



<n78 HUPE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				650000			26.5
Frequency (MHz)				3750			
100	PI/2 BPSK	1	1	24.65			
100	PI/2 BPSK	1	137	25.41			
100	PI/2 BPSK	1	271	25.23			
100	PI/2 BPSK	135	0	25.31			26.0
100	PI/2 BPSK	135	69	25.39			26.5
100	PI/2 BPSK	135	138	25.37			26.0
100	PI/2 BPSK	270	0	25.34			
100	QPSK	1	1	24.57			26.5
100	QPSK	1	137	25.33			
100	QPSK	1	271	25.09			26.5
100	QPSK	135	0	25.25			
100	QPSK	135	69	25.39			
100	QPSK	135	138	25.33			
100	QPSK	270	0	25.40			25.5
100	16QAM	1	1	24.44			25.5
100	64QAM	1	1	23.69			24.0
100	256QAM	1	1	21.84			22.0
Channel				649334	650000	650666	26.5
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	24.66	24.69	24.59	
Channel				648668	650000	651332	26.5
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	24.55	24.57	24.62	
Channel				648334	650000	651666	26.5
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	24.53	24.68	24.67	
Channel				648000	650000	652000	26.5
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	24.63	24.69	24.65	
Channel				647334	650000	652666	26.5
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	24.53	24.59	24.61	
Channel				647168	650000	652832	26.5
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	24.66	24.71	24.67	
Channel				647000	650000	653000	26.5
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	24.57	24.70	24.60	



**Default Power Mode (MIMO1)**

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	8.43	8.41	8.42	9.5
80	PI/2 BPSK	1	108	8.73	8.89	8.79	
80	PI/2 BPSK	1	215	8.43	8.60	8.42	
80	PI/2 BPSK	108	0	8.68	8.68	8.68	9.5
80	PI/2 BPSK	108	55	8.72	8.73	8.70	9.5
80	PI/2 BPSK	108	109	8.56	8.68	8.59	9.5
80	PI/2 BPSK	216	0	8.76	8.78	8.51	
80	QPSK	1	1	8.17	8.46	8.24	9.5
80	QPSK	1	108	8.76	8.73	8.69	
80	QPSK	1	215	8.31	8.55	8.32	
80	QPSK	108	0	8.41	8.58	8.47	9.5
80	QPSK	108	55	8.47	8.57	8.57	
80	QPSK	108	109	8.63	8.45	8.33	
80	QPSK	216	0	8.65	8.46	8.46	9.5
80	16QAM	1	1	8.24	8.25	8.35	9.5
80	64QAM	1	1	8.36	8.38	8.25	9.5
80	256QAM	1	1	8.31	8.19	8.27	9.5
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	8.33	8.38	8.30	9.5
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	8.32	8.50	8.39	9.5
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	8.23	8.29	8.45	9.5
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	8.34	8.53	8.52	9.5



<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	12.5
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	11.49	11.78	11.58	12.5
100	PI/2 BPSK	1	137	11.90	12.45	12.21	
100	PI/2 BPSK	1	271	11.87	12.39	12.03	
100	PI/2 BPSK	135	0	11.64	12.26	12.23	12.5
100	PI/2 BPSK	135	69	11.93	12.37	12.18	12.5
100	PI/2 BPSK	135	138	11.64	12.29	12.11	12.5
100	PI/2 BPSK	270	0	11.84	12.30	12.01	
100	QPSK	1	1	11.30	11.55	11.73	12.5
100	QPSK	1	137	12.01	12.43	12.08	
100	QPSK	1	271	11.50	12.25	12.07	
100	QPSK	135	0	11.49	11.87	12.00	12.5
100	QPSK	135	69	11.86	12.10	12.20	
100	QPSK	135	138	11.48	12.29	12.01	
100	QPSK	270	0	11.92	12.22	12.13	12.5
100	16QAM	1	1	11.33	11.65	11.65	12.5
100	64QAM	1	1	11.05	11.72	11.69	12.5
100	256QAM	1	1	11.27	11.72	11.73	12.5
Channel				649334	656000	662666	12.5
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	11.16	11.76	11.75	12.5
Channel				648668	656000	663332	12.5
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	11.38	11.66	11.94	12.5
Channel				648334	656000	663666	12.5
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	11.14	12.00	11.60	12.5
Channel				648000	656000	664000	12.5
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	11.11	11.81	11.92	12.5
Channel				647334	656000	664666	12.5
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	11.31	11.99	11.82	12.5
Channel				647168	656000	664832	12.5
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	11.28	11.80	11.83	12.5
Channel				647000	656000	665000	12.5
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	11.26	11.93	11.83	12.5



<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				633332			12.5
Frequency (MHz)				3499.98			
100	PI/2 BPSK	1	1	11.17			
100	PI/2 BPSK	1	137	11.73			
100	PI/2 BPSK	1	271	11.20			
100	PI/2 BPSK	135	0	11.57			12.5
100	PI/2 BPSK	135	69	11.71			12.5
100	PI/2 BPSK	135	138	11.37			12.5
100	PI/2 BPSK	270	0	11.56			
100	QPSK	1	1	11.24			12.5
100	QPSK	1	137	11.35			
100	QPSK	1	271	11.37			
100	QPSK	135	0	11.30			12.5
100	QPSK	135	69	11.69			
100	QPSK	135	138	11.17			
100	QPSK	270	0	11.27			12.5
100	16QAM	1	1	11.32			12.5
100	64QAM	1	1	11.36			12.5
100	256QAM	1	1	11.25			12.5
Channel				632668	633332	634000	12.5
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	11.34	11.35	11.06	12.5
Channel				632000	633332	634666	12.5
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	11.37	11.44	11.41	12.5
Channel				631668	633332	635000	12.5
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	11.17	11.12	11.22	12.5
Channel				631334	633332	635332	12.5
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	11.15	11.36	11.56	12.5
Channel				630668	633332	636000	12.5
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	11.16	11.16	11.14	12.5
Channel				630500	633332	636166	12.5
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	11.23	11.20	11.36	12.5
Channel				630334	633332	636332	12.5
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	11.32	11.32	11.13	12.5



<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				650000			12.5
Frequency (MHz)				3750			
100	PI/2 BPSK	1	1	11.52			
100	PI/2 BPSK	1	137	12.19			
100	PI/2 BPSK	1	271	11.86			
100	PI/2 BPSK	135	0	11.80			12.5
100	PI/2 BPSK	135	69	12.08			12.5
100	PI/2 BPSK	135	138	12.03			12.5
100	PI/2 BPSK	270	0	12.10			
100	QPSK	1	1	11.08			12.5
100	QPSK	1	137	12.09			
100	QPSK	1	271	12.05			
100	QPSK	135	0	11.84			12.5
100	QPSK	135	69	12.12			
100	QPSK	135	138	11.82			
100	QPSK	270	0	11.91			12.5
100	16QAM	1	1	11.16			12.5
100	64QAM	1	1	10.95			12.5
100	256QAM	1	1	11.11			12.5
Channel				649334	650000	650666	12.5
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	11.26	11.26	11.42	12.5
Channel				648668	650000	651332	12.5
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	11.18	11.33	11.51	12.5
Channel				648334	650000	651666	12.5
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	11.30	11.45	11.34	12.5
Channel				648000	650000	652000	12.5
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	11.38	11.21	11.14	12.5
Channel				647334	650000	652666	12.5
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	11.24	11.52	11.23	12.5
Channel				647168	650000	652832	12.5
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	11.32	11.46	11.51	12.5
Channel				647000	650000	653000	12.5
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	11.31	11.45	11.12	12.5



**Default Power Mode (MIMO2)**

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	22.98	22.82	22.99	24.0
20	PI/2 BPSK	1	53	23.10	22.91	23.07	
20	PI/2 BPSK	1	104	23.07	22.84	23.01	
20	PI/2 BPSK	50	0	22.15	22.00	22.20	23.5
20	PI/2 BPSK	50	28	23.04	22.95	23.02	24.0
20	PI/2 BPSK	50	56	22.59	22.40	22.56	23.5
20	PI/2 BPSK	100	0	22.62	22.36	22.54	
20	QPSK	1	1	22.76	22.59	22.68	24.0
20	QPSK	1	53	22.98	22.83	23.03	
20	QPSK	1	104	23.04	22.81	22.97	
20	QPSK	50	0	21.71	21.47	21.61	23.0
20	QPSK	50	28	23.08	22.86	23.05	24.0
20	QPSK	50	56	22.06	21.93	22.13	23.0
20	QPSK	100	0	21.96	21.79	22.04	
20	16QAM	1	1	21.83	21.60	21.75	23.0
20	64QAM	1	1	20.09	19.86	20.13	21.5
20	256QAM	1	1	18.42	18.26	18.48	19.5
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	22.93	22.78	22.92	24.0
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	22.97	22.76	22.89	24.0
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	22.89	22.79	22.95	24.0



<n7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				502000	507000	512000	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	22.68	22.72	22.69	
20	PI/2 BPSK	1	53	22.83	22.88	22.86	24.0
20	PI/2 BPSK	1	104	22.67	22.74	22.67	
20	PI/2 BPSK	50	0	22.36	22.43	22.44	
20	PI/2 BPSK	50	28	22.80	22.81	22.76	24.0
20	PI/2 BPSK	50	56	22.25	22.35	22.38	23.5
20	PI/2 BPSK	100	0	22.28	22.33	22.30	
20	QPSK	1	1	22.59	22.66	22.67	24.0
20	QPSK	1	53	22.77	22.77	22.80	
20	QPSK	1	104	22.74	22.76	22.77	
20	QPSK	50	0	21.95	21.98	21.99	23.0
20	QPSK	50	28	22.73	22.76	22.77	24.0
20	QPSK	50	56	21.86	21.90	21.93	23.0
20	QPSK	100	0	21.78	21.87	21.81	
20	16QAM	1	1	21.61	21.65	21.66	23.0
20	64QAM	1	1	19.83	19.92	19.88	21.5
20	256QAM	1	1	18.36	18.39	18.39	19.5
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	22.58	22.69	22.61	24.0
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	22.59	22.65	22.64	24.0
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	22.55	22.70	22.64	24.0



<n25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	23.17	23.16	23.11	
20	PI/2 BPSK	1	53	23.49	23.43	23.41	24.0
20	PI/2 BPSK	1	104	23.40	23.36	23.35	
20	PI/2 BPSK	50	0	22.67	22.69	22.68	
20	PI/2 BPSK	50	28	23.45	23.43	23.44	24.0
20	PI/2 BPSK	50	56	22.96	22.91	22.84	23.5
20	PI/2 BPSK	100	0	22.96	22.85	22.88	
20	QPSK	1	1	23.14	23.08	23.05	24.0
20	QPSK	1	53	23.39	23.36	23.32	
20	QPSK	1	104	23.31	23.32	23.33	
20	QPSK	50	0	22.25	22.18	22.21	23.0
20	QPSK	50	28	23.43	23.41	23.38	24.0
20	QPSK	50	56	22.45	22.40	22.40	23.0
20	QPSK	100	0	22.34	22.34	22.37	
20	16QAM	1	1	22.13	22.07	22.06	23.0
20	64QAM	1	1	20.38	20.31	20.32	21.5
20	256QAM	1	1	18.72	18.66	18.60	19.5
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	23.13	23.09	23.09	24.0
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	23.11	23.13	23.08	24.0
Channel				370500	376500	382500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	23.15	23.12	23.09	24.0





<n30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				462000			23.0
Frequency (MHz)				2310			
10	PI/2 BPSK	1	1	21.59			23.0
10	PI/2 BPSK	1	26	21.79			
10	PI/2 BPSK	1	50	21.69			
10	PI/2 BPSK	25	0	20.68			22.5
10	PI/2 BPSK	25	14	21.46			23.0
10	PI/2 BPSK	25	27	20.85			22.5
10	PI/2 BPSK	50	0	20.84			
10	QPSK	1	1	21.23			23.0
10	QPSK	1	26	21.58			
10	QPSK	1	50	21.66			
10	QPSK	25	0	20.19			22.0
10	QPSK	25	14	21.44			23.0
10	QPSK	25	27	20.36			22.0
10	QPSK	50	0	20.24			
10	16QAM	1	1	20.21			22.0
10	64QAM	1	1	18.57			20.5
10	256QAM	1	1	17.01			18.5
Channel				461500	462000	462500	Tune-up limit (dBm)
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	21.41	21.43	21.39	23.0

<n38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				516000	519000	522000	24.0
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	23.12	23.39	22.86	24.0
20	PI/2 BPSK	1	26	23.12	23.56	22.87	
20	PI/2 BPSK	1	49	22.98	23.38	22.81	
20	PI/2 BPSK	25	0	22.50	22.85	22.33	23.5
20	PI/2 BPSK	25	13	23.04	23.38	22.87	24.0
20	PI/2 BPSK	25	26	22.52	22.94	22.26	23.5
20	PI/2 BPSK	50	0	22.52	22.89	22.39	
20	QPSK	1	1	23.04	23.36	22.90	24.0
20	QPSK	1	26	23.12	23.46	22.90	
20	QPSK	1	49	23.06	23.30	22.80	
20	QPSK	25	0	22.07	22.42	22.89	24.0
20	QPSK	25	13	23.06	23.47	22.92	
20	QPSK	25	26	22.05	22.41	22.90	
20	QPSK	50	0	22.06	22.41	21.84	23.0
20	16QAM	1	1	21.99	22.34	21.81	23.0
20	64QAM	1	1	19.98	20.38	19.86	21.5
20	256QAM	1	1	18.48	18.77	18.33	19.5
Channel				515502	519000	522498	Tune-up limit (dBm)
Frequency (MHz)				2577.51	2595	2612.49	
15	PI/2 BPSK	1	1	23.02	23.34	22.84	24.0
Channel				515004	519000	522996	Tune-up limit (dBm)
Frequency (MHz)				2575.02	2595	2614.98	
10	PI/2 BPSK	1	1	23.05	23.35	22.86	24.0



<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	22.63	22.58	22.39	
80	PI/2 BPSK	1	108	23.35	23.27	23.10	24.0
80	PI/2 BPSK	1	215	22.54	22.50	22.23	
80	PI/2 BPSK	108	0	23.19	23.22	22.98	23.5
80	PI/2 BPSK	108	55	23.26	23.25	23.01	24.0
80	PI/2 BPSK	108	109	23.19	23.14	22.89	23.5
80	PI/2 BPSK	216	0	23.23	23.22	22.97	
80	QPSK	1	1	22.57	22.57	22.35	24.0
80	QPSK	1	108	23.02	23.01	22.79	
80	QPSK	1	215	22.44	22.41	22.19	
80	QPSK	108	0	23.18	23.14	22.87	24.0
80	QPSK	108	55	23.15	23.15	22.93	
80	QPSK	108	109	23.18	23.16	22.91	
80	QPSK	216	0	22.98	22.98	22.72	23.0
80	16QAM	1	1	22.59	22.52	22.27	23.0
80	64QAM	1	1	21.45	21.47	21.21	21.5
80	256QAM	1	1	20.31	20.28	20.03	20.5
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	22.36	22.28	22.66	24.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	22.23	22.36	22.56	24.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	22.22	22.40	22.52	24.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	22.28	22.34	22.56	24.0



<n41 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	26.41	26.41	26.26	27.0
80	PI/2 BPSK	1	108	26.85	26.83	26.72	
80	PI/2 BPSK	1	215	26.15	26.20	25.99	
80	PI/2 BPSK	108	0	26.25	26.25	26.11	26.5
80	PI/2 BPSK	108	55	26.80	26.82	26.69	27.0
80	PI/2 BPSK	108	109	26.16	26.16	26.05	26.5
80	PI/2 BPSK	216	0	26.28	26.27	26.15	
80	QPSK	1	1	26.28	26.26	26.08	27.0
80	QPSK	1	108	26.45	26.46	26.29	
80	QPSK	1	215	26.02	26.05	25.85	
80	QPSK	108	0	25.76	25.78	25.59	27.0
80	QPSK	108	55	26.76	26.79	26.65	
80	QPSK	108	109	25.68	25.72	25.51	
80	QPSK	216	0	25.74	25.76	25.56	26.0
80	16QAM	1	1	25.14	25.12	24.95	26.0
80	64QAM	1	1	23.47	23.45	23.28	24.5
80	256QAM	1	1	21.92	21.90	21.70	22.5
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	26.45	26.46	26.33	27.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	26.39	26.48	26.30	27.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	26.41	26.33	26.25	27.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	26.43	26.35	26.31	27.0



<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	Tune-up limit (dBm)
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	22.32	22.39	22.54	
40	PI/2 BPSK	1	108	22.95	23.07	23.14	24.0
40	PI/2 BPSK	1	214	22.34	22.51	22.56	
40	PI/2 BPSK	108	0	22.18	22.45	22.42	
40	PI/2 BPSK	108	54	23.05	23.12	23.13	24.0
40	PI/2 BPSK	108	108	22.24	22.49	22.50	23.5
40	PI/2 BPSK	216	0	22.35	22.42	22.56	
40	QPSK	1	1	22.31	22.49	22.56	
40	QPSK	1	108	22.89	23.02	23.12	24.0
40	QPSK	1	214	22.33	22.55	22.54	
40	QPSK	108	0	21.82	21.92	21.93	
40	QPSK	108	54	22.82	22.98	22.95	24.0
40	QPSK	108	108	21.72	21.94	21.94	23.0
40	QPSK	216	0	21.83	22.02	22.04	
40	16QAM	1	1	21.34	21.49	21.62	
40	64QAM	1	1	19.69	19.71	19.74	21.5
40	256QAM	1	1	18.16	18.24	18.42	19.5
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	22.32	22.38	22.51	
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	22.31	22.38	22.50	
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	22.24	22.33	22.54	
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	22.23	22.30	22.53	



<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	Tune-up limit (dBm)
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	22.40	22.61	22.91	24.0
100	PI/2 BPSK	1	137	23.00	23.27	23.54	
100	PI/2 BPSK	1	271	22.28	22.59	22.87	
100	PI/2 BPSK	135	0	22.89	23.14	23.44	23.5
100	PI/2 BPSK	135	69	23.09	23.33	23.52	24.0
100	PI/2 BPSK	135	138	22.85	23.10	23.32	23.5
100	PI/2 BPSK	270	0	22.96	23.20	23.48	
100	QPSK	1	1	22.37	22.59	22.85	24.0
100	QPSK	1	137	22.89	23.20	23.50	
100	QPSK	1	271	22.23	22.52	22.78	
100	QPSK	135	0	22.85	23.13	23.41	24.0
100	QPSK	135	69	22.97	23.28	23.53	
100	QPSK	135	138	22.79	23.08	23.31	
100	QPSK	270	0	22.88	22.77	22.91	23.0
100	16QAM	1	1	22.24	22.46	22.72	23.0
100	64QAM	1	1	21.48	21.72	21.95	22.5
100	256QAM	1	1	20.33	20.54	20.75	21.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	22.37	22.44	22.90	24.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	22.26	22.47	22.74	24.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	22.26	22.42	22.90	24.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	22.40	22.56	22.76	24.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	22.33	22.56	22.77	24.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	22.38	22.56	22.90	24.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	22.25	22.46	22.78	24.0



<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				633332			24.0
Frequency (MHz)				3499.98			
100	PI/2 BPSK	1	1	22.91			24.0
100	PI/2 BPSK	1	137	23.72			
100	PI/2 BPSK	1	271	23.30			
100	PI/2 BPSK	135	0	23.41			23.5
100	PI/2 BPSK	135	69	23.69			24.0
100	PI/2 BPSK	135	138	23.46			23.5
100	PI/2 BPSK	270	0	23.47			
100	QPSK	1	1	22.90			24.0
100	QPSK	1	137	23.68			
100	QPSK	1	271	23.29			
100	QPSK	135	0	23.60			24.0
100	QPSK	135	69	23.65			
100	QPSK	135	138	23.58			
100	QPSK	270	0	22.90			23.0
100	16QAM	1	1	22.89			23.0
100	64QAM	1	1	21.13			22.5
100	256QAM	1	1	19.94			21.5
Channel				632668	633332	634000	24.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	22.40	22.43	22.47	24.0
Channel				632000	633332	634666	24.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	22.43	22.40	22.33	24.0
Channel				631668	633332	635000	24.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	22.42	22.48	22.42	24.0
Channel				631334	633332	635332	24.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	22.35	22.48	22.42	24.0
Channel				630668	633332	636000	24.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	22.33	22.34	22.39	24.0
Channel				630500	633332	636166	24.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	22.36	22.49	22.39	24.0
Channel				630334	633332	636332	24.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	22.43	22.51	22.34	24.0



<n77 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	27.0
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	25.21	25.19	25.00	27.0
100	PI/2 BPSK	1	137	25.82	25.99	25.89	
100	PI/2 BPSK	1	271	25.23	25.41	25.23	
100	PI/2 BPSK	135	0	25.02	25.28	25.18	26.5
100	PI/2 BPSK	135	69	25.73	25.98	25.87	27.0
100	PI/2 BPSK	135	138	25.03	25.26	25.07	26.5
100	PI/2 BPSK	270	0	25.14	25.40	25.21	
100	QPSK	1	1	25.13	25.12	25.13	27.0
100	QPSK	1	137	25.65	25.88	25.74	
100	QPSK	1	271	25.01	25.28	25.16	
100	QPSK	135	0	25.15	25.18	25.02	27.0
100	QPSK	135	69	25.61	25.83	25.68	
100	QPSK	135	138	25.04	25.21	25.04	
100	QPSK	270	0	24.45	24.72	24.56	26.0
100	16QAM	1	1	24.03	24.00	24.15	26.0
100	64QAM	1	1	22.51	22.70	22.50	24.5
100	256QAM	1	1	20.86	21.08	20.92	22.5
Channel				649334	656000	662666	27.0
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	25.33	25.36	25.27	27.0
Channel				648668	656000	663332	27.0
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	25.24	25.51	25.16	27.0
Channel				648334	656000	663666	27.0
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	25.16	25.46	25.30	27.0
Channel				648000	656000	664000	27.0
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	25.20	25.39	25.20	27.0
Channel				647334	656000	664666	27.0
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	25.21	25.35	25.28	27.0
Channel				647168	656000	664832	27.0
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	25.28	25.47	25.26	27.0
Channel				647000	656000	665000	27.0
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	25.16	25.40	25.18	27.0



<n77 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				633332			27.0
Frequency (MHz)				3499.98			
100	PI/2 BPSK	1	1	25.10			27.0
100	PI/2 BPSK	1	137	25.39			
100	PI/2 BPSK	1	271	25.29			
100	PI/2 BPSK	135	0	24.64			26.5
100	PI/2 BPSK	135	69	25.35			27.0
100	PI/2 BPSK	135	138	24.70			26.5
100	PI/2 BPSK	270	0	24.71			
100	QPSK	1	1	25.07			27.0
100	QPSK	1	137	25.23			
100	QPSK	1	271	25.25			
100	QPSK	135	0	25.12			27.0
100	QPSK	135	69	25.28			
100	QPSK	135	138	25.19			
100	QPSK	270	0	24.67			26.0
100	16QAM	1	1	24.39			26.0
100	64QAM	1	1	22.65			24.5
100	256QAM	1	1	20.55			22.5
Channel				632668	633332	634000	27.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	25.33	25.22	25.19	27.0
Channel				632000	633332	634666	27.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	25.24	25.23	25.31	27.0
Channel				631668	633332	635000	27.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	25.22	25.34	25.29	27.0
Channel				631334	633332	635332	27.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	25.37	25.23	25.32	27.0
Channel				630668	633332	636000	27.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	25.20	25.33	25.24	27.0
Channel				630500	633332	636166	27.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	25.33	25.35	25.37	27.0
Channel				630334	633332	636332	27.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	25.20	25.19	25.30	27.0





<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				650000			24.0
Frequency (MHz)				3750			
100	PI/2 BPSK	1	1	22.51			
100	PI/2 BPSK	1	137	23.36			
100	PI/2 BPSK	1	271	23.17			
100	PI/2 BPSK	135	0	23.18			23.5
100	PI/2 BPSK	135	69	23.29			24.0
100	PI/2 BPSK	135	138	23.30			23.5
100	PI/2 BPSK	270	0	23.32			
100	QPSK	1	1	22.44			24.0
100	QPSK	1	137	23.17			
100	QPSK	1	271	23.11			
100	QPSK	135	0	23.17			24.0
100	QPSK	135	69	23.33			
100	QPSK	135	138	23.32			
100	QPSK	270	0	22.97			23.0
100	16QAM	1	1	22.46			23.0
100	64QAM	1	1	22.21			22.5
100	256QAM	1	1	21.15			21.5
Channel				649334	650000	650666	24.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	22.40	22.34	22.33	24.0
Channel				648668	650000	651332	24.0
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	22.39	22.40	22.39	24.0
Channel				648334	650000	651666	24.0
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	22.39	22.44	22.19	24.0
Channel				648000	650000	652000	24.0
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	22.26	22.44	22.19	24.0
Channel				647334	650000	652666	24.0
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	22.41	22.46	22.36	24.0
Channel				647168	650000	652832	24.0
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	22.24	22.36	22.25	24.0
Channel				647000	650000	653000	24.0
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	22.29	22.51	22.39	24.0



<n78 HUPE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				650000			27.0
Frequency (MHz)				3750			
100	PI/2 BPSK	1	1	25.22			
100	PI/2 BPSK	1	137	25.94			
100	PI/2 BPSK	1	271	25.71			
100	PI/2 BPSK	135	0	25.82			26.5
100	PI/2 BPSK	135	69	25.93			27.0
100	PI/2 BPSK	135	138	25.88			26.5
100	PI/2 BPSK	270	0	25.92			
100	QPSK	1	1	25.17			27.0
100	QPSK	1	137	25.85			
100	QPSK	1	271	25.61			
100	QPSK	135	0	25.74			27.0
100	QPSK	135	69	25.91			
100	QPSK	135	138	25.85			
100	QPSK	270	0	25.87			26.0
100	16QAM	1	1	25.06			26.0
100	64QAM	1	1	23.27			24.5
100	256QAM	1	1	21.72			22.5
Channel				649334	650000	650666	27.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	25.32	25.27	25.25	
Channel				648668	650000	651332	27.0
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	25.17	25.26	25.26	
Channel				648334	650000	651666	27.0
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	25.27	25.27	25.29	
Channel				648000	650000	652000	27.0
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	25.30	25.32	25.24	
Channel				647334	650000	652666	27.0
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	25.19	25.28	25.32	
Channel				647168	650000	652832	27.0
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	25.28	25.14	25.26	
Channel				647000	650000	653000	27.0
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	25.24	25.24	25.29	



**Default Power Mode (Aux)**

<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				507204	518598	529998	
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	12.35	12.45	12.42	14.0
80	PI/2 BPSK	1	108	12.63	12.90	12.89	
80	PI/2 BPSK	1	215	12.29	12.69	12.54	
80	PI/2 BPSK	108	0	12.74	12.58	12.73	14.0
80	PI/2 BPSK	108	55	12.88	12.89	12.85	14.0
80	PI/2 BPSK	108	109	12.51	12.49	12.51	14.0
80	PI/2 BPSK	216	0	12.51	12.80	12.65	
80	QPSK	1	1	12.24	12.29	12.26	14.0
80	QPSK	1	108	12.72	12.58	12.54	
80	QPSK	1	215	12.08	12.65	12.10	
80	QPSK	108	0	12.39	12.49	12.76	14.0
80	QPSK	108	55	12.46	12.40	12.40	
80	QPSK	108	109	12.33	12.40	12.60	
80	QPSK	216	0	12.72	12.74	12.57	14.0
80	16QAM	1	1	12.34	12.38	12.43	14.0
80	64QAM	1	1	12.51	12.28	12.26	14.0
80	256QAM	1	1	12.03	12.29	12.05	14.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	12.27	12.15	12.23	14.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	12.26	12.36	12.42	14.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	12.39	12.43	12.42	14.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	12.46	12.51	12.36	14.0



<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	Tune-up limit (dBm)
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	13.32	13.95	13.82	15.0
100	PI/2 BPSK	1	137	13.82	14.43	14.26	
100	PI/2 BPSK	1	271	13.78	14.36	14.07	
100	PI/2 BPSK	135	0	13.80	14.30	13.97	15.0
100	PI/2 BPSK	135	69	13.80	14.38	14.34	15.0
100	PI/2 BPSK	135	138	13.81	14.34	14.15	15.0
100	PI/2 BPSK	270	0	14.05	14.34	14.32	
100	QPSK	1	1	13.25	13.79	13.53	15.0
100	QPSK	1	137	13.77	14.34	14.16	
100	QPSK	1	271	13.61	14.04	14.10	
100	QPSK	135	0	13.75	14.04	13.78	15.0
100	QPSK	135	69	13.69	14.13	14.38	
100	QPSK	135	138	13.65	14.21	14.33	
100	QPSK	270	0	13.71	14.35	14.05	15.0
100	16QAM	1	1	13.12	13.85	13.54	15.0
100	64QAM	1	1	13.08	13.95	13.51	15.0
100	256QAM	1	1	13.36	13.66	13.47	15.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	13.40	13.76	13.65	15.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	13.49	13.72	13.86	15.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	13.07	14.02	13.78	15.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	13.35	13.97	13.62	15.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	13.19	13.74	13.67	15.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	13.33	13.71	13.52	15.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	13.24	13.94	13.56	15.0



<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				633332			15.0
Frequency (MHz)				3499.98			
100	PI/2 BPSK	1	1	13.27			
100	PI/2 BPSK	1	137	13.65			
100	PI/2 BPSK	1	271	13.26			
100	PI/2 BPSK	135	0	13.57			15.0
100	PI/2 BPSK	135	69	13.62			15.0
100	PI/2 BPSK	135	138	13.20			15.0
100	PI/2 BPSK	270	0	13.57			
100	QPSK	1	1	13.15			15.0
100	QPSK	1	137	13.45			
100	QPSK	1	271	13.27			
100	QPSK	135	0	13.32			15.0
100	QPSK	135	69	13.52			
100	QPSK	135	138	13.38			
100	QPSK	270	0	13.31			15.0
100	16QAM	1	1	13.10			15.0
100	64QAM	1	1	13.45			15.0
100	256QAM	1	1	13.08			15.0
Channel				632668	633332	634000	15.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	13.24	13.20	13.25	15.0
Channel				632000	633332	634666	15.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	13.11	13.23	13.22	15.0
Channel				631668	633332	635000	15.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	13.33	13.08	13.11	15.0
Channel				631334	633332	635332	15.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	13.24	13.19	13.29	15.0
Channel				630668	633332	636000	15.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	13.37	13.14	13.37	15.0
Channel				630500	633332	636166	15.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	13.33	13.06	13.38	15.0
Channel				630334	633332	636332	15.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	13.21	13.48	13.23	15.0



<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				650000			15.0
Frequency (MHz)				3750			
100	PI/2 BPSK	1	1	13.43			
100	PI/2 BPSK	1	137	14.23			
100	PI/2 BPSK	1	271	13.95			
100	PI/2 BPSK	135	0	13.87			15.0
100	PI/2 BPSK	135	69	14.11			15.0
100	PI/2 BPSK	135	138	14.03			15.0
100	PI/2 BPSK	270	0	14.22			
100	QPSK	1	1	13.15			15.0
100	QPSK	1	137	14.11			
100	QPSK	1	271	14.08			
100	QPSK	135	0	13.86			15.0
100	QPSK	135	69	14.11			
100	QPSK	135	138	13.95			
100	QPSK	270	0	14.00			15.0
100	16QAM	1	1	13.27			15.0
100	64QAM	1	1	13.25			15.0
100	256QAM	1	1	13.22			15.0
Channel				649334	650000	650666	15.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	13.36	13.41	13.43	15.0
Channel				648668	650000	651332	15.0
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	13.16	13.35	13.25	15.0
Channel				648334	650000	651666	15.0
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	13.31	13.57	13.14	15.0
Channel				648000	650000	652000	15.0
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	13.57	13.36	13.41	15.0
Channel				647334	650000	652666	15.0
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	13.49	13.58	13.55	15.0
Channel				647168	650000	652832	15.0
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	13.40	13.28	13.57	15.0
Channel				647000	650000	653000	15.0
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	13.39	13.59	13.12	15.0



**Reduced Power Mode (Main)**

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	11.67	11.55	11.85	13.0
20	PI/2 BPSK	1	53	11.75	11.99	11.91	
20	PI/2 BPSK	1	104	11.68	11.85	11.88	
20	PI/2 BPSK	50	0	11.75	11.56	11.85	13.0
20	PI/2 BPSK	50	28	11.78	11.98	11.94	13.0
20	PI/2 BPSK	50	56	11.68	11.95	11.92	13.0
20	PI/2 BPSK	100	0	11.78	11.90	11.86	
20	QPSK	1	1	11.66	11.57	11.81	13.0
20	QPSK	1	53	11.73	11.92	11.85	
20	QPSK	1	104	11.66	11.81	11.84	
20	QPSK	50	0	11.82	11.55	11.92	13.0
20	QPSK	50	28	11.76	11.94	11.91	13.0
20	QPSK	50	56	11.75	11.90	11.88	13.0
20	QPSK	100	0	11.79	11.76	11.84	
20	16QAM	1	1	11.61	11.63	11.73	13.0
20	64QAM	1	1	11.41	11.34	11.52	13.0
20	256QAM	1	1	11.78	11.83	11.91	13.0
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	11.71	11.68	11.61	13.0
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	11.59	11.62	11.70	13.0
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	11.68	11.80	11.90	13.0



<n5>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				166800	167300	167800	Tune-up limit (dBm)
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	13.89	13.94	13.92	14.5
20	PI/2 BPSK	1	53	13.96	13.98	13.93	
20	PI/2 BPSK	1	104	13.85	13.88	13.80	
20	PI/2 BPSK	50	0	13.91	13.92	13.95	14.5
20	PI/2 BPSK	50	28	13.94	13.96	13.94	14.5
20	PI/2 BPSK	50	56	13.95	13.93	13.91	14.5
20	PI/2 BPSK	100	0	13.87	13.95	13.92	
20	QPSK	1	1	13.79	13.88	13.82	14.5
20	QPSK	1	53	13.96	13.97	13.94	
20	QPSK	1	104	13.83	13.87	13.77	
20	QPSK	50	0	13.90	13.95	13.92	14.5
20	QPSK	50	28	13.95	13.97	13.95	14.5
20	QPSK	50	56	13.92	13.94	13.93	14.5
20	QPSK	100	0	13.96	13.95	13.91	
20	16QAM	1	1	13.73	13.78	13.76	14.5
20	64QAM	1	1	13.44	13.51	13.49	14.5
20	256QAM	1	1	13.92	13.93	13.94	14.5
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	13.85	13.91	13.86	14.5
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	13.79	13.89	13.86	14.5
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	PI/2 BPSK	1	1	13.88	13.85	13.88	14.5





<n7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				502000	507000	512000	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	9.71	9.73	9.75	
20	PI/2 BPSK	1	53	9.75	9.86	9.81	10.5
20	PI/2 BPSK	1	104	9.73	9.80	9.71	10.5
20	PI/2 BPSK	50	0	9.67	9.65	9.65	
20	PI/2 BPSK	50	28	9.65	9.68	9.66	10.5
20	PI/2 BPSK	50	56	9.61	9.62	9.63	10.5
20	PI/2 BPSK	100	0	9.68	9.72	9.70	
20	QPSK	1	1	9.73	9.64	9.69	10.5
20	QPSK	1	53	9.73	9.82	9.80	
20	QPSK	1	104	9.75	9.74	9.68	
20	QPSK	50	0	9.75	9.63	9.65	10.5
20	QPSK	50	28	9.62	9.66	9.64	10.5
20	QPSK	50	56	9.58	9.60	9.61	10.5
20	QPSK	100	0	9.65	9.71	9.68	
20	16QAM	1	1	9.67	9.60	9.65	10.5
20	64QAM	1	1	9.47	9.69	9.35	10.5
20	256QAM	1	1	9.64	9.73	9.74	10.5
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	9.63	9.67	9.68	10.5
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	9.64	9.64	9.70	10.5
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	9.69	9.67	9.67	10.5



<n25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	11.99	11.84	12.02	13.0
20	PI/2 BPSK	1	53	12.12	12.08	12.11	
20	PI/2 BPSK	1	104	12.05	12.07	12.03	
20	PI/2 BPSK	50	0	12.08	11.96	12.05	13.0
20	PI/2 BPSK	50	28	12.09	12.08	12.07	13.0
20	PI/2 BPSK	50	56	11.99	12.07	12.03	13.0
20	PI/2 BPSK	100	0	12.05	11.94	12.01	
20	QPSK	1	1	11.90	11.82	11.93	13.0
20	QPSK	1	53	12.08	12.01	12.08	
20	QPSK	1	104	11.94	12.01	11.97	
20	QPSK	50	0	12.06	11.88	12.03	13.0
20	QPSK	50	28	12.06	12.06	12.08	13.0
20	QPSK	50	56	11.96	12.04	12.02	13.0
20	QPSK	100	0	12.02	11.91	12.03	
20	16QAM	1	1	11.84	11.77	11.88	13.0
20	64QAM	1	1	11.56	11.51	11.64	13.0
20	256QAM	1	1	11.98	11.93	12.05	13.0
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	11.63	11.59	11.66	13.0
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	11.56	11.53	11.68	13.0
Channel				370500	376500	382500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	11.68	11.74	11.76	13.0



<n30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				462000			12.0
Frequency (MHz)				2310			
10	PI/2 BPSK	1	1	11.36			12.0
10	PI/2 BPSK	1	26	11.96			
10	PI/2 BPSK	1	50	11.58			
10	PI/2 BPSK	25	0	11.21			12.0
10	PI/2 BPSK	25	14	11.23			12.0
10	PI/2 BPSK	25	27	11.09			12.0
10	PI/2 BPSK	50	0	11.11			
10	QPSK	1	1	10.18			12.0
10	QPSK	1	26	10.32			
10	QPSK	1	50	11.51			
10	QPSK	25	0	10.11			12.0
10	QPSK	25	14	10.24			12.0
10	QPSK	25	27	10.12			12.0
10	QPSK	50	0	10.21			
10	16QAM	1	1	10.11			12.0
10	64QAM	1	1	10.15			12.0
10	256QAM	1	1	10.32			12.0
Channel				461500	462000	462500	12.0
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	11.26	11.28	11.22	12.0

<n38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				516000	519000	522000	9.5
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	8.65	8.55	8.63	9.5
20	PI/2 BPSK	1	26	8.74	8.64	8.77	
20	PI/2 BPSK	1	49	8.66	8.60	8.69	
20	PI/2 BPSK	25	0	8.63	8.61	8.73	9.5
20	PI/2 BPSK	25	13	8.52	8.52	8.61	9.5
20	PI/2 BPSK	25	26	8.67	8.61	8.69	9.5
20	PI/2 BPSK	50	0	8.58	8.56	8.69	
20	QPSK	1	1	8.63	8.41	8.53	9.5
20	QPSK	1	26	8.56	8.49	8.65	
20	QPSK	1	49	8.63	8.42	8.59	
20	QPSK	25	0	8.44	8.57	8.72	9.5
20	QPSK	25	13	8.42	8.32	8.56	
20	QPSK	25	26	8.49	8.57	8.67	9.5
20	QPSK	50	0	8.52	8.50	8.69	9.5
20	16QAM	1	1	8.60	8.43	8.61	9.5
20	64QAM	1	1	8.70	8.55	8.59	9.5
20	256QAM	1	1	8.56	8.52	8.51	9.5
Channel				515502	519000	522498	9.5
Frequency (MHz)				2577.51	2595	2612.49	
15	PI/2 BPSK	1	1	8.44	8.45	8.64	9.5
Channel				515004	519000	522996	9.5
Frequency (MHz)				2575.02	2595	2614.98	
10	PI/2 BPSK	1	1	8.45	8.41	8.41	9.5



<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	8.16	8.61	8.95	9.5
80	PI/2 BPSK	1	108	8.60	9.02	9.45	
80	PI/2 BPSK	1	215	8.39	8.87	9.21	
80	PI/2 BPSK	108	0	8.43	8.88	9.31	9.5
80	PI/2 BPSK	108	55	8.51	8.98	9.39	9.5
80	PI/2 BPSK	108	109	8.50	8.95	9.34	9.5
80	PI/2 BPSK	216	0	8.46	8.93	9.35	
80	QPSK	1	1	8.01	8.52	8.90	9.5
80	QPSK	1	108	8.43	8.97	9.44	
80	QPSK	1	215	8.32	8.73	9.07	
80	QPSK	108	0	8.34	8.94	9.27	9.5
80	QPSK	108	55	8.37	8.76	9.25	
80	QPSK	108	109	8.41	8.93	9.33	
80	QPSK	216	0	8.42	8.73	9.30	9.5
80	16QAM	1	1	8.52	8.87	9.30	9.5
80	64QAM	1	1	8.36	8.74	9.12	9.5
80	256QAM	1	1	8.42	8.94	9.26	9.5
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	8.05	8.47	8.85	9.5
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	8.12	8.58	8.94	9.5
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	8.06	8.49	8.88	9.5
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	7.96	8.57	8.88	9.5



<n41 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	11.12	11.54	11.82	12.5
80	PI/2 BPSK	1	108	11.42	11.88	12.28	
80	PI/2 BPSK	1	215	11.23	11.79	12.13	
80	PI/2 BPSK	108	0	11.37	11.70	12.15	12.5
80	PI/2 BPSK	108	55	11.44	11.96	12.24	12.5
80	PI/2 BPSK	108	109	11.32	11.91	12.21	12.5
80	PI/2 BPSK	216	0	11.27	11.73	12.23	
80	QPSK	1	1	10.83	11.52	11.73	12.5
80	QPSK	1	108	11.35	11.96	12.27	
80	QPSK	1	215	11.12	11.60	12.02	
80	QPSK	108	0	11.32	11.75	12.16	12.5
80	QPSK	108	55	11.29	11.72	12.18	
80	QPSK	108	109	11.34	11.76	12.27	
80	QPSK	216	0	11.29	11.68	12.16	12.5
80	16QAM	1	1	11.47	11.73	12.18	12.5
80	64QAM	1	1	11.29	11.54	12.02	12.5
80	256QAM	1	1	11.40	11.83	12.11	12.5
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	11.12	11.50	11.84	12.5
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	11.03	11.45	11.86	12.5
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	11.05	11.62	11.85	12.5
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	11.11	11.55	11.75	12.5



<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	13.5
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	12.17	12.32	12.46	
40	PI/2 BPSK	1	108	12.68	12.97	12.86	13.5
40	PI/2 BPSK	1	214	12.57	12.44	12.56	
40	PI/2 BPSK	108	0	12.62	12.60	12.81	
40	PI/2 BPSK	108	54	12.82	12.85	12.84	13.5
40	PI/2 BPSK	108	108	12.78	12.59	12.82	13.5
40	PI/2 BPSK	216	0	12.74	12.87	12.84	
40	QPSK	1	1	12.15	12.27	12.40	
40	QPSK	1	108	12.76	12.94	12.85	13.5
40	QPSK	1	214	12.53	12.39	12.55	
40	QPSK	108	0	12.59	12.62	12.87	
40	QPSK	108	54	12.82	12.84	12.91	13.5
40	QPSK	108	108	12.94	12.55	12.94	13.5
40	QPSK	216	0	12.72	12.54	12.93	
40	16QAM	1	1	12.22	12.32	12.41	
40	64QAM	1	1	12.01	12.05	12.13	13.5
40	256QAM	1	1	12.47	12.46	12.56	13.5
Channel				344000	349000	354000	13.5
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	12.17	12.22	12.38	
Channel				343500	349000	354500	13.5
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	12.09	12.22	12.37	
Channel				343000	349000	355000	13.5
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	12.11	12.31	12.39	
Channel				342500	349000	355500	13.5
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	12.15	12.22	12.36	



<n71>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				134600	136100	137600	13.5
Frequency (MHz)				673	680.5	688	
20	PI/2 BPSK	1	1	12.99	13.01	13.32	
20	PI/2 BPSK	1	53	13.10	13.20	13.51	13.5
20	PI/2 BPSK	1	104	13.08	13.15	13.44	
20	PI/2 BPSK	50	0	13.07	13.08	13.35	
20	PI/2 BPSK	50	28	13.09	13.18	13.39	13.5
20	PI/2 BPSK	50	56	13.02	13.16	13.37	13.5
20	PI/2 BPSK	100	0	13.03	13.09	13.38	
20	QPSK	1	1	12.95	12.91	13.16	
20	QPSK	1	53	13.10	13.16	13.46	13.5
20	QPSK	1	104	13.01	13.13	13.42	
20	QPSK	50	0	13.00	13.03	13.27	
20	QPSK	50	28	13.10	13.12	13.37	13.5
20	QPSK	50	56	13.00	13.12	13.42	13.5
20	QPSK	100	0	13.04	13.07	13.38	
20	16QAM	1	1	12.78	12.90	13.11	
20	64QAM	1	1	12.61	12.65	12.92	13.5
20	256QAM	1	1	12.95	13.03	13.33	13.5
Channel				134100	136100	138100	13.5
Frequency (MHz)				670.5	680.5	690.5	
15	PI/2 BPSK	1	1	12.96	13.01	13.23	13.5
Channel				133600	136100	138600	13.5
Frequency (MHz)				668	680.5	693	
10	PI/2 BPSK	1	1	12.95	13.01	13.17	13.5
Channel				133100	136100	139100	13.5
Frequency (MHz)				665.5	680.5	695.5	
5	PI/2 BPSK	1	1	12.86	12.99	13.17	13.5



<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	Tune-up limit (dBm)
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	10.41	10.79	10.77	12.0
100	PI/2 BPSK	1	137	10.90	11.27	11.28	
100	PI/2 BPSK	1	271	10.55	10.95	10.86	
100	PI/2 BPSK	135	0	10.68	11.14	11.05	12.0
100	PI/2 BPSK	135	69	10.77	11.22	11.23	12.0
100	PI/2 BPSK	135	138	10.67	11.14	11.05	12.0
100	PI/2 BPSK	270	0	10.74	11.21	11.25	
100	QPSK	1	1	10.32	10.61	10.76	12.0
100	QPSK	1	137	10.82	11.17	11.24	
100	QPSK	1	271	10.39	10.75	10.71	
100	QPSK	135	0	10.57	10.96	10.98	12.0
100	QPSK	135	69	10.70	11.22	11.04	
100	QPSK	135	138	10.53	10.95	10.87	
100	QPSK	270	0	10.56	11.16	11.09	12.0
100	16QAM	1	1	10.27	10.59	10.66	12.0
100	64QAM	1	1	10.40	10.77	10.68	12.0
100	256QAM	1	1	10.21	10.74	10.72	12.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	10.30	10.78	10.74	12.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	10.21	10.64	10.70	12.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	10.37	10.62	10.70	12.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	10.28	10.60	10.58	12.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	10.21	10.70	10.57	12.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	10.34	10.73	10.64	12.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	10.21	10.72	10.76	12.0





<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				633332			12.0
Frequency (MHz)				3499.98			
100	PI/2 BPSK	1	1	10.53			
100	PI/2 BPSK	1	137	10.77			
100	PI/2 BPSK	1	271	10.74			
100	PI/2 BPSK	135	0	10.68			12.0
100	PI/2 BPSK	135	69	10.76			12.0
100	PI/2 BPSK	135	138	10.73			12.0
100	PI/2 BPSK	270	0	10.73			
100	QPSK	1	1	10.59			12.0
100	QPSK	1	137	10.60			
100	QPSK	1	271	10.73			
100	QPSK	135	0	10.52			12.0
100	QPSK	135	69	10.66			
100	QPSK	135	138	10.57			
100	QPSK	270	0	10.61			12.0
100	16QAM	1	1	10.65			12.0
100	64QAM	1	1	10.66			12.0
100	256QAM	1	1	10.55			12.0
Channel				632668	633332	634000	12.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	10.56	10.50	10.58	12.0
Channel				632000	633332	634666	12.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	10.56	10.56	10.45	12.0
Channel				631668	633332	635000	12.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	10.51	10.54	10.60	12.0
Channel				631334	633332	635332	12.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	10.45	10.50	10.61	12.0
Channel				630668	633332	636000	12.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	10.47	10.46	10.60	12.0
Channel				630500	633332	636166	12.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	10.63	10.60	10.59	12.0
Channel				630334	633332	636332	12.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	10.59	10.54	10.55	12.0



<n77 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	Tune-up limit (dBm)
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	13.37	13.75	13.69	15.0
100	PI/2 BPSK	1	137	13.72	14.10	14.18	
100	PI/2 BPSK	1	271	13.49	13.93	13.79	
100	PI/2 BPSK	135	0	13.60	13.98	13.90	15.0
100	PI/2 BPSK	135	69	13.67	14.06	14.13	15.0
100	PI/2 BPSK	135	138	13.64	13.98	13.89	15.0
100	PI/2 BPSK	270	0	13.68	14.14	14.15	
100	QPSK	1	1	13.20	13.44	13.63	15.0
100	QPSK	1	137	13.66	14.17	14.14	
100	QPSK	1	271	13.39	13.71	13.51	
100	QPSK	135	0	13.57	13.96	13.78	15.0
100	QPSK	135	69	13.56	14.13	13.89	
100	QPSK	135	138	13.39	13.80	13.79	
100	QPSK	270	0	13.49	14.07	14.03	15.0
100	16QAM	1	1	13.09	13.55	13.51	15.0
100	64QAM	1	1	13.36	13.76	13.57	15.0
100	256QAM	1	1	13.03	13.73	13.56	15.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	13.40	13.76	13.60	15.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	13.36	13.72	13.75	15.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	13.47	13.78	13.68	15.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	13.35	13.84	13.60	15.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	13.35	13.85	13.78	15.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	13.38	13.71	13.62	15.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	13.29	13.80	13.66	15.0



<n77 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset		Power Middle Ch. / Freq.		Tune-up limit (dBm)
Channel					633332		15.0
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		13.51		15.0
100	PI/2 BPSK	1	137		13.77		
100	PI/2 BPSK	1	271		13.74		
100	PI/2 BPSK	135	0		13.50		15.0
100	PI/2 BPSK	135	69		13.65		15.0
100	PI/2 BPSK	135	138		13.64		15.0
100	PI/2 BPSK	270	0		13.60		
100	QPSK	1	1		13.46		15.0
100	QPSK	1	137		13.47		
100	QPSK	1	271		13.53		
100	QPSK	135	0		13.35		15.0
100	QPSK	135	69		13.51		
100	QPSK	135	138		13.43		
100	QPSK	270	0		13.57		15.0
100	16QAM	1	1		13.47		15.0
100	64QAM	1	1		13.50		15.0
100	256QAM	1	1		13.46		15.0
Channel				632668	633332	634000	15.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	13.47	13.60	13.46	15.0
Channel				632000	633332	634666	15.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	13.46	13.48	13.57	15.0
Channel				631668	633332	635000	15.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	13.47	13.47	13.55	15.0
Channel				631334	633332	635332	15.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	13.42	13.51	13.58	15.0
Channel				630668	633332	636000	15.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	13.43	13.41	13.48	15.0
Channel				630500	633332	636166	15.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	13.61	13.56	13.52	15.0
Channel				630334	633332	636332	15.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	13.43	13.41	13.57	15.0



<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				650000			12.0
Frequency (MHz)				3750			
100	PI/2 BPSK	1	1	10.51			
100	PI/2 BPSK	1	137	11.01			
100	PI/2 BPSK	1	271	10.95			
100	PI/2 BPSK	135	0	10.52			12.0
100	PI/2 BPSK	135	69	10.80			12.0
100	PI/2 BPSK	135	138	10.94			12.0
100	PI/2 BPSK	270	0	10.75			
100	QPSK	1	1	10.51			12.0
100	QPSK	1	137	10.97			
100	QPSK	1	271	10.79			
100	QPSK	135	0	10.52			12.0
100	QPSK	135	69	10.76			
100	QPSK	135	138	10.92			
100	QPSK	270	0	10.72			12.0
100	16QAM	1	1	10.47			12.0
100	64QAM	1	1	10.38			12.0
100	256QAM	1	1	10.43			12.0
Channel				649334	650000	650666	12.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	10.56	10.50	10.56	12.0
Channel				648668	650000	651332	12.0
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	10.48	10.47	10.55	12.0
Channel				648334	650000	651666	12.0
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	10.50	10.48	10.43	12.0
Channel				648000	650000	652000	12.0
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	10.49	10.45	10.57	12.0
Channel				647334	650000	652666	12.0
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	10.53	10.48	10.54	12.0
Channel				647168	650000	652832	12.0
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	10.54	10.58	10.49	12.0
Channel				647000	650000	653000	12.0
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	10.57	10.47	10.45	12.0



<n78 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				650000			15.0
Frequency (MHz)				3750			
100	PI/2 BPSK	1	1	13.36			
100	PI/2 BPSK	1	137	13.94			
100	PI/2 BPSK	1	271	13.83			
100	PI/2 BPSK	135	0	13.47			15.0
100	PI/2 BPSK	135	69	13.65			15.0
100	PI/2 BPSK	135	138	13.78			15.0
100	PI/2 BPSK	270	0	13.73			
100	QPSK	1	1	13.33			15.0
100	QPSK	1	137	13.88			
100	QPSK	1	271	13.67			
100	QPSK	135	0	13.37			15.0
100	QPSK	135	69	13.59			
100	QPSK	135	138	13.73			
100	QPSK	270	0	13.71			15.0
100	16QAM	1	1	13.37			15.0
100	64QAM	1	1	13.34			15.0
100	256QAM	1	1	13.39			15.0
Channel				649334	650000	650666	15.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	13.28	13.31	13.34	15.0
Channel				648668	650000	651332	15.0
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	13.29	13.35	13.29	15.0
Channel				648334	650000	651666	15.0
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	13.41	13.41	13.30	15.0
Channel				648000	650000	652000	15.0
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	13.28	13.41	13.38	15.0
Channel				647334	650000	652666	15.0
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	13.31	13.40	13.46	15.0
Channel				647168	650000	652832	15.0
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	13.36	13.44	13.46	15.0
Channel				647000	650000	653000	15.0
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	13.35	13.40	13.33	15.0



**Reduced Power Mode (MIMO2)**

<n2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	13.0
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	11.92	11.83	12.03	13.0
20	PI/2 BPSK	1	53	11.92	12.23	12.09	
20	PI/2 BPSK	1	104	11.84	12.15	12.01	
20	PI/2 BPSK	50	0	12.07	11.77	11.96	13.0
20	PI/2 BPSK	50	28	11.95	12.15	12.06	13.0
20	PI/2 BPSK	50	56	11.91	12.11	12.09	13.0
20	PI/2 BPSK	100	0	12.00	12.09	12.03	
20	QPSK	1	1	11.84	11.81	11.95	13.0
20	QPSK	1	53	11.88	12.17	11.99	
20	QPSK	1	104	11.81	12.08	11.98	
20	QPSK	50	0	12.02	11.80	12.08	13.0
20	QPSK	50	28	11.95	12.16	12.03	13.0
20	QPSK	50	56	11.95	12.11	12.04	13.0
20	QPSK	100	0	12.04	11.95	11.98	
20	16QAM	1	1	11.81	11.76	11.82	13.0
20	64QAM	1	1	11.62	11.52	11.69	13.0
20	256QAM	1	1	12.03	12.02	11.99	13.0
Channel				371500	376000	380500	13.0
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	11.87	11.76	11.98	13.0
Channel				371000	376000	381000	13.0
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	11.81	11.76	11.95	13.0
Channel				370500	376000	381500	13.0
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	11.80	11.68	11.87	13.0



<n7>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				502000	507000	512000	Tune-up limit (dBm)
Frequency (MHz)				2510	2535	2560	
20	PI/2 BPSK	1	1	9.58	9.61	9.61	
20	PI/2 BPSK	1	53	9.64	9.73	9.66	10.0
20	PI/2 BPSK	1	104	9.61	9.66	9.60	10.0
20	PI/2 BPSK	50	0	9.48	9.48	9.52	
20	PI/2 BPSK	50	28	9.48	9.57	9.55	10.0
20	PI/2 BPSK	50	56	9.41	9.48	9.44	10.0
20	PI/2 BPSK	100	0	9.50	9.60	9.54	
20	QPSK	1	1	9.62	9.50	9.53	10.0
20	QPSK	1	53	9.58	9.68	9.63	
20	QPSK	1	104	9.60	9.64	9.51	
20	QPSK	50	0	9.57	9.52	9.52	10.0
20	QPSK	50	28	9.50	9.56	9.48	10.0
20	QPSK	50	56	9.41	9.41	9.41	10.0
20	QPSK	100	0	9.50	9.57	9.49	
20	16QAM	1	1	9.48	9.45	9.49	10.0
20	64QAM	1	1	9.28	9.55	9.17	10.0
20	256QAM	1	1	9.50	9.62	9.56	10.0
Channel				501500	507000	512500	Tune-up limit (dBm)
Frequency (MHz)				2507.5	2535	2562.5	
15	PI/2 BPSK	1	1	9.54	9.59	9.57	10.0
Channel				501000	507000	513000	Tune-up limit (dBm)
Frequency (MHz)				2505	2535	2565	
10	PI/2 BPSK	1	1	9.56	9.55	9.55	10.0
Channel				500500	507000	513500	Tune-up limit (dBm)
Frequency (MHz)				2502.5	2535	2567.5	
5	PI/2 BPSK	1	1	9.56	9.51	9.56	10.0



<n25>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376500	381000	13.0
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	12.41	12.30	12.44	
20	PI/2 BPSK	1	53	12.66	12.61	12.62	13.0
20	PI/2 BPSK	1	104	12.49	12.53	12.53	
20	PI/2 BPSK	50	0	12.53	12.38	12.50	
20	PI/2 BPSK	50	28	12.64	12.60	12.63	13.0
20	PI/2 BPSK	50	56	12.45	12.55	12.44	13.0
20	PI/2 BPSK	100	0	12.50	12.34	12.48	
20	QPSK	1	1	12.31	12.31	12.38	13.0
20	QPSK	1	53	12.56	12.48	12.57	
20	QPSK	1	104	12.43	12.46	12.38	
20	QPSK	50	0	12.51	12.36	12.50	13.0
20	QPSK	50	28	12.59	12.57	12.52	13.0
20	QPSK	50	56	12.42	12.51	12.49	13.0
20	QPSK	100	0	12.46	12.31	12.48	
20	16QAM	1	1	12.24	12.19	12.30	13.0
20	64QAM	1	1	12.00	11.98	12.11	13.0
20	256QAM	1	1	12.42	12.39	12.55	13.0
Channel				371500	376500	381500	13.0
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	12.34	12.21	12.37	13.0
Channel				371000	376500	382000	13.0
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	12.40	12.30	12.40	13.0
Channel				370500	376500	382500	13.0
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	12.32	12.20	12.40	13.0





<n30>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				462000			12.0
Frequency (MHz)				2310			
10	PI/2 BPSK	1	1	11.16			12.0
10	PI/2 BPSK	1	26	11.35			
10	PI/2 BPSK	1	50	11.32			
10	PI/2 BPSK	25	0	10.84			12.0
10	PI/2 BPSK	25	14	11.25			12.0
10	PI/2 BPSK	25	27	11.16			12.0
10	PI/2 BPSK	50	0	11.08			
10	QPSK	1	1	10.60			12.0
10	QPSK	1	26	10.72			
10	QPSK	1	50	10.92			
10	QPSK	25	0	10.44			12.0
10	QPSK	25	14	10.73			12.0
10	QPSK	25	27	10.73			12.0
10	QPSK	50	0	10.59			
10	16QAM	1	1	10.66			12.0
10	64QAM	1	1	10.43			12.0
10	256QAM	1	1	10.89			12.0
Channel				461500	462000	462500	12.0
Frequency (MHz)				2307.5	2310	2312.5	
5	PI/2 BPSK	1	1	11.12	11.14	11.10	12.0

<n38>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				516000	519000	522000	11.0
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	9.43	9.57	9.59	11.0
20	PI/2 BPSK	1	26	9.49	9.60	9.69	
20	PI/2 BPSK	1	49	9.45	9.56	9.64	
20	PI/2 BPSK	25	0	9.46	9.58	9.58	11.0
20	PI/2 BPSK	25	13	9.32	9.52	9.54	11.0
20	PI/2 BPSK	25	26	9.39	9.59	9.59	11.0
20	PI/2 BPSK	50	0	9.35	9.52	9.59	
20	QPSK	1	1	9.27	9.50	9.49	11.0
20	QPSK	1	26	9.41	9.58	9.52	
20	QPSK	1	49	9.44	9.37	9.45	
20	QPSK	25	0	9.28	9.57	9.43	11.0
20	QPSK	25	13	9.18	9.39	9.37	
20	QPSK	25	26	9.36	9.45	9.57	11.0
20	QPSK	50	0	9.34	9.41	9.51	11.0
20	16QAM	1	1	9.31	9.41	9.54	11.0
20	64QAM	1	1	9.30	9.47	9.61	11.0
20	256QAM	1	1	9.25	9.44	9.49	11.0
Channel				515502	519000	522498	11.0
Frequency (MHz)				2577.51	2595	2612.49	
15	PI/2 BPSK	1	1	9.45	9.44	9.42	11.0
Channel				515004	519000	522996	11.0
Frequency (MHz)				2575.02	2595	2614.98	
10	PI/2 BPSK	1	1	9.17	9.46	9.49	11.0



<n41>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	9.38	9.42	9.38	11.0
80	PI/2 BPSK	1	108	9.83	9.82	9.80	
80	PI/2 BPSK	1	215	9.48	9.56	9.45	
80	PI/2 BPSK	108	0	9.70	9.63	9.64	11.0
80	PI/2 BPSK	108	55	9.76	9.70	9.68	11.0
80	PI/2 BPSK	108	109	9.65	9.69	9.58	11.0
80	PI/2 BPSK	216	0	9.69	9.68	9.58	
80	QPSK	1	1	9.22	9.36	9.23	11.0
80	QPSK	1	108	9.81	9.70	9.62	
80	QPSK	1	215	9.28	9.45	9.28	
80	QPSK	108	0	9.51	9.59	9.57	11.0
80	QPSK	108	55	9.52	9.57	9.58	
80	QPSK	108	109	9.53	9.55	9.42	
80	QPSK	216	0	9.62	9.54	9.56	11.0
80	16QAM	1	1	9.30	9.23	9.33	11.0
80	64QAM	1	1	9.38	9.36	9.28	11.0
80	256QAM	1	1	9.23	9.25	9.21	11.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	9.38	9.35	9.35	11.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	9.39	9.48	9.31	11.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	9.31	9.35	9.43	11.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	9.29	9.47	9.47	11.0



<n41 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	12.27	12.23	12.26	14.0
80	PI/2 BPSK	1	108	12.72	12.64	12.71	
80	PI/2 BPSK	1	215	12.30	12.51	12.27	
80	PI/2 BPSK	108	0	12.64	12.45	12.61	14.0
80	PI/2 BPSK	108	55	12.66	12.60	12.61	14.0
80	PI/2 BPSK	108	109	12.59	12.59	12.57	14.0
80	PI/2 BPSK	216	0	12.61	12.57	12.50	
80	QPSK	1	1	12.09	12.31	12.09	14.0
80	QPSK	1	108	12.68	12.63	12.57	
80	QPSK	1	215	12.17	12.45	12.16	
80	QPSK	108	0	12.43	12.46	12.46	14.0
80	QPSK	108	55	12.47	12.40	12.58	
80	QPSK	108	109	12.43	12.43	12.30	
80	QPSK	216	0	12.42	12.52	12.46	14.0
80	16QAM	1	1	12.16	12.05	12.16	14.0
80	64QAM	1	1	12.23	12.18	12.25	14.0
80	256QAM	1	1	12.23	12.07	12.01	14.0
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	PI/2 BPSK	1	1	12.24	12.21	12.19	14.0
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	PI/2 BPSK	1	1	12.22	12.18	12.19	14.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	12.23	12.16	12.27	14.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	12.21	12.33	12.29	14.0



<n66>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	Tune-up limit (dBm)
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	11.34	11.45	11.57	13.0
40	PI/2 BPSK	1	108	11.81	12.11	11.88	
40	PI/2 BPSK	1	214	11.66	11.53	11.67	
40	PI/2 BPSK	108	0	11.76	11.67	11.92	13.0
40	PI/2 BPSK	108	54	11.93	12.02	12.01	13.0
40	PI/2 BPSK	108	108	11.93	11.70	11.94	13.0
40	PI/2 BPSK	216	0	11.81	11.95	11.94	
40	QPSK	1	1	11.25	11.45	11.48	13.0
40	QPSK	1	108	11.88	12.09	11.91	
40	QPSK	1	214	11.60	11.52	11.58	
40	QPSK	108	0	11.73	11.75	11.98	13.0
40	QPSK	108	54	11.91	11.98	11.93	13.0
40	QPSK	108	108	12.10	11.63	11.97	13.0
40	QPSK	216	0	11.80	11.66	11.95	
40	16QAM	1	1	11.29	11.42	11.50	13.0
40	64QAM	1	1	11.15	11.19	11.19	13.0
40	256QAM	1	1	11.55	11.60	11.60	13.0
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	11.31	11.40	11.47	13.0
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	11.21	11.31	11.42	13.0
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	11.18	11.29	11.36	13.0
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	11.10	11.19	11.33	13.0



<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	Tune-up limit (dBm)
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	12.30	12.82	12.71	14.0
100	PI/2 BPSK	1	137	12.98	13.44	13.33	
100	PI/2 BPSK	1	271	12.83	13.31	13.16	
100	PI/2 BPSK	135	0	12.74	13.20	13.03	14.0
100	PI/2 BPSK	135	69	12.87	13.43	13.24	14.0
100	PI/2 BPSK	135	138	12.77	13.28	13.15	14.0
100	PI/2 BPSK	270	0	12.87	13.42	13.21	
100	QPSK	1	1	12.17	12.68	12.55	14.0
100	QPSK	1	137	12.95	13.40	13.28	
100	QPSK	1	271	12.70	13.20	13.06	
100	QPSK	135	0	12.65	13.04	12.93	14.0
100	QPSK	135	69	12.76	13.23	13.19	
100	QPSK	135	138	12.57	13.24	13.15	
100	QPSK	270	0	12.86	13.33	13.09	14.0
100	16QAM	1	1	12.23	12.81	12.69	14.0
100	64QAM	1	1	12.21	12.75	12.68	14.0
100	256QAM	1	1	12.28	12.81	12.54	14.0
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	12.31	12.89	12.81	14.0
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	12.38	12.79	12.77	14.0
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	12.26	12.91	12.67	14.0
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	12.21	12.78	12.74	14.0
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	12.21	12.84	12.80	14.0
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	12.37	12.72	12.66	14.0
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	12.20	12.84	12.75	14.0



<n77>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				633332			14.0
Frequency (MHz)				3499.98			
100	PI/2 BPSK	1	1	12.30			
100	PI/2 BPSK	1	137	12.58			
100	PI/2 BPSK	1	271	12.28			
100	PI/2 BPSK	135	0	12.48			14.0
100	PI/2 BPSK	135	69	12.57			14.0
100	PI/2 BPSK	135	138	12.39			14.0
100	PI/2 BPSK	270	0	12.49			
100	QPSK	1	1	12.15			14.0
100	QPSK	1	137	12.52			
100	QPSK	1	271	12.24			
100	QPSK	135	0	12.34			14.0
100	QPSK	135	69	12.57			
100	QPSK	135	138	12.34			
100	QPSK	270	0	12.32			14.0
100	16QAM	1	1	12.12			14.0
100	64QAM	1	1	12.25			14.0
100	256QAM	1	1	12.13			14.0
Channel				632668	633332	634000	14.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	12.36	12.38	12.25	14.0
Channel				632000	633332	634666	14.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	12.29	12.26	12.32	14.0
Channel				631668	633332	635000	14.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	12.24	12.23	12.28	14.0
Channel				631334	633332	635332	14.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	12.26	12.39	12.37	14.0
Channel				630668	633332	636000	14.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	12.27	12.28	12.27	14.0
Channel				630500	633332	636166	14.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	12.27	12.25	12.28	14.0
Channel				630334	633332	636332	14.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	12.36	12.30	12.32	14.0



<n77 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	17.0
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	15.14	15.63	15.53	17.0
100	PI/2 BPSK	1	137	15.92	16.40	16.29	
100	PI/2 BPSK	1	271	15.80	16.31	16.16	
100	PI/2 BPSK	135	0	15.65	16.05	15.93	17.0
100	PI/2 BPSK	135	69	15.84	16.36	16.09	17.0
100	PI/2 BPSK	135	138	15.68	16.13	16.00	17.0
100	PI/2 BPSK	270	0	15.68	16.36	16.15	
100	QPSK	1	1	15.02	15.52	15.46	17.0
100	QPSK	1	137	15.82	16.20	16.12	
100	QPSK	1	271	15.50	16.02	15.98	
100	QPSK	135	0	15.65	15.85	15.75	17.0
100	QPSK	135	69	15.60	16.06	16.07	
100	QPSK	135	138	15.52	16.13	16.09	
100	QPSK	270	0	15.84	16.27	16.06	17.0
100	16QAM	1	1	15.12	15.63	15.50	17.0
100	64QAM	1	1	15.01	15.66	15.57	17.0
100	256QAM	1	1	15.28	15.74	15.54	17.0
Channel				649334	656000	662666	17.0
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	15.19	15.72	15.45	17.0
Channel				648668	656000	663332	17.0
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	15.16	15.56	15.58	17.0
Channel				648334	656000	663666	17.0
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	15.13	15.63	15.51	17.0
Channel				648000	656000	664000	17.0
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	15.22	15.68	15.47	17.0
Channel				647334	656000	664666	17.0
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	15.09	15.72	15.59	17.0
Channel				647168	656000	664832	17.0
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	15.18	15.53	15.47	17.0
Channel				647000	656000	665000	17.0
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	15.21	15.71	15.43	17.0



<n77 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				633332			17.0
Frequency (MHz)				3499.98			
100	PI/2 BPSK	1	1	15.15			17.0
100	PI/2 BPSK	1	137	15.56			
100	PI/2 BPSK	1	271	15.08			
100	PI/2 BPSK	135	0	15.30			17.0
100	PI/2 BPSK	135	69	15.51			17.0
100	PI/2 BPSK	135	138	15.34			17.0
100	PI/2 BPSK	270	0	15.32			
100	QPSK	1	1	15.02			17.0
100	QPSK	1	137	15.45			
100	QPSK	1	271	15.18			
100	QPSK	135	0	15.15			17.0
100	QPSK	135	69	15.55			
100	QPSK	135	138	15.22			
100	QPSK	270	0	15.20			17.0
100	16QAM	1	1	15.00			17.0
100	64QAM	1	1	15.19			17.0
100	256QAM	1	1	15.12			17.0
Channel				632668	633332	634000	17.0
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	15.10	15.12	15.07	17.0
Channel				632000	633332	634666	17.0
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	15.07	15.16	15.12	17.0
Channel				631668	633332	635000	17.0
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	15.08	15.08	15.11	17.0
Channel				631334	633332	635332	17.0
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	15.06	15.21	15.14	17.0
Channel				630668	633332	636000	17.0
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	15.19	15.15	15.22	17.0
Channel				630500	633332	636166	17.0
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	15.09	15.14	15.19	17.0
Channel				630334	633332	636332	17.0
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	15.24	15.05	15.15	17.0





<n78>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				650000			14.0
Frequency (MHz)				3750			
100	PI/2 BPSK	1	1	12.33			
100	PI/2 BPSK	1	137	13.06			
100	PI/2 BPSK	1	271	13.02			
100	PI/2 BPSK	135	0	12.81			14.0
100	PI/2 BPSK	135	69	13.02			14.0
100	PI/2 BPSK	135	138	13.05			14.0
100	PI/2 BPSK	270	0	13.04			
100	QPSK	1	1	12.17			14.0
100	QPSK	1	137	13.00			
100	QPSK	1	271	12.98			
100	QPSK	135	0	12.79			14.0
100	QPSK	135	69	13.00			
100	QPSK	135	138	13.02			
100	QPSK	270	0	12.87			14.0
100	16QAM	1	1	12.25			14.0
100	64QAM	1	1	12.13			14.0
100	256QAM	1	1	12.22			14.0
Channel				649334	650000	650666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	12.33	12.38	12.43	14.0
Channel				648668	650000	651332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	12.29	12.30	12.38	14.0
Channel				648334	650000	651666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	12.36	12.42	12.26	14.0
Channel				648000	650000	652000	Tune-up limit (dBm)
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	12.43	12.40	12.24	14.0
Channel				647334	650000	652666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	12.41	12.39	12.40	14.0
Channel				647168	650000	652832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	12.33	12.33	12.41	14.0
Channel				647000	650000	653000	Tune-up limit (dBm)
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	12.43	12.43	12.31	14.0



<n78 HPUE>

BW [MHz]	Modulation	RB Size	RB Offset	Power Middle Ch. / Freq.			Tune-up limit (dBm)
Channel				650000			17.0
Frequency (MHz)				3750			
100	PI/2 BPSK	1	1	15.22			17.0
100	PI/2 BPSK	1	137	15.97			
100	PI/2 BPSK	1	271	15.88			
100	PI/2 BPSK	135	0	15.79			17.0
100	PI/2 BPSK	135	69	15.93			17.0
100	PI/2 BPSK	135	138	15.92			17.0
100	PI/2 BPSK	270	0	15.89			
100	QPSK	1	1	15.07			17.0
100	QPSK	1	137	15.88			
100	QPSK	1	271	15.90			
100	QPSK	135	0	15.73			17.0
100	QPSK	135	69	15.95			
100	QPSK	135	138	15.83			
100	QPSK	270	0	15.69			17.0
100	16QAM	1	1	15.12			17.0
100	64QAM	1	1	15.04			17.0
100	256QAM	1	1	15.17			17.0
Channel				649334	650000	650666	17.0
Frequency (MHz)				3740.01	3750	3759.99	
80	PI/2 BPSK	1	1	15.23	15.16	15.25	17.0
Channel				648668	650000	651332	17.0
Frequency (MHz)				3730.02	3750	3769.98	
60	PI/2 BPSK	1	1	15.29	15.27	15.16	17.0
Channel				648334	650000	651666	17.0
Frequency (MHz)				3725.01	3750	3774.99	
50	PI/2 BPSK	1	1	15.28	15.23	15.30	17.0
Channel				648000	650000	652000	17.0
Frequency (MHz)				3720	3750	3780	
40	PI/2 BPSK	1	1	15.32	15.22	15.22	17.0
Channel				647334	650000	652666	17.0
Frequency (MHz)				3710.01	3750	3789.99	
20	PI/2 BPSK	1	1	15.23	15.19	15.14	17.0
Channel				647168	650000	652832	17.0
Frequency (MHz)				3707.52	3750	3792.48	
15	PI/2 BPSK	1	1	15.13	15.16	15.15	17.0
Channel				647000	650000	653000	17.0
Frequency (MHz)				3705	3750	3795	
10	PI/2 BPSK	1	1	15.21	15.19	15.20	17.0



<SAR test exclusion table>

General Note:

- The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
- Maximum power is the source-based time-average power and represents the maximum RF output power among production units
- Per KDB 447498 D01v06, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
- Per KDB 447498 D01v06, standalone SAR test exclusion threshold is applied; If the test separation distance is < 5mm, 5mm is used to determine SAR exclusion threshold.
- Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:
 
$$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$$
 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR
  - f(GHz) is the RF channel transmit frequency in GHz
  - Power and distance are rounded to the nearest mW and mm before calculation
  - The result is rounded to one decimal place for comparison
- Per KDB 447498 D01v06, at 100 MHz to 6 GHz and for *test separation distances* > 50 mm, the SAR test exclusion threshold is determined according to the following
  - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · ( f(MHz)/150)] mW, at 100 MHz to 1500 MHz
  - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

<WWAN Main Antenna>

Exposure Position	Wireless Interface	WCDMA Band V	WCDMA Band IV	WCDMA Band II	LTE Band 71/n71	LTE Band 12	LTE Band 13	LTE Band 14	LTE Band 17	LTE Band 5/n5	LTE Band 26	LTE Band 4	LTE Band 66/n66	LTE Band 2/n2	LTE Band 25/n25	LTE Band 30/n30	LTE Band 7/n7	LTE Band 38/n38	LTE Band 41/n41	LTE Band 48	LTE Band n77/n78
	Calculated Frequency (MHz)	846	1750	1907	695	715	784	795	713	848	848	1754	1779	1909	1914	2312	2567	2617	2687	3697	3975
	Maximum power (dBm)	24.5	24.5	24.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0	24.0	24.0	24.0	24.0	23.0	24.0	24.0	24.0	21.0	24.0
Bottom Face	Maximum rated power(mW)	281.84	281.84	281.84	316.23	316.23	316.23	316.23	316.23	316.23	316.23	251.19	251.19	251.19	251.19	199.53	251.19	251.19	251.19	125.89	251.19
	Separation distance(mm)	5.0																			
	exclusion threshold	51.9	74.6	77.8	52.7	53.5	56.0	56.4	53.4	58.2	58.2	66.5	67.0	69.4	69.5	60.7	80.5	81.3	82.4	48.4	100.2
Edge 1	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Separation distance(mm)	5.0																			
	exclusion threshold	51.9	74.6	77.8	52.7	53.5	56.0	56.4	53.4	58.2	58.2	66.5	67.0	69.4	69.5	60.7	80.5	81.3	82.4	48.4	100.2
Edge 2	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Separation distance(mm)	5.0																			
	exclusion threshold	51.9	74.6	77.8	52.7	53.5	56.0	56.4	53.4	58.2	58.2	66.5	67.0	69.4	69.5	60.7	80.5	81.3	82.4	48.4	100.2
Edge 3	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Separation distance(mm)	202.0																			
	exclusion threshold	1020.0	1633.0	1629.0	884.0	902.0	964.0	974.0	900.0	1022.0	1022.0	1633.0	1632.0	1629.0	1628.0	1619.0	1614.0	1613.0	1612.0	1598.0	1595.0
Edge 4	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
	Separation distance(mm)	226.0																			
	exclusion threshold	1156.0	1873.0	1869.0	995.0	1016.0	1089.0	1101.0	1014.0	1158.0	1158.0	1873.0	1872.0	1869.0	1868.0	1859.0	1854.0	1853.0	1852.0	1838.0	1835.0
Bottom of Laptop	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No	No
	Separation distance(mm)	5.0																			
	exclusion threshold	51.9	74.6	77.8	52.7	53.5	56.0	56.4	53.4	58.2	58.2	66.5	67.0	69.4	69.5	60.7	80.5	81.3	82.4	48.4	100.2
Bottom of Laptop	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



<WWAN Aux Antenna>

Exposure Position	Wireless Interface	LTE Band n41	LTE Band n77/n78
	Exposure Position	Calculated Frequency (MHz)	2687
Maximum power (dBm)		14.0	15.0
Maximum rated power(mW)		25.12	31.62
Separation distance(mm)		5.0	
Bottom Face	exclusion threshold	8.2	12.6
	Testing required?	Yes	Yes
	Separation distance(mm)	5.0	
Edge 1	exclusion threshold	8.2	12.6
	Testing required?	Yes	Yes
	Separation distance(mm)	227.6	
Edge 2	exclusion threshold	1868.0	1851.0
	Testing required?	No	No
	Separation distance(mm)	202.0	
Edge 3	exclusion threshold	1612.0	1595.0
	Testing required?	No	No
	Separation distance(mm)	5.0	
Edge 4	exclusion threshold	8.2	12.6
	Testing required?	Yes	Yes
	Separation distance(mm)	5.0	
Bottom of Laptop	exclusion threshold	8.2	12.6
	Testing required?	Yes	Yes

<WWAN MIMO 1 Antenna>

Exposure Position	Wireless Interface	LTE Band n41	LTE Band n77/n78
	Exposure Position	Calculated Frequency (MHz)	2687
Maximum power (dBm)		9.5	12.5
Maximum rated power(mW)		8.91	17.78
Separation distance(mm)		5.0	
Bottom Face	exclusion threshold	2.9	7.1
	Testing required?	No	Yes
	Separation distance(mm)	23.9	
Edge 1	exclusion threshold	0.6	1.5
	Testing required?	No	No
	Separation distance(mm)	5.0	
Edge 2	exclusion threshold	2.9	7.1
	Testing required?	No	Yes
	Separation distance(mm)	159.6	
Edge 3	exclusion threshold	1188.0	1171.0
	Testing required?	No	No
	Separation distance(mm)	301.0	
Edge 4	exclusion threshold	2602.0	2585.0
	Testing required?	No	No
	Separation distance(mm)	5.0	
Bottom of Laptop	exclusion threshold	2.9	7.1
	Testing required?	No	Yes



**<WWAN MIMO 2 Antenna>**

Exposure Position	Wireless Interface	WCDMA Band IV	WCDMA Band II	LTE Band 4	LTE Band 66/n66	LTE Band 2/n2	LTE Band 25/n25	LTE Band 30/n30	LTE Band 7/n7	LTE Band 38/n38	LTE Band 41/n41	LTE Band 48	LTE Band n77/n78
Exposure Position	Calculated Frequency (MHz)	1750	1907	1754	1779	1909	1914	2312	2567	2617	2687	3697	3975
	Maximum power (dBm)	24.0	24.0	24.0	24.0	24.0	24.0	23.0	24.0	24.0	24.0	22.0	24.0
	Maximum rated power(mW)	251.19	251.19	251.19	251.19	251.19	251.19	199.53	251.19	251.19	251.19	158.49	251.19
Bottom Face	Separation distance(mm)	5.0											
	exclusion threshold	66.5	69.4	66.5	67.0	69.4	69.5	60.7	80.5	81.3	82.4	61.0	100.2
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 1	Separation distance(mm)	25.5											
	exclusion threshold	13.0	13.6	13.1	13.1	13.6	13.6	11.9	15.8	15.9	16.2	12.0	19.6
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Edge 2	Separation distance(mm)	301.0											
	exclusion threshold	2623.0	2619.0	2623.0	2622.0	2619.0	2618.0	2609.0	2604.0	2603.0	2602.0	2588.0	2585.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No
Edge 3	Separation distance(mm)	158.0											
	exclusion threshold	1193.0	1189.0	1193.0	1192.0	1189.0	1188.0	1179.0	1174.0	1173.0	1172.0	1158.0	1155.0
	Testing required?	No	No	No	No	No	No	No	No	No	No	No	No
Edge 4	Separation distance(mm)	5.0											
	exclusion threshold	66.5	69.4	66.5	67.0	69.4	69.5	60.7	80.5	81.3	82.4	61.0	100.2
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bottom of Laptop	Separation distance(mm)	5.0											
	exclusion threshold	66.5	69.4	66.5	67.0	69.4	69.5	60.7	80.5	81.3	82.4	61.0	100.2
	Testing required?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes



### 13. SAR Test Results

**General Note:**

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
  - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
  - b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
  - c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)\*Tune-up Scaling Factor
  - d. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix  $63.3\%/62.9\% = 1.006$  is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)\* Tune-up Scaling Factor\* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
  - $\leq 0.8$  W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\leq 100$  MHz
  - $\leq 0.6$  W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
  - $\leq 0.4$  W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is  $\geq 200$  MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is  $\geq 0.8$ W/kg.
4. For the exposure positions that proximity sensor power reduction is applied for SAR compliance, additional SAR testing with EUT transmitting full power in sensor trigger distance was performed according to section 4. The test results just verification the sensor trigger distance to meet KDB 616217 requirement, when in normal usage will not operate at trigger distance, therefore, these results were not using performed Sim-Tx analysis

**UMTS Note:**

1. Per KDB 941225 D01v03r01, for SAR testing is measured using a 12.2 kbps RMC with TPC bits configured to all "1's".
2. Per KDB 941225 D01v03r01, RMC 12.2kbps setting is used to evaluate SAR. The maximum output power and tune-up tolerance specified for production units in HSDPA / HSUPA / DC-HSDPA is  $\leq 1/4$  dB higher than RMC 12.2Kbps or when the highest reported SAR of the RMC12.2Kbps is scaled by the ratio of specified maximum output power and tune-up tolerance of HSDPA / HSUPA / DC-HSDPA to RMC12.2Kbps and the adjusted SAR is  $\leq 1.2$  W/kg, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA, and according to the following RF output power, the output power results of the secondary modes (HSUPA, HSDPA, DC-HSDPA) are less than  $1/4$  dB higher than the primary modes; therefore, SAR measurement is not required for HSDPA / HSUPA / DC-HSDPA.

**LTE Note:**

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are  $\leq 0.8$  W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is  $> 1.45$  W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is  $>$  not  $\frac{1}{2}$  dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is  $\leq 1.45$  W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is  $>$  not  $\frac{1}{2}$  dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is  $\leq 1.45$  W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4/B5/B12/B17/B26/B38/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 2/4/5/17/38 SAR test was covered by Band 25/66/26/12/41; according to TCB workshop, SAR test for overlapping LTE bands can be reduced if
  - a. The maximum output power, including tolerance, for the smaller band is  $\leq$  the larger band to qualify for the SAR test exclusion.
  - b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.

**5G NR Note:**

1. The device support SCS 15KHz and 30KHz for NR FDD and TDD and have the same maximum power, in this report only select SCS 15KHz for NR FDD and SCS 30KHz for NR TDD power measurement, due to SCS 15KHz for FDD and SCS 30KHz for TDD have highest support bandwidth, and the NR SAR is  $< 1g$  SAR 1.45W/kg. Output power and SAR measurement for SCS30KHz for FDD and SCS15KHz for TDD shall be not necessary.
2. Referencing the procedure in KDB 941225, the test procedures are outlined as below:
  - a. To start SAR test for the largest channel bandwidth for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
  - b. For PI/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are  $\leq 0.8$  W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is  $> 1.45$  W/kg, the remaining required test channels must also be tested.
  - c. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not  $\frac{1}{2}$  dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
  - d. Smaller bandwidth output power for each RB allocation configuration for this device is not  $\frac{1}{2}$  dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is  $\leq 1.45$  W/kg, smaller bandwidth SAR testing is not required for this device
  - e. The NR n5/41/66/71/77 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth.
  - f. The NR n2/38 SAR test was covered by NR n25/41; due to SAR test for overlapping NR bands can be reduced if the maximum power including tolerance, for the smaller band is  $\leq$  the larger band to qualify for the SAR test exclusion and the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band
  - g. Due to test setup limitations, SAR testing for NR was performed using Factory Test Mode software to establish the connection and perform SAR with 100% transmission. And only for TDD power class2 was performed using Factory Test Mode software to establish the connection and perform SAR with 50% transmission



13.1 Body SAR

<WCDMA SAR>

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WCDMA II_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	9400	1880	12.84	13.50	1.164	-0.03	0.318	0.370
	WCDMA II_Main	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	9400	1880	12.84	13.50	1.164	-0.15	0.958	1.115
	WCDMA II_Main	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	9262	1852.4	12.79	13.50	1.178	-0.12	0.883	1.040
01	WCDMA II_Main	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	9538	1907.6	12.83	13.50	1.167	-0.09	0.999	1.166
	WCDMA II_Main	RMC 12.2Kbps	Edge 1	0mm	Amphenol	ON	9400	1880	12.84	13.50	1.164	-0.17	0.254	0.296
	WCDMA II_Main	RMC 12.2Kbps	Edge 2	0mm	Amphenol	ON	9400	1880	12.84	13.50	1.164	0.11	0.060	0.070
	WCDMA II_Main	RMC 12.2Kbps	Bottom of Laptop	29mm	Amphenol	OFF	9400	1880	23.77	24.50	1.183	-0.05	0.101	0.119
	WCDMA II_Main	RMC 12.2Kbps	Bottom Face	34mm	Amphenol	OFF	9400	1880	23.77	24.50	1.183	-0.16	0.065	0.077
	WCDMA II_Main	RMC 12.2Kbps	Edge 1	24mm	Amphenol	OFF	9400	1880	23.77	24.50	1.183	-0.04	0.109	0.129
	WCDMA II_Main	RMC 12.2Kbps	Edge 2	6mm	Amphenol	OFF	9400	1880	23.77	24.50	1.183	-0.19	0.088	0.104
	WCDMA II_Main	RMC 12.2Kbps	Bottom Face	0mm	NVC	ON	9538	1907.6	12.83	13.50	1.167	0.19	0.600	0.700
	WCDMA II_MIMO 2	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	9400	1880	12.89	13.00	1.026	0.13	0.278	0.285
	WCDMA II_MIMO 2	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	9400	1880	12.89	13.00	1.026	0.06	0.790	0.810
	WCDMA II_MIMO 2	RMC 12.2Kbps	Edge 4	0mm	Amphenol	ON	9400	1880	12.89	13.00	1.026	0.11	1.030	1.056
	WCDMA II_MIMO 2	RMC 12.2Kbps	Edge 4	0mm	Amphenol	ON	9262	1852.4	12.78	13.00	1.052	-0.01	0.992	1.044
	WCDMA II_MIMO 2	RMC 12.2Kbps	Edge 4	0mm	Amphenol	ON	9538	1907.6	12.88	13.00	1.028	0.07	1.070	1.100
	WCDMA II_MIMO 2	RMC 12.2Kbps	Bottom of Laptop	22mm	Amphenol	OFF	9400	1880	23.83	24.00	1.040	-0.06	0.202	0.210
	WCDMA II_MIMO 2	RMC 12.2Kbps	Bottom Face	24mm	Amphenol	OFF	9400	1880	23.83	24.00	1.040	-0.18	0.176	0.183
	WCDMA II_MIMO 2	RMC 12.2Kbps	Edge 1	0mm	Amphenol	OFF	9400	1880	23.83	24.00	1.040	-0.02	0.040	0.042
	WCDMA II_MIMO 2	RMC 12.2Kbps	Edge 4	22mm	Amphenol	OFF	9400	1880	23.83	24.00	1.040	-0.17	0.280	0.291
	WCDMA II_MIMO 2	RMC 12.2Kbps	Edge 4	0mm	NVC	ON	9538	1907.6	12.88	13.00	1.028	-0.11	0.559	0.575
	WCDMA IV_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	1312	1712.4	12.96	13.50	1.132	-0.16	0.345	0.391
	WCDMA IV_Main	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	1312	1712.4	12.96	13.50	1.132	-0.11	1.010	1.144
02	WCDMA IV_Main	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	1413	1732.6	12.88	13.50	1.153	-0.09	1.020	1.177
	WCDMA IV_Main	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	1513	1752.6	12.90	13.50	1.148	-0.1	1.010	1.160
	WCDMA IV_Main	RMC 12.2Kbps	Edge 1	0mm	Amphenol	ON	1312	1712.4	12.96	13.50	1.132	-0.12	0.254	0.288
	WCDMA IV_Main	RMC 12.2Kbps	Edge 2	0mm	Amphenol	ON	1312	1712.4	12.96	13.50	1.132	-0.09	0.131	0.148
	WCDMA IV_Main	RMC 12.2Kbps	Bottom of Laptop	29mm	Amphenol	OFF	1312	1712.4	23.94	24.50	1.138	0.18	0.132	0.150
	WCDMA IV_Main	RMC 12.2Kbps	Bottom Face	34mm	Amphenol	OFF	1312	1712.4	23.94	24.50	1.138	-0.08	0.088	0.100
	WCDMA IV_Main	RMC 12.2Kbps	Edge 1	24mm	Amphenol	OFF	1312	1712.4	23.94	24.50	1.138	-0.09	0.132	0.150
	WCDMA IV_Main	RMC 12.2Kbps	Edge 2	6mm	Amphenol	OFF	1312	1712.4	23.94	24.50	1.138	-0.08	0.084	0.096
	WCDMA IV_Main	RMC 12.2Kbps	Bottom Face	0mm	NVC	ON	1413	1732.6	12.88	13.50	1.153	0.04	0.677	0.781
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	1312	1712.4	12.89	13.50	1.151	0.06	0.339	0.390
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	1312	1712.4	12.89	13.50	1.151	0.11	0.848	0.976
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Edge 4	0mm	Amphenol	ON	1312	1712.4	12.89	13.50	1.151	0.06	0.942	1.084
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Edge 4	0mm	Amphenol	ON	1413	1732.6	12.80	13.50	1.175	-0.01	0.934	1.097
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Edge 4	0mm	Amphenol	ON	1513	1752.6	12.74	13.50	1.191	0.01	0.887	1.057
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Bottom of Laptop	22mm	Amphenol	OFF	1312	1712.4	23.87	24.00	1.030	-0.18	0.323	0.333
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Bottom Face	24mm	Amphenol	OFF	1312	1712.4	23.87	24.00	1.030	-0.04	0.200	0.206
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Edge 1	0mm	Amphenol	OFF	1312	1712.4	23.87	24.00	1.030	0.16	0.067	0.069
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Edge 4	22mm	Amphenol	OFF	1312	1712.4	23.87	24.00	1.030	0.18	0.331	0.341
	WCDMA IV_MIMO 2	RMC 12.2Kbps	Edge 4	0mm	NVC	ON	1413	1732.6	12.80	13.50	1.175	0.12	0.504	0.592
	WCDMA V_Main	RMC 12.2Kbps	Bottom of Laptop	0mm	Amphenol	ON	4132	826.4	14.06	14.50	1.107	0.04	0.184	0.204
	WCDMA V_Main	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	4132	826.4	14.06	14.50	1.107	0.06	0.938	1.038
	WCDMA V_Main	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	4182	836.4	13.96	14.50	1.132	0.03	0.917	1.038
03	WCDMA V_Main	RMC 12.2Kbps	Bottom Face	0mm	Amphenol	ON	4233	846.6	13.95	14.50	1.135	0.02	0.921	1.045
	WCDMA V_Main	RMC 12.2Kbps	Edge 1	0mm	Amphenol	ON	4132	826.4	14.06	14.50	1.107	-0.09	0.115	0.127
	WCDMA V_Main	RMC 12.2Kbps	Edge 2	0mm	Amphenol	ON	4132	826.4	14.06	14.50	1.107	-0.02	0.670	0.741
	WCDMA V_Main	RMC 12.2Kbps	Bottom of Laptop	29mm	Amphenol	OFF	4132	826.4	23.65	24.50	1.216	-0.02	0.100	0.122
	WCDMA V_Main	RMC 12.2Kbps	Bottom Face	34mm	Amphenol	OFF	4132	826.4	23.65	24.50	1.216	0	0.001	0.001
	WCDMA V_Main	RMC 12.2Kbps	Edge 1	24mm	Amphenol	OFF	4132	826.4	23.65	24.50	1.216	0	0.001	0.001
	WCDMA V_Main	RMC 12.2Kbps	Edge 2	6mm	Amphenol	OFF	4132	826.4	23.65	24.50	1.216	0.11	0.337	0.410
	WCDMA V_Main	RMC 12.2Kbps	Edge 3	0mm	Amphenol	OFF	4132	826.4	23.65	24.50	1.216	0	0.001	0.001
	WCDMA V_Main	RMC 12.2Kbps	Edge 4	0mm	Amphenol	OFF	4132	826.4	23.65	24.50	1.216	0	0.001	0.001
	WCDMA V_Main	RMC 12.2Kbps	Bottom Face	0mm	NVC	ON	4233	846.6	13.95	14.50	1.135	0.08	0.511	0.580





<FDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 7_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	21350	2560	9.95	10.50	1.135	0.02	0.255	0.289
	LTE Band 7_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	21350	2560	9.93	10.50	1.140	0.09	0.268	0.306
	LTE Band 7_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	21350	2560	9.95	10.50	1.135	0.04	0.896	1.017
	LTE Band 7_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	20850	2510	9.88	10.50	1.153	0.13	0.817	0.942
	LTE Band 7_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	21100	2535	9.86	10.50	1.159	0.06	0.840	0.973
	LTE Band 7_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	21350	2560	9.93	10.50	1.140	0.09	0.932	1.063
	LTE Band 7_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	20850	2510	9.81	10.50	1.172	0.11	0.858	1.006
	LTE Band 7_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	21100	2535	9.80	10.50	1.175	0.15	0.895	1.052
	LTE Band 7_Main	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	21350	2560	9.74	10.50	1.191	0.03	0.888	1.058
	LTE Band 7_Main	20M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	21350	2560	9.95	10.50	1.135	-0.01	0.201	0.228
	LTE Band 7_Main	20M	QPSK	50	0	Edge 1	0mm	Amphenol	ON	21350	2560	9.93	10.50	1.140	-0.04	0.219	0.250
	LTE Band 7_Main	20M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	21350	2560	9.95	10.50	1.135	0.01	0.039	0.044
	LTE Band 7_Main	20M	QPSK	50	0	Edge 2	0mm	Amphenol	ON	21350	2560	9.93	10.50	1.140	0.18	0.066	0.075
	LTE Band 7_Main	20M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	21100	2535	22.70	24.00	1.349	-0.07	0.073	0.098
	LTE Band 7_Main	20M	QPSK	50	0	Bottom of Laptop	29mm	Amphenol	OFF	21100	2535	21.76	23.00	1.330	0.04	0.055	0.073
	LTE Band 7_Main	20M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	21100	2535	22.70	24.00	1.349	0.08	0.086	0.116
	LTE Band 7_Main	20M	QPSK	50	0	Bottom Face	34mm	Amphenol	OFF	21100	2535	21.76	23.00	1.330	0.01	0.071	0.094
	LTE Band 7_Main	20M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	21100	2535	22.70	24.00	1.349	0.03	0.109	0.147
	LTE Band 7_Main	20M	QPSK	50	0	Edge 1	24mm	Amphenol	OFF	21100	2535	21.76	23.00	1.330	-0.05	0.092	0.122
	LTE Band 7_Main	20M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	21100	2535	22.70	24.00	1.349	-0.14	0.163	0.220
	LTE Band 7_Main	20M	QPSK	50	0	Edge 2	6mm	Amphenol	OFF	21100	2535	21.76	23.00	1.330	0.13	0.134	0.178
	LTE Band 7C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	21350	2560	8.81	10.50	1.476	-0.05	0.717	1.058
	LTE Band 7C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	20850	2510	8.60	10.50	1.549	0.01	0.684	1.059
	LTE Band 7C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	21100	2535	8.77	10.50	1.489	-0.04	0.691	1.029
	LTE Band 7_Main	20M	QPSK	50	0	Bottom Face	0mm	NVC	ON	21350	2560	9.93	10.50	1.140	0.03	0.562	0.641
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	21350	2560	9.48	9.50	1.005	0.04	0.214	0.215
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	21350	2560	9.31	9.50	1.045	0.06	0.229	0.239
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	21350	2560	9.48	9.50	1.005	0.11	0.871	0.875
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	20850	2510	9.44	9.50	1.014	-0.12	0.838	0.850
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	21100	2535	9.21	9.50	1.069	0.06	0.854	0.913
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	21350	2560	9.31	9.50	1.045	0.01	0.892	0.932
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	20850	2510	9.28	9.50	1.052	0.01	0.828	0.871
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	21100	2535	9.29	9.50	1.050	-0.13	0.868	0.911
	LTE Band 7_MIMO 2	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	21350	2560	9.31	9.50	1.045	-0.02	0.862	0.901
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	21350	2560	9.48	9.50	1.005	-0.04	1.050	1.055
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	20850	2510	9.44	9.50	1.014	-0.02	1.010	1.024
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	21100	2535	9.21	9.50	1.069	-0.06	1.030	1.101
04	LTE Band 7_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	21350	2560	9.31	9.50	1.045	-0.08	1.110	1.160
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	20850	2510	9.28	9.50	1.052	-0.06	1.030	1.084
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	21100	2535	9.29	9.50	1.050	-0.07	1.080	1.134
	LTE Band 7_MIMO 2	20M	QPSK	100	0	Edge 4	0mm	Amphenol	ON	21350	2560	9.31	9.50	1.045	-0.09	1.060	1.107
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Bottom of Laptop	22mm	Amphenol	OFF	20850	2510	22.91	24.00	1.285	0.11	0.273	0.351
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Bottom of Laptop	22mm	Amphenol	OFF	20850	2510	21.92	23.00	1.282	0.06	0.231	0.296
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Bottom Face	24mm	Amphenol	OFF	20850	2510	22.91	24.00	1.285	-0.13	0.354	0.455
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Bottom Face	24mm	Amphenol	OFF	20850	2510	21.92	23.00	1.282	0.14	0.301	0.386
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Edge 1	0mm	Amphenol	OFF	20850	2510	22.91	24.00	1.285	0.06	0.343	0.441
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Edge 1	0mm	Amphenol	OFF	20850	2510	21.92	23.00	1.282	0.03	0.274	0.351
	LTE Band 7_MIMO 2	20M	QPSK	1	0	Edge 4	22mm	Amphenol	OFF	20850	2510	22.91	24.00	1.285	-0.08	0.367	0.472
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Edge 4	22mm	Amphenol	OFF	20850	2510	21.92	23.00	1.282	-0.03	0.311	0.399
	LTE Band 7C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	21350	2560	9.11	9.50	1.094	0.03	0.956	1.046
	LTE Band 7C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	20850	2510	7.87	9.50	1.455	0.06	0.774	1.127
	LTE Band 7C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	21100	2535	8.43	9.50	1.279	-0.15	0.841	1.076
	LTE Band 7_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	NVC	ON	21350	2560	9.31	9.50	1.045	-0.12	0.695	0.726



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 12_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	23095	707.5	14.34	14.50	1.038	0.14	0.157	0.163
	LTE Band 12_Main	10M	QPSK	25	0	Bottom of Laptop	0mm	Amphenol	ON	23095	707.5	14.00	14.50	1.122	0.04	0.164	0.184
	LTE Band 12_Main	10M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	23095	707.5	14.34	14.50	1.038	0	0.544	0.564
	LTE Band 12_Main	10M	QPSK	25	0	Bottom Face	0mm	Amphenol	ON	23095	707.5	14.00	14.50	1.122	0.02	0.565	0.634
	LTE Band 12_Main	10M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	23095	707.5	14.34	14.50	1.038	0.03	0.161	0.167
	LTE Band 12_Main	10M	QPSK	25	0	Edge 1	0mm	Amphenol	ON	23095	707.5	14.00	14.50	1.122	-0.02	0.239	0.268
	LTE Band 12_Main	10M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	23095	707.5	14.34	14.50	1.038	-0.02	0.952	0.988
05	LTE Band 12_Main	10M	QPSK	25	0	Edge 2	0mm	Amphenol	ON	23095	707.5	14.00	14.50	1.122	0.02	1.000	1.122
	LTE Band 12_Main	10M	QPSK	50	0	Edge 2	0mm	Amphenol	ON	23095	707.5	14.00	14.50	1.122	-0.02	0.958	1.075
	LTE Band 12_Main	10M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	23095	707.5	23.82	25.00	1.312	0.04	0.060	0.079
	LTE Band 12_Main	10M	QPSK	25	0	Bottom of Laptop	29mm	Amphenol	OFF	23095	707.5	22.80	24.00	1.318	0.11	0.047	0.062
	LTE Band 12_Main	10M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	23095	707.5	23.82	25.00	1.312	0	0.001	0.001
	LTE Band 12_Main	10M	QPSK	25	0	Bottom Face	34mm	Amphenol	OFF	23095	707.5	22.80	24.00	1.318	0	0.001	0.001
	LTE Band 12_Main	10M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	23095	707.5	23.82	25.00	1.312	0	0.001	0.001
	LTE Band 12_Main	10M	QPSK	25	0	Edge 1	24mm	Amphenol	OFF	23095	707.5	22.80	24.00	1.318	0	0.001	0.001
	LTE Band 12_Main	10M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	23095	707.5	23.82	25.00	1.312	0.05	0.354	0.465
	LTE Band 12_Main	10M	QPSK	25	0	Edge 2	6mm	Amphenol	OFF	23095	707.5	22.80	24.00	1.318	0.02	0.311	0.410
	LTE Band 12_Main	10M	QPSK	1	0	Edge 3	0mm	Amphenol	OFF	23095	707.5	23.82	25.00	1.312	0	0.001	0.001
	LTE Band 12_Main	10M	QPSK	25	0	Edge 3	0mm	Amphenol	OFF	23095	707.5	22.80	24.00	1.318	0	0.001	0.001
	LTE Band 12_Main	10M	QPSK	1	0	Edge 4	0mm	Amphenol	OFF	23095	707.5	23.82	25.00	1.312	0	0.001	0.001
	LTE Band 12_Main	10M	QPSK	25	0	Edge 4	0mm	Amphenol	OFF	23095	707.5	22.80	24.00	1.318	0	0.001	0.001
	LTE Band 12_Main	10M	QPSK	25	0	Edge 2	0mm	NVC	ON	23095	707.5	14.00	14.50	1.122	-0.02	0.963	1.081
	LTE Band 13_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	23230	782	14.99	15.00	1.002	0.12	0.263	0.264
	LTE Band 13_Main	10M	QPSK	25	0	Bottom of Laptop	0mm	Amphenol	ON	23230	782	14.64	15.00	1.086	0.16	0.240	0.261
	LTE Band 13_Main	10M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	23230	782	14.99	15.00	1.002	0.05	0.943	0.945
	LTE Band 13_Main	10M	QPSK	25	0	Bottom Face	0mm	Amphenol	ON	23230	782	14.64	15.00	1.086	-0.01	0.961	1.044
06	LTE Band 13_Main	10M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	23230	782	14.50	15.00	1.122	0.05	0.994	1.115
	LTE Band 13_Main	10M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	23230	782	14.99	15.00	1.002	-0.09	0.207	0.207
	LTE Band 13_Main	10M	QPSK	25	0	Edge 1	0mm	Amphenol	ON	23230	782	14.64	15.00	1.086	-0.02	0.164	0.178
	LTE Band 13_Main	10M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	23230	782	14.99	15.00	1.002	0.03	0.776	0.778
	LTE Band 13_Main	10M	QPSK	25	0	Edge 2	0mm	Amphenol	ON	23230	782	14.64	15.00	1.086	0.01	0.735	0.799
	LTE Band 13_Main	10M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	23230	782	23.85	25.00	1.303	0.12	0.109	0.142
	LTE Band 13_Main	10M	QPSK	25	0	Bottom of Laptop	29mm	Amphenol	OFF	23230	782	22.81	24.00	1.315	0.04	0.091	0.120
	LTE Band 13_Main	10M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	23230	782	23.85	25.00	1.303	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	25	0	Bottom Face	34mm	Amphenol	OFF	23230	782	22.81	24.00	1.315	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	23230	782	23.85	25.00	1.303	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	25	0	Edge 1	24mm	Amphenol	OFF	23230	782	22.81	24.00	1.315	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	23230	782	23.85	25.00	1.303	-0.02	0.524	0.683
	LTE Band 13_Main	10M	QPSK	25	0	Edge 2	6mm	Amphenol	OFF	23230	782	22.81	24.00	1.315	0.09	0.471	0.619
	LTE Band 13_Main	10M	QPSK	1	0	Edge 3	0mm	Amphenol	OFF	23230	782	23.85	25.00	1.303	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	25	0	Edge 3	0mm	Amphenol	OFF	23230	782	22.81	24.00	1.315	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	1	0	Edge 4	0mm	Amphenol	OFF	23230	782	23.85	25.00	1.303	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	25	0	Edge 4	0mm	Amphenol	OFF	23230	782	22.81	24.00	1.315	0	0.001	0.001
	LTE Band 13_Main	10M	QPSK	50	0	Bottom Face	0mm	NVC	ON	23230	782	14.50	15.00	1.122	-0.04	0.953	1.069



# FCC SAR TEST REPORT

Report No. : FA190605

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 14_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	23330	793	15.06	15.50	1.107	-0.04	0.254	0.281
	LTE Band 14_Main	10M	QPSK	25	0	Bottom of Laptop	0mm	Amphenol	ON	23330	793	14.90	15.50	1.148	-0.05	0.253	0.290
	LTE Band 14_Main	10M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	23330	793	15.06	15.50	1.107	0	0.999	1.106
	LTE Band 14_Main	10M	QPSK	25	0	Bottom Face	0mm	Amphenol	ON	23330	793	14.90	15.50	1.148	0	1.020	1.171
07	LTE Band 14_Main	10M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	23330	793	14.92	15.50	1.143	0.01	1.030	1.177
	LTE Band 14_Main	10M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	23330	793	15.06	15.50	1.107	-0.02	0.175	0.194
	LTE Band 14_Main	10M	QPSK	25	0	Edge 1	0mm	Amphenol	ON	23330	793	14.90	15.50	1.148	-0.19	0.156	0.179
	LTE Band 14_Main	10M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	23330	793	15.06	15.50	1.107	0.03	0.725	0.802
	LTE Band 14_Main	10M	QPSK	25	0	Edge 2	0mm	Amphenol	ON	23330	793	14.90	15.50	1.148	-0.03	0.740	0.850
	LTE Band 14_Main	10M	QPSK	50	0	Edge 2	0mm	Amphenol	ON	23330	793	14.92	15.50	1.143	0.02	0.733	0.838
	LTE Band 14_Main	10M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	23330	793	24.23	25.00	1.194	0.17	0.109	0.130
	LTE Band 14_Main	10M	QPSK	25	0	Bottom of Laptop	29mm	Amphenol	OFF	23330	793	22.80	24.00	1.318	0.11	0.092	0.121
	LTE Band 14_Main	10M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	23330	793	24.23	25.00	1.194	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	25	0	Bottom Face	34mm	Amphenol	OFF	23330	793	22.80	24.00	1.318	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	23330	793	24.23	25.00	1.194	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	25	0	Edge 1	24mm	Amphenol	OFF	23330	793	22.80	24.00	1.318	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	23330	793	24.23	25.00	1.194	0.19	0.512	0.611
	LTE Band 14_Main	10M	QPSK	25	0	Edge 2	6mm	Amphenol	OFF	23330	793	22.80	24.00	1.318	-0.02	0.455	0.600
	LTE Band 14_Main	10M	QPSK	1	0	Edge 3	0mm	Amphenol	OFF	23330	793	24.23	25.00	1.194	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	25	0	Edge 3	0mm	Amphenol	OFF	23330	793	22.80	24.00	1.318	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	1	0	Edge 4	0mm	Amphenol	OFF	23330	793	24.23	25.00	1.194	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	25	0	Edge 4	0mm	Amphenol	OFF	23330	793	22.80	24.00	1.318	0	0.001	0.001
	LTE Band 14_Main	10M	QPSK	50	0	Bottom Face	0mm	NVC	ON	23330	793	14.92	15.50	1.143	-0.07	0.775	0.886
	LTE Band 25_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	26140	1860	13.47	13.50	1.007	-0.16	0.422	0.425
	LTE Band 25_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	26140	1860	13.25	13.50	1.059	-0.17	0.406	0.430
	LTE Band 25_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	26140	1860	13.47	13.50	1.007	-0.12	0.966	0.973
	LTE Band 25_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	26340	1880	13.28	13.50	1.052	-0.1	1.010	1.062
	LTE Band 25_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	26590	1905	13.25	13.50	1.059	0.04	1.080	1.144
	LTE Band 25_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	26140	1860	13.25	13.50	1.059	-0.08	1.080	1.144
	LTE Band 25_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	26340	1880	13.18	13.50	1.076	-0.14	1.010	1.087
08	LTE Band 25_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	26590	1905	13.22	13.50	1.067	0.02	1.120	1.195
	LTE Band 25_Main	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	26140	1860	13.35	13.50	1.035	-0.18	1.060	1.097
	LTE Band 25_Main	20M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	26140	1860	13.47	13.50	1.007	-0.08	0.336	0.338
	LTE Band 25_Main	20M	QPSK	50	0	Edge 1	0mm	Amphenol	ON	26140	1860	13.25	13.50	1.059	0	0.324	0.343
	LTE Band 25_Main	20M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	26140	1860	13.47	13.50	1.007	0.08	0.078	0.079
	LTE Band 25_Main	20M	QPSK	50	0	Edge 2	0mm	Amphenol	ON	26140	1860	13.25	13.50	1.059	0.15	0.075	0.079
	LTE Band 25_Main	20M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	26340	1880	22.85	24.00	1.303	0.14	0.087	0.113
	LTE Band 25_Main	20M	QPSK	50	0	Bottom of Laptop	29mm	Amphenol	OFF	26340	1880	21.74	23.00	1.337	0.12	0.079	0.106
	LTE Band 25_Main	20M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	26340	1880	22.85	24.00	1.303	0.11	0.051	0.066
	LTE Band 25_Main	20M	QPSK	50	0	Bottom Face	34mm	Amphenol	OFF	26340	1880	21.74	23.00	1.337	0.06	0.045	0.060
	LTE Band 25_Main	20M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	26340	1880	22.85	24.00	1.303	-0.08	0.082	0.107
	LTE Band 25_Main	20M	QPSK	50	0	Edge 1	24mm	Amphenol	OFF	26340	1880	21.74	23.00	1.337	-0.17	0.071	0.095
	LTE Band 25_Main	20M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	26340	1880	22.85	24.00	1.303	0.17	0.073	0.095
	LTE Band 25_Main	20M	QPSK	50	0	Edge 2	6mm	Amphenol	OFF	26340	1880	21.74	23.00	1.337	0.03	0.064	0.086
	LTE Band 25_Main	20M	QPSK	50	0	Bottom Face	0mm	NVC	ON	26590	1905	13.22	13.50	1.067	0.02	0.698	0.744
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	26140	1860	12.48	12.50	1.005	0.15	0.310	0.311
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	26140	1860	12.18	12.50	1.076	0.15	0.300	0.323
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	26140	1860	12.48	12.50	1.005	0.01	0.882	0.886
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	26340	1880	12.05	12.50	1.109	-0.02	0.918	1.018
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	26590	1905	12.45	12.50	1.012	-0.1	0.973	0.984
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	26140	1860	12.18	12.50	1.076	-0.16	0.869	0.935
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	26340	1880	12.13	12.50	1.089	0.09	0.911	0.992
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	26590	1905	12.12	12.50	1.091	0.11	0.956	1.043
	LTE Band 25_MIMO 2	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	26140	1860	12.05	12.50	1.109	-0.15	0.872	0.967
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	26140	1860	12.48	12.50	1.005	-0.14	0.961	0.965
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	26340	1880	12.05	12.50	1.109	-0.14	1.000	1.109
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	26590	1905	12.45	12.50	1.012	-0.18	1.060	1.072
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	26140	1860	12.18	12.50	1.076	-0.16	0.982	1.057
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	26340	1880	12.13	12.50	1.089	0.12	1.030	1.122
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	26590	1905	12.12	12.50	1.091	-0.14	1.080	1.179
	LTE Band 25_MIMO 2	20M	QPSK	100	0	Edge 4	0mm	Amphenol	ON	26140	1860	12.05	12.50	1.109	-0.19	0.985	1.093
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Bottom of Laptop	22mm	Amphenol	OFF	26140	1860	22.78	24.00	1.324	-0.07	0.187	0.248
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Bottom of Laptop	22mm	Amphenol	OFF	26140	1860	21.72	23.00	1.343	0.12	0.187	0.251
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Bottom Face	24mm	Amphenol	OFF	26140	1860	22.78	24.00	1.324	0.06	0.136	0.180
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Bottom Face	24mm	Amphenol	OFF	26140	1860	21.72	23.00	1.343	0.09	0.136	0.183
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Edge 1	0mm	Amphenol	OFF	26140	1860	22.78	24.00	1.324	-0.16	0.221	0.293
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Edge 1	0mm	Amphenol	OFF	26140	1860	21.72	23.00	1.343	-0.01	0.174	0.234
	LTE Band 25_MIMO 2	20M	QPSK	1	0	Edge 4	22mm	Amphenol	OFF	26140	1860	22.78	24.00	1.324	0.18	0.239	0.317
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Edge 4	22mm	Amphenol	OFF	26140	1860	21.72	23.00	1.343	0.14	0.239	0.321
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	NVC	ON	26590	1905	12.12	12.50	1.091	-0.19	0.954	1.041
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	NVC	ON	26140	1860	12.18	12.50	1.076	-0.19	0.915	0.985
	LTE Band 25_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	NVC	ON	26340	1880	12.13	12.50	1.089	-0.19	0.852	0.928



# FCC SAR TEST REPORT

Report No. : FA190605

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 26_Main	15M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	26865	831.5	14.49	14.50	1.002	-0.15	0.197	0.197
	LTE Band 26_Main	15M	QPSK	36	0	Bottom of Laptop	0mm	Amphenol	ON	26865	831.5	14.31	14.50	1.045	-0.06	0.173	0.181
	LTE Band 26_Main	15M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	26865	831.5	14.49	14.50	1.002	0.02	0.976	0.978
09	LTE Band 26_Main	15M	QPSK	36	0	Bottom Face	0mm	Amphenol	ON	26865	831.5	14.31	14.50	1.045	0.06	1.020	1.066
	LTE Band 26_Main	15M	QPSK	75	0	Bottom Face	0mm	Amphenol	ON	26865	831.5	14.34	14.50	1.038	0.05	1.010	1.048
	LTE Band 26_Main	15M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	26865	831.5	14.49	14.50	1.002	0.1	0.138	0.138
	LTE Band 26_Main	15M	QPSK	36	0	Edge 1	0mm	Amphenol	ON	26865	831.5	14.31	14.50	1.045	0.14	0.127	0.133
	LTE Band 26_Main	15M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	26865	831.5	14.49	14.50	1.002	-0.06	0.595	0.596
	LTE Band 26_Main	15M	QPSK	36	0	Edge 2	0mm	Amphenol	ON	26865	831.5	14.31	14.50	1.045	-0.03	0.583	0.609
	LTE Band 26_Main	15M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	26865	831.5	23.73	25.00	1.340	-0.14	0.104	0.139
	LTE Band 26_Main	15M	QPSK	36	0	Bottom of Laptop	29mm	Amphenol	OFF	26865	831.5	22.72	24.00	1.343	0.01	0.091	0.122
	LTE Band 26_Main	15M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	26865	831.5	23.73	25.00	1.340	0	0.001	0.001
	LTE Band 26_Main	15M	QPSK	36	0	Bottom Face	34mm	Amphenol	OFF	26865	831.5	22.72	24.00	1.343	0	0.001	0.001
	LTE Band 26_Main	15M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	26865	831.5	23.73	25.00	1.340	0	0.001	0.001
	LTE Band 26_Main	15M	QPSK	36	0	Edge 1	24mm	Amphenol	OFF	26865	831.5	22.72	24.00	1.343	0	0.001	0.001
	LTE Band 26_Main	15M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	26865	831.5	23.73	25.00	1.340	-0.12	0.469	0.628
	LTE Band 26_Main	15M	QPSK	36	0	Edge 2	6mm	Amphenol	OFF	26865	831.5	22.72	24.00	1.343	0.09	0.412	0.553
	LTE Band 26_Main	15M	QPSK	1	0	Edge 3	0mm	Amphenol	OFF	26865	831.5	23.73	25.00	1.340	0	0.001	0.001
	LTE Band 26_Main	15M	QPSK	36	0	Edge 3	0mm	Amphenol	OFF	26865	831.5	22.72	24.00	1.343	0	0.001	0.001
	LTE Band 26_Main	15M	QPSK	1	0	Edge 4	0mm	Amphenol	OFF	26865	831.5	23.73	25.00	1.340	0	0.001	0.001
	LTE Band 26_Main	15M	QPSK	36	0	Edge 4	0mm	Amphenol	OFF	26865	831.5	22.72	24.00	1.343	0	0.001	0.001
	LTE Band 5B_Main	10M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	20575	841.5	13.12	14.50	1.374	-0.03	0.675	0.927
	LTE Band 26_Main	15M	QPSK	36	0	Bottom Face	0mm	NVC	ON	26865	831.5	14.31	14.50	1.045	-0.07	0.976	1.020
	LTE Band 30_Main	10M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	27710	2310	11.15	11.50	1.084	0.14	0.358	0.388
	LTE Band 30_Main	10M	QPSK	25	0	Bottom of Laptop	0mm	Amphenol	ON	27710	2310	10.88	11.50	1.153	-0.11	0.342	0.394
	LTE Band 30_Main	10M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	27710	2310	11.15	11.50	1.084	0.03	0.979	1.061
	LTE Band 30_Main	10M	QPSK	25	0	Bottom Face	0mm	Amphenol	ON	27710	2310	10.88	11.50	1.153	0.09	0.948	1.093
	LTE Band 30_Main	10M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	27710	2310	10.88	11.50	1.153	0.01	0.954	1.100
	LTE Band 30_Main	10M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	27710	2310	11.15	11.50	1.084	0.17	0.168	0.182
	LTE Band 30_Main	10M	QPSK	25	0	Edge 1	0mm	Amphenol	ON	27710	2310	10.88	11.50	1.153	-0.07	0.161	0.186
	LTE Band 30_Main	10M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	27710	2310	11.15	11.50	1.084	0.04	0.193	0.209
	LTE Band 30_Main	10M	QPSK	25	0	Edge 2	0mm	Amphenol	ON	27710	2310	10.88	11.50	1.153	0.02	0.279	0.322
	LTE Band 30_Main	10M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	27710	2310	21.86	23.00	1.300	0.12	0.084	0.109
	LTE Band 30_Main	10M	QPSK	25	0	Bottom of Laptop	29mm	Amphenol	OFF	27710	2310	20.77	22.00	1.327	0.14	0.072	0.096
	LTE Band 30_Main	10M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	27710	2310	21.86	23.00	1.300	0.13	0.059	0.077
	LTE Band 30_Main	10M	QPSK	25	0	Bottom Face	34mm	Amphenol	OFF	27710	2310	20.77	22.00	1.327	0.06	0.051	0.068
	LTE Band 30_Main	10M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	27710	2310	21.86	23.00	1.300	0.18	0.074	0.096
	LTE Band 30_Main	10M	QPSK	25	0	Edge 1	24mm	Amphenol	OFF	27710	2310	20.77	22.00	1.327	-0.09	0.065	0.086
	LTE Band 30_Main	10M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	27710	2310	21.86	23.00	1.300	-0.11	0.157	0.204
	LTE Band 30_Main	10M	QPSK	25	0	Edge 2	6mm	Amphenol	OFF	27710	2310	20.77	22.00	1.327	0.01	0.131	0.174
	LTE Band 30_Main	10M	QPSK	50	0	Bottom Face	0mm	NVC	ON	27710	2310	10.88	11.50	1.153	0.07	0.735	0.848
	LTE Band 30_MIMO 2	10M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	27710	2310	10.46	10.50	1.009	0.04	0.219	0.221
	LTE Band 30_MIMO 2	10M	QPSK	25	0	Bottom of Laptop	0mm	Amphenol	ON	27710	2310	9.98	10.50	1.127	0.05	0.210	0.237
	LTE Band 30_MIMO 2	10M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	27710	2310	10.46	10.50	1.009	-0.13	0.857	0.865
	LTE Band 30_MIMO 2	10M	QPSK	25	0	Bottom Face	0mm	Amphenol	ON	27710	2310	9.98	10.50	1.127	0.05	0.876	0.987
	LTE Band 30_MIMO 2	10M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	27710	2310	10.02	10.50	1.117	-0.02	0.864	0.965
	LTE Band 30_MIMO 2	10M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	27710	2310	10.46	10.50	1.009	-0.06	1.080	1.090
	LTE Band 30_MIMO 2	10M	QPSK	25	0	Edge 4	0mm	Amphenol	ON	27710	2310	9.98	10.50	1.127	-0.05	1.020	1.150
10	LTE Band 30_MIMO 2	10M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	27710	2310	10.02	10.50	1.117	-0.11	1.070	1.195
	LTE Band 30_MIMO 2	10M	QPSK	1	0	Bottom of Laptop	22mm	Amphenol	OFF	27710	2310	21.91	23.00	1.285	0.16	0.186	0.239
	LTE Band 30_MIMO 2	10M	QPSK	25	0	Bottom of Laptop	22mm	Amphenol	OFF	27710	2310	20.96	22.00	1.271	0.13	0.153	0.194
	LTE Band 30_MIMO 2	10M	QPSK	1	0	Bottom Face	24mm	Amphenol	OFF	27710	2310	21.91	23.00	1.285	0.03	0.203	0.261
	LTE Band 30_MIMO 2	10M	QPSK	25	0	Bottom Face	24mm	Amphenol	OFF	27710	2310	20.96	22.00	1.271	0.07	0.167	0.212
	LTE Band 30_MIMO 2	10M	QPSK	1	0	Edge 1	0mm	Amphenol	OFF	27710	2310	21.91	23.00	1.285	-0.17	0.203	0.261
	LTE Band 30_MIMO 2	10M	QPSK	25	0	Edge 1	0mm	Amphenol	OFF	27710	2310	20.96	22.00	1.271	-0.01	0.162	0.206
	LTE Band 30_MIMO 2	10M	QPSK	1	0	Edge 4	22mm	Amphenol	OFF	27710	2310	21.91	23.00	1.285	0.19	0.303	0.389
	LTE Band 30_MIMO 2	10M	QPSK	25	0	Edge 4	22mm	Amphenol	OFF	27710	2310	20.96	22.00	1.271	0.09	0.258	0.328
	LTE Band 30_MIMO 2	10M	QPSK	50	0	Edge 4	0mm	NVC	ON	27710	2310	10.02	10.50	1.117	-0.1	0.665	0.743



# FCC SAR TEST REPORT

Report No. : FA190605

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 66_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	132322	1745	13.46	13.50	1.009	0.02	0.398	0.402
	LTE Band 66_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	132322	1745	13.36	13.50	1.033	-0.12	0.394	0.407
	LTE Band 66_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132322	1745	13.46	13.50	1.009	-0.14	1.090	1.100
	LTE Band 66_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132072	1720	13.32	13.50	1.042	-0.16	1.030	1.074
	LTE Band 66_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132572	1770	13.41	13.50	1.021	-0.12	1.090	1.113
	LTE Band 66_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	132322	1745	13.36	13.50	1.033	-0.05	1.140	1.177
	LTE Band 66_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	132072	1720	13.28	13.50	1.052	-0.06	1.060	1.115
11	LTE Band 66_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	132572	1770	13.32	13.50	1.042	-0.09	1.150	1.199
	LTE Band 66_Main	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	132322	1745	13.39	13.50	1.026	-0.12	1.150	1.179
	LTE Band 66_Main	20M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	132322	1745	13.46	13.50	1.009	0	0.335	0.338
	LTE Band 66_Main	20M	QPSK	50	0	Edge 1	0mm	Amphenol	ON	132322	1745	13.36	13.50	1.033	-0.14	0.332	0.343
	LTE Band 66_Main	20M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	132322	1745	13.46	13.50	1.009	0.16	0.124	0.125
	LTE Band 66_Main	20M	QPSK	50	0	Edge 2	0mm	Amphenol	ON	132322	1745	13.36	13.50	1.033	-0.06	0.122	0.126
	LTE Band 66_Main	20M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	132072	1720	22.80	24.00	1.318	0.15	0.101	0.133
	LTE Band 66_Main	20M	QPSK	50	0	Bottom of Laptop	29mm	Amphenol	OFF	132072	1720	21.79	23.00	1.321	0.11	0.089	0.118
	LTE Band 66_Main	20M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	132072	1720	22.80	24.00	1.318	0.06	0.074	0.098
	LTE Band 66_Main	20M	QPSK	50	0	Bottom Face	34mm	Amphenol	OFF	132072	1720	21.79	23.00	1.321	0.07	0.064	0.085
	LTE Band 66_Main	20M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	132072	1720	22.80	24.00	1.318	0.13	0.100	0.132
	LTE Band 66_Main	20M	QPSK	50	0	Edge 1	24mm	Amphenol	OFF	132072	1720	21.79	23.00	1.321	-0.04	0.087	0.115
	LTE Band 66_Main	20M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	132072	1720	22.80	24.00	1.318	-0.18	0.053	0.070
	LTE Band 66_Main	20M	QPSK	50	0	Edge 2	6mm	Amphenol	OFF	132072	1720	21.79	23.00	1.321	0.04	0.046	0.061
	LTE Band 66B_Main	15M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132322	1745	12.18	13.50	1.355	-0.03	0.842	1.141
	LTE Band 66B_Main	15M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132047	1717.5	11.95	13.50	1.429	0.06	0.803	1.147
	LTE Band 66B_Main	15M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132597	1772.5	12.15	13.50	1.365	0.01	0.822	1.122
	LTE Band 66C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132322	1745	11.79	13.50	1.483	-0.06	0.782	1.159
	LTE Band 66C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132072	1720	11.51	13.50	1.581	-0.12	0.741	1.172
	LTE Band 66C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132572	1770	11.74	13.50	1.500	0.09	0.771	1.156
	LTE Band 66_Main	20M	QPSK	50	0	Bottom Face	0mm	NVC	ON	132572	1770	13.32	13.50	1.042	-0.08	0.875	0.912
	LTE Band 66_Main	20M	QPSK	50	0	Bottom Face	0mm	NVC	ON	132322	1745	13.36	13.50	1.033	-0.01	0.871	0.900
	LTE Band 66_Main	20M	QPSK	50	0	Bottom Face	0mm	NVC	ON	132072	1720	13.28	13.50	1.052	-0.05	0.795	0.836
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	132322	1745	12.98	13.00	1.005	-0.15	0.381	0.383
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	132322	1745	12.76	13.00	1.057	-0.03	0.353	0.373
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132322	1745	12.98	13.00	1.005	0.1	0.952	0.956
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132072	1720	12.94	13.00	1.014	-0.13	0.936	0.949
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	132572	1770	12.76	13.00	1.057	0.16	0.911	0.963
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	132322	1745	12.76	13.00	1.057	-0.02	1.050	1.110
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	132072	1720	12.73	13.00	1.064	0.09	1.040	1.107
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	132572	1770	12.67	13.00	1.079	-0.05	1.000	1.079
	LTE Band 66_MIMO 2	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	132322	1745	12.66	13.00	1.081	0.07	1.010	1.092
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	132322	1745	12.98	13.00	1.005	-0.15	1.160	1.165
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	132072	1720	12.94	13.00	1.014	-0.09	1.140	1.156
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	132572	1770	12.76	13.00	1.057	-0.03	1.110	1.173
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	132322	1745	12.76	13.00	1.057	-0.02	1.130	1.194
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	132072	1720	12.73	13.00	1.064	-0.18	1.120	1.192
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	132572	1770	12.67	13.00	1.079	-0.18	1.080	1.165
	LTE Band 66_MIMO 2	20M	QPSK	100	0	Edge 4	0mm	Amphenol	ON	132322	1745	12.66	13.00	1.081	-0.16	1.090	1.179
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Bottom of Laptop	22mm	Amphenol	OFF	132322	1745	22.90	24.00	1.288	-0.11	0.249	0.321
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Bottom of Laptop	22mm	Amphenol	OFF	132322	1745	21.86	23.00	1.300	0.01	0.201	0.261
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Bottom Face	24mm	Amphenol	OFF	132322	1745	22.90	24.00	1.288	-0.08	0.139	0.179
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Bottom Face	24mm	Amphenol	OFF	132322	1745	21.86	23.00	1.300	-0.05	0.108	0.140
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Edge 1	0mm	Amphenol	OFF	132322	1745	22.90	24.00	1.288	0.11	0.192	0.247
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Edge 1	0mm	Amphenol	OFF	132322	1745	21.86	23.00	1.300	0.03	0.151	0.196
	LTE Band 66_MIMO 2	20M	QPSK	1	0	Edge 4	22mm	Amphenol	OFF	132322	1745	22.90	24.00	1.288	0	0.249	0.321
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Edge 4	22mm	Amphenol	OFF	132322	1745	21.86	23.00	1.300	0.09	0.205	0.267
	LTE Band 66B_MIMO 2	15M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	132322	1745	11.55	13.00	1.396	0.03	0.786	1.098
	LTE Band 66B_MIMO 2	15M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	132047	1717.5	11.25	13.00	1.496	0.09	0.745	1.115
	LTE Band 66B_MIMO 2	15M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	132597	1772.5	11.53	13.00	1.403	-0.14	0.771	1.082
	LTE Band 66C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	132322	1745	11.27	13.00	1.489	-0.05	0.710	1.057
	LTE Band 66C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	132072	1720	11.08	13.00	1.556	0.01	0.654	1.018
	LTE Band 66C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	132572	1770	11.24	13.00	1.500	0.19	0.672	1.008
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	NVC	ON	132322	1745	12.76	13.00	1.057	-0.08	0.884	0.934
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	NVC	ON	132072	1720	12.73	13.00	1.064	-0.18	0.930	0.990
	LTE Band 66_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	NVC	ON	132572	1770	12.67	13.00	1.079	0	0.837	0.903



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 71_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	133322	683	13.78	14.00	1.052	-0.12	0.112	0.118
	LTE Band 71_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	133322	683	13.60	14.00	1.096	0.13	0.129	0.141
	LTE Band 71_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	133322	683	13.78	14.00	1.052	0.13	0.570	0.600
	LTE Band 71_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	133322	683	13.60	14.00	1.096	-0.12	0.581	0.637
	LTE Band 71_Main	20M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	133322	683	13.78	14.00	1.052	-0.16	0.108	0.114
	LTE Band 71_Main	20M	QPSK	50	0	Edge 1	0mm	Amphenol	ON	133322	683	13.60	14.00	1.096	0.06	0.152	0.167
	LTE Band 71_Main	20M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	133322	683	13.78	14.00	1.052	-0.01	0.912	0.959
12	LTE Band 71_Main	20M	QPSK	50	0	Edge 2	0mm	Amphenol	ON	133322	683	13.60	14.00	1.096	0	0.918	1.007
	LTE Band 71_Main	20M	QPSK	100	0	Edge 2	0mm	Amphenol	ON	133322	683	13.67	14.00	1.079	0	0.916	0.988
	LTE Band 71_Main	20M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	133322	683	23.88	25.00	1.294	-0.17	0.053	0.069
	LTE Band 71_Main	20M	QPSK	50	0	Bottom of Laptop	29mm	Amphenol	OFF	133322	683	22.97	24.00	1.268	0.06	0.045	0.057
	LTE Band 71_Main	20M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	133322	683	23.88	25.00	1.294	0	0.001	0.001
	LTE Band 71_Main	20M	QPSK	50	0	Bottom Face	34mm	Amphenol	OFF	133322	683	22.97	24.00	1.268	0	0.001	0.001
	LTE Band 71_Main	20M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	133322	683	23.88	25.00	1.294	0	0.001	0.001
	LTE Band 71_Main	20M	QPSK	50	0	Edge 1	24mm	Amphenol	OFF	133322	683	22.97	24.00	1.268	0	0.001	0.001
	LTE Band 71_Main	20M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	133322	683	23.88	25.00	1.294	-0.1	0.269	0.348
	LTE Band 71_Main	20M	QPSK	50	0	Edge 2	6mm	Amphenol	OFF	133322	683	22.97	24.00	1.268	0.14	0.231	0.293
	LTE Band 71_Main	20M	QPSK	1	0	Edge 3	0mm	Amphenol	OFF	133322	683	23.88	25.00	1.294	0	0.001	0.001
	LTE Band 71_Main	20M	QPSK	50	0	Edge 3	0mm	Amphenol	OFF	133322	683	22.97	24.00	1.268	0	0.001	0.001
	LTE Band 71_Main	20M	QPSK	1	0	Edge 4	0mm	Amphenol	OFF	133322	683	23.88	25.00	1.294	0	0.001	0.001
	LTE Band 71_Main	20M	QPSK	50	0	Edge 4	0mm	Amphenol	OFF	133322	683	22.97	24.00	1.268	0	0.001	0.001
	LTE Band 71_Main	20M	QPSK	50	0	Edge 2	0mm	NVC	ON	133322	683	13.60	14.00	1.096	0.03	0.750	0.822



<TDD LTE SAR>

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 38_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	38000	2595	11.33	12.50	1.309	62.9	1.006	0.11	0.278	0.366
	LTE Band 38_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	38000	2595	11.32	12.50	1.312	62.9	1.006	0.07	0.242	0.319
13	LTE Band 38_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	38000	2595	11.33	12.50	1.309	62.9	1.006	-0.02	0.860	1.133
	LTE Band 38_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	38000	2595	11.32	12.50	1.312	62.9	1.006	-0.15	0.825	1.089
	LTE Band 38_Main	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	38000	2595	11.25	12.50	1.334	62.9	1.006	-0.16	0.806	1.081
	LTE Band 38_Main	20M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	38000	2595	11.33	12.50	1.309	62.9	1.006	0.01	0.244	0.321
	LTE Band 38_Main	20M	QPSK	50	0	Edge 1	0mm	Amphenol	ON	38000	2595	11.32	12.50	1.312	62.9	1.006	0.11	0.215	0.284
	LTE Band 38_Main	20M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	38000	2595	11.33	12.50	1.309	62.9	1.006	-0.05	0.017	0.022
	LTE Band 38_Main	20M	QPSK	50	0	Edge 2	0mm	Amphenol	ON	38000	2595	11.32	12.50	1.312	62.9	1.006	0.1	0.016	0.021
	LTE Band 38_Main	20M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	38000	2595	22.57	24.00	1.390	62.9	1.006	-0.04	0.150	0.210
	LTE Band 38_Main	20M	QPSK	50	0	Bottom of Laptop	29mm	Amphenol	OFF	38000	2595	21.53	23.00	1.403	62.9	1.006	0.06	0.134	0.189
	LTE Band 38_Main	20M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	38000	2595	22.57	24.00	1.390	62.9	1.006	0.18	0.222	0.310
	LTE Band 38_Main	20M	QPSK	50	0	Bottom Face	34mm	Amphenol	OFF	38000	2595	21.53	23.00	1.403	62.9	1.006	0.01	0.202	0.285
	LTE Band 38_Main	20M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	38000	2595	22.57	24.00	1.390	62.9	1.006	-0.01	0.168	0.235
	LTE Band 38_Main	20M	QPSK	50	0	Edge 1	24mm	Amphenol	OFF	38000	2595	21.53	23.00	1.403	62.9	1.006	0.14	0.150	0.212
	LTE Band 38_Main	20M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	38000	2595	22.57	24.00	1.390	62.9	1.006	-0.15	0.104	0.145
	LTE Band 38_Main	20M	QPSK	50	0	Edge 2	6mm	Amphenol	OFF	38000	2595	21.53	23.00	1.403	62.9	1.006	0.02	0.191	0.270
	LTE Band 38C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	37901	2585.1	11.60	13.50	1.549	62.9	1.006	0.12	0.715	1.114
	LTE Band 38C_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	38000	2595	11.33	12.50	1.309	62.9	1.006	0.05	0.586	0.772
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	39750	2506	12.49	12.50	1.002	62.9	1.006	-0.02	0.117	0.118
	LTE Band 41_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	39750	2506	12.45	12.50	1.012	62.9	1.006	-0.17	0.115	0.117
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	39750	2506	12.49	12.50	1.002	62.9	1.006	-0.04	0.862	0.869
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	40185	2549.5	11.66	12.50	1.213	62.9	1.006	-0.03	0.853	1.041
14	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	40620	2593	11.85	12.50	1.161	62.9	1.006	-0.05	0.954	1.115
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	41055	2636.5	12.25	12.50	1.059	62.9	1.006	-0.01	0.798	0.850
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	41490	2680	11.60	12.50	1.230	62.9	1.006	0	0.842	1.042
	LTE Band 41_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	39750	2506	12.45	12.50	1.012	62.9	1.006	-0.03	0.863	0.878
	LTE Band 41_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	40185	2549.5	11.76	12.50	1.186	62.9	1.006	-0.07	0.909	1.084
	LTE Band 41_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	40620	2593	11.84	12.50	1.164	62.9	1.006	-0.06	0.946	1.108
	LTE Band 41_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	41055	2636.5	12.21	12.50	1.069	62.9	1.006	0.02	0.812	0.873
	LTE Band 41_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	41490	2680	11.69	12.50	1.205	62.9	1.006	-0.02	0.870	1.055
	LTE Band 41_Main	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	39750	2506	12.22	12.50	1.067	62.9	1.006	-0.03	0.839	0.900
	LTE Band 41_Main	20M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	39750	2506	12.49	12.50	1.002	62.9	1.006	0.01	0.087	0.088
	LTE Band 41_Main	20M	QPSK	50	0	Edge 1	0mm	Amphenol	ON	39750	2506	12.45	12.50	1.012	62.9	1.006	0.1	0.094	0.096
	LTE Band 41_Main	20M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	39750	2506	12.49	12.50	1.002	62.9	1.006	0.07	0.027	0.027
	LTE Band 41_Main	20M	QPSK	50	0	Edge 2	0mm	Amphenol	ON	39750	2506	12.45	12.50	1.012	62.9	1.006	0.08	0.028	0.028
	LTE Band 41_Main	20M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	39750	2506	21.86	22.00	1.033	62.9	1.006	0.18	0.077	0.080
	LTE Band 41_Main	20M	QPSK	50	0	Bottom of Laptop	29mm	Amphenol	OFF	39750	2506	20.66	21.00	1.081	62.9	1.006	0.02	0.068	0.074
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	39750	2506	21.86	22.00	1.033	62.9	1.006	0.02	0.043	0.045
	LTE Band 41_Main	20M	QPSK	50	0	Bottom Face	34mm	Amphenol	OFF	39750	2506	20.66	21.00	1.081	62.9	1.006	0.11	0.036	0.039
	LTE Band 41_Main	20M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	39750	2506	21.86	22.00	1.033	62.9	1.006	-0.11	0.081	0.084
	LTE Band 41_Main	20M	QPSK	50	0	Edge 1	24mm	Amphenol	OFF	39750	2506	20.66	21.00	1.081	62.9	1.006	0.09	0.070	0.076
	LTE Band 41_Main	20M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	39750	2506	21.86	22.00	1.033	62.9	1.006	-0.14	0.051	0.053
	LTE Band 41_Main	20M	QPSK	50	0	Edge 2	6mm	Amphenol	OFF	39750	2506	20.66	21.00	1.081	62.9	1.006	0.13	0.043	0.047
	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	39750	2506	12.48	12.50	1.005	42.9	1.009	0.03	0.766	0.776
	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	40185	2549.5	11.51	12.50	1.256	42.9	1.009	0.09	0.613	0.777
	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	40620	2593	11.65	12.50	1.216	42.9	1.009	-0.02	0.656	0.805
	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	41055	2636.5	12.00	12.50	1.122	42.9	1.009	0.06	0.706	0.799
	LTE Band 41_HPUE_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	41490	2680	11.52	12.50	1.253	42.9	1.009	0.03	0.626	0.792
	LTE Band 41C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	41055	2636.5	10.02	10.50	1.117	62.9	1.006	-0.05	0.901	1.012
	LTE Band 41C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	39750	2506	9.86	10.50	1.159	62.9	1.006	-0.12	0.881	1.027
	LTE Band 41C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	40185	2549.5	8.93	10.50	1.435	62.9	1.006	-0.08	0.744	1.074
	LTE Band 41C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	40620	2593	9.07	10.50	1.390	62.9	1.006	0.08	0.759	1.061
	LTE Band 41C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	41490	2680	9.39	10.50	1.291	62.9	1.006	0.16	0.795	1.033
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	40620	2593	11.85	12.50	1.161	62.9	1.006	-0.14	0.762	0.890
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	39750	2506	12.49	12.50	1.002	62.9	1.006	0.07	0.802	0.809
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	40185	2549.5	11.66	12.50	1.213	62.9	1.006	0.15	0.735	0.897
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	41055	2636.5	12.25	12.50	1.059	62.9	1.006	-0.11	0.764	0.814
	LTE Band 41_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	41490	2680	11.60	12.50	1.230	62.9	1.006	-0.15	0.744	0.921



Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	39750	2506	11.18	11.50	1.076	62.9	1.006	-0.02	0.148	0.160
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	39750	2506	11.11	11.50	1.094	62.9	1.006	0.15	0.153	0.168
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	40185	2549.5	11.09	11.50	1.099	62.9	1.006	0.11	0.817	0.903
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	40620	2593	11.17	11.50	1.079	62.9	1.006	0.12	0.879	0.954
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	41055	2636.5	11.00	11.50	1.122	62.9	1.006	0.11	0.862	0.973
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	41490	2680	11.07	11.50	1.104	62.9	1.006	0.07	0.854	0.949
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	39750	2506	11.11	11.50	1.094	62.9	1.006	0.07	0.835	0.919
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	40185	2549.5	11.08	11.50	1.102	62.9	1.006	0.1	0.855	0.947
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	40620	2593	11.10	11.50	1.096	62.9	1.006	0.03	0.874	0.964
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	41055	2636.5	10.97	11.50	1.130	62.9	1.006	0.1	0.859	0.976
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	41490	2680	11.03	11.50	1.114	62.9	1.006	0.05	0.859	0.963
	LTE Band 41_MIMO 2	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	39750	2506	11.15	11.50	1.084	62.9	1.006	0.08	0.832	0.907
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	39750	2506	11.18	11.50	1.076	62.9	1.006	-0.18	0.784	0.849
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	40185	2549.5	11.09	11.50	1.099	62.9	1.006	-0.14	0.850	0.940
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	40620	2593	11.17	11.50	1.079	62.9	1.006	-0.17	0.869	0.943
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	41055	2636.5	11.00	11.50	1.122	62.9	1.006	-0.07	0.848	0.957
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	41490	2680	11.07	11.50	1.104	62.9	1.006	-0.07	0.894	0.993
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	39750	2506	11.11	11.50	1.094	62.9	1.006	0.01	0.816	0.898
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	40185	2549.5	11.08	11.50	1.102	62.9	1.006	0.02	0.877	0.972
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	40620	2593	11.10	11.50	1.096	62.9	1.006	-0.18	0.885	0.976
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	41055	2636.5	10.97	11.50	1.130	62.9	1.006	-0.07	0.869	0.988
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Edge 4	0mm	Amphenol	ON	41490	2680	11.03	11.50	1.114	62.9	1.006	-0.13	0.875	0.981
	LTE Band 41_MIMO 2	20M	QPSK	100	0	Edge 4	0mm	Amphenol	ON	39750	2506	11.15	11.50	1.084	62.9	1.006	-0.15	0.820	0.894
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Bottom of Laptop	22mm	Amphenol	OFF	39750	2506	22.74	24.00	1.337	62.9	1.006	0.07	0.255	0.343
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Bottom of Laptop	22mm	Amphenol	OFF	39750	2506	21.74	23.00	1.337	62.9	1.006	-0.15	0.233	0.313
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Bottom Face	24mm	Amphenol	OFF	39750	2506	22.74	24.00	1.337	62.9	1.006	0.02	0.697	0.937
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Bottom Face	24mm	Amphenol	OFF	39750	2506	21.74	23.00	1.337	62.9	1.006	0.08	0.646	0.869
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 1	0mm	Amphenol	OFF	39750	2506	22.74	24.00	1.337	62.9	1.006	0.08	0.229	0.308
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Edge 1	0mm	Amphenol	OFF	39750	2506	21.74	23.00	1.337	62.9	1.006	0.05	0.184	0.247
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	22mm	Amphenol	OFF	39750	2506	22.74	24.00	1.337	62.9	1.006	0.04	0.328	0.441
	LTE Band 41_MIMO 2	20M	QPSK	50	0	Edge 4	22mm	Amphenol	OFF	39750	2506	21.74	23.00	1.337	62.9	1.006	-0.13	0.309	0.415
	LTE Band 41_HPUE_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	40620	2593	11.04	11.50	1.112	42.9	1.009	-0.15	0.554	0.621
	LTE Band 41_HPUE_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	39750	2506	10.88	11.50	1.153	42.9	1.009	0.05	0.544	0.633
	LTE Band 41_HPUE_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	40185	2549.5	10.89	11.50	1.151	42.9	1.009	-0.15	0.511	0.593
	LTE Band 41_HPUE_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	41055	2636.5	10.76	11.50	1.186	42.9	1.009	0.12	0.519	0.621
	LTE Band 41_HPUE_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	41490	2680	10.85	11.50	1.161	42.9	1.009	-0.17	0.502	0.588
	LTE Band 41C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	40620	2593	11.43	11.50	1.016	62.9	1.006	-0.1	0.788	0.806
	LTE Band 41C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	39750	2506	11.03	11.50	1.114	62.9	1.006	-0.15	0.744	0.834
	LTE Band 41C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	40185	2549.5	11.00	11.50	1.122	62.9	1.006	-0.08	0.731	0.825
	LTE Band 41C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	41055	2636.5	11.34	11.50	1.038	62.9	1.006	0.12	0.766	0.800
	LTE Band 41C_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	Amphenol	ON	41490	2680	11.20	11.50	1.072	62.9	1.006	-0.07	0.751	0.810
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	NVC	ON	41490	2680	11.07	11.50	1.104	62.9	1.006	-0.09	0.753	0.836
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	NVC	ON	39750	2506	11.18	11.50	1.076	62.9	1.006	0.06	0.666	0.722
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	NVC	ON	40185	2549.5	11.09	11.50	1.099	62.9	1.006	0.06	0.723	0.799
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	NVC	ON	40620	2593	11.17	11.50	1.079	62.9	1.006	-0.03	0.739	0.802
	LTE Band 41_MIMO 2	20M	QPSK	1	0	Edge 4	0mm	NVC	ON	41055	2636.5	11.00	11.50	1.122	62.9	1.006	-0.12	0.721	0.814





# FCC SAR TEST REPORT

Report No. : FA190605

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	LTE Band 48_Main	20M	QPSK	1	0	Bottom of Laptop	0mm	Amphenol	ON	56640	3690	11.05	11.50	1.109	62.9	1.006	0.12	0.186	0.208
	LTE Band 48_Main	20M	QPSK	50	0	Bottom of Laptop	0mm	Amphenol	ON	56640	3690	10.89	11.50	1.151	62.9	1.006	-0.16	0.153	0.177
	LTE Band 48_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	56640	3690	11.05	11.50	1.109	62.9	1.006	0.13	0.772	0.861
	LTE Band 48_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	55340	3560	10.44	11.50	1.276	62.9	1.006	0.08	0.777	0.998
15	LTE Band 48_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	55830	3609	10.67	11.50	1.211	62.9	1.006	-0.08	0.981	1.195
	LTE Band 48_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	56150	3641	10.82	11.50	1.169	62.9	1.006	-0.1	0.844	0.993
	LTE Band 48_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	56640	3690	10.89	11.50	1.151	62.9	1.006	0.12	0.835	0.967
	LTE Band 48_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	55340	3560	10.40	11.50	1.288	62.9	1.006	-0.12	0.765	0.991
	LTE Band 48_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	55830	3609	10.50	11.50	1.259	62.9	1.006	0.17	0.775	0.982
	LTE Band 48_Main	20M	QPSK	50	0	Bottom Face	0mm	Amphenol	ON	56150	3641	10.71	11.50	1.199	62.9	1.006	-0.08	0.782	0.944
	LTE Band 48_Main	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	56640	3690	11.00	11.50	1.122	62.9	1.006	0.08	0.805	0.909
	LTE Band 48_Main	20M	QPSK	1	0	Edge 1	0mm	Amphenol	ON	56640	3690	11.05	11.50	1.109	62.9	1.006	0.16	0.181	0.202
	LTE Band 48_Main	20M	QPSK	50	0	Edge 1	0mm	Amphenol	ON	56640	3690	10.89	11.50	1.151	62.9	1.006	-0.03	0.156	0.181
	LTE Band 48_Main	20M	QPSK	1	0	Edge 2	0mm	Amphenol	ON	56640	3690	11.05	11.50	1.109	62.9	1.006	0.01	0.035	0.039
	LTE Band 48_Main	20M	QPSK	50	0	Edge 2	0mm	Amphenol	ON	56640	3690	10.89	11.50	1.151	62.9	1.006	-0.12	0.028	0.032
	LTE Band 48_Main	20M	QPSK	1	0	Bottom of Laptop	29mm	Amphenol	OFF	56150	3641	19.25	21.00	1.496	62.9	1.006	0.06	0.065	0.098
	LTE Band 48_Main	20M	QPSK	50	0	Bottom of Laptop	29mm	Amphenol	OFF	56150	3641	18.33	20.00	1.469	62.9	1.006	0.01	0.055	0.081
	LTE Band 48_Main	20M	QPSK	1	0	Bottom Face	34mm	Amphenol	OFF	56150	3641	19.25	21.00	1.496	62.9	1.006	0.03	0.058	0.087
	LTE Band 48_Main	20M	QPSK	50	0	Bottom Face	34mm	Amphenol	OFF	56150	3641	18.33	20.00	1.469	62.9	1.006	-0.08	0.051	0.075
	LTE Band 48_Main	20M	QPSK	1	0	Edge 1	24mm	Amphenol	OFF	56150	3641	19.25	21.00	1.496	62.9	1.006	-0.05	0.261	0.393
	LTE Band 48_Main	20M	QPSK	50	0	Edge 1	24mm	Amphenol	OFF	56150	3641	18.33	20.00	1.469	62.9	1.006	0.13	0.233	0.344
	LTE Band 48_Main	20M	QPSK	1	0	Edge 2	6mm	Amphenol	OFF	56150	3641	19.25	21.00	1.496	62.9	1.006	0.18	0.091	0.137
	LTE Band 48_Main	20M	QPSK	50	0	Edge 2	6mm	Amphenol	OFF	56150	3641	18.33	20.00	1.469	62.9	1.006	0.08	0.084	0.124
	LTE Band 48C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	56640	3690	11.24	11.50	1.062	62.9	1.006	0.06	0.961	1.026
	LTE Band 48C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	55340	3560	10.00	11.50	1.413	62.9	1.006	-0.1	0.819	1.164
	LTE Band 48C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	55830	3609	10.57	11.50	1.239	62.9	1.006	-0.12	0.892	1.112
	LTE Band 48C_Main	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	56150	3641	10.91	11.50	1.146	62.9	1.006	-0.06	0.916	1.056
	LTE Band 48_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	55830	3609	10.67	11.50	1.211	62.9	1.006	0.02	0.510	0.621
	LTE Band 48_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	56640	3690	11.05	11.50	1.109	62.9	1.006	0.18	0.471	0.526
	LTE Band 48_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	55340	3560	10.44	11.50	1.276	62.9	1.006	-0.02	0.506	0.650
	LTE Band 48_Main	20M	QPSK	1	0	Bottom Face	0mm	NVC	ON	56150	3641	10.82	11.50	1.169	62.9	1.006	-0.13	0.505	0.594
	LTE Band 48_MIMO 2	20M	QPSK	1	49	Bottom of Laptop	0mm	Amphenol	ON	55830	3609	9.95	10.50	1.135	62.9	1.006	0.12	0.217	0.248
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Bottom of Laptop	0mm	Amphenol	ON	55830	3609	9.88	10.50	1.153	62.9	1.006	-0.07	0.213	0.247
	LTE Band 48_MIMO 2	20M	QPSK	1	49	Bottom Face	0mm	Amphenol	ON	55830	3609	9.95	10.50	1.135	62.9	1.006	-0.13	0.666	0.760
	LTE Band 48_MIMO 2	20M	QPSK	1	49	Bottom Face	0mm	Amphenol	ON	55340	3560	9.85	10.50	1.161	62.9	1.006	-0.19	0.718	0.839
	LTE Band 48_MIMO 2	20M	QPSK	1	49	Bottom Face	0mm	Amphenol	ON	56150	3641	9.87	10.50	1.156	62.9	1.006	-0.03	0.766	0.891
	LTE Band 48_MIMO 2	20M	QPSK	1	49	Bottom Face	0mm	Amphenol	ON	56640	3690	9.82	10.50	1.169	62.9	1.006	0.11	0.987	1.161
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Bottom Face	0mm	Amphenol	ON	55830	3609	9.88	10.50	1.153	62.9	1.006	-0.03	0.687	0.797
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Bottom Face	0mm	Amphenol	ON	55340	3560	9.85	10.50	1.161	62.9	1.006	-0.02	0.723	0.845
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Bottom Face	0mm	Amphenol	ON	56150	3641	9.79	10.50	1.178	62.9	1.006	0.14	0.773	0.916
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Bottom Face	0mm	Amphenol	ON	56640	3690	9.78	10.50	1.180	62.9	1.006	0.15	0.995	1.181
	LTE Band 48_MIMO 2	20M	QPSK	100	0	Bottom Face	0mm	Amphenol	ON	55830	3609	9.86	10.50	1.159	62.9	1.006	-0.06	0.678	0.790
	LTE Band 48_MIMO 2	20M	QPSK	1	49	Edge 4	0mm	Amphenol	ON	55830	3609	9.95	10.50	1.135	62.9	1.006	-0.13	0.640	0.731
	LTE Band 48_MIMO 2	20M	QPSK	1	49	Edge 4	0mm	Amphenol	ON	55340	3560	9.85	10.50	1.161	62.9	1.006	-0.11	0.681	0.796
	LTE Band 48_MIMO 2	20M	QPSK	1	49	Edge 4	0mm	Amphenol	ON	56150	3641	9.87	10.50	1.156	62.9	1.006	-0.14	0.681	0.792
	LTE Band 48_MIMO 2	20M	QPSK	1	49	Edge 4	0mm	Amphenol	ON	56640	3690	9.82	10.50	1.169	62.9	1.006	-0.11	0.754	0.887
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Edge 4	0mm	Amphenol	ON	55830	3609	9.88	10.50	1.153	62.9	1.006	-0.11	0.722	0.838
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Edge 4	0mm	Amphenol	ON	55340	3560	9.85	10.50	1.161	62.9	1.006	-0.12	0.692	0.809
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Edge 4	0mm	Amphenol	ON	56150	3641	9.79	10.50	1.178	62.9	1.006	-0.13	0.689	0.816
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Edge 4	0mm	Amphenol	ON	56640	3690	9.78	10.50	1.180	62.9	1.006	-0.18	0.770	0.914
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Edge 4	0mm	Amphenol	ON	55830	3609	9.88	10.50	1.153	62.9	1.006	-0.16	0.657	0.762
	LTE Band 48_MIMO 2	20M	QPSK	1	0	Bottom of Laptop	22mm	Amphenol	OFF	56150	3641	20.87	22.00	1.297	62.9	1.006	0.06	0.132	0.172
	LTE Band 48_MIMO 2	20M	QPSK	50	0	Bottom of Laptop	22mm	Amphenol	OFF	56150	3641	19.85	21.00	1.303	62.9	1.006	-0.13	0.118	0.155
	LTE Band 48_MIMO 2	20M	QPSK	1	0	Bottom Face	24mm	Amphenol	OFF	56150	3641	20.87	22.00	1.297	62.9	1.006	-0.08	0.105	0.137
	LTE Band 48_MIMO 2	20M	QPSK	50	0	Bottom Face	24mm	Amphenol	OFF	56150	3641	19.85	21.00	1.303	62.9	1.006	0.11	0.095	0.125
	LTE Band 48_MIMO 2	20M	QPSK	1	0	Edge 1	0mm	Amphenol	OFF	56150	3641	20.87	22.00	1.297	62.9	1.006	0.1	0.129	0.168
	LTE Band 48_MIMO 2	20M	QPSK	50	0	Edge 1	0mm	Amphenol	OFF	56150	3641	19.85	21.00	1.303	62.9	1.006	-0.19	0.103	0.135
	LTE Band 48_MIMO 2	20M	QPSK	1	0	Edge 4	22mm	Amphenol	OFF	56150	3641	20.87	22.00	1.297	62.9	1.006	0.13	0.172	0.224
	LTE Band 48_MIMO 2	20M	QPSK	50	0	Edge 4	22mm	Amphenol	OFF	56150	3641	19.85	21.00	1.303	62.9	1.006	-0.02	0.149	0.195
	LTE Band 48C_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	56640	3690	9.89	10.50	1.151	62.9	1.006	-0.07	0.849	0.983
	LTE Band 48C_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	55340	3560	9.75	10.50	1.189	62.9	1.006	-0.11	0.813	0.972
	LTE Band 48C_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	55830	3609	9.80	10.50	1.175	62.9	1.006	-0.02	0.835	0.987
	LTE Band 48C_MIMO 2	20M	QPSK	1	0	Bottom Face	0mm	Amphenol	ON	56150	3641	9.82	10.50	1.169	62.9	1.006	-0.05	0.841	0.989
	LTE Band 48_MIMO 2	20M	QPSK	50	24	Bottom Face	0mm	NVC	ON	56640	3690	9.78	10.50	1.180	62.9	1.006	-0.11	0.504	0.598



<5G NR SAR>

Table with 17 columns: Plot No., Band, BW (MHz), Modulation, RB Size, RB offset, Test Position, Gap (mm), Antenna Vendor, Power Reduction, Ch., Freq. (MHz), Average Power (dBm), Tune-Up Limit (dBm), Tune-up Scaling Factor, Power Drift (dB), Measured 1g SAR (W/kg), Reported 1g SAR (W/kg). Rows include test data for FR1 n5\_Main, FR1 n7\_Main, and FR1 n7\_MIMO 2 across various test positions and antenna configurations.



# FCC SAR TEST REPORT

Report No. : FA190605

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n25_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	Amphenol	ON	372000	1860	12.12	13.00	1.225	0.03	0.335	0.410
	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	372000	1860	12.09	13.00	1.233	0.04	0.371	0.457
	FR1 n25_Main	20M	BPSK	1	53	Bottom Face	0mm	Amphenol	ON	372000	1860	12.12	13.00	1.225	-0.09	0.752	0.921
	FR1 n25_Main	20M	BPSK	1	53	Bottom Face	0mm	Amphenol	ON	376500	1882.5	12.08	13.00	1.236	-0.08	0.842	1.041
	FR1 n25_Main	20M	BPSK	1	53	Bottom Face	0mm	Amphenol	ON	381000	1905	12.11	13.00	1.227	-0.04	0.867	1.064
	FR1 n25_Main	20M	BPSK	50	28	Bottom Face	0mm	Amphenol	ON	372000	1860	12.09	13.00	1.233	-0.08	0.757	0.933
	FR1 n25_Main	20M	BPSK	50	28	Bottom Face	0mm	Amphenol	ON	376500	1882.5	12.08	13.00	1.236	-0.05	0.827	1.022
18	FR1 n25_Main	20M	BPSK	50	28	Bottom Face	0mm	Amphenol	ON	381000	1905	12.07	13.00	1.239	-0.01	0.885	1.096
	FR1 n25_Main	20M	BPSK	100	0	Bottom Face	0mm	Amphenol	ON	372000	1860	12.05	13.00	1.245	-0.07	0.767	0.955
	FR1 n25_Main	20M	BPSK	1	53	Edge 1	0mm	Amphenol	ON	372000	1860	12.12	13.00	1.225	0.02	0.265	0.325
	FR1 n25_Main	20M	BPSK	50	28	Edge 1	0mm	Amphenol	ON	372000	1860	12.09	13.00	1.233	-0.13	0.294	0.363
	FR1 n25_Main	20M	BPSK	1	53	Edge 2	0mm	Amphenol	ON	372000	1860	12.12	13.00	1.225	-0.14	0.074	0.091
	FR1 n25_Main	20M	BPSK	50	28	Edge 2	0mm	Amphenol	ON	372000	1860	12.09	13.00	1.233	0.13	0.082	0.101
	FR1 n25_Main	20M	BPSK	1	53	Bottom of Laptop	29mm	Amphenol	OFF	372000	1860	23.41	24.00	1.146	0.01	0.091	0.104
	FR1 n25_Main	20M	BPSK	50	28	Bottom of Laptop	29mm	Amphenol	OFF	372000	1860	23.41	24.00	1.146	-0.09	0.080	0.092
	FR1 n25_Main	20M	BPSK	1	53	Bottom Face	34mm	Amphenol	OFF	372000	1860	23.41	24.00	1.146	0.01	0.059	0.068
	FR1 n25_Main	20M	BPSK	50	28	Bottom Face	34mm	Amphenol	OFF	372000	1860	23.41	24.00	1.146	0.02	0.051	0.058
	FR1 n25_Main	20M	BPSK	1	53	Edge 1	24mm	Amphenol	OFF	372000	1860	23.41	24.00	1.146	-0.1	0.062	0.071
	FR1 n25_Main	20M	BPSK	50	28	Edge 1	24mm	Amphenol	OFF	372000	1860	23.41	24.00	1.146	-0.04	0.053	0.061
	FR1 n25_Main	20M	BPSK	1	53	Edge 2	6mm	Amphenol	OFF	372000	1860	23.41	24.00	1.146	0.19	0.080	0.092
	FR1 n25_Main	20M	BPSK	50	28	Edge 2	6mm	Amphenol	OFF	372000	1860	23.41	24.00	1.146	0.12	0.071	0.081
	FR1 n25_Main	20M	BPSK	50	28	Bottom Face	0mm	NVC	ON	381000	1905	12.07	13.00	1.239	-0.12	0.669	0.829
	FR1 n25_Main	20M	BPSK	50	28	Bottom Face	0mm	NVC	ON	372000	1860	12.09	13.00	1.233	0.03	0.582	0.718
	FR1 n25_Main	20M	BPSK	50	28	Bottom Face	0mm	NVC	ON	376500	1882.5	12.08	13.00	1.236	-0.09	0.625	0.772
	FR1 n25_MIMO 2	20M	BPSK	1	53	Bottom of Laptop	0mm	Amphenol	ON	372000	1860	12.66	13.00	1.081	-0.11	0.329	0.356
	FR1 n25_MIMO 2	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	372000	1860	12.64	13.00	1.086	-0.13	0.365	0.397
	FR1 n25_MIMO 2	20M	BPSK	1	53	Bottom Face	0mm	Amphenol	ON	372000	1860	12.66	13.00	1.081	0.08	0.923	0.998
	FR1 n25_MIMO 2	20M	BPSK	1	53	Bottom Face	0mm	Amphenol	ON	376500	1882.5	12.61	13.00	1.094	0.03	0.918	1.004
	FR1 n25_MIMO 2	20M	BPSK	1	53	Bottom Face	0mm	Amphenol	ON	381000	1905	12.62	13.00	1.091	-0.15	0.921	1.005
	FR1 n25_MIMO 2	20M	BPSK	50	28	Bottom Face	0mm	Amphenol	ON	372000	1860	12.64	13.00	1.086	0.19	0.942	1.023
	FR1 n25_MIMO 2	20M	BPSK	50	28	Bottom Face	0mm	Amphenol	ON	376500	1882.5	12.60	13.00	1.096	0.05	0.938	1.028
	FR1 n25_MIMO 2	20M	BPSK	50	28	Bottom Face	0mm	Amphenol	ON	381000	1905	12.63	13.00	1.089	-0.13	0.947	1.031
	FR1 n25_MIMO 2	20M	BPSK	100	0	Bottom Face	0mm	Amphenol	ON	372000	1860	12.50	13.00	1.122	0.04	0.935	1.049
	FR1 n25_MIMO 2	20M	BPSK	1	53	Edge 4	0mm	Amphenol	ON	372000	1860	12.66	13.00	1.081	-0.04	0.924	0.999
	FR1 n25_MIMO 2	20M	BPSK	1	53	Edge 4	0mm	Amphenol	ON	376500	1882.5	12.61	13.00	1.094	-0.17	0.927	1.014
	FR1 n25_MIMO 2	20M	BPSK	1	53	Edge 4	0mm	Amphenol	ON	381000	1905	12.62	13.00	1.091	0.14	0.923	1.007
	FR1 n25_MIMO 2	20M	BPSK	50	28	Edge 4	0mm	Amphenol	ON	372000	1860	12.64	13.00	1.086	0.15	0.917	0.996
	FR1 n25_MIMO 2	20M	BPSK	50	28	Edge 4	0mm	Amphenol	ON	376500	1882.5	12.60	13.00	1.096	-0.08	0.965	1.058
	FR1 n25_MIMO 2	20M	BPSK	50	28	Edge 4	0mm	Amphenol	ON	381000	1905	12.63	13.00	1.089	-0.09	0.959	1.044
	FR1 n25_MIMO 2	20M	BPSK	100	0	Edge 4	0mm	Amphenol	ON	372000	1860	12.50	13.00	1.122	0.06	0.820	0.920
	FR1 n25_MIMO 2	20M	BPSK	1	53	Bottom of Laptop	22mm	Amphenol	OFF	372000	1860	23.49	24.00	1.125	0.07	0.217	0.244
	FR1 n25_MIMO 2	20M	BPSK	50	28	Bottom of Laptop	22mm	Amphenol	OFF	372000	1860	23.45	24.00	1.135	-0.09	0.201	0.228
	FR1 n25_MIMO 2	20M	BPSK	1	53	Bottom Face	24mm	Amphenol	OFF	372000	1860	23.49	24.00	1.125	-0.04	0.170	0.191
	FR1 n25_MIMO 2	20M	BPSK	50	28	Bottom Face	24mm	Amphenol	OFF	372000	1860	23.45	24.00	1.135	-0.13	0.153	0.174
	FR1 n25_MIMO 2	20M	BPSK	1	53	Edge 1	0mm	Amphenol	OFF	372000	1860	23.49	24.00	1.125	0.18	0.330	0.371
	FR1 n25_MIMO 2	20M	BPSK	50	28	Edge 1	0mm	Amphenol	OFF	372000	1860	23.45	24.00	1.135	-0.06	0.305	0.346
	FR1 n25_MIMO 2	20M	BPSK	1	53	Edge 4	22mm	Amphenol	OFF	372000	1860	23.49	24.00	1.125	-0.07	0.286	0.322
	FR1 n25_MIMO 2	20M	BPSK	50	28	Edge 4	22mm	Amphenol	OFF	372000	1860	23.45	24.00	1.135	-0.11	0.268	0.304
	FR1 n25_MIMO 2	20M	BPSK	50	28	Edge 4	0mm	NVC	ON	376500	1882.5	12.60	13.00	1.096	-0.09	0.939	1.030
	FR1 n25_MIMO 2	20M	BPSK	50	28	Edge 4	0mm	NVC	ON	372000	1860	12.64	13.00	1.086	0.06	0.892	0.969
	FR1 n25_MIMO 2	20M	BPSK	50	28	Edge 4	0mm	NVC	ON	381000	1905	12.63	13.00	1.089	-0.01	0.933	1.016



# FCC SAR TEST REPORT

Report No. : FA190605

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n30_Main	10M	BPSK	1	26	Bottom of Laptop	0mm	Amphenol	ON	462000	2310	11.96	12.00	1.009	0.01	0.374	0.377
	FR1 n30_Main	10M	BPSK	25	14	Bottom of Laptop	0mm	Amphenol	ON	462000	2310	11.23	12.00	1.194	-0.09	0.411	0.491
	FR1 n30_Main	10M	BPSK	1	26	Bottom Face	0mm	Amphenol	ON	462000	2310	11.96	12.00	1.009	-0.08	0.861	0.869
	FR1 n30_Main	10M	BPSK	25	14	Bottom Face	0mm	Amphenol	ON	462000	2310	11.23	12.00	1.194	-0.04	0.914	1.091
19	FR1 n30_Main	10M	BPSK	50	0	Bottom Face	0mm	Amphenol	ON	462000	2310	11.11	12.00	1.227	-0.08	0.920	1.129
	FR1 n30_Main	10M	BPSK	1	26	Edge 1	0mm	Amphenol	ON	462000	2310	11.96	12.00	1.009	-0.11	0.182	0.184
	FR1 n30_Main	10M	BPSK	25	14	Edge 1	0mm	Amphenol	ON	462000	2310	11.23	12.00	1.194	0.08	0.200	0.239
	FR1 n30_Main	10M	BPSK	1	26	Edge 2	0mm	Amphenol	ON	462000	2310	11.96	12.00	1.009	-0.07	0.165	0.167
	FR1 n30_Main	10M	BPSK	25	14	Edge 2	0mm	Amphenol	ON	462000	2310	11.23	12.00	1.194	-0.1	0.181	0.216
	FR1 n30_Main	10M	BPSK	1	26	Bottom of Laptop	29mm	Amphenol	OFF	462000	2310	22.52	23.00	1.117	0.12	0.098	0.109
	FR1 n30_Main	10M	BPSK	25	14	Bottom of Laptop	29mm	Amphenol	OFF	462000	2310	22.46	23.00	1.132	-0.11	0.088	0.100
	FR1 n30_Main	10M	BPSK	1	26	Bottom Face	34mm	Amphenol	OFF	462000	2310	22.52	23.00	1.117	-0.19	0.063	0.070
	FR1 n30_Main	10M	BPSK	25	14	Bottom Face	34mm	Amphenol	OFF	462000	2310	22.46	23.00	1.132	0.18	0.055	0.062
	FR1 n30_Main	10M	BPSK	1	26	Edge 1	24mm	Amphenol	OFF	462000	2310	22.52	23.00	1.117	0.04	0.072	0.080
	FR1 n30_Main	10M	BPSK	25	14	Edge 1	24mm	Amphenol	OFF	462000	2310	22.46	23.00	1.132	0.06	0.063	0.071
	FR1 n30_Main	10M	BPSK	1	26	Edge 2	6mm	Amphenol	OFF	462000	2310	22.52	23.00	1.117	-0.13	0.125	0.140
	FR1 n30_Main	10M	BPSK	25	14	Edge 2	6mm	Amphenol	OFF	462000	2310	22.46	23.00	1.132	0.01	0.111	0.126
	FR1 n30_Main	10M	BPSK	50	0	Bottom Face	0mm	NVC	ON	462000	2310	11.11	12.00	1.227	-0.04	0.741	0.910
	FR1 n30_MIMO 2	10M	BPSK	1	26	Bottom of Laptop	0mm	Amphenol	ON	462000	2310	11.35	12.00	1.161	0.02	0.241	0.280
	FR1 n30_MIMO 2	10M	BPSK	25	14	Bottom of Laptop	0mm	Amphenol	ON	462000	2310	11.25	12.00	1.189	0.19	0.235	0.279
	FR1 n30_MIMO 2	10M	BPSK	1	26	Bottom Face	0mm	Amphenol	ON	462000	2310	11.35	12.00	1.161	0.18	0.926	1.076
	FR1 n30_MIMO 2	10M	BPSK	25	14	Bottom Face	0mm	Amphenol	ON	462000	2310	11.25	12.00	1.189	-0.15	0.934	1.110
	FR1 n30_MIMO 2	10M	BPSK	50	0	Bottom Face	0mm	Amphenol	ON	462000	2310	11.08	12.00	1.236	-0.15	0.241	0.298
	FR1 n30_MIMO 2	10M	BPSK	1	26	Edge 4	0mm	Amphenol	ON	462000	2310	11.35	12.00	1.161	0.01	0.588	0.683
	FR1 n30_MIMO 2	10M	BPSK	25	14	Edge 4	0mm	Amphenol	ON	462000	2310	11.25	12.00	1.189	0.03	0.241	0.286
	FR1 n30_MIMO 2	10M	BPSK	1	26	Bottom of Laptop	22mm	Amphenol	OFF	462000	2310	21.79	23.00	1.321	-0.09	0.199	0.263
	FR1 n30_MIMO 2	10M	BPSK	25	14	Bottom of Laptop	22mm	Amphenol	OFF	462000	2310	21.46	23.00	1.426	-0.15	0.175	0.249
	FR1 n30_MIMO 2	10M	BPSK	1	26	Bottom Face	24mm	Amphenol	OFF	462000	2310	21.79	23.00	1.321	0.05	0.228	0.301
	FR1 n30_MIMO 2	10M	BPSK	25	14	Bottom Face	24mm	Amphenol	OFF	462000	2310	21.46	23.00	1.426	0.18	0.208	0.297
	FR1 n30_MIMO 2	10M	BPSK	1	26	Edge 1	0mm	Amphenol	OFF	462000	2310	21.79	23.00	1.321	0.02	0.236	0.312
	FR1 n30_MIMO 2	10M	BPSK	25	14	Edge 1	0mm	Amphenol	OFF	462000	2310	21.46	23.00	1.426	0.12	0.224	0.319
	FR1 n30_MIMO 2	10M	BPSK	1	26	Edge 4	22mm	Amphenol	OFF	462000	2310	21.79	23.00	1.321	-0.18	0.314	0.415
	FR1 n30_MIMO 2	10M	BPSK	25	14	Edge 4	22mm	Amphenol	OFF	462000	2310	21.46	23.00	1.426	-0.1	0.285	0.406
	FR1 n30_MIMO 2	10M	BPSK	25	14	Bottom Face	0mm	NVC	ON	462000	2310	11.25	12.00	1.189	-0.05	0.623	0.740
	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	349000	1745	12.97	13.50	1.130	0.16	0.385	0.435
	FR1 n66_Main	40M	BPSK	108	54	Bottom of Laptop	0mm	Amphenol	ON	349000	1745	12.85	13.50	1.161	0.16	0.376	0.437
	FR1 n66_Main	40M	BPSK	1	108	Bottom Face	0mm	Amphenol	ON	349000	1745	12.97	13.50	1.130	-0.03	0.949	1.072
	FR1 n66_Main	40M	BPSK	108	54	Bottom Face	0mm	Amphenol	ON	349000	1745	12.85	13.50	1.161	-0.19	0.925	1.074
	FR1 n66_Main	40M	BPSK	216	0	Bottom Face	0mm	Amphenol	ON	349000	1745	12.87	13.50	1.156	-0.03	0.927	1.072
	FR1 n66_Main	40M	BPSK	1	108	Edge 1	0mm	Amphenol	ON	349000	1745	12.97	13.50	1.130	0.05	0.253	0.286
	FR1 n66_Main	40M	BPSK	108	54	Edge 1	0mm	Amphenol	ON	349000	1745	12.85	13.50	1.161	0.03	0.247	0.287
	FR1 n66_Main	40M	BPSK	1	108	Edge 2	0mm	Amphenol	ON	349000	1745	12.97	13.50	1.130	-0.16	0.065	0.073
	FR1 n66_Main	40M	BPSK	108	54	Edge 2	0mm	Amphenol	ON	349000	1745	12.85	13.50	1.161	0.15	0.064	0.074
	FR1 n66_Main	40M	BPSK	1	108	Bottom of Laptop	29mm	Amphenol	OFF	349000	1745	23.16	24.00	1.213	-0.17	0.115	0.140
	FR1 n66_Main	40M	BPSK	108	54	Bottom of Laptop	29mm	Amphenol	OFF	349000	1745	23.11	24.00	1.227	-0.03	0.106	0.130
	FR1 n66_Main	40M	BPSK	1	108	Bottom Face	34mm	Amphenol	OFF	349000	1745	23.16	24.00	1.213	-0.09	0.082	0.099
	FR1 n66_Main	40M	BPSK	108	54	Bottom Face	34mm	Amphenol	OFF	349000	1745	23.11	24.00	1.227	-0.19	0.074	0.091
	FR1 n66_Main	40M	BPSK	1	108	Edge 1	24mm	Amphenol	OFF	349000	1745	23.16	24.00	1.213	-0.18	0.109	0.132
	FR1 n66_Main	40M	BPSK	108	54	Edge 1	24mm	Amphenol	OFF	349000	1745	23.11	24.00	1.227	-0.03	0.098	0.120
	FR1 n66_Main	40M	BPSK	1	108	Edge 2	6mm	Amphenol	OFF	349000	1745	23.16	24.00	1.213	0.19	0.057	0.069
	FR1 n66_Main	40M	BPSK	108	54	Edge 2	6mm	Amphenol	OFF	349000	1745	23.11	24.00	1.227	0.01	0.051	0.063
	FR1 n66_Main	40M	BPSK	108	54	Bottom Face	0mm	NVC	ON	349000	1745	12.85	13.50	1.161	-0.09	0.715	0.830
	FR1 n66_MIMO 2	40M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	349000	1745	12.11	13.00	1.227	0.19	0.302	0.371
	FR1 n66_MIMO 2	40M	BPSK	108	54	Bottom of Laptop	0mm	Amphenol	ON	349000	1745	12.02	13.00	1.253	0.04	0.310	0.388
	FR1 n66_MIMO 2	40M	BPSK	1	108	Bottom Face	0mm	Amphenol	ON	349000	1745	12.11	13.00	1.227	-0.11	0.785	0.964
	FR1 n66_MIMO 2	40M	BPSK	108	54	Bottom Face	0mm	Amphenol	ON	349000	1745	12.02	13.00	1.253	-0.14	0.850	1.065
	FR1 n66_MIMO 2	40M	BPSK	216	0	Bottom Face	0mm	Amphenol	ON	349000	1745	11.95	13.00	1.274	0.06	0.811	1.033
20	FR1 n66_MIMO 2	40M	BPSK	1	108	Edge 4	0mm	Amphenol	ON	349000	1745	12.11	13.00	1.227	-0.19	0.900	1.105
	FR1 n66_MIMO 2	40M	BPSK	108	54	Edge 4	0mm	Amphenol	ON	349000	1745	12.02	13.00	1.253	-0.02	0.856	1.073
	FR1 n66_MIMO 2	40M	BPSK	216	0	Edge 4	0mm	Amphenol	ON	349000	1745	11.95	13.00	1.274	-0.02	0.793	1.010
	FR1 n66_MIMO 2	40M	BPSK	1	108	Bottom of Laptop	22mm	Amphenol	OFF	349000	1745	23.07	24.00	1.239	-0.05	0.288	0.357
	FR1 n66_MIMO 2	40M	BPSK	108	54	Bottom of Laptop	22mm	Amphenol	OFF	349000	1745	23.12	24.00	1.225	-0.03	0.265	0.325
	FR1 n66_MIMO 2	40M	BPSK	1	108	Bottom Face	24mm	Amphenol	OFF	349000	1745	23.07	24.00	1.239	-0.13	0.176	0.218
	FR1 n66_MIMO 2	40M	BPSK	108	54	Bottom Face	24mm	Amphenol	OFF	349000	1745	23.12	24.00	1.225	-0.18	0.161	0.197
	FR1 n66_MIMO 2	40M	BPSK	1	108	Edge 1	0mm	Amphenol	OFF	349000	1745	23.07	24.00	1.239	0.01	0.212	0.263
	FR1 n66_MIMO 2	40M	BPSK	108	54	Edge 1	0mm	Amphenol	OFF	349000	1745	23.12	24.00	1.225	0.05	0.201	0.246
	FR1 n66_MIMO 2	40M	BPSK	1	108	Edge 4	22mm	Amphenol	OFF	349000	1745	23.07	24.00	1.239	-0.04	0.298	0.369
	FR1 n66_MIMO 2	40M	BPSK	108	54	Edge 4	22mm	Amphenol	OFF	349000	1745	23.12	24.00	1.225	0.15	0.284	0.348
	FR1 n66_MIMO 2	40M	BPSK	1	108	Edge 4	0mm	NVC	ON	349000	1745	12.11	13.00	1.227	0.01	0.641	0.787



**FCC SAR TEST REPORT**

**Report No. : FA190605**

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n71_Main	20M	BPSK	1	53	Bottom of Laptop	0mm	Amphenol	ON	136100	680.5	13.20	13.50	1.072	-0.04	0.122	0.131
	FR1 n71_Main	20M	BPSK	50	28	Bottom of Laptop	0mm	Amphenol	ON	136100	680.5	13.18	13.50	1.076	0.14	0.139	0.150
	FR1 n71_Main	20M	BPSK	1	53	Bottom Face	0mm	Amphenol	ON	136100	680.5	13.20	13.50	1.072	0.16	0.364	0.390
	FR1 n71_Main	20M	BPSK	50	28	Bottom Face	0mm	Amphenol	ON	136100	680.5	13.18	13.50	1.076	-0.03	0.410	0.441
	FR1 n71_Main	20M	BPSK	1	53	Edge 1	0mm	Amphenol	ON	136100	680.5	13.20	13.50	1.072	0.05	0.071	0.076
	FR1 n71_Main	20M	BPSK	50	28	Edge 1	0mm	Amphenol	ON	136100	680.5	13.18	13.50	1.076	-0.06	0.081	0.087
	FR1 n71_Main	20M	BPSK	1	53	Edge 2	0mm	Amphenol	ON	136100	680.5	13.20	13.50	1.072	-0.07	0.814	0.872
	FR1 n71_Main	20M	BPSK	50	28	Edge 2	0mm	Amphenol	ON	136100	680.5	13.18	13.50	1.076	-0.06	0.914	0.984
21	FR1 n71_Main	20M	BPSK	100	0	Edge 2	0mm	Amphenol	ON	136100	680.5	13.09	13.50	1.099	-0.02	1.040	1.143
	FR1 n71_Main	20M	BPSK	1	53	Bottom of Laptop	29mm	Amphenol	OFF	136100	680.5	24.88	25.00	1.028	0.18	0.057	0.059
	FR1 n71_Main	20M	BPSK	50	28	Bottom of Laptop	29mm	Amphenol	OFF	136100	680.5	24.83	25.00	1.040	0.01	0.049	0.051
	FR1 n71_Main	20M	BPSK	1	53	Bottom Face	34mm	Amphenol	OFF	136100	680.5	24.88	25.00	1.028	0	0.001	0.001
	FR1 n71_Main	20M	BPSK	50	28	Bottom Face	34mm	Amphenol	OFF	136100	680.5	24.83	25.00	1.040	0	0.001	0.001
	FR1 n71_Main	20M	BPSK	1	53	Edge 1	24mm	Amphenol	OFF	136100	680.5	24.88	25.00	1.028	0	0.001	0.001
	FR1 n71_Main	20M	BPSK	50	28	Edge 1	24mm	Amphenol	OFF	136100	680.5	24.83	25.00	1.040	0	0.001	0.001
	FR1 n71_Main	20M	BPSK	1	53	Edge 2	6mm	Amphenol	OFF	136100	680.5	24.88	25.00	1.028	0.18	0.288	0.296
	FR1 n71_Main	20M	BPSK	50	28	Edge 2	6mm	Amphenol	OFF	136100	680.5	24.83	25.00	1.040	-0.02	0.261	0.271
	FR1 n71_Main	20M	BPSK	1	53	Edge 3	0mm	Amphenol	OFF	136100	680.5	24.88	25.00	1.028	0	0.001	0.001
	FR1 n71_Main	20M	BPSK	50	28	Edge 3	0mm	Amphenol	OFF	136100	680.5	24.83	25.00	1.040	0	0.001	0.001
	FR1 n71_Main	20M	BPSK	1	53	Edge 4	0mm	Amphenol	OFF	136100	680.5	24.88	25.00	1.028	0	0.001	0.001
	FR1 n71_Main	20M	BPSK	50	28	Edge 4	0mm	Amphenol	OFF	136100	680.5	24.83	25.00	1.040	0	0.001	0.001
	FR1 n71_Main	20M	BPSK	100	0	Edge 2	0mm	NVC	ON	136100	680.5	13.09	13.50	1.099	0.09	0.805	0.885



# FCC SAR TEST REPORT

Report No. : FA190605

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n41_Main	80M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	518598	2592.99	9.02	9.50	1.117	-0.19	0.381	0.426
	FR1 n41_Main	80M	BPSK	108	55	Bottom of Laptop	0mm	Amphenol	ON	518598	2592.99	8.98	9.50	1.127	-0.11	0.345	0.389
22	FR1 n41_Main	80M	BPSK	1	108	Bottom Face	0mm	Amphenol	ON	518598	2592.99	9.02	9.50	1.117	-0.19	1.030	1.150
	FR1 n41_Main	80M	BPSK	108	55	Bottom Face	0mm	Amphenol	ON	518598	2592.99	8.98	9.50	1.127	0.13	0.952	1.073
	FR1 n41_Main	80M	BPSK	216	0	Bottom Face	0mm	Amphenol	ON	518598	2592.99	8.93	9.50	1.140	0	0.938	1.070
	FR1 n41_Main	80M	BPSK	1	108	Edge 1	0mm	Amphenol	ON	518598	2592.99	9.02	9.50	1.117	-0.08	0.280	0.313
	FR1 n41_Main	80M	BPSK	108	55	Edge 1	0mm	Amphenol	ON	518598	2592.99	8.98	9.50	1.127	-0.12	0.256	0.289
	FR1 n41_Main	80M	BPSK	1	108	Edge 2	0mm	Amphenol	ON	518598	2592.99	9.02	9.50	1.117	-0.11	0.030	0.034
	FR1 n41_Main	80M	BPSK	108	55	Edge 2	0mm	Amphenol	ON	518598	2592.99	8.98	9.50	1.127	-0.09	0.022	0.025
	FR1 n41_Main	80M	BPSK	1	108	Bottom of Laptop	29mm	Amphenol	OFF	518598	2592.99	23.64	24.00	1.086	0.18	0.396	0.430
	FR1 n41_Main	80M	BPSK	108	55	Bottom of Laptop	29mm	Amphenol	OFF	518598	2592.99	23.49	24.00	1.125	-0.02	0.371	0.417
	FR1 n41_Main	80M	BPSK	1	108	Bottom Face	34mm	Amphenol	OFF	518598	2592.99	23.64	24.00	1.086	-0.13	0.254	0.276
	FR1 n41_Main	80M	BPSK	108	55	Bottom Face	34mm	Amphenol	OFF	518598	2592.99	23.49	24.00	1.125	-0.07	0.238	0.268
	FR1 n41_Main	80M	BPSK	1	108	Edge 1	24mm	Amphenol	OFF	518598	2592.99	23.64	24.00	1.086	0.09	0.215	0.234
	FR1 n41_Main	80M	BPSK	108	55	Edge 1	24mm	Amphenol	OFF	518598	2592.99	23.49	24.00	1.125	0.05	0.199	0.224
	FR1 n41_Main	80M	BPSK	1	108	Edge 2	6mm	Amphenol	OFF	518598	2592.99	23.64	24.00	1.086	-0.13	0.126	0.137
	FR1 n41_Main	80M	BPSK	108	55	Edge 2	6mm	Amphenol	OFF	518598	2592.99	23.49	24.00	1.125	-0.02	0.111	0.125
	FR1 n41_HPUE_Main	80M	BPSK	1	108	Bottom Face	0mm	Amphenol	ON	518598	2592.99	11.88	12.50	1.153	0.05	0.968	1.117
	FR1 n41_Main	80M	BPSK	1	108	Bottom Face	0mm	NVC	ON	518598	2592.99	9.02	9.50	1.117	0	0.764	0.853
	FR1 n41_MIMO 1	80M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	OFF	518598	2592.99	8.89	9.50	1.151	0.14	0.115	0.132
	FR1 n41_MIMO 1	80M	BPSK	108	55	Bottom of Laptop	0mm	Amphenol	OFF	518598	2592.99	8.73	9.50	1.194	0.19	0.096	0.115
	FR1 n41_MIMO 1	80M	BPSK	1	108	Bottom Face	0mm	Amphenol	OFF	518598	2592.99	8.89	9.50	1.151	0.01	0.676	0.778
	FR1 n41_MIMO 1	80M	BPSK	108	55	Bottom Face	0mm	Amphenol	OFF	518598	2592.99	8.73	9.50	1.194	0.14	0.645	0.770
	FR1 n41_MIMO 1	80M	BPSK	1	108	Edge 1	0mm	Amphenol	OFF	518598	2592.99	8.89	9.50	1.151	-0.04	0.073	0.084
	FR1 n41_MIMO 1	80M	BPSK	108	55	Edge 1	0mm	Amphenol	OFF	518598	2592.99	8.73	9.50	1.194	-0.11	0.062	0.074
	FR1 n41_MIMO 1	80M	BPSK	1	108	Edge 2	0mm	Amphenol	OFF	518598	2592.99	8.89	9.50	1.151	0.01	0.997	1.147
	FR1 n41_MIMO 1	80M	BPSK	108	55	Edge 2	0mm	Amphenol	OFF	518598	2592.99	8.73	9.50	1.194	-0.12	0.952	1.137
	FR1 n41_MIMO 1	80M	BPSK	216	0	Edge 2	0mm	Amphenol	OFF	518598	2592.99	8.78	9.50	1.180	0.03	0.925	1.092
	FR1 n41_MIMO 1	80M	BPSK	1	108	Edge 2	0mm	NVC	OFF	518598	2592.99	8.89	9.50	1.151	0.07	0.655	0.754
	FR1 n41_MIMO 2	80M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	ON	518598	2592.99	9.82	11.00	1.312	-0.13	0.165	0.217
	FR1 n41_MIMO 2	80M	BPSK	108	55	Bottom of Laptop	0mm	Amphenol	ON	518598	2592.99	9.70	11.00	1.349	0.08	0.144	0.194
	FR1 n41_MIMO 2	80M	BPSK	1	108	Bottom Face	0mm	Amphenol	ON	518598	2592.99	9.82	11.00	1.312	-0.12	0.876	1.149
	FR1 n41_MIMO 2	80M	BPSK	108	55	Bottom Face	0mm	Amphenol	ON	518598	2592.99	9.70	11.00	1.349	-0.05	0.834	1.125
	FR1 n41_MIMO 2	80M	BPSK	216	0	Bottom Face	0mm	Amphenol	ON	518598	2592.99	9.68	11.00	1.355	0	0.825	1.118
	FR1 n41_MIMO 2	80M	BPSK	1	108	Edge 4	0mm	Amphenol	ON	518598	2592.99	9.82	11.00	1.312	-0.05	0.874	1.147
	FR1 n41_MIMO 2	80M	BPSK	108	55	Edge 4	0mm	Amphenol	ON	518598	2592.99	9.70	11.00	1.349	-0.07	0.842	1.136
	FR1 n41_MIMO 2	80M	BPSK	216	0	Edge 4	0mm	Amphenol	ON	518598	2592.99	9.68	11.00	1.355	0.16	0.831	1.126
	FR1 n41_MIMO 2	80M	BPSK	1	108	Bottom of Laptop	22mm	Amphenol	OFF	518598	2592.99	23.27	24.00	1.183	-0.18	0.359	0.425
	FR1 n41_MIMO 2	80M	BPSK	108	55	Bottom of Laptop	22mm	Amphenol	OFF	518598	2592.99	23.25	24.00	1.189	-0.07	0.332	0.395
	FR1 n41_MIMO 2	80M	BPSK	1	108	Bottom Face	24mm	Amphenol	OFF	518598	2592.99	23.27	24.00	1.183	-0.13	0.457	0.541
	FR1 n41_MIMO 2	80M	BPSK	108	55	Bottom Face	24mm	Amphenol	OFF	518598	2592.99	23.25	24.00	1.189	-0.12	0.429	0.510
	FR1 n41_MIMO 2	80M	BPSK	1	108	Edge 1	0mm	Amphenol	OFF	518598	2592.99	23.27	24.00	1.183	0.19	0.960	1.136
	FR1 n41_MIMO 2	80M	BPSK	108	55	Edge 1	0mm	Amphenol	OFF	518598	2592.99	23.25	24.00	1.189	-0.05	0.932	1.108
	FR1 n41_MIMO 2	80M	BPSK	1	108	Edge 4	22mm	Amphenol	OFF	518598	2592.99	23.27	24.00	1.183	0.15	0.934	1.105
	FR1 n41_MIMO 2	80M	BPSK	108	55	Edge 4	22mm	Amphenol	OFF	518598	2592.99	23.25	24.00	1.189	0.08	0.909	1.080
	FR1 n41_HPUE_MIMO 2	80M	BPSK	1	108	Bottom Face	0mm	Amphenol	ON	518598	2592.99	12.64	14.00	1.368	-0.1	0.833	1.139
	FR1 n41_MIMO 2	80M	BPSK	1	108	Bottom Face	0mm	NVC	ON	518598	2592.99	9.82	11.00	1.312	-0.08	0.601	0.789
	FR1 n41_Aux	80M	BPSK	1	108	Bottom of Laptop	0mm	Amphenol	OFF	518598	2592.99	12.90	14.00	1.288	-0.19	0.413	0.532
	FR1 n41_Aux	80M	BPSK	108	55	Bottom of Laptop	0mm	Amphenol	OFF	518598	2592.99	12.89	14.00	1.291	-0.16	0.408	0.527
	FR1 n41_Aux	80M	BPSK	1	108	Bottom Face	0mm	Amphenol	OFF	518598	2592.99	12.90	14.00	1.288	-0.05	0.869	1.119
	FR1 n41_Aux	80M	BPSK	108	55	Bottom Face	0mm	Amphenol	OFF	518598	2592.99	12.89	14.00	1.291	0.1	0.841	1.086
	FR1 n41_Aux	80M	BPSK	216	0	Bottom Face	0mm	Amphenol	OFF	518598	2592.99	12.80	14.00	1.318	-0.02	0.825	1.088
	FR1 n41_Aux	80M	BPSK	1	108	Edge 1	0mm	Amphenol	OFF	518598	2592.99	12.90	14.00	1.288	0.04	0.679	0.875
	FR1 n41_Aux	80M	BPSK	108	55	Edge 1	0mm	Amphenol	OFF	518598	2592.99	12.89	14.00	1.291	-0.12	0.625	0.807
	FR1 n41_Aux	80M	BPSK	216	0	Edge 1	0mm	Amphenol	OFF	518598	2592.99	12.89	14.00	1.291	0.03	0.611	0.789
	FR1 n41_Aux	80M	BPSK	1	108	Edge 4	0mm	Amphenol	OFF	518598	2592.99	12.90	14.00	1.288	0.14	0.180	0.232
	FR1 n41_Aux	80M	BPSK	108	55	Edge 4	0mm	Amphenol	OFF	518598	2592.99	12.89	14.00	1.291	0.04	0.139	0.179
	FR1 n41_Aux	80M	BPSK	1	108	Bottom Face	0mm	NVC	OFF	518598	2592.99	12.90	14.00	1.288	0.04	0.615	0.792



# FCC SAR TEST REPORT

Report No. : FA190605

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	ON	656000	3840	11.27	12.00	1.183	-0.15	0.283	0.335
	FR1 n77_Main	100M	BPSK	135	69	Bottom of Laptop	0mm	Amphenol	ON	656000	3840	11.22	12.00	1.197	0	0.252	0.302
23	FR1 n77_Main	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	ON	656000	3840	11.27	12.00	1.183	-0.15	0.978	1.157
	FR1 n77_Main	100M	BPSK	135	69	Bottom Face	0mm	Amphenol	ON	656000	3840	11.22	12.00	1.197	0.04	0.946	1.132
	FR1 n77_Main	100M	BPSK	270	0	Bottom Face	0mm	Amphenol	ON	656000	3840	11.21	12.00	1.199	-0.08	0.951	1.141
	FR1 n77_Main	100M	BPSK	1	137	Edge 1	0mm	Amphenol	ON	656000	3840	11.27	12.00	1.183	0.17	0.248	0.293
	FR1 n77_Main	100M	BPSK	135	69	Edge 1	0mm	Amphenol	ON	656000	3840	11.22	12.00	1.197	-0.12	0.231	0.276
	FR1 n77_Main	100M	BPSK	1	137	Edge 2	0mm	Amphenol	ON	656000	3840	11.27	12.00	1.183	-0.08	0.040	0.047
	FR1 n77_Main	100M	BPSK	135	69	Edge 2	0mm	Amphenol	ON	656000	3840	11.22	12.00	1.197	-0.03	0.035	0.042
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	29mm	Amphenol	OFF	656000	3840	23.25	24.00	1.189	-0.03	0.618	0.734
	FR1 n77_Main	100M	BPSK	135	69	Bottom of Laptop	29mm	Amphenol	OFF	656000	3840	23.22	24.00	1.197	0.17	0.578	0.692
	FR1 n77_Main	100M	BPSK	1	137	Bottom Face	34mm	Amphenol	OFF	656000	3840	23.25	24.00	1.189	-0.11	0.541	0.643
	FR1 n77_Main	100M	BPSK	135	69	Bottom Face	34mm	Amphenol	OFF	656000	3840	23.22	24.00	1.197	-0.15	0.512	0.613
	FR1 n77_Main	100M	BPSK	1	137	Edge 1	24mm	Amphenol	OFF	656000	3840	23.25	24.00	1.189	0.18	0.334	0.397
	FR1 n77_Main	100M	BPSK	135	69	Edge 1	24mm	Amphenol	OFF	656000	3840	23.22	24.00	1.197	0.03	0.312	0.373
	FR1 n77_Main	100M	BPSK	1	137	Edge 2	6mm	Amphenol	OFF	656000	3840	23.25	24.00	1.189	-0.06	0.645	0.767
	FR1 n77_Main	100M	BPSK	135	69	Edge 2	6mm	Amphenol	OFF	656000	3840	23.22	24.00	1.197	-0.05	0.614	0.735
	FR1 n77_HPUE_Main	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	ON	656000	3840	14.10	15.00	1.230	-0.15	0.921	1.133
	FR1 n77_Main	100M	BPSK	1	137	Bottom Face	0mm	NVC	ON	656000	3840	11.27	12.00	1.183	0.06	0.629	0.744
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	ON	633332	3499.98	10.77	12.00	1.327	-0.05	0.258	0.342
	FR1 n77_Main	100M	BPSK	135	69	Bottom of Laptop	0mm	Amphenol	ON	633332	3499.98	10.76	12.00	1.330	-0.09	0.243	0.323
	FR1 n77_Main	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	ON	633332	3499.98	10.77	12.00	1.327	-0.01	0.839	1.114
	FR1 n77_Main	100M	BPSK	135	69	Bottom Face	0mm	Amphenol	ON	633332	3499.98	10.76	12.00	1.330	0.18	0.815	1.084
	FR1 n77_Main	100M	BPSK	270	0	Bottom Face	0mm	Amphenol	ON	633332	3499.98	10.73	12.00	1.340	0.14	0.807	1.081
	FR1 n77_Main	100M	BPSK	1	137	Edge 1	0mm	Amphenol	ON	633332	3499.98	10.77	12.00	1.327	0.09	0.288	0.382
	FR1 n77_Main	100M	BPSK	135	69	Edge 1	0mm	Amphenol	ON	633332	3499.98	10.76	12.00	1.330	-0.05	0.268	0.357
	FR1 n77_Main	100M	BPSK	1	137	Edge 2	0mm	Amphenol	ON	633332	3499.98	10.77	12.00	1.327	0.12	0.172	0.228
	FR1 n77_Main	100M	BPSK	135	69	Edge 2	0mm	Amphenol	ON	633332	3499.98	10.76	12.00	1.330	0.03	0.165	0.220
	FR1 n77_Main	100M	BPSK	1	137	Bottom of Laptop	29mm	Amphenol	OFF	633332	3499.98	22.93	24.00	1.279	-0.13	0.119	0.152
	FR1 n77_Main	100M	BPSK	135	69	Bottom of Laptop	29mm	Amphenol	OFF	633332	3499.98	22.86	24.00	1.300	0.03	0.102	0.133
	FR1 n77_Main	100M	BPSK	1	137	Bottom Face	34mm	Amphenol	OFF	633332	3499.98	22.93	24.00	1.279	0.06	0.221	0.283
	FR1 n77_Main	100M	BPSK	135	69	Bottom Face	34mm	Amphenol	OFF	633332	3499.98	22.86	24.00	1.300	-0.11	0.210	0.273
	FR1 n77_Main	100M	BPSK	1	137	Edge 1	24mm	Amphenol	OFF	633332	3499.98	22.93	24.00	1.279	0.1	0.350	0.448
	FR1 n77_Main	100M	BPSK	135	69	Edge 1	24mm	Amphenol	OFF	633332	3499.98	22.86	24.00	1.300	-0.08	0.315	0.410
	FR1 n77_Main	100M	BPSK	1	137	Edge 2	6mm	Amphenol	OFF	633332	3499.98	22.93	24.00	1.279	0.12	0.601	0.769
	FR1 n77_Main	100M	BPSK	135	69	Edge 2	6mm	Amphenol	OFF	633332	3499.98	22.86	24.00	1.300	-0.05	0.571	0.742
	FR1 n77_HPUE_Main	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	ON	633332	3499.98	13.77	15.00	1.327	-0.01	0.811	1.077
	FR1 n77_Main	100M	BPSK	1	137	Bottom Face	0mm	NVC	ON	633332	3499.98	10.77	12.00	1.327	0.01	0.660	0.876
	FR1 n77_MIMO 1	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	OFF	656000	3840	12.45	12.50	1.012	-0.15	0.142	0.144
	FR1 n77_MIMO 1	100M	BPSK	135	69	Bottom of Laptop	0mm	Amphenol	OFF	656000	3840	12.37	12.50	1.030	-0.1	0.115	0.118
	FR1 n77_MIMO 1	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	OFF	656000	3840	12.45	12.50	1.012	-0.01	0.769	0.778
	FR1 n77_MIMO 1	100M	BPSK	135	69	Bottom Face	0mm	Amphenol	OFF	656000	3840	12.37	12.50	1.030	0.07	0.733	0.755
	FR1 n77_MIMO 1	100M	BPSK	1	137	Edge 1	0mm	Amphenol	OFF	656000	3840	12.45	12.50	1.012	-0.02	0.053	0.054
	FR1 n77_MIMO 1	100M	BPSK	135	69	Edge 1	0mm	Amphenol	OFF	656000	3840	12.37	12.50	1.030	-0.08	0.042	0.043
	FR1 n77_MIMO 1	100M	BPSK	1	137	Edge 2	0mm	Amphenol	OFF	656000	3840	12.45	12.50	1.012	-0.01	1.020	1.032
	FR1 n77_MIMO 1	100M	BPSK	135	69	Edge 2	0mm	Amphenol	OFF	656000	3840	12.37	12.50	1.030	0.08	0.971	1.001
	FR1 n77_MIMO 1	100M	BPSK	270	0	Edge 2	0mm	Amphenol	OFF	656000	3840	12.30	12.50	1.047	0.01	0.955	1.000
	FR1 n77_MIMO 1	100M	BPSK	1	137	Edge 2	0mm	NVC	OFF	656000	3840	12.45	12.50	1.012	-0.09	0.825	0.835
	FR1 n77_MIMO 1	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	OFF	633332	3499.98	11.73	12.50	1.194	0.09	0.125	0.149
	FR1 n77_MIMO 1	100M	BPSK	135	69	Bottom of Laptop	0mm	Amphenol	OFF	633332	3499.98	11.71	12.50	1.199	-0.16	0.122	0.146
	FR1 n77_MIMO 1	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	OFF	633332	3499.98	11.73	12.50	1.194	0.06	0.570	0.681
	FR1 n77_MIMO 1	100M	BPSK	135	69	Bottom Face	0mm	Amphenol	OFF	633332	3499.98	11.71	12.50	1.199	-0.07	0.551	0.661
	FR1 n77_MIMO 1	100M	BPSK	1	137	Edge 1	0mm	Amphenol	OFF	633332	3499.98	11.73	12.50	1.194	0.1	0.059	0.070
	FR1 n77_MIMO 1	100M	BPSK	135	69	Edge 1	0mm	Amphenol	OFF	633332	3499.98	11.71	12.50	1.199	0.18	0.048	0.058
	FR1 n77_MIMO 1	100M	BPSK	1	137	Edge 2	0mm	Amphenol	OFF	633332	3499.98	11.73	12.50	1.194	0.06	0.593	0.708
	FR1 n77_MIMO 1	100M	BPSK	135	69	Edge 2	0mm	Amphenol	OFF	633332	3499.98	11.71	12.50	1.199	0.16	0.571	0.685
	FR1 n77_MIMO 1	100M	BPSK	1	137	Edge 2	0mm	NVC	OFF	633332	3499.98	11.73	12.50	1.194	0.11	0.466	0.556



# FCC SAR TEST REPORT

Report No. : FA190605

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	ON	656000	3840	13.44	14.00	1.138	0.17	0.273	0.311
	FR1 n77_MIMO 2	100M	BPSK	135	69	Bottom of Laptop	0mm	Amphenol	ON	656000	3840	13.43	14.00	1.140	0.09	0.253	0.288
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	ON	656000	3840	13.44	14.00	1.138	-0.14	0.854	0.972
	FR1 n77_MIMO 2	100M	BPSK	135	69	Bottom Face	0mm	Amphenol	ON	656000	3840	13.43	14.00	1.140	0.09	0.843	0.961
	FR1 n77_MIMO 2	100M	BPSK	270	0	Bottom Face	0mm	Amphenol	ON	656000	3840	13.42	14.00	1.143	-0.11	0.836	0.955
	FR1 n77_MIMO 2	100M	BPSK	1	137	Edge 4	0mm	Amphenol	ON	656000	3840	13.44	14.00	1.138	0.11	0.683	0.777
	FR1 n77_MIMO 2	100M	BPSK	135	69	Edge 4	0mm	Amphenol	ON	656000	3840	13.43	14.00	1.140	0.15	0.653	0.745
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom of Laptop	22mm	Amphenol	OFF	656000	3840	23.27	24.00	1.183	0.09	0.534	0.632
	FR1 n77_MIMO 2	100M	BPSK	135	69	Bottom of Laptop	22mm	Amphenol	OFF	656000	3840	23.33	24.00	1.167	0.18	0.501	0.585
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom Face	24mm	Amphenol	OFF	656000	3840	23.27	24.00	1.183	0.18	0.350	0.414
	FR1 n77_MIMO 2	100M	BPSK	135	69	Bottom Face	24mm	Amphenol	OFF	656000	3840	23.33	24.00	1.167	-0.07	0.339	0.396
	FR1 n77_MIMO 2	100M	BPSK	1	137	Edge 1	0mm	Amphenol	OFF	656000	3840	23.27	24.00	1.183	-0.07	0.671	0.794
	FR1 n77_MIMO 2	100M	BPSK	135	69	Edge 1	0mm	Amphenol	OFF	656000	3840	23.33	24.00	1.167	-0.05	0.666	0.777
	FR1 n77_MIMO 2	100M	BPSK	1	137	Edge 4	22mm	Amphenol	OFF	656000	3840	23.27	24.00	1.183	0.07	0.817	0.967
	FR1 n77_MIMO 2	100M	BPSK	135	69	Edge 4	22mm	Amphenol	OFF	656000	3840	23.33	24.00	1.167	-0.16	0.808	0.943
	FR1 n77_HPUE_MIMO 2	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	ON	656000	3840	16.40	17.00	1.148	-0.12	0.824	0.946
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom Face	0mm	NVC	ON	656000	3840	13.44	14.00	1.138	0.18	0.694	0.790
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	ON	633332	3499.98	12.58	14.00	1.387	-0.12	0.219	0.304
	FR1 n77_MIMO 2	100M	BPSK	135	69	Bottom of Laptop	0mm	Amphenol	ON	633332	3499.98	12.57	14.00	1.390	-0.06	0.208	0.289
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	ON	633332	3499.98	12.58	14.00	1.387	0.13	0.801	1.111
	FR1 n77_MIMO 2	100M	BPSK	135	69	Bottom Face	0mm	Amphenol	ON	633332	3499.98	12.57	14.00	1.390	0.13	0.786	1.093
	FR1 n77_MIMO 2	100M	BPSK	270	0	Bottom Face	0mm	Amphenol	ON	633332	3499.98	12.49	14.00	1.416	-0.17	0.779	1.103
	FR1 n77_MIMO 2	100M	BPSK	1	137	Edge 4	0mm	Amphenol	ON	633332	3499.98	12.58	14.00	1.387	0.18	0.774	1.073
	FR1 n77_MIMO 2	100M	BPSK	135	69	Edge 4	0mm	Amphenol	ON	633332	3499.98	12.57	14.00	1.390	0.02	0.765	1.063
	FR1 n77_MIMO 2	100M	BPSK	270	0	Edge 4	0mm	Amphenol	ON	633332	3499.98	12.49	14.00	1.416	-0.04	0.742	1.051
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom of Laptop	22mm	Amphenol	OFF	633332	3499.98	23.72	24.00	1.067	0.15	0.603	0.643
	FR1 n77_MIMO 2	100M	BPSK	135	69	Bottom of Laptop	22mm	Amphenol	OFF	633332	3499.98	23.69	24.00	1.074	0.18	0.594	0.638
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom Face	24mm	Amphenol	OFF	633332	3499.98	23.72	24.00	1.067	-0.02	0.932	0.994
	FR1 n77_MIMO 2	100M	BPSK	135	69	Bottom Face	24mm	Amphenol	OFF	633332	3499.98	23.69	24.00	1.074	0.07	0.923	0.991
	FR1 n77_MIMO 2	100M	BPSK	1	137	Edge 1	0mm	Amphenol	OFF	633332	3499.98	23.72	24.00	1.067	-0.05	0.394	0.420
	FR1 n77_MIMO 2	100M	BPSK	135	69	Edge 1	0mm	Amphenol	OFF	633332	3499.98	23.69	24.00	1.074	-0.09	0.384	0.412
	FR1 n77_MIMO 2	100M	BPSK	1	137	Edge 4	22mm	Amphenol	OFF	633332	3499.98	23.72	24.00	1.067	-0.02	0.801	0.854
	FR1 n77_MIMO 2	100M	BPSK	135	69	Edge 4	22mm	Amphenol	OFF	633332	3499.98	23.69	24.00	1.074	-0.07	0.782	0.840
	FR1 n77_HPUE_MIMO 2	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	ON	633332	3499.98	15.56	17.00	1.393	0.16	0.768	1.070
	FR1 n77_MIMO 2	100M	BPSK	1	137	Bottom Face	0mm	NVC	ON	633332	3499.98	12.58	14.00	1.387	-0.03	0.714	0.990
	FR1 n77_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	OFF	633332	3499.98	13.65	15.00	1.365	0.17	0.163	0.222
	FR1 n77_Aux	100M	BPSK	135	69	Bottom of Laptop	0mm	Amphenol	OFF	633332	3499.98	13.62	15.00	1.374	-0.09	0.151	0.207
	FR1 n77_Aux	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	OFF	633332	3499.98	13.65	15.00	1.365	0.1	0.803	1.096
	FR1 n77_Aux	100M	BPSK	135	69	Bottom Face	0mm	Amphenol	OFF	633332	3499.98	13.62	15.00	1.374	-0.05	0.766	1.053
	FR1 n77_Aux	100M	BPSK	270	0	Bottom Face	0mm	Amphenol	OFF	633332	3499.98	13.57	15.00	1.390	-0.04	0.734	1.020
	FR1 n77_Aux	100M	BPSK	1	137	Edge 1	0mm	Amphenol	OFF	633332	3499.98	13.65	15.00	1.365	-0.01	0.086	0.117
	FR1 n77_Aux	100M	BPSK	135	69	Edge 1	0mm	Amphenol	OFF	633332	3499.98	13.62	15.00	1.374	-0.08	0.072	0.099
	FR1 n77_Aux	100M	BPSK	1	137	Edge 4	0mm	Amphenol	OFF	633332	3499.98	13.65	15.00	1.365	0.06	0.237	0.323
	FR1 n77_Aux	100M	BPSK	135	69	Edge 4	0mm	Amphenol	OFF	633332	3499.98	13.62	15.00	1.374	-0.15	0.210	0.289
	FR1 n77_Aux	100M	BPSK	1	137	Bottom Face	0mm	NVC	OFF	633332	3499.98	13.65	15.00	1.365	-0.02	0.668	0.912
	FR1 n77_Aux	100M	BPSK	1	137	Bottom of Laptop	0mm	Amphenol	OFF	656000	3840	14.43	15.00	1.140	-0.18	0.264	0.301
	FR1 n77_Aux	100M	BPSK	135	69	Bottom of Laptop	0mm	Amphenol	OFF	656000	3840	14.38	15.00	1.153	-0.11	0.258	0.298
	FR1 n77_Aux	100M	BPSK	1	137	Bottom Face	0mm	Amphenol	OFF	656000	3840	14.43	15.00	1.140	-0.01	0.927	1.057
	FR1 n77_Aux	100M	BPSK	135	69	Bottom Face	0mm	Amphenol	OFF	656000	3840	14.38	15.00	1.153	0.19	0.886	1.022
	FR1 n77_Aux	100M	BPSK	270	0	Bottom Face	0mm	Amphenol	OFF	656000	3840	14.34	15.00	1.164	0.09	0.843	0.981
	FR1 n77_Aux	100M	BPSK	1	137	Edge 1	0mm	Amphenol	OFF	656000	3840	14.43	15.00	1.140	-0.01	0.129	0.147
	FR1 n77_Aux	100M	BPSK	135	69	Edge 1	0mm	Amphenol	OFF	656000	3840	14.38	15.00	1.153	0.04	0.103	0.119
	FR1 n77_Aux	100M	BPSK	1	137	Edge 4	0mm	Amphenol	OFF	656000	3840	14.43	15.00	1.140	0.03	0.171	0.195
	FR1 n77_Aux	100M	BPSK	135	69	Edge 4	0mm	Amphenol	OFF	656000	3840	14.38	15.00	1.153	0.19	0.155	0.179
	FR1 n77_Aux	100M	BPSK	1	137	Bottom Face	0mm	NVC	OFF	656000	3840	14.43	15.00	1.140	-0.07	0.862	0.983





**13.2 Repeated SAR Measurement**

No.	Band	Mode	Test Position	Gap (mm)	Antenna Vendor	Power Reduction	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 7_MIMO 2	20M_QPSK_50_0	Edge 4	0mm	Amphenol	ON	21350	2560	9.31	9.50	1.045	-	-	-0.08	1.110	-	1.160
2nd	LTE Band 7_MIMO 2	20M_QPSK_50_0	Edge 4	0mm	Amphenol	ON	21350	2560	9.31	9.50	1.045	-	-	0.05	1.070	1.04	1.118
1st	LTE Band 25_Main	20M_QPSK_50_0	Bottom Face	0mm	Amphenol	ON	26590	1905	13.22	13.50	1.067	-	-	0.02	1.120	-	1.195
2nd	LTE Band 25_Main	20M_QPSK_50_0	Bottom Face	0mm	Amphenol	ON	26590	1905	13.22	13.50	1.067	-	-	0.04	1.100	1.02	1.173
1st	LTE Band 26_Main	15M_QPSK_36_0	Bottom Face	0mm	Amphenol	ON	26865	831.5	14.31	14.50	1.045	-	-	0.06	1.020	-	1.066
2nd	LTE Band 26_Main	15M_QPSK_36_0	Bottom Face	0mm	Amphenol	ON	26865	831.5	14.31	14.50	1.045	-	-	0.01	1.010	1.01	1.055
1st	LTE Band 30_MIMO 2	10M_QPSK_1_0	Edge 4	0mm	Amphenol	ON	27710	2310	10.46	10.50	1.009	-	-	-0.06	1.080	-	1.090
2nd	LTE Band 30_MIMO 2	10M_QPSK_1_0	Edge 4	0mm	Amphenol	ON	27710	2310	10.46	10.50	1.009	-	-	-0.12	1.060	1.02	1.070
1st	LTE Band 66_MIMO 2	20M_QPSK_1_0	Edge 4	0mm	Amphenol	ON	132322	1745	12.98	13.00	1.005	-	-	-0.15	1.160	-	1.165
2nd	LTE Band 66_MIMO 2	20M_QPSK_1_0	Edge 4	0mm	Amphenol	ON	132322	1745	12.98	13.00	1.005	-	-	-0.12	1.140	1.02	1.145
1st	LTE Band 48_MIMO 2	20M_QPSK_50_24	Bottom Face	0mm	Amphenol	ON	56640	3690	9.78	10.50	1.180	62.9	1.006	0.15	0.995	-	1.181
2nd	LTE Band 48_MIMO 2	20M_QPSK_50_24	Bottom Face	0mm	Amphenol	ON	56640	3690	9.78	10.50	1.180	62.9	1.006	-0.06	0.974	1.02	1.157
1st	FR1 n71_Main	20M_QPSK_100_0	Edge 2	0mm	Amphenol	ON	136100	680.5	13.09	13.50	1.099	-	-	-0.02	1.040	-	1.143
2nd	FR1 n71_Main	20M_QPSK_100_0	Edge 2	0mm	Amphenol	ON	136100	680.5	13.09	13.50	1.099	-	-	0.06	1.020	1.02	1.121
1st	FR1 n77_MIMO 1	100M_BPSK_1_137	Edge 2	0mm	Amphenol	OFF	656000	3840	12.45	12.50	1.012	-	-	-0.01	1.020	-	1.032
2nd	FR1 n77_MIMO 1	100M_BPSK_1_137	Edge 2	0mm	Amphenol	OFF	656000	3840	12.45	12.50	1.012	-	-	0.05	0.964	1.06	0.975
1st	FR1 n77_MIMO 2	100M_BPSK_1_137	Bottom Face	24mm	Amphenol	OFF	633332	3499.98	23.72	24.00	1.067	-	-	-0.02	0.932	-	0.994
2nd	FR1 n77_MIMO 2	100M_BPSK_1_137	Bottom Face	24mm	Amphenol	OFF	633332	3499.98	23.72	24.00	1.067	-	-	0.03	0.921	1.01	0.982

**General Note:**

1. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is  $\geq 0.8W/kg$ .
2. Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is  $\leq 1.2$  and the measured SAR  $< 1.45W/kg$ , only one repeated measurement is required.
3. The ratio is the difference in percentage between original and repeated *measured* SAR.
4. All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.



**13.3 Power Class 2 and Power Class 3 Linearity**

This device support Power Class 2 and Power Class 3 operations for LTE Band 41. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required

This device support Power Class 2 and Power Class 3 operations for FR1 n41/n77. The highest available duty cycle for Power Class 2 operation is 50% using UL-DL configuration 1. Per FCC Guidance based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each FR1 configuration and exposure condition combination, according to the highest time averaged power for all applicable uplink-downlink configurations in Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required.

Use PC3 power level and SAR to estimated PC2 SAR linearly, and check if the deviation from the measured PC2 SAR is <10%

LTE Band 41_Main Ant	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	12.5	12.5
Reported 1g SAR (W/kg)	1.115	0.805
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	11.26	7.70
Linearity SAR(W/kg)	0.76	
% deviation from expected linearity		5.54%

LTE Band 41_MIMO 2 Ant	LTE Band 41	LTE Band 41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	11.5	11.5
Reported 1g SAR (W/kg)	0.993	0.633
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	8.94	6.12
Linearity SAR(W/kg)	0.68	
% deviation from expected linearity		-6.81%

FR1 n41_Main Ant	FR1 n41	FR1 n41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	9.5	12.5
Reported 1g SAR (W/kg)	1.15	1.117
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	8.91	8.89
Linearity SAR(W/kg)	1.15	
% deviation from expected linearity		-2.64%

FR1 n41_MIMO 2 Ant	FR1 n41	FR1 n41
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	11	14
Reported 1g SAR (W/kg)	1.149	1.08
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	12.59	12.56
Linearity SAR(W/kg)	1.15	
% deviation from expected linearity		-5.78%



FR1 n77_Main Ant	FR1 n77	FR1 n77
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	12	15
Reported 1g SAR (W/kg)	1.157	1.133
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	15.85	15.81
Linearity SAR(W/kg)	1.15	
% deviation from expected linearity		-1.84%

FR1 n77_MIMO 2 Ant	FR1 n77	FR1 n77
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	14	17
Reported 1g SAR (W/kg)	1.111	1.07
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	25.12	25.06
Linearity SAR(W/kg)	1.11	
% deviation from expected linearity		-3.46%

**14. Simultaneous Transmission Analysis**

NO.	Simultaneous Transmission Configurations	Body
1.	WWAN Main + WWAN MIMO 2 + 2.4GHz WLAN Ant 1 + 2.4GHz WLAN Ant 2	Yes
2.	WWAN Main + WWAN MIMO 2 + 2.4GHz WLAN Ant 1 + Bluetooth Ant 2	Yes
3.	WWAN Main + WWAN MIMO 2 + 5/6GHz WLAN Ant 1 + 5/6GHz WLAN Ant 2 + Bluetooth Ant 2	Yes
4.	WWAN MIMO 1 + 2.4GHz WLAN Ant 1 + 2.4GHz WLAN Ant 2	Yes
5.	WWAN MIMO 1 + 2.4GHz WLAN Ant 1 + Bluetooth Ant 2	Yes
6.	WWAN MIMO 1 + 5/6GHz WLAN Ant 1 + 5/6GHz WLAN Ant 2 + Bluetooth Ant 2	Yes
7.	WWAN Aux+ 2.4GHz WLAN Ant 1 + 2.4GHz WLAN Ant 2	Yes
8.	WWAN Aux + 2.4GHz WLAN Ant 1 + Bluetooth Ant 2	Yes
9.	WWAN Aux + 5/6GHz WLAN Ant 1 + 5/6GHz WLAN Ant 2 + Bluetooth Ant 2	Yes

**General Note:**

1. The Intel AX211D2W WLAN/BT module is also integrated into Lenovo TP00128B host. The 2.4GHz, 5GHz and Bluetooth SAR results are referenced from Intel SAR report, report number: 210922-01.TR01 (FCC ID: PD9AX211D2), WLAN 6E SAR refers new report number.: 210922-01.TR02 (FCC ID: PD9AX211D2) and these SAR results are also used to perform simultaneous transmission analysis.
2. The worst case SAR from each WWAN transmit antenna is used for Sim-Tx analysis. Therefore, the following summations represent the absolute worst cases for simultaneous transmission for this device and it is conservative.
3. The Sim-Tx analysis for EN-DC active is choose the worst case standalone SAR from the WWAN main and MIMO2 antenna within the exposure positions, regardless of whether the EN-DC combinations. Therefore, the following summations represent the absolute worst cases for simultaneous transmission for this device and it is conservative.
4. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
  - i) Scalar SAR summation < 1.6W/kg.
  - ii)  $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$ , and the peak separation distance is determined from the square root of  $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$ , where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
  - iii) If  $SPLSR \leq 0.04$ , simultaneously transmission SAR measurement is not necessary.
  - iv) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
  - v) The SPLSR calculated results please refer to section 14.2.



**14.1 Body Exposure Conditions**

**Main & MIMO 2**

Exposure Position	1	2	3	4	5	6	7	8	9	1+2+3+4 Summed 1g SAR (W/kg)	1+2+3+9 Summed 1g SAR (W/kg)	1+2+5+6+9 Summed 1g SAR (W/kg)	1+2+7+8+9 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN Main Ant 1g SAR (W/kg)	Maximum WWAN MIMO 2 Ant 1g SAR (W/kg)	WLAN2.4GHz Ant 1 1g SAR (W/kg)	WLAN2.4GHz Ant 2 1g SAR (W/kg)	WLAN5GHz Ant 1 1g SAR (W/kg)	WLAN5GHz Ant 2 1g SAR (W/kg)	WLAN6GHz Ant 1 1g SAR (W/kg)	WLAN6GHz Ant 2 1g SAR (W/kg)	Bluetooth Ant 2 1g SAR (W/kg)						
Bottom of Laptop at 0mm	0.734	0.643	0.610	1.160	1.580	1.110	1.590	1.590	0.200	3.147	2.187	4.267	4.757	0.04	Case 1
Bottom Face at 0mm	1.199	1.181	0.760	0.930	0.580	0.590	0.300	0.920	0.120	4.070	3.260	3.670	3.720	0.02	Case 2
Edge 1 at 0mm	0.448	1.136								1.584	1.584	1.584	1.584		
Edge 2 at 0mm	1.143									1.143	1.143	1.143	1.143		
Edge 3 at 0mm	0.001		0.850	1.140	1.480	0.930	1.340	1.590	0.200	1.991	1.051	2.611	3.131	0.03	Case 3
Edge 4 at 0mm	0.001	1.195								1.196	1.196	1.196	1.196		

**MIMO1**

Exposure Position	1	2	3	4	5	6	7	8	1+2+3 Summed 1g SAR (W/kg)	1+2+8 Summed 1g SAR (W/kg)	1+4+5+8 Summed 1g SAR (W/kg)	1+6+7+8 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN MIMO1 Ant 1g SAR (W/kg)	WLAN2.4GHz Ant 1 1g SAR (W/kg)	WLAN2.4GHz Ant 2 1g SAR (W/kg)	WLAN5GHz Ant 1 1g SAR (W/kg)	WLAN5GHz Ant 2 1g SAR (W/kg)	WLAN6GHz Ant 1 1g SAR (W/kg)	WLAN6GHz Ant 2 1g SAR (W/kg)	Bluetooth Ant 2 1g SAR (W/kg)						
Bottom of Laptop at 0mm	0.149	0.610	1.160	1.580	1.110	1.590	1.590	0.200	1.919	0.959	3.039	3.529	0.04	Case 4
Bottom Face at 0mm	0.778	0.760	0.930	0.580	0.590	0.300	0.920	0.120	2.468	1.658	2.068	2.118	0.01	Case 5
Edge 1 at 0mm	0.084								0.084	0.084	0.084	0.084		
Edge 2 at 0mm	1.147								1.147	1.147	1.147	1.147		

**Aux**

Exposure Position	1	2	3	4	5	6	7	8	1+2+3 Summed 1g SAR (W/kg)	1+2+8 Summed 1g SAR (W/kg)	1+4+5+8 Summed 1g SAR (W/kg)	1+6+7+8 Summed 1g SAR (W/kg)	SPLSR	Case No
	Maximum WWAN Aux Ant 1g SAR (W/kg)	WLAN2.4GHz Ant 1 1g SAR (W/kg)	WLAN2.4GHz Ant 2 1g SAR (W/kg)	WLAN5GHz Ant 1 1g SAR (W/kg)	WLAN5GHz Ant 2 1g SAR (W/kg)	WLAN6GHz Ant 1 1g SAR (W/kg)	WLAN6GHz Ant 2 1g SAR (W/kg)	Bluetooth Ant 2 1g SAR (W/kg)						
Bottom of Laptop at 0mm	0.532	0.610	1.160	1.580	1.110	1.590	1.590	0.200	2.302	1.342	3.422	3.912	0.04	Case 6
Bottom Face at 0mm	1.119	0.760	0.930	0.580	0.590	0.300	0.920	0.120	2.809	1.999	2.409	2.459	0.02	Case 7
Edge 1 at 0mm	0.875								0.875	0.875	0.875	0.875		
Edge 4 at 0mm	0.323								0.323	0.323	0.323	0.323		

**14.2 SPLSR Evaluation and Analysis**

**General Note:**

1. According to antenna location of appendix D, the minimum distance between each WWAN/WLAN/BT transmit antenna are using for SPLSR analysis.
2. For SPLSR analysis is selected highest standalone SAR from each WWAN transmit antenna to be evaluated and it is conservative.
3.  $SPLSR = (SAR_1 + SAR_2)^{1.5} / (min. \text{ separation distance, mm})$ . If  $SPLSR \leq 0.04$ , simultaneously transmission SAR measurement is not necessary

**Main & MIMO 2**

	Band	Position	SAR (W/kg)	Gap	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 1	Maximum Main Ant	Bottom of Laptop	0.734	0mm	152.0	1.38	0.01	Not required
	Maximum MIMO2 Ant		0.643	0mm				
	Maximum Main Ant	Bottom of Laptop	0.734	0mm	198.0	1.34	0.01	Not required
	WLAN2.4GHz_Ant 1		0.61	0mm				
	Maximum Main Ant	Bottom of Laptop	0.734	0mm	252.0	1.89	0.01	Not required
	WLAN2.4GHz_Ant 2		1.16	0mm				
	Maximum Main Ant	Bottom of Laptop	0.734	0mm	198.0	2.31	0.02	Not required
	WLAN5GHz_Ant 1		1.58	0mm				
	Maximum Main Ant	Bottom of Laptop	0.734	0mm	198.0	2.32	0.02	Not required
	WLAN6GHz_Ant 1		1.59	0mm				
	Maximum Main Ant	Bottom of Laptop	0.734	0mm	252.0	2.04	0.01	Not required
	WLAN5GHz+BT_Ant 2		1.31	0mm				
	Maximum Main Ant	Bottom of Laptop	0.734	0mm	252.0	2.52	0.02	Not required
	WLAN6GHz+BT_Ant 2		1.79	0mm				
	Maximum MIMO2 Ant	Bottom of Laptop	0.643	0mm	276.0	1.25	0.01	Not required
	WLAN2.4GHz_Ant 1		0.61	0mm				
	Maximum MIMO2 Ant	Bottom of Laptop	0.643	0mm	152.0	1.80	0.02	Not required
	WLAN2.4GHz_Ant 2		1.16	0mm				
	Maximum MIMO2 Ant	Bottom of Laptop	0.643	0mm	276.0	2.22	0.01	Not required
	WLAN5GHz_Ant 1		1.58	0mm				
	Maximum MIMO2 Ant	Bottom of Laptop	0.643	0mm	276.0	2.23	0.01	Not required
	WLAN6GHz_Ant 1		1.59	0mm				
	Maximum MIMO2 Ant	Bottom of Laptop	0.643	0mm	152.0	1.95	0.02	Not required
	WLAN5GHz+BT_Ant 2		1.31	0mm				
	Maximum MIMO2 Ant	Bottom of Laptop	0.643	0mm	152.0	2.43	0.02	Not required
	WLAN6GHz+BT_Ant 2		1.79	0mm				
	WLAN2.4GHz_Ant 1	Bottom of Laptop	0.61	0mm	175.0	1.77	0.01	Not required
	WLAN2.4GHz_Ant 2		1.16	0mm				
	WLAN2.4GHz_Ant 1	Bottom of Laptop	0.61	0mm	175.0	0.81	0.00	Not required
	BT_Ant 2		0.2	0mm				
WLAN5GHz_Ant 1	Bottom of Laptop	1.58	0mm	175.0	2.89	0.03	Not required	
WLAN5GHz+BT_Ant 2		1.31	0mm					
WLAN6GHz_Ant 1	Bottom of Laptop	1.59	0mm	175.0	3.38	0.04	Not required	
WLAN6GHz+BT_Ant 2		1.79	0mm					



	Band	Position	SAR (W/kg)	Gap	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 2	Maximum Main Ant	Bottom Face	1.199	0mm	152.0	2.38	0.02	Not required
	Maximum MIMO2 Ant		1.181	0mm				
	Maximum Main Ant	Bottom Face	1.199	0mm	198.0	1.96	0.01	Not required
	WLAN2.4GHz_Ant 1		0.76	0mm				
	Maximum Main Ant	Bottom Face	1.199	0mm	252.0	2.13	0.01	Not required
	WLAN2.4GHz_Ant 2		0.93	0mm				
	Maximum Main Ant	Bottom Face	1.199	0mm	198.0	1.78	0.01	Not required
	WLAN5GHz_Ant 1		0.58	0mm				
	Maximum Main Ant	Bottom Face	1.199	0mm	198.0	1.50	0.01	Not required
	WLAN6GHz_Ant 1		0.3	0mm				
	Maximum Main Ant	Bottom Face	1.199	0mm	252.0	1.91	0.01	Not required
	WLAN5GHz+BT_Ant 2		0.71	0mm				
	Maximum Main Ant	Bottom Face	1.199	0mm	252.0	2.24	0.01	Not required
	WLAN6GHz+BT_Ant 2		1.04	0mm				
	Maximum MIMO2 Ant	Bottom Face	1.181	0mm	276.0	1.94	0.01	Not required
	WLAN2.4GHz_Ant 1		0.76	0mm				
	Maximum MIMO2 Ant	Bottom Face	1.181	0mm	152.0	2.11	0.02	Not required
	WLAN2.4GHz_Ant 2		0.93	0mm				
	Maximum MIMO2 Ant	Bottom Face	1.181	0mm	276.0	1.76	0.01	Not required
	WLAN5GHz_Ant 1		0.58	0mm				
	Maximum MIMO2 Ant	Bottom Face	1.181	0mm	276.0	1.48	0.01	Not required
	WLAN6GHz_Ant 1		0.3	0mm				
	Maximum MIMO2 Ant	Bottom Face	1.181	0mm	152.0	1.89	0.02	Not required
	WLAN5GHz+BT_Ant 2		0.71	0mm				
	Maximum MIMO2 Ant	Bottom Face	1.181	0mm	152.0	2.22	0.02	Not required
	WLAN6GHz+BT_Ant 2		1.04	0mm				
	WLAN2.4GHz_Ant 1	Bottom Face	0.76	0mm	175.0	1.69	0.01	Not required
	WLAN2.4GHz_Ant 2		0.93	0mm				
	WLAN2.4GHz_Ant 1	Bottom Face	0.76	0mm	175.0	0.88	0.00	Not required
	BT_Ant 2		0.12	0mm				
WLAN5GHz_Ant 1	Bottom Face	0.58	0mm	175.0	1.29	0.01	Not required	
WLAN5GHz+BT_Ant 2		0.71	0mm					
WLAN6GHz_Ant 1	Bottom Face	0.3	0mm	175.0	1.34	0.01	Not required	
WLAN6GHz+BT_Ant 2		1.04	0mm					
Case 3	Maximum Main Ant	Edge 3	0.001	0mm	198.0	0.85	0.00	Not required
	WLAN2.4GHz_Ant 1		0.85	0mm				
	Maximum Main Ant	Edge 3	0.001	0mm	252.0	1.14	0.00	Not required
	WLAN2.4GHz_Ant 2		1.14	0mm				
	Maximum Main Ant	Edge 3	0.001	0mm	198.0	1.48	0.01	Not required
	WLAN5GHz_Ant 1		1.48	0mm				
	Maximum Main Ant	Edge 3	0.001	0mm	198.0	1.34	0.01	Not required
	WLAN6GHz_Ant 1		1.34	0mm				
	Maximum Main Ant	Edge 3	0.001	0mm	252.0	1.13	0.00	Not required
	WLAN5GHz+BT_Ant 2		1.13	0mm				
	Maximum Main Ant	Edge 3	0.001	0mm	252.0	1.61	0.01	Not required
	WLAN6GHz+BT_Ant 2		1.61	0mm				
	WLAN2.4GHz_Ant 1	Edge 3	0.85	0mm	175.0	1.99	0.02	Not required
	WLAN2.4GHz_Ant 2		1.14	0mm				
	WLAN2.4GHz_Ant 1	Edge 3	0.85	0mm	175.0	1.05	0.01	Not required
	BT_Ant 2		0.2	0mm				
	WLAN5GHz_Ant 1	Edge 3	1.48	0mm	175.0	2.61	0.02	Not required
	WLAN5GHz+BT_Ant 2		1.13	0mm				
	WLAN6GHz_Ant 1	Edge 3	1.34	0mm	175.0	2.95	0.03	Not required
	WLAN6GHz+BT_Ant 2		1.61	0mm				



MIMO1&Aux

	Band	Position	SAR (W/kg)	Gap	Minimum distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)				
Case 4	Maximum MIMO1 Antenna	Bottom of Laptop	0.149	0mm	158.0	0.76	0.00	Not required
	WLAN2.4GHz_Ant 1		0.61	0mm				
	Maximum MIMO1 Antenna	Bottom of Laptop	0.149	0mm	282.0	1.31	0.01	Not required
	WLAN2.4GHz_Ant 2		1.16	0mm				
	Maximum MIMO1 Antenna	Bottom of Laptop	0.149	0mm	158.0	1.73	0.01	Not required
	WLAN5GHz_Ant 1		1.58	0mm				
	Maximum MIMO1 Antenna	Bottom of Laptop	0.149	0mm	158.0	1.74	0.01	Not required
	WLAN6GHz_Ant 1		1.59	0mm				
	Maximum MIMO1 Antenna	Bottom of Laptop	0.149	0mm	282.0	1.46	0.01	Not required
	WLAN5GHz+BT_Ant 2		1.31	0mm				
	Maximum MIMO1 Antenna	Bottom of Laptop	0.149	0mm	282.0	1.94	0.01	Not required
	WLAN6GHz+BT_Ant 2		1.79	0mm				
	WLAN2.4GHz_Ant 1	Bottom of Laptop	0.61	0mm	175.0	1.77	0.01	Not required
	WLAN2.4GHz_Ant 2		1.16	0mm				
	WLAN5GHz_Ant 1	Bottom of Laptop	1.58	0mm	175.0	2.89	0.03	Not required
	WLAN5GHz+BT_Ant 2		1.31	0mm				
WLAN6GHz_Ant 1	Bottom of Laptop	1.59	0mm	175.0	3.38	0.04	Not required	
WLAN6GHz+BT_Ant 2		1.79	0mm					
Case 5	Maximum MIMO1 Antenna	Bottom Face	0.778	0mm	158.0	1.54	0.01	Not required
	WLAN2.4GHz_Ant 1		0.76	0mm				
	Maximum MIMO1 Antenna	Bottom Face	0.778	0mm	282.0	1.71	0.01	Not required
	WLAN2.4GHz_Ant 2		0.93	0mm				
	Maximum MIMO1 Antenna	Bottom Face	0.778	0mm	158.0	1.36	0.01	Not required
	WLAN5GHz_Ant 1		0.58	0mm				
	Maximum MIMO1 Antenna	Bottom Face	0.778	0mm	158.0	1.08	0.01	Not required
	WLAN6GHz_Ant 1		0.3	0mm				
	Maximum MIMO1 Antenna	Bottom Face	0.778	0mm	282.0	1.49	0.01	Not required
	WLAN5GHz+BT_Ant 2		0.71	0mm				
	Maximum MIMO1 Antenna	Bottom Face	0.778	0mm	282.0	1.82	0.01	Not required
	WLAN6GHz+BT_Ant 2		1.04	0mm				
	WLAN2.4GHz_Ant 1	Bottom Face	0.76	0mm	175.0	1.69	0.01	Not required
	WLAN2.4GHz_Ant 2		0.93	0mm				
	WLAN2.4GHz_Ant 1	Bottom Face	0.76	0mm	175.0	0.88	0.00	Not required
	BT_Ant 2		0.12	0mm				
WLAN5GHz_Ant 1	Bottom Face	0.58	0mm	175.0	1.29	0.01	Not required	
WLAN5GHz+BT_Ant 2		0.71	0mm					
WLAN6GHz_Ant 1	Bottom Face	0.3	0mm	175.0	1.34	0.01	Not required	
WLAN6GHz+BT_Ant 2		1.04	0mm					
Case 6	Maximum Aux Antenna	Bottom of Laptop	0.532	0mm	263.0	1.14	0.00	Not required
	WLAN2.4GHz_Ant 1		0.61	0mm				
	Maximum Aux Antenna	Bottom of Laptop	0.532	0mm	198.0	1.69	0.01	Not required
	WLAN2.4GHz_Ant 2		1.16	0mm				
	Maximum Aux Antenna	Bottom of Laptop	0.532	0mm	263.0	2.11	0.01	Not required
	WLAN5GHz_Ant 1		1.58	0mm				
	Maximum Aux Antenna	Bottom of Laptop	0.532	0mm	263.0	2.12	0.01	Not required
	WLAN6GHz_Ant 1		1.59	0mm				
Maximum Aux Antenna	Bottom of Laptop	0.532	0mm	198.0	1.84	0.01	Not required	
WLAN5GHz+BT_Ant 2		1.31	0mm					



	Maximum Aux Antenna	Bottom of Laptop	0.532	0mm	198.0	2.32	0.02	Not required
	WLAN6GHz+BT_Ant 2		1.79	0mm				
	WLAN2.4GHz_Ant 1	Bottom of Laptop	0.61	0mm	175.0	1.77	0.01	Not required
	WLAN2.4GHz_Ant 2		1.16	0mm				
	WLAN5GHz_Ant 1	Bottom of Laptop	1.58	0mm	175.0	2.89	0.03	Not required
	WLAN5GHz+BT_Ant 2		1.31	0mm				
	WLAN6GHz_Ant 1	Bottom of Laptop	1.59	0mm	175.0	3.38	0.04	Not required
	WLAN6GHz+BT_Ant 2		1.79	0mm				
<b>Case 7</b>	<b>Band</b>	<b>Position</b>	<b>SAR (W/kg)</b>	<b>Gap (mm)</b>	<b>Minimum distance (mm)</b>	<b>Summed SAR (W/kg)</b>	<b>SPLSR Results</b>	<b>Simultaneous SAR</b>
	Maximum Aux Antenna	Bottom Face	1.119	0mm	263.0	1.88	0.01	Not required
	WLAN2.4GHz_Ant 1		0.76	0mm				
	Maximum Aux Antenna	Bottom Face	1.119	0mm	198.0	2.05	0.01	Not required
	WLAN2.4GHz_Ant 2		0.93	0mm				
	Maximum Aux Antenna	Bottom Face	1.119	0mm	263.0	1.70	0.01	Not required
	WLAN5GHz_Ant 1		0.58	0mm				
	Maximum Aux Antenna	Bottom Face	1.119	0mm	263.0	1.42	0.01	Not required
	WLAN6GHz_Ant 1		0.3	0mm				
	Maximum Aux Antenna	Bottom Face	1.119	0mm	198.0	1.83	0.01	Not required
	WLAN5GHz+BT_Ant 2		0.71	0mm				
	Maximum Aux Antenna	Bottom Face	1.119	0mm	198.0	2.16	0.02	Not required
	WLAN6GHz+BT_Ant 2		1.04	0mm				
	WLAN2.4GHz_Ant 1	Bottom Face	0.76	0mm	175.0	1.69	0.01	Not required
	WLAN2.4GHz_Ant 2		0.93	0mm				
	WLAN2.4GHz_Ant 1	Bottom Face	0.76	0mm	175.0	0.88	0.00	Not required
	BT_Ant 2		0.12	0mm				
	WLAN5GHz_Ant 1	Bottom Face	0.58	0mm	175.0	1.29	0.01	Not required
	WLAN5GHz+BT_Ant 2		0.71	0mm				
	WLAN6GHz_Ant 1	Bottom Face	0.3	0mm	175.0	1.34	0.01	Not required
WLAN6GHz+BT_Ant 2	1.04		0mm					

**Test Engineer :** Murphy Lee, Kells Chen, Kevin Guo and Sing Lim



## **15. Uncertainty Assessment**

Per KDB 865664 D01 SAR measurement 100MHz to 6GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg and the measured 10-g SAR within a frequency band is < 3.75 W/kg. The expanded SAR measurement uncertainty must be  $\leq 30\%$ , for a confidence interval of  $k = 2$ . If these conditions are met, extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. For this device, the highest measured 1-g SAR is less 1.5W/kg. Therefore, the measurement uncertainty table is not required in this report.

Declaration of Conformity:

The test results with all measurement uncertainty excluded is presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

## **16. References**

- [1] FCC 47 CFR Part 2 "Frequency Allocations and Radio Treaty Matters; General Rules and Regulations"
- [2] ANSI/IEEE Std. C95.1-1992, "IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz", September 1992
- [3] IEEE Std. 1528-2013, "IEEE Recommended Practice for Determining the Peak Spatial-Average Specific Absorption Rate (SAR) in the Human Head from Wireless Communications Devices: Measurement Techniques", Sep 2013
- [4] SPEAG DASY System Handbook
- [5] FCC KDB 447498 D01 v06, "Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies", Oct 2015
- [6] FCC KDB 941225 D01 v03r01, "3G SAR MEAUREMENT PROCEDURES", Oct 2015
- [7] FCC KDB 941225 D05 v02r05, "SAR Evaluation Considerations for LTE Devices", Dec 2015
- [8] FCC KDB 941225 D05A v01r02, "Rel. 10 LTE SAR Test Guidance and KDB Inquiries", Oct 2015
- [9] FCC KDB 616217 D04 v01r02, "SAR Evaluation Considerations for Laptop, Notebook, Netbook and Tablet Computers", Oct 2015
- [10] FCC KDB 865664 D01 v01r04, "SAR Measurement Requirements for 100 MHz to 6 GHz", Aug 2015.
- [11] FCC KDB 865664 D02 v01r02, "RF Exposure Compliance Reporting and Documentation Considerations" Oct 2015.