

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.5 °C
 Ambient Temperature: 21.7 °C
 Test Date: 05/13/2020
 Plot No.: 25

DUT: SM-A516V; Type: Bar

Communication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.857 \text{ S/m}$; $\epsilon_r = 42.676$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

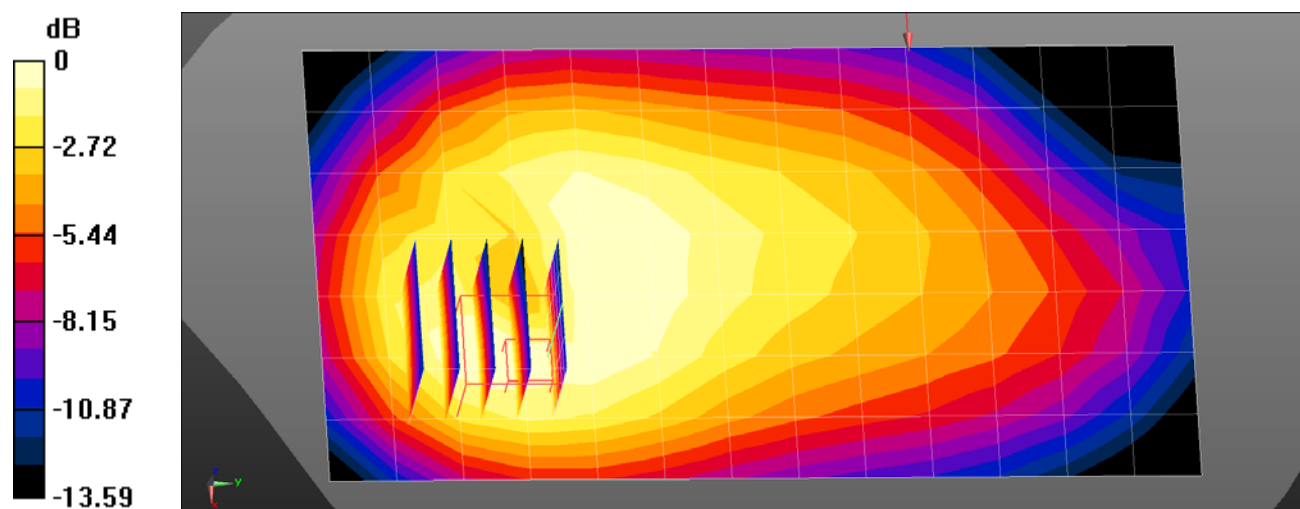
- Probe: ES3DV3 - SN3076; ConvF(6.52, 6.52, 6.52) @ 707.5 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 12 Body Rear QPSK 10MHz 1RB 24offset 23095ch body worn/Area Scan (8x14x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.243 W/kg

LTE Band 12 Body Rear QPSK 10MHz 1RB 24offset 23095ch body worn/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 13.70 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 0.333 W/kg
SAR(1 g) = 0.205 W/kg; SAR(10 g) = 0.127 W/kg
 Maximum value of SAR (measured) = 0.245 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: 20.5 °C
 Test Date: 05/14/2020
 Plot No.: 26

DUT: SM-A516V; Type: Bar

Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 782 \text{ MHz}$; $\sigma = 0.93 \text{ S/m}$; $\epsilon_r = 41.649$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

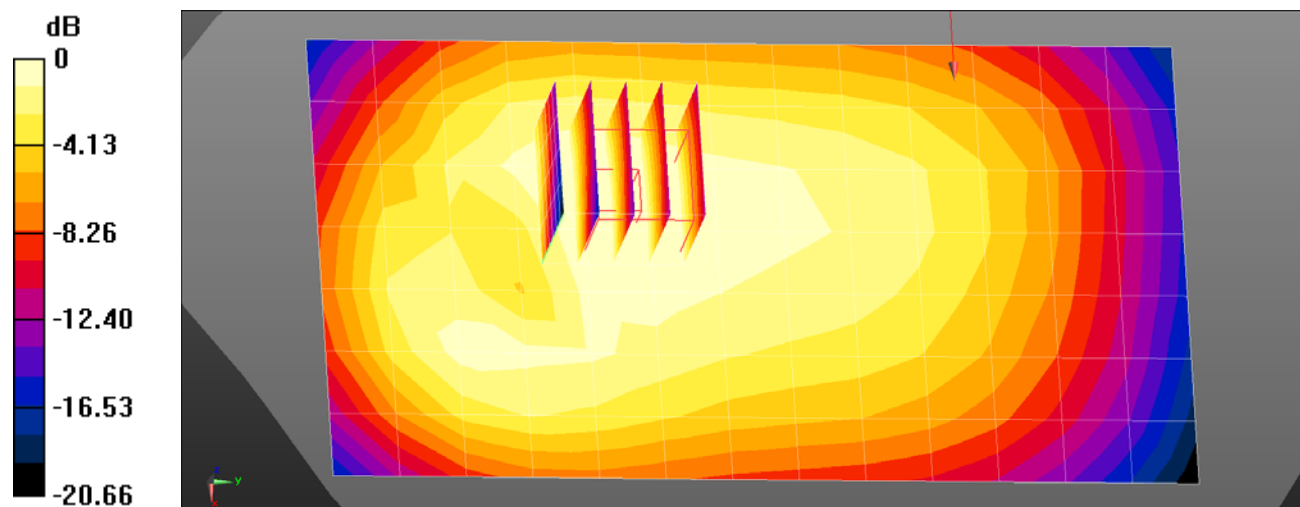
- Probe: ES3DV3 - SN3076; ConvF(6.52, 6.52, 6.52) @ 782 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 13 Body Rear QPSK 10MHz 1RB 24offset 23230ch body worn/Area Scan (8x14x1):

Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.297 W/kg

LTE Band 13 Body Rear QPSK 10MHz 1RB 24offset 23230ch body worn/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 Reference Value = 15.76 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.377 W/kg
SAR(1 g) = 0.281 W/kg; SAR(10 g) = 0.201 W/kg
 Maximum value of SAR (measured) = 0.317 W/kg



0 dB = 0.297 W/kg = -5.27 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.1 °C
 Ambient Temperature: 20.3 °C
 Test Date: 05/13/2020
 Plot No.: 27

DUT: SM-A516V; Type: Bar

Communication System: UID 0, LTE 66 (0); Frequency: 1770 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1770 \text{ MHz}$; $\sigma = 1.354 \text{ S/m}$; $\epsilon_r = 40.276$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14) @ 1770 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE 66 Body Front QPSK 20MHz 1RB 0offset 132572ch/Area Scan (8x14x1): Measurement grid:

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

Maximum value of SAR (measured) = 0.872 W/kg

LTE 66 Body Front QPSK 20MHz 1RB 0offset 132572ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

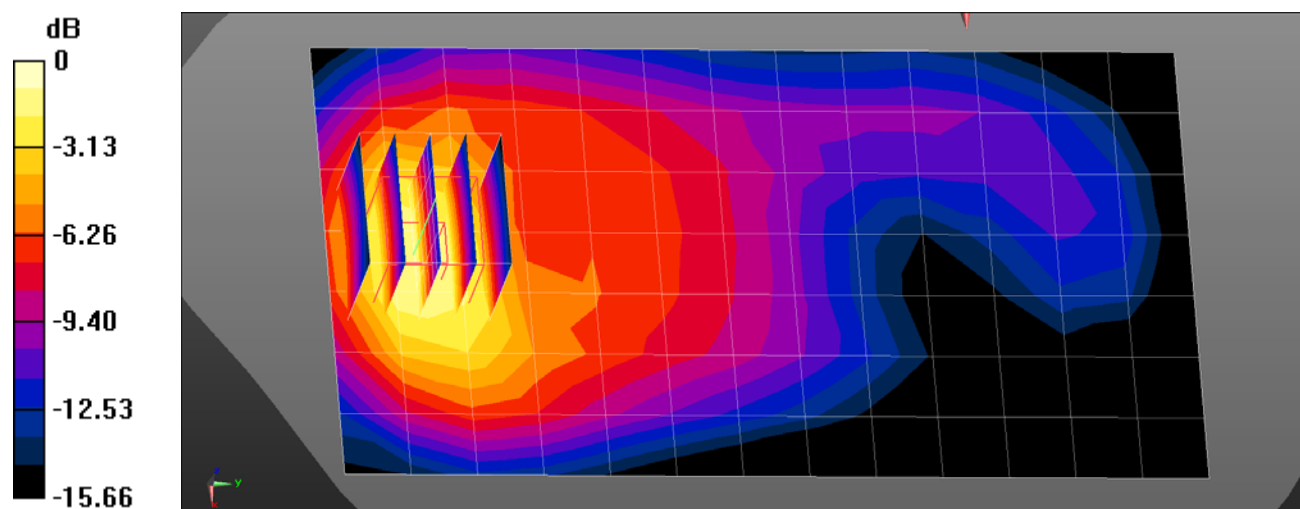
$dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 8.790 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 1.26 W/kg

SAR(1 g) = 0.751 W/kg; SAR(10 g) = 0.430 W/kg

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



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

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/26/2020
 Plot No.: 28

DUT: SM-A516V; Type: Bar

Communication System: UID 0, 5G NR (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.406 \text{ S/m}$; $\epsilon_r = 39.714$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ; Calibrated: 2019-07-23
- 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);

NR n2 Body Front DFT-s QPSK 20MHz 50RB 28offset 380000ch/Area Scan (8x14x1): Measurement grid:
 $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 1.19 W/kg

NR n2 Body Front DFT-s QPSK 20MHz 50RB 28offset 380000ch/Zoom Scan (5x5x7)/Cube

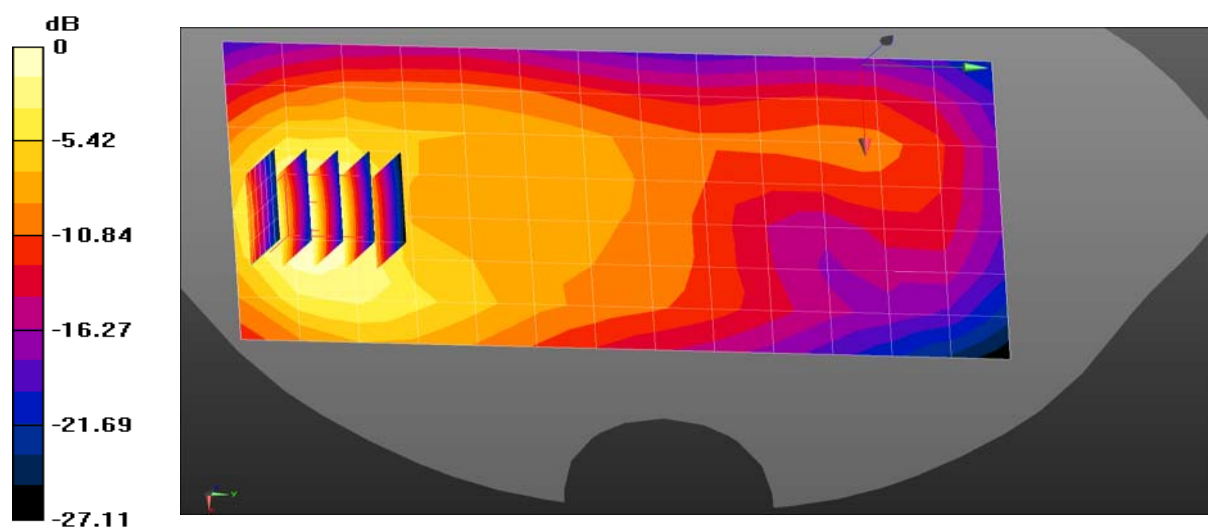
0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 10.10 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.91 W/kg

SAR(1 g) = 1.14 W/kg; SAR(10 g) = 0.634 W/kg

Maximum value of SAR (measured) = 1.40 W/kg



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

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.7 °C
Ambient Temperature: 21.9 °C
Test Date: 05/19/2020
Plot No.: 29

DUT: SM-A516V; Type: Bar

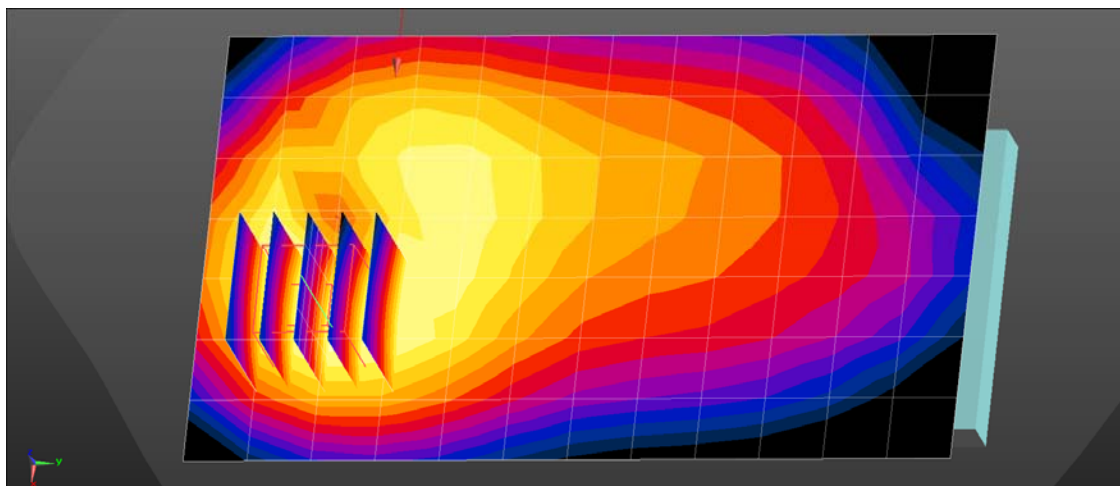
Communication System: UID 0, 5G nr (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.948$ S/m; $\epsilon_r = 42.782$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(9.85, 9.85, 9.85); Calibrated: 2019-09-27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

NR n5 Body-Worn Rear DFT-s QPSK 20MHz 1RB 1offset 167300ch/Area Scan (8x13x1): Measurement
grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.385 W/kg

NR n5 Body-Worn Rear DFT-s QPSK 20MHz 1RB 1offset 167300ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 12.72 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.470 W/kg
SAR(1 g) = 0.288 W/kg; SAR(10 g) = 0.179 W/kg
Maximum value of SAR (measured) = 0.397 W/kg



0 dB = 0.397 W/kg = -4.01 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.0 °C
 Ambient Temperature: 20.2 °C
 Test Date: 05/17/2020
 Plot No.: 30

DUT: SM-A516V; Type: Bar

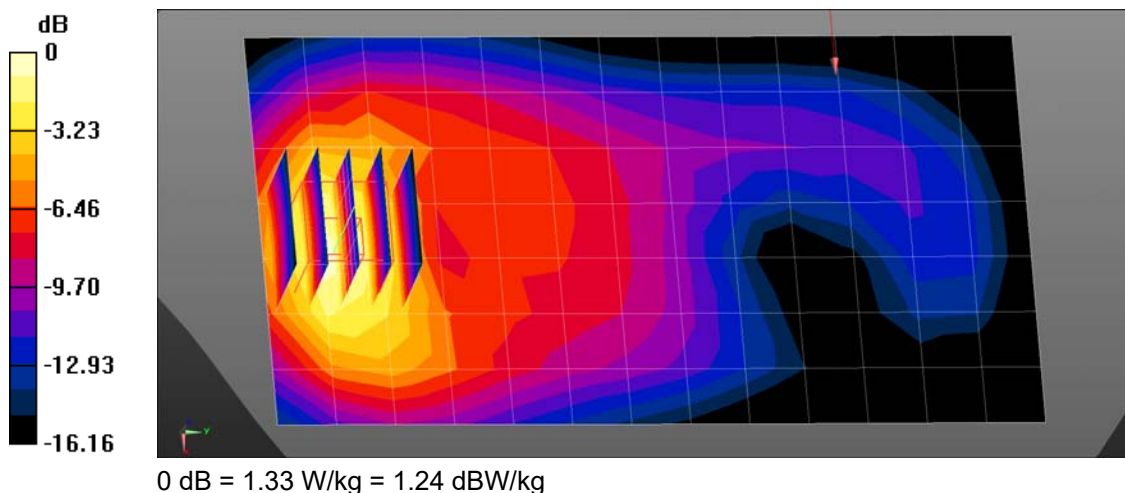
Communication System: UID 0, 5G NR (0); Frequency: 1770 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1770$ MHz; $\sigma = 1.369$ S/m; $\epsilon_r = 39.776$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1770 MHz;
- 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);

NR n66 Body Front DFT-s QPSK 20MHz 50RB 28offset 354000ch/Area Scan (8x14x1): Measurement grid:
 $dx=15$ mm, $dy=15$ mm
 Maximum value of SAR (measured) = 1.22 W/kg

NR n66 Body Front DFT-s QPSK 20MHz 50RB 28offset 354000ch/Zoom Scan (5x5x7)/Cube
0: Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm
 Reference Value = 10.17 V/m; Power Drift = 0.10 dB
 Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 0.911 W/kg; SAR(10 g) = 0.512 W/kg
 Maximum value of SAR (measured) = 1.33 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.0 °C
 Ambient Temperature: 20.8 °C
 Test Date: 05/22/2020
 Plot No.: 31

DUT: SM-A516V; Type: Bar

Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.765$ S/m; $\epsilon_r = 40.275$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(7.65, 7.65, 7.65) @ 2412 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 9/19/2019
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

802.11b Body-Worn Rear 1Mbps 1ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.215 W/kg

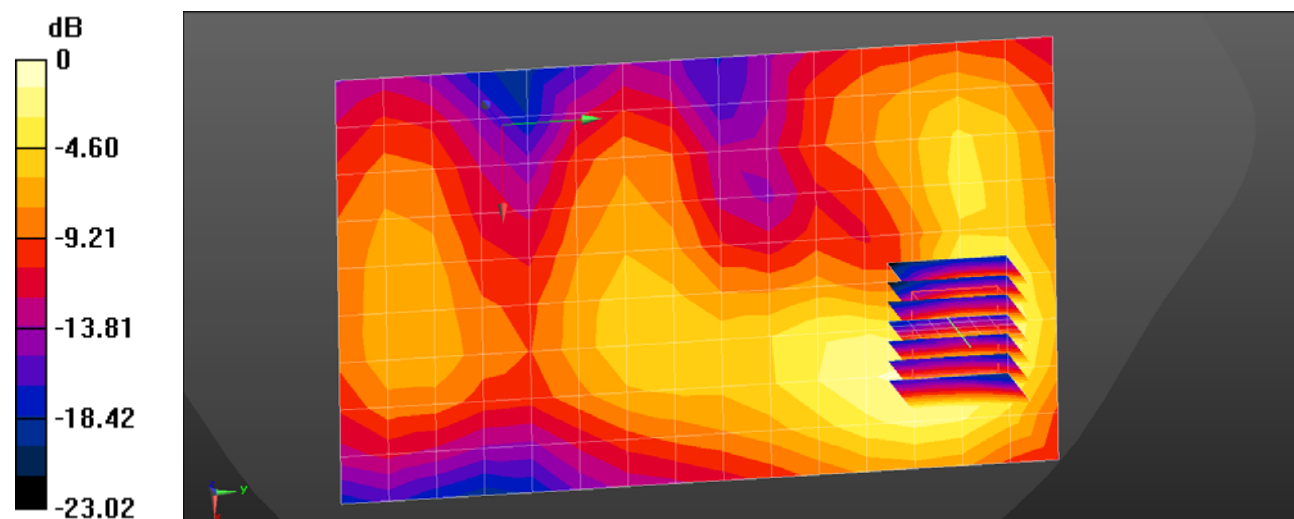
802.11b Body-Worn Rear 1Mbps 1ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 4.916 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 0.280 W/kg

SAR(1 g) = 0.143 W/kg; SAR(10 g) = 0.073 W/kg

Maximum value of SAR (measured) = 0.229 W/kg



0 dB = 0.229 W/kg = -6.40 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.3 °C
 Ambient Temperature: 20.1 °C
 Test Date: 06/04/2020
 Plot No.: 32

DUT: SM-A516V; Type: Bar

Communication System: UID 0, WIFI 5GHz (0); Frequency: 5680 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5680 \text{ MHz}$; $\sigma = 5.099 \text{ S/m}$; $\epsilon_r = 36.472$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5680 MHz;
- 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);

802.11a Body Rear 6Mbps 124ch/Area Scan (11x19x1): Measurement grid: $dx=10\text{mm}$, $dy=10\text{mm}$
 Maximum value of SAR (measured) = 0.630 W/kg

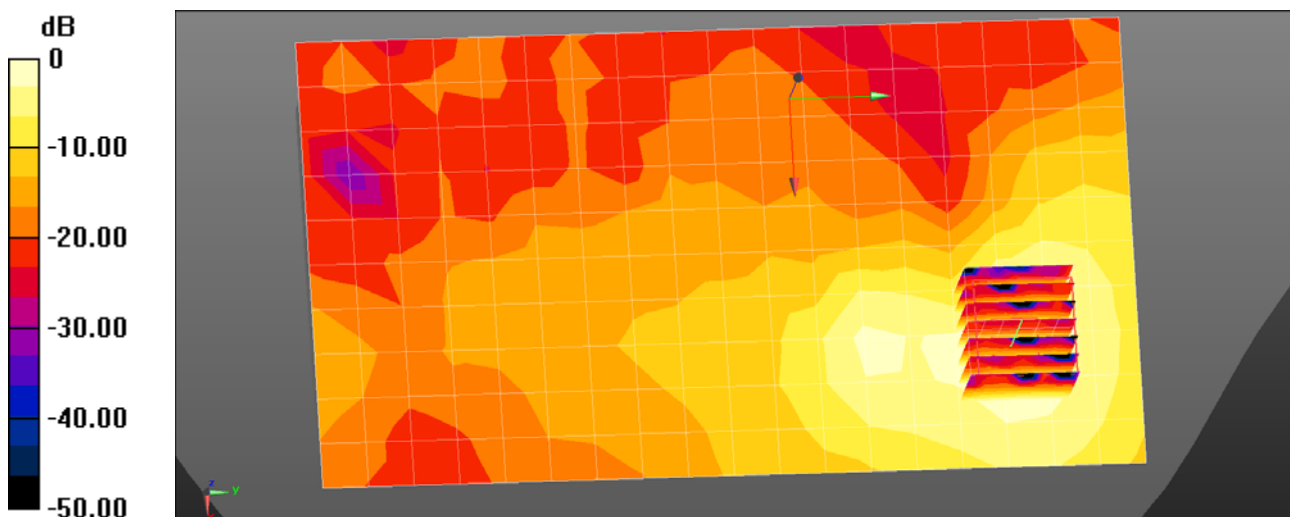
802.11a Body Rear 6Mbps 124ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=4\text{mm}$, $dy=4\text{mm}$, $dz=1.4\text{mm}$

Reference Value = 2.218 V/m; Power Drift = 0.10 dB

Peak SAR (extrapolated) = 1.17 W/kg

SAR(1 g) = 0.291 W/kg; SAR(10 g) = 0.113 W/kg

Maximum value of SAR (measured) = 0.675 W/kg



0 dB = 0.675 W/kg = -1.71 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.5
 Ambient Temperature: 21.7
 Test Date: 05/28/2020
 Plot No.: 33

DUT: SM-A516V; Type: Bar

Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2441 \text{ MHz}$; $\sigma = 1.799 \text{ S/m}$; $\epsilon_r = 39.8$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(7.65, 7.65, 7.65) @ 2441 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

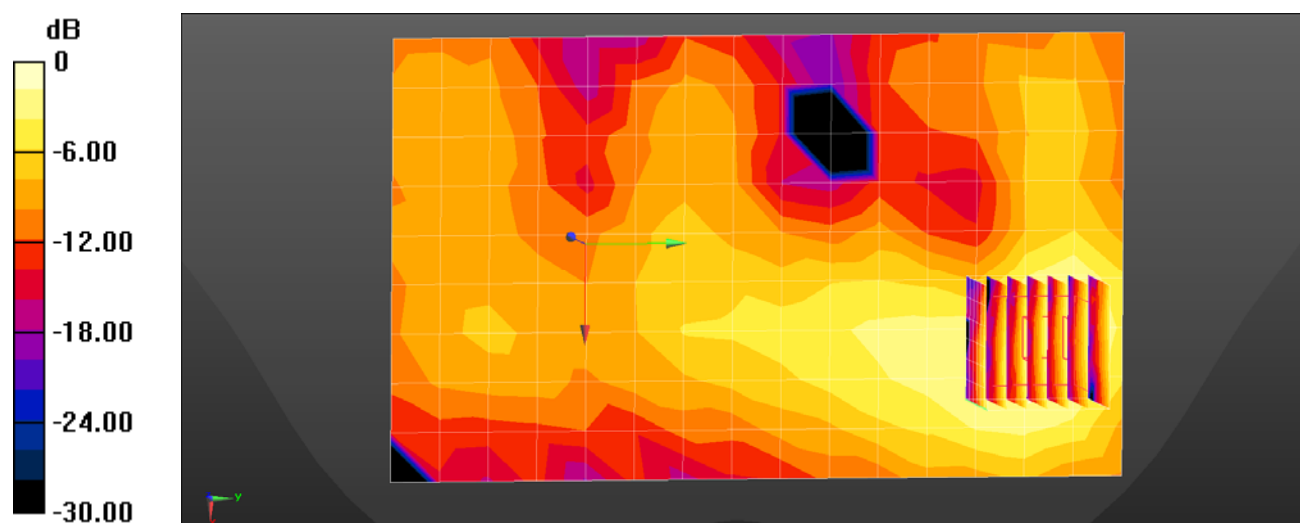
Bluetooth Body-Worn Rear DH5 39ch/Area Scan (10x16x1): Measurement grid: $dx=12\text{mm}$, $dy=12\text{mm}$
 Maximum value of SAR (measured) = 0.0464 W/kg

Bluetooth Body-Worn Rear DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$

Reference Value = 1.506 V/m; Power Drift = -0.16 dB
 Peak SAR (extrapolated) = 0.0630 W/kg

SAR(1 g) = 0.030 W/kg; SAR(10 g) = 0.015 W/kg

Maximum value of SAR (measured) = 0.0496 W/kg



0 dB = 0.0496 W/kg = -13.05 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/15/2020
 Plot No.: 34

DUT: SM-A516V; Type: Bar

Communication System: UID 0, GSM850 GPRS 2TX (0); Frequency: 824.2 MHz; Duty Cycle: 1:4.14954
 Medium parameters used (interpolated): $f = 824.2$ MHz; $\sigma = 0.916$ S/m; $\epsilon_r = 42.417$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.22, 6.22, 6.22) @ 824.2 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

GSM850 Body Rear 2Tx 128ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.730 W/kg

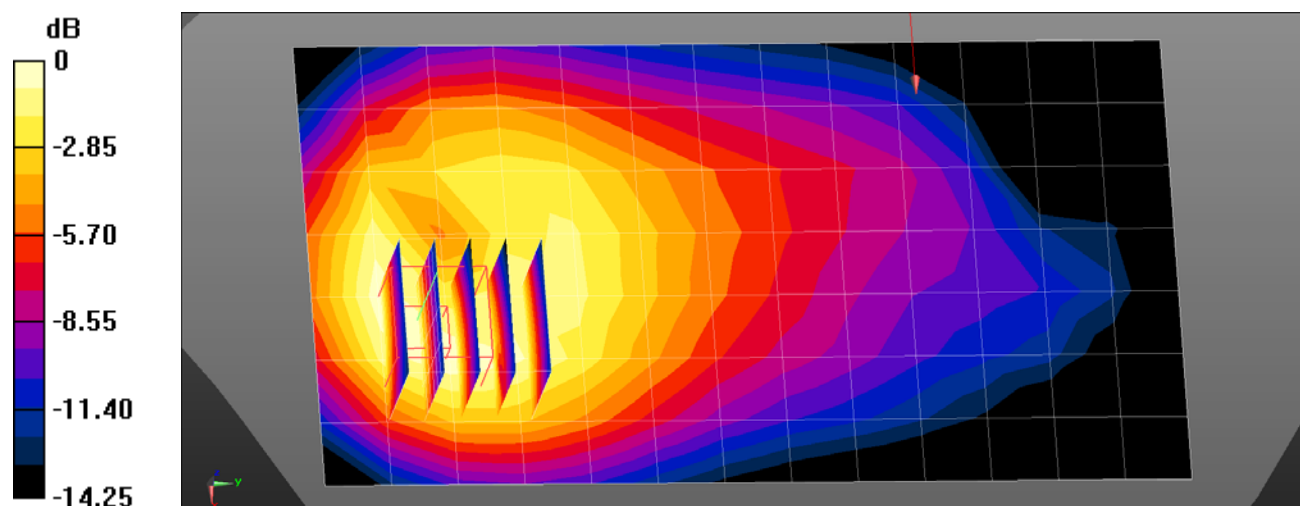
GSM850 Body Rear 2Tx 128ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 14.30 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 1.08 W/kg

SAR(1 g) = 0.632 W/kg; SAR(10 g) = 0.373 W/kg

Maximum value of SAR (measured) = 0.742 W/kg



0 dB = 0.742 W/kg = -1.30 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.3 °C
Ambient Temperature: 21.5 °C
Test Date: 05/12/2020
Plot No.: 35

DUT: SM-A516V; Type: Bar

Communication System: UID 0, GSM 1900 2Tx (0); Frequency: 1909.8 MHz; Duty Cycle: 1:4.14954
Medium parameters used: $f = 1910$ MHz; $\sigma = 1.413$ S/m; $\epsilon_r = 39.092$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.31, 8.31, 8.31) @ 1909.8 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Body Bottom 2Tx 810ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.22 W/kg

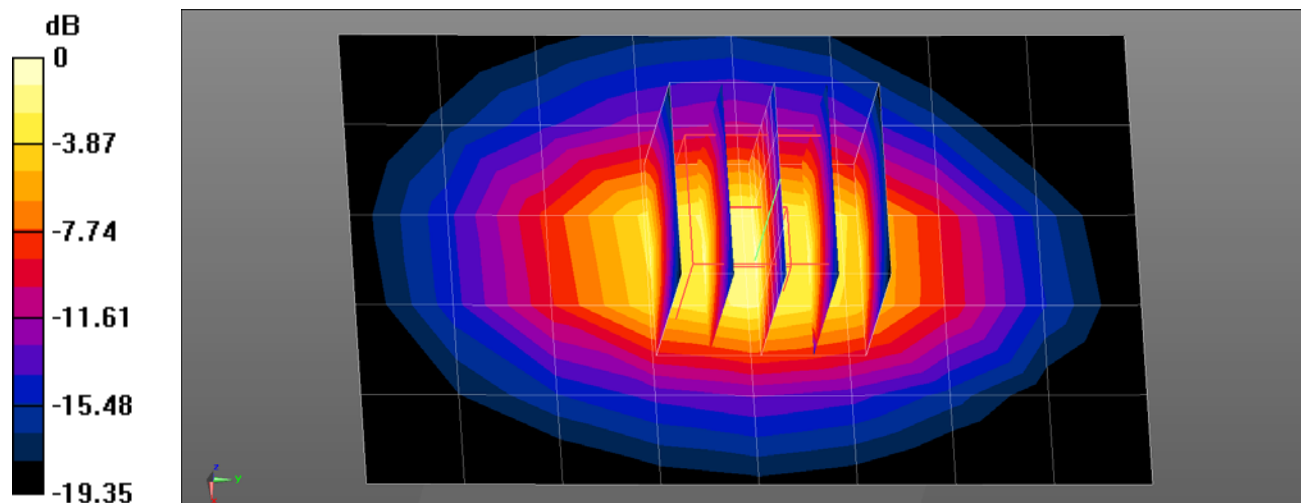
GSM1900 Body Bottom 2Tx 810ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 35.40 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 2.18 W/kg

SAR(1 g) = 1.19 W/kg; SAR(10 g) = 0.607 W/kg

Maximum value of SAR (measured) = 1.81 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/15/2020
 Plot No.: 36

DUT: SM-A516V; Type: Bar

Communication System: UID 0, WCDMA850 (0); Frequency: 826.4 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 826.4 \text{ MHz}$; $\sigma = 0.909 \text{ S/m}$; $\epsilon_r = 42.772$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.22, 6.22, 6.22) @ 826.4 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA Band 5 Body Rear 4132ch/Area Scan (8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.536 W/kg

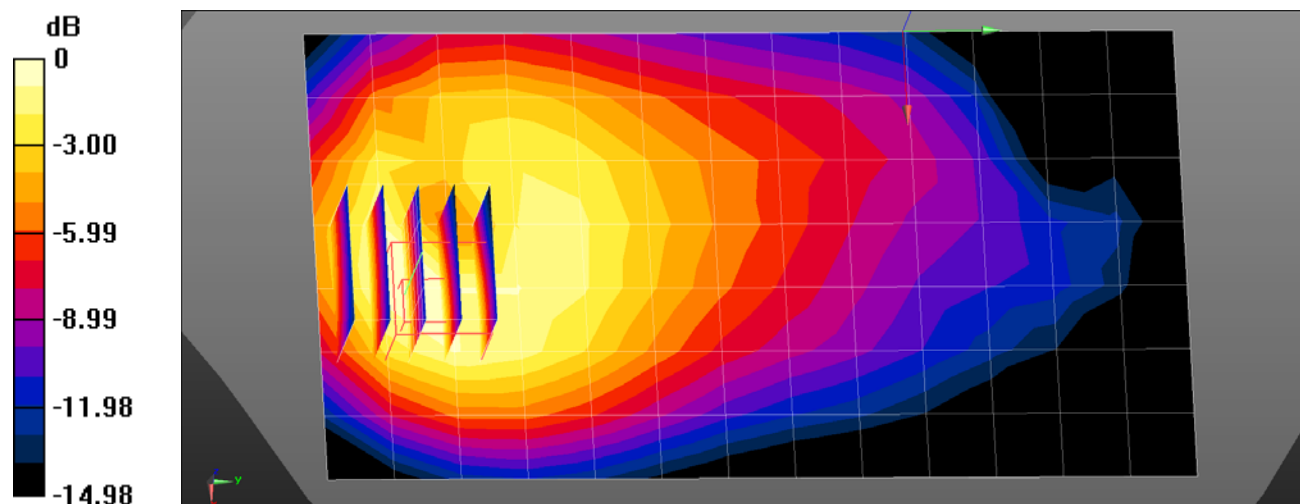
WCDMA Band 5 Body Rear 4132ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 12.30 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 0.820 W/kg

SAR(1 g) = 0.476 W/kg; SAR(10 g) = 0.281 W/kg

Maximum value of SAR (measured) = 0.579 W/kg



0 dB = 0.579 W/kg = -2.37 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/25/2020
 Plot No.: 37

DUT: SM-A516V; Type: Bar

Communication System: UID 0, WCDMA1900 (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1907.6$ MHz; $\sigma = 1.399$ S/m; $\epsilon_r = 39.088$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.75, 7.75, 7.75) @ 1907.6 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B2 Body Bottom 9538ch/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.36 W/kg

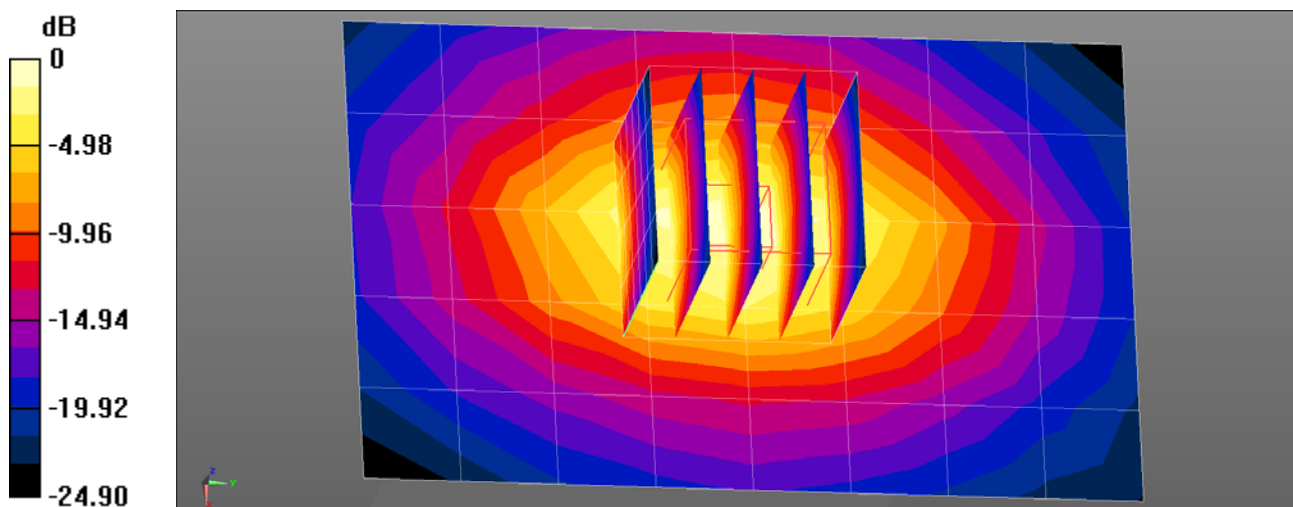
WCDMA B2 Body Bottom 9538ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 31.88 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 1.81 W/kg

SAR(1 g) = 0.973 W/kg; SAR(10 g) = 0.500 W/kg

Maximum value of SAR (measured) = 1.51 W/kg



0 dB = 1.36 W/kg = 1.34 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.3 °C
Ambient Temperature: 21.5 °C
Test Date: 05/11/2020
Plot No.: 38

DUT: SM-A516V; Type: Bar

Communication System: UID 0, LTE Band 2 (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1900$ MHz; $\sigma = 1.45$ S/m; $\epsilon_r = 39.091$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.1, 5.1, 5.1) @ 1900 MHz; Calibrated: 2019-07-23
- 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)

LTE Band 2 Body Bottom QPSK 20MHz 50RB 25offset 19100ch/Area Scan (6x9x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 1.04 W/kg

LTE Band 2 Body Bottom QPSK 20MHz 50RB 25offset 19100ch/Zoom Scan (5x5x7)/Cube 0:

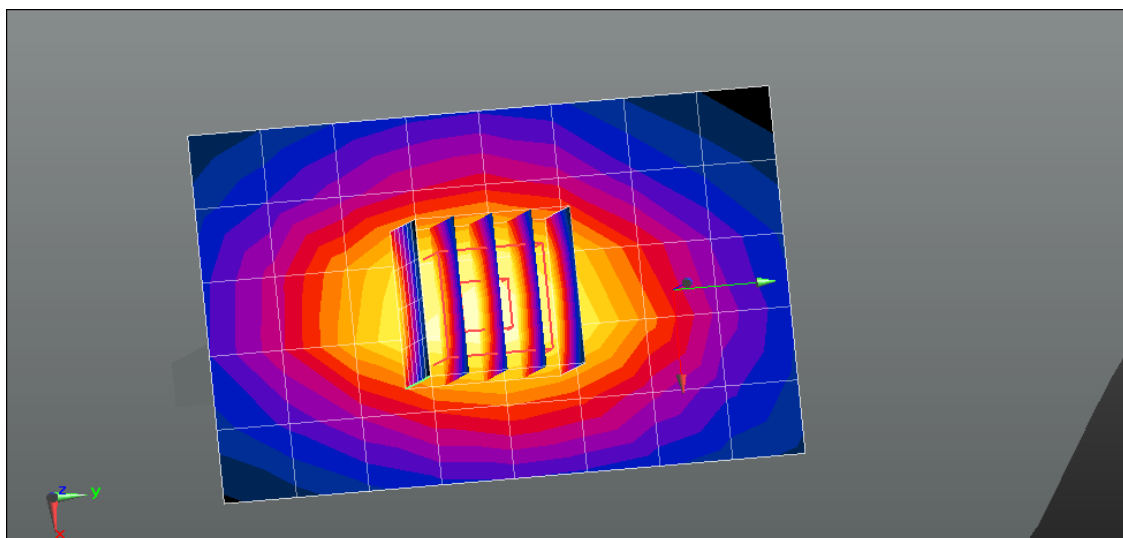
Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 29.33 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 1.75 W/kg

SAR(1 g) = 0.999 W/kg; SAR(10 g) = 0.519 W/kg

Maximum value of SAR (measured) = 1.25 W/kg



0 dB = 1.04 W/kg = 0.16 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.9 °C
 Ambient Temperature: 21.1 °C
 Test Date: 05/12/2020
 Plot No.: 39

DUT: SM-A516V; Type: Bar

Communication System: UID 0, LTE Band 5 (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.923$ S/m; $\epsilon_r = 42.666$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.22, 6.22, 6.22) @ 836.5 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 5 Body Rear QPSK 10MHz 1RB 0offset 20525ch/Area Scan (8x13x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.623 W/kg

LTE Band 5 Body Rear QPSK 10MHz 1RB 0offset 20525ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid:

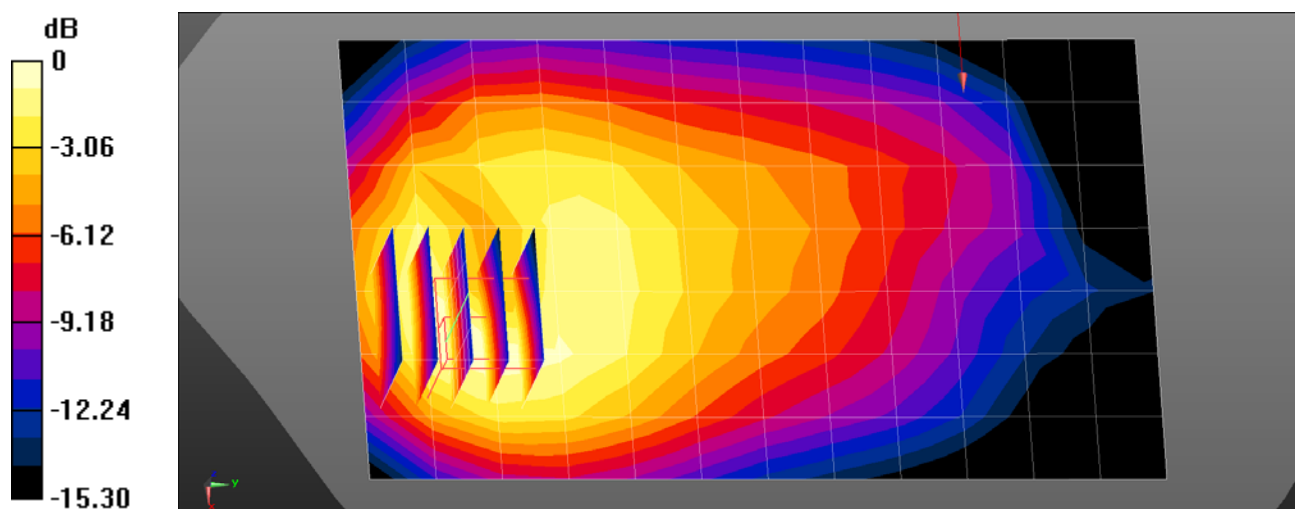
dx=8mm, dy=8mm, dz=5mm

Reference Value = 15.62 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.920 W/kg

SAR(1 g) = 0.536 W/kg; SAR(10 g) = 0.316 W/kg

Maximum value of SAR (measured) = 0.650 W/kg



0 dB = 0.650 W/kg = -1.87 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.9 °C
 Ambient Temperature: 21.1 °C
 Test Date: 05/28/2020
 Plot No.: 40

DUT: SM-A516V; Type: Bar

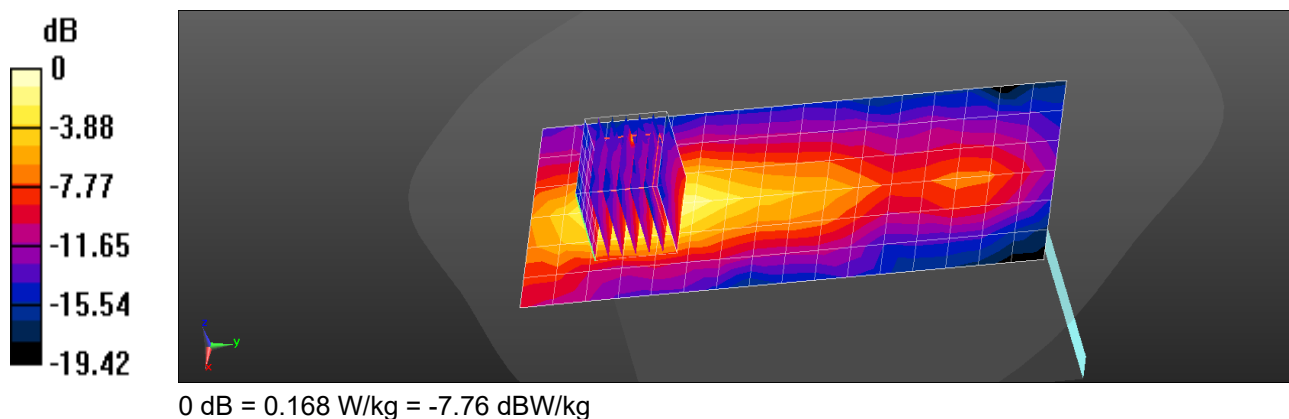
Communication System: UID 0, LTE Band 7 (0); Frequency: 2560 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2560 \text{ MHz}$; $\sigma = 1.914 \text{ S/m}$; $\epsilon_r = 37.956$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.36, 7.36, 7.36) @ 2560 MHz; Calibrated: 2019-08-29
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2019-11-18
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4)

LTE Band7 Body Left QPSK 20MHz 50RB 49offset 21350ch/Area Scan (7x17x1): Measurement grid:
 $dx=12\text{mm}$, $dy=12\text{mm}$
 Maximum value of SAR (measured) = 0.168 W/kg

LTE Band7 Body Left QPSK 20MHz 50RB 49offset 21350ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 5.432 V/m; Power Drift = -0.17 dB
 Peak SAR (extrapolated) = 15.3 W/kg
SAR(1 g) = 0.199 W/kg; SAR(10 g) = 0.067 W/kg
 Maximum value of SAR (measured) = 3.88 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.5 °C
 Ambient Temperature: 21.7 °C
 Test Date: 05/13/2020
 Plot No.: 41

DUT: SM-A516V; Type: Bar

Communication System: UID 0, LTE Band 12 (0); Frequency: 707.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 707.5 \text{ MHz}$; $\sigma = 0.857 \text{ S/m}$; $\epsilon_r = 42.676$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.52, 6.52, 6.52) @ 707.5 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 12 Body Rear QPSK 10MHz 1RB 24offset 23095ch/Area Scan (8x13x1): Measurement grid:
 $dx=15\text{mm}$, $dy=15\text{mm}$.

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

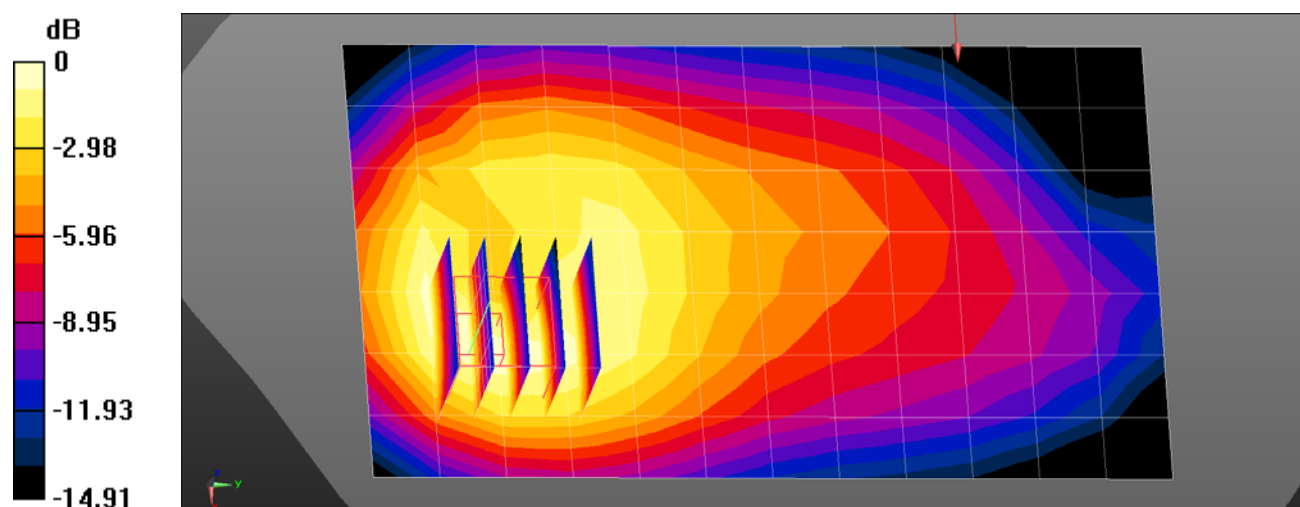
LTE Band 12 Body Rear QPSK 10MHz 1RB 24offset 23095ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 14.00 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 0.732 W/kg

SAR(1 g) = 0.421 W/kg; SAR(10 g) = 0.248 W/kg

Maximum value of SAR (measured) = 0.504 W/kg



0 dB = 0.504 W/kg = -2.98 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.3 °C
 Ambient Temperature: 20.5 °C
 Test Date: 05/14/2020
 Plot No.: 42

DUT: SM-A516V; Type: Bar

Communication System: UID 0, LTE Band 13 (0); Frequency: 782 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 782 \text{ MHz}$; $\sigma = 0.93 \text{ S/m}$; $\epsilon_r = 41.649$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.52, 6.52, 6.52) @ 782 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band 13 Body Rear QPSK 10MHz 1RB 24offset 23230ch/Area Scan (8x13x1): Measurement grid:

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

Maximum value of SAR (measured) = 0.575 W/kg

LTE Band 13 Body Rear QPSK 10MHz 1RB 24offset 23230ch/Zoom Scan (5x5x7)/Cube 0: Measurement

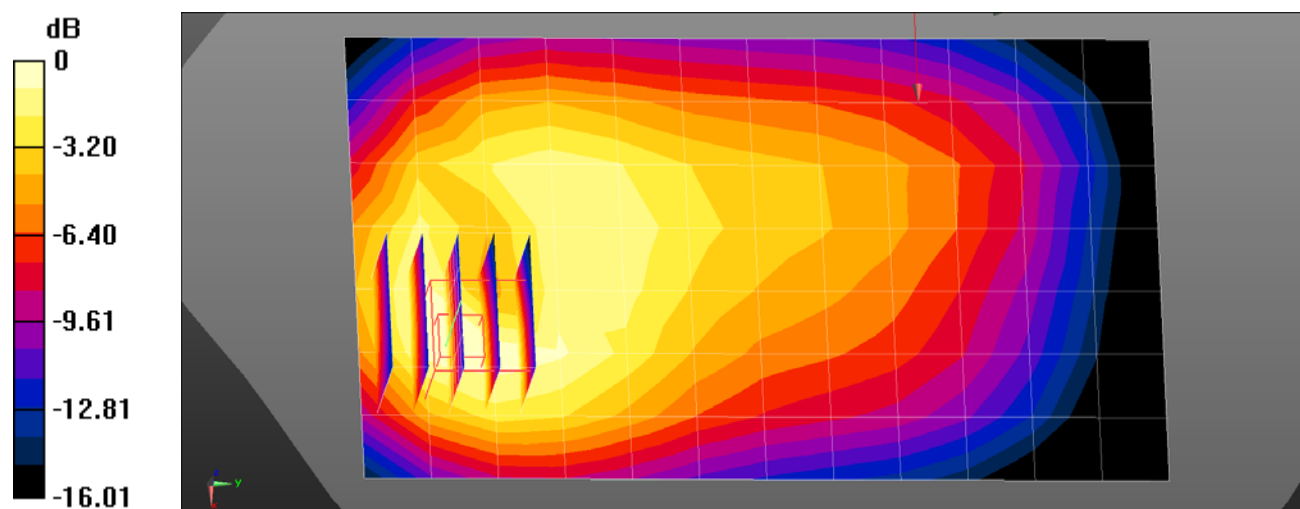
grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 15.90 V/m; Power Drift = 0.05 dB

Peak SAR (extrapolated) = 0.854 W/kg

SAR(1 g) = 0.491 W/kg; SAR(10 g) = 0.286 W/kg.

Maximum value of SAR (measured) = 0.594 W/kg



0 dB = 0.594 W/kg = -2.26 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.4 °C
Ambient Temperature: 20.6 °C
Test Date: 05/14/2020
Plot No.: 43

DUT: SM-A516V; Type: Bar

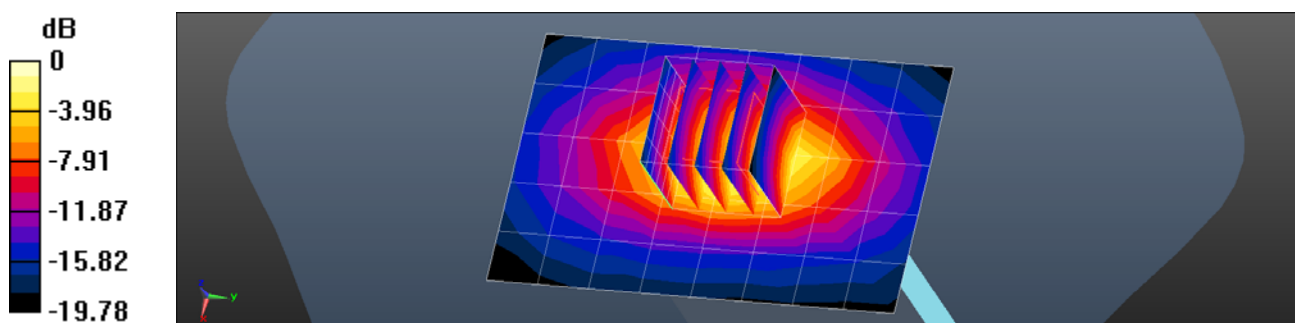
Communication System: UID 0, LTE 66 (0); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1770$ MHz; $\sigma = 1.36$ S/m; $\epsilon_r = 40.252$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14) @ 1770 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4)

SM-A516V/LTE 66 Body Bottom QPSK 20MHz 1RB 0offset 132572ch/Area Scan (6x9x1): Measurement
grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.35 W/kg

SM-A516V/LTE 66 Body Bottom QPSK 20MHz 1RB 0offset 132572ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.98 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.76 W/kg
SAR(1 g) = 0.963 W/kg; SAR(10 g) = 0.509 W/kg
Maximum value of SAR (measured) = 1.46 W/kg



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.4 °C
Ambient Temperature: 20.6 °C
Test Date: 05/14/2020
Plot No.: 44

DUT: SM-A516V; Type: Bar

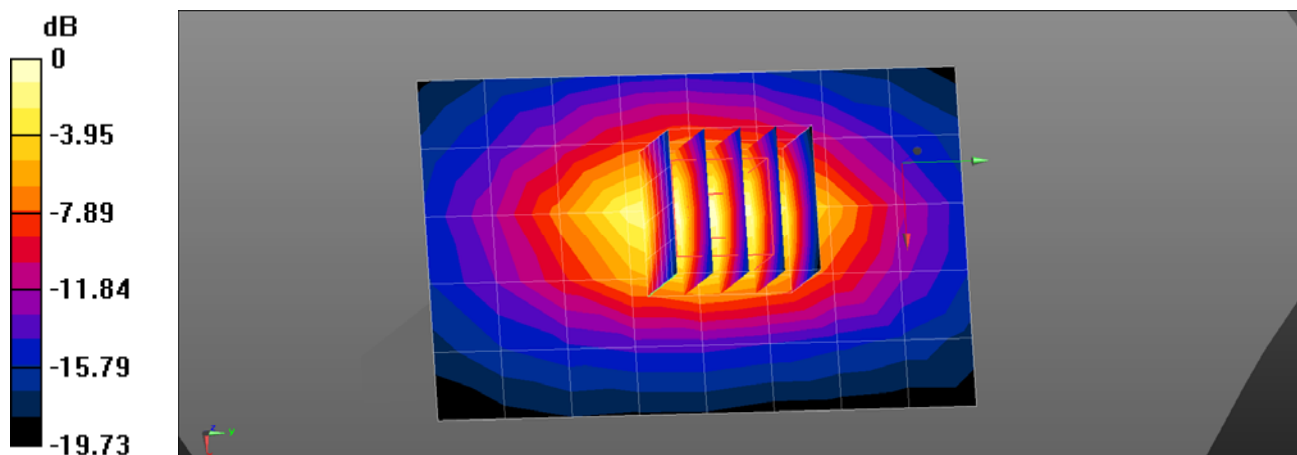
Communication System: UID 0, LTE 66 (0); Frequency: 1770 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1770$ MHz; $\sigma = 1.36$ S/m; $\epsilon_r = 40.252$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4)

LTE 66 Body Bottom QPSK 20MHz 50RB 25offset 132572ch/Area Scan (6x9x1): Measurement grid:
dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.44 W/kg

LTE 66 Body Bottom QPSK 20MHz 50RB 25offset 132572ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 32.01 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 1.84 W/kg
SAR(1 g) = 1.01 W/kg; SAR(10 g) = 0.530 W/kg
Maximum value of SAR (measured) = 1.52 W/kg



0 dB = 1.44 W/kg = 1.57 dBW/kg

Test Laboratory: HCT CO., LTD

EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/26/2020
 Plot No.: 45

DUT: SM-A516V; Type: Bar;

Communication System: UID 0, 5G NR (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.406$ S/m; $\epsilon_r = 39.714$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.1, 5.1, 5.1) @ 1900 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Front; Type: QD000P40CD; Serial: TP:xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR n2 Body Bottom DFT-s QPSK 20MHz 1RB 1offset 380000ch/Area Scan (6x9x1): Measurement grid:

dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.893 W/kg

NR n2 Body Bottom DFT-s QPSK 20MHz 1RB 1offset 380000ch/Zoom Scan (5x5x7)/Cube 0:

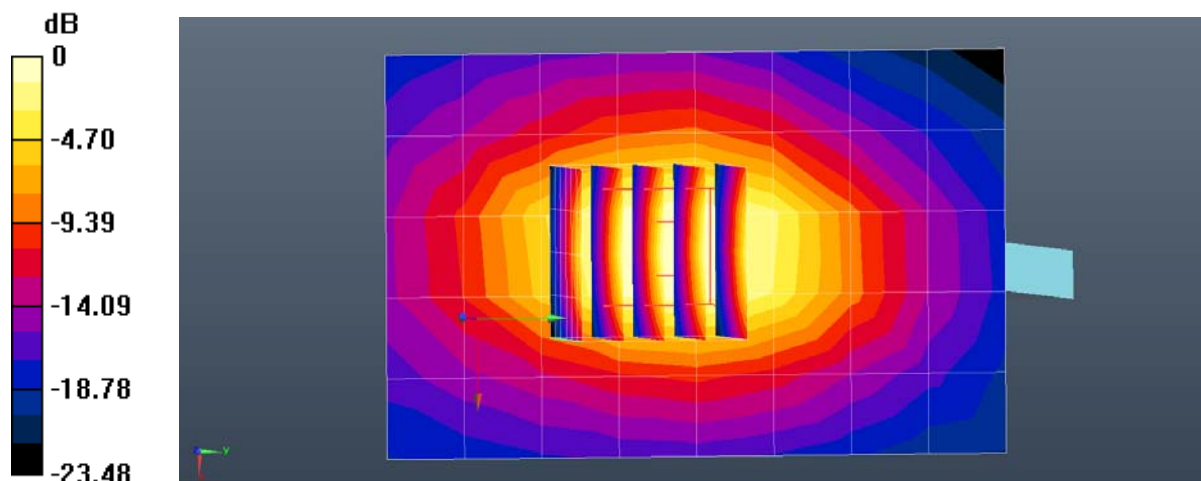
Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 30.31 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 1.71 W/kg

SAR(1 g) = 0.981 W/kg; SAR(10 g) = 0.510 W/kg

Maximum value of SAR (measured) = 1.23 W/kg



0 dB = 0.893 W/kg = -0.49 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.7 °C
 Ambient Temperature: 21.9 °C
 Test Date: 05/19/2020
 Plot No.: 46

DUT: SM-A516V; Type: Bar

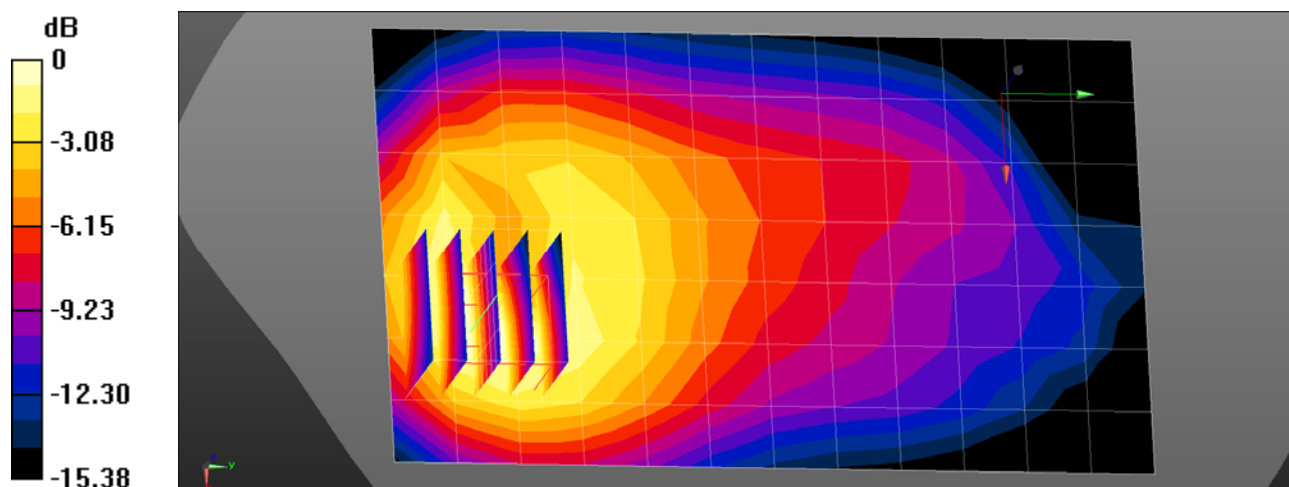
Communication System: UID 0, 5G nr (0); Frequency: 836.5 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 836.5$ MHz; $\sigma = 0.948$ S/m; $\epsilon_r = 42.782$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(9.85, 9.85, 9.85); Calibrated: 2019-09-27;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

NR n5 Body Rear DFT-s QPSK 20MHz 1RB 1offset 167300ch/Area Scan (8x13x1): Measurement grid:
 dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 0.845 W/kg

NR n5 Body Rear DFT-s QPSK 20MHz 1RB 1offset 167300ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 14.57 V/m; Power Drift = -0.12 dB
 Peak SAR (extrapolated) = 1.07 W/kg
SAR(1 g) = 0.621 W/kg; SAR(10 g) = 0.370 W/kg
 Maximum value of SAR (measured) = 0.906 W/kg



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

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 19.8 °C
 Ambient Temperature: 20.0 °C
 Test Date: 05/26/2020
 Plot No.: 47

DUT: SM-A516V; Type: Bar

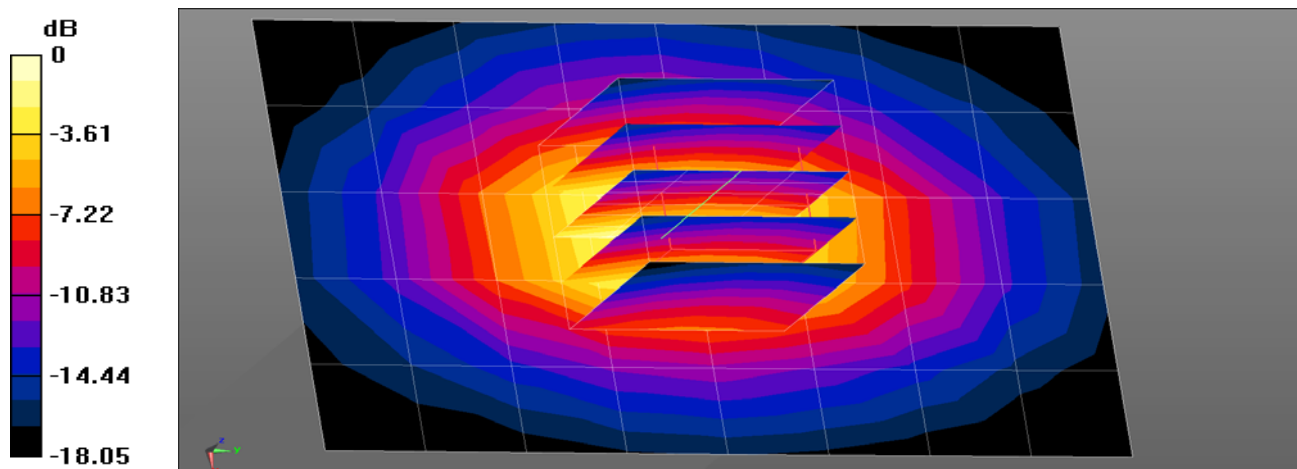
Communication System: UID 0, 5G NR (0); Frequency: 1770 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1770$ MHz; $\sigma = 1.369$ S/m; $\epsilon_r = 39.776$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1770 MHz;
- 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);

NR n66 Body Bottom DFT-s QPSK 20MHz 50RB 0offset 354000ch/Area Scan (6x9x1): Measurement grid:
 dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.18 W/kg

NR n66 Body Bottom DFT-s QPSK 20MHz 50RB 0offset 354000ch/Zoom Scan (5x5x7)/Cube
0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 35.01 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 1.89 W/kg
SAR(1 g) = 1.07 W/kg; SAR(10 g) = 0.576 W/kg
 Maximum value of SAR (measured) = 1.59 W/kg



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

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.0 °C
 Ambient Temperature: 20.8 °C
 Test Date: 05/22/2020
 Plot No.: 48

DUT: SM-A516V; Type: Bar

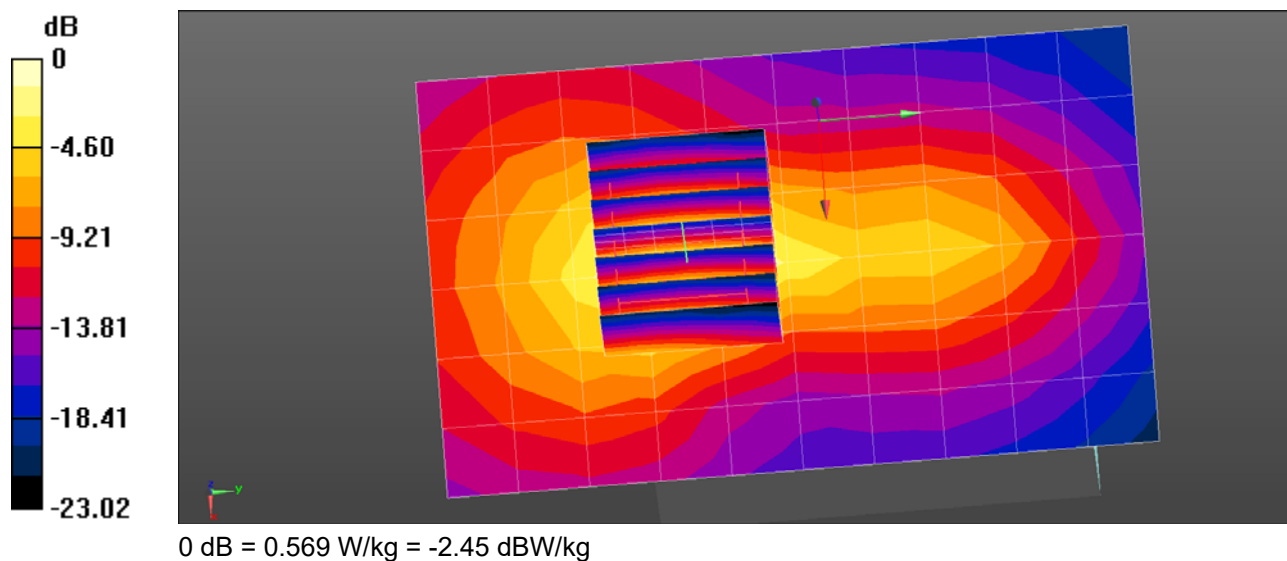
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.765$ S/m; $\epsilon_r = 40.275$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(7.65, 7.65, 7.65) @ 2412 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 9/19/2019
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

802.11b Body Top 1Mbps 1ch/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.524 W/kg

802.11b Body Top 1Mbps 1ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 10.49 V/m; Power Drift = -0.01dB
 Peak SAR (extrapolated) = 0.709 W/kg
SAR(1 g) = 0.333 W/kg; SAR(10 g) = 0.150 W/kg
 Maximum value of SAR (measured) = 0.569 W/kg



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.3 °C
Ambient Temperature: 20.1 °C
Test Date: 06/04/2020
Plot No.: 49

DUT: SM-A516V; Type: Bar

Communication System: UID 0, WIFI 5GHz (0); Frequency: 5745 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 5.17$ S/m; $\epsilon_r = 36.368$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5745 MHz;
- 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);

802.11a Body Rear 6Mbps 149ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.873 W/kg

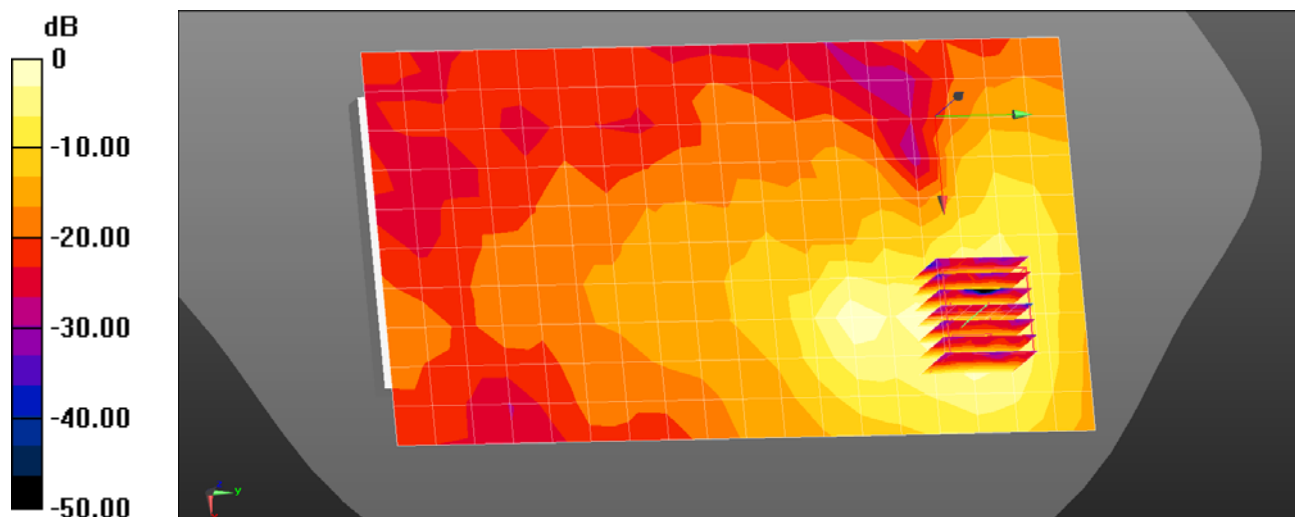
802.11a Body Rear 6Mbps 149ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 2.320 V/m; Power Drift = -0.16 dB

Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 0.386 W/kg; SAR(10 g) = 0.139 W/kg

Maximum value of SAR (measured) = 0.899 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.5
 Ambient Temperature: 21.7
 Test Date: 05/28/2020
 Plot No.: 50

DUT: SM-A516V; Type: Bar

Communication System: UID 0, Bluetooth (0); Frequency: 2441 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2441$ MHz; $\sigma = 1.799$ S/m; $\epsilon_r = 39.8$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(7.65, 7.65, 7.65) @ 2441 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Bluetooth Body Left DH5 39ch/Area Scan (6x16x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 0.115 W/kg

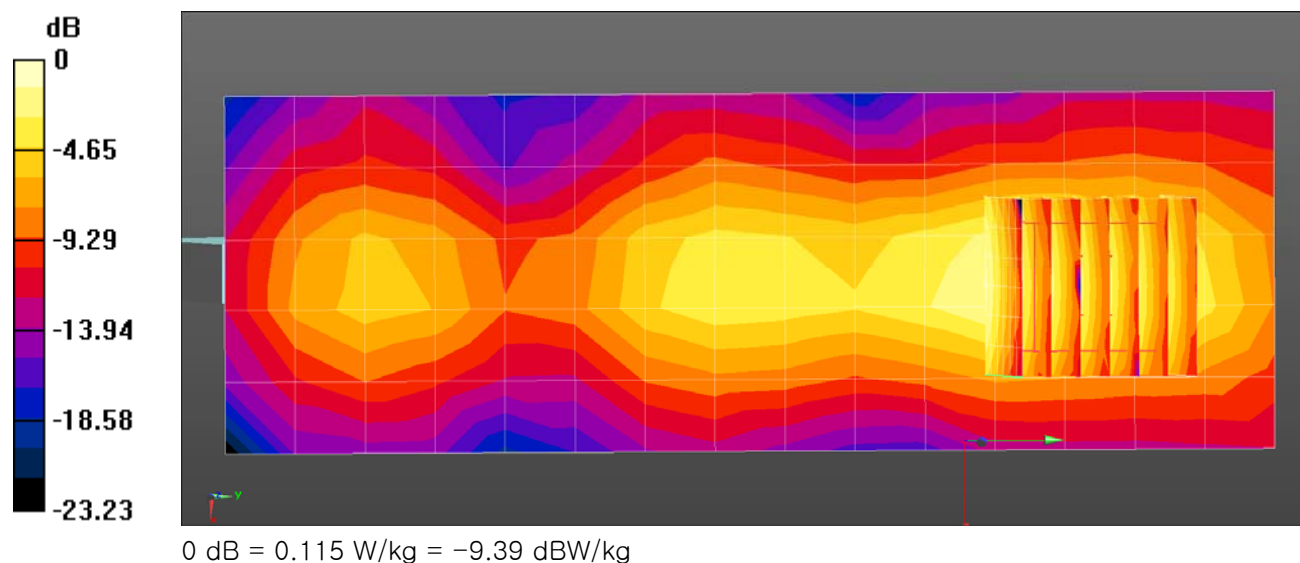
Bluetooth Body Left DH5 39ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.700 V/m; Power Drift = -0.15 dB

Peak SAR (extrapolated) = 0.178 W/kg

SAR(1 g) = 0.078 W/kg; SAR(10 g) = 0.034 W/kg

Maximum value of SAR (measured) = 0.137 W/kg



Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 21.3 °C
 Ambient Temperature: 21.5 °C
 Test Date: 05/12/2020
 Plot No.: 51

DUT: SM-A516V; Type: Bar

Communication System: UID 0, GSM 1900 2Tx (0); Frequency: 1880 MHz; Duty Cycle: 1:4.14954
 Medium parameters used: $f = 1880 \text{ MHz}$; $\sigma = 1.381 \text{ S/m}$; $\epsilon_r = 39.266$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.31, 8.31, 8.31) @ 1880 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

GSM1900 Body Bottom 2Tx 661ch/Area Scan (6x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 3.81 W/kg

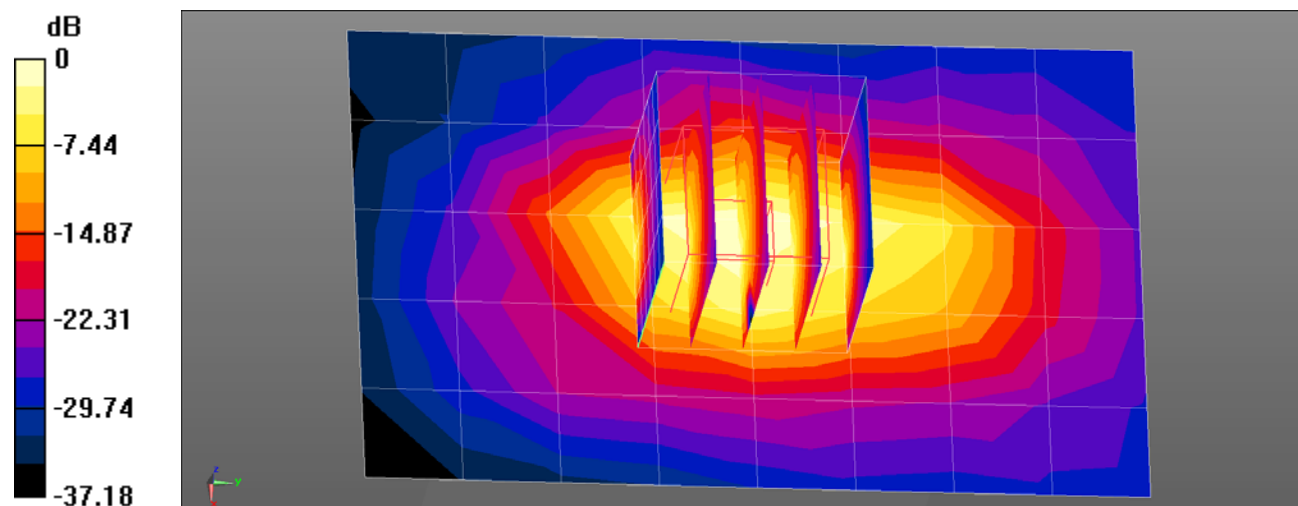
GSM1900 Body Bottom 2Tx 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 69.56 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 8.68 W/kg

SAR(1 g) = 3.79 W/kg; SAR(10 g) = 1.62 W/kg

Maximum value of SAR (measured) = 7.16 W/kg



0 dB = 3.81 W/kg = 5.81 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/25/2020
 Plot No.: 52

DUT: SM-A516V; Type: Bar

Communication System: UID 0, WCDMA1900 (0); Frequency: 1852.4 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1852.4$ MHz; $\sigma = 1.341$ S/m; $\epsilon_r = 39.375$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.75, 7.75, 7.75) @ 1852.4 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B2 Body Front 9262ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 5.39 W/kg

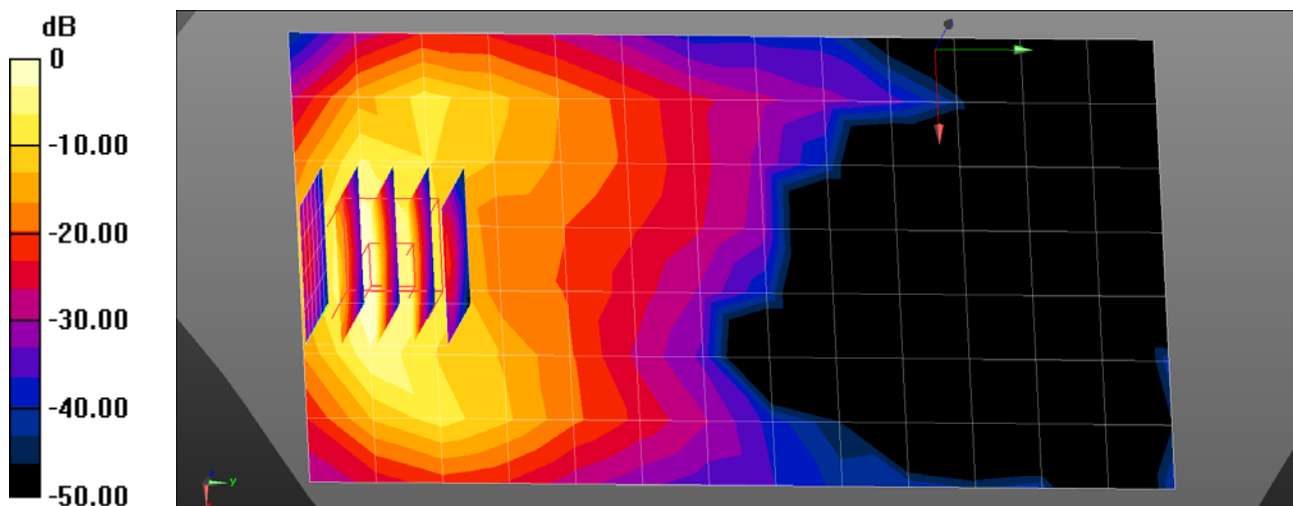
WCDMA B2 Body Front 9262ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.357 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 11.9 W/kg

SAR(1 g) = 4.75 W/kg; SAR(10 g) = 2.02 W/kg

Maximum value of SAR (measured) = 6.76 W/kg



0 dB = 5.39 W/kg = 7.31 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/25/2020
 Plot No.: 53

DUT: SM-A516V; Type: Bar

Communication System: UID 0, WCDMA1900 (0); Frequency: 1907.6 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 1907.6$ MHz; $\sigma = 1.399$ S/m; $\epsilon_r = 39.088$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.75, 7.75, 7.75) @ 1907.6 MHz; Calibrated: 2019-11-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

WCDMA B2 Body Front 9538ch/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 5.95 W/kg

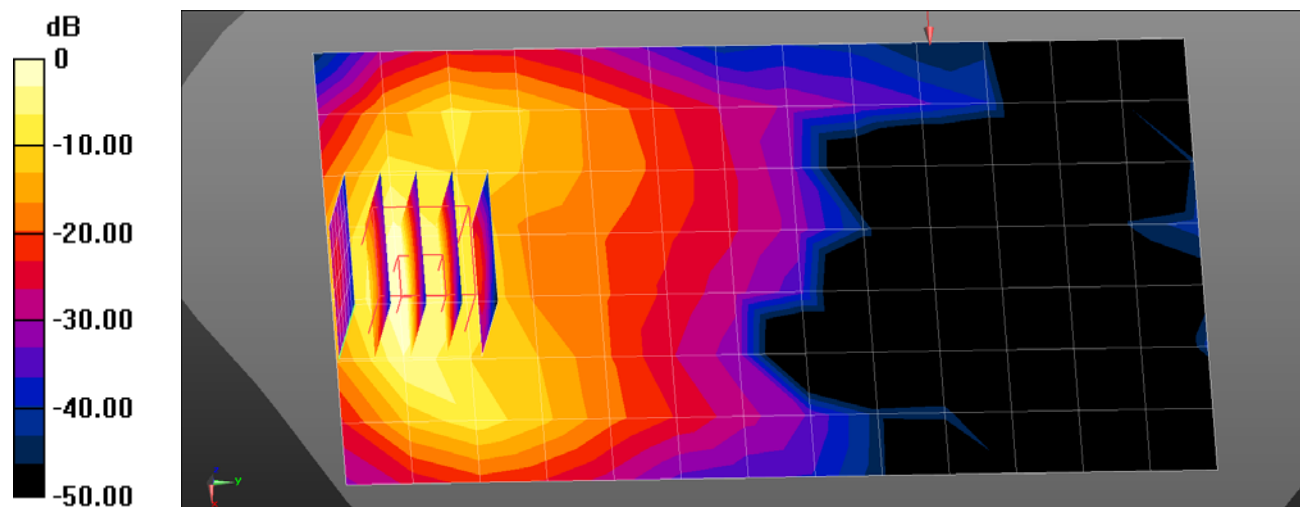
SM-A516V/WCDMA B2 Body Front 9538ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 1.476 V/m; Power Drift = -0.17 dB

Peak SAR (extrapolated) = 12.8 W/kg

SAR(1 g) = 5.09 W/kg; SAR(10 g) = 2.13 W/kg

Maximum value of SAR (measured) = 7.33 W/kg



0 dB = 5.95 W/kg = 7.74 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.9 °C
Ambient Temperature: 21.1 °C
Test Date: 05/12/2020
Plot No.: 54

DUT: SM-A516V; Type: Bar

Communication System: UID 0, LTE2 (20MHz) (0); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 1900$ MHz; $\sigma = 1.386$ S/m; $\epsilon_r = 39.176$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.75, 7.75, 7.75); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE 2 Body Front QPSK 20MHz 50RB 25offset 19100ch Phablet/Area Scan (8x14x1): Measurement grid:

$dx=15$ mm, $dy=15$ mm

Maximum value of SAR (measured) = 9.97 W/kg

LTE 2 Body Front QPSK 20MHz 50RB 25offset 19100ch Phablet/Zoom Scan (5x5x7)/Cube 0:

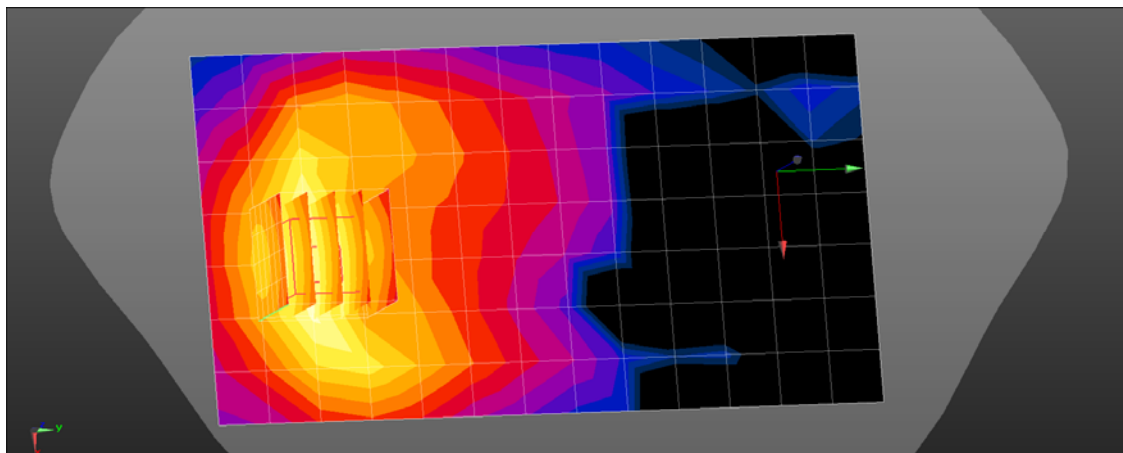
Measurement grid: $dx=8$ mm, $dy=8$ mm, $dz=5$ mm

Reference Value = 3.553 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 13.6 W/kg

SAR(1 g) = 5.9 W/kg; SAR(10 g) = 2.47 W/kg

Maximum value of SAR (measured) = 9.99 W/kg



0 dB = 9.97 W/kg = 9.99 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.9 °C
Ambient Temperature: 21.2 °C
Test Date: 05/28/2020
Plot No.: 55

DUT: SM-A516V; Type: Bar

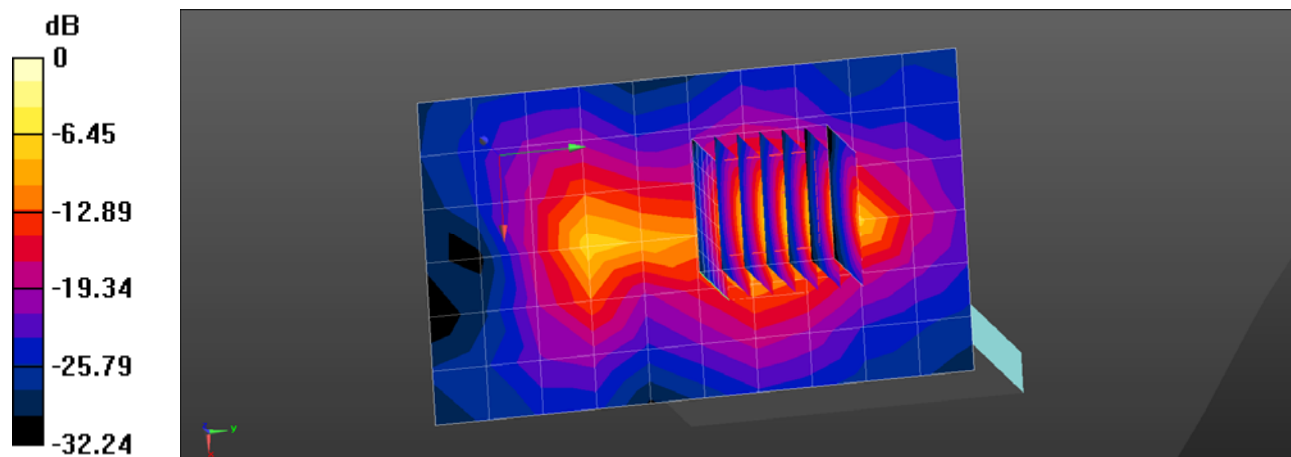
Communication System: UID 0, LTE Band 7 (0); Frequency: 2560 MHz; Duty Cycle: 1:1
Medium parameters used: $f = 2560$ MHz; $\sigma = 1.914$ S/m; $\epsilon_r = 37.956$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.36, 7.36, 7.36); Calibrated: 2019-08-29;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2019-11-18
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

LTE Band7 Body Bottom QPSK 20MHz 50RB 49offset 21350ch/Area Scan (7x11x1): Measurement grid:
dx=12mm, dy=12mm
Maximum value of SAR (measured) = 5.00 W/kg

LTE Band7 Body Bottom QPSK 20MHz 50RB 49offset 21350ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 15.33 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 9.14 W/kg
SAR(1 g) = 2.15 W/kg; SAR(10 g) = 0.694 W/kg
Maximum value of SAR (measured) = 6.00 W/kg



0 dB = 5.00 W/kg = 6.99 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.4 °C
Ambient Temperature: 20.6 °C
Test Date: 05/14/2020
Plot No.: 56

DUT: SM-A516V; Type: Bar

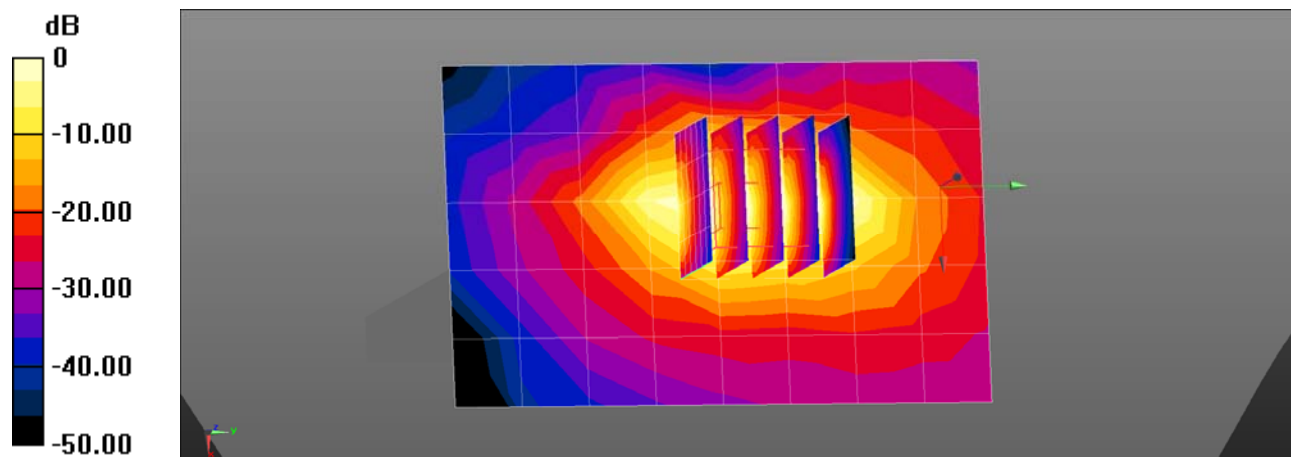
Communication System: UID 0, LTE 66 (0); Frequency: 1745 MHz; Duty Cycle: 1:1
Medium parameters used (interpolated): $f = 1745 \text{ MHz}$; $\sigma = 1.337 \text{ S/m}$; $\epsilon_r = 40.377$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE 66 Body Bottom QPSK 20MHz 1RB 49offset 132322ch Phablet/Area Scan (6x9x1): Measurement grid:
 $dx=15\text{mm}$, $dy=15\text{mm}$
Maximum value of SAR (measured) = 6.86 W/kg

LTE 66 Body Bottom QPSK 20MHz 1RB 49offset 132322ch Phablet/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
Reference Value = 67.66 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 10.5 W/kg
SAR(1 g) = 4.49 W/kg; SAR(10 g) = 2.04 W/kg
Maximum value of SAR (measured) = 8.44 W/kg



0 dB = 6.86 W/kg = 8.37 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/14/2020
 Plot No.: 57

DUT: SM-A516V; Type: Bar

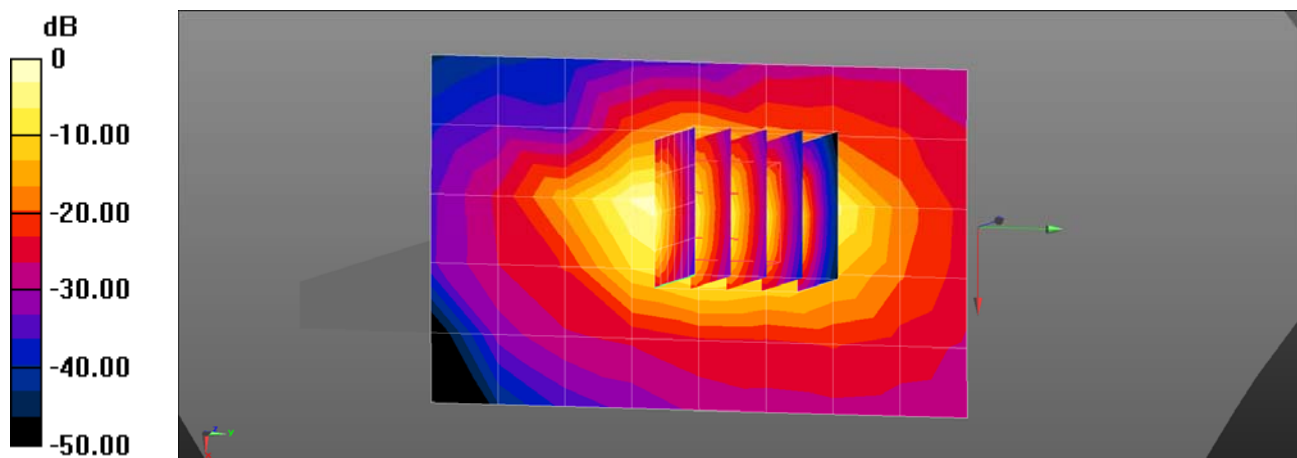
Communication System: UID 0, LTE 66 (0); Frequency: 1770 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1770$ MHz; $\sigma = 1.36$ S/m; $\epsilon_r = 40.252$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14); Calibrated: 2019-11-28;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

LTE 66 Body Bottom QPSK 20MHz 50RB 25offset 132572ch Phablet/Area Scan (6x9x1): Measurement
 grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 6.15 W/kg

LTE 66 Body Bottom QPSK 20MHz 50RB 25offset 132572ch Phablet/Zoom Scan (5x5x7)/Cube 0:
 Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 74.79 V/m; Power Drift = 0.16 dB
 Peak SAR (extrapolated) = 14.4 W/kg
SAR(1 g) = 4.76 W/kg; SAR(10 g) = 2.12 W/kg
 Maximum value of SAR (measured) = 9.46 W/kg



0 dB = 6.15 W/kg = 7.89 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/26/2020
 Plot No.: 58

DUT: SM-A516V; Type: Bar

Communication System: UID 0, 5G NR (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.388 \text{ S/m}$; $\epsilon_r = 39.797$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.1, 5.1, 5.1); Calibrated: 2019-07-23
- 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)

NR n2 Body Front DFT-s QPSK 20MHz 50RB 0offset 380000ch Grip 0mm/Area Scan

(8x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$

Maximum value of SAR (measured) = 6.21 W/kg

NR n2 Body Front DFT-s QPSK 20MHz 50RB 0offset 380000ch Grip 0mm/Zoom Scan (5x5x7)/Cube

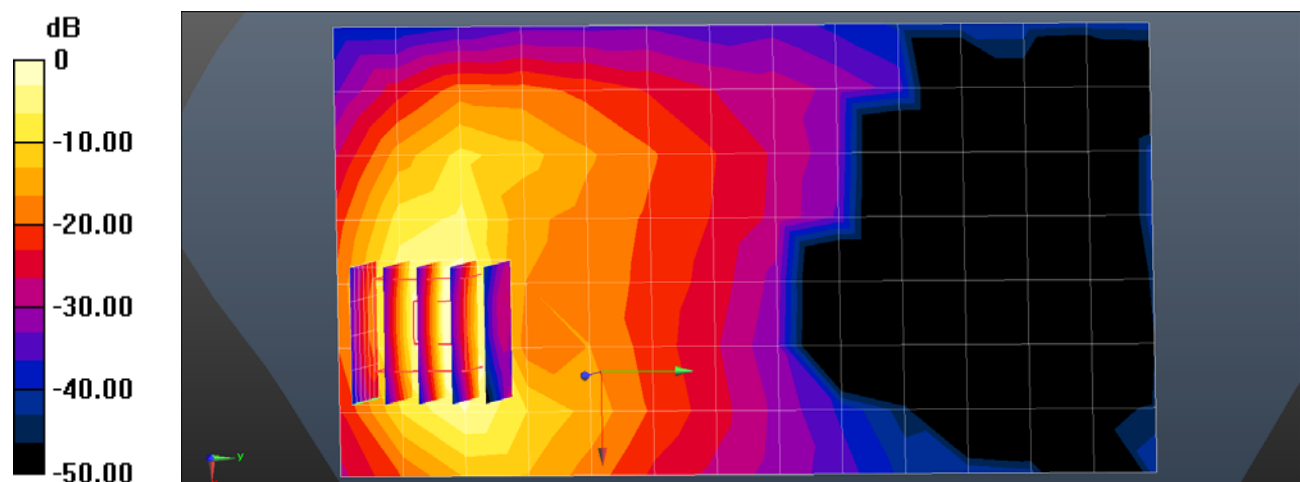
0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 2.205 V/m; Power Drift = 0.17 dB

Peak SAR (extrapolated) = 13.5 W/kg

SAR(1 g) = 5.96 W/kg; SAR(10 g) = 2.51 W/kg

Maximum value of SAR (measured) = 8.70 W/kg



0 dB = 6.21 W/kg = 7.93 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/26/2020
 Plot No.: 59

DUT: SM-A516V; Type: Bar

Communication System: UID 0, 5G NR (0); Frequency: 1860 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.364$ S/m; $\epsilon_r = 39.934$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.1, 5.1, 5.1); Calibrated: 2019-07-23
- 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);

NR n2 Body Front DFT-s QPSK 20MHz 100RB 0offset 372000ch back off 0mm/Area Scan

(8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 6.36 W/kg

NR n2 Body Front DFT-s QPSK 20MHz 100RB 0offset 372000ch back off 0mm/Zoom Scan (5x5x7)/Cube

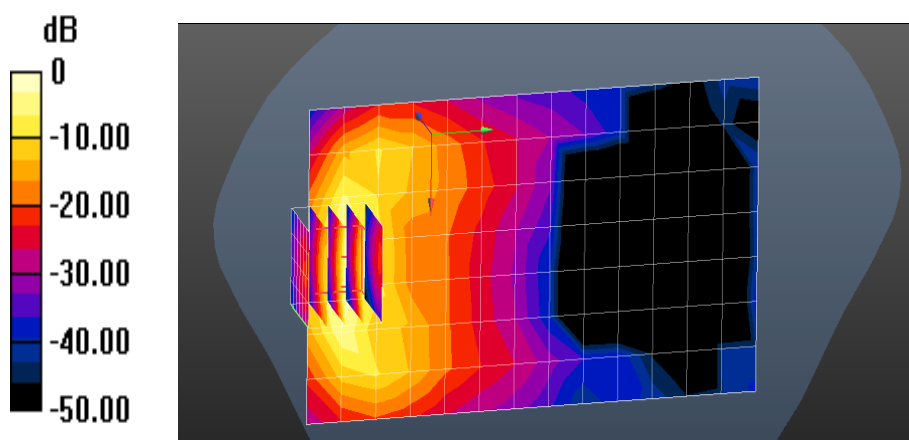
0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 0.8110 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 12.5 W/kg

SAR(1 g) = 5.77 W/kg; SAR(10 g) = 2.52 W/kg

Maximum value of SAR (measured) = 7.51 W/kg



0 dB = 6.36 W/kg = 8.04 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 23.2 °C
 Ambient Temperature: 23.0 °C
 Test Date: 03/20/2020
 Plot No.: 60

DUT: SM-A516V; Type: Bar

Communication System: UID 0, 5G NR (0); Frequency: 1720 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1720$ MHz; $\sigma = 1.326$ S/m; $\epsilon_r = 39.97$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1720 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); Type: QD 000 P41 AA; Serial: 1933
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

SM-A516V/NR n66 Body Bottom DFT-s QPSK 20MHz 1RB 1offset 344000ch back off 0mm/Area Scan

(7x8x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 12.2 W/kg

SM-A516V/NR n66 Body Bottom DFT-s QPSK 20MHz 1RB 1offset 344000ch back off 0mm/Zoom Scan

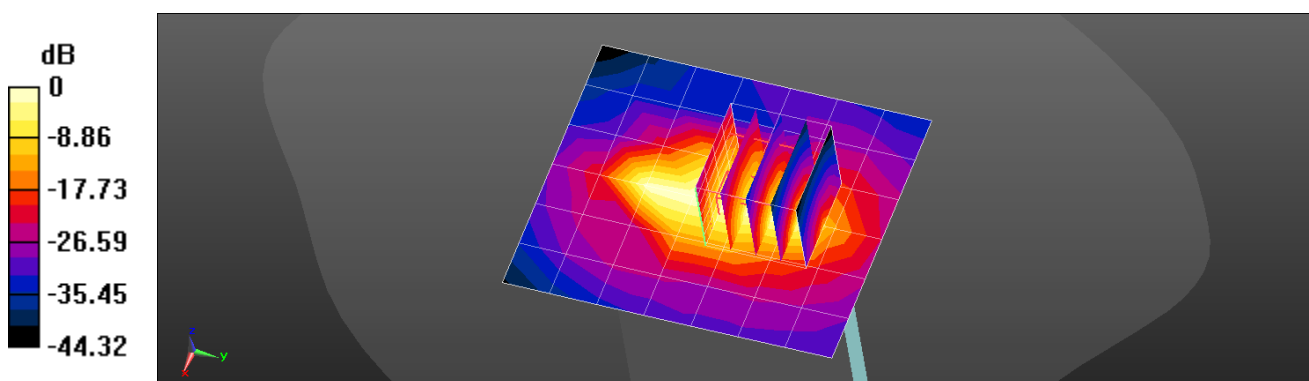
(5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 96.05 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 15.9 W/kg

SAR(1 g) = 6.11 W/kg; SAR(10 g) = 2.32 W/kg

Maximum value of SAR (measured) = 12.7 W/kg



0 dB = 12.2 W/kg = 10.85 dBW/kg

Test Laboratory: HCT CO., LTD
 EUT Type: Mobile Phone
 Liquid Temperature: 20.4 °C
 Ambient Temperature: 20.6 °C
 Test Date: 05/26/2020
 Plot No.: 61

DUT: SM-A516V; Type: Bar

Communication System: UID 0, WIFI 5GHz (0); Frequency: 5680 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5680$ MHz; $\sigma = 5.099$ S/m; $\epsilon_r = 36.472$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1) @ 5680 MHz;
- 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);

802.11a Body Rear 6Mbps 124ch/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 3.27 W/kg

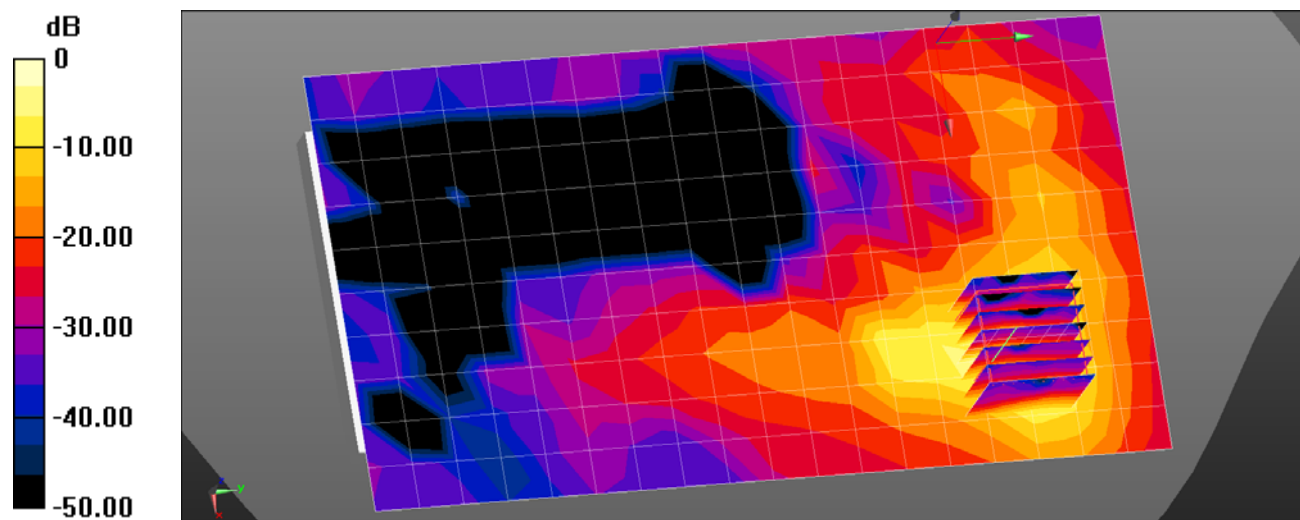
802.11a Body Rear 6Mbps 124ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 0.4620 V/m; Power Drift = 0.13 dB

Peak SAR (extrapolated) = 22.6 W/kg

SAR(1 g) = 2.86 W/kg; SAR(10 g) = 0.674 W/kg

Maximum value of SAR (measured) = 9.03 W/kg



0 dB = 9.03 W/kg = 9.56 dBW/kg

Appendix C. – Dipole Verification Plots

■ Verification Data (750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.5 °C
 Test Date: 05/13/2020
 Plot No.: 62

DUT: Dipole 750 MHz D750V3; Type: D750V3

Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.893 \text{ S/m}$; $\epsilon_r = 42.025$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.52, 6.52, 6.52) @ 750 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/750MHz Head Verification/Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.474 W/kg

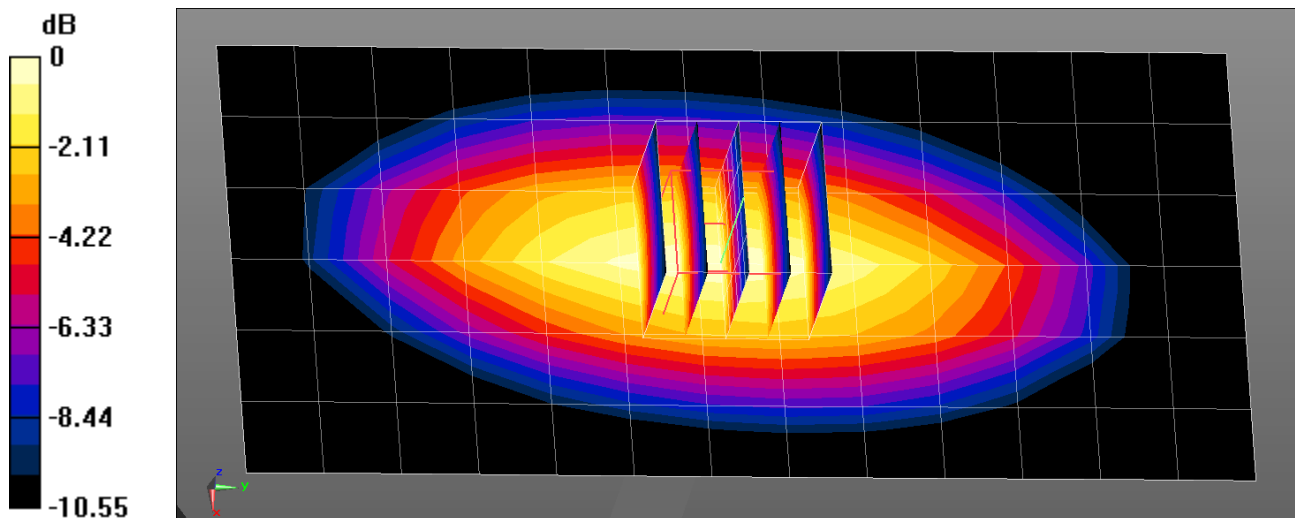
Dipole/750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.84 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.615 W/kg

SAR(1 g) = 0.408 W/kg; SAR(10 g) = 0.265 W/kg

Maximum value of SAR (measured) = 0.480 W/kg



0 dB = 0.480 W/kg = -3.19 dBW/kg

■ Verification Data (750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.3 °C
 Test Date: 05/14/2020
 Plot No.: 63

DUT: Dipole 750 MHz D750V3; Type: D750V3

Communication System: UID 0, CW (0); Frequency: 750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 750 \text{ MHz}$; $\sigma = 0.899 \text{ S/m}$; $\epsilon_r = 42.036$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.52, 6.52, 6.52) @ 750 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/750MHz Head Verification/Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.477 W/kg

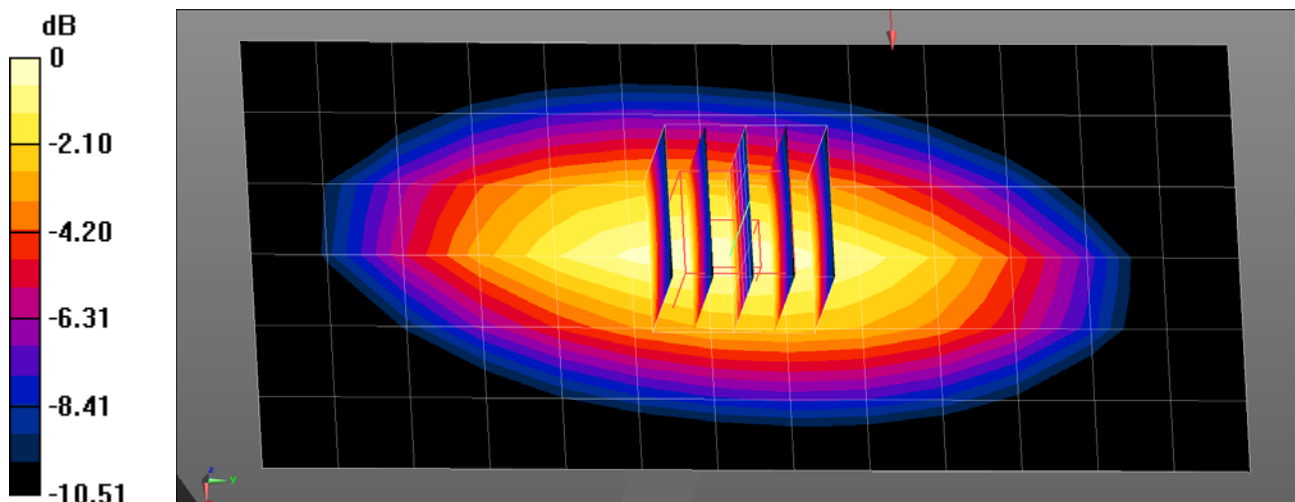
Dipole/750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 23.87 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.615 W/kg

SAR(1 g) = 0.410 W/kg; SAR(10 g) = 0.267 W/kg

Maximum value of SAR (measured) = 0.481 W/kg



0 dB = 0.481 W/kg = -3.18 dBW/kg

■ Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.4 °C
Test Date: 05/15/2020
Plot No.: 64

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; $\sigma = 0.927$ S/m; $\epsilon_r = 42.277$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.22, 6.22, 6.22) @ 835 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/835MHz Head Verification/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.551 W/kg

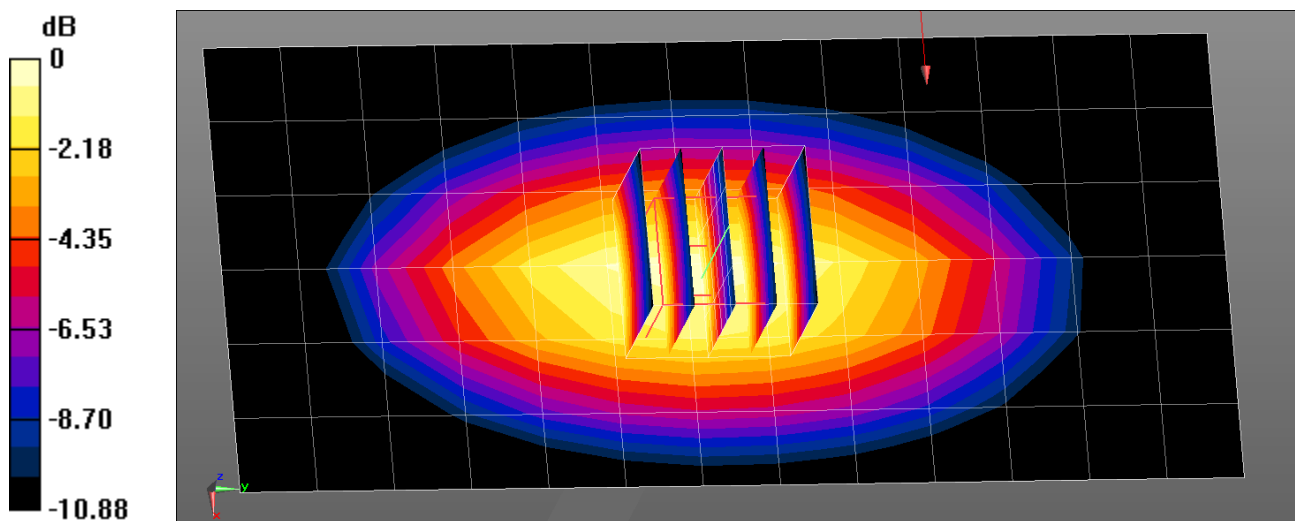
Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.01 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.743 W/kg

SAR(1 g) = 0.492 W/kg; SAR(10 g) = 0.320 W/kg

Maximum value of SAR (measured) = 0.578 W/kg



0 dB = 0.578 W/kg = -2.38 dBW/kg

■ Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.4 °C
 Test Date: 05/19/2020
 Plot No.: 65

DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 835 \text{ MHz}$; $\sigma = 0.917 \text{ S/m}$; $\epsilon_r = 42.664$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.22, 6.22, 6.22) @ 835 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/835MHz Head Verification/Area Scan (7x14x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 0.599 W/kg

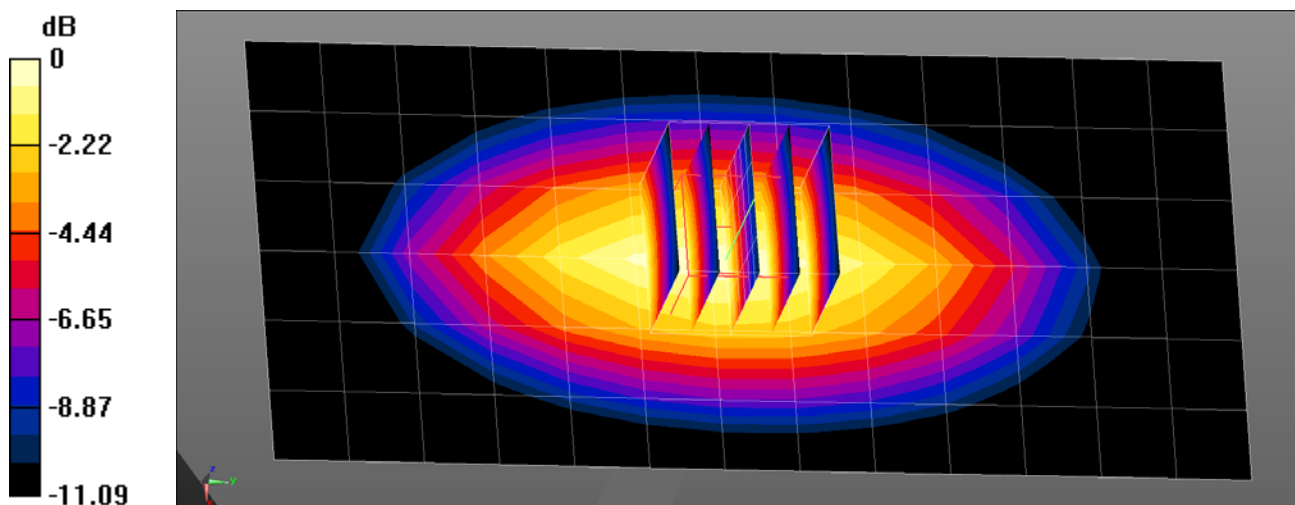
Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 26.18 V/m; Power Drift = -0.01 dB

Peak SAR (extrapolated) = 0.786 W/kg

SAR(1 g) = 0.514 W/kg; SAR(10 g) = 0.330 W/kg

Maximum value of SAR (measured) = 0.607 W/kg



0 dB = 0.607 W/kg = -2.17 dBW/kg

■ Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
Input Power: 0.05 W
Liquid Temp: 20.9 °C
Test Date: 05/12/2020
Plot No.: 66

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; $\sigma = 0.922$ S/m; $\epsilon_r = 42.685$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(6.22, 6.22, 6.22) @ 835 MHz; Calibrated: 2019-07-23
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1417; Calibrated: 2020-02-26
- Phantom: SAM with CRP v5.0_Right
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/835MHz Head Verification/Area Scan (7x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.551 W/kg

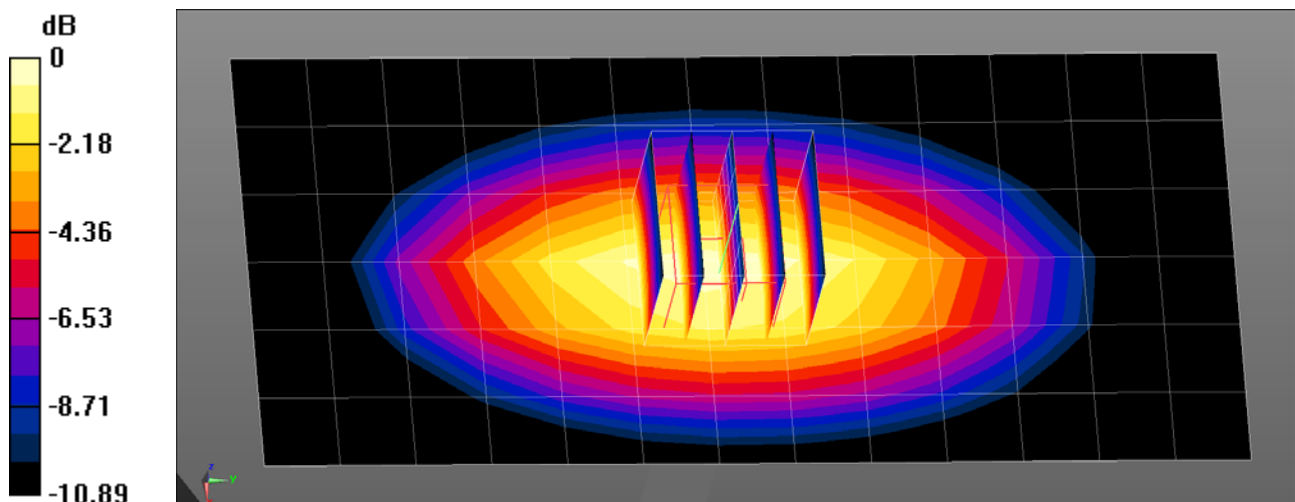
Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 25.08 V/m; Power Drift = -0.04 dB

Peak SAR (extrapolated) = 0.738 W/kg

SAR(1 g) = 0.490 W/kg; SAR(10 g) = 0.318 W/kg

Maximum value of SAR (measured) = 0.574 W/kg



■ Verification Data (835 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.7 °C
 Test Date: 05/19/2020
 Plot No.: 67

DUT: Dipole 835 MHz D835V2; Type: D835V2

Communication System: UID 0, CW (0); Frequency: 835 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 835 \text{ MHz}$; $\sigma = 0.942 \text{ S/m}$; $\epsilon_r = 42.801$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(9.85, 9.85, 9.85) @ 835 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2020-04-22
- Phantom: Twin-SAM V5.0 (20deg probe tilt)
- Measurement SW: DASY52, Version 52.10 (4);

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

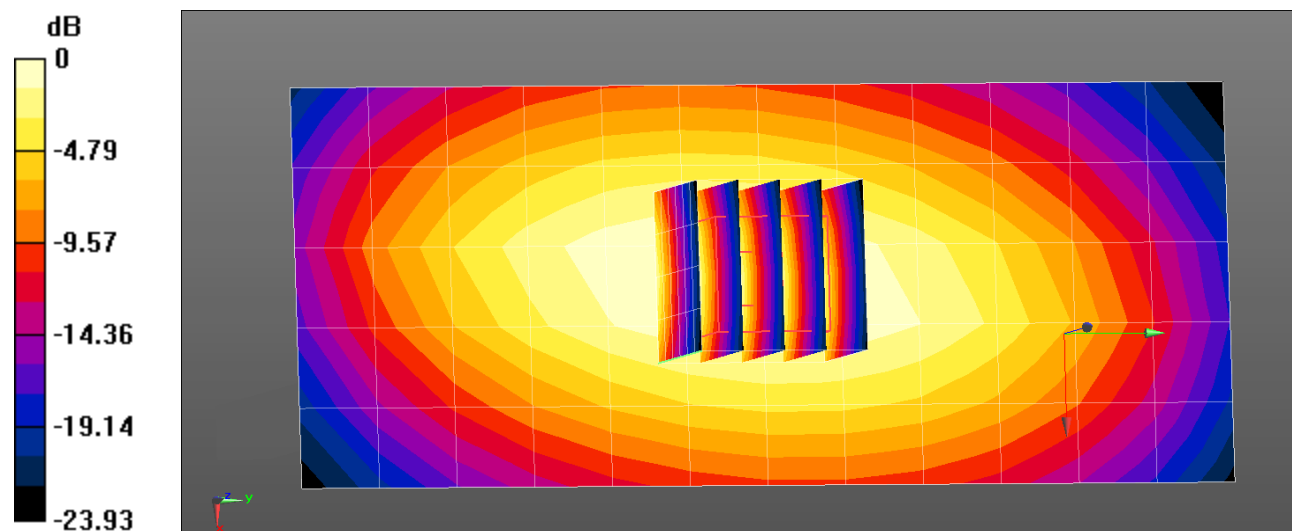
Dipole/835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 27.36 V/m; Power Drift = -0.07 dB

Peak SAR (extrapolated) = 0.726 W/kg

SAR(1 g) = 0.480 W/kg; SAR(10 g) = 0.316 W/kg

Maximum value of SAR (measured) = 0.644 W/kg



0 dB = 0.558 W/kg = -2.53 dBW/kg

■ Verification Data (1 800 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.1 °C
 Test Date: 05/13/2020
 Plot No.: 68

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.381 \text{ S/m}$; $\epsilon_r = 40.226$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY5 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: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1800MHz Head Verification/Area Scan (6x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 3.20 W/kg

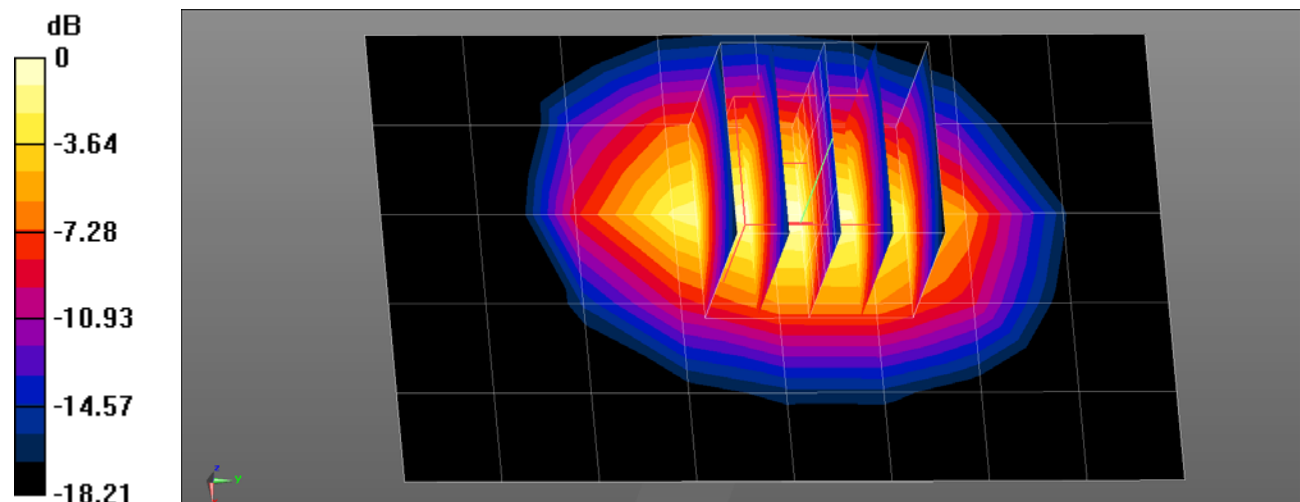
Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 40.01 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 3.91 W/kg

SAR(1 g) = 1.99 W/kg; SAR(10 g) = 1.02 W/kg

Maximum value of SAR (measured) = 3.18 W/kg



0 dB = 3.18 W/kg = 5.02 dBW/kg

■ Verification Data (1 800 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.4 °C
 Test Date: 05/14/2020
 Plot No.: 69

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.386 \text{ S/m}$; $\epsilon_r = 40.239$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14) @ 1800 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1800MHz Head Verification/Area Scan (6x9x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 2.58 W/kg

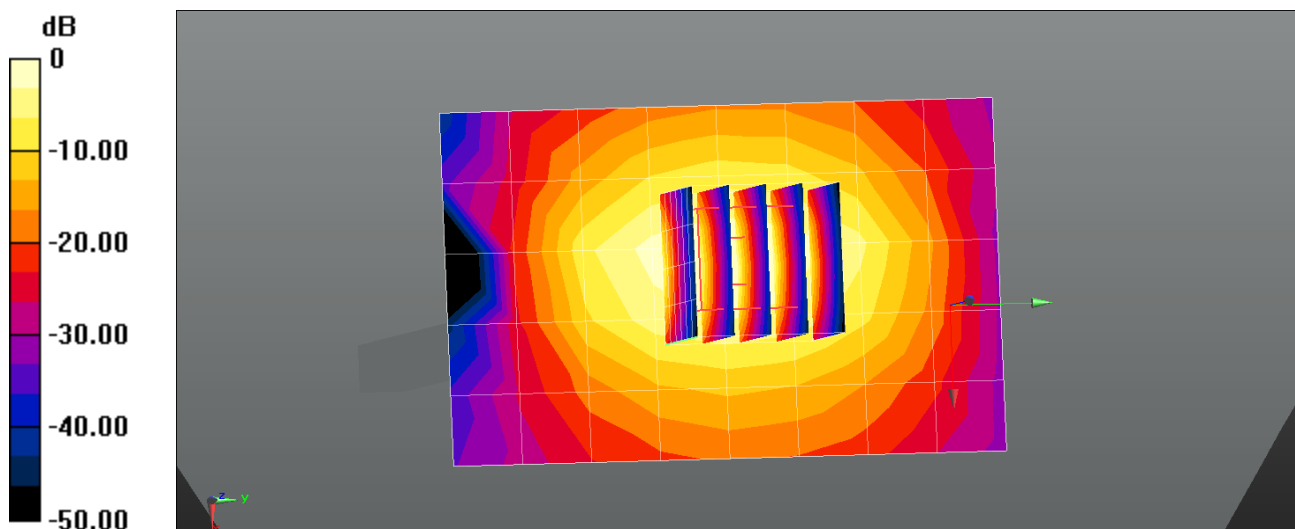
Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 44.51 V/m; Power Drift = 0.16 dB

Peak SAR (extrapolated) = 3.63 W/kg

SAR(1 g) = 1.83 W/kg; SAR(10 g) = 0.953 W/kg

Maximum value of SAR (measured) = 2.94 W/kg



0 dB = 2.58 W/kg = 4.12 dBW/kg

■ Verification Data (1 800 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.1 °C
 Test Date: 05/13/2020
 Plot No.: 70

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.381 \text{ S/m}$; $\epsilon_r = 40.226$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.14, 8.14, 8.14) @ 1800 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1800MHz Head Verification/Area Scan (5x8x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 2.24 W/kg

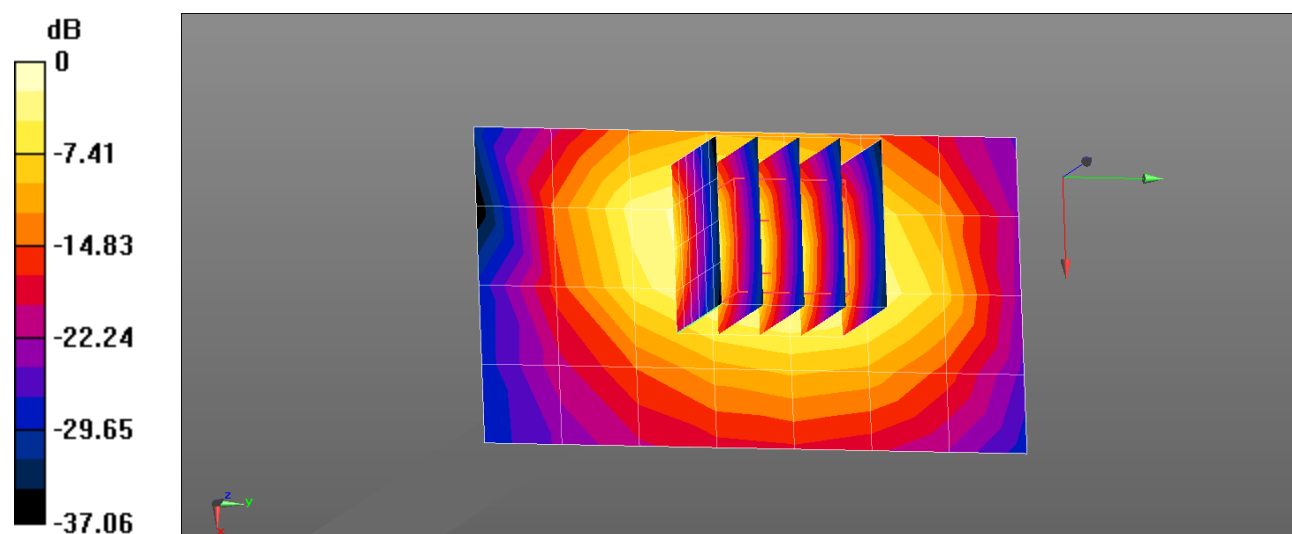
Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 40.06 V/m; Power Drift = 0.18 dB

Peak SAR (extrapolated) = 3.96 W/kg

SAR(1 g) = 2 W/kg; SAR(10 g) = 1.03 W/kg

Maximum value of SAR (measured) = 3.23 W/kg



0 dB = 2.24 W/kg = 3.49 dBW/kg

■ Verification Data (1 800 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.0 °C
 Test Date: 05/17/2020
 Plot No.: 71

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.439 \text{ S/m}$; $\epsilon_r = 39.993$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.62, 8.62, 8.62) @ 1800 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1800MHz Head Verification/Area Scan (7x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 3.01 W/kg

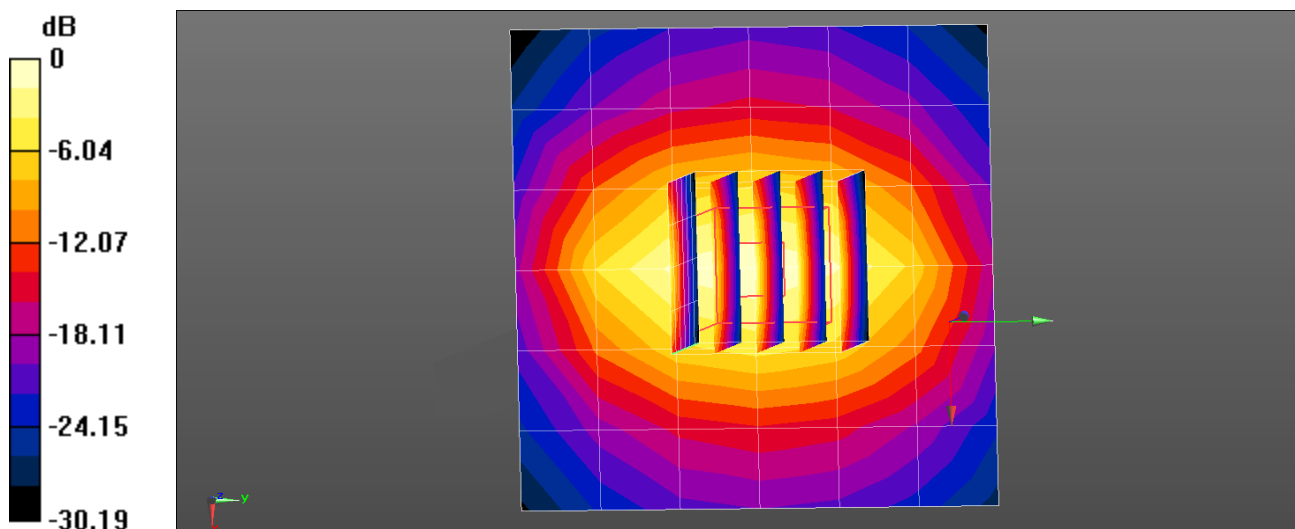
Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 47.46 V/m; Power Drift = -0.03 dB

Peak SAR (extrapolated) = 3.63 W/kg

SAR(1 g) = 1.93 W/kg; SAR(10 g) = 1.01 W/kg

Maximum value of SAR (measured) = 3.04 W/kg



0 dB = 3.01 W/kg = 4.79 dBW/kg

■ Verification Data (1 800 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 19.8 °C
 Test Date: 05/26/2020
 Plot No.: 72

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1800 \text{ MHz}$; $\sigma = 1.398 \text{ S/m}$; $\epsilon_r = 39.832$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(8.75, 8.75, 8.75) @ 1800 MHz;
- 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 52.8 (8);

Dipole/1800MHz Head Verification/Area Scan (7x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 3.02 W/kg

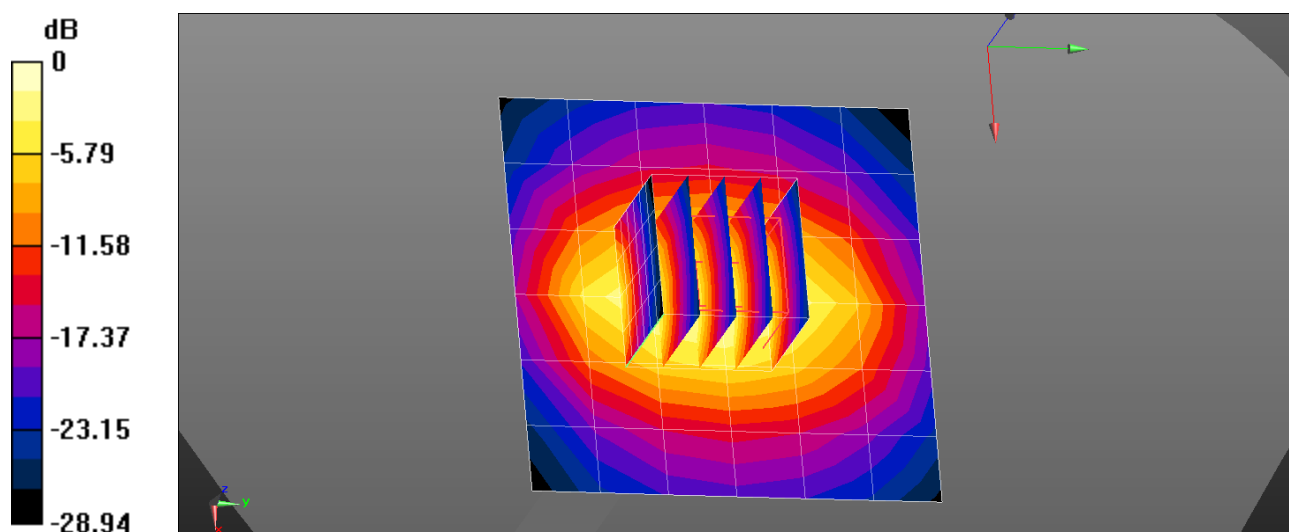
Dipole/1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 47.93 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 3.70 W/kg

SAR(1 g) = 1.93 W/kg; SAR(10 g) = 1.01 W/kg

Maximum value of SAR (measured) = 2.99 W/kg



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

■ Verification Data (1 900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.3 °C
 Test Date: 05/11/2020
 Plot No.: 73

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; $\sigma = 1.397$ S/m; $\epsilon_r = 38.242$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 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: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1900MHz Head Verification/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.15 W/kg

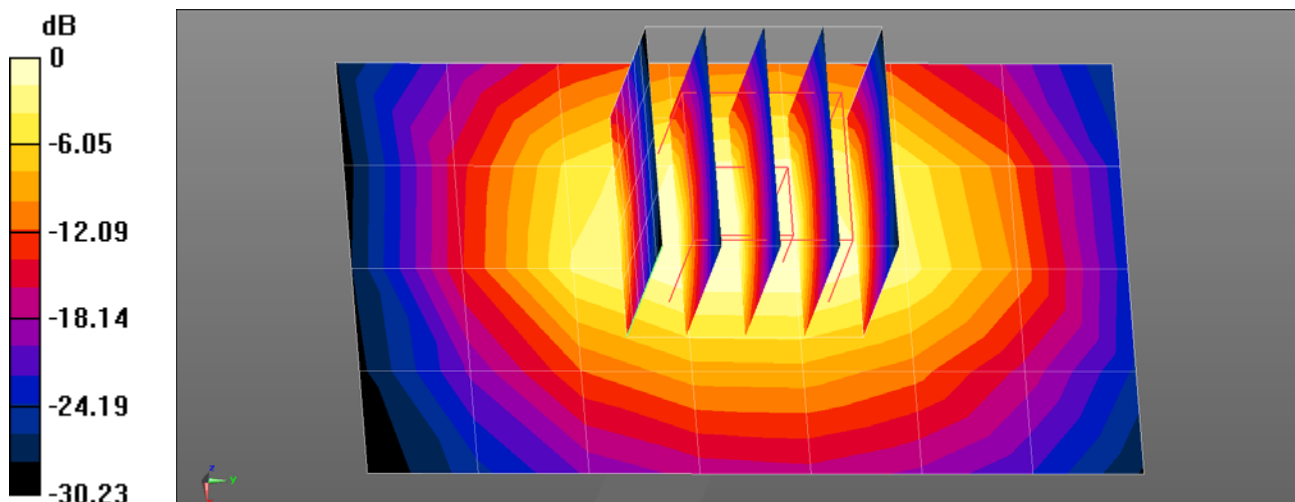
Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 41.84 V/m; Power Drift = 0.12 dB

Peak SAR (extrapolated) = 3.61 W/kg

SAR(1 g) = 1.89 W/kg; SAR(10 g) = 0.975 W/kg

Maximum value of SAR (measured) = 2.98 W/kg



0 dB = 2.15 W/kg = 3.33 dBW/kg

■ Verification Data (1 900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.3 °C
 Test Date: 05/11/2020
 Plot No.: 73

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

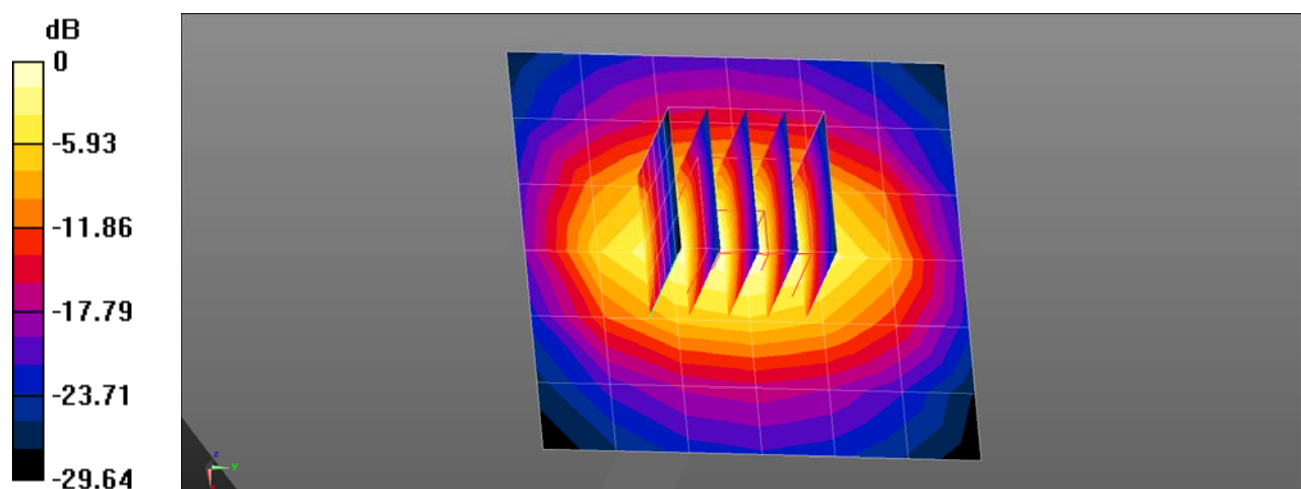
Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.45$ S/m; $\epsilon_r = 39.091$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.1, 5.1, 5.1); Calibrated: 2019-07-23;
- 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);

Dipole/1 900 MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.69 W/kg

Dipole/1 900 MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 44.70 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 3.86 W/kg
SAR(1 g) = 2.14 W/kg; SAR(10 g) = 1.12 W/kg
 Maximum value of SAR (measured) = 2.70 W/kg



0 dB = 2.69 W/kg = 4.29 dBW/kg

■ Verification Data (1 900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.9 °C
 Test Date: 05/12/2020
 Plot No.: 74

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

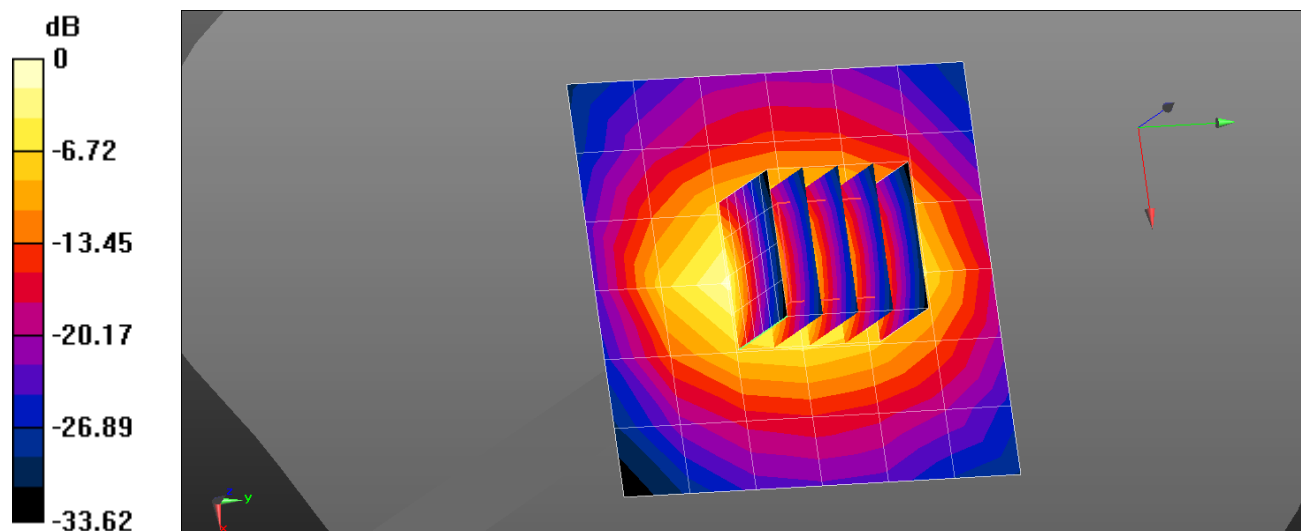
Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900$ MHz; $\sigma = 1.386$ S/m; $\epsilon_r = 39.176$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.75, 7.75, 7.75) @ 1900 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1900MHz Head Verification(LTE 2 Phablet)/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.96 W/kg

Dipole/1900MHz Head Verification(LTE 2 Phablet)/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 47.61 V/m; Power Drift = 0.02 dB
 Peak SAR (extrapolated) = 3.63 W/kg
SAR(1 g) = 1.88 W/kg; SAR(10 g) = 0.968 W/kg
 Maximum value of SAR (measured) = 3.00 W/kg



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

■ Verification Data (1 900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.4 °C
 Test Date: 05/26/2020
 Plot No.: 75

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

Communication System: UID 0, 5G NR (0); Frequency: 1860 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1860$ MHz; $\sigma = 1.391$ S/m; $\epsilon_r = 38.58$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3967; ConvF(8.34, 8.34, 8.34) @ 1860 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2020-02-03
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 3.05 W/kg

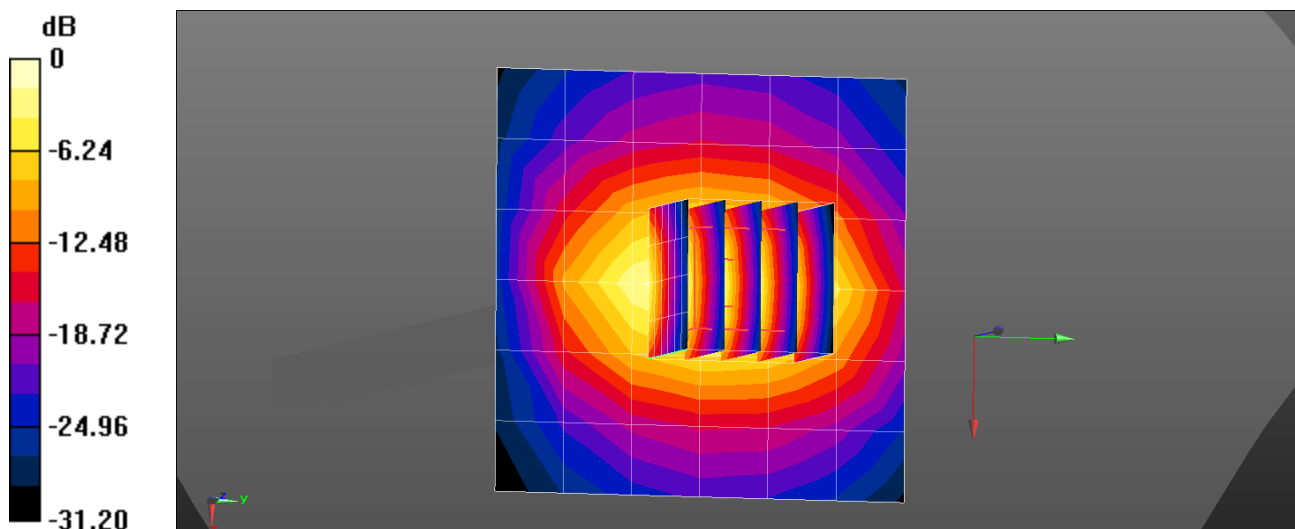
Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 49.00 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.79 W/kg

SAR(1 g) = 1.93 W/kg; SAR(10 g) = 0.971 W/kg

Maximum value of SAR (measured) = 3.13 W/kg



0 dB = 3.05 W/kg = 4.84 dBW/kg

■ Verification Data (1 900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.4 °C
 Test Date: 05/26/2020
 Plot No.: 76

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; $\sigma = 1.406$ S/m; $\epsilon_r = 39.714$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.1, 5.1, 5.1) @ 1900 MHz;
- 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);

Dipole/1 900 MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.61 W/kg

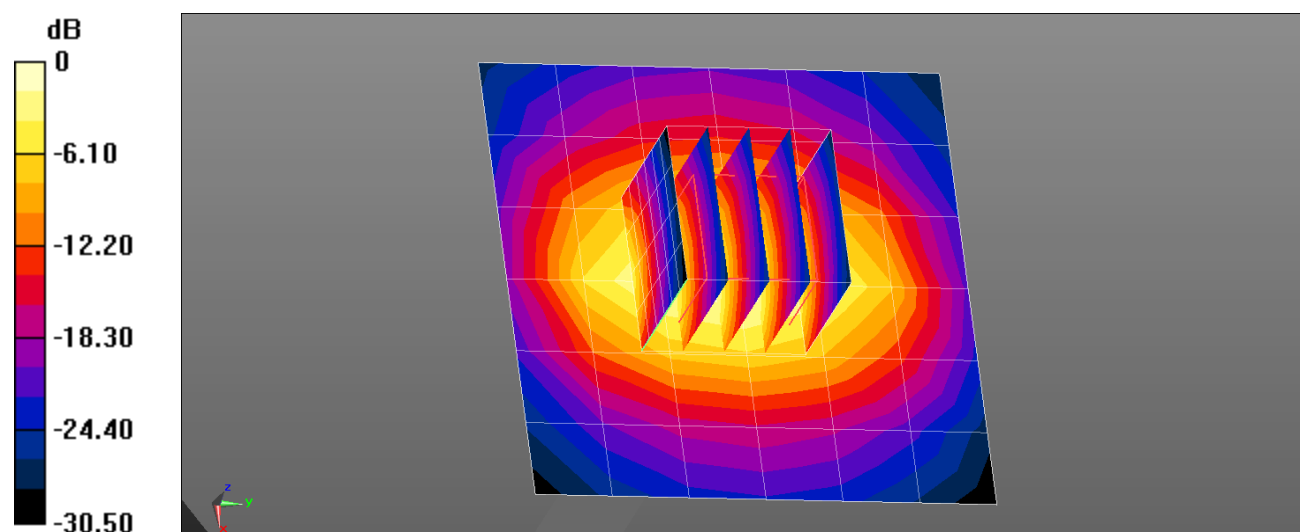
Dipole/1 900 MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 44.56 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 3.77 W/kg

SAR(1 g) = 2.09 W/kg; SAR(10 g) = 1.09 W/kg

Maximum value of SAR (measured) = 2.64 W/kg



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

■ Verification Data (1 900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.4 °C
 Test Date: 05/26/2020
 Plot No.: 77

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; $\sigma = 1.388$ S/m; $\epsilon_r = 39.797$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.1, 5.1, 5.1) @ 1900 MHz;
- 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);

Dipole/1 900 MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 2.59 W/kg

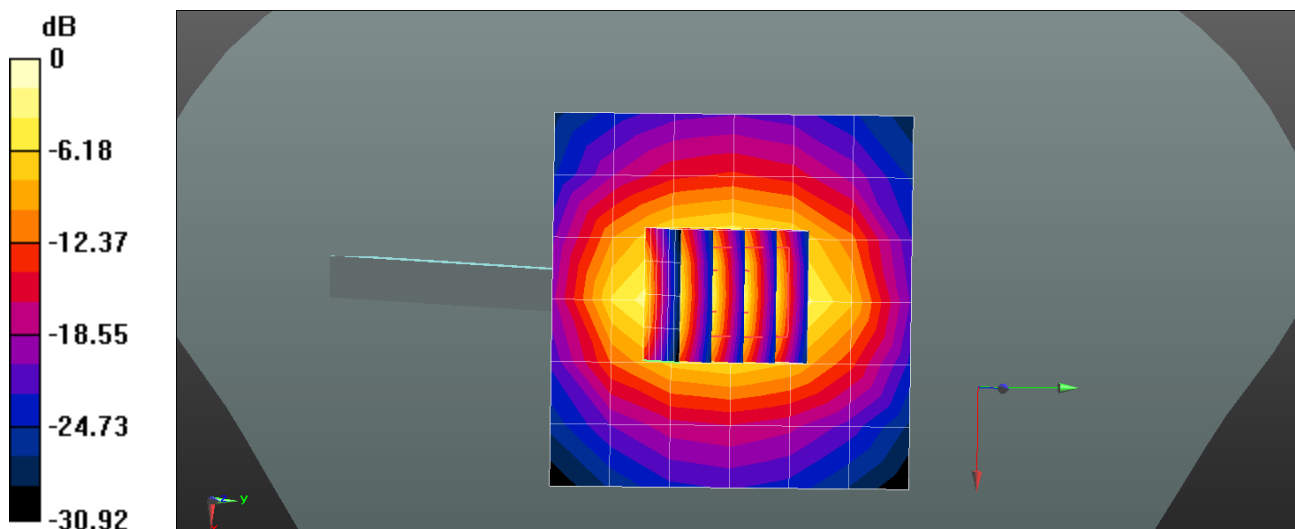
Dipole/1 900 MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 44.62 V/m; Power Drift = 0.07 dB

Peak SAR (extrapolated) = 3.74 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.08 W/kg

Maximum value of SAR (measured) = 2.58 W/kg



0 dB = 2.59 W/kg = 4.13 dBW/kg

■ Verification Data (1 900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.3 °C
 Test Date: 05/12/2020
 Plot No.: 78

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; $\sigma = 1.4$ S/m; $\epsilon_r = 39.112$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.31, 8.31, 8.31) @ 1900 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 3.17 W/kg

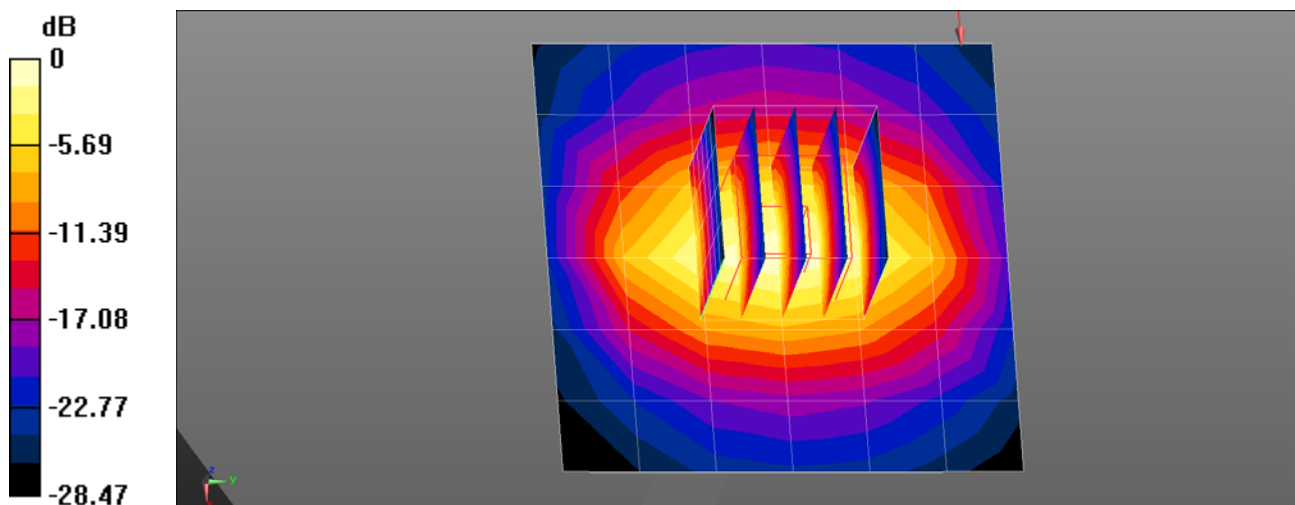
Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 49.13 V/m; Power Drift = 0.14 dB

Peak SAR (extrapolated) = 3.95 W/kg

SAR(1 g) = 2.06 W/kg; SAR(10 g) = 1.05 W/kg

Maximum value of SAR (measured) = 3.27 W/kg



0 dB = 3.17 W/kg = 5.02 dBW/kg

■ Verification Data (1 900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.0 °C
 Test Date: 05/11/2020
 Plot No.: 79

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; $\sigma = 1.4$ S/m; $\epsilon_r = 39.21$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3903; ConvF(8.31, 8.31, 8.31) @ 1900 MHz; Calibrated: 2020-03-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: Twin-SAM V8.0_20171017 (Right1)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/WCDMA1900 Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 3.20 W/kg

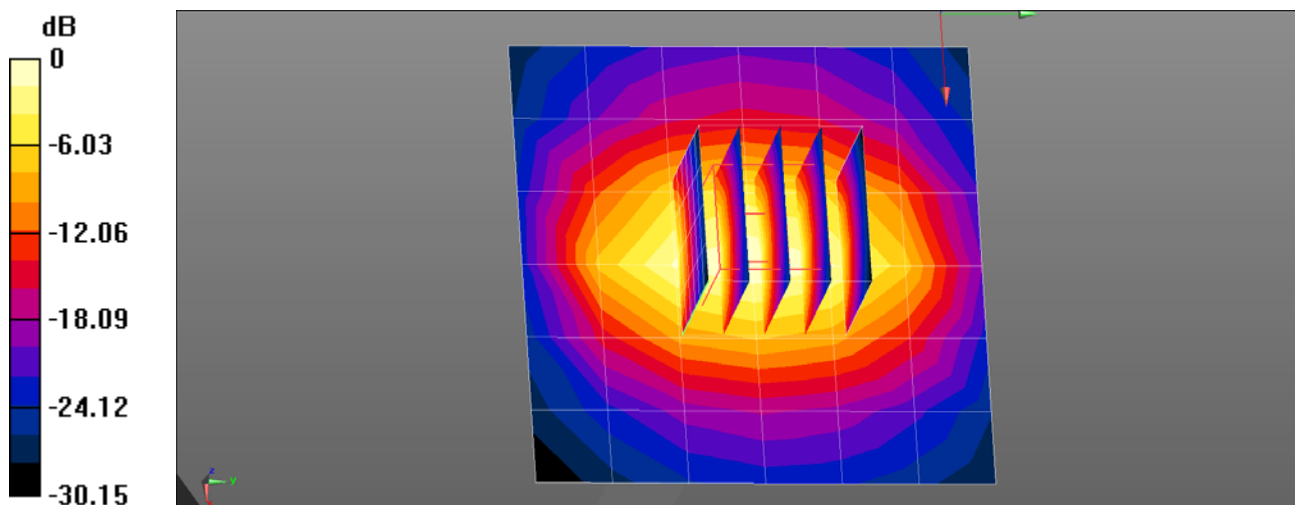
Dipole/WCDMA1900 Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 49.39 V/m; Power Drift = 0.09 dB

Peak SAR (extrapolated) = 4.00 W/kg

SAR(1 g) = 2.07 W/kg; SAR(10 g) = 1.06 W/kg

Maximum value of SAR (measured) = 3.31 W/kg



0 dB = 3.20 W/kg = 5.05 dBW/kg

■ Verification Data (1 900 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.4 °C
 Test Date: 05/25/2020
 Plot No.: 80

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

Communication System: UID 0, CW (0); Frequency: 1900 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 1900 \text{ MHz}$; $\sigma = 1.39 \text{ S/m}$; $\epsilon_r = 39.144$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.75, 7.75, 7.75) @ 1900 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE3 Sn446; Calibrated: 2019-07-18
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/1900MHz Head Verification/Area Scan (7x7x1): Measurement grid: $dx=15\text{mm}$, $dy=15\text{mm}$
 Maximum value of SAR (measured) = 2.96 W/kg

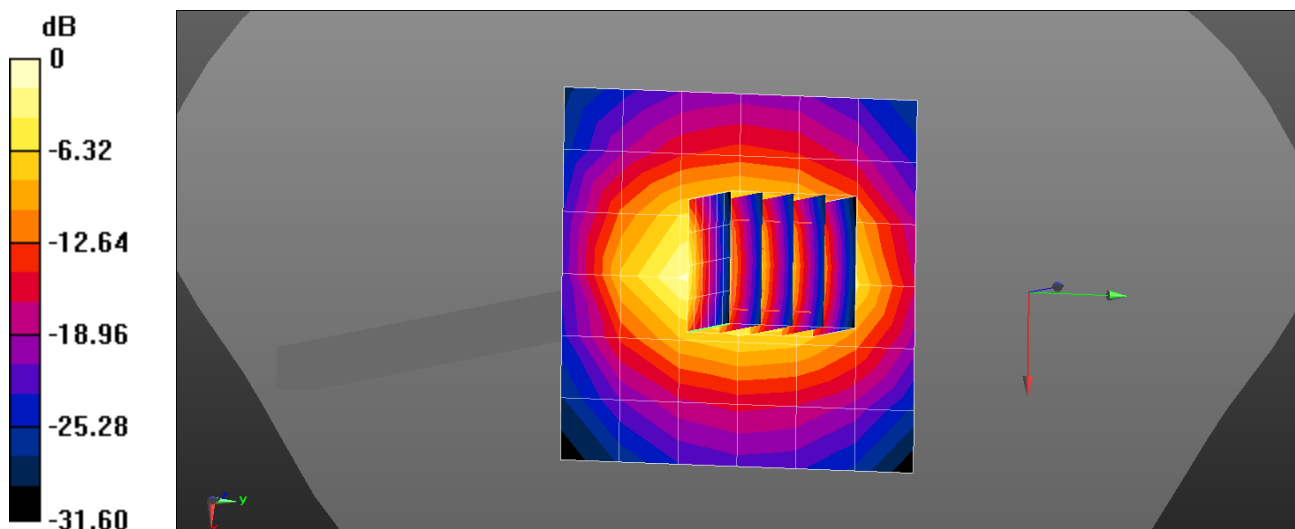
Dipole/1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$

Reference Value = 47.40 V/m; Power Drift = 0.11 dB

Peak SAR (extrapolated) = 3.75 W/kg

SAR(1 g) = 1.93 W/kg; SAR(10 g) = 0.993 W/kg

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



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

■ Verification Data (2 450 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.5 °C
 Test Date: 05/28/2020
 Plot No.: 81

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; $\sigma = 1.808$ S/m; $\epsilon_r = 39.78$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(7.65, 7.65, 7.65) @ 2450 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: Twin-SAM V4.0 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2450MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 4.36 W/kg

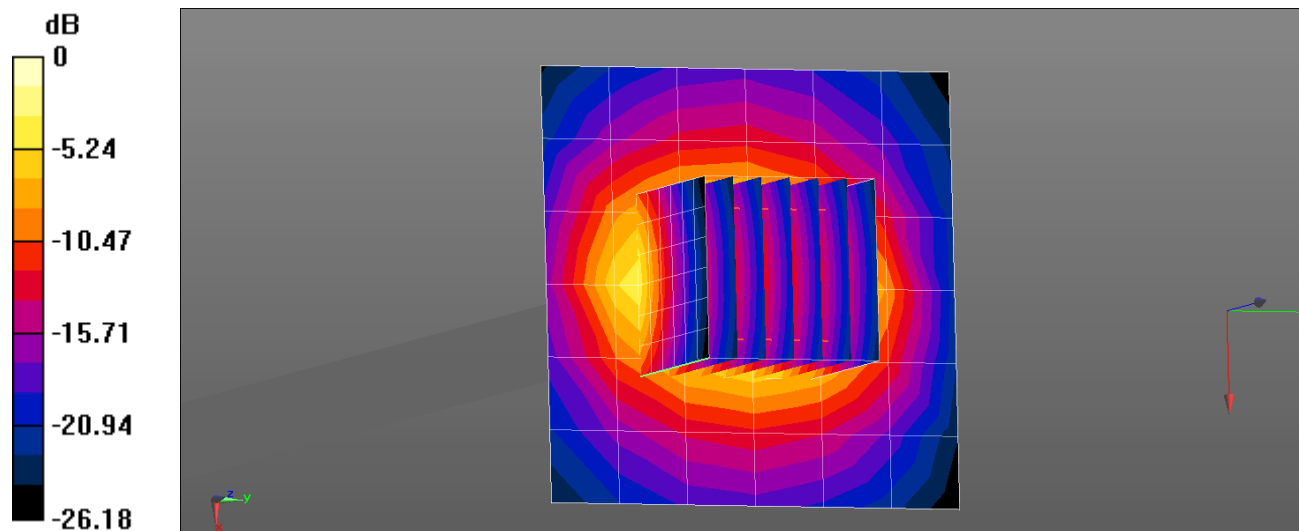
Dipole/2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 51.03 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 5.64 W/kg

SAR(1 g) = 2.56 W/kg; SAR(10 g) = 1.16 W/kg

Maximum value of SAR (measured) = 4.40 W/kg



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

■ Verification Data (2 450 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 19.5 °C
 Test Date: 06/11/2020
 Plot No.: 82

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2

Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz; Duty Cycle: 1:1
 Medium parameters used (interpolated): $f = 2412$ MHz; $\sigma = 1.761$ S/m; $\epsilon_r = 40.029$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(7.6, 7.6, 7.6); 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);

Dipole/2450MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 3.44 W/kg

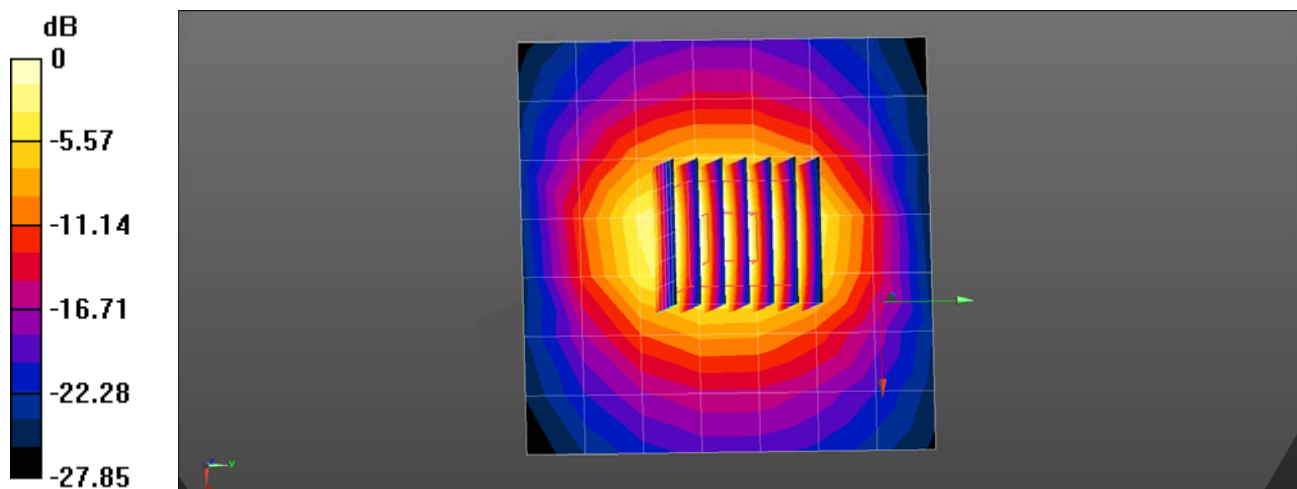
Dipole/2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 52.51 V/m; Power Drift = 0.01 dB

Peak SAR (extrapolated) = 5.74 W/kg

SAR(1 g) = 2.58 W/kg; SAR(10 g) = 1.17 W/kg

Maximum value of SAR (measured) = 4.53 W/kg



0 dB = 3.44 W/kg = 5.36 dBW/kg

■ Verification Data (2 450 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.8 °C
 Test Date: 05222020
 Plot No.: 83

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; $\sigma = 1.81$ S/m; $\epsilon_r = 40.151$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3903; ConvF(7.65, 7.65, 7.65); Calibrated: 2020-03-25;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2019-09-19
- Phantom: Twin-SAM V4.0(Left-Left)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2450MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 4.27 W/kg

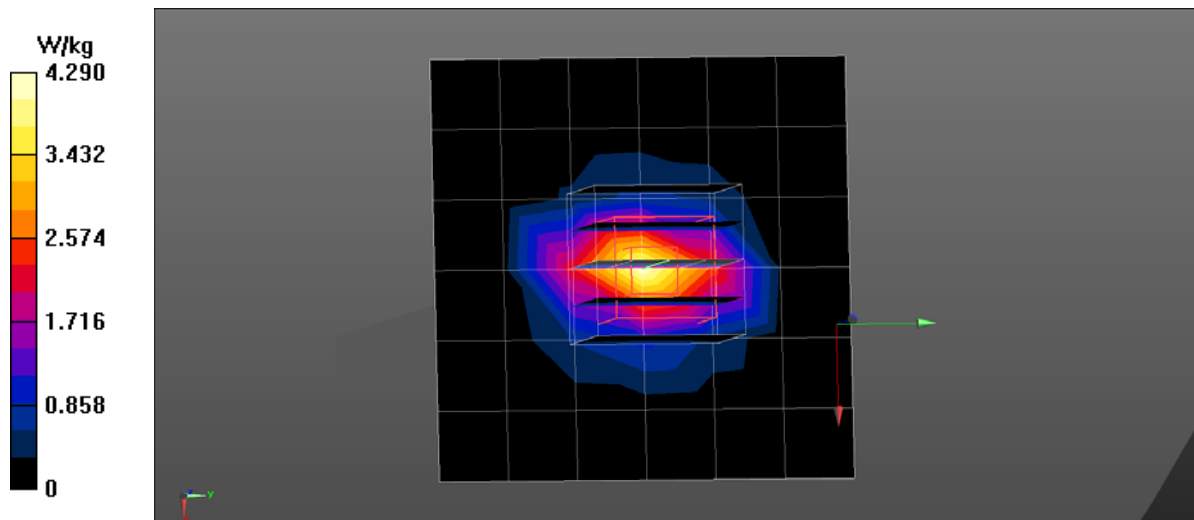
Dipole/2450MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 50.40 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 5.43 W/kg

SAR(1 g) = 2.5 W/kg; SAR(10 g) = 1.13 W/kg

Maximum value of SAR (measured) = 4.29 W/kg



0 dB = 4.27 W/kg = 6.31 dBW/kg

■ Verification Data (2 600 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 21.7 °C
 Test Date: 05/11/2020
 Plot No.: 84

DUT: Dipole 2600 MHz D2600V2; Type: D2600V2

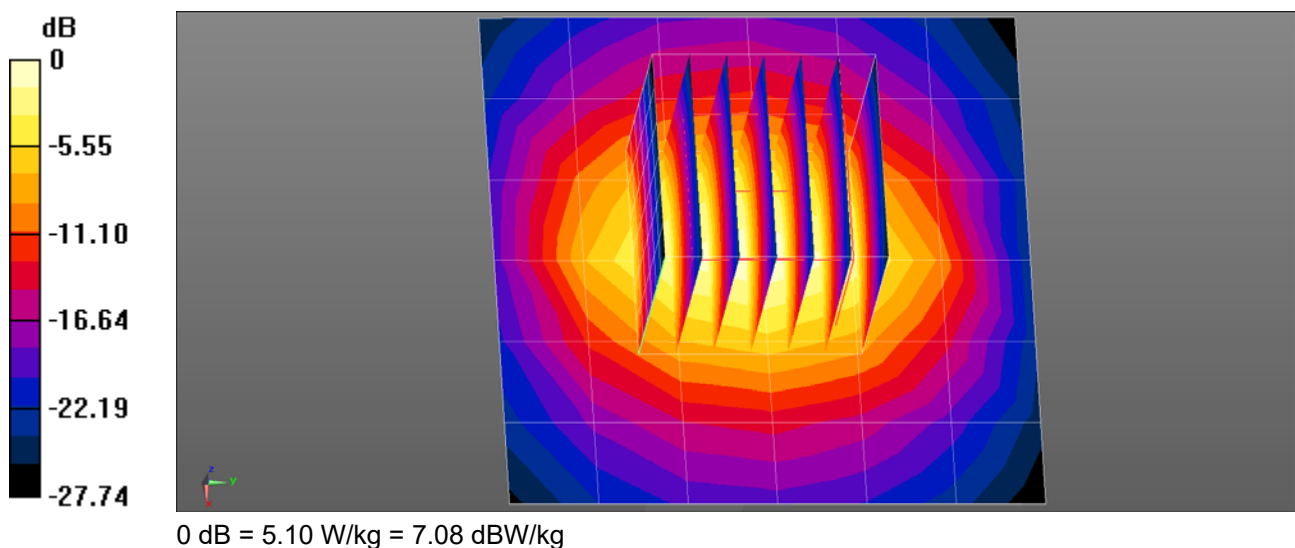
Communication System: UID 0, CW (0); Frequency: 2600 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 2600$ MHz; $\sigma = 1.95$ S/m; $\epsilon_r = 37.878$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY5 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 (20deg probe tilt)_1588_20200429
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 5.10 W/kg

Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 53.31 V/m; Power Drift = 0.03 dB
 Peak SAR (extrapolated) = 6.70 W/kg
SAR(1 g) = 2.9 W/kg; SAR(10 g) = 1.27 W/kg
 Maximum value of SAR (measured) = 5.15 W/kg



■ Verification Data (2 600 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.9 °C
 Test Date: 05/28/2020
 Plot No.: 85

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; $\sigma = 1.947$ S/m; $\epsilon_r = 37.854$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN7370; ConvF(7.36, 7.36, 7.36) @ 2600 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1225; Calibrated: 2019-11-18
- Phantom: Twin-SAM V8.0_20171017(Left2)
- Measurement SW: DASY52, Version 52.10 (4);

Dipole/2600MHz Head Verification/Area Scan (7x7x1): Measurement grid: dx=12mm, dy=12mm
 Maximum value of SAR (measured) = 4.68 W/kg

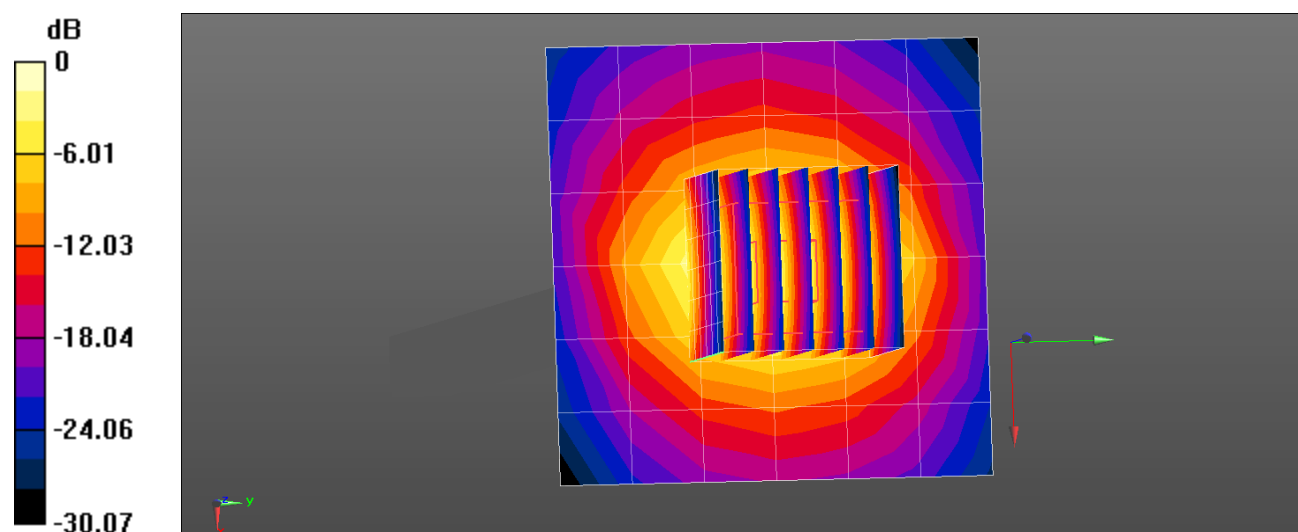
Dipole/2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 51.01 V/m; Power Drift = -0.09 dB

Peak SAR (extrapolated) = 6.42 W/kg

SAR(1 g) = 2.71 W/kg; SAR(10 g) = 1.18 W/kg

Maximum value of SAR (measured) = 4.91 W/kg



0 dB = 4.68 W/kg = 6.70 dBW/kg

■ Verification Data (5 250 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.3 °C
 Test Date: 06/04/2020
 Plot No.: 86

DUT: Dipole D5GHzV2; Type: D5GHzV2

Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5250$ MHz; $\sigma = 4.61$ S/m; $\epsilon_r = 37.028$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57); 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);

Dipole/5.2GHz Head Verification)/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 6.74 W/kg

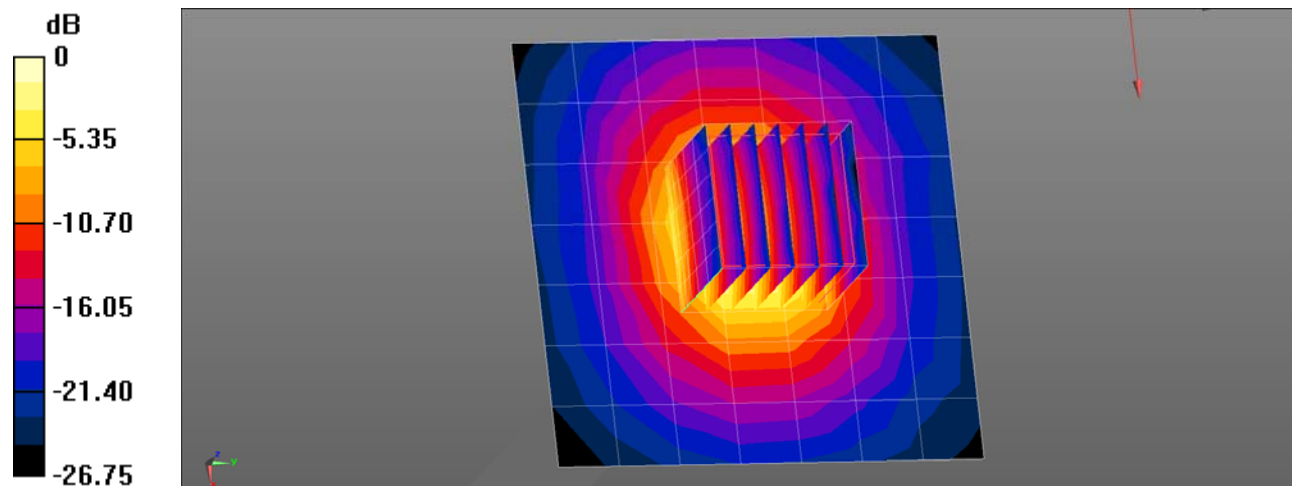
Dipole/5.2GHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 50.35 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 17.6 W/kg

SAR(1 g) = 3.87 W/kg; SAR(10 g) = 1.11 W/kg

Maximum value of SAR (measured) = 9.73 W/kg



0 dB = 6.74 W/kg = 8.29 dBW/kg

■ Verification Data (5 250 MHz Body)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.7 °C
 Test Date: 06/04/2020
 Plot No.: 87

DUT: Dipole D5GHzV2; Type: D5GHzV2

Communication System: UID 0, CW (0); Frequency: 5250 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5250$ MHz; $\sigma = 4.621$ S/m; $\epsilon_r = 37.082$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.57, 5.57, 5.57); 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);

Dipole/5.2GHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 7.39 W/kg

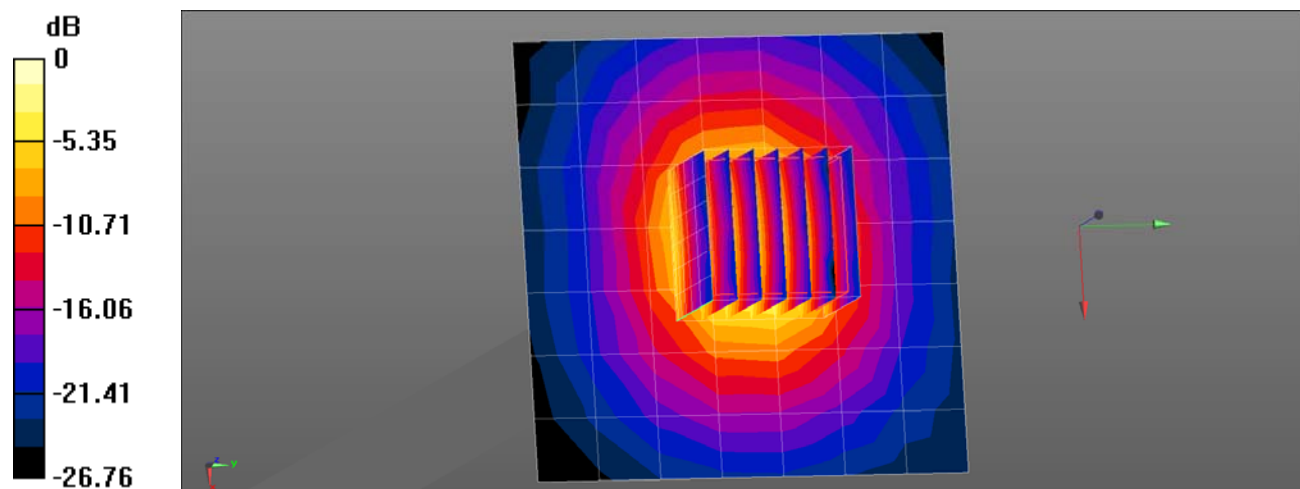
Dipole/5.2GHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 48.28 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 17.0 W/kg

SAR(1 g) = 3.75 W/kg; SAR(10 g) = 1.09 W/kg

Maximum value of SAR (measured) = 9.49 W/kg



0 dB = 7.39 W/kg = 8.69 dBW/kg

■ Verification Data (5 600 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.3 °C
 Test Date: 06/04/2020
 Plot No.: 88

DUT: Dipole D5GHzV2; Type: D5GHzV2

Communication System: UID 0, CW (0); Frequency: 5600 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5600$ MHz; $\sigma = 5.002$ S/m; $\epsilon_r = 36.54$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(4.84, 4.84, 4.84); 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);

Dipole/5.6GHz Head Verification(WLAN 5GHz Head)/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.19 W/kg

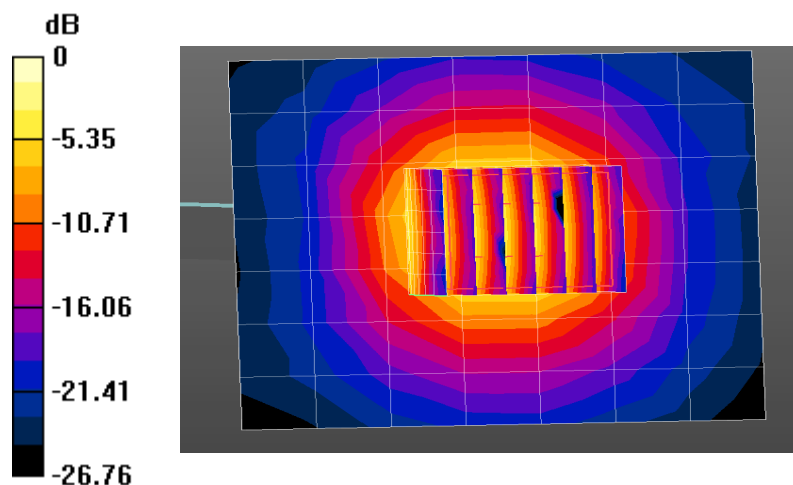
Dipole/5.6GHz Head Verification(WLAN 5GHz Head)/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 51.41 V/m; Power Drift = 0.04 dB

Peak SAR (extrapolated) = 21.6 W/kg

SAR(1 g) = 4.36 W/kg; SAR(10 g) = 1.24 W/kg

Maximum value of SAR (measured) = 11.3 W/kg



0 dB = 7.39 W/kg = 8.69 dBW/kg

■ Verification Data (5 600 Mhz Body)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.7 °C
Test Date: 06/04/2020
Plot No.: 89

DUT: Dipole D5GHzV2; Type: D5GHzV2

Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: $f = 5600$ MHz; $\sigma = 5.01$ S/m; $\epsilon_r = 36.6$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(4.84, 4.84, 4.84); 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);

Dipole/5.6GHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 49.03 V/m; Power Drift = -0.01 dB

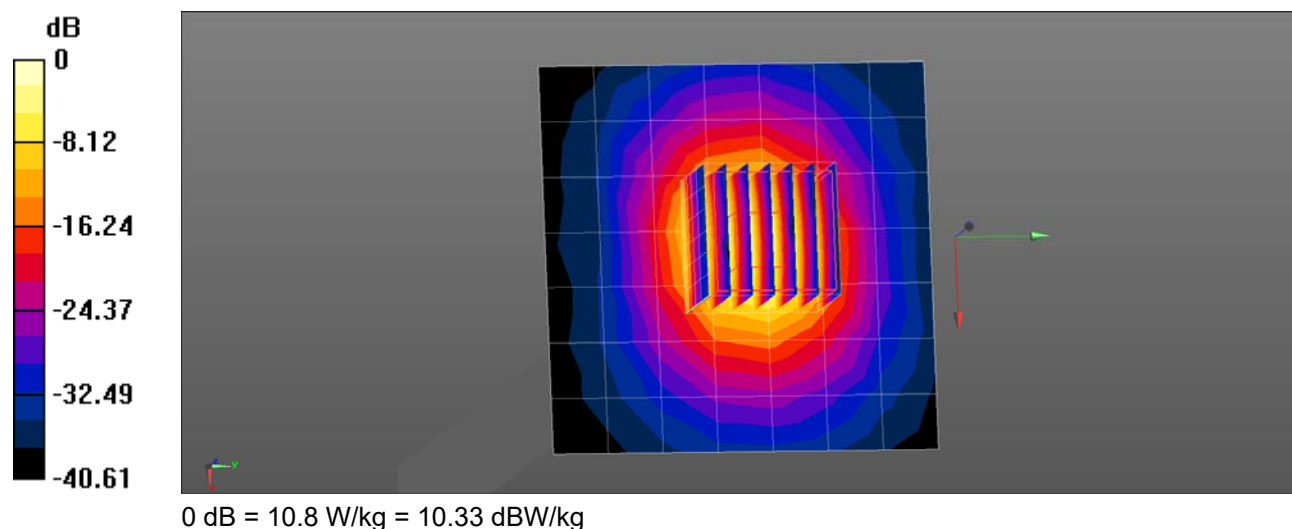
Peak SAR (extrapolated) = 20.3 W/kg

SAR(1 g) = 4.21 W/kg; SAR(10 g) = 1.21 W/kg

Maximum value of SAR (measured) = 10.8 W/kg

Dipole/5.6GHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 8.88 W/kg



■ Verification Data (5 750 MHz Head)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.3 °C
 Test Date: 06/04/2020
 Plot No.: 90

DUT: Dipole D5GHzV2; Type: D5GHzV2

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5750$ MHz; $\sigma = 5.173$ S/m; $\epsilon_r = 36.294$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1); 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);

Dipole/5.75GHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 7.57 W/kg

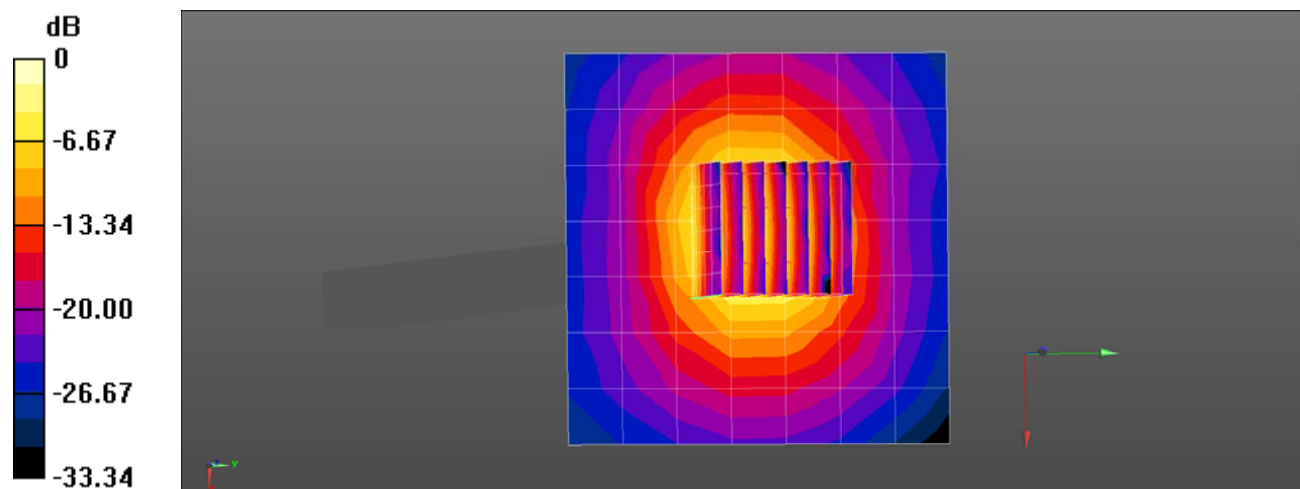
Dipole/5.75GHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.37 V/m; Power Drift = 0.19 dB

Peak SAR (extrapolated) = 21.6 W/kg

SAR(1 g) = 3.91 W/kg; SAR(10 g) = 1.09 W/kg

Maximum value of SAR (measured) = 10.7 W/kg



0 dB = 7.57 W/kg = 8.79 dBW/kg

■ Verification Data (5 750 Mhz Body)

Test Laboratory: HCT CO., LTD
 Input Power: 0.05 W
 Liquid Temp: 20.7 °C
 Test Date: 06/04/2020
 Plot No.: 91

DUT: Dipole D5GHzV2; Type: D5GHzV2

Communication System: UID 0, CW (0); Frequency: 5750 MHz; Duty Cycle: 1:1
 Medium parameters used: $f = 5750 \text{ MHz}$; $\sigma = 5.175 \text{ S/m}$; $\epsilon_r = 36.359$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3968; ConvF(5.1, 5.1, 5.1); 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);

Dipole/5.75GHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 8.29 W/kg

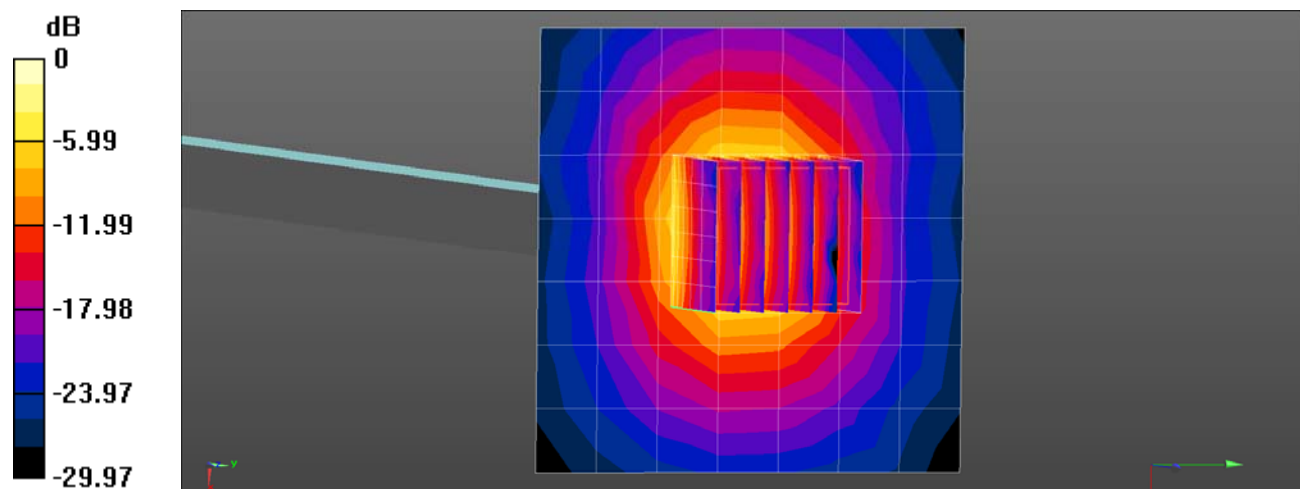
Dipole/5.75GHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 46.84 V/m; Power Drift = 0.15 dB

Peak SAR (extrapolated) = 20.4 W/kg

SAR(1 g) = 3.91 W/kg; SAR(10 g) = 1.09 W/kg

Maximum value of SAR (measured) = 10.4 W/kg



0 dB = 8.29 W/kg = 9.18 dBW/kg

Appendix D. – SAR Tissue Characterization

The brain and muscle mixtures consist of a viscous gel using hydrox-ethyl cellulose (HEC) gelling agent and saline solution (see Table 3.1). Preservation with a bactericide 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

SAR System Validation Summary 1g

SAR System No.	Probe	Probe Type	Probe Calibration Point		Dipole	Date	Dielectric Parameters		CW Validation			Modulation Validation		
							Measured Permittivity	Measured Conductivity	Sensitivity	Probe Linearity	Probe Isotropy	MOD. Type	Duty Factor	PAR
9	3968	EX3DV4	Body	1750	2d015	2019-10-11	53.5	1.52	PASS	PASS	PASS	N/A	N/A	N/A
3	3797	EX3DV4	Body	1900	5d061	2020-01-31	53.3	1.53	PASS	PASS	PASS	GMSK	PASS	N/A
8	3967	EX3DV4	Body	5250	1107	2020-03-11	48.8	5.36	PASS	PASS	PASS	OFDM	N/A	PASS
8	3967	EX3DV4	Body	5600	1107	2020-03-11	48.3	5.78	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary – Extremity SAR Considerations

Note;

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