Appendix B. – SAR Test Plots

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.1℃
Test Date: 09/11/2020
Plot No.: 1

DUT: SM-G991U ; Type: Bar

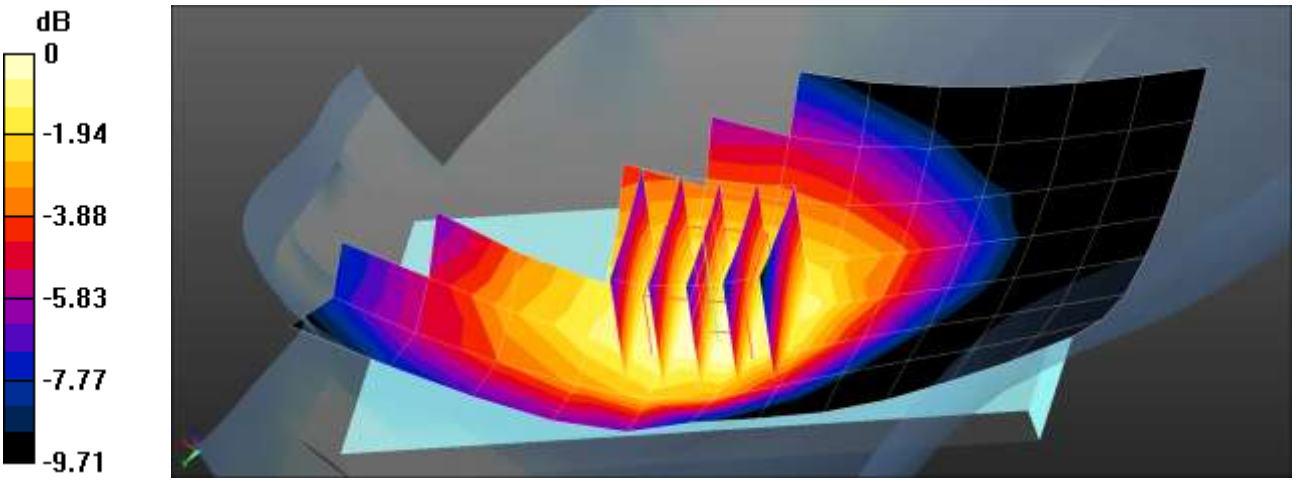
Communication System: UID 0, CDMA BC10 (FCC) (0); Frequency: 820 MHz;Duty Cycle: 1:1
Medium parameters used: f = 820 MHz; σ = 0.912 S/m; ε_r = 42.951; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); 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 CDMA S055 RC3 560ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.230 W/kg

CDMA BC10 Head Right Touch CDMA S055 RC3 560ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.620 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.291 W/kg
SAR(1 g) = 0.227 W/kg; SAR(10 g) = 0.174 W/kg
Maximum value of SAR (measured) = 0.238 W/kg



0 dB = 0.238 W/kg = −6.23 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/11/2020
Plot No.:	2

DUT: SM-G991U ; Type: Bar

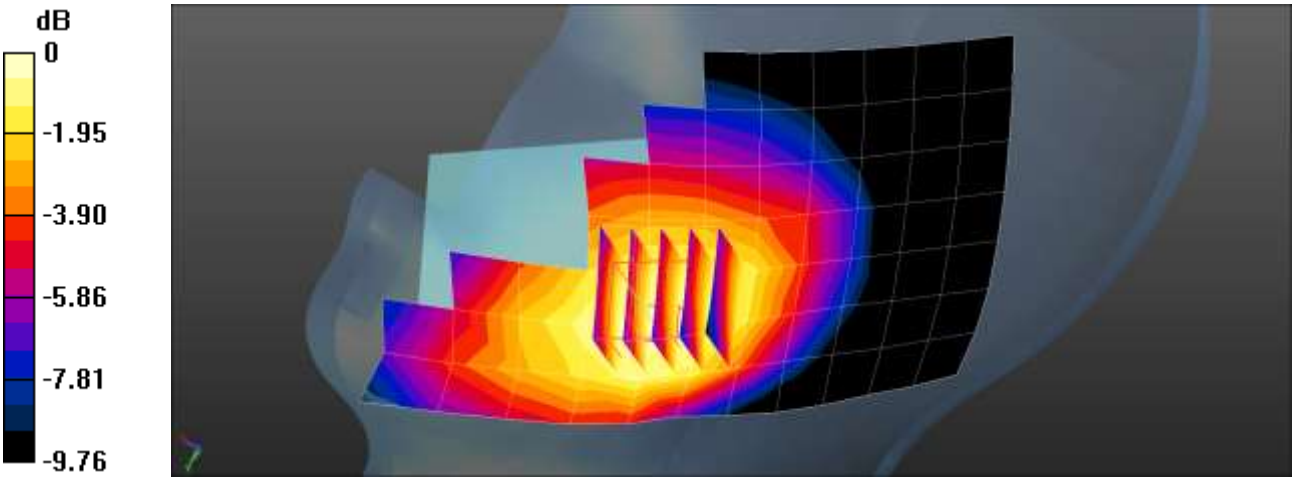
Communication System: UID 0, CDMA 835MHz FCC (0); Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.926 S/m; ε_r = 42.76; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); 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 BC0 Head Right Touch SO55 RC3 384ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.246 W/kg

CDMA BC0 Head Right Touch SO55 RC3 384ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.898 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.313 W/kg
SAR(1 g) = 0.244 W/kg; SAR(10 g) = 0.186 W/kg
Maximum value of SAR (measured) = 0.252 W/kg



0 dB = 0.252 W/kg = −5.99 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.1℃
Ambient Temperature:	22.3℃
Test Date:	09/16/2020
Plot No.:	3

DUT: SM-G991U ; Type: Bar

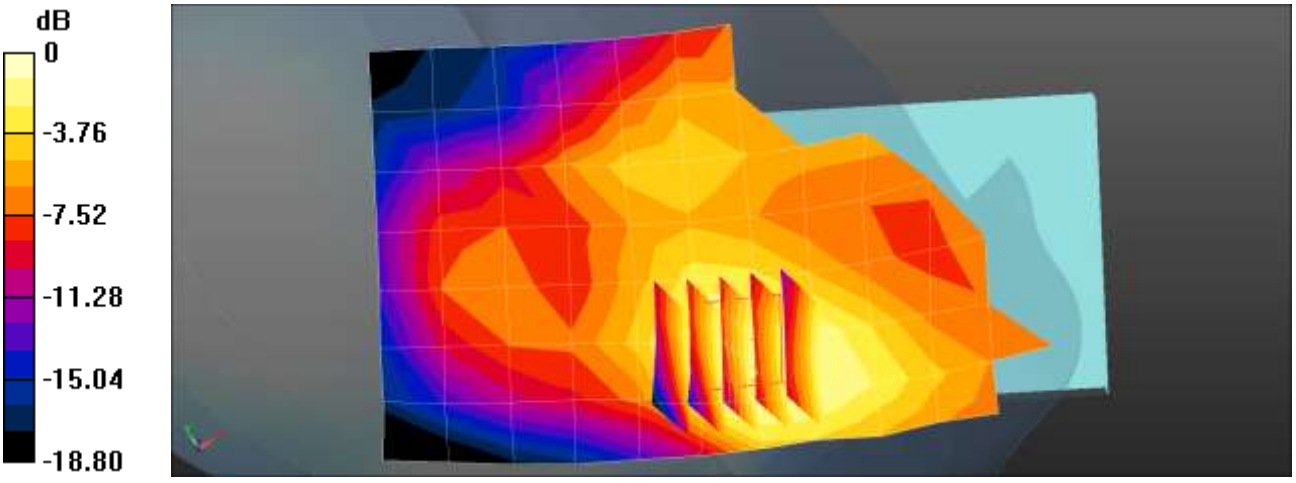
Communication System: UID 0, CDMA BC1(1900MHz) (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.427 S/m; ε_r = 39.601; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC1 Head Left Touch SO55 RC3 600ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.233 W/kg

CDMA BC1 Head Left Touch SO55 RC3 600ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.383 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.320 W/kg
SAR(1 g) = 0.238 W/kg; SAR(10 g) = 0.158 W/kg
Maximum value of SAR (measured) = 0.256 W/kg



0 dB = 0.256 W/kg = −5.92 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.1℃
Ambient Temperature: 22.3℃
Test Date: 09/14/2020
Plot No.: 4

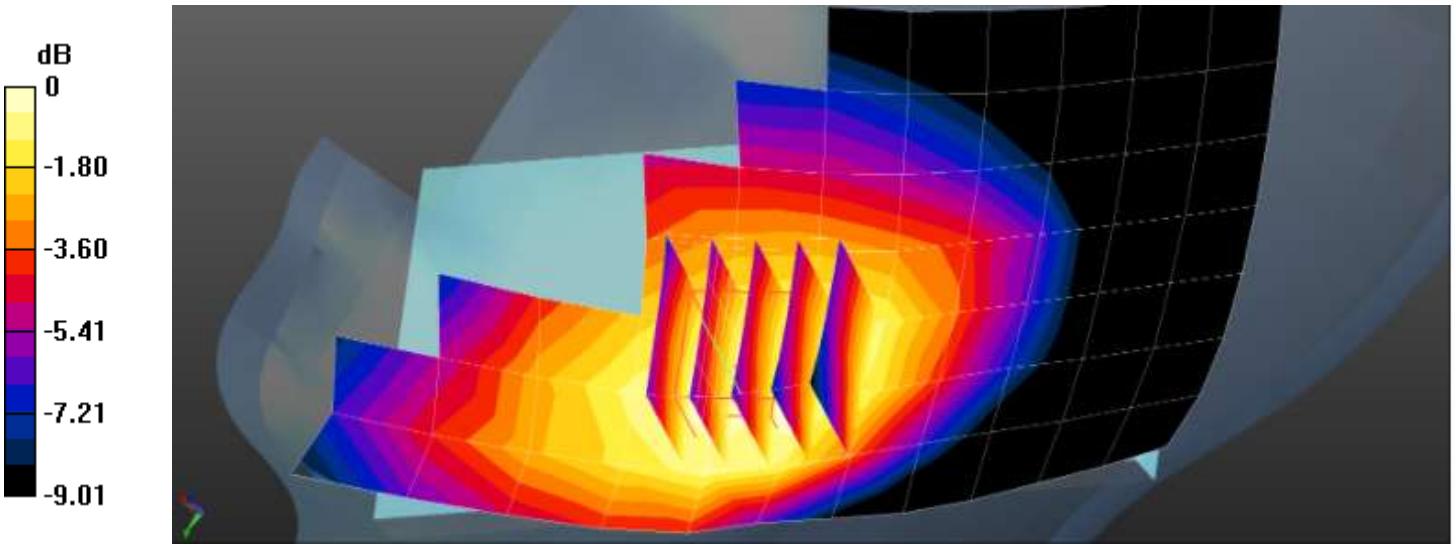
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, GSM850 GPRS 2TX (0); Frequency: 836.6 MHz;Duty Cycle: 1:4.14954
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.922 S/m; ε_r = 42.679; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

GSM850 Head Right Touch GPRS 2TX 190ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.185 W/kg
GSM850 Head Right Touch GPRS 2TX 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.842 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.237 W/kg
SAR(1 g) = 0.185 W/kg; SAR(10 g) = 0.141 W/kg
Maximum value of SAR (measured) = 0.220 W/kg



0 dB = 0.220 W/kg = −6.58 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/15/2020
Plot No.:	5

DUT: SM-G991U ; Type: Bar

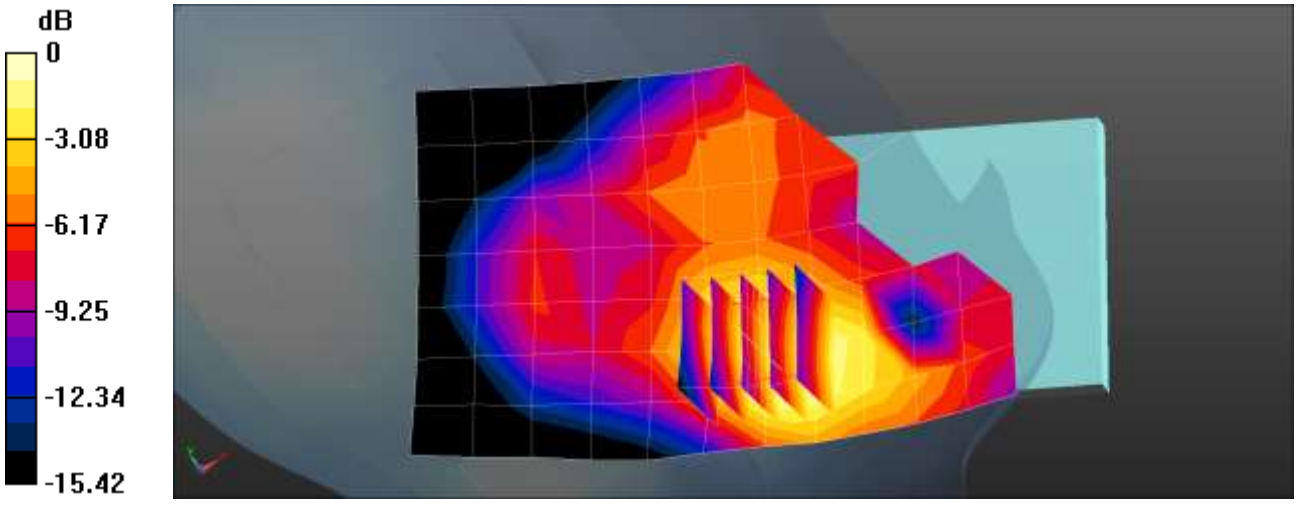
Communication System: UID 0, GSM 1900 3TX (0); Frequency: 1880 MHz;Duty Cycle: 1:2.77013
Medium parameters used: f = 1880 MHz; σ = 1.429 S/m; ε_r = 39.955; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- 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) = 0.166 W/kg

GSM1900 Head Left Touch 3Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.883 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.229 W/kg
SAR(1 g) = 0.164 W/kg; SAR(10 g) = 0.105 W/kg
Maximum value of SAR (measured) = 0.180 W/kg



0 dB = 0.180 W/kg = −7.45 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.1℃
Ambient Temperature:	22.3℃
Test Date:	09/14/2020
Plot No.:	6

DUT: SM-G991U ; Type: Bar

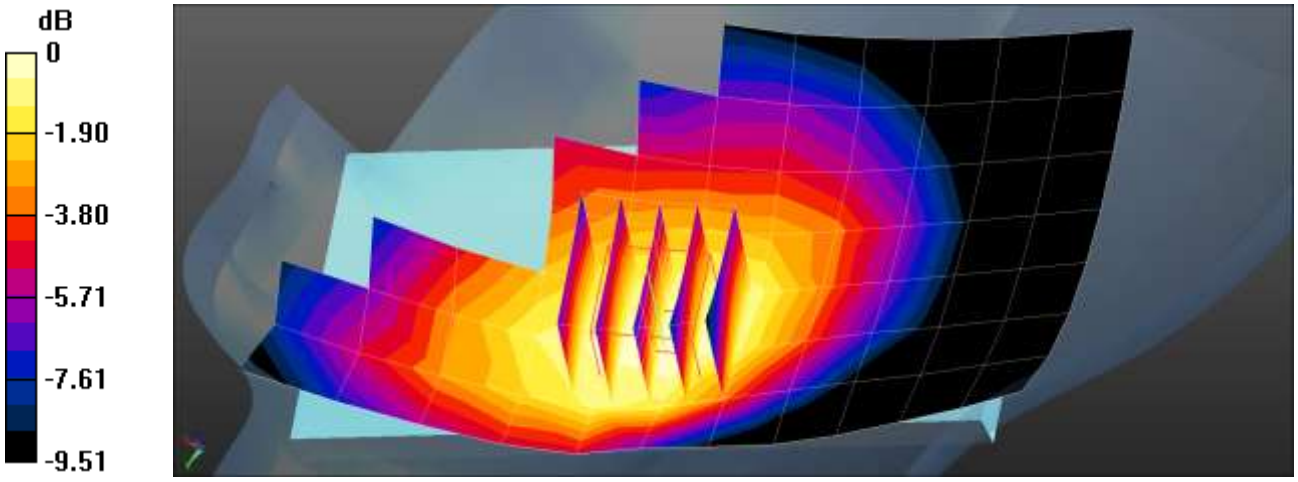
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.922 S/m; ε_r = 42.679; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA 5 Head Right Touch 4183ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.219 W/kg

WCDMA 5 Head Right Touch 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.000 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.265 W/kg
SAR(1 g) = 0.205 W/kg; SAR(10 g) = 0.157 W/kg
Maximum value of SAR (measured) = 0.214 W/kg



0 dB = 0.214 W/kg = −6.70 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.7℃
Ambient Temperature: 21.9℃
Test Date: 09/16/2020
Plot No.: 7

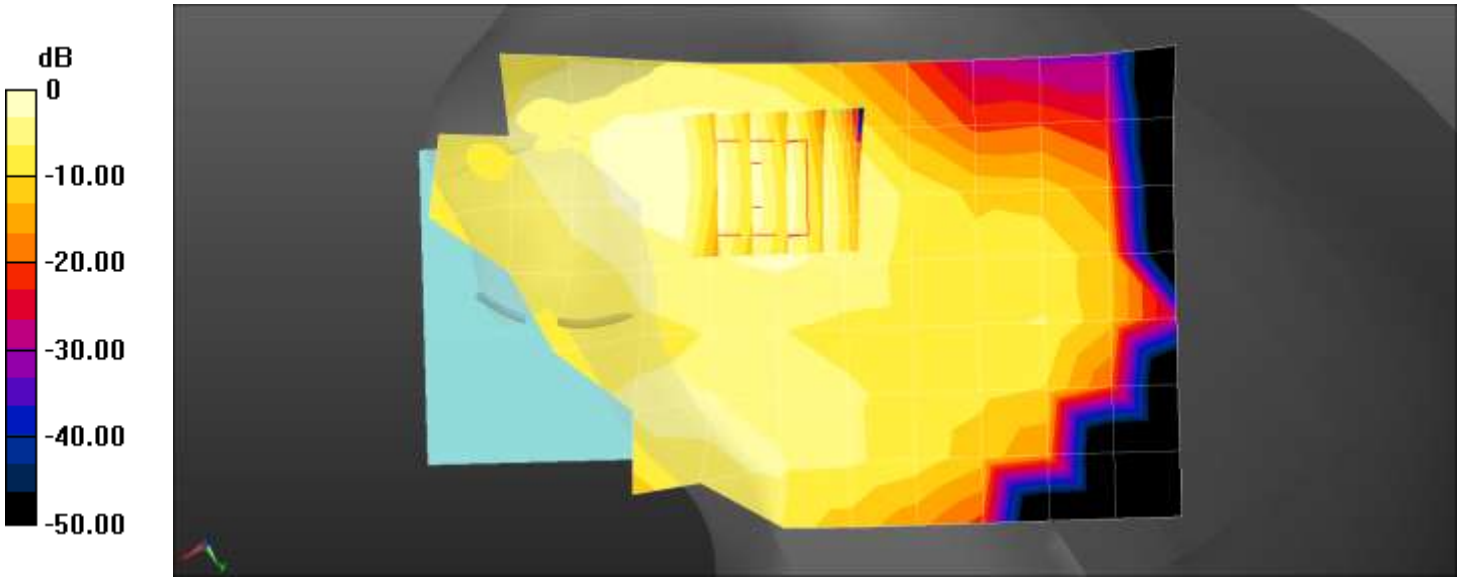
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, WCDMA IV (0); Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.337 S/m; ε_r = 40.861; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.82, 7.82, 7.82) @ 1732.4 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B4 Head Left Touch 1412ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.332 W/kg
WCDMA B4 Head Left Touch 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.010 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.402 W/kg
SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.174 W/kg
Smallest distance from peaks to all points 3 dB below = 14.3 mm
Ratio of SAR at M2 to SAR at M1 = 68.8%
Maximum value of SAR (measured) = 0.355 W/kg



0 dB = 0.332 W/kg = −4.78 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.0℃
Ambient Temperature: 22.2℃
Test Date: 09/15/2020
Plot No.: 8

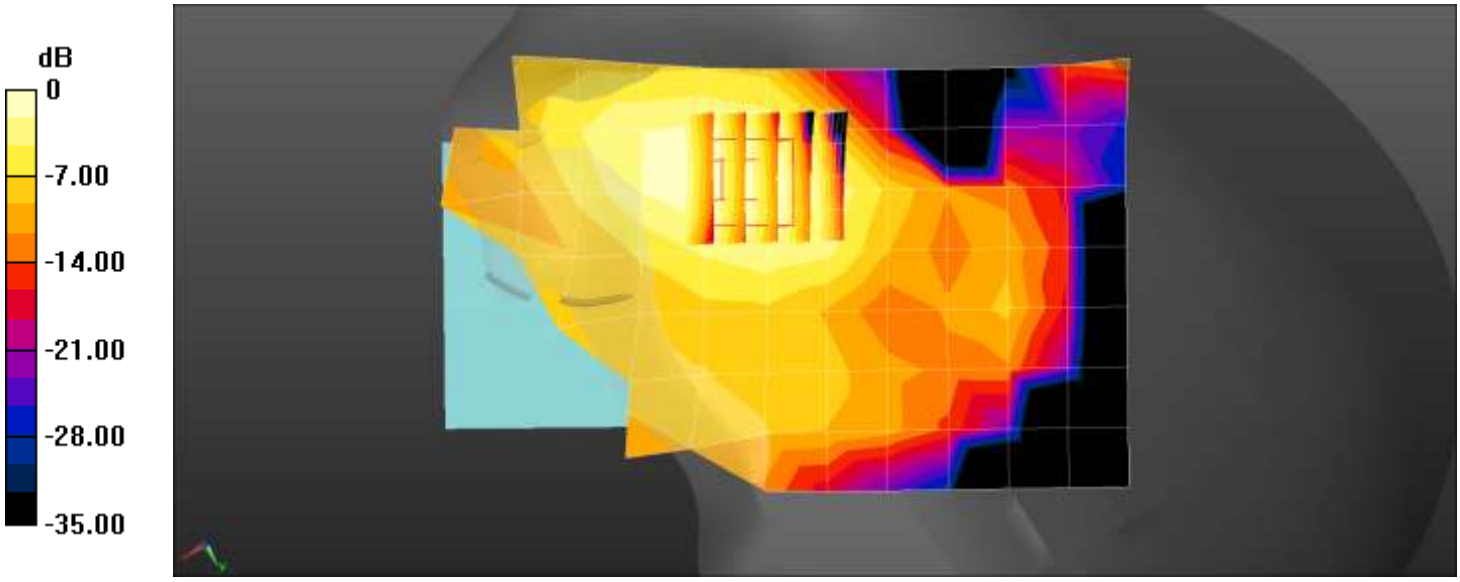
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, WCDMA1900 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.41 S/m; ε_r = 39.965; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57) @ 1880 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B2 Head Left Touch 9400ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.269 W/kg**WCDMA B2 Head Left Touch 9400ch/Zoom Scan (5x5x7)/Cube 0:** Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.86 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.339 W/kg
SAR(1 g) = 0.218 W/kg; SAR(10 g) = 0.136 W/kg
Smallest distance from peaks to all points 3 dB below = 14.9 mm
Ratio of SAR at M2 to SAR at M1 = 64.7%
Maximum value of SAR (measured) = 0.293 W/kg



0 dB = 0.293 W/kg = −5.33 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.7℃
Ambient Temperature: 20.8℃
Test Date: 10/05/2020
Plot No.: 9

DUT: SM-G991U ; Type: Bar

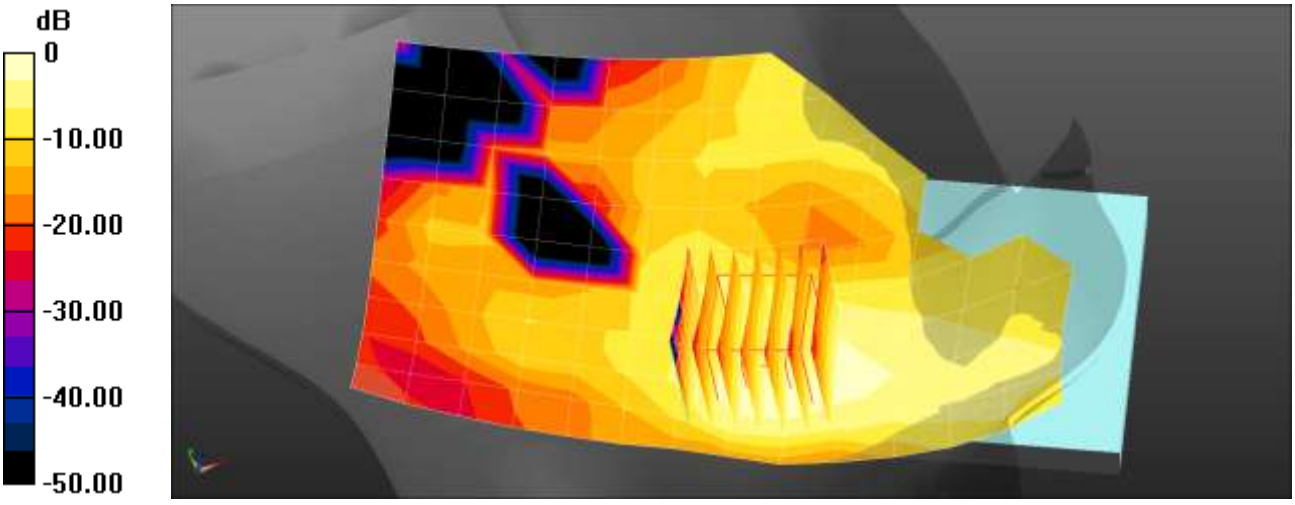
Communication System: UID 0, LTE Band7 (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.882 S/m; ε_r = 40.07; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.35, 7.35, 7.35); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- 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 (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.197 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 = 2.565 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.242 W/kg
SAR(1 g) = 0.126 W/kg; SAR(10 g) = 0.065 W/kg
Maximum value of SAR (measured) = 0.192 W/kg



0 dB = 0.197 W/kg = −7.05 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.7℃
Ambient Temperature:	22.9℃
Test Date:	09/14/2020
Plot No.:	10

DUT: SM-G991U ; Type: Bar

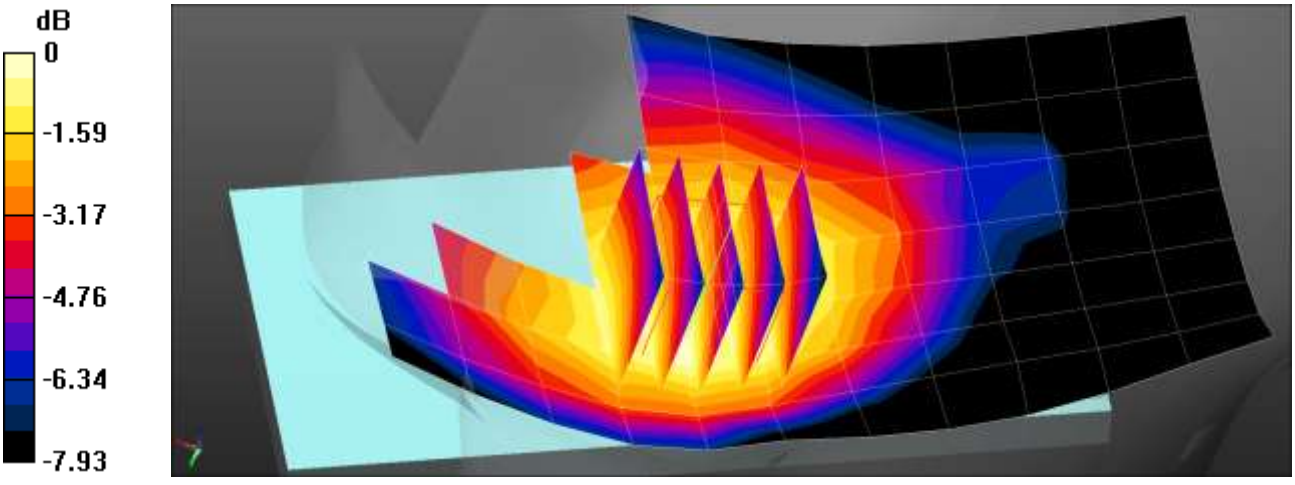
Communication System: UID 0, LTE 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.857 S/m; ε_r = 42.935; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.26, 9.26, 9.26); 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);

LTE Band 12 Head Right Touch QPSK 10MHz 1RB 0offset 23095ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.183 W/kg

LTE Band 12 Head Right Touch QPSK 10MHz 1RB 0offset 23095ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.612 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.199 W/kg
SAR(1 g) = 0.164 W/kg; SAR(10 g) = 0.132 W/kg
Maximum value of SAR (measured) = 0.184 W/kg



0 dB = 0.184 W/kg = −7.35 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.7℃
Ambient Temperature:	22.9℃
Test Date:	09/14/2020
Plot No.:	11

DUT: SM-G991U ; Type: Bar

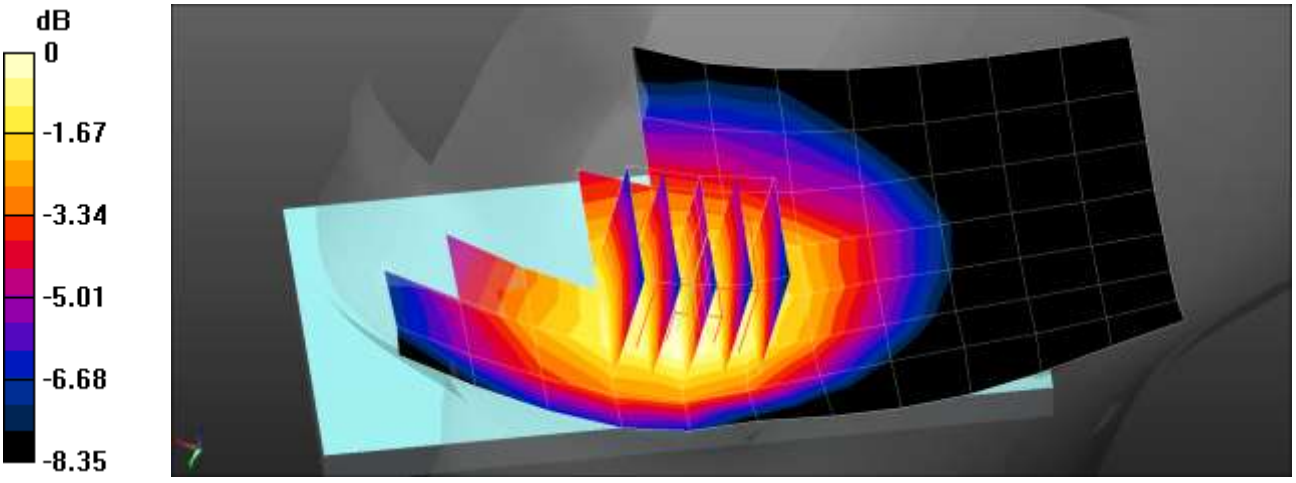
Communication System: UID 0, LTE13 (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.911 S/m; ε_r = 41.966; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.26, 9.26, 9.26); 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);

LTE Band 13 Head Right Touch QPSK 10MHz 1RB 0offset 23230ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.217 W/kg

LTE Band 13 Head Right Touch QPSK 10MHz 1RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.050 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.245 W/kg
SAR(1 g) = 0.193 W/kg; SAR(10 g) = 0.150 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: 22.4℃
Ambient Temperature: 22.6℃
Test Date: 09/14/2020
Plot No.: 12

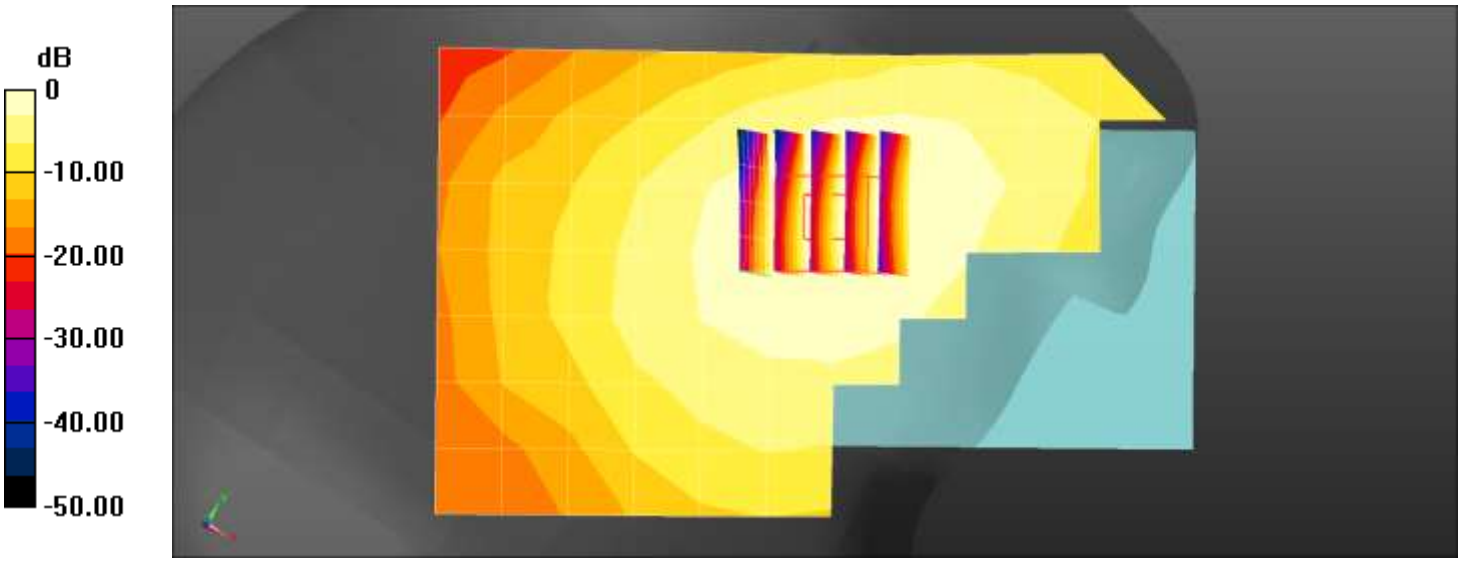
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, LTE 14 (0); Frequency: 793 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 793 MHz; σ = 0.916 S/m; ε_r = 41.738; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 793 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- 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) = 0.246 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 = 5.119 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.266 W/kg
SAR(1 g) = 0.209 W/kg; SAR(10 g) = 0.161 W/kg
Maximum value of SAR (measured) = 0.246 W/kg



0 dB = 0.246 W/kg = −6.10 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.7℃
Ambient Temperature: 22.9℃
Test Date: 09/28/2020
Plot No.: 13

DUT: SM-G991U ; Type: Bar

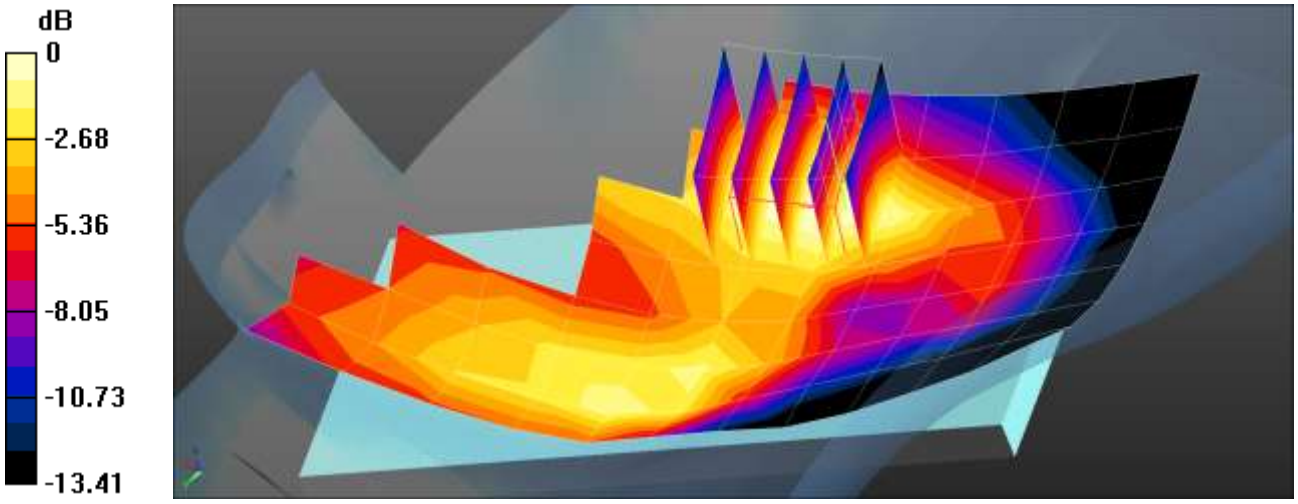
Communication System: UID 0, LTE Band 25 (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.421 S/m; ε_r = 38.708; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 25 Head Right Touch QPSK 20MHz 1RB 0offset 26365ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.133 W/kg

LTE Band 25 Head Right Touch QPSK 20MHz 1RB 0offset 26365ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.870 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.151 W/kg
SAR(1 g) = 0.117 W/kg; SAR(10 g) = 0.075 W/kg
Maximum value of SAR (measured) = 0.129 W/kg



0 dB = 0.129 W/kg = −8.89 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.9℃
Test Date:	10/01/2020
Plot No.:	14

DUT: SM-G991U ; Type: Bar

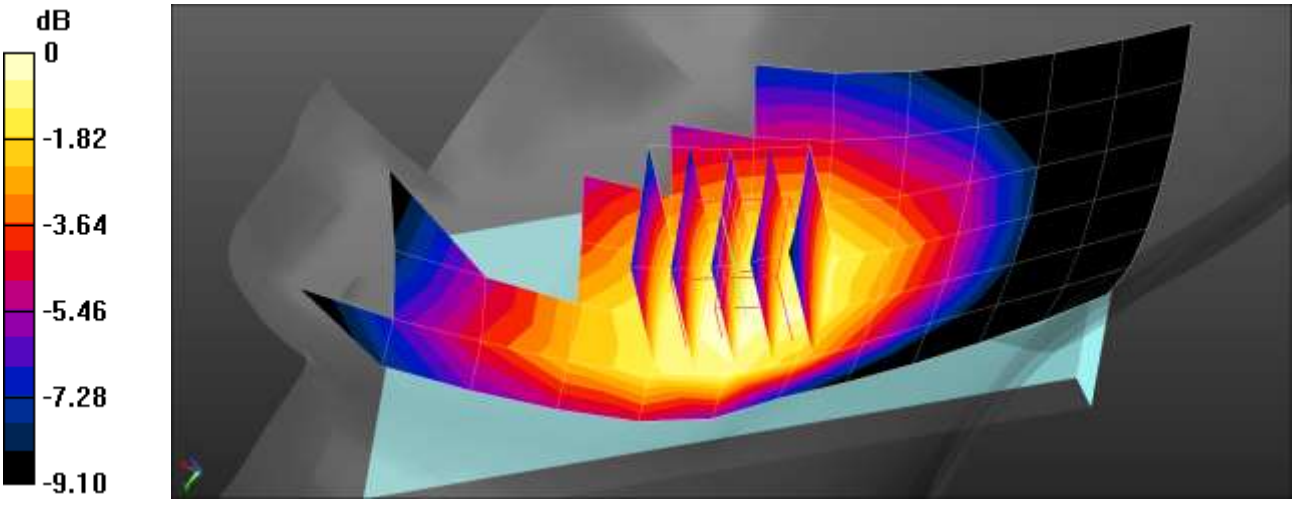
Communication System: UID 0, LTE Band 5 (0); Frequency: 831.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.6 MHz; σ = 0.879 S/m; ε_r = 41.778; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

UL CA LTE Band 5 Head Right Touch QPSK 10MHz 1RB 49offset 20476ch/Area Scan (7x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.307 W/kg

UL CA LTE Band 5 Head Right Touch QPSK 10MHz 1RB 49offset 20476ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.476 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.331 W/kg
SAR(1 g) = 0.259 W/kg; SAR(10 g) = 0.196 W/kg
Maximum value of SAR (measured) = 0.303 W/kg



0 dB = 0.303 W/kg = −5.19 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.4℃
Test Date:	10/02/2020
Plot No.:	15

DUT: SM-G991U ; Type: Bar

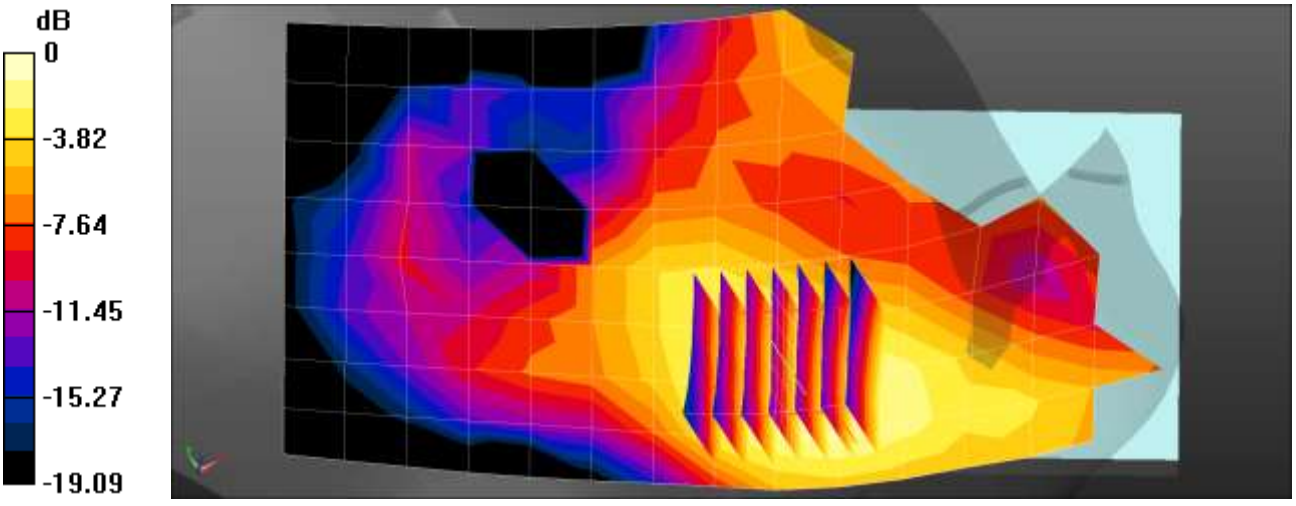
Communication System: UID 0, LTE30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.625 S/m; ε_r = 40.331; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.87, 4.87, 4.87); Calibrated: 2020-07-31;
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0(Left-Left)
- 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) = 0.136 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 = 2.994 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.206 W/kg
SAR(1 g) = 0.121 W/kg; SAR(10 g) = 0.071 W/kg
Maximum value of SAR (measured) = 0.145 W/kg



0 dB = 0.145 W/kg = −8.39 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.8℃
Ambient Temperature:	21.0℃
Test Date:	10/29/2020
Plot No.:	16

DUT: SM-G991U ; Type: Bar

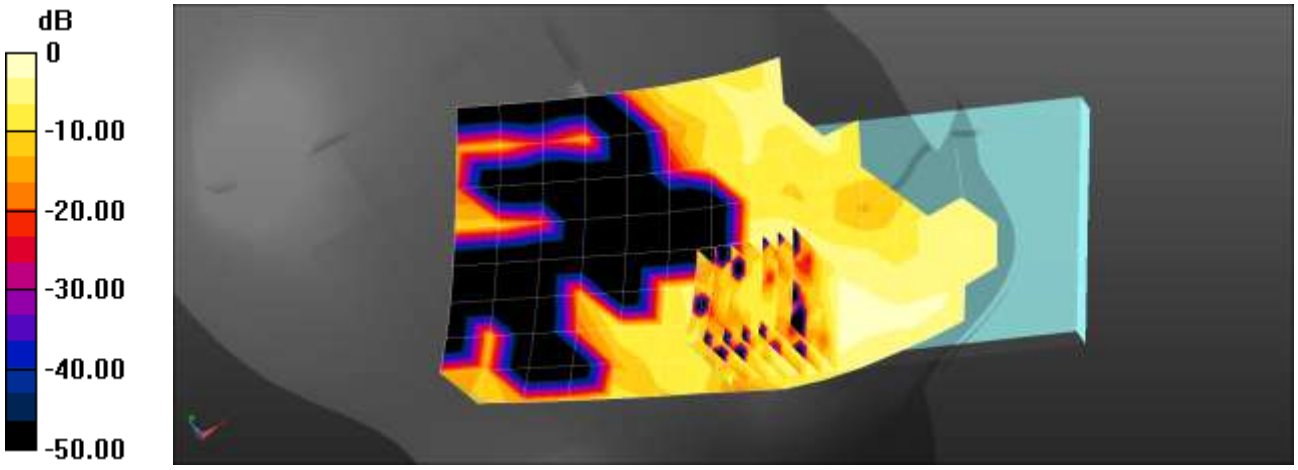
Communication System: UID 0, LTE 40 (0); Frequency: 2310 MHz;Duty Cycle: 1: 1.58052
Medium parameters used: f = 2310 MHz; σ = 1.644 S/m; ε_r = 40.562; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.64, 7.64, 7.64); Calibrated: 2020-09-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2020-09-29
- Phantom: Twin-SAM V8.0 (Left)
- 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) = 0.00833 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 = 1.463 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.0110 W/kg
SAR(1 g) = 0.00583 W/kg; SAR(10 g) = 0.00271 W/kg
Maximum value of SAR (measured) = 0.00927 W/kg



0 dB = 0.00833 W/kg = −20.79 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.8℃
Ambient Temperature: 21.0℃
Test Date: 10/29/2020
Plot No.: 17

DUT: SM-G991U ; Type: Bar

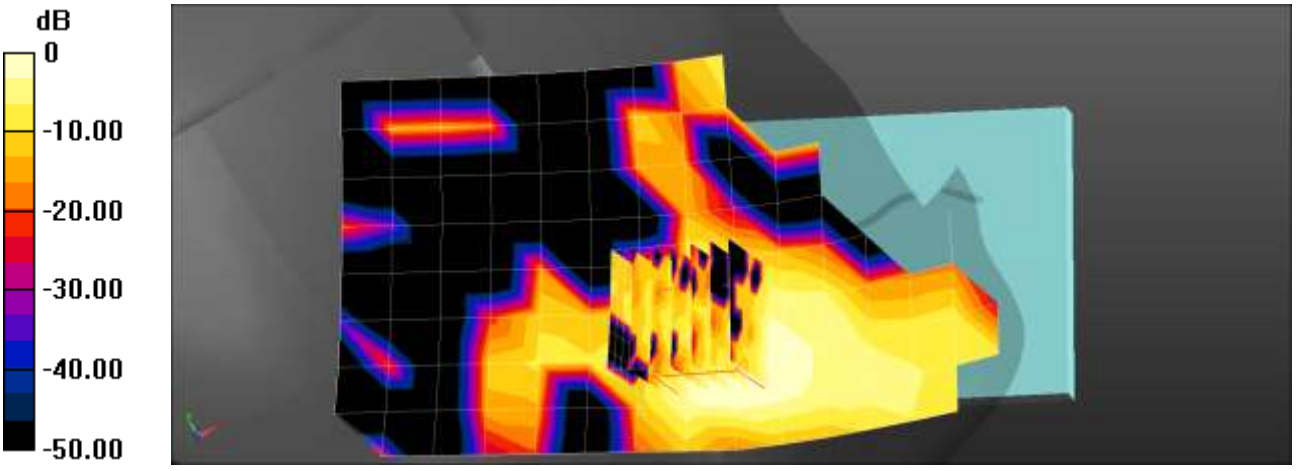
Communication System: UID 0, LTE 40 (0); Frequency: 2355 MHz;Duty Cycle: 1: 1.58052
Medium parameters used (interpolated): f = 2355 MHz; σ = 1.699 S/m; ε_r = 40.437; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.64, 7.64, 7.64); Calibrated: 2020-09-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2020-09-29
- Phantom: Twin-SAM V8.0 (Left)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 40 Head Left Touch QPSK 10MHz 1RB 0offset 39200ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0102 W/kg

LTE Band 40 Head Left Touch QPSK 10MHz 1RB 0offset 39200ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.0260 W/kg
SAR(1 g) = 0.00627 W/kg; SAR(10 g) = 0.00334 W/kg
Maximum value of SAR (measured) = 0.00980 W/kg



0 dB = 0.0102 W/kg = −19.91 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.5℃
Ambient Temperature: 22.7℃
Test Date: 09/28/2020
Plot No.: 18

DUT: SM-G991U ; Type: Bar

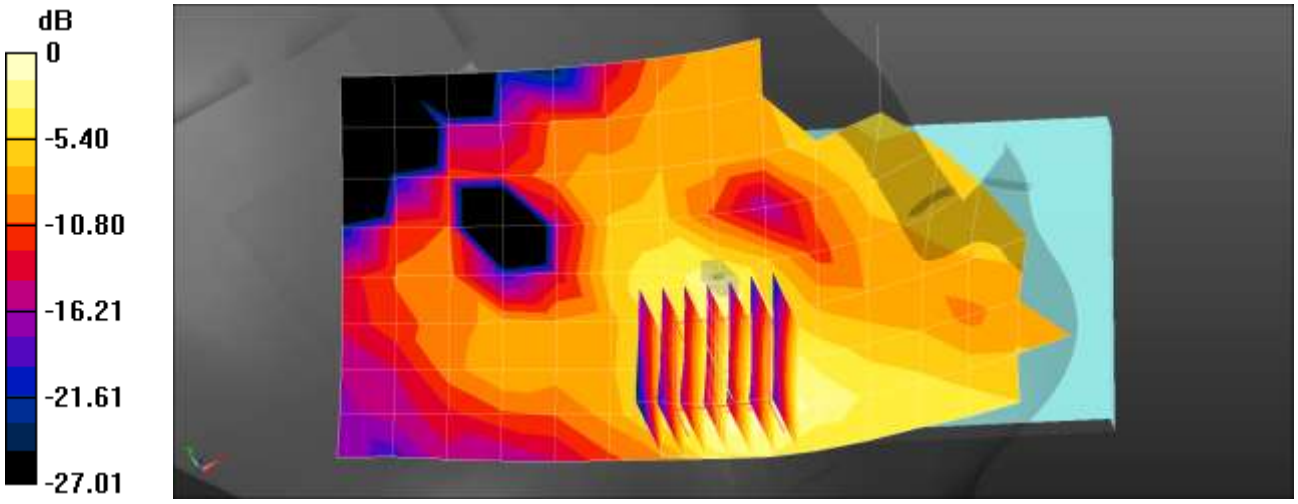
Communication System: UID 0, LTE Band41 (0); Frequency: 2680 MHz;Duty Cycle: 1: 1:2.31
Medium parameters used: f = 2680 MHz; σ = 2.103 S/m; ε_r = 39.759; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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 Head Left Touch QPSK 20MHz 1RB 0offset 41490ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.182 W/kg

LTE Band 41 Head Left Touch QPSK 20MHz 1RB 0offset 41490ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.324 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.281 W/kg
SAR(1 g) = 0.157 W/kg; SAR(10 g) = 0.082 W/kg
Maximum value of SAR (measured) = 0.193 W/kg



0 dB = 0.193 W/kg = −7.14 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.4℃
Test Date:	10/02/2020
Plot No.:	19

DUT: SM-G991U ; Type: Bar

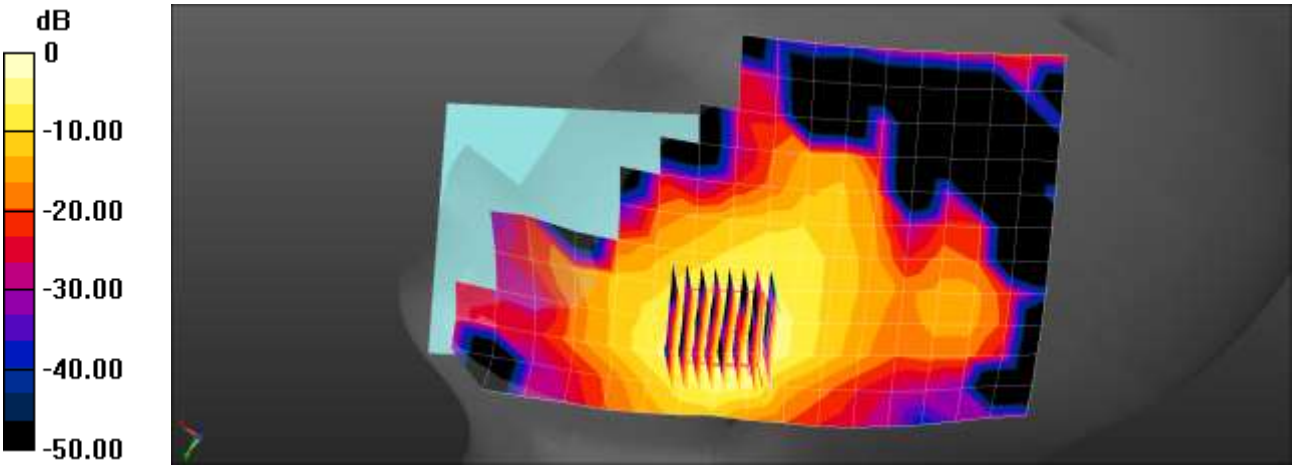
Communication System: UID 0, LTE 48(FCC) (0); Frequency: 3690 MHz;Duty Cycle: 1:1.58016
Medium parameters used: f = 3690 MHz; σ = 3.148 S/m; ε_r = 37.985; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(6.87, 6.87, 6.87); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 48 Head Right Touch QPSK 20MHz 50RB 0offset 56640ch/Area Scan (12x19x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.05 W/kg

LTE Band 48 Head Right Touch QPSK 20MHz 50RB 0offset 56640ch/Zoom Scan (8x8x8)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 3.323 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.446 W/kg; SAR(10 g) = 0.165 W/kg
Maximum value of SAR (measured) = 0.940 W/kg



0 dB = 1.05 W/kg = 0.20 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: 10/27/2020
Plot No.: 20

DUT: SM-G991U ; Type: Bar

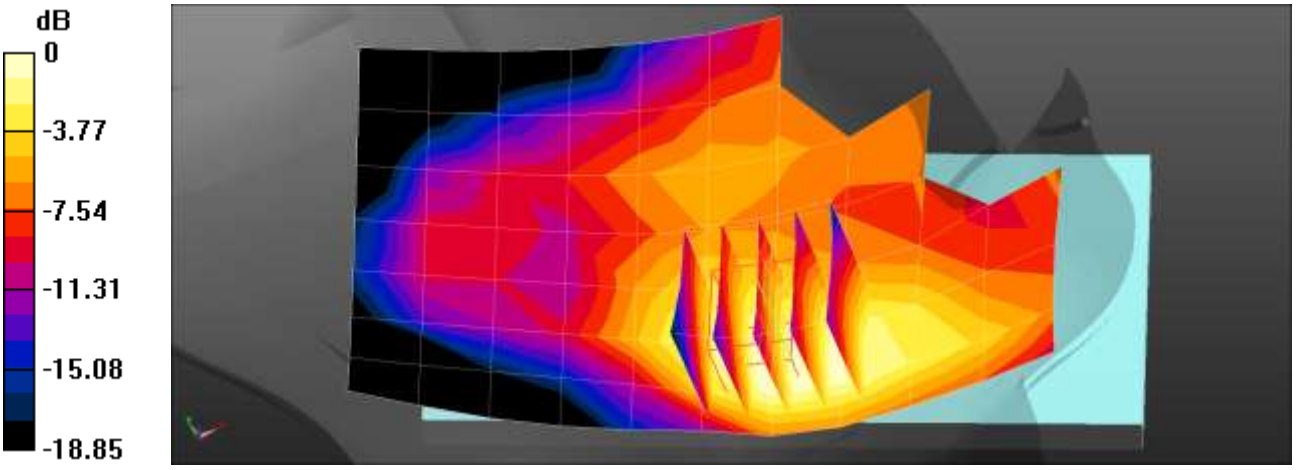
PCC: 1 745 MHz 132322 Ch., SCC: 1 735.1 MHz 132223 Ch.

Communication System: UID 0, LTE Band 66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.334 S/m; ε_r = 40.424; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.24, 5.24, 5.24); 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 Band 66 Head Left Touch PCC 10MHz QPSK 1RB 0offset 132322ch10MHz SCC QPSK 1RB 49offset 132223ch /Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.247 W/kg
LTE Band 66 Head Left Touch PCC 10MHz QPSK 1RB 0offset 132322ch10MHz SCC QPSK 1RB 49offset 132223ch /Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.576 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.351 W/kg
SAR(1 g) = 0.241 W/kg; SAR(10 g) = 0.154 W/kg
Maximum value of SAR (measured) = 0.277 W/kg



0 dB = 0.277 W/kg = −5.58 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.4℃
Ambient Temperature:	22.6℃
Test Date:	09/14/2020
Plot No.:	21

DUT: SM-G991U ; Type: Bar

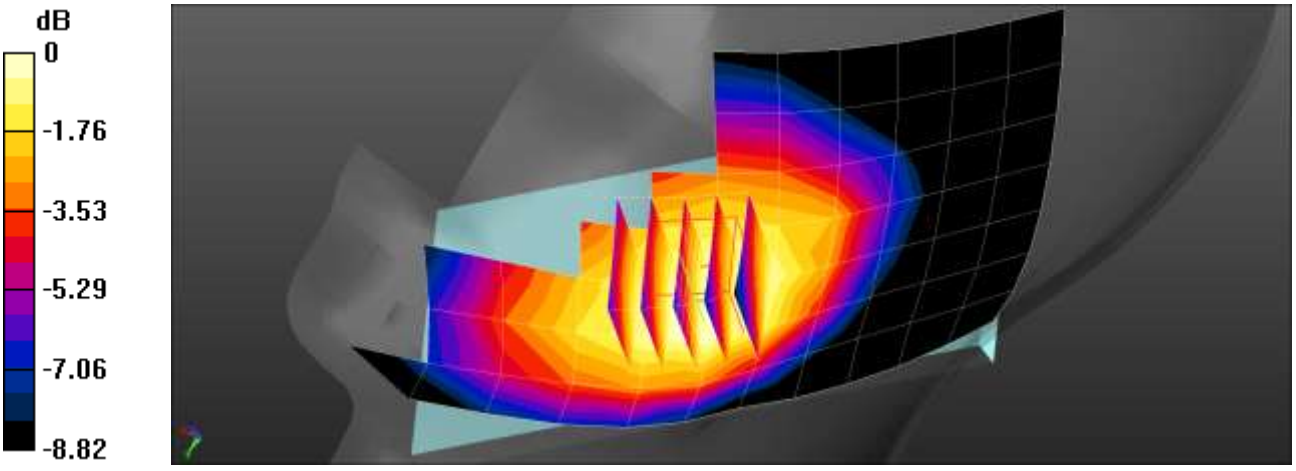
Communication System: UID 0, LTE 71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 680.5 MHz; σ = 0.81 S/m; ε_r = 43.359; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- 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) = 0.145 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 = 3.998 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.158 W/kg
SAR(1 g) = 0.140 W/kg; SAR(10 g) = 0.111 W/kg
Maximum value of SAR (measured) = 0.148 W/kg



0 dB = 0.148 W/kg = −8.30 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.6℃
Ambient Temperature:	21.8℃
Test Date:	10/19/2020
Plot No.:	22

DUT: SM-G991U ; Type: Bar

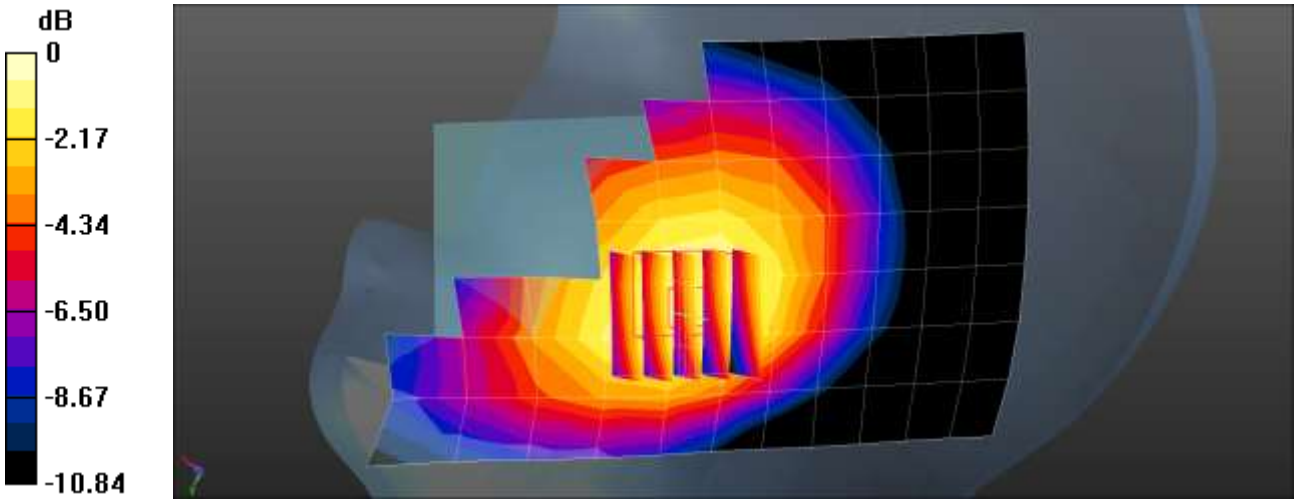
Communication System: UID 0, NR n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.929 S/m; ε_r = 42.321; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.2, 9.2, 9.2); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n5 Head Right Touch QPSK 20MHz 1RB 53offset 167300ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.212 W/kg

n5 Head Right Touch QPSK 20MHz 1RB 53offset 167300ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.511 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.243 W/kg
SAR(1 g) = 0.191 W/kg; SAR(10 g) = 0.146 W/kg
Maximum value of SAR (measured) = 0.225 W/kg



0 dB = 0.225 W/kg = −6.48 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.0℃
Test Date:	10/20/232020
Plot No.:	23

DUT: SM-G991U ; Type: Bar

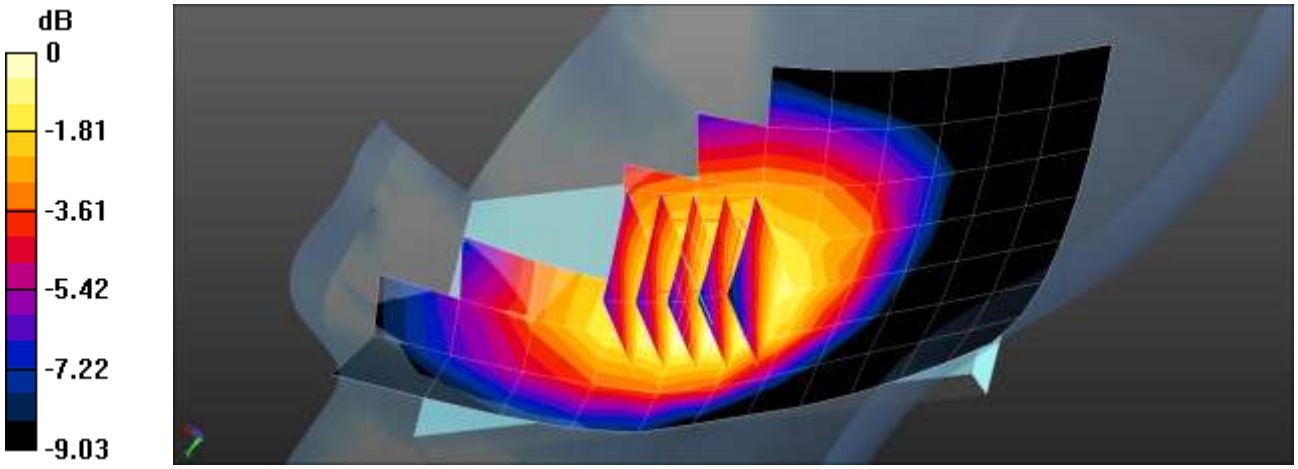
Communication System: UID 0, NR n12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.856 S/m; ε_r = 41.538; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.51, 9.51, 9.51); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n12 Head Right Touch QPSK 15MHz 36RB 22offset 141500ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.142 W/kg

n12 Head Right Touch QPSK 15MHz 36RB 22offset 141500ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.072 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.156 W/kg
SAR(1 g) = 0.128 W/kg; SAR(10 g) = 0.104 W/kg
Maximum value of SAR (measured) = 0.147 W/kg



0 dB = 0.147 W/kg = −8.33 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.0℃
Ambient Temperature: 22.2℃
Test Date: 09/28/2020
Plot No.: 24

DUT: SM-G991U ; Type: Bar

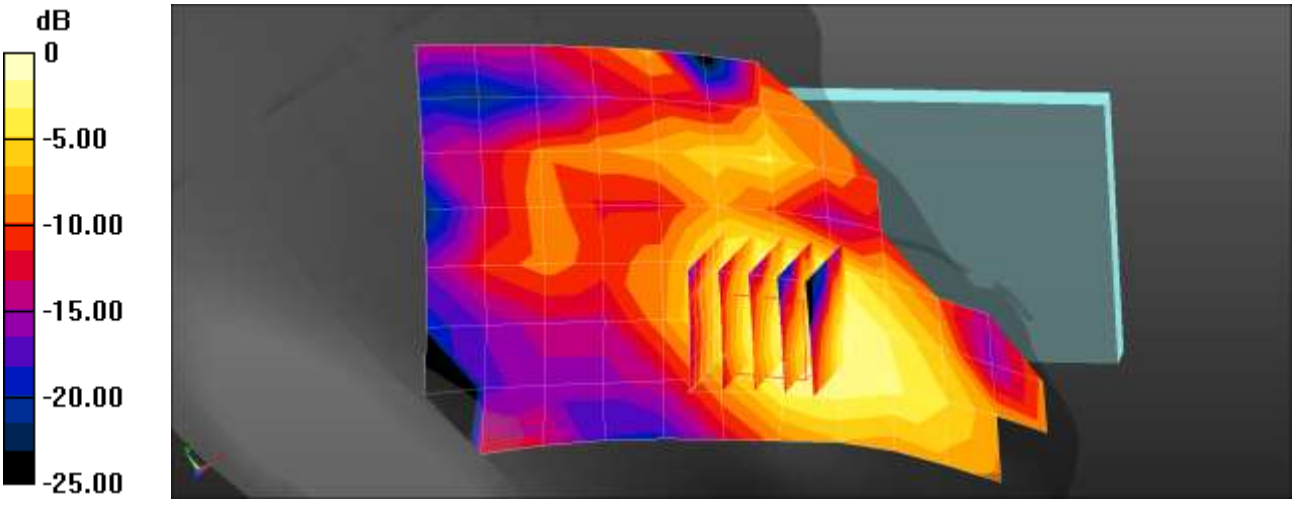
Communication System: UID 0, NR n25 (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.432 S/m; ε_r = 39.951; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0 (Left)
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 25 Head Left Touch DFT-S QPSK 40MHz 50RB 28offset 376500ch/Area Scan (8x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.278 W/kg

NR Band 25 Head Left Touch DFT-S QPSK 40MHz 50RB 28offset 376500ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.657 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.374 W/kg
SAR(1 g) = 0.241 W/kg; SAR(10 g) = 0.142 W/kg
Maximum value of SAR (measured) = 0.306 W/kg



0 dB = 0.306 W/kg = −5.14 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.4℃
Test Date:	10/13/2020
Plot No.:	25

DUT: SM-G991U ; Type: Bar

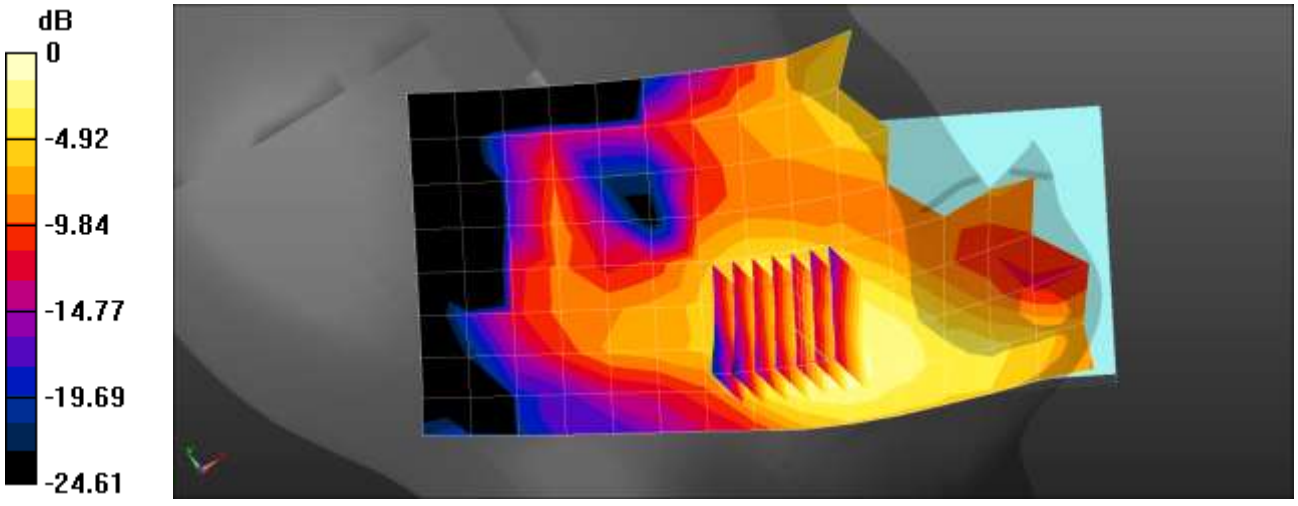
Communication System: UID 0, NR n30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.648 S/m; ε_r = 40.477; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

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

NR Band 30 Head Left Touch DFT-s QPSK 10MHz 1RB 26offset 462000ch/Area Scan (9x16x1):
Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.147 W/kg

NR Band 30 Head Left Touch DFT-s QPSK 10MHz 1RB 26offset 462000ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.122 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.188 W/kg
SAR(1 g) = 0.106 W/kg; SAR(10 g) = 0.059 W/kg
Maximum value of SAR (measured) = 0.155 W/kg



0 dB = 0.155 W/kg = −8.10 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.9℃
Ambient Temperature: 21.0℃
Test Date: 10/22/2020
Plot No.: 26

DUT: SM-G991U ; Type: Bar

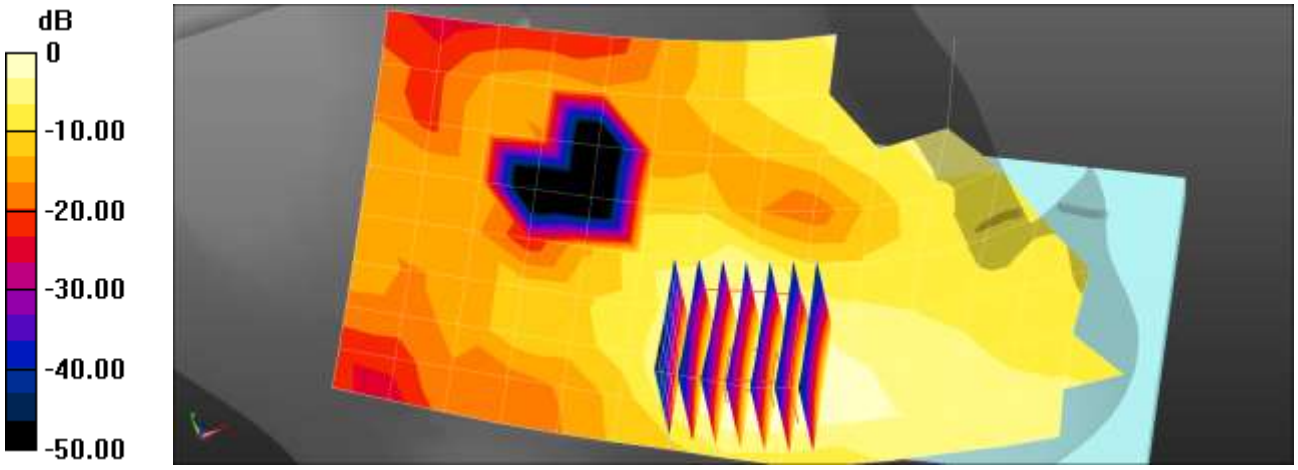
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.925 S/m; ε_r = 40.851; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 Head Left Touch QPSK 100MHz 135RB 69offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0788 W/kg

n41 Head Left Touch QPSK 100MHz 135RB 69offset 518598ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.462 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 0.137 W/kg
SAR(1 g) = 0.072 W/kg; SAR(10 g) = 0.036 W/kg
Maximum value of SAR (measured) = 0.0915 W/kg



0 dB = 0.0788 W/kg = −11.03 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: 1
Plot No.: 27

DUT: SM-G991U ; Type: Bar

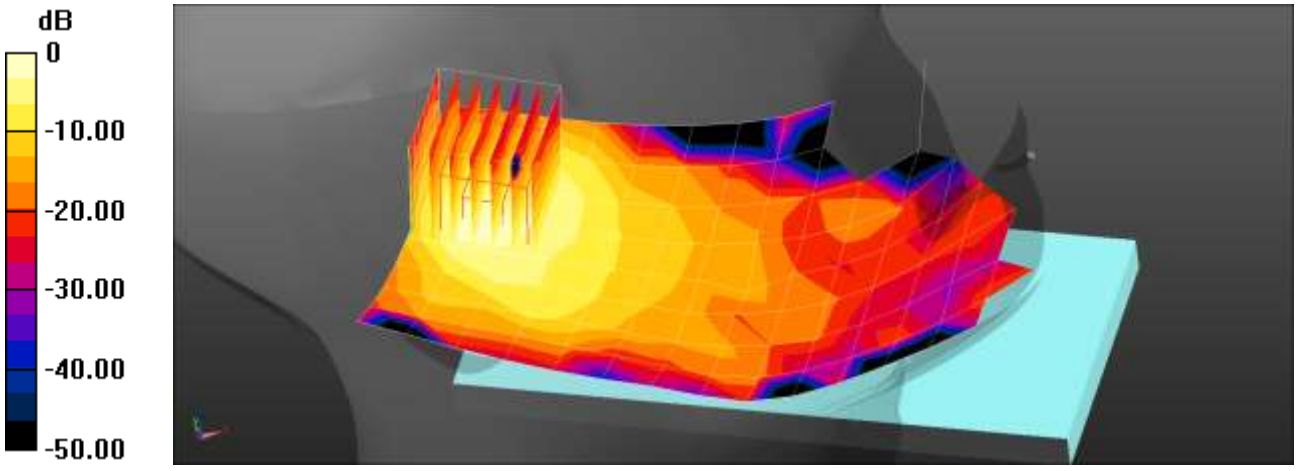
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.979 S/m; ε_r = 39.161; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 Head Left Tilt QPSK 100MHz 135RB 69offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.169 W/kg

n41 Head Left Tilt QPSK 100MHz 135RB 69offset 518598ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.354 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.428 W/kg
SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.059 W/kg.
Maximum value of SAR (measured) = 0.227 W/kg



0 dB = 0.169 W/kg = −7.73 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.3℃
Ambient Temperature:	20.4℃
Test Date:	10/21/2020
Plot No.:	28

DUT: SM-G991U ; Type: Bar

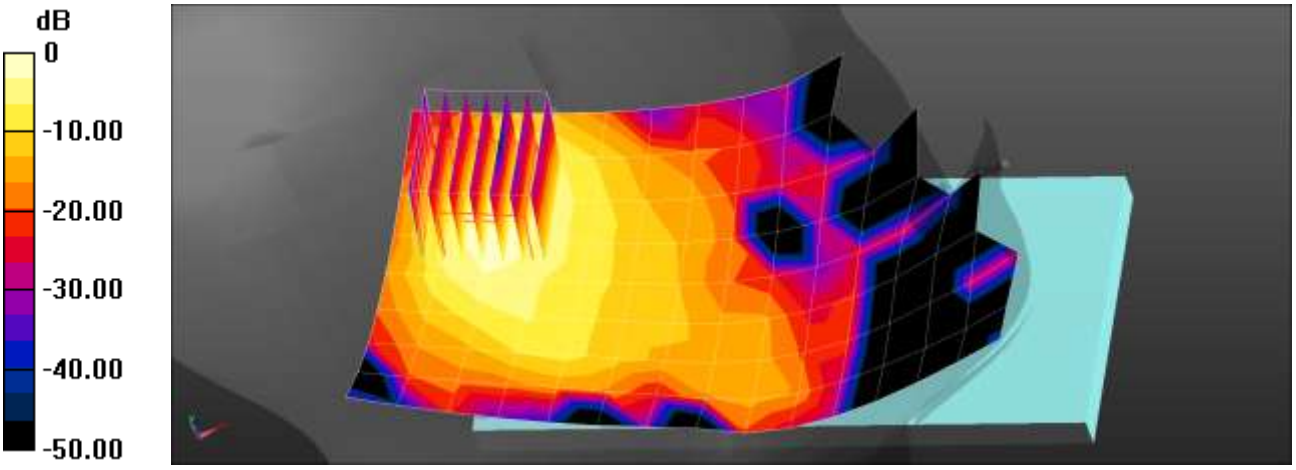
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.935 S/m; ε_r = 38.743; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 Head Left Tilt QPSK 100MHz 1RB 1offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.173 W/kg

n41 Head Left Tilt QPSK 100MHz 1RB 1offset 518598ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.726 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.406 W/kg
SAR(1 g) = 0.146 W/kg; SAR(10 g) = 0.057 W/kg.
Maximum value of SAR (measured) = 0.212 W/kg



0 dB = 0.173 W/kg = −7.63 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.1℃
Ambient Temperature: 21.3℃
Test Date: 10/13/2020
Plot No.: 29

DUT: SM-G991U ; Type: Bar

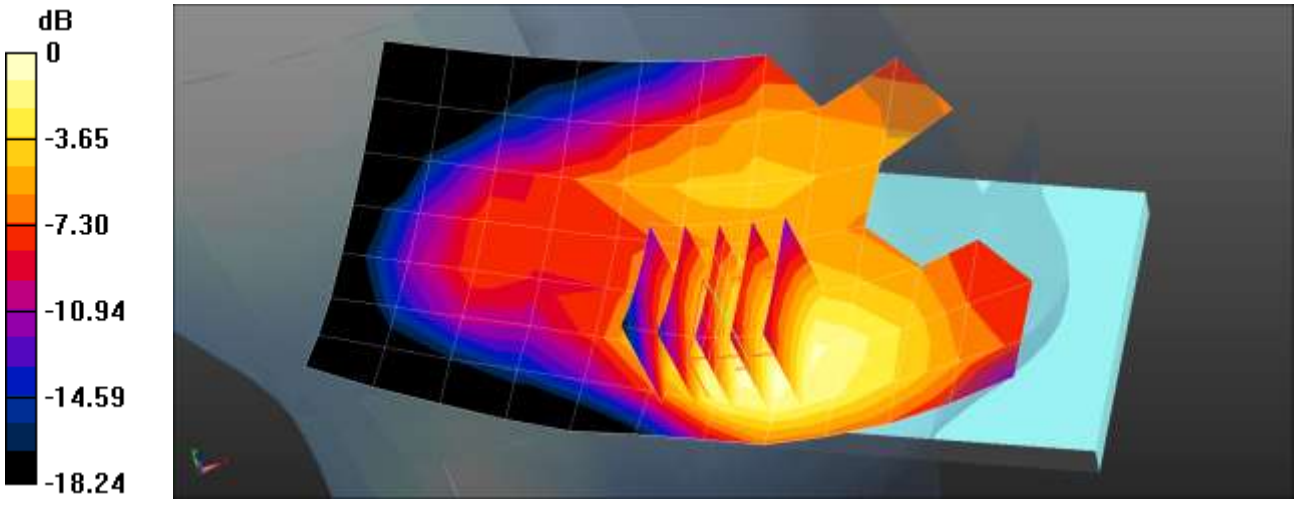
Communication System: UID 0, n66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.334 S/m; ε_r = 40.439; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(8.2, 8.2, 8.2); Calibrated: 2020-05-29;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n66 Head Left Touch QPSK 40MHz 1RB 1offset 349000ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.279 W/kg

n66 Head Left Touch QPSK 40MHz 1RB 1offset 349000ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 6.216 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.391 W/kg
SAR(1 g) = 0.274 W/kg; SAR(10 g) = 0.180 W/kg
Maximum value of SAR (measured) = 0.293 W/kg



0 dB = 0.293 W/kg = −5.33 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	10/21/2020
Plot No.:	30

DUT: SM-G991U ; Type: Bar

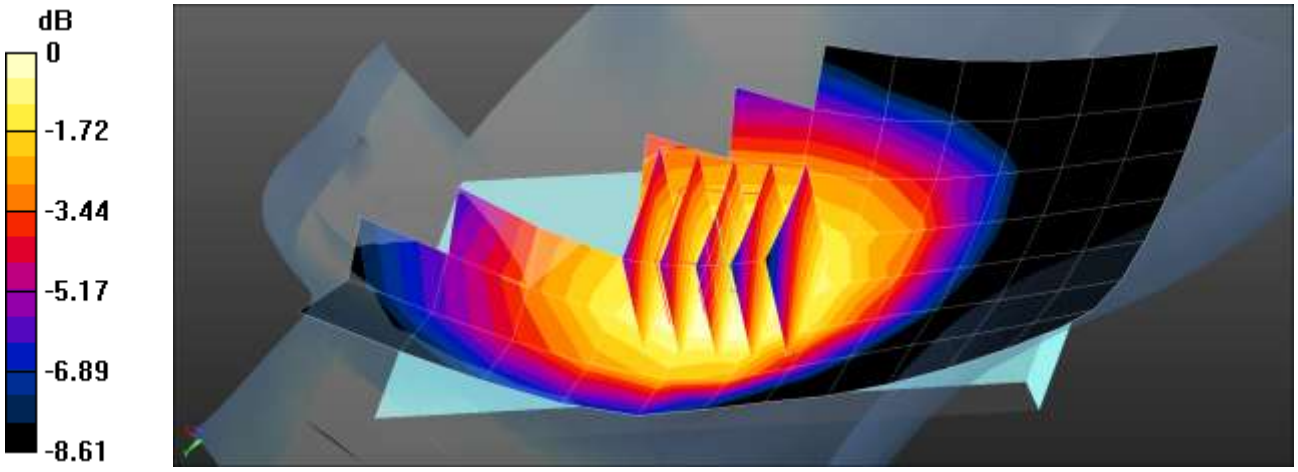
Communication System: UID 0, NR n71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.83 S/m; ε_r = 41.968; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.51, 9.51, 9.51); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n71 Head Right Touch QPSK 20MHz 50RB 28offset 136100ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.124 W/kg

n71 Head Right Touch QPSK 20MHz 50RB 28offset 136100ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.861 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.134 W/kg
SAR(1 g) = 0.114 W/kg; SAR(10 g) = 0.095 W/kg
Maximum value of SAR (measured) = 0.128 W/kg



0 dB = 0.128 W/kg = −8.93 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.6℃
Ambient Temperature:	22.8℃
Test Date:	10/21/2020
Plot No.:	31

DUT: SM-G991U ; Type: Bar

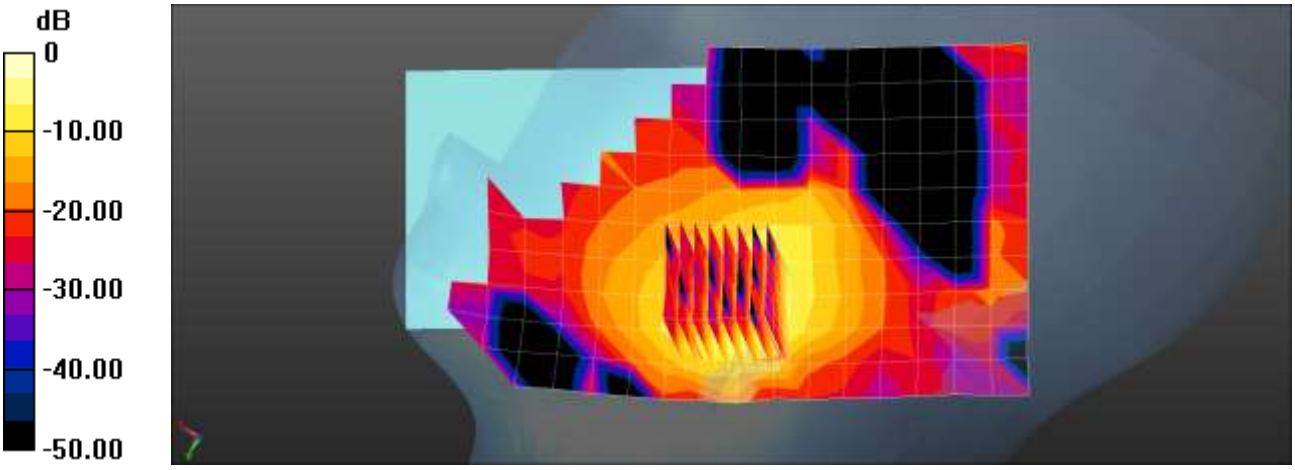
Communication System: UID 0, NR Band 77 (0); Frequency: 3840 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3840 MHz; σ = 3.273 S/m; ε_r = 38.051; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(6.6, 6.6, 6.6); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

NR n77 Head Right Touch DFT-s QPSK 100MHz 1RB 271offset 656000ch/Area Scan (11x19x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.357 W/kg

NR n77 Head Right Touch DFT-s QPSK 100MHz 1RB 271offset 656000ch/Zoom Scan (8x8x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.189 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.563 W/kg
SAR(1 g) = 0.158 W/kg; SAR(10 g) = 0.049 W/kg
Maximum value of SAR (measured) = 0.355 W/kg



0 dB = 0.357 W/kg = −4.48 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.6℃
Ambient Temperature:	22.8℃
Test Date:	10/21/2020
Plot No.:	32

DUT: SM-G991U ; Type: Bar

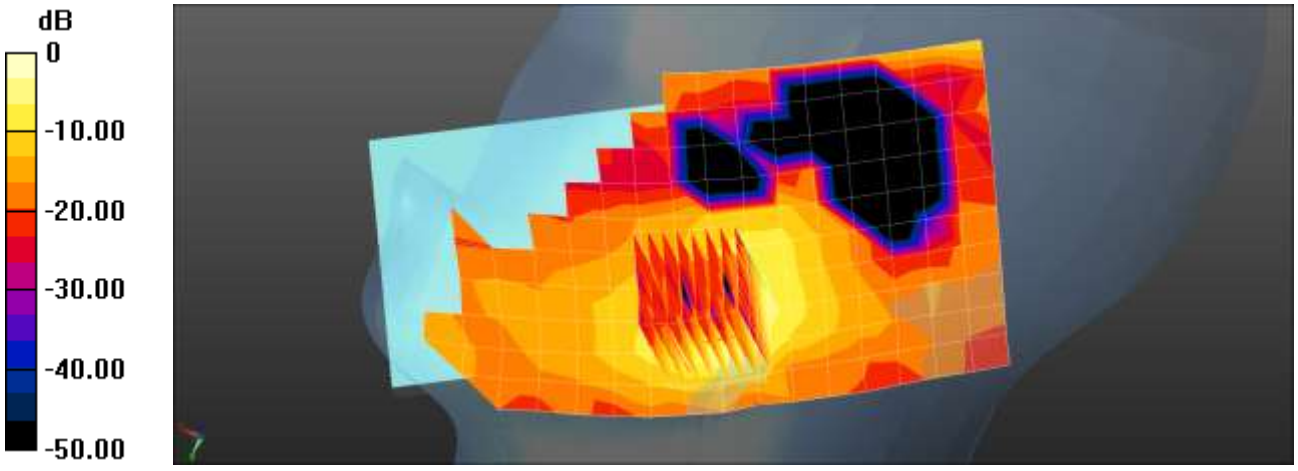
Communication System: UID 0, NR Band 77 (0); Frequency: 3840 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3840 MHz; σ = 3.273 S/m; ε_r = 38.051; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(6.6, 6.6, 6.6); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

NR n77 Head Right Touch DFT-s QPSK 100MHz 1RB 271offset 656000ch/Area Scan (11x19x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.297 W/kg

NR n77 Head Right Touch DFT-s QPSK 100MHz 1RB 271offset 656000ch/Zoom Scan (8x8x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 5.317 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 4.27 W/kg
SAR(1 g) = 0.143 W/kg; SAR(10 g) = 0.046 W/kg
Maximum value of SAR (measured) = 0.334 W/kg



0 dB = 0.297 W/kg = −5.27 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.0℃
Ambient Temperature: 21.2℃
Test Date: 11/06/2020
Plot No.: 33

DUT: SM-G991U ; Type: Bar

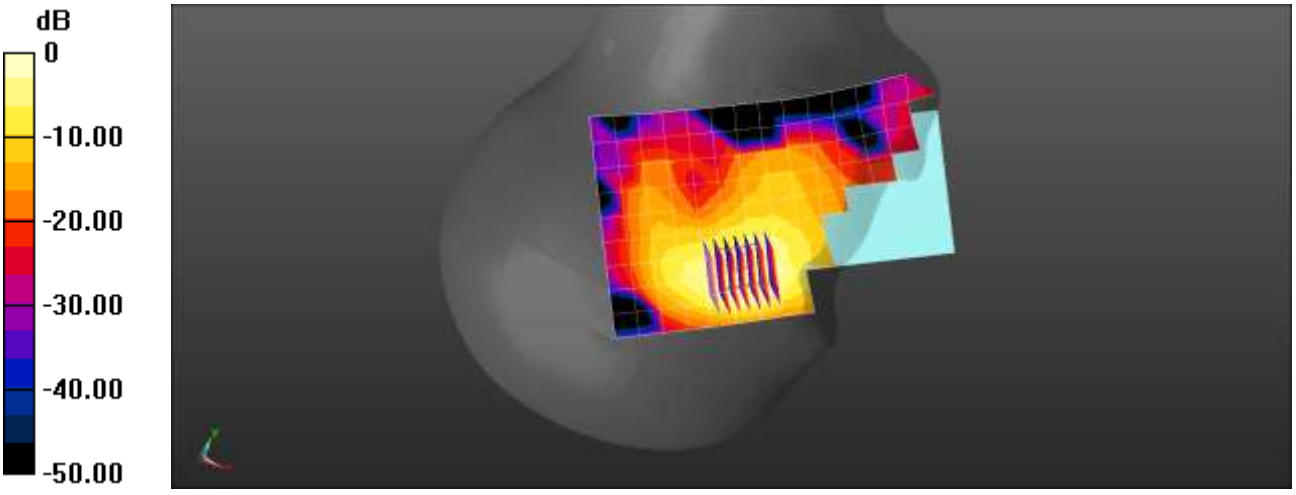
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.722 S/m; ε_r = 40.182; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 – SN3797; ConvF(7.35, 7.35, 7.35); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

802.11b Head Right Touch 1Mbps 1ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.789 W/kg

802.11b Head Right Touch 1Mbps 1ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.752 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.73 W/kg
SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.262 W/kg
Maximum value of SAR (measured) = 1.26 W/kg



0 dB = 0.789 W/kg = −1.03 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.2℃
Test Date:	11/06/2020
Plot No.:	34

DUT: SM-G991U ; Type: Bar

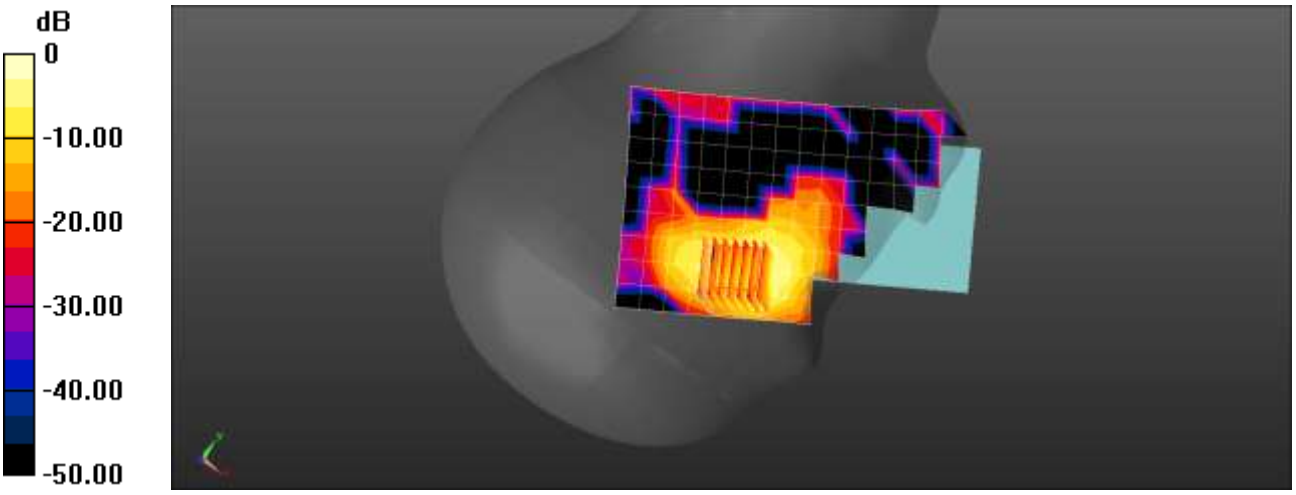
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.757 S/m; ε_r = 40.083; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.35, 7.35, 7.35) @ 2437 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

802.11b Head Right Touch 1Mbps 6ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.188 W/kg

802.11b Head Right Touch 1Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.229 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.393 W/kg
SAR(1 g) = 0.139 W/kg; SAR(10 g) = 0.052 W/kg
Smallest distance from peaks to all points 3 dB below = 5.1 mm
Ratio of SAR at M2 to SAR at M1 = 33.5%
Maximum value of SAR (measured) = 0.253 W/kg



0 dB = 0.188 W/kg = -7.27 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/25/2020
Plot No.:	35

DUT: SM-G991U ; Type: Bar

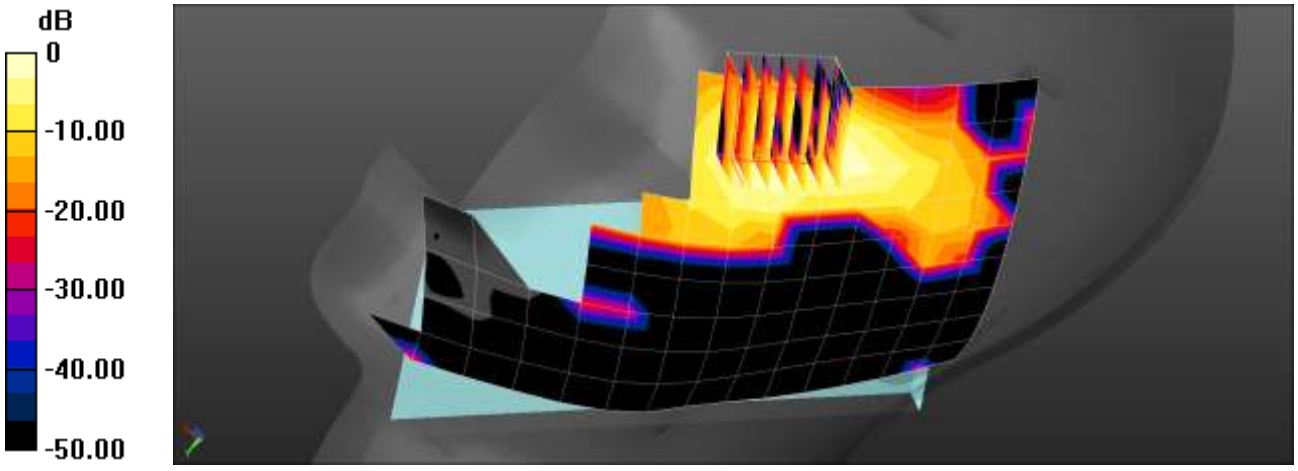
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.802 S/m; ε_r = 39.352; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

802.11g Head Right Touch 6Mbps 11ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0706 W/kg

802.11g Head Right Touch 6Mbps 11ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.7700 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.165 W/kg
SAR(1 g) = 0.058 W/kg; SAR(10 g) = 0.021 W/kg
Maximum value of SAR (measured) = 0.124 W/kg



0 dB = 0.0706 W/kg = −11.51 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.5℃
Ambient Temperature: 22.7℃
Test Date: 09/26/2020
Plot No.: 36

DUT: SM-G991U ; Type: Bar

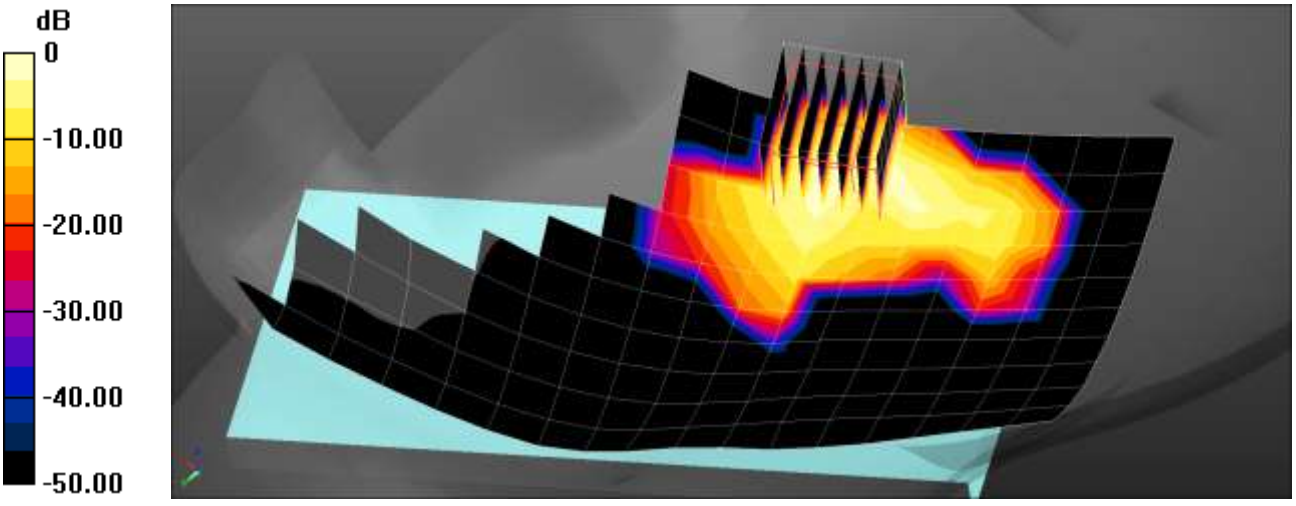
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5290 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5290 MHz; σ = 4.63 S/m; ε_r = 36.894; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(5.15, 5.15, 5.15); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

802.11ac80 Head Right Touch MCS0 58ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.843 W/kg

802.11ac80 Head Right Touch MCS0 58ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.79 W/kg
SAR(1 g) = 0.375 W/kg; SAR(10 g) = 0.101 W/kg
Maximum value of SAR (measured) = 1.11 W/kg



0 dB = 0.843 W/kg = −0.74 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	09/29/2020
Plot No.:	37

DUT: SM-G991U ; Type: Bar

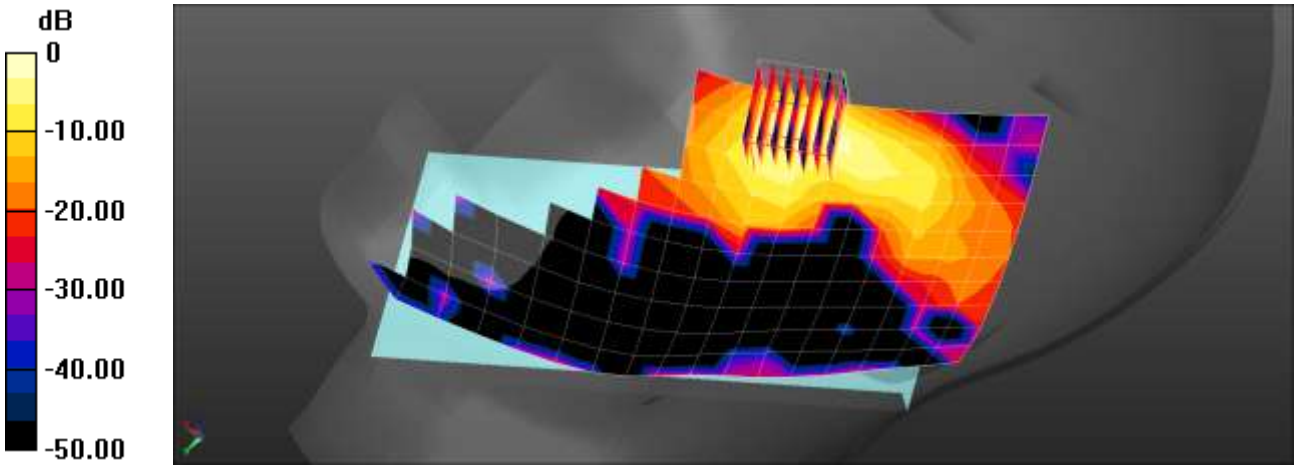
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5290 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5290 MHz; σ = 4.63 S/m; ε_r = 36.894; ρ = 1000 kg/m^3
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(5.15, 5.15, 5.15); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

802.11ac80 Head Right Touch MCS0 58ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.894 W/kg

802.11ac80 Head Right Touch MCS0 58ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.480 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.51 W/kg
SAR(1 g) = 0.320 W/kg; SAR(10 g) = 0.092 W/kg
Maximum value of SAR (measured) = 0.870 W/kg



0 dB = 0.894 W/kg = −0.49 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.7℃
Ambient Temperature:	21.8℃
Test Date:	10/28/2020
Plot No.:	38

DUT: SM-G991U ; Type: Bar

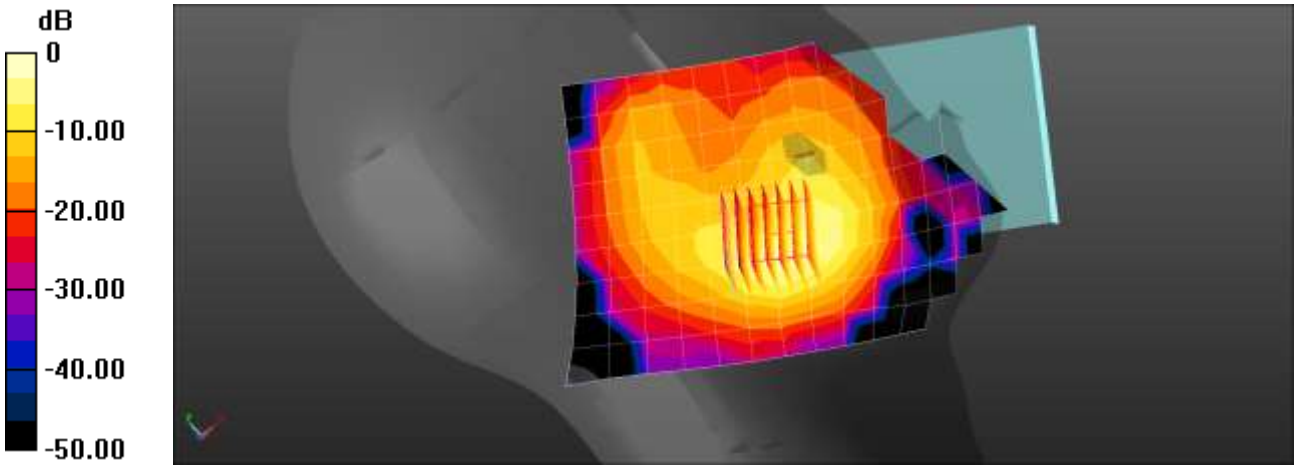
Communication System: UID 0, Bluetooth (0); Frequency: 2402 MHz;Duty Cycle: 1:1.302
Medium parameters used (interpolated): f = 2402 MHz; σ = 1.769 S/m; ε_r = 39.66; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Head Left Touch DH5 0ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.676 W/kg

Bluetooth Head Left Touch DH5 0ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.209 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.957 W/kg
SAR(1 g) = 0.351 W/kg; SAR(10 g) = 0.139 W/kg
Maximum value of SAR (measured) = 0.694 W/kg



0 dB = 0.676 W/kg = −1.70 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/11/2020
Plot No.:	39

DUT: SM-G991U ; Type: Bar

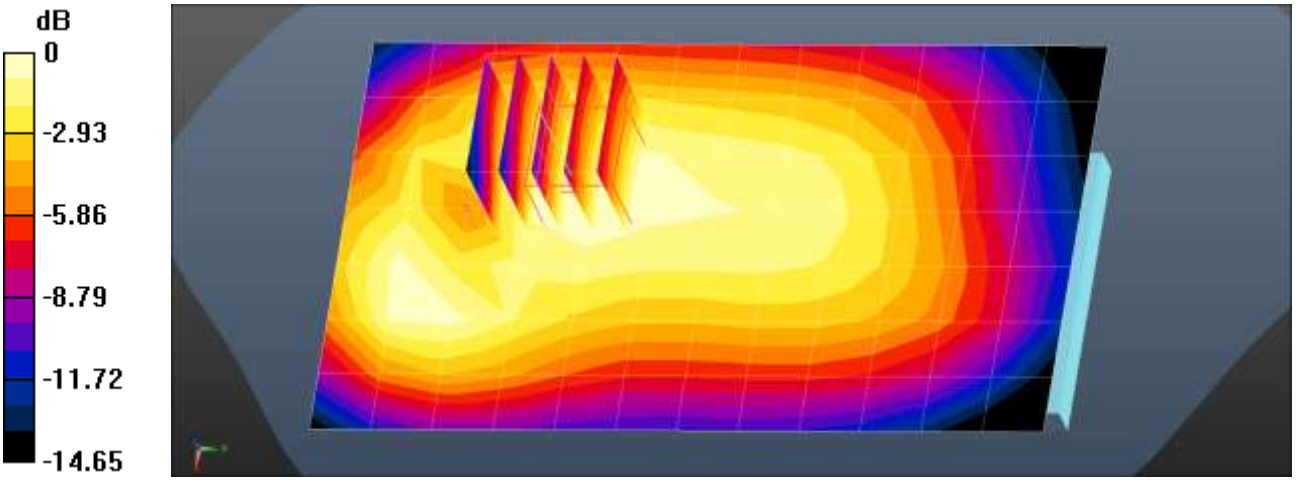
Communication System: UID 0, CDMA BC10 (FCC) (0); Frequency: 820 MHz;Duty Cycle: 1:1
Medium parameters used: f = 820 MHz; σ = 0.912 S/m; ε_r = 42.951; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); 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 Rear TDSO S032 RC3 560ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.271 W/kg

CDMA BC10 Body Worn Rear TDSO S032 RC3 560ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.72 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.367 W/kg
SAR(1 g) = 0.268 W/kg; SAR(10 g) = 0.191 W/kg
Maximum value of SAR (measured) = 0.284 W/kg



0 dB = 0.284 W/kg = −5.47 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/11/2020
Plot No.:	40

DUT: SM-G991U ; Type: Bar

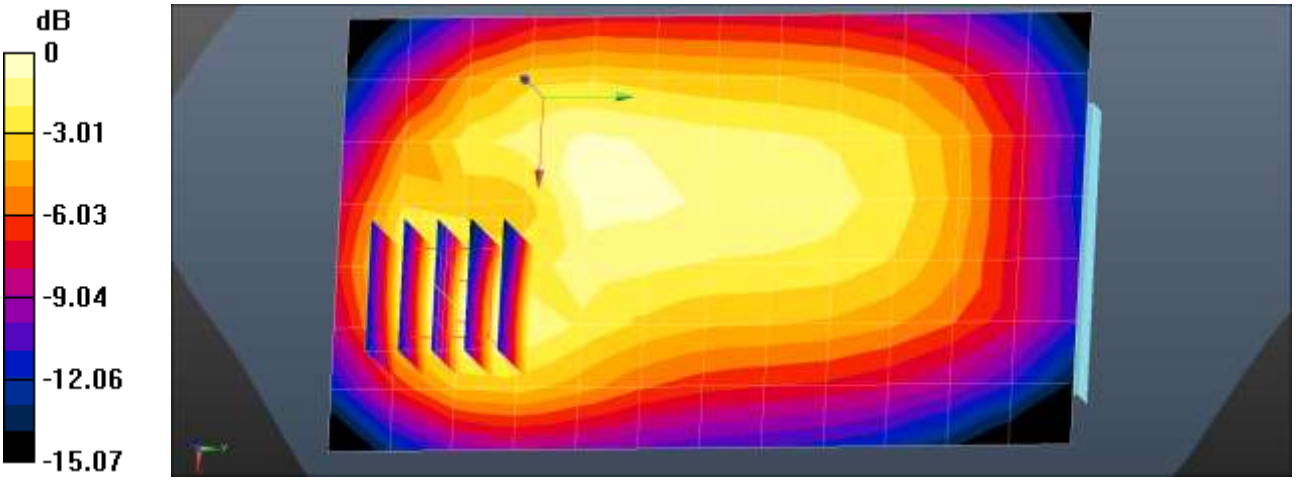
Communication System: UID 0, CDMA 835MHz FCC (0); Frequency: 836.52 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.52 MHz; σ = 0.926 S/m; ε_r = 42.76; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); 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 BC0 Body-Worn Rear TDSOP S032 RC3 384ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.321 W/kg

CDMA BC0 Body-Worn Rear TDSOP S032 RC3 384ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.42 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.535 W/kg
SAR(1 g) = 0.313 W/kg; SAR(10 g) = 0.182 W/kg
Maximum value of SAR (measured) = 0.342 W/kg



0 dB = 0.342 W/kg = −4.66 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.1℃
Ambient Temperature:	22.3℃
Test Date:	09/16/2020
Plot No.:	41

DUT: SM-G991U ; Type: Bar

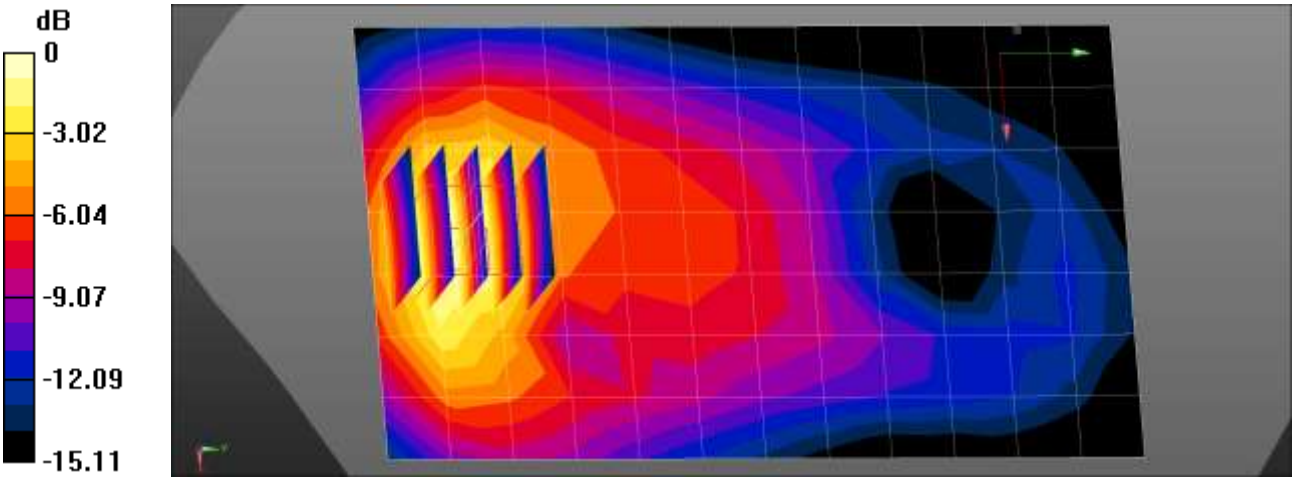
Communication System: UID 0, CDMA BC1(1900MHz) (0); Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.401 S/m; ε_r = 39.761; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC1 Body Worn Rear TDSO S032 RC3 25ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.884 W/kg

CDMA BC1 Body Worn Rear TDSO S032 RC3 25ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.06 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.930 W/kg; SAR(10 g) = 0.554 W/kg
Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 1.01 W/kg = 0.04 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.1℃
Ambient Temperature:	22.3℃
Test Date:	09/14/2020
Plot No.:	42

DUT: SM-G991U ; Type: Bar

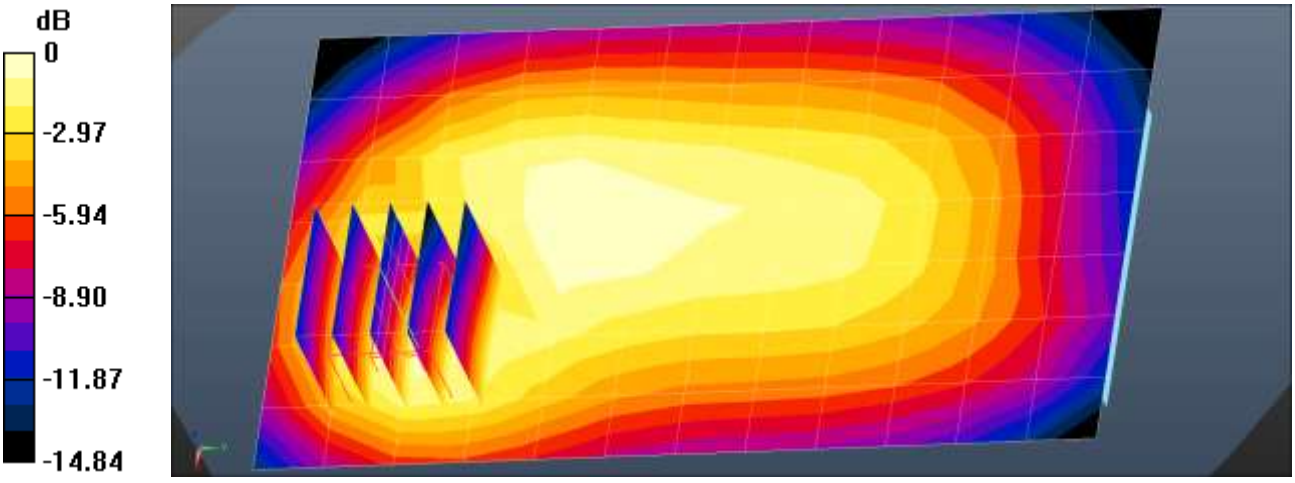
Communication System: UID 0, GSM850 GPRS 2TX (0); Frequency: 836.6 MHz;Duty Cycle: 1:4.14954
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.922 S/m; ε_r = 42.679; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

GSM850 Body-Worn Rear GPRS 2TX 190ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.354 W/kg

GSM850 Body-Worn Rear GPRS 2TX 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.00 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.552 W/kg
SAR(1 g) = 0.325 W/kg; SAR(10 g) = 0.190 W/kg
Maximum value of SAR (measured) = 0.349 W/kg



0 dB = 0.349 W/kg = −4.57 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/15/2020
Plot No.:	43

DUT: SM-G991U ; Type: Bar

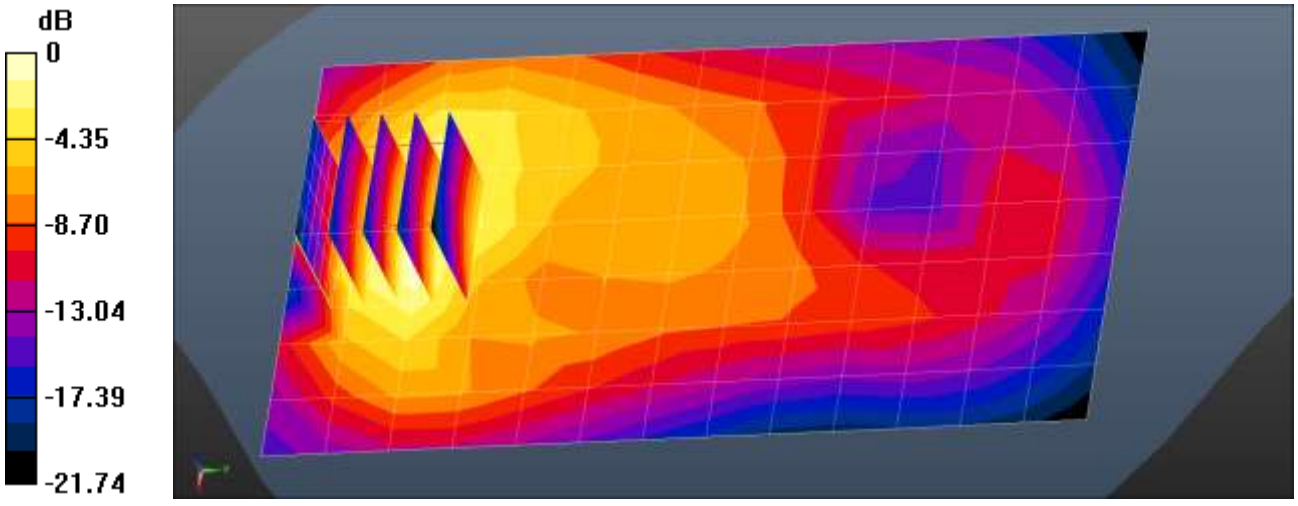
Communication System: UID 0, GSM 1900 3TX (0); Frequency: 1880 MHz;Duty Cycle: 1:2.77013
Medium parameters used: f = 1880 MHz; σ = 1.429 S/m; ε_r = 39.955; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Body Rear 661ch Body Worn 3Tx/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.577 W/kg

GSM1900 Body Rear 661ch Body Worn 3Tx/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.235 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.825 W/kg
SAR(1 g) = 0.525 W/kg; SAR(10 g) = 0.313 W/kg
Maximum value of SAR (measured) = 0.567 W/kg



0 dB = 0.577 W/kg = −2.39 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.1℃
Ambient Temperature:	22.3℃
Test Date:	09/14/2020
Plot No.:	44

DUT: SM-G991U ; Type: Bar

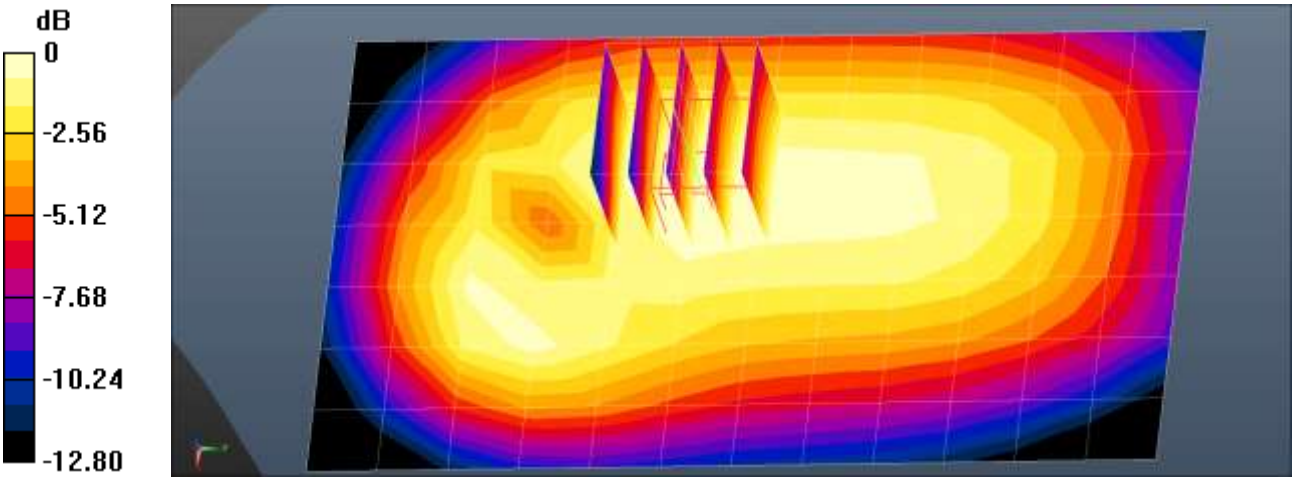
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.922 S/m; ε_r = 42.679; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA 5 Body-Worn Rear 4183ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.307 W/kg

WCDMA 5 Body-Worn Rear 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.26 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 0.414 W/kg
SAR(1 g) = 0.303 W/kg; SAR(10 g) = 0.219 W/kg
Maximum value of SAR (measured) = 0.319 W/kg



0 dB = 0.319 W/kg = −4.96 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.7℃
Ambient Temperature:	21.9℃
Test Date:	09/16/2020
Plot No.:	45

DUT: SM-G991U ; Type: Bar

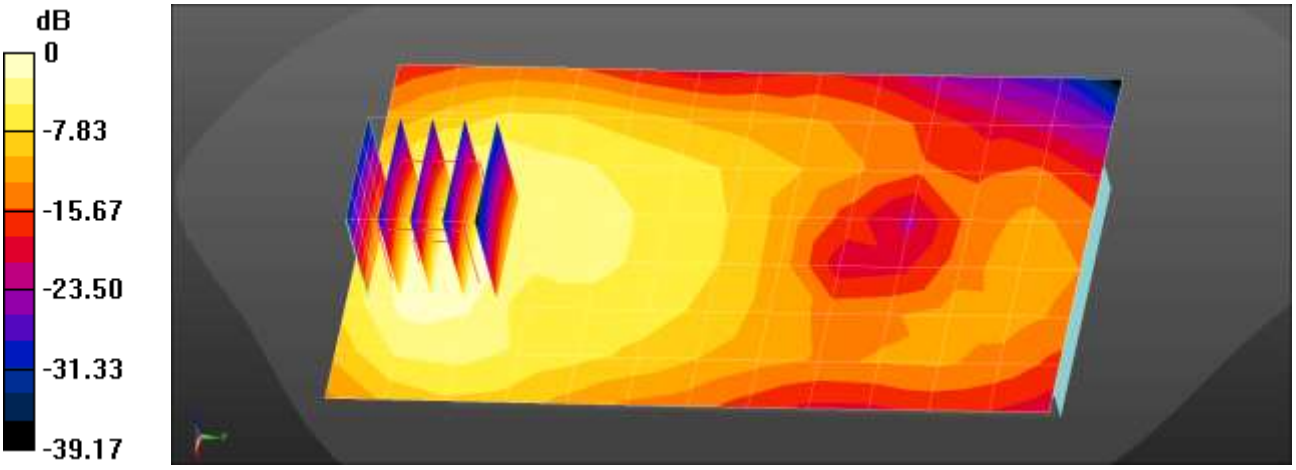
Communication System: UID 0, WCDMA IV (0); Frequency: 1752.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.6 MHz; σ = 1.355 S/m; ε_r = 40.795; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.82, 7.82, 7.82); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B4 BodyWorn Rear 1513ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.03 W/kg

WCDMA B4 BodyWorn Rear 1513ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.022 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 1.46 W/kg
SAR(1 g) = 0.900 W/kg; SAR(10 g) = 0.523 W/kg
Maximum value of SAR (measured) = 1.27 W/kg



0 dB = 1.03 W/kg = 0.11 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.0℃
Ambient Temperature: 22.2℃
Test Date: 09/15/2020
Plot No.: 46

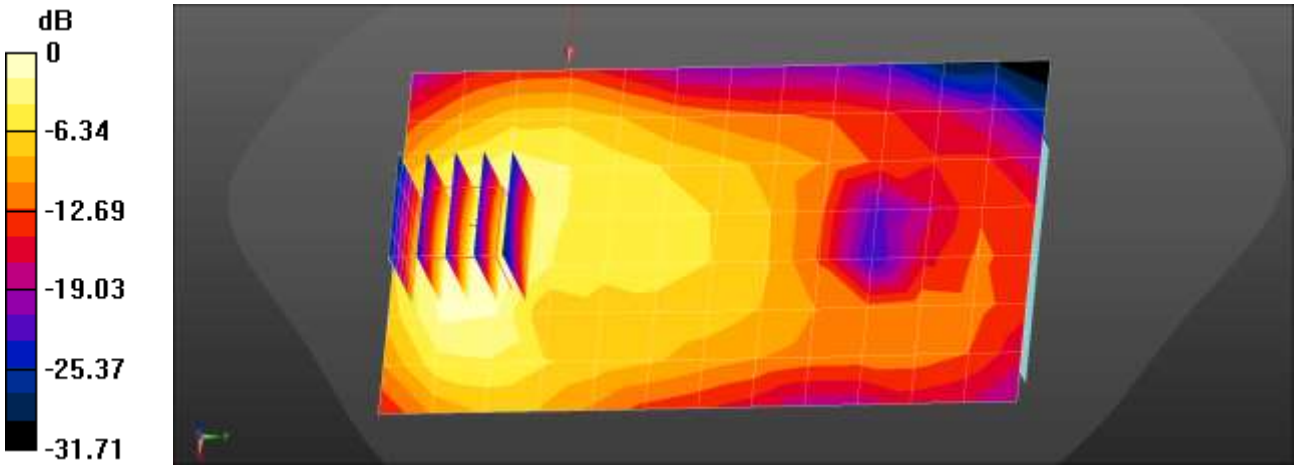
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, WCDMA1900 (0); Frequency: 1852.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.383 S/m; ε_r = 40.072; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B2 BodyWorn Rear 9262ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm.
Maximum value of SAR (measured) = 1.11 W/kg
WCDMA B2 BodyWorn Rear 9262ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.76 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 0.962 W/kg; SAR(10 g) = 0.556 W/kg
Maximum value of SAR (measured) = 1.37 W/kg



0 dB = 1.11 W/kg = 0.46 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.7℃
Ambient Temperature: 20.9℃
Test Date: 10/05/2020
Plot No.: 47

DUT: SM-G991U ; Type: Bar

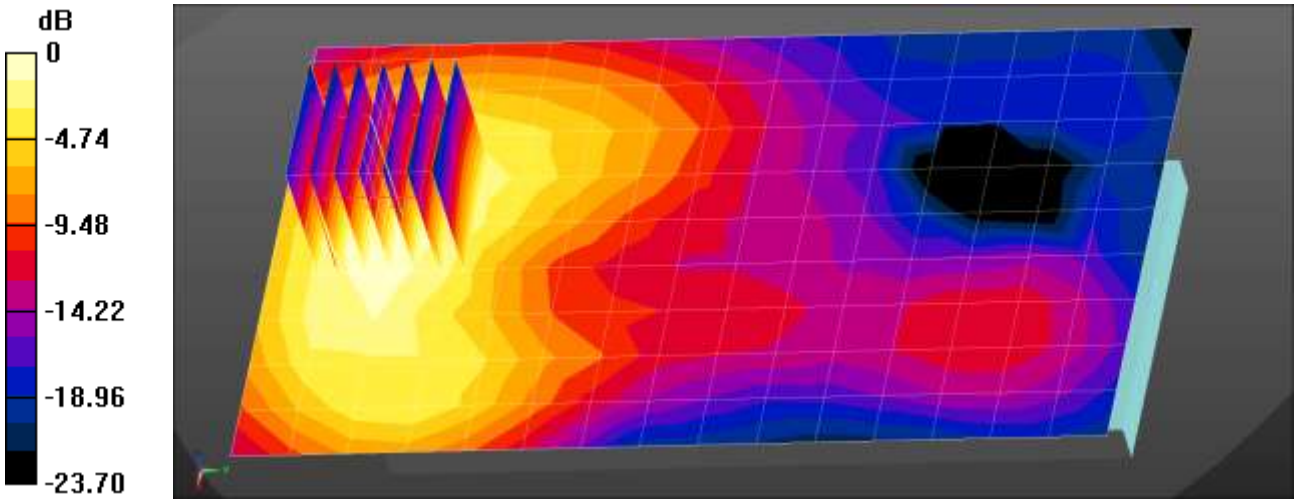
Communication System: UID 0, LTE Band7 (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.882 S/m; ε_r = 40.07; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.35, 7.35, 7.35); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- 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 (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.565 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 = 3.921 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.712 W/kg
SAR(1 g) = 0.363 W/kg; SAR(10 g) = 0.195 W/kg
Maximum value of SAR (measured) = 0.572 W/kg



0 dB = 0.572 W/kg = −2.43 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.7℃
Ambient Temperature:	22.9℃
Test Date:	09/14/2020
Plot No.:	48

DUT: SM-G991U ; Type: Bar

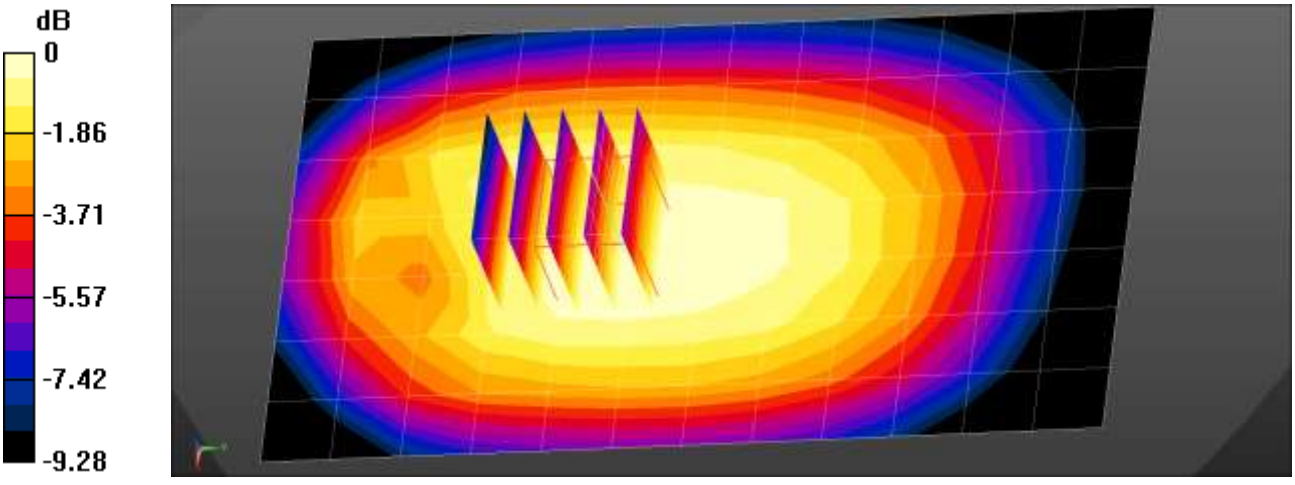
Communication System: UID 0, LTE 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.857 S/m; ε_r = 42.935; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.26, 9.26, 9.26); 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);

LTE Band 12 Body Front QPSK 10MHz 1RB 0offset 23095ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.280 W/kg

LTE Band 12 Body Front QPSK 10MHz 1RB 0offset 23095ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.64 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.309 W/kg
SAR(1 g) = 0.245 W/kg; SAR(10 g) = 0.192 W/kg
Maximum value of SAR (measured) = 0.287 W/kg



0 dB = 0.287 W/kg = −5.42 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.7℃
Ambient Temperature:	22.9℃
Test Date:	09/14/2020
Plot No.:	49

DUT: SM-G991U ; Type: Bar

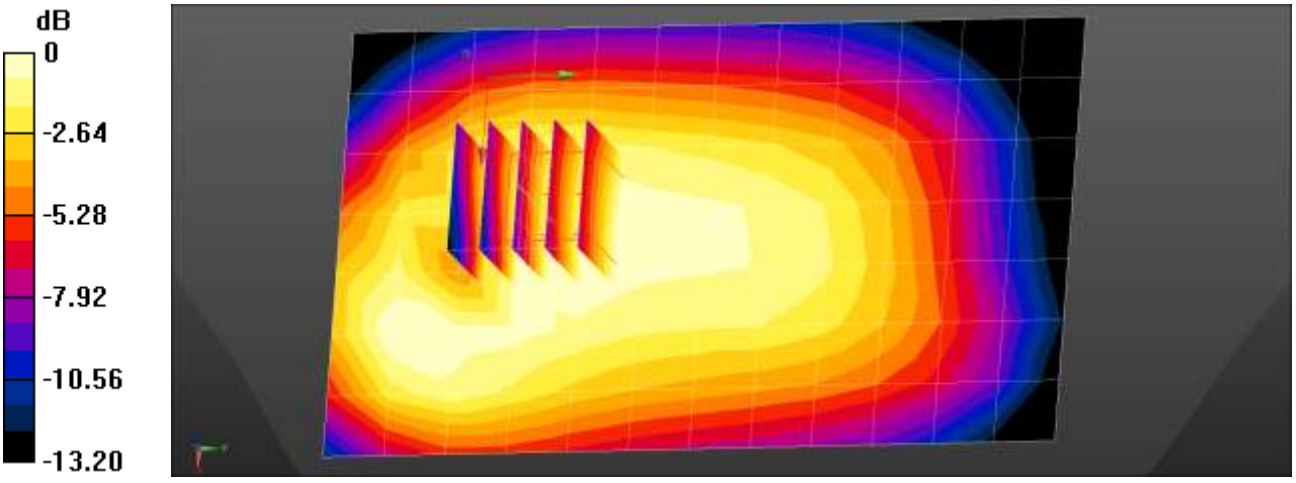
Communication System: UID 0, LTE13 (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.911 S/m; ε_r = 41.966; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.26, 9.26, 9.26); 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);

LTE Band 13 Body Rear QPSK 10MHz 1RB 0offset 23230ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.338 W/kg

LTE Band 13 Body Rear QPSK 10MHz 1RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.44 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 0.372 W/kg
SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.199 W/kg
Maximum value of SAR (measured) = 0.336 W/kg



0 dB = 0.336 W/kg = −4.74 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.4℃
Ambient Temperature: 22.6℃
Test Date: 09/14/2020
Plot No.: 50

DUT: SM-G991U ; Type: Bar

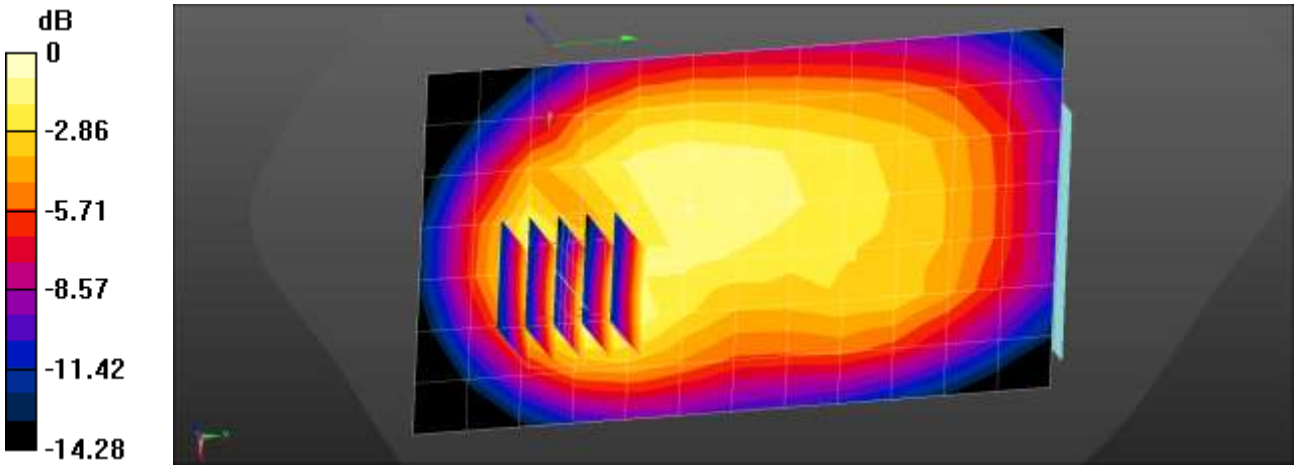
Communication System: UID 0, LTE 14 (0); Frequency: 793 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 793 MHz; σ = 0.916 S/m; ε_r = 41.738; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 14 BodyWorn Rear QPSK 10MHz 1RB 0offset 23330ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.437 W/kg

LTE Band 14 BodyWorn Rear QPSK 10MHz 1RB 0offset 23330ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.71 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.585 W/kg
SAR(1 g) = 0.335 W/kg; SAR(10 g) = 0.197 W/kg
Maximum value of SAR (measured) = 0.489 W/kg



0 dB = 0.489 W/kg = −3.11 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.7℃
Ambient Temperature:	22.9℃
Test Date:	09/28/2020
Plot No.:	51

DUT: SM-G991U ; Type: Bar

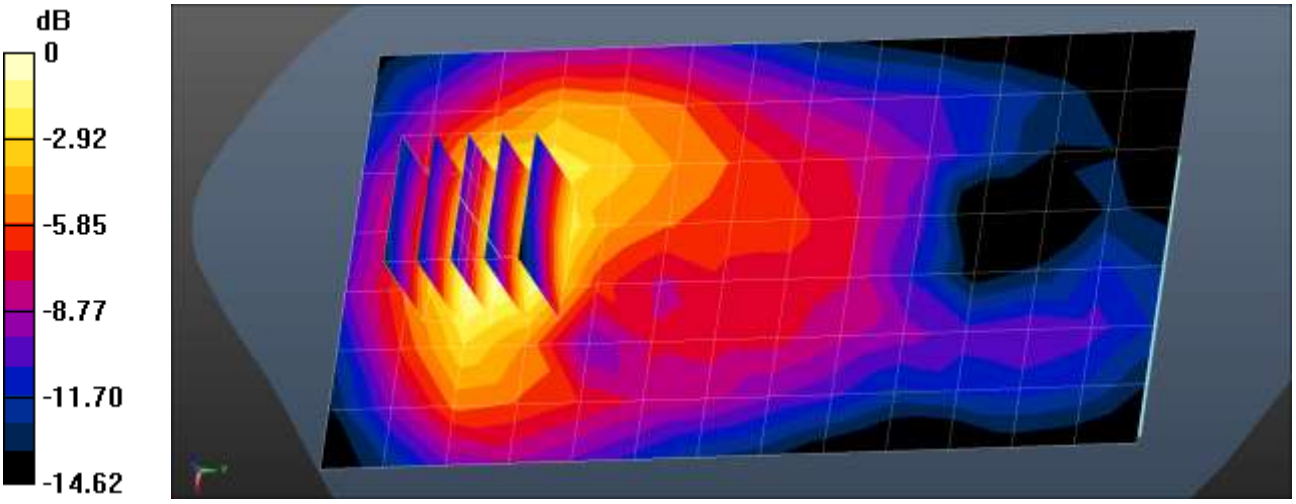
Communication System: UID 0, LTE Band 25 (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.421 S/m; ε_r = 38.708; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 25 Body Worn Rear QPSK 20MHz 1RB 0offset 26365ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.545 W/kg

LTE Band 25 Body Worn Rear QPSK 20MHz 1RB 0offset 26365ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.732 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.687 W/kg
SAR(1 g) = 0.550 W/kg; SAR(10 g) = 0.345 W/kg
Maximum value of SAR (measured) = 0.608 W/kg



0 dB = 0.608 W/kg = −2.16 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.1℃
Ambient Temperature: 21.2℃
Test Date: 10/20/2020
Plot No.: 52

DUT: SM-G991U ; Type: Bar

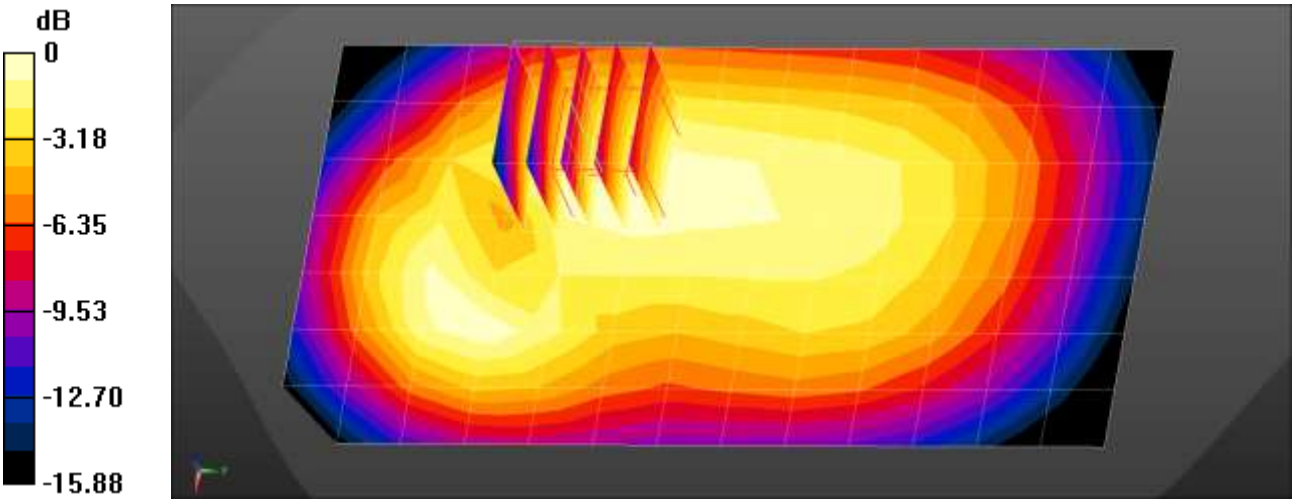
Communication System: UID 0, LTE Band 5 (0); Frequency: 831.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.6 MHz; σ = 0.879 S/m; ε_r = 41.778; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 5 Body Worn Rear QPSK 10MHz 1RB 49offset 20476ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.390 W/kg

LTE Band 5 Body Worn Rear QPSK 10MHz 1RB 49offset 20476ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.23 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.447 W/kg
SAR(1 g) = 0.322 W/kg; SAR(10 g) = 0.227 W/kg
Maximum value of SAR (measured) = 0.406 W/kg



0 dB = 0.406 W/kg = −3.91 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.2℃
Ambient Temperature: 21.4℃
Test Date: 10/02/2020
Plot No.: 53

DUT: SM-G991U ; Type: Bar

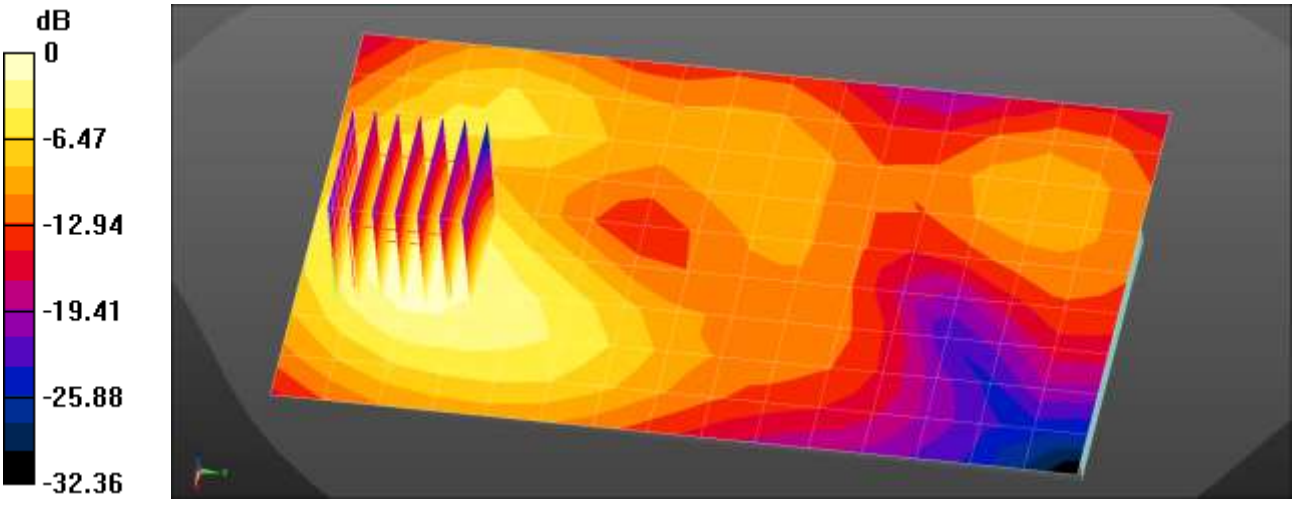
Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.648 S/m; ε_r = 40.57; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.73, 7.73, 7.73); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 30 Body worn Front QPSK 10MHz 1RB 0offset 27710ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.805 W/kg

LTE Band 30 Body worn Front QPSK 10MHz 1RB 0offset 27710ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.561 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.979 W/kg
SAR(1 g) = 0.530 W/kg; SAR(10 g) = 0.284 W/kg
Maximum value of SAR (measured) = 0.812 W/kg



0 dB = 0.805 W/kg = −0.94 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.6℃
Ambient Temperature:	21.8℃
Test Date:	10/30/2020
Plot No.:	54

DUT: SM-G991U ; Type: Bar

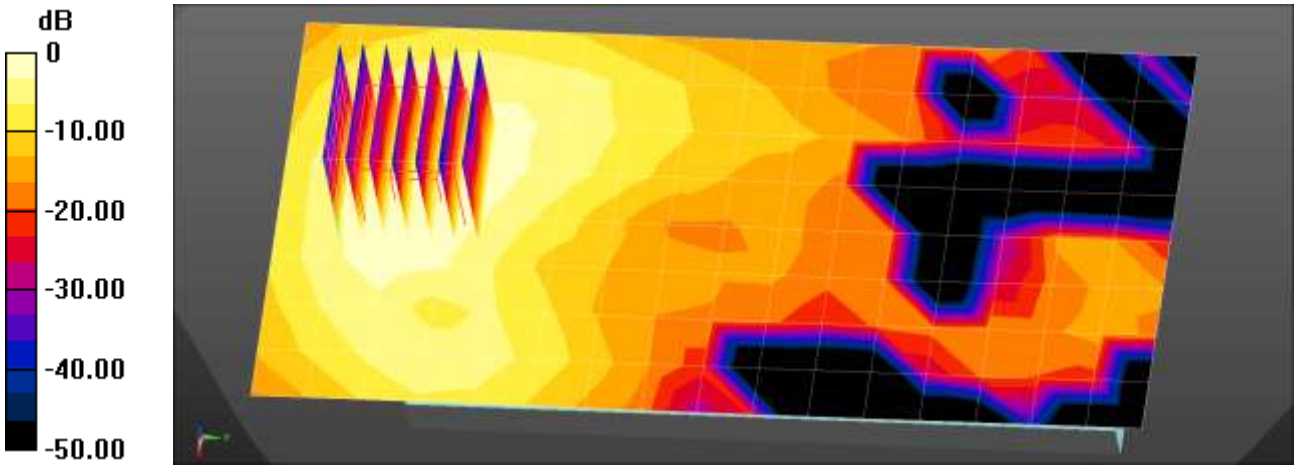
Communication System: UID 0, LTE Band 40 (0); Frequency: 2310 MHz;Duty Cycle: 1:1.58125
Medium parameters used: f = 2310 MHz; σ = 1.647 S/m; ε_r = 40.498; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

LTE Band 40 Body Worn Rear QPSK 10MHz 1RB 24offset 38750ch/Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0611 W/kg

LTE Band 40 Body Worn Rear QPSK 10MHz 1RB 24offset 38750ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.6270 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.0820 W/kg
SAR(1 g) = 0.043 W/kg; SAR(10 g) = 0.023 W/kg
Maximum value of SAR (measured) = 0.0673 W/kg



0 dB = 0.0611 W/kg = −12.14 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.6℃
Ambient Temperature:	21.8℃
Test Date:	10/30/2020
Plot No.:	55

DUT: SM-G991U ; Type: Bar

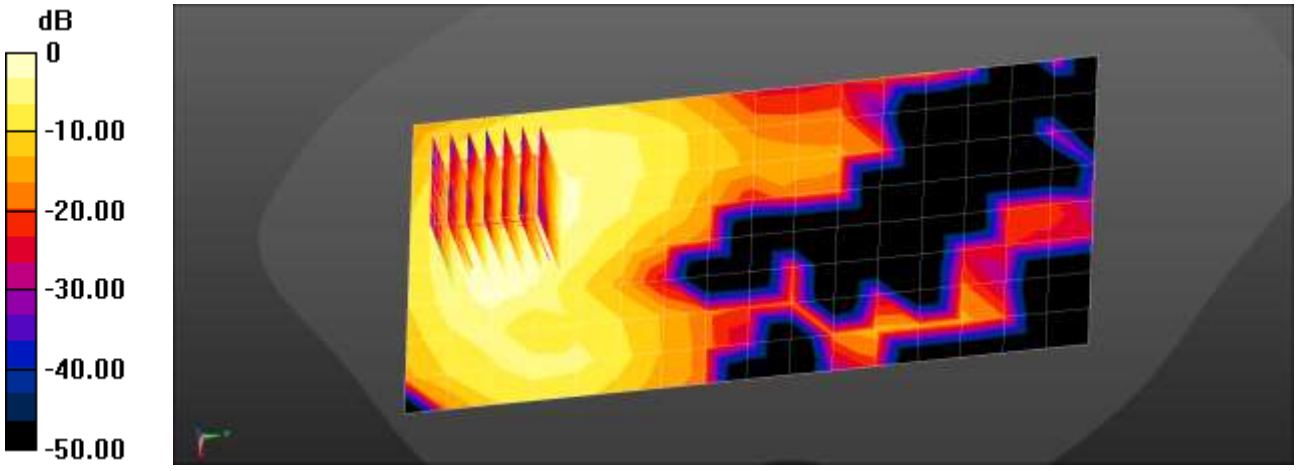
Communication System: UID 0, LTE Band 40 (0); Frequency: 2355 MHz;Duty Cycle: 1:1.58125
Medium parameters used (interpolated): f = 2355 MHz; σ = 1.698 S/m; ε_r = 40.374; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

LTE Band 40 Body Worn Rear QPSK 10MHz 1RB 24offset 39200ch/Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0666 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 = 0.10 dB
Peak SAR (extrapolated) = 0.0880 W/kg
SAR(1 g) = 0.045 W/kg; SAR(10 g) = 0.023 W/kg
Maximum value of SAR (measured) = 0.0705 W/kg



0 dB = 0.0666 W/kg = −11.77 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.7℃
Ambient Temperature: 20.9℃
Test Date: 10/01/2020
Plot No.: 56

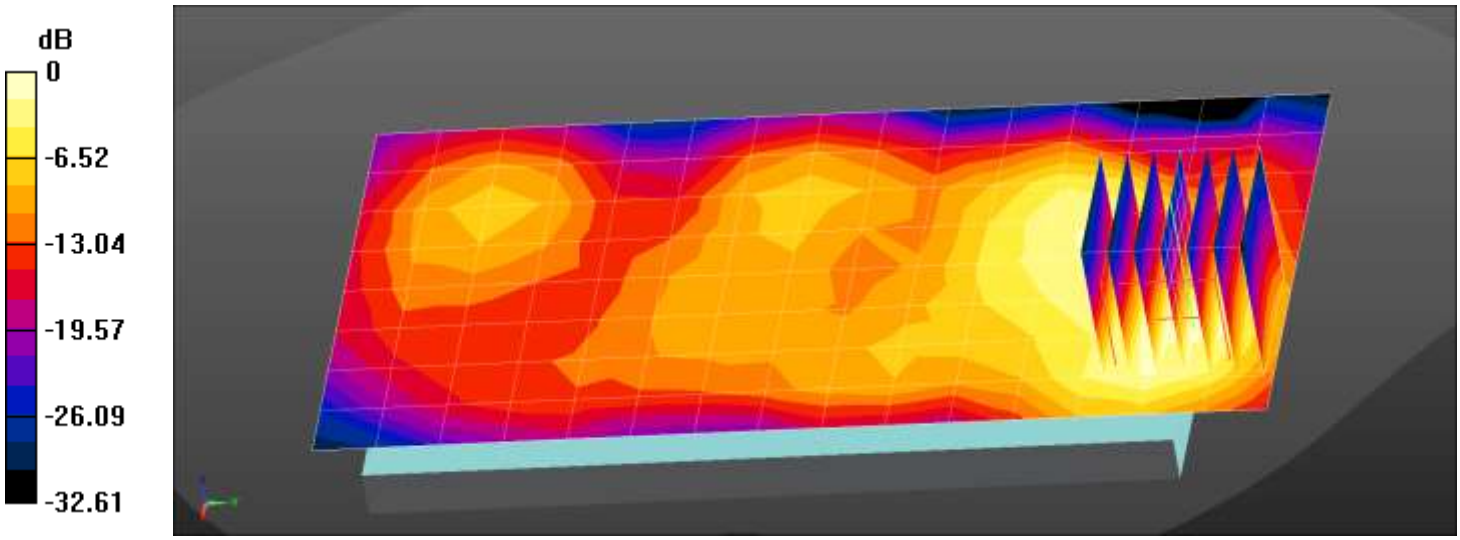
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, LTE Band41 (0); Frequency: 2680 MHz;Duty Cycle: 1:1.58052
Medium parameters used: f = 2680 MHz; σ = 2.103 S/m; ε_r = 39.759; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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 Bnad 41 BodyWorn Front QPSK 20MHz 1RB 49offset 41490ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.447 W/kg
LTE Bnad 41 BodyWorn Front QPSK 20MHz 1RB 49offset 41490ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.700 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.696 W/kg
SAR(1 g) = 0.349 W/kg; SAR(10 g) = 0.173 W/kg
Maximum value of SAR (measured) = 0.448 W/kg



0 dB = 0.447 W/kg = −3.50 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.4℃
Test Date:	10/02/2020
Plot No.:	57

DUT: SM-G991U ; Type: Bar

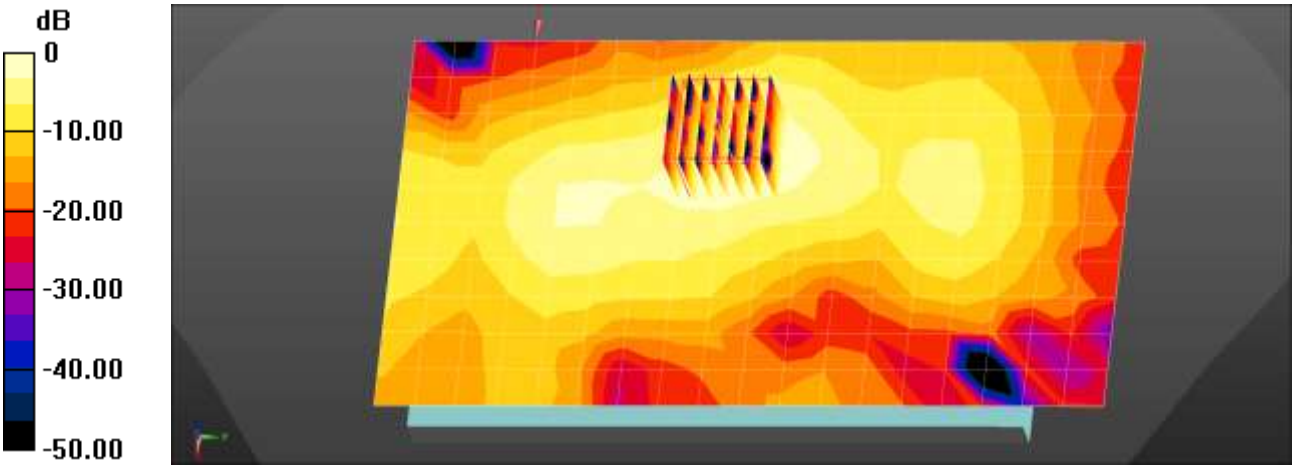
Communication System: UID 0, LTE 48(FCC) (0); Frequency: 3690 MHz;Duty Cycle: 1:1.58016
Medium parameters used: f = 3690 MHz; σ = 3.148 S/m; ε_r = 37.985; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(6.87, 6.87, 6.87); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 48 BodyWorn Rear QPSK 20MHz 1RB 0offset 56640ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.241 W/kg

LTE Band 48 BodyWorn Rear QPSK 20MHz 1RB 0offset 56640ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 4.187 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.364 W/kg
SAR(1 g) = 0.135 W/kg; SAR(10 g) = 0.055 W/kg
Maximum value of SAR (measured) = 0.259 W/kg



0 dB = 0.259 W/kg = −5.87 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	10/27/2020
Plot No.:	58

DUT: SM-G991U ; Type: Bar

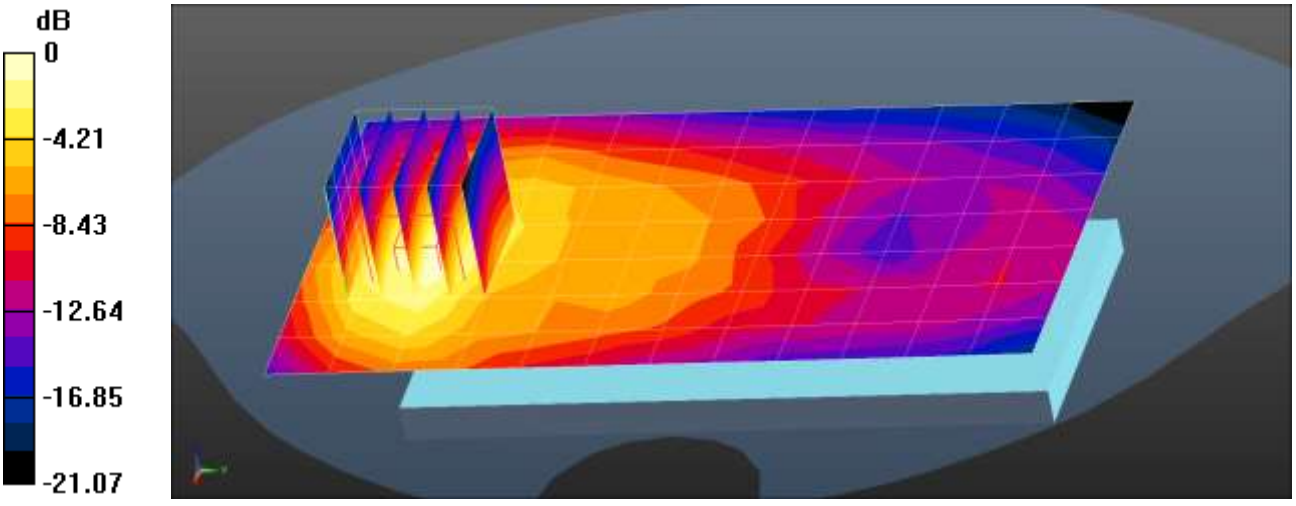
Communication System: UID 0, LTE 66 (0); Frequency: 1720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1720 MHz; σ = 1.308 S/m; ε_r = 40.339; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.91, 5.91, 5.91); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 66 Body Worn Rear QPSK 20MHz 1RB 99offset 132072ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.977 W/kg

LTE Band 66 Body Worn Rear QPSK 20MHz 1RB 99offset 132072ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.02 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 1.01 W/kg
SAR(1 g) = 0.842 W/kg; SAR(10 g) = 0.540 W/kg
Maximum value of SAR (measured) = 0.927 W/kg



0 dB = 0.977 W/kg = −0.10 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.4℃
Ambient Temperature: 22.6℃
Test Date: 09/14/2020
Plot No.: 59

DUT: SM-G991U ; Type: Bar

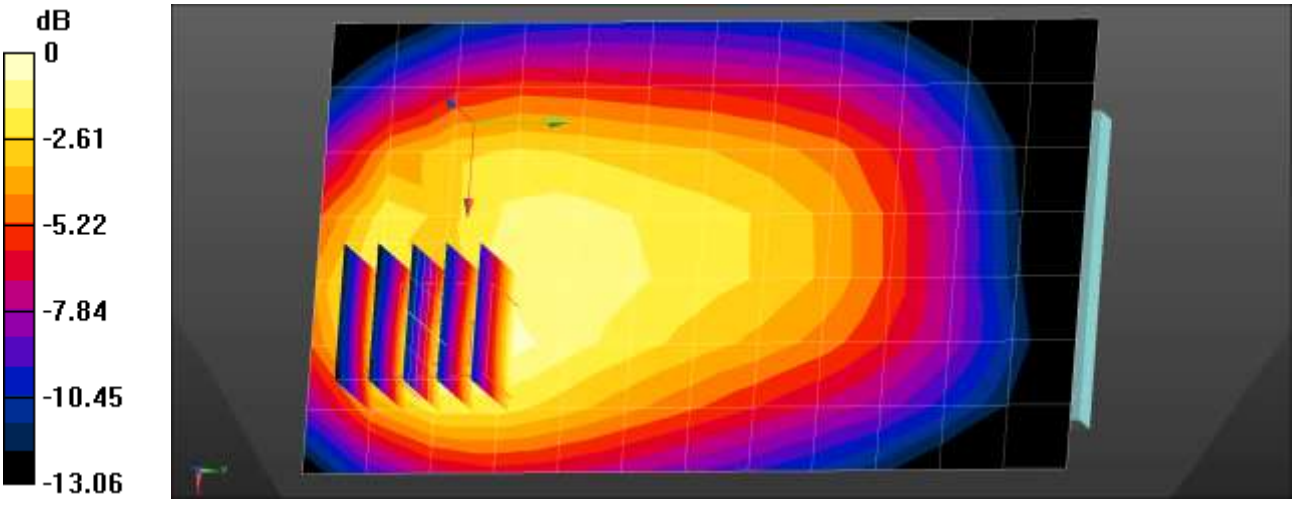
Communication System: UID 0, LTE 71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 680.5 MHz; σ = 0.81 S/m; ε_r = 43.359; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 71 BodyWorn Rear QPSK 20MHz 1RB 0offset 133297ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.304 W/kg

LTE Band 71 BodyWorn Rear QPSK 20MHz 1RB 0offset 133297ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.45 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.354 W/kg
SAR(1 g) = 0.228 W/kg; SAR(10 g) = 0.141 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: 21.6℃
Ambient Temperature: 21.8℃
Test Date: 10/19/2020
Plot No.: 60

DUT: SM-G991U ; Type: Bar

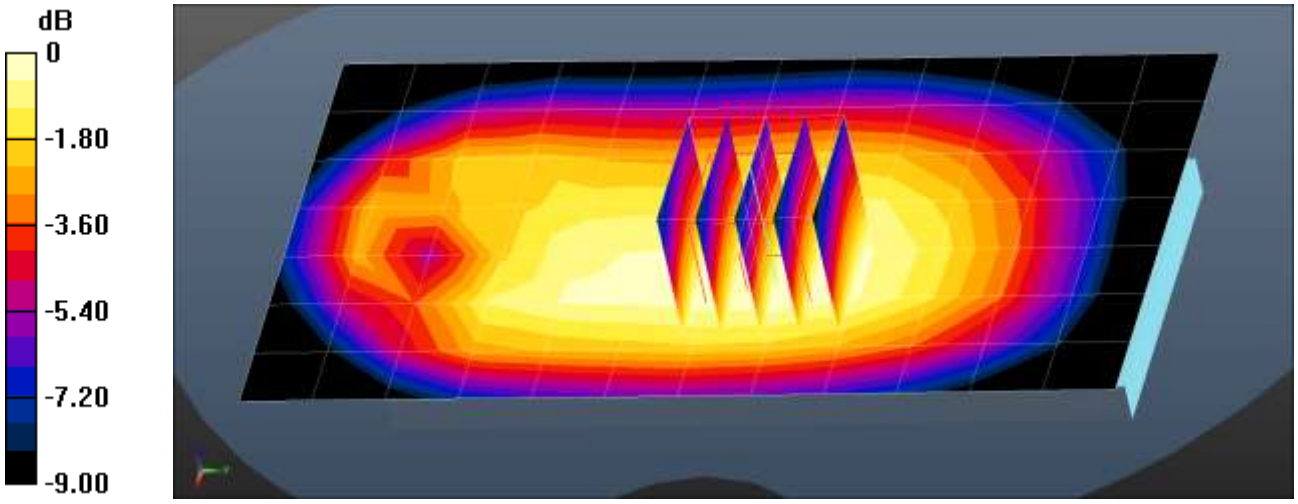
Communication System: UID 0, NR n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.929 S/m; ε_r = 42.321; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.2, 9.2, 9.2); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n5 BodyWorn Front QPSK 20MHz 50RB 28offset 167300ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.282 W/kg

n5 BodyWorn Front QPSK 20MHz 50RB 28offset 167300ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.81 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.317 W/kg
SAR(1 g) = 0.243 W/kg; SAR(10 g) = 0.184 W/kg
Maximum value of SAR (measured) = 0.293 W/kg



0 dB = 0.293 W/kg = −5.33 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.0℃
Test Date: 10/20/2020
Plot No.: 61

DUT: SM-G991U ; Type: Bar

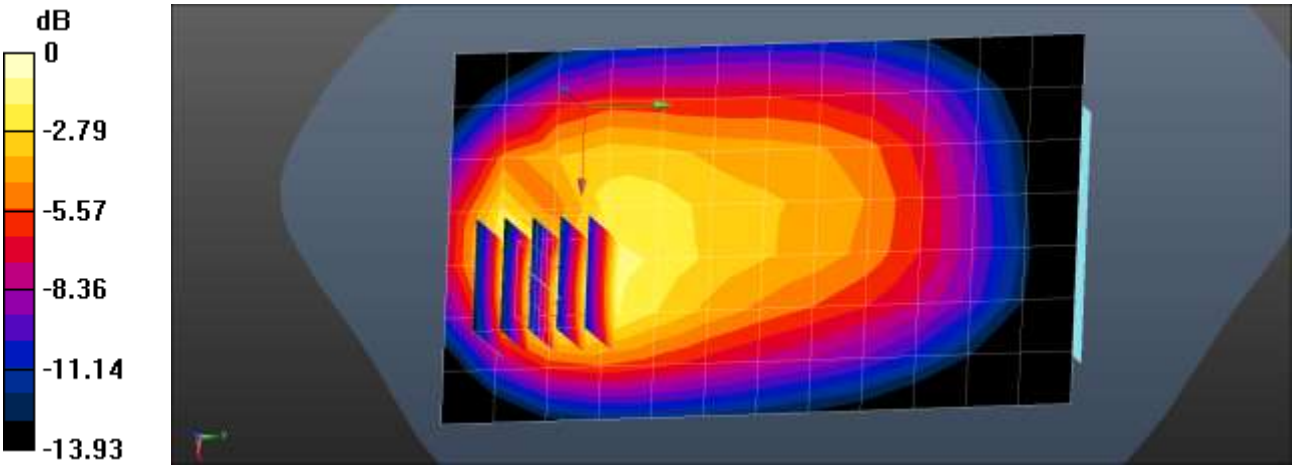
Communication System: UID 0, NR n12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.856 S/m; ε_r = 41.538; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.51, 9.51, 9.51); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n12 BodyWorn Rear QPSK 15MHz 1RB 1offset 141500ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.293 W/kg

n12 BodyWorn Rear QPSK 15MHz 1RB 1offset 141500ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.15 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.444 W/kg
SAR(1 g) = 0.243 W/kg; SAR(10 g) = 0.143 W/kg
Maximum value of SAR (measured) = 0.358 W/kg



0 dB = 0.358 W/kg = −4.46 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.0℃
Ambient Temperature: 22.2℃
Test Date: 09/28/2020
Plot No.: 62

DUT: SM-G991U ; Type: Bar

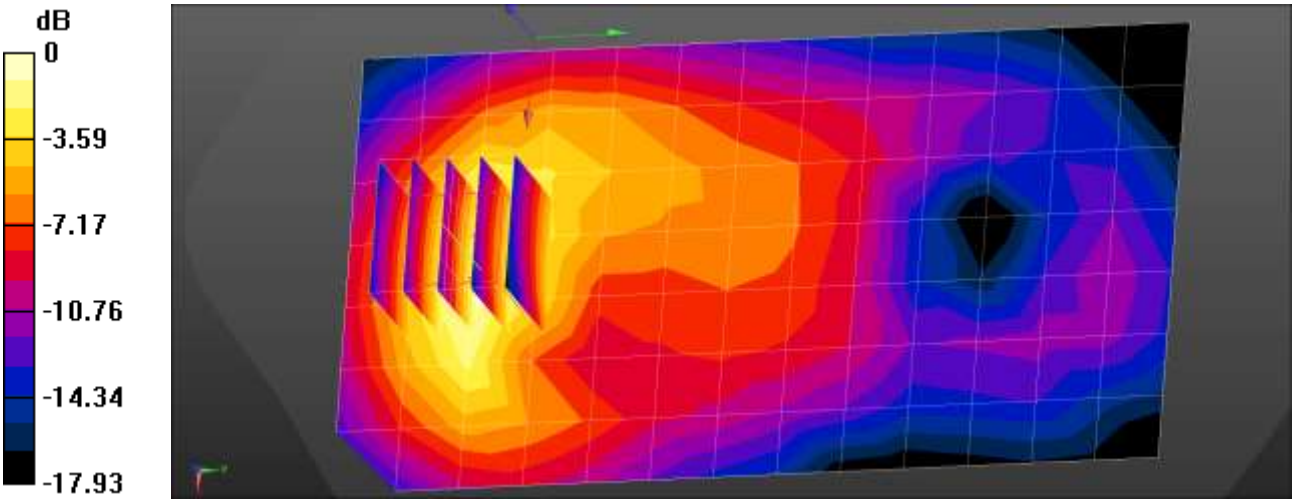
Communication System: UID 0, NR n25 (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.432 S/m; ε_r = 39.951; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0 (Left)
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 25 BodyWorn Rear DFT-S QPSK 40MHz 50RB 28offset 376500ch/Area Scan (8x14x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.782 W/kg

NR Band 25 BodyWorn Rear DFT-S QPSK 40MHz 50RB 28offset 376500ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.45 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.955 W/kg
SAR(1 g) = 0.596 W/kg; SAR(10 g) = 0.358 W/kg
Maximum value of SAR (measured) = 0.832 W/kg



0 dB = 0.832 W/kg = −0.80 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.4℃
Test Date:	10/01/2020
Plot No.:	63

DUT: SM-G991U ; Type: Bar

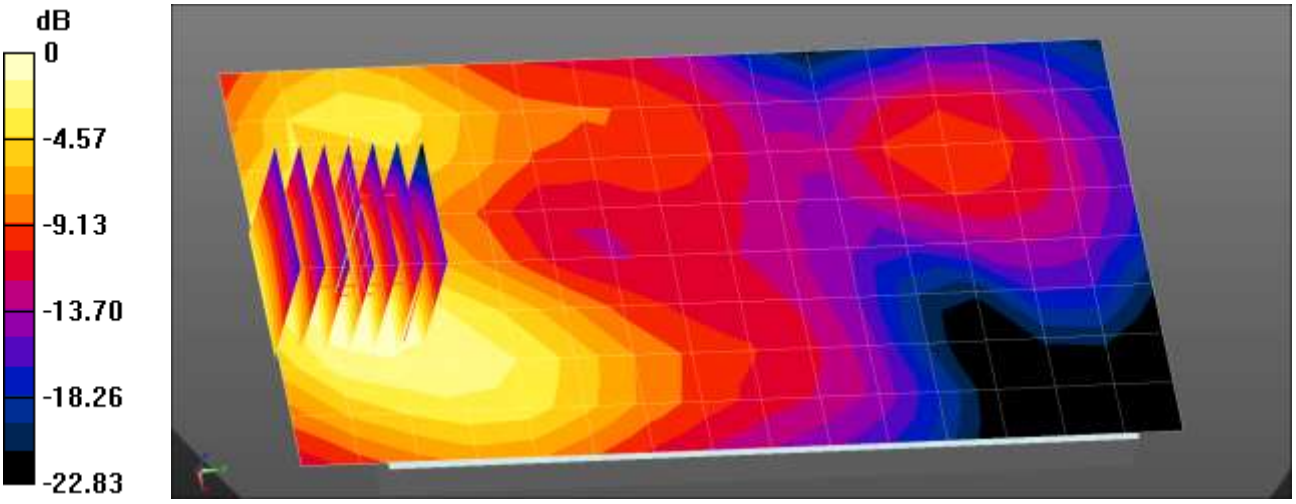
Communication System: UID 0, NR n30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.648 S/m; ε_r = 40.477; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

NR Band 30 BodyWorn Front DFT-s QPSK 10MHz 1RB 26offset 462000ch/Area Scan (9x16x1):
Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.558 W/kg

NR Band 30 BodyWorn Front DFT-s QPSK 10MHz 1RB 26offset 462000ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.102 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.708 W/kg
SAR(1 g) = 0.389 W/kg; SAR(10 g) = 0.212 W/kg
Maximum value of SAR (measured) = 0.587 W/kg



0 dB = 0.587 W/kg = −2.31 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.9℃
Ambient Temperature:	21.0℃
Test Date:	10/22/2020
Plot No.:	64

DUT: SM-G991U ; Type: Bar

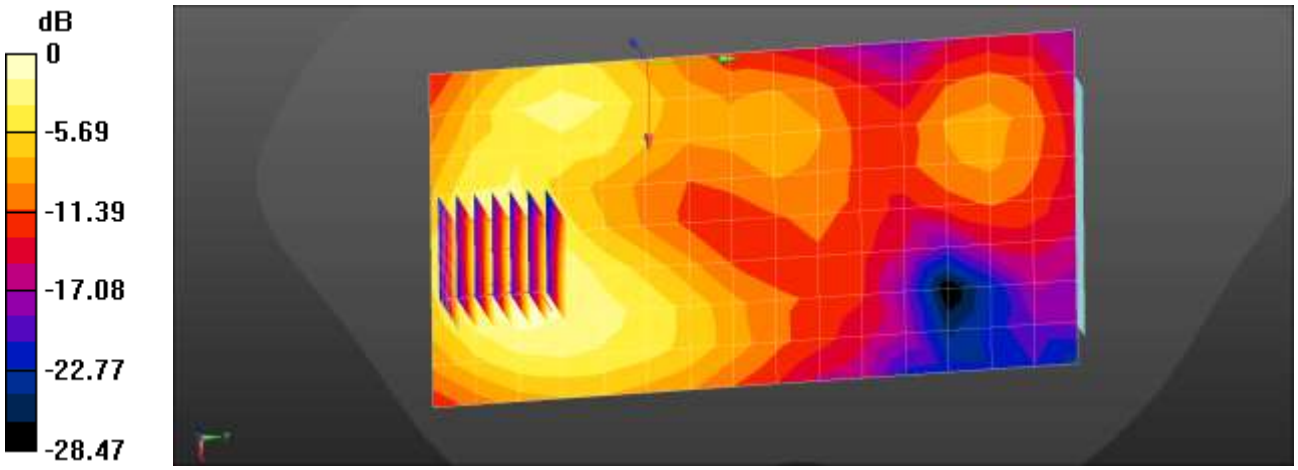
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.925 S/m; ε_r = 40.851; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 BodyWorn Front QPSK 100MHz 135RB 69offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.210 W/kg

n41 BodyWorn Front QPSK 100MHz 135RB 69offset 518598ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.229 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.324 W/kg
SAR(1 g) = 0.169 W/kg; SAR(10 g) = 0.088 W/kg
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:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	10/20/2020
Plot No.:	65

DUT: SM-G991U ; Type: Bar

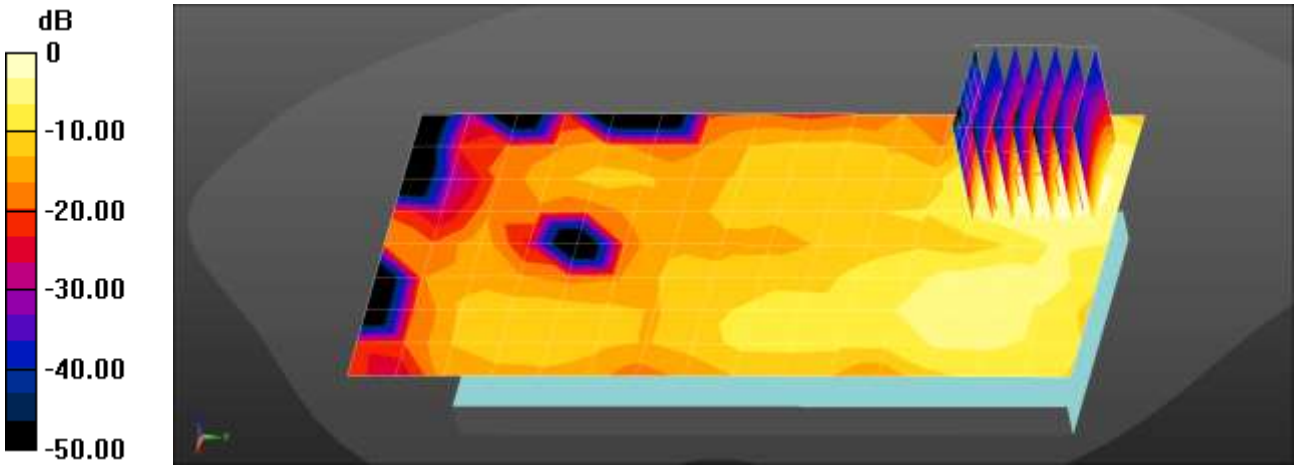
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.979 S/m; ε_r = 39.161; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 Body Rear QPSK 100MHz 135RB 69offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0882 W/kg

n41 Body Rear QPSK 100MHz 135RB 69offset 518598ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.340 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.138 W/kg
SAR(1 g) = 0.071 W/kg; SAR(10 g) = 0.035 W/kg
Maximum value of SAR (measured) = 0.0906 W/kg



0 dB = 0.0882 W/kg = −10.55 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.3℃
Ambient Temperature: 20.4℃
Test Date: 10/21/2020
Plot No.: 66

DUT: SM-G991U ; Type: Bar

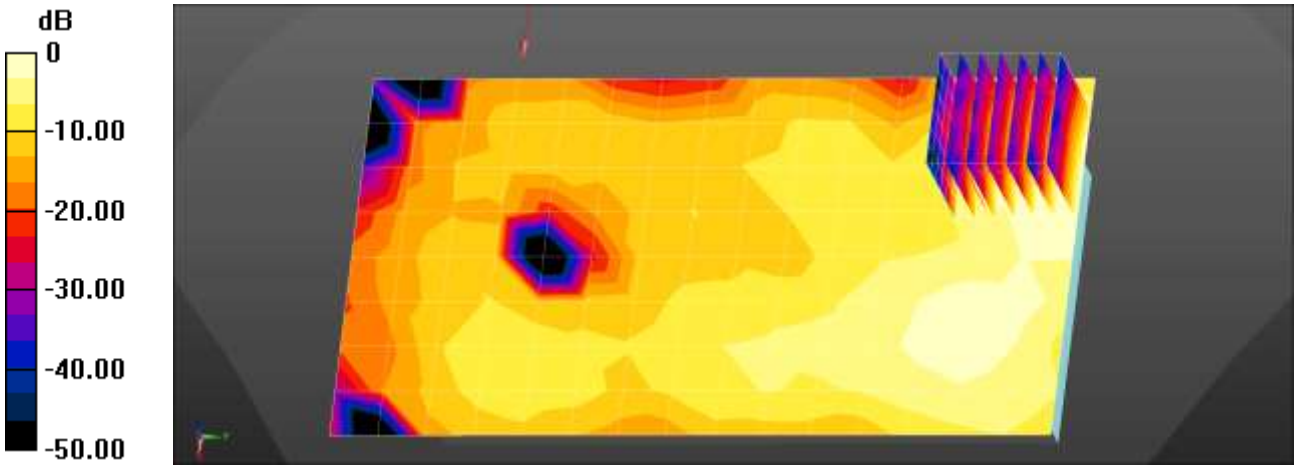
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.935 S/m; ε_r = 38.743; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 Body Rear QPSK 100MHz 135RB 69offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0542 W/kg

n41 Body Rear QPSK 100MHz 135RB 69offset 518598ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.652 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.0850 W/kg
SAR(1 g) = 0.044 W/kg; SAR(10 g) = 0.022 W/kg
Maximum value of SAR (measured) = 0.0549 W/kg



0 dB = 0.0542 W/kg = −12.66 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	10/13/2020
Plot No.:	67

DUT: SM-G991U ; Type: Bar

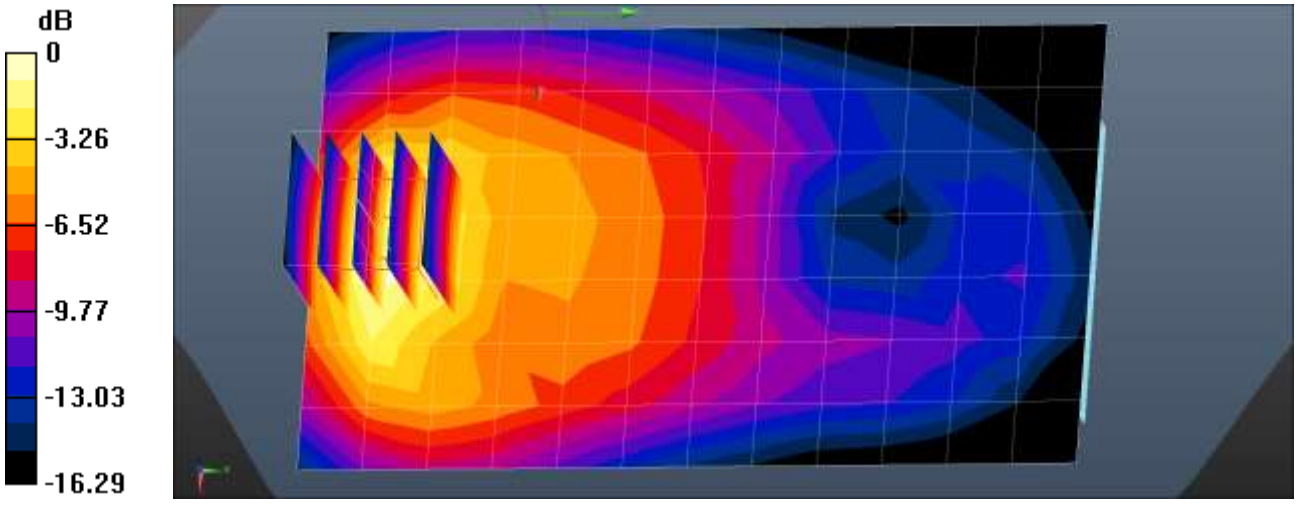
Communication System: UID 0, n66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.334 S/m; ε_r = 40.439; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(8.2, 8.2, 8.2); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n66 Body worn Rear DFT-s QPSK 40MHz 1RB 1offset 349000ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.12 W/kg

n66 Body worn Rear DFT-s QPSK 40MHz 1RB 1offset 349000ch/Zoom Scan (5x5x5)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.99 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.900 W/kg; SAR(10 g) = 0.541 W/kg
Maximum value of SAR (measured) = 1.26 W/kg



0 dB = 1.26 W/kg = 1.00 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	10/13/2020
Plot No.:	68

DUT: SM-G991U ; Type: Bar

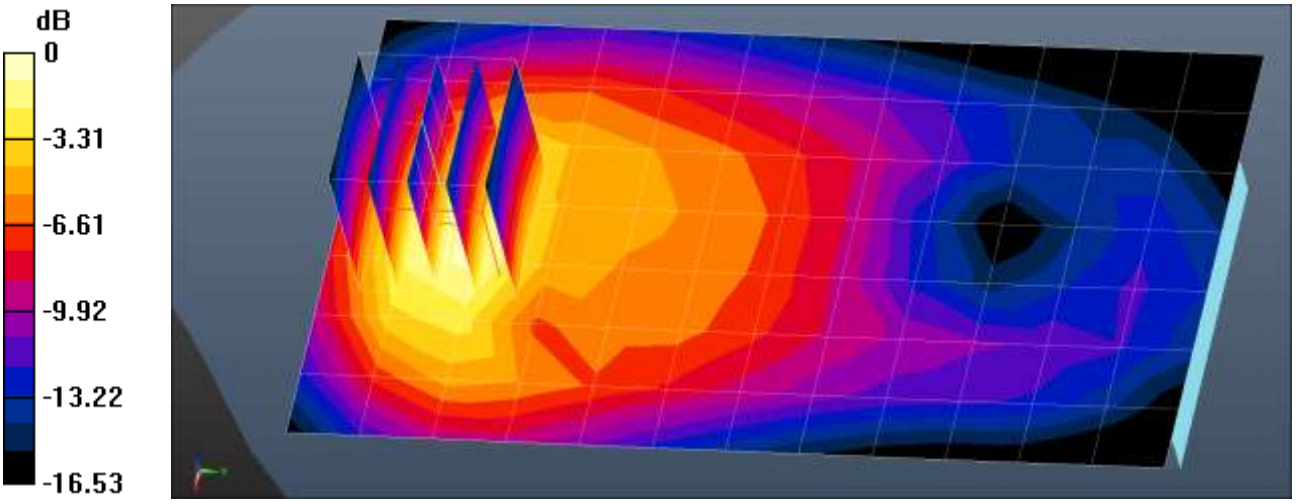
Communication System: UID 0, n66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.334 S/m; ε_r = 40.439; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(8.2, 8.2, 8.2); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n66 Body worn Rear DFT-s QPSK 40MHz 108RB 54offset 349000ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.05 W/kg

n66 Body worn Rear DFT-s QPSK 40MHz 108RB 54offset 349000ch/Zoom Scan (5x5x5)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.20 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.871 W/kg; SAR(10 g) = 0.521 W/kg
Maximum value of SAR (measured) = 1.22 W/kg



0 dB = 1.22 W/kg = 0.86 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.3℃
Test Date:	10/21/2020
Plot No.:	69

DUT: SM-G991U ; Type: Bar

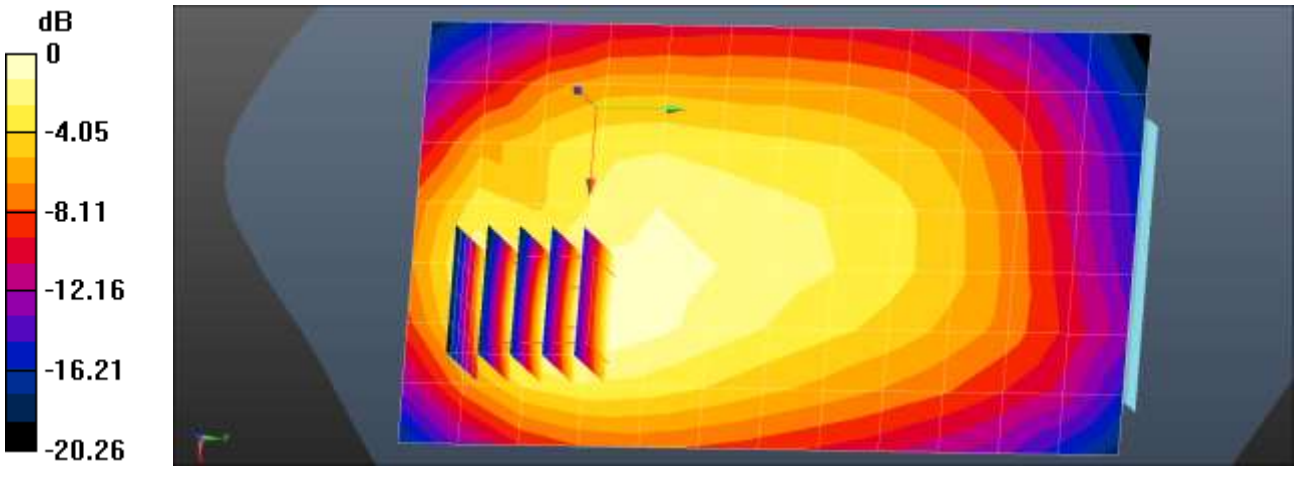
Communication System: UID 0, NR n71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.83 S/m; ε_r = 41.968; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.51, 9.51, 9.51); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n71 Body-worn Rear QPSK 20MHz 50RB 28offset 136100ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.235 W/kg

n71 Body-worn Rear QPSK 20MHz 50RB 28offset 136100ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.44 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.281 W/kg
SAR(1 g) = 0.178 W/kg; SAR(10 g) = 0.113 W/kg
Maximum value of SAR (measured) = 0.243 W/kg



0 dB = 0.235 W/kg = −6.30 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.6℃
Ambient Temperature: 22.8℃
Test Date: 10/21/2020
Plot No.: 70

DUT: SM-G991U ; Type: Bar

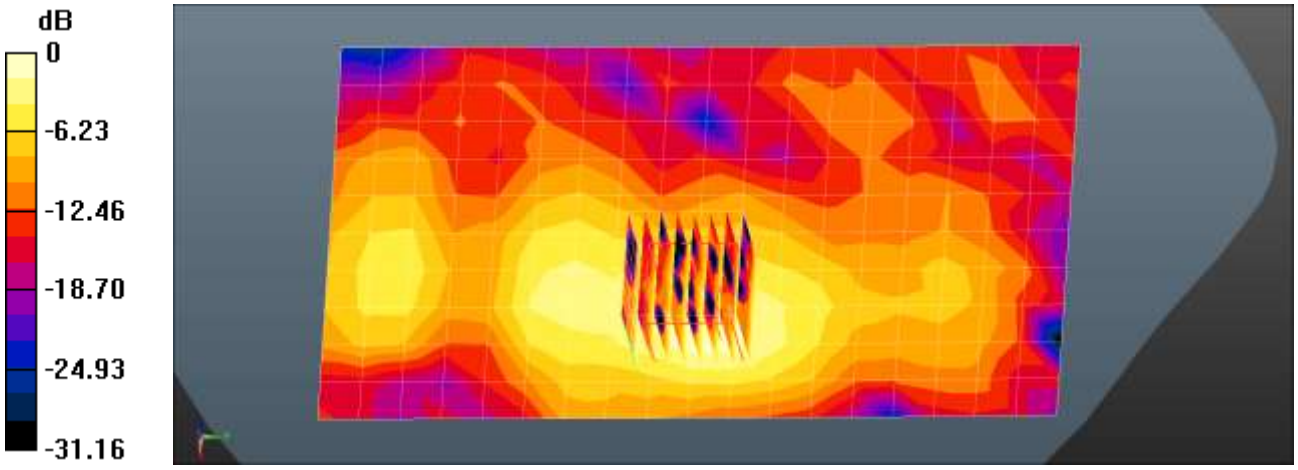
Communication System: UID 0, NR Band 77 (0); Frequency: 3840 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3840 MHz; σ = 3.273 S/m; ε_r = 38.051; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(6.6, 6.6, 6.6); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

NR n77 BodyWorn Front DFT-s QPSK 100MHz 1RB 271offset 656000ch/Area Scan (11x19x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0831 W/kg

NR n77 BodyWorn Front DFT-s QPSK 100MHz 1RB 271offset 656000ch/Zoom Scan (8x8x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.154 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.134 W/kg
SAR(1 g) = 0.044 W/kg; SAR(10 g) = 0.016 W/kg
Maximum value of SAR (measured) = 0.0904 W/kg



0 dB = 0.0831 W/kg = −10.81 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.6℃
Ambient Temperature: 22.8℃
Test Date: 10/21/2020
Plot No.: 71

DUT: SM-G991U ; Type: Bar

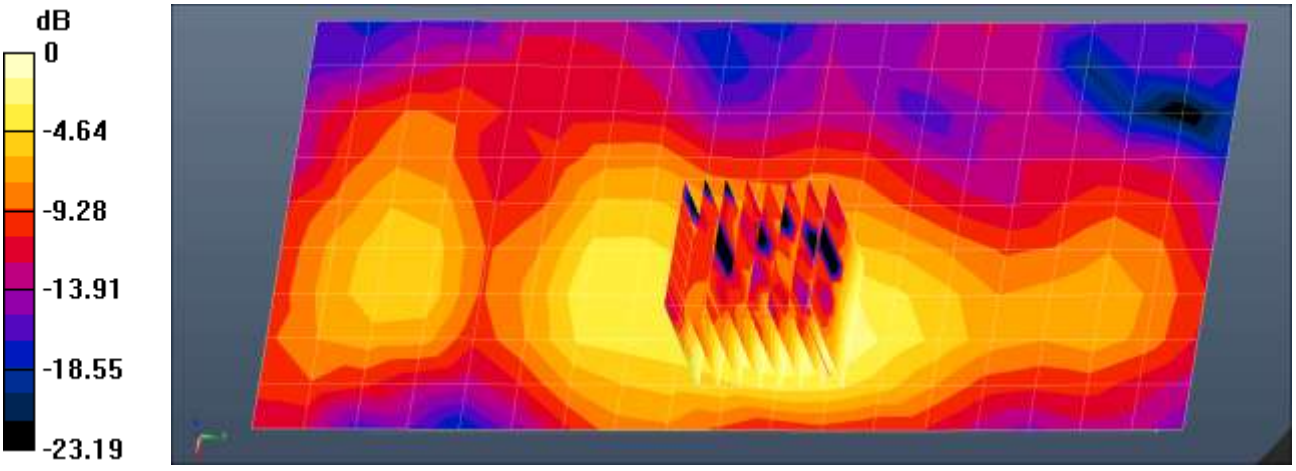
Communication System: UID 0, NR Band 77 (0); Frequency: 3930 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3930 MHz; σ = 3.302 S/m; ε_r = 37.818; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(6.6, 6.6, 6.6); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

NR n77 BodyWorn Front DFT-s QPSK 100MHz 135RB 69offset 662000ch/Area Scan (10x19x1):
Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.144 W/kg

NR n77 BodyWorn Front DFT-s QPSK 100MHz 135RB 69offset 662000ch/Zoom Scan (8x8x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.536 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.220 W/kg
SAR(1 g) = 0.074 W/kg; SAR(10 g) = 0.028 W/kg
Maximum value of SAR (measured) = 0.148 W/kg



0 dB = 0.144 W/kg = −8.40 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.3℃
Ambient Temperature: 22.5℃
Test Date: 09/24/2020
Plot No.: 72

DUT: SM-G991U ; Type: Bar

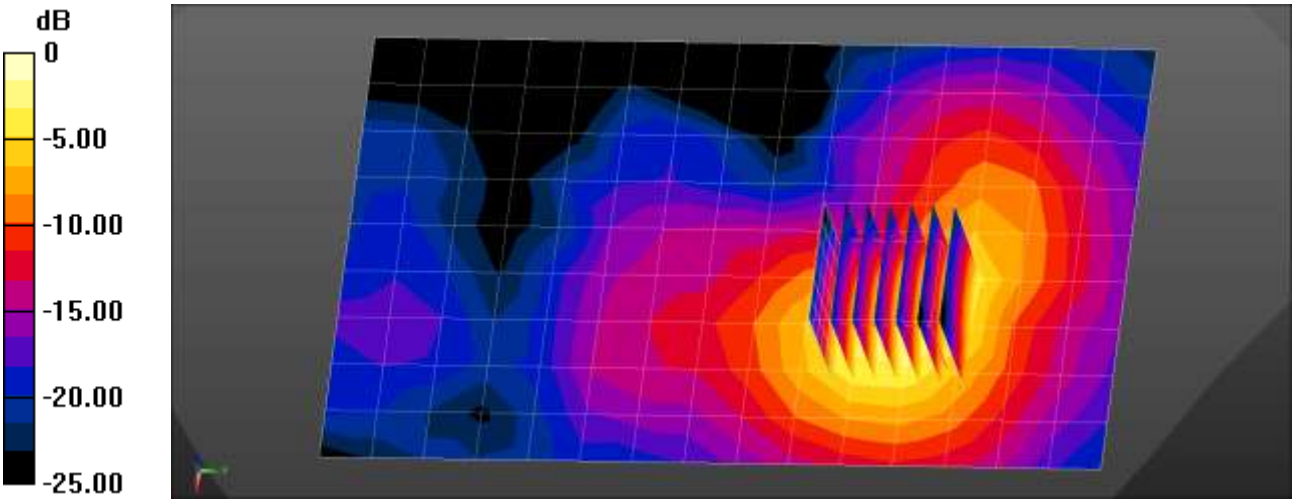
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.845 S/m; ε_r = 40.498; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

802.11b Body Worn Rear 1Mbps 11ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.348 W/kg

802.11b Body Worn Rear 1Mbps 11ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.500 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.433 W/kg
SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.088 W/kg
Maximum value of SAR (measured) = 0.338 W/kg



0 dB = 0.338 W/kg = −4.71 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.0℃
Ambient Temperature: 21.2℃
Test Date: 11/06/2020
Plot No.: 73

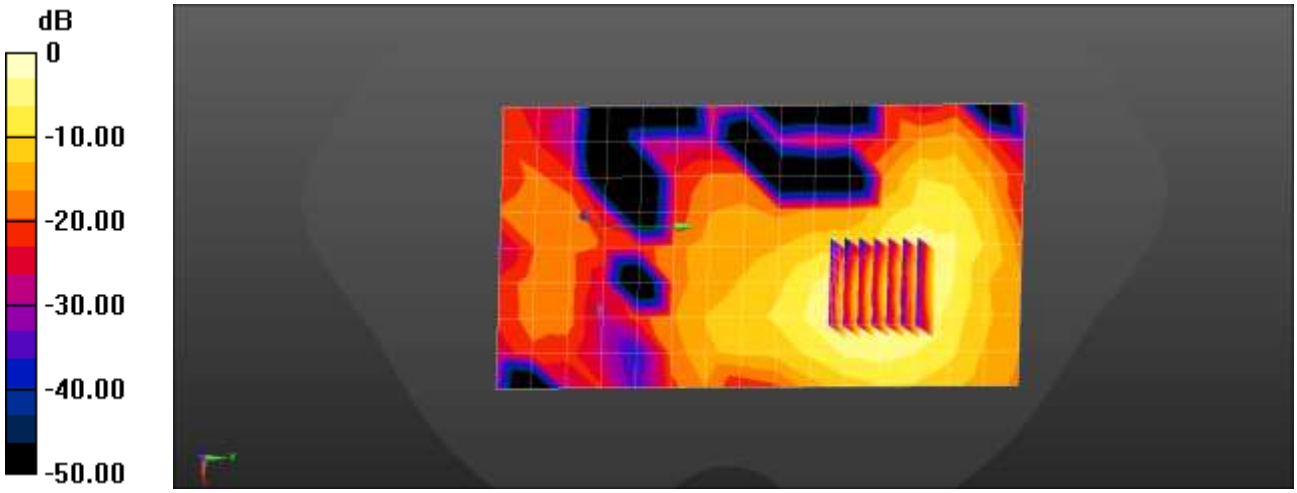
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, 2450MHz FCC (0); Frequency: 2462 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2462 MHz; σ = 1.779 S/m; ε_r = 39.998; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 – SN3797; ConvF(7.35, 7.35, 7.35); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

802.11b BodyWorn Rear 1Mbps 11ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm.
Maximum value of SAR (measured) = 0.129 W/kg
802.11b BodyWorn Rear 1Mbps 11ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.424 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.249 W/kg
SAR(1 g) = 0.104 W/kg; SAR(10 g) = 0.047 W/kg
Maximum value of SAR (measured) = 0.177 W/kg



0 dB = 0.129 W/kg = −8.89 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.1℃
Test Date: 09/25/2020
Plot No.: 74

DUT: SM-G991U ; Type: Bar

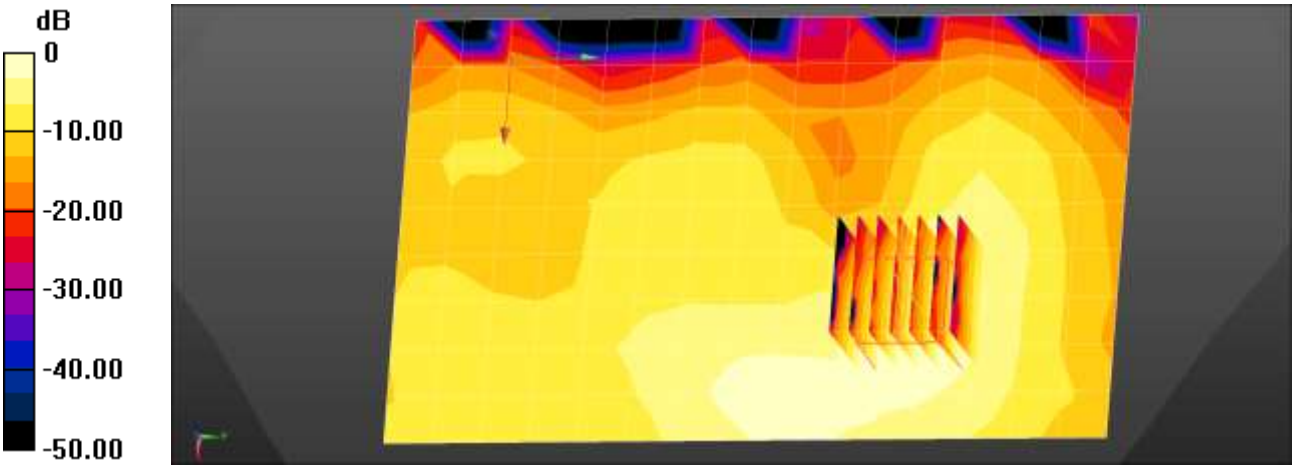
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.78 S/m; ε_r = 39.474; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

802.11g Body-worn Rear 6Mbps 6ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.150 W/kg

802.11g Body-worn Rear 6Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 5.828 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.204 W/kg
SAR(1 g) = 0.098 W/kg; SAR(10 g) = 0.047 W/kg
Maximum value of SAR (measured) = 0.162 W/kg



0 dB = 0.162 W/kg = −7.90 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.2℃
Ambient Temperature: 21.3℃
Test Date: 09/27/2020
Plot No.: 75

DUT: SM-G991U ; Type: Bar

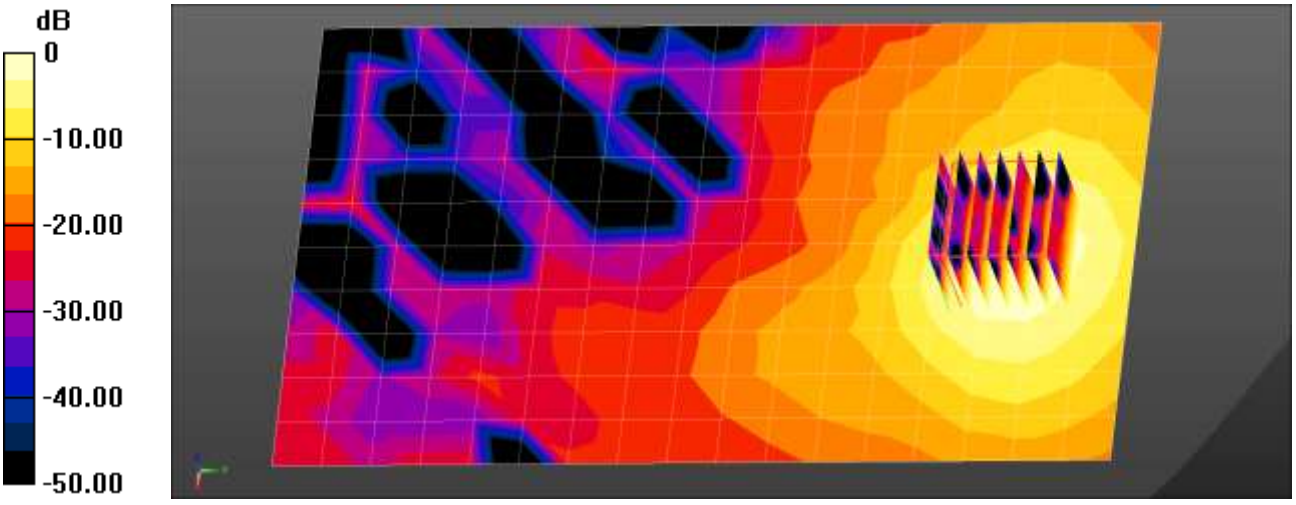
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5720 MHz; σ = 5.014 S/m; ε_r = 36.612; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.75, 4.75, 4.75); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

802.11a Body Worn Rear 6Mbps 144ch/Area Scan (11x18x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.33 W/kg

802.11a Body Worn Rear 6Mbps 144ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0.6560 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 2.40 W/kg
SAR(1 g) = 0.594 W/kg; SAR(10 g) = 0.216 W/kg
Maximum value of SAR (measured) = 1.40 W/kg



0 dB = 1.33 W/kg = 1.25 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.1℃
Test Date: 10/01/2020
Plot No.: 76

DUT: SM-G991U ; Type: Bar

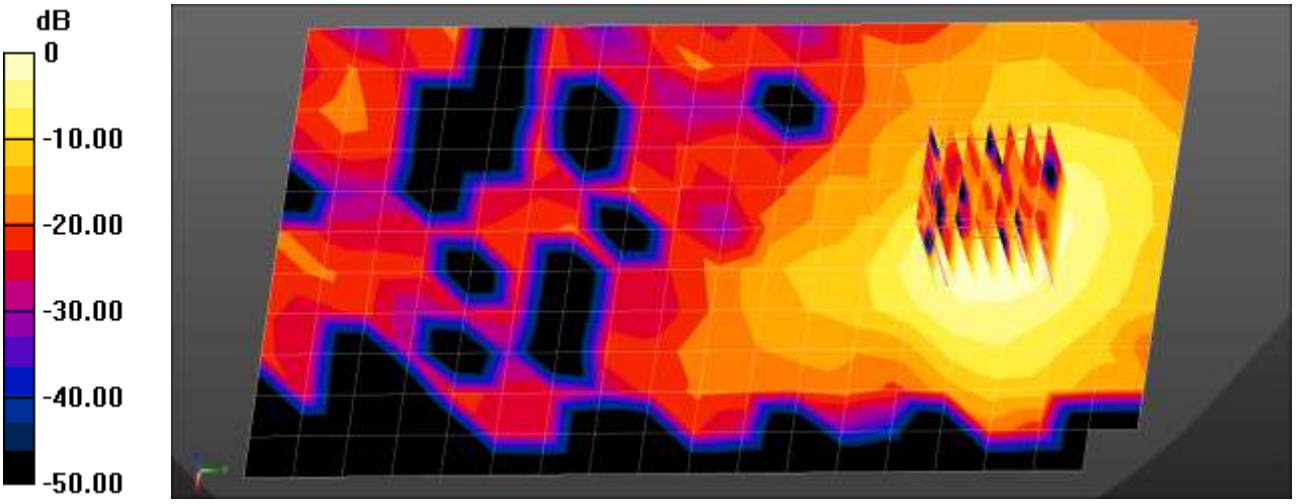
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5775 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5775 MHz; σ = 5.193 S/m; ε_r = 36.236; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.75, 4.75, 4.75); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

802.11ac80 Body Worn Rear MCS0 155ch/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.316 W/kg

802.11ac80 Body Worn Rear MCS0 155ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.557 W/kg
SAR(1 g) = 0.142 W/kg; SAR(10 g) = 0.049 W/kg
Maximum value of SAR (measured) = 0.340 W/kg



0 dB = 0.316 W/kg = −5.00 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.7℃
Ambient Temperature:	21.8℃
Test Date:	10/28/2020
Plot No.:	77

DUT: SM-G991U ; Type: Bar

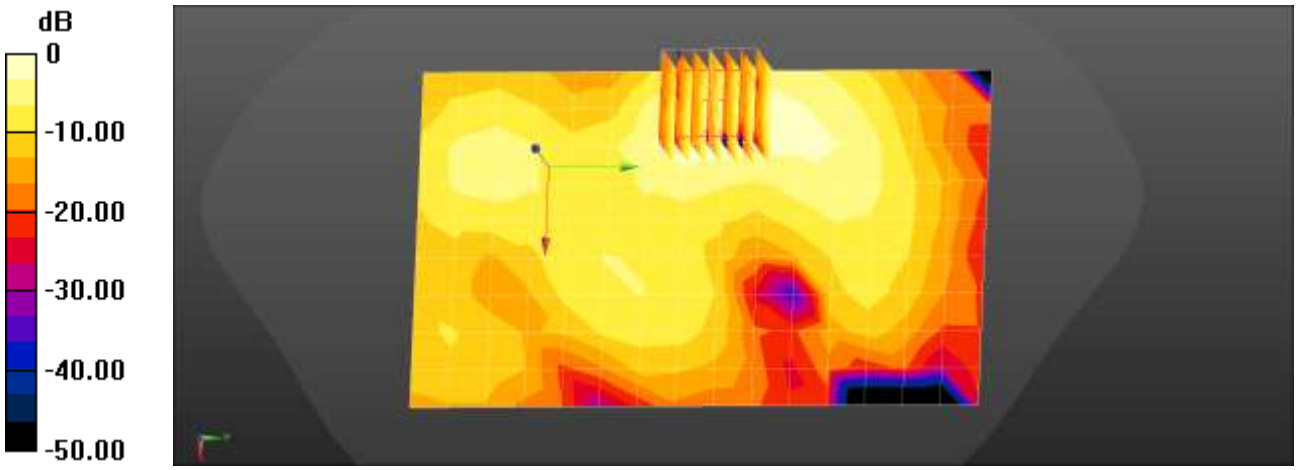
Communication System: UID 0, Bluetooth (0); Frequency: 2402 MHz;Duty Cycle: 1:1.302
Medium parameters used (interpolated): f = 2402 MHz; σ = 1.769 S/m; ε_r = 39.66; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Body Worn Front DH5 0ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0718 W/kg

Bluetooth Body Worn Front DH5 0ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.738 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 0.100 W/kg
SAR(1 g) = 0.046 W/kg; SAR(10 g) = 0.022 W/kg
Maximum value of SAR (measured) = 0.0782 W/kg



0 dB = 0.0782 W/kg = −11.07 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/11/2020
Plot No.:	78

DUT: SM-G991U ; Type: Bar

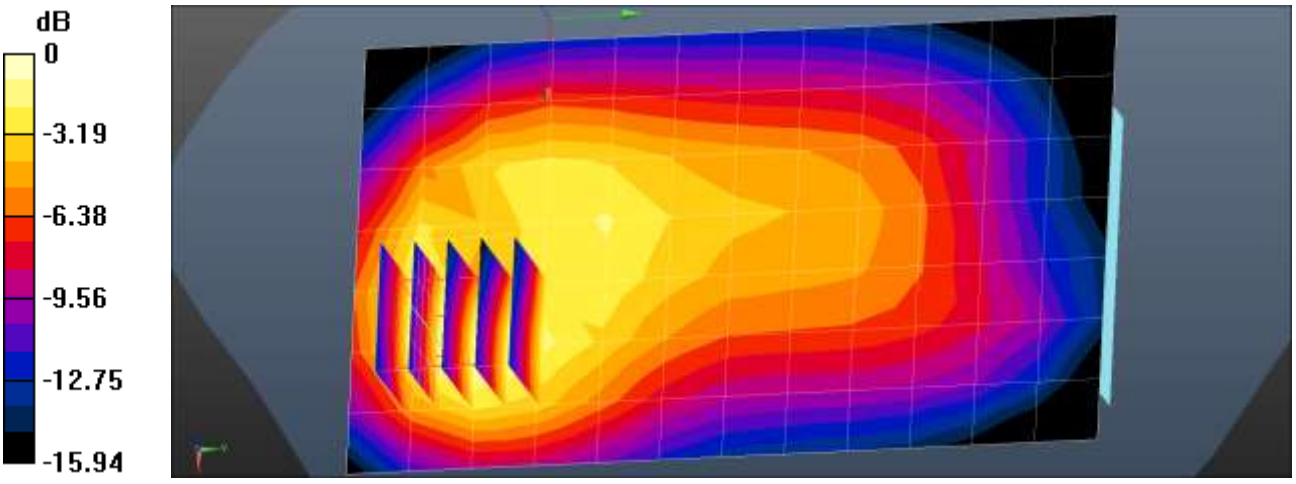
Communication System: UID 0, CDMA BC10 (FCC) (0); Frequency: 820 MHz;Duty Cycle: 1:1
Medium parameters used: f = 820 MHz; σ = 0.912 S/m; ε_r = 42.951; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); 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 Rear EVDO Rev.0 560ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.594 W/kg

CDMA BC10 Body Rear EVDO Rev.0 560ch/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) = 1.03 W/kg
SAR(1 g) = 0.561 W/kg; SAR(10 g) = 0.310 W/kg
Maximum value of SAR (measured) = 0.606 W/kg



0 dB = 0.606 W/kg = −2.18 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.1℃
Test Date: 09/11/2020
Plot No.: 79

DUT: SM-G991U ; Type: Bar

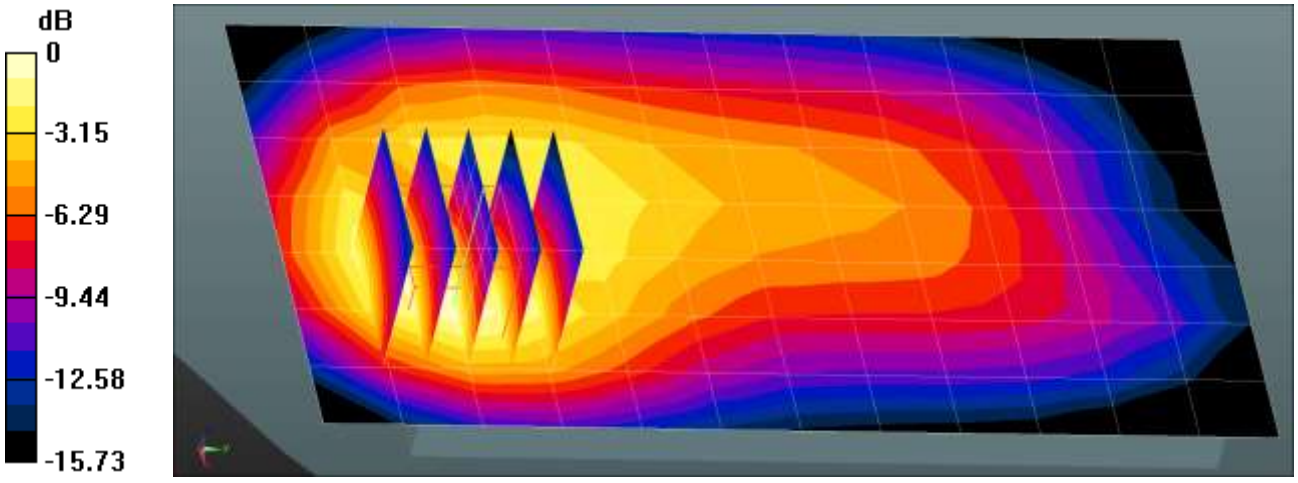
Communication System: UID 0, CDMA 835MHz FCC (0); Frequency: 824.7 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 824.7 MHz; σ = 0.916 S/m; ε_r = 42.896; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); 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 BC0 Body Rear EVDO Rev.0 1013ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.665 W/kg

CDMA BC0 Body Rear EVDO Rev.0 1013ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.93 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.652 W/kg; SAR(10 g) = 0.357 W/kg
Maximum value of SAR (measured) = 0.694 W/kg



0 dB = 0.694 W/kg = −1.59 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.1℃
Ambient Temperature:	22.3℃
Test Date:	09/16/2020
Plot No.:	80

DUT: SM-G991U ; Type: Bar

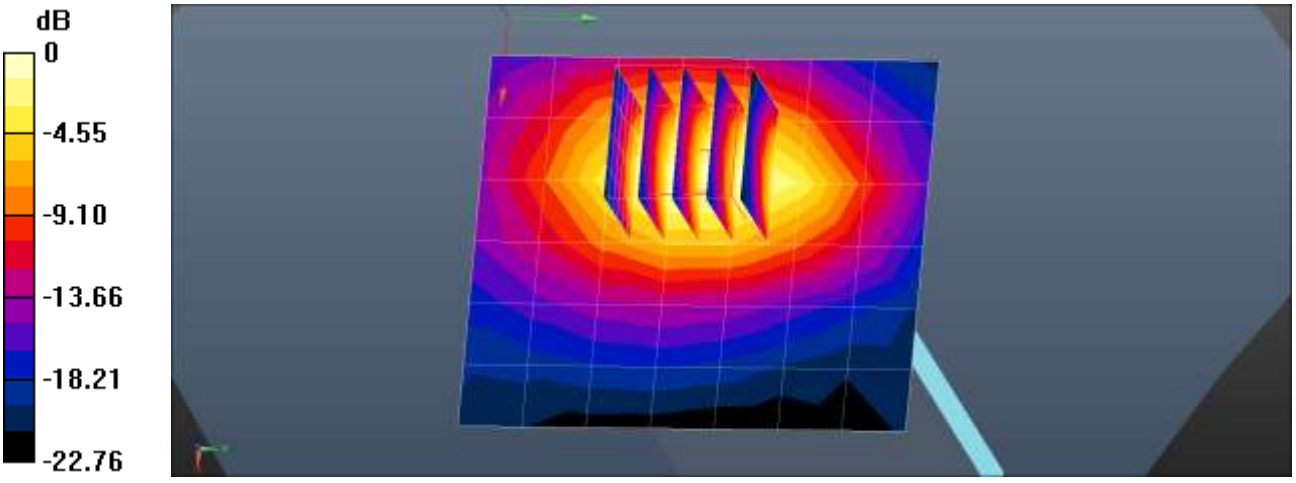
Communication System: UID 0, CDMA BC1(1900MHz) (0); Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.401 S/m; ε_r = 39.761; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC1 Body Bottom EVDO Rev.0 25ch/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.985 W/kg

CDMA BC1 Body Bottom EVDO Rev.0 25ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.67 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.946 W/kg; SAR(10 g) = 0.529 W/kg
Maximum value of SAR (measured) = 1.06 W/kg



0 dB = 0.985 W/kg = −0.06 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.1℃
Ambient Temperature:	22.3℃
Test Date:	09/14/2020
Plot No.:	81

DUT: SM-G991U ; Type: Bar

Communication System: UID 0, GSM850 GPRS 2TX (0); Frequency: 836.6 MHz;Duty Cycle: 1:4.14954
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.922 S/m; ε_r = 42.679; ρ = 1000 kg/m^3
Phantom section: Flat Section

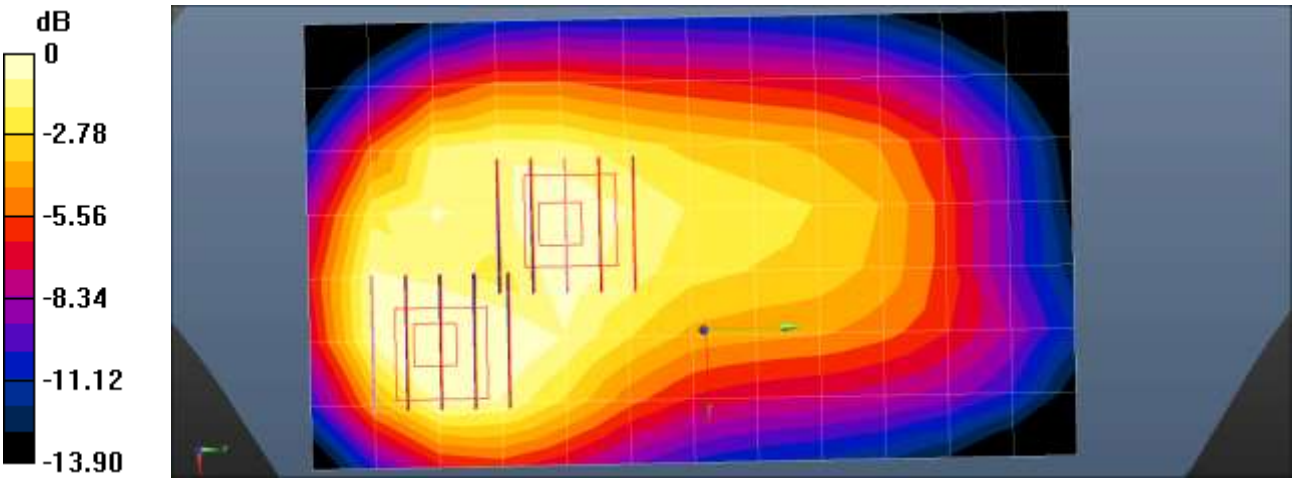
DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

GSM850 Body Rear GPRS 2TX 190ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.820 W/kg

GSM850 Body Rear GPRS 2TX 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.58 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 1.50 W/kg
SAR(1 g) = 0.771 W/kg; SAR(10 g) = 0.411 W/kg
Maximum value of SAR (measured) = 0.822 W/kg

GSM850 Body Rear GPRS 2TX 190ch/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.58 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.777 W/kg
SAR(1 g) = 0.505 W/kg; SAR(10 g) = 0.340 W/kg
Maximum value of SAR (measured) = 0.534 W/kg



0 dB = 0.534 W/kg = −2.72 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/15/2020
Plot No.:	82

DUT: SM-G991U ; Type: Bar

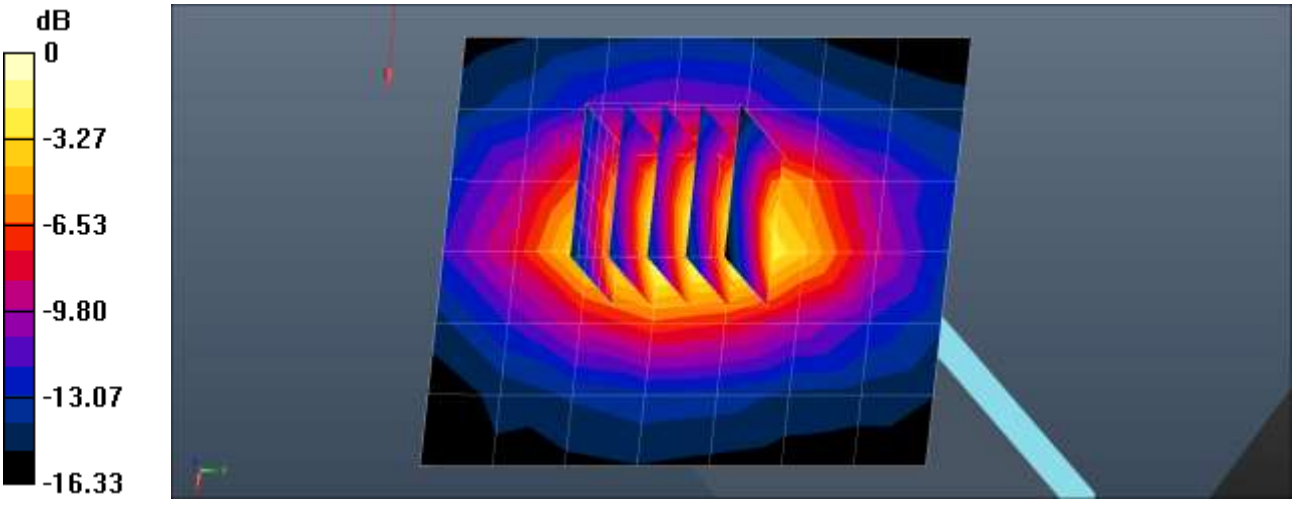
Communication System: UID 0, GSM 1900 4TX (0); Frequency: 1880 MHz;Duty Cycle: 1:2.07491
Medium parameters used: f = 1880 MHz; σ = 1.429 S/m; ε_r = 39.955; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Body Bottom 4Tx 661ch/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.519 W/kg

GSM1900 Body Bottom 4Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.00 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.719 W/kg
SAR(1 g) = 0.523 W/kg; SAR(10 g) = 0.303 W/kg
Maximum value of SAR (measured) = 0.587 W/kg



0 dB = 0.519 W/kg = −2.85 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.1℃
Ambient Temperature:	22.3℃
Test Date:	09/14/2020
Plot No.:	83

DUT: SM-G991U ; Type: Bar

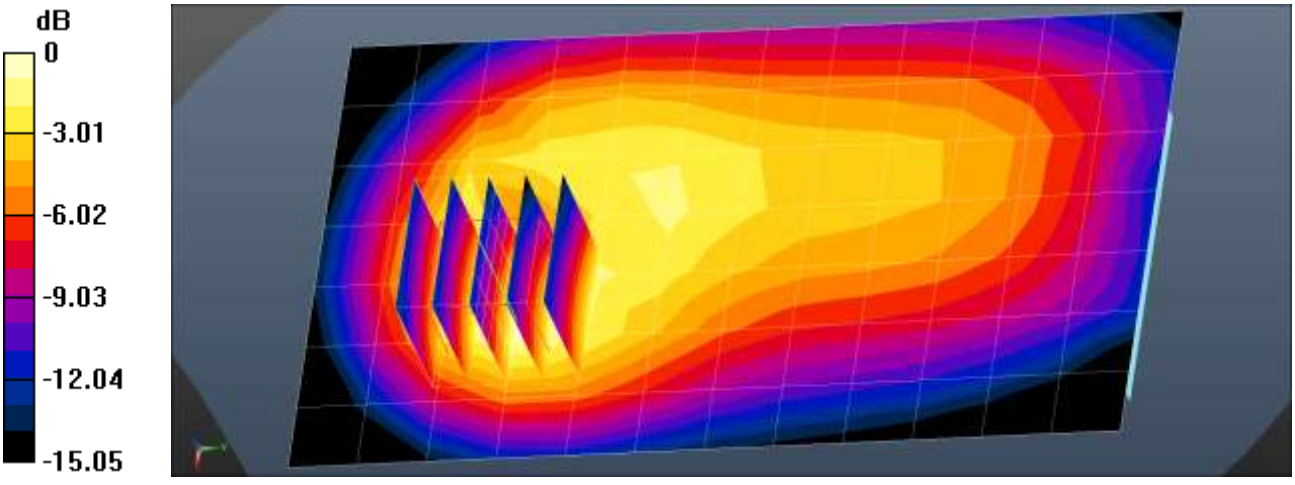
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.922 S/m; ε_r = 42.679; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA 5 Body Rear 4183ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.553 W/kg

WCDMA 5 Body Rear 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.83 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.13 W/kg
SAR(1 g) = 0.612 W/kg; SAR(10 g) = 0.339 W/kg
Maximum value of SAR (measured) = 0.650 W/kg



0 dB = 0.650 W/kg = −1.87 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.7℃
Ambient Temperature: 21.9℃
Test Date: 09/16/2020
Plot No.: 84

DUT: SM-G991U ; 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 = 1.337 S/m; ε_r = 40.861; ρ = 1000 kg/m^3
Phantom section: Flat Section

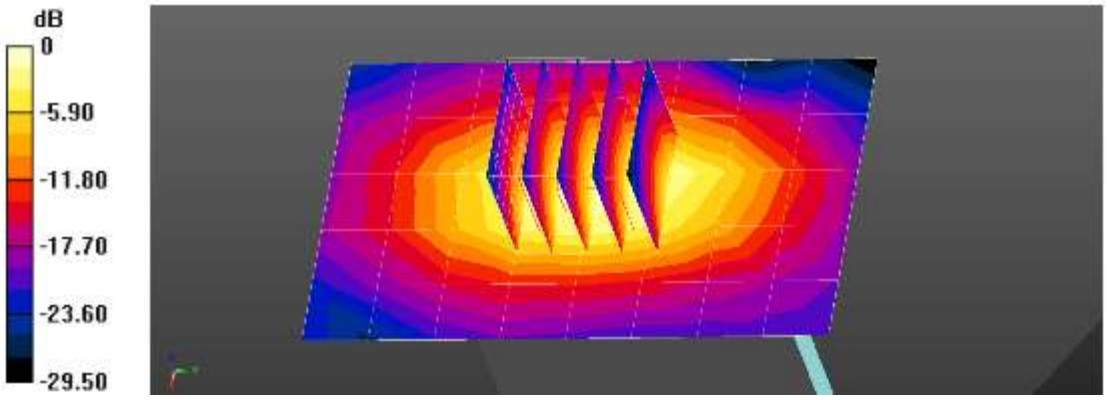
DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.82, 7.82, 7.82) @ 1732.4 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B4 Body Bottom 1412ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.906 W/kg

WCDMA B4 Body Bottom 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.51 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.32 W/kg

SAR(1 g) = 0.757 W/kg; SAR(10 g) = 0.399 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 57.9%
Maximum value of SAR (measured) = 1.11 W/kg



0 dB = 0.906 W/kg = -0.43 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.0℃
Ambient Temperature:	22.2℃
Test Date:	09/15/2020
Plot No.:	85

DUT: SM-G991U ; Type: Bar

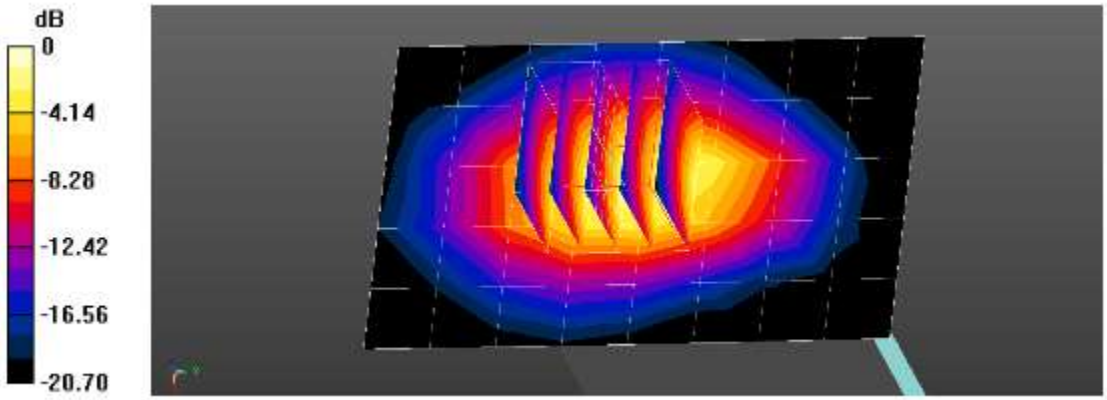
Communication System: UID 0, WCDMA1900 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.41 S/m; ε_r = 39.965; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57) @ 1880 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B2 Body Bottom 9400ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.10 W/kg

WCDMA B2 Body Bottom 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.83 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.907 W/kg; SAR(10 g) = 0.473 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 56.2%
Maximum value of SAR (measured) = 1.38 W/kg



0 dB = 1.38 W/kg = 1.40 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.7℃
Ambient Temperature: 20.8℃
Test Date: 10/05/2020
Plot No.: 86

DUT: SM-G991U ; Type: Bar

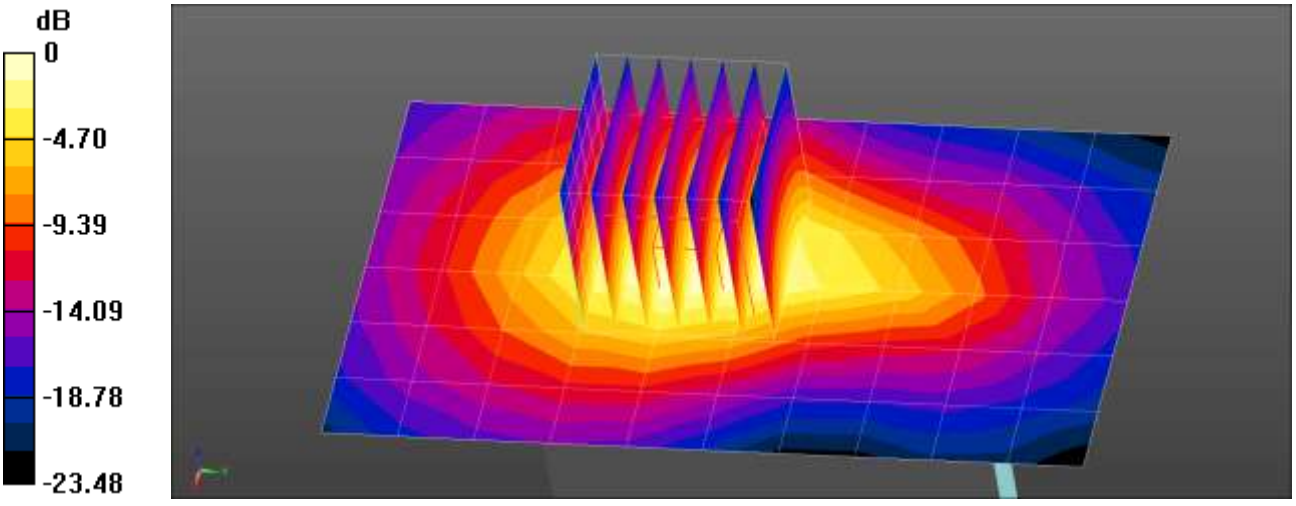
Communication System: UID 0, LTE Band7 (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2510 MHz; σ = 1.882 S/m; ε_r = 40.07; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.35, 7.35, 7.35); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 7 Body Bottom QPSK 20MHz 50RB 49offset 20850ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.881 W/kg

LTE Band 7 Body Bottom QPSK 20MHz 50RB 49offset 20850ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 20.51 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.582 W/kg; SAR(10 g) = 0.280 W/kg
Maximum value of SAR (measured) = 0.967 W/kg



0 dB = 0.881 W/kg = −0.55 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.7℃
Ambient Temperature: 22.9℃
Test Date: 09/14/2020
Plot No.: 87

DUT: SM-G991U ; Type: Bar

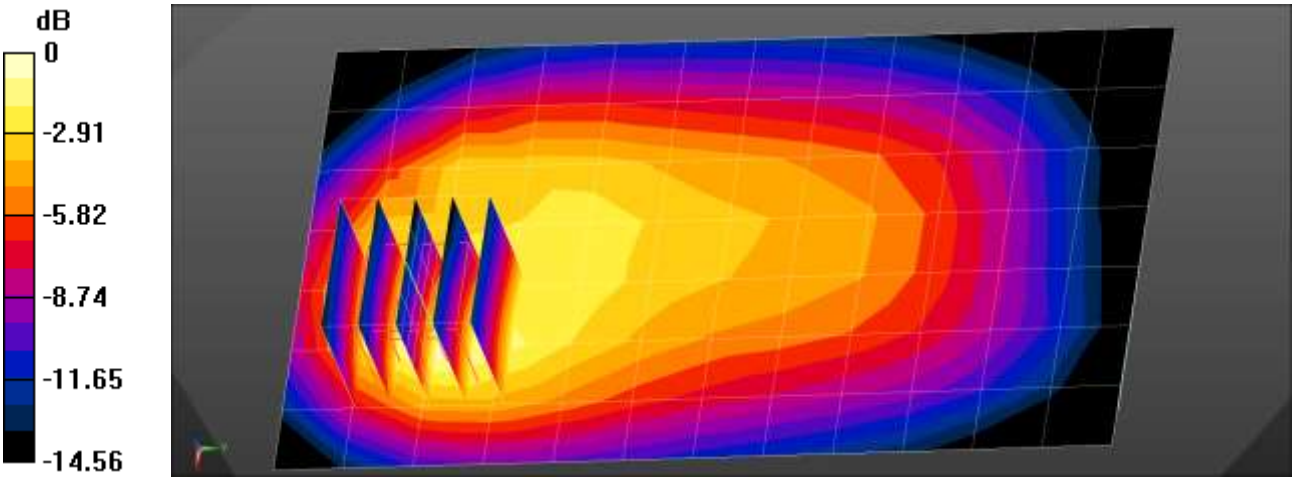
Communication System: UID 0, LTE 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.857 S/m; ε_r = 42.935; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.26, 9.26, 9.26); 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);

LTE Band 12 Body Rear QPSK 10MHz 1RB 0offset 23095ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.684 W/kg

LTE Band 12 Body Rear QPSK 10MHz 1RB 0offset 23095ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.32 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.862 W/kg
SAR(1 g) = 0.447 W/kg; SAR(10 g) = 0.251 W/kg
Maximum value of SAR (measured) = 0.699 W/kg



0 dB = 0.699 W/kg = −1.56 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.7℃
Ambient Temperature: 22.9℃
Test Date: 09/14/2020
Plot No.: 88

DUT: SM-G991U ; Type: Bar

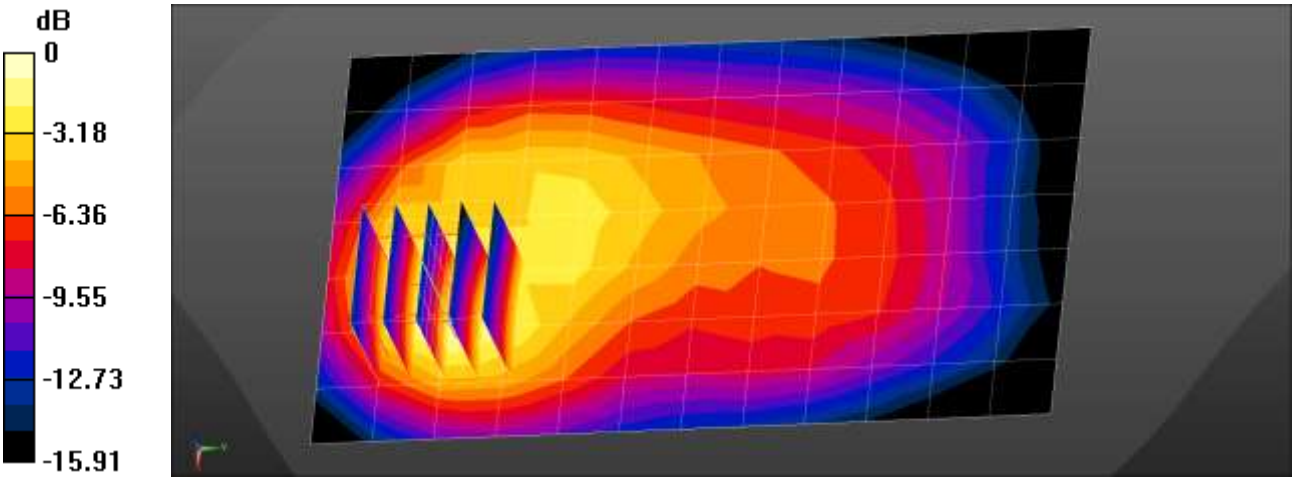
Communication System: UID 0, LTE13 (0); Frequency: 782 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 782 MHz; σ = 0.911 S/m; ε_r = 41.966; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.26, 9.26, 9.26); 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);

LTE Band 13 Body Rear QPSK 10MHz 25RB 0offset 23230ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.765 W/kg

LTE Band 13 Body Rear QPSK 10MHz 25RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 16.09 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.984 W/kg
SAR(1 g) = 0.515 W/kg; SAR(10 g) = 0.286 W/kg
Maximum value of SAR (measured) = 0.795 W/kg



0 dB = 0.795 W/kg = −1.00 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.4℃
Ambient Temperature:	22.6℃
Test Date:	09/14/2020
Plot No.:	89

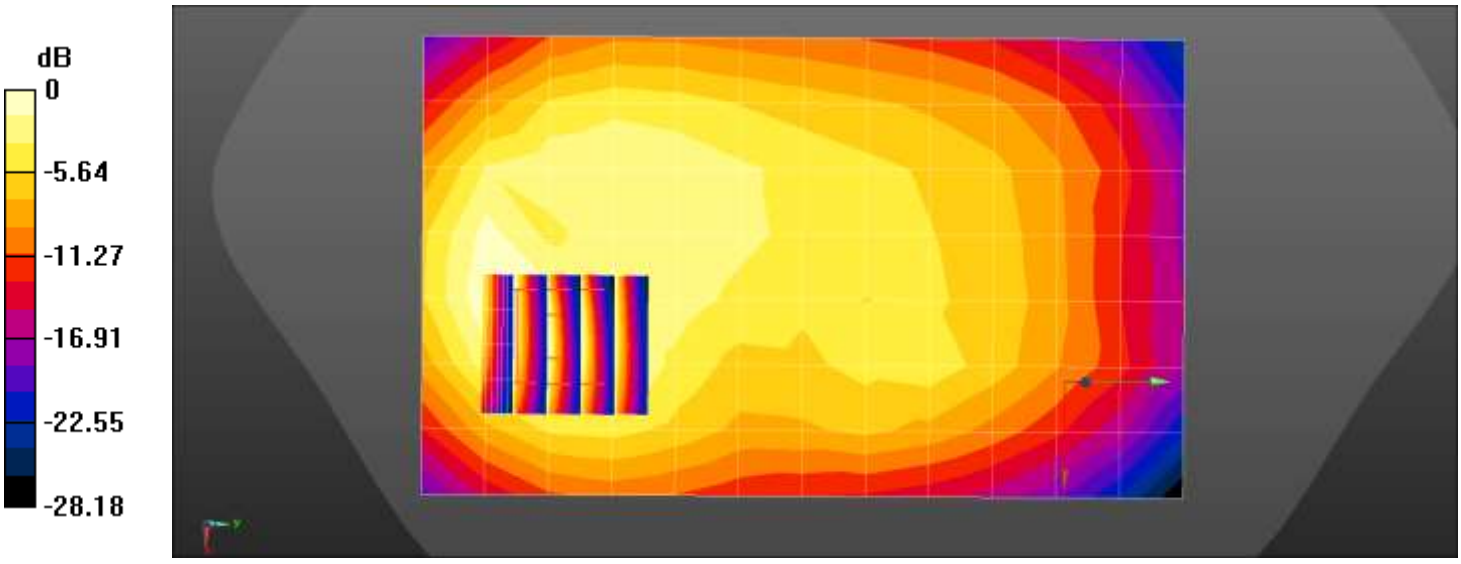
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, LTE 14 (0); Frequency: 793 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 793 MHz; σ = 0.916 S/m; ε_r = 41.738; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 793 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 14 Body Rear QPSK 10MHz 1RB 0offset 23330ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.780 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 = 16.69 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.631 W/kg; SAR(10 g) = 0.353 W/kg
Maximum value of SAR (measured) = 0.964 W/kg



0 dB = 0.780 W/kg = −1.08 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.7℃
Ambient Temperature: 22.9℃
Test Date: 09/28/2020
Plot No.: 90

DUT: SM-G991U ; Type: Bar

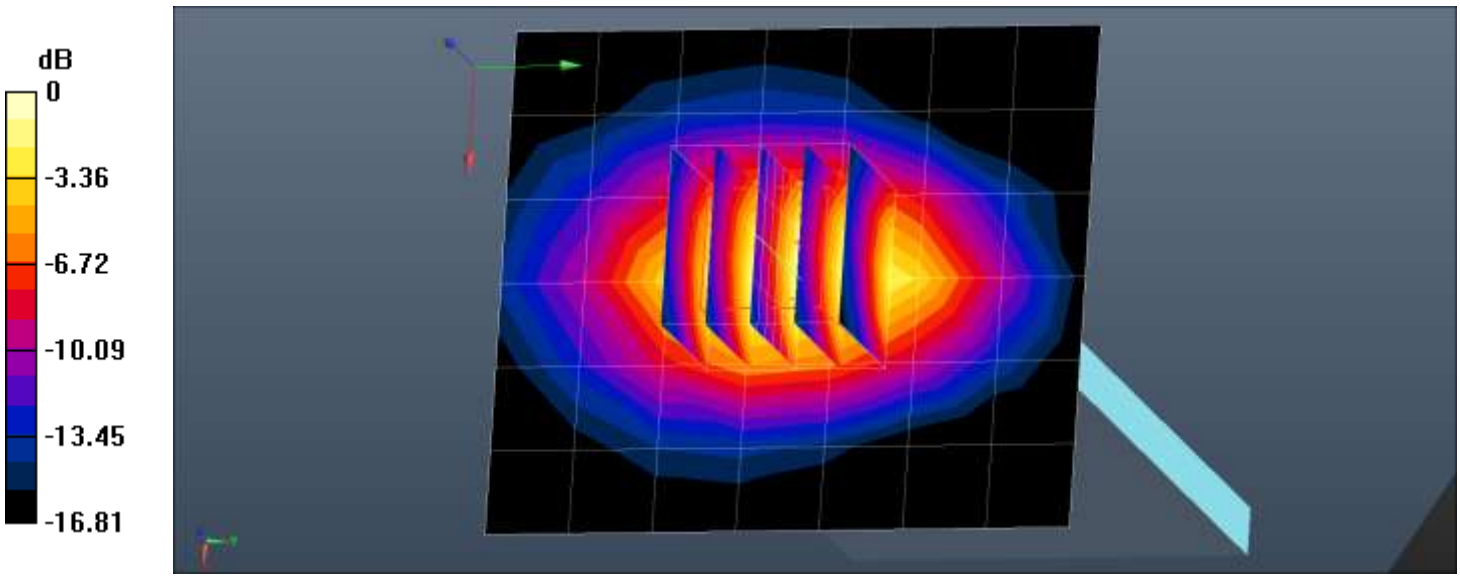
Communication System: UID 0, LTE Band 25 (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.421 S/m; ε_r = 38.708; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 25 Body Bottom QPSK 20MHz 50RB 0offset 26365ch/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.773 W/kg

LTE Band 25 Body Bottom QPSK 20MHz 50RB 0offset 26365ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.83 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.02 W/kg
SAR(1 g) = 0.699 W/kg; SAR(10 g) = 0.390 W/kg
Maximum value of SAR (measured) = 0.790 W/kg



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.7℃
Ambient Temperature: 22.9℃
Test Date: 09/28/2020
Plot No.: 91

DUT: SM-G991U ; Type: Bar

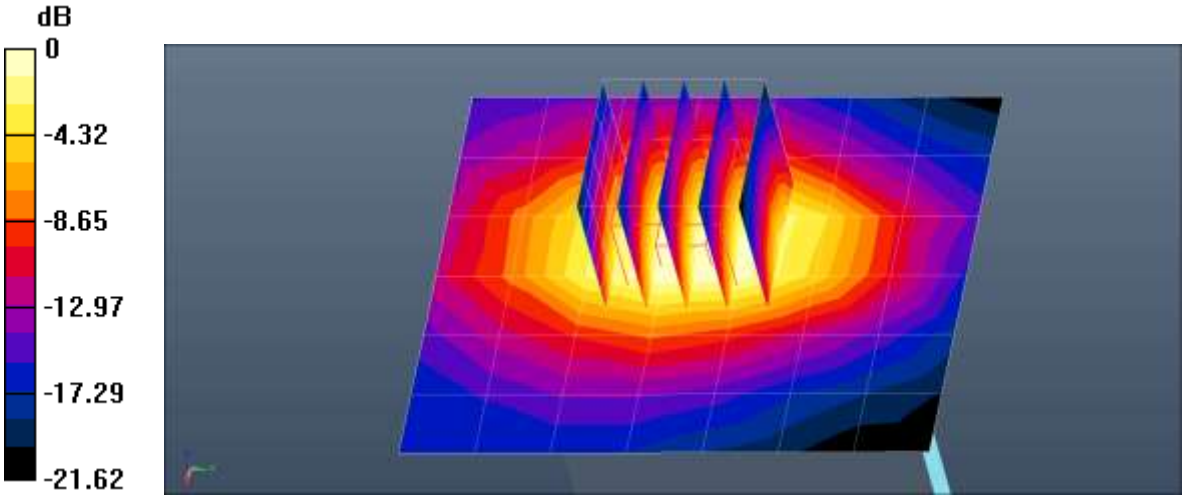
Communication System: UID 0, LTE Band 25 (0); Frequency: 1905 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1905 MHz; σ = 1.439 S/m; ε_r = 38.656; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 25 Body Bottom QPSK 20MHz 50RB 0offset 26590ch/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.575 W/kg

LTE Band 25 Body Bottom QPSK 20MHz 50RB 0offset 26590ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.17 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.969 W/kg
SAR(1 g) = 0.665 W/kg; SAR(10 g) = 0.375 W/kg
Maximum value of SAR (measured) = 0.751 W/kg



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.2℃
Test Date:	10/20/2020
Plot No.:	92

DUT: SM-G991U ; Type: Bar

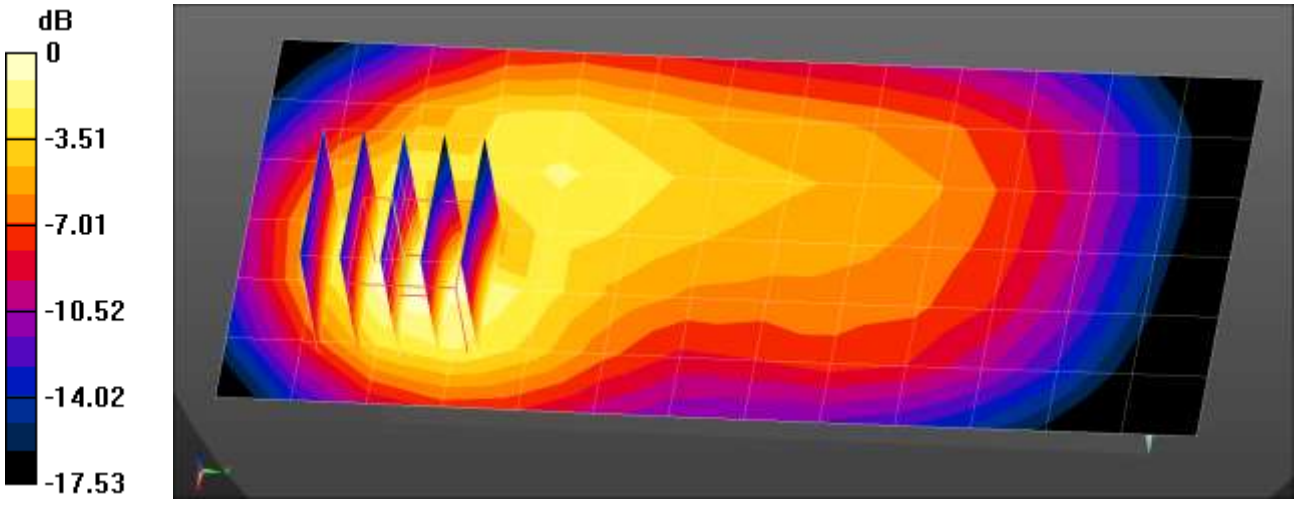
Communication System: UID 0, LTE Band 5 (0); Frequency: 831.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.6 MHz; σ = 0.879 S/m; ε_r = 41.778; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 5 Body Rear QPSK 10MHz 1RB 49offset 20476ch/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.929 W/kg

LTE Band 5 Body Rear QPSK 10MHz 1RB 49offset 20476ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.73 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.641 W/kg; SAR(10 g) = 0.353 W/kg
Maximum value of SAR (measured) = 0.977 W/kg



0 dB = 0.977 W/kg = −0.10 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.4℃
Test Date:	10/02/2020
Plot No.:	93

DUT: SM-G991U ; Type: Bar

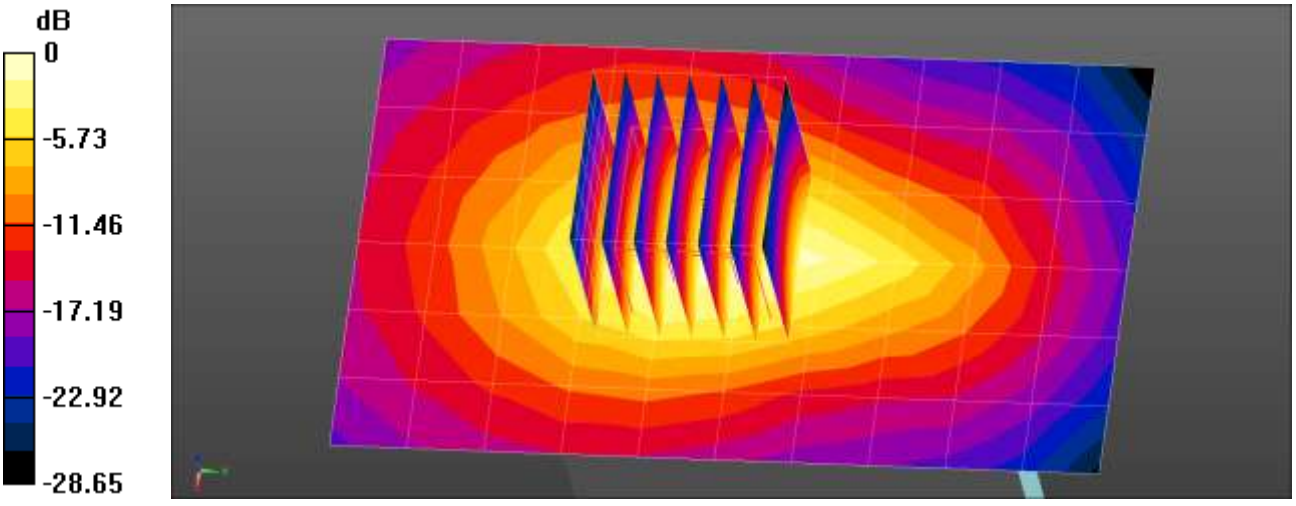
Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.648 S/m; ε_r = 40.57; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.73, 7.73, 7.73); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 30 Body Bottom QPSK 10MHz 25RB 0offset 27710ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.20 W/kg

LTE Band 30 Body Bottom QPSK 10MHz 25RB 0offset 27710ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 28.18 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.57 W/kg
SAR(1 g) = 0.780 W/kg; SAR(10 g) = 0.381 W/kg
Maximum value of SAR (measured) = 1.27 W/kg



0 dB = 1.20 W/kg = 0.79 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.6℃
Ambient Temperature:	21.8℃
Test Date:	10/30/2020
Plot No.:	94

DUT: SM-G991U ; Type: Bar

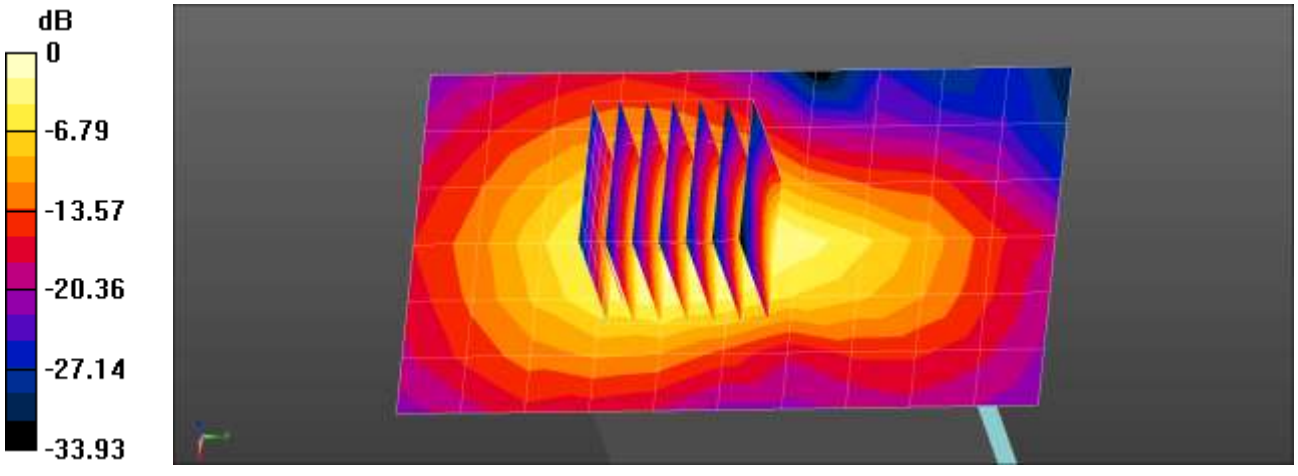
Communication System: UID 0, LTE Band 40 (0); Frequency: 2310 MHz;Duty Cycle: 1:1.58125
Medium parameters used: f = 2310 MHz; σ = 1.647 S/m; ε_r = 40.498; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

LTE Band 40 Body Bottom QPSK 10MHz 1RB 24offset 38750ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.240 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 = 11.77 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.318 W/kg
SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.073 W/kg
Maximum value of SAR (measured) = 0.252 W/kg



0 dB = 0.240 W/kg = −6.19 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.6℃
Ambient Temperature: 21.8℃
Test Date: 10/30/2020
Plot No.: 95

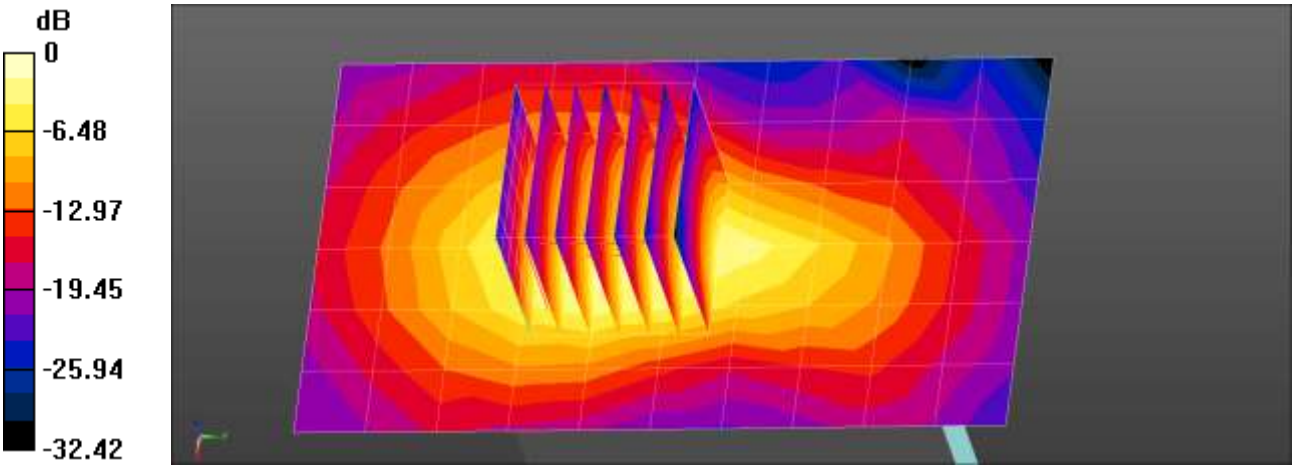
DUT: SM-G991U ; Type: Bar Communication System: UID 0, LTE Band 40 (0); Frequency: 2310 MHz;Duty Cycle: 1:1.58125
Medium parameters used: f = 2310 MHz; σ = 1.647 S/m; ε_r = 40.498; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

LTE Band 40 Body Bottom QPSK 10MHz 25RB 12offset 38750ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.199 W/kg

LTE Band 40 Body Bottom QPSK 10MHz 25RB 12offset 38750ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.67 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.265 W/kg
SAR(1 g) = 0.127 W/kg; SAR(10 g) = 0.061 W/kg
Maximum value of SAR (measured) = 0.211 W/kg



0 dB = 0.199 W/kg = −7.01 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.6℃
Ambient Temperature:	21.8℃
Test Date:	10/30/2020
Plot No.:	96

DUT: SM-G991U ; Type: Bar

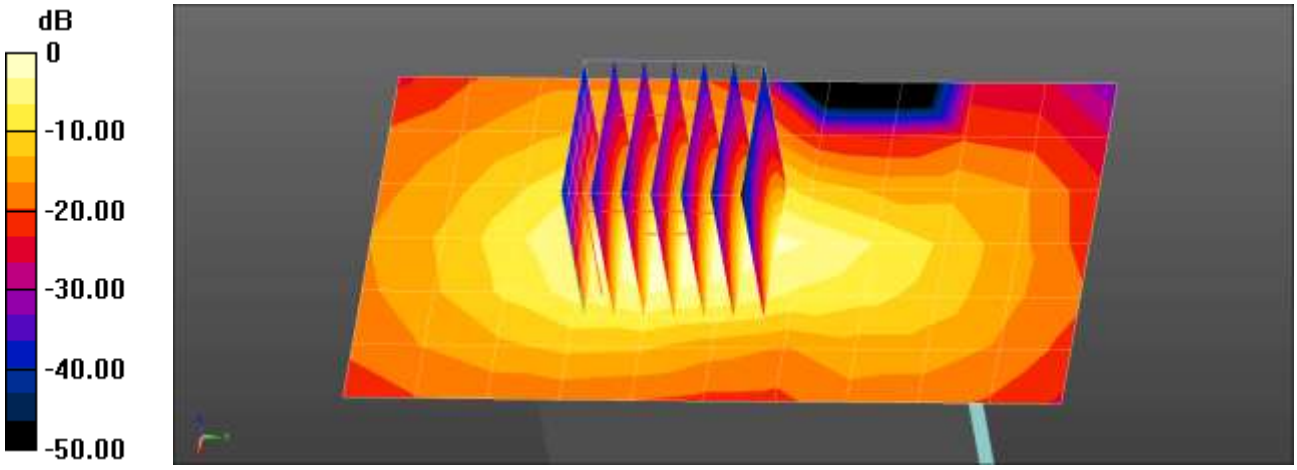
Communication System: UID 0, LTE Band 40 (0); Frequency: 2355 MHz;Duty Cycle: 1:1.58125
Medium parameters used (interpolated): f = 2355 MHz; σ = 1.698 S/m; ε_r = 40.374; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

LTE Band 40 Body Bottom QPSK 10MHz 1RB 24offset 39200ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.277 W/kg

LTE Band 40 Body Bottom QPSK 10MHz 1RB 24offset 39200ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.36 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 0.369 W/kg
SAR(1 g) = 0.175 W/kg; SAR(10 g) = 0.082 W/kg
Maximum value of SAR (measured) = 0.291 W/kg



0 dB = 0.277 W/kg = −5.58 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	10/20/2020
Plot No.:	97

DUT: SM-G991U ; Type: Bar

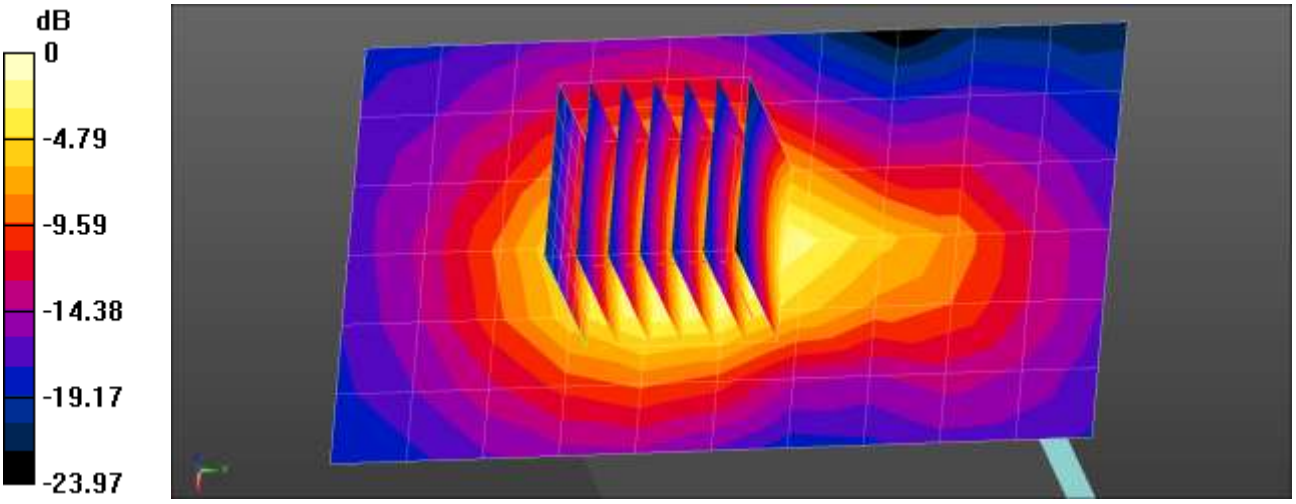
Communication System: UID 0, LTE Band41 (0); Frequency: 2593 MHz;Duty Cycle: 1:1.58052
Medium parameters used (interpolated): f = 2593 MHz; σ = 2.005 S/m; ε_r = 39.102; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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 Body Bottom QPSK 20MHz 50RB 0offset 40620ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.899 W/kg

LTE Band 41 Body Bottom QPSK 20MHz 50RB 0offset 40620ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 22.07 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.781 W/kg; SAR(10 g) = 0.362 W/kg
Maximum value of SAR (measured) = 1.03 W/kg



0 dB = 0.899 W/kg = −0.46 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: 10/20/2020
Plot No.: 98

DUT: SM-G991U ; Type: Bar

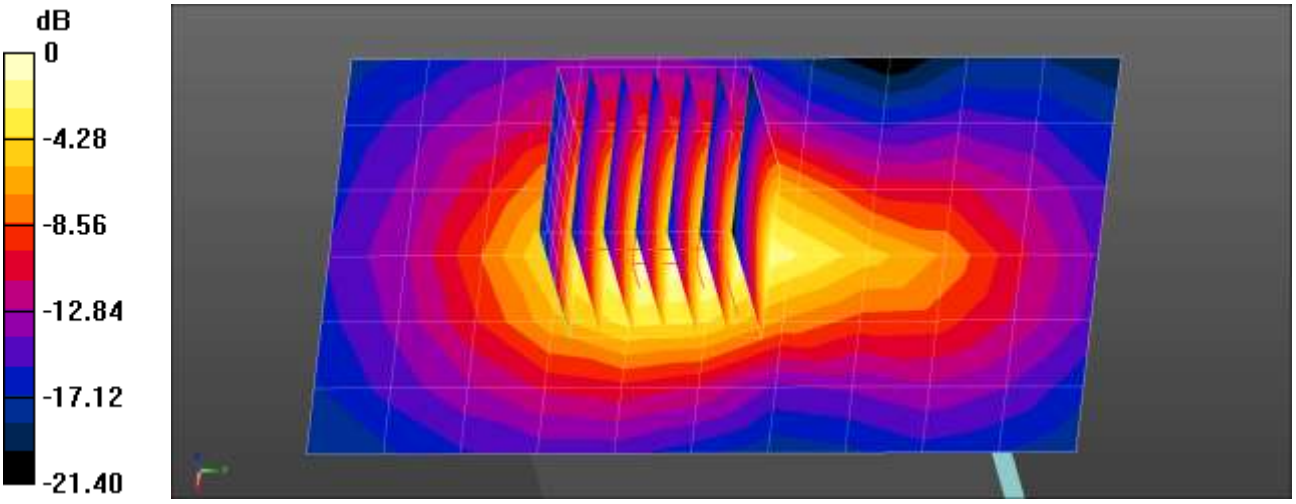
Communication System: UID 0, LTE Band41 (0); Frequency: 2593 MHz;Duty Cycle: 1:1:2.31
Medium parameters used (interpolated): f = 2593 MHz; σ = 2.005 S/m; ε_r = 39.102; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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 Body Bottom QPSK 20MHz 1RB 0offset 40620ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.877 W/kg

LTE Band 41 Body Bottom QPSK 20MHz 1RB 0offset 40620ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.58 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.723 W/kg; SAR(10 g) = 0.341 W/kg
Maximum value of SAR (measured) = 0.947 W/kg



0 dB = 0.877 W/kg = −0.57 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.4℃
Test Date:	10/02/2020
Plot No.:	99

DUT: SM-G991U ; Type: Bar

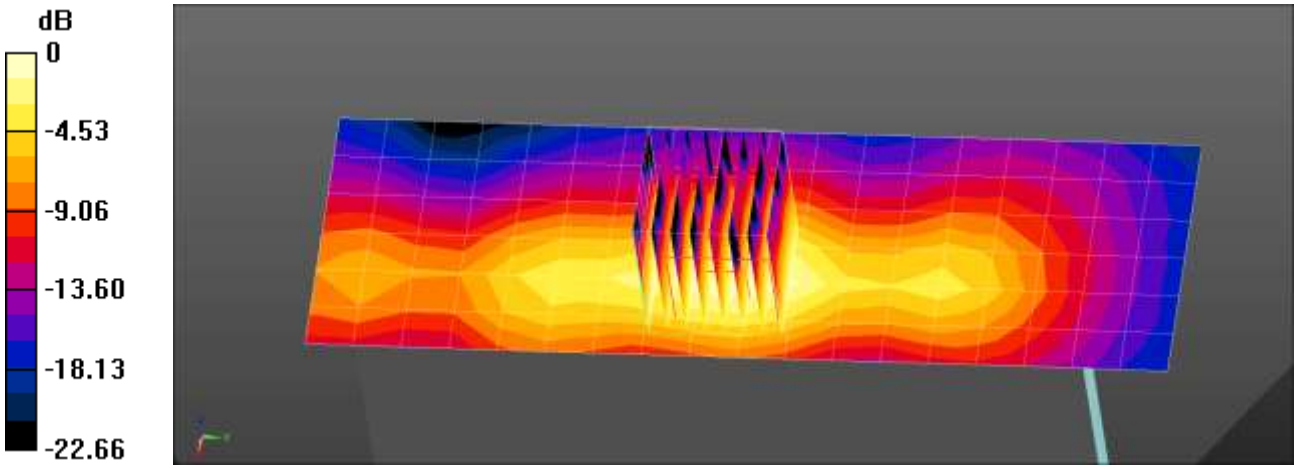
Communication System: UID 0, LTE 48(FCC) (0); Frequency: 3690 MHz;Duty Cycle: 1:1.58016
Medium parameters used: f = 3690 MHz; σ = 3.148 S/m; ε_r = 37.985; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(6.87, 6.87, 6.87); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 48 Body Right QPSK 20MHz 1RB 0offset 56640ch/Area Scan (7x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.884 W/kg

LTE Band 48 Body Right QPSK 20MHz 1RB 0offset 56640ch/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 11.82 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.37 W/kg
SAR(1 g) = 0.473 W/kg; SAR(10 g) = 0.190 W/kg
Maximum value of SAR (measured) = 0.924 W/kg



0 dB = 0.884 W/kg = −0.54 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: 10/27/2020
Plot No.: 100

DUT: SM-G991U ; Type: Bar

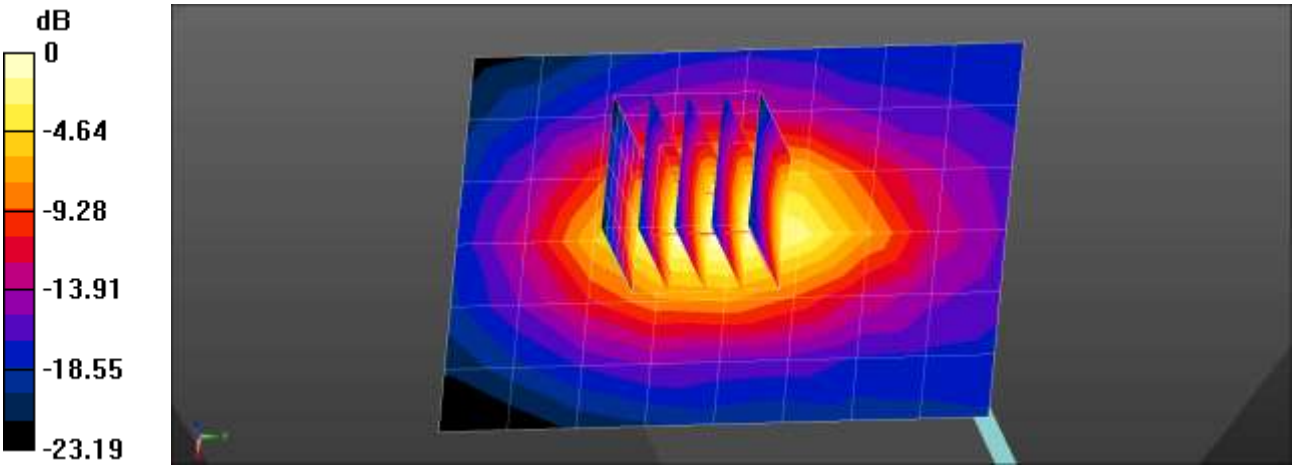
Communication System: UID 0, LTE Band 66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.334 S/m; ε_r = 40.424; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.24, 5.24, 5.24); 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 Band 66 Body Bottom 10MHz QPSK 1RB 0offset 132322ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.797 W/kg

LTE Band 66 Body Bottom 10MHz QPSK 1RB 0offset 132322ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.91 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.667 W/kg; SAR(10 g) = 0.356 W/kg
Maximum value of SAR (measured) = 0.825 W/kg



0 dB = 0.797 W/kg = −0.98 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.3℃
Ambient Temperature:	21.5℃
Test Date:	10/27/2020
Plot No.:	101

DUT: SM-G991U ; Type: Bar

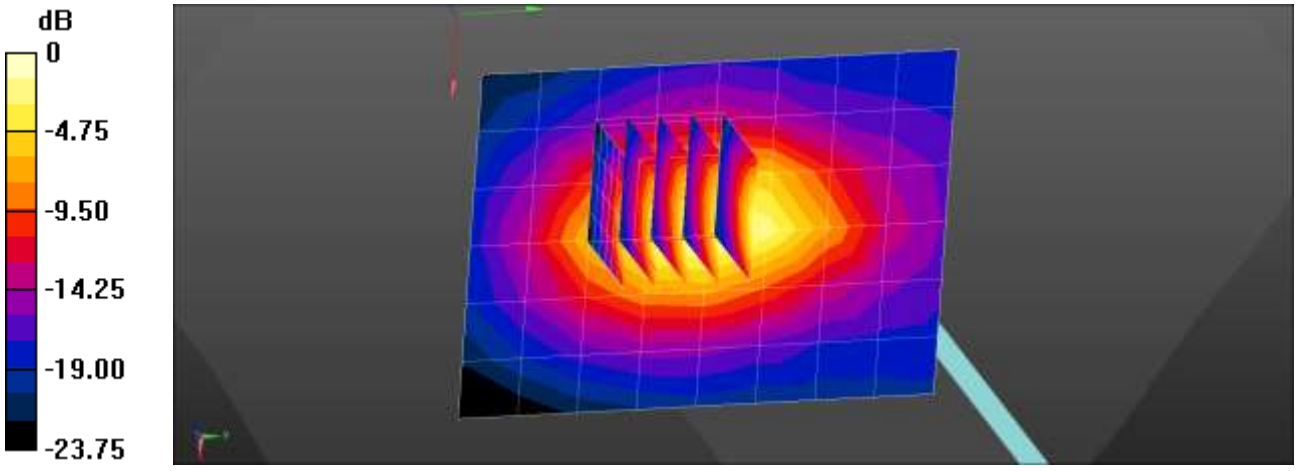
Communication System: UID 0, LTE Band 66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.334 S/m; ε_r = 40.424; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.24, 5.24, 5.24); 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 Band 66 Body Bottom 20MHz QPSK 1RB 99offset 132322ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.816 W/kg

LTE Band 66 Body Bottom 20MHz QPSK 1RB 99offset 132322ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.67 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 1.15 W/kg
SAR(1 g) = 0.679 W/kg; SAR(10 g) = 0.362 W/kg
Maximum value of SAR (measured) = 0.832 W/kg



0 dB = 0.816 W/kg = −0.88 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.4℃
Ambient Temperature: 22.6℃
Test Date: 09/14/2020
Plot No.: 102

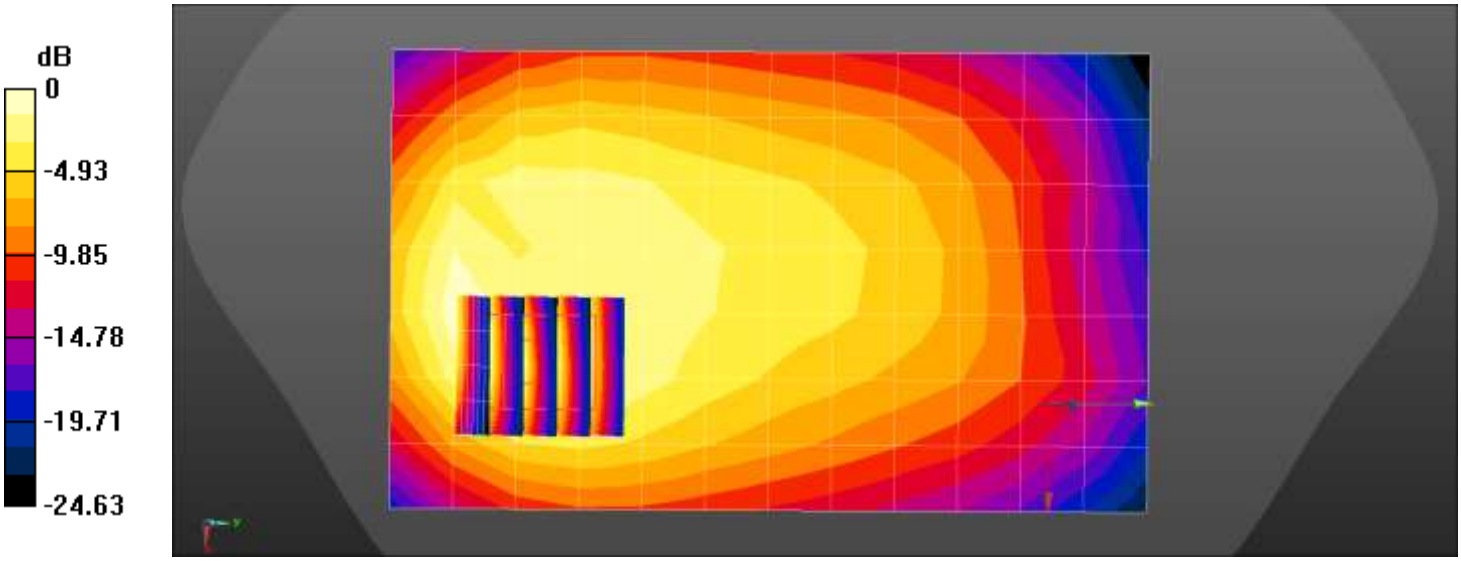
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, LTE 71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (extrapolated): f = 680.5 MHz; σ = 0.81 S/m; ε_r = 43.359; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 680.5 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 71 Body Rear QPSK 20MHz 1RB 0offset 133297ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.492 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 = 16.20 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.675 W/kg
SAR(1 g) = 0.385 W/kg; SAR(10 g) = 0.218 W/kg
Maximum value of SAR (measured) = 0.544 W/kg



0 dB = 0.492 W/kg = −3.08 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.6℃
Ambient Temperature: 21.8℃
Test Date: 10/19/2020
Plot No.: 103

DUT: SM-G991U ; Type: Bar

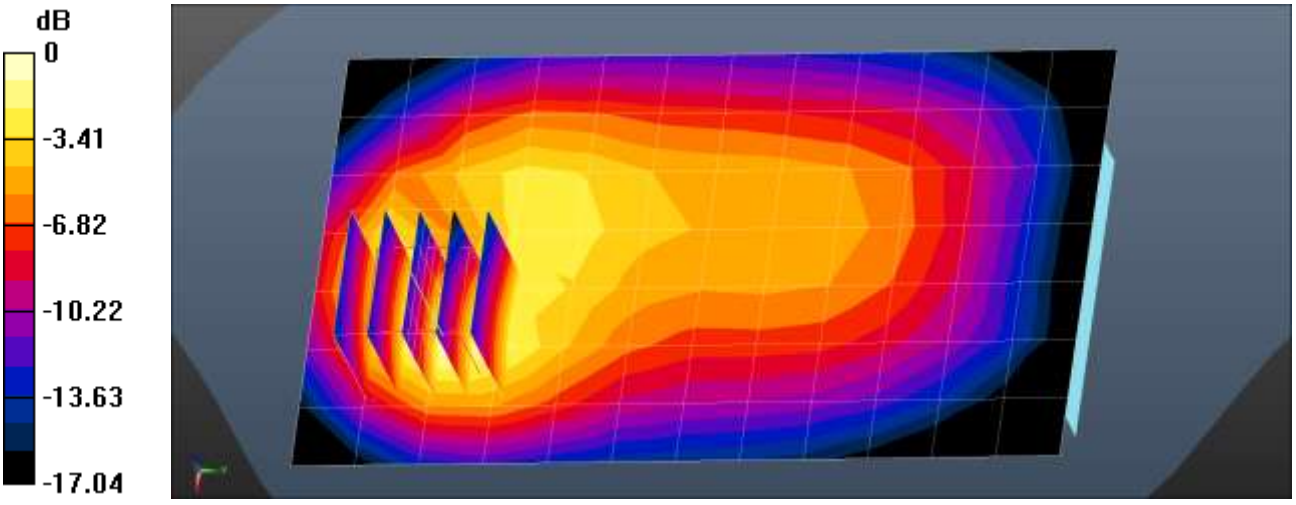
Communication System: UID 0, NR n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.929 S/m; ε_r = 42.321; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.2, 9.2, 9.2); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n5 Body Rear QPSK 20MHz 50RB 28offset 167300ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.738 W/kg

n5 Body Rear QPSK 20MHz 50RB 28offset 167300ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.89 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 0.973 W/kg
SAR(1 g) = 0.529 W/kg; SAR(10 g) = 0.294 W/kg
Maximum value of SAR (measured) = 0.807 W/kg



0 dB = 0.807 W/kg = −0.93 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.0℃
Test Date: 10/20/2020
Plot No.: 104

DUT: SM-G991U ; Type: Bar

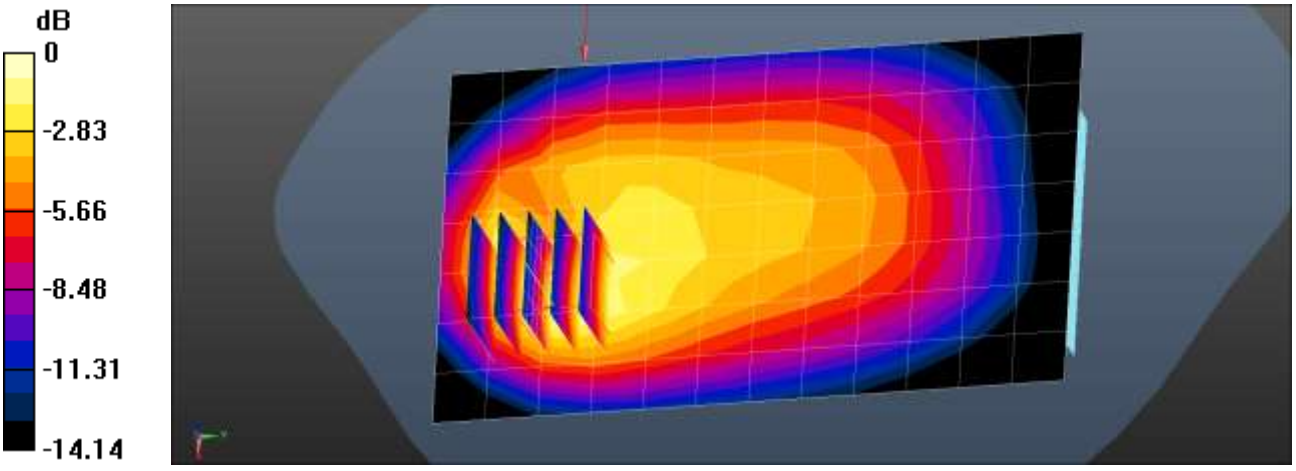
Communication System: UID 0, NR n12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.856 S/m; ε_r = 41.538; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.51, 9.51, 9.51); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n12 Body Rear QPSK 15MHz 36RB 22offset 141500ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.469 W/kg

n12 Body Rear QPSK 15MHz 36RB 22offset 141500ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 18.07 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 0.651 W/kg
SAR(1 g) = 0.360 W/kg; SAR(10 g) = 0.211 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:	22.0℃
Ambient Temperature:	22.2℃
Test Date:	09/28/2020
Plot No.:	105

DUT: SM-G991U ; Type: Bar

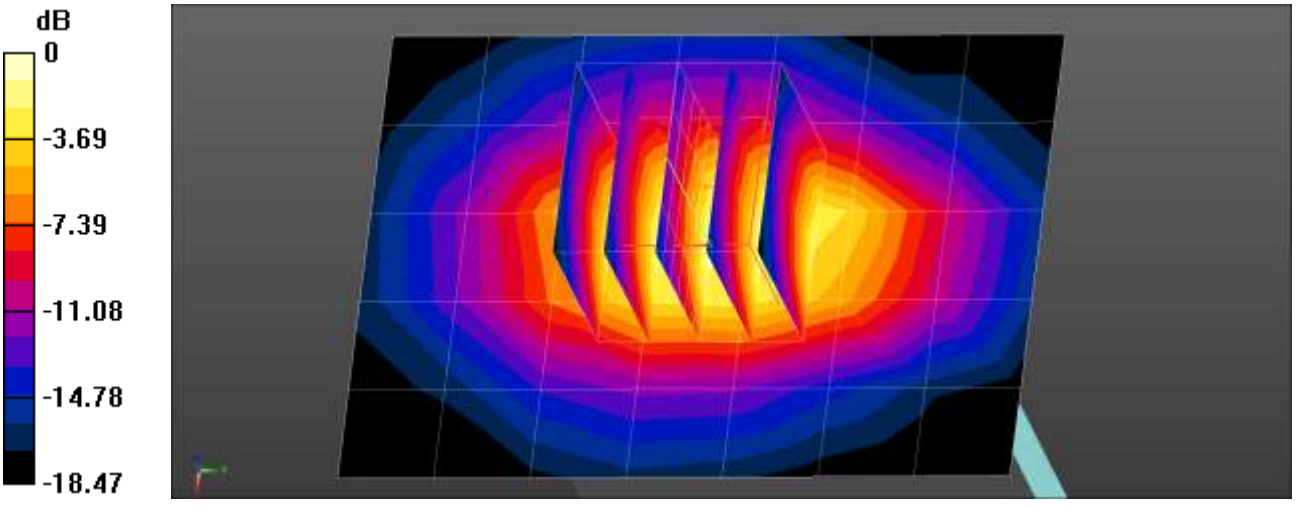
Communication System: UID 0, NR n25 (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.432 S/m; ε_r = 39.951; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0 (Left)
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 25 Body Bottom DFT-S QPSK 40MHz 1RB 1offset 376500ch/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.926 W/kg

NR Band 25 Body Bottom DFT-S QPSK 40MHz 1RB 1offset 376500ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.43 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 1.39 W/kg
SAR(1 g) = 0.805 W/kg; SAR(10 g) = 0.436 W/kg
Maximum value of SAR (measured) = 1.19 W/kg



0 dB = 1.19 W/kg = 0.76 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.0℃
Ambient Temperature: 20.1℃
Test Date: 10/15/2020
Plot No.: 106

DUT: SM-G991U ; Type: Bar

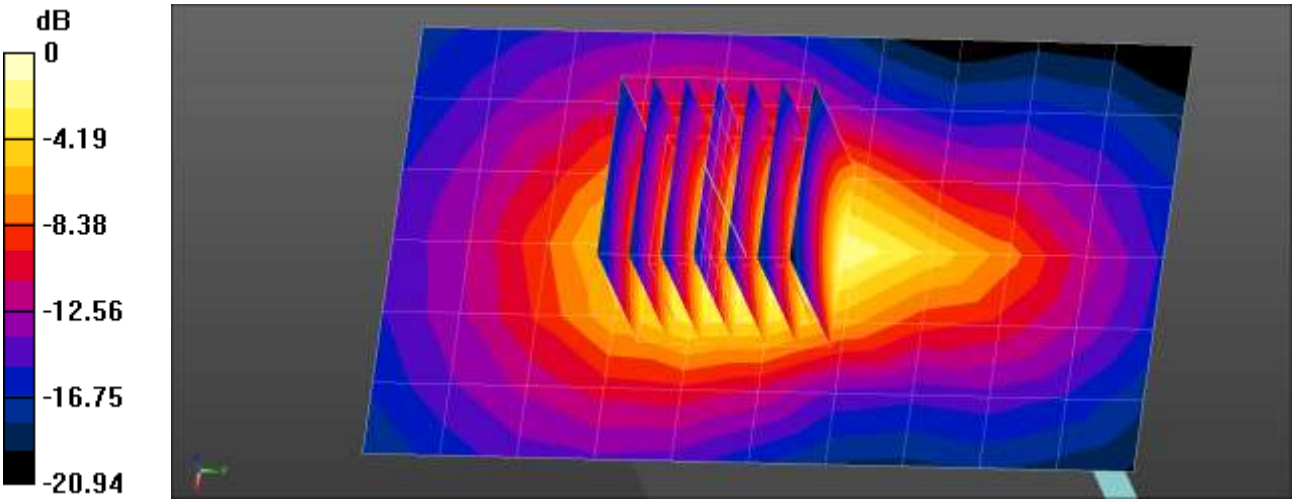
Communication System: UID 0, n30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.641 S/m; ε_r = 40.475; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.87, 4.87, 4.87); 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);

n30 Body Bottom QPSK 10MHz 1RB 50offset 462000ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.941 W/kg

n30 Body Bottom QPSK 10MHz 1RB 50offset 462000ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 24.80 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.42 W/kg
SAR(1 g) = 0.765 W/kg; SAR(10 g) = 0.384 W/kg
Maximum value of SAR (measured) = 0.976 W/kg



0 dB = 0.976 W/kg = −0.11 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.0℃
Ambient Temperature: 20.1℃
Test Date: 10/15/2020
Plot No.: 107

DUT: SM-G991U ; Type: Bar

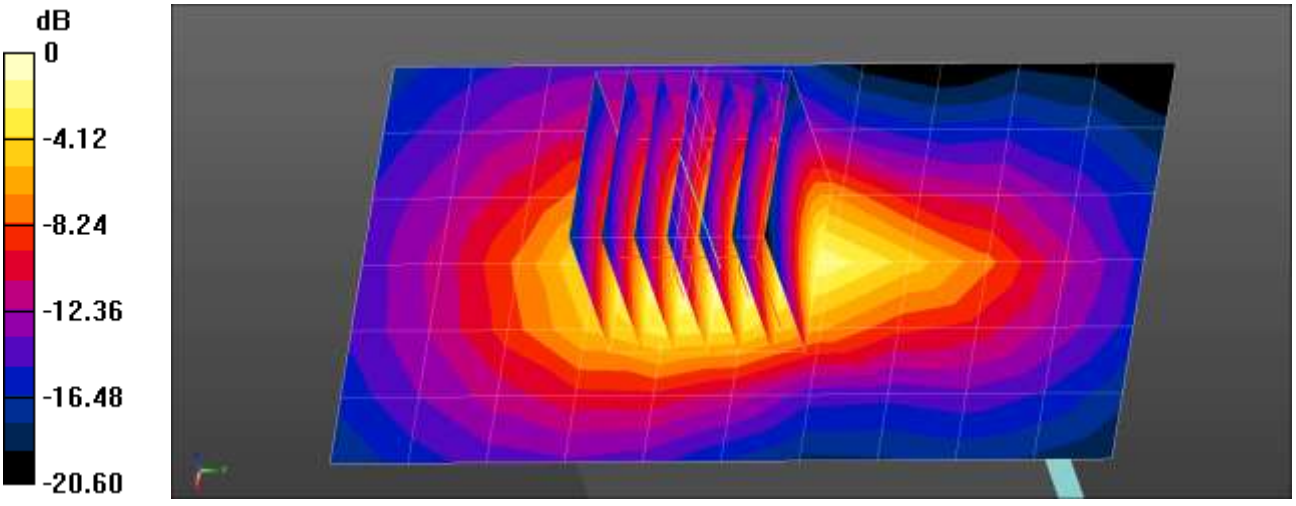
Communication System: UID 0, n30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.641 S/m; ε_r = 40.475; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.87, 4.87, 4.87); 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);

n30 Body Bottom QPSK 10MHz 1RB 1offset 462000ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.848 W/kg

n30 Body Bottom QPSK 10MHz 1RB 1offset 462000ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.50 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.696 W/kg; SAR(10 g) = 0.352 W/kg
Maximum value of SAR (measured) = 0.889 W/kg



0 dB = 0.889 W/kg = −0.51 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.9℃
Ambient Temperature: 21.0℃
Test Date: 10/22/2020
Plot No.: 108

DUT: SM-G991U ; Type: Bar

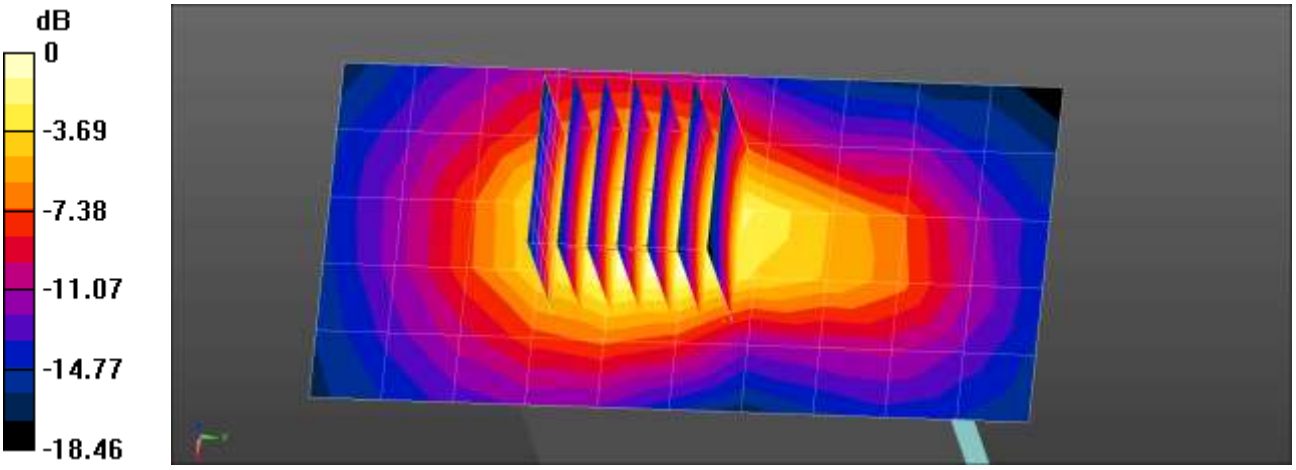
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.925 S/m; ε_r = 40.851; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 Body Bottom QPSK 100MHz 135RB 69offset 518598ch/Area Scan (6x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.258 W/kg

n41 Body Bottom QPSK 100MHz 135RB 69offset 518598ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 12.70 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.496 W/kg
SAR(1 g) = 0.245 W/kg; SAR(10 g) = 0.115 W/kg
Maximum value of SAR (measured) = 0.319 W/kg



0 dB = 0.258 W/kg = −5.89 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: 10/20/2020
Plot No.: 109

DUT: SM-G991U ; Type: Bar

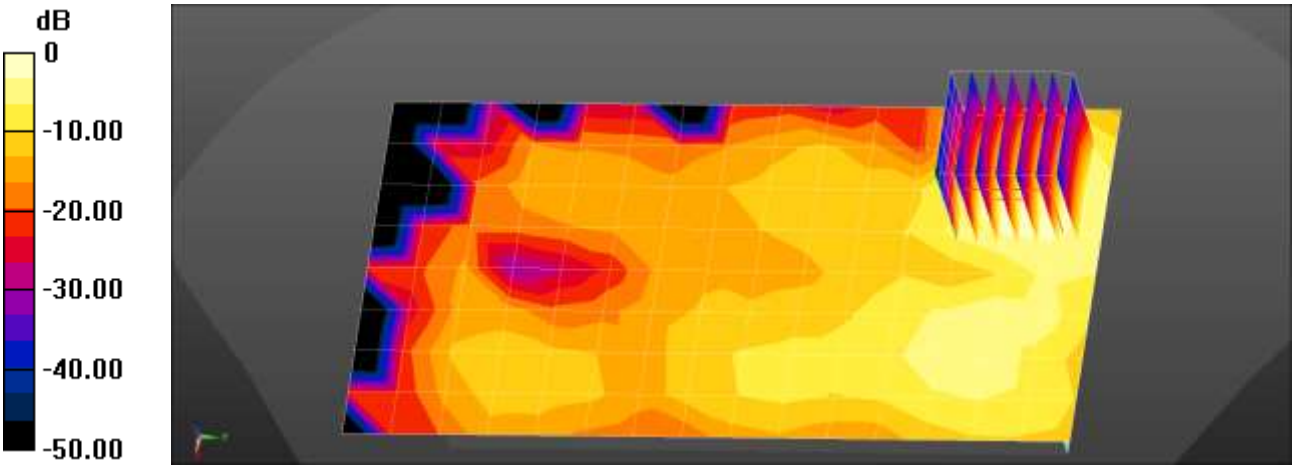
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.979 S/m; ε_r = 39.161; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 Body Rear QPSK 100MHz 135RB 69offset 518598ch 185 re/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.140 W/kg

n41 Body Rear QPSK 100MHz 135RB 69offset 518598ch 185 re/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.504 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 0.213 W/kg
SAR(1 g) = 0.108 W/kg; SAR(10 g) = 0.052 W/kg
Maximum value of SAR (measured) = 0.136 W/kg



0 dB = 0.140 W/kg = −8.55 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.3℃
Ambient Temperature: 20.4℃
Test Date: 10/21/2020
Plot No.: 110

DUT: SM-G991U ; Type: Bar

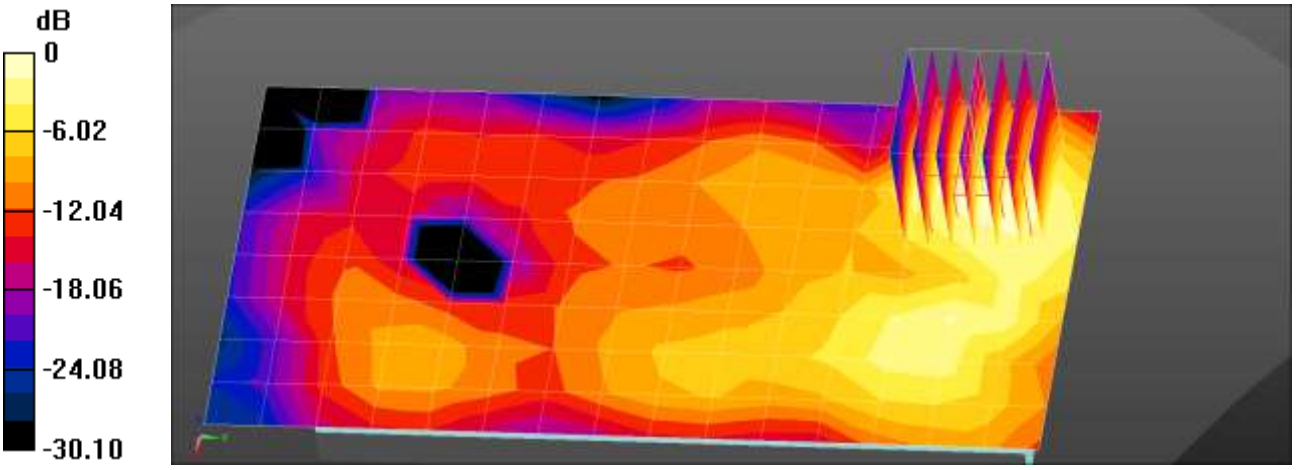
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.935 S/m; ε_r = 38.743; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 Body Rear QPSK 100MHz 135RB 69offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.131 W/kg

n41 Body Rear QPSK 100MHz 135RB 69offset 518598ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.207 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 0.213 W/kg
SAR(1 g) = 0.108 W/kg; SAR(10 g) = 0.051 W/kg
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: 21.1℃
Ambient Temperature: 21.3℃
Test Date: 10/13/2020
Plot No.: 111

DUT: SM-G991U ; Type: Bar

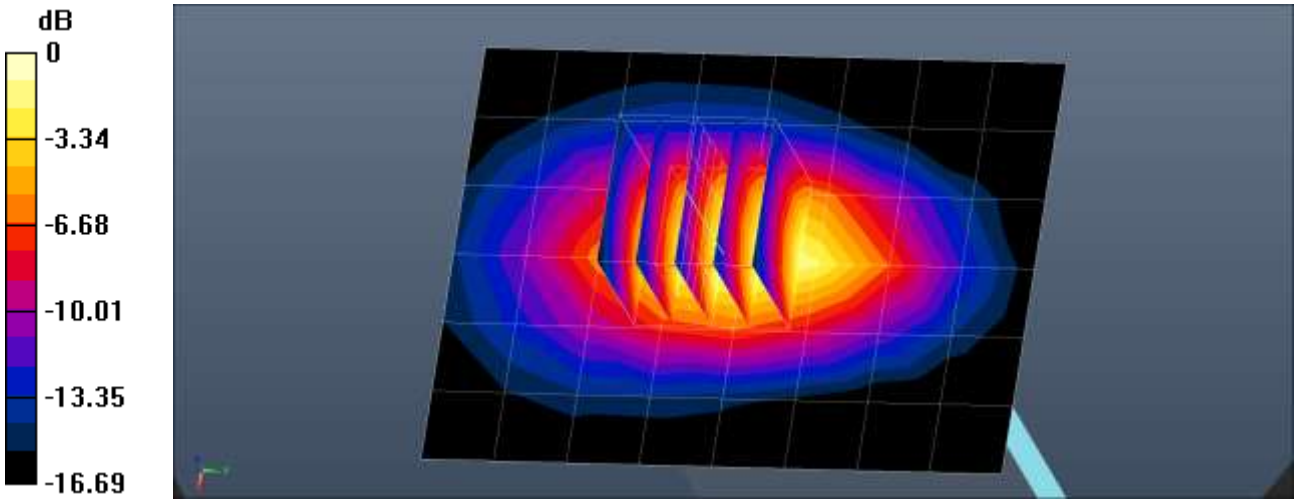
Communication System: UID 0, n66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.334 S/m; ε_r = 40.439; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(8.2, 8.2, 8.2); Calibrated: 2020-05-29;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n66 Body Bottom DFT-s QPSK 40MHz 1RB 1offset 349000ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.890 W/kg

n66 Body Bottom DFT-s QPSK 40MHz 1RB 1offset 349000ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.85 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.807 W/kg; SAR(10 g) = 0.443 W/kg
Maximum value of SAR (measured) = 0.896 W/kg



0 dB = 0.896 W/kg = −0.48 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.1℃
Ambient Temperature: 21.3℃
Test Date: 10/21/2020
Plot No.: 112

DUT: SM-G991U ; Type: Bar

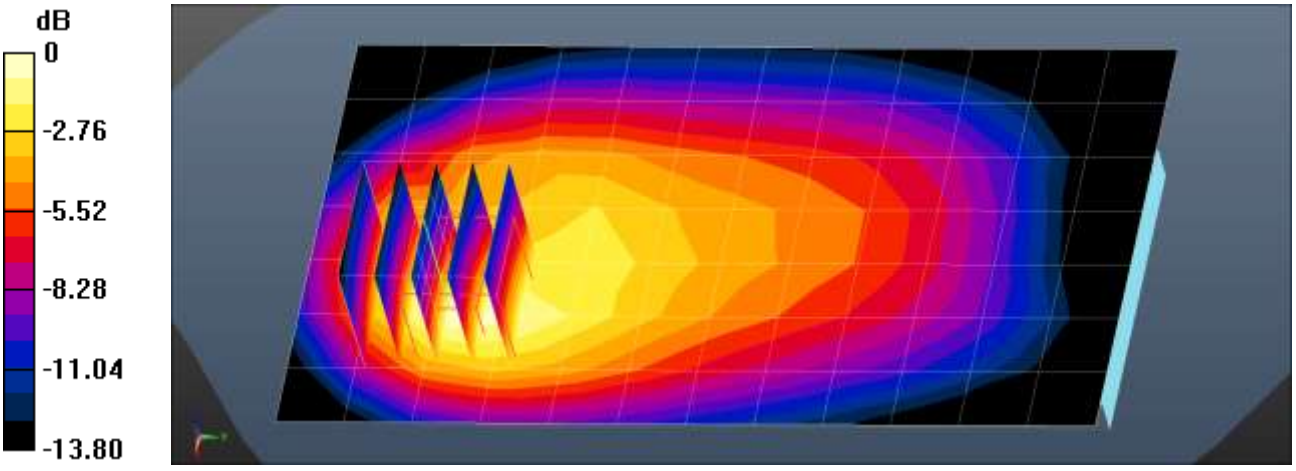
Communication System: UID 0, NR n71 (0); Frequency: 680.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.83 S/m; ε_r = 41.968; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.51, 9.51, 9.51); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n71 Body Rear QPSK 20MHz 50RB 28offset 136100ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.424 W/kg

n71 Body Rear QPSK 20MHz 50RB 28offset 136100ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 14.67 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.519 W/kg
SAR(1 g) = 0.292 W/kg; SAR(10 g) = 0.173 W/kg
Maximum value of SAR (measured) = 0.438 W/kg



0 dB = 0.438 W/kg = −3.59 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.6℃
Ambient Temperature:	22.8℃
Test Date:	10/21/2020
Plot No.:	113

DUT: SM-G991U ; Type: Bar

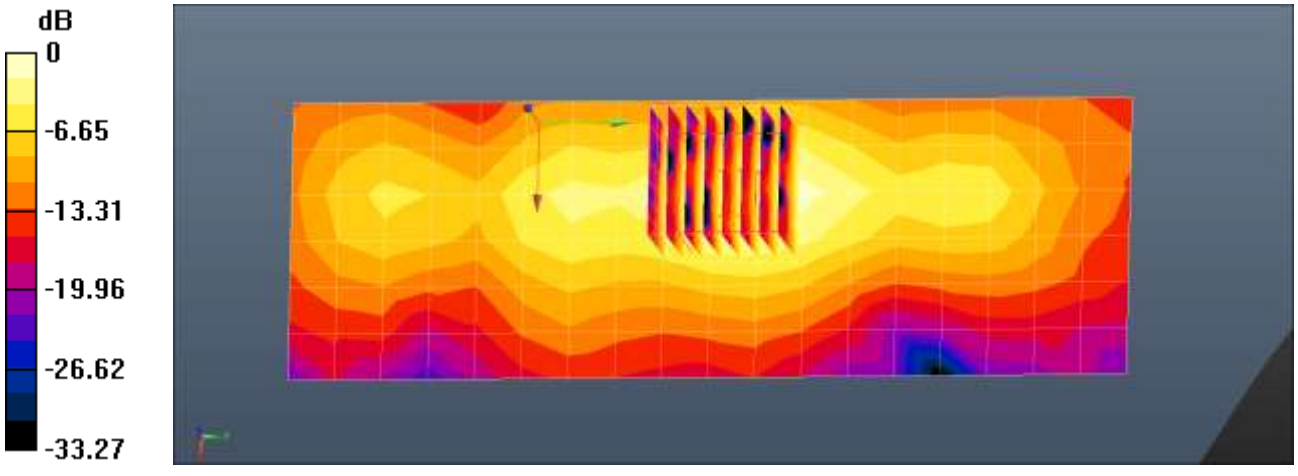
Communication System: UID 0, NR Band 77 (0); Frequency: 3930 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3930 MHz; σ = 3.302 S/m; ε_r = 37.818; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(6.6, 6.6, 6.6); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

NR n77 Body Right DFT-s QPSK 100MHz 135RB 69offset 662000ch/Area Scan (7x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.407 W/kg

NR n77 Body Right DFT-s QPSK 100MHz 135RB 69offset 662000ch/Zoom Scan (8x8x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 7.843 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.640 W/kg
SAR(1 g) = 0.218 W/kg; SAR(10 g) = 0.083 W/kg
Maximum value of SAR (measured) = 0.430 W/kg



0 dB = 0.407 W/kg = −3.90 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.6℃
Ambient Temperature:	22.8℃
Test Date:	10/21/2020
Plot No.:	114

DUT: SM-G991U ; Type: Bar

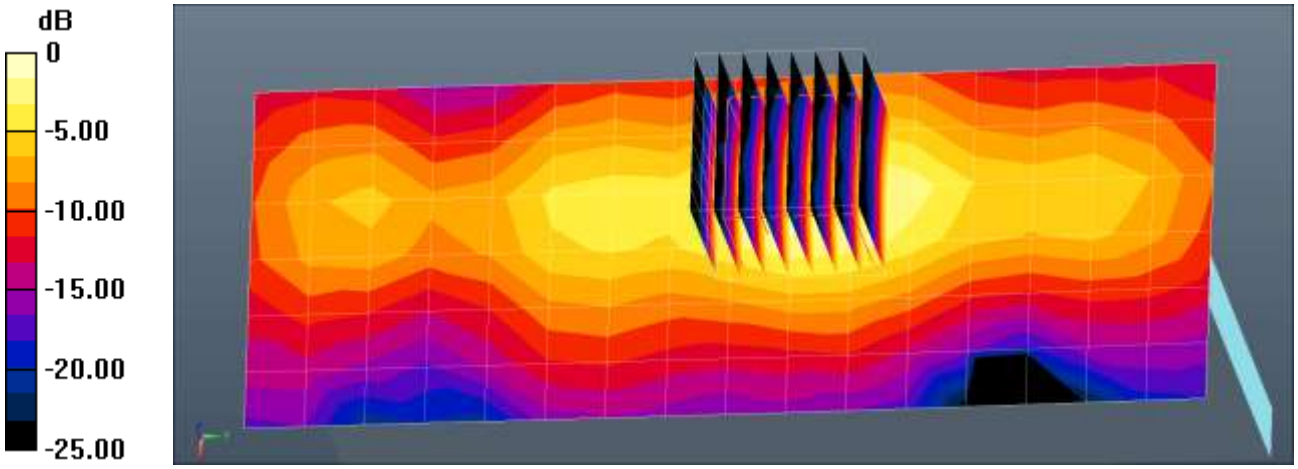
Communication System: UID 0, NR Band 77 (0); Frequency: 3840 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3840 MHz; σ = 3.273 S/m; ε_r = 38.051; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(6.6, 6.6, 6.6); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

NR n77 Body Right DFT-s QPSK 100MHz 1RB 271offset 656000ch/Area Scan (7x17x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.538 W/kg

NR n77 Body Right DFT-s QPSK 100MHz 1RB 271offset 656000ch/Zoom Scan (8x8x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 9.552 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.842 W/kg
SAR(1 g) = 0.292 W/kg; SAR(10 g) = 0.115 W/kg
Maximum value of SAR (measured) = 0.573 W/kg



0 dB = 0.573 W/kg = −2.42 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/25/2020
Plot No.:	115

DUT: SM-G991U ; Type: Bar

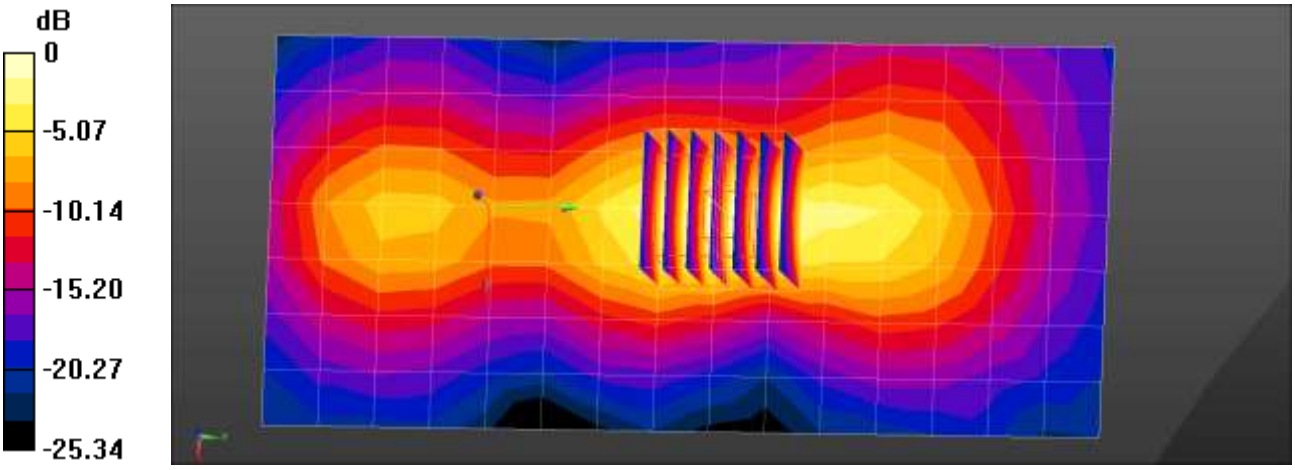
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.78 S/m; ε_r = 39.474; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

802.11g Body Left 6Mbps 6ch/Area Scan (8x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.565 W/kg

802.11g Body Left 6Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.46 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.824 W/kg
SAR(1 g) = 0.363 W/kg; SAR(10 g) = 0.163 W/kg
Maximum value of SAR (measured) = 0.640 W/kg



0 dB = 0.640 W/kg = −1.94 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.0℃
Ambient Temperature:	21.2℃
Test Date:	11/06/2020
Plot No.:	116

DUT: SM-G991U ; Type: Bar

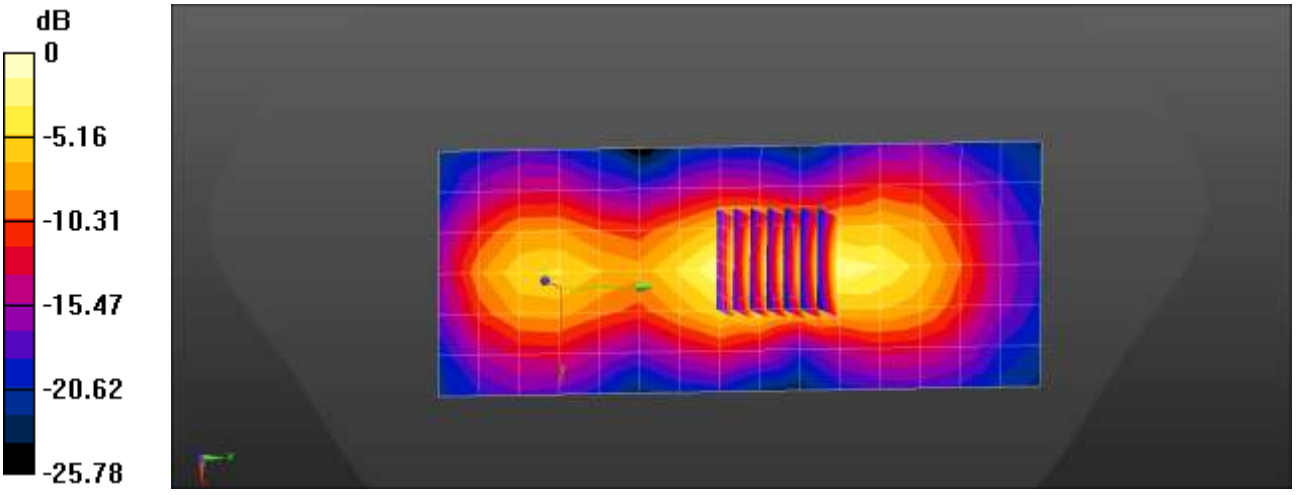
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.722 S/m; ε_r = 40.182; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 – SN3797; ConvF(7.35, 7.35, 7.35); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

802.11b Body Left 1Mbps 1ch/Area Scan (7x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.662 W/kg

802.11b Body Left 1Mbps 1ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.97 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.911 W/kg
SAR(1 g) = 0.404 W/kg; SAR(10 g) = 0.183 W/kg
Maximum value of SAR (measured) = 0.709 W/kg



0 dB = 0.662 W/kg = −1.79 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.9℃
Ambient Temperature:	22.1℃
Test Date:	09/25/2020
Plot No.:	117

DUT: SM-G991U ; Type: Bar

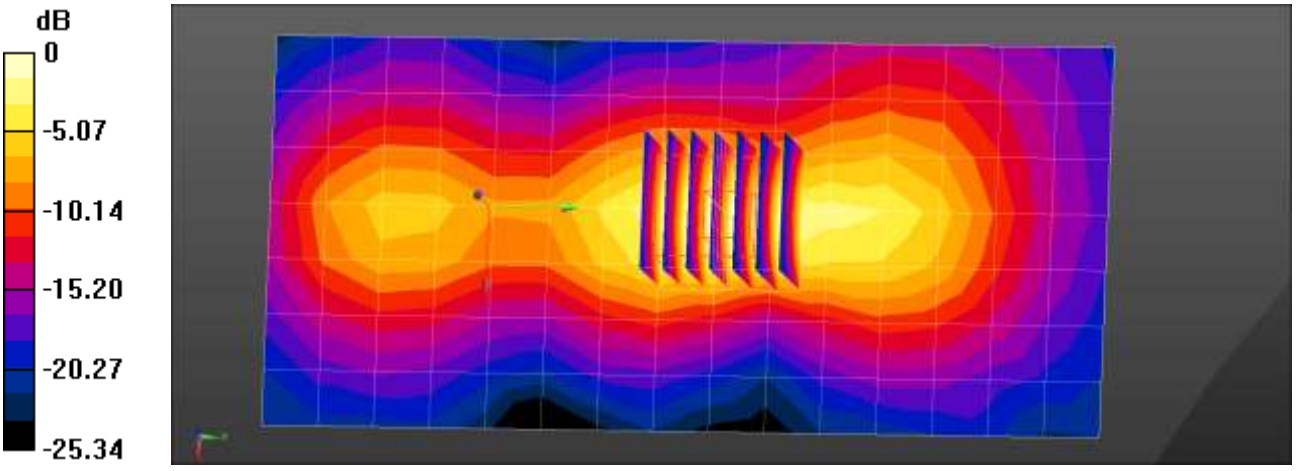
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.78 S/m; ε_r = 39.474; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

802.11g Body Left 6Mbps 6ch/Area Scan (8x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.565 W/kg

802.11g Body Left 6Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 14.46 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.824 W/kg
SAR(1 g) = 0.363 W/kg; SAR(10 g) = 0.163 W/kg
Maximum value of SAR (measured) = 0.640 W/kg



0 dB = 0.640 W/kg = −1.94 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.7℃
Ambient Temperature: 21.9℃
Test Date: 09/28/2020
Plot No.: 118

DUT: SM-G991U ; Type: Bar

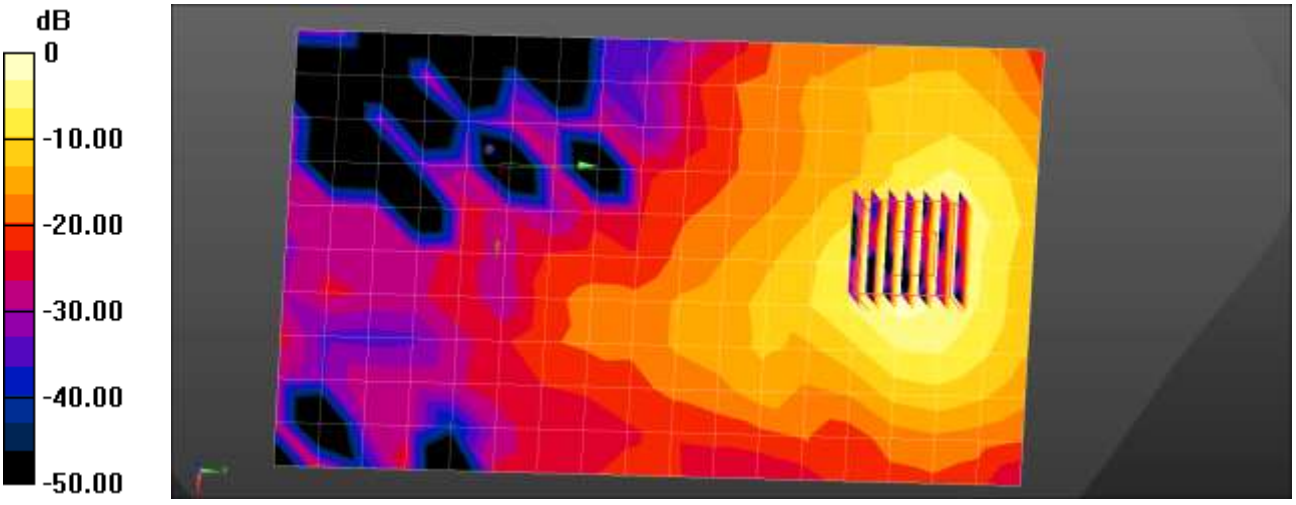
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5785 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5785 MHz; σ = 5.201 S/m; ε_r = 36.774; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.75, 4.75, 4.75); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

802.11a Body Rear 6Mbps 157ch/Area Scan (11x18x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.75 W/kg

802.11a Body Rear 6Mbps 157ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.393 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 3.59 W/kg
SAR(1 g) = 0.824 W/kg; SAR(10 g) = 0.263 W/kg
Maximum value of SAR (measured) = 2.05 W/kg



0 dB = 1.75 W/kg = 2.44 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.1℃
Test Date: 10/01/2020
Plot No.: 119

DUT: SM-G991U ; Type: Bar

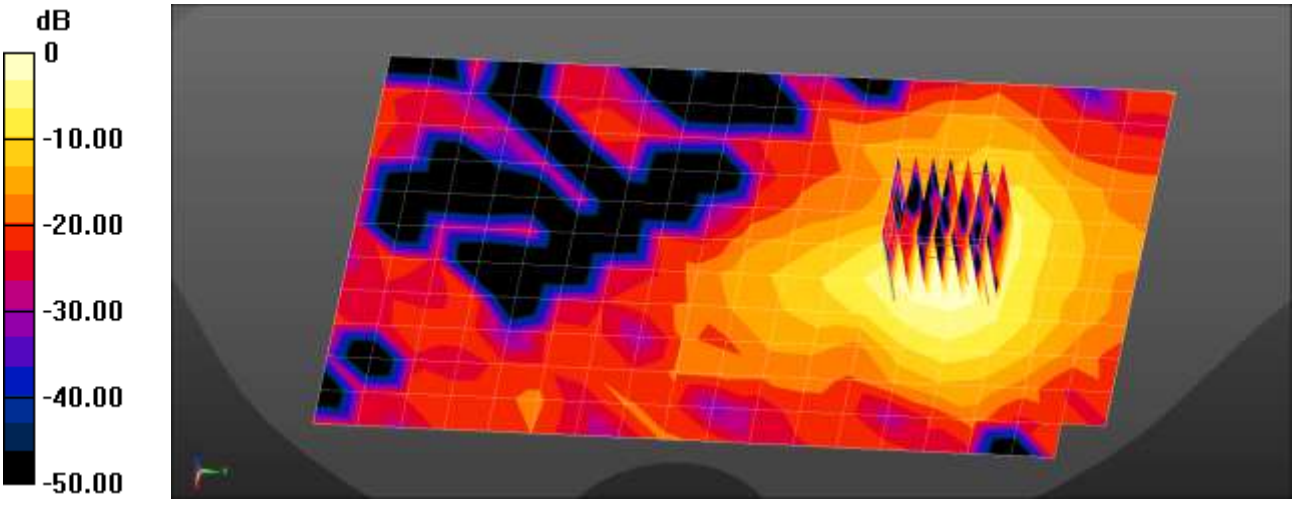
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5775 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5775 MHz; σ = 5.193 S/m; ε_r = 36.236; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.75, 4.75, 4.75); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

802.11ac80 Body Rear MCS0 155ch/Area Scan (12x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.483 W/kg

802.11ac80 Body Rear MCS0 155ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.359 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 2.21 W/kg
SAR(1 g) = 0.231 W/kg; SAR(10 g) = 0.067 W/kg
Maximum value of SAR (measured) = 0.611 W/kg



0 dB = 0.483 W/kg = −3.16 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.7℃
Ambient Temperature: 21.8℃
Test Date: 10/28/2020
Plot No.: 120

DUT: SM-G991U ; Type: Bar

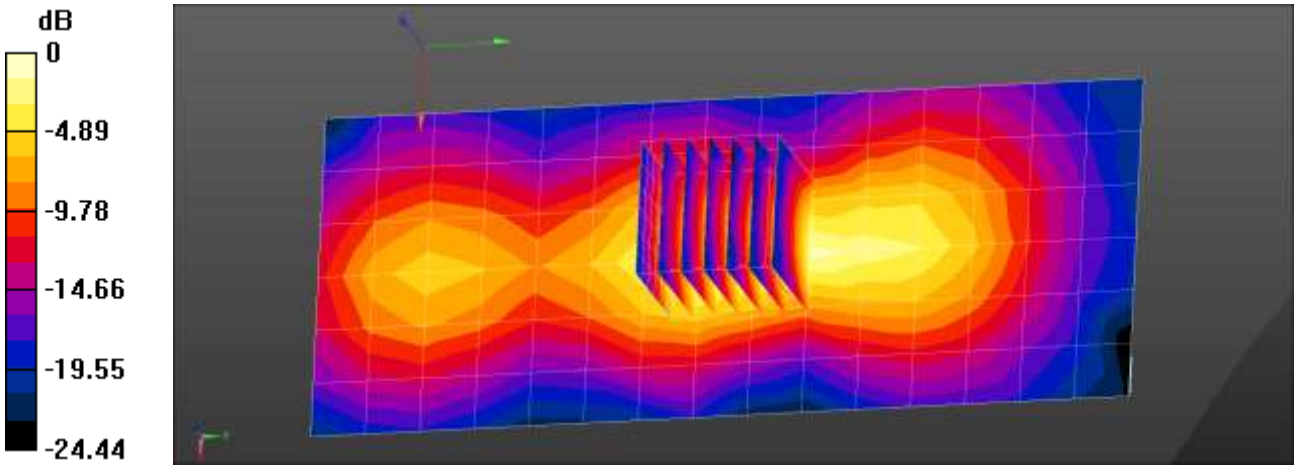
Communication System: UID 0, Bluetooth (0); Frequency: 2402 MHz;Duty Cycle: 1:1.302
Medium parameters used (interpolated): f = 2402 MHz; σ = 1.769 S/m; ε_r = 39.66; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Body Left DH5 0ch/Area Scan (7x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.296 W/kg

Bluetooth Body Left DH5 0ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.30 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.383 W/kg
SAR(1 g) = 0.169 W/kg; SAR(10 g) = 0.076 W/kg
Maximum value of SAR (measured) = 0.295 W/kg



0 dB = 0.296 W/kg = −5.29 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.1℃
Ambient Temperature: 22.3℃
Test Date: 09/15/2020
Plot No.: 121

DUT: SM-G991U ; Type: Bar

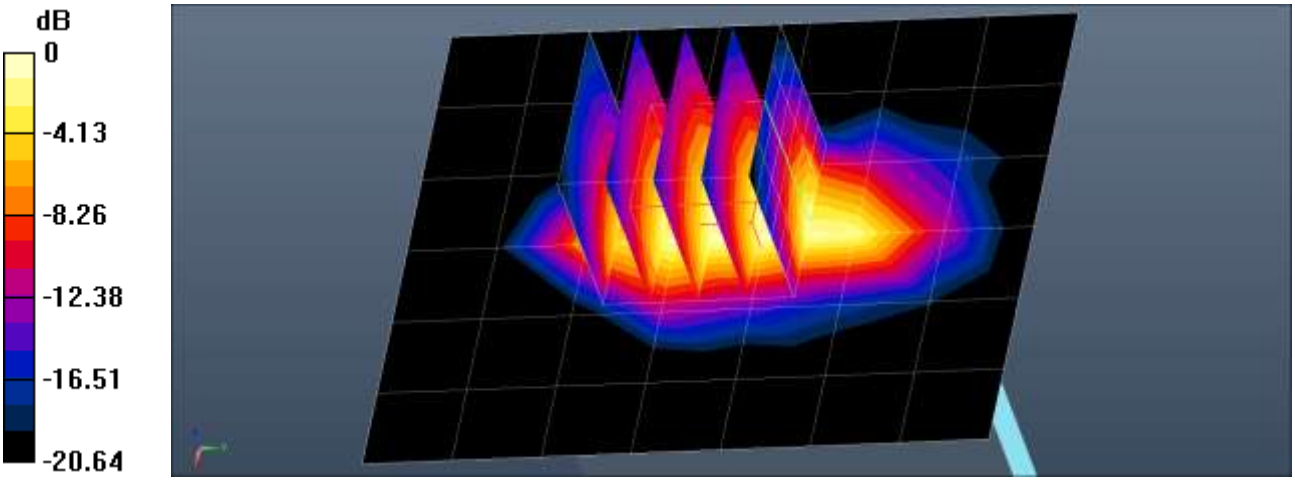
Communication System: UID 0, CDMA BC1(1900MHz) (0); Frequency: 1851.25 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1851.25 MHz; σ = 1.401 S/m; ε_r = 39.761; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

CDMA BC1 Body Bottom EVDO Rev.0 25ch/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 4.72 W/kg

CDMA BC1 Body Bottom EVDO Rev.0 25ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 62.42 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 9.54 W/kg
SAR(1 g) = 4.74 W/kg; SAR(10 g) = 2.26 W/kg
Maximum value of SAR (measured) = 5.68 W/kg



0 dB = 5.68 W/kg = 7.54 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.1℃
Test Date: 09/15/2020
Plot No.: 122

DUT: SM-G991U ; Type: Bar

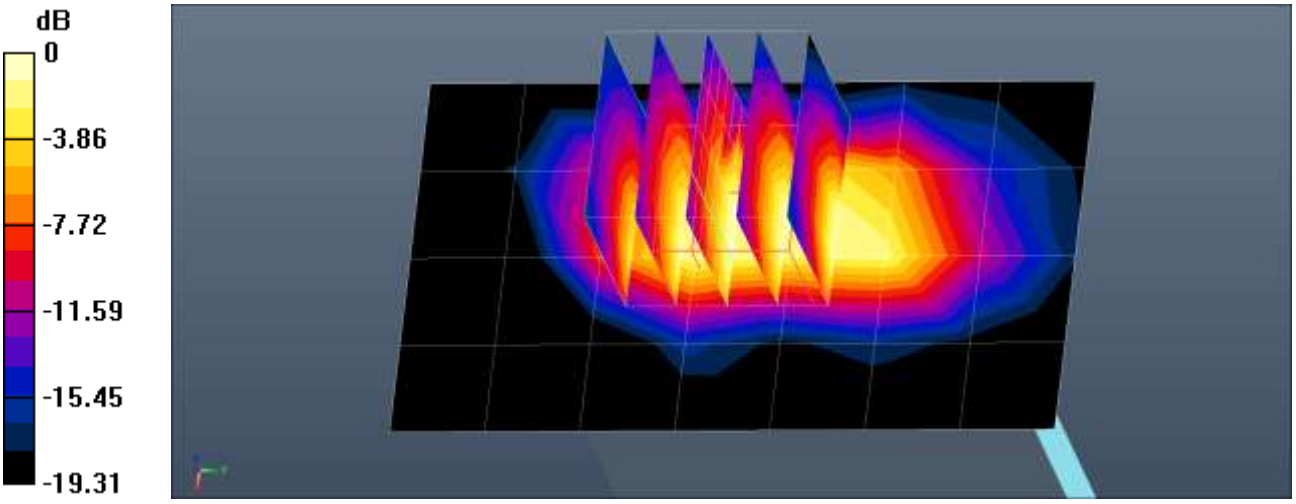
Communication System: UID 0, GSM 1900 4TX (0); Frequency: 1850.2 MHz;Duty Cycle: 1:2.07491
Medium parameters used (interpolated): f = 1850.2 MHz; σ = 1.4 S/m; ε_r = 40.078; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Body Bottom 4Tx 512ch/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.70 W/kg

GSM19000 Body Bottom 4Tx 512ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 45.25 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 5.68 W/kg
SAR(1 g) = 3.63 W/kg; SAR(10 g) = 1.87 W/kg
Maximum value of SAR (measured) = 3.74 W/kg



0 dB = 3.74 W/kg = 5.73 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.1℃
Test Date: 09/15/2020
Plot No.: 123

DUT: SM-G991U ; Type: Bar

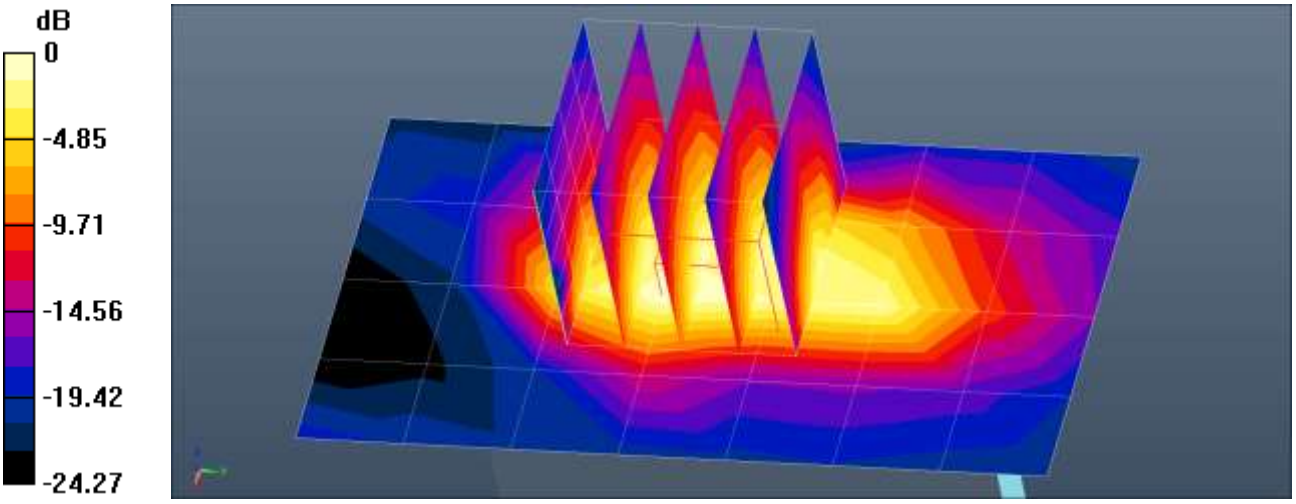
Communication System: UID 0, GSM 1900 4TX (0); Frequency: 1880 MHz;Duty Cycle: 1:2.07491
Medium parameters used: f = 1880 MHz; σ = 1.429 S/m; ε_r = 39.955; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Body Bottom 4Tx 661ch/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.63 W/kg

GSM1900 Body Bottom 4Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.72 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 5.79 W/kg
SAR(1 g) = 3.85 W/kg; SAR(10 g) = 1.93 W/kg
Maximum value of SAR (measured) = 4.58 W/kg



0 dB = 3.63 W/kg = 5.60 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.7℃
Ambient Temperature:	21.9℃
Test Date:	09/16/2020
Plot No.:	124

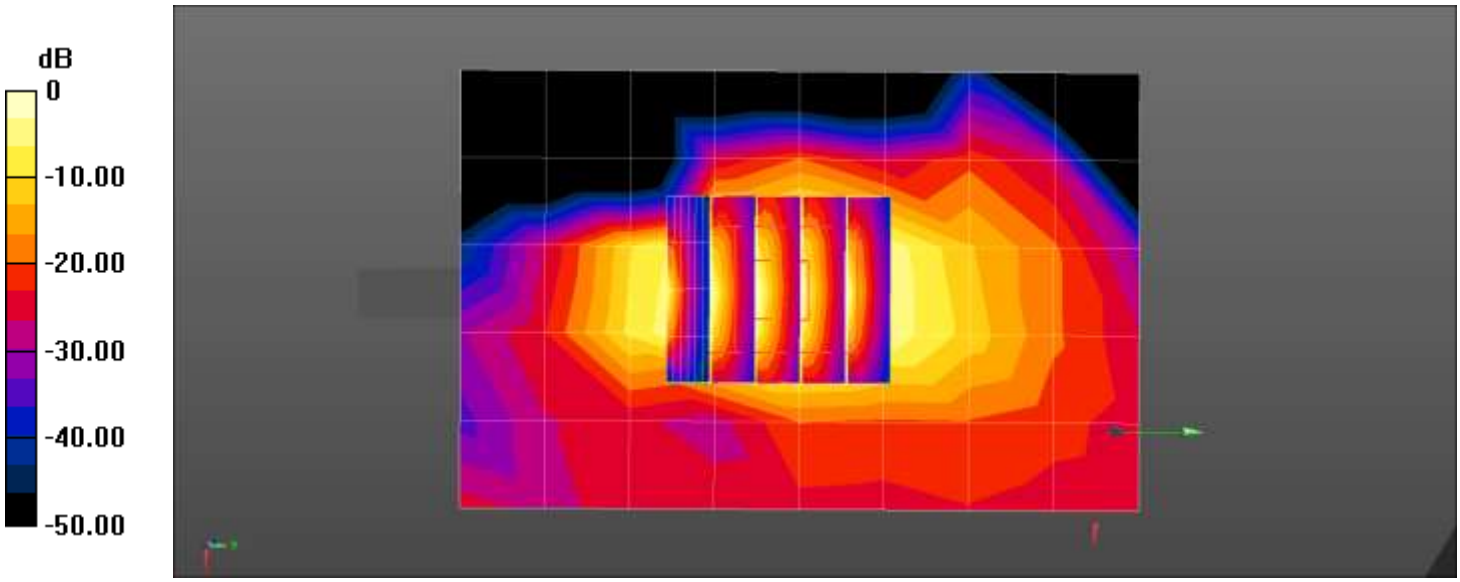
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, WCDMA IV (0); Frequency: 1732.4 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1732.4 MHz; σ = 1.325 S/m; ε_r = 40.449; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.82, 7.82, 7.82) @ 1732.4 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B4 Body Bottom 1412ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.89 W/kg
WCDMA B4 Body Bottom 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 79.57 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 10.1 W/kg
SAR(1 g) = 4.48 W/kg; SAR(10 g) = 1.94 W/kg
Smallest distance from peaks to all points 3 dB below = 6.4 mm
Ratio of SAR at M2 to SAR at M1 = 43.5%
Maximum value of SAR (measured) = 8.31 W/kg



0 dB = 2.89 W/kg = 4.61 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.0℃
Ambient Temperature: 22.2℃
Test Date: 09/15/2020
Plot No.: 125

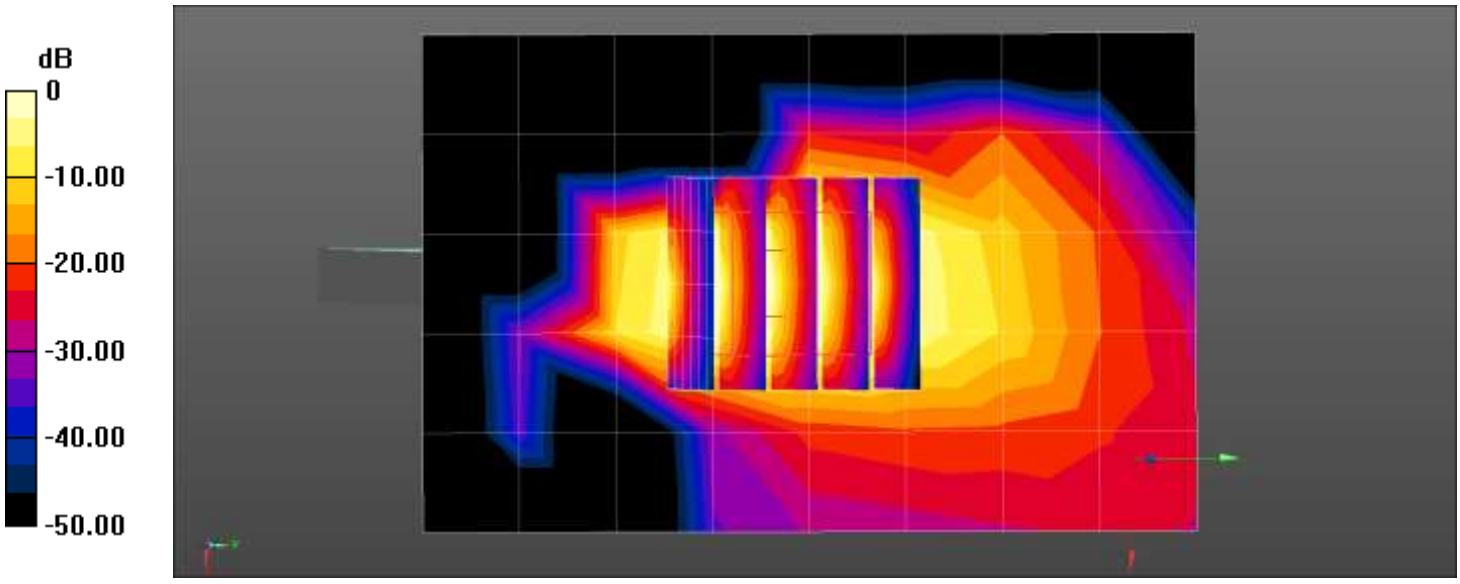
DUT: SM-G991U ; Type: Bar

Communication System: UID 0, WCDMA1900 (0); Frequency: 1880 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1880 MHz; σ = 1.379 S/m; ε_r = 40.187; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57) @ 1880 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B2 Body Bottom 9400ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.28 W/kg
WCDMA B2 Body Bottom 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 67.86 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 8.23 W/kg
SAR(1 g) = 3.61 W/kg; SAR(10 g) = 1.53 W/kg
Smallest distance from peaks to all points 3 dB below = 6.4 mm
Ratio of SAR at M2 to SAR at M1 = 43.2%
Maximum value of SAR (measured) = 6.76 W/kg



0 dB = 2.28 W/kg = 3.57 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
Liquid Temperature: 21.6℃
Ambient Temperature: 21.8℃
Test Date: 10/19/2020
Plot No.: 126

DUT: SM-G991U ; Type: Bar

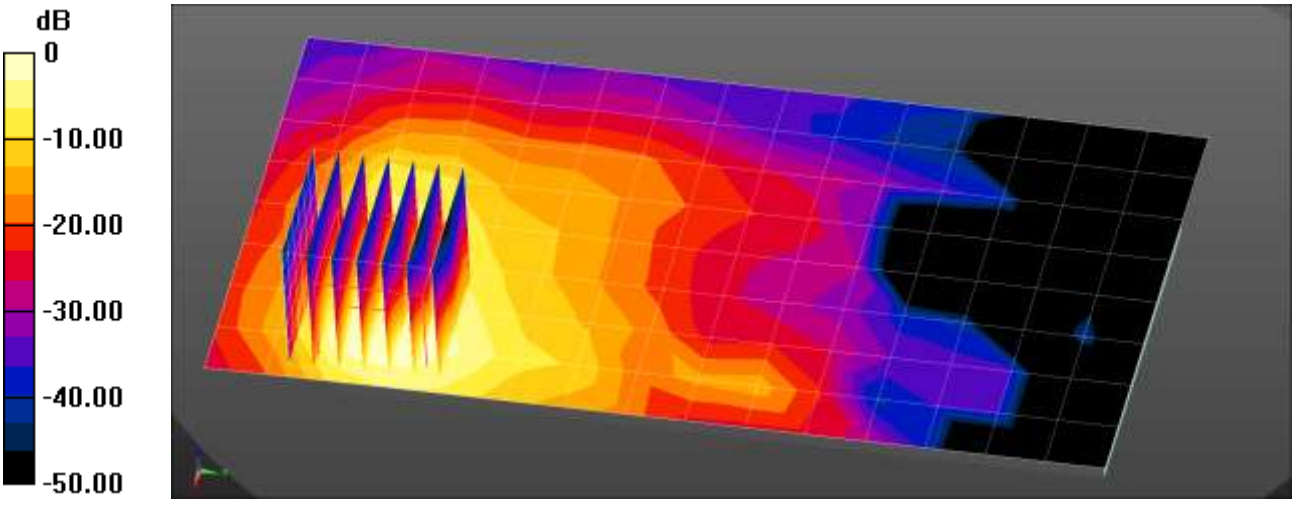
Communication System: UID 0, LTE Band 7 (0); Frequency: 2560 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2560 MHz; σ = 1.948 S/m; ε_r = 40.66; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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 7 Phablet Rear QPSK 20MHz 50RB 0offset 21350ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.10 W/kg

LTE Band 7 Phablet Rear QPSK 20MHz 50RB 0offset 21350ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.966 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 10.1 W/kg
SAR(1 g) = 3.54 W/kg; SAR(10 g) = 1.53 W/kg
Maximum value of SAR (measured) = 5.19 W/kg



0 dB = 4.10 W/kg = 6.13 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
Liquid Temperature: 22.7℃
Ambient Temperature: 22.9℃
Test Date: 09/28/2020
Plot No.: 127

DUT: SM-G991U ; Type: Bar

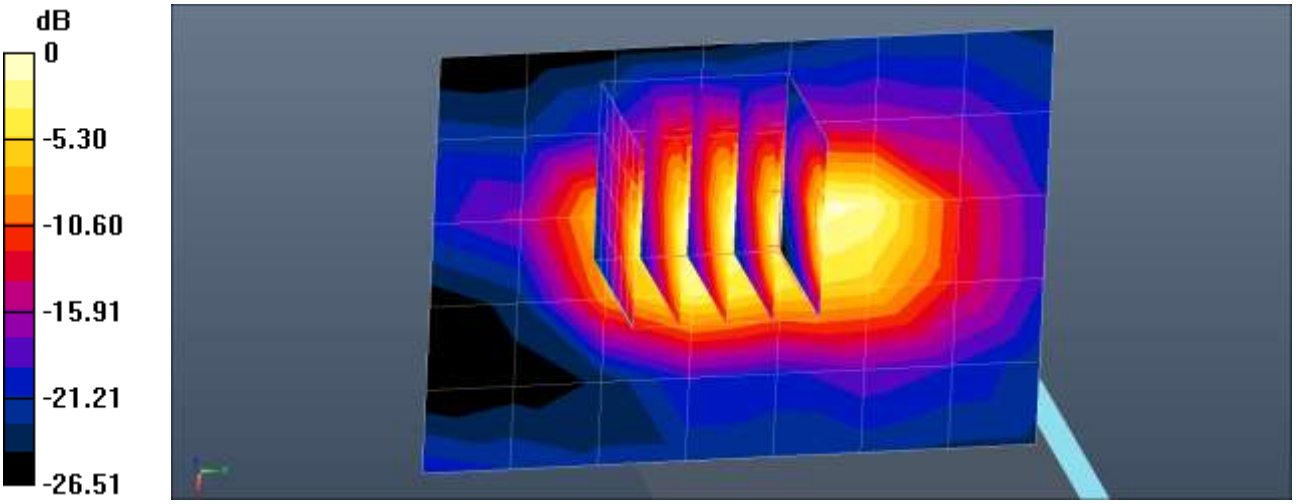
Communication System: UID 0, LTE Band 25 (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.421 S/m; ε_r = 38.708; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 25 Body Bottom QPSK 20MHz 50RB 0offset 26365ch/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.63 W/kg

LTE Band 25 Body Bottom QPSK 20MHz 50RB 0offset 26365ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 45.86 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 5.94 W/kg
SAR(1 g) = 2.78 W/kg; SAR(10 g) = 1.34 W/kg
Maximum value of SAR (measured) = 4.05 W/kg



0 dB = 2.63 W/kg = 4.19 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.6℃
Ambient Temperature: 21.8℃
Test Date: 10/12/2020
Plot No.: 128

DUT: SM-G991U ; Type: Bar

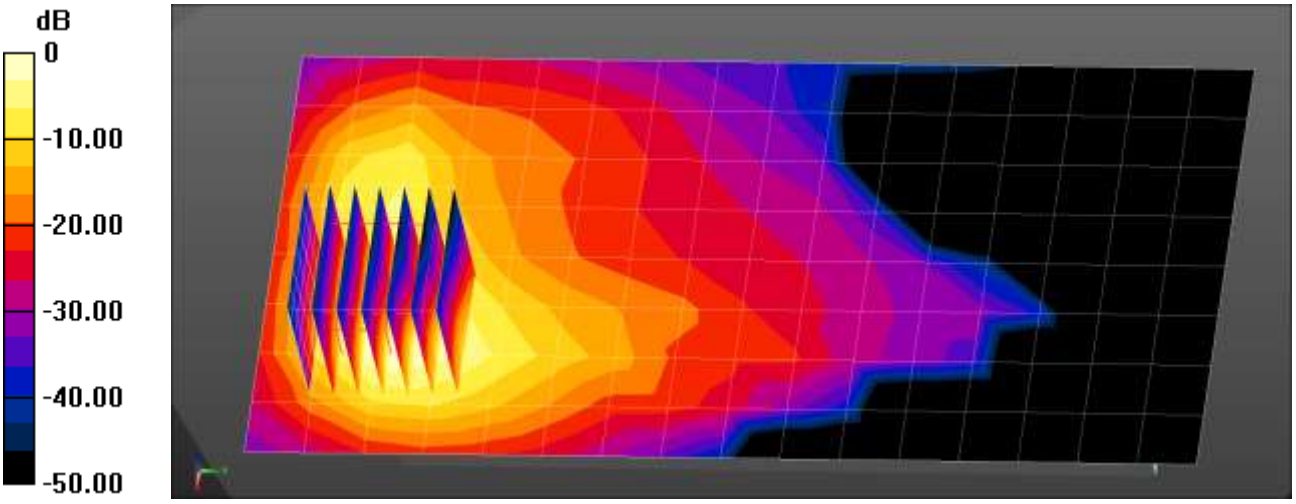
Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.644 S/m; ε_r = 40.525; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.73, 7.73, 7.73); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- 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 0offset 27710ch/Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 10.1 W/kg

LTE Band 30 Body Rear QPSK 10MHz 25RB 0offset 27710ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.589 V/m; Power Drift = 0.1 dB
Peak SAR (extrapolated) = 18.3 W/kg
SAR(1 g) = 5 W/kg; SAR(10 g) = 2.09 W/kg
Maximum value of SAR (measured) = 12.2 W/kg



0 dB = 10.1 W/kg = 10.03 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.3℃
Ambient Temperature: 21.5℃
Test Date: 10/20/2020
Plot No.: 129

DUT: SM-G991U ; Type: Bar

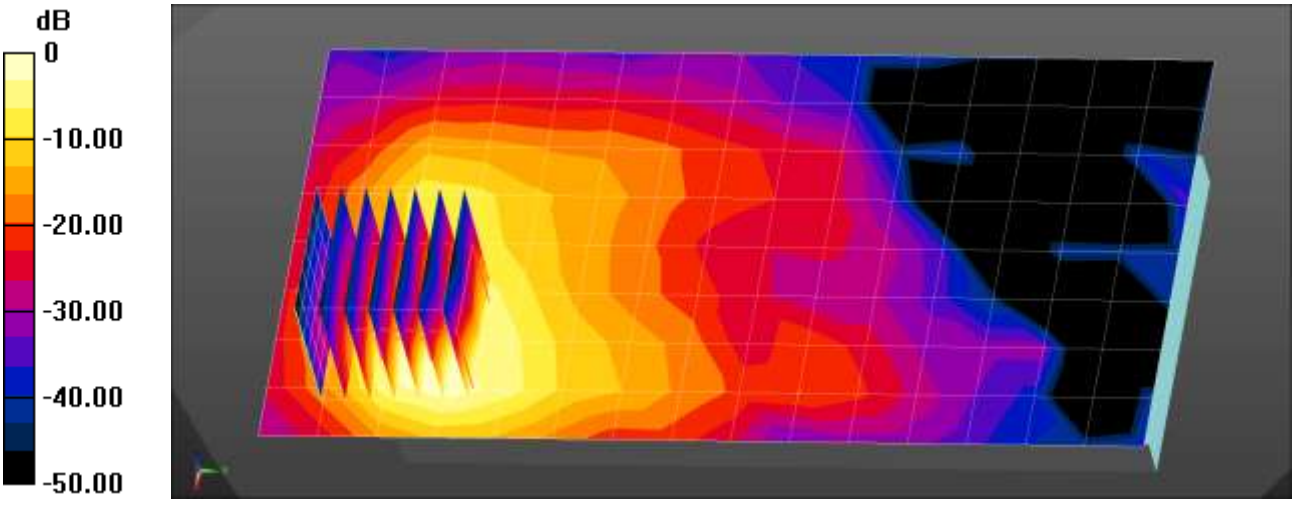
Communication System: UID 0, LTE Band41 (0); Frequency: 2506 MHz;Duty Cycle: 1:1.58052
Medium parameters used (interpolated): f = 2506 MHz; σ = 1.864 S/m; ε_r = 39.368; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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 Phablet Rear QPSK 20MHz 50RB 49offset 39750ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 5.72 W/kg

LTE Band 41 Phablet Rear QPSK 20MHz 50RB 49offset 39750ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.409 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 13.3 W/kg
SAR(1 g) = 4.25 W/kg; SAR(10 g) = 1.9 W/kg
Maximum value of SAR (measured) = 6.41 W/kg



0 dB = 5.72 W/kg = 7.58 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.7℃
Ambient Temperature: 22.9℃
Test Date: 09/29/2020
Plot No.: 130

DUT: SM-G991U ; Type: Bar

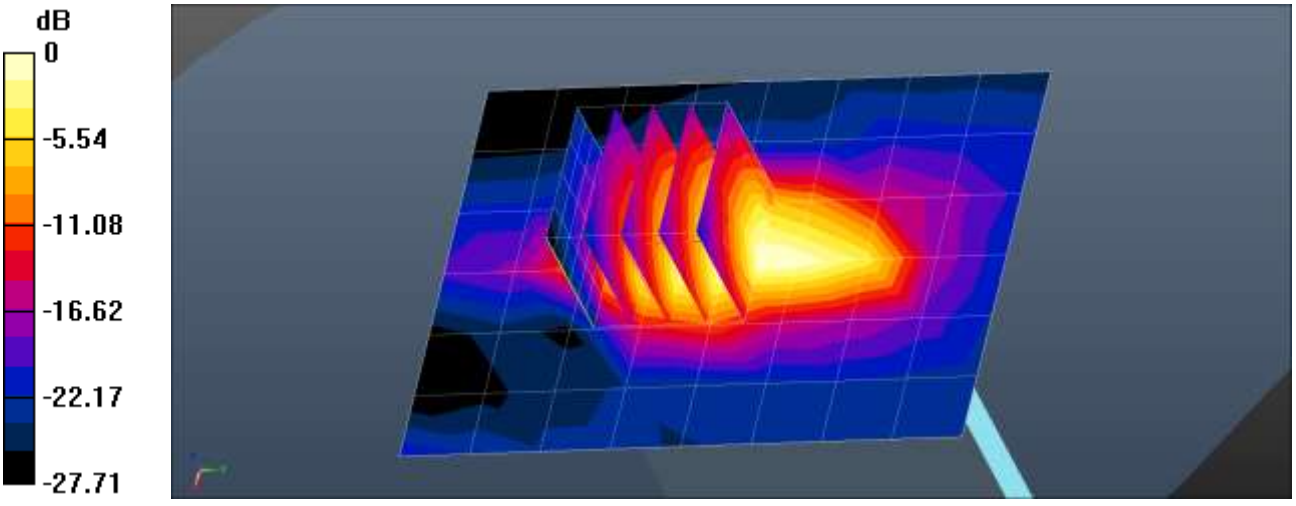
Communication System: UID 0, LTE 66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.332 S/m; ε_r = 40.27; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.91, 5.91, 5.91); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 66 Body Bottom QPSK 20MHz 50RB 25offset 132322ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.42 W/kg

LTE Band 66 Body Bottom QPSK 20MHz 50RB 25offset 132322ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 50.57 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 5.38 W/kg
SAR(1 g) = 3 W/kg; SAR(10 g) = 1.52 W/kg
Maximum value of SAR (measured) = 3.57 W/kg



0 dB = 3.42 W/kg = 5.34 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.0℃
Ambient Temperature:	22.2℃
Test Date:	09/28/2020
Plot No.:	131

DUT: SM-G991U ; Type: Bar

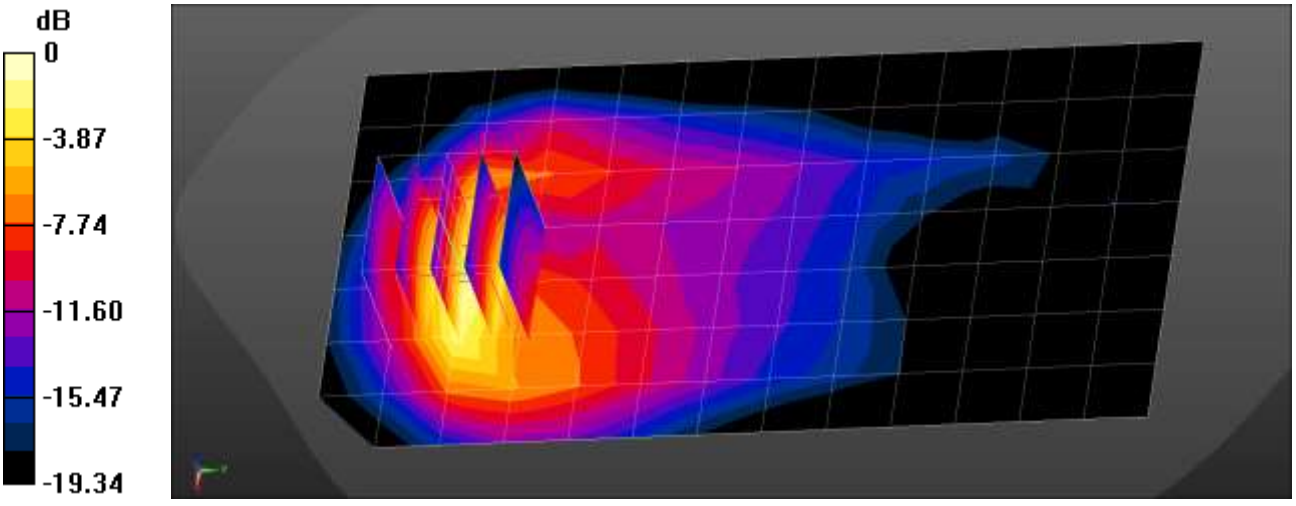
Communication System: UID 0, NR n25 (0); Frequency: 1882.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.432 S/m; ε_r = 39.951; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0 (Left)
- Measurement SW: DASY52, Version 52.10 (4);

NR Band 25 Body Front DFT-S QPSK 40MHz 1RB 1offset 376500ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 4.25 W/kg

NR Band 25 Body Front DFT-S QPSK 40MHz 1RB 1offset 376500ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 11.86 V/m; Power Drift = -0.15 dB
Peak SAR (extrapolated) = 5.32 W/kg
SAR(1 g) = 2.96 W/kg; SAR(10 g) = 1.52 W/kg
Maximum value of SAR (measured) = 4.52 W/kg



0 dB = 4.52 W/kg = 6.55 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.0℃
Ambient Temperature: 20.1℃
Test Date: 10/15/2020
Plot No.: 132

DUT: SM-G991U ; Type: Bar

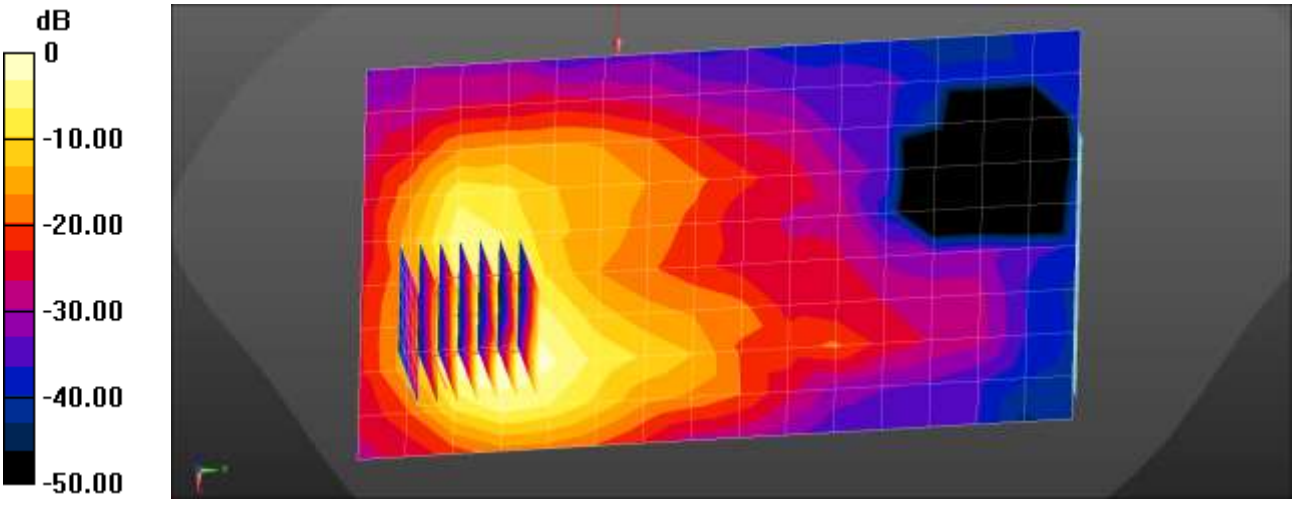
Communication System: UID 0, n30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.641 S/m; ε_r = 40.475; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.87, 4.87, 4.87); 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);

n30 Body Rear QPSK 10MHz 1RB 50offset 462000ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.92 W/kg

n30 Body Rear QPSK 10MHz 1RB 50offset 462000ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.400 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 8.25 W/kg
SAR(1 g) = 2.91 W/kg; SAR(10 g) = 1.38 W/kg
Maximum value of SAR (measured) = 4.16 W/kg



0 dB = 3.92 W/kg = 5.93 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.0℃
Ambient Temperature: 20.1℃
Test Date: 10/15/2020
Plot No.: 133

DUT: SM-G991U ; Type: Bar

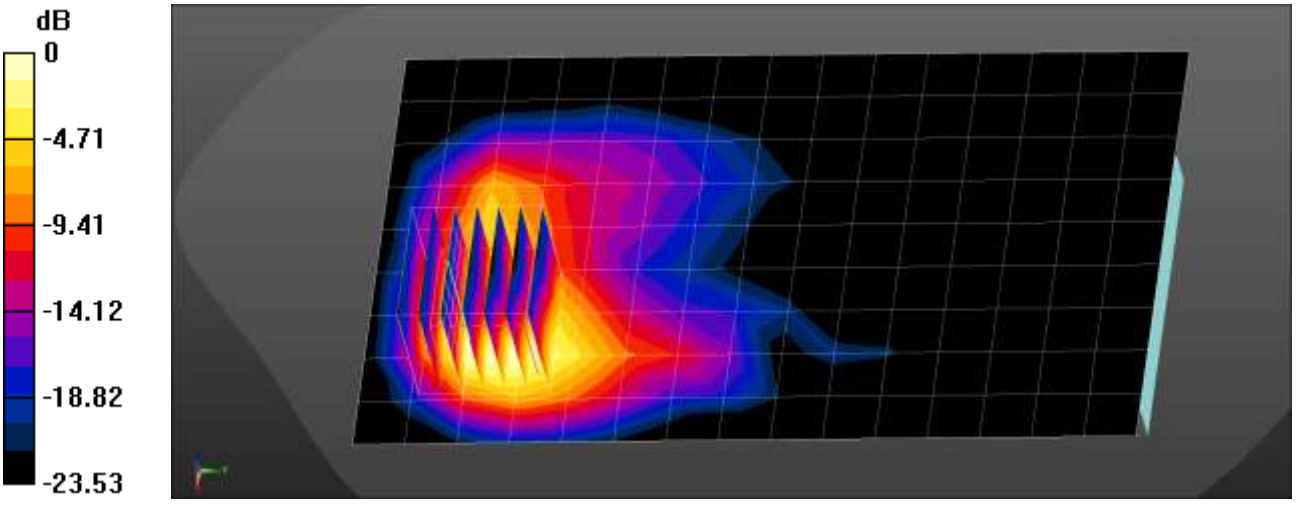
Communication System: UID 0, n30 (0); Frequency: 2310 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2310 MHz; σ = 1.641 S/m; ε_r = 40.475; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.87, 4.87, 4.87); 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);

n30 Body Rear QPSK 10MHz 25RB 27offset 462000ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.11 W/kg

n30 Body Rear QPSK 10MHz 25RB 27offset 462000ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.941 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 7.70 W/kg
SAR(1 g) = 2.83 W/kg; SAR(10 g) = 1.37 W/kg
Maximum value of SAR (measured) = 4.20 W/kg



0 dB = 4.20 W/kg = 6.23 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.9℃
Ambient Temperature: 21.0℃
Test Date: 10/22/2020
Plot No.: 134

DUT: SM-G991U ; Type: Bar

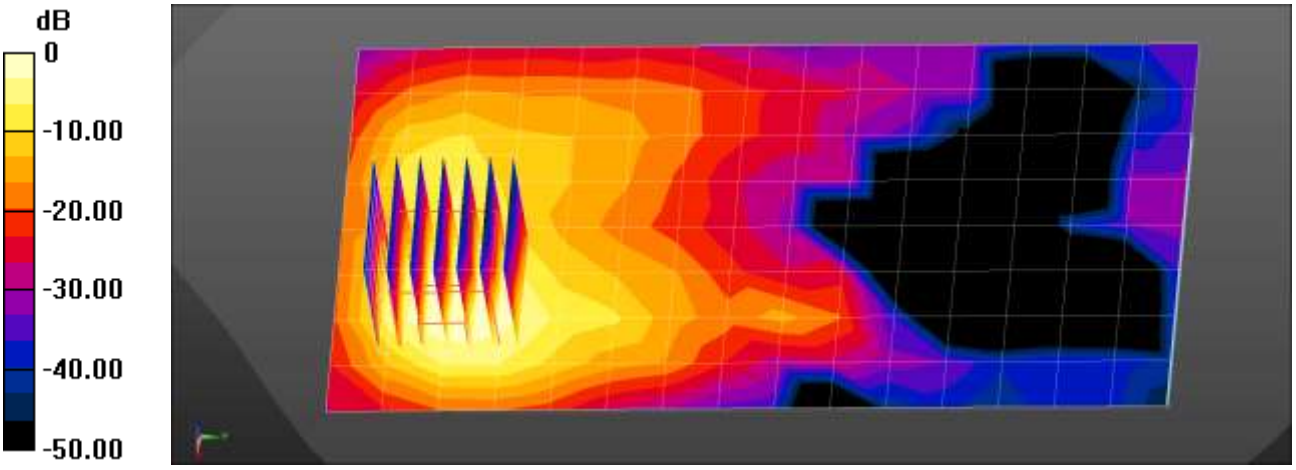
Communication System: UID 0, n41 (0); Frequency: 2592.99 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2592.99 MHz; σ = 1.925 S/m; ε_r = 40.851; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

n41 Phablet Rear QPSK 100MHz 135RB 69offset 518598ch/Area Scan (9x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.55 W/kg

n41 Phablet Rear QPSK 100MHz 135RB 69offset 518598ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.9970 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 5.89 W/kg
SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.803 W/kg
Maximum value of SAR (measured) = 2.69 W/kg



0 dB = 2.55 W/kg = 4.07 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.1℃
Ambient Temperature: 22.3℃
Test Date: 10/14/2020
Plot No.: 135

DUT: SM-G991U ; Type: Bar

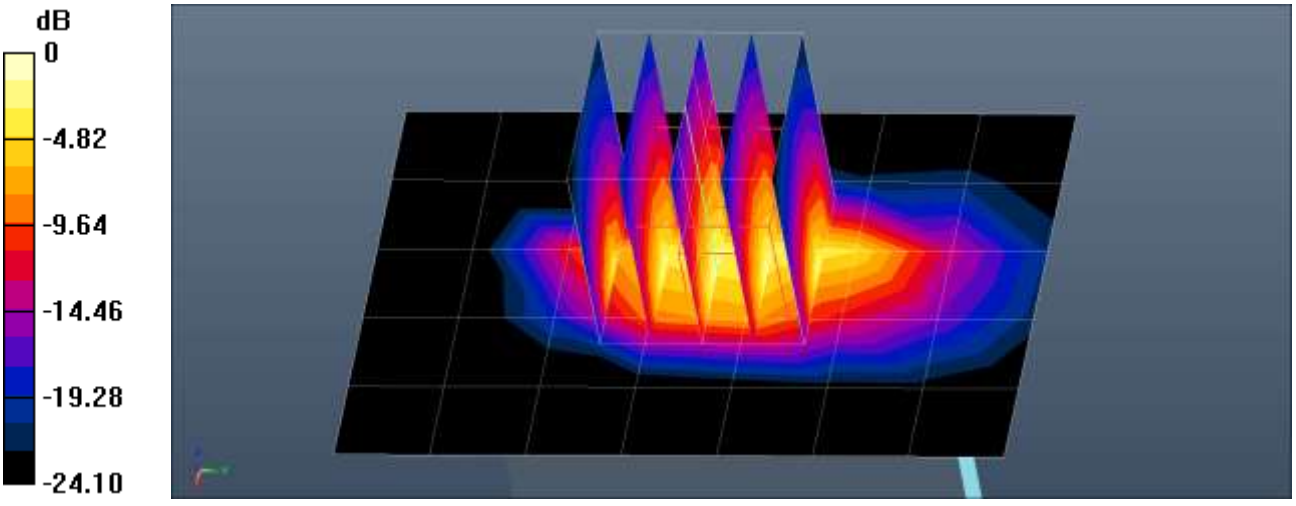
Communication System: UID 0, n66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.339 S/m; ε_r = 40.458; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(8.2, 8.2, 8.2); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

n66 Body Bottom DFT-s QPSK 40MHz 108RB 0offset 349000ch/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.81 W/kg

n66 Body Bottom DFT-s QPSK 40MHz 108RB 0offset 349000ch/Zoom Scan (5x5x5)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 73.14 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 8.59 W/kg
SAR(1 g) = 3.78 W/kg; SAR(10 g) = 1.68 W/kg
Maximum value of SAR (measured) = 6.85 W/kg



0 dB = 6.85 W/kg = 8.36 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.7℃
Ambient Temperature: 22.9℃
Test Date: 09/26/2020
Plot No.: 136

DUT: SM-G991U ; Type: Bar

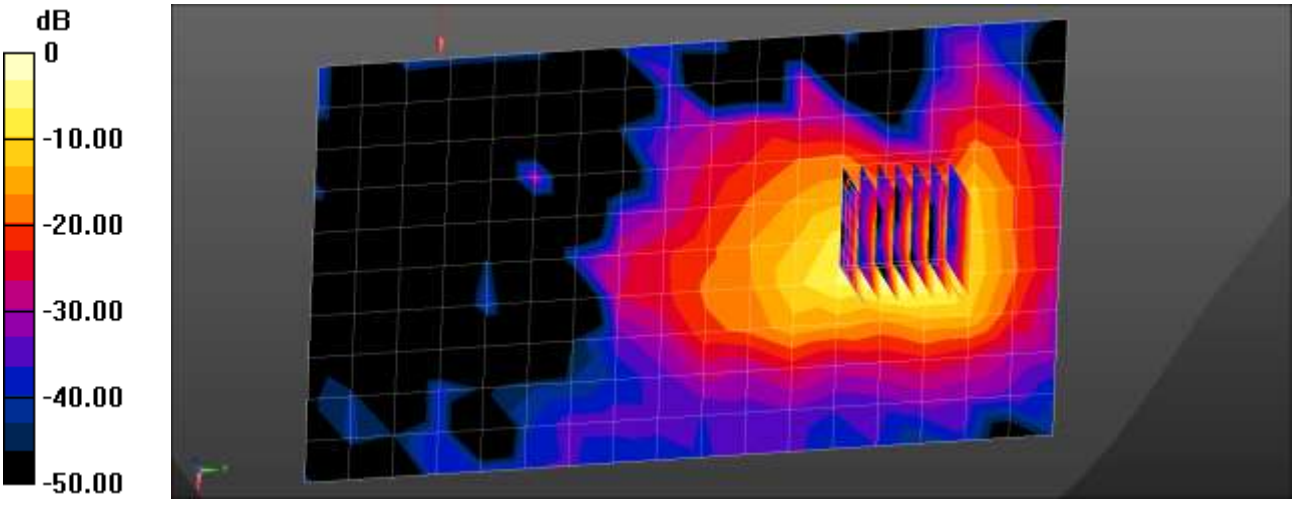
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5720 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5720 MHz; σ = 5.014 S/m; ε_r = 36.612; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.75, 4.75, 4.75); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

802.11a Phablet Rear 6Mbps 144ch/Area Scan (11x18x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 14.9 W/kg

802.11a Phablet Rear 6Mbps 144ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 2.472 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 49.1 W/kg
SAR(1 g) = 6.75 W/kg; SAR(10 g) = 1.63 W/kg
Maximum value of SAR (measured) = 20.9 W/kg



0 dB = 14.9 W/kg = 11.73 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.9℃
Ambient Temperature: 22.1℃
Test Date: 10/01/2020
Plot No.: 137

DUT: SM-G991U ; Type: Bar

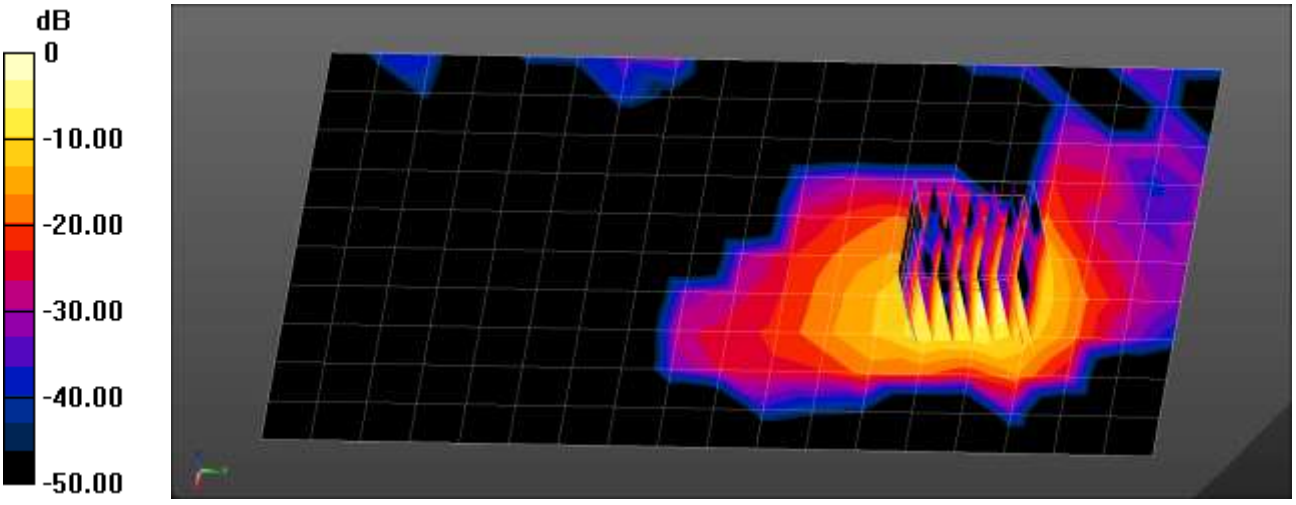
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5610 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5610 MHz; σ = 5.009 S/m; ε_r = 36.484; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.6, 4.6, 4.6); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

802.11ac80 Body Rear MCS0 122ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 5.75 W/kg

802.11ac80 Body Rear MCS0 122ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 11.7 W/kg
SAR(1 g) = 1.72 W/kg; SAR(10 g) = 0.377 W/kg
Maximum value of SAR (measured) = 5.32 W/kg



0 dB = 5.75 W/kg = 7.59 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.7℃
Ambient Temperature:	20.9℃
Test Date:	10/01/2020
Plot No.:	138

DUT: SM-G991U ; Type: Bar

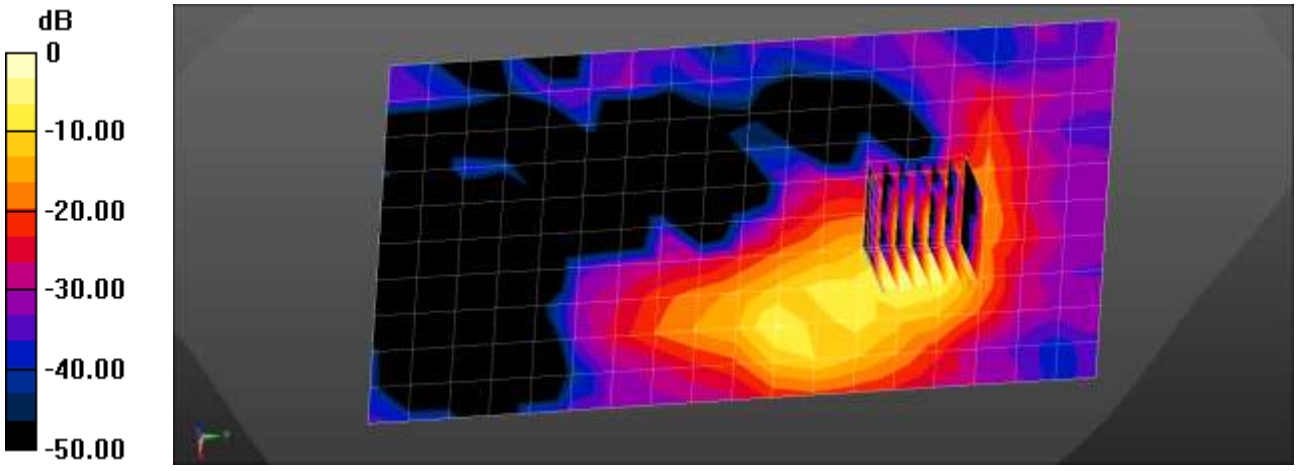
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5290 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5290 MHz; σ = 4.767 S/m; ε_r = 35.947; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.85, 4.85, 4.85); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

802.11ac Body Rear MCS0 58ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.85 W/kg

802.11ac Body Rear MCS0 58ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 0 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 15.2 W/kg
SAR(1 g) = 2.65 W/kg; SAR(10 g) = 0.550 W/kg
Maximum value of SAR (measured) = 8.35 W/kg



0 dB = 6.85 W/kg = 8.35 dBW/kg

Appendix C. – Dipole Verification Plots

Verification Data (750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.9 ℃
Test Date:	10/20/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

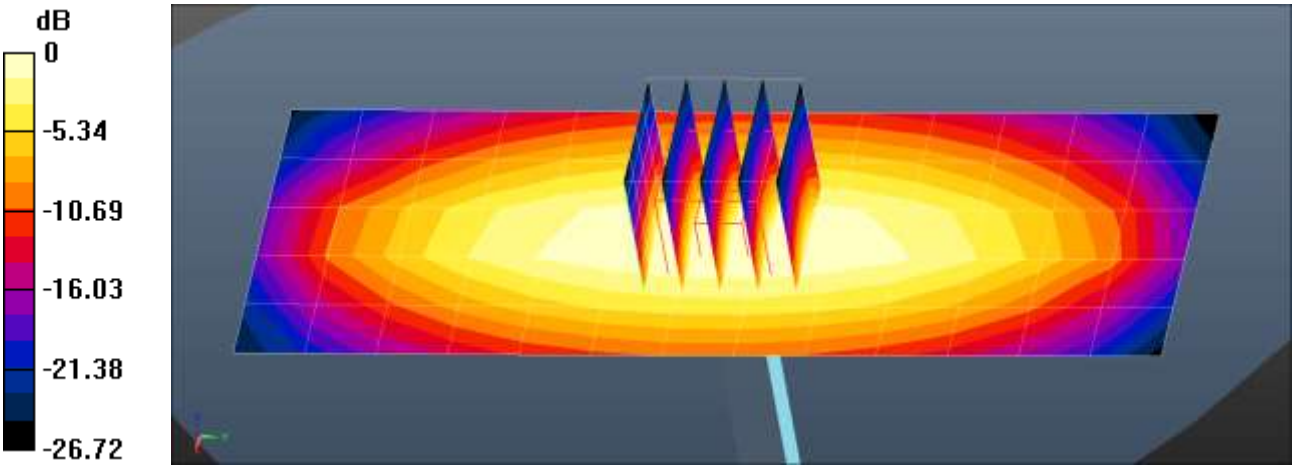
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.898 S/m; ε_r = 40.985; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.51, 9.51, 9.51); Calibrated: 2020-05-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/750MHz Head Verification/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.498 W/kg

Dipole/750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.70 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 0.645 W/kg
SAR(1 g) = 0.427 W/kg; SAR(10 g) = 0.282 W/kg
Maximum value of SAR (measured) = 0.574 W/kg



0 dB = 0.498 W/kg = −3.03 dBW/kg

Verification Data (750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	09/14/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

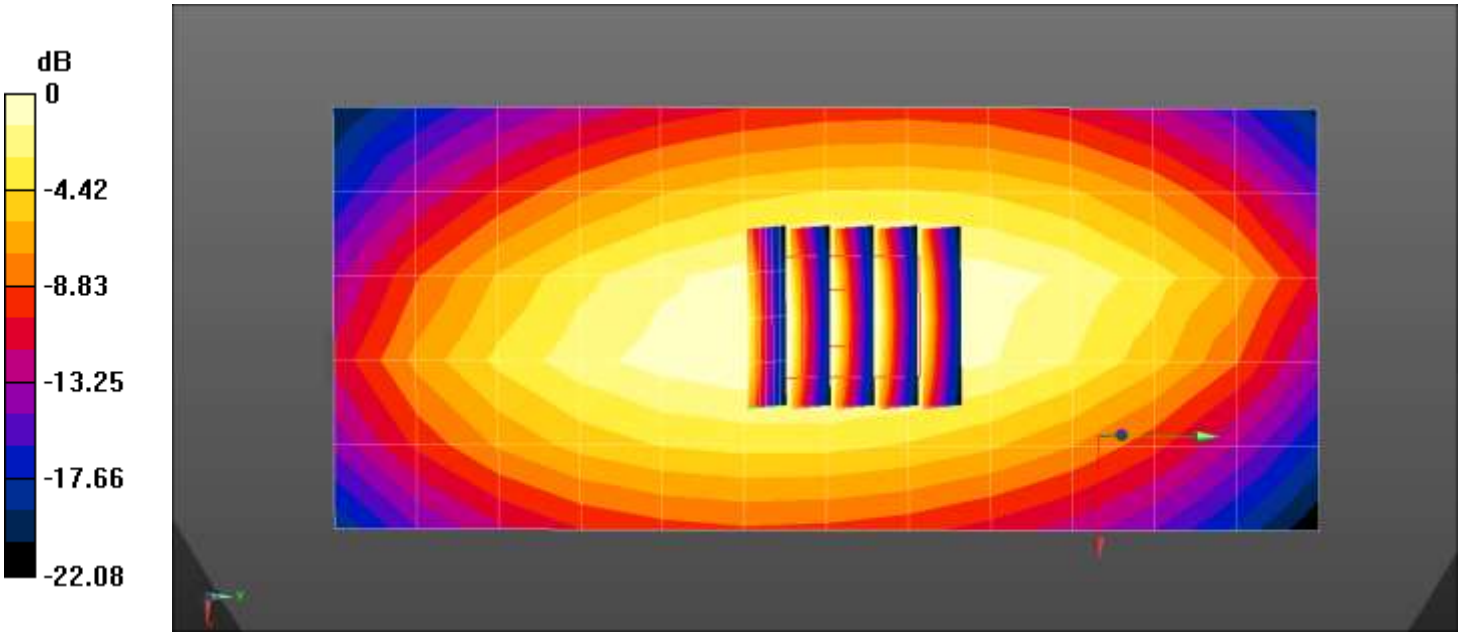
Communication System: UID 0, LTE 12 (0); Frequency: 707.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.857 S/m; ε_r = 42.935; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.26, 9.26, 9.26) @ 707.5 MHz;
- 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);

Dipole/750MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.454 W/kg

Dipole/750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.06 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.590 W/kg
SAR(1 g) = 0.395 W/kg; SAR(10 g) = 0.264 W/kg
Smallest distance from peaks to all points 3 dB below = 16.7 mm
Ratio of SAR at M2 to SAR at M1 = 67.1%
Maximum value of SAR (measured) = 0.525 W/kg



0 dB = 0.454 W/kg = −3.43 dBW/kg

Verification Data (750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.4 ℃
Test Date:	09/14/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

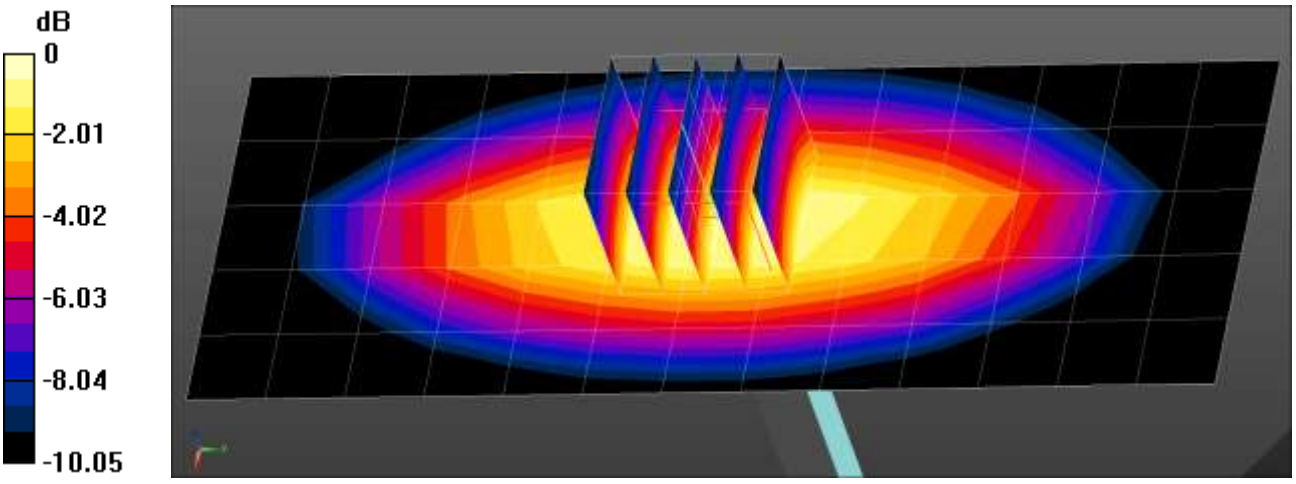
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.877 S/m; ε_r = 42.314; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/750MHz Head Verification/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.468 W/kg

Dipole/750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.80 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 0.589 W/kg
SAR(1 g) = 0.408 W/kg; SAR(10 g) = 0.274 W/kg
Maximum value of SAR (measured) = 0.530 W/kg



0 dB = 0.530 W/kg = −2.76 dBW/kg

Verification Data (750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.1 ℃
Test Date:	10/21/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

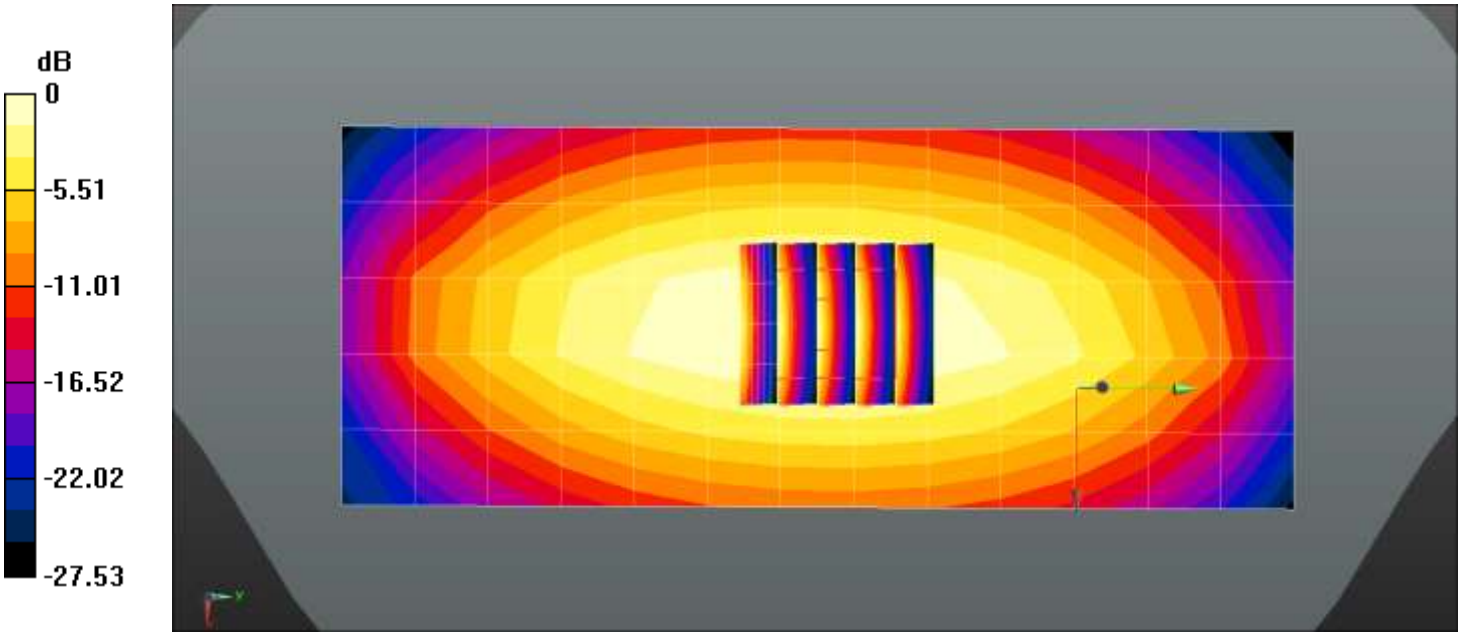
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.898 S/m; ε_r = 41.023; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.51, 9.51, 9.51) @ 750 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/750MHz Head Verification/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.502 W/kg

Dipole/750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.81 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.645 W/kg
SAR(1 g) = 0.429 W/kg; SAR(10 g) = 0.283 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 66.4%
Maximum value of SAR (measured) = 0.574 W/kg



0 dB = 0.502 W/kg = −2.99 dBW/kg

Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.9 ℃
Test Date:	09/11/2020

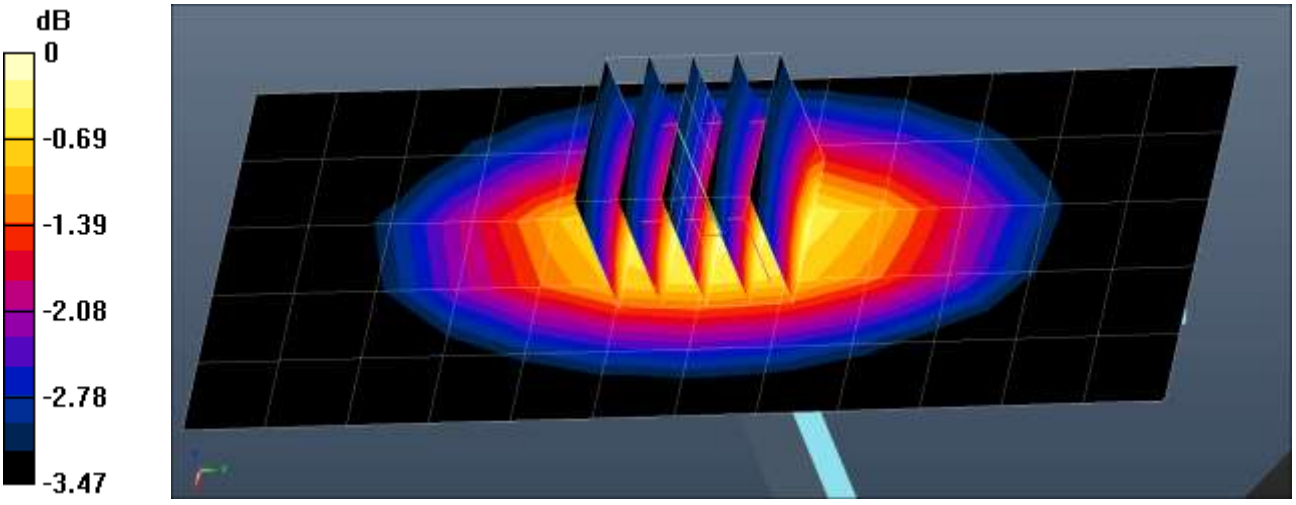
DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.925 S/m; ε_r = 42.777; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); 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 (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.500 W/kg
835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.21 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.595 W/kg
SAR(1 g) = 0.504 W/kg; SAR(10 g) = 0.411 W/kg
Maximum value of SAR (measured) = 0.527 W/kg



0 dB = 0.527 W/kg = −2.78 dBW/kg

Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.1 ℃
Test Date:	09/14/2020

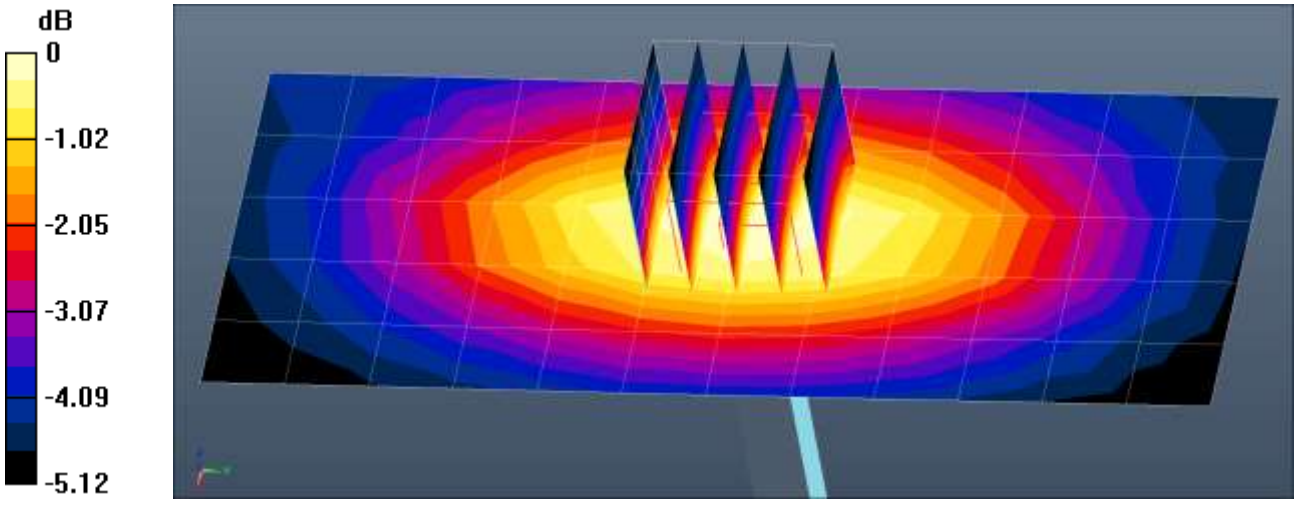
DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.92 S/m; ε_r = 42.696; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(6.96, 6.96, 6.96); 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 (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.498 W/kg
835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.21 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.593 W/kg
SAR(1 g) = 0.502 W/kg; SAR(10 g) = 0.409 W/kg
Maximum value of SAR (measured) = 0.524 W/kg



0 dB = 0.498 W/kg = −3.03 dBW/kg

Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.6 ℃
Test Date:	10/19/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

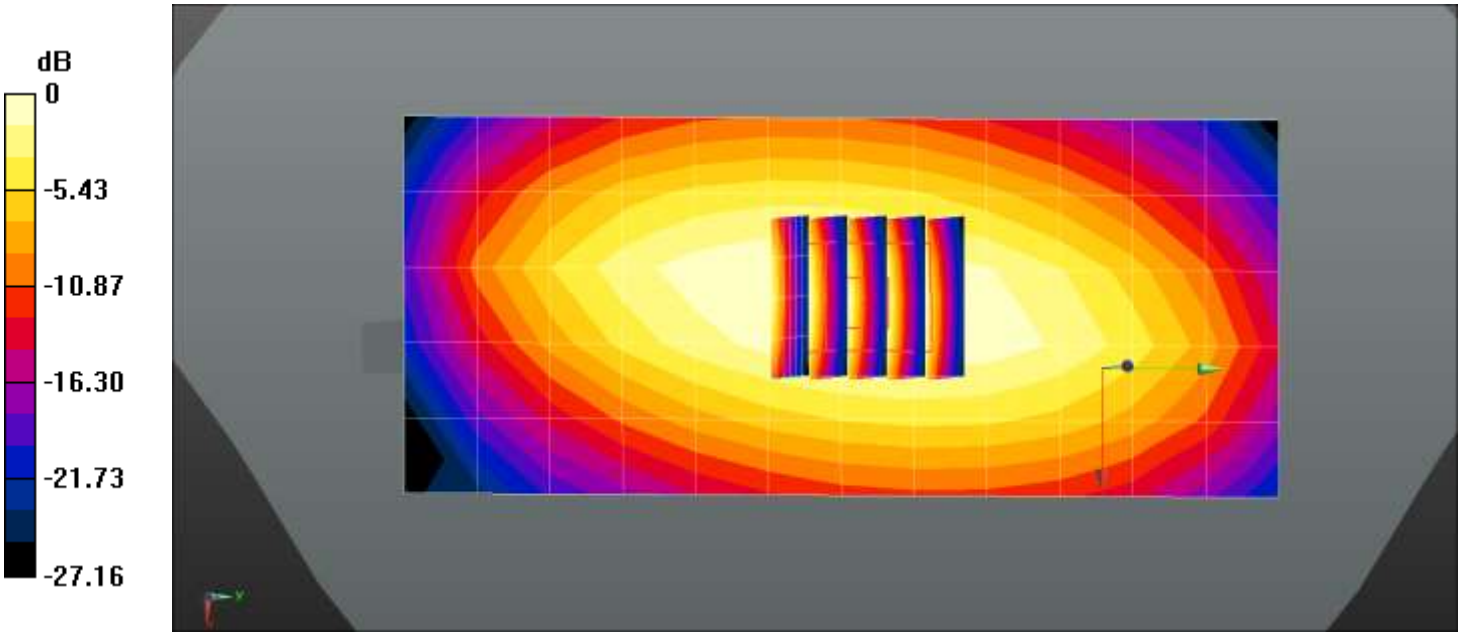
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.928 S/m; ε_r = 42.337; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(9.2, 9.2, 9.2) @ 835 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.558 W/kg

Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.69 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.730 W/kg
SAR(1 g) = 0.479 W/kg; SAR(10 g) = 0.313 W/kg
Smallest distance from peaks to all points 3 dB below = 15.8 mm
Ratio of SAR at M2 to SAR at M1 = 65.5%
Maximum value of SAR (measured) = 0.646 W/kg



0 dB = 0.558 W/kg = −2.53 dBW/kg

Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.1 ℃
Test Date:	10/20/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

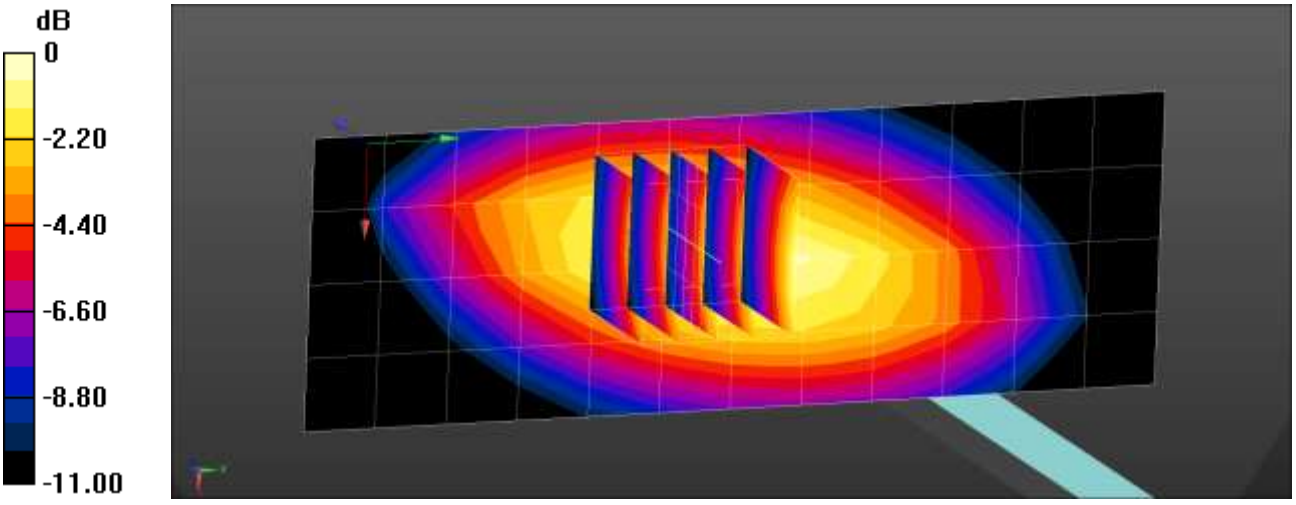
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.883 S/m; ε_r = 41.737; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn504; Calibrated: 2020-02-26
- Phantom: Twin-SAM V4.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification(LTE 5)/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.639 W/kg

835MHz Head Verification(LTE 5)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.58 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.732 W/kg
SAR(1 g) = 0.495 W/kg; SAR(10 g) = 0.325 W/kg
Maximum value of SAR (measured) = 0.656 W/kg



0 dB = 0.656 W/kg = −1.83 dBW/kg

Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	09/14/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

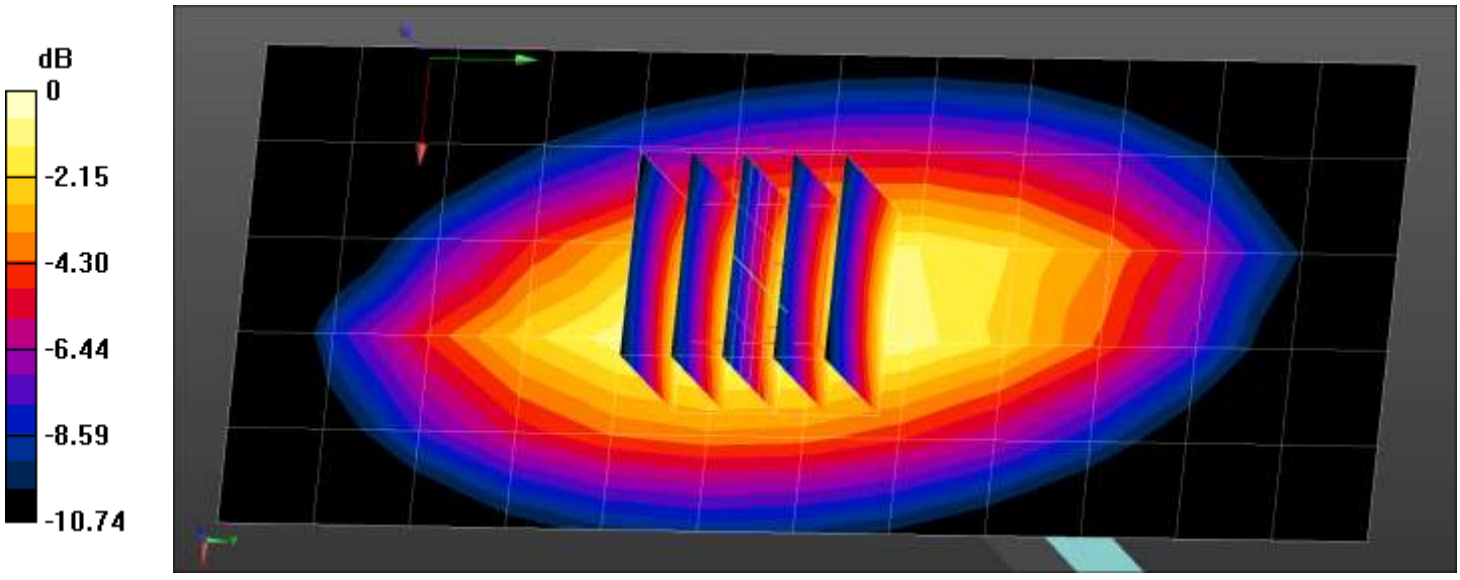
Communication System: UID 0, LTE 26 (0); Frequency: 831.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.926 S/m; ε_r = 42.323; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03); 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);

Dipole/835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.629 W/kg

Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.11 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.778 W/kg
SAR(1 g) = 0.501 W/kg; SAR(10 g) = 0.330 W/kg
Maximum value of SAR (measured) = 0.680 W/kg



0 dB = 0.680 W/kg = −1.67 dBW/kg

Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.7 ℃
Test Date:	09/16/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

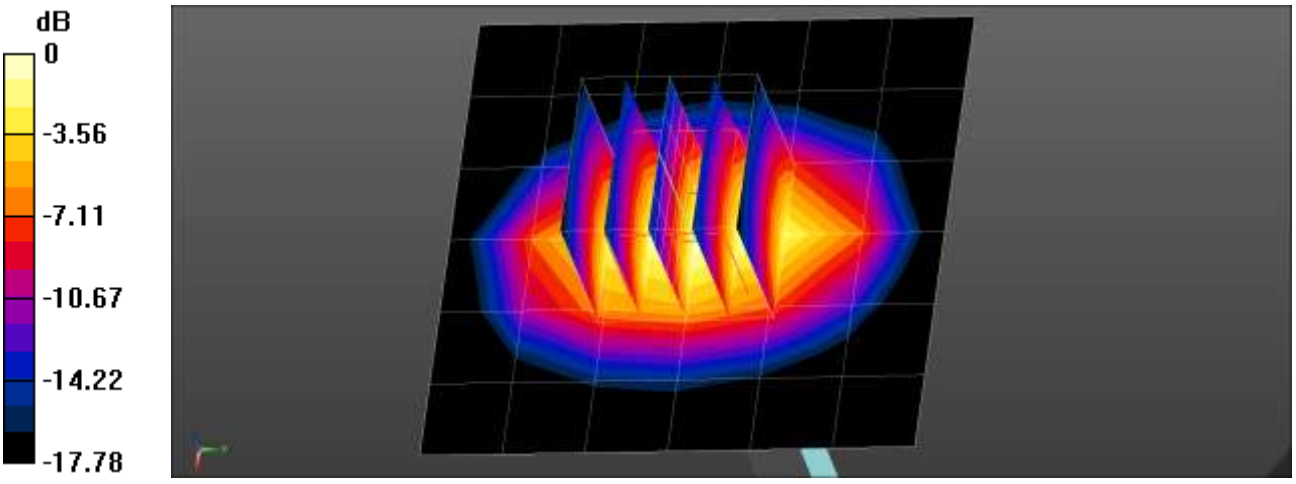
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.423 S/m; ε_r = 40.565; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.82, 7.82, 7.82); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1800MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.98 W/kg

Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.46 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 3.62 W/kg
SAR(1 g) = 1.93 W/kg; SAR(10 g) = 1.01 W/kg
Maximum value of SAR (measured) = 3.03 W/kg



0 dB = 3.03 W/kg = 4.81 dBW/kg

Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	09/29/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

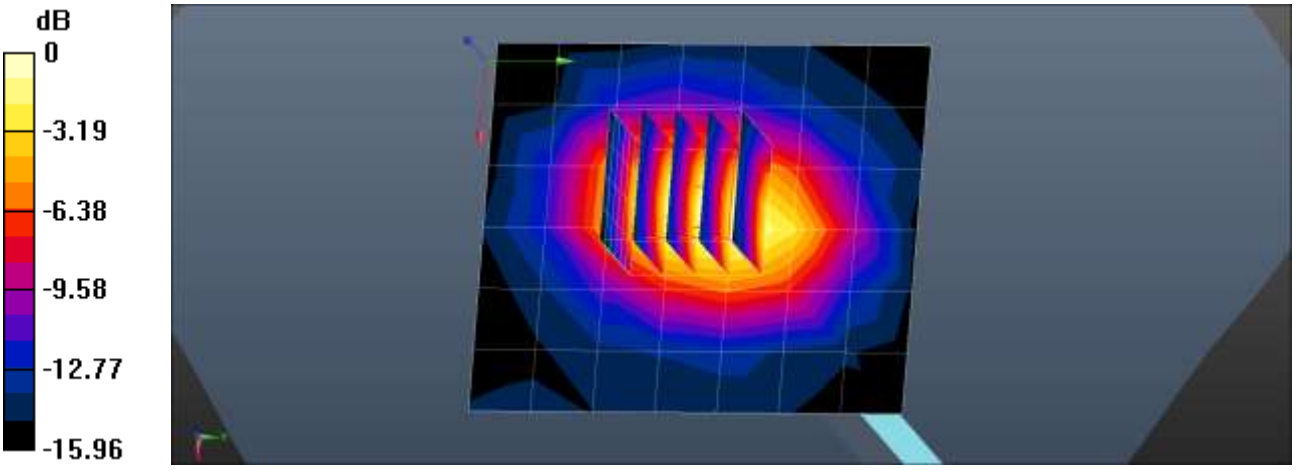
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.382 S/m; ε_r = 40.11; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.91, 5.91, 5.91); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Verification/1800MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.99 W/kg

Verification/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 39.21 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 2.80 W/kg
SAR(1 g) = 1.84 W/kg; SAR(10 g) = 1.04 W/kg
Maximum value of SAR (measured) = 2.07 W/kg



0 dB = 1.99 W/kg = 2.99 dBW/kg

Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.3 ℃
Test Date:	10/27/2020

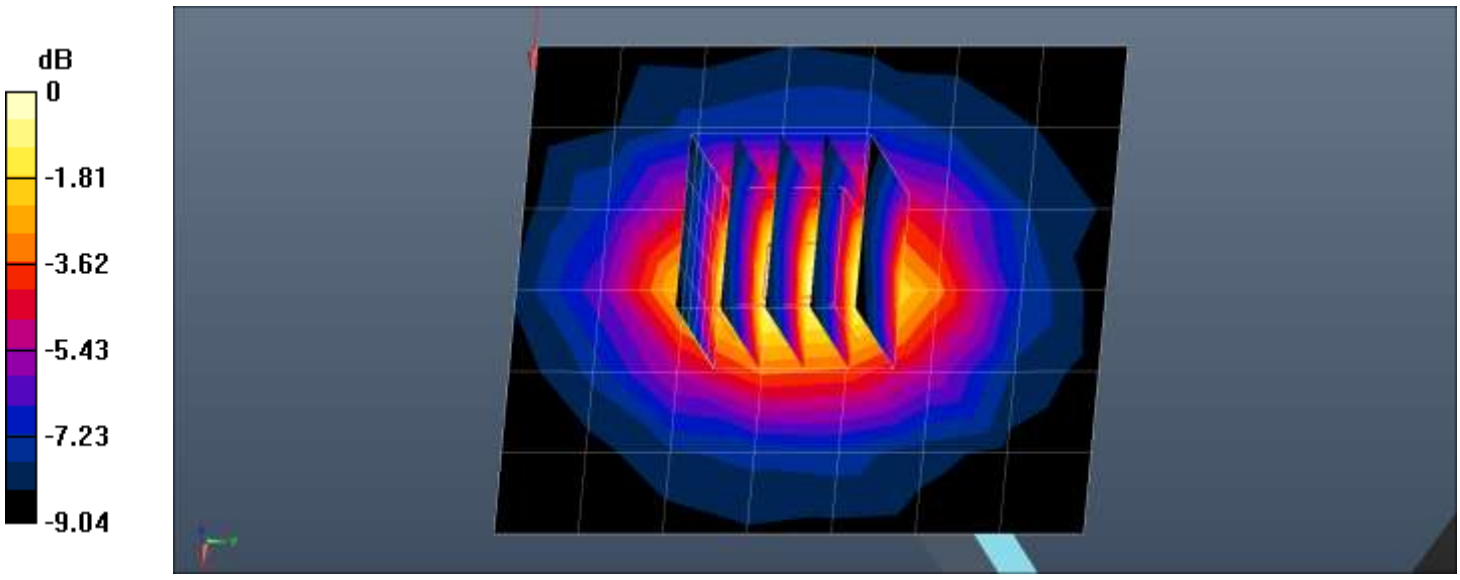
DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.384 S/m; ε_r = 40.253; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.24, 5.24, 5.24) @ 1800 MHz;
- 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);

Dipole/1800MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.65 W/kg
Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.66 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.46 W/kg
SAR(1 g) = 1.9 W/kg; SAR(10 g) = 0.994 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 54.7%
Maximum value of SAR (measured) = 2.41 W/kg



0 dB = 1.65 W/kg = 2.19 dBW/kg

Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.1 ℃
Test Date:	10/13/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

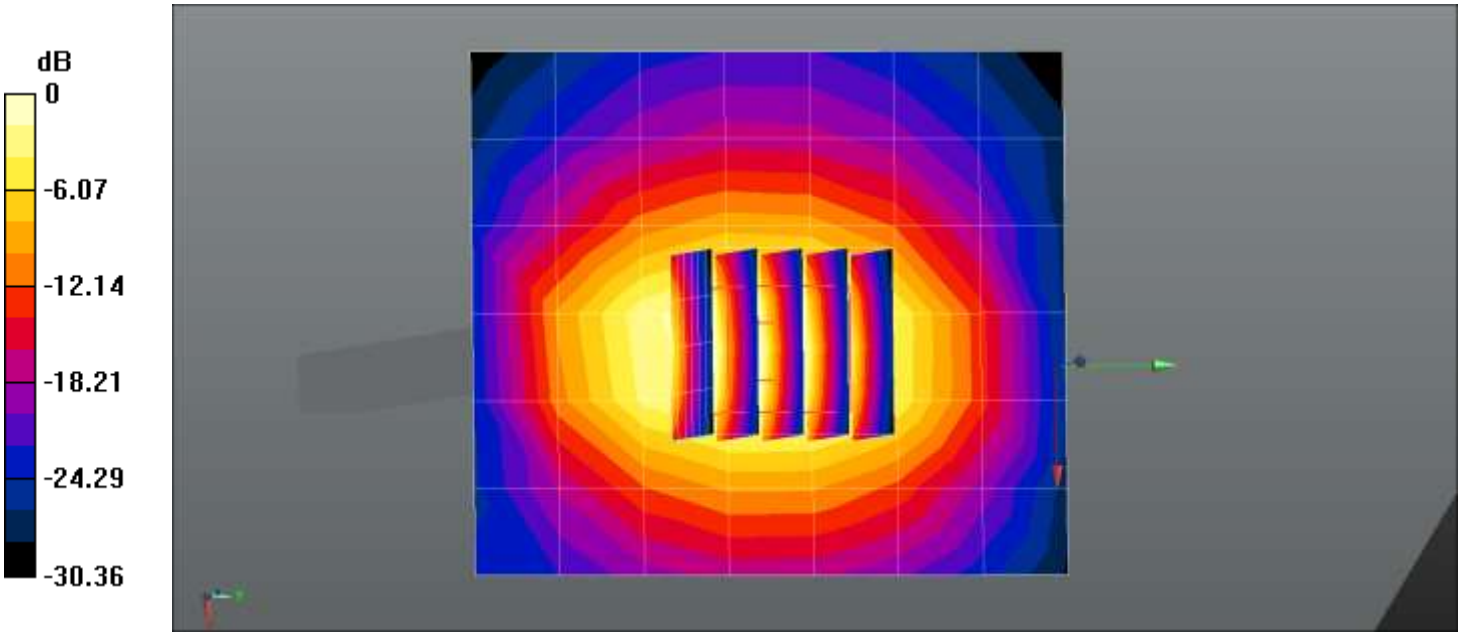
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.384 S/m; ε_r = 40.28; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(8.2, 8.2, 8.2) @ 1800 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1800MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.03 W/kg

Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.46 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 3.44 W/kg
SAR(1 g) = 1.89 W/kg; SAR(10 g) = 0.996 W/kg
Smallest distance from peaks to all points 3 dB below = 9.7 mm
Ratio of SAR at M2 to SAR at M1 = 54.7%
Maximum value of SAR (measured) = 2.92 W/kg



0 dB = 2.03 W/kg = 3.08 dBW/kg

Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.7 ℃
Test Date:	09/16/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

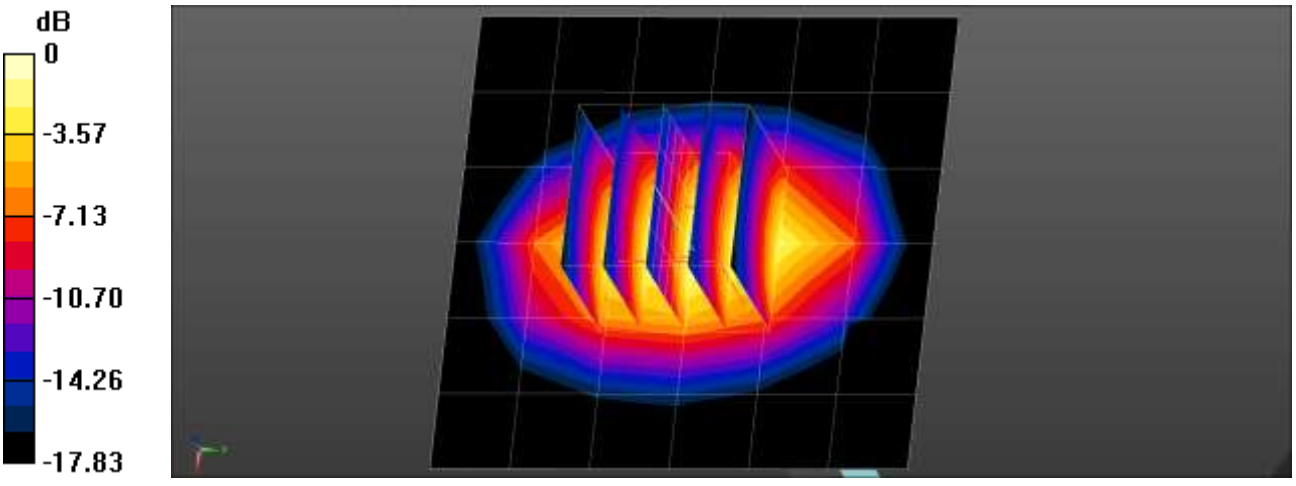
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.387 S/m; ε_r = 40.247; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.82, 7.82, 7.82); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

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

Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.28 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 3.51 W/kg
SAR(1 g) = 1.89 W/kg; SAR(10 g) = 0.991 W/kg
Maximum value of SAR (measured) = 2.94 W/kg



0 dB = 2.94 W/kg = 4.68 dBW/kg

Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.1 ℃
Test Date:	10/14/2020

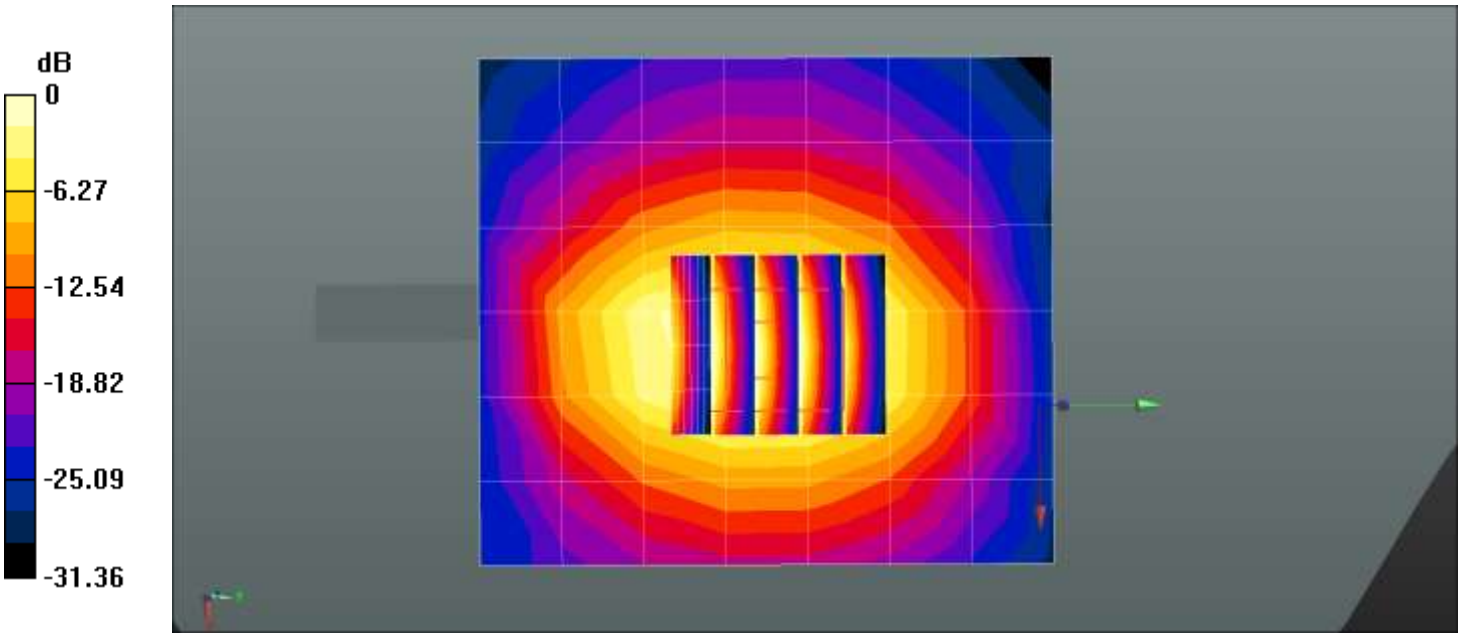
DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.39 S/m; ε_r = 40.291; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7314; ConvF(8.2, 8.2, 8.2) @ 1800 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2020-08-07
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1800MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.04 W/kg
Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 40.95 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 3.44 W/kg
SAR(1 g) = 1.9 W/kg; SAR(10 g) = 1 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 54.9%
Maximum value of SAR (measured) = 2.92 W/kg



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

Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.1 ℃
Test Date:	09/11/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

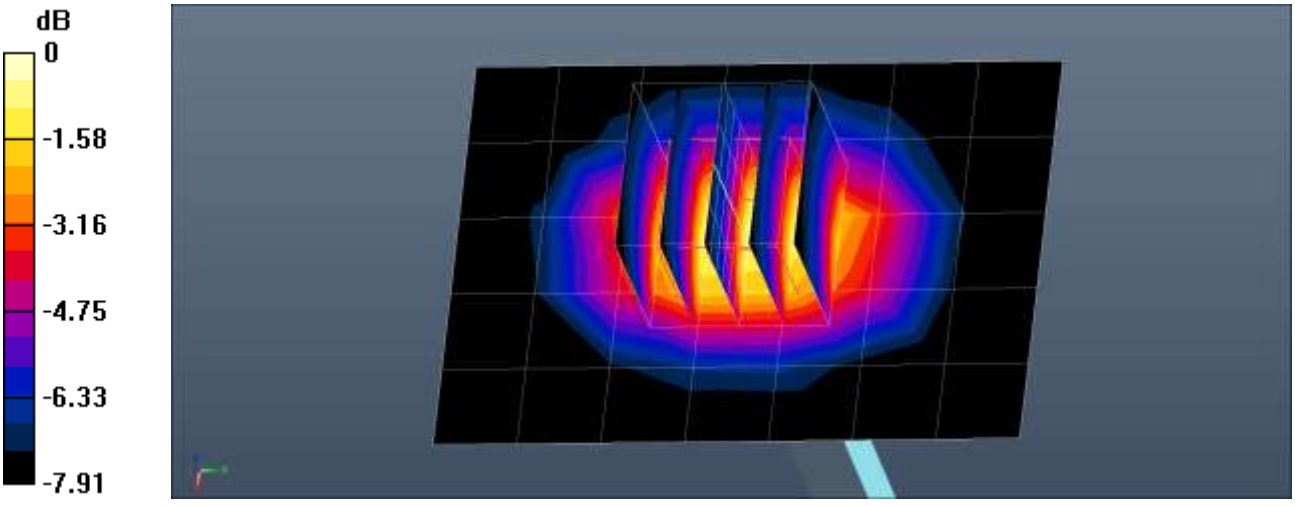
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.445 S/m; ε_r = 39.502; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); 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);

Dipole/1900MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.91 W/kg

Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 40.26 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 2.96 W/kg
SAR(1 g) = 2.04 W/kg; SAR(10 g) = 1.29 W/kg
Maximum value of SAR (measured) = 2.24 W/kg



0 dB = 2.24 W/kg = 3.50 dBW/kg

Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.9 ℃
Test Date:	09/15/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

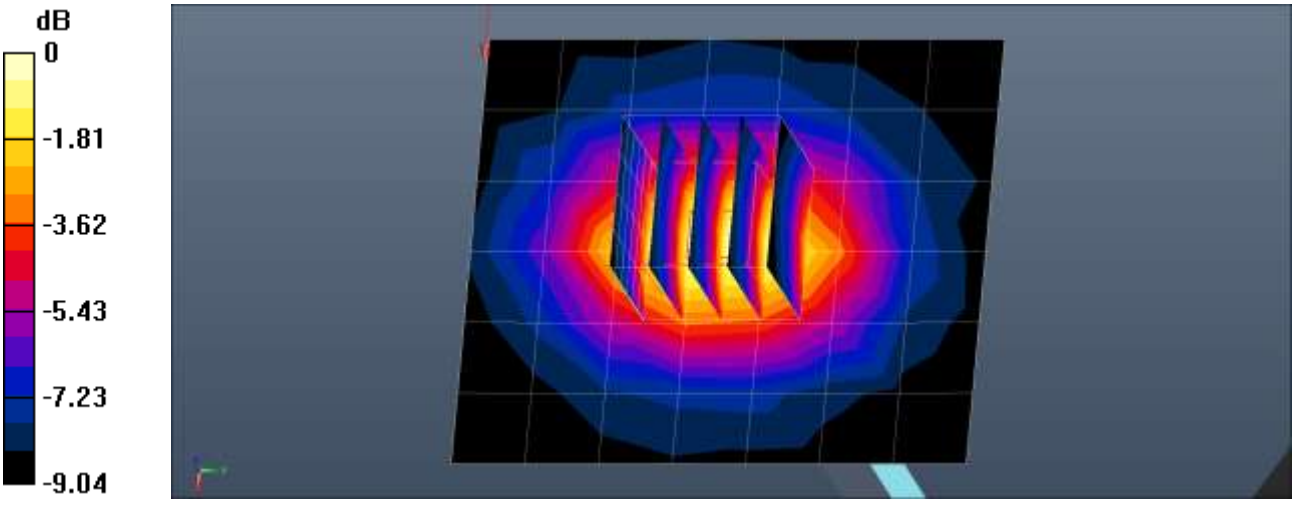
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.447 S/m; ε_r = 39.867; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1900MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.25 W/kg

Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.97 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 2.49 W/kg
SAR(1 g) = 1.9 W/kg; SAR(10 g) = 1.25 W/kg
Maximum value of SAR (measured) = 2.08 W/kg



0 dB = 2.25 W/kg = 3.52 dBW/kg

Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.0 ℃
Test Date:	09/15/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

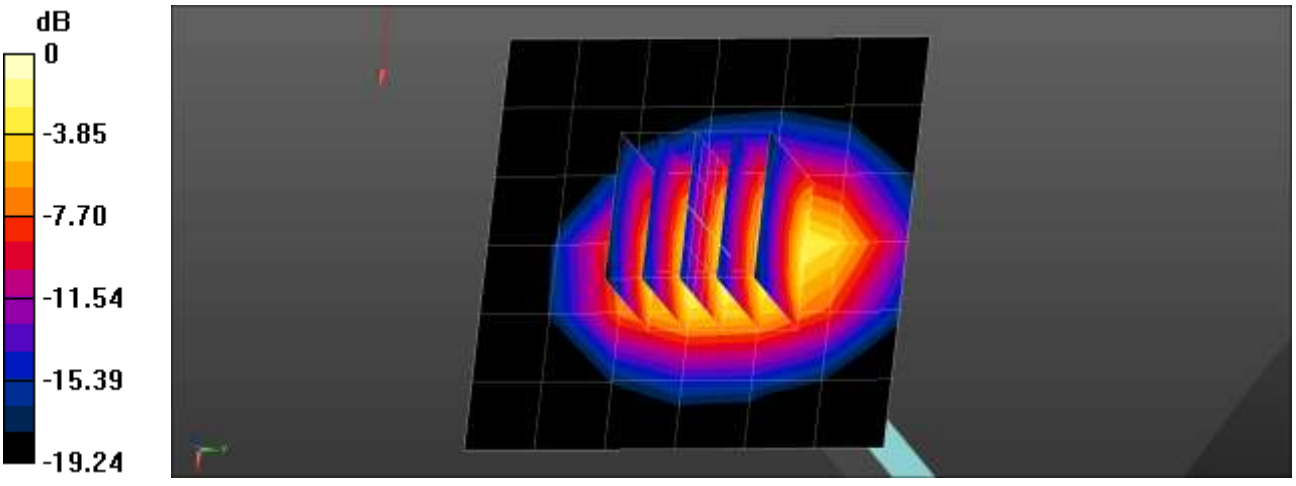
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.428 S/m; ε_r = 39.878; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.59 W/kg

Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.47 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 3.61 W/kg
SAR(1 g) = 1.92 W/kg; SAR(10 g) = 0.988 W/kg
Maximum value of SAR (measured) = 3.02 W/kg



0 dB = 3.02 W/kg = 4.80 dBW/kg

Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	09/28/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

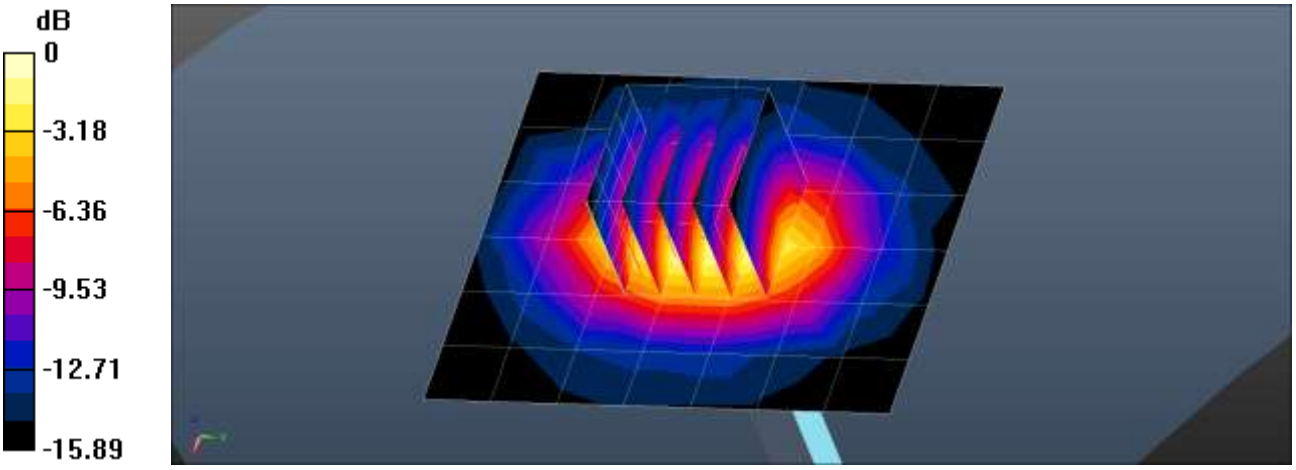
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.447 S/m; ε_r = 39.867; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63); Calibrated: 2020-02-26;
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2020-07-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Verification/1900MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.10 W/kg

Verification/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 40.91 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 2.99 W/kg
SAR(1 g) = 1.96 W/kg; SAR(10 g) = 1.09 W/kg
Maximum value of SAR (measured) = 2.21 W/kg



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

Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.0 ℃
Test Date:	09/28/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

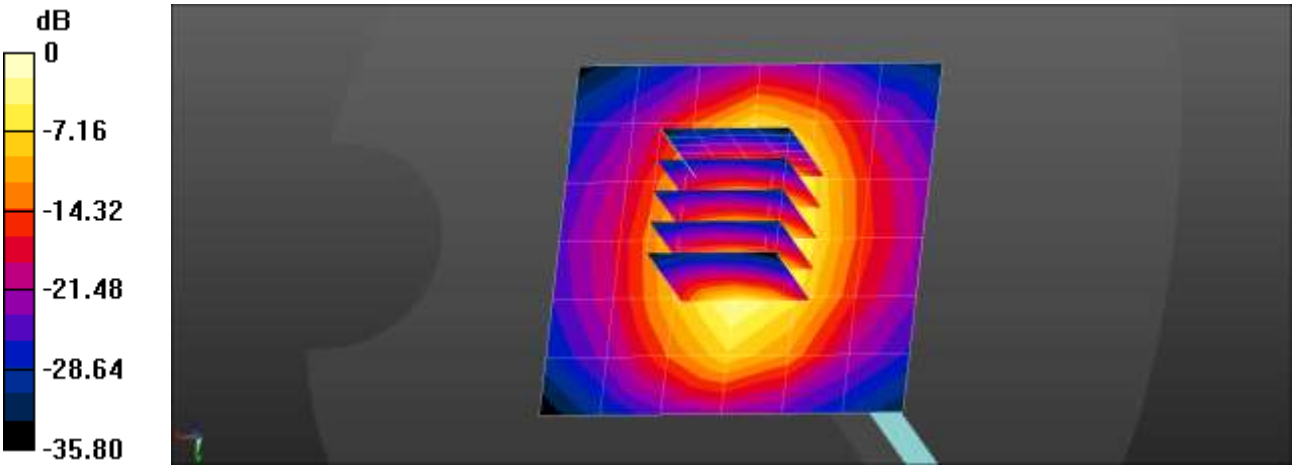
Communication System: UID 0, CW; Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.395 S/m; ε_r = 39.883; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0 (Left)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.04 W/kg

Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.96 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.88 W/kg
SAR(1 g) = 2.04 W/kg; SAR(10 g) = 1.06 W/kg
Maximum value of SAR (measured) = 3.23 W/kg



0 dB = 3.04 W/kg = 4.82 dBW/kg

Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.0 ℃
Test Date:	09/15/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

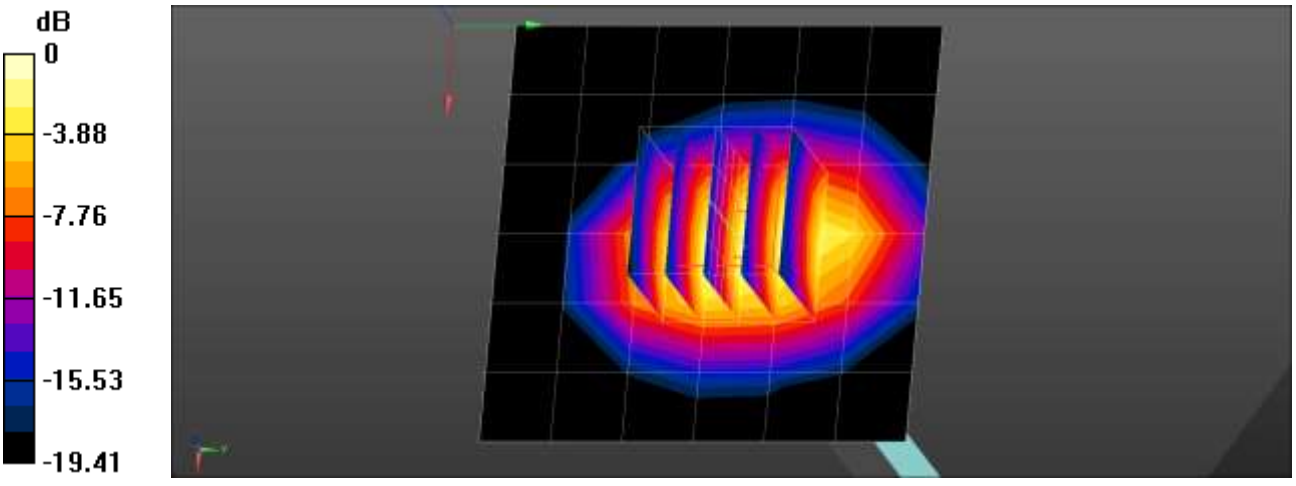
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.397 S/m; ε_r = 40.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3697; ConvF(7.57, 7.57, 7.57); Calibrated: 2020-03-26;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1567; Calibrated: 2020-03-20
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.55 W/kg

Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 42.40 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 3.53 W/kg
SAR(1 g) = 1.88 W/kg; SAR(10 g) = 0.967 W/kg
Maximum value of SAR (measured) = 2.96 W/kg



0 dB = 2.96 W/kg = 4.71 dBW/kg

Verification Data (2 300 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	10/13/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

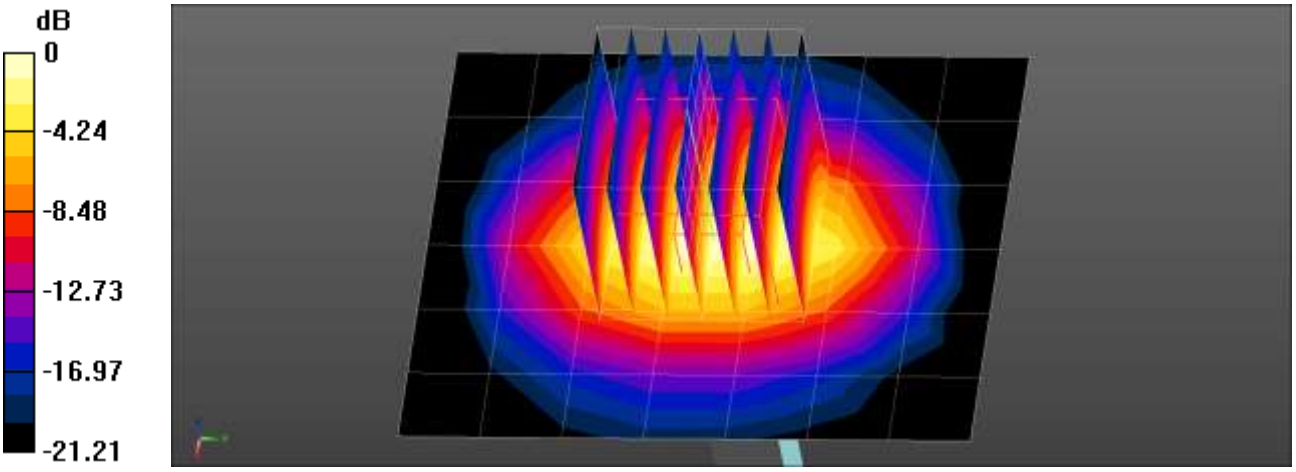
Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.646 S/m; ε_r = 40.498; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

Dipole/2300MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.75 W/kg

Dipole/2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 51.33 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 5.18 W/kg
SAR(1 g) = 2.42 W/kg; SAR(10 g) = 1.13 W/kg
Maximum value of SAR (measured) = 4.06 W/kg



0 dB = 4.06 W/kg = 6.09 dBW/kg

Verification Data (2 300 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	10/02/2020

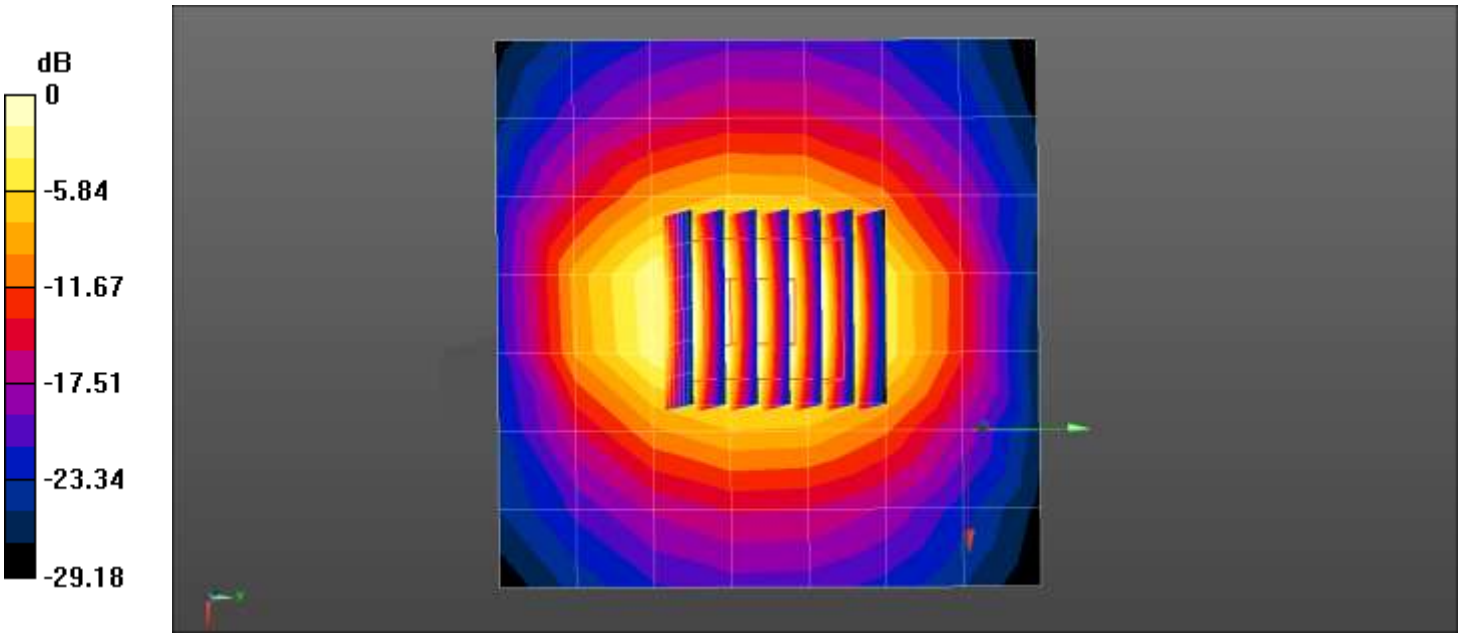
DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.639 S/m; ε_r = 40.533; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.73, 7.73, 7.73) @ 2300 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2300MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.04 W/kg
Dipole/2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.04 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 5.23 W/kg
SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.16 W/kg
Smallest distance from peaks to all points 3 dB below = 9.5 mm
Ratio of SAR at M2 to SAR at M1 = 47.1%
Maximum value of SAR (measured) = 4.16 W/kg



0 dB = 3.04 W/kg = 4.83 dBW/kg

Verification Data (2 300 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.0 ℃
Test Date:	10/15/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

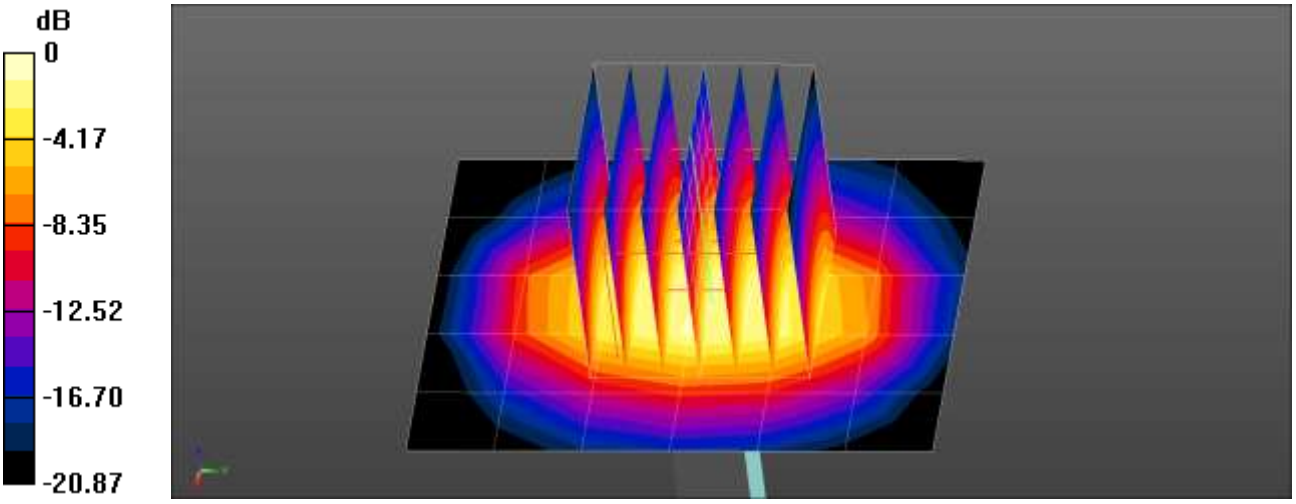
Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.634 S/m; ε_r = 40.517; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.87, 4.87, 4.87); 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);

Dipole/2300MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.33 W/kg

Dipole/2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 44.96 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 4.71 W/kg
SAR(1 g) = 2.34 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 3.07 W/kg



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

Verification Data (2 300 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.6 ℃
Test Date:	10/30/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

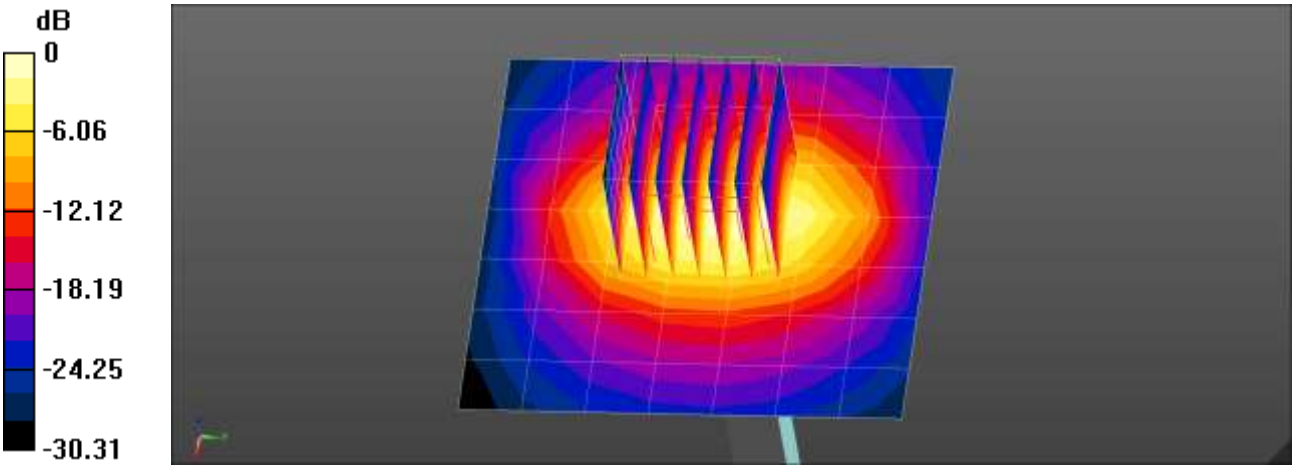
Communication System: UID 0, CW; Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.638 S/m; ε_r = 40.564; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.64, 7.64, 7.64); Calibrated: 2020-09-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2020-09-29
- Phantom: Twin-SAM V8.0 (Left)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2300MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.68 W/kg

Dipole/2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.77 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 4.94 W/kg
SAR(1 g) = 2.32 W/kg; SAR(10 g) = 1.09 W/kg
Maximum value of SAR (measured) = 3.90 W/kg



0 dB = 3.68 W/kg = 5.65 dBW/kg

Verification Data (2 300 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.6 ℃
Test Date:	10/30/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

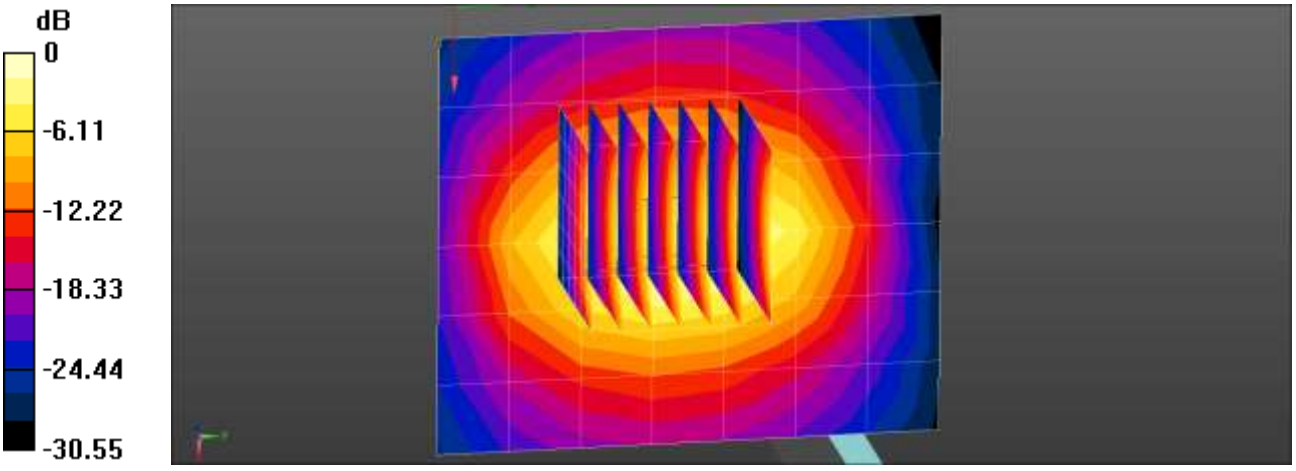
Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.637 S/m; ε_r = 40.495; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

Dipole/2300MHz Head Verification/Area Scan (7x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.90 W/kg

Dipole/2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.12 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 5.14 W/kg
SAR(1 g) = 2.33 W/kg; SAR(10 g) = 1.09 W/kg
Maximum value of SAR (measured) = 3.99 W/kg



0 dB = 3.90 W/kg = 5.91 dBW/kg

Verification Data (2 300 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.6 ℃
Test Date:	10/12/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

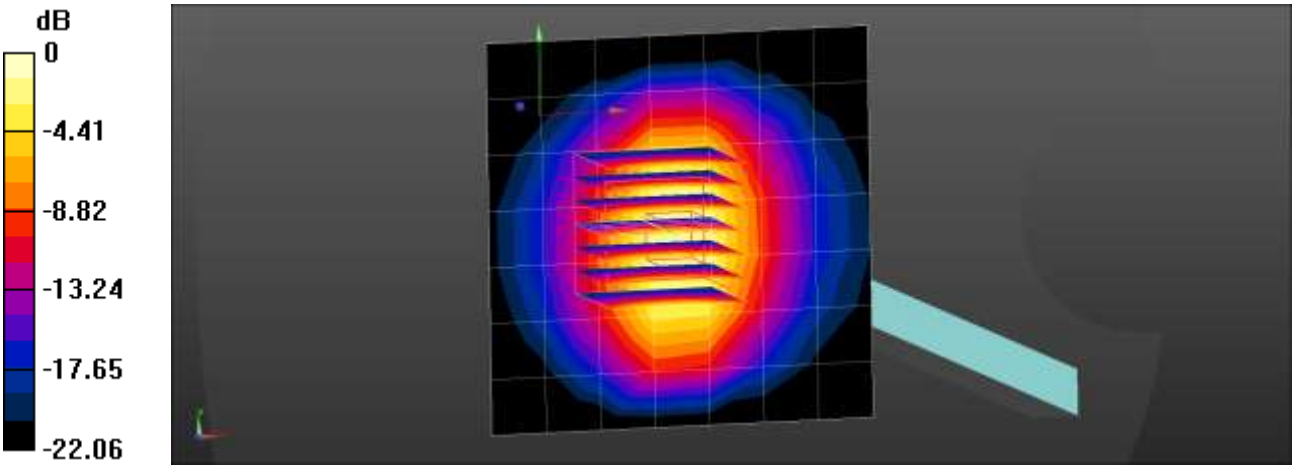
Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.639 S/m; ε_r = 40.526; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.73, 7.73, 7.73); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2300MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.03 W/kg

Dipole/2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.00 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 5.25 W/kg
SAR(1 g) = 2.46 W/kg; SAR(10 g) = 1.15 W/kg
Maximum value of SAR (measured) = 4.18 W/kg



0 dB = 4.18 W/kg = 6.21 dBW/kg

Verification Data (2 300 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.1 ℃
Test Date:	10/15/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

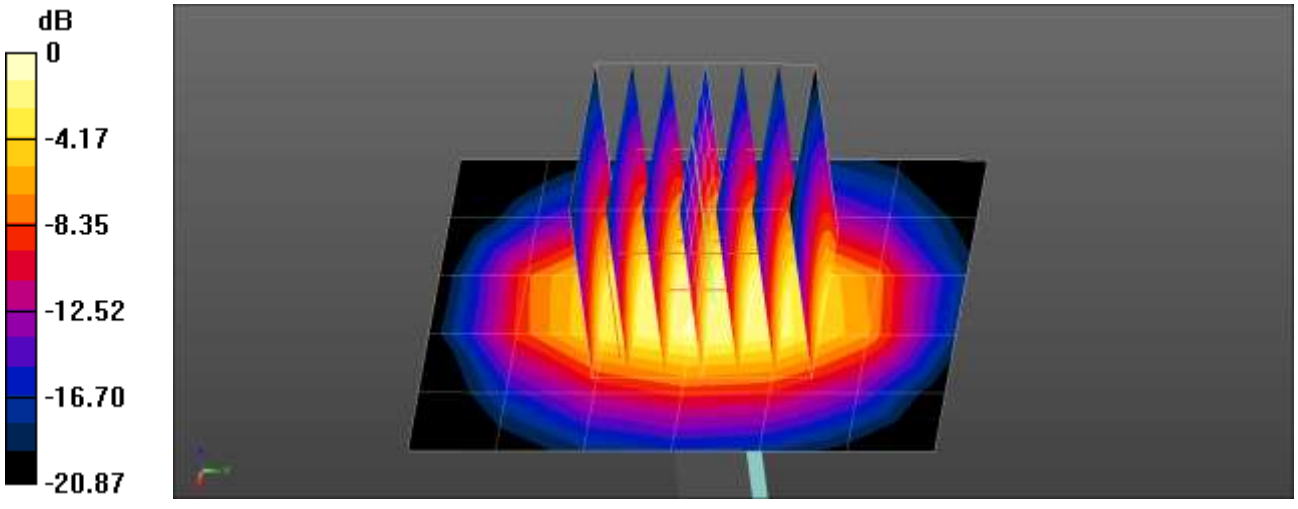
Communication System: UID 0, CW (0); Frequency: 2300 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2300 MHz; σ = 1.634 S/m; ε_r = 40.517; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.87, 4.87, 4.87); 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);

Dipole/2300MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.33 W/kg

Dipole/2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 44.96 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 4.71 W/kg
SAR(1 g) = 2.34 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 3.07 W/kg



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

Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	09/21/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

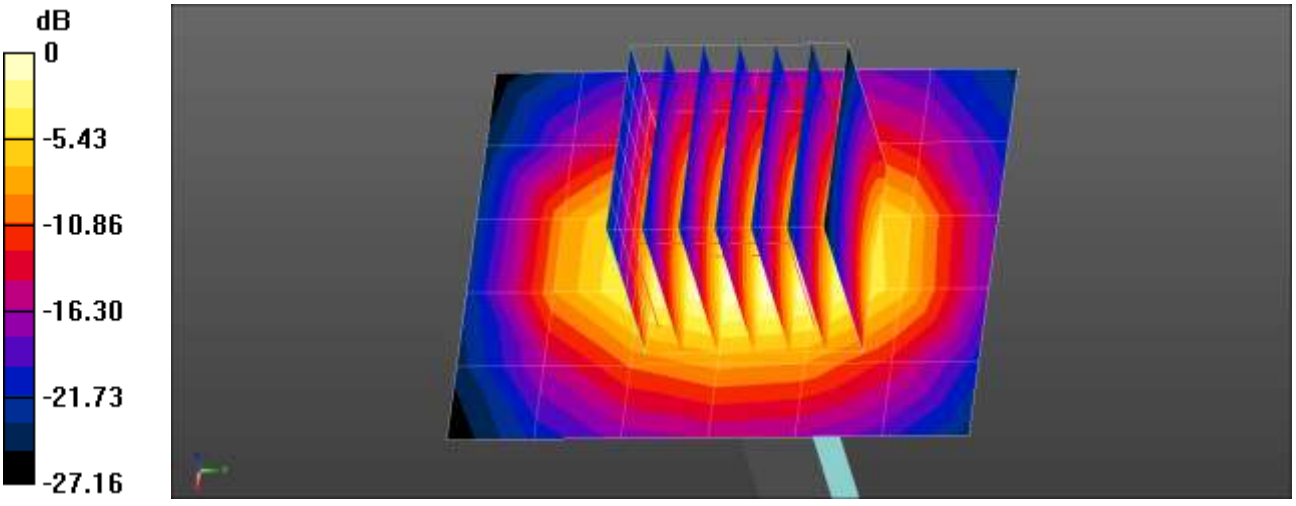
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.823 S/m; ε_r = 39.539; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2450MHz Head Verification (BT)/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.60 W/kg

Dipole/2450MHz Head Verification (BT)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.46 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 6.20 W/kg
SAR(1 g) = 2.75 W/kg; SAR(10 g) = 1.23 W/kg
Maximum value of SAR (measured) = 4.79 W/kg



0 dB = 3.60 W/kg = 5.56 dBW/kg

Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.3 ℃
Test Date:	09/24/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

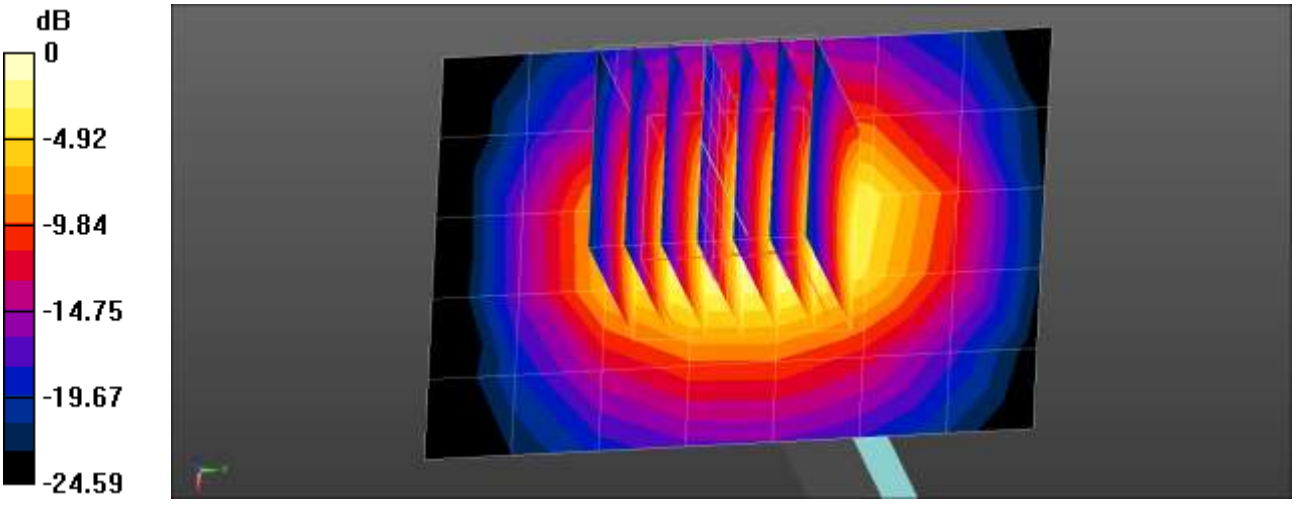
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.83 S/m; ε_r = 40.531; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2450MHz Head Verification(WLAN2.4G Ant1,2)/Area Scan (6x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.14 W/kg

Dipole/2450MHz Head Verification(WLAN2.4G Ant1,2)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.71 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 5.70 W/kg
SAR(1 g) = 2.5 W/kg; SAR(10 g) = 1.13 W/kg
Maximum value of SAR (measured) = 4.19 W/kg



0 dB = 4.19 W/kg = 6.22 dBW/kg

Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.9 ℃
Test Date:	09/25/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

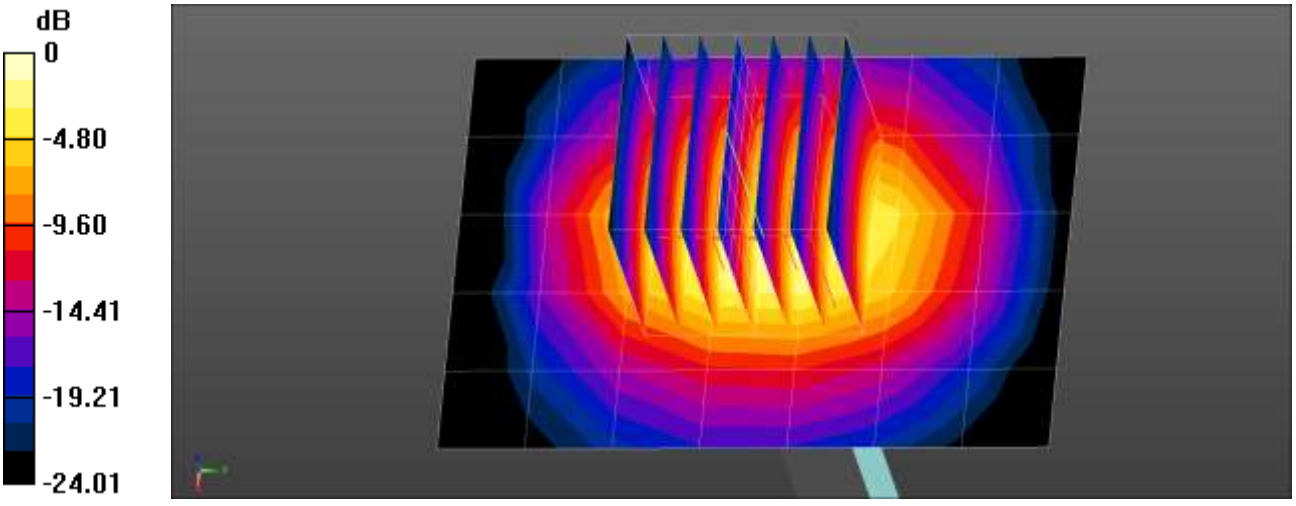
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.794 S/m; ε_r = 39.423; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.5, 7.5, 7.5); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2450MHz Head Verification(WLAN2.4G MIMO)/Area Scan (6x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.62 W/kg

Dipole/2450MHz Head Verification(WLAN2.4G MIMO)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.78 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 5.79 W/kg
SAR(1 g) = 2.54 W/kg; SAR(10 g) = 1.14 W/kg
Maximum value of SAR (measured) = 4.49 W/kg



0 dB = 4.49 W/kg = 6.52 dBW/kg

Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	11/06/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

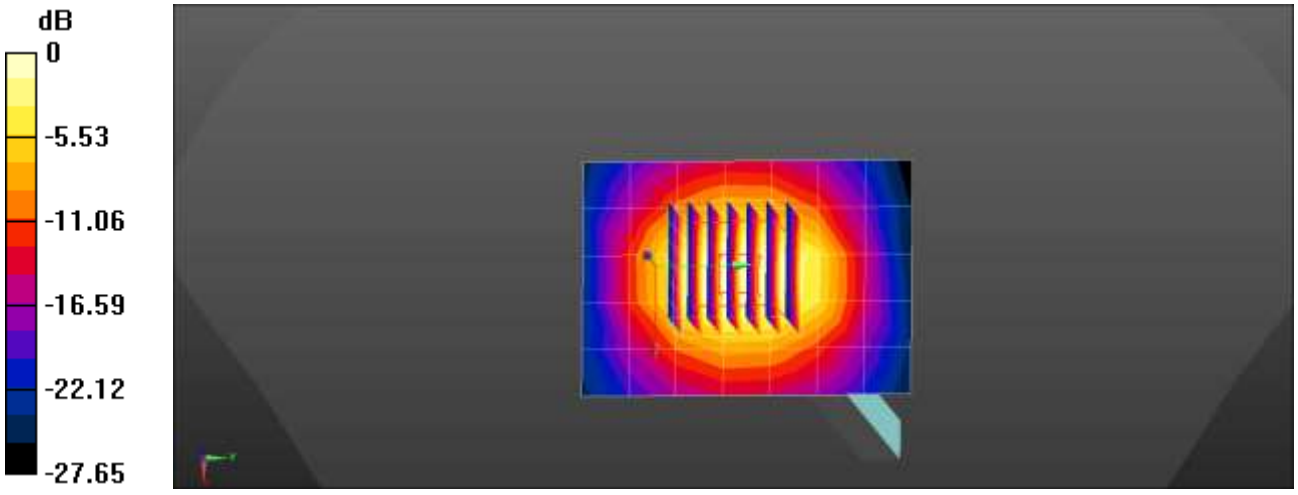
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.771 S/m; ε_r = 40.033; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 – SN3797; ConvF(7.35, 7.35, 7.35); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2450MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.17 W/kg

Dipole/2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.67 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 6.12 W/kg
SAR(1 g) = 2.58 W/kg; SAR(10 g) = 1.12 W/kg
Maximum value of SAR (measured) = 4.66 W/kg



0 dB = 3.28 W/kg = 5.15 dBW/kg

Verification Data (2 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.7 ℃
Test Date:	10/05/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

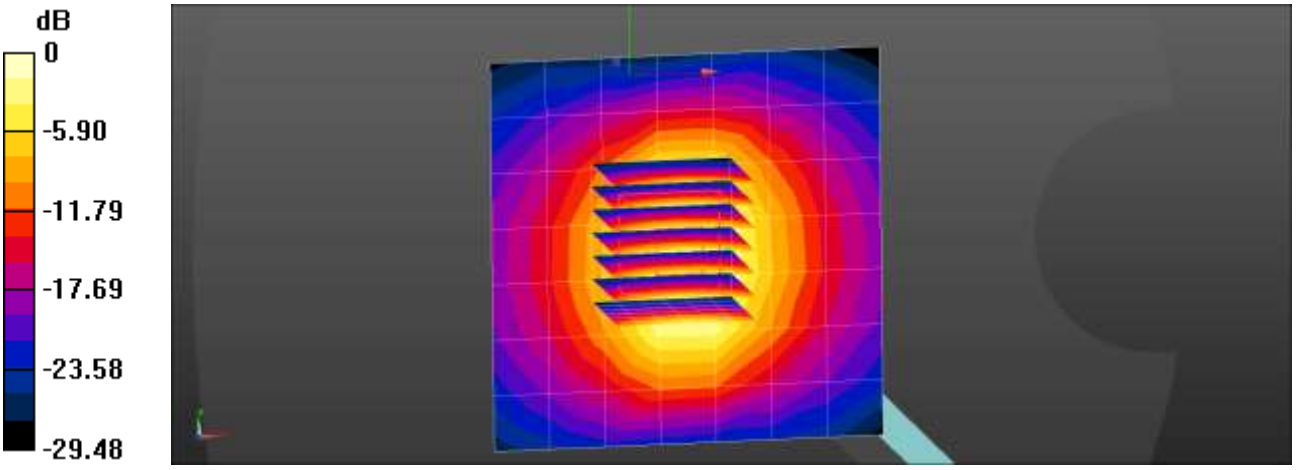
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.972 S/m; ε_r = 39.638; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.35, 7.35, 7.35); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2600MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.66 W/kg

Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.65 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 6.69 W/kg
SAR(1 g) = 2.89 W/kg; SAR(10 g) = 1.26 W/kg
Maximum value of SAR (measured) = 5.16 W/kg



0 dB = 3.66 W/kg = 5.63 dBW/kg

Verification Data (2 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.0 ℃
Test Date:	10/27/2020

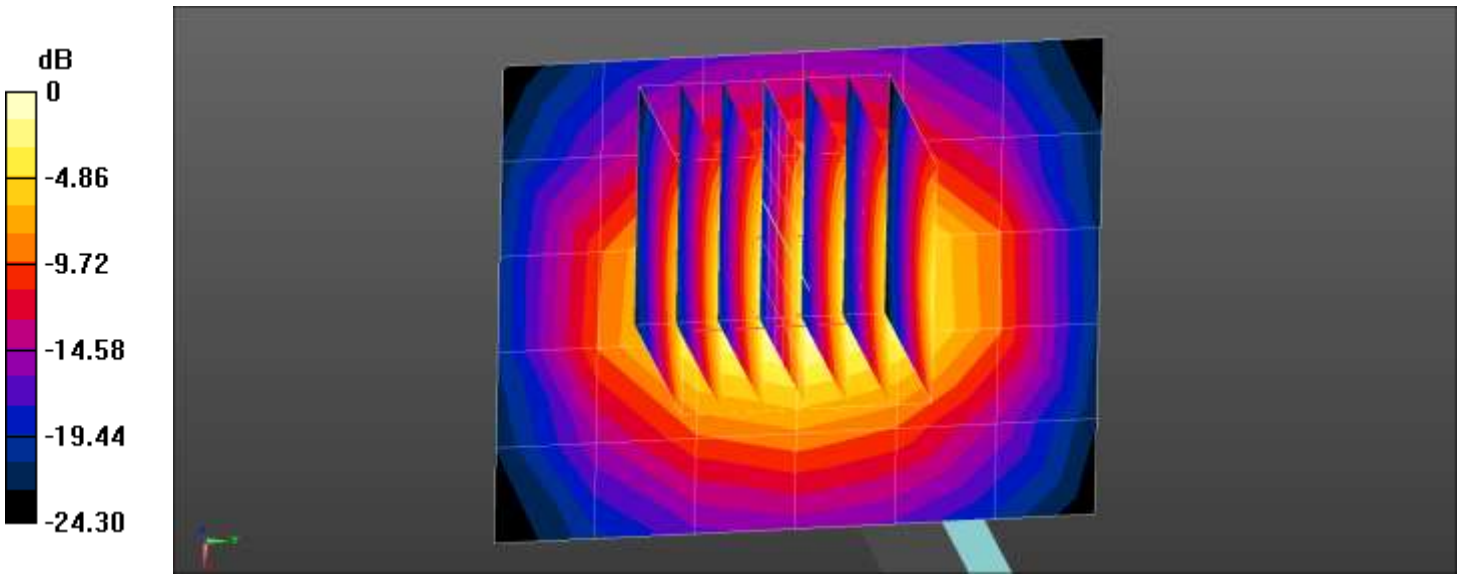
DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.935 S/m; ε_r = 39.751; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5) @ 2600 MHz;
- 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);

Dipole/2600MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.12 W/kg
Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 46.31 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 6.36 W/kg
SAR(1 g) = 2.86 W/kg; SAR(10 g) = 1.25 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 46.3%
Maximum value of SAR (measured) = 3.87 W/kg



0 dB = 3.12 W/kg = 4.94 dBW/kg

Verification Data (2 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.3 ℃
Test Date:	10/21/2020

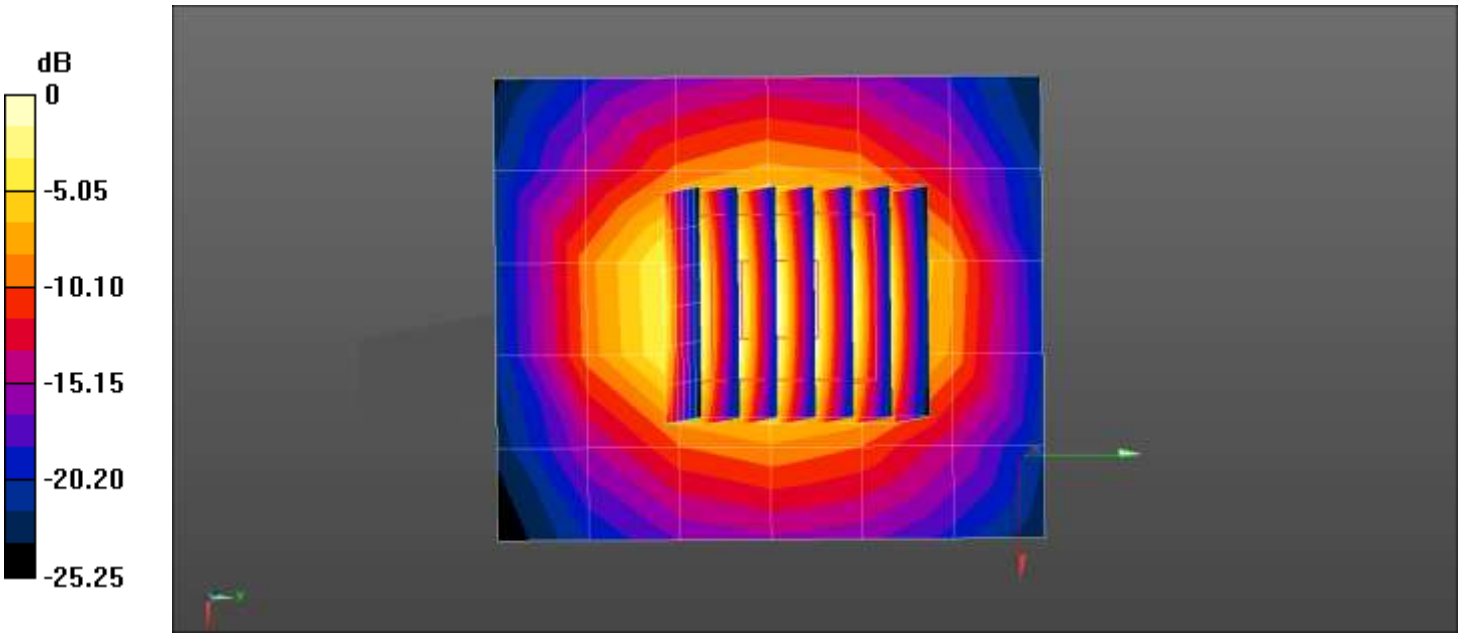
DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.944 S/m; ε_r = 38.766; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5) @ 2600 MHz;
- 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);

Dipole/2600MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.79 W/kg
Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 44.78 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 6.03 W/kg
SAR(1 g) = 2.71 W/kg; SAR(10 g) = 1.19 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 45.8%
Maximum value of SAR (measured) = 3.64 W/kg



0 dB = 2.79 W/kg = 4.46 dBW/kg

Verification Data (2 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.5 ℃
Test Date:	09/28/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

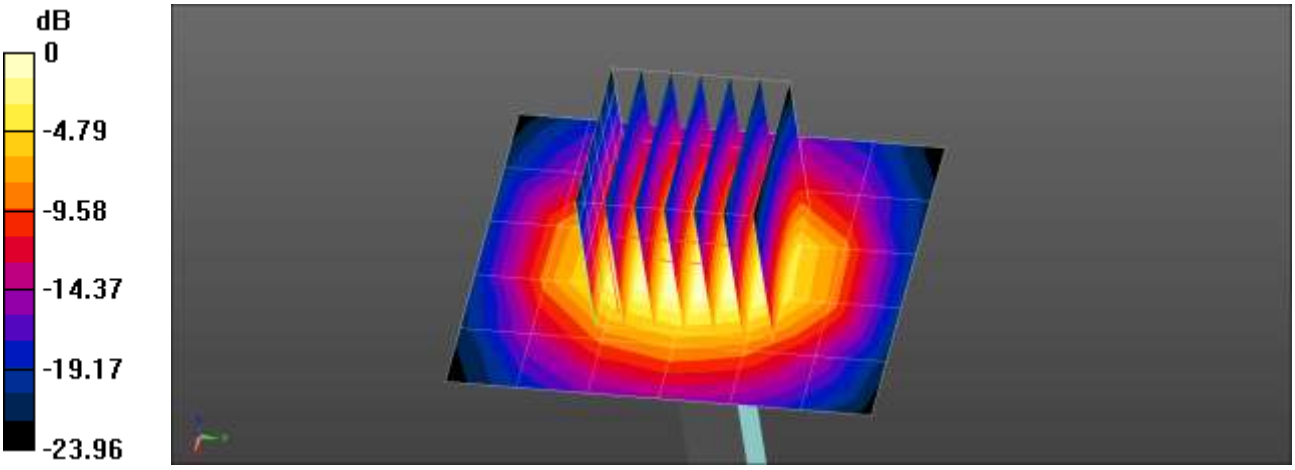
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.019 S/m; ε_r = 40.07; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

Dipole/2600MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.05 W/kg

Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 45.35 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 6.33 W/kg
SAR(1 g) = 2.86 W/kg; SAR(10 g) = 1.26 W/kg
Maximum value of SAR (measured) = 3.80 W/kg



0 dB = 3.05 W/kg = 4.84 dBW/kg

Verification Data (2 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.3 ℃
Test Date:	10/20/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

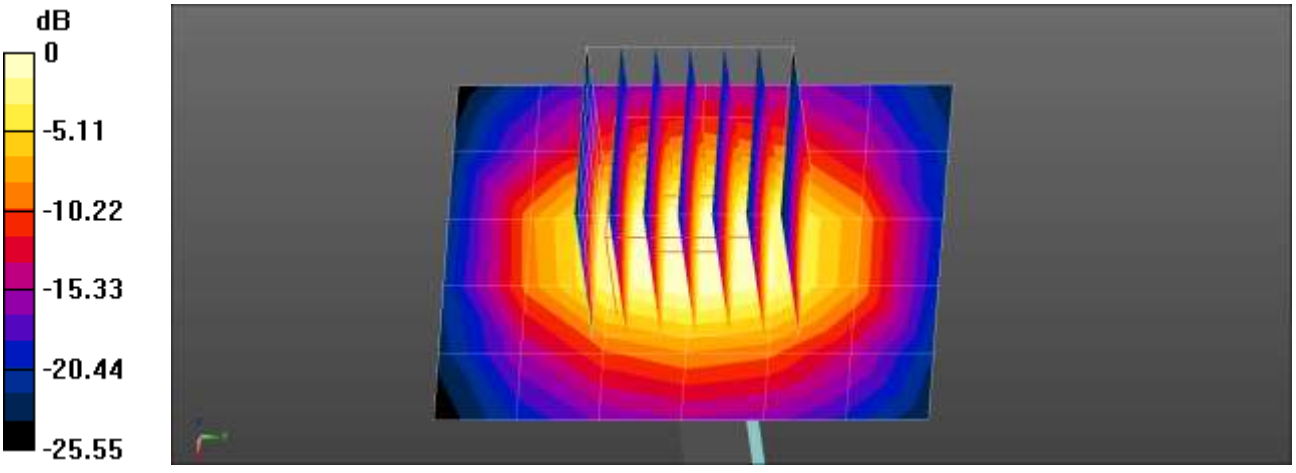
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 2.015 S/m; ε_r = 39.075; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

Dipole/2600MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.95 W/kg

Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 46.66 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 6.50 W/kg
SAR(1 g) = 2.94 W/kg; SAR(10 g) = 1.29 W/kg
Maximum value of SAR (measured) = 3.98 W/kg



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

Verification Data (2 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.9 ℃
Test Date:	10/22/2020

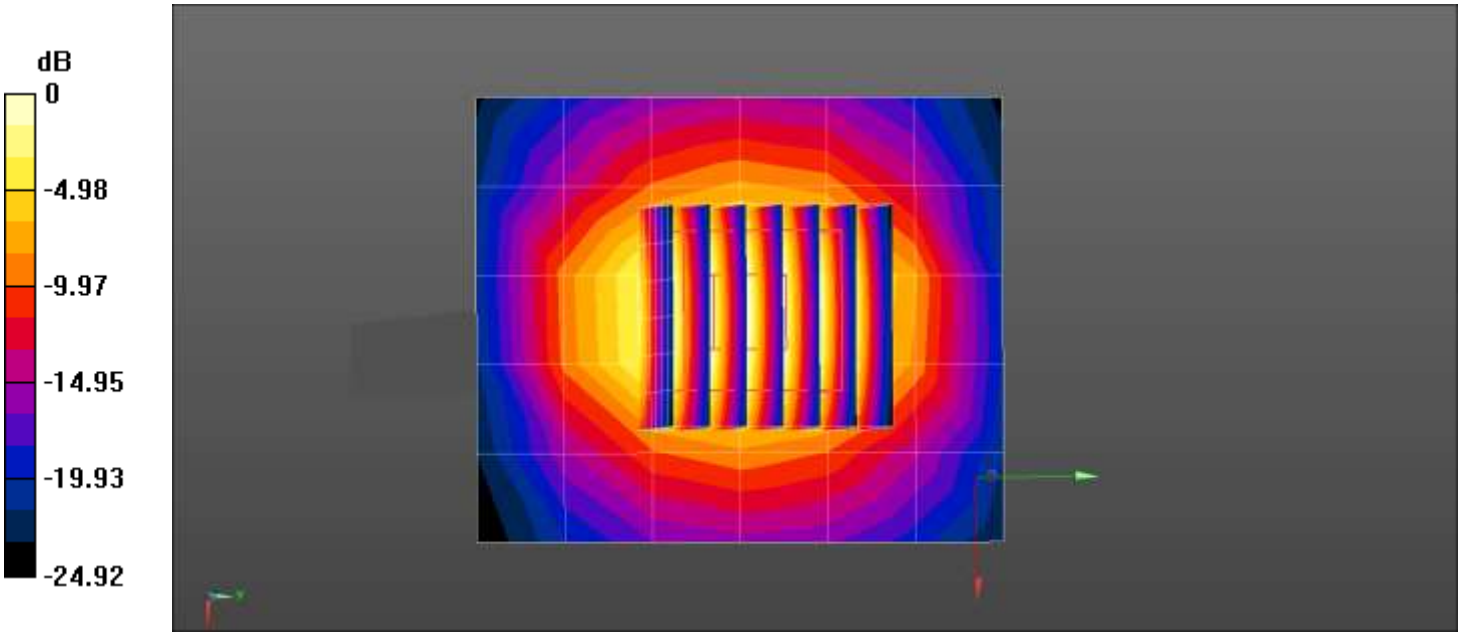
DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.93 S/m; ε_r = 40.877; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5) @ 2600 MHz;
- 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);

Dipole/2600MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.84 W/kg
Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 45.48 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 6.08 W/kg
SAR(1 g) = 2.73 W/kg; SAR(10 g) = 1.2 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 45.8%
Maximum value of SAR (measured) = 3.68 W/kg



0 dB = 2.84 W/kg = 4.53 dBW/kg

Verification Data (2 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.3 ℃
Test Date:	10/20/2020

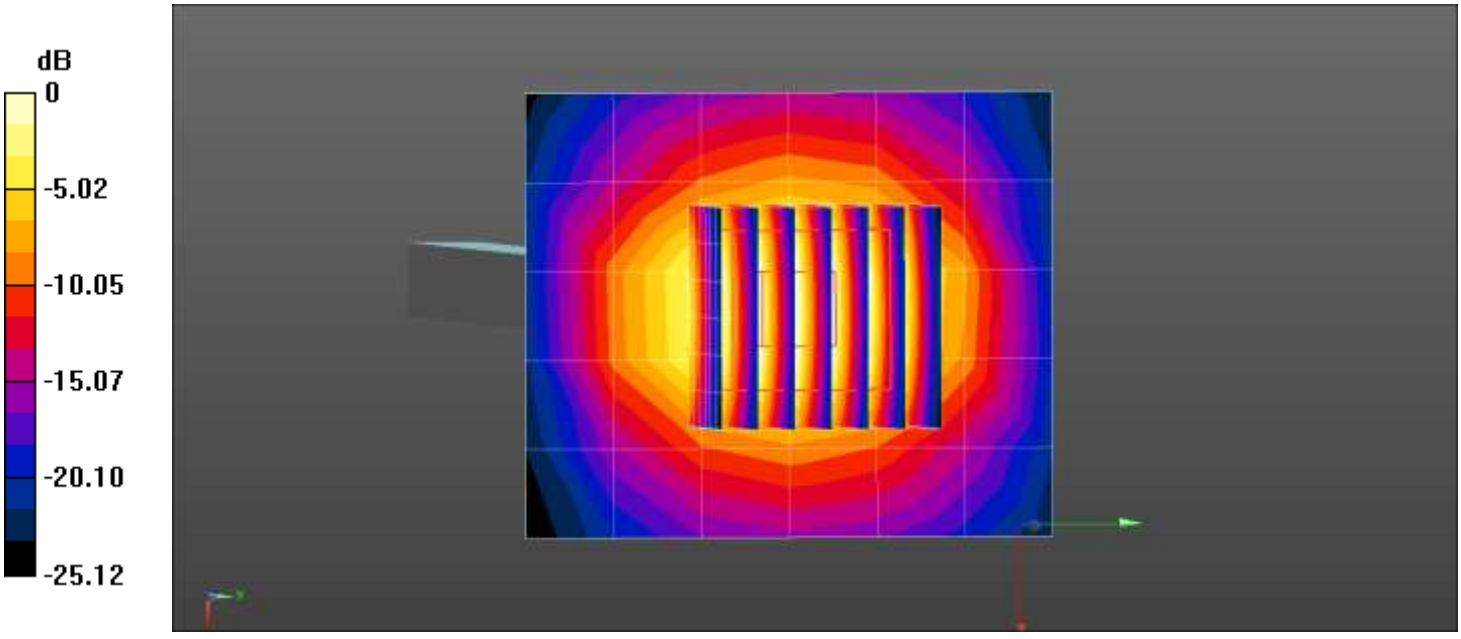
DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.992 S/m; ε_r = 40.152; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5) @ 2600 MHz;
- 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);

Dipole/2600MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 2.87 W/kg
Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 45.10 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 6.18 W/kg
SAR(1 g) = 2.78 W/kg; SAR(10 g) = 1.22 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 45.9%
Maximum value of SAR (measured) = 3.73 W/kg



0 dB = 2.87 W/kg = 4.58 dBW/kg

Verification Data (2 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.6 ℃
Test Date:	10/19/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

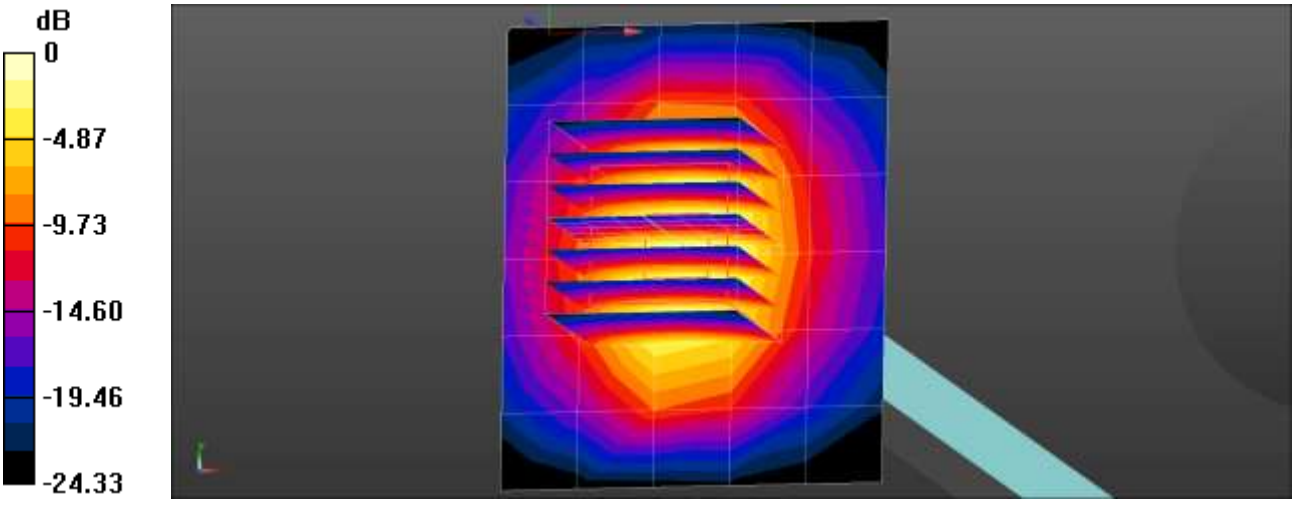
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.992 S/m; ε_r = 40.531; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.5, 4.5, 4.5); 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);

Dipole/2600MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.30 W/kg

Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 47.33 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 6.85 W/kg
SAR(1 g) = 3.07 W/kg; SAR(10 g) = 1.33 W/kg
Maximum value of SAR (measured) = 4.14 W/kg



0 dB = 4.14 W/kg = 6.17 dBW/kg

Verification Data (3 500 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	10/02/2020

DUT: Dipole 3500 MHz D3500V2; Type: D3500V2

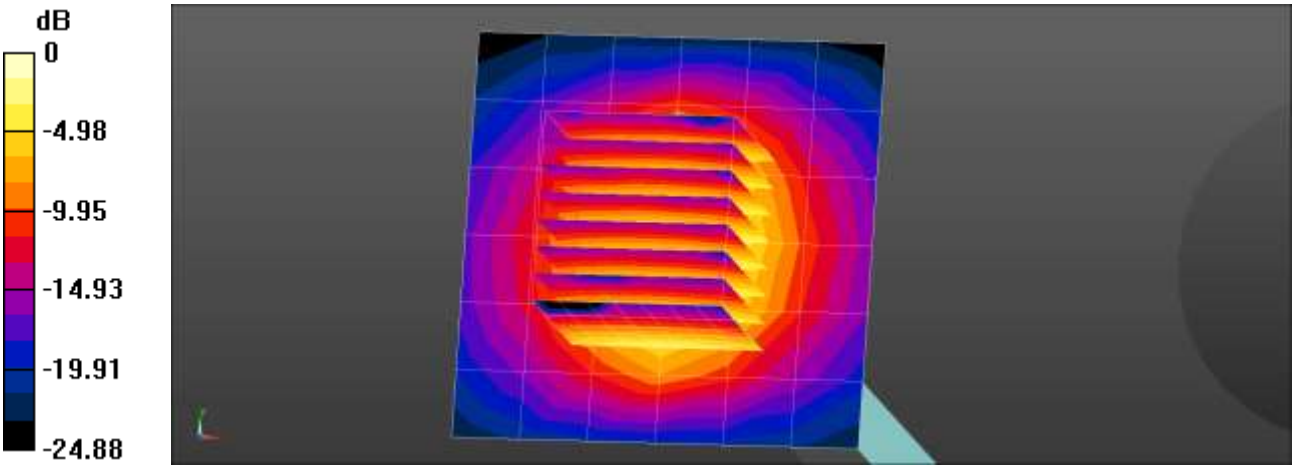
Communication System: UID 0, CW (0); Frequency: 3500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3500 MHz; σ = 2.995 S/m; ε_r = 38.454; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(6.9, 6.9, 6.9); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/3500MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.80 W/kg

Dipole/3500MHz Head Verification/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.49 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 9.71 W/kg
SAR(1 g) = 3.37 W/kg; SAR(10 g) = 1.25 W/kg
Maximum value of SAR (measured) = 6.59 W/kg



0 dB = 6.80 W/kg = 8.33 dBW/kg

Verification Data (3 500 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.4 ℃
Test Date:	10/21/2020

DUT: Dipole 3500 MHz D3500V2; Type: D3500V2

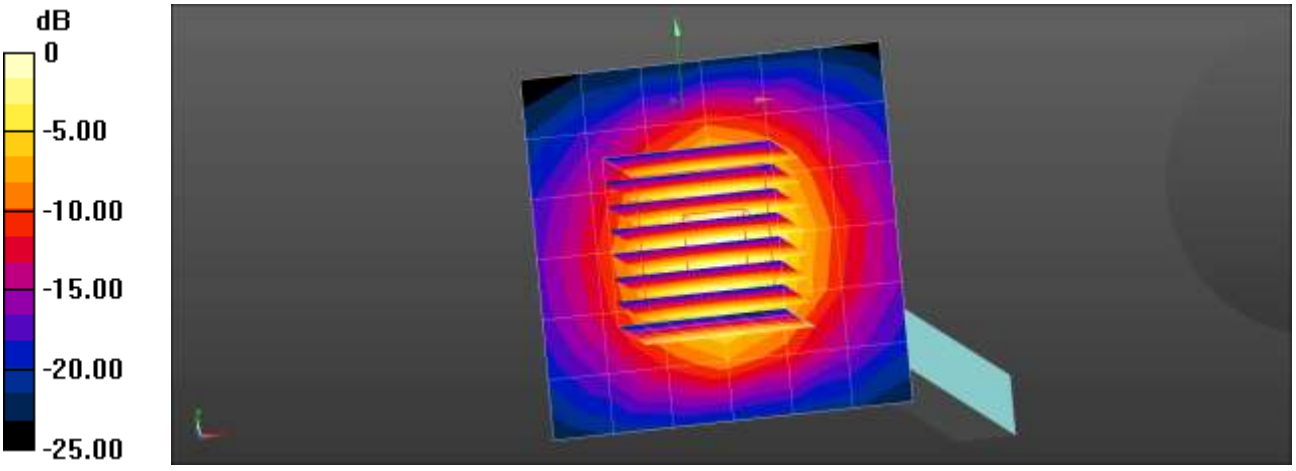
Communication System: UID 0, CW (0); Frequency: 3500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3500 MHz; σ = 2.896 S/m; ε_r = 37.708; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(6.9, 6.9, 6.9); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/3500MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.60 W/kg

Dipole/3500MHz Head Verification/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.99 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 9.32 W/kg
SAR(1 g) = 3.25 W/kg; SAR(10 g) = 1.21 W/kg
Maximum value of SAR (measured) = 6.33 W/kg



0 dB = 6.60 W/kg = 8.20 dBW/kg

Verification Data (3 700 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	10/02/2020

DUT: Dipole 3700 MHz D3700V2; Type: D3700V2

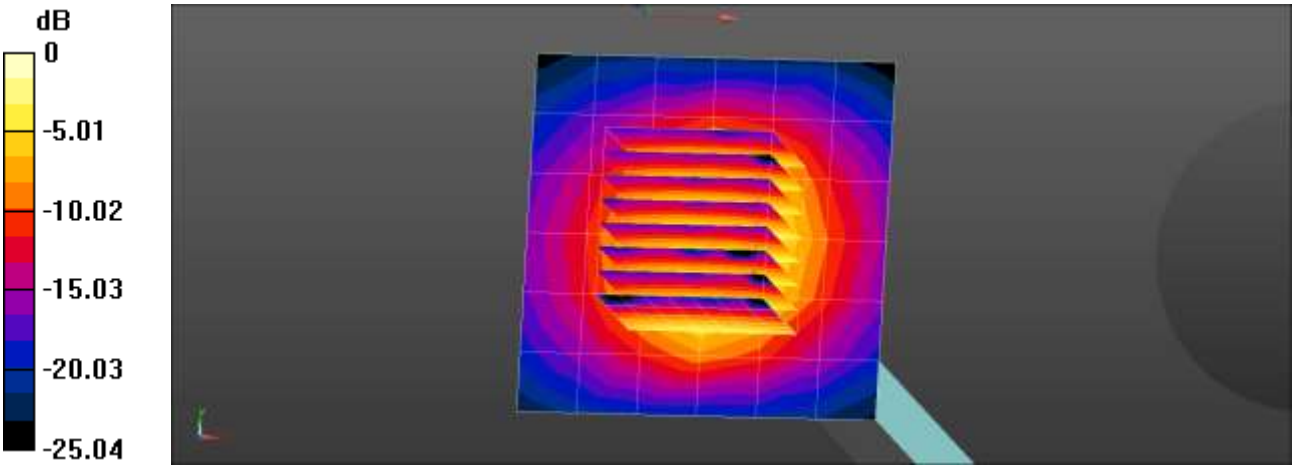
Communication System: UID 0, CW (0); Frequency: 3700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3700 MHz; σ = 3.158 S/m; ε_r = 38.034; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(6.87, 6.87, 6.87); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/3700MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.66 W/kg

Dipole/3700MHz Head Verification/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.28 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 9.46 W/kg
SAR(1 g) = 3.35 W/kg; SAR(10 g) = 1.22 W/kg
Maximum value of SAR (measured) = 6.63 W/kg



0 dB = 6.66 W/kg = 8.23 dBW/kg

Verification Data (3 700 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.4 ℃
Test Date:	10/21/2020

DUT: Dipole 3700 MHz D3700V2; Type: D3700V2

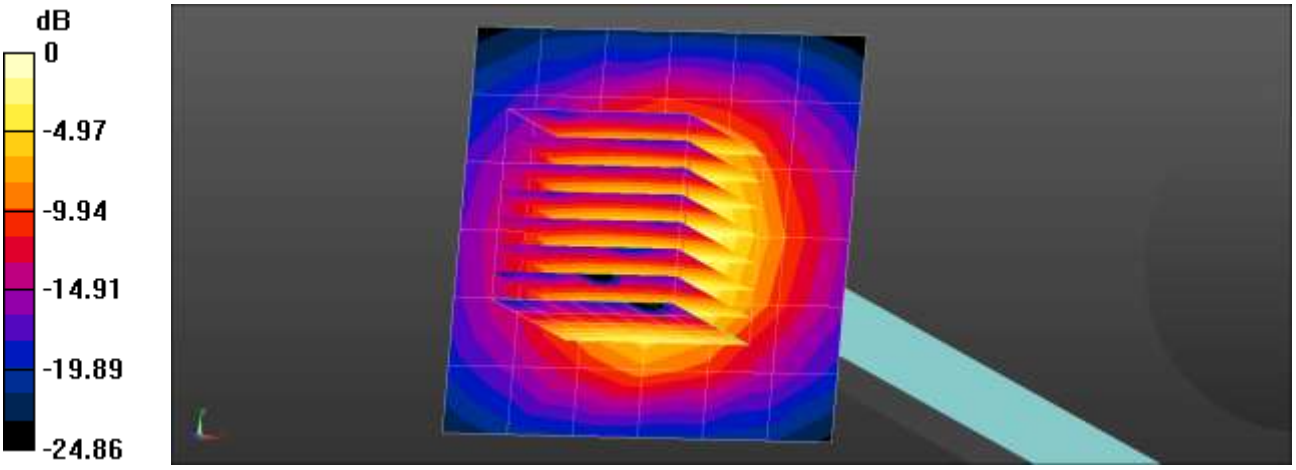
Communication System: UID 0, CW (0); Frequency: 3700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3700 MHz; σ = 3.164 S/m; ε_r = 36.784; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(6.87, 6.87, 6.87); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/3700MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.72 W/kg

Dipole/3700MHz Head Verification/Zoom Scan (8x8x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.48 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 9.49 W/kg
SAR(1 g) = 3.36 W/kg; SAR(10 g) = 1.22 W/kg
Maximum value of SAR (measured) = 6.61 W/kg



0 dB = 6.72 W/kg = 8.27 dBW/kg

Verification Data (3 700 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.6 ℃
Test Date:	10/21/2020

DUT: Dipole 3700 MHz D3700V2; Type: D3700V2

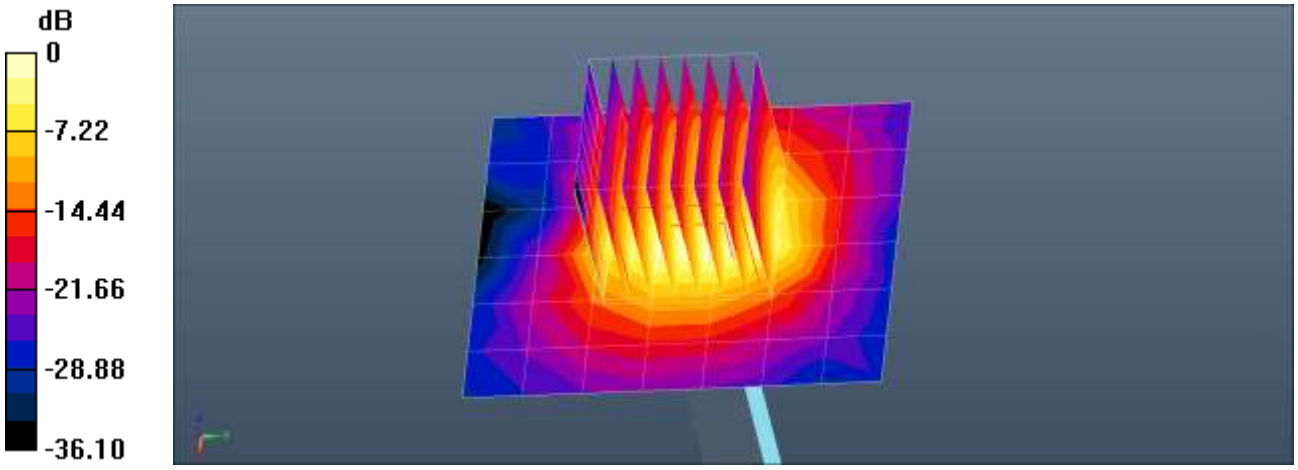
Communication System: UID 0, CW (0); Frequency: 3700 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3700 MHz; σ = 3.155 S/m; ε_r = 37.967; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3967; ConvF(6.72, 6.72, 6.72); Calibrated: 2020-08-19;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1629; Calibrated: 2020-08-11
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/3700MHz Head Verification(n77)/Area Scan (7x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 5.83 W/kg

Dipole/3700MHz Head Verification(n77)/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 46.03 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 11.9 W/kg
SAR(1 g) = 3.25 W/kg; SAR(10 g) = 1.04 W/kg
Maximum value of SAR (measured) = 6.95 W/kg



0 dB = 5.83 W/kg = 7.66 dBW/kg

Verification Data (3 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.6 ℃
Test Date:	10/21/2020

DUT: Dipole 3900 MHz D3900V2; Type: D3900V2

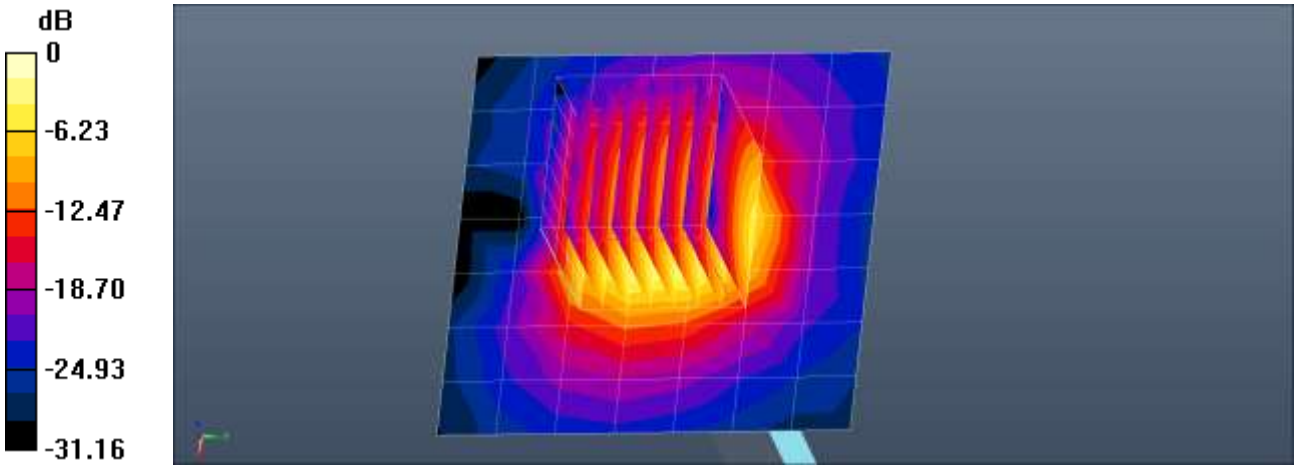
Communication System: UID 0, CW (0); Frequency: 3900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 3900 MHz; σ = 3.323 S/m; ε_r = 37.93; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3967; ConvF(6.5, 6.5, 6.5); Calibrated: 2020-08-19;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1629; Calibrated: 2020-08-11
- Phantom: SAM with CRP v5.0
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/3900MHz Head Verification(n77)/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 5.47 W/kg

Dipole/3900MHz Head Verification(n77)/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 52.05 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 12.7 W/kg
SAR(1 g) = 3.34 W/kg; SAR(10 g) = 1.02 W/kg
Maximum value of SAR (measured) = 7.49 W/kg



0 dB = 5.47 W/kg = 7.38 dBW/kg

Verification Data (5 250 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	09/26/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

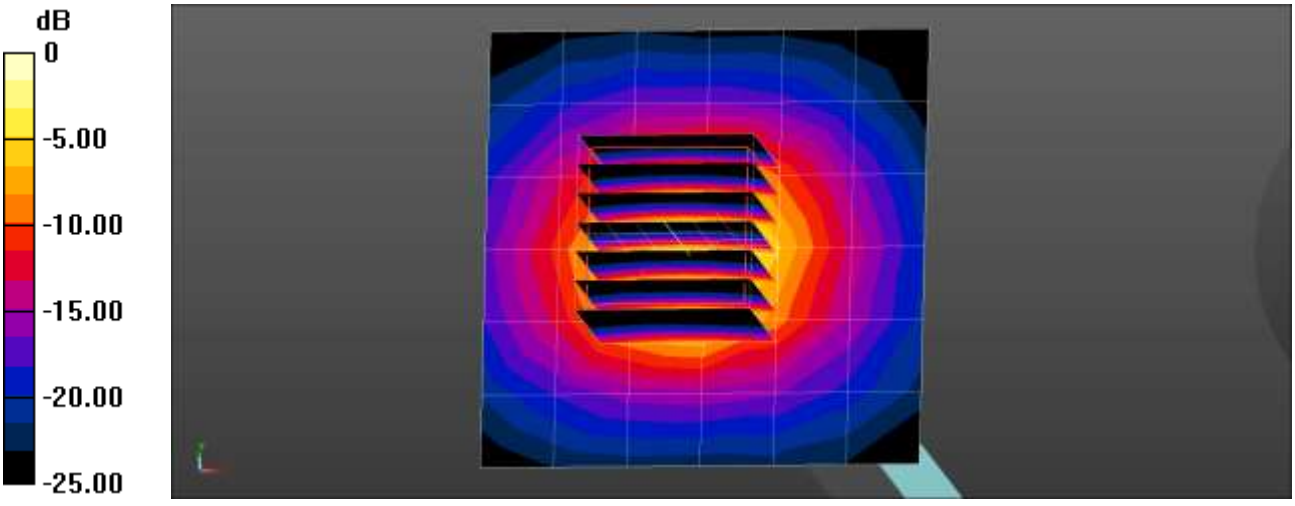
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.764 S/m; ε_r = 35.916; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.85, 4.85, 4.85); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/5250MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.65 W/kg

Dipole/5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.37 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 17.0 W/kg
SAR(1 g) = 3.88 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 9.90 W/kg



0 dB = 9.90 W/kg = 9.96 dBW/kg

Verification Data (5 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	09/26/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

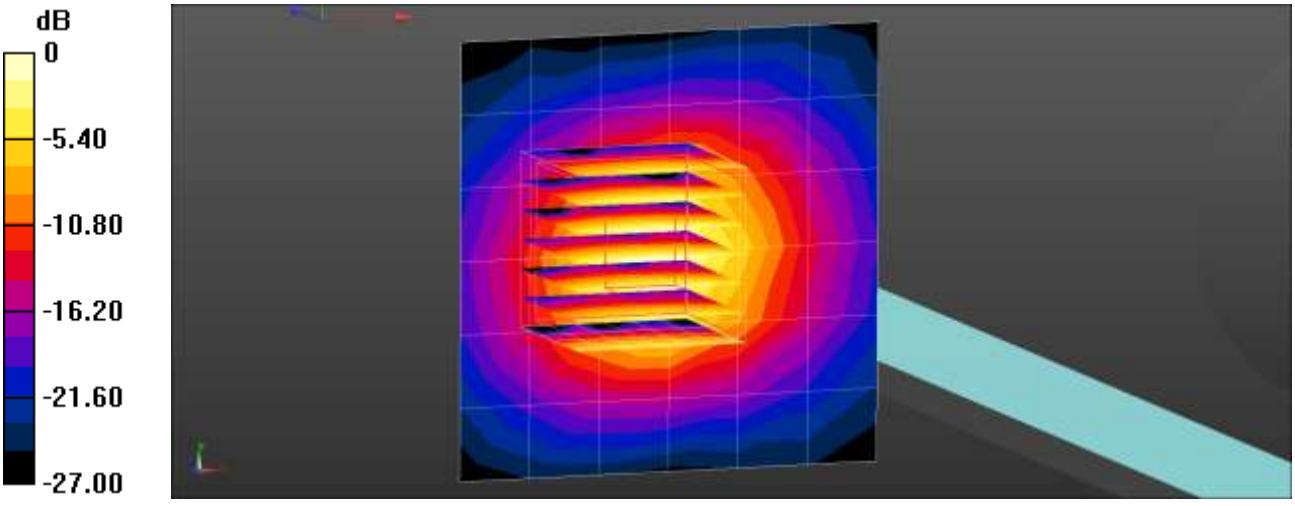
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.04 S/m; ε_r = 35.822; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.56, 4.56, 4.56); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/5600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.6 W/kg

Dipole/5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.72 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 18.7 W/kg
SAR(1 g) = 4.06 W/kg; SAR(10 g) = 1.17 W/kg
Maximum value of SAR (measured) = 10.4 W/kg



0 dB = 10.6 W/kg = 10.25 dBW/kg

Verification Data (5 750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	09/26/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

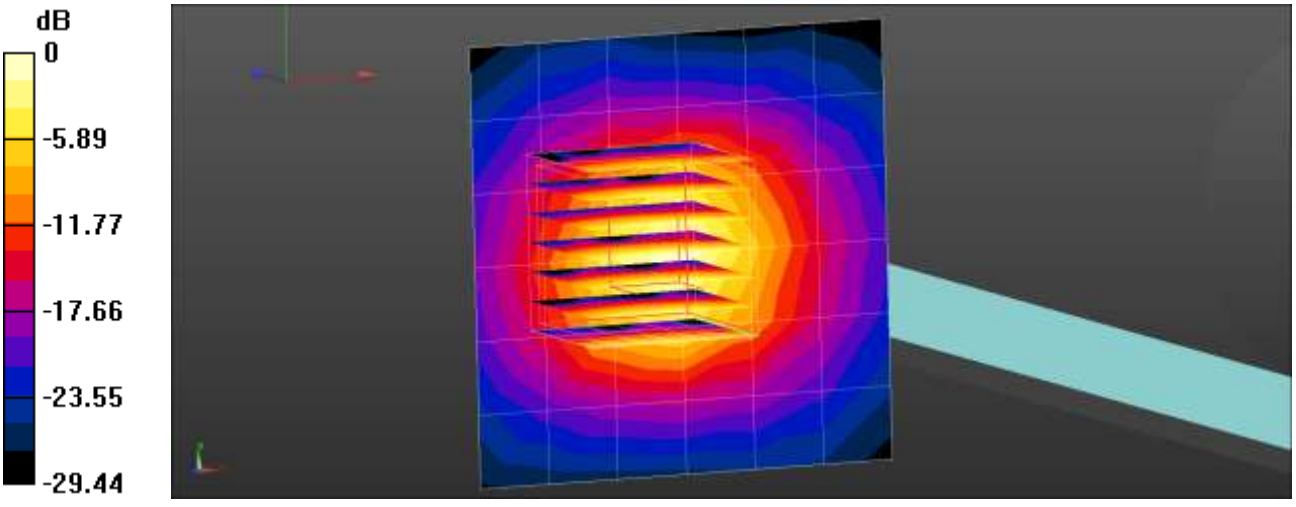
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.169 S/m; ε_r = 35.626; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(4.66, 4.66, 4.66); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/5750MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 11.4 W/kg

Dipole/5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 52.00 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 21.9 W/kg
SAR(1 g) = 4.36 W/kg; SAR(10 g) = 1.19 W/kg
Maximum value of SAR (measured) = 11.7 W/kg



0 dB = 11.4 W/kg = 10.55 dBW/kg

Verification Data (5 250 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.5 ℃
Test Date:	09/26/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

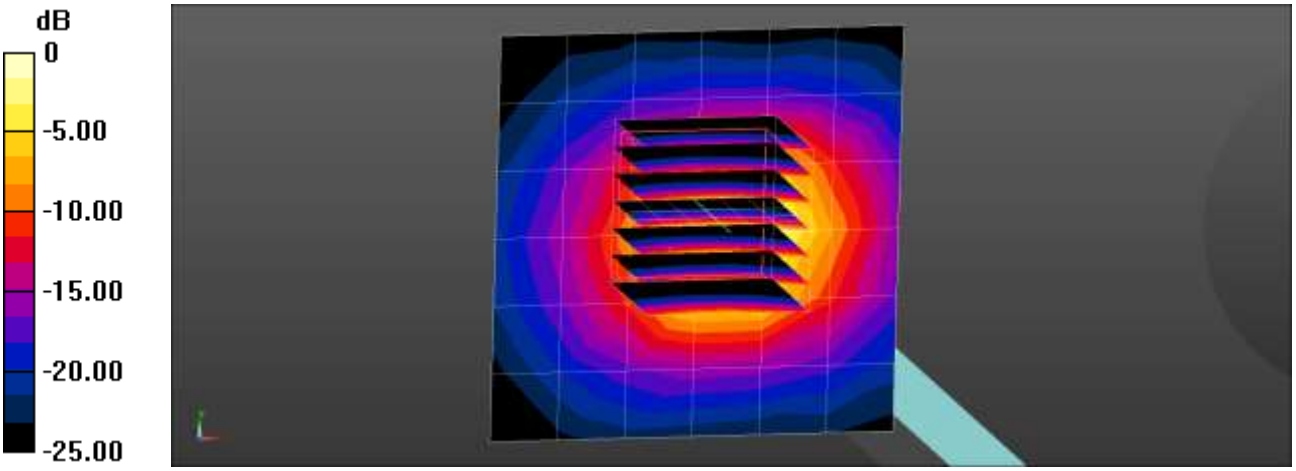
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.562 S/m; ε_r = 36.878; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(5.15, 5.15, 5.15); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/5250MHz Head Verification(5GHz Head WLAN 5GHz UNII2A)/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.73 W/kg

Dipole/5250MHz Head Verification(5GHz Head WLAN 5GHz UNII2A)/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 46.74 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 17.4 W/kg
SAR(1 g) = 4.09 W/kg; SAR(10 g) = 1.18 W/kg
Maximum value of SAR (measured) = 9.81 W/kg



0 dB = 9.81 W/kg = 9.92 dBW/kg

Verification Data (5 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.2 ℃
Test Date:	09/27/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

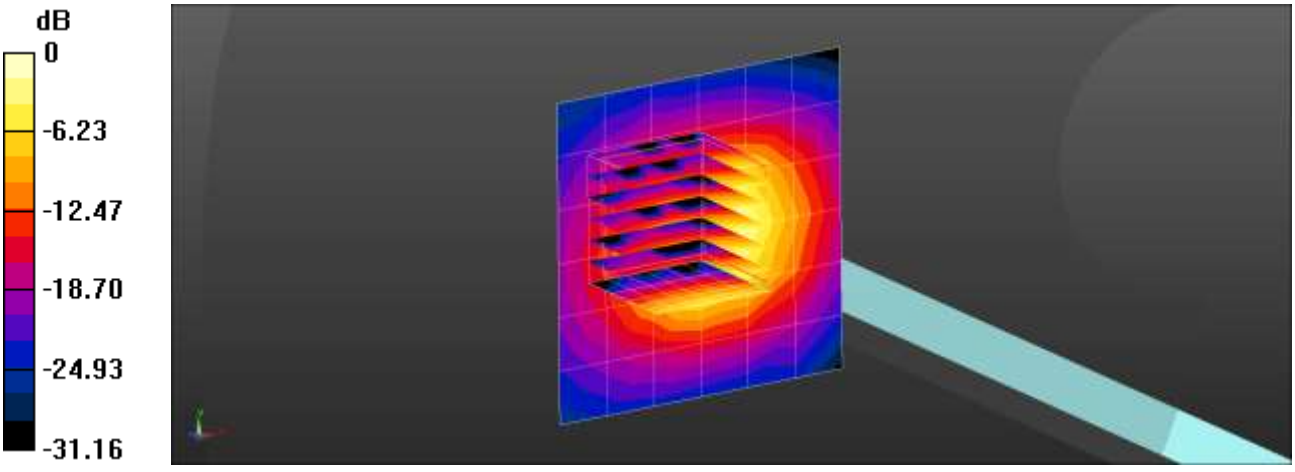
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 4.869 S/m; ε_r = 36.761; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.6, 4.6, 4.6); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/5600MHz Head Verification(5GHz Head WLAN 5GHz UNII2C)/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.79 W/kg

Dipole/5600MHz Head Verification(5GHz Head WLAN 5GHz UNII2C)/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.33 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 20.3 W/kg
SAR(1 g) = 4.35 W/kg; SAR(10 g) = 1.25 W/kg
Maximum value of SAR (measured) = 11.4 W/kg



0 dB = 9.79 W/kg = 9.91 dBW/kg

Verification Data (5 750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.7 ℃
Test Date:	09/28/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

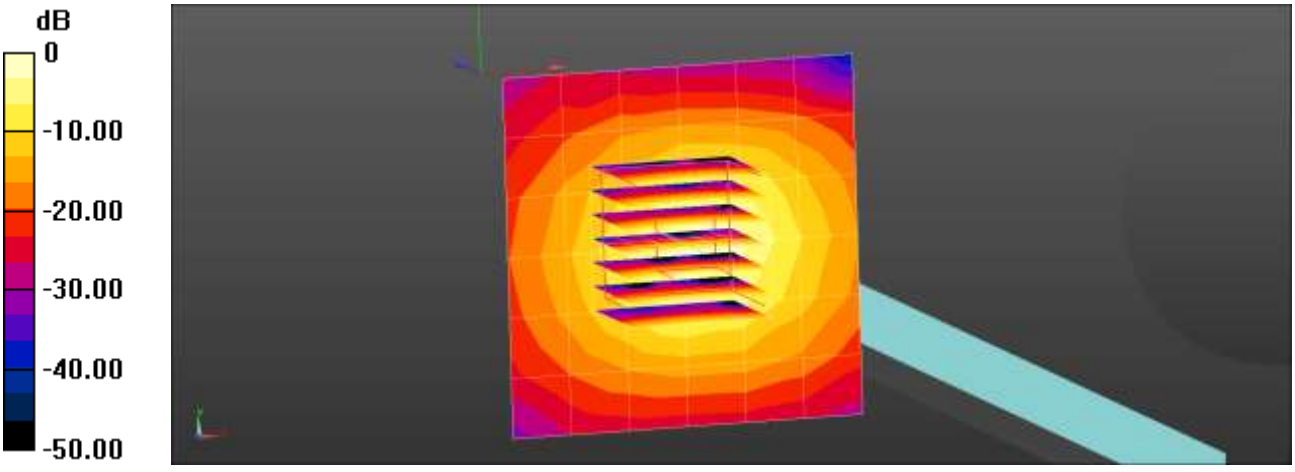
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.168 S/m; ε_r = 36.867; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.75, 4.75, 4.75); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/5750MHz Head Verification(5GHz Head WLAN 5GHz UNII3)/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.97 W/kg

Dipole/5750MHz Head Verification(5GHz Head WLAN 5GHz UNII3)/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 46.78 V/m; Power Drift = -0.11 dB
Peak SAR (extrapolated) = 18.6 W/kg
SAR(1 g) = 3.92 W/kg; SAR(10 g) = 1.14 W/kg
Maximum value of SAR (measured) = 10.2 W/kg



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

Verification Data (5 250 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.9 ℃
Test Date:	10/01/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

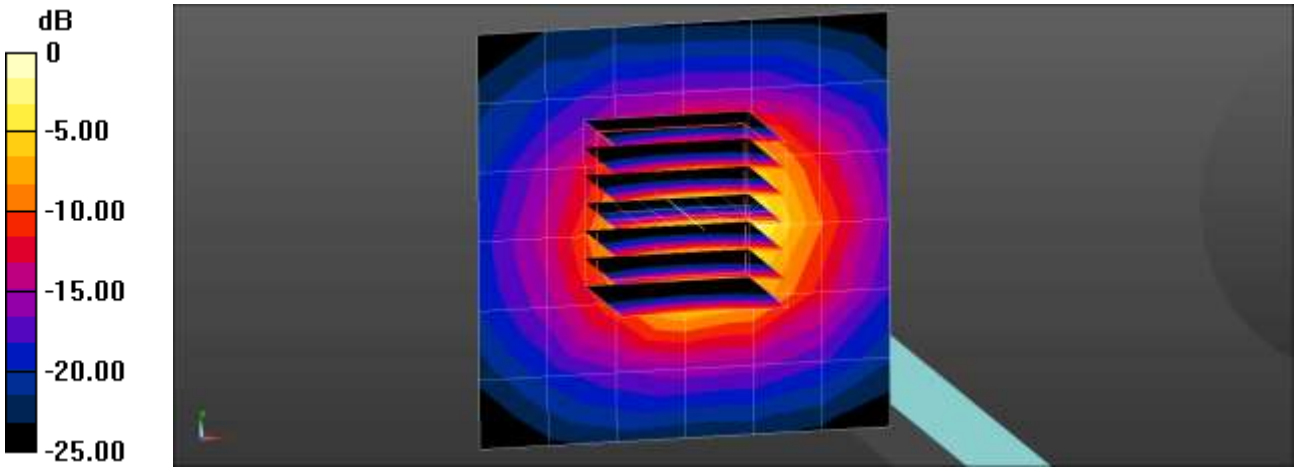
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.6 S/m; ε_r = 36.017; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(5.15, 5.15, 5.15); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/5250MHz Head Verification(5GHz Head WLAN 5GHz UNII2A)/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.65 W/kg

Dipole/5250MHz Head Verification(5GHz Head WLAN 5GHz UNII2A)/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.19 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 16.3 W/kg
SAR(1 g) = 3.92 W/kg; SAR(10 g) = 1.14 W/kg
Maximum value of SAR (measured) = 9.74 W/kg



0 dB = 9.74 W/kg = 9.89 dBW/kg

Verification Data (5 600 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.9 ℃
Test Date:	10/01/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

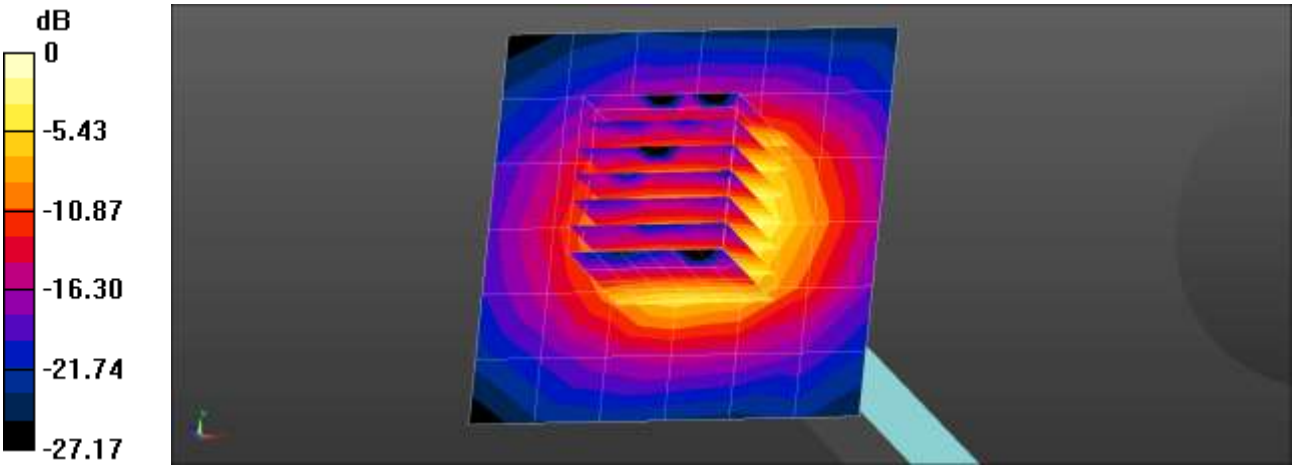
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 4.999 S/m; ε_r = 36.498; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.6, 4.6, 4.6); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/5600MHz Head Verification(5GHz Head WLAN 5GHz UNII2C)/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.62 W/kg

Dipole/5600MHz Head Verification(5GHz Head WLAN 5GHz UNII2C)/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.18 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 19.1 W/kg
SAR(1 g) = 4.26 W/kg; SAR(10 g) = 1.24 W/kg
Maximum value of SAR (measured) = 10.9 W/kg



0 dB = 9.62 W/kg = 9.83 dBW/kg

Verification Data (5 750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.9 ℃
Test Date:	10/01/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

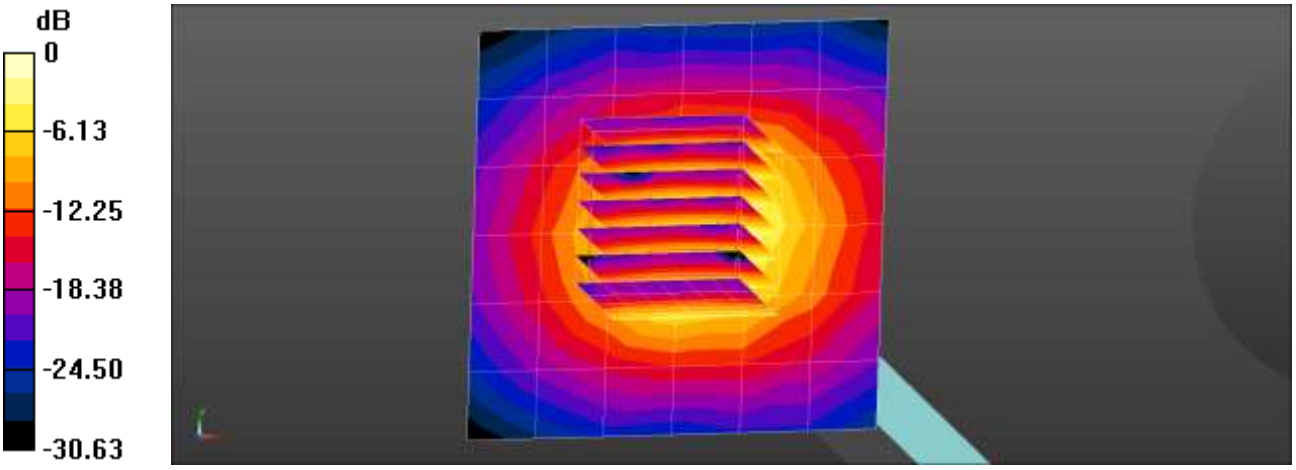
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.17 S/m; ε_r = 36.262; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(4.75, 4.75, 4.75); Calibrated: 2020-08-31;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn614; Calibrated: 2020-01-27
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/5750MHz Head Verification(5GHz Head WLAN 5GHz UNII3)/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.09 W/kg

Dipole/5750MHz Head Verification(5GHz Head WLAN 5GHz UNII3)/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 46.73 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 18.5 W/kg
SAR(1 g) = 3.92 W/kg; SAR(10 g) = 1.14 W/kg
Maximum value of SAR (measured) = 10.2 W/kg



0 dB = 9.09 W/kg = 9.58 dBW/kg

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
3	3797	EX3DV4	Head	750	1014	2019-09-11	41.7	0.87	PASS	PASS	PASS	N/A	N/A	N/A
5	3903	EX3DV4	Head	750	1014	2019-06-07	55.6	0.98	PASS	PASS	PASS	N/A	N/A	N/A
8	1630	ET3DV6	Head	835	4d266	2020-09-05	41.6	0.91	PASS	PASS	PASS	N/A	N/A	N/A
15	7314	EX3DV4	Head	835	4d266	2020-09-05	41.6	0.91	PASS	PASS	PASS	GMSK	PASS	N/A
5	3903	EX3DV4	Head	835	4d266	2020-09-05	41.6	0.91	PASS	PASS	PASS	GMSK	PASS	N/A
5	3903	EX3DV4	Head	835	4d266	2020-09-05	41.6	0.91	PASS	PASS	PASS	N/A	N/A	N/A
3	3797	EX3DV4	Head	835	4d266	2020-09-05	41.6	0.91	PASS	PASS	PASS	GMSK	PASS	N/A
8	3967	EX3DV4	Head	1750	2d007	2020-09-05	40.1	1.39	PASS	PASS	PASS	GMSK	PASS	N/A
7	1630	ET3DV6	Head	1750	2d007	2019-10-01	40.1	1.39	PASS	PASS	PASS	GMSK	PASS	N/A
11	3076	ES3DV3	Head	1750	2d007	2019-10-11	40.1	1.39	PASS	PASS	PASS	GMSK	PASS	N/A
15	7314	EX3DV4	Head	1750	2d007	2019-10-11	40.1	1.39	PASS	PASS	PASS	N/A	N/A	N/A
7	1630	ET3DV6	Head	1900	5d061	2020-03-07	40.1	1.42	PASS	PASS	PASS	GMSK	PASS	N/A
8	3967	EX3DV4	Head	1900	5d061	2020-03-07	40.1	1.42	PASS	PASS	PASS	GMSK	PASS	N/A
3	3797	EX3DV4	Head	2300	1010	2020-09-04	36.6	1.69	PASS	PASS	PASS	GMSK	PASS	N/A
11	3076	ES3DV3	Head	2300	1010	2020-09-04	36.6	1.69	PASS	PASS	PASS	N/A	N/A	N/A
9	3968	EX3DV4	Head	2300	1010	2020-10-04	36.6	1.69	PASS	PASS	PASS	GMSK	PASS	N/A
12	7370	EX3DV4	Head	2450	1049	2020-03-02	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
3	3797	EX3DV4	Head	2450	1049	2020-09-05	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
11	3076	ES3DV3	Head	2600	1015	2019-09-28	39.2	1.96	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	3500	1040	2020-09-08	37.7	2.92	PASS	PASS	PASS	N/A	N/A	N/A
12	7370	EX3DV4	Head	3700	1066	2020-09-08	36.8	3.08	PASS	PASS	PASS	N/A	N/A	N/A
8	3967	EX3DV4	Head	3700	1066	2020-03-07	36.9	3.07	PASS	PASS	PASS	N/A	N/A	N/A
8	3967	EX3DV4	Head	3900	1019	2020-05-30	37.8	3.33	PASS	PASS	PASS	N/A	N/A	N/A
3	3797	EX3DV4	Head	5250	1317	2020-09-04	35.6	4.71	PASS	PASS	PASS	OFDM	N/A	PASS
3	3797	EX3DV4	Head	5600	1317	2020-09-04	35.3	5.04	PASS	PASS	PASS	OFDM	N/A	PASS
3	3797	EX3DV4	Head	5750	1317	2020-09-04	35.8	5.25	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	5250	1317	2020-09-10	35.6	4.71	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	5600	1317	2020-09-10	35.3	5.04	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	5750	1317	2020-09-10	35.8	5.25	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
8	3697	ES3DV3	Head	1750	2d007	2019-10-01	40.1	1.39	PASS	PASS	PASS	N/A	N/A	N/A
7	1630	ET3DV6	Head	1750	2d007	2019-10-01	40.1	1.39	PASS	PASS	PASS	N/A	N/A	N/A
14	7314	EX3DV4	Head	1750	2d007	2019-10-11	40.1	1.39	PASS	PASS	PASS	N/A	N/A	N/A
7	1630	ET3DV6	Head	1900	5d061	2020-01-31	40.1	1.42	PASS	PASS	PASS	N/A	N/A	N/A
8	3967	EX3DV4	Head	1900	5d061	2020-01-31	40.1	1.42	PASS	PASS	PASS	GMSK	PASS	N/A
12	7370	EX3DV4	Head	2300	1010	2020-09-04	39.5	1.68	PASS	PASS	PASS	N/A	N/A	N/A
11	3076	ES3DV3	Head	2300	1010	2020-09-04	39.5	1.68	PASS	PASS	PASS	N/A	N/A	N/A
3	3797	EX3DV4	Head	5250	1317	2020-09-04	35.6	4.71	PASS	PASS	PASS	OFDM	N/A	PASS
3	3797	EX3DV4	Head	5600	1317	2020-09-04	35.3	5.04	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	5750	1317	2020-09-10	35.6	4.71	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	5250	1317	2020-09-10	35.3	5.04	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.