

Measurement Report for SM-A556E_DS, Right Touch, GSM 850, GPRS-FDD (TDMA, GMSK, TN 0-1), Channel 190 (836.6 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	GSM 850	GSM, 10024-DAC	836.6	10.0	0.936	42.1

Hardware Setup

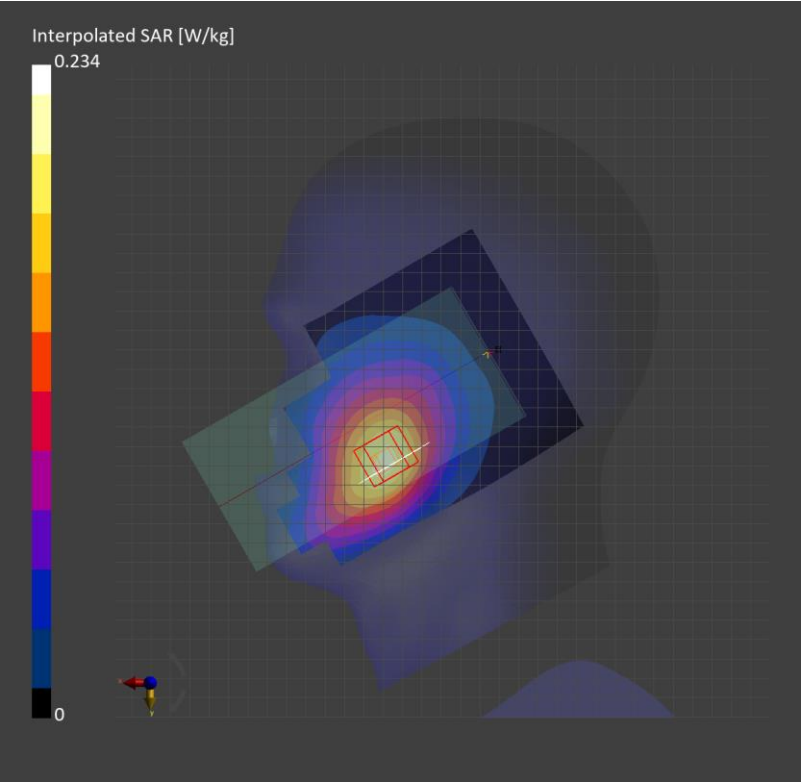
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000	EX3DV4 - SN7545, 2023-08-25	DAE4 Sn1447, 2023-03-22

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 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]	0.177	0.189
psSAR10g [W/Kg]	0.122	0.149
Power Drift [dB]		0.01
M2/M1 [%]		93.0
Dist 3dB Peak [mm]		21.5



Measurement Report for SM-A556E_DS, Rear, GSM 850, GPRS-FDD (TDMA, GMSK, TN 0-1), Channel 190 (836.6 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Rear, 10.00	GSM 850	GSM, 10024-DAC	836.6	9.61	0.911	42.2

Hardware Setup

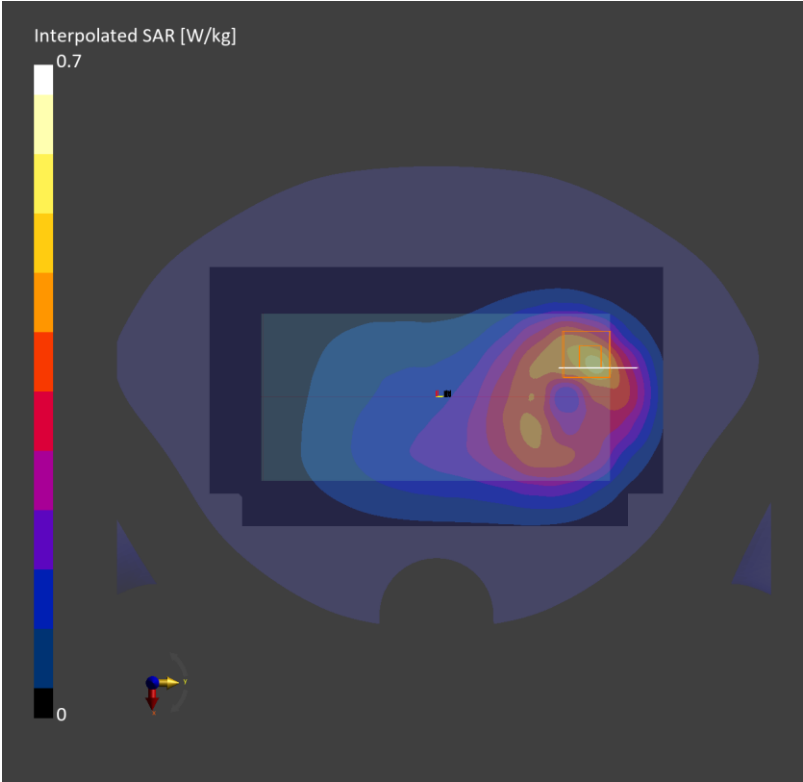
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN3871, 2023-08-25	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	0.467	0.459
psSAR10g [W/Kg]	0.296	0.281
Power Drift [dB]		-0.04
M2 / M1 [%]		85.4
Dist 3dB Peak [mm]		10.4



GSM 1900

Frequency: 1880 MHz; Communication System Channel Number: 661; Duty Cycle: 1:1.99986

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.404$ S/m; $\epsilon_r = 40.141$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN7313; ConvF(7.4, 7.69, 8.06) @ 1880 MHz; Calibrated: 3/24/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (Right); Phantom section: Left Section; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LHS/Touch GPRS ch.661 4slot/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.0664 W/kg

LHS/Touch GPRS ch.661 4slot/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 6.936 V/m; Power Drift = 0.13 dB

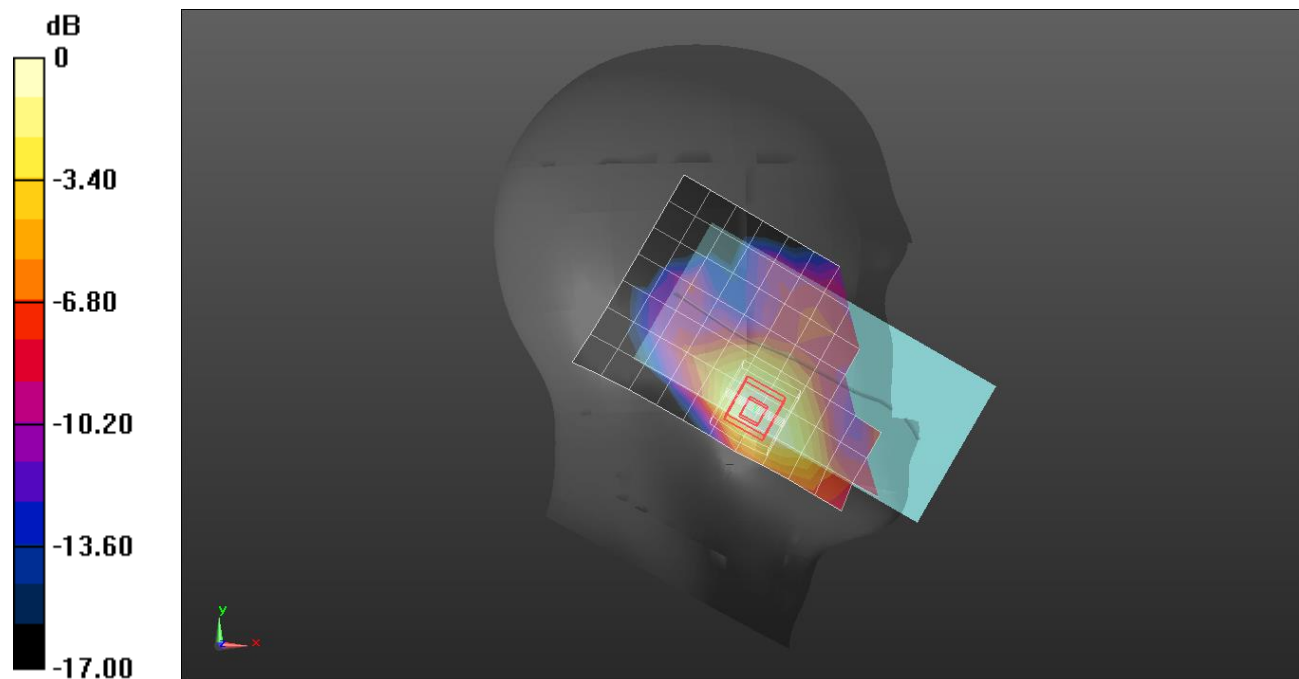
Peak SAR (extrapolated) = 0.0770 W/kg

SAR(1 g) = 0.052 W/kg; SAR(10 g) = 0.034 W/kg

Smallest distance from peaks to all points 3 dB below: Larger than measurement grid (> 16 mm)

Ratio of SAR at M2 to SAR at M1 = 67.7%

Maximum value of SAR (measured) = 0.0688 W/kg



0 dB = 0.0688 W/kg = -11.62 dBW/kg

GSM 1900

Frequency: 1909.8 MHz; Communication System Channel Number: 810; Duty Cycle: 1:8.00018

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used: $f = 1910$ MHz; $\sigma = 1.415$ S/m; $\epsilon_r = 40.125$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN7313; ConvF(7.4, 7.69, 8.06) @ 1909.8 MHz; Calibrated: 3/24/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (Right); Phantom section: Flat Section; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Bottom/GPRS 1 slot ch.810/Area Scan (9x5x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.636 W/kg

Bottom/GPRS 1 slot ch.810/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.17 V/m; Power Drift = -0.18 dB

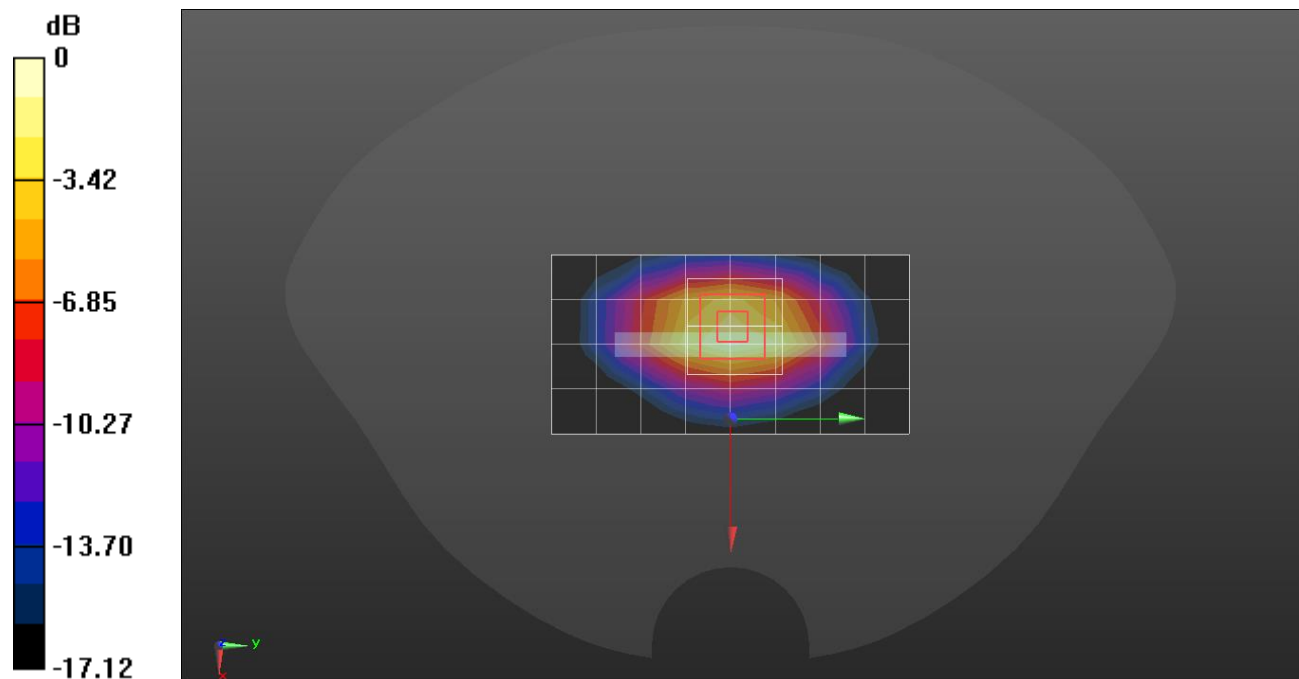
Peak SAR (extrapolated) = 0.881 W/kg

SAR(1 g) = 0.529 W/kg; SAR(10 g) = 0.288 W/kg

Smallest distance from peaks to all points 3 dB below = 10.7 mm

Ratio of SAR at M2 to SAR at M1 = 61.5%

Maximum value of SAR (measured) = 0.768 W/kg



0 dB = 0.768 W/kg = -1.15 dBW/kg

W-CDMA Band II

Frequency: 1880 MHz; Communication System Channel Number: 9400; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.404$ S/m; $\epsilon_r = 40.141$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN7313; ConvF(7.4, 7.69, 8.06) @ 1880 MHz; Calibrated: 3/24/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (Right); Phantom section: Left Section; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LHS/Touch Rel.99 ch.9400/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.177 W/kg

LHS/Touch Rel.99 ch.9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 11.19 V/m; Power Drift = 0.08 dB

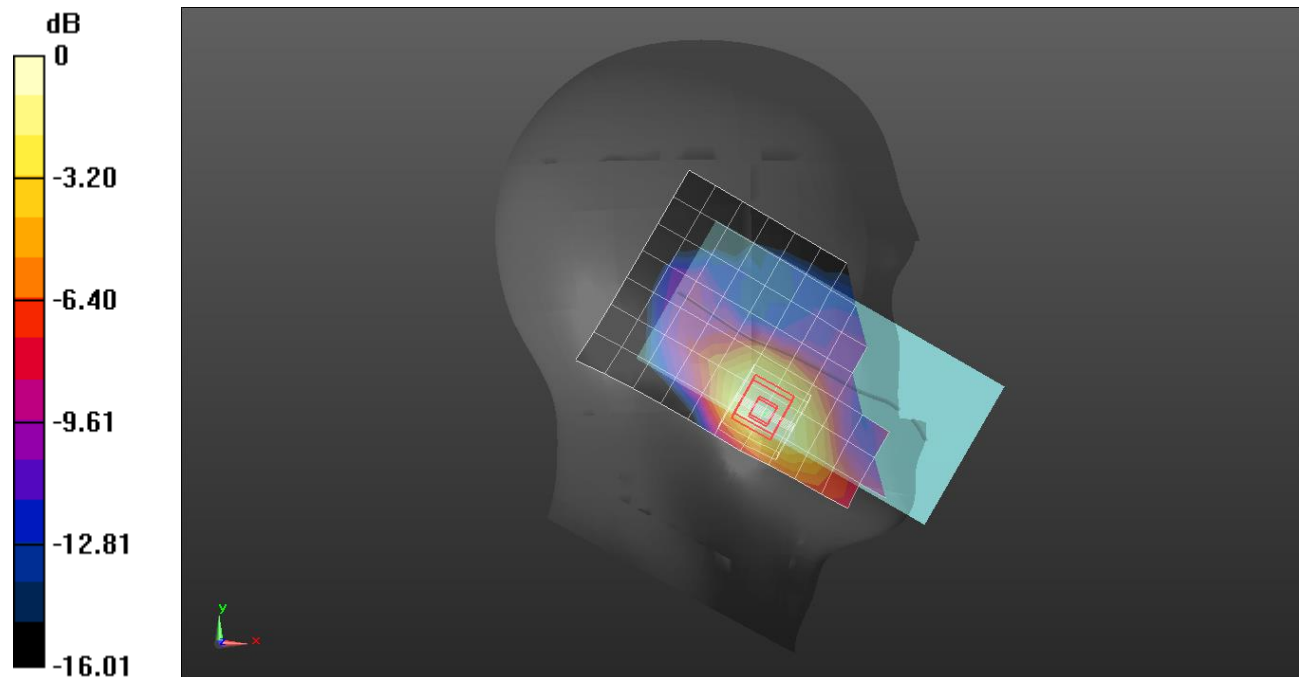
Peak SAR (extrapolated) = 0.207 W/kg

SAR(1 g) = 0.136 W/kg; SAR(10 g) = 0.085 W/kg

Smallest distance from peaks to all points 3 dB below = 13.7 mm

Ratio of SAR at M2 to SAR at M1 = 65.5%

Maximum value of SAR (measured) = 0.185 W/kg



0 dB = 0.185 W/kg = -7.33 dBW/kg

W-CDMA Band II

Frequency: 1880 MHz; Communication System Channel Number: 9400; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used: $f = 1880$ MHz; $\sigma = 1.404$ S/m; $\epsilon_r = 40.141$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN7313; ConvF(7.4, 7.69, 8.06) @ 1880 MHz; Calibrated: 3/24/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (Right); Phantom section: Flat Section; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Bottom/Rel.99 ch.9400/Area Scan (9x5x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.659 W/kg

Bottom/Rel.99 ch.9400/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 22.82 V/m; Power Drift = -0.00 dB

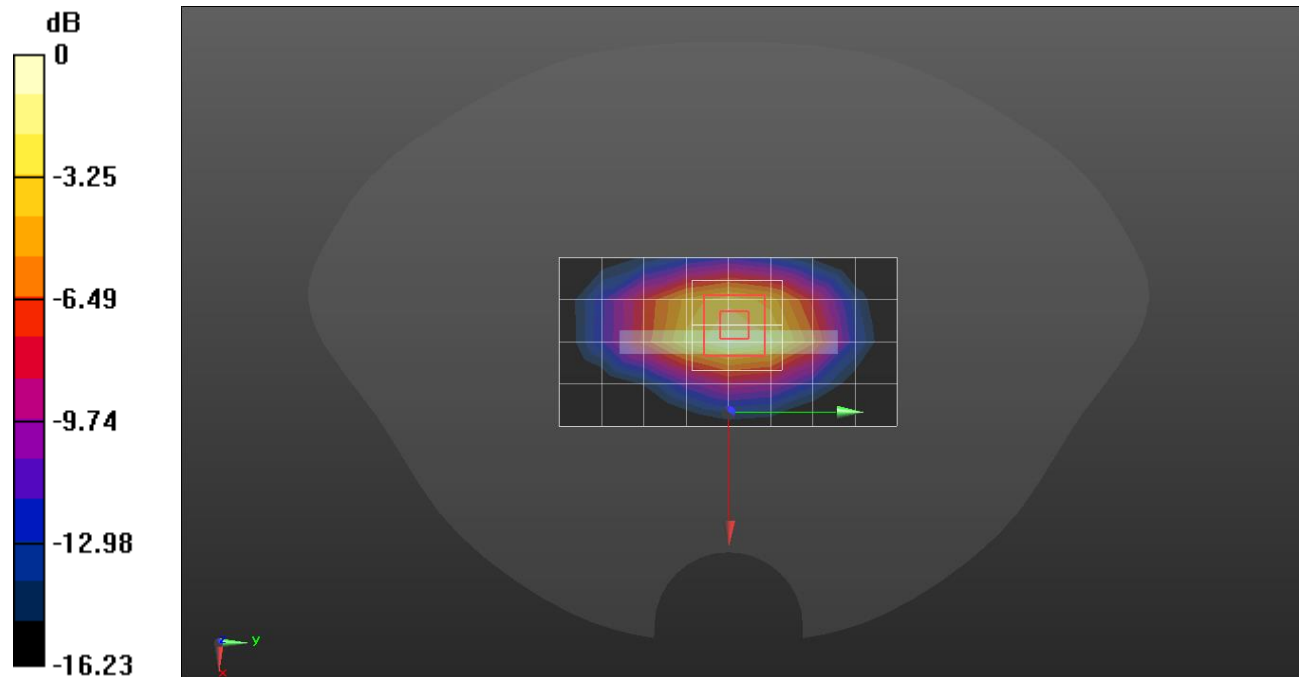
Peak SAR (extrapolated) = 0.917 W/kg

SAR(1 g) = 0.561 W/kg; SAR(10 g) = 0.312 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 62.5%

Maximum value of SAR (measured) = 0.803 W/kg



0 dB = 0.803 W/kg = -0.95 dBW/kg

W-CDMA Band IV

Frequency: 1732.6 MHz; Communication System Channel Number: 1413; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 1732.6$ MHz; $\sigma = 1.353$ S/m; $\epsilon_r = 40.31$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN7313; ConvF(7.9, 8.21, 8.47) @ 1732.6 MHz; Calibrated: 3/24/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (Right); Phantom section: Left Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

LHS/Touch Rel.99 ch.1413/Area Scan (8x14x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.167 W/kg

LHS/Touch Rel.99 ch.1413/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.91 V/m; Power Drift = 0.04 dB

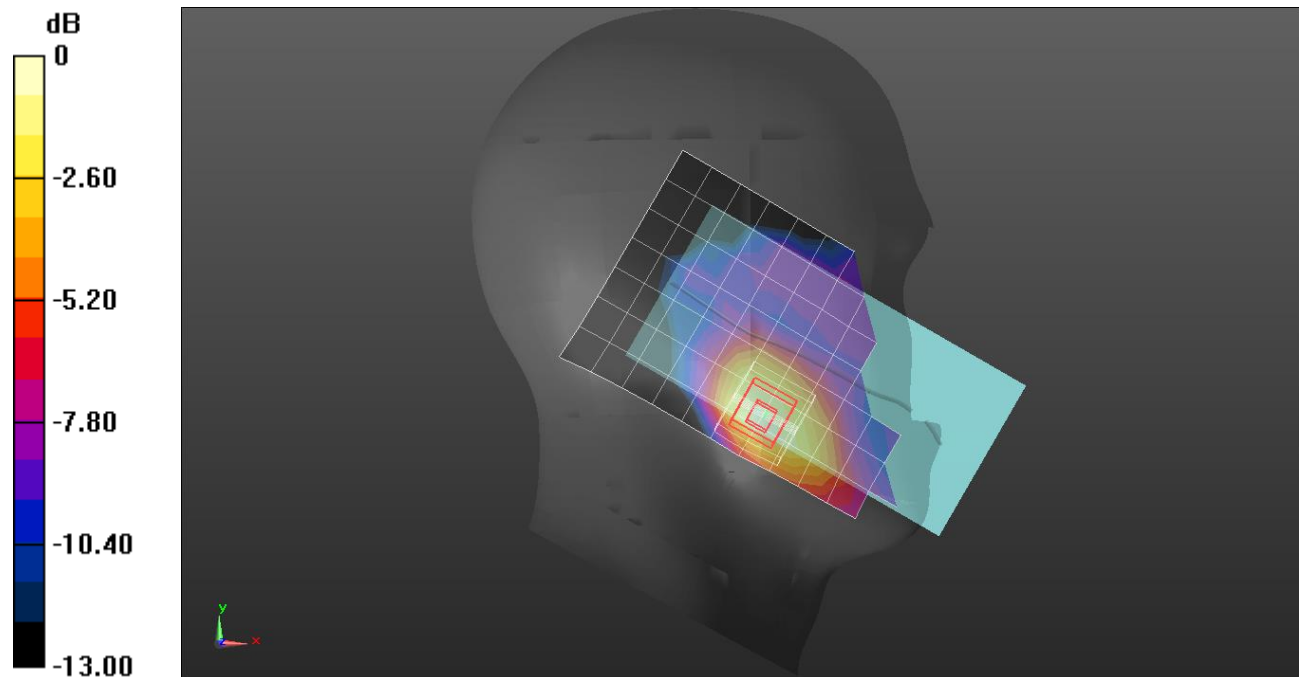
Peak SAR (extrapolated) = 0.190 W/kg

SAR(1 g) = 0.130 W/kg; SAR(10 g) = 0.084 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 69%

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



0 dB = 0.172 W/kg = -7.64 dBW/kg

Measurement Report for SM-A556E_DS, BOTTOM, Band 4, UMTS-FDD (WCDMA), Channel 1413 (1732.6 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BOTTOM, 10.00	Band 4	WCDMA, 10011-CAC	1732.6	7.9	1.31	40.5

Hardware Setup

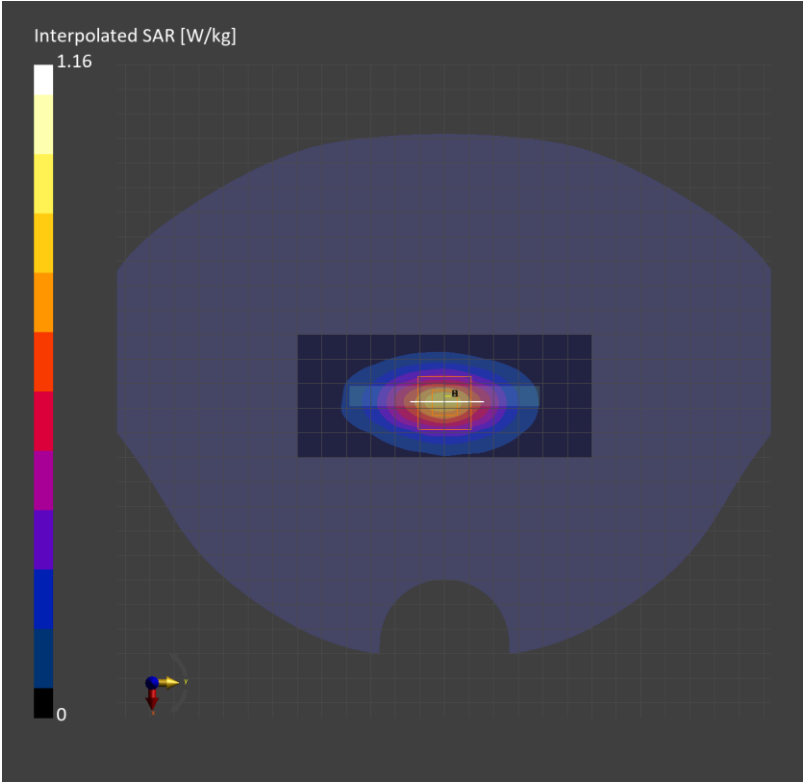
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN7313, 2023-03-24	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	49.8 x 120.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.3 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]	0.685	0.698
psSAR10g [W/Kg]	0.367	0.391
Power Drift [dB]		0.03
M2 / M1 [%]		85.7
Dist 3dB Peak [mm]		10.8



Measurement Report for SM-A556E_DS, Right Touch, Band 5, UMTS-FDD (WCDMA), Channel 4183 (836.6 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	Band 5	WCDMA, 10011-CAC	836.6	10.0	0.936	42.1

Hardware Setup

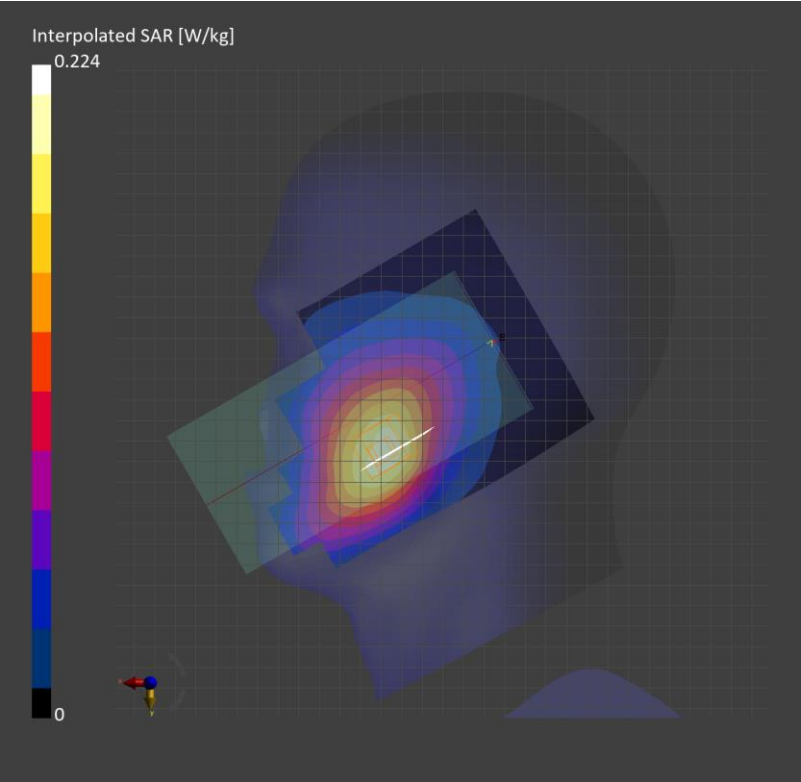
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2039	HBBL-600-10000	EX3DV4 – SN7545, 2023-08-25	DAE4 Sn1447, 2023-03-22

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 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]	0.173	0.183
psSAR10g [W/Kg]	0.119	0.146
Power Drift [dB]		-0.09
M2/M1 [%]		94.1
Dist 3dB Peak [mm]		25.1



Measurement Report for SM-A556E_DS, Rear, Band 5, UMTS-FDD (WCDMA), Channel 4183 (836.6 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Rear, 10.00	Band 5	WCDMA, 10011-CAC	836.6	9.61	0.911	42.2

Hardware Setup

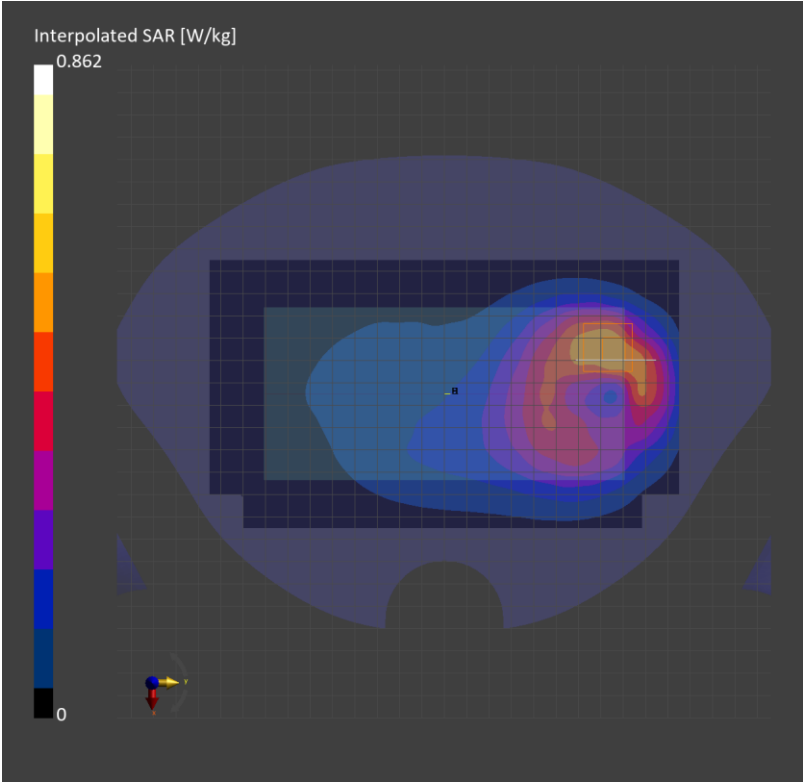
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN3871, 2023-08-25	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	0.508	0.537
psSAR10g [W/Kg]	0.336	0.333
Power Drift [dB]		-0.02
M2 / M1 [%]		85.6
Dist 3dB Peak [mm]		11.9



Measurement Report for SM-A556E_DS, Right Touch, Band 5, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 20525 (836.5 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	Band 5	LTE-FDD, 10175-CAH	836.5	10.0	0.936	42.1

Hardware Setup

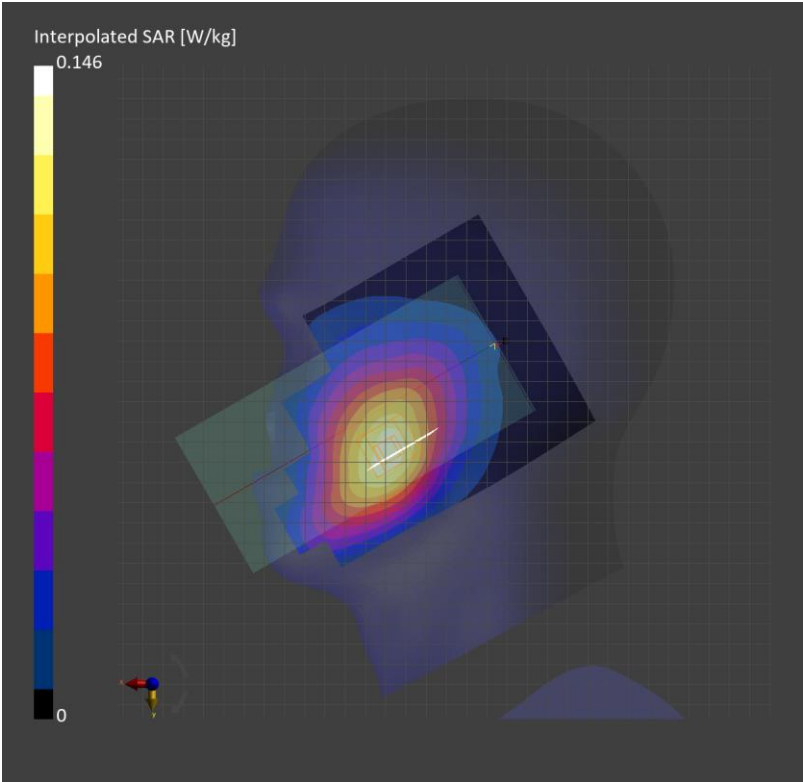
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000	EX3DV4 - SN7545, 2023-08-25	DAE4 Sn1447, 2023-03-22

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 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]	0.113	0.119
psSAR10g [W/Kg]	0.078	0.094
Power Drift [dB]		-0.02
M2 / M1 [%]		93.9
Dist 3dB Peak [mm]		25.9



Measurement Report for SM-A556E_DS, Rear, Band 5, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 20525 (836.5 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Rear, 10.00	Band 5	LTE-FDD, 10175-CAH	836.5	9.61	0.911	42.2

Hardware Setup

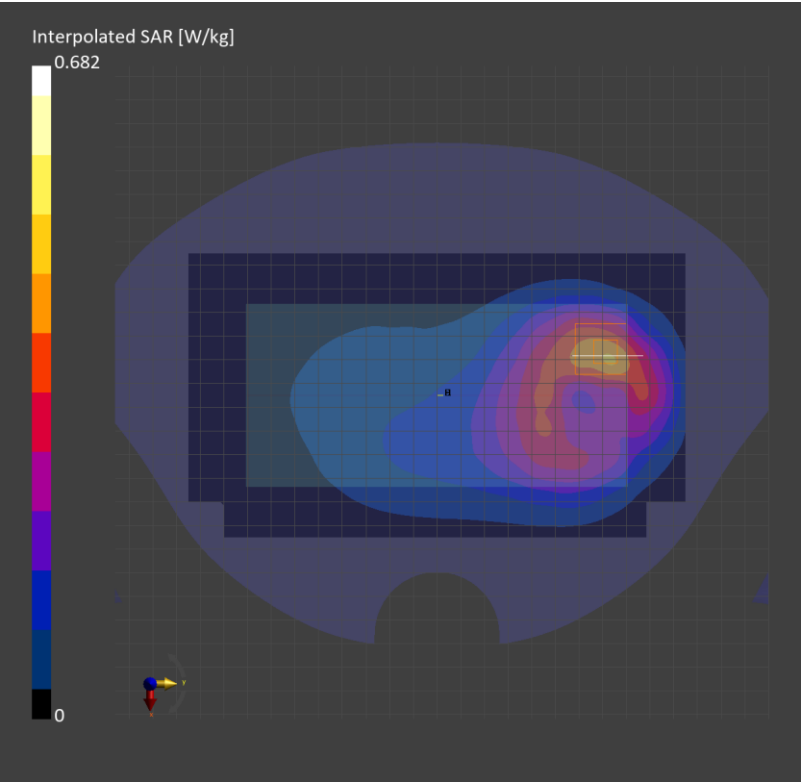
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN3871, 2023-08-25	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	0.394	0.423
psSAR10g [W/Kg]	0.256	0.258
Power Drift [dB]		-0.06
M2 / M1 [%]		86.4
Dist 3dB Peak [mm]		11.9



Measurement Report for SM-A556E_DS, Right Touch, Band 12, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Low AntennaCfg:SISO, Channel 23095 (707.5 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	Band 12	LTE-FDD, 10175-CAH	707.5	10.28	0.895	42.6

Hardware Setup

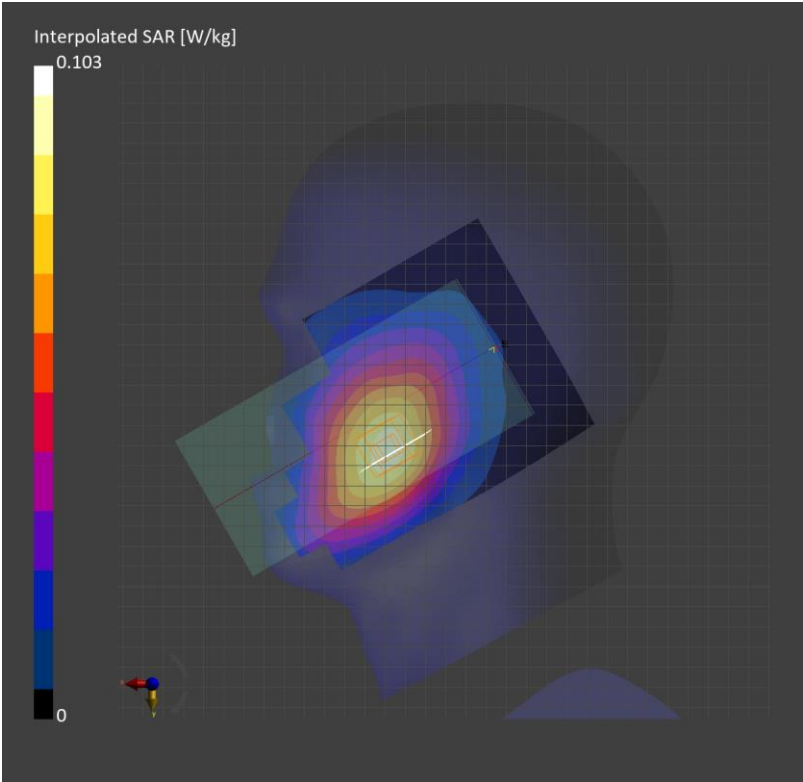
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000	EX3DV4 - SN7545, 2023-08-25	DAE4 Sn1447, 2023-03-22

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 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]	0.080	0.083
psSAR10g [W/Kg]	0.056	0.067
Power Drift [dB]		-0.04
M2 / M1 [%]		93.0
Dist 3dB Peak [mm]		> 16.0



Measurement Report for SM-A556E_DS, Rear, Band 12, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 23095 (707.5 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Rear, 10.00	Band 12	LTE-FDD, 10175-CAH	707.5	9.64	0.880	42.5

Hardware Setup

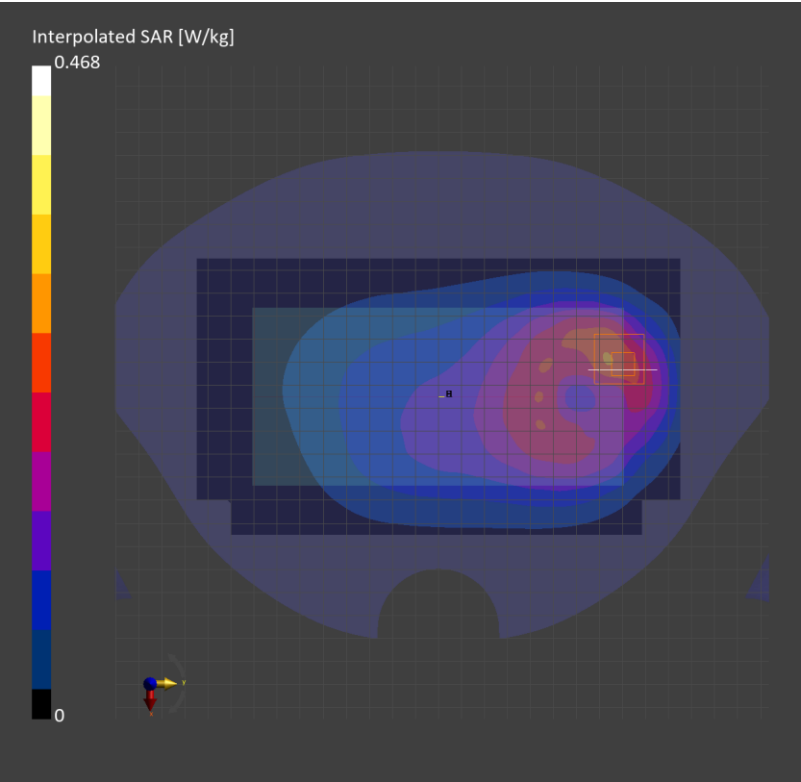
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN3871, 2023-08-25	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	0.241	0.260
psSAR10g [W/Kg]	0.161	0.153
Power Drift [dB]		0.06
M2 / M1 [%]		82.8
Dist 3dB Peak [mm]		10.4



Measurement Report for SM-A556E_DS, Right Touch, Band 13, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Low AntennaCfg:SISO, Channel 23230 (782.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	Band 13	LTE-FDD, 10175-CAH	782.0	10.28	0.918	42.4

Hardware Setup

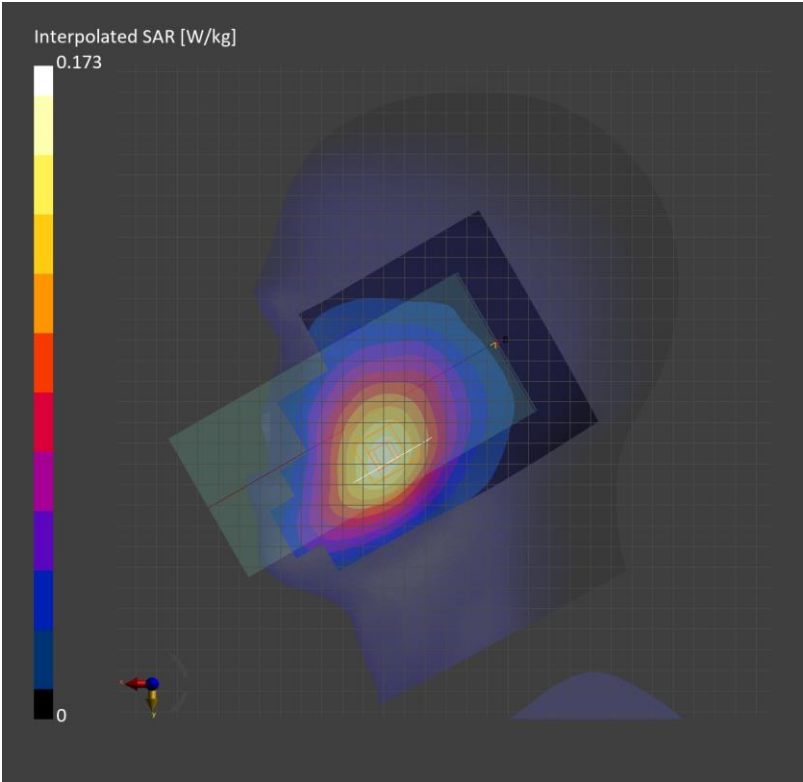
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000	EX3DV4 - SN7545, 2023-08-25	DAE4 Sn1447, 2023-03-22

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 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]	0.133	0.141
psSAR10g [W/Kg]	0.093	0.111
Power Drift [dB]		0.00
M2 / M1 [%]		93.9
Dist 3dB Peak [mm]		25.6



Measurement Report for SM-A556E_DS, Rear, Band 13, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 23230 (782.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Rear, 10.00	Band 13	LTE-FDD, 10175-CAH	782.0	9.64	0.898	42.1

Hardware Setup

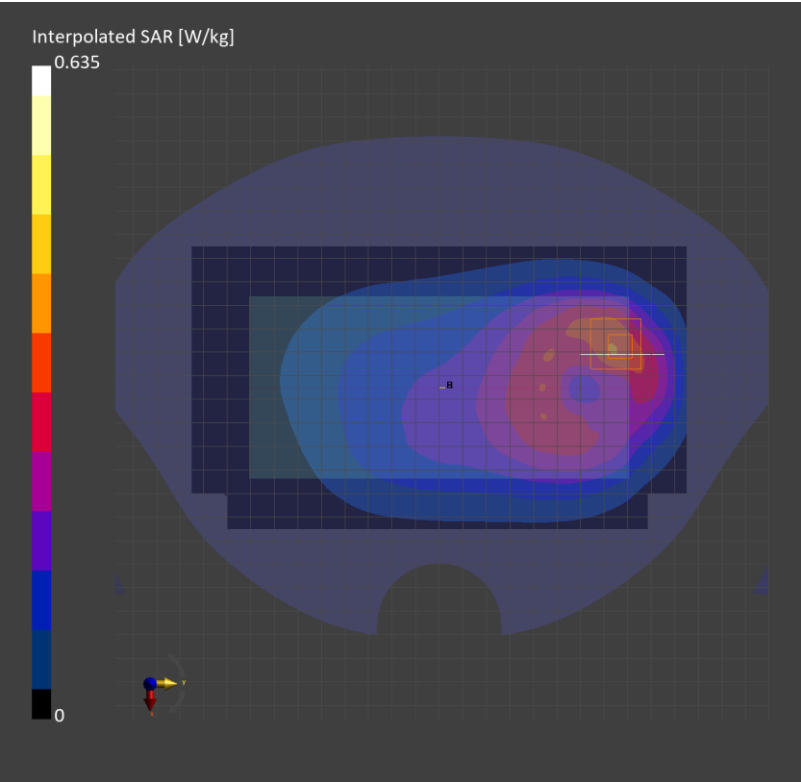
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN3871, 2023-08-25	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	4.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.325	0.367
psSAR10g [W/Kg]	0.217	0.216
Power Drift [dB]		0.04
M2 / M1 [%]		83.9
Dist 3dB Peak [mm]		11.4



Measurement Report for SM-A556E_DS, Left Touch, Band 25, LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) RBPosition:Low AntennaCfg:SISO, Channel 26590 (1905.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	Touch, 0.00	Band 25	LTE-FDD, 10297-AAE	1905.0	8.14	1.39	41.9

Hardware Setup

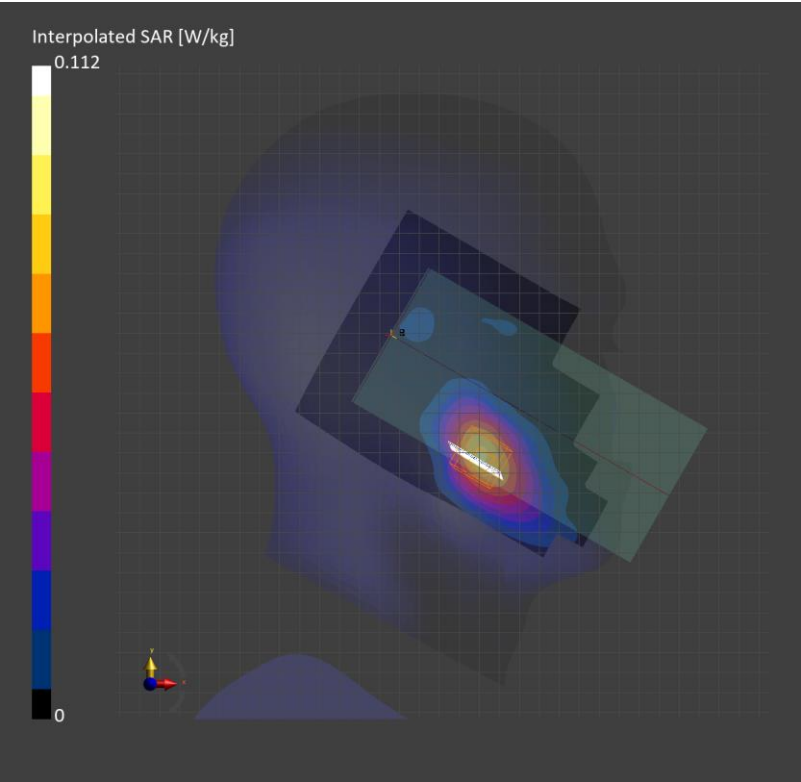
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1877	HSL1900	EX3DV4 - SN7651, 2023-05-30	DAE4 Sn1671, 2023-05-25

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	0.070	0.072
psSAR10g [W/Kg]	0.041	0.045
Power Drift [dB]		-0.12
M2 / M1 [%]		88.4
Dist 3dB Peak [mm]		11.4



Measurement Report for SM-A556E_DS, BOTTOM, Band 25, LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) RBPosition:Low AntennaCfg:SISO, Channel 26590 (1905.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BOTTOM, 10.00	Band 25	LTE-FDD, 10297-AAE	1905.0	8.07	1.39	39.8

Hardware Setup

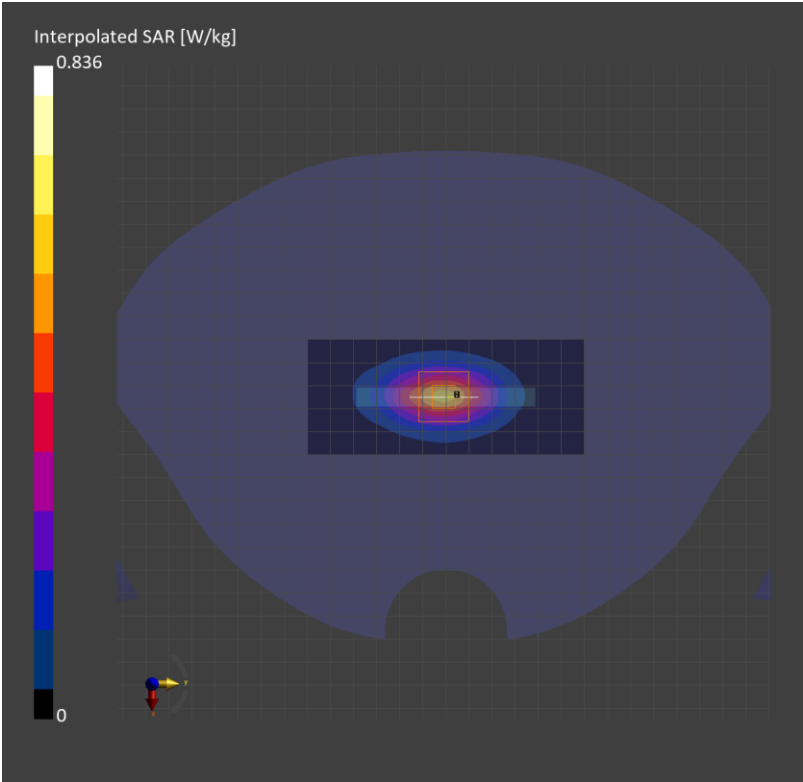
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000	EX3DV4 - SN7376, 2023-07-25	DAE4 Sn1343, 2023-06-30

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	49.8 x 120.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.3 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]	0.461	0.477
psSAR10g [W/Kg]	0.238	0.253
Power Drift [dB]		-0.01
M2 / M1 [%]		84.3
Dist 3dB Peak [mm]		9.7



LTE Band 25

Frequency: 1882.5 MHz; Communication System Channel Number: 26365; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 1882.5$ MHz; $\sigma = 1.382$ S/m; $\epsilon_r = 40.587$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN3871; ConvF(8.31, 7.78, 8.15) @ 1882.5 MHz; Calibrated: 8/25/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (Right); Phantom section: Right Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

RHS/Tilt QPSK 1/0 ch.26365/Area Scan (9x15x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.610 W/kg

RHS/Tilt QPSK 1/0 ch.26365/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 17.44 V/m; Power Drift = 0.11 dB

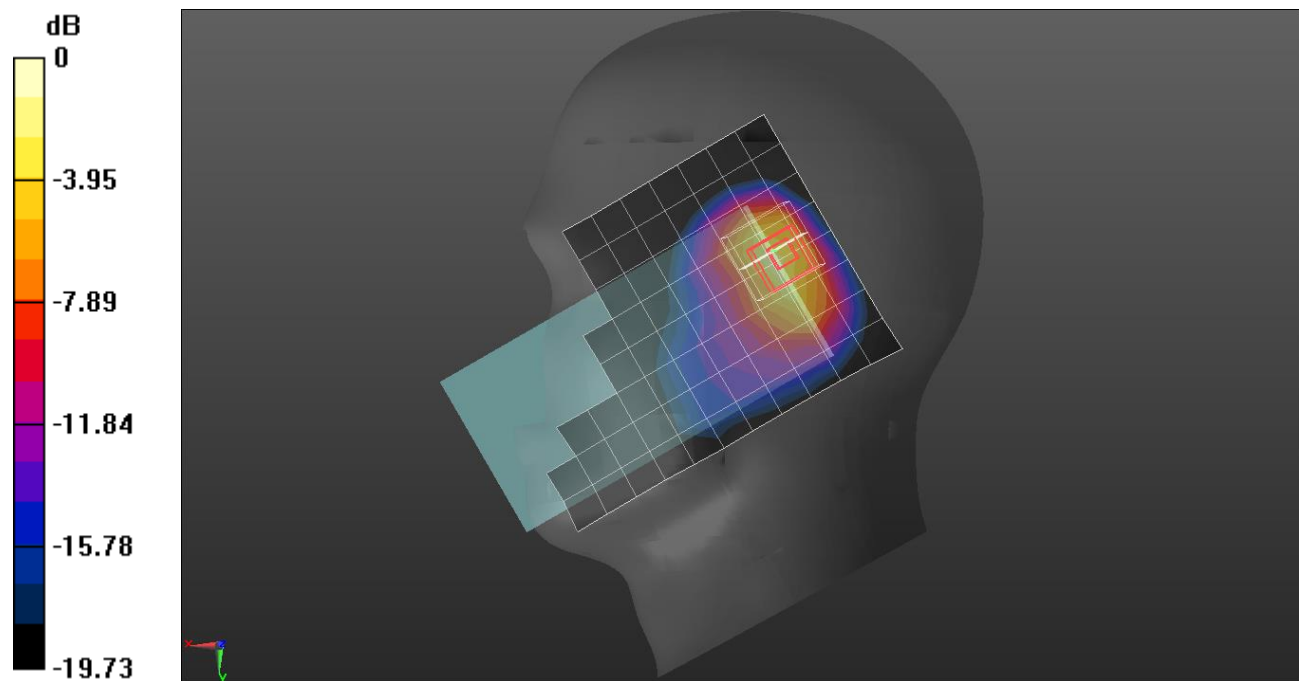
Peak SAR (extrapolated) = 1.07 W/kg

SAR(1 g) = 0.531 W/kg; SAR(10 g) = 0.258 W/kg

Smallest distance from peaks to all points 3 dB below = 8 mm

Ratio of SAR at M2 to SAR at M1 = 48.5%

Maximum value of SAR (measured) = 0.869 W/kg



0 dB = 0.869 W/kg = -0.61 dBW/kg

LTE Band 25

Frequency: 1882.5 MHz; Communication System Channel Number: 26365; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 1882.5$ MHz; $\sigma = 1.382$ S/m; $\epsilon_r = 40.587$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN3871; ConvF(8.31, 7.78, 8.15) @ 1882.5 MHz; Calibrated: 8/25/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (Right); Phantom section: Flat Section; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Top/QPSK RB 50/0 ch.26365/Area Scan (8x6x1): Measurement grid: dx=15mm, dy=15mm

Maximum value of SAR (measured) = 0.278 W/kg

Top/QPSK RB 50/0 ch.26365/Zoom Scan (5x6x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 10.60 V/m; Power Drift = 0.02 dB

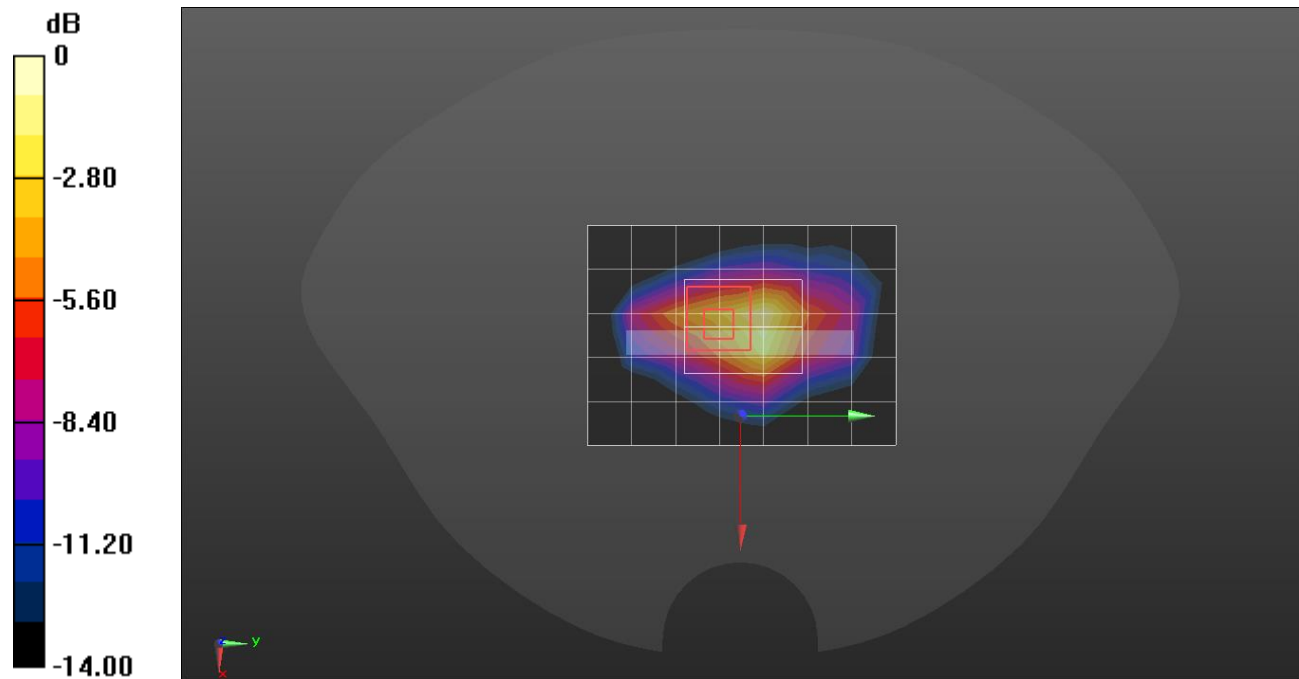
Peak SAR (extrapolated) = 0.364 W/kg

SAR(1 g) = 0.196 W/kg; SAR(10 g) = 0.095 W/kg

Smallest distance from peaks to all points 3 dB below = 6.4 mm

Ratio of SAR at M2 to SAR at M1 = 61.5%

Maximum value of SAR (measured) = 0.325 W/kg



0 dB = 0.325 W/kg = -4.88 dBW/kg

Measurement Report for SM-A556E_DS, Right Touch, Band 26, LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) RBPosition:Low AntennaCfg:SISO, Channel 26865 (831.5 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	Band 26	LTE-FDD, 10181-CAF	831.5	10.0	0.934	42.1

Hardware Setup

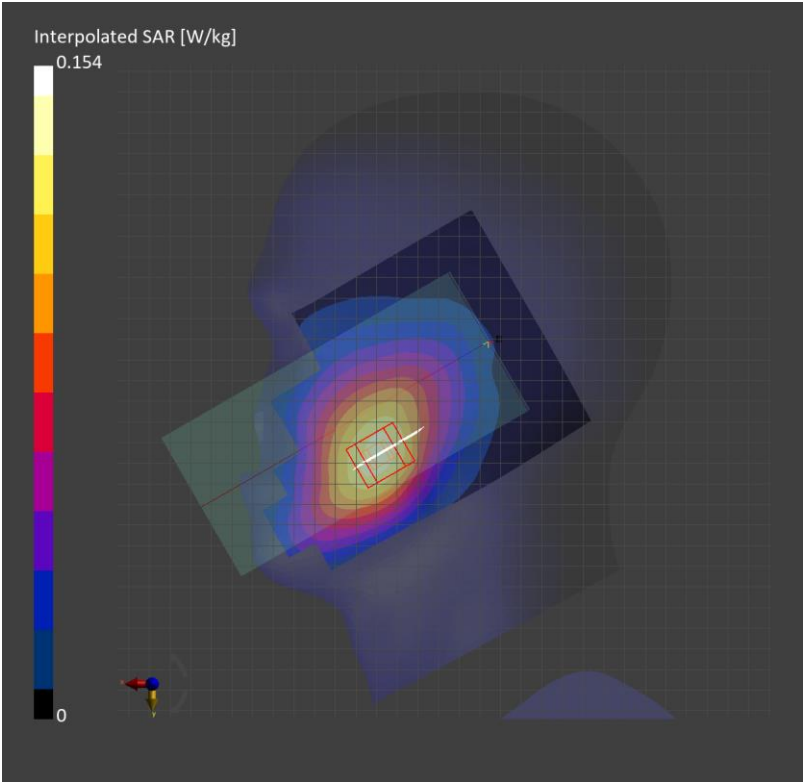
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000	EX3DV4 - SN7545, 2023-08-25	DAE4 Sn1447, 2023-03-22

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 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]	0.119	0.126
psSAR10g [W/Kg]	0.082	0.098
Power Drift [dB]		0.00
M2 / M1 [%]		93.9
Dist 3dB Peak [mm]		23.3



Measurement Report for SM-A556E_DS, Rear, Band 26, LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 26865 (831.5 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Rear, 10.00	Band 26	LTE-FDD, 10181-CAF	831.5	9.61	0.910	42.2

Hardware Setup

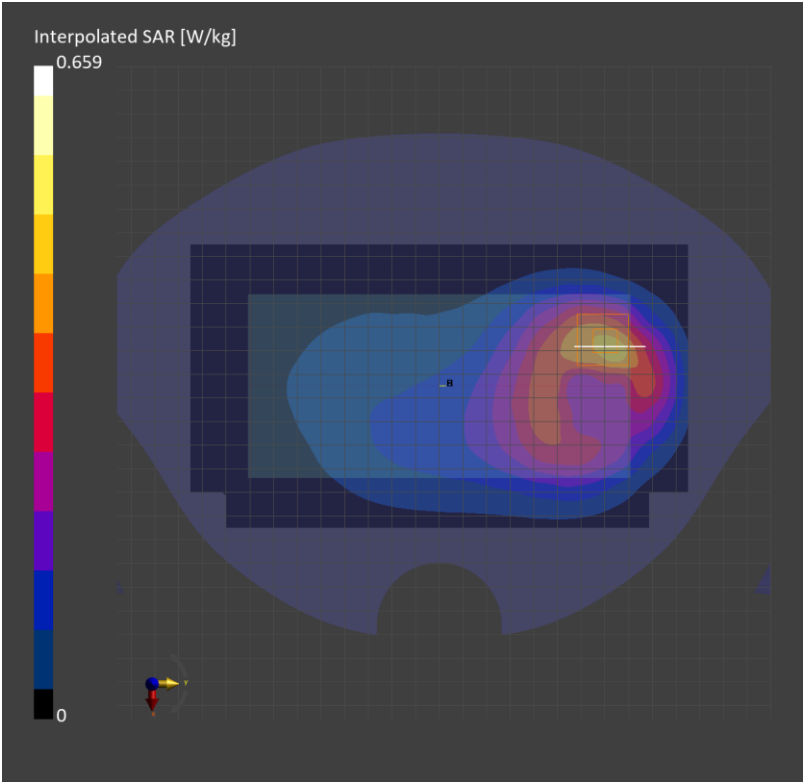
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN3871, 2023-08-25	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	4.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.409	0.418
psSAR10g [W/Kg]	0.265	0.261
Power Drift [dB]		0.02
M2 / M1 [%]		86.2
Dist 3dB Peak [mm]		11.9



LTE Band 41

Frequency: 2680 MHz; Communication System Channel Number: 41490; Duty Cycle: 1:1.59956

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used: $f = 2680$ MHz; $\sigma = 2.025$ S/m; $\epsilon_r = 39.118$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7645; ConvF(6.73, 6.97, 6.26) @ 2680 MHz; Calibrated: 9/20/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Phantom section: Left Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LHS/Touch QPSK RB 50/50 ch.41490/Area Scan (11x17x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.0941 W/kg

LHS/Touch QPSK RB 50/50 ch.41490/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 7.202 V/m; Power Drift = 0.09 dB

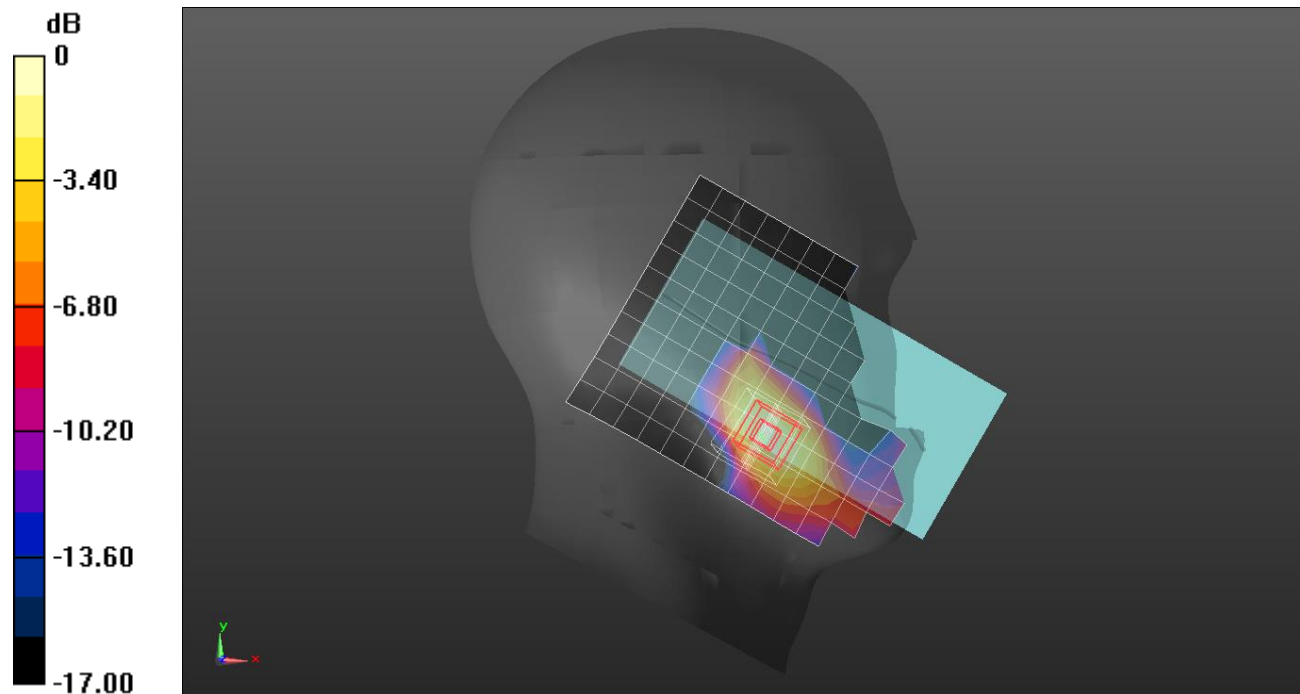
Peak SAR (extrapolated) = 0.140 W/kg

SAR(1 g) = 0.071 W/kg; SAR(10 g) = 0.036 W/kg

Smallest distance from peaks to all points 3 dB below = 9.6 mm

Ratio of SAR at M2 to SAR at M1 = 50.5%

Maximum value of SAR (measured) = 0.109 W/kg



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

LTE Band 41

Frequency: 2680 MHz; Communication System Channel Number: 41490; Duty Cycle: 1:1.59956

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used: $f = 2680$ MHz; $\sigma = 2.025$ S/m; $\epsilon_r = 39.118$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7645; ConvF(6.73, 6.97, 6.26) @ 2680 MHz; Calibrated: 9/20/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Phantom section: Flat Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bottom/QPSK RB 1/99 ch.41490/Area Scan (10x6x1): Measurement grid: dx=12mm, dy=12mm

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

Bottom/QPSK RB 1/99 ch.41490/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.45 V/m; Power Drift = -0.01 dB

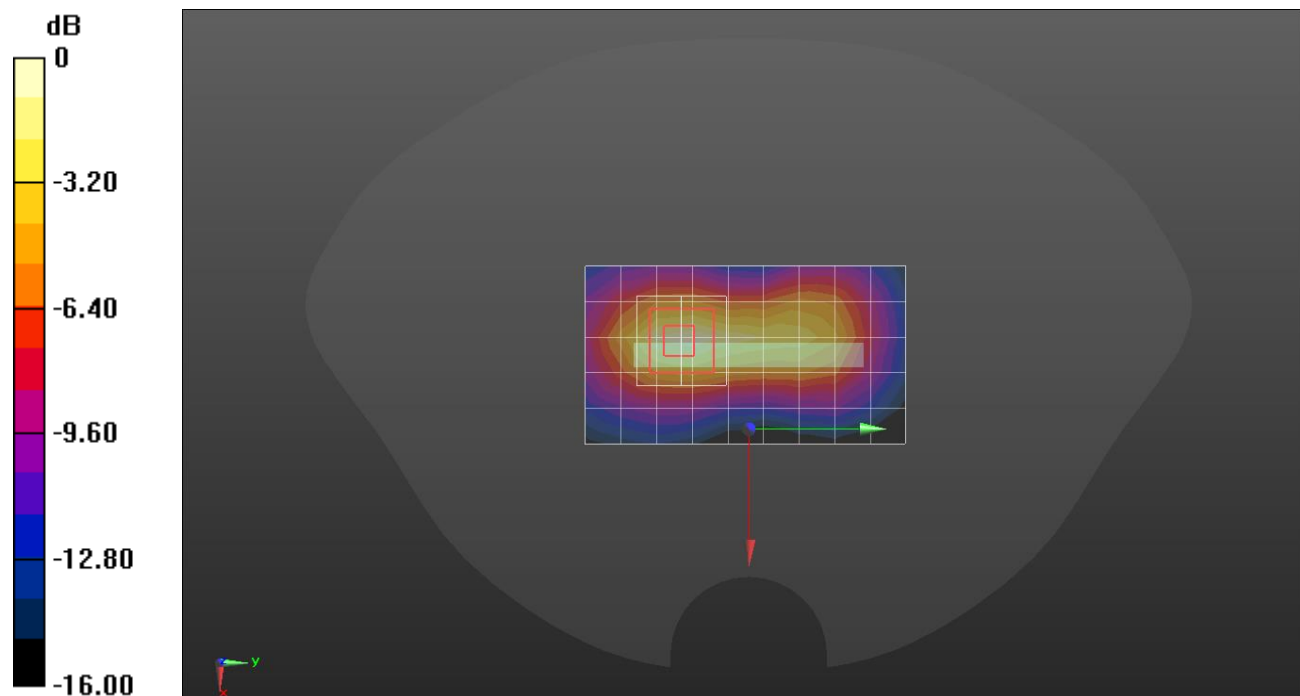
Peak SAR (extrapolated) = 0.615 W/kg

SAR(1 g) = 0.289 W/kg; SAR(10 g) = 0.133 W/kg

Smallest distance from peaks to all points 3 dB below = 9.8 mm

Ratio of SAR at M2 to SAR at M1 = 47.2%

Maximum value of SAR (measured) = 0.491 W/kg



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

LTE Band 41

Frequency: 2506 MHz; Communication System Channel Number: 39750; Duty Cycle: 1:1.59956

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 2506$ MHz; $\sigma = 1.926$ S/m; $\epsilon_r = 40.82$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/17/2023
- Probe: EX3DV4 - SN7651; ConvF(7.45, 8.08, 6.92) @ 2506 MHz; Calibrated: 5/30/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: SAM (20deg probe tilt) with CRP v5.0(Right); Phantom section: Right Section ; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

RHS/Tilt QPSK 50/50 ch.39750/Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 1.08 W/kg

RHS/Tilt QPSK 50/50 ch.39750/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.95 V/m; Power Drift = 0.03 dB

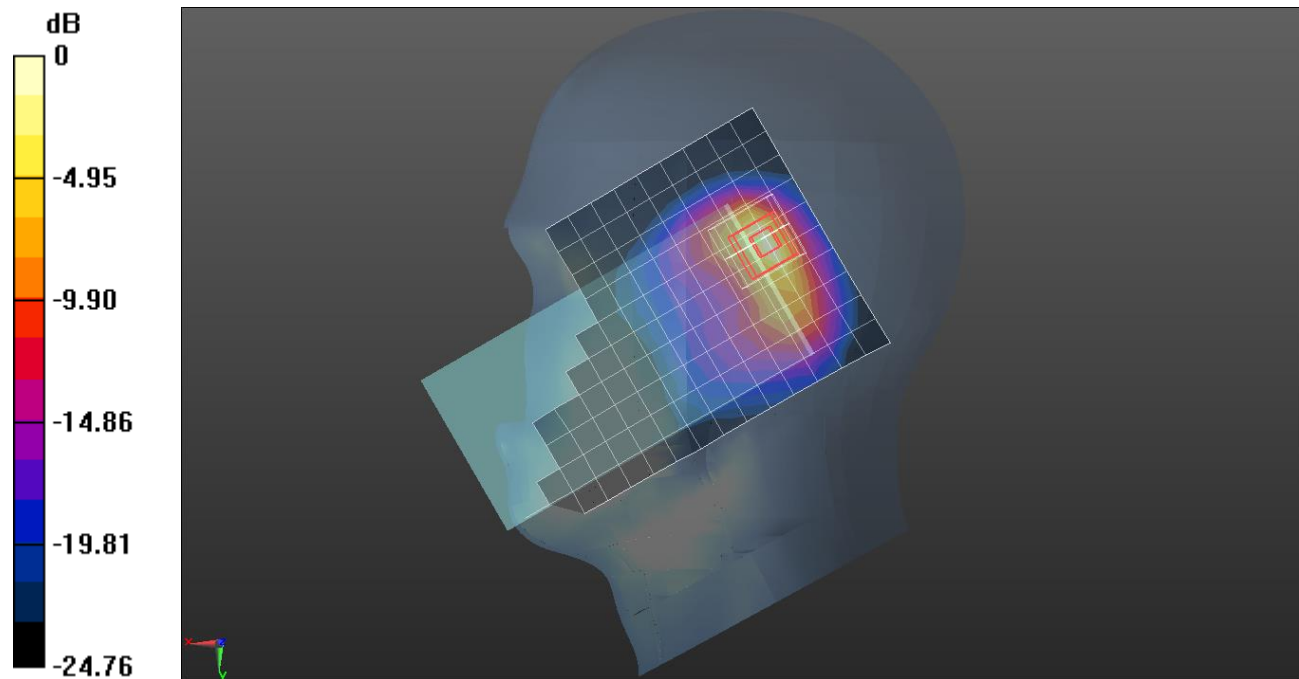
Peak SAR (extrapolated) = 1.68 W/kg

SAR(1 g) = 0.690 W/kg; SAR(10 g) = 0.272 W/kg

Smallest distance from peaks to all points 3 dB below = 5.8 mm

Ratio of SAR at M2 to SAR at M1 = 42.9%

Maximum value of SAR (measured) = 1.28 W/kg



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

LTE Band 41

Frequency: 2549.5 MHz; Communication System Channel Number: 40185; Duty Cycle: 1:1.59956

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used: $f = 2550$ MHz; $\sigma = 1.896$ S/m; $\epsilon_r = 39.621$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7645; ConvF(6.73, 6.97, 6.26) @ 2549.5 MHz; Calibrated: 9/20/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Phantom section: Flat Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Top/QPSK RB 50/50 ch.40185/Area Scan (10x6x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.344 W/kg

Top/QPSK RB 50/50 ch.40185/Zoom Scan (7x10x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 12.17 V/m; Power Drift = 0.00 dB

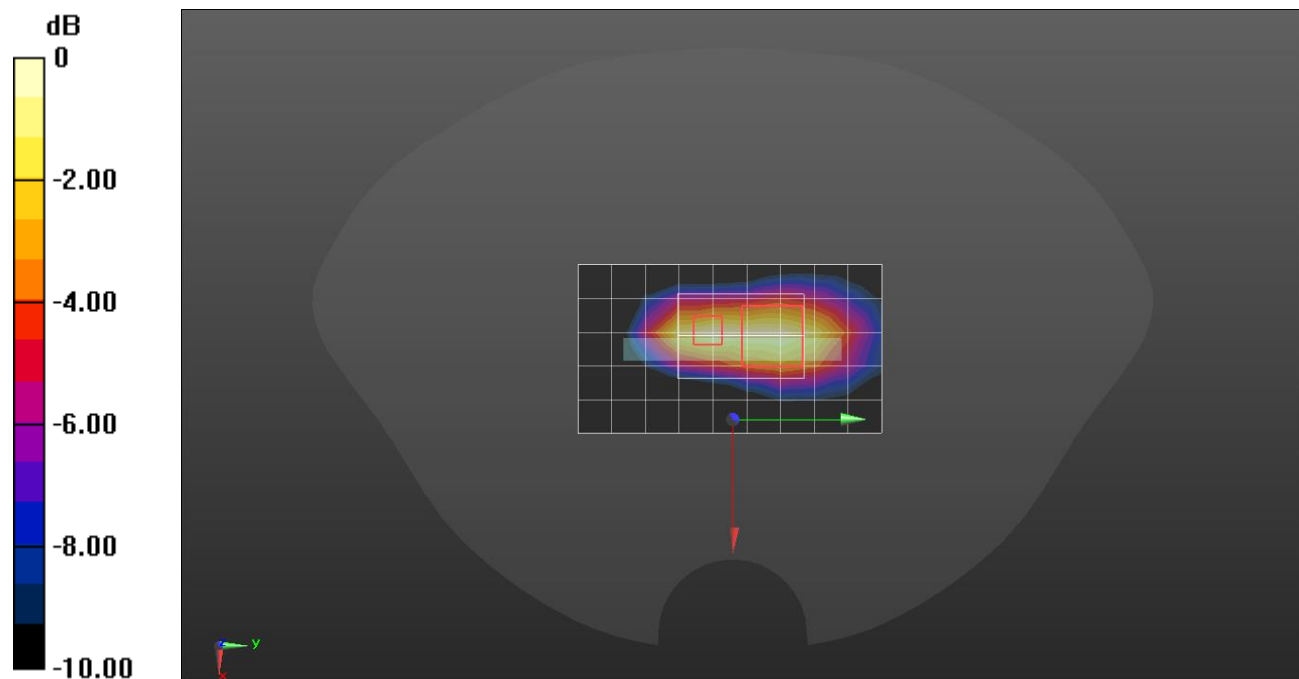
Peak SAR (extrapolated) = 0.427 W/kg

SAR(1 g) = 0.202 W/kg; SAR(10 g) = 0.102 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 47.8%

Maximum value of SAR (measured) = 0.335 W/kg



Measurement Report for SM-A556E_DS, Left Touch, Band 66, LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 132322 (1745.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	Touch, 0.00	Band 66	LTE-FDD, 10297-AAE	1745.0	8.61	1.32	40.2

Hardware Setup

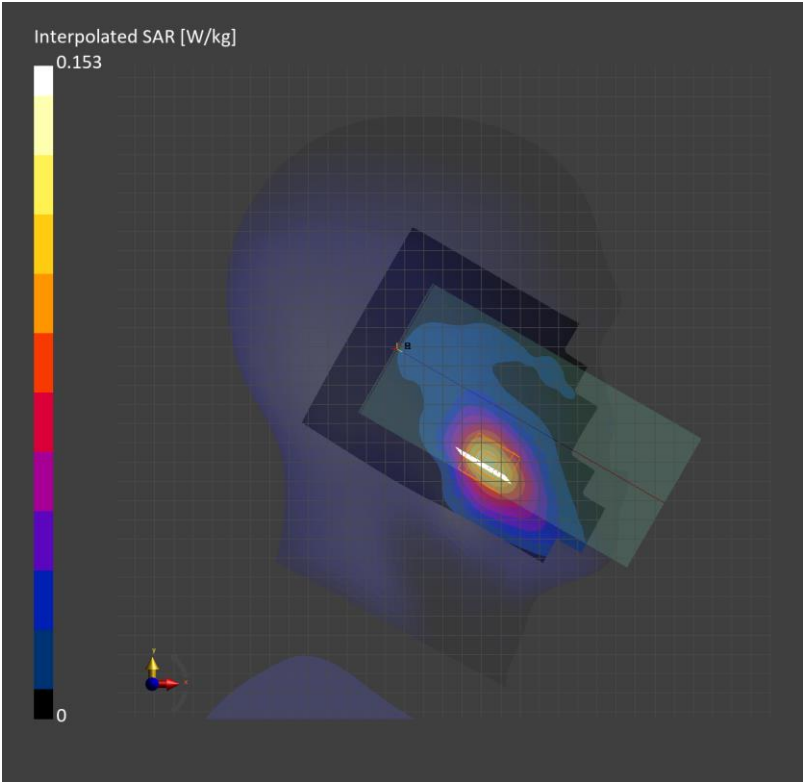
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000	EX3DV4 - SN7376, 2023-07-25	DAE4 Sn1343, 2023-06-30

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	0.102	0.110
psSAR10g [W/Kg]	0.060	0.072
Power Drift [dB]		-0.09
M2 / M1 [%]		92.3
Dist 3dB Peak [mm]		13.4



Measurement Report for SM-A556E_DS, BOTTOM, Band 66, LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK) RBPosition:Low AntennaCfg:SISO, Channel 132322 (1745.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BOTTOM, 10.00	Band 66	LTE-FDD, 10297-AAE	1745.0	8.61	1.31	39.9

Hardware Setup

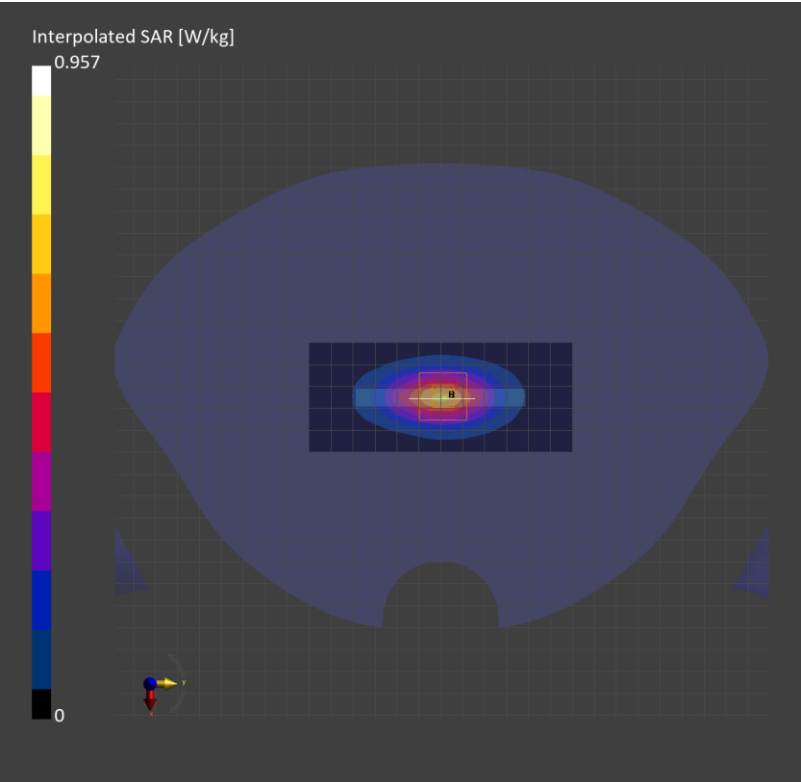
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2043	HBBL-600-10000	EX3DV4 – SN7376, 2023-07-25	DAE4 Sn1343, 2023-06-30

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	49.8 x 120.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.3 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]	0.522	0.537
psSAR10g [W/Kg]	0.273	0.288
Power Drift [dB]		0.06
M2 / M1 [%]		83.0
Dist 3dB Peak [mm]		9.7



Measurement Report for SM-A556E_DS, Right Touch, Band 66, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) RBPosition:Low AntennaCfg:SISO, Channel 132322 (1745.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	Band 66	LTE-FDD, 10169-CAF	1745.0	8.61	1.35	39.6

Hardware Setup

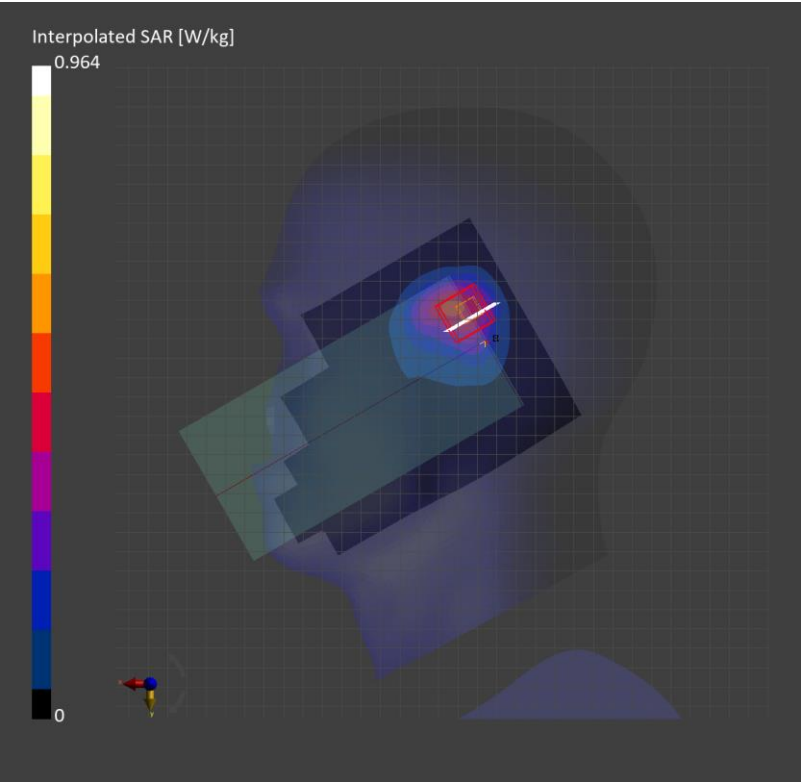
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2043	HBBL-600-10000	EX3DV4 – SN7376, 2023-07-25	DAE4 Sn1343, 2023-06-30

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	0.417	0.490
psSAR10g [W/Kg]	0.245	0.257
Power Drift [dB]		-0.01
M2 / M1 [%]		77.7
Dist 3dB Peak [mm]		8.1



Measurement Report for SM-A556E_DS, TOP, Band 66, LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK) RBPosition:Low AntennaCfg:SISO, Channel 132322 (1745.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	TOP, 10.00	Band 66	LTE-FDD, 10169-CAF	1745.0	8.61	1.32	40.2

Hardware Setup

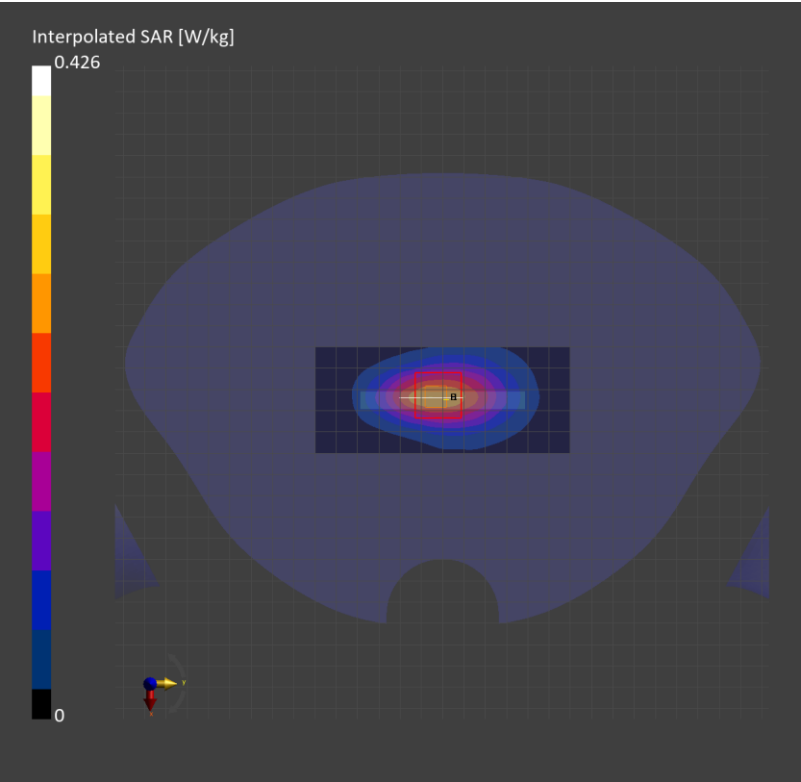
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000	EX3DV4 - SN7376, 2023-07-25	DAE4 Sn1343, 2023-06-30

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	49.8 x 120.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.3 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]	0.233	0.239
psSAR10g [W/Kg]	0.132	0.136
Power Drift [dB]		-0.02
M2 / M1 [%]		83.2
Dist 3dB Peak [mm]		10.8



Measurement Report for SM-A556E_DS, Right Touch, Band n5, 5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) RBPosition:Mid AntennaCfg:SISO, Channel 167300 (836.5 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	Band n5	5G NR FR1 FDD, 10939-AAC	836.5	10.0	0.936	42.1

Hardware Setup

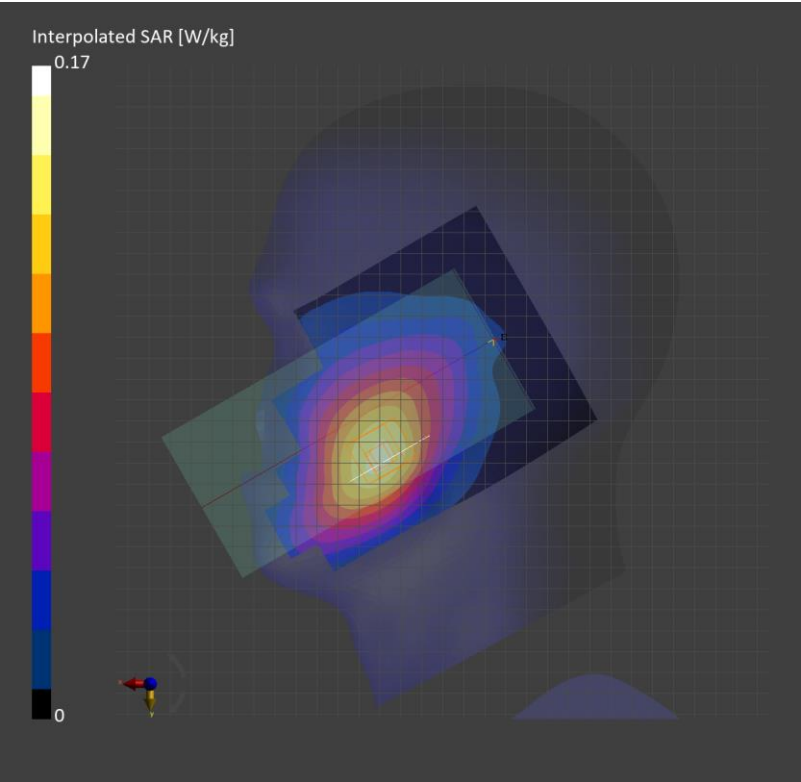
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2039	HBBL-600-10000	EX3DV4 – SN7545, 2023-08-25	DAE4 Sn1447, 2023-03-22

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 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]	0.128	0.136
psSAR10g [W/Kg]	0.088	0.108
Power Drift [dB]		0.01
M2 / M1 [%]		92.8
Dist 3dB Peak [mm]		23.1



Measurement Report for SM-A556E_DS, Rear, Band n5, 5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz) RBPosition:Mid AntennaCfg:SISO, Channel 167300 (836.5 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Rear, 10.00	Band n5	5G NR FR1 FDD, 10939-AAC	836.5	9.61	0.911	42.2

Hardware Setup

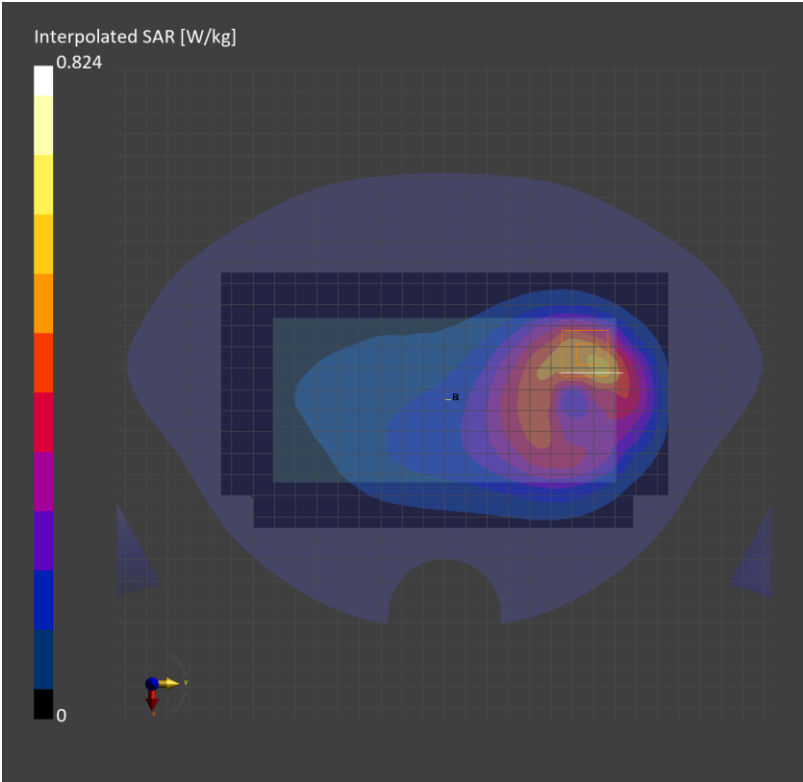
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN3871, 2023-08-25	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	4.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.498	0.522
psSAR10g [W/Kg]	0.325	0.322
Power Drift [dB]		0.01
M2 / M1 [%]		86.1
Dist 3dB Peak [mm]		12.6



NR Band n41(Voice/Data/SRS0)

Frequency: 2592.99 MHz; Communication System Channel Number: 518598; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.931$ S/m; $\epsilon_r = 38.939$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7545; ConvF(7.2, 7.2, 7.2) @ 2592.99 MHz; Calibrated: 8/25/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Phantom section: Left Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LHS/Touch QPSK RB 135/138 ch.518598/Area Scan (10x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.0611 W/kg

LHS/Touch QPSK RB 135/138 ch.518598/Zoom Scan (8x8x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 5.287 V/m; Power Drift = -0.14 dB

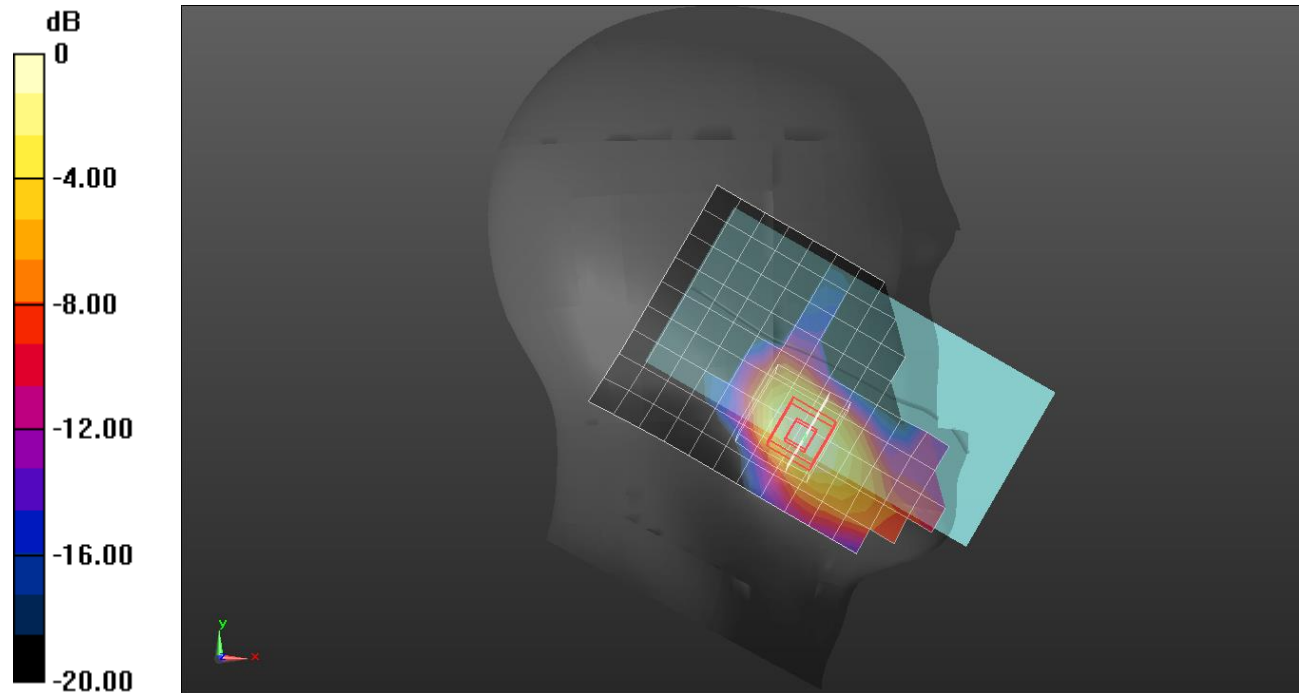
Peak SAR (extrapolated) = 0.0850 W/kg

SAR(1 g) = 0.044 W/kg; SAR(10 g) = 0.022 W/kg

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

Ratio of SAR at M2 to SAR at M1 = 52.6%

Maximum value of SAR (measured) = 0.0682 W/kg



0 dB = 0.0682 W/kg = -11.66 dBW/kg

NR Band n41(Voice/Data/SRS0)

Frequency: 2592.99 MHz; Communication System Channel Number: 518598; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.913$ S/m; $\epsilon_r = 38.776$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7645; ConvF(6.73, 6.97, 6.26) @ 2592.99 MHz; Calibrated: 9/20/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Phantom section: Flat Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Bottom/QPSK RB 1/271 ch.518598/Area Scan (11x6x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.528 W/kg

Bottom/QPSK RB 1/271 ch.518598/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 14.96 V/m; Power Drift = 0.11 dB

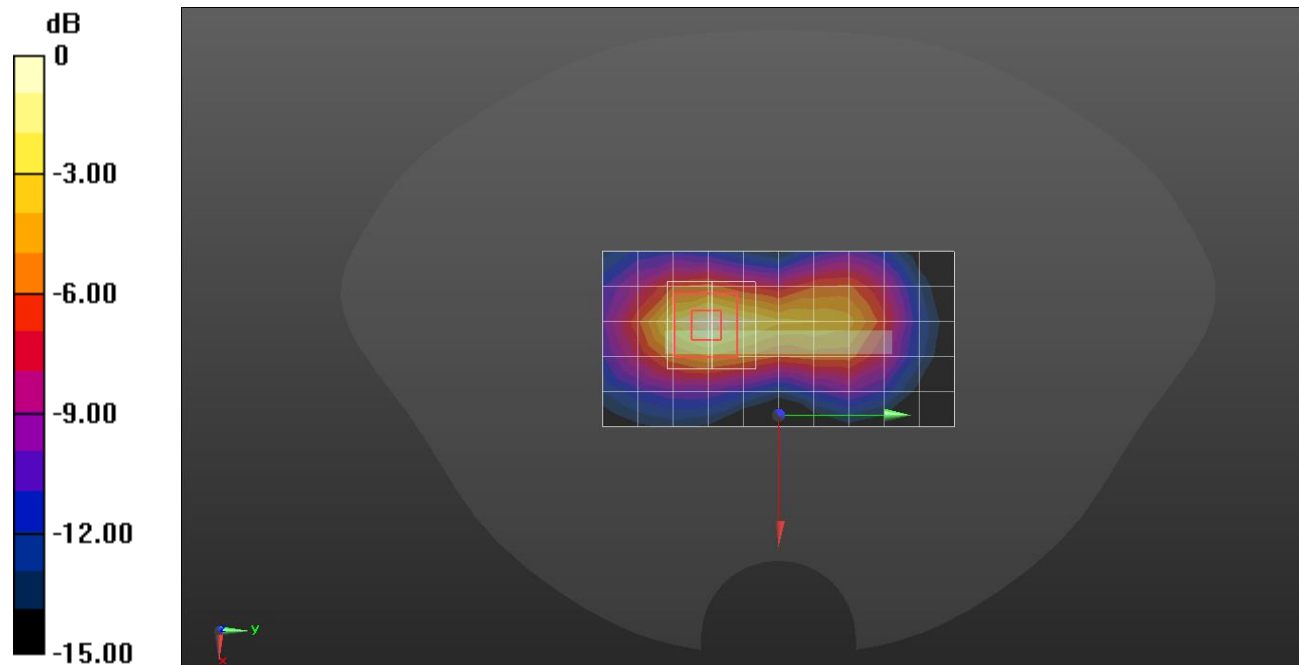
Peak SAR (extrapolated) = 0.654 W/kg

SAR(1 g) = 0.302 W/kg; SAR(10 g) = 0.135 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 46.8%

Maximum value of SAR (measured) = 0.518 W/kg



0 dB = 0.518 W/kg = -2.86 dBW/kg

NR Band n41(SRS1 & Voice/Data/SRS0)

Frequency: 2592.99 MHz; Communication System Channel Number: 518598; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.905$ S/m; $\epsilon_r = 37.743$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7545; ConvF(7.2, 7.2, 7.2) @ 2592.99 MHz; Calibrated: 8/25/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Phantom section: Right Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

RHS/Tilt QPSK RB135/69 ch.518598/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.15 W/kg

RHS/Tilt QPSK RB135/69 ch.518598/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 23.29 V/m; Power Drift = -0.00 dB

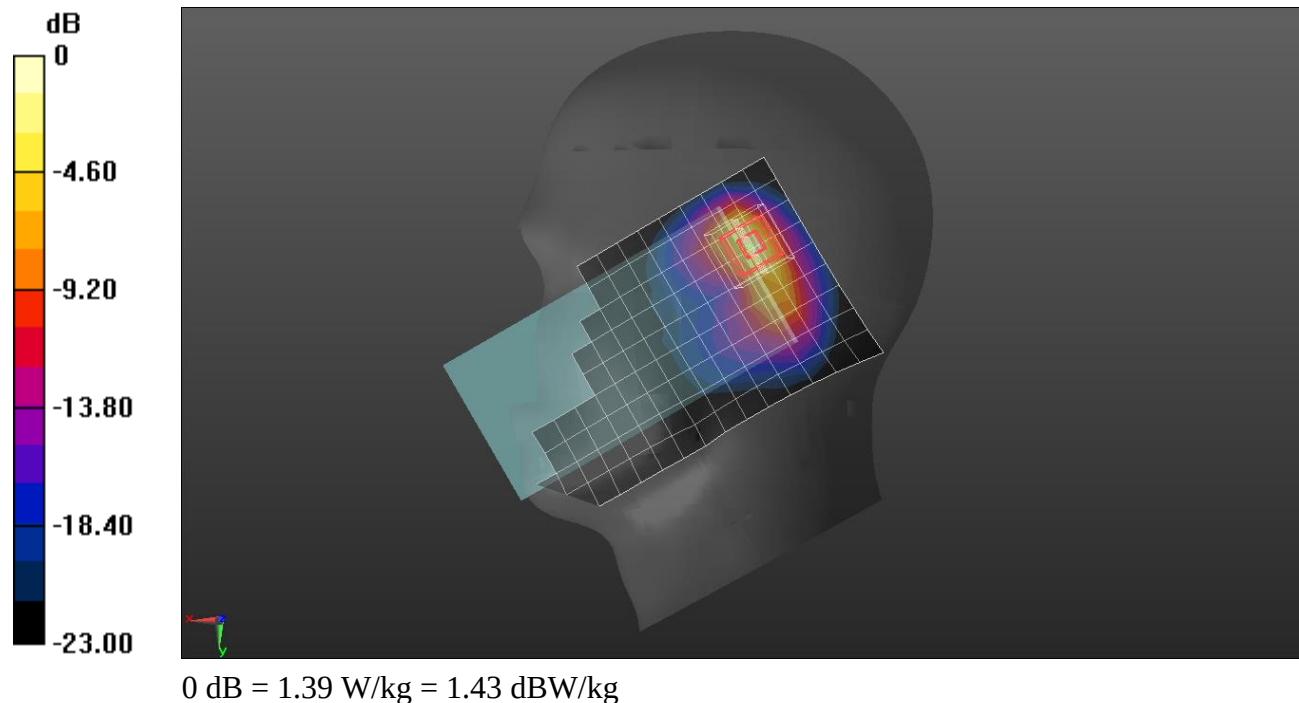
Peak SAR (extrapolated) = 1.83 W/kg

SAR(1 g) = 0.720 W/kg; SAR(10 g) = 0.281 W/kg

Smallest distance from peaks to all points 3 dB below = 6 mm

Ratio of SAR at M2 to SAR at M1 = 41.1%

Maximum value of SAR (measured) = 1.39 W/kg



NR Band n41(SRS1 & Voice/Data/SRS0)

Frequency: 2592.99 MHz; Communication System Channel Number: 518598; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.882$ S/m; $\epsilon_r = 40.005$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN3871; ConvF(8.01, 7.39, 7.8) @ 2592.99 MHz; Calibrated: 8/25/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (Right); Phantom section: Flat Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Top/QPSK RB 1/1 ch.518598/Area Scan (10x6x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.316 W/kg

Top/QPSK RB 1/1 ch.518598/Zoom Scan (7x12x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 11.94 V/m; Power Drift = 0.13 dB

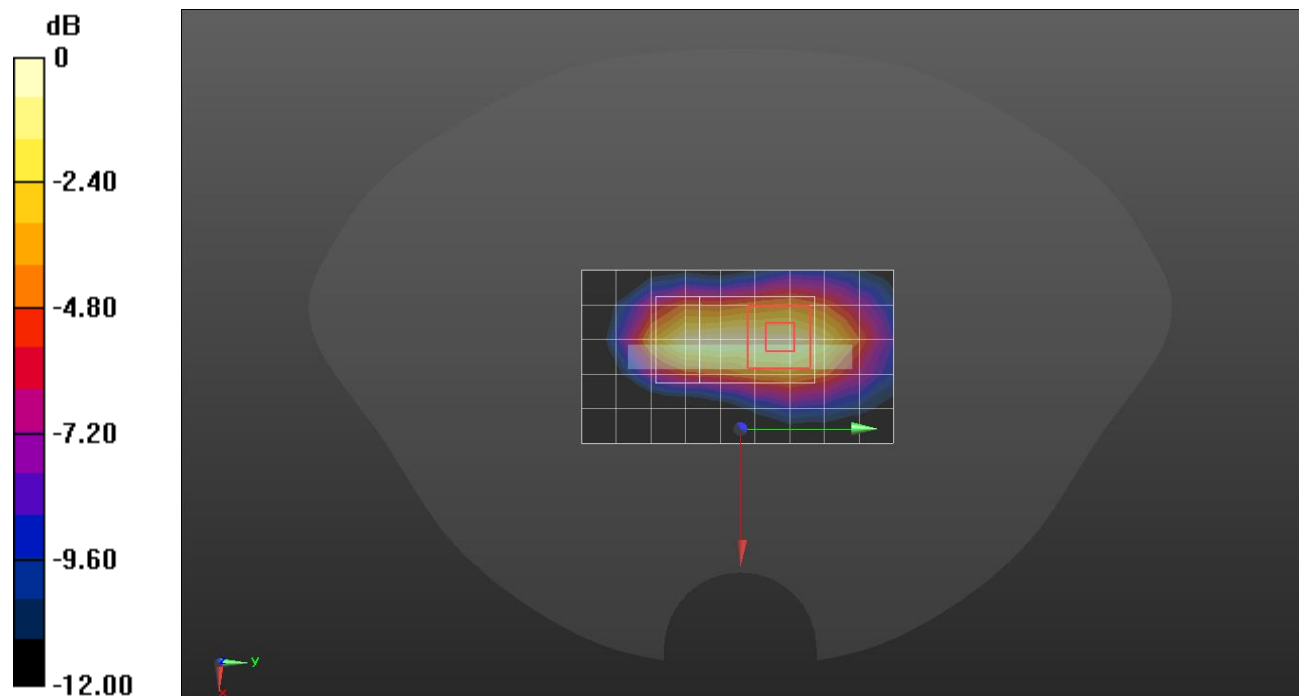
Peak SAR (extrapolated) = 0.381 W/kg

SAR(1 g) = 0.201 W/kg; SAR(10 g) = 0.110 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 53.7%

Maximum value of SAR (measured) = 0.314 W/kg



0 dB = 0.314 W/kg = -5.03 dBW/kg

NR Band n41(SRS2/SRS3)

Frequency: 2592.99 MHz; Communication System Channel Number: 518598; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

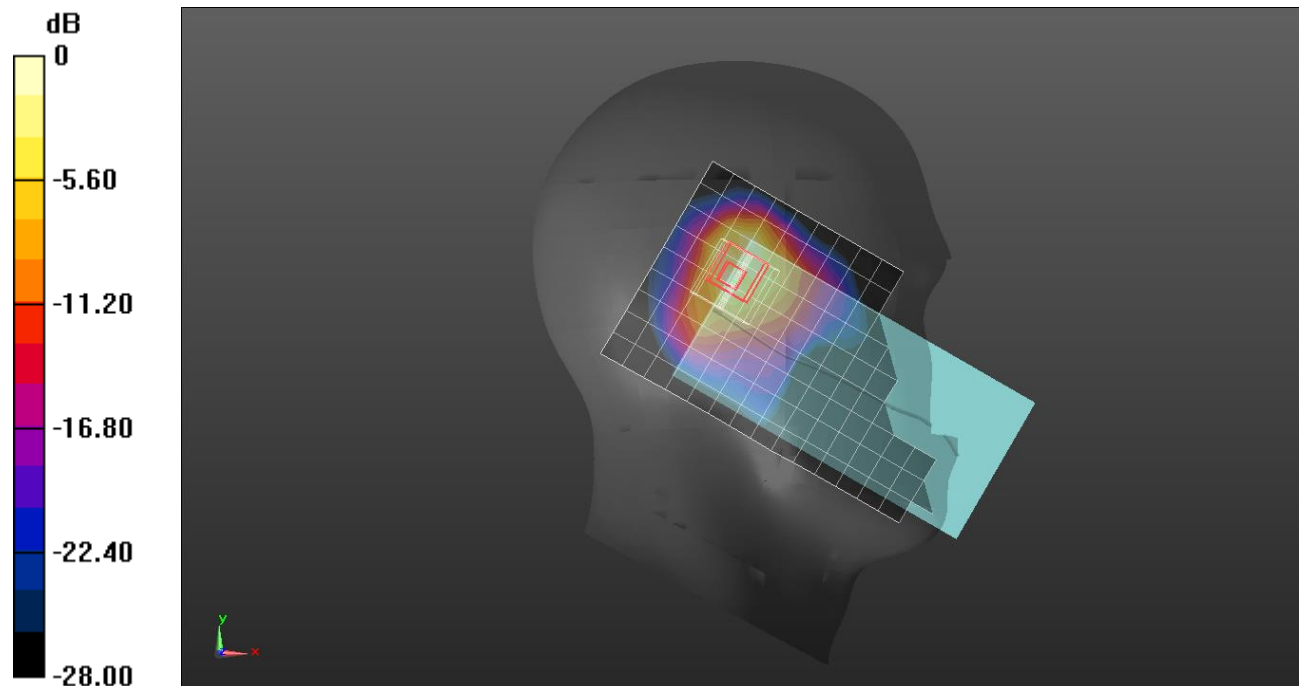
Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.892$ S/m; $\epsilon_r = 39.611$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7545; ConvF(7.2, 7.2, 7.2) @ 2592.99 MHz; Calibrated: 8/25/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Phantom section: Left Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

LHS/Touch CW RB 1/136 ch.518598/Area Scan (10x18x1): Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.04 W/kg

LHS/Touch CW RB 1/136 ch.518598/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.16 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.73 W/kg
SAR(1 g) = 0.624 W/kg; SAR(10 g) = 0.264 W/kg
Smallest distance from peaks to all points 3 dB below = 6.7 mm
Ratio of SAR at M2 to SAR at M1 = 42.2%
Maximum value of SAR (measured) = 1.16 W/kg



0 dB = 1.16 W/kg = 0.64 dBW/kg

NR Band n41(SRS2/SRS3)

Frequency: 2592.99 MHz; Communication System Channel Number: 518598; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 2592.99$ MHz; $\sigma = 1.898$ S/m; $\epsilon_r = 38.874$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN3871; ConvF(8.01, 7.39, 7.8) @ 2592.99 MHz; Calibrated: 8/25/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (Right); Phantom section: Flat Section; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Rear/CW ch.518598/Area Scan (9x17x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.434 W/kg

Rear/CW ch.518598/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 13.71 V/m; Power Drift = -0.00 dB

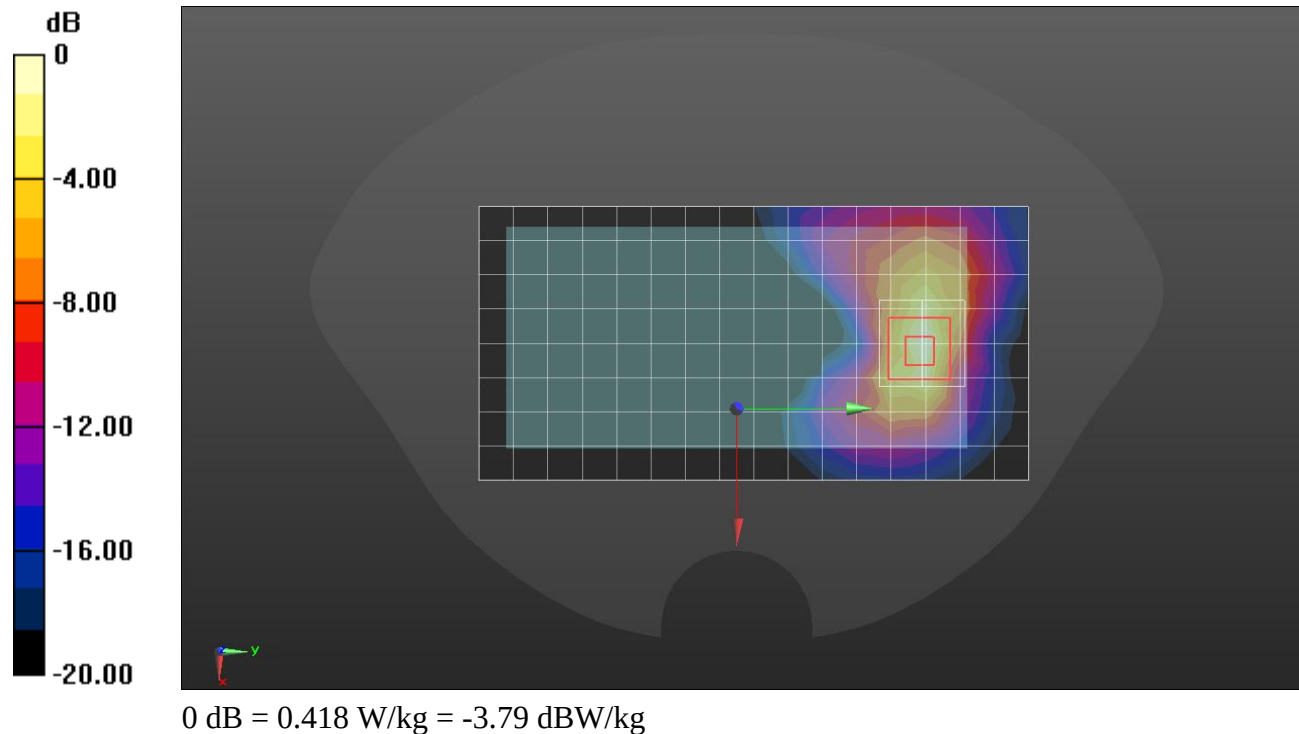
Peak SAR (extrapolated) = 0.513 W/kg

SAR(1 g) = 0.264 W/kg; SAR(10 g) = 0.118 W/kg

Smallest distance from peaks to all points 3 dB below = 7.6 mm

Ratio of SAR at M2 to SAR at M1 = 53.1%

Maximum value of SAR (measured) = 0.418 W/kg



Measurement Report for SM-A556E_DS, Left Touch, Band n66, 5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz) RBPosition:Mid AntennaCfg:SISO, Channel 349000 (1745.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
LeftHead, HSL	Touch, 0.00	Band n66	5G NR FR1 FDD, 10942-AAC	1745.0	8.61	1.32	40.2

Hardware Setup

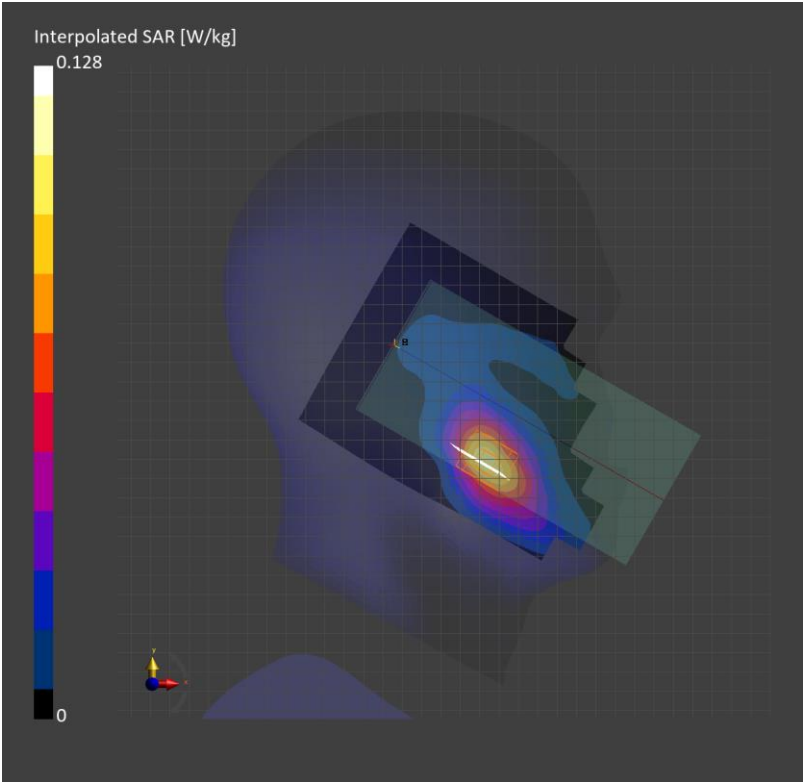
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 2043	HBBL-600-10000	EX3DV4 – SN7376, 2023-07-25	DAE4 Sn1343, 2023-06-30

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	0.085	0.092
psSAR10g [W/Kg]	0.050	0.060
Power Drift [dB]		-0.08
M2 / M1 [%]		92.5
Dist 3dB Peak [mm]		12.8



Measurement Report for SM-A556E_DS, BOTTOM, Band n66, 5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz) RBPosition:Mid AntennaCfg:SISO, Channel 349000 (1745.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	BOTTOM, 10.00	Band n66	5G NR FR1 FDD, 10942-AAC	1745.0	8.4	1.32	39.5

Hardware Setup

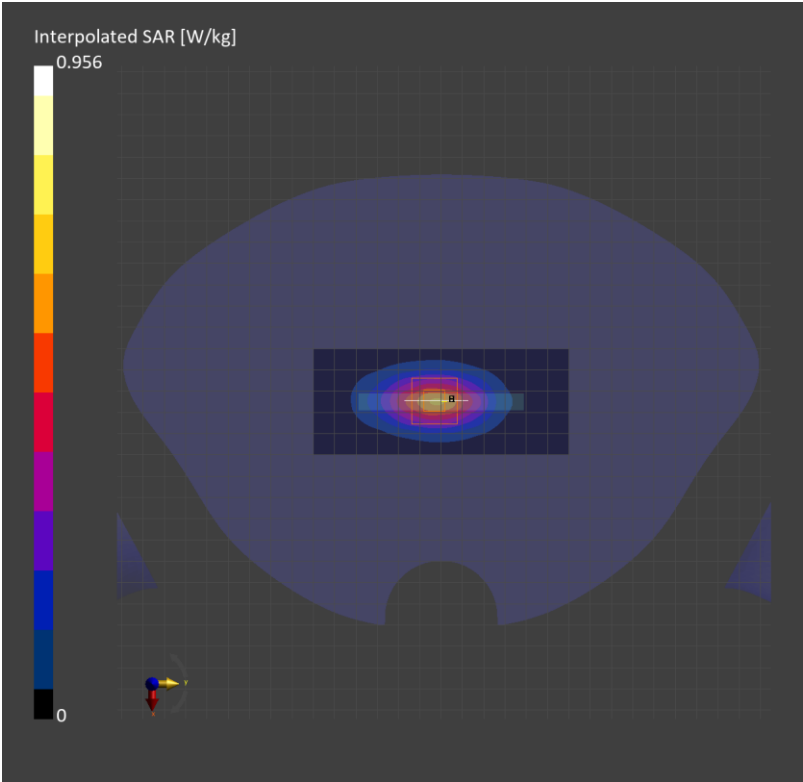
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1877	HSL1900	EX3DV4 - SN7314, 2023-05-26	DAE4 Sn1671, 2023-05-25

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	49.8 x 120.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.3 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]	0.516	0.522
psSAR10g [W/Kg]	0.272	0.276
Power Drift [dB]		0.01
M2 / M1 [%]		82.8
Dist 3dB Peak [mm]		9.6



Measurement Report for SM-A556E_DS, RIGHT TILT, Band n66, 5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz) RBPosition:Mid AntennaCfg:SISO, Channel 349000 (1745.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	TILT, 0.00	Band n66	5G NR FR1 FDD, 10942-AAC	1745.0	7.9	1.31	40.5

Hardware Setup

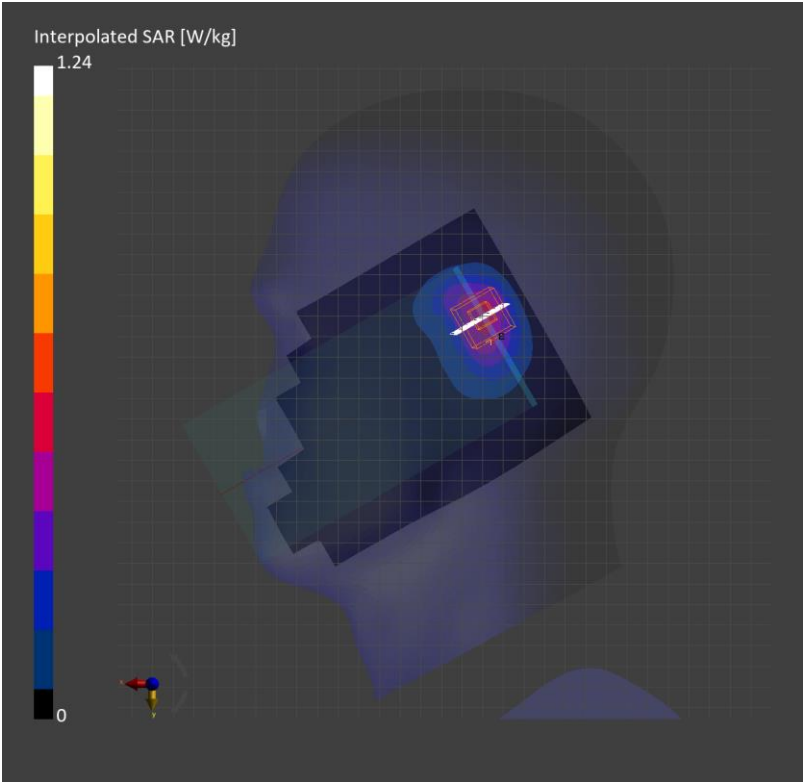
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN7313, 2023-03-24	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	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]	4.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.450	0.628
psSAR10g [W/Kg]	0.265	0.309
Power Drift [dB]		0.01
M2 / M1 [%]		79.6
Dist 3dB Peak [mm]		8.1



Measurement Report for SM-A556E_DS, TOP, Band n66, 5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz) RBPosition:Mid AntennaCfg:SISO, Channel 349000 (1745.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	TOP, 10.00	Band n66	5G NR FR1 FDD, 10942-AAC	1745.0	8.57	1.34	40.0

Hardware Setup

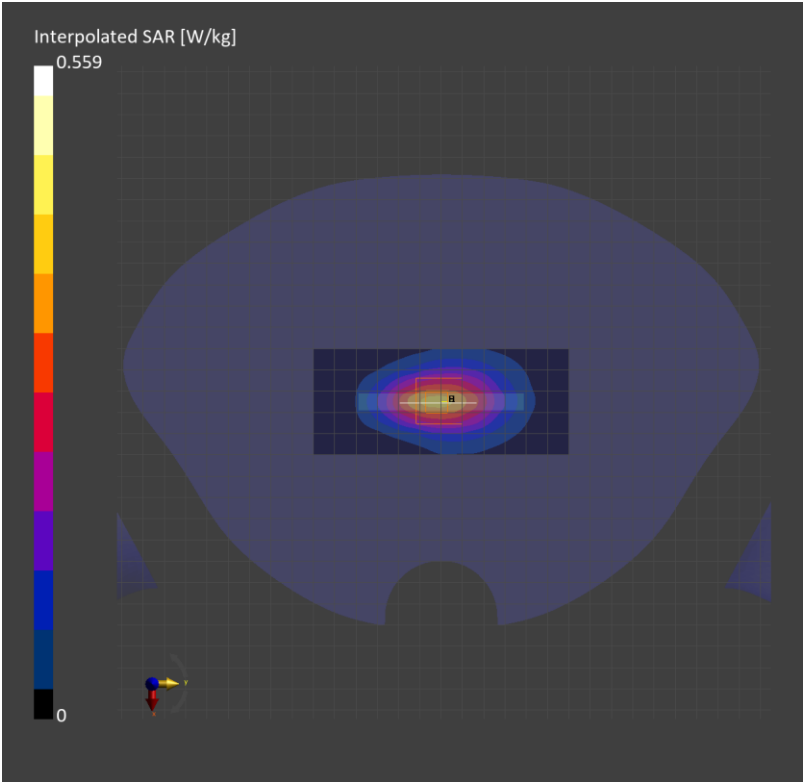
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1877	HSL1900	EX3DV4 - SN7651, 2023-05-30	DAE4 Sn1671, 2023-05-25

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	49.8 x 120.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.3 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]	0.317	0.321
psSAR10g [W/Kg]	0.178	0.182
Power Drift [dB]		-0.02
M2 / M1 [%]		84.0
Dist 3dB Peak [mm]		10.9



Measurement Report for SM-A556E_DS, RIGHT TILT, Band n77, 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) RBPosition:High AntennaCfg:SISO, Channel 662000 (3930.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	TILT, 0.00	Band n77	5G NR FR1 TDD, 10866-AAD	3930.0	6.1	3.34	37.4

Hardware Setup

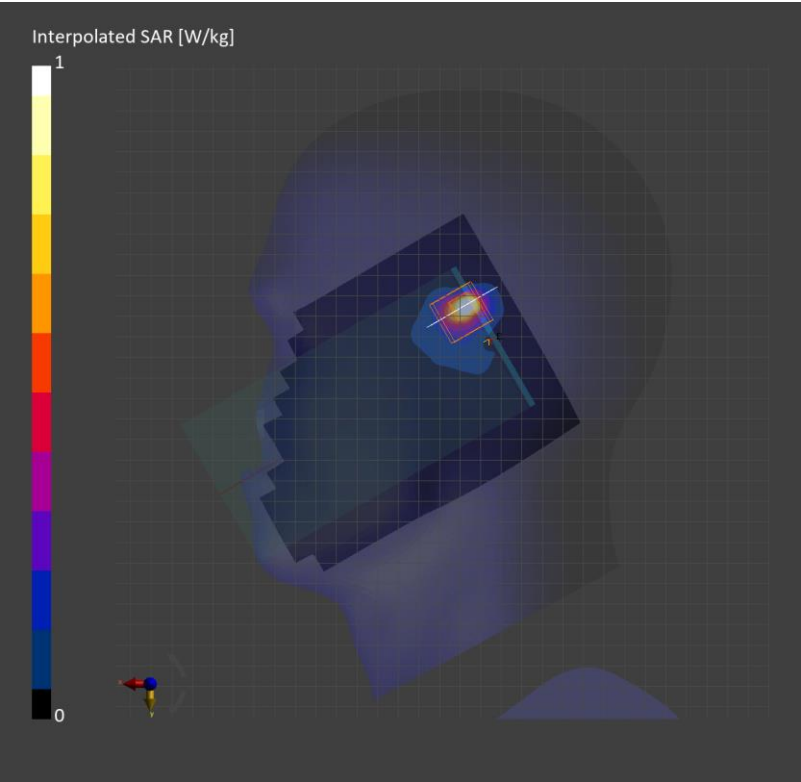
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) – 1991	HBBL-600-10000	EX3DV4 – SN7313, 2023-03-24	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 200.0	28.0 x 28.0 x 28.0
Grid Steps [mm]	10.0 x 10.0	4.7 x 4.7 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.656	0.703
psSAR10g [W/Kg]	0.208	0.212
Power Drift [dB]		-0.04
M2 /M1 [%]		74.8
Dist 3dB Peak [mm]		6.0



Measurement Report for SM-A556E_DS, Rear, Band n77, 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz) RBPosition:Mid AntennaCfg:SISO, Channel 633334 (3500.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Rear, 10.00	Band n77	5G NR FR1 TDD, 10866-AAD	3500.0	6.42	2.84	38.4

Hardware Setup

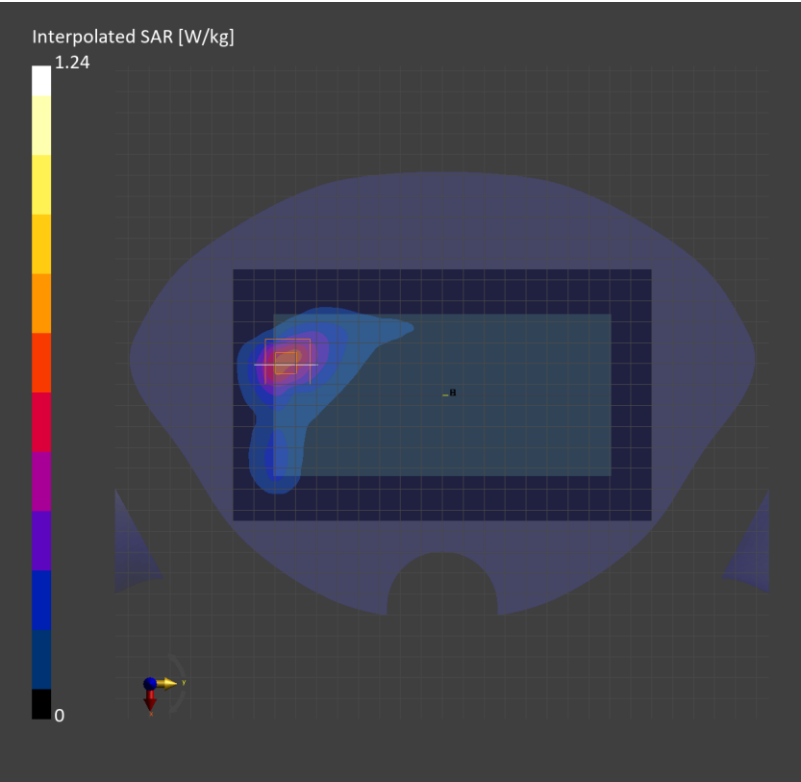
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000	EX3DV4 - SN7313, 2023-03-24	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 200.0	28.0 x 28.0 x 28.0
Grid Steps [mm]	10.0 x 10.0	5.0 x 5.0 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.519	0.561
psSAR10g [W/Kg]	0.231	0.240
Power Drift [dB]		0.03
M2 / M1 [%]		80.2
Dist 3dB Peak [mm]		9.3



Wi-Fi (DTS Band)

Frequency: 2462 MHz; Communication System Channel Number: 11; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.863$ S/m; $\epsilon_r = 38.301$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/17/2023
- Probe: EX3DV4 - SN7314; ConvF(7.47, 7.47, 7.47) @ 2462 MHz; Calibrated: 5/26/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: SAM (20deg probe tilt) with CRP v5.0(Right); Phantom section: Right Section ; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

RHS/Touch 802.11 b mode ch.11 SISO ant 1/Area Scan (11x18x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.632 W/kg

RHS/Touch 802.11 b mode ch.11 SISO ant 1/Zoom Scan (7x7x7)/Cube 0: Measurement grid:

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

Reference Value = 15.01 V/m; Power Drift = 0.13 dB

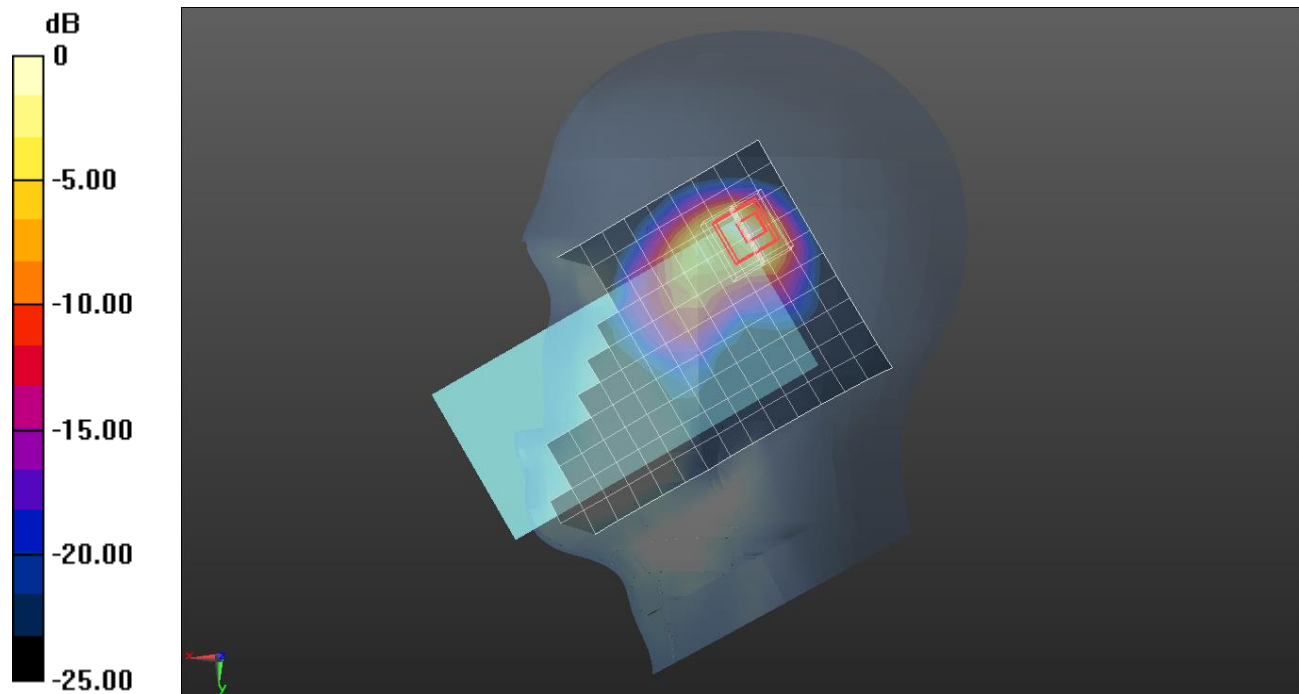
Peak SAR (extrapolated) = 0.834 W/kg

SAR(1 g) = 0.299 W/kg; SAR(10 g) = 0.122 W/kg

Smallest distance from peaks to all points 3 dB below = 4.5 mm

Ratio of SAR at M2 to SAR at M1 = 35.9%

Maximum value of SAR (measured) = 0.615 W/kg



Wi-Fi (DTS Band)

Frequency: 2462 MHz; Communication System Channel Number: 11; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 2462$ MHz; $\sigma = 1.823$ S/m; $\epsilon_r = 39.28$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/17/2023
- Probe: EX3DV4 - SN7314; ConvF(7.47, 7.47, 7.47) @ 2462 MHz; Calibrated: 5/26/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: SAM (20deg probe tilt) with CRP v5.0(Right); Phantom section: Flat Section ; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left/802.11 b mode ch 11 Ant.1/Area Scan (17x7x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.553 W/kg

Left/802.11 b mode ch 11 Ant.1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 15.98 V/m; Power Drift = 0.07 dB

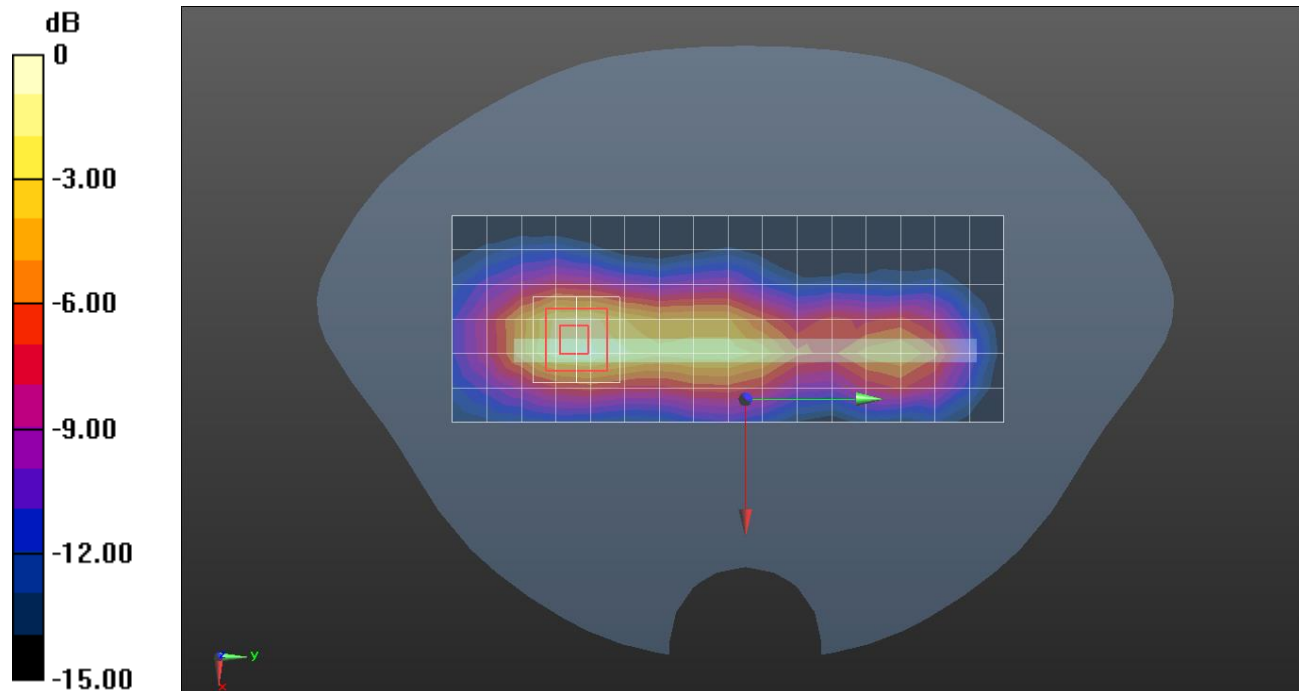
Peak SAR (extrapolated) = 0.821 W/kg

SAR(1 g) = 0.408 W/kg; SAR(10 g) = 0.198 W/kg

Smallest distance from peaks to all points 3 dB below = 9 mm

Ratio of SAR at M2 to SAR at M1 = 50.2%

Maximum value of SAR (measured) = 0.661 W/kg



0 dB = 0.661 W/kg = -1.80 dBW/kg

Measurement Report for SM-A556E_DS, Right Touch, U-NII-1, U-NII-2A, IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle), Channel 54 (5270.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	U-NII-1, U-NII-2A	WLAN, 10599-AAC	5270.0	5.5	4.66	35.2

Hardware Setup

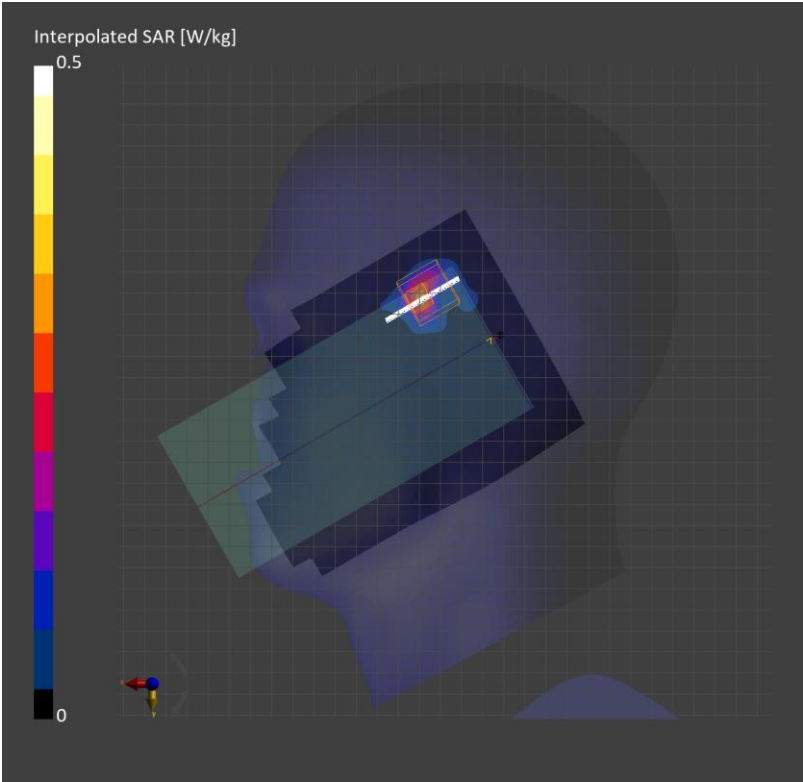
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1877	HSL1750	EX3DV4 - SN7651, 2023-05-30	DAE4 Sn1671, 2023-05-25

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 200.0	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]	0.204	0.191
psSAR10g [W/Kg]	0.065	0.055
Power Drift [dB]		-0.14
M2 / M1 [%]		62.8
Dist 3dB Peak [mm]		3.3



Measurement Report for SM-A556E_DS, LEFT, U-NII-1, U-NII-2A, IEEE 802.11n (HT Mixed, 40MHz, MCS0, 90pc duty cycle), Channel 54 (5270.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	LEFT, 0.00	U-NII-1, U-NII-2A	WLAN, 10599-AAC	5270.0	5.5	4.66	35.2

Hardware Setup

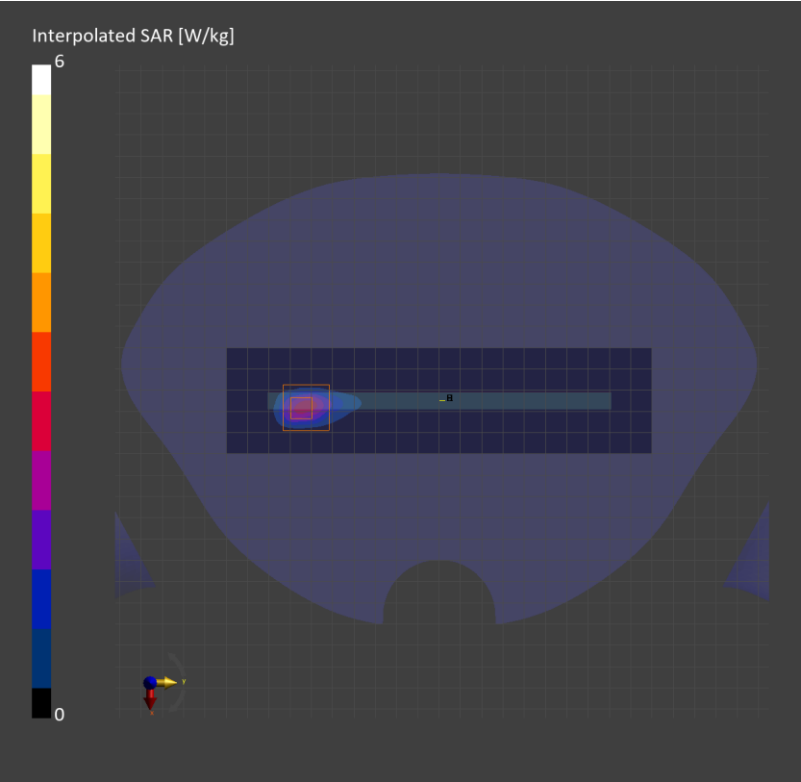
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1877	HSL1750	EX3DV4 - SN7651, 2023-05-30	DAE4 Sn1671, 2023-05-25

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	49.8 x 200.0	22.0 x 22.0 x 22.0
Grid Steps [mm]	8.3 x 10.0	2.6 x 2.6 x 1.2
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	1.88	2.39
psSAR10g [W/Kg]	0.544	0.534
Power Drift [dB]		0.00
M2/M1 [%]		64.0
Dist 3dB Peak [mm]		4.0



Wi-Fi (U-NII Bands)

Frequency: 5610 MHz; Communication System Channel Number: 122; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used (interpolated): $f = 5610$ MHz; $\sigma = 5.075$ S/m; $\epsilon_r = 35.615$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/17/2023
- Probe: EX3DV4 - SN7314; ConvF(4.76, 4.76, 4.76) @ 5610 MHz; Calibrated: 5/26/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: SAM (20deg probe tilt) with CRP v5.0(Right); Phantom section: Right Section ; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

RHS/Touch 802.11 ac mode ch.122 SISO Ant.1/Area Scan (11x20x1): Measurement grid:

dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.570 W/kg

RHS/Touch802.11 ac mode ch.122 SISO Ant.1/Zoom Scan (8x8x8)/Cube 0: Measurement grid:

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

Reference Value = 11.65 V/m; Power Drift = -0.10 dB

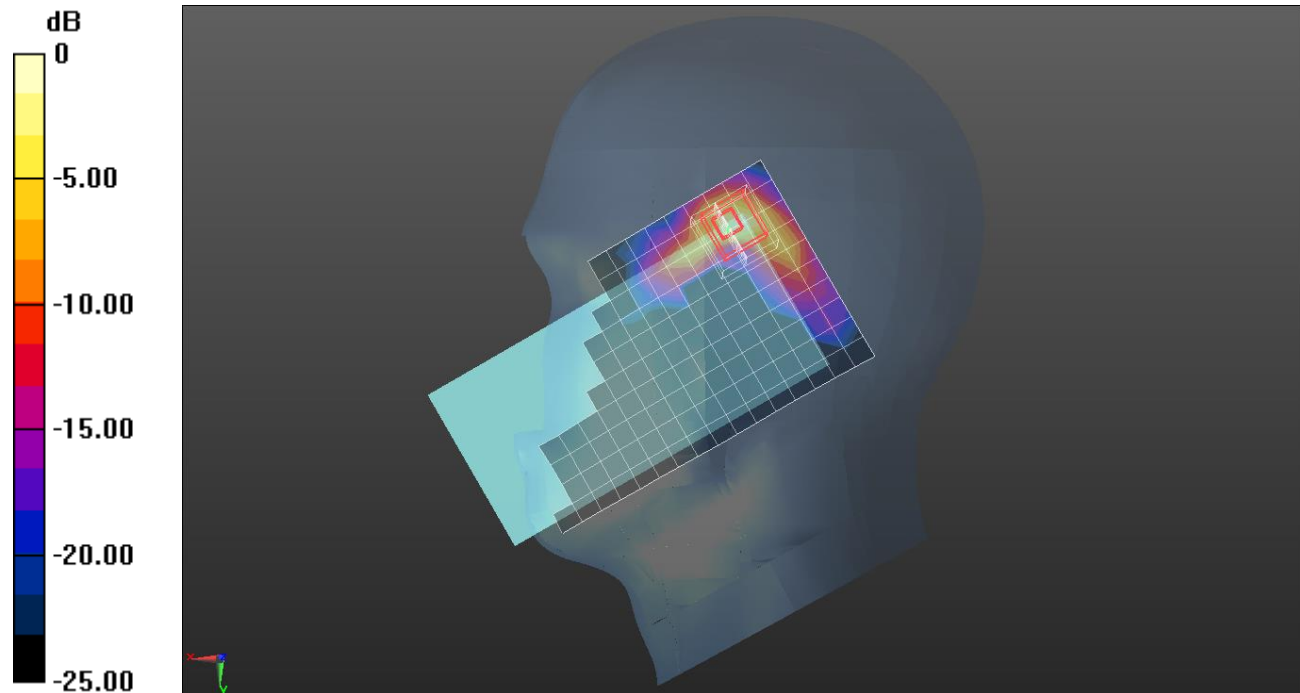
Peak SAR (extrapolated) = 1.33 W/kg

SAR(1 g) = 0.233 W/kg; SAR(10 g) = 0.062 W/kg

Smallest distance from peaks to all points 3 dB below = 3.2 mm

Ratio of SAR at M2 to SAR at M1 = 57%

Maximum value of SAR (measured) = 0.689 W/kg



0 dB = 0.689 W/kg = -1.62 dBW/kg

Wi-Fi (U-NII Bands)

Frequency: 5720 MHz; Communication System Channel Number: 144; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used: $f = 5720$ MHz; $\sigma = 5.193$ S/m; $\epsilon_r = 35.412$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/17/2023
- Probe: EX3DV4 - SN7314; ConvF(4.85, 4.85, 4.85) @ 5720 MHz; Calibrated: 5/26/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: SAM (20deg probe tilt) with CRP v5.0(Right); Phantom section: Flat Section ; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left/802.11 a mode ch.144 SISO Ant.1/Area Scan (18x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 10.7 W/kg

Left/802.11 a mode ch.144 SISO Ant.1/Zoom Scan (9x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 47.78 V/m; Power Drift = 0.10 dB

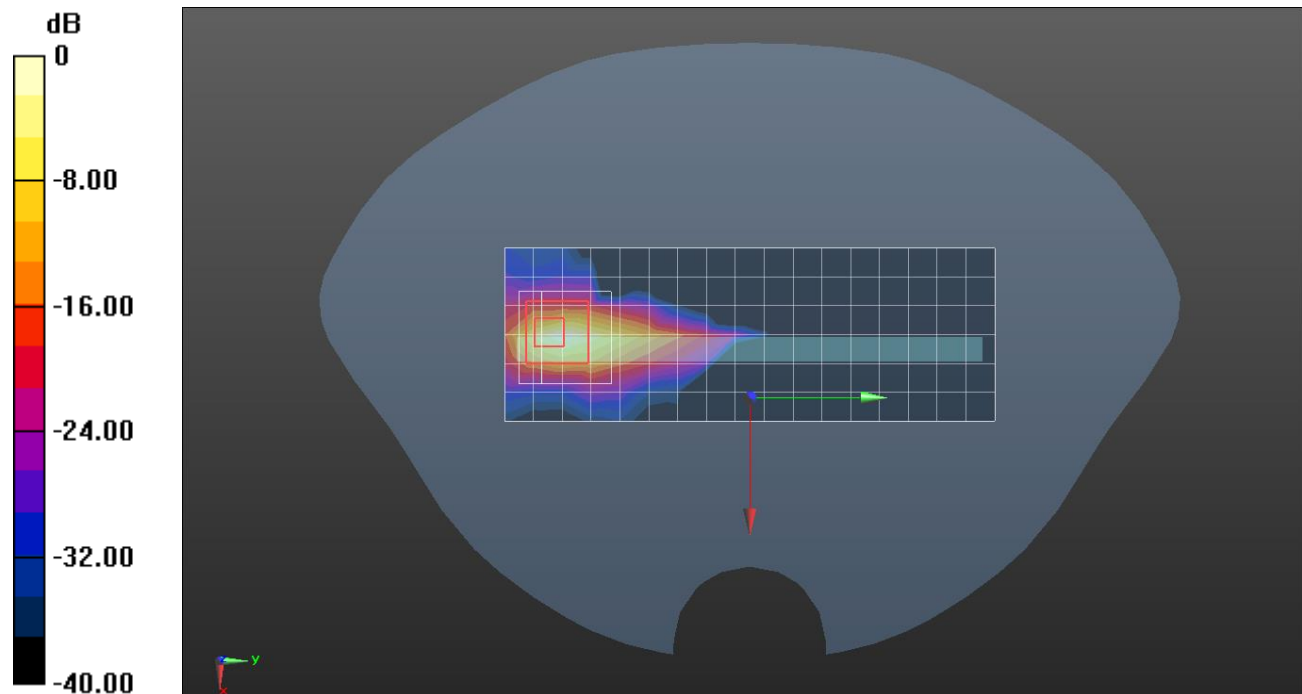
Peak SAR (extrapolated) = 30.9 W/kg

SAR(1 g) = 3.78 W/kg; SAR(10 g) = 0.820 W/kg

Smallest distance from peaks to all points 3 dB below = 4 mm

Ratio of SAR at M2 to SAR at M1 = 53.7%

Maximum value of SAR (measured) = 10.6 W/kg



0 dB = 10.6 W/kg = 10.25 dBW/kg

Wi-Fi (U-NII Bands)

Frequency: 5775 MHz; Communication System Channel Number: 155; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

Medium parameters used: $f = 5775$ MHz; $\sigma = 5.327$ S/m; $\epsilon_r = 35.385$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/17/2023
- Probe: EX3DV4 - SN7314; ConvF(4.85, 4.85, 4.85) @ 5775 MHz; Calibrated: 5/26/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: SAM (20deg probe tilt) with CRP v5.0(Right); Phantom section: Right Section ; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

RHS/Touch 802.11 ac mode ch.155 Ant 1/Area Scan (12x20x1): Measurement grid: dx=10mm, dy=10mm

Maximum value of SAR (measured) = 0.456 W/kg

RHS/Touch 802.11 ac mode ch.155 Ant 1/Zoom Scan (9x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm

Reference Value = 14.25 V/m; Power Drift = -0.14 dB

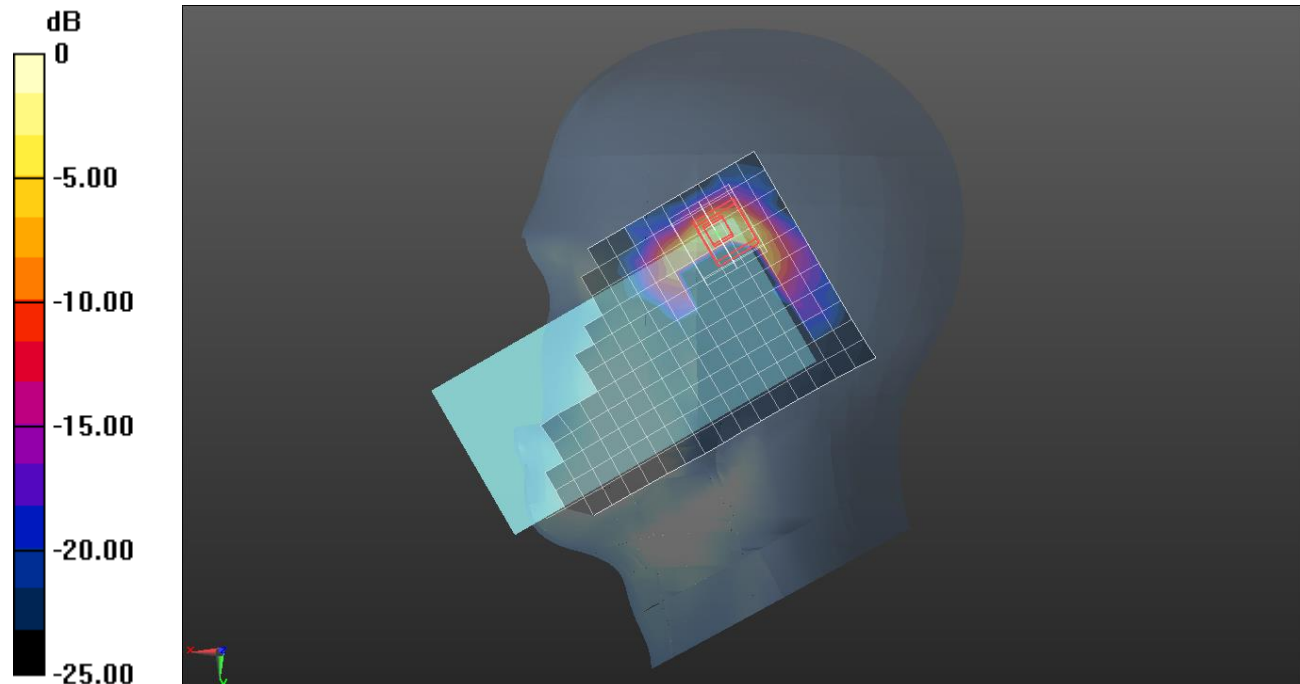
Peak SAR (extrapolated) = 2.90 W/kg

SAR(1 g) = 0.273 W/kg; SAR(10 g) = 0.066 W/kg

Smallest distance from peaks to all points 3 dB below = 3.2 mm

Ratio of SAR at M2 to SAR at M1 = 58.1%

Maximum value of SAR (measured) = 0.881 W/kg



0 dB = 0.881 W/kg = -0.55 dBW/kg

Wi-Fi (U-NII Bands)

Frequency: 5745 MHz; Communication System Channel Number: 149; Duty Cycle: 1:1

Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C

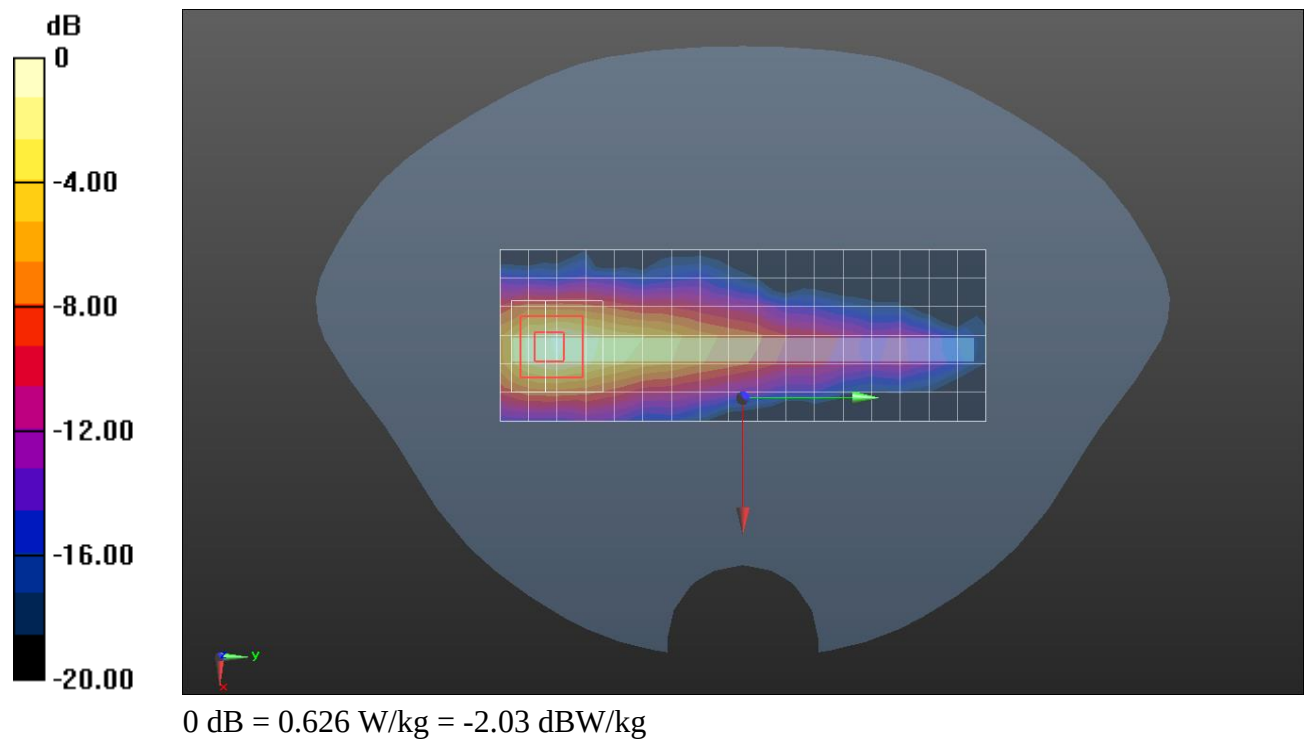
Medium parameters used (interpolated): $f = 5745$ MHz; $\sigma = 5.211$ S/m; $\epsilon_r = 35.366$; $\rho = 1000$ kg/m³

DASY5 Configuration:

- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1494; Calibrated: 7/17/2023
- Probe: EX3DV4 - SN7314; ConvF(4.85, 4.85, 4.85) @ 5745 MHz; Calibrated: 5/26/2023
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
- Phantom: SAM (20deg probe tilt) with CRP v5.0(Right); Phantom section: Flat Section ; Type: QD000P40CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7483)

Left/802.11 a mode ch.149 SISO Ant.1/Area Scan (18x7x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.490 W/kg

Left/802.11 a mode ch.149 SISO Ant.1/Zoom Scan (9x9x8)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=1.4mm
Reference Value = 10.84 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.09 W/kg
SAR(1 g) = 0.252 W/kg; SAR(10 g) = 0.087 W/kg
Smallest distance from peaks to all points 3 dB below = 8.8 mm
Ratio of SAR at M2 to SAR at M1 = 59.6%
Maximum value of SAR (measured) = 0.626 W/kg



Measurement Report for SM-A556E_DS, Right Touch, ISM 2.4 GHz Band, Bluetooth Low Energy, Channel 0 (2402.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
RightHead, HSL	Touch, 0.00	ISM 2.4 GHz Band	Bluetooth, 10670-AAA	2402.0	7.64	1.84	40.2

Hardware Setup

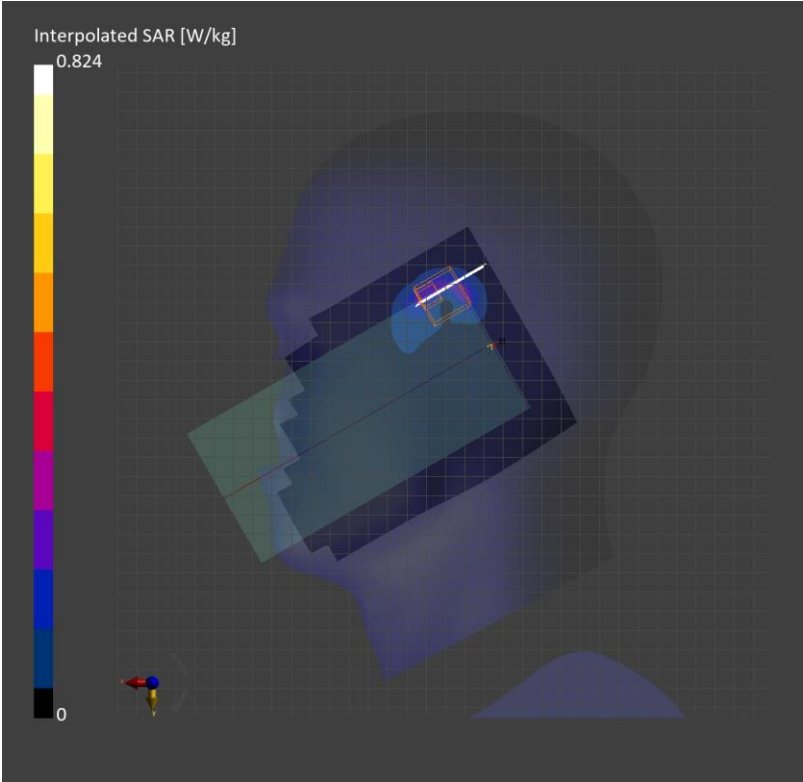
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1877	HSL1900	EX3DV4 - SN7651, 2023-05-30	DAE4 Sn1671, 2023-05-25

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 200.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	10.0 x 10.0	4.1 x 4.1 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.178	0.181
psSAR10g [W/Kg]	0.085	0.081
Power Drift [dB]		-0.15
M2/M1 [%]		77.1
Dist 3dB Peak [mm]		4.9



Measurement Report for SM-A556E_DS, LEFT, ISM 2.4 GHz Band, Bluetooth Low Energy, Channel 0 (2402.0 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	LEFT, 10.00	ISM 2.4 GHz Band	Bluetooth, 10670-AAA	2402.0	7.64	1.84	40.2

Hardware Setup

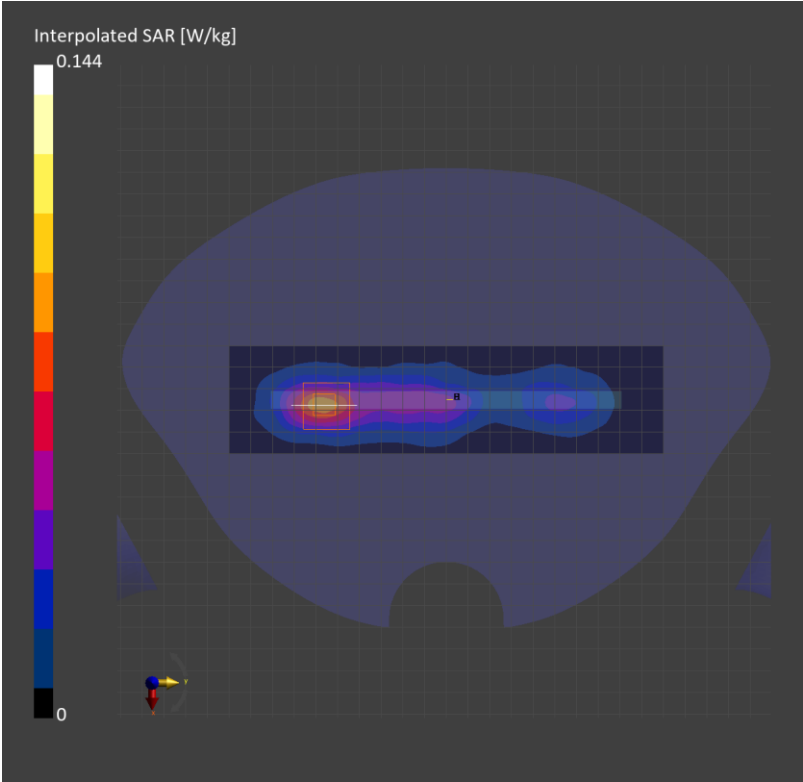
Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V5.0 (30deg probe tilt) - 1877	HSL1900	EX3DV4 - SN7651, 2023-05-30	DAE4 Sn1671, 2023-05-25

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	49.8 x 200.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	8.3 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]	0.071	0.066
psSAR10g [W/Kg]	0.034	0.033
Power Drift [dB]		0.03
M2/M1 [%]		73.5
Dist 3dB Peak [mm]		9.0



Measurement Report for SM-A556E_DS, Rear, Custom Band, CW, Channel 13600 (13.6 MHz)

Exposure Conditions

Phantom Section, TSL	Position, Test Distance [mm]	Band	Group, UID	Frequency [MHz]	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	Rear, 0.00	Custom Band	CW, 0--	13.6	17.89	0.718	53.7

Hardware Setup

Phantom	TSL (Tissue Simulating Liquid)	Probe, Calibration Date	DAE, Calibration Date
ELI V6.0 (20deg probe tilt) – 2005	HSL750	EX3DV4 – SN7646, 2023-03-23	DAE4 Sn1447, 2023-03-22

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	120.0 x 210.0	32.0 x 32.0 x 30.0
Grid Steps [mm]	15.0 x 15.0	3.8 x 3.8 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.036	0.057
psSAR10g [W/Kg]	0.024	0.018
Power Drift [dB]		-0.19
M2 / M1 [%]		49.0
Dist 3dB Peak [mm]		3.8

