

4.4 Occupied Bandwidth Measurement

4.4.1 Limits of Occupied Bandwidth Measurement

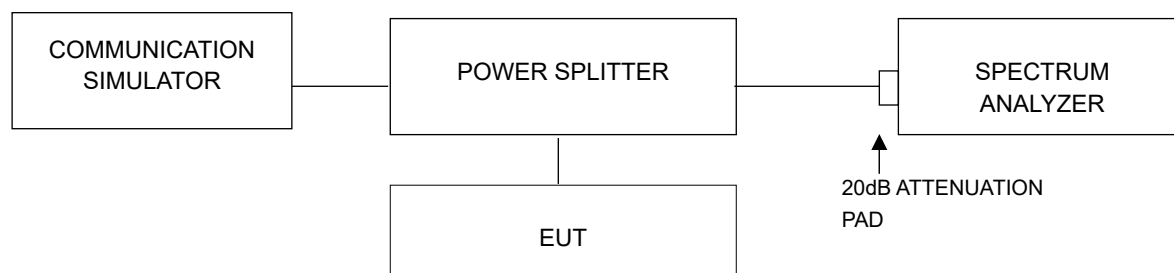
The occupied bandwidth (OBW), that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission.

4.4.2 Test Procedure

The EUT makes a call to the communication simulator. All measurements were done at low, middle and high operational frequency range. The communication simulator station system controlled a EUT to export maximum output power under transmission mode and specific channel frequency. Measurement method, please refer to section 5.4.4 of ANSI C63.26. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

For the 26dBc bandwidth measurement method, please refer to section 5.4.3 of ANSI C63.26.

4.4.3 Test Setup



4.4.4 Test Result

Occupied Bandwidth

LTE Band 4, Channel Bandwidth 1.4MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
19957	1710.7	1.09	1.09	1.09	1.09
20175	1732.5	1.09	1.09	1.09	1.08
20393	1754.3	1.09	1.09	1.09	1.08
LTE Band 4, Channel Bandwidth 3MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
19965	1711.5	2.70	2.70	2.70	2.70
20175	1732.5	2.70	2.70	2.70	2.69
20385	1753.5	2.70	2.70	2.70	2.69
LTE Band 4, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
19975	1712.5	4.49	4.49	4.49	4.49
20175	1732.5	4.49	4.49	4.48	4.49
20375	1752.5	4.49	4.49	4.49	4.48
LTE Band 4, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20000	1715.0	8.98	8.95	8.96	8.96
20175	1732.5	8.97	8.96	8.96	8.95
20350	1750.0	8.97	8.94	8.95	8.95
LTE Band 4, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20025	1717.5	13.45	13.44	13.45	13.44
20175	1732.5	13.45	13.45	13.45	13.44
20325	1747.5	13.44	13.44	13.44	13.44

LTE Band 4, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20050	1720.0	17.90	17.91	17.91	17.91
20175	1732.5	17.92	17.93	17.93	17.93
20300	1745.0	17.92	17.92	17.92	17.93

Spectrum Plot of Worst Value

1.4MHz / 16QAM



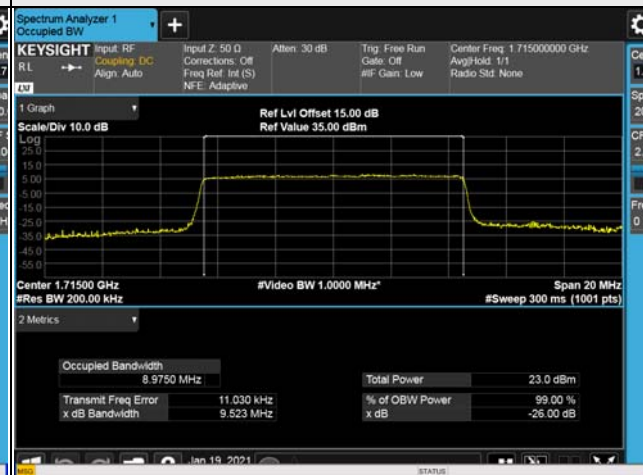
3MHz / 16QAM



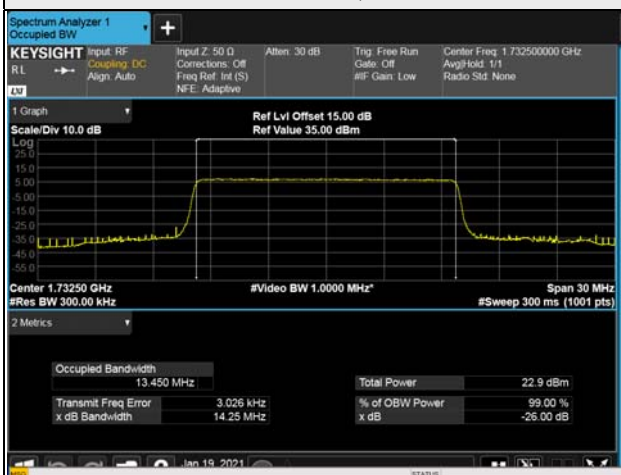
5MHz / 16QAM



10MHz / QPSK



15MHz / QPSK



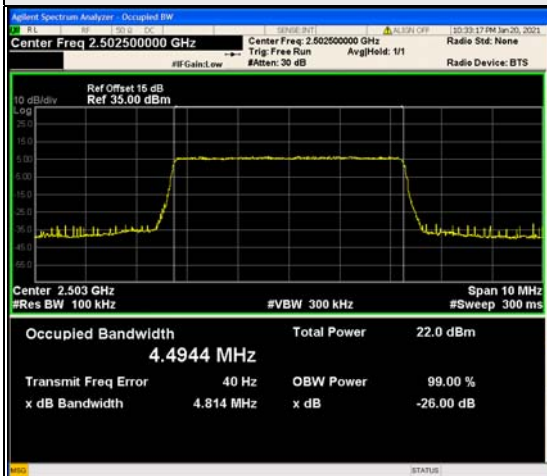
20MHz / 256QAM



LTE Band 7, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20775	2502.5	4.48	4.49	4.49	4.49
21100	2535.0	4.49	4.49	4.49	4.49
21425	2567.5	4.49	4.49	4.49	4.48
LTE Band 7, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20800	2505.0	8.95	8.95	8.96	8.95
21100	2535.0	8.95	8.95	8.95	8.95
21400	2565.0	8.95	8.96	8.96	8.95
LTE Band 7, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20825	2507.5	13.44	13.43	13.43	13.43
21100	2535.0	13.45	13.44	13.43	13.44
21375	2562.5	13.46	13.45	13.44	13.46
LTE Band 7, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20850	2510.0	17.90	17.91	17.91	17.91
21100	2535.0	17.91	17.93	17.92	17.92
21350	2560.0	17.93	17.95	17.95	17.95

Spectrum Plot of Worst Value

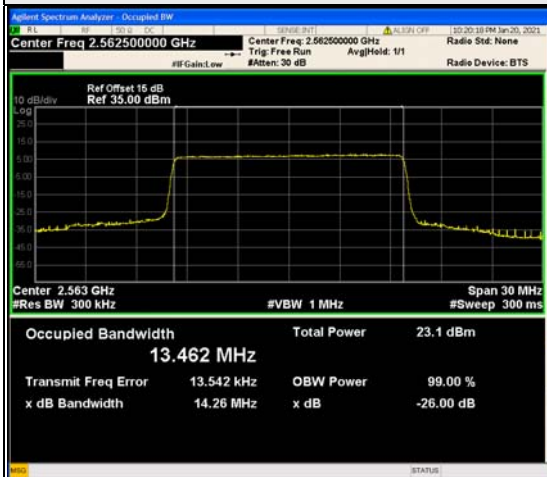
5MHz / 64QAM



10MHz / 16QAM



15MHz / QPSK



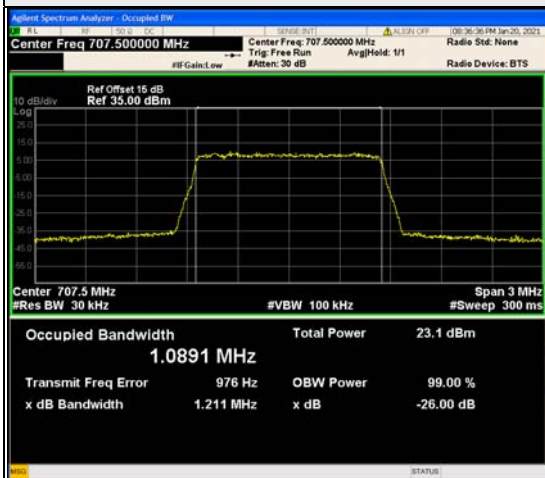
20MHz / 64QAM



LTE Band 12, Channel Bandwidth 1.4MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23017	699.7	1.09	1.09	1.09	1.09
23095	707.5	1.09	1.09	1.09	1.09
23173	715.3	1.09	1.09	1.09	1.09
LTE Band 12, Channel Bandwidth 3MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23025	700.5	2.70	2.69	2.69	2.70
23095	707.5	2.70	2.69	2.69	2.70
23165	714.5	2.70	2.69	2.69	2.70
LTE Band 12, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23035	701.5	4.48	4.49	4.49	4.48
23095	707.5	4.49	4.49	4.50	4.49
23155	713.5	4.48	4.48	4.49	4.48
LTE Band 12, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23060	704.0	8.95	8.96	8.95	8.95
23095	707.5	8.96	8.96	8.96	8.96
23130	711.0	8.95	8.96	8.96	8.95

Spectrum Plot of Worst Value

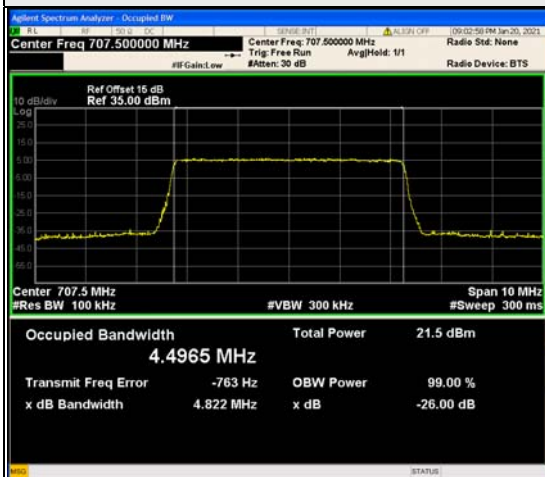
1.4MHz / 16QAM



3MHz / QPSK



5MHz / 64QAM

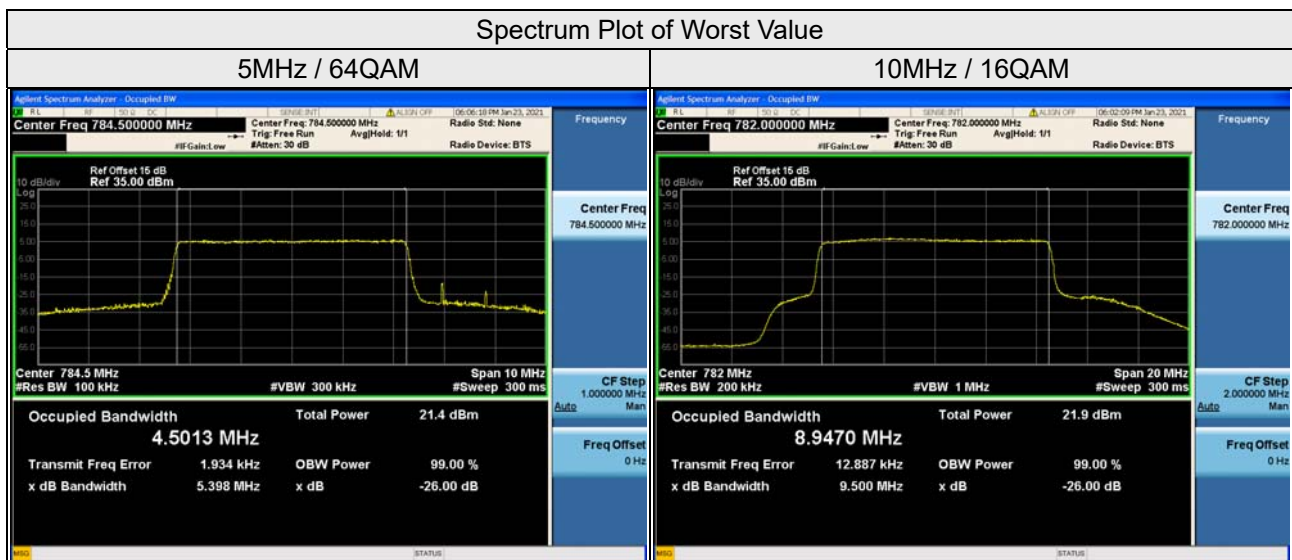


10MHz / 64QAM



LTE Band 13, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23205	779.5	4.47	4.48	4.49	4.48
23230	782.0	4.49	4.49	4.50	4.48
23255	784.5	4.48	4.50	4.50	4.49

LTE Band 13, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23230	782.0	8.95	8.95	8.94	8.94



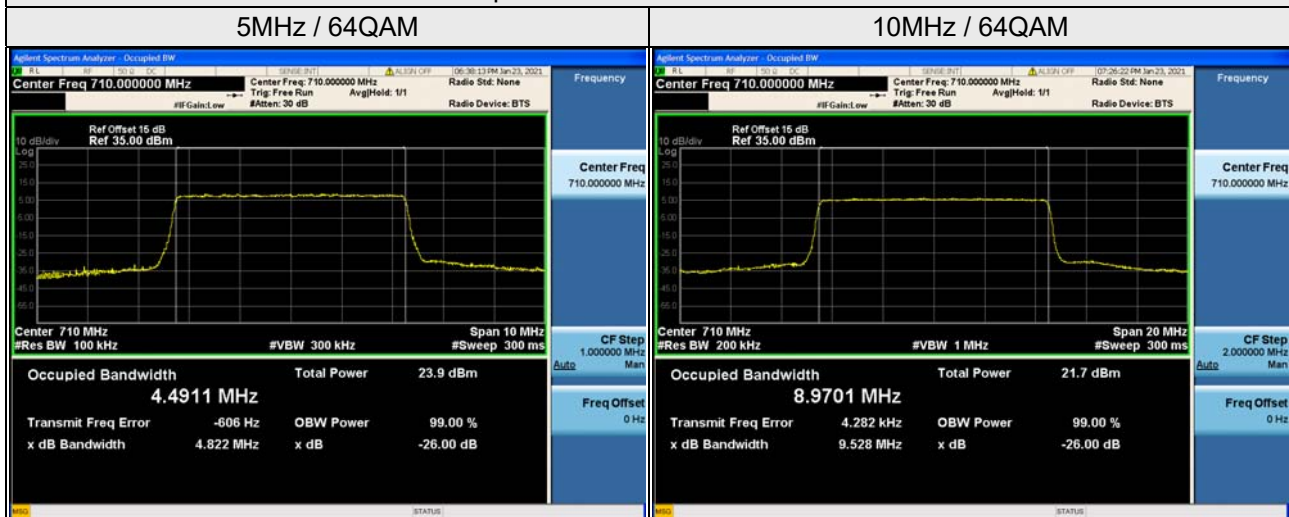
LTE Band 17, Channel Bandwidth 5MHz

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23755	706.5	4.49	4.48	4.48	4.49
23790	710.0	4.49	4.48	4.49	4.49
23825	713.5	4.49	4.48	4.48	4.48

LTE Band 17, Channel Bandwidth 10MHz

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23780	709.0	8.96	8.95	8.97	8.96
23790	710.0	8.96	8.95	8.97	8.95
23800	711.0	8.96	8.94	8.96	8.95

Spectrum Plot of Worst Value



LTE Band 30, Channel Bandwidth 5MHz

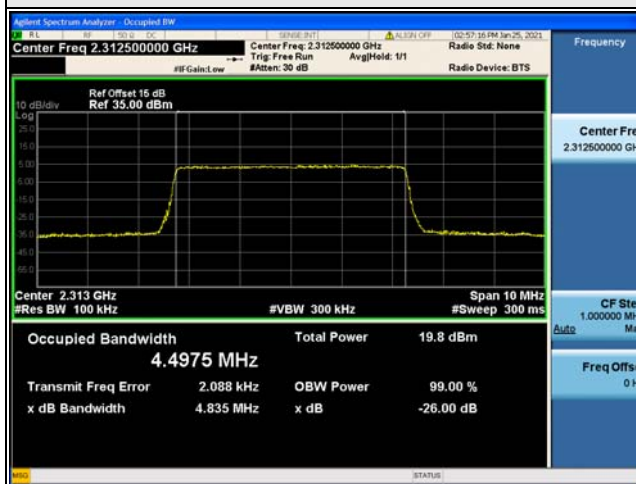
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
27685	2307.5	4.49	4.49	4.49	4.49
27710	2310.0	4.49	4.49	4.49	4.49
27735	2312.5	4.49	4.49	4.50	4.49

LTE Band 30, Channel Bandwidth 10MHz

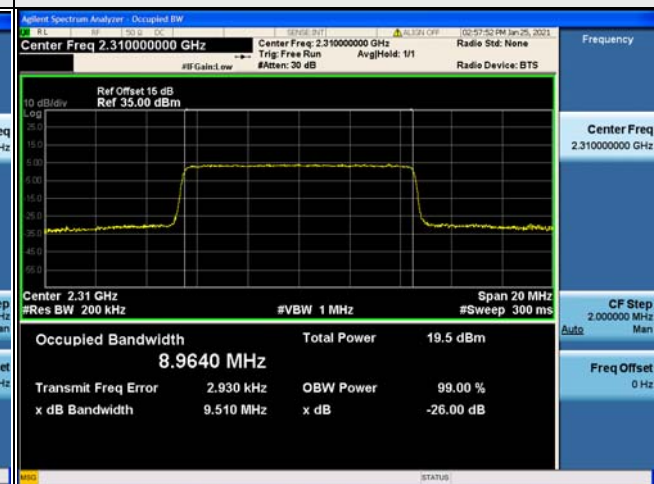
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
27710	2310.0	8.95	8.96	8.96	8.96

Spectrum Plot of Worst Value

5MHz / 64QAM



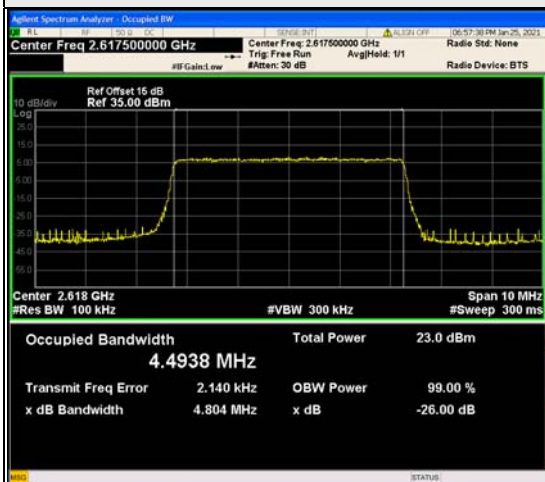
10MHz / 64QAM



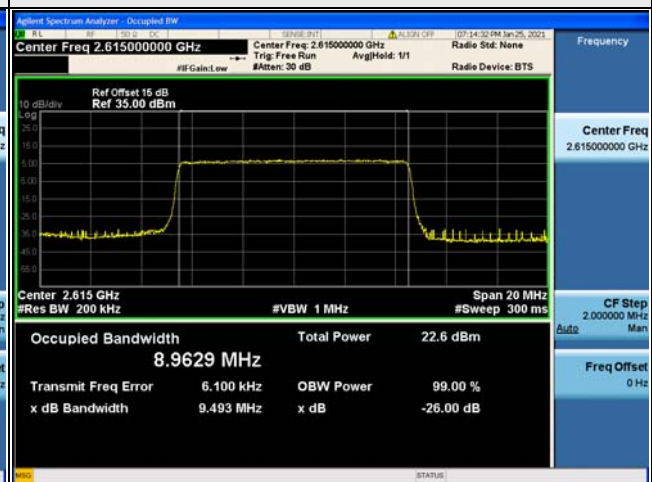
LTE Band 38, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
37775	2572.5	4.49	4.49	4.49	4.47
38000	2595.0	4.49	4.49	4.49	4.47
38225	2617.5	4.49	4.48	4.49	4.48
LTE Band 38, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
37800	2575.0	8.96	8.95	8.96	8.95
38000	2595.0	8.96	8.95	8.96	8.95
38200	2615.0	8.96	8.95	8.96	8.95
LTE Band 38, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
37825	2577.5	13.45	13.44	13.45	13.44
38000	2595.0	13.44	13.43	13.45	13.43
38175	2612.5	13.44	13.43	13.44	13.42
LTE Band 38, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
37850	2580.0	17.90	17.90	17.90	17.90
38000	2595.0	17.89	17.90	17.89	17.90
38150	2610.0	17.89	17.90	17.89	17.89

Spectrum Plot of Worst Value

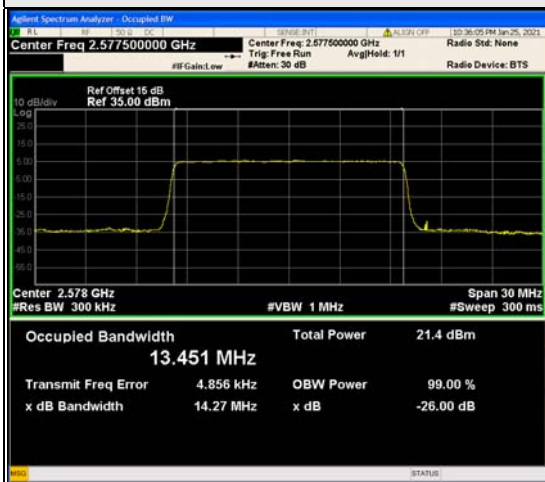
5MHz / QPSK



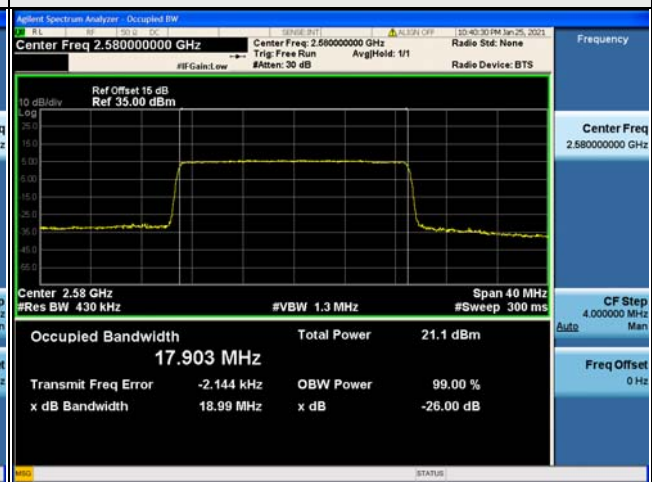
10MHz / QPSK



15MHz / 64QAM



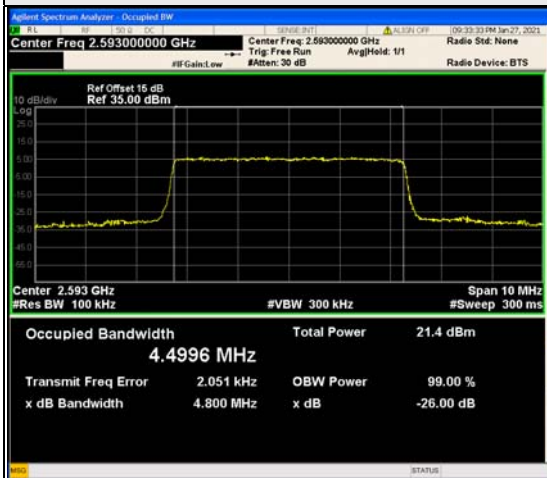
20MHz / 64QAM



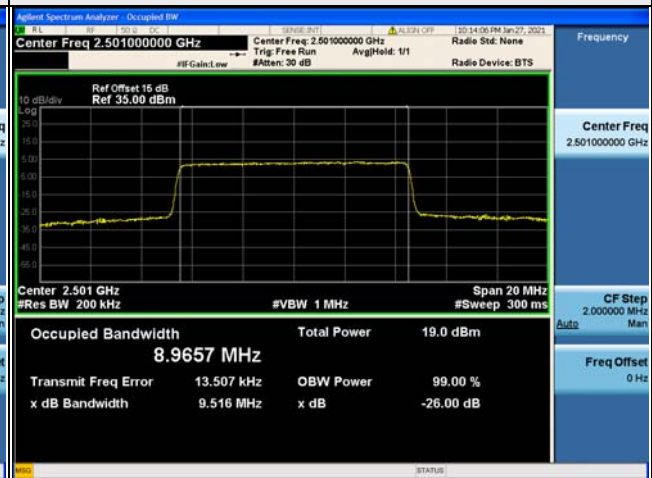
LTE Band 41, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
39675	2498.5	4.49	4.49	4.50	4.48
40620	2593.0	4.49	4.49	4.50	4.48
41565	2687.5	4.49	4.49	4.49	4.48
LTE Band 41, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
39700	2501.0	8.96	8.97	8.97	8.97
40620	2593.0	8.95	8.96	8.96	8.96
41540	2685.0	8.95	8.96	8.96	8.96
LTE Band 41, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
39725	2503.5	13.45	13.45	13.46	13.45
40620	2593.0	13.45	13.44	13.44	13.44
41515	2682.5	13.45	13.44	13.44	13.43
LTE Band 41, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
39750	2506.0	17.91	17.91	17.94	17.91
40620	2593.0	17.90	17.89	17.91	17.90
41490	2680.0	17.90	17.89	17.90	17.89

Spectrum Plot of Worst Value

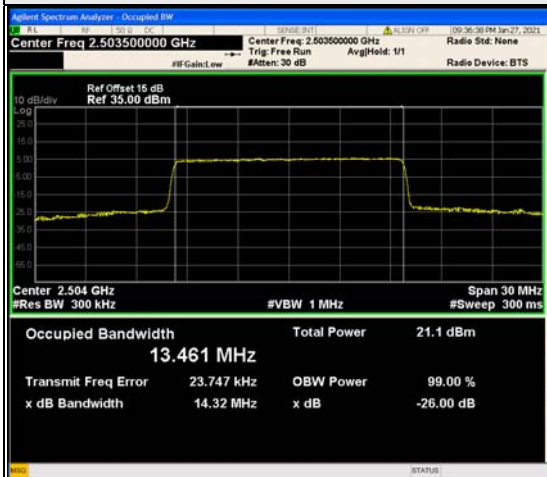
5MHz / 64QAM



10MHz / 256QAM



15MHz / 64QAM



20MHz / 64QAM

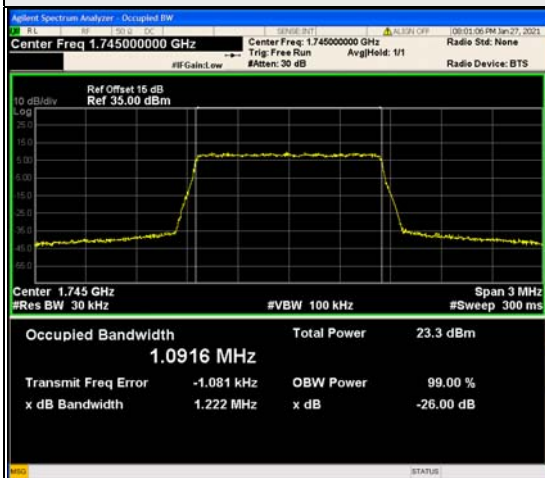


LTE Band 66, Channel Bandwidth 1.4MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
131979	1710.7	1.09	1.09	1.09	1.08
132322	1745.0	1.09	1.09	1.09	1.09
132665	1779.3	1.09	1.09	1.09	1.09
LTE Band 66, Channel Bandwidth 3MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
131987	1711.5	2.70	2.70	2.70	2.70
132322	1745.0	2.69	2.69	2.70	2.69
132657	1778.5	2.70	2.69	2.70	2.70
LTE Band 66, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
131997	1712.5	4.49	4.49	4.49	4.48
132322	1745.0	4.49	4.49	4.49	4.48
132647	1777.5	4.49	4.49	4.48	4.49
LTE Band 66, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
132022	1715.0	8.96	8.96	8.97	8.95
132322	1745.0	8.95	8.96	8.97	8.95
132622	1775.0	8.95	8.96	8.96	8.97
LTE Band 66, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
132047	1717.5	13.46	13.44	13.44	13.45
132322	1745.0	13.46	13.45	13.45	13.45
132597	1772.5	13.46	13.45	13.45	13.46

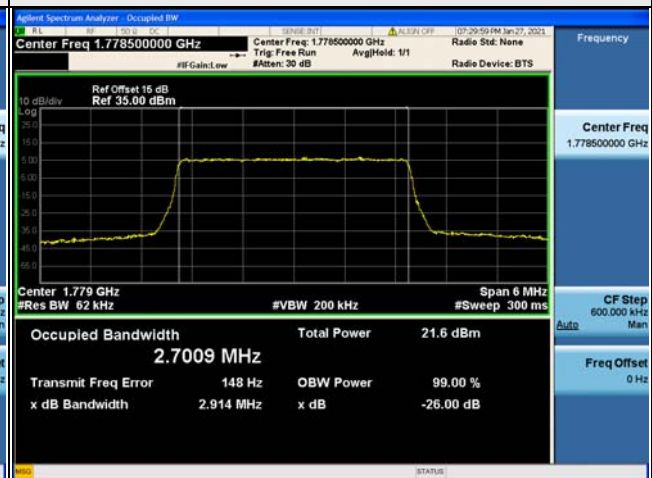
LTE Band 66, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
132072	1720.0	17.90	17.92	17.91	17.91
132322	1745.0	17.92	17.94	17.94	17.94
132572	1770.0	17.94	17.96	17.95	17.96

Spectrum Plot of Worst Value

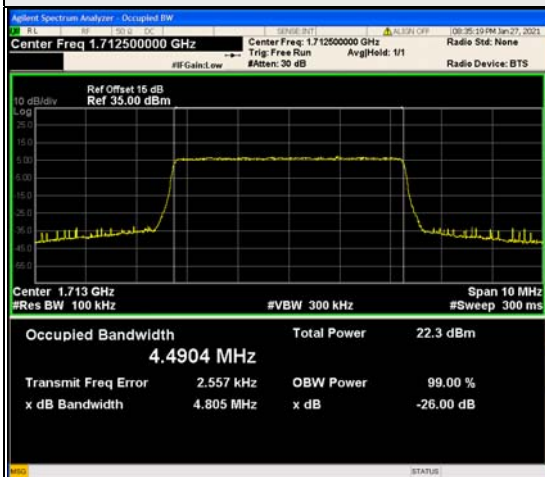
1.4MHz / 16QAM



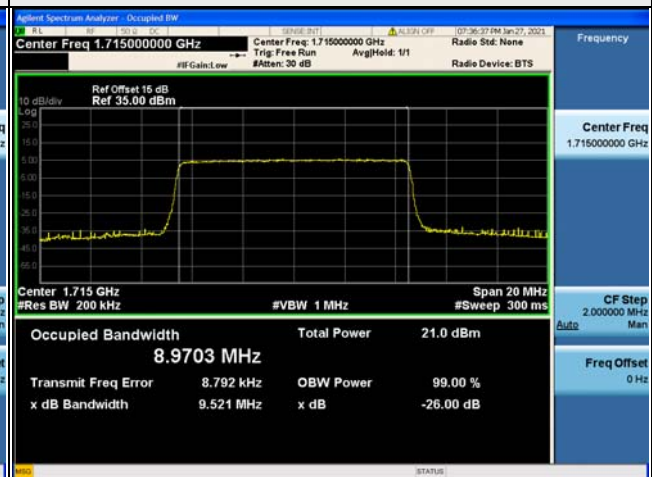
3MHz / 64QAM



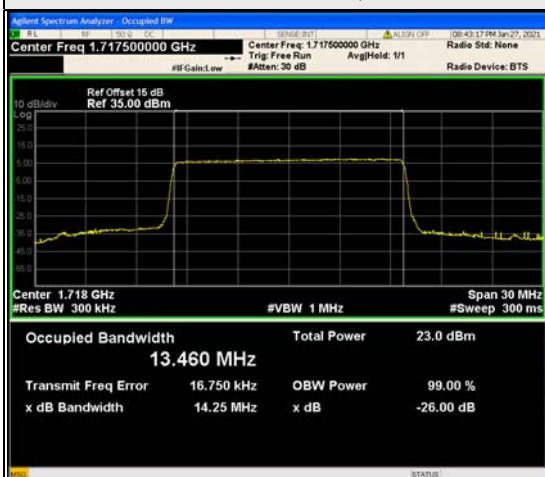
5MHz / 16QAM



10MHz / 64QAM



15MHz / QPSK



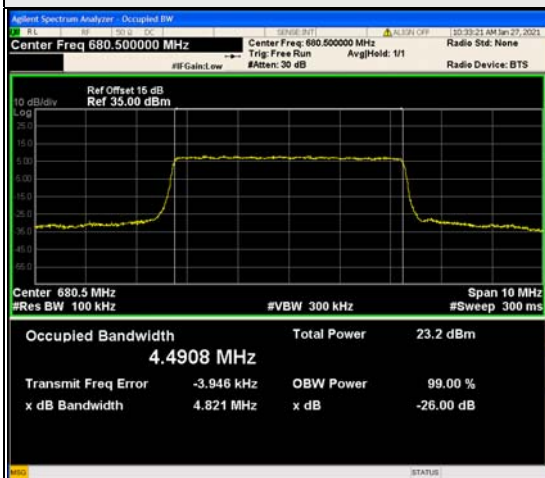
20MHz / 256QAM



LTE Band 71, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
133147	665.5	4.49	4.48	4.48	4.48
133297	680.5	4.49	4.48	4.49	4.48
133447	695.5	4.49	4.49	4.49	4.49
LTE Band 71, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
133172	668.0	8.97	8.95	8.97	8.95
133297	680.5	8.95	8.94	8.95	8.95
133422	693.0	8.95	8.94	8.96	8.95
LTE Band 71, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
133197	670.5	13.48	13.47	13.47	13.46
133297	680.5	13.45	13.43	13.42	13.41
133397	690.5	13.46	13.45	13.45	13.45
LTE Band 71, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
133222	673.0	17.94	17.92	17.92	17.91
133297	680.5	17.93	17.91	17.89	17.87
133372	688.0	17.96	17.96	17.95	17.95

Spectrum Plot of Worst Value

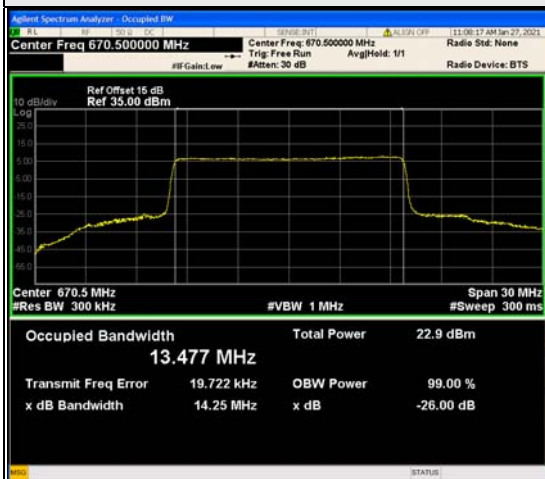
5MHz / QPSK



10MHz / 64QAM



15MHz / QPSK



20MHz / QPSK



26dB Bandwidth

LTE Band 4, Channel Bandwidth 1.4MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
19957	1710.7	1.21	1.21	1.21	1.21
20175	1732.5	1.21	1.21	1.22	1.21
20393	1754.3	1.22	1.21	1.21	1.21
LTE Band 4, Channel Bandwidth 3MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
19965	1711.5	2.93	2.90	2.90	2.92
20175	1732.5	2.93	2.92	2.92	2.93
20385	1753.5	2.94	2.91	2.91	2.92
LTE Band 4, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
19975	1712.5	4.80	4.80	4.80	4.81
20175	1732.5	4.82	4.81	4.80	4.80
20375	1752.5	4.82	4.82	4.79	4.82
LTE Band 4, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20000	1715.0	9.52	9.48	9.50	9.51
20175	1732.5	9.51	9.51	9.51	9.49
20350	1750.0	9.51	9.50	9.50	9.50
LTE Band 4, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20025	1717.5	14.24	14.23	14.26	14.23
20175	1732.5	14.25	14.23	14.25	14.23
20325	1747.5	14.24	14.24	14.24	14.24

LTE Band 4, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20050	1720.0	19.02	18.99	19.01	18.99
20175	1732.5	19.02	19.02	19.02	19.02
20300	1745.0	19.03	19.01	19.02	19.01

Spectrum Plot of Worst Value

1.4MHz / 64QAM



3MHz / QPSK



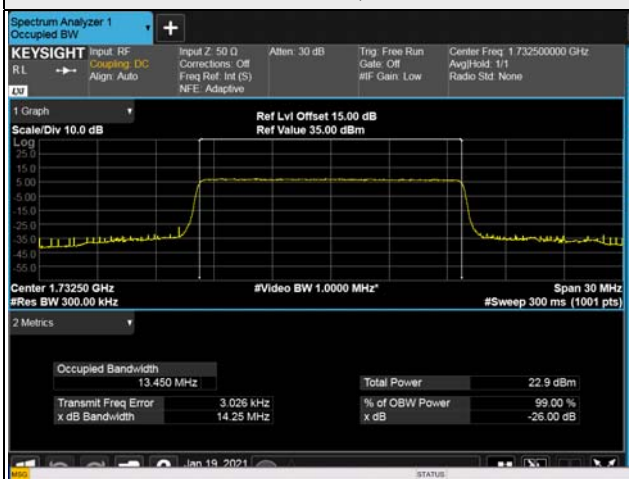
5MHz / QPSK



10MHz / QPSK



15MHz / QPSK



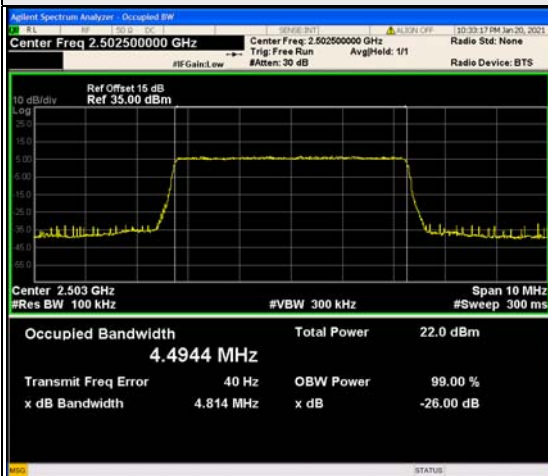
20MHz / QPSK



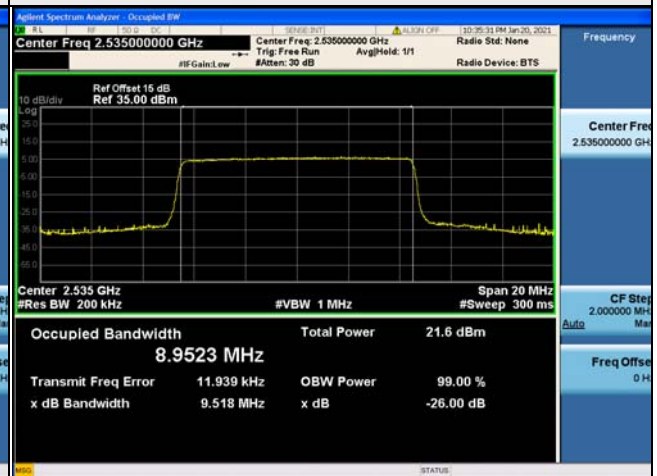
LTE Band 7, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20775	2502.5	4.78	4.81	4.81	4.79
21100	2535.0	4.80	4.78	4.81	4.80
21425	2567.5	4.79	4.80	4.81	4.81
LTE Band 7, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20800	2505.0	9.49	9.51	9.49	9.50
21100	2535.0	9.49	9.50	9.52	9.48
21400	2565.0	9.49	9.50	9.50	9.49
LTE Band 7, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20825	2507.5	14.25	14.24	14.23	14.21
21100	2535.0	14.23	14.24	14.23	14.22
21375	2562.5	14.26	14.25	14.22	14.22
LTE Band 7, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
20850	2510.0	19.01	19.00	18.99	19.00
21100	2535.0	19.00	19.03	19.00	19.01
21350	2560.0	19.02	19.04	19.02	19.02

Spectrum Plot of Worst Value

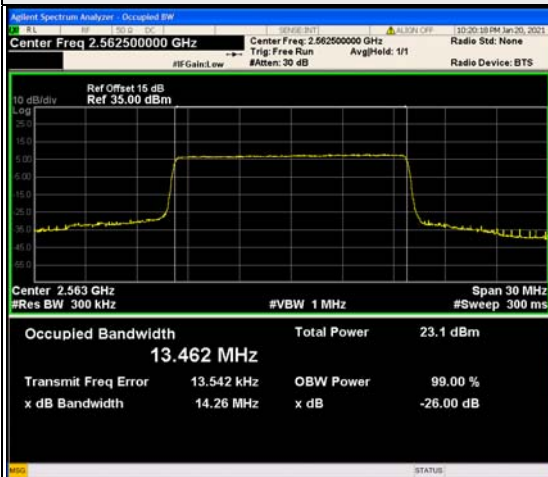
5MHz / 64QAM



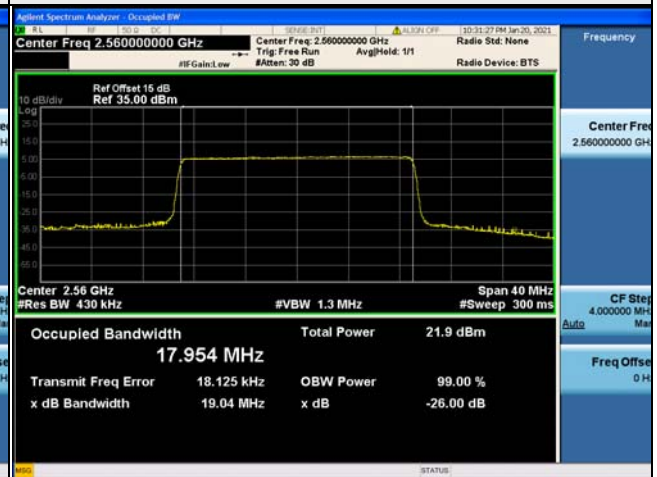
10MHz / 64QAM



15MHz / QPSK



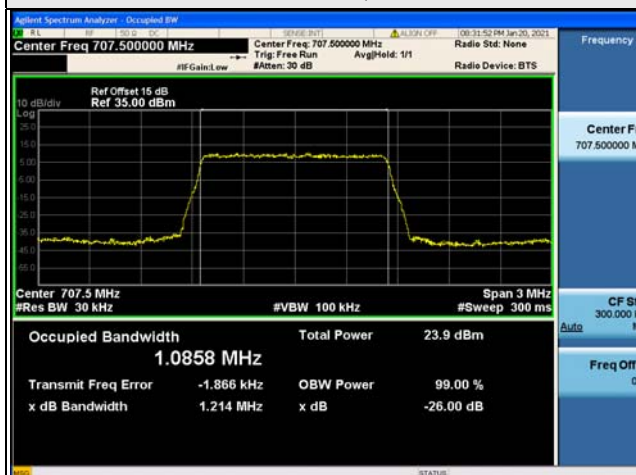
20MHz / 16QAM



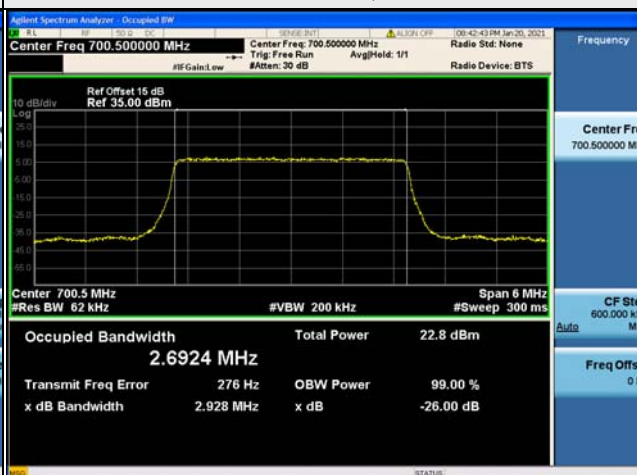
LTE Band 12, Channel Bandwidth 1.4MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23017	699.7	1.21	1.21	1.21	1.21
23095	707.5	1.21	1.21	1.21	1.21
23173	715.3	1.21	1.21	1.21	1.21
LTE Band 12, Channel Bandwidth 3MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23025	700.5	2.91	2.93	2.90	2.91
23095	707.5	2.91	2.92	2.90	2.91
23165	714.5	2.91	2.92	2.89	2.90
LTE Band 12, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23035	701.5	4.80	4.80	4.82	4.79
23095	707.5	4.80	4.80	4.82	4.81
23155	713.5	4.80	4.78	4.84	4.80
LTE Band 12, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23060	704.0	9.50	9.51	9.52	9.50
23095	707.5	9.51	9.50	9.51	9.50
23130	711.0	9.52	9.50	9.50	9.50

Spectrum Plot of Worst Value

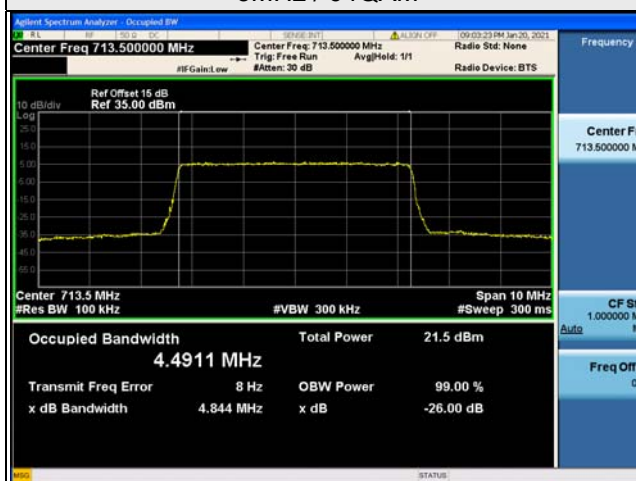
1.4MHz / QPSK



3MHz / 16QAM



5MHz / 64QAM

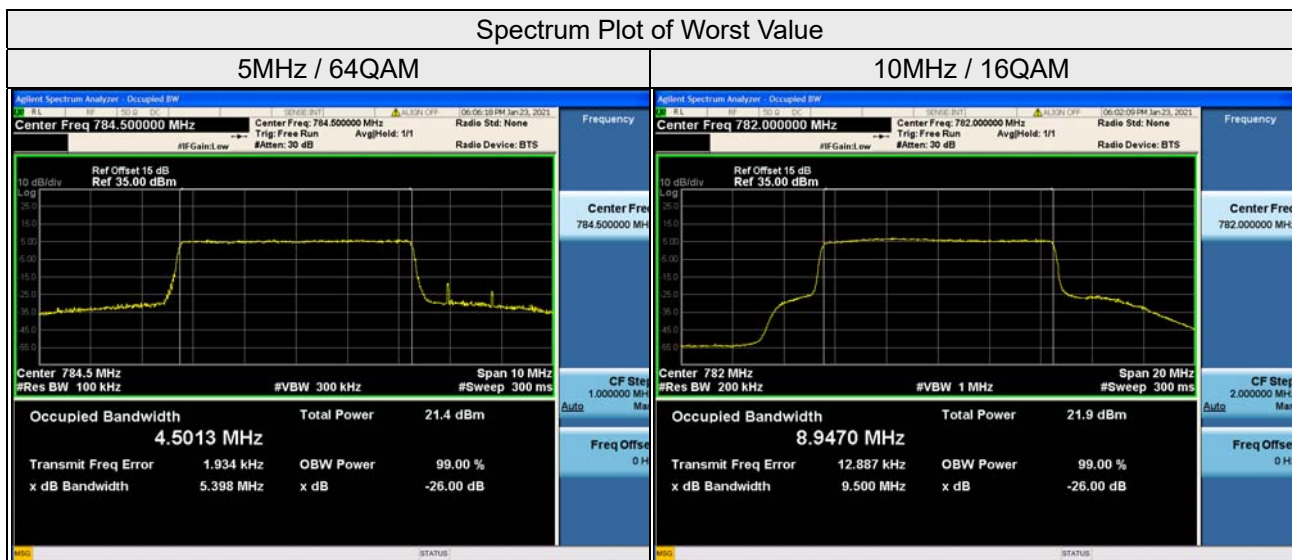


10MHz / QPSK



LTE Band 13, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23205	779.5	4.78	4.78	4.83	4.79
23230	782.0	4.81	4.81	5.11	4.80
23255	784.5	4.81	4.81	5.40	4.82

LTE Band 13, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23230	782.0	9.50	9.50	9.49	9.49



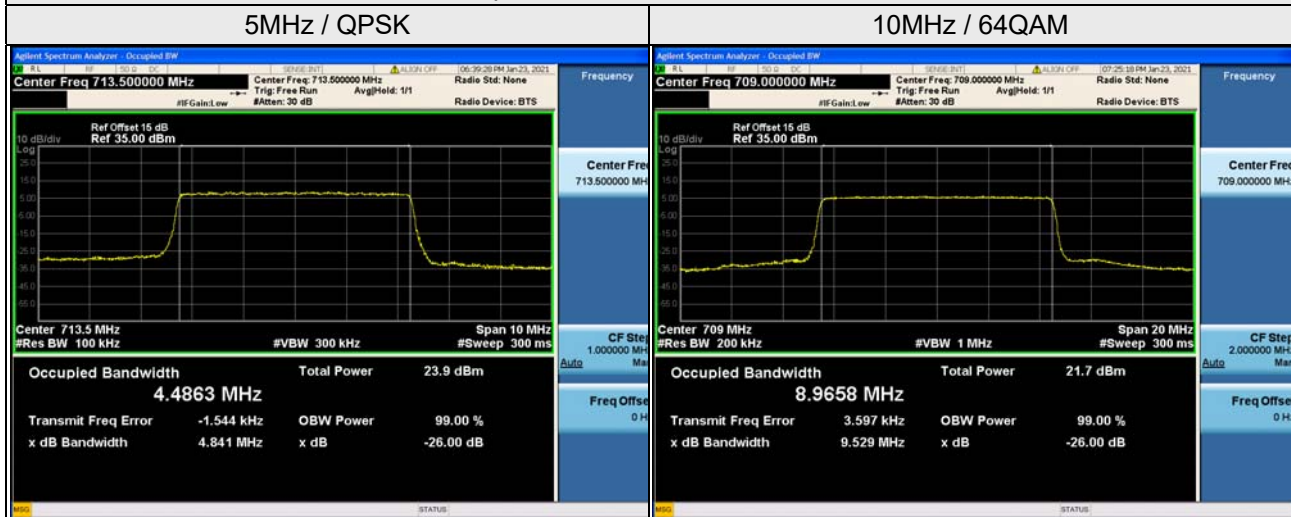
LTE Band 17, Channel Bandwidth 5MHz

Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23755	706.5	4.79	4.78	4.79	4.81
23790	710.0	4.82	4.79	4.81	4.80
23825	713.5	4.84	4.79	4.80	4.80

LTE Band 17, Channel Bandwidth 10MHz

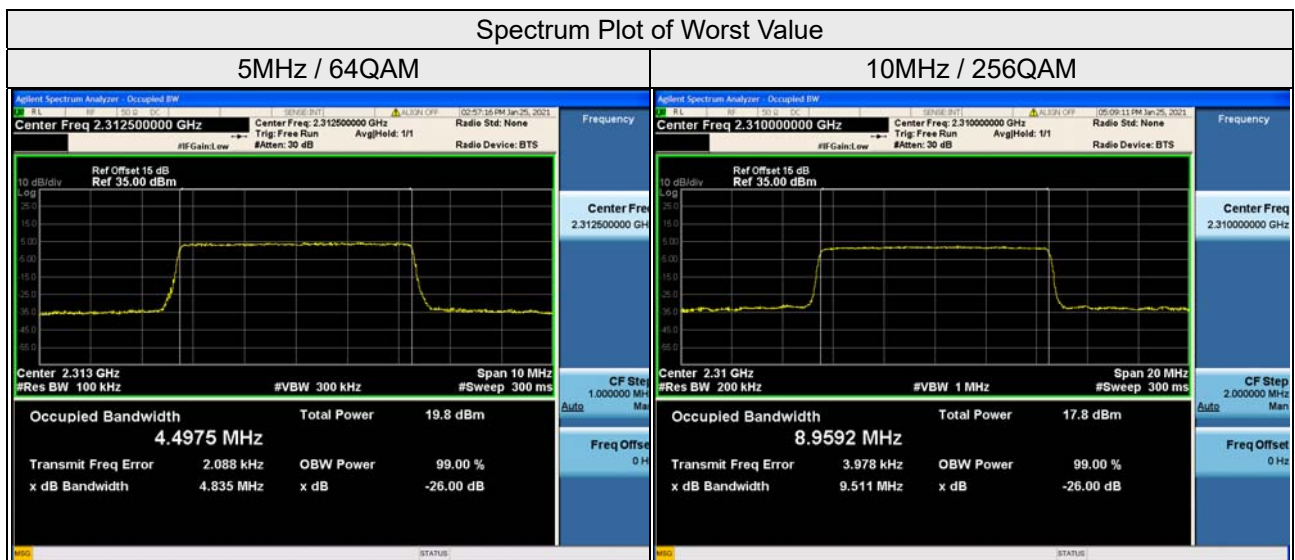
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
23780	709.0	9.50	9.51	9.53	9.50
23790	710.0	9.52	9.49	9.53	9.49
23800	711.0	9.50	9.50	9.52	9.51

Spectrum Plot of Worst Value



LTE Band 30, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
27685	2307.5	4.79	4.80	4.82	4.82
27710	2310.0	4.81	4.79	4.82	4.81
27735	2312.5	4.78	4.80	4.84	4.80

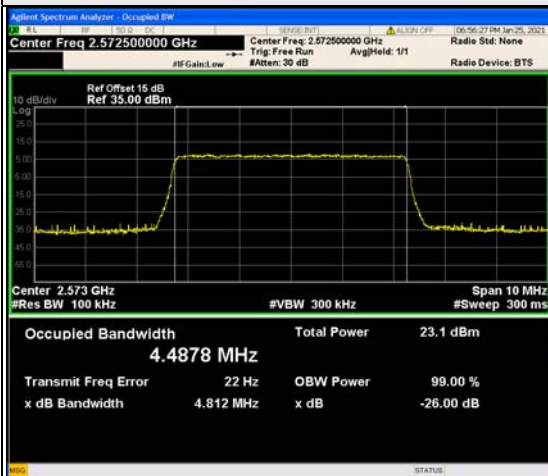
LTE Band 30, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
27710	2310.0	9.51	9.50	9.51	9.51



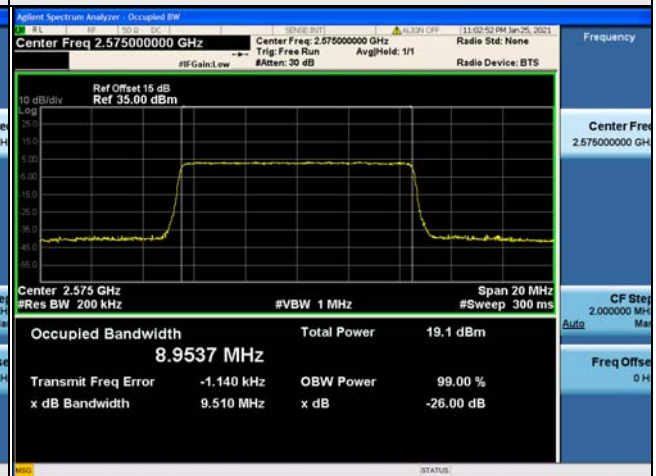
LTE Band 38, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
37775	2572.5	4.81	4.77	4.80	4.78
38000	2595.0	4.81	4.77	4.80	4.79
38225	2617.5	4.80	4.79	4.80	4.79
LTE Band 38, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
37800	2575.0	9.49	9.49	9.50	9.51
38000	2595.0	9.49	9.49	9.48	9.50
38200	2615.0	9.49	9.50	9.51	9.50
LTE Band 38, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
37825	2577.5	14.24	14.22	14.27	14.22
38000	2595.0	14.24	14.22	14.27	14.20
38175	2612.5	14.21	14.23	14.23	14.21
LTE Band 38, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
37850	2580.0	19.00	18.99	18.99	18.99
38000	2595.0	18.99	18.98	18.98	18.98
38150	2610.0	18.98	18.99	18.99	18.99

Spectrum Plot of Worst Value

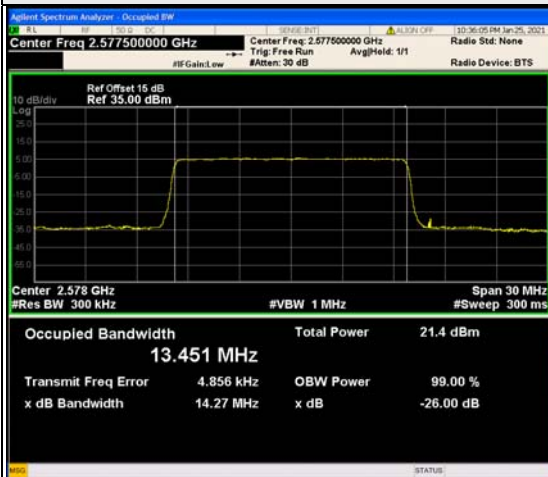
5MHz / QPSK



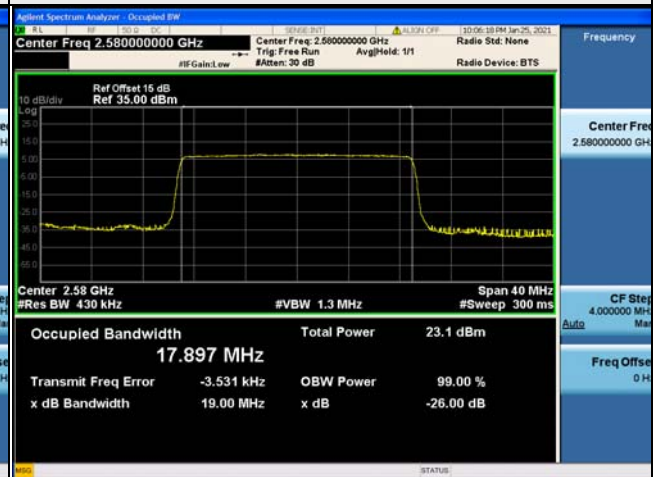
10MHz / 256QAM



15MHz / 64QAM



20MHz / QPSK



LTE Band 41, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
39675	2498.5	4.48	4.80	4.83	4.80
40620	2593.0	4.80	4.79	4.80	4.78
41565	2687.5	4.80	4.78	4.78	4.80
LTE Band 41, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
39700	2501.0	9.49	9.50	9.53	9.52
40620	2593.0	9.49	9.51	9.52	9.51
41540	2685.0	9.48	9.49	9.50	9.51
LTE Band 41, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
39725	2503.5	14.27	14.28	14.32	14.24
40620	2593.0	14.26	14.24	14.25	14.21
41515	2682.5	14.22	14.23	14.24	14.24
LTE Band 41, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
39750	2506.0	19.06	19.04	19.06	19.03
40620	2593.0	19.01	19.00	19.01	19.00
41490	2680.0	18.99	18.98	18.99	18.98

Spectrum Plot of Worst Value

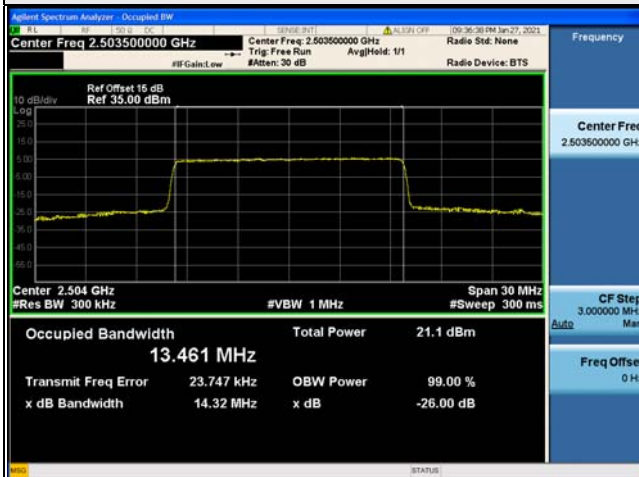
5MHz / 64QAM



10MHz / 64QAM



15MHz / 64QAM



20MHz / 64QAM

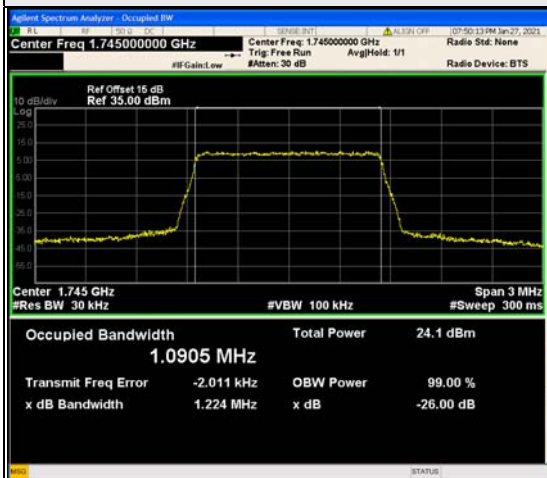


LTE Band 66, Channel Bandwidth 1.4MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
131979	1710.7	1.22	1.22	1.22	1.22
132322	1745.0	1.22	1.22	1.22	1.20
132665	1779.3	1.22	1.22	1.21	1.22
LTE Band 66, Channel Bandwidth 3MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
131987	1711.5	2.90	2.92	2.91	2.92
132322	1745.0	2.91	2.93	2.91	2.91
132657	1778.5	2.91	2.92	2.91	2.91
LTE Band 66, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
131997	1712.5	4.80	4.81	4.80	4.78
132322	1745.0	4.78	4.79	4.80	4.81
132647	1777.5	4.79	4.79	4.80	4.80
LTE Band 66, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
132022	1715.0	9.51	9.49	9.52	9.50
132322	1745.0	9.49	9.50	9.52	9.49
132622	1775.0	9.49	9.51	9.51	9.55
LTE Band 66, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
132047	1717.5	14.25	14.23	14.24	14.23
132322	1745.0	14.24	14.26	14.25	14.23
132597	1772.5	14.25	14.25	14.25	14.23

LTE Band 66, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
132072	1720.0	18.99	19.00	18.98	18.99
132322	1745.0	19.01	19.00	19.01	19.01
132572	1770.0	19.04	19.02	19.04	19.02

Spectrum Plot of Worst Value

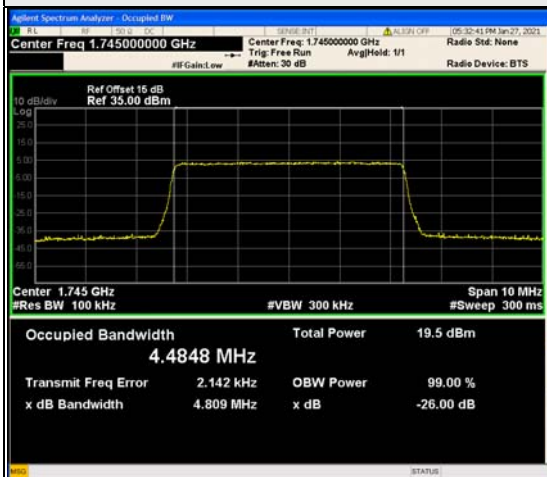
1.4MHz / QPSK



3MHz / 16QAM



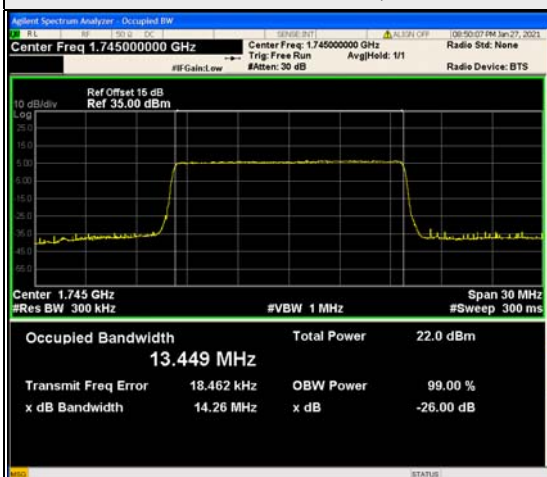
5MHz / 256QAM



10MHz / 256QAM



15MHz / 16QAM



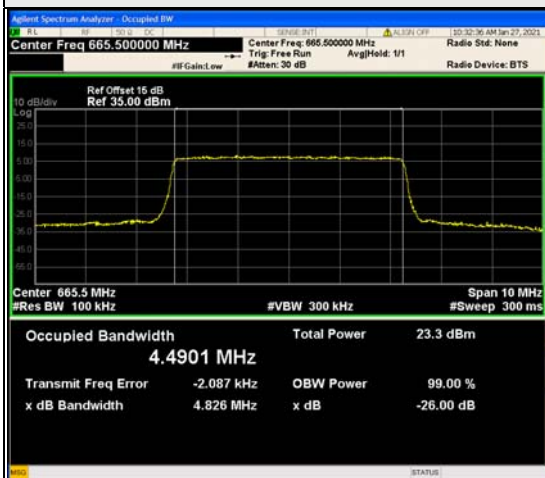
20MHz / 64QAM



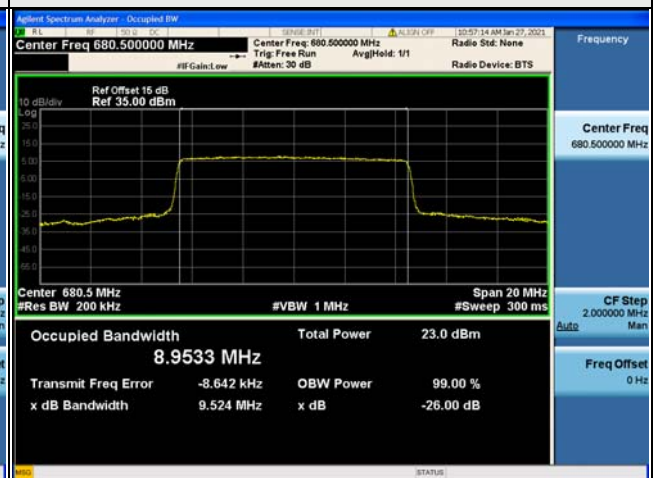
LTE Band 71, Channel Bandwidth 5MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
133147	665.5	4.83	4.79	4.79	4.80
133297	680.5	4.82	4.80	4.81	4.80
133447	695.5	4.82	4.80	4.80	4.81
LTE Band 71, Channel Bandwidth 10MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
133172	668.0	9.52	9.51	9.50	9.50
133297	680.5	9.52	9.51	9.49	9.49
133422	693.0	9.49	9.50	9.52	9.49
LTE Band 71, Channel Bandwidth 15MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
133197	670.5	14.25	14.25	14.25	14.23
133297	680.5	14.26	14.25	14.26	14.22
133397	690.5	14.26	14.26	14.26	14.21
LTE Band 71, Channel Bandwidth 20MHz					
Channel	Frequency (MHz)	26dB Bandwidth (MHz)			
		QPSK	16QAM	64QAM	256QAM
133222	673.0	19.03	19.00	19.00	18.99
133297	680.5	20.48	19.04	19.00	19.00
133372	688.0	19.04	19.05	19.04	19.02

Spectrum Plot of Worst Value

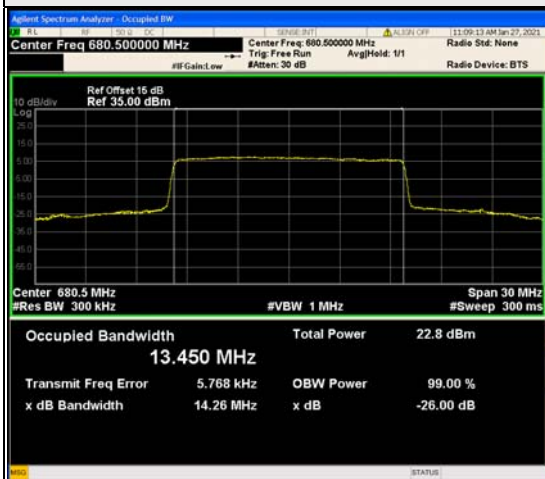
5MHz / QPSK



10MHz / QPSK



15MHz / QPSK



20MHz / QPSK



4.5 Channel Edge / Out-of-Band Emissions Measurement

4.5.1 Limits of Band Edge / Out-of-Band Emissions Measurement

For LTE Band 4, 66:

According to FCC 27.53(h) for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 MHz, 1915-1920MHz, 1995-2000 MHz, 2000-2020MHz, 2110-2155MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log (P)$ dB.

For LTE Band 7, 38, 41:

According to FCC 27.53(m)(4) specified that power of any emission outside of the channel edge must be attenuated below the transmitting power (P) by a factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5MHz. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed.

For LTE Band 12, 71:

According to FCC 27.53(g) for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

For LTE Band 13:

According to FCC 27.53(c)(2) for on any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB.

According to 27.53(c)(4) On all frequencies between 763-775MHz and 793-806MHz, by a factor not less than $65 + 10 \log (P)$ dB in a 6.25 kHz band segment, for mobile and portable stations

For LTE Band 17:

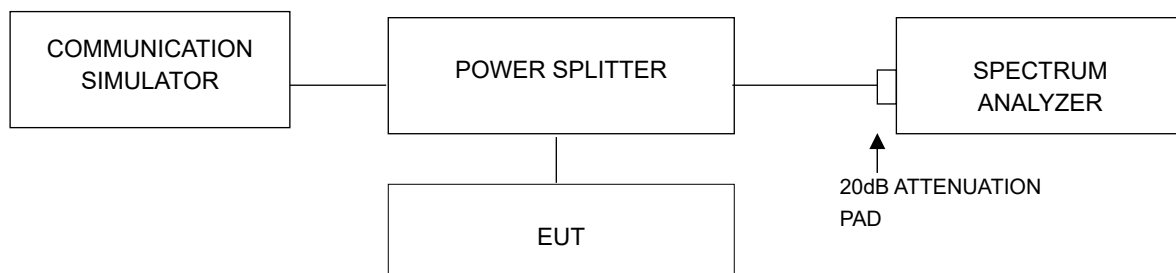
According to FCC 27.53(g) for operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

For LTE Band 30:

According to FCC 27.53(a) (4) For mobile and portable stations operating in the 2305-2315MHz and 2350-2360 MHz bands:

- (i) By a factor of not less than: $43 + 10 \log (P)$ dB on all frequencies between 2305 and 2320MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, not less than $55 + 10 \log (P)$ dB on all frequencies between 2320 and 2324 MHz and on all frequencies between 2341 and 2345MHz, not less than $61 + 10 \log (P)$ dB on all frequencies between 2324 and 2328 MHz and on all frequencies between 2337 and 2341 MHz, and not less than $67 + 10 \log (P)$ dB on all frequencies between 2328 and 2337 MHz;
- (ii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2300 and 2305MHz, $55 + 10 \log (P)$ dB on all frequencies between 2296 and 2300 MHz, $61 + 10 \log (P)$ dB on all frequencies between 2292 and 2296 MHz, $67 + 10 \log (P)$ dB on all frequencies between 2288 and 2292 MHz, and $70 + 10 \log (P)$ dB below 2288 MHz;
- (iii) By a factor of not less than $43 + 10 \log (P)$ dB on all frequencies between 2360 and 2365MHz, and not less than $70 + 10 \log (P)$ dB above 2365MHz.

4.5.2 Test Setup



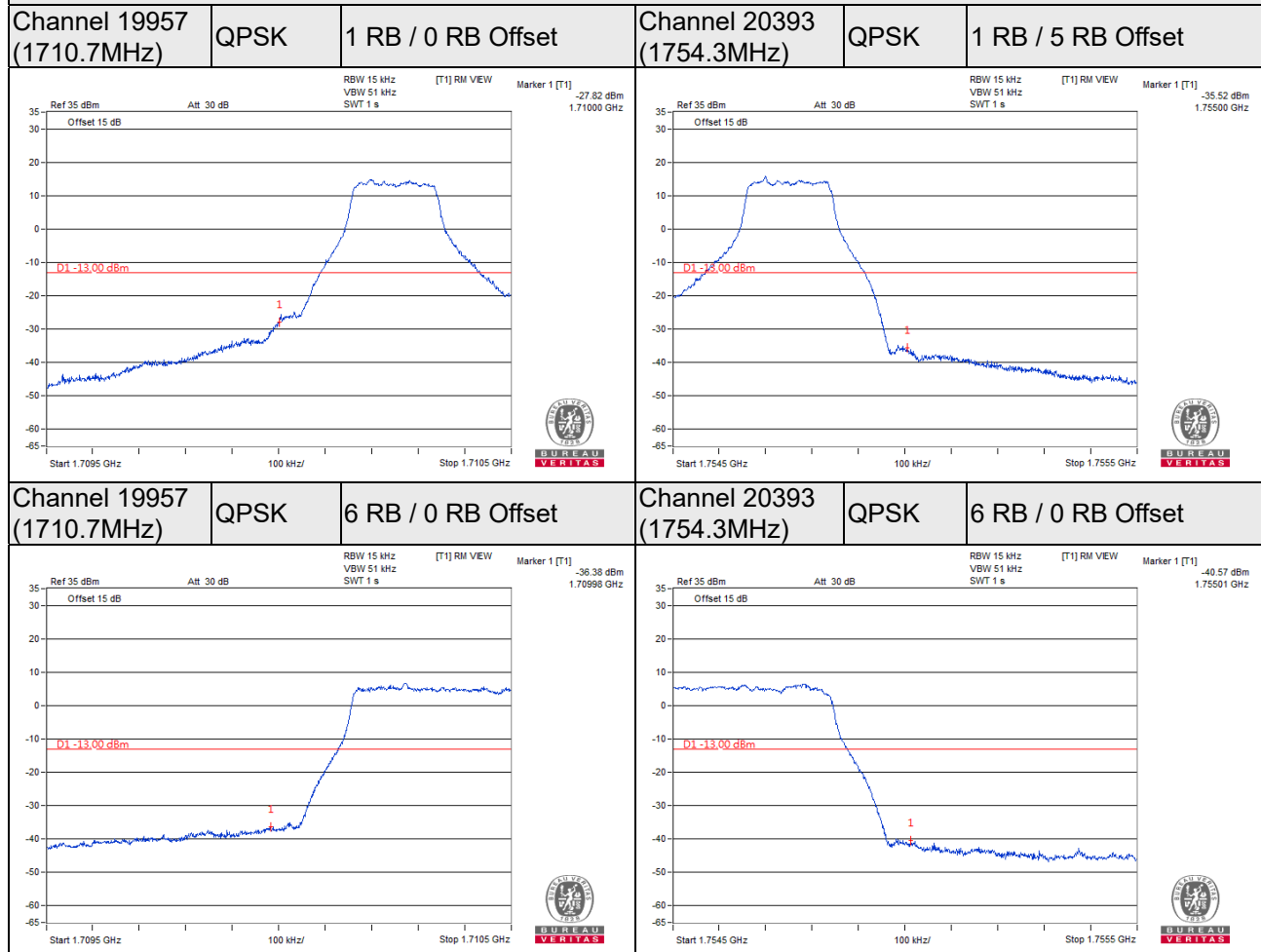
4.5.3 Test Procedures

- a. The EUT was set up for the rated peak power. The power was measured with Spectrum Analyzer. Band edge measurements were done at 2 channels: low, middle and high operational frequency range. Emission mask measurements were done at 3 channels: low and high operational frequency range.
- b. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 15kHz and VB of the spectrum is 51kHz (LTE Channel Bandwidth 1.4MHz).
- c. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 30kHz and VB of the spectrum is 100kHz (LTE Channel Bandwidth 3MHz).
- d. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 51kHz and VB of the spectrum is 160kHz (LTE Channel Bandwidth 5MHz).
- e. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 100kHz and VB of the spectrum is 300kHz (LTE Channel Bandwidth 10MHz).
- f. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 150kHz and VB of the spectrum is 470kHz (LTE Channel Bandwidth 15MHz).
- g. The center frequency of spectrum is the band edge frequency and span is 1MHz. RB of the spectrum is 200kHz and VB of the spectrum is 1MHz (LTE Channel Bandwidth 20MHz).
- h. Except LTE Band 12 and LTE Band 17 measurement procedure refer 27.53(g)(m)(6).
- i. Record the max trace plot into the test report.

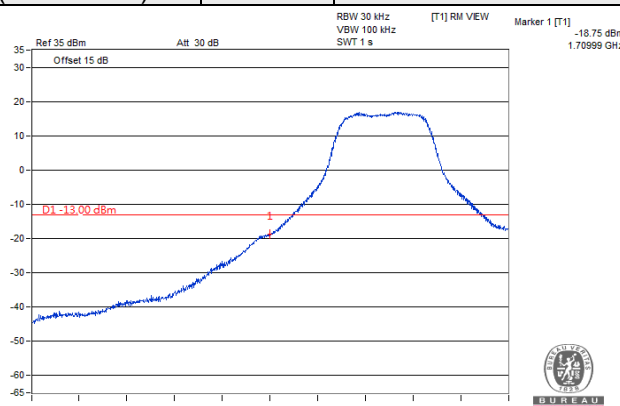
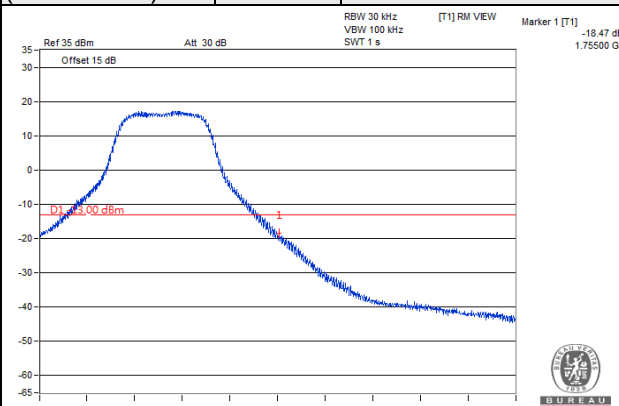
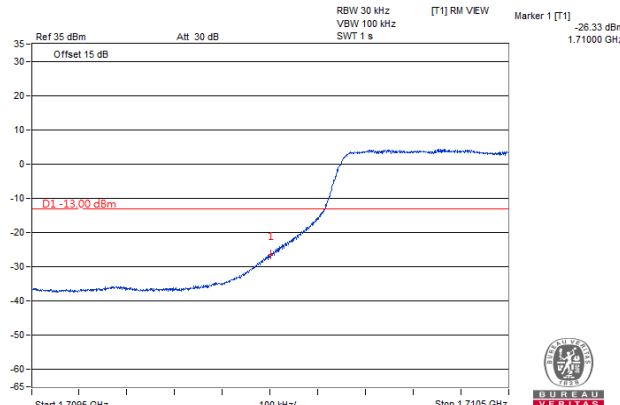
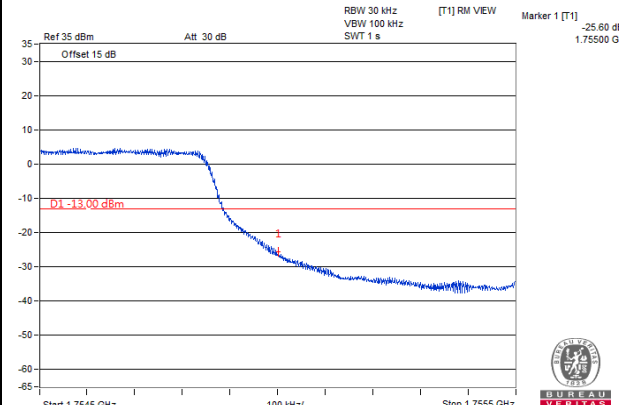
4.5.4 Test Results

Band Edge

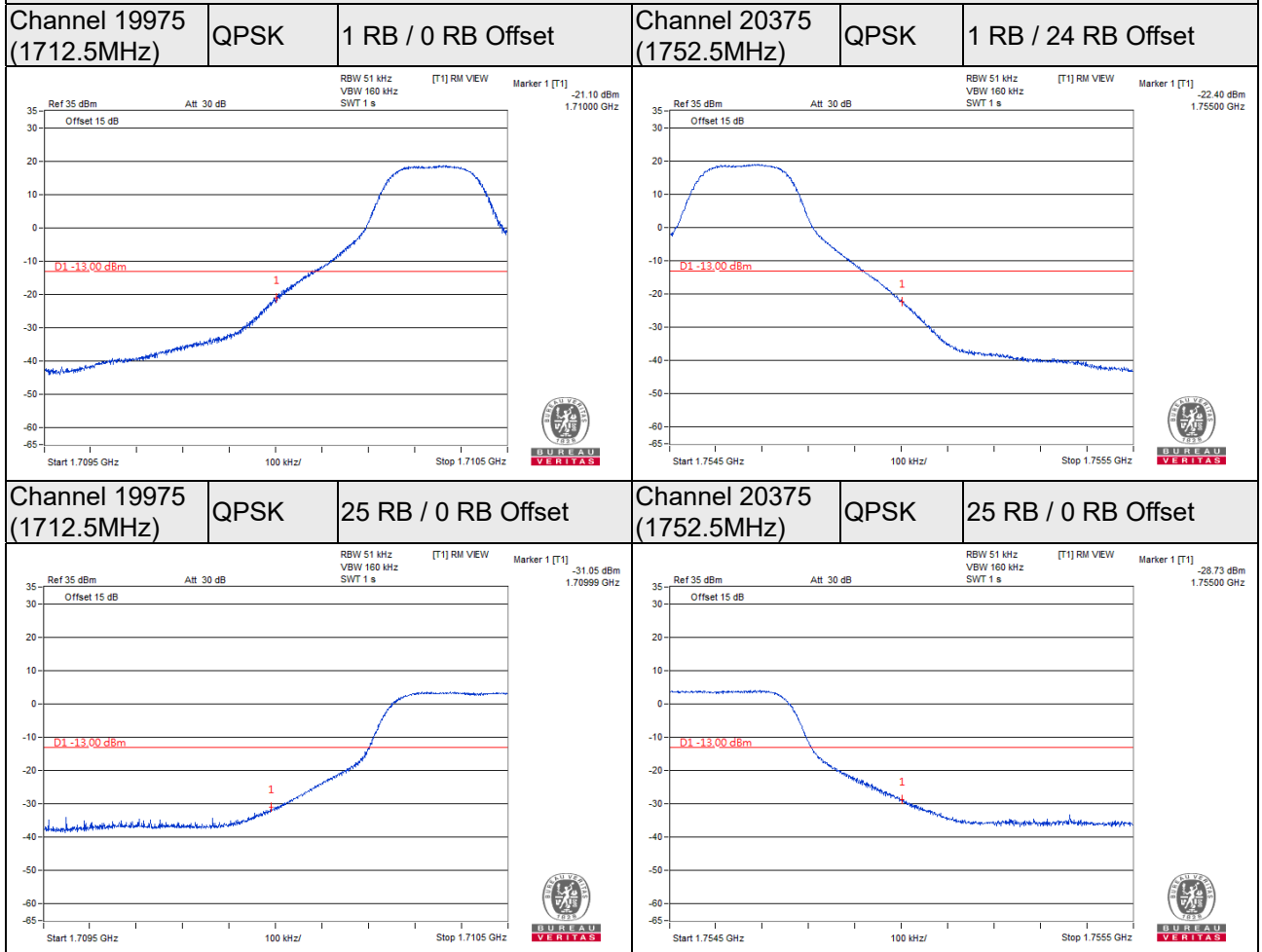
LTE Band 4, Channel Bandwidth 1.4MHz



LTE Band 4, Channel Bandwidth 3MHz

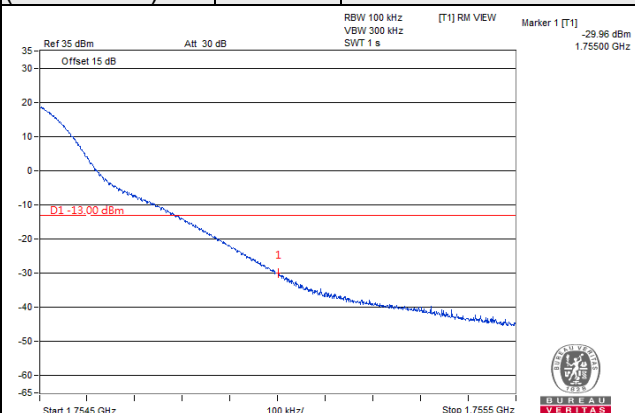
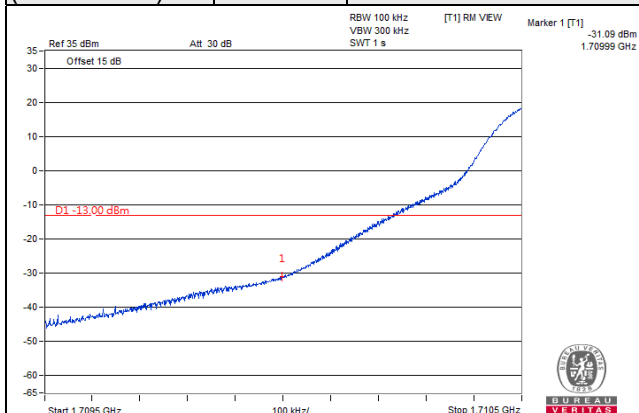
Channel 19965 (1711.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 20385 (1753.5MHz)	QPSK	1 RB / 14 RB Offset
					
Channel 19965 (1711.5MHz)	QPSK	15 RB / 0 RB Offset	Channel 20385 (1753.5MHz)	QPSK	15 RB / 0 RB Offset
					

LTE Band 4, Channel Bandwidth 5MHz

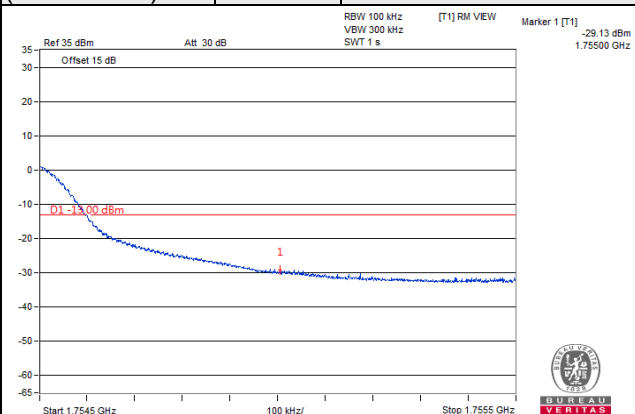
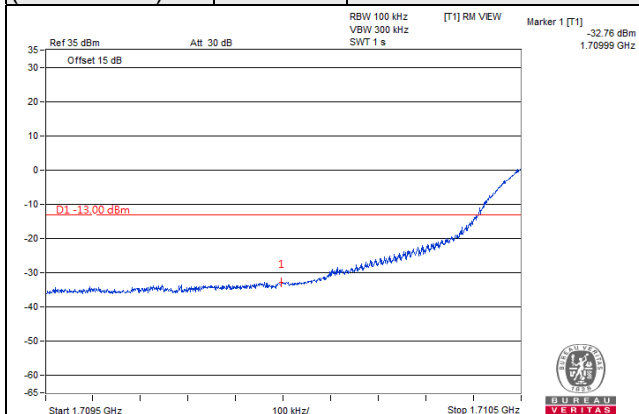


LTE Band 4, Channel Bandwidth 10MHz

Channel 20000 (1715.0MHz)	QPSK	1 RB / 0 RB Offset	Channel 20350 (1750.0MHz)	QPSK	1 RB / 49 RB Offset
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Channel 20000 (1715.0MHz)	QPSK	50 RB / 0 RB Offset	Channel 20350 (1750.0MHz)	QPSK	50 RB / 0 RB Offset
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LTE Band 4, Channel Bandwidth 15MHz

Channel 20025
(1717.5MHz)

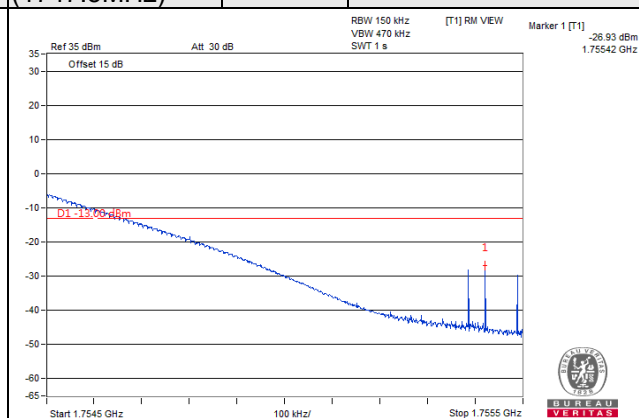
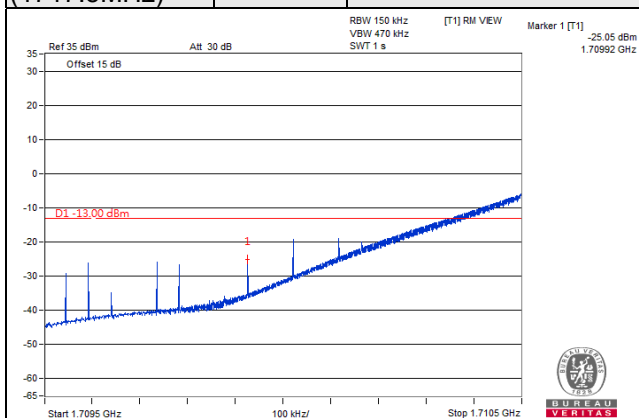
QPSK

1 RB / 0 RB Offset

Channel 20325
(1747.5MHz)

QPSK

1 RB / 74 RB Offset



Channel 20025
(1717.5MHz)

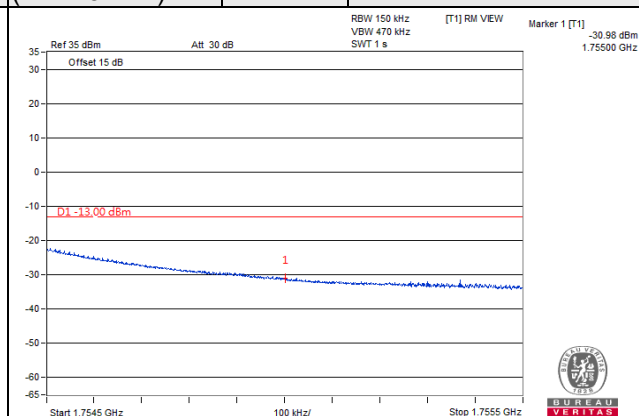
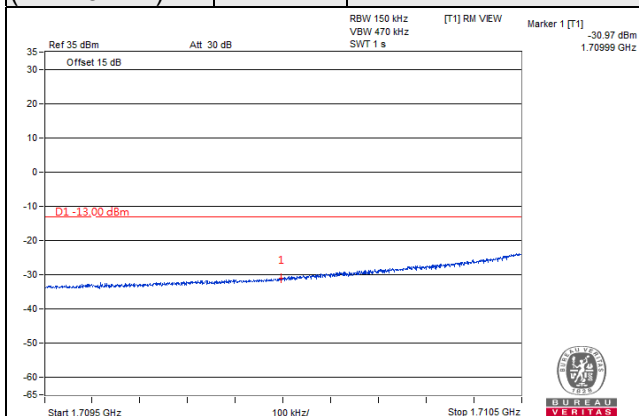
QPSK

75 RB / 0 RB Offset

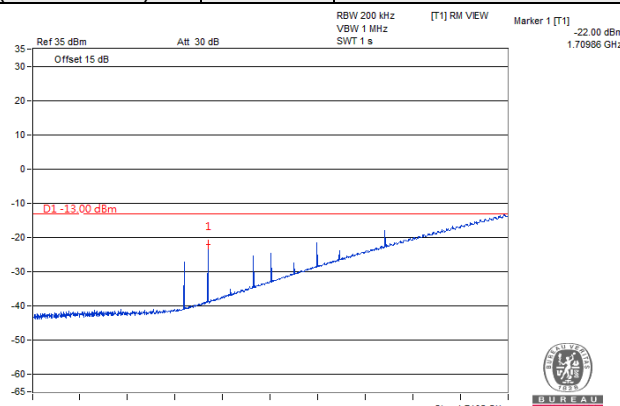
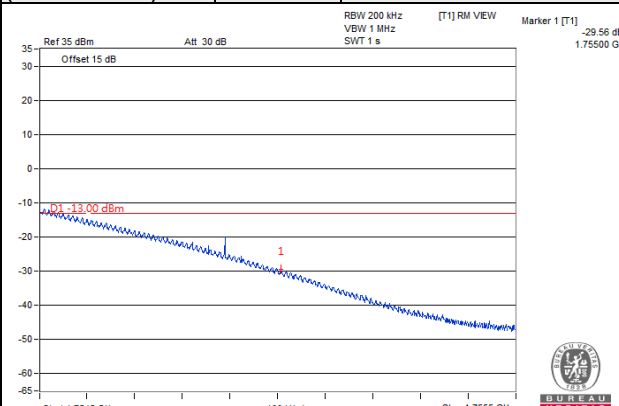
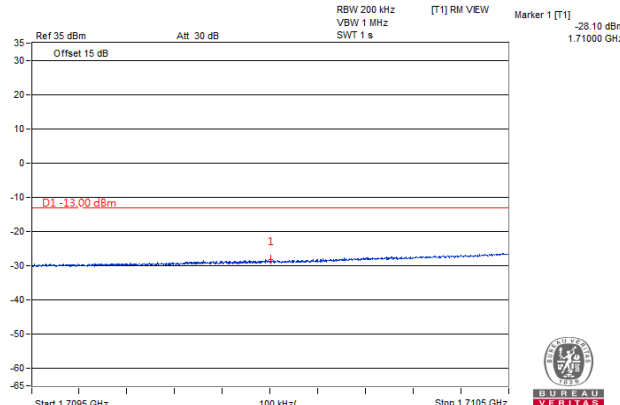
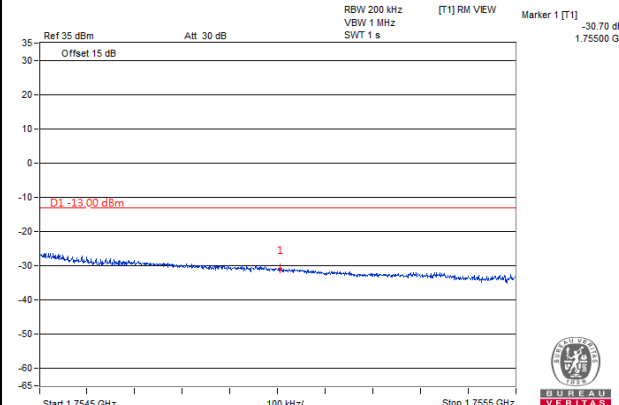
Channel 20325
(1747.5MHz)

QPSK

75 RB / 0 RB Offset

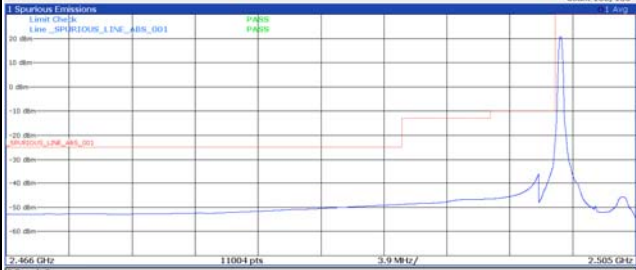
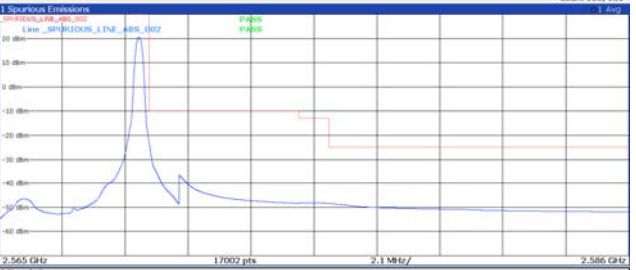
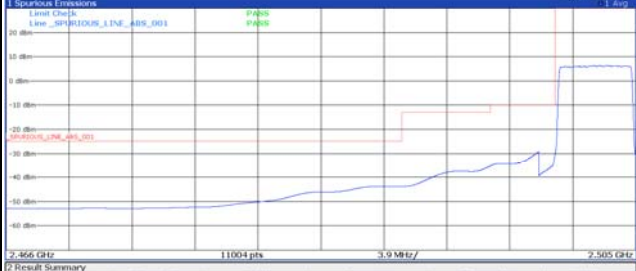
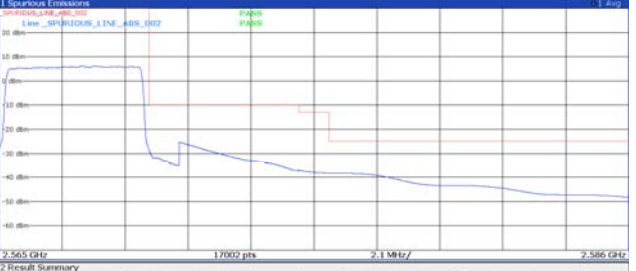


LTE Band 4, Channel Bandwidth 20MHz

Channel 20050 (1720.0MHz)	QPSK	1 RB / 0 RB Offset	Channel 20300 (1745.0MHz)	QPSK	1 RB / 99 RB Offset
					
Channel 20050 (1720.0MHz)	QPSK	100 RB / 0 RB Offset	Channel 20300 (1745.0MHz)	QPSK	100 RB / 0 RB Offset
					

Out-of-Band Emission

LTE Band 7, Channel Bandwidth 5MHz

Channel 20775 (2502.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 21425 (2567.5MHz)	QPSK	1 RB / 24 RB Offset																																																																								
MultiView Spectrum Ref Level 20.00 dBm Offset 15.00 dB Mode Auto FFT 1 Spurious Emissions Line: SPURIOUS_1_FNE_ABS_001 			MultiView Spectrum Ref Level 30.00 dBm Offset 15.00 dB Mode Auto FFT 1 Spurious Emissions Line: SPURIOUS_1_FNE_ABS_002 																																																																										
2 Result Summary <table border="1"> <thead> <tr> <th>Range Low</th><th>Range Up</th><th>Power</th><th>Frequency</th><th>Power Abs</th><th>Power</th></tr> </thead> <tbody> <tr> <td>2.486 GHz</td><td>2.490 GHz</td><td>1.000 MHz</td><td>2.49050 GHz</td><td>-48.79 dBm</td><td>-33.79 dB</td></tr> <tr> <td>2.490 GHz</td><td>2.495 GHz</td><td>1.000 MHz</td><td>2.49600 GHz</td><td>-46.44 dBm</td><td>-33.44 dB</td></tr> <tr> <td>2.495 GHz</td><td>2.499 GHz</td><td>1.000 MHz</td><td>2.49900 GHz</td><td>-36.12 dBm</td><td>-26.12 dB</td></tr> <tr> <td>2.499 GHz</td><td>2.503 GHz</td><td>100.000 kHz</td><td>2.50000 GHz</td><td>-22.62 dBm</td><td>-12.62 dB</td></tr> <tr> <td>2.503 GHz</td><td>2.505 GHz</td><td>100.000 kHz</td><td>2.50033 GHz</td><td>20.83 dBm</td><td>-9.18 dB</td></tr> </tbody> </table>			Range Low	Range Up	Power	Frequency	Power Abs	Power	2.486 GHz	2.490 GHz	1.000 MHz	2.49050 GHz	-48.79 dBm	-33.79 dB	2.490 GHz	2.495 GHz	1.000 MHz	2.49600 GHz	-46.44 dBm	-33.44 dB	2.495 GHz	2.499 GHz	1.000 MHz	2.49900 GHz	-36.12 dBm	-26.12 dB	2.499 GHz	2.503 GHz	100.000 kHz	2.50000 GHz	-22.62 dBm	-12.62 dB	2.503 GHz	2.505 GHz	100.000 kHz	2.50033 GHz	20.83 dBm	-9.18 dB	2 Result Summary <table border="1"> <thead> <tr> <th>Range Low</th><th>Range Up</th><th>Power</th><th>Frequency</th><th>Power Abs</th><th>Power</th></tr> </thead> <tbody> <tr> <td>2.565 GHz</td><td>2.570 GHz</td><td>100.000 kHz</td><td>2.56966 GHz</td><td>20.52 dBm</td><td>-9.48 dB</td></tr> <tr> <td>2.570 GHz</td><td>2.571 GHz</td><td>100.000 kHz</td><td>2.57000 GHz</td><td>-22.84 dBm</td><td>-12.84 dB</td></tr> <tr> <td>2.571 GHz</td><td>2.575 GHz</td><td>1.000 MHz</td><td>2.57100 GHz</td><td>-36.74 dBm</td><td>-26.74 dB</td></tr> <tr> <td>2.575 GHz</td><td>2.576 GHz</td><td>1.000 MHz</td><td>2.57500 GHz</td><td>-48.13 dBm</td><td>-35.13 dB</td></tr> <tr> <td>2.576 GHz</td><td>2.586 GHz</td><td>1.000 MHz</td><td>2.57600 GHz</td><td>-48.42 dBm</td><td>-23.42 dB</td></tr> </tbody> </table>			Range Low	Range Up	Power	Frequency	Power Abs	Power	2.565 GHz	2.570 GHz	100.000 kHz	2.56966 GHz	20.52 dBm	-9.48 dB	2.570 GHz	2.571 GHz	100.000 kHz	2.57000 GHz	-22.84 dBm	-12.84 dB	2.571 GHz	2.575 GHz	1.000 MHz	2.57100 GHz	-36.74 dBm	-26.74 dB	2.575 GHz	2.576 GHz	1.000 MHz	2.57500 GHz	-48.13 dBm	-35.13 dB	2.576 GHz	2.586 GHz	1.000 MHz	2.57600 GHz	-48.42 dBm	-23.42 dB
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11:30:33 20.01.2021 Channel 20775 (2502.5MHz) QPSK 25 RB / 0 RB Offset			12:19:40 20.01.2021 Channel 21425 (2567.5MHz) QPSK 25 RB / 0 RB Offset																																																																										
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12:00:18 20.01.2021			12:41:56 20.01.2021																																																																										

LTE Band 7, Channel Bandwidth 10MHz

Channel 20800
(2505.0MHz)

QPSK

1 RB / 0 RB Offset

Channel 21400
(2565.0MHz)

QPSK

1 RB / 49 RB Offset



13:00:40 20.01.2021

Channel 20800
(2505.0MHz)

QPSK

50 RB / 0 RB Offset

Channel 21400
(2565.0MHz)

QPSK

50 RB / 0 RB Offset



13:11:26 20.01.2021



13:14:43 20.01.2021

LTE Band 7, Channel Bandwidth 15MHz

Channel 20825
(2507.5MHz)

QPSK

1 RB / 0 RB Offset

Channel 21375
(2562.5MHz)

QPSK

1 RB / 74 RB Offset



03:11:00 23.01.2021

Channel 20825
(2507.5MHz)

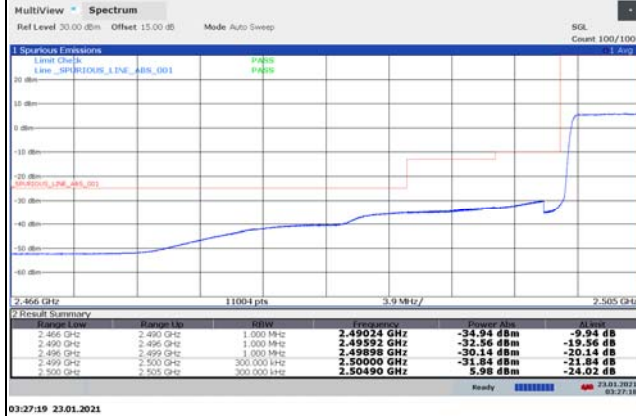
QPSK

75 RB / 0 RB Offset

Channel 21375
(2562.5MHz)

QPSK

75 RB / 0 RB Offset



03:27:19 23.01.2021



03:36:18 23.01.2021

LTE Band 7, Channel Bandwidth 20MHz

Channel 20850
(2510.0MHz)

QPSK

1 RB / 0 RB Offset

Channel 21350
(2560.0MHz)

QPSK

1 RB / 99 RB Offset



03:53:16 23.01.2021

Channel 20850
(2510.0MHz)

QPSK

100 RB / 0 RB Offset

Channel 21350
(2560.0MHz)

QPSK

100 RB / 0 RB Offset



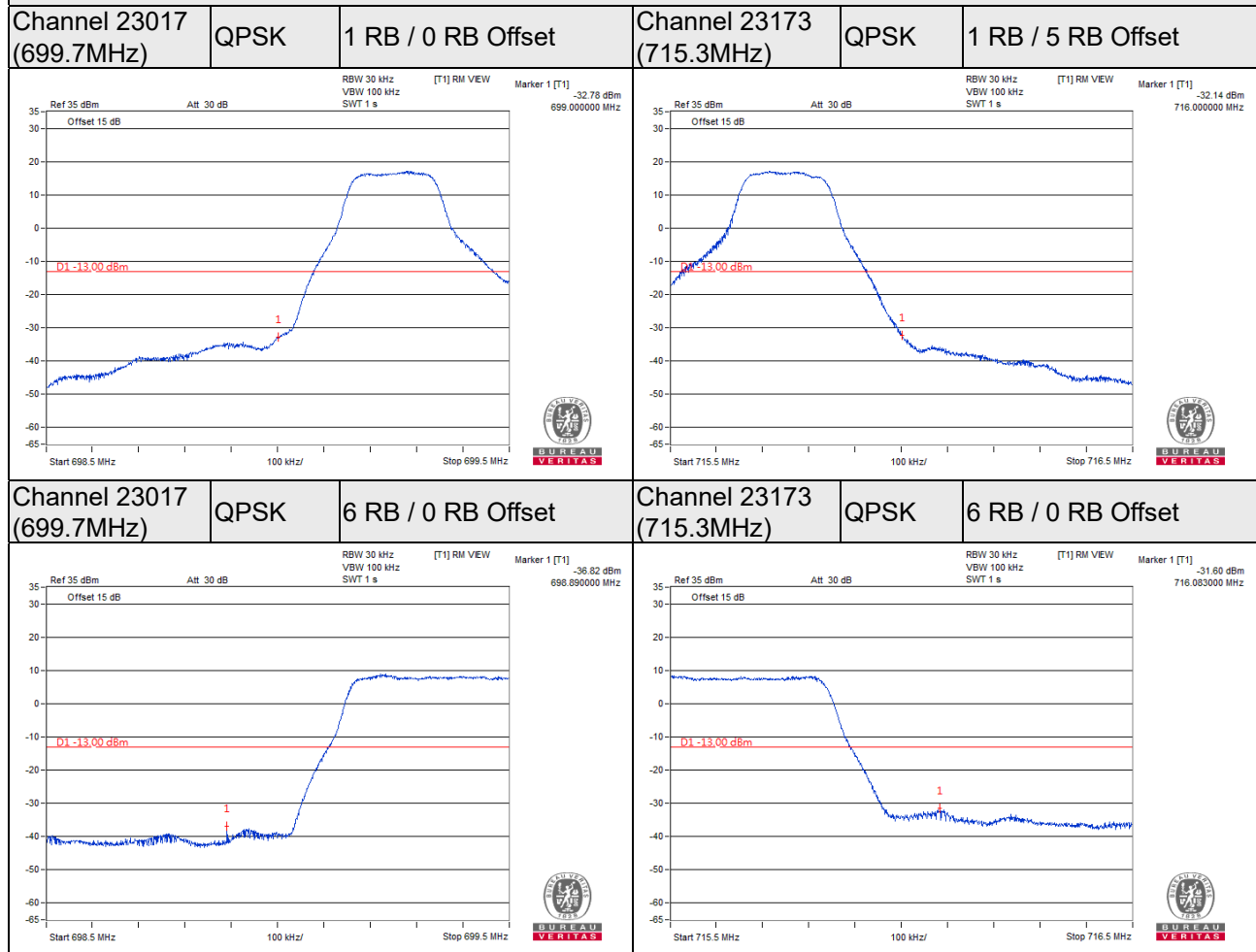
04:01:26 23.01.2021



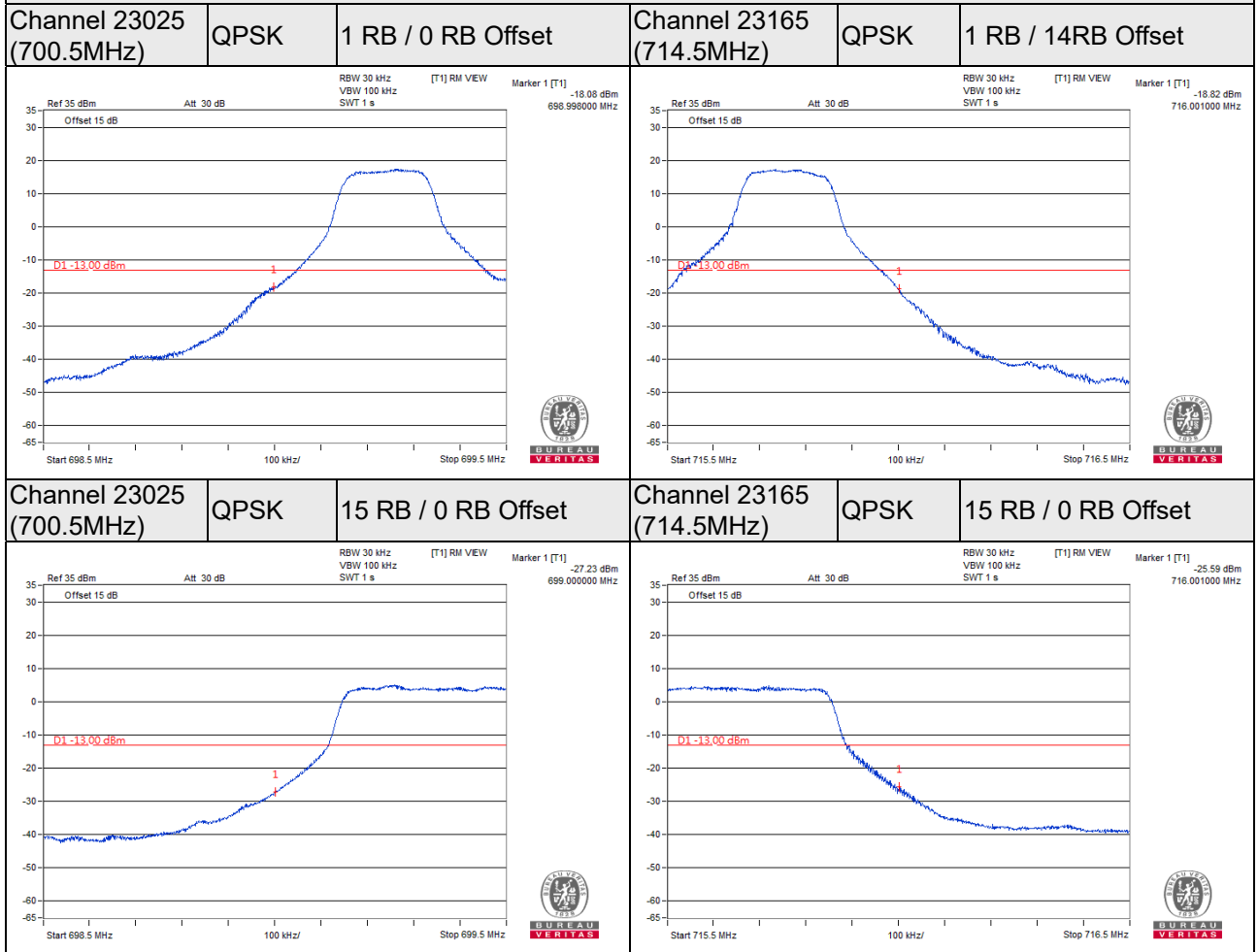
04:10:35 23.01.2021

Band Edge

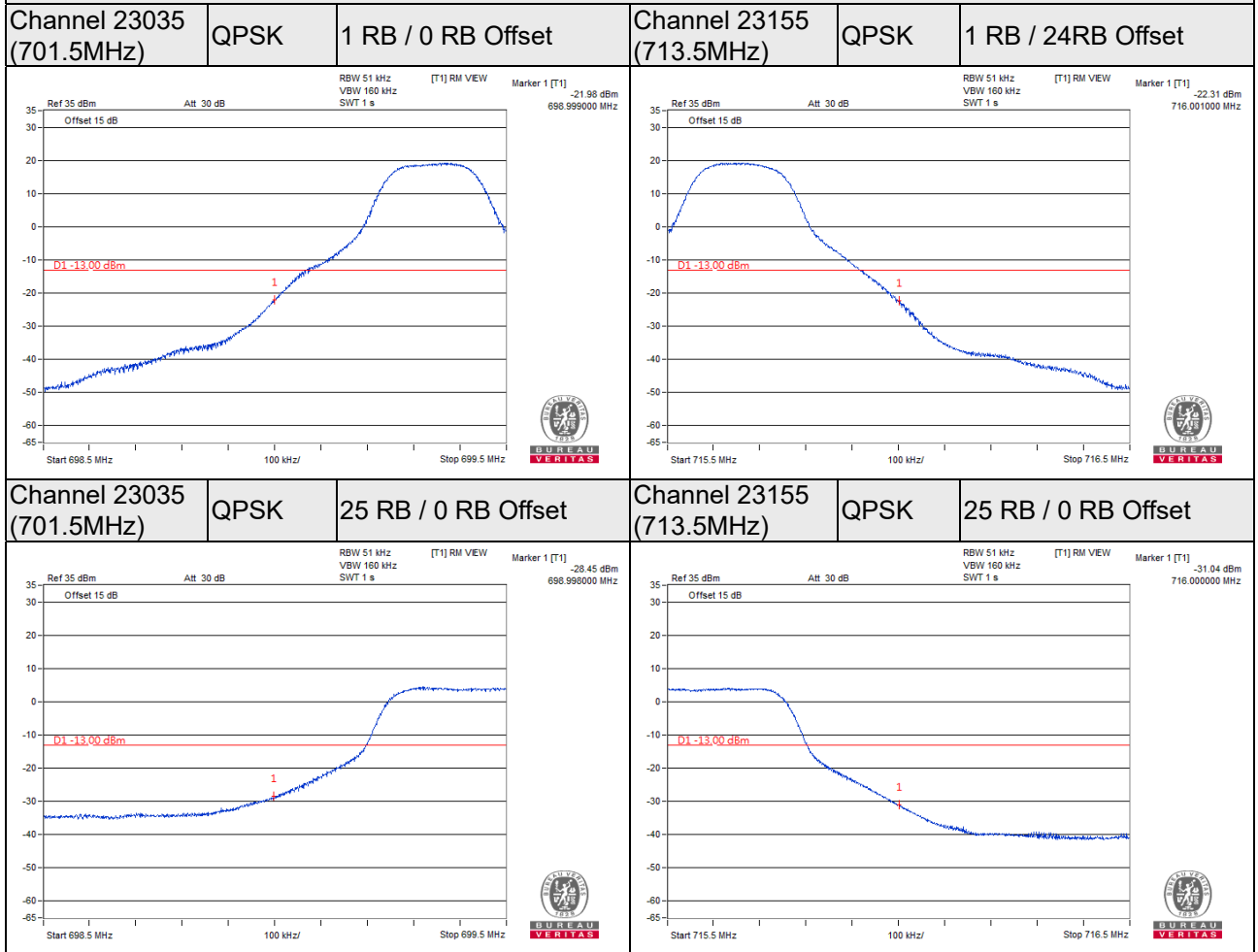
LTE Band 12, Channel Bandwidth 1.4MHz



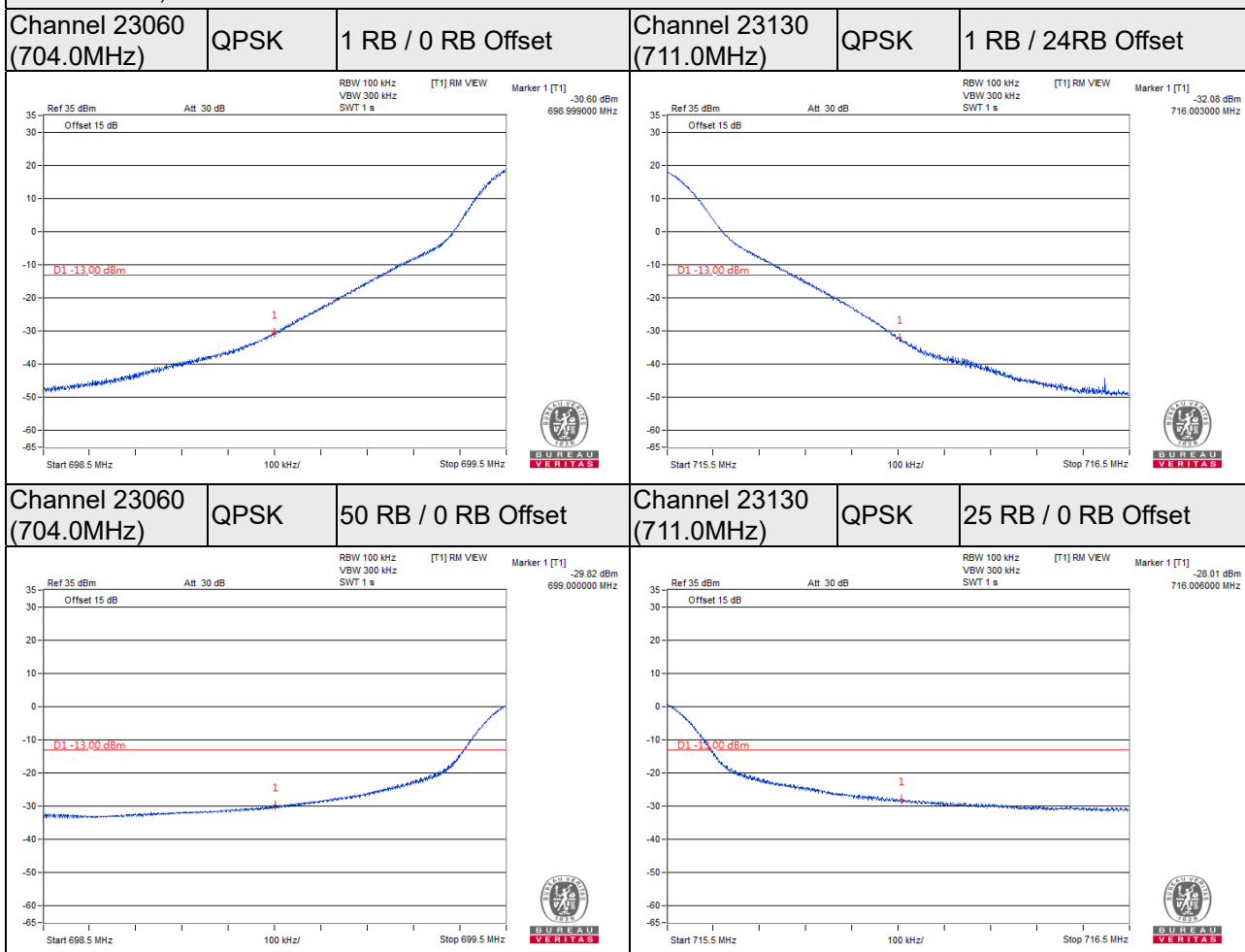
LTE Band 12, Channel Bandwidth 3MHz



LTE Band 12, Channel Bandwidth 5MHz

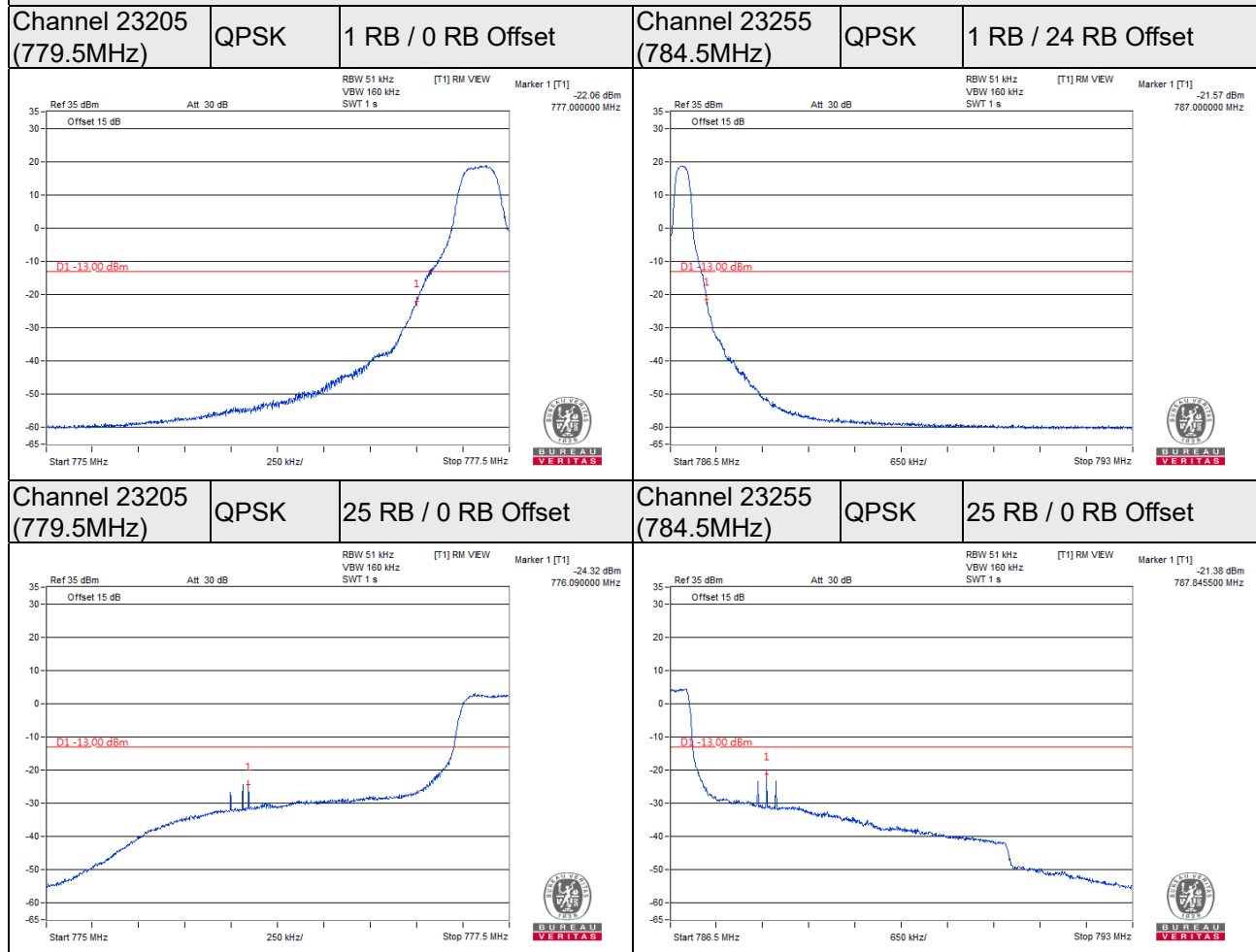


LTE Band 12, Channel Bandwidth 10MHz

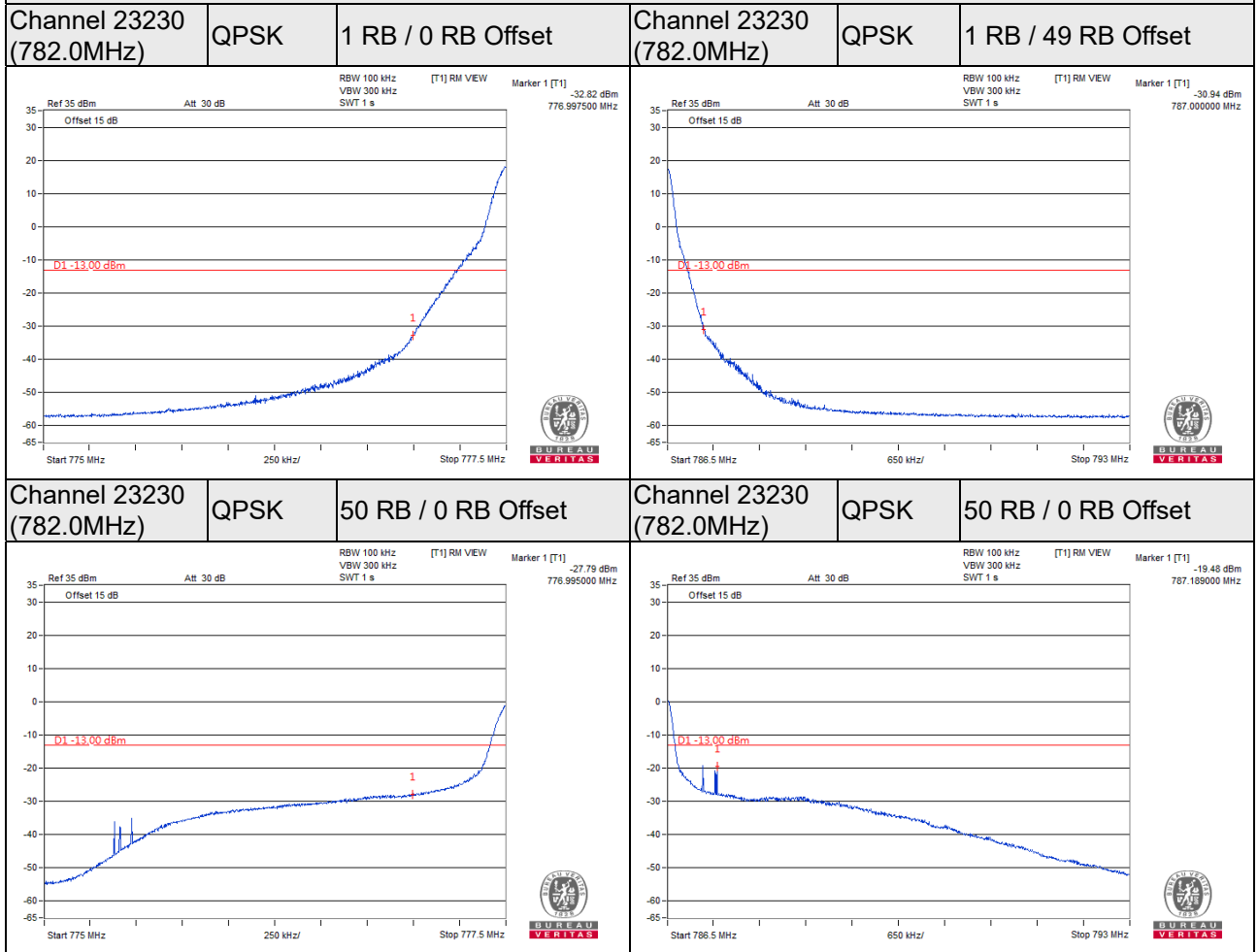


Band Edge

LTE Band 13, Channel Bandwidth 5MHz

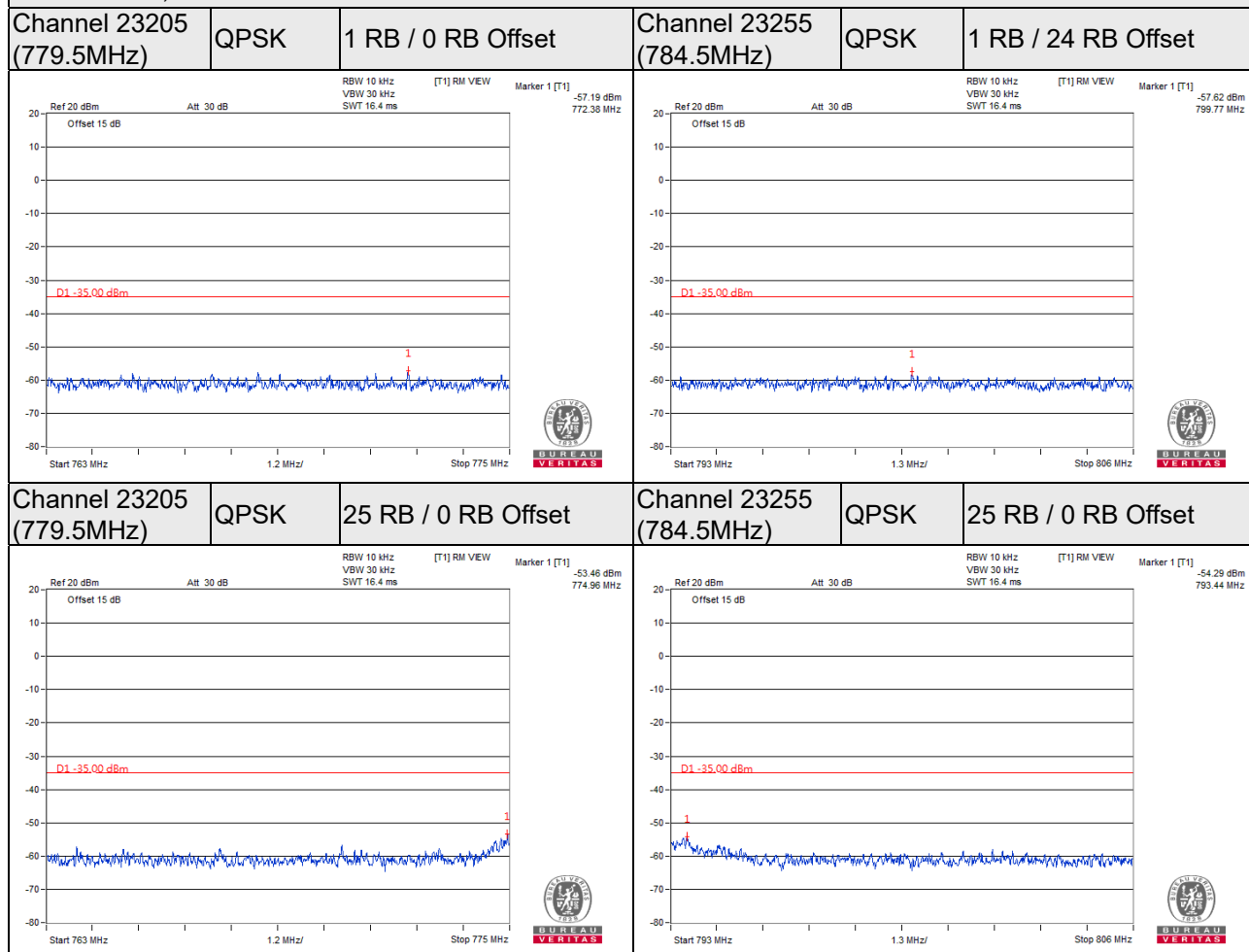


LTE Band 13, Channel Bandwidth 10MHz



Emission Mask

LTE Band 13, Channel Bandwidth 5MHz



For the 763-775MHz and 793-806MHz band, the FCC limit is $65 + 10 \log(P[\text{watt}])$ in a 6.25 kHz bandwidth. Since it was not possible to set the resolution bandwidth to 6.25 kHz with the available equipment, a bandwidth of 10 kHz was used instead to show compliance, and the correction factor is compensated at the spectrum. By using a 10 kHz bandwidth on the spectrum analyzer.

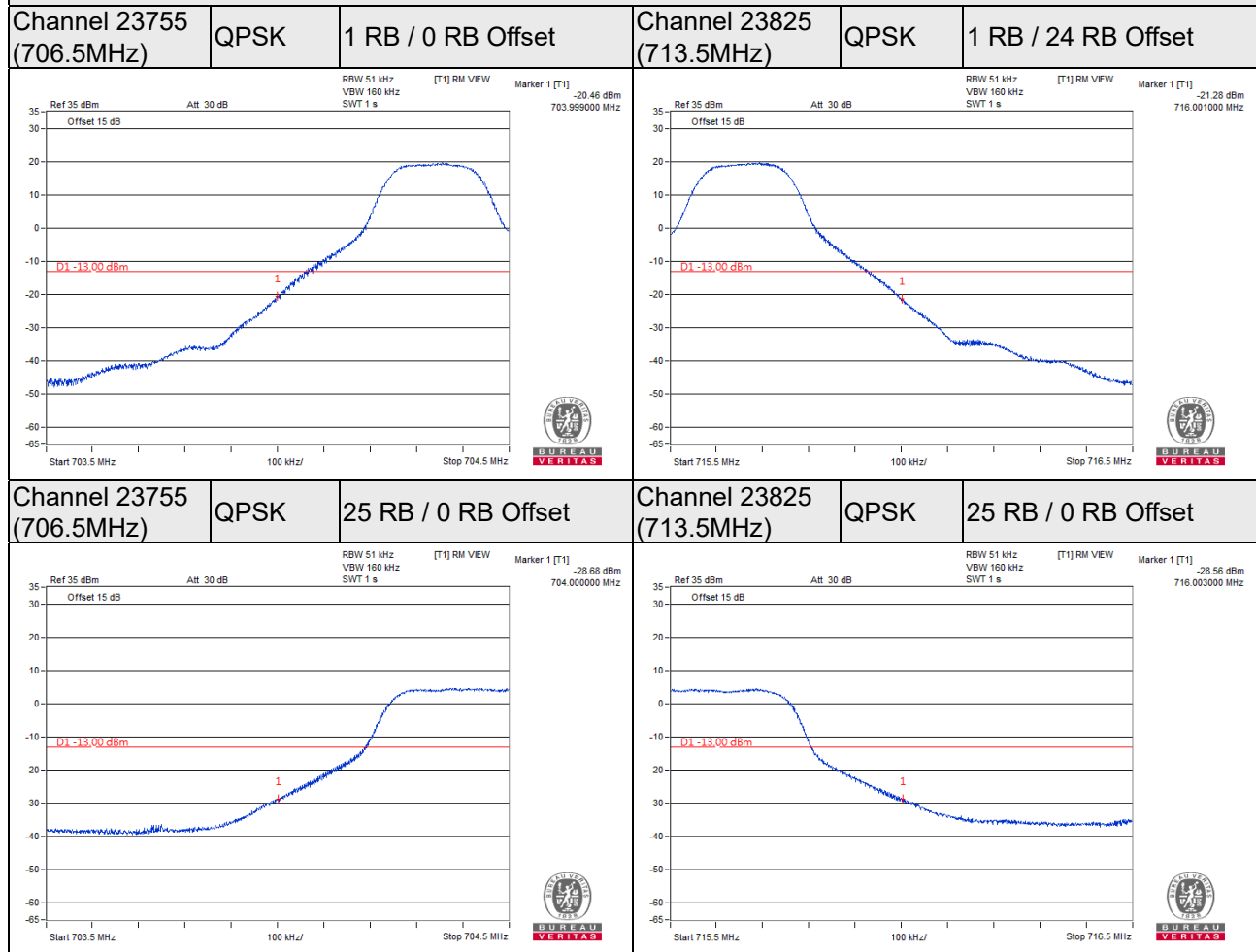
LTE Band 13, Channel Bandwidth 10MHz



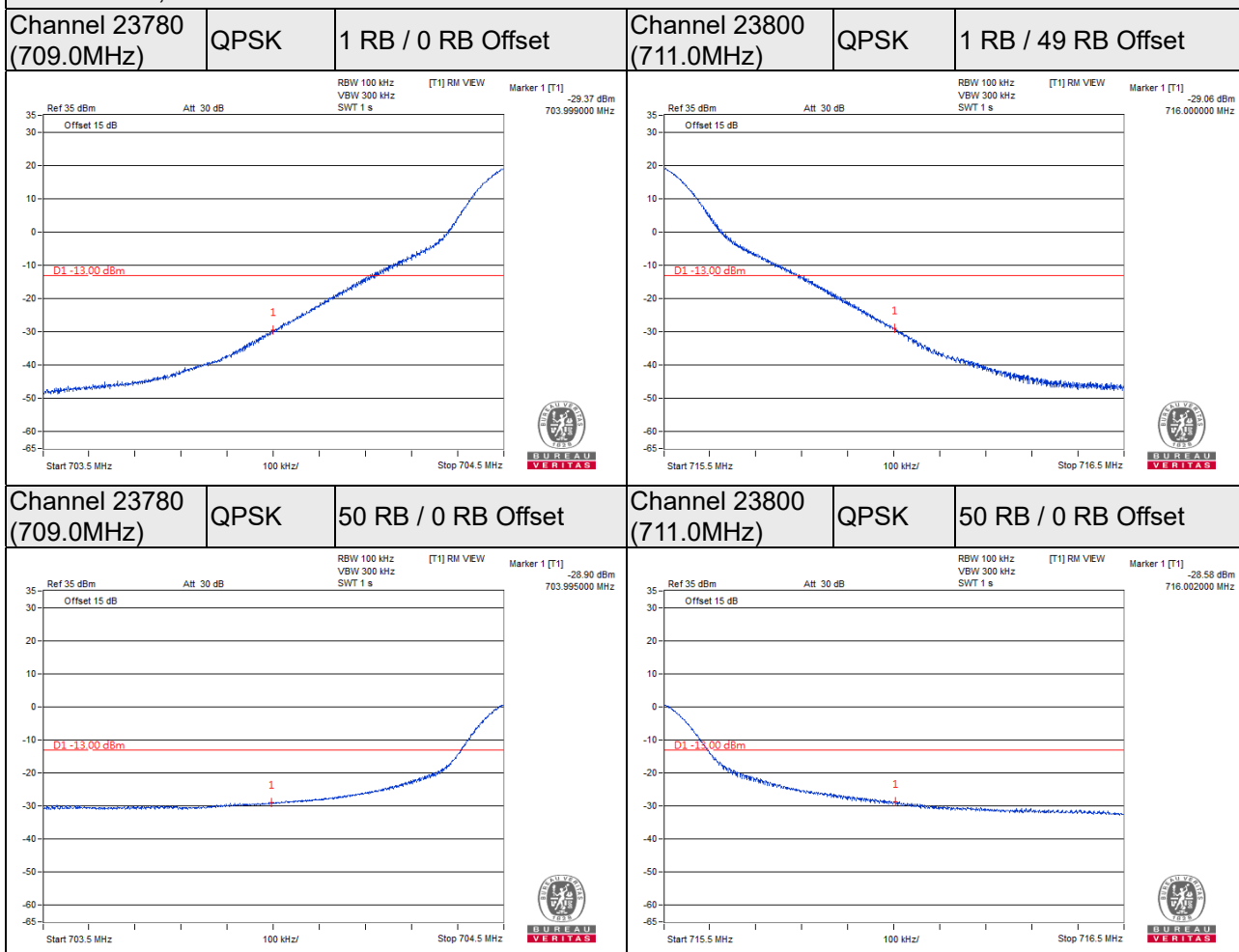
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Band Edge

LTE Band 17, Channel Bandwidth 5MHz



LTE Band 17, Channel Bandwidth 10MHz



LTE Band 30, Channel Bandwidth 10MHz

Channel 27710
(2310.0MHz)

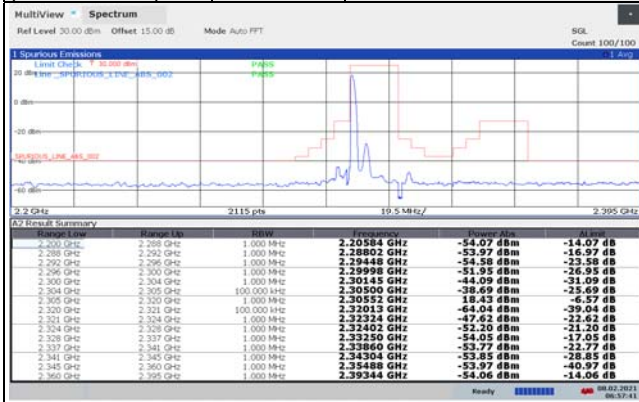
QPSK

1 RB / 0 RB Offset

Channel 27710
(2310.0MHz)

QPSK

1 RB / 49 RB Offset

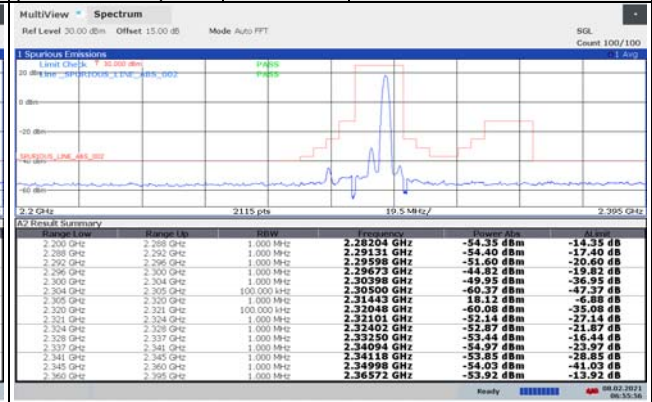


06:57:41 08.02.2021

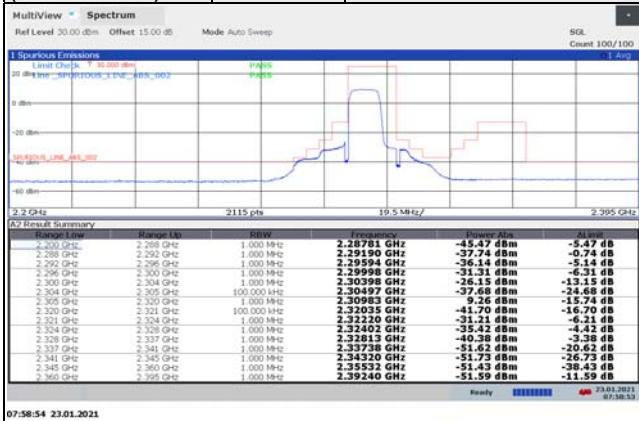
Channel 27710
(2310.0MHz)

QPSK

50 RB / 0 RB Offset



06:55:57 08.02.2021

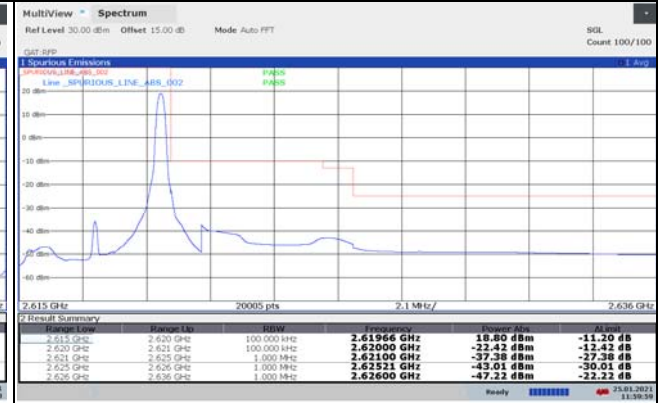


07:58:54 23.01.2021

Out-of-Band Emission

LTE Band 38, Channel Bandwidth 5MHz

Channel 37775 (2572.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 38225 (2617.5MHz)	QPSK	1 RB / 24 RB Offset
------------------------------	------	--------------------	------------------------------	------	---------------------



Channel 37775 (2572.5MHz)	QPSK	25 RB / 0 RB Offset	Channel 38225 (2617.5MHz)	QPSK	25 RB / 0 RB Offset
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LTE Band 38, Channel Bandwidth 10MHz

Channel 37800
(2575.0MHz)

QPSK

1 RB / 0 RB Offset

Channel 38200
(2615.0MHz)

QPSK

1 RB / 49 RB Offset



12:45:56 25.01.2021

Channel 37800
(2575.0MHz)

QPSK

50 RB / 0 RB Offset

Channel 38200
(2615.0MHz)

QPSK

50 RB / 0 RB Offset



12:58:31 25.01.2021



02:19:38 26.01.2021

LTE Band 38, Channel Bandwidth 15MHz

Channel 37825
(2577.5MHz)

QPSK

1 RB / 0 RB Offset

Channel 38175
(2612.5MHz)

QPSK

1 RB / 74 RB Offset



03:01:39 26.01.2021

Channel 37825
(2577.5MHz)

QPSK

75 RB / 0 RB Offset

Channel 38175
(2612.5MHz)

QPSK

75 RB / 0 RB Offset



03:14:44 26.01.2021



04:06:10 26.01.2021

LTE Band 38, Channel Bandwidth 20MHz

Channel 37850
(2580.0MHz)

QPSK

1 RB / 0 RB Offset

Channel 38150
(2610.0MHz)

QPSK

1 RB / 99 RB Offset



Channel 37850
(2580.0MHz)

QPSK

100 RB / 0 RB Offset

Channel 38150
(2610.0MHz)

QPSK

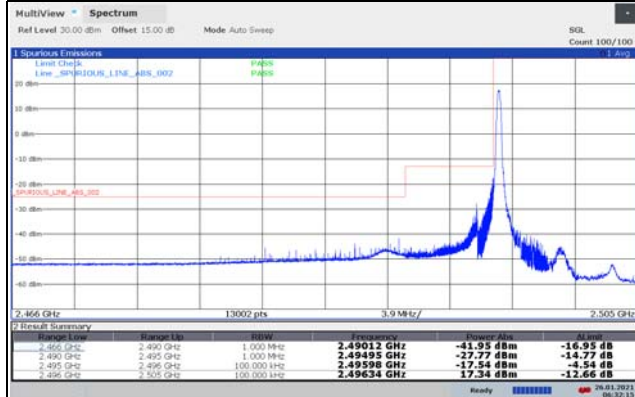
100 RB / 0 RB Offset



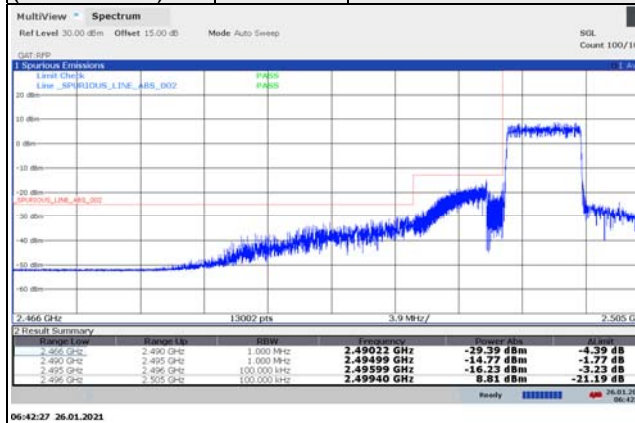
Out-of-Band Emission

LTE Band 41, Channel Bandwidth 5MHz

Channel 39675 (2498.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 41565 (2687.5MHz)	QPSK	1 RB / 24 RB Offset
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Channel 39675 (2498.5MHz)	QPSK	25 RB / 0 RB Offset
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06:42:27 26.01.2021



Channel 41565 (2687.5MHz)	QPSK	25 RB / 0 RB Offset
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06:46:40 26.01.2021

LTE Band 41, Channel Bandwidth 15MHz

Channel 39725
(2503.5MHz)

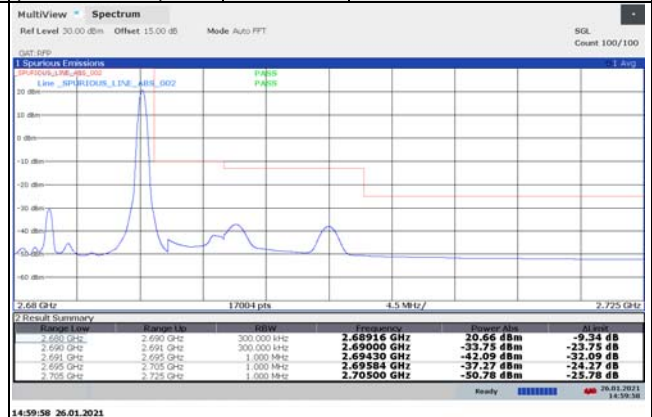
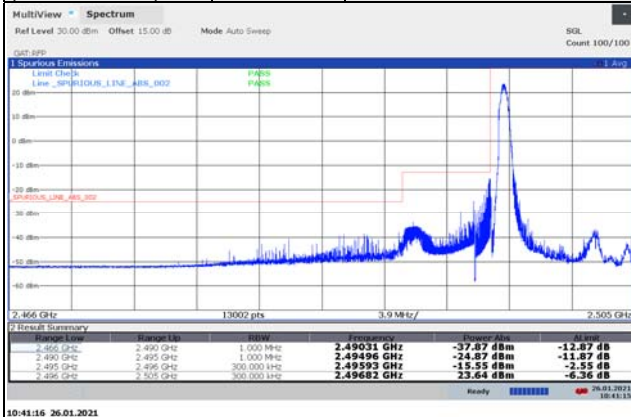
QPSK

1 RB / 0 RB Offset

Channel 41515
(2682.5MHz)

QPSK

1 RB / 74 RB Offset



Channel 39725
(2503.5MHz)

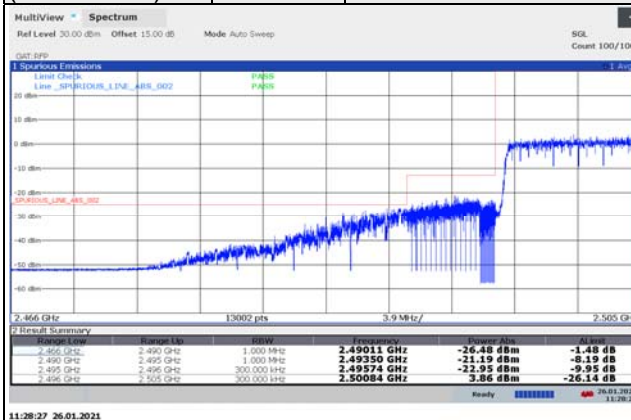
QPSK

75 RB / 0 RB Offset

Channel 41515
(2682.5MHz)

QPSK

75 RB / 0 RB Offset



LTE Band 41, Channel Bandwidth 20MHz

Channel 39750
(2506.0MHz)

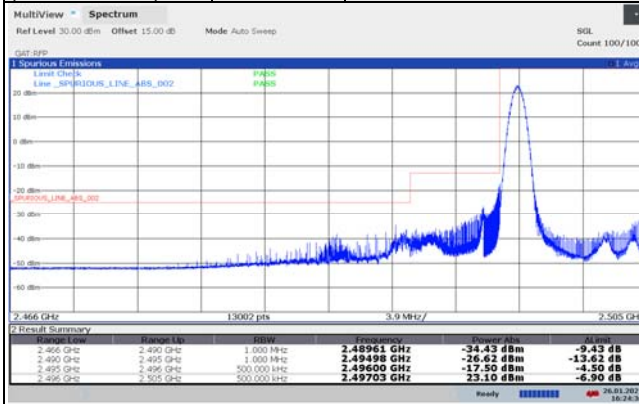
QPSK

1 RB / 0 RB Offset

Channel 41490
(2680.0MHz)

QPSK

1 RB / 99 RB Offset



Channel 39750
(2506.0MHz)

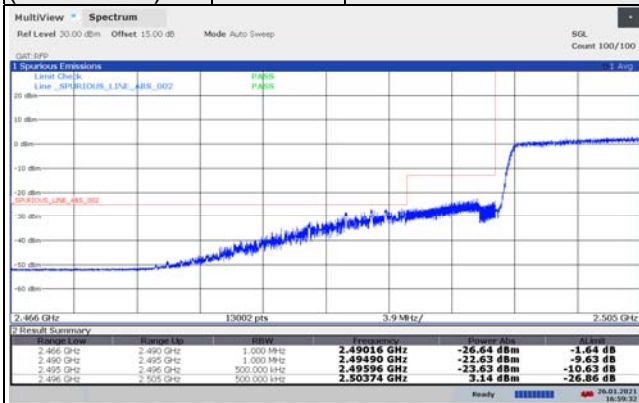
QPSK

100 RB / 0 RB Offset

Channel 41490
(2680.0MHz)

QPSK

100 RB / 0 RB Offset



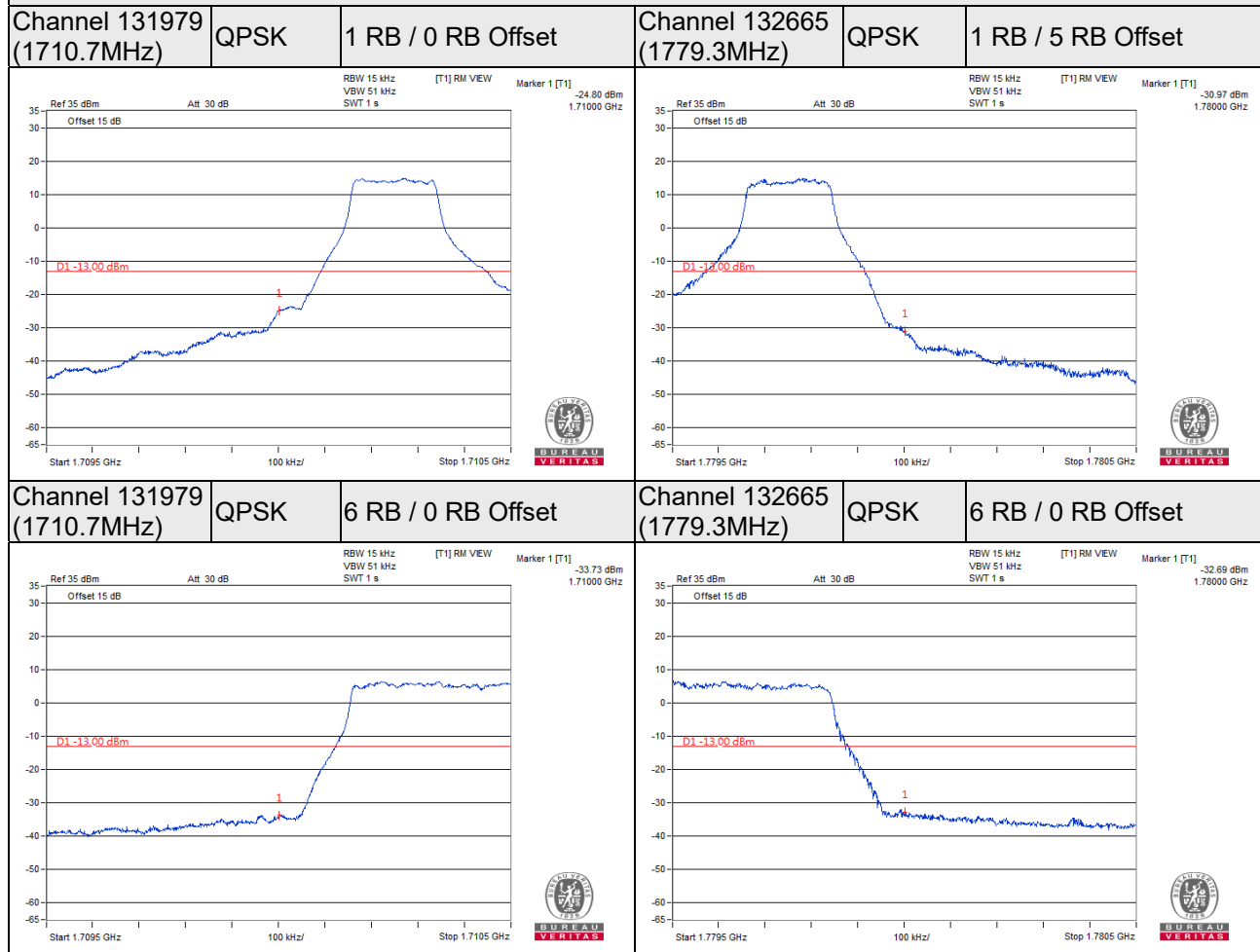
16:59:32 26.01.2021



17:22:07 26.01.2021

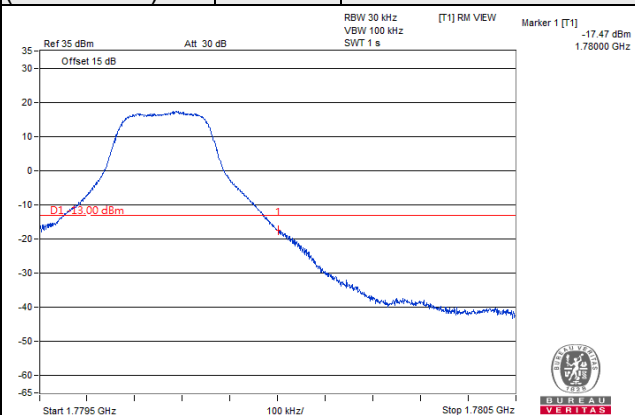
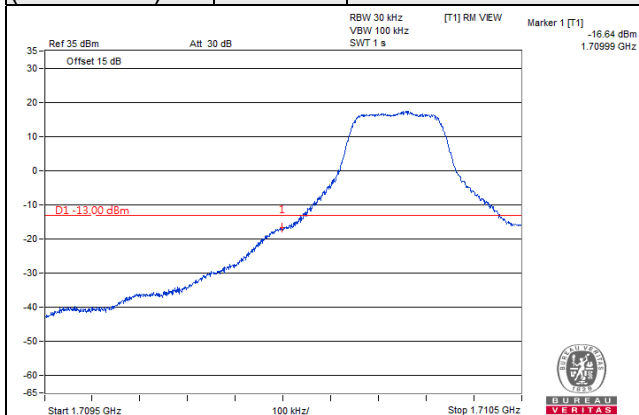
Band Edge

LTE Band 66, Channel Bandwidth 1.4MHz

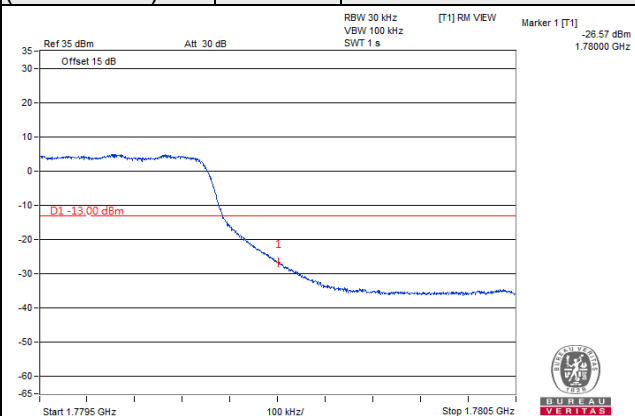
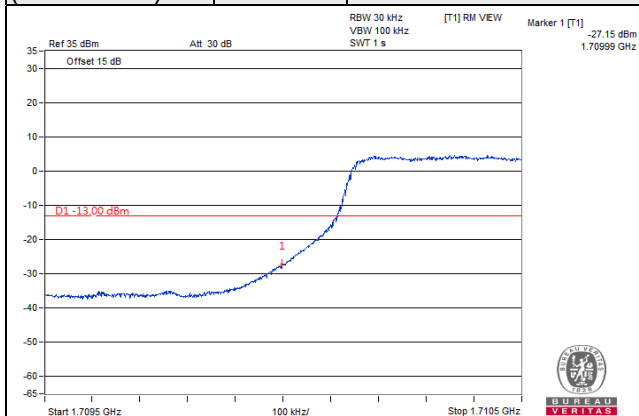


LTE Band 66, Channel Bandwidth 3MHz

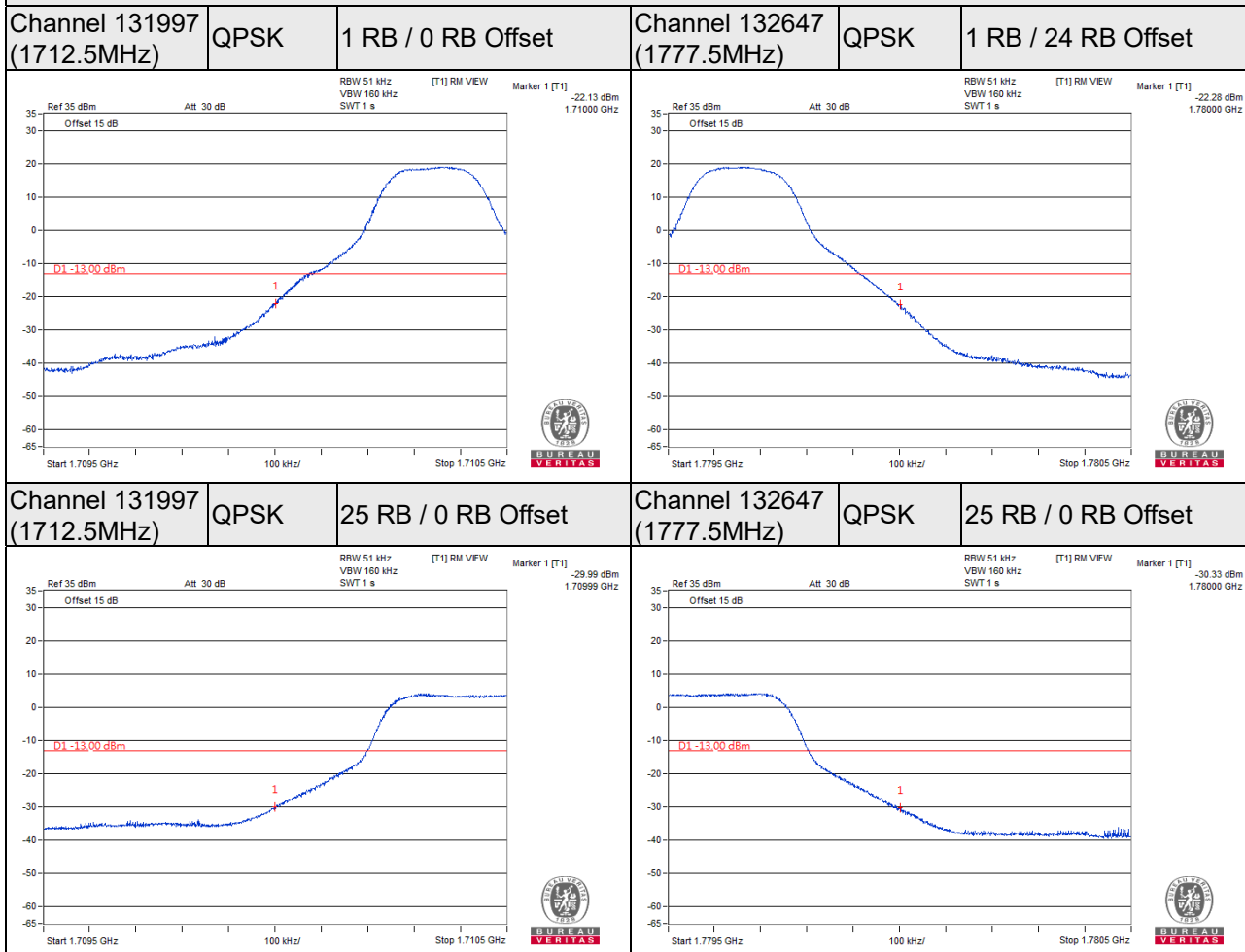
Channel 131987 (1711.5MHz)	QPSK	1 RB / 0 RB Offset	Channel 132657 (1778.5MHz)	QPSK	1 RB / 14 RB Offset
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Channel 131987 (1711.5MHz)	QPSK	15 RB / 0 RB Offset	Channel 132657 (1778.5MHz)	QPSK	15 RB / 0 RB Offset
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LTE Band 66, Channel Bandwidth 5MHz



LTE Band 66, Channel Bandwidth 10MHz

Channel 132022
(1715.0MHz)

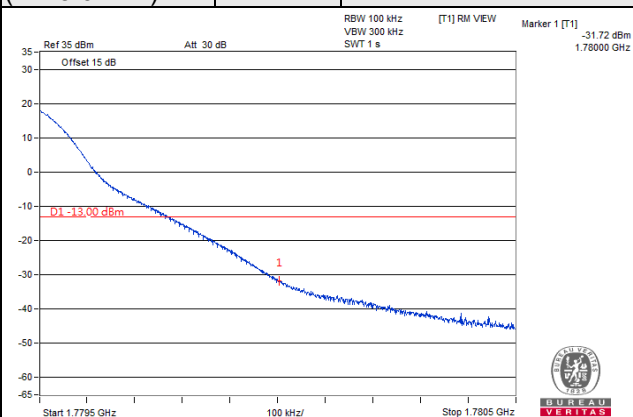
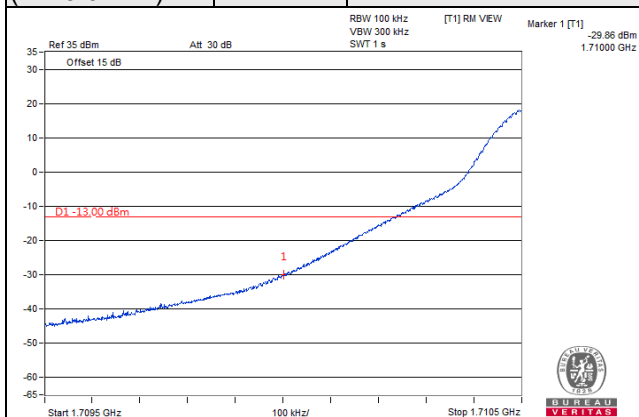
QPSK

1 RB / 0 RB Offset

Channel 132622
(1775.0MHz)

QPSK

1 RB / 49 RB Offset



Channel 132022
(1715.0MHz)

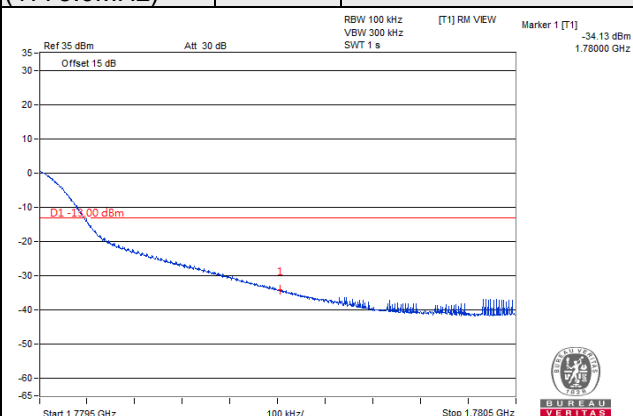
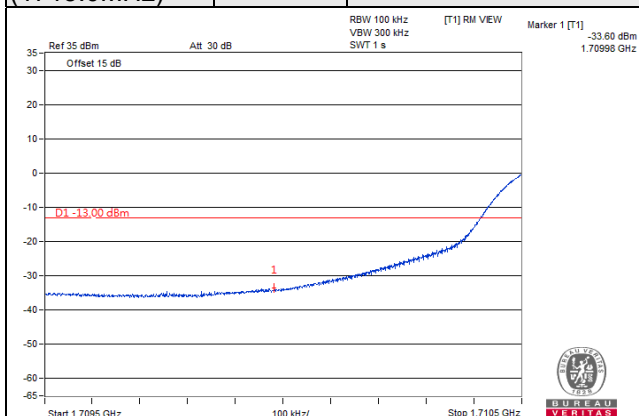
QPSK

50 RB / 0 RB Offset

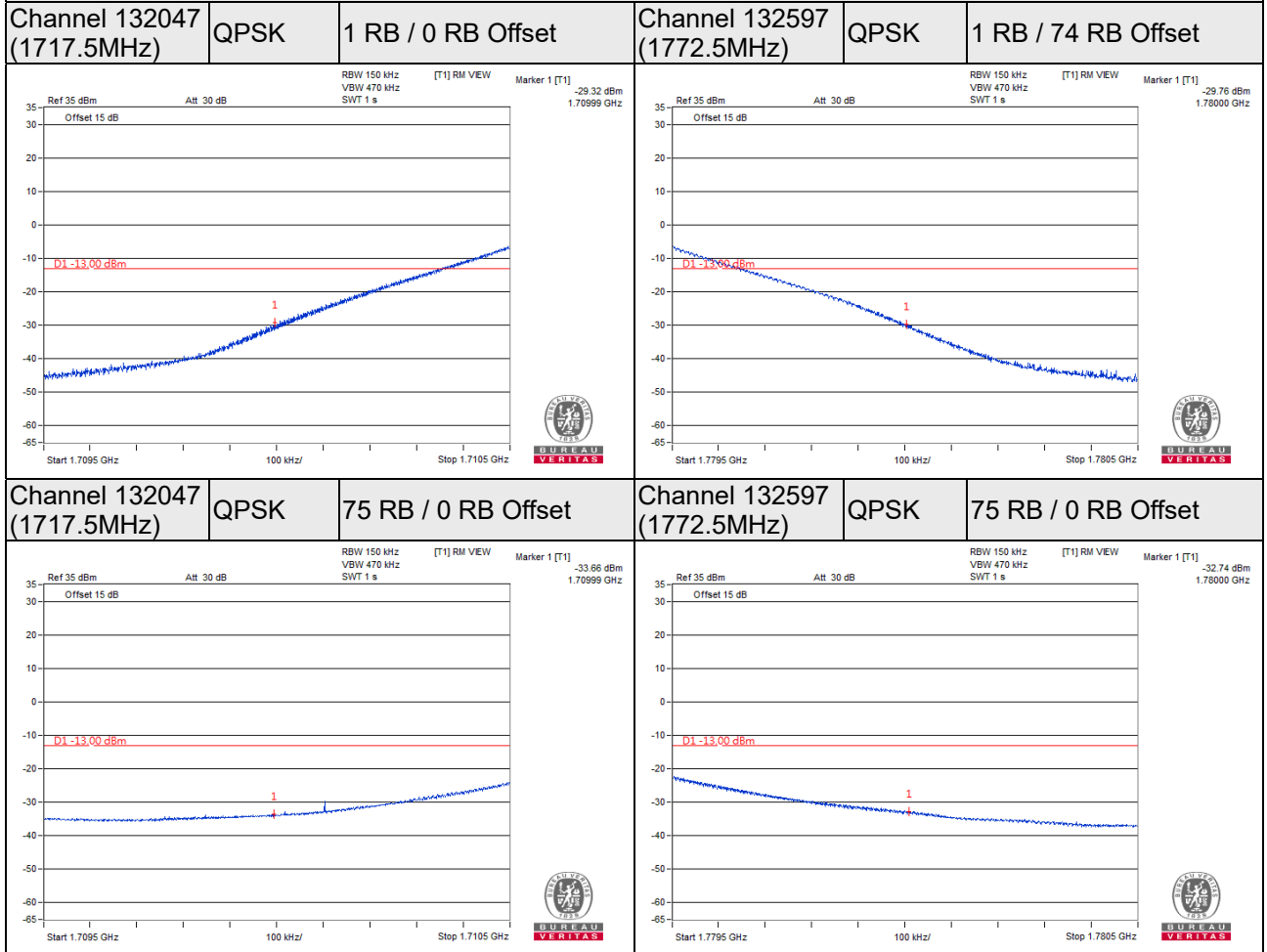
Channel 132622
(1775.0MHz)

QPSK

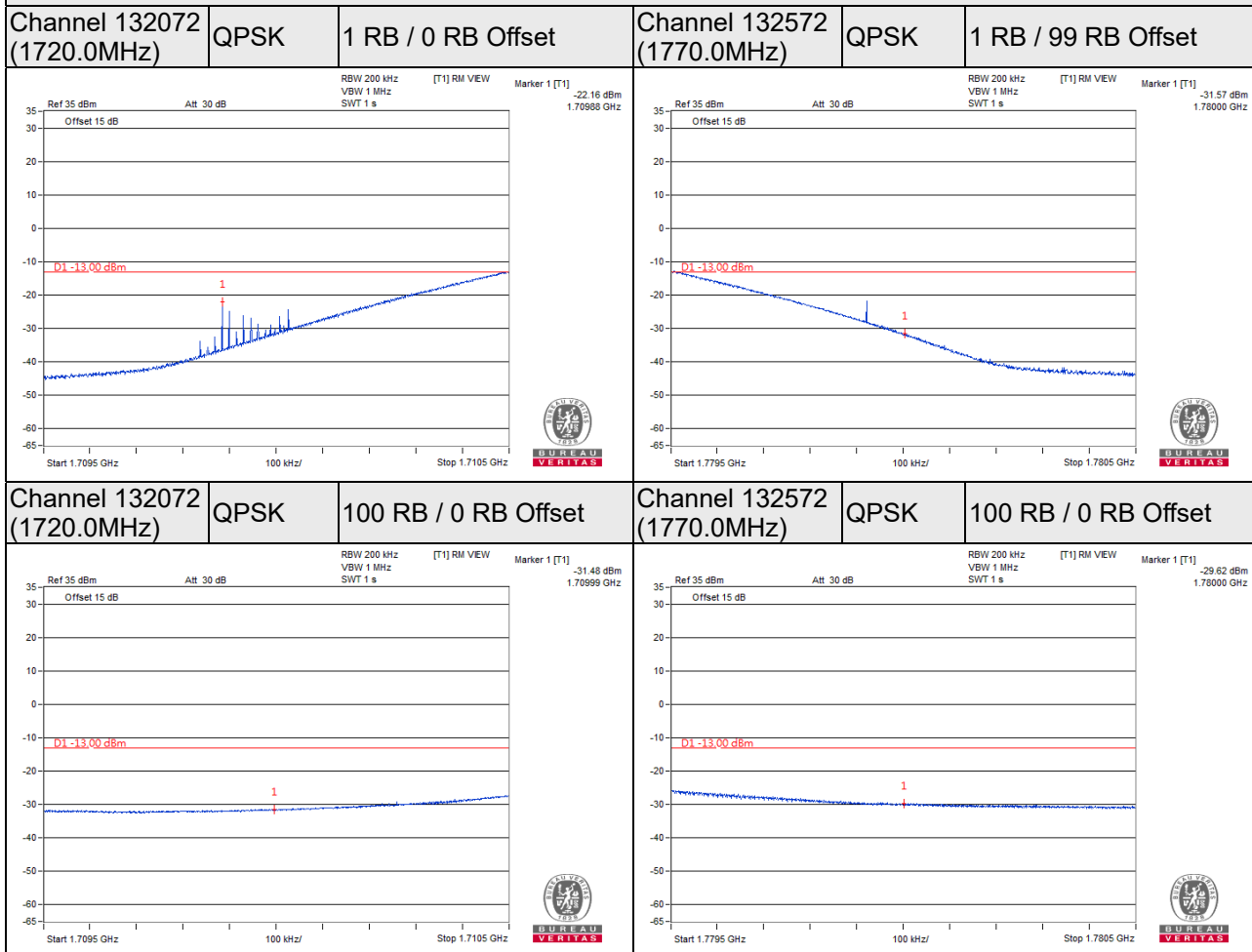
50 RB / 0 RB Offset



LTE Band 66, Channel Bandwidth 15MHz

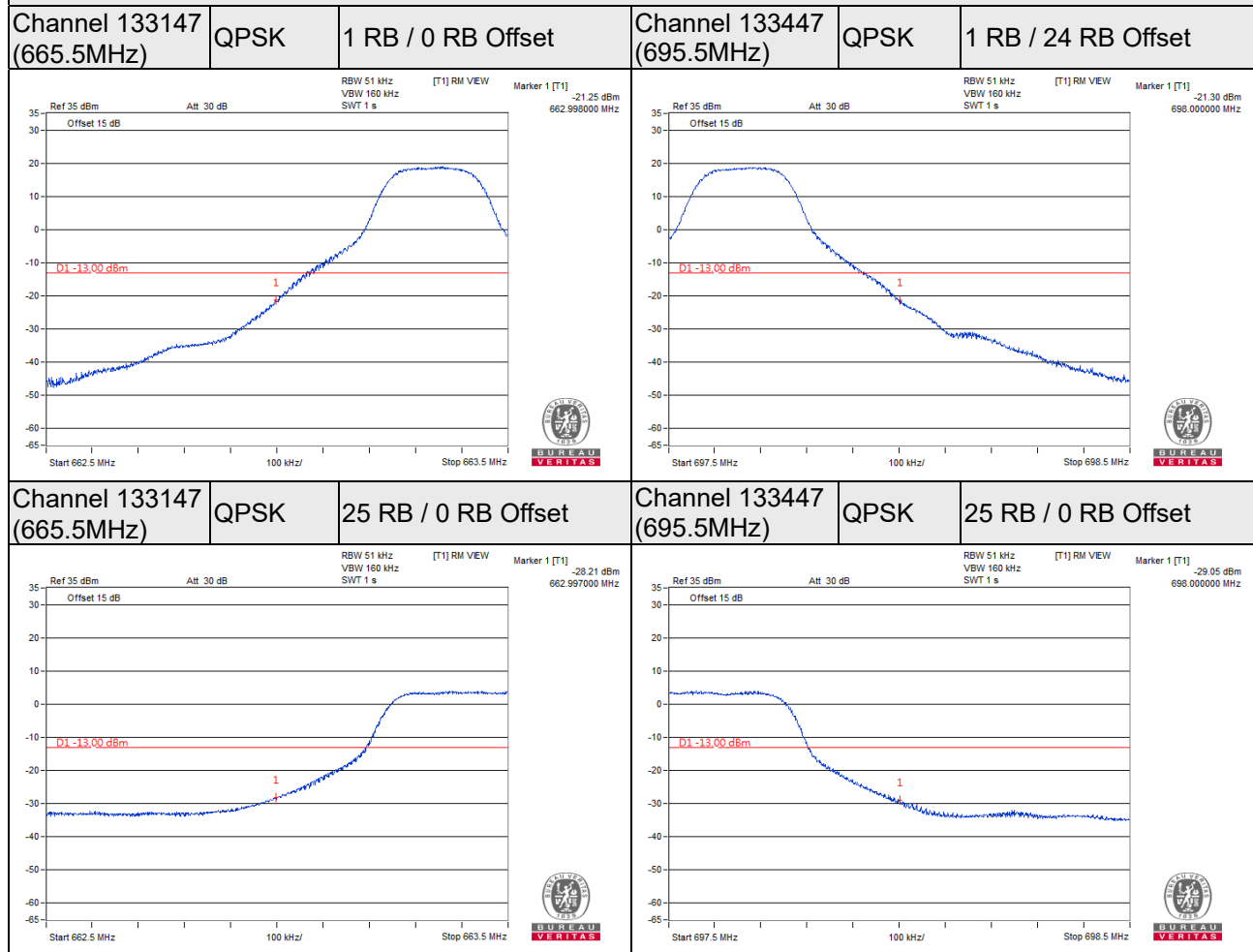


LTE Band 66, Channel Bandwidth 20MHz

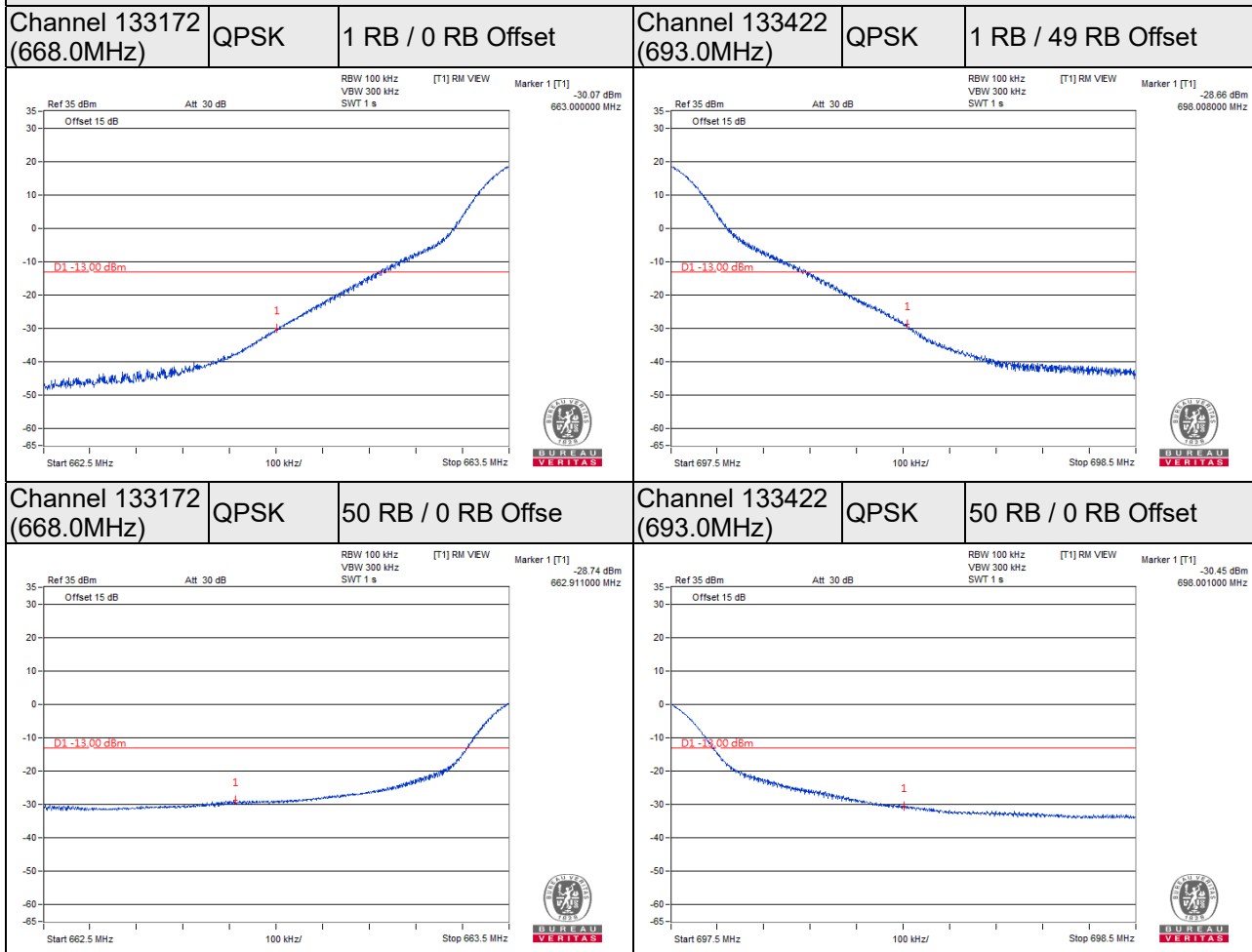


Band Edge

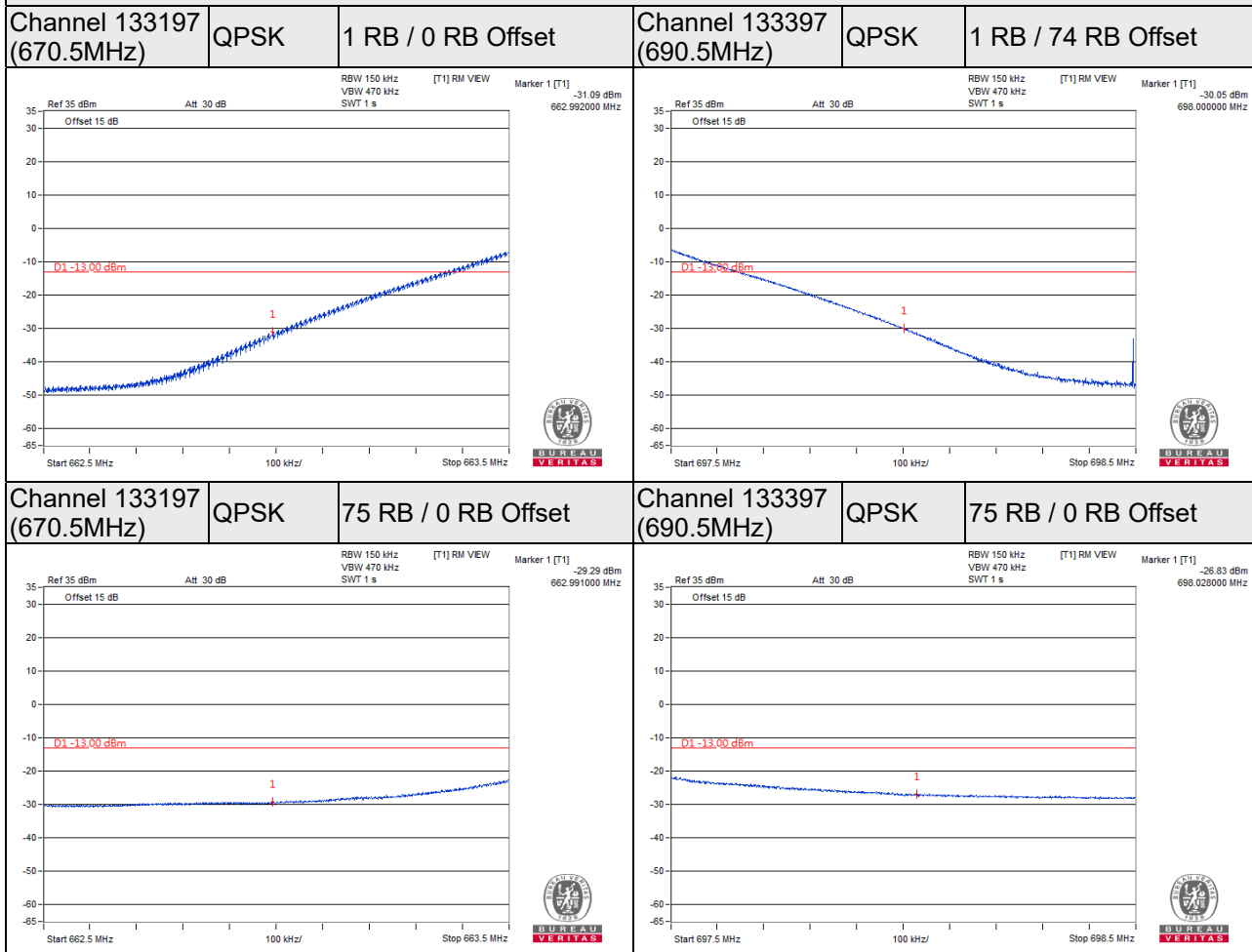
LTE Band 71, Channel Bandwidth 5MHz



LTE Band 71, Channel Bandwidth 10MHz



LTE Band 71, Channel Bandwidth 15MHz



LTE Band 71, Channel Bandwidth 20MHz

