

LTE B4 (1700MHz) / Setup Path Loss = 5.4 (TS9)						
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
1.4 MHz	19957	1710.7	1	1	23.13	22.41
				3	23.17	22.49
				5	22.99	22.28
			3	1	23.20	22.34
				2	23.21	22.29
				3	23.11	22.15
	6	0	22.25	21.23		
	20175	1732.5	1	1	23.18	22.46
				3	23.16	22.53
				5	22.99	22.32
			3	1	23.22	22.29
				2	23.19	22.25
				3	23.13	22.17
	6	0	22.24	21.26		
	20393	1754.3	1	1	21.96	22.02
				3	21.89	22.02
				5	21.67	21.82
			3	1	22.01	21.83
2				21.93	21.78	
3				21.86	21.71	
6	0	21.79	20.85			

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
3 MHz	19965	1711.5	1	1	22.56	21.97
				7	22.68	22.08
				14	22.57	21.93
			7	1	21.96	21.45
				4	22.08	21.68
				8	21.92	21.39
	15	0	21.78	21.05		
	20175	1732.5	1	1	22.94	22.25
				7	23.14	22.54
				14	23.09	22.43
			7	1	21.59	21.2
				4	21.68	21.29
				8	21.42	21.13
	15	0	22.27	21.31		
	20385	1753.5	1	1	22.78	22.07
				7	22.83	22.15
				14	22.58	21.93
			7	1	21.27	21.04
4				21.36	21.37	
8				21.28	21.09	
15	0	21.84	20.85			

LTE B4 (1700MHz) / Setup Path Loss = 5.4 (TS9)						
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
5 MHz	19975	1712.5	1	1	23.03	22.24
				12	23.17	22.42
				24	23.09	22.50
			12	1	22.32	21.36
				7	22.33	21.31
				13	22.29	21.27
	25	0	22.23	21.31		
	20175	1732.5	1	1	23.07	22.16
				12	23.12	22.35
				24	23.09	22.43
			12	1	22.30	21.36
				7	22.33	21.34
				13	22.30	21.32
	25	0	22.23	21.34		
	20375	1752.5	1	1	22.81	21.57
12				22.73	21.43	
24				22.59	20.81	
12			1	21.90	20.97	
			7	21.85	20.90	
			13	21.80	20.84	
25	0	21.88	20.89			

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
10 MHz	20000	1715.0	1	1	22.35	21.66
				24	22.43	21.75
				49	21.83	21.40
			25	1	21.70	20.82
				13	21.62	20.68
				25	21.44	20.58
	50	0	21.55	20.72		
	20175	1732.5	1	1	22.80	22.19
				24	23.11	22.52
				49	23.01	22.38
			25	1	22.13	21.23
				13	22.27	21.37
				25	22.26	21.28
	50	0	22.18	21.34		
	20350	1750.0	1	1	22.96	22.59
				24	22.58	22.08
				49	21.44	21.53
			25	1	22.03	21.04
13				21.95	20.94	
25				21.87	20.84	
50	0	21.93	20.92			

LTE B4 (1700MHz) / Setup Path Loss = 5.4 (TS9)								
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM		
15 MHz	20025	1717.5	1	1	22.65	21.95		
				37	22.21	21.51		
				74	22.31	21.48		
			37	1	21.68	21.32		
				19	21.72	21.21		
				38	21.44	21.06		
			75	0	21.32	20.52		
			20175	1732.5	1	1	22.72	22.08
						37	22.70	22.11
	74	22.68				22.05		
	37	1			22.1	21.89		
		19			22.16	21.73		
		38			22.03	21.66		
	75	0			21.98	21.20		
	20325	1747.5			1	1	23.84	23.17
						37	23.36	22.23
			74	23.54		22.68		
			37	1	22.39	21.98		
19				22.68	22.04			
38				22.43	22.11			
75			0	22.18	21.13			

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM		
20 MHz	20050	1720.0	1	1	22.69	22.26		
				49	22.04	21.66		
				99	21.27	21.03		
			50	1	21.32	20.62		
				24	21.34	20.49		
				50	21.54	20.63		
			100	0	21.50	20.55		
			20175	1732.5	1	1	23.01	22.28
						49	22.69	21.97
	99	23.06				22.30		
	50	1			21.80	20.97		
		24			22.12	21.26		
		50			22.15	21.13		
	100	0			21.98	21.12		
	20300	1745.0			1	1	22.18	21.83
						49	22.84	22.31
			99	21.87		21.40		
			50	1	22.29	21.35		
				24	21.98	20.89		
				50	21.93	20.93		
			100	0	22.17	20.96		

LTE B66 (1700MHz) / Setup Path Loss = 5.4 (TS9)						
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
5 MHz	131997	1712.5	1	1	21.78	20.95
				12	21.90	21.11
				24	21.89	21.08
			12	1	21.13	20.08
				7	21.15	20.11
				13	20.99	20.02
	25	0	20.96	20.02		
	132422	1755.0	1	1	21.27	21.50
				12	21.43	21.54
				24	21.42	21.49
			12	1	21.51	20.49
				7	21.49	20.47
				13	21.26	20.36
	25	0	21.35	20.37		
	132646	1777.4	1	1	21.77	21.03
12				21.77	21.08	
24				21.54	20.81	
12			1	22.21	20.18	
			7	22.10	20.14	
			13	21.84	19.89	
25	0	21.99	20.04			

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
10 MHz	132033	1716.1	1	1	21.25	20.55
				24	21.62	20.93
				49	21.52	20.87
			25	1	20.86	19.88
				13	20.79	19.78
				25	20.63	19.69
	50	0	20.69	19.80		
	132422	1755.0	1	1	22.16	21.27
				24	22.37	21.50
				49	22.27	21.25
			25	1	22.45	20.48
				13	22.32	20.34
				25	22.10	20.16
	50	0	22.26	20.36		
	132621	1774.9	1	1	21.95	21.28
				24	22.06	21.44
				49	21.56	21.03
			25	1	21.41	20.52
13				21.25	20.31	
25				20.88	19.99	
50	0	21.10	20.26			

LTE B66 (1700MHz) / Setup Path Loss = 5.4 (TS9)						
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
15 MHz	132047	1717.5	1	1	21.53	20.67
				37	21.62	20.80
				75	21.43	20.75
			37	1	21.03	20.46
				19	21.08	20.59
				38	21.00	20.43
	75	0	20.58	19.60		
	132422	1755.0	1	1	22.26	21.59
				37	22.10	21.40
				75	22.13	21.36
			37	1	21.59	20.89
				19	21.41	20.97
				38	21.37	20.92
	75	0	21.09	20.38		
	132596	1772.4	1	1	22.50	22.03
37				21.88	21.40	
75				21.94	21.46	
37			1	21.85	20.99	
			19	21.93	22.05	
			38	21.46	22.01	
75	0	21.16	20.32			

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
20 MHz	132072	1720.0	1	1	21.05	20.75
				49	21.24	20.97
				99	21.90	21.53
			50	1	20.69	19.83
				24	20.64	19.74
				50	20.81	19.82
	100	0	20.73	19.70		
	132422	1755.0	1	1	22.27	21.65
				49	21.95	21.42
				99	22.06	21.46
			50	1	21.42	20.65
				24	21.27	20.41
				50	21.11	20.20
	100	0	21.27	20.31		
	132571	1769.9	1	1	22.71	21.81
				49	22.08	21.22
				99	21.66	20.79
			50	1	22.33	20.45
24				22.47	20.59	
50				22.13	20.27	
100	0	22.22	20.33			

LTE B2 (1900MHz) / Setup Path Loss = 5.5 (TS9)						
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
1.4 MHz	18607	1850.7	1	1	22.05	21.41
				3	22.04	21.45
				5	21.94	21.29
			3	1	22.06	21.22
				2	22.07	21.20
				3	22.02	21.14
	6	0	21.01	20.38		
	18900	1880.0	1	1	22.11	21.33
				3	22.08	21.26
				5	21.84	21.10
			3	1	22.09	21.08
				2	22.11	20.14
				3	22.04	20.07
	6	0	22.10	19.97		
	19193	1909.3	1	1	21.86	21.18
				3	21.82	21.13
				5	21.64	20.96
			3	1	21.86	20.95
2				21.85	20.96	
3				21.76	20.85	
6	0	20.85	20.10			

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
3 MHz	18615	1851.5	1	1	22.46	21.74
				7	22.44	21.71
				14	22.14	21.44
			7	1	21.56	20.79
				4	21.69	20.86
				8	21.44	20.91
	15	0	21.26	20.44		
	18900	1880.0	1	1	22.27	21.58
				7	22.23	21.54
				14	21.94	21.28
			7	1	21.48	20.88
				4	21.43	20.83
				8	21.29	20.71
	15	0	21.25	20.4		
	19185	1908.5	1	1	21.97	21.11
				7	21.96	21.12
				14	21.66	20.86
			7	1	21.16	20.68
4				21.18	20.72	
8				21.02	20.59	
15	0	20.93	20.12			

LTE B2 (1900MHz) / Setup Path Loss = 5.5 (TS9)							
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM	
5 MHz	18625	1852.5	1	1	21.91	21.25	
				12	22.03	21.34	
				24	21.68	20.98	
			12	1	21.31	20.13	
				7	21.33	20.32	
				13	21.19	20.22	
	25	0	21.17	20.19			
	18900	1880.0	1	1	22.16	21.51	
				12	22.14	21.53	
				24	21.74	21.07	
			12	1	21.35	20.33	
				7	21.38	20.37	
				13	21.34	20.28	
			25	0	21.25	20.25	
			19175	1907.5	1	1	21.87
12						21.86	21.09
24	21.50	20.71					
12	1	21.00			19.98		
	7	21.06			19.93		
	13	20.83			19.89		
25	0	20.90	19.95				

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM		
10 MHz	18650	1855.0	1	1	22.06	21.18		
				24	21.97	21.17		
				49	21.91	21.08		
			25	1	21.10	20.10		
				13	21.20	20.17		
				25	21.19	20.33		
	50	0	21.13	20.25				
	18900	1880.0	1	1	22.51	21.73		
				24	22.16	21.38		
				49	21.63	20.89		
			25	1	21.32	20.32		
				13	21.27	20.25		
				25	21.14	20.24		
			50	0	21.21	20.32		
			19150	1905.0	1	1	22.32	21.36
						24	21.96	21.09
	49	21.43				20.55		
	25	1			21.15	20.19		
13		21.05			20.05			
25		20.83			19.92			
50	0	20.96	20.06					

LTE B2 (1900MHz) / Setup Path Loss = 5.5 (TS9)								
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM		
15 MHz	18675	1857.5	1	1	22.11	21.57		
				37	21.77	21.25		
				75	21.86	21.42		
			37	1	21.46	20.98		
				19	21.15	20.73		
				38	21.36	20.81		
			75	0	21.07	20.17		
			18900	1880.0	1	1	22.78	22.02
						37	21.97	21.46
	75	22.43				21.97		
	37	1			21.85	21.16		
		19			21.26	20.73		
		38			21.68	20.95		
	75	0			21.07	20.22		
	19125	1902.5			1	1	22.64	22.09
						37	21.82	21.17
			75	22.15		21.84		
			37	1	21.93	21.29		
19				21.04	20.88			
38				21.63	21.03			
75			0	21.04	20.14			

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM		
20 MHz	18700	1860.0	1	1	22.23	21.46		
				49	21.99	21.26		
				99	23.04	22.17		
			50	1	21.05	20.23		
				24	21.38	20.50		
				50	21.60	20.74		
			100	0	21.33	20.41		
			18900	1880.0	1	1	23.15	22.21
						49	22.12	21.18
	99	21.96				21.04		
	50	1			22.25	20.49		
		24			22.19	20.28		
		50			22.09	20.20		
	100	0			22.16	20.31		
	19100	1900.0			1	1	22.10	21.41
						49	22.06	21.35
			99	21.35		20.65		
			50	1	21.13	20.25		
				24	21.21	20.28		
				50	20.96	20.17		
			100	0	20.96	20.10		

LTE B7 (2600MHz) / Setup Path Loss = 6.2 (Murata)								
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM		
5 MHz	20775	2502.5	1	1	22.79	22.12		
				12	22.87	22.17		
				24	22.74	21.99		
			12	1	21.88	20.92		
				7	21.93	20.98		
				13	21.80	20.84		
			25	0	21.91	20.93		
			21100	2535.0	1	1	22.96	22.31
						12	22.97	22.31
	24	22.95				22.19		
	12	1			22.08	21.12		
		7			22.12	21.16		
		13			22.10	21.13		
	25	0			22.08	21.12		
	21425	2567.5			1	1	22.13	21.36
						12	21.94	21.20
			24	21.56		20.80		
			12	1	22.10	21.14		
7				22.01	21.08			
13				21.84	20.89			
25			0	21.97	21.02			

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM		
10 MHz	20800	2505.0	1	1	23.00	22.29		
				24	22.89	22.16		
				49	22.36	21.68		
			25	1	22.02	21.04		
				13	21.97	20.97		
				25	22.01	21.04		
			50	0	21.98	20.97		
			21100	2535.0	1	1	23.21	22.49
						24	23.03	23.39
	49	22.91				22.30		
	25	1			22.24	21.25		
		13			22.16	21.17		
		25			22.18	21.18		
	50	0			22.13	21.16		
	21400	2565.0			1	1	22.55	21.80
						24	22.19	21.47
			49	21.36		20.00		
			25	1	22.42	21.38		
13				22.22	21.28			
25				21.88	20.93			
50			0	22.13	21.19			

LTE B7 (2600MHz) / Setup Path Loss = 6.2 (Murata)						
Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
15 MHz	20825	2507.5	1	1	23.20	22.43
				37	22.85	22.19
				75	22.92	22.31
			37	1	22.30	21.73
				19	22.13	21.61
				38	22.26	21.77
	75	0	22.07	21.03		
	21100	2535.0	1	1	23.35	22.59
				37	23.23	22.25
				75	23.15	22.16
			37	1	22.42	21.87
				19	22.36	21.75
				38	22.03	21.79
	75	0	22.20	21.17		
	21424	2562.5	1	1	23.14	22.63
37				22.87	22.28	
75				23.04	22.46	
37			1	22.58	22.04	
			19	22.37	21.85	
			38	22.31	21.79	
75	0	22.01	21.54			

Bandwidth	UL Channel	UL Freq. MHz	# RBs	Offset RBs	QPSK	16QAM
20 MHz	20850	2510.0	1	1	23.37	22.54
				49	22.95	22.19
				99	22.99	22.19
			50	1	22.10	21.13
				24	22.13	21.18
				50	22.09	21.09
	100	0	22.16	21.15		
	21100	2535.0	1	1	23.43	22.78
				49	23.00	22.35
				99	23.10	22.45
			50	1	22.29	21.35
				24	22.17	21.21
				50	22.27	21.28
	100	0	22.24	21.23		
	21349	2560.0	1	1	23.44	22.76
				49	23.03	22.39
				99	23.13	22.52
			50	1	22.29	21.35
24				22.18	21.21	
50				22.27	21.27	
100	0	22.23	21.26			

Table 10.5.2 Test Reduction Table – LTE

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced		
Band 2 1850-1910 MHz	A	18700	20 MHz	QPSK	50	0	Tested		
		18900					Tested		
		19100					Tested		
		18700			100	0	Reduced ¹		
		18900					Reduced ¹		
		19100					Reduced ¹		
		18700			1	49	Tested		
		18900					Tested		
		19100					Tested		
		18700			99	99	Reduced ²		
		18900		Reduced ²					
		19100		Reduced ²					
		18700		50	25	Reduced ³			
		18900				Reduced ³			
		19100				Reduced ³			
		18700		100	0	Reduced ¹			
		18900				Reduced ¹			
		19100				Reduced ¹			
		18700		1	49	Reduced ⁴			
		18900				Reduced ⁴			
	19100	Reduced ⁴							
	18700	99	99	Reduced ⁴					
	18900			Reduced ⁴					
	19100			Reduced ⁴					
	All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵	
	B	QPSK	18700	20 MHz	50	25	Reduced ⁶		
			18900				Tested		
			19100				Reduced ⁶		
			18700				100	0	Reduced ¹
			18900						Reduced ¹
			19100						Reduced ¹
			18700				1	49	Reduced ²
			18900						Tested
			19100						Reduced ²
			18700				99	99	Reduced ²
		18900	Reduced ²						
		19100	Reduced ²						
		18700	50		25	Reduced ³			
		18900				Reduced ³			
		19100				Reduced ³			
		18700	100		0	Reduced ¹			
		18900				Reduced ¹			
		19100				Reduced ¹			
		18700	1		49	Reduced ⁴			
18900		Reduced ⁴							
19100		Reduced ⁴							
18700		99	99		Reduced ⁴				
18900					Reduced ⁴				
19100					Reduced ⁴				
All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵		

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴- 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.

Reduced⁵- 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.

Reduced⁶- 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.

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced	
Band 2 1850-1910 MHz	C	18700	20 MHz	QPSK	50	25	Reduced ⁶	
		18900					Tested	
		19100			Reduced ⁶			
		18700			100	0	Reduced ¹	
		18900					Reduced ¹	
		19100			Reduced ¹			
		18700			1	49	Reduced ⁶	
		18900					Tested	
		19100					Reduced ⁶	
		18700			99	99	Reduced ²	
		18900		Reduced ²				
		19100		Reduced ²				
		18700		16QAM	50	25	Reduced ³	
		18900					Reduced ³	
		19100			Reduced ³			
		18700			100	0	Reduced ¹	
		18900					Reduced ¹	
		19100			Reduced ¹			
		18700			1	49	Reduced ⁴	
		18900					Reduced ⁴	
	19100	Reduced ⁴						
	18700	99	99		Reduced ⁴			
	18900			Reduced ⁴				
	19100			Reduced ⁴				
	All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵
	D	D	18700	20 MHz	QPSK	50	25	Reduced ⁶
			18900					Tested
			19100			Reduced ⁶		
			18700			100	0	Reduced ¹
			18900					Reduced ¹
			19100			Reduced ¹		
			18700			1	49	Reduced ⁶
			18900					Tested
			19100					Reduced ⁶
			18700			99	99	Reduced ²
			18900		Reduced ²			
			19100		Reduced ²			
			18700		16QAM	50	25	Reduced ³
			18900					Reduced ³
			19100			Reduced ³		
			18700			100	0	Reduced ¹
			18900					Reduced ¹
			19100			Reduced ¹		
			18700			1	49	Reduced ⁴
18900			Reduced ⁴					
19100	Reduced ⁴							
18700	99	99	Reduced ⁴					
18900			Reduced ⁴					
19100			Reduced ⁴					
All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵	

Reduced¹ - 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴ - 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.

Reduced⁵ - 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.

Reduced⁶ - 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.

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 2 1850-1910 MHz	E	18700	20 MHz	QPSK	50	25	Reduced ⁶
		18900					Tested
		19100					Reduced ⁶
		18700			100	0	Reduced ¹
		18900					Reduced ¹
		19100					Reduced ¹
		18700			1	49	Reduced ⁶
		18900					Tested
		19100					Reduced ⁶
		18700				99	Reduced ²
		18900					Reduced ²
		19100					Reduced ²
		18700		16QAM	50	25	Reduced ³
		18900					Reduced ³
		19100					Reduced ³
		18700			100	0	Reduced ¹
		18900					Reduced ¹
		19100					Reduced ¹
		18700			1	49	Reduced ⁴
		18900					Reduced ⁴
		19100					Reduced ⁴
		18700				99	Reduced ⁴
		18900					Reduced ⁴
		19100					Reduced ⁴
All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴- 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.

Reduced⁵- 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.

Reduced⁶- 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: 223.9 mW

Closest Distance to Side F: 110.0 mm

$[\{(3.0)/(\sqrt{1.91})\} * 50 \text{ mm}] + \{(110 - 50 \text{ mm}) * 10\} = 708 \text{ mW}$ which is greater than 223.9 mW

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced	
Band 4 1710-1755 MHz	A	18700	20 MHz	QPSK	50	25	Tested	
		18900					Tested	
		19100					Tested	
		18700			100	0	Reduced ¹	
		18900					Reduced ¹	
		19100					Reduced ¹	
		18700			1	49	Reduced ⁶	
		18900					Tested	
		19100					Reduced ⁶	
		18700					99	Reduced ²
		18900		Reduced ²				
		19100		Reduced ²				
		18700		Reduced ³				
		18900		50	25	Reduced ³		
		19100				Reduced ³		
		18700				100	0	Reduced ¹
		18900		Reduced ¹				
		19100		Reduced ¹				
		18700		1	49	Reduced ⁴		
		18900				Reduced ⁴		
	19100	Reduced ⁴						
	18700	99	Reduced ⁴					
	18900		Reduced ⁴					
	19100		Reduced ⁴					
	18700		Reduced ⁴					
	All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵
	B	QPSK	18700	20 MHz	50	25	Reduced ⁶	
			18900				Tested	
			19100				Reduced ⁶	
			18700		100	0	Reduced ¹	
			18900				Reduced ¹	
			19100				Reduced ¹	
			18700		1	49	Reduced ⁶	
			18900				Tested	
			19100				Reduced ⁶	
			18700				99	Reduced ²
		18900	Reduced ²					
		19100	Reduced ²					
		18700	Reduced ³					
		18900	50		25	Reduced ³		
		19100				Reduced ³		
		18700				100	0	Reduced ¹
		18900	Reduced ¹					
		19100	Reduced ¹					
18700		1	49		Reduced ⁴			
18900					Reduced ⁴			
19100	Reduced ⁴							
18700	99			Reduced ⁴				
18900				Reduced ⁴				
19100				Reduced ⁴				
18700				Reduced ⁴				
All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵	

Reduced¹ - 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴ - 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.

Reduced⁵ - 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.

Reduced⁶ - 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.

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced	
Band 4 1710-1755 MHz	C	18700	20 MHz	QPSK	50	25	Reduced ⁶	
		18900					Tested	
		19100					Reduced ⁶	
		18700			100	0	Reduced ¹	
		18900					Reduced ¹	
		19100					Reduced ¹	
		18700			1	49	Reduced ⁶	
		18900					Tested	
		19100				Reduced ⁶		
		18700				99	Reduced ²	
		18900		Reduced ²				
		19100		Reduced ²				
		18700		50	25	Reduced ³		
		18900				Reduced ³		
		19100				Reduced ³		
		18700		100	0	Reduced ¹		
		18900				Reduced ¹		
		19100				Reduced ¹		
		18700		1	49	Reduced ⁴		
		18900				Reduced ⁴		
		19100			Reduced ⁴			
	18700	99	Reduced ⁴					
	18900		Reduced ⁴					
	19100	Reduced ⁴						
	All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵
	D	QPSK	18700	20 MHz	50	25	Reduced ⁶	
			18900				Tested	
			19100				Reduced ⁶	
			18700		100	0	Reduced ¹	
			18900				Reduced ¹	
			19100				Reduced ¹	
			18700		1	49	Reduced ⁶	
			18900				Tested	
			19100			Reduced ⁶		
			18700			99	Reduced ²	
		18900	Reduced ²					
		19100	Reduced ²					
		18700	50		25	Reduced ³		
		18900				Reduced ³		
		19100				Reduced ³		
		18700	100		0	Reduced ¹		
		18900				Reduced ¹		
19100		Reduced ¹						
18700		1	49		Reduced ⁴			
18900					Reduced ⁴			
19100			Reduced ⁴					
18700	99		Reduced ⁴					
18900		Reduced ⁴						
19100	Reduced ⁴							
All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵	

Reduced¹ - 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴ - 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.

Reduced⁵ - 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.

Reduced⁶ - 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.

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced		
Band 4 1710-1755 MHz	E	18700	20 MHz	QPSK	50	25	Reduced ⁶		
		18900					Tested		
		19100					Reduced ⁶		
		18700					Reduced ¹		
		18900					Reduced ¹		
		19100					Reduced ¹		
		18700			100	0	Reduced ⁶		
		18900					Tested		
		19100					Reduced ⁶		
		18700					1	49	Reduced ²
		18900							Reduced ²
		19100							Reduced ²
		18700		99	99	Reduced ²			
		18900				Reduced ²			
		19100				Reduced ²			
		18700		16QAM	50	25	Reduced ³		
		18900					Reduced ³		
		19100					Reduced ³		
		18700					100	0	Reduced ¹
		18900							Reduced ¹
		19100							Reduced ¹
18700	1	49	Reduced ⁴						
18900			Reduced ⁴						
19100			Reduced ⁴						
18700			99		99	Reduced ⁴			
18900						Reduced ⁴			
19100						Reduced ⁴			
All lower bandwidths (15 MHz, 10 MHz, 5 MHz, 3 MHz, 1.4 MHz)							Reduced ⁵		

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴ - 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.

Reduced⁵ - 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.

Reduced⁶ - 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: 223.9 mW

Closest Distance to Side F: 110.0 mm

$$[{\{(3.0)/(\sqrt{1.755})\} * 50 \text{ mm}}] + [110 - 50 \text{ mm}] * 10 = 685 \text{ mW which is greater than 223.9 mW}$$

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced	
Band 5 824-849 MHz	A	20450	10 MHz	QPSK	25	12	Reduced ⁶	
		20525					Tested	
		20600					Reduced ⁶	
		20450			50	0	Reduced ¹	
		20525					Reduced ¹	
		20600					Reduced ¹	
		20450			1	12	Reduced ⁶	
		20525					Tested	
		20600					Reduced ⁶	
		20450				24	Reduced ²	
		20525					Reduced ²	
		20600		Reduced ²				
		20450		16QAM	25	12	Reduced ³	
		20525					Reduced ³	
		20600					Reduced ³	
		20450			50	0	Reduced ¹	
		20525					Reduced ¹	
		20600					Reduced ¹	
		20450			1	12	Reduced ⁴	
		20525					Reduced ⁴	
		20600					Reduced ⁴	
		20450				24	Reduced ⁴	
	20525	Reduced ⁴						
	20600	Reduced ⁴						
	All lower bandwidths (5 MHz)							Reduced ⁵
	B	B	20450	10 MHz	QPSK	25	12	Reduced ⁶
			20525					Tested
			20600					Reduced ⁶
			20450			50	0	Reduced ¹
			20525					Reduced ¹
			20600					Reduced ¹
			20450			1	12	Reduced ⁶
			20525					Tested
			20600					Reduced ⁶
			20450				24	Reduced ²
			20525					Reduced ²
			20600		Reduced ²			
			20450		16QAM	25	12	Reduced ³
			20525					Reduced ³
			20600					Reduced ³
			20450			50	0	Reduced ¹
			20525					Reduced ¹
			20600					Reduced ¹
			20450			1	12	Reduced ⁴
20525			Reduced ⁴					
20600			Reduced ⁴					
20450			24				Reduced ⁴	
20525	Reduced ⁴							
20600	Reduced ⁴							
All lower bandwidths (5 MHz)							Reduced ⁵	

Reduced¹ – 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.
 Reduced² - 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.
 Reduced³ - 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.
 Reduced⁴- 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.
 Reduced⁵- 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.
 Reduced⁶- 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.

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced	
Band 5 824-849 MHz	C	20450	10 MHz	QPSK	25	12	Tested	
		20525					Tested	
		20600					Tested	
		20450			50	0	Reduced ¹	
		20525					Reduced ¹	
		20600					Reduced ¹	
		20450			1	12	Reduced ⁶	
		20525					Tested	
		20600					Reduced ⁶	
		20450			1	24	Reduced ²	
		20525		Reduced ²				
		20600		Reduced ²				
		20450		25	12	Reduced ³		
		20525				Reduced ³		
		20600				Reduced ³		
		20450		50	0	Reduced ¹		
		20525				Reduced ¹		
		20600				Reduced ¹		
		20450		1	12	Reduced ⁴		
		20525				Reduced ⁴		
		20600				Reduced ⁴		
	20450	1	24	Reduced ⁴				
	20525			Reduced ⁴				
	20600			Reduced ⁴				
	All lower bandwidths (5 MHz)							Reduced ⁵
	D	D	20450	10 MHz	QPSK	25	12	Reduced ⁶
			20525					Tested
			20600					Reduced ⁶
			20450			50	0	Reduced ¹
			20525					Reduced ¹
			20600					Reduced ¹
			20450			1	12	Reduced ⁶
			20525					Tested
			20600					Reduced ⁶
			20450			1	24	Reduced ²
			20525		Reduced ²			
			20600		Reduced ²			
			20450		25	12	Reduced ³	
			20525				Reduced ³	
			20600				Reduced ³	
			20450		50	0	Reduced ¹	
			20525				Reduced ¹	
20600			Reduced ¹					
20450			1		12	Reduced ⁴		
20525						Reduced ⁴		
20600						Reduced ⁴		
20450	1	24	Reduced ⁴					
20525			Reduced ⁴					
20600			Reduced ⁴					
All lower bandwidths (5 MHz)							Reduced ⁵	

Reduced¹ – 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.
 Reduced² - 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.
 Reduced³ - 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.
 Reduced⁴- 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.
 Reduced⁵- 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.
 Reduced⁶- 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.

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced		
Band 5 824-849 MHz	E	20450	10 MHz	QPSK	25	12	Reduced ⁶		
		20525					Tested		
		20600					Reduced ⁶		
		20450					50	0	Reduced ¹
		20525							Reduced ¹
		20600							Reduced ¹
		20450			1	12	Reduced ⁶		
		20525					Tested		
		20600					Reduced ⁶		
		20450			1	24	Reduced ²		
		20525					Reduced ²		
		20600					Reduced ²		
		20450		25	12	Reduced ³			
		20525				Reduced ³			
		20600				Reduced ³			
		20450		50	0	Reduced ¹			
		20525				Reduced ¹			
		20600				Reduced ¹			
		20450		1	12	Reduced ⁴			
		20525				Reduced ⁴			
		20600				Reduced ⁴			
20450	1	24	Reduced ⁴						
20525			Reduced ⁴						
20600			Reduced ⁴						
All lower bandwidths (5 MHz)							Reduced ⁵		

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴- 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.

Reduced⁵- 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.

Reduced⁶- 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: 110.0 mm

$$[{\{(3.0)/(\sqrt{0.849})\} * 50 \text{ mm}}] + {\{110 - 50 \text{ mm}\} * 10} = 762 \text{ mW which is greater than 251.2 mW}$$

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					Reduced ¹	
		21350					Reduced ¹	
		20850			1	49	Tested	
		21100					Tested	
		21350					Tested	
		20850			99	25	Reduced ¹	
		21100		Reduced ¹				
		21350		Reduced ¹				
		20850		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	25	Reduced ⁴				
	21100			Reduced ⁴				
	21350			Reduced ⁴				
	All lower bandwidths (15 MHz, 10 MHz, 5 MHz)							Reduced ⁵
	B	QPSK	20850	20 MHz	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	25	Reduced ⁶	
		21100	Tested					
		21350	Reduced ⁶					
		20850	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	25	Reduced ⁴					
21100			Reduced ⁴					
21350			Reduced ⁴					
All lower bandwidths (15 MHz, 10 MHz, 5 MHz)							Reduced ⁵	

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴- 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.

Reduced⁵- 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.

Reduced⁶- 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.

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

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴- 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.

Reduced⁵- 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.

Reduced⁶- 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.

Band/ Frequency (MHz)	Side	Required Test Channel	Bandwidth	Modulation	RB Allocation	RB Offset	Tested/ Reduced
Band 7 2500-2570 MHz	E	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	99	Reduced ⁶
		21100					Tested
		21350					Reduced ⁶
		20850		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	99	Reduced ⁴	
		21100				Reduced ⁴	
		21350				Reduced ⁴	
All lower bandwidths (15 MHz, 10 MHz, 5 MHz)							Reduced ⁵

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴ - 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.

Reduced⁵ - 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.

Reduced⁶ - 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: 223.9 mW
Closest Distance to Side F: 110.0 mm

$$[{\{(3.0)/(\sqrt{2.70})\} * 50 \text{ mm}}] + \{(70 - 50 \text{ mm}) * 10\} = 291 \text{ mW which is greater than } 223.9 \text{ mW}$$

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	Reduced ¹	
		23230			1	12	Tested	
		23230		16QAM	24	24	Reduced ²	
		23230			25	12	Reduced ³	
		23230			50	0	Reduced ¹	
		23230			1	12	Reduced ⁴	
		23230			1	24	Reduced ⁴	
	All lower bandwidths (5 MHz)							Reduced ⁵
	B	23230	10 MHz	QPSK	25	12	Tested	
		23230			50	0	Reduced ¹	
		23230			1	12	Tested	
		23230		16QAM	24	24	Reduced ²	
		23230			25	12	Reduced ³	
		23230			50	0	Reduced ¹	
		23230			1	12	Reduced ⁴	
		23230			1	24	Reduced ⁴	
	All lower bandwidths (5 MHz)							Reduced ⁵

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴- 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.

Reduced⁵- 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.

Reduced⁶- 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.

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	12	Tested	
		23230				24	Reduced ²	
		23230		16QAM	25	12	Reduced ³	
		23230			50	0	Reduced ¹	
		23230			1	12	Reduced ⁴	
		23230				24	Reduced ⁴	
	All lower bandwidths (5 MHz)							Reduced ⁵
	D	10 MHz	23230	QPSK	25	12	Tested	
			23230		50	0	Reduced ¹	
			23230		1	12	Tested	
			23230			24	Reduced ²	
			23230	16QAM	25	12	Reduced ³	
			23230		50	0	Reduced ¹	
			23230		1	12	Reduced ⁴	
			23230			24	Reduced ⁴	
	All lower bandwidths (5 MHz)							Reduced ⁵

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴- 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.

Reduced⁵- 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.

Reduced⁶- 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.

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	12	Tested		
		23230					24	Reduced ²	
		23230				16QAM	25	12	Reduced ³
		23230					50	0	Reduced ¹
		23230					1	12	Reduced ⁴
		23230					1	24	Reduced ⁴
All lower bandwidths (5 MHz)							Reduced ⁵		

Reduced¹ – 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.

Reduced² - 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.

Reduced³ - 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.

Reduced⁴- 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.

Reduced⁵- 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.

Reduced⁶- 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: 223.9 mW

Closest Distance to Side F: 110.0 mm

$[\{(3.0)/(\sqrt{0.787})\} * 50 \text{ mm}] + \{110 - 50 \text{ mm}\} * 10 = 769 \text{ mW}$ which is greater than 223.9 mW

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 (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.							
10 mm	----	Side A	782.0	23230	10 MHz/QPSK	1	12	0	22.56	0.649	0.81
	----		782.0	23230	10 MHz/QPSK	12	7	1	21.73	0.525	0.63
	----	Side B	782.0	23230	10 MHz/QPSK	1	12	0	22.56	0.386	0.48
	----		782.0	23230	10 MHz/QPSK	12	7	1	21.73	0.285	0.34
	1	Side C	782.0	23230	10 MHz/QPSK	1	12	0	22.56	0.988	1.23
	----		782.0	23230	10 MHz/QPSK	12	7	1	21.73	0.612	0.73
	----	Side D	782.0	23230	10 MHz/QPSK	1	12	0	22.56	0.221	0.27
	----		782.0	23230	10 MHz/QPSK	12	7	1	21.73	0.178	0.21
	----	Side E	782.0	23230	10 MHz/QPSK	1	12	0	22.56	0.0677	0.08
	----		782.0	23230	10 MHz/QPSK	12	7	1	21.73	0.0467	0.06
----	Repeat	782.0	23230	10 MHz/QPSK	1	12	0	22.56	0.975	1.21	

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 - CDMA

MEASUREMENT RESULTS

Gap	Plot	Frequency		Modulation	Position	End Power (dBm)	Reverse Channel	Forward Channel	Measured SAR (W/kg)	Reported SAR (W/kg)
		MHz	Ch.							
10 mm	----	824.7	1013	CDMA	Side A	23.75	153.6 kbps	2 Slot 307.2 kbps	1.05	1.11
	2	836.5	384	CDMA		23.73	153.6 kbps	2 Slot 307.2 kbps	1.31	1.39
	----	848.3	777	CDMA		23.22	153.6 kbps	2 Slot 307.2 kbps	1.08	1.29
	----	824.7	1013	CDMA	Side B	23.75	153.6 kbps	2 Slot 307.2 kbps	0.832	0.88
	----	836.5	384	CDMA		23.73	153.6 kbps	2 Slot 307.2 kbps	1.06	1.13
	----	848.3	777	CDMA		23.22	153.6 kbps	2 Slot 307.2 kbps	0.636	0.76
	----	824.7	1013	CDMA	Side C	23.75	153.6 kbps	2 Slot 307.2 kbps	1.11	1.18
	----	836.5	384	CDMA		23.73	153.6 kbps	2 Slot 307.2 kbps	1.29	1.37
	----	848.3	777	CDMA		23.22	153.6 kbps	2 Slot 307.2 kbps	0.938	1.12
	----	836.5	384	CDMA	Side D	23.73	153.6 kbps	2 Slot 307.2 kbps	0.459	0.49
	----	836.5	384	CDMA	Side E	23.73	153.6 kbps	2 Slot 307.2 kbps	0.0912	0.10
	----	836.5	384	CDMA	Repeat	23.73	153.6 kbps	2 Slot 307.2 kbps	1.29	1.37

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


SAR Data Summary – 835 MHz Body - WCDMA

MEASUREMENT RESULTS

Gap	Plot	Frequency		Modulation	Position	End Power (dBm)	RMC	Test Set Up	Measured SAR (W/kg)	Reported SAR (W/kg)
		MHz	Ch.							
10 mm	----	826.4	4132	WCDMA	Side A	23.42	12.2 kbps	Test Loop 1	0.909	0.93
	----	836.6	4183	WCDMA		23.13	12.2 kbps	Test Loop 1	1.17	1.27
	----	846.6	4233	WCDMA		23.16	12.2 kbps	Test Loop 1	1.11	1.20
	----	836.6	4183	WCDMA	Side B	23.13	12.2 kbps	Test Loop 1	0.471	0.51
	----	826.4	4132	WCDMA	Side C	23.42	12.2 kbps	Test Loop 1	1.05	1.07
	----	836.6	4183	WCDMA		23.13	12.2 kbps	Test Loop 1	1.23	1.34
	3	846.6	4233	WCDMA		23.16	12.2 kbps	Test Loop 1	1.28	1.38
	----	836.6	4183	WCDMA	Side D	23.13	12.2 kbps	Test Loop 1	0.279	0.30
	----	836.6	4183	WCDMA	Side E	23.13	12.2 kbps	Test Loop 1	0.083	0.09
----	846.6	4233	WCDMA	Repeat	23.16	12.2 kbps	Test Loop 1	1.25	1.35	

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
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SAR Data Summary – 835 MHz Body - GPRS

MEASUREMENT RESULTS

Gap	Plot	Frequency		Rev Level/ Modulation	Position	End Power (dBm)	TX Level	Multislot Configuration	Measured SAR (W/kg)	Reported SAR (W/kg)
		MHz	Ch.							
10 mm	4	824.2	128	GMSK	Side A	32.17	5	1 Slot	1.12	1.22
	----	836.6	190	GMSK		32.15	5	1 Slot	0.861	0.94
	----	848.8	251	GMSK		32.27	5	1 Slot	0.892	0.95
	----	836.6	190	GMSK	Side B	32.15	5	1 Slot	0.492	0.54
	----	824.2	128	GMSK	Side C	32.17	5	1 Slot	0.741	0.81
	----	836.6	190	GMSK		32.15	5	1 Slot	0.828	0.90
	----	848.8	251	GMSK		32.27	5	1 Slot	0.844	0.90
	----	836.6	190	GMSK	Side D	32.15	5	1 Slot	0.274	0.30
	----	836.6	190	GMSK	Side E	32.15	5	1 Slot	0.0806	0.09
	----	824.2	128	GMSK	Repeat	32.17	5	1 Slot	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



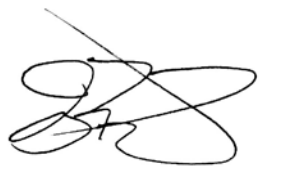
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SAR Data Summary – 835 MHz Body – LTE Band 5

MEASUREMENT RESULTS											
Gap	Plot	Position	Frequency		BW/ Modulation	RB Size	RB Offset	MPR Target	End Power (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)
			MHz	Ch.							
10 mm	----	Side A	836.5	20525	10 MHz/QPSK	1	24	0	22.48	0.703	0.89
	----		836.5	20525	10 MHz/QPSK	25	12	1	21.62	0.270	0.33
	----	Side B	836.5	20525	10 MHz/QPSK	1	24	0	22.48	0.598	0.76
	----		836.5	20525	10 MHz/QPSK	25	12	1	21.62	0.625	0.77
	----	Side C	829.0	20450	10 MHz/QPSK	1	24	0	21.72	0.723	1.09
	5		836.5	20525	10 MHz/QPSK	1	24	0	22.48	0.982	1.24
	----		844.0	20599	10 MHz/QPSK	1	24	0	21.09	0.747	1.30
	----	Side D	836.5	20525	10 MHz/QPSK	25	12	1	21.62	0.767	0.94
	----		836.5	20525	10 MHz/QPSK	1	24	0	22.48	0.294	0.37
	----	Side E	836.5	20525	10 MHz/QPSK	25	12	1	21.62	0.283	0.35
	----		836.5	20525	10 MHz/QPSK	1	24	0	22.48	0.045	0.06
	----	Repeat	836.5	20525	10 MHz/QPSK	25	12	1	21.62	0.0488	0.06
	----		836.5	20525	10 MHz/QPSK	1	24	0	22.48	0.976	1.22

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 – 1750 MHz Body – LTE Band 4

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	6	Side A	1720.0	20050	20 MHz/QPSK	1	49	0	22.04	0.765	1.07
	-----		1732.5	20175	20 MHz/QPSK	1	49	0	22.69	0.798	0.76
	-----		1745.0	20300	20 MHz/QPSK	1	49	0	22.84	0.774	0.90
	-----		1732.5	20175	20 MHz/QPSK	50	24	1	22.12	0.646	0.71
	-----	Side B	1732.5	20175	20 MHz/QPSK	1	49	0	22.69	0.266	0.32
	-----		1732.5	20175	20 MHz/QPSK	50	24	1	22.12	0.204	0.28
	-----	Side C	1732.5	20175	20 MHz/QPSK	1	49	0	22.69	0.646	0.78
	-----		1732.5	20175	20 MHz/QPSK	50	24	1	22.12	0.620	0.68
	-----	Side D	1732.5	20175	20 MHz/QPSK	1	49	0	22.69	0.363	0.44
	-----		1732.5	20175	20 MHz/QPSK	50	24	1	22.12	0.229	0.25
	-----	Side E	1732.5	20175	20 MHz/QPSK	1	49	0	22.69	0.294	0.35
	-----		1732.5	20175	20 MHz/QPSK	50	24	1	22.12	0.273	0.30
	-----	Repeat	1720.0	20050	20 MHz/QPSK	1	49	0	22.04	0.755	1.05

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

SAR Data Summary – 1900 MHz Body - CDMA

MEASUREMENT RESULTS

Gap	Plot	Frequency		Rev Level/ Modulation	Position	End Power (dBm)	Reverse Channel	Forward Channel	Measured SAR (W/kg)	Reported SAR (W/kg)
		MHz	Ch.							
10 mm	----	1851.25	25	CDMA	Side A	22.86	153.6 kbps	2 Slot 307.2 kbps	1.15	1.33
	7	1880.00	600	CDMA		23.04	153.6 kbps	2 Slot 307.2 kbps	1.29	1.43
	----	1908.75	1175	CDMA		22.88	153.6 kbps	2 Slot 307.2 kbps	1.01	1.17
	----	1880.00	600	CDMA	Side B	23.04	153.6 kbps	2 Slot 307.2 kbps	0.388	0.43
	----	1880.00	600	CDMA	Side C	23.04	153.6 kbps	2 Slot 307.2 kbps	0.755	0.84
	----	1880.00	600	CDMA	Side D	23.04	153.6 kbps	2 Slot 307.2 kbps	0.470	0.52
	----	1880.00	600	CDMA	Side E	23.04	153.6 kbps	2 Slot 307.2 kbps	0.334	0.37
	----	1880.00	600	CDMA	Repeat	23.04	153.6 kbps	2 Slot 307.2 kbps	1.27	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

SAR Data Summary – 1900 MHz Body - WCDMA

MEASUREMENT RESULTS

Gap	Plot	Frequency		Rev Level/ Modulation	Position	End Power (dBm)	RMC	Test Set Up	Measured SAR (W/kg)	Reported SAR (W/kg)
		MHz	Ch.							
10 mm	----	1852.4	9262	WCDMA	Side A	23.05	12.2 kbps	Test Loop 1	1.29	1.43
	----	1880.0	9400	WCDMA		23.02	12.2 kbps	Test Loop 1	1.32	1.47
	8	1907.6	9538	WCDMA		23.38	12.2 kbps	Test Loop 1	1.35	1.39
	----	1852.4	9262	WCDMA	Side B	23.02	12.2 kbps	Test Loop 1	0.504	0.56
	----	1880.0	9400	WCDMA	Side C	23.02	12.2 kbps	Test Loop 1	0.599	0.67
	----	1852.4	9262	WCDMA	Side D	23.02	12.2 kbps	Test Loop 1	0.476	0.53
	----	1852.4	9262	WCDMA	Side E	23.02	12.2 kbps	Test Loop 1	0.353	0.39
	----	1907.6	9538	WCDMA	Repeat	23.38	12.2 kbps	Test Loop 1	1.33	1.37

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


SAR Data Summary – 1900 MHz Body - GPRS

MEASUREMENT RESULTS

Gap	Plot	Frequency		Rev Level/ Modulation	Position	End Power (dBm)	TX Level	Multislot Configuration	Measured SAR (W/kg)	Reported SAR (W/kg)
		MHz	Ch.							
10 mm	9	1880.0	661	GMSK	Side A	29.52	0	1 Slot	0.560	0.80
	----	1880.0	661	GMSK	Side B	29.52	0	1 Slot	0.203	0.29
	----	1880.0	661	GMSK	Side C	29.52	0	1 Slot	0.371	0.53
	----	1880.0	661	GMSK	Side D	29.52	0	1 Slot	0.252	0.36
	----	1880.0	661	GMSK	Side E	29.52	0	1 Slot	0.133	0.19

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

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 (dBm)	Measured SAR (W/kg)	Reported SAR (W/kg)	
			MHz	Ch.								
10 mm	10	Side A	1860.0	18700	20 MHz/QPSK	1	49	0	21.99	1.18	1.33	
	-----		1880.0	18900	20 MHz/QPSK	1	49	0	22.12	1.15	1.26	
	-----		1900.0	19100	20 MHz/QPSK	1	49	0	22.06	1.17	1.30	
	-----		1860.0	18700	20 MHz/QPSK	50	24	1	21.38	1.09	1.12	
	-----		1880.0	18900	20 MHz/QPSK	50	4	1	22.19	1.08	0.92	
	-----		1900.0	19100	20 MHz/QPSK	50	24	1	21.21	0.738	0.79	
	-----	-----	Side B	1880.0	18900	20 MHz/QPSK	1	49	0	22.12	0.254	0.28
	-----	-----		1880.0	18900	20 MHz/QPSK	50	24	1	22.19	0.213	0.18
	-----	-----	Side C	1880.0	18900	20 MHz/QPSK	1	49	0	22.12	0.598	0.65
	-----	-----		1880.0	18900	20 MHz/QPSK	50	24	1	22.19	0.482	0.41
	-----	-----	Side D	1880.0	18900	20 MHz/QPSK	1	49	0	22.12	0.419	0.46
	-----	-----		1880.0	18900	20 MHz/QPSK	50	24	1	22.19	0.354	0.30
	-----	-----	Side E	1880.0	18900	20 MHz/QPSK	1	49	0	22.12	0.246	0.27
	-----	-----		1880.0	18900	20 MHz/QPSK	50	24	1	22.19	0.235	0.20
	-----	-----	Repeat	1860.0	18700	20 MHz/QPSK	1	49	0	21.99	1.15	1.30

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

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	22.95	0.691	0.78	
	11		2535.0	21100	20 MHz/QPSK	1	49	0	23.00	1.30	1.42	
	----		2562.5	21350	20 MHz/QPSK	1	49	0	23.03	1.28	1.40	
	----		2507.5	20850	20 MHz/QPSK	50	24	1	22.13	0.707	0.77	
	----		2535.0	21100	20 MHz/QPSK	50	24	1	22.17	0.891	0.96	
	----		2562.5	21350	20 MHz/QPSK	50	24	1	22.18	0.803	0.86	
	----	Side B	2535.0	21100	20 MHz/QPSK	1	49	0	23.00	0.742	0.83	
	----		2535.0	21100	20 MHz/QPSK	50	24	1	22.17	0.597	0.64	
	----	Side C	2507.5	20850	20 MHz/QPSK	1	49	0	22.95	0.841	0.95	
	----		2535.0	21100	20 MHz/QPSK	1	49	0	23.00	0.918	1.03	
	----		2562.5	21350	20 MHz/QPSK	1	49	0	23.03	0.671	0.75	
	----		2507.5	20850	20 MHz/QPSK	50	24	1	22.13	0.936	1.02	
	----		2535.0	21100	20 MHz/QPSK	50	24	1	22.17	0.675	0.73	
	----		2562.5	21350	20 MHz/QPSK	50	24	1	22.18	0.606	0.65	
	----	Side D	2535.0	21100	20 MHz/QPSK	1	49	0	23.00	0.0875	0.10	
	----		2535.0	21100	20 MHz/QPSK	50	24	1	22.17	0.0727	0.08	
	----	Side E	2535.0	21100	20 MHz/QPSK	1	49	0	23.00	0.641	0.72	
	----		2535.0	21100	20 MHz/QPSK	50	24	1	22.17	0.482	0.52	
	----	Repeat		2535.0	21100	20 MHz/QPSK	1	49	0	23.00	1.27	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

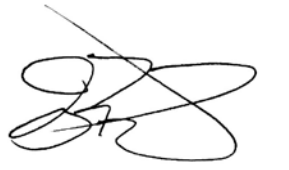
SAR Data Summary – 2450 MHz Body 802.11b/g

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	2437	6	DSSS	Chain 0	18.0	0.149	0.15
	-----	Side B	2437	6	DSSS		18.0	0.164	0.16
	-----	Side C	2437	6	DSSS		18.0	0.153	0.15
	12	Side A	2437	6	OFDM	Chain 1	18.0	0.174	0.17
	-----	Side C	2437	6	OFDM		18.0	0.134	0.13
	-----	Side D	2437	6	OFDM		18.0	0.128	0.13

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

SAR Data Summary – 5200 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	5220	44	OFDM	Chain 0	9.3	0.0466	0.06
	13	Side B	5220	44	OFDM		9.3	0.0675	0.08
	-----	Side C	5220	44	OFDM		9.3	0.0156	0.02
	-----	Side A	5220	44	OFDM	Chain 1	9.3	0.00602	0.01
	-----	Side C	5220	44	OFDM		9.3	0.00699	0.01
	-----	Side D	5220	44	OFDM		9.3	0.0399	0.05

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


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	Chain 0	19.4	0.179	0.21
	-----	Side B	5785	157	OFDM		19.4	0.140	0.16
	14	Side C	5785	157	OFDM		19.4	0.226	0.26
	-----	Side A	5785	157	OFDM	Chain 1	19.4	0.107	0.12
	-----	Side C	5785	157	OFDM		19.4	0.105	0.12
	-----	Side D	5785	157	OFDM		19.4	0.206	0.24

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

SAR Data Summary – Simultaneous Transmit (Worst Case)

MEASUREMENT RESULTS								
Plot	Frequency (WLAN)		Frequency (WWAN)		WWAN Technology	SAR (W/kg) WLAN	SAR (W/kg) WWAN	Total SAR (W/kg)
	MHz	Ch.	MHz	Ch.				
-----	5825	157	1907.6	9538	WCDMA Band 2	0.26	1.47	1.73
						Body 1.6 W/kg (mW/g) averaged over 1 gram		

The worst case condition is in the 5.8 GHz band. The WWAN and WLAN antennas are a minimum of 52 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

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

$$(0.26 + 1.47)^{1.5}/52 = 0.04$$

SAR Data Summary – Simultaneous Transmit (WLAN MIMO)

MEASUREMENT RESULTS								
Plot	Frequency (WLAN)		Frequency (WWAN)		WWAN Technology	SAR (W/kg) WLAN	SAR (W/kg) WWAN	Total SAR (W/kg)
	MHz	Ch.	MHz	Ch.				
-----	5825	157	1907.6	9538	WCDMA Band 2	0.26 + 0.24	1.47	1.97
						Body 1.6 W/kg (mW/g) averaged over 1 gram		

The worst case condition is in the 5.8 GHz band. The WWAN and WLAN antennas are a minimum of 52 mm apart and the WLAN antennas are a minimum of 55 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

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

$$(0.26 + 1.47)^{1.5}/52 = 0.04$$

$$(0.24 + 1.47)^{1.5}/52 = 0.04$$

$$(0.26 + 0.24)^{1.5}/55 = 0.01$$

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
ELI4 Flat Phantom	N/A	N/A	1251
Device Holder	N/A	N/A	N/A
Data Acquisition Electronics 4	01/14/2017	01/14/2016	1321
SPEAG E-Field Probe EX3DV4	08/20/2016	08/20/2015	3693
SPEAG E-Field Probe EX3DV4	01/27/2017	01/27/2016	3833
Speag Validation Dipole D750V2	08/10/2016	08/10/2015	1053
Speag Validation Dipole D835V2	08/10/2016	08/10/2015	4d131
Speag Validation Dipole D1750V2	08/13/2016	08/13/2015	1061
Speag Validation Dipole D1900V2	08/13/2016	08/13/2015	5d147
Speag Validation Dipole D2450V2	08/10/2016	08/10/2015	881
Speag Validation Dipole D2550V2	08/10/2016	08/10/2015	1003
Speag Validation Dipole D5GHzV2	08/11/2016	08/11/2015	1119
Agilent N1911A Power Meter	05/20/2017	05/20/2015	GB45100254
Agilent N1922A Power Sensor	06/25/2017	06/25/2015	MY45240464
Advantest R3261A Spectrum Analyzer	03/26/2017	03/26/2015	31720068
Agilent (HP) 8350B Signal Generator	03/26/2017	03/26/2015	2749A10226
Agilent (HP) 83525A RF Plug-In	03/26/2017	03/26/2015	2647A01172
Agilent (HP) 8753C Vector Network Analyzer	03/26/2017	03/26/2015	3135A01724
Agilent (HP) 85047A S-Parameter Test Set	03/26/2017	03/26/2015	2904A00595
Agilent (HP) 8960 Base Station Sim.	03/31/2017	03/31/2015	MY48360364
Anritsu MT8820C	07/28/2017	07/28/2015	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
Apral 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 (5 Ghz)	N/A	N/A	N/A

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.

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.

- [5] IEEE Standard 1528 – 2013, IEEE Recommended Practice for Determining the Peak-Spatial Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communication Devices: Measurement Techniques, June 2013.

- [6] Industry Canada, RSS – 102 Issue 5, Radio Frequency Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands), March 2015.

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

Appendix A – System Validation Plots and Data

Test Result for UIM Dielectric Parameter

Thu 21/Jul/2016

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
0.7040	55.714	0.96	55.708	0.974*
0.7075	55.70	0.96	55.698	0.978*
0.7100	55.69	0.96	55.69	0.98
0.7110	55.686	0.96	55.687	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

* value interpolated

Test Result for UIM Dielectric Parameter

Tue 19/Jul/2016

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
0.8190	55.264	0.97	55.98	0.98*
0.8242	55.243	0.97	55.954	0.98*
0.8250	55.24	0.97	55.95	0.98
0.8264	55.234	0.97	55.944	0.981*
0.8315	55.214	0.97	55.924	0.987*
0.8350	55.20	0.97	55.91	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*
0.8488	55.159	0.984	55.852	0.994*
0.8550	55.14	0.99	55.84	1.00
0.8650	55.11	1.01	55.80	1.01

* value interpolated

Test Result for UIM Dielectric Parameter

Thu 21/Jul/2016

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
1.7124	53.525	1.47	53.543	1.482*
1.7200	53.51	1.47	53.52	1.49
1.7300	53.48	1.48	53.38	1.50
1.7325	53.475	1.48	53.375	1.503*
1.7326	53.475	1.48	53.375	1.503*
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
1.7526	53.425	1.49	53.315	1.523*
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

Test Result for UIM Dielectric Parameter

Mon 18/Jul/2016

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
1.8502	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
1.8825	53.30	1.52	52.118	1.453*
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*
1.9050	53.30	1.52	52.095	1.485*
1.9088	53.30	1.52	52.119	1.499*
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

Wed 27/Jul/2016

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	52.76	1.93
2.4120	52.748	1.912	52.756	1.932*
2.4200	52.74	1.92	52.74	1.94
2.4300	52.73	1.93	52.72	1.95
2.4370	52.716	1.937	52.706	1.957*
2.4400	52.71	1.94	52.70	1.96
2.4500	52.70	1.95	52.69	1.97
2.4600	52.69	1.96	52.67	1.98
2.4620	52.686	1.964	52.666	1.982*
2.4700	52.67	1.98	52.65	1.99
2.4800	52.66	1.99	52.63	2.01

* value interpolated

Test Result for UIM Dielectric Parameter

Thu 21/Jul/2016

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
2.5060	52.628	2.032	52.562	2.042*
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
2.5930	52.517	2.153	52.387	2.196*
2.6000	52.51	2.16	52.38	2.21
2.6100	52.50	2.18	52.35	2.22
2.6200	52.48	2.19	52.33	2.25
2.6300	52.47	2.21	52.32	2.27
2.6400	52.46	2.22	52.30	2.29
2.6500	52.45	2.23	52.29	2.30
2.6600	52.43	2.25	52.27	2.32
2.6700	52.42	2.26	52.25	2.34
2.6800	52.41	2.28	52.23	2.35
2.6900	52.39	2.29	52.20	2.37
2.7000	52.38	2.30	52.19	2.39

* value interpolated

Test Result for UIM Dielectric Parameter

Thu 28/Jul/2016

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	49.19	5.14
5.1200	49.12	5.21	49.16	5.17
5.1400	49.10	5.23	49.13	5.20
5.1600	49.07	5.25	49.10	5.23
5.1800	49.04	5.28	49.07	5.26
5.2000	49.01	5.30	49.04	5.29
5.2100	49.00	5.31	49.035	5.30*
5.2200	48.99	5.32	49.03	5.31
5.2400	48.96	5.35	49.00	5.34
5.2600	48.93	5.37	48.98	5.37
5.2800	48.91	5.39	48.95	5.39
5.2900	48.895	5.405	48.935	5.405*
5.3000	48.88	5.42	48.92	5.42
5.3200	48.85	5.44	48.90	5.45
5.3400	48.82	5.46	48.87	5.48
5.3600	48.80	5.49	48.84	5.49
5.3800	48.77	5.51	48.81	5.50
5.4000	48.74	5.53	48.78	5.52
5.4200	48.72	5.56	48.75	5.55
5.4400	48.69	5.58	48.72	5.57
5.4600	48.66	5.60	48.69	5.60
5.4800	48.63	5.63	48.66	5.62
5.5000	48.61	5.65	48.63	5.64
5.5200	48.58	5.67	48.61	5.66
5.5400	48.55	5.70	48.58	5.69
5.5600	48.53	5.72	48.55	5.71
5.5800	48.50	5.74	48.52	5.73
5.6000	48.47	5.77	48.49	5.76
5.6200	48.44	5.79	48.46	5.78
5.6400	48.42	5.81	48.43	5.80
5.6600	48.39	5.84	48.40	5.82
5.6800	48.36	5.86	48.37	5.84
5.7000	48.34	5.88	48.34	5.87
5.7200	48.31	5.91	48.31	5.89
5.7400	48.28	5.93	48.28	5.92
5.7450	48.273	5.935	48.273	5.925*
5.7600	48.25	5.95	48.25	5.94
5.7750	48.235	5.973	48.228	5.963*
5.7800	48.23	5.98	48.22	5.97
5.7850	48.223	5.985	48.213	5.978*
5.8000	48.20	6.00	48.19	6.00
5.8200	48.17	6.02	48.16	6.02
5.8250	48.165	6.028	48.153	6.025*
5.8400	48.15	6.05	48.13	6.04

* value interpolated

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; $\sigma = 0.99$ S/m; $\epsilon_r = 55.57$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

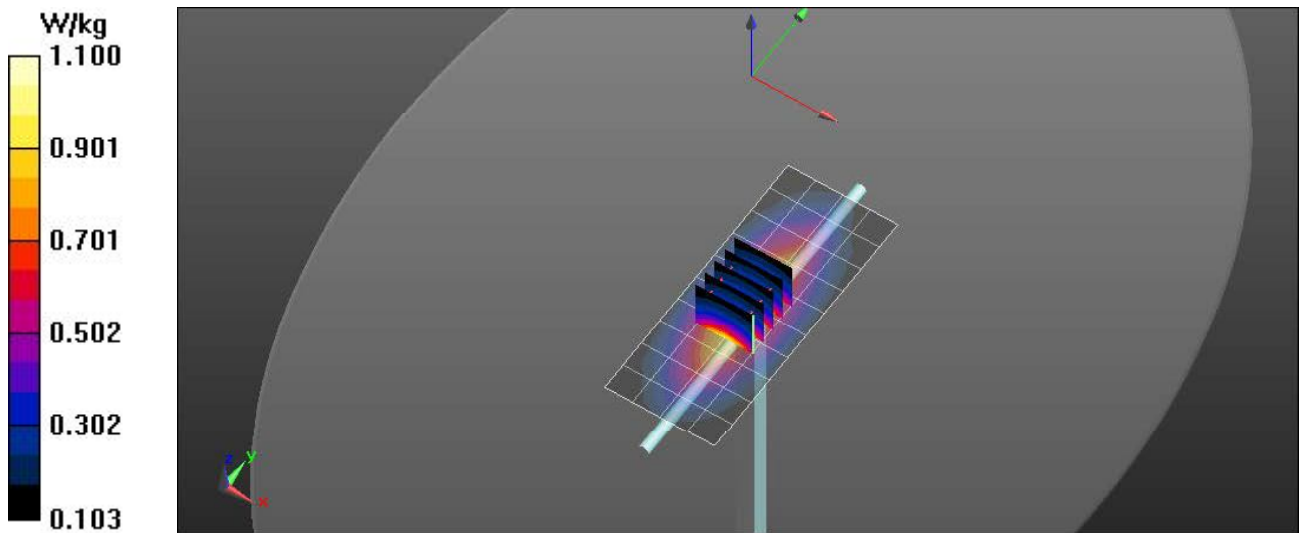
Test Date: Date: 7/21/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

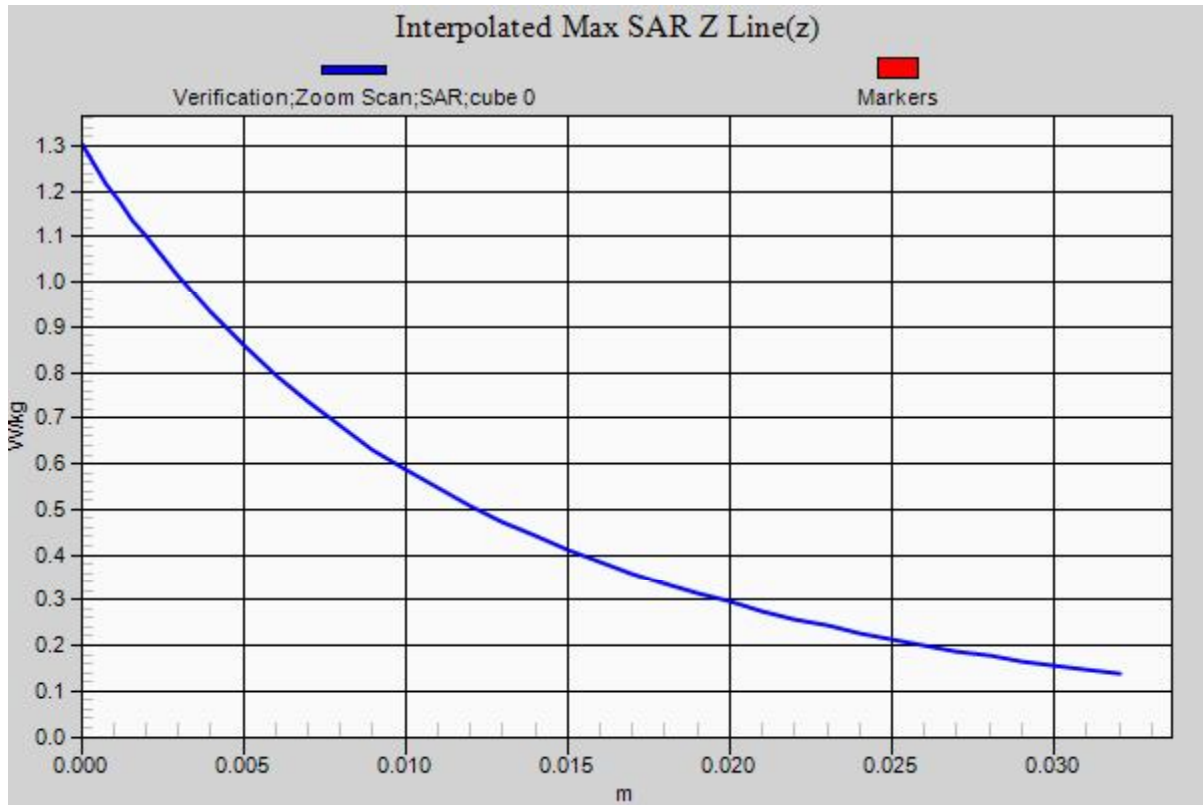
Probe: EX3DV4 - SN3833; ConvF(9.23, 9.23, 9.23); Calibrated: 1/27/2016;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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





RF Exposure Lab

Plot 2

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

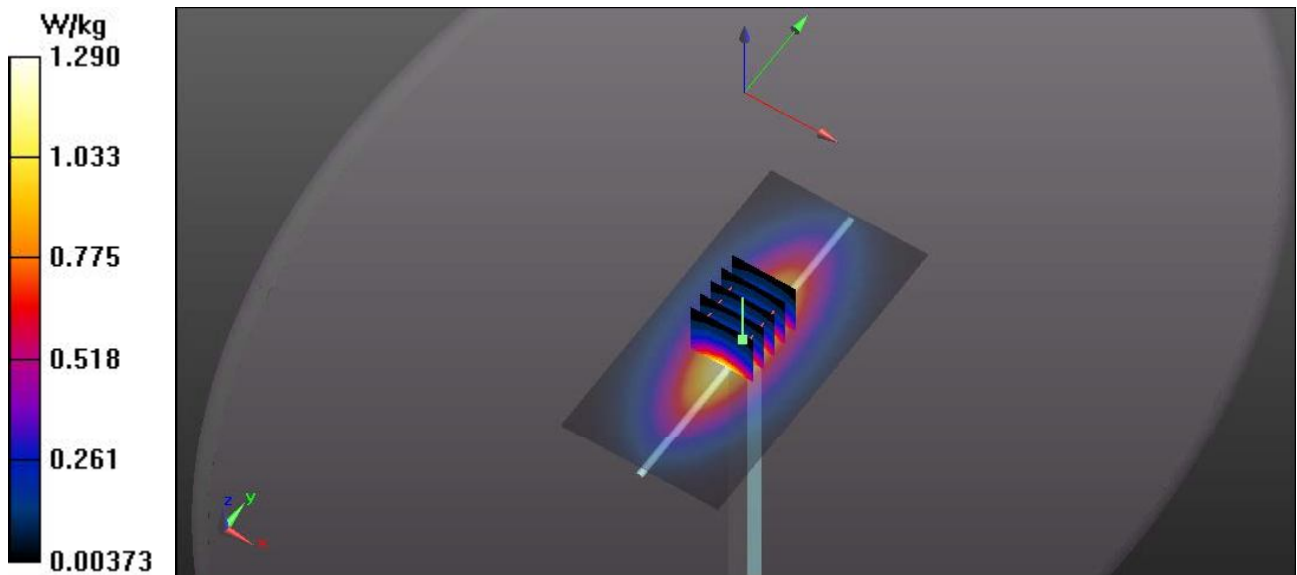
Communication System: CW; Frequency: 835 MHz; Duty Cycle: 1:1
 Medium: MSL835; Medium parameters used: $f = 835 \text{ MHz}$; $\sigma = 0.99 \text{ S/m}$; $\epsilon_r = 55.91$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

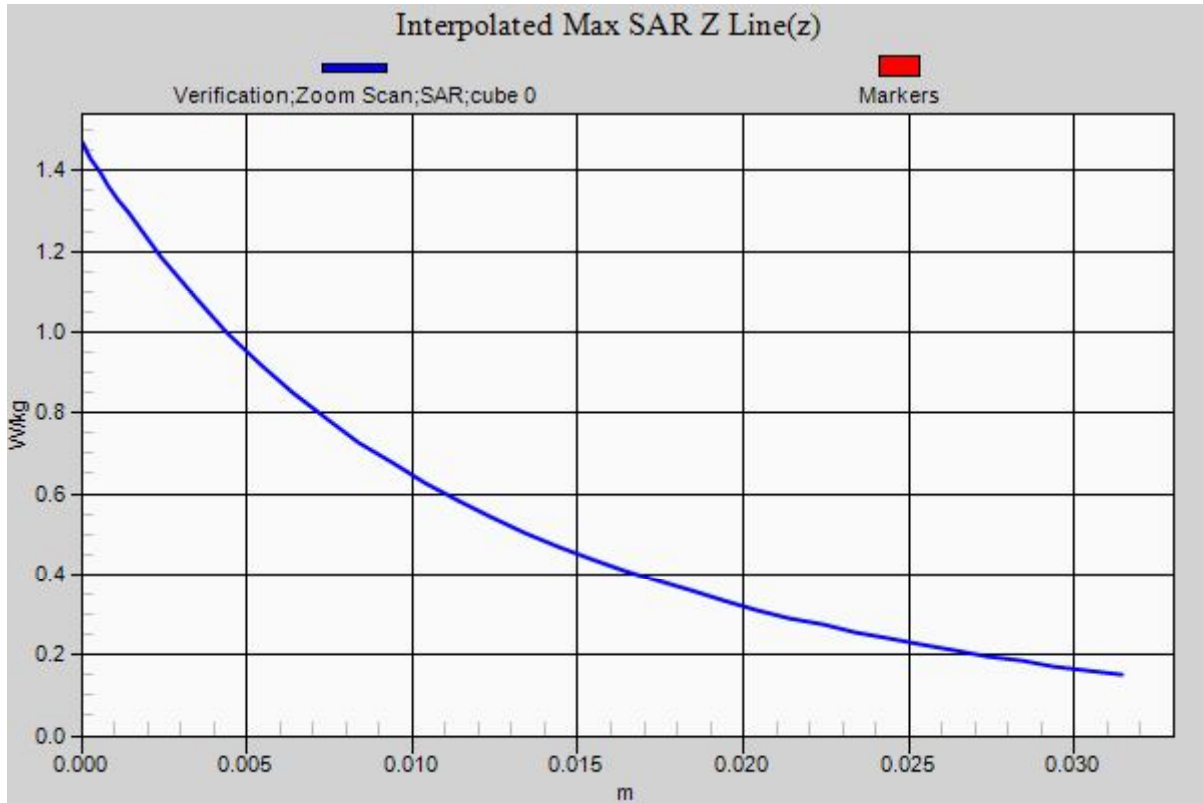
Test Date: Date: 7/19/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 - SN3833; ConvF(8.73, 8.73, 8.73); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

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

835 MHz Body/Verification/Zoom Scan (5x5x7)/Cube 0: Measurement grid: $dx=8\text{mm}$, $dy=8\text{mm}$, $dz=5\text{mm}$
 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





RF Exposure Lab

Plot 3

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: $f = 1750 \text{ MHz}$; $\sigma = 1.52 \text{ S/m}$; $\epsilon_r = 53.32$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

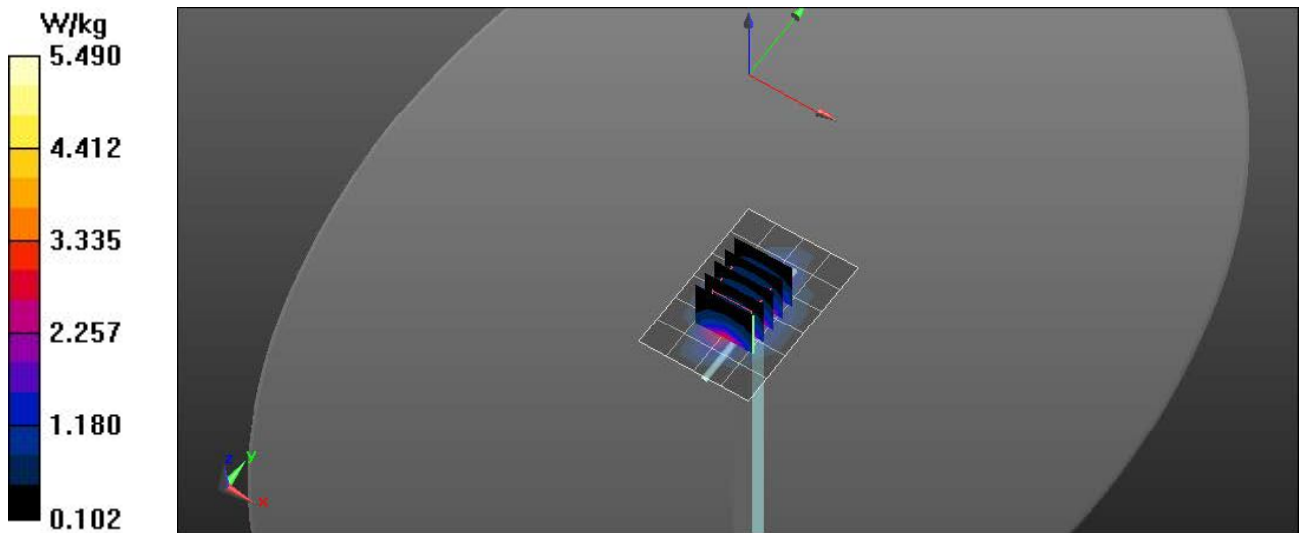
Test Date: Date: 7/21/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

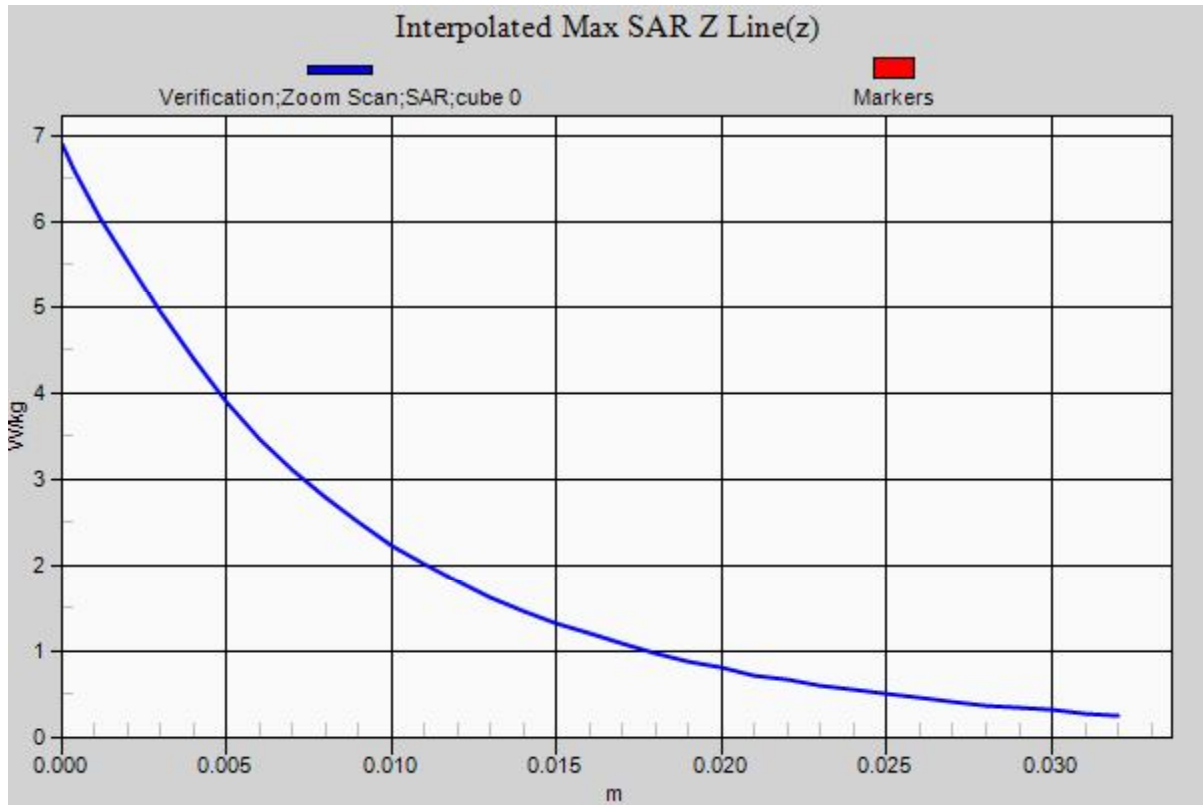
Probe: EX3DV4 - SN3833; ConvF(7.32, 7.32, 7.32); Calibrated: 1/27/2016;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
Measurement SW: DASYS2, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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





RF Exposure Lab

Plot 4

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

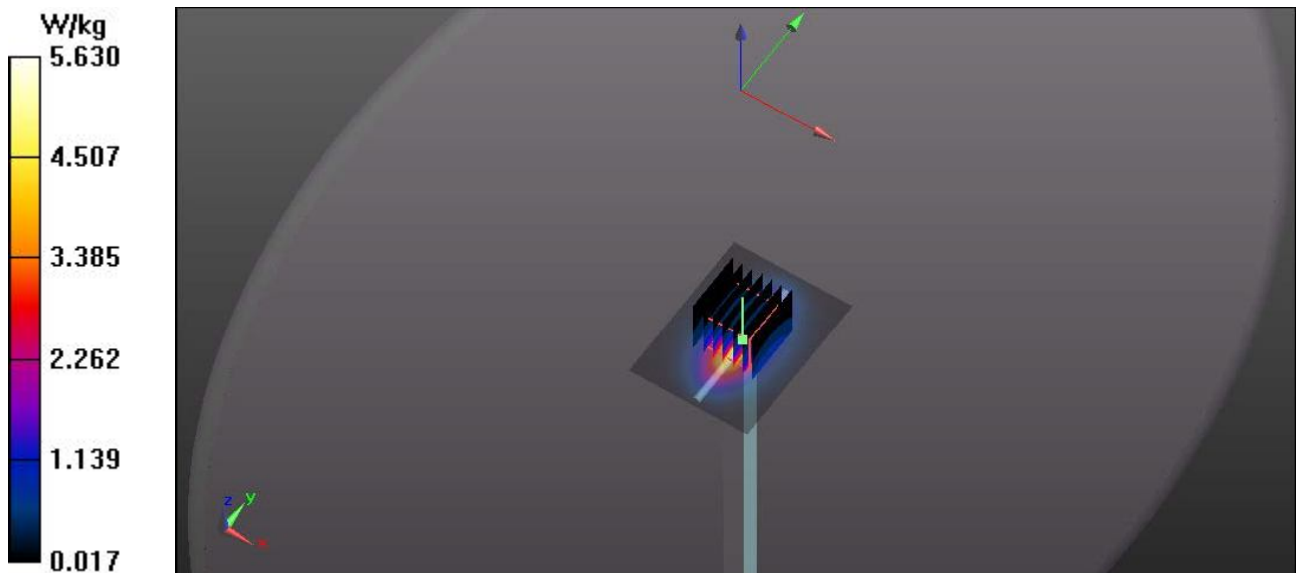
Communication System: CW; Frequency: 1900 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium parameters used: $f = 1900$ MHz; $\sigma = 1.47$ S/m; $\epsilon_r = 52.07$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

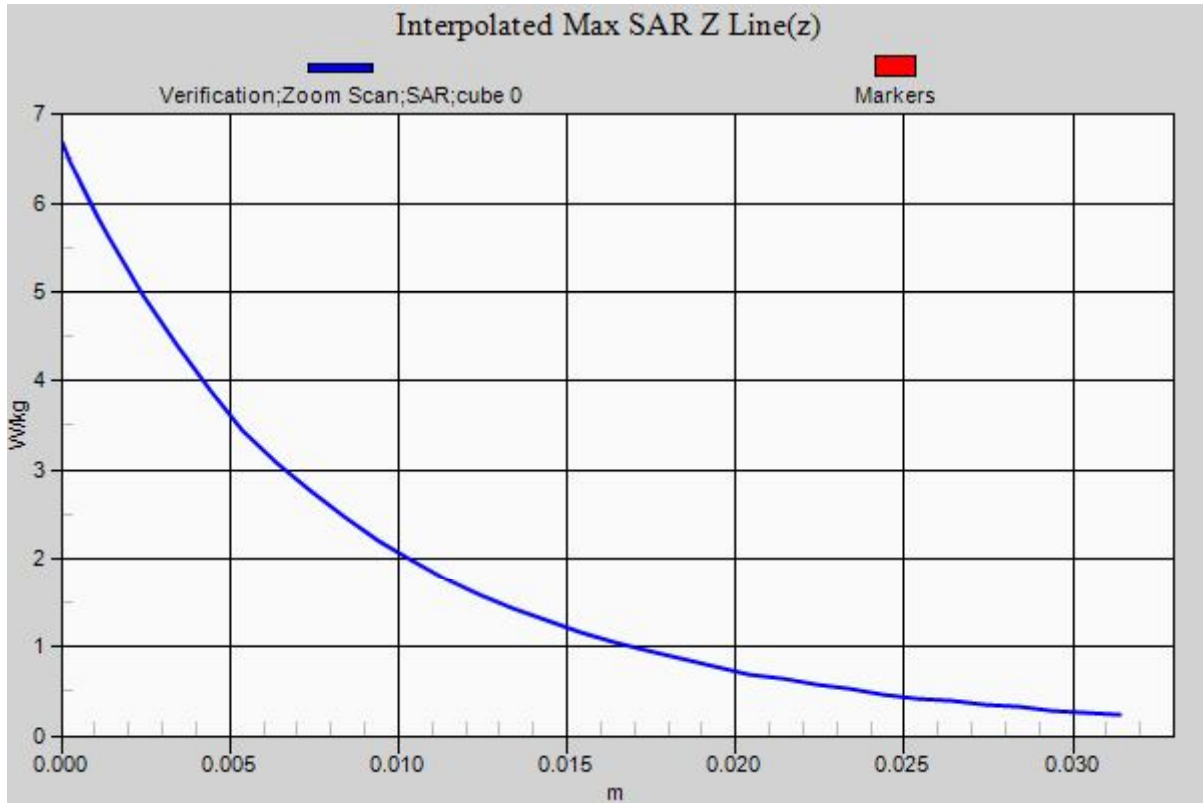
Test Date: Date: 7/18/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3833; ConvF(7.13, 7.13, 7.13); Calibrated: 1/27/2016;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

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





RF Exposure Lab

Plot 5

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

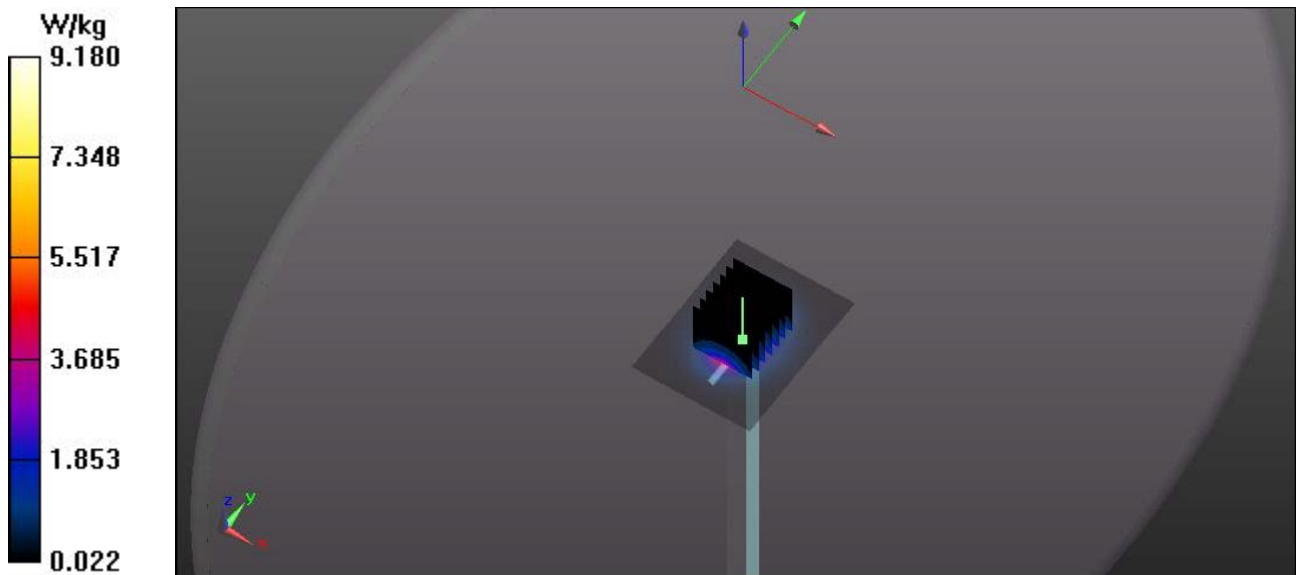
Communication System: CW; Frequency: 2550 MHz; Duty Cycle: 1:1
 Medium: MSL2600; Medium parameters used: $f = 2550 \text{ MHz}$; $\sigma = 2.12 \text{ S/m}$; $\epsilon_r = 52.47$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

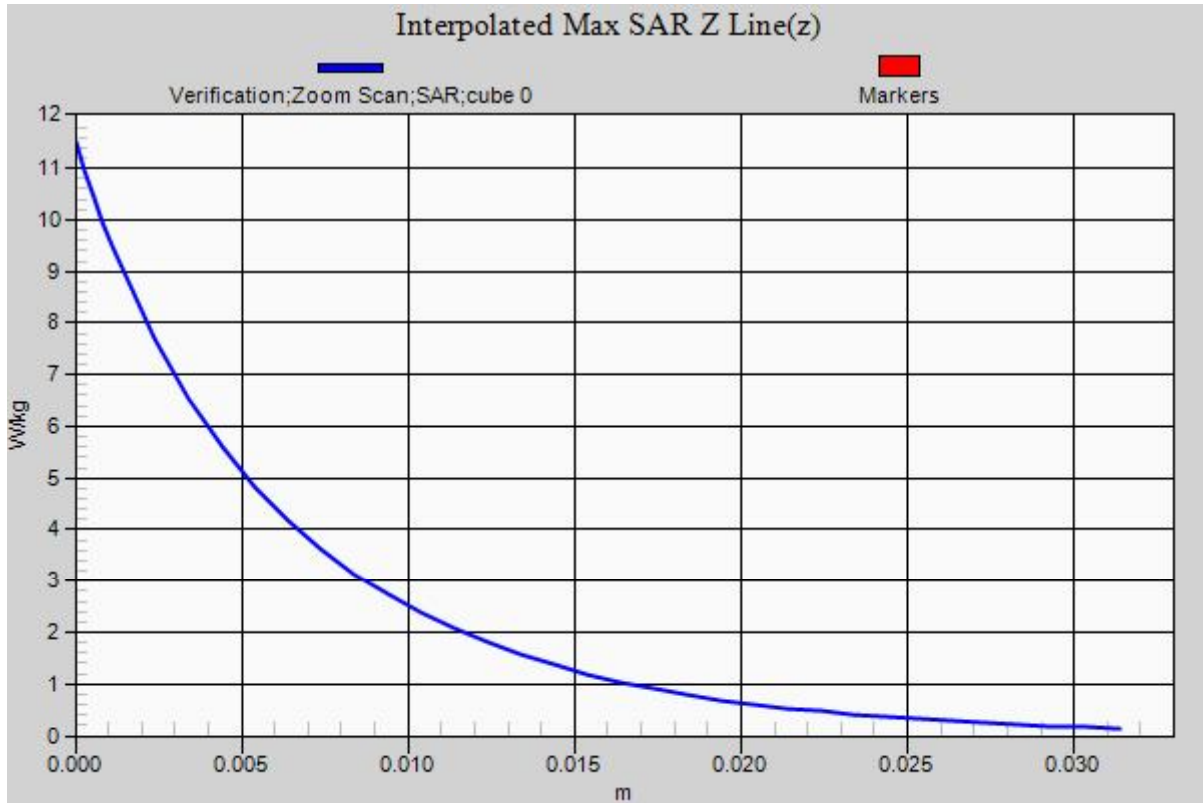
Test Date: Date: 7/21/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 - SN3693; ConvF(6.67, 6.67, 6.67); Calibrated: 8/20/2015;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

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

2550 MHz Body/Verification/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 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





RF Exposure Lab

Plot 6

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

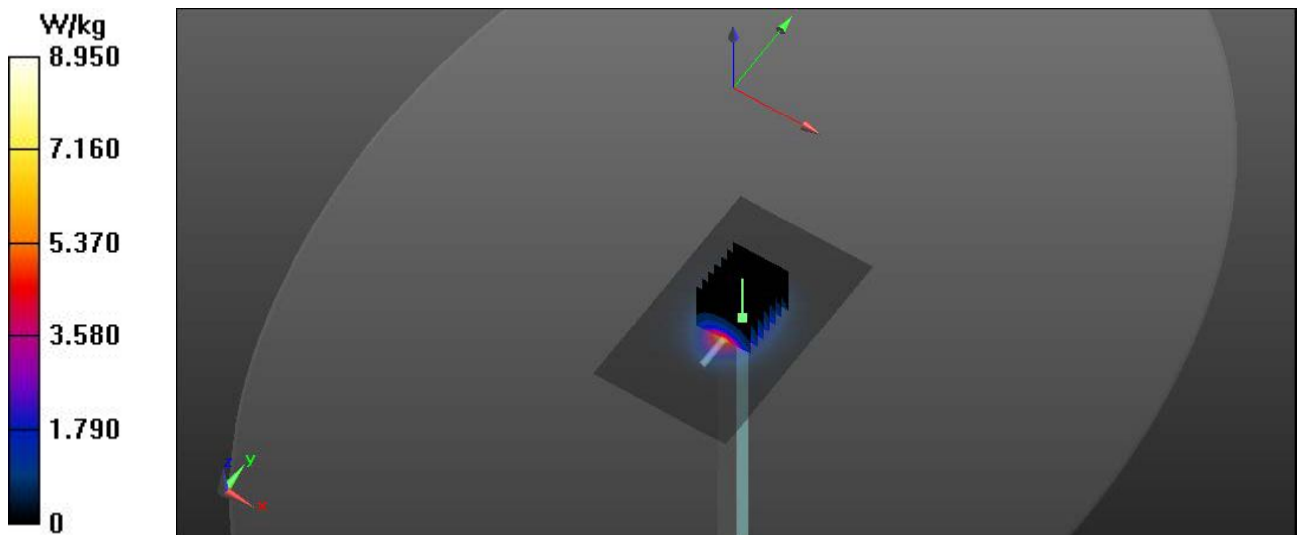
Communication System: CW; Frequency: 2450 MHz; Duty Cycle: 1:1
 Medium: MSL2450; Medium parameters used: $f = 2450 \text{ MHz}$; $\sigma = 1.97 \text{ S/m}$; $\epsilon_r = 52.69$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

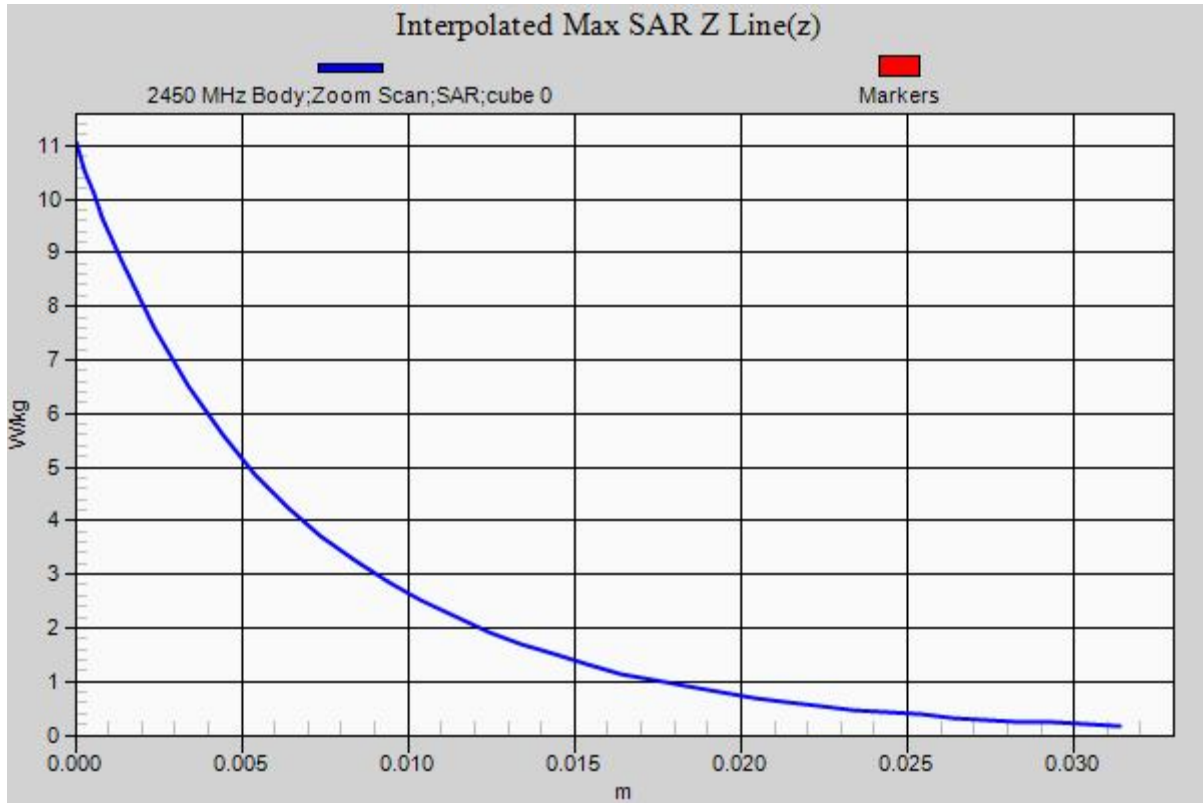
Test Date: Date: 7/27/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C
 Probe: EX3DV4 - SN3833; ConvF(6.87, 6.87, 6.87); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

Body Verification/2450 MHz/Area Scan (61x101x1): Interpolated grid: $dx=1.200 \text{ mm}$, $dy=1.200 \text{ mm}$
 Maximum value of SAR (interpolated) = 8.93 W/kg

Body Verification/2450 MHz/Zoom Scan (7x7x7)/Cube 0: Measurement grid: $dx=5\text{mm}$, $dy=5\text{mm}$, $dz=5\text{mm}$
 Reference Value = 53.517 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 11.09 W/kg
 $P_{in} = 100 \text{ mW}$
SAR(1 g) = 5.18 W/kg; SAR(10 g) = 2.41 W/kg
 Maximum value of SAR (measured) = 8.84 W/kg





RF Exposure Lab

Plot 7

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

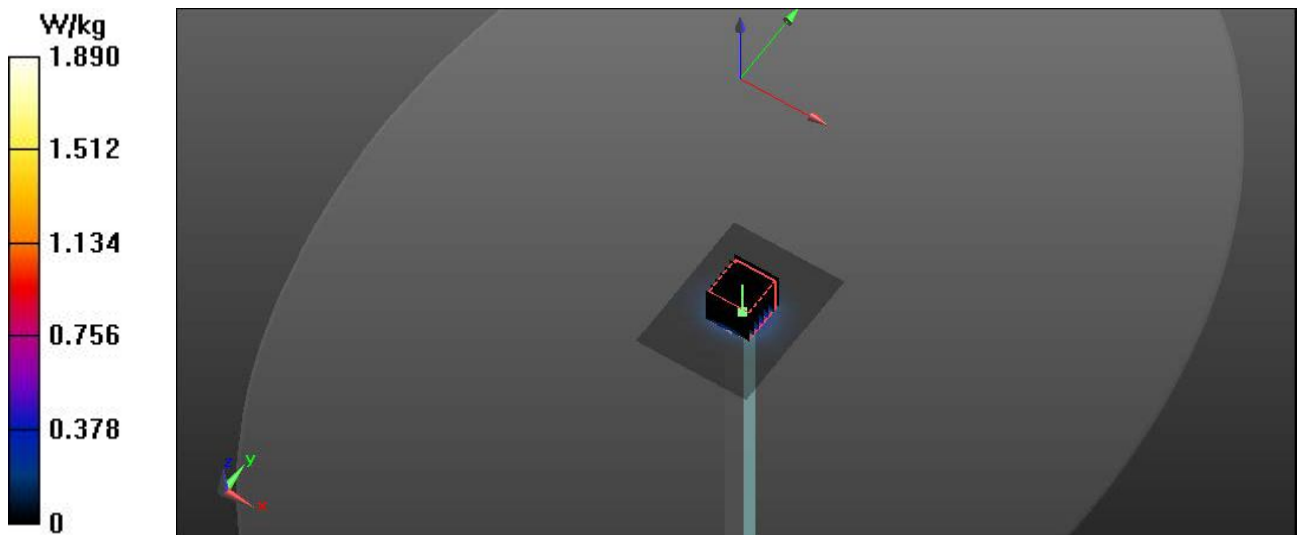
Communication System: CW; Frequency: 5200 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used: $f = 5200$ MHz; $\sigma = 5.29$ S/m; $\epsilon_r = 49.04$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

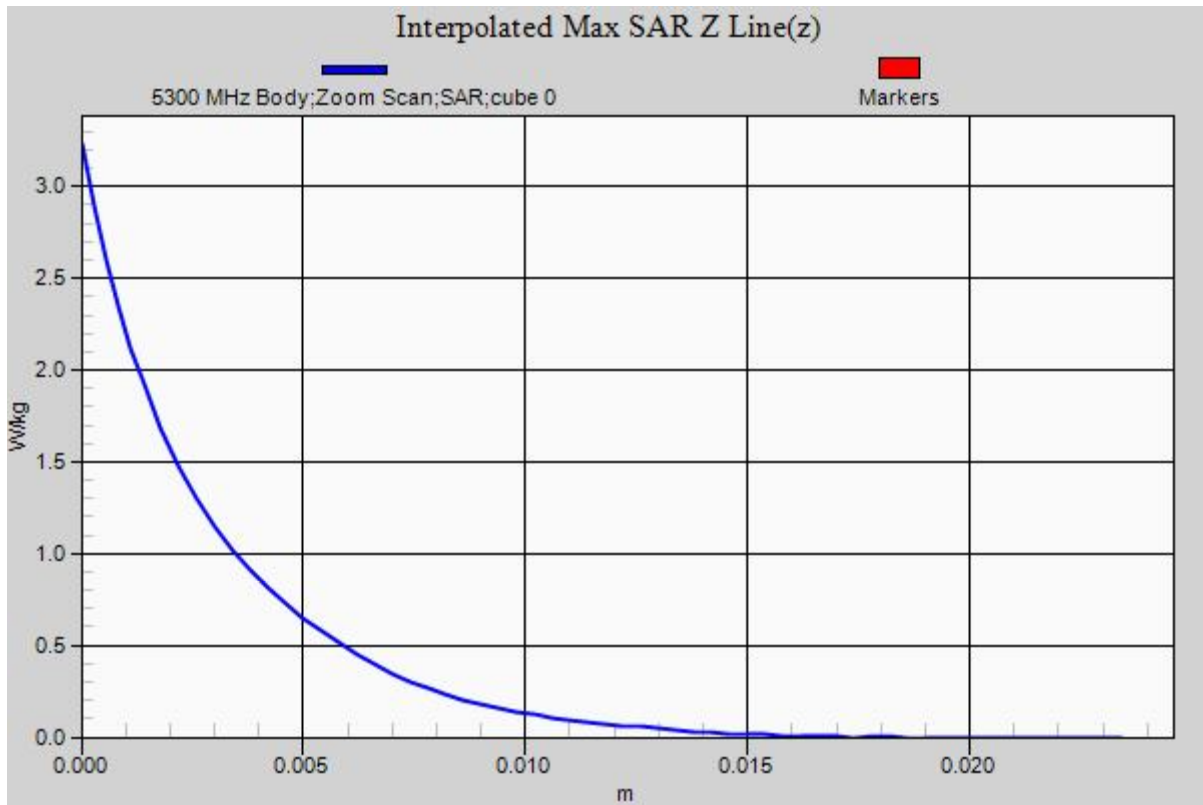
Test Date: Date: 7/28/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3833; ConvF(4.03, 4.03, 4.03); Calibrated: 1/27/2016;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

Body Verification/5200 MHz/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.89 W/kg

Body Verification/5200 MHz/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 12.708 V/m; Power Drift = 0.02 dB
Peak SAR (extrapolated) = 3.21 W/kg
Pin=10 mW
SAR(1 g) = 0.782 W/kg; SAR(10 g) = 0.214 W/kg
Maximum value of SAR (measured) = 1.89 W/kg





RF Exposure Lab

Plot 8

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

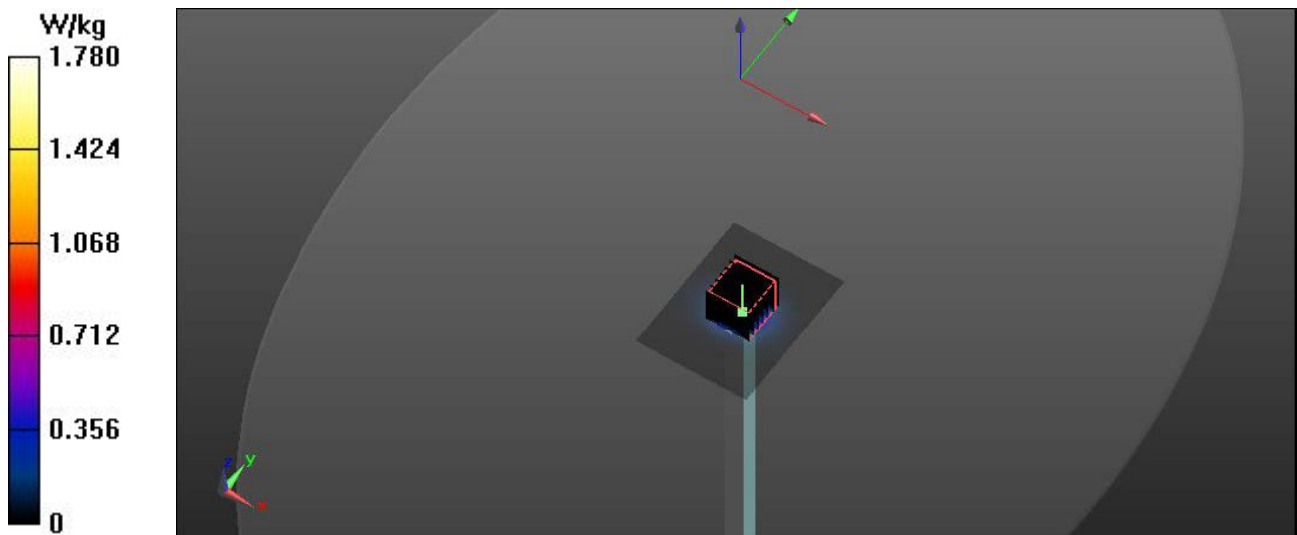
Communication System: CW; Frequency: 5800 MHz; Duty Cycle: 1:1
Medium: MSL 3-6 GHz; Medium parameters used: $f = 5800$ MHz; $\sigma = 6$ S/m; $\epsilon_r = 48.19$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

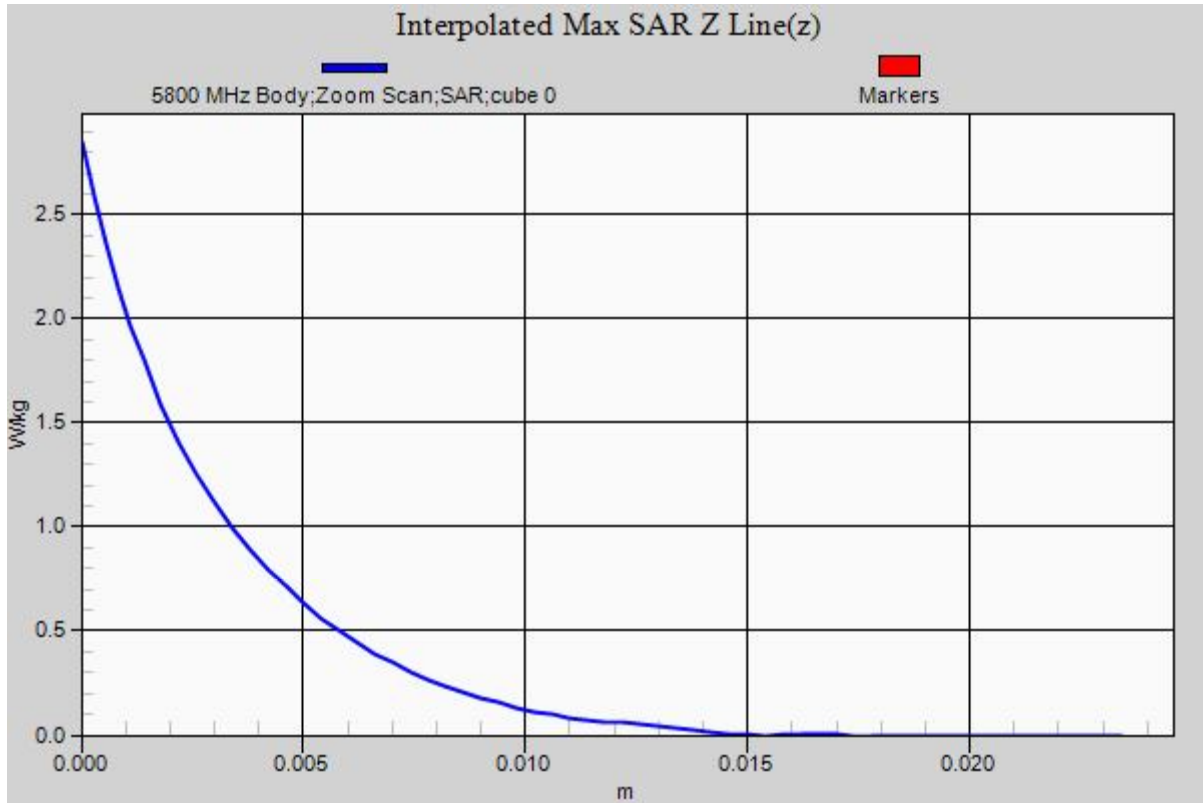
Test Date: Date: 7/28/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C
Probe: EX3DV4 - SN3833; ConvF(3.49, 3.49, 3.49); Calibrated: 1/27/2016;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

Body Verification/5800 MHz/Area Scan (61x81x1): Interpolated grid: dx=1.000 mm, dy=1.000 mm
Maximum value of SAR (interpolated) = 1.76 W/kg

Body Verification/5800 MHz/Zoom Scan (7x7x12)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=2mm
Reference Value = 12.402 V/m; Power Drift = 0.01 dB
Peak SAR (extrapolated) = 2.88 W/kg
Pin=10 mW
SAR(1 g) = 0.795 W/kg; SAR(10 g) = 0.212 W/kg
Maximum value of SAR (measured) = 1.78 W/kg





Appendix B – SAR Test Data Plots

RF Exposure Lab

Plot 1

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 782 MHz; Duty Cycle: 1:1
Medium: MSL750; Medium parameters used (interpolated): $f = 782 \text{ MHz}$; $\sigma = 1 \text{ S/m}$; $\epsilon_r = 55.452$; $\rho = 1000 \text{ kg/m}^3$
Phantom section: Flat Section

Test Date: Date: 7/21/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(9.23, 9.23, 9.23); Calibrated: 1/27/2016;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

750 MHz B13 LTE/Back 1RB Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.866 W/kg

750 MHz B13 LTE/Back 1RB Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

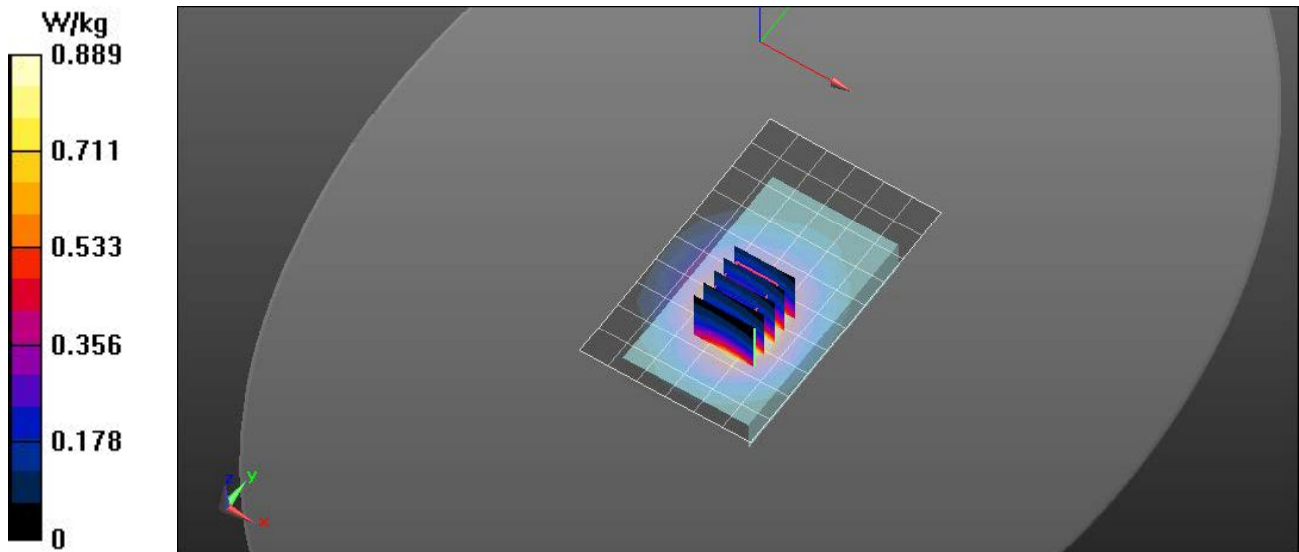
Reference Value = 24.46 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 2.02 W/kg

SAR(1 g) = 0.988 W/kg; SAR(10 g) = 0.427 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.889 W/kg



RF Exposure Lab

Plot 2

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: CDMA2000 (1xEV-DO); Frequency: 836.52 MHz; Duty Cycle: 1:1
 Medium: MSL835; Medium parameters used (interpolated): $f = 836.52$ MHz; $\sigma = 0.99$ S/m; $\epsilon_r = 55.902$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 7/20/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(8.73, 8.73, 8.73); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

835 MHz CDMA/Front Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.44 W/kg

835 MHz CDMA/Front Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

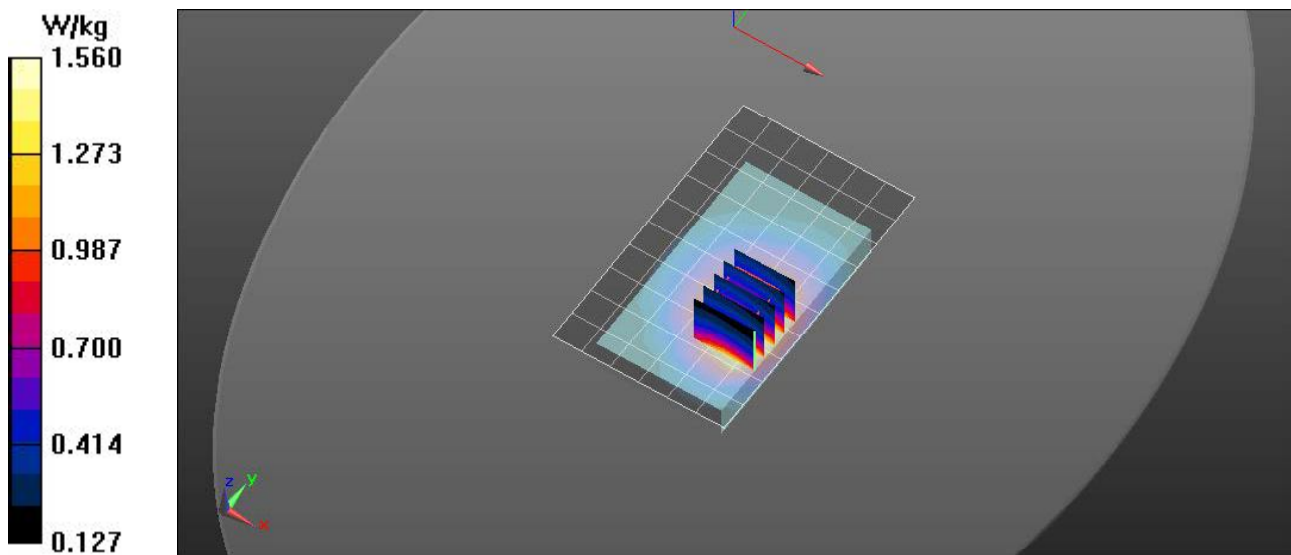
Reference Value = 0.8570 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 1.75 W/kg

SAR(1 g) = 1.31 W/kg; SAR(10 g) = 0.941 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.56 W/kg



RF Exposure Lab

Plot 3

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: UMTS (WCDMA); Frequency: 846.6 MHz; Duty Cycle: 1:1
 Medium: MSL835; Medium parameters used (interpolated): $f = 846.6$ MHz; $\sigma = 0.992$ S/m; $\epsilon_r = 55.857$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 7/20/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(8.73, 8.73, 8.73); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

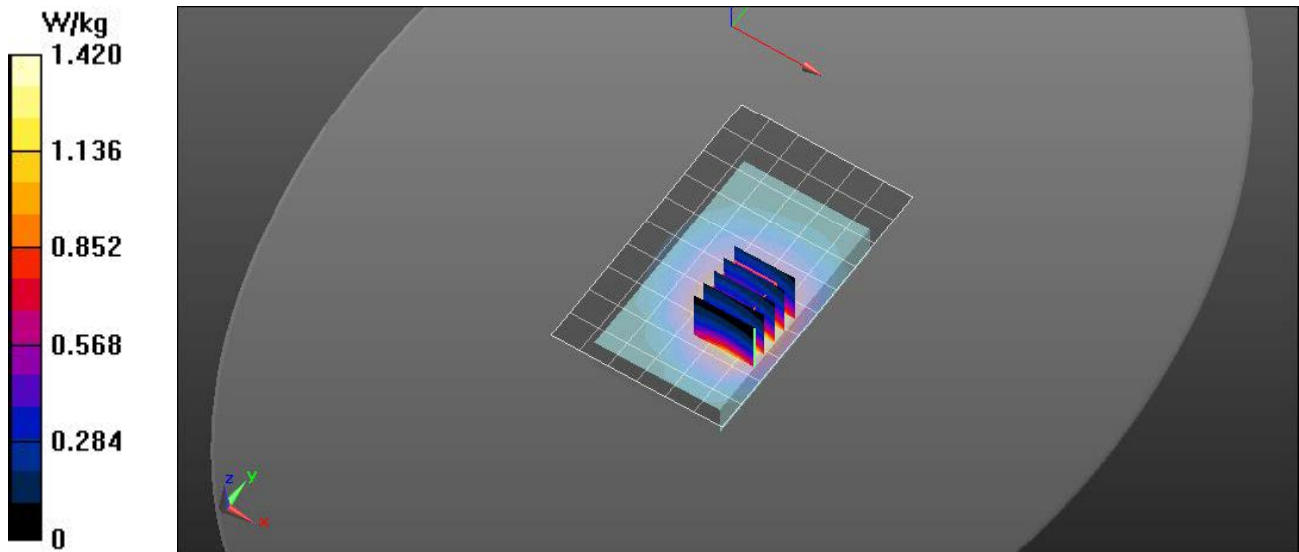
835 MHz WCDMA/Back High/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)
 Maximum value of SAR (measured) = 1.31 W/kg

835 MHz WCDMA/Back High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

Reference Value = 26.00 V/m; Power Drift = -0.02 dB
 Peak SAR (extrapolated) = 2.89 W/kg
SAR(1 g) = 1.28 W/kg; SAR(10 g) = 0.739 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)
 Maximum value of SAR (measured) = 1.42 W/kg



RF Exposure Lab

Plot 4

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: GPRS 2-Slot (GMSK); Frequency: 824.2 MHz; Duty Cycle: 1:4.00037
Medium: MSL835; Medium parameters used: $f = 824.2$ MHz; $\sigma = 0.994$ S/m; $\epsilon_r = 55.852$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

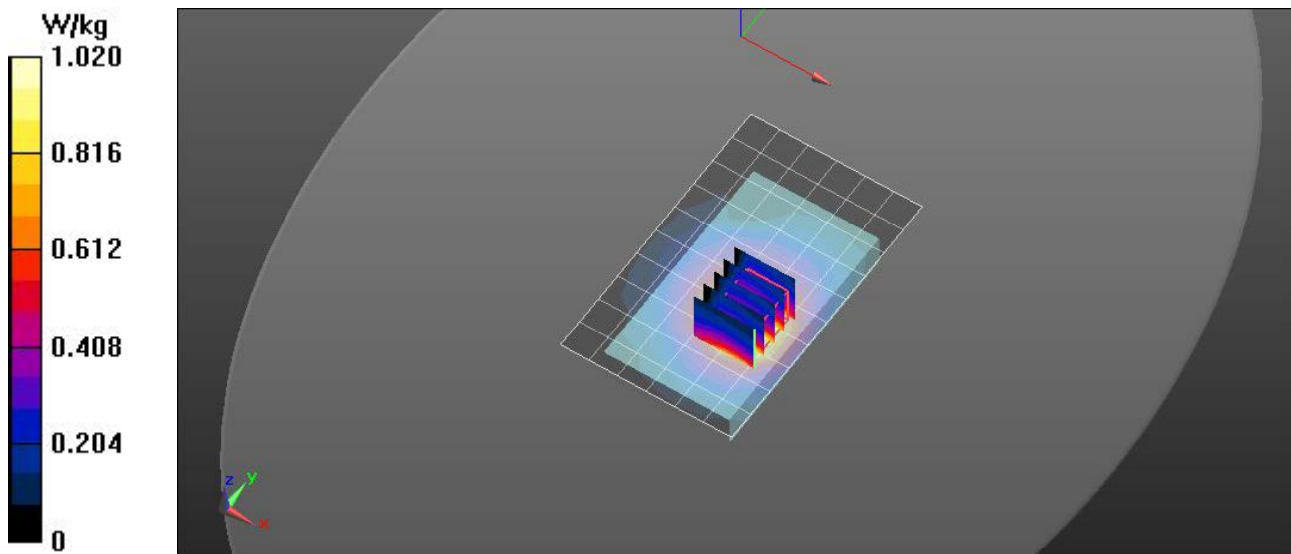
Test Date: Date: 7/20/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(8.73, 8.73, 8.73); Calibrated: 1/27/2016;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

835 MHz GPRS/Front Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.987 W/kg

835 MHz GPRS/Front Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 24.74 V/m; Power Drift = -0.02 dB
Peak SAR (extrapolated) = 2.06 W/kg
SAR(1 g) = 1.12 W/kg; SAR(10 g) = 0.653 W/kg
Maximum value of SAR (measured) = 1.02 W/kg



RF Exposure Lab

Plot 5

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: LTE (SC-FDMA, 1 RB, 10 MHz, QPSK); Frequency: 836.6 MHz; Duty Cycle: 1:1
 Medium: MSL835; Medium parameters used (interpolated): $f = 836.6$ MHz; $\sigma = 0.99$ S/m; $\epsilon_r = 55.902$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 7/19/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(8.73, 8.73, 8.73); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

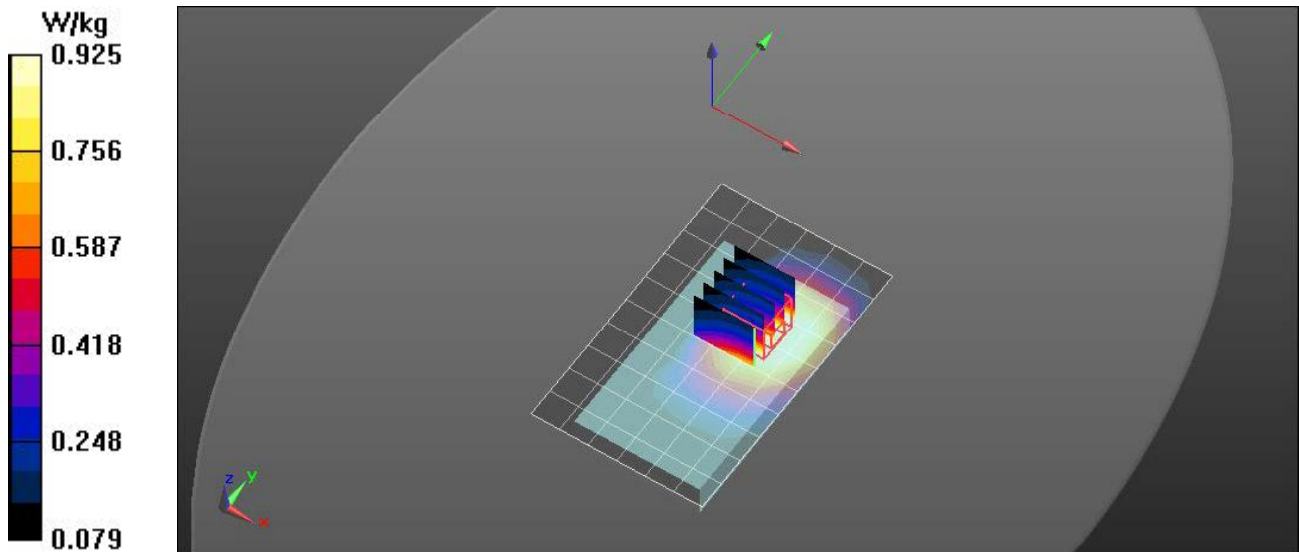
Procedure Notes:

835 MHz B5 LTE/Back 1RB Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)
 Maximum value of SAR (measured) = 1.03 W/kg

835 MHz B5 LTE/Back 1RB Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 23.63 V/m; Power Drift = -0.01 dB
 Peak SAR (extrapolated) = 2.34 W/kg
SAR(1 g) = 0.982 W/kg; SAR(10 g) = 0.329 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)
 Maximum value of SAR (measured) = 0.925 W/kg



RF Exposure Lab

Plot 6

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: LTE (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 1745 MHz; Duty Cycle: 1:1
 Medium: MSL1750; Medium parameters used (interpolated): $f = 1745$ MHz; $\sigma = 1.515$ S/m; $\epsilon_r = 53.34$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 7/21/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(7.32, 7.32, 7.32); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

1750 MHz B66 LTE/Front 1RB Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.912 W/kg

1750 MHz B66 LTE/Front 1RB Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

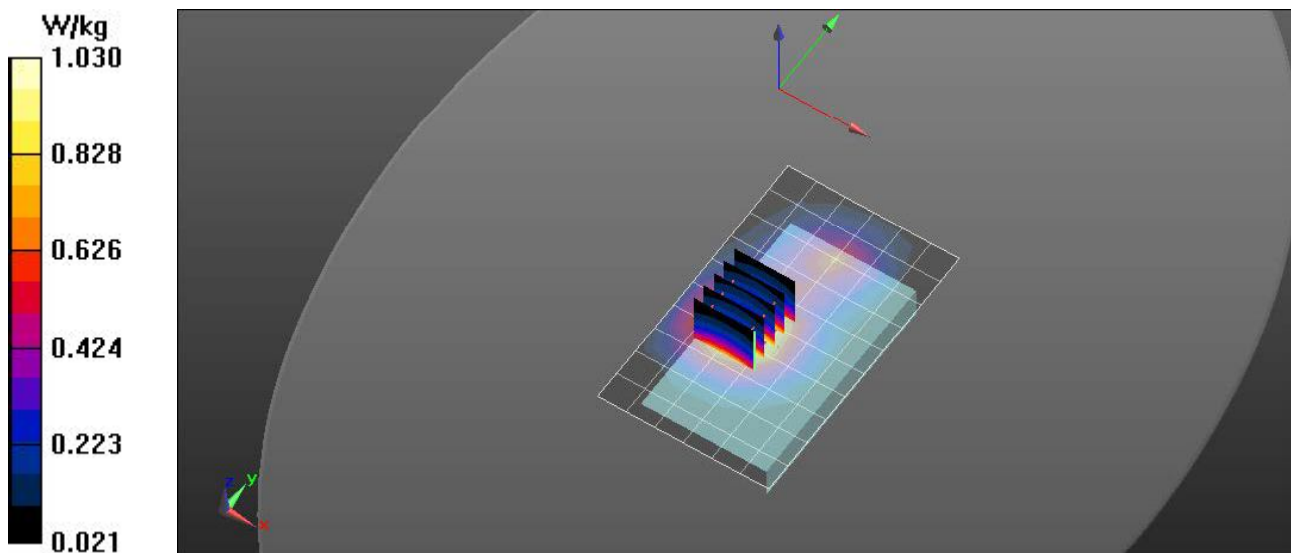
Reference Value = 17.46 V/m; Power Drift = -0.00 dB

Peak SAR (extrapolated) = 1.22 W/kg

SAR(1 g) = 0.798 W/kg; SAR(10 g) = 0.462 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.03 W/kg



RF Exposure Lab

Plot 7

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: CDMA2000 (1xEV-DO); Frequency: 1880 MHz; Duty Cycle: 1:1
Medium: MSL1900; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ S/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

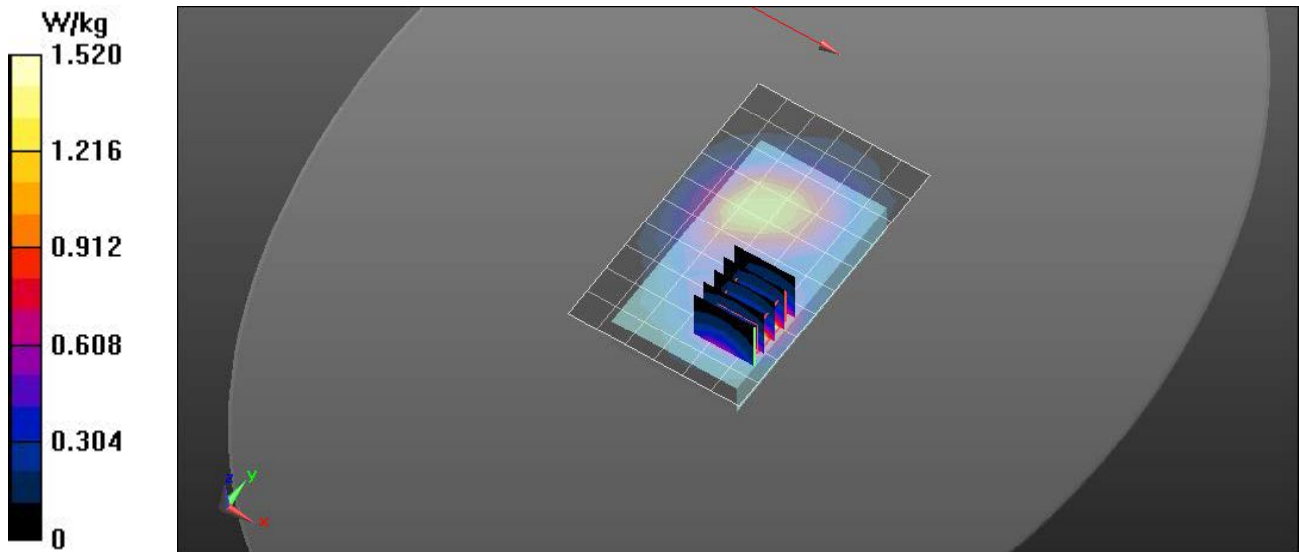
Test Date: Date: 7/18/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(7.13, 7.13, 7.13); Calibrated: 1/27/2016;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

1900 MHz CDMA/Front Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 1.24 W/kg

1900 MHz CDMA/Front Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 19.53 V/m; Power Drift = -0.03 dB
Peak SAR (extrapolated) = 2.42 W/kg
SAR(1 g) = 1.29 W/kg; SAR(10 g) = 0.691 W/kg
Maximum value of SAR (measured) = 1.52 W/kg



RF Exposure Lab

Plot 8

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: UMTS (WCDMA); Frequency: 1907.6 MHz; Duty Cycle: 1:1
 Medium: MSL1900; Medium parameters used (interpolated): $f = 1907.6 \text{ MHz}$; $\sigma = 1.493 \text{ S/m}$; $\epsilon_r = 52.108$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

Test Date: Date: 7/18/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(7.13, 7.13, 7.13); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

1900 MHz WCDMA/Front High/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.63 W/kg

1900 MHz WCDMA/Front High/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

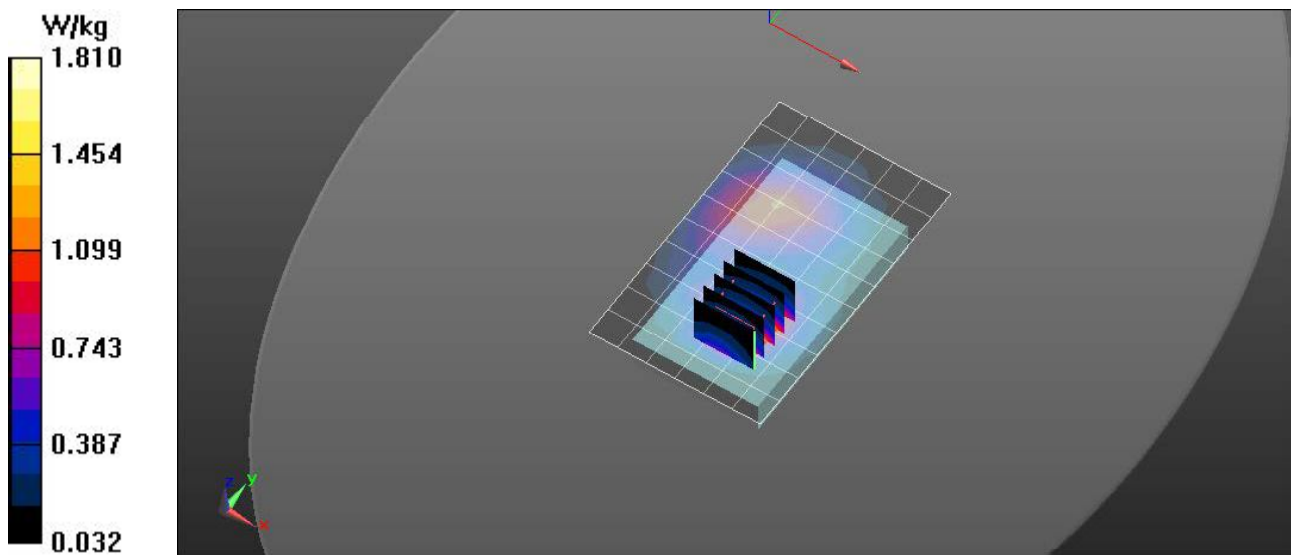
Reference Value = 14.01 V/m; Power Drift = 0.03 dB

Peak SAR (extrapolated) = 2.24 W/kg

SAR(1 g) = 1.35 W/kg; SAR(10 g) = 0.770 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 1.81 W/kg



RF Exposure Lab

Plot 9

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: GPRS 2-Slot (GMSK); Frequency: 1880 MHz; Duty Cycle: 1:4.00037
Medium: MSL1900; Medium parameters used: $f = 1880$ MHz; $\sigma = 1.45$ S/m; $\epsilon_r = 52.1$; $\rho = 1000$ kg/m³
Phantom section: Flat Section

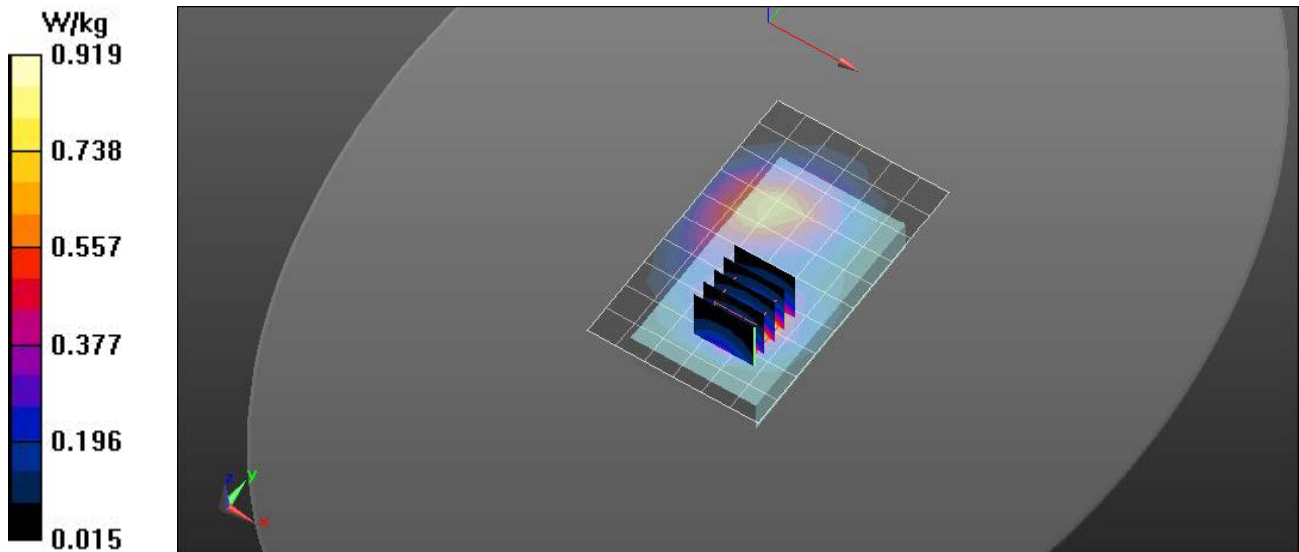
Test Date: Date: 7/18/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(7.13, 7.13, 7.13); Calibrated: 1/27/2016;
Sensor-Surface: 2mm (Mechanical Surface Detection)
Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

1900 MHz GPRS/Front Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
Maximum value of SAR (measured) = 0.928 W/kg

1900 MHz GPRS/Front Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
Reference Value = 10.78 V/m; Power Drift = -0.01 dB
Peak SAR (extrapolated) = 1.16 W/kg
SAR(1 g) = 0.560 W/kg; SAR(10 g) = 0.320 W/kg
Maximum value of SAR (measured) = 0.919 W/kg



RF Exposure Lab

Plot 10

DUT: MIFI7730L; Type: MIFI; Serial: Test

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; $\sigma = 1.44$ S/m; $\epsilon_r = 52.03$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

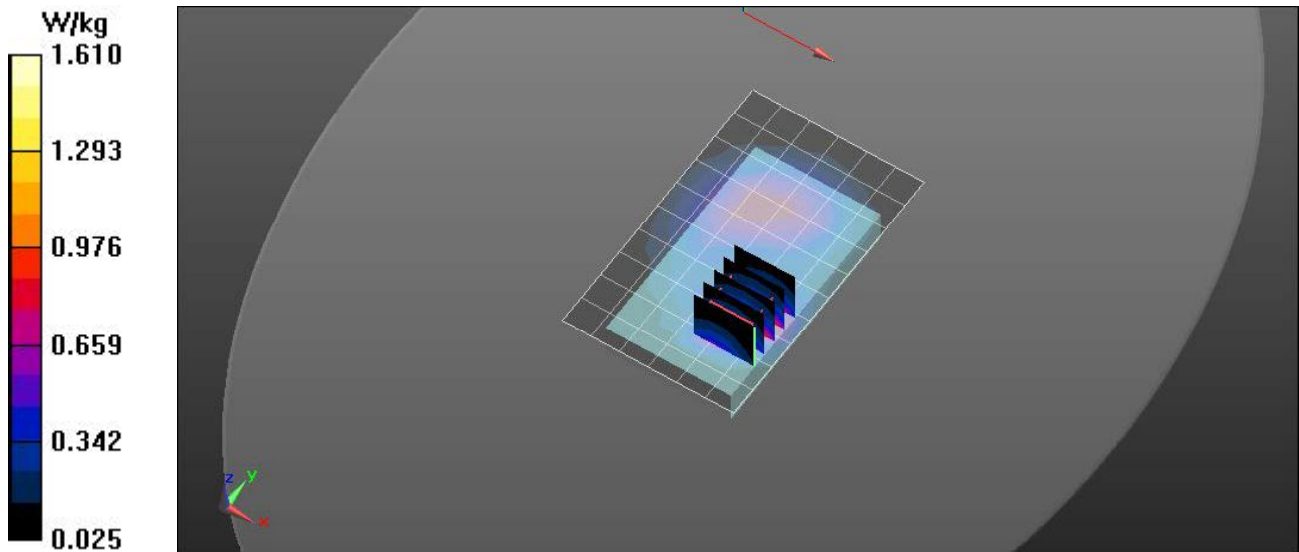
Test Date: Date: 7/19/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(7.13, 7.13, 7.13); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

1900 MHz B2 LTE/Front 1RB Low/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm
 Maximum value of SAR (measured) = 1.26 W/kg

1900 MHz B2 LTE/Front 1RB Low/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm
 Reference Value = 14.29 V/m; Power Drift = -0.04 dB
 Peak SAR (extrapolated) = 1.99 W/kg
SAR(1 g) = 1.18 W/kg; SAR(10 g) = 0.643 W/kg
 Maximum value of SAR (measured) = 1.61 W/kg



RF Exposure Lab

Plot 11

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: LTE (SC-FDMA, 1 RB, 20 MHz, QPSK); Frequency: 2535 MHz; Duty Cycle: 1:1
 Medium: MSL2550; Medium parameters used (interpolated): $f = 2535 \text{ MHz}$; $\sigma = 2.1 \text{ S/m}$; $\epsilon_r = 52.495$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

Test Date: Date: 7/21/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3693; ConvF(6.67, 6.67, 6.67); Calibrated: 8/20/2015;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

2600 MHz B7 LTE/Front 1RB Mid/Area Scan (7x11x1): Measurement grid: dx=15mm, dy=15mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 2.09 W/kg

2600 MHz B7 LTE/Front 1RB Mid/Zoom Scan (5x5x7)/Cube 0: Measurement grid: dx=8mm, dy=8mm, dz=5mm

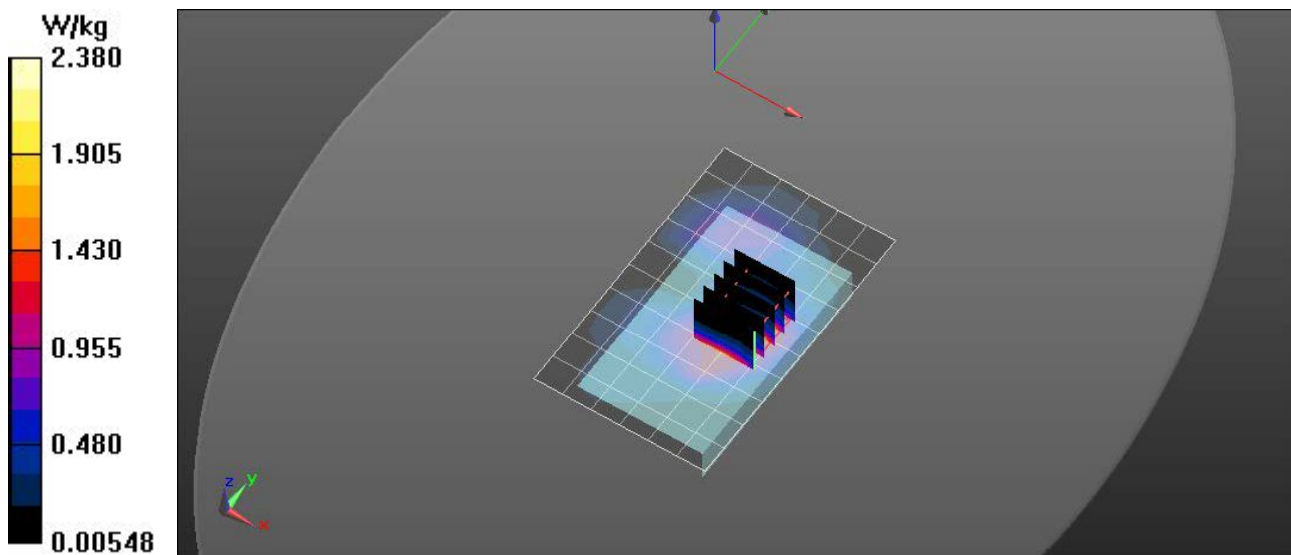
Reference Value = 18.33 V/m; Power Drift = -0.02 dB

Peak SAR (extrapolated) = 3.25 W/kg

SAR(1 g) = 1.30 W/kg; SAR(10 g) = 0.596 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 2.38 W/kg



RF Exposure Lab

Plot 12

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: WiFi 802.11b (DSSS, 1 Mbps); Frequency: 2437 MHz; Duty Cycle: 1:1
 Medium: MSL2450; Medium parameters used (interpolated): $f = 2437$ MHz; $\sigma = 1.957$ S/m; $\epsilon_r = 52.706$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 7/27/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(6.87, 6.87, 6.87); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

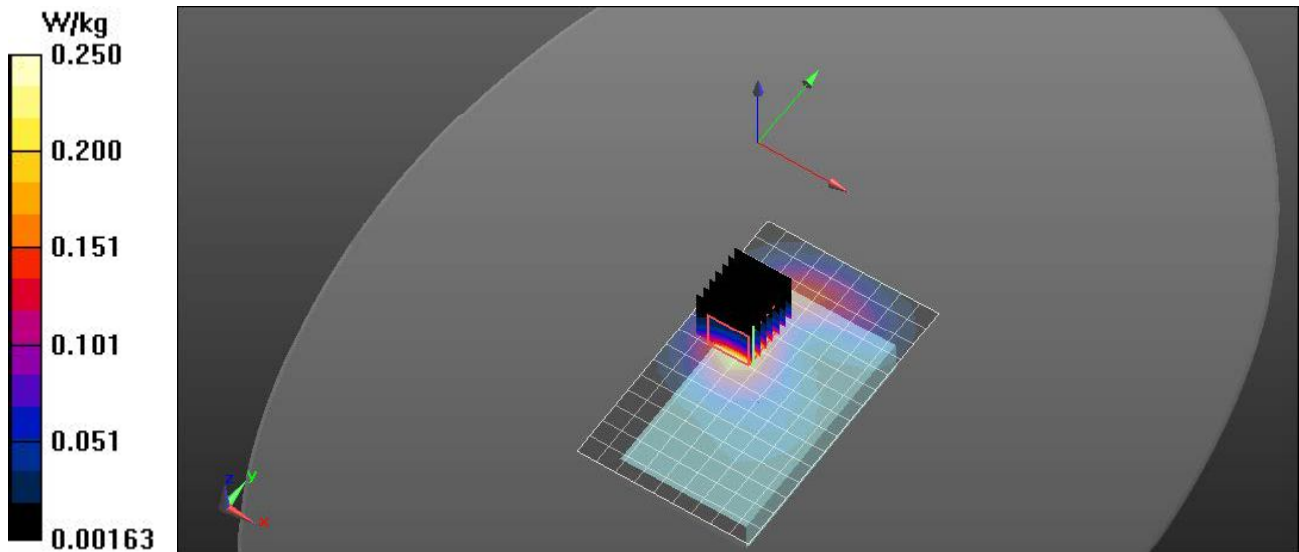
Procedure Notes:

2450 MHz WiFi/Front Tx2 High/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)
 Maximum value of SAR (measured) = 0.243 W/kg

2450 MHz WiFi/Front Tx2 High/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=5mm, dy=5mm, dz=5mm
 Reference Value = 6.695 V/m; Power Drift = 0.01 dB
 Peak SAR (extrapolated) = 0.330 W/kg
SAR(1 g) = 0.174 W/kg; SAR(10 g) = 0.094 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)
 Maximum value of SAR (measured) = 0.250 W/kg



RF Exposure Lab

Plot 13

DUT: MIFI7730L; Type: MIFI; Serial: Test

Communication System: WiFi 802.11a (OFDM, 6 Mbps); Frequency: 5220 MHz; Duty Cycle: 1:1
 Medium: MSL 3-6 GHz; Medium parameters used: $f = 5220 \text{ MHz}$; $\sigma = 5.31 \text{ S/m}$; $\epsilon_r = 49.03$; $\rho = 1000 \text{ kg/m}^3$
 Phantom section: Flat Section

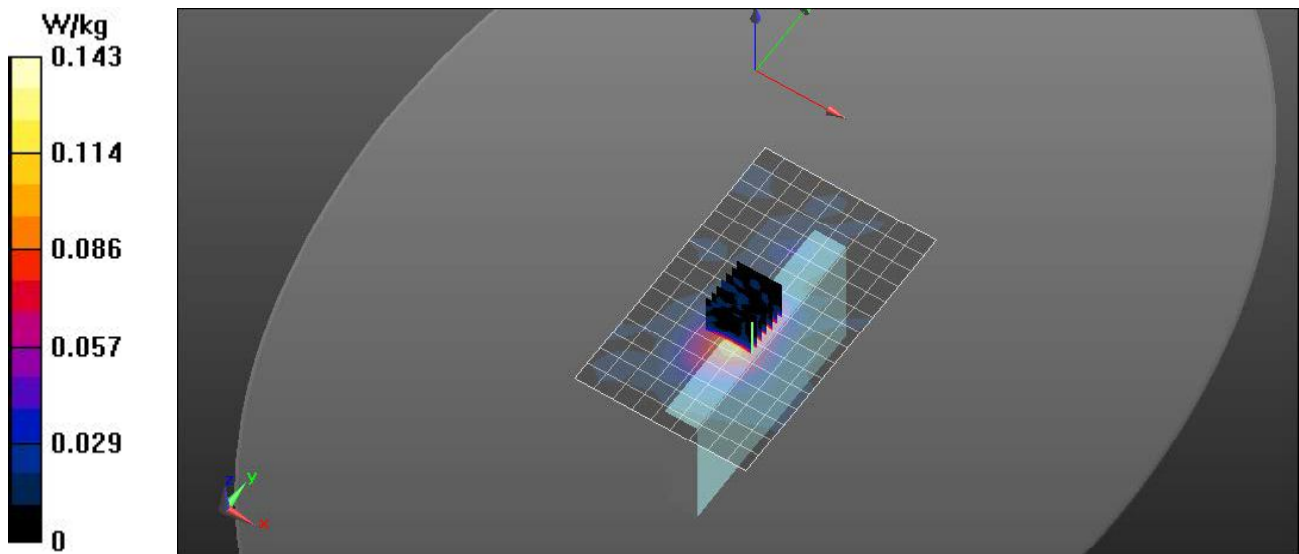
Test Date: Date: 7/29/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(4.03, 4.03, 4.03); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

5200 MHz WiFi/Left Tx1 44/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm
 Maximum value of SAR (measured) = 0.120 W/kg

5200 MHz WiFi/Left Tx1 44/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm
 Reference Value = 3.650 V/m; Power Drift = 0.02 dB
 Peak SAR (extrapolated) = 0.510 W/kg
SAR(1 g) = 0.067 W/kg
 Maximum value of SAR (measured) = 0.143 W/kg



RF Exposure Lab

Plot 14

DUT: MIFI7730L; Type: MIFI; Serial: Test

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; $\sigma = 5.978$ S/m; $\epsilon_r = 48.213$; $\rho = 1000$ kg/m³
 Phantom section: Flat Section

Test Date: Date: 8/1/2016; Ambient Temp: 23 °C; Tissue Temp: 21 °C

Probe: EX3DV4 - SN3833; ConvF(3.49, 3.49, 3.49); Calibrated: 1/27/2016;
 Sensor-Surface: 2mm (Mechanical Surface Detection)
 Electronics: DAE4 Sn1321; Calibrated: 1/14/2016
 Phantom: ELI v5.0; Type: QDOVA001BB; Serial: 1251
 Measurement SW: DASY52, Version 52.8 (8); SEMCAD X Version 14.6.10 (7331)

Procedure Notes:

5800 MHz WiFi/Back Tx1 157/Area Scan (10x16x1): Measurement grid: dx=10mm, dy=10mm

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.402 W/kg

5800 MHz WiFi/Back Tx1 157/Zoom Scan (7x7x7)/Cube 0: Measurement grid: dx=4mm, dy=4mm, dz=4mm

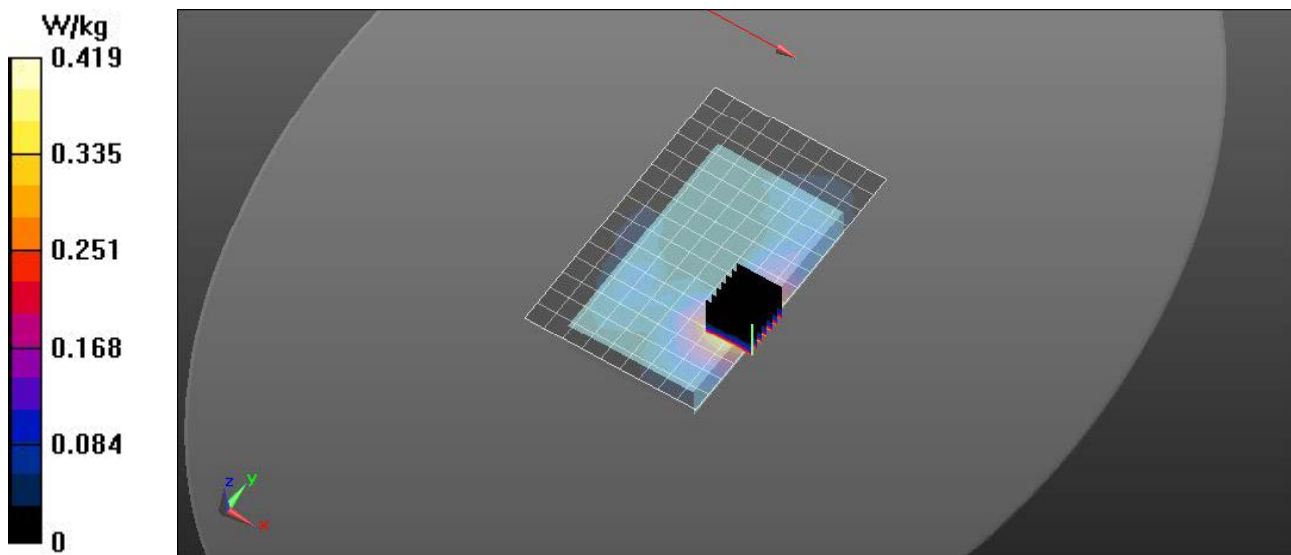
Reference Value = 2.053 V/m; Power Drift = 0.02 dB

Peak SAR (extrapolated) = 0.820 W/kg

SAR(1 g) = 0.226 W/kg

[Info: Interpolated medium parameters used for SAR evaluation.](#)

Maximum value of SAR (measured) = 0.419 W/kg



Appendix C – SAR Test Setup Photos



Test Position Side A 10 mm Gap



Test Position Side B 10 mm Gap



Test Position Side C 10 mm Gap



Test Position Side D 10 mm Gap



Test Position Side E 10 mm Gap



Test and Antenna Locations



Front of Device



Back of Device

Appendix D – Probe Calibration Data Sheets

gm

**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
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Multilateral Agreement for the recognition of calibration certificates

Accreditation No.: **SCS 0108**

Client **RF Exposure Lab**

Certificate No: **EX3-3693_Aug15**

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 20, 2015**

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 E4419B	GB41293874	01-Apr-15 (No. 217-02128)	Mar-16
Power sensor E4412A	MY41498087	01-Apr-15 (No. 217-02128)	Mar-16
Reference 3 dB Attenuator	SN: S5054 (3c)	01-Apr-15 (No. 217-02129)	Mar-16
Reference 20 dB Attenuator	SN: S5277 (20x)	01-Apr-15 (No. 217-02132)	Mar-16
Reference 30 dB Attenuator	SN: S5129 (30b)	01-Apr-15 (No. 217-02133)	Mar-16
Reference Probe ES3DV2	SN: 3013	30-Dec-14 (No. ES3-3013_Dec14)	Dec-15
DAE4	SN: 660	14-Jan-15 (No. DAE4-660_Jan15)	Jan-16
Secondary Standards	ID	Check Date (in house)	Scheduled Check
RF generator HP 8648C	US3642U01700	4-Aug-99 (in house check Apr-13)	In house check: Apr-16
Network Analyzer HP 8753E	US37390585	18-Oct-01 (in house check Oct-14)	In house check: Oct-15

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

Issued: August 24, 2015

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