Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 7 2500-2570 MHz	A	20850	20 MHz	QPSK	50	25	Tested
		21100					Tested
		21350					Tested
		20850			100	0	Reduced[1]
		21100					Tested
		21350					Reduced[1]
		20850			1	49	Tested
		21100					Tested
		21350					Tested
		20850				99	Reduced[1]
		21100					Reduced[1]
		21350					Reduced[1]
		20850		16QAM	50	25	Reduced[3]
		21100					Reduced[3]
		21350					Reduced[3]
		20850			100	0	Reduced[1]
		21100					Reduced[1]
		21350					Reduced[1]
		20850			1	49	Reduced[4]
		21100					Reduced[4]
		21350					Reduced[4]
		20850				99	Reduced[4]
		21100					Reduced[4]
		21350					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz)					Reduced[5]
	C	20850	20 MHz	QPSK	50	25	Reduced[6]
		21100					Tested
		21350					Reduced[6]
		20850			100	0	Reduced[1]
		21100					Reduced[1]
		21350					Reduced[1]
		20850			1	49	Reduced[2]
		21100					Reduced[2]
		21350					Reduced[2]
		20850				99	Reduced[6]
		21100					Tested
		21350					Reduced[6]
		20850		16QAM	50	25	Reduced[3]
		21100					Reduced[3]
		21350					Reduced[3]
		20850			100	0	Reduced[1]
		21100					Reduced[1]
		21350					Reduced[1]
		20850			1	49	Reduced[4]
		21100					Reduced[4]
		21350					Reduced[4]
		20850				99	Reduced[4]
		21100					Reduced[4]
		21350					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 7 2500-2570 MHz	D	20850	20 MHz	QPSK	50	25	Reduced[6]
		21100					Tested
		21350					Reduced[6]
		20850			100	0	Reduced[1]
		21100					Reduced[1]
		21350					Reduced[1]
		20850			1	49	Reduced[2]
		21100					Reduced[2]
		21350					Reduced[2]
		20850				99	Tested
		21100					Tested
		21350					Tested
		20850		16QAM	50	25	Reduced[3]
		21100					Reduced[3]
		21350					Reduced[3]
		20850			100	0	Reduced[1]
		21100					Reduced[1]
		21350					Reduced[1]
		20850			1	49	Reduced[4]
		21100					Reduced[4]
		21350					Reduced[4]
		20850				99	Reduced[4]
		21100					Reduced[4]
		21350					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Sides B & F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 199.5 mW
Closest Distance to Side B: 75 mm
Closest Distance to Side F: 71 mm

Side F is the closest; therefore, if Side F is excluded side B would also be excluded.

[{[(3.0)/(√2.70)]*50 mm}]+[{71-50 mm}*10]=301 mW which is greater than 223.9 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 30 2305-2315 MHz	A	27710	10 MHz	QPSK	25	12	Tested
		27710			50	0	Reduced[1]
		27710			1	24	Tested
		27710				49	Reduced[2]
		27710		16QAM	25	12	Reduced[3]
		27710			50	0	Reduced[1]
		27710			1	24	Reduced[4]
		27710				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]
	C	27710	10 MHz	QPSK	25	12	Tested
		27710			50	0	Reduced[1]
		27710			1	24	Tested
		27710				49	Reduced[2]
		27710		16QAM	25	12	Reduced[3]
		27710			50	0	Reduced[1]
		27710			1	24	Reduced[4]
		27710				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 30 2305-2315 MHz	D	27710	10 MHz	QPSK	25	12	Tested
		27710			50	0	Reduced[1]
		27710			1	24	Tested
		27710				49	Reduced[2]
		27710		16QAM	25	12	Reduced[3]
		27710			50	0	Reduced[1]
		27710			1	24	Reduced[4]
		27710				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Side F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 251.2 mW
Closest Distance to Side F: 97 mm

[{[(3.0)/(√2.315)]*50 mm}]+[{97-50 mm}*10]=578 mW which is greater than 251.2 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 38 2570-2620 MHz	A	37850	20 MHz	QPSK	50	25	Tested
		38000					Tested
		38150					Tested
		37850			100	0	Reduced[1]
		38000					Tested
		38150					Reduced[1]
		37850			1	49	Tested
		38000					Tested
		38150					Tested
		37850				99	Reduced[1]
		38000					Reduced[1]
		38150					Reduced[1]
		37850		16QAM	50	25	Reduced[3]
		38000					Reduced[3]
		38150					Reduced[3]
		37850			100	0	Reduced[1]
		38000					Reduced[1]
		38150					Reduced[1]
		37850			1	49	Reduced[4]
		38000					Reduced[4]
		38150					Reduced[4]
		37850				99	Reduced[4]
		38000					Reduced[4]
		38150					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz)					Reduced[5]
	C	37850	20 MHz	QPSK	50	25	Reduced[6]
		38000					Tested
		38150					Reduced[6]
		37850			100	0	Reduced[1]
		38000					Reduced[1]
		38150					Reduced[1]
		37850			1	49	Reduced[2]
		38000					Reduced[2]
		38150					Reduced[2]
		37850				99	Reduced[6]
		38000					Tested
		38150					Reduced[6]
		37850		16QAM	50	25	Reduced[3]
		38000					Reduced[3]
		38150					Reduced[3]
		37850			100	0	Reduced[1]
		38000					Reduced[1]
		38150					Reduced[1]
		37850			1	49	Reduced[4]
		38000					Reduced[4]
		38150					Reduced[4]
		37850				99	Reduced[4]
		38000					Reduced[4]
		38150					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 38 2570-2620 MHz	D	37850	20 MHz	QPSK	50	25	Reduced[6]
		38000					Tested
		38150					Reduced[6]
		37850			100	0	Reduced[1]
		38000					Reduced[1]
		38150					Reduced[1]
		37850			1	49	Reduced[2]
		38000					Reduced[2]
		38150					Reduced[2]
		37850				99	Reduced[6]
		38000					Tested
		38150					Reduced[6]
		37850		16QAM	50	25	Reduced[3]
		38000					Reduced[3]
		38150					Reduced[3]
		37850			100	0	Reduced[1]
		38000					Reduced[1]
		38150					Reduced[1]
		37850			1	49	Reduced[4]
		38000					Reduced[4]
		38150					Reduced[4]
		37850				99	Reduced[4]
		38000					Reduced[4]
		38150					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Sides B & F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 199.5 mW
Closest Distance to Side B: 75 mm
Closest Distance to Side F: 71 mm

Side F is the closest; therefore, if Side F is excluded side B would also be excluded.

[{[(3.0)/(√2.70)]*50 mm}]+[{71-50 mm}*10]=301 mW which is greater than 223.9 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 40 2300-2400 MHz	A	38750	20 MHz	QPSK	50	25	Reduced[6]
		39150					Tested
		39550					Reduced[6]
		38750			100	0	Reduced[1]
		39150					Reduced[1]
		39550					Tested
		38750			1	49	Tested
		39150					Tested
		39550					Tested
		38750				99	Reduced[1]
		39150					Reduced[1]
		39550					Reduced[1]
		38750		16QAM	50	25	Reduced[3]
		39150					Reduced[3]
		39550					Reduced[3]
		38750			100	0	Reduced[1]
		39150					Reduced[1]
		39550					Reduced[1]
		38750			1	49	Reduced[4]
		39150					Reduced[4]
		39550					Reduced[4]
		38750				99	Reduced[4]
		39150					Reduced[4]
		39550					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz)					Reduced[5]
	C	20850	20 MHz	QPSK	50	25	Reduced[6]
		38750					Tested
		39150					Reduced[6]
		39550			100	0	Reduced[1]
		38750					Reduced[1]
		39150					Reduced[1]
		39550			1	49	Reduced[6]
		38750					Tested
		39150					Reduced[6]
		39550				99	Reduced[2]
		38750					Reduced[2]
		39150					Reduced[2]
		39550		16QAM	50	25	Reduced[3]
		38750					Reduced[3]
		39150					Reduced[3]
		39550			100	0	Reduced[1]
		38750					Reduced[1]
		39150					Reduced[1]
		39550			1	49	Reduced[4]
		38750					Reduced[4]
		39150					Reduced[4]
		39550				99	Reduced[4]
		38750					Reduced[4]
		39150					Reduced[4]
		39550					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 40 2300-2400 MHz	D	38750	20 MHz	QPSK	50	25	Reduced[6]
		39150					Tested
		39550					Reduced[6]
		38750			100	0	Reduced[1]
		39150					Reduced[1]
		39550					Reduced[1]
		38750			1	49	Reduced[6]
		39150					Tested
		39550					Reduced[6]
		38750				99	Reduced[2]
		39150					Reduced[2]
		39550					Reduced[2]
		38750		16QAM	50	25	Reduced[3]
		39150					Reduced[3]
		39550					Reduced[3]
		38750			100	0	Reduced[1]
		39150					Reduced[1]
		39550					Reduced[1]
		38750			1	49	Reduced[4]
		39150					Reduced[4]
		39550					Reduced[4]
		38750				99	Reduced[4]
		39150					Reduced[4]
		39550					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Sides B & F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 199.5 mW
Closest Distance to Side B: 75 mm
Closest Distance to Side F: 71 mm

Side F is the closest; therefore, if Side F is excluded side B would also be excluded.

[{[(3.0)/(√2.40)]*50 mm}]+[{71-50 mm}*10]=306 mW which is greater than 223.9 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 12 699-716 MHz	A	23060	10 MHz	QPSK	25	12	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	24	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060				49	Reduced[2]
		23095					Reduced[2]
		23129					Reduced[2]
		23060		16QAM	25	12	Reduced[3]
		23095					Reduced[3]
		23129					Reduced[3]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	24	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		23060				49	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]
	B	23060	10 MHz	QPSK	25	12	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	24	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060				49	Reduced[2]
		23095					Reduced[2]
		23129					Reduced[2]
		23060		16QAM	25	12	Reduced[3]
		23095					Reduced[3]
		23129					Reduced[3]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	24	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		23060				49	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 12 699-716 MHz	C	23060	10 MHz	QPSK	25	12	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	24	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060				49	Reduced[2]
		23095					Reduced[2]
		23129					Reduced[2]
		23060		16QAM	25	12	Reduced[3]
		23095					Reduced[3]
		23129					Reduced[3]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	24	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		23060				49	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]
	D	23060	10 MHz	QPSK	25	12	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	12	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060				24	Reduced[2]
		23095					Reduced[2]
		23129					Reduced[2]
		23060		16QAM	25	12	Reduced[3]
		23095					Reduced[3]
		23129					Reduced[3]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	24	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		23060				49	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 12 699-716 MHz	E	23060	10 MHz	QPSK	25	12	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	12	Reduced[6]
		23095					Tested
		23129					Reduced[6]
		23060				24	Reduced[2]
		23095					Reduced[2]
		23129					Reduced[2]
		23060		16QAM	25	12	Reduced[3]
		23095					Reduced[3]
		23129					Reduced[3]
		23060			50	0	Reduced[1]
		23095					Reduced[1]
		23129					Reduced[1]
		23060			1	24	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		23060				49	Reduced[4]
		23095					Reduced[4]
		23129					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Side F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 251.2 mW
Closest Distance to Side F: 97 mm

[{[(3.0)/(√0.716)]*50 mm}]+[{97-50 mm}*10]=632 mW which is greater than 251.2 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 17 704-716 MHz	A	23780	10 MHz	QPSK	25	12	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	24	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780				49	Reduced[2]
		23790					Reduced[2]
		23800					Reduced[2]
		23780		16QAM	25	12	Reduced[3]
		23790					Reduced[3]
		23800					Reduced[3]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	24	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		23780				49	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]
	B	23780	10 MHz	QPSK	25	12	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	24	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780				49	Reduced[2]
		23790					Reduced[2]
		23800					Reduced[2]
		23780		16QAM	25	12	Reduced[3]
		23790					Reduced[3]
		23800					Reduced[3]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	24	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		23780				49	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 17 704-716 MHz	C	23780	10 MHz	QPSK	25	12	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	24	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780				49	Reduced[2]
		23790					Reduced[2]
		23800					Reduced[2]
		23780		16QAM	25	12	Reduced[3]
		23790					Reduced[3]
		23800					Reduced[3]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	24	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		23780				49	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]
	D	23780	10 MHz	QPSK	25	12	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	12	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780				24	Reduced[2]
		23790					Reduced[2]
		23800					Reduced[2]
		23780		16QAM	25	12	Reduced[3]
		23790					Reduced[3]
		23800					Reduced[3]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	24	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		23780				49	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 17 704-716 MHz	E	23780	10 MHz	QPSK	25	12	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	12	Reduced[6]
		23790					Tested
		23800					Reduced[6]
		23780				24	Reduced[2]
		23790					Reduced[2]
		23800					Reduced[2]
		23780		16QAM	25	12	Reduced[3]
		23790					Reduced[3]
		23800					Reduced[3]
		23780			50	0	Reduced[1]
		23790					Reduced[1]
		23800					Reduced[1]
		23780			1	24	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		23780				49	Reduced[4]
		23790					Reduced[4]
		23800					Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Side F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 251.2 mW
Closest Distance to Side F: 97 mm

[{[(3.0)/(√0.716)]*50 mm}]+[{97-50 mm}*10]=632 mW which is greater than 251.2 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 13 777-787 MHz	A	23230	10 MHz	QPSK	25	12	Tested
		23230			50	0	Tested
		23230			1	24	Tested
		23230				49	Reduced[2]
		23230		16QAM	25	12	Reduced[3]
		23230			50	0	Reduced[1]
		23230			1	24	Reduced[4]
		23230				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]
	B	23230	10 MHz	QPSK	25	12	Tested
		23230			50	0	Reduced[1]
		23230			1	24	Tested
		23230				49	Reduced[2]
		23230		16QAM	25	12	Reduced[3]
		23230			50	0	Reduced[1]
		23230			1	24	Reduced[4]
		23230				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 13 777-787 MHz	C	23230	10 MHz	QPSK	25	12	Tested
		23230			50	0	Reduced[1]
		23230			1	24	Tested
		23230				49	Reduced[2]
		23230		16QAM	25	12	Reduced[3]
		23230			50	0	Reduced[1]
		23230			1	24	Reduced[4]
		23230				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]
	D	23230	10 MHz	QPSK	25	12	Tested
		23230			50	0	Reduced[1]
		23230			1	24	Tested
		23230				49	Reduced[2]
		23230		16QAM	25	12	Reduced[3]
		23230			50	0	Reduced[1]
		23230			1	24	Reduced[4]
		23230				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 13 777-787 MHz	E	23230	10 MHz	QPSK	25	12	Tested
		23230			50	0	Reduced[1]
		23230			1	24	Tested
		23230				49	Reduced[2]
		23230		16QAM	25	12	Reduced[3]
		23230			50	0	Reduced[1]
		23230			1	24	Reduced[4]
		23230				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Side F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 251.2 mW
Closest Distance to Side F: 97 mm

[{[(3.0)/(√0.782)]*50 mm}]+[{97-50 mm}*10]=639 mW which is greater than 251.2 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 14 788-798 MHz	A	23330	10 MHz	QPSK	25	12	Tested
		23330			50	0	Reduced[1]
		23330			1	24	Tested
		23330				49	Reduced[2]
		23330		16QAM	25	12	Reduced[3]
		23330			50	0	Reduced[1]
		23330			1	24	Reduced[4]
		23330				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]
	B	23330	10 MHz	QPSK	25	12	Tested
		23330			50	0	Reduced[1]
		23330			1	24	Tested
		23330				49	Reduced[2]
		23330		16QAM	25	12	Reduced[3]
		23330			50	0	Reduced[1]
		23330			1	24	Reduced[4]
		23330				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 14 788-798 MHz	C	23330	10 MHz	QPSK	25	12	Tested
		23330			50	0	Reduced[1]
		23330			1	24	Tested
		23330				49	Reduced[2]
		23330		16QAM	25	12	Reduced[3]
		23330			50	0	Reduced[1]
		23330			1	24	Reduced[4]
		23330				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]
	D	23330	10 MHz	QPSK	25	12	Tested
		23330			50	0	Reduced[1]
		23330			1	24	Tested
		23330				49	Reduced[2]
		23330		16QAM	25	12	Reduced[3]
		23330			50	0	Reduced[1]
		23330			1	24	Reduced[4]
		23330				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 14 788-798 MHz	E	23330	10 MHz	QPSK	25	12	Tested
		23330			50	0	Reduced[1]
		23330			1	24	Tested
		23330				49	Reduced[2]
		23330		16QAM	25	12	Reduced[3]
		23330			50	0	Reduced[1]
		23330			1	24	Reduced[4]
		23330				49	Reduced[4]
		All lower bandwidths (5 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Side F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 251.2 mW
Closest Distance to Side F: 97 mm

[{[(3.0)/(√0.787)]*50 mm}]+[{97-50 mm}*10]=639 mW which is greater than 251.2 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 41 2496-2690 MHz	A	39750	20 MHz	QPSK	50	25	Tested
		40135					Tested
		40620					Tested
		41105					Tested
		41490					Tested
		39750			100	0	Reduced[1]
		40135					Reduced[1]
		40620					Tested
		41105					Reduced[1]
		41490					Reduced[1]
		39750			1	49	Tested
		40135					Tested
		40620					Tested
		41105					Tested
		41490					Tested
		39750				99	Reduced[2]
		40135					Reduced[2]
		40620					Reduced[2]
		41105					Reduced[2]
		41490					Reduced[2]
		39750		16QAM	50	25	Reduced[3]
		40135					Reduced[3]
		40620					Reduced[3]
		41105					Reduced[3]
		41490					Reduced[3]
		39750			100	0	Reduced[1]
		40135					Reduced[1]
		40620					Reduced[1]
		41105					Reduced[1]
		41490					Reduced[1]
		39750			1	49	Reduced[4]
		40135					Reduced[4]
		40620					Reduced[4]
		41105					Reduced[4]
		41490					Reduced[4]
		39750				99	Reduced[4]
		40135					Reduced[4]
		40620					Reduced[4]
		41105					Reduced[4]
		41490					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 41 2496-2690 MHz	C	39750	20 MHz	QPSK	50	25	Reduced[6]
		40135					Reduced[6]
		40620					Tested
		41105					Reduced[6]
		41490					Reduced[6]
		39750			100	0	Reduced[1]
		40135					Reduced[1]
		40620					Reduced[1]
		41105					Reduced[1]
		41490					Reduced[1]
		39750			1	49	Reduced[6]
		40135					Reduced[6]
		40620					Tested
		41105					Reduced[6]
		41490					Reduced[6]
		39750				99	Reduced[2]
		40135					Reduced[2]
		40620					Reduced[2]
		41105					Reduced[2]
		41490					Reduced[2]
		39750		16QAM	50	25	Reduced[3]
		40135					Reduced[3]
		40620					Reduced[3]
		41105					Reduced[3]
		41490					Reduced[3]
		39750			100	0	Reduced[1]
		40135					Reduced[1]
		40620					Reduced[1]
		41105					Reduced[1]
		41490					Reduced[1]
		39750			1	49	Reduced[4]
		40135					Reduced[4]
		40620					Reduced[4]
		41105					Reduced[4]
		41490					Reduced[4]
		39750				99	Reduced[4]
		40135					Reduced[4]
		40620					Reduced[4]
		41105					Reduced[4]
		41490					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 41 2496-2690 MHz	D	39750	20 MHz	QPSK	50	25	Tested
		40135					Tested
		40620					Tested
		41105					Tested
		41490					Tested
		39750			100	0	Reduced[1]
		40135					Reduced[1]
		40620					Tested
		41105					Reduced[1]
		41490					Reduced[1]
		39750			1	49	Tested
		40135					Tested
		40620					Tested
		41105					Tested
		41490					Tested
		39750				99	Reduced[2]
		40135					Reduced[2]
		40620					Reduced[2]
		41105					Reduced[2]
		41490					Reduced[2]
		39750		16QAM	50	25	Reduced[3]
		40135					Reduced[3]
		40620					Reduced[3]
		41105					Reduced[3]
		41490					Reduced[3]
		39750			100	0	Reduced[1]
		40135					Reduced[1]
		40620					Reduced[1]
		41105					Reduced[1]
		41490					Reduced[1]
		39750			1	49	Reduced[4]
		40135					Reduced[4]
		40620					Reduced[4]
		41105					Reduced[4]
		41490					Reduced[4]
		39750				99	Reduced[4]
		40135					Reduced[4]
		40620					Reduced[4]
		41105					Reduced[4]
		41490					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Sides B & F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 251.2 mW
Closest Distance to Side B: 78 mm
Closest Distance to Side F: 97 mm

Side B is the closest; therefore, if Side B is excluded side F would also be excluded.

[{[(3.0)/(√2.69)]*50 mm}]+[{78-50 mm}*10]=301 mW which is greater than 251.2 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 42 3400-3600 MHz	A	41690	20 MHz	QPSK	50	25	Reduced[6]
		42140					Reduced[6]
		42590					Tested
		43040					Reduced[6]
		43490					Reduced[6]
		41690			100	0	Reduced[1]
		42140					Reduced[1]
		42590					Reduced[1]
		43040					Reduced[1]
		43490					Reduced[1]
		41690			1	49	Reduced[6]
		42140					Reduced[6]
		42590					Tested
		43040					Reduced[6]
		43490					Reduced[6]
		41690				99	Reduced[2]
		42140					Reduced[2]
		42590					Reduced[2]
		43040					Reduced[2]
		43490					Reduced[2]
		41690		16QAM	50	25	Reduced[3]
		42140					Reduced[3]
		42590					Reduced[3]
		43040					Reduced[3]
		43490					Reduced[3]
		41690			100	0	Reduced[1]
		42140					Reduced[1]
		42590					Reduced[1]
		43040					Reduced[1]
		43490					Reduced[1]
		41690			1	49	Reduced[4]
		42140					Reduced[4]
		42590					Reduced[4]
		43040					Reduced[4]
		43490					Reduced[4]
		41690				99	Reduced[4]
		42140					Reduced[4]
		42590					Reduced[4]
		43040					Reduced[4]
		43490					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 42 3400-3600 MHz	C	41690	20 MHz	QPSK	50	25	Reduced[6]
		42140					Reduced[6]
		42590					Tested
		43040					Reduced[6]
		43490					Reduced[6]
		41690			100	0	Reduced[1]
		42140					Reduced[1]
		42590					Reduced[1]
		43040					Reduced[1]
		43490					Reduced[1]
		41690			1	49	Reduced[6]
		42140					Reduced[6]
		42590					Tested
		43040					Reduced[6]
		43490					Reduced[6]
		41690				99	Reduced[2]
		42140					Reduced[2]
		42590					Reduced[2]
		43040					Reduced[2]
		43490					Reduced[2]
		41690		16QAM	50	25	Reduced[3]
		42140					Reduced[3]
		42590					Reduced[3]
		43040					Reduced[3]
		43490					Reduced[3]
		41690			100	0	Reduced[1]
		42140					Reduced[1]
		42590					Reduced[1]
		43040					Reduced[1]
		43490					Reduced[1]
		41690			1	49	Reduced[4]
		42140					Reduced[4]
		42590					Reduced[4]
		43040					Reduced[4]
		43490					Reduced[4]
		41690				99	Reduced[4]
		42140					Reduced[4]
		42590					Reduced[4]
		43040					Reduced[4]
		43490					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 42 3400-3600 MHz	D	41690	20 MHz	QPSK	50	25	Reduced[6]
		42140					Reduced[6]
		42590					Tested
		43040					Reduced[6]
		43490					Reduced[6]
		41690			100	0	Reduced[1]
		42140					Reduced[1]
		42590					Reduced[1]
		43040					Reduced[1]
		43490					Reduced[1]
		41690			1	49	Reduced[6]
		42140					Reduced[6]
		42590					Tested
		43040					Reduced[6]
		43490					Reduced[6]
		41690				99	Reduced[2]
		42140					Reduced[2]
		42590					Reduced[2]
		43040					Reduced[2]
		43490					Reduced[2]
		41690		16QAM	50	25	Reduced[3]
		42140					Reduced[3]
		42590					Reduced[3]
		43040					Reduced[3]
		43490					Reduced[3]
		41690			100	0	Reduced[1]
		42140					Reduced[1]
		42590					Reduced[1]
		43040					Reduced[1]
		43490					Reduced[1]
		41690			1	49	Reduced[4]
		42140					Reduced[4]
		42590					Reduced[4]
		43040					Reduced[4]
		43490					Reduced[4]
		41690				99	Reduced[4]
		42140					Reduced[4]
		42590					Reduced[4]
		43040					Reduced[4]
		43490					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 42 3400-3600 MHz	E	41690	20 MHz	QPSK	50	25	Reduced[6]
		42140					Reduced[6]
		42590					Tested
		43040					Reduced[6]
		43490					Reduced[6]
		41690			100	0	Reduced[1]
		42140					Reduced[1]
		42590					Reduced[1]
		43040					Reduced[1]
		43490					Reduced[1]
		41690			1	49	Reduced[6]
		42140					Reduced[6]
		42590					Tested
		43040					Reduced[6]
		43490					Reduced[6]
		41690				99	Reduced[2]
		42140					Reduced[2]
		42590					Reduced[2]
		43040					Reduced[2]
		43490					Reduced[2]
		41690		16QAM	50	25	Reduced[3]
		42140					Reduced[3]
		42590					Reduced[3]
		43040					Reduced[3]
		43490					Reduced[3]
		41690			100	0	Reduced[1]
		42140					Reduced[1]
		42590					Reduced[1]
		43040					Reduced[1]
		43490					Reduced[1]
		41690			1	49	Reduced[4]
		42140					Reduced[4]
		42590					Reduced[4]
		43040					Reduced[4]
		43490					Reduced[4]
		41690				99	Reduced[4]
		42140					Reduced[4]
		42590					Reduced[4]
		43040					Reduced[4]
		43490					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Sides B & F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 251.2 mW
Closest Distance to Side B: 78 mm
Closest Distance to Side F: 97 mm

Side B is the closest; therefore, if Side B is excluded side F would also be excluded.

[{[(3.0)/(√3.60)]*50 mm}]+[{78-50 mm}*10]=359 mW which is greater than 251.2 mW

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 48 3550-3700 MHz	A	55340	20 MHz	QPSK	50	25	Reduced[6]
		55665					Reduced[6]
		55990					Tested
		56315					Reduced[6]
		56640					Reduced[6]
		55340			100	0	Reduced[1]
		55665					Reduced[1]
		55990					Reduced[1]
		56315					Reduced[1]
		56640					Reduced[1]
		55340			1	49	Reduced[6]
		55665					Reduced[6]
		55990					Tested
		56315					Reduced[6]
		56640					Reduced[6]
		55340				99	Reduced[2]
		55665					Reduced[2]
		55990					Reduced[2]
		56315					Reduced[2]
		56640					Reduced[2]
		55340		16QAM	50	25	Reduced[3]
		55665					Reduced[3]
		55990					Reduced[3]
		56315					Reduced[3]
		56640					Reduced[3]
		55340			100	0	Reduced[1]
		55665					Reduced[1]
		55990					Reduced[1]
		56315					Reduced[1]
		56640					Reduced[1]
		55340			1	49	Reduced[4]
		55665					Reduced[4]
		55990					Reduced[4]
		56315					Reduced[4]
		56640					Reduced[4]
		55340				99	Reduced[4]
		55665					Reduced[4]
		55990					Reduced[4]
		56315					Reduced[4]
		56640					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 48 3550-3700 MHz	C	55340	20 MHz	QPSK	50	25	Reduced[6]
		55665					Reduced[6]
		55990					Tested
		56315					Reduced[6]
		56640					Reduced[6]
		55340			100	0	Reduced[1]
		55665					Reduced[1]
		55990					Reduced[1]
		56315					Reduced[1]
		56640					Reduced[1]
		55340			1	49	Reduced[6]
		55665					Reduced[6]
		55990					Tested
		56315					Reduced[6]
		56640					Reduced[6]
		55340				99	Reduced[2]
		55665					Reduced[2]
		55990					Reduced[2]
		56315					Reduced[2]
		56640					Reduced[2]
		55340		16QAM	50	25	Reduced[3]
		55665					Reduced[3]
		55990					Reduced[3]
		56315					Reduced[3]
		56640					Reduced[3]
		55340			100	0	Reduced[1]
		55665					Reduced[1]
		55990					Reduced[1]
		56315					Reduced[1]
		56640					Reduced[1]
		55340			1	49	Reduced[4]
		55665					Reduced[4]
		55990					Reduced[4]
		56315					Reduced[4]
		56640					Reduced[4]
		55340				99	Reduced[4]
		55665					Reduced[4]
		55990					Reduced[4]
		56315					Reduced[4]
		56640					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 48 3550-3700 MHz	D	55340	20 MHz	QPSK	50	25	Reduced[6]
		55665					Reduced[6]
		55990					Tested
		56315					Reduced[6]
		56640					Reduced[6]
		55340			100	0	Reduced[1]
		55665					Reduced[1]
		55990					Reduced[1]
		56315					Reduced[1]
		56640					Reduced[1]
		55340			1	49	Reduced[6]
		55665					Reduced[6]
		55990					Tested
		56315					Reduced[6]
		56640					Reduced[6]
		55340				99	Reduced[2]
		55665					Reduced[2]
		55990					Reduced[2]
		56315					Reduced[2]
		56640					Reduced[2]
		55340		16QAM	50	25	Reduced[3]
		55665					Reduced[3]
		55990					Reduced[3]
		56315					Reduced[3]
		56640					Reduced[3]
		55340			100	0	Reduced[1]
		55665					Reduced[1]
		55990					Reduced[1]
		56315					Reduced[1]
		56640					Reduced[1]
		55340			1	49	Reduced[4]
		55665					Reduced[4]
		55990					Reduced[4]
		56315					Reduced[4]
		56640					Reduced[4]
		55340				99	Reduced[4]
		55665					Reduced[4]
		55990					Reduced[4]
		56315					Reduced[4]
		56640					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

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Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 48 3550-3700 MHz	E	55340	20 MHz	QPSK	50	25	Reduced[6]
		55665					Reduced[6]
		55990					Tested
		56315					Reduced[6]
		56640					Reduced[6]
		55340			100	0	Reduced[1]
		55665					Reduced[1]
		55990					Reduced[1]
		56315					Reduced[1]
		56640					Reduced[1]
		55340			1	49	Reduced[6]
		55665					Reduced[6]
		55990					Tested
		56315					Reduced[6]
		56640					Reduced[6]
		55340				99	Reduced[2]
		55665					Reduced[2]
		55990					Reduced[2]
		56315					Reduced[2]
		56640					Reduced[2]
		55340		16QAM	50	25	Reduced[3]
		55665					Reduced[3]
		55990					Reduced[3]
		56315					Reduced[3]
		56640					Reduced[3]
		55340			100	0	Reduced[1]
		55665					Reduced[1]
		55990					Reduced[1]
		56315					Reduced[1]
		56640					Reduced[1]
		55340			1	49	Reduced[4]
		55665					Reduced[4]
		55990					Reduced[4]
		56315					Reduced[4]
		56640					Reduced[4]
		55340				99	Reduced[4]
		55665					Reduced[4]
		55990					Reduced[4]
		56315					Reduced[4]
		56640					Reduced[4]
		All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)					Reduced[5]

Reduced[1] – If the SAR value in the 50% RB testing is less than 1.45 W/kg, the 100% RB testing is reduced per KDB941225 D05 3) A) I) page 4.

Reduced[2] - If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 3) B) I) page 4.

Reduced[3] - If the SAR value in the 50% RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) A) I) page 4.

Reduced[4]- If the SAR value in the 1 RB testing is less than 1.45 W/kg, the remaining channels are reduced per KDB941225 D05 4) B) I) page 5.

Reduced[5]- If the conducted power is within ±0.5 dB, all testing where the SAR value is less than 1.45 W/kg is reduced per KDB941225 D05 5) B) I) page 5.

Reduced[6]- If the SAR value measured on the middle channel is less than 0.8 W/kg and the conducted power is within ±0.5 dB, the remaining channels are reduced per KDB941225 D05 page 4 footnote 2.

Sides B & F Reduced based on distance in KDB 447498 D01 v06 (See below calculations).

Maximum power: 251.2 mW
Closest Distance to Side B: 78 mm
Closest Distance to Side F: 97 mm

Side B is the closest; therefore, if Side B is excluded side F would also be excluded.

[{[(3.0)/(√3.70)]*50 mm}]+[{78-50 mm}*10]=357 mW which is greater than 251.2 mW

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SAR Data Summary – 750 MHz Body – LTE Band 12

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.							
10 mm	1	Side A	707.5	23095	10 MHz/QPSK	1	24	0	23.00	0.620	0.78
	-----		707.5	23095	10 MHz/QPSK	25	12	1	22.23	0.507	0.61
	-----	Side B	707.5	23095	10 MHz/QPSK	1	24	0	23.00	0.271	0.34
	-----		707.5	23095	10 MHz/QPSK	25	12	1	22.23	0.219	0.26
	-----	Side C	707.5	23095	10 MHz/QPSK	1	24	0	23.00	0.607	0.76
	-----		707.5	23095	10 MHz/QPSK	25	12	1	22.23	0.490	0.59
	-----	Side D	707.5	23095	10 MHz/QPSK	1	24	0	23.00	0.131	0.17
	-----		707.5	23095	10 MHz/QPSK	25	12	1	22.23	0.108	0.13
	-----	Side E	707.5	23095	10 MHz/QPSK	1	24	0	23.00	0.0768	0.10
	-----		707.5	23095	10 MHz/QPSK	25	12	1	22.23	0.0623	0.07
									Body **1.6 W/kg (mW/g)** averaged over 1 gram		

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 750 MHz Body – LTE Band 17

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.							
10 mm	2	Side A	710.0	23780	10 MHz/QPSK	1	24	0	23.09	0.645	0.80
	-----		710.0	23780	10 MHz/QPSK	25	12	1	22.13	0.548	0.67
	-----	Side B	710.0	23780	10 MHz/QPSK	1	24	0	23.09	0.306	0.38
	-----		710.0	23780	10 MHz/QPSK	25	12	1	22.13	0.247	0.30
	-----	Side C	710.0	23780	10 MHz/QPSK	1	24	0	23.09	0.540	0.67
	-----		710.0	23780	10 MHz/QPSK	25	12	1	22.13	0.442	0.54
	-----	Side D	710.0	23780	10 MHz/QPSK	1	24	0	23.09	0.151	0.19
	-----		710.0	23780	10 MHz/QPSK	25	12	1	22.13	0.118	0.14
	-----	Side E	710.0	23780	10 MHz/QPSK	1	24	0	23.09	0.0799	0.10
	-----		710.0	23780	10 MHz/QPSK	25	12	1	22.13	0.0667	0.08
									Body **1.6 W/kg (mW/g)** averaged over 1 gram		

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

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SAR Data Summary – 750 MHz Body – LTE Band 13

MEASUREMENT RESULTS

Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.					(dBm)		
10 mm	3	Side A	782.0	23230	10 MHz/QPSK	1	24	0	23.48	1.00	1.13
	-----		782.0	23230	10 MHz/QPSK	25	12	1	23.51	0.824	0.92
	-----		782.0	23230	10 MHz/QPSK	50	0	1	23.26	0.721	0.86
	-----	Side B	782.0	23230	10 MHz/QPSK	1	24	0	23.48	0.602	0.68
	-----		782.0	23230	10 MHz/QPSK	25	12	1	23.51	0.492	0.55
	-----	Side C	782.0	23230	10 MHz/QPSK	1	24	0	23.48	0.775	0.87
	-----		782.0	23230	10 MHz/QPSK	25	12	1	23.51	0.606	0.68
	-----	Side D	782.0	23230	10 MHz/QPSK	1	24	0	23.48	0.284	0.32
	-----		782.0	23230	10 MHz/QPSK	25	12	1	23.51	0.231	0.26
	-----	Side E	782.0	23230	10 MHz/QPSK	1	24	0	23.48	0.0911	0.10
	-----		782.0	23230	10 MHz/QPSK	25	12	1	23.51	0.0731	0.08
	-----	Repeat	782.0	23230	10 MHz/QPSK	1	24	0	23.48	0.987	1.11

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

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SAR Data Summary – 750 MHz Body – LTE Band 14

MEASUREMENT RESULTS

Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.							
10 mm	4	Side A	793	23330	10 MHz/QPSK	1	24	0	23.45	0.757	0.86
	-----		793	23330	10 MHz/QPSK	25	12	1	23.54	0.513	0.57
	-----		793	23330	10 MHz/QPSK	50	0	1	23.37	0.436	0.50
	-----	Side B	793	23330	10 MHz/QPSK	1	24	0	23.45	0.366	0.42
	-----		793	23330	10 MHz/QPSK	25	12	1	23.54	0.329	0.37
	-----	Side C	793	23330	10 MHz/QPSK	1	24	0	23.45	0.464	0.53
	-----		793	23330	10 MHz/QPSK	25	12	1	23.54	0.435	0.48
	-----	Side D	793	23330	10 MHz/QPSK	1	24	0	23.45	0.133	0.15
	-----		793	23330	10 MHz/QPSK	25	12	1	23.54	0.134	0.15
	-----	Side E	793	23330	10 MHz/QPSK	1	24	0	23.45	0.102	0.12
	-----		793	23330	10 MHz/QPSK	25	12	1	23.54	0.0786	0.19
	-----	Repeat	793	23330	10 MHz/QPSK	1	24	0	23.45	0.734	0.83

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

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SAR Data Summary – 835 MHz Body - WCDMA

MEASUREMENT RESULTS

Gap	Plot	Frequency		Modulation	Position	End Power	RMC	Test Set Up	Measured SAR	Reported SAR
		MHz	Ch.			(dBm)			(W/kg)	(W/kg)
10 mm	----	836.6	4183	WCDMA	Side A	23.13	12.2 kbps	Test Loop 1	0.552	0.67
	----	836.6	4183	WCDMA	Side B	23.13	12.2 kbps	Test Loop 1	0.163	0.20
	5	836.6	4183	WCDMA	Side C	23.13	12.2 kbps	Test Loop 1	0.589	0.72
	----	836.6	4183	WCDMA	Side D	23.13	12.2 kbps	Test Loop 1	0.117	0.14
	----	836.6	4183	WCDMA	Side E	23.13	12.2 kbps	Test Loop 1	0.130	0.16

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

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SAR Data Summary – 835 MHz Body – LTE Band 5

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power	Measured SAR	Reported SAR
			MHz	Ch.					(dBm)	(W/kg)	(W/kg)
10 mm	6	Side A	829.0	20450	10 MHz/QPSK	1	24	0	23.9	0.975	1.00
	-----		836.5	20525	10 MHz/QPSK	1	24	0	24.0	0.954	0.95
	-----		844.0	20599	10 MHz/QPSK	1	24	0	24.0	0.937	0.94
	-----		836.5	20525	10 MHz/QPSK	25	12	1	22.9	0.782	0.80
	-----		836.5	20525	10 MHz/QPSK	50	0	1	22.9	0.698	0.71
	-----	Side B	836.5	20525	10 MHz/QPSK	1	24	0	24.0	0.400	0.40
	-----		836.5	20525	10 MHz/QPSK	25	12	1	22.9	0.326	0.33
	-----	Side C	836.5	20525	10 MHz/QPSK	1	24	0	24.0	0.790	0.79
	-----		836.5	20525	10 MHz/QPSK	25	12	1	22.9	0.647	0.66
	-----	Side D	836.5	20525	10 MHz/QPSK	1	24	0	24.0	0.233	0.23
	-----		836.5	20525	10 MHz/QPSK	25	12	1	22.9	0.191	0.20
	-----	Side E	836.5	20525	10 MHz/QPSK	1	24	0	24.0	0.0973	0.10
	-----		836.5	20525	10 MHz/QPSK	25	12	1	22.9	0.0769	0.08
	-----	Repeat	836.5	20525	10 MHz/QPSK	1	24	0	23.9	0.956	0.98

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

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SAR Data Summary – 835 MHz Body – LTE Band 26

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.							
10 mm	-----	Side A	831.5	26865	15 MHz/QPSK	1	37	0	23.43	0.535	0.61
	-----		831.5	26865	15 MHz/QPSK	36	19	1	22.20	0.512	0.62
	-----	Side B	831.5	26865	15 MHz/QPSK	1	37	0	23.43	0.337	0.38
	-----		831.5	26865	15 MHz/QPSK	36	19	1	22.20	0.274	0.33
	7	Side C	831.5	26865	15 MHz/QPSK	1	37	0	23.43	0.689	0.79
	-----		831.5	26865	15 MHz/QPSK	36	19	1	22.20	0.560	0.67
	-----	Side D	831.5	26865	15 MHz/QPSK	1	37	0	23.43	0.195	0.22
	-----		831.5	26865	15 MHz/QPSK	36	19	1	22.20	0.155	0.19
	-----	Side E	831.5	26865	15 MHz/QPSK	1	37	0	23.43	0.0949	0.11
	-----		831.5	26865	15 MHz/QPSK	36	19	1	22.20	0.0751	0.09
									Body 1.6 W/kg (mW/g) averaged over 1 gram		

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 1750 MHz Body - WCDMA

MEASUREMENT RESULTS

Gap	Plot	Frequency		Rev Level/ Modulation	Position	End Power	RMC	Test Set Up	Measured SAR	Reported SAR
		MHz	Ch.			(dBm)			(W/kg)	(W/kg)
10 mm	8	1712.4	1312	WCDMA	Side A	22.56	12.2 kbps	Test Loop 1	0.945	1.32
	----	1732.6	1413	WCDMA		22.77	12.2 kbps	Test Loop 1	0.902	1.20
	----	1752.6	1513	WCDMA		23.32	12.2 kbps	Test Loop 1	0.961	1.12
	----	1732.6	1413	WCDMA	Side B	22.77	12.2 kbps	Test Loop 1	0.595	0.79
	----	1712.4	1312	WCDMA	Side C	22.56	12.2 kbps	Test Loop 1	0.586	0.82
	----	1732.6	1413	WCDMA		22.77	12.2 kbps	Test Loop 1	0.644	0.86
	----	1752.6	1513	WCDMA		23.32	12.2 kbps	Test Loop 1	0.604	0.71
	----	1732.6	1413	WCDMA	Side D	22.77	12.2 kbps	Test Loop 1	0.139	0.19
	----	1732.6	1413	WCDMA	Side E	22.77	12.2 kbps	Test Loop 1	0.540	0.72
	----	1712.4	1312	WCDMA	Repeat	22.56	12.2 kbps	Test Loop 1	0.973	1.36

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 1750 MHz Body – LTE Band 66

MEASUREMENT RESULTS

Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.					(dBm)		
10 mm	9	Side A	1720.0	132072	20 MHz/QPSK	1	49	0	23.9	1.28	1.31
	-----		1745.0	132322	20 MHz/QPSK	1	49	0	24.0	1.10	1.10
	-----		1780.0	132572	20 MHz/QPSK	1	49	0	24.0	0.96	0.96
	-----		1720.0	132072	20 MHz/QPSK	50	24	1	22.9	1.23	1.26
	-----		1745.0	132322	20 MHz/QPSK	50	24	1	23.0	0.893	0.89
	-----		1780.0	132572	20 MHz/QPSK	50	24	1	23.0	0.786	0.79
	-----		1720.0	132072	20 MHz/QPSK	100	0	1	23.0	0.721	0.72
	-----	Side B	1745.0	132322	20 MHz/QPSK	1	49	0	24.0	0.408	0.41
	-----		1745.0	132322	20 MHz/QPSK	50	24	1	23.0	0.341	0.34
	-----	Side C	1745.0	132322	20 MHz/QPSK	1	49	0	24.0	0.773	0.77
	-----		1745.0	132322	20 MHz/QPSK	50	24	1	23.0	0.640	0.64
	-----	Side D	1745.0	132322	20 MHz/QPSK	1	49	0	24.0	0.196	0.20
	-----		1745.0	132322	20 MHz/QPSK	50	24	1	23.0	0.165	0.17
	-----	Side E	1720.0	132072	20 MHz/QPSK	1	49	0	23.9	1.21	1.24
	-----		1745.0	132322	20 MHz/QPSK	1	49	0	24.0	0.916	0.92
	-----		1780.0	132572	20 MHz/QPSK	1	49	0	24.0	0.509	0.51
	-----		1745.0	132322	20 MHz/QPSK	50	24	1	23.0	0.666	0.67
	-----	Repeat	1720.0	132072	20 MHz/QPSK	1	49	0	23.9	1.26	1.29

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 1900 MHz Body - WCDMA

MEASUREMENT RESULTS

Gap	Plot	Frequency		Rev Level/ Modulation	Position	End Power	RMC	Test Set Up	Measured SAR	Reported SAR
		MHz	Ch.			(dBm)			(W/kg)	(W/kg)
10 mm	10	1852.4	9262	WCDMA	Side A	23.67	12.2 kbps	Test Loop 1	1.11	1.20
	----	1880.0	9400	WCDMA		23.89	12.2 kbps	Test Loop 1	1.08	1.11
	----	1907.6	9538	WCDMA		23.71	12.2 kbps	Test Loop 1	0.968	1.04
	----	1852.4	9262	WCDMA	Side B	23.89	12.2 kbps	Test Loop 1	0.220	0.23
	----	1852.4	9262	WCDMA	Side C	23.67	12.2 kbps	Test Loop 1	0.851	0.92
	----	1880.0	9400	WCDMA		23.89	12.2 kbps	Test Loop 1	0.821	0.84
	----	1907.6	9538	WCDMA		23.71	12.2 kbps	Test Loop 1	0.732	0.78
	----	1852.4	9262	WCDMA	Side D	23.89	12.2 kbps	Test Loop 1	0.237	0.24
	----	1852.4	9262	WCDMA	Side E	23.89	12.2 kbps	Test Loop 1	0.229	0.23
	----	1907.6	9538	WCDMA	Repeat	23.67	12.2 kbps	Test Loop 1	1.09	1.18

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 1900 MHz Body – LTE Band 2

MEASUREMENT RESULTS

Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power	Measured SAR	Reported SAR
			MHz	Ch.					(dBm)	(W/kg)	(W/kg)
10 mm	-----	Side A	1860.0	18700	20 MHz/QPSK	1	49	0	24.0	0.838	0.84
	-----		1880.0	18900	20 MHz/QPSK	1	49	0	24.0	0.940	0.94
	11		1900.0	19100	20 MHz/QPSK	1	49	0	24.0	0.948	0.95
	-----		1860.0	18700	20 MHz/QPSK	50	24	1	23.0	0.796	0.80
	-----		1880.0	18900	20 MHz/QPSK	50	24	1	23.0	0.878	0.88
	-----		1900.0	19100	20 MHz/QPSK	50	24	1	23.0	0.846	0.85
	-----		1900.0	19100	20 MHz/QPSK	100	0	1	23.0	0.732	0.73
	-----	Side B	1880.0	18900	20 MHz/QPSK	1	49	0	24.0	0.244	0.24
	-----		1880.0	18900	20 MHz/QPSK	50	24	1	23.0	0.202	0.20
	-----	Side C	1860.0	18700	20 MHz/QPSK	1	49	0	24.0	0.831	0.83
	-----		1880.0	18900	20 MHz/QPSK	1	49	0	24.0	0.797	0.80
	-----		1900.0	19100	20 MHz/QPSK	1	49	0	24.0	0.799	0.80
	-----		1880.0	18900	20 MHz/QPSK	50	24	1	23.0	0.622	0.62
	-----	Side D	1880.0	18900	20 MHz/QPSK	1	49	0	24.0	0.183	0.18
	-----		1880.0	18900	20 MHz/QPSK	50	24	1	23.0	0.156	0.16
	-----	Side E	1880.0	18900	20 MHz/QPSK	1	49	0	24.0	0.186	0.19
	-----		1880.0	18900	20 MHz/QPSK	50	24	1	23.0	0.153	0.15
	-----	Repeat	1860.0	18700	20 MHz/QPSK	1	49	0	24.0	0.922	0.92

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 1900 MHz Body – LTE Band 25

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power	Measured SAR	Reported SAR
			MHz	Ch.					(dBm)	(W/kg)	(W/kg)
10 mm	12	Side A	1860.0	26140	20 MHz/QPSK	1	49	0	23.46	1.18	1.34
	-----		1882.5	26365	20 MHz/QPSK	1	49	0	22.70	0.992	1.34
	-----		1905.0	26590	20 MHz/QPSK	1	49	0	23.20	1.02	1.23
	-----		1860.0	26140	20 MHz/QPSK	50	24	1	22.60	0.956	1.05
	-----		1882.5	26365	20 MHz/QPSK	50	24	1	21.95	0.831	1.06
	-----		1905.0	26590	20 MHz/QPSK	50	24	1	22.29	0.914	1.08
	-----		1860.0	26140	20 MHz/QPSK	100	0	1	22.66	0.972	1.05
	-----	Side B	1882.5	26365	20 MHz/QPSK	1	49	0	22.70	0.369	0.50
	-----		1882.5	26365	20 MHz/QPSK	50	24	1	21.95	0.320	0.41
	-----	Side C	1860.0	26140	20 MHz/QPSK	1	49	0	23.46	0.955	1.08
	-----		1882.5	26365	20 MHz/QPSK	1	49	0	22.70	0.827	1.12
	-----		1905.0	26590	20 MHz/QPSK	1	49	0	23.20	0.834	1.00
	-----		1882.5	26365	20 MHz/QPSK	50	24	1	21.95	0.676	0.86
	-----	Side D	1882.5	26365	20 MHz/QPSK	1	49	0	22.70	0.139	0.19
	-----		1882.5	26365	20 MHz/QPSK	50	24	1	21.95	0.111	0.14
	-----	Side E	1882.5	26365	20 MHz/QPSK	1	49	0	22.70	0.245	0.33
	-----		1882.5	26365	20 MHz/QPSK	50	24	1	21.95	0.199	0.25
	-----	Repeat	1860.0	26140	20 MHz/QPSK	1	49	0	23.46	1.23	1.39

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 2300 MHz Body – LTE Band 30

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.							
10 mm	13	Side A	2310.0	27710	10 MHz/QPSK	1	24	0	23.46	0.742	0.84
	-----		2310.0	27710	10 MHz/QPSK	25	12	1	22.42	0.660	0.75
	-----		2310.0	27710	10 MHz/QPSK	50	0	1	22.75	0.562	0.60
	-----	Side C	2310.0	27710	10 MHz/QPSK	1	24	0	23.46	0.369	0.42
	-----		2310.0	27710	10 MHz/QPSK	25	12	1	22.42	0.242	0.28
	-----	Side D	2310.0	27710	10 MHz/QPSK	1	24	0	23.46	0.664	0.75
	-----		2310.0	27710	10 MHz/QPSK	25	12	1	22.42	0.543	0.62
	-----	Repeat	2310.0	27710	10 MHz/QPSK	1	24	0	23.46	0.721	0.82
									Body 1.6 W/kg (mW/g) averaged over 1 gram		

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

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Vice President

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SAR Data Summary – 2300 MHz Body – LTE Band 40

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.					(dBm)		
10 mm	-----	Side A	2310.0	38750	20 MHz/QPSK	1	49	0	23.42	0.923	1.06
	-----		2350.0	39150	20 MHz/QPSK	1	49	0	23.44	0.836	0.95
	14		2390.0	39550	20 MHz/QPSK	1	49	0	23.61	1.07	1.17
	-----		2350.0	39150	20 MHz/QPSK	50	24	1	22.75	0.758	0.80
	-----		2390.0	39550	20 MHz/QPSK	100	0	1	22.72	0.658	0.70
	-----	Side C	2350.0	39150	20 MHz/QPSK	1	49	0	23.44	0.359	0.41
	-----		2350.0	39150	20 MHz/QPSK	50	24	1	22.75	0.282	0.30
	-----	Side D	2350.0	39150	20 MHz/QPSK	1	49	0	23.44	0.569	0.65
	-----		2350.0	39150	20 MHz/QPSK	50	24	1	22.75	0.470	0.50
	-----	Repeat	2390.0	39550	20 MHz/QPSK	1	49	0	23.61	1.05	1.15

Body 1.6 W/kg (mW/g) averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05 v02r05 clause 5.4. TDD is tested at the highest duty factor using UL-DL configuration 1 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05 v02r05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4. A duty cycle of 1:1.58 is the highest duty cycle achievable which was used for testing Band 40.

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SAR Data Summary – 2550 MHz Body – LTE Band 7

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.							
10 mm	-----	Side A	2507.5	20850	20 MHz/QPSK	1	49	0	22.4	1.10	1.26
	15		2535.0	21100	20 MHz/QPSK	1	49	0	22.6	1.31	1.44
	-----		2562.5	21350	20 MHz/QPSK	1	49	0	22.2	1.18	1.42
	-----		2507.5	20850	20 MHz/QPSK	50	24	1	21.1	0.973	1.20
	-----		2535.0	21100	20 MHz/QPSK	50	24	1	21.1	1.03	1.27
	-----		2562.5	21350	20 MHz/QPSK	50	24	1	21.3	1.02	1.20
	-----		2535.0	21100	20 MHz/QPSK	100	0	1	21.2	1.01	1.21
	-----	Side B	2535.0	21100	20 MHz/QPSK	1	49	0	22.6	0.152	0.17
	-----		2535.0	21100	20 MHz/QPSK	50	24	1	21.1	0.106	0.13
	-----	Side C	2535.0	21100	20 MHz/QPSK	1	49	0	22.6	0.681	0.75
	-----		2535.0	21100	20 MHz/QPSK	50	24	1	21.1	0.692	0.85
	-----	Side D	2507.5	20850	20 MHz/QPSK	1	49	0	22.4	0.801	0.92
	-----		2535.0	21100	20 MHz/QPSK	1	49	0	22.6	0.921	1.01
	-----		2562.5	21350	20 MHz/QPSK	1	49	0	22.2	0.832	1.00
	-----		2535.0	21100	20 MHz/QPSK	50	24	1	21.1	0.760	0.94
	-----	Side E	2535.0	21100	20 MHz/QPSK	1	49	0	22.6	0.129	0.14
	-----		2535.0	21100	20 MHz/QPSK	50	24	1	21.1	0.0987	0.12
	-----	Repeat	2535.0	21100	20 MHz/QPSK	1	49	0	22.6	1.29	1.41

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 2500 MHz Body – LTE Band 38

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.							
10 mm	-----	Side A	2580	37850	20 MHz/QPSK	1	49	0	23.13	0.711	0.87
	-----		2595	38000	20 MHz/QPSK	1	49	0	22.82	0.734	0.96
	16		2610	38150	20 MHz/QPSK	1	49	0	22.87	0.723	0.94
	-----		2580	37850	20 MHz/QPSK	50	24	1	22.04	0.607	0.76
	-----		2595	38000	20 MHz/QPSK	50	24	1	21.84	0.629	0.82
	-----		2610	38150	20 MHz/QPSK	50	24	1	21.89	0.618	0.80
	-----		2595	38000	20 MHz/QPSK	100	0	1	22.82	0.603	0.63
	-----	Side C	2595	38000	20 MHz/QPSK	1	49	0	22.82	0.190	0.25
	-----		2595	38000	20 MHz/QPSK	50	24	1	21.84	0.0988	0.13
	-----	Side D	2595	38000	20 MHz/QPSK	1	49	0	22.82	0.237	0.31
	-----		2595	38000	20 MHz/QPSK	50	24	1	21.84	0.195	0.25
	-----	Repeat	2595	38000	20 MHz/QPSK	1	49	0	22.82	0.721	0.95

Body 1.6 W/kg (mW/g) averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05 v02r05 clause 5.4. TDD is tested at the highest duty factor using UL-DL configuration 1 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05 v02r05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4. A duty cycle of 1:1.58 is the highest duty cycle achievable which was used for testing Band 40.

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SAR Data Summary – 2500 MHz Body – LTE Band 41

MEASUREMENT RESULTS

Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.					(dBm)		
10 mm	-----	Side A	2506.0	39750	20 MHz/QPSK	1	49	0	24.58	1.03	1.14
	-----		2544.5	40135	20 MHz/QPSK	1	49	0	24.37	1.04	1.20
	17		2593.0	40620	20 MHz/QPSK	1	49	0	24.42	1.20	1.37
	-----		2641.5	41105	20 MHz/QPSK	1	49	0	24.01	1.07	1.34
	-----		2680.0	41490	20 MHz/QPSK	1	49	0	23.40	0.929	1.34
	-----		2506.0	39750	20 MHz/QPSK	50	24	1	23.80	0.859	0.90
	-----		2544.5	40135	20 MHz/QPSK	50	24	1	23.86	0.970	1.00
	-----		2593.0	40620	20 MHz/QPSK	50	24	1	23.59	0.982	1.08
	-----		2641.5	41105	20 MHz/QPSK	50	24	1	23.33	0.965	1.13
	-----		2680.0	41490	20 MHz/QPSK	50	24	1	23.77	1.01	1.07
	-----		2593.0	40620	20 MHz/QPSK	100	0	1	23.73	0.785	0.84
	-----	Side C	2593.0	40620	20 MHz/QPSK	1	49	0	24.42	0.641	0.73
	-----		2593.0	40620	20 MHz/QPSK	50	24	1	23.59	0.541	0.59
	-----	Side D	2506.0	39750	20 MHz/QPSK	1	49	0	24.58	0.757	0.83
	-----		2544.5	40135	20 MHz/QPSK	1	49	0	24.37	0.773	0.89
	-----		2593.0	40620	20 MHz/QPSK	1	49	0	24.42	0.753	0.86
	-----		2641.5	41105	20 MHz/QPSK	1	49	0	24.01	0.697	0.88
	-----		2680.0	41490	20 MHz/QPSK	1	49	0	23.40	0.638	0.92
	-----		2506.0	39750	20 MHz/QPSK	50	24	1	23.80	0.823	0.86
	-----		2544.5	40135	20 MHz/QPSK	50	24	1	23.86	0.854	0.88
	-----		2593.0	40620	20 MHz/QPSK	50	24	1	23.59	0.814	0.89
	-----		2641.5	41105	20 MHz/QPSK	50	24	1	23.33	0.766	0.89
	-----		2680.0	41490	20 MHz/QPSK	50	24	1	23.77	0.755	0.80
	-----	Repeat	2593.0	40620	20 MHz/QPSK	1	49	0	24.42	1.25	1.43

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05 v02r05 clause 5.4. TDD is tested at the highest duty factor using UL-DL configuration 1 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05 v02r05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4. A duty cycle of 1:1.58 is the highest duty cycle achievable which was used for testing Band 41.

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SAR Data Summary – 3500 MHz Body – LTE Band 42

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power	Measured SAR	Reported SAR
			MHz	Ch.					(dBm)	(W/kg)	(W/kg)
10 mm	18	Side A	3500.0	42590	20 MHz/QPSK	1	49	0	22.96	0.331	0.42
	-----		3500.0	42590	20 MHz/QPSK	50	24	1	22.42	0.270	0.31
	-----	Side C	3500.0	42590	20 MHz/QPSK	1	49	0	22.96	0.264	0.34
	-----		3500.0	42590	20 MHz/QPSK	50	24	1	22.42	0.218	0.25
	-----	Side D	3500.0	42590	20 MHz/QPSK	1	49	0	22.96	0.0894	0.11
	-----		3500.0	42590	20 MHz/QPSK	50	24	1	22.42	0.0784	0.09
	-----	Side E	3500.0	42590	20 MHz/QPSK	1	49	0	22.96	0.0723	0.09
	-----		3500.0	42590	20 MHz/QPSK	50	24	1	22.42	0.0590	0.07

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05 v02r05 clause 5.4. TDD is tested at the highest duty factor using UL-DL configuration 1 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05 v02r05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4. A duty cycle of 1:1.58 is the highest duty cycle achievable which was used for testing Band 42.

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SAR Data Summary – 3600 MHz Body – LTE Band 48

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power	Measured SAR	Reported SAR
			MHz	Ch.					(dBm)	(W/kg)	(W/kg)
10 mm	19	Side A	3625	55990	20 MHz/QPSK	1	49	0	23.6	0.319	0.35
	-----		3625	55990	20 MHz/QPSK	50	24	1	23.1	0.285	0.35
	-----	Side C	3625	55990	20 MHz/QPSK	1	49	0	23.6	0.269	0.30
	-----		3625	55990	20 MHz/QPSK	50	24	1	23.1	0.224	0.28
	-----	Side D	3625	55990	20 MHz/QPSK	1	49	0	23.6	0.112	0.12
	-----		3625	55990	20 MHz/QPSK	50	24	1	23.1	0.0897	0.11
	-----	Side E	3625	55990	20 MHz/QPSK	1	49	0	23.6	0.104	0.11
	-----		3625	55990	20 MHz/QPSK	50	24	1	23.1	0.0856	0.11

Body
1.6 W/kg (mW/g)
averaged over 1 gram

6. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
7. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
8. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
9. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
10. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

LTE TDD testing is performed using the SAR test guidance provided in FCC KDB 941225 D05 v02r05 clause 5.4. TDD is tested at the highest duty factor using UL-DL configuration 1 with special subframe configuration 6 and applying the FDD LTE procedures in KDB 941225 D05 v02r05. SAR testing is performed using the extended cyclic prefix listed in 3GPP TS 36.211 Section 4. A duty cycle of 1:1.58 is the highest duty cycle achievable which was used for testing Band 48.

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SAR Data Summary – 2450 MHz Body 802.11b

MEASUREMENT RESULTS

Gap	Plot	Position	Frequency		Modulation	Antenna	End Power	Measured SAR	Reported SAR
			MHz	Ch.			(dBm)	(W/kg)	(W/kg)
10 mm	-----	Side A	2437	6	DSSS	Tx0	17.7	0.148	0.16
	-----	Side B	2437	6	DSSS		17.7	0.148	0.16
	-----	Side C	2437	6	DSSS		17.7	0.126	0.14
	-----	Side F	2437	6	DSSS		17.7	0.0471	0.05
	20	Side A	2437	6	DSSS	Tx1	17.1	0.257	0.32
	-----	Side C	2437	6	DSSS		17.1	0.168	0.21
	-----	Side D	2437	6	DSSS		17.1	0.169	0.21
	-----	Side F	2437	6	DSSS		17.1	0.0555	0.07

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 5200 MHz Body 802.11a

MEASUREMENT RESULTS

Gap	Plot	Position	Frequency		Modulation	Antenna	End Power	Measured SAR	Reported SAR
			MHz	Ch.			(dBm)	(W/kg)	(W/kg)
10 mm	-----	Side A	5220	44	OFDM	Tx0	11.0	0.150	0.19
	21	Side B	5200	40	OFDM		11.1	0.547	0.67
	-----		5220	44	OFDM		11.0	0.479	0.60
	-----	Side C	5220	44	OFDM		11.0	0.092	0.12
	-----	Side F	5220	44	OFDM		11.0	0.00933	0.01
	-----	Side A	5220	44	OFDM	Tx1	11.0	0.0716	0.09
	-----	Side C	5220	44	OFDM		11.0	0.0489	0.06
	-----	Side D	5220	44	OFDM		11.0	0.236	0.30
	-----	Side F	5220	44	OFDM		11.0	0.00575	0.01

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – 5800 MHz Body 802.11a

MEASUREMENT RESULTS

Gap	Plot	Position	Frequency		Modulation	Antenna	End Power	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.			(dBm)		
10 mm	-----	Side A	5785	157	OFDM	Tx0	19.8	0.926	0.97
	-----		5825	165	OFDM		19.9	0.838	0.86
	-----	Side B	5745	149	OFDM		19.9	1.15	1.18
	22		5785	157	OFDM		19.8	1.36	1.42
	-----		5825	165	OFDM		19.9	1.25	1.28
	-----	Side C	5785	157	OFDM		19.8	0.546	0.57
	-----		5825	165	OFDM		19.9	0.519	0.53
	-----	Side D	5785	157	OFDM		19.8	0.137	0.14
	-----	Side E	5785	157	OFDM		19.8	0.116	0.12
	-----	Side F	5785	157	OFDM		19.8	0.147	0.15
	-----	Side A	5785	157	OFDM	Tx1	17.6	0.695	0.76
	-----		5825	165	OFDM		17.8	0.635	0.66
	-----	Side B	5785	157	OFDM		17.6	0.102	0.11
	-----	Side C	5785	157	OFDM		17.6	0.300	0.33
	-----	Side D	5745	149	OFDM		17.7	1.12	1.20
	-----		5785	157	OFDM		17.6	1.29	1.41
	-----		5825	165	OFDM		17.8	1.26	1.32
	-----	Side E	5785	157	OFDM		17.6	0.0687	0.08
	-----	Side F	5785	157	OFDM		17.6	0.0559	0.06
	-----	Repeat	5785	157	OFDM	Tx0	19.8	1.34	1.40

Body
1.6 W/kg (mW/g)
averaged over 1 gram

1. Battery is fully charged for all tests.
   Power Measured ☒Conducted ☐ERP ☐EIRP
2. SAR Measurement
   Phantom Configuration ☐Left Head ☒Eli4 ☐Right Head
   SAR Configuration ☐Head ☒Body
3. Test Signal Call Mode ☒Test Code ☐Base Station Simulator
4. Test Configuration ☐With Belt Clip ☐Without Belt Clip ☒N/A
5. Tissue Depth is at least 15.0 cm

Jay M. Moulton
Vice President

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SAR Data Summary – Simultaneous Transmit (Worst Case) Ant 0 – WiFi

MEASUREMENT RESULTS								
Side	Frequency (WLAN)		Frequency (WWAN)		WWAN Technology	SAR (W/kg) WLAN	SAR (W/kg) WWAN	Total SAR (W/kg)
	MHz	Ch.	MHz	Ch.				
A	5785	157	1882.5	26365	LTE Band 25	0.97	1.34	2.31
B	5785	157	1732.6	1413	WCDMA Band 4	1.41	0.79	2.20
C	5785	157	1882.5	26365	LTE Band 25	0.57	1.12	1.69
D	5785	157	782.0	23230	LTE Band 13	1.41	0.32	1.73
E	5785	157	1720.0	132072	LTE Band 66	0.12	1.24	1.36
F	5785	157	Estimated			0.15	0.48	0.63
					Body 1.6 W/kg (mW/g) averaged over 1 gram			

The worst case condition is Side A. The WWAN and WLAN antennas are a minimum of 80 mm apart. Using the highest reported SAR to calculate the simultaneous Tx using peak separation ratio, the highest ratio would be 0.04 which meets the requirements of KDB 447498 section 4.3.2 3) on page 13. The calculation is shown below.

Simultaneous Separation Ratio Calculation

$(SAR_1 + SAR_2)^{1.5}/R_i \leq 0.04$ rounded to two digits

$(0.97 + 1.34)^{1.5}/80 = 0.04$

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SAR Data Summary – Simultaneous Transmit (Worst Case) Ant 2 – WiFi

MEASUREMENT RESULTS								
Side	Frequency (WLAN)		Frequency (WWAN)		WWAN Technology	SAR (W/kg) WLAN	SAR (W/kg) WWAN	Total SAR (W/kg)
	MHz	Ch.	MHz	Ch.				
A	5785	157	2535.0	21100	LTE Band 7	0.97	1.44	2.41
B	5785	157	2535.0	21100	LTE Band 7	1.41	0.17	1.58
C	5785	157	2535.0	21100	LTE Band 7	0.57	0.85	1.42
D	5785	157	2535.0	21100	LTE Band 7	1.41	1.01	2.42
E	5785	157	2535.0	21100	LTE Band 7	0.12	0.14	0.26
F	5785	157	Estimated			0.15	0.40	0.55
					Body 1.6 W/kg (mW/g) averaged over 1 gram			

The worst case condition is Side A. The WWAN and WLAN antennas are a minimum of 85 mm apart. Using the highest reported SAR to calculate the simultaneous Tx using peak separation ratio, the highest ratio would be 0.04 which meets the requirements of KDB 447498 section 4.3.2 3) on page 13. The calculation is shown below.

Simultaneous Separation Ratio Calculation

$(SAR_1 + SAR_2)^{1.5}/R_i \leq 0.04$ rounded to two digits

$(0.97 + 1.44)^{1.5}/85 = 0.04$

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SAR Data Summary – Simultaneous Transmit (Worst Case) Ant 4 – WiFi

MEASUREMENT RESULTS								
Side	Frequency (WLAN)		Frequency (WWAN)		WWAN Technology	SAR (W/kg) WLAN	SAR (W/kg) WWAN	Total SAR (W/kg)
	MHz	Ch.	MHz	Ch.				
A	5785	157	3500.0	42590	LTE Band 42	0.97	0.42	1.39
B	5785	157	Estimated			1.41	0.40	1.81
C	5785	157	3500.0	42590	LTE Band 42	0.57	0.34	0.91
D	5785	157	3625.0	55990	LTE Band 48	1.41	0.12	1.53
E	5785	157	3625.0	55990	LTE Band 48	0.12	0.11	0.23
F	5785	157	Estimated			0.15	0.40	0.55

Body 1.6 W/kg (mW/g) averaged over 1 gram

The worst case condition is Side B. The WWAN and WLAN antennas are a minimum of 76 mm apart. Using the highest reported SAR to calculate the simultaneous Tx using peak separation ratio, the highest ratio would be 0.03 which meets the requirements of KDB 447498 section 4.3.2 3) on page 13. The calculation is shown below.

Simultaneous Separation Ratio Calculation

$(SAR_1 + SAR_2)^{1.5}/R_i \leq 0.04$ rounded to two digits

$(1.41 + 0.40)^{1.5}/76 = 0.03$

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SAR Data Summary – Simultaneous Transmit (Uplink CA)

The volume scan was conducted for the two highest channels for all the uplink configurations on Side A of the device. The worst case SAR combined value for the Uplink CA is 1.46 W/kg. See plots 23 and 24 in Appendix B for the data sheets.

1st Band	2nd Band	1st Band Conducted Power	2nd Band Conducted Power	1st Band Channel	2nd Band Channel	SAR Volume Scan Sum	Scaled SAR
B2	B13	23.1 dBm	23.6 dBm	19100	23230	1.18	1.45
B66	B13	22.9 dBm	23.6 dBm	132072	23230	1.13	1.46

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11. Test Equipment List

Table 11.1 Equipment Specifications

Type	Calibration Due Date	Calibration Done Date	Serial Number
Staubli Robot TX60L	N/A	N/A	F07/55M6A1/A/01
Measurement Controller CS8c	N/A	N/A	1012
ELI5 Flat Phantom	N/A	N/A	2037
Device Holder	N/A	N/A	N/A
Data Acquisition Electronics 4	01/10/2019	01/10/2018	1321
Data Acquisition Electronics 4	01/10/2020	01/10/2019	1321
SPEAG E-Field Probe EX3DV4	08/18/2018	08/18/2017	3693
SPEAG E-Field Probe EX3DV4	04/20/2019	04/20/2018	3662
Speag Validation Dipole D750V2	08/10/2018	08/10/2015	1053
Speag Validation Dipole D750V2	07/13/2019	07/13/2018	1016
Speag Validation Dipole D835V2	08/10/2018	08/10/2015	4d131
Speag Validation Dipole D835V2	07/13/2019	07/13/2018	4d089
Speag Validation Dipole D1750V2	08/13/2018	08/13/2015	1061
Speag Validation Dipole D1750V2	07/20/2019	07/20/2018	1018
Speag Validation Dipole D1900V2	08/13/2019	08/13/2015	5d147
Speag Validation Dipole D1900V2	07/13/2018	07/13/2018	5d116
Speag Validation Dipole D2300V2	08/20/2019	08/20/2018	1060
Speag Validation Dipole D2450V2	08/10/2016	08/10/2015	881
Speag Validation Dipole D2550V2	08/10/2018	08/10/2015	1003
Speag Validation Dipole D2550V2	07/12/2020	07/12/2018	1003
Speag Validation Dipole D3500V2	04/13/2019	04/13/2018	1061
Speag Validation Dipole D3700V2	04/13/2019	04/13/2018	1024
Speag Validation Dipole D5GHzV2	08/11/2018	08/11/2015	1119
Agilent N1911A Power Meter	05/20/2019	03/20/2017	GB45100254
Agilent N1922A Power Sensor	06/21/2019	06/21/2017	MY45240464
Advantest R3261A Spectrum Analyzer	03/26/2019	03/20/2017	31720068
Agilent (HP) 8350B Signal Generator	03/26/2019	03/20/2017	2749A10226
Agilent (HP) 83525A RF Plug-In	03/26/2019	03/20/2017	2647A01172
Agilent (HP) 8753C Vector Network Analyzer	03/26/2019	03/20/2017	3135A01724
Agilent (HP) 85047A S-Parameter Test Set	03/26/2019	03/20/2017	2904A00595
Agilent (HP) 8960 Base Station Sim.	03/30/2019	03/30/2017	MY48360364
Anritsu MT8820C	07/27/2019	07/27/2017	6201176199
Agilent N1911A Power Meter	04/27/2020	04/27/2019	GB45100254
Agilent N1922A Power Sensor	04/27/2020	04/27/2019	MY45240464
Advantest R3261A Spectrum Analyzer	03/25/2020	03/25/2019	31720068
Agilent (HP) 8350B Signal Generator	03/20/2020	03/20/2019	2749A10226
Agilent (HP) 83525A RF Plug-In	03/20/2020	03/20/2019	2647A01172
Agilent (HP) 8753C Vector Network Analyzer	03/20/2020	03/20/2019	3135A01724
Agilent (HP) 85047A S-Parameter Test Set	03/20/2020	03/20/2019	2904A00595
Agilent (HP) 8960 Base Station Sim.	03/19/2020	03/19/2019	MY48360364
Anritsu MT8820C	01/26/2020	01/26/2019	6201176199
Agilent 778D Dual Directional Coupler	N/A	N/A	MY48220184
MiniCircuits BW-N20W5+ Fixed 20 dB Attenuator	N/A	N/A	N/A
MiniCircuits SPL-10.7+ Low Pass Filter	N/A	N/A	R8979513746
Aprel Dielectric Probe Assembly	N/A	N/A	0011
Body Equivalent Matter (750 MHz)	N/A	N/A	N/A
Body Equivalent Matter (835 MHz)	N/A	N/A	N/A
Body Equivalent Matter (1750 MHz)	N/A	N/A	N/A
Body Equivalent Matter (1900 MHz)	N/A	N/A	N/A
Body Equivalent Matter (2450 MHz)	N/A	N/A	N/A
Body Equivalent Matter (2550 MHz)	N/A	N/A	N/A
Body Equivalent Matter (3-5 GHz)	N/A	N/A	N/A

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12. Conclusion

The SAR measurement indicates that the EUT complies with the RF radiation exposure limits of the FCC/IC. These measurements are taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The tested device complies with the requirements in respect to all parameters subject to the test. The test results and statements relate only to the item(s) tested.

Please note that the absorption and distribution of electromagnetic energy in the body is a very complex phenomena that depends on the mass, shape, and size of the body; the orientation of the body with respect to the field vectors; and, the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because innumerable factors may interact to determine the specific biological outcome of an exposure to electromagnetic fields, any protection guide shall consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

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13. References

[1] Federal Communications Commission, ET Docket 93-62, Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation, August 1996

[2] ANSI/IEEE C95.1 – 1992, American National Standard Safety Levels with respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300kHz to 100GHz, New York: IEEE, 1992.

[3] ANSI/IEEE C95.3 – 2002, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave, New York: IEEE, 2002.

[4] International Electrotechnical Commission, IEC 62209-2 (Edition 1.0), Human Exposure to radio frequency fields from hand-held and body mounted wireless communication devices – Human models, instrumentation, and procedures – Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz), March 2010.

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[7] Health Canada, Safety Code 6, Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3kHz to 300 GHz, 2009.

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Appendix A – System Validation Plots and Data

```
**********************************************************
Test Result for UIM Dielectric Parameter
Wed 06/Jun/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
**********************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
0.7000       55.73  0.96   55.72  0.97
0.7100       55.69  0.96   55.69  0.98
0.7200       55.65  0.96   55.66  0.98
0.7300       55.61  0.96   55.63  0.98
0.7400       55.57  0.96   55.60  0.99
0.7500       55.53  0.96   55.57  0.99
0.7600       55.49  0.96   55.54  0.99
0.7700       55.45  0.96   55.50  1.00
0.7800       55.41  0.97   55.46  1.00
0.7820       55.404 0.97   55.452 1.00*
0.7900       55.38  0.97   55.42  1.00
0.7930       55.368 0.97   55.408 1.003*
0.8000       55.34  0.97   55.38  1.01

* value interpolated

**********************************************************
Test Result for UIM Dielectric Parameter
Thu 26/Jul/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
**********************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
0.7000       55.73  0.96   55.59  0.95
0.7100       55.69  0.96   55.55  0.96
0.7200       55.65  0.96   55.51  0.96
0.7300       55.61  0.96   55.46  0.97
0.7400       55.57  0.96   55.42  0.97
0.7500       55.53  0.96   55.38  0.98
0.7600       55.49  0.96   55.33  0.98
0.7700       55.45  0.96   55.29  0.99
0.7800       55.41  0.97   55.25  0.99
0.7820       55.404 0.97   55.24  0.992*
0.7900       55.38  0.97   55.20  1.00
0.8000       55.34  0.97   55.16  1.00

* value interpolated
```


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```
************************************************************
Test Result for UIM Dielectric Parameter
Tue 19/Feb/2019
Freq   Frequency(GHz)
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
0.7000       55.73  0.96   55.53  0.97
0.7040       55.714 0.96   55.518 0.974*
0.7075       55.70  0.96   55.508 0.978*
0.7100       55.69  0.96   55.50  0.98
0.7110       55.686 0.96   55.497 0.98*
0.7200       55.65  0.96   55.47  0.98
0.7300       55.61  0.96   55.44  0.98
0.7400       55.57  0.96   55.41  0.99
0.7500       55.53  0.96   55.38  0.99
0.7600       55.49  0.96   55.35  0.99
0.7700       55.45  0.96   55.31  1.00
0.7800       55.41  0.97   55.37  1.00
0.7900       55.38  0.97   55.33  1.00
0.8000       55.34  0.97   55.29  1.01

* value interpolated


************************************************************
Test Result for UIM Dielectric Parameter
Fri 01/Jun/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
0.8050       55.32  0.97   56.05  0.96
0.8150       55.28  0.97   56.00  0.98
0.8250       55.24  0.97   55.95  0.98
0.8264       55.234 0.97   55.944 0.981*
0.8290       55.24  0.97   55.934 0.984*
0.8350       55.20  0.97   55.91  0.99
0.8355       55.199 0.971  55.908 0.99*
0.8366       55.195 0.972  55.902 0.99*
0.8440       55.173 0.979  55.865 0.99*
0.8450       55.17  0.98   55.86  0.99
0.8466       55.165 0.982  55.857 0.992*
0.8550       55.14  0.99   55.84  1.00
0.8650       55.11  1.01   55.80  1.01
0.8750       55.08  1.02   55.78  1.03
0.8850       55.05  1.03   55.73  1.03
0.8950       55.02  1.04   55.70  1.04

* value interpolated
```


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```
************************************************************
Test Result for UIM Dielectric Parameter
Mon 18/Feb/2019
Freq   Frequency(GHz)
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
0.8050       55.32  0.97   54.87  0.98
0.8150       55.28  0.97   54.82  0.98
0.8215       55.254 0.97   54.788 0.987*
0.8250       55.24  0.97   54.77  0.99
0.8315       55.214 0.97   54.744 0.99*
0.8350       55.20  0.97   54.73  0.99
0.8415       55.181 0.977  54.707 0.993*
0.8550       55.14  0.99   54.66  1.00
0.8650       55.11  1.01   54.62  1.01
0.8750       55.08  1.02   54.60  1.02
0.8850       55.05  1.03   54.55  1.03
0.8950       55.02  1.04   54.52  1.05

* value interpolated


************************************************************
Test Result for UIM Dielectric Parameter
Tue 05/Jun/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
1.7100       53.53  1.47   53.55  1.48
1.7200       53.51  1.47   53.52  1.49
1.7300       53.48  1.48   53.38  1.50
1.7400       53.46  1.48   53.36  1.51
1.7450       53.445 1.485  53.34  1.515*
1.7500       53.43  1.49   53.32  1.52
1.7600       53.41  1.49   53.30  1.53
1.7700       53.38  1.50   53.27  1.55
1.7800       53.35  1.51   53.23  1.55

* value interpolated
```


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************************************************************
Test Result for UIM Dielectric Parameter
Thu 26/Jul/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
1.7100       53.53  1.47   53.39  1.47
1.7200       53.51  1.47   53.36  1.48
1.7300       53.48  1.48   53.32  1.49
1.7400       53.46  1.48   53.29  1.50
1.7450       53.445 1.485  53.28  1.505*
1.7500       53.43  1.49   53.27  1.51
1.7600       53.41  1.49   53.25  1.52
1.7700       53.38  1.50   53.22  1.53
1.7800       53.35  1.51   53.20  1.54

* value interpolated


************************************************************
Test Result for UIM Dielectric Parameter
Thu 21/Feb/2019
Freq   Frequency(GHz)
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
1.7100       53.53  1.47   52.81  1.49
1.7124       53.525 1.47   52.803 1.492*
1.7200       53.51  1.47   52.78  1.50
1.7300       53.48  1.48   52.74  1.51
1.7326       53.475 1.48   52.735 1.513*
1.7400       53.46  1.48   52.72  1.52
1.7500       53.43  1.49   52.68  1.53
1.7526       53.425 1.49   52.675 1.533*
1.7600       53.41  1.49   52.66  1.54
1.7700       53.38  1.50   52.63  1.55
1.7800       53.35  1.51   52.59  1.56

* value interpolated
```


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```
************************************************************
Test Result for UIM Dielectric Parameter
Thu 31/May/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
1.8400       53.30  1.52   52.04  1.43
1.8500       53.30  1.52   52.03  1.44
1.8524       53.30  1.52   52.03  1.44*
1.8600       53.30  1.52   52.03  1.44
1.8700       53.30  1.52   52.14  1.45
1.8800       53.30  1.52   52.10  1.45
1.8900       53.30  1.52   52.17  1.46
1.9000       53.30  1.52   52.07  1.47
1.9076       53.30  1.52   52.108 1.493*
1.9100       53.30  1.52   52.12  1.50
1.9200       53.30  1.52   52.00  1.50

* value interpolated

************************************************************
Test Result for UIM Dielectric Parameter
Thu 26/Jul/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
1.8500       53.30  1.52   53.27  1.49
1.8600       53.30  1.52   53.25  1.50
1.8700       53.30  1.52   53.23  1.51
1.8800       53.30  1.52   53.21  1.52
1.8900       53.30  1.52   53.19  1.53
1.9000       53.30  1.52   53.17  1.54
1.9100       53.30  1.52   53.15  1.55
1.9200       53.30  1.52   53.14  1.57
1.9300       53.30  1.52   53.12  1.58

* value interpolated
```


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```
************************************************************
Test Result for UIM Dielectric Parameter
Wed 27/Feb/2019
Freq   Frequency(GHz)
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
1.8400       53.30  1.52   52.42  1.53
1.8500       53.30  1.52   52.41  1.54
1.8600       53.30  1.52   52.40  1.54
1.8700       53.30  1.52   52.38  1.55
1.8800       53.30  1.52   52.36  1.55
1.8825       53.30  1.52   52.355 1.553*
1.8900       53.30  1.52   52.34  1.56
1.9000       53.30  1.52   52.31  1.56
1.9050       53.30  1.52   52.30  1.565*
1.9100       53.30  1.52   52.29  1.57
1.9200       53.30  1.52   52.27  1.57

* value interpolated


************************************************************
Test Result for UIM Dielectric Parameter
Thu 14/Feb/2019
Freq   Frequency(GHz)
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
2.2900       52.91  1.80   52.65  1.83
2.3000       52.90  1.81   52.63  1.84
2.3100       52.89  1.82   52.61  1.85
2.3200       52.87  1.83   52.59  1.86
2.3300       52.86  1.84   52.58  1.87
2.3400       52.85  1.84   52.56  1.88
2.3500       52.83  1.85   52.54  1.89
2.3600       52.82  1.86   52.52  1.89
2.3700       52.81  1.87   52.50  1.90
2.3800       52.79  1.88   52.48  1.91
2.3900       52.78  1.88   52.47  1.92
2.4000       52.77  1.89   52.45  1.93
```


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```
************************************************************
Test Result for UIM Dielectric Parameter
Mon 02/Jul/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
2.4100       52.75  1.91   52.85  1.88
2.4120       52.748 1.912  52.846 1.882*
2.4200       52.74  1.92   52.83  1.89
2.4300       52.73  1.93   52.81  1.90
2.4370       52.716 1.937  52.796 1.907*
2.4400       52.71  1.94   52.79  1.91
2.4500       52.70  1.95   52.77  1.92
2.4600       52.69  1.96   52.75  1.93
2.4620       52.686 1.964  52.746 1.932*
2.4700       52.67  1.98   52.73  1.94
2.4800       52.66  1.99   52.71  1.95

* value interpolated


************************************************************
Test Result for UIM Dielectric Parameter
Mon 09/Jul/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
Freq         FCC_eB FCC_sB Test_e Test_s
2.4900       52.65  2.01   52.60  2.02
2.5000       52.64  2.02   52.58  2.03
2.5100       52.62  2.04   52.55  2.05
2.5200       52.61  2.05   52.52  2.07
2.5300       52.60  2.06   52.50  2.09
2.5350       52.595 2.07   52.495 2.10*
2.5400       52.59  2.08   52.49  2.11
2.5500       52.57  2.09   52.47  2.12
2.5600       52.56  2.11   52.45  2.14
2.5700       52.55  2.12   52.43  2.16
2.5800       52.53  2.13   52.42  2.17
2.5900       52.52  2.15   52.39  2.19
2.6000       52.51  2.16   52.38  2.21

* value interpolated
```


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```
**********************************************************
Test Result for UIM Dielectric Parameter
Mon 25/Feb/2019
Freq   Frequency(GHz)
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
**********************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
2.4900	52.65	2.01	52.31	2.01
2.5000	52.64	2.02	52.29	2.02
2.5060	52.628	2.032	52.272	2.032*
2.5100	52.62	2.04	52.26	2.04
2.5200	52.61	2.05	52.23	2.06
2.5300	52.60	2.06	52.21	2.08
2.5400	52.59	2.08	52.20	2.10
2.5445	52.581	2.085	52.191	2.105*
2.5500	52.57	2.09	52.18	2.11
2.5600	52.56	2.11	52.16	2.13
2.5700	52.55	2.12	52.14	2.15
2.5800	52.53	2.13	52.13	2.16
2.5900	52.52	2.15	52.10	2.18
2.5930	52.517	2.153	52.097	2.186*
2.6000	52.51	2.16	52.09	2.20
2.6100	52.50	2.18	52.06	2.21
2.6200	52.48	2.19	52.04	2.22
2.6300	52.47	2.21	52.03	2.24
2.6400	52.46	2.22	52.01	2.25
2.6415	52.459	2.222	52.009	2.252*
2.6500	52.45	2.23	52.00	2.26
2.6600	52.43	2.25	51.98	2.27
2.6700	52.42	2.26	51.96	2.28
2.6800	52.41	2.28	51.94	2.30
2.6900	52.39	2.29	51.91	2.31
2.7000	52.38	2.30	51.90	2.32
2.8000	52.37	2.31	51.88	2.33

* value interpolated

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```
**********************************************************
Test Result for UIM Dielectric Parameter
Mon 11/Jun/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
**********************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
3.4900	51.33	3.31	51.24	3.34
3.5000	51.32	3.32	51.23	3.35
3.5100	51.31	3.33	51.23	3.36
3.5200	51.29	3.34	51.22	3.37
3.5300	51.28	3.35	51.20	3.38
3.5400	51.27	3.36	51.19	3.39
3.5500	51.25	3.37	51.17	3.40
3.5600	51.24	3.38	51.15	3.41
3.5700	51.23	3.40	51.14	3.42
3.5800	51.21	3.41	51.12	3.43
3.5900	51.20	3.42	51.10	3.44
3.5925	51.198	3.423	51.098	3.445*
3.6000	51.19	3.43	51.09	3.46
3.6100	51.17	3.44	51.07	3.47
3.6200	51.16	3.45	51.05	3.48
3.6250	51.155	3.46	51.045	3.485*
3.6300	51.15	3.47	51.04	3.49
3.6400	51.13	3.48	51.02	3.50
3.6500	51.12	3.49	51.00	3.52
3.6575	51.105	3.498	50.993	3.528*
3.6600	51.10	3.50	50.99	3.53
3.6700	51.09	3.51	50.97	3.54
3.6800	51.08	3.52	50.96	3.55
3.6900	51.06	3.54	50.94	3.56
3.7000	51.05	3.55	50.92	3.57
3.7100	51.04	3.56	50.91	3.58

* value interpolated

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```
**********************************************************
Test Result for UIM Dielectric Parameter
Mon 25/Feb/2019
Freq   Frequency(GHz)
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
**********************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
3.3900	51.47	3.20	51.25	3.23
3.4000	51.45	3.21	51.23	3.24
3.4100	51.44	3.23	51.22	3.25
3.4200	51.43	3.24	51.21	3.26
3.4300	51.41	3.25	51.19	3.27
3.4400	51.40	3.26	51.18	3.28
3.4550	51.385	3.275	51.165	3.295*
3.4500	51.39	3.27	51.17	3.29
3.4600	51.37	3.28	51.16	3.30
3.4700	51.36	3.29	51.15	3.31
3.4800	51.35	3.30	51.13	3.32
3.4900	51.33	3.31	51.12	3.33
3.5000	51.32	3.32	51.11	3.34
3.5100	51.31	3.33	51.11	3.35
3.5200	51.29	3.34	51.10	3.36
3.5300	51.28	3.35	51.08	3.37
3.5400	51.27	3.36	51.07	3.38
3.5450	51.26	3.365	51.06	3.385*
3.5500	51.25	3.37	51.05	3.39
3.5600	51.24	3.38	51.03	3.40
3.5700	51.23	3.40	51.02	3.41
3.5800	51.21	3.41	51.00	3.42
3.5900	51.20	3.42	50.98	3.43
3.6000	51.19	3.43	50.97	3.44
3.6100	51.17	3.44	50.95	3.45

* value interpolated

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```
************************************************************
Test Result for UIM Dielectric Parameter
Thu 28/Jun/2018
Freq   Frequency(GHz)
FCC_eH Limits for Head Epsilon
FCC_sH Limits for Head Sigma
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
************************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
5.1000	49.15	5.18	49.22	5.10
5.1200	49.12	5.21	49.19	5.12
5.1400	49.10	5.23	49.16	5.14
5.1600	49.07	5.25	49.13	5.16
5.1800	49.04	5.28	49.10	5.19
5.2000	49.01	5.30	49.07	5.21
5.2100	49.00	5.31	49.055	5.22*
5.2200	48.99	5.32	49.04	5.23
5.2400	48.96	5.35	49.01	5.25
5.2600	48.93	5.37	48.98	5.28
5.2800	48.91	5.39	48.95	5.31
5.2900	48.895	5.405	48.935	5.32*
5.3000	48.88	5.42	48.92	5.33
5.3200	48.85	5.44	48.89	5.36
5.3400	48.82	5.46	48.86	5.38
5.3600	48.80	5.49	48.83	5.40
5.3800	48.77	5.51	48.80	5.43
5.4000	48.74	5.53	48.77	5.46
5.4200	48.72	5.56	48.74	5.49
5.4400	48.69	5.58	48.71	5.51
5.4600	48.66	5.60	48.68	5.53
5.4800	48.63	5.63	48.65	5.55
5.5000	48.61	5.65	48.62	5.58
5.5200	48.58	5.67	48.59	5.61
5.5400	48.55	5.70	48.56	5.64
5.5600	48.53	5.72	48.53	5.67
5.5800	48.50	5.74	48.50	5.70
5.6000	48.47	5.77	48.47	5.73
5.6200	48.44	5.79	48.44	5.75
5.6400	48.42	5.81	48.41	5.78
5.6600	48.39	5.84	48.38	5.81
5.6800	48.36	5.86	48.35	5.84
5.7000	48.34	5.88	48.32	5.86
5.7200	48.31	5.91	48.29	5.89
5.7400	48.28	5.93	48.26	5.91
5.7450	48.273	5.935	48.253	5.918*
5.7600	48.25	5.95	48.23	5.94
5.7750	48.235	5.973	48.208	5.963*
5.7800	48.23	5.98	48.20	5.97
5.7850	48.223	5.985	48.193	5.975*
5.8000	48.20	6.00	48.17	5.99
5.8200	48.17	6.02	48.14	6.02
5.8250	48.165	6.028	48.133	6.025*
5.8400	48.15	6.05	48.11	6.04

* value interpolated

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```
**********************************************************
Test Result for UIM Dielectric Parameter
Mon 09/Sep/2019
Freq   Frequency(GHz)
FCC_eB Limits for Body Epsilon
FCC_sB Limits for Body Sigma
Test_e Epsilon  of  UIM
Test_s Sigma of UIM
**********************************************************
```

Freq	FCC_eB	FCC_sB	Test_e	Test_s
2.5300	52.60	2.06	51.92	2.09
2.5400	52.59	2.08	51.91	2.11
2.5500	52.57	2.09	51.89	2.12
2.5600	52.56	2.11	51.87	2.14
2.5700	52.55	2.12	51.85	2.16
2.5800	52.53	2.13	51.84	2.17
2.5900	52.52	2.15	51.81	2.19
2.5950	52.515	2.155	51.805	2.20*
2.6000	52.51	2.16	51.80	2.21
2.6100	52.50	2.18	51.77	2.22
2.6200	52.48	2.19	51.75	2.25
2.6300	52.47	2.21	51.74	2.27
2.6400	52.46	2.22	51.72	2.29

* value interpolated

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RF Exposure Lab

Plot 1

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN:1053

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used: f = 750 MHz; σ = 0.99 S/m; ε_r = 55.57; ρ = 1000 kg/m^3
Phantom section: Flat Section

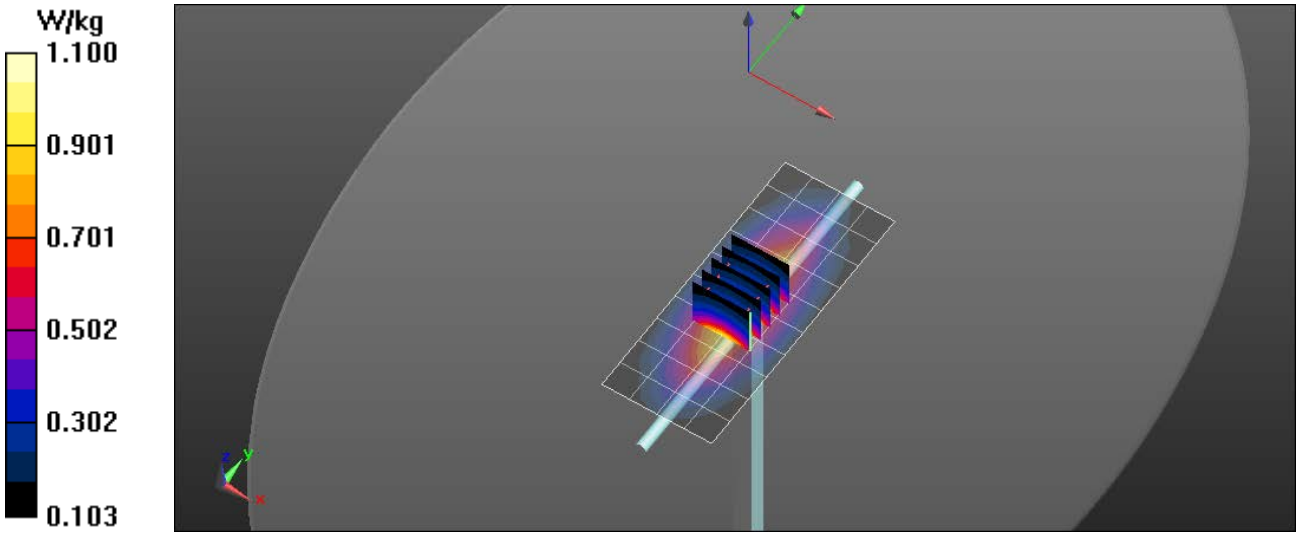
Test Date: Date: 6/6/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(9.62, 9.62, 9.62); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

750 MHz/Verification/Area Scan (5x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.08 W/kg

750 MHz/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.227 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.30 W/kg
SAR(1 g) = 0.865 W/kg; SAR(10 g) = 0.569 W/kg
Maximum value of SAR (measured) = 1.10 W/kg



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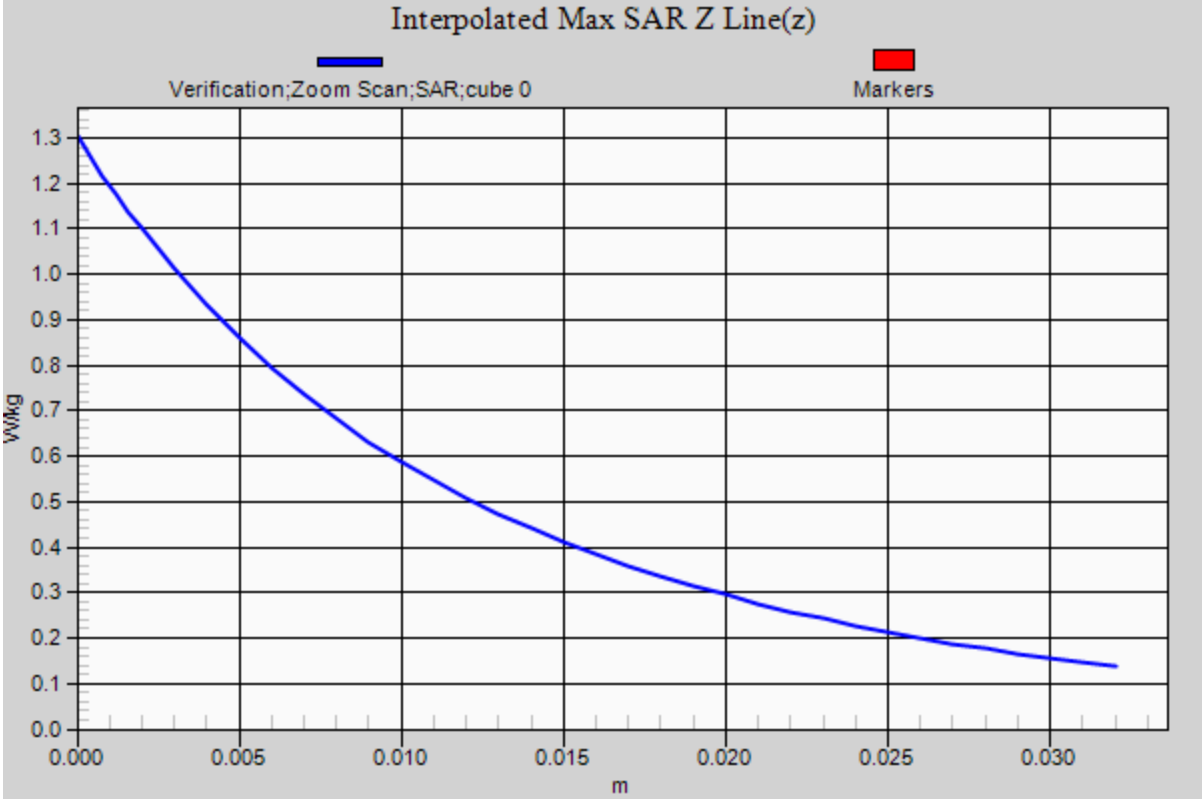

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Plot 2

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN:1053

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used: f = 750 MHz; σ = 0.98 S/m; ε_r = 55.38; ρ = 1000 kg/m^3
Phantom section: Flat Section

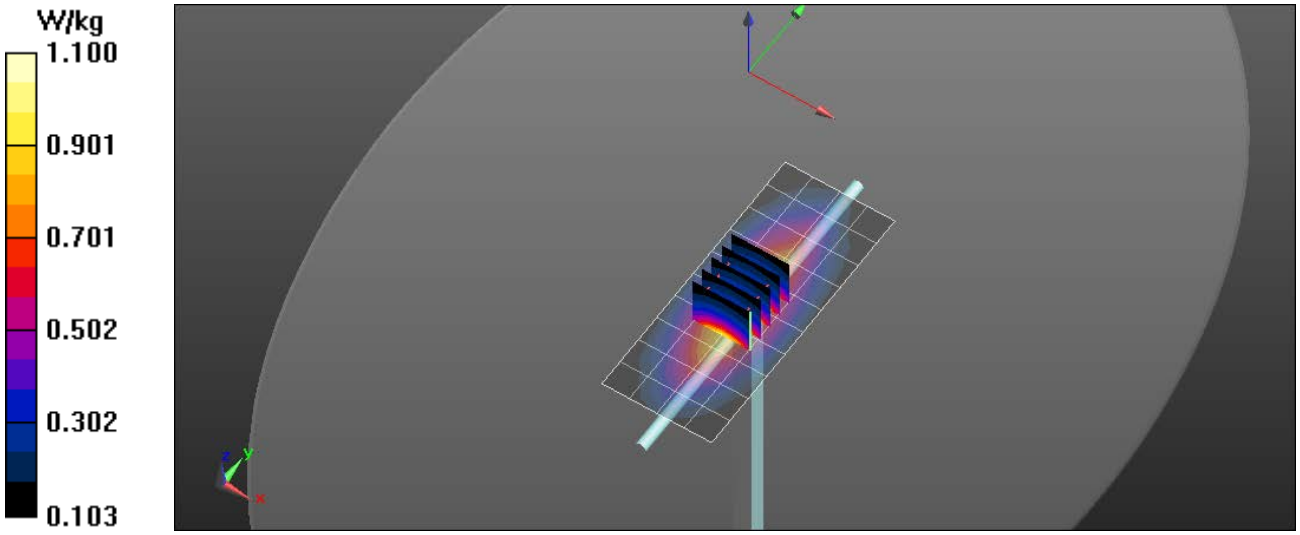
Test Date: Date: 7/26/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3693; ConvF(9.35, 9.35, 9.35); Calibrated: 8/18/2017;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/21/2017
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

750 MHz/Verification/Area Scan (5x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.09 W/kg

750 MHz/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.143 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.31 W/kg
P_{in}= 100 mW
SAR(1 g) = 0.852 W/kg; SAR(10 g) = 0.551 W/kg
Maximum value of SAR (measured) = 1.10 W/kg



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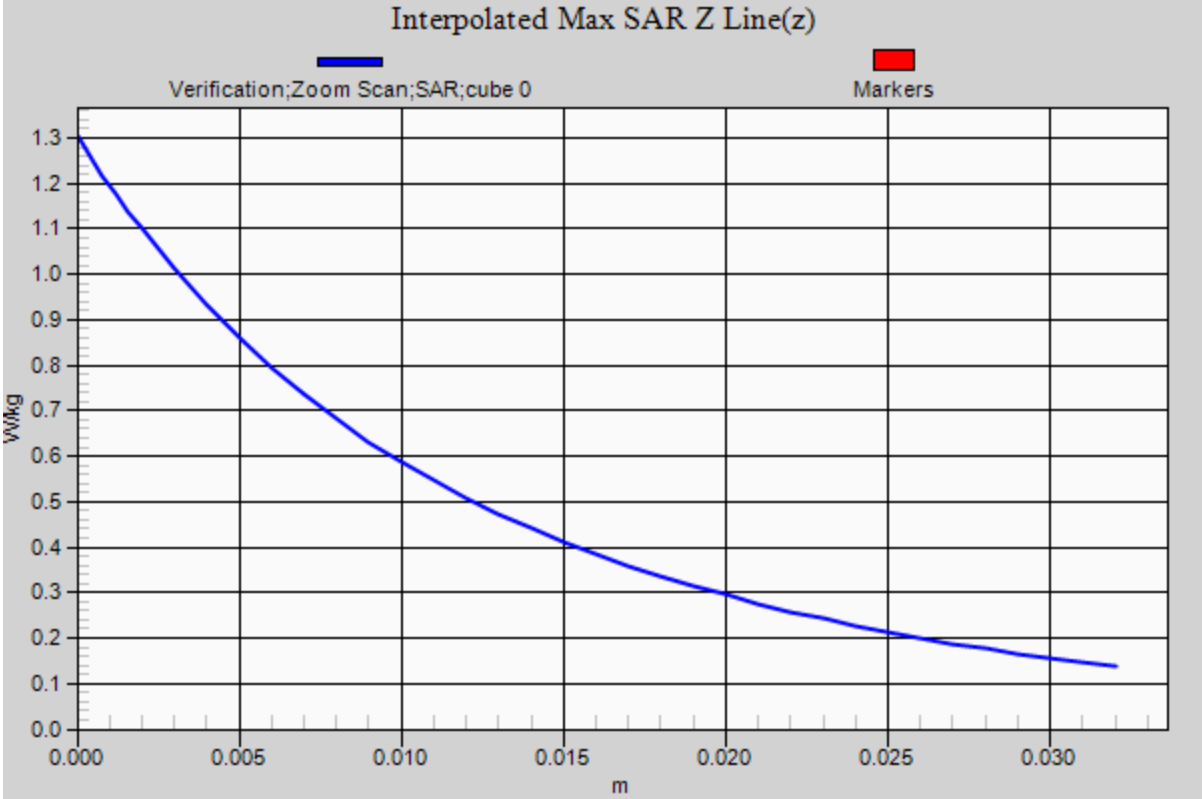

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Plot 3

DUT: Dipole 750 MHz D750V3; Type: D750V3; Serial: D750V3 - SN:1016

Communication System: CW; Frequency: 750 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used: f = 750 MHz; σ = 0.99 S/m; ε_r = 55.38; ρ = 1000 kg/m^3
Phantom section: Flat Section

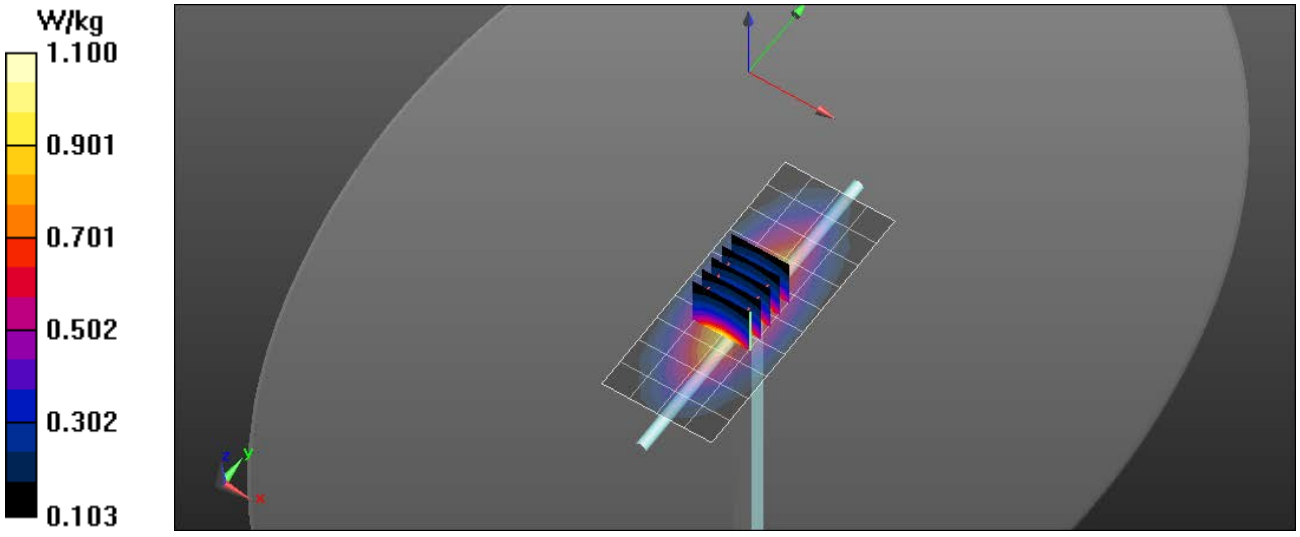
Test Date: Date: 2/19/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(9.62, 9.62, 9.62); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2019
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

750 MHz/Verification/Area Scan (5x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.05 W/kg

750 MHz/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.897 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 1.28 W/kg
SAR(1 g) = 0.859 W/kg; SAR(10 g) = 0.564 W/kg
Maximum value of SAR (measured) = 1.09 W/kg



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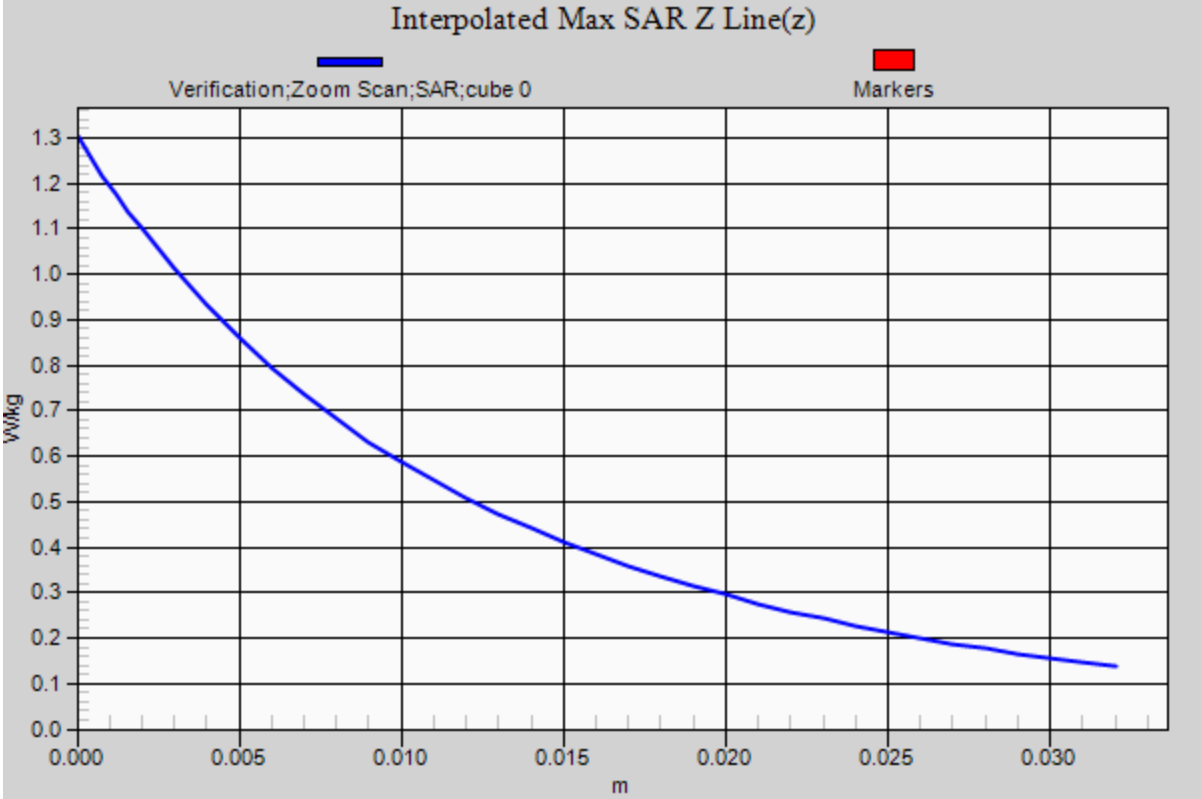

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Plot 4

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:4d131

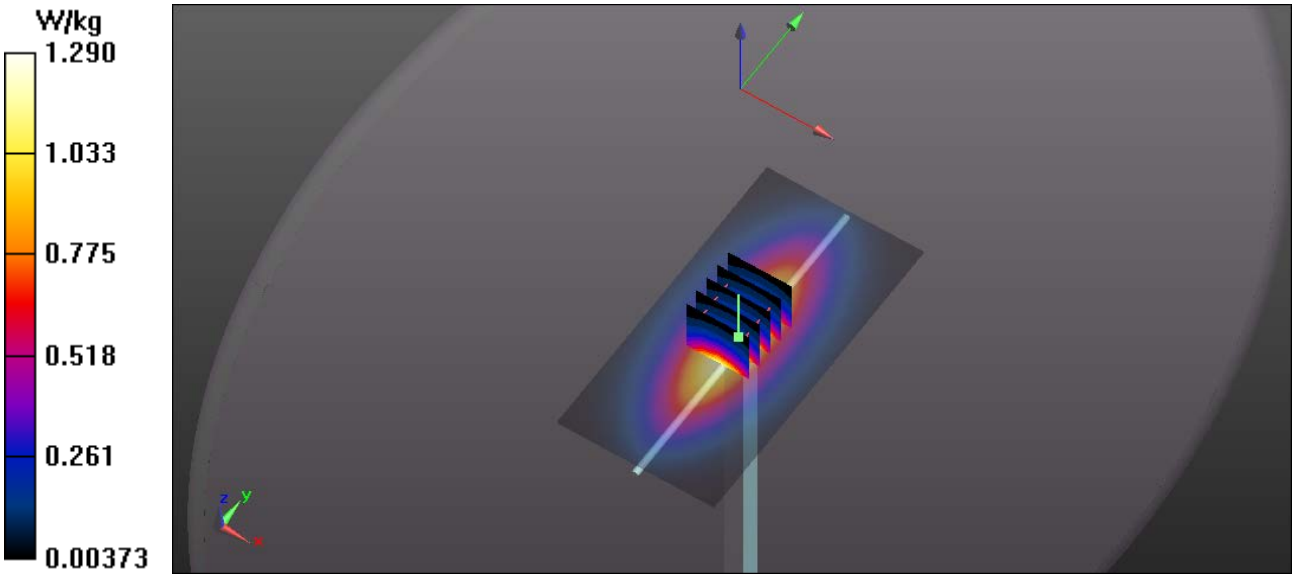
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: MSL835; Medium parameters used: f = 835 MHz; σ = 0.99 S/m; ε_r = 55.91; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/1/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(9.21, 9.21, 9.21); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

835 MHz Body/Verification/Area Scan (81x161x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.29 W/kg

835 MHz Body/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 52.612 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.47 W/kg
SAR(1 g) = 0.953 W/kg; SAR(10 g) = 0.632 W/kg
Maximum value of SAR (measured) = 1.29 W/kg



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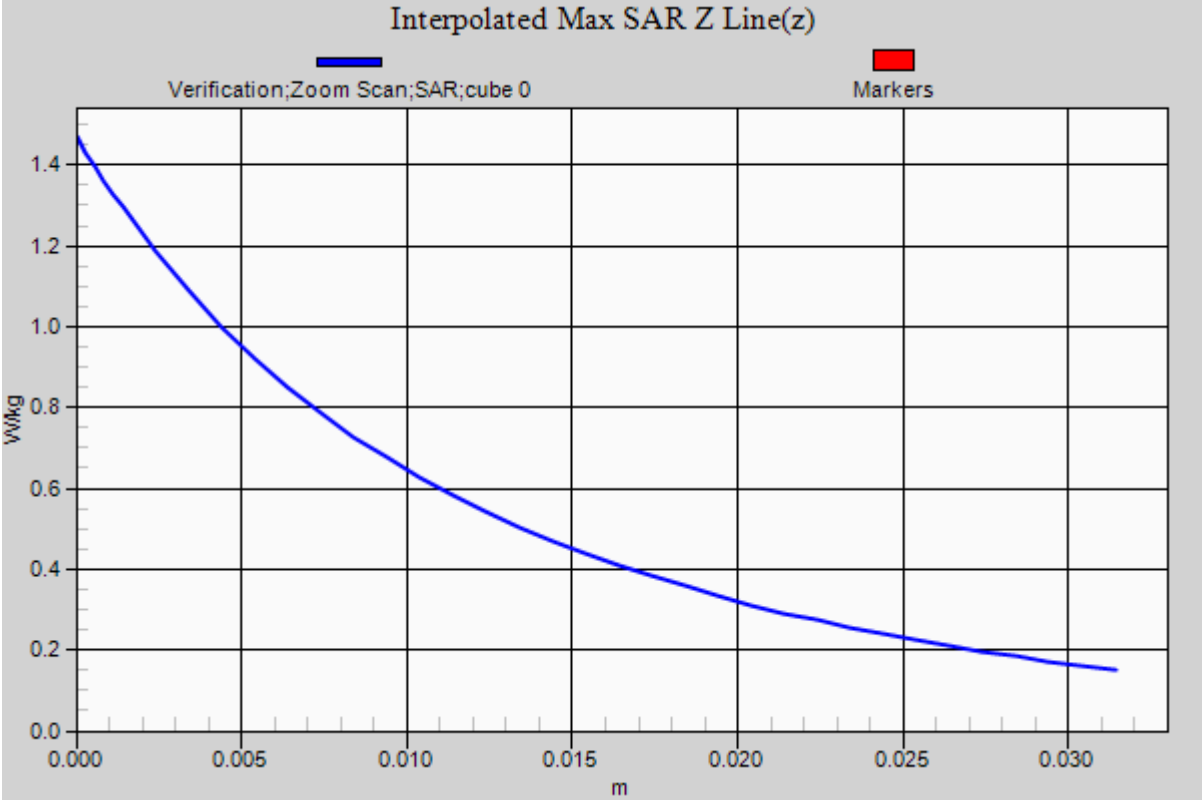

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Plot 5

DUT: Dipole 835 MHz D835V2; Type: D835V2; Serial: D835V2 - SN:4d089

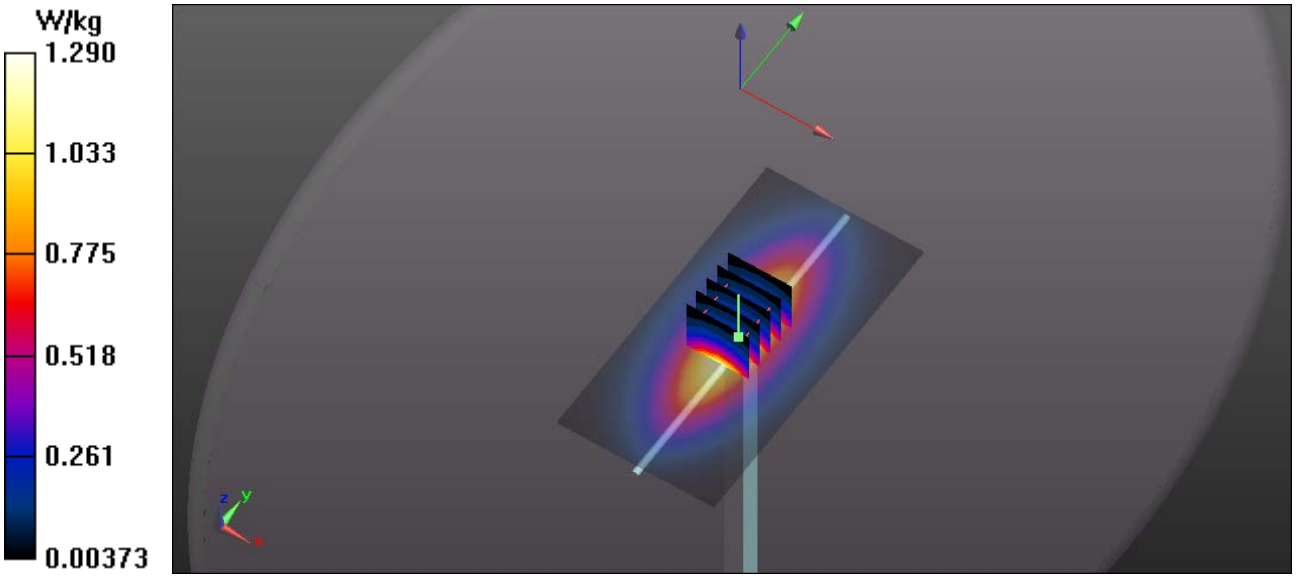
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
Medium: MSL835; Medium parameters used: f = 835 MHz; σ = 0.99 S/m; ε_r = 54.73; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/18/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(9.21, 9.21, 9.21); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2019
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

835 MHz Body/Verification/Area Scan (81x161x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.34 W/kg

835 MHz Body/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 53.568 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.49 W/kg
SAR(1 g) = 0.963 W/kg; SAR(10 g) = 0.637 W/kg
Maximum value of SAR (measured) = 1.30 W/kg



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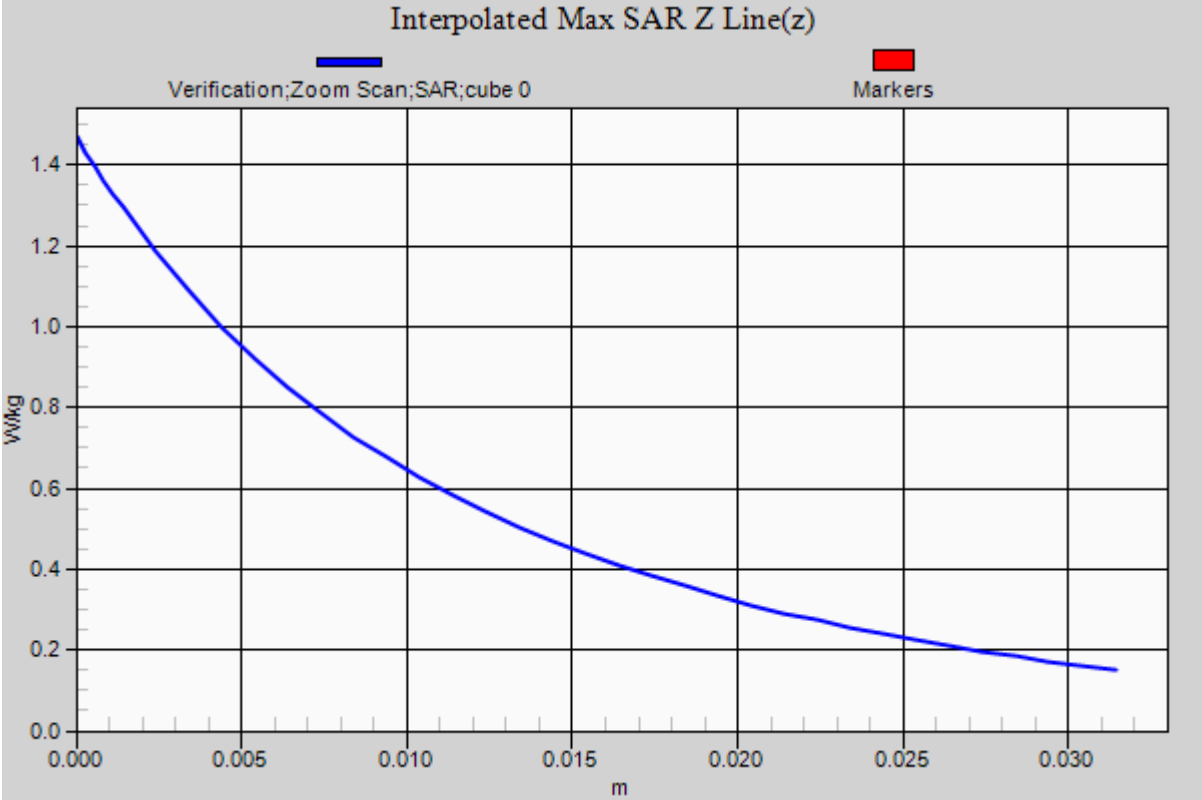

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Plot 6

DUT: Dipole 1750 MHz D1750V2; Type: D1750V2; Serial: D1750V2 - SN:1061

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: MSL1750; Medium parameters used: f = 1750 MHz; σ = 1.52 S/m; ε_r = 53.32; ρ = 1000 kg/m^3
Phantom section: Flat Section

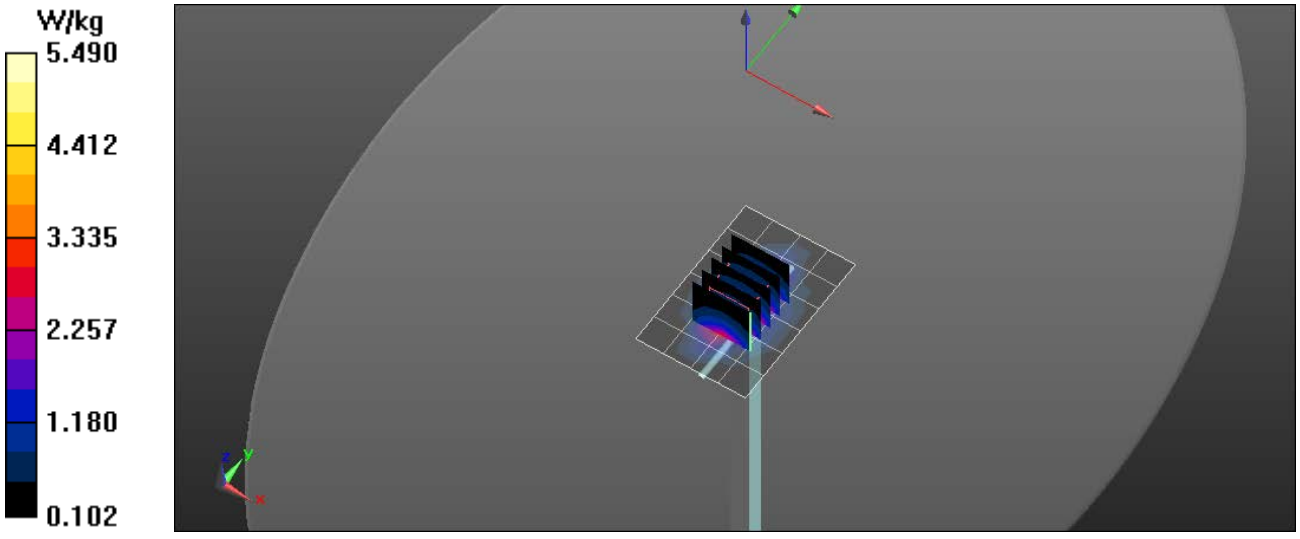
Test Date: Date: 6/5/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.96, 7.96, 7.96); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

1750 MHz/Verification/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.33 W/kg

1750 MHz/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.227 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 6.89 W/kg
SAR(1 g) = 3.85 W/kg; SAR(10 g) = 2.03 W/kg
Maximum value of SAR (measured) = 5.49 W/kg



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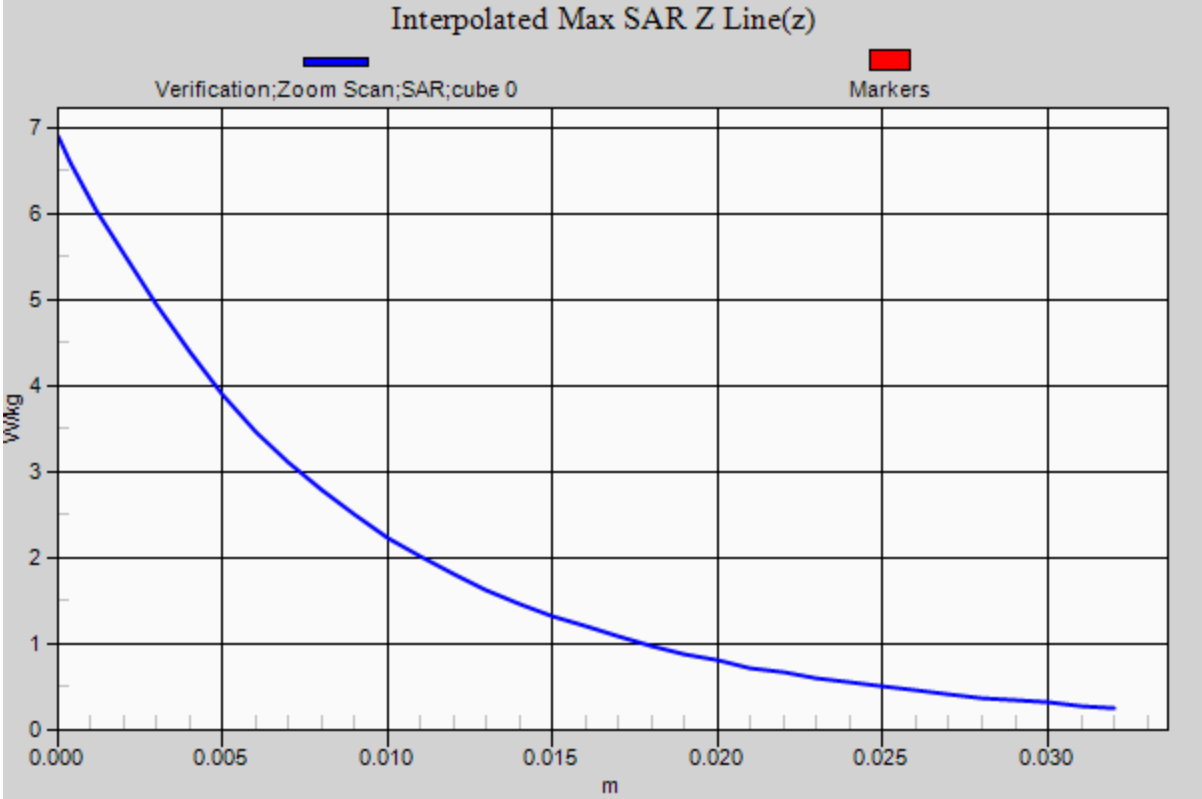

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Plot 7

DUT: Dipole 1750 MHz D1750V2; Type: D1750V2; Serial: D1750V2 - SN:1061

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: MSL1750; Medium parameters used: f = 1750 MHz; σ = 1.51 S/m; ε_r = 53.27; ρ = 1000 kg/m^3
Phantom section: Flat Section

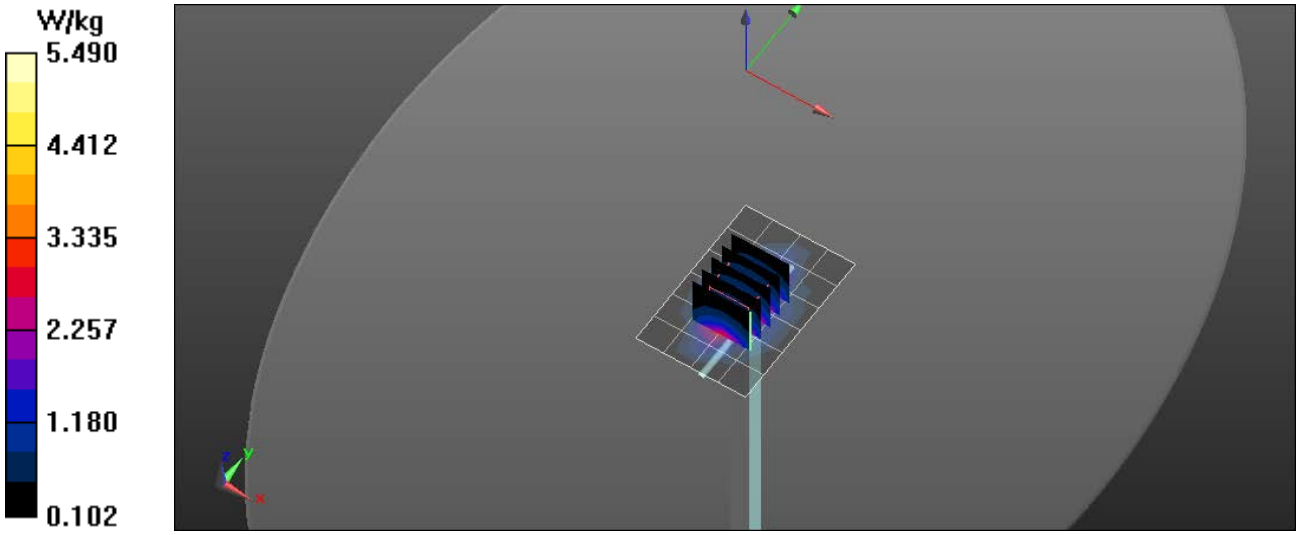
Test Date: Date: 7/26/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3693; ConvF(7.77, 7.77, 7.77); Calibrated: 8/18/2017;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/21/2017
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

1750 MHz/Verification/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.31 W/kg

1750 MHz/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.489 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 6.92 W/kg
P_{in}= 100 mW
SAR(1 g) = 3.81 W/kg; SAR(10 g) = 2 W/kg
Maximum value of SAR (measured) = 5.47 W/kg



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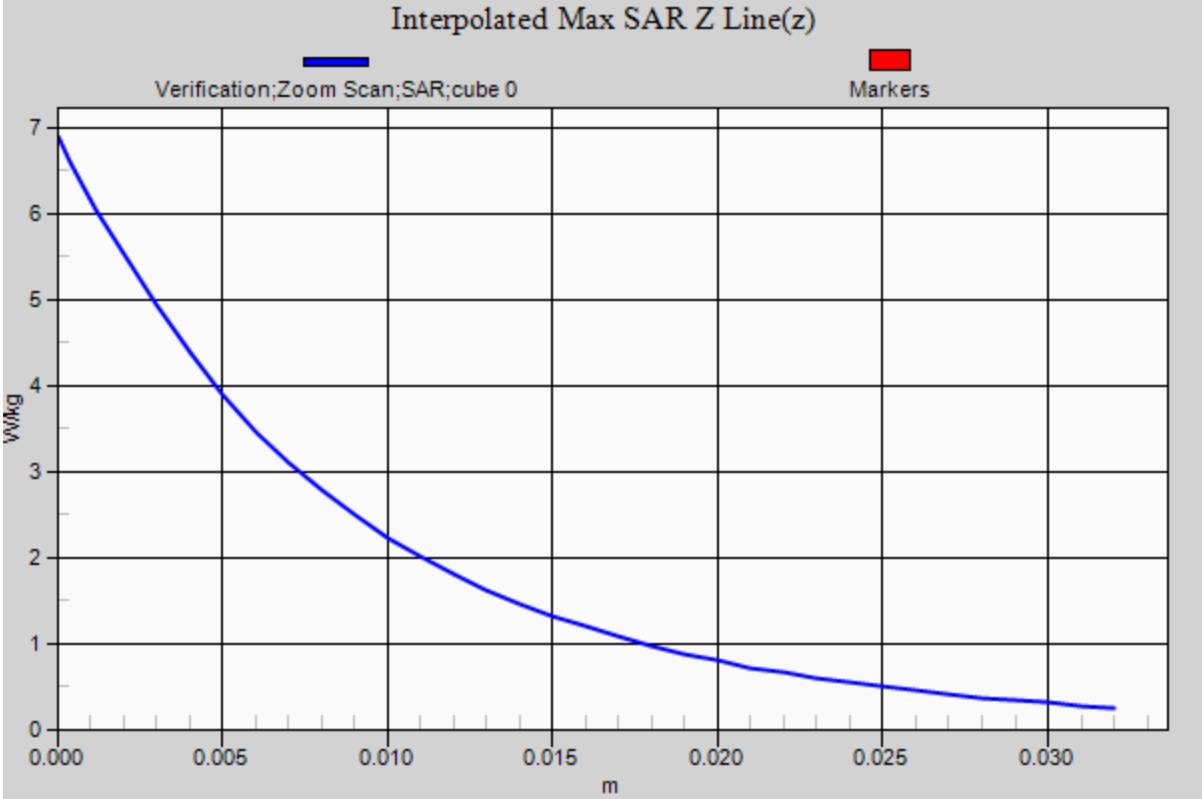

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Plot 8

DUT: Dipole 1750 MHz D1750V2; Type: D1750V2; Serial: D1750V2 - SN:1018

Communication System: CW; Frequency: 1750 MHz; Duty Cycle: 1:1
Medium: MSL1750; Medium parameters used: f = 1750 MHz; σ = 1.53 S/m; ε_r = 52.68; ρ = 1000 kg/m^3
Phantom section: Flat Section

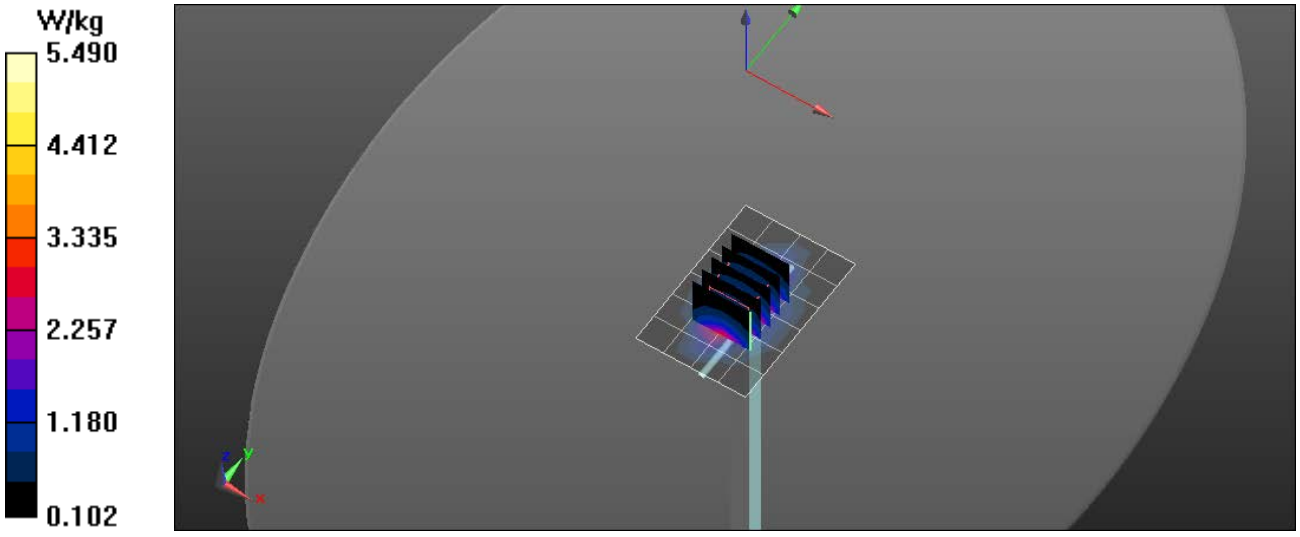
Test Date: Date: 2/6/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.96, 7.96, 7.96); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2019
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

1750 MHz/Verification/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.25 W/kg

1750 MHz/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 30.236 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 6.86 W/kg
SAR(1 g) = 3.69 W/kg; SAR(10 g) = 1.95 W/kg
Maximum value of SAR (measured) = 5.47 W/kg



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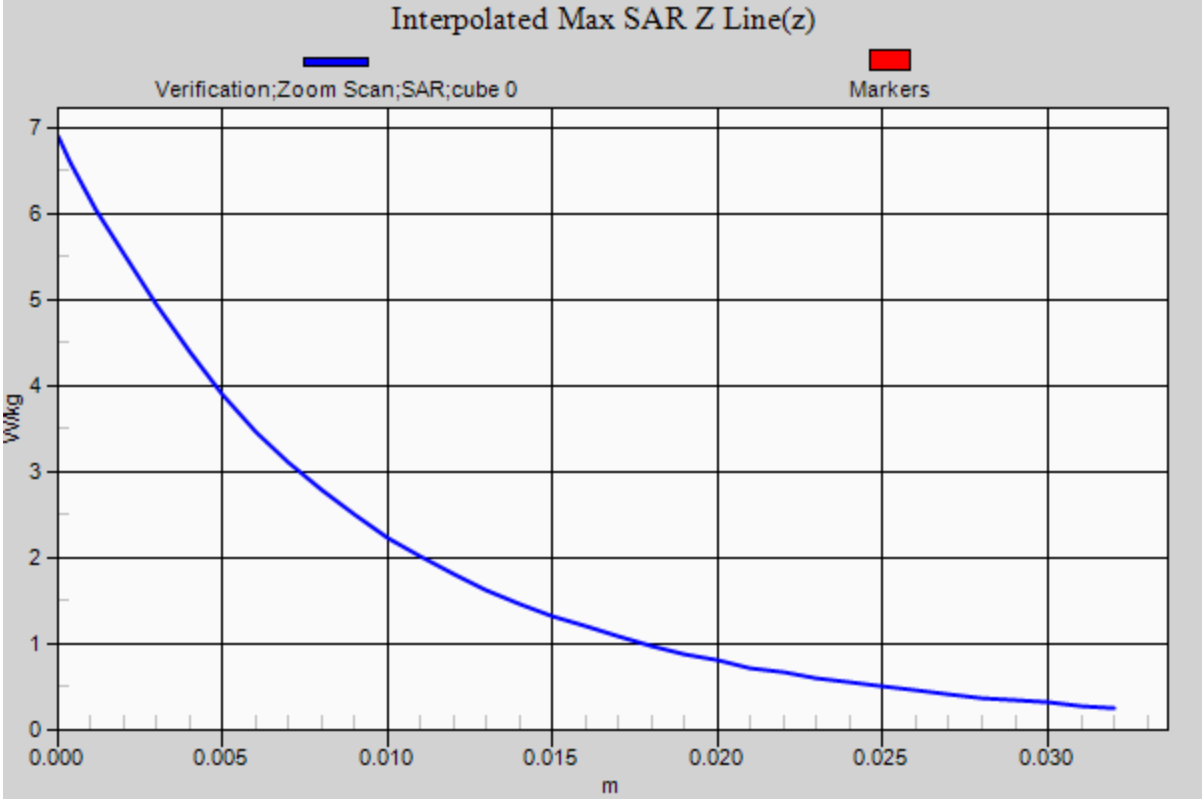

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Plot 9

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d147

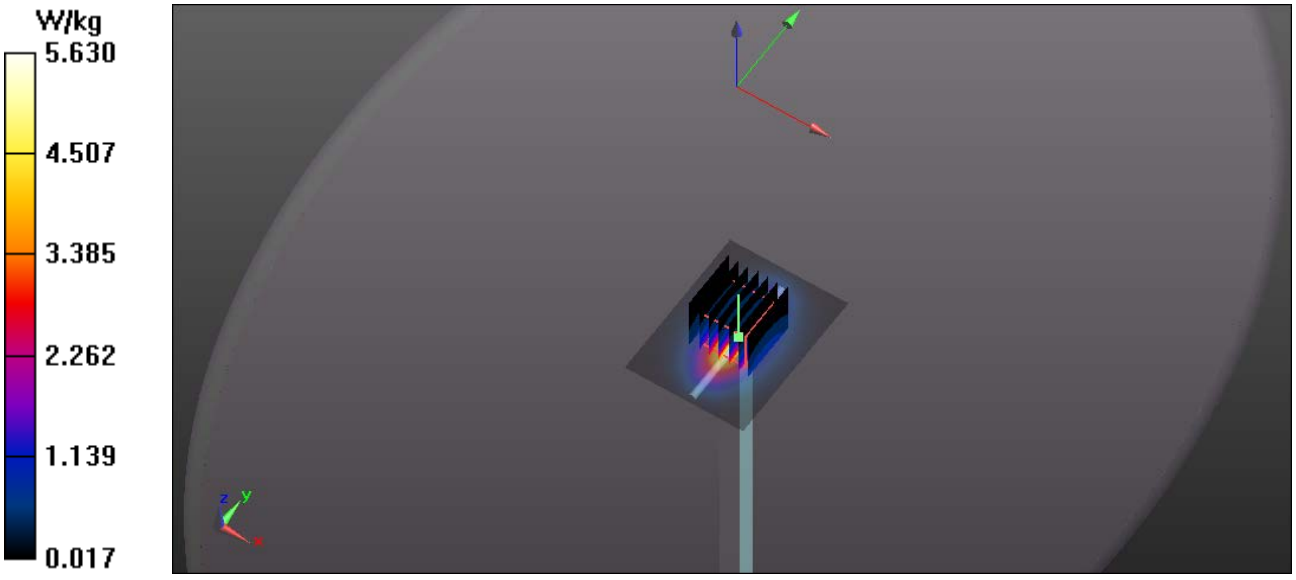
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium parameters used: f = 1900 MHz; σ = 1.47 S/m; ε_r = 52.07; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 5/31/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3693; ConvF(7.54, 7.54, 7.54); Calibrated: 8/18/2017;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

1900 MHz Body/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 5.63 W/kg

1900 MHz Body/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.612 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 6.68 W/kg
SAR(1 g) = 3.98 W/kg; SAR(10 g) = 1.92 W/kg
Maximum value of SAR (measured) = 5.63 W/kg



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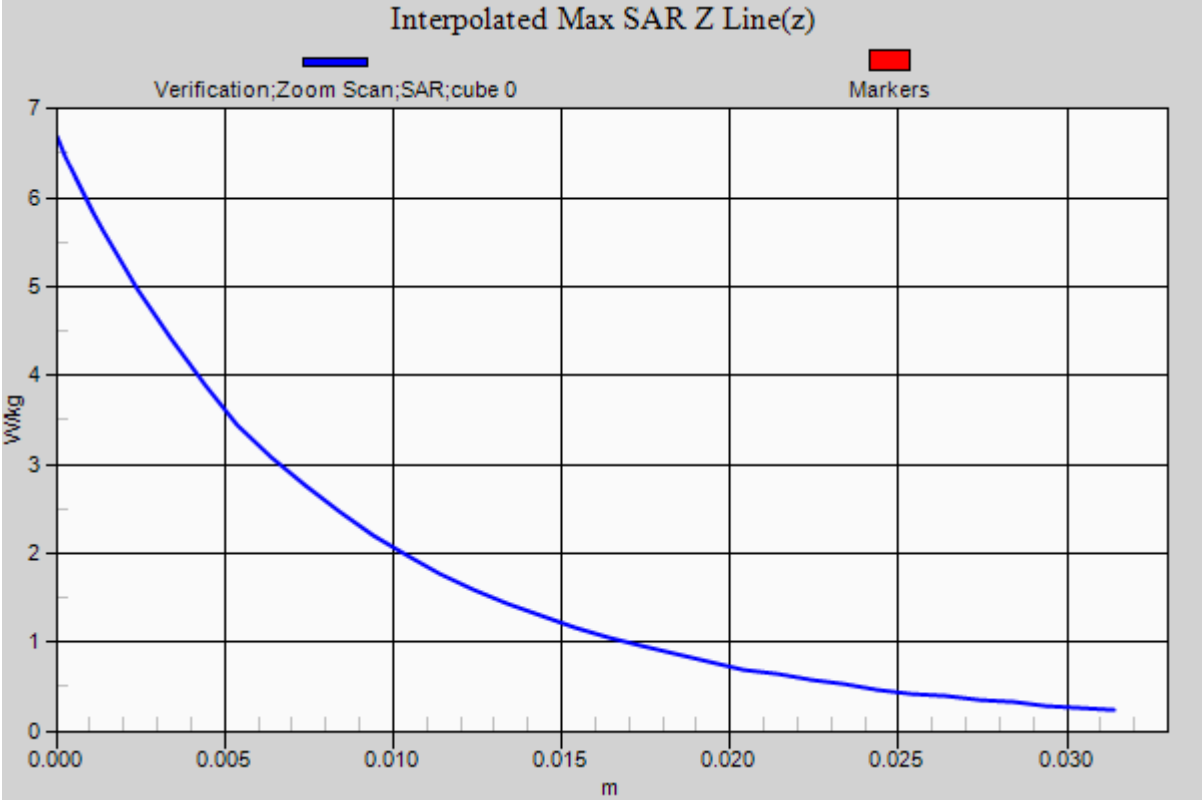

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Plot 10

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d147

Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium parameters used: f = 1900 MHz; σ = 1.54 S/m; ε_r = 53.17; ρ = 1000 kg/m^3
Phantom section: Flat Section

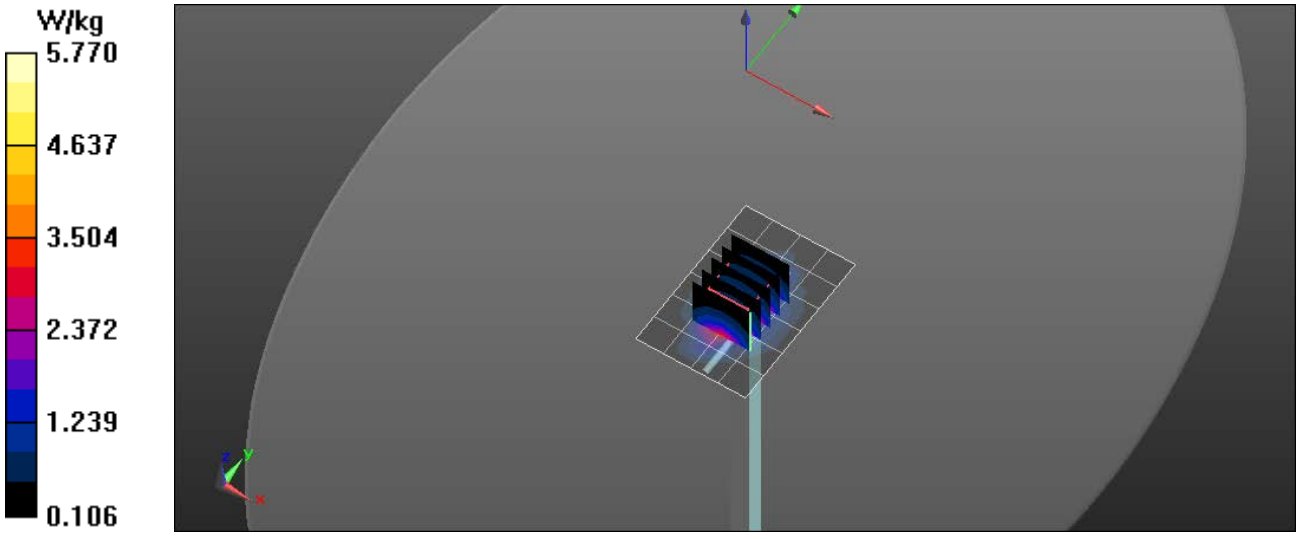
Test Date: Date: 7/26/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3693; ConvF(7.54, 7.54, 7.54); Calibrated: 8/18/2017;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/21/2017
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

1900 MHz/Verification/Area Scan (5x7x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 5.44 W/kg

1900 MHz/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 31.227 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 7.22 W/kg
SAR(1 g) = 4.02 W/kg; SAR(10 g) = 2.1 W/kg
Maximum value of SAR (measured) = 5.77 W/kg



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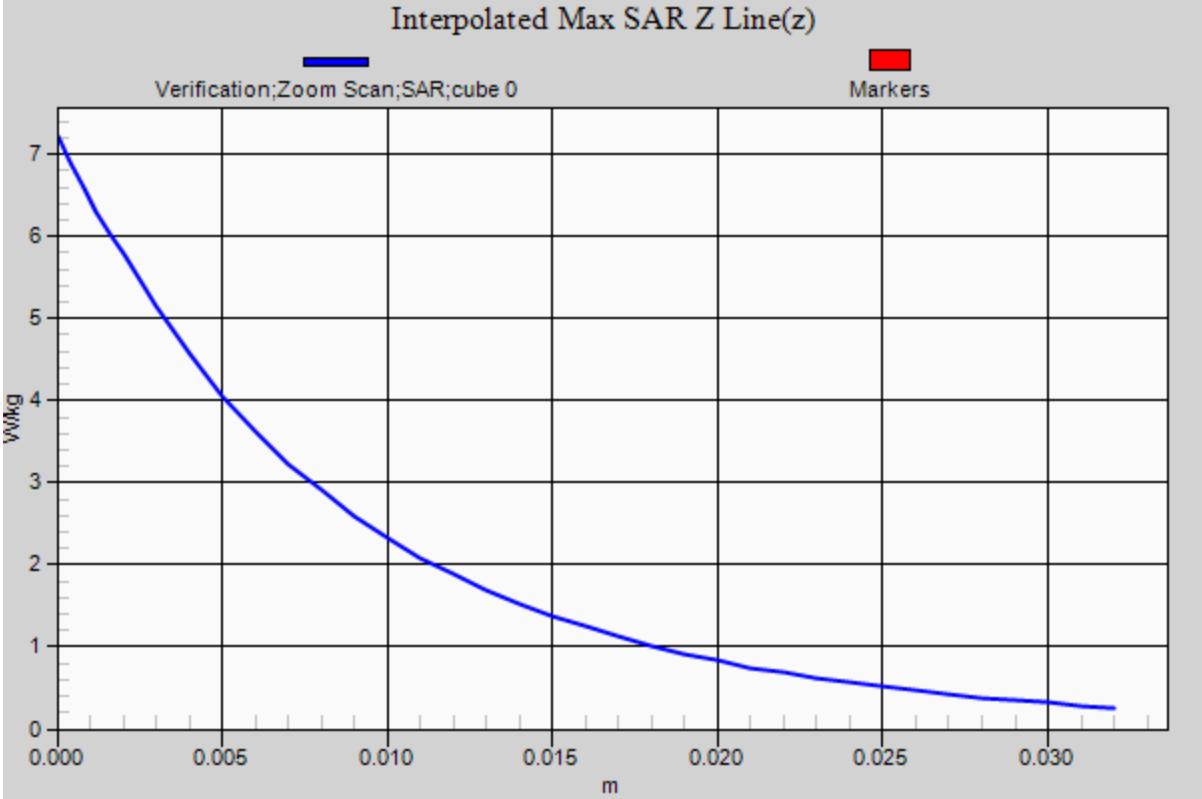

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Plot 11

DUT: Dipole 1900 MHz D1900V2; Type: D1900V2; Serial: D1900V2 - SN:5d116

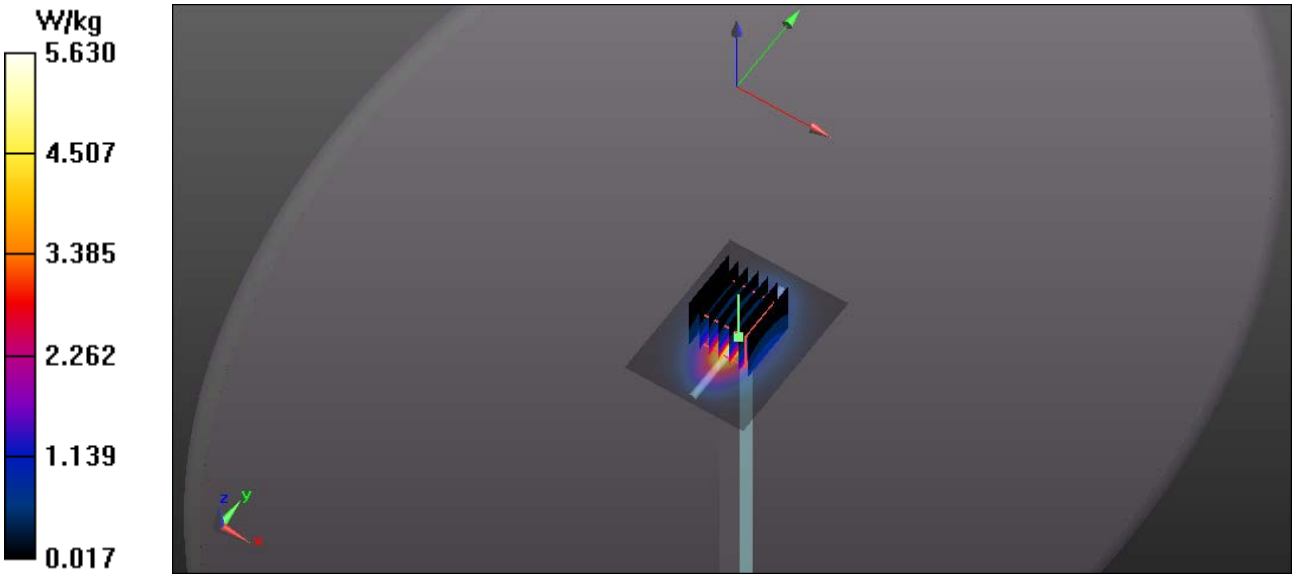
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium parameters used: f = 1900 MHz; σ = 1.56 S/m; ε_r = 52.31; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/27/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(7.61, 7.61, 7.61); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2019
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

1900 MHz Body/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 5.69 W/kg

1900 MHz Body/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.975 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 6.65 W/kg
SAR(1 g) = 4.06 W/kg; SAR(10 g) = 1.97 W/kg
Maximum value of SAR (measured) = 5.62 W/kg



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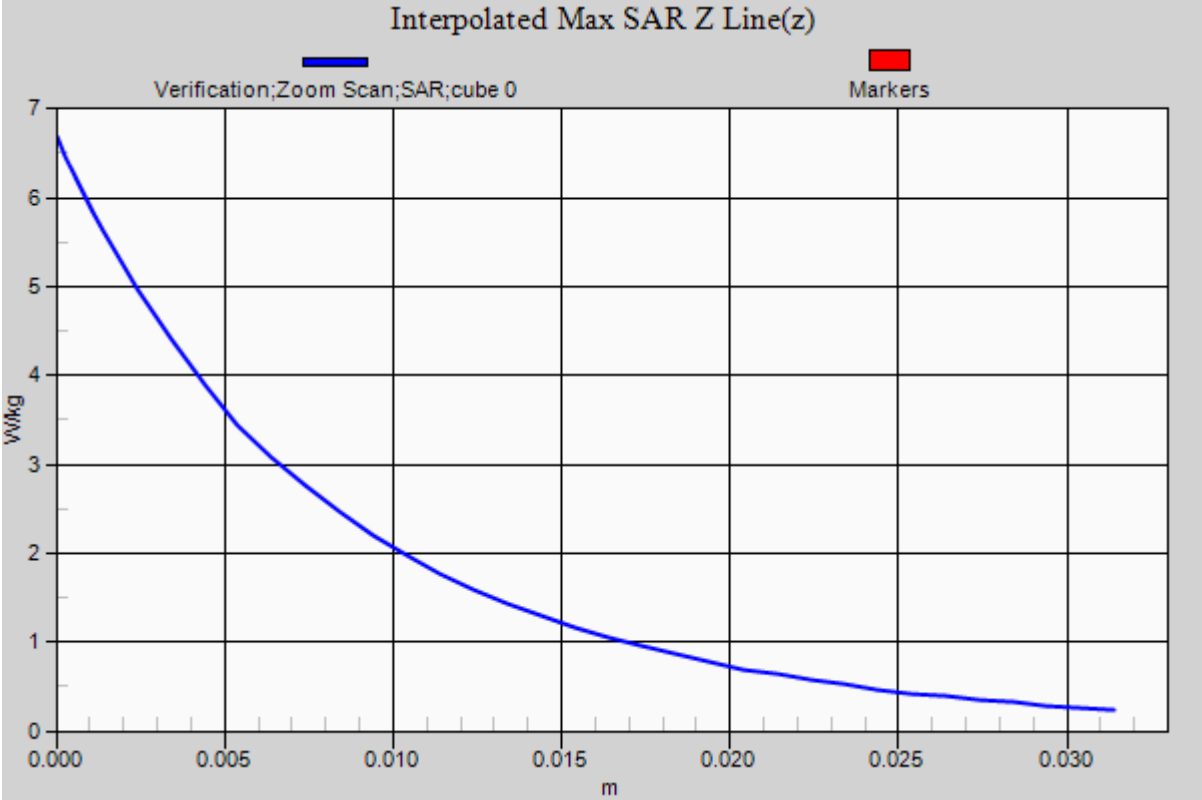

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Plot 12

DUT: Dipole 2300 MHz D2300V2; Type: D2300V2; Serial: D2300V2 - SN:1060

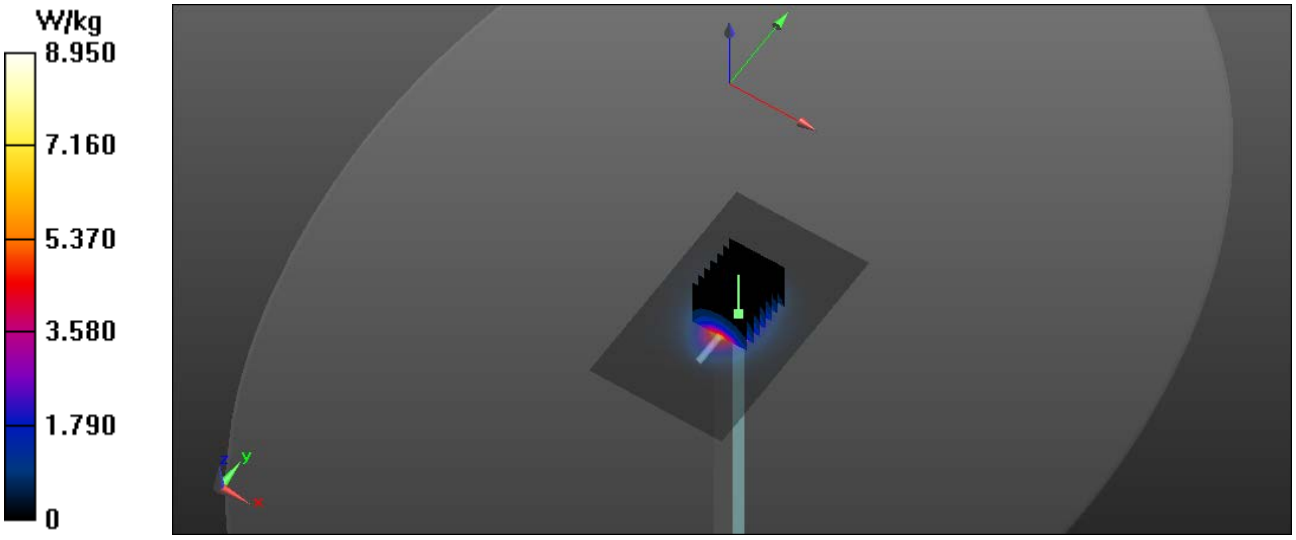
Communication System: CW; Frequency: 2300 MHz; Duty Cycle: 1:1
Medium: MSL2300; Medium parameters used: f = 2300 MHz; σ = 1.84 S/m; ε_r = 52.63; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/14/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(7.33, 7.33, 7.33); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2019
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Body Verification/2300 MHz/Area Scan (61x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 8.95 W/kg

Body Verification/2300 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.597 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 11.18 W/kg
P_{in}= 100 mW
SAR(1 g) = 4.82 W/kg; SAR(10 g) = 2.2 W/kg
Maximum value of SAR (measured) = 8.71 W/kg



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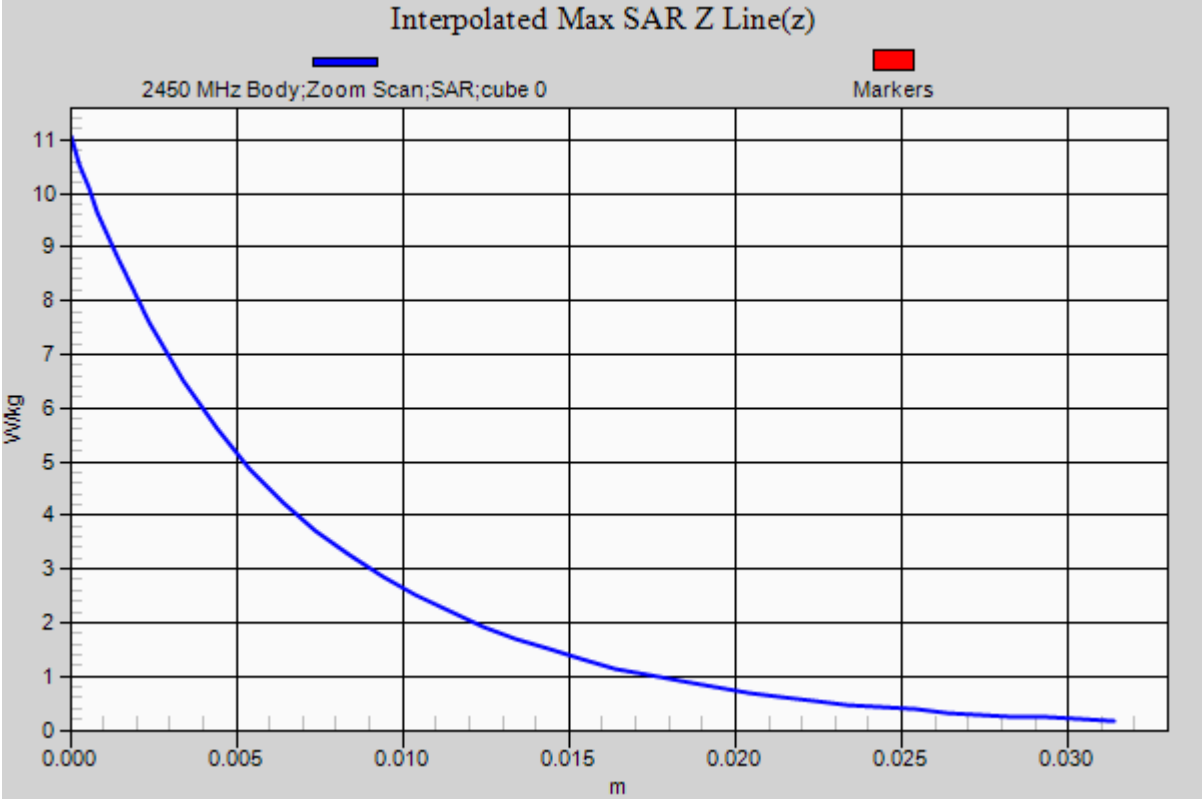

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Plot 13

DUT: Dipole 2550 MHz D2550V2; Type: D2550V2; Serial: D2550V2 - SN:1003

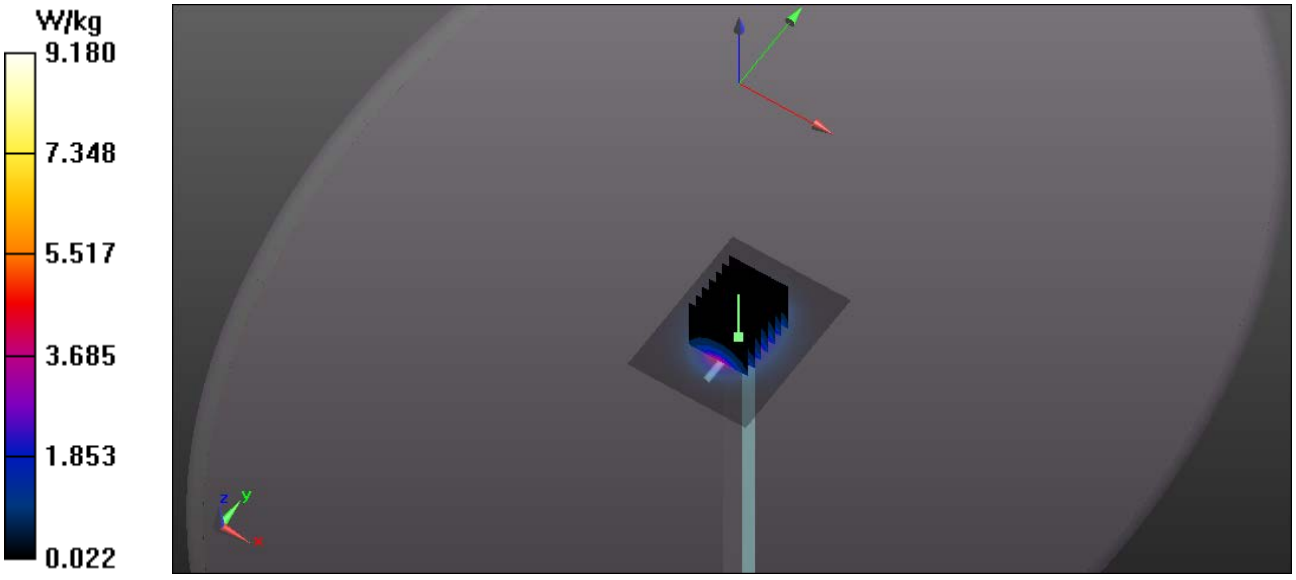
Communication System: CW; Frequency: 2550 MHz; Duty Cycle: 1:1
Medium: MSL2600; Medium parameters used: f = 2550 MHz; σ = 2.12 S/m; ε_r = 52.47; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 7/9/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(7.15, 7.15, 7.15); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

2550 MHz Body/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 9.18 W/kg

2550 MHz Body/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.541 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 11.5 W/kg
SAR(1 g) = 5.41 W/kg; SAR(10 g) = 2.42 W/kg
Maximum value of SAR (measured) = 8.98 W/kg



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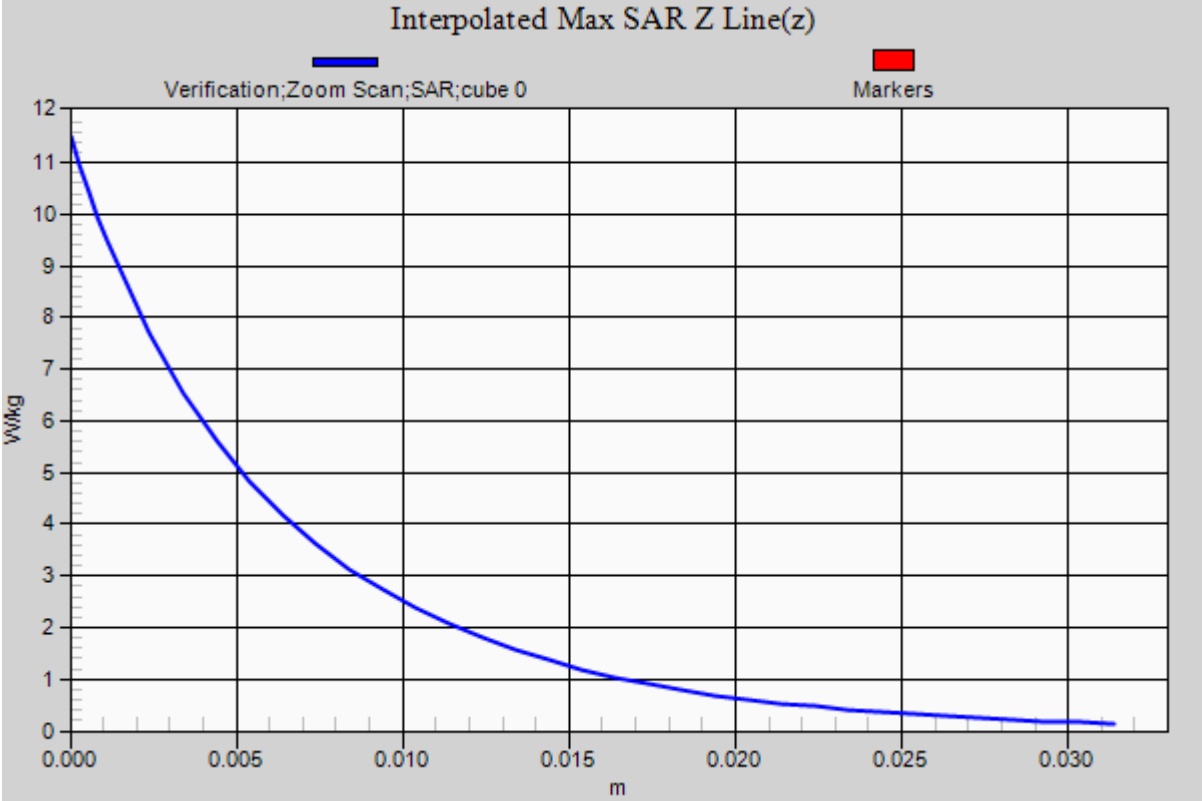

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Plot 14

DUT: Dipole 2550 MHz D2550V2; Type: D2550V2; Serial: D2550V2 - SN:1003

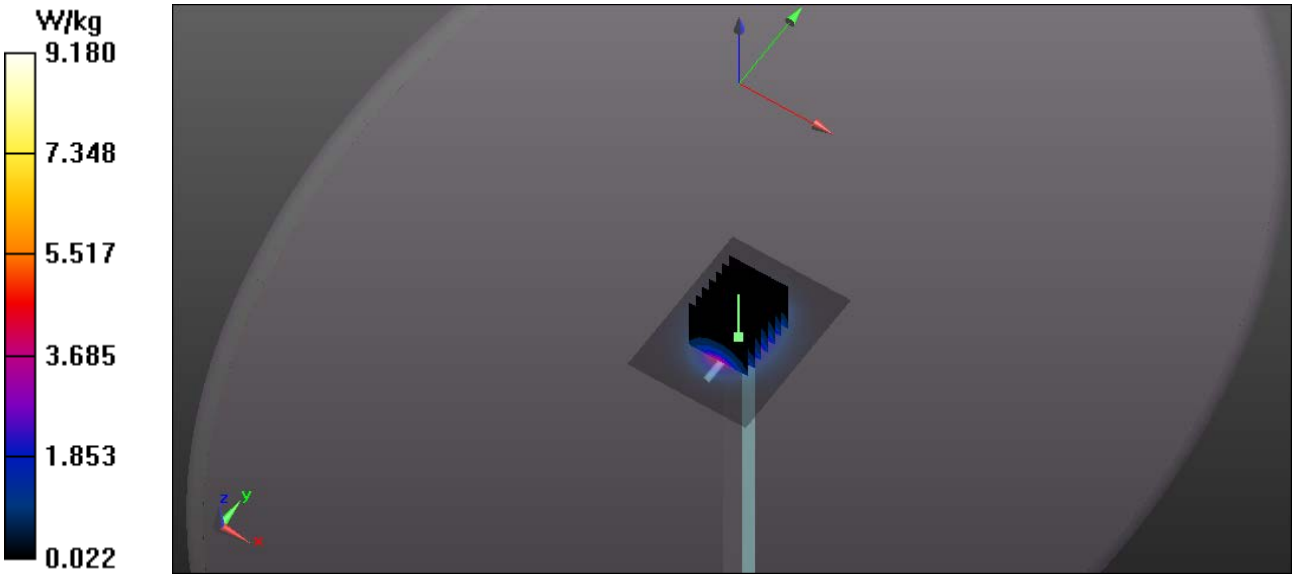
Communication System: CW; Frequency: 2550 MHz; Duty Cycle: 1:1
Medium: MSL2600; Medium parameters used: f = 2550 MHz; σ = 2.11 S/m; ε_r = 52.18; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/25/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(7.15, 7.15, 7.15); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2019
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

2550 MHz Body/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.91 W/kg

2550 MHz Body/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 54.867 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 11.6 W/kg
SAR(1 g) = 5.33 W/kg; SAR(10 g) = 2.43 W/kg
Maximum value of SAR (measured) = 9.18 W/kg



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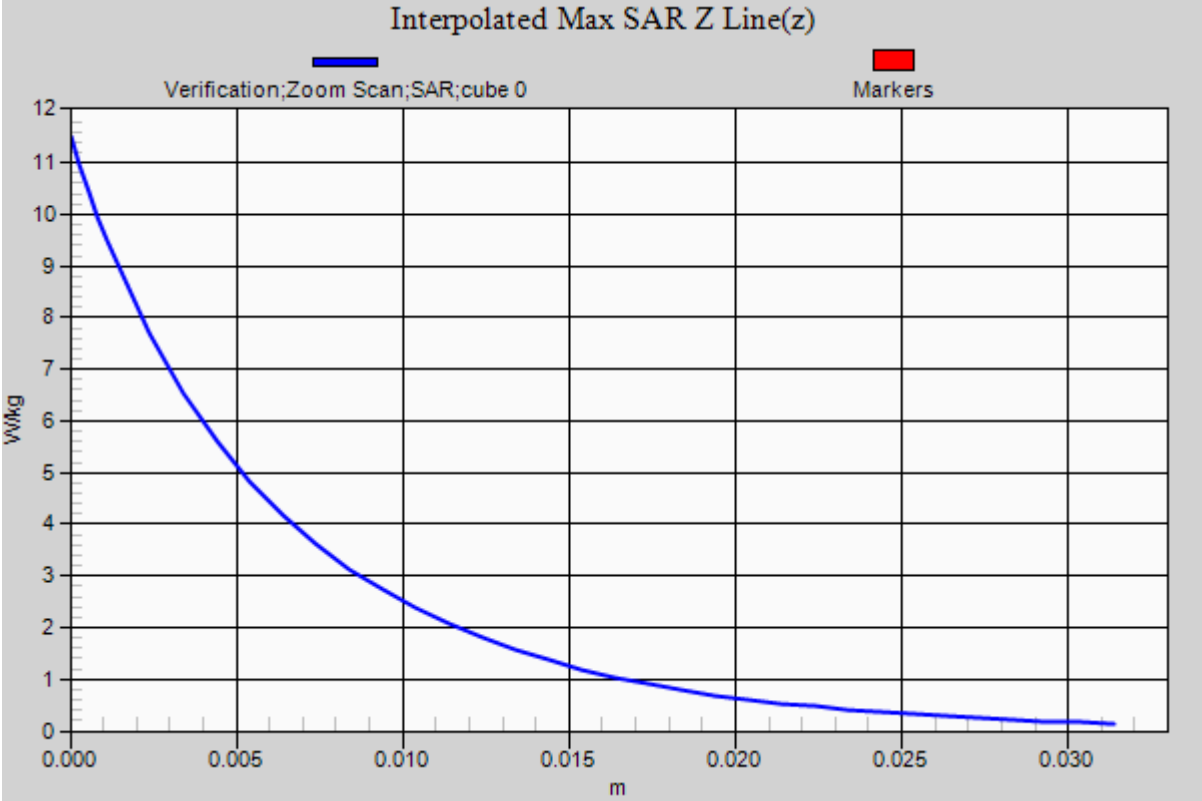

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Plot 15

DUT: Dipole D3500V2; Type: D3500V2; Serial: D3500V2 - SN:1061

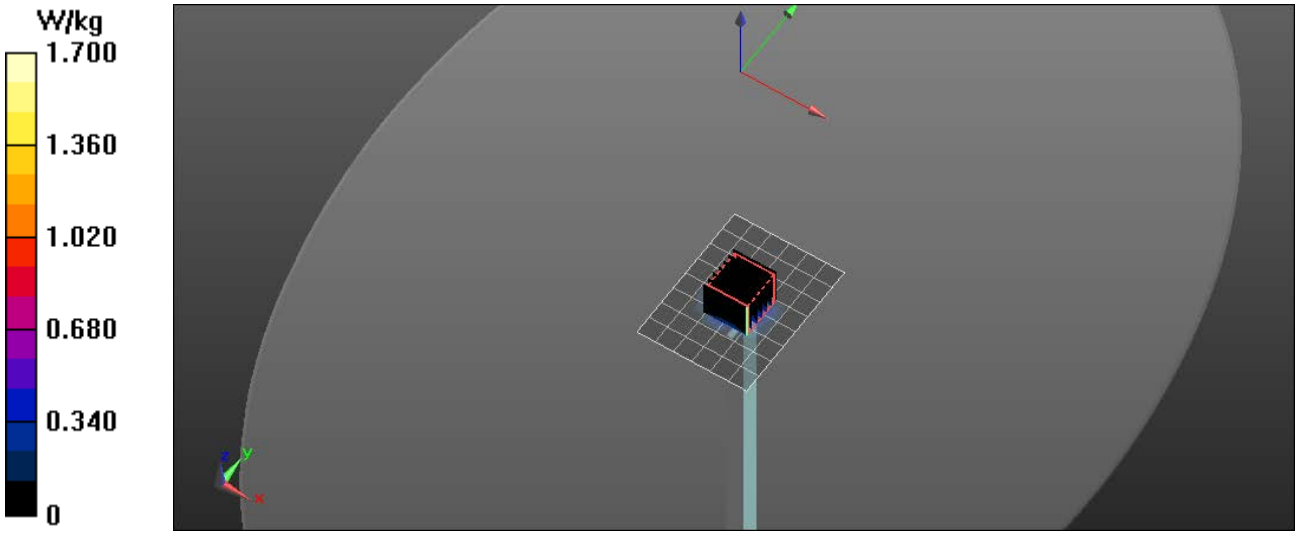
Communication System: CW; Frequency: 3500 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used: f = 3500 MHz; σ = 3.35 S/m; ε_r = 51.23; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/11/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(7, 7, 7); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

3500 MHz Body/Verification/Area Scan (7x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.64 W/kg

3500 MHz Body/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
Reference Value = 11.892 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.63 W/kg
SAR(1 g) = 0.655 W/kg; SAR(10 g) = 0.245 W/kg
Maximum value of SAR (measured) = 1.70 W/kg



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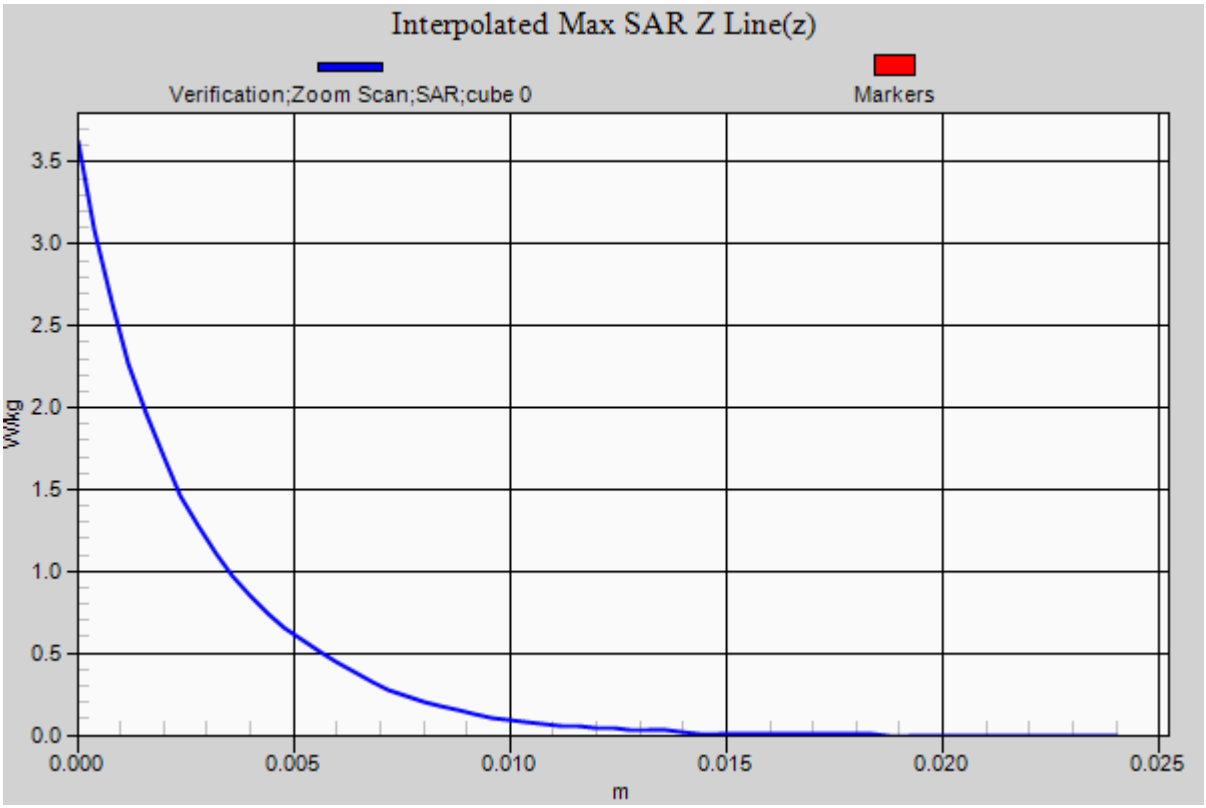

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Plot 16

DUT: Dipole D3500V2; Type: D3500V2; Serial: D3500V2 - SN:1061

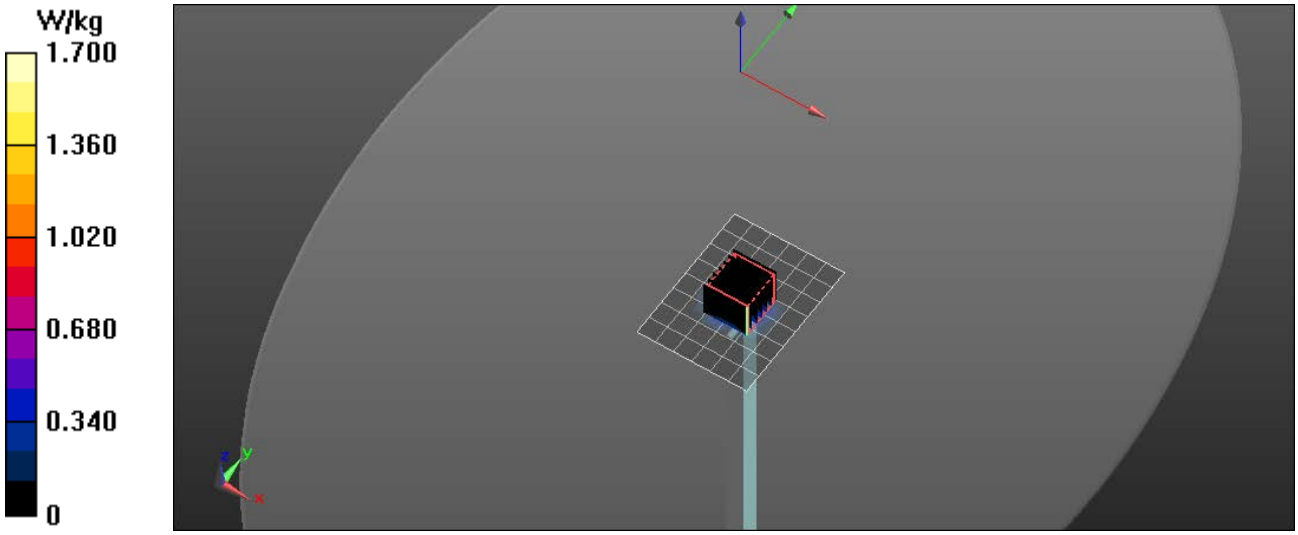
Communication System: CW; Frequency: 3500 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used: f = 3500 MHz; σ = 3.34 S/m; ε_r = 51.11; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/25/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(7, 7, 7); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2019
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

3500 MHz Body/Verification/Area Scan (7x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.61 W/kg

3500 MHz Body/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
Reference Value = 12.358 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.65 W/kg
SAR(1 g) = 0.657 W/kg; SAR(10 g) = 0.246 W/kg
Maximum value of SAR (measured) = 1.68 W/kg



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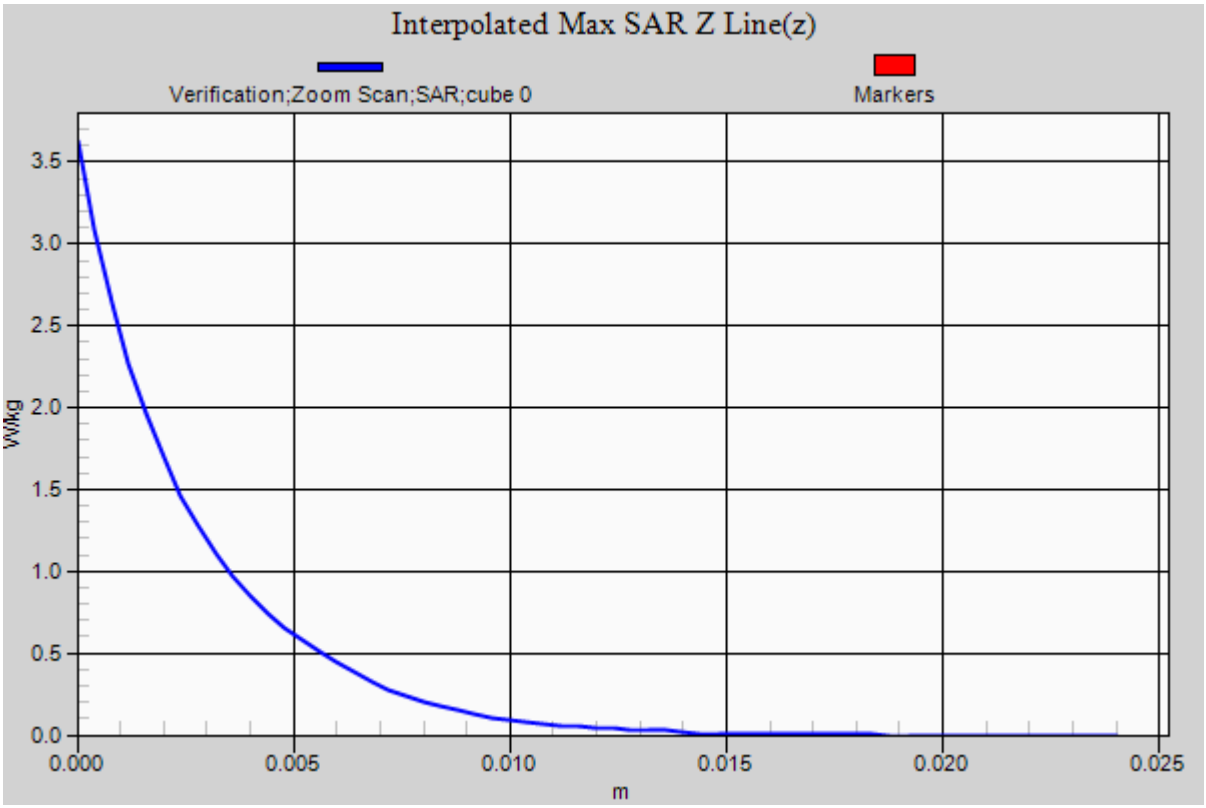

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Plot 17

DUT: Dipole D3700V2; Type: D3700V2; Serial: D3700V2 - SN:1024

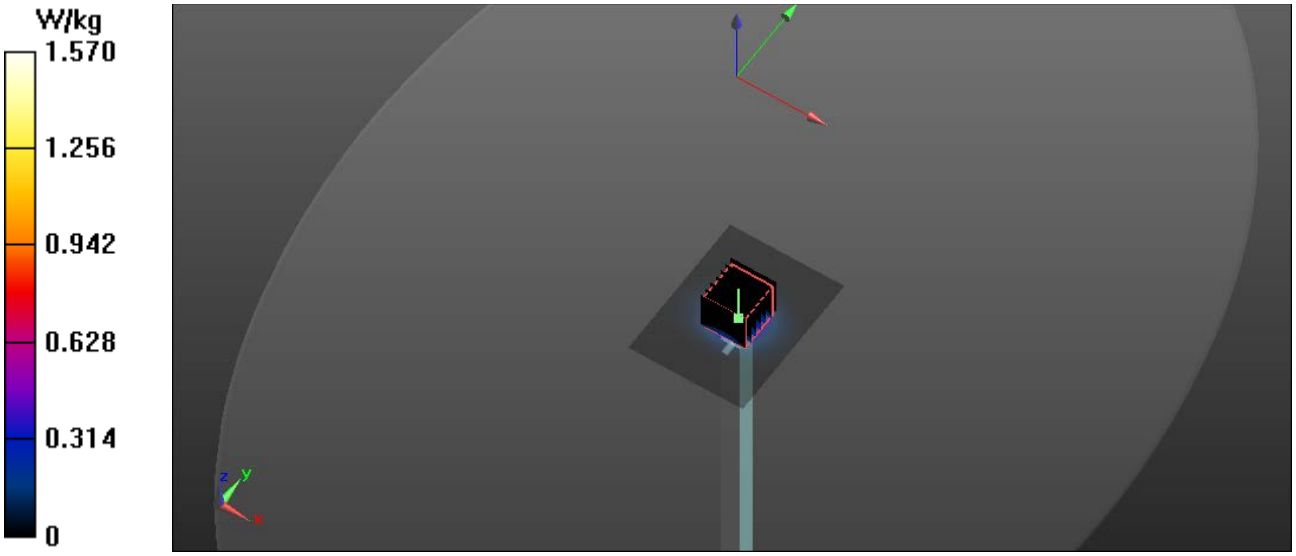
Communication System: CW; Frequency: 3700 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used: f = 3700 MHz; σ = 3.57 S/m; ε_r = 50.92; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/11/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(6.71, 6.71, 6.71); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

3700 MHz Body/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.55 W/kg

3700 MHz Body/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
Reference Value = 55.759 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 3.09 W/kg
SAR(1 g) = 0.659 W/kg; SAR(10 g) = 0.238 W/kg
Maximum value of SAR (measured) = 1.58 W/kg



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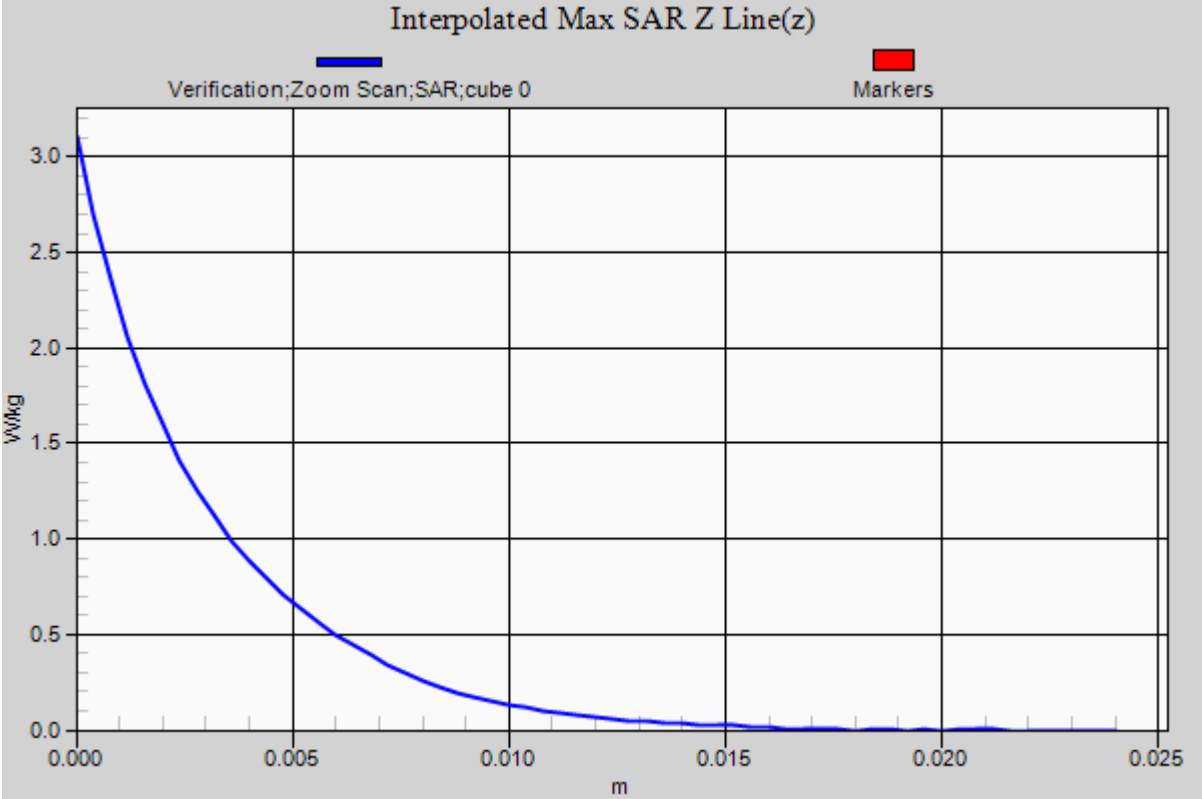

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Plot 18

DUT: Dipole 2450 MHz D2450V2; Type: D2450V2; Serial: D2450V2 - SN: 881

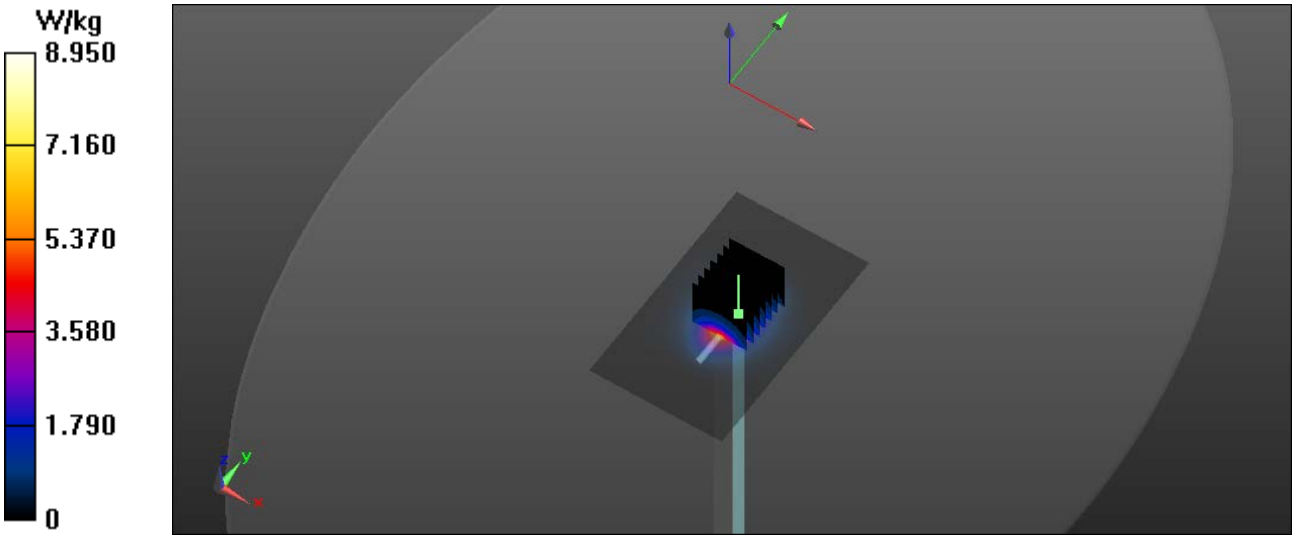
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
Medium: MSL2450; Medium parameters used: f = 2450 MHz; σ = 1.92 S/m; ε_r = 52.77; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 7/2/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(7.29, 7.29, 7.29); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Body Verification/2450 MHz/Area Scan (61x101x1): Interpolated grid: dx=1.200 mm, dy=1.200 mm
Maximum value of SAR (interpolated) = 8.92 W/kg

Body Verification/2450 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 53.359 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 11.04 W/kg
SAR(1 g) = 5.22 W/kg; SAR(10 g) = 2.47 W/kg
Maximum value of SAR (measured) = 8.79 W/kg



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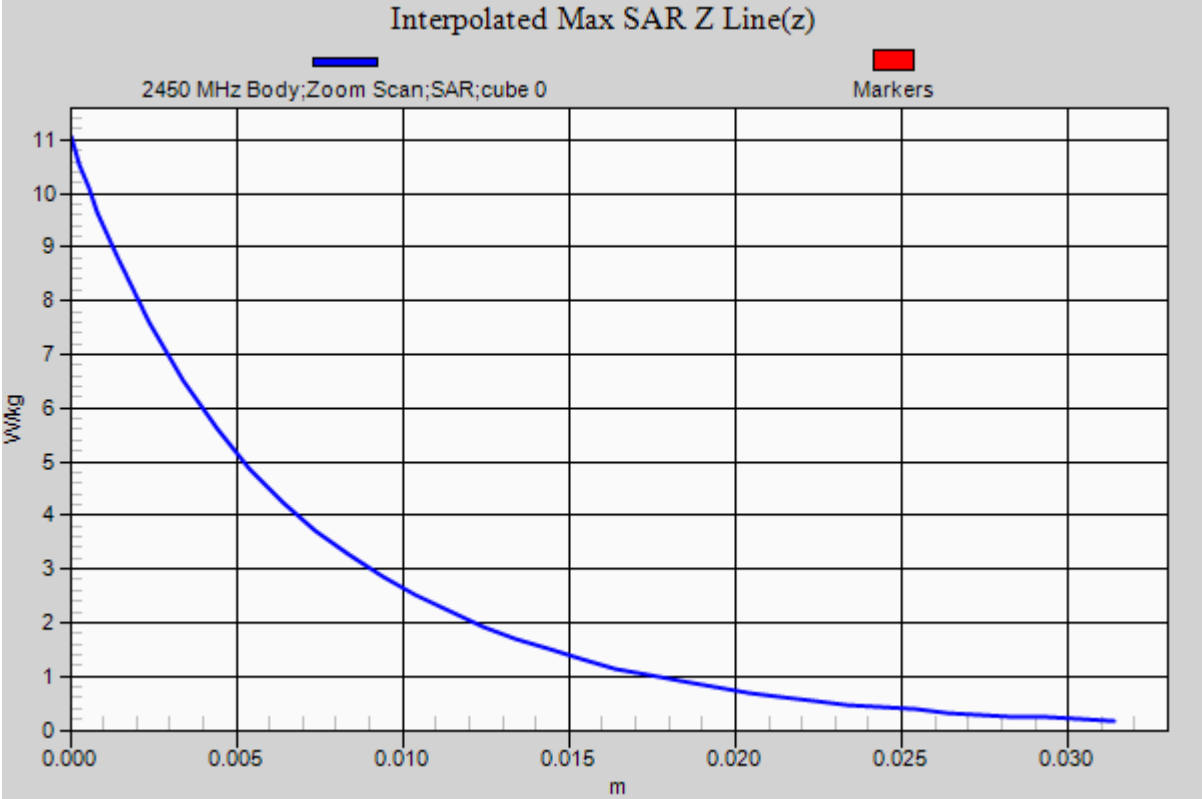

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Plot 19

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1119

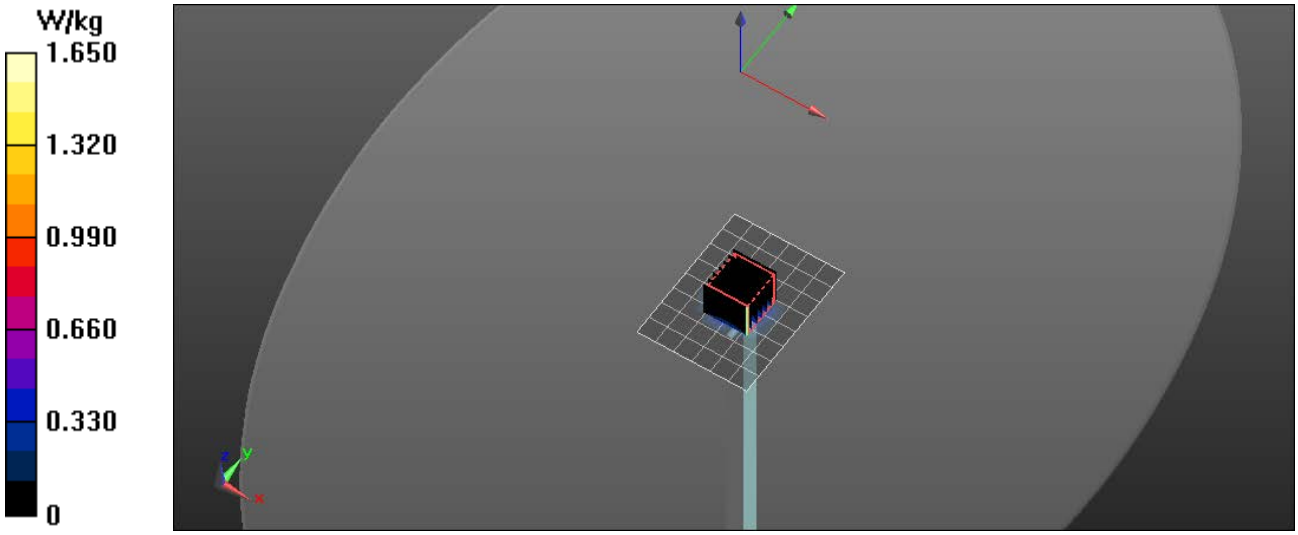
Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used: f = 5200 MHz; σ = 5.21 S/m; ε_r = 49.07; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/28/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(4.46, 4.46, 4.46); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

5200 MHz Body/Verification/Area Scan (7x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.58 W/kg

5200 MHz Body/Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.705 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 3.75 W/kg
SAR(1 g) = 0.813 W/kg; SAR(10 g) = 0.231 W/kg
Maximum value of SAR (measured) = 1.65 W/kg



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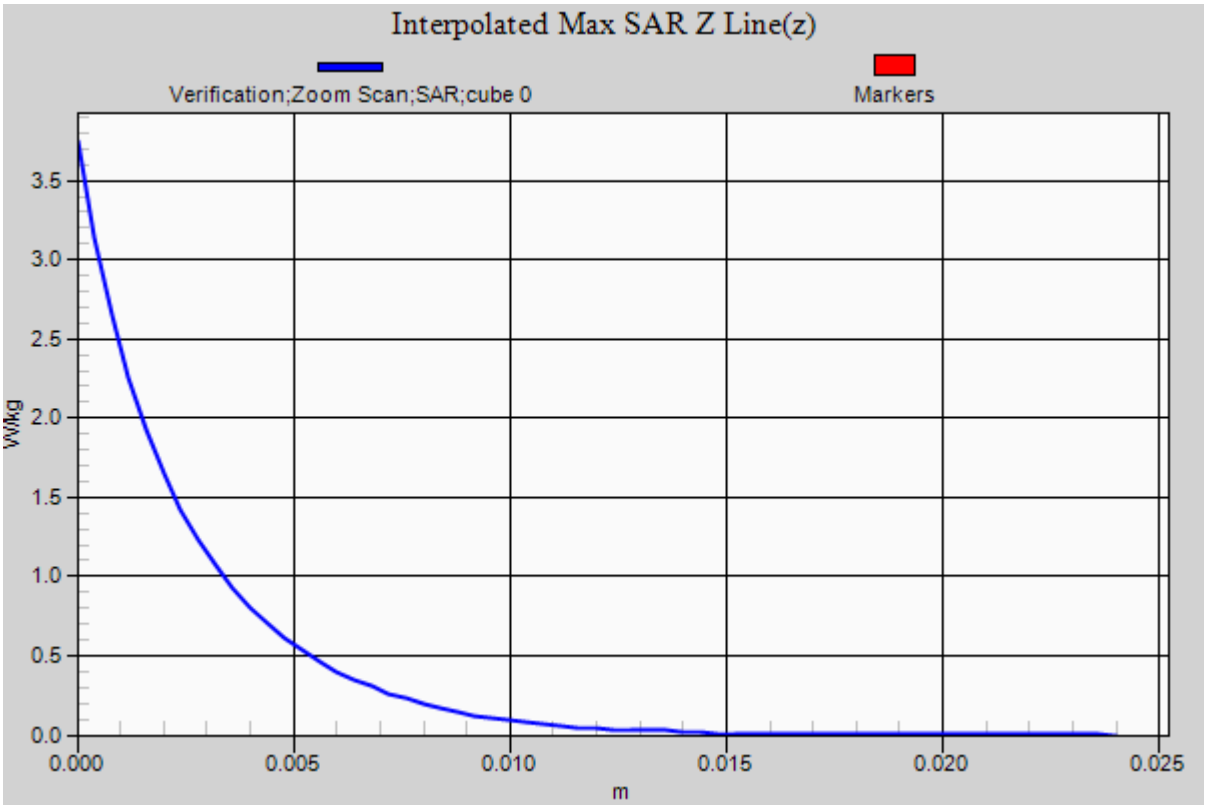

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Plot 20

DUT: Dipole D5GHzV2; Type: D5GHzV2; Serial: D5GHzV2 - SN:1119

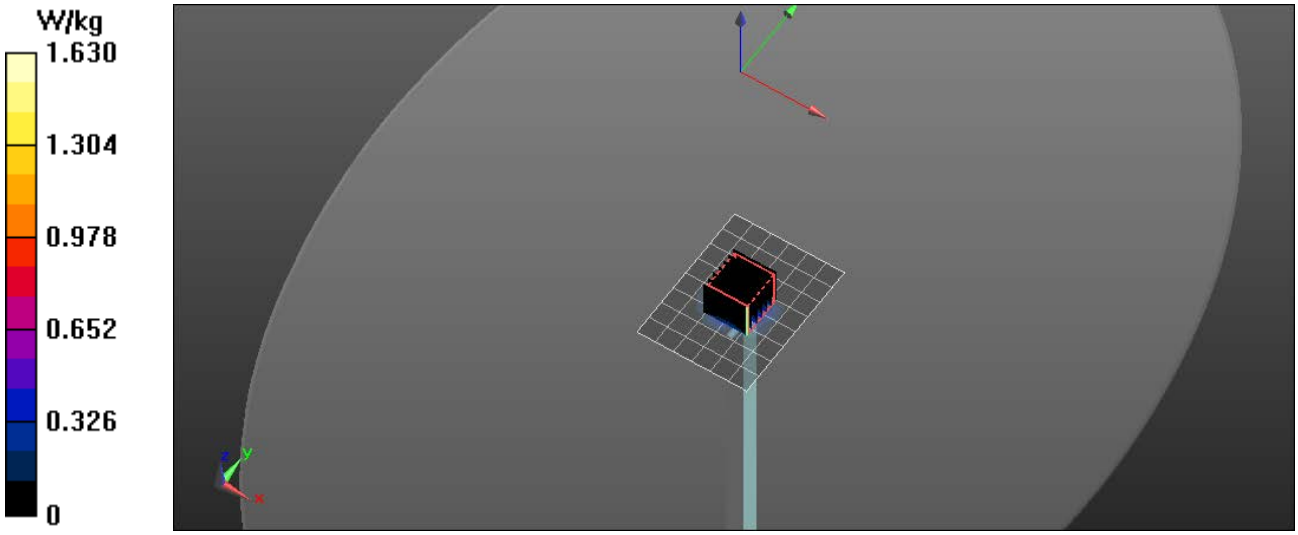
Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used: f = 5800 MHz; σ = 5.99 S/m; ε_r = 48.17; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/28/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(4.08, 4.08, 4.08); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

5800 MHz Body/Verification/Area Scan (7x9x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.56 W/kg

5800 MHz Body/Verification/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 11.621 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 3.47 W/kg
SAR(1 g) = 0.799 W/kg; SAR(10 g) = 0.228 W/kg
Maximum value of SAR (measured) = 1.63 W/kg



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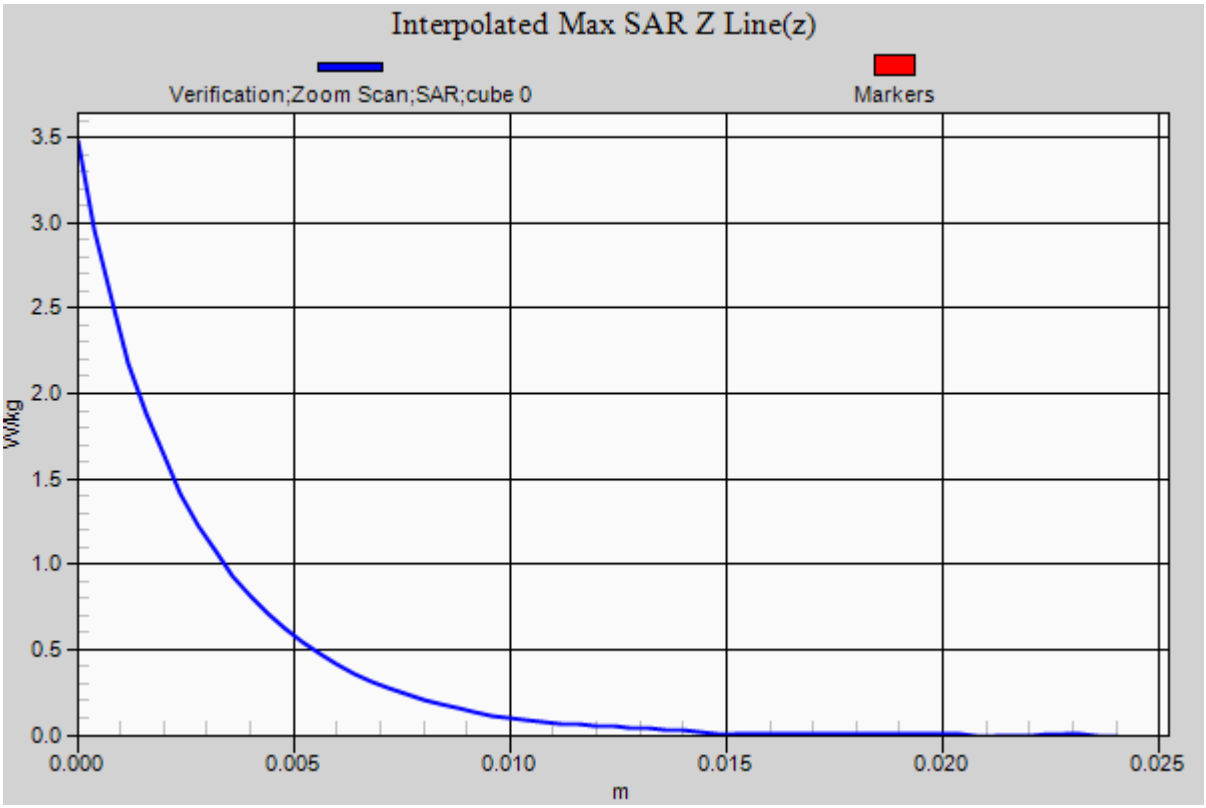

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Plot 21

DUT: Dipole 2550 MHz D2550V2; Type: D2550V2; Serial: D2550V2 - SN: 1003

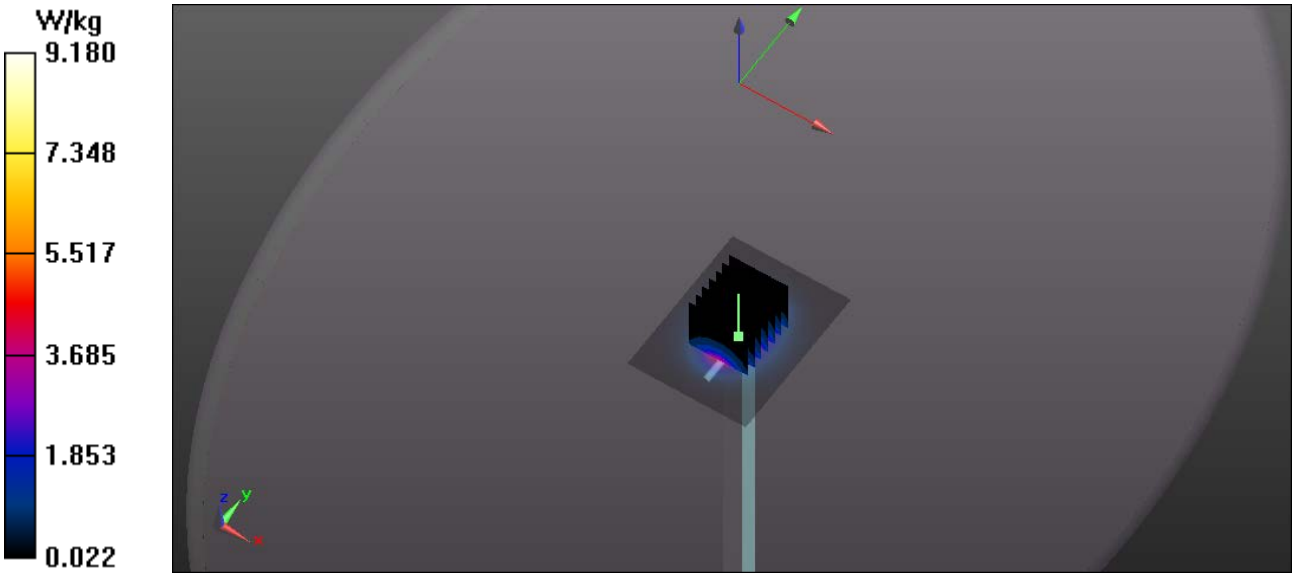
Communication System: CW; Frequency: 2550 MHz; Duty Cycle: 1:1
Medium: MSL2600; Medium parameters used: f = 2550 MHz; σ = 2.12 S/m; ε_r = 51.89; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 9/9/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3662; ConvF(7.12, 7.12, 7.12); Calibrated: 4/24/2019;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1416; Calibrated: 4/16/2019
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

2550 MHz Body/Verification/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 8.97 W/kg

2550 MHz Body/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 52.963 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 11.55 W/kg
P_{in}= 100 mW
SAR(1 g) = 5.29 W/kg; SAR(10 g) = 2.28 W/kg
Maximum value of SAR (measured) = 9.18 W/kg



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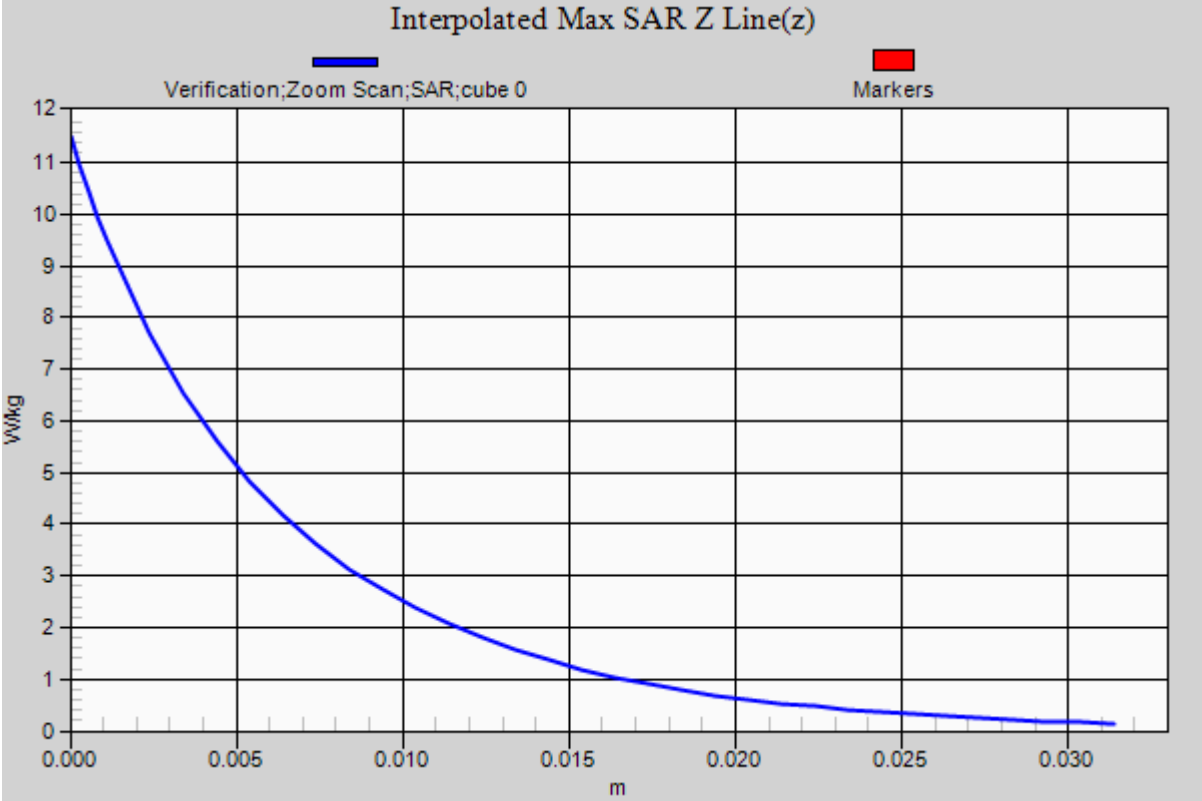

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Appendix B – SAR Test Data Plots

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Plot 1

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 707.5 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used (interpolated): f = 707.5 MHz; σ = 0.978 S/m; ε_r = 55.508; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/19/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(9.8, 9.8, 9.8); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

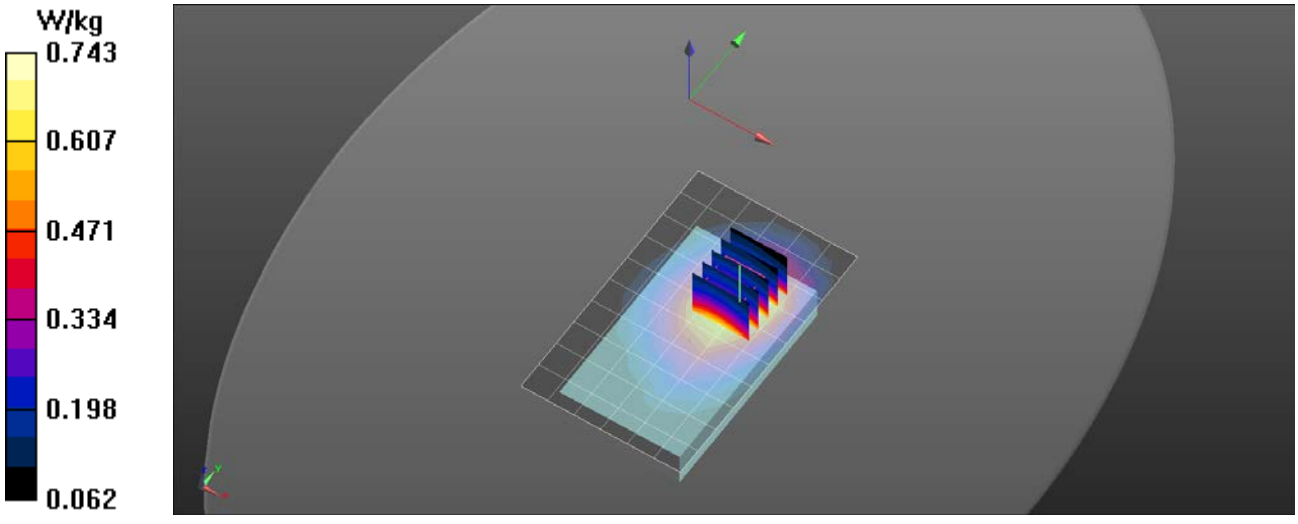
Procedure Notes:

Band 12 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.716 W/kg

Band 12 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 23.23 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 0.850 W/kg
SAR(1 g) = 0.620 W/kg; SAR(10 g) = 0.441 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.743 W/kg



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Plot 2

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 710 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used: f = 710 MHz; σ = 0.98 S/m; ε_r = 55.5; ρ = 1000 kg/m^3
Phantom section: Flat Section

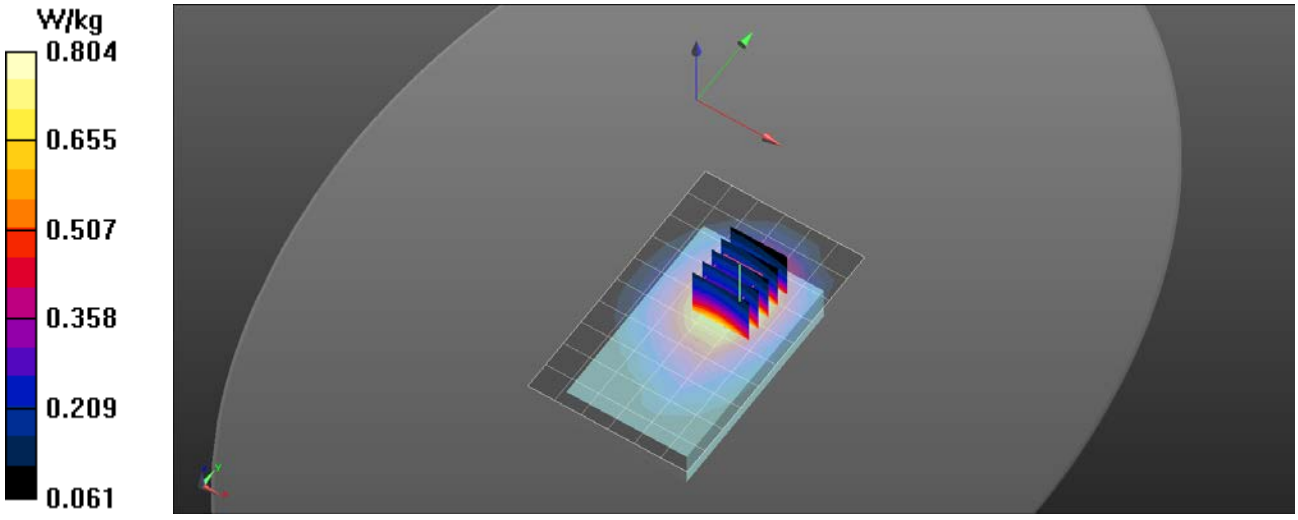
Test Date: Date: 2/19/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(9.8, 9.8, 9.8); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band 17 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.746 W/kg

Band 17 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 25.13 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.914 W/kg
SAR(1 g) = 0.645 W/kg; SAR(10 g) = 0.460 W/kg
Maximum value of SAR (measured) = 0.804 W/kg



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Plot 3

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 782 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used (interpolated): f = 782 MHz; σ = 1 S/m; ε_r = 55.452; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/6/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(9.8, 9.8, 9.8); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band 13 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

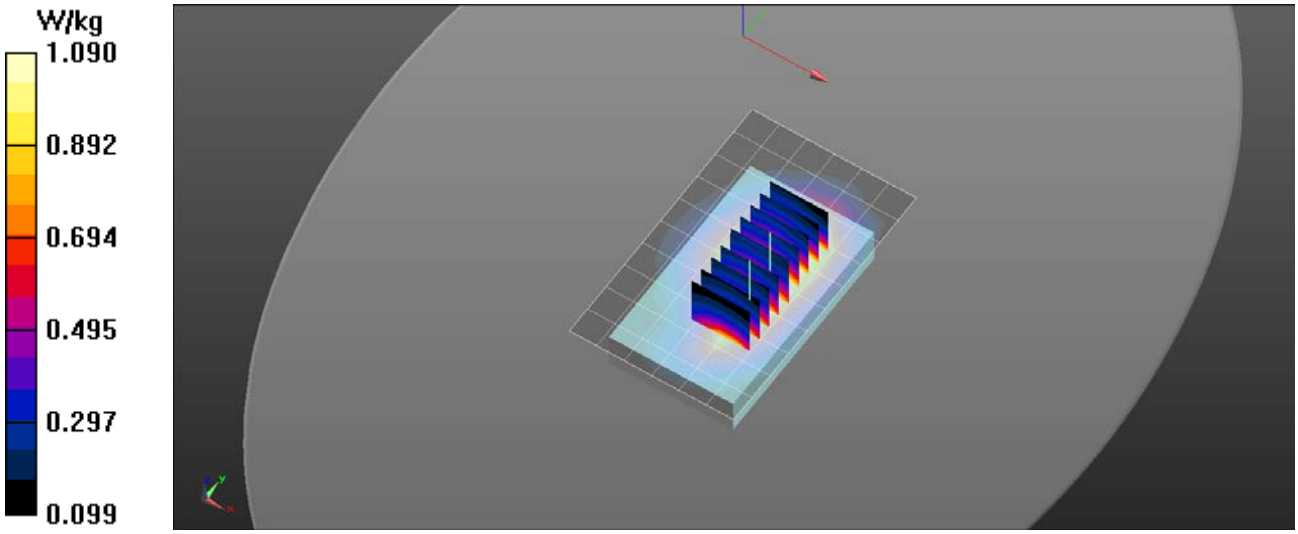
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.18 W/kg

Band 13 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 32.32 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.33 W/kg
SAR(1 g) = 1 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.19 W/kg

Band 13 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 32.32 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.21 W/kg
SAR(1 g) = 0.905 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.09 W/kg



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Plot 4

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 793 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used (interpolated): f = 793 MHz; σ = 1.003 S/m; ε_r = 55.408; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/6/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(9.8, 9.8, 9.8); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band 14 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

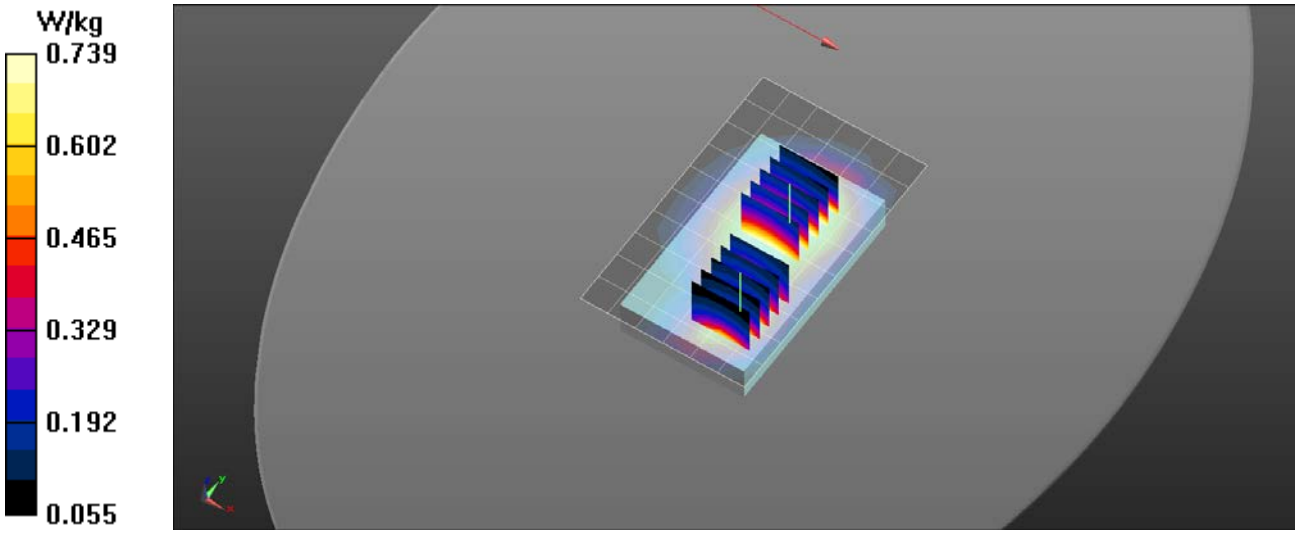
Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.921 W/kg

Band 14 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.73 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.06 W/kg
SAR(1 g) = 0.757 W/kg

Info: Interpolated medium parameters used for SAR evaluation.

Band 14 LTE/Side A 1 RB 24 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 1: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.73 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 0.861 W/kg
SAR(1 g) = 0.597 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.739 W/kg



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Plot 5

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: UMTS (WCDMA); Frequency: 836.6 MHz; Duty Cycle: 1:1
Medium: MSL835; Medium parameters used (interpolated): f = 836.6 MHz; σ = 0.99 S/m; ε_r = 55.902; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/1/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(9.21, 9.21, 9.21); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

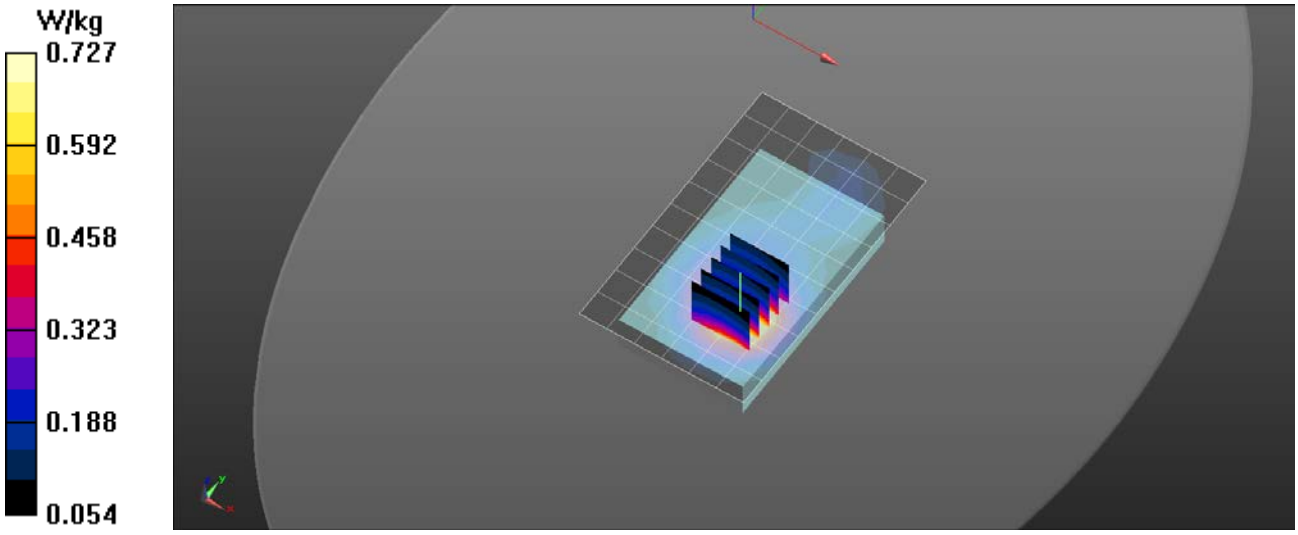
Procedure Notes:

Band 5 UMTS/Side C Ant 0 Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.709 W/kg

Band 5 UMTS/Side C Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.23 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.843 W/kg
SAR(1 g) = 0.589 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.727 W/kg



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Plot 6

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 829 MHz; Duty Cycle: 1:1
Medium: MSL835; Medium parameters used (interpolated): f = 829 MHz; σ = 0.984 S/m; ε_r = 55.934; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/1/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(9.21, 9.21, 9.21); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

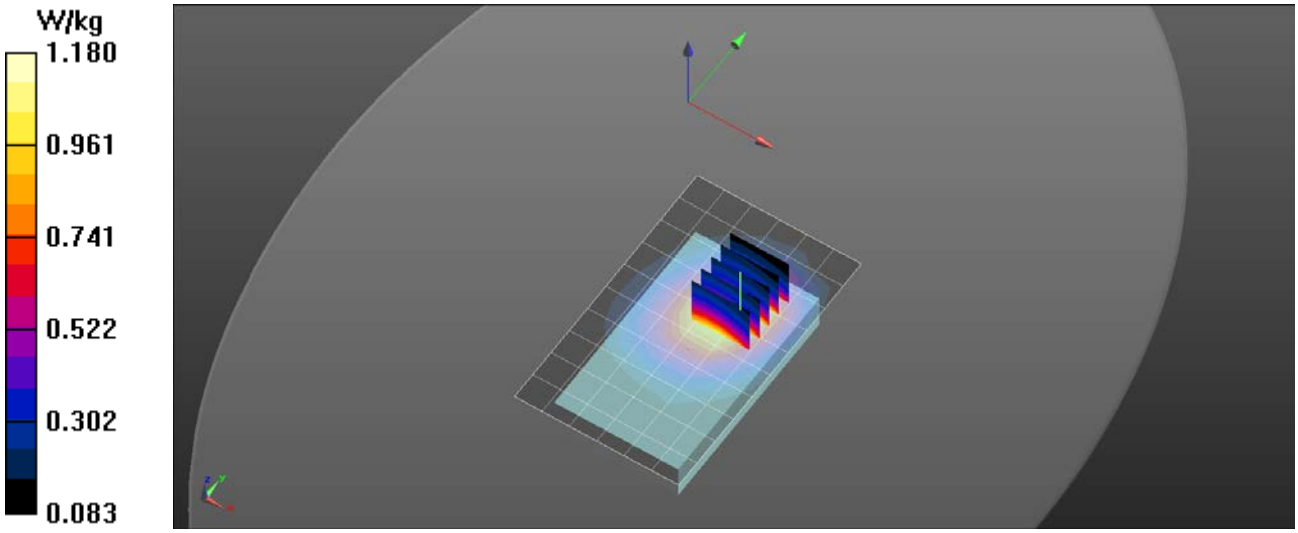
Procedure Notes:

Band 5 LTE/Side A 1 RB 24 Offset Ant 0 Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.14 W/kg

Band 5 LTE/Side A 1 RB 24 Offset Ant 0 Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 27.59 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 1.36 W/kg
SAR(1 g) = 0.975 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.18 W/kg



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Plot 7

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 831.5 MHz; Duty Cycle: 1:1
Medium: MSL835; Medium parameters used (interpolated): f = 831.5 MHz; σ = 0.99 S/m; ε_r = 54.744; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/19/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(9.21, 9.21, 9.21); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

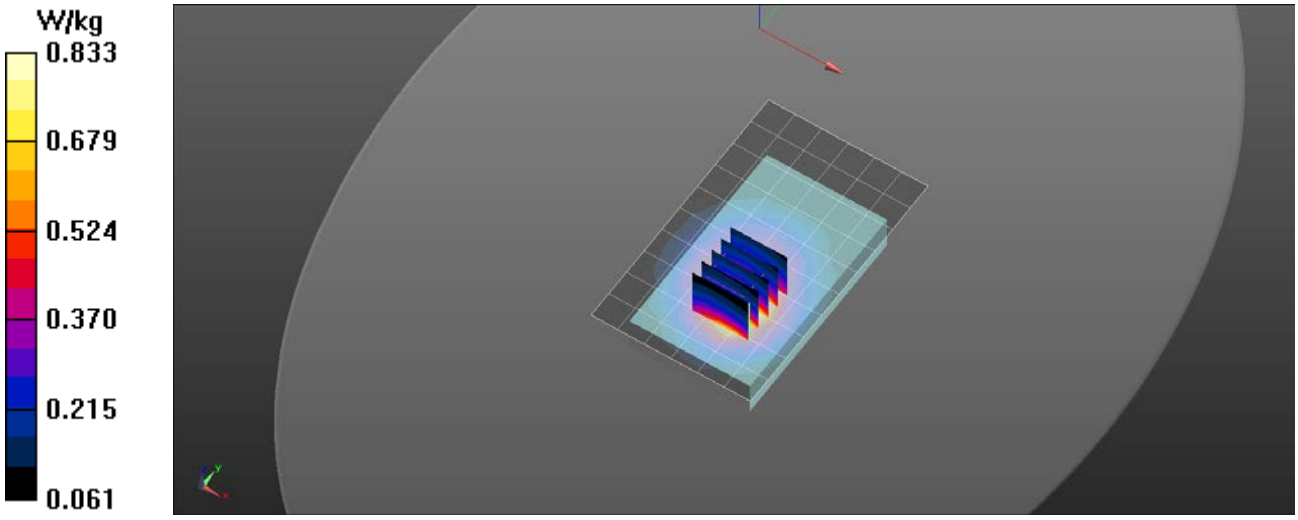
Procedure Notes:

Band 26 LTE/Side C 1 RB 24 Offset Ant 0 Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.800 W/kg

Band 26 LTE/Side C 1 RB 24 Offset Ant 0 Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 20.82 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 0.951 W/kg
SAR(1 g) = 0.689 W/kg; SAR(10 g) = 0.481 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.833 W/kg



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Plot 8

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: UMTS (WCDMA); Frequency: 1712.4 MHz; Duty Cycle: 1:1
Medium: MSL1750; Medium parameters used (interpolated): f = 1712.4 MHz; σ = 1.492 S/m; ε_r = 52.803; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/22/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.96, 7.96, 7.96); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

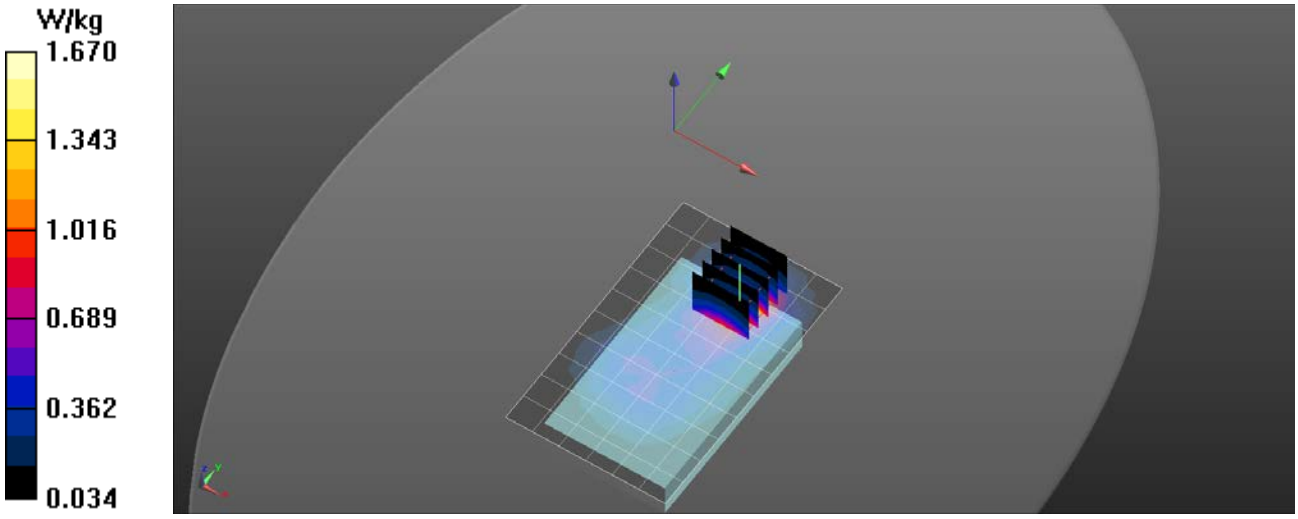
Procedure Notes:

Band 4 UMTS/Side A Ant 0 Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.53 W/kg

Band 4 UMTS/Side A Ant 0 Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.41 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 2.09 W/kg
SAR(1 g) = 0.945 W/kg; SAR(10 g) = 0.482 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.67 W/kg



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Plot 9

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: MSL1750; Medium parameters used: f = 1720 MHz; σ = 1.49 S/m; ε_r = 53.52; ρ = 1000 kg/m^3
Phantom section: Flat Section

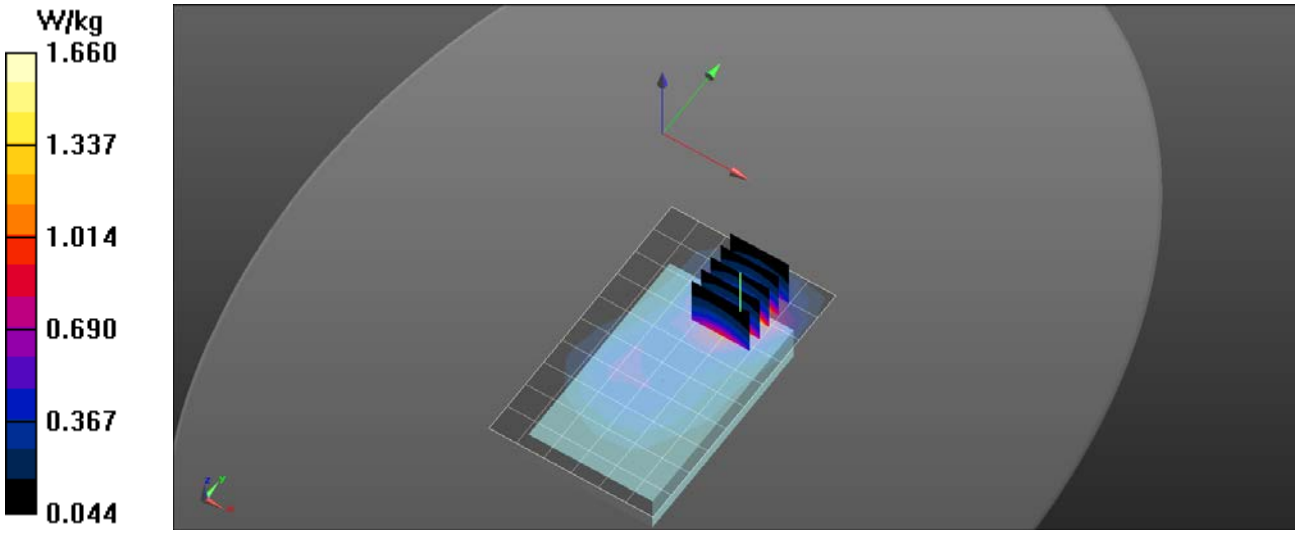
Test Date: Date: 6/8/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.96, 7.96, 7.96); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band 66 LTE Retest/Side A 1 RB 49 Offset Ant 0 Low2/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.73 W/kg

Band 66 LTE Retest/Side A 1 RB 49 Offset Ant 0 Low2/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.62 V/m; Power Drift = 0.04 dB
Peak SAR (extrapolated) = 2.07 W/kg
SAR(1 g) = 1.28 W/kg
Maximum value of SAR (measured) = 1.66 W/kg



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Plot 10

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: UMTS (WCDMA); Frequency: 1852.4 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium parameters used (interpolated): f = 1852.4 MHz; σ = 1.44 S/m; ε_r = 52.03; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/1/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3693; ConvF(7.54, 7.54, 7.54); Calibrated: 8/18/2017;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

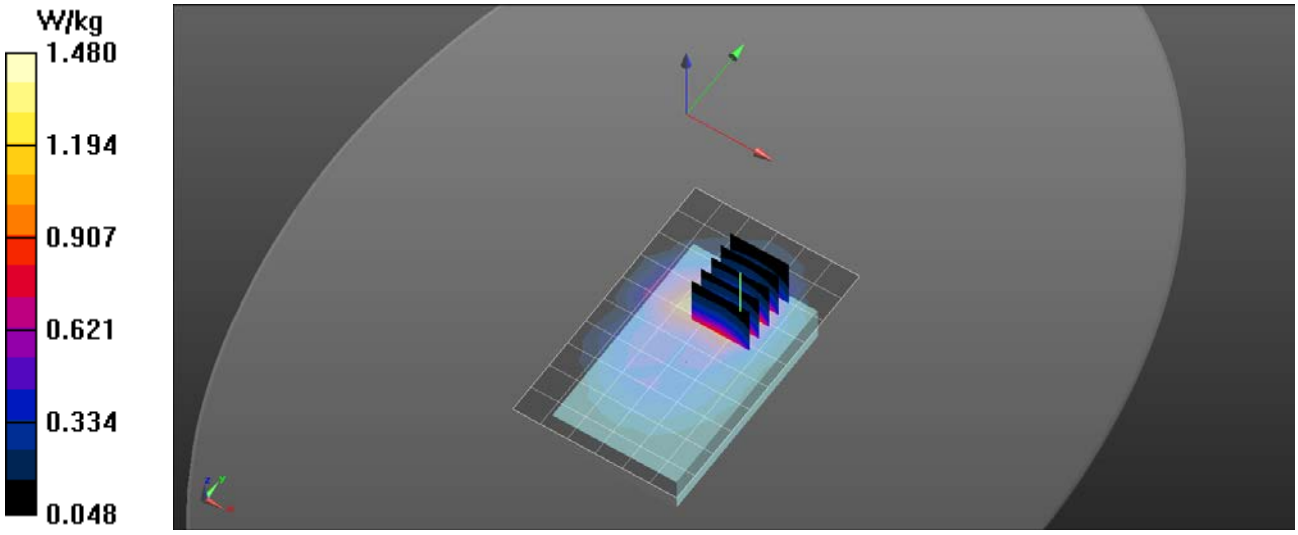
Procedure Notes:

Band 2 UMTS/Side A Ant 0 Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.38 W/kg

Band 2 UMTS/Side A Ant 0 Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.81 V/m; Power Drift = -0.04 dB
Peak SAR (extrapolated) = 1.83 W/kg
SAR(1 g) = 1.11 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.48 W/kg



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Plot 11

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium parameters used: f = 1900 MHz; σ = 1.47 S/m; ε_r = 52.07; ρ = 1000 kg/m^3
Phantom section: Flat Section

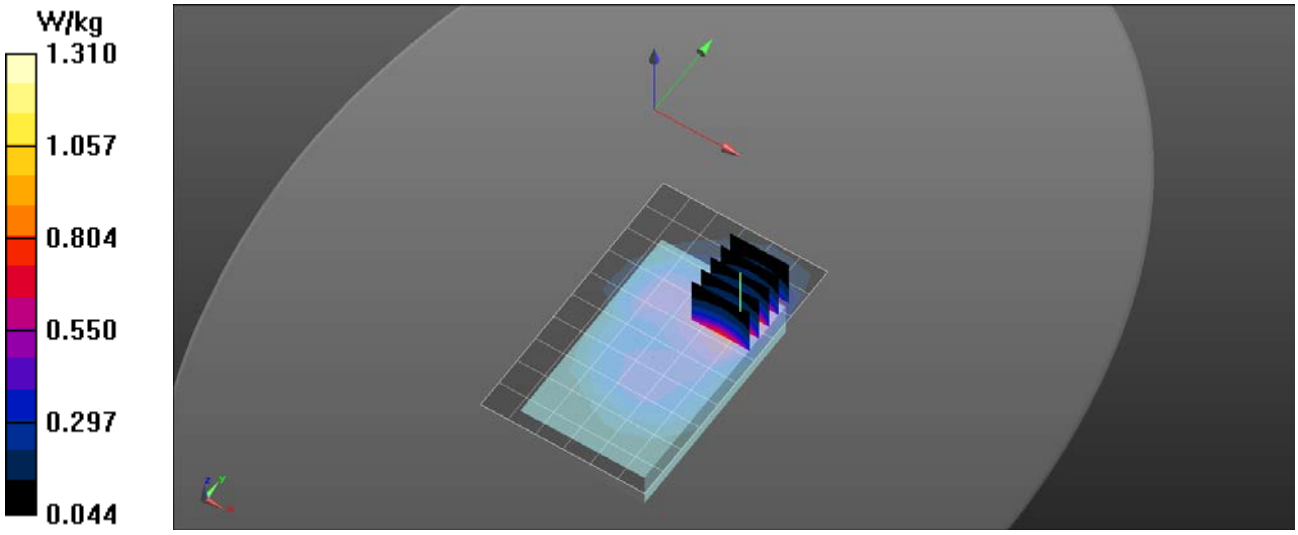
Test Date: Date: 5/31/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3693; ConvF(7.54, 7.54, 7.54); Calibrated: 8/18/2017;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: TP:xxxx
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band 2 LTE/Side A 1 RB 49 Offset Ant 0 High/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.04 W/kg

Band 2 LTE/Side A 1 RB 49 Offset Ant 0 High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 13.79 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 1.63 W/kg
SAR(1 g) = 0.948 W/kg
Maximum value of SAR (measured) = 1.31 W/kg



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Plot 12

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1860 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium parameters used: f = 1860 MHz; σ = 1.54 S/m; ε_r = 52.4; ρ = 1000 kg/m^3
Phantom section: Flat Section

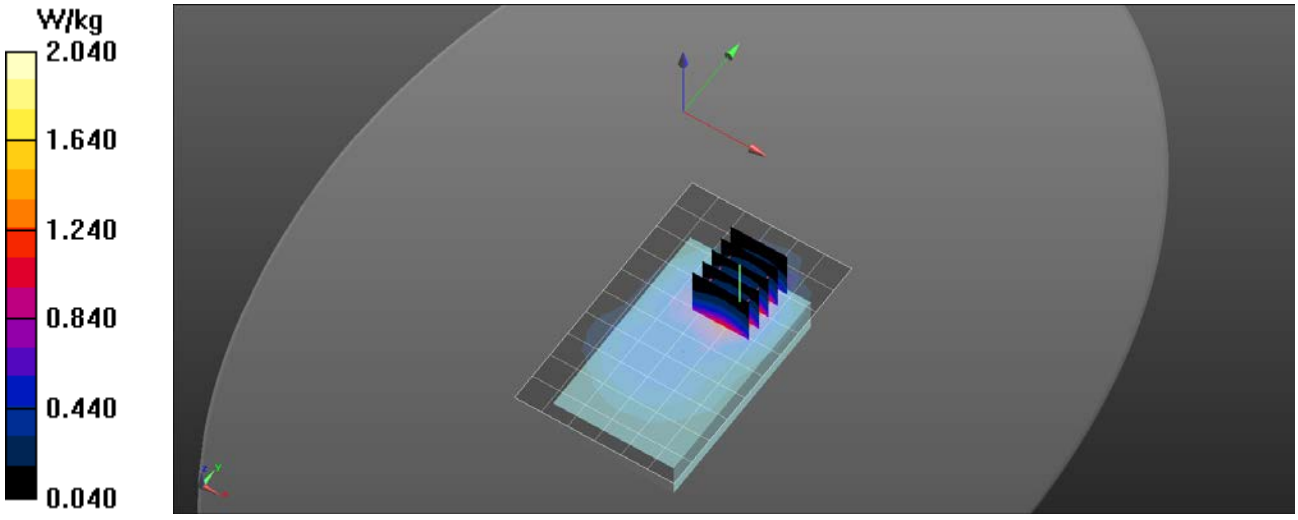
Test Date: Date: 2/27/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.61, 7.61, 7.61); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band 25 LTE/Side A 1 RB 49 Offset Ant 0 Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.99 W/kg

Band 25 LTE/Side A 1 RB 49 Offset Ant 0 Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 15.67 V/m; Power Drift = -0.00 dB
Peak SAR (extrapolated) = 2.58 W/kg
SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.615 W/kg
Maximum value of SAR (measured) = 2.04 W/kg



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Plot 13

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 2310 MHz; Duty Cycle: 1:1
Medium: MSL2300; Medium parameters used: f = 2310 MHz; σ = 1.85 S/m; ε_r = 52.61; ρ = 1000 kg/m^3
Phantom section: Flat Section

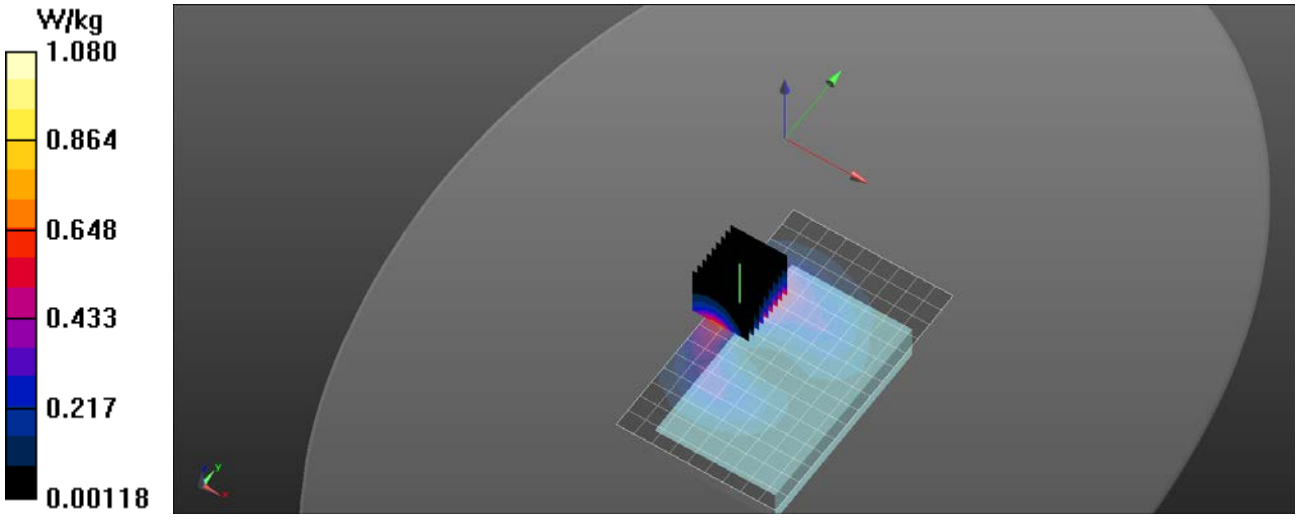
Test Date: Date: 2/14/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.33, 7.33, 7.33); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band 30 LTE/Side A 1 RB 24 Offset Ant 2 Mid/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 1.05 W/kg

Band 30 LTE/Side A 1 RB 24 Offset Ant 2 Mid/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
Reference Value = 4.858 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 1.41 W/kg
SAR(1 g) = 0.742 W/kg; SAR(10 g) = 0.374 W/kg
Maximum value of SAR (measured) = 1.08 W/kg



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Plot 14

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2390 MHz; Duty Cycle: 1:8.33681
Medium: MSL2300; Medium parameters used (extrapolated): f = 2390 MHz; σ = 1.92 S/m; ε_r = 52.47; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/14/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.33, 7.33, 7.33); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

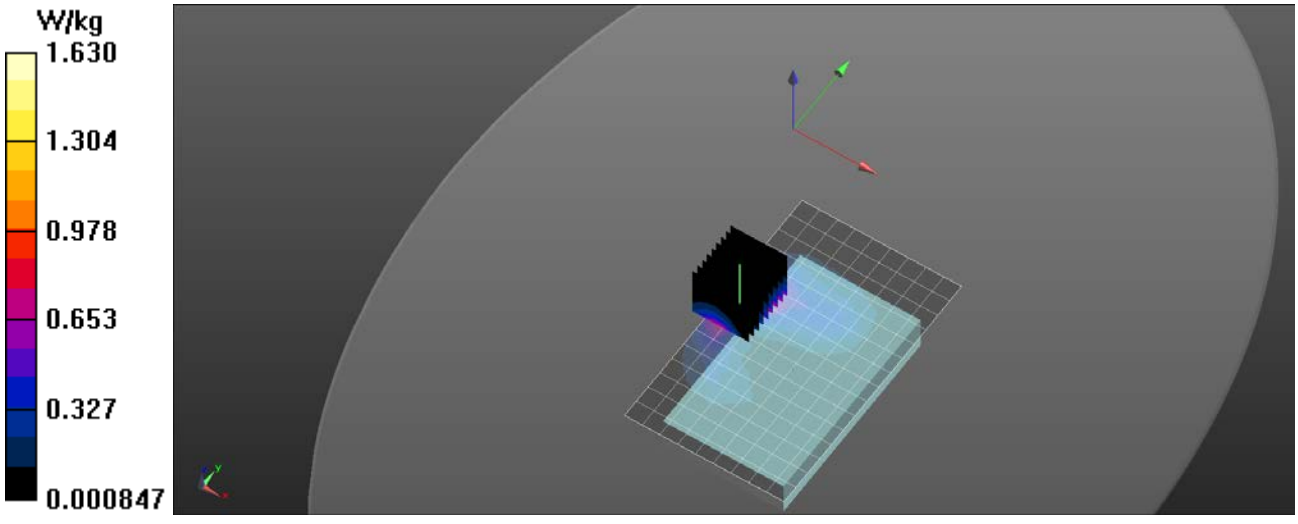
Procedure Notes:

Band 40 LTE/Side A 1 RB 49 Offset Ant 2 High/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm

Info: Extrapolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.48 W/kg

Band 40 LTE/Side A 1 RB 49 Offset Ant 2 High/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
Reference Value = 6.025 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.20 W/kg
SAR(1 g) = 1.07 W/kg; SAR(10 g) = 0.482 W/kg

Info: Extrapolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.63 W/kg



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Plot 15

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2535 MHz; Duty Cycle: 1:1
Medium: MSL2550; Medium parameters used (interpolated): f = 2535 MHz; σ = 2.1 S/m; ε_r = 52.495; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 7/9/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.15, 7.15, 7.15); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

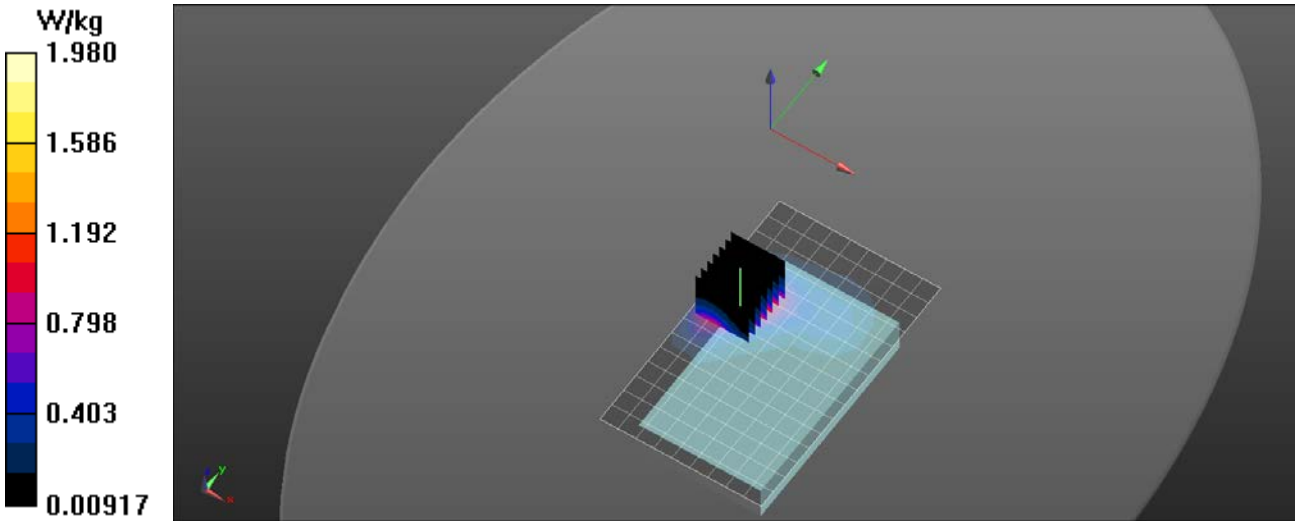
Procedure Notes:

Band 7 LTE Final/Side A 50 RB 24 Offset Ant 2 Mid/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.92 W/kg

Band 7 LTE Final/Side A 50 RB 24 Offset Ant 2 Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.825 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.62 W/kg
SAR(1 g) = 1.31 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.98 W/kg



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Plot 16

DUT: MIFI8800; Type: Hotspot; Serial: 48

Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2595 MHz; Duty Cycle: 1:1
Medium: MSL2550; Medium parameters used (interpolated): f = 2595 MHz; σ = 2.2 S/m; ε_r = 51.805; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 9/9/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.21, 7.21, 7.21); Calibrated: 4/24/2019;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1416; Calibrated: 4/16/2019
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

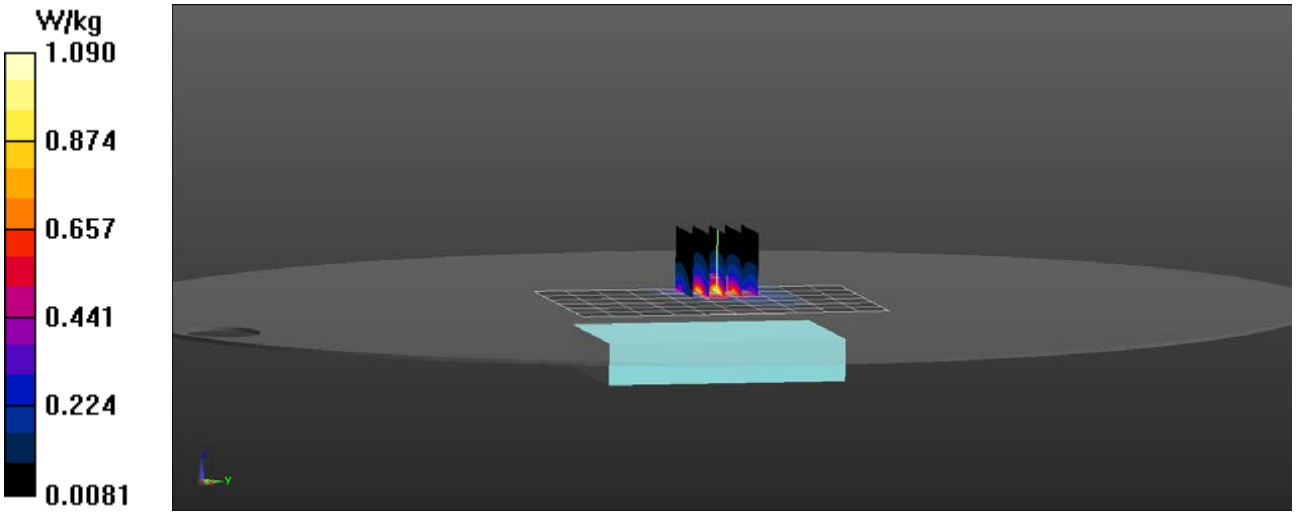
Procedure Notes:

Band 38 LTE/Side A 1 RB 49 Offset Ant 0 Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.968 W/kg

Band 38 LTE/Side A 1 RB 49 Offset Ant 0 Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 6.404 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 1.45 W/kg
SAR(1 g) = 0.734 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 1.09 W/kg



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Plot 17

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2593 MHz; Duty Cycle: 1:8.33681
Medium: MSL2550; Medium parameters used (interpolated): f = 2593 MHz; σ = 2.186 S/m; ε_r = 52.097; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 2/25/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.15, 7.15, 7.15); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

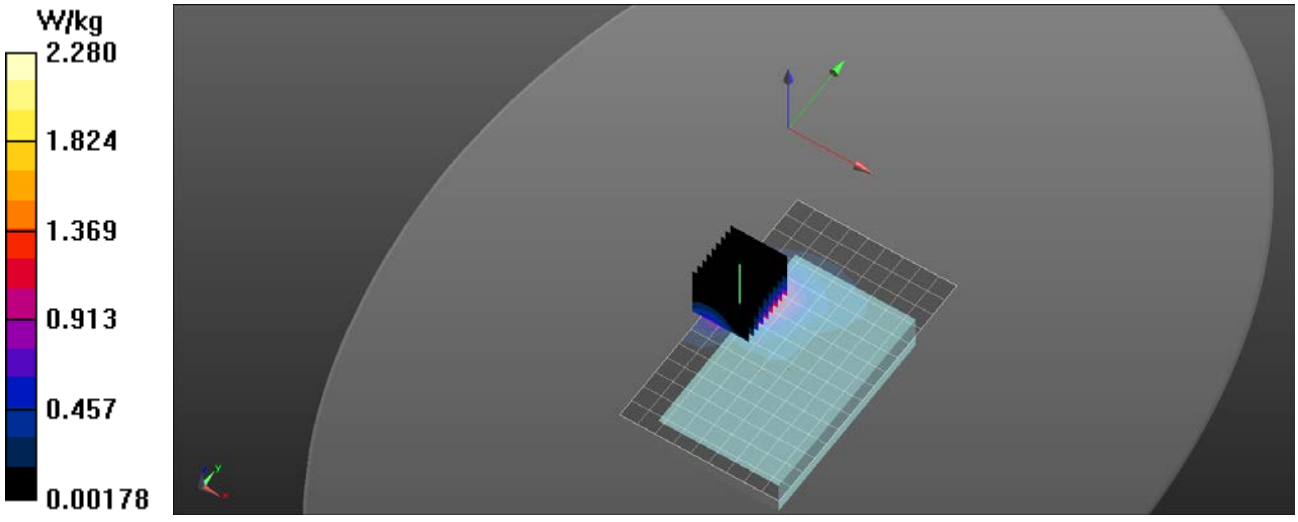
Procedure Notes:

Band 41 LTE/Side A 1 RB 49 Offset Ant 2 Mid/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.05 W/kg

Band 41 LTE/Side A 1 RB 49 Offset Ant 2 Mid/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
Reference Value = 8.500 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 3.24 W/kg
SAR(1 g) = 1.20 W/kg; SAR(10 g) = 0.575 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.28 W/kg



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Plot 18

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 3500 MHz; Duty Cycle: 1:8.33681
Medium: MSL 3-6 GHz; Medium parameters used: f = 3500 MHz; σ = 3.34 S/m; ε_r = 51.11; ρ = 1000 kg/m^3
Phantom section: Flat Section

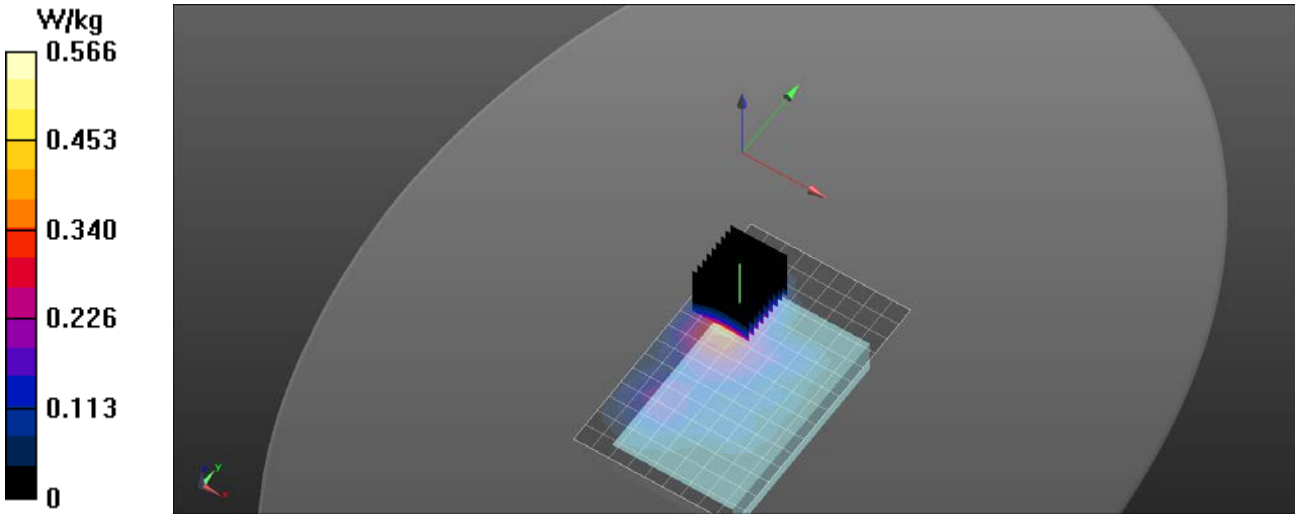
Test Date: Date: 2/25/2019; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7, 7, 7); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Band 42 LTE/Side A 1 RB 49 Offset Ant 2 Mid/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.590 W/kg

Band 42 LTE/Side A 1 RB 49 Offset Ant 2 Mid/Zoom Scan (9x9x9)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
Reference Value = 6.230 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 0.895 W/kg
SAR(1 g) = 0.331 W/kg; SAR(10 g) = 0.137 W/kg
Maximum value of SAR (measured) = 0.566 W/kg



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Plot 19

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 3625 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used (interpolated): f = 3625 MHz; σ = 3.485 S/m; ε_r = 51.045; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/11/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(6.71, 6.71, 6.71); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

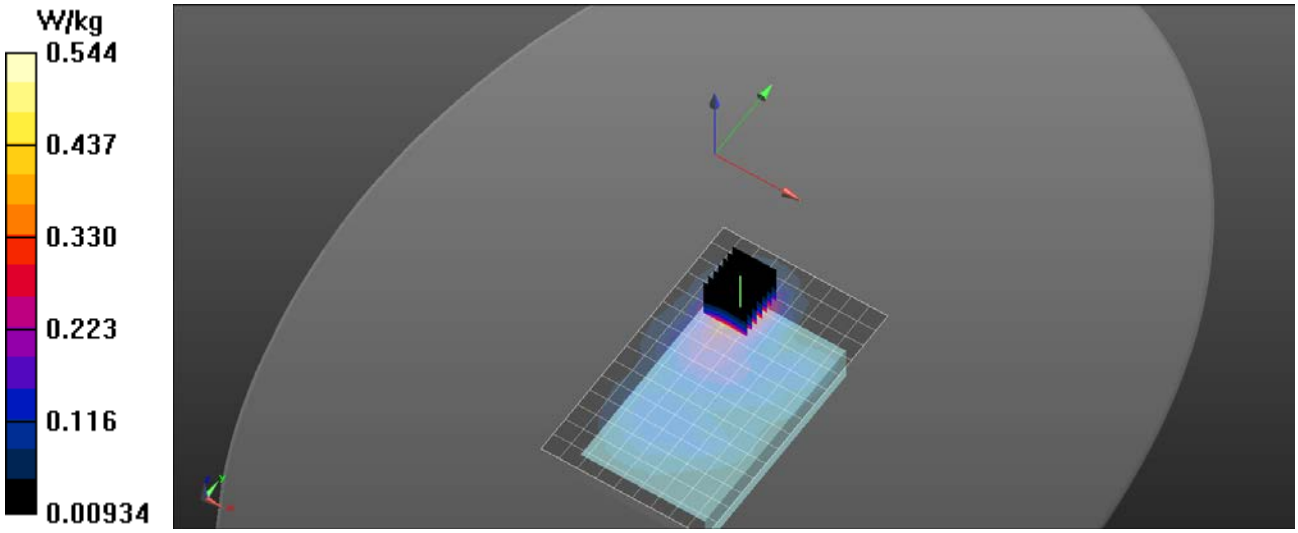
Procedure Notes:

Band 48 LTE/Side A 1 RB 49 Offset Ant 4 Mid2/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.516 W/kg

Band 48 LTE/Side A 1 RB 49 Offset Ant 4 Mid2/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
Reference Value = 5.811 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 0.836 W/kg
SAR(1 g) = 0.319 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.544 W/kg



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Plot 20

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: WiFi 802.11b (DSSS, 11 Mbps); Frequency: 2437 MHz; Duty Cycle: 1:1
Medium: MSL2450; Medium parameters used (interpolated): f = 2437 MHz; σ = 1.907 S/m; ε_r = 52.796; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 7/2/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(7.29, 7.29, 7.29); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

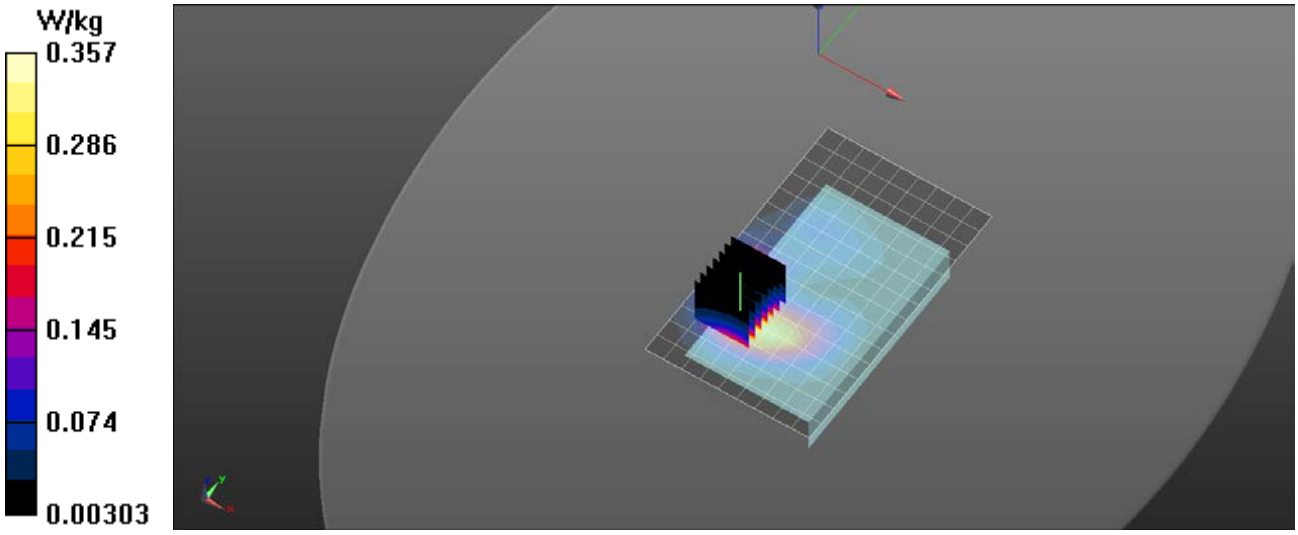
Procedure Notes:

2450 MHz/Side A Ant 1Mid/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.343 W/kg

2450 MHz/Side A Ant 1Mid/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
Reference Value = 3.066 V/m; Power Drift = 0.03 dB
Peak SAR (extrapolated) = 0.471 W/kg
SAR(1 g) = 0.257 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 0.357 W/kg



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Plot 21

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: WiFi 802.11a (OFDM, 6 Mbps); Frequency: 5200 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used: f = 5200 MHz; σ = 5.27 S/m; ε_r = 49.11; ρ = 1000 kg/m^3
Phantom section: Flat Section

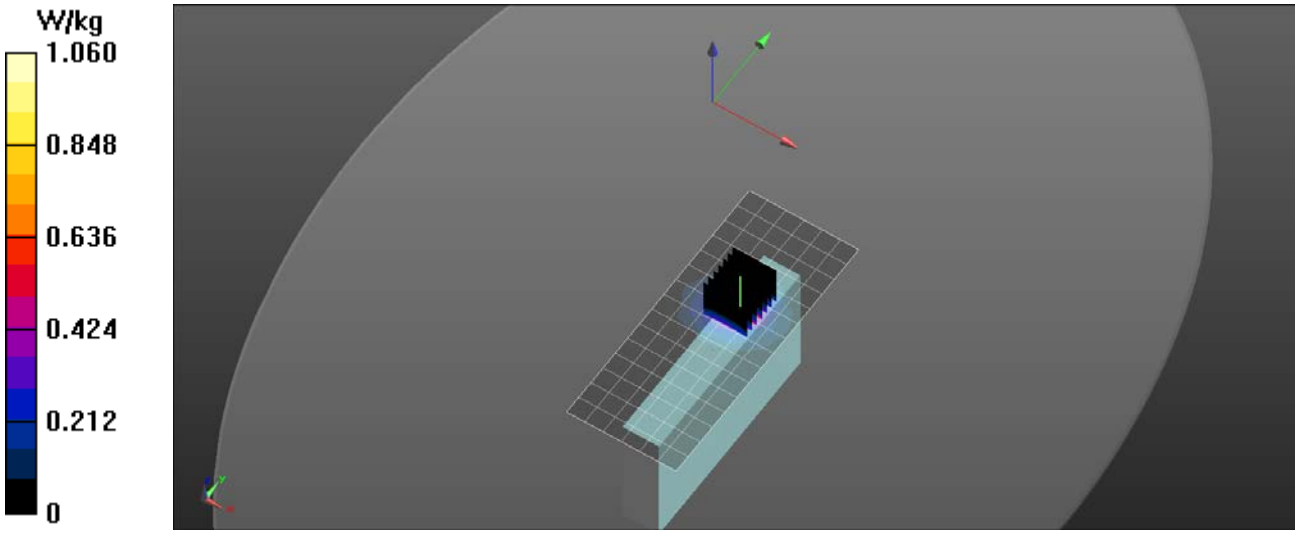
Test Date: Date: 6/28/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(4.46, 4.46, 4.46); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

5200 MHz/Side B Ant 0 40/Area Scan (7x16x1): Measurement grid: dx=10mm, dy=10mm
Maximum value of SAR (measured) = 0.942 W/kg

5200 MHz/Side B Ant 0 40/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 4.305 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 2.10 W/kg
SAR(1 g) = 0.547 W/kg
Maximum value of SAR (measured) = 1.06 W/kg



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Plot 22

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: WiFi 802.11a (OFDM, 6 Mbps); Frequency: 5785 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used (interpolated): f = 5785 MHz; σ = 5.975 S/m; ε_r = 48.193; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 6/28/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3662; ConvF(4.08, 4.08, 4.08); Calibrated: 4/20/2018;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/10/2018
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 2037
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

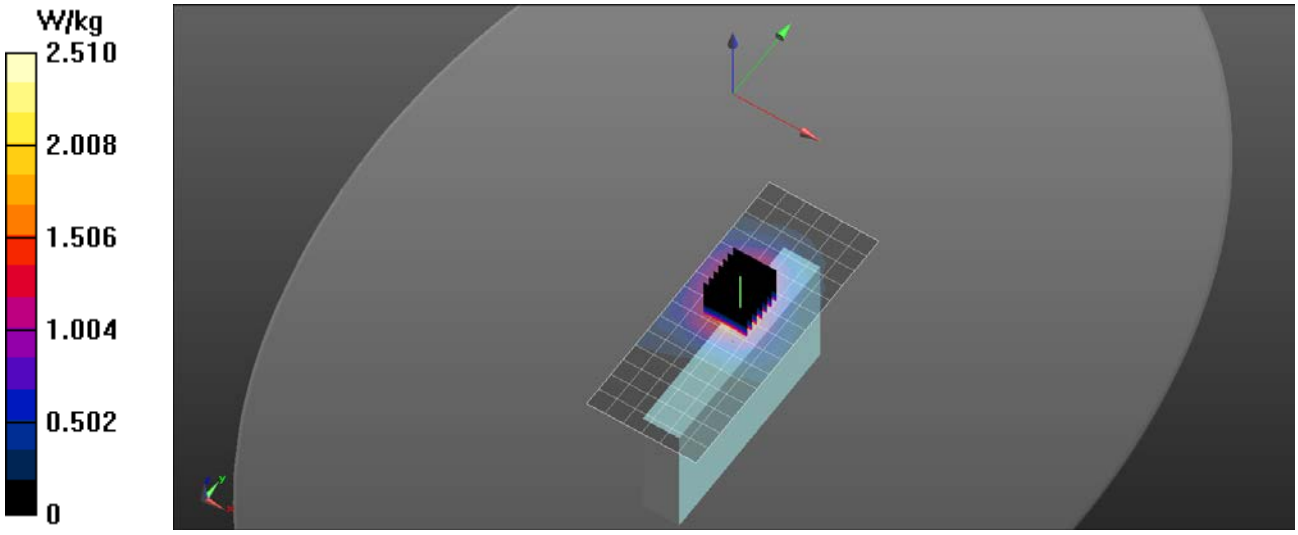
Procedure Notes:

5800 MHz/Side B Ant 0 157/Area Scan (7x16x1): Measurement grid: dx=10mm, dy=10mm

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.35 W/kg

5800 MHz/Side B Ant 0 157/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 13.25 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 5.62 W/kg
SAR(1 g) = 1.36 W/kg

Info: Interpolated medium parameters used for SAR evaluation.
Maximum value of SAR (measured) = 2.51 W/kg



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Plot 23

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium parameters used: f = 1900 MHz; σ = 1.57 S/m; ε_r = 51.05; ρ = 1000 kg/m^3
Phantom section: Flat Section

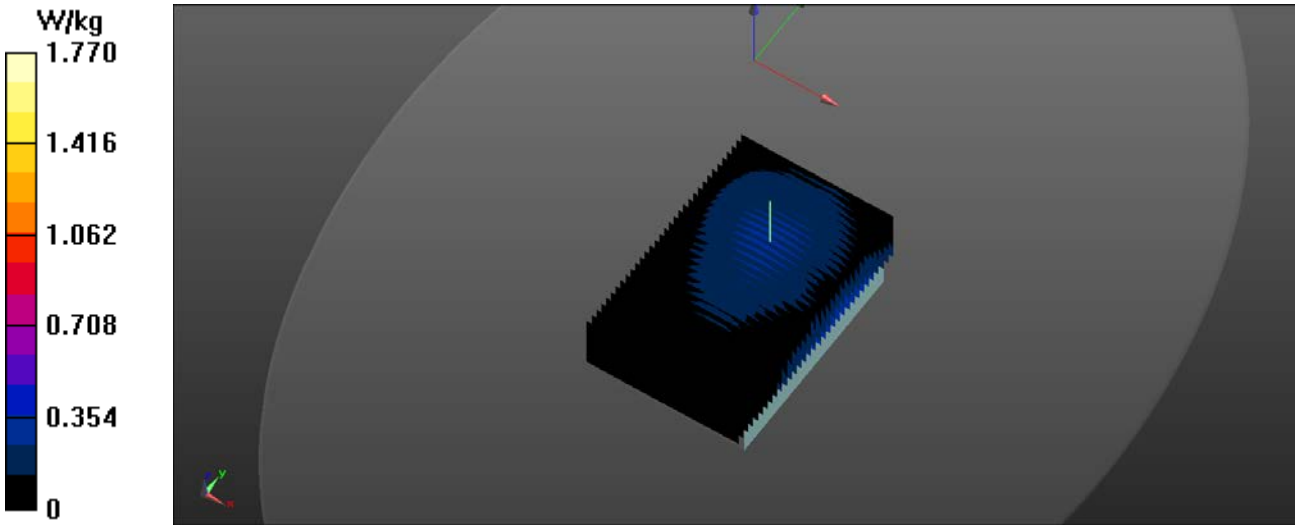
Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 782 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used (interpolated): f = 782 MHz; σ = 0.926 S/m; ε_r = 41.412; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 7/26/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3693; ConvF(9.55, 9.55, 9.55); Calibrated: 8/18/2017;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/21/2017
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Multi Band Result:
SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.788 W/kg
Maximum value of SAR (interpolated) = 1.77 W/kg



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Plot 24

DUT: MIFI8000; Type: Hotspot; Serial: 67

Communication System: LTE (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1720 MHz; Duty Cycle: 1:1
Medium: MSL1750; Medium parameters used (interpolated): f = 1720 MHz; σ = 1.444 S/m; ε_r = 53.316; ρ = 1000 kg/m^3
Phantom section: Flat Section

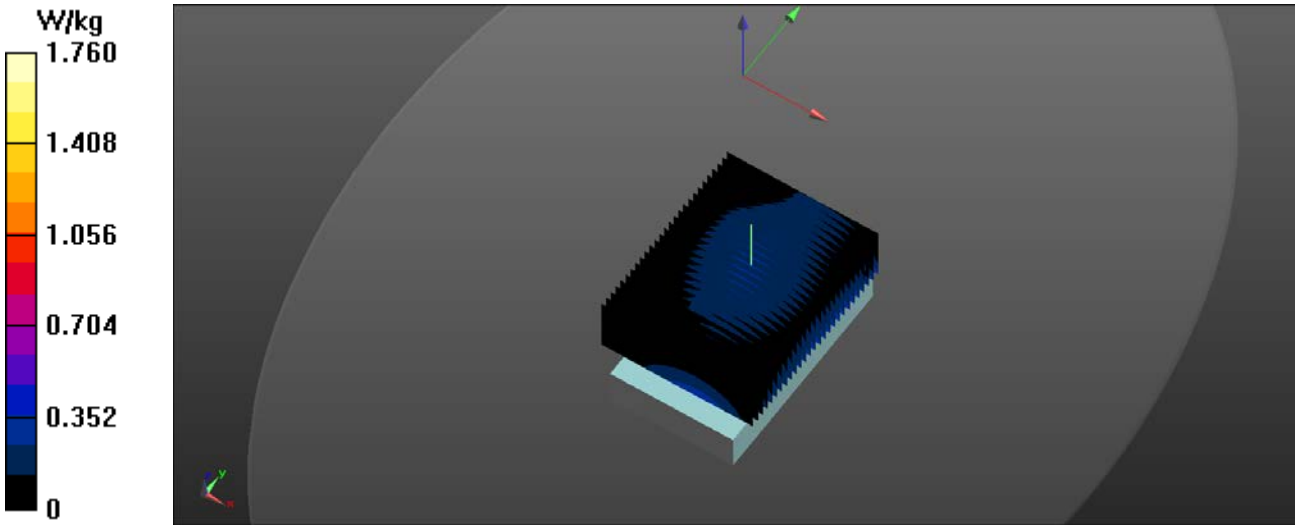
Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 782 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used (interpolated): f = 782 MHz; σ = 0.926 S/m; ε_r = 41.412; ρ = 1000 kg/m^3
Phantom section: Flat Section

Test Date: Date: 7/26/2018; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3693; ConvF(9.55, 9.55, 9.55); Calibrated: 8/18/2017;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn759; Calibrated: 8/21/2017
Phantom: ELI v5.0; Type: QDOVA002AA; Serial: 1251
Measurement SW: DASY52, Version 52.10 (0); SEMCAD X Version 14.6.10 (7417)

Procedure Notes:

Multi Band Result:
SAR(1 g) = 1.13 W/kg; SAR(10 g) = 0.702 W/kg
Maximum value of SAR (interpolated) = 1.76 W/kg



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Appendix C – SAR Test Setup Photos

Test Position Side A 10 mm Gap

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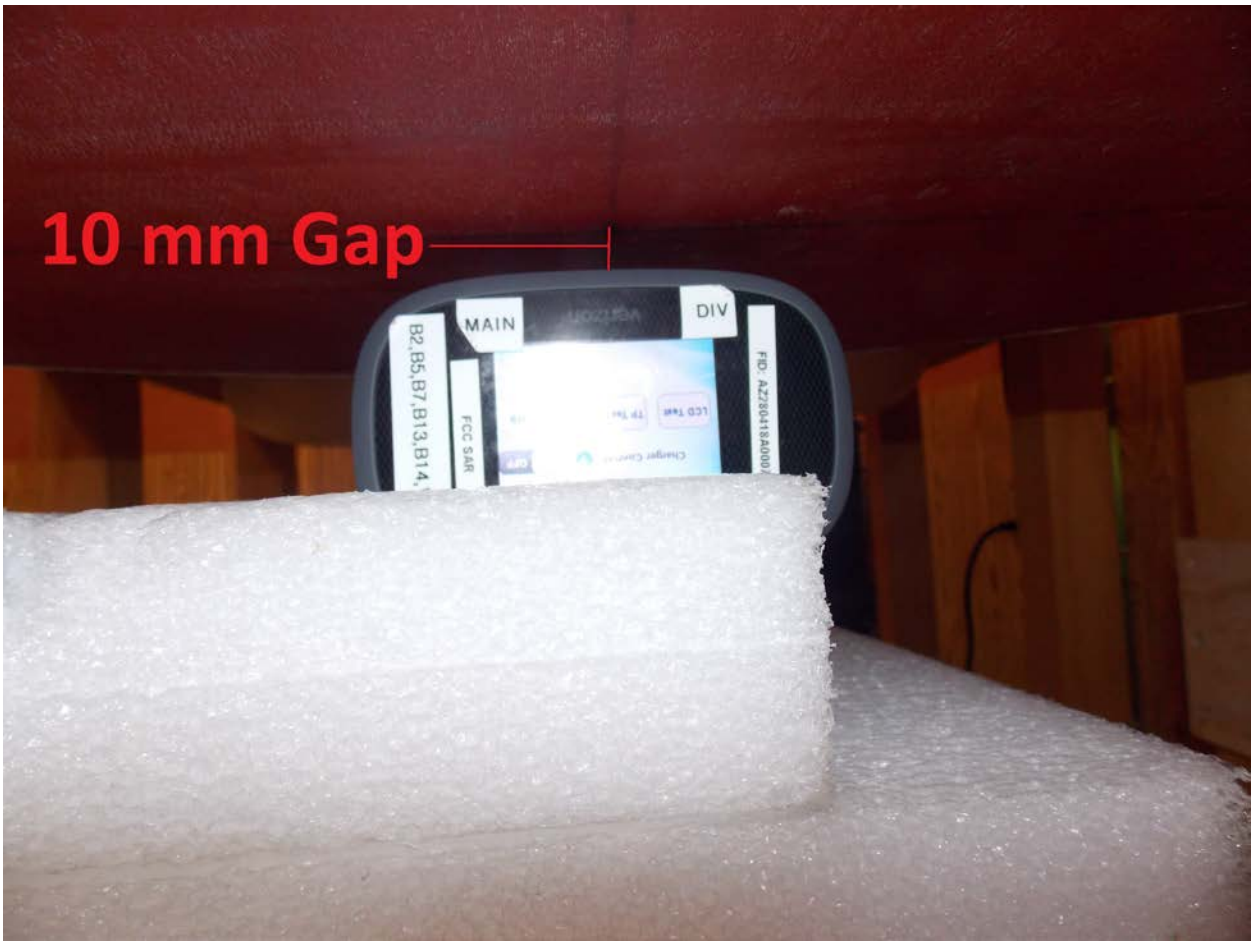

Test Position Side B 10 mm Gap

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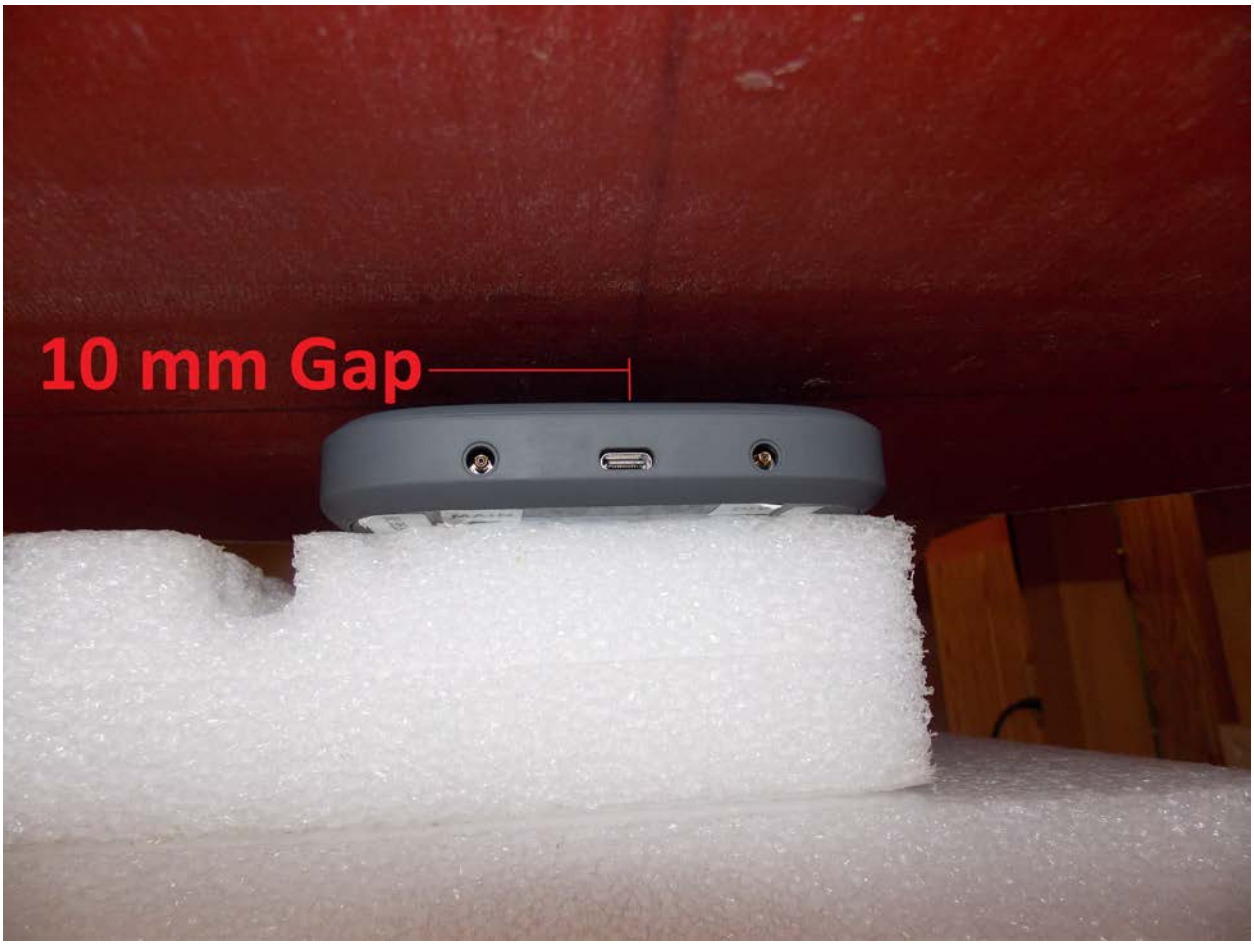

Test Position Side C 10 mm Gap

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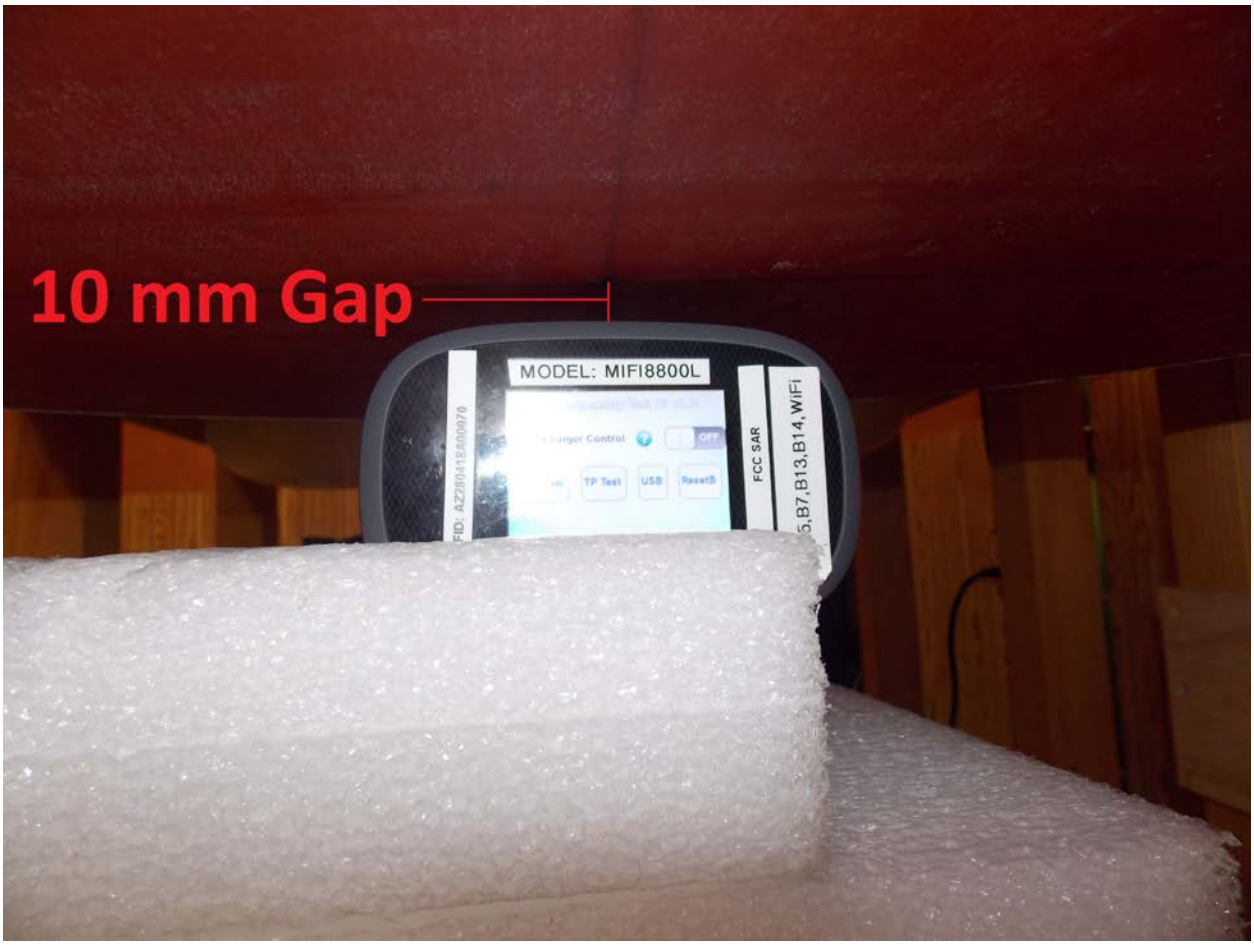

Test Position Side D 10 mm Gap

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Test Position Side E 10 mm Gap

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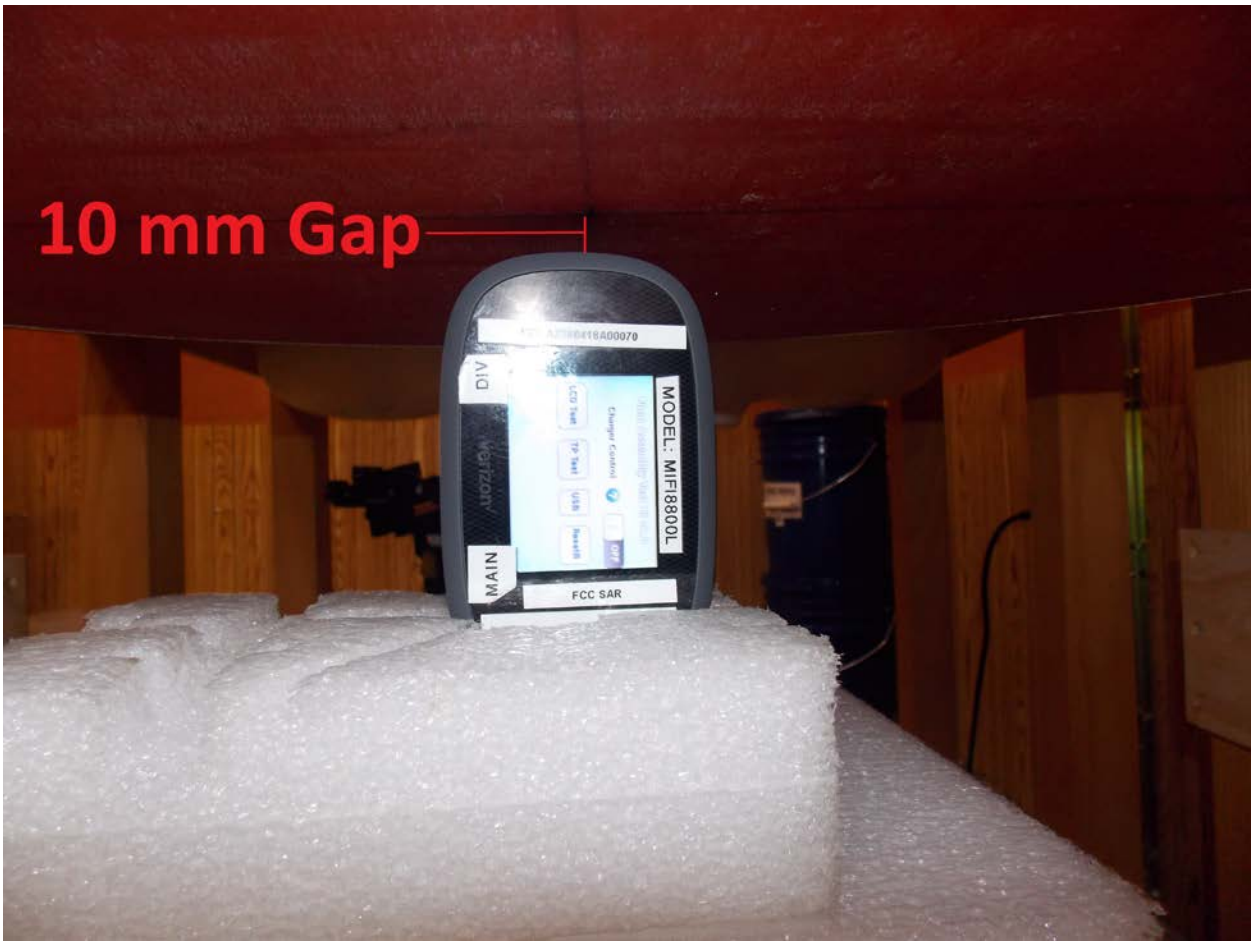

Test Position Side F 10 mm Gap

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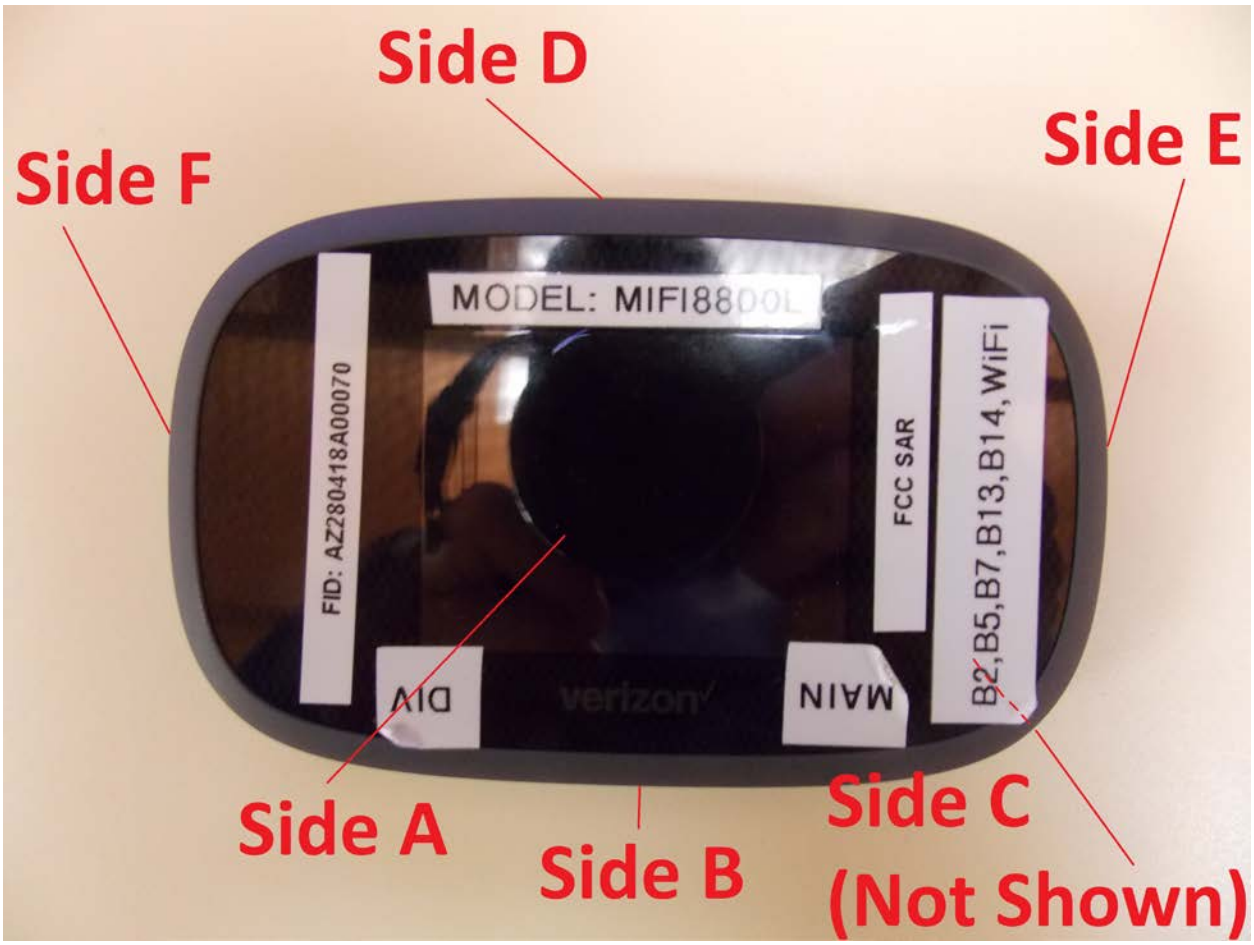

Test Locations

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Front of Device

This report shall not be reproduced except in full without the written approval of RF Exposure Lab, LLC.

Back of Device

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Appendix D – Probe Calibration Data Sheets

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Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client RF Exposure Lab

Certificate No: EX3-3662_Apr18

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN:3662

Calibration procedure(s): QA CAL-01.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6
Calibration procedure for dosimetric E-field probes

Calibration date: April 20, 2018

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-18 (No. 217-02672/02673)	Apr-19
Power sensor NRP-Z91	SN: 103244	04-Apr-18 (No. 217-02672)	Apr-19
Power sensor NRP-Z91	SN: 103245	04-Apr-18 (No. 217-02673)	Apr-19
Reference 20 dB Attenuator	SN: S5277 (20x)	04-Apr-18 (No. 217-02682)	Apr-19
Reference Probe ES3DV2	SN: 3013	30-Dec-17 (No. ES3-3013_Dec17)	Dec-18
DAE4	SN: 660	21-Dec-17 (No. DAE4-660_Dec17)	Dec-18
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-16)	In house check: Jun-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-17)	In house check: Oct-18

	Name	Function	Signature
Calibrated by:	Leif Klysner	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 20, 2018

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Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
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S Servizio svizzero di taratura
Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS) **Accreditation No.: SCS 0108**

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Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., ϑ = 0 is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization ϑ = 0 (f ≤ 900 MHz in TEM-cell; f > 1800 MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for f ≤ 800 MHz) and inside waveguide using analytical field distributions based on power measurements for f > 800 MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle*: The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

Probe EX3DV4

SN:3662

Manufactured: October 20, 2008
Calibrated: April 20, 2018

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3662

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.44	0.45	0.48	± 10.1 %
DCP (mV)[B]	102.6	97.6	96.4	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	136.8	±3.3 %
		Y	0.0	0.0	1.0		132.2	
		Z	0.0	0.0	1.0		148.8	

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3662

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
750	41.9	0.89	9.80	9.80	9.80	0.43	0.90	± 12.0 %
900	41.5	0.97	9.29	9.29	9.29	0.40	0.91	± 12.0 %
1750	40.1	1.37	8.29	8.29	8.29	0.29	0.84	± 12.0 %
1900	40.0	1.40	8.01	8.01	8.01	0.37	0.80	± 12.0 %
2300	39.5	1.67	7.71	7.71	7.71	0.35	0.80	± 12.0 %
2450	39.2	1.80	7.39	7.39	7.39	0.28	0.91	± 12.0 %
2600	39.0	1.96	7.14	7.14	7.14	0.36	0.85	± 12.0 %
3500	37.9	2.91	7.08	7.08	7.08	0.25	1.20	± 13.1 %
3700	37.7	3.12	6.99	6.99	6.99	0.25	1.20	± 13.1 %
5250	35.9	4.71	5.04	5.04	5.04	0.35	1.80	± 13.1 %
5600	35.5	5.07	4.81	4.81	4.81	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.89	4.89	4.89	0.40	1.80	± 13.1 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3662

Calibration Parameter Determined in Body Tissue Simulating Media

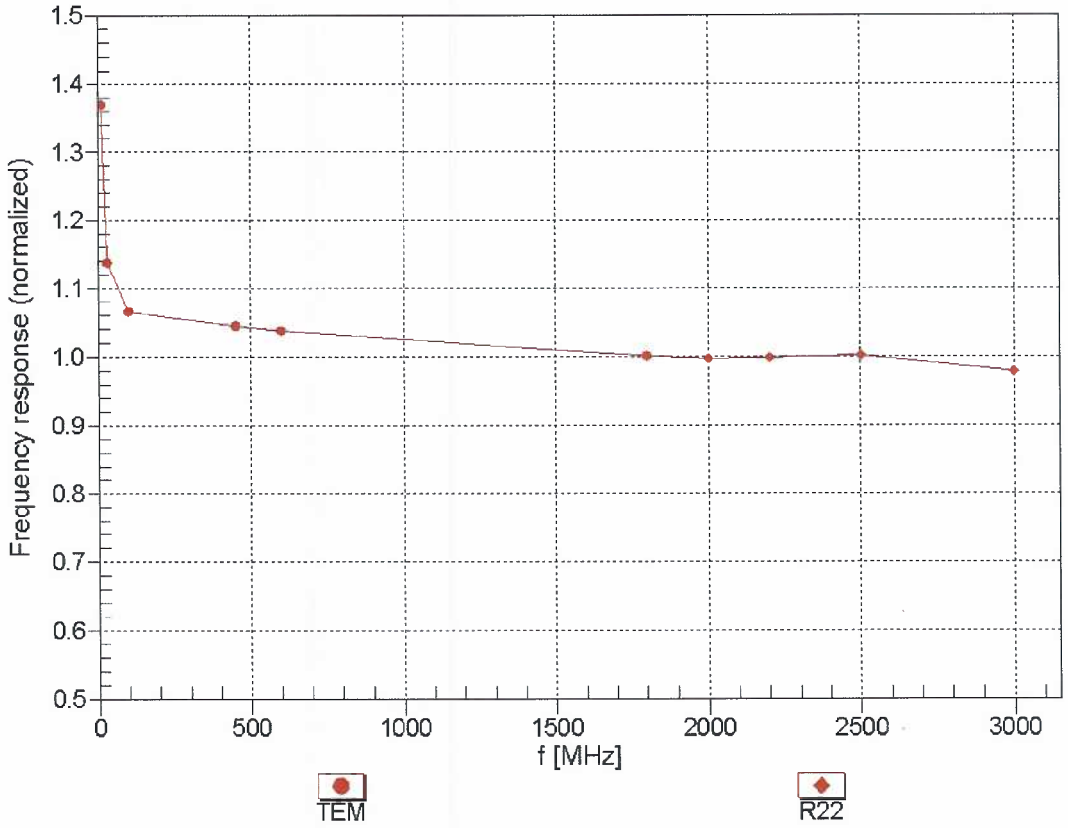
f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
750	55.5	0.96	9.62	9.62	9.62	0.37	0.98	± 12.0 %
900	55.0	1.05	9.21	9.21	9.21	0.44	0.84	± 12.0 %
1750	53.4	1.49	7.96	7.96	7.96	0.45	0.80	± 12.0 %
1900	53.3	1.52	7.61	7.61	7.61	0.44	0.80	± 12.0 %
2300	52.9	1.81	7.33	7.33	7.33	0.41	0.80	± 12.0 %
2450	52.7	1.95	7.29	7.29	7.29	0.36	0.87	± 12.0 %
2600	52.5	2.16	7.15	7.15	7.15	0.26	0.99	± 12.0 %
3500	51.3	3.31	7.00	7.00	7.00	0.25	1.20	± 13.1 %
3700	51.0	3.55	6.71	6.71	6.71	0.23	1.20	± 13.1 %
5250	48.9	5.36	4.46	4.46	4.46	0.45	1.90	± 13.1 %
5600	48.5	5.77	3.91	3.91	3.91	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.08	4.08	4.08	0.50	1.90	± 13.1 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

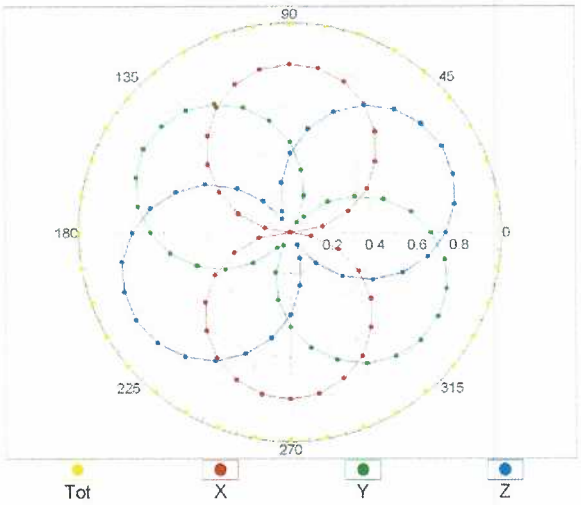
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



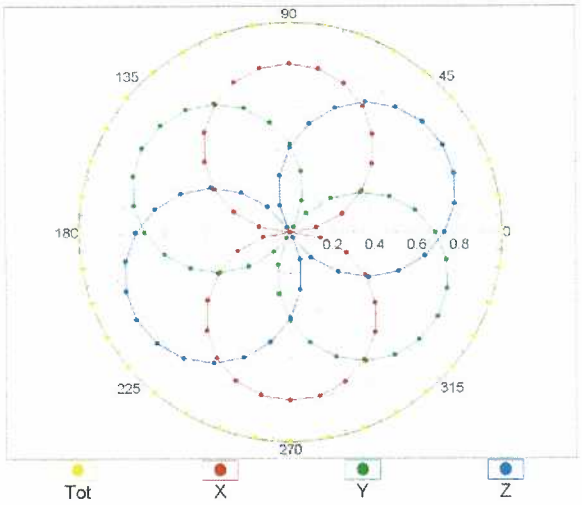
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

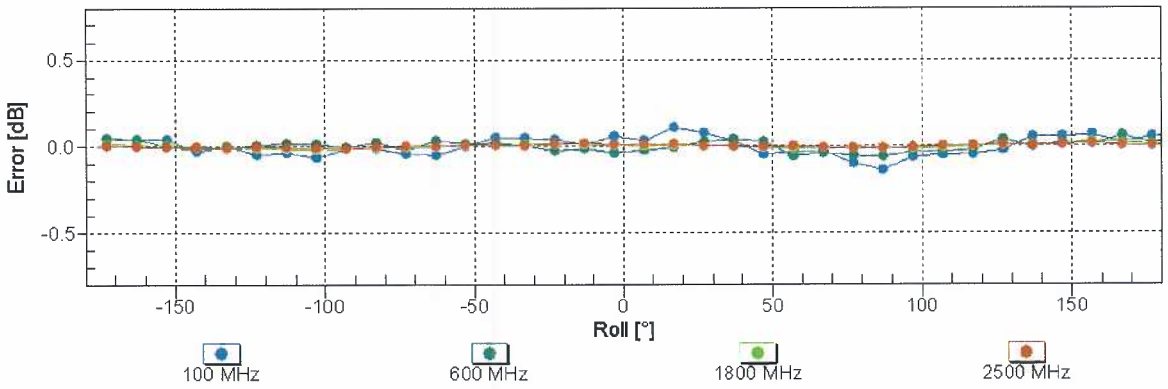
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



f=1800 MHz,R22

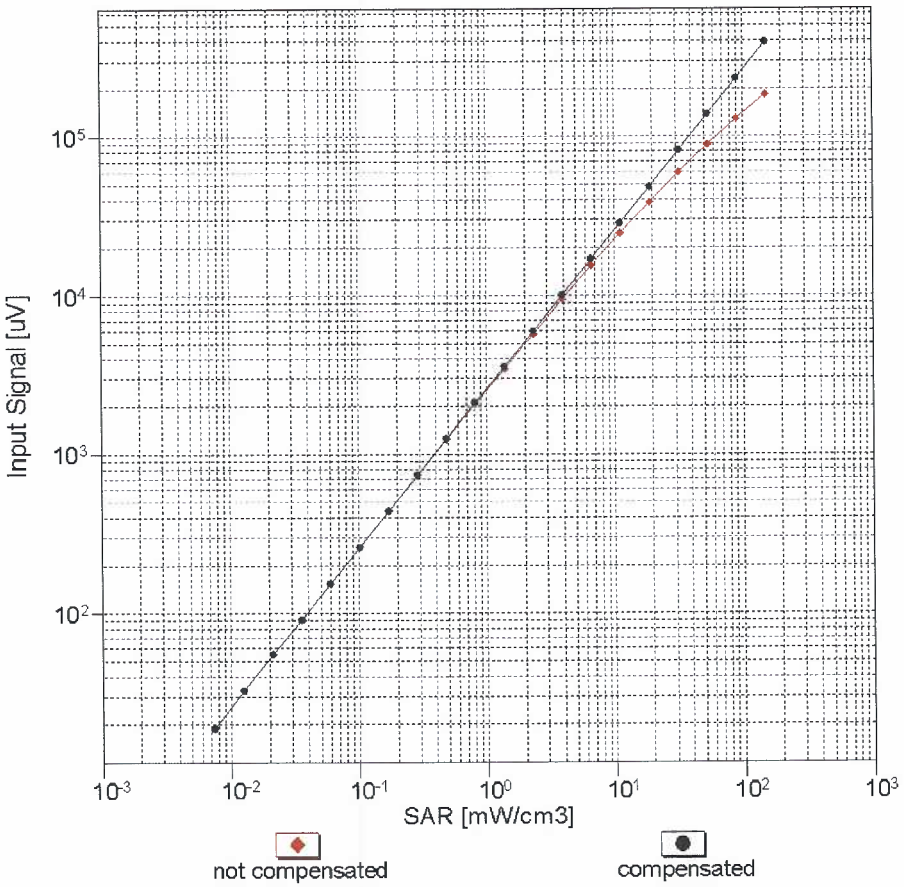


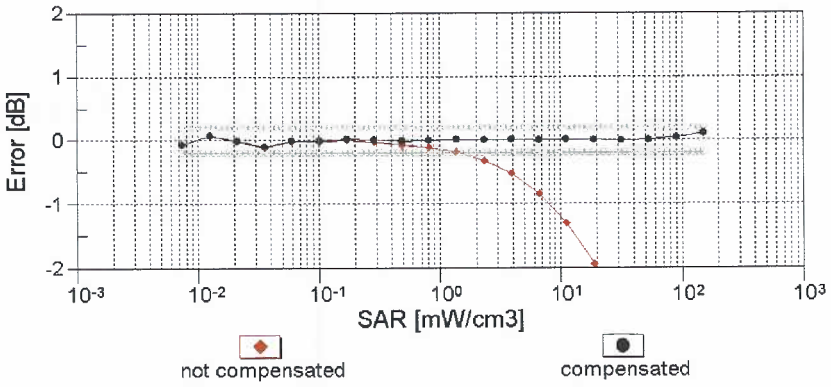


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR_{head})

(TEM cell , f_{eval}= 1900 MHz)

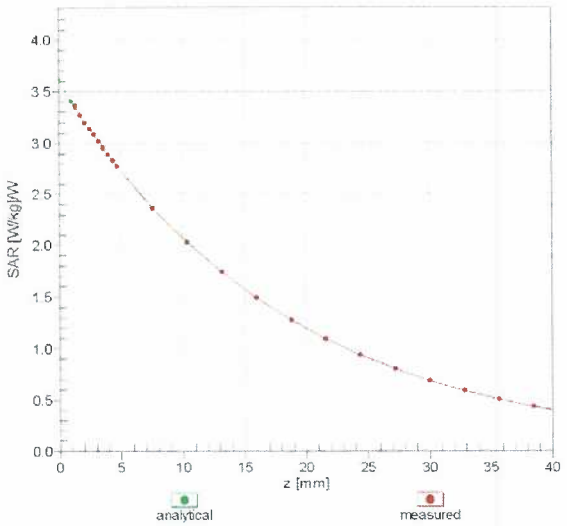




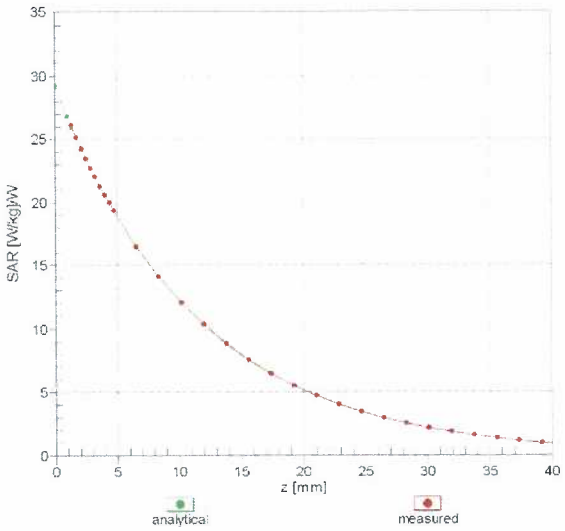
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 900 MHz,WGLS R9 (H_convF)

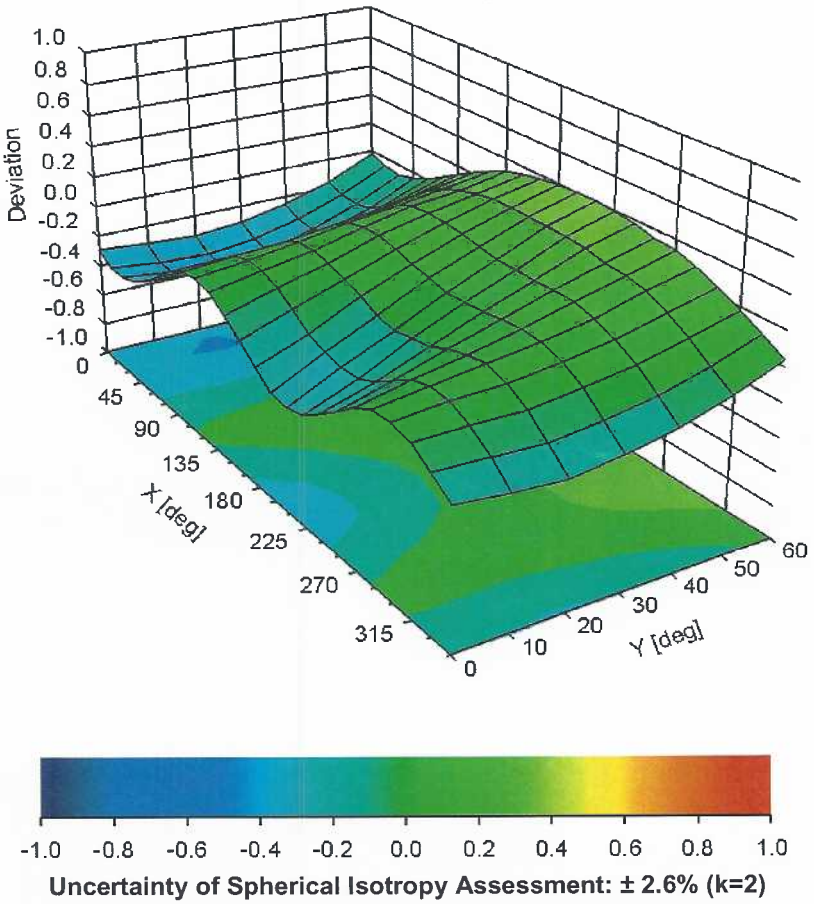


f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz



Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3662

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-22.9
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

Calibration Laboratory of
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Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

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The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client RF Exposure Lab

Certificate No: EX3-3662_Apr19

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN:3662

Calibration procedure(s): QA CAL-01.v9, QA CAL-14.v5, QA CAL-23.v5, QA CAL-25.v7
Calibration procedure for dosimetric E-field probes

Calibration date: April 24, 2019

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	03-Apr-19 (No. 217-02892/02893)	Apr-20
Power sensor NRP-Z91	SN: 103244	03-Apr-19 (No. 217-02892)	Apr-20
Power sensor NRP-Z91	SN: 103245	03-Apr-19 (No. 217-02893)	Apr-20
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DAE4	SN: 660	19-Dec-18 (No. DAE4-660_Dec18)	Dec-19
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Secondary Standards	ID	Check Date (in house)	Scheduled Check
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Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-18)	In house check: Jun-20
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-18)	In house check: Jun-20
Network Analyzer E8358A	SN: US41080477	31-Mar-14 (in house check Oct-18)	In house check: Oct-19

	Name	Function	Signature
Calibrated by:	Claudio Leubler	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: April 25, 2019

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Accredited by the Swiss Accreditation Service (SAS) **Accreditation No.: SCS 0108**

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Glossary:

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ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
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Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

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b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z*: *A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle*: The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3662

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.43	0.45	0.50	± 10.1 %
DCP (mV)[B]	100.7	100.3	97.0	

Calibration Results for Modulation Response

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Max dev.	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	157.7	±1.9 %	± 4.7 %
		Y	0.0	0.0	1.0		152.9		
		Y	0.0	0.0	1.0		153.2		

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3662

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	-22.4
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3662

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
750	41.9	0.89	9.57	9.57	9.57	0.49	0.80	± 12.0 %
900	41.5	0.97	9.12	9.12	9.12	0.51	0.80	± 12.0 %
1750	40.1	1.37	8.23	8.23	8.23	0.38	0.85	± 12.0 %
1900	40.0	1.40	7.90	7.90	7.90	0.37	0.85	± 12.0 %
2300	39.5	1.67	7.50	7.50	7.50	0.39	0.85	± 12.0 %
2450	39.2	1.80	7.33	7.33	7.33	0.41	0.84	± 12.0 %
2600	39.0	1.96	7.21	7.21	7.21	0.42	0.85	± 12.0 %
3500	37.9	2.91	7.07	7.07	7.07	0.30	1.20	± 13.1 %
3700	37.7	3.12	6.92	6.92	6.92	0.35	1.25	± 13.1 %
5250	35.9	4.71	5.05	5.05	5.05	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.81	4.81	4.81	0.40	1.80	± 13.1 %
5750	35.4	5.22	4.90	4.90	4.90	0.40	1.80	± 13.1 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3662

Calibration Parameter Determined in Body Tissue Simulating Media

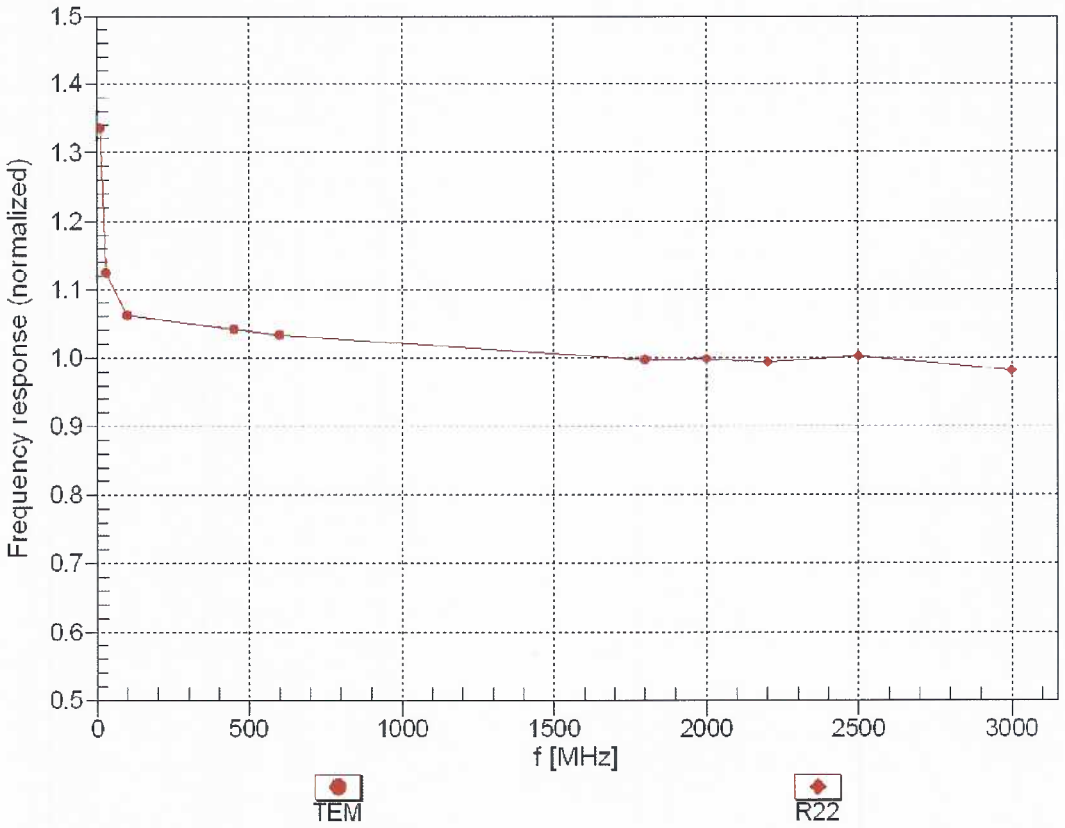
f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
750	55.5	0.96	9.55	9.55	9.55	0.47	0.80	± 12.0 %
900	55.0	1.05	9.34	9.34	9.34	0.45	0.80	± 12.0 %
1750	53.4	1.49	7.95	7.95	7.95	0.40	0.85	± 12.0 %
1900	53.3	1.52	7.69	7.69	7.69	0.43	0.84	± 12.0 %
2300	52.9	1.81	7.43	7.43	7.43	0.40	0.86	± 12.0 %
2450	52.7	1.95	7.36	7.36	7.36	0.40	0.85	± 12.0 %
2600	52.5	2.16	7.12	7.12	7.12	0.22	0.97	± 12.0 %
3500	51.3	3.31	6.83	6.83	6.83	0.30	1.25	± 13.1 %
3700	51.0	3.55	6.52	6.52	6.52	0.35	1.25	± 13.1 %
5250	48.9	5.36	4.30	4.30	4.30	0.50	1.90	± 13.1 %
5600	48.5	5.77	3.87	3.87	3.87	0.50	1.90	± 13.1 %
5750	48.3	5.94	4.07	4.07	4.07	0.50	1.90	± 13.1 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Validity of ConvF assessed at 6 MHz is 4-9 MHz, and ConvF assessed at 13 MHz is 9-19 MHz. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

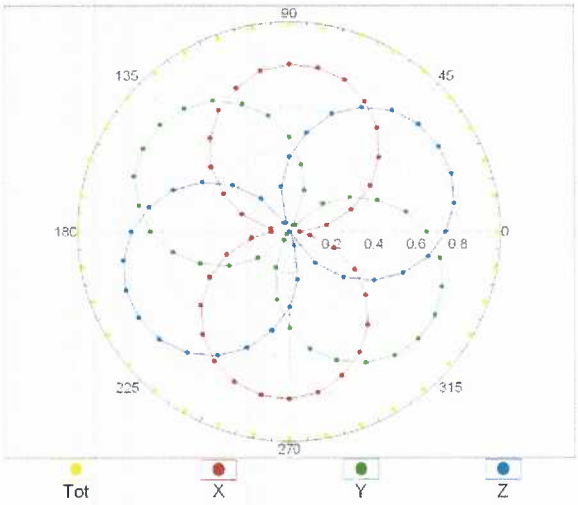
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



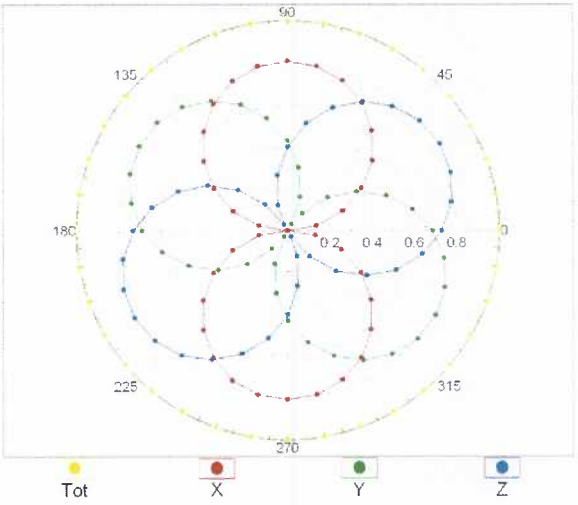
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

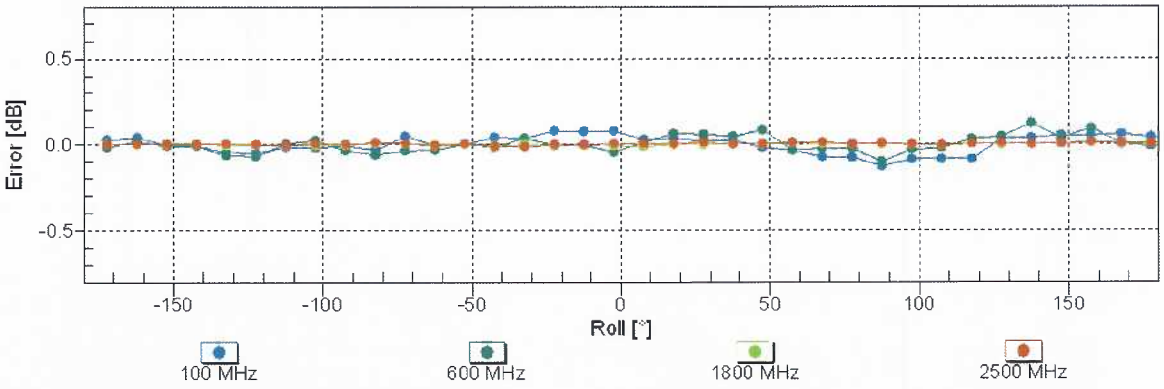
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



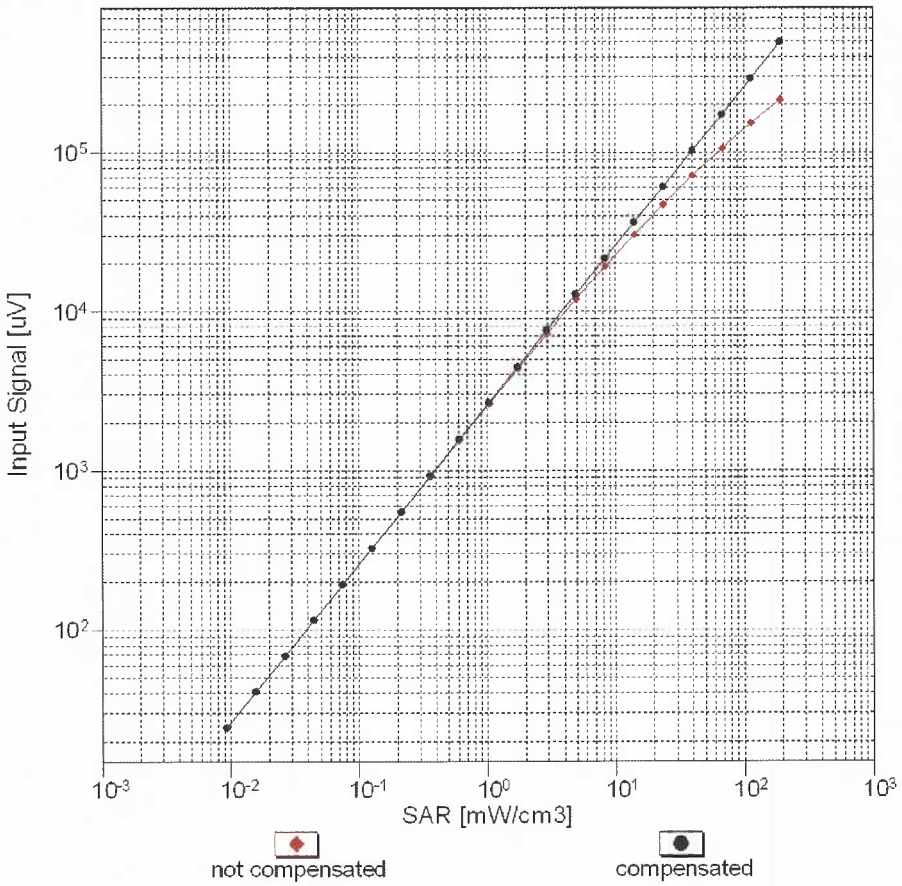
f=1800 MHz,R22

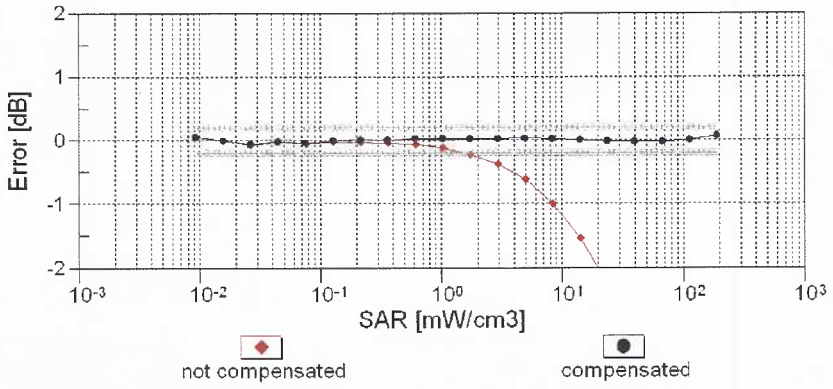




Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR$_{head}$)
(TEM cell , f_{eval}= 1900 MHz)

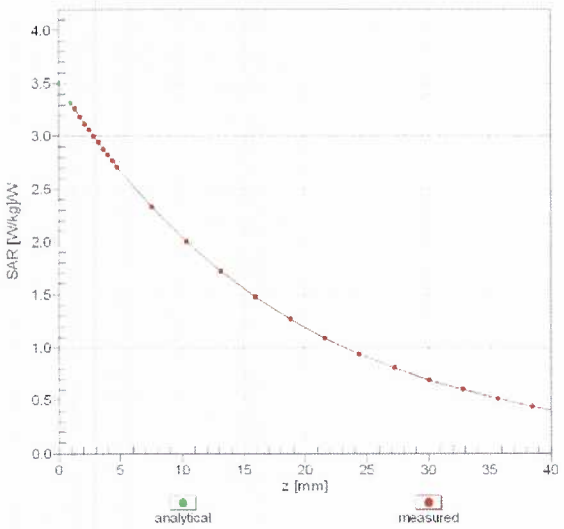




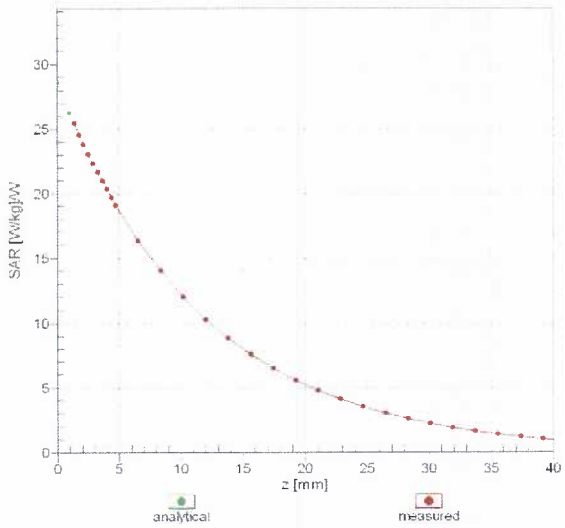
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 900 MHz,WGLS R9 (H_convF)

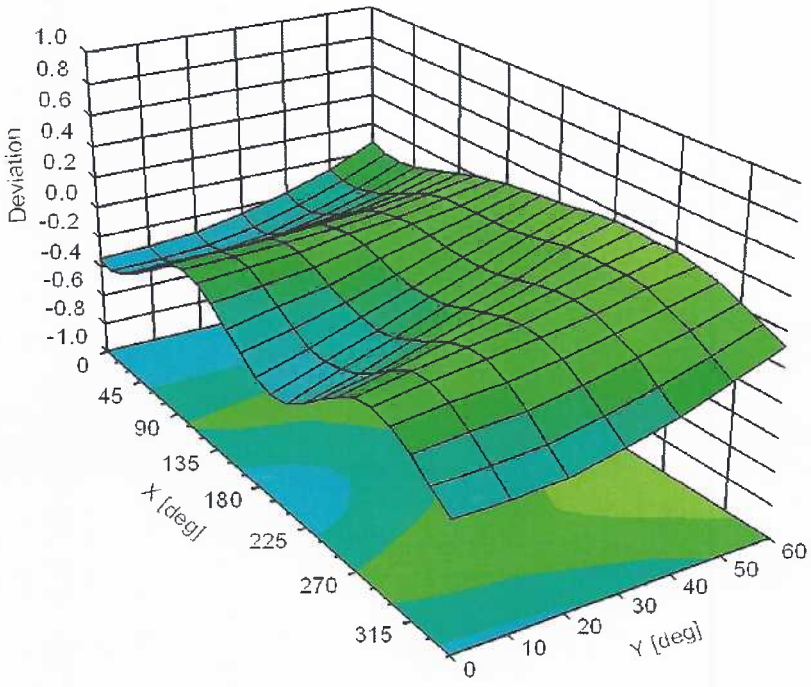


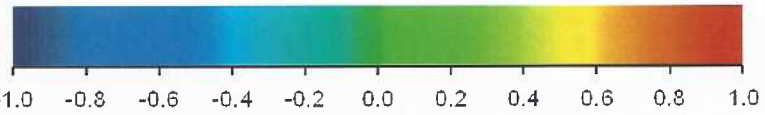
f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

Calibration Laboratory of
Schmid & Partner
Engineering AG
Zeughausstrasse 43, 8004 Zurich, Switzerland

S Schweizerischer Kalibrierdienst
C Service suisse d'étalonnage
S Servizio svizzero di taratura
S Swiss Calibration Service

Accredited by the Swiss Accreditation Service (SAS)
The Swiss Accreditation Service is one of the signatories to the EA Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: SCS 0108

Client RF Exposure Lab

Certificate No: EX3-3693_Aug17

CALIBRATION CERTIFICATE

Object: EX3DV4 - SN:3693

Calibration procedure(s): QA CAL-01.v9, QA CAL-12.v9, QA CAL-14.v4, QA CAL-23.v5, QA CAL-25.v6
Calibration procedure for dosimetric E-field probes

Calibration date: August 18, 2017

This calibration certificate documents the traceability to national standards, which realize the physical units of measurements (SI).
The measurements and the uncertainties with confidence probability are given on the following pages and are part of the certificate.

All calibrations have been conducted in the closed laboratory facility: environment temperature (22 ± 3)°C and humidity < 70%.

Calibration Equipment used (M&TE critical for calibration)

Primary Standards	ID	Cal Date (Certificate No.)	Scheduled Calibration
Power meter NRP	SN: 104778	04-Apr-17 (No. 217-02521/02522)	Apr-18
Power sensor NRP-Z91	SN: 103244	04-Apr-17 (No. 217-02521)	Apr-18
Power sensor NRP-Z91	SN: 103245	04-Apr-17 (No. 217-02525)	Apr-18
Reference 20 dB Attenuator	SN: S5277 (20x)	07-Apr-17 (No. 217-02528)	Apr-18
Reference Probe ES3DV2	SN: 3013	31-Dec-16 (No. ES3-3013_Dec16)	Dec-17
DAE4	SN: 660	7-Dec-16 (No. DAE4-660_Dec16)	Dec-17
Secondary Standards	ID	Check Date (in house)	Scheduled Check
Power meter E4419B	SN: GB41293874	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: MY41498087	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
Power sensor E4412A	SN: 000110210	06-Apr-16 (in house check Jun-16)	In house check: Jun-18
RF generator HP 8648C	SN: US3642U01700	04-Aug-99 (in house check Jun-16)	In house check: Jun-18
Network Analyzer HP 8753E	SN: US37390585	18-Oct-01 (in house check Oct-16)	In house check: Oct-17

	Name	Function	Signature
Calibrated by:	Jeton Kastrati	Laboratory Technician	
Approved by:	Katja Pokovic	Technical Manager	

Issued: August 22, 2017

This calibration certificate shall not be reproduced except in full without written approval of the laboratory.

Glossary:

TSL	tissue simulating liquid
NORMx,y,z	sensitivity in free space
ConvF	sensitivity in TSL / NORMx,y,z
DCP	diode compression point
CF	crest factor (1/duty_cycle) of the RF signal
A, B, C, D	modulation dependent linearization parameters
Polarization φ	φ rotation around probe axis
Polarization ϑ	ϑ rotation around an axis that is in the plane normal to probe axis (at measurement center), i.e., $\vartheta = 0$ is normal to probe axis
Connector Angle	information used in DASY system to align probe sensor X to the robot coordinate system

Calibration is Performed According to the Following Standards:

a) IEEE Std 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Averaged Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", June 2013
b) IEC 62209-1, ", "Measurement procedure for the assessment of Specific Absorption Rate (SAR) from hand-held and body-mounted devices used next to the ear (frequency range of 300 MHz to 6 GHz)", July 2016
c) IEC 62209-2, "Procedure to determine the Specific Absorption Rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)", March 2010
d) KDB 865664, "SAR Measurement Requirements for 100 MHz to 6 GHz"

Methods Applied and Interpretation of Parameters:

- *NORMx,y,z:* Assessed for E-field polarization $\vartheta = 0$ ($f \leq 900$ MHz in TEM-cell; $f > 1800$ MHz: R22 waveguide). NORMx,y,z are only intermediate values, i.e., the uncertainties of NORMx,y,z does not affect the E^2-field uncertainty inside TSL (see below *ConvF*).
- *NORM(f)x,y,z = NORMx,y,z * frequency_response* (see Frequency Response Chart). This linearization is implemented in DASY4 software versions later than 4.2. The uncertainty of the frequency response is included in the stated uncertainty of *ConvF*.
- *DCPx,y,z:* DCP are numerical linearization parameters assessed based on the data of power sweep with CW signal (no uncertainty required). DCP does not depend on frequency nor media.
- *PAR:* PAR is the Peak to Average Ratio that is not calibrated but determined based on the signal characteristics
- *Ax,y,z; Bx,y,z; Cx,y,z; Dx,y,z; VRx,y,z: A, B, C, D* are numerical linearization parameters assessed based on the data of power sweep for specific modulation signal. The parameters do not depend on frequency nor media. *VR* is the maximum calibration range expressed in RMS voltage across the diode.
- *ConvF and Boundary Effect Parameters:* Assessed in flat phantom using E-field (or Temperature Transfer Standard for $f \leq 800$ MHz) and inside waveguide using analytical field distributions based on power measurements for $f > 800$ MHz. The same setups are used for assessment of the parameters applied for boundary compensation (alpha, depth) of which typical uncertainty values are given. These parameters are used in DASY4 software to improve probe accuracy close to the boundary. The sensitivity in TSL corresponds to *NORMx,y,z * ConvF* whereby the uncertainty corresponds to that given for *ConvF*. A frequency dependent *ConvF* is used in DASY version 4.4 and higher which allows extending the validity from ± 50 MHz to ± 100 MHz.
- *Spherical isotropy (3D deviation from isotropy)*: in a field of low gradients realized using a flat phantom exposed by a patch antenna.
- *Sensor Offset*: The sensor offset corresponds to the offset of virtual measurement center from the probe tip (on probe axis). No tolerance required.
- *Connector Angle*: The angle is assessed using the information gained by determining the *NORMx* (no uncertainty required).

Probe EX3DV4

SN:3693

Manufactured: April 22, 2009
Calibrated: August 18, 2017

Calibrated for DASY/EASY Systems
(Note: non-compatible with DASY2 system!)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3693

Basic Calibration Parameters

	Sensor X	Sensor Y	Sensor Z	Unc (k=2)
Norm ($\mu V/(V/m)^2$)[A]	0.39	0.32	0.35	± 10.1 %
DCP (mV)[B]	95.1	97.9	107.8	

Modulation Calibration Parameters

UID	Communication System Name		A dB	B dB√μV	C	D dB	VR mV	Unc[E] (k=2)
0	CW	X	0.0	0.0	1.0	0.00	153.2	±3.5 %
		Y	0.0	0.0	1.0		144.5	
		Z	0.0	0.0	1.0		151.4	

Note: For details on UID parameters see Appendix.

Sensor Model Parameters

	C1 fF	C2 fF	α V^{-1}	T1 $ms.V^{-2}$	T2 $ms.V^{-1}$	T3 ms	T4 V^{-2}	T5 V^{-1}	T6
X	33.42	257.2	37.63	9.549	1.014	5.071	0	0.481	1.008
Y	36.13	269.4	35.53	11.22	0.702	5.041	0.308	0.41	1.005
Z	28.36	204.6	33.61	4.581	0.465	5.032	0.705	0.298	1.004

The reported uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

[A] The uncertainties of Norm X,Y,Z do not affect the E^2-field uncertainty inside TSL (see Pages 5 and 6).
[B] Numerical linearization parameter: uncertainty not required.
[E] Uncertainty is determined using the max. deviation from linear response applying rectangular distribution and is expressed for the square of the field value.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3693

Calibration Parameter Determined in Head Tissue Simulating Media

f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
150	52.3	0.76	11.31	11.31	11.31	0.00	1.00	± 13.3 %
220	49.0	0.81	10.54	10.54	10.54	0.00	1.00	± 13.3 %
450	43.5	0.87	9.78	9.78	9.78	0.13	1.60	± 13.3 %
750	41.9	0.89	9.55	9.55	9.55	0.36	1.03	± 12.0 %
1750	40.1	1.37	8.15	8.15	8.15	0.28	0.85	± 12.0 %
1900	40.0	1.40	7.85	7.85	7.85	0.30	0.85	± 12.0 %
2300	39.5	1.67	7.44	7.44	7.44	0.38	0.85	± 12.0 %
2450	39.2	1.80	7.05	7.05	7.05	0.31	0.84	± 12.0 %
5200	36.0	4.66	5.09	5.09	5.09	0.35	1.80	± 13.1 %
5300	35.9	4.76	4.83	4.83	4.83	0.35	1.80	± 13.1 %
5500	35.6	4.96	4.85	4.85	4.85	0.40	1.80	± 13.1 %
5600	35.5	5.07	4.70	4.70	4.70	0.40	1.80	± 13.1 %
5800	35.3	5.27	4.65	4.65	4.65	0.40	1.80	± 13.1 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3693

Calibration Parameter Determined in Body Tissue Simulating Media

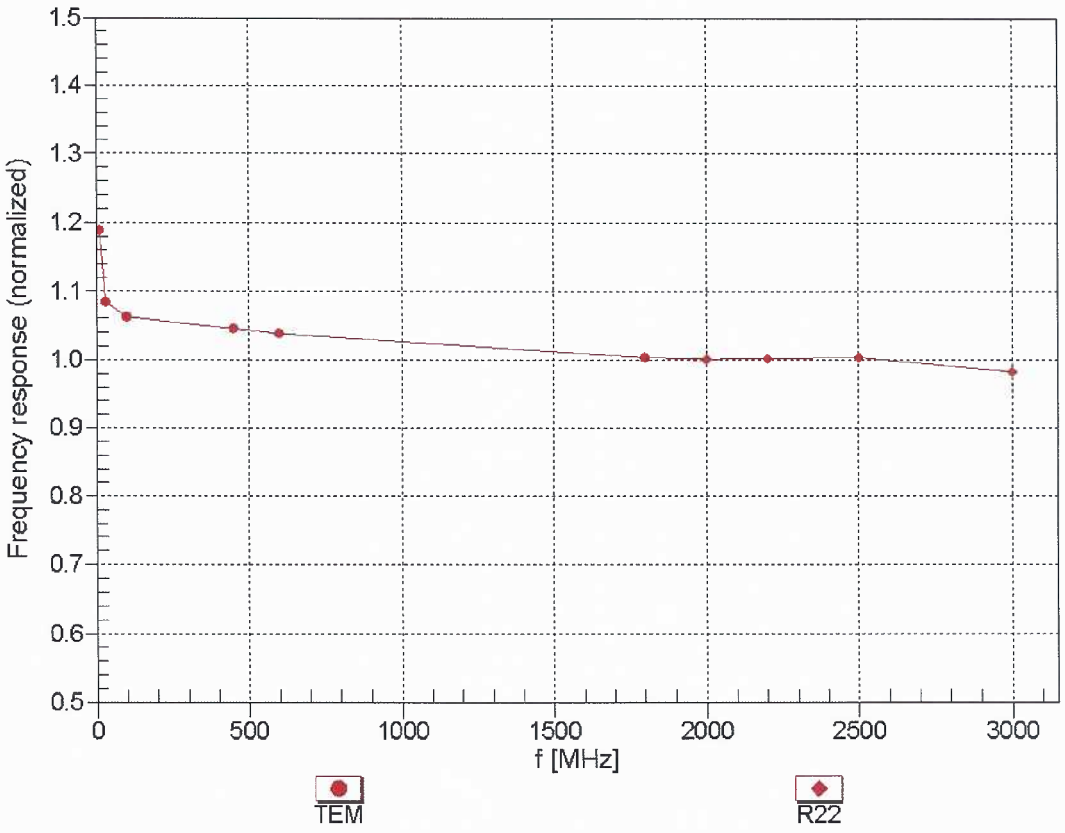
f (MHz) [C]	Relative Permittivity [F]	Conductivity (S/m) [F]	ConvF X	ConvF Y	ConvF Z	Alpha [G]	Depth [G] (mm)	Unc (k=2)
150	61.9	0.80	10.76	10.76	10.76	0.00	1.00	± 13.3 %
220	60.2	0.86	10.08	10.08	10.08	0.00	1.00	± 13.3 %
450	56.7	0.94	10.19	10.19	10.19	0.10	1.30	± 13.3 %
750	55.5	0.96	9.35	9.35	9.35	0.50	0.85	± 12.0 %
1750	53.4	1.49	7.77	7.77	7.77	0.37	0.85	± 12.0 %
1900	53.3	1.52	7.54	7.54	7.54	0.30	0.96	± 12.0 %
2300	52.9	1.81	7.41	7.41	7.41	0.38	0.84	± 12.0 %
2450	52.7	1.95	7.26	7.26	7.26	0.34	0.89	± 12.0 %
5200	49.0	5.30	4.70	4.70	4.70	0.35	1.90	± 13.1 %
5300	48.9	5.42	4.46	4.46	4.46	0.40	1.90	± 13.1 %
5500	48.6	5.65	4.04	4.04	4.04	0.40	1.90	± 13.1 %
5600	48.5	5.77	4.00	4.00	4.00	0.40	1.90	± 13.1 %
5800	48.2	6.00	4.21	4.21	4.21	0.40	1.90	± 13.1 %

[C] Frequency validity above 300 MHz of ± 100 MHz only applies for DASY v4.4 and higher (see Page 2), else it is restricted to ± 50 MHz. The uncertainty is the RSS of the ConvF uncertainty at calibration frequency and the uncertainty for the indicated frequency band. Frequency validity below 300 MHz is ± 10, 25, 40, 50 and 70 MHz for ConvF assessments at 30, 64, 128, 150 and 220 MHz respectively. Above 5 GHz frequency validity can be extended to ± 110 MHz.

[F] At frequencies below 3 GHz, the validity of tissue parameters (ε and σ) can be relaxed to ± 10% if liquid compensation formula is applied to measured SAR values. At frequencies above 3 GHz, the validity of tissue parameters (ε and σ) is restricted to ± 5%. The uncertainty is the RSS of the ConvF uncertainty for indicated target tissue parameters.

[G] Alpha/Depth are determined during calibration. SPEAG warrants that the remaining deviation due to the boundary effect after compensation is always less than ± 1% for frequencies below 3 GHz and below ± 2% for frequencies between 3-6 GHz at any distance larger than half the probe tip diameter from the boundary.

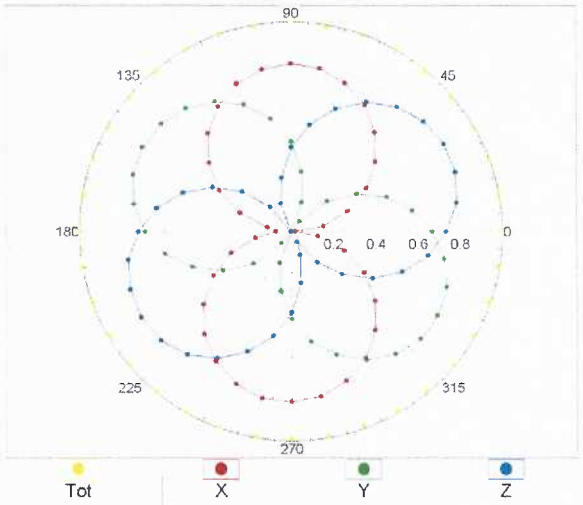
Frequency Response of E-Field
(TEM-Cell:ifi110 EXX, Waveguide: R22)



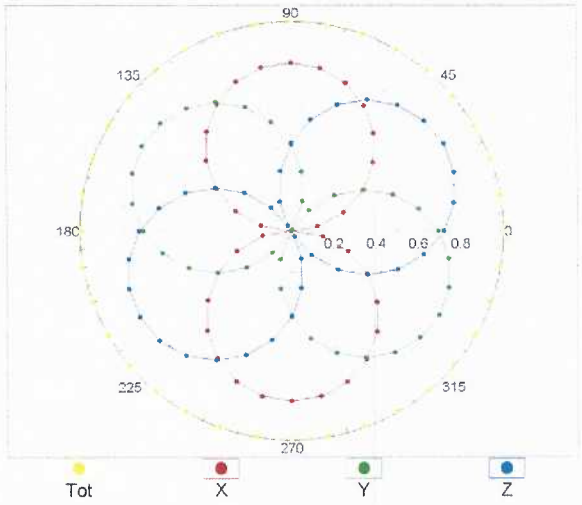
Uncertainty of Frequency Response of E-field: ± 6.3% (k=2)

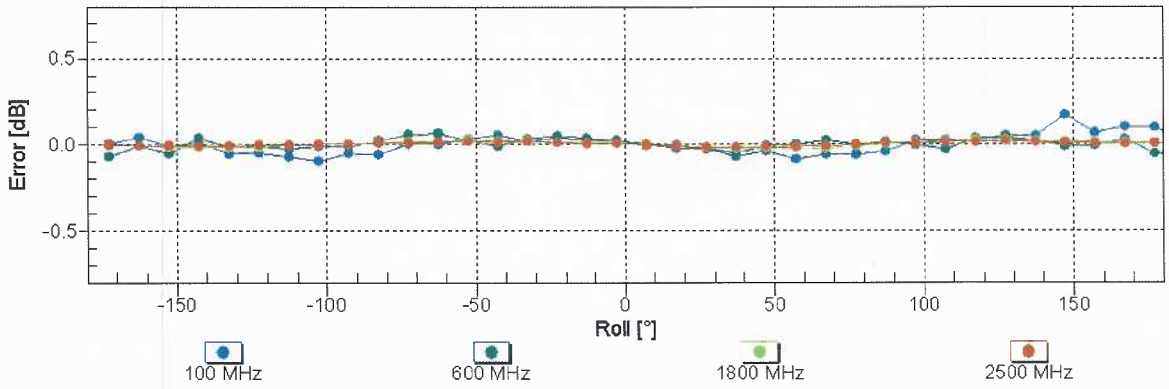
Receiving Pattern (ϕ), ϑ = 0°

f=600 MHz,TEM



f=1800 MHz,R22

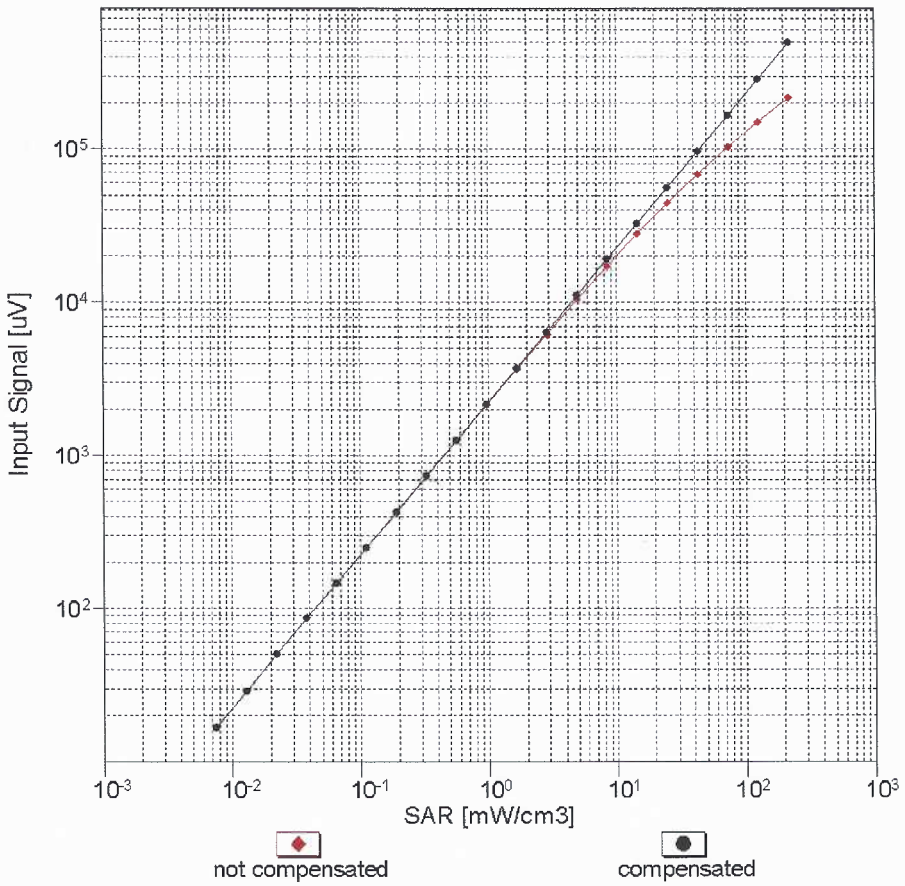


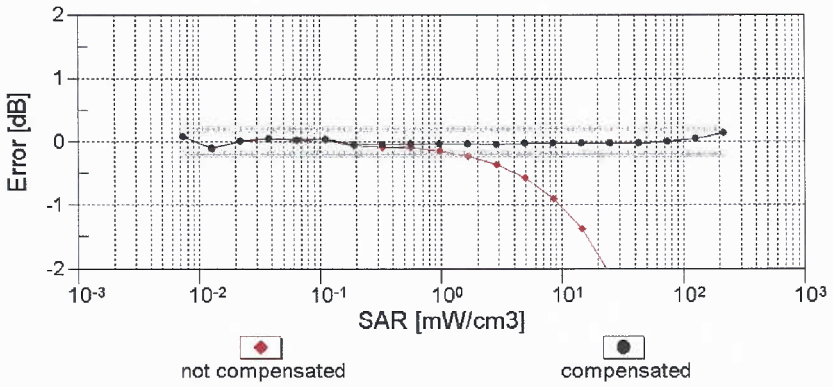


Uncertainty of Axial Isotropy Assessment: ± 0.5% (k=2)

Dynamic Range f(SAR$_{head}$)

(TEM cell , f_{eval}= 1900 MHz)

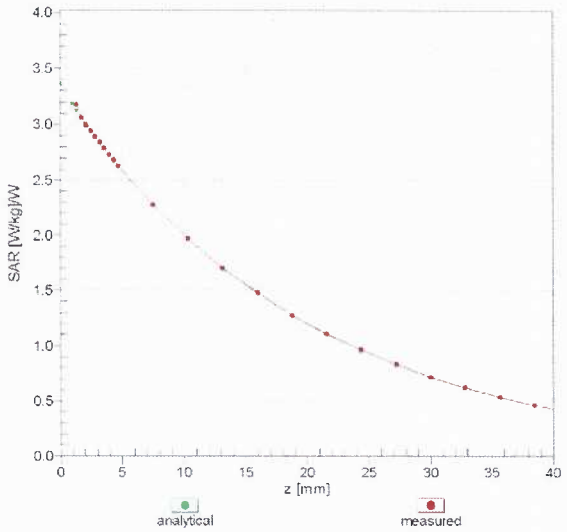




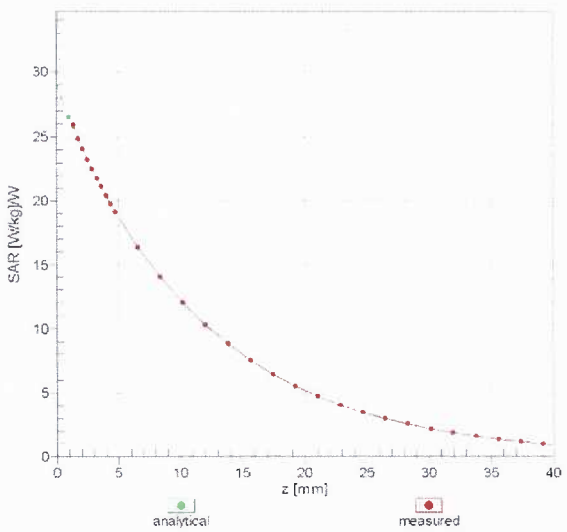
Uncertainty of Linearity Assessment: ± 0.6% (k=2)

Conversion Factor Assessment

f = 750 MHz,WGLS R9 (H_convF)

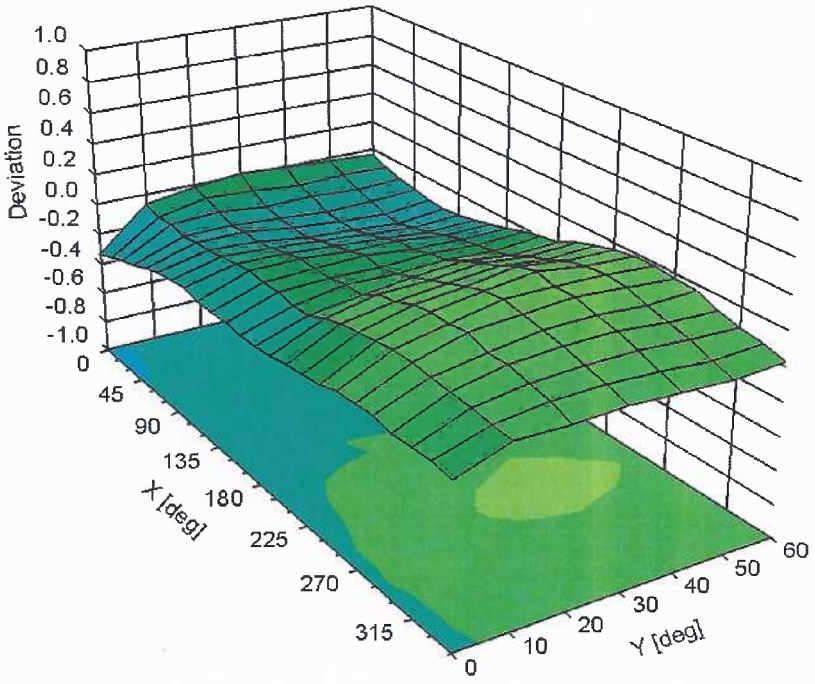


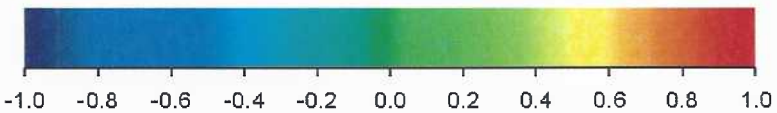
f = 1900 MHz,WGLS R22 (H_convF)



Deviation from Isotropy in Liquid

Error (ϕ, ϑ), f = 900 MHz





Uncertainty of Spherical Isotropy Assessment: ± 2.6% (k=2)

DASY/EASY - Parameters of Probe: EX3DV4 - SN:3693

Other Probe Parameters

Sensor Arrangement	Triangular
Connector Angle (°)	107.3
Mechanical Surface Detection Mode	enabled
Optical Surface Detection Mode	disabled
Probe Overall Length	337 mm
Probe Body Diameter	10 mm
Tip Length	9 mm
Tip Diameter	2.5 mm
Probe Tip to Sensor X Calibration Point	1 mm
Probe Tip to Sensor Y Calibration Point	1 mm
Probe Tip to Sensor Z Calibration Point	1 mm
Recommended Measurement Distance from Surface	1.4 mm