Appendix B. – SAR Test Plots

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	22.9 ℃
Liquid Temperature:	22.8 ℃
Test Date:	10/02/2024
Plot No.:	A1
Band:	GSM850 Head SAR

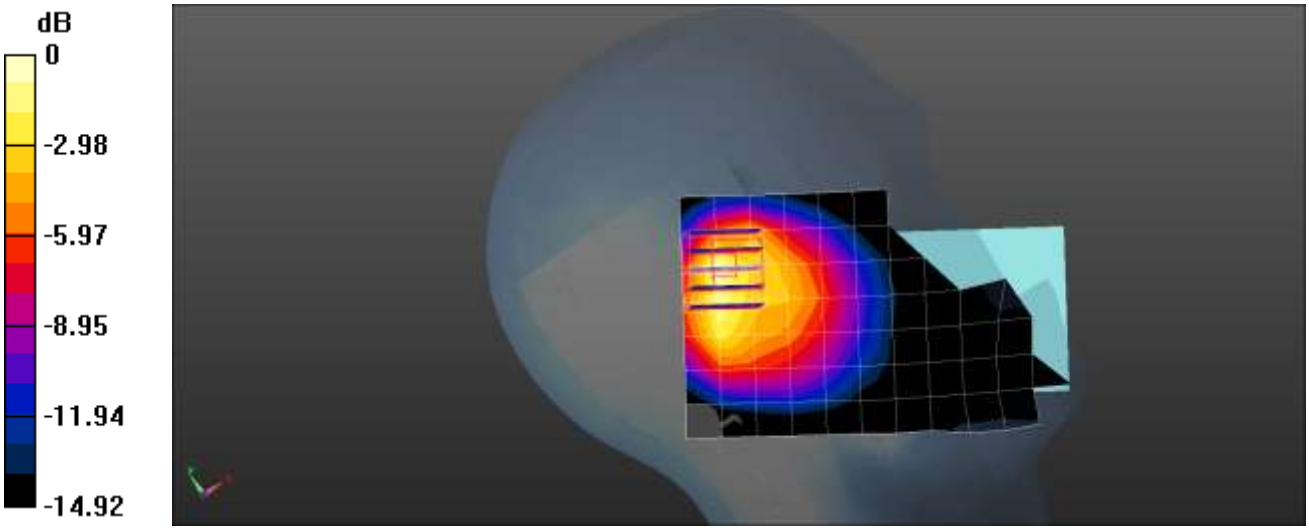
Communication System: UID 0, GSM 850 (0); Frequency: 824.2 MHz;Duty Cycle: 1:8.30042
Medium parameters used (interpolated): f = 824.2 MHz; σ = 0.928 S/m; ε_r = 42.421; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY Configuration:

- Probe: EX3DV4 - SN7655; ConvF(9.18, 9.32, 9.14) @ 824.2 MHz;
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217
- Measurement SW: DASY52, Version 52.10 (3);

GSM850 Head Left Touch 128ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.933 W/kg

GSM850 Head Left Touch 128ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 22.24 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 0.577 W/kg; SAR(10 g) = 0.316 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 41.2%
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
Ambient Temperature:	22.4 ℃
Liquid Temperature:	22.3 ℃
Test Date:	10/07/2024
Plot No.:	A2
Band:	GSM1900 Head SAR

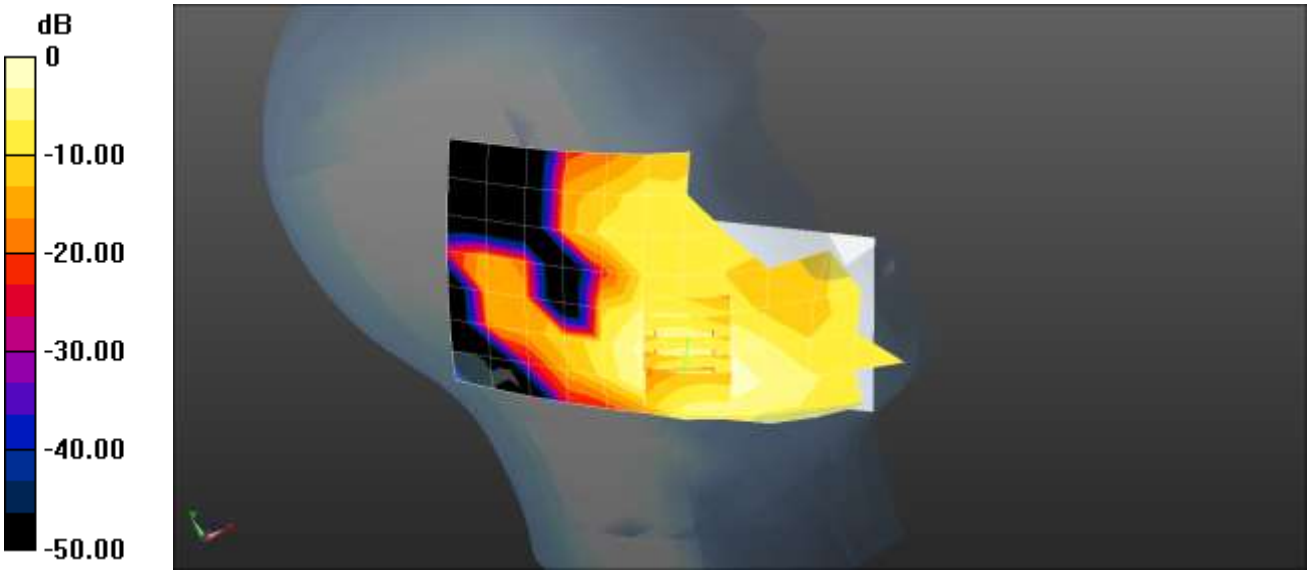
Communication System: UID 0, GSM 1900 2TX (0); Frequency: 1880 MHz;Duty Cycle: 1:4.14954
Medium parameters used: f = 1880 MHz; σ = 1.411 S/m; ε_r = 38.888; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.55, 8.06, 7.74) @ 1880 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

GSM1900 2Tx Head Left Touch 661ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.101 W/kg

GSM1900 2Tx Head Left Touch 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 2.406 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 0.121 W/kg
SAR(1 g) = 0.085 W/kg; SAR(10 g) = 0.053 W/kg
Smallest distance from peaks to all points 3 dB below = 12.8 mm
Ratio of SAR at M2 to SAR at M1 = 69.2%
Maximum value of SAR (measured) = 0.109 W/kg



0 dB = 0.109 W/kg = -9.63 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	20.0 ℃
Liquid Temperature:	19.9 ℃
Test Date:	10/07/2024
Plot No.:	A3
Band:	UMTS Band 5 Head SAR

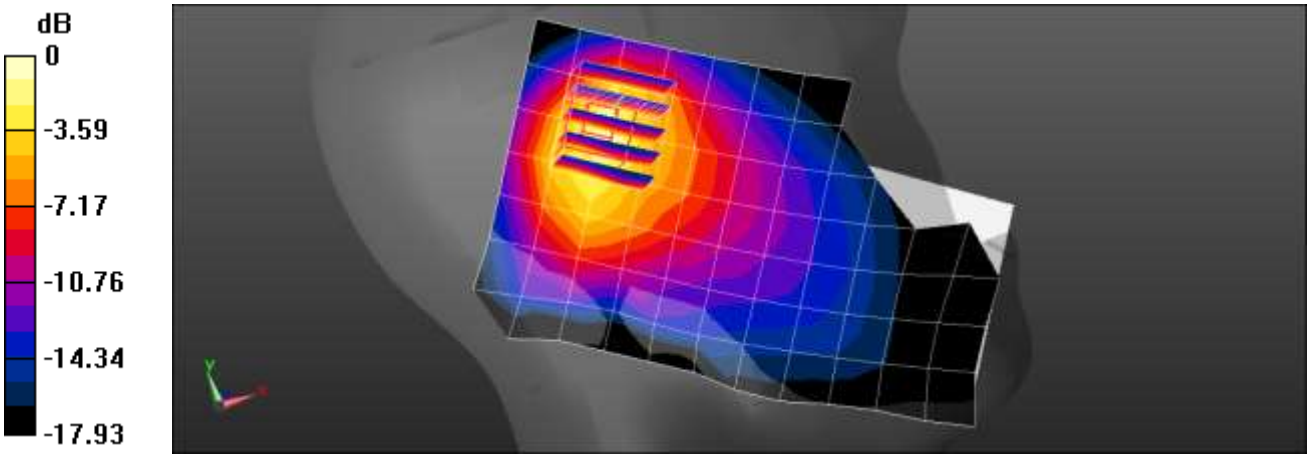
Communication System: UID 10011 - CAC, UMTS-FDD (WCDMA); Frequency: 846.6 MHz;Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 846.6 MHz; σ = 0.942 S/m; ε_r = 42.586; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(8.72, 9.56, 9.91) @ 846.6 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

UMTS Band 5 Head Left Tilt 4233ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.56 W/kg

UMTS Band 5 Head Left Tilt 4233ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.72 V/m; Power Drift = -0.18 dB
Peak SAR (extrapolated) = 2.03 W/kg
SAR(1 g) = 0.832 W/kg; SAR(10 g) = 0.420 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 38%
Maximum value of SAR (measured) = 1.47 W/kg



0 dB = 1.47 W/kg = 1.67 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	20.6 ℃
Liquid Temperature:	20.5 ℃
Test Date:	10/08/2024
Plot No.:	A4
Band:	LTE FDD Band 2 Head SAR

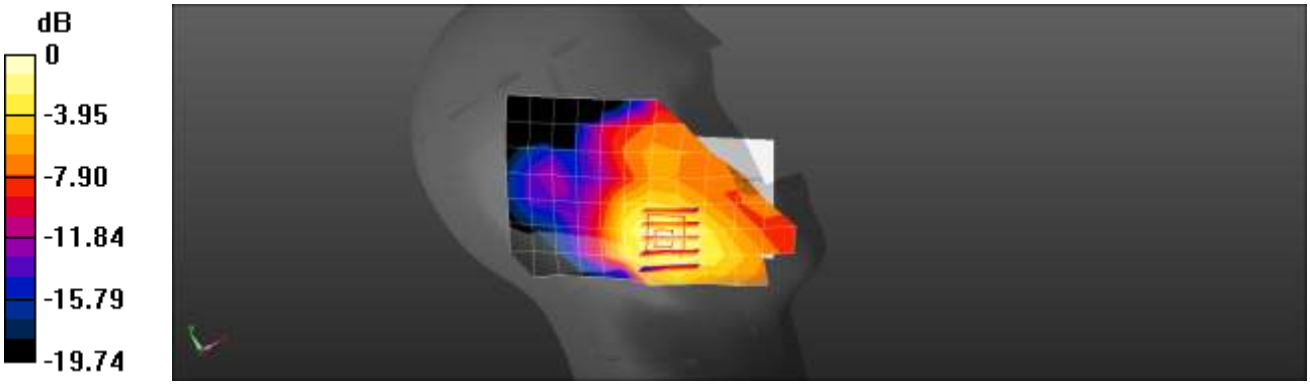
Communication System: UID 10169 - CAF, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1860 MHz;Duty Cycle: 1:3.73852
Medium parameters used: f = 1860 MHz; σ = 1.389 S/m; ε_r = 40.761; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(7.5, 8.17, 8.31) @ 1860 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 2 Head Left Touch QPSK 20MHz 1RB 0offset 18700ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.168 W/kg

LTE Band 2 Head Left Touch QPSK 20MHz 1RB 0offset 18700ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.173 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.237 W/kg
SAR(1 g) = 0.160 W/kg; SAR(10 g) = 0.101 W/kg
Smallest distance from peaks to all points 3 dB below = 15.6 mm
Ratio of SAR at M2 to SAR at M1 = 68.5%
Maximum value of SAR (measured) = 0.212 W/kg



0 dB = 0.212 W/kg = -6.74 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 21.8 ℃
Liquid Temperature: 21.7 ℃
Test Date: 11/08/2024
Plot No.: A5
Band: LTE FDD Band 12 Head SAR
Measurement Report for Device, CHEEK, Band 12, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23095 (707.500 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	CHEEK, 0.00	Band 12	LTE-FDD, 10175-CAH	707.500, 23095	8.91	0.862	42.9

Hardware Setup

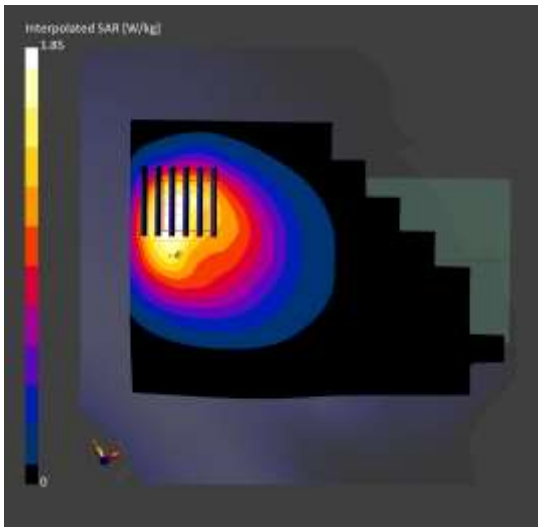
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.736	0.757
psSAR10g [W/Kg]	0.485	0.413
Power Drift [dB]	0.01	-0.01
M2/M1 [%]		71.1
Dist 3dB Peak [mm]		8.8



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	21.8 ℃
Liquid Temperature:	21.7 ℃
Test Date:	10/09/2024
Plot No.:	A6
Band:	LTE FDD Band 13 Head SAR

Measurement Report for Device, CHEEK, Band 13, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23230 (782.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	CHEEK, 0.00	Band 13	LTE-FDD, 10175-CAH	782.000, 23230	8.91	0.928	42.0

Hardware Setup

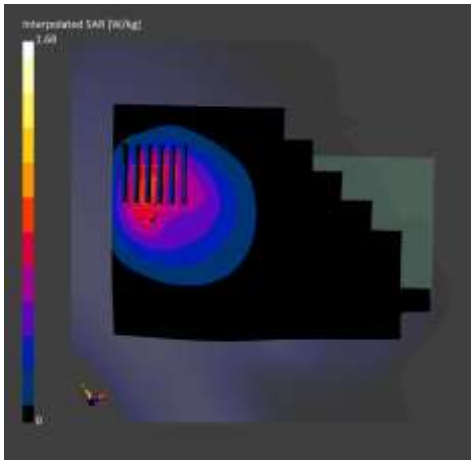
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	HBBL-600-10000 Charge:xxxx, 2024-Nov-08	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.766	0.744
psSAR10g [W/Kg]	0.500	0.425
Power Drift [dB]	0.01	0.00
M2/M1 [%]		75.1
Dist 3dB Peak [mm]		8.8



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	22.6 ℃
Liquid Temperature:	22.5 ℃
Test Date:	10/10/2024
Plot No.:	A7
Band:	LTE FDD Band 26 Head SAR

Measurement Report for Device, CHEEK, Band 26, LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK), Channel 26865 (831.500 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	CHEEK, 0.00	Band 26	LTE-FDD, 10181-CAF	831.500, 26865	8.75	0.924	42.4

Hardware Setup

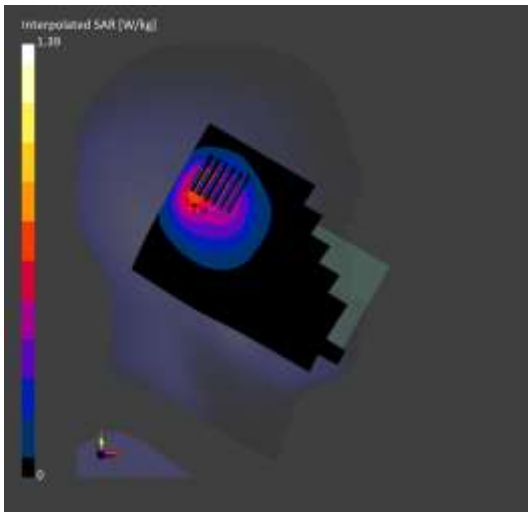
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.683	0.632
psSAR10g [W/Kg]	0.446	0.374
Power Drift [dB]	-0.12	0.01
M2/M1 [%]		76.3
Dist 3dB Peak [mm]		9.7



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 20.9 ℃
Liquid Temperature: 20.8 ℃
Test Date: 11/21/2024
Plot No.: A8
Band: LTE TDD Band 41 (Power Class 3) Head SAR
Measurement Report for Device, TILT, Band 41, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 41490 (2680.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	TILT, 0.00	Band 41	LTE-TDD, 10172-CAH	2680.000, 41490	6.64	2.14	38.1

Hardware Setup

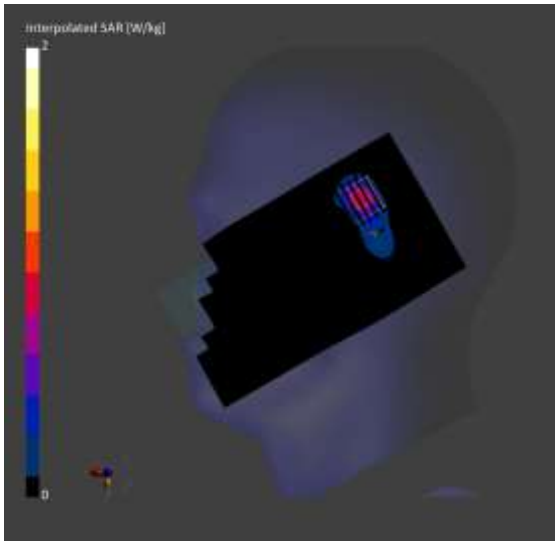
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 x 200.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.724	0.819
psSAR10g [W/Kg]	0.298	0.307
Power Drift [dB]	-0.04	-0.02
M2/M1 [%]		77.4
Dist 3dB Peak [mm]		6.1



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	23.4 ℃
Liquid Temperature:	23.3 ℃
Test Date:	10/11/2024
Plot No.:	A9
Band:	LTE FDD Band 66 Head SAR

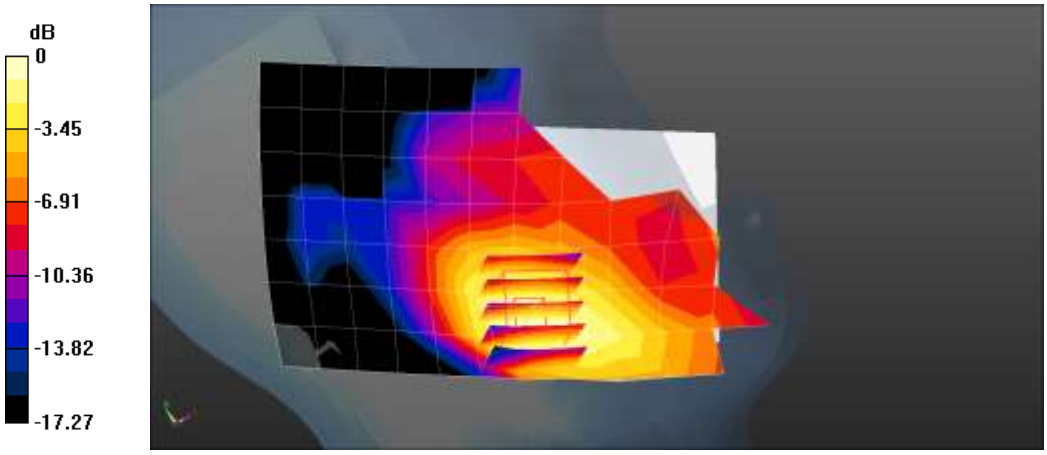
Communication System: UID 10169 - CAF, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1720 MHz;Duty Cycle: 1:3.73852
Medium parameters used: f = 1720 MHz; σ = 1.315 S/m; ε_r = 40.816; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.69, 8.16, 7.84) @ 1720 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 66 Head Left Touch QPSK 20MHz 1RB 99offset 132072ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.245 W/kg

LTE Band 66 Head Left Touch QPSK 20MHz 1RB 99offset 132072ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 3.932 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.276 W/kg
SAR(1 g) = 0.199 W/kg; SAR(10 g) = 0.134 W/kg
Smallest distance from peaks to all points 3 dB below = 13.5 mm
Ratio of SAR at M2 to SAR at M1 = 73.9%
Maximum value of SAR (measured) = 0.251 W/kg



0 dB = 0.251 W/kg = -6.00 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	20.5 ℃
Liquid Temperature:	20.4 ℃
Test Date:	10/14/2024
Plot No.:	A10
Band:	NR FDD Band n5 Head SAR

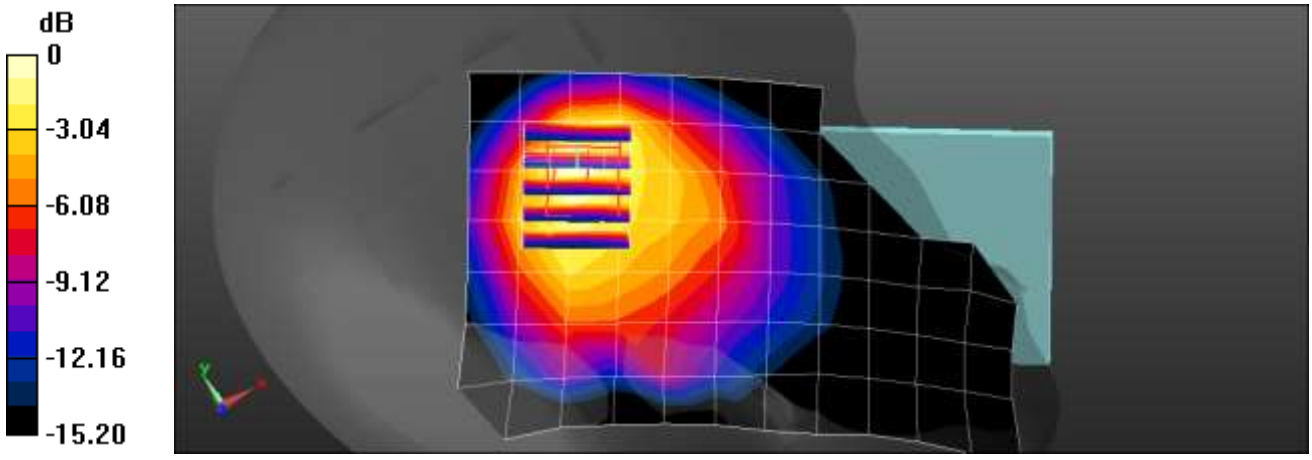
Communication System: UID 0, NR n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.925 S/m; ε_r = 42.573; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(8.72, 9.56, 9.91) @ 836.5 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

NR Band n5 Head Left Touch DFT-s QPSK 20MHz 50RB 28offset 167300ch/Area Scan (8x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.52 W/kg

NR Band n5 Head Left Touch DFT-s QPSK 20MHz 50RB 28offset 167300ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 0 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 1.79 W/kg
SAR(1 g) = 0.799 W/kg; SAR(10 g) = 0.446 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 42.4%
Maximum value of SAR (measured) = 1.36 W/kg



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

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	21.0 ℃
Liquid Temperature:	20.9 ℃
Test Date:	11/20/2024
Plot No.:	A11
Band:	NR TDD Band n41 Head SAR

Measurement Report for Device, TILT, Band n41, 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)
RBPosition:Mid AntennaCfg:SISO, Channel 518598 (2592.990 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	TILT, 0.00	Band n41	5G NR FR1 TDD, 10866-AAF	2592.990, 518598	6.64	2.04	38.4

Hardware Setup

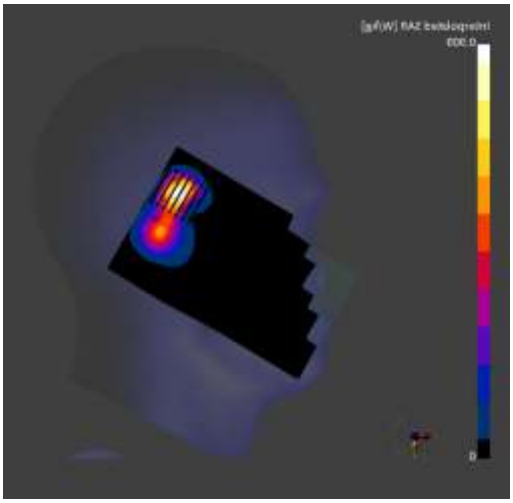
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.373	0.413
psSAR10g [W/Kg]	0.162	0.165
Power Drift [dB]	-0.13	-0.15
M2/M1 [%]		80.2
Dist 3dB Peak [mm]		7.1



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	19.9 ℃
Liquid Temperature:	19.8 ℃
Test Date:	10/11/2024
Plot No.:	A12
Band:	NR FDD Band n66 Head SAR

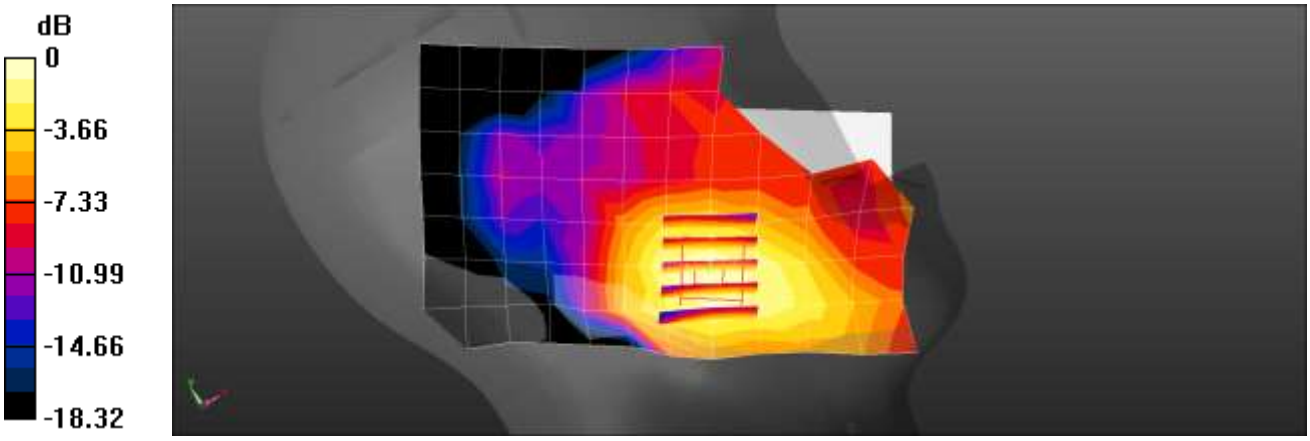
Communication System: UID 0, n66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.348 S/m; ε_r = 40.895; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(7.77, 8.41, 8.66) @ 1745 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

NR Band n66 Head Left Touch DFT-s QPSK 40MHz 108RB 54offset 349000ch/Area Scan (8x13x1):
Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.240 W/kg

NR Band n66 Head Left Touch DFT-s QPSK 40MHz 108RB 54offset 349000ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 4.248 V/m; Power Drift = 0.14 dB
Peak SAR (extrapolated) = 0.291 W/kg
SAR(1 g) = 0.193 W/kg; SAR(10 g) = 0.124 W/kg
Smallest distance from peaks to all points 3 dB below = 19 mm
Ratio of SAR at M2 to SAR at M1 = 70.8%
Maximum value of SAR (measured) = 0.248 W/kg



0 dB = 0.248 W/kg = -6.06 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	22.1 ℃
Liquid Temperature:	22.0 ℃
Test Date:	10/21/2024
Plot No.:	A13
Band:	2.4 GHz WLAN Head SAR

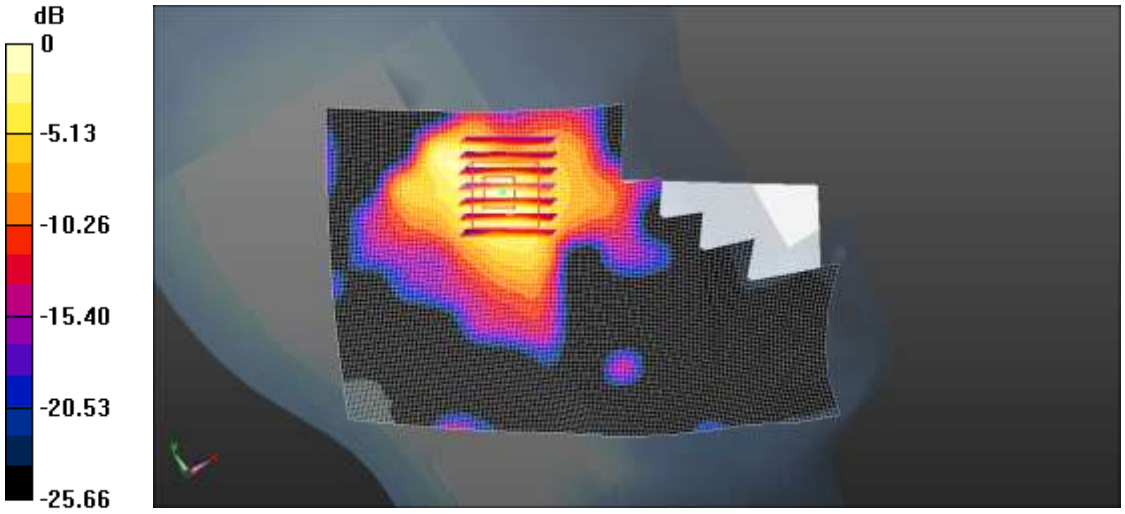
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.754 S/m; ε_r = 39.136; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.25, 7.78, 7.45) @ 2412 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

802.11b Head Left Touch 1Mbps 1ch/Area Scan (91x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.736 W/kg

802.11b Head Left Touch 1Mbps 1ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 2.858 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.865 W/kg
SAR(1 g) = 0.444 W/kg; SAR(10 g) = 0.206 W/kg
Smallest distance from peaks to all points 3 dB below = 7.1 mm
Ratio of SAR at M2 to SAR at M1 = 59.1%
Maximum value of SAR (measured) = 0.691 W/kg



0 dB = 0.691 W/kg = -1.61 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 22.1 ℃
Liquid Temperature: 22.0 ℃
Test Date: 10/21/2024
Plot No.: A14
Band: 5 GHz WLAN Head SAR
Measurement Report for Device, CHEEK, WLAN 5GHz, IEEE 802.11ax (80MHz, MCS0, 99pc duty cycle), Channel 58 (5290.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	CHEEK, 0.00	WLAN 5GHz	WLAN, 10731-AAC	5290.0, 58	6.07	4.71	36.8

Hardware Setup

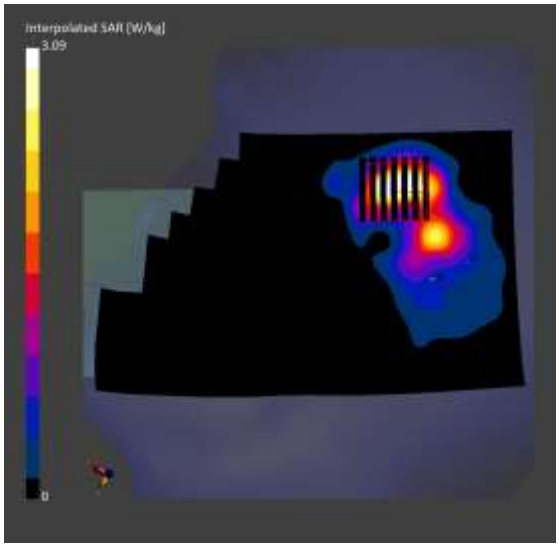
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 x 180.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.672	0.718
psSAR10g [W/Kg]	0.237	0.215
Power Drift [dB]	-0.11	-0.06
M2/M1 [%]		62.2
Dist 3dB Peak [mm]		4.7



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 19.5 ℃
Liquid Temperature: 19.4 ℃
Test Date: 10/25/2024
Plot No.: A15
Band: 6 ㎓ WLAN Head SAR

Measurement Report for Device, TILT, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 90pc duty cycle), Channel 79 (6345.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	TILT, 0.00	U-NII-5	WLAN, 10743-AAC	6345.000, 79	5.56	5.87	34.5

Hardware Setup

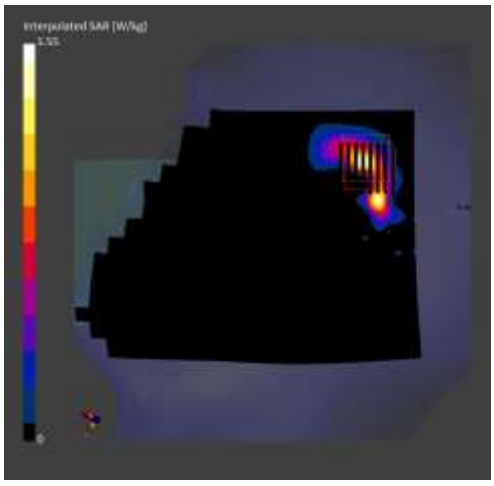
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7681, 2023-11-27	DAE4 Sn780, 2024-06-19

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	119.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.5 x 8.5	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/kg]	0.079	0.104
psSAR10g [W/kg]	0.022	0.022
psAPD (1.0cm2, sq) [W/m2]		1.04
psAPD (4.0cm2, sq) [W/m2]		0.598
Power Drift [dB]	0.01	0.11
M2/M1 [%]		53.0
Dist 3dB Peak [mm]		4.3



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	22.8 ℃
Liquid Temperature:	22.7 ℃
Test Date:	10/15/2024
Plot No.:	A16
Band:	Bluetooth Head SAR

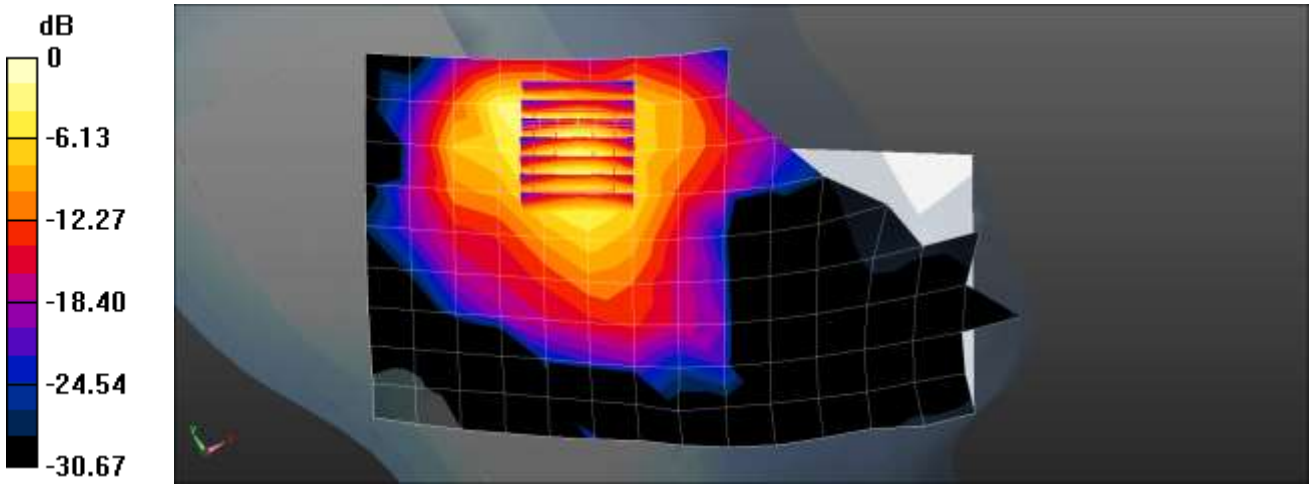
Communication System: UID 10032 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2480 MHz;Duty Cycle: 1:1.30557
Medium parameters used: f = 2480 MHz; σ = 1.856 S/m; ε_r = 39.205; ρ = 1000 kg/m^3
Phantom section: Left Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.25, 7.78, 7.45) @ 2480 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Bluetooth Head Left Touch DH5 78ch/Area Scan (10x16x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.705 W/kg

Bluetooth Head Left Touch DH5 78ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.230 V/m; Power Drift = -0.17 dB
Peak SAR (extrapolated) = 0.993 W/kg
SAR(1 g) = 0.514 W/kg; SAR(10 g) = 0.233 W/kg
Smallest distance from peaks to all points 3 dB below = 6.4 mm
Ratio of SAR at M2 to SAR at M1 = 54.2%
Maximum value of SAR (measured) = 0.785 W/kg



0 dB = 0.785 W/kg = -1.05 dBW/kg

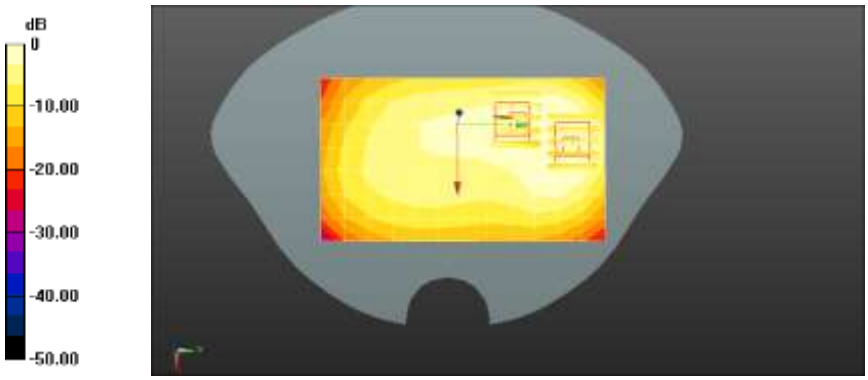
Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	22.9 ℃
Liquid Temperature:	22.8 ℃
Test Date:	10/02/2024
Plot No.:	B1
Band:	GSM850 Body/Hotspot SAR

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; σ = 0.928 S/m; ε_r = 42.421; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(9.18, 9.32, 9.14) @ 824.2 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

GSM850 2Tx Body Rear 128ch/Area Scan (8x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.764 W/kg
GSM850 2Tx Body Rear 128ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.06 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 1.17 W/kg
SAR(1 g) = 0.684 W/kg; SAR(10 g) = 0.383 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 61.2%
Maximum value of SAR (measured) = 0.977 W/kg
GSM850 2Tx Body Rear 128ch/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.06 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.702 W/kg
SAR(1 g) = 0.480 W/kg; SAR(10 g) = 0.337 W/kg
Smallest distance from peaks to all points 3 dB below = 17.6 mm
Ratio of SAR at M2 to SAR at M1 = 68%
Maximum value of SAR (measured) = 0.636 W/kg



0 dB = 0.636 W/kg = -1.97 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	22.4 ℃
Liquid Temperature:	22.3 ℃
Test Date:	10/07/2024
Plot No.:	B2
Band:	GSM1900 Body/Hotspot SAR

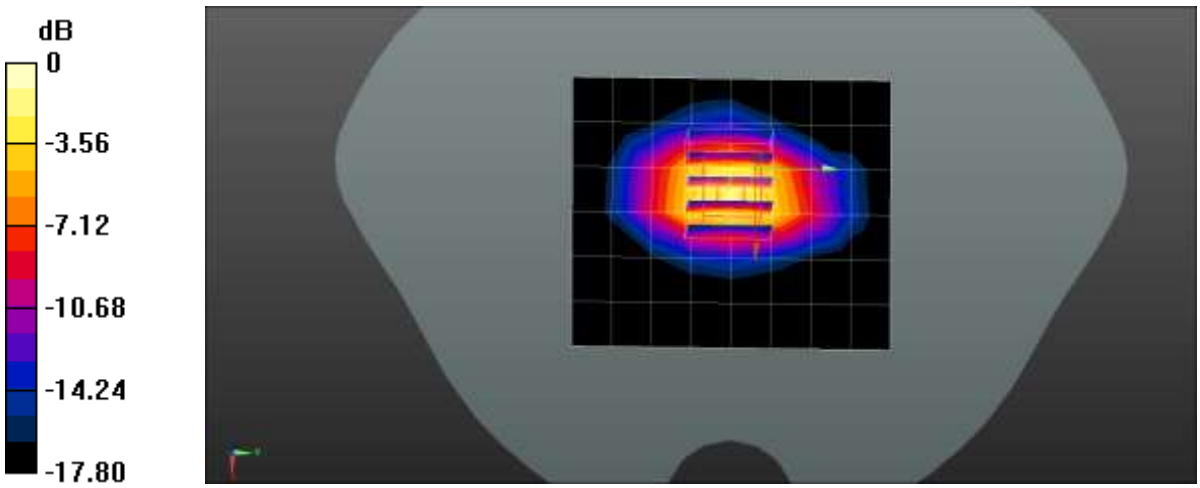
Communication System: UID 0, GSM 1900 3TX (0); Frequency: 1880 MHz;Duty Cycle: 1:2.77013
Medium parameters used: f = 1880 MHz; σ = 1.411 S/m; ε_r = 38.888; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.55, 8.06, 7.74) @ 1880 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

GSM1900 3Tx Body Bottom 661ch/Area Scan (7x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.795 W/kg

GSM1900 3Tx Body Bottom 661ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.27 V/m; Power Drift = 0.20 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.782 W/kg; SAR(10 g) = 0.407 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 58%
Maximum value of SAR (measured) = 1.21 W/kg



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	20.0 ℃
Liquid Temperature:	19.9 ℃
Test Date:	10/07/2024
Plot No.:	B3
Band:	UMTS Band 5 Body/Hotspot SAR

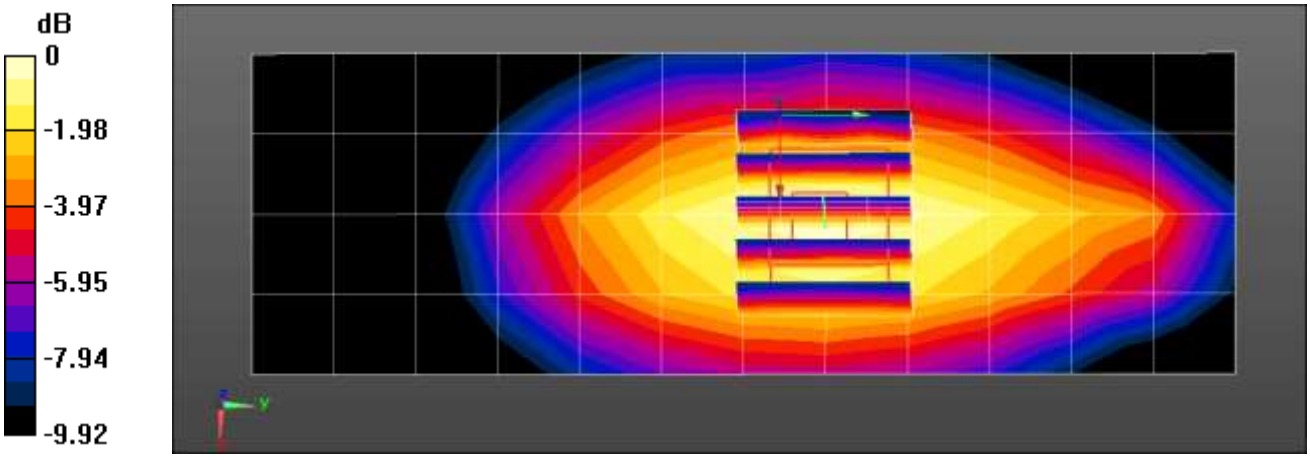
Communication System: UID 10011 - CAC, UMTS-FDD (WCDMA); Frequency: 836.6 MHz;Duty Cycle: 1:1.95434
Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.932 S/m; ε_r = 42.722; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(8.72, 9.56, 9.91) @ 836.6 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

UMTS Band 5 Body Right 4183ch/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.634 W/kg

UMTS Band 5 Body Right 4183ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.90 V/m; Power Drift = -0.05 dB
Peak SAR (extrapolated) = 0.720 W/kg
SAR(1 g) = 0.511 W/kg; SAR(10 g) = 0.351 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 70.6%
Maximum value of SAR (measured) = 0.657 W/kg



0 dB = 0.657 W/kg = -1.82 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	20.6 ℃
Liquid Temperature:	20.5 ℃
Test Date:	10/08/2024
Plot No.:	B4
Band:	LTE FDD Band 2 Body/Hotspot SAR

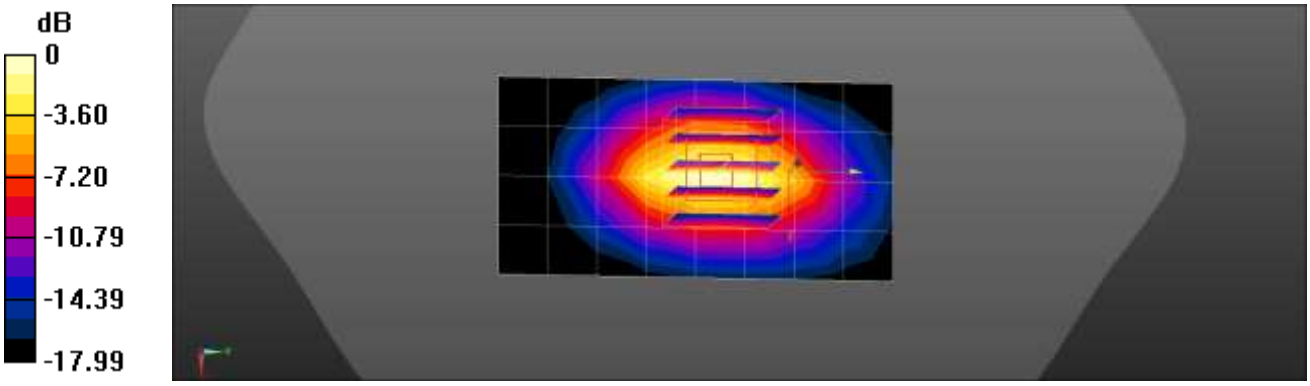
Communication System: UID 10297 - AAE, LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK); Frequency: 1860 MHz;Duty Cycle: 1:3.80978
Medium parameters used: f = 1860 MHz; σ = 1.389 S/m; ε_r = 40.761; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(7.5, 8.17, 8.31) @ 1860 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LTE Band 2 Body Bottom QPSK 20MHz 50RB 0offset 18700ch/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.21 W/kg

LTE Band 2 Body Bottom QPSK 20MHz 50RB 0offset 18700ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.21 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.46 W/kg
SAR(1 g) = 0.844 W/kg; SAR(10 g) = 0.444 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 58.5%
Maximum value of SAR (measured) = 1.26 W/kg



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

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 21.8 ℃
Liquid Temperature: 21.7 ℃
Test Date: 11/08/2024
Plot No.: B5
Band: LTE FDD Band 12 Body/Hotspot SAR

Measurement Report for Device, BACK, Band 12, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23095 (707.500 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 10.00	Band 12	LTE-FDD, 10175-CAH	707.500, 23095	8.91	0.862	42.9

Hardware Setup

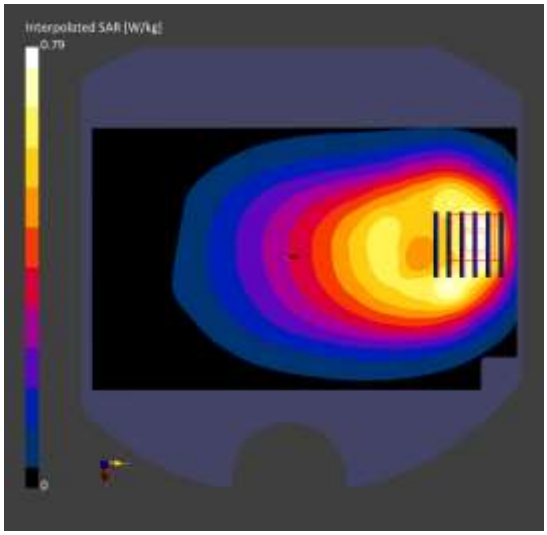
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.401	0.436
psSAR10g [W/Kg]	0.267	0.258
Power Drift [dB]	-0.10	0.07
M2/M1 [%]		79.9
Dist 3dB Peak [mm]		10.8



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 21.8 ℃
Liquid Temperature: 21.7 ℃
Test Date: 10/09/2024
Plot No.: B6
Band: LTE FDD Band 13 Body/Hotspot SAR

Measurement Report for Device, BACK, Band 13, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23230 (782.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 10.00	Band 13	LTE-FDD, 10175-CAH	782.000, 23230	8.91	0.928	42.0

Hardware Setup

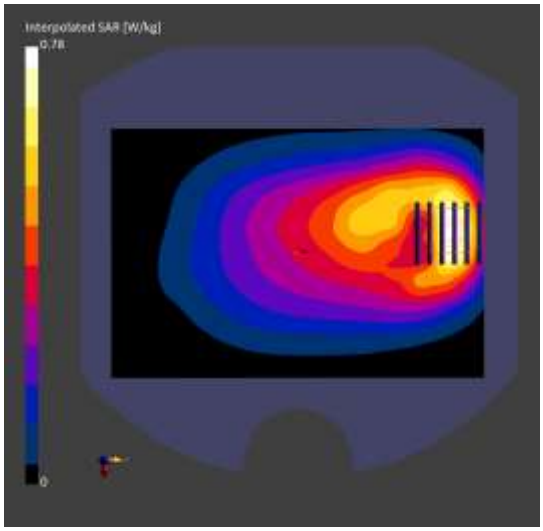
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.415	0.423
psSAR10g [W/Kg]	0.264	0.243
Power Drift [dB]	0.03	-0.03
M2/M1 [%]		79.5
Dist 3dB Peak [mm]		10.8



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 22.6 ℃
Liquid Temperature: 22.5 ℃
Test Date: 10/10/2024
Plot No.: B7
Band: LTE FDD Band 26 Body/Hotspot SAR

Measurement Report for Device, EDGE TOP, Band 26, LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK), Channel 26865 (831.500 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	EDGE TOP, 10.00	Band 26	LTE-FDD, 10181-CAF	831.500, 26865	8.75	0.924	42.4

Hardware Setup

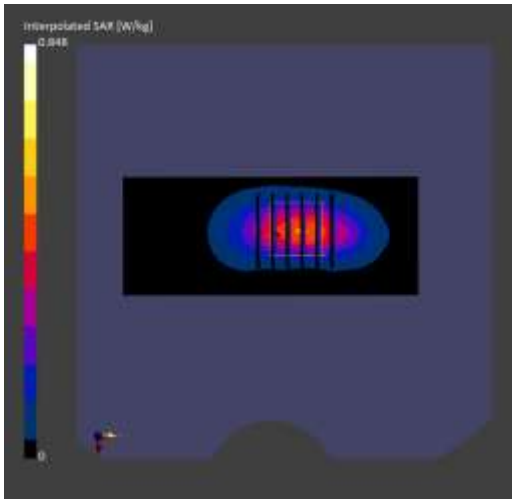
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	48.0 x 120.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.409	0.420
psSAR10g [W/Kg]	0.230	0.217
Power Drift [dB]	0.02	-0.01
M2/M1 [%]		79.0
Dist 3dB Peak [mm]		8.4



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	20.9 ℃
Liquid Temperature:	20.8 ℃
Test Date:	11/21/2024
Plot No.:	B8
Band:	LTE TDD Band 41 (Power Class 3) Body/Hotspot SAR

Measurement Report for Device, EDGE BOTTOM, Band 41, LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK, UL Subframe=2,3,4,7,8,9) RBPosition:Mid AntennaCfg:SISO, Channel 40185 (2549.500 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	EDGE BOTTOM, 10.00	Band 41	LTE-TDD, 10435-AAG	2549.500, 40185	6.64	1.98	38.9

Hardware Setup

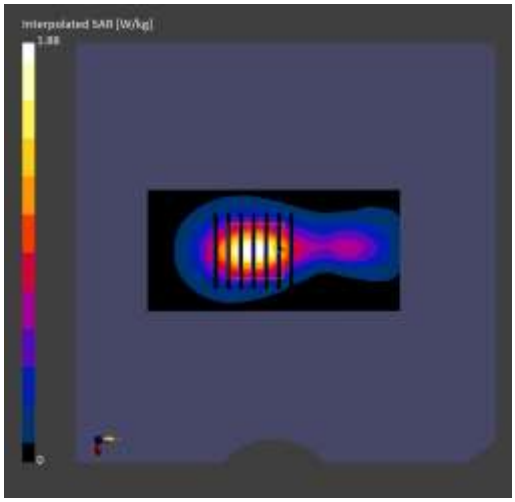
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	48.0 x 100.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.0 x 10.0	5.0 x 5.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.878	0.923
psSAR10g [W/Kg]	0.390	0.423
Power Drift [dB]	-0.01	0.02
M2/M1 [%]		80.2
Dist 3dB Peak [mm]		9.0



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	23.4 ℃
Liquid Temperature:	23.3 ℃
Test Date:	10/11/2024
Plot No.:	B9
Band:	LTE FDD Band 66 Body/Hotspot SAR

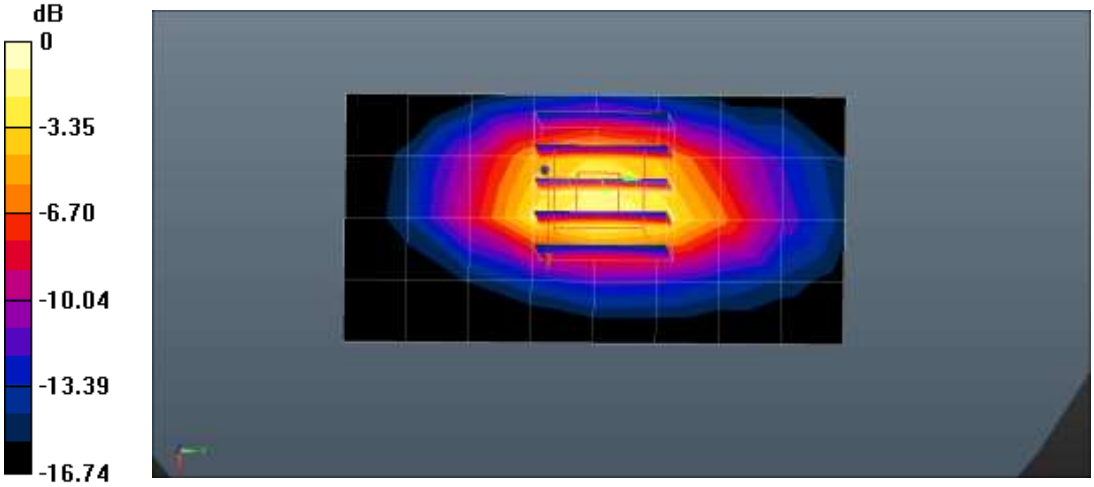
Communication System: UID 10100 - CAF, LTE-FDD (SC-FDMA, 100% RB, 20 MHz, QPSK); Frequency: 1770 MHz;Duty Cycle: 1:3.68638
Medium parameters used: f = 1770 MHz; σ = 1.364 S/m; ε_r = 40.662; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.69, 8.16, 7.84) @ 1770 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

LTE Band 66 Body Bottom QPSK 20MHz 100RB 0offset 132572ch/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.03 W/kg

LTE Band 66 Body Bottom QPSK 20MHz 100RB 0offset 132572ch/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.61 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.887 W/kg; SAR(10 g) = 0.480 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 61.4%
Maximum value of SAR (measured) = 1.28 W/kg



0 dB = 1.28 W/kg = 1.07 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	20.5 ℃
Liquid Temperature:	20.4 ℃
Test Date:	10/14/2024
Plot No.:	B10
Band:	NR FDD Band n5 Body/Hotspot SAR

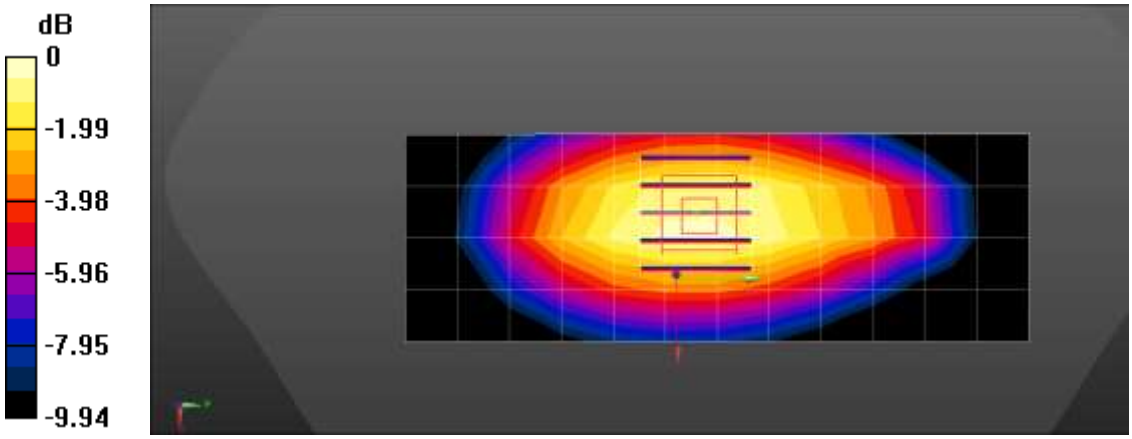
Communication System: UID 0, NR n5 (0); Frequency: 836.5 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.925 S/m; ε_r = 42.573; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(8.72, 9.56, 9.91) @ 836.5 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

NR Band n5 Body Right DFT-s QPSK 20MHz 50RB 28offset 167300ch/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.534 W/kg

NR Band n5 Body Right DFT-s QPSK 20MHz 50RB 28offset 167300ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.93 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.650 W/kg
SAR(1 g) = 0.456 W/kg; SAR(10 g) = 0.309 W/kg
Ratio of SAR at M2 to SAR at M1 = 69.5%
Maximum value of SAR (measured) = 0.591 W/kg



0 dB = 0.591 W/kg = -2.28 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	21.0 ℃
Liquid Temperature:	20.9 ℃
Test Date:	11/20/2024
Plot No.:	B11
Band:	NR TDD Band n41 Body/Hotspot SAR

Measurement Report for Device, EDGE BOTTOM, Band n41, 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) RBPosition:Mid AntennaCfg:SISO, Channel 518598 (2592.990 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	EDGE BOTTOM, 10.00	Band n41	5G NR FR1 TDD, 10866-AAF	2592.990, 518598	6.64	2.03	38.4

Hardware Setup

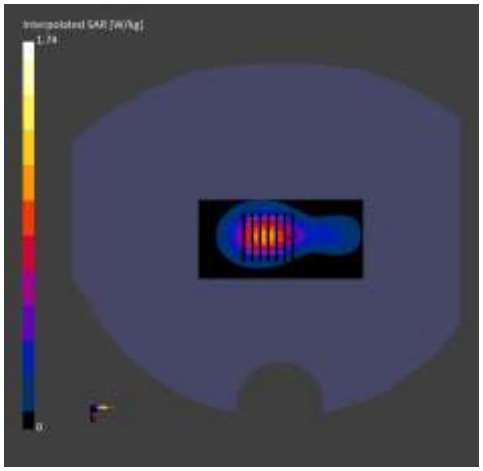
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	48.0 x 100.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.0 x 10.0	5.0 x 5.0 x 5.0
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.870	0.944
psSAR10g [W/Kg]	0.411	0.457
Power Drift [dB]	0.03	0.03
M2/M1 [%]		53.8
Dist 3dB Peak [mm]		10.0



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	19.9 ℃
Liquid Temperature:	19.8 ℃
Test Date:	10/11/2024
Plot No.:	B12
Band:	NR FDD Band n66 Body/Hotspot SAR

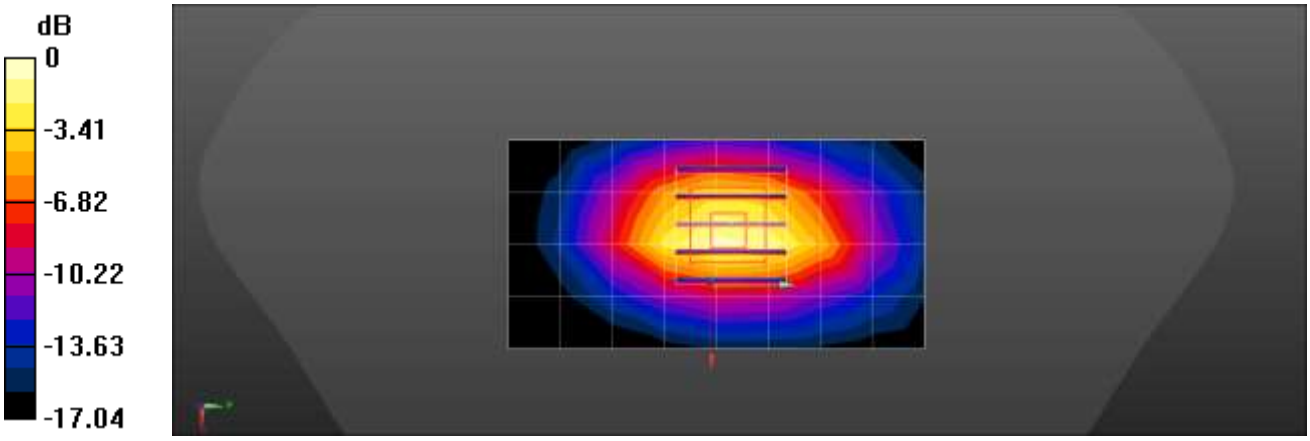
Communication System: UID 0, n66 (0); Frequency: 1745 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.348 S/m; ε_r = 40.895; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(7.77, 8.41, 8.66) @ 1745 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

NR Band n66 Body Bottom DFT-s QPSK 40MHz 1RB 108offset 349000ch/Area Scan (5x9x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.834 W/kg

NR Band n66 Body Bottom DFT-s QPSK 40MHz 1RB 108offset 349000ch/Zoom Scan (5x5x7)/Cube 0:
Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.05 V/m; Power Drift = 0.16 dB
Peak SAR (extrapolated) = 1.12 W/kg
SAR(1 g) = 0.655 W/kg; SAR(10 g) = 0.355 W/kg
Smallest distance from peaks to all points 3 dB below = 10.7 mm
Ratio of SAR at M2 to SAR at M1 = 59.5%
Maximum value of SAR (measured) = 0.967 W/kg



0 dB = 0.967 W/kg = -0.15 dBW/kg

Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	22.9 ℃
Liquid Temperature:	22.8 ℃
Test Date:	10/22/2024
Plot No.:	B13
Band:	2.4 GHz WLAN Body/Hotspot SAR

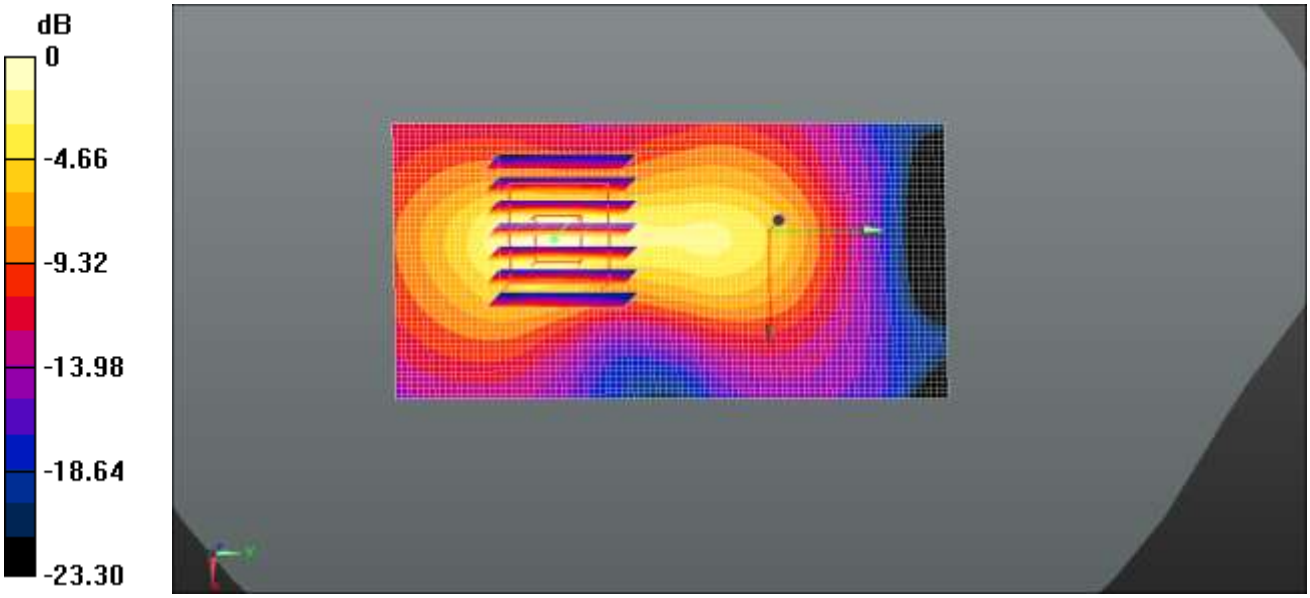
Communication System: UID 0, 2450MHz FCC (0); Frequency: 2412 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 2412 MHz; σ = 1.754 S/m; ε_r = 38.836; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.25, 7.78, 7.45) @ 2412 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

802.11b Body Top 1Mbps 1ch/Area Scan (51x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.426 W/kg

802.11b Body Top 1Mbps 1ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 11.18 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.535 W/kg
SAR(1 g) = 0.265 W/kg; SAR(10 g) = 0.115 W/kg
Smallest distance from peaks to all points 3 dB below = 7.6 mm
Ratio of SAR at M2 to SAR at M1 = 52.3%
Maximum value of SAR (measured) = 0.439 W/kg



0dB = 0.439 W/kg = -3.58 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 22.1 ℃
Liquid Temperature: 22.0 ℃
Test Date: 10/24/2024
Plot No.: B14
Band: 5 ㎓ WLAN Body/Hotspot SAR

Measurement Report for Device, BACK, Custom Band, IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle), Channel 5855000 (5855.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BACK, 10.00	Custom Band	CW, 10544-AAC	5855.0, 5855000	5.32	5.14	36.1

Hardware Setup

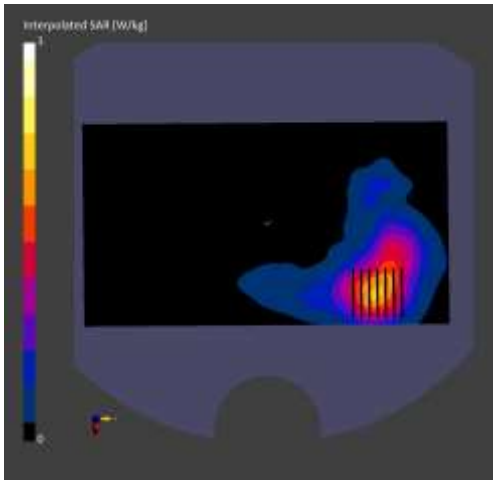
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	100.0 x 180.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.527	0.554
psSAR10g [W/Kg]	0.213	0.211
Power Drift [dB]	0.16	-0.16
M2/M1 [%]		59.4
Dist 3dB Peak [mm]		10.4



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 19.7 ℃
Liquid Temperature: 19.6 ℃
Test Date: 10/22/2024
Plot No.: B15
Band: 6 GHz WLAN Hotspot SAR
Measurement Report for Device, EDGE LEFT, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle), Channel 79 (6345.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	EDGE LEFT, 10.00	U-NII-5	WLAN, 10755-AAC	6345.000, 79	5.75	5.80	34.2

Hardware Setup

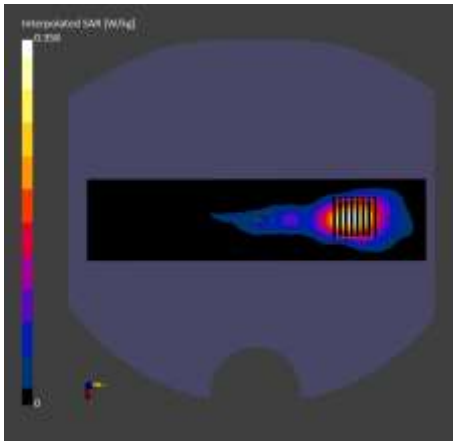
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7679, 2024-08-22	DAE4 Sn504, 2024-01-30

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	48.0 x 200.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.0 x 10.0	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/kg]	0.074	0.081
psSAR10g [W/kg]	0.026	0.028
psAPD (1.0cm2, sq) [W/m2]		0.814
psAPD (4.0cm2, sq) [W/m2]		0.640
Power Drift [dB]	-0.12	-0.16
M2/M1 [%]		57.5
Dist 3dB Peak [mm]		8.2



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	22.5 ℃
Liquid Temperature:	22.4 ℃
Test Date:	10/16/2024
Plot No.:	B16
Band:	Bluetooth Body/Hotspot SAR

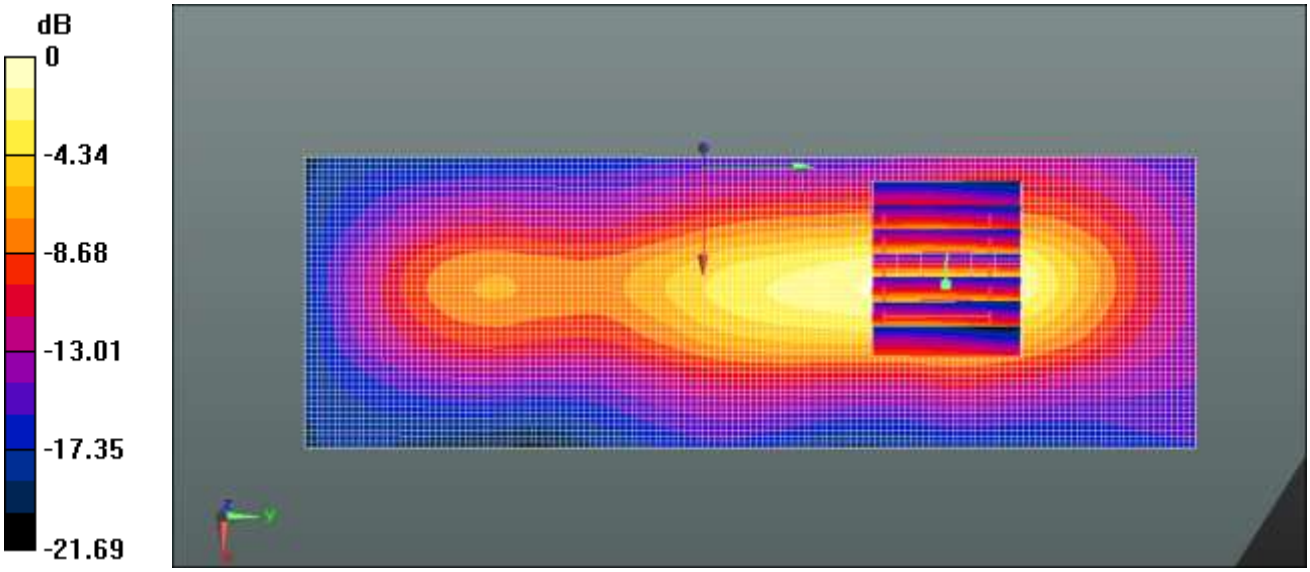
Communication System: UID 10032 - CAA, IEEE 802.15.1 Bluetooth (GFSK, DH5); Frequency: 2402 MHz;Duty Cycle: 1:1.30557
Medium parameters used (interpolated): f = 2402 MHz; σ = 1.814 S/m; ε_r = 39.238; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN3797; ConvF(7.41, 7.17, 7.14) @ 2402 MHz; Calibrated: 2024-01-23
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1629; Calibrated: 2024-08-16
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

Bluetooth Body Left DH5 0ch/Area Scan (51x151x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 0.532 W/kg

Bluetooth Body Left DH5 0ch/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 10.61 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.648 W/kg
SAR(1 g) = 0.328 W/kg; SAR(10 g) = 0.156 W/kg
Smallest distance from peaks to all points 3 dB below = 8 mm
Ratio of SAR at M2 to SAR at M1 = 52.4%
Maximum value of SAR (measured) = 0.530 W/kg



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

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 22.1 ℃
Liquid Temperature: 22.0 ℃
Test Date: 10/24/2024
Plot No.: C1
Band: 5 GHz WLAN Phablet SAR
Measurement Report for Device, EDGE LEFT, Custom Band, IEEE 802.11ac WiFi (80MHz, MCS0, 99pc duty cycle), Channel 5855000 (5855.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	EDGE LEFT, 0.00	Custom Band	CW, 10544-AAC	5855.0, 5855000	5.32	5.14	36.1

Hardware Setup

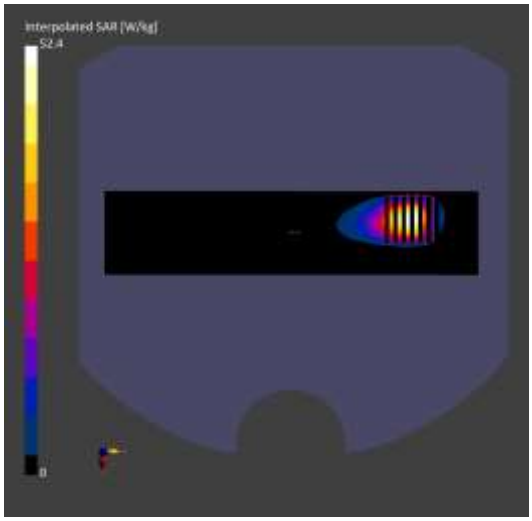
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 180.0	24.0 x 24.0 x 22.0
Grid Steps [mm]	10.0 x 10.0	4.0 x 4.0 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	5.45	8.80
psSAR10g [W/Kg]	1.68	1.90
Power Drift [dB]	-0.08	-0.14
M2/M1 [%]		56.4
Dist 3dB Peak [mm]		4.0



Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Ambient Temperature: 20.3 ℃
Liquid Temperature: 20.2 ℃
Test Date: 10/29/2024
Plot No.: C2
Band: 6 GHz WLAN Phablet SAR

Measurement Report for Device, EDGE LEFT, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle), Channel 79 (6345.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	EDGE LEFT, 0.00	U-NII-5	WLAN, 10755-AAC	6345.000, 79	5.56	5.88	34.5

Hardware Setup

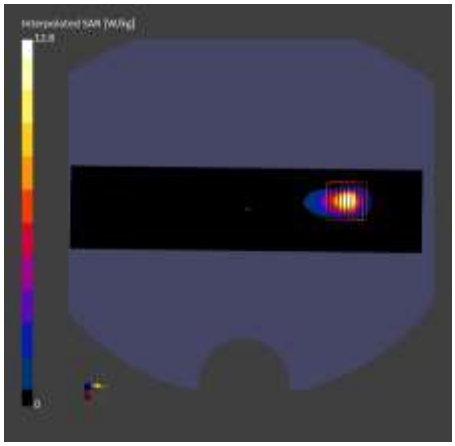
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7681, 2023-11-27	DAE4 Sn780, 2024-06-19

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	48.0 x 204.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.0 x 8.5	2.6 x 2.6 x 1.2
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/kg]	1.25	1.86
psSAR10g [W/kg]	0.290	0.360
psAPD (1.0cm2, sq) [W/m2]		18.6
psAPD (4.0cm2, sq) [W/m2]		8.75
Power Drift [dB]	-0.12	0.00
M2/M1 [%]		50.6
Dist 3dB Peak [mm]		4.0



Test Laboratory:	HCT CO., LTD
EUT Type:	Mobile Phone
Ambient Temperature:	22.3 ℃
Liquid Temperature:	22.2 ℃
Test Date:	10/07/2024
Plot No.:	C3
Band:	NFC Phablet SAR

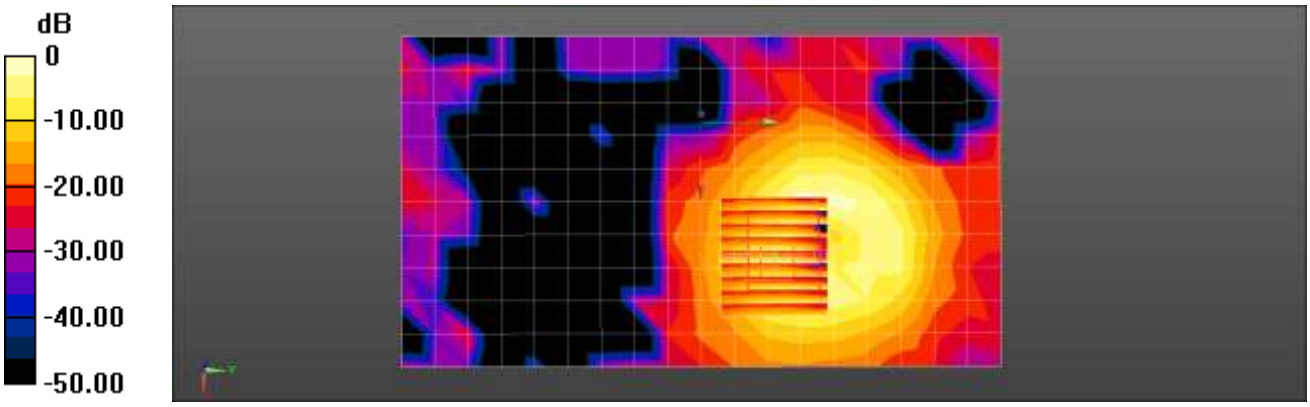
Communication System: UID 0, NFC (0); Frequency: 13.56 MHz;Duty Cycle: 1:1
Medium parameters used: f = 14 MHz; σ = 0.74 S/m; ε_r = 54.534; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.39, 5.7, 6.16) @ 13.56 MHz; Calibrated: 2024-07-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2024-03-15
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

NFC Phablet Rear Type B 106kbps/Area Scan (11x19x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0652 W/kg

NFC Phablet Rear Type B 106kbps/Zoom Scan (9x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 1.360 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 0.323 W/kg
SAR(1 g) = 0.055 W/kg; SAR(10 g) = 0.019 W/kg
Ratio of SAR at M2 to SAR at M1 = 62.6%
Maximum value of SAR (measured) = 0.0742 W/kg



0 dB = 0.0742 W/kg = -11.30 dBW/kg

Test Laboratory: HCT CO., LTD
EUT Type: Mobile Phone
Liquid Temperature: 18.8 °C
Test Date: 10/16/2024
Plot No.: D1
Band: 6 GHz WLAN PD

Measurement Report for Device, EDGE LEFT, U-NII-5, IEEE 802.11ax (160MHz, MCS0, 99pc duty cycle), Channel 15 (6025.0 MHz)Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	EDGE LEFT, 2.00	U-NII-5	WLAN, 10755-AAC	6025.0, 15	1.0

Hardware Setup

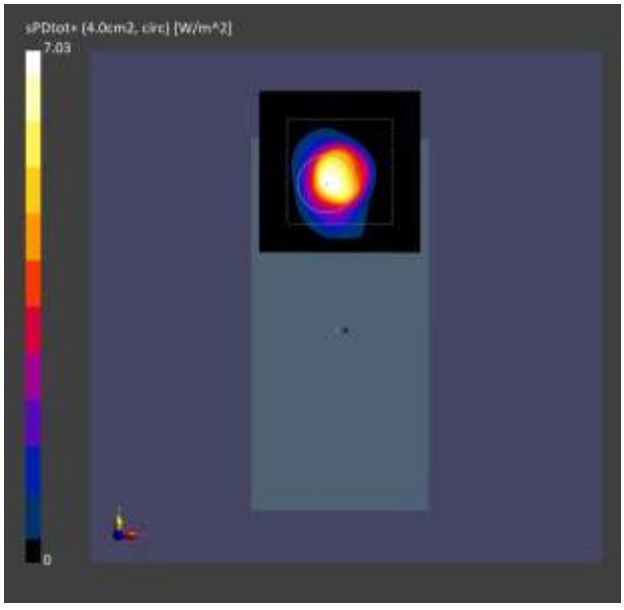
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave - xxxx	Air -	EUmmWV4 - SN9528_F1-55GHz, 2024-05-17	DAE4 Sn446, 2023-11-16

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.04102331270196222 x 0.04102331270196222

Measurement Results

Scan Type	5G Scan
Avg. Area [cm^2]	4.00
psPDn+ [W/m^2]	3.48
psPDtot+ [W/m^2]	7.03
psPDmod+ [W/m^2]	8.84
E_{max} [V/m]	145
Power Drift [dB]	0.19



Appendix C. – Dipole Verification Plots

■ Verification Data (750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.2 ℃
Test Date:	10/04/2024
Band:	LTE FDD Band 12 _MAIN1 ANT.

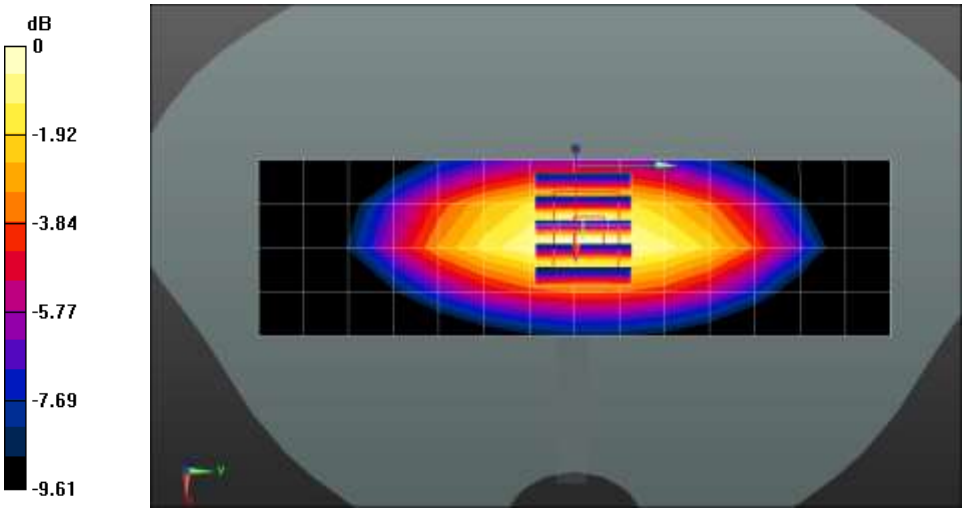
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.894 S/m; ε_r = 42.504; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(9.12, 9.7, 9.5) @ 750 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

750MHz Head Verification/Area Scan (5x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.510 W/kg

750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.56 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.580 W/kg
SAR(1 g) = 0.423 W/kg; SAR(10 g) = 0.286 W/kg
Smallest distance from peaks to all points 3 dB below = 17.9 mm
Ratio of SAR at M2 to SAR at M1 = 71.7%
Maximum value of SAR (measured) = 0.538 W/kg



0 dB = 0.538 W/kg = -2.69 dBW/kg

■ Verification Data (750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.7 ℃
Test Date: 11/08/2024
Band: LTE FDD Band 12 _SUB1 ANT.
Measurement Report for Device, , , CW, Channel 0 (750.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	750.000, 0	8.91	0.903	42.3

Hardware Setup

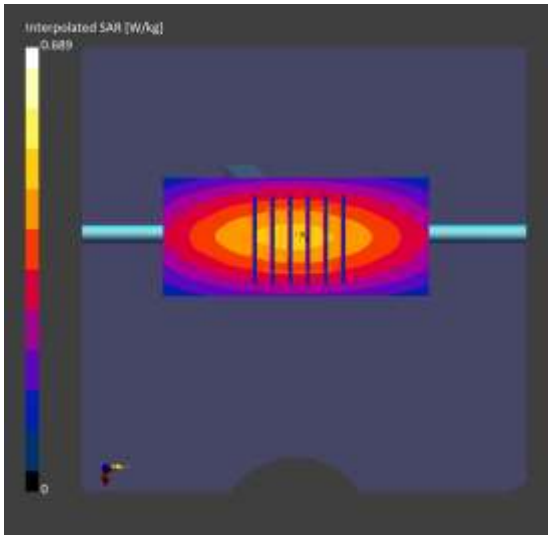
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.423	0.449
psSAR10g [W/Kg]	0.284	0.303
Power Drift [dB]	-0.05	-0.04
M2/M1 [%]		85.6
Dist 3dB Peak [mm]		> 15.0



■ Verification Data (750 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.3 ℃
Test Date:	10/03/2024
Band:	LTE FDD Band 13_MAIN1 ANT.

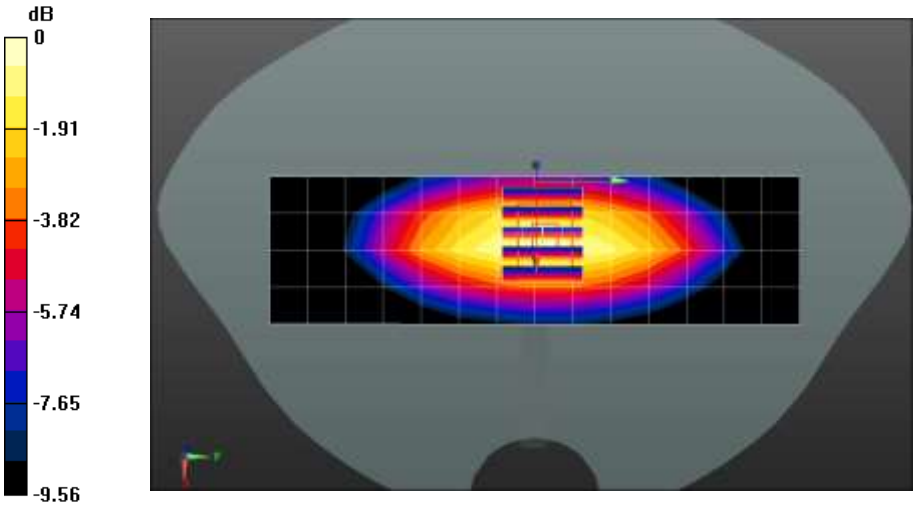
Communication System: UID 0, CW (0); Frequency: 750 MHz;Duty Cycle: 1:1
Medium parameters used: f = 750 MHz; σ = 0.895 S/m; ε_r = 42.549; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(9.12, 9.7, 9.5) @ 750 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

750MHz Head Verification/Area Scan (5x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.519 W/kg

750MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.83 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 0.594 W/kg
SAR(1 g) = 0.428 W/kg; SAR(10 g) = 0.290 W/kg
Smallest distance from peaks to all points 3 dB below = 16.7 mm
Ratio of SAR at M2 to SAR at M1 = 71.1%
Maximum value of SAR (measured) = 0.549 W/kg



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

■ Verification Data (750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.7 ℃
Test Date: 10/09/2024
Band: LTE FDD Band 13_SUB1 ANT.
Measurement Report for Device, , , CW, Channel 0 (750.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	750.000, 0	8.91	0.905	42.5

Hardware Setup

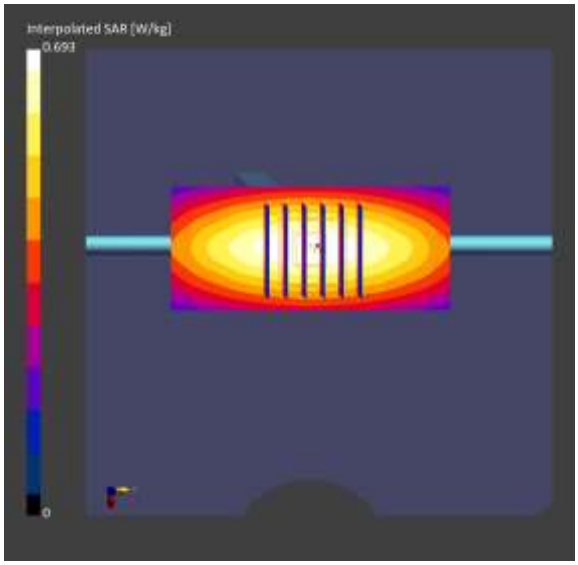
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.423	0.450
psSAR10g [W/Kg]	0.284	0.304
Power Drift [dB]	-0.05	-0.06
M2/M1 [%]		85.6
Dist 3dB Peak [mm]		> 15.0



■ Verification Data (750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.9 ℃
Test Date: 11/27/2024
Band: LTE Band 13 Fast Volume

Measurement Report for Device, , , CW, Channel 0 (750.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	750.000, 0	8.91	0.908	42.5

Hardware Setup

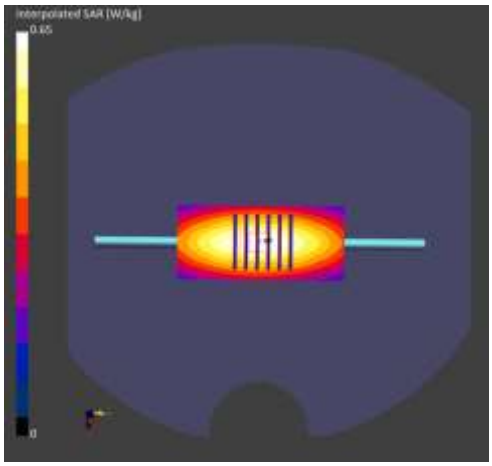
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.441	0.446
psSAR10g [W/Kg]	0.294	0.302
Power Drift [dB]	0.01	-0.02
M2/M1 [%]		88.7
Dist 3dB Peak [mm]		> 15.0



■ Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.6 ℃
Test Date:	10/01/2024
Band:	GSM 850 _MAIN1 ANT.

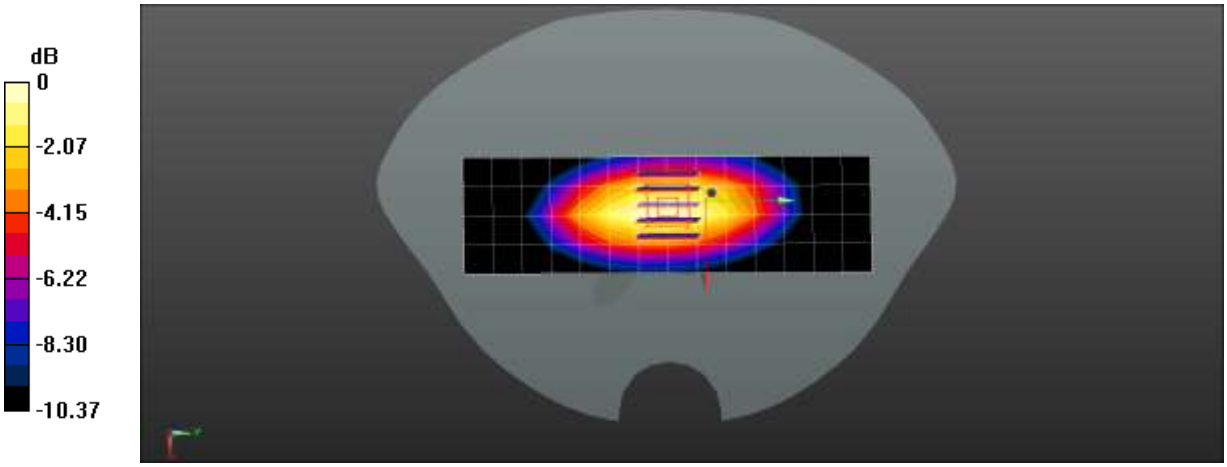
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.924 S/m; ε_r = 42.531; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(9.18, 9.32, 9.14) @ 835 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

835MHz Head Verification/Area Scan (5x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.650 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 29.09 V/m; Power Drift = -0.14dB
Peak SAR (extrapolated) = 0.721 W/kg
SAR(1 g) = 0.513 W/kg; SAR(10 g) = 0.337 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 70.4%
Maximum value of SAR (measured) = 0.665 W/kg



0 dB = 0.665 W/kg = -1.77 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.8 ℃
Test Date:	10/02/2024
Band:	GSM 850 _SUB1 ANT.

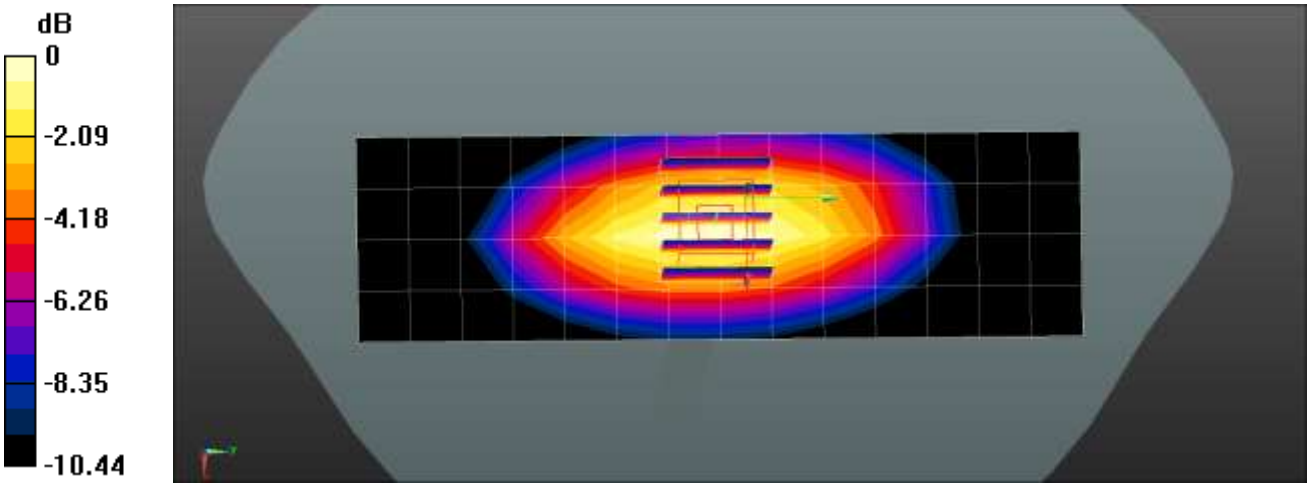
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.931 S/m; ε_r = 42.368; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(9.18, 9.32, 9.14) @ 835 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

835MHz Head Verification/Area Scan (5x15x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.656 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 28.43 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.732 W/kg
SAR(1 g) = 0.519 W/kg; SAR(10 g) = 0.341 W/kg
Smallest distance from peaks to all points 3 dB below = 16 mm
Ratio of SAR at M2 to SAR at M1 = 70.2%
Maximum value of SAR (measured) = 0.674 W/kg



0 dB = 0.674 W/kg = -1.71 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.3 ℃
Test Date:	10/06/2024
Band:	UMTS Band 5 _MAIN1 ANT

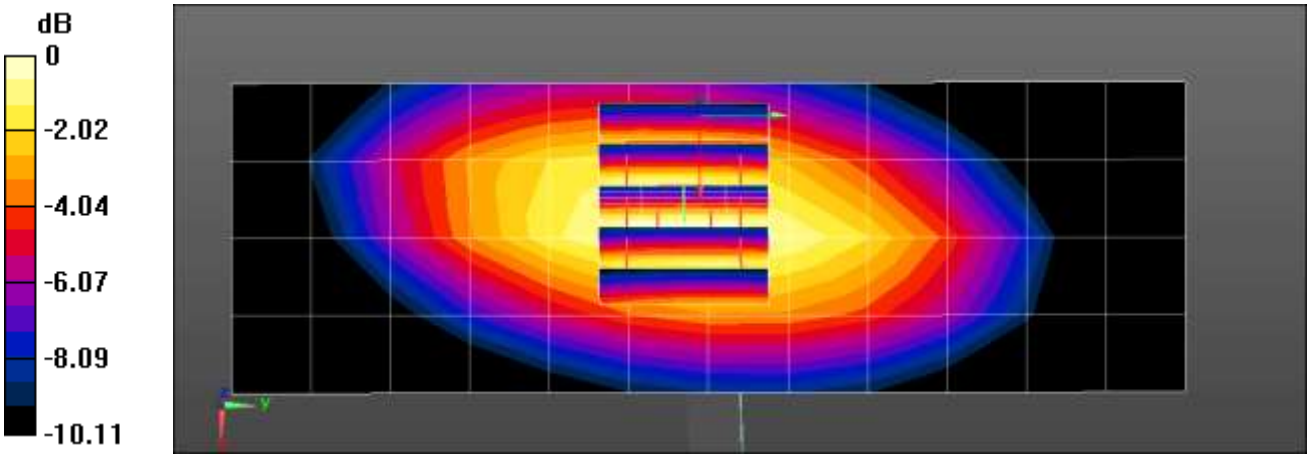
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.939 S/m; ε_r = 42.937; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(8.72, 9.56, 9.91) @ 835 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

835MHz Head Verification/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.626 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.61 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.706 W/kg
SAR(1 g) = 0.499 W/kg; SAR(10 g) = 0.335 W/kg
Smallest distance from peaks to all points 3 dB below = 16.3 mm
Ratio of SAR at M2 to SAR at M1 = 70.1%
Maximum value of SAR (measured) = 0.646 W/kg



0 dB = 0.646 W/kg = -1.90 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	19.9 ℃
Test Date:	10/07/2024
Band:	UMTS Band 5 _SUB1 ANT

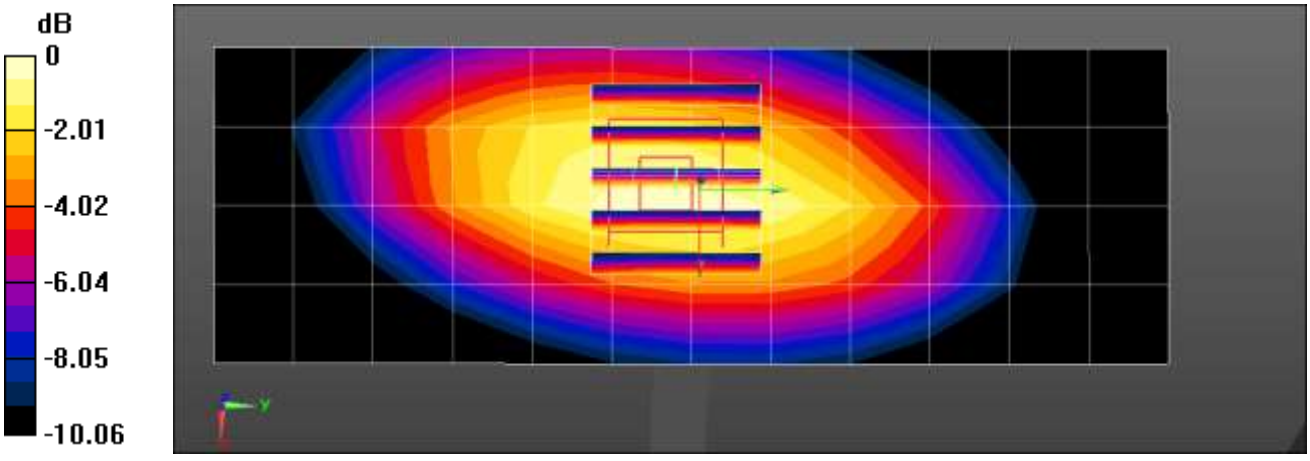
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.93 S/m; ε_r = 42.745; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(8.72, 9.56, 9.91) @ 835 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

835MHz Head Verification/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.622 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.59 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.695 W/kg
SAR(1 g) = 0.493 W/kg; SAR(10 g) = 0.331 W/kg
Smallest distance from peaks to all points 3 dB below = 16.3 mm
Ratio of SAR at M2 to SAR at M1 = 70.4%
Maximum value of SAR (measured) = 0.637 W/kg



0 dB = 0.637 W/kg = -1.96 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.7 ℃
Test Date:	10/09/2024
Band:	LTE FDD Band 26 _MAIN1 ANT.

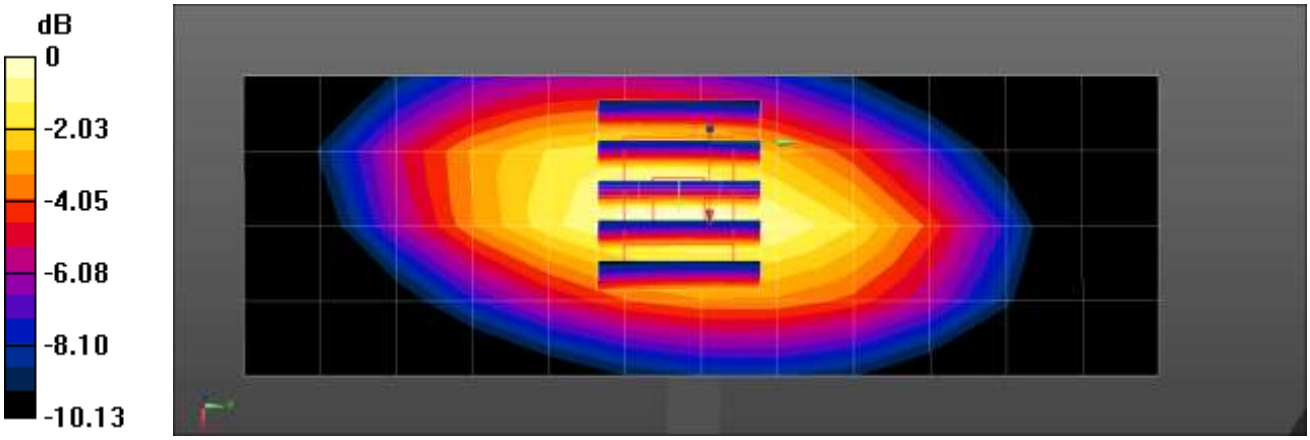
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.939 S/m; ε_r = 42.932; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(8.72, 9.56, 9.91) @ 835 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

835MHz Head Verification/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.620 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.43 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 0.701 W/kg
SAR(1 g) = 0.497 W/kg; SAR(10 g) = 0.333 W/kg
Smallest distance from peaks to all points 3 dB below = 16.3 mm
Ratio of SAR at M2 to SAR at M1 = 70.5%
Maximum value of SAR (measured) = 0.643 W/kg



0 dB = 0.643 W/kg = -1.92 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.5 ℃
Test Date: 10/10/2024
Band: LTE FDD Band 26 _SUB1 ANT.
Measurement Report for Device, , , CW, Channel 0 (835.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	835.000, 0	8.75	0.928	42.3

Hardware Setup

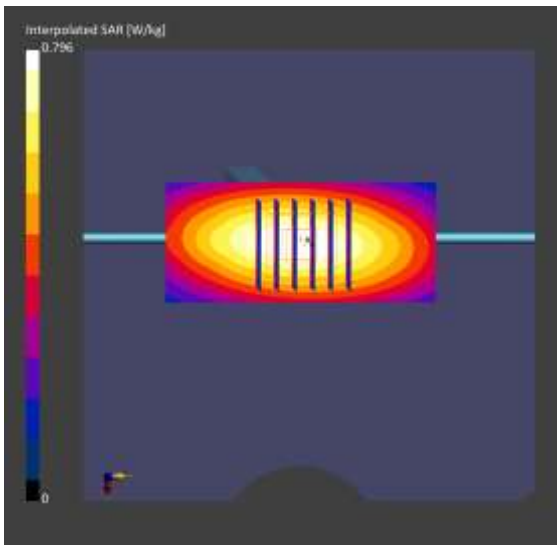
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.484	0.516
psSAR10g [W/Kg]	0.322	0.346
Power Drift [dB]	-0.02	-0.03
M2/M1 [%]		85.7
Dist 3dB Peak [mm]		23.0



■ Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.4 ℃
Test Date:	10/14/2024
Band:	NR FDD Band n5 _SUB1 ANT.

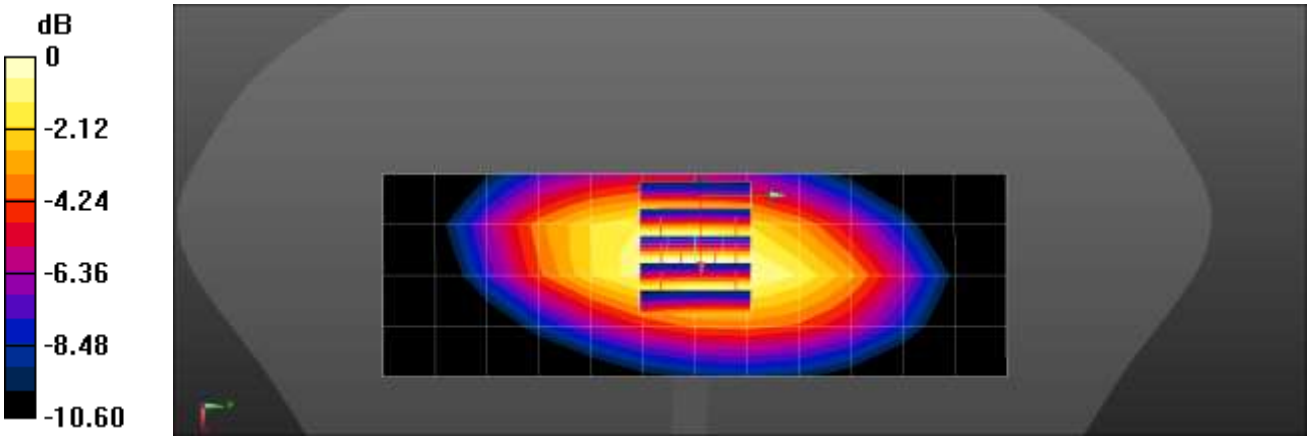
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.924 S/m; ε_r = 42.595; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(8.72, 9.56, 9.91) @ 835 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

835MHz Head Verification/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.616 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.50 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 0.717 W/kg
SAR(1 g) = 0.495 W/kg; SAR(10 g) = 0.327 W/kg
Smallest distance from peaks to all points 3 dB below = 16.7 mm
Ratio of SAR at M2 to SAR at M1 = 68.4%
Maximum value of SAR (measured) = 0.651 W/kg



0 dB = 0.651 W/kg = -1.86 dBW/kg

■ Verification Data (835 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.9 ℃
Test Date: 11/27/2024
Band: UMTS Band5 Fast Volume

Measurement Report for Device, , , CW, Channel 0 (835.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	835.000, 0	8.75	0.913	42.8

Hardware Setup

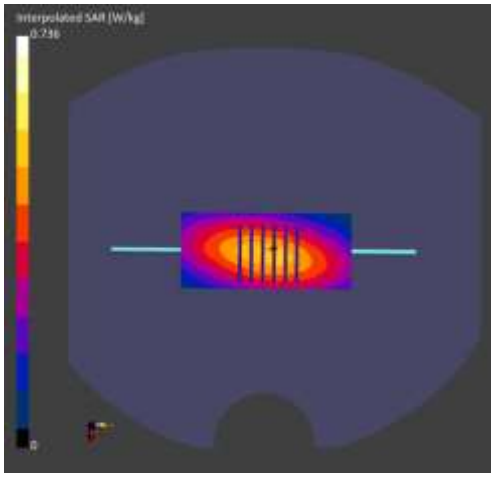
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.465	0.479
psSAR10g [W/Kg]	0.308	0.324
Power Drift [dB]	-0.01	0.01
M2/M1 [%]		85.8
Dist 3dB Peak [mm]		19.0



■ Verification Data (835 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.7 ℃
Test Date:	10/10/2024
Band:	NR FDD Band n5 _MAIN1 ANT

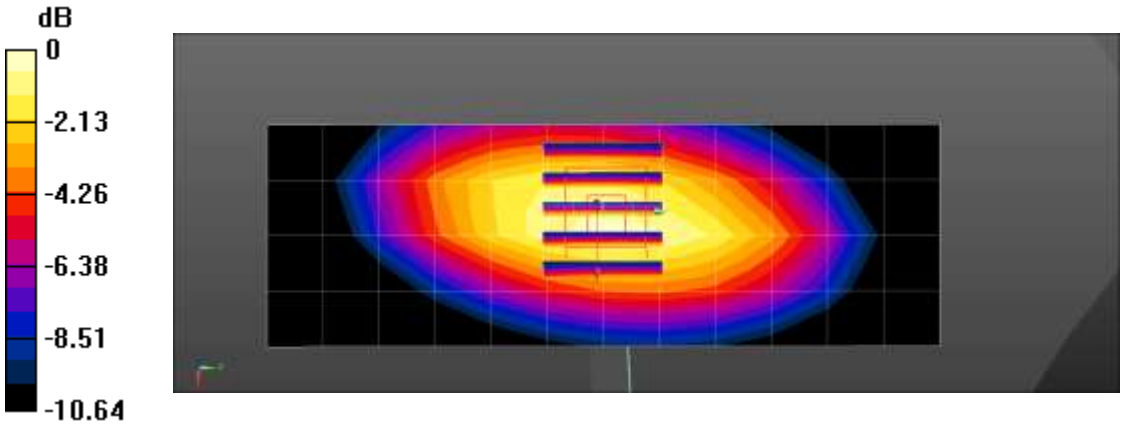
Communication System: UID 0, CW (0); Frequency: 835 MHz;Duty Cycle: 1:1
Medium parameters used (interpolated): f = 835 MHz; σ = 0.932 S/m; ε_r = 42.784; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(8.72, 9.56, 9.91) @ 835 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

835MHz Head Verification/Area Scan (5x13x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.606 W/kg

835MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 26.78 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.719 W/kg
SAR(1 g) = 0.497 W/kg; SAR(10 g) = 0.329 W/kg
Smallest distance from peaks to all points 3 dB below = 16.1 mm
Ratio of SAR at M2 to SAR at M1 = 68.6%
Maximum value of SAR (measured) = 0.653 W/kg



0 dB = 0.653 W/kg = -1.85 dBW/kg

■ Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	23.3 ℃
Test Date:	10/11/2024
Band:	LTE FDD Band 66 _MAIN1 ANT.

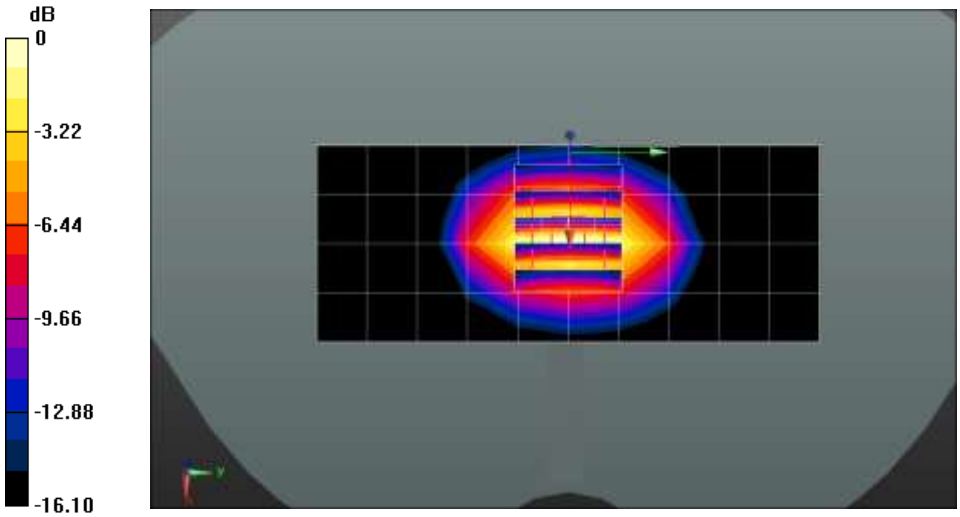
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.368 S/m; ε_r = 40.729; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.69, 8.16, 7.84) @ 1800 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

1800MHz Head Verification/Area Scan (5x11x1): 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 = 48.50 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.44 W/kg
SAR(1 g) = 2 W/kg; SAR(10 g) = 1.09 W/kg
Smallest distance from peaks to all points 3 dB below = 11.2 mm
Ratio of SAR at M2 to SAR at M1 = 58.4%
Maximum value of SAR (measured) = 2.98 W/kg



0 dB = 2.98 W/kg = 4.74 dBW/kg

■ Verification Data (1 800 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	19.8 ℃
Test Date:	10/11/2024
Band:	NR FDD Band n66 _MAIN1 ANT.

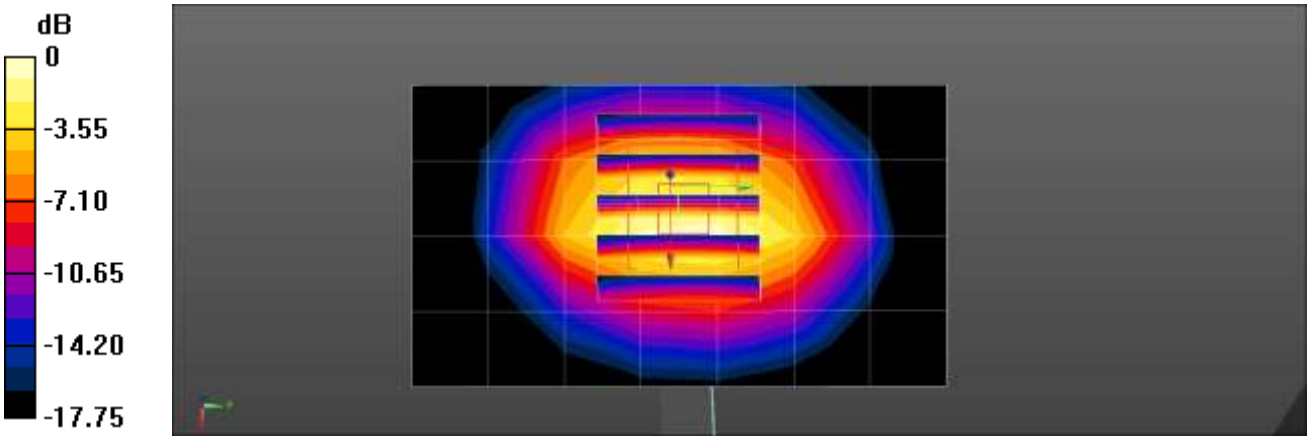
Communication System: UID 0, CW (0); Frequency: 1800 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1800 MHz; σ = 1.403 S/m; ε_r = 40.633; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(7.77, 8.41, 8.66) @ 1800 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

1800MHz Head Verification/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.49 W/kg

1800MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 45.14 V/m; Power Drift = 0.11 dB
Peak SAR (extrapolated) = 3.45 W/kg
SAR(1 g) = 1.85 W/kg; SAR(10 g) = 0.970 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 53.5%
Maximum value of SAR (measured) = 2.89 W/kg



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

■ Verification Data (1 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.9 ℃
Test Date: 11/25/2024
Band: NR FDD Band n66 ENDC _SUB2 ANT.
Measurement Report for Device, , , CW, Channel 0 (1800.000 MHz)
Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	1800.000, 0	7.55	1.41	41.2

Hardware Setup

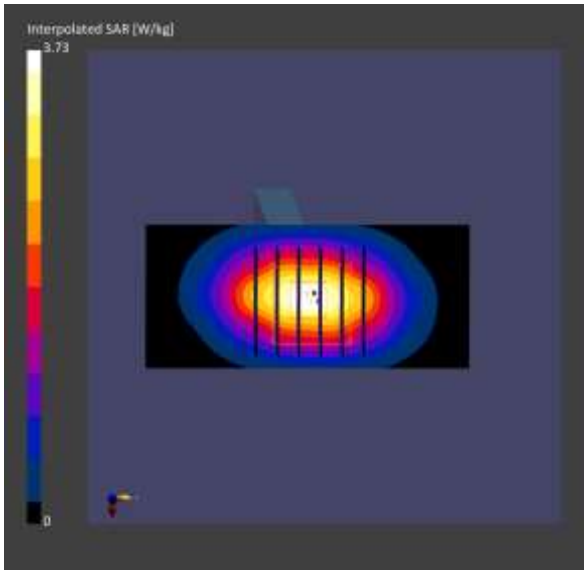
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	40.0 x 90.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 15.0	6.0 x 6.0 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.12	2.01
psSAR10g [W/Kg]	1.11	1.07
Power Drift [dB]	-0.07	-0.12
M2/M1 [%]		82.2
Dist 3dB Peak [mm]		10.8



■ Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.3 ℃
Test Date:	10/07/2024
Band:	GSM 1900 _MAIN1 ANT.

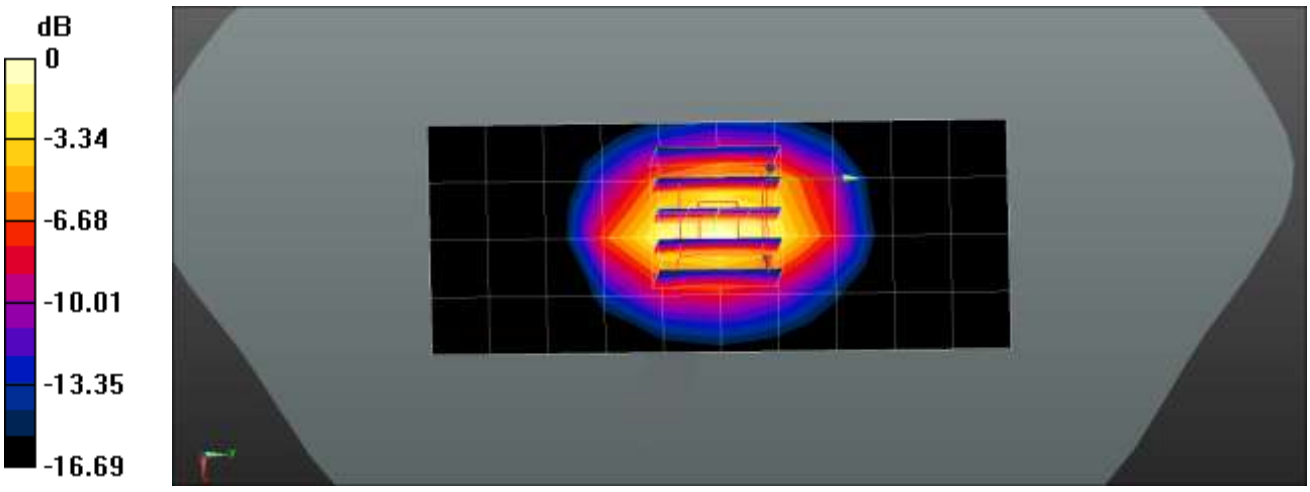
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.431 S/m; ε_r = 38.807; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.55, 8.06, 7.74) @ 1900 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

1900MHz Head Verification/Area Scan (5x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.64 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 45.15 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 3.35 W/kg
SAR(1 g) = 1.94 W/kg; SAR(10 g) = 1.05 W/kg
Smallest distance from peaks to all points 3 dB below = 10.1 mm
Ratio of SAR at M2 to SAR at M1 = 58.1%
Maximum value of SAR (measured) = 2.90 W/kg



0 dB = 2.90 W/kg = 4.62 dBW/kg

■ Verification Data (1 900 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.5 ℃
Test Date:	10/08/2024
Band:	LTE FDD Band 2 _MAIN1 ANT.

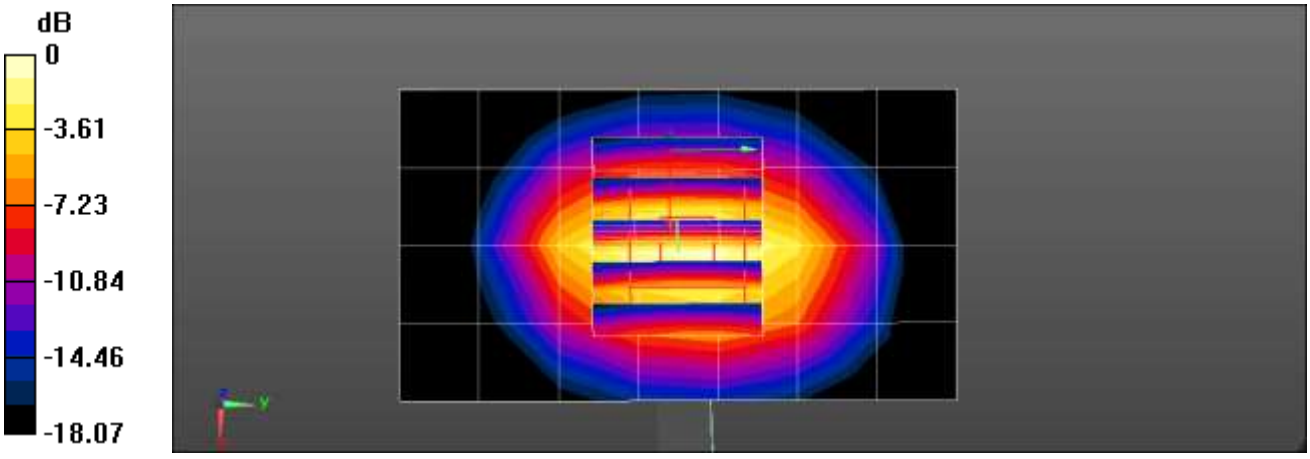
Communication System: UID 0, CW (0); Frequency: 1900 MHz;Duty Cycle: 1:1
Medium parameters used: f = 1900 MHz; σ = 1.351 S/m; ε_r = 40.637; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7680; ConvF(7.5, 8.17, 8.31) @ 1900 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn1686; Calibrated: 2024-06-19
- Phantom: Twin-SAM V5.0 (30deg probe tilt); Type: QD 000 P40 CD; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

1900MHz Head Verification/Area Scan (5x8x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.70 W/kg

1900MHz Head Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 48.56 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 3.46 W/kg
SAR(1 g) = 1.93 W/kg; SAR(10 g) = 1.01 W/kg
Smallest distance from peaks to all points 3 dB below = 9.6 mm
Ratio of SAR at M2 to SAR at M1 = 55.6%
Maximum value of SAR (measured) = 2.94 W/kg



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

■ Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.0 ℃
Test Date:	10/21/2024
Band:	2.4 ㎓ WLAN Head

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN:743

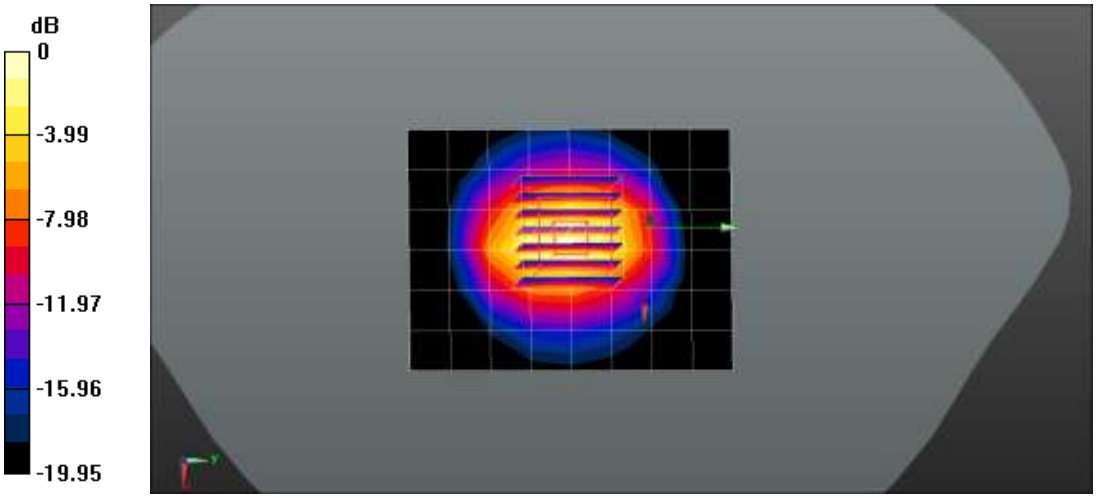
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.796 S/m; ε_r = 39.007; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.25, 7.78, 7.45) @ 2450 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

2450MHz Head Verification/Area Scan (7x9x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.08 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 50.65 V/m; Power Drift = -0.09 dB
Peak SAR (extrapolated) = 5.14 W/kg
SAR(1 g) = 2.74 W/kg; SAR(10 g) = 1.34 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 54.1%
Maximum value of SAR (measured) = 4.29 W/kg



0 dB = 4.29 W/kg = 6.32 dBW/kg

■ Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.8 ℃
Test Date:	10/22/2024
Band:	2.4 ㎓ WLAN Body

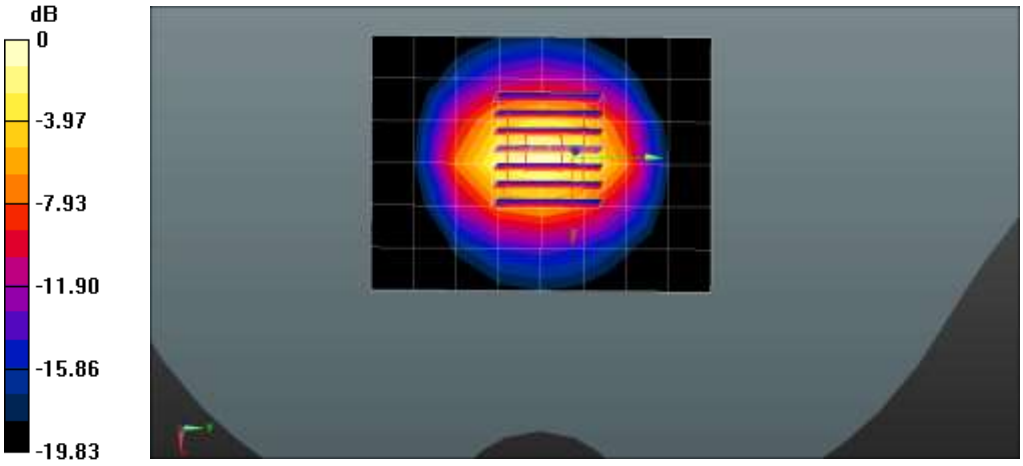
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.796 S/m; ε_r = 38.705; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.25, 7.78, 7.45) @ 2450 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

2450MHz Head Verification/Area Scan (7x9x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 3.90 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 49.43 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 4.82 W/kg
SAR(1 g) = 2.56 W/kg; SAR(10 g) = 1.25 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 53.7%
Maximum value of SAR (measured) = 4.05 W/kg



0 dB = 4.05 W/kg = 6.07 dBW/kg

■ Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.7 ℃
Test Date:	10/15/2024
Band:	Bluetooth Head

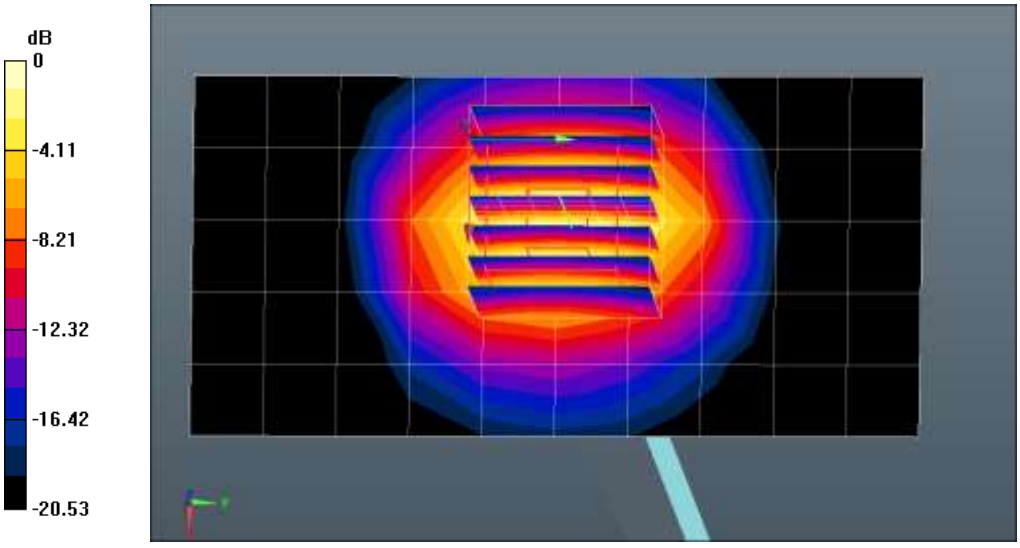
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.834 S/m; ε_r = 39.215; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.25, 7.78, 7.45) @ 2450 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

2450MHz Head Verification/Area Scan (6x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.26 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 46.75 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 5.15 W/kg
SAR(1 g) = 2.74 W/kg; SAR(10 g) = 1.33 W/kg
Smallest distance from peaks to all points 3 dB below = 9 mm
Ratio of SAR at M2 to SAR at M1 = 53.8%
Maximum value of SAR (measured) = 4.34 W/kg



0 dB = 4.34 W/kg = 6.37 dBW/kg

■ Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.4 ℃
Test Date:	10/16/2024
Band:	Bluetooth Body

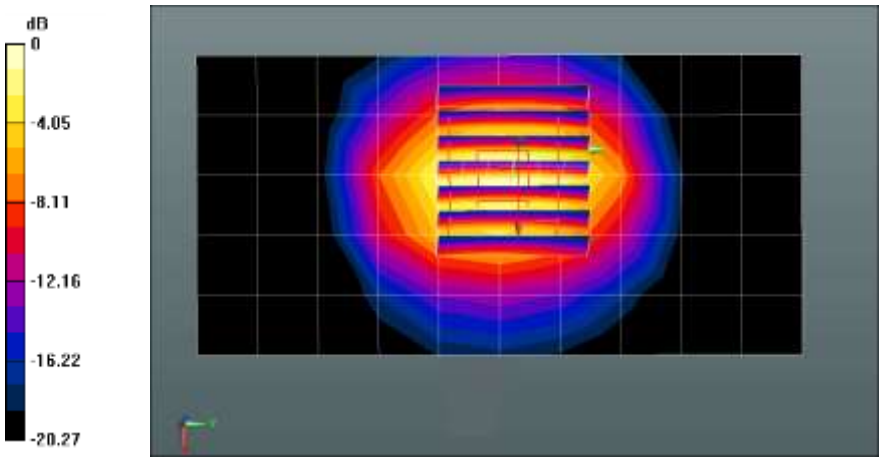
Communication System: UID 0, CW (0); Frequency: 2450 MHz;Duty Cycle: 1:1
Medium parameters used: f = 2450 MHz; σ = 1.856 S/m; ε_r = 39.381; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: EX3DV4 - SN7655; ConvF(7.25, 7.78, 7.45) @ 2450 MHz; Calibrated: 2024-05-28
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn652; Calibrated: 2024-01-17
- Phantom: SAM_Front_2011217; Type: QD000P40CB; Serial: 1514
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

2450MHz Head Verification/Area Scan (6x11x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.31 W/kg

2450MHz Head Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 46.61 V/m; Power Drift = 0.07 dB
Peak SAR (extrapolated) = 5.25 W/kg
SAR(1 g) = 2.77 W/kg; SAR(10 g) = 1.34 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 53.5%
Maximum value of SAR (measured) = 4.40 W/kg



0 dB = 4.40 W/kg = 6.43 dBW/kg

■ Verification Data (2 450 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	20.9 ℃
Test Date:	11/27/2024
Band:	Bluetooth Fast Volume

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	2450.000, 0	6.75	1.82	39.6

Hardware Setup

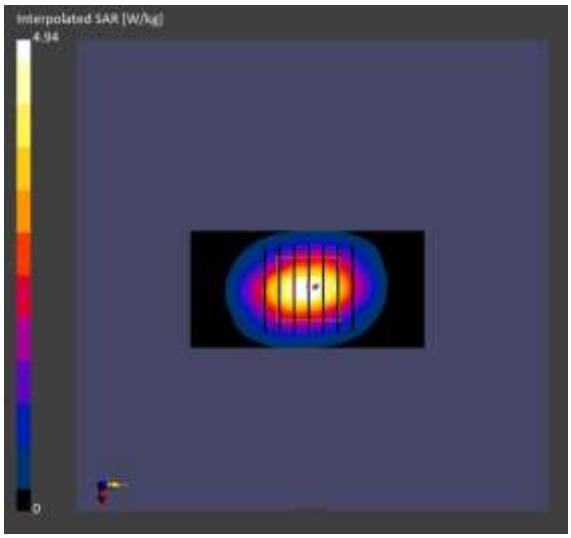
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.44	2.48
psSAR10g [W/Kg]	1.12	1.18
Power Drift [dB]	0.00	-0.01
M2/M1 [%]		80.8
Dist 3dB Peak [mm]		9.0



■ Verification Data (2 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.4 ℃
Test Date: 11/18/2024
Band: LTE TDD Band 41 (PC3) _MAIN2 ANT.
Measurement Report for Device, , , CW, Channel 0 (2600.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	2600.000, 0	6.64	2.04	38.7

Hardware Setup

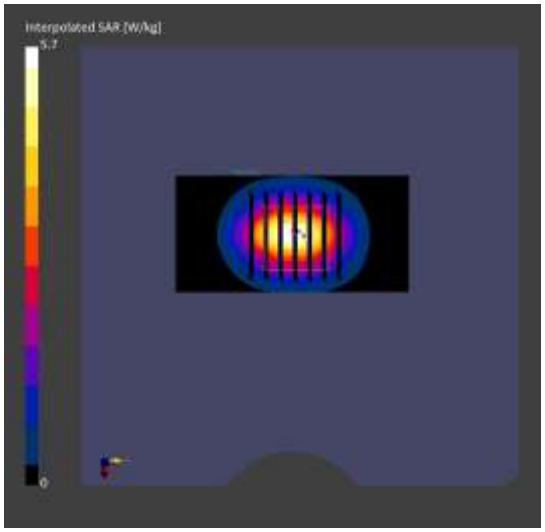
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.75	2.79
psSAR10g [W/Kg]	1.22	1.27
Power Drift [dB]	-0.05	-0.01
M2/M1 [%]		81.1
Dist 3dB Peak [mm]		9.0



■ Verification Data (2 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.8 ℃
Test Date: 11/21/2024
Band: LTE TDD Band 41 (PC3) _SUB2 ANT.
Measurement Report for Device, , , CW, Channel 0 (2600.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	2600.000, 0	6.64	2.02	38.5

Hardware Setup

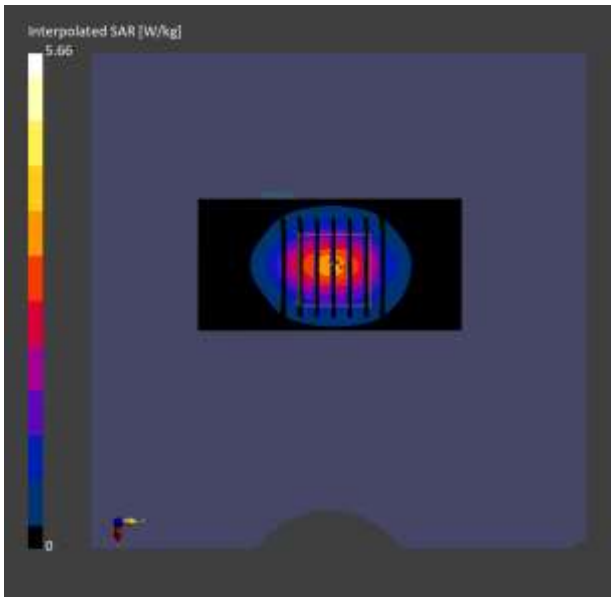
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.72	2.75
psSAR10g [W/Kg]	1.20	1.25
Power Drift [dB]	-0.03	-0.07
M2/M1 [%]		80.5
Dist 3dB Peak [mm]		8.6



■ Verification Data (2 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.4 ℃
Test Date: 11/19/2024
Band: NR FDD Band n41_ MAIN2 ANT.
Measurement Report for Device, , , CW, Channel 0 (2600.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	2600.000, 0	6.64	2.04	38.4

Hardware Setup

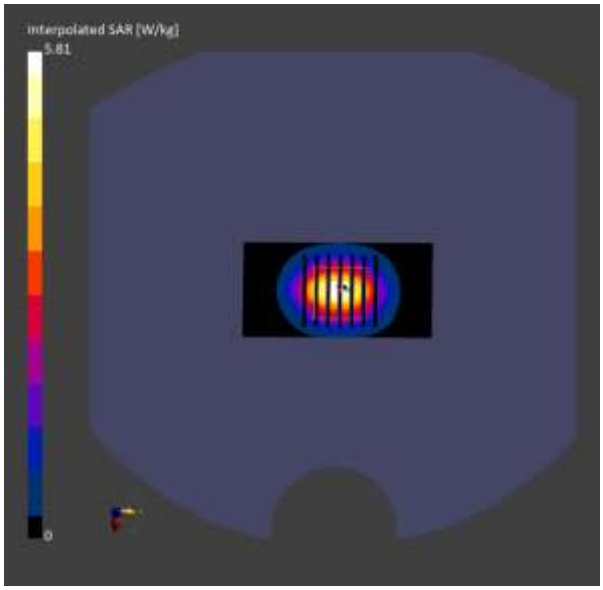
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.74	2.82
psSAR10g [W/Kg]	1.22	1.29
Power Drift [dB]	0.04	-0.05
M2/M1 [%]		80.8
Dist 3dB Peak [mm]		8.6



■ Verification Data (2 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.9 ℃
Test Date: 11/20/2024
Band: NR FDD Band n41_SUB2 ANT.

Measurement Report for Device, , , CW, Channel 0 (2600.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	2600.000, 0	6.64	2.05	38.5

Hardware Setup

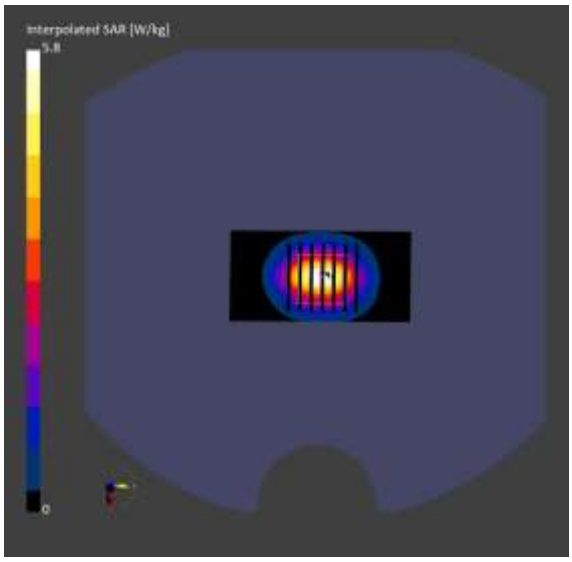
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.82	2.85
psSAR10g [W/Kg]	1.25	1.31
Power Drift [dB]	-0.08	-0.04
M2/M1 [%]		81.0
Dist 3dB Peak [mm]		9.0



■ Verification Data (2 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 20.9 ℃
Test Date: 11/27/2024
Band: LTE 41 Fast Volume

Measurement Report for Device, , , CW, Channel 0 (2600.000 MHz)
Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	2600.000, 0	6.64	2.01	38.9

Hardware Setup

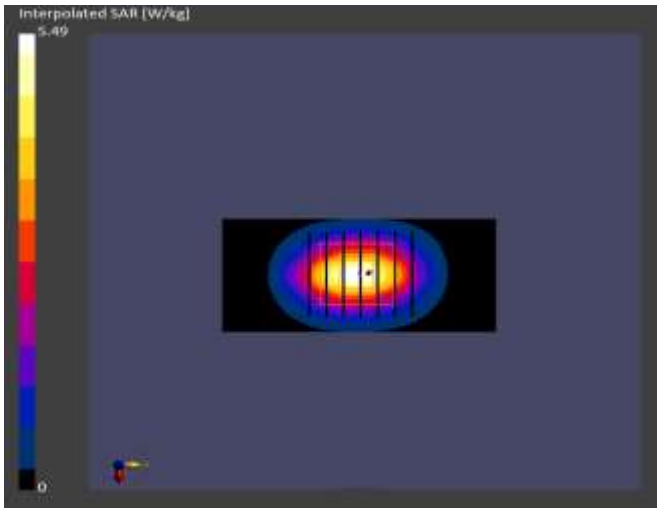
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7751, 2024-09-19	DAE4ip Sn1866, 2024-05-02

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.70	2.71
psSAR10g [W/Kg]	1.19	1.24
Power Drift [dB]	-0.01	-0.01
M2/M1 [%]		81.1
Dist 3dB Peak [mm]		9.0



■ Verification Data (5 250 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.4 ℃
Test Date: 10/17/2024
Band U-NII-2A Head Ant.1
Measurement Report for Device, , , CW, Channel 0 (5250.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5250.0, 0	6.07	4.69	37.0

Hardware Setup

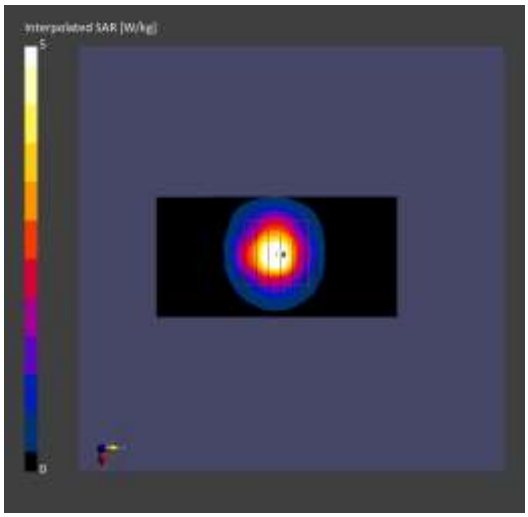
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.73	3.90
psSAR10g [W/Kg]	1.07	1.11
Power Drift [dB]	-0.01	-0.03
M2/M1 [%]		63.7
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.4 ℃
Test Date: 10/17/2024
Band U-NII-2C Head Ant.1

Measurement Report for Device, , , CW, Channel 0 (5600.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5600.0, 0	5.33	4.99	36.7

Hardware Setup

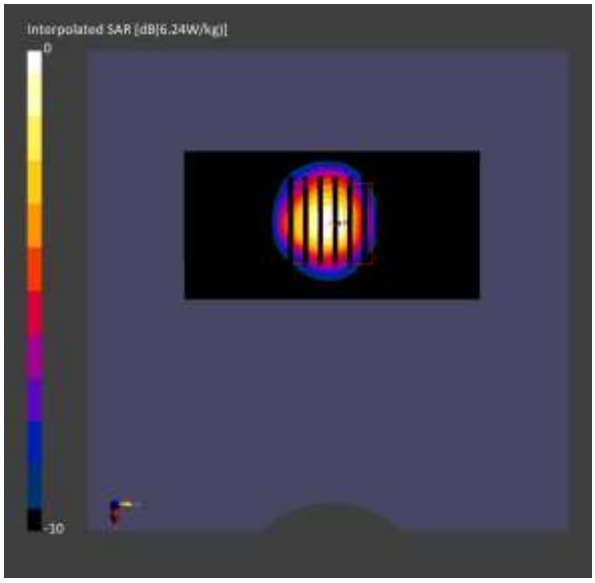
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.94	4.16
psSAR10g [W/Kg]	1.11	1.16
Power Drift [dB]	0.02	0.00
M2/M1 [%]		61.8
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.4 ℃
Test Date: 10/17/2024
Band U-NII-3 Head Ant.1

Measurement Report for Device, , , CW, Channel 0 (5750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5750.0, 0	5.35	5.21	36.6

Hardware Setup

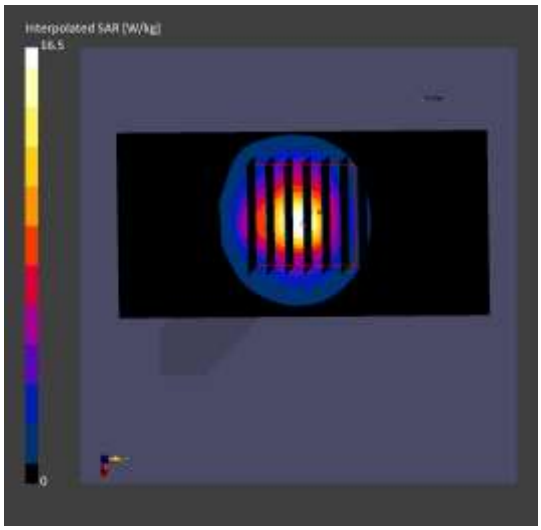
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.60	3.77
psSAR10g [W/Kg]	1.03	1.06
Power Drift [dB]	0.00	-0.02
M2/M1 [%]		60.7
Dist 3dB Peak [mm]		7.2



■ Verification Data (5 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.4 ℃
Test Date: 10/17/2024
Band: U-NII-4 Head Ant.1

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

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5800.0, 0	5.32	5.16	36.6

Hardware Setup

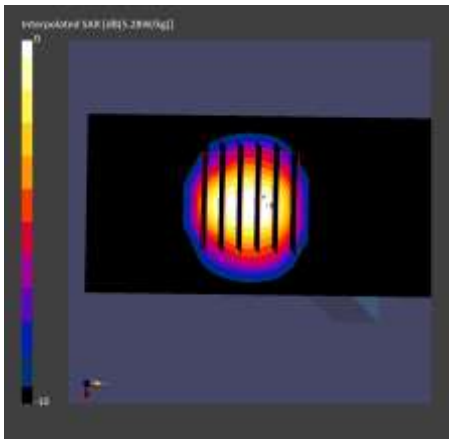
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.65	4.08
psSAR10g [W/Kg]	1.06	1.11
Power Drift [dB]	0.01	-0.00
M2/M1 [%]		56.9
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 250 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/18/2024
Band U-NII-2A Head Ant.2
Measurement Report for Device, , , CW, Channel 0 (5250.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5250.0, 0	6.07	4.70	37.0

Hardware Setup

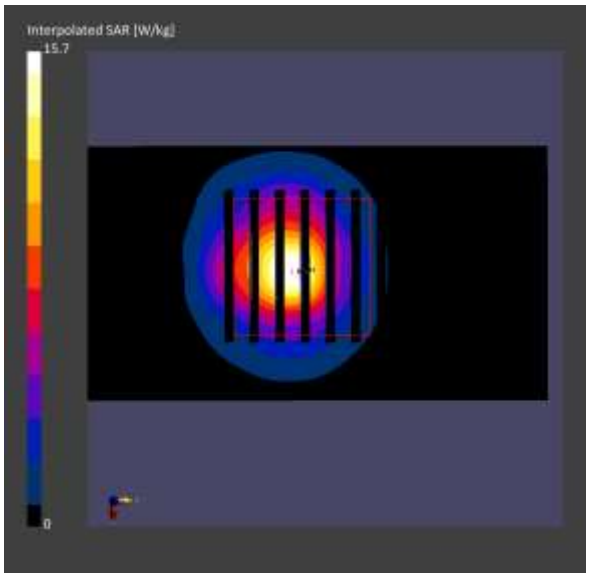
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.66	3.85
psSAR10g [W/Kg]	1.05	1.08
Power Drift [dB]	0.02	-0.00
M2/M1 [%]		63.8
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/18/2024
Band U-NII-2C Head Ant.2
Measurement Report for Device, , , CW, Channel 0 (5600.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5600.0, 0	5.33	4.99	36.7

Hardware Setup

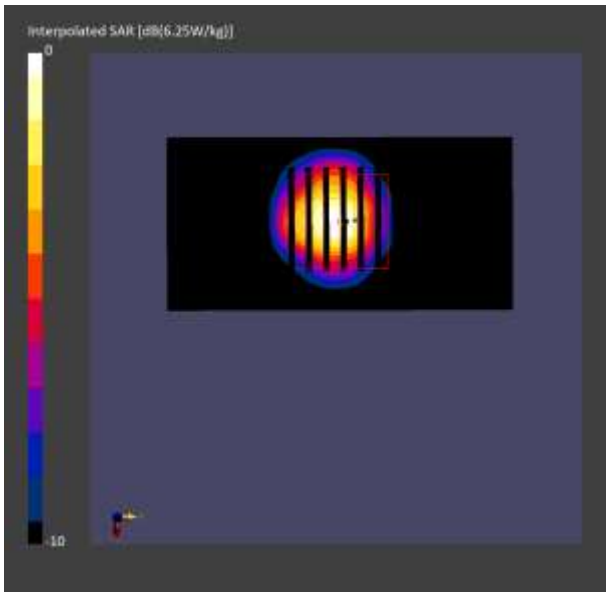
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.95	4.15
psSAR10g [W/Kg]	1.12	1.15
Power Drift [dB]	0.01	0.01
M2/M1 [%]		61.7
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/18/2024
Band U-NII-3 Head Ant.2
Measurement Report for Device, , , CW, Channel 0 (5750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5750.0, 0	5.35	5.21	36.6

Hardware Setup

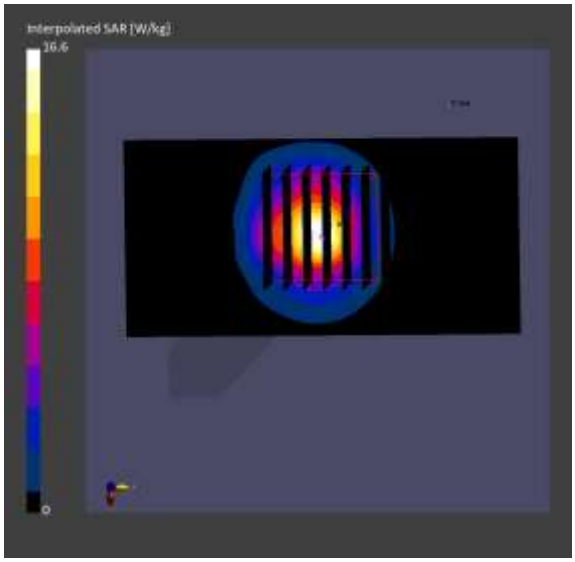
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.57	3.79
psSAR10g [W/Kg]	1.02	1.06
Power Drift [dB]	0.00	0.00
M2/M1 [%]		60.4
Dist 3dB Peak [mm]		7.2



■ Verification Data (5 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/18/2024
Band: U-NII-4 Head Ant.2
Measurement Report for Device, , , CW, Channel 0 (5800.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5800.0, 0	5.32	5.17	36.6

Hardware Setup

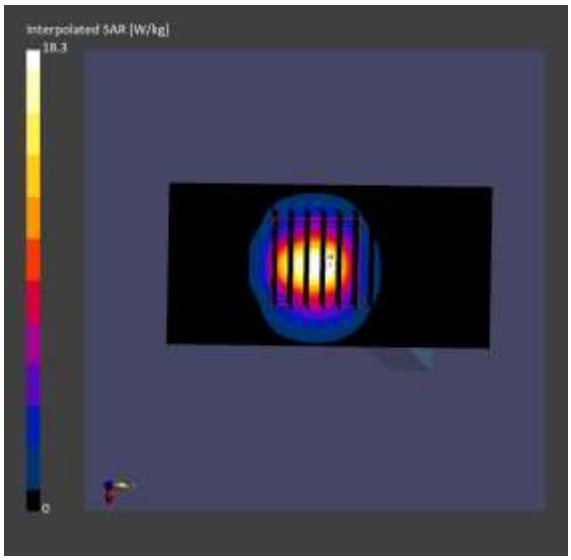
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.65	4.08
psSAR10g [W/Kg]	1.06	1.12
Power Drift [dB]	0.01	-0.00
M2/M1 [%]		56.8
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 250 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/21/2024
Band U-NII-2A Head MIMO

Measurement Report for Device, , , CW, Channel 0 (5250.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5250.0, 0	6.07	4.65	36.8

Hardware Setup

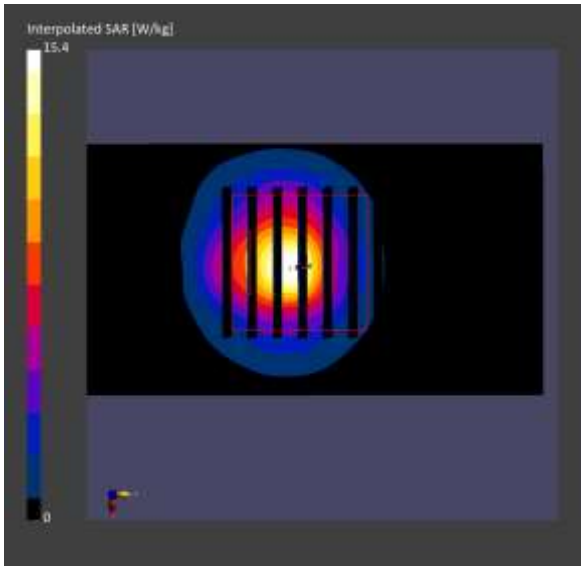
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.61	3.81
psSAR10g [W/Kg]	1.04	1.07
Power Drift [dB]	-0.01	0.00
M2/M1 [%]		63.9
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/21/2024
Band U-NII-2C Head MIMO
Measurement Report for Device, , , CW, Channel 0 (5600.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5600.0, 0	5.33	4.94	36.5

Hardware Setup

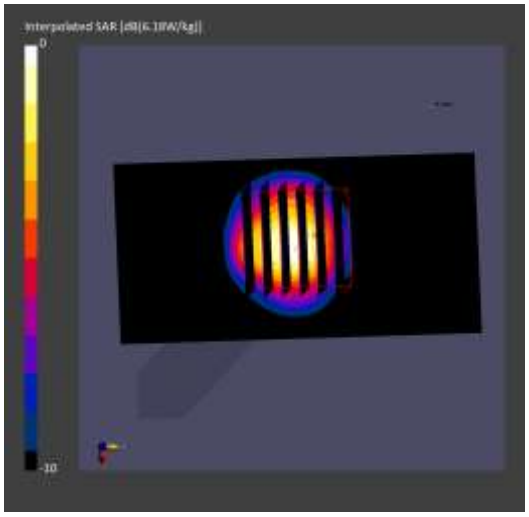
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.90	4.09
psSAR10g [W/Kg]	1.10	1.14
Power Drift [dB]	0.02	0.00
M2/M1 [%]		62.0
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/21/2024
Band U-NII-3 Head MIMO
Measurement Report for Device, , , CW, Channel 0 (5750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5750.0, 0	5.35	5.15	36.4

Hardware Setup

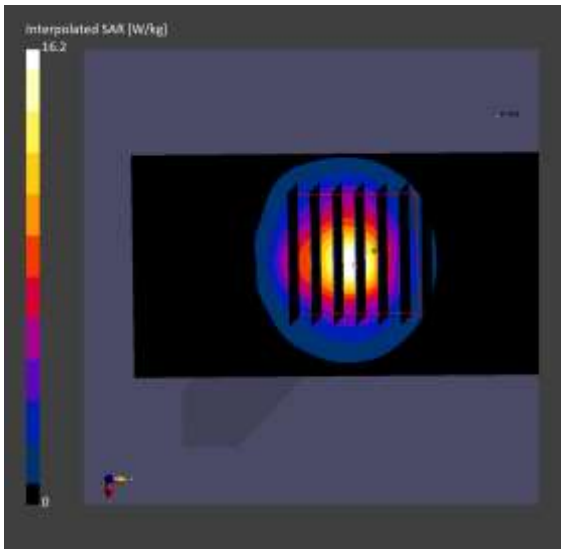
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.55	3.72
psSAR10g [W/Kg]	1.02	1.04
Power Drift [dB]	0.01	0.01
M2/M1 [%]		60.8
Dist 3dB Peak [mm]		7.2



■ Verification Data (5 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/21/2024
Band: U-NII-4 Head MIMO

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

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5800.0, 0	5.32	5.11	36.4

Hardware Setup

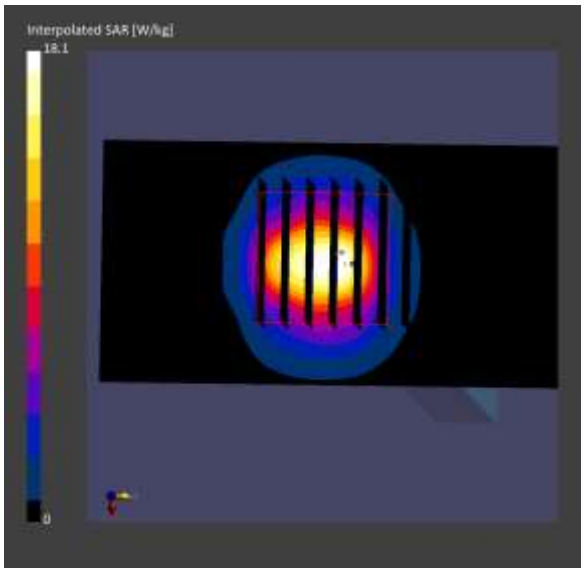
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.62	4.06
psSAR10g [W/Kg]	1.05	1.11
Power Drift [dB]	-0.00	-0.01
M2/M1 [%]		56.9
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 250 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 10/22/2024
Band U-NII-2A Body Ant.1
Measurement Report for Device, , , CW, Channel 0 (5250.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5250.0, 0	6.07	4.70	37.0

Hardware Setup

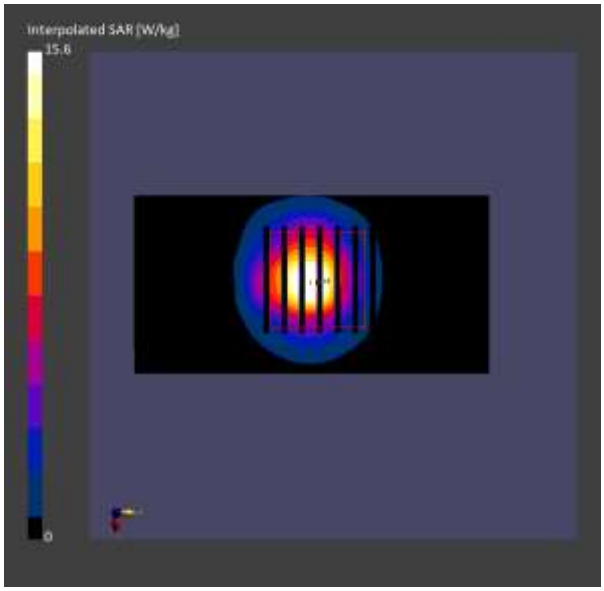
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.66	3.86
psSAR10g [W/Kg]	1.04	1.09
Power Drift [dB]	0.01	0.01
M2/M1 [%]		63.9
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 10/22/2024
Band U-NII-2C Body Ant.1
Measurement Report for Device, , , CW, Channel 0 (5600.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5600.0, 0	5.33	5.00	36.7

Hardware Setup

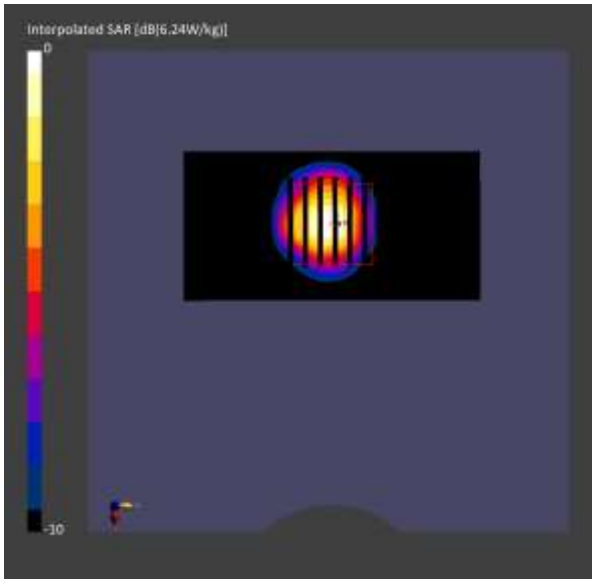
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.94	4.16
psSAR10g [W/Kg]	1.11	1.15
Power Drift [dB]	-0.01	-0.00
M2/M1 [%]		61.7
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 10/22/2024
Band U-NII-3 Body Ant.1
Measurement Report for Device, , , CW, Channel 0 (5750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5750.0, 0	5.35	5.21	36.6

Hardware Setup

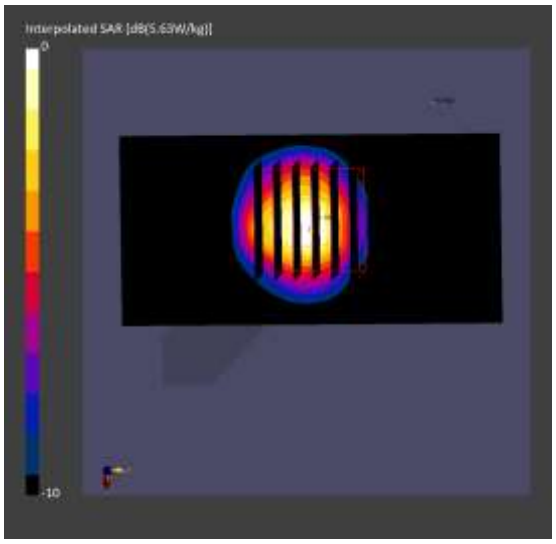
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.60	3.75
psSAR10g [W/Kg]	1.03	1.05
Power Drift [dB]	0.00	0.00
M2/M1 [%]		60.9
Dist 3dB Peak [mm]		7.2



■ Verification Data (5 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.1 ℃
Test Date: 10/22/2024
Band: U-NII-4 Body Ant.1
Measurement Report for Device, , , CW, Channel 0 (5800.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5800.0, 0	5.32	5.17	36.6

Hardware Setup

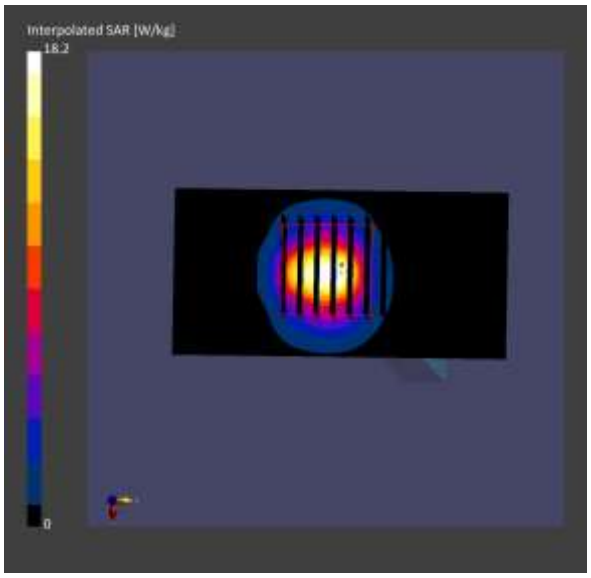
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.65	4.08
psSAR10g [W/Kg]	1.06	1.12
Power Drift [dB]	0.01	-0.00
M2/M1 [%]		57.0
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 250 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.5 ℃
Test Date: 10/23/2024
Band U-NII-2A Body Ant.2
Measurement Report for Device, , , CW, Channel 0 (5250.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5250.0, 0	6.07	4.71	37.0

Hardware Setup

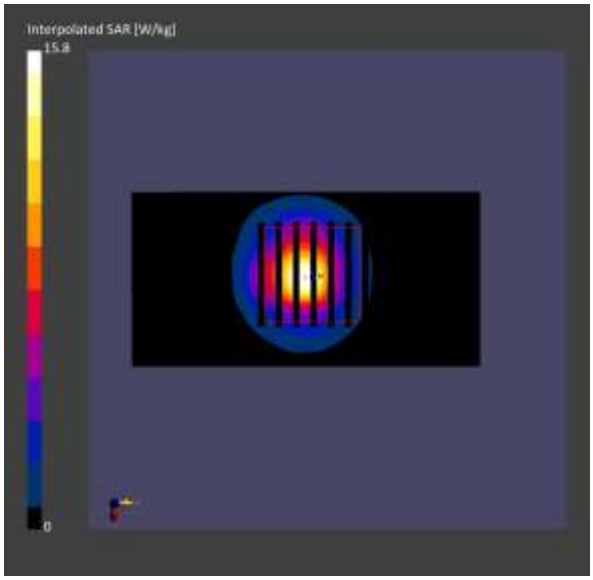
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.66	3.88
psSAR10g [W/Kg]	1.04	1.10
Power Drift [dB]	-0.01	0.01
M2/M1 [%]		63.4
Dist 3dB Peak [mm]		6.8



■ Verification Data (5 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.5 ℃
Test Date: 10/23/2024
Band U-NII-2C Body Ant.2
Measurement Report for Device, , , CW, Channel 0 (5600.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5600.0, 0	5.33	5.01	36.7

Hardware Setup

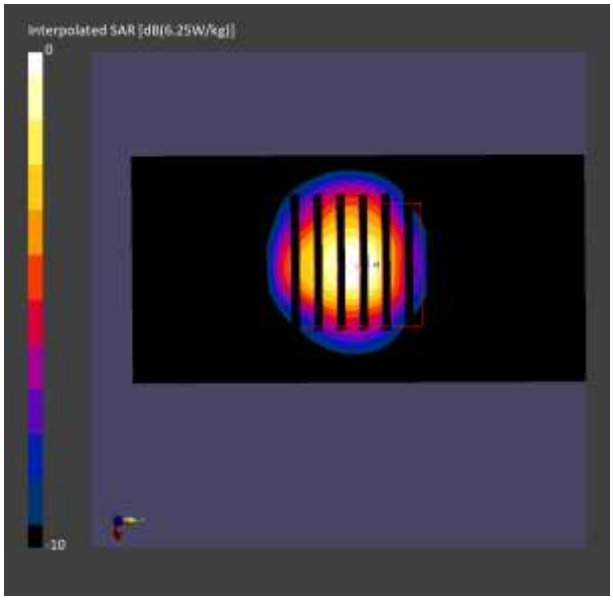
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.94	4.16
psSAR10g [W/Kg]	1.11	1.15
Power Drift [dB]	-0.00	-0.01
M2/M1 [%]		61.9
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.5 ℃
Test Date: 10/23/2024
Band U-NII-3 Body Ant.2
Measurement Report for Device, , , CW, Channel 0 (5750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5750.0, 0	5.35	5.22	36.5

Hardware Setup

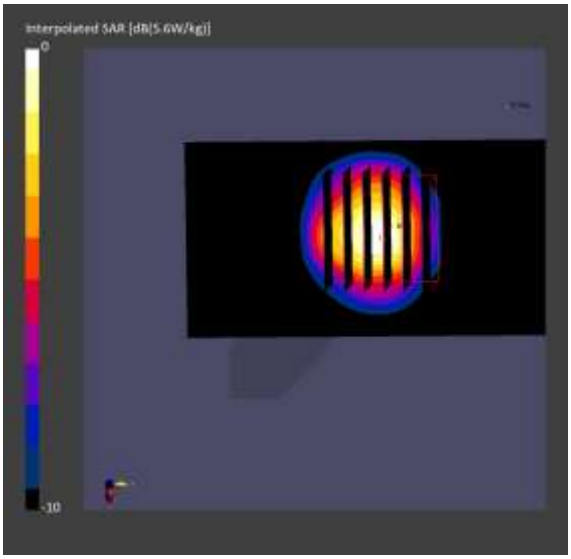
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.58	3.81
psSAR10g [W/Kg]	1.02	1.07
Power Drift [dB]	-0.00	0.01
M2/M1 [%]		60.4
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 21.5 ℃
Test Date: 10/23/2024
Band: U-NII-4 Body Ant.2
Measurement Report for Device, , , CW, Channel 0 (5800.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5800.0, 0	5.32	5.18	36.5

Hardware Setup

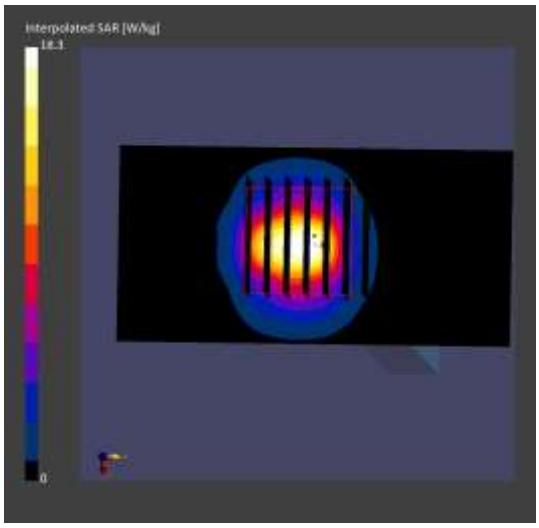
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.67	4.10
psSAR10g [W/Kg]	1.06	1.12
Power Drift [dB]	0.01	0.03
M2/M1 [%]		57.2
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 250 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/24/2024
Band U-NII-2A Body MIMO
Measurement Report for Device, , , CW, Channel 0 (5250.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5250.0, 0	6.07	4.68	36.7

Hardware Setup

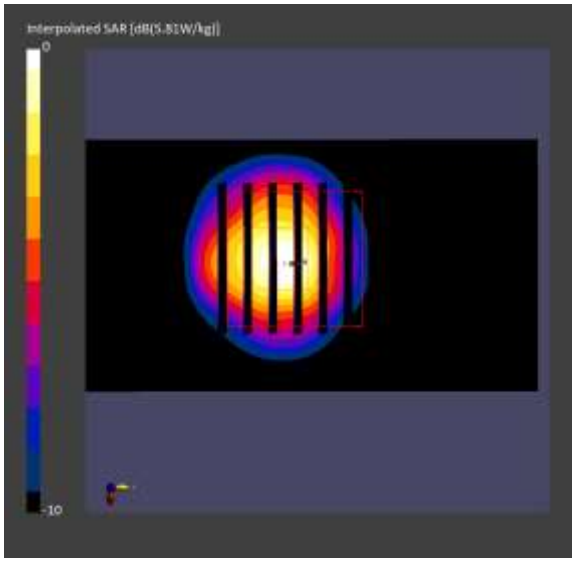
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.62	3.85
psSAR10g [W/Kg]	1.04	1.08
Power Drift [dB]	-0.00	-0.02
M2/M1 [%]		63.7
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 600 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/24/2024
Band U-NII-2C Body MIMO
Measurement Report for Device, , , CW, Channel 0 (5600.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5600.0, 0	5.33	4.98	36.4

Hardware Setup

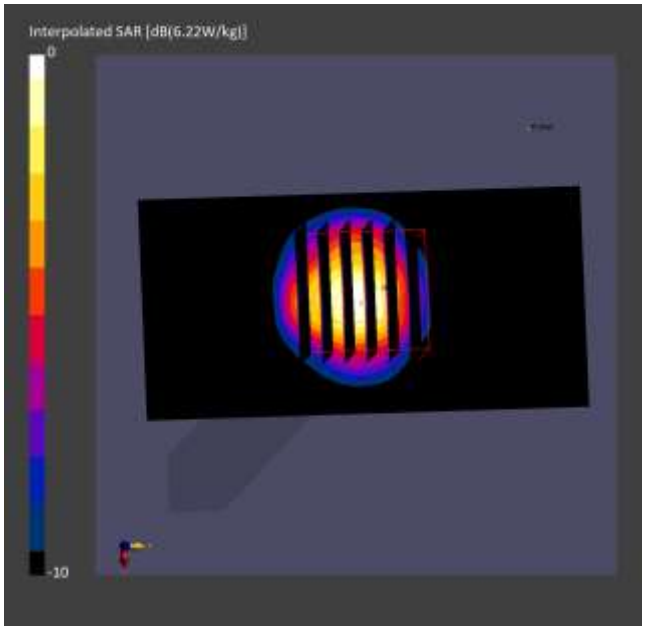
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.93	4.14
psSAR10g [W/Kg]	1.11	1.15
Power Drift [dB]	0.00	0.00
M2/M1 [%]		62.0
Dist 3dB Peak [mm]		6.8



■ Verification Data (5 750 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/24/2024
Band U-NII-3 Body MIMO
Measurement Report for Device, , , CW, Channel 0 (5750.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5750.0, 0	5.35	5.19	36.3

Hardware Setup

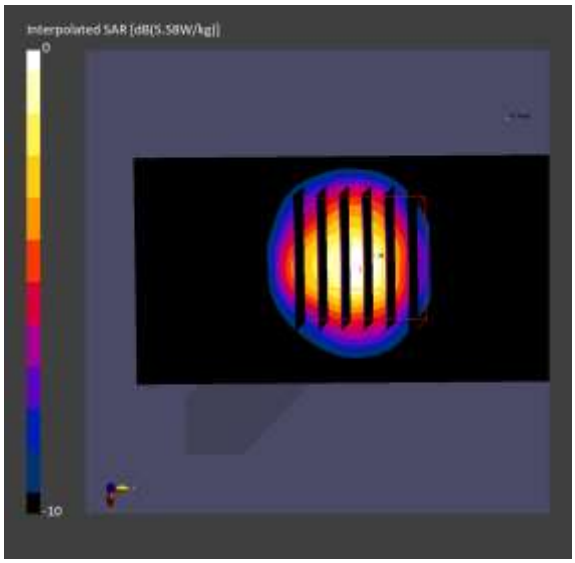
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.57	3.78
psSAR10g [W/Kg]	1.02	1.06
Power Drift [dB]	0.01	0.02
M2/M1 [%]		60.5
Dist 3dB Peak [mm]		6.9



■ Verification Data (5 800 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.05 W
Liquid Temp: 22.0 ℃
Test Date: 10/24/2024
Band: U-NII-4 Body MIMO
Measurement Report for Device, , , CW, Channel 0 (5800.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	5800.0, 0	5.32	5.15	36.3

Hardware Setup

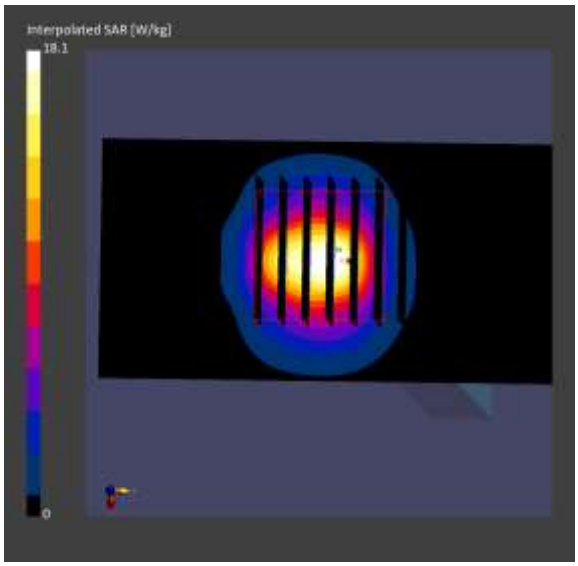
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7654, 2024-05-22	DAE4 Sn1417, 2024-02-16

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.64	4.07
psSAR10g [W/Kg]	1.05	1.12
Power Drift [dB]	0.00	0.01
M2/M1 [%]		57.1
Dist 3dB Peak [mm]		6.8



■ Verification Data (6 500 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.01 W
Liquid Temp: 19.4 ℃
Test Date: 10/25/2024
Band: 6 ㎓ WLAN Ant.1
Measurement Report for Device, , , CW, Channel 0 (6500.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	6500.000, 0	5.56	6.03	34.4

Hardware Setup

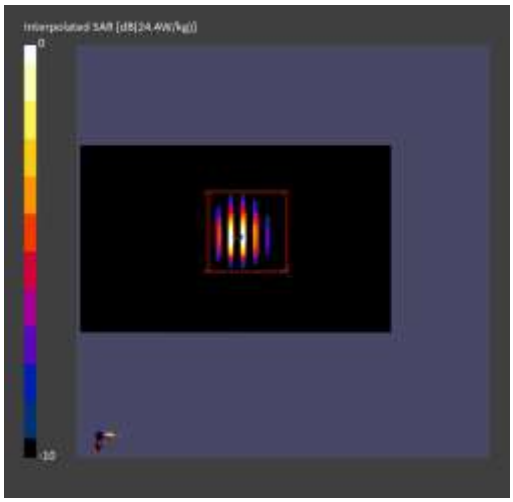
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7681, 2023-11-27	DAE4 Sn780, 2024-06-19

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	12.4	14.8
psSAR10g [W/Kg]	2.40	2.66
Power Drift [dB]	-0.01	-0.01
M2/M1 [%]		51.1
Dist 3dB Peak [mm]		4.8



■ Verification Data (6 500 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.01 W
Liquid Temp: 19.7 ℃
Test Date: 10/28/2024
Band: 6 ㎓ WLAN Ant.2

Measurement Report for Device, , , CW, Channel 0 (6500.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	6500.000, 0	5.56	6.01	34.3

Hardware Setup

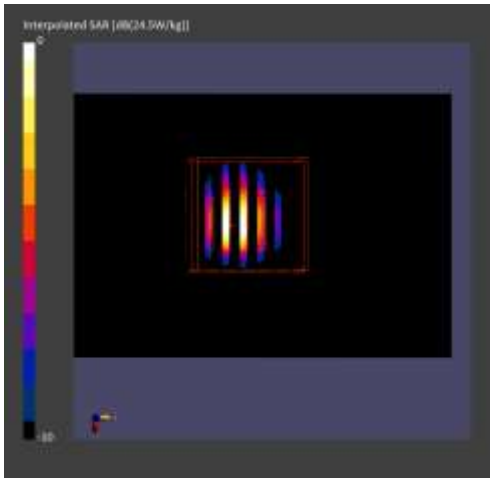
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7681, 2023-11-27	DAE4 Sn780, 2024-06-19

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	12.5	14.8
psSAR10g [W/Kg]	2.40	2.66
Power Drift [dB]	-0.00	-0.01
M2/M1 [%]		51.0
Dist 3dB Peak [mm]		4.8



■ Verification Data (6 500 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.01 W
Liquid Temp: 20.2 ℃
Test Date: 10/29/2024
Band: 6 ㎓ WLAN MIMO
Measurement Report for Device, , , CW, Channel 0 (6500.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	,		CW, 0--	6500.000, 0	5.56	6.05	34.4

Hardware Setup

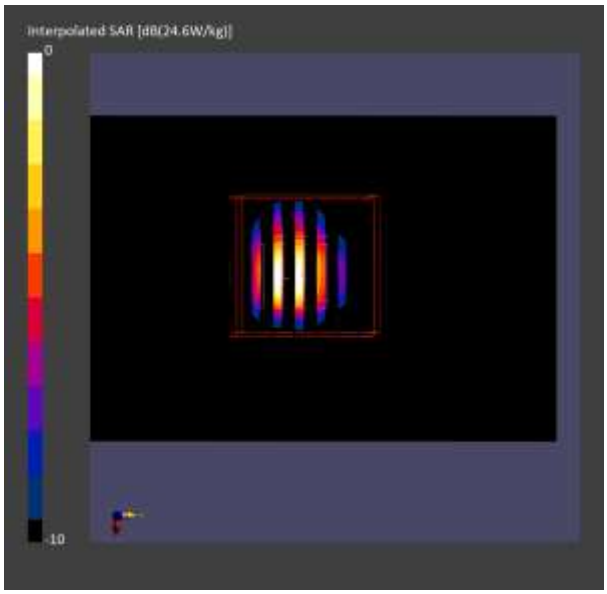
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V4.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7681, 2023-11-27	DAE4 Sn780, 2024-06-19

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
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	12.5	14.9
psSAR10g [W/Kg]	2.41	2.69
Power Drift [dB]	0.00	-0.01
M2/M1 [%]		51.0
Dist 3dB Peak [mm]		4.8



■ Verification Data (6 500 ㎒ Head)

Test Laboratory: HCT CO., LTD
Input Power 0.01 W
Liquid Temp: 19.6 ℃
Test Date: 10/22/2024
Band: 6 ㎓ WLAN VLP

Measurement Report for Device, , , CW, Channel 0 (6500.000 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, Head Simulating Liquid	,		CW, 0--	6500.000, 0	5.75	5.95	34.1

Hardware Setup

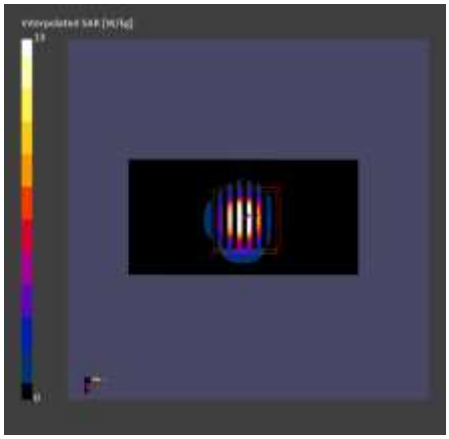
Phantom	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - xxxx	EX3DV4 - SN7679, 2024-08-22	DAE4 Sn504, 2024-01-30

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	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/kg]	13.5	14.8
psSAR10g [W/kg]	2.60	2.83
psAPD (1.0cm2, sq) [W/m2]		148
psAPD (4.0cm2, sq) [W/m2]		68.5
Power Drift [dB]	-0.04	-0.01
M2/M1 [%]		53.8
Dist 3dB Peak [mm]		4.8



◆ Extremity SAR

■ Verification Data (13 ㎒ Head)

Test Laboratory:	HCT CO., LTD
Input Power	0.05 W
Liquid Temp:	22.2 ℃
Test Date:	10/07/2024
Band:	NFC

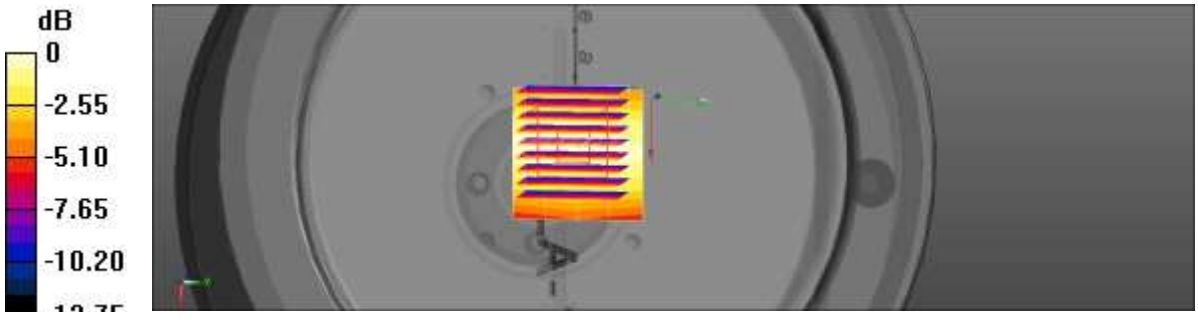
Communication System: UID 0, NFC (0); Frequency: 13 MHz;Duty Cycle: 1:1
Medium parameters used: f = 13 MHz; σ = 0.735 S/m; ε_r = 54.519; ρ = 1000 kg/m^3
Phantom section: Flat Section

DASY5 Configuration:

- Probe: ES3DV3 - SN3076; ConvF(5.39, 5.7, 6.16) @ 13 MHz; Calibrated: 2024-07-17
- Sensor-Surface: 3mm (Mechanical Surface Detection)
- Electronics: DAE4 Sn869; Calibrated: 2024-03-15
- Phantom: ELI V8.0 (20deg probe tilt); Type: QD OVA 004 Ax; Serial: xxxx
- Measurement SW: DASY52, Version 52.10 (3); SEMCAD X Version 14.6.13 (7474)

13MHz Head Verification/Area Scan (5x5x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.0343 W/kg

13MHz Head Verification/Zoom Scan (9x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 6.758 V/m; Power Drift = 0.10 dB
Peak SAR (extrapolated) = 0.0590 W/kg
SAR(1 g) = 0.030 W/kg; SAR(10 g) = 0.018 W/kg
Ratio of SAR at M2 to SAR at M1 = 83.3%
Maximum value of SAR (measured) = 0.0350 W/kg



0 dB = 0.0350 W/kg = -14.56 dBW/kg

◆ Power Density

■ Verification Data (10 GHz)

Test Laboratory: HCT CO., LTD
Input Power 0.01 W
Amb. Temp: 18.8 ℃
Test Date: 10/16/2024
Band: 6 GHz WLAN Power Density Ant.1

Measurement Report for Device, FRONT, Validation band, CW, Channel 10000 (10000.0 MHz)

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	FRONT, 10.00	Validation band	CW, 0--	10000.0, 10000	1.0

Hardware Setup

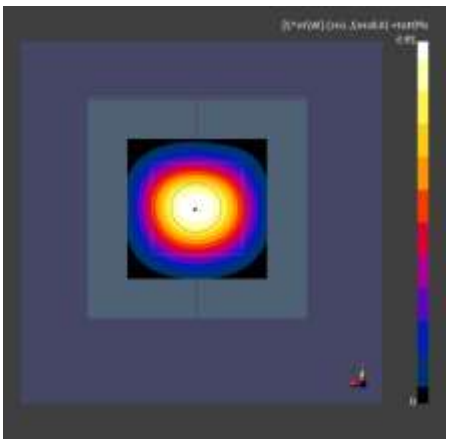
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave - xxxx	Air -	EUmmWV4 - SN9528_F1-55GHz, 2024-05-17	DAE4 Sn446, 2023-11-16

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.125 x 0.125
Sensor Surface [mm]	10.0

Measurement Results

Scan Type	5G Scan
Avg. Area [cm^2]	4.00
psPDn+ [W/m^2]	29.0
psPDtot+ [W/m^2]	29.5
psPDmod+ [W/m^2]	29.6
E_{max} [V/m]	109
Power Drift [dB]	-0.02



■ Verification Data (10 GHz)

Test Laboratory: HCT CO., LTD
Input Power 0.01 W
Amb Temp: 19.3 ℃
Test Date: 10/17/2024
Band: 6 GHz WLAN Power Density Ant.2
Measurement Report for Device, FRONT, Validation band, CW, Channel 10000 (10000.0 MHz)

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	FRONT, 10.00	Validation band	CW, 0--	10000.0, 10000	1.0

Hardware Setup

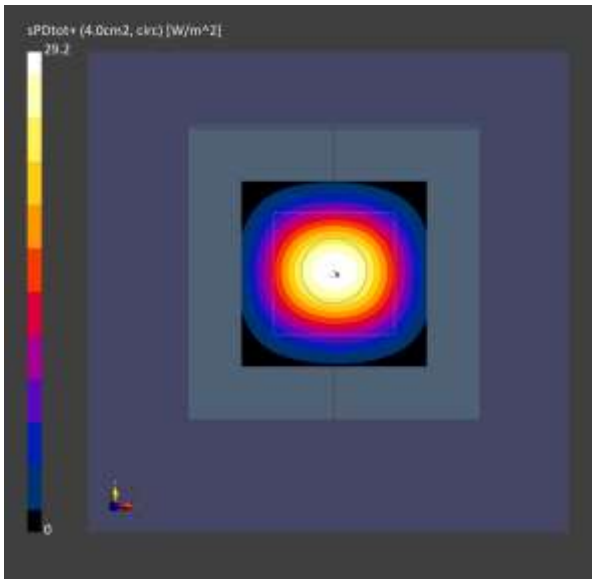
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave - xxxx	Air -	EUmmWV4 - SN9528_F1-55GHz, 2024-05-17	DAE4 Sn446, 2023-11-16

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.125 x 0.125
Sensor Surface [mm]	10.0

Measurement Results

Scan Type	5G Scan
Avg. Area [cm^2]	4.00
psPDn+ [W/m^2]	29.0
psPDtot+ [W/m^2]	29.2
psPDmod+ [W/m^2]	29.3
E_{max} [V/m]	109
Power Drift [dB]	0.02



■ Verification Data (10 GHz)

Test Laboratory: HCT CO., LTD
Input Power 0.01 W
Amb Temp: 20.0 ℃
Test Date: 10/18/2024
Band: 6 GHz WLAN Power Density MIMO
Measurement Report for Device, FRONT, Validation band, CW, Channel 10000 (10000.0 MHz)

Exposure Conditions

Phantom Section	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz], Channel Number	Conversion Factor
5G	FRONT, 10.00	Validation band	CW, 0--	10000.0, 10000	1.0

Hardware Setup

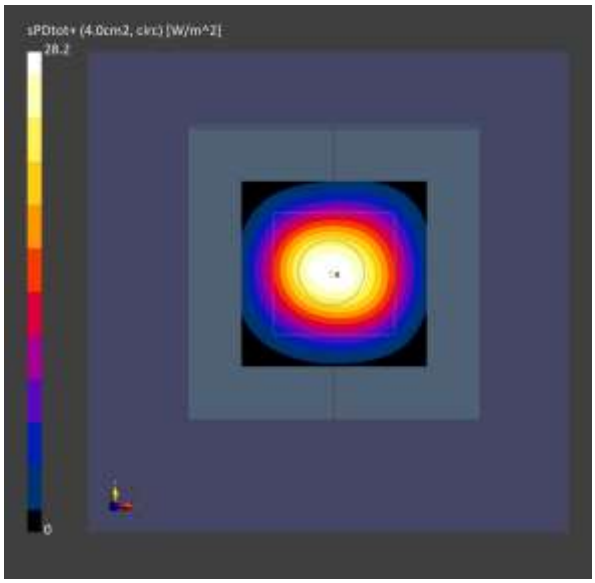
Phantom	Medium	Probe, Calibration Date	DAE, Calibration Date
mmWave - xxxx	Air -	EUmmWV4 - SN9528_F1-55GHz, 2024-05-17	DAE4 Sn446, 2023-11-16

Scans Setup

Scan Type	5G Scan
Grid Extents [mm]	60.0 x 60.0
Grid Steps [lambda]	0.125 x 0.125
Sensor Surface [mm]	10.0

Measurement Results

Scan Type	5G Scan
Avg. Area [cm^2]	4.00
psPDn+ [W/m^2]	28.1
psPDtot+ [W/m^2]	28.2
psPDmod+ [W/m^2]	28.4
E_{max} [V/m]	109
Power Drift [dB]	-0.01



Appendix D. – SAR Tissue Characterization

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

Ingredients (% by weight)	Frequency (㎒)									
	750		835		1 900		2 450 – 2 700		3500 - 5 800	
Tissue Type	Head	Body	Head	Body	Head	Body	Head	Body	Head	Body
Water	41.1	51.7	40.45	53.06	54.9	70.17	71.88	73.2	65.52	78.66
Salt (NaCl)	1.4	0.9	1.45	0.94	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
HEC	0.2	0	1.0	1.0	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
Triton X-100	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	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 KDB 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
14	7655	EX3DV4	Head	750	1014	2024-06-16	41.7	0.87	PASS	PASS	PASS	N/A	N/A	N/A
21	7751	EX3DV4	Head	750	1014	2024-10-18	41.7	0.87	PASS	PASS	PASS	N/A	N/A	N/A
14	7655	EX3DV4	Head	835	441	2024-06-16	41.6	0.89	PASS	PASS	PASS	GMSK	PASS	N/A
12	7680	EX3DV4	Head	835	441	2024-06-16	41.6	0.89	PASS	PASS	PASS	N/A	N/A	N/A
21	7751	EX3DV4	Head	835	441	2024-10-18	41.6	0.89	PASS	PASS	PASS	N/A	N/A	N/A
8	7654	EX3DV4	Head	835	441	2024-05-24	41.6	0.90	PASS	PASS	PASS	N/A	N/A	N/A
14	7655	EX3DV4	Head	1750	2d007	2024-06-16	40.1	1.39	PASS	PASS	PASS	N/A	N/A	N/A
12	7680	EX3DV4	Head	1750	2d007	2024-06-16	40.1	1.40	PASS	PASS	PASS	N/A	N/A	N/A
21	7751	EX3DV4	Head	1750	2d007	2024-10-18	40.1	1.39	PASS	PASS	PASS	N/A	N/A	N/A
12	7680	EX3DV4	Head	1900	5d032	2024-06-16	40.1	1.41	PASS	PASS	PASS	N/A	N/A	N/A
14	7655	EX3DV4	Head	1900	5d032	2024-06-16	40.1	1.41	PASS	PASS	PASS	GMSK	PASS	N/A
14	7655	EX3DV4	Head	2450	743	2024-06-16	39.2	1.83	PASS	PASS	PASS	OFDM	N/A	PASS
21	7751	EX3DV4	Head	2600	1015	2024-10-18	39.1	1.94	PASS	PASS	PASS	TDD	PASS	N/A
8	7654	EX3DV4	Head	5250	1107	2024-06-28	35.9	4.71	PASS	PASS	PASS	OFDM	N/A	PASS
8	7654	EX3DV4	Head	5600	1107	2024-06-28	35.5	5.09	PASS	PASS	PASS	OFDM	N/A	PASS
8	7654	EX3DV4	Head	5750	1107	2024-06-28	35.4	5.22	PASS	PASS	PASS	OFDM	N/A	PASS
8	7654	EX3DV4	Head	5800	1107	2024-06-28	35.3	5.23	PASS	PASS	PASS	OFDM	N/A	PASS
17	7681	EX3DV4	Head	6500	1012	2024-10-25	34.3	6.08	PASS	PASS	PASS	OFDM	N/A	PASS
11	7679	EX3DV4	Head	6500	1012	2024-10-18	34.3	6.08	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
5	3076	ES3DV3	Head	13	1016	2024-10-18	54.9	0.74	PASS	PASS	PASS	N/A	N/A	N/A
8	7654	EX3DV4	Head	5250	1107	2024-06-28	35.8	4.70	PASS	PASS	PASS	OFDM	N/A	PASS
8	7654	EX3DV4	Head	5600	1107	2024-06-28	35.6	5.06	PASS	PASS	PASS	OFDM	N/A	PASS
8	7654	EX3DV4	Head	5800	1107	2024-06-28	35.4	5.24	PASS	PASS	PASS	OFDM	N/A	PASS
17	7681	EX3DV4	Head	6500	1012	2024-10-25	34.3	6.08	PASS	PASS	PASS	OFDM	N/A	PASS
11	7679	EX3DV4	Head	6500	1012	2024-10-18	34.3	6.08	PASS	PASS	PASS	OFDM	N/A	PASS

SAR System Validation Summary 10g

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.