
Appendix

Appendix B. – SAR Test Plots

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.7°C
 Ambient Temperature: 20.9°C
 Test Date: 07/16/2020
 Plot No.: 1

DU: SM-G781V; Type: Bar

Communication System: UID 0, CDMA800(BC10) (0); Frequency: 820 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 820 \text{ MHz}$; $\sigma = 0.932 \text{ S/m}$; $\epsilon_r = 42.831$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 820 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/CDMA BC10 Head Right Tilt 560ch SO55 RC3/Area Scan (8x13x1): Measurement grid:

$dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 0.274 W/kg

SM-G781V/CDMA BC10 Head Right Tilt 560ch SO55 RC3/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

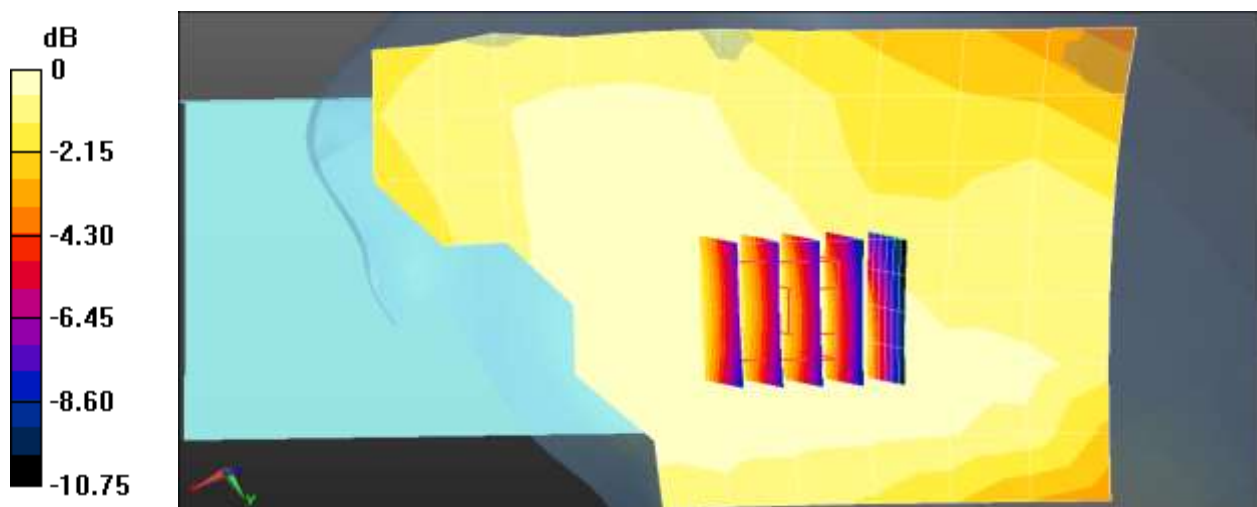
$dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 7.286 V/m; Power Drift = -0.13 dB

Peak SAR (extrapolated) = 0.323 W/kg

SAR(1 g) = 0.234 W/kg; SAR(10 g) = 0.175 W/kg

Maximum value of SAR (measured) = 0.294 W/kg



0 dB = 0.294 W/kg = -5.32 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.0°C
Ambient Temperature: 20.3°C
Test Date: 07/15/2020
Plot No.: 2

DUT: SM-G781V; 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; $\sigma = 0.945$ S/m; $\epsilon_r = 42.595$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.52 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/CDMA BC0 Head Right Touch 384ch SO55 RC3/Area Scan (8x14x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.144 W/kg

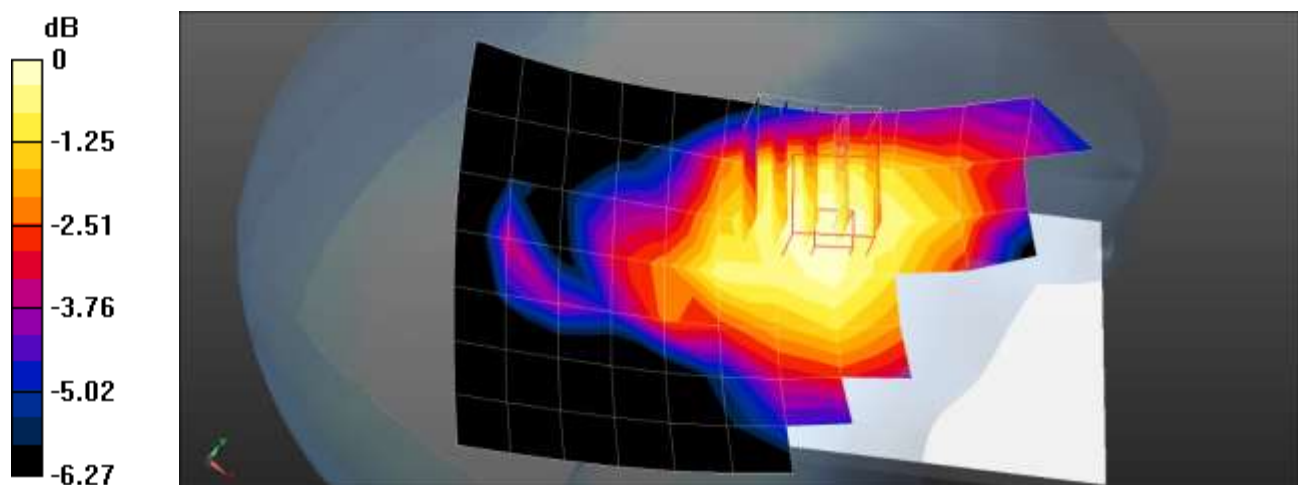
SM-G781V/CDMA BC0 Head Right Touch 384ch SO55 RC3/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.802 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.151 W/kg

SAR(1 g) = 0.137 W/kg; SAR(10 g) = 0.120 W/kg

Maximum value of SAR (measured) = 0.146 W/kg



0 dB = 0.146 W/kg = -8.36 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.8°C
Ambient Temperature: 21.0°C
Test Date: 08/12/2020
Plot No.: 3

DUT: SM-G781V; Type: Bar

Communication System: UID 0, CDMA BC1 (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.407$ S/m; $\epsilon_r = 39.748$; $\rho = 1000$ kg/m³
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1880 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/CDMA BC1 Head Left Touch EvDO Rev.A 600ch/Area Scan (8x14x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.140 W/kg

SM-G781V/CDMA BC1 Head Left Touch EvDO Rev.A 600ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 2.976 V/m; Power Drift = -0.12 dB

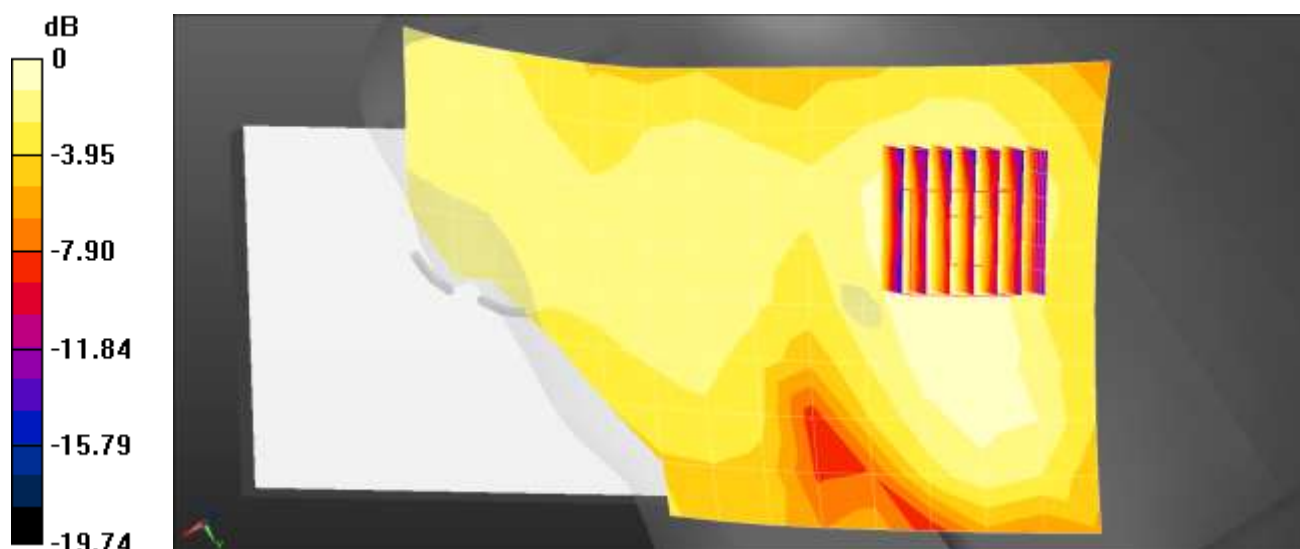
Peak SAR (extrapolated) = 0.177 W/kg

SAR(1 g) = 0.111 W/kg; SAR(10 g) = 0.067 W/kg

Smallest distance from peaks to all points 3 dB below = 12.8 mm

Ratio of SAR at M2 to SAR at M1 = 64.7%

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: 20.1°C
Ambient Temperature: 20.3°C
Test Date: 07/14/2020
Plot No.: 4

DUT: SM-G781V; 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; $\sigma = 0.929$ S/m; $\epsilon_r = 42.616$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.6 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/GSM850 Head Right Touch 2Tx 190ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.209 W/kg

SM-G781V/GSM850 Head Right Touch 2Tx 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.098 V/m; Power Drift = -0.11 dB

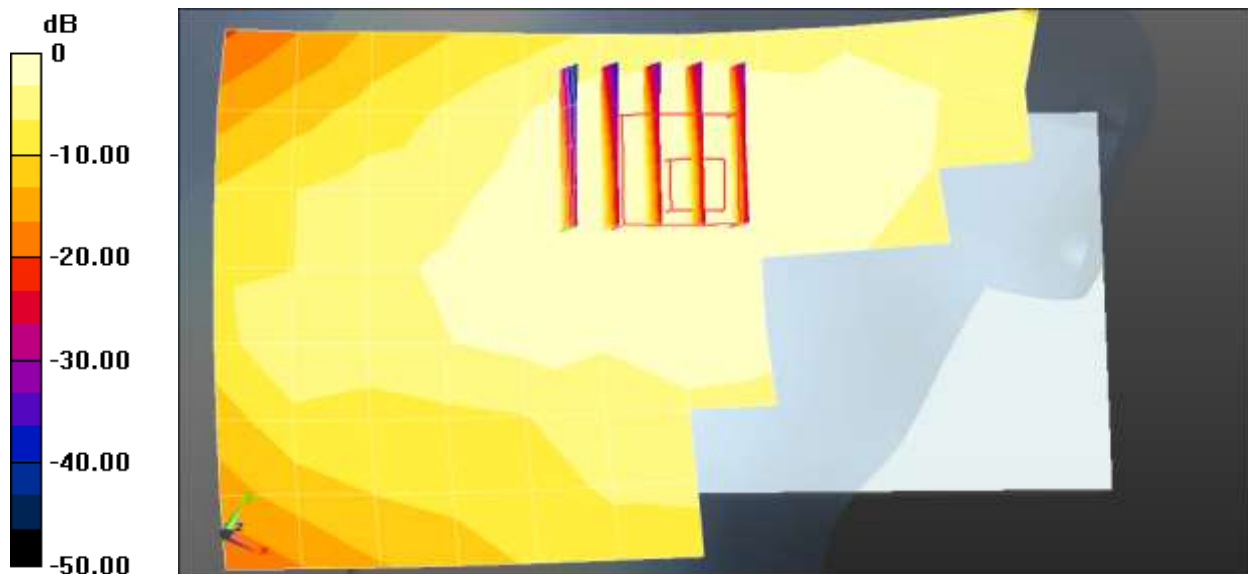
Peak SAR (extrapolated) = 0.223 W/kg

SAR(1 g) = 0.180 W/kg; SAR(10 g) = 0.139 W/kg

Smallest distance from peaks to all points 3 dB below = 22 mm

Ratio of SAR at M2 to SAR at M1 = 84.3%

Maximum value of SAR (measured) = 0.210 W/kg



0 dB = 0.209 W/kg = -6.80 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.1°C
Ambient Temperature: 21.3°C
Test Date: 08/16/2020
Plot No.: 5

DUT: SM-G781V; Type: Bar

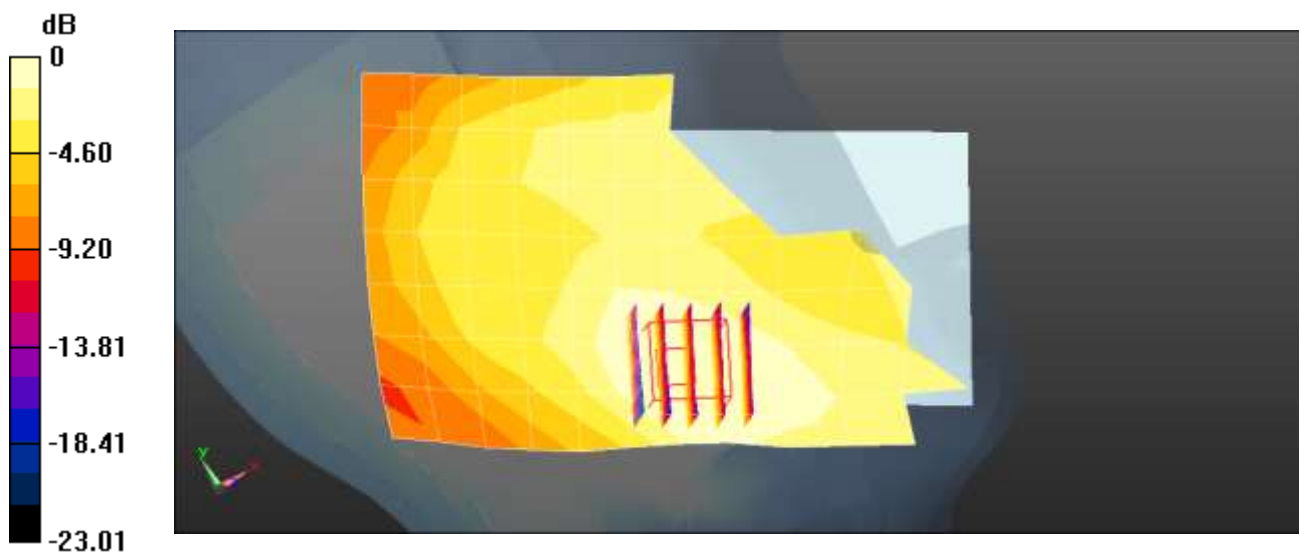
Communication System: UID 0, GSM 1900 3Tx (0); Frequency: 1880 MHz; Duty Cycle: 1:2.77013
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 40.315$; $\rho = 1000$ kg/m³
Phantom section: Left Section

DASY Configuration:

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

SM-G781V/GSM1900 Head Left Touch 3Tx 661ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.108 W/kg

SM-G781V/GSM1900 Head Left Touch 3Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.015 V/m; Power Drift = 0.19 dB
Peak SAR (extrapolated) = 0.117 W/kg
SAR(1 g) = 0.074 W/kg; SAR(10 g) = 0.045 W/kg
Smallest distance from peaks to all points 3 dB below = 13 mm
Ratio of SAR at M2 to SAR at M1 = 61.4%
Maximum value of SAR (measured) = 0.0986 W/kg



0 dB = 0.0986 W/kg = -10.06 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.4°C
 Ambient Temperature: 20.6°C
 Test Date: 07/15/2020
 Plot No.: 6

DUT: SM-G781V; Type: Bar

Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.927$ S/m; $\epsilon_r = 42.923$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 836.6 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band5 Head Right Touch 4183ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.181 W/kg

SM-G781V/WCDMA Band5 Head Right Touch 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm

Reference Value = 5.769 V/m; Power Drift = -0.06 dB

Peak SAR (extrapolated) = 0.199 W/kg

SAR(1 g) = 0.143 W/kg; SAR(10 g) = 0.106 W/kg

Smallest distance from peaks to all points 3 dB below = 13.8 mm

Ratio of SAR at M2 to SAR at M1 = 74.7%

Maximum value of SAR (measured) = 0.176 W/kg



0 dB = 0.181 W/kg = -7.43 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.2°C
Ambient Temperature: 20.5°C
Test Date: 07/14/2020
Plot No.: 7

DUT: SM-G781V; Type: Bar

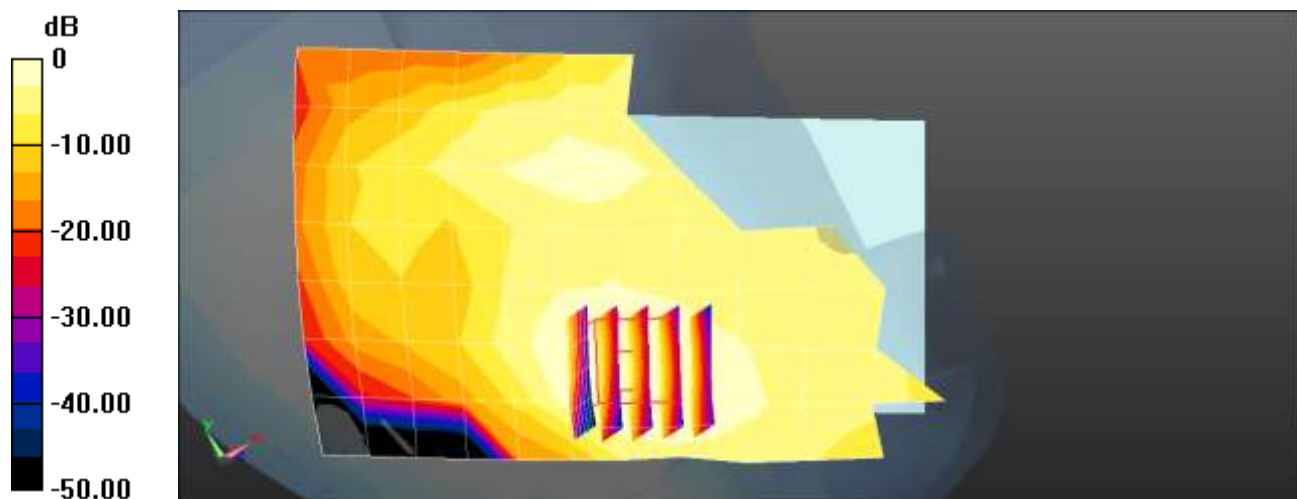
Communication System: UID 0, WCDMA IV (0); Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.312$ S/m; $\epsilon_r = 40.212$; $\rho = 1000$ kg/m³
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14) @ 1732.4 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band4 Head Left Touch 1412ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.104 W/kg

SM-G781V/WCDMA Band4 Head Left Touch 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.453 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 0.133 W/kg
SAR(1 g) = 0.085 W/kg; SAR(10 g) = 0.053 W/kg
Smallest distance from peaks to all points 3 dB below = 14.3 mm
Ratio of SAR at M2 to SAR at M1 = 65.2%
Maximum value of SAR (measured) = 0.116 W/kg



0 dB = 0.104 W/kg = -9.83 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.9°C
 Ambient Temperature: 21.1°C
 Test Date: 07/27/2020
 Plot No.: 8

DUT: SM-G781V; Type: Bar

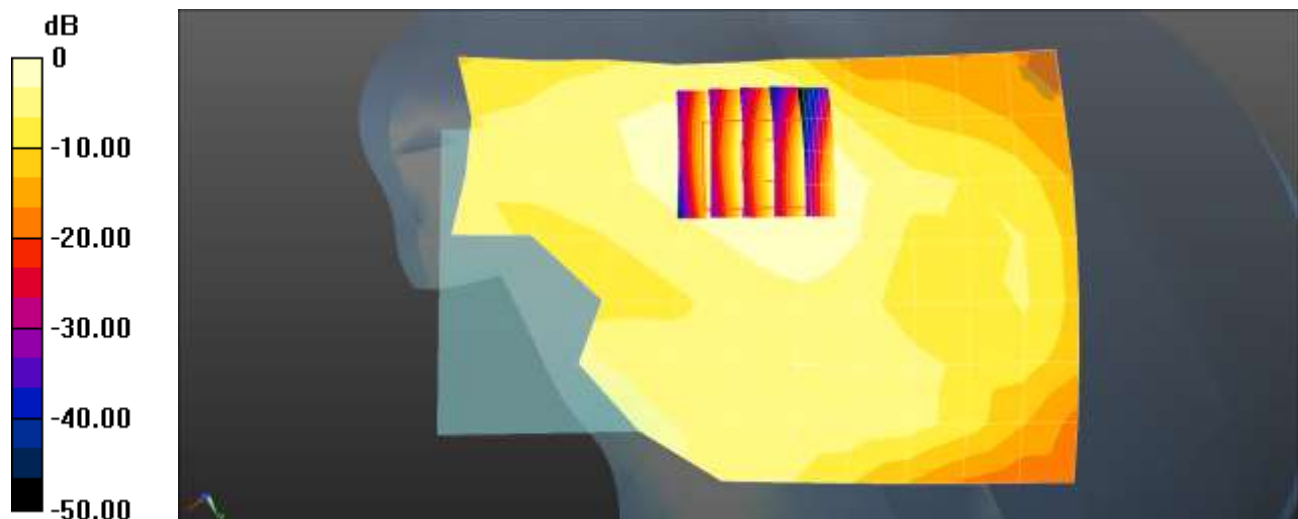
Communication System: UID 0, WCDMA1900 (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.423 \text{ S/m}$; $\epsilon_r = 39.318$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.75, 7.75, 7.75) @ 1880 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band2 Head Left Touch 9400ch/Area Scan (8x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.119 W/kg

SM-G781V/WCDMA Band2 Head Left Touch 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 4.780 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 0.162 W/kg
SAR(1 g) = 0.101 W/kg; SAR(10 g) = 0.063 W/kg
 Smallest distance from peaks to all points 3 dB below = 13.1 mm
 Ratio of SAR at M2 to SAR at M1 = 63.9%
 Maximum value of SAR (measured) = 0.138 W/kg



0 dB = 0.119 W/kg = -9.24 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.6°C
 Ambient Temperature: 20.8°C
 Test Date: 07/28/2020
 Plot No.: 9

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band7 (0); Frequency: 2510 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2510$ MHz; $\sigma = 1.88$ S/m; $\epsilon_r = 40.099$; $\rho = 1000$ kg/m³
 Phantom section: Left Section

DASY Configuration:

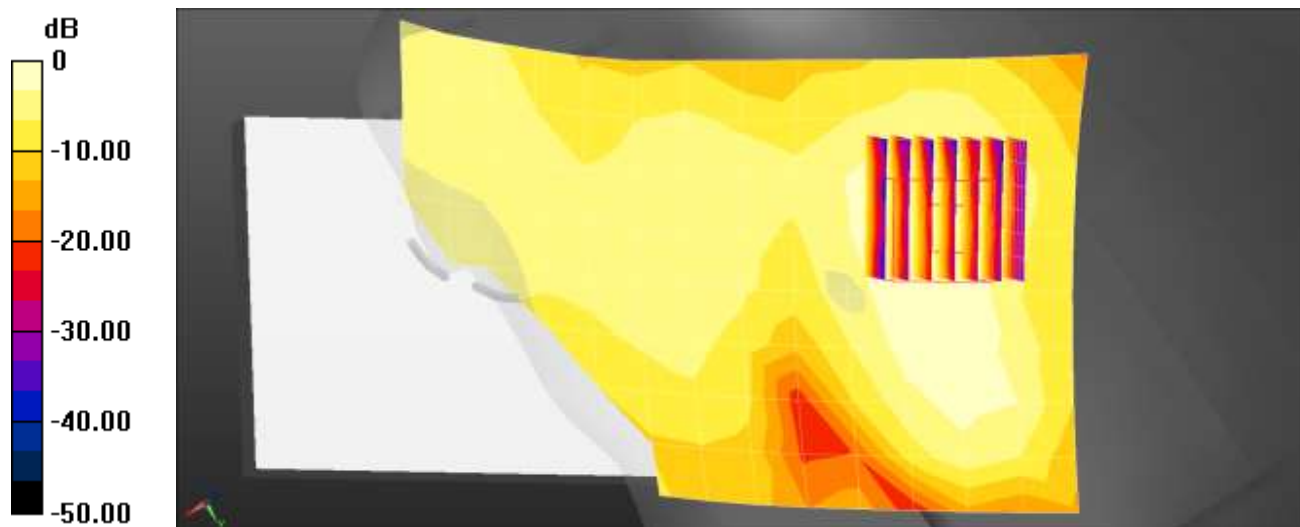
- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2510 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band 7 Head Left Touch QPSK 20MHz 1RB 99offset 20850ch/Area Scan (9x16x1):

Measurement grid: $dx=12$ mm, $dy=12$ mm
 Maximum value of SAR (measured) = 0.110 W/kg

SM-G781V/LTE Band 7 Head Left Touch QPSK 20MHz 1RB 99offset 20850ch/Zoom Scan (7x7x7)/Cube

0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
 Reference Value = 2.137 V/m; Power Drift = -0.15 dB
 Peak SAR (extrapolated) = 0.136 W/kg
SAR(1 g) = 0.073 W/kg; SAR(10 g) = 0.039 W/kg
 Smallest distance from peaks to all points 3 dB below = 11.2 mm
 Ratio of SAR at M2 to SAR at M1 = 53.2%
 Maximum value of SAR (measured) = 0.112 W/kg



0 dB = 0.110 W/kg = -9.60 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.2°C
Ambient Temperature: 20.4°C
Test Date: 07/08/2020
Plot No.: 10

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.859$ S/m; $\epsilon_r = 42.769$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 707.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 12 Head Right Touch QPSK 10MHz 1RB 49offset 23095ch/Area Scan (8x13x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.172 W/kg

SM-G781V/LTE 12 Head Right Touch QPSK 10MHz 1RB 49offset 23095ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 7.023 V/m; Power Drift = -0.10 dB

Peak SAR (extrapolated) = 0.187 W/kg

SAR(1 g) = 0.158 W/kg; SAR(10 g) = 0.127 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 83.9%

Maximum value of SAR (measured) = 0.178 W/kg



0 dB = 0.172 W/kg = -7.65 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.4°C
Ambient Temperature: 20.7°C
Test Date: 07/09/2020
Plot No.: 11

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 782 \text{ MHz}$; $\sigma = 0.927 \text{ S/m}$; $\epsilon_r = 41.851$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 782 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 13 Head Right Touch QPSK 10MHz 1RB 0offset 23230ch/Area Scan (8x13x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.246 W/kg

SM-G781V/LTE 13 Head Right Touch QPSK 10MHz 1RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 8.416 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 0.268 W/kg
SAR(1 g) = 0.221 W/kg; SAR(10 g) = 0.173 W/kg
Smallest distance from peaks to all points 3 dB below = 26 mm
Ratio of SAR at M2 to SAR at M1 = 82.1%
Maximum value of SAR (measured) = 0.251 W/kg



0 dB = 0.246 W/kg = -6.09 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.6°C
Ambient Temperature: 20.9°C
Test Date: 07/13/2020
Plot No.: 12

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, LTE Band 14 (0); Frequency: 793 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 793$ MHz; $\sigma = 0.939$ S/m; $\epsilon_r = 41.604$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 793 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 14 Head Right Touch QPSK 10MHz 1RB 0offset 23330ch/Area Scan (8x13x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.228 W/kg

SM-G781V/LTE 14 Head Right Touch QPSK 10MHz 1RB 0offset 23330ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.156 V/m; Power Drift = -0.19 dB

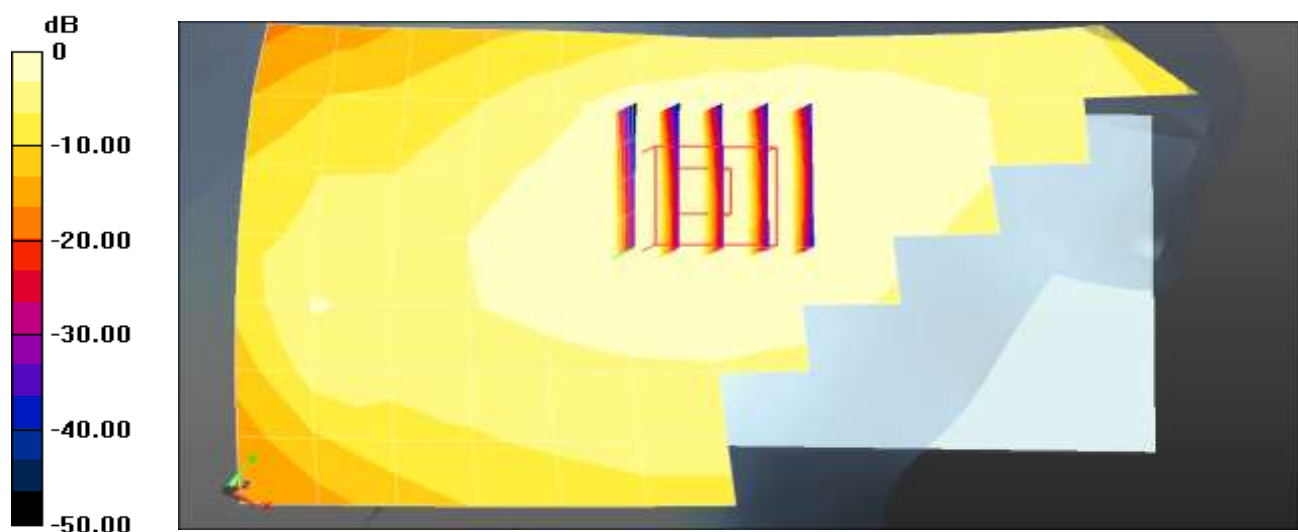
Peak SAR (extrapolated) = 0.242 W/kg

SAR(1 g) = 0.198 W/kg; SAR(10 g) = 0.158 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 83.2%

Maximum value of SAR (measured) = 0.227 W/kg



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

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.2°C
 Ambient Temperature: 20.5°C
 Test Date: 08/19/2020
 Plot No.: 13

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.407$ S/m; $\epsilon_r = 39.844$; $\rho = 1000$ kg/m³
 Phantom section: Left Section

DASY Configuration:

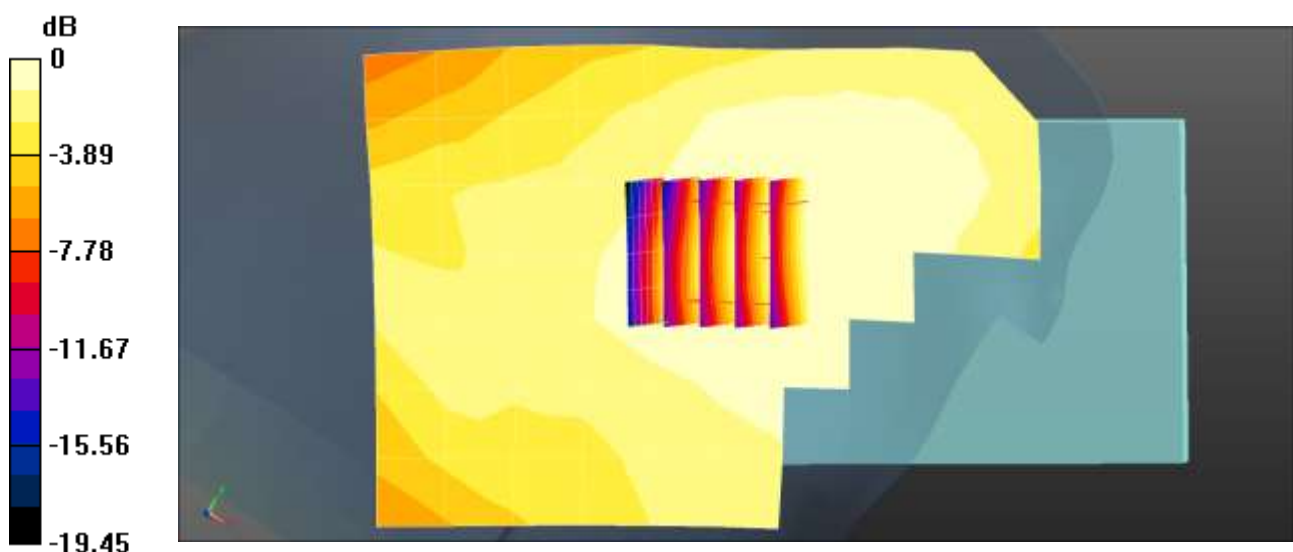
- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1905 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band25 Head Left Touch QPSK 20MHz 1RB 99offset 26590ch/Area Scan (8x14x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.0818 W/kg

SM-G781V/LTE Band25 Head Left Touch QPSK 20MHz 1RB 99offset 26590ch/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 2.735 V/m; Power Drift = -0.17 dB
 Peak SAR (extrapolated) = 0.105 W/kg
SAR(1 g) = 0.066 W/kg; SAR(10 g) = 0.042 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 62.7%
 Maximum value of SAR (measured) = 0.0905 W/kg



0 dB = 0.0905 W/kg = -10.43 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 19.8°C
 Ambient Temperature: 20.1°C
 Test Date: 07/10/2020
 Plot No.: 14

DUT: SM-G781V; Type: Bar;

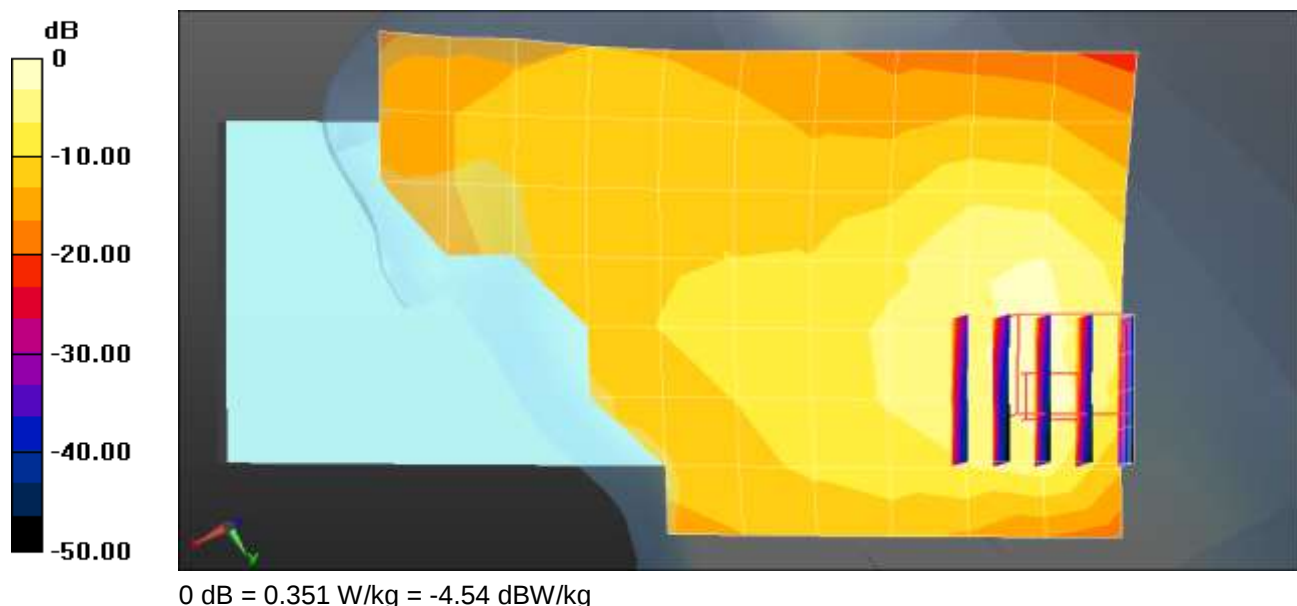
Communication System: UID 0, LTE Band 26 (0); Frequency: 831.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 831.5$ MHz; $\sigma = 0.942$ S/m; $\epsilon_r = 42.435$; $\rho = 1000$ kg/m³
 Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 831.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 26 Head Left Tilt QPSK 15MHz 1RB 0offset 26865ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.351 W/kg

SM-G781V/LTE 26 Head Left Tilt QPSK 15MHz 1RB 0offset 26865ch/Zoom Scan (5x5x7)/Cube 0:
 Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 14.89 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 0.533 W/kg
SAR(1 g) = 0.143 W/kg; SAR(10 g) = 0.066 W/kg
 Smallest distance from peaks to all points 3 dB below = 6.4 mm
 Ratio of SAR at M2 to SAR at M1 = 23.2%
 Maximum value of SAR (measured) = 0.314 W/kg



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.0°C
Ambient Temperature: 21.2°C
Test Date: 08/07/2020
Plot No.: 15

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2310$ MHz; $\sigma = 1.648$ S/m; $\epsilon_r = 40.979$; $\rho = 1000$ kg/m³
Phantom section: Left Section

DASY Configuration:

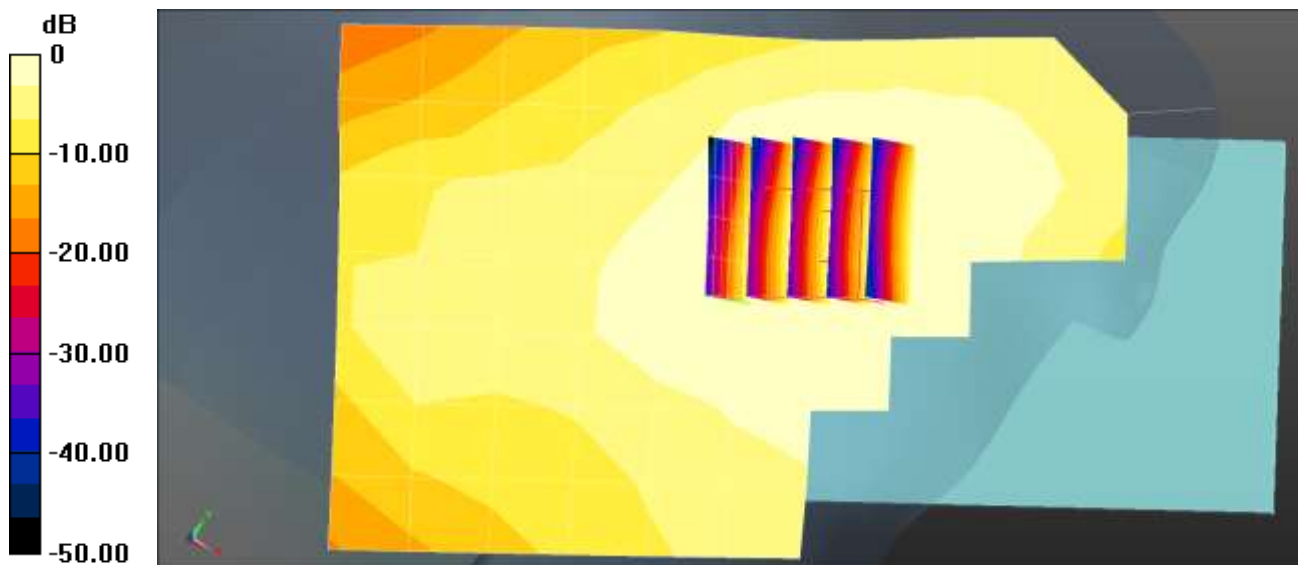
- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band 30 Head Left Touch QPSK 10MHz 1RB 24offset 27710ch/Area Scan (9x16x1):

Measurement grid: $dx=12$ mm, $dy=12$ mm
Maximum value of SAR (measured) = 0.107 W/kg

SM-G781V/LTE Band 30 Head Left Touch QPSK 10MHz 1RB 24offset 27710ch/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
Reference Value = 2.835 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.137 W/kg
SAR(1 g) = 0.078 W/kg; SAR(10 g) = 0.045 W/kg
Smallest distance from peaks to all points 3 dB below = 13.5 mm
Ratio of SAR at M2 to SAR at M1 = 58.3%
Maximum value of SAR (measured) = 0.115 W/kg



0 dB = 0.107 W/kg = -9.71 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.8°C
 Ambient Temperature: 21.0°C
 Test Date: 08/08/2020
 Plot No.: 16

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band 40 (0); Frequency: 2310 MHz; Duty Cycle: 1:1.58125
 Medium parameters used: $f = 2310$ MHz; $\sigma = 1.639$ S/m; $\epsilon_r = 41.034$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY Configuration:

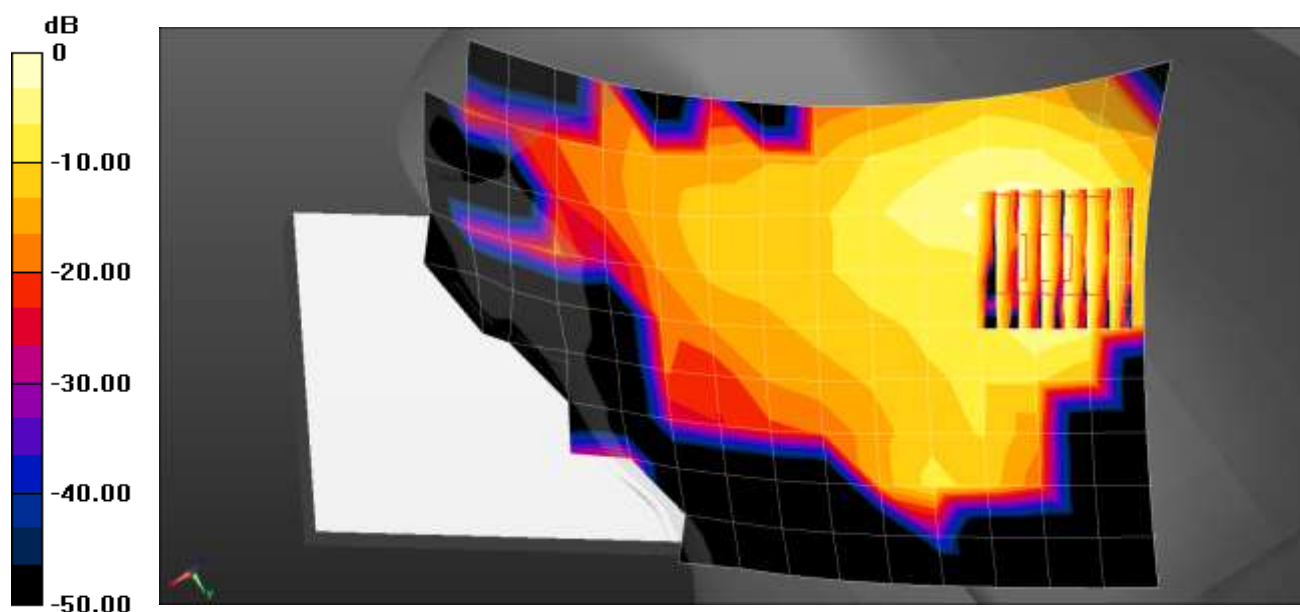
- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band 40 Head Right Touch QPSK 10MHz 25RB 12offset 38750ch/Area Scan (9x16x1):

Measurement grid: $dx=12$ mm, $dy=12$ mm
 Maximum value of SAR (measured) = 0.00342 W/kg

SM-G781V/LTE Band 40 Head Right Touch QPSK 10MHz 25RB 12ffset 38750ch/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
 Reference Value = 0 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.00883 W/kg
SAR(1 g) = 0.000348 W/kg; SAR(10 g) = 6.44e-005 W/kg
 Ratio of SAR at M2 to SAR at M1 = 19.3%
 Maximum value of SAR (measured) = 0.00413 W/kg



0 dB = 0.00342 W/kg = -24.66 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.7°C
 Ambient Temperature: 20.9°C
 Test Date: 08/11/2020
 Plot No.: 17

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE 40 (0); Frequency: 2355 MHz; Duty Cycle: 1:1.58052
 Medium parameters used (interpolated): $f = 2355$ MHz; $\sigma = 1.708$ S/m; $\epsilon_r = 40.055$; $\rho = 1000$ kg/m³
 Phantom section: Left Section

DASY Configuration:

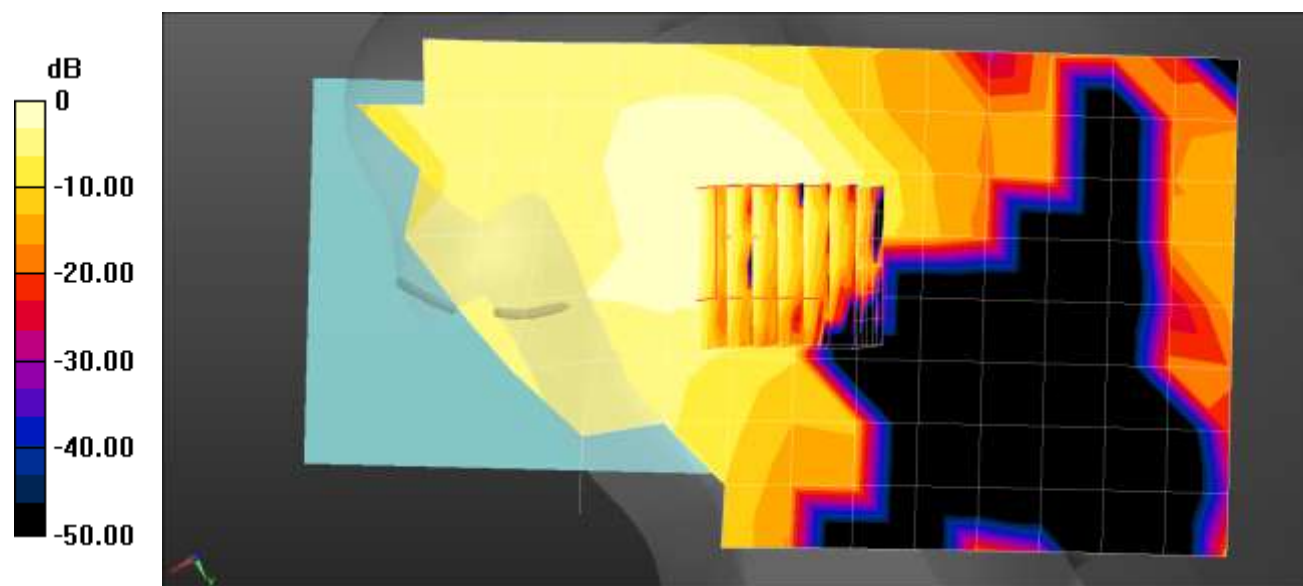
- Probe: EX3DV4 - SN7370; ConvF(7.49, 7.49, 7.49) @ 2355 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band40 Head Left Touch QPSK 10MHz 1RB 24offset 39200ch/Area Scan (9x16x1):

Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.0433 W/kg

SM-G781V/LTE Band40 Head Left Touch QPSK 10MHz 1RB 24offset 39200ch/Zoom Scan (7x7x7)/Cube

0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 0.05800 V/m; Power Drift = 0.16 dB
 Peak SAR (extrapolated) = 0.0510 W/kg
SAR(1 g) = 0.028 W/kg; SAR(10 g) = 0.013 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 57.2%
 Maximum value of SAR (measured) = 0.0421 W/kg



0 dB = 0.0433 W/kg = -13.64 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4°C
 Ambient Temperature: 20.6°C
 Test Date: 07/29/2020
 Plot No.: 18

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band41 (0); Frequency: 2549.5 MHz; Duty Cycle: 1: 1:2.310
 Medium parameters used: $f = 2550$ MHz; $\sigma = 1.931$ S/m; $\epsilon_r = 39.085$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY Configuration:

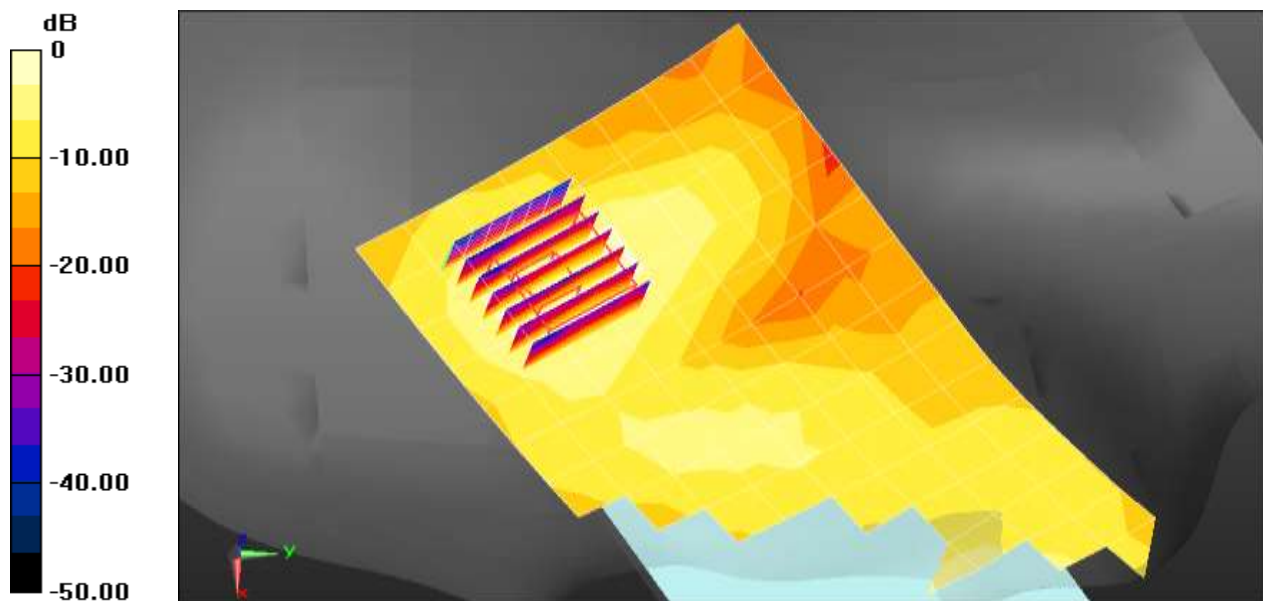
- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2549.5 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band 41 Head Right Touch QPSK 20MHz 1RB 0offset 40185ch/Area Scan (9x16x1):

Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.0922 W/kg

SM-G781V/LTE Band 41 Head Right Touch QPSK 20MHz 1RB 0offset 40185ch/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 4.251 V/m; Power Drift = -0.08 dB
 Peak SAR (extrapolated) = 0.148 W/kg
SAR(1 g) = 0.062 W/kg; SAR(10 g) = 0.031 W/kg
 Smallest distance from peaks to all points 3 dB below = 5 mm
 Ratio of SAR at M2 to SAR at M1 = 31.9%
 Maximum value of SAR (measured) = 0.110 W/kg



0 dB = 0.0922 W/kg = -10.35 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.3°C
 Ambient Temperature: 21.5°C
 Test Date: 08/17/2020
 Plot No.: 19

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band66 (0); Frequency: 1770 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1770$ MHz; $\sigma = 1.353$ S/m; $\epsilon_r = 40.163$; $\rho = 1000$ kg/m³
 Phantom section: Left Section

DASY Configuration:

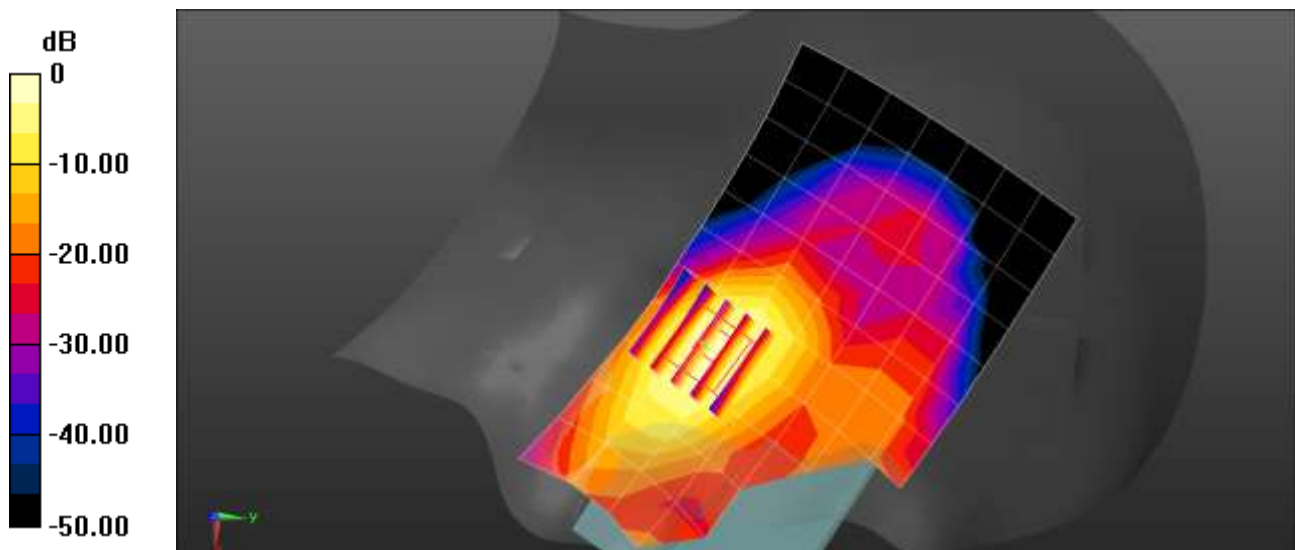
- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1770 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band66 Head Left Touch QPSK 20MHz 1RB 0offset 132572ch/Area Scan (8x14x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.237 W/kg

SM-G781V/LTE Band66 Head Left Touch QPSK 20MHz 1RB 0offset 132572ch/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 4.760 V/m; Power Drift = -0.13 dB
 Peak SAR (extrapolated) = 0.305 W/kg
SAR(1 g) = 0.194 W/kg; SAR(10 g) = 0.121 W/kg
 Smallest distance from peaks to all points 3 dB below = 13.4 mm
 Ratio of SAR at M2 to SAR at M1 = 64.9%
 Maximum value of SAR (measured) = 0.264 W/kg



0 dB = 0.264 W/kg = -5.78 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.1°C
Ambient Temperature: 21.4°C
Test Date: 07/16/2020
Plot No.: 20

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band 71 (0); Frequency: 680.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 680.5$ MHz; $\sigma = 0.894$ S/m; $\epsilon_r = 43.357$; $\rho = 1000$ kg/m³
Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 680.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 71 Head Right Touch QPSK 20MHz 1RB 99offset 133297ch/Area Scan

(8x13x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.245 W/kg

SM-G781V/LTE 71 Head Right Touch QPSK 20MHz 1RB 99offset 133297ch/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.529 V/m; Power Drift = 0.04 dB

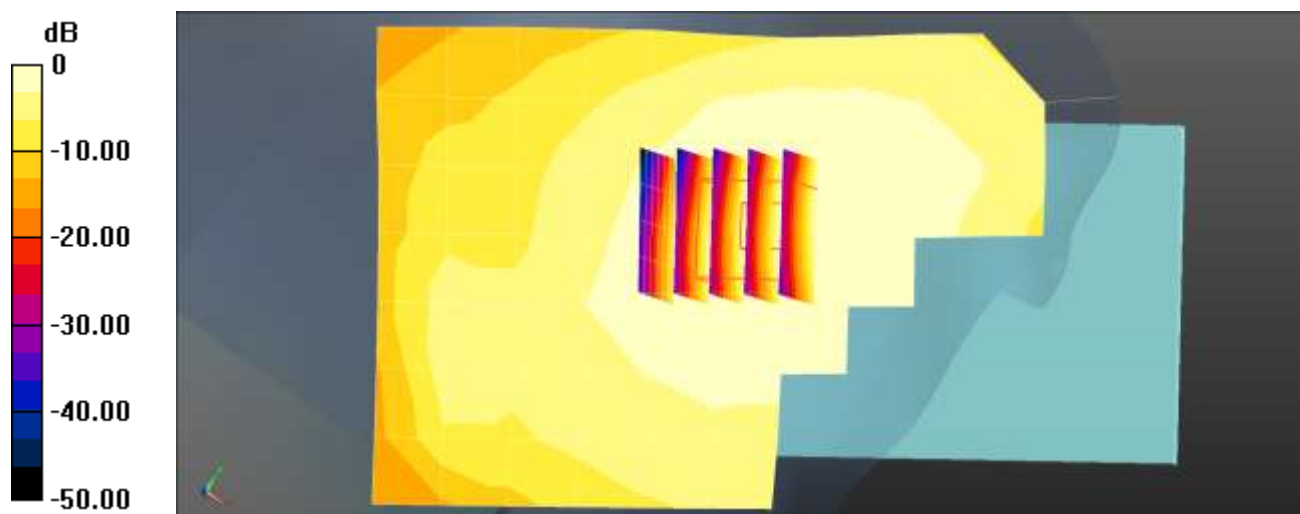
Peak SAR (extrapolated) = 0.264 W/kg

SAR(1 g) = 0.222 W/kg; SAR(10 g) = 0.179 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 85%

Maximum value of SAR (measured) = 0.248 W/kg



0 dB = 0.245 W/kg = -6.11 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.3°C
 Ambient Temperature: 20.6°C
 Test Date: 08/06/2020
 Plot No.: 21

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 42.633$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7370; ConvF(9.88, 9.88, 9.88) @ 836.5 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: SAM with CRP v5.0_2020_06_09;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n5 Head Right Touch DFT-s QPSK 20MHz 50RB 28offset 167300ch/Area Scan (8x14x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm
 Maximum value of SAR (measured) = 0.0898 W/kg

SM-G781V/NR n5 Head Right Touch DFT-s QPSK 20MHz 50RB 28offset 167300ch/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 3.497 V/m; Power Drift = 0.11 dB

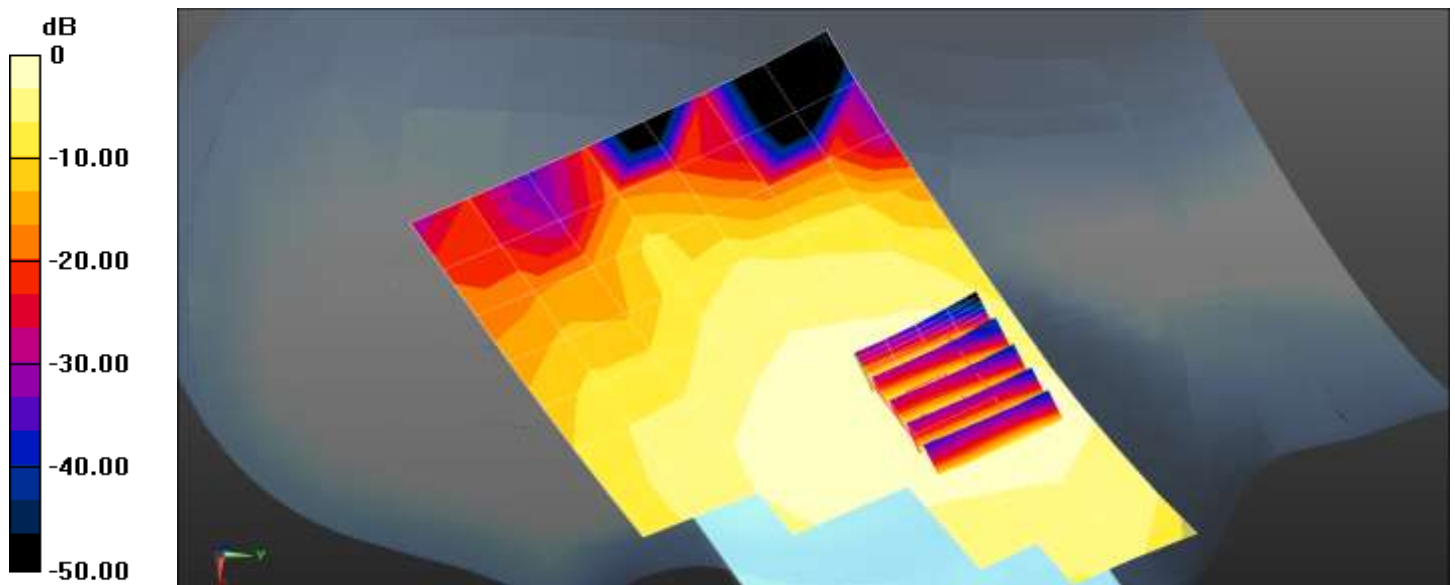
Peak SAR (extrapolated) = 0.101 W/kg

SAR(1 g) = 0.075 W/kg; SAR(10 g) = 0.055 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 73.9%

Maximum value of SAR (measured) = 0.0919 W/kg



0 dB = 0.0898 W/kg = -10.47 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.3°C
 Ambient Temperature: 20.5°C
 Test Date: 08/10/2020
 Plot No.: 22

DUT: SM-G781V; Type: Bar

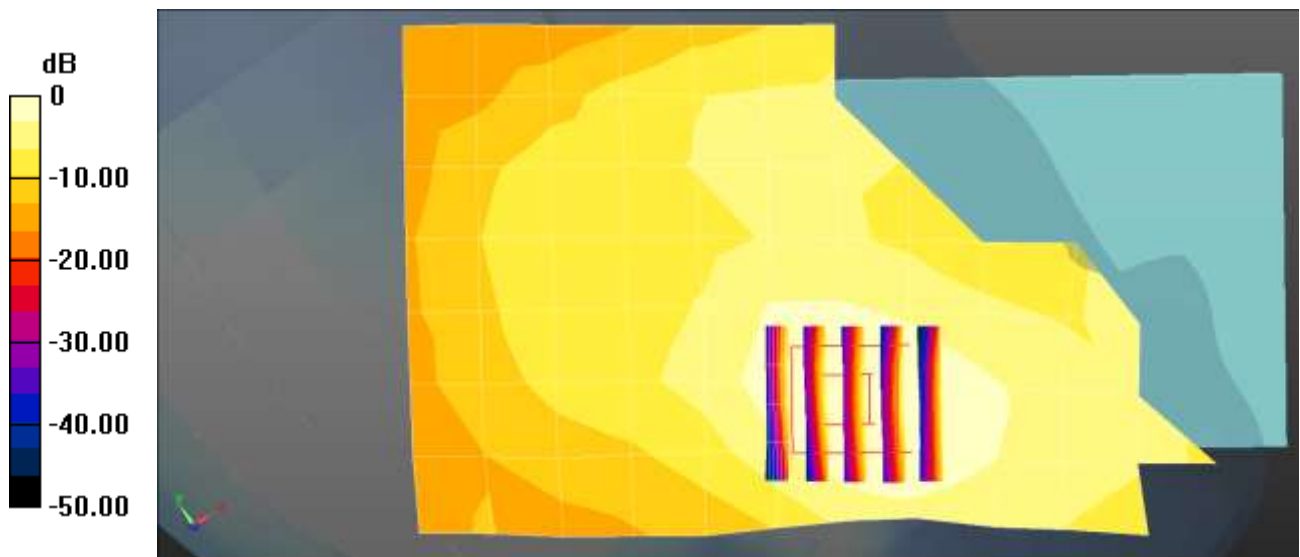
Communication System: UID 0, n25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.401$ S/m; $\epsilon_r = 39.776$; $\rho = 1000$ kg/m³
 Phantom section: Left Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1905 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR Band 25 Head Left Touch DFT-s QPSK 20MHz 50RB 28offset 381000ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.147 W/kg

SM-G781V/NR Band 25 Head Left Touch DFT-s QPSK 20MHz 50RB 28offset 381000ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 4.169 V/m; Power Drift = -0.13 dB
 Peak SAR (extrapolated) = 0.204 W/kg
SAR(1 g) = 0.138 W/kg; SAR(10 g) = 0.086 W/kg
 Smallest distance from peaks to all points 3 dB below = 13.8 mm
 Ratio of SAR at M2 to SAR at M1 = 67.3%
 Maximum value of SAR (measured) = 0.149 W/kg



0 dB = 0.147 W/kg = -8.34 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.7°C
 Ambient Temperature: 20.9°C
 Test Date: 08/06/2020
 Plot No.: 23

DUT: SM-G781V; Type: Bar

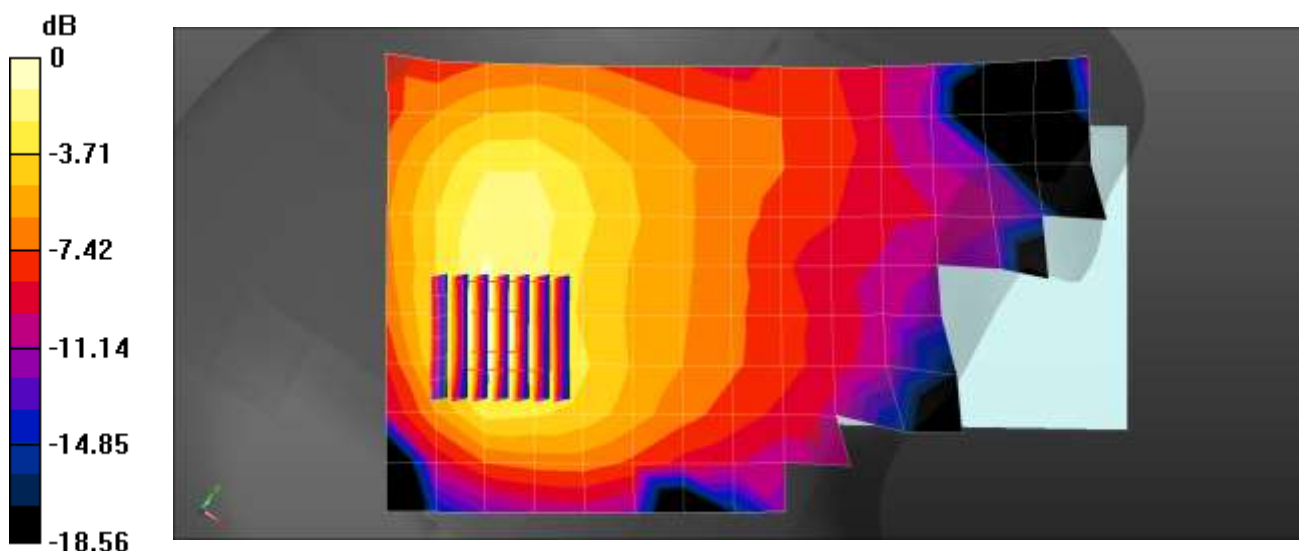
Communication System: UID 0, NR Band n41 (0); Frequency: 2592.99 MHz; Duty Cycle: 1:4.00037
 Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.946$ S/m; $\epsilon_r = 37.895$; $\rho = 1000$ kg/m³
 Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.41, 7.41, 7.41) @ 2592.99 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n41 Head Left Touch DFT-s QPSK 100MHz 1RB 137offset 518598ch/Area Scan
(10x17x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.125 W/kg

SM-G781V/NR n41 Head Left Touch DFT-s QPSK 100MHz 1RB 137offset 518598ch/Zoom Scan
(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 0 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.150 W/kg
SAR(1 g) = 0.067 W/kg; SAR(10 g) = 0.029 W/kg
 Smallest distance from peaks to all points 3 dB below = 10.7 mm
 Ratio of SAR at M2 to SAR at M1 = 42.3%
 Maximum value of SAR (measured) = 0.114 W/kg



0 dB = 0.114 W/kg = -9.43 dBW/kg

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

Liquid Temperature: 19.7°C
 Ambient Temperature: 19.9°C
 Test Date: 08/07/2020
 Plot No.: 24

DUT: SM-G781V; Type: Bar

Communication System: UID 0, NR Band n66 (0); Frequency: 1745 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.386$ S/m; $\epsilon_r = 38.799$; $\rho = 1000$ kg/m³
 Phantom section: Left Section

DASY Configuration:

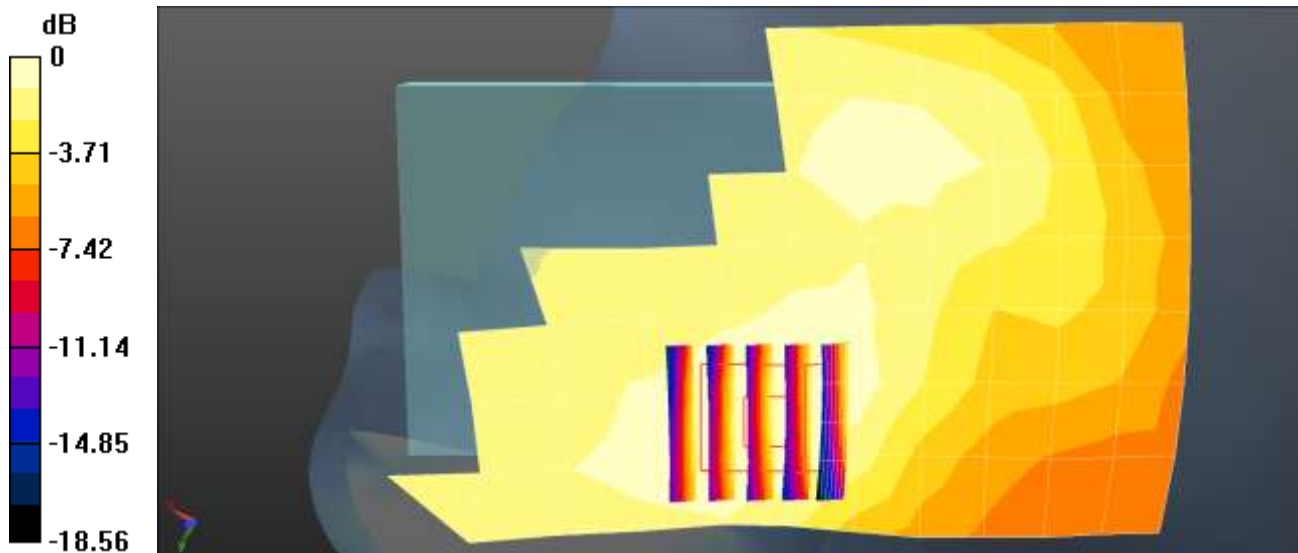
- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1745 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n66 Body Left Touch CP QPSK 20MHz 1RB 104offset 349000ch/Area Scan (8x13x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.0981 W/kg

SM-G781V/NR n66 Body Left Touch CP QPSK 20MHz 1RB 104offset 349000ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 3.096 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 0.135 W/kg
SAR(1 g) = 0.087 W/kg; SAR(10 g) = 0.055 W/kg
 Smallest distance from peaks to all points 3 dB below = 15.1 mm
 Ratio of SAR at M2 to SAR at M1 = 66%
 Maximum value of SAR (measured) = 0.118 W/kg



0 dB = 0.118 W/kg = -9.28 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 22.1°C
 Ambient Temperature: 22.4°C
 Test Date: 08/07/2020
 Plot No.: 25

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, NR (0); Frequency: 680.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 680.5$ MHz; $\sigma = 0.836$ S/m; $\epsilon_r = 42.493$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7370; ConvF(10.27, 10.27, 10.27) @ 680.5 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: SAM with CRP v5.0_2020_06_09;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n71 Body Right Touch DFT-s QPSK 20MHz 1RB 53offset 136100ch/Area Scan (8x13x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm
 Maximum value of SAR (measured) = 0.179 W/kg

SM-G781V/NR n71 Body Right Touch DFT-s QPSK 20MHz 1RB 53offset 136100ch/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 6.460 V/m; Power Drift = -0.02 dB

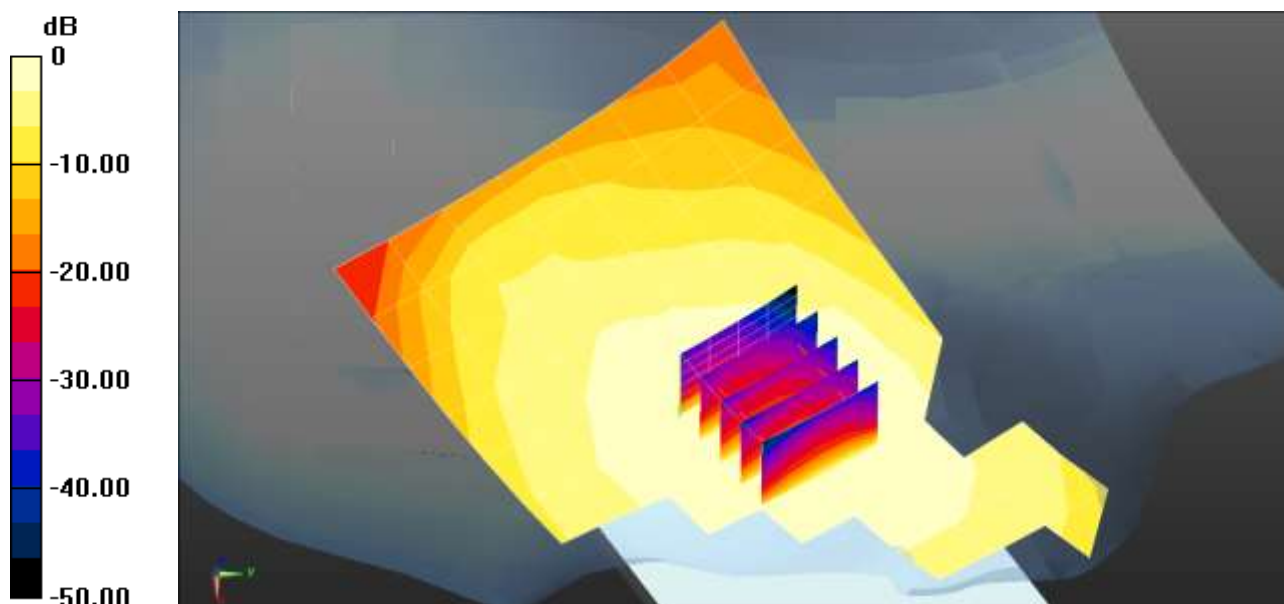
Peak SAR (extrapolated) = 0.198 W/kg

SAR(1 g) = 0.153 W/kg; SAR(10 g) = 0.123 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 78.4%

Maximum value of SAR (measured) = 0.181 W/kg



0 dB = 0.179 W/kg = -7.47 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.5°C
 Ambient Temperature: 20.7°C
 Test Date: 07/20/2020
 Test Laboratory: HCT CO., LTD

DUT: SM-G781V; Type: Bar

Communication System: UID 0, 2450MHz; Frequency: 2437 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.785$ S/m; $\epsilon_r = 38.443$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.49, 7.49, 7.49) @ 2437 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11b Head Right Tilt 1Mbps 6ch Ant1/Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.648 W/kg

SM-G781V/802.11b Head Right Tilt 1Mbps 6ch Ant1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 17.51 V/m; Power Drift = 0.03 dB

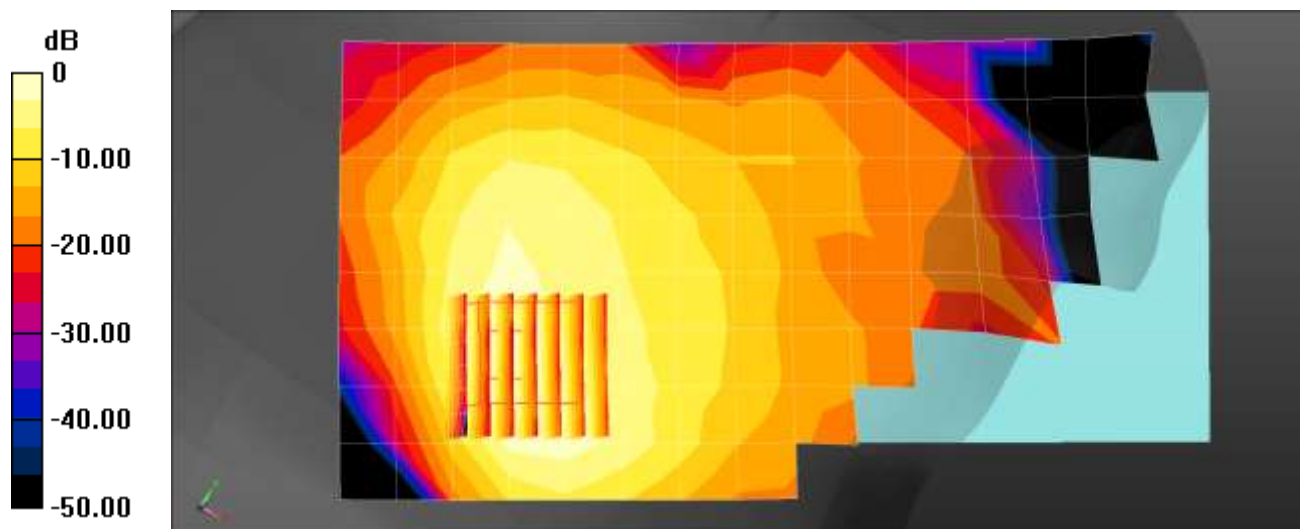
Peak SAR (extrapolated) = 1.40 W/kg

SAR(1 g) = 0.527 W/kg; SAR(10 g) = 0.208 W/kg

Smallest distance from peaks to all points 3 dB below = 7 mm

Ratio of SAR at M2 to SAR at M1 = 37.5%

Maximum value of SAR (measured) = 1.01 W/kg



0 dB = 0.648 W/kg = -1.88 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 19.9°C
 Ambient Temperature: 20.1°C
 Test Date: 07/23/2020
 Plot No.: 27

DUT: SM-G781V; Type: Bar

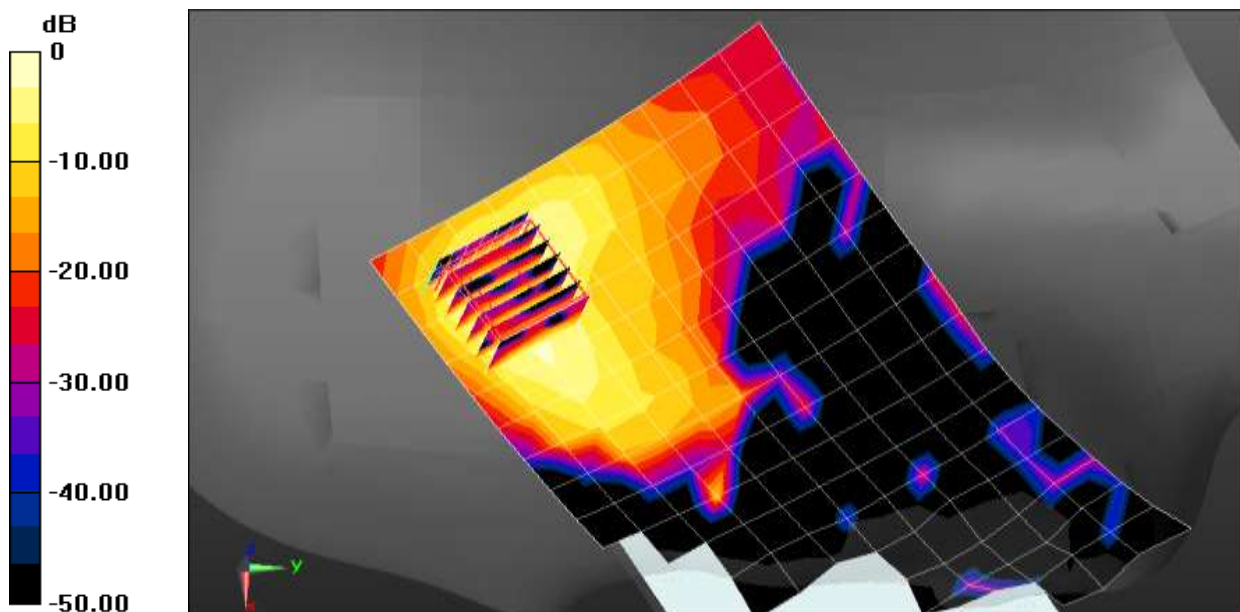
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5290 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5290$ MHz; $\sigma = 4.868$ S/m; $\epsilon_r = 37.041$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5290 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11ac80 Head Right Touch MCS0 58ch/Area Scan (11x19x1): Measurement grid:
 $dx=10$ mm, $dy=10$ mm
 Maximum value of SAR (measured) = 0.524 W/kg

SM-G781V/802.11ac80 Head Right Touch MCS0 58ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid:
 $dx=4$ mm, $dy=4$ mm, $dz=1.4$ mm
 Reference Value = 4.056 V/m; Power Drift = 0.09 dB
 Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 0.254 W/kg; SAR(10 g) = 0.074 W/kg
 Smallest distance from peaks to all points 3 dB below = 4.3 mm
 Ratio of SAR at M2 to SAR at M1 = 58.7%
 Maximum value of SAR (measured) = 0.766 W/kg



0 dB = 0.524 W/kg = -2.81 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 21.8°C
 Ambient Temperature: 22.1°C
 Test Date: 07/29/2020
 Plot No.: 28

DUT: SM-G781V; Type: Bar

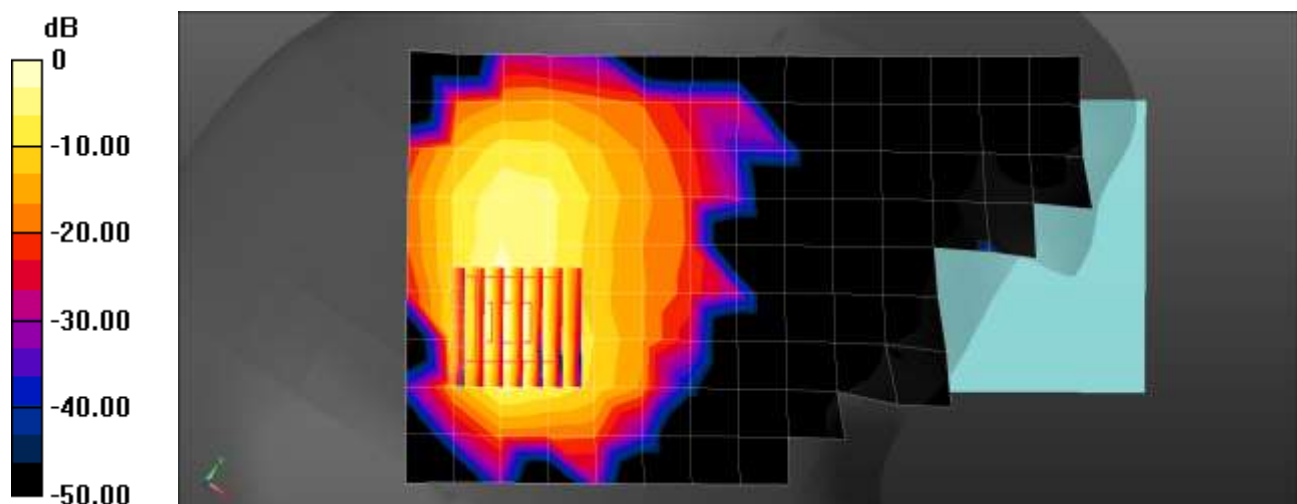
Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1: 1.302
 Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.793$ S/m; $\epsilon_r = 40.573$; $\rho = 1000$ kg/m³
 Phantom section: Right Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2441 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/Bluetooth Head Right Tilt DH5 39ch/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.237 W/kg

SM-G781V/Bluetooth Head Right Tilt DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 8.484 V/m; Power Drift = -0.11 dB
 Peak SAR (extrapolated) = 0.380 W/kg
SAR(1 g) = 0.133 W/kg; SAR(10 g) = 0.050 W/kg
 Smallest distance from peaks to all points 3 dB below = 7 mm
 Ratio of SAR at M2 to SAR at M1 = 36.2%
 Maximum value of SAR (measured) = 0.274 W/kg



0 dB = 0.237 W/kg = -6.25 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.7°C
 Ambient Temperature: 20.9°C
 Test Date: 07/16/2020
 Plot No.: 29

DUT: SM-G781V; Type: Bar

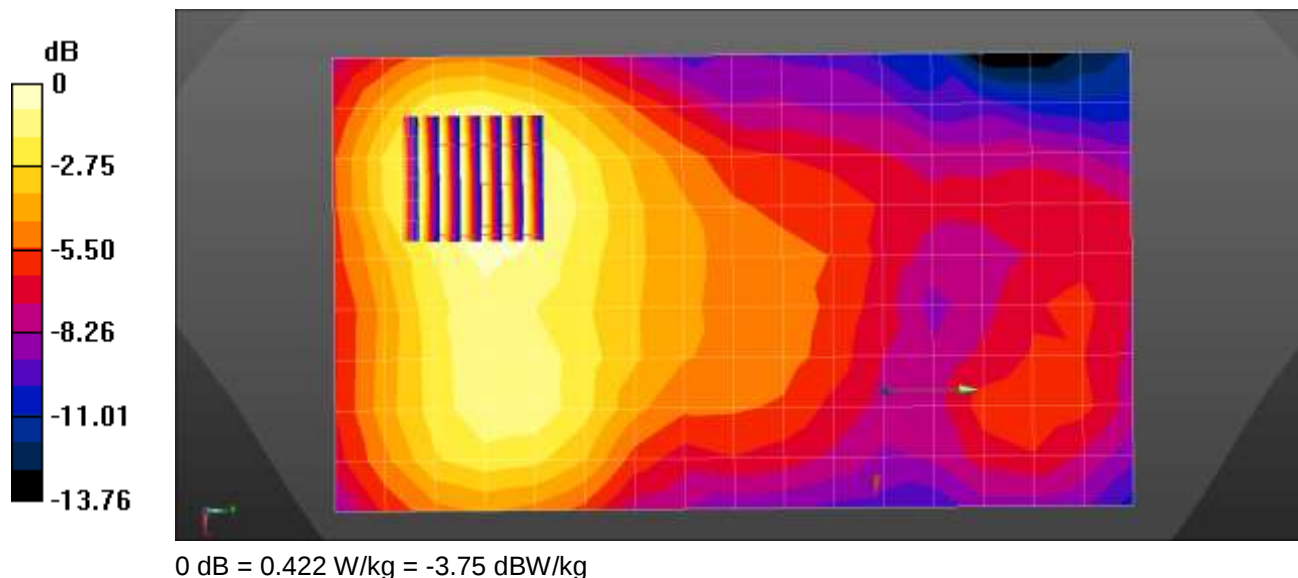
Communication System: UID 0, CDMA800(BC10) (0); Frequency: 820 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 820 \text{ MHz}$; $\sigma = 0.932 \text{ S/m}$; $\epsilon_r = 42.831$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 820 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/CDMA BC10 Body Rear 560ch Rev.A RETAP Body Worn/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.377 W/kg

SM-G781V/CDMA BC10 Body Rear 560ch Rev.A RETAP Body Worn/Zoom Scan (5x5x7)/Cube 0:
 Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 15.39 V/m; Power Drift = -0.05 dB
 Peak SAR (extrapolated) = 0.490 W/kg
SAR(1 g) = 0.301 W/kg; SAR(10 g) = 0.185 W/kg
 Maximum value of SAR (measured) = 0.422 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.0°C
 Ambient Temperature: 20.3°C
 Test Date: 07/15/2020
 Plot No.: 30

DUT: SM-G781V; 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; $\sigma = 0.945$ S/m; $\epsilon_r = 42.595$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.52 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/CDMA BC0 Body Rear 384ch EVDO Rev.A/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.320 W/kg

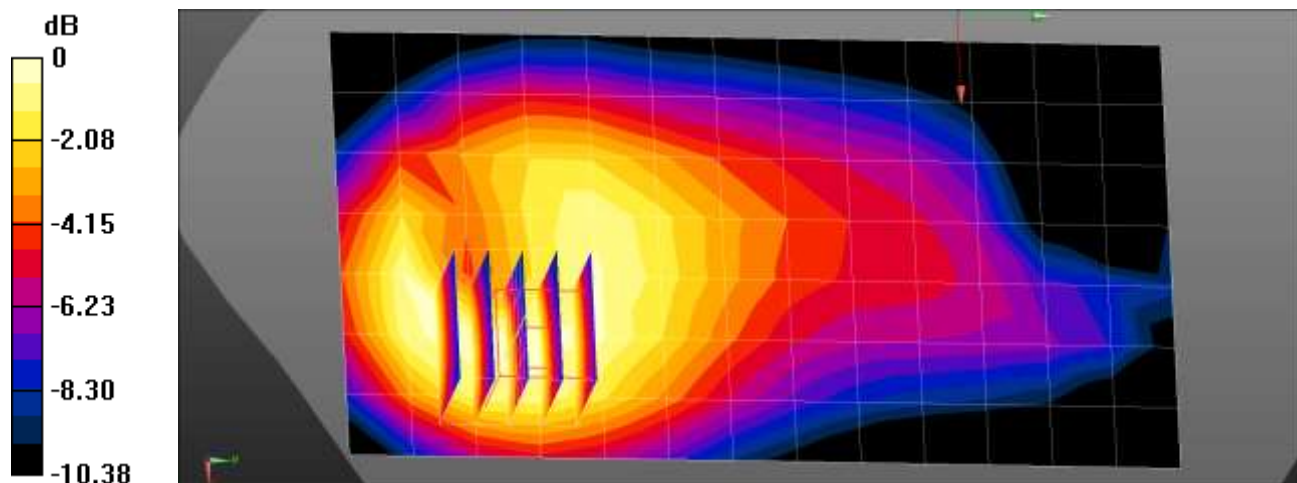
SM-G781V/CDMA BC0 Body Rear 384ch EVDO Rev.A/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.79 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.373 W/kg

SAR(1 g) = 0.265 W/kg; SAR(10 g) = 0.185 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: 20.8°C
Ambient Temperature: 21.0°C
Test Date: 08/12/2020
Plot No.: 31

DUT: SM-G781V; Type: BarCommunication System: UID 0, CDMA BC1 (0); Frequency: 1908.75 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 1908.75$ MHz; $\sigma = 1.441$ S/m; $\epsilon_r = 39.584$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1908.75 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/CDMA BC1 BodyWorn Rear EvDO Rev.A 1175ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.845 W/kg

SM-G781V/CDMA BC1 BodyWorn Rear EvDO Rev.A 1175ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.635 V/m; Power Drift = 0.10 dB

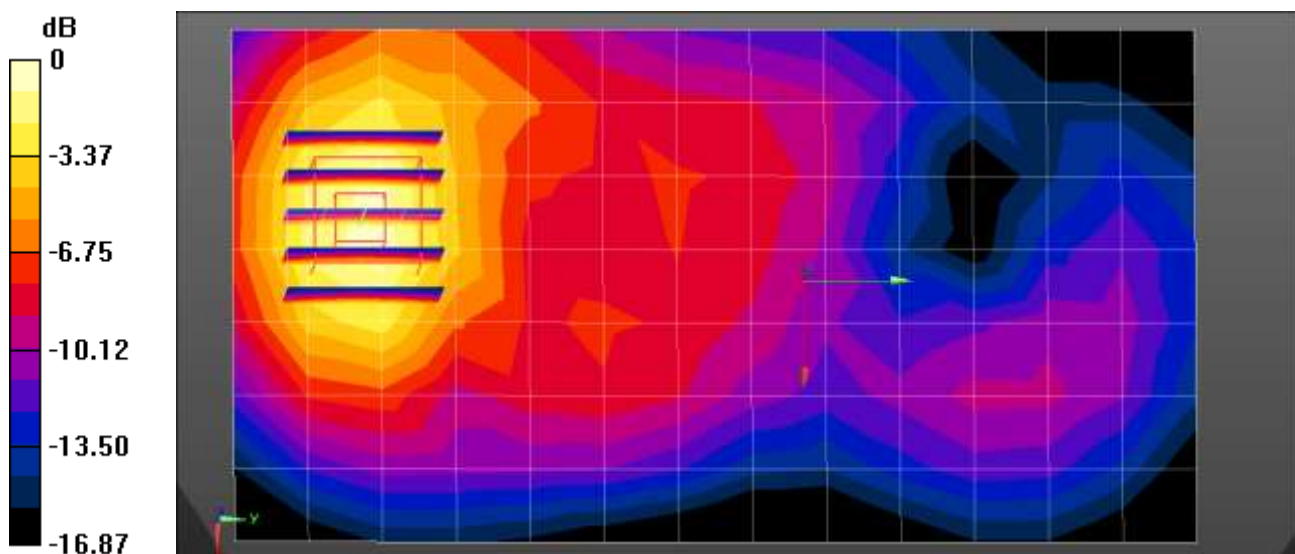
Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.630 W/kg; SAR(10 g) = 0.360 W/kg

Smallest distance from peaks to all points 3 dB below = 15.8 mm

Ratio of SAR at M2 to SAR at M1 = 57.9%

Maximum value of SAR (measured) = 0.919 W/kg



0 dB = 0.919 W/kg = -0.37 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.1°C
 Ambient Temperature: 20.3°C
 Test Date: 07/14/2020
 Plot No.: 32

DUT: SM-G781V; Type: Bar;

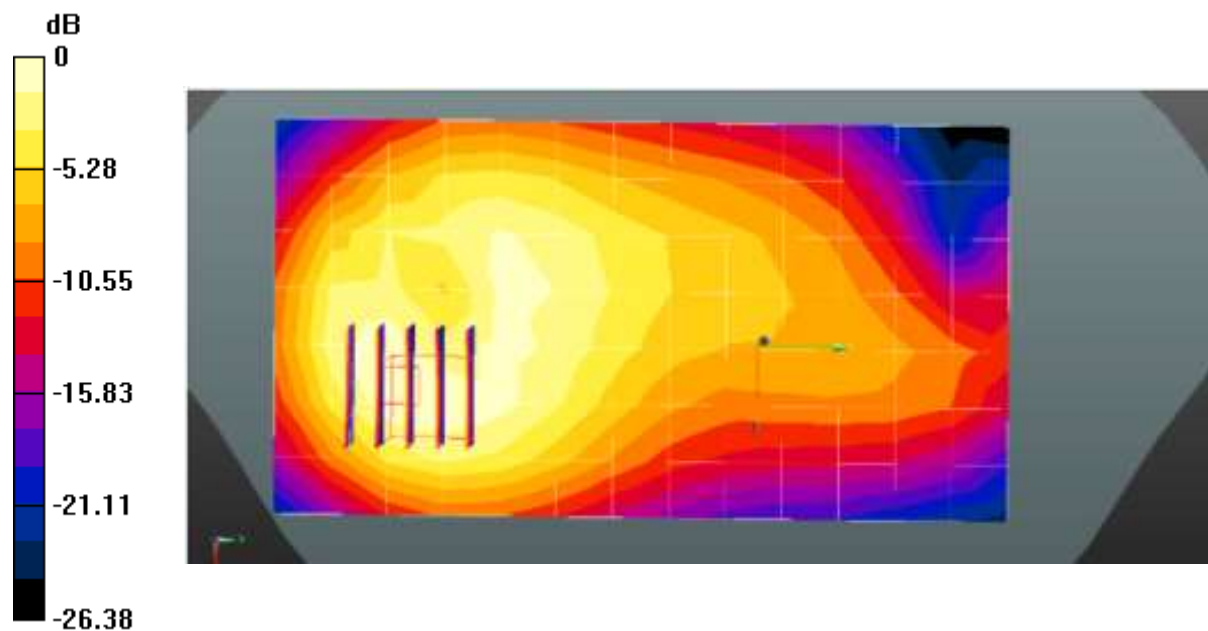
Communication System: UID 0, GSM850 GPRS 2TX (0); Frequency: 836.6 MHz; Duty Cycle: 1:4.14954
 Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.929$ S/m; $\epsilon_r = 42.616$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.6 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/GSM850 BodyWorn Rear 2Tx 190ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.423 W/kg

SM-G781V/GSM850 BodyWorn Rear 2Tx 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 13.47 V/m; Power Drift = 0.09 dB
 Peak SAR (extrapolated) = 0.502 W/kg
SAR(1 g) = 0.315 W/kg; SAR(10 g) = 0.198 W/kg
 Smallest distance from peaks to all points 3 dB below = 15.2 mm
 Ratio of SAR at M2 to SAR at M1 = 63.8%
 Maximum value of SAR (measured) = 0.441 W/kg



0 dB = 0.423 W/kg = -3.73 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 21.1°C
 Ambient Temperature: 21.3°C
 Test Date: 08/16/2020
 Plot No.: 33

DUT: SM-G781V; Type: Bar

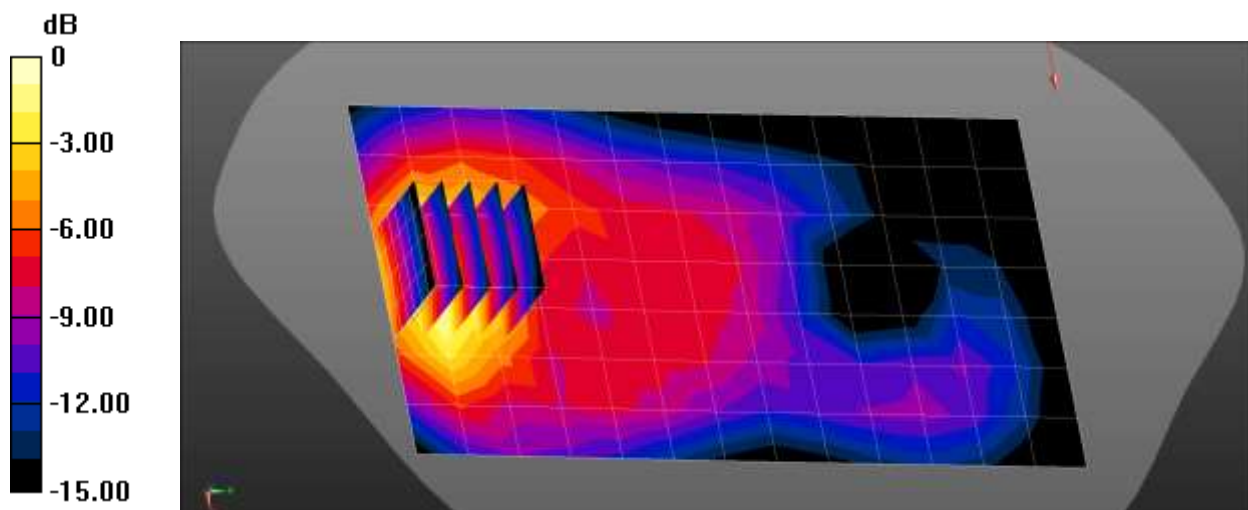
Communication System: UID 0, GSM 1900 3Tx (0); Frequency: 1880 MHz; Duty Cycle: 1:2.77013
 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 40.315$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/GSM1900 Body Rear 3Tx 661ch Bodyworn/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.462 W/kg

SM-G781V/GSM1900 Body Rear 3Tx 661ch Bodyworn/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 7.795 V/m; Power Drift = 0.11 dB
 Peak SAR (extrapolated) = 0.567 W/kg
SAR(1 g) = 0.344 W/kg; SAR(10 g) = 0.197 W/kg
 Smallest distance from peaks to all points 3 dB below = 14.4 mm
 Ratio of SAR at M2 to SAR at M1 = 59.5%
 Maximum value of SAR (measured) = 0.493 W/kg



0 dB = 0.493 W/kg = -3.07 dBW/kg

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

Liquid Temperature: 20.4°C
 Ambient Temperature: 20.6°C
 Test Date: 07/15/2020
 Plot No.: 34

DUT: SM-G781V; Type: Bar

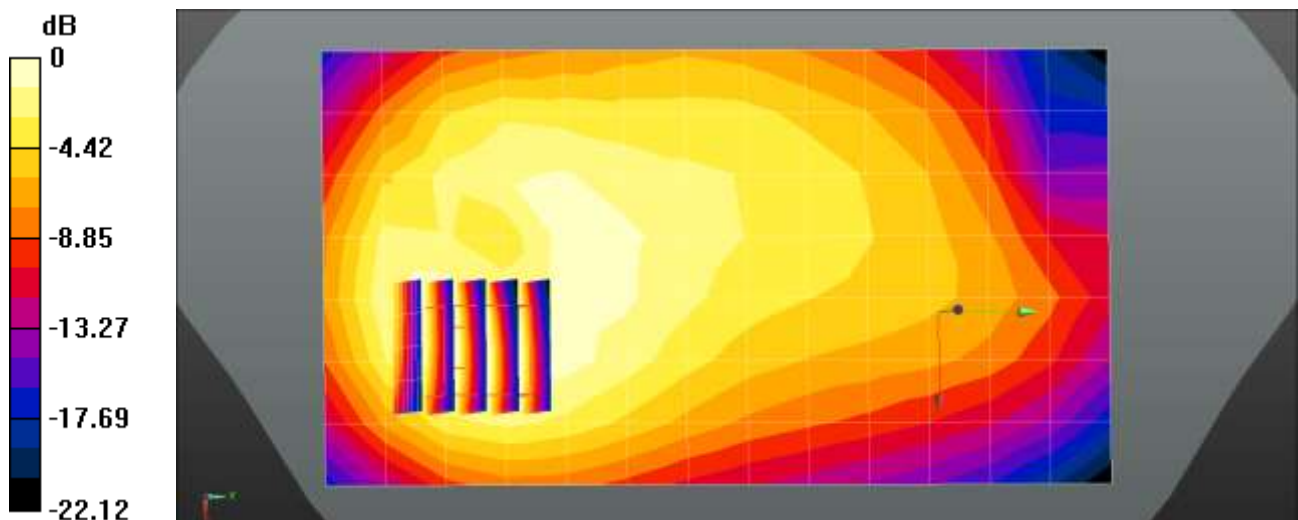
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.927 \text{ S/m}$; $\epsilon_r = 42.923$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 836.6 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band5 Body Rear 4183ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.279 W/kg

SM-G781V/WCDMA Band5 Body Rear 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 12.74 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.350 W/kg
SAR(1 g) = 0.216 W/kg; SAR(10 g) = 0.133 W/kg
 Smallest distance from peaks to all points 3 dB below = 14.3 mm
 Ratio of SAR at M2 to SAR at M1 = 61.6%
 Maximum value of SAR (measured) = 0.303 W/kg



0 dB = 0.279 W/kg = -5.55 dBW/kg

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

Liquid Temperature: 20.2°C
 Ambient Temperature: 20.5°C
 Test Date: 07/14/2020
 Plot No.: 35

DUT: SM-G781V; 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; $\sigma = 1.312$ S/m; $\epsilon_r = 40.212$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14) @ 1732.4 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band4 Body worn Rear 1412ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.865 W/kg

SM-G781V/WCDMA Band4 Body worn Rear 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 9.331 V/m; Power Drift = -0.05 dB

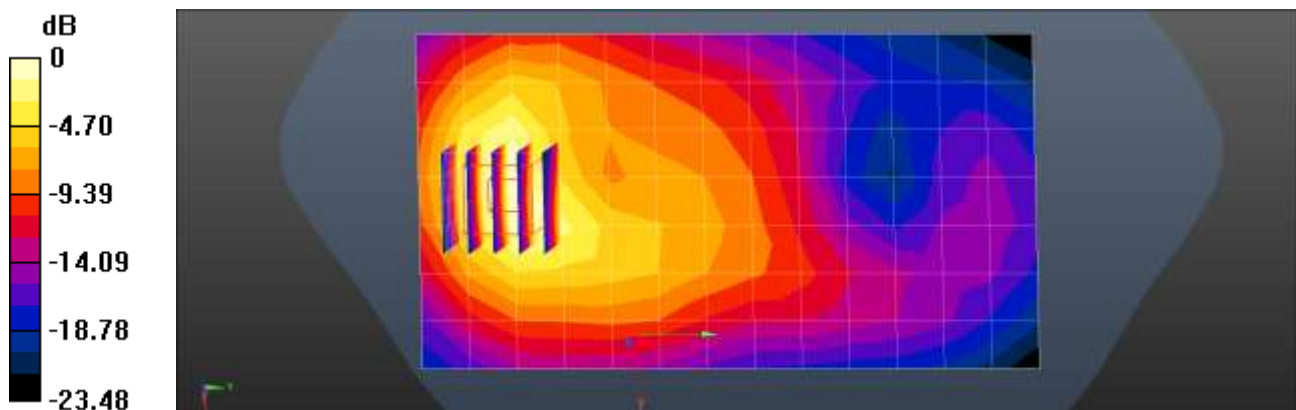
Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.619 W/kg; SAR(10 g) = 0.354 W/kg

Smallest distance from peaks to all points 3 dB below = 13.2 mm

Ratio of SAR at M2 to SAR at M1 = 58.4%

Maximum value of SAR (measured) = 0.906 W/kg



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

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.9°C
Ambient Temperature: 21.1°C
Test Date: 07/27/2020
Plot No.: 36

DUT: SM-G781V; Type: Bar

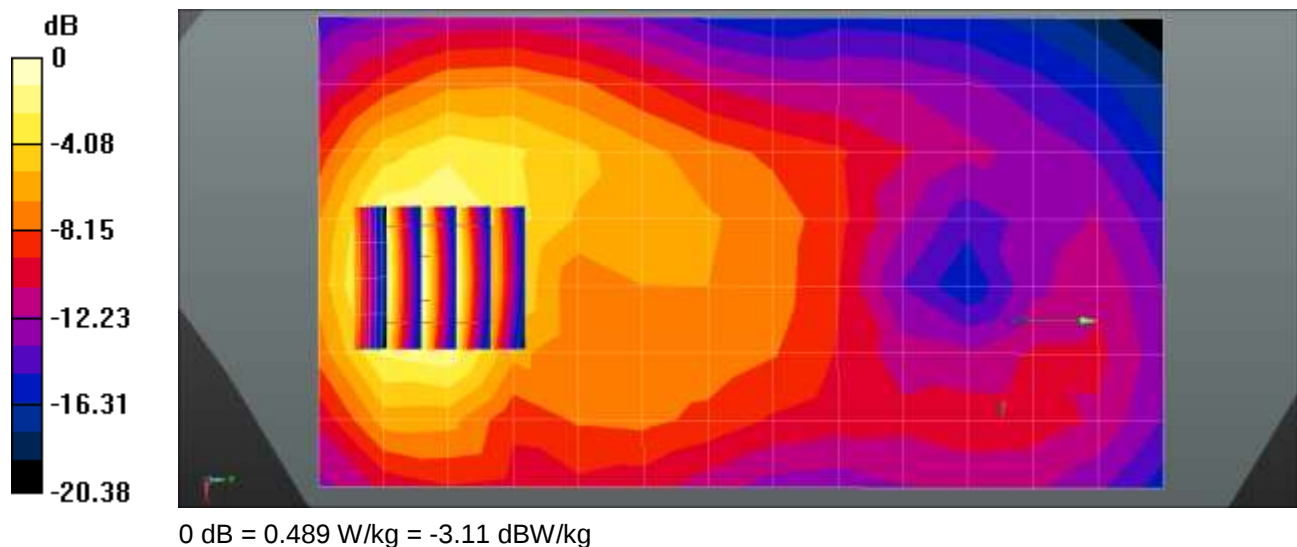
Communication System: UID 0, WCDMA1900 (0); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1880$ MHz; $\sigma = 1.423$ S/m; $\epsilon_r = 39.318$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/WCDMA Band2 Body Rear 9400ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.489 W/kg

SM-G781V/WCDMA Band2 Body Rear 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 8.458 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.837 W/kg
SAR(1 g) = 0.503 W/kg; SAR(10 g) = 0.294 W/kg
Smallest distance from peaks to all points 3 dB below = 14.4 mm
Ratio of SAR at M2 to SAR at M1 = 60.8%
Maximum value of SAR (measured) = 0.555 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.6°C
 Ambient Temperature: 20.8°C
 Test Date: 07/28/2020
 Plot No.: 37

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band7 (0); Frequency: 2510 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2510$ MHz; $\sigma = 1.88$ S/m; $\epsilon_r = 40.099$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

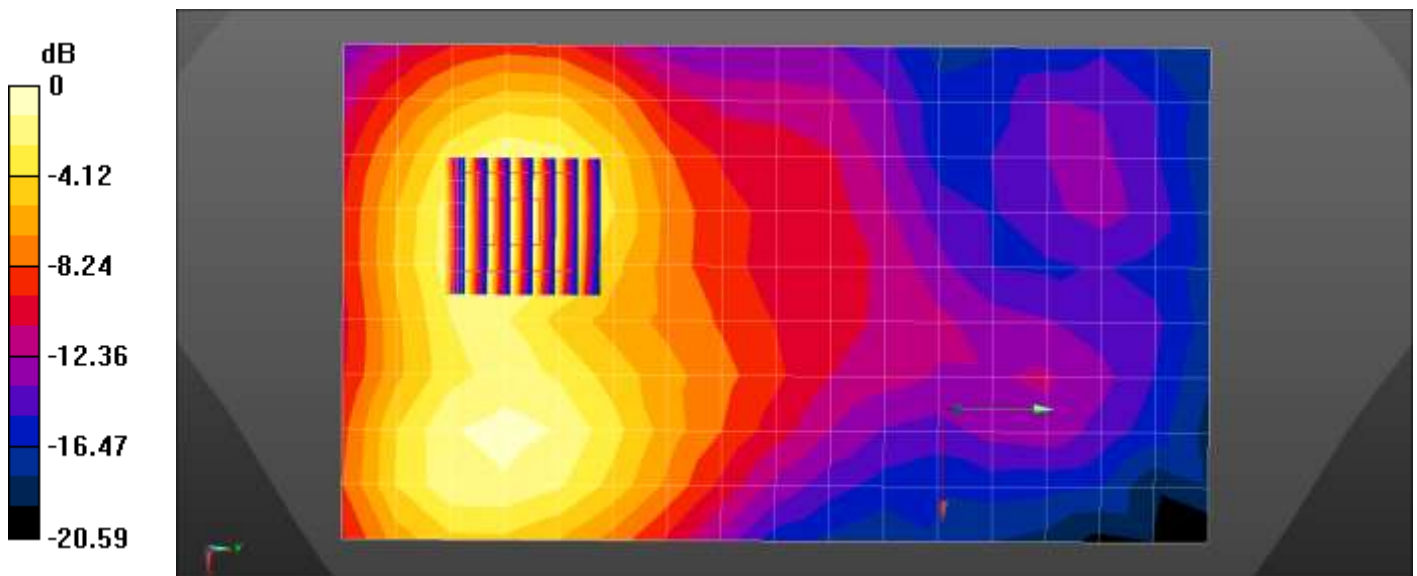
- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2510 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band 7 Body Rear QPSK 20MHz 1RB 0offset 20850ch body worn/Area Scan (10x17x1):

Measurement grid: $dx=12$ mm, $dy=12$ mm
 Maximum value of SAR (measured) = 0.431 W/kg

SM-G781V/LTE Band 7 Body Rear QPSK 20MHz 1RB 0offset 20850ch body worn/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
 Reference Value = 4.790 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 0.548 W/kg
SAR(1 g) = 0.271 W/kg; SAR(10 g) = 0.142 W/kg
 Smallest distance from peaks to all points 3 dB below = 16.3 mm
 Ratio of SAR at M2 to SAR at M1 = 47.8%
 Maximum value of SAR (measured) = 0.438 W/kg



0 dB = 0.431 W/kg = -3.66 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.2°C
 Ambient Temperature: 20.4°C
 Test Date: 07/08/2020
 Plot No.: 38

DUT: SM-G781V; Type: Bar;

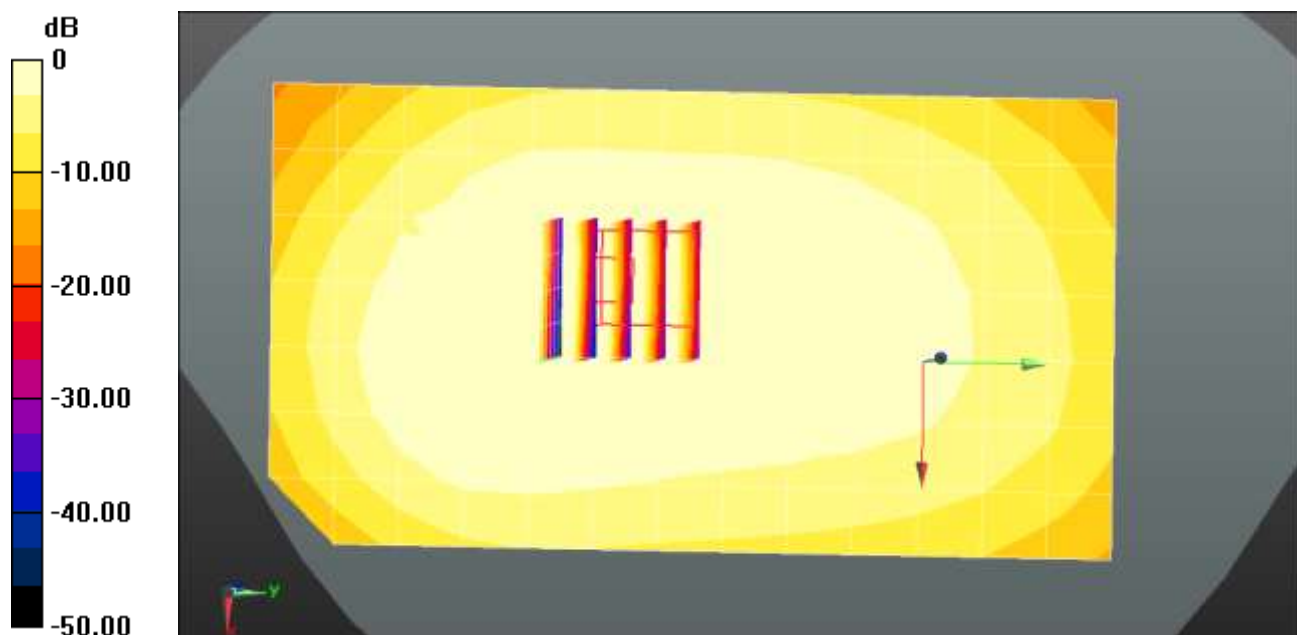
Communication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.859$ S/m; $\epsilon_r = 42.769$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 707.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 12 Body Rear QPSK 10MHz 1RB 49offset 23095ch/Area Scan (8x14x1): Measurement
 grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.318 W/kg

SM-G781V/LTE 12 Body Rear QPSK 10MHz 1RB 49offset 23095ch/Zoom Scan (5x5x7)/Cube 0:
 Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 18.68 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.345 W/kg
SAR(1 g) = 0.268 W/kg; SAR(10 g) = 0.205 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 75.1%
 Maximum value of SAR (measured) = 0.317 W/kg



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.4°C
Ambient Temperature: 20.7°C
Test Date: 07/09/2020
Plot No.: 39

DUT: SM-G781V; Type: Bar: Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 782$ MHz; $\sigma = 0.927$ S/m; $\epsilon_r = 41.851$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 782 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 13 Body Rear QPSK 10MHz 1RB 0offset 23230ch/Area Scan (8x15x1): Measurement

grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.433 W/kg

SM-G781V/LTE 13 Body Rear QPSK 10MHz 1RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.64 V/m; Power Drift = -0.04 dB

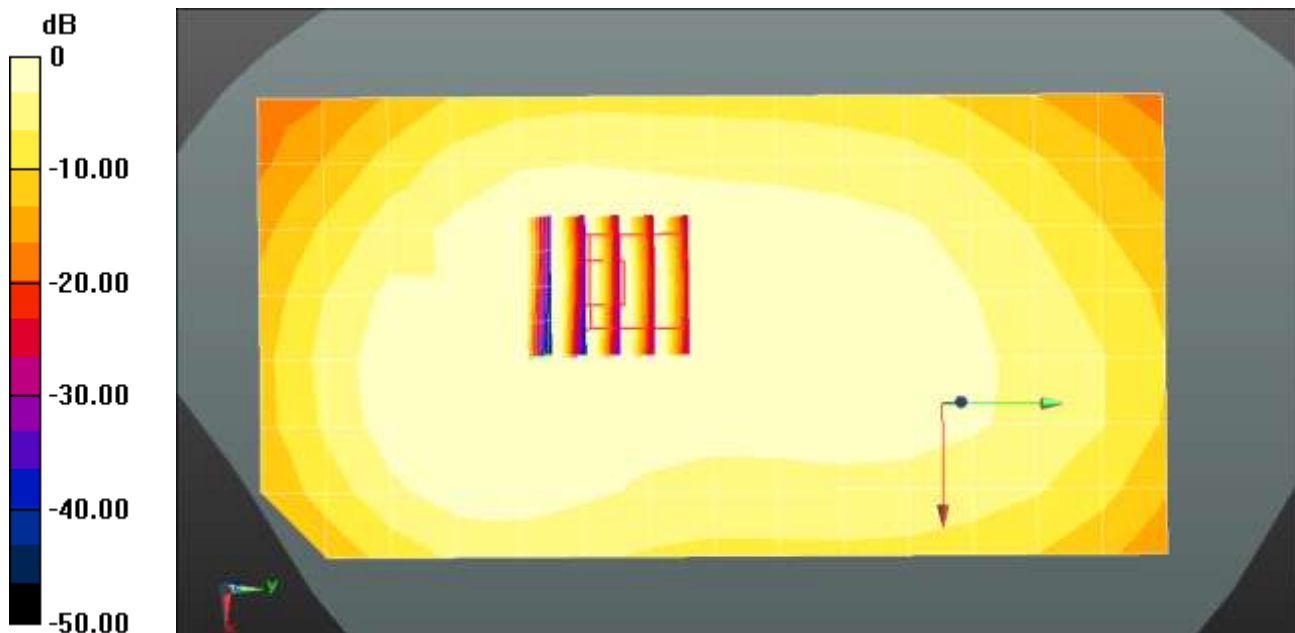
Peak SAR (extrapolated) = 0.478 W/kg

SAR(1 g) = 0.355 W/kg; SAR(10 g) = 0.259 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 74.9%

Maximum value of SAR (measured) = 0.436 W/kg



0 dB = 0.433 W/kg = -3.63 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.6°C
 Ambient Temperature: 20.9°C
 Test Date: 07/13/2020
 Plot No.: 40

DUT: SM-G781V; Type: Bar:

Communication System: UID 0, LTE Band 14 (0); Frequency: 793 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 793 \text{ MHz}$; $\sigma = 0.939 \text{ S/m}$; $\epsilon_r = 41.604$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

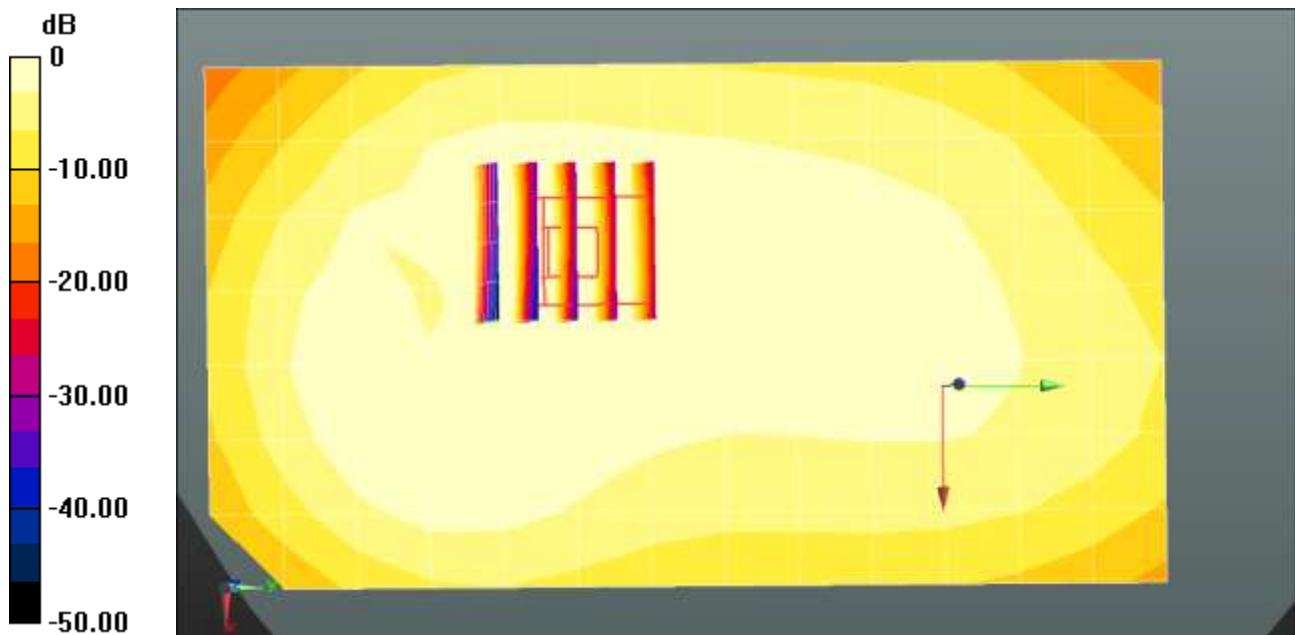
- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 793 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 14 Body worn Rear QPSK 10MHz 1RB 0offset 23330ch/Area Scan (8x14x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.407 W/kg

SM-G781V/LTE 14 Body worn Rear QPSK 10MHz 1RB 0offset 23330ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 17.97 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.466 W/kg
SAR(1 g) = 0.340 W/kg; SAR(10 g) = 0.244 W/kg
 Smallest distance from peaks to all points 3 dB below = 20.5 mm
 Ratio of SAR at M2 to SAR at M1 = 72.9%
 Maximum value of SAR (measured) = 0.424 W/kg



0 dB = 0.407 W/kg = -3.90 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.2°C
 Ambient Temperature: 20.5°C
 Test Date: 08/19/2020
 Plot No.: 41

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.407$ S/m; $\epsilon_r = 39.844$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

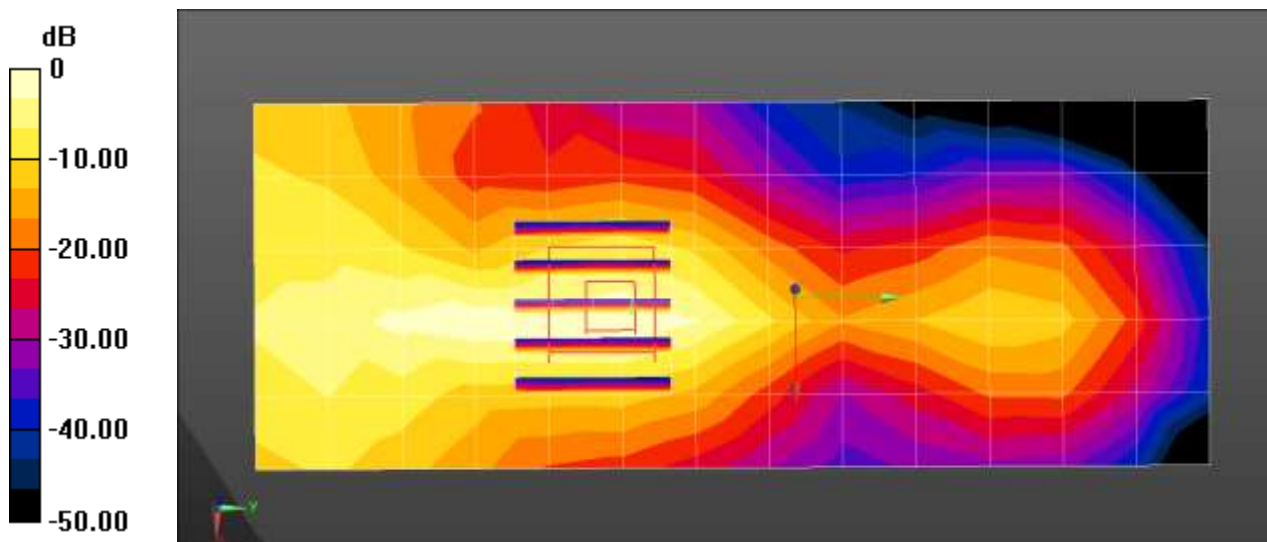
- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1905 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band25 BodyWorn Rear QPSK 20MHz 1RB 99offset 26590ch/Area Scan (8x14x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.739 W/kg

SM-G781V/LTE Band25 BodyWorn Rear QPSK 20MHz 1RB 99offset 26590ch/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 8.678 V/m; Power Drift = 0.16 dB
 Peak SAR (extrapolated) = 0.935 W/kg
SAR(1 g) = 0.530 W/kg; SAR(10 g) = 0.292 W/kg
 Smallest distance from peaks to all points 3 dB below = 13.7 mm
 Ratio of SAR at M2 to SAR at M1 = 56.6%
 Maximum value of SAR (measured) = 0.790 W/kg



0 dB = 0.790 W/kg = -1.02 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 19.8°C
 Ambient Temperature: 20.1°C
 Test Date: 07/10/2020
 Plot No.: 42

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, LTE Band 26 (0); Frequency: 831.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 831.5$ MHz; $\sigma = 0.942$ S/m; $\epsilon_r = 42.435$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

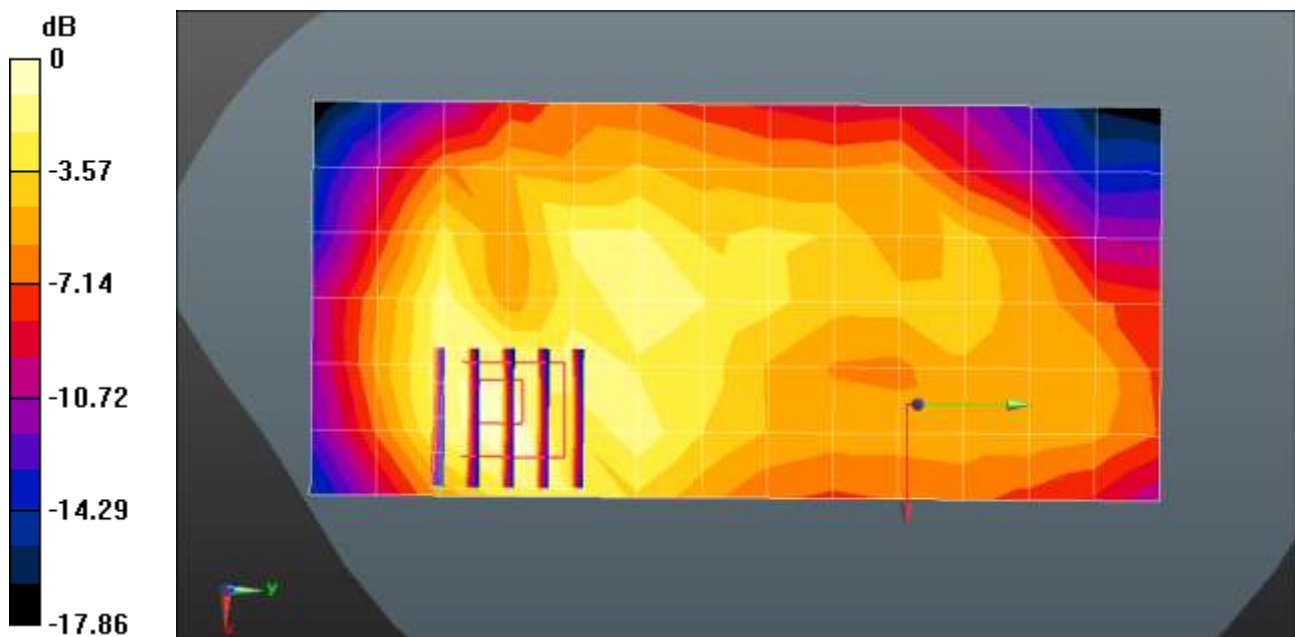
- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 831.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 26 Body worn Rear QPSK 15MHz 1RB 0offset 26865ch/Area Scan (7x14x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.271 W/kg

SM-G781V/LTE 26 Body worn Rear QPSK 15MHz 1RB 0offset 26865ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 12.03 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 0.382 W/kg
SAR(1 g) = 0.223 W/kg; SAR(10 g) = 0.135 W/kg
 Smallest distance from peaks to all points 3 dB below = 12.8 mm
 Ratio of SAR at M2 to SAR at M1 = 60.1%
 Maximum value of SAR (measured) = 0.307 W/kg



0 dB = 0.271 W/kg = -5.67 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.0°C
 Ambient Temperature: 21.2°C
 Test Date: 08/07/2020
 Plot No.: 43

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310$ MHz; $\sigma = 1.648$ S/m; $\epsilon_r = 40.979$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/LTE Band 30 Body Rear QPSK 10MHz 1RB 24offset 27710ch body worn/Area Scan

(9x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.462 W/kg

SM-G781V/LTE Band 30 Body Rear QPSK 10MHz 1RB 24offset 27710ch body worn/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.386 V/m; Power Drift = -0.17 dB

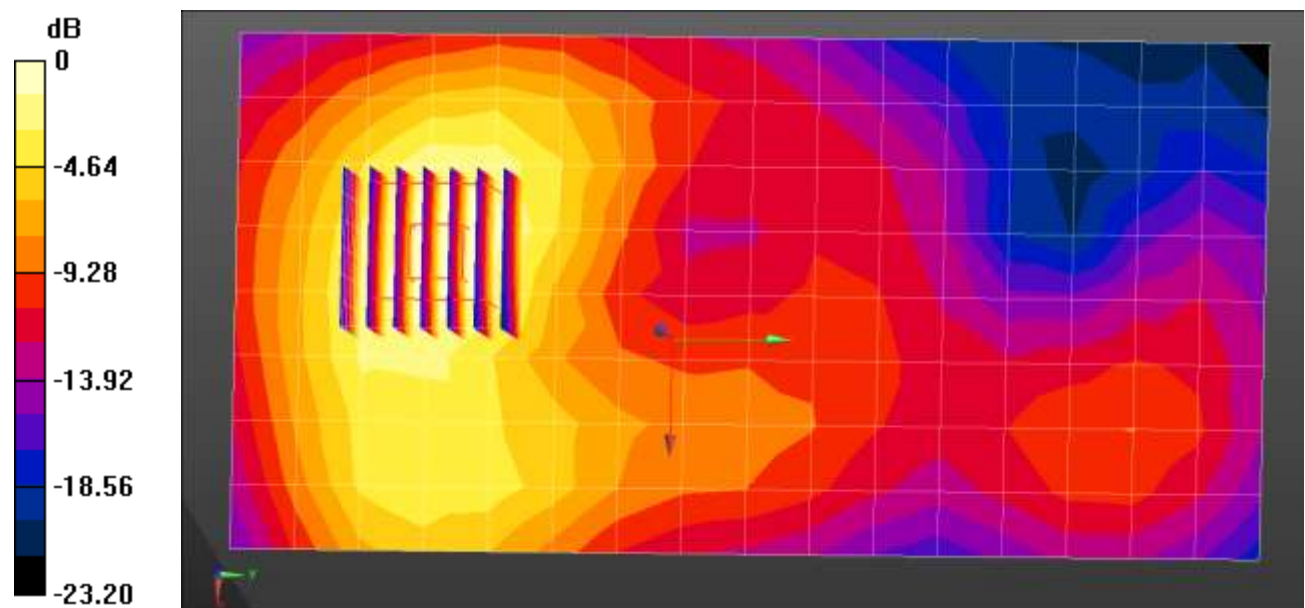
Peak SAR (extrapolated) = 0.613 W/kg

SAR(1 g) = 0.324 W/kg; SAR(10 g) = 0.176 W/kg

Smallest distance from peaks to all points 3 dB below = 13.9 mm

Ratio of SAR at M2 to SAR at M1 = 52.4%

Maximum value of SAR (measured) = 0.503 W/kg



0 dB = 0.462 W/kg = -3.35 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.8°C
 Ambient Temperature: 21.0°C
 Test Date: 08/08/2020
 Plot No.: 44

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band 40 (0); Frequency: 2310 MHz; Duty Cycle: 1:1.58125
 Medium parameters used: $f = 2310$ MHz; $\sigma = 1.639$ S/m; $\epsilon_r = 41.034$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

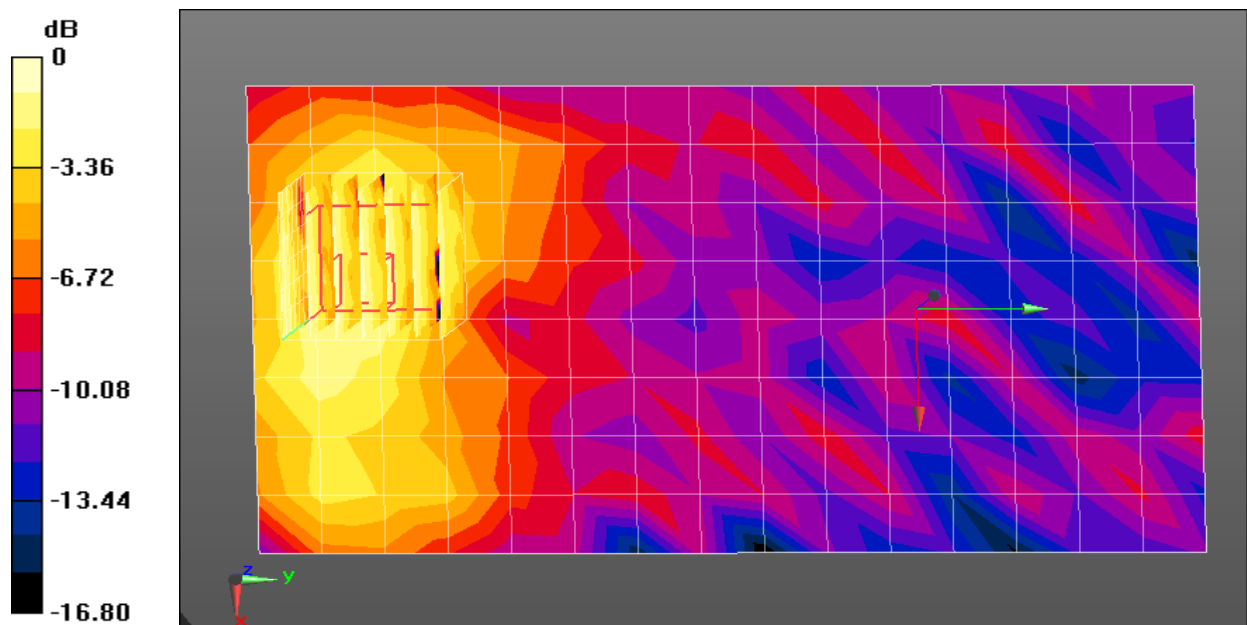
- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band 40 Body worn Rear QPSK 10MHz 1RB 24offset 38750ch/Area Scan (9x16x1):

Measurement grid: $dx=12$ mm, $dy=12$ mm
 Maximum value of SAR (measured) = 0.0175 W/kg

SM-G781V/LTE Band 40 Body worn Rear QPSK 10MHz 1RB 24offset 38750ch/Zoom Scan (7x7x7)/Cube

0: Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
 Reference Value = 0 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.0200 W/kg
SAR(1 g) = 0.010 W/kg; SAR(10 g) = 0.0056 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 47.3%
 Maximum value of SAR (measured) = 0.0158 W/kg



0 dB = 0.0175 W/kg = -17.57 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.5°C
 Ambient Temperature: 20.7°C
 Test Date: 08/10/2020
 Plot No.: 45

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE 40 (0); Frequency: 2355 MHz; Duty Cycle: 1:1.58052
 Medium parameters used (interpolated): $f = 2355$ MHz; $\sigma = 1.699$ S/m; $\epsilon_r = 40.581$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

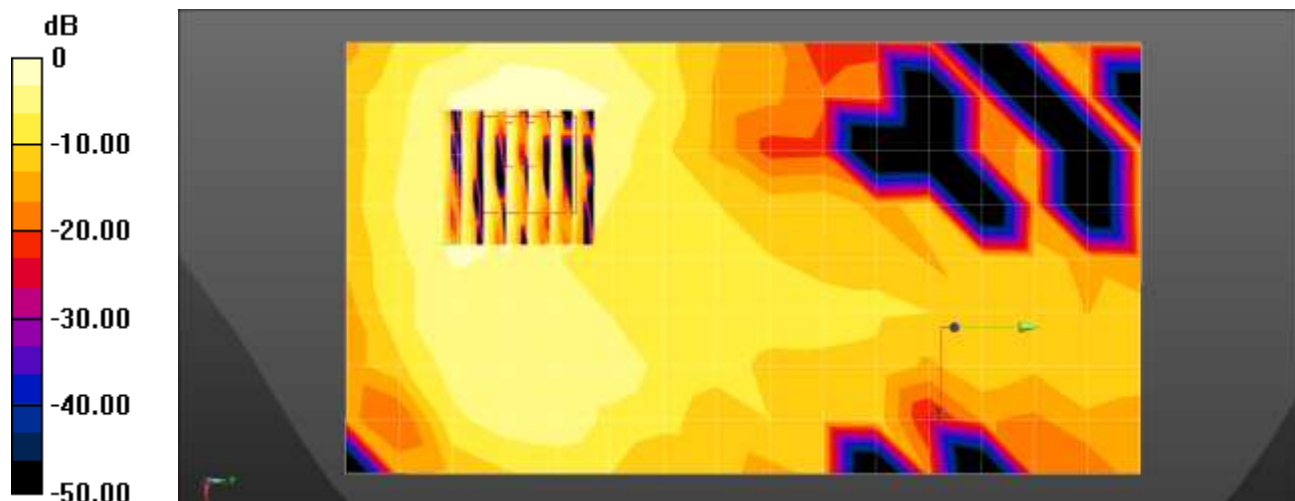
- Probe: EX3DV4 - SN3716; ConvF(7.34, 7.34, 7.34) @ 2355 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band40 BodyWorn Rear QPSK 10MHz 1RB 24offset 39200ch/Area Scan (9x16x1):

Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.0173 W/kg

SM-G781V/LTE Band40 BodyWorn Rear QPSK 10MHz 1RB 24offset 39200ch/Zoom Scan (7x7x7)/Cube

0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 0.8350 V/m; Power Drift = -0.19 dB
 Peak SAR (extrapolated) = 0.0350 W/kg
SAR(1 g) = 0.012 W/kg; SAR(10 g) = 0.00518 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 47.3%
 Maximum value of SAR (measured) = 0.0192 W/kg



0 dB = 0.0173 W/kg = -17.61 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4°C
 Ambient Temperature: 20.6°C
 Test Date: 07/29/2020
 Plot No.: 46

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band41 (0); Frequency: 2549.5 MHz; Duty Cycle: 1: 1:2.310
 Medium parameters used: $f = 2550$ MHz; $\sigma = 1.931$ S/m; $\epsilon_r = 39.085$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

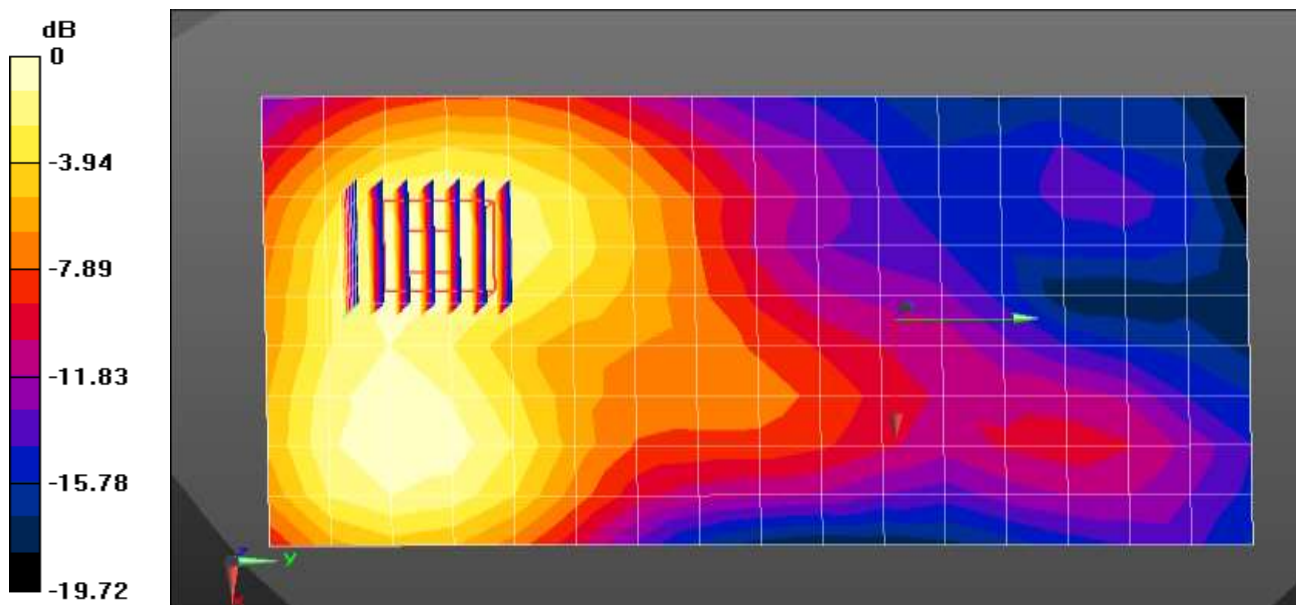
- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2549.5 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band 41 Body Rear QPSK 20MHz 1RB 0offset 40185ch/Area Scan (10x17x1):

Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.339 W/kg

SM-G781V/LTE Band 41 Body Rear QPSK 20MHz 1RB 0offset 40185ch/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 4.555 V/m; Power Drift = -0.19 dB
 Peak SAR (extrapolated) = 0.436 W/kg
SAR(1 g) = 0.224 W/kg; SAR(10 g) = 0.122 W/kg
 Smallest distance from peaks to all points 3 dB below = 17.9 mm
 Ratio of SAR at M2 to SAR at M1 = 49.6%
 Maximum value of SAR (measured) = 0.352 W/kg



0 dB = 0.339 W/kg = -4.70 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.3°C
 Ambient Temperature: 21.5°C
 Test Date: 08/17/2020
 Plot No.: 47

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band66 (0); Frequency: 1770 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1770$ MHz; $\sigma = 1.353$ S/m; $\epsilon_r = 40.163$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

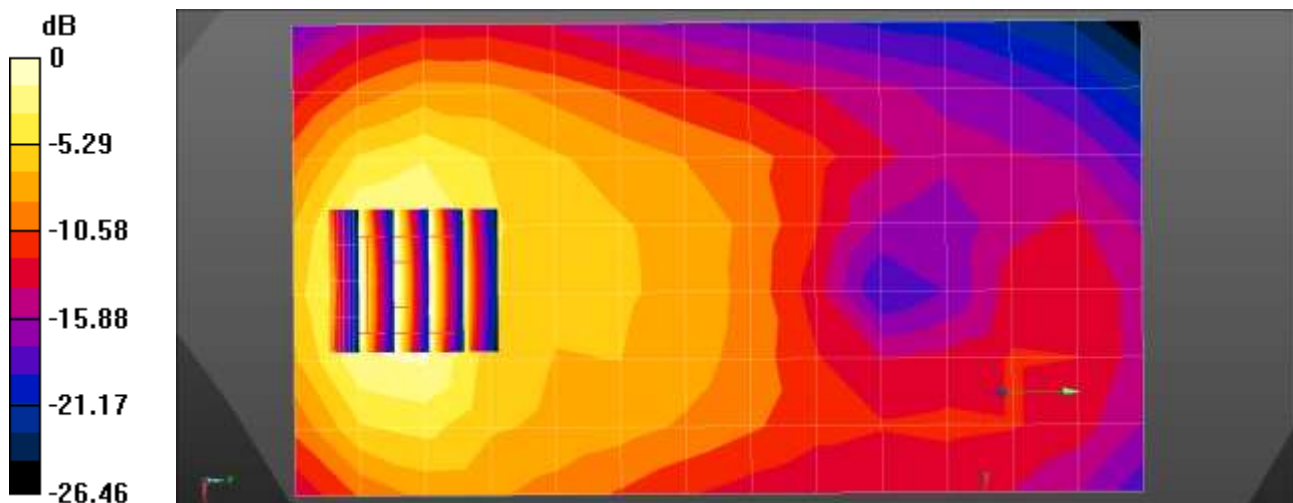
- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1770 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band66 BodyWorn Rear QPSK 20MHz 1RB 0offset 132572ch/Area Scan (8x14x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.09 W/kg

SM-G781V/LTE Band66 BodyWorn Rear QPSK 20MHz 1RB 0offset 132572ch/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 8.927 V/m; Power Drift = 0.14 dB
 Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.871 W/kg; SAR(10 g) = 0.506 W/kg
 Smallest distance from peaks to all points 3 dB below = 14.4 mm
 Ratio of SAR at M2 to SAR at M1 = 59.3%
 Maximum value of SAR (measured) = 1.26 W/kg



0 dB = 1.09 W/kg = 0.38 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.1°C
 Ambient Temperature: 21.4°C
 Test Date: 07/16/2020
 Plot No.: 48

DUT: SM-G781V; Type: Bar

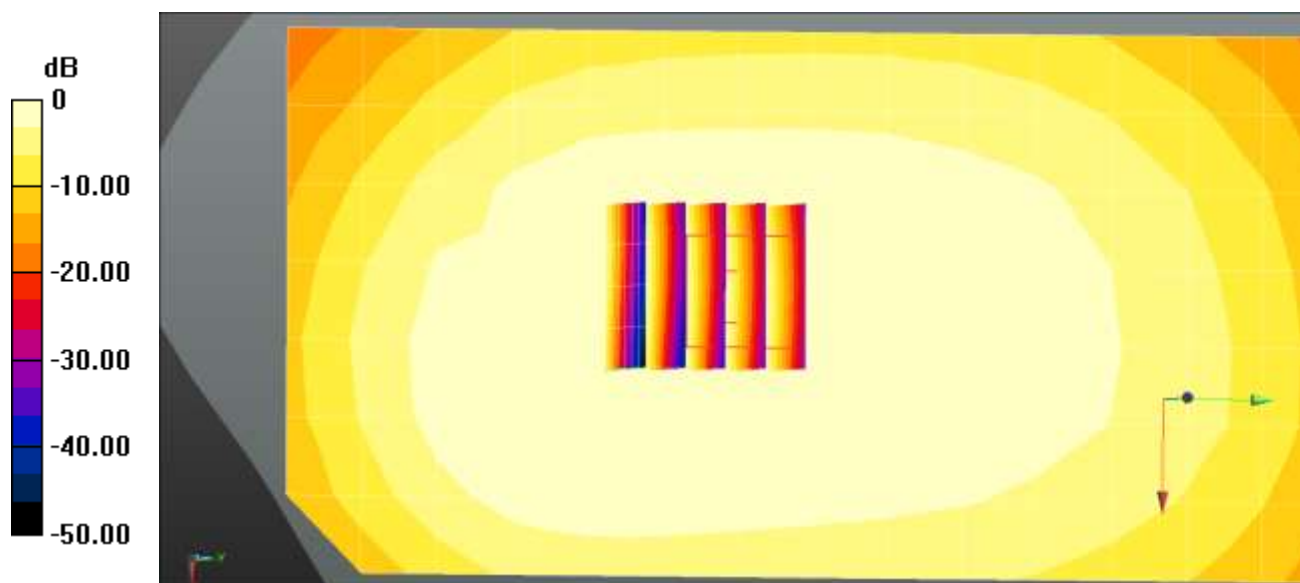
Communication System: UID 0, LTE Band 71 (0); Frequency: 680.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 680.5$ MHz; $\sigma = 0.894$ S/m; $\epsilon_r = 43.357$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 680.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 71 Body Rear QPSK 20MHz 1RB 99offset 133297ch/Area Scan (8x15x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.383 W/kg

SM-G781V/LTE 71 Body Rear QPSK 20MHz 1RB 99offset 133297ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 20.79 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.420 W/kg
SAR(1 g) = 0.331 W/kg; SAR(10 g) = 0.255 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 78.6%
 Maximum value of SAR (measured) = 0.390 W/kg



0 dB = 0.383 W/kg = -4.17 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.3°C
 Ambient Temperature: 20.6°C
 Test Date: 08/06/2020
 Plot No.: 49

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 42.633$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

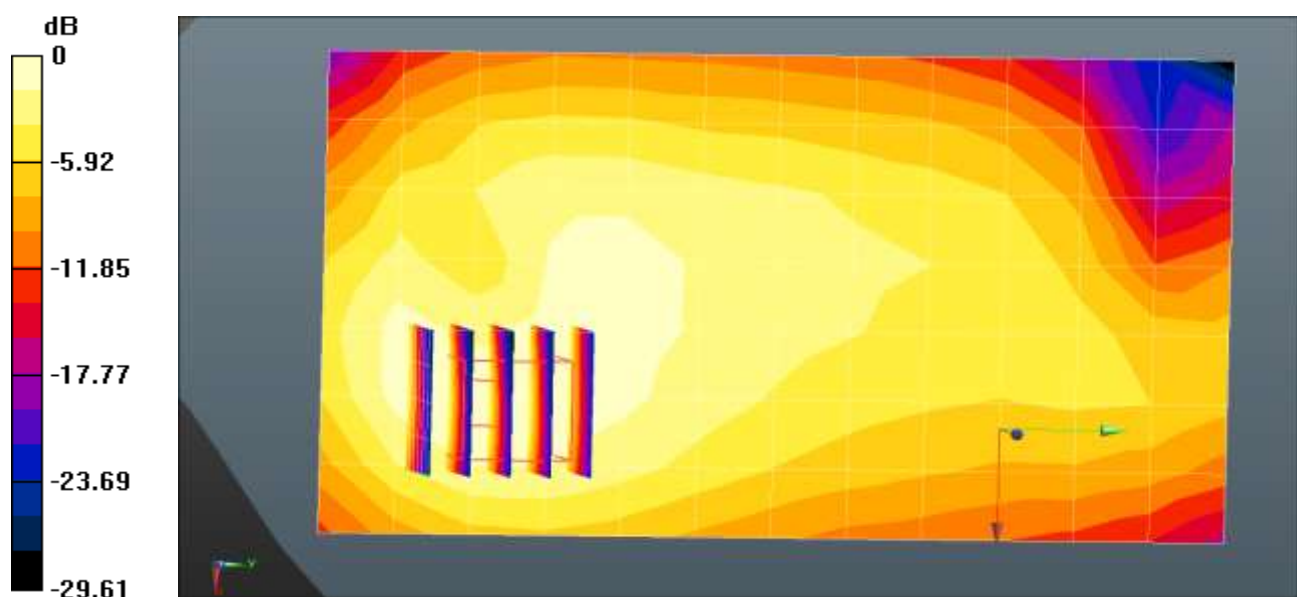
- Probe: EX3DV4 - SN7370; ConvF(9.88, 9.88, 9.88) @ 836.5 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: SAM with CRP v5.0_2020_06_09;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n5 BodyWorn Rear DFT-s QPSK 20MHz 50RB 28offset 167300ch/Area Scan (8x13x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.187 W/kg

SM-G781V/NR n5 BodyWorn Rear DFT-s QPSK 20MHz 50RB 28offset 167300ch/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 10.31 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 0.222 W/kg
SAR(1 g) = 0.138 W/kg; SAR(10 g) = 0.088 W/kg
 Smallest distance from peaks to all points 3 dB below = 17 mm
 Ratio of SAR at M2 to SAR at M1 = 61.8%
 Maximum value of SAR (measured) = 0.190 W/kg



0 dB = 0.187 W/kg = -7.28 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.3°C
 Ambient Temperature: 20.5°C
 Test Date: 08/10/2020
 Plot No.: 50

DUT: SM-G781V; Type: Bar

Communication System: UID 0, n25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1905 \text{ MHz}$; $\sigma = 1.401 \text{ S/m}$; $\epsilon_r = 39.776$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

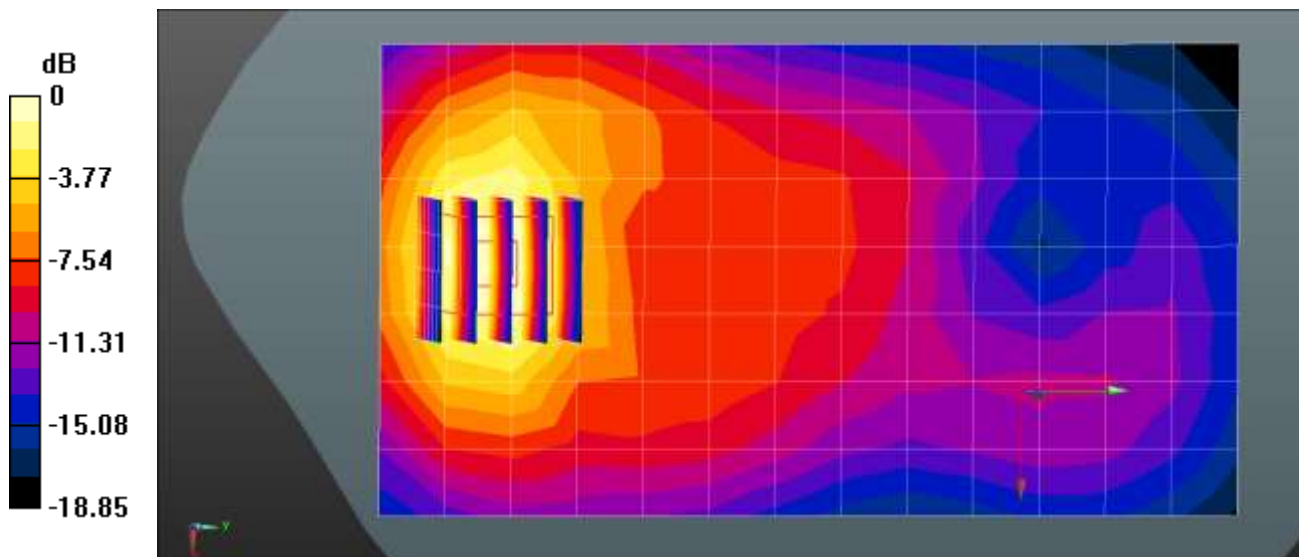
- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1905 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR Band 25 Body Rear DFT-s 20MHz 1RB 53offset 381000ch/Area Scan (8x14x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.811 W/kg

SM-G781V/NR Band 25 Body Rear DFT-s 20MHz 1RB 53offset 381000ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 9.514 V/m; Power Drift = -0.09 dB
 Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.814 W/kg; SAR(10 g) = 0.465 W/kg
 Smallest distance from peaks to all points 3 dB below = 14.4 mm
 Ratio of SAR at M2 to SAR at M1 = 60.4%
 Maximum value of SAR (measured) = 0.893 W/kg



0 dB = 0.811 W/kg = -0.91 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.7°C
 Ambient Temperature: 20.9°C
 Test Date: 08/06/2020
 Plot No.: 51

DUT: SM-G781V; Type: Bar

Communication System: UID 0, NR Band n41 (0); Frequency: 2592.99 MHz; Duty Cycle: 1:4.00037
 Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.946$ S/m; $\epsilon_r = 37.895$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

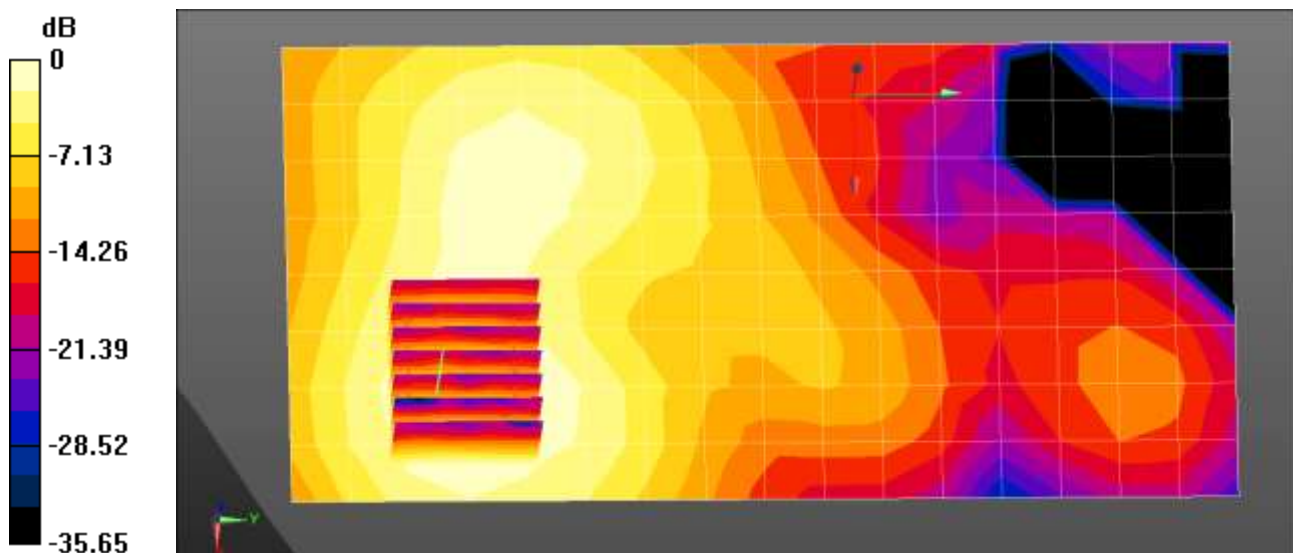
- Probe: EX3DV4 - SN3968; ConvF(7.41, 7.41, 7.41) @ 2592.99 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n41 BodyWorn Rear DFT-s QPSK 100MHz 1RB 137offset 518598ch/Area Scan (9x17x1):

Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.145 W/kg

SM-G781V/NR n41 BodyWorn Rear DFT-s QPSK 100MHz 1RB 137offset 518598ch/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 2.871 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 0.184 W/kg
SAR(1 g) = 0.087 W/kg; SAR(10 g) = 0.044 W/kg
 Smallest distance from peaks to all points 3 dB below = 16.3 mm
 Ratio of SAR at M2 to SAR at M1 = 44.6%
 Maximum value of SAR (measured) = 0.143 W/kg



0 dB = 0.143 W/kg = -8.45 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 19.7°C
 Ambient Temperature: 19.9°C
 Test Date: 08/07/2020
 Plot No.: 52

DUT: SM-G781V; Type: Bar

Communication System: UID 0, NR Band n66 (0); Frequency: 1770 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1770$ MHz; $\sigma = 1.416$ S/m; $\epsilon_r = 38.664$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

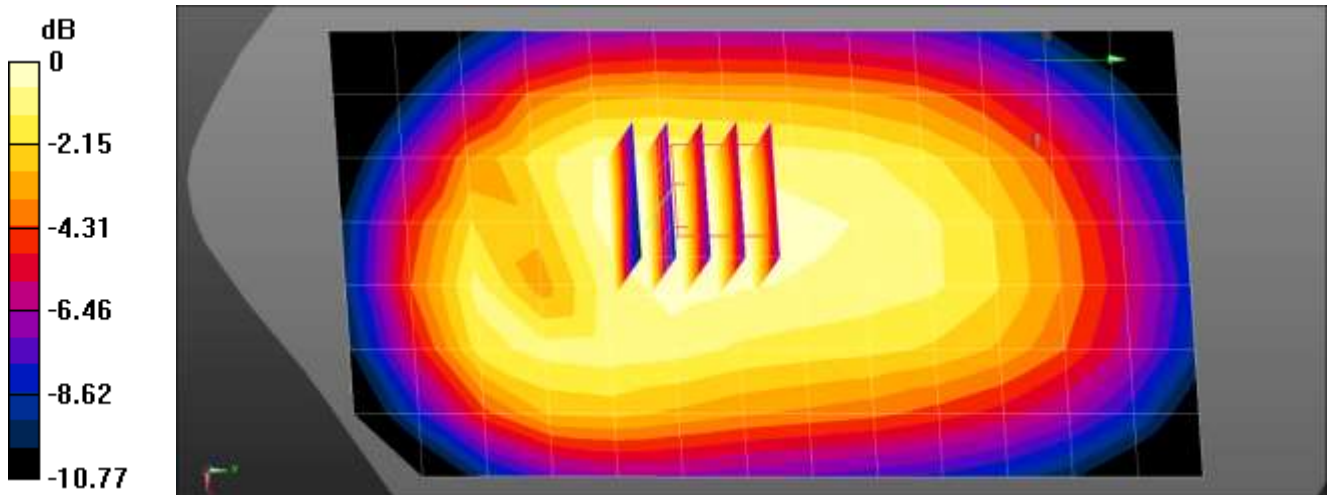
- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1770 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n66 Body Rear DFT-s QPSK 20MHz 50RB 28offset 354000ch/Area Scan (8x14x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.483 W/kg

SM-G781V/NR n66 Body Rear DFT-s QPSK 20MHz 50RB 28offset 354000ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 6.818 V/m; Power Drift = 0.11dB
 Peak SAR (extrapolated) = 0.677 W/kg
SAR(1 g) = 0.398 W/kg; SAR(10 g) = 0.230 W/kg
 Smallest distance from peaks to all points 3 dB below = 14.3 mm
 Ratio of SAR at M2 to SAR at M1 = 59.3%
 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: 22.1°C
 Ambient Temperature: 22.4°C
 Test Date: 08/07/2020
 Plot No.: 53

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, NR (0); Frequency: 680.5 MHz; Duty Cycle: 1:1

Medium parameters used (interpolated): $f = 680.5$ MHz; $\sigma = 0.836$ S/m; $\epsilon_r = 42.493$; $\rho = 1000$ kg/m³

Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7370; ConvF(10.27, 10.27, 10.27) @ 680.5 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: SAM with CRP v5.0_2020_06_09;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n71 BodyWorn Rear DFT-s QPSK 20MHz 1RB 53offset 136100ch/Area Scan (8x13x1):

Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.301 W/kg

SM-G781V/NR n71 BodyWorn Rear DFT-s QPSK 20MHz 1RB 53offset 136100ch/Zoom Scan

(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 18.89 V/m; Power Drift = -0.04 dB

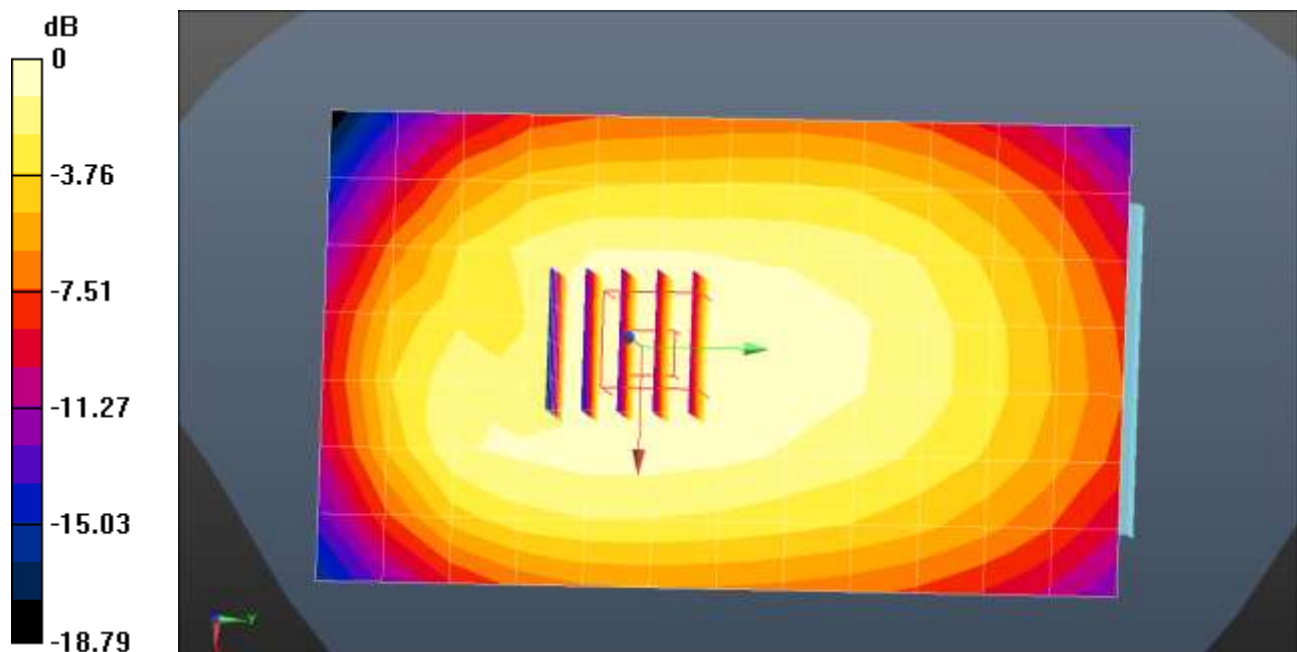
Peak SAR (extrapolated) = 0.337 W/kg

SAR(1 g) = 0.249 W/kg; SAR(10 g) = 0.190 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 73.6%

Maximum value of SAR (measured) = 0.305 W/kg



0 dB = 0.301 W/kg = -5.22 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.2°C
 Ambient Temperature: 21.4°C
 Test Date: 08/12/2020
 Plot No.: 54

DUT: SM-G781V; Type: Bar

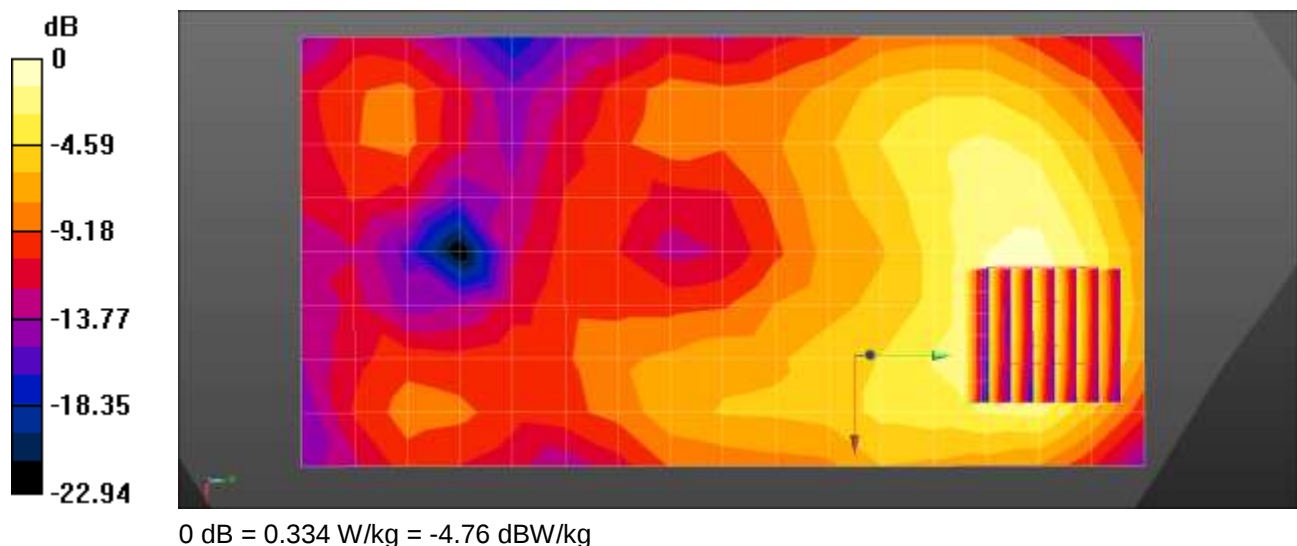
Communication System: UID 0, 2450MHz; Frequency: 2437 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.788$ S/m; $\epsilon_r = 38.62$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.49, 7.49, 7.49) @ 2437 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11b Body Rear 1Mbps 6ch/Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.334 W/kg

SM-G781V/802.11b Body Rear 1Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 3.154 V/m; Power Drift = 0.17 dB
 Peak SAR (extrapolated) = 0.430 W/kg
SAR(1 g) = 0.217 W/kg; SAR(10 g) = 0.114 W/kg
 Smallest distance from peaks to all points 3 dB below = 14.6 mm
 Ratio of SAR at M2 to SAR at M1 = 47.9%
 Maximum value of SAR (measured) = 0.344 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.9°C
 Ambient Temperature: 21.1°C
 Test Date: 07/24/2020
 Plot No.: 55

DUT: SM-G781V; Type: Bar

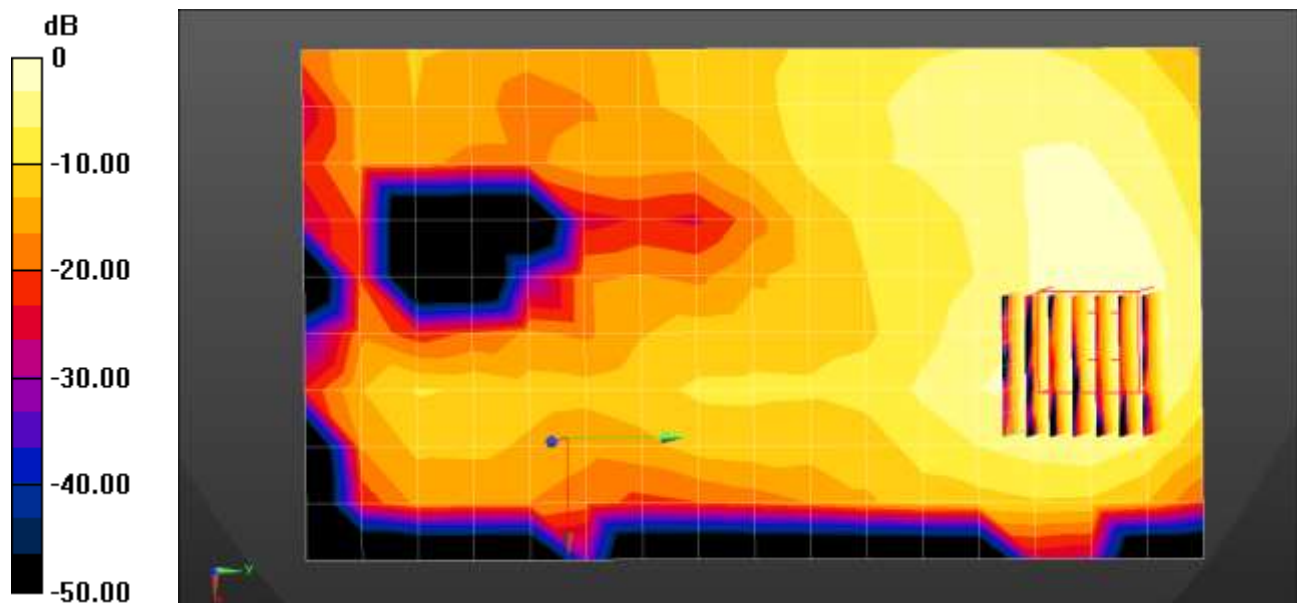
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.782$ S/m; $\epsilon_r = 38.462$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2437 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11b BodyWorn Rear 1Mbps 6ch/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.0787 W/kg

SM-G781V/802.11b BodyWorn Rear 1Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 0.7230 V/m; Power Drift = 0.15 dB
 Peak SAR (extrapolated) = 0.106 W/kg
SAR(1 g) = 0.050 W/kg; SAR(10 g) = 0.025 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 43.2%
 Maximum value of SAR (measured) = 0.0826 W/kg



0 dB = 0.0787 W/kg = -11.04 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.1°C
Ambient Temperature: 21.4°C
Test Date: 08/03/2020
Plot No.: 56

DUT: SM-G781V; Type: Bar

Communication System: UID 0, WIFI 5GHz (0); Frequency: 5785 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 5.304$ S/m; $\epsilon_r = 35.4$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5785 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11a Body Rear 6Mbps 157ch Body Worn/Area Scan (11x19x1): Measurement grid:

dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.322 W/kg

SM-G781V/802.11a Body Rear 6Mbps 157ch Body Worn/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.120 V/m; Power Drift = -0.15 dB

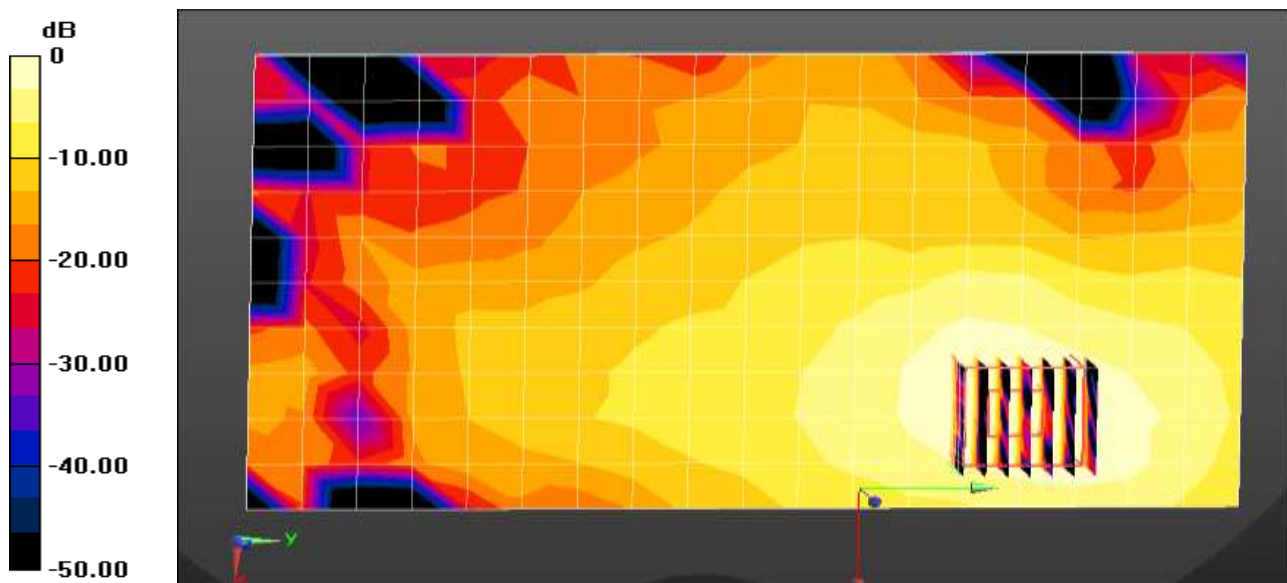
Peak SAR (extrapolated) = 0.631 W/kg

SAR(1 g) = 0.138 W/kg; SAR(10 g) = 0.053 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 56.6%

Maximum value of SAR (measured) = 0.331 W/kg



0 dB = 0.322 W/kg = -4.93 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 21.0°C
 Ambient Temperature: 21.2°C
 Test Date: 08/05/2020
 Plot No.: 57

DUT: SM-G781V; Type: Bar

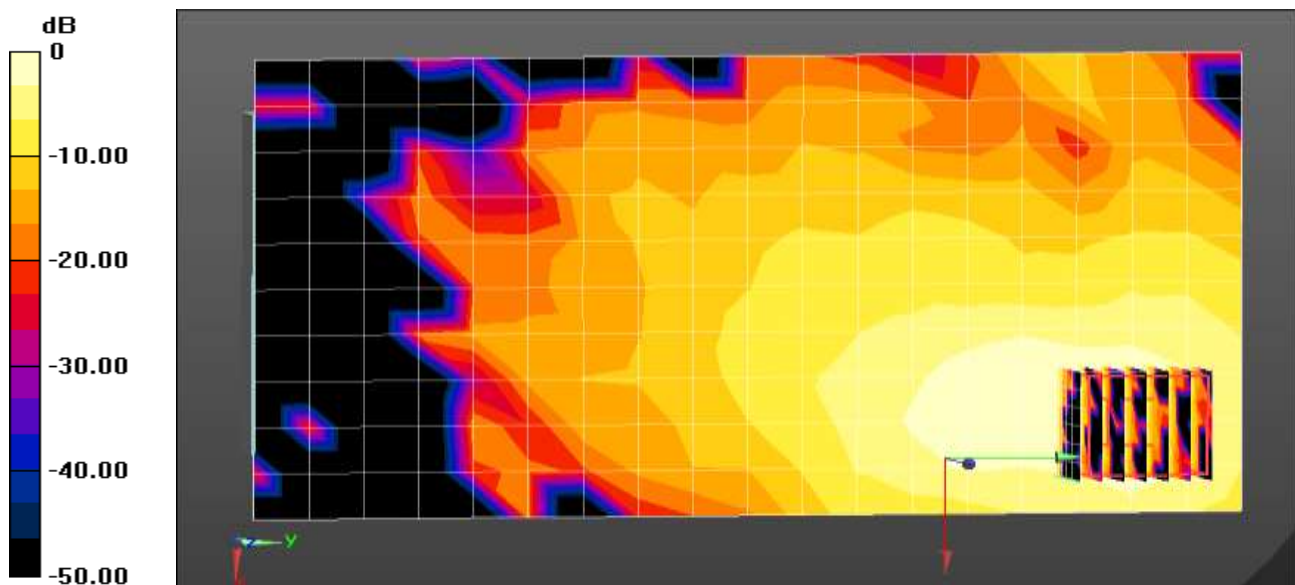
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5290 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5290$ MHz; $\sigma = 4.776$ S/m; $\epsilon_r = 35.989$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5290 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11ac80 BodyWorn Rear MCS0 58ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 0.0907 W/kg

SM-G781V/802.11ac80 BodyWorn Rear MCS0 58ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 0.9520 V/m; Power Drift = 0.18 dB
 Peak SAR (extrapolated) = 0.145 W/kg
SAR(1 g) = 0.037 W/kg; SAR(10 g) = 0.014 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 61.1%
 Maximum value of SAR (measured) = 0.0875 W/kg



0 dB = 0.0907 W/kg = -10.42 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 21.8°C
 Ambient Temperature: 22.1°C
 Test Date: 07/29/2020
 Plot No.: 58

DUT: SM-G781V; Type: Bar

Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1: 1.302
 Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.793$ S/m; $\epsilon_r = 40.573$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2441 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (2);

SM-G781V/Bluetooth BodyWorn Front DH5 39ch/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.101 W/kg

SM-G781V/Bluetooth BodyWorn Front DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

dx=5mm, dy=5mm, dz=5mm

Reference Value = 1.990 V/m; Power Drift = 0.09 dB

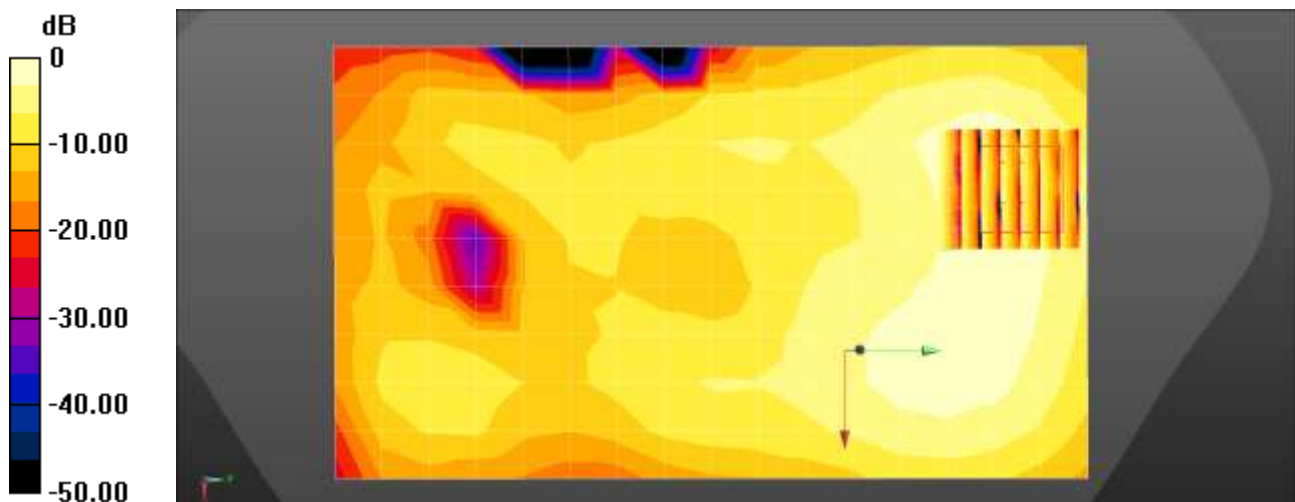
Peak SAR (extrapolated) = 0.131 W/kg

SAR(1 g) = 0.063 W/kg; SAR(10 g) = 0.032 W/kg

Smallest distance from peaks to all points 3 dB below = 13.2 mm

Ratio of SAR at M2 to SAR at M1 = 46.1%

Maximum value of SAR (measured) = 0.103 W/kg



0 dB = 0.101 W/kg = -9.94 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.7°C
Ambient Temperature: 20.9°C
Test Date: 07/16/2020
Plot No.: 59

DUT: SM-G781V; Type: Bar

Communication System: UID 0, CDMA800(BC10) (0); Frequency: 820 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 820$ MHz; $\sigma = 0.932$ S/m; $\epsilon_r = 42.831$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

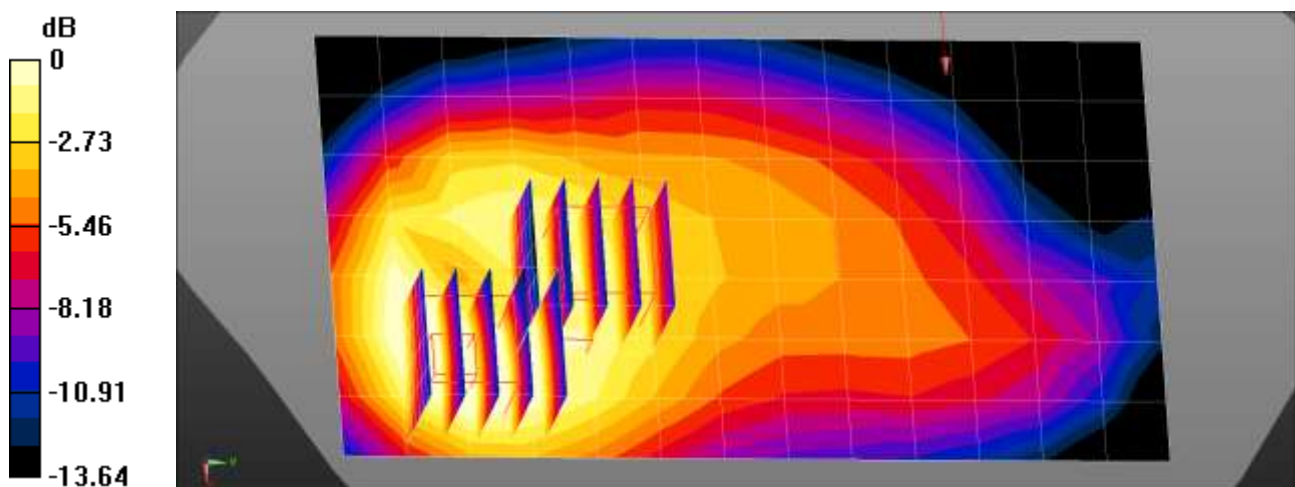
DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 820 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/CDMA BC10 Body Rear 560ch EvDo Rev.0/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.725 W/kg

SM-G781V/CDMA BC10 Body Rear 560ch EvDo Rev.0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.04 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.997 W/kg
SAR(1 g) = 0.572 W/kg; SAR(10 g) = 0.335 W/kg
Maximum value of SAR (measured) = 0.826 W/kg1

SM-G781V/CDMA BC10 Body Rear 560ch EvDo Rev.0/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.04 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.709 W/kg
SAR(1 g) = 0.405 W/kg; SAR(10 g) = 0.268 W/kg
Maximum value of SAR (measured) = 0.607 W/kg



Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.0°C
 Ambient Temperature: 20.3°C
 Test Date: 07/15/2020
 Plot No.: 60

DUT: SM-G781V; Type: Bar

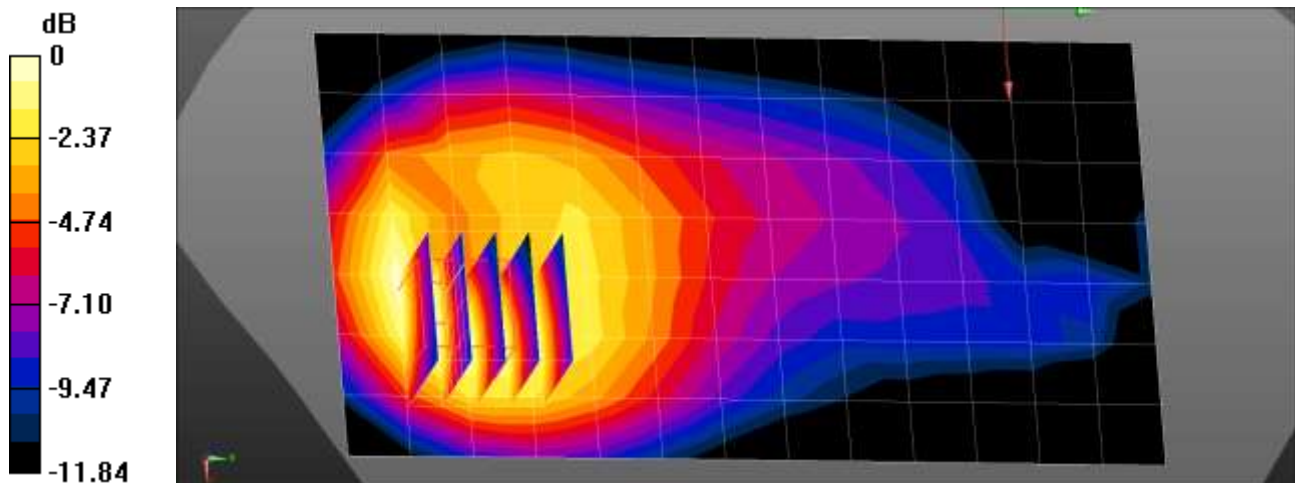
Communication System: UID 0, CDMA 835MHz FCC (0); Frequency: 836.52 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.945$ S/m; $\epsilon_r = 42.595$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.52 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/CDMA BC0 Body Rear 384ch EVDO Rev.0/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.654 W/kg

SM-G781V/CDMA BC0 Body Rear 384ch EVDO Rev.0/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 12.34 V/m; Power Drift = 0.10 dB
 Peak SAR (extrapolated) = 0.793 W/kg
SAR(1 g) = 0.510 W/kg; SAR(10 g) = 0.327 W/kg
 Maximum value of SAR (measured) = 0.681 W/kg



0 dB = 0.681 W/kg = -1.67 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.8°C
 Ambient Temperature: 21.0°C
 Test Date: 08/12/2020
 Plot No.: 61

DUT: SM-G781V; Type: Bar

Communication System: UID 0, CDMA BC1 (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.407$ S/m; $\epsilon_r = 39.748$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/CDMA BC1 Body Bottom EvDO Rev.0 600ch/Area Scan (7x9x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.932 W/kg

SM-G781V/CDMA BC1 Body Bottom EvDO Rev.0 600ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.73 V/m; Power Drift = 0.04 dB

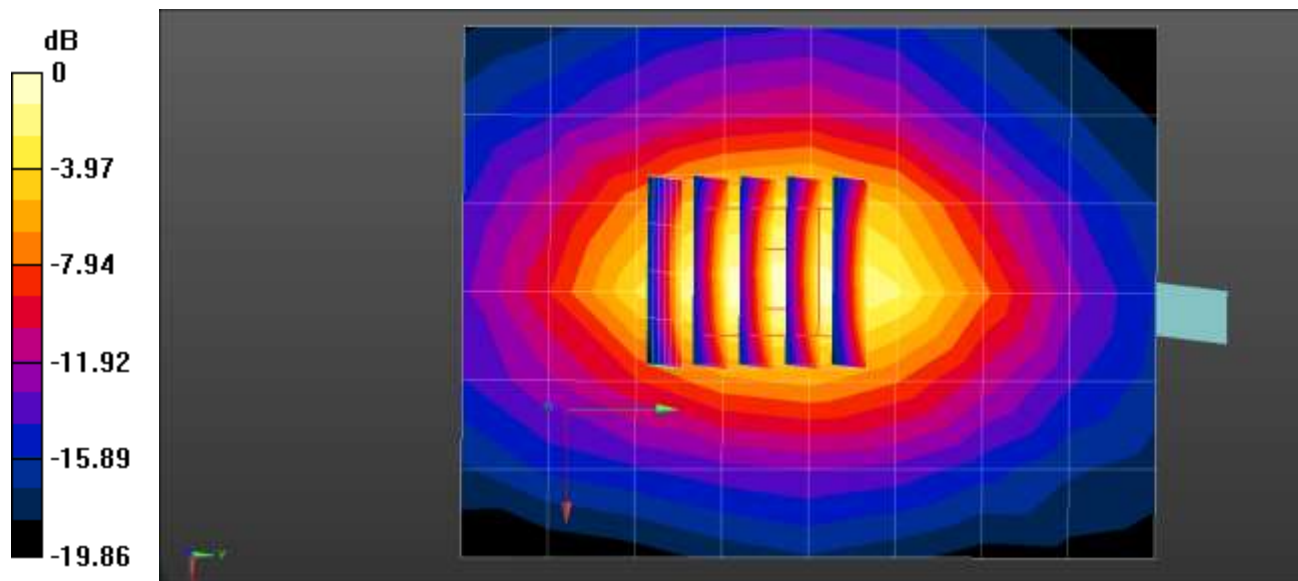
Peak SAR (extrapolated) = 1.20 W/kg

SAR(1 g) = 0.654 W/kg; SAR(10 g) = 0.340 W/kg

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 55.4%

Maximum value of SAR (measured) = 1.00 W/kg



0 dB = 1.00 W/kg = 0.00 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.1°C
 Ambient Temperature: 20.3°C
 Test Date: 07/14/2020
 Plot No.: 62

DUT: SM-G781V; 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; $\sigma = 0.929$ S/m; $\epsilon_r = 42.616$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 836.6 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/GSM850 Body Rear 2Tx 190ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.827 W/kg

SM-G781V/GSM850 Body Rear 2Tx 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.66 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.599 W/kg; SAR(10 g) = 0.358 W/kg

Smallest distance from peaks to all points 3 dB below = 11.5 mm

Ratio of SAR at M2 to SAR at M1 = 59.2%

Maximum value of SAR (measured) = 0.861 W/kg

SM-G781V/GSM850 Body Rear 2Tx 190ch/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.66 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.890 W/kg

SAR(1 g) = 0.495 W/kg; SAR(10 g) = 0.274 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 61.9%

Maximum value of SAR (measured) = 0.746 W/kg

SM-G781V/GSM850 Body Rear 2Tx 190ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.66 V/m; Power Drift = 0.02 dB

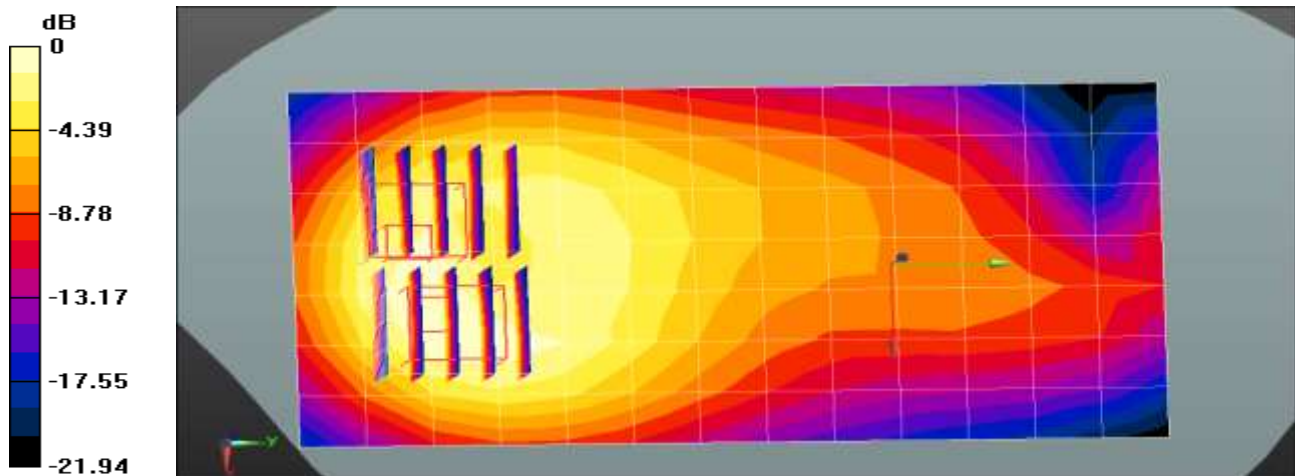
Peak SAR (extrapolated) = 1.01 W/kg

SAR(1 g) = 0.599 W/kg; SAR(10 g) = 0.358 W/kg

Smallest distance from peaks to all points 3 dB below = 11.5 mm

Ratio of SAR at M2 to SAR at M1 = 59.2%

Maximum value of SAR (measured) = 0.861 W/kg



0 dB = 0.827 W/kg = -0.82 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.1°C
 Ambient Temperature: 21.3°C
 Test Date: 08/16/2020
 Plot No.: 63

DUT: SM-G781V; Type: Bar

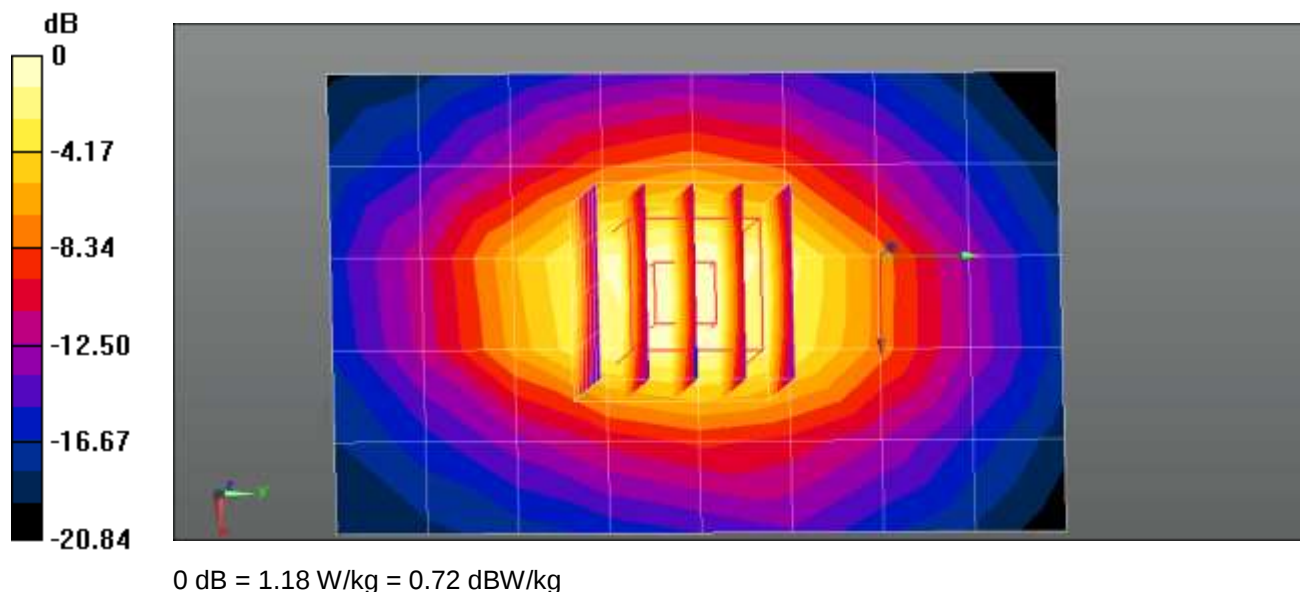
Communication System: UID 0, GSM 1900 3Tx (0); Frequency: 1880 MHz; Duty Cycle: 1:2.77013
 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.374$ S/m; $\epsilon_r = 40.315$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/GSM1900 Body Bottom 3Tx 661ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.16 W/kg

SM-G781V/GSM1900 Body Bottom 3Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 29.98 V/m; Power Drift = -0.05 dB
 Peak SAR (extrapolated) = 1.43 W/kg
SAR(1 g) = 0.783 W/kg; SAR(10 g) = 0.413 W/kg
 Smallest distance from peaks to all points 3 dB below = 11.2 mm
 Ratio of SAR at M2 to SAR at M1 = 56%
 Maximum value of SAR (measured) = 1.18 W/kg



Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.4°C
 Ambient Temperature: 20.6°C
 Test Date: 07/15/2020
 Plot No.: 64

DUT: SM-G781V; Type: Bar

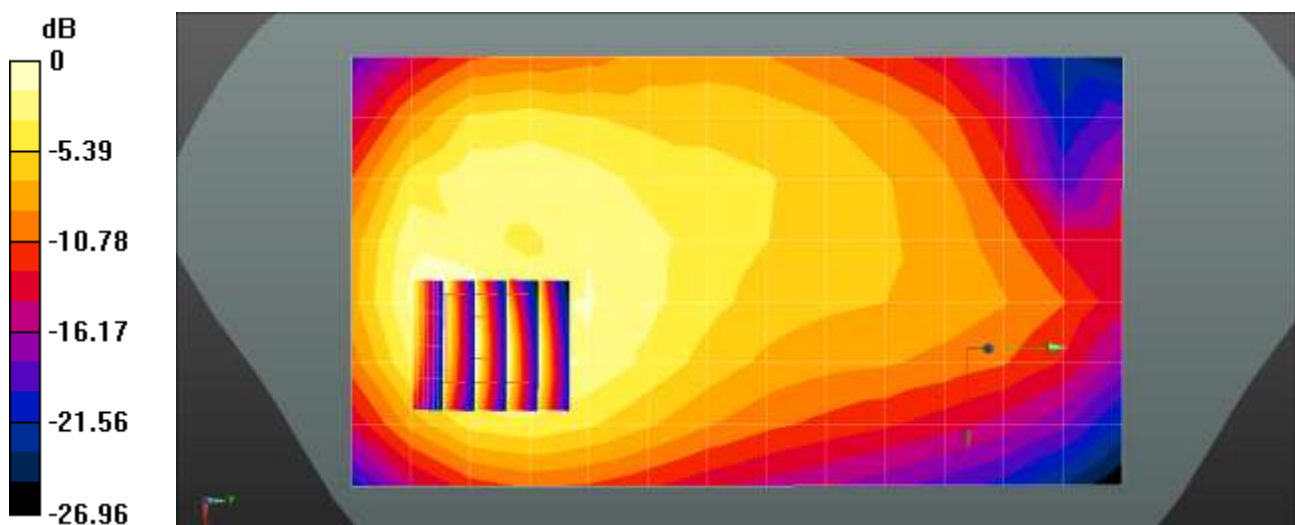
Communication System: UID 0, WCDMA850 (0); Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.6 \text{ MHz}$; $\sigma = 0.927 \text{ S/m}$; $\epsilon_r = 42.923$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 836.6 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band5 Body Rear 4183ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.544 W/kg

SM-G781V/WCDMA Band5 Body Rear 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 13.51 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 0.726 W/kg
SAR(1 g) = 0.420 W/kg; SAR(10 g) = 0.244 W/kg
 Smallest distance from peaks to all points 3 dB below = 12.5 mm
 Ratio of SAR at M2 to SAR at M1 = 58.2%
 Maximum value of SAR (measured) = 0.607 W/kg



0 dB = 0.544 W/kg = -2.64 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
Liquid Temperature: 19.9°C
Ambient Temperature: 20.2°C
Test Date: 08/24/2020
Plot No.: 65

DUT: SM-G781V; Type: Bar

Communication System: D 0, WCDMA IV (0); Frequency: 1732.4 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1732.4$ MHz; $\sigma = 1.318$ S/m; $\epsilon_r = 39.813$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.24, 5.24, 5.24) @ 1732.4 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band 4 Body Bottom 1412ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.590 W/kg

SM-G781V/WCDMA Band 4 Body Bottom 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 24.49 V/m; Power Drift = -0.02 dB

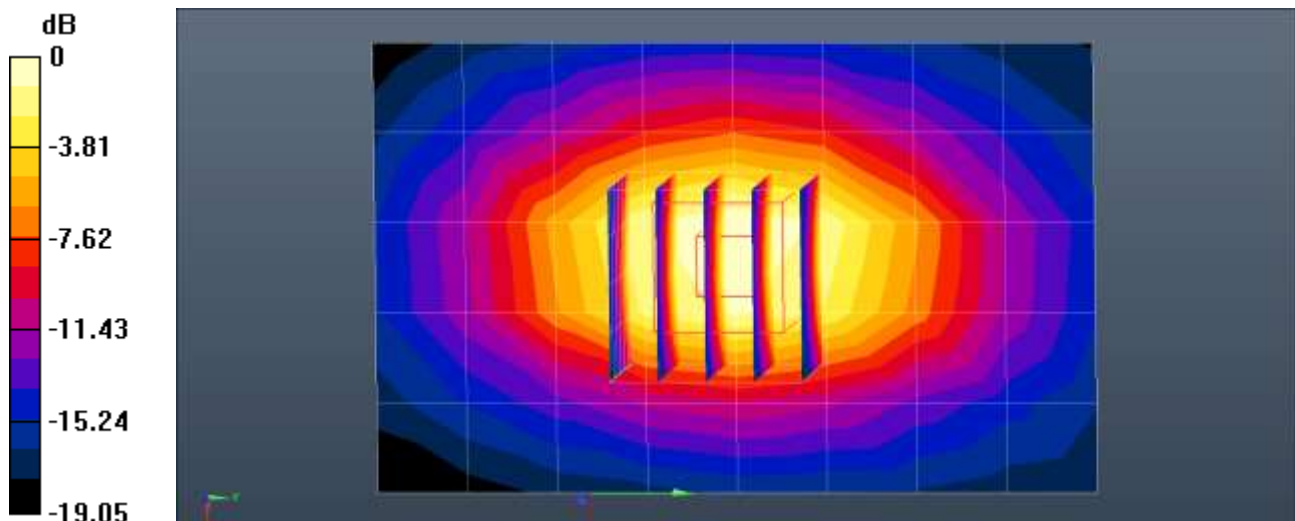
Peak SAR (extrapolated) = 0.994 W/kg

SAR(1 g) = 0.594 W/kg; SAR(10 g) = 0.325 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 60.6%

Maximum value of SAR (measured) = 0.730 W/kg



0 dB = 0.590 W/kg = -2.29 dBW/kg

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

Liquid Temperature: 20.9°C
Ambient Temperature: 21.1°C
Test Date: 07/27/2020
Plot No.: 66

DUT: SM-G781V; Type: Bar

Communication System: UID 0, WCDMA1900 (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1907.6$ MHz; $\sigma = 1.451$ S/m; $\epsilon_r = 39.155$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1907.6 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band2 Body Bottom 9400ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.855 W/kg

SM-G781V/WCDMA Band2 Body Bottom 9400ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 28.59 V/m; Power Drift = -0.03 dB

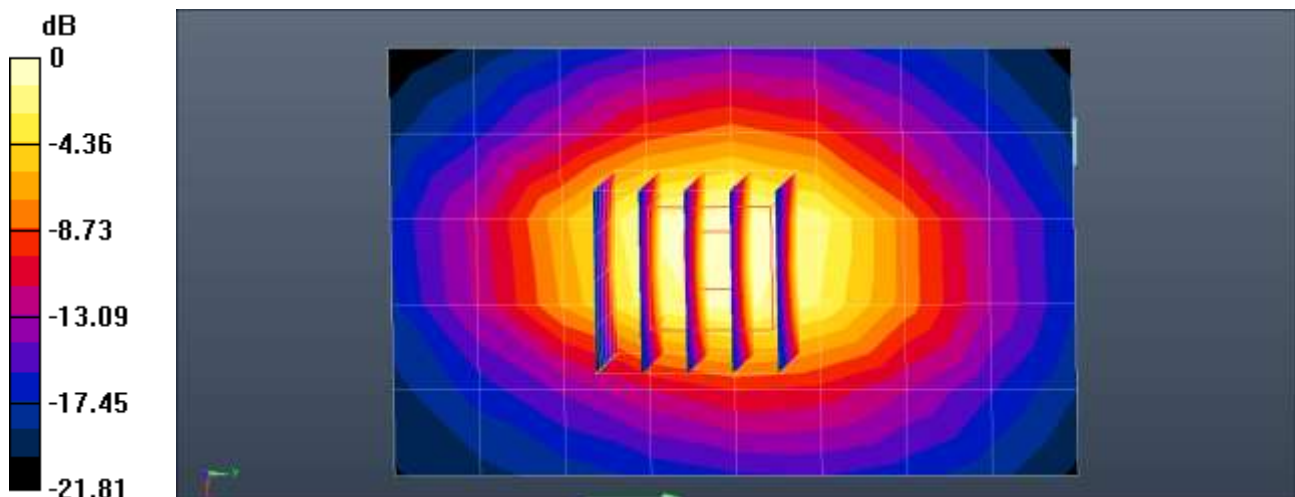
Peak SAR (extrapolated) = 1.65 W/kg

SAR(1 g) = 0.958 W/kg; SAR(10 g) = 0.503 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 58.4%

Maximum value of SAR (measured) = 1.07 W/kg



0 dB = 0.855 W/kg = -0.68 dBW/kg

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

Liquid Temperature: 20.6°C
Ambient Temperature: 20.8°C
Test Date: 07/28/2020
Plot No.: 67

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band7 (0); Frequency: 2510 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 2510 \text{ MHz}$; $\sigma = 1.88 \text{ S/m}$; $\epsilon_r = 40.099$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/LTE Band 7 Head Left Touch QPSK 20MHz 50RB 25offset 20850ch/Area Scan (7x10x1):

Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$

Maximum value of SAR (measured) = 0.590 W/kg

SM-G781V/LTE Band 7 Head Left Touch QPSK 20MHz 50RB 25offset 20850ch/Zoom Scan

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

Reference Value = 11.48 V/m; Power Drift = -0.01 dB

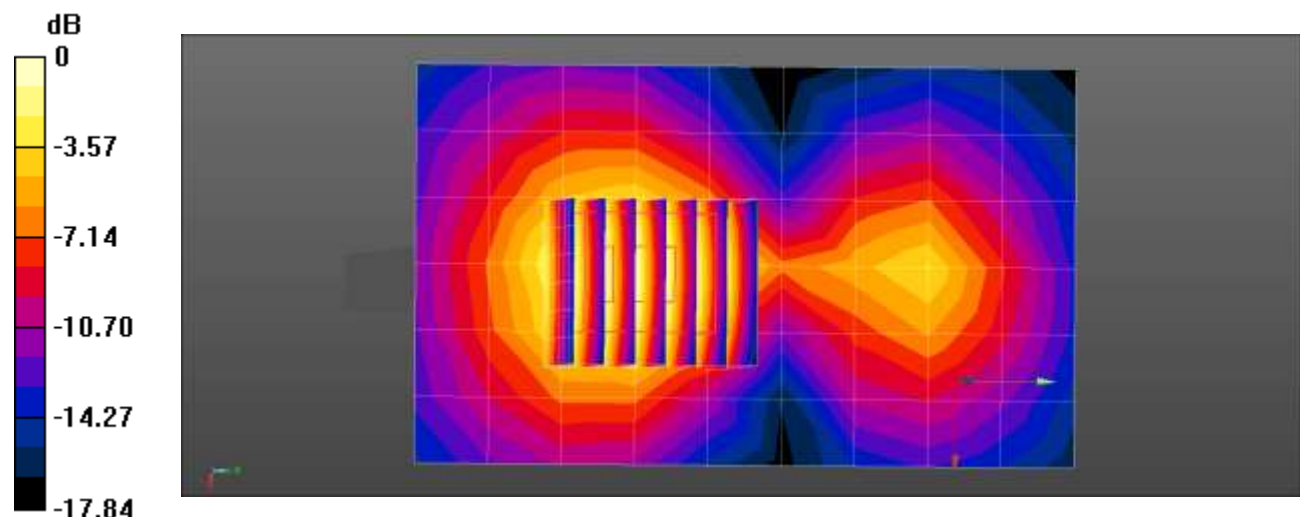
Peak SAR (extrapolated) = 0.760 W/kg

SAR(1 g) = 0.370 W/kg; SAR(10 g) = 0.176 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 48.8%

Maximum value of SAR (measured) = 0.603 W/kg



0 dB = 0.590 W/kg = -2.29 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.2°C

Ambient Temperature: 20.4°C
Test Date: 07/08/2020
Plot No.: 68

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 707.5$ MHz; $\sigma = 0.879$ S/m; $\epsilon_r = 42.769$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

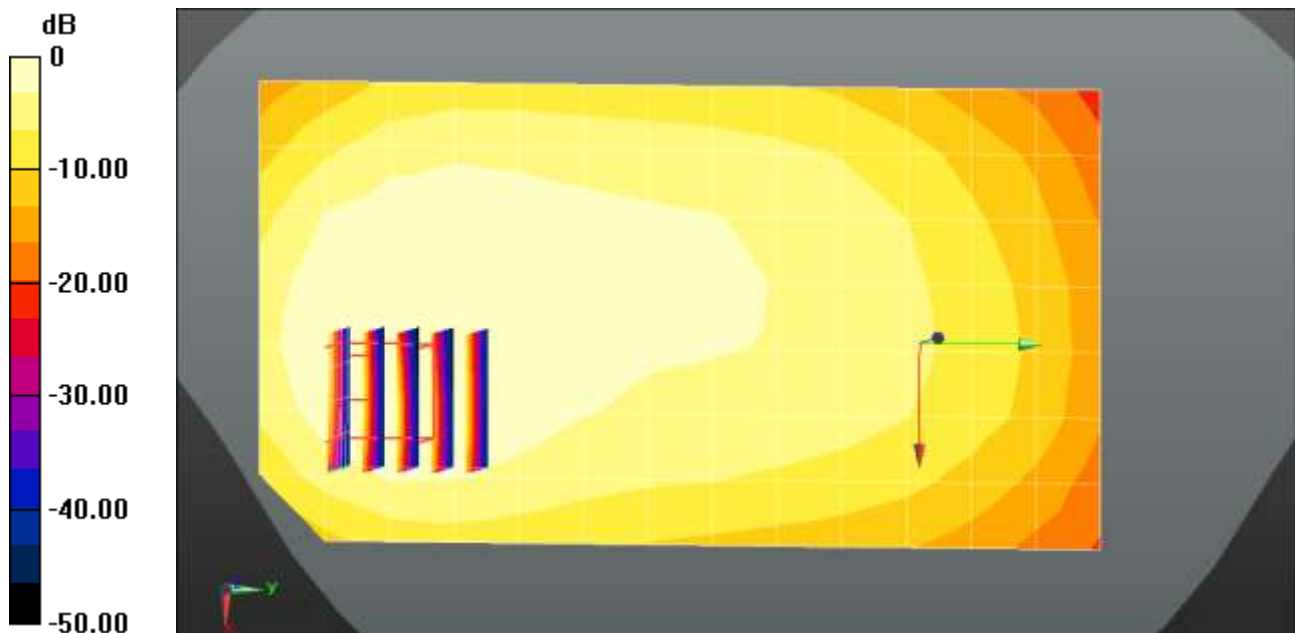
DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 707.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 12 Body Rear QPSK 10MHz 1RB 49offset 23095ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.503 W/kg

SM-G781V/LTE 12 Body Rear QPSK 10MHz 1RB 49offset 23095ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 17.50 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.661 W/kg
SAR(1 g) = 0.363 W/kg; SAR(10 g) = 0.211 W/kg
Smallest distance from peaks to all points 3 dB below = 11.3 mm
Ratio of SAR at M2 to SAR at M1 = 53.5%
Maximum value of SAR (measured) = 0.540 W/kg



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.4°C

Ambient Temperature: 20.7°C
 Test Date: 07/09/2020
 Plot No.: 69

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 782 \text{ MHz}$; $\sigma = 0.927 \text{ S/m}$; $\epsilon_r = 41.851$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 782 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 13 Body Rear QPSK 10MHz 1RB 0offset 23230ch/Area Scan (8x15x1): Measurement

grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.891 W/kg

SM-G781V/LTE 13 Body Rear QPSK 10MHz 1RB 0offset 23230ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 19.63 V/m; Power Drift = -0.01 dB

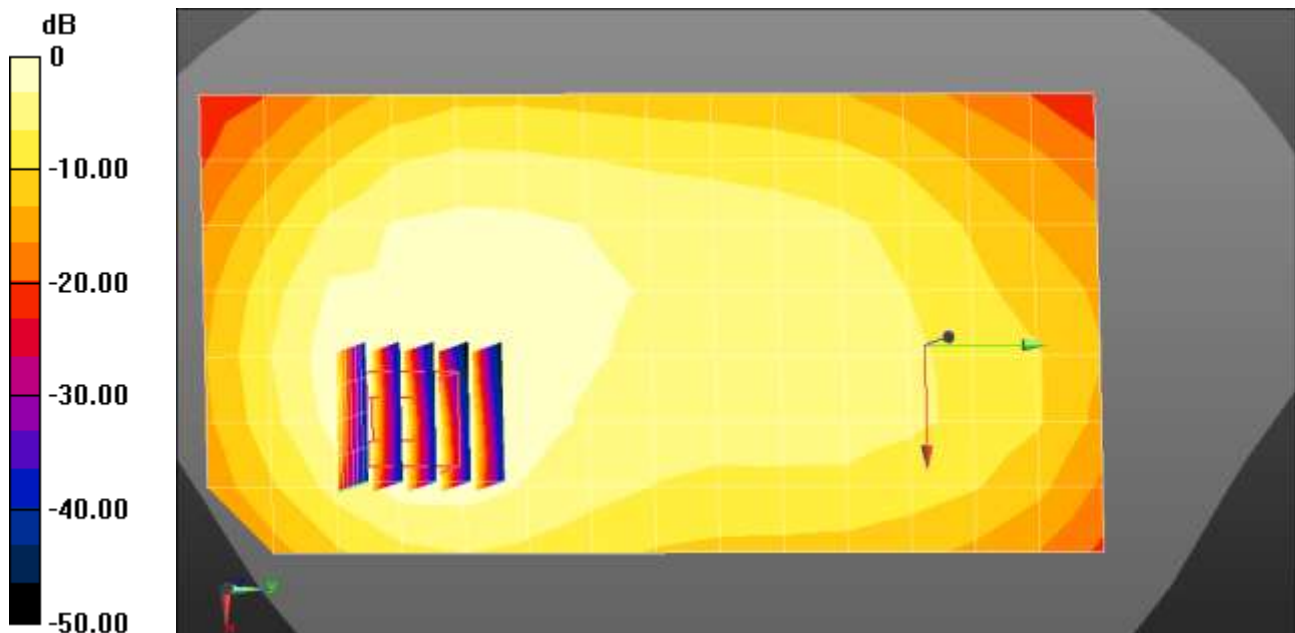
Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.619 W/kg; SAR(10 g) = 0.365 W/kg

Smallest distance from peaks to all points 3 dB below = 11.5 mm

Ratio of SAR at M2 to SAR at M1 = 56.2%

Maximum value of SAR (measured) = 0.906 W/kg



0 dB = 0.891 W/kg = -0.50 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.6°C

Ambient Temperature: 20.9°C
Test Date: 07/13/2020
Plot No.: 70

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, LTE Band 14 (0); Frequency: 793 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 793 \text{ MHz}$; $\sigma = 0.939 \text{ S/m}$; $\epsilon_r = 41.604$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 793 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 14 Body Rear QPSK 10MHz 1RB 0offset 23330ch/Area Scan (8x14x1): Measurement

grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.844 W/kg

SM-G781V/LTE 14 Body Rear QPSK 10MHz 1RB 0offset 23330ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.05 V/m; Power Drift = 0.02 dB

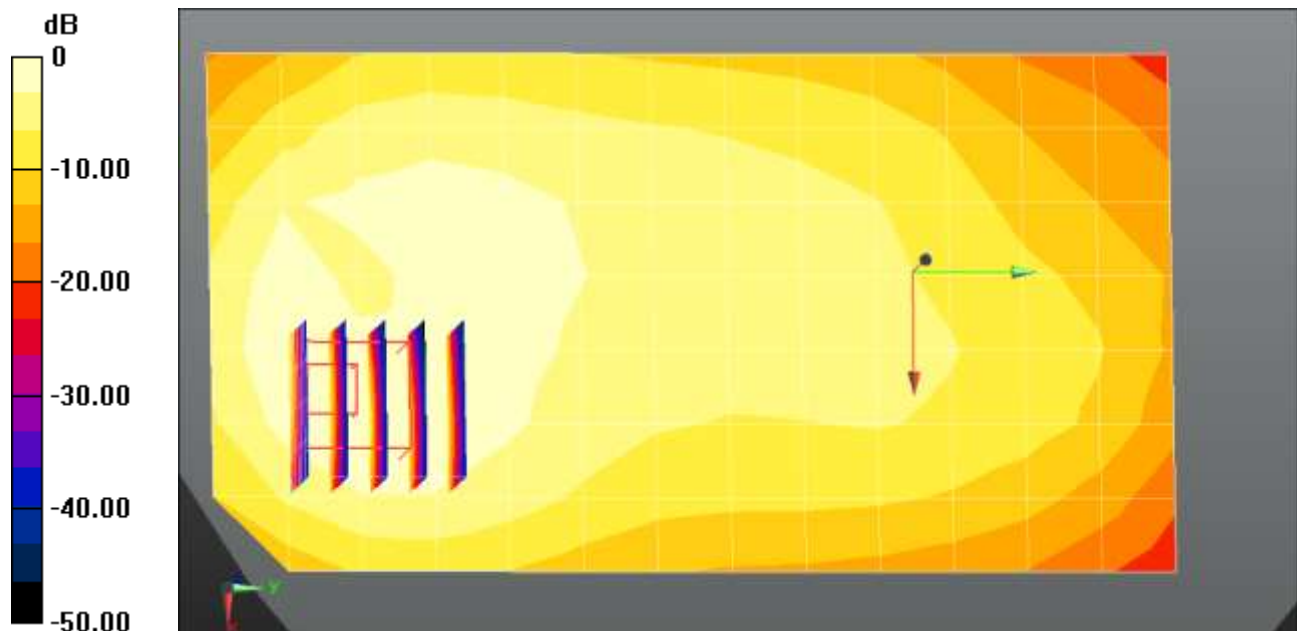
Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.604 W/kg; SAR(10 g) = 0.354 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 55.9%

Maximum value of SAR (measured) = 0.891 W/kg



0 dB = 0.844 W/kg = -0.74 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.2°C

Ambient Temperature: 20.5°C
 Test Date: 08/19/2020
 Plot No.: 71

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.407$ S/m; $\epsilon_r = 39.844$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

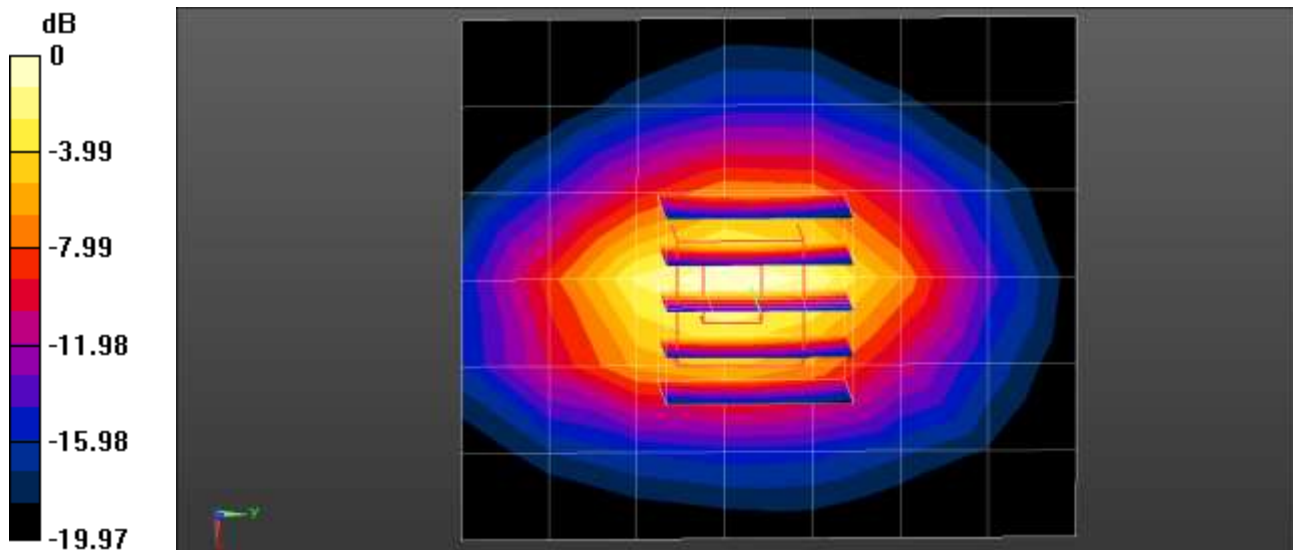
- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1905 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band25 Body Bottom QPSK 20MHz 50RB 49offset 26590ch/Area Scan (7x8x1):

Measurement grid: dx=15mm, dy=15mm
 =Maximum value of SAR (measured) = 1.11 W/kg

SM-G781V/LTE Band25 Body Bottom QPSK 20MHz 50RB 49offset 26590ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 28.42 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 1.38 W/kg
SAR(1 g) = 0.729 W/kg; SAR(10 g) = 0.373 W/kg
 Smallest distance from peaks to all points 3 dB below = 10.7 mm
 Ratio of SAR at M2 to SAR at M1 = 53.1%
 Maximum value of SAR (measured) = 1.12 W/kg



0 dB = 1.12 W/kg = 0.49 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 19.8°C
Ambient Temperature: 20.1°C
Test Date: 07/10/2020
Plot No.: 72

DUT: SM-G781V; Type: Bar

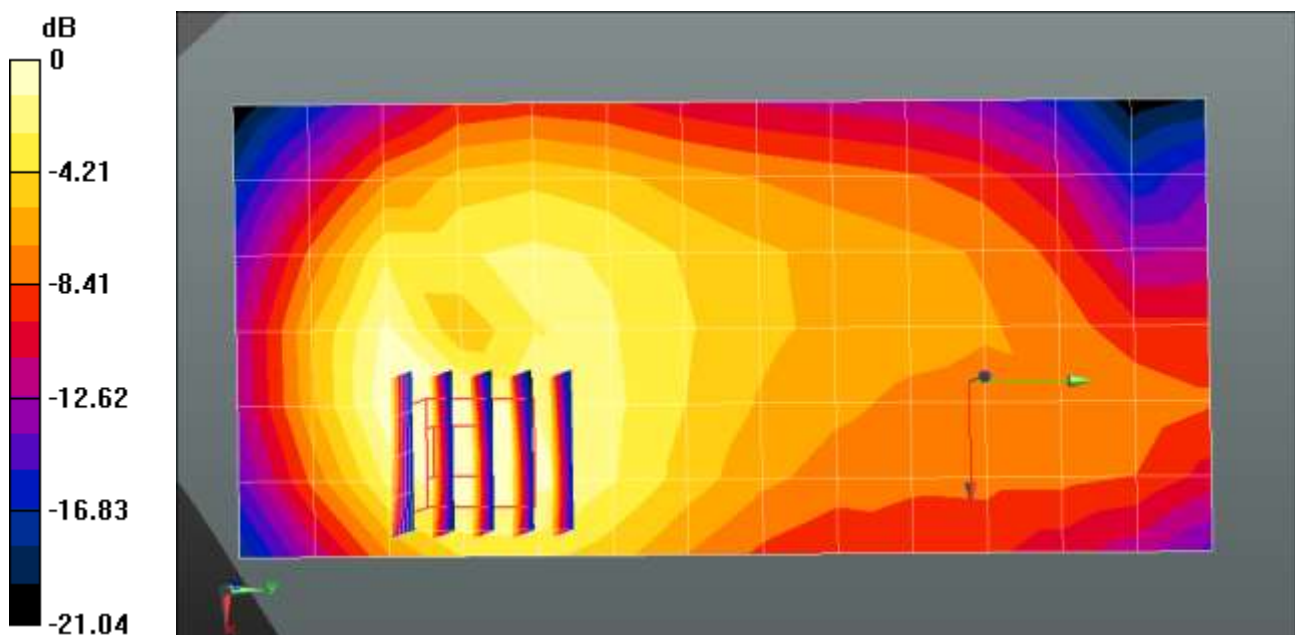
Communication System: UID 0, LTE Band 26 (0); Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 831.5$ MHz; $\sigma = 0.942$ S/m; $\epsilon_r = 42.435$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 831.5 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE 26 Body Rear QPSK 15MHz 1RB 0offset 26865ch/Area Scan (7x14x1): Measurement
grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.595 W/kg

SM-G781V/LTE 26 Body Rear QPSK 15MHz 1RB 0offset 26865ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.30 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.788 W/kg
SAR(1 g) = 0.458 W/kg; SAR(10 g) = 0.275 W/kg
Smallest distance from peaks to all points 3 dB below = 12.9 mm
Ratio of SAR at M2 to SAR at M1 = 55.8%
Maximum value of SAR (measured) = 0.651 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.0°C
 Ambient Temperature: 21.2°C
 Test Date: 08/07/2020
 Plot No.: 73

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band 30 (0); Frequency: 2310 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2310$ MHz; $\sigma = 1.648$ S/m; $\epsilon_r = 40.979$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

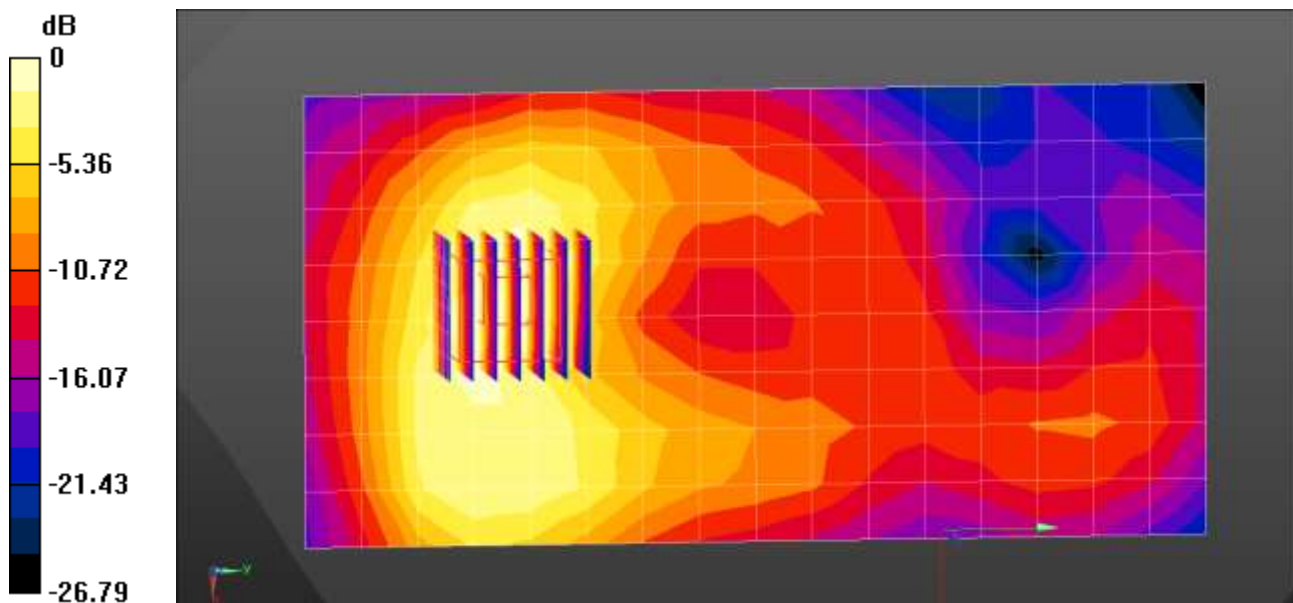
- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2310 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band 30 Body Rear QPSK 10MHz 25RB 0offset 27710ch/Area Scan (9x17x1):

Measurement grid: $dx=12$ mm, $dy=12$ mm
 Maximum value of SAR (measured) = 0.416 W/kg

SM-G781V/LTE Band 30 Body Rear QPSK 10MHz 25RB 0offset 27710ch/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: $dx=5$ mm, $dy=5$ mm, $dz=5$ mm
 Reference Value = 4.722 V/m; Power Drift = -0.18 dB
 Peak SAR (extrapolated) = 0.594 W/kg
SAR(1 g) = 0.304 W/kg; SAR(10 g) = 0.159 W/kg
 Smallest distance from peaks to all points 3 dB below = 11.7 mm
 Ratio of SAR at M2 to SAR at M1 = 50.5%
 Maximum value of SAR (measured) = 0.481 W/kg



0 dB = 0.416 W/kg = -3.80 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.8°C
 Ambient Temperature: 21.0°C
 Test Date: 08/08/2020
 Plot No.: 74

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band 40 (0); Frequency: 2310 MHz; Duty Cycle: 1:1.58125
 Medium parameters used: $f = 2310$ MHz; $\sigma = 1.639$ S/m; $\epsilon_r = 41.034$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/LTE Band 40 Body Front QPSK 10MHz 1RB 24offset 38750ch/Area Scan (9x16x1):

Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.0284 W/kg

SM-G781V/LTE Band 40 Body Front QPSK 10MHz 1RB 24offset 38750ch/Zoom Scan (7x7x7)/Cube 0:

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

Reference Value = 0.9540 V/m; Power Drift = 0.15 dB

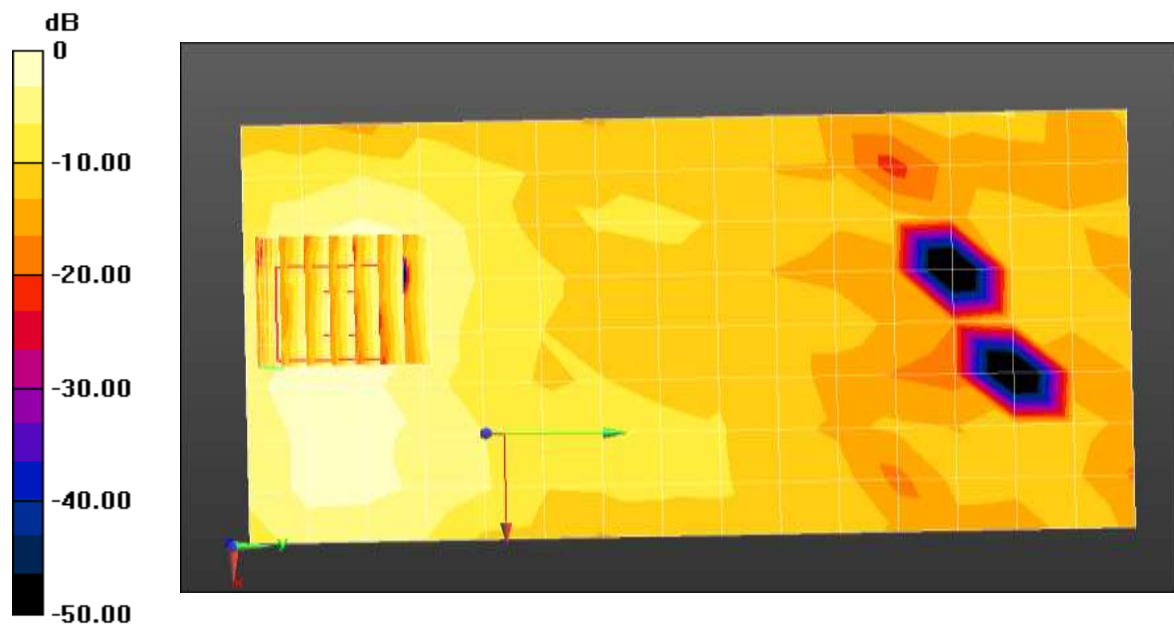
Peak SAR (extrapolated) = 0.0360 W/kg

SAR(1 g) = 0.019 W/kg; SAR(10 g) = 0.00988 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 50.4%

Maximum value of SAR (measured) = 0.0293 W/kg



0 dB = 0.0284 W/kg = -15.46 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.5°C
 Ambient Temperature: 20.7°C
 Test Date: 08/10/2020
 Plot No.: 75

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE 40 (0); Frequency: 2355 MHz; Duty Cycle: 1:1.58052
 Medium parameters used (interpolated): $f = 2355$ MHz; $\sigma = 1.699$ S/m; $\epsilon_r = 40.581$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

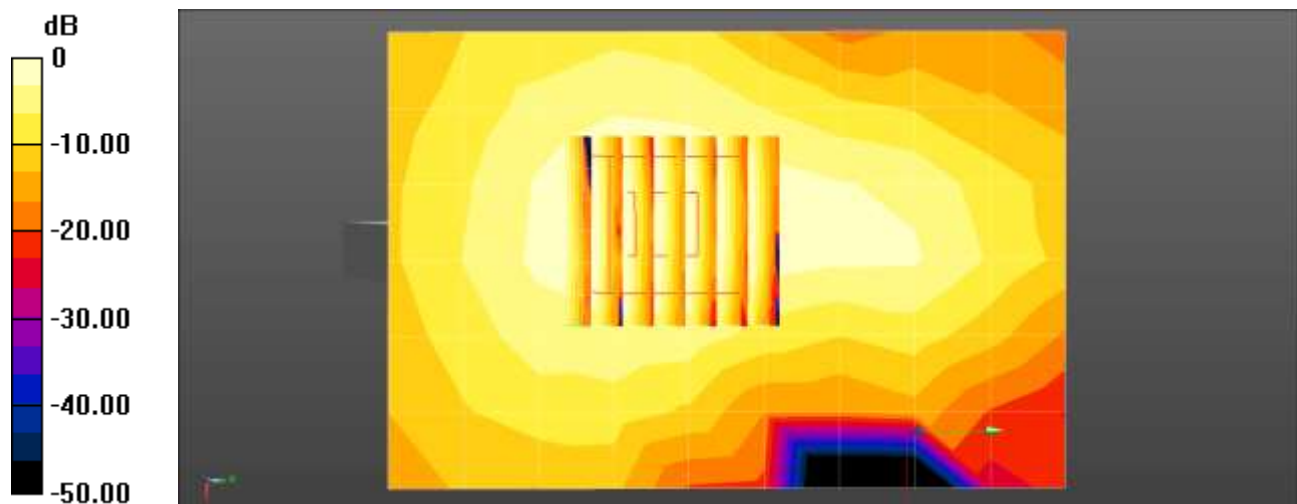
- Probe: EX3DV4 - SN3716; ConvF(7.34, 7.34, 7.34) @ 2355 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band40 Body Bottom QPSK 10MHz 1RB 24offset 39200ch/Area Scan (7x10x1):

Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.0371 W/kg

SM-G781V/LTE Band40 Body Bottom QPSK 10MHz 1RB 24offset 39200ch/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 4.473 V/m; Power Drift = 0.15 dB
 Peak SAR (extrapolated) = 0.0540 W/kg
SAR(1 g) = 0.028 W/kg; SAR(10 g) = 0.015 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 52.5%
 Maximum value of SAR (measured) = 0.0449 W/kg



0 dB = 0.0371 W/kg = -14.30 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4°C
 Ambient Temperature: 20.6°C
 Test Date: 07/29/2020
 Plot No.: 46

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band41 (0); Frequency: 2506 MHz; Duty Cycle: 1:1.58016
 Medium parameters used (interpolated): $f = 2506$ MHz; $\sigma = 1.89$ S/m; $\epsilon_r = 39.256$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

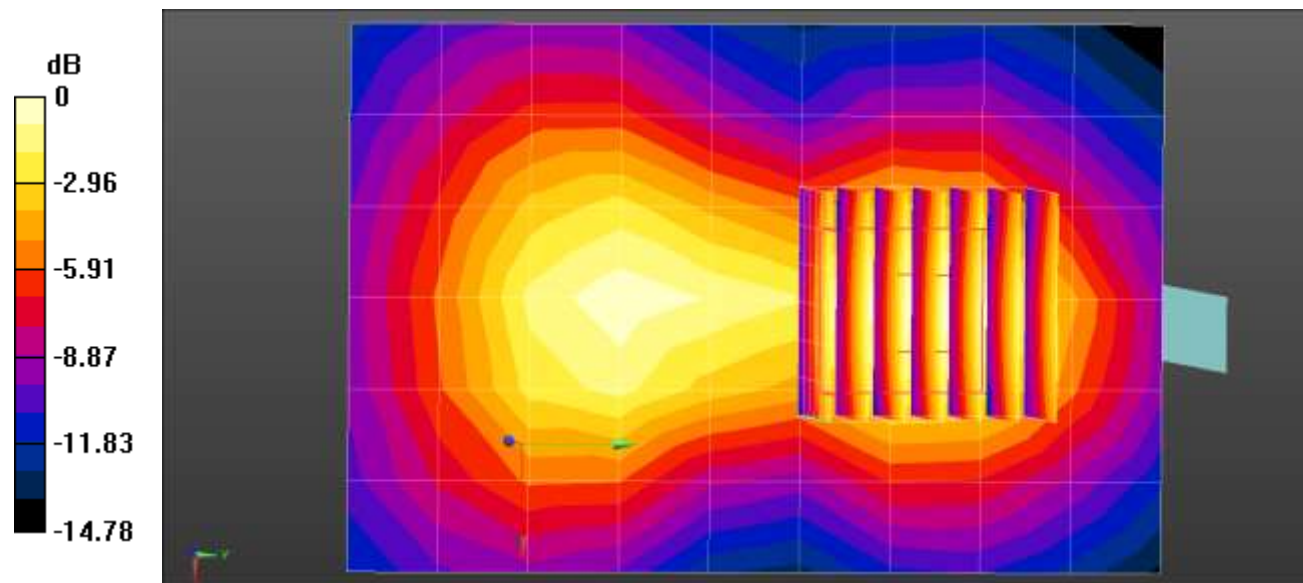
- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2506 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band 41 Body Bottom QPSK 20MHz 1RB 0offset 39750ch/Area Scan

(7x10x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.484 W/kg

SM-G781V/LTE Band 41 Body Bottom QPSK 20MHz 1RB 0offset 39750ch/Zoom Scan (7x7x7)/Cube

0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 13.50 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.730 W/kg
SAR(1 g) = 0.315 W/kg; SAR(10 g) = 0.142 W/kg
 Smallest distance from peaks to all points 3 dB below = 11.2 mm
 Ratio of SAR at M2 to SAR at M1 = 42.6%
 Maximum value of SAR (measured) = 0.554 W/kg



0 dB = 0.484 W/kg = -3.15 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 21.3°C
 Ambient Temperature: 21.5°C
 Test Date: 08/17/2020
 Plot No.: 77

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band66 (0); Frequency: 1770 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1770$ MHz; $\sigma = 1.353$ S/m; $\epsilon_r = 40.163$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

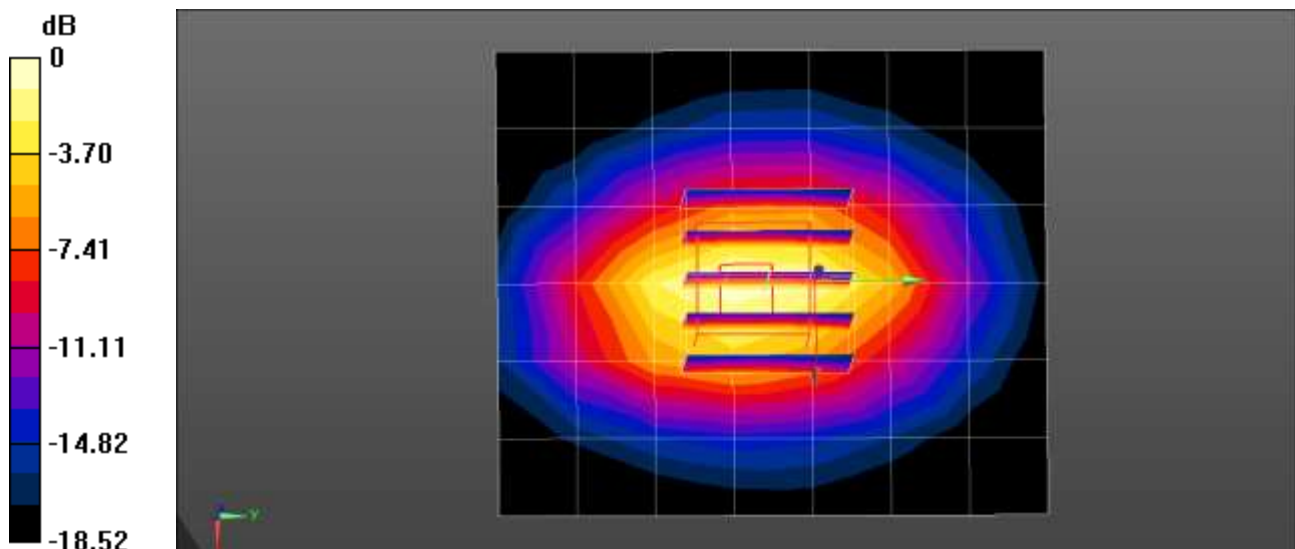
- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1770 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band66 Body Bottom QPSK 20MHz 100RB 0offset 132572ch/Area Scan (7x8x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.07 W/kg

SM-G781V/LTE Band66 Body Bottom QPSK 20MHz 100RB 0offset 132572ch/Zoom Scan (5x5x7)/Cube

0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 28.92 V/m; Power Drift = -0.08 dB
 Peak SAR (extrapolated) = 1.34 W/kg
SAR(1 g) = 0.723 W/kg; SAR(10 g) = 0.385 W/kg
 Smallest distance from peaks to all points 3 dB below = 10.1 mm
 Ratio of SAR at M2 to SAR at M1 = 55.8%
 Maximum value of SAR (measured) = 1.08 W/kg



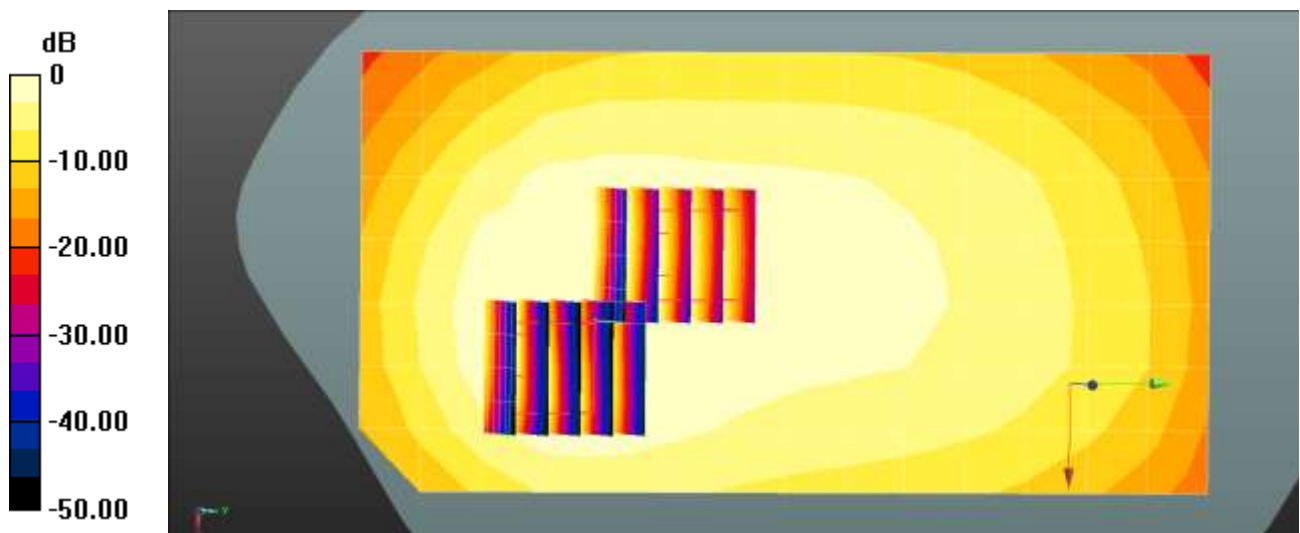
0 dB = 1.08 W/kg = 0.33 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.1°C
 Ambient Temperature: 21.4°C
 Test Date: 07/16/2020
 Plot No.: 78

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band 71 (0); Frequency: 680.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 680.5$ MHz; $\sigma = 0.894$ S/m; $\epsilon_r = 43.357$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section
 DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 680.5 MHz; Calibrated: 2020-03-25
 - Sensor-Surface: 1.4mm (Mechanical Surface Detection)
 - Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
 - Phantom: SAM with CRP v5.0_Right
 - Measurement SW: DASY52, Version 52.10 (4);
- SM-G781V/LTE 71 Body Rear QPSK 20MHz 1RB 99offset 133297ch/Area Scan (8x15x1):** Measurement grid:
 dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.600 W/kg
SM-G781V/LTE 71 Body Rear QPSK 20MHz 1RB 99offset 133297ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 20.95 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.785 W/kg
SAR(1 g) = 0.430 W/kg; SAR(10 g) = 0.253 W/kg
 Smallest distance from peaks to all points 3 dB below = 14.8 mm
 Ratio of SAR at M2 to SAR at M1 = 53.8%
 Maximum value of SAR (measured) = 0.645 W/kg
SM-G781V/LTE 71 Body Rear QPSK 20MHz 1RB 99offset 133297ch/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 20.95 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.583 W/kg
SAR(1 g) = 0.431 W/kg; SAR(10 g) = 0.316 W/kg
 Smallest distance from peaks to all points 3 dB below: Larger than measurement grid
 Ratio of SAR at M2 to SAR at M1 = 75.9%
 Maximum value of SAR (measured) = 0.525 W/kg



0 dB = 0.600 W/kg = -2.22 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.3°C
 Ambient Temperature: 20.6°C
 Test Date: 08/06/2020
 Plot No.: 79

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, NR (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.921$ S/m; $\epsilon_r = 42.633$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

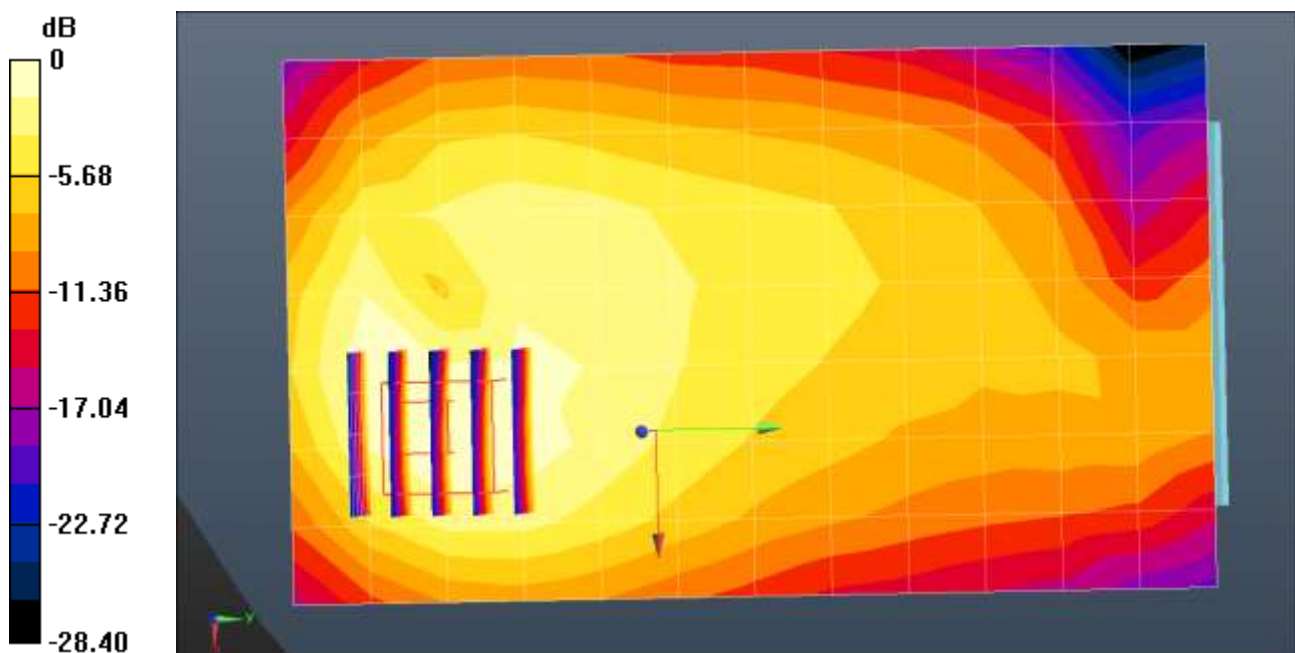
- Probe: EX3DV4 - SN7370; ConvF(9.88, 9.88, 9.88) @ 836.5 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: SAM with CRP v5.0_2020_06_09;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n5 Body Rear DFT-s QPSK 20MHz 50RB 28offset 167300ch/Area Scan (8x13x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.344 W/kg

SM-G781V/NR n5 Body Rear DFT-s QPSK 20MHz 50RB 28offset 167300ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 11.39 V/m; Power Drift = -0.15 dB
 Peak SAR (extrapolated) = 0.445 W/kg
SAR(1 g) = 0.255 W/kg; SAR(10 g) = 0.155 W/kg
 Smallest distance from peaks to all points 3 dB below = 13.7 mm
 Ratio of SAR at M2 to SAR at M1 = 53.9%
 Maximum value of SAR (measured) = 0.359 W/kg



0 dB = 0.344 W/kg = -4.63 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.3°C
 Ambient Temperature: 20.5°C
 Test Date: 08/10/2020
 Plot No.: 80

DUT: SM-G781V; Type: Bar

Communication System: UID 0, n25 (0); Frequency: 1860 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.357$ S/m; $\epsilon_r = 39.862$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

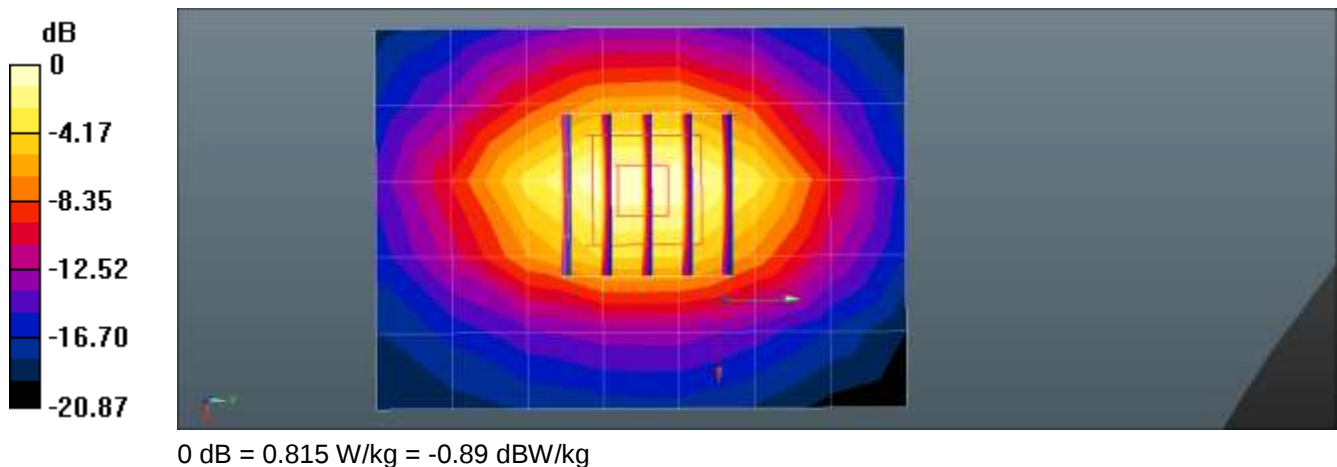
- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1860 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR Band 25 Body Bottom DFT-s 20MHz 1RB 1offset 372000ch/Area Scan (6x8x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.815 W/kg

SM-G781V/NR Band 25 Body Bottom DFT-s 20MHz 1RB 1offset 372000ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 24.87 V/m; Power Drift = 0.11 dB
 Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.796 W/kg; SAR(10 g) = 0.435 W/kg
 Smallest distance from peaks to all points 3 dB below = 11.2 mm
 Ratio of SAR at M2 to SAR at M1 = 62.1%
 Maximum value of SAR (measured) = 0.892 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.7°C
 Ambient Temperature: 20.9°C
 Test Date: 08/06/2020
 Plot No.: 81

DUT: SM-G781V; Type: Bar

Communication System: UID 0, NR Band n41 (0); Frequency: 2592.99 MHz; Duty Cycle: 1:4.00037
 Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.946$ S/m; $\epsilon_r = 37.895$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

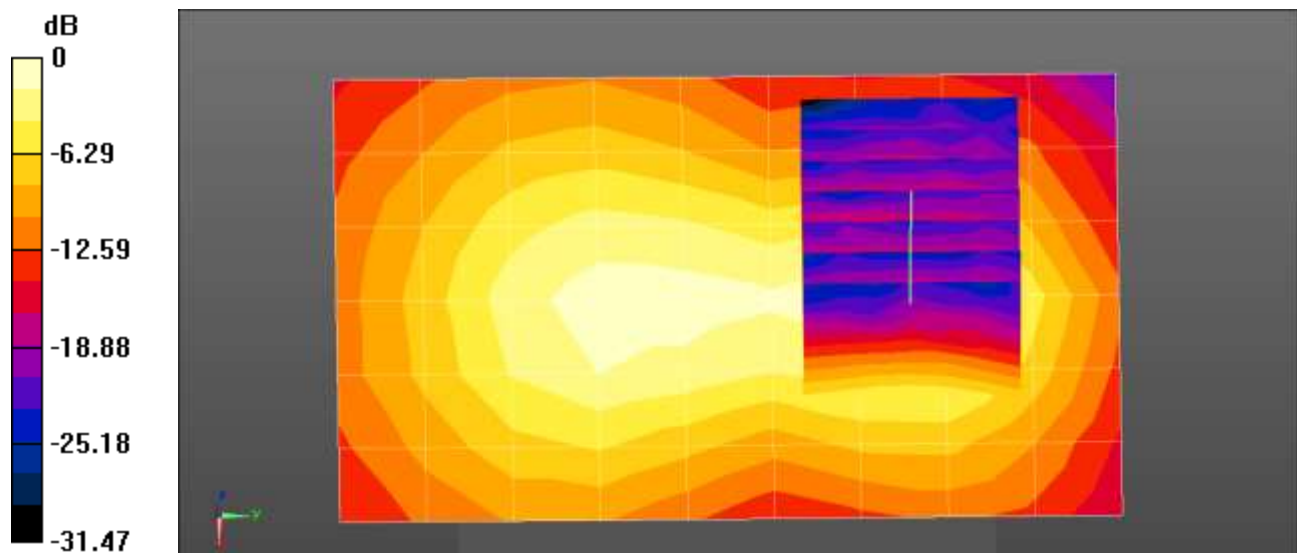
- Probe: EX3DV4 - SN3968; ConvF(7.41, 7.41, 7.41) @ 2592.99 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n41 Body Bottom DFT-s QPSK 100MHz 135RB 0offset 518598ch/Area Scan (7x10x1):

Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.213 W/kg

SM-G781V/NR n41 Body Bottom DFT-s QPSK 100MHz 135RB 0offset 518598ch/Zoom Scan

(7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 9.754 V/m; Power Drift = -0.06 dB
 Peak SAR (extrapolated) = 0.310 W/kg
SAR(1 g) = 0.132 W/kg; SAR(10 g) = 0.059 W/kg
 Smallest distance from peaks to all points 3 dB below = 11 mm
 Ratio of SAR at M2 to SAR at M1 = 41.5%
 Maximum value of SAR (measured) = 0.236 W/kg



0 dB = 0.236 W/kg = -6.27 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.5°C
 Ambient Temperature: 20.8°C
 Test Date: 08/21/2020
 Plot No.: 82

DUT: SM-G781V; Type: Bar

Communication System: UID 0, NR Band 66 (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720$ MHz; $\sigma = 1.303$ S/m; $\epsilon_r = 40.532$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

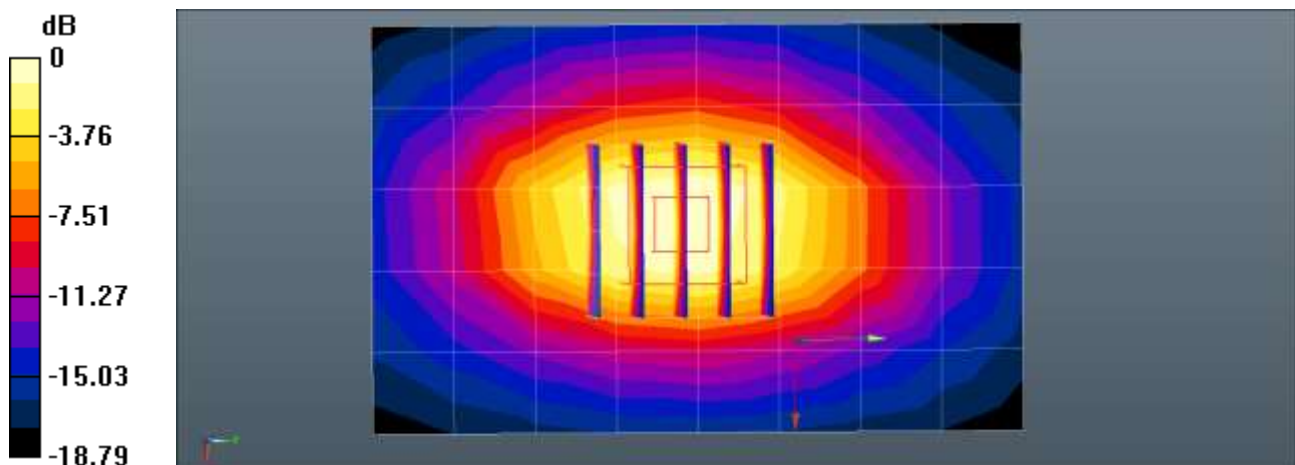
- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1720 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n66 Body Bottom DFT-s QPSK 20MHz 1RB 1offset 344000ch/Area Scan (6x9x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm
 Maximum value of SAR (measured) = 0.764 W/kg

SM-G781V/NR n66 Body Bottom DFT-s QPSK 20MHz 1RB 1offset 344000ch/Zoom Scan (5x5x7)/Cube

0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
 Reference Value = 29.00 V/m; Power Drift = 0.02 dB
 Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.712 W/kg; SAR(10 g) = 0.390 W/kg
 Smallest distance from peaks to all points 3 dB below = 11.2 mm
 Ratio of SAR at M2 to SAR at M1 = 59.7%
 Maximum value of SAR (measured) = 1.04 W/kg



0 dB = 0.764 W/kg = -1.17 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 22.1°C
 Ambient Temperature: 22.4°C
 Test Date: 08/07/2020
 Plot No.: 83

DUT: SM-G781V; Type: Bar;

Communication System: UID 0, NR (0); Frequency: 680.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 680.5$ MHz; $\sigma = 0.836$ S/m; $\epsilon_r = 42.493$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

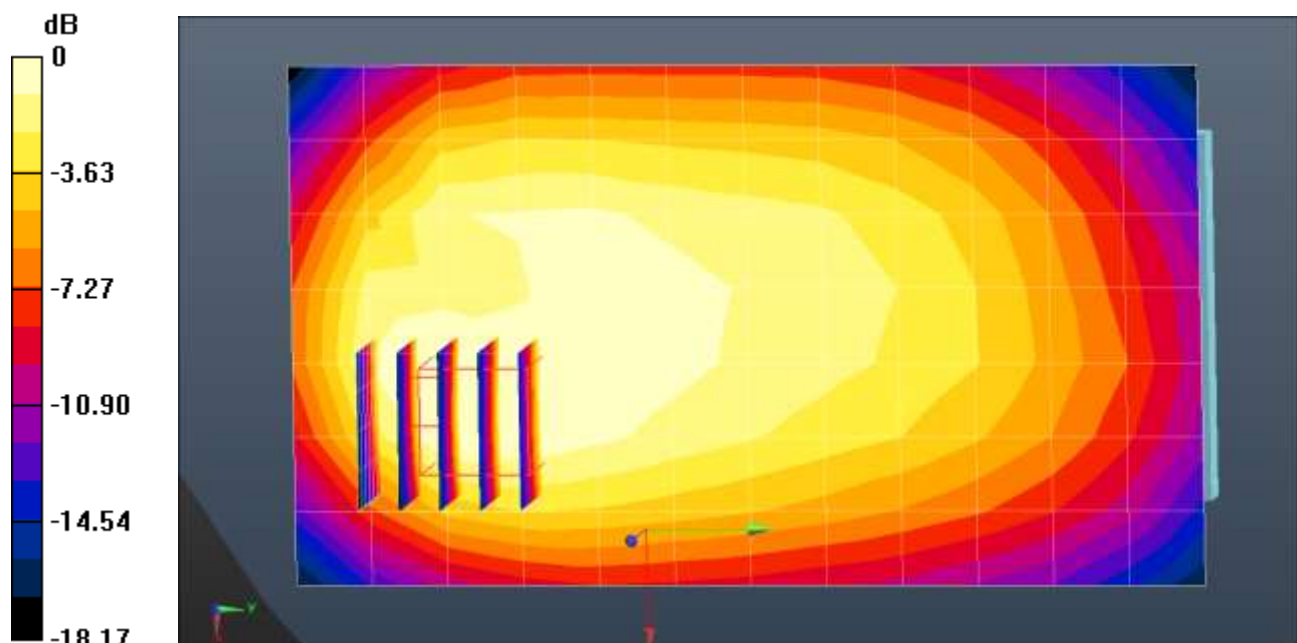
- Probe: EX3DV4 - SN7370; ConvF(10.27, 10.27, 10.27) @ 680.5 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: SAM with CRP v5.0_2020_06_09;
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n71 Body Rear DFT-s QPSK 20MHz 50RB 28offset 136100ch/Area Scan (8x13x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.401 W/kg

SM-G781V/NR n71 Body Rear DFT-s QPSK 20MHz 50RB 28offset 136100ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 18.97 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.574 W/kg
SAR(1 g) = 0.306 W/kg; SAR(10 g) = 0.183 W/kg
 Smallest distance from peaks to all points 3 dB below = 14.8 mm
 Ratio of SAR at M2 to SAR at M1 = 52.3%
 Maximum value of SAR (measured) = 0.470 W/kg



0 dB = 0.401 W/kg = -3.97 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.2°C
Ambient Temperature: 21.4°C
Test Date: 08/12/2020
Plot No.: 84

DUT: SM-G781V; Type: Bar

Communication System: UID 0, 2450MHz; Frequency: 2437 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.788$ S/m; $\epsilon_r = 38.62$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.49, 7.49, 7.49) @ 2437 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11b Body Top 1Mbps 6ch/Area Scan (8x9x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.779 W/kg

SM-G781V/802.11b Body Top 1Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 22.19 V/m; Power Drift = 0.05 dB

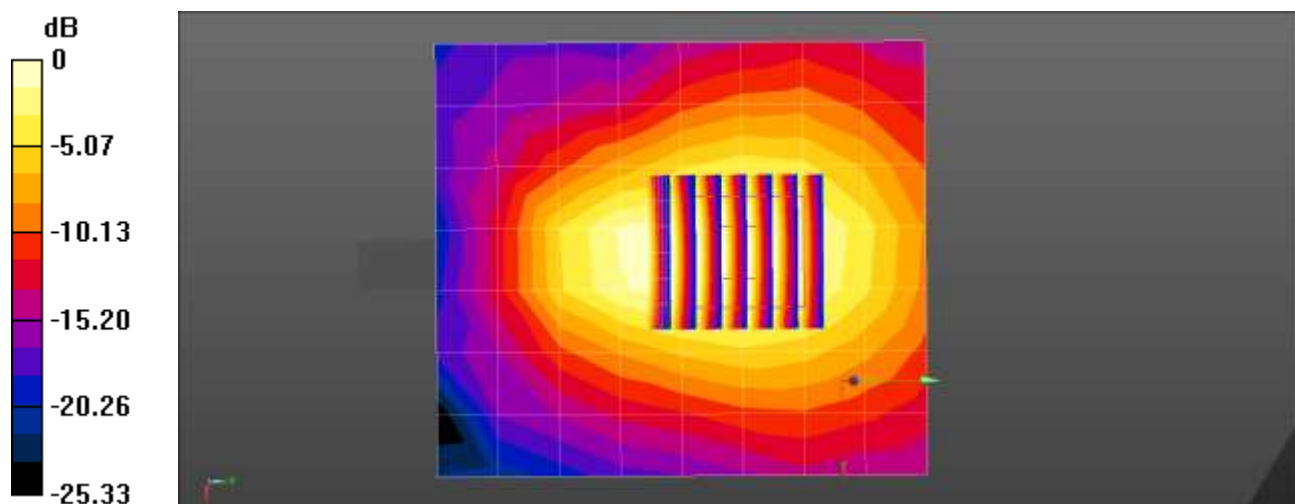
Peak SAR (extrapolated) = 1.09 W/kg

SAR(1 g) = 0.544 W/kg; SAR(10 g) = 0.278 W/kg

Smallest distance from peaks to all points 3 dB below = 13 mm

Ratio of SAR at M2 to SAR at M1 = 48.2%

Maximum value of SAR (measured) = 0.873 W/kg



0 dB = 0.779 W/kg = -1.09 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.9°C
 Ambient Temperature: 21.1°C
 Test Date: 07/24/2020
 Plot No.: 85

DUT: SM-G781V; Type: Bar

Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.782$ S/m; $\epsilon_r = 38.462$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2437 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11b Body Top 1Mbps 6ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.217 W/kg

SM-G781V/802.11b Body Top 1Mbps 6ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.16 V/m; Power Drift = 0.13 dB

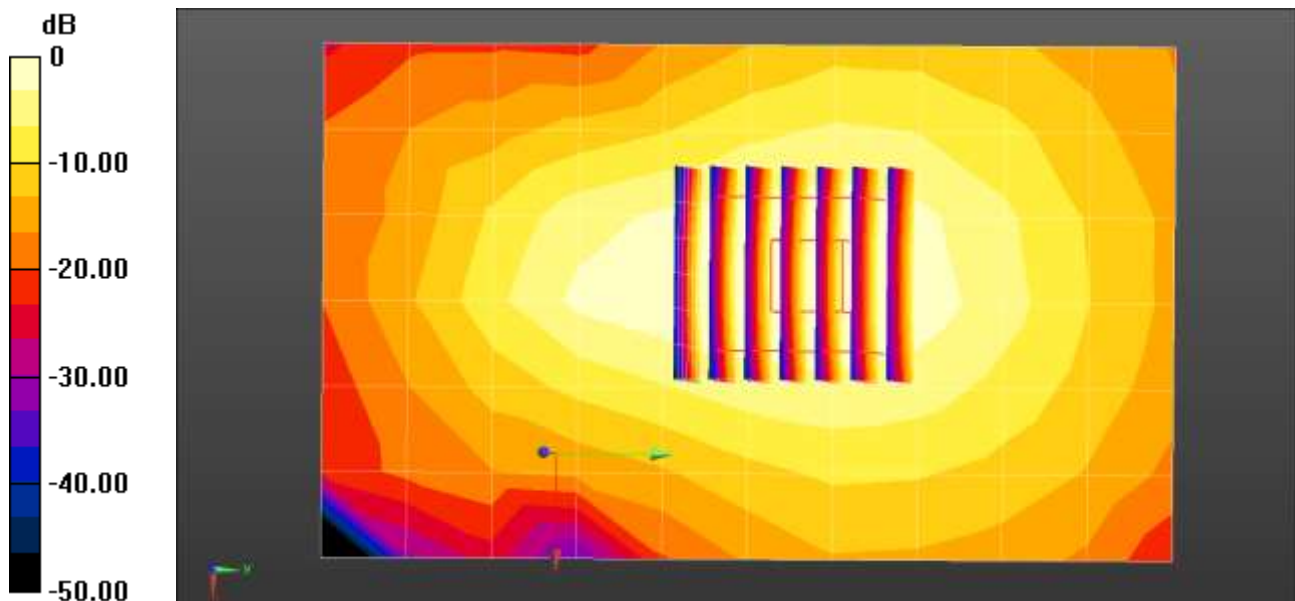
Peak SAR (extrapolated) = 0.294 W/kg

SAR(1 g) = 0.143 W/kg; SAR(10 g) = 0.072 W/kg

Smallest distance from peaks to all points 3 dB below = 12.4 mm

Ratio of SAR at M2 to SAR at M1 = 47.5%

Maximum value of SAR (measured) = 0.234 W/kg



0 dB = 0.217 W/kg = -6.63 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.4°C
 Ambient Temperature: 21.7°C
 Test Date: 07/20/2020
 Plot No.: 86

DUT: SM-G781V; Type: Bar

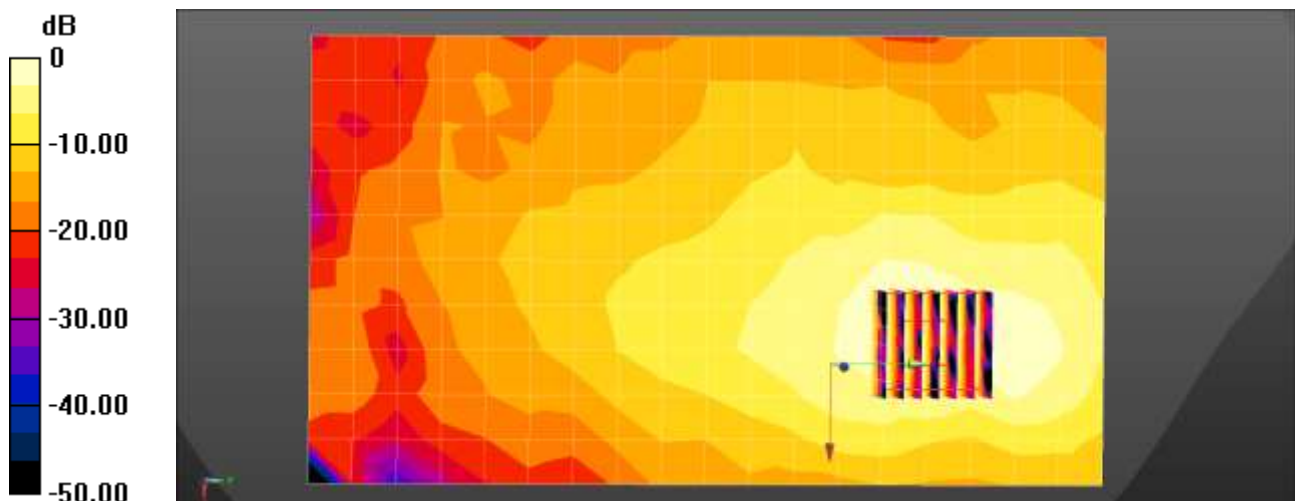
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5785 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5785$ MHz; $\sigma = 5.201$ S/m; $\epsilon_r = 36.247$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5785 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11a Body Rear 6Mbps 157ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 0.583 W/kg

SM-G781V/802.11a Body Rear 6Mbps 157ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 3.296 V/m; Power Drift = -0.07 dB
 Peak SAR (extrapolated) = 1.23 W/kg
SAR(1 g) = 0.266 W/kg; SAR(10 g) = 0.100 W/kg
 Smallest distance from peaks to all points 3 dB below = 10.2 mm
 Ratio of SAR at M2 to SAR at M1 = 57.2%
 Maximum value of SAR (measured) = 0.650 W/kg



0 dB = 0.583 W/kg = -2.34 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.0°C
 Ambient Temperature: 21.2°C
 Test Date: 08/05/2020
 Plot No.: 87

DUT: SM-G781V; Type: Bar

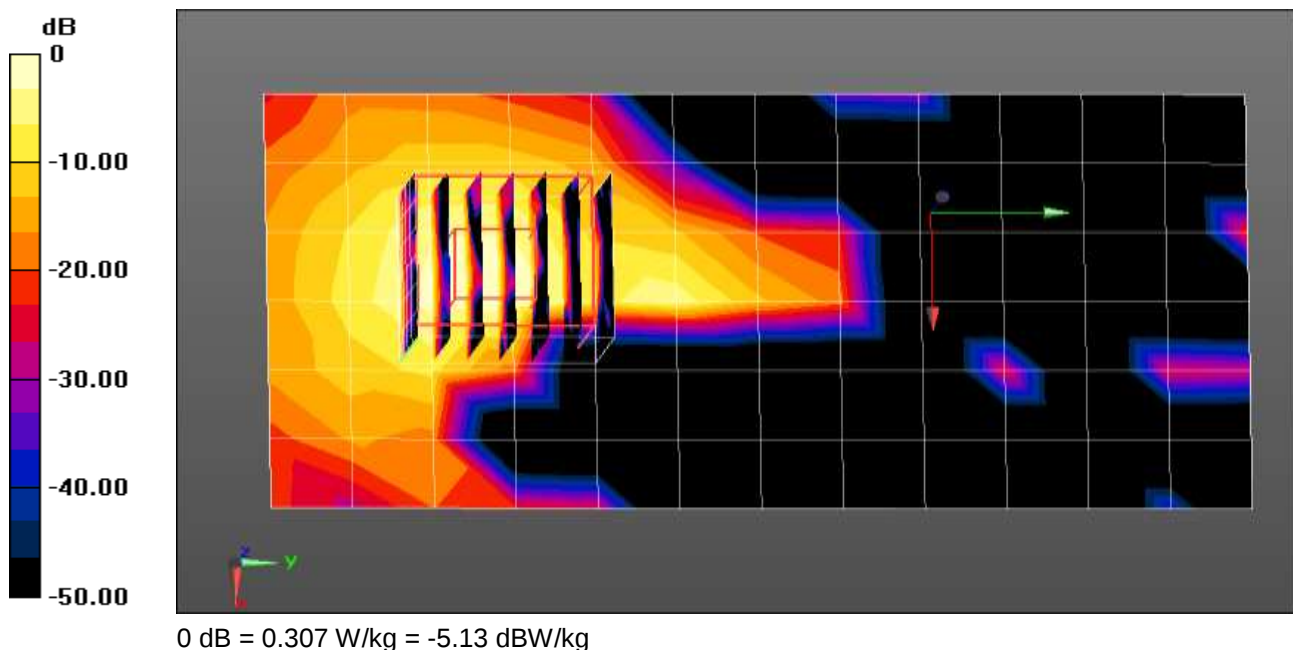
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5775 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5775$ MHz; $\sigma = 5.282$ S/m; $\epsilon_r = 35.358$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5775 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11ac80 Body Top MCS0 155ch/Area Scan (7x13x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 0.307 W/kg

SM-G781V/802.11ac80 Body Top MCS0 155ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 3.061 V/m; Power Drift = 0.07 dB
 Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.154 W/kg; SAR(10 g) = 0.031 W/kg
 Smallest distance from peaks to all points 3 dB below = 4.3 mm
 Ratio of SAR at M2 to SAR at M1 = 53.9%
 Maximum value of SAR (measured) = 0.529 W/kg



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.8°C
Ambient Temperature: 22.1°C
Test Date: 07/29/2020
Plot No.: 88

DUT: SM-G781V; Type: Bar

Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1: 1.302
Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.793$ S/m; $\epsilon_r = 40.573$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6) @ 2441 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (2);

SM-G781V/Bluetooth Body Top DH5 39ch/Area Scan (7x10x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.318 W/kg

SM-G781V/Bluetooth Body Top DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.69 V/m; Power Drift = 0.17 dB

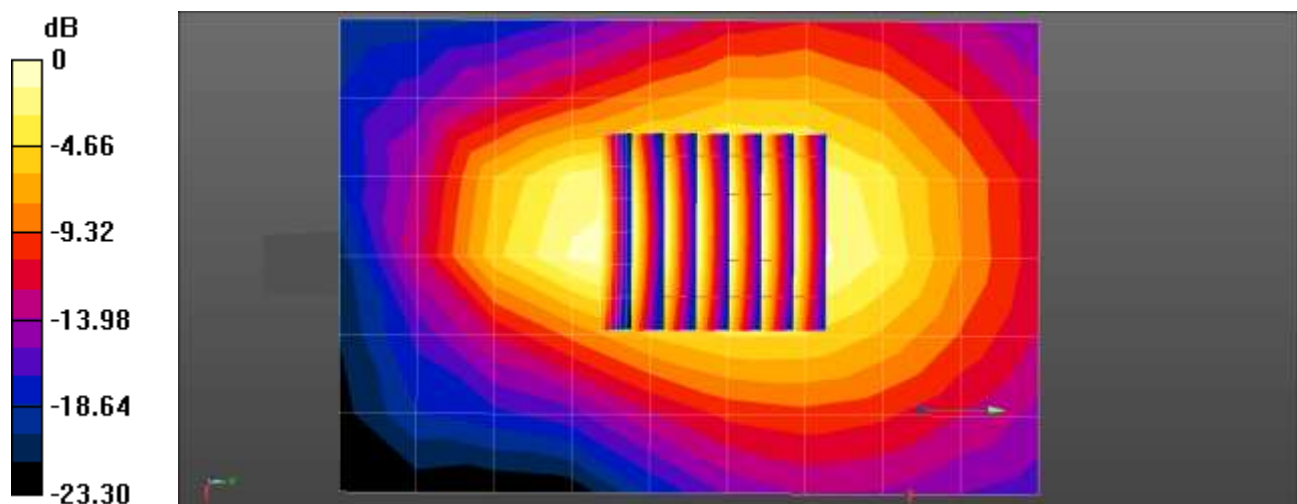
Peak SAR (extrapolated) = 0.440 W/kg

SAR(1 g) = 0.217 W/kg; SAR(10 g) = 0.109 W/kg

Smallest distance from peaks to all points 3 dB below = 12 mm

Ratio of SAR at M2 to SAR at M1 = 48.3%

Maximum value of SAR (measured) = 0.352 W/kg



0 dB = 0.318 W/kg = -4.97 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 21.0°C
 Ambient Temperature: 20.8°C
 Test Date: 08/12/2020
 Plot No.: 89

DUT: SM-G781V; Type: Bar

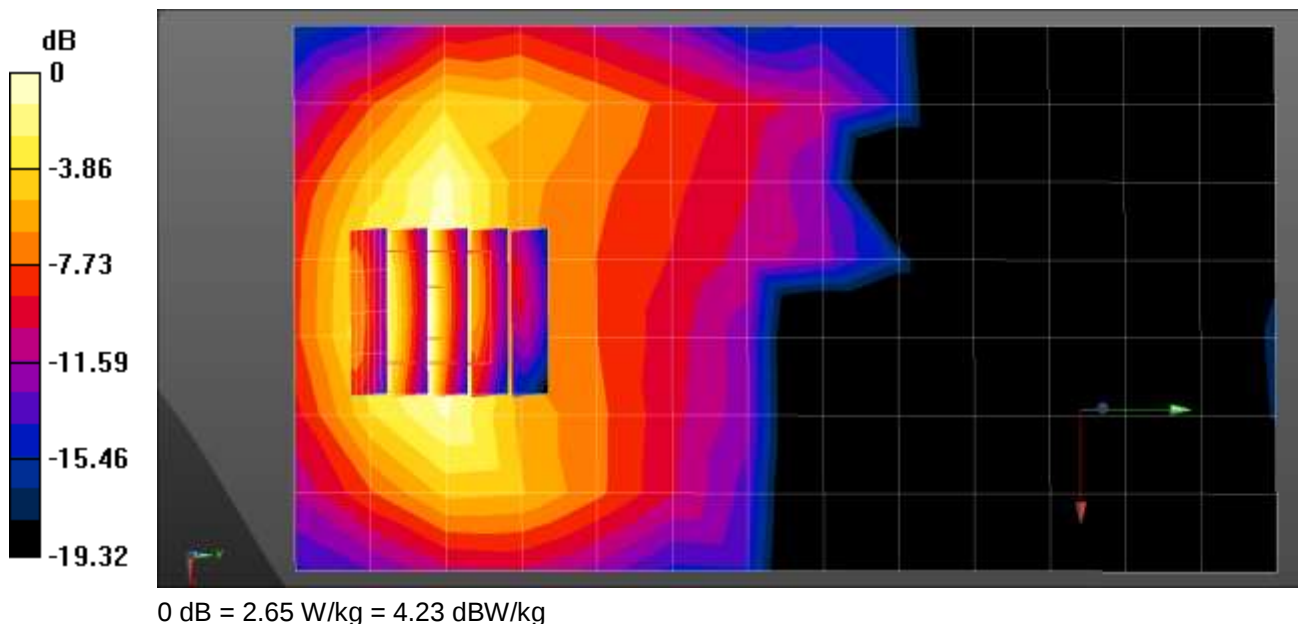
Communication System: UID 0, CDMA BC1 (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880$ MHz; $\sigma = 1.39$ S/m; $\epsilon_r = 40.009$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/CDMA BC1 Body Front EvDO Rev.0 600ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.71 W/kg

SM-G781V/CDMA BC1 Body Front EvDO Rev.0 600ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 9.273 V/m; Power Drift = 0.10 dB
 Peak SAR (extrapolated) = 3.25 W/kg
SAR(1 g) = 1.71 W/kg; SAR(10 g) = 0.849 W/kg
 Smallest distance from peaks to all points 3 dB below = 8 mm
 Ratio of SAR at M2 to SAR at M1 = 54.8%
 Maximum value of SAR (measured) = 2.65 W/kg



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

Liquid Temperature: 21.1°C
 Ambient Temperature: 21.3°C
 Test Date: 08/16/2020
 Plot No.: 90

DUT: SM-G781V; Type: Bar

Communication System: UID 0, GSM 1900 3Tx (0); Frequency: 1880 MHz; Duty Cycle: 1:2.77013
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.374 \text{ S/m}$; $\epsilon_r = 40.315$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/GSM1900 Body Front 3Tx 661ch/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 3.26 W/kg

SM-G781V/GSM1900 Body Front 3Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 0 V/m; Power Drift = 0.01 dB

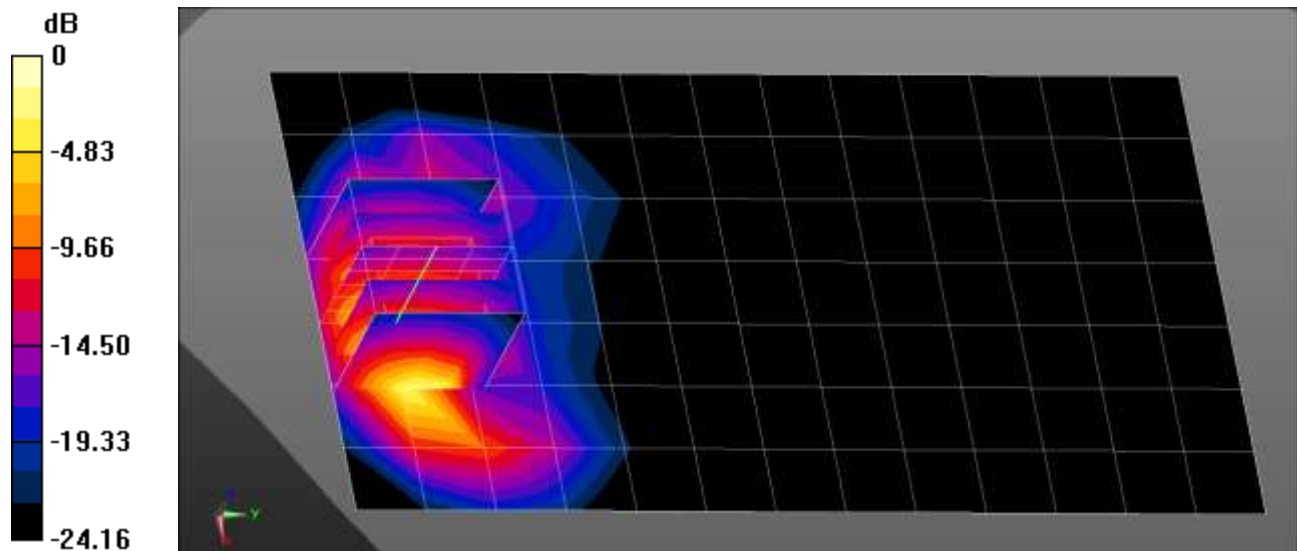
Peak SAR (extrapolated) = 5.81 W/kg

SAR(1 g) = 2.52 W/kg; SAR(10 g) = 1.07 W/kg

Smallest distance from peaks to all points 3 dB below = 6.4 mm

Ratio of SAR at M2 to SAR at M1 = 50.6%

Maximum value of SAR (measured) = 3.91 W/kg



0 dB = 3.91 W/kg = 5.92 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 19.9°C
 Ambient Temperature: 20.2°C

Test Date: 08/24/2020
Plot No.: 91

DUT: SM-G781V; 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; $\sigma = 1.318$ S/m; $\epsilon_r = 39.813$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.24, 5.24, 5.24) @ 1732.4 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band 4 Body Rear 1412ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 2.40 W/kg

SM-G781V/WCDMA Band 4 Body Rear 1412ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 8.569 V/m; Power Drift = 0.04 dB

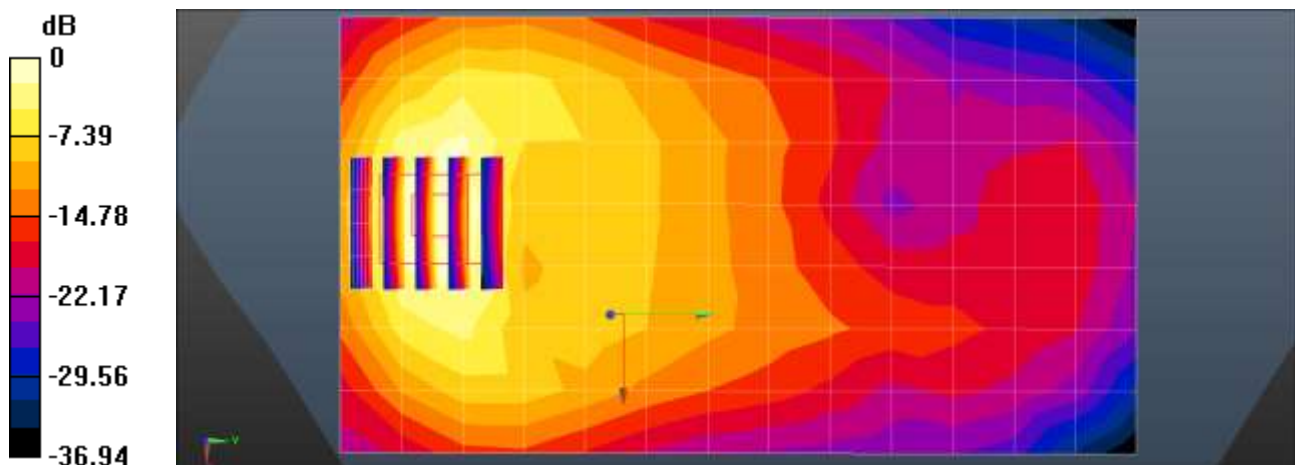
Peak SAR (extrapolated) = 4.38 W/kg

SAR(1 g) = 2.44 W/kg; SAR(10 g) = 1.28 W/kg

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 56.8%

Maximum value of SAR (measured) = 3.10 W/kg



0 dB = 2.40 W/kg = 3.81 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.9°C
 Ambient Temperature: 21.1°C
 Test Date: 07/27/2020
 Plot No.: 92

DUT: SM-G781V; Type: Bar

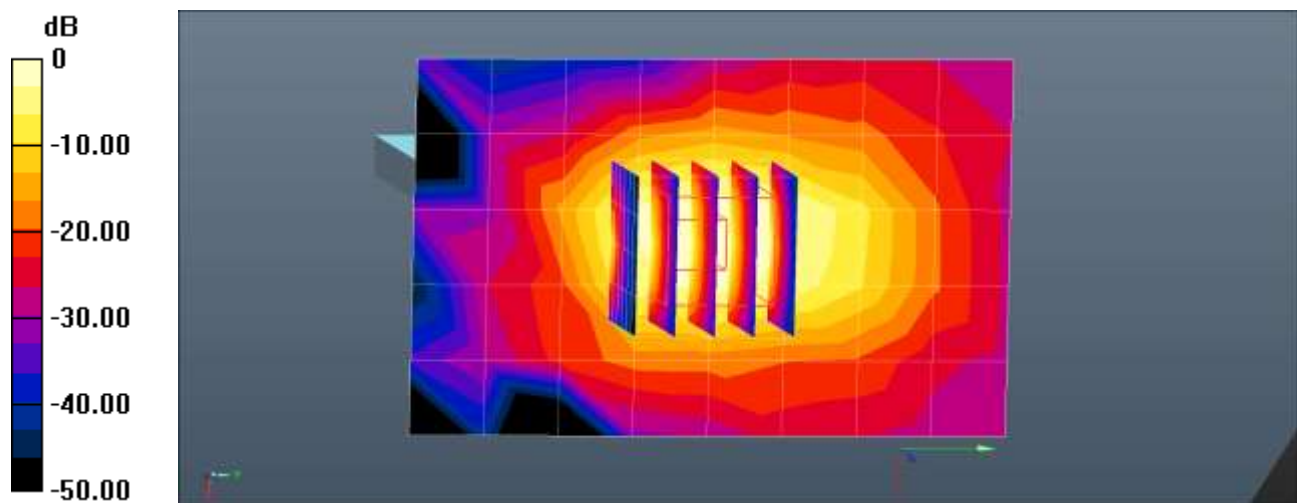
Communication System: UID 0, WCDMA1900 (0); Frequency: 1880 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.423 \text{ S/m}$; $\epsilon_r = 39.318$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.75, 7.75, 7.75) @ 1880 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/WCDMA Band2 Body Bottom 9400ch grip 0mm/Area Scan (6x9x1): Measurement grid:
 $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 1.99 W/kg

SM-G781V/WCDMA Band2 Body Bottom 9400ch grip 0mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 51.76 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 4.88 W/kg
SAR(1 g) = 2.09 W/kg; SAR(10 g) = 0.915 W/kg
 Smallest distance from peaks to all points 3 dB below = 6.4 mm
 Ratio of SAR at M2 to SAR at M1 = 42.7%
 Maximum value of SAR (measured) = 3.88 W/kg



0 dB = 1.99 W/kg = 2.98 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.6°C
 Ambient Temperature: 21.8°C
 Test Date: 08/20/2020
 Plot No.: 93

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.409$ S/m; $\epsilon_r = 40.002$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

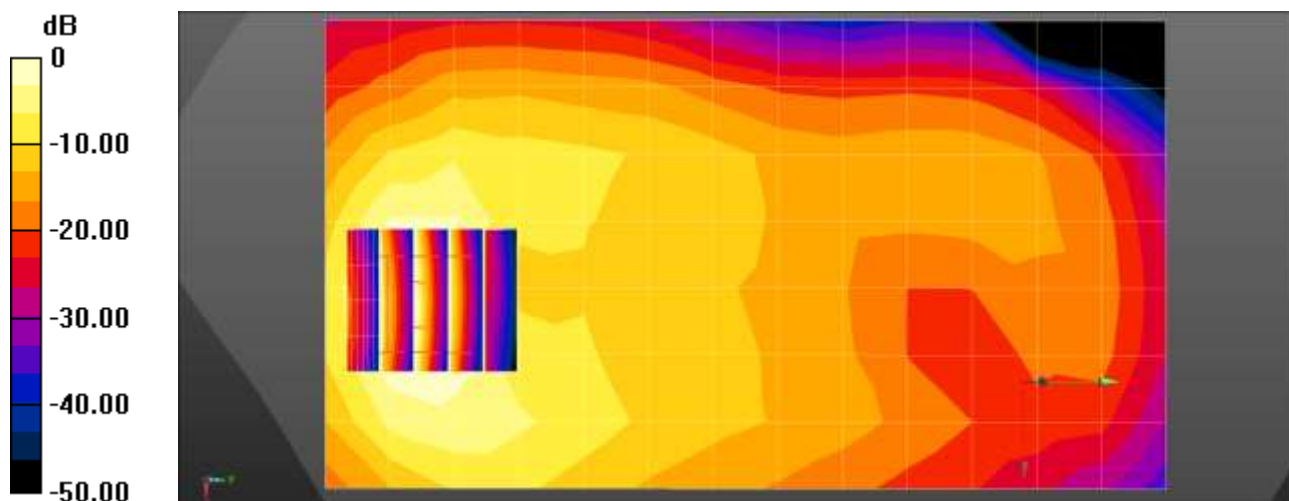
- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1905 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band25 Body Front QPSK 20MHz 1RB 99offset 26590ch/Area Scan (8x14x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.39 W/kg

SM-G781V/LTE Band25 Body Front QPSK 20MHz 1RB 99offset 26590ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 8.122 V/m; Power Drift = 0.11 dB
 Peak SAR (extrapolated) = 4.69 W/kg
SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.17 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.3 mm
 Ratio of SAR at M2 to SAR at M1 = 52.9%
 Maximum value of SAR (measured) = 3.84 W/kg



0 dB = 2.39 W/kg = 3.79 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.5°C
Ambient Temperature: 21.8°C
Test Date: 08/18/2020
Plot No.: 94

DUT: SM-G781V; Type: Bar

Communication System: UID 0, LTE Band66 (0); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1770$ MHz; $\sigma = 1.359$ S/m; $\epsilon_r = 40.343$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

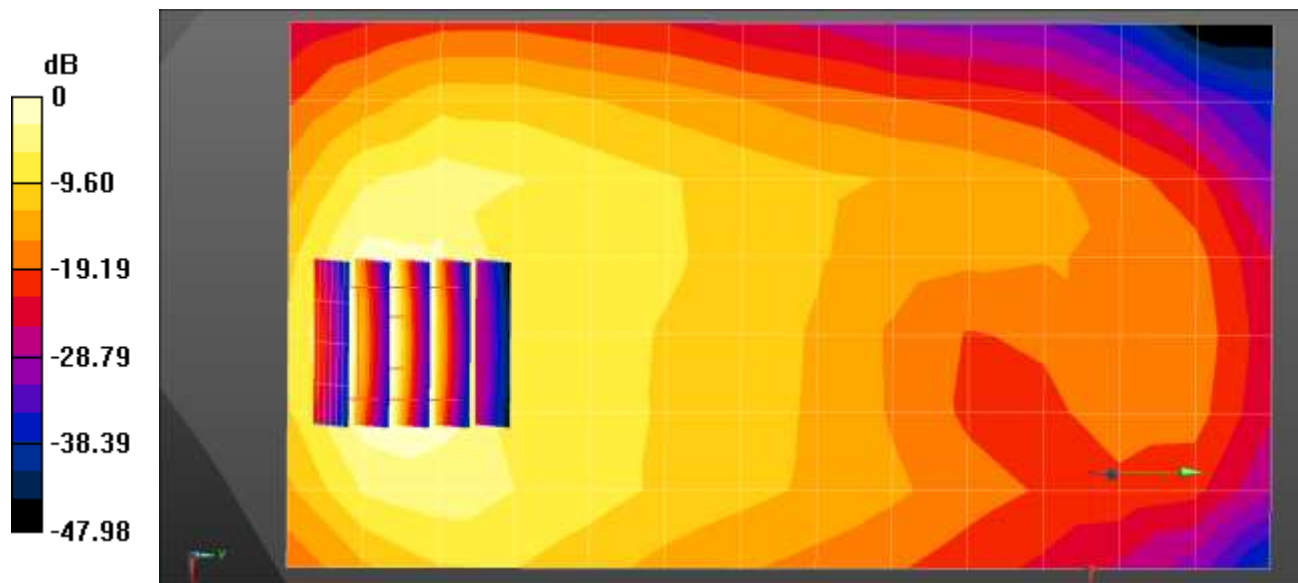
- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1770 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/LTE Band66 Body Front QPSK 20MHz 1RB 0offset 132572ch/Area Scan (8x14x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.81 W/kg

SM-G781V/LTE Band66 Body Front QPSK 20MHz 1RB 0offset 132572ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 9.381 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 5.13 W/kg
SAR(1 g) = 2.72 W/kg; SAR(10 g) = 1.38 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 54.6%
Maximum value of SAR (measured) = 4.26 W/kg



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

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.4°C
 Ambient Temperature: 20.7°C
 Test Date: 08/14/2020
 Plot No.: 95

DUT: SM-G781V; Type: Bar

Communication System: UID 0, n25 (0); Frequency: 1905 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1905$ MHz; $\sigma = 1.44$ S/m; $\epsilon_r = 40.288$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

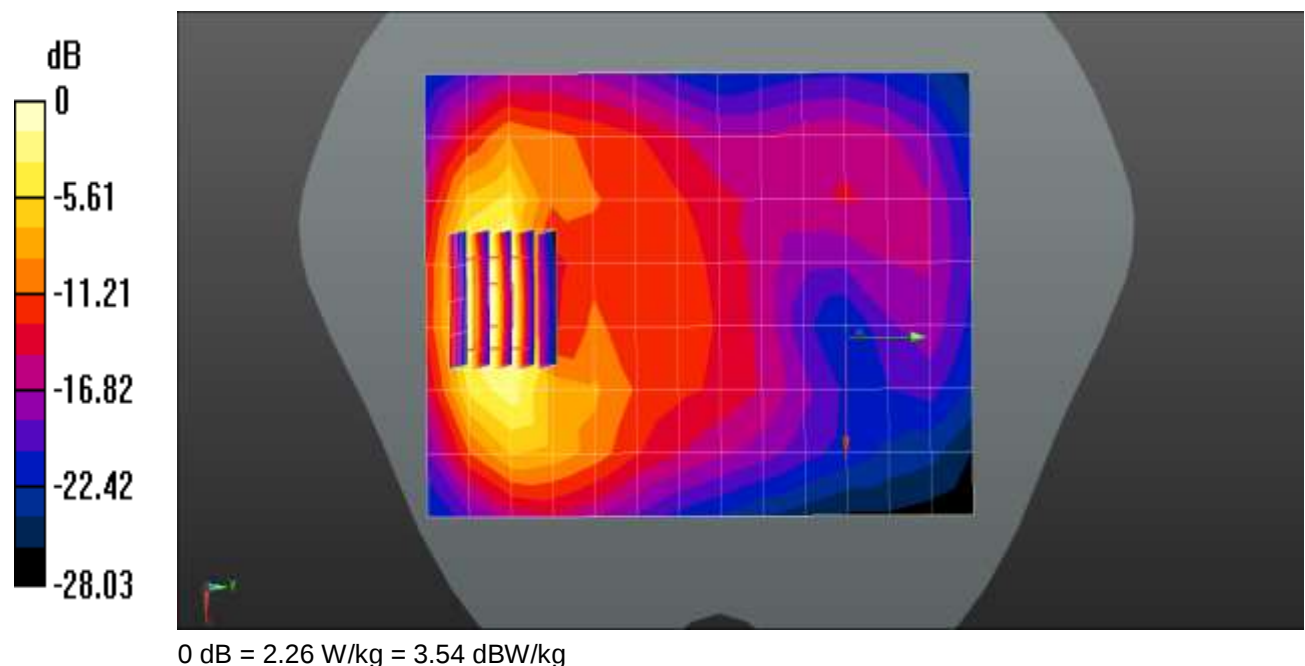
- Probe: ET3DV6 - SN1630; ConvF(5.63, 5.63, 5.63) @ 1905 MHz; Calibrated: 2020-02-26
- Sensor-Surface: 4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR Band 25 Body Front DFT-s 20MHz 50RB 28offset 381000ch/Area Scan (8x14x1):

Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.26 W/kg

SM-G781V/NR Band 25 Body Front DFT-s 20MHz 50RB 28offset 381000ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 9.117 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 4.98 W/kg
SAR(1 g) = 2.62 W/kg; SAR(10 g) = 1.27 W/kg
 Smallest distance from peaks to all points 3 dB below = 8 mm
 Ratio of SAR at M2 to SAR at M1 = 57.9%
 Maximum value of SAR (measured) = 2.93 W/kg



Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
Liquid Temperature: 20.5°C
Ambient Temperature: 20.8°C
Test Date: 08/21/2020
Plot No.: 96

DUT: SM-G781V; Type: Bar

Communication System: UID 0, NR Band 66 (0); Frequency: 1720 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1720$ MHz; $\sigma = 1.303$ S/m; $\epsilon_r = 40.532$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

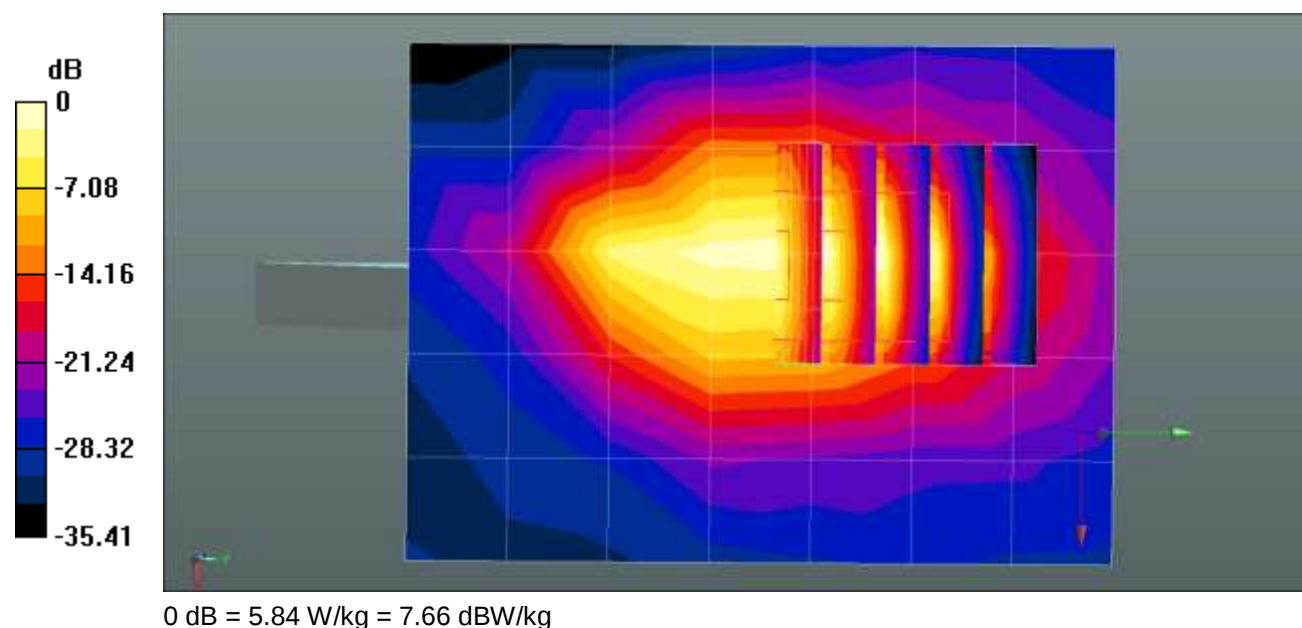
- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1720 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/NR n66 Body Bottom CP QPSK 20MHz 1RB 1offset 344000ch/Area Scan (6x8x1):

Measurement grid: $dx=15$ mm, $dy=15$ mm
Maximum value of SAR (measured) = 5.84 W/kg

SM-G781V/NR n66 Body Bottom CP QPSK 20MHz 1RB 1offset 344000ch/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
Reference Value = 55.59 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 9.06 W/kg
SAR(1 g) = 3.02 W/kg; SAR(10 g) = 1.25 W/kg
Smallest distance from peaks to all points 3 dB below = 4.8 mm
Ratio of SAR at M2 to SAR at M1 = 30.9%
Maximum value of SAR (measured) = 6.14 W/kg



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

Liquid Temperature: 21.1°C
 Ambient Temperature: 21.4°C
 Test Date: 08/03/2020
 Plot No.: 97

DUT: SM-G781V; Type: Bar

Communication System: UID 0, WIFI 5GHz (0); Frequency: 5300 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5300$ MHz; $\sigma = 4.801$ S/m; $\epsilon_r = 35.988$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5300 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11a Body Left 6Mbps 60ch/Area Scan (7x19x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 10.7 W/kg

SM-G781V/802.11a Body Left 6Mbps 60ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 6.320 V/m; Power Drift = -0.14 dB

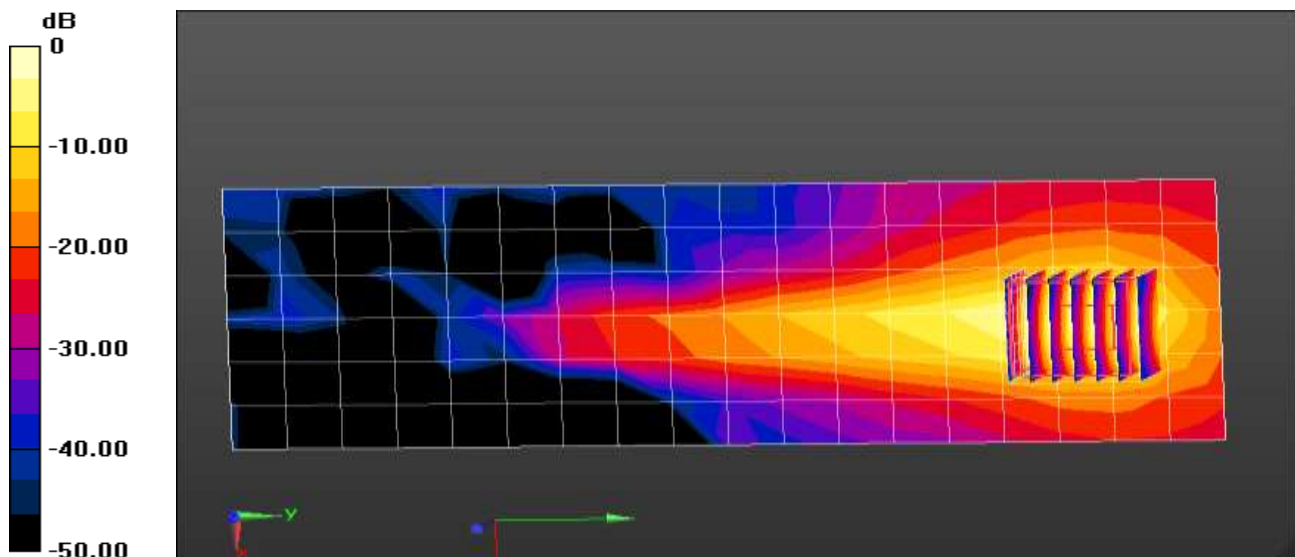
Peak SAR (extrapolated) = 38.8 W/kg

SAR(1 g) = 5.97 W/kg; SAR(10 g) = 1.42 W/kg

Smallest distance from peaks to all points 3 dB below = 3.2 mm

Ratio of SAR at M2 to SAR at M1 = 57.8%

Maximum value of SAR (measured) = 16.3 W/kg



0 dB = 10.7 W/kg = 10.31 dBW/kg

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

Ambient Temperature: 21.2°C
 Test Date: 08/05/2020
 Plot No.: 98

DUT: SM-G781V; Type: Bar

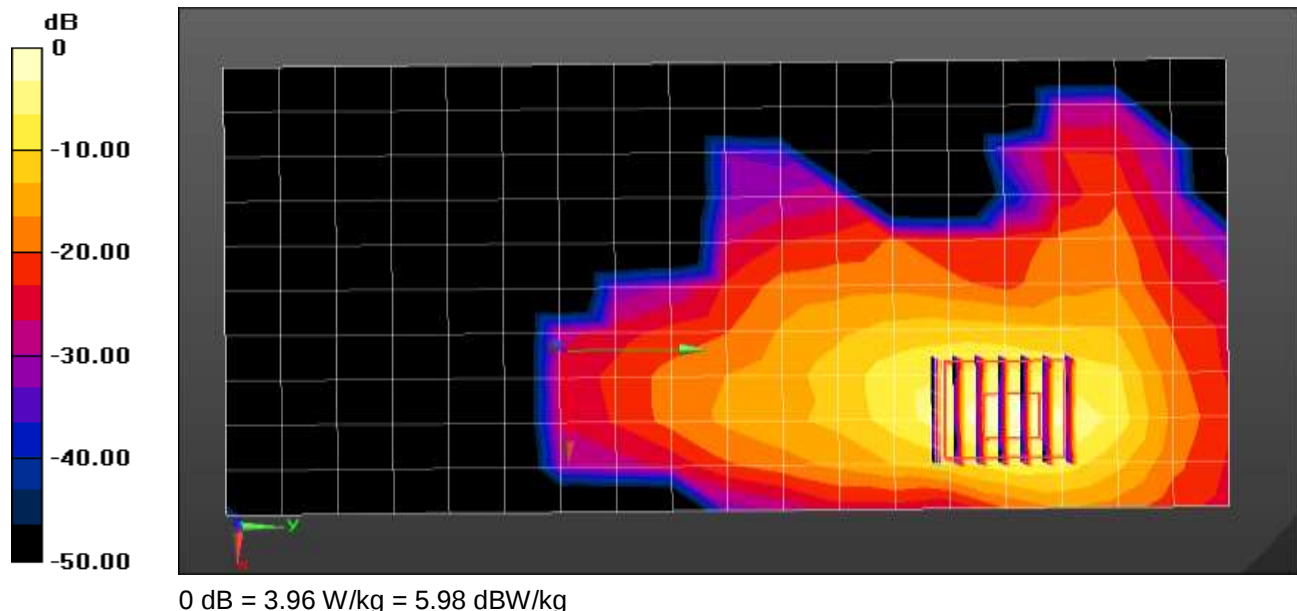
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5290 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 5290$ MHz; $\sigma = 4.776$ S/m; $\epsilon_r = 35.989$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5290 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

SM-G781V/802.11ac80 Body Rear MCS0 58ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 3.96 W/kg

SM-G781V/802.11ac80 Body Rear MCS0 58ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 1.748 V/m; Power Drift = -0.09 dB
 Peak SAR (extrapolated) = 11.0 W/kg
SAR(1 g) = 1.39 W/kg; SAR(10 g) = 0.401 W/kg
 Smallest distance from peaks to all points 3 dB below = 5.1 mm
 Ratio of SAR at M2 to SAR at M1 = 49.3%
 Maximum value of SAR (measured) = 4.46 W/kg



Appendix C. – Dipole Verification Plots

Verification Data (750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.2 °C
 Test Date: 07/08/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.922 \text{ S/m}$; $\epsilon_r = 42.197$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 750 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification (L12)/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.507 W/kg

750MHz Head Verification (L12)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.97 V/m; Power Drift = -0.14 dB

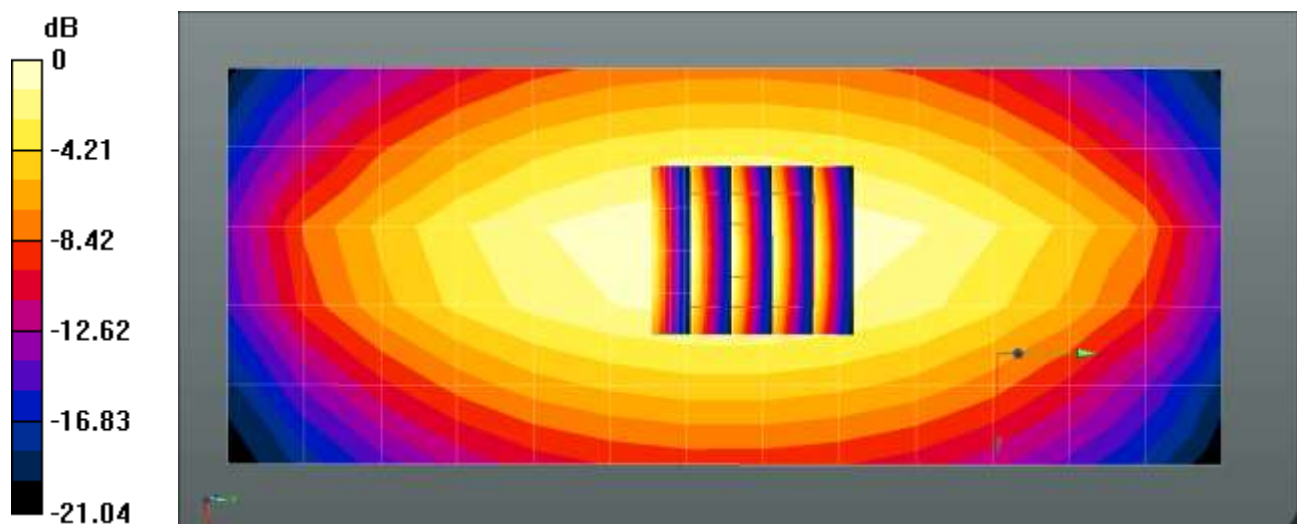
Peak SAR (extrapolated) = 0.590 W/kg

SAR(1 g) = 0.440 W/kg; SAR(10 g) = 0.301 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 73.8%

Maximum value of SAR (measured) = 0.553 W/kg



0 dB = 0.507 W/kg = -2.95 dBW/kg

Verification Data (750 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.4 °C
Test Date: 07/09/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.877 \text{ S/m}$; $\epsilon_r = 42.314$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 750 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification (L13)/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.486 W/kg

750MHz Head Verification (L13)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.88 V/m; Power Drift = 0.04 dB

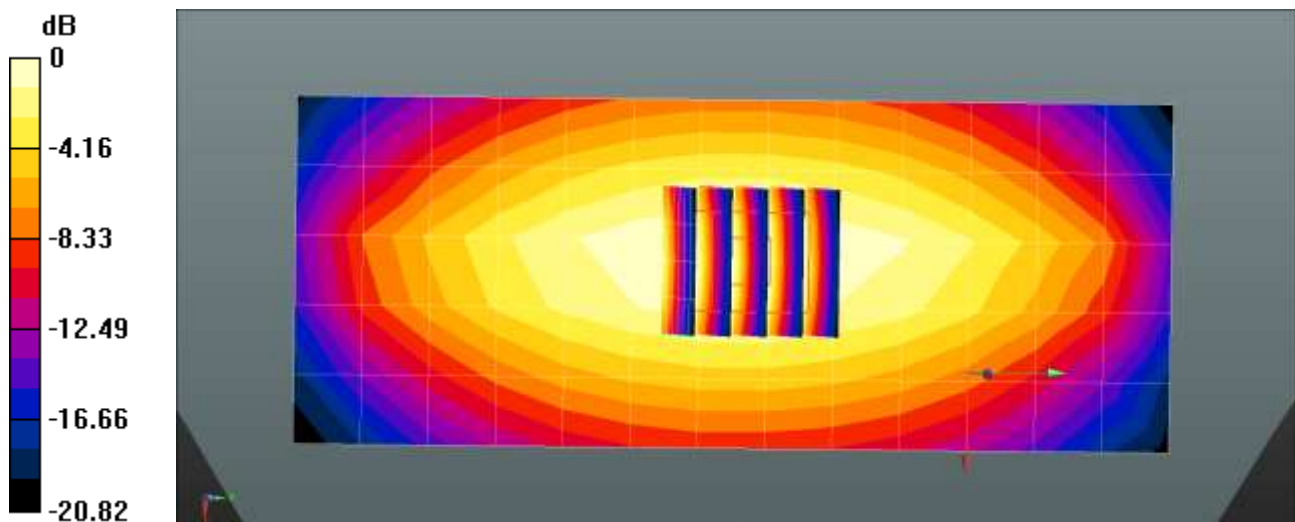
Peak SAR (extrapolated) = 0.567 W/kg

SAR(1 g) = 0.420 W/kg; SAR(10 g) = 0.287 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 73.2%

Maximum value of SAR (measured) = 0.530 W/kg



0 dB = 0.486 W/kg = -3.13 dBW/kg

Verification Data (750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.6 °C
 Test Date: 07/13/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.877 \text{ S/m}$; $\epsilon_r = 42.297$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 750 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification (L14)/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.491 W/kg

750MHz Head Verification (L14)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.77 V/m; Power Drift = 0.01 dB

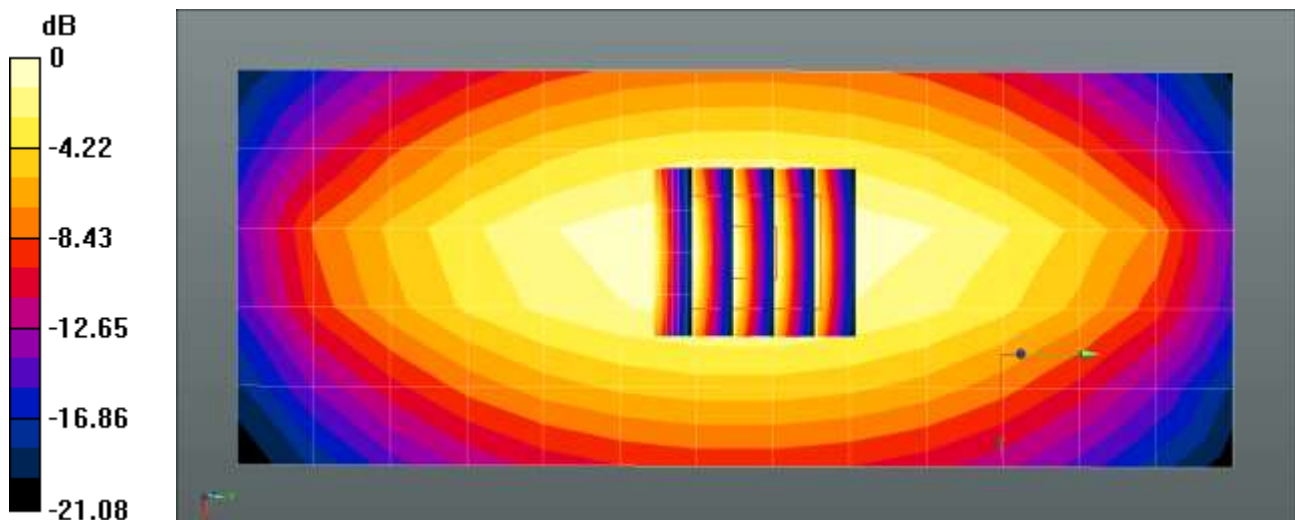
Peak SAR (extrapolated) = 0.573 W/kg

SAR(1 g) = 0.422 W/kg; SAR(10 g) = 0.289 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 72.7%

Maximum value of SAR (measured) = 0.533 W/kg



0 dB = 0.491 W/kg = -3.09 dBW/kg

Verification Data (750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.1 °C
 Test Date: 07/16/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.904 \text{ S/m}$; $\epsilon_r = 42.46$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.86, 9.86, 9.86) @ 750 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification (L71)/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.468 W/kg

750MHz Head Verification (L71)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.72 V/m; Power Drift = -0.02 dB

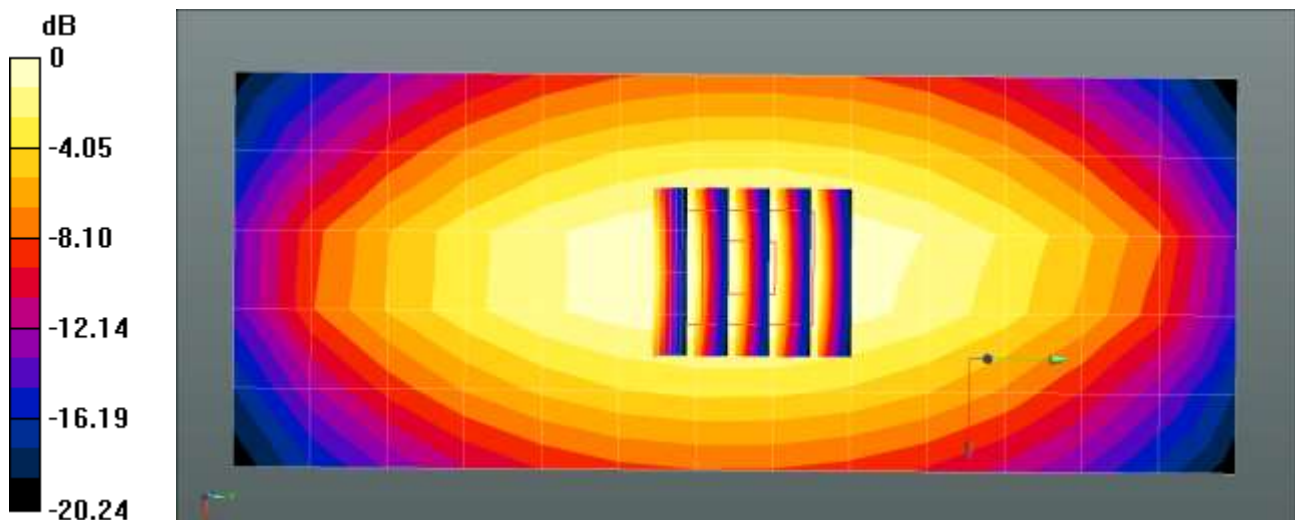
Peak SAR (extrapolated) = 0.596 W/kg

SAR(1 g) = 0.421 W/kg; SAR(10 g) = 0.291 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 73.5%

Maximum value of SAR (measured) = 0.528 W/kg



0 dB = 0.468 W/kg = -3.30 dBW/kg

Verification Data (750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 22.1 °C
 Test Date: 08/07/2020

DUT: Dipole 750 MHz D750V3; Type: D750V3

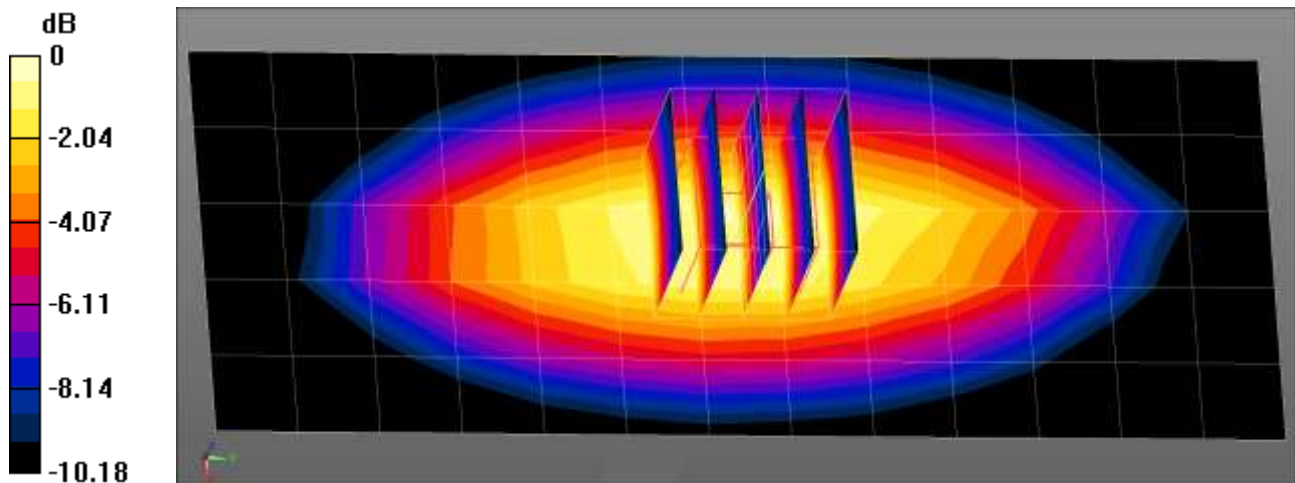
Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.909 \text{ S/m}$; $\epsilon_r = 41.486$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(10.27, 10.27, 10.27) @ 750 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

750MHz Head Verification/Area Scan (6x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.493 W/kg

750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 25.94 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.641 W/kg
SAR(1 g) = 0.413 W/kg; SAR(10 g) = 0.272 W/kg
 Maximum value of SAR (measured) = 0.561 W/kg



0 dB = 0.561 W/kg = -2.51 dBW/kg

Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.0 °C
 Test Date: 07/15/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 835 \text{ MHz}$; $\sigma = 0.944 \text{ S/m}$; $\epsilon_r = 42.61$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 835 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification (CDMA BC0)/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.582 W/kg

835MHz Head Verification (CDMA BC0)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.67 V/m; Power Drift = 0.04 dB

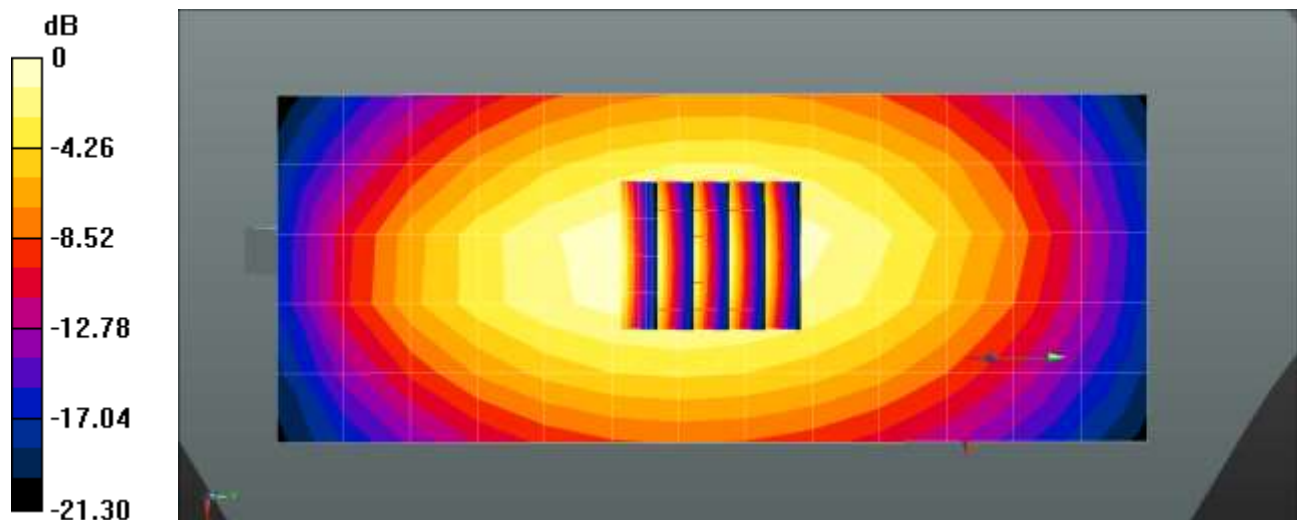
Peak SAR (extrapolated) = 0.660 W/kg

SAR(1 g) = 0.487 W/kg; SAR(10 g) = 0.337 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 73.1%

Maximum value of SAR (measured) = 0.611 W/kg



0 dB = 0.582 W/kg = -2.35 dBW/kg

Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.1 °C
Test Date: 07/14/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 835 \text{ MHz}$; $\sigma = 0.927 \text{ S/m}$; $\epsilon_r = 42.636$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 835 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification (GSM 850)/Area Scan (6x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.573 W/kg

835MHz Head Verification (GSM 850)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.68 V/m; Power Drift = 0.01 dB

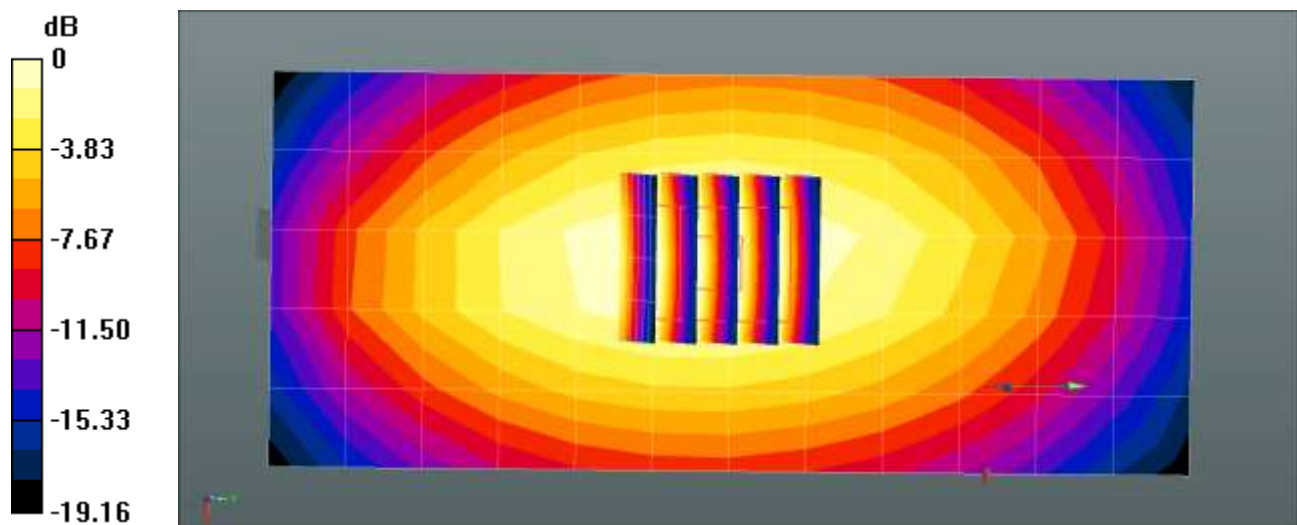
Peak SAR (extrapolated) = 0.679 W/kg

SAR(1 g) = 0.482 W/kg; SAR(10 g) = 0.333 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 73%

Maximum value of SAR (measured) = 0.626 W/kg



0 dB = 0.573 W/kg = -2.26 dBW/kg

Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.8 °C
Test Date: 07/10/2020

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; $\sigma = 0.945$ S/m; $\epsilon_r = 42.385$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(9.61, 9.61, 9.61) @ 835 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification (L26)/Area Scan (6x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.583 W/kg

835MHz Head Verification (L26)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.80 V/m; Power Drift = -0.02 dB

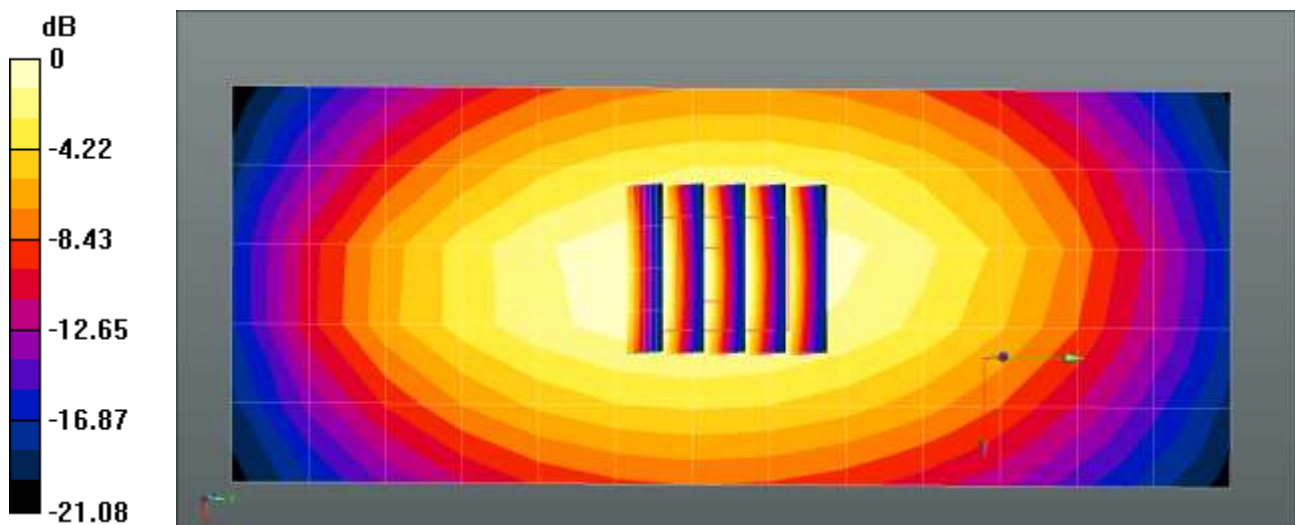
Peak SAR (extrapolated) = 0.665 W/kg

SAR(1 g) = 0.489 W/kg; SAR(10 g) = 0.338 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid

Ratio of SAR at M2 to SAR at M1 = 73.1%

Maximum value of SAR (measured) = 0.615 W/kg



0 dB = 0.584 W/kg = -2.33 dBW/kg

Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.3 °C
 Test Date: 08/06/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

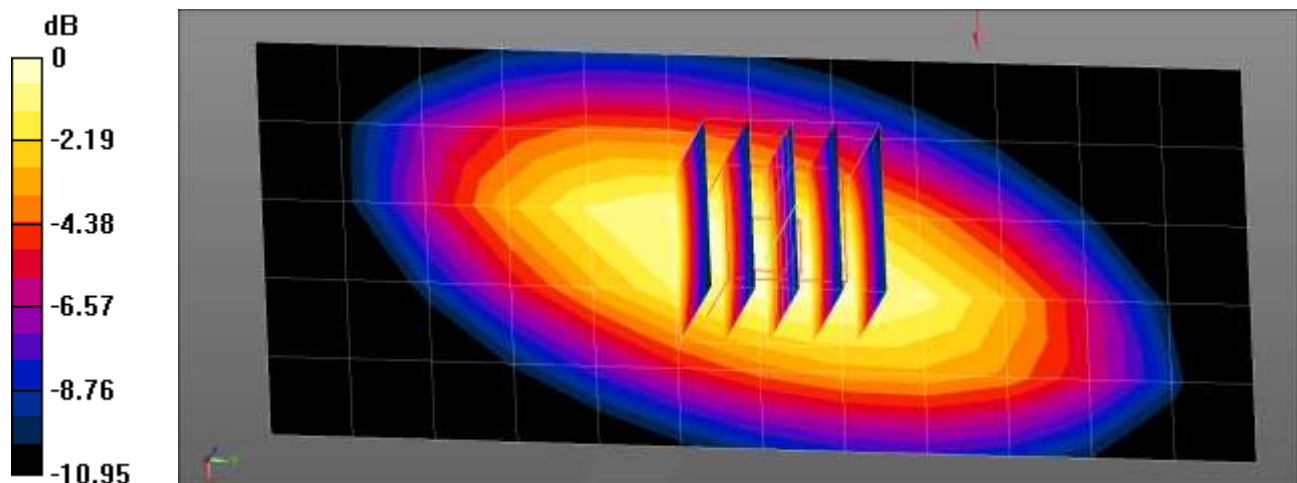
Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 835$ MHz; $\sigma = 0.919$ S/m; $\epsilon_r = 42.65$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(9.88, 9.88, 9.88) @ 835 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.603 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 27.94 V/m; Power Drift = -0.06 dB
 Peak SAR (extrapolated) = 0.749 W/kg
SAR(1 g) = 0.485 W/kg; SAR(10 g) = 0.320 W/kg
 Maximum value of SAR (measured) = 0.656 W/kg



0 dB = 0.656 W/kg = -1.83 dBW/kg

Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.47°C
Test Date: 07/16/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

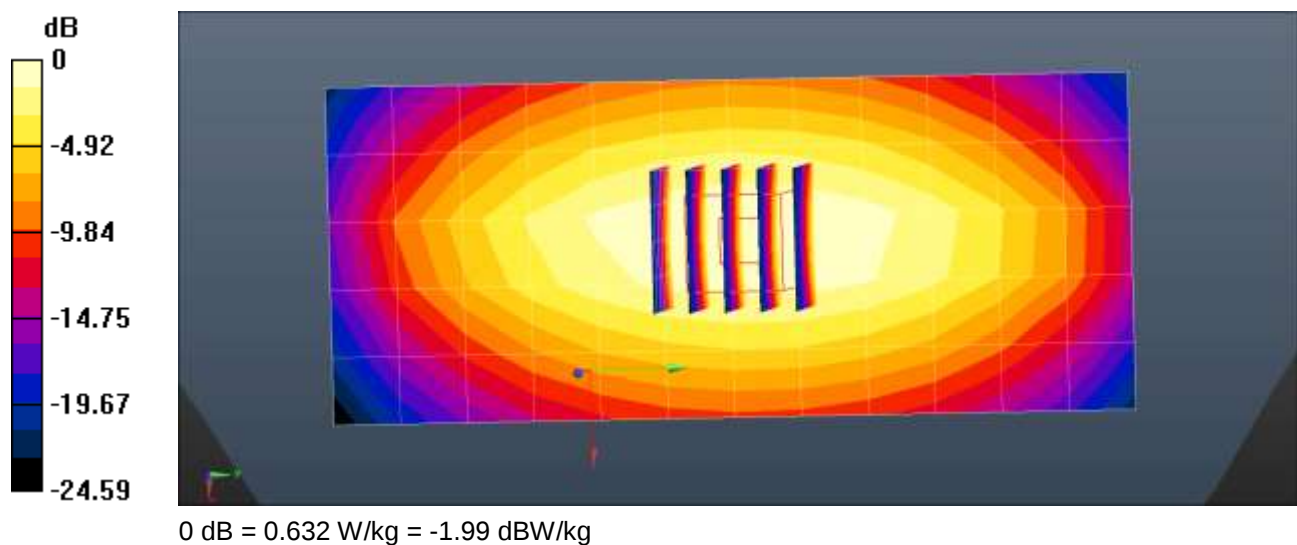
Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 835$ MHz; $\sigma = 0.945$ S/m; $\epsilon_r = 42.659$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 835 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification/Area Scan (6x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.632 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.29 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.776 W/kg
SAR(1 g) = 0.506 W/kg; SAR(10 g) = 0.333 W/kg
Smallest distance from peaks to all points 3 dB below = 20 mm
Ratio of SAR at M2 to SAR at M1 = 64.9%
Maximum value of SAR (measured) = 0.681 W/kg



Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.4 °C
Test Date: 07/15/2020

DUT: Dipole 835 MHz D835V2; Type: D835V2

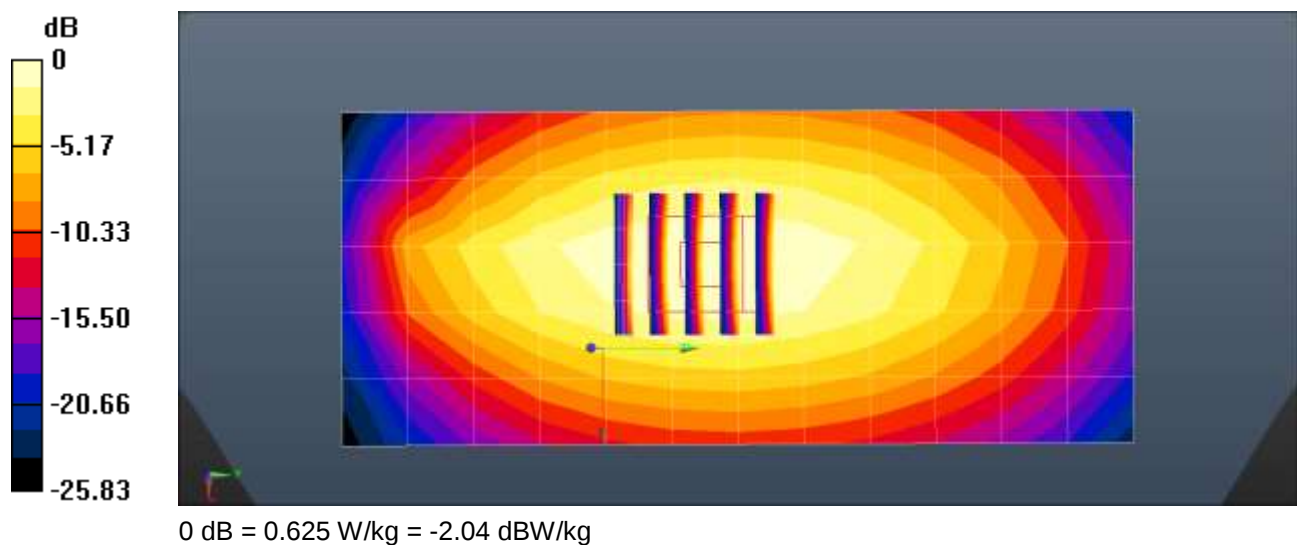
Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 835 \text{ MHz}$; $\sigma = 0.926 \text{ S/m}$; $\epsilon_r = 42.942$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.03, 9.03, 9.03) @ 835 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Right_20170913
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification/Area Scan (6x13x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 0.625 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 27.66 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.768 W/kg
SAR(1 g) = 0.503 W/kg; SAR(10 g) = 0.328 W/kg
Smallest distance from peaks to all points 3 dB below = 17.2 mm
Ratio of SAR at M2 to SAR at M1 = 65.2%
Maximum value of SAR (measured) = 0.679 W/kg



Verification Data (1800 MHz Head)

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

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

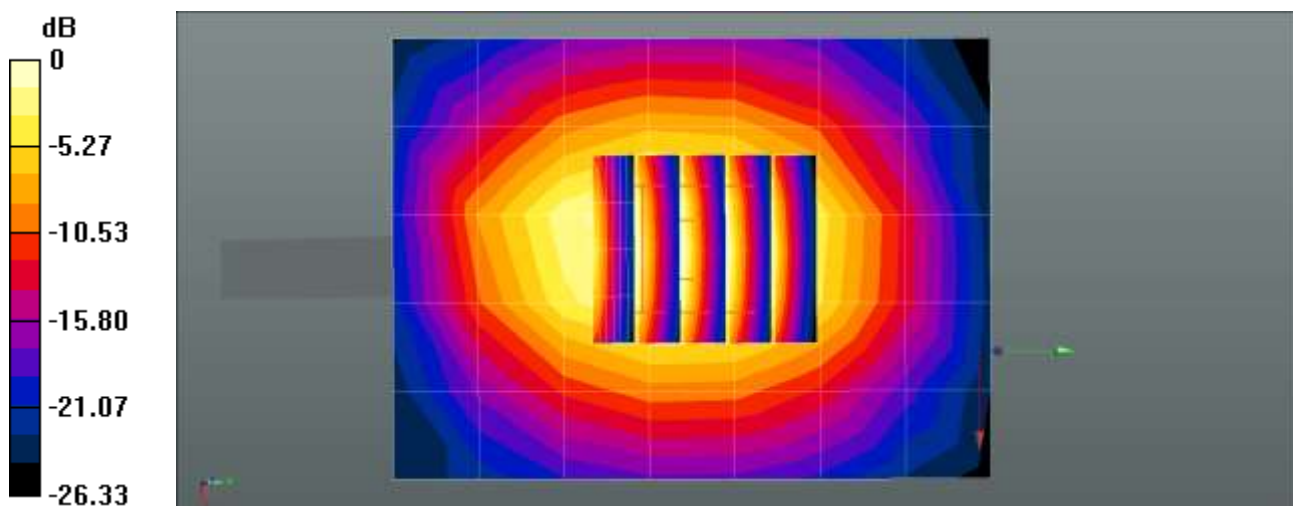
Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.381 \text{ S/m}$; $\epsilon_r = 40.287$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1800 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (6x8x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 2.00 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 43.12 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.82 W/kg
SAR(1 g) = 2.03 W/kg; SAR(10 g) = 1.06 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 53.5%
Maximum value of SAR (measured) = 2.60 W/kg



Verification Data (1800 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.7 °C
Test Date: 08/07/2020

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; $\sigma = 1.442$ S/m; $\epsilon_r = 38.522$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

SM-G781V/1800MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.31 W/kg

SM-G781V/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 46.47 V/m; Power Drift = -0.16 dB

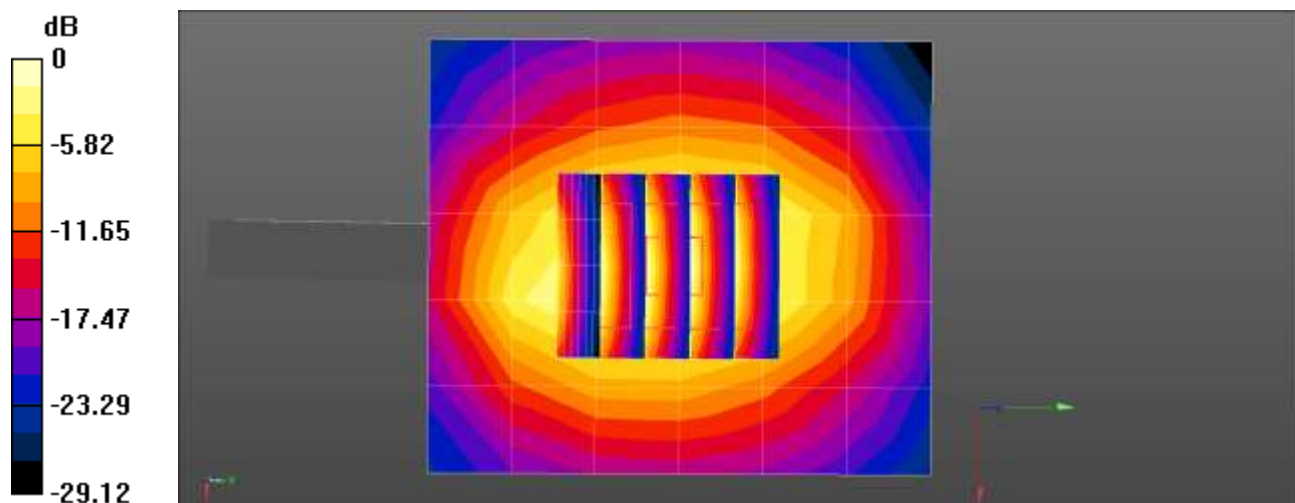
Peak SAR (extrapolated) = 3.62 W/kg

SAR(1 g) = 1.91 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 = 52.6%

Maximum value of SAR (measured) = 2.97 W/kg



0 dB = 2.31 W/kg = 3.64 dBW/kg

Verification Data (1800 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.9 °C
Test Date: 08/24/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.378 \text{ S/m}$; $\epsilon_r = 39.621$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.24, 5.24, 5.24) @ 1800 MHz; Calibrated: 2020-07-31
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (6x8x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 1.82 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 43.07 V/m; Power Drift = -0.04 dB

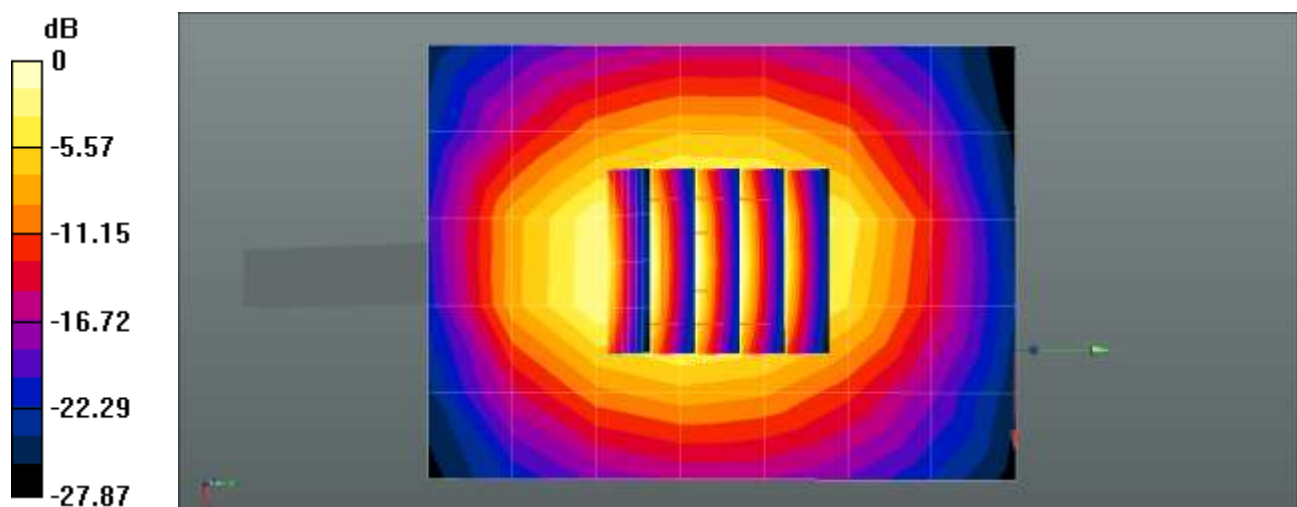
Peak SAR (extrapolated) = 3.60 W/kg

SAR(1 g) = 1.96 W/kg; SAR(10 g) = 1.03 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 54.4%

Maximum value of SAR (measured) = 2.51 W/kg



0 dB = 1.82 W/kg = 2.61 dBW/kg

Verification Data (1800 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.2 °C
 Test Date: 07/14/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.374 \text{ S/m}$; $\epsilon_r = 40.031$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14) @ 1800 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification(WCDMA B4)/Area Scan (6x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 2.65 W/kg

1800MHz Head Verification(WCDMA B4)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 47.89 V/m; Power Drift = 0.10 dB

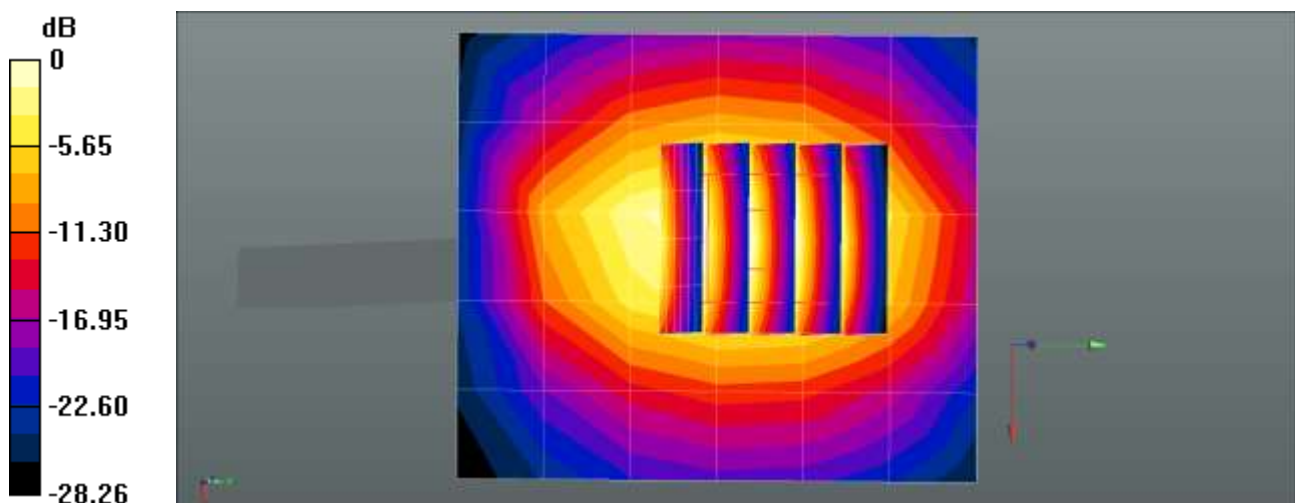
Peak SAR (extrapolated) = 4.01 W/kg

SAR(1 g) = 2.01 W/kg; SAR(10 g) = 1.03 W/kg

Smallest distance from peaks to all points 3 dB below = 10.1 mm

Ratio of SAR at M2 to SAR at M1 = 50%

Maximum value of SAR (measured) = 3.23 W/kg



0 dB = 2.65 W/kg = 4.24 dBW/kg

Verification Data (1800 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.3 °C
Test Date: 08/17/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

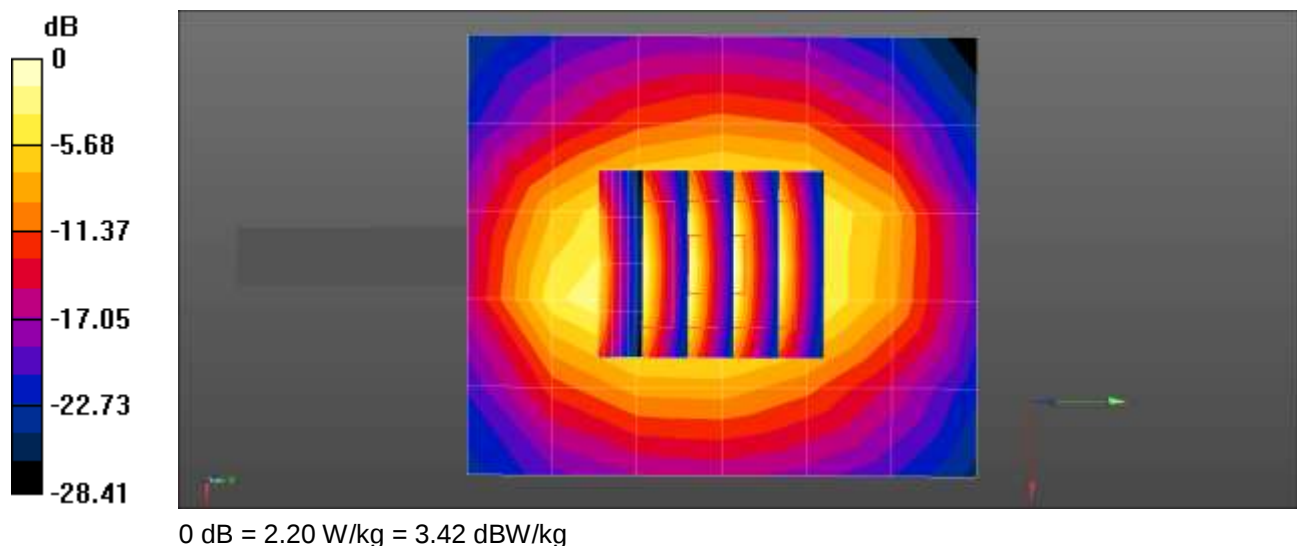
Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1800$ MHz; $\sigma = 1.381$ S/m; $\epsilon_r = 40.077$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

1800MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.20 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.50 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 3.49 W/kg
SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.961 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 52.4%
Maximum value of SAR (measured) = 2.86 W/kg

**Verification Data (1800 MHz Head)**

Test Laboratory: HCT CO., LTD

Input Power 0.05 W
Liquid Temp: 21.5 °C
Test Date: 08/18/2020

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

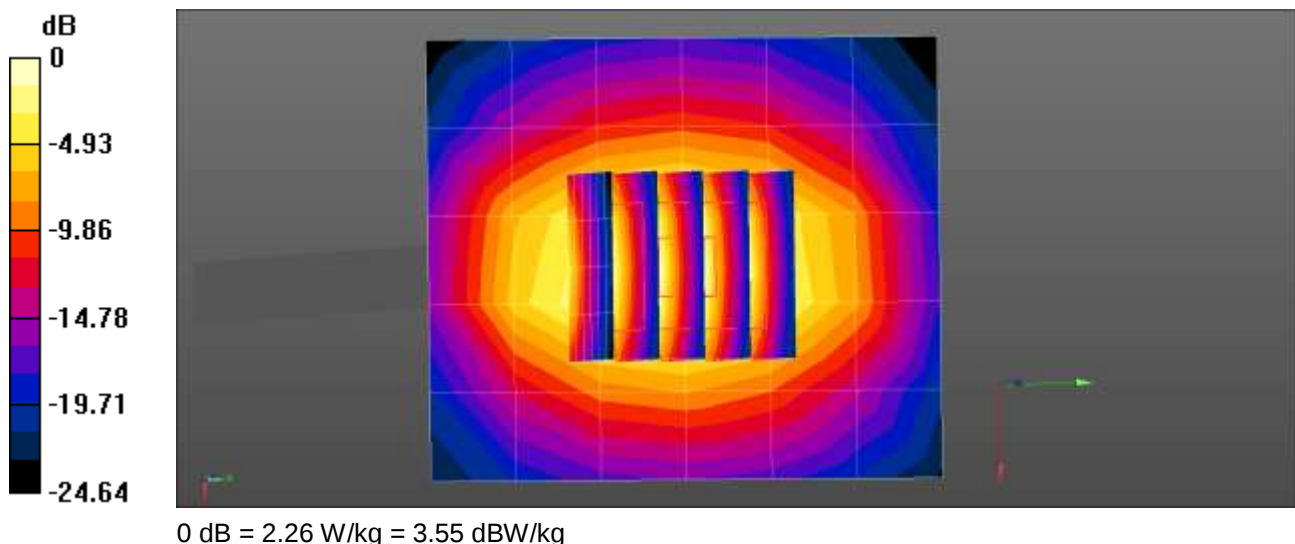
Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1800$ MHz; $\sigma = 1.386$ S/m; $\epsilon_r = 40.252$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

1800MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.26 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.39 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 3.48 W/kg
SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.965 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 52.4%
Maximum value of SAR (measured) = 2.86 W/kg

**Verification Data (1900 MHz Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W

Liquid Temp: 20.9 °C
Test Date: 07/27/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

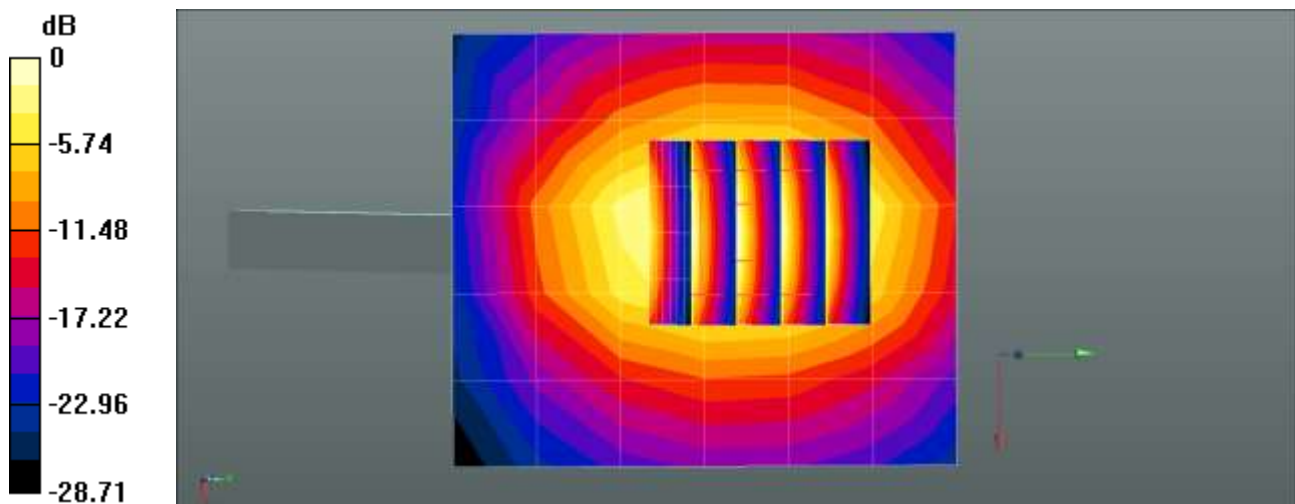
Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1900$ MHz; $\sigma = 1.444$ S/m; $\epsilon_r = 39.213$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.75, 7.75, 7.75) @ 1900 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

1900MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.72 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 46.99 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 4.14 W/kg
SAR(1 g) = 2.08 W/kg; SAR(10 g) = 1.06 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 50%
Maximum value of SAR (measured) = 3.37 W/kg



0 dB = 2.72 W/kg = 4.34 dBW/kg

Verification Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.9 °C

Test Date: 07/27/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

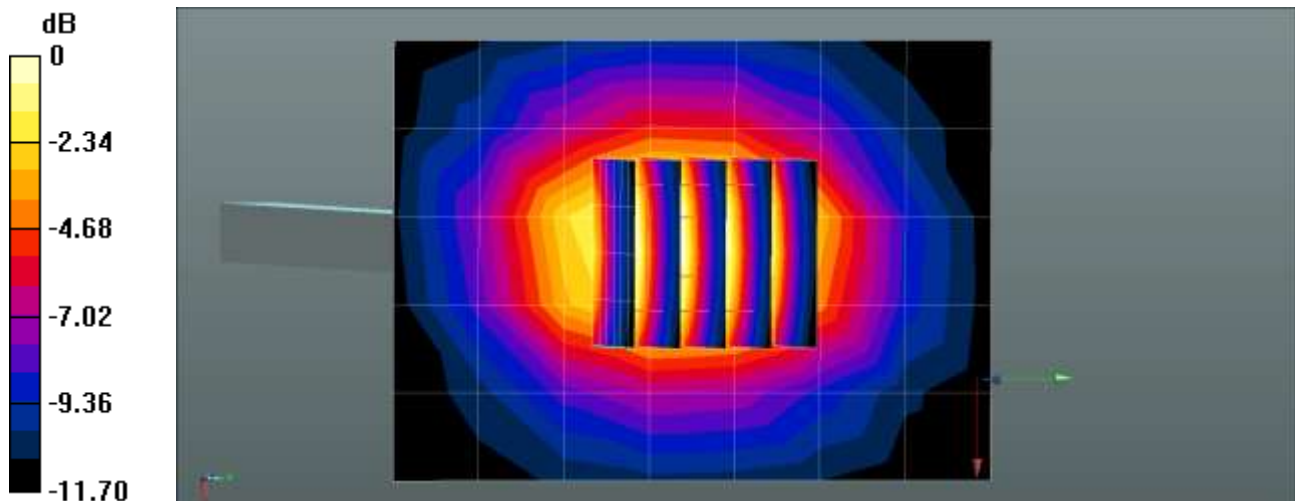
Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1900$ MHz; $\sigma = 1.444$ S/m; $\epsilon_r = 39.213$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

1900MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.78 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 39.66 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.06 W/kg
SAR(1 g) = 1.9 W/kg; SAR(10 g) = 1.1 W/kg
Smallest distance from peaks to all points 3 dB below = 13.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.7%
Maximum value of SAR (measured) = 2.11 W/kg



0 dB = 1.78 W/kg = 2.50 dBW/kg

Verification Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 21.6 °C
Test Date: 08/20/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

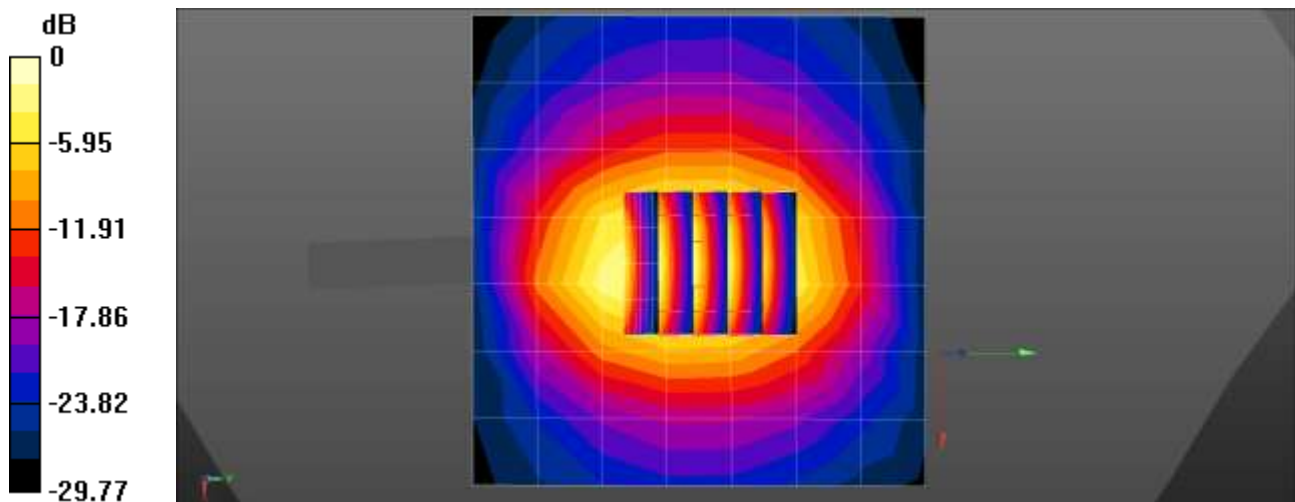
Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1900$ MHz; $\sigma = 1.404$ S/m; $\epsilon_r = 40.042$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

1900MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.60 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.63 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 3.99 W/kg
SAR(1 g) = 2.03 W/kg; SAR(10 g) = 1.04 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 50.6%
Maximum value of SAR (measured) = 3.28 W/kg



0 dB = 2.60 W/kg = 4.14 dBW/kg

Verification Data (1900 MHz Head)

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

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; $\sigma = 1.404$ S/m; $\epsilon_r = 39.843$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.10 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 49.03 V/m; Power Drift = -0.07 dB

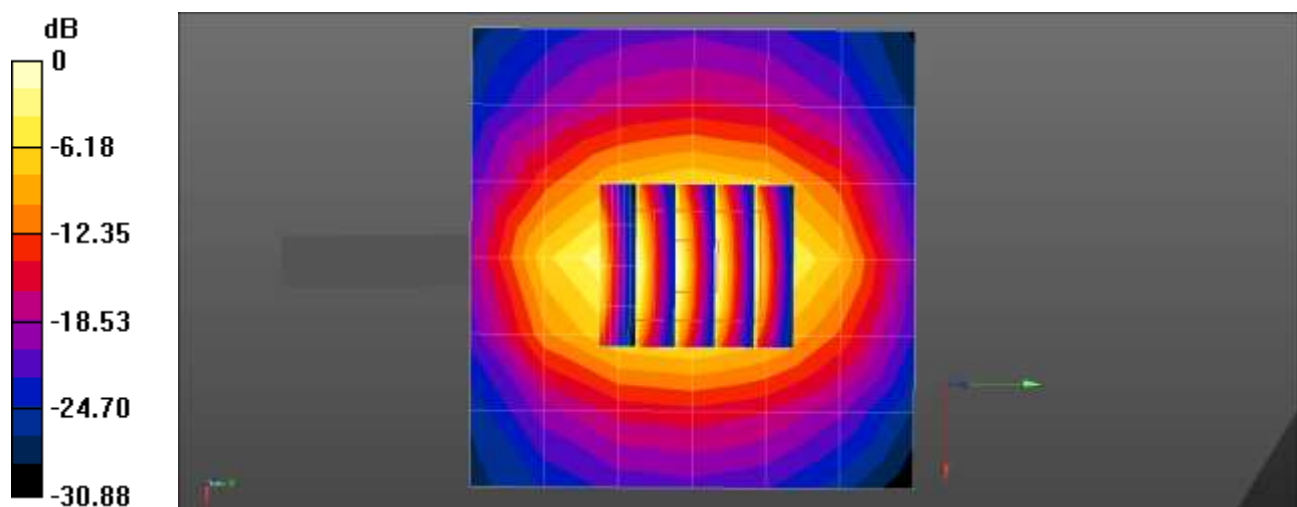
Peak SAR (extrapolated) = 3.75 W/kg

SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.02 W/kg

Smallest distance from peaks to all points 3 dB below = 10.7 mm

Ratio of SAR at M2 to SAR at M1 = 52.4%

Maximum value of SAR (measured) = 3.13 W/kg



0 dB = 3.10 W/kg = 4.92 dBW/kg

Verification Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 22.4 °C
 Test Date: 08/14/2020

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; $\sigma = 1.407$ S/m; $\epsilon_r = 39.912$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

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

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 49.15 V/m; Power Drift = -0.12 dB

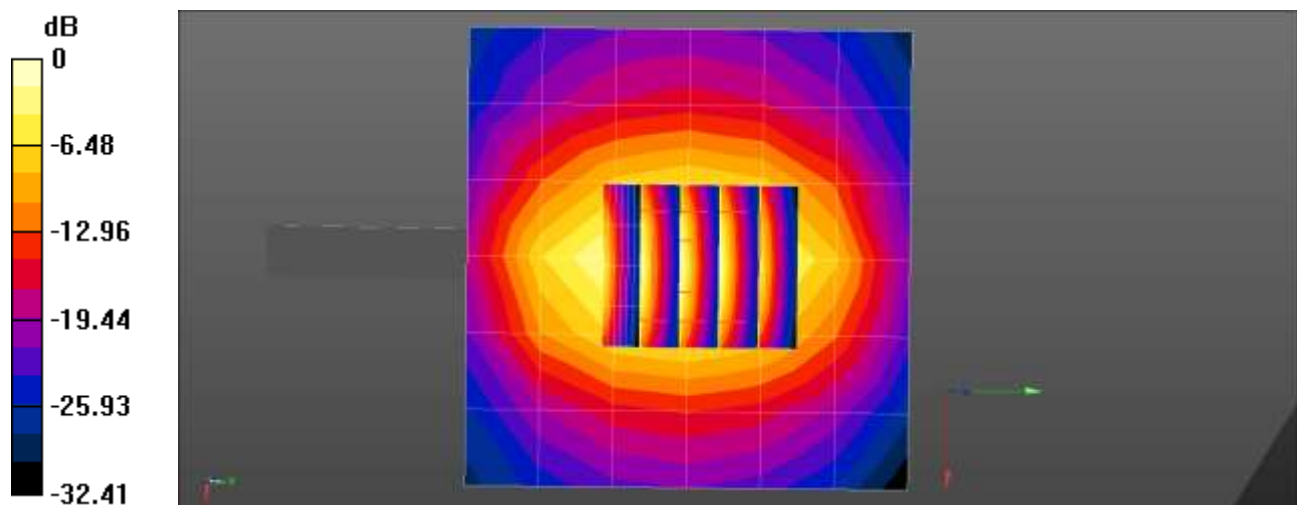
Peak SAR (extrapolated) = 3.78 W/kg

SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.01 W/kg

Smallest distance from peaks to all points 3 dB below = 10.7 mm

Ratio of SAR at M2 to SAR at M1 = 52%

Maximum value of SAR (measured) = 3.15 W/kg



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

Verification Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.8 °C
 Test Date: 08/12/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.431$ S/m; $\epsilon_r = 39.619$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.33, 8.33, 8.33) @ 1900 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (2);

1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.99 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 47.49 V/m; Power Drift = -0.08 dB

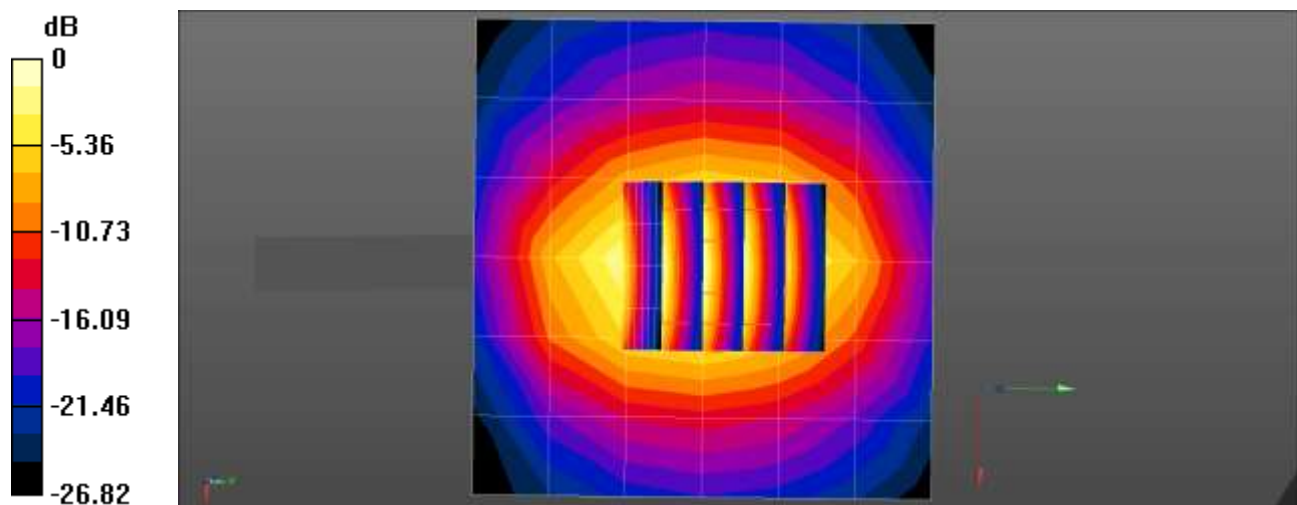
Peak SAR (extrapolated) = 3.79 W/kg

SAR(1 g) = 1.9 W/kg; SAR(10 g) = 0.980 W/kg

Smallest distance from peaks to all points 3 dB below = 11.2 mm

Ratio of SAR at M2 to SAR at M1 = 49.9%

Maximum value of SAR (measured) = 3.08 W/kg



0 dB = 2.99 W/kg = 4.76 dBW/kg

Verification Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 °C
Test Date: 08/16/2020

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; $\sigma = 1.394$ S/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.08 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 48.68 V/m; Power Drift = -0.07 dB

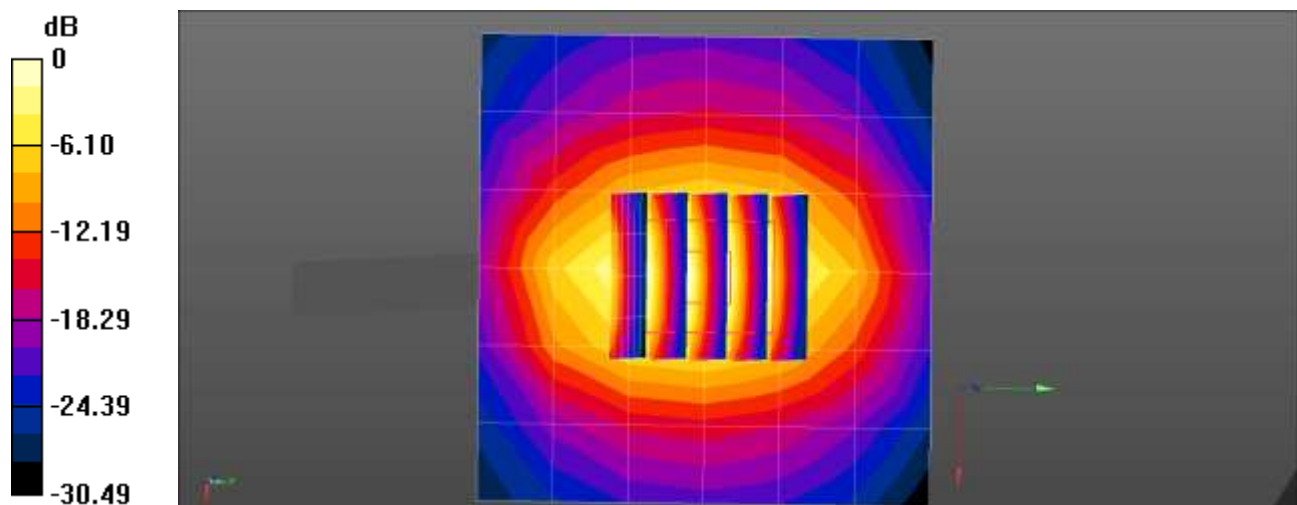
Peak SAR (extrapolated) = 3.72 W/kg

SAR(1 g) = 1.95 W/kg; SAR(10 g) = 1 W/kg

Smallest distance from peaks to all points 3 dB below = 10.7 mm

Ratio of SAR at M2 to SAR at M1 = 52.1%

Maximum value of SAR (measured) = 3.10 W/kg



0 dB = 3.08 W/kg = 4.88 dBW/kg

Verification Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.4 °C
 Test Date: 08/14/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

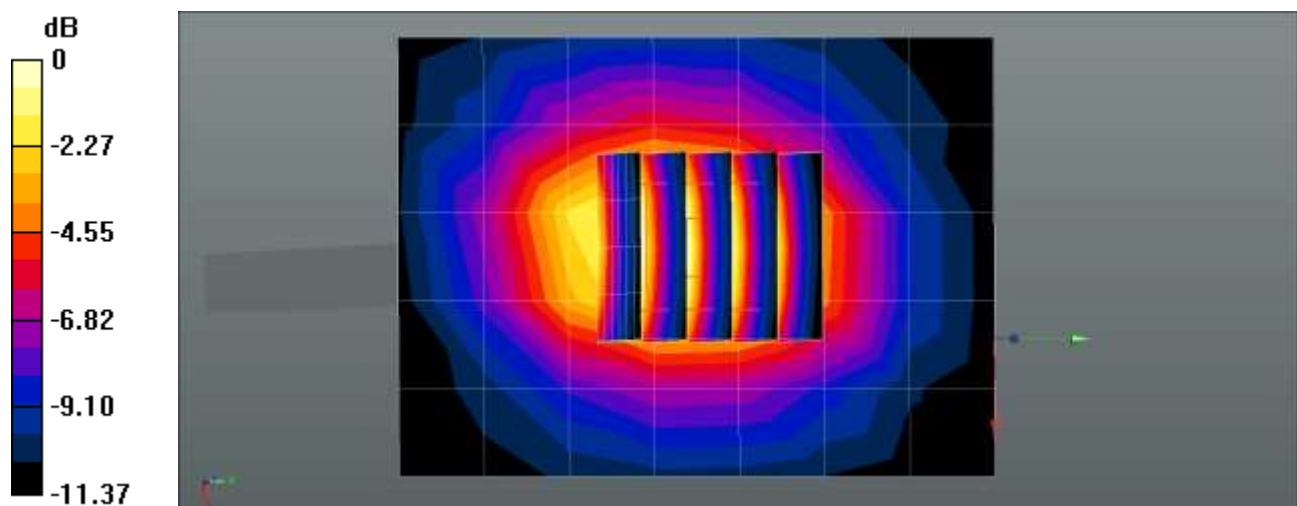
Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.436$ S/m; $\epsilon_r = 40.3$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

1900MHz Head Verification/Area Scan (6x8x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.73 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 39.33 V/m; Power Drift = 0.00 dB
 Peak SAR (extrapolated) = 3.02 W/kg
SAR(1 g) = 1.84 W/kg; SAR(10 g) = 1.06 W/kg
 Smallest distance from peaks to all points 3 dB below = 13.7 mm
 Ratio of SAR at M2 to SAR at M1 = 61.1%
 Maximum value of SAR (measured) = 2.04 W/kg



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

Verification Data (1900 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.3 °C
Test Date: 08/10/2020

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

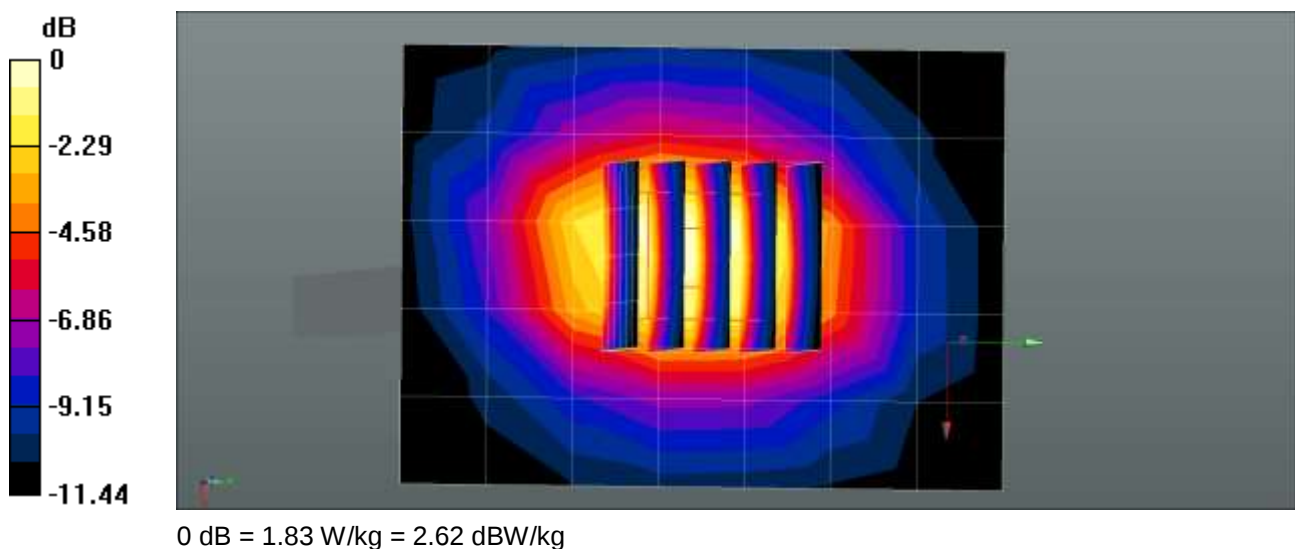
Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.398 \text{ S/m}$; $\epsilon_r = 39.798$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

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

1900MHz Head Verification/Area Scan (6x8x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 1.83 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 41.41 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.30 W/kg
SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.12 W/kg
Smallest distance from peaks to all points 3 dB below = 12.8 mm
Ratio of SAR at M2 to SAR at M1 = 60.3%
Maximum value of SAR (measured) = 2.19 W/kg



Verification Data (2300 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.8 °C
 Test Date: 08/08/2020

DUT: Dipole 2300 MHz D2300V2; Type: D2300V3

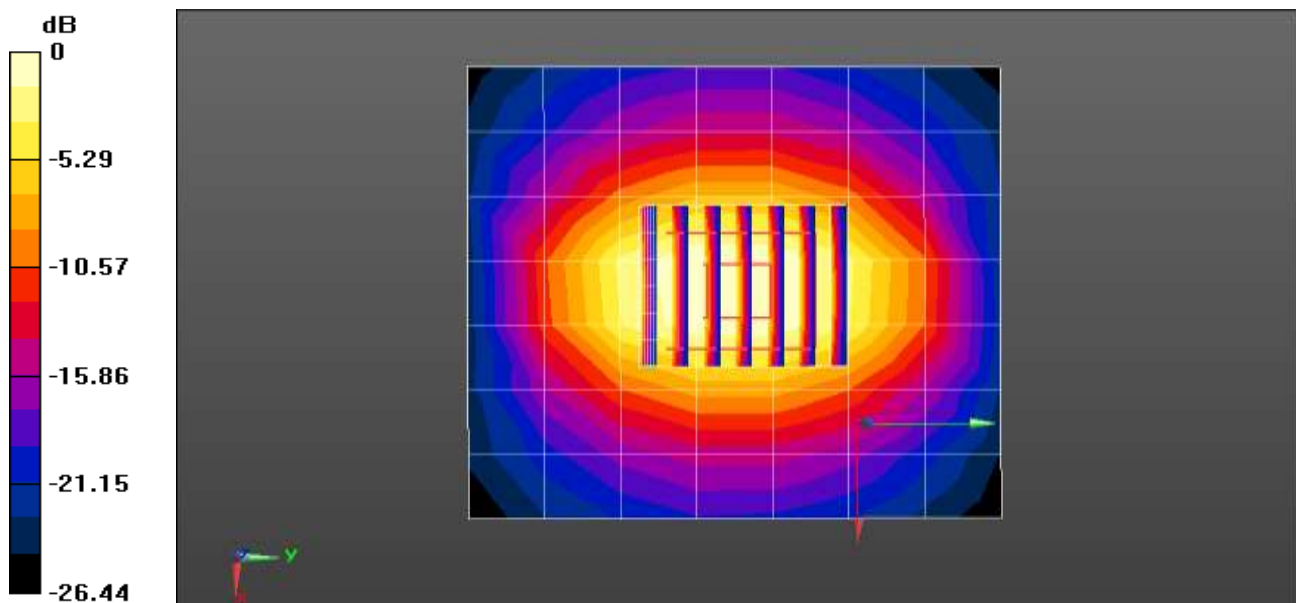
Communication System: UID 0, CW (0); Frequency: 2300 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2300$ MHz; $\sigma = 1.632$ S/m; $\epsilon_r = 41.042$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2300 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2300MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 2.92 W/kg

2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 51.05 V/m; Power Drift = 0.04 dB
 Peak SAR (extrapolated) = 5.15 W/kg
SAR(1 g) = 2.38 W/kg; SAR(10 g) = 1.12 W/kg
 Smallest distance from peaks to all points 3 dB below = 9 mm
 Ratio of SAR at M2 to SAR at M1 = 46.1%
 Maximum value of SAR (measured) = 4.06 W/kg



0 dB = 2.92 W/kg = 4.65 dBW/kg

Verification Data (2300 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 21.0 °C
Test Date: 08/07/2020

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; $\sigma = 1.634$ S/m; $\epsilon_r = 40.966$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.47, 7.47, 7.47) @ 2300 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2300MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 2.98 W/kg

2300MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 51.51 V/m; Power Drift = 0.03 dB

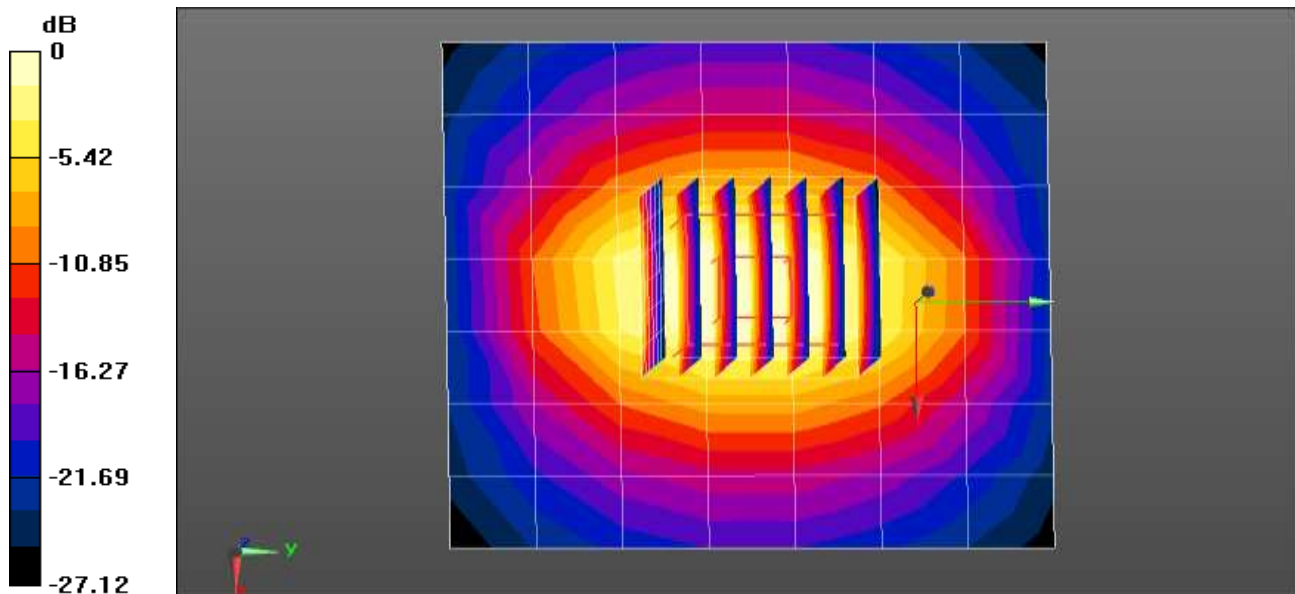
Peak SAR (extrapolated) = 5.22 W/kg

SAR(1 g) = 2.41 W/kg; SAR(10 g) = 1.13 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 46%

Maximum value of SAR (measured) = 4.11 W/kg



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

Verification Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.5 °C
 Test Date: 08/10/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

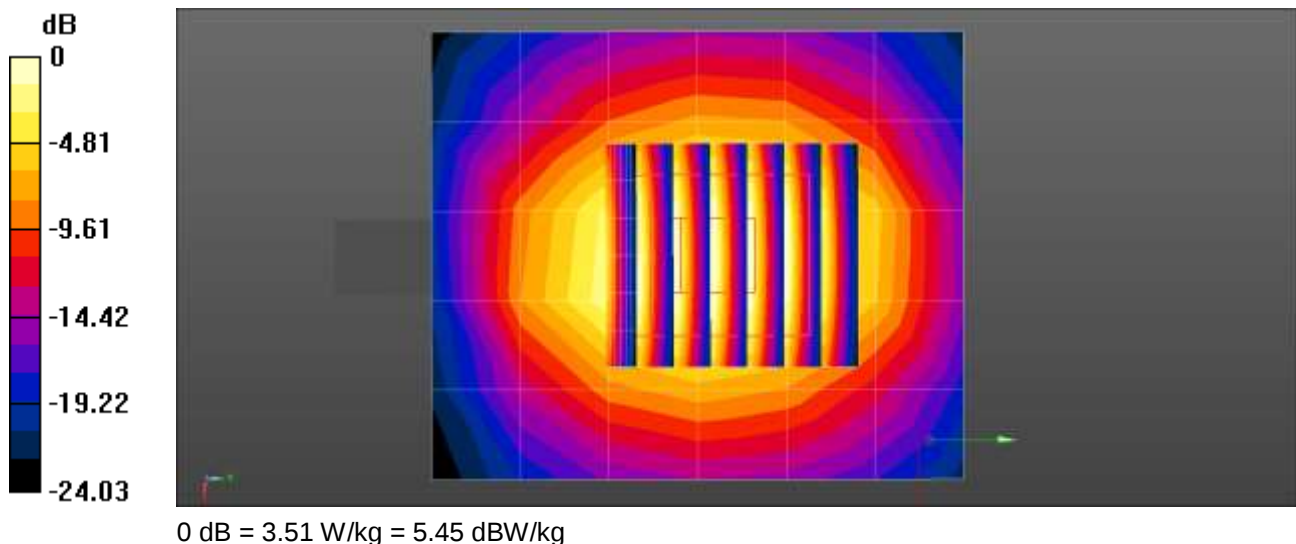
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.813$ S/m; $\epsilon_r = 40.222$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3716; ConvF(7.34, 7.34, 7.34) @ 2450 MHz; Calibrated: 2019-11-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn868; Calibrated: 2019-09-04
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 3.51 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 52.10 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 5.80 W/kg
SAR(1 g) = 2.6 W/kg; SAR(10 g) = 1.18 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.2 mm
 Ratio of SAR at M2 to SAR at M1 = 43.8%
 Maximum value of SAR (measured) = 4.55 W/kg



Verification Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 21.2 °C
Test Date: 08/12/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

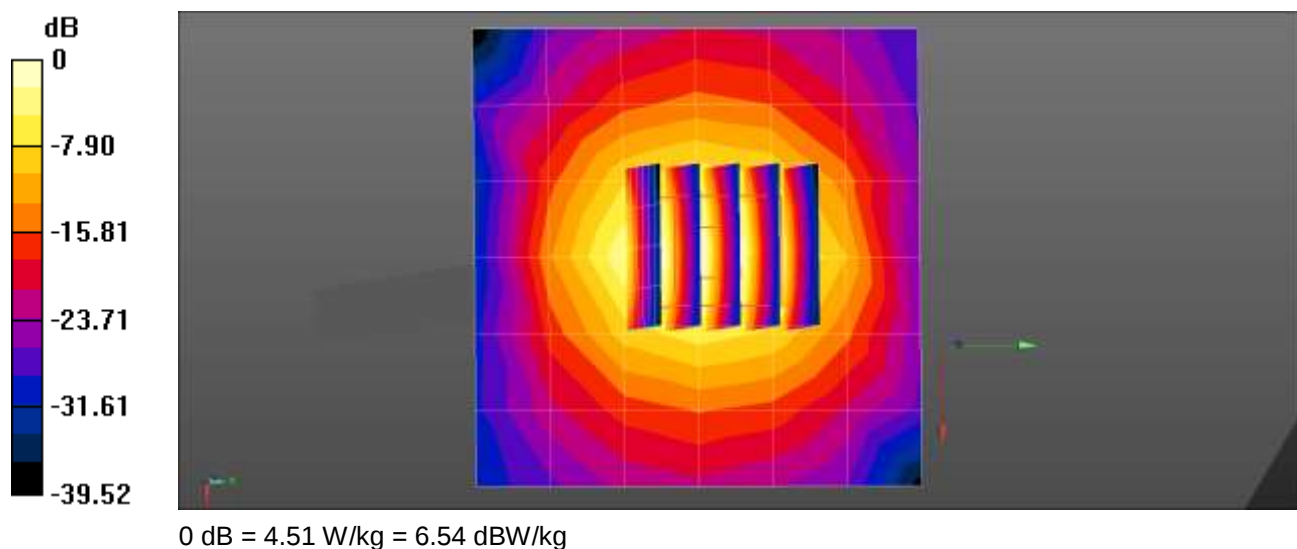
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2450$ MHz; $\sigma = 1.805$ S/m; $\epsilon_r = 38.582$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.49, 7.49, 7.49) @ 2450 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 4.51 W/kg

2450MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 51.48 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 5.81 W/kg
SAR(1 g) = 2.57 W/kg; SAR(10 g) = 1.17 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 43%
Maximum value of SAR (measured) = 4.51 W/kg



Verification Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.7 °C
Test Date: 08/11/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

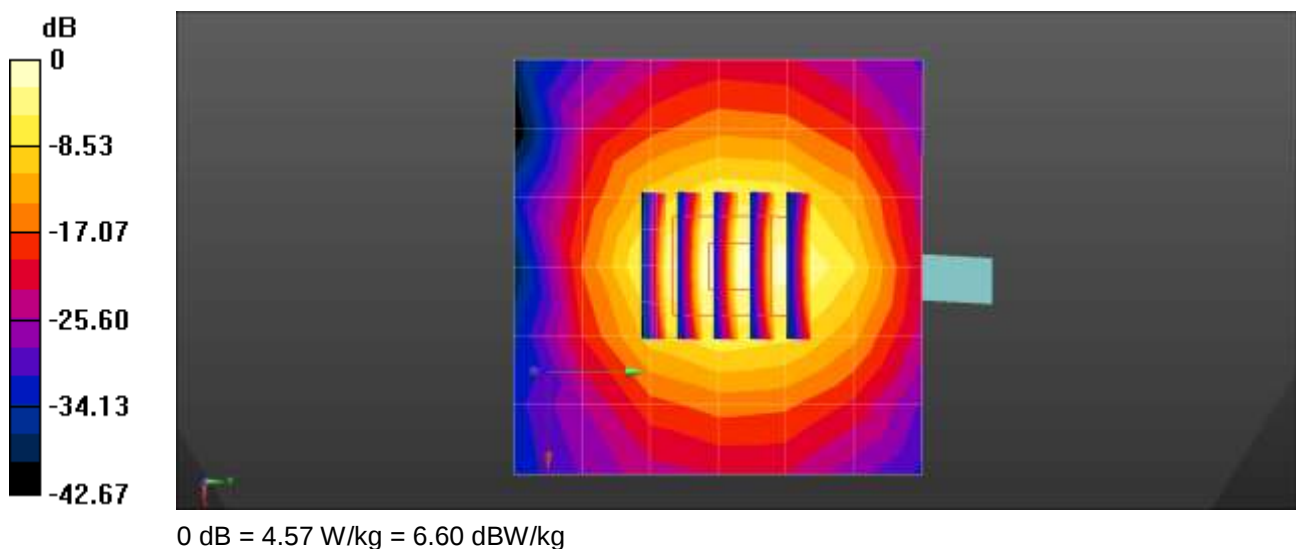
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.821$ S/m; $\epsilon_r = 39.701$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.49, 7.49, 7.49) @ 2450 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 4.57 W/kg

2450MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 51.36 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 6.19 W/kg
SAR(1 g) = 2.74 W/kg; SAR(10 g) = 1.24 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 43.1%
Maximum value of SAR (measured) = 4.84 W/kg



Verification Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.5 °C
 Test Date: 07/20/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

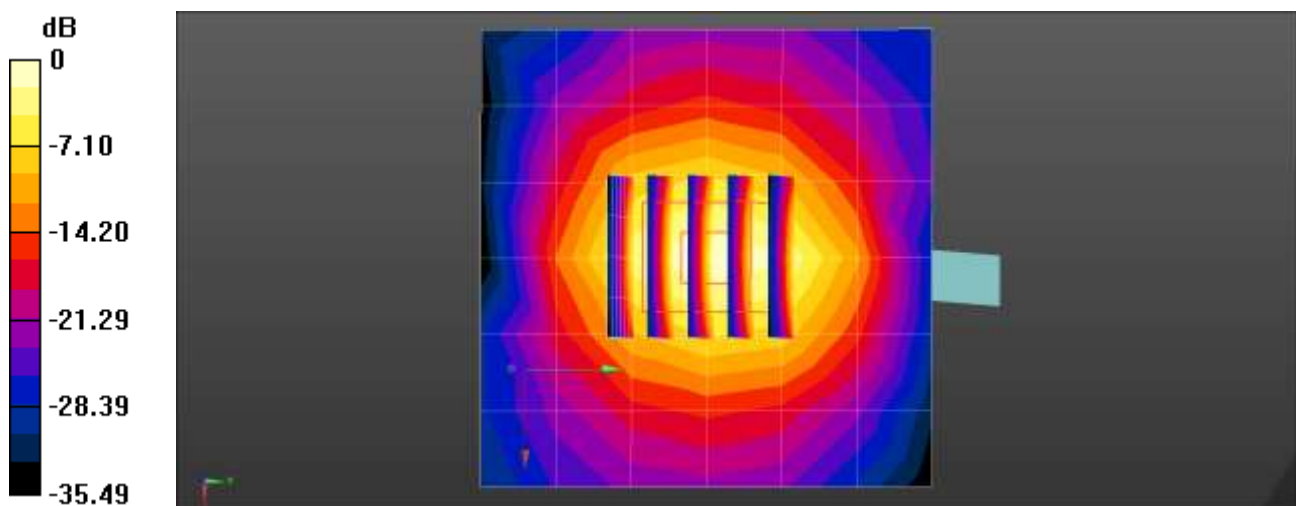
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.803$ S/m; $\epsilon_r = 38.379$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.49, 7.49, 7.49) @ 2450 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn648; Calibrated: 2020-05-25
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 4.75 W/kg

2450MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 52.40 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 6.15 W/kg
SAR(1 g) = 2.64 W/kg; SAR(10 g) = 1.19 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.6 mm
 Ratio of SAR at M2 to SAR at M1 = 41.9%
 Maximum value of SAR (measured) = 4.74 W/kg



0 dB = 4.75 W/kg = 6.76 dBW/kg

Verification Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.9 °C
 Test Date: 07/24/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

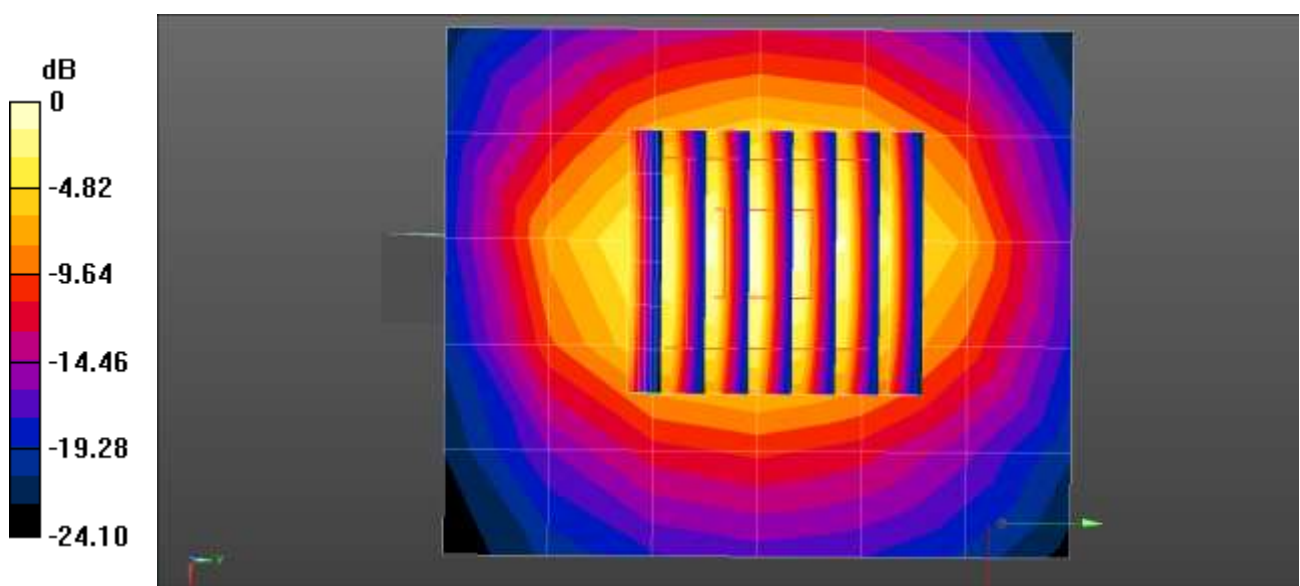
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.799$ S/m; $\epsilon_r = 38.388$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

2450MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 4.33 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 48.02 V/m; Power Drift = 0.16 dB
 Peak SAR (extrapolated) = 5.57 W/kg
SAR(1 g) = 2.56 W/kg; SAR(10 g) = 1.17 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.8 mm
 Ratio of SAR at M2 to SAR at M1 = 45.2%
 Maximum value of SAR (measured) = 4.40 W/kg



0 dB = 4.33 W/kg = 6.37 dBW/kg

Verification Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.2 °C
 Test Date: 08/12/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

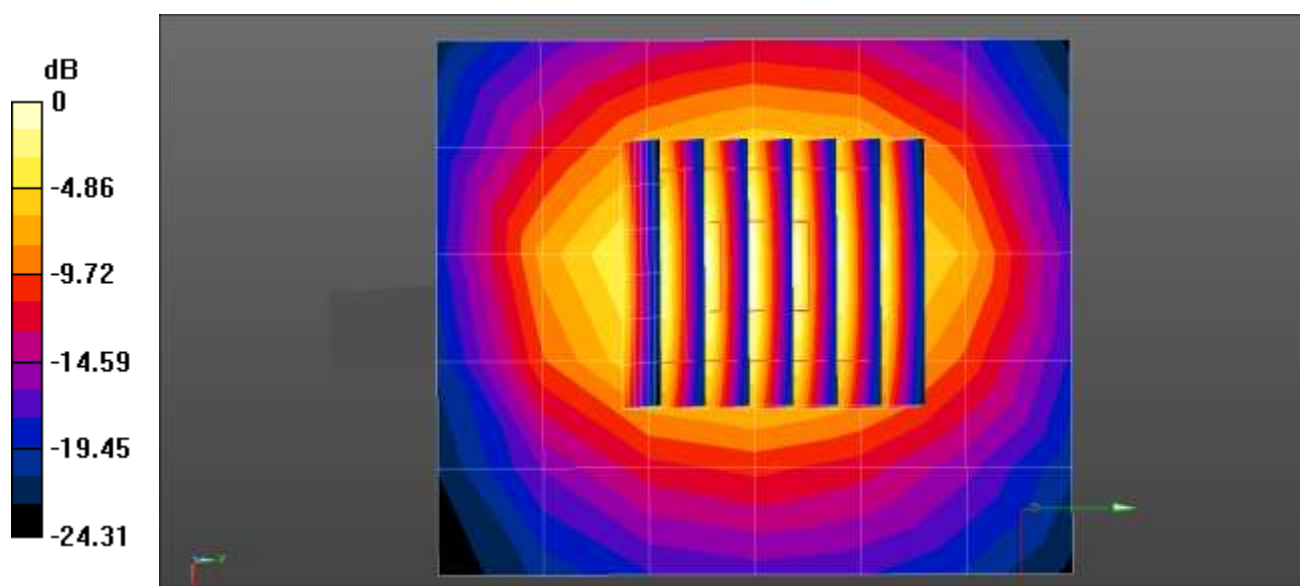
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2450$ MHz; $\sigma = 1.799$ S/m; $\epsilon_r = 38.361$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

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

2450MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 4.34 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 48.16 V/m; Power Drift = 0.14 dB
 Peak SAR (extrapolated) = 5.61 W/kg
SAR(1 g) = 2.56 W/kg; SAR(10 g) = 1.17 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.8 mm
 Ratio of SAR at M2 to SAR at M1 = 45.1%
 Maximum value of SAR (measured) = 4.44 W/kg



0 dB = 4.34 W/kg = 6.37 dBW/kg

Verification Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 21.8 °C
Test Date: 07/29/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

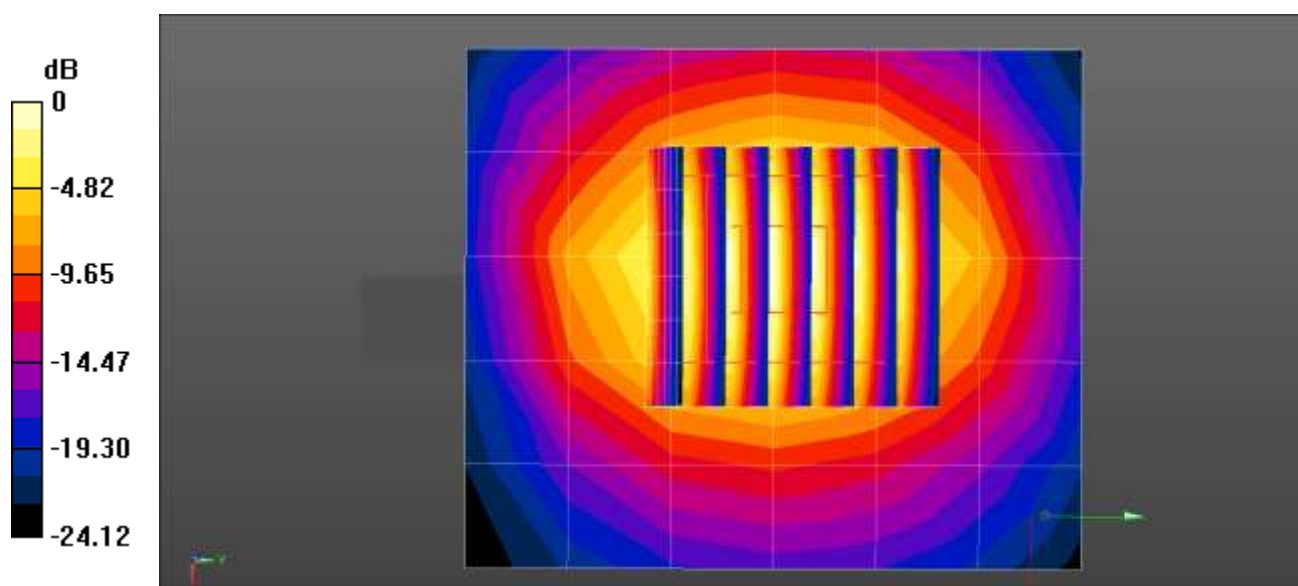
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.804$ S/m; $\epsilon_r = 40.557$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

2450MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.46 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 48.94 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 5.57 W/kg
SAR(1 g) = 2.56 W/kg; SAR(10 g) = 1.17 W/kg
Smallest distance from peaks to all points 3 dB below = 9.8 mm
Ratio of SAR at M2 to SAR at M1 = 45.2%
Maximum value of SAR (measured) = 4.41 W/kg



0 dB = 4.46 W/kg = 6.49 dBW/kg

Verification Data (2450 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 21.1 °C
Test Date: 07/30/2020

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

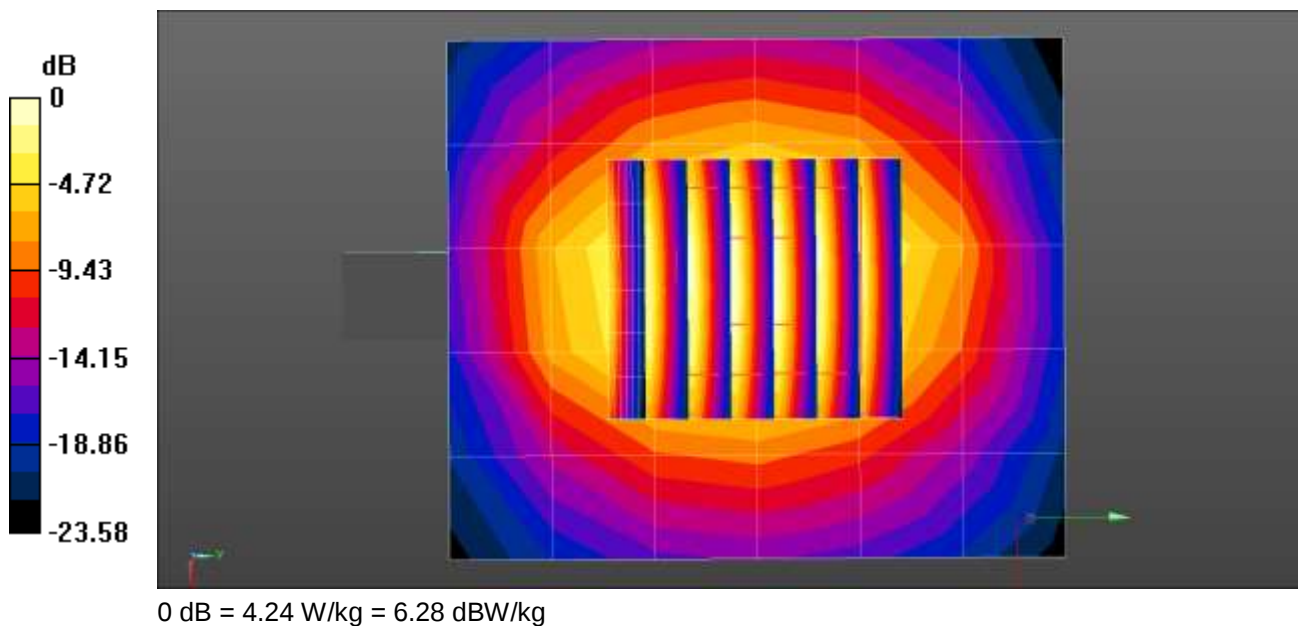
Communication System: UID 0, CW (0); Frequency: 2450 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 2450$ MHz; $\sigma = 1.805$ S/m; $\epsilon_r = 40.579$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

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

2450MHz Head Verification/Area Scan (6x7x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.24 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.51 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 6.29 W/kg
SAR(1 g) = 2.79 W/kg; SAR(10 g) = 1.27 W/kg
Smallest distance from peaks to all points 3 dB below = 9.2 mm
Ratio of SAR at M2 to SAR at M1 = 43.6%
Maximum value of SAR (measured) = 4.88 W/kg



Verification Data (2600 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.6 °C
Test Date: 07/28/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

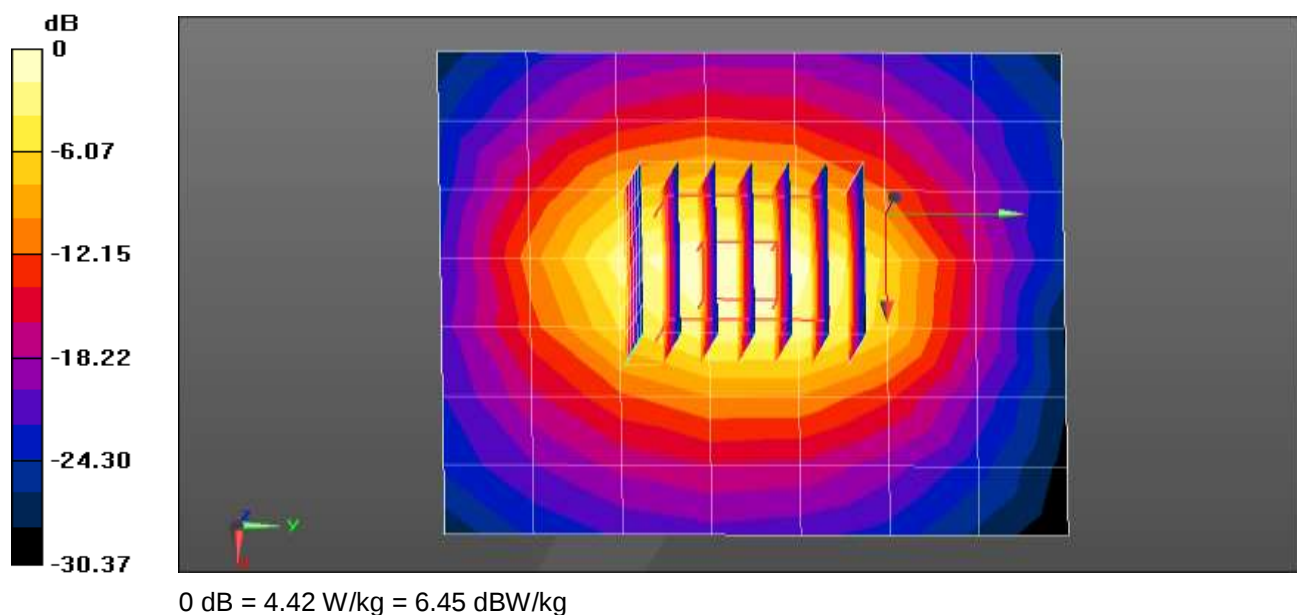
Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2600$ MHz; $\sigma = 1.983$ S/m; $\epsilon_r = 39.778$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2600 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2600MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.42 W/kg

2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.61 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 6.56 W/kg
SAR(1 g) = 2.79 W/kg; SAR(10 g) = 1.22 W/kg
Smallest distance from peaks to all points 3 dB below = 9.2 mm
Ratio of SAR at M2 to SAR at M1 = 41.8%
Maximum value of SAR (measured) = 5.05 W/kg



Verification Data (2600 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.4 °C
 Test Date: 07/29/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

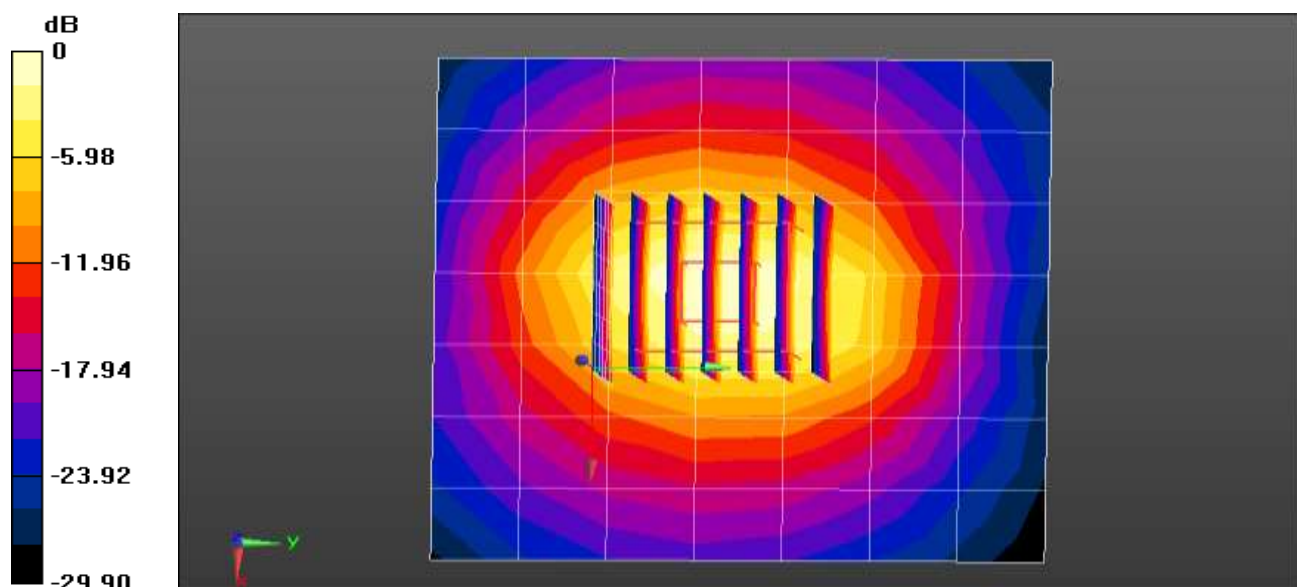
Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2600$ MHz; $\sigma = 1.975$ S/m; $\epsilon_r = 38.856$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.2, 7.2, 7.2) @ 2600 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2/3/2020
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

2600MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 4.38 W/kg

2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 50.60 V/m; Power Drift = 0.05 dB
 Peak SAR (extrapolated) = 6.50 W/kg
SAR(1 g) = 2.77 W/kg; SAR(10 g) = 1.21 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.2 mm
 Ratio of SAR at M2 to SAR at M1 = 42%
 Maximum value of SAR (measured) = 5.01 W/kg



0 dB = 4.38 W/kg = 6.42 dBW/kg

Verification Data (2600 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.7 °C
 Test Date: 08/06/2020

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

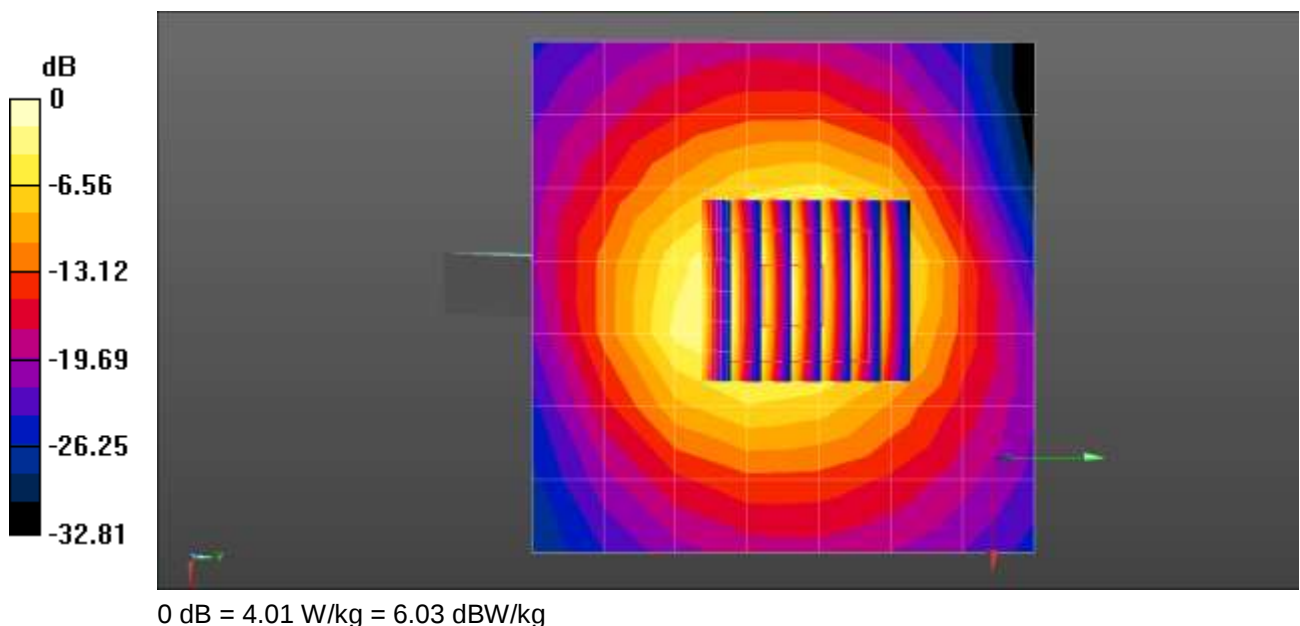
Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2600$ MHz; $\sigma = 1.948$ S/m; $\epsilon_r = 37.849$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.41, 7.41, 7.41) @ 2600 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

2600MHz Head Verification(n41)/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 4.01 W/kg

2600MHz Head Verification(n41)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 53.74 V/m; Power Drift = -0.03 dB
 Peak SAR (extrapolated) = 6.63 W/kg
SAR(1 g) = 2.86 W/kg; SAR(10 g) = 1.27 W/kg
 Smallest distance from peaks to all points 3 dB below = 9.8 mm
 Ratio of SAR at M2 to SAR at M1 = 42%
 Maximum value of SAR (measured) = 5.08 W/kg



Verification Data (5250 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.3 °C
Test Date: 07/22/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

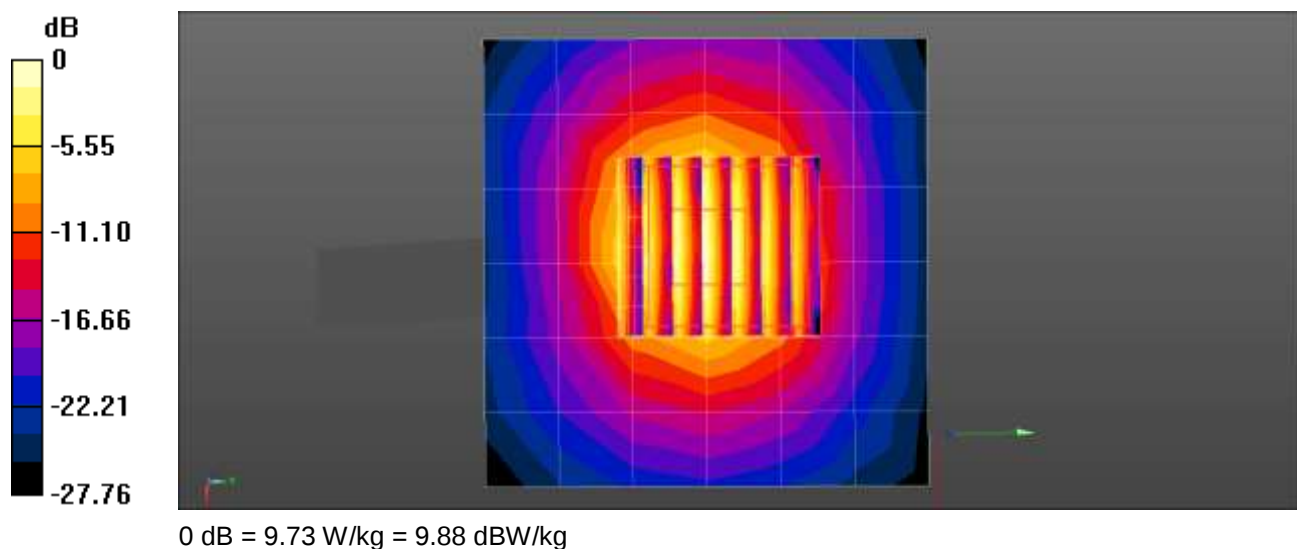
Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 5250$ MHz; $\sigma = 4.618$ S/m; $\epsilon_r = 37.071$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5250 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.73 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.64 V/m; Power Drift = 0.21 dB
Peak SAR (extrapolated) = 18.4 W/kg
SAR(1 g) = 4.08 W/kg; SAR(10 g) = 1.15 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.4%
Maximum value of SAR (measured) = 10.5 W/kg



Verification Data (5250 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.4 °C
 Test Date: 07/20/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

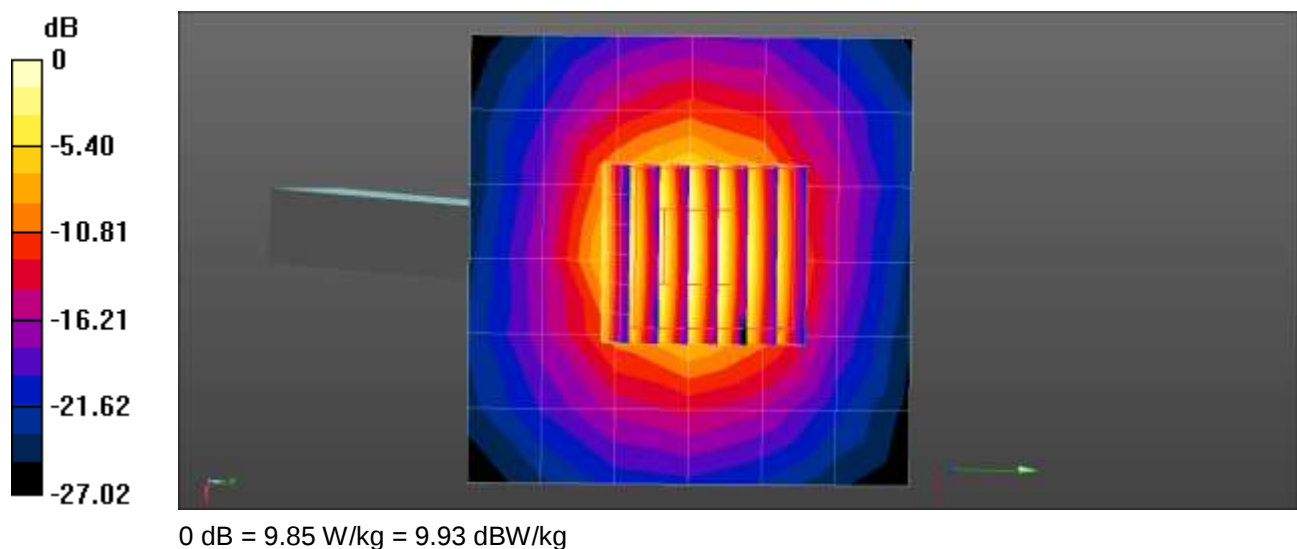
Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5250$ MHz; $\sigma = 4.59$ S/m; $\epsilon_r = 37.096$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5250 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 9.85 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 50.91 V/m; Power Drift = 0.07 dB
 Peak SAR (extrapolated) = 17.8 W/kg
SAR(1 g) = 3.91 W/kg; SAR(10 g) = 1.12 W/kg
 Smallest distance from peaks to all points 3 dB below = 7.2 mm
 Ratio of SAR at M2 to SAR at M1 = 60.8%
 Maximum value of SAR (measured) = 9.97 W/kg



Verification Data (5250 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.9 °C
Test Date: 07/23/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

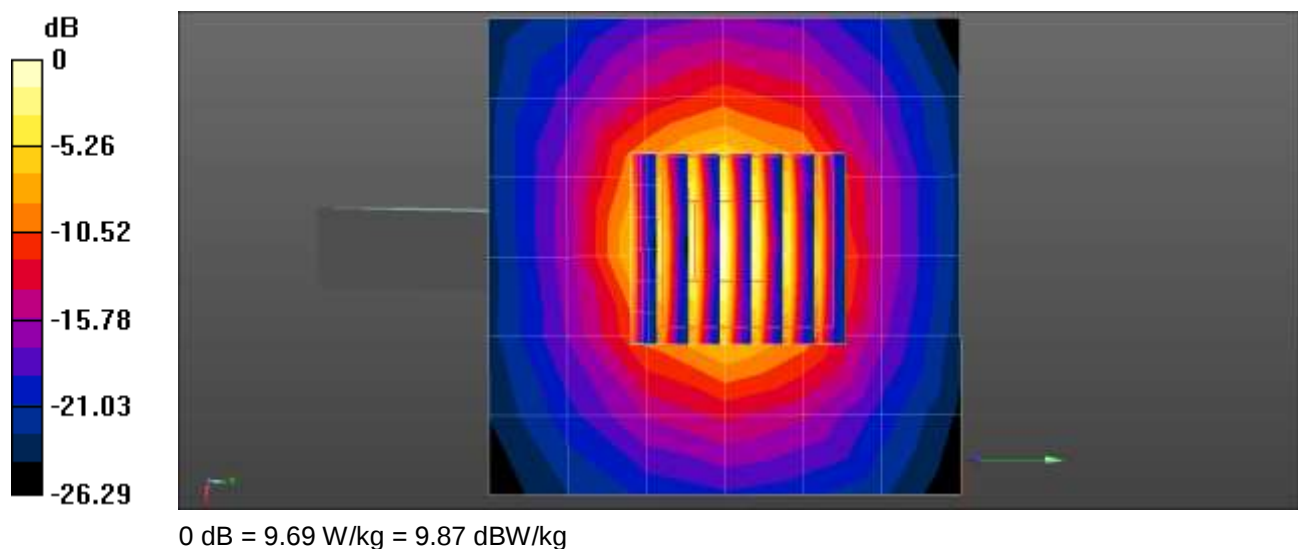
Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 5250$ MHz; $\sigma = 4.826$ S/m; $\epsilon_r = 37.086$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5250 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.69 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.67 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 17.7 W/kg
SAR(1 g) = 3.86 W/kg; SAR(10 g) = 1.12 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 60.6%
Maximum value of SAR (measured) = 9.86 W/kg



Verification Data (5250 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.2 °C
Test Date: 07/21/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

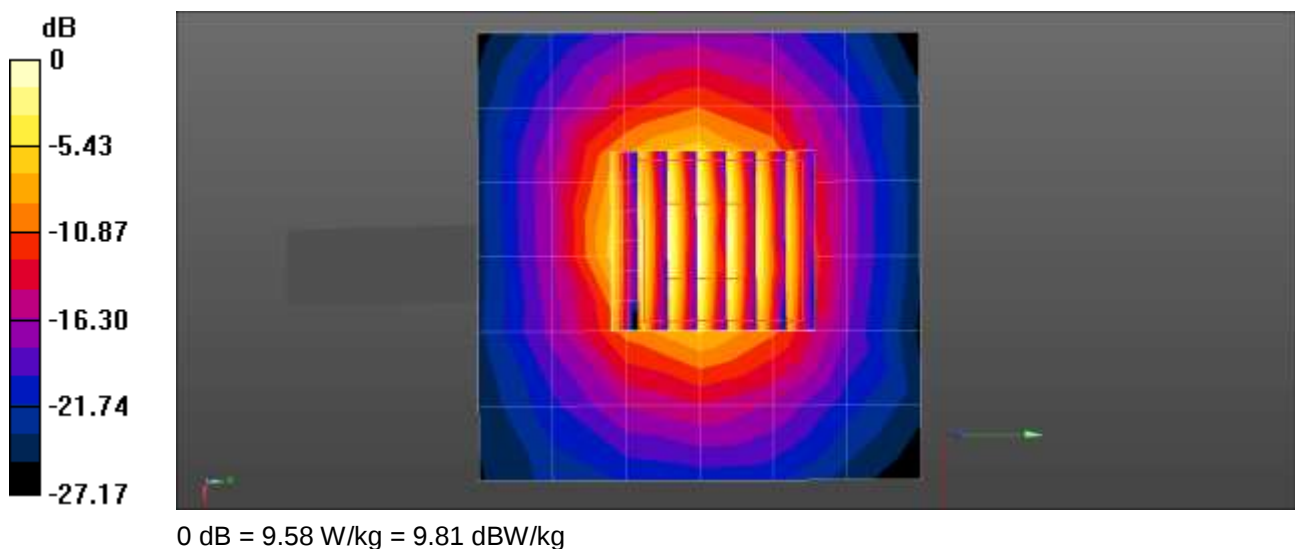
Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5250 \text{ MHz}$; $\sigma = 4.603 \text{ S/m}$; $\epsilon_r = 37.011$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5250 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification/Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 9.58 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
Reference Value = 50.21 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 18.2 W/kg
SAR(1 g) = 4.04 W/kg; SAR(10 g) = 1.14 W/kg
Smallest distance from peaks to all points 3 dB below = 6.8 mm
Ratio of SAR at M2 to SAR at M1 = 61.3%
Maximum value of SAR (measured) = 10.3 W/kg



Verification Data (5250 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.1 °C
Test Date: 08/04/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

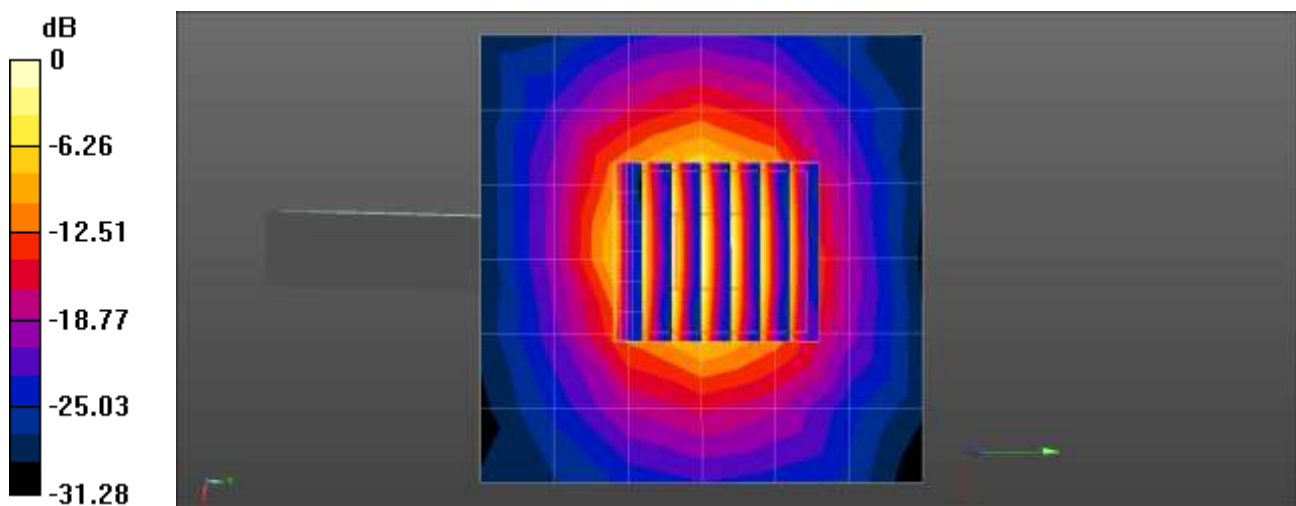
Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 5250$ MHz; $\sigma = 4.609$ S/m; $\epsilon_r = 36.001$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5250 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.24 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.57 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 18.7 W/kg
SAR(1 g) = 4 W/kg; SAR(10 g) = 1.13 W/kg
Smallest distance from peaks to all points 3 dB below = 6.8 mm
Ratio of SAR at M2 to SAR at M1 = 60.2%
Maximum value of SAR (measured) = 10.4 W/kg



0 dB = 10.4 W/kg = 10.17 dBW/kg

Verification Data (5250 MHz Head)

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

DUT: Dipole D5GHzV2; Type: D5GHzV2

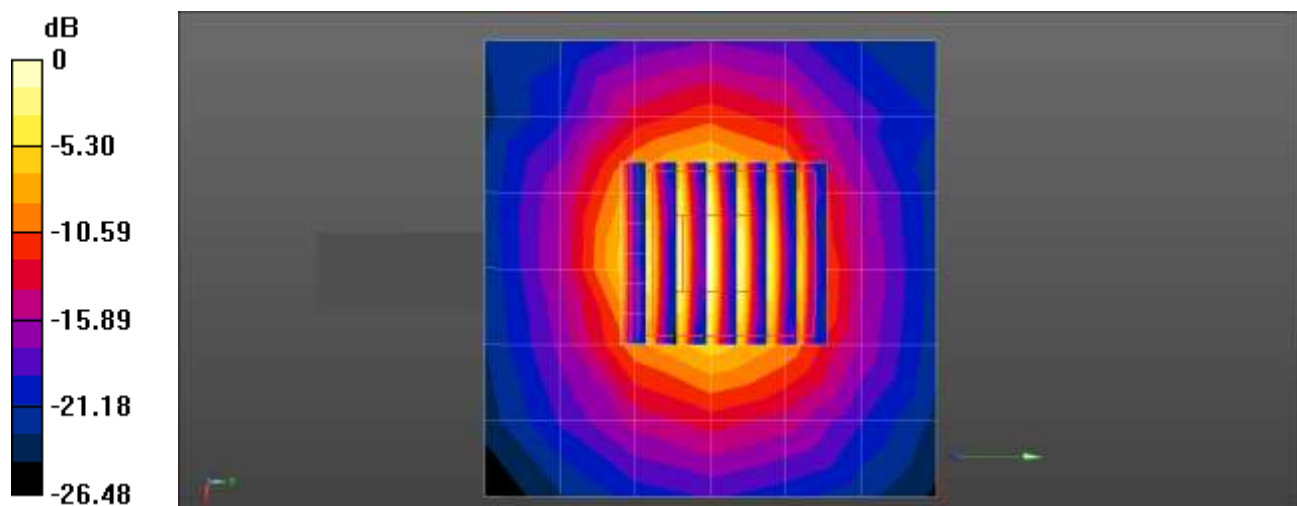
Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5250$ MHz; $\sigma = 4.745$ S/m; $\epsilon_r = 37.099$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5250 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.45 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.51 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 19.1 W/kg
SAR(1 g) = 4.11 W/kg; SAR(10 g) = 1.17 W/kg
Smallest distance from peaks to all points 3 dB below = 6.8 mm
Ratio of SAR at M2 to SAR at M1 = 60.4%
Maximum value of SAR (measured) = 10.7 W/kg



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

Verification Data (5250 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 21.0 °C
Test Date: 08/05/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

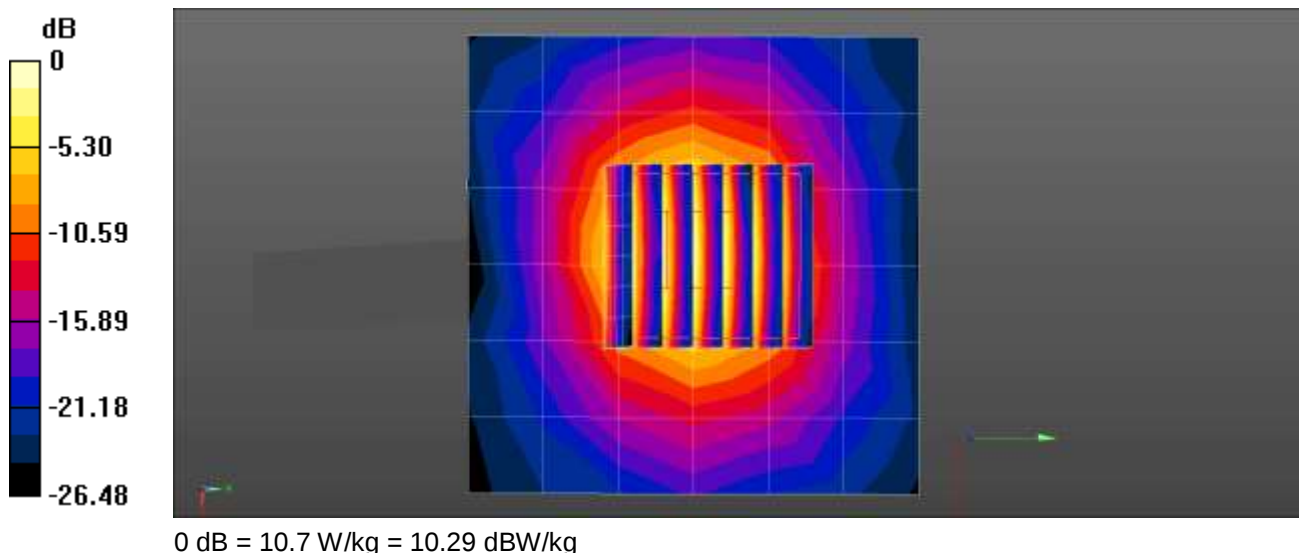
Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 5250$ MHz; $\sigma = 4.734$ S/m; $\epsilon_r = 36.015$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57) @ 5250 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 4/22/2020
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5250MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.50 W/kg

5250MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.82 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 19.3 W/kg
SAR(1 g) = 4.09 W/kg; SAR(10 g) = 1.16 W/kg
Smallest distance from peaks to all points 3 dB below = 6.8 mm
Ratio of SAR at M2 to SAR at M1 = 59.9%
Maximum value of SAR (measured) = 10.7 W/kg



Verification Data (5600 Mhz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.3 °C
Test Date: 07/22/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

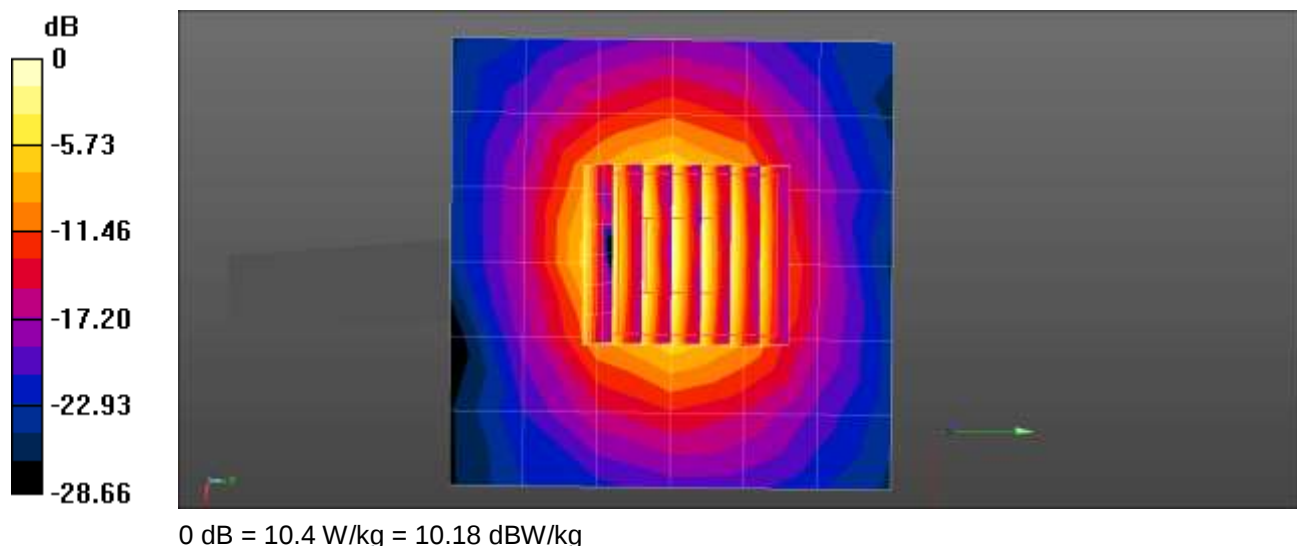
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5600$ MHz; $\sigma = 5.004$ S/m; $\epsilon_r = 36.591$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(4.84, 4.84, 4.84) @ 5600 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.4 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.22 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 19.5 W/kg
SAR(1 g) = 4.04 W/kg; SAR(10 g) = 1.17 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 58.8%
Maximum value of SAR (measured) = 10.5 W/kg



Verification Data (5600 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.4 °C
 Test Date: 07/20/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

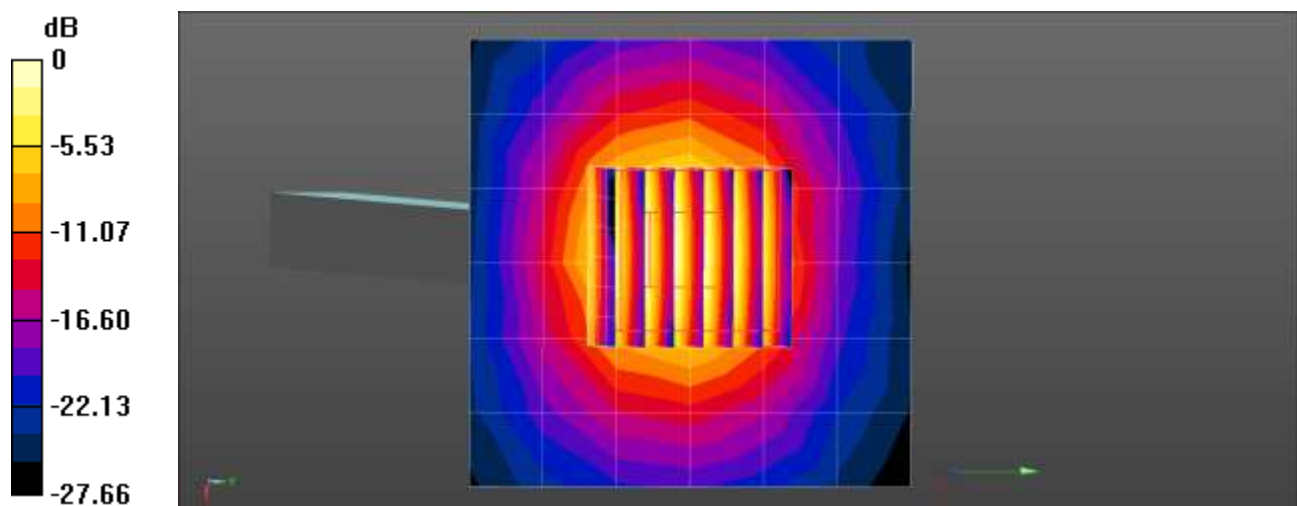
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5600$ MHz; $\sigma = 4.999$ S/m; $\epsilon_r = 36.48$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(4.84, 4.84, 4.84) @ 5600 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 10.3 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 49.52 V/m; Power Drift = 0.11 dB
 Peak SAR (extrapolated) = 20.2 W/kg
SAR(1 g) = 4.08 W/kg; SAR(10 g) = 1.17 W/kg
 Smallest distance from peaks to all points 3 dB below = 7.2 mm
 Ratio of SAR at M2 to SAR at M1 = 57.9%
 Maximum value of SAR (measured) = 10.6 W/kg



0 dB = 10.3 W/kg = 10.12 dBW/kg

Verification Data (5600 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.9 °C
Test Date: 07/23/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5600$ MHz; $\sigma = 5.231$ S/m; $\epsilon_r = 36.62$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(4.84, 4.84, 4.84) @ 5600 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.7 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 50.58 V/m; Power Drift = 0.03 dB

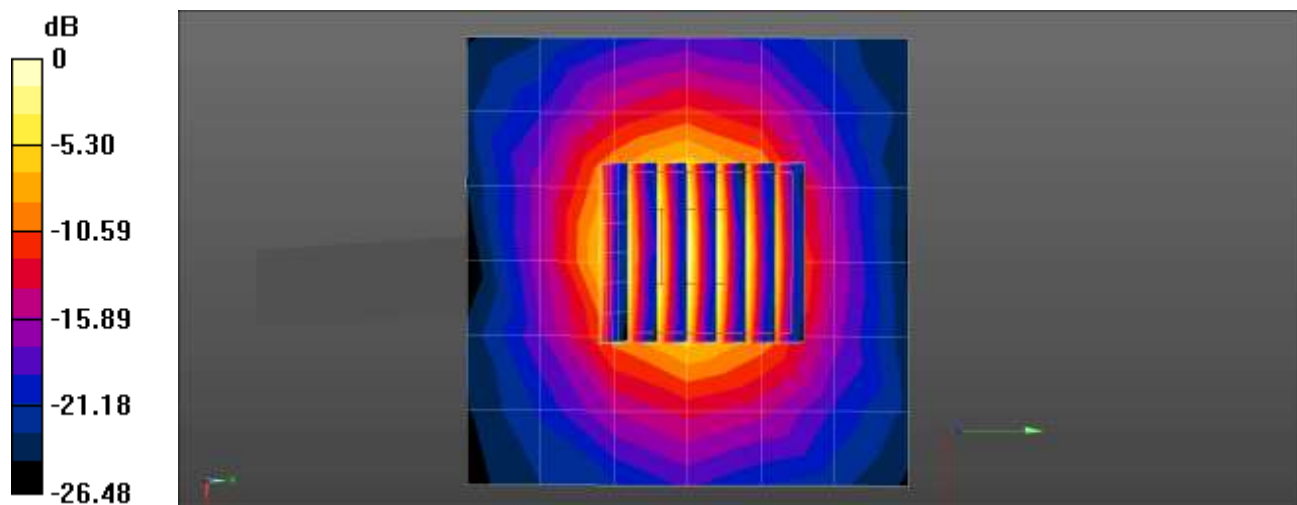
Peak SAR (extrapolated) = 20.9 W/kg

SAR(1 g) = 4.22 W/kg; SAR(10 g) = 1.22 W/kg

Smallest distance from peaks to all points 3 dB below = 7.2 mm

Ratio of SAR at M2 to SAR at M1 = 58.3%

Maximum value of SAR (measured) = 11.1 W/kg



0 dB = 10.7 W/kg = 10.31 dBW/kg

Verification Data (5600 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.2 °C
Test Date: 07/21/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

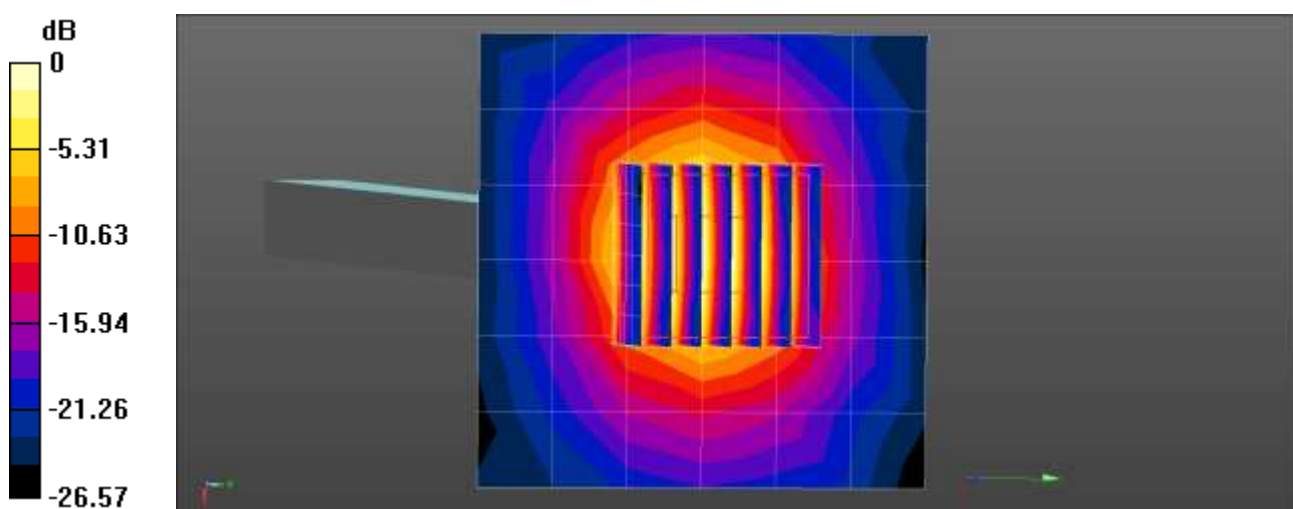
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5600$ MHz; $\sigma = 4.997$ S/m; $\epsilon_r = 36.492$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(4.84, 4.84, 4.84) @ 5600 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.5 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 50.12 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 19.8 W/kg
SAR(1 g) = 4.03 W/kg; SAR(10 g) = 1.16 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 58.5%
Maximum value of SAR (measured) = 10.6 W/kg



0 dB = 10.5 W/kg = 10.23 dBW/kg

Verification Data (5600 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.1 °C
 Test Date: 08/04/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

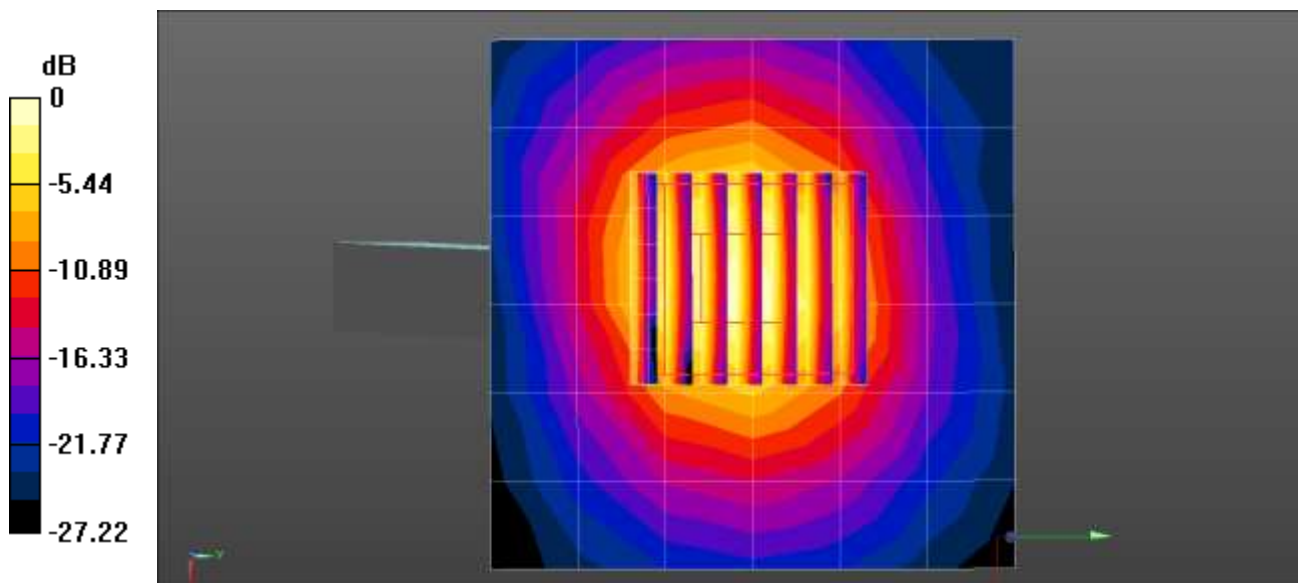
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5600$ MHz; $\sigma = 5$ S/m; $\epsilon_r = 35.53$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(4.84, 4.84, 4.84) @ 5600 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 9.74 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 48.82 V/m; Power Drift = 0.15 dB
 Peak SAR (extrapolated) = 20.9 W/kg
SAR(1 g) = 4.26 W/kg; SAR(10 g) = 1.21 W/kg
 Smallest distance from peaks to all points 3 dB below = 7.2 mm
 Ratio of SAR at M2 to SAR at M1 = 58.5%
 Maximum value of SAR (measured) = 11.1 W/kg



0 dB = 9.74 W/kg = 9.88 dBW/kg

Verification Data (5600 MHz Head)

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

DUT: Dipole D5GHzV2; Type: D5GHzV2

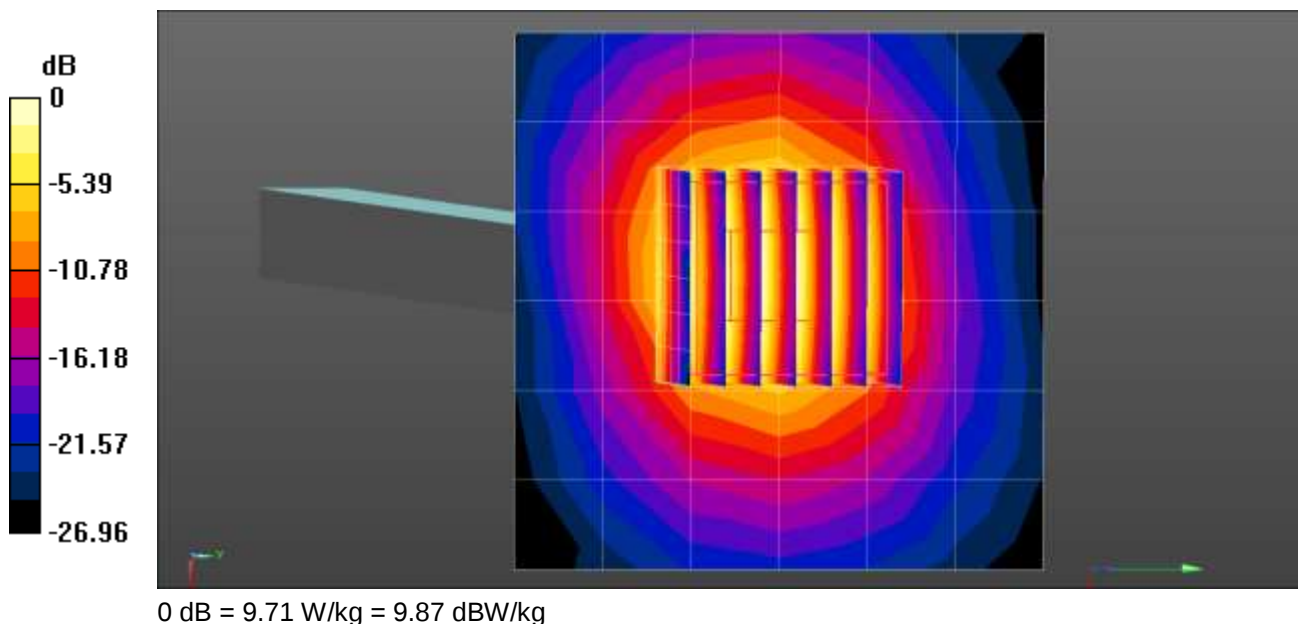
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.083$ S/m; $\epsilon_r = 35.648$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(4.84, 4.84, 4.84) @ 5600 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 9.71 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 48.58 V/m; Power Drift = 0.14 dB
 Peak SAR (extrapolated) = 20.9 W/kg
SAR(1 g) = 4.31 W/kg; SAR(10 g) = 1.23 W/kg
 Smallest distance from peaks to all points 3 dB below = 7.4 mm
 Ratio of SAR at M2 to SAR at M1 = 58.9%
 Maximum value of SAR (measured) = 11.2 W/kg



Verification Data (5600 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.0 °C
 Test Date: 08/05/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

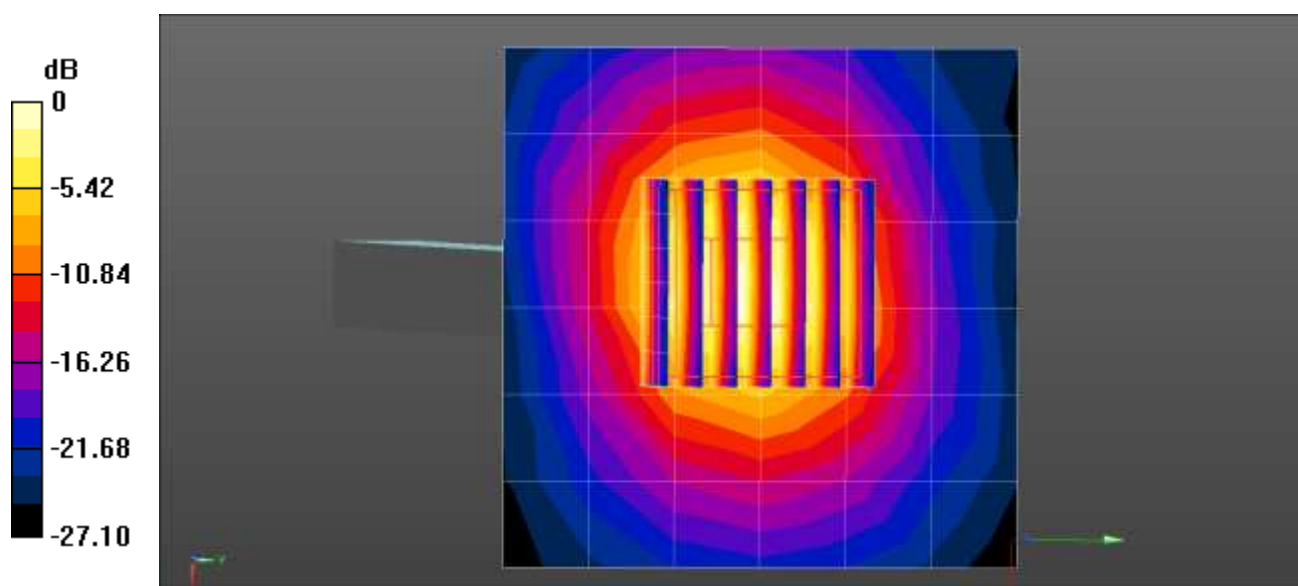
Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.087$ S/m; $\epsilon_r = 35.621$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(4.84, 4.84, 4.84) @ 5600 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 9.85 W/kg

5600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 48.69 V/m; Power Drift = 0.18 dB
 Peak SAR (extrapolated) = 21.9 W/kg
SAR(1 g) = 4.36 W/kg; SAR(10 g) = 1.23 W/kg
 Smallest distance from peaks to all points 3 dB below = 7.2 mm
 Ratio of SAR at M2 to SAR at M1 = 58.2%
 Maximum value of SAR (measured) = 11.5 W/kg



0 dB = 9.85 W/kg = 9.94 dBW/kg

Verification Data (5750 MHz Head

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 19.3 °C
 Test Date: 07/22/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

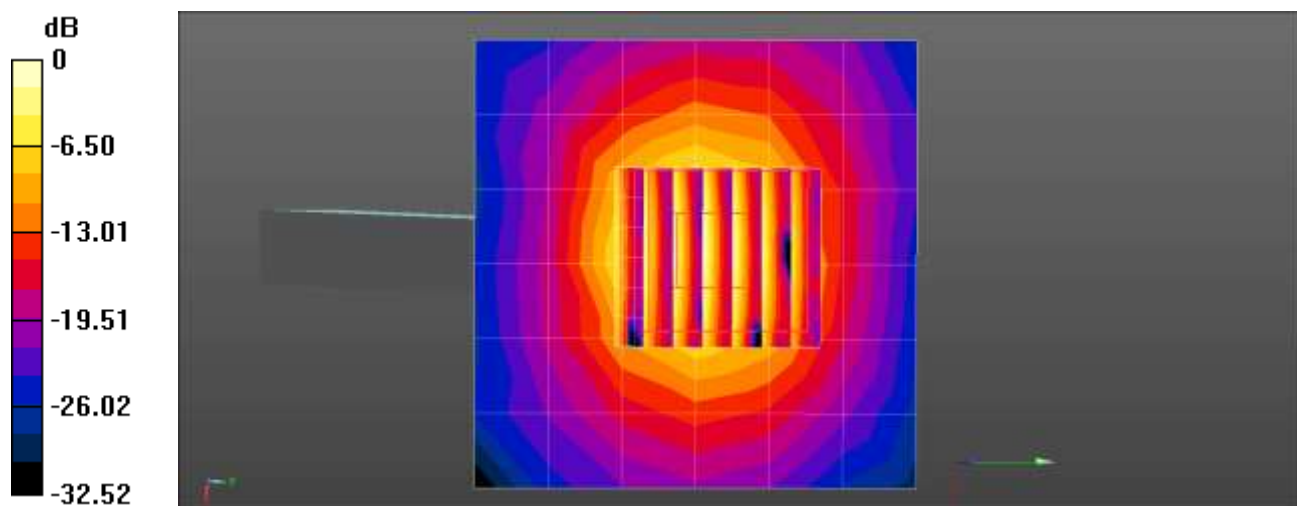
Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5750 \text{ MHz}$; $\sigma = 5.177 \text{ S/m}$; $\epsilon_r = 36.342$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5750 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification/Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
 Maximum value of SAR (measured) = 10.1 W/kg

5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
 Reference Value = 48.90 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 20.5 W/kg
SAR(1 g) = 3.95 W/kg; SAR(10 g) = 1.1 W/kg
 Smallest distance from peaks to all points 3 dB below = 7.2 mm
 Ratio of SAR at M2 to SAR at M1 = 57.2%
 Maximum value of SAR (measured) = 10.5 W/kg



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

Verification Data (5750 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 21.4 °C
Test Date: 07/20/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

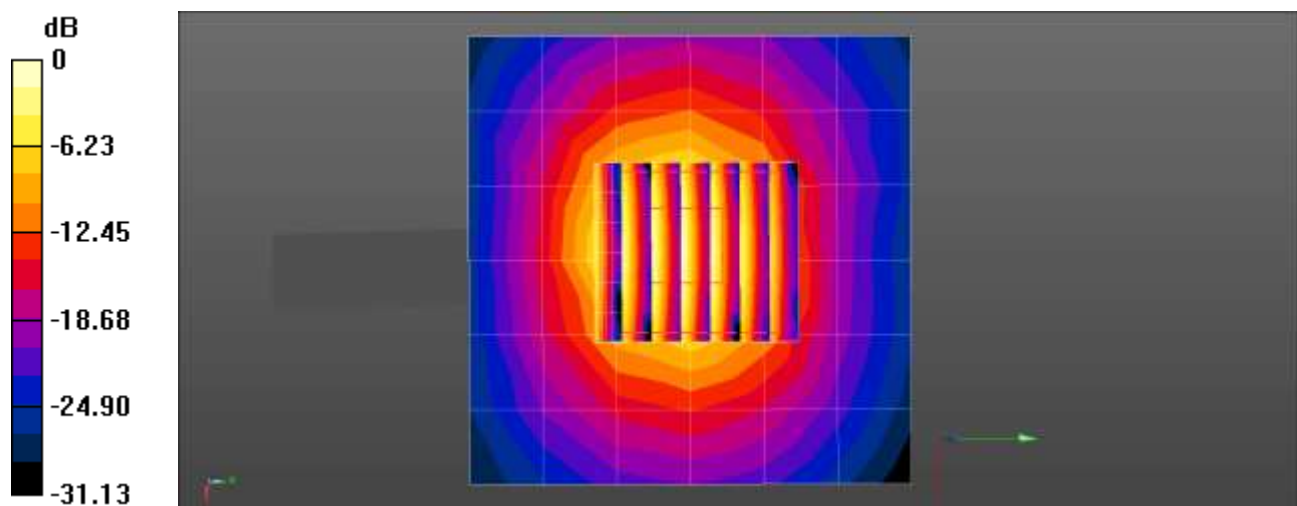
Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5750 \text{ MHz}$; $\sigma = 5.152 \text{ S/m}$; $\epsilon_r = 36.259$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5750 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification/Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
Maximum value of SAR (measured) = 10.5 W/kg

5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
Reference Value = 49.71 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 21.8 W/kg
SAR(1 g) = 4.08 W/kg; SAR(10 g) = 1.12 W/kg
Smallest distance from peaks to all points 3 dB below = 6.6 mm
Ratio of SAR at M2 to SAR at M1 = 56.7%
Maximum value of SAR (measured) = 11.0 W/kg



0 dB = 10.5 W/kg = 10.22 dBW/kg

Verification Data (5750 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 19.9 °C
Test Date: 07/23/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

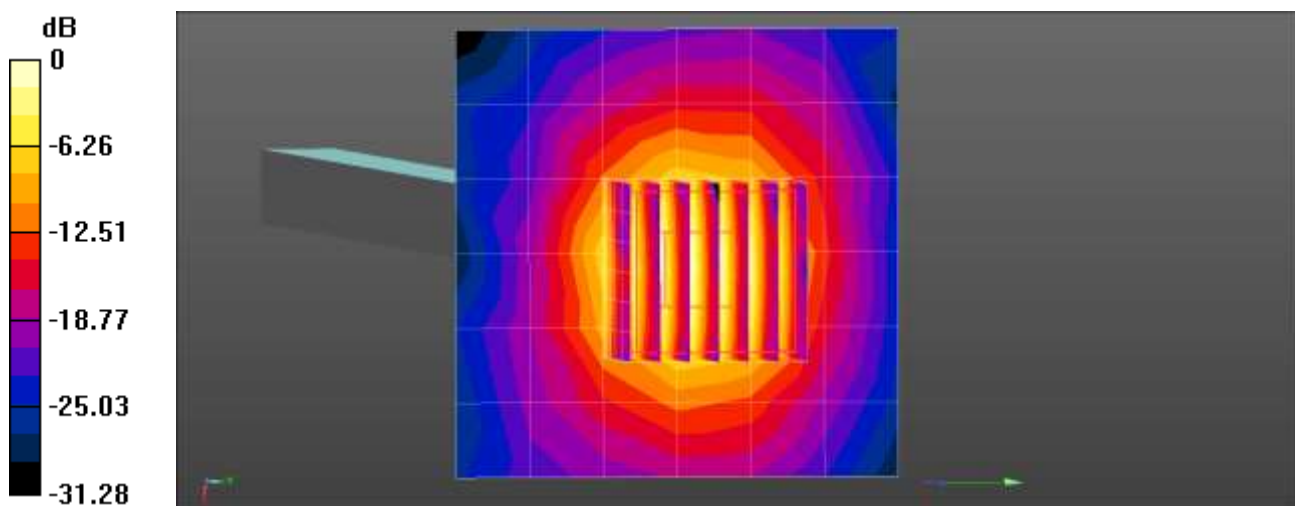
Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 5750$ MHz; $\sigma = 5.402$ S/m; $\epsilon_r = 36.379$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5750 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.8 W/kg

5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.59 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 23.1 W/kg
SAR(1 g) = 4.42 W/kg; SAR(10 g) = 1.21 W/kg
Smallest distance from peaks to all points 3 dB below = 7.2 mm
Ratio of SAR at M2 to SAR at M1 = 57.1%
Maximum value of SAR (measured) = 11.9 W/kg



0 dB = 10.8 W/kg = 10.34 dBW/kg

Verification Data (5750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 19.2 °C
 Test Date: 07/21/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

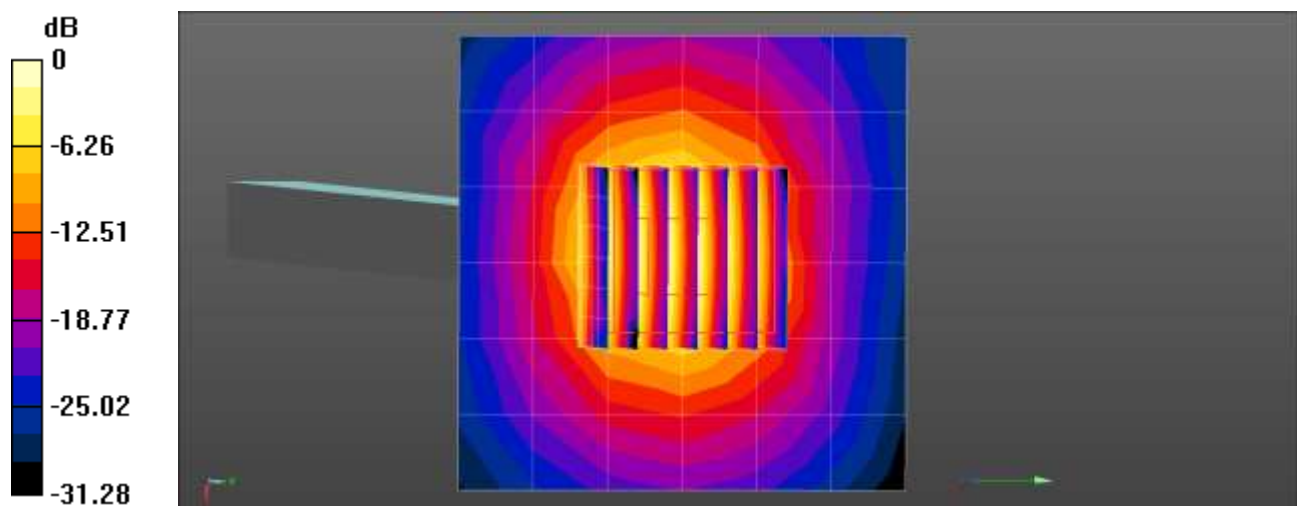
Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5750 \text{ MHz}$; $\sigma = 5.171 \text{ S/m}$; $\epsilon_r = 36.261$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5750 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification/Area Scan (7x7x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
 Maximum value of SAR (measured) = 10.6 W/kg

5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$
 Reference Value = 49.36 V/m; Power Drift = 0.13 dB
 Peak SAR (extrapolated) = 21.8 W/kg
SAR(1 g) = 4.1 W/kg; SAR(10 g) = 1.13 W/kg
 Smallest distance from peaks to all points 3 dB below = 6.4 mm
 Ratio of SAR at M2 to SAR at M1 = 56.6%
 Maximum value of SAR (measured) = 11.1 W/kg



0 dB = 10.6 W/kg = 10.26 dBW/kg

Verification Data (5750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.1 °C
 Test Date: 08/04/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

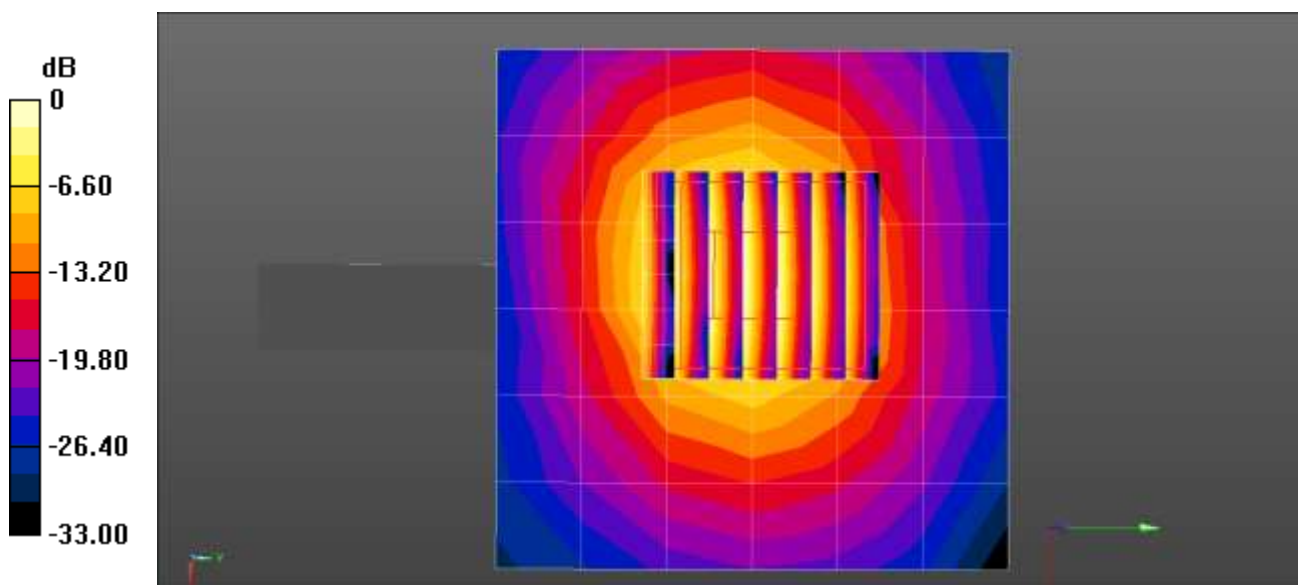
Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.168$ S/m; $\epsilon_r = 35.284$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5750 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 8.79 W/kg

5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 45.45 V/m; Power Drift = 0.12 dB
 Peak SAR (extrapolated) = 21.5 W/kg
SAR(1 g) = 4.15 W/kg; SAR(10 g) = 1.13 W/kg
 Smallest distance from peaks to all points 3 dB below = 6.8 mm
 Ratio of SAR at M2 to SAR at M1 = 57.4%
 Maximum value of SAR (measured) = 11.1 W/kg



0 dB = 8.79 W/kg = 9.44 dBW/kg

Verification Data (5750 MHz Head)

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

DUT: Dipole D5GHzV2; Type: D5GHzV2

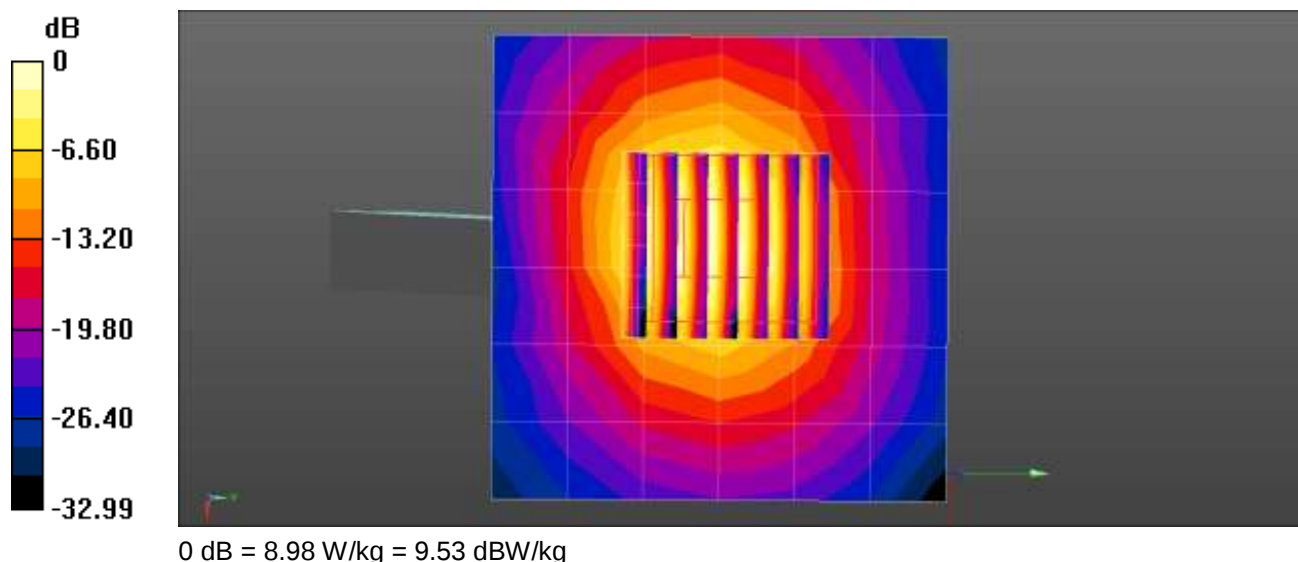
Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.251$ S/m; $\epsilon_r = 35.447$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5750 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 8.98 W/kg

5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 45.62 V/m; Power Drift = 0.14 dB
 Peak SAR (extrapolated) = 22.1 W/kg
SAR(1 g) = 4.2 W/kg; SAR(10 g) = 1.15 W/kg
 Smallest distance from peaks to all points 3 dB below = 7.2 mm
 Ratio of SAR at M2 to SAR at M1 = 57.2%
 Maximum value of SAR (measured) = 11.3 W/kg



Verification Data (5750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.0 °C
 Test Date: 08/05/2020

DUT: Dipole D5GHzV2; Type: D5GHzV2

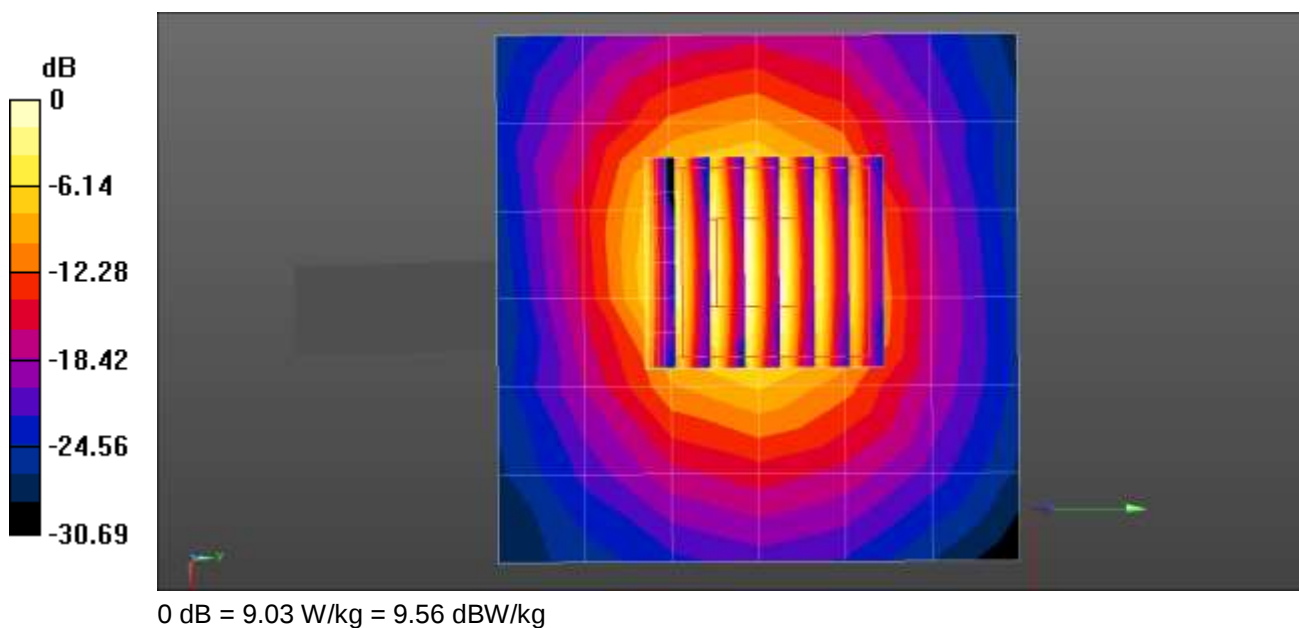
Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.246$ S/m; $\epsilon_r = 35.395$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5750 MHz; Calibrated: 2019-09-27
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V4.0 (Left-Right)
- Measurement SW: DASY52, Version 52.10 (4);

5750MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 9.03 W/kg

5750MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
 Reference Value = 45.52 V/m; Power Drift = 0.10 dB
 Peak SAR (extrapolated) = 21.7 W/kg
SAR(1 g) = 4.19 W/kg; SAR(10 g) = 1.15 W/kg
 Smallest distance from peaks to all points 3 dB below = 6.8 mm
 Ratio of SAR at M2 to SAR at M1 = 57.3%
 Maximum value of SAR (measured) = 11.2 W/kg



Appendix D. – SAR Tissue Characterization

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

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

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

Composition of the Tissue Equivalent Matter

Appendix E. – SAR Tissue Characterization

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

A tabulated summary of the system validation status including the validation date(s), measurement frequencies, SAR probes and tissue dielectric parameters has been included.

SAR System No.	Probe	Probe Type	Probe Calibration Point		Dipole	Date	Dielectric Parameters		CW Validation			Modulation Validation		
							Measured Permittivity	Measured Conductivity	Sensitivity	Probe Linearity	Probe Isotropy	MOD. Type	Duty Factor	PAR
12	7370	EX3DV4	Head	750	1014	2019-09-11	41.7	0.87	PASS	PASS	PASS	N/A	N/A	N/A
1	3863	EX3DV4	Body	750	1014	2019-06-07	55.6	0.98	PASS	PASS	PASS	N/A	N/A	N/A
12	7370	EX3DV4	Head	835	441	2019-09-11	41.6	0.91	PASS	PASS	PASS	N/A	N/A	N/A
12	7370	EX3DV4	Head	835	441	2019-09-11	41.6	0.91	PASS	PASS	PASS	GMSK	PASS	N/A
3	3797	EX3DV4	Body	835	441	2019-12-10	55.3	0.98	PASS	PASS	PASS	GMSK	PASS	N/A
11	3076	ES3DV3	Body	835	441	2019-09-03	55.5	0.97	PASS	PASS	PASS	GMSK	PASS	N/A
1	3863	EX3DV4	Body	835	441	2019-09-03	55.4	0.97	PASS	PASS	PASS	N/A	N/A	N/A
11	3076	ES3DV3	Head	1750	2d015	2019-10-01	40.1	1.39	PASS	PASS	PASS	N/A	N/A	N/A
1	3863	EX3DV4	Body	1750	2d015	2019-10-01	53.5	1.52	PASS	PASS	PASS	N/A	N/A	N/A
9	3968	EX3DV4	Body	1750	2d015	2019-10-11	53.5	1.52	PASS	PASS	PASS	N/A	N/A	N/A
3	3797	EX3DV4	Head	1900	5d061	2020-01-31	40.1	1.42	PASS	PASS	PASS	GMSK	PASS	N/A
3	3797	EX3DV4	Body	1900	5d061	2020-01-31	53.3	1.53	PASS	PASS	PASS	GMSK	PASS	N/A
9	3968	EX3DV4	Head	2450	743	2020-03-02	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
1	3863	EX3DV4	Head	2450	743	2020-03-02	39.4	1.81	PASS	PASS	PASS	OFDM	N/A	PASS
9	3968	EX3DV4	Body	2450	743	2020-03-02	52.8	1.94	PASS	PASS	PASS	OFDM	N/A	PASS
1	3863	EX3DV4	Body	2450	743	2020-03-02	52.8	1.94	PASS	PASS	PASS	OFDM	N/A	PASS
1	3863	EX3DV4	Head	2600	1106	2019-09-28	39.2	1.96	PASS	PASS	PASS	TDD	PASS	N/A
1	3863	EX3DV4	Body	2600	1106	2019-09-28	52.4	2.16	PASS	PASS	PASS	TDD	PASS	N/A
12	7370	EX3DV4	Head	5250	1107	2019-10-11	35.6	4.71	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	5600	1107	2019-10-11	35.3	5.04	PASS	PASS	PASS	OFDM	N/A	PASS
12	7370	EX3DV4	Head	5750	1107	2019-10-11	35.8	5.25	PASS	PASS	PASS	OFDM	N/A	PASS
8	3967	EX3DV4	Body	5250	1107	2020-03-11	48.8	5.36	PASS	PASS	PASS	OFDM	N/A	PASS
8	3967	EX3DV4	Body	5600	1107	2020-03-11	48.3	5.78	PASS	PASS	PASS	OFDM	N/A	PASS
8	3967	EX3DV4	Body	5750	1107	2020-03-11	48.4	5.95	PASS	PASS	PASS	OFDM	N/A	PASS

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SAR System No.	Probe	Probe Type	Probe Calibration Point			Dipole	Date	Dielectric Parameters		CW Validation			Modulation Validation		
								Measured Permittivity	Measured Conductivity	Sensitivity	Probe Linearity	Probe Isotropy	MOD. Type	Duty Factor	PAR
9	3968	EX3DV4	Body	1750	2d015	2019-10-11		53.5	1.52	PASS	PASS	PASS	N/A	N/A	N/A
3	3797	EX3DV4	Body	1900	5d061	2020-01-31		53.3	1.53	PASS	PASS	PASS	GMSK	PASS	N/A
8	3967	EX3DV4	Body	5250	1107	2020-03-11		48.8	5.36	PASS	PASS	PASS	OFDM	N/A	PASS
8	3967	EX3DV4	Body	5600	1107	2020-03-11		48.3	5.78	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary – Extremity SAR Considerations

Note;

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