Measurement Report for SM-F946U_UMPC, 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], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	REAR, 10.00	GSM 850	GSM, 10024-DAC	836.6, 190	10.0	0.933	42.0

Hardware Setup

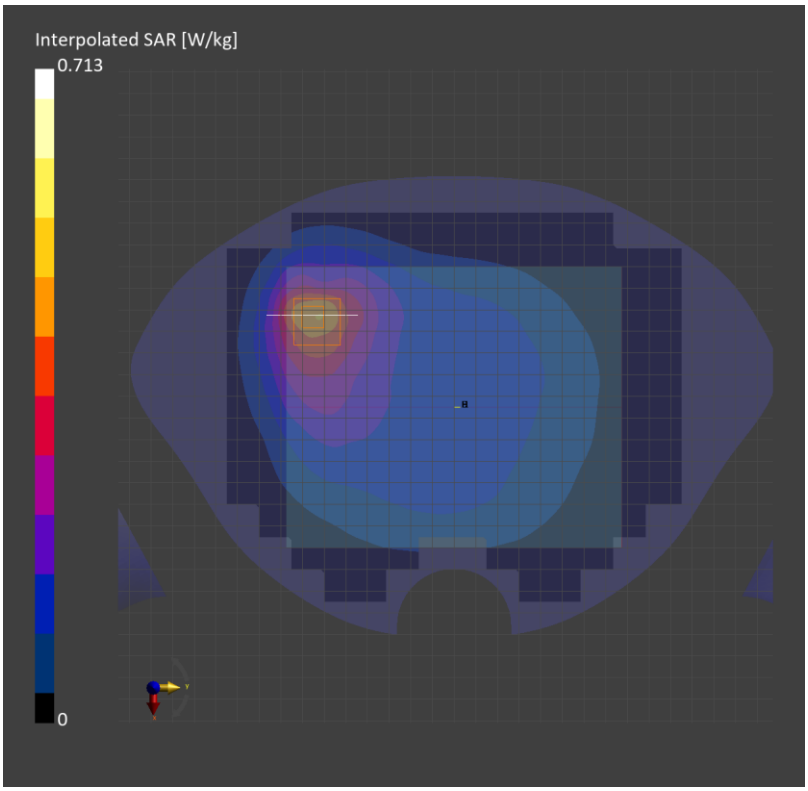
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-07	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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	0.418
psSAR10g [W/Kg]	0.275	0.254
Power Drift [dB]		-0.04
M2/M1 [%]		83.8
Dist 3dB Peak [mm]		14.9



Measurement Report for SM-F946U_UMPC, 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], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	REAR, 0.00	GSM 850	GSM, 10024-DAC	836.6, 190	10.0	0.933	42.0

Hardware Setup

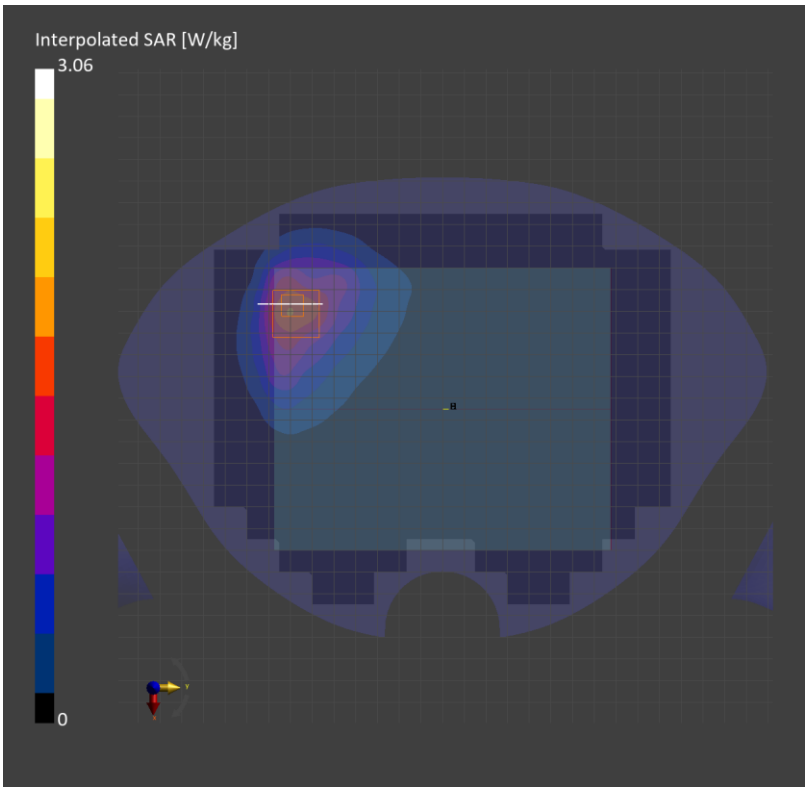
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-07	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	1.56	1.59
psSAR10g [W/Kg]	1.00	0.881
Power Drift [dB]		0.01
M2/M1 [%]		81.9
Dist 3dB Peak [mm]		11.4



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, GSM 1900, GPRS-FDD (TDMA, GMSK, TN 0-1-2-3), Channel 661 (1880.0 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 BOTTOM, 10.00	GSM 1900	GSM, 10028-DAC	1880.0, 661	8.51	1.37	39.9

Hardware Setup

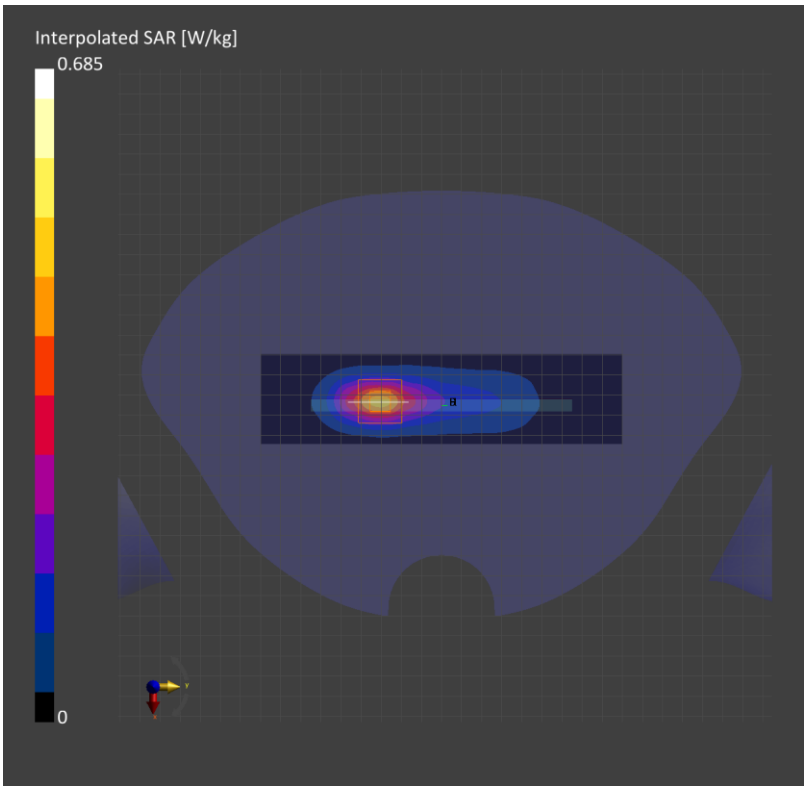
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-07	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.381	0.393
psSAR10g [W/Kg]	0.190	0.201
Power Drift [dB]		0.02
M2/M1 [%]		85.3
Dist 3dB Peak [mm]		9.6



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, GSM 1900, GPRS-FDD (TDMA, GMSK, TN 0-1-2-3), Channel 661 (1880.0 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 BOTTOM, 0.00	GSM 1900	GSM, 10028-DAC	1880.0, 661	8.51	1.37	39.9

Hardware Setup

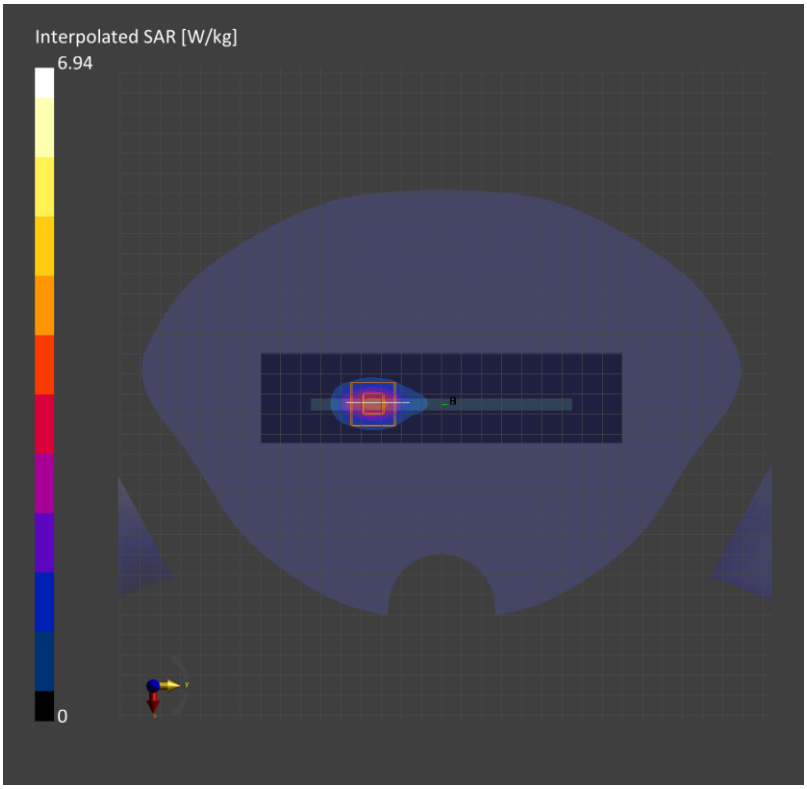
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-07	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 15.0	5.3 x 5.3 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.99	3.05
psSAR10g [W/Kg]	1.30	1.26
Power Drift [dB]		0.01
M2/M1 [%]		79.7
Dist 3dB Peak [mm]		6.4



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, WCDMA Band II, UMTS-FDD (WCDMA), Channel 9400 (1880.0 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 BOTTOM, 10.00	WCDMA Band II	WCDMA, 10011-CAC	1880.0, 9400	8.51	1.40	38.6

Hardware Setup

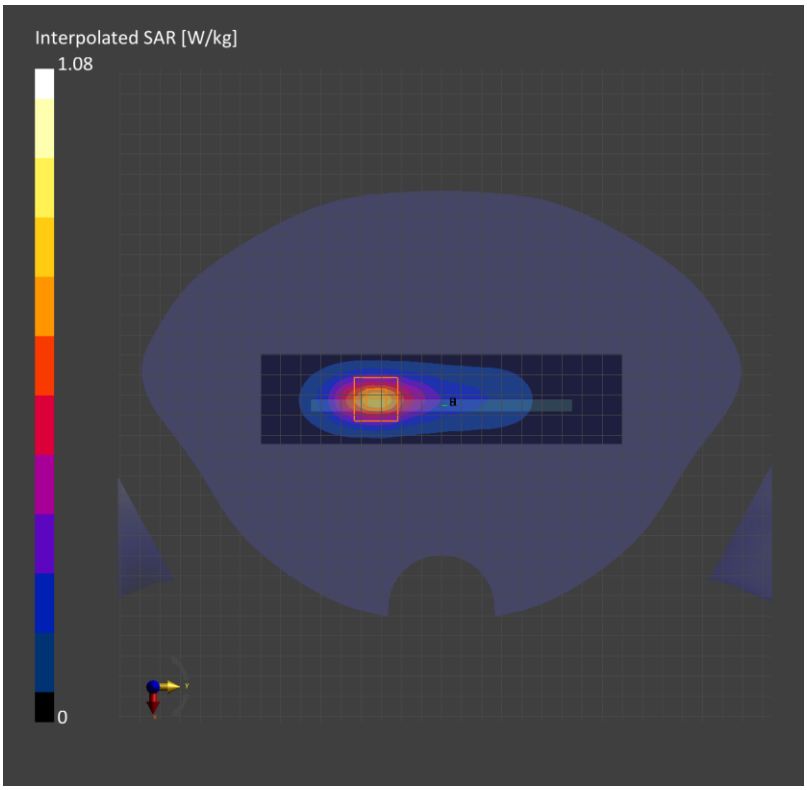
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.629	0.635
psSAR10g [W/Kg]	0.321	0.331
Power Drift [dB]		0.01
M2/M1 [%]		86.1
Dist 3dB Peak [mm]		9.6



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, WCDMA Band II, UMTS-FDD (WCDMA), Channel 9538 (1907.6 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, 0.00	WCDMA Band II	WCDMA, 10011-CAC	1907.6, 9538	8.51	1.41	38.5

Hardware Setup

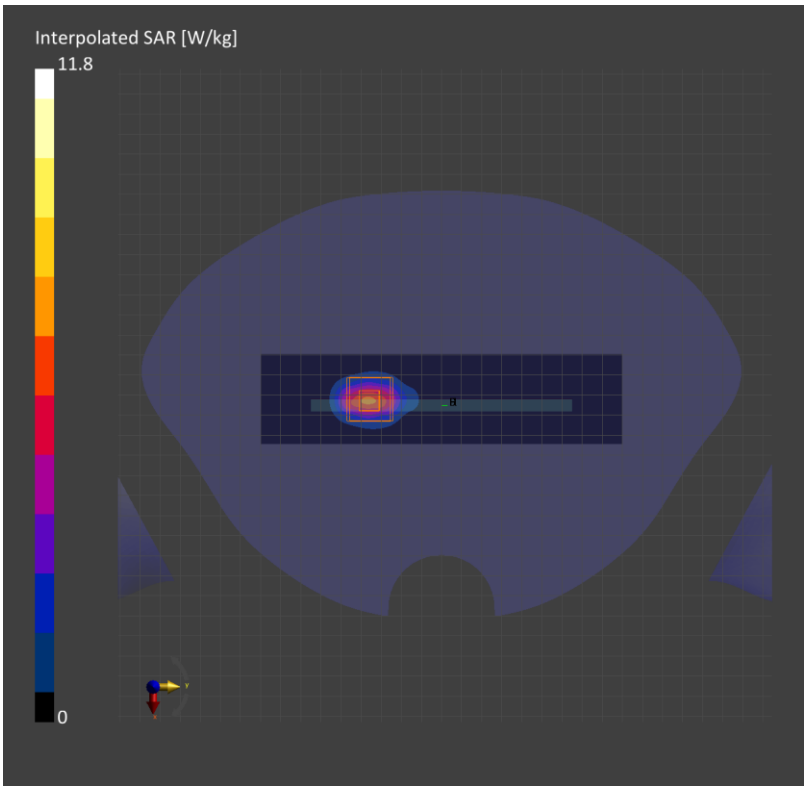
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 15.0	5.5 x 5.5 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	5.59	5.30
psSAR10g [W/Kg]	2.44	2.26
Power Drift [dB]		0.01
M2/M1 [%]		78.6
Dist 3dB Peak [mm]		6.4



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, WCDMA Band IV, UMTS-FDD (WCDMA), Channel 1413 (1732.6 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	WCDMA Band IV	WCDMA, 10011-CAC	1732.6, 1413	8.66	1.32	38.7

Hardware Setup

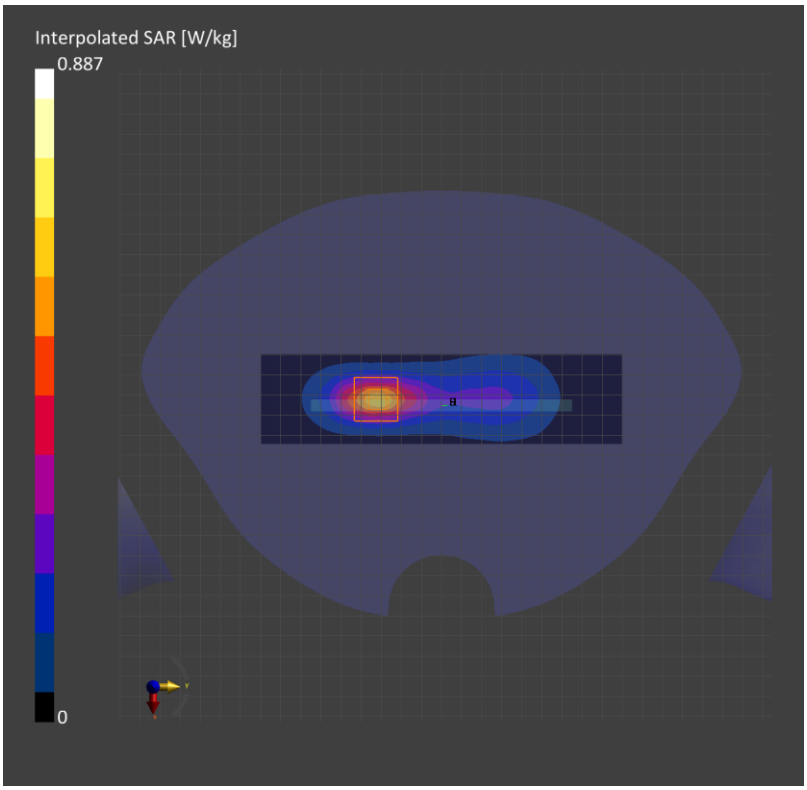
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.512	0.518
psSAR10g [W/Kg]	0.262	0.272
Power Drift [dB]		0.02
M2/M1 [%]		85.0
Dist 3dB Peak [mm]		9.1



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, WCDMA Band IV, UMTS-FDD (WCDMA), Channel 1513 (1752.6 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, 0.00	WCDMA Band IV	WCDMA, 10011-CAC	1752.6, 1513	8.66	1.33	38.7

Hardware Setup

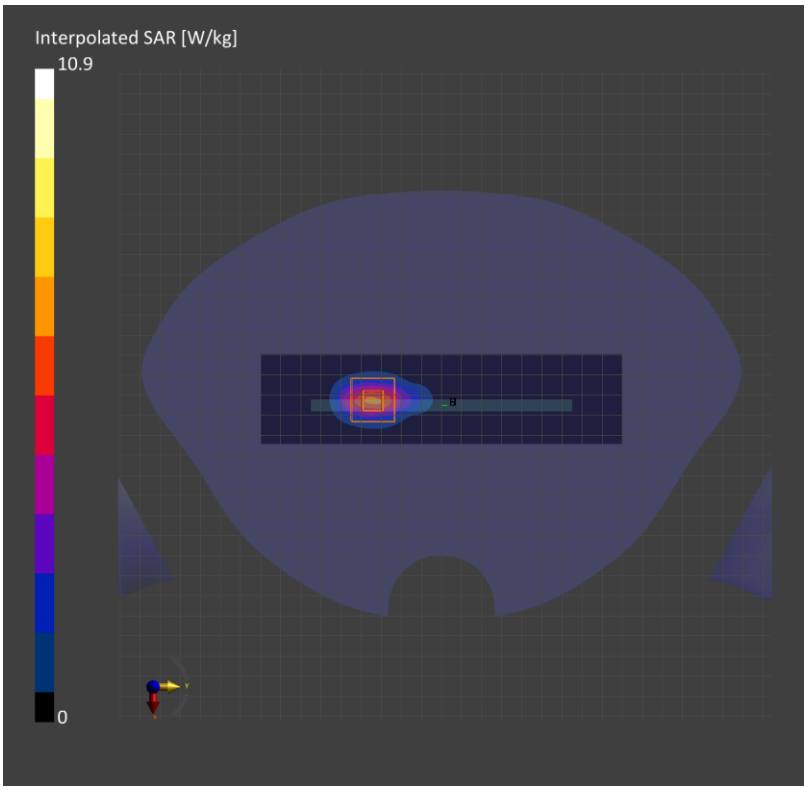
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 15.0	5.5 x 5.5 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	5.19	5.00
psSAR10g [W/Kg]	2.35	2.20
Power Drift [dB]		0.02
M2/M1 [%]		80.5
Dist 3dB Peak [mm]		6.6



Measurement Report for SM-F946U_UMPC, REAR, WCDMA Band V, UMTS-FDD (WCDMA), Channel 4183 (836.6 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	REAR, 10.00	WCDMA Band V	WCDMA, 10011-CAC	836.6, 4183	10.0	0.933	42.0

Hardware Setup

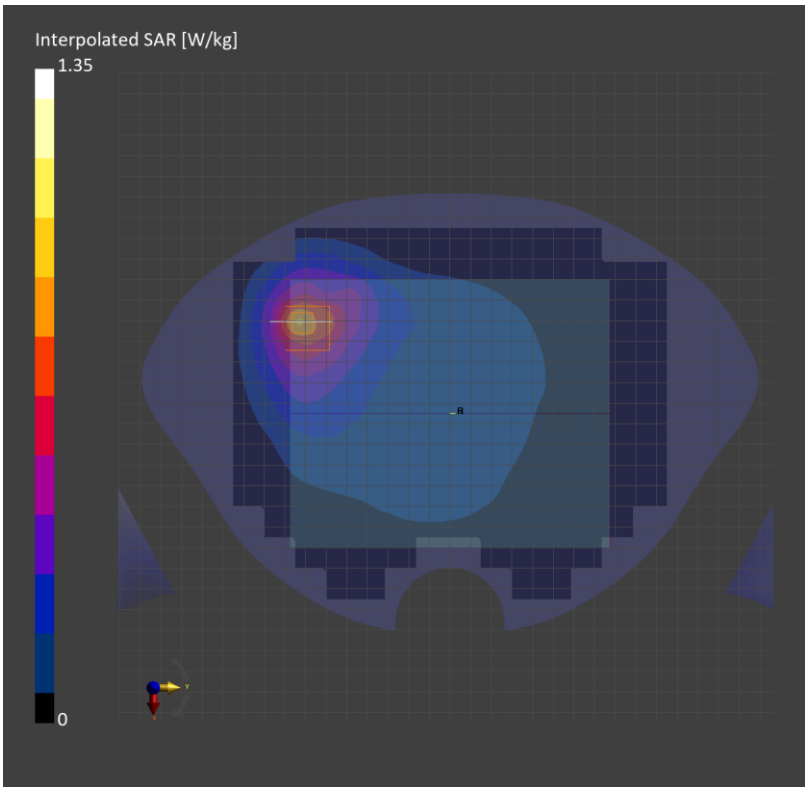
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-07	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	0.761	0.741
psSAR10g [W/Kg]	0.479	0.433
Power Drift [dB]		0.01
M2/M1 [%]		81.8
Dist 3dB Peak [mm]		13.5



Measurement Report for SM-F946U_UMPC, EDGE LEFT, WCDMA Band V, UMTS-FDD (WCDMA), Channel 4183 (836.6 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	WCMDA Band V	WCDMA, 10011-CAC	836.6, 4183	10.0	0.933	42.0

Hardware Setup

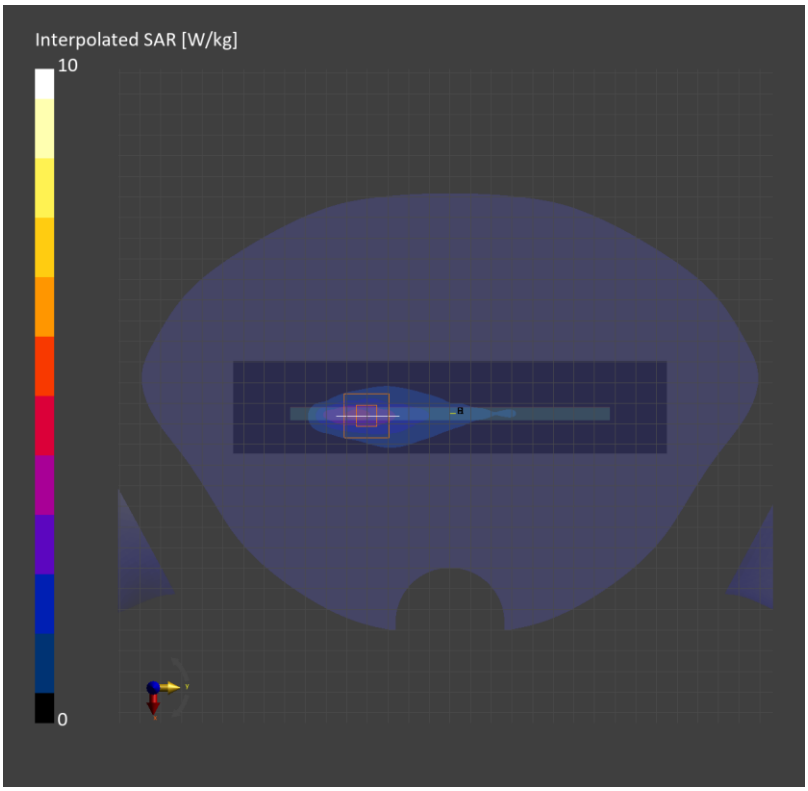
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-07	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 210.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 15.0	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.92	3.33
psSAR10g [W/Kg]	1.49	1.36
Power Drift [dB]		0.01
M2/M1 [%]		59.2
Dist 3dB Peak [mm]		4.8



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, LTE Band 7 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK), Channel 20850 (2510.0 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 BOTTOM, 10.00	Band 7	LTE-FDD, 10169-CAF	2510.0, 20850	7.74	1.82	40.2

Hardware Setup

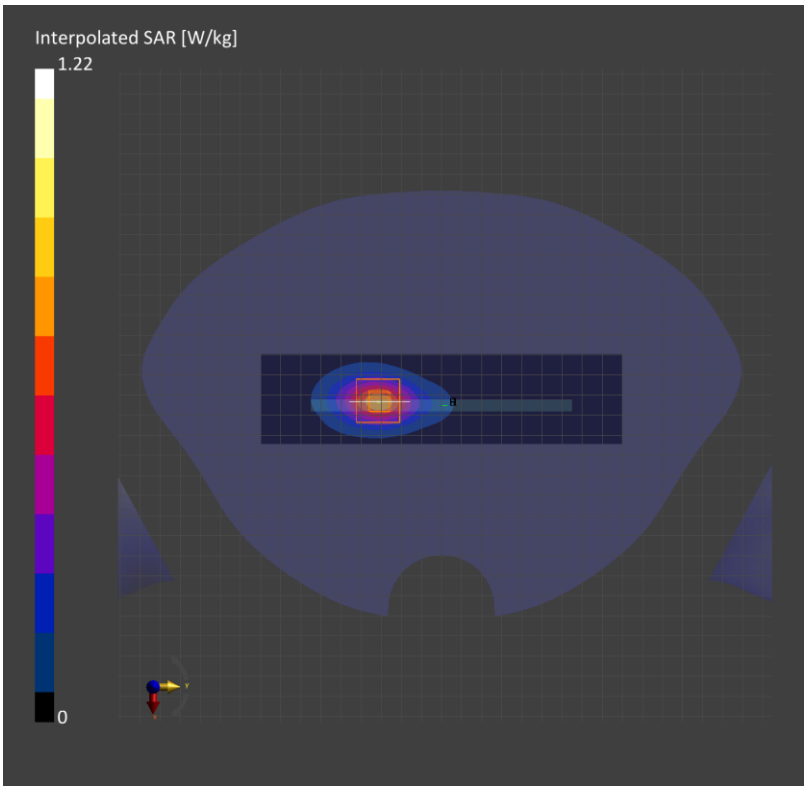
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-04	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.621	0.627
psSAR10g [W/Kg]	0.289	0.294
Power Drift [dB]		0.03
M2/M1 [%]		82.0
Dist 3dB Peak [mm]		9.5



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, LTE Band 7 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK), Channel 21350 (2560.0 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 BOTTOM, 0.00	Band 7	LTE-FDD, 10169-CAF	2560.0, 21350	7.03	1.96	39.9

Hardware Setup

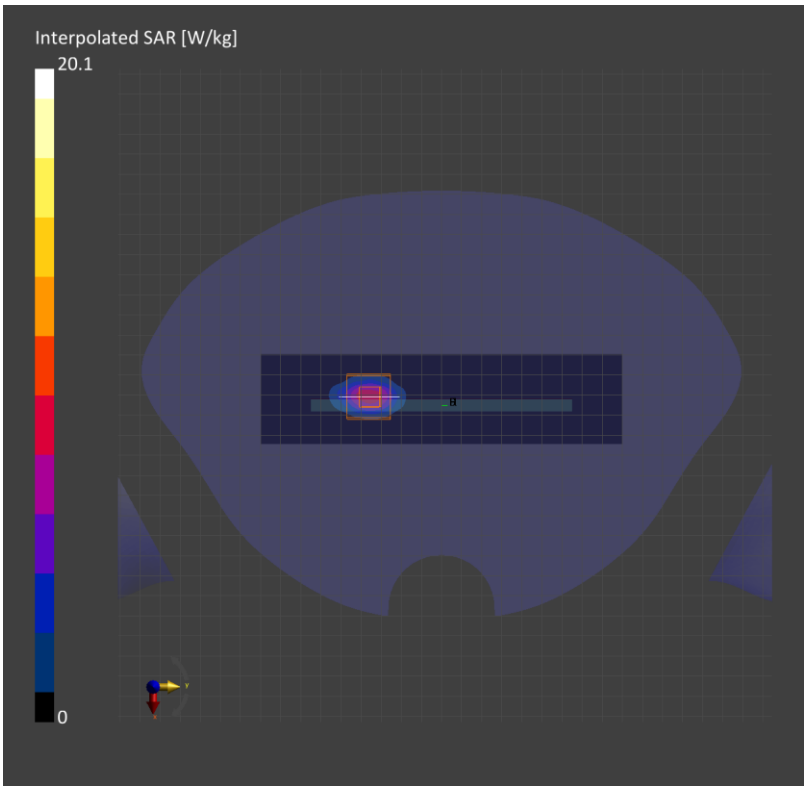
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-May-03	EX3DV4 - SN7313, 2023-03-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	7.16	7.19
psSAR10g [W/Kg]	2.68	2.61
Power Drift [dB]		0.02
M2/M1 [%]		72.8
Dist 3dB Peak [mm]		6.0



Measurement Report for SM-F946U_UMPC, EDGE TOP, LTE Band 7 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK), Channel 21350 (2560.0 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 TOP, 0.00	Band 7	LTE-FDD, 10169-CAF	2560.0, 21350	7.74	1.88	38.4

Hardware Setup

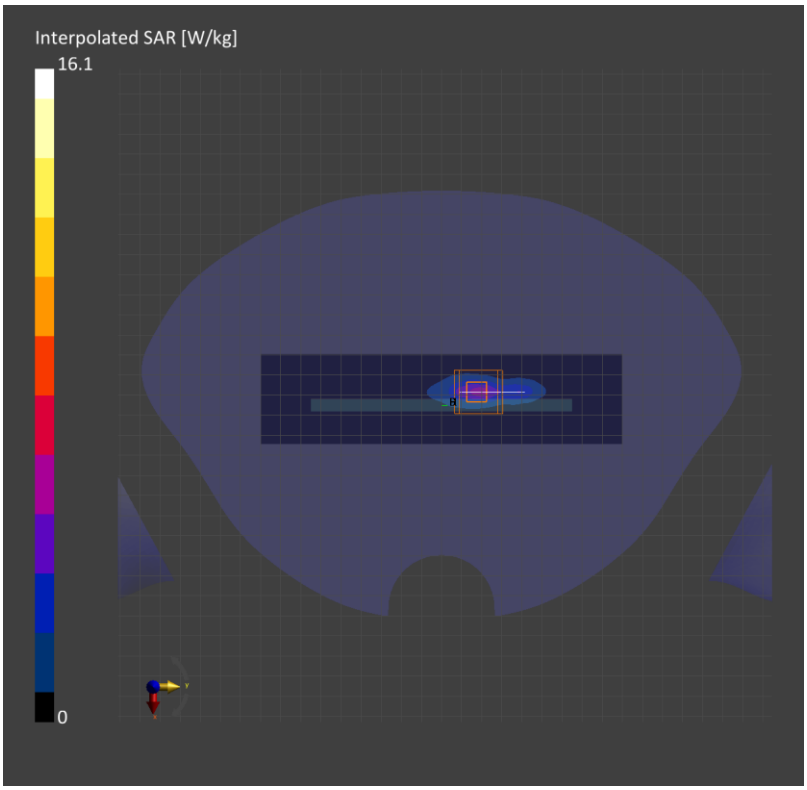
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-07	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 10.0	3.6 x 3.6 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.97	4.19
psSAR10g [W/Kg]	1.42	1.28
Power Drift [dB]		0.10
M2/M1 [%]		65.2
Dist 3dB Peak [mm]		4.3



Measurement Report for SM-F946U_UMPC, REAR, LTE Band 12 (10MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23095 (707.5 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	REAR, 10.00	Band 12	LTE-FDD, 10175-CAH	707.5, 23095	10.23	0.886	42.9

Hardware Setup

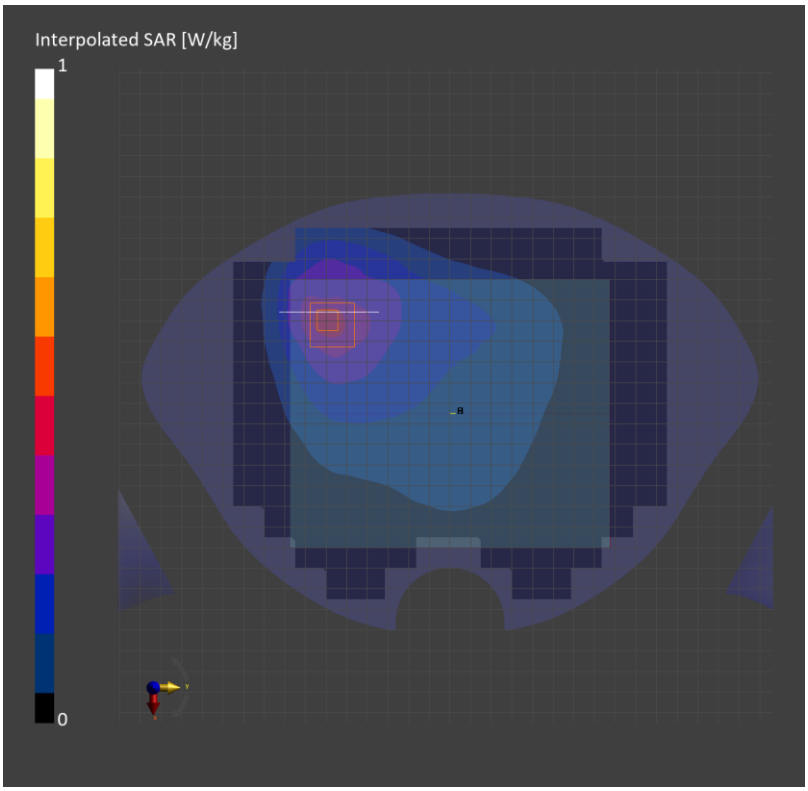
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	0.409	0.397
psSAR10g [W/Kg]	0.267	0.247
Power Drift [dB]		-0.04
M2/M1 [%]		85.8
Dist 3dB Peak [mm]		15.2



Measurement Report for SM-F946U_UMPC, EDGE LEFT, LTE Band 12 (10MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23095 (707.5 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	Band 12	LTE-FDD, 10175-CAH	707.5, 23095	10.23	0.886	42.9

Hardware Setup

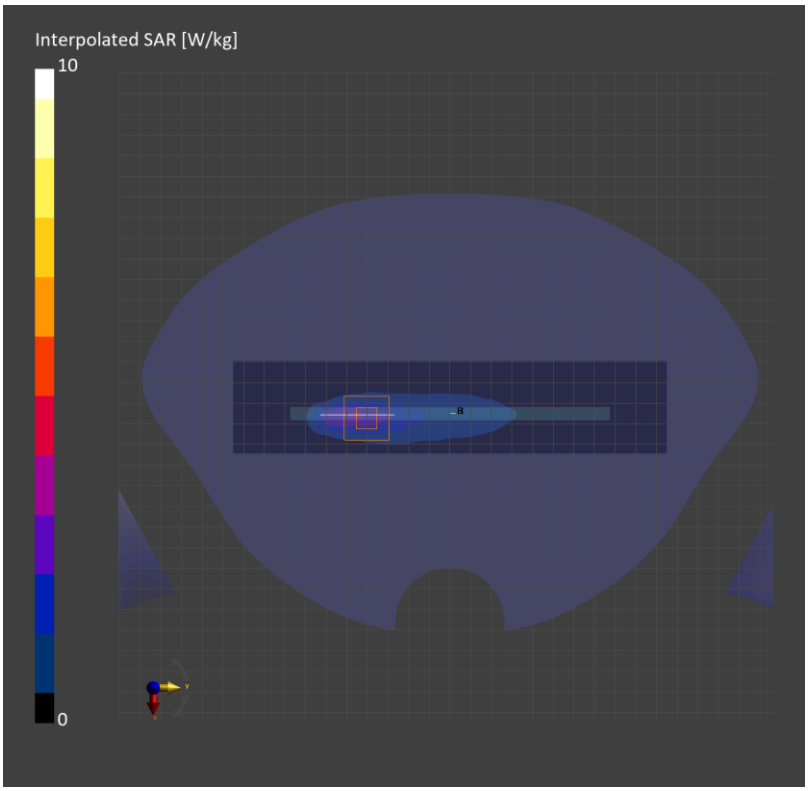
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 210.0	36.0 x 36.0 x 30.0
Grid Steps [mm]	6.4 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]	2.79	2.95
psSAR10g [W/Kg]	1.43	1.17
Power Drift [dB]		0.01
M2/M1 [%]		53.0
Dist 3dB Peak [mm]		3.7



Measurement Report for SM-F946U_UMPC, REAR, LTE Band 13 (10MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23230 (782.0 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	REAR, 10.00	Band 13	LTE-FDD, 10175-CAH	782.0, 23230	10.23	0.906	42.5

Hardware Setup

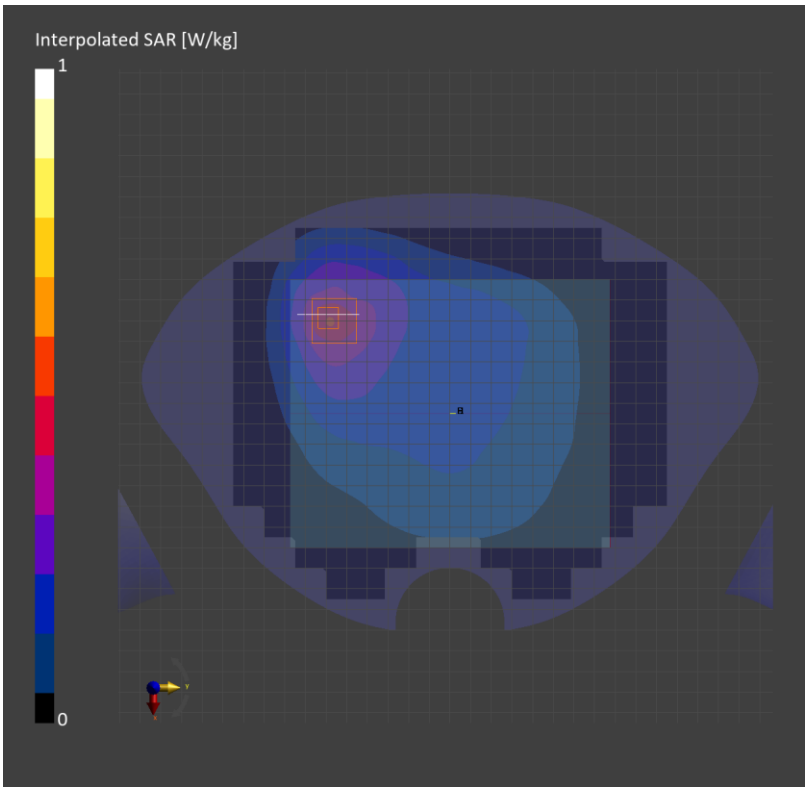
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	0.430	0.422
psSAR10g [W/Kg]	0.281	0.260
Power Drift [dB]		-0.04
M2/M1 [%]		85.2
Dist 3dB Peak [mm]		16.4



Measurement Report for SM-F946U_UMPC, EDGE LEFT, LTE Band 13 (10MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23230 (782.0 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	Band 13	LTE-FDD, 10175-CAH	782.0, 23230	10.23	0.906	42.5

Hardware Setup

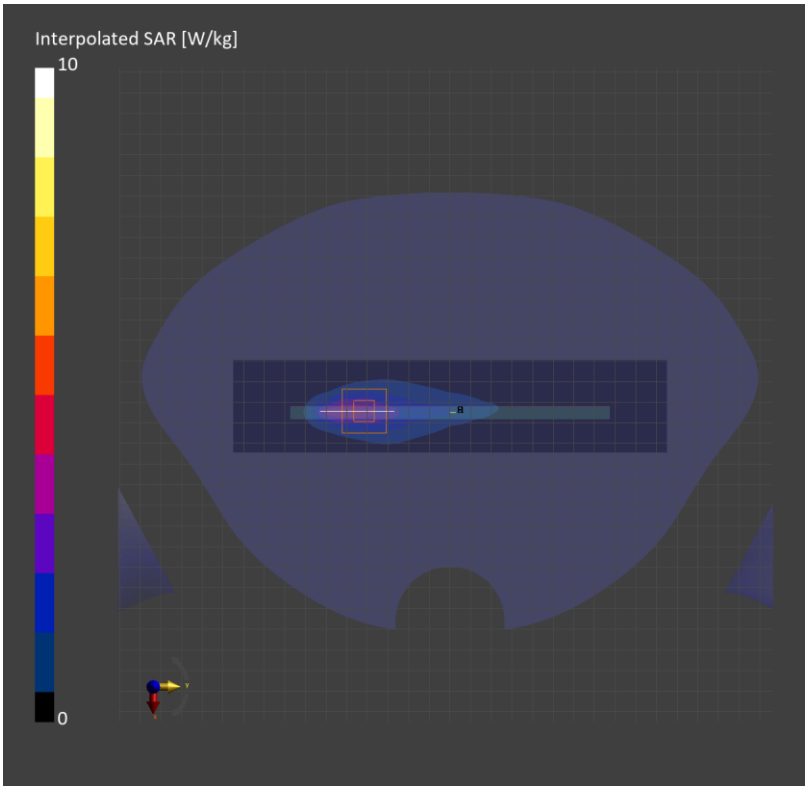
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 210.0	36.0 x 36.0 x 30.0
Grid Steps [mm]	6.4 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]	3.25	3.34
psSAR10g [W/Kg]	1.68	1.42
Power Drift [dB]		-0.03
M2/M1 [%]		58.1
Dist 3dB Peak [mm]		4.9



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, LTE Band 14 (10MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23330 (793.0 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 BOTTOM, 10.00	Band 14	LTE-FDD, 10175-CAH	793.0, 23330	10.23	0.910	42.5

Hardware Setup

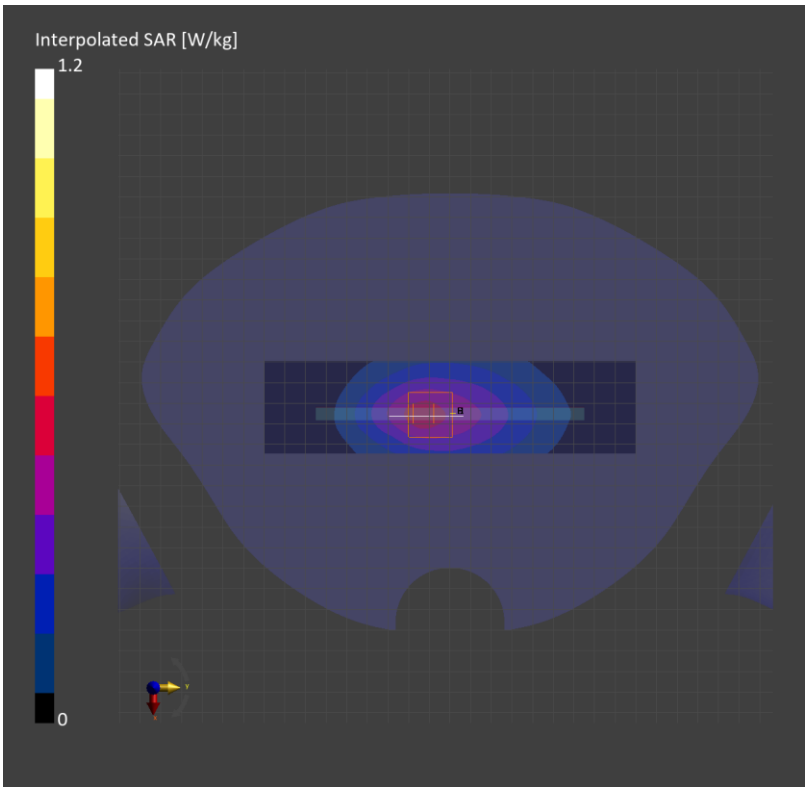
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.476	0.483
psSAR10g [W/Kg]	0.314	0.320
Power Drift [dB]		0.00
M2/M1 [%]		91.2
Dist 3dB Peak [mm]		18.0



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, LTE Band 14 (10MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK), Channel 23330 (793.0 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 BOTTOM, 0.00	Band 14	LTE-FDD, 10175-CAH	793.0, 23330	10.23	0.910	42.5

Hardware Setup

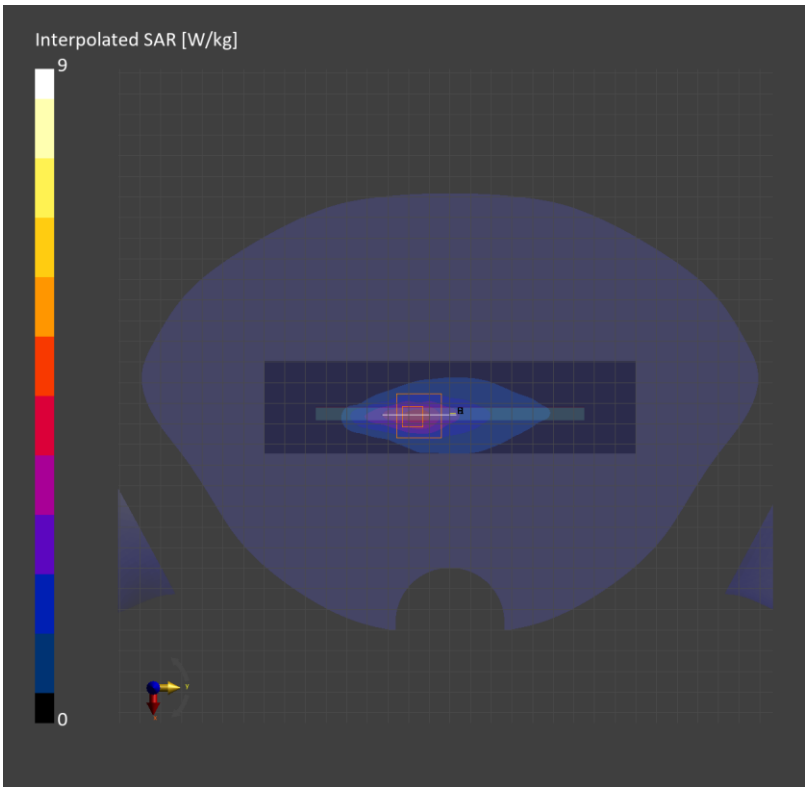
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	36.0 x 36.0 x 30.0
Grid Steps [mm]	6.4 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]	3.39	3.39
psSAR10g [W/Kg]	1.78	1.48
Power Drift [dB]		0.01
M2/M1 [%]		60.6
Dist 3dB Peak [mm]		4.8



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, LTE Band 25 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK), Channel 26140 (1860.0 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 BOTTOM, 10.00	Band 25	LTE-FDD, 10297-AAE	1860.0, 26140	8.51	1.38	38.6

Hardware Setup

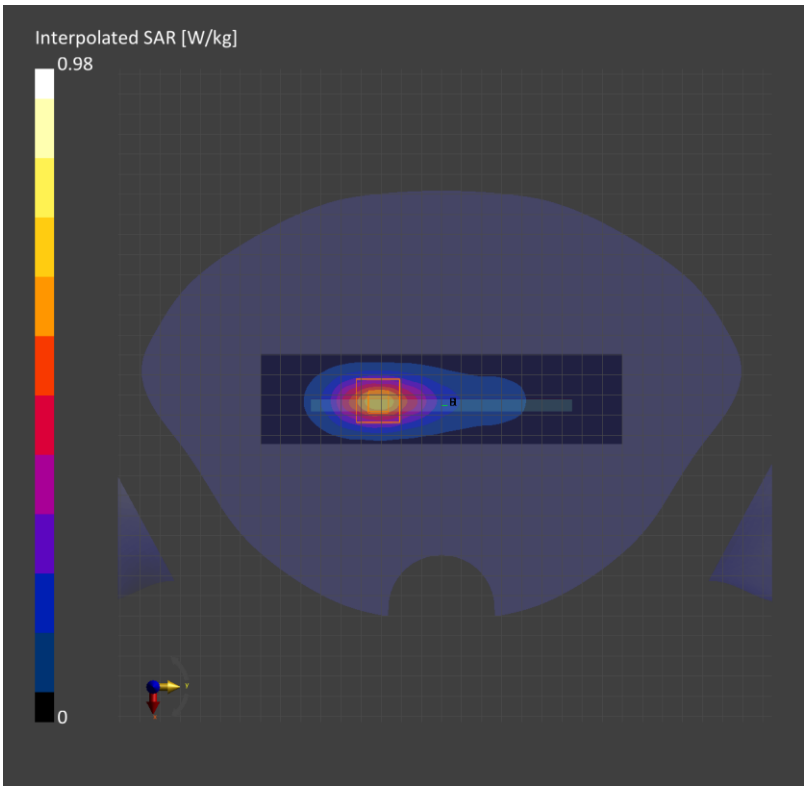
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.575	0.581
psSAR10g [W/Kg]	0.294	0.305
Power Drift [dB]		0.02
M2/M1 [%]		86.2
Dist 3dB Peak [mm]		9.6



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, LTE Band 25 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK), Channel 26590 (1905.0 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 BOTTOM, 0.00	Band 25	LTE-FDD, 10297-AAE	1905.0, 26590	8.51	1.41	38.5

Hardware Setup

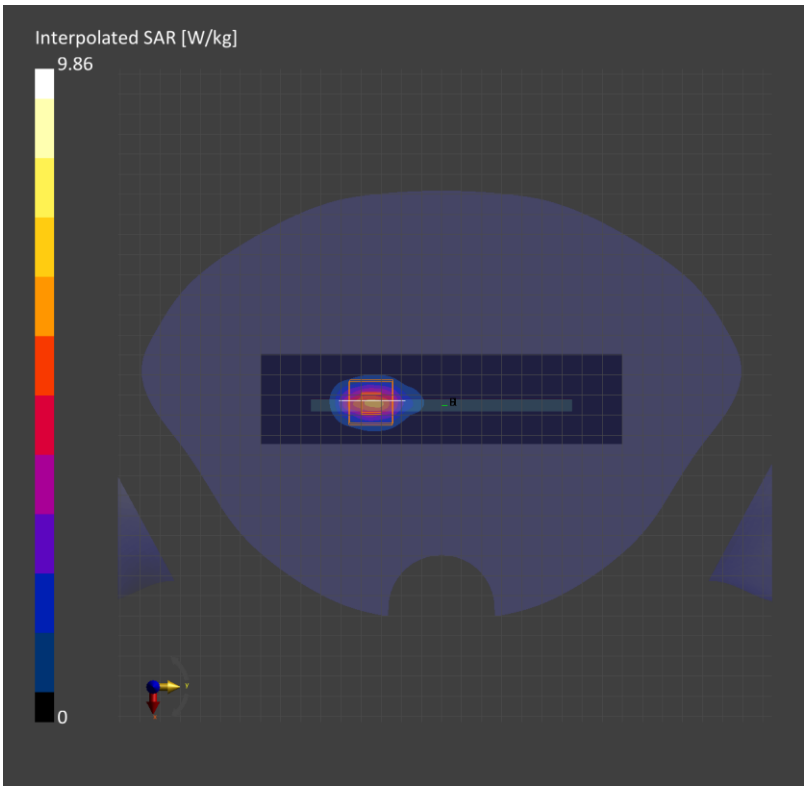
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 15.0	5.5 x 5.5 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	4.66	4.54
psSAR10g [W/Kg]	2.03	1.93
Power Drift [dB]		0.03
M2/M1 [%]		80.6
Dist 3dB Peak [mm]		6.6



Measurement Report for SM-F946U_UMPC, EDGE TOP, LTE Band 25 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK), Channel 26590 (1905.0 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 TOP, 0.00	Band 25	LTE-FDD, 10169-CAF	1905.0, 26590	8.51	1.41	38.5

Hardware Setup

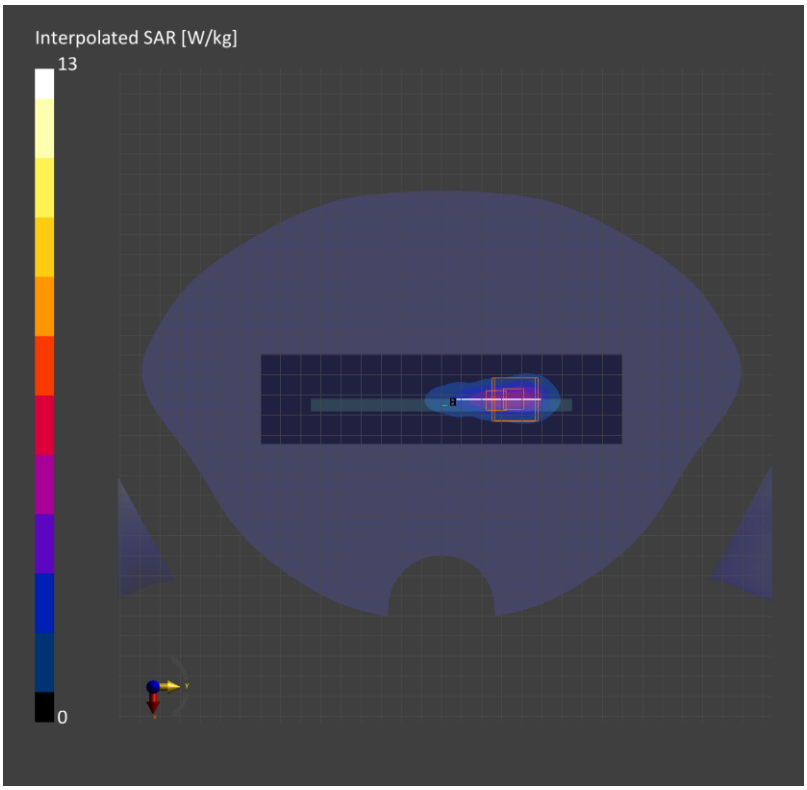
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	4.08	3.82
psSAR10g [W/Kg]	1.85	1.77
Power Drift [dB]		-0.01
M2/M1 [%]		66.2
Dist 3dB Peak [mm]		4.8



Measurement Report for SM-F946U_UMPC, REAR, LTE Band 26 (15MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK), Channel 26865 (831.5 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	REAR, 10.00	Band 26	LTE-FDD, 10181-CAF	831.5, 26865	10.0	0.922	42.4

Hardware Setup

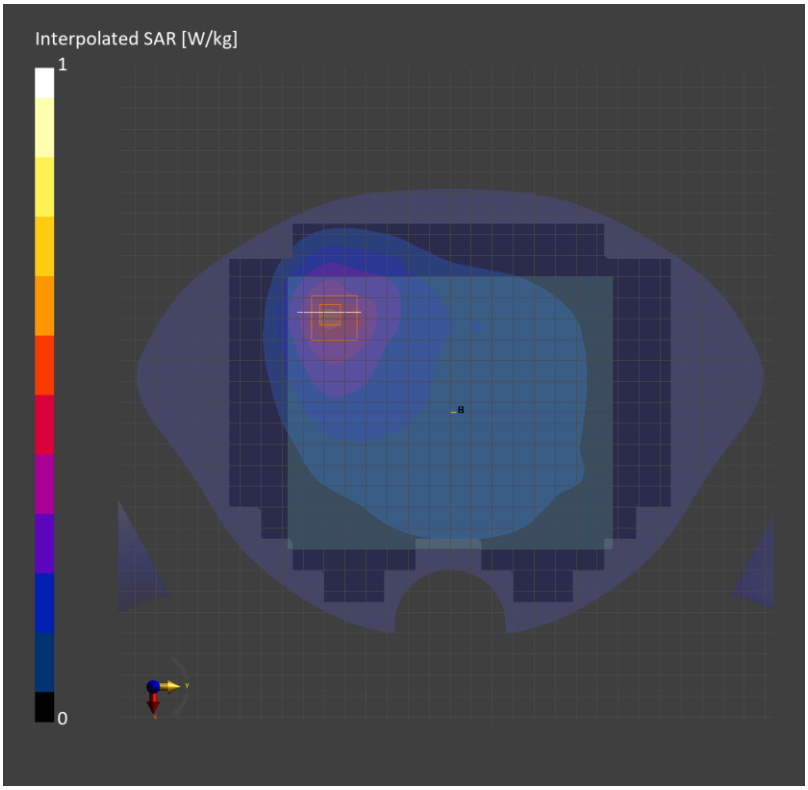
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	0.452	0.464
psSAR10g [W/Kg]	0.293	0.282
Power Drift [dB]		-0.01
M2/M1 [%]		86.3
Dist 3dB Peak [mm]		14.9



Measurement Report for SM-F946U_UMPC, EDGE LEFT, LTE Band 26 (15MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK), Channel 26865 (831.5 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	Band 26	LTE-FDD, 10181-CAF	831.5, 26865	10.0	0.922	42.4

Hardware Setup

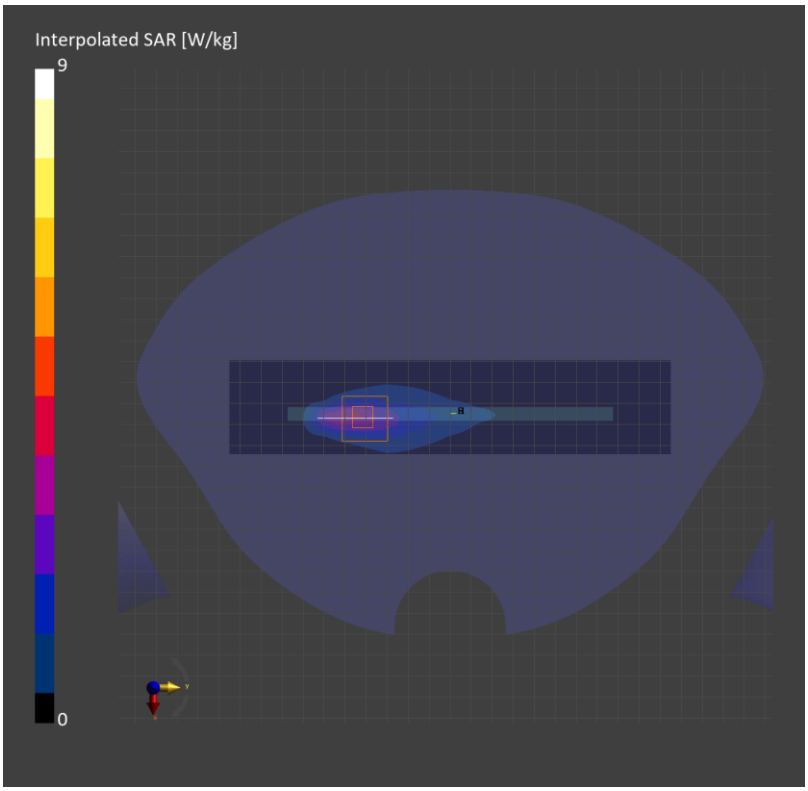
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 210.0	36.0 x 36.0 x 30.0
Grid Steps [mm]	6.4 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]	3.05	3.22
psSAR10g [W/Kg]	1.54	1.34
Power Drift [dB]		0.02
M2/M1 [%]		56.8
Dist 3dB Peak [mm]		4.4



UL CA 5B

Frequency: 836.5 MHz; Communication System Channel Number: 20525; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 836.5 MHz; σ = 0.925 S/m; ε_r = 42.087; ρ = 1000 kg/m^3

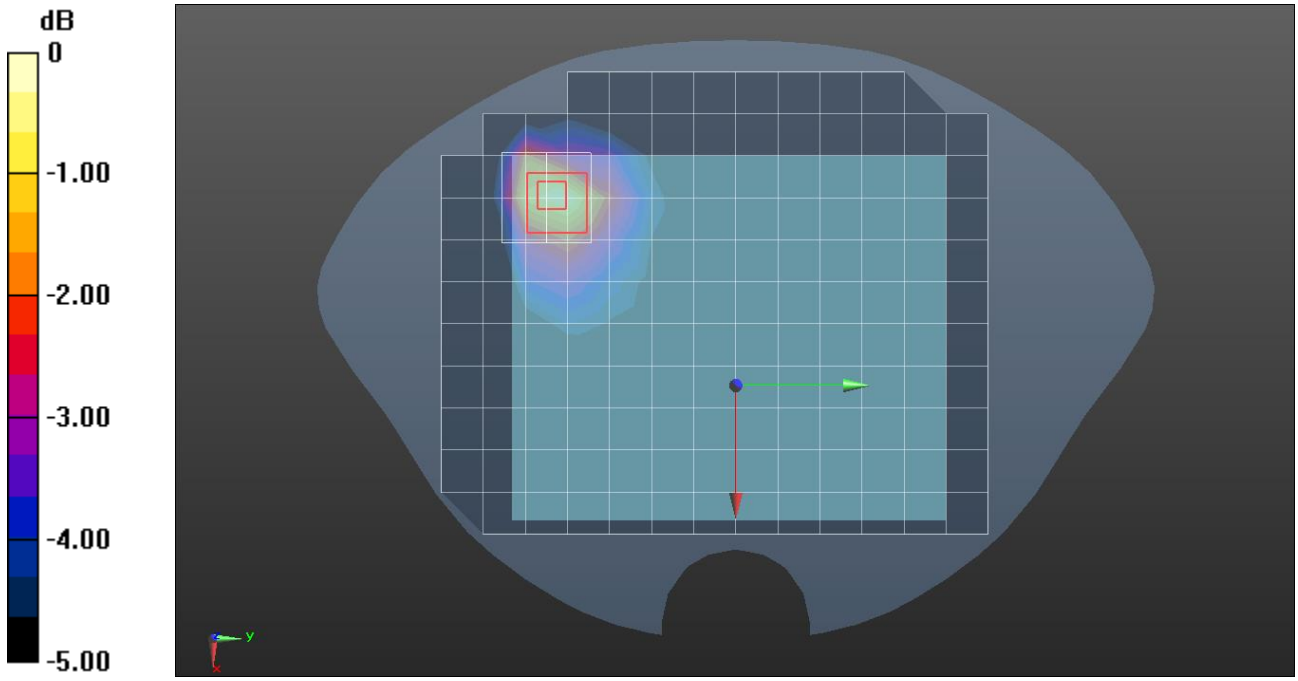
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE3 Sn479; Calibrated: 2022-10-06
- Probe: EX3DV4 - SN7545; ConvF(9.8, 9.8, 9.8) @ 836.5 MHz; Calibrated: 2022-08-19
- Sensor-Surface: 1.4mm (Mechanical Surface 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 (7501)

Rear/QPSK RB 1/49 ch.20525/Area Scan (12x14x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.672 W/kg

Rear/QPSK RB 1/49 ch.20525/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.43 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.850 W/kg
SAR(1 g) = 0.493 W/kg; SAR(10 g) = 0.301 W/kg
Maximum value of SAR (measured) = 0.714 W/kg



0 dB = 0.714 W/kg = -1.46 dBW/kg

Measurement Report for SM-F946U_UMPC, EDGE TOP, Band 30, LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK) RBPosition:Mid AntennaCfg:SISO, Channel 27710 (2310.0 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 TOP, 10.00	Band 30	LTE-FDD, 10175-CAH	2310.0, 27710	8.3	1.68	39.7

Hardware Setup

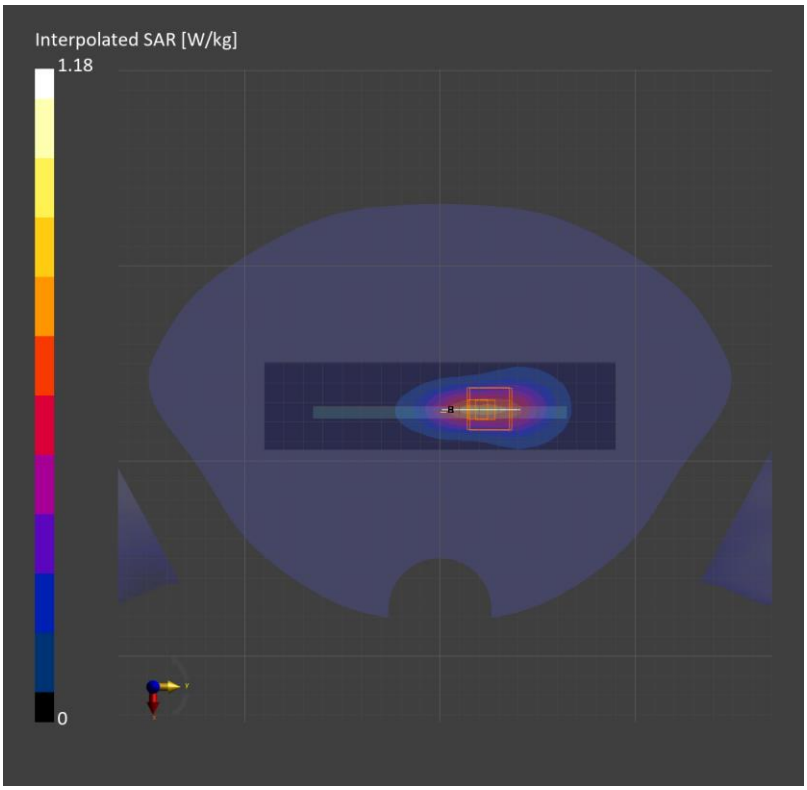
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-27	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.567	0.577
psSAR10g [W/Kg]	0.290	0.294
Power Drift [dB]		-0.02
M2/M1 [%]		79.1
Dist 3dB Peak [mm]		9.0



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band 30, LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK) AntennaCfg:SISO, Channel 27710 (2310.0 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 TOP, 0.00	Band 30	LTE-FDD, 10108-CAH	2310.0, 27710	8.3	1.68	39.7

Hardware Setup

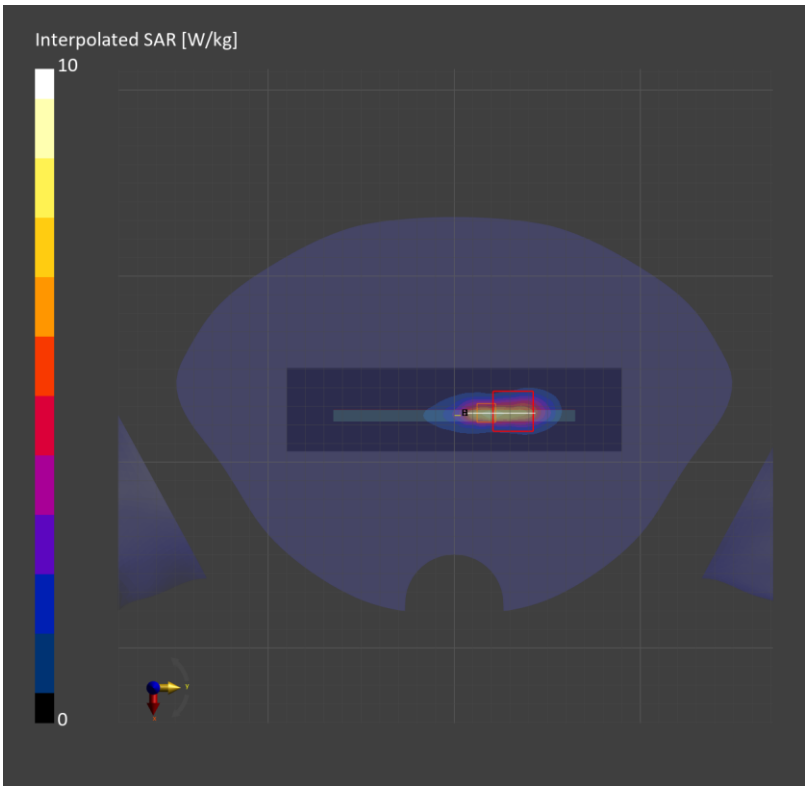
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-27	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 10.0	2.9 x 2.9 x 1.2
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	5.61	5.86
psSAR10g [W/Kg]	2.27	2.15
Power Drift [dB]		-0.01
M2/M1 [%]		67.8
Dist 3dB Peak [mm]		4.1



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, LTE Band 41 (20MHz Bandwidth), LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK), Channel 40185 (2549.5 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, 10151-CAH	2549.5, 40185	7.74	1.86	40.2

Hardware Setup

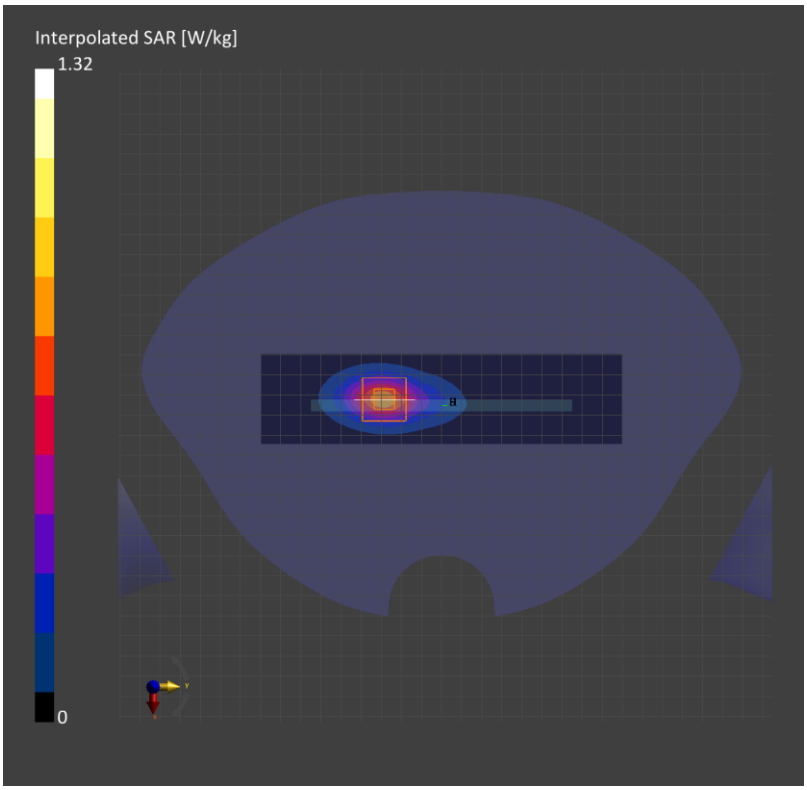
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-04	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.660	0.669
psSAR10g [W/Kg]	0.302	0.310
Power Drift [dB]		0.02
M2/M1 [%]		81.9
Dist 3dB Peak [mm]		9.0



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, LTE Band 41 (20MHz Bandwidth), LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK), Channel 40185 (2549.5 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, 0.00	Band 41	LTE-TDD, 10151-CAH	2549.5, 40185	7.42	1.93	39.2

Hardware Setup

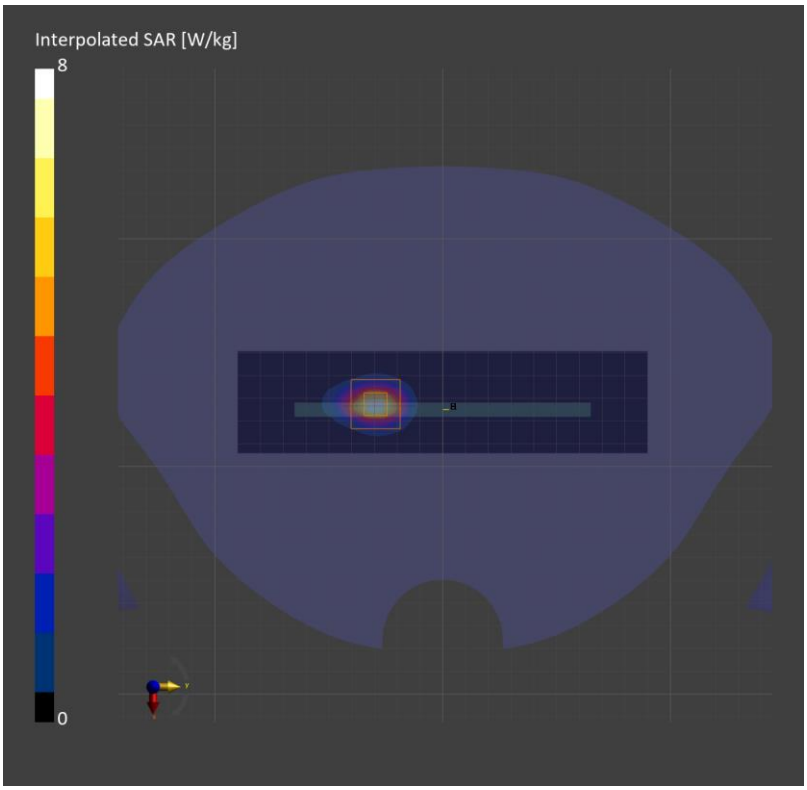
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-May-10	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1494, 2022-07-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 10.0	4.6 x 4.6 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	5.43	5.37
psSAR10g [W/Kg]	2.01	1.90
Power Drift [dB]		0.00
M2/M1 [%]		75.5
Dist 3dB Peak [mm]		5.6



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band 41 (20MHz Bandwidth), LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK), Channel 40620 (2593.0 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 TOP, 10.00	Band 41	LTE-TDD, 10151-CAH	2593.0, 40620	7.74	1.91	38.3

Hardware Setup

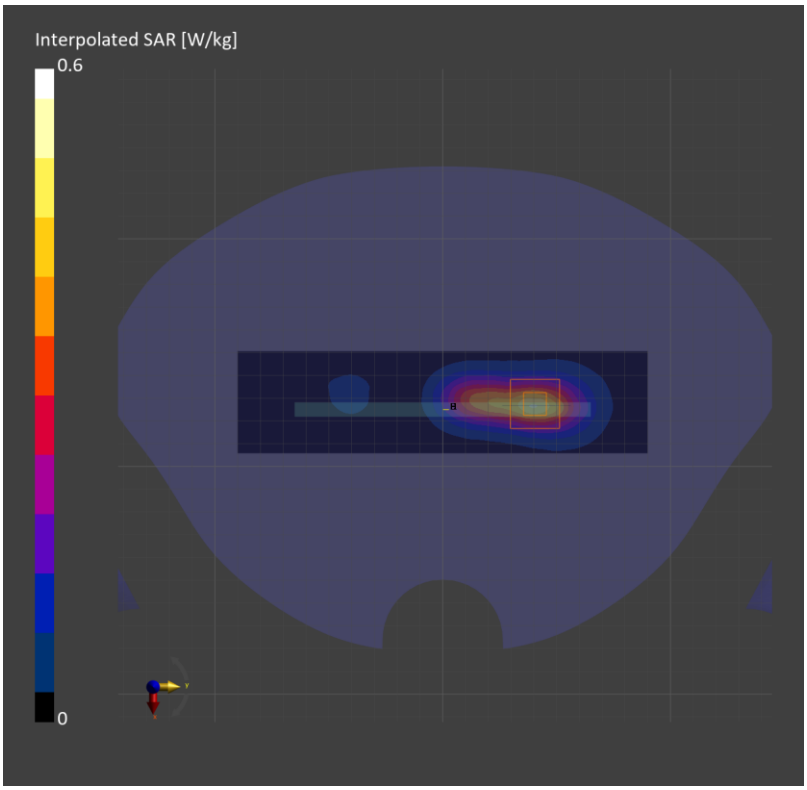
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-07	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.378	0.410
psSAR10g [W/Kg]	0.174	0.193
Power Drift [dB]		-0.16
M2/M1 [%]		79.8
Dist 3dB Peak [mm]		9.0



LTE Band 41 UPPER

Frequency: 2593 MHz; Communication System Channel Number: 40620; Duty Cycle: 1:1.59956
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 2593 MHz; σ = 1.987 S/m; ε_r = 39.264; ρ = 1000 kg/m^3

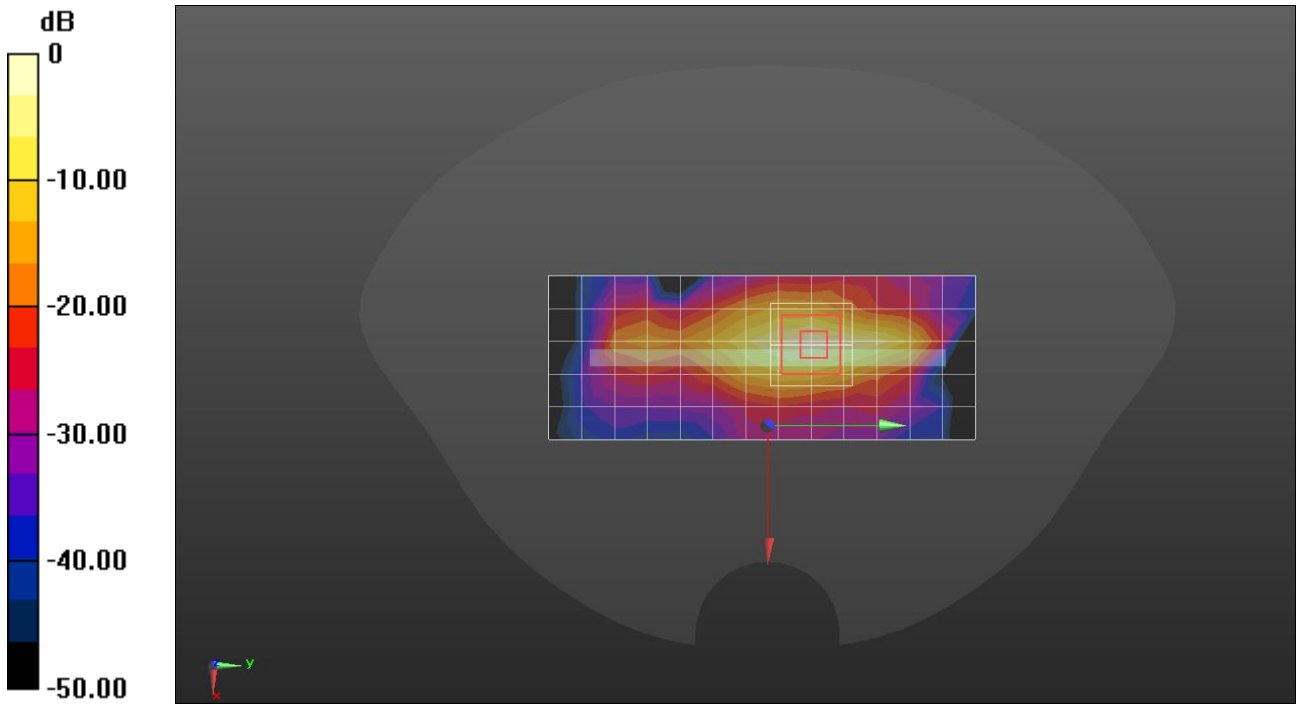
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7645; ConvF(6.73, 6.73, 6.73) @ 2593 MHz; Calibrated: 11/15/2022
- Sensor-Surface: 1.4mm (Mechanical Surface 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 1/0 ch.40620/Area Scan (14x6x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 13.4 W/kg

Top/QPSK RB 1/0 ch.40620/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 72.85 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 20.4 W/kg
SAR(1 g) = 5.84 W/kg; SAR(10 g) = 1.96 W/kg
Maximum value of SAR (measured) = 14.1 W/kg



0 dB = 14.1 W/kg = 11.49 dBW/kg

UL CA 41C

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; σ = 1.865 S/m; ε_r = 39.898; ρ = 1000 kg/m^3

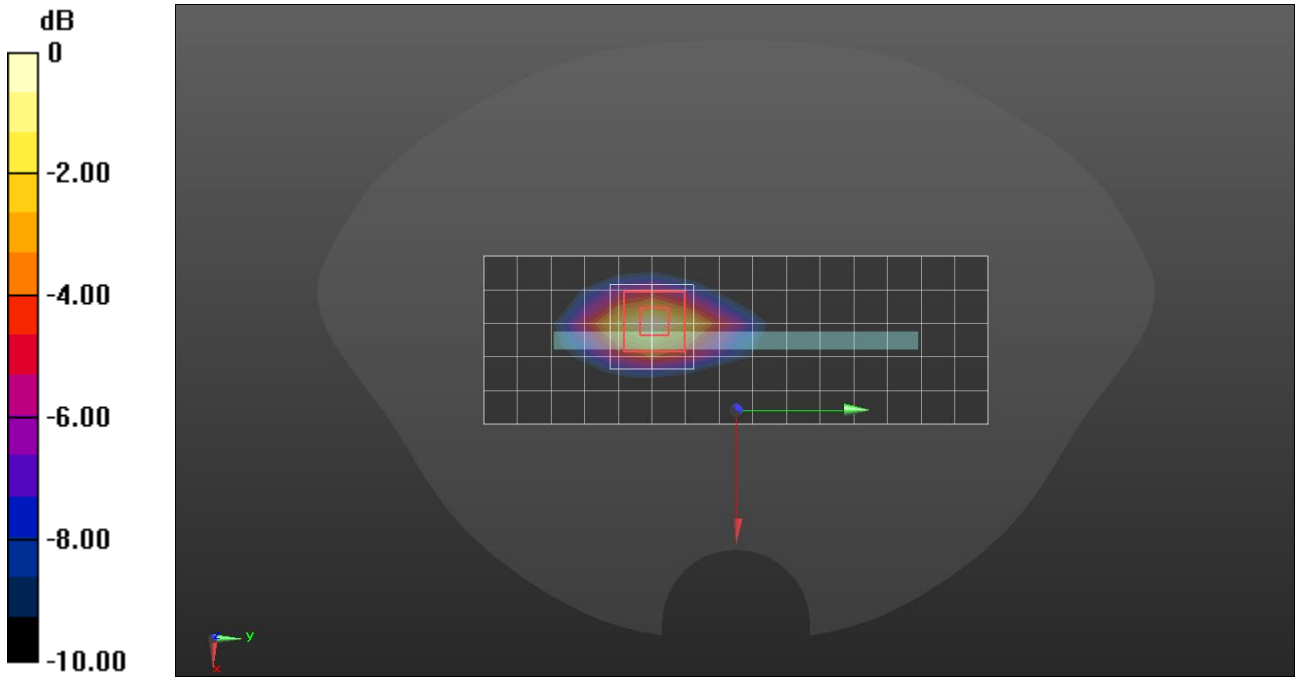
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn912; Calibrated: 2022-11-16
- Probe: EX3DV4 - SN7645; ConvF(6.73, 6.73, 6.73) @ 2549.5 MHz; Calibrated: 2022-11-15
- Sensor-Surface: 1.4mm (Mechanical 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)

Bottom/QPSK RB 50/0 ch.40185/Area Scan (16x6x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.03 W/kg

Bottom/QPSK RB 50/0 ch.40185/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.41 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 1.14 W/kg
SAR(1 g) = 0.594 W/kg; SAR(10 g) = 0.280 W/kg
Maximum value of SAR (measured) = 0.926 W/kg



0 dB = 0.926 W/kg = -0.33 dBW/kg

UL CA 41C

Frequency: 2593 MHz; Communication System Channel Number: 40620; Duty Cycle: 1:1.59956
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 2593 MHz; σ = 1.902 S/m; ε_r = 39.822; ρ = 1000 kg/m^3

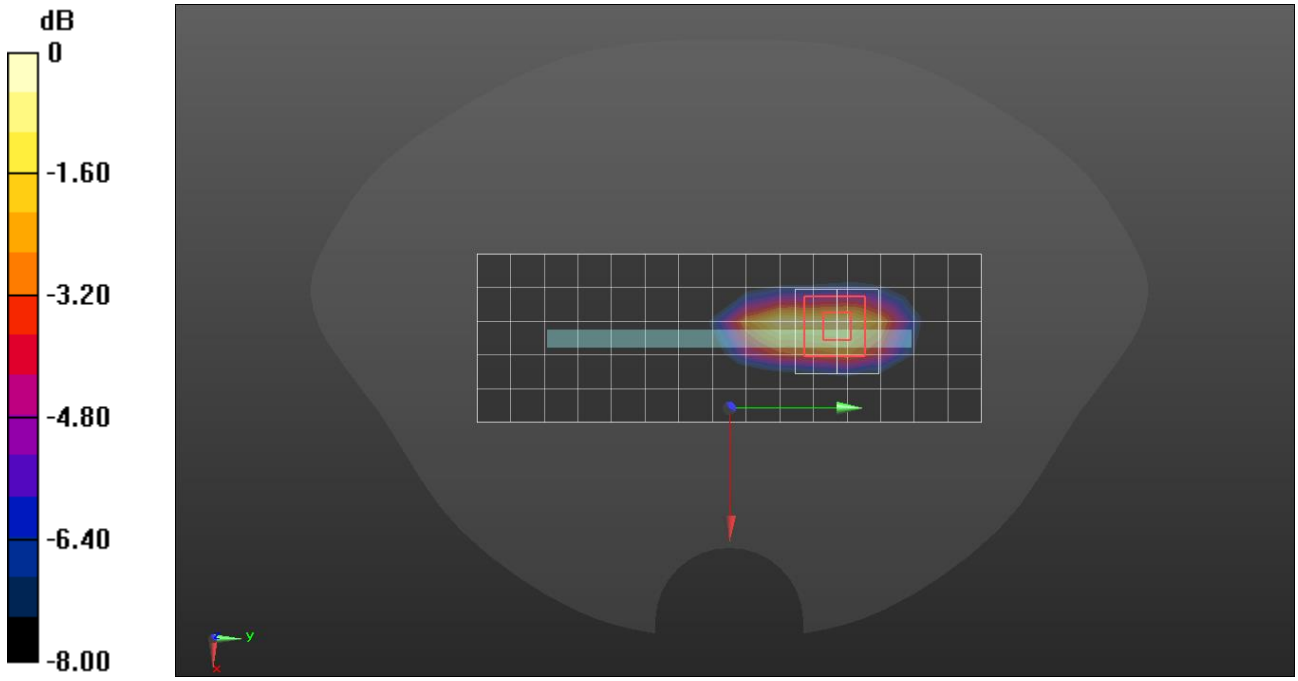
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn912; Calibrated: 2022-11-16
- Probe: EX3DV4 - SN7645; ConvF(6.73, 6.73, 6.73) @ 2593 MHz; Calibrated: 2022-11-15
- Sensor-Surface: 1.4mm (Mechanical Surface 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 50/0 ch.40620/Area Scan (16x6x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.874 W/kg

Top/QPSK RB 50/0 ch.40620/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 17.10 V/m; Power Drift = -0.08 dB
Peak SAR (extrapolated) = 1.22 W/kg
SAR(1 g) = 0.617 W/kg; SAR(10 g) = 0.307 W/kg
Maximum value of SAR (measured) = 0.968 W/kg



0 dB = 0.968 W/kg = -0.14 dBW/kg

Measurement Report for SM-F946U_UMPC, EDGE TOP, LTE Band 48 (20MHz Bandwidth), LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK, Channel 55340 (3560.0 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 TOP, 10.00	Band 48	LTE-TDD, 10151-CAH	3560.0, 55340	7.37	2.98	37.9

Hardware Setup

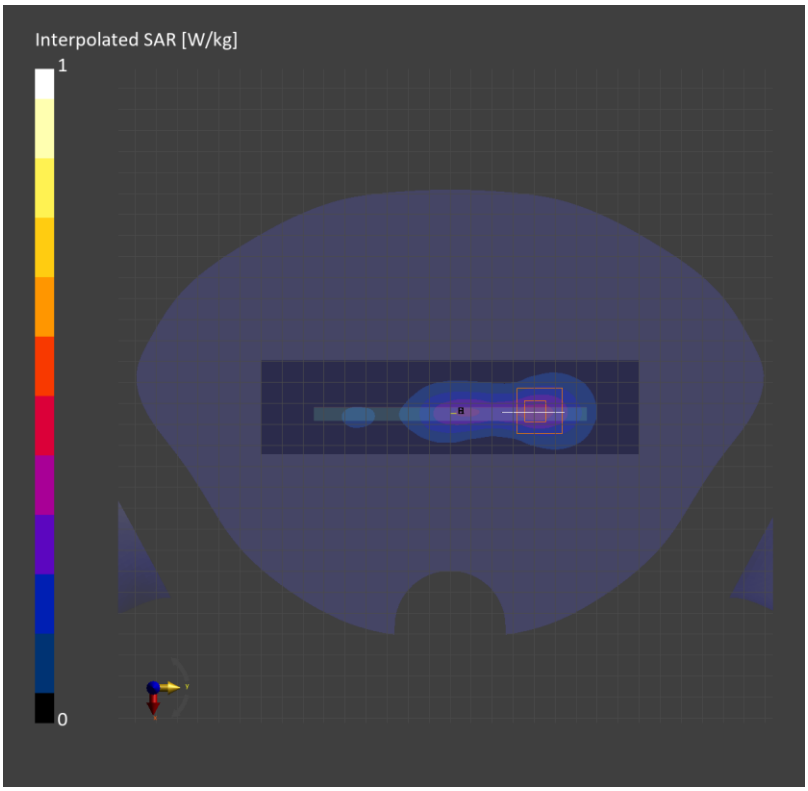
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-May-01	EX3DV4 - SN7646, 2023-03-23	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	28.0 x 28.0 x 28.0
Grid Steps [mm]	6.4 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]	0.276	0.286
psSAR10g [W/Kg]	0.122	0.124
Power Drift [dB]		0.05
M2/M1 [%]		76.4
Dist 3dB Peak [mm]		9.3



Measurement Report for SM-F946U_UMPC, EDGE TOP, LTE Band 48 (20MHz Bandwidth), LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK), Channel 56207 (3646.7 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, 0.00	Band 48	LTE-TDD, 10172-CAH	3646.7, 56207	7.03	3.02	37.6

Hardware Setup

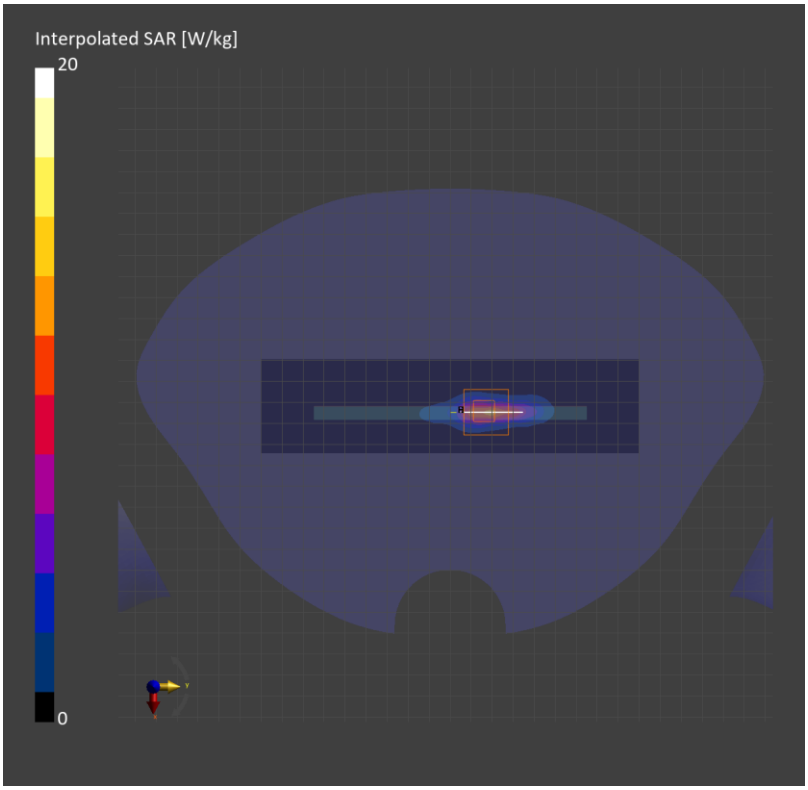
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-May-01	EX3DV4 - SN7646, 2023-03-23	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	28.0 x 28.0 x 28.0
Grid Steps [mm]	6.4 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]	7.60	8.46
psSAR10g [W/Kg]	2.40	2.40
Power Drift [dB]		-0.03
M2/M1 [%]		62.2
Dist 3dB Peak [mm]		4.1



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band 48, LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK) RBPosition:High AntennaCfg:SISO, Channel 55340 (3560.0 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 TOP, 10.00	Band 48	LTE-TDD, 10151-CAH	3560.0, 55340	6.0	3.02	38.1

Hardware Setup

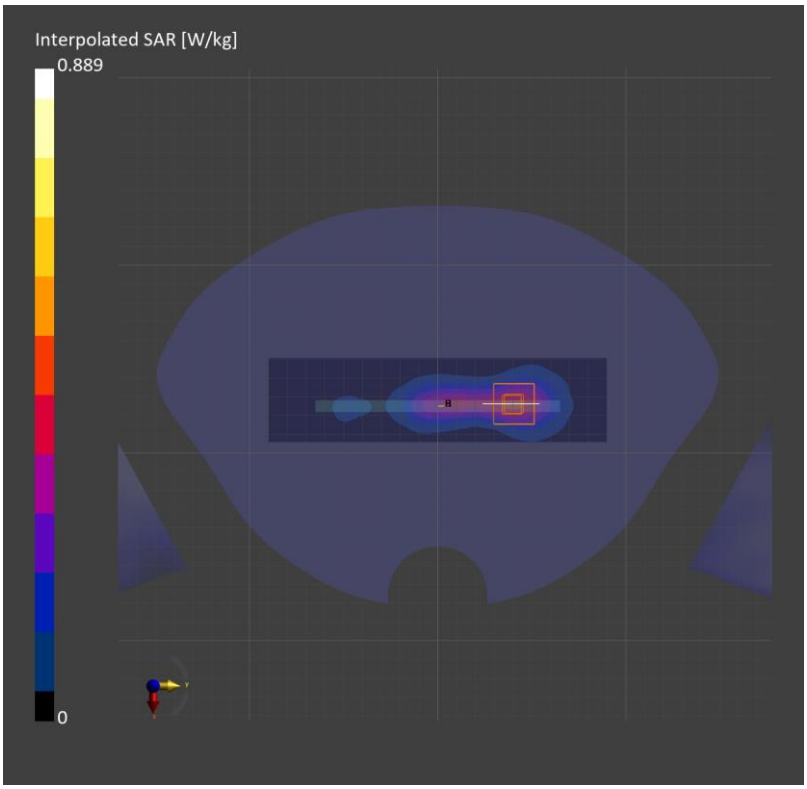
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-May-09	EX3DV4 - SN7645, 2022-11-15	DAE3 Sn479, 2022-10-06

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	28.0 x 28.0 x 28.0
Grid Steps [mm]	6.4 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]	0.346	0.360
psSAR10g [W/Kg]	0.151	0.153
Power Drift [dB]		0.13
M2/M1 [%]		74.4
Dist 3dB Peak [mm]		9.5



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, LTE Band 66 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK), Channel 132072 (1720.0 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 BOTTOM, 10.00	Band 66	LTE-FDD, 10297-AAE	1720.0, 132072	8.66	1.31	38.7

Hardware Setup

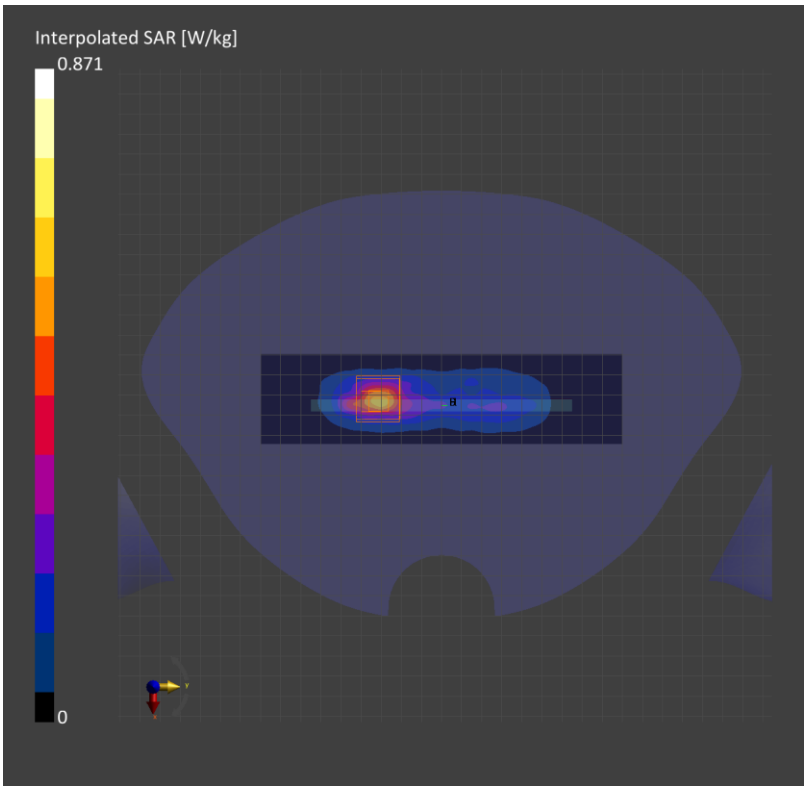
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 15.0	5.9 x 5.9 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	0.474	0.454
psSAR10g [W/Kg]	0.221	0.236
Power Drift [dB]		0.01
M2/M1 [%]		85.7
Dist 3dB Peak [mm]		7.1



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, Band 66 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK), Channel 132072 (1720.0 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 BOTTOM, 0.00	Band 66	LTE-FDD, 10169-CAF	1720.0, 132072	8.66	1.31	38.7

Hardware Setup

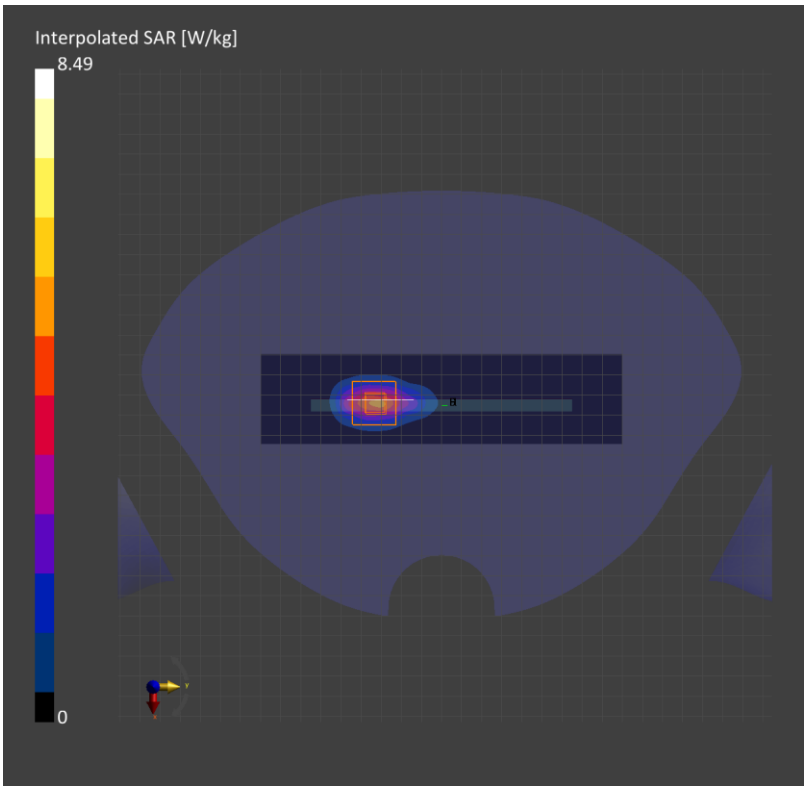
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 15.0	5.5 x 5.5 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.96	3.89
psSAR10g [W/Kg]	1.81	1.71
Power Drift [dB]		-0.01
M2/M1 [%]		80.8
Dist 3dB Peak [mm]		6.6



UL CA 66B

Frequency: 1717.5 MHz; Communication System Channel Number: 132047; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 1717.5 MHz; σ = 1.314 S/m; ε_r = 40.295; ρ = 1000 kg/m^3

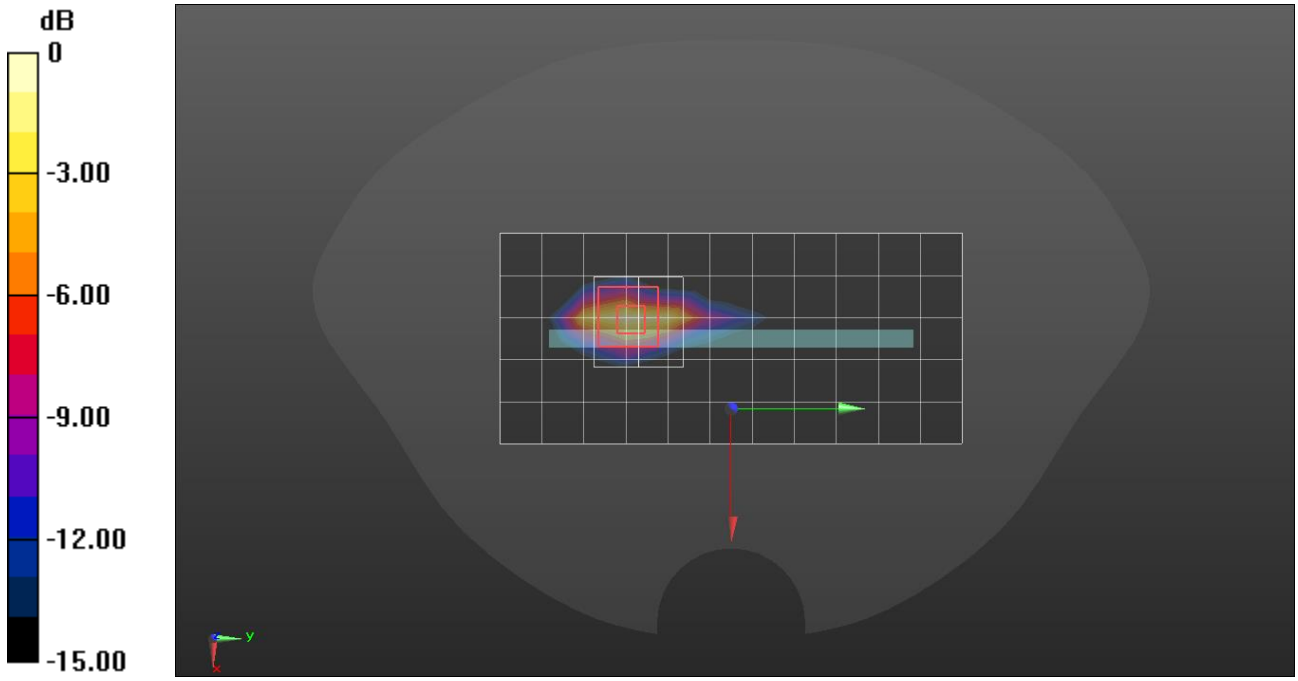
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 2023-03-22
- Probe: EX3DV4 - SN3871; ConvF(8.58, 8.58, 8.58) @ 1717.5 MHz; Calibrated: 2022-09-26
- Sensor-Surface: 1.4mm (Mechanical 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/QPSK RB 1/74 ch.132047/Area Scan (12x6x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 7.98 W/kg

Bottom/QPSK RB 1/74 ch.132047/Zoom Scan (5x5x5)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 71.65 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 10.7 W/kg
SAR(1 g) = 4.5 W/kg; SAR(10 g) = 1.94 W/kg
Maximum value of SAR (measured) = 8.27 W/kg



0 dB = 8.27 W/kg = 9.18 dBW/kg

UL CA 66C

Frequency: 1720 MHz; Communication System Channel Number: 132072; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 1720 MHz; σ = 1.315 S/m; ε_r = 40.29; ρ = 1000 kg/m^3

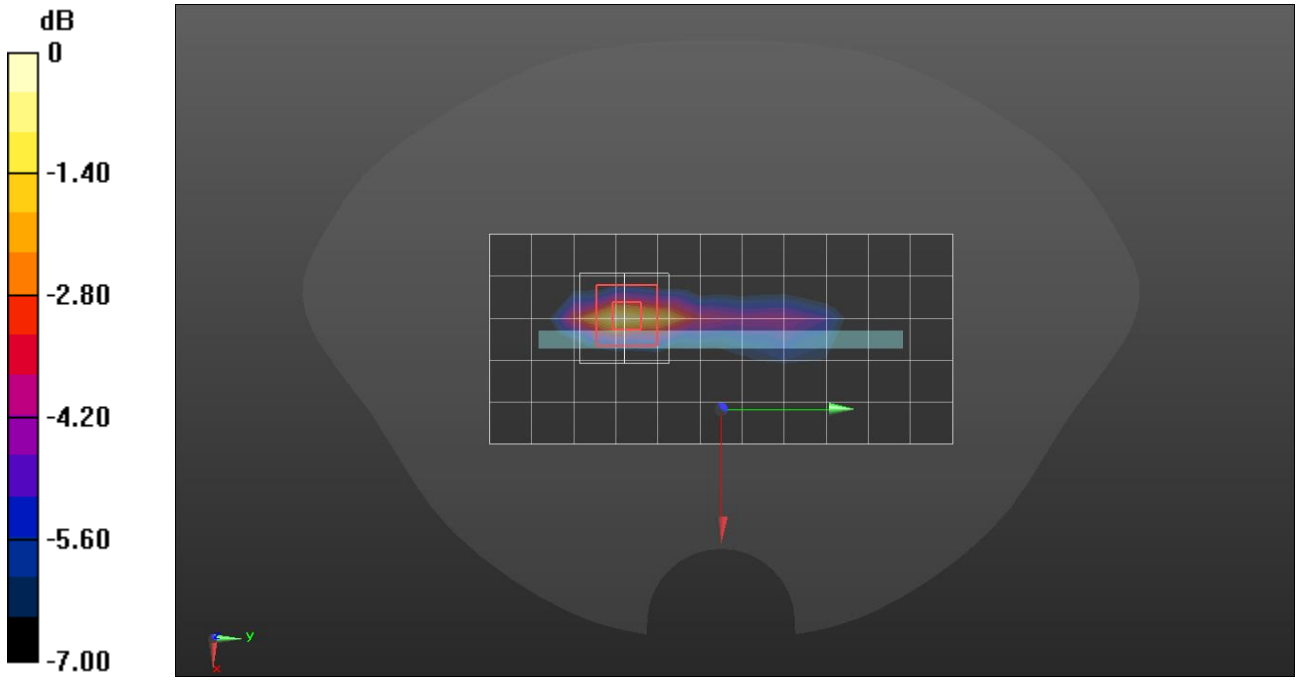
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 2023-03-22
- Probe: EX3DV4 - SN3871; ConvF(8.58, 8.58, 8.58) @ 1720 MHz; Calibrated: 2022-09-26
- Sensor-Surface: 1.4mm (Mechanical 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/QPSK RB 50/0 ch.132072/Area Scan (12x6x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.671 W/kg

Bottom/QPSK RB 50/0 ch.132072/Zoom Scan (5x5x5)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.55 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 0.809 W/kg
SAR(1 g) = 0.465 W/kg; SAR(10 g) = 0.243 W/kg
Maximum value of SAR (measured) = 0.694 W/kg



0 dB = 0.694 W/kg = -1.59 dBW/kg

Measurement Report for SM-F946U_UMPC, EDGE TOP, LTE Band 66 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK), Channel 132572 (1770.0 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 TOP, 10.00	Band 66	LTE-FDD, 10297-AAE	1770.0, 132572	8.66	1.34	38.6

Hardware Setup

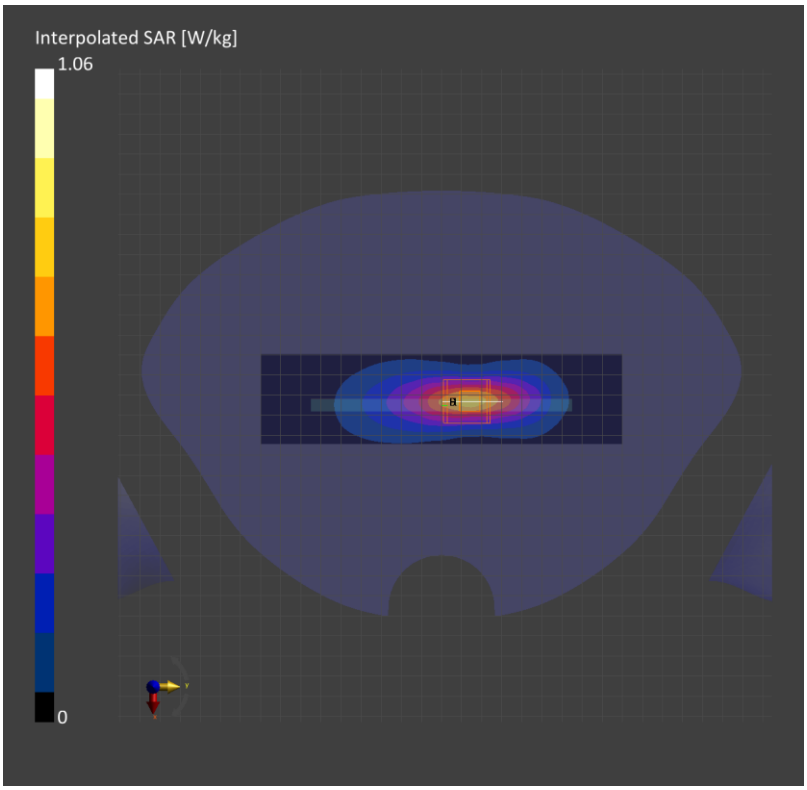
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.600	0.589
psSAR10g [W/Kg]	0.314	0.312
Power Drift [dB]		-0.01
M2/M1 [%]		83.8
Dist 3dB Peak [mm]		9.6



Measurement Report for SM-F946U_UMPC, EDGE TOP, LTE Band 66 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 50% RB, 20 MHz, QPSK), Channel 132572 (1770.0 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 TOP, 0.00	Band 66	LTE-FDD, 10297-AAE	1770.0, 132572	8.66	1.34	38.6

Hardware Setup

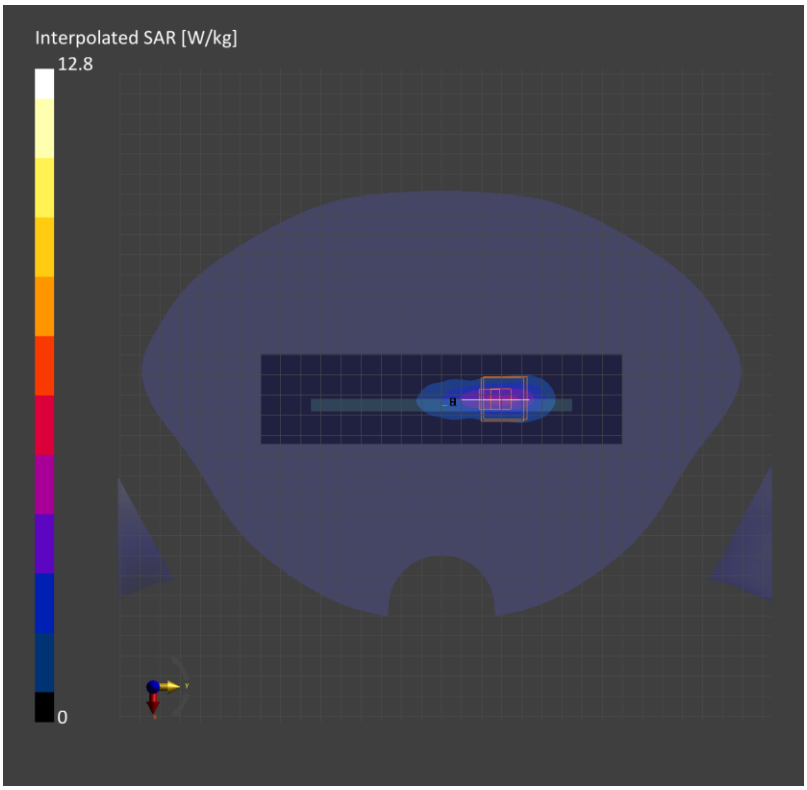
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2037	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1468, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	3.64	3.82
psSAR10g [W/Kg]	1.70	1.59
Power Drift [dB]		-0.01
M2/M1 [%]		67.9
Dist 3dB Peak [mm]		5.3



UL CA 66B

Frequency: 1772.5 MHz; Communication System Channel Number: 132597; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 1772.5 MHz; σ = 1.345 S/m; ε_r = 40.164; ρ = 1000 kg/m^3

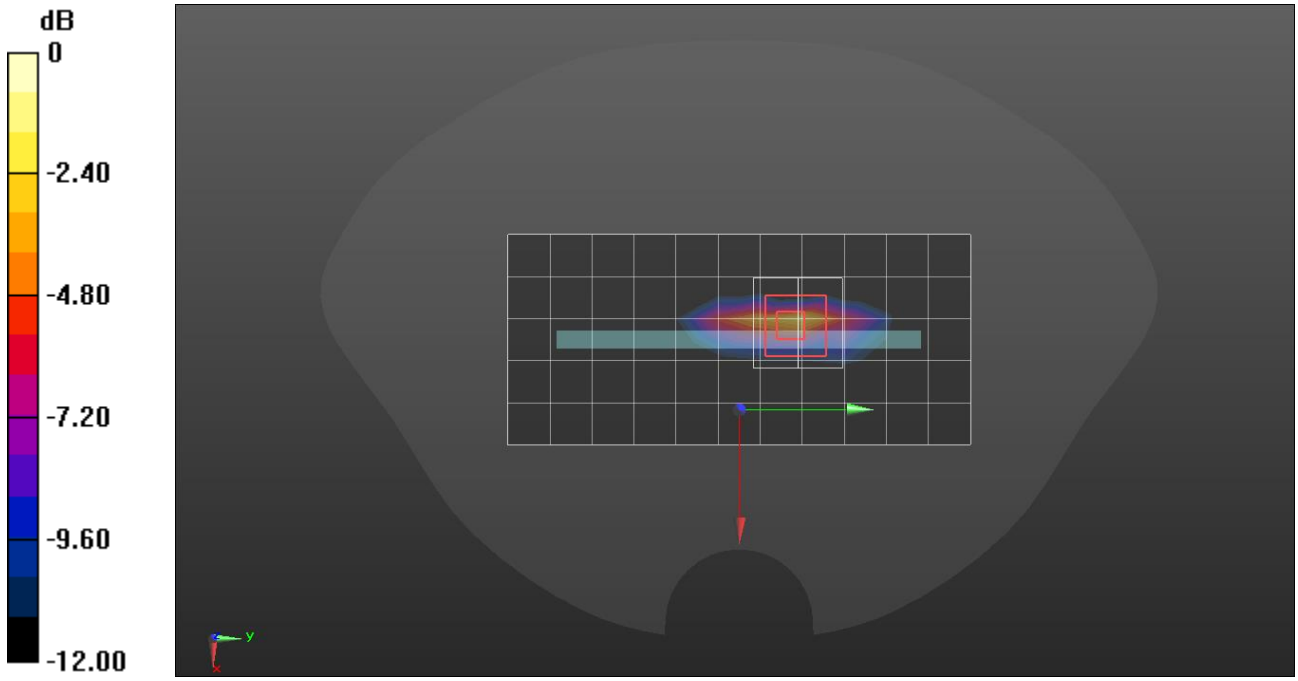
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 2023-03-22
- Probe: EX3DV4 - SN3871; ConvF(8.58, 8.58, 8.58) @ 1772.5 MHz; Calibrated: 2022-09-26
- Sensor-Surface: 1.4mm (Mechanical 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/QPSK RB 36/0 ch.132597/Area Scan (12x6x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 6.40 W/kg

Bottom/QPSK RB 36/0 ch.132597/Zoom Scan (5x5x5)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 41.01 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 13.7 W/kg
SAR(1 g) = 4.03 W/kg; SAR(10 g) = 1.55 W/kg
Maximum value of SAR (measured) = 9.69 W/kg



0 dB = 9.69 W/kg = 9.86 dBW/kg

UL CA 66C

Frequency: 1770 MHz; Communication System Channel Number: 132572; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 1770 MHz; σ = 1.343 S/m; ε_r = 40.172; ρ = 1000 kg/m^3

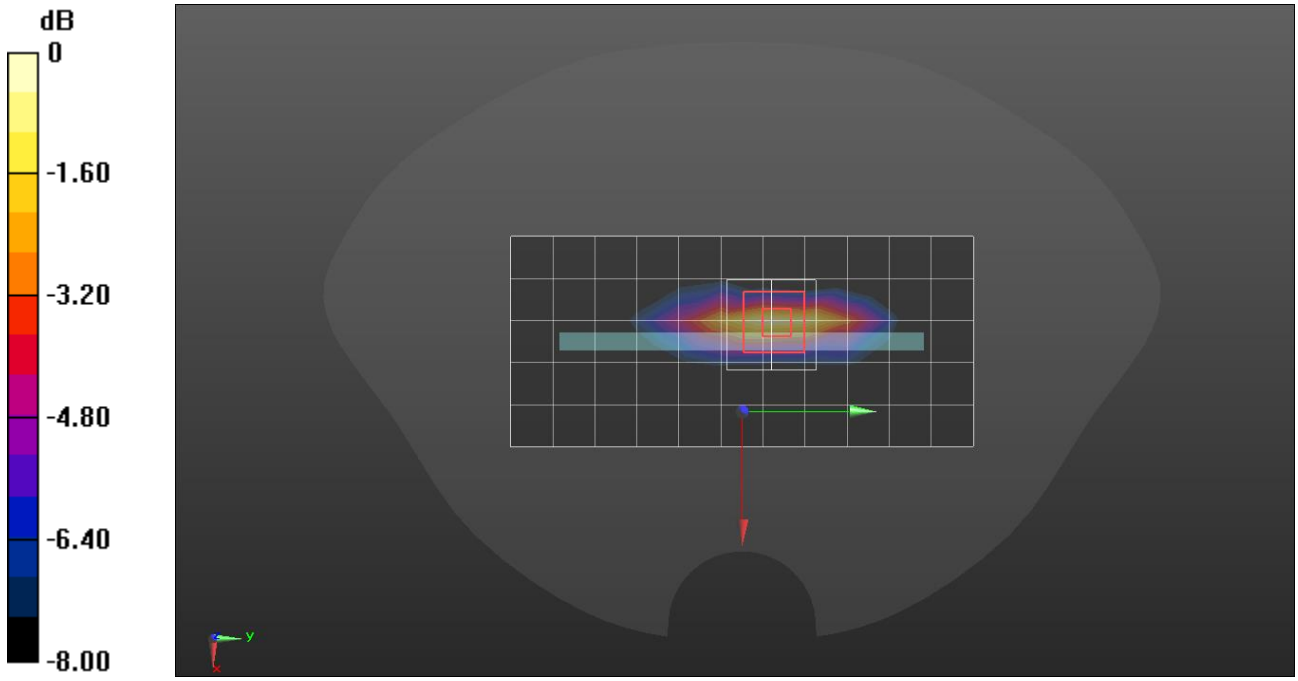
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 2023-03-22
- Probe: EX3DV4 - SN3871; ConvF(8.58, 8.58, 8.58) @ 1770 MHz; Calibrated: 2022-09-26
- Sensor-Surface: 1.4mm (Mechanical 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.132572/Area Scan (12x6x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.898 W/kg

Top/QPSK RB 50/0 ch.132572/Zoom Scan 2 (5x5x5)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.69 V/m; Power Drift = 0.06 dB
Peak SAR (extrapolated) = 1.18 W/kg
SAR(1 g) = 0.622 W/kg; SAR(10 g) = 0.325 W/kg
Maximum value of SAR (measured) = 0.948 W/kg



0 dB = 0.948 W/kg = -0.23 dBW/kg

Measurement Report for SM-F946U_UMPC, EDGE LEFT, LTE Band 71 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK), Channel 133297 (680.5 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, 10.00	Band 71	LTE-FDD, 10169-CAF	680.5, 133297	10.23	0.878	42.9

Hardware Setup

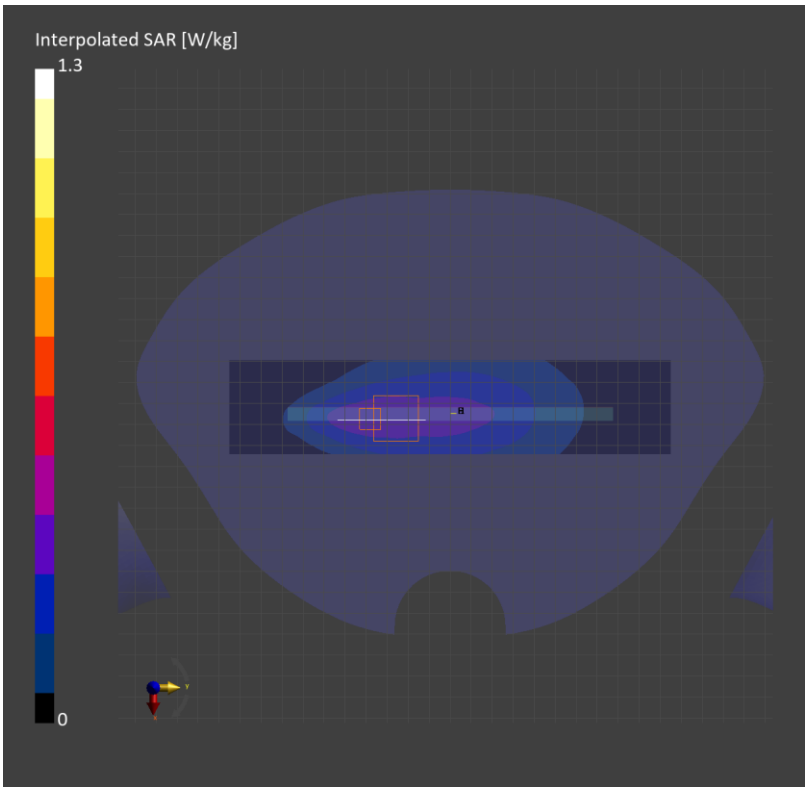
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 210.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.355	0.362
psSAR10g [W/Kg]	0.239	0.239
Power Drift [dB]		-0.07
M2/M1 [%]		83.7
Dist 3dB Peak [mm]		14.1



Measurement Report for SM-F946U_UMPC, EDGE LEFT, LTE Band 71 (20MHz Bandwidth), LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK), Channel 133297 (680.5 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	Band 71	LTE-FDD, 10169-CAF	680.5, 133297	10.23	0.878	42.9

Hardware Setup

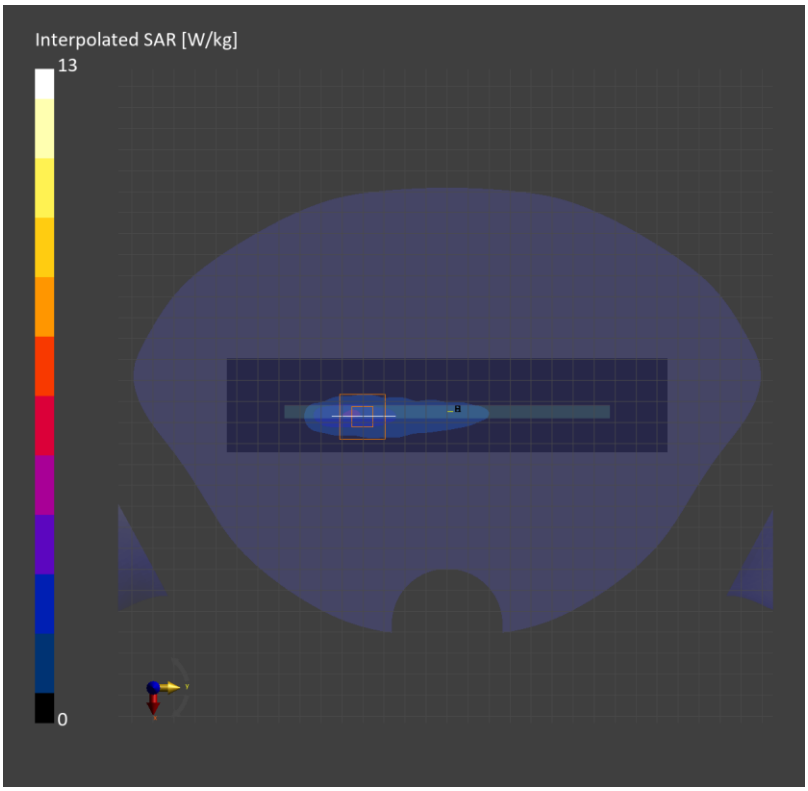
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7651, 2022-05-30	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 210.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 15.0	3.4 x 3.4 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.74	2.91
psSAR10g [W/Kg]	1.40	1.14
Power Drift [dB]		-0.01
M2/M1 [%]		55.8
Dist 3dB Peak [mm]		4.8



NR Band n7

Frequency: 2535 MHz; Communication System Channel Number: 507000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 2535 MHz; σ = 1.928 S/m; ε_r = 38.58; ρ = 1000 kg/m^3

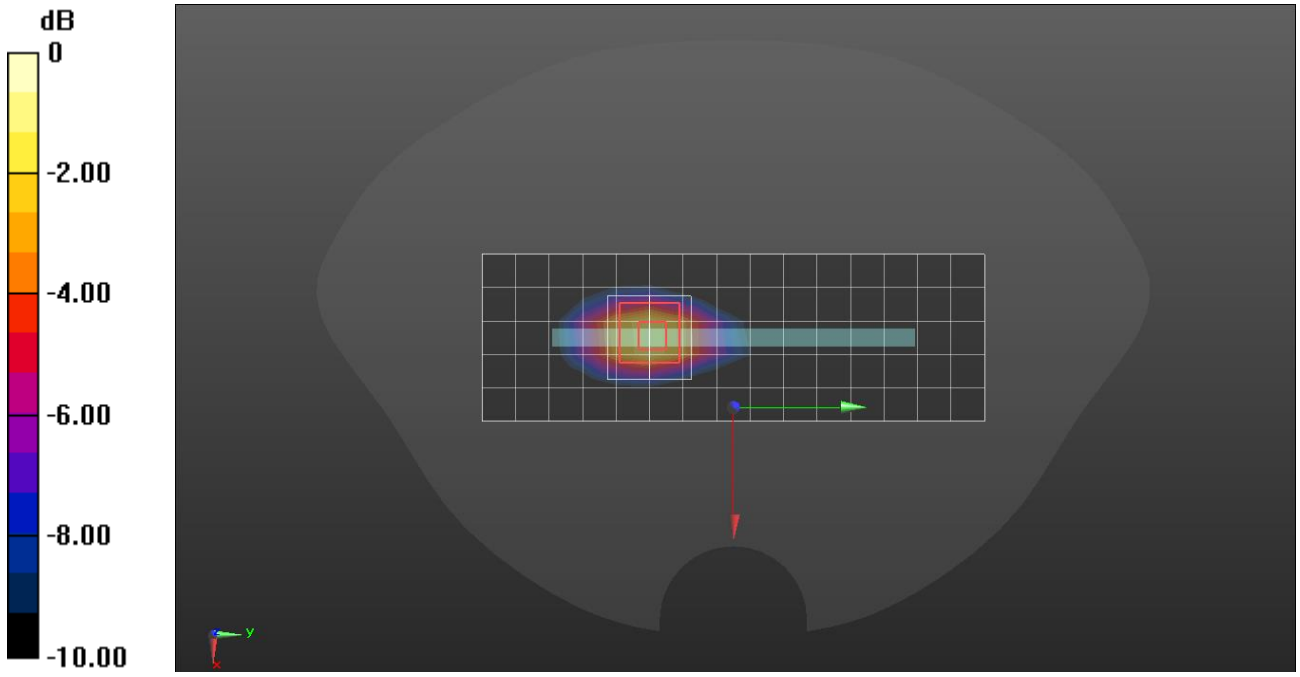
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn912; Calibrated: 2022-11-16
- Sensor-Surface: 1.4mm (Mechanical Surface Detection)
(Mechanical Surface Detection)
- Phantom: Twin-SAM V5.0 (20deg probe tilt); Phantom section: Flat Section ; Type: QD 000 P40 CD
- Measurement SW: DASY52, Version 52.10 (4); SEMCAD X Version 14.6.14 (7501)

Bottom/QPSK RB 216/0 ch.507000/Area Scan (16x6x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 1.02 W/kg

Bottom/QPSK RB 216/0 ch.507000/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 23.14 V/m; Power Drift = -0.19 dB
Peak SAR (extrapolated) = 1.62 W/kg
SAR(1 g) = 0.874 W/kg; SAR(10 g) = 0.426 W/kg
Maximum value of SAR (measured) = 1.35 W/kg



0 dB = 1.35 W/kg = 1.30 dBW/kg

NR Band n7

Frequency: 2535 MHz; Communication System Channel Number: 507000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 2535 MHz; σ = 1.928 S/m; ε_r = 38.58; ρ = 1000 kg/m^3

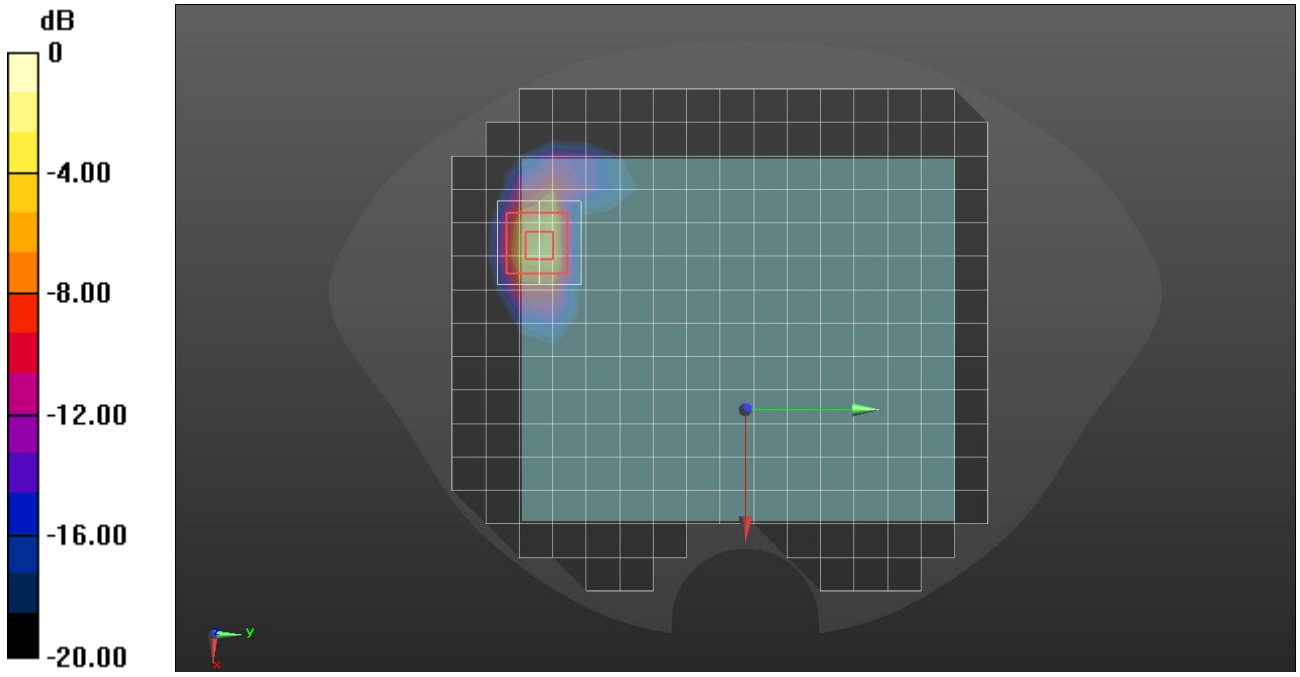
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn912; Calibrated: 2022-11-16
- Probe: EX3DV4 - SN7645; ConvF(6.73, 6.73, 6.73) @ 2535 MHz; Calibrated: 2022-11-15
- Sensor-Surface: 1.4mm (Mechanical Surface 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)

Rear/QPSK RB 216/0 ch.50700/Area Scan (16x17x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 5.76 W/kg

Rear/QPSK RB 216/0 ch.50700/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.27 V/m; Power Drift = -0.06 dB
Peak SAR (extrapolated) = 14.8 W/kg
SAR(1 g) = 5.92 W/kg; SAR(10 g) = 2.3 W/kg
Maximum value of SAR (measured) = 11.5 W/kg



0 dB = 11.5 W/kg = 10.61 dBW/kg

NR Band n7

Frequency: 2535 MHz; Communication System Channel Number: 507000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 2535 MHz; σ = 1.858 S/m; ε_r = 39.912; ρ = 1000 kg/m^3

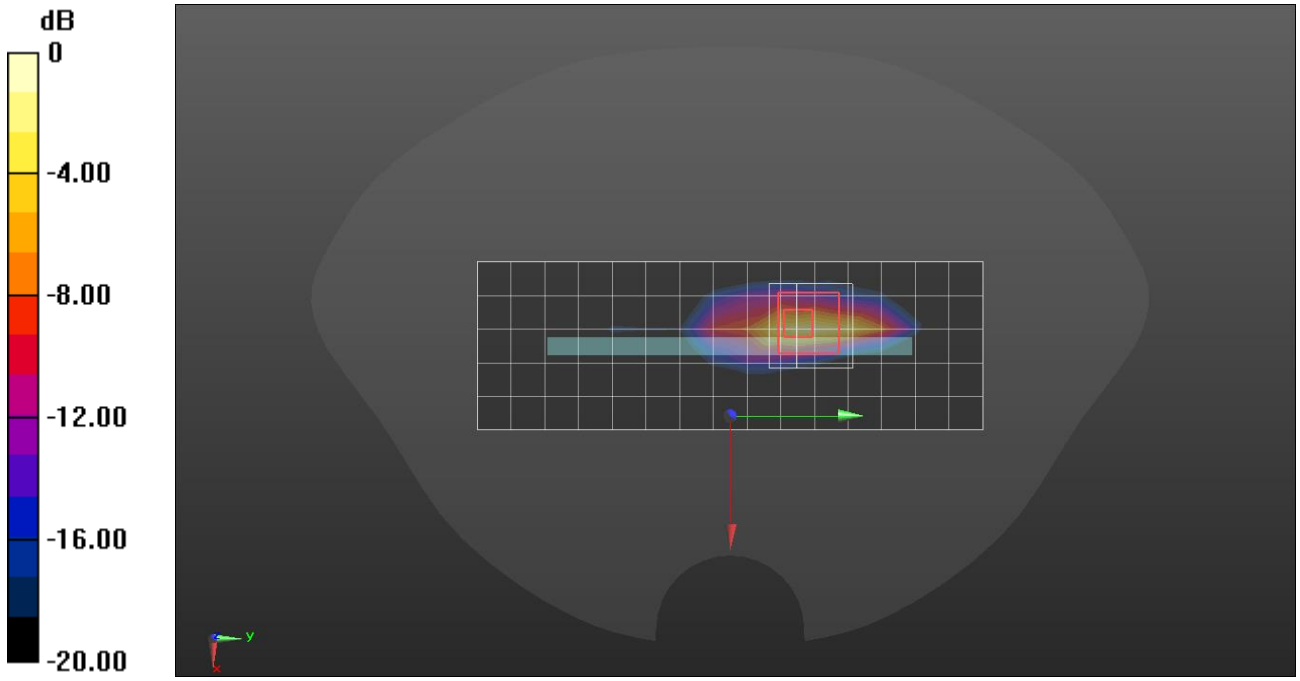
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn912; Calibrated: 2022-11-16
- Probe: EX3DV4 - SN7645; ConvF(6.73, 6.73, 6.73) @ 2535 MHz; Calibrated: 2022-11-15
- Sensor-Surface: 1.4mm (Mechanical Surface 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 216/0 ch.507000/Area Scan (16x6x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 13.5 W/kg

Top/QPSK RB 216/0 ch.507000/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 68.80 V/m; Power Drift = 0.12 dB
Peak SAR (extrapolated) = 23.7 W/kg
SAR(1 g) = 6.04 W/kg; SAR(10 g) = 2 W/kg
Maximum value of SAR (measured) = 15.7 W/kg



0 dB = 15.7 W/kg = 11.96 dBW/kg

NR Band n12

Frequency: 707.5 MHz; Communication System Channel Number: 141500; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.869 S/m; ε_r = 42.486; ρ = 1000 kg/m^3

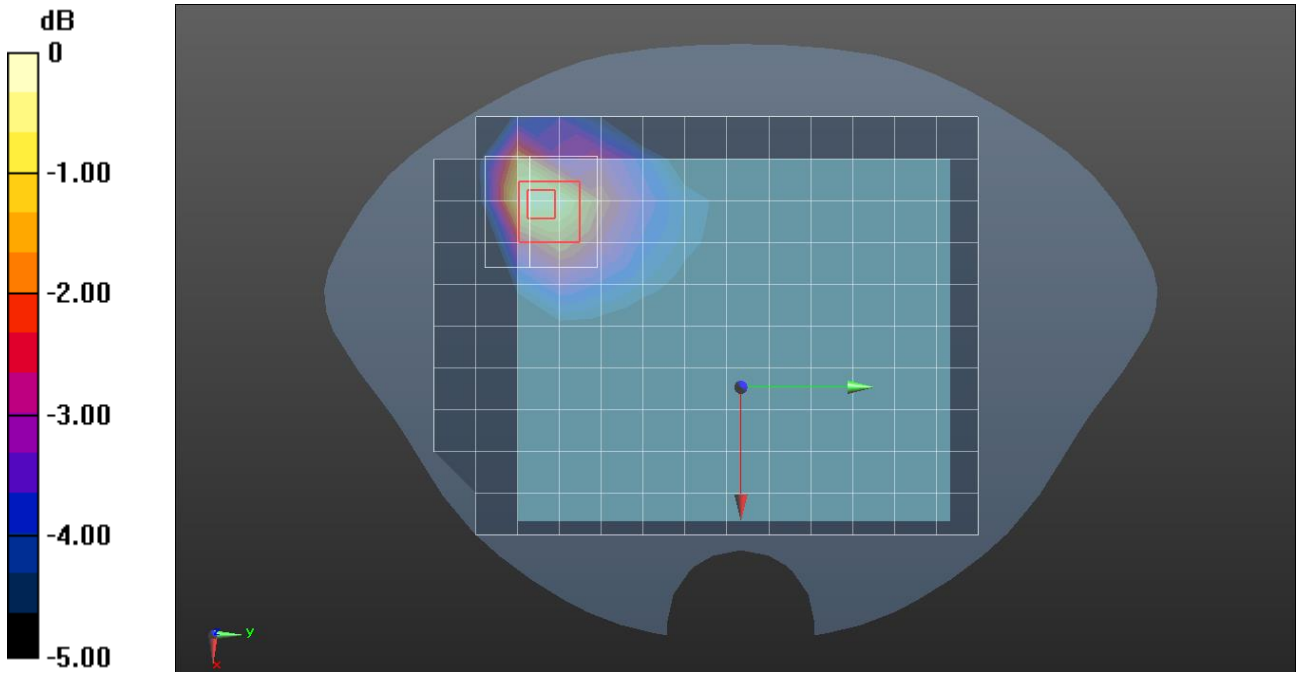
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE3 Sn479; Calibrated: 2022-10-06
- Probe: EX3DV4 - SN7545; ConvF(10.14, 10.14, 10.14) @ 707.5 MHz; Calibrated: 2022-08-19
- Sensor-Surface: 1.4mm (Mechanical 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 (7501)

Front/QPSK RB 36/22 ch.141500/Area Scan (11x14x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.586 W/kg

Front/QPSK RB 36/22 ch.141500/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.46 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 0.773 W/kg
SAR(1 g) = 0.434 W/kg; SAR(10 g) = 0.264 W/kg
Maximum value of SAR (measured) = 0.636 W/kg



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

NR Band n12

Frequency: 707.5 MHz; Communication System Channel Number: 141500; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.869 S/m; ε_r = 42.486; ρ = 1000 kg/m^3

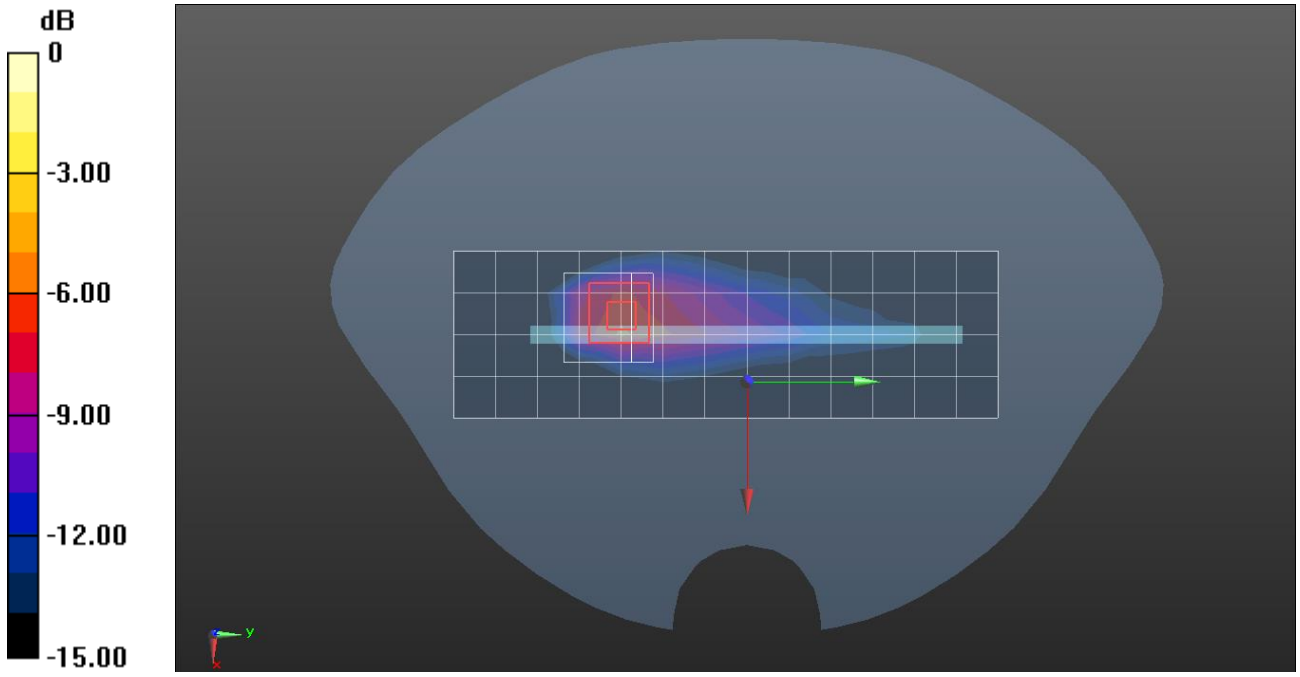
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE3 Sn479; Calibrated: 2022-10-06
- Probe: EX3DV4 - SN7545; ConvF(10.14, 10.14, 10.14) @ 707.5 MHz; Calibrated: 2022-08-19
- Sensor-Surface: 1.4mm (Mechanical 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 (7501)

Left/QPSK RB 36/22 ch.141500/Area Scan (14x5x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.95 W/kg

Left/QPSK RB 36/22 ch.141500/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 68.79 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 10.6 W/kg
SAR(1 g) = 2.73 W/kg; SAR(10 g) = 1.1 W/kg
Maximum value of SAR (measured) = 7.33 W/kg



0 dB = 7.33 W/kg = 8.65 dBW/kg

NR Band n25

Frequency: 1882.5 MHz; Communication System Channel Number: 376500; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.368 S/m; ε_r = 39.555; ρ = 1000 kg/m^3

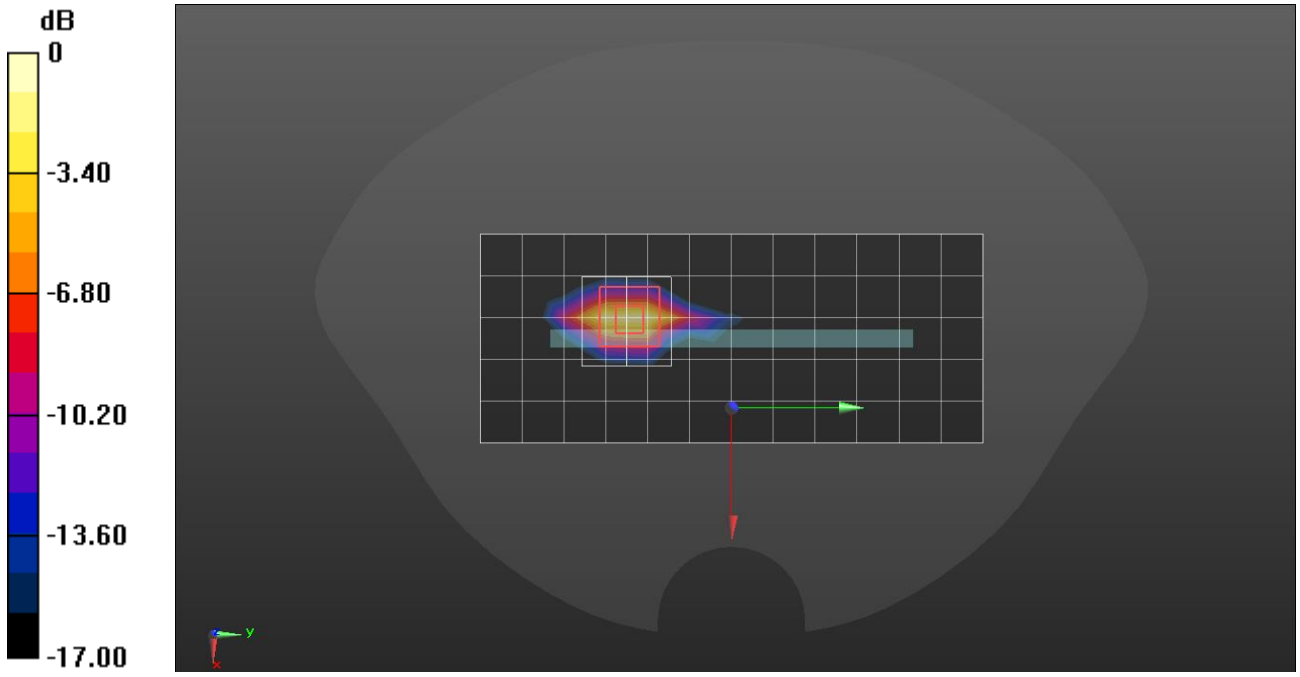
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1667; Calibrated: 2022-04-27
- Probe: EX3DV4 - SN3871; ConvF(8.34, 8.34, 8.34) @ 1882.5 MHz; Calibrated: 2022-09-26
- Sensor-Surface: 1.4mm (Mechanical 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/QPSK RB 108/54 ch.376500/Area Scan (6x13x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 7.38 W/kg

Bottom/QPSK RB 108/54 ch.376500/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 63.87 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 11.4 W/kg
SAR(1 g) = 4.37 W/kg; SAR(10 g) = 1.7 W/kg
Maximum value of SAR (measured) = 8.70 W/kg



0 dB = 8.70 W/kg = 9.40 dBW/kg

NR Band n25

Frequency: 1882.5 MHz; Communication System Channel Number: 376500; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.418 S/m; ε_r = 40.324; ρ = 1000 kg/m^3

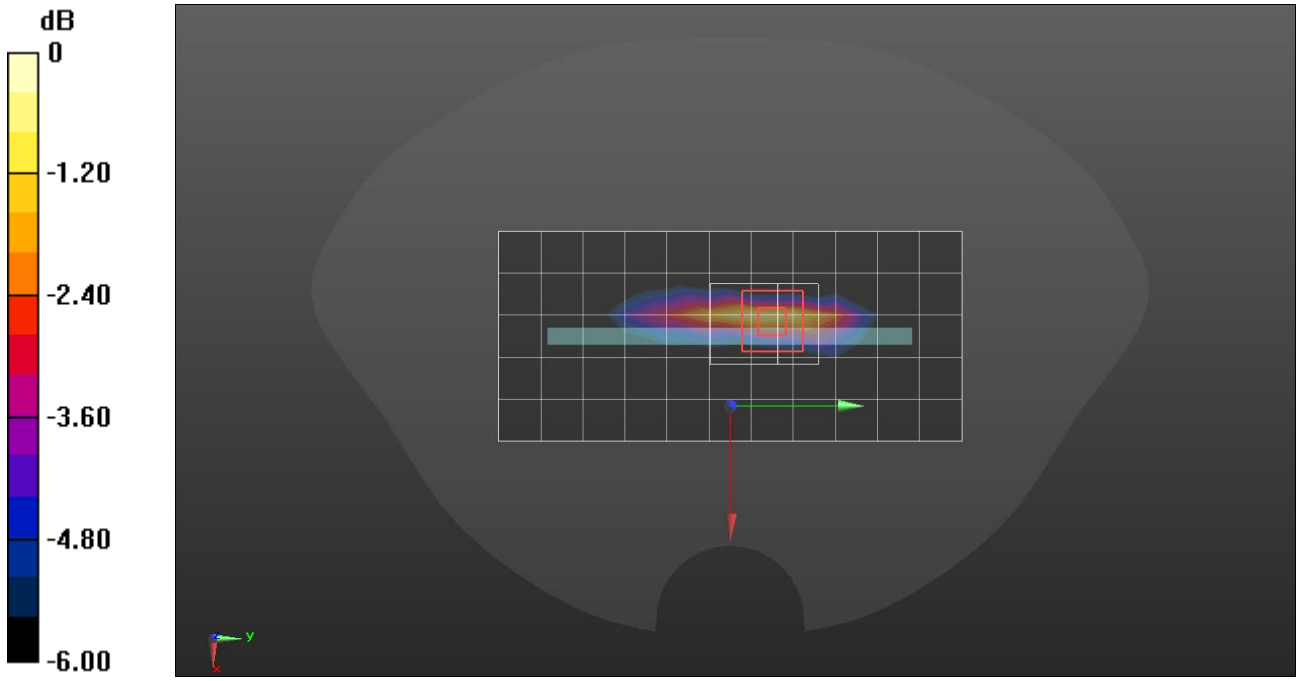
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1667; Calibrated: 2022-04-27
- Probe: EX3DV4 - SN7314; ConvF(8.08, 8.08, 8.08) @ 1882.5 MHz; Calibrated: 2022-05-31
- Sensor-Surface: 1.4mm (Mechanical 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 108/0 ch.376500/Area Scan (6x12x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.855 W/kg

Top/QPSK RB 108/0 ch.376500/Zoom Scan (7x9x8)/Cube 0:

Measurement grid: dx=4.8mm, dy=4.8mm, dz=1.4mm
Reference Value = 23.13 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.25 W/kg
SAR(1 g) = 0.568 W/kg; SAR(10 g) = 0.279 W/kg
Maximum value of SAR (measured) = 0.928 W/kg



0 dB = 0.928 W/kg = -0.32 dBW/kg

NR Band n25

Frequency: 1882.5 MHz; Communication System Channel Number: 376500; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 1882.5 MHz; σ = 1.402 S/m; ε_r = 39.122; ρ = 1000 kg/m^3

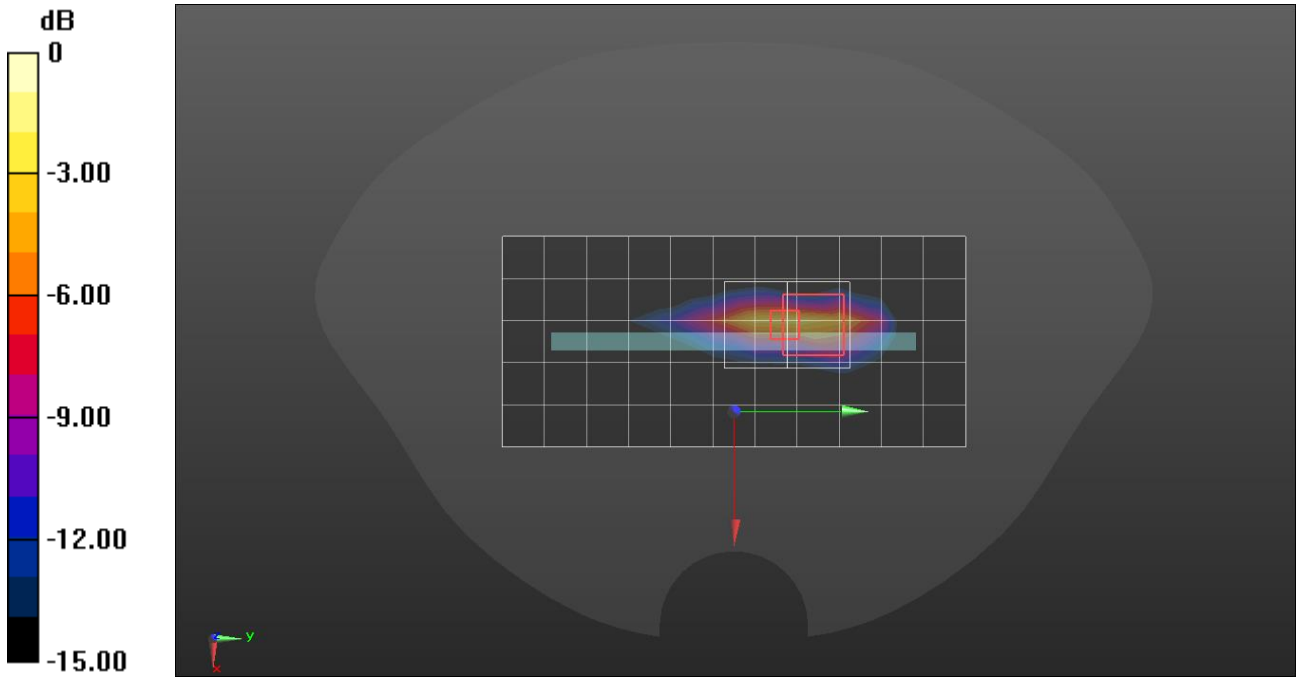
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1667; Calibrated: 2022-04-27
- Probe: EX3DV4 - SN7314; ConvF(8.08, 8.08, 8.08) @ 1882.5 MHz; Calibrated: 2022-05-31
- Sensor-Surface: 1.4mm (Mechanical 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 108/0 ch.376500/Area Scan (6x12x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 7.06 W/kg

Top/QPSK RB 108/0 ch.376500/Zoom Scan(12x17x8)/Cube 0:

Measurement grid: dx=2.8mm, dy=2.8mm, dz=1.4mm
Reference Value = 69.93 V/m; Power Drift = 0.09 dB
Peak SAR (extrapolated) = 23.3 W/kg
SAR(1 g) = 4.65 W/kg; SAR(10 g) = 1.85 W/kg
Maximum value of SAR (measured) = 11.6 W/kg



0 dB = 11.6 W/kg = 10.64 dBW/kg

NR Band n26

Frequency: 831.5 MHz; Communication System Channel Number: 166300; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.907 S/m; ε_r = 42.228; ρ = 1000 kg/m^3

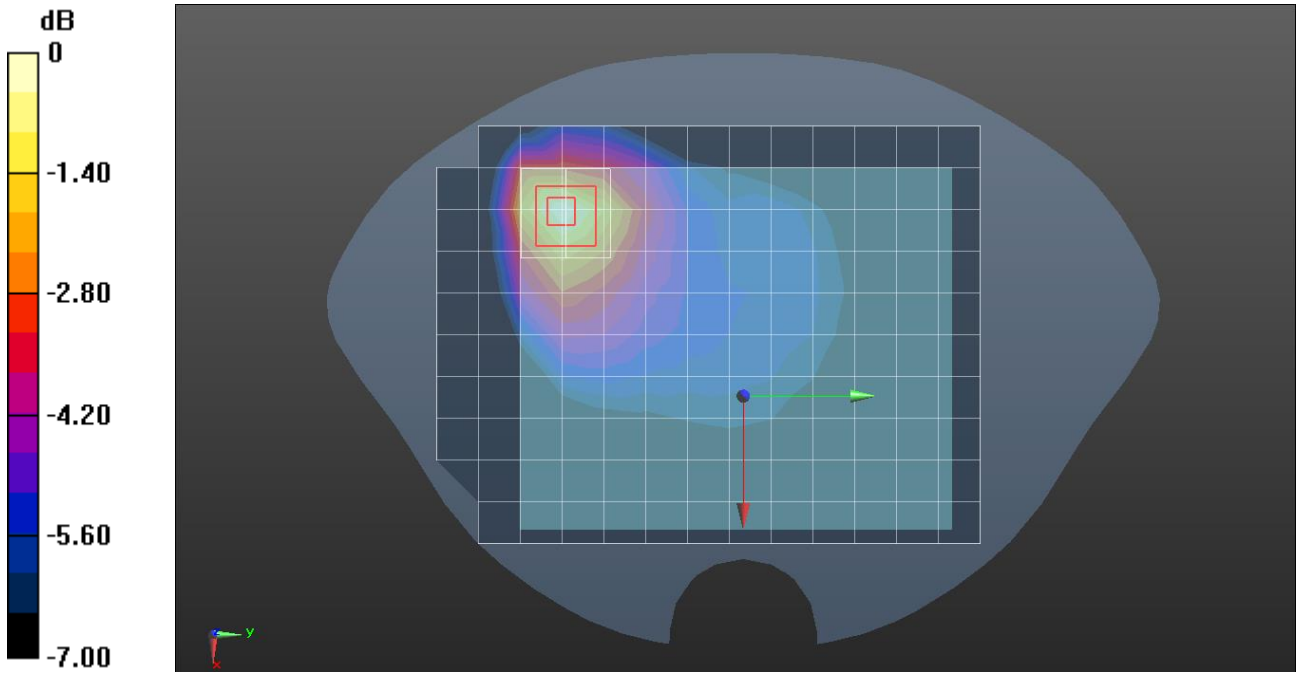
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE3 Sn479; Calibrated: 2022-10-06
- Probe: EX3DV4 - SN7545; ConvF(9.8, 9.8, 9.8) @ 831.5 MHz; Calibrated: 2022-08-19
- Sensor-Surface: 1.4mm (Mechanical Surface 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 (7501)

Rear/QPSK RB 50/28 ch.166300/Area Scan (11x14x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.752 W/kg

Rear/QPSK RB 50/28 ch.166300/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.18 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 0.903 W/kg
SAR(1 g) = 0.523 W/kg; SAR(10 g) = 0.319 W/kg
Maximum value of SAR (measured) = 0.742 W/kg



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

NR Band n26

Frequency: 831.5 MHz; Communication System Channel Number: 166300; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.907 S/m; ε_r = 42.228; ρ = 1000 kg/m^3

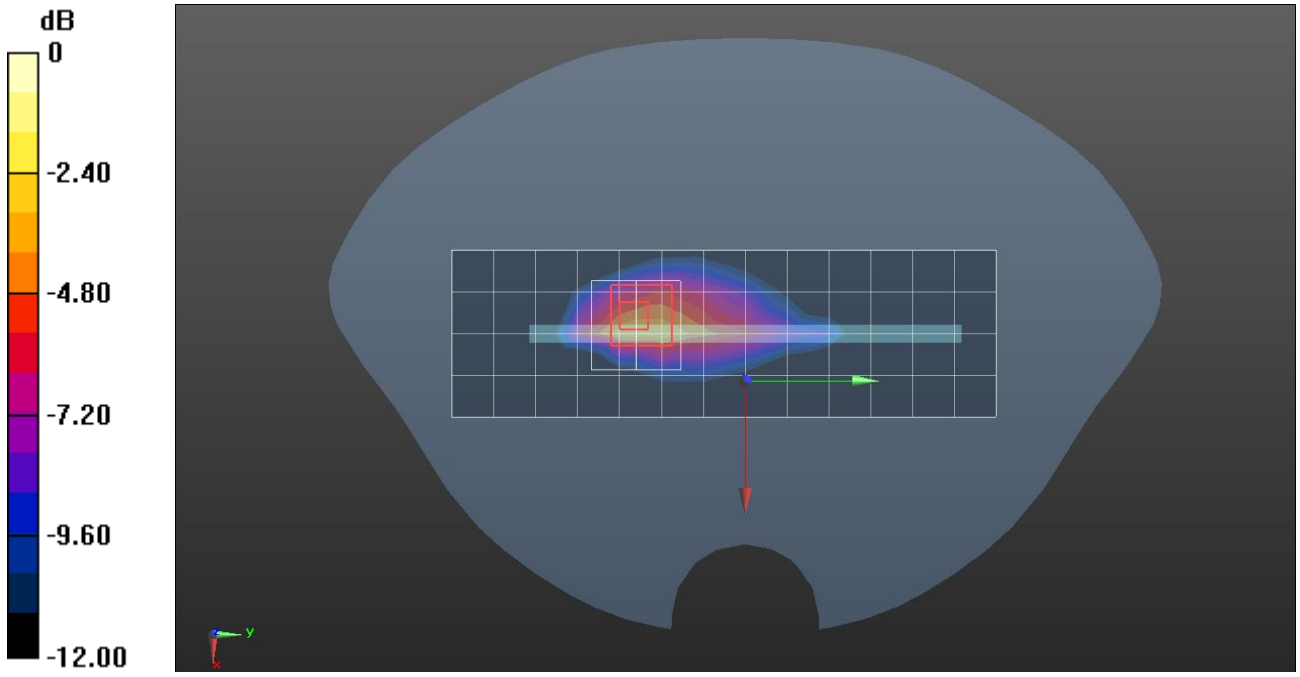
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE3 Sn479; Calibrated: 2022-10-06
- Probe: EX3DV4 - SN7545; ConvF(9.8, 9.8, 9.8) @ 831.5 MHz; Calibrated: 2022-08-19
- Sensor-Surface: 1.4mm (Mechanical Surface 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 (7501)

Left/QPSK RB 50/28 ch.166300/Area Scan (14x5x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.94 W/kg

Left/QPSK RB 50/28 ch.166300/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.00 V/m; Power Drift = 0.17 dB
Peak SAR (extrapolated) = 10.1 W/kg
SAR(1 g) = 3.27 W/kg; SAR(10 g) = 1.43 W/kg
Maximum value of SAR (measured) = 6.06 W/kg



0 dB = 6.06 W/kg = 7.82 dBW/kg

NR Band n30

Frequency: 2310 MHz; Communication System Channel Number: 462000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 2310 MHz; σ = 1.82 S/m; ε_r = 38.988; ρ = 1000 kg/m^3

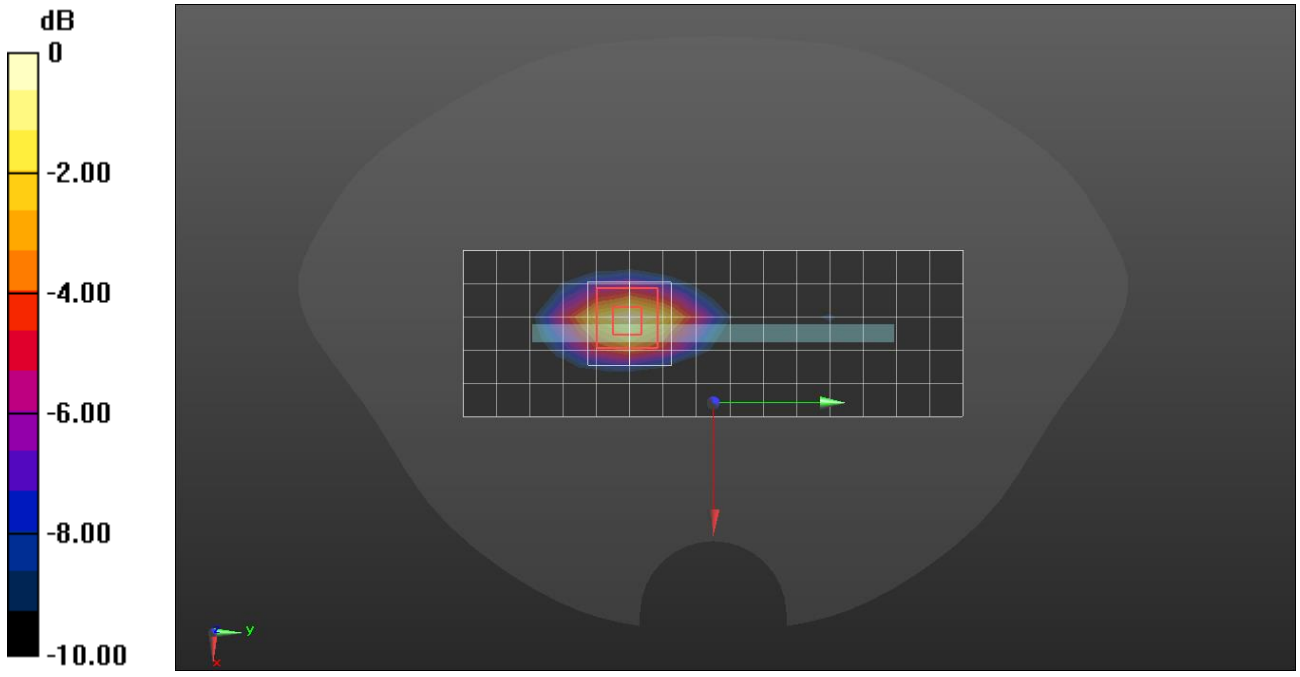
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn912; Calibrated: 2022-11-16
- Probe: EX3DV4 - SN7645; ConvF(7.3, 7.3, 7.3) @ 2310 MHz; Calibrated: 2022-11-15
- Sensor-Surface: 1.4mm (Mechanical Surface 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)

Bottom/QPSK RB 25/14 ch.462000/Area Scan (16x6x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.979 W/kg

Bottom/QPSK RB 25/14 ch.462000/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 21.86 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 1.20 W/kg
SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.322 W/kg
Maximum value of SAR (measured) = 0.999 W/kg



0 dB = 0.999 W/kg = -0.00 dBW/kg

NR Band n30

Frequency: 2310 MHz; Communication System Channel Number: 462000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 2310 MHz; σ = 1.82 S/m; ε_r = 38.988; ρ = 1000 kg/m^3

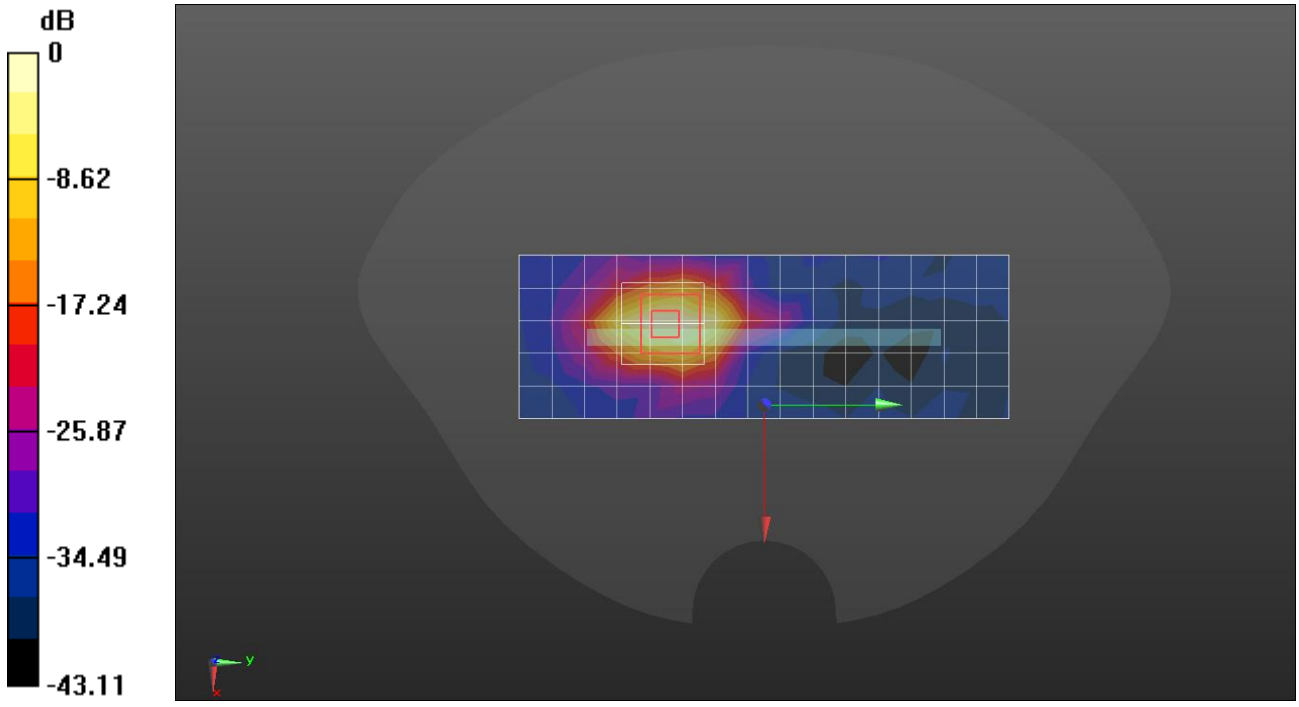
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn912; Calibrated: 11/16/2022
- Probe: EX3DV4 - SN7645; ConvF(7.3, 7.3, 7.3) @ 2310 MHz; Calibrated: 11/15/2022
- Sensor-Surface: 1.4mm (Mechanical Surface Detection (Locations From Previous Scan Used))
- 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 50/0 ch.462000/Area Scan (16x6x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 11.9 W/kg

Bottom/QPSK RB 50/0 ch.462000/Zoom Scan (7x7x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 75.45 V/m; Power Drift = -0.14 dB
Peak SAR (extrapolated) = 21.5 W/kg
SAR(1 g) = 6.43 W/kg; SAR(10 g) = 2.5 W/kg
Maximum value of SAR (measured) = 14.8 W/kg



0 dB = 14.8 W/kg = 11.70 dBW/kg

NR Band n30

Frequency: 2310 MHz; Communication System Channel Number: 462000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 2310 MHz; σ = 1.706 S/m; ε_r = 39.493; ρ = 1000 kg/m^3

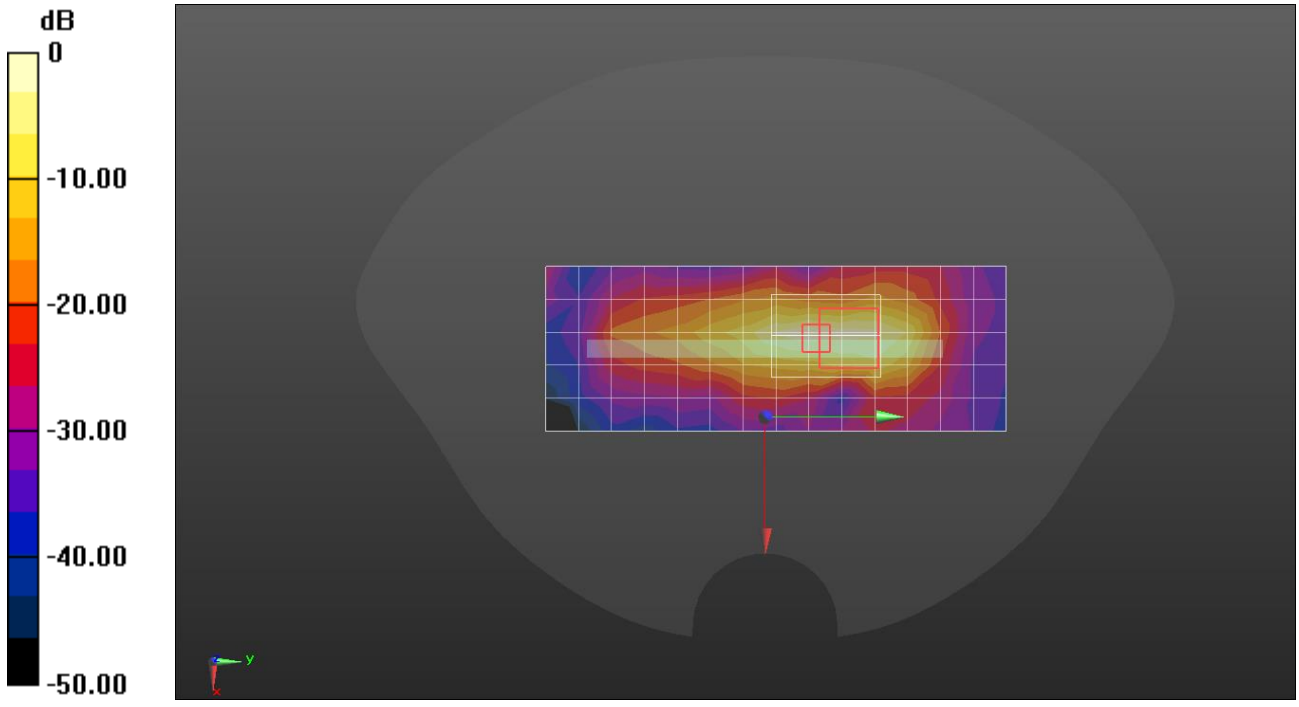
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7645; ConvF(7.3, 7.3, 7.3) @ 2310 MHz; Calibrated: 11/15/2022
- Sensor-Surface: 1.4mm (Mechanical Surface Detection (Locations From Previous Scan Used)),
- 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 25/14 ch.462000/Area Scan (15x6x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 12.4 W/kg

Top/QPSK RB 25/14 ch.462000/Zoom Scan (7x9x7)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 75.32 V/m; Power Drift = 0.05 dB
Peak SAR (extrapolated) = 23.1 W/kg
SAR(1 g) = 5.84 W/kg; SAR(10 g) = 2.27 W/kg
Maximum value of SAR (measured) = 15.4 W/kg



0 dB = 15.4 W/kg = 11.88 dBW/kg

Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, Band n41(Voice/data/SRS0), 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz), Channel 518598 (2593.0 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 BOTTOM, 10.00	Band n41	5G NR FR1 TDD, 10866-AAF	2593.0, 518598	7.74	1.91	39.4

Hardware Setup

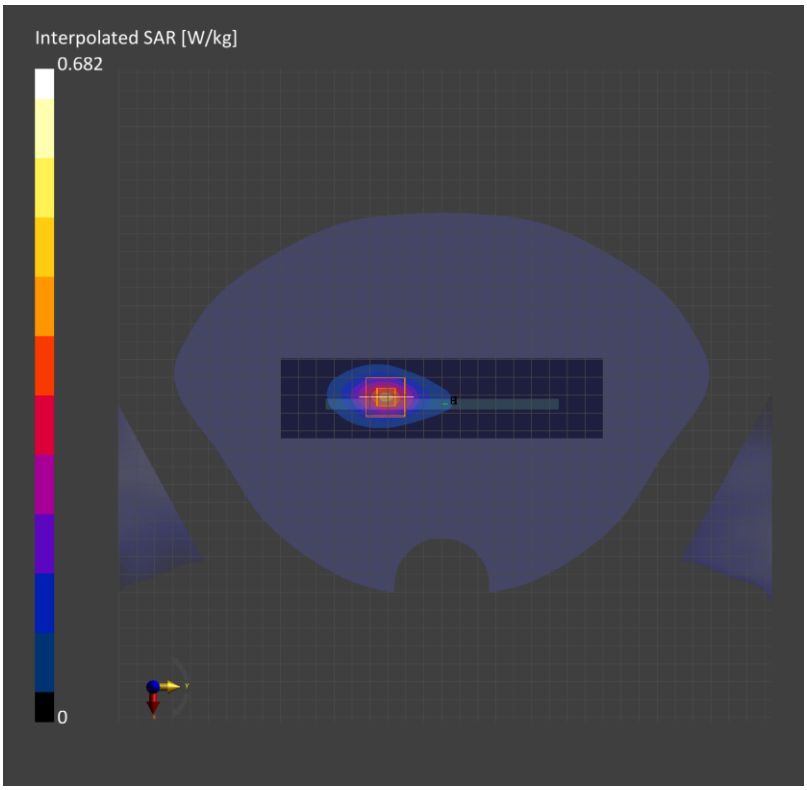
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-11	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.316	0.326
psSAR10g [W/Kg]	0.143	0.150
Power Drift [dB]		0.15
M2/M1 [%]		79.3
Dist 3dB Peak [mm]		9.0



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, Band n41(Voice/data/SRS0), 5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz), Channel 518598 (2593.0 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 BOTTOM, 0.00	Band n41	5G NR FR1 TDD, 10917-AAD	2593.0, 518598	7.74	1.91	39.4

Hardware Setup

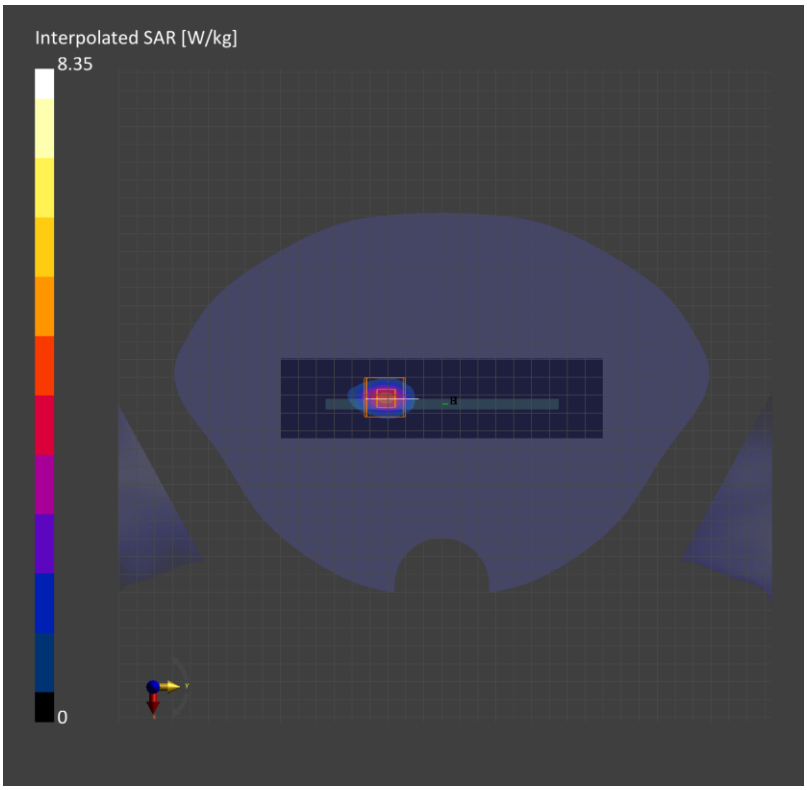
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-11	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 10.0	4.3 x 4.3 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.41	3.32
psSAR10g [W/Kg]	1.24	1.19
Power Drift [dB]		-0.07
M2/M1 [%]		78.3
Dist 3dB Peak [mm]		5.8



Measurement Report for SM-F946U_UMPC, EDGE TOP, Custom Band, CW, Channel 2593000 (2593.0 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 TOP, 10.00	Custom Band	CW, 0--	2593.0, 2593000	7.74	1.91	39.4

Hardware Setup

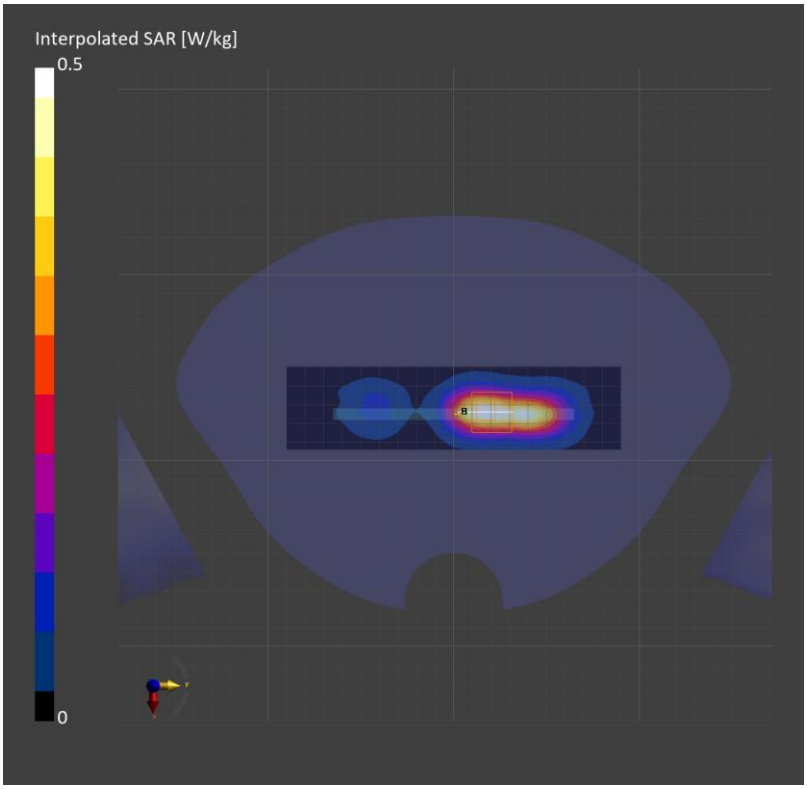
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-13	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.386	0.410
psSAR10g [W/Kg]	0.184	0.193
Power Drift [dB]		0.07
M2/M1 [%]		78.4
Dist 3dB Peak [mm]		9.0



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band n41(SRS1/SRS2/SRS3), CW, Channel 2593000 (2593.0 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 TOP, 0.00	Band n41	CW, 0--	2593.0, 2593000	7.74	1.91	39.4

Hardware Setup

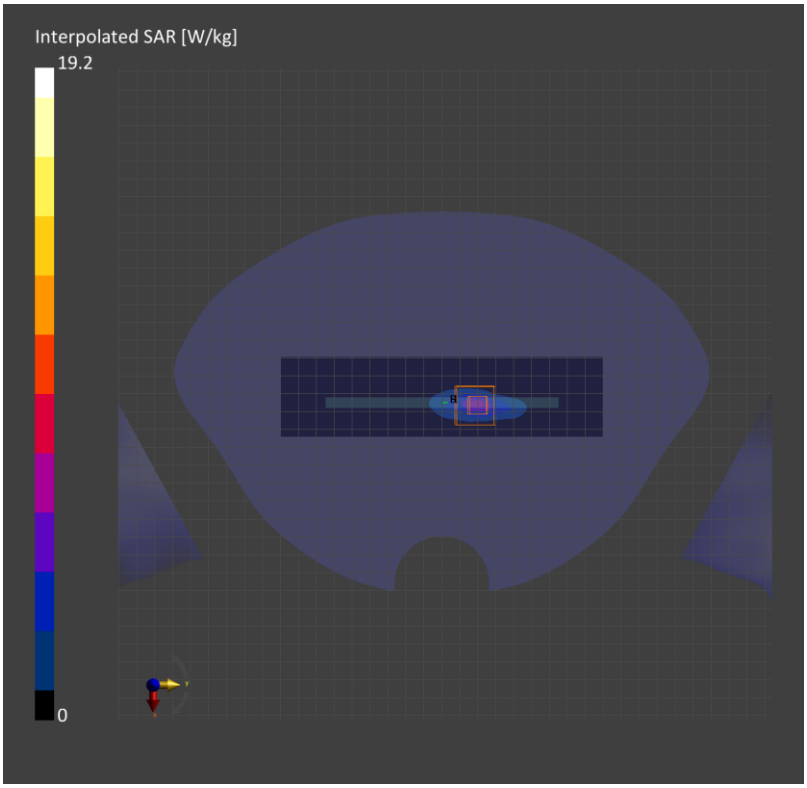
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-13	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	4.74	5.02
psSAR10g [W/Kg]	1.72	1.61
Power Drift [dB]		-0.01
M2/M1 [%]		65.7
Dist 3dB Peak [mm]		4.8



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band n41(Voice/data/SRS0), 5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz), Channel 518598 (2593.0 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 TOP, 10.00	Band n41	5G NR FR1 TDD, 10866-AAF	2593.0, 518598	7.74	1.92	39.7

Hardware Setup

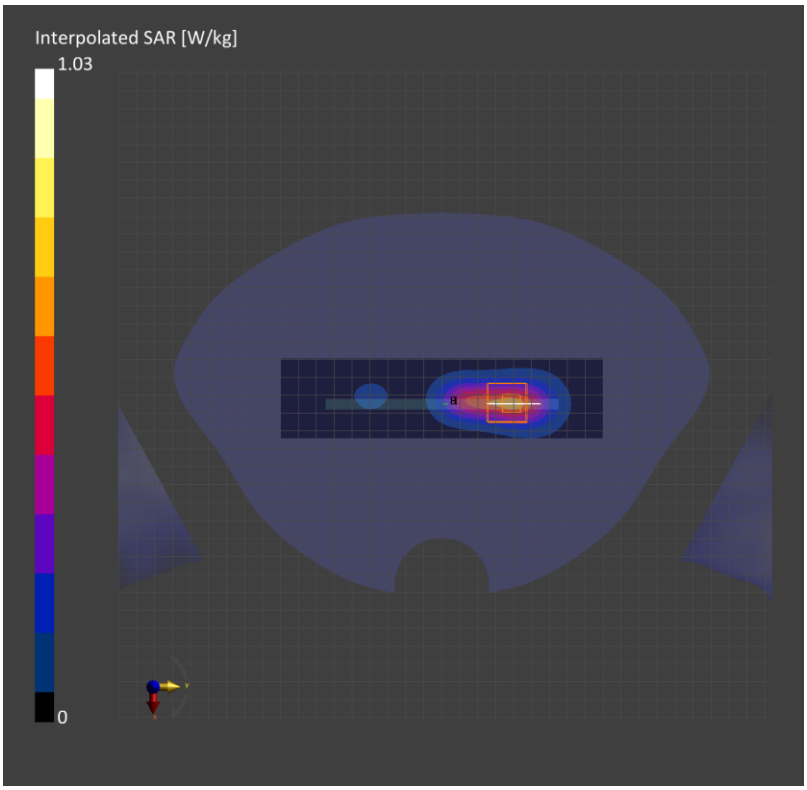
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-21	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.506	0.499
psSAR10g [W/Kg]	0.243	0.239
Power Drift [dB]		-0.08
M2/M1 [%]		79.4
Dist 3dB Peak [mm]		9.0



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band n41(Voice/data/SRS0), 5G NR (DFT-s-OFDM, 50% RB, 100 MHz, QPSK, 30 kHz), Channel 518598 (2593.0 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 TOP, 0.00	Band n41	5G NR FR1 TDD, 10917-AAD	2593.0, 518598	7.74	1.92	39.7

Hardware Setup

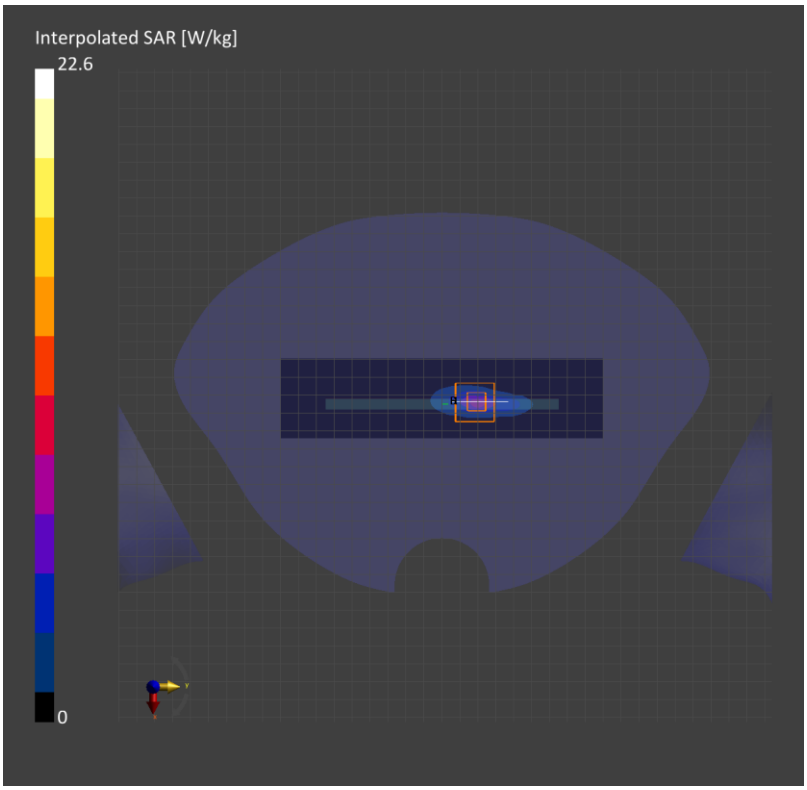
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-21	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 10.0	2.9 x 2.9 x 1.2
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	5.55	5.58
psSAR10g [W/Kg]	2.01	1.78
Power Drift [dB]		-0.01
M2/M1 [%]		69.1
Dist 3dB Peak [mm]		4.4



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, Custom Band, CW, Channel 2593000 (2593.0 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 BOTTOM, 10.00	Custom Band	CW, 0--	2593.0, 2593000	7.03	1.90	39.5

Hardware Setup

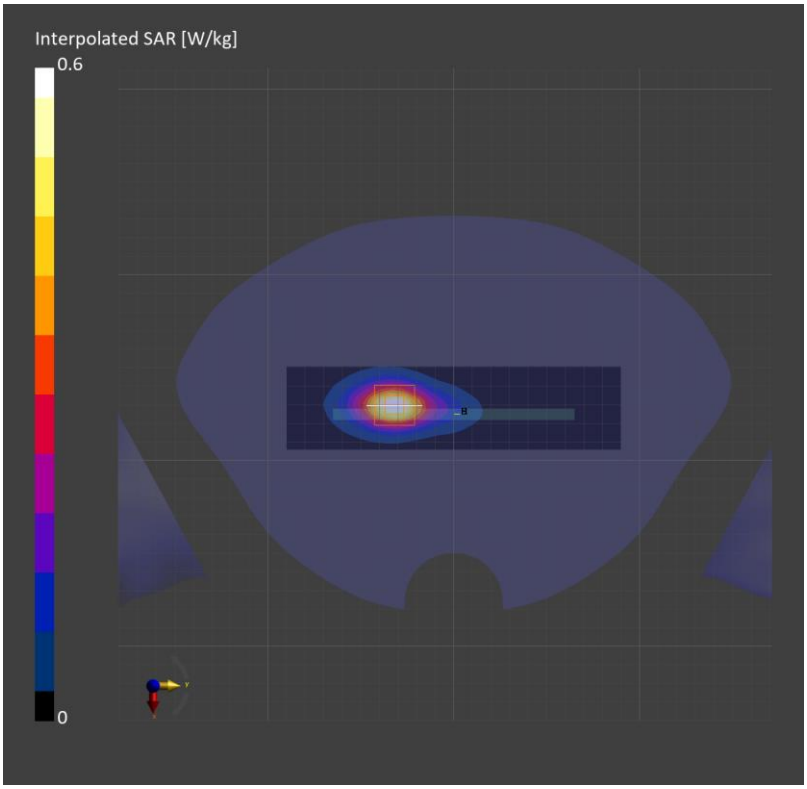
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-26	EX3DV4 - SN7313, 2023-03-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.464	0.471
psSAR10g [W/Kg]	0.211	0.216
Power Drift [dB]		-0.02
M2/M1 [%]		80.9
Dist 3dB Peak [mm]		9.0



Measurement Report for SM-F946U_UMPC, EDGE BOTTOM, Band n41(SRS1/SRS2/SRS3), CW, Channel 2593000 (2593.0 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 BOTTOM, 0.00	Band n41	CW, 0--	2593.0, 2593000	7.03	1.90	39.5

Hardware Setup

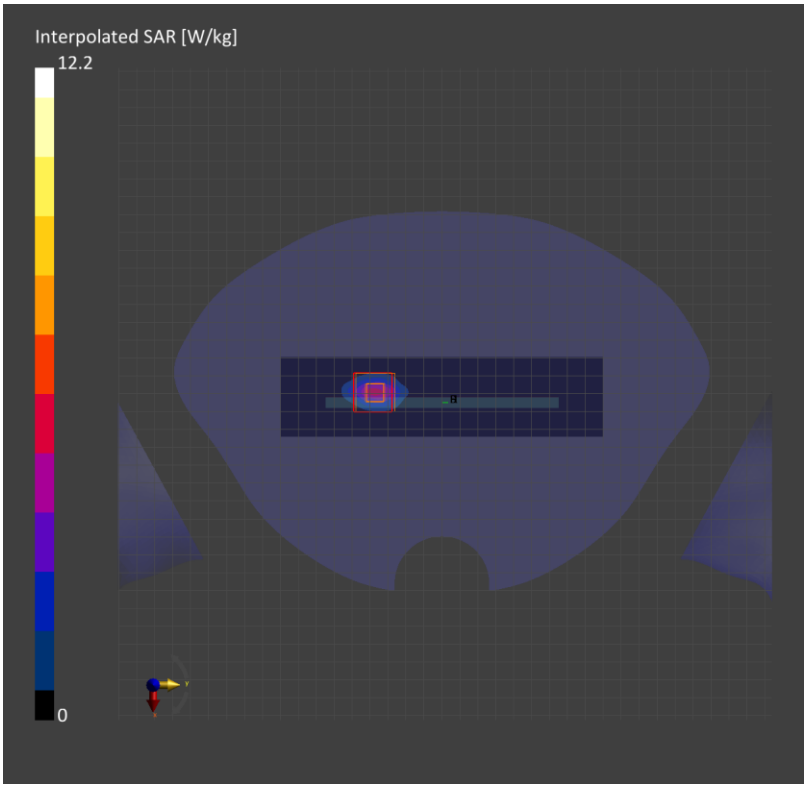
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-26	EX3DV4 - SN7313, 2023-03-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 10.0	3.8 x 3.8 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.82	3.76
psSAR10g [W/Kg]	1.41	1.34
Power Drift [dB]		-0.03
M2/M1 [%]		68.1
Dist 3dB Peak [mm]		4.6



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band n48(Voice/data/SRS0), 5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 30 kHz), Channel 645332 (3680.0 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 TOP, 10.00	Band n48	5G NR FR1 TDD, 10913-AAD	3680.0, 645332	7.03	3.01	38.9

Hardware Setup

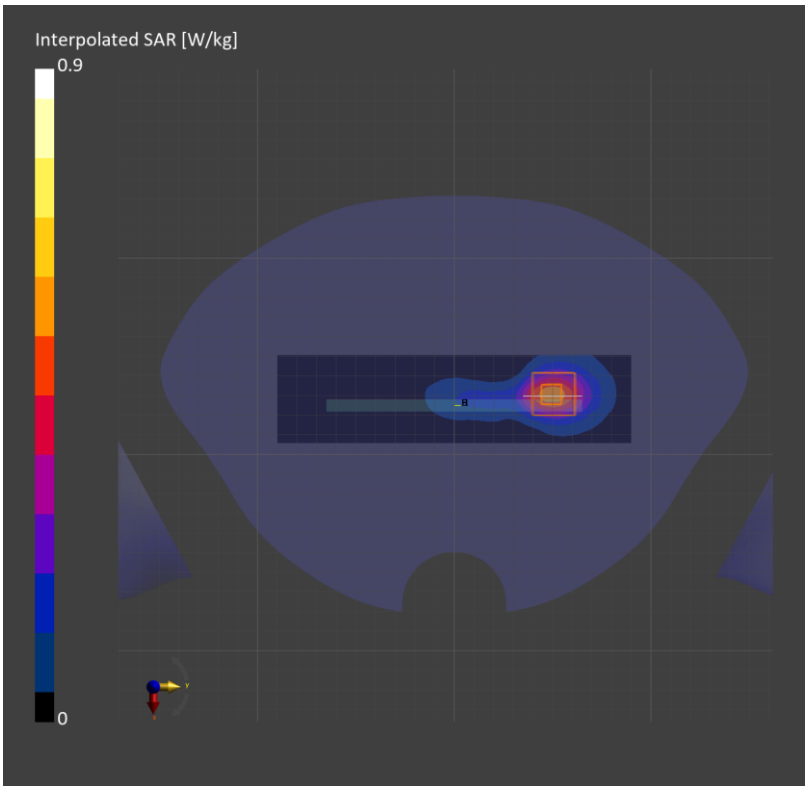
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-15	EX3DV4 - SN7646, 2023-03-23	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 28.0
Grid Steps [mm]	6.4 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]	0.434	0.449
psSAR10g [W/Kg]	0.183	0.189
Power Drift [dB]		0.07
M2/M1 [%]		74.9
Dist 3dB Peak [mm]		9.1



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band n48(Voice/data/SRS0), 5G NR (DFT-s-OFDM, 1 RB, 40 MHz, QPSK, 30 kHz), Channel 638000 (3570.0 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 TOP, 0.00	Band n48	5G NR FR1 TDD, 10903-AAD	3570.0, 638000	7.37	2.96	39.2

Hardware Setup

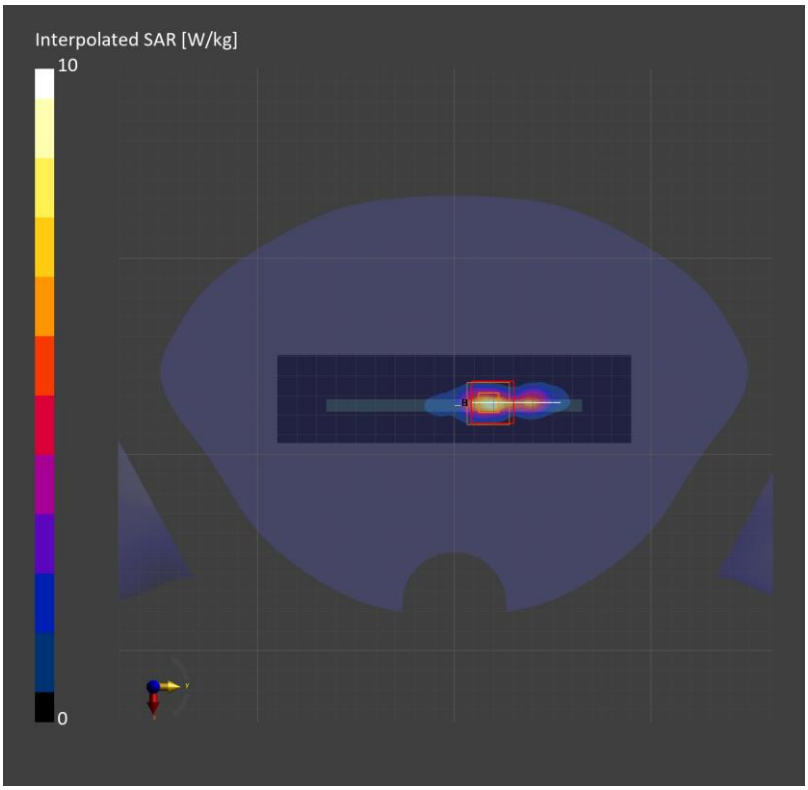
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-15	EX3DV4 - SN7646, 2023-03-23	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 28.0
Grid Steps [mm]	6.4 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]	5.58	5.93
psSAR10g [W/Kg]	1.72	1.64
Power Drift [dB]		-0.01
M2/M1 [%]		67.1
Dist 3dB Peak [mm]		4.5



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band n48(SRS1/SRS2/SRS3), CW, Channel 3570000 (3570.0 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 TOP, 10.00	Band n48	CW, 0--	3570.0, 3570000	7.37	2.89	37.9

Hardware Setup

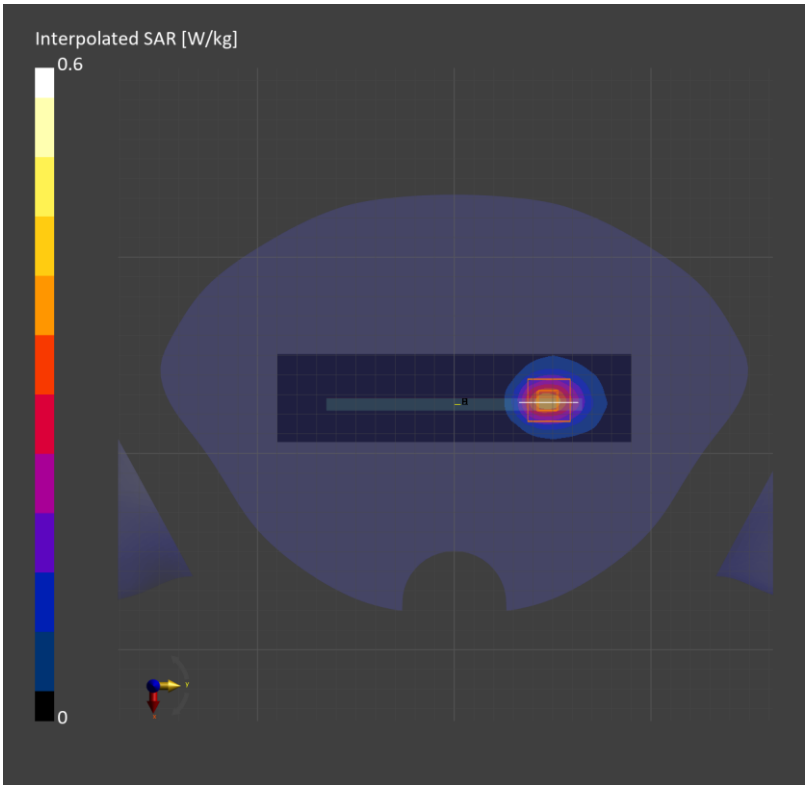
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-13	EX3DV4 - SN7646, 2023-03-23	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	28.0 x 28.0 x 28.0
Grid Steps [mm]	6.4 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]	0.290	0.296
psSAR10g [W/Kg]	0.122	0.123
Power Drift [dB]		0.01
M2/M1 [%]		76.2
Dist 3dB Peak [mm]		10.0



Measurement Report for SM-F946U_UMPC, EDGE TOP, Band n48(SRS1/SRS2/SRS3), CW, Channel 3570000 (3570.0 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 TOP, 0.00	Band n48	CW, 0--	3570.0, 3570000	7.37	2.89	37.9

Hardware Setup

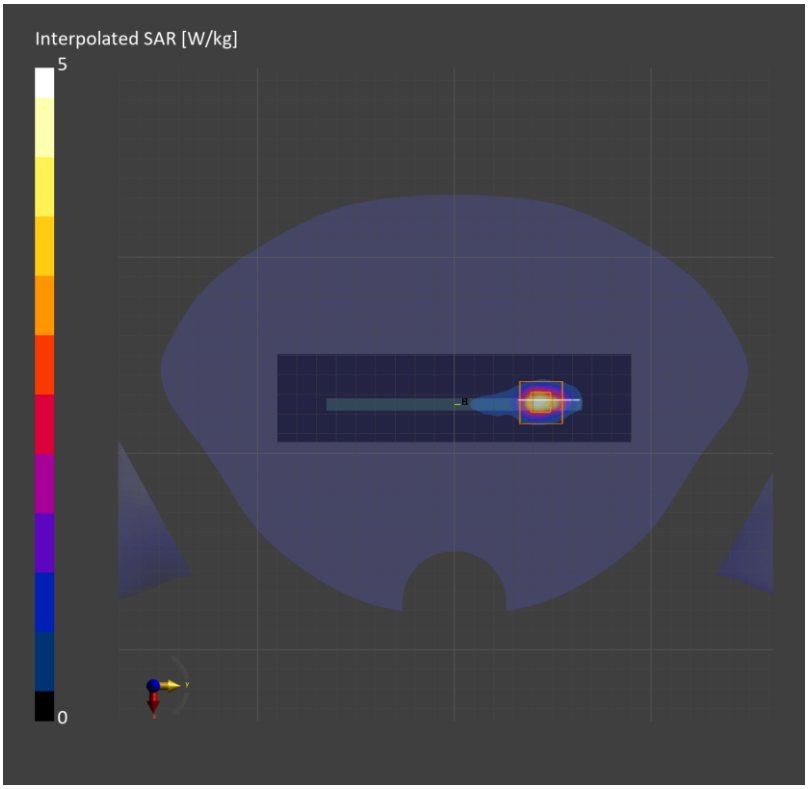
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-13	EX3DV4 - SN7646, 2023-03-23	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	28.0 x 28.0 x 28.0
Grid Steps [mm]	6.4 x 10.0	3.9 x 3.9 x 1.4
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	2.89	3.04
psSAR10g [W/Kg]	0.901	0.920
Power Drift [dB]		0.01
M2/M1 [%]		70.9
Dist 3dB Peak [mm]		4.7



NR Band n66

Frequency: 1745 MHz; Communication System Channel Number: 349000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.319 S/m; ε_r = 39.856; ρ = 1000 kg/m^3

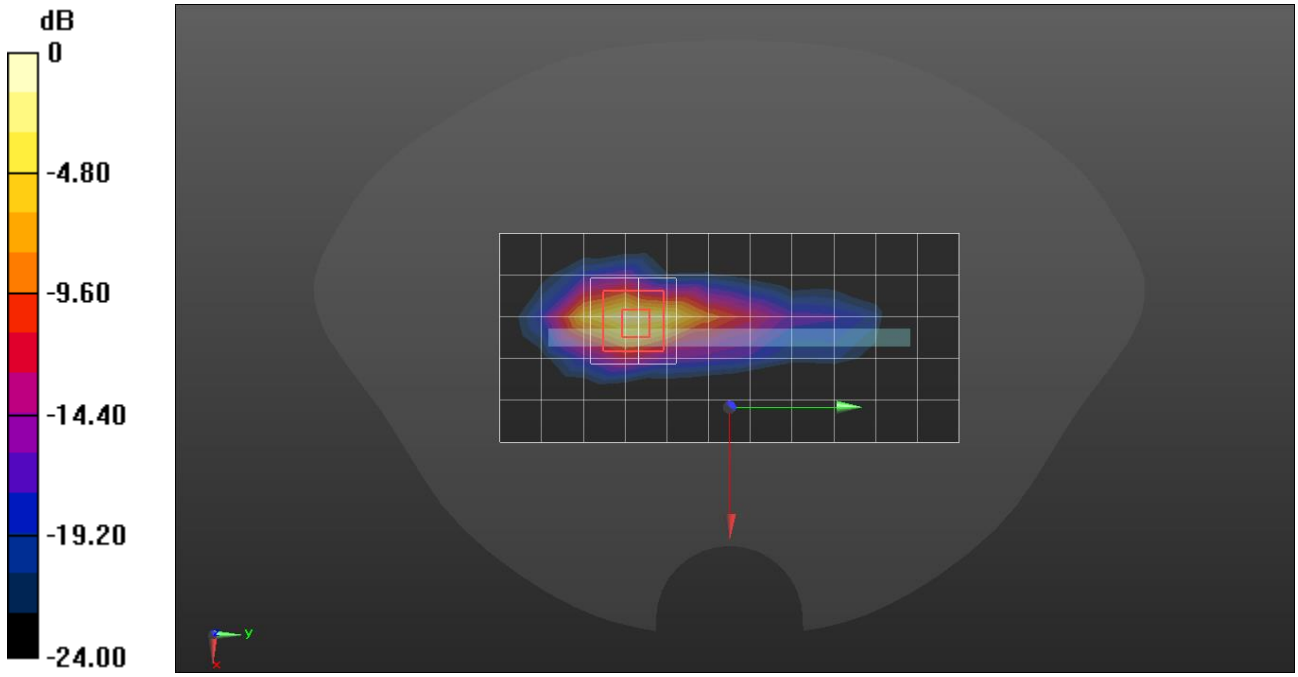
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1667; Calibrated: 4/27/2022
- Probe: EX3DV4 - SN3871; ConvF(8.58, 8.58, 8.58) @ 1745 MHz; Calibrated: 9/26/2022
- Sensor-Surface: 1.4mm (Mechanical Surface 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)

Bottom/QPSK RB 108/54 ch.349000/Area Scan (12x6x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 6.41 W/kg

Bottom/QPSK RB 108/54 ch.349000/Zoom Scan (10x10x8)/Cube 0:

Measurement grid: dx=3.4mm, dy=3.4mm, dz=1.4mm
Reference Value = 66.90 V/m; Power Drift = 0.00 dB
Peak SAR (extrapolated) = 10.9 W/kg
SAR(1 g) = 3.99 W/kg; SAR(10 g) = 1.61 W/kg
Maximum value of SAR (measured) = 7.65 W/kg



0 dB = 7.65 W/kg = 8.84 dBW/kg

NR Band n66

Frequency: 1745 MHz; Communication System Channel Number: 349000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.393 S/m; ε_r = 39.403; ρ = 1000 kg/m^3

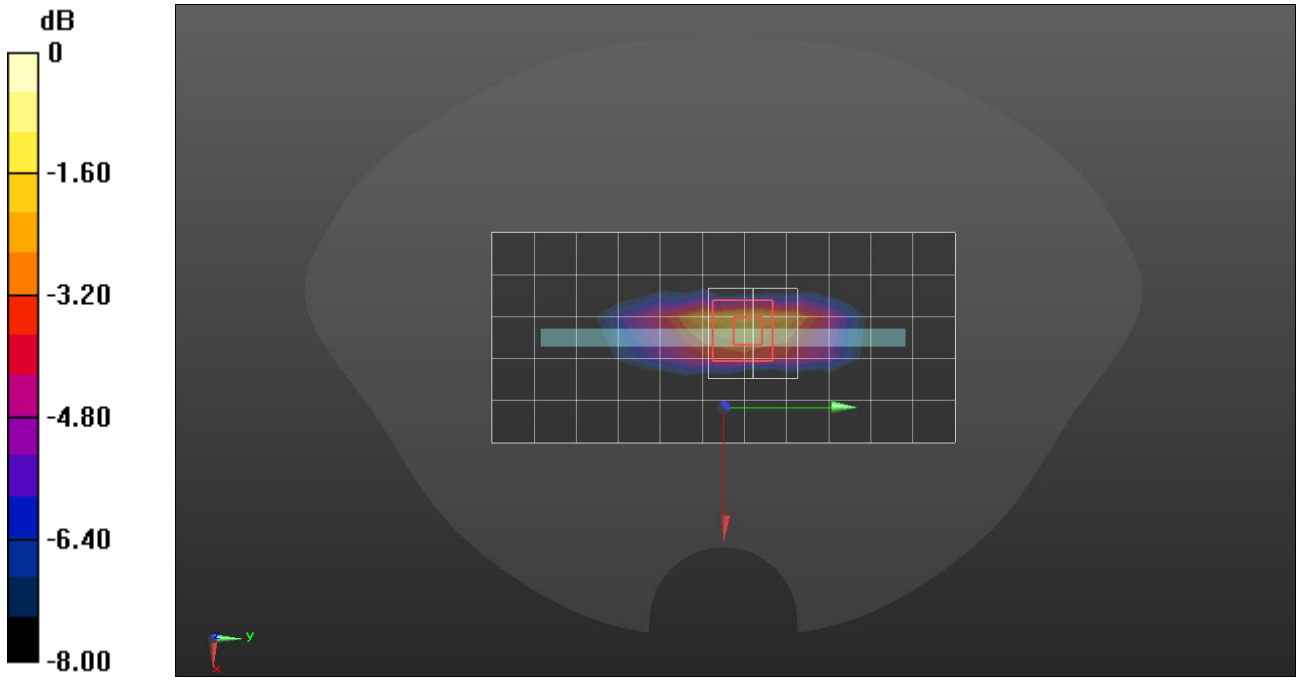
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1667; Calibrated: 2022-04-27
- Probe: EX3DV4 - SN7314; ConvF(8.39, 8.39, 8.39) @ 1745 MHz; Calibrated: 2022-05-31
- Sensor-Surface: 1.4mm (Mechanical 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 1/214 ch.349000/Area Scan (12x6x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.611 W/kg

Top/QPSK RB 1/214 ch.349000/Zoom Scan (5x5x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.25 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.970 W/kg
SAR(1 g) = 0.537 W/kg; SAR(10 g) = 0.286 W/kg
Maximum value of SAR (measured) = 0.810 W/kg



0 dB = 0.810 W/kg = -0.92 dBW/kg

NR Band n66

Frequency: 1745 MHz; Communication System Channel Number: 349000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 1745 MHz; σ = 1.393 S/m; ε_r = 39.403; ρ = 1000 kg/m^3

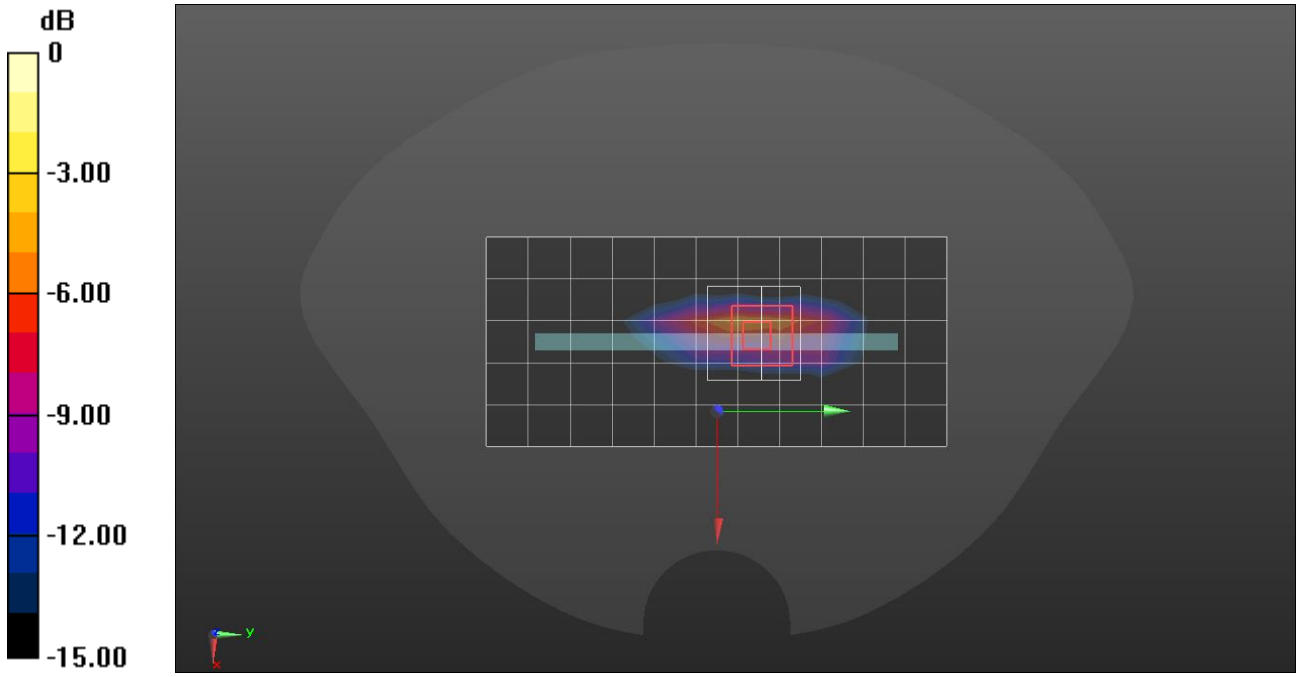
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1667; Calibrated: 2022-04-27
- Probe: EX3DV4 - SN7314; ConvF(8.39, 8.39, 8.39) @ 1745 MHz; Calibrated: 2022-05-31
- Sensor-Surface: 1.4mm (Mechanical 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 108/54 ch.349000/Area Scan (12x6x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 4.34 W/kg

Top/QPSK RB 108/54 ch.349000/Zoom Scan (13x13x8)/Cube 0:

Measurement grid: dx=2.8mm, dy=2.8mm, dz=1.4mm
Reference Value = 76.73 V/m; Power Drift = -0.07 dB
Peak SAR (extrapolated) = 21.6 W/kg
SAR(1 g) = 4.73 W/kg; SAR(10 g) = 1.73 W/kg
Maximum value of SAR (measured) = 11.4 W/kg



0 dB = 11.4 W/kg = 10.57 dBW/kg

NR Band n71

Frequency: 680.5 MHz; Communication System Channel Number: 136100; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.89 S/m; ε_r = 42.104; ρ = 1000 kg/m^3

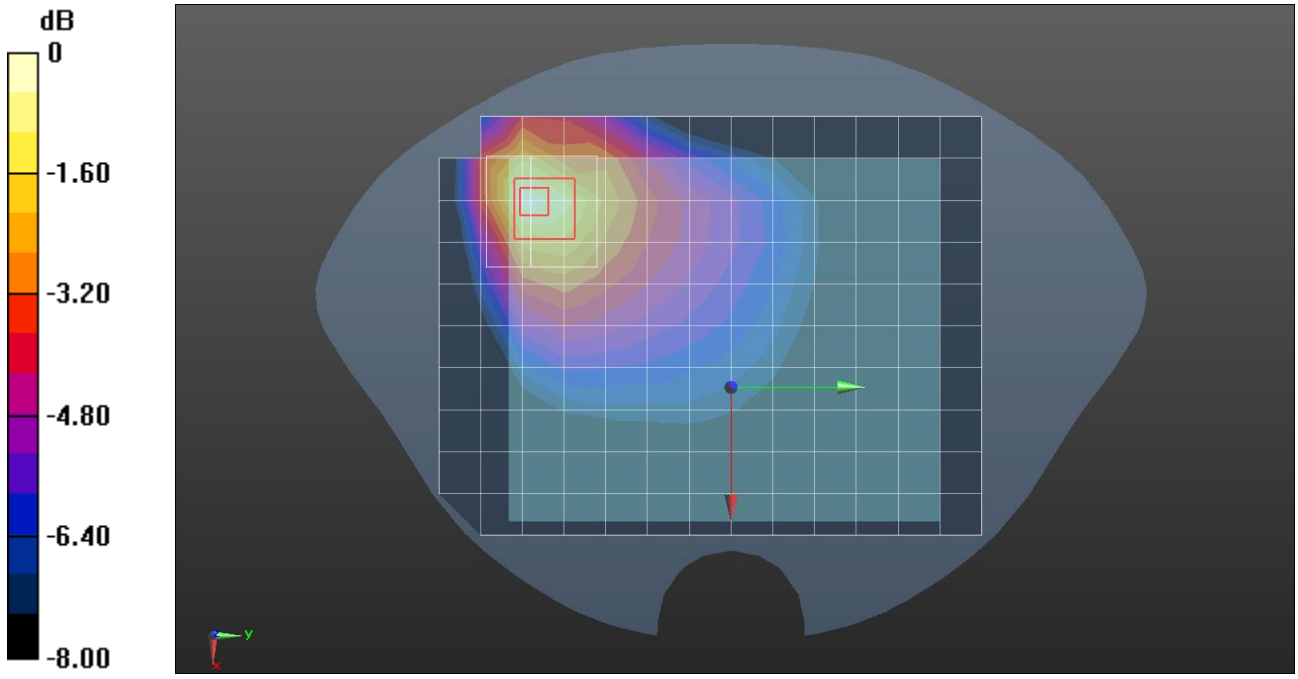
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE3 Sn479; Calibrated: 10/6/2022
- Probe: EX3DV4 - SN7545; ConvF(10.14, 10.14, 10.14) @ 680.5 MHz; Calibrated: 8/19/2022
- Sensor-Surface: 1.4mm (Mechanical 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)

Rear/QPSK RB 50/28 ch.136100/Area Scan (11x14x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.457 W/kg

Rear/QPSK RB 50/28 ch.136100/Zoom Scan (6x6x7)/Cube 0:

Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 21.41 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.554 W/kg
SAR(1 g) = 0.323 W/kg; SAR(10 g) = 0.203 W/kg
Maximum value of SAR (measured) = 0.468 W/kg



0 dB = 0.468 W/kg = -3.30 dBW/kg

NR Band n71

Frequency: 680.5 MHz; Communication System Channel Number: 136100; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 680.5 MHz; σ = 0.89 S/m; ε_r = 42.104; ρ = 1000 kg/m^3

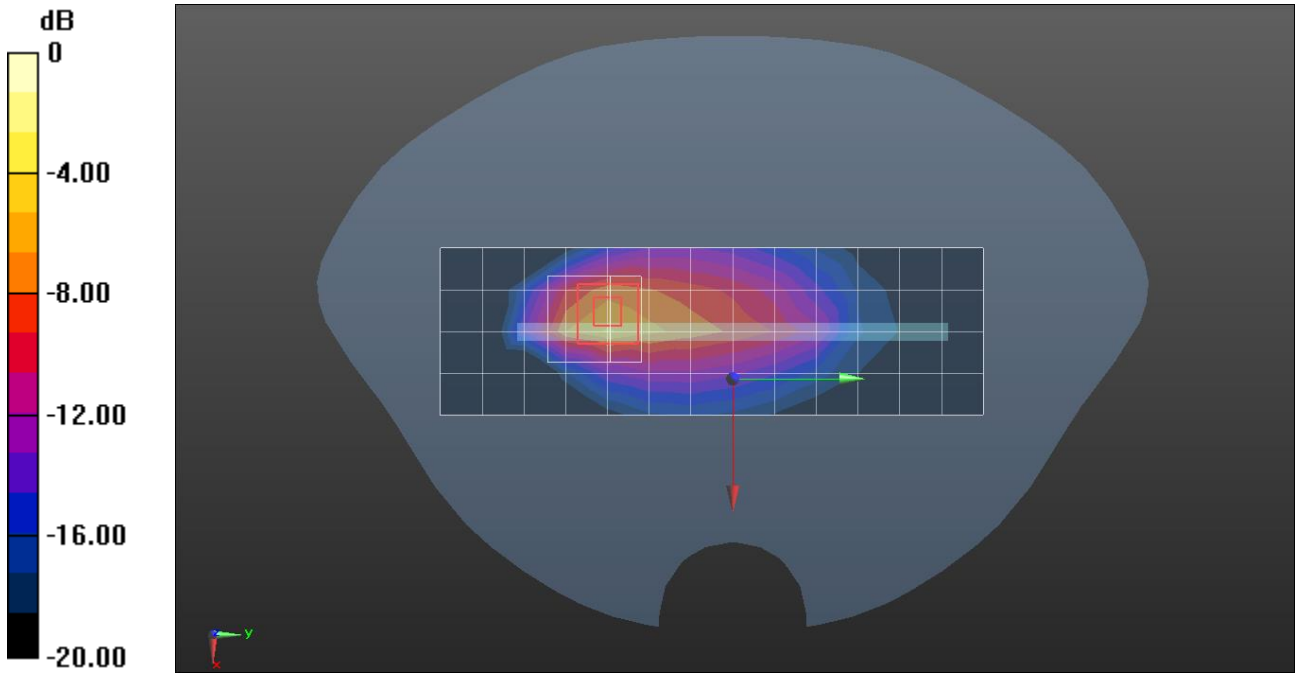
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE3 Sn479; Calibrated: 10/6/2022
- Probe: EX3DV4 - SN7545; ConvF(10.14, 10.14, 10.14) @ 680.5 MHz; Calibrated: 8/19/2022
- Sensor-Surface: 1.4mm (Mechanical 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/QPSK RB 1/1 ch.136100/Area Scan (14x5x1):

Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 2.79 W/kg

Left/QPSK RB 1/1 ch.136100/Zoom Scan (12x13x8)/Cube 0:

Measurement grid: dx=2.8mm, dy=2.8mm, dz=1.4mm
Reference Value = 68.86 V/m; Power Drift = 0.18 dB
Peak SAR (extrapolated) = 25.5 W/kg
SAR(1 g) = 3.56 W/kg; SAR(10 g) = 1.39 W/kg
Maximum value of SAR (measured) = 8.98 W/kg



0 dB = 8.98 W/kg = 9.53 dBW/kg

Measurement Report for SM-F946U_UMPC, EDGE TOP, 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], Channel Number	Conversion Factor	TSL Conductivity [S/m]	TSL Permittivity
Flat, HSL	EDGE TOP, 10.00	Band n77	5G NR FR1 TDD, 10866-AAF	3930.0, 662000	6.89	3.33	36.5

Hardware Setup

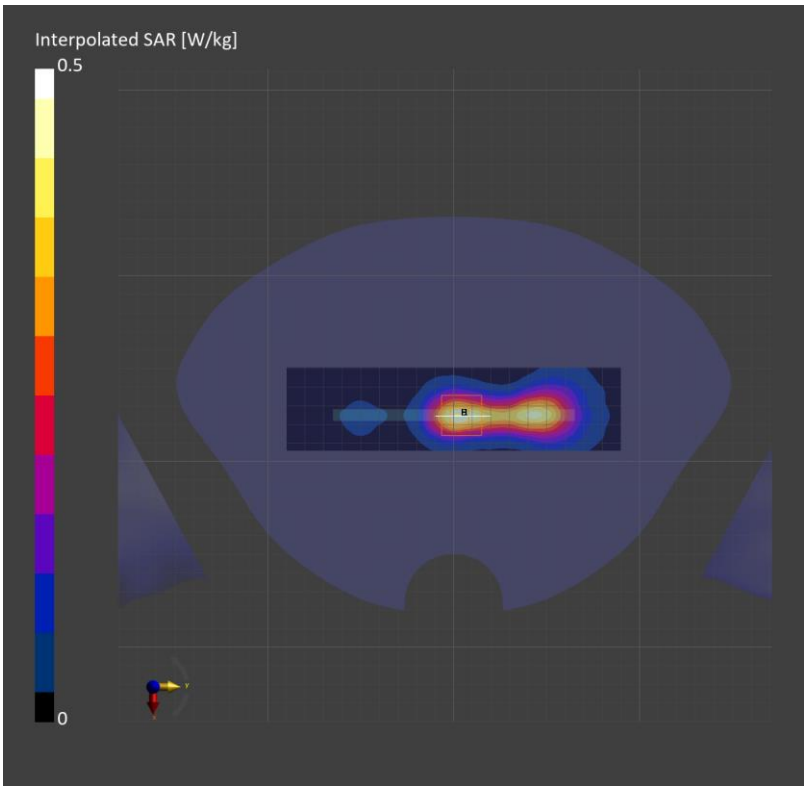
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-Apr-19	EX3DV4 - SN7646, 2023-03-23	DAE4 Sn1671, 2022-05-31

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	28.0 x 28.0 x 28.0
Grid Steps [mm]	6.4 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]	0.332	0.326
psSAR10g [W/Kg]	0.137	0.132
Power Drift [dB]		-0.07
M2/M1 [%]		76.0
Dist 3dB Peak [mm]		9.1



NR Band n77

Frequency: 3750 MHz; Communication System Channel Number: 650000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 3750 MHz; σ = 3.16 S/m; ε_r = 37.771; ρ = 1000 kg/m^3

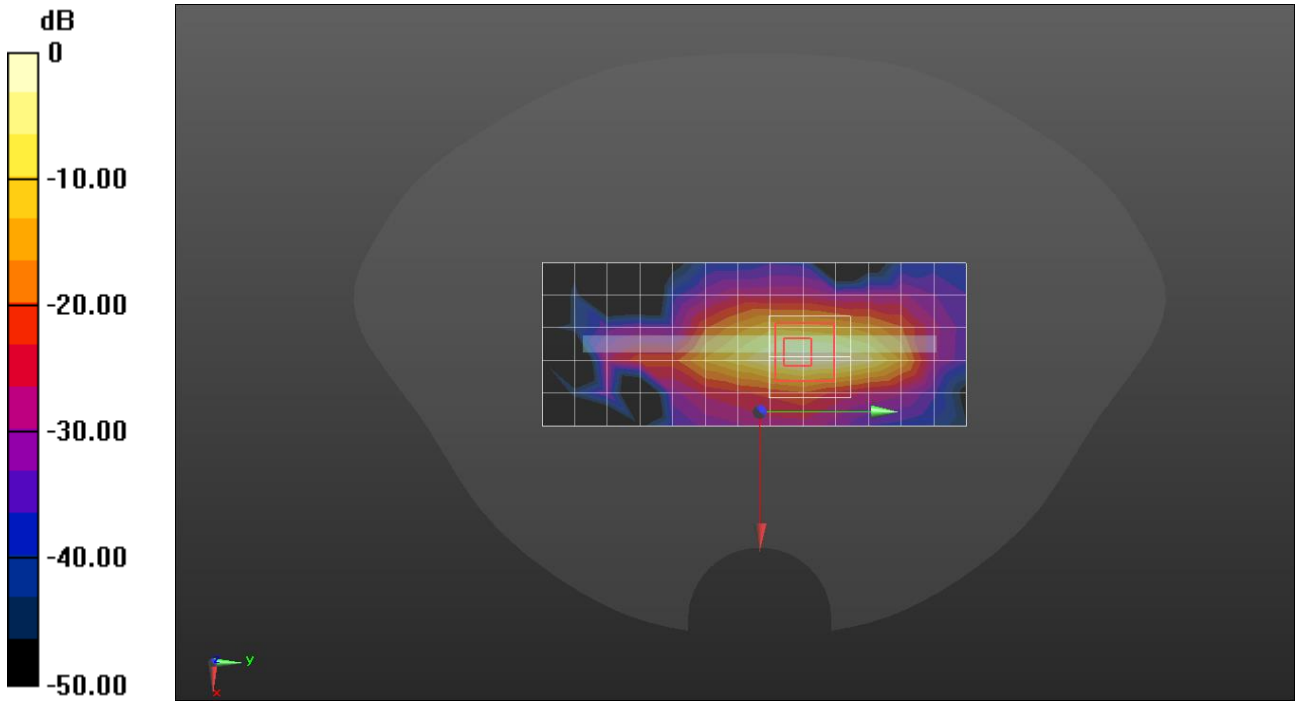
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1447; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7313; ConvF(6.26, 6.53, 6.84) @ 3750 MHz; Calibrated: 3/24/2023
- Sensor-Surface: 1.4mm (Mechanical Surface 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)

Top/QPSK RB 135/69 ch.650000/Area Scan (6x14x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 13.0 W/kg

Top/QPSK RB 135/69 ch.650000/Zoom Scan (7x7x8)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=1.4mm
Reference Value = 59.95 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 36.3 W/kg
SAR(1 g) = 6.73 W/kg; SAR(10 g) = 1.87 W/kg
Maximum value of SAR (measured) = 16.8 W/kg



0 dB = 16.8 W/kg = 12.25 dBW/kg

NR Band n77 (SRS1/SRS2/SRS3)

Frequency: 3500.01 MHz; Communication System Channel Number: 633334; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 3500.01 MHz; σ = 2.904 S/m; ε_r = 38.164; ρ = 1000 kg/m^3

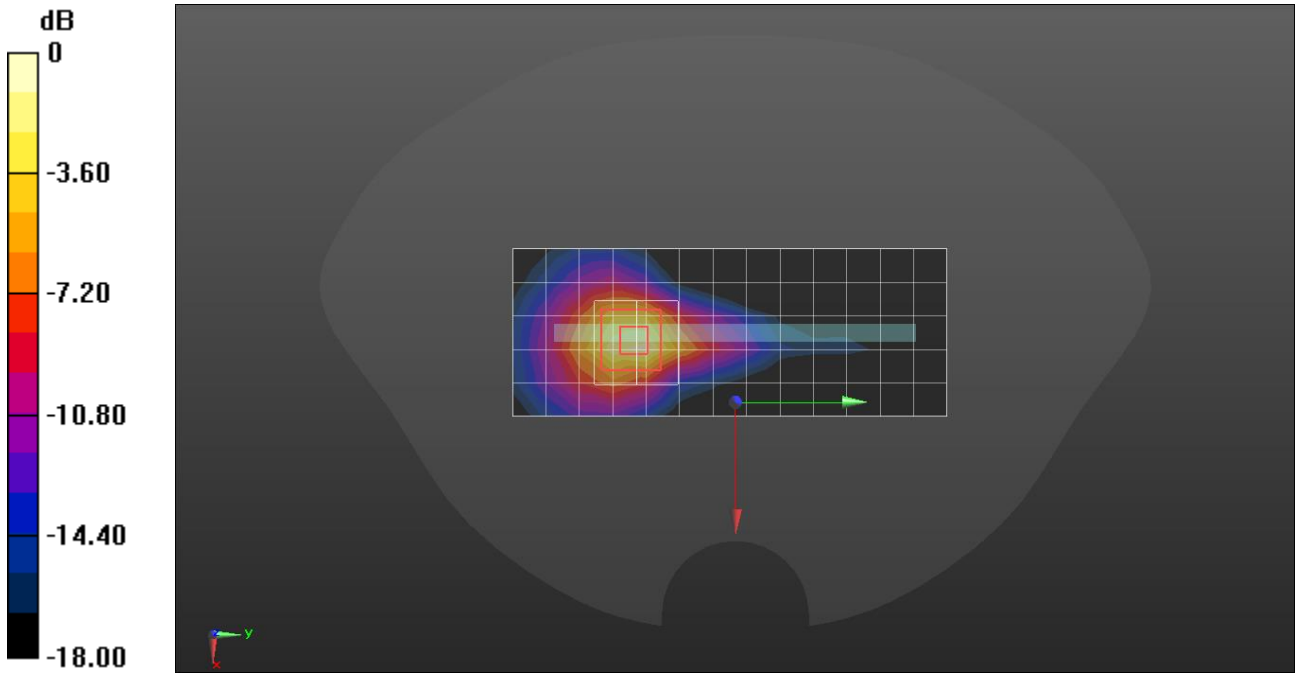
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1447; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7313; ConvF(6.42, 6.71, 7.02) @ 3500.01 MHz; Calibrated: 3/24/2023
- Sensor-Surface: 1.4mm (Mechanical 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/CW ch.633334/Area Scan (6x14x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 0.604 W/kg

Bottom/CW ch.633334/Zoom Scan (7x7x8)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=1.4mm
Reference Value = 14.71 V/m; Power Drift = -0.10 dB
Peak SAR (extrapolated) = 0.890 W/kg
SAR(1 g) = 0.413 W/kg; SAR(10 g) = 0.174 W/kg
Maximum value of SAR (measured) = 0.713 W/kg



0 dB = 0.713 W/kg = -1.47 dBW/kg

NR Band n77 (SRS1/SRS2/SRS3)

Frequency: 3750 MHz; Communication System Channel Number: 650000; Duty Cycle: 1:1
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 3750 MHz; σ = 3.104 S/m; ε_r = 37.184; ρ = 1000 kg/m^3

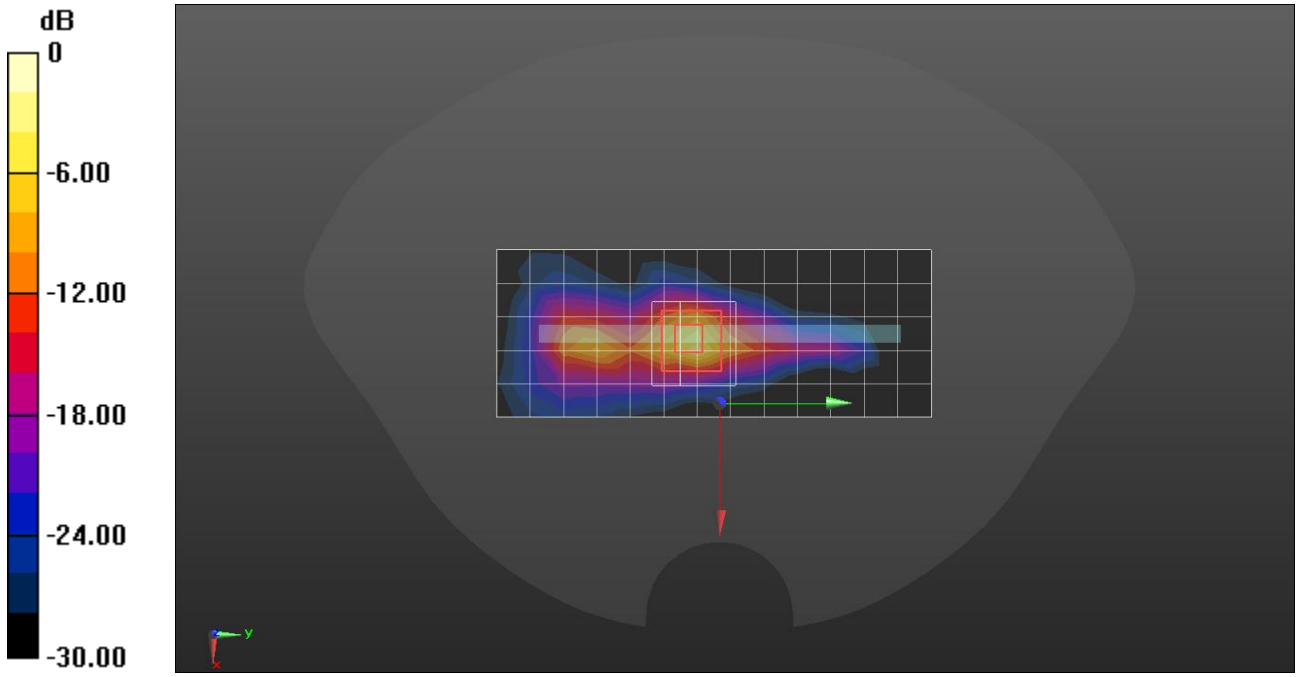
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1447; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7313; ConvF(6.26, 6.53, 6.84) @ 3750 MHz; Calibrated: 3/24/2023
- Sensor-Surface: 1.4mm (Mechanical Surface 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/CW ch.650000/Area Scan (6x14x1):

Measurement grid: dx=12mm, dy=12mm
Maximum value of SAR (measured) = 4.28 W/kg

Bottom/CW ch.650000/Zoom Scan (7x7x8)/Cube 0:

Measurement grid: dx=5mm, dy=5mm, dz=1.4mm
Reference Value = 42.27 V/m; Power Drift = 0.08 dB
Peak SAR (extrapolated) = 16.1 W/kg
SAR(1 g) = 3.03 W/kg; SAR(10 g) = 0.794 W/kg
Maximum value of SAR (measured) = 8.07 W/kg



0 dB = 8.07 W/kg = 9.07 dBW/kg

Measurement Report for SM-F946U_UMPC, EDGE TOP, WLAN 2.4GHz, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle), Channel 6 (2437.0 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 TOP, 10.00	WLAN 2.4GHz	WLAN, 10415-AAA	2437.0, 6	8.04	1.84	38.8

Hardware Setup

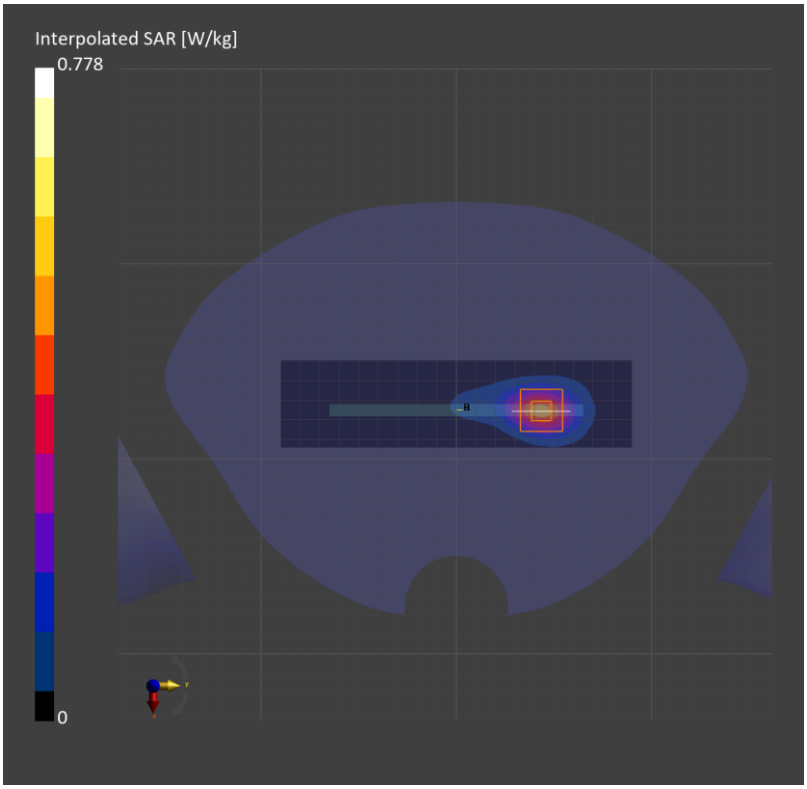
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-1000, 2023-Mar-30	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1670, 2022-06-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.380	0.381
psSAR10g [W/Kg]	0.177	0.175
Power Drift [dB]		0.13
M2/M1 [%]		80.1
Dist 3dB Peak [mm]		9.3



Measurement Report for SM-F946U_UMPC, EDGE TOP, WLAN 2.4GHz, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle), Channel 6 (2437.0 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 TOP, 0.00	WLAN 2.4GHz	WLAN, 10415-AAA	2437.0, 6	8.04	1.76	40.3

Hardware Setup

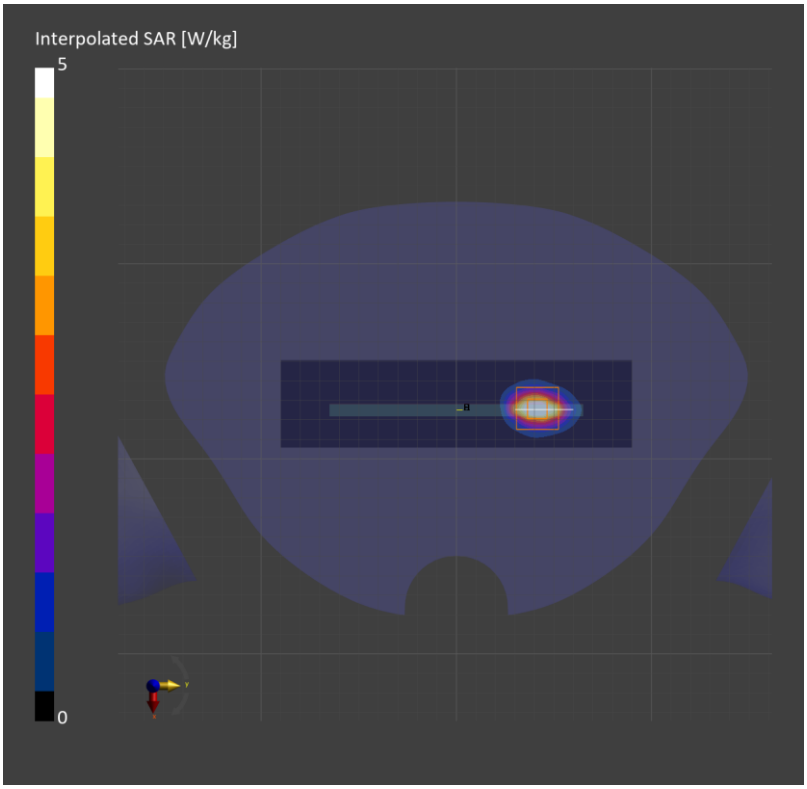
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Apr-03	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 10.0	4.3 x 4.3 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	4.08	4.14
psSAR10g [W/Kg]	1.54	1.45
Power Drift [dB]		-0.02
M2/M1 [%]		71.0
Dist 3dB Peak [mm]		5.2



Measurement Report for SM-F946U_UMPC, EDGE LEFT, WLAN 2.4GHz, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle), Channel 6 (2437.0 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, 10.00	WLAN 2.4GHz	WLAN, 10415-AAA	2437.0, 6	8.04	1.84	38.8

Hardware Setup

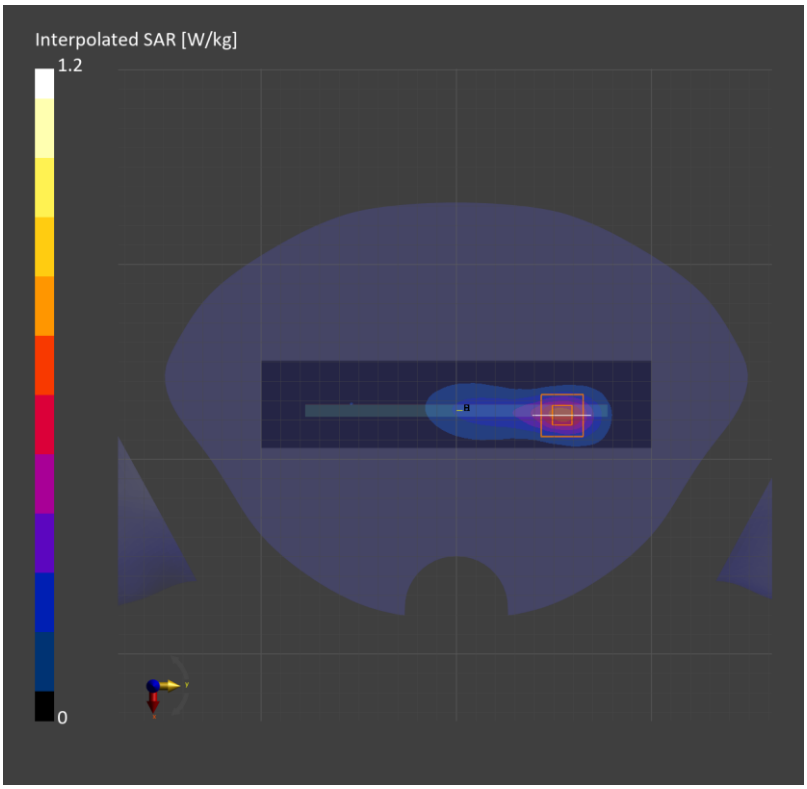
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Mar-30	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1670, 2022-06-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 200.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 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]	0.511	0.520
psSAR10g [W/Kg]	0.232	0.238
Power Drift [dB]		0.04
M2/M1 [%]		82.2
Dist 3dB Peak [mm]		8.6



Measurement Report for SM-F946U_UMPC, EDGE TOP, WLAN 2.4GHz, IEEE 802.11b WiFi 2.4 GHz (DSSS, 1 Mbps, 99pc duty cycle), Channel 6 (2437.0 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 TOP, 0.00	WLAN 2.4GHz	WLAN, 10415-AAA	2437.0, 6	8.04	1.84	38.8

Hardware Setup

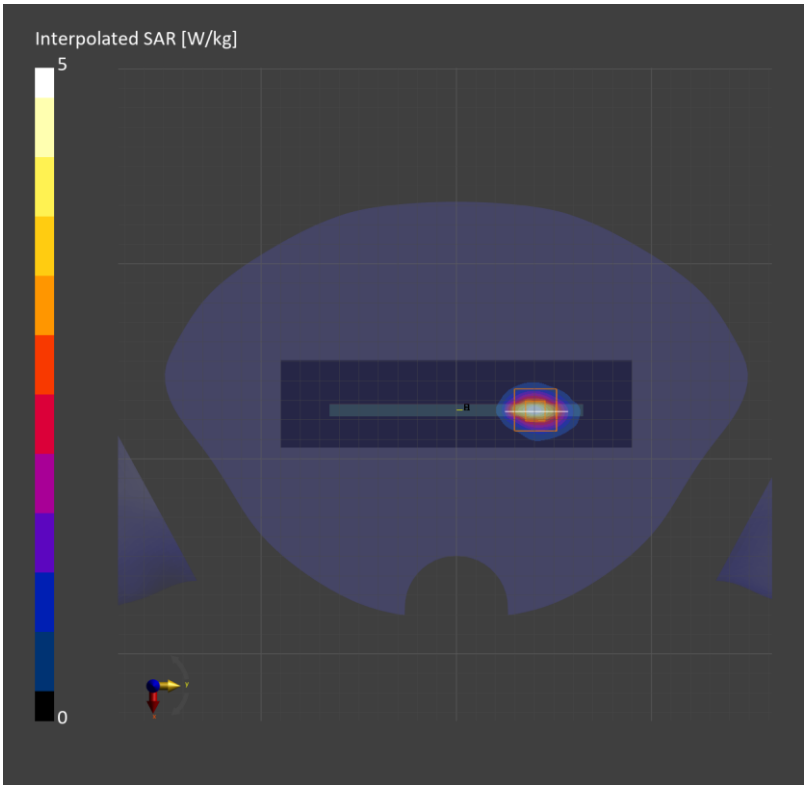
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2039	HBBL-600-10000, 2023-Mar-30	EX3DV4 - SN7330, 2023-01-24	DAE4 Sn1670, 2022-06-07

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 10.0	4.6 x 4.6 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	3.38	3.37
psSAR10g [W/Kg]	1.29	1.19
Power Drift [dB]		-0.10
M2/M1 [%]		69.0
Dist 3dB Peak [mm]		4.7



Measurement Report for SM-F946U_UMPC, REAR, WLAN 5GHz, IEEE 802.11ac WiFi (80MHz, MCS0, 90pc 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
Flat, HSL	REAR, 10.00	WLAN 5GHz	WLAN, 10626-AAC	5290.0, 58	5.15	4.64	37.6

Hardware Setup

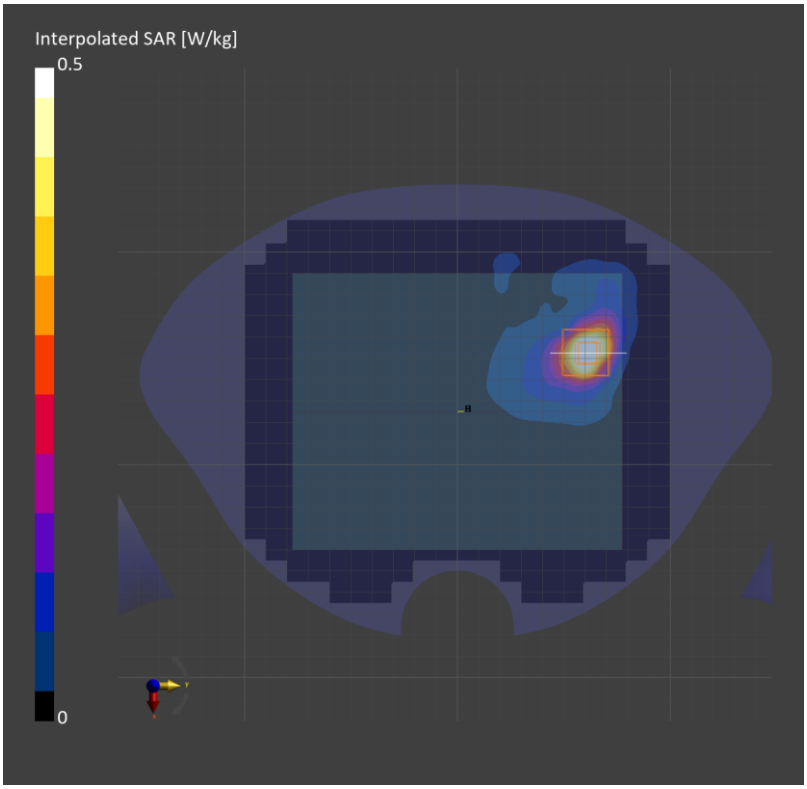
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000, 2023-Apr-25	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1494, 2022-07-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	0.445	0.479
psSAR10g [W/Kg]	0.151	0.155
Power Drift [dB]		-0.04
M2/M1 [%]		68.4
Dist 3dB Peak [mm]		7.2



Measurement Report for SM-F946U_UMPC, REAR, WLAN 5GHz, IEEE 802.11ac WiFi (80MHz, MCS0, 90pc 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
Flat, HSL	REAR, 0.00	WLAN 5GHz	WLAN, 10626-AAC	5290.0, 58	5.15	4.64	37.6

Hardware Setup

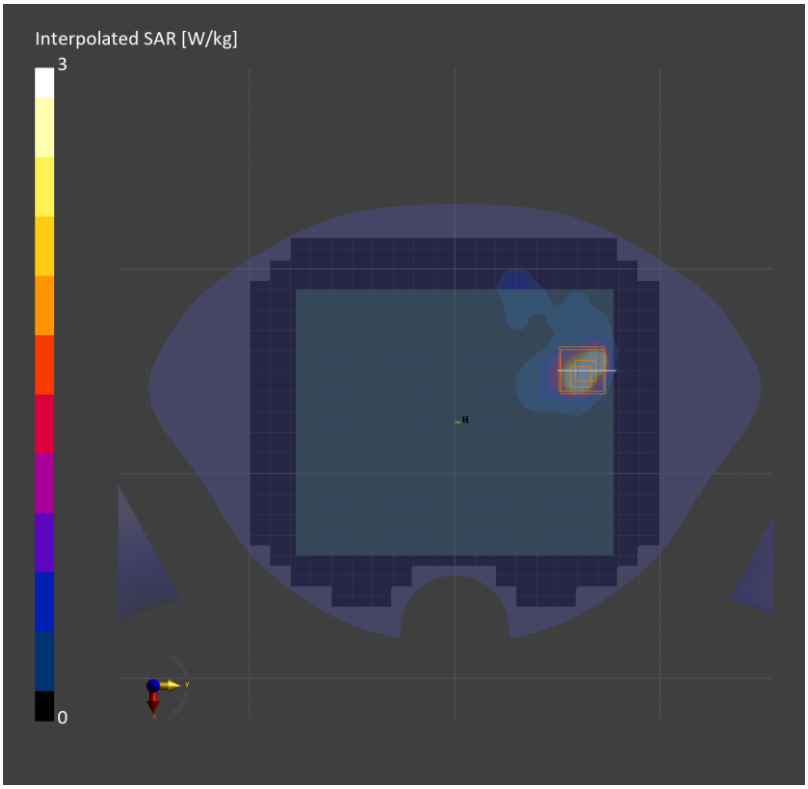
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000, 2023-Apr-25	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1494, 2022-07-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	3.12	4.53
psSAR10g [W/Kg]	0.986	1.13
Power Drift [dB]		-0.02
M2/M1 [%]		62.8
Dist 3dB Peak [mm]		4.0



Measurement Report for SM-F946U_UMPC, REAR, WLAN 5GHz, IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle), Channel 138 (5690.0 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	REAR, 10.00	WLAN 5GHz	WLAN, 10626-AAC	5690.0, 138	4.56	5.10	36.8

Hardware Setup

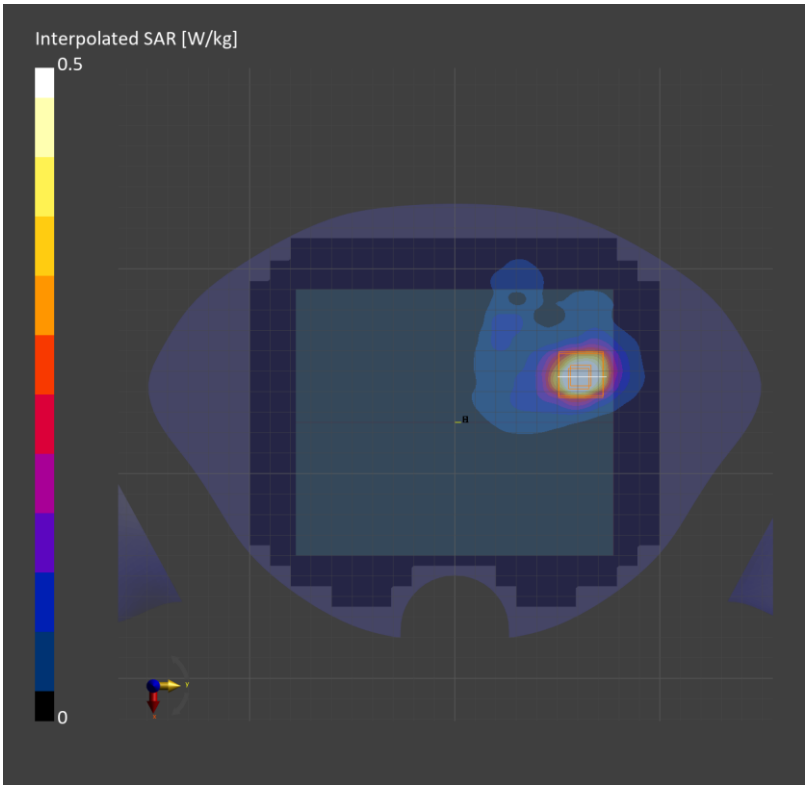
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000, 2023-Apr-25	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1494, 2022-07-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	0.536	0.581
psSAR10g [W/Kg]	0.179	0.188
Power Drift [dB]		-0.06
M2/M1 [%]		64.6
Dist 3dB Peak [mm]		8.1



Wi-Fi 5.5 GHz

Frequency: 5690 MHz; Communication System Channel Number: 138; Duty Cycle: 1:7.6366
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used (interpolated): f = 5690 MHz; σ = 5.074 S/m; ε_r = 34.301; ρ = 1000 kg/m^3

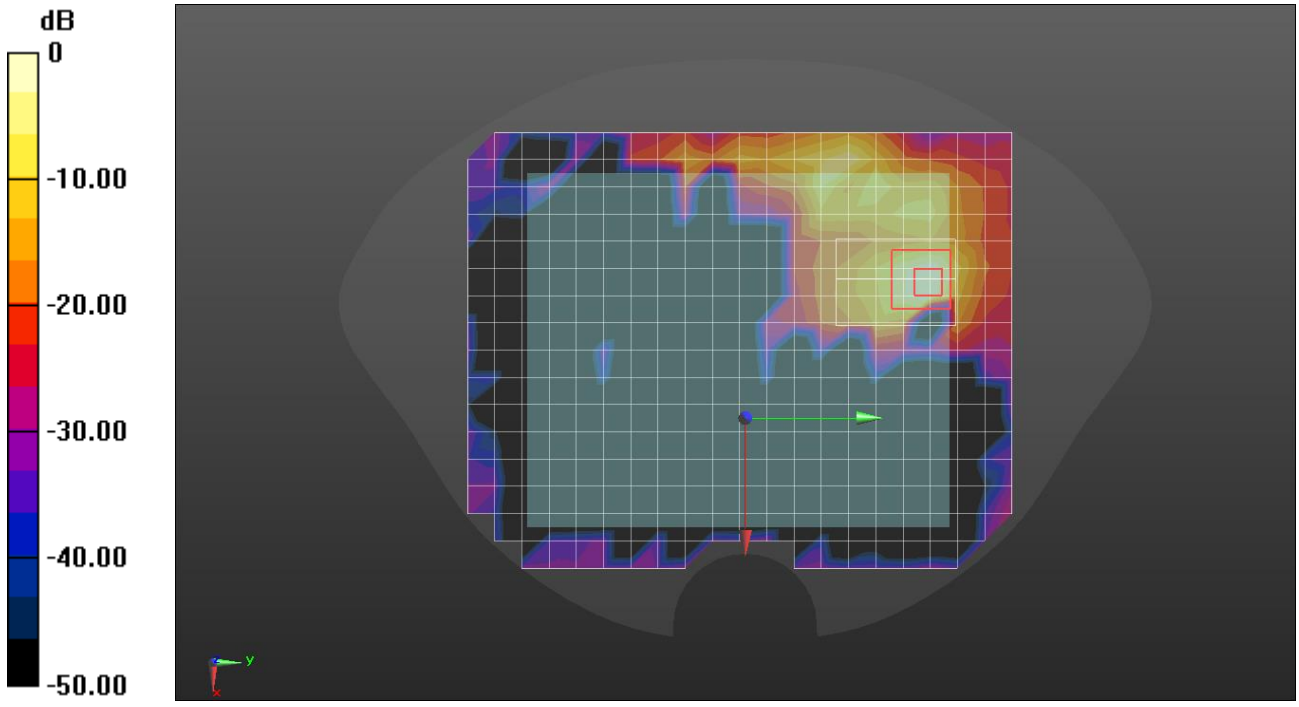
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1591; Calibrated: 3/22/2023
- Probe: EX3DV4 - SN7645; ConvF(4.33, 4.33, 4.33) @ 5690 MHz; Calibrated: 11/15/2022
- Sensor-Surface: 1.4mm (Mechanical Surface 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/802.11 ac mode ch.138 MIMO/Area Scan (21x17x1):

Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 8.70 W/kg

Rear/802.11 ac mode ch.138 MIMO/Zoom Scan (16x22x8)/Cube 0:

Measurement grid: dx=2.1mm, dy=2.1mm, dz=1.4mm
Reference Value = 40.04 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 26.4 W/kg
SAR(1 g) = 4.4 W/kg; SAR(10 g) = 0.987 W/kg
Maximum value of SAR (measured) = 14.2 W/kg



0 dB = 14.2 W/kg = 11.52 dBW/kg

Measurement Report for SM-F946U_UMPC, REAR, WLAN 5GHz, IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle), Channel 155 (5775.0 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	REAR, 10.00	WLAN 5GHz	WLAN, 10626-AAC	5775.0, 155	4.5	5.20	36.6

Hardware Setup

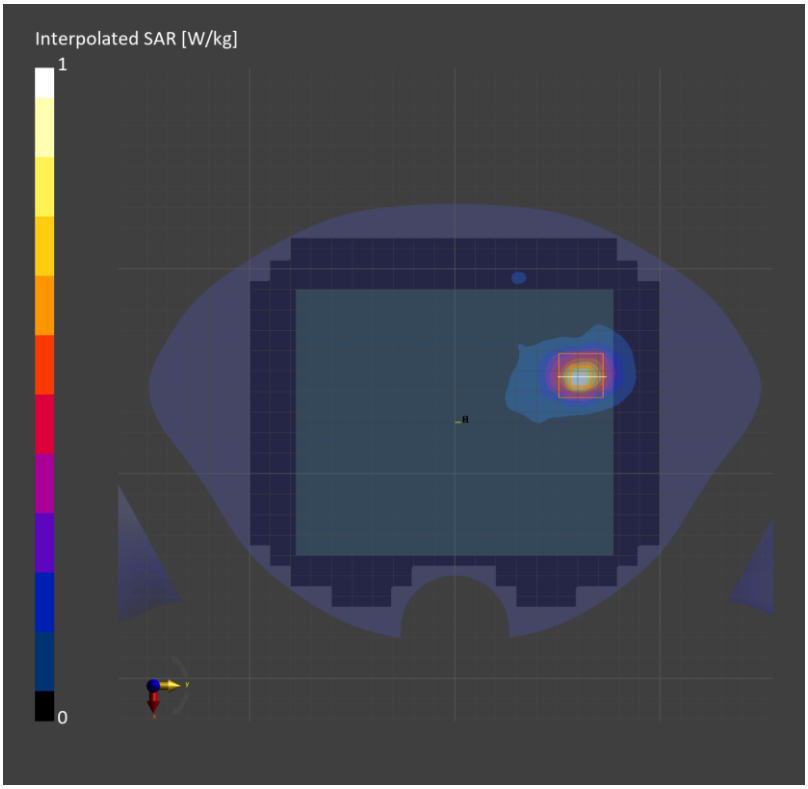
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000, 2023-Apr-25	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1494, 2022-07-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	0.689	0.742
psSAR10g [W/Kg]	0.227	0.232
Power Drift [dB]		0.05
M2/M1 [%]		64.2
Dist 3dB Peak [mm]		7.6



Measurement Report for SM-F946U_UMPC, REAR, WLAN 5GHz, IEEE 802.11ac WiFi (80MHz, MCS0, 90pc duty cycle), Channel 155 (5775.0 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	REAR, 0.00	WLAN 5GHz	WLAN, 10626-AAC	5775.0, 155	4.5	5.20	36.6

Hardware Setup

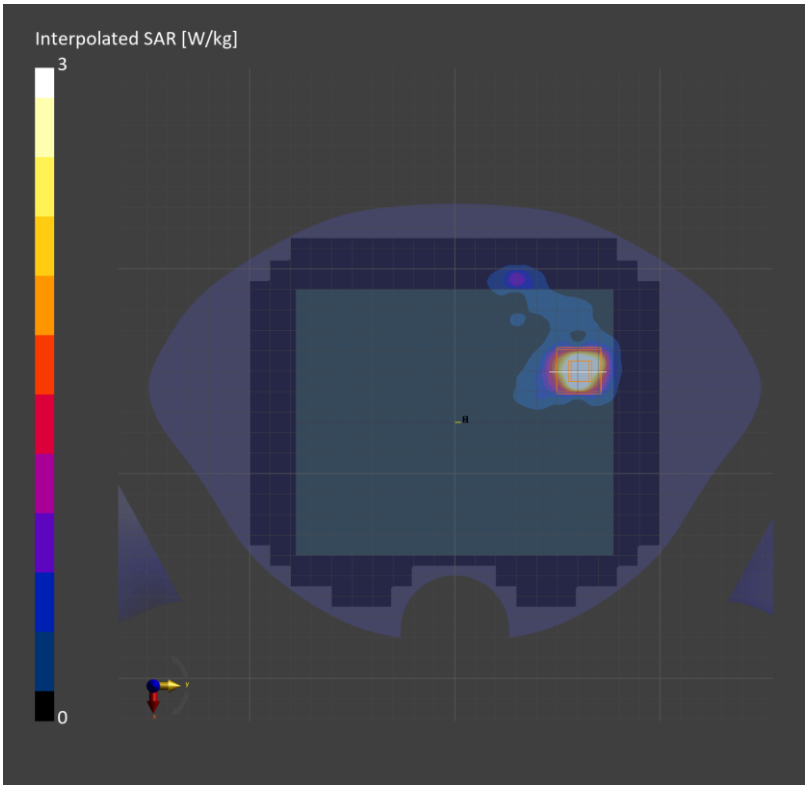
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000, 2023-Apr-25	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1494, 2022-07-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	3.51	5.15
psSAR10g [W/Kg]	1.05	1.24
Power Drift [dB]		0.05
M2/M1 [%]		60.7
Dist 3dB Peak [mm]		4.8



Measurement Report for SM-F946U_UMPC, REAR, WLAN 5GHz, IEEE 802.11ac WiFi (80MHz, MCS0, 90pc 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	REAR, 10.00	WLAN 5GHz	WLAN, 10626-AAC	5855.0, 5855000	4.5	5.29	36.5

Hardware Setup

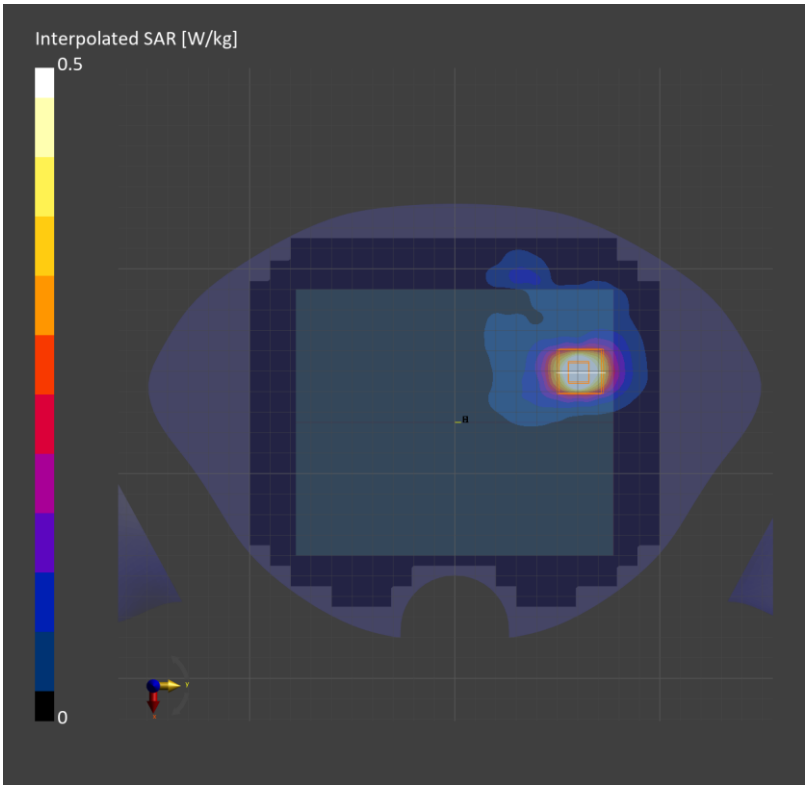
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000, 2023-Apr-25	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1494, 2022-07-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	0.512	0.575
psSAR10g [W/Kg]	0.175	0.181
Power Drift [dB]		-0.08
M2/M1 [%]		62.9
Dist 3dB Peak [mm]		7.6



Measurement Report for SM-F946U_UMPC, REAR, WLAN 5GHz, IEEE 802.11ac WiFi (80MHz, MCS0, 90pc 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	REAR, 0.00	WLAN 5GHz	WLAN, 10626-AAC	5855.0, 5855000	4.5	5.29	36.5

Hardware Setup

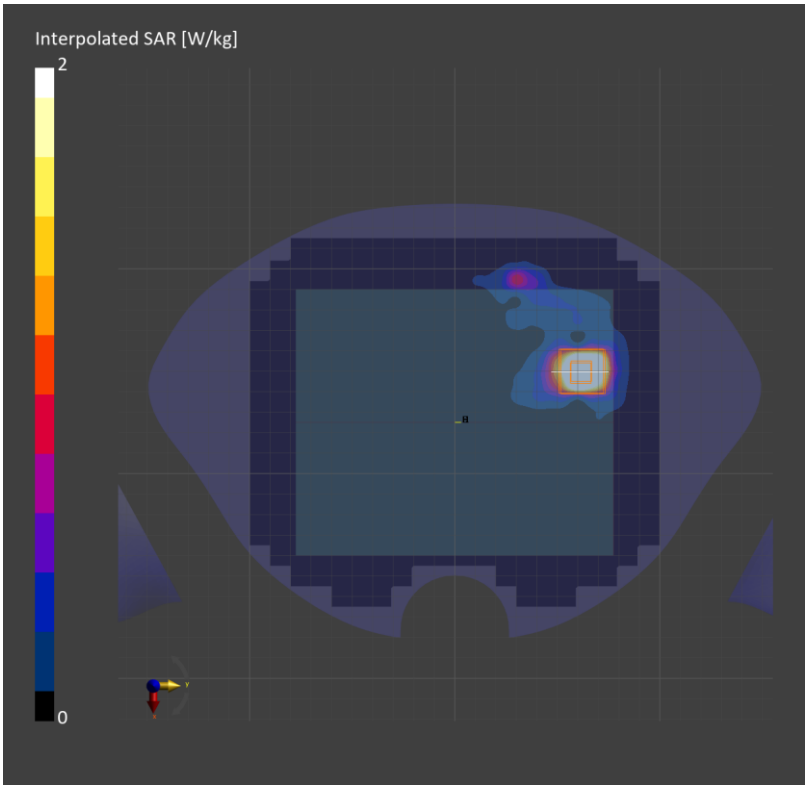
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 2043	HBBL-600-10000, 2023-Apr-25	EX3DV4 - SN7376, 2022-07-27	DAE4 Sn1494, 2022-07-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	2.91	4.24
psSAR10g [W/Kg]	0.895	1.03
Power Drift [dB]		-0.15
M2/M1 [%]		60.3
Dist 3dB Peak [mm]		4.8



Bluetooth

Frequency: 2440 MHz; Communication System Channel Number: 19; Duty Cycle: 1:1.17625
Room Ambient Temperature: 23.0°C; Liquid Temperature: 22.0°C
Medium parameters used: f = 2440 MHz; σ = 1.847 S/m; ε_r = 38.84; ρ = 1000 kg/m^3

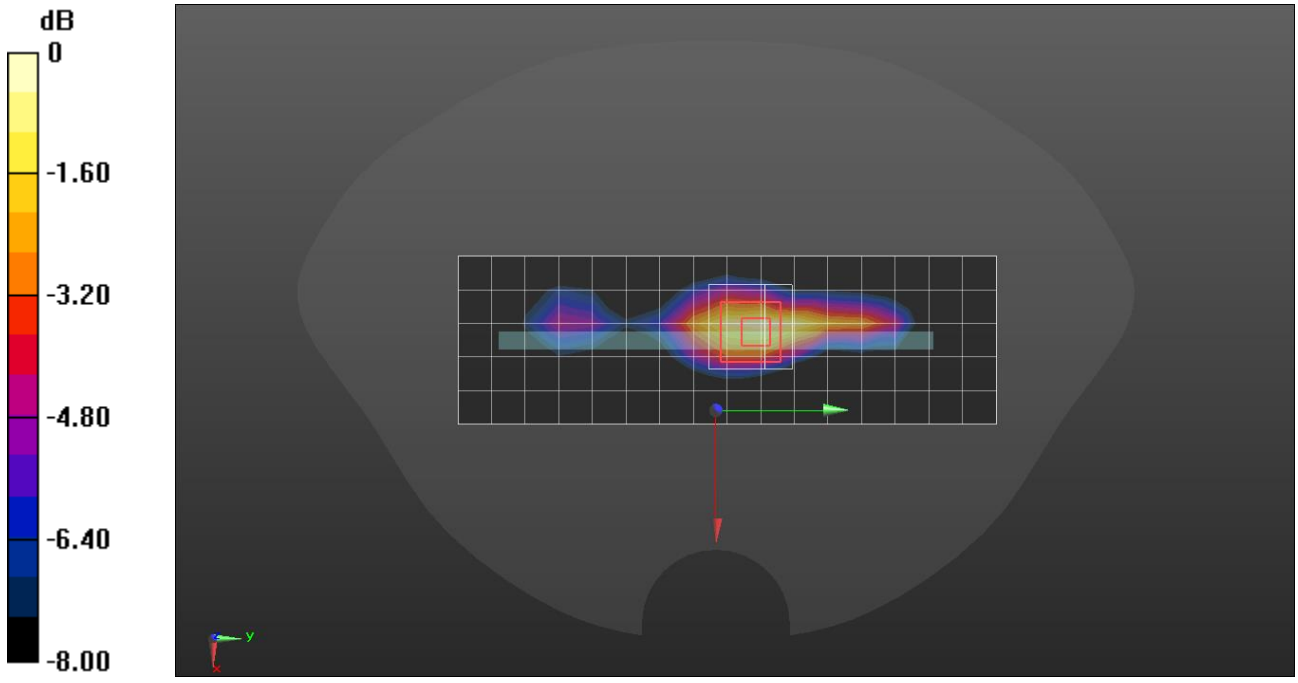
DASY5 Configuration:
- Area Scan Setting: Find Secondary Maximum Within: 2.0 dB and with a peak SAR value greater than 0.012W/kg
- Electronics: DAE4 Sn1668; Calibrated: 4/26/2023
- Probe: EX3DV4 - SN7652; ConvF(8.21, 7.98, 8.36) @ 2440 MHz; Calibrated: 4/24/2023
- Sensor-Surface: 1.4mm (Mechanical Surface 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)

Left/Bluetooth GFSK ch.19 Ant.1/Area Scan (17x6x1): Measurement grid: dx=12mm, dy=12mm

Maximum value of SAR (measured) = 0.203 W/kg

Left/Bluetooth GFSK ch.19 Ant.1/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm

Reference Value = 9.685 V/m; Power Drift = -0.16 dB
Peak SAR (extrapolated) = 0.267 W/kg
SAR(1 g) = 0.128 W/kg; SAR(10 g) = 0.063 W/kg
Smallest distance from peaks to all points 3 dB below = 9.1 mm
Ratio of SAR at M2 to SAR at M1 = 48.3%
Maximum value of SAR (measured) = 0.205 W/kg



0 dB = 0.205 W/kg = −6.88 dBW/kg

Measurement Report for SM-F946U_UMPC, EDGE TOP, ISM 2.4 GHz Band, Bluetooth Low Energy, Channel 19 (2440.0 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 TOP, 0.00	ISM 2.4 GHz Band	Bluetooth, 10670-AAA	2440.0, 19	6.93	1.85	38.2

Hardware Setup

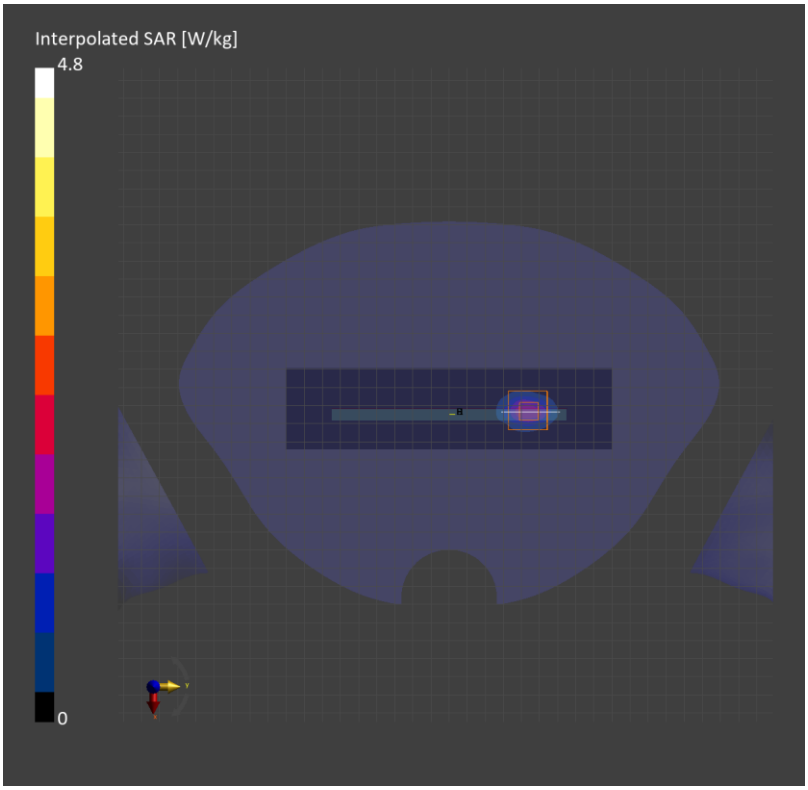
Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
Twin-SAM V8.0 (30deg probe tilt) - 1991	HBBL-600-10000, 2023-May-22	EX3DV4 - SN7645, 2022-11-15	DAE4 Sn1667, 2023-04-24

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	38.4 x 180.0	30.0 x 30.0 x 30.0
Grid Steps [mm]	6.4 x 10.0	4.6 x 4.6 x 1.5
Sensor Surface [mm]	3.0	1.4

Measurement Results

	Area Scan	Zoom Scan
psSAR1g [W/Kg]	1.44	1.50
psSAR10g [W/Kg]	0.558	0.516
Power Drift [dB]		-0.01
M2/M1 [%]		65.4
Dist 3dB Peak [mm]		5.0



Measurement Report for SM-F946U_UMPC, REAR, Custom Band, CW, Channel 13600 (13.6 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	REAR, 0.00	Custom Band	CW, 0--	13.6, 13600	16.64	0.773	57.0

Hardware Setup

Phantom	TSL, Measured Date	Probe, Calibration Date	DAE, Calibration Date
ELI V6.0 (20deg probe tilt) - 2005	HBBL4-250V3, 2023-Apr-25	EX3DV4 - SN7313, 2023-03-24	DAE4 Sn1343, 2022-08-18

Scans Setup

	Area Scan	Zoom Scan
Grid Extents [mm]	180.0 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]	0.034	0.040
psSAR10g [W/Kg]	0.021	0.014
Power Drift [dB]		0.03
M2/M1 [%]		58.3
Dist 3dB Peak [mm]		4.6