

LTE Band 41_IC									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				39715 (2 502.5 MHz)		40640 (2 595.0 MHz)		41565 (2 687.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	QPSK	1	0	25.14	0.327	25.19	0.330	25.27	0.337
		1	12	25.16	0.328	25.10	0.324	25.12	0.325
		1	24	25.04	0.319	25.13	0.326	25.01	0.317
		12	0	24.59	0.288	24.59	0.288	24.42	0.277
		12	6	24.62	0.290	24.55	0.285	24.40	0.275
		12	13	24.50	0.282	24.51	0.282	24.31	0.270
	25	0	24.57	0.286	24.55	0.285	24.28	0.268	
	16QAM	1	0	24.82	0.303	24.82	0.303	24.35	0.272
		1	12	24.81	0.303	24.77	0.300	24.24	0.265
		1	24	24.73	0.297	24.72	0.296	24.11	0.258
		12	0	23.64	0.231	23.63	0.231	23.41	0.219
		12	6	23.63	0.231	23.63	0.231	23.45	0.221
		12	13	23.56	0.227	23.59	0.229	23.38	0.218
	25	0	23.59	0.229	23.58	0.228	23.40	0.219	
	64QAM	1	0	23.90	0.245	23.91	0.246	22.61	0.182
		1	12	23.86	0.243	23.84	0.242	22.47	0.177
		1	24	23.75	0.237	23.80	0.240	22.34	0.171
		12	0	22.63	0.183	22.63	0.183	21.56	0.143
12		6	22.66	0.185	22.64	0.184	21.60	0.145	
12		13	22.54	0.179	22.58	0.181	21.51	0.142	
25	0	22.59	0.182	22.58	0.181	21.50	0.141		

LTE Band 41_IC									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				39740 (2 505.0 MHz)		40640 (2 595.0 MHz)		41540 (2 685.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
10	QPSK	1	0	25.14	0.327	24.95	0.313	25.45	0.351
		1	25	25.09	0.323	25.08	0.322	25.23	0.333
		1	49	25.07	0.321	24.80	0.302	24.97	0.314
		25	0	24.60	0.288	24.51	0.282	24.44	0.278
		25	12	24.60	0.288	24.59	0.288	24.39	0.275
		25	25	24.55	0.285	24.45	0.279	24.29	0.269
	50	0	24.52	0.283	24.50	0.282	24.39	0.275	
	16QAM	1	0	24.79	0.301	24.53	0.284	24.53	0.284
		1	25	24.74	0.298	24.72	0.296	24.31	0.270
		1	49	24.79	0.301	24.45	0.279	24.03	0.253
		25	0	23.64	0.231	23.54	0.226	23.56	0.227
		25	12	23.65	0.232	23.63	0.231	23.47	0.222
		25	25	23.60	0.229	23.48	0.223	23.32	0.215
	50	0	23.53	0.225	23.53	0.225	23.47	0.222	
	64QAM	1	0	23.87	0.244	23.71	0.235	22.83	0.192
		1	25	23.86	0.243	23.91	0.246	22.55	0.180
		1	49	23.85	0.243	23.53	0.225	22.26	0.168
		25	0	22.63	0.183	22.58	0.181	21.67	0.147
25		12	22.66	0.185	22.64	0.184	21.57	0.144	
25		25	22.59	0.182	22.50	0.178	21.38	0.137	
50	0	22.53	0.179	22.52	0.179	21.50	0.141		

LTE Band 41_IC									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				39765 (2 507.5 MHz)		40640 (2 595.0 MHz)		41515 (2 682.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
15	QPSK	1	0	25.19	0.330	24.93	0.311	25.36	0.344
		1	36	25.10	0.324	25.05	0.320	25.32	0.340
		1	74	25.08	0.322	24.84	0.305	25.07	0.321
		36	0	24.42	0.277	24.48	0.281	24.73	0.297
		36	18	24.56	0.286	24.52	0.283	24.53	0.284
		36	37	24.48	0.281	24.49	0.281	24.36	0.273
		75	0	24.50	0.282	24.48	0.281	24.51	0.282
	16QAM	1	0	24.79	0.301	24.52	0.283	24.78	0.301
		1	36	24.72	0.296	24.70	0.295	24.40	0.275
		1	74	24.69	0.294	24.48	0.281	24.04	0.254
		36	0	23.44	0.221	23.47	0.222	23.76	0.238
		36	18	23.57	0.228	23.55	0.226	23.53	0.225
		36	37	23.52	0.225	23.50	0.224	23.38	0.218
		75	0	23.51	0.224	23.48	0.223	23.59	0.229
	64QAM	1	0	23.90	0.245	23.68	0.233	23.12	0.205
		1	36	23.75	0.237	23.76	0.238	22.69	0.186
		1	74	23.78	0.239	23.55	0.226	22.38	0.173
		36	0	22.45	0.176	22.49	0.177	21.93	0.156
36		18	22.58	0.181	22.54	0.179	21.66	0.147	
36		37	22.51	0.178	22.52	0.179	21.51	0.142	
75		0	22.52	0.179	22.49	0.177	21.71	0.148	

LTE Band 41_IC									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				39790 (2 510.0 MHz)		40640 (2 595.0 MHz)		41490 (2 680.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
20	QPSK	1	0	25.22	0.333	25.00	0.316	25.28	0.337
		1	50	25.12	0.325	25.23	0.333	25.54	0.358
		1	99	25.10	0.324	24.89	0.308	24.92	0.310
		50	0	24.47	0.280	24.57	0.286	24.93	0.311
		50	25	24.62	0.290	24.65	0.292	24.63	0.290
		50	13	24.52	0.283	24.55	0.285	24.43	0.277
		100	0	24.55	0.285	24.55	0.285	24.73	0.297
	16QAM	1	0	24.90	0.309	24.60	0.288	24.62	0.290
		1	50	24.73	0.297	24.83	0.304	24.52	0.283
		1	99	24.67	0.293	24.48	0.281	23.86	0.243
		50	0	23.46	0.222	23.57	0.228	23.95	0.248
		50	25	23.61	0.230	23.67	0.233	23.65	0.232
		50	50	23.52	0.225	23.56	0.227	23.41	0.219
		100	0	23.53	0.225	23.54	0.226	23.68	0.233
	64QAM	1	0	23.88	0.244	23.69	0.234	23.21	0.209
		1	50	23.87	0.244	23.91	0.246	22.76	0.189
		1	99	23.87	0.244	23.56	0.227	21.98	0.158
		50	0	22.46	0.176	22.56	0.180	21.98	0.158
50		25	22.60	0.182	22.64	0.184	21.71	0.148	
50		50	22.53	0.179	22.54	0.179	21.45	0.140	
100		0	22.55	0.180	22.55	0.180	21.78	0.151	

LTE Band 66/4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				131979 (1 710.7 MHz)		132322 (1 745.0 MHz)		132665 (1 779.3 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
1.4	QPSK	1	0	22.56	0.180	22.52	0.179	22.77	0.189
		1	3	22.49	0.177	22.53	0.179	22.83	0.192
		1	5	22.59	0.182	22.53	0.179	22.75	0.188
		3	0	22.57	0.181	22.53	0.179	22.79	0.190
		3	2	22.57	0.181	22.55	0.180	22.82	0.191
		3	3	22.52	0.179	22.55	0.180	22.76	0.189
	16QAM	6	0	21.65	0.146	21.61	0.145	21.85	0.153
		1	0	21.87	0.154	21.77	0.150	22.12	0.163
		1	3	21.87	0.154	21.82	0.152	22.17	0.165
		1	5	21.81	0.152	21.87	0.154	22.01	0.159
		3	0	21.73	0.149	21.68	0.147	21.97	0.157
		3	2	21.80	0.151	21.75	0.150	21.91	0.155
	64QAM	3	3	21.83	0.152	21.70	0.148	21.95	0.157
		6	0	20.67	0.117	20.68	0.117	20.87	0.122
		1	0	20.82	0.121	20.78	0.120	21.07	0.128
		1	3	20.79	0.120	20.77	0.119	21.08	0.128
		1	5	20.79	0.120	20.78	0.120	21.02	0.126
		3	0	20.73	0.118	20.75	0.119	20.96	0.125
		3	2	20.79	0.120	20.70	0.117	21.00	0.126
		3	3	20.66	0.116	20.74	0.119	20.98	0.125
		6	0	19.71	0.094	19.66	0.092	19.89	0.097

LTE Band 66/4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				131987 (1 711.5 MHz)		132322 (1 745.0 MHz)		132657 (1 778.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
3	QPSK	1	0	22.61	0.182	22.46	0.176	22.93	0.196
		1	7	22.63	0.183	22.40	0.174	22.89	0.195
		1	14	22.51	0.178	22.37	0.173	22.72	0.187
		8	0	21.67	0.147	21.54	0.143	21.96	0.157
		8	4	21.66	0.147	21.50	0.141	21.92	0.156
		8	7	21.68	0.147	21.48	0.141	21.90	0.155
		15	0	21.63	0.146	21.45	0.140	21.89	0.155
	16QAM	1	0	21.94	0.156	21.70	0.148	22.27	0.169
		1	7	21.81	0.152	21.69	0.148	22.19	0.166
		1	14	21.91	0.155	21.68	0.147	22.06	0.161
		8	0	20.78	0.120	20.59	0.115	21.01	0.126
		8	4	20.73	0.118	20.61	0.115	21.03	0.127
		8	7	20.75	0.119	20.53	0.113	20.94	0.124
	64QAM	15	0	20.75	0.119	20.54	0.113	20.92	0.124
		1	0	20.94	0.124	20.64	0.116	21.11	0.129
		1	7	20.83	0.121	20.64	0.116	21.07	0.128
		1	14	20.87	0.122	20.59	0.115	21.08	0.128
		8	0	19.78	0.095	19.58	0.091	20.00	0.100
		8	4	19.77	0.095	19.59	0.091	19.98	0.100
		8	7	19.74	0.094	19.50	0.089	19.96	0.099
	15	0	19.75	0.094	19.52	0.090	20.01	0.100	

LTE Band 66/4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				131997 (1 712.5 MHz)		132322 (1 745.0 MHz)		132647 (1 777.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	QPSK	1	0	22.62	0.183	22.45	0.176	22.88	0.194
		1	12	22.61	0.182	22.52	0.179	22.92	0.196
		1	24	22.55	0.180	22.41	0.174	22.82	0.191
		12	0	21.77	0.150	21.52	0.142	21.98	0.158
		12	6	21.68	0.147	21.53	0.142	21.94	0.156
		12	13	21.66	0.147	21.45	0.140	21.83	0.152
	25	0	21.65	0.146	21.48	0.141	21.93	0.156	
	16QAM	1	0	21.92	0.156	21.73	0.149	22.09	0.162
		1	12	21.91	0.155	21.70	0.148	22.12	0.163
		1	24	21.72	0.149	21.69	0.148	22.06	0.161
		12	0	20.76	0.119	20.58	0.114	21.01	0.126
		12	6	20.81	0.121	20.62	0.115	20.96	0.125
		12	13	20.67	0.117	20.51	0.112	20.94	0.124
	25	0	20.64	0.116	20.53	0.113	20.93	0.124	
	64QAM	1	0	20.73	0.118	20.71	0.118	21.15	0.130
		1	12	20.81	0.121	20.71	0.118	21.12	0.129
		1	24	20.72	0.118	20.67	0.117	20.97	0.125
		12	0	19.73	0.094	19.57	0.091	20.01	0.100
12		6	19.77	0.095	19.55	0.090	20.03	0.101	
12		13	19.69	0.093	19.53	0.090	19.94	0.099	
25	0	19.71	0.094	19.56	0.090	20.01	0.100		

LTE Band 66/4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				132022 (1 715.0 MHz)		132322 (1 745.0 MHz)		132622 (1 775.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
10	QPSK	1	0	22.44	0.175	22.21	0.166	22.53	0.179
		1	25	22.55	0.180	22.35	0.172	22.82	0.191
		1	49	22.41	0.174	22.27	0.169	22.71	0.187
		25	0	21.62	0.145	21.44	0.139	21.85	0.153
		25	12	21.73	0.149	21.54	0.143	21.83	0.152
		25	25	21.61	0.145	21.48	0.141	21.91	0.155
	50	0	21.61	0.145	21.46	0.140	21.76	0.150	
	16QAM	1	0	21.63	0.146	21.44	0.139	21.72	0.149
		1	25	21.81	0.152	21.60	0.145	22.15	0.164
		1	49	21.76	0.150	21.58	0.144	21.89	0.155
		25	0	20.69	0.117	20.43	0.110	20.82	0.121
		25	12	20.74	0.119	20.62	0.115	20.87	0.122
		25	25	20.61	0.115	20.51	0.112	20.81	0.121
	50	0	20.63	0.116	20.45	0.111	20.81	0.121	
	64QAM	1	0	20.65	0.116	20.44	0.111	20.75	0.119
		1	25	20.79	0.120	20.66	0.116	21.07	0.128
		1	49	20.61	0.115	20.63	0.116	20.90	0.123
		25	0	19.57	0.091	19.42	0.087	19.83	0.096
25		12	19.77	0.095	19.52	0.090	19.87	0.097	
25		25	19.67	0.093	19.49	0.089	19.88	0.097	
50	0	19.63	0.092	19.45	0.088	19.81	0.096		

LTE Band 66/4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				132047 (1 717.5 MHz)		132322 (1 745.0 MHz)		132597 (1 772.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
15	QPSK	1	0	22.46	0.176	22.23	0.167	22.68	0.185
		1	36	22.54	0.179	22.32	0.171	22.76	0.189
		1	74	22.40	0.174	22.31	0.170	22.77	0.189
		36	0	21.63	0.146	21.46	0.140	21.83	0.152
		36	18	21.60	0.145	21.47	0.140	21.85	0.153
		36	37	21.49	0.141	21.46	0.140	21.88	0.154
		75	0	21.51	0.142	21.48	0.141	21.81	0.152
	16QAM	1	0	21.68	0.147	21.49	0.141	21.93	0.156
		1	36	21.85	0.153	21.55	0.143	22.03	0.160
		1	74	21.60	0.145	21.61	0.145	22.02	0.159
		36	0	20.67	0.117	21.47	0.140	20.84	0.121
		36	18	20.77	0.119	20.51	0.112	20.87	0.122
		36	37	20.50	0.112	20.51	0.112	20.78	0.120
		75	0	20.52	0.113	20.41	0.110	20.80	0.120
	64QAM	1	0	20.71	0.118	20.52	0.113	20.98	0.125
		1	36	20.74	0.119	20.63	0.116	21.03	0.127
		1	74	20.68	0.117	20.54	0.113	21.06	0.128
		36	0	19.68	0.093	19.51	0.089	19.81	0.096
36		18	19.69	0.093	19.52	0.090	19.78	0.095	
36		37	19.51	0.089	19.52	0.090	19.84	0.096	
75		0	19.54	0.090	19.48	0.089	19.82	0.096	

LTE Band 66/4									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				132072 (1 720.0 MHz)		132322 (1 745.0 MHz)		132572 (1 777.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
20	QPSK	1	0	22.23	0.167	22.02	0.159	22.62	0.183
		1	50	22.42	0.175	22.11	0.163	22.65	0.184
		1	99	22.31	0.170	22.29	0.169	22.75	0.188
		50	0	21.61	0.145	21.41	0.138	21.64	0.146
		50	25	21.55	0.143	21.49	0.141	21.79	0.151
		50	13	21.44	0.139	21.49	0.141	21.73	0.149
		100	0	21.53	0.142	21.43	0.139	21.77	0.150
	16QAM	1	0	21.51	0.142	21.32	0.136	21.91	0.155
		1	50	21.77	0.150	21.52	0.142	21.99	0.158
		1	99	21.54	0.143	21.58	0.144	22.03	0.160
		50	0	20.53	0.113	20.48	0.112	20.67	0.117
		50	25	20.57	0.114	20.50	0.112	20.81	0.121
		50	50	20.51	0.112	20.51	0.112	20.77	0.119
		100	0	20.44	0.111	20.43	0.110	20.75	0.119
	64QAM	1	0	20.53	0.113	20.39	0.109	20.76	0.119
		1	50	20.74	0.119	20.46	0.111	21.02	0.126
		1	99	20.59	0.115	20.57	0.114	21.04	0.127
		50	0	19.66	0.092	19.45	0.088	19.72	0.094
		50	25	19.55	0.090	19.49	0.089	19.85	0.097
		50	50	19.53	0.090	19.44	0.088	19.81	0.096
		100	0	19.53	0.090	19.41	0.087	19.75	0.094

LTE Band 71									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				133147 (665.5 MHz)		133297 (680.5 MHz)		133447 (695.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
5	QPSK	1	0	22.53	0.179	22.11	0.163	22.22	0.167
		1	12	22.38	0.173	22.20	0.166	22.41	0.174
		1	24	22.33	0.171	22.21	0.166	22.32	0.171
		12	0	21.49	0.141	21.23	0.133	21.42	0.139
		12	6	21.51	0.142	21.32	0.136	21.46	0.140
		12	13	21.45	0.140	21.34	0.136	21.48	0.141
	25	0	21.47	0.140	21.31	0.135	21.45	0.140	
	16QAM	1	0	21.86	0.153	21.50	0.141	21.62	0.145
		1	12	21.65	0.146	21.62	0.145	21.77	0.150
		1	24	21.68	0.147	21.57	0.144	21.63	0.146
		12	0	20.48	0.112	20.28	0.107	20.46	0.111
		12	6	20.54	0.113	20.41	0.110	20.49	0.112
		12	13	20.49	0.112	20.36	0.109	20.52	0.113
	25	0	20.51	0.112	20.32	0.108	20.46	0.111	
	64QAM	1	0	20.79	0.120	20.38	0.109	20.48	0.112
		1	12	20.67	0.117	20.47	0.111	20.61	0.115
		1	24	20.48	0.112	20.56	0.114	20.59	0.115
		12	0	19.52	0.090	19.25	0.084	19.41	0.087
12		6	19.56	0.090	19.33	0.086	19.52	0.090	
12		13	19.51	0.089	19.38	0.087	19.55	0.090	
25	0	19.51	0.089	19.32	0.086	19.42	0.087		

LTE Band 71									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				133172 (668.0 MHz)		133297 (680.5 MHz)		133422 (693.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
10	QPSK	1	0	22.54	0.179	22.27	0.169	22.35	0.172
		1	25	22.35	0.172	22.17	0.165	22.35	0.172
		1	49	22.26	0.168	22.17	0.165	22.27	0.169
		25	0	21.48	0.141	21.28	0.134	21.44	0.139
		25	12	21.46	0.140	21.32	0.136	21.37	0.137
		25	25	21.34	0.136	21.23	0.133	21.42	0.139
	50	0	21.35	0.136	21.22	0.132	21.32	0.136	
	16QAM	1	0	21.84	0.153	21.57	0.144	21.71	0.148
		1	25	21.72	0.149	21.61	0.145	21.72	0.149
		1	49	21.59	0.144	21.57	0.144	21.65	0.146
		25	0	20.55	0.114	20.29	0.107	20.43	0.110
		25	12	20.49	0.112	20.33	0.108	20.47	0.111
		25	25	20.38	0.109	20.30	0.107	20.43	0.110
	50	0	20.36	0.109	20.26	0.106	20.36	0.109	
	64QAM	1	0	20.82	0.121	20.54	0.113	20.59	0.115
		1	25	20.57	0.114	20.48	0.112	20.57	0.114
		1	49	20.61	0.115	20.51	0.112	20.67	0.117
		25	0	19.55	0.090	19.30	0.085	19.50	0.089
25		12	19.51	0.089	19.38	0.087	19.49	0.089	
25		25	19.38	0.087	19.27	0.085	19.44	0.088	
50	0	19.41	0.087	19.30	0.085	19.41	0.087		

LTE Band 71									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				133197 (670.5 MHz)		133297 (680.5 MHz)		133397 (690.5 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
15	QPSK	1	0	22.46	0.176	22.32	0.171	22.28	0.169
		1	36	22.24	0.167	22.17	0.165	22.29	0.169
		1	74	22.09	0.162	22.20	0.166	22.22	0.167
		36	0	21.36	0.137	21.25	0.133	21.30	0.135
		36	18	21.44	0.139	21.34	0.136	21.37	0.137
		36	37	21.32	0.136	21.32	0.136	21.52	0.142
	75	0	21.42	0.139	21.31	0.135	21.28	0.134	
	16QAM	1	0	21.79	0.151	21.71	0.148	21.63	0.146
		1	36	21.64	0.146	21.64	0.146	21.69	0.148
		1	74	21.57	0.144	21.57	0.144	21.65	0.146
		36	0	20.38	0.109	20.28	0.107	20.30	0.107
		36	18	20.49	0.112	20.35	0.108	20.38	0.109
		36	37	20.40	0.110	20.35	0.108	20.49	0.112
	75	0	20.41	0.110	20.34	0.108	20.35	0.108	
	64QAM	1	0	20.72	0.118	20.66	0.116	20.59	0.115
		1	36	20.57	0.114	20.61	0.115	20.58	0.114
		1	74	20.49	0.112	20.58	0.114	20.57	0.114
		36	0	19.40	0.087	19.27	0.085	19.35	0.086
36		18	19.46	0.088	19.39	0.087	19.41	0.087	
36		37	19.40	0.087	19.36	0.086	19.52	0.090	
75	0	19.39	0.087	19.36	0.086	19.44	0.088		

LTE Band 71									
Bandwidth (MHz)	Modulation	RB Size	RB Offset	Conducted Output Power					
				133222 (673.0 MHz)		133297 (680.5 MHz)		133372 (688.0 MHz)	
				(dB m)	(W)	(dB m)	(W)	(dB m)	(W)
20	QPSK	1	0	22.31	0.170	22.40	0.174	22.21	0.166
		1	50	22.19	0.166	22.11	0.163	22.25	0.168
		1	99	22.08	0.161	22.27	0.169	22.17	0.165
		50	0	21.31	0.135	21.26	0.134	21.24	0.133
		50	25	21.41	0.138	21.37	0.137	21.43	0.139
		50	13	21.33	0.136	21.29	0.135	21.34	0.136
	100	0	21.37	0.137	21.30	0.135	21.26	0.134	
	16QAM	1	0	21.84	0.153	21.75	0.150	21.66	0.147
		1	50	21.57	0.144	21.54	0.143	21.61	0.145
		1	99	21.56	0.143	21.60	0.145	21.58	0.144
		50	0	20.37	0.109	20.29	0.107	20.27	0.106
		50	25	20.45	0.111	20.37	0.109	20.42	0.110
		50	50	20.36	0.109	20.31	0.107	20.44	0.111
	100	0	20.39	0.109	20.30	0.107	20.32	0.108	
	64QAM	1	0	20.74	0.119	20.61	0.115	20.59	0.115
		1	50	20.54	0.113	20.48	0.112	20.55	0.114
		1	99	20.51	0.112	20.58	0.114	20.56	0.114
		50	0	19.38	0.087	19.33	0.086	19.27	0.085
50		25	19.49	0.089	19.37	0.086	19.45	0.088	
50		50	19.36	0.086	19.33	0.086	19.48	0.089	
100	0	19.38	0.087	19.33	0.086	19.29	0.085		

4. Occupied Bandwidth

4.1. Limit

CFR 47, Section FCC §2.1049 and IC RSS-Gen Issue 5 6.7.

4.2. Test Procedure

FCC

The test follows section 5.4.4 of ANSI C63.26-2015.

- a. The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (typically a span of $1.5 \times \text{OBW}$ is sufficient).
- b. The nominal IF filter 3 dB bandwidth (RBW) shall be in the range of 1 % to 5 % of the anticipated OBW, and the VBW shall be set $\geq 3 \times \text{RBW}$.
- c. Set the reference level of the instrument as required to prevent the signal amplitude from exceeding the maximum spectrum analyzer input mixer level for linear operation. See guidance provided in 4.2.3.
- d. Set the detection mode to peak, and the trace mode to max-hold.
- e. If the instrument does not have a 99 % OBW function, recover the trace data points and sum directly in linear power terms. Place the recovered amplitude data points, beginning at the lowest frequency, in a running sum until 0.5 % of the total is reached. Record that frequency as the lower OBW frequency. Repeat the process until 99.5 % of the total is reached and record that frequency as the upper OBW frequency. The 99 % power OBW can be determined by computing the difference between these two frequencies.
- f. The OBW shall be reported and plot(s) of the measuring instrument display shall be provided with the test report. The frequency and amplitude axis and scale shall be clearly labeled. Tabular data can be reported in addition to the plot(s).

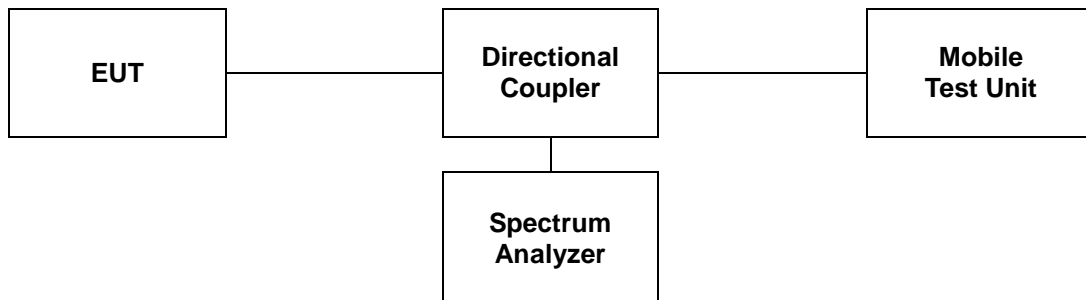
IC

The following conditions shall be observed for measuring the occupied bandwidth and x dB bandwidth:

- The transmitter shall be operated at its maximum carrier power measured under normal test conditions.
- The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.
- The detector of the spectrum analyzer shall be set to “Sample”. However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or “Max Hold”) may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.
- The resolution bandwidth (RBW) shall be in the range of 1 % to 5 % of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.

Note: It may be necessary to repeat the measurement a few times until the RBW and VBW are in compliance with the above requirement.

For the 99 % emission bandwidth, the trace data points are recovered and directly summed in linear power level terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached, and that frequency recorded. The process is repeated for the highest frequency data points (starting at the highest frequency, at the right side of the span, and going down in frequency). This frequency is then recorded. The difference between the two recorded frequencies is the occupied bandwidth (or the 99 % emission bandwidth).



4.3 Test Results

Ambient temperature : (23 ± 1) °C
 Relative humidity : 47 % R.H.

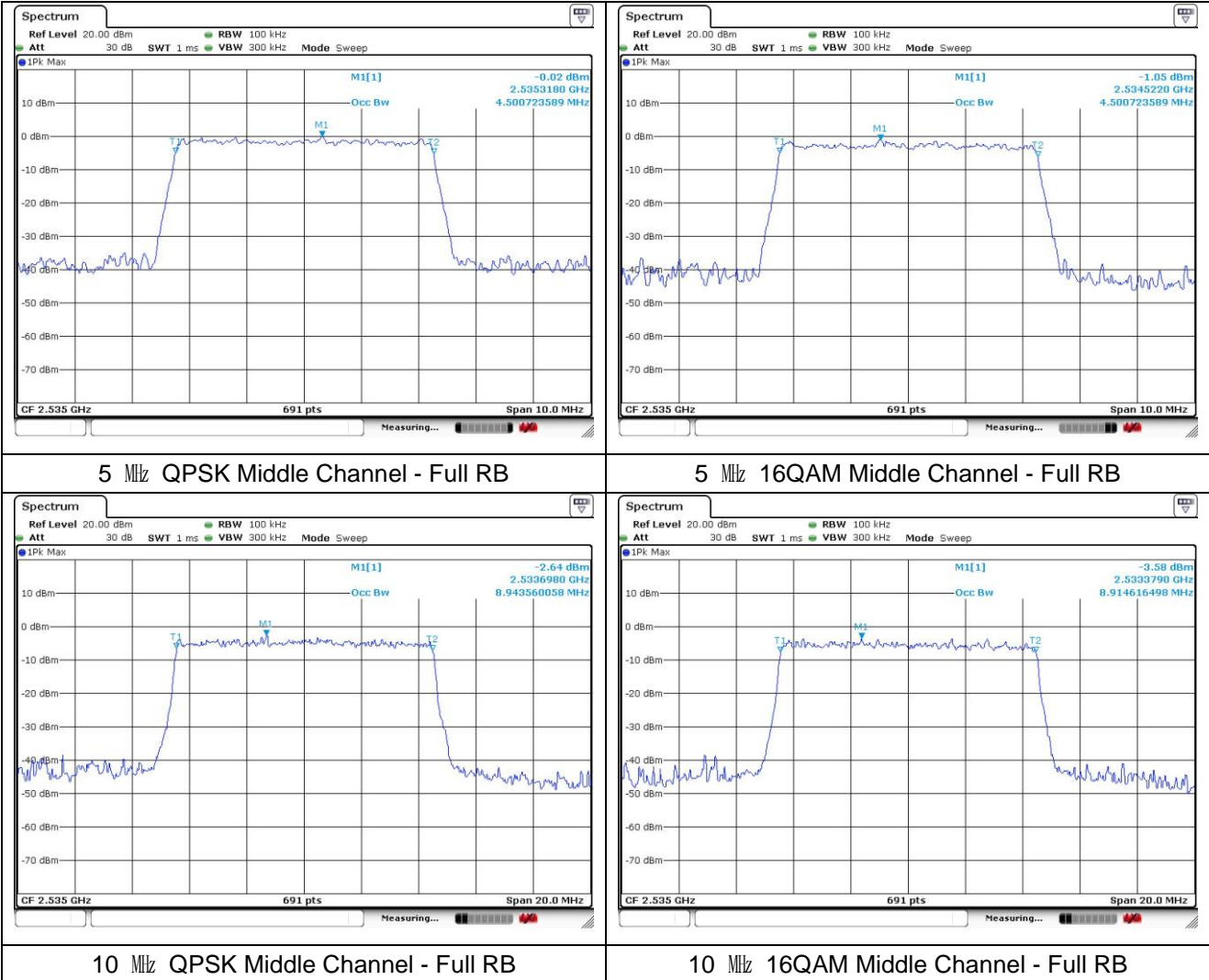
Band	Bandwidth (MHz)	Frequency (MHz)	Occupied Bandwidth (MHz)			
			SIM 1		SIM 2	
			QPSK	16QAM	QPSK	16QAM
7	5	2 535.0	4.501	4.501	4.515	4.515
	10		8.944	8.915	8.944	8.973
	15		13.502	13.459	13.546	13.502
	20		17.887	17.945	17.945	18.003
12/17	1.4	707.5	1.094	1.094	1.094	1.094
	3		2.674	2.683	2.683	2.683
	5		4.501	4.486	4.501	4.501
	10		8.944	8.944	8.944	8.944
13	5	782.0	4.501	4.515	4.515	4.515
	10		8.944	8.915	8.944	8.944
25/2	1.4	1 882.5	1.094	1.094	1.094	1.098
	3		2.674	2.683	2.692	2.692
	5		4.501	4.501	4.530	4.501
	10		8.944	8.915	8.944	8.944
	15		13.502	13.502	13.502	13.502
	20		17.945	17.945	17.945	18.003
26/5 Part 22	1.4	836.5	1.094	1.094	1.094	1.094
	3		2.674	2.683	2.692	2.683
	5		4.501	4.501	4.515	4.501
	10		8.944	8.915	8.944	8.973
	15	831.5	13.502	13.459	13.502	13.502
26 Part 90	1.4	819.0	1.094	1.094	1.094	1.094
	3		2.674	2.683	2.692	2.692
	5		4.501	4.501	4.515	4.515
	10		8.944	8.915	8.944	8.944
	15	821.5	13.459	13.459	13.502	13.502
41 FCC	5	2 593.0	4.515	4.501	4.530	4.515
	10		8.915	8.915	8.944	8.944
	15		13.502	13.502	13.459	13.502
	20		17.887	17.945	17.887	17.887
41 IC	5	2 595.0	4.501	4.486	4.530	4.501
	10		8.915	8.915	8.944	8.973
	15		13.459	13.459	13.502	13.502
	20		17.887	17.887	17.887	17.887

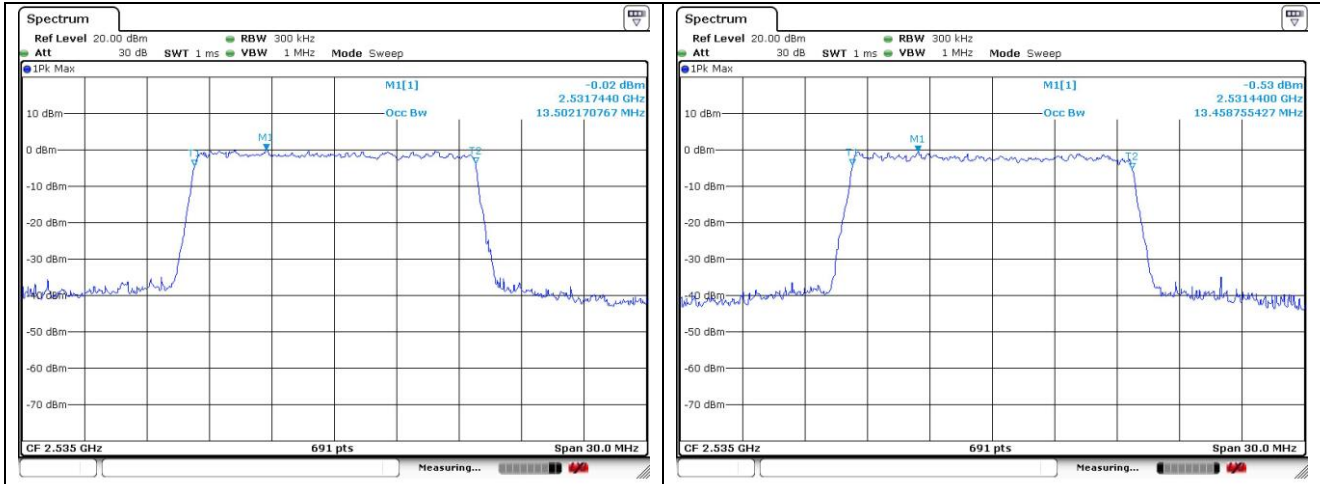
Band	Bandwidth (MHz)	Frequency (MHz)	Occupied Bandwidth (MHz)			
			SIM 1		SIM 2	
			QPSK	16QAM	QPSK	16QAM
66/4	1.4	1 745.0	1.094	1.094	1.094	1.094
	3		2.674	2.683	2.683	2.692
	5		4.486	4.501	4.501	4.501
	10		8.944	8.944	8.944	8.944
	15		13.502	13.459	13.502	13.502
	20		17.887	17.945	17.945	17.887
71	5	680.5	4.525	4.496	4.525	4.496
	10		8.951	8.931	8.951	8.951
	15		13.487	13.487	13.546	13.487
	20		17.902	17.902	17.902	17.942

- Test plots

SIM 1

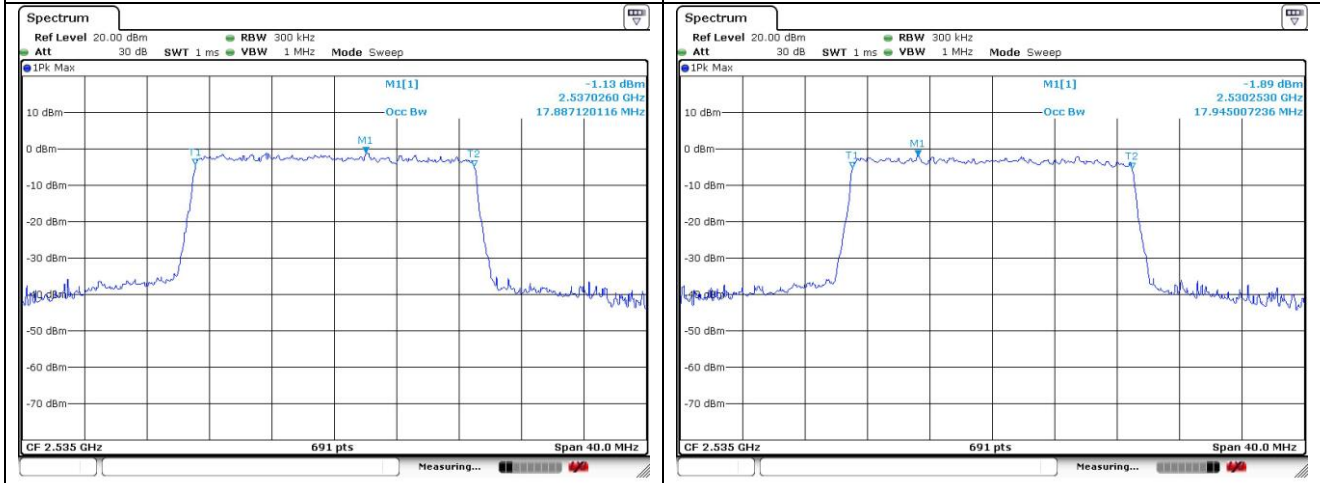
LTE band 7





15 MHz QPSK Middle Channel - Full RB

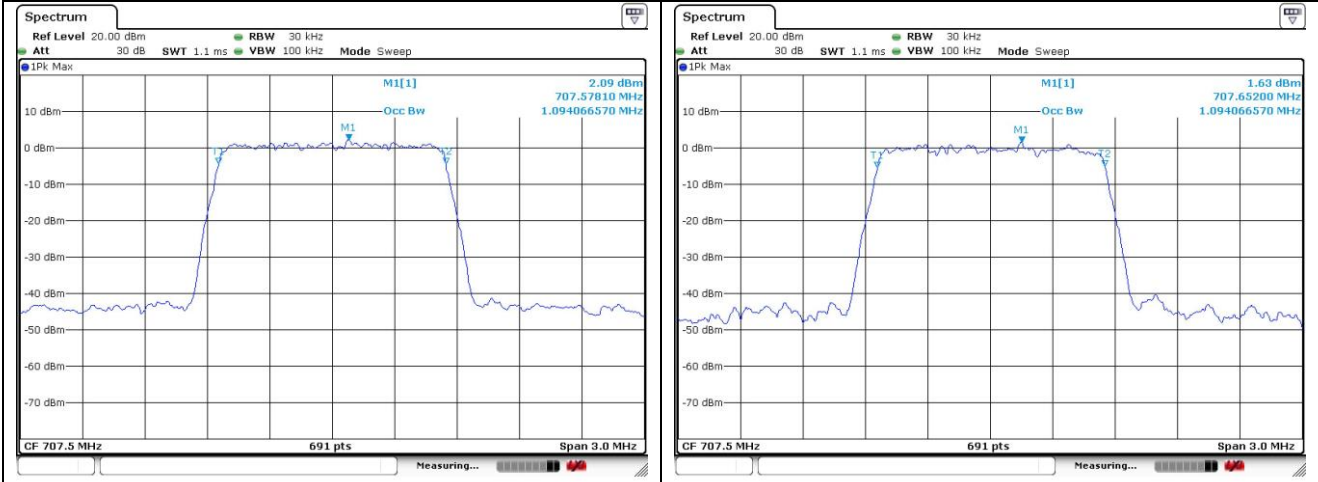
15 MHz 16QAM Middle Channel - Full RB



20 MHz QPSK Middle Channel - Full RB

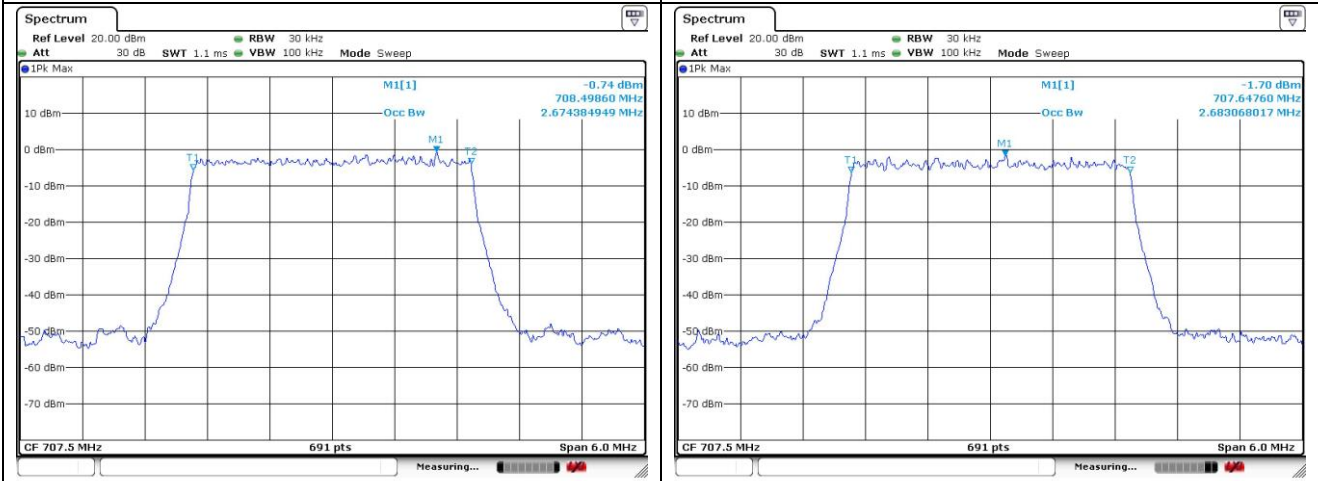
20 MHz 16QAM Middle Channel - Full RB

LTE band 12/17



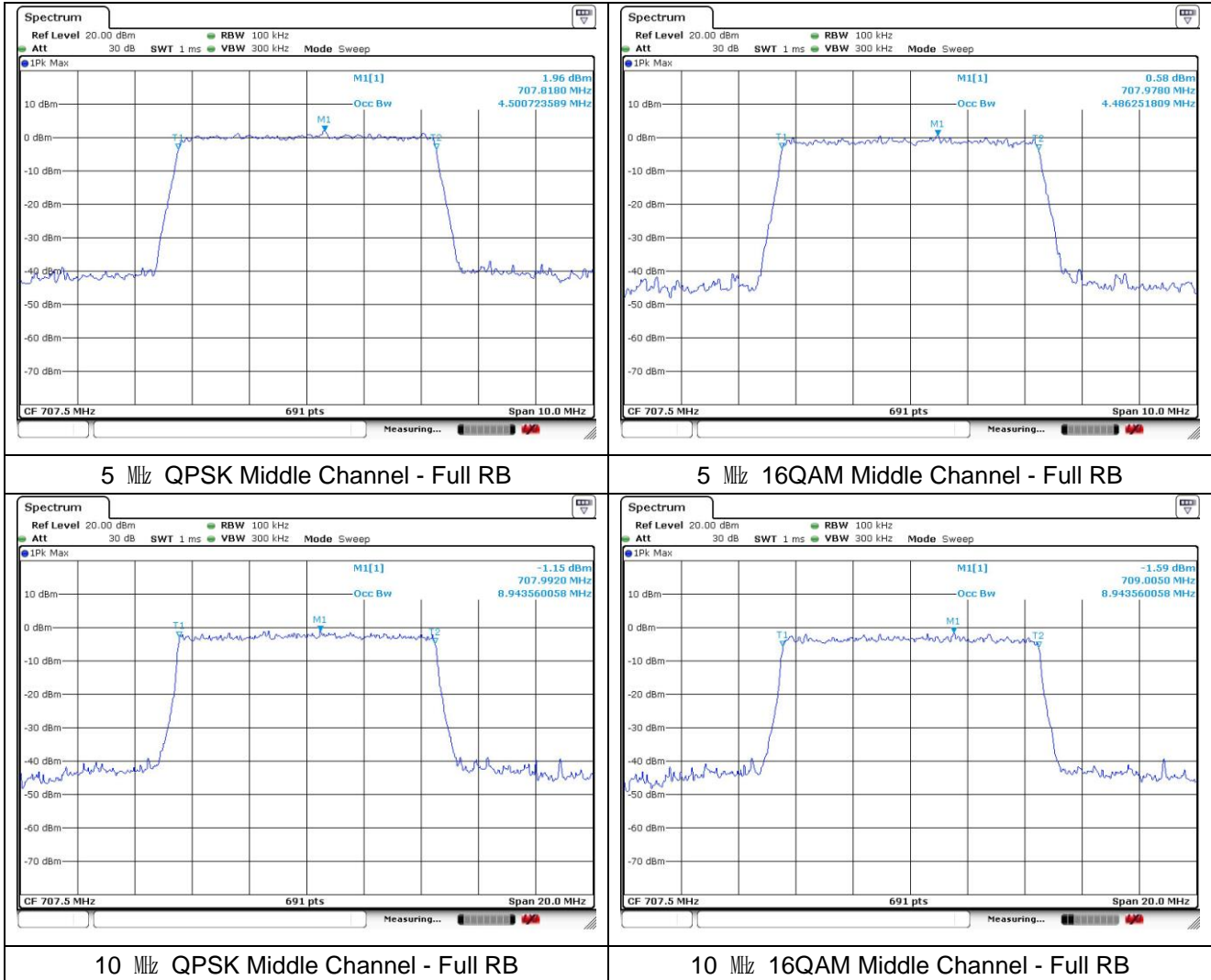
1.4 MHz QPSK Middle Channel - Full RB

1.4 MHz 16QAM Middle Channel - Full RB

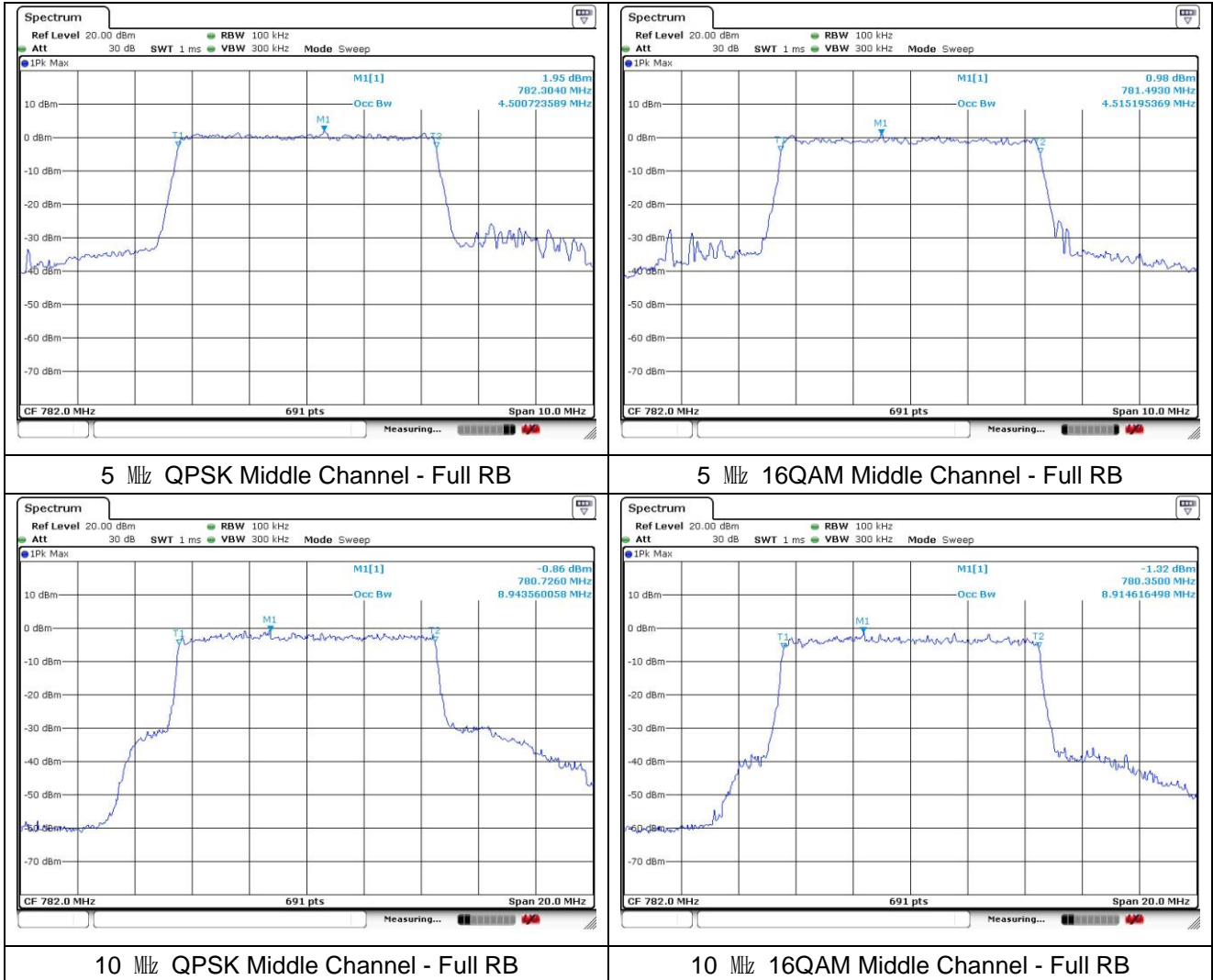


3 MHz QPSK Middle Channel - Full RB

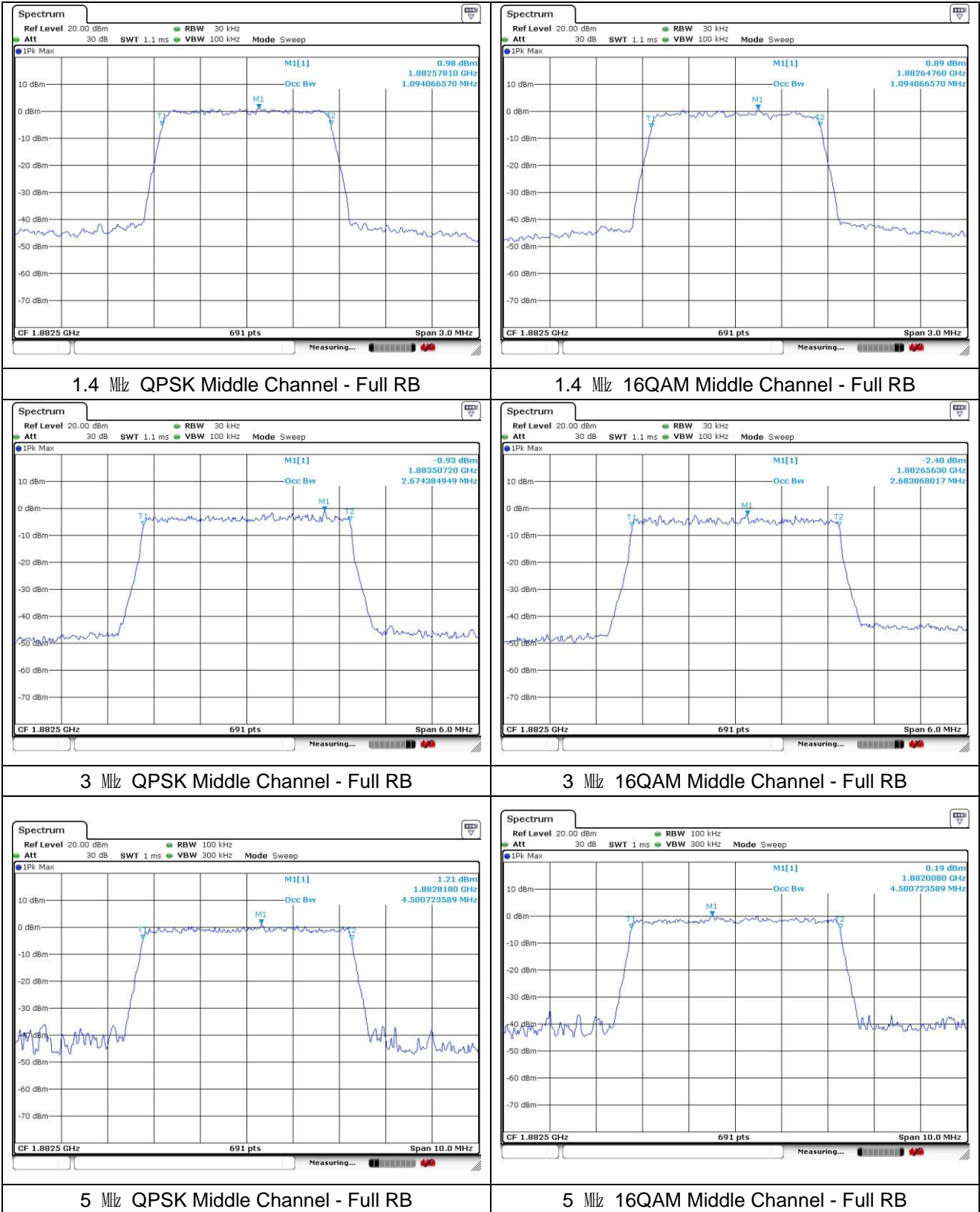
3 MHz 16QAM Middle Channel - Full RB

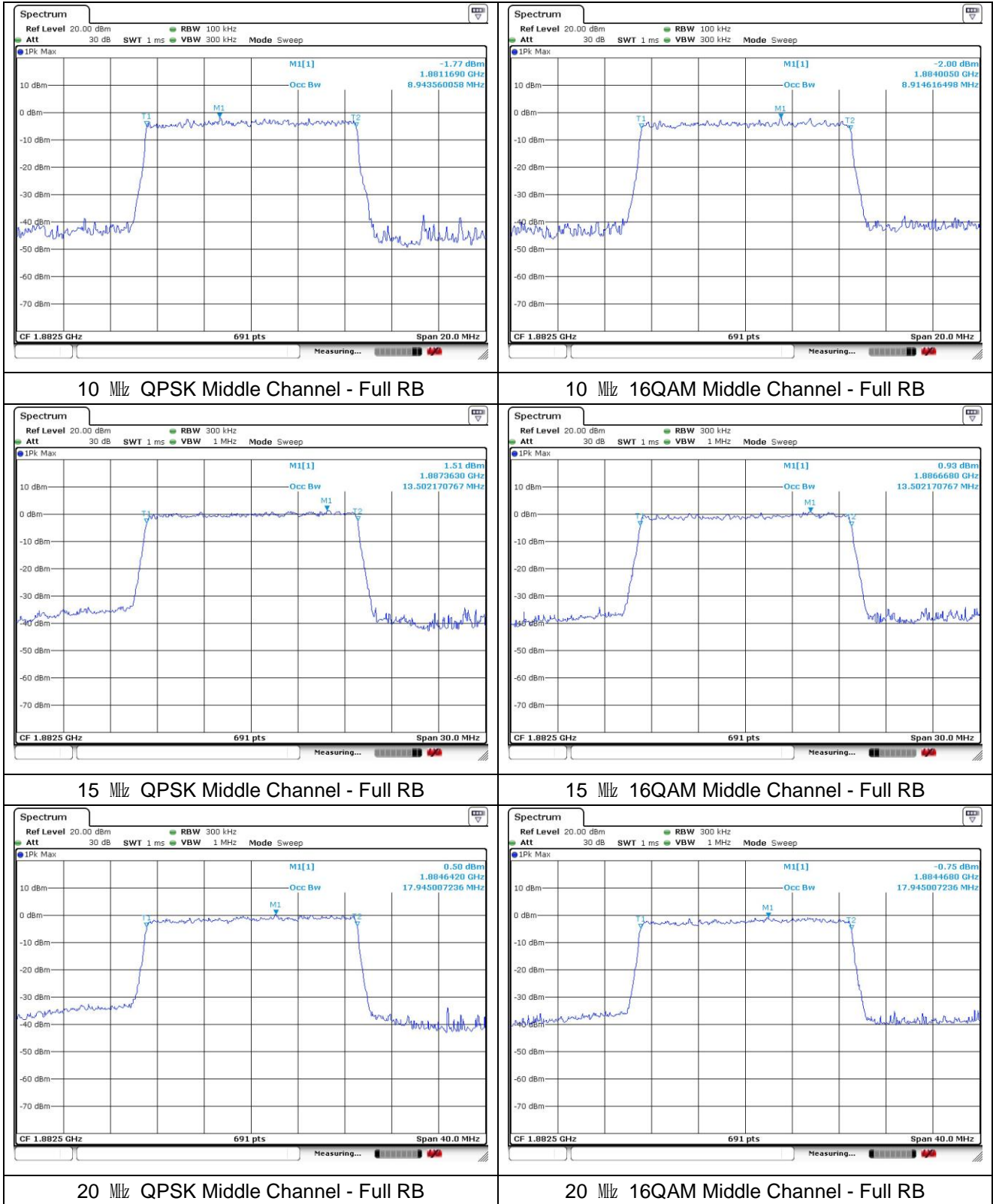


LTE band 13

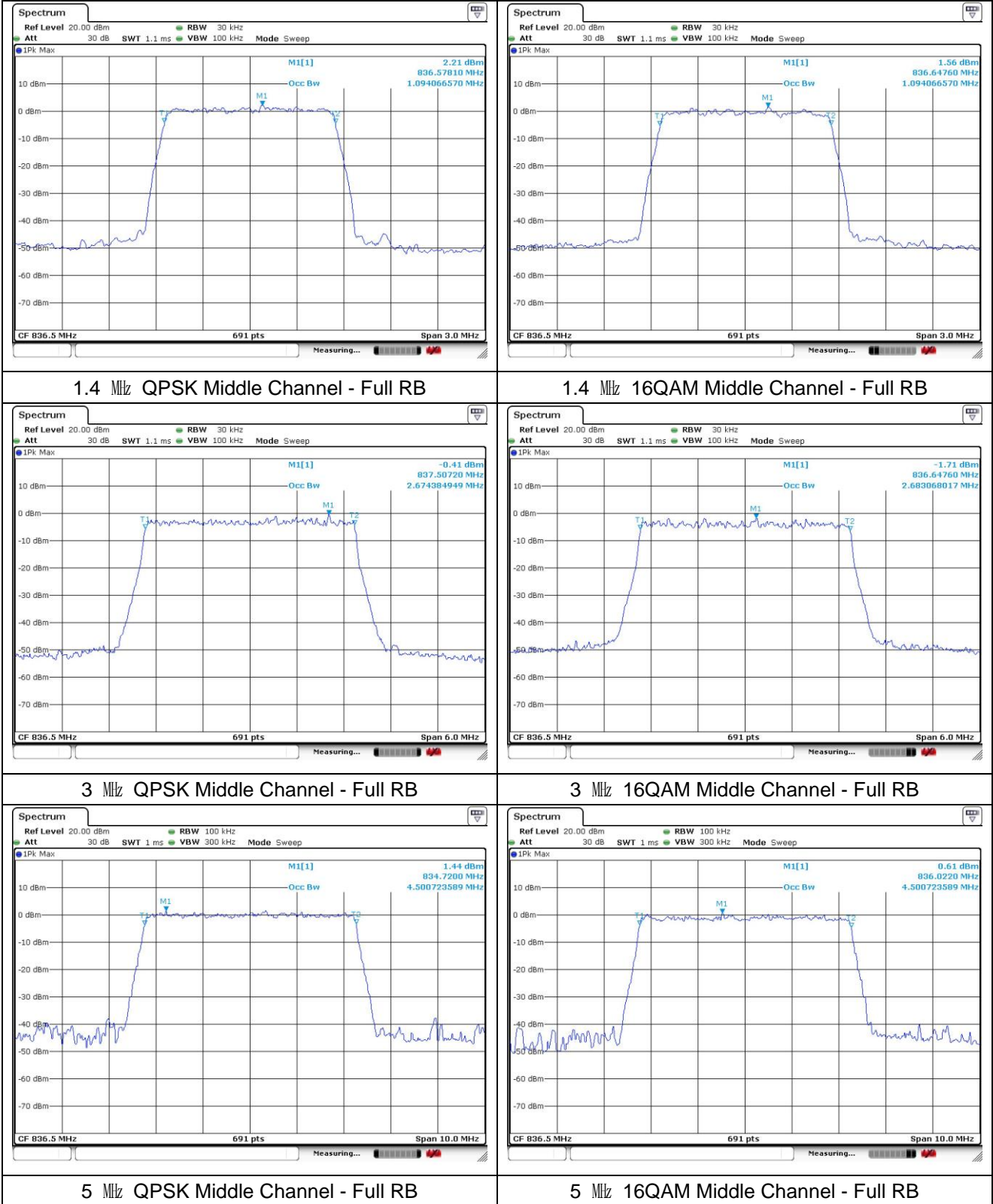


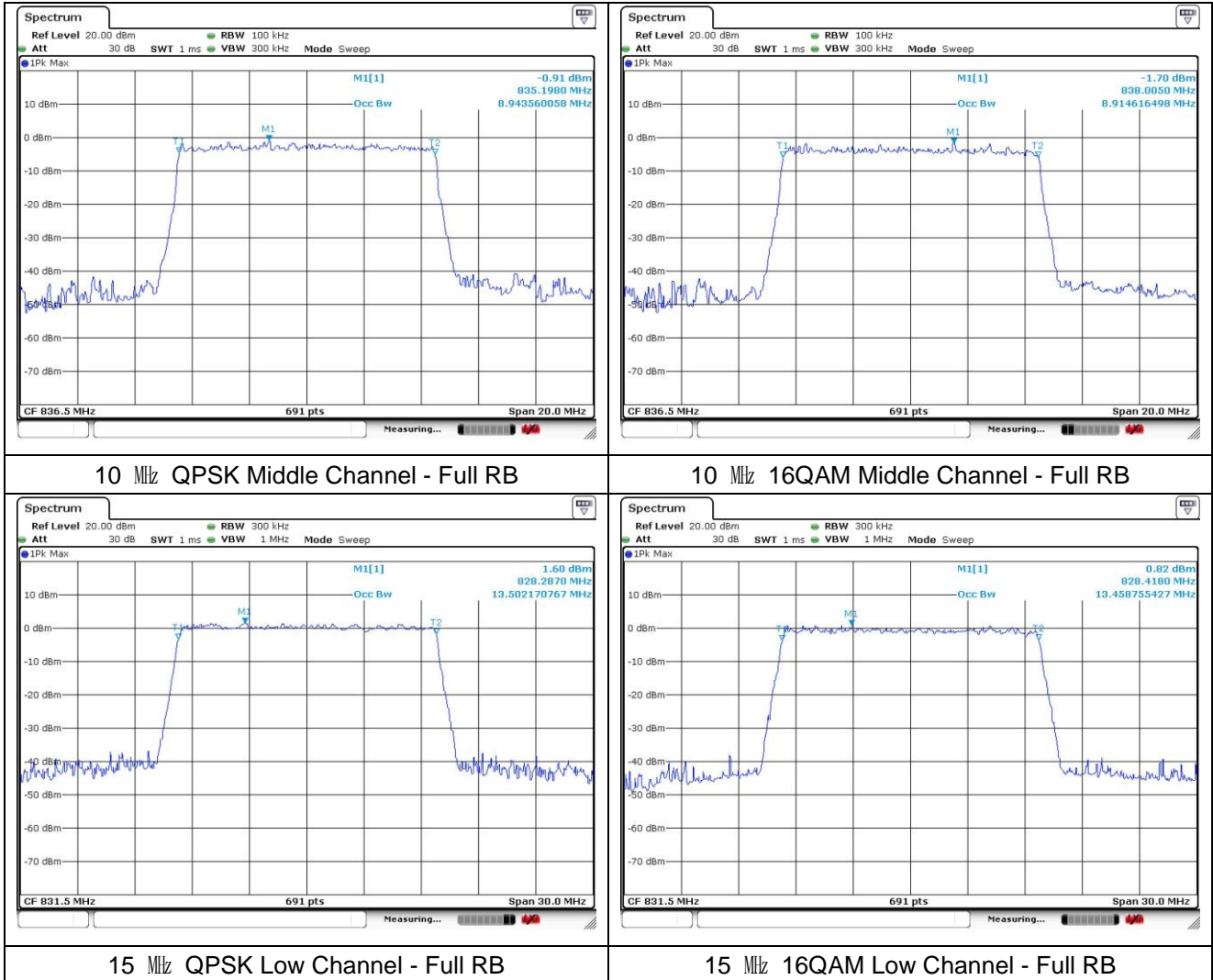
LTE band 25/2



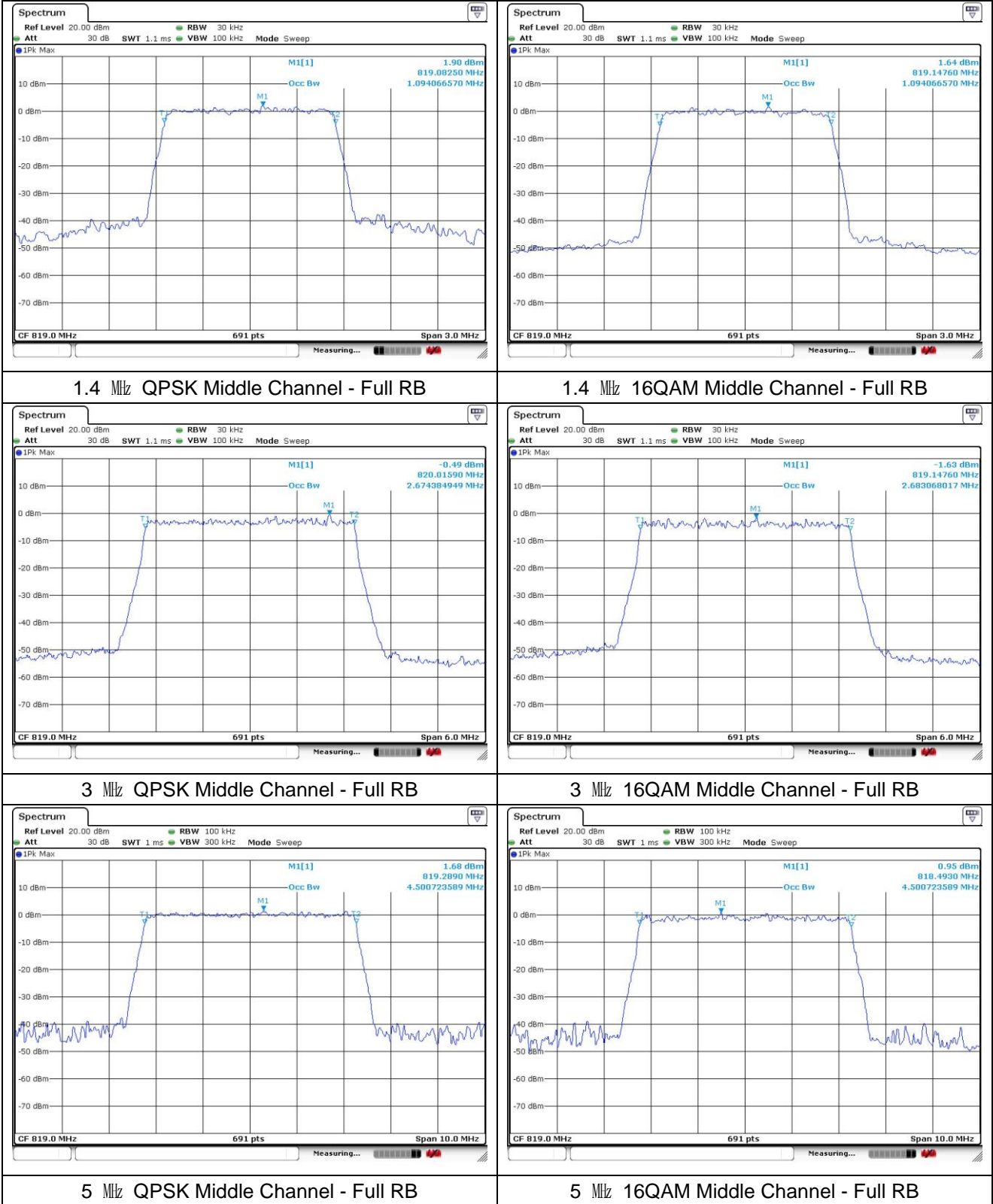


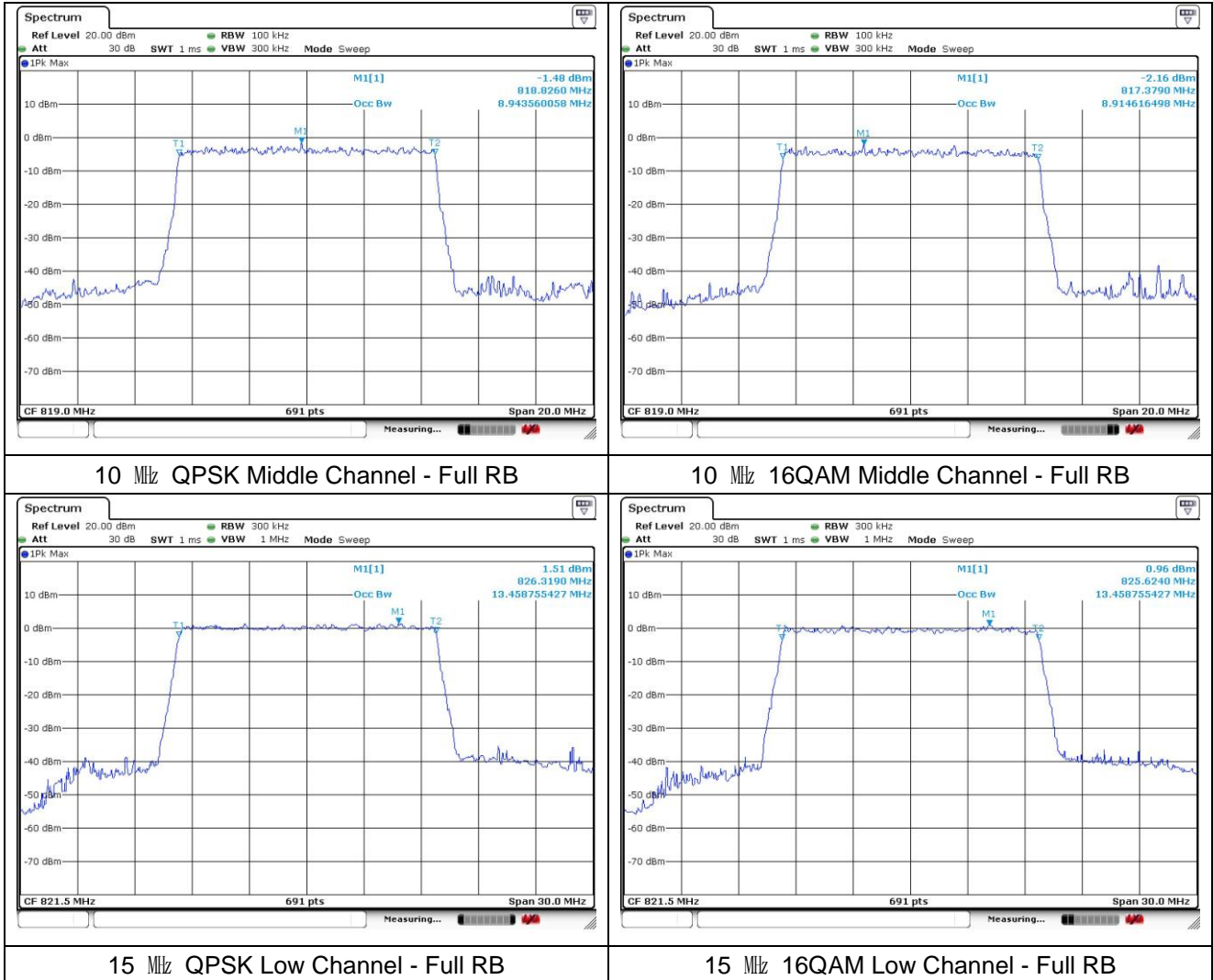
LTE band 26/5_Part 22



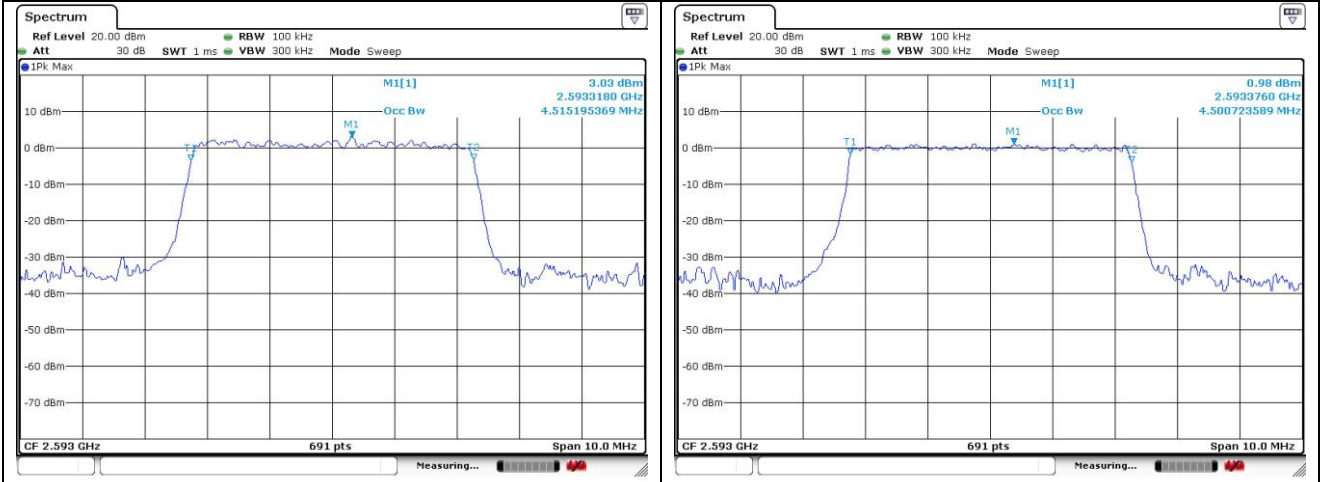


LTE band 26_Part 90



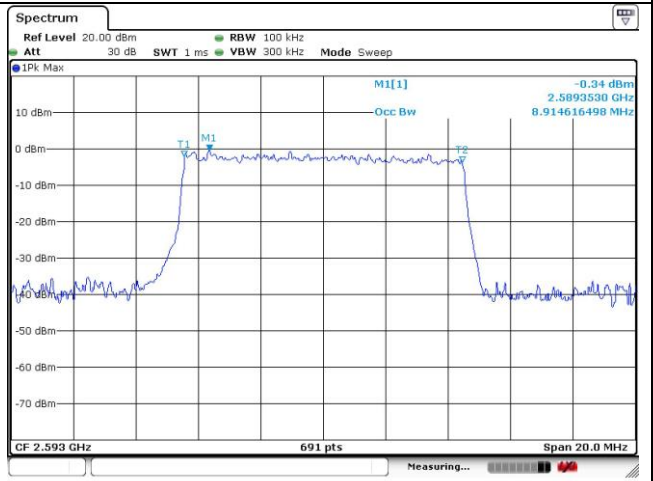
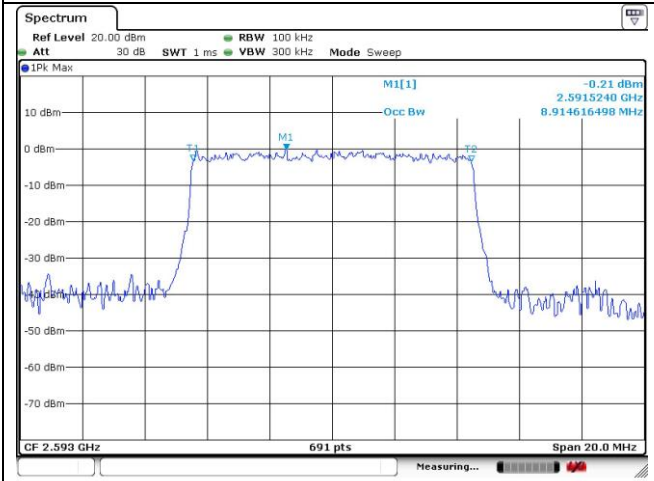


LTE band 41_FCC



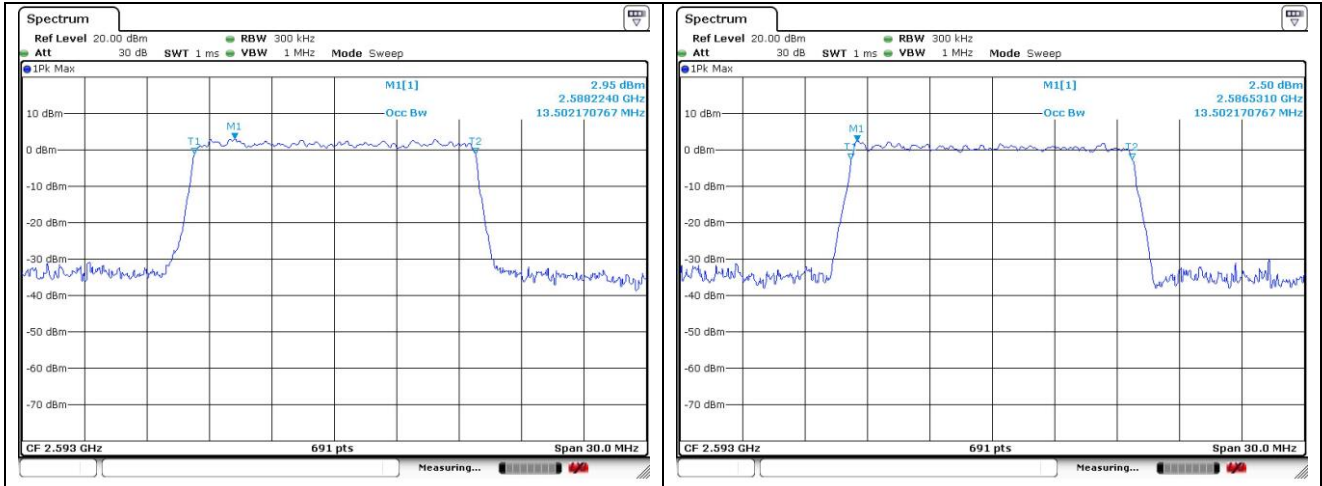
5 MHz QPSK Middle Channel - Full RB

5 MHz 16QAM Middle Channel - Full RB



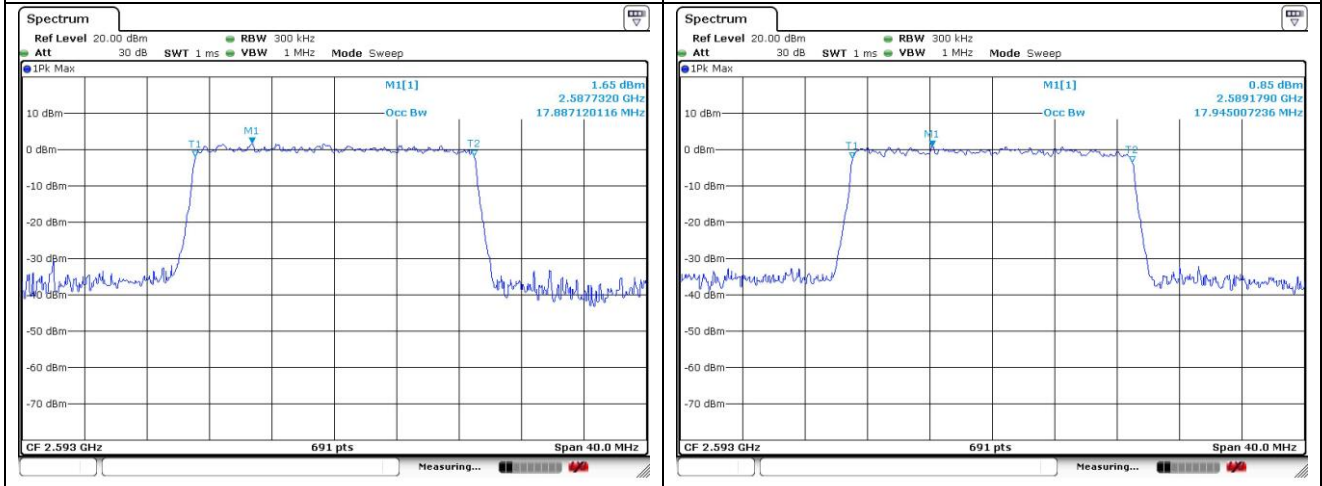
10 MHz QPSK Middle Channel - Full RB

10 MHz 16QAM Middle Channel - Full RB



15 MHz QPSK Middle Channel - Full RB

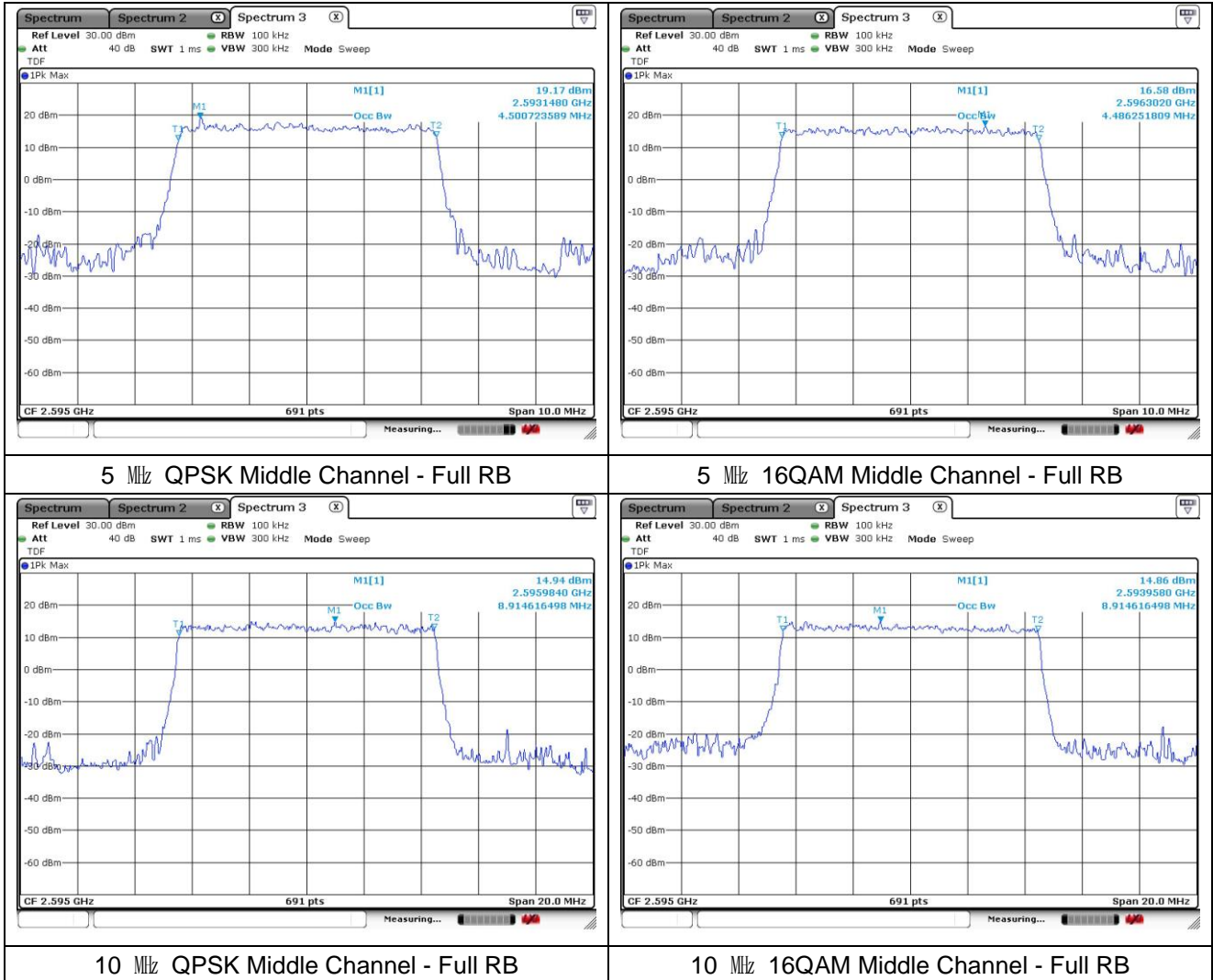
15 MHz 16QAM Middle Channel - Full RB

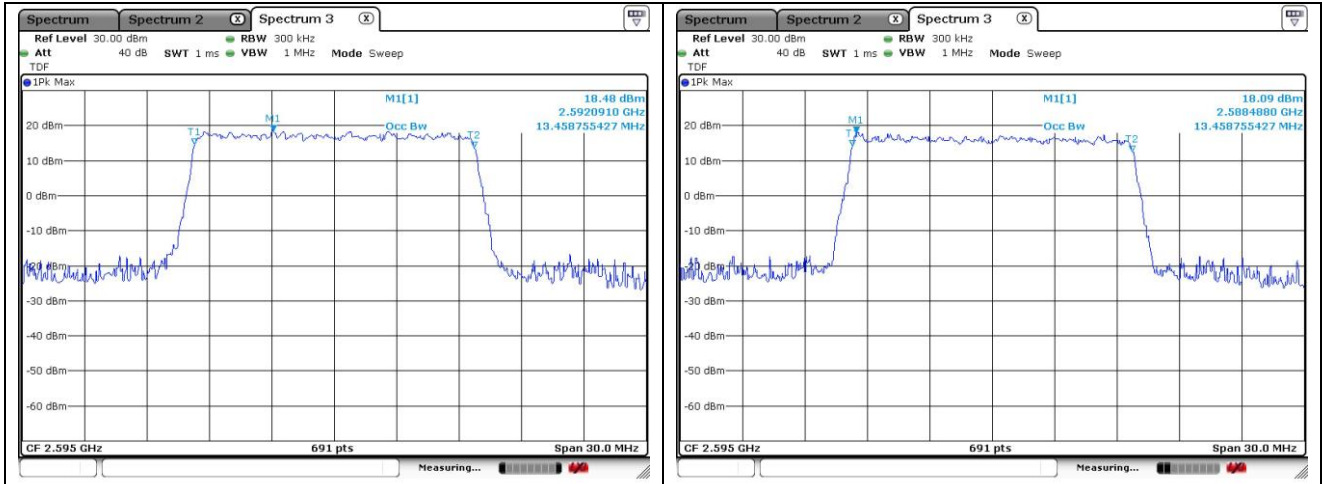


20 MHz QPSK Middle Channel - Full RB

20 MHz 16QAM Middle Channel - Full RB

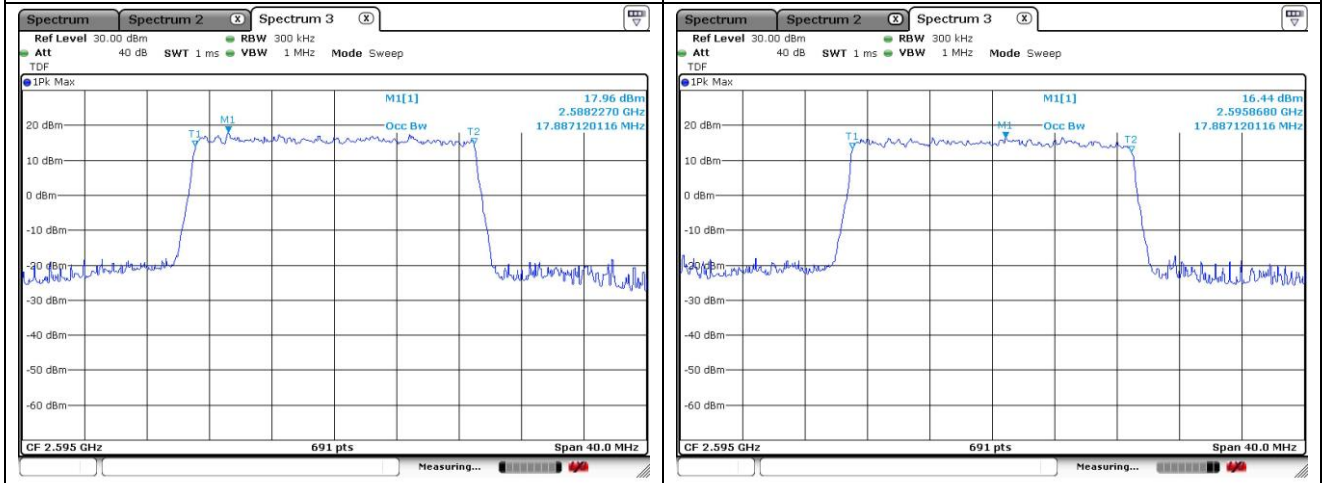
LTE band 41_IC





15 MHz QPSK Middle Channel - Full RB

15 MHz 16QAM Middle Channel - Full RB



20 MHz QPSK Middle Channel - Full RB

20 MHz 16QAM Middle Channel - Full RB