Appendix B. – SAR Test Plots

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.3 ℃
Test Date:	11/01/2021
Plot No.:	1

Measurement Report for Device, BACK, GSM 850, GPRS-FDD (TDMA, GMSK, TN 0-1), Channel 190 (836.6 MHz)

Hardware Setup

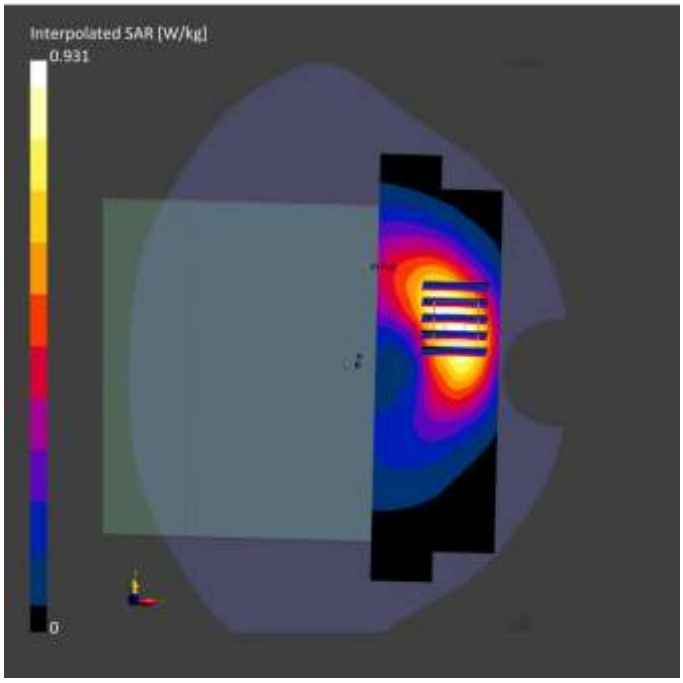
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	60.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.570	0.608
psSAR10g [W/Kg]	0.381	0.384
Power Drift [dB]	0.02	-0.02



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 21.0℃
Ambient Temperature: 21.2℃
Test Date: 11/30/2021
Plot No.: 2

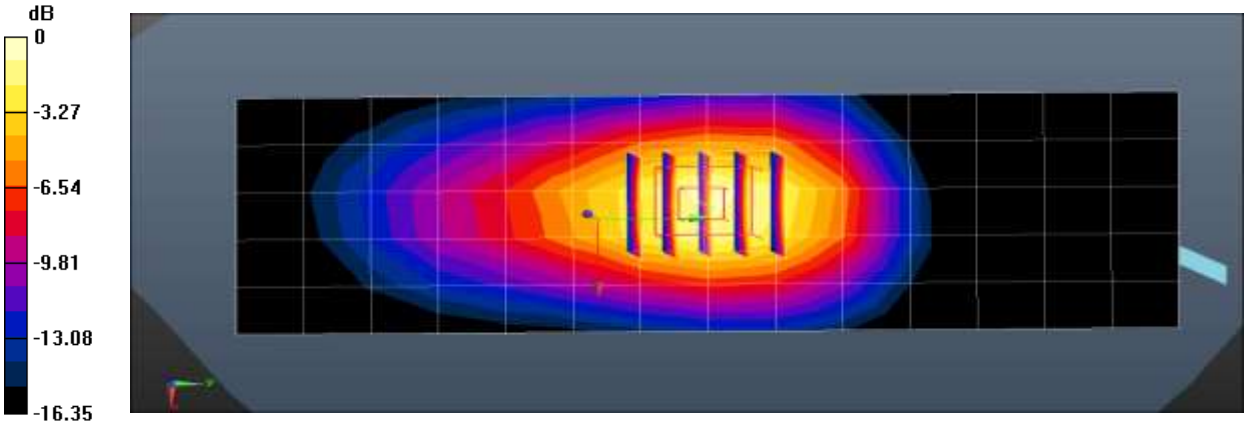
Communication System: UID 0, GSM 1900 2TX (0); Frequency: 1880 MHz;Duty Cycle: 1:4.14954
Medium parameters used: f = 1880 MHz; σ = 1.388 S/m; ε_r = 41.374; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

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

GSM1900 Body Top 2Tx 661ch Max 22mm/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.733 W/kg

GSM1900 Body Top 2Tx 661ch Max 22mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.76 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 0.968 W/kg
SAR(1 g) = 0.570 W/kg; SAR(10 g) = 0.324 W/kg
Maximum value of SAR (measured) = 0.818 W/kg



0 dB = 0.818 W/kg = -0.87 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.2℃
Ambient Temperature:	20.3℃
Test Date:	11/02/2021
Plot No.:	3

Measurement Report for Device, EDGE TOP, Band 5, UTRA/FDD, UMTS-FDD (WCDMA), Channel 4233 (846.6 MHz)

Hardware Setup

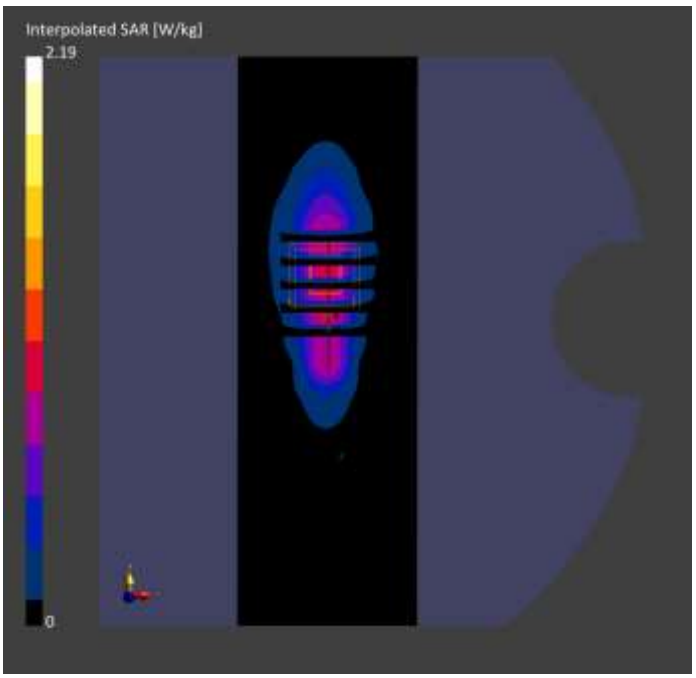
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	60.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.835	0.789
psSAR10g [W/Kg]	0.478	0.409
Power Drift [dB]	-0.01	0.02



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 22.5℃
Ambient Temperature: 22.6℃
Test Date: 10/29/2021
Plot No.: 4

Communication System: UID 0, WCDMA IV (0); Frequency: 1752.8 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1752.8 MHz; σ = 1.371 S/m; ε_r = 41.353; ρ = 1000 kg/m^3
Phantom section: Flat Section

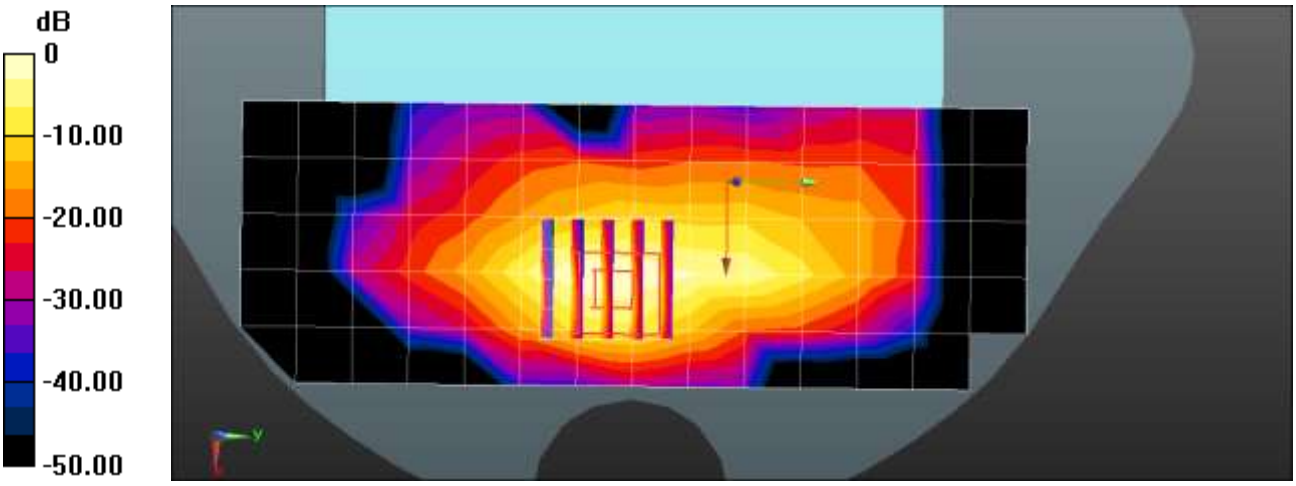
DASY5 Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.12, 8.12, 8.12) @ 1752.8 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM
- Measurement SW: DASY52, Version 52.10 (4);

UMTS Band 4 Body Rear 1513ch/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 1.78 W/kg

UMTS Band 4 Body Rear 1513ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.5800 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 2.72 W/kg
SAR(1 g) = 1 W/kg; SAR(10 g) = 0.414 W/kg
Maximum value of SAR (measured) = 2.05 W/kg



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 23.3℃
Ambient Temperature: 23.4℃
Test Date: 10/28/2021
Plot No.: 5

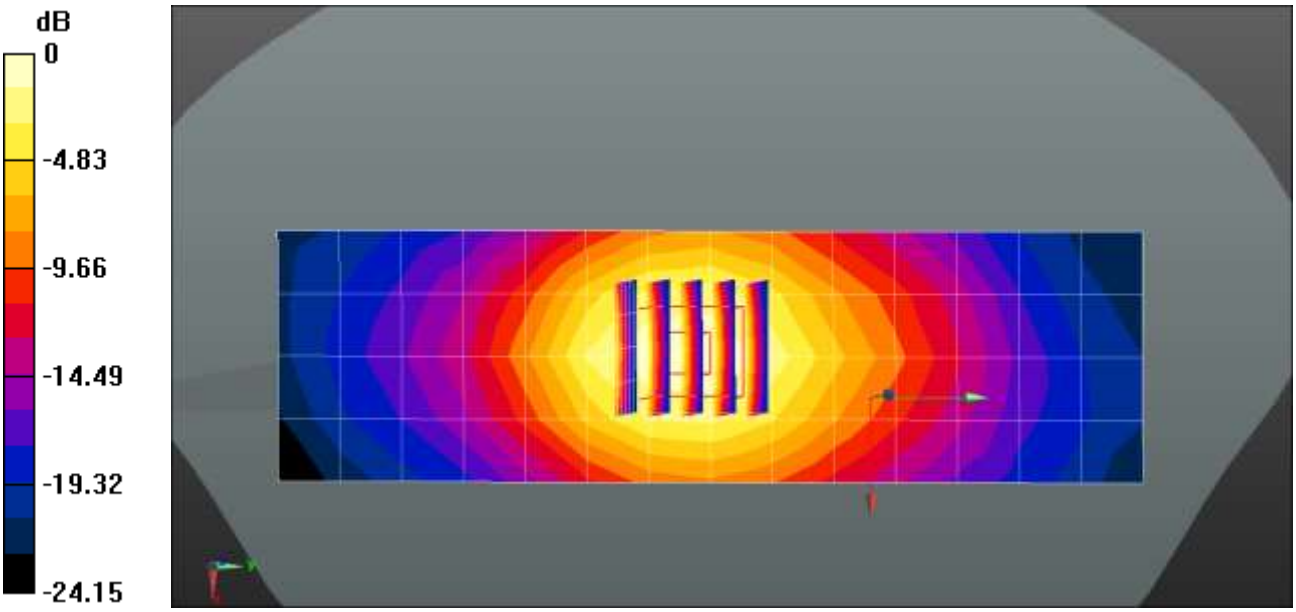
Communication System: UID 0, WCDMA1900 (0); Frequency: 1907.6 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1907.6 MHz; σ = 1.416 S/m; ε_r = 41.346; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

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

UMTS Band 2 Body Top 9538ch/Area Scan (5x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.31 W/kg

UMTS Band 2 Body Top 9538ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.41 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 0.961 W/kg; SAR(10 g) = 0.558 W/kg
Maximum value of SAR (measured) = 1.38 W/kg



0 dB = 1.31 W/kg = 1.16 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.2℃
Ambient Temperature: 20.3℃
Test Date: 11/10/2021
Plot No.: 6

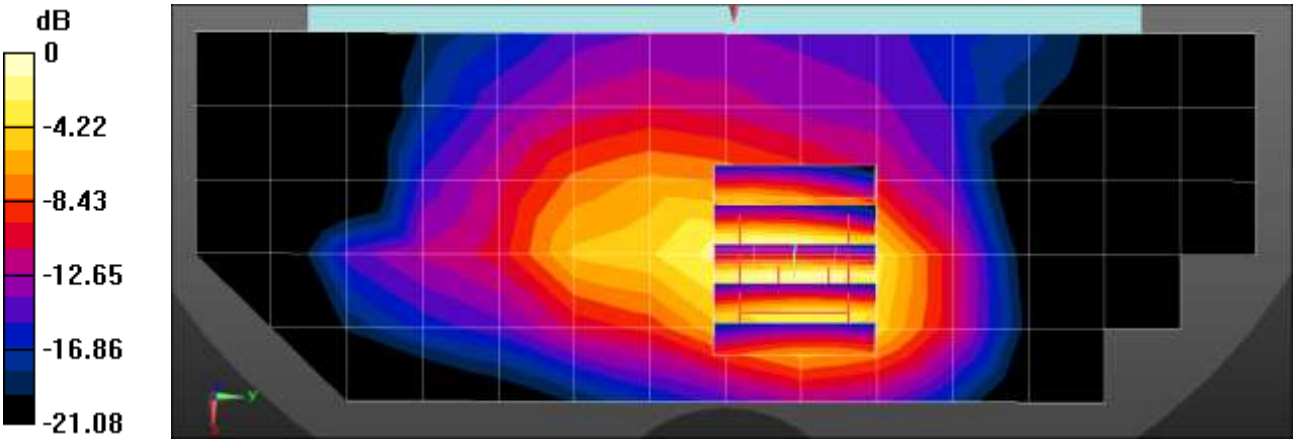
Communication System: UID 0, LTE Band2 (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.386 S/m; ε_r = 41.361; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.83, 7.83, 7.83) @ 1900 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 2 Body Rear QPSK 20MHz 1RB 49offset 19100ch Max 9mm/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.601 W/kg

LTE Band 2 Body Rear QPSK 20MHz 1RB 49offset 19100ch Max 9mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.985 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 0.909 W/kg
SAR(1 g) = 0.460 W/kg; SAR(10 g) = 0.229 W/kg
Maximum value of SAR (measured) = 0.744 W/kg



0 dB = 0.744 W/kg = -1.28 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.2℃
Test Date:	11/09/2021
Plot No.:	7

Measurement Report for Device, BACK, Band 5, E-UTRA/FDD, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 20525 (836.5 MHz)

Hardware Setup

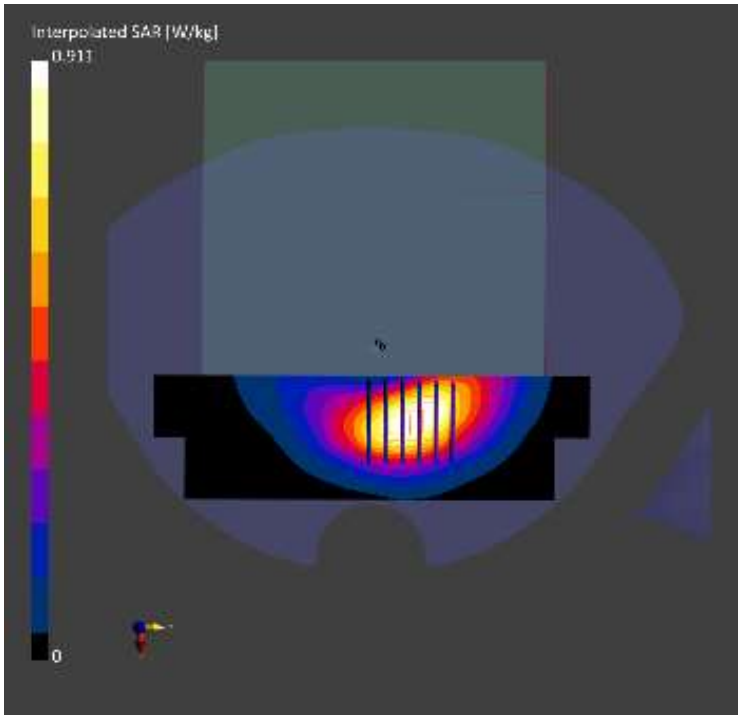
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	60.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/kg]	0.534	0.583
psSAR10g [W/kg]	0.355	0.348
Power Drift [dB]	0.03	0.03



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4℃
Ambient Temperature:	20.5℃
Test Date:	11/03/2021
Plot No.:	8

Measurement Report for Device, EDGE TOP, Band 12, E-UTRA/FDD, LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 23095 (707.5 MHz)

Hardware Setup

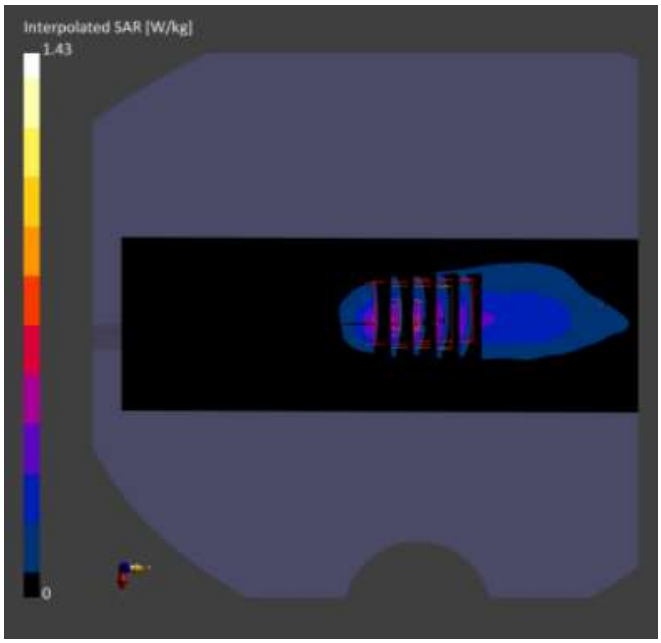
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	60.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.441	0.479
psSAR10g [W/Kg]	0.246	0.213
Power Drift [dB]	-0.01	0.08



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.6℃
Ambient Temperature:	20.7℃
Test Date:	11/04/2021
Plot No.:	9

\Measurement Report for Device, EDGE TOP, Band 13, E-UTRA/FDD, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 23230 (782.0 MHz)

Hardware Setup

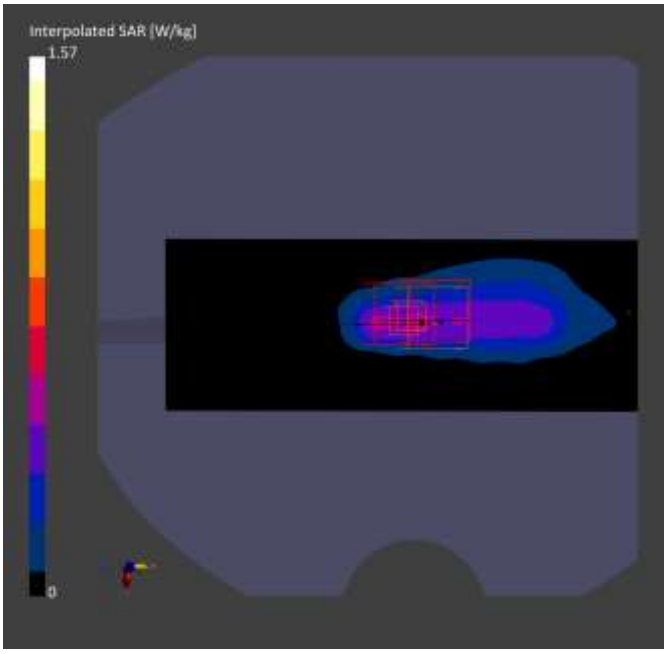
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	60.0 x 180.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.481	0.534
psSAR10g [W/Kg]	0.272	0.246
Power Drift [dB]	-0.05	0.01



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 20.4℃
Ambient Temperature: 20.5℃
Test Date: 11/05/2021
Plot No.: 10

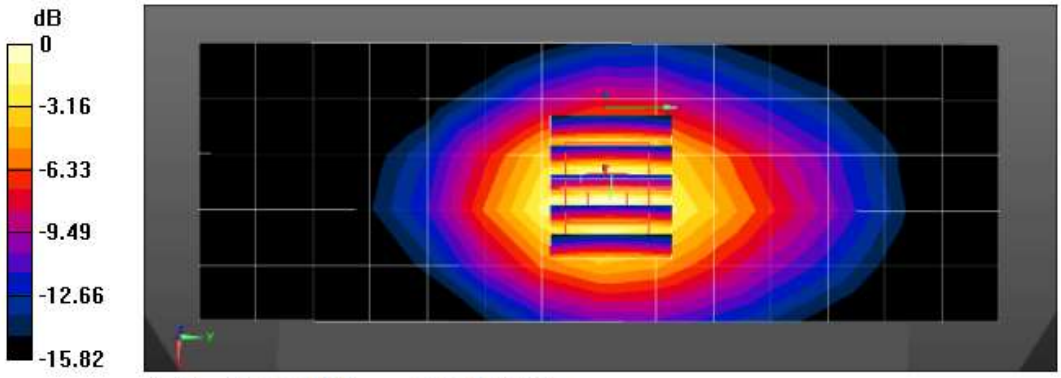
Communication System: UID 0, LTE Band25 (0); Frequency: 1860 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1860 MHz; σ = 1.371 S/m; ε_r = 41.454; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.83, 7.83, 7.83) @ 1860 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 25 Body Top QPSK 20MHz 1RB 49offset 26140ch Max 22mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.942 W/kg

LTE Band 25 Body Top QPSK 20MHz 1RB 49offset 26140ch Max 22mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.65 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.678 W/kg; SAR(10 g) = 0.393 W/kg



0 dB = 0.980 W/kg = -0.09 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.2℃
Ambient Temperature:	21.3℃
Test Date:	11/05/2021
Plot No.:	12

Measurement Report for Device, EDGE TOP, Band 26 E-UTRA/FDD, LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 26865 (831.5 MHz)

Hardware Setup

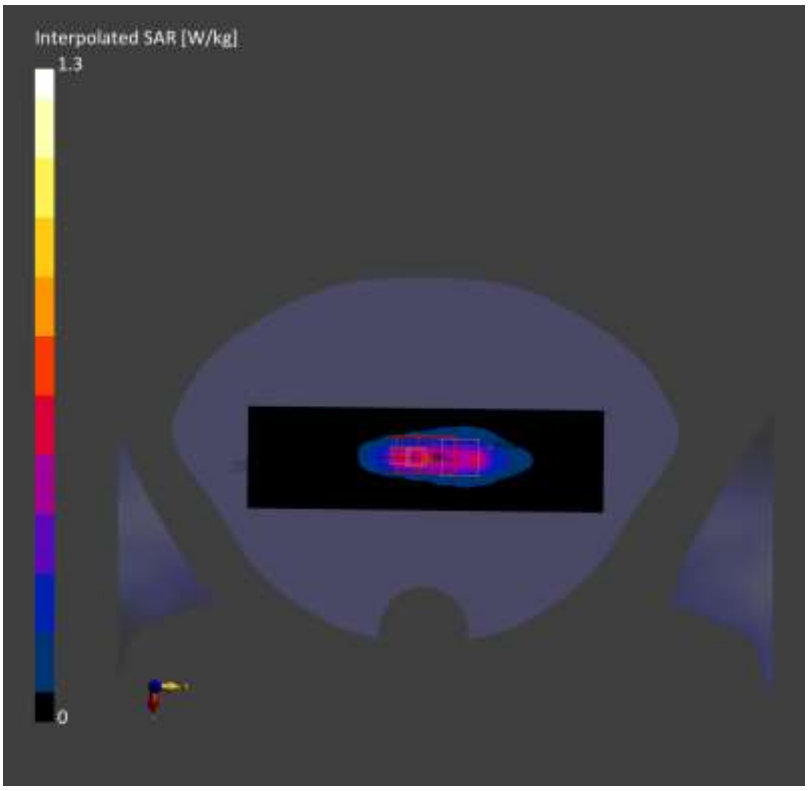
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	60.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	8.0 x 8.0 x 5.0
Grading Ratio	1.5	1.5

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.484	0.459
psSAR10g [W/Kg]	0.275	0.202
Power Drift [dB]	-0.04	-0.00



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.2℃
Test Date:	11/01/2021
Plot No.:	12

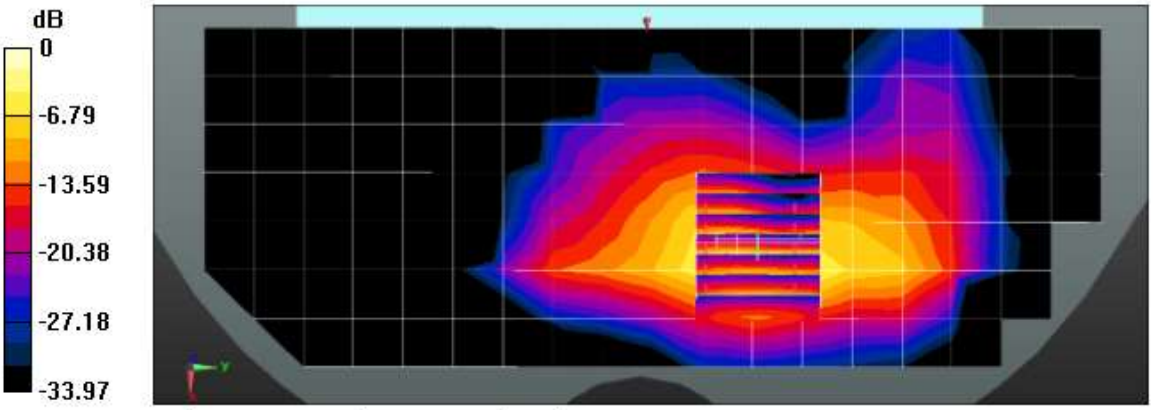
Communication System: UID 0, LTE Band 41 (FCC) (0); Frequency: 2636.5 MHz;Duty Cycle: 1:1.58052
Medium parameters used (interpolated): f = 2636.5 MHz; σ = 1.99 S/m; ε_r = 39.484; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.57, 4.57, 4.57) @ 2636.5 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 41 Body Rear QPSK 20MHz 1RB 49offset 41055ch/Area Scan (8x19x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.26 W/kg
LTE Band 41 Body Rear QPSK 20MHz 1RB 49offset 41055ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 1.071 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 3.24 W/kg
SAR(1 g) = 0.926 W/kg; SAR(10 g) = 0.305 W/kg
Maximum value of SAR (measured) = 1.45 W/kg



0 dB = 1.45 W/kg = 1.61 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	21.1℃
Ambient Temperature:	21.2℃
Test Date:	11/01/2021
Plot No.:	13

Communication System: UID 0, LTE Band 41 (FCC) (0); Frequency: 2636.5 MHz;Duty Cycle: 1:1.58052
Medium parameters used (interpolated): f = 2636.5 MHz; σ = 1.99 S/m; ε_r = 39.484; ρ = 1000 kg/m^3
Phantom section: Flat Section

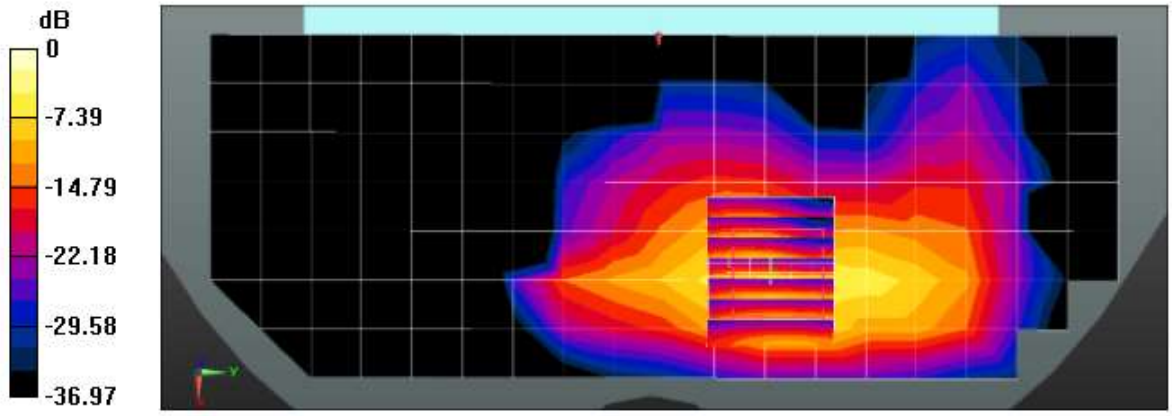
DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.57, 4.57, 4.57) @ 2636.5 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 41 Body Rear QPSK 20MHz 50RB 25offset 41055ch/Area Scan (8x19x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.29 W/kg

LTE Band 41 Body Rear QPSK 20MHz 50RB 25offset 41055ch/Zoom Scan (7x7x7)/Cube 0:
Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 0.7610 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 3.29 W/kg
SAR(1 g) = 0.906 W/kg; SAR(10 g) = 0.293 W/kg
Maximum value of SAR (measured) = 1.43 W/kg



0 dB = 1.43 W/kg = 1.55 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.2℃
Ambient Temperature:	20.3℃
Test Date:	10/29/2021
Plot No.:	14

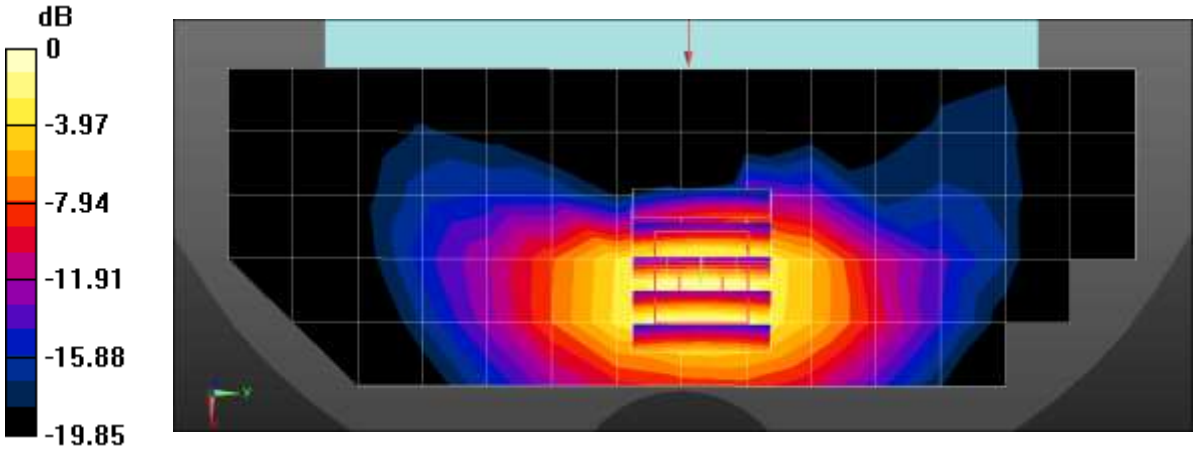
Communication System: UID 0, LTE Band66 (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.371 S/m; ε_r = 40.831; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.06, 8.06, 8.06) @ 1770 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 66 Body Rear QPSK 20MHz 1RB 99offset 132572ch Max 15mm/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.954 W/kg

LTE Band 66 Body Rear QPSK 20MHz 1RB 99offset 132572ch Max 15mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.2050 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.58 W/kg
SAR(1 g) = 0.907 W/kg; SAR(10 g) = 0.497 W/kg
Maximum value of SAR (measured) = 1.33 W/kg



0 dB = 1.33 W/kg = 1.24 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.2℃
Ambient Temperature:	20.3℃
Test Date:	10/29/2021
Plot No.:	15

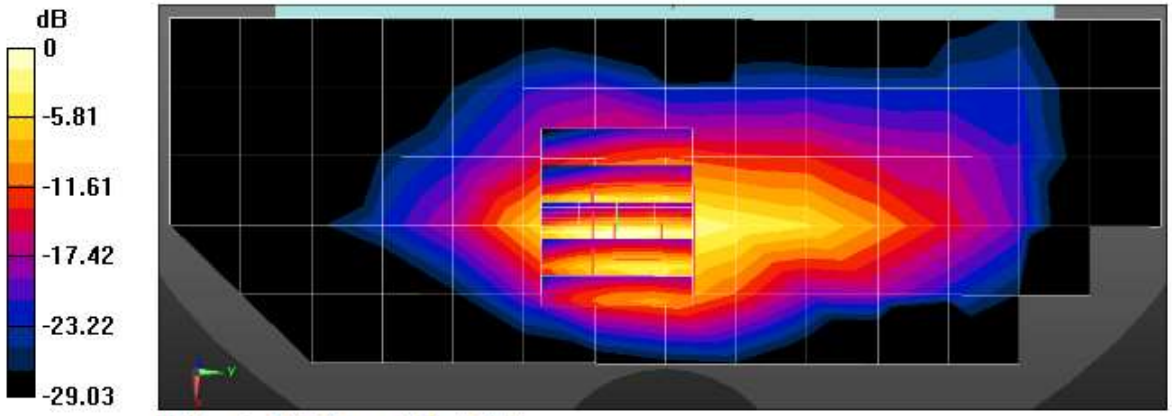
Communication System: UID 0, LTE Band66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.337 S/m; ε_r = 40.967; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.06, 8.06, 8.06) @ 1745 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 66 Body Rear QPSK 20MHz 50RB 25offset 132322ch Grip 0mm/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.62 W/kg

LTE Band 66 Body Rear QPSK 20MHz 50RB 25offset 132322ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.3460 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 2.43 W/kg
SAR(1 g) = 0.853 W/kg; SAR(10 g) = 0.348 W/kg
Maximum value of SAR (measured) = 1.74 W/kg



0 dB = 1.74 W/kg = 2.41 dBW/kg

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

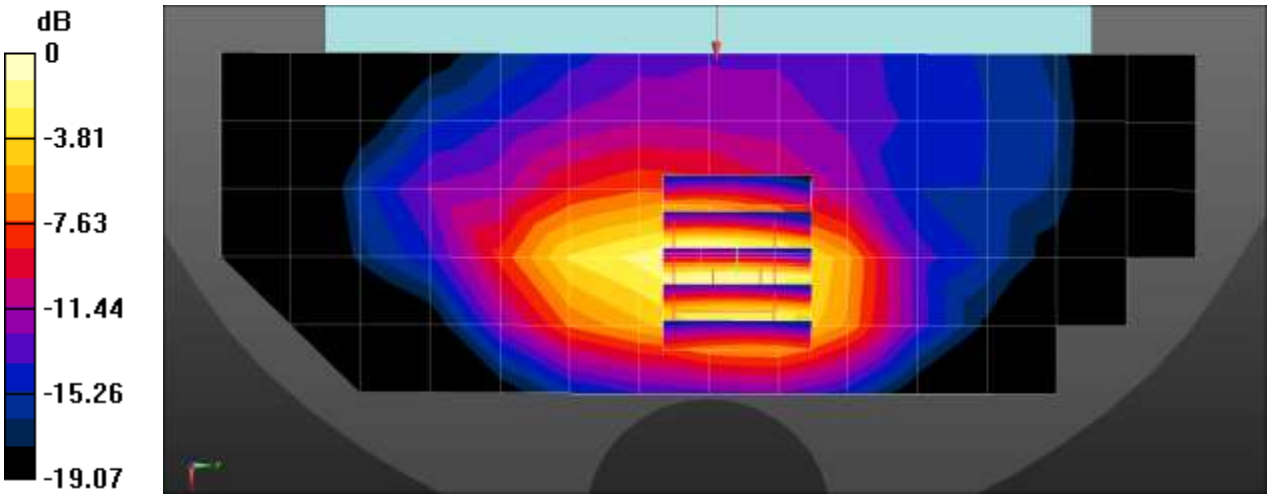
Communication System: UID 0, LTE Band66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.312 S/m; ε_r = 41.375; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.06, 8.06, 8.06) @ 1745 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 66 Body Rear QPSK 20MHz 1RB 49offset 132322ch Max 9mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.621 W/kg

LTE Band 66 Body Rear QPSK 20MHz 1RB 49offset 132322ch Max 9mm/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.750 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.872 W/kg
SAR(1 g) = 0.470 W/kg; SAR(10 g) = 0.250 W/kg
Maximum value of SAR (measured) = 0.732 W/kg



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

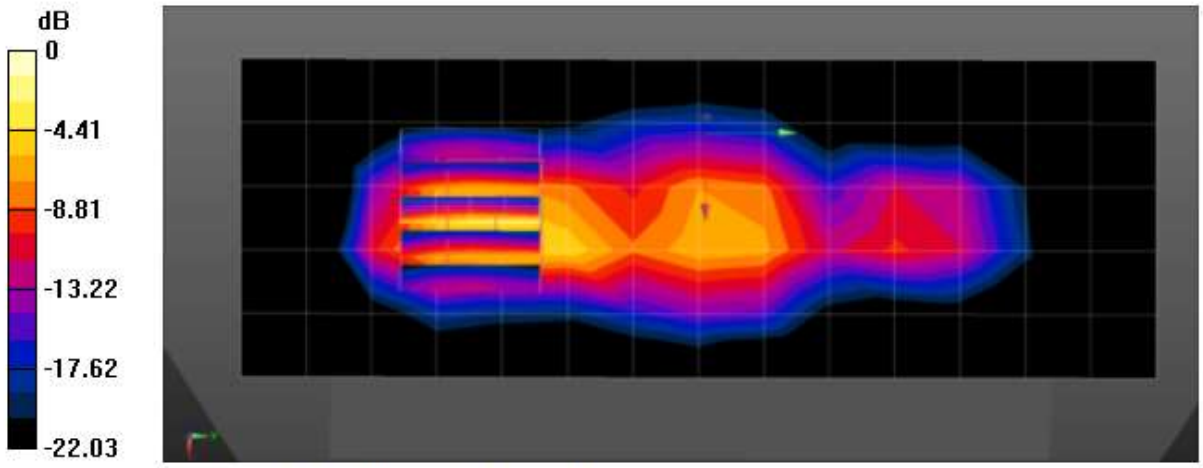
Communication System: UID 0, LTE Band66 (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.334 S/m; ε_r = 41.211; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.06, 8.06, 8.06) @ 1770 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 66 Body Bottom QPSK 20MHz 50RB 0offset 132572ch Grip 0mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.419 W/kg

LTE Band 66 Body Bottom QPSK 20MHz 50RB 0offset 132572ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.30 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.44 W/kg
SAR(1 g) = 0.463 W/kg; SAR(10 g) = 0.195 W/kg
Maximum value of SAR (measured) = 1.05 W/kg



0 dB = 1.05 W/kg = 0.21 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4℃
Ambient Temperature:	20.5 ℃
Test Date:	11/04/2021
Plot No.:	18

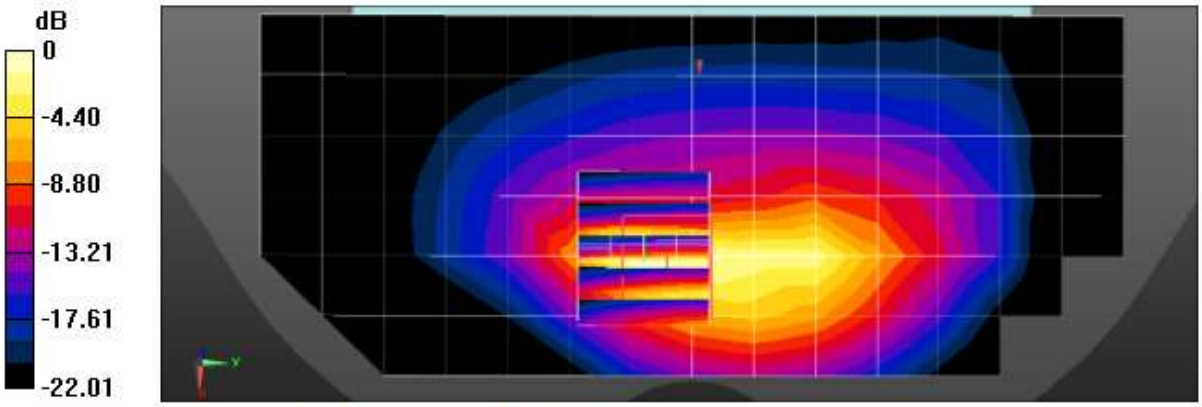
Communication System: UID 0, NR n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.918 S/m; ε_r = 41.531; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.04, 9.04, 9.04) @ 836.5 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR Band n5 Body Rear DFT-s QPSK 20MHz 1RB 1offset 167300ch Grip 0mm/Area Scan (7x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.30 W/kg

NR Band n5 Body Rear DFT-s QPSK 20MHz 1RB 1offset 167300ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 5.342 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 0.534 W/kg; SAR(10 g) = 0.234 W/kg
Maximum value of SAR (measured) = 1.30 W/kg



0 dB = 1.30 W/kg = 1.14 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4℃
Ambient Temperature:	20.5 ℃
Test Date:	11/04/2021
Plot No.:	19

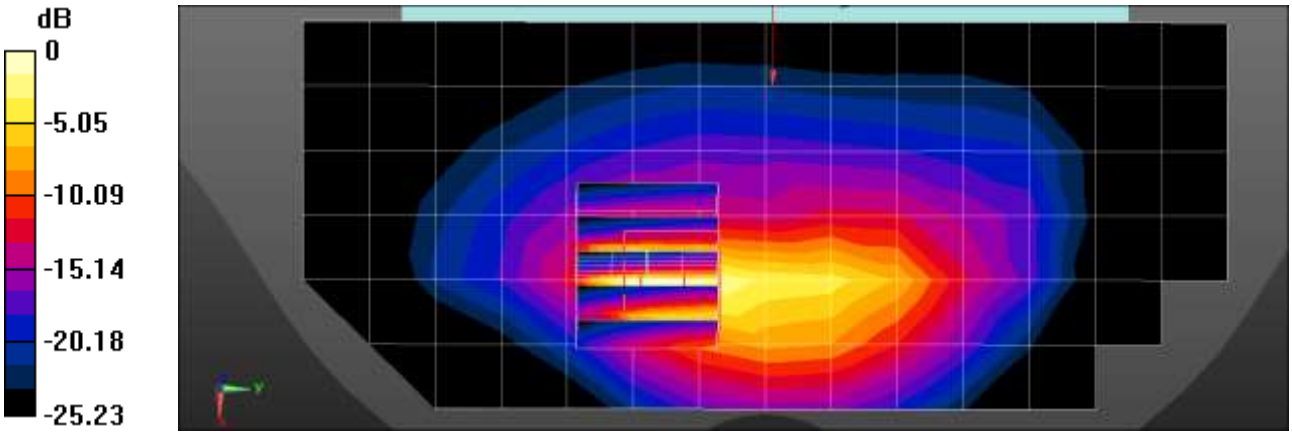
Communication System: UID 0, NR n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.918 S/m; ε_r = 41.531; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.04, 9.04, 9.04) @ 836.5 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR Band n5 Body Rear DFT-s QPSK 20MHz 100RB 0offset 167300ch Grip 0mm/Area Scan (7x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.97 W/kg

NR Band n5 Body Rear DFT-s QPSK 20MHz 100RB 0offset 167300ch Grip 0mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.101 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 3.03 W/kg
SAR(1 g) = 0.547 W/kg; SAR(10 g) = 0.208 W/kg
Maximum value of SAR (measured) = 1.76 W/kg



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.4℃
Ambient Temperature:	20.5℃
Test Date:	11/05/2021
Plot No.:	20

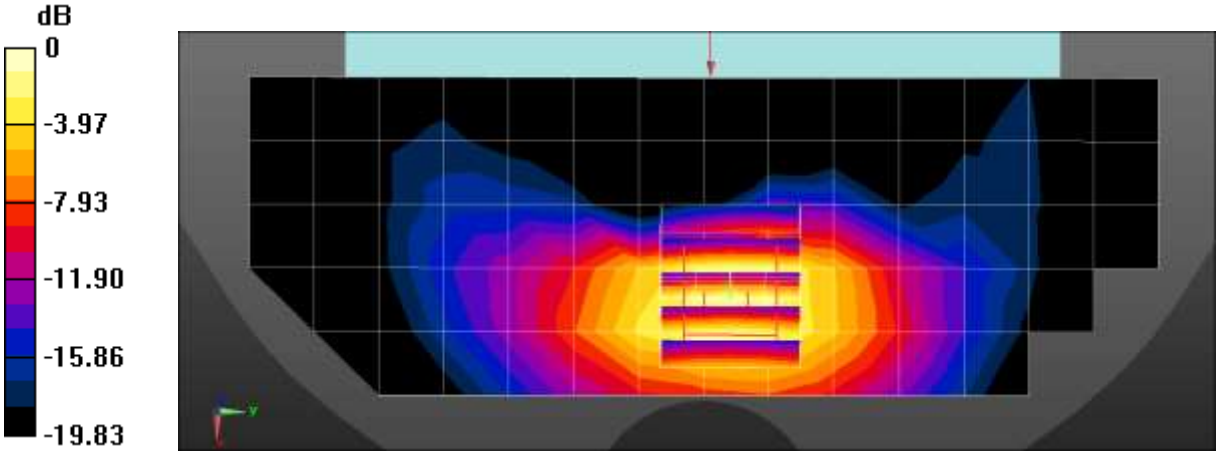
Communication System: UID 0, NR Band n66 (0); Frequency: 1770 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1770 MHz; σ = 1.377 S/m; ε_r = 41.2; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.06, 8.06, 8.06) @ 1770 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

NR Band n66 Body Rear DFT-s QPSK 20MHz 1RB 104offset 354000ch Max 15mm/Area Scan (6x15x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.929 W/kg

NR Band n66 Body Rear DFT-s QPSK 20MHz 1RB 104offset 354000ch Max 15mm/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0.07100 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 1.48 W/kg
SAR(1 g) = 0.857 W/kg; SAR(10 g) = 0.466 W/kg
Maximum value of SAR (measured) = 1.26 W/kg



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	19.6℃
Ambient Temperature:	19.7℃
Test Date:	11/04/2021
Plot No.:	21

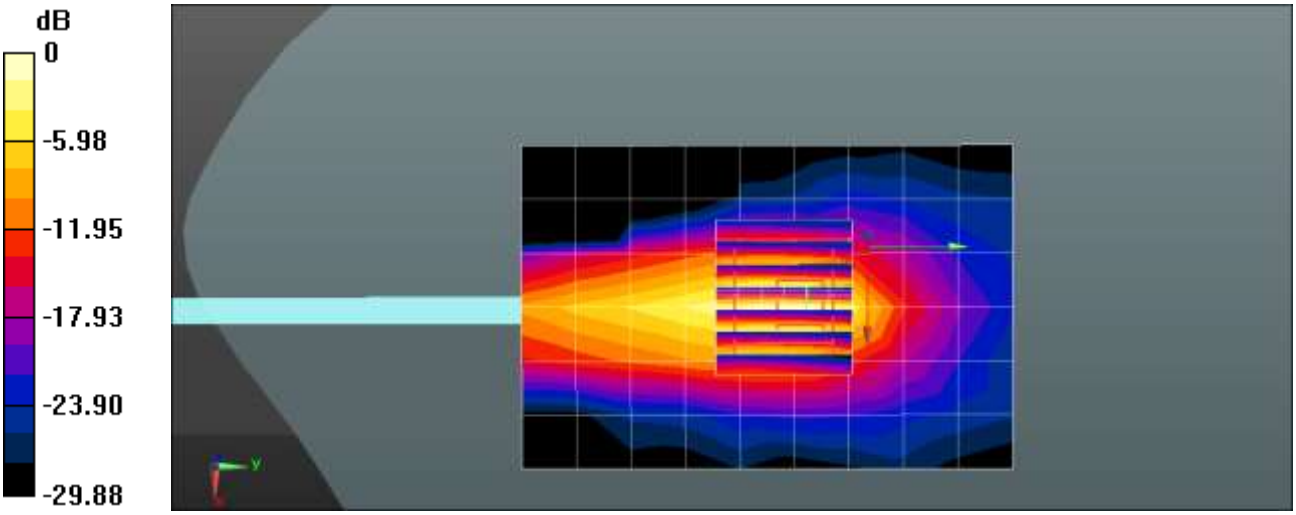
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.786 S/m; ε_r = 37.978; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2412 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM with CRP v5.0_2020_06_09; Type: QD000P40CD; Serial: TP1574
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11b Body Right 1Mbps 1ch Grip 0mm/Area Scan (7x10x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.791 W/kg

802.11b Body Right 1Mbps 1ch Grip 0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.43 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 2.01 W/kg
SAR(1 g) = 0.545 W/kg; SAR(10 g) = 0.188 W/kg
Maximum value of SAR (measured) = 0.855 W/kg



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

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	19.7℃
Ambient Temperature:	19.8℃
Test Date:	11/08/2021
Plot No.:	22

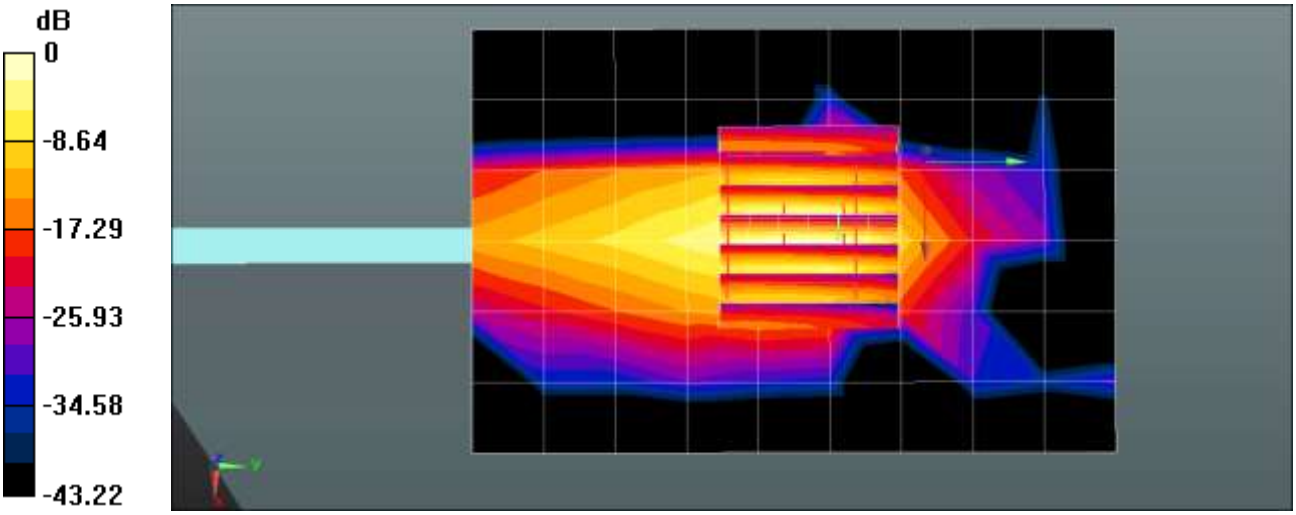
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2437 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2437 MHz; σ = 1.812 S/m; ε_r = 37.92; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2437 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11b Body Right 1Mbps 6ch RSDB 0mm/Area Scan (7x10x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.534 W/kg

802.11b Body Right 1Mbps 6ch RSDB 0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 4.130 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 1.40 W/kg
SAR(1 g) = 0.336 W/kg; SAR(10 g) = 0.106 W/kg
Maximum value of SAR (measured) = 0.516 W/kg



0 dB = 0.516 W/kg = -2.87 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.0℃
Ambient Temperature:	20.1℃
Test Date:	11/10/2021
Plot No.:	23

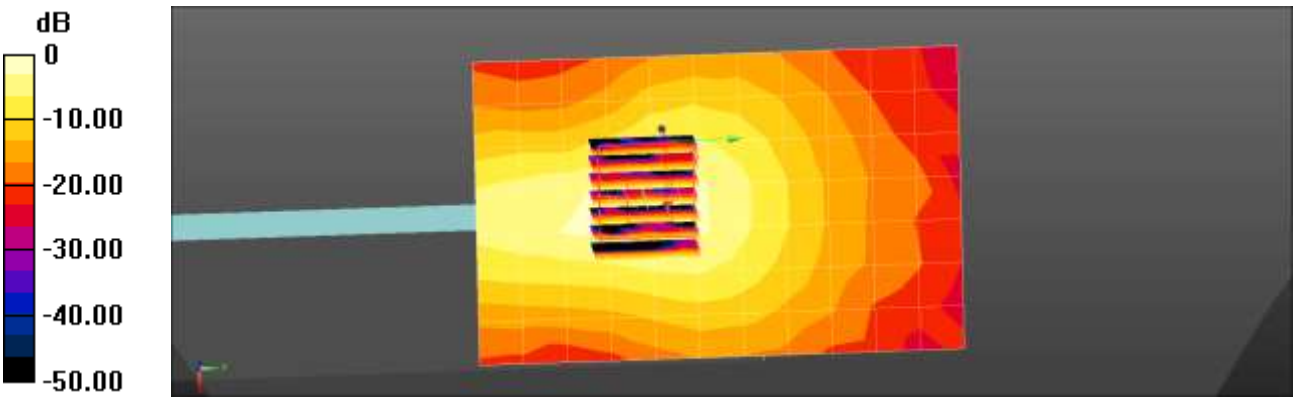
Communication System: UID 0, WIFI 5GHz UNII2A (0); Frequency: 5320 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5320 MHz; σ = 4.68 S/m; ε_r = 36.923; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(5.75, 5.75, 5.75) @ 5320 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2021-04-23
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11a Body Right 6Mbps 64ch Max 9mm/Area Scan (8x12x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.728 W/kg

802.11a Body Right 6Mbps 64ch Max 9mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 10.23 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 1.56 W/kg
SAR(1 g) = 0.380 W/kg; SAR(10 g) = 0.134 W/kg
Maximum value of SAR (measured) = 0.901 W/kg



0 dB = 0.901 W/kg = -0.45 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.8℃
Ambient Temperature:	20.9℃
Test Date:	11/12/2021
Plot No.:	24

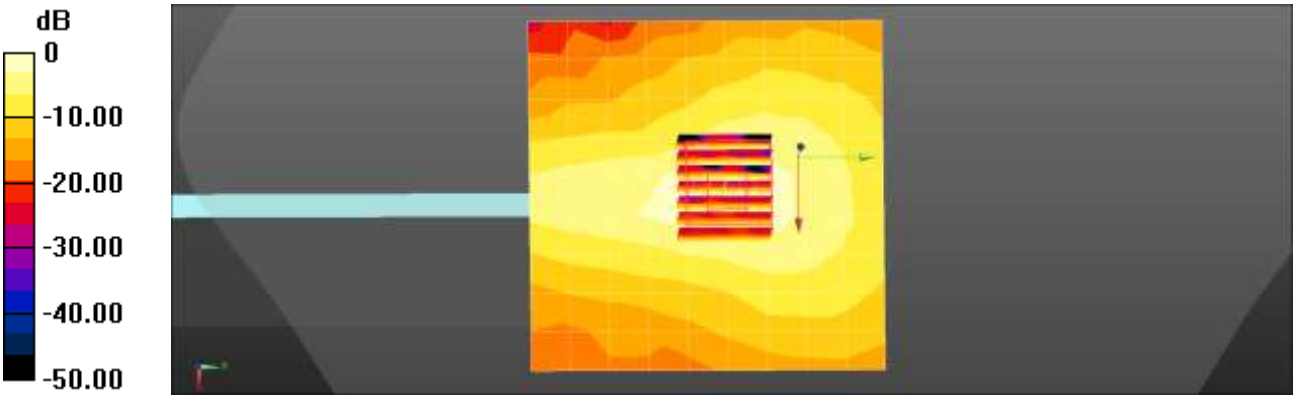
Communication System: UID 0, WIFI 5GHz UNII2C (0); Frequency: 5500 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5500 MHz; σ = 4.891 S/m; ε_r = 36.85; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(5.1, 5.1, 5.1) @ 5500 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2021-04-23
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11a Body Right 6Mbps 100ch Max 9mm/Area Scan (10x10x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.817 W/kg

802.11a Body Right 6Mbps 100ch Max 9mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 13.90 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 1.67 W/kg
SAR(1 g) = 0.380 W/kg; SAR(10 g) = 0.135 W/kg
Maximum value of SAR (measured) = 0.921 W/kg



0 dB = 0.921 W/kg = -0.36 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	22.0℃
Ambient Temperature:	22.1℃
Test Date:	11/18/2021
Plot No.:	25

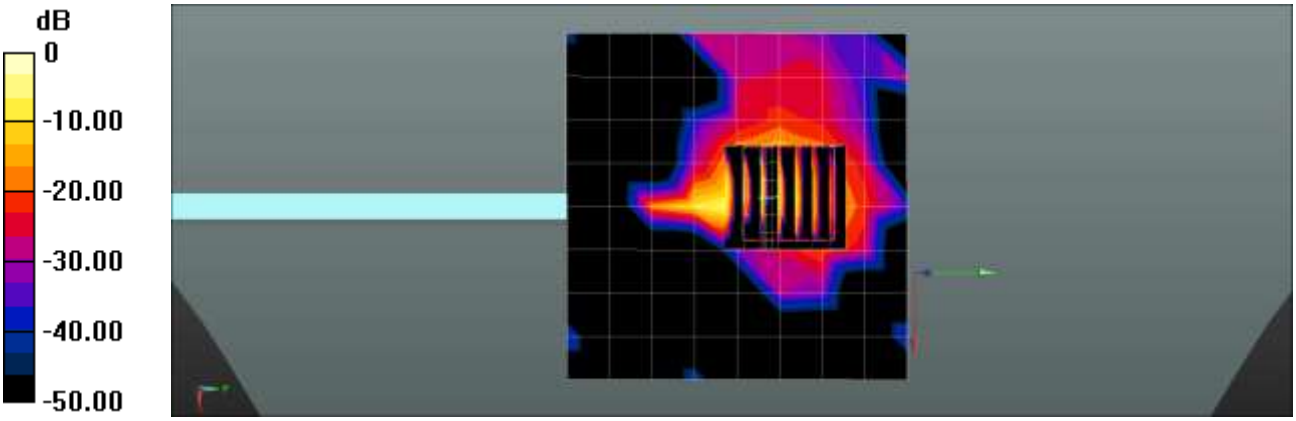
Communication System: UID 0, WIFI 5GHz (0); Frequency: 5855 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 5855 MHz; σ = 5.344 S/m; ε_r = 36.619; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7309; ConvF(5.05, 5.05, 5.05) @ 5855 MHz; Calibrated: 2021-04-20
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn504; Calibrated: 2021-02-19
- Phantom: SAM
- Measurement SW: DASY52, Version 52.10 (4)

802.11ac80 Body Right MCS0 171ch Grip 0mm /Area Scan (9x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.37 W/kg

802.11ac80 Body Right MCS0 171ch Grip 0mm /Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 14.21 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 4.40 W/kg
SAR(1 g) = 0.588 W/kg; SAR(10 g) = 0.107 W/kg
Maximum value of SAR (measured) = 2.05 W/kg



0 dB = 2.05 W/kg = 3.12 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.0℃
Ambient Temperature:	20.1℃
Test Date:	11/10/2021
Plot No.:	26

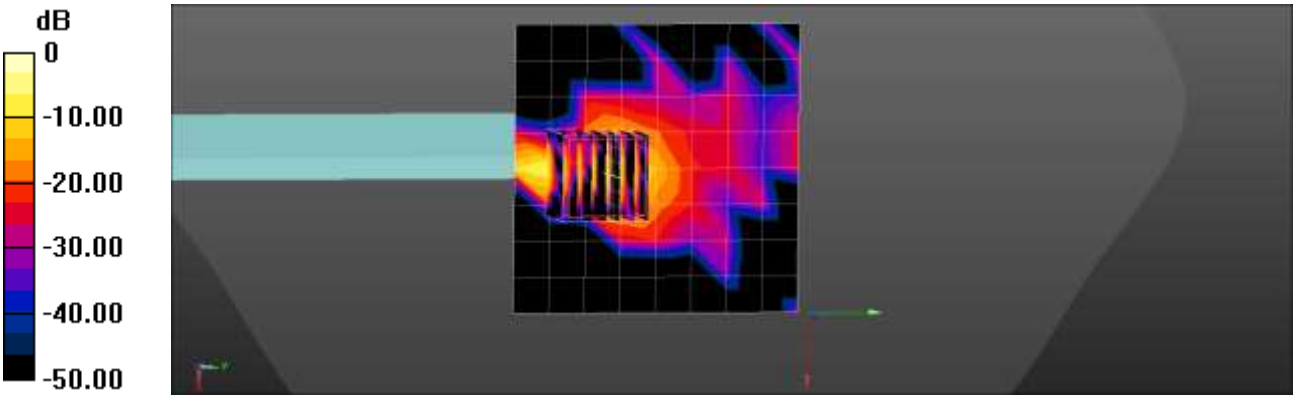
Communication System: UID 0, WIFI 5GHz UNII2A (0); Frequency: 5290 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5290 MHz; σ = 4.671 S/m; ε_r = 36.959; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(5.75, 5.75, 5.75) @ 5290 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2021-04-23
- Phantom: Twin-SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

802.11ac Body Right MCS0 58ch RSDB 0mm/Area Scan (9x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.918 W/kg

802.11ac Body Right MCS0 58ch RSDB 0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 3.256 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.09 W/kg
SAR(1 g) = 0.366 W/kg; SAR(10 g) = 0.074 W/kg
Maximum value of SAR (measured) = 1.34 W/kg



0 dB = 1.34 W/kg = 1.27 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.0℃
Ambient Temperature:	20.2℃
Test Date:	11/03/2021
Plot No.:	27

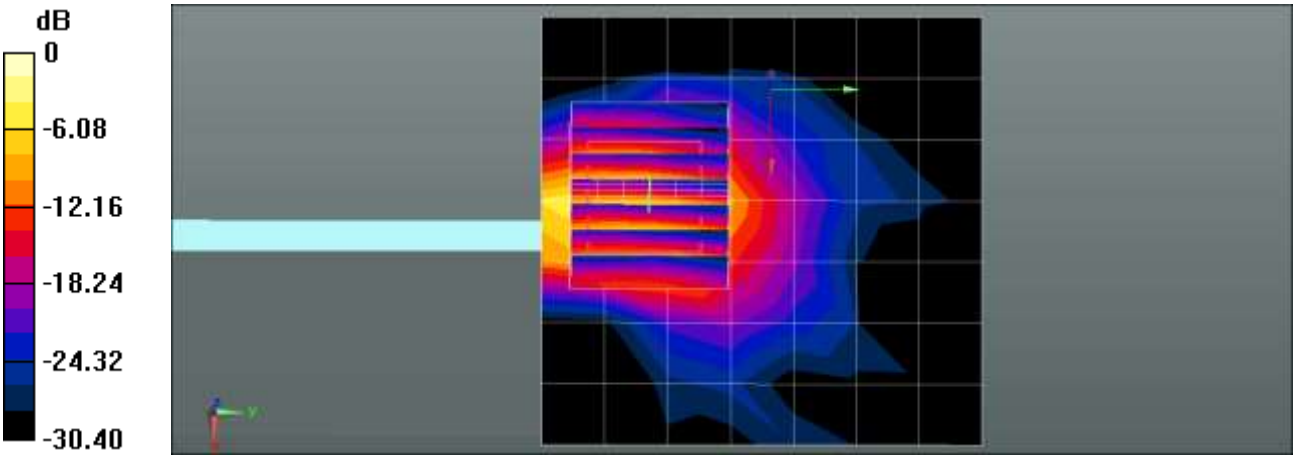
Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1.300
Medium parameters used: f = 2480 MHz; σ = 1.863 S/m; ε_r = 37.749; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2480 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM with CRP v5.0_2020_06_09; Type: QD000P40CD; Serial: TP1574
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bluetooth Body Left 2DH5 78ch RSDB 0mm/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.352 W/kg

Bluetooth Body Left 2DH5 78ch RSDB 0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.315 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 1.29 W/kg
SAR(1 g) = 0.327 W/kg; SAR(10 g) = 0.108 W/kg
Maximum value of SAR (measured) = 0.491 W/kg



0 dB = 0.491 W/kg = -3.09 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Liquid Temperature:	20.0℃
Ambient Temperature:	20.2℃
Test Date:	11/03/2021
Plot No.:	28

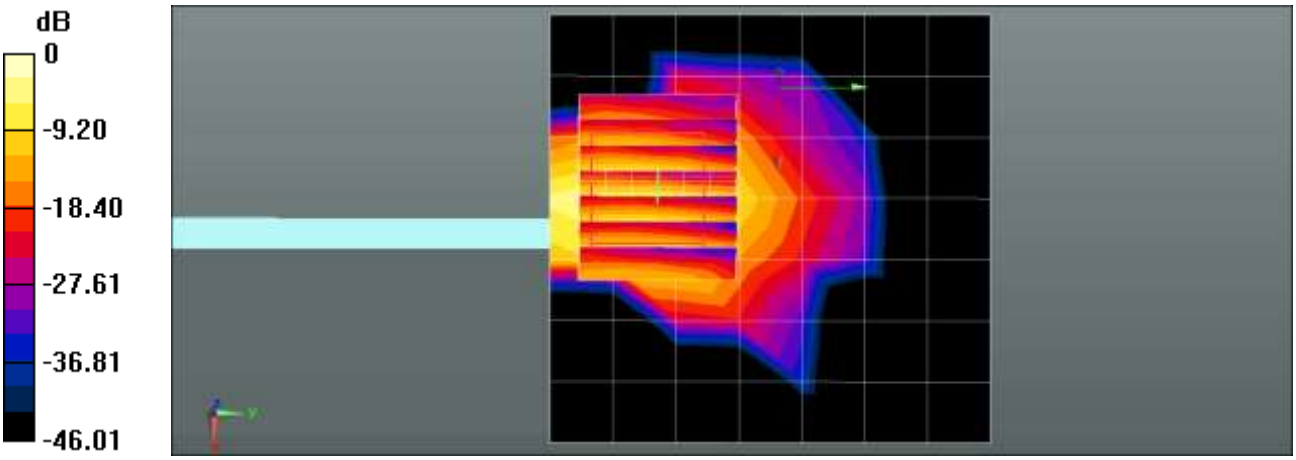
Communication System: UID 0, Bluetooth (0); Frequency: 2480 MHz;Duty Cycle: 1:1.302
Medium parameters used: f = 2480 MHz; σ = 1.863 S/m; ε_r = 37.749; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2480 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bluetooth Left DH5 78ch RSDB 0mm/Area Scan (8x8x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.275 W/kg

Bluetooth Body Left DH5 78ch RSDB 0mm/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.567 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 0.923 W/kg
SAR(1 g) = 0.229 W/kg; SAR(10 g) = 0.074 W/kg
Maximum value of SAR (measured) = 0.336 W/kg



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

Appendix C. – Dipole Verification Plots

■ Verification Data (750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.4℃
Test Date:	11/03/2021

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

Exposure Conditions

Phantom Section, TSL	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	10.79	0.910	41.8

Hardware Setup

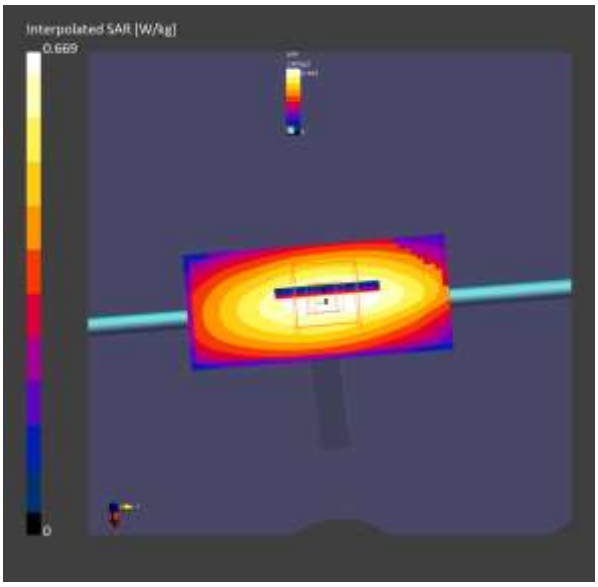
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.435	0.436
psSAR10g [W/Kg]	0.290	0.291
Power Drift [dB]	0.01	0.01



■ Verification Data (750 ㎒ Head)

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

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

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	750.0, 0	10.79	0.910	41.8

Hardware Setup

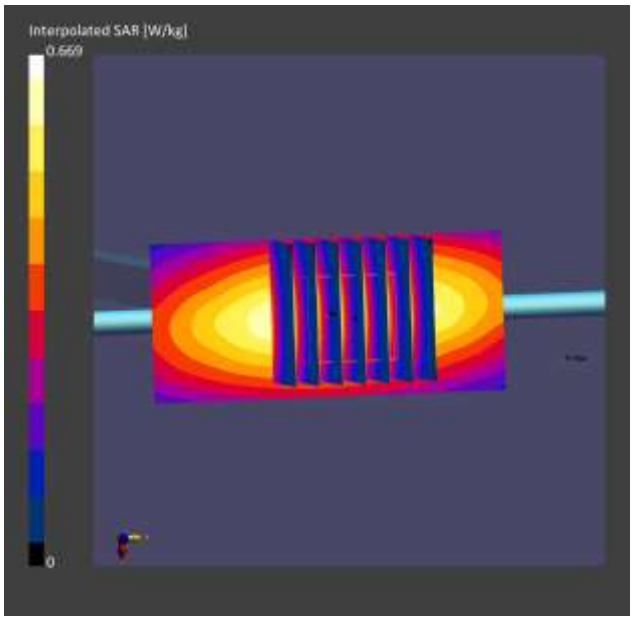
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

Area Scan		Zoom Scan
psSAR1g [W/Kg]	0.435	0.436
psSAR10g [W/Kg]	0.290	0.291
Power Drift [dB]	0.01	0.01



■ **Verification Data (835㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.2℃
Test Date: 11/01/2021

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

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	835.0, 0	10.54	0.914	40.6

Hardware Setup

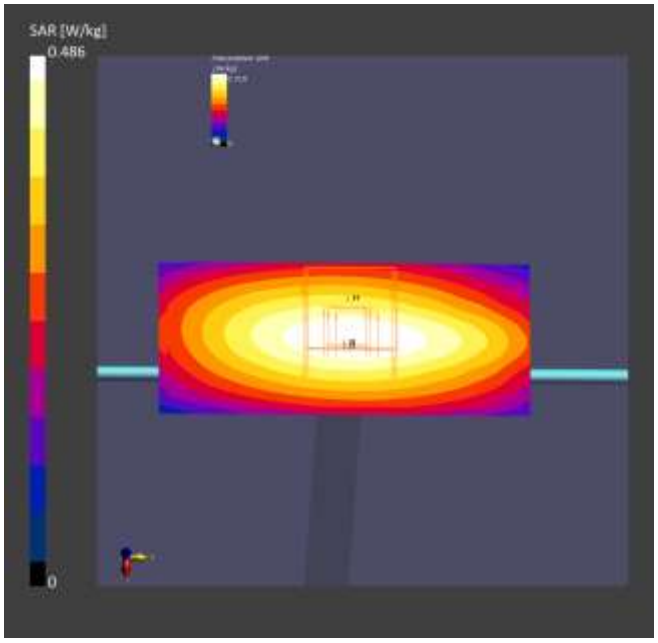
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.458	0.459
psSAR10g [W/Kg]	0.303	0.301
Power Drift [dB]	0.01	0.01



■ **Verification Data (835 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.2℃
Test Date: 11/02/2021

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

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	835.0, 0	10.54	0.913	40.6

Hardware Setup

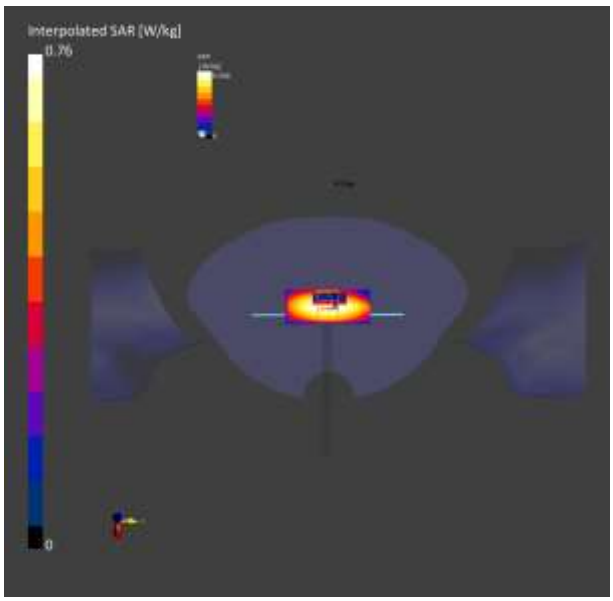
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.477	0.478
psSAR10g [W/Kg]	0.314	0.312
Power Drift [dB]	-0.01	-0.01



■ **Verification Data (835 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.2℃
Test Date: 11/09/2021

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

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	835.0, 0	10.54	0.905	41.2

Hardware Setup

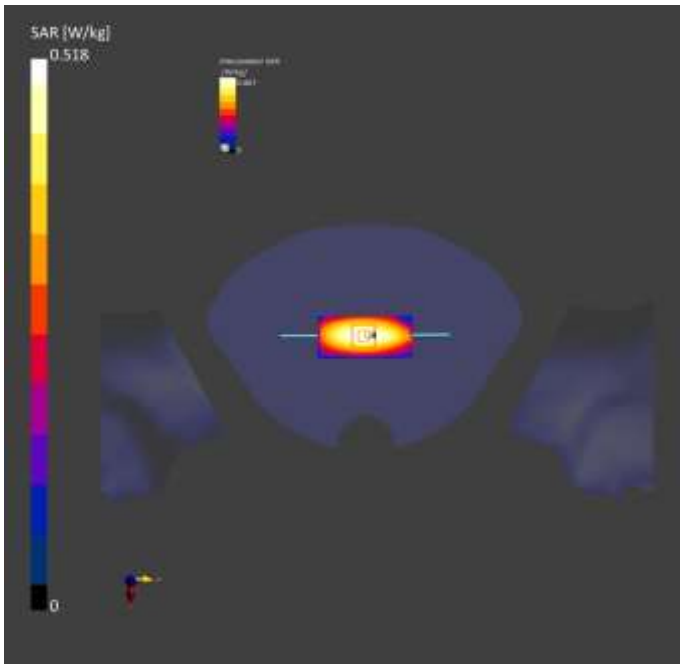
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.490	0.493
psSAR10g [W/Kg]	0.323	0.318
Power Drift [dB]	-0.00	0.02



■ **Verification Data (835 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.2℃
Test Date: 11/05/2021

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

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	835.0, 0	10.54	0.928	40.5

Hardware Setup

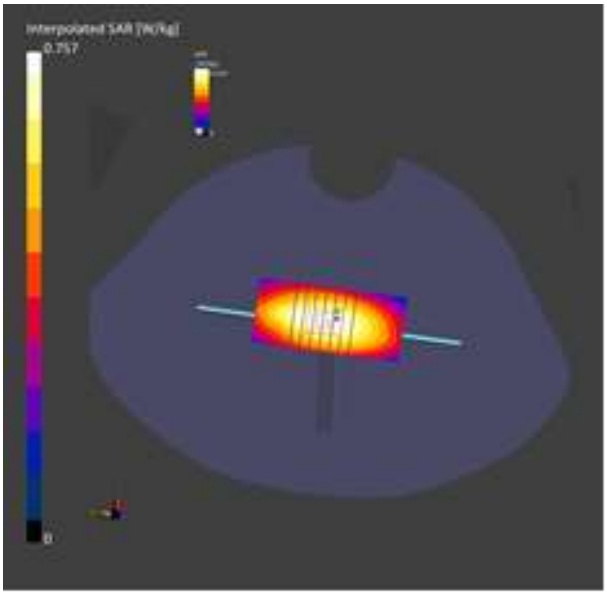
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2047	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.488	0.491
psSAR10g [W/Kg]	0.325	0.327
Power Drift [dB]	0.01	0.03



■ **Verification Data (1800 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.2℃
Test Date: 10/29/2021

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

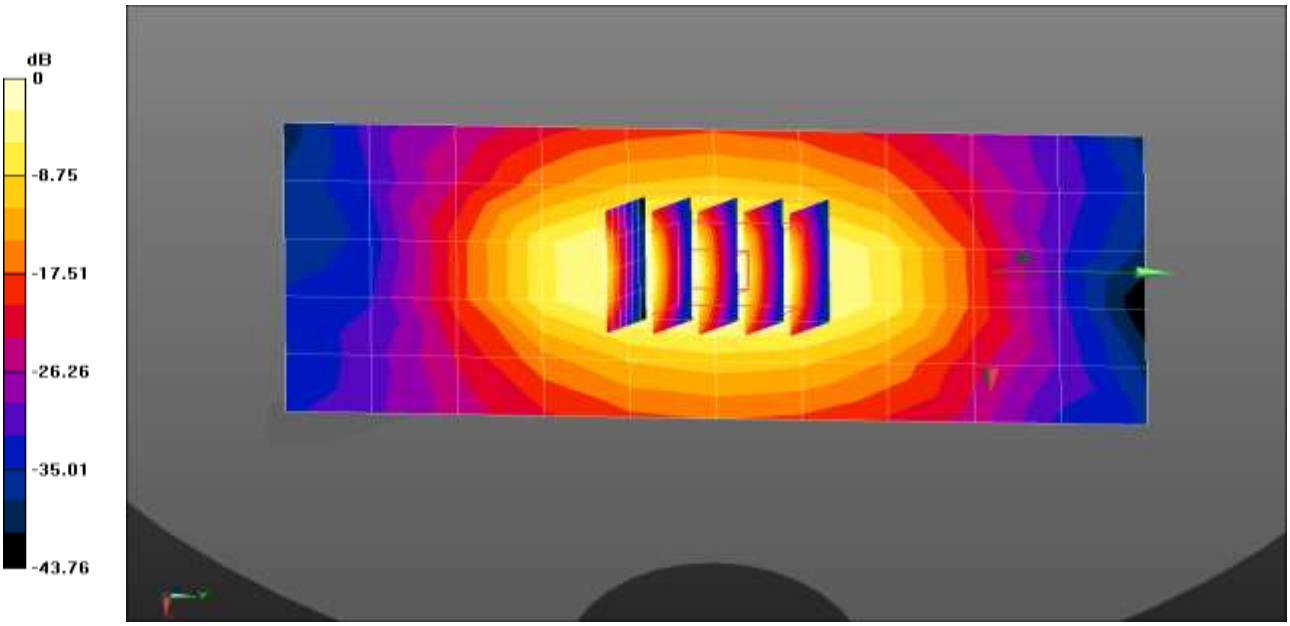
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.406 S/m; ε_r = 40.787; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.06, 8.06, 8.06) @ 1800 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM V8.0 (Right-Left)
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.04 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 49.36 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.92 W/kg
SAR(1 g) = 1.97 W/kg; SAR(10 g) = 1.01 W/kg
Maximum value of SAR (measured) = 3.19 W/kg



0 dB = 2.04 W/kg = 3.11 dBW/kg

■ **Verification Data (1800 ㎒ Head)**

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

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2; Serial: D1800V2 - SN:xxx
Procedure Name: 1800MHz Head Verification

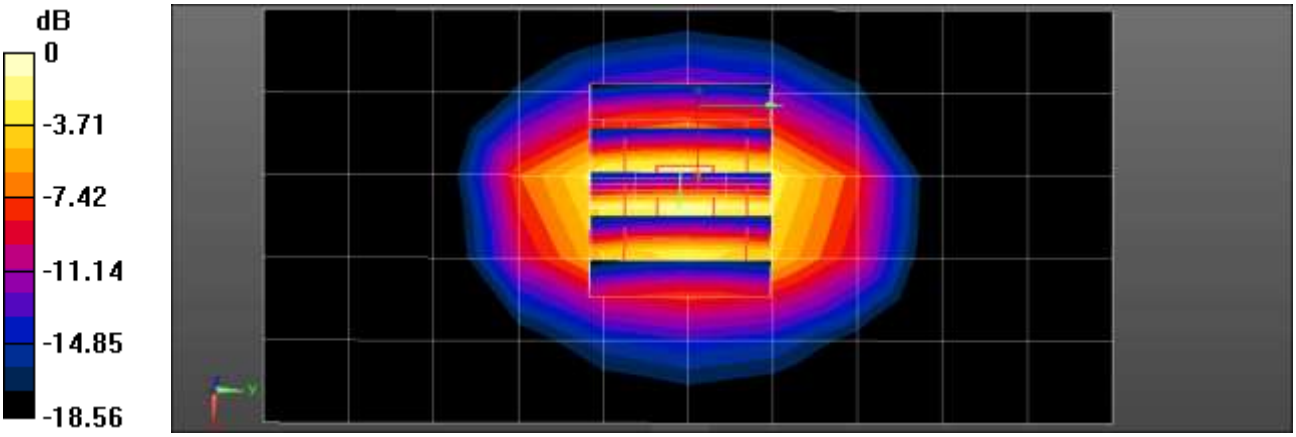
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.367 S/m; ε_r = 41.16; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.06, 8.06, 8.06) @ 1800 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM V8.0 (Right-Left); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1800MHz Head Verification/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.58 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 49.97 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 4.07 W/kg
SAR(1 g) = 2.04 W/kg; SAR(10 g) = 1.04 W/kg
Maximum value of SAR (measured) = 3.33 W/kg



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

■ **Verification Data (1800 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.5 ℃
Test Date: 10/29/2021

DUT: D1800V2 - SN2d015; Type: D1800V2

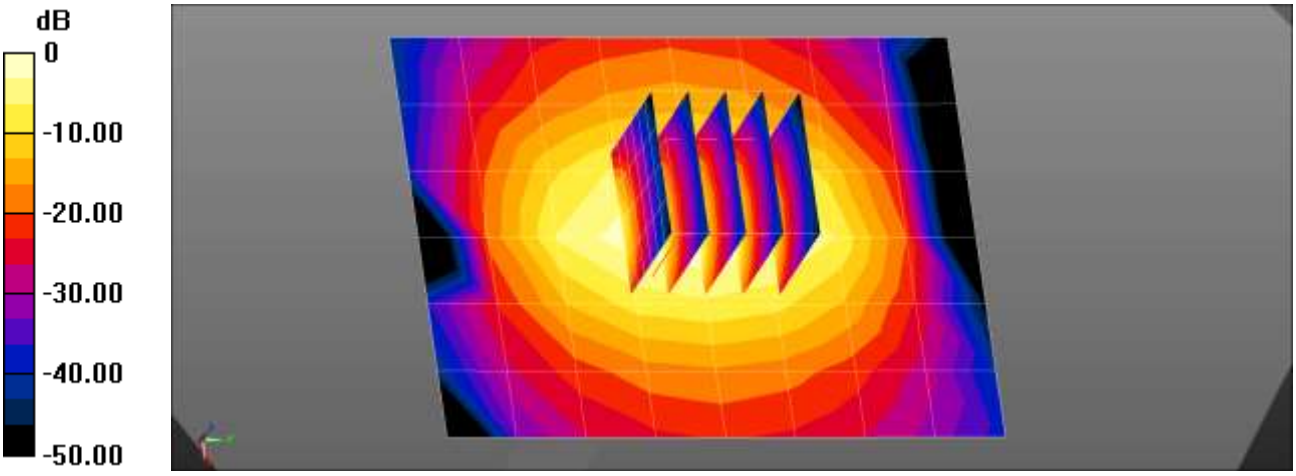
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.411 S/m; ε_r = 41.105; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3972; ConvF(8.12, 8.12, 8.12) @ 1800 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2021-03-29
- Phantom: SAM_Left_20170913
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.93 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.15 V/m; Power Drift = 0.15 dB
Peak SAR (extrapolated) = 3.59 W/kg
SAR(1 g) = 1.98 W/kg; SAR(10 g) = 1.04 W/kg
Maximum value of SAR (measured) = 3.05 W/kg



0 dB = 2.93 W/kg = 4.67 dBW/kg

■ **Verification Data (1900 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.2℃
Test Date: 11/10/2021

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:xxx
Procedure Name: 1900MHz Head Verification

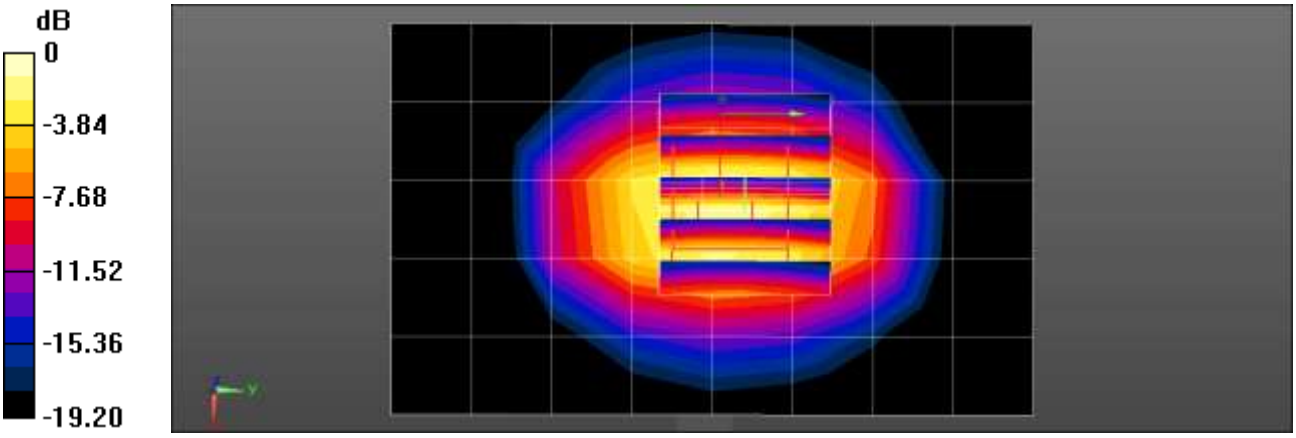
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.386 S/m; ε_r = 41.361; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.83, 7.83, 7.83) @ 1900 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM V8.0 (Right-Left); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1900MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.14 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.23 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.71 W/kg
SAR(1 g) = 1.93 W/kg; SAR(10 g) = 0.984 W/kg
Maximum value of SAR (measured) = 3.02 W/kg



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

■ **Verification Data (1900 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.0 ℃
Test Date: 11/30/2021

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:xxx
Procedure Name: 1900MHz Head Verification

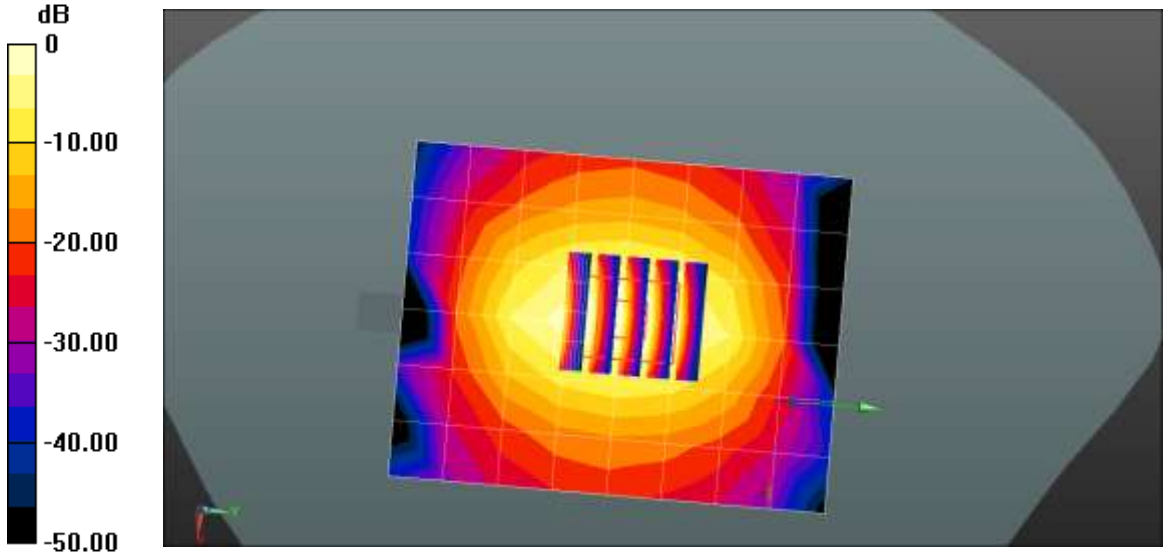
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.405 S/m; ε_r = 41.342; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

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

1900MHz Head Verification/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.03 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.05 V/m; Power Drift = 0.13 dB
Peak SAR (extrapolated) = 3.73 W/kg
SAR(1 g) = 2.02 W/kg; SAR(10 g) = 1.06 W/kg
Maximum value of SAR (measured) = 3.13 W/kg



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

■ **Verification Data (1900 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.4℃
Test Date: 11/05/2021

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:xxx
Procedure Name: 1900MHz Head Verification

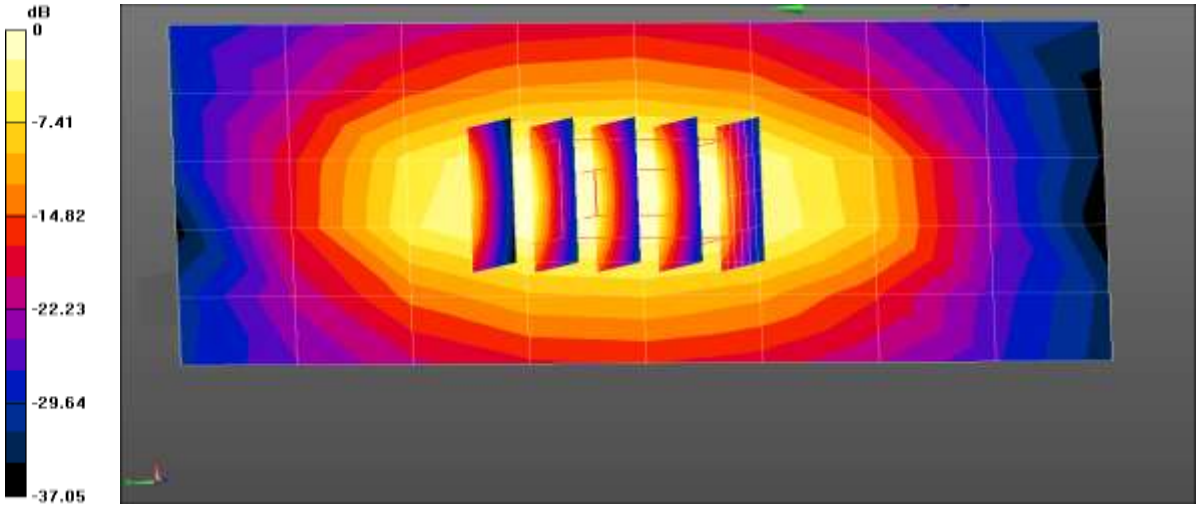
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.407 S/m; ε_r = 41.308; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.83, 7.83, 7.83) @ 1900 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM V8.0 (Right-Left); Type: QD 000 P41 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

1900MHz Head Verification/Area Scan (6x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.16 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.30 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.77 W/kg
SAR(1 g) = 1.96 W/kg; SAR(10 g) = 1.000 W/kg
Maximum value of SAR (measured) = 3.05 W/kg



0 dB = 2.13 W/kg = 3.28 dBW/kg

■ **Verification Data (1900 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 23.3℃
Test Date: 10/28/2021

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2

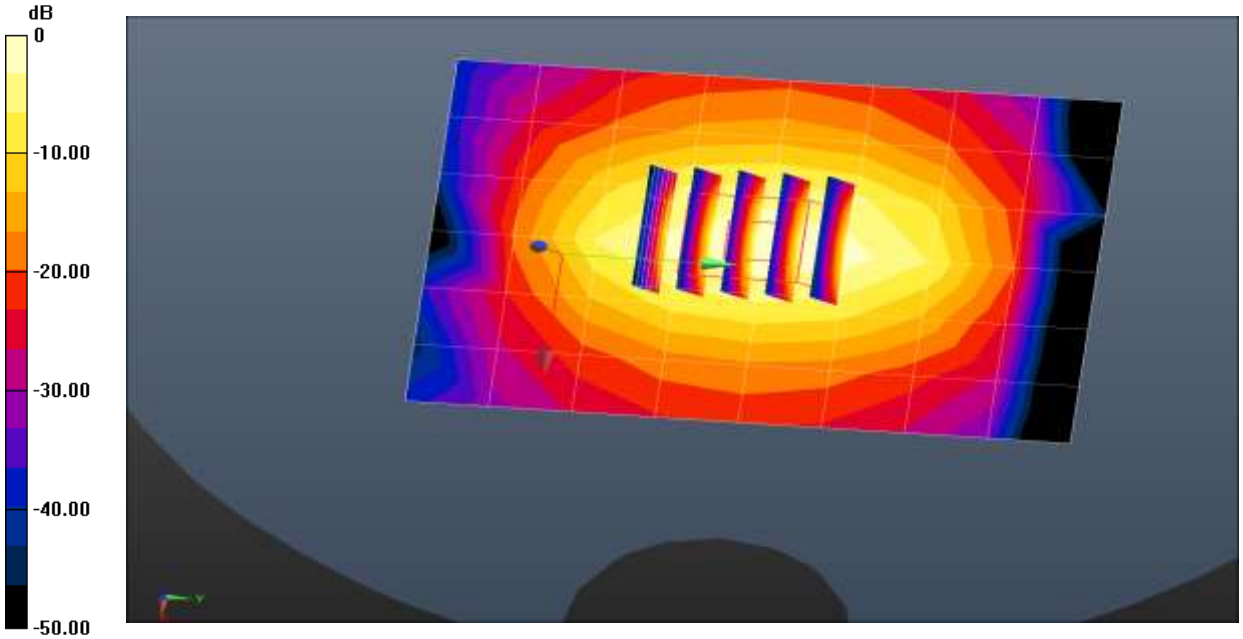
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.408 S/m; ε_r = 41.372; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

1900MHz Head Verification/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 3.03 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 47.89 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 3.72 W/kg
SAR(1 g) = 2.01 W/kg; SAR(10 g) = 1.05 W/kg
Maximum value of SAR (measured) = 3.11 W/kg



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

■ **Verification Data (2450 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.0℃
Test Date: 11/02/2021

DUT: D2450V2 - SN965; Type: D2450V2

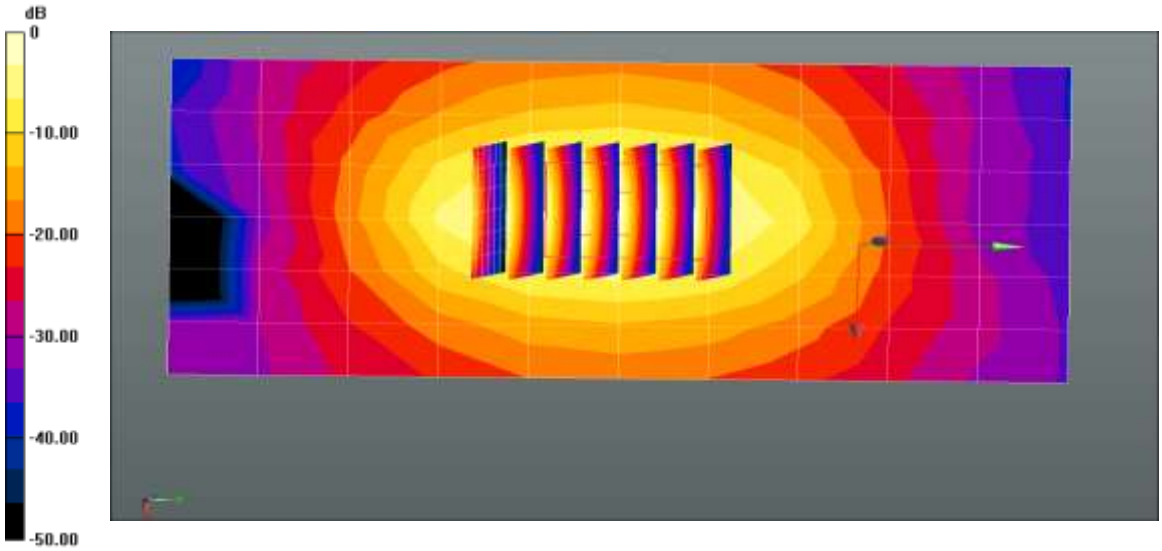
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.822 S/m; ε_r = 37.866; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2450 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.20 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 43.83 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 5.36 W/kg
SAR(1 g) = 2.47 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 3.26 W/kg



0 dB = 3.20 W/kg = 5.06 dBW/kg

■ **Verification Data (2450 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.0℃
Test Date: 11/03/2021

DUT: D2450V2 - SN965; Type: D2450V2;

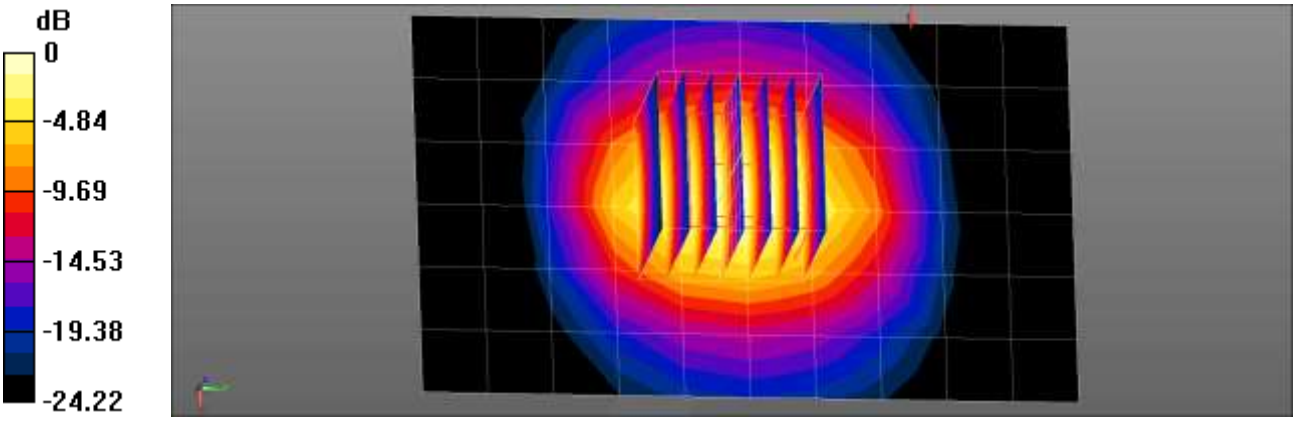
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.826 S/m; ε_r = 37.883; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2450 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4)

2450MHz Head Verification/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.23 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 43.15 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 5.39 W/kg
SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.12 W/kg
Maximum value of SAR (measured) = 3.29 W/kg



0 dB = 3.29 W/kg = 5.17 dBW/kg

■ **Verification Data (2450 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 19.6℃
Test Date: 11/04/2021

DUT: D2450V2 - SN965; Type: D2450V2

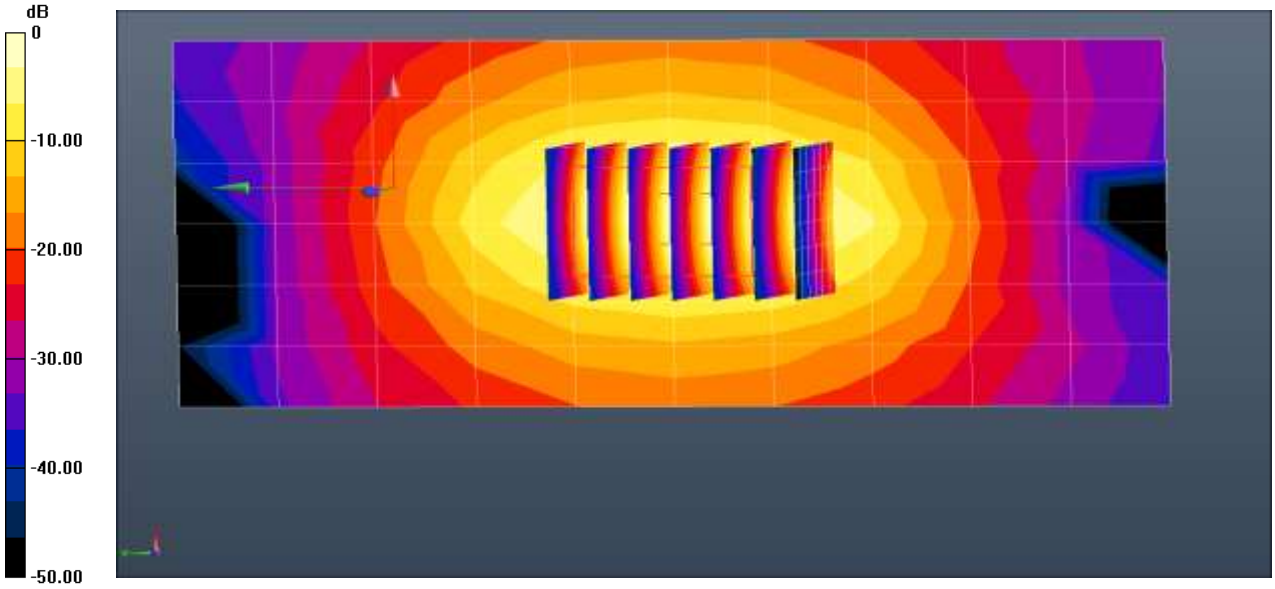
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.825 S/m; ε_r = 37.849; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2450 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.21 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 43.85 V/m; Power Drift = -0.13 dB
Peak SAR (extrapolated) = 5.22 W/kg
SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.14 W/kg
Maximum value of SAR (measured) = 3.27 W/kg



0 dB = 3.21 W/kg = 5.07 dBW/kg

■ **Verification Data (2450 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 18.9 ℃
Test Date: 11/05/2021

DUT: D2450V2 - SN965; Type: D2450V2;

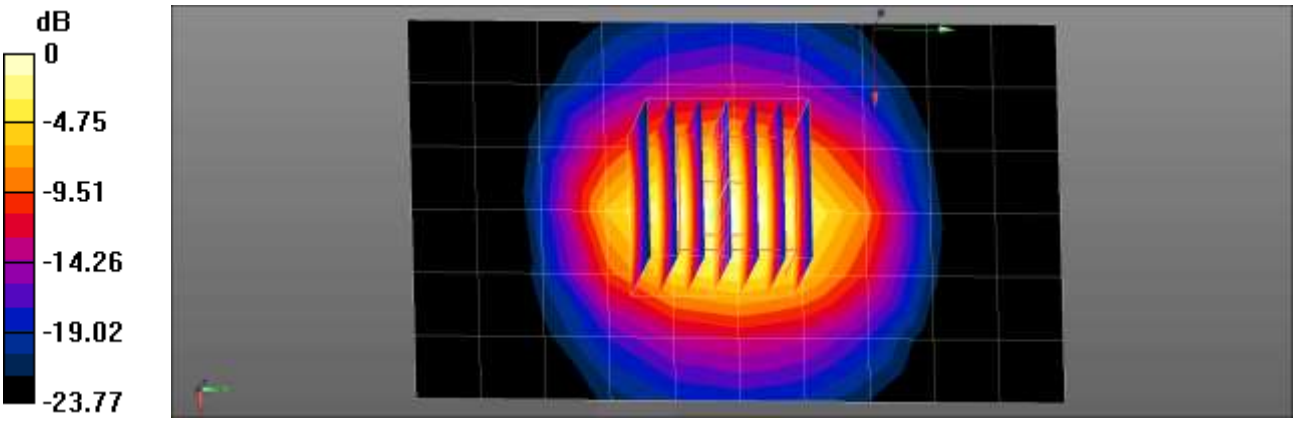
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.825 S/m; ε_r = 37.891; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2450 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4)

2450MHz Head Verification/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.20 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 43.74 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 5.24 W/kg
SAR(1 g) = 2.49 W/kg; SAR(10 g) = 1.13 W/kg
Maximum value of SAR (measured) = 3.27 W/kg



0 dB = 3.27 W/kg = 5.15 dBW/kg

■ **Verification Data (2450 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 19.7℃
Test Date: 11/08/2021

DUT: D2450V2 - SN965; Type: D2450V2

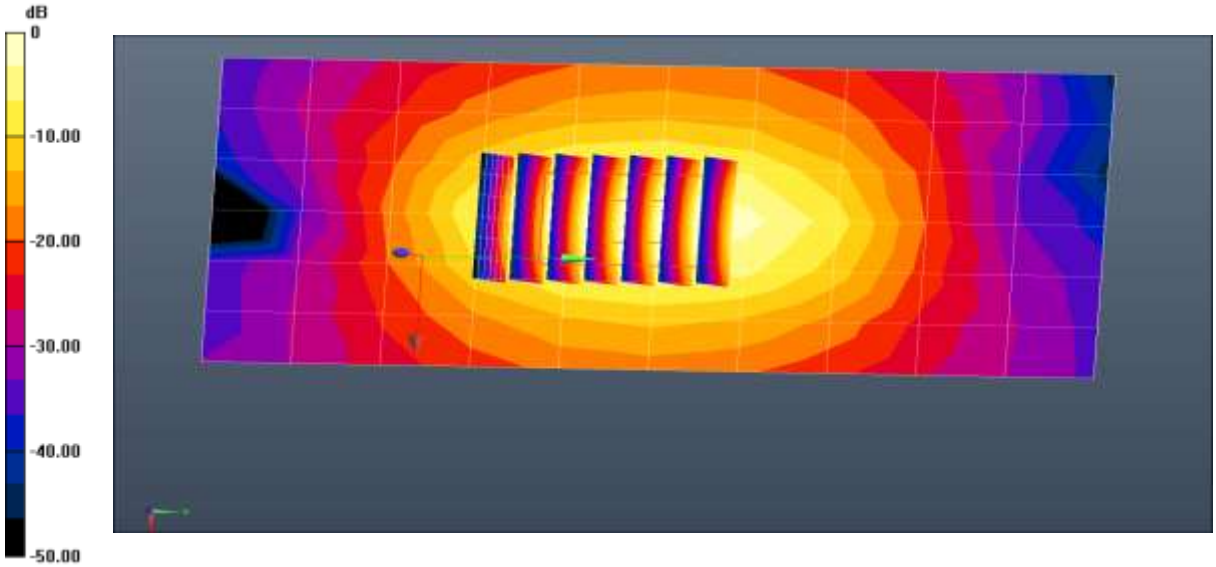
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.823 S/m; ε_r = 37.866; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.74, 4.74, 4.74) @ 2450 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

2450MHz Head Verification/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.20 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 43.78 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 5.25 W/kg
SAR(1 g) = 2.48 W/kg; SAR(10 g) = 1.13 W/kg
Maximum value of SAR (measured) = 3.27 W/kg



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

■ **Verification Data (2600 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1℃
Test Date: 11/01/2021

DUT: D2600V2 - SN1106; Type: D2600V2

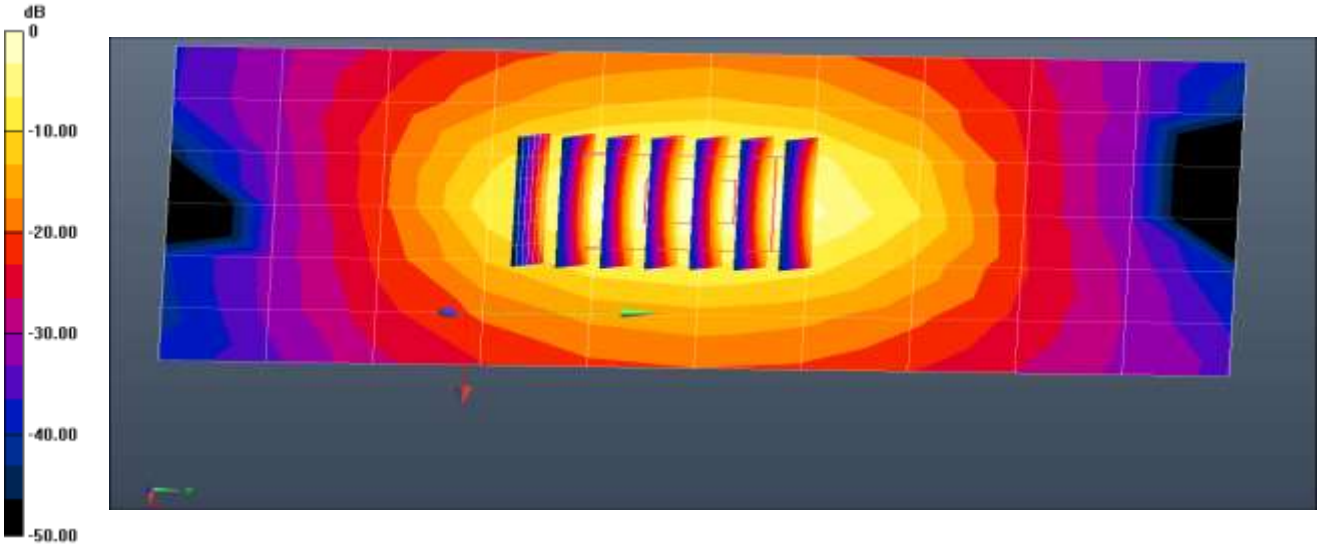
Communication System: UID 0, CW (0); Frequency: 2600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2600 MHz; σ = 1.947 S/m; ε_r = 39.633; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: ES3DV3 - SN3076; ConvF(4.57, 4.57, 4.57) @ 2600 MHz; Calibrated: 2021-07-28
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2021-06-21
- Phantom: SAM with CRP v5.0_2020_06_09
- Measurement SW: DASY52, Version 52.10 (4);

2600MHz Head Verification/Area Scan (7x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.92 W/kg

2600MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 46.48 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 6.93 W/kg
SAR(1 g) = 2.99 W/kg; SAR(10 g) = 1.29 W/kg
Maximum value of SAR (measured) = 4.05 W/kg



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

■ **Verification Data (5250 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.0℃
Test Date: 11/10/2021
DUT: Dipole D5GHzV2; Type: D5GHzV2;

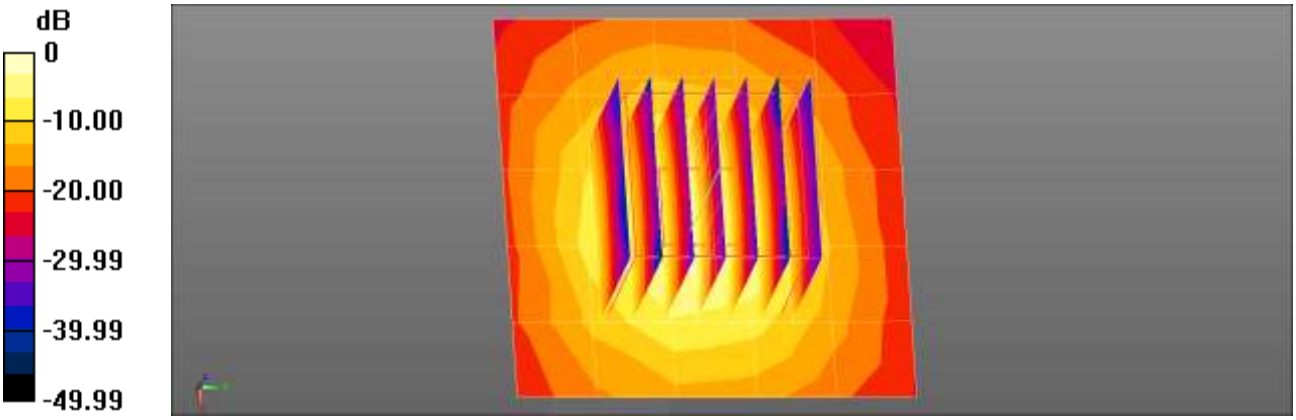
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.623 S/m; ε_r = 37.065; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(5.75, 5.75, 5.75) @ 5250 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2021-04-23
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4)

5GHz Head(WLAN 5GHz UNII1&2A RSDB) verification/Area Scan (6x6x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.33 W/kg

5GHz Head(WLAN 5GHz UNII1&2A RSDB) verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.54 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 18.2 W/kg
SAR(1 g) = 4.22 W/kg; SAR(10 g) = 1.19 W/kg
Maximum value of SAR (measured) = 10.8 W/kg



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

■ **Verification Data (5600 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.8℃
Test Date: 11/12/2021
DUT: Dipole D5GHzV2; Type: D5GHzV2;

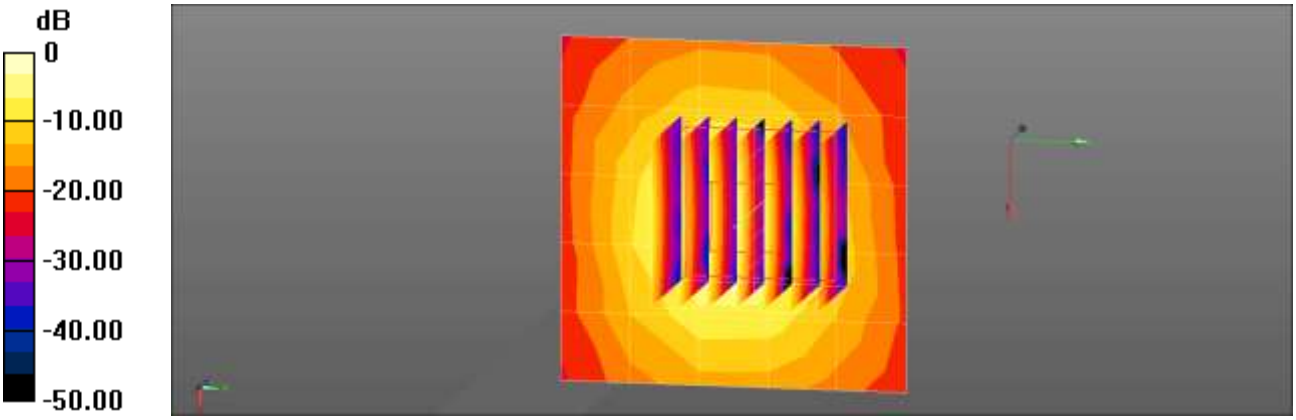
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.012 S/m; ε_r = 36.628; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(5.1, 5.1, 5.1) @ 5600 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2021-04-23
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4)

5GHz Head(WLAN 5GHz UNII2C RSDB) verification/Area Scan (6x6x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 7.95 W/kg

5GHz Head(WLAN 5GHz UNII2C RSDB) verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.34 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 19.4 W/kg
SAR(1 g) = 4.12 W/kg; SAR(10 g) = 1.17 W/kg
Maximum value of SAR (measured) = 10.7 W/kg



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

■ **Verification Data (5750 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.1℃
Test Date: 11/16/2021

DUT: Dipole D5GHzV2; Type: D5GHzV2;

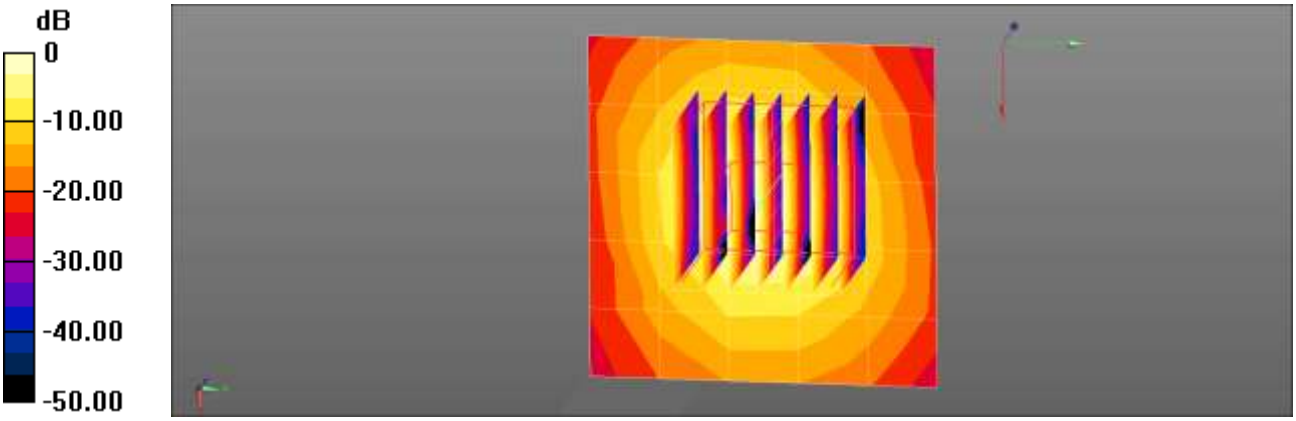
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.35 S/m; ε_r = 37.074; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(5.19, 5.19, 5.19) @ 5750 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2021-04-23
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4)

5GHz Head(WLAN 5GHz UNII3 RSDB) verification/Area Scan (6x6x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.44 W/kg

5GHz Head(WLAN 5GHz UNII3 RSDB) verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.46 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 19.4 W/kg
SAR(1 g) = 3.94 W/kg; SAR(10 g) = 1.12 W/kg
Maximum value of SAR (measured) = 10.4 W/kg



0 dB = 10.4 W/kg = 10.17 dBW/kg

■ **Verification Data (5800 ㎒ Head)**

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

DUT: Dipole 5GHz; Type: D5000V2

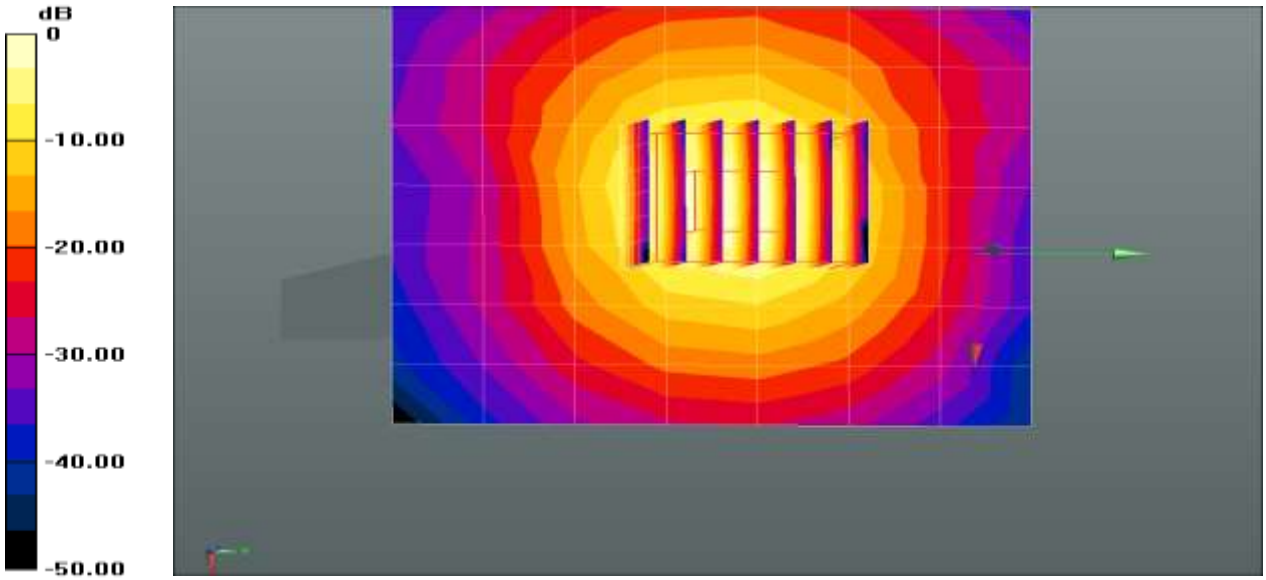
Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.411 S/m; ε_r = 36.745; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

5800MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 43.99 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 14.5 W/kg

5800MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
SAR(1 g) = 3.92 W/kg; SAR(10 g) = 1.27 W/kg
Maximum value of SAR (measured) = 9.25 W/kg



0 dB = 9.25 W/kg = 9.66 dBW/kg

■ **Verification Data (5250 ㎒ Head)**

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

DUT: Dipole D5GHzV2; Type: D5GHzV2;

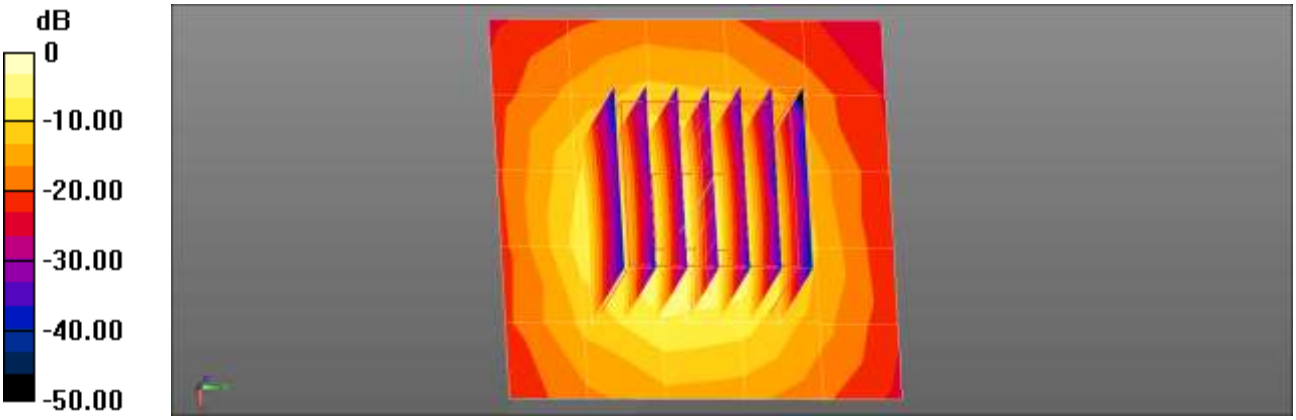
Communication System: UID 0, CW (0); Frequency: 5250 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5250 MHz; σ = 4.616 S/m; ε_r = 37.083; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(5.75, 5.75, 5.75) @ 5250 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2021-04-23
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4)

5GHz Head(WLAN 5GHz UNII1&2A Grip) verification/Area Scan (6x6x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 9.34 W/kg

5GHz Head(WLAN 5GHz UNII1&2A Grip) verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.50 V/m; Power Drift = -0.12 dB
Peak SAR (extrapolated) = 18.5 W/kg
SAR(1 g) = 4.23 W/kg; SAR(10 g) = 1.19 W/kg
Maximum value of SAR (measured) = 10.9 W/kg



0 dB = 10.9 W/kg = 10.37 dBW/kg

■ **Verification Data (5600 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 19.8℃
Test Date: 11/15/2021
DUT: Dipole D5GHzV2; Type: D5GHzV2;

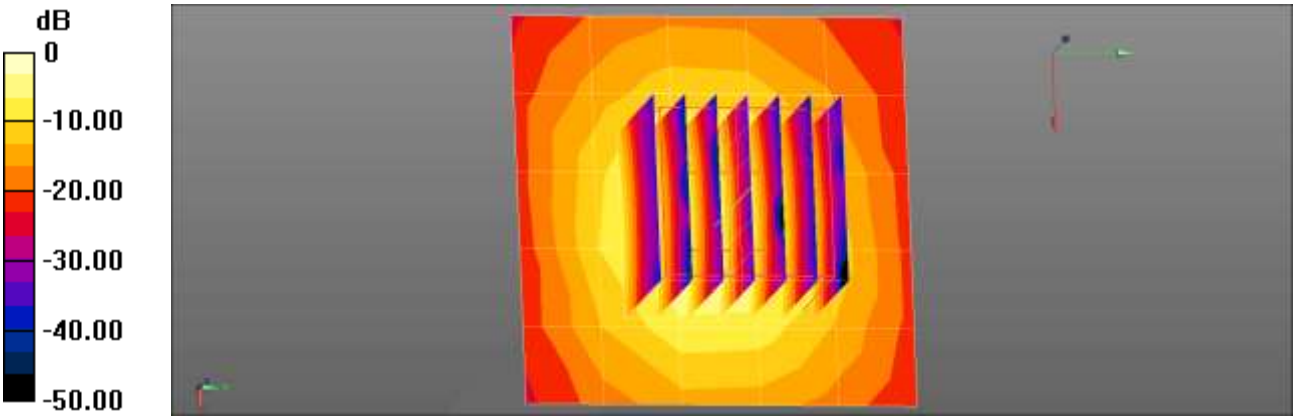
Communication System: UID 0, CW (0); Frequency: 5600 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5600 MHz; σ = 5.016 S/m; ε_r = 36.091; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(5.1, 5.1, 5.1) @ 5600 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2021-04-23
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4)

5GHz Head(WLAN 5GHz UNII2C Grip) verification/Area Scan (6x6x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.01 W/kg

5GHz Head(WLAN 5GHz UNII2C Grip) verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 49.30 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 19.3 W/kg
SAR(1 g) = 4.13 W/kg; SAR(10 g) = 1.17 W/kg
Maximum value of SAR (measured) = 10.7 W/kg



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

■ **Verification Data (5750 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.2℃
Test Date: 11/17/2021
DUT: Dipole D5GHzV2; Type: D5GHzV2;

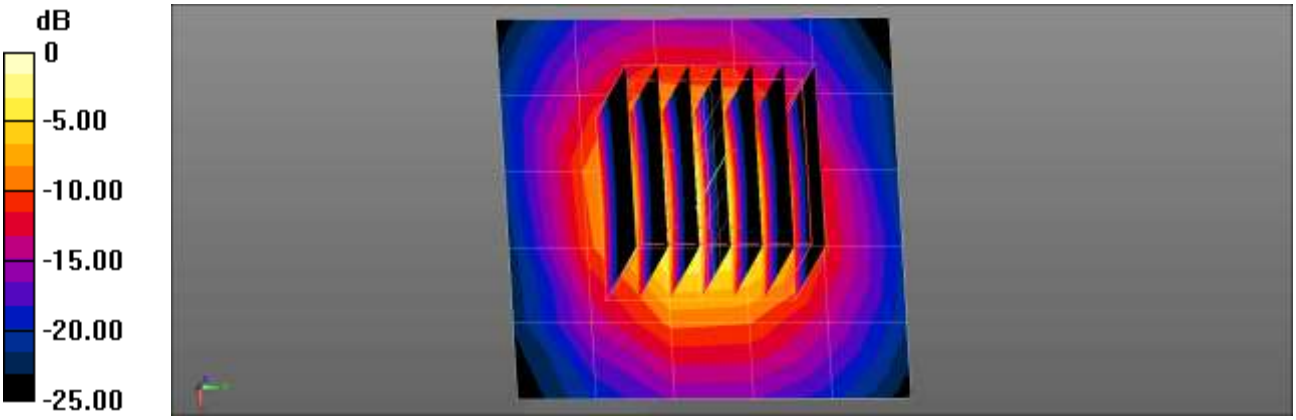
Communication System: UID 0, CW (0); Frequency: 5750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5750 MHz; σ = 5.365 S/m; ε_r = 36.508; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(5.19, 5.19, 5.19) @ 5750 MHz; Calibrated: 2021-05-21
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn466; Calibrated: 2021-04-23
- Phantom: Twin-SAM V4.0 Right
- Measurement SW: DASY52, Version 52.10 (4)

5GHz Head(WLAN 5GHz UNII3 Grip) verification/Area Scan (6x6x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 6.41 W/kg

5GHz Head(WLAN 5GHz UNII3 Grip) verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 48.57 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 19.1 W/kg
SAR(1 g) = 3.93 W/kg; SAR(10 g) = 1.11 W/kg
Maximum value of SAR (measured) = 10.3 W/kg



0 dB = 10.3 W/kg = 10.13 dBW/kg

■ **Verification Data (5800 ㎒ Head)**

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

DUT: Dipole 5GHz; Type: D5000V2

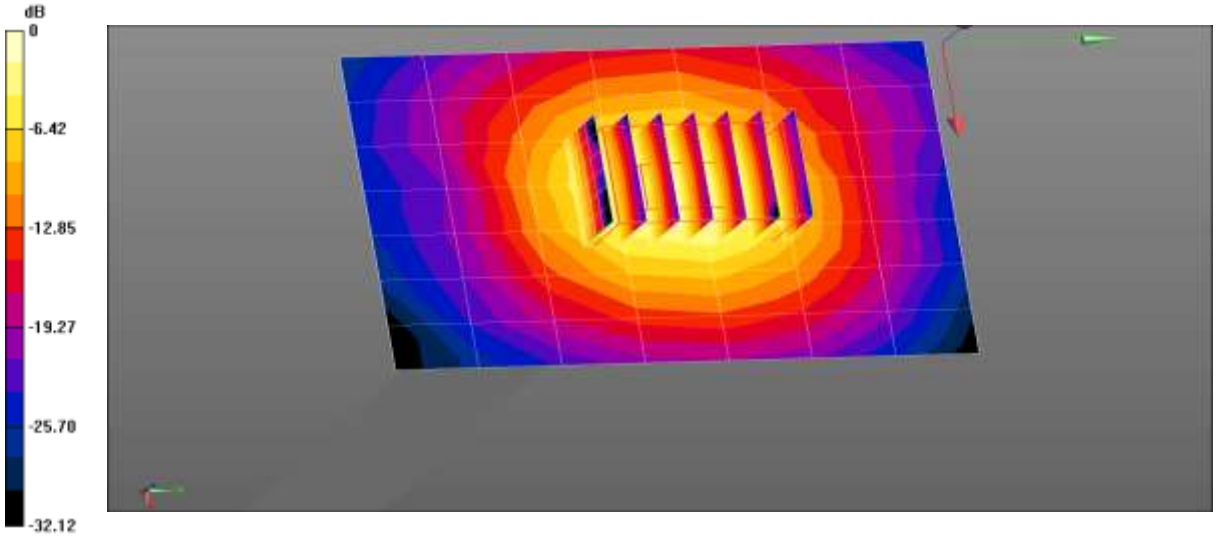
Communication System: UID 0, CW (0); Frequency: 5800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 5800 MHz; σ = 5.325 S/m; ε_r = 36.218; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

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

5800MHz Head Verification/Area Scan (8x8x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.01 W/kg

5800MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 43.79 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 14.2 W/kg
SAR(1 g) = 3.88 W/kg; SAR(10 g) = 1.25 W/kg
Maximum value of SAR (measured) = 9.10 W/kg



0 dB = 8.01 W/kg = 9.04 dBW/kg

- 5G NR SUB 6

■ **Verification Data (835 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.4 ℃
Test Date: 11/04/2021

DUT: Dipole 835 MHz D835V2; Type: D835V2

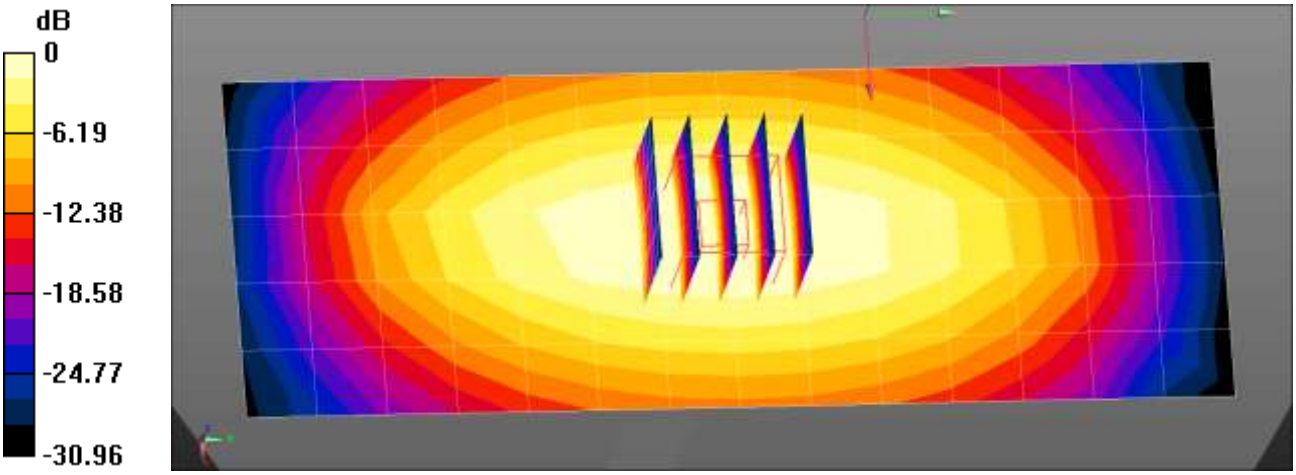
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.916 S/m; ε_r = 41.546; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(9.04, 9.04, 9.04) @ 835 MHz; Calibrated: 2020-11-25
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM V8.0 (Right-Left)
- Measurement SW: DASY52, Version 52.10 (4);

835MHz Head Verification/Area Scan (6x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.558 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.87 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.725 W/kg
SAR(1 g) = 0.475 W/kg; SAR(10 g) = 0.307 W/kg
Maximum value of SAR (measured) = 0.641 W/kg



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

■ **Verification Data (1 800 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.4℃
Test Date: 11/05/2021

DUT: Dipole 1800 MHz D1800V2; Type: D1800V2

Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.415 S/m; ε_r = 41.09; ρ = 1000 kg/m^3
Phantom section: Flat Section

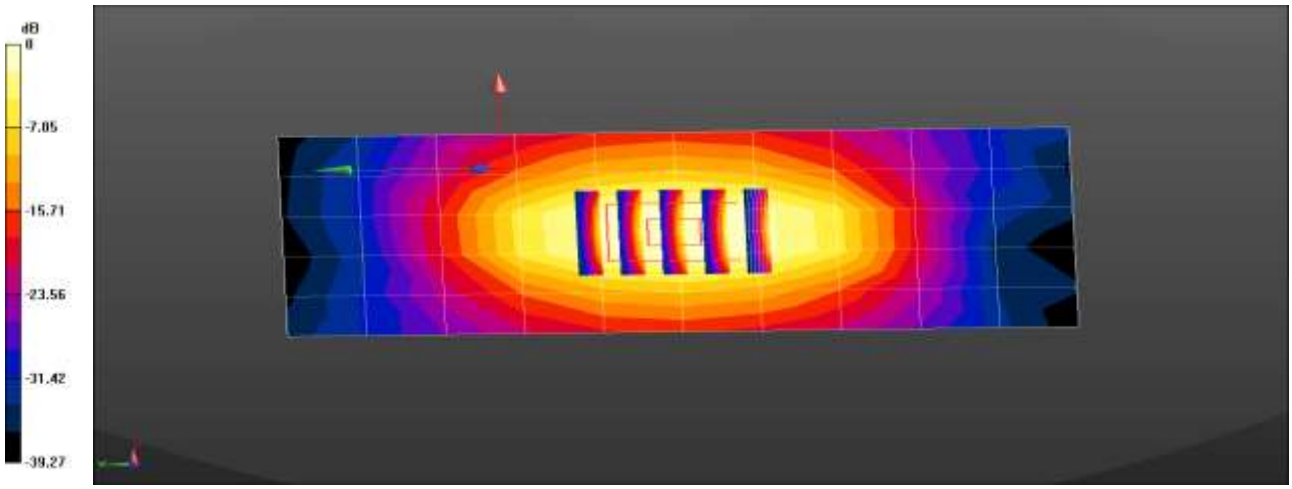
DASY Configuration:

- Probe: EX3DV4 - SN3797; ConvF(8.06, 8.06, 8.06) @ 1800 MHz; Calibrated: 2020-11-25

- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn446; Calibrated: 2021-09-30
- Phantom: Twin-SAM V8.0 (Right-Left)
- Measurement SW: DASY52, Version 52.10 (4);

1800MHz Head Verification/Area Scan (6x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.05 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 49.39 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 3.96 W/kg
SAR(1 g) = 2 W/kg; SAR(10 g) = 1.02 W/kg
Maximum value of SAR (measured) = 3.24 W/kg



0 dB = 2.05 W/kg = 3.13 dBW/kg

- Hybrid SPLSR/Volume

■ **Verification Data (1 800 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.9℃
Test Date: 11/25/2021
Measurement Report for Device,, CW, Channel 0 (1800.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	1800.0, 0	9.4	1.40	40.8

Hardware Setup

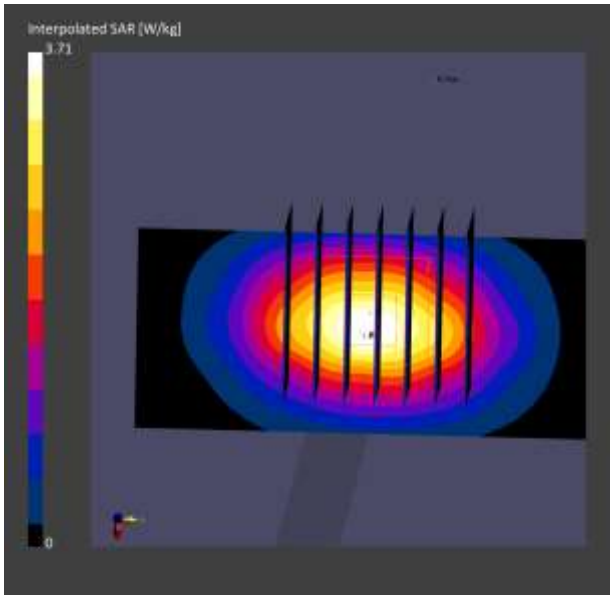
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	1.85	1.85
psSAR10g [W/Kg]	0.996	0.960
Power Drift [dB]	-0.01	0.01



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

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.9℃
Test Date: 11/25/2021

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

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	2450.0, 0	8.49	1.73	39.4

Hardware Setup

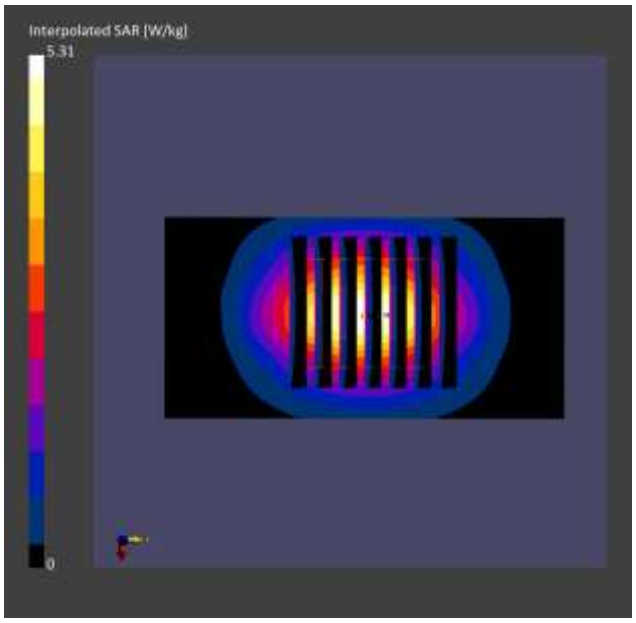
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.46	2.46
psSAR10g [W/Kg]	1.18	1.16
Power Drift [dB]	0.01	-0.00



■ **Verification Data (2 600 ㎒ Head)**

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.9℃
Test Date: 11/25/2021

Measurement Report for Device, CW, Channel 0 (2600.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	2600.0, 0	8.28	1.94	38.8

Hardware Setup

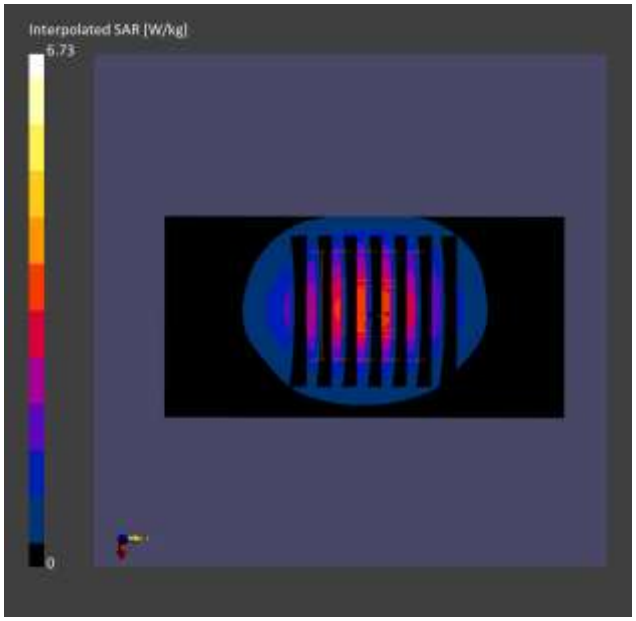
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.97	3.02
psSAR10g [W/Kg]	1.39	1.36
Power Drift [dB]	0.01	-0.02



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

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.5℃
Test Date: 11/26/2021

Measurement Report for Device, CW, Channel 0 (5800.0 MHz)

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	5800.0, 0	5.37	5.42	35.1

Hardware Setup

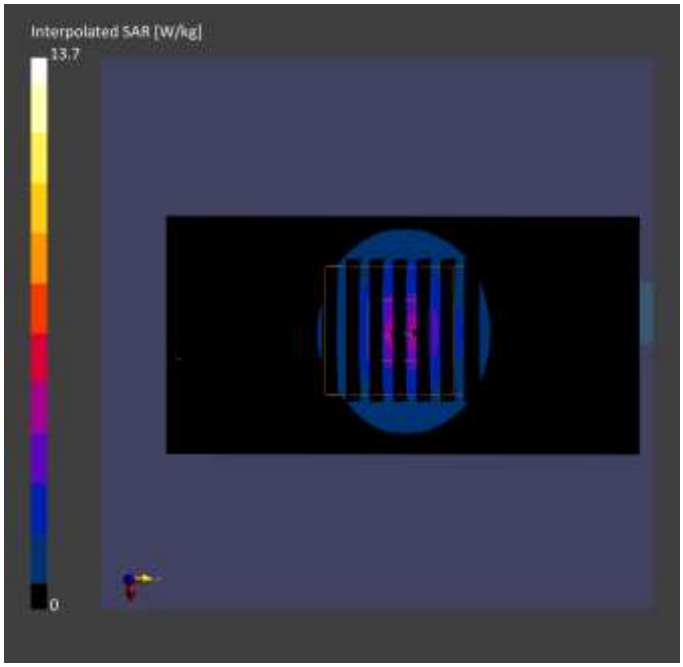
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.57	3.62
psSAR10g [W/Kg]	1.15	1.19
Power Drift [dB]	-0.01	-0.01



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

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	21.5℃
Test Date:	11/26/2021

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

Exposure Conditions

Phantom Section, TSL	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	6500.0, 0	5.98	5.51	35.7

Hardware Setup

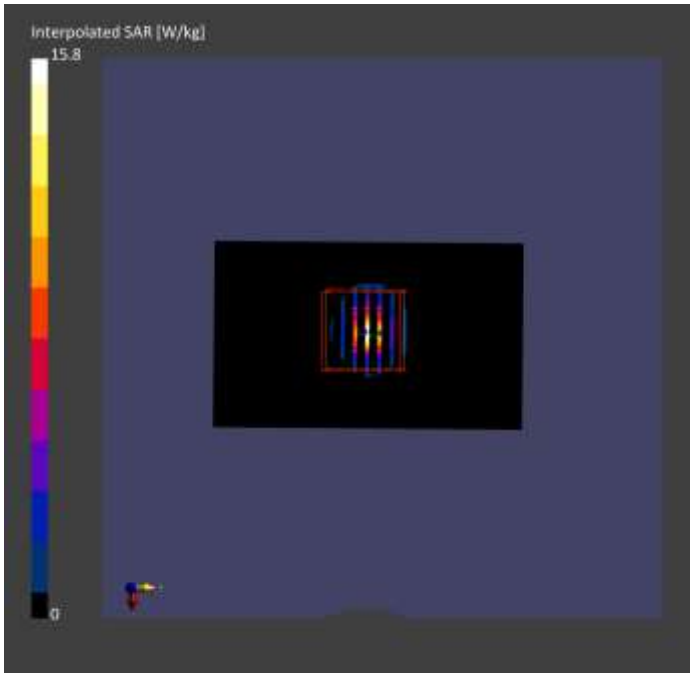
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2049	EX3DV4 - SN7654, 2021-05-21	DAE4 Sn648, 2021-06-02

Scans Setup

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

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.68	2.83
psSAR10g [W/Kg]	0.542	0.559
Power Drift [dB]	-0.03	-0.03



Appendix D. – SAR Tissue Characterization

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

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

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

Composition of the Tissue Equivalent Matter

Appendix E. – SAR SYSTEM VALIDATION

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

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
7622	EX3DV4	Head	750	1014	2021-07-09	41.9	0.89	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	750	1014	2021-09-24	41.9	0.89	PASS	PASS	PASS	N/A	N/A	N/A
7622	EX3DV4	Head	835	4d165	2021-09-20	41.5	0.90	PASS	PASS	PASS	GMSK	PASS	N/A
7622	EX3DV4	Head	835	4d165	2021-09-20	41.5	0.90	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	835	4d165	2021-09-24	41.5	0.90	PASS	PASS	PASS	N/A	N/A	N/A
7622	EX3DV4	Head	1750	2d015	2021-08-30	40.0	1.40	PASS	PASS	PASS	GMSK	PASS	N/A
7622	EX3DV4	Head	1750	2d015	2021-08-30	40.0	1.40	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	1750	2d015	2021-09-17	40.0	1.40	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	1750	2d015	2021-09-24	40.0	1.40	PASS	PASS	PASS	N/A	N/A	N/A
7622	EX3DV4	Head	1900	5d032	2021-02-22	40.0	1.40	PASS	PASS	PASS	GMSK	PASS	N/A
7622	EX3DV4	Head	1900	5d032	2021-06-22	40.0	1.40	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	1900	5d032	2021-09-24	40.0	1.40	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	1900	5d032	2021-09-24	40.0	1.40	PASS	PASS	PASS	N/A	N/A	N/A
7622	EX3DV4	Head	2450	965	2021-07-26	39.2	1.80	PASS	PASS	PASS	OFDM	N/A	PASS
3968	EX3DV4	Head	2450	965	2021-07-26	39.2	1.80	PASS	PASS	PASS	OFDM	N/A	PASS
7622	EX3DV4	Head	2600	1106	2021-08-20	39.0	1.96	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	2600	1106	2021-08-14	39.0	1.96	PASS	PASS	PASS	N/A	N/A	N/A
7622	EX3DV4	Head	2600	1106	2021-08-20	39.0	1.96	PASS	PASS	PASS	TDD	PASS	N/A
3076	ES3DV3	Head	2600	1106	2021-08-20	39.0	1.96	PASS	PASS	PASS	NA	N/A	N/A
7370	EX3DV4	Head	2600	1106	2021-09-24	39.0	1.96	PASS	PASS	PASS	N/A	N/A	N/A
7622	EX3DV4	Head	3500	1040	2021-03-19	37.9	2.91	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	3500	1040	2021-09-24	37.9	2.91	PASS	PASS	PASS	N/A	N/A	N/A
7622	EX3DV4	Head	3700	1066	2020-12-10	37.7	3.12	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	3700	1066	2021-09-24	37.7	3.12	PASS	PASS	PASS	N/A	N/A	N/A
7622	EX3DV4	Head	3900	1019	2021-07-23	37.5	3.32	PASS	PASS	PASS	N/A	N/A	N/A
7370	EX3DV4	Head	3900	1019	2021-09-24	37.5	3.32	PASS	PASS	PASS	N/A	N/A	N/A
7622	EX3DV4	Head	5250	1107	2021-08-30	35.9	4.71	PASS	PASS	PASS	OFDM	N/A	PASS
7622	EX3DV4	Head	5600	1107	2021-08-30	35.5	5.07	PASS	PASS	PASS	OFDM	N/A	PASS
7622	EX3DV4	Head	5750	1107	2021-08-30	35.4	5.22	PASS	PASS	PASS	OFDM	N/A	PASS
3968	EX3DV4	Head	5750	1107	2021-08-30	35.4	5.22	PASS	PASS	PASS	OFDM	N/A	PASS
7309	EX3DV4	Head	5800	1317	2021-06-30	35.3	5.27	PASS	PASS	PASS	OFDM	N/A	PASS
3968	EX3DV4	Head	6500	1012	2021-09-29	34.5	6.07	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary 1g

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