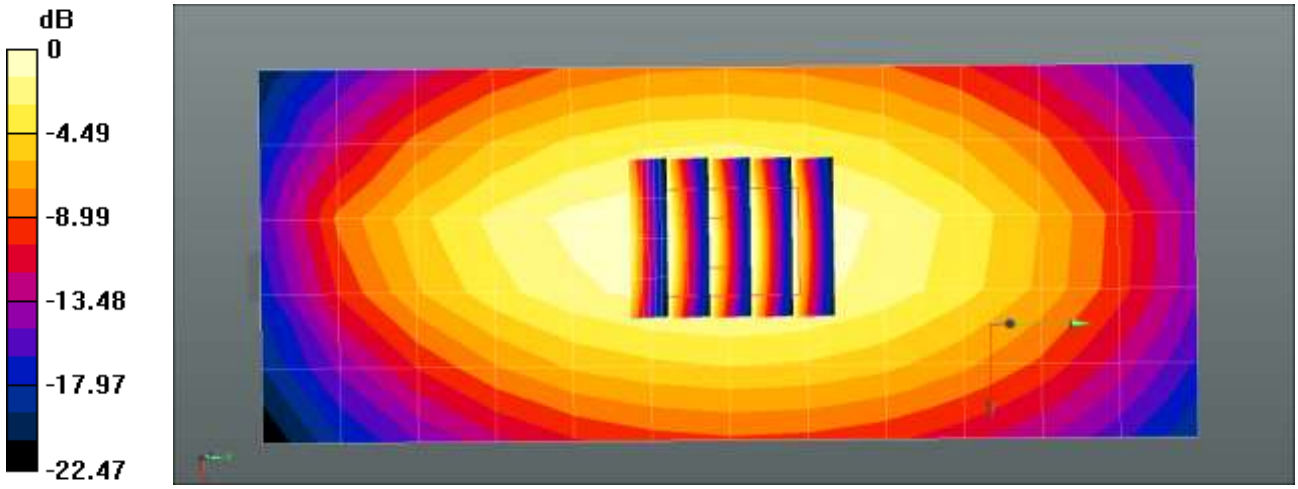
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.915 S/m; ε_r = 42.745; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 835 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (2);

835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.566 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.69 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.675 W/kg
SAR(1 g) = 0.453 W/kg; SAR(10 g) = 0.304 W/kg
Maximum value of SAR (measured) = 0.599 W/kg



0 dB = 0.599 W/kg = -2.23 dBW/kg

Verification Data (835 MHz)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 19.4 ℃
Test Date: 08/25/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

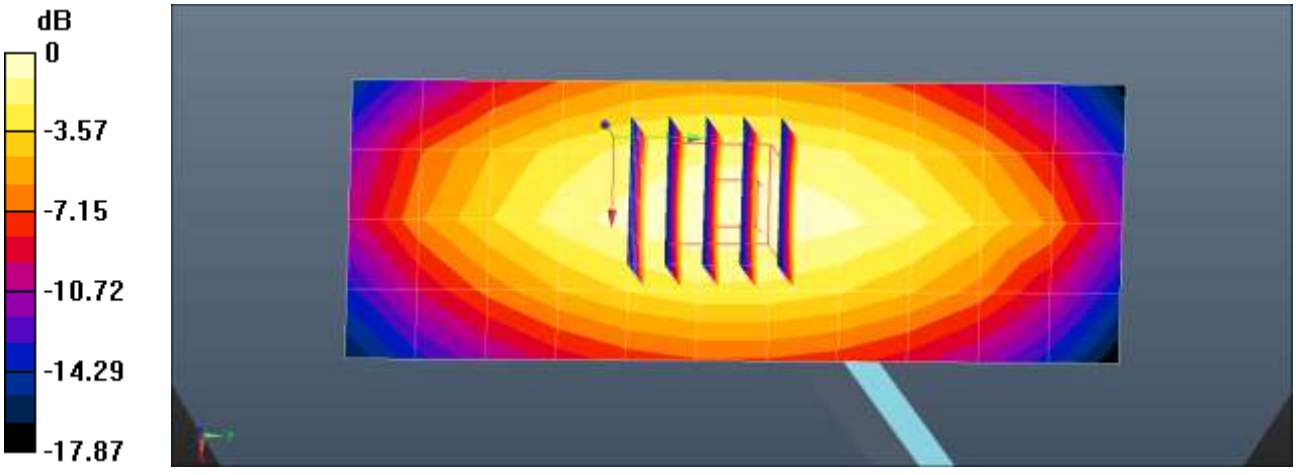
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.914 S/m; ε_r = 42.745; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 835 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification/Area Scan (5x12x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.580 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.93 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.650 W/kg
SAR(1 g) = 0.474 W/kg; SAR(10 g) = 0.321 W/kg
Smallest distance from peaks to all points 3 dB below = 18.7 mm
Ratio of SAR at M2 to SAR at M1 = 71.2%
Maximum value of SAR (measured) = 0.603 W/kg



0 dB = 0.580 W/kg = −2.37 dBW/kg

Verification Data (835 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.5 ℃
Test Date:	08/21/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

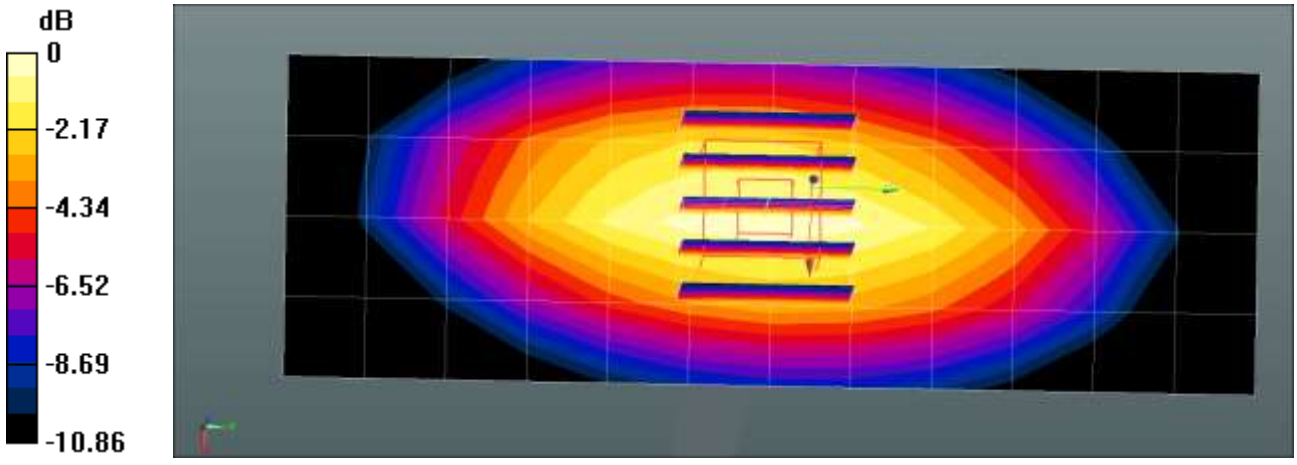
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.909 S/m; ε_r = 41.38; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 835 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.638 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.73 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.731 W/kg
SAR(1 g) = 0.489 W/kg; SAR(10 g) = 0.321 W/kg
Smallest distance from peaks to all points 3 dB below = 16.1 mm
Ratio of SAR at M2 to SAR at M1 = 66.6%
Maximum value of SAR (measured) = 0.654 W/kg



0 dB = 0.654 W/kg = -1.84 dBW/kg

Verification Data (835 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.1 ℃
Test Date:	08/24/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

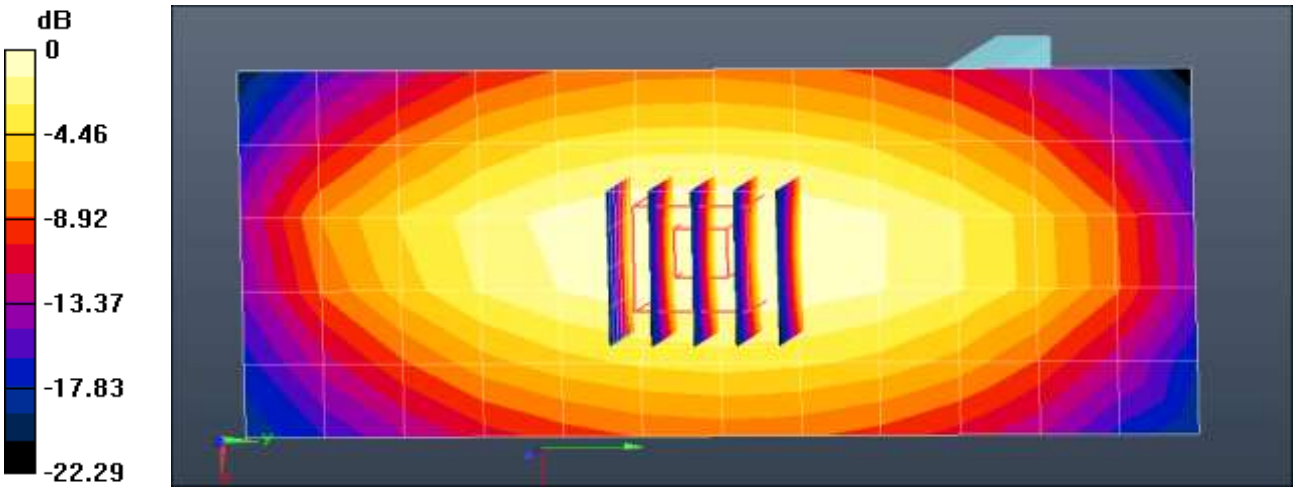
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.919 S/m; ε_r = 42.695; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 835 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.538 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.08 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.670 W/kg
SAR(1 g) = 0.491 W/kg; SAR(10 g) = 0.331 W/kg
Maximum value of SAR (measured) = 0.626 W/kg



0 dB = 0.626 W/kg = −2.03 dBW/kg

Verification Data (1800 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	08/21/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

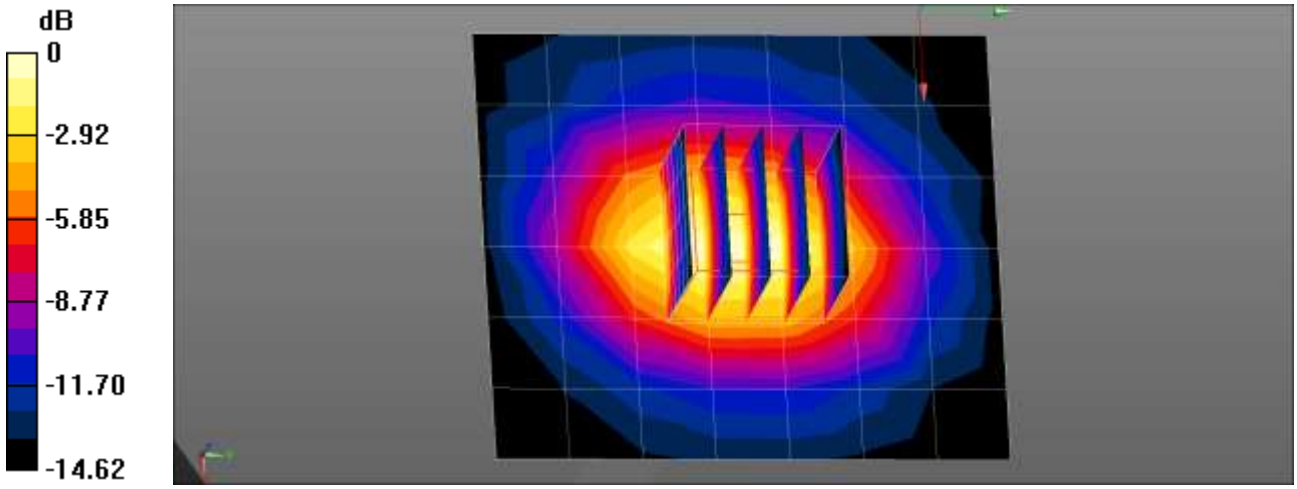
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.383 S/m; ε_r = 40.12; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.91, 5.91, 5.91) @ 1800 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.92 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 40.09 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.92 W/kg
SAR(1 g) = 1.82 W/kg; SAR(10 g) = 1.04 W/kg
Maximum value of SAR (measured) = 2.02 W/kg



0 dB = 1.92 W/kg = 2.83 dBW/kg

Verification Data (1800 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.7 ℃
Test Date:	08/20/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

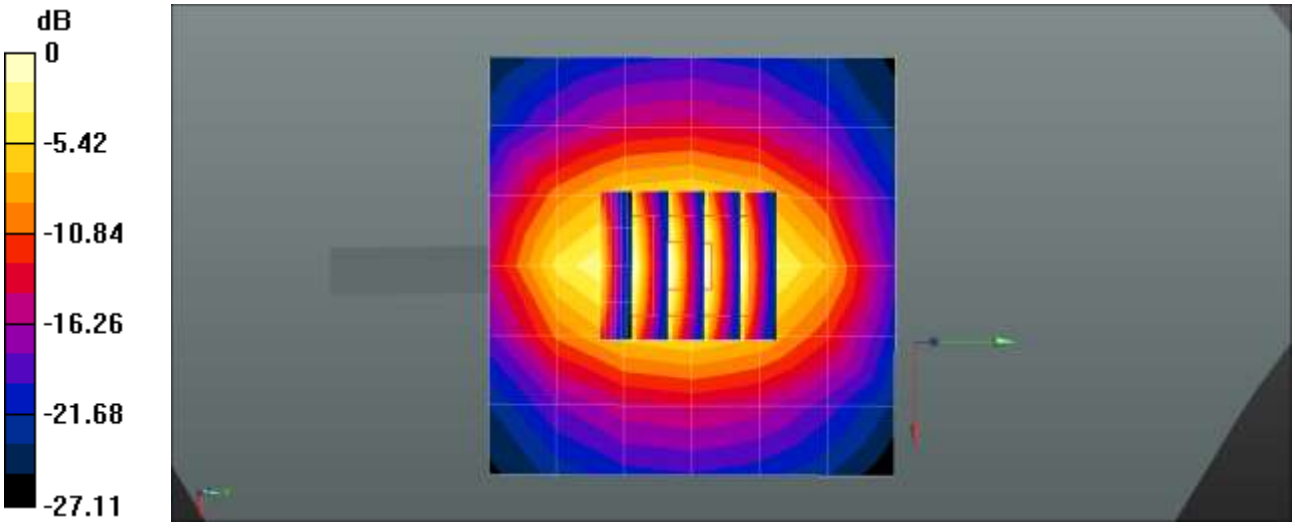
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.377 S/m; ε_r = 39.984; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1800 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.93 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.63 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 3.55 W/kg
SAR(1 g) = 1.86 W/kg; SAR(10 g) = 0.984 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 52.2%
Maximum value of SAR (measured) = 2.93 W/kg



0 dB = 2.93 W/kg = 4.68 dBW/kg

Verification Data (1800 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.2 ℃
Test Date:	08/19/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

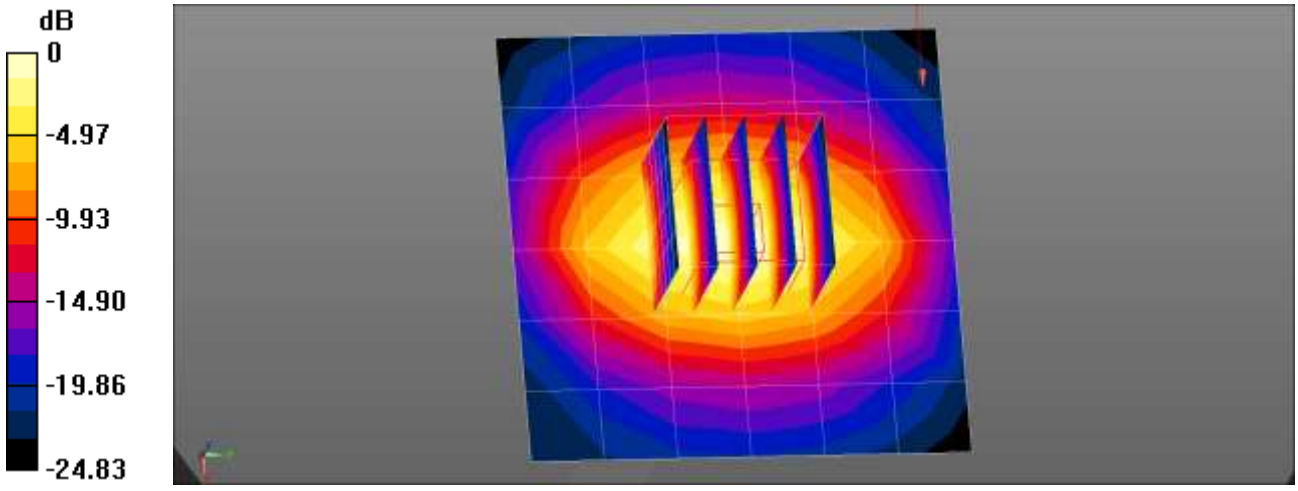
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.383 S/m; ε_r = 40.122; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1800 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.89 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.05 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 3.44 W/kg
SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.967 W/kg
Maximum value of SAR (measured) = 2.88 W/kg



0 dB = 2.89 W/kg = 4.60 dBW/kg

Verification Data (1800 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.5 ℃
Test Date:	08/21/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

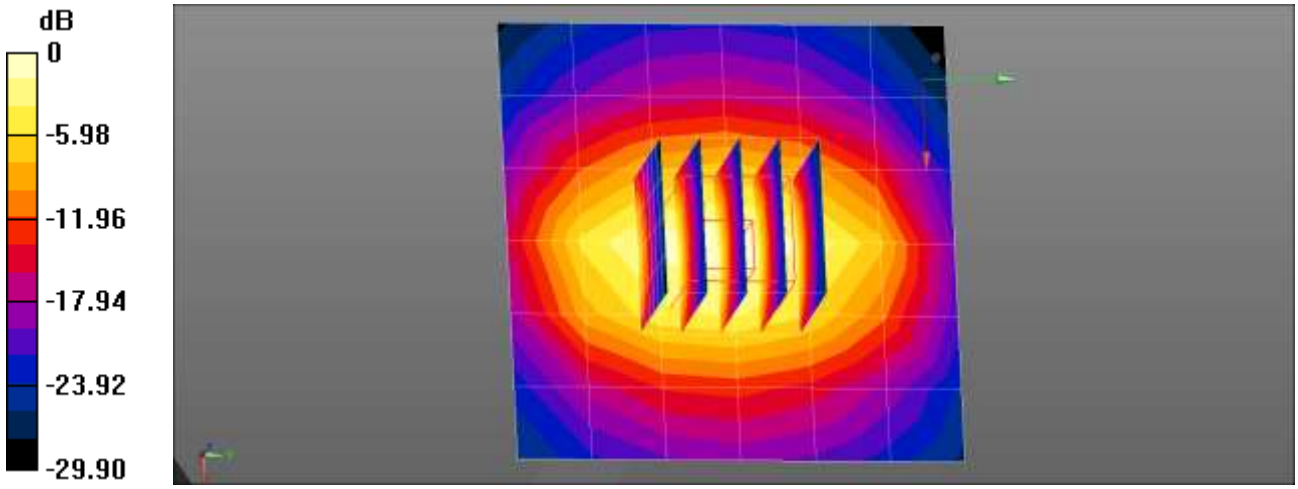
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.462 S/m; ε_r = 39.597; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1800 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.77 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 45.08 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 3.60 W/kg
SAR(1 g) = 1.88 W/kg; SAR(10 g) = 0.988 W/kg
Maximum value of SAR (measured) = 2.98 W/kg



0 dB = 2.77 W/kg = 4.43 dBW/kg

Verification Data (1800 MHz)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.2 ℃
Test Date: 08/06/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

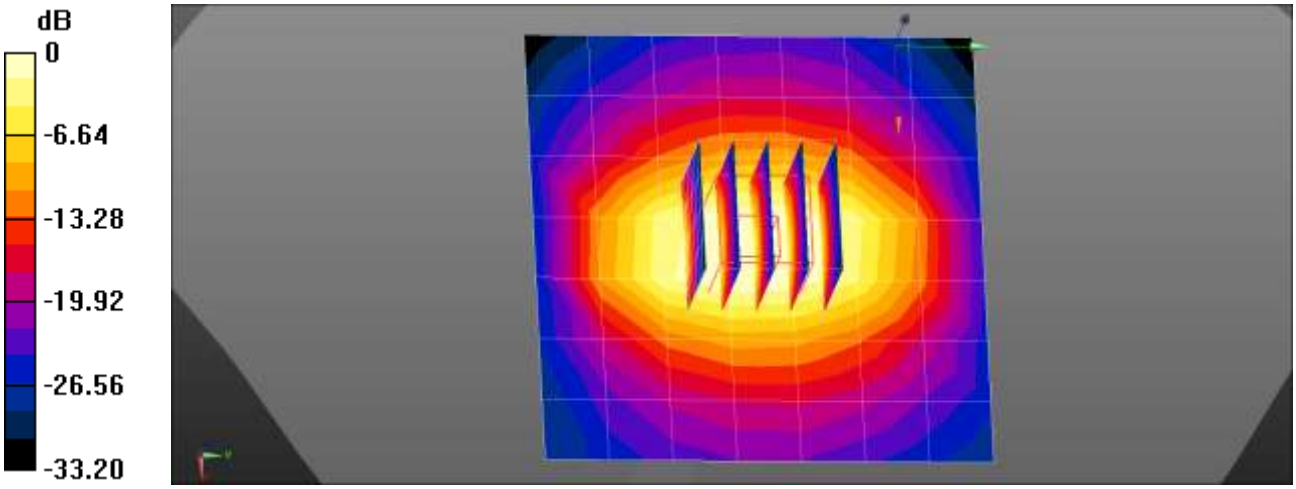
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.381 S/m; ε_r = 40.054; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1800 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.90 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 49.80 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 3.78 W/kg
SAR(1 g) = 1.96 W/kg; SAR(10 g) = 1.01 W/kg
Maximum value of SAR (measured) = 3.14 W/kg



0 dB = 1.90 W/kg = 2.78 dBW/kg

Verification Data (1900 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.7 ℃
Test Date:	08/12/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

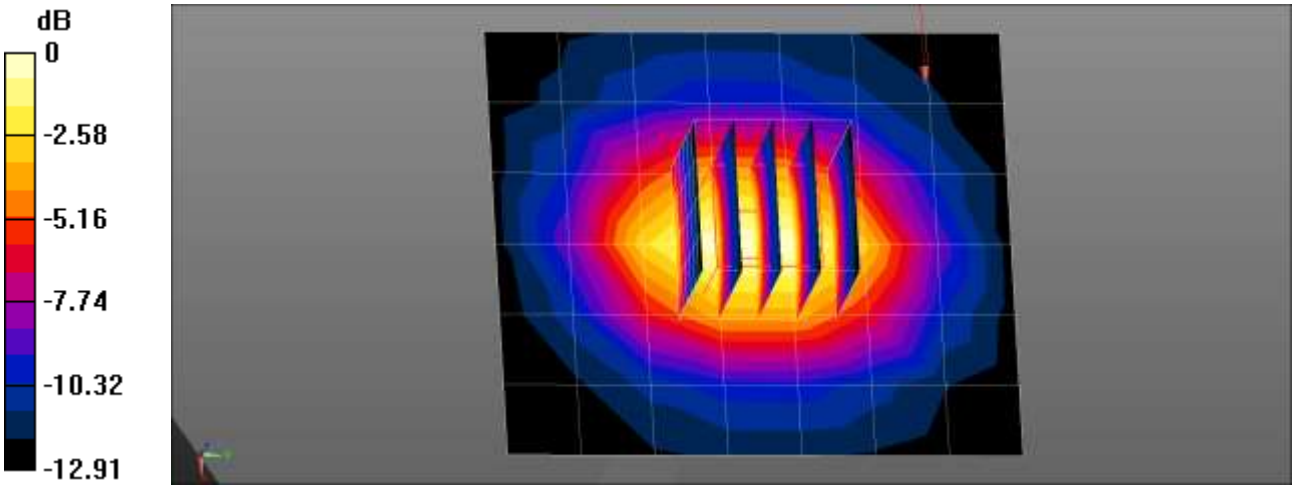
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.389 S/m; ε_r = 39.96; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1900 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

1900MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.00 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.51 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.17 W/kg
SAR(1 g) = 1.93 W/kg; SAR(10 g) = 1.1 W/kg
Maximum value of SAR (measured) = 2.15 W/kg



0 dB = 2.00 W/kg = 3.01 dBW/kg

Verification Data (1900 ㎒)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.3 ℃
Test Date: 08/20/2020

DUT: Dipole 1900 MHz D1900V2;

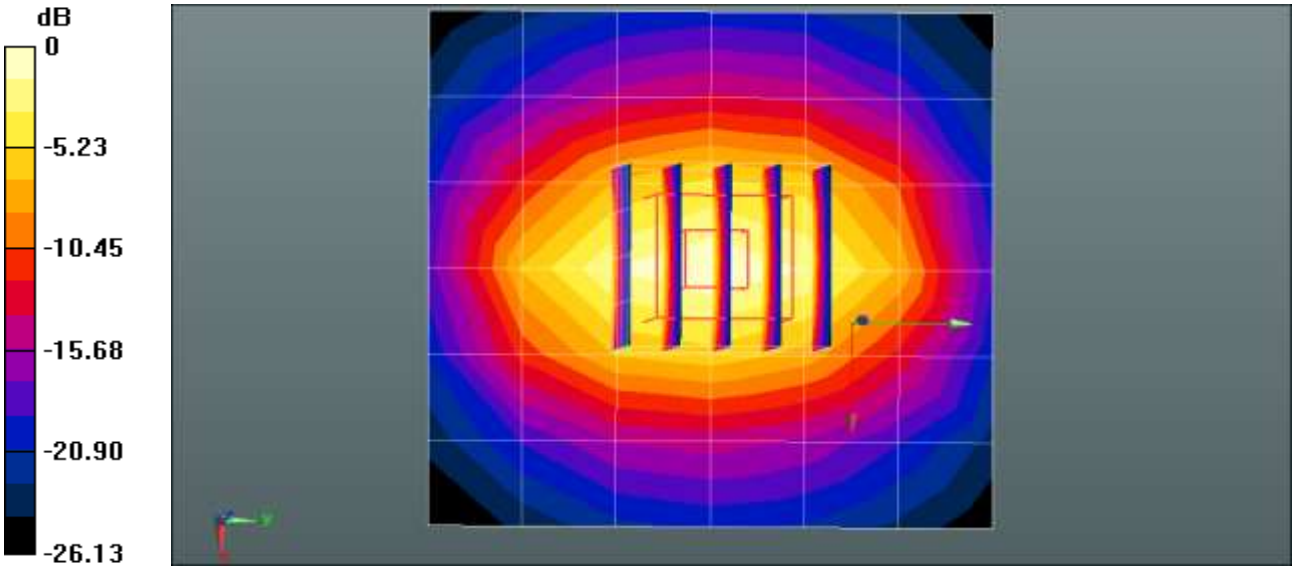
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.439 S/m; ε_r = 39.914; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.31, 8.31, 8.31) @ 1900 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- 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)

1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.13 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.12 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.76 W/kg
SAR(1 g) = 1.97 W/kg; SAR(10 g) = 1.02 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 52%
Maximum value of SAR (measured) = 3.13 W/kg



0 dB = 3.13 W/kg = 4.95 dBW/kg

Verification Data (1900 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.6 ℃
Test Date:	08/13/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

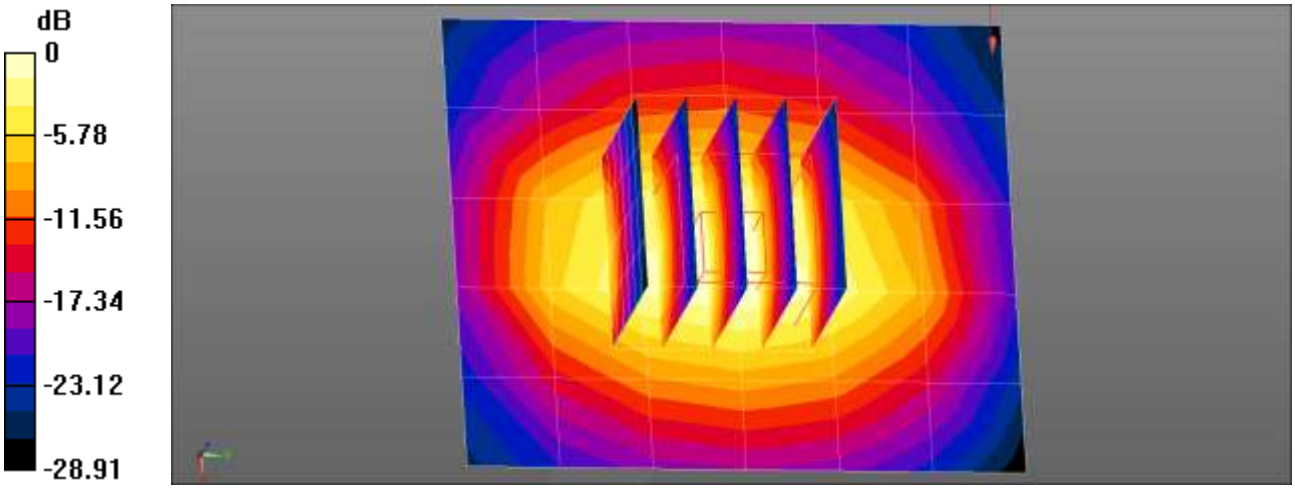
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.454 S/m; ε_r = 39.627; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1900 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

1900MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.64 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.49 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 3.96 W/kg
SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.06 W/kg
Maximum value of SAR (measured) = 3.26 W/kg



0 dB = 2.64 W/kg = 4.22 dBW/kg

Verification Data (1900 ㎒)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.0 ℃
Test Date: 08/13/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

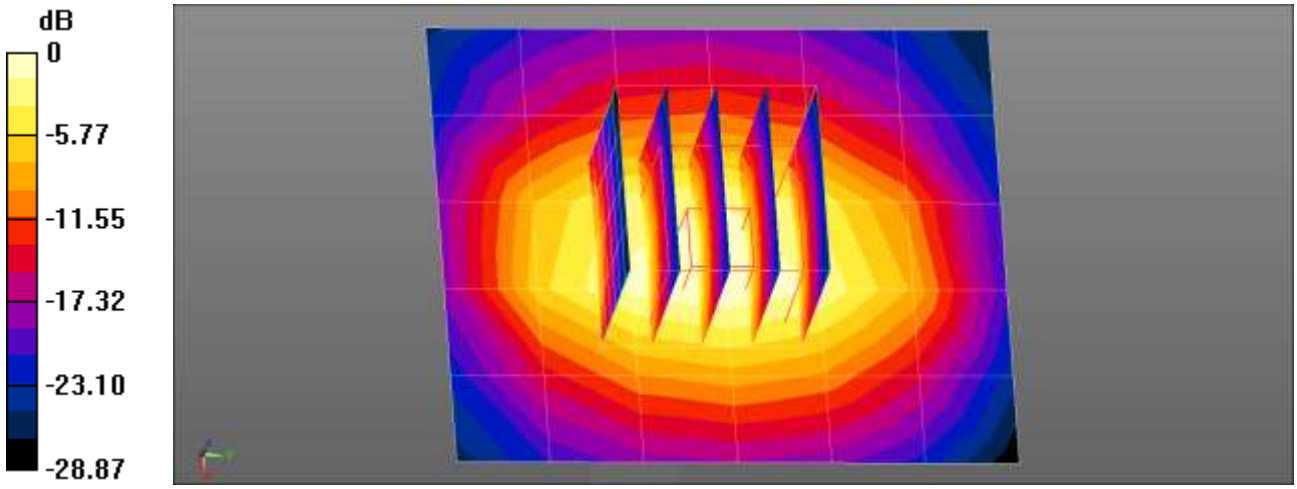
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.434 S/m; ε_r = 39.868; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1900 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

1900MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.61 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.69 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 3.90 W/kg
SAR(1 g) = 2.04 W/kg; SAR(10 g) = 1.05 W/kg
Maximum value of SAR (measured) = 3.22 W/kg



0 dB = 2.61 W/kg = 4.16 dBW/kg

Verification Data (1900 ㎒)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.4 ℃
Test Date: 08/24/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

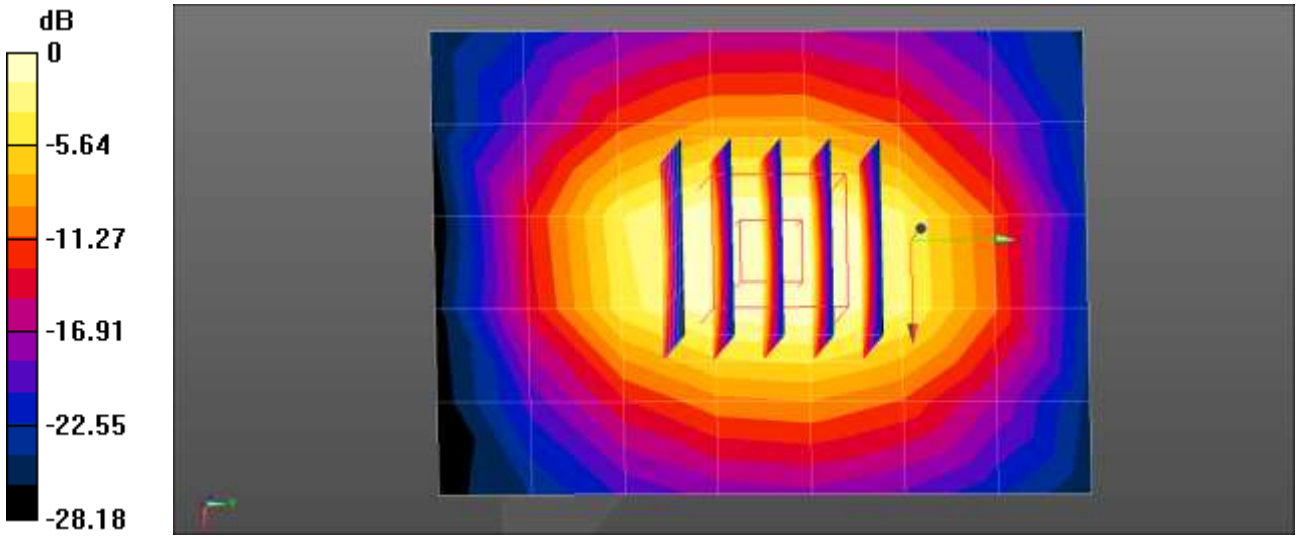
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.447 S/m; ε_r = 39.988; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1900 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

1900MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.68 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.82 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.72 W/kg
SAR(1 g) = 1.96 W/kg; SAR(10 g) = 1 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 53.2%
Maximum value of SAR (measured) = 2.52 W/kg



0 dB = 1.68 W/kg = 2.25 dBW/kg

Verification Data (1900 ㎒)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.0 ℃
Test Date: 08/25/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

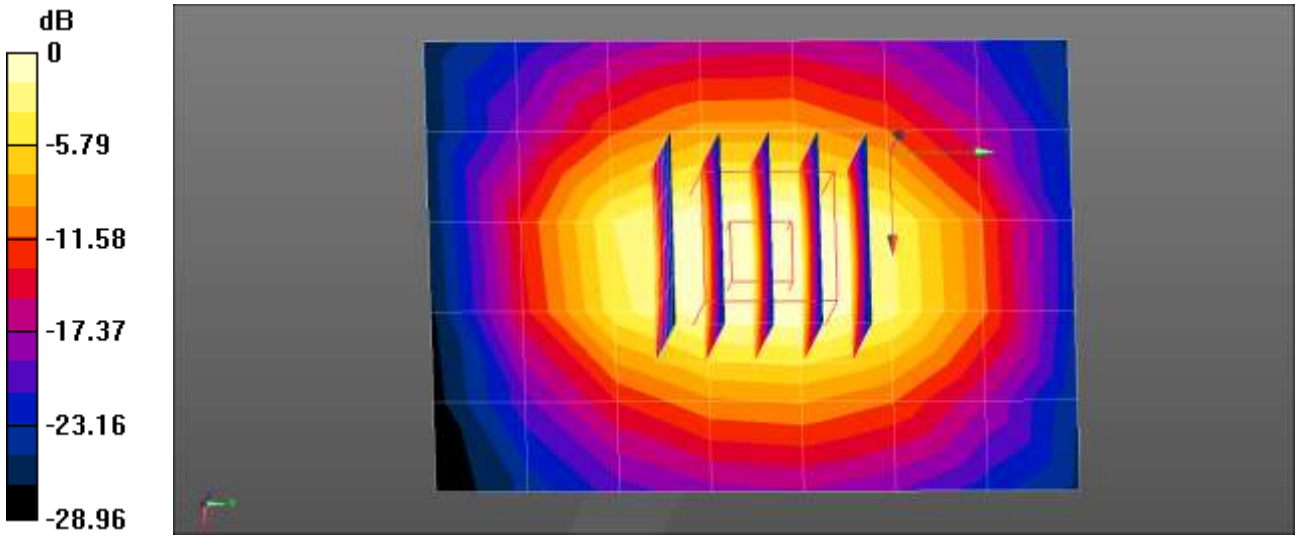
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.449 S/m; ε_r = 39.979; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1900 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

1900MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.66 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.77 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 3.73 W/kg
SAR(1 g) = 1.97 W/kg; SAR(10 g) = 1 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 53.4%
Maximum value of SAR (measured) = 2.53 W/kg



0 dB = 1.66 W/kg = 2.20 dBW/kg

Verification Data (1900 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.4 ℃
Test Date:	08/18/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

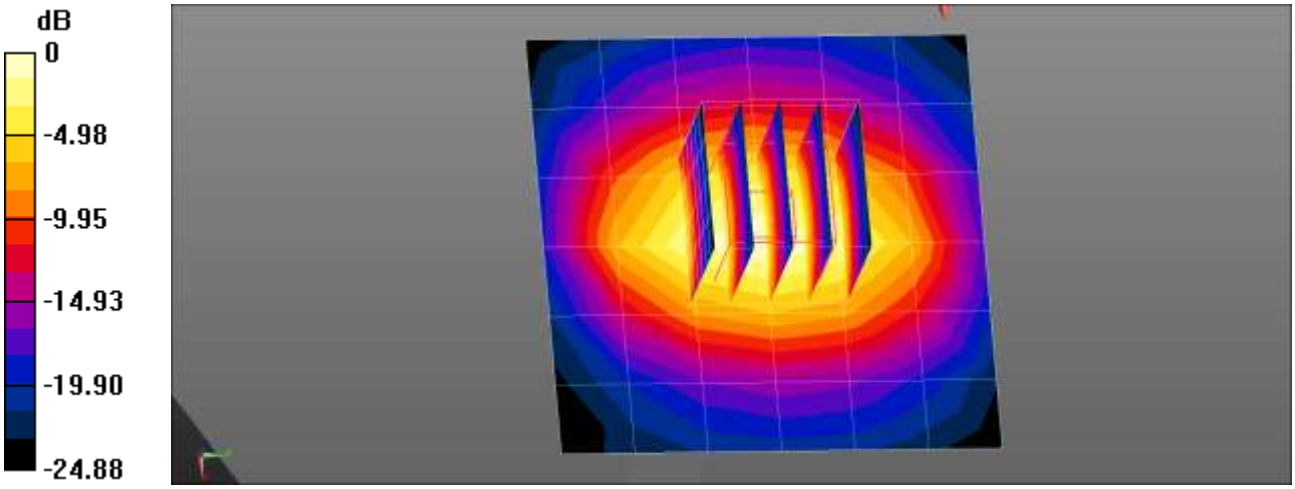
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.438 S/m; ε_r = 39.982; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.31, 8.31, 8.31) @ 1900 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.13 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.18 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 4.01 W/kg
SAR(1 g) = 2.03 W/kg; SAR(10 g) = 1.05 W/kg
Maximum value of SAR (measured) = 3.27 W/kg



0 dB = 3.13 W/kg = 4.96 dBW/kg

Verification Data (1900 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.1 ℃
Test Date:	08/21/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

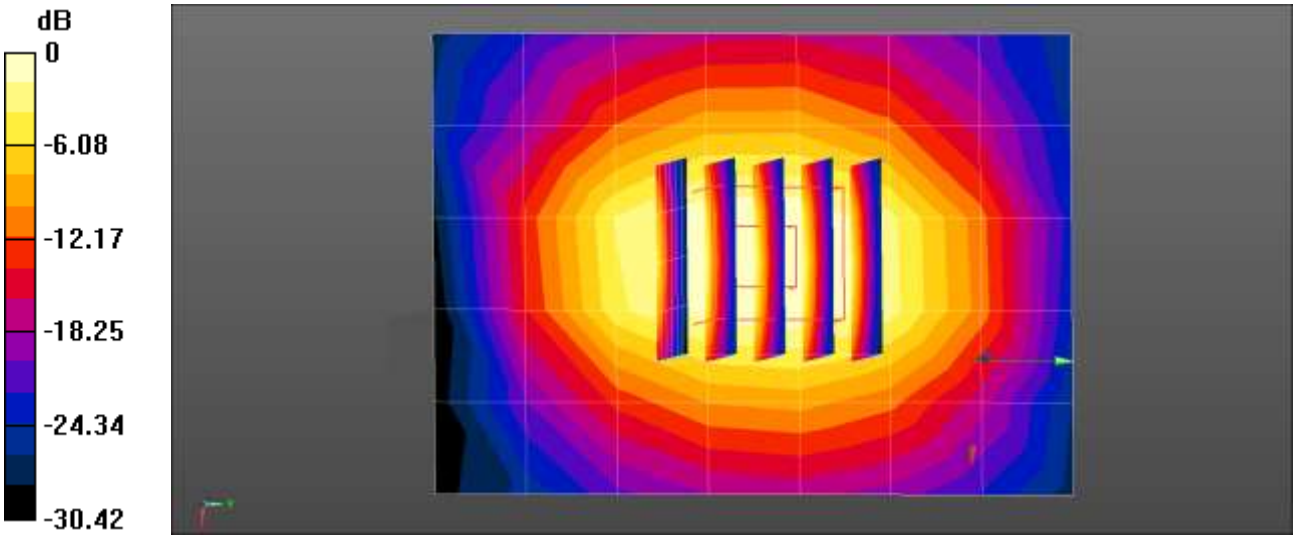
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.449 S/m; ε_r = 39.969; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1900 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

1900MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.67 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.79 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 3.72 W/kg
SAR(1 g) = 1.96 W/kg; SAR(10 g) = 1 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 53.2%
Maximum value of SAR (measured) = 2.52 W/kg



0 dB = 1.67 W/kg = 2.22 dBW/kg

Verification Data (1900 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.3 ℃
Test Date:	08/20/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

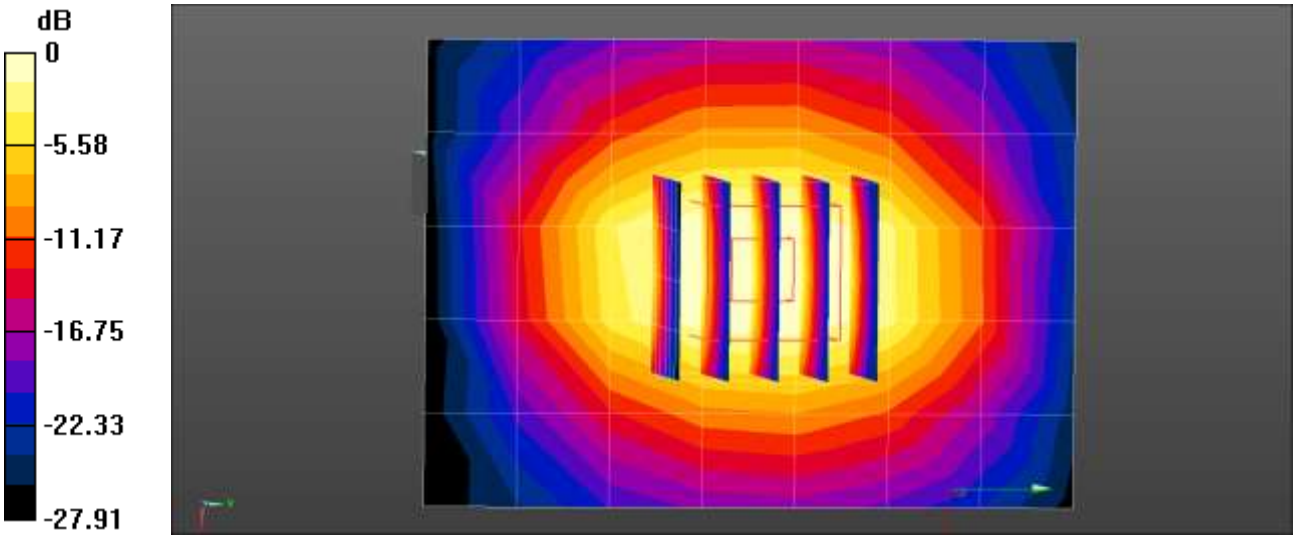
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.453 S/m; ε_r = 39.955; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.08, 5.08, 5.08) @ 1900 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

1900MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.68 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.94 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.72 W/kg
SAR(1 g) = 1.97 W/kg; SAR(10 g) = 1.01 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 53.4%
Maximum value of SAR (measured) = 2.52 W/kg



0 dB = 1.68 W/kg = 2.25 dBW/kg

Verification Data (2300 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.1 ℃
Test Date:	08/04/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

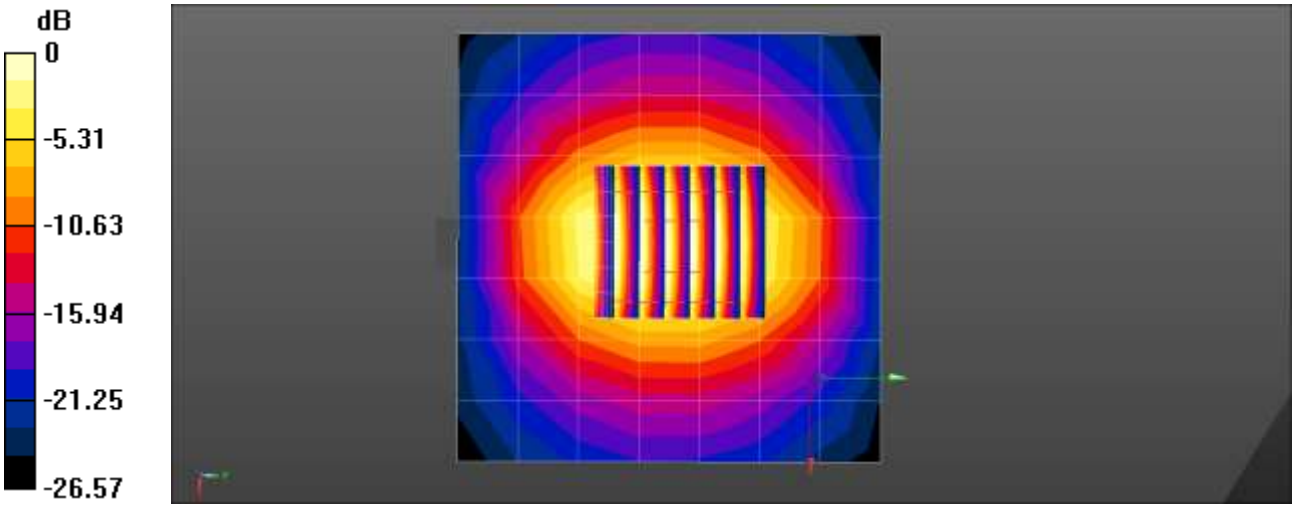
Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.634 S/m; ε_r = 40.966; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2300 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2300MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.98 W/kg

2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.78 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 5.24 W/kg
SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.13 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 46%
Maximum value of SAR (measured) = 4.13 W/kg



0 dB = 2.98 W/kg = 4.75 dBW/kg

Verification Data (2300 MHz)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.0 ℃
Test Date: 08/10/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

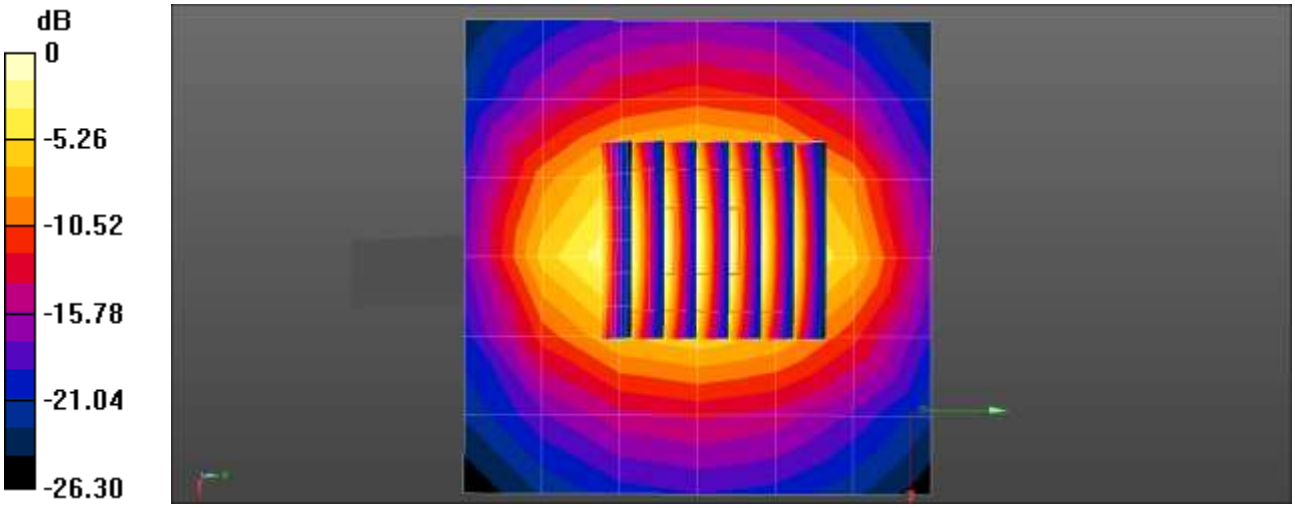
Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.635 S/m; ε_r = 41.172; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2300 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2300MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.02 W/kg

2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.28 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 5.30 W/kg
SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.13 W/kg
Smallest distance from peaks to all points 3 dB below = 9.2 mm
Ratio of SAR at M2 to SAR at M1 = 45.3%
Maximum value of SAR (measured) = 4.15 W/kg



0 dB = 4.02 W/kg = 6.04 dBW/kg

Verification Data (2300 MHz)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.0 ℃
Test Date: 08/11/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

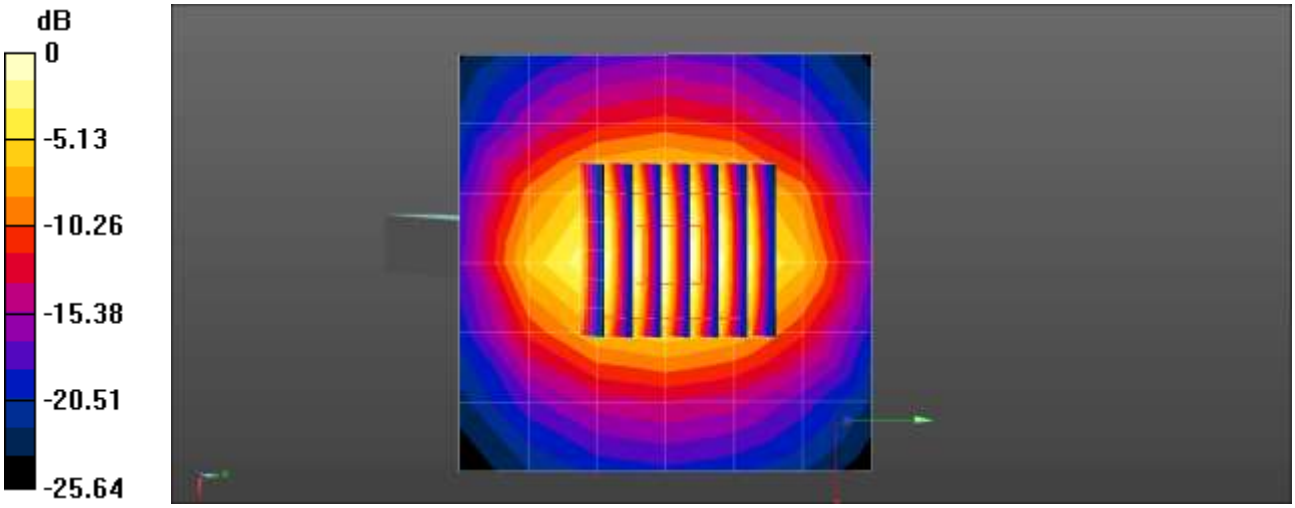
Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.633 S/m; ε_r = 41.091; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2300 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2300MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.08 W/kg

2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.57 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 5.30 W/kg
SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.13 W/kg
Smallest distance from peaks to all points 3 dB below = 9.2 mm
Ratio of SAR at M2 to SAR at M1 = 45.2%
Maximum value of SAR (measured) = 4.15 W/kg



0 dB = 4.08 W/kg = 6.11 dBW/kg

Verification Data (2450 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.7 ℃
Test Date:	08/05/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

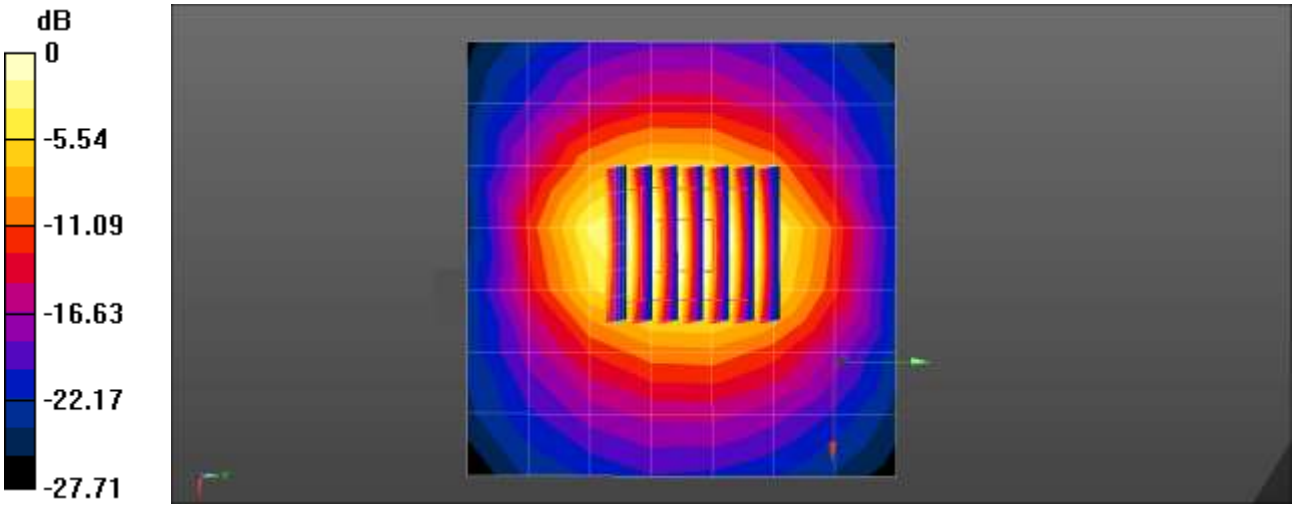
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2450 MHz; σ = 1.813 S/m; ε_r = 40.616; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.35, 7.35, 7.35) @ 2450 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.57 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.06 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 5.59 W/kg
SAR(1 g) = 2.47 W/kg; SAR(10 g) = 1.12 W/kg
Smallest distance from peaks to all points 3 dB below = 9.5 mm
Ratio of SAR at M2 to SAR at M1 = 43.8%
Maximum value of SAR (measured) = 4.37 W/kg



0 dB = 3.57 W/kg = 5.53 dBW/kg

Verification Data (2450 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.3 ℃
Test Date:	08/06/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

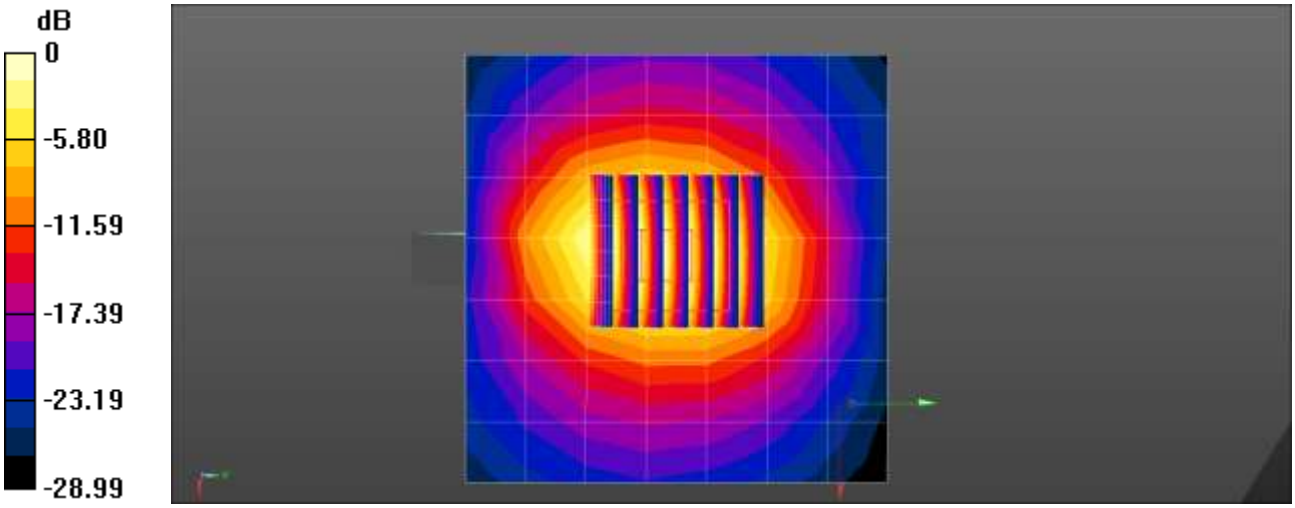
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2450 MHz; σ = 1.804 S/m; ε_r = 40.466; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.35, 7.35, 7.35) @ 2450 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.33 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.71 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 6.28 W/kg
SAR(1 g) = 2.68 W/kg; SAR(10 g) = 1.2 W/kg
Smallest distance from peaks to all points 3 dB below = 8.9 mm
Ratio of SAR at M2 to SAR at M1 = 42.4%
Maximum value of SAR (measured) = 4.81 W/kg



0 dB = 4.33 W/kg = 6.36 dBW/kg

Verification Data (2450 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	08/10/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

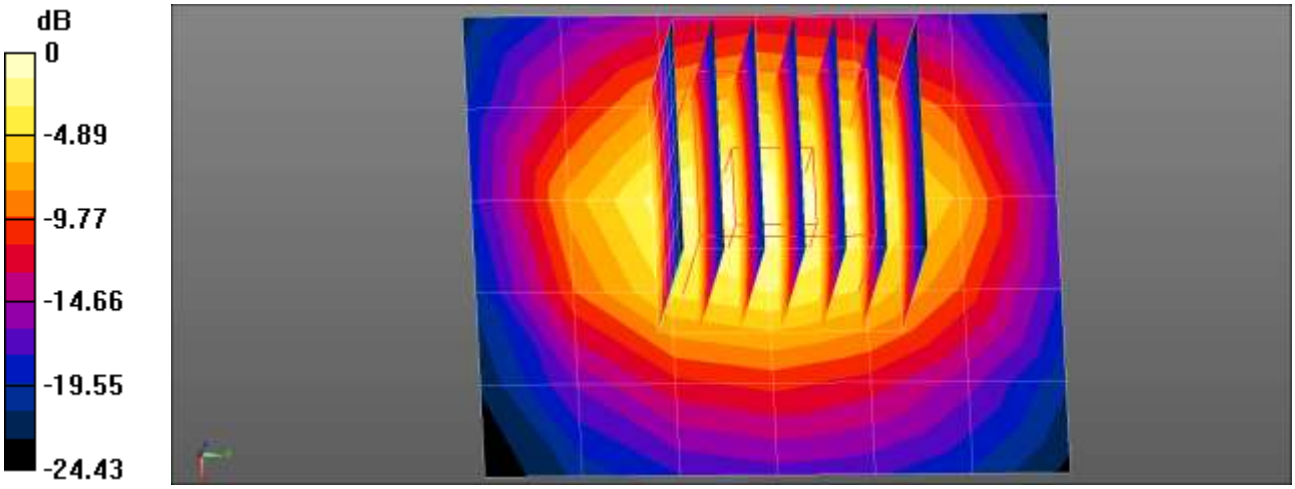
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2450 MHz; σ = 1.813 S/m; ε_r = 40.652; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2450 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.38 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 48.26 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 5.66 W/kg
SAR(1 g) = 2.59 W/kg; SAR(10 g) = 1.18 W/kg
Maximum value of SAR (measured) = 4.45 W/kg



0 dB = 4.38 W/kg = 6.41 dBW/kg

Verification Data (2450 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.5 ℃
Test Date:	08/11/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

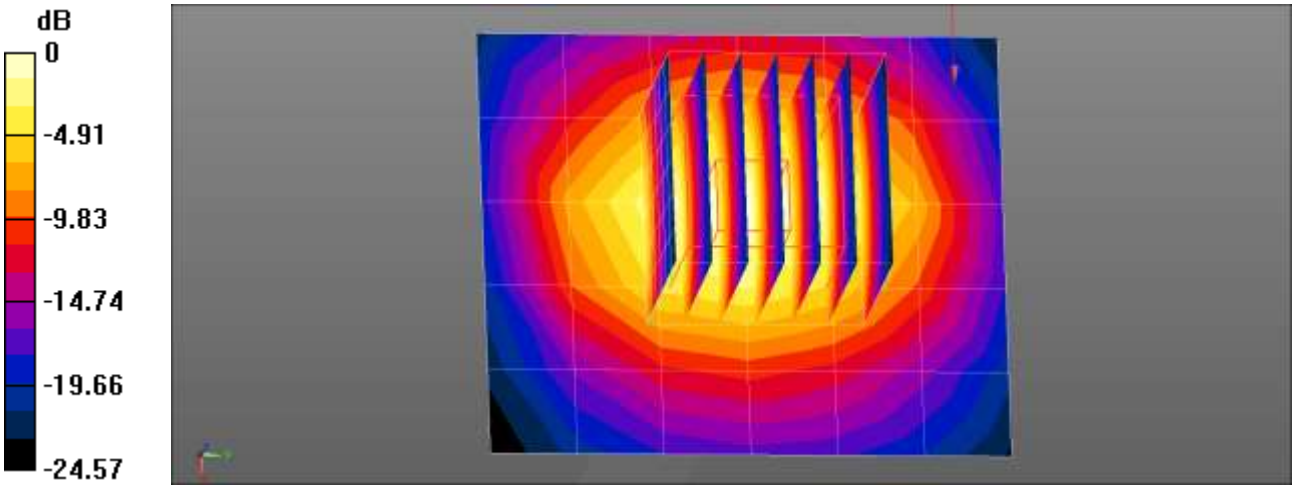
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2450 MHz; σ = 1.827 S/m; ε_r = 40.678; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2450 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.40 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 48.29 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 5.68 W/kg
SAR(1 g) = 2.6 W/kg; SAR(10 g) = 1.19 W/kg
Maximum value of SAR (measured) = 4.46 W/kg



0 dB = 4.40 W/kg = 6.44 dBW/kg

Verification Data (2450 ㎒)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.9 ℃
Test Date:	08/12/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

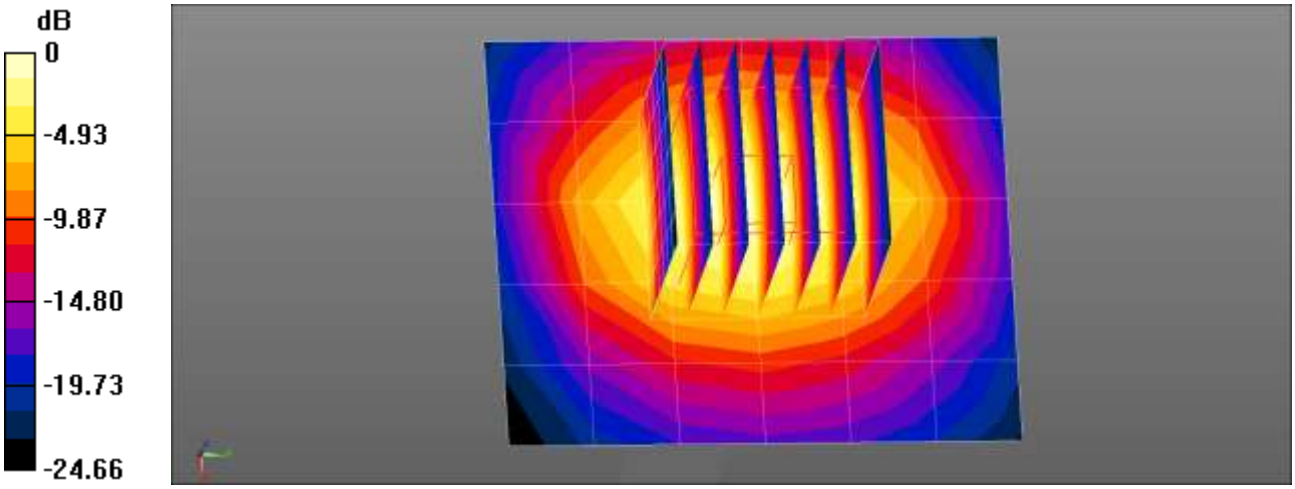
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2450 MHz; σ = 1.815 S/m; ε_r = 40.02; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2450 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.35 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 48.35 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 5.67 W/kg
SAR(1 g) = 2.59 W/kg; SAR(10 g) = 1.18 W/kg
Maximum value of SAR (measured) = 4.48 W/kg



0 dB = 4.35 W/kg = 6.39 dBW/kg

Verification Data (2600 MHz)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.8 ℃
Test Date: 08/20/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

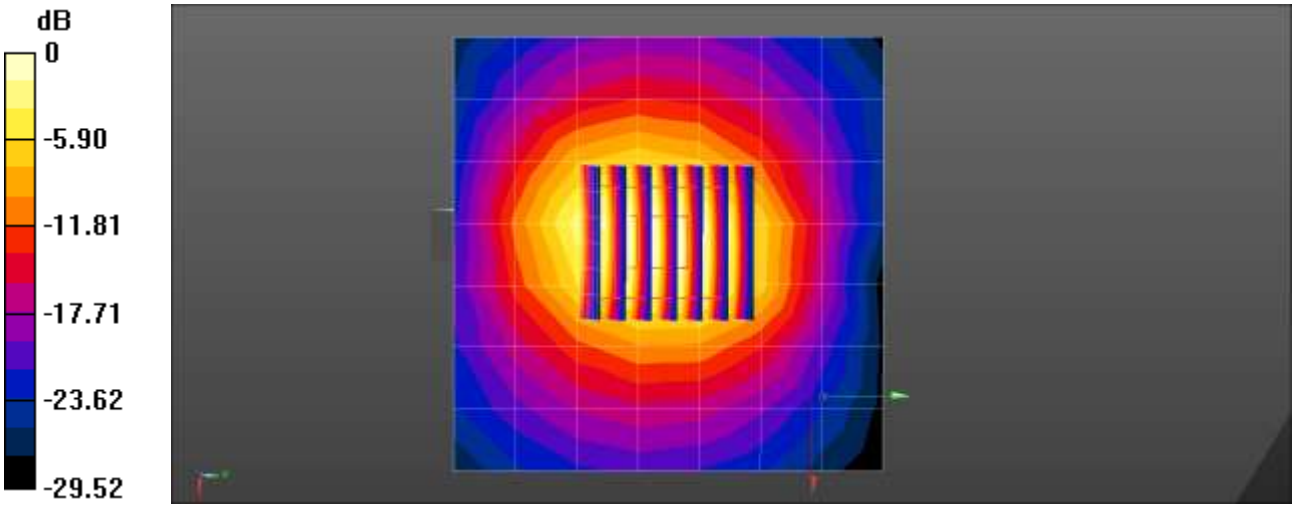
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.98 S/m; ε_r = 39.76; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2600 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2600MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.41 W/kg

2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.53 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 6.54 W/kg
SAR(1 g) = 2.79 W/kg; SAR(10 g) = 1.21 W/kg
Smallest distance from peaks to all points 3 dB below = 9.2 mm
Ratio of SAR at M2 to SAR at M1 = 41.9%
Maximum value of SAR (measured) = 5.02 W/kg



0 dB = 4.41 W/kg = 6.44 dBW/kg

Verification Data (2600 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.1 ℃
Test Date:	08/26/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

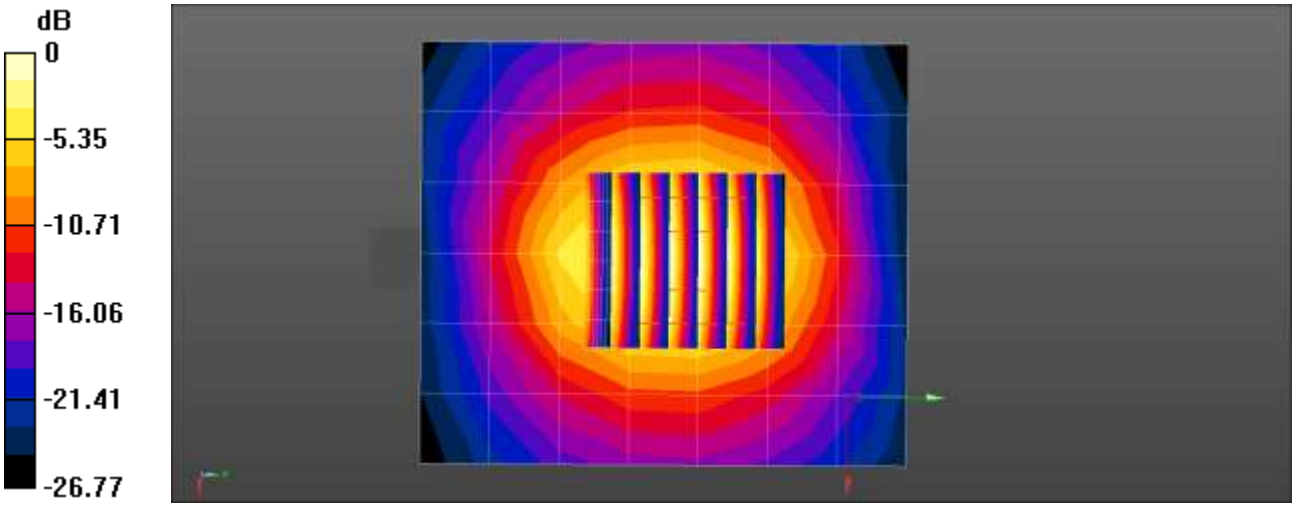
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.945 S/m; ε_r = 37.865; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5) @ 2600 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

2600MHz Head Verification(LTE B41 head)/Area Scan (7x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.37 W/kg

2600MHz Head Verification(LTE B41 head)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 44.07 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 6.04 W/kg
SAR(1 g) = 2.67 W/kg; SAR(10 g) = 1.18 W/kg
Smallest distance from peaks to all points 3 dB below = 10 mm
Ratio of SAR at M2 to SAR at M1 = 44%
Maximum value of SAR (measured) = 3.60 W/kg



0 dB = 3.37 W/kg = 5.27 dBW/kg

Verification Data (2600 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.3 ℃
Test Date:	08/26/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

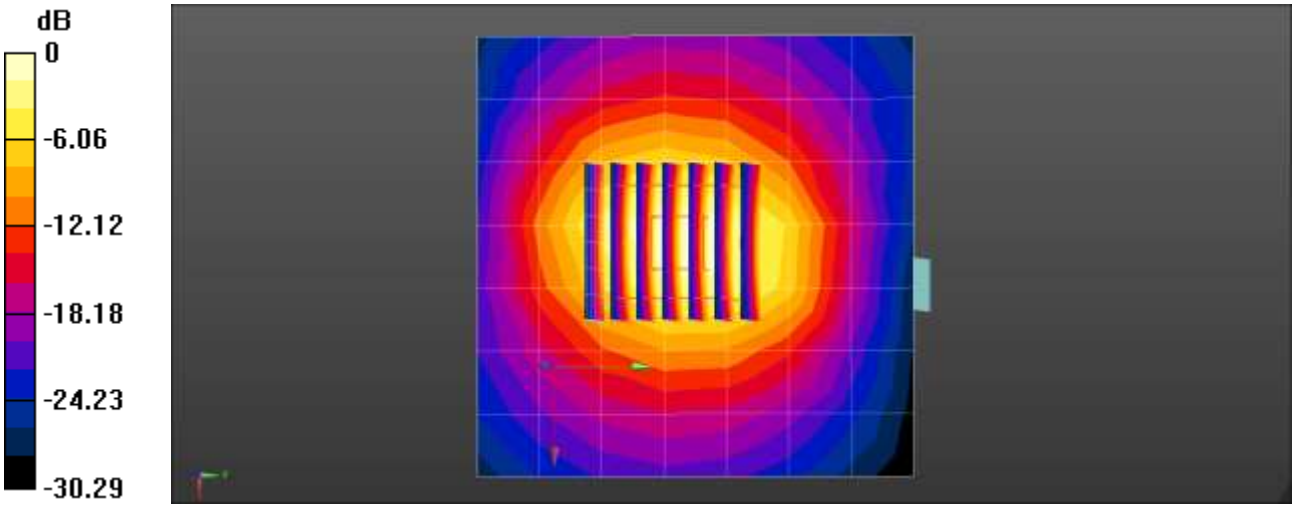
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.932 S/m; ε_r = 38.815; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2600 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2600MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.32 W/kg

2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.56 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 6.33 W/kg
SAR(1 g) = 2.71 W/kg; SAR(10 g) = 1.18 W/kg
Smallest distance from peaks to all points 3 dB below = 9.2 mm
Ratio of SAR at M2 to SAR at M1 = 42%
Maximum value of SAR (measured) = 4.88 W/kg



0 dB = 4.32 W/kg = 6.35 dBW/kg

Verification Data (2600 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.3 ℃
Test Date:	08/18/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

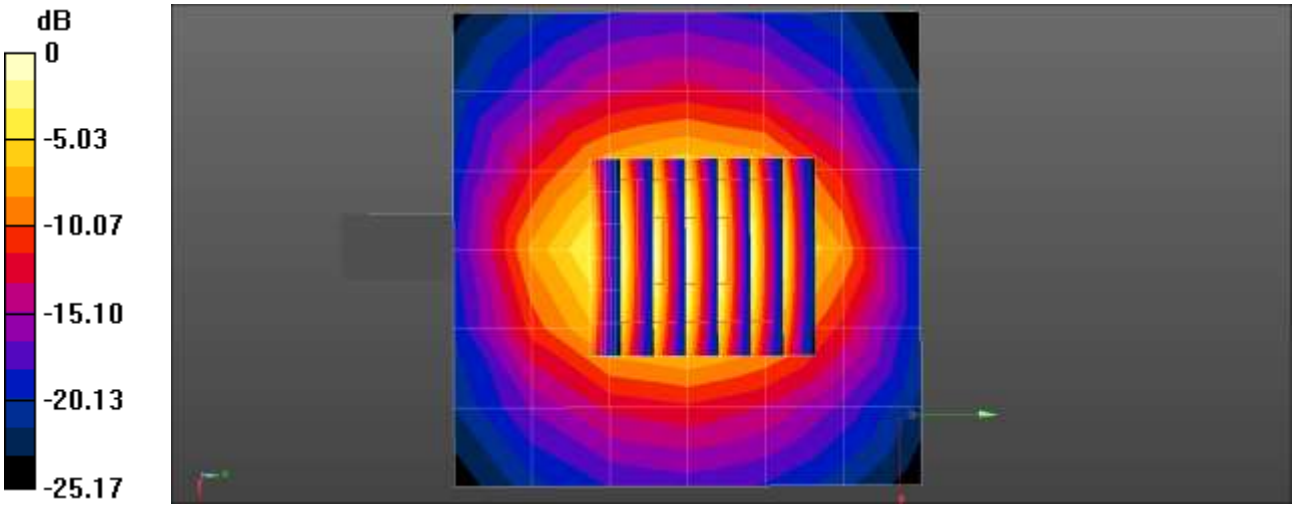
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.983 S/m; ε_r = 40.211; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2600 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 5.25 W/kg

2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.22 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 6.97 W/kg
SAR(1 g) = 2.85 W/kg; SAR(10 g) = 1.23 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 40%
Maximum value of SAR (measured) = 5.26 W/kg



0 dB = 5.25 W/kg = 7.20 dBW/kg

Verification Data (5250 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	08/12/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

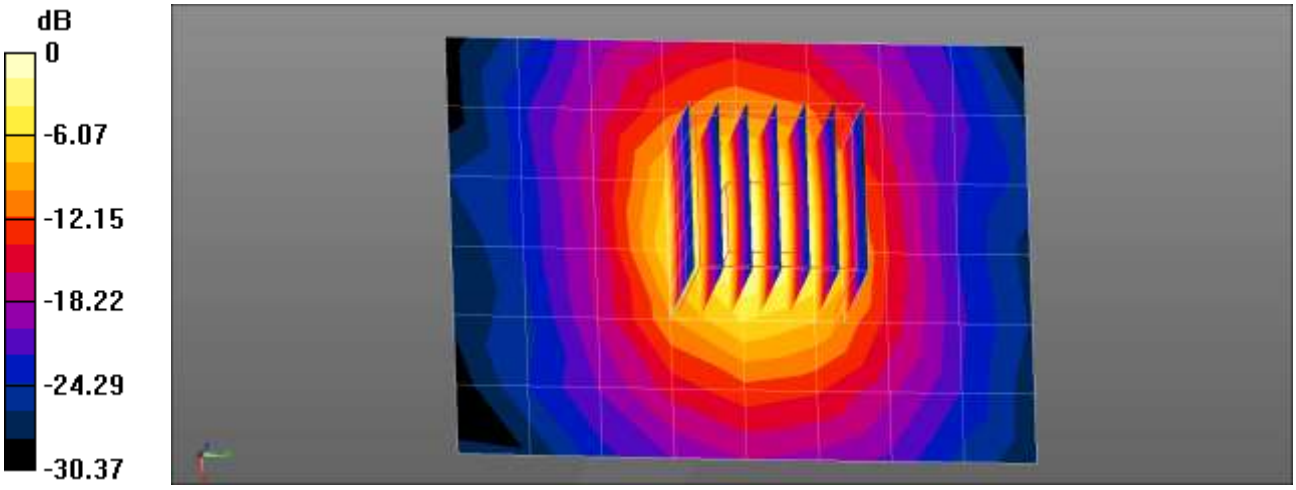
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.689 S/m; ε_r = 36.98; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.95, 4.95, 4.95) @ 5250 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification(5G WALN Ant1)/Area Scan (7x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.97 W/kg

5250MHz Head Verification(5G WALN Ant1)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 47.93 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 15.7 W/kg
SAR(1 g) = 3.88 W/kg; SAR(10 g) = 1.14 W/kg
Maximum value of SAR (measured) = 9.71 W/kg



0 dB = 8.97 W/kg = 9.53 dBW/kg

Verification Data (5250 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.4 ℃
Test Date:	08/13/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

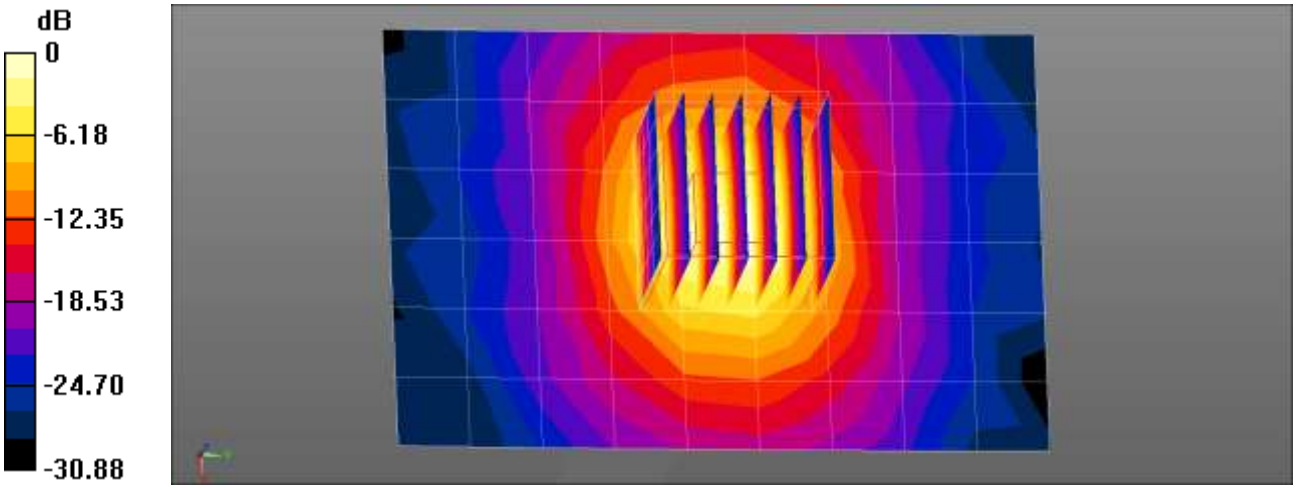
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.632 S/m; ε_r = 36.657; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.95, 4.95, 4.95) @ 5250 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification(5G WLAN Ant2)/Area Scan (7x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.35 W/kg

5250MHz Head Verification(5G WLAN Ant2)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 50.21 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 16.3 W/kg
SAR(1 g) = 3.95 W/kg; SAR(10 g) = 1.15 W/kg
Maximum value of SAR (measured) = 10.1 W/kg



0 dB = 8.35 W/kg = 9.22 dBW/kg

Verification Data (5250 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.6 ℃
Test Date:	08/14/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

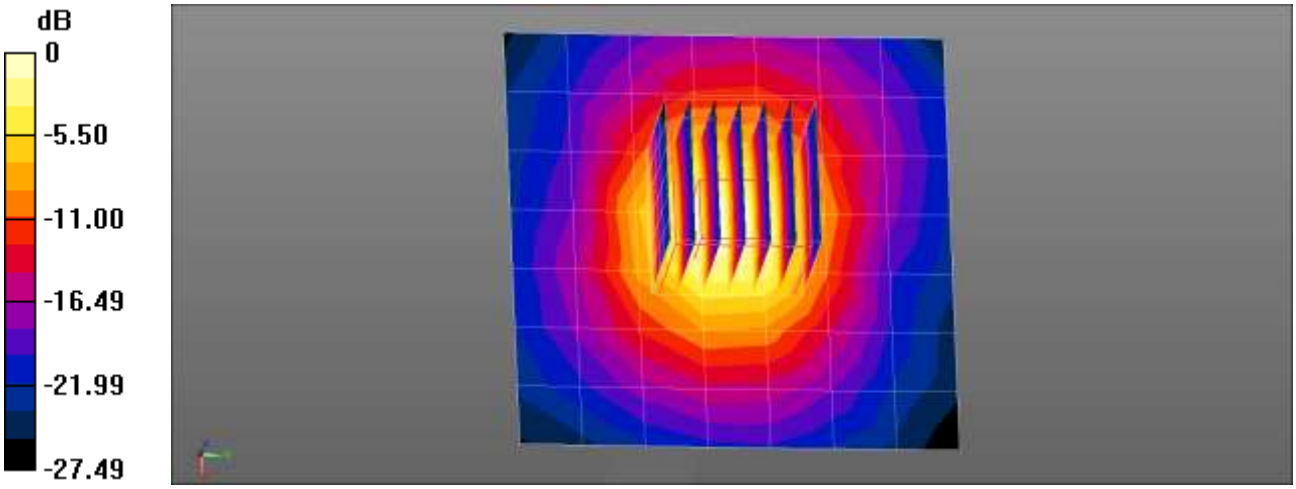
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5250 MHz; σ = 4.601 S/m; ε_r = 37.056; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.95, 4.95, 4.95) @ 5250 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 7.56 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Graded ratio:1.4 Reference Value = 48.49 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 15.6 W/kg
SAR(1 g) = 3.88 W/kg; SAR(10 g) = 1.17 W/kg
Maximum value of SAR (measured) = 9.58 W/kg



0 dB = 7.56 W/kg = 8.79 dBW/kg

Verification Data (5600 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	08/12/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

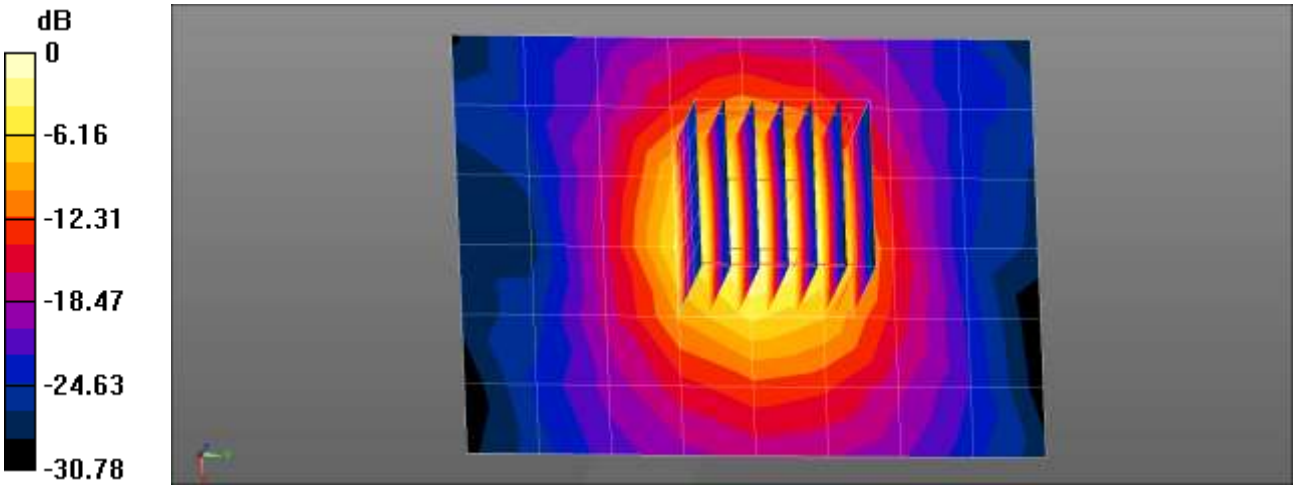
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.019 S/m; ε_r = 36.742; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.42, 4.42, 4.42) @ 5600 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification(5G WALN Ant1)/Area Scan (7x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.4 W/kg

5600MHz Head Verification(5G WALN Ant1)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 50.40 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 18.5 W/kg
SAR(1 g) = 4.24 W/kg; SAR(10 g) = 1.23 W/kg
Maximum value of SAR (measured) = 10.9 W/kg



0 dB = 10.4 W/kg = 10.18 dBW/kg

Verification Data (5600 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.4 ℃
Test Date:	08/13/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

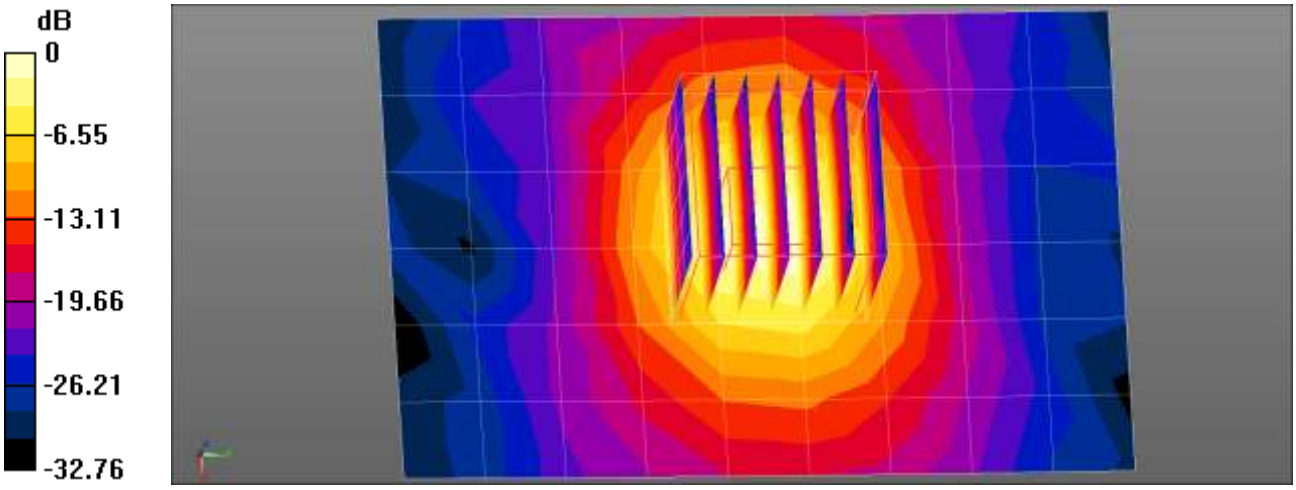
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.053 S/m; ε_r = 36.678; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.42, 4.42, 4.42) @ 5600 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification(5G WLAN Ant2)/Area Scan (7x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.22 W/kg

5600MHz Head Verification(5G WLAN Ant2)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 50.42 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 18.6 W/kg
SAR(1 g) = 4.28 W/kg; SAR(10 g) = 1.24 W/kg
Maximum value of SAR (measured) = 11.0 W/kg



0 dB = 9.22 W/kg = 9.65 dBW/kg

Verification Data (5600 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.6 ℃
Test Date:	08/14/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

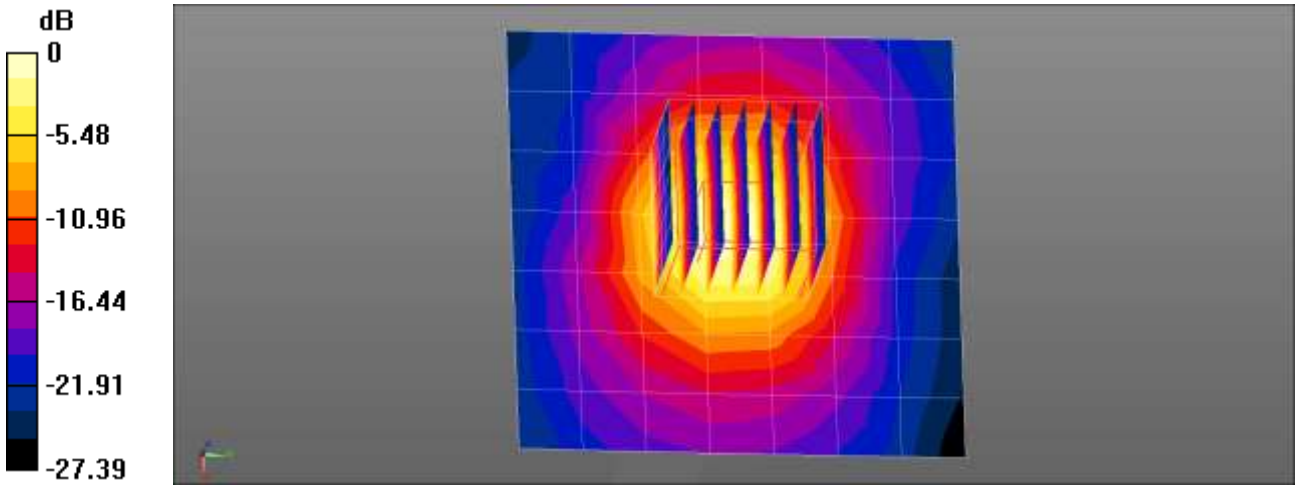
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 4.976 S/m; ε_r = 36.461; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.42, 4.42, 4.42) @ 5600 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.17 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Graded ratio:1.4
Reference Value = 48.61 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 4.12 W/kg; SAR(10 g) = 1.23 W/kg
Maximum value of SAR (measured) = 10.4 W/kg



0 dB = 8.17 W/kg = 9.12 dBW/kg

Verification Data (5750 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	08/12/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

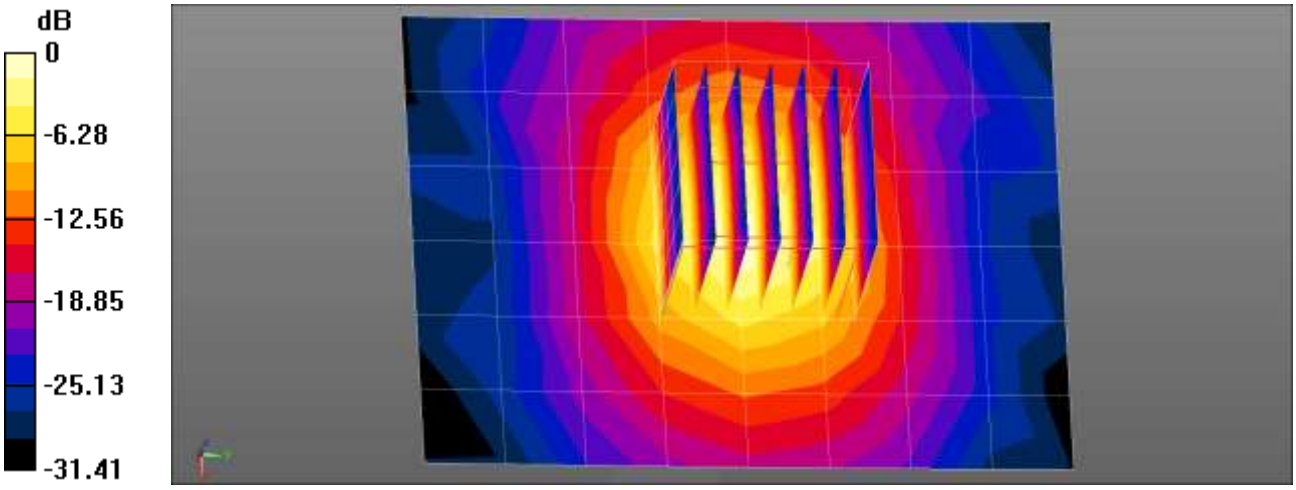
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.195 S/m; ε_r = 36.706; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.37, 4.37, 4.37) @ 5750 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification(5G WALN Ant1)/Area Scan (7x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.90 W/kg

5750MHz Head Verification(5G WALN Ant1)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 48.09 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 18.0 W/kg
SAR(1 g) = 3.97 W/kg; SAR(10 g) = 1.15 W/kg
Maximum value of SAR (measured) = 10.3 W/kg



0 dB = 9.90 W/kg = 9.96 dBW/kg

Verification Data (5750 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.4 ℃
Test Date:	08/13/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

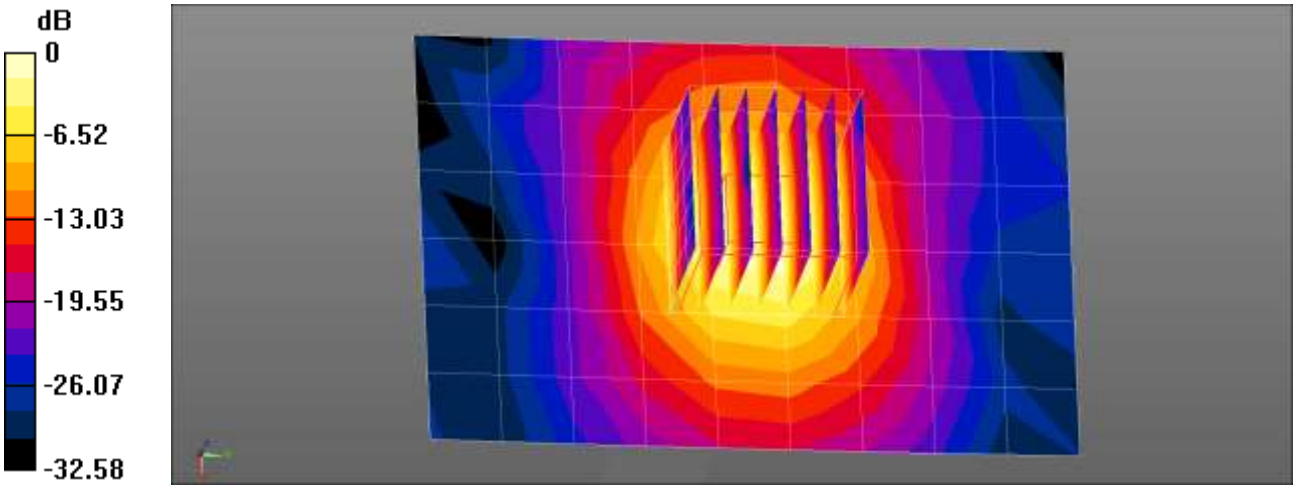
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.19 S/m; ε_r = 36.757; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.37, 4.37, 4.37) @ 5750 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification(5G WLAN Ant2)/Area Scan (7x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.69 W/kg

5750MHz Head Verification(5G WLAN Ant2)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm Graded ratio:1.4
Reference Value = 48.04 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 17.9 W/kg
SAR(1 g) = 3.96 W/kg; SAR(10 g) = 1.15 W/kg
Maximum value of SAR (measured) = 10.4 W/kg



0 dB = 8.69 W/kg = 9.39 dBW/kg

Verification Data (5750 MHz)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.6 ℃
Test Date:	08/14/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

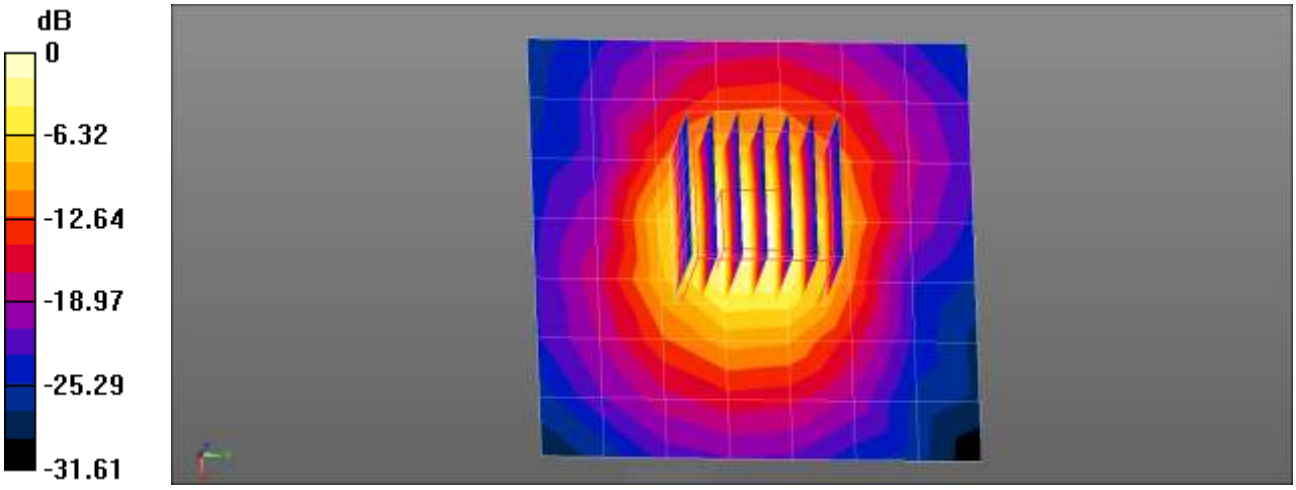
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.143 S/m; ε_r = 36.264; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(4.37, 4.37, 4.37) @ 5750 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.44 W/kg

5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Graded ratio:1.4
Reference Value = 48.40 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 18.6 W/kg
SAR(1 g) = 4.12 W/kg; SAR(10 g) = 1.2 W/kg
Maximum value of SAR (measured) = 10.7 W/kg



0 dB = 8.44 W/kg = 9.26 dBW/kg

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 Tissue Characterization

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
12	7370	EX3DV4	Head	750	1014	2019-09-11	41.7	0.87	PASS	PASS	PASS	N/A	N/A	N/A
1	3863	EX3DV4	Body	750	1014	2019-06-07	55.6	0.98	PASS	PASS	PASS	N/A	N/A	N/A
12	7370	EX3DV4	Head	835	441	2019-09-11	41.6	0.91	PASS	PASS	PASS	N/A	N/A	N/A
12	7370	EX3DV4	Head	835	441	2019-09-11	41.6	0.91	PASS	PASS	PASS	GMSK	PASS	N/A
3	3797	EX3DV4	Body	835	441	2019-12-10	55.3	0.98	PASS	PASS	PASS	GMSK	PASS	N/A
11	3076	ES3DV3	Body	835	441	2019-09-03	55.5	0.97	PASS	PASS	PASS	GMSK	PASS	N/A
1	3863	EX3DV4	Body	835	441	2019-09-03	55.4	0.97	PASS	PASS	PASS	N/A	N/A	N/A
11	3076	ES3DV3	Head	1750	2d015	2019-10-01	40.1	1.39	PASS	PASS	PASS	N/A	N/A	N/A
1	3863	EX3DV4	Body	1750	2d015	2019-10-01	53.5	1.52	PASS	PASS	PASS	N/A	N/A	N/A
9	3968	EX3DV4	Body	1750	2d015	2019-10-11	53.5	1.52	PASS	PASS	PASS	N/A	N/A	N/A
3	3797	EX3DV4	Head	1900	5d061	2020-01-31	40.1	1.42	PASS	PASS	PASS	GMSK	PASS	N/A
3	3797	EX3DV4	Body	1900	5d061	2020-01-31	53.3	1.53	PASS	PASS	PASS	GMSK	PASS	N/A
9	3968	EX3DV4	Head	2450	743	2020-03-02	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
1	3863	EX3DV4	Head	2450	743	2020-03-02	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
9	3968	EX3DV4	Body	2450	743	2020-03-02	52.8	1.94	PASS	PASS	PASS	OFDM	N/A	PASS
1	3863	EX3DV4	Body	2450	743	2020-03-02	52.8	1.94	PASS	PASS	PASS	OFDM	N/A	PASS
1	3863	EX3DV4	Head	2600	1106	2019-09-28	39.2	1.96	PASS	PASS	PASS	TDD	PASS	N/A
1	3863	EX3DV4	Body	2600	1106	2019-09-28	52.4	2.16	PASS	PASS	PASS	TDD	PASS	N/A
12	7370	EX3DV4	Head	5250	1107	2019-10-11	35.6	4.71	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	5600	1107	2019-10-11	35.3	5.04	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	5750	1107	2019-10-11	35.8	5.25	PASS	PASS	PASS	OFDM	N/A	PASS
8	3967	EX3DV4	Body	5250	1107	2020-03-11	48.8	5.36	PASS	PASS	PASS	OFDM	N/A	PASS
8	3967	EX3DV4	Body	5600	1107	2020-03-11	48.3	5.78	PASS	PASS	PASS	OFDM	N/A	PASS
8	3967	EX3DV4	Body	5750	1107	2020-03-11	48.4	5.95	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary 1g

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
9	3968	EX3DV4	Body	1750	2d015	2019-10-11	53.5	1.52	PASS	PASS	PASS	N/A	N/A	N/A
3	3797	EX3DV4	Body	1900	5d061	2020-01-31	53.3	1.53	PASS	PASS	PASS	GMSK	PASS	N/A
8	3967	EX3DV4	Body	5250	1107	2020-03-11	48.8	5.36	PASS	PASS	PASS	OFDM	N/A	PASS
8	3967	EX3DV4	Body	5600	1107	2020-03-11	48.3	5.78	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary – Extremity SAR Considerations

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.