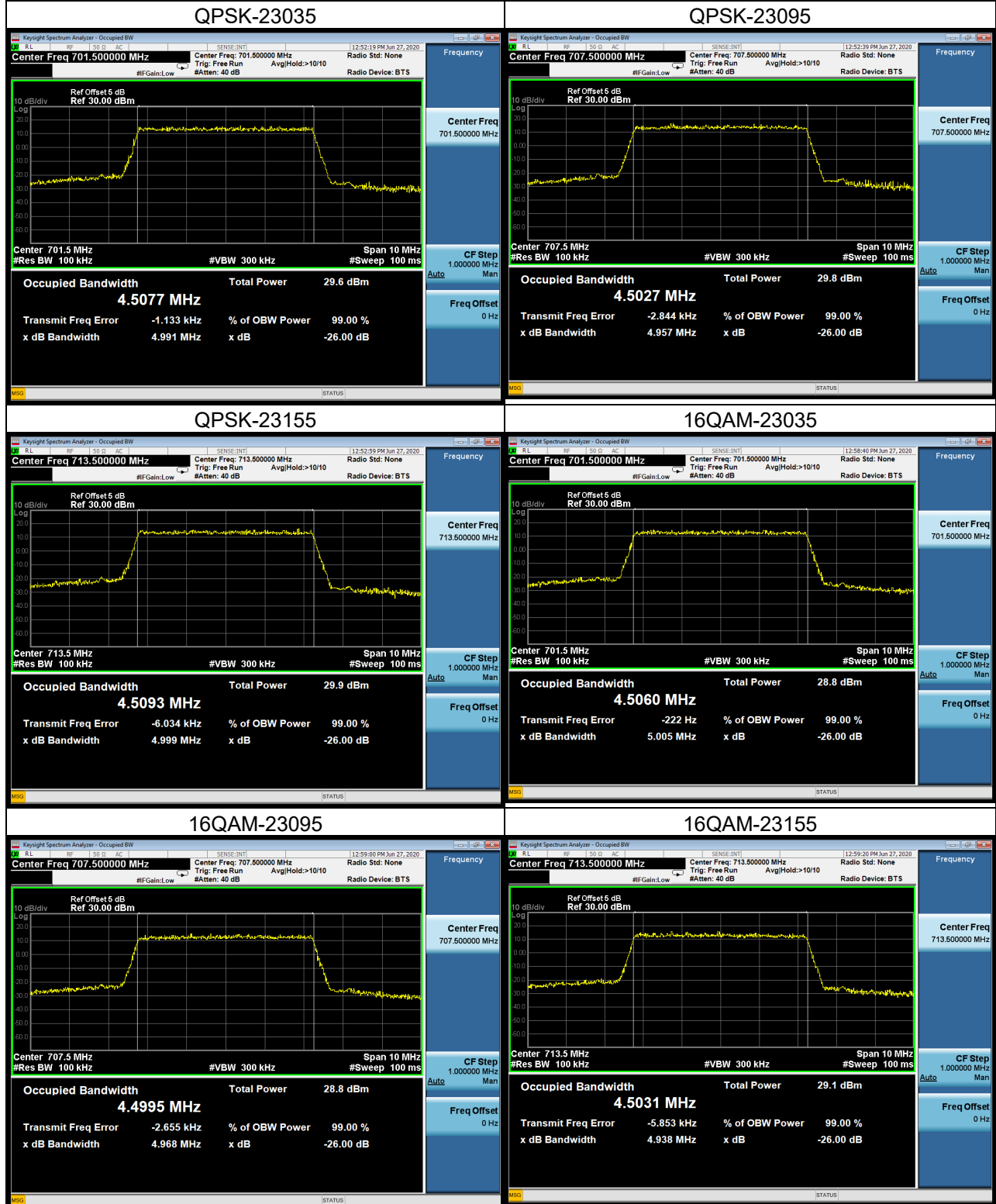


Spectrum Plot

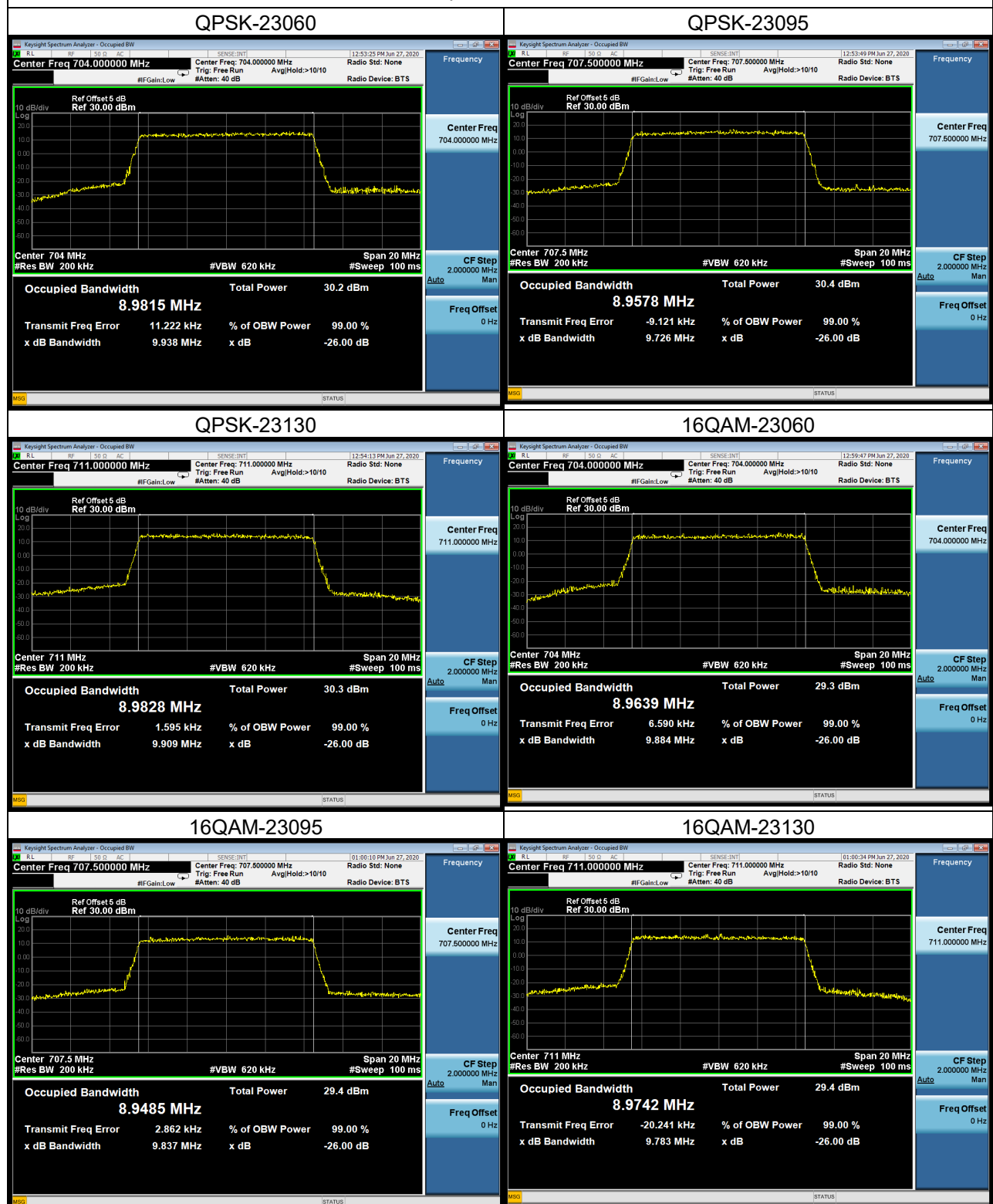


Spectrum Plot



LTE Band 12_10M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23060	704.0	8.9815	23060	704.0	9.938
23095	707.5	8.9578	23095	707.5	9.726
23130	711.0	8.9828	23130	711.0	9.909
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23060	704.0	8.9639	23060	704.0	9.884
23095	707.5	8.9485	23095	707.5	9.837
23130	711.0	8.9742	23130	711.0	9.783
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23060	704.0	8.9748	23060	704.0	9.847
23095	707.5	8.9640	23095	707.5	9.856
23130	711.0	8.9622	23130	711.0	9.828

Spectrum Plot

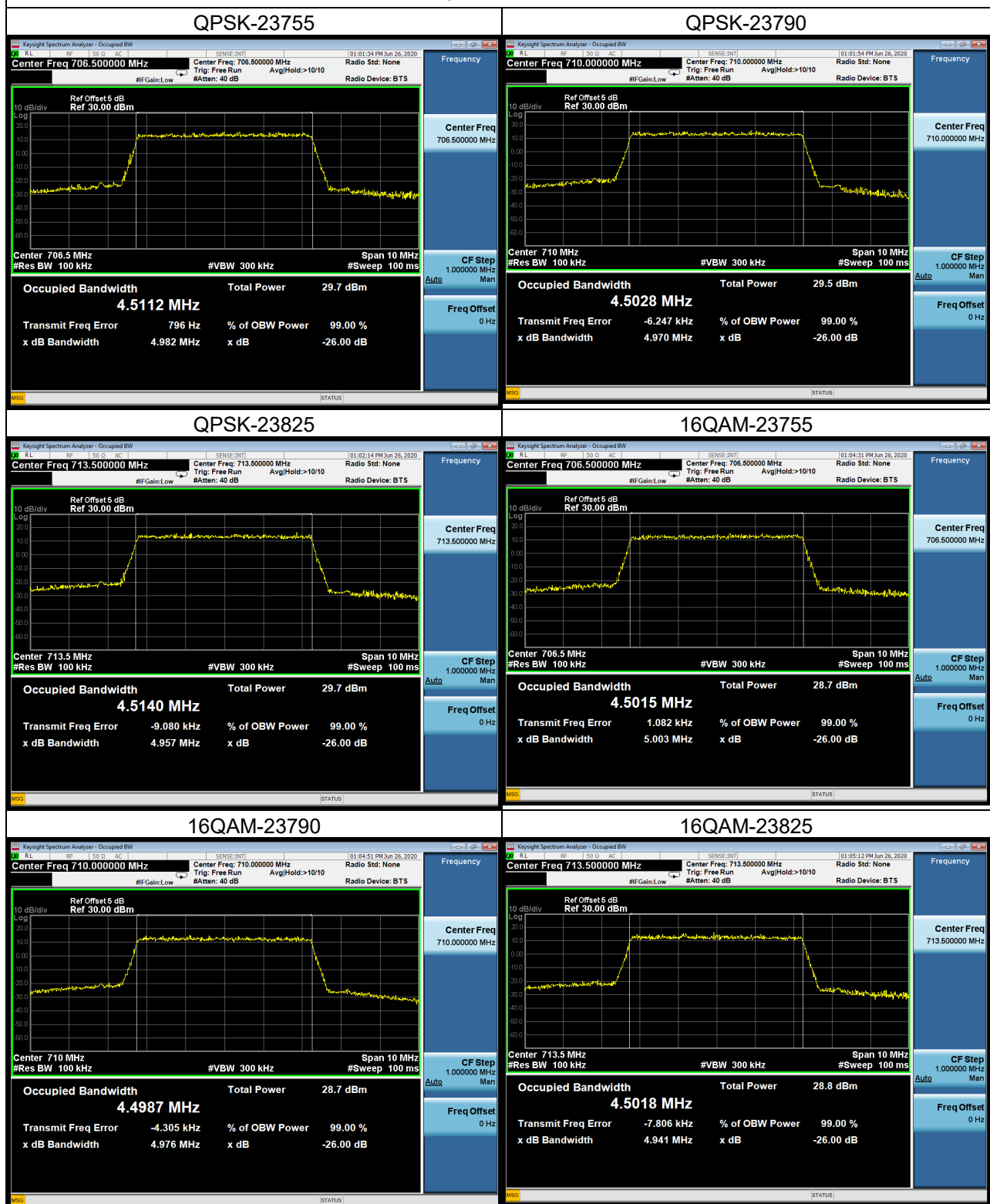


Spectrum Plot



LTE Band 17_5M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23755	706.5	4.5112	23755	706.5	4.982
23790	710	4.5028	23790	710	4.970
23825	713.5	4.5140	23825	713.5	4.957
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23755	706.5	4.5015	23755	706.5	5.003
23790	710	4.4987	23790	710	4.976
23825	713.5	4.5018	23825	713.5	4.941
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23755	706.5	4.4973	23755	706.5	4.990
23790	710	4.5176	23790	710	5.024
23825	713.5	4.5080	23825	713.5	4.979

Spectrum Plot

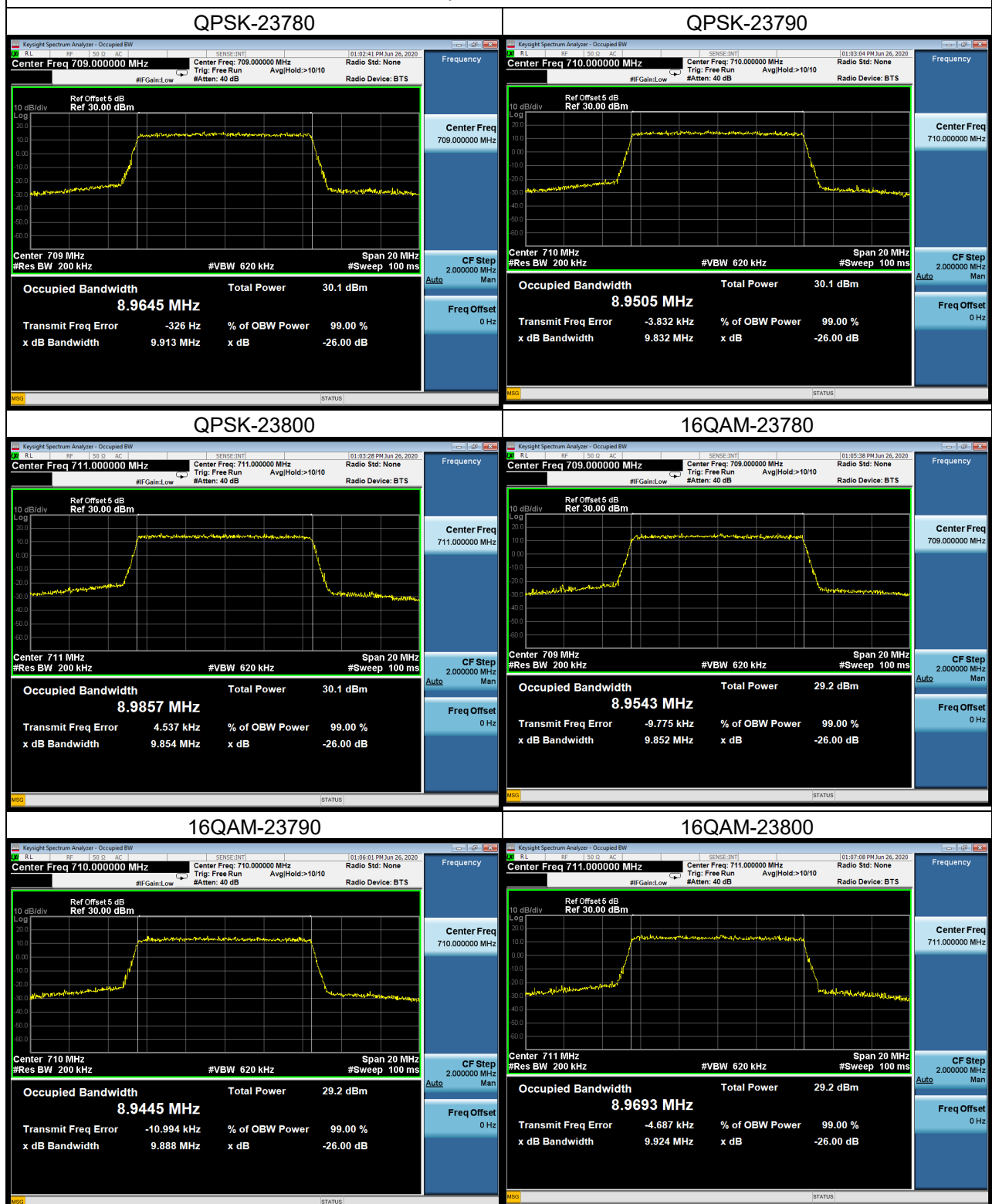


Spectrum Plot



LTE Band 17_10M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23780	709	8.9645	23780	709	9.913
23790	710	8.9505	23790	710	9.832
23800	711	8.9857	23800	711	9.854
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23780	709	8.9543	23780	709	9.852
23790	710	8.9445	23790	710	9.888
23800	711	8.9693	23800	711	9.924
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
23780	709	8.9493	23780	709	9.811
23790	710	8.9526	23790	710	9.831
23800	711	8.9633	23800	711	9.766

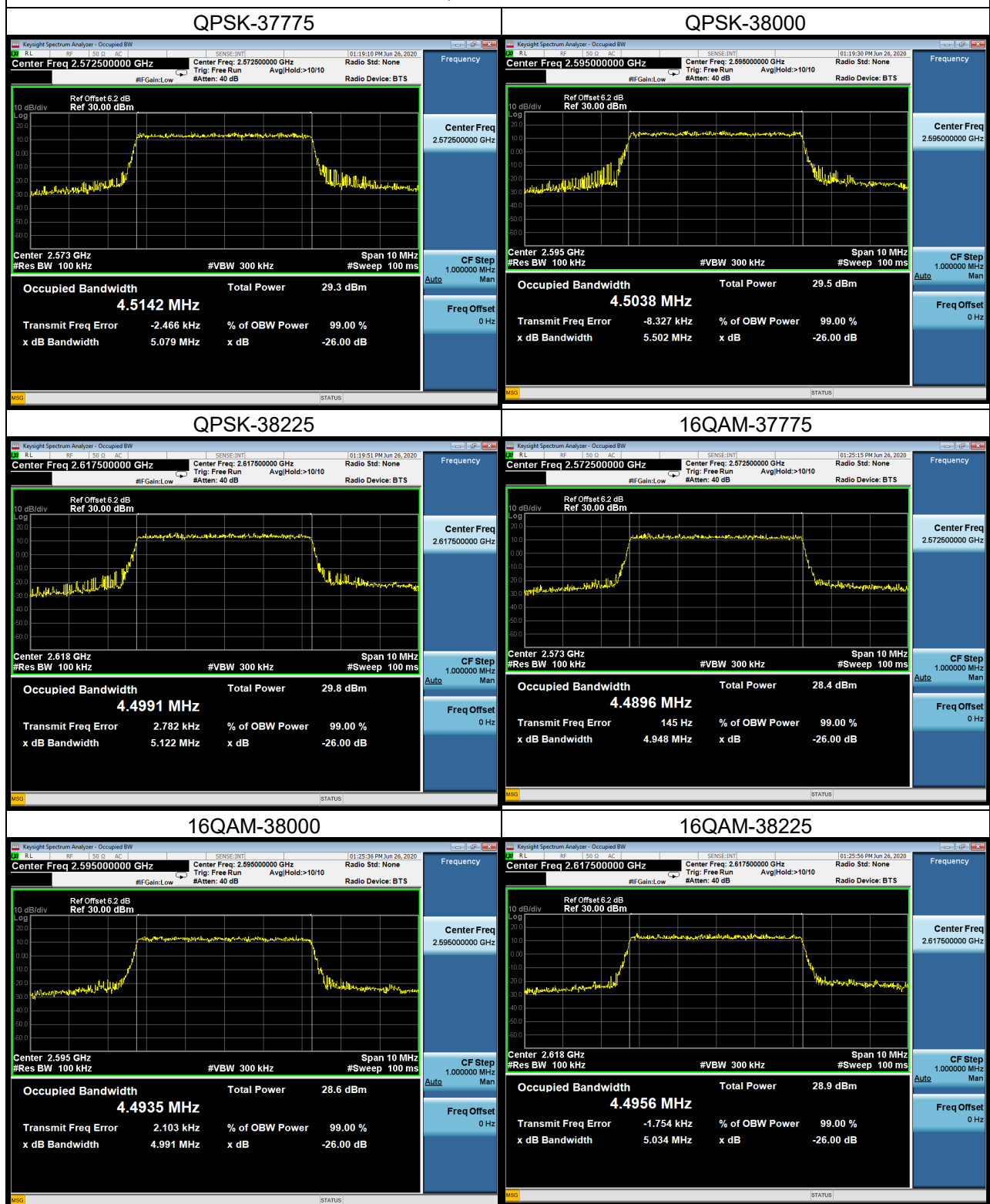
Spectrum Plot





LTE Band 38_5M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37775	2572.5	4.5142	37775	2572.5	5.079
38000	2595	4.5038	38000	2595	5.502
38225	2617.5	4.4991	38225	2617.5	5.122
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37775	2572.5	4.4896	37775	2572.5	4.948
38000	2595	4.4935	38000	2595	4.991
38225	2617.5	4.4956	38225	2617.5	5.034
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37775	2572.5	4.4895	37775	2572.5	5.005
38000	2595	4.5020	38000	2595	4.973
38225	2617.5	4.5031	38225	2617.5	5.124

Spectrum Plot

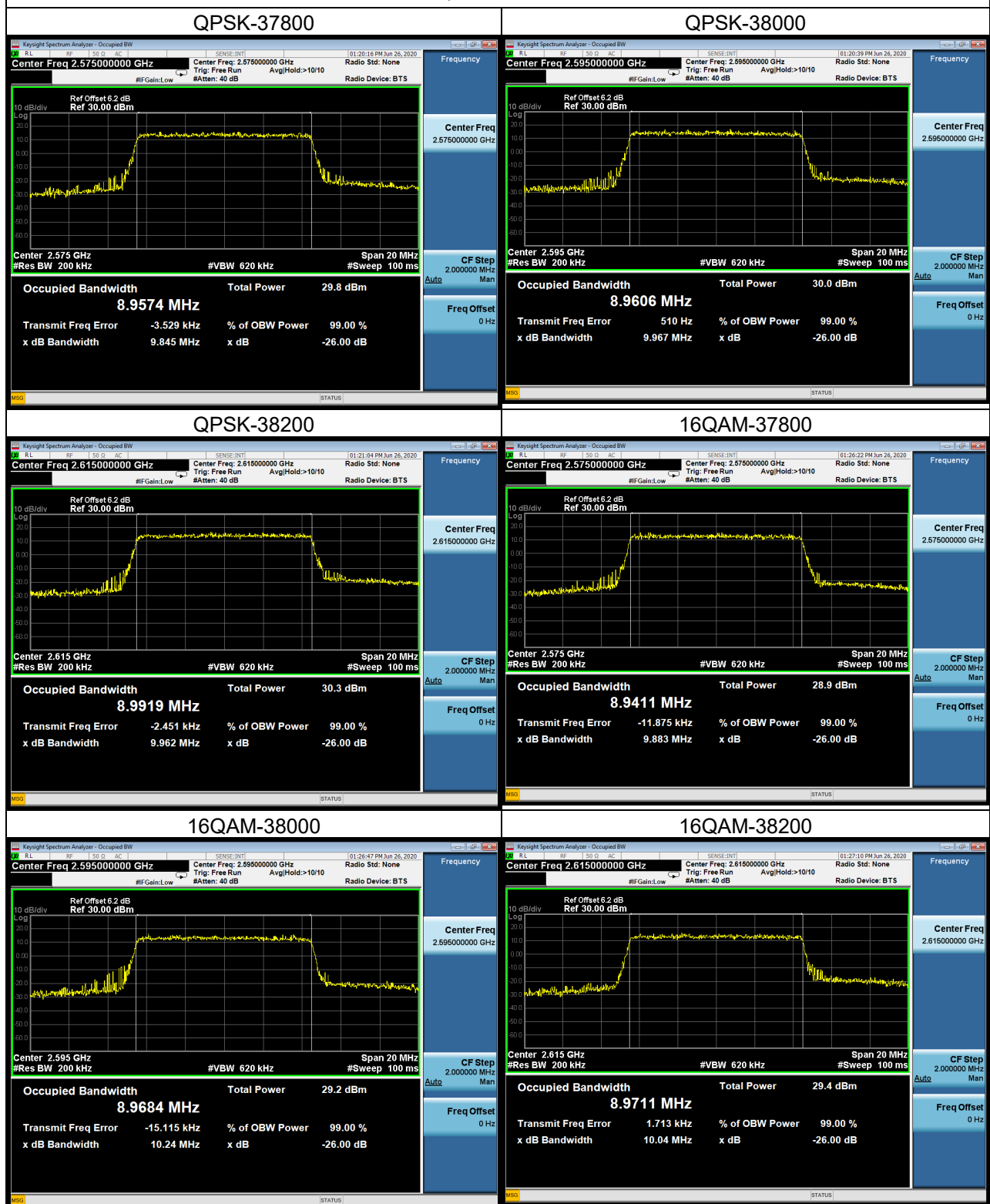


Spectrum Plot



LTE Band 38_10M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37800	2575	8.9574	37800	2575	9.845
38000	2595	8.9606	38000	2595	9.967
38200	2615	8.9919	38200	2615	9.962
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37800	2575	8.9411	37800	2575	9.883
38000	2595	8.9684	38000	2595	10.24
38200	2615	8.9711	38200	2615	10.04
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37800	2575	8.9662	37800	2575	9.876
38000	2595	8.9617	38000	2595	9.987
38200	2615	8.9795	38200	2615	10.25

Spectrum Plot

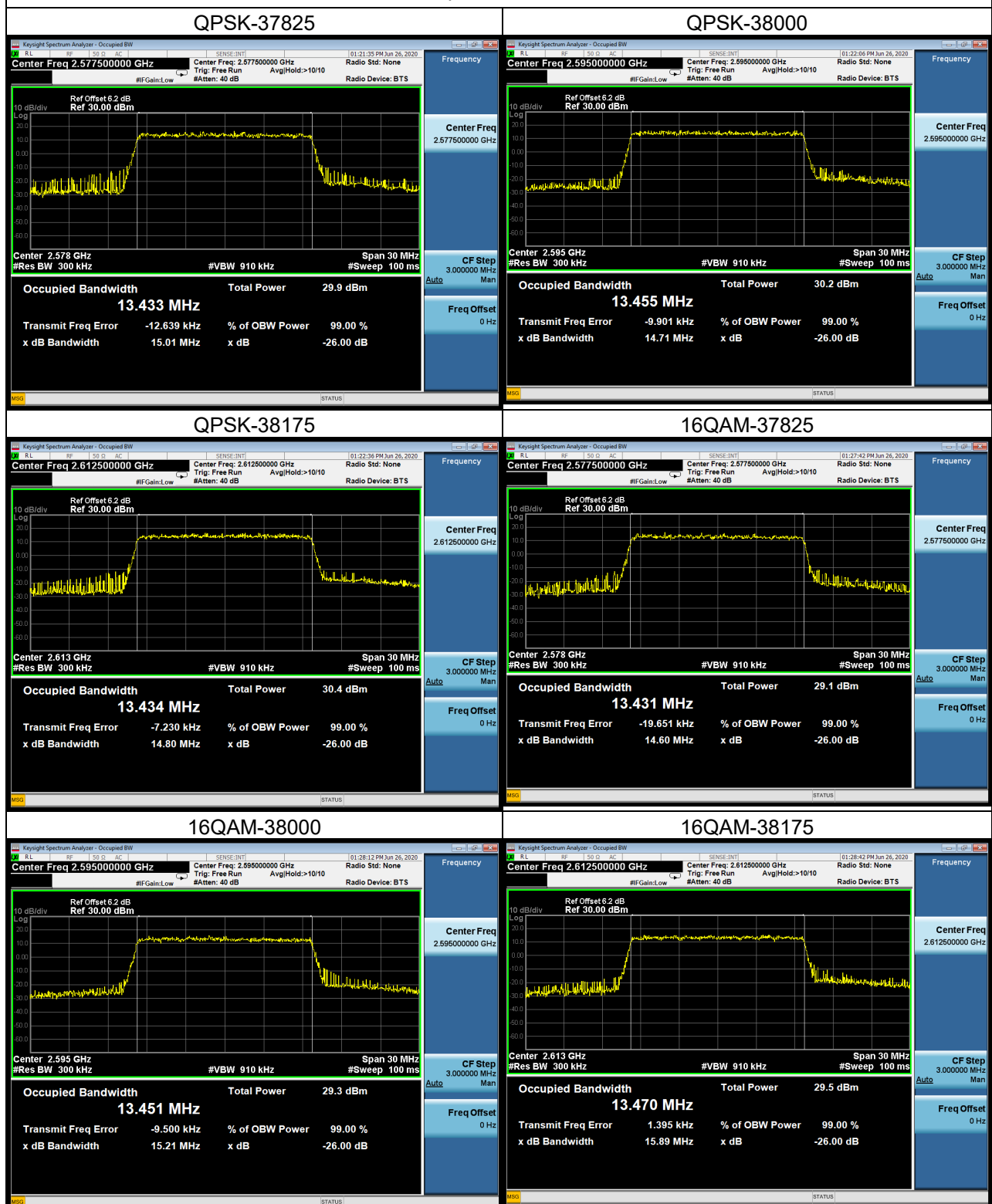


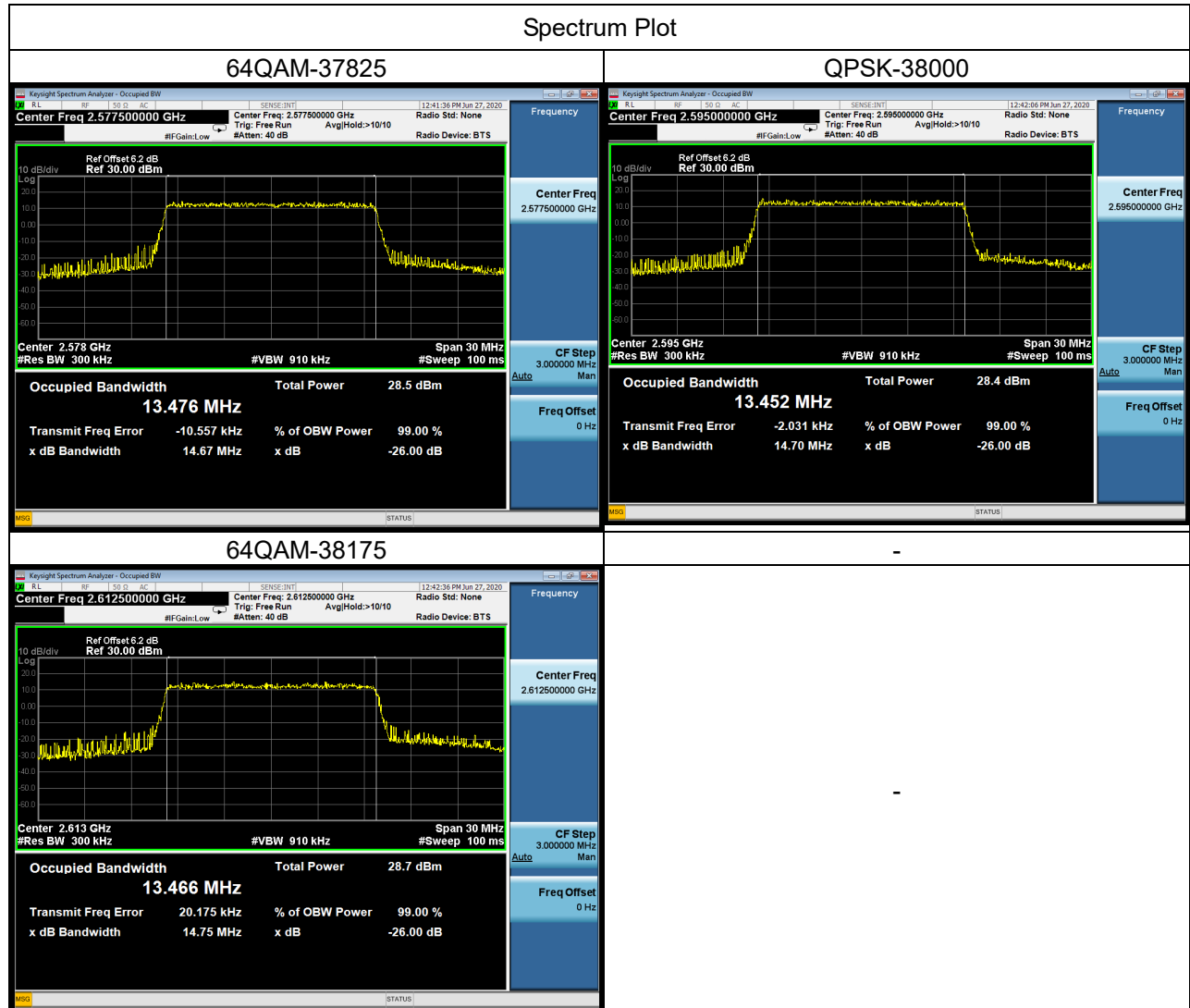
Spectrum Plot



LTE Band 38_15M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37825	2577.5	13.433	37825	2577.5	15.01
38000	2595	13.455	38000	2595	14.71
38175	2612.5	13.434	38175	2612.5	14.80
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37825	2577.5	13.431	37825	2577.5	14.60
38000	2595	13.451	38000	2595	15.21
38175	2612.5	13.470	38175	2612.5	15.89
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37825	2577.5	13.476	37825	2577.5	14.67
38000	2595	13.452	38000	2595	14.70
38175	2612.5	13.466	38175	2612.5	14.75

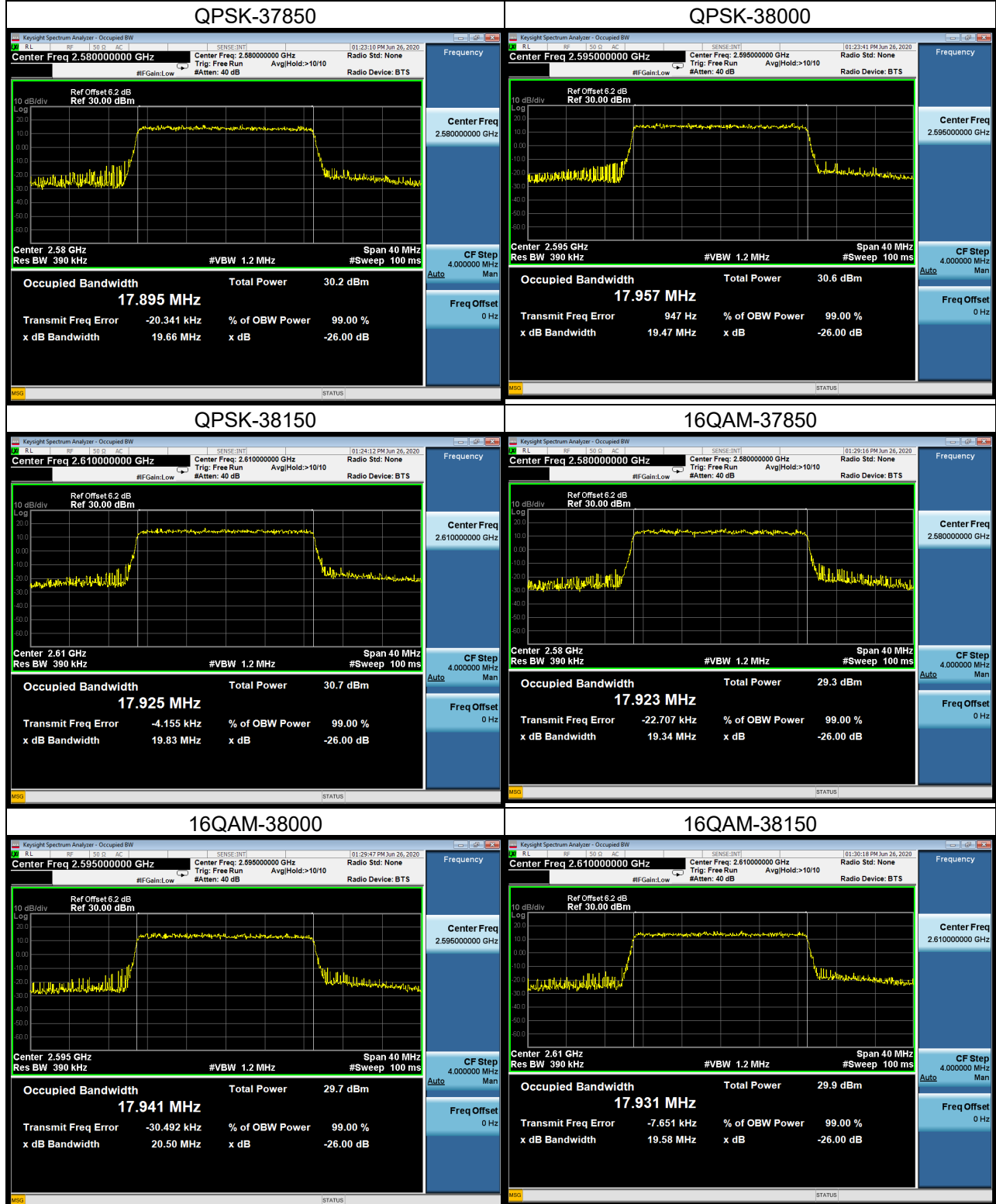
Spectrum Plot





LTE Band 38_20M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37850	2580	17.895	37850	2580	19.66
38000	2595	17.957	38000	2595	19.47
38150	2610	17.925	38150	2610	19.83
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37850	2580	17.923	37850	2580	19.34
38000	2595	17.941	38000	2595	20.50
38150	2610	17.931	38150	2610	19.58
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
37850	2580	17.860	37850	2580	19.92
38000	2595	17.934	38000	2595	19.71
38150	2610	17.935	38150	2610	19.40

Spectrum Plot

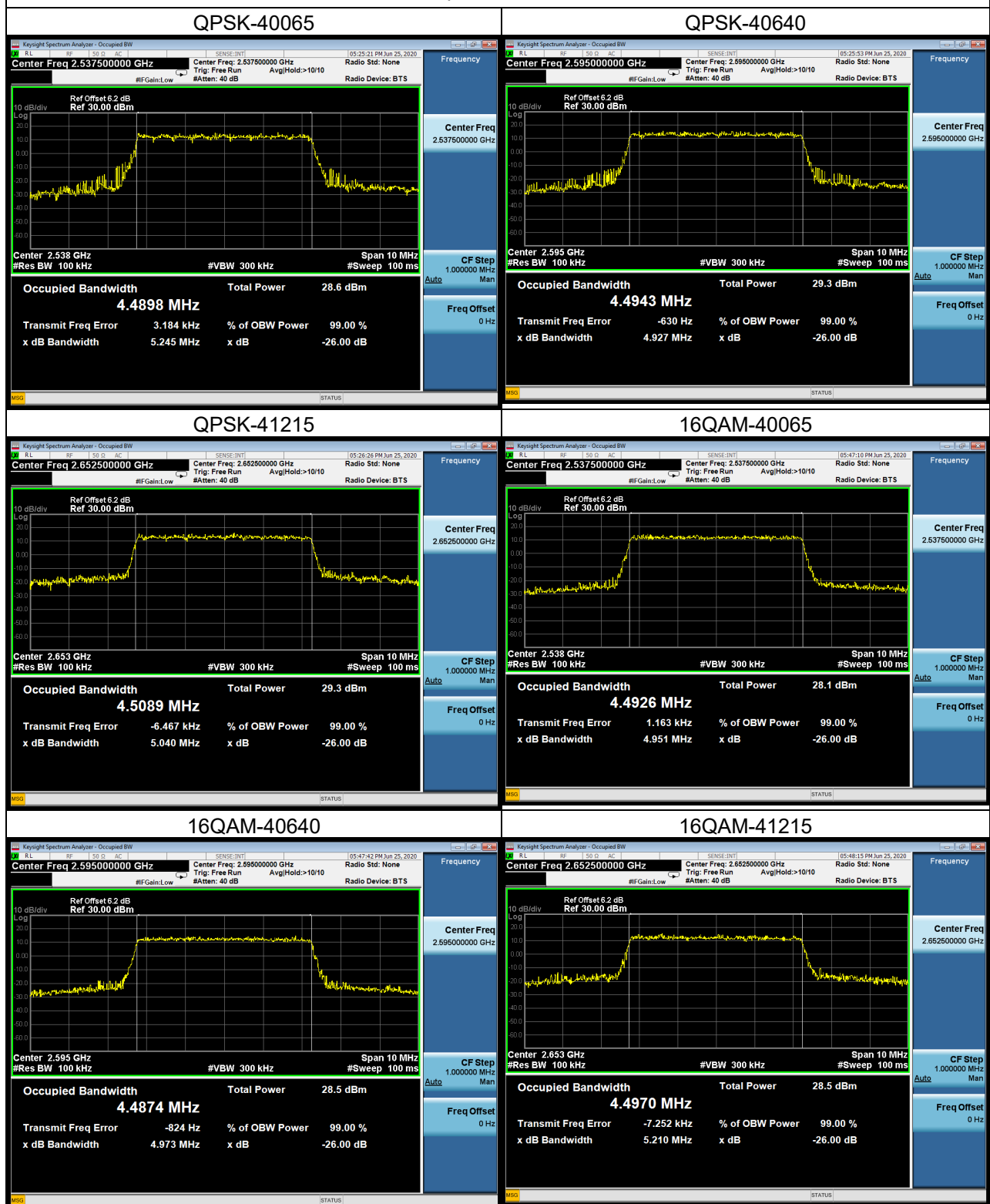


Spectrum Plot



LTE Band 41_5M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40065	2537.5	4.4898	40065	2537.5	5.245
40640	2595	4.4943	40640	2595	4.927
41215	2652.5	4.5089	41215	2652.5	5.040
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40065	2537.5	4.4926	40065	2537.5	4.951
40640	2595	4.4874	40640	2595	4.973
41215	2652.5	4.4970	41215	2652.5	5.210
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40065	2537.5	4.4982	40065	2537.5	4.982
40640	2595	4.5141	40640	2595	4.979
41215	2652.5	4.4971	41215	2652.5	5.292

Spectrum Plot

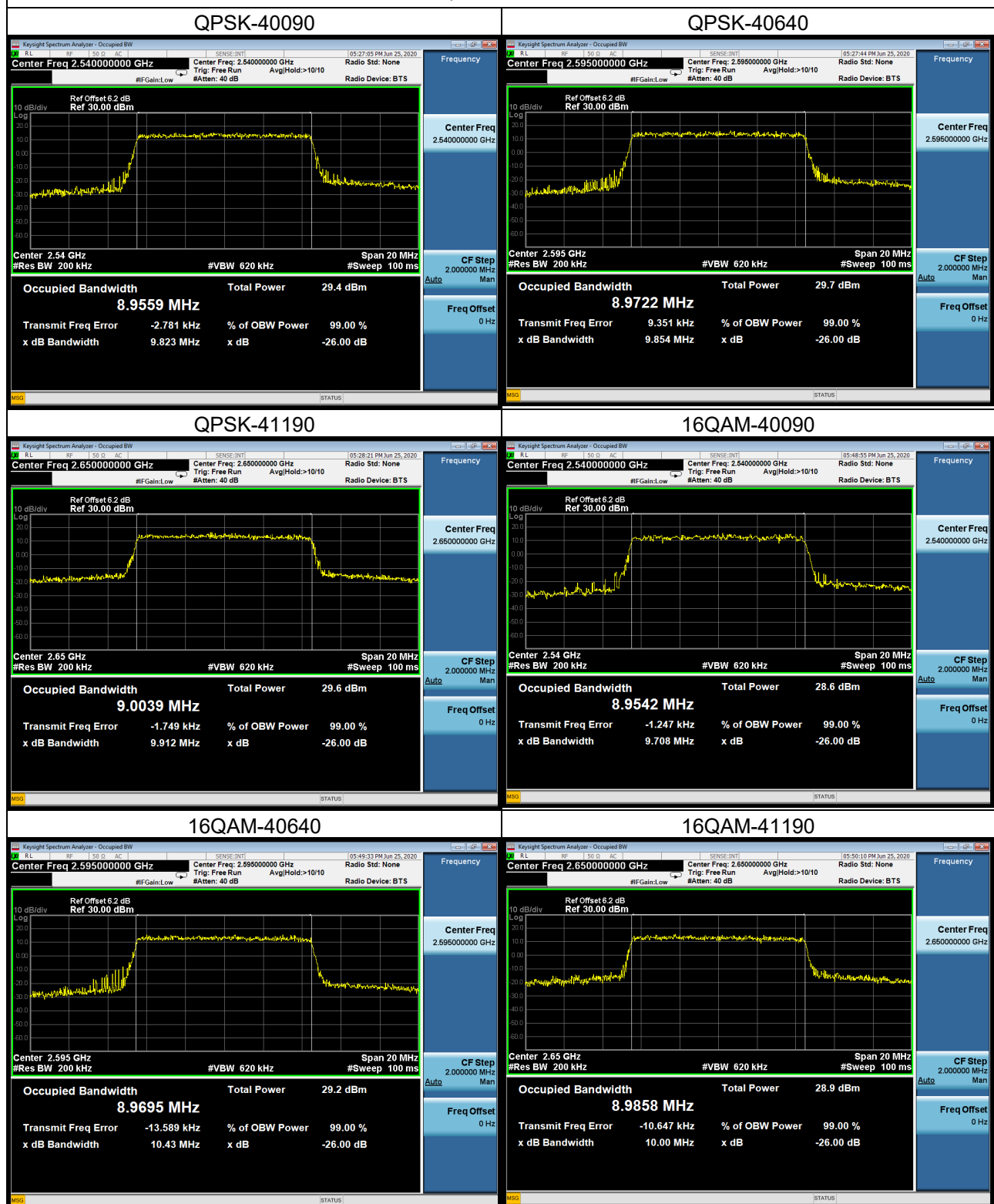


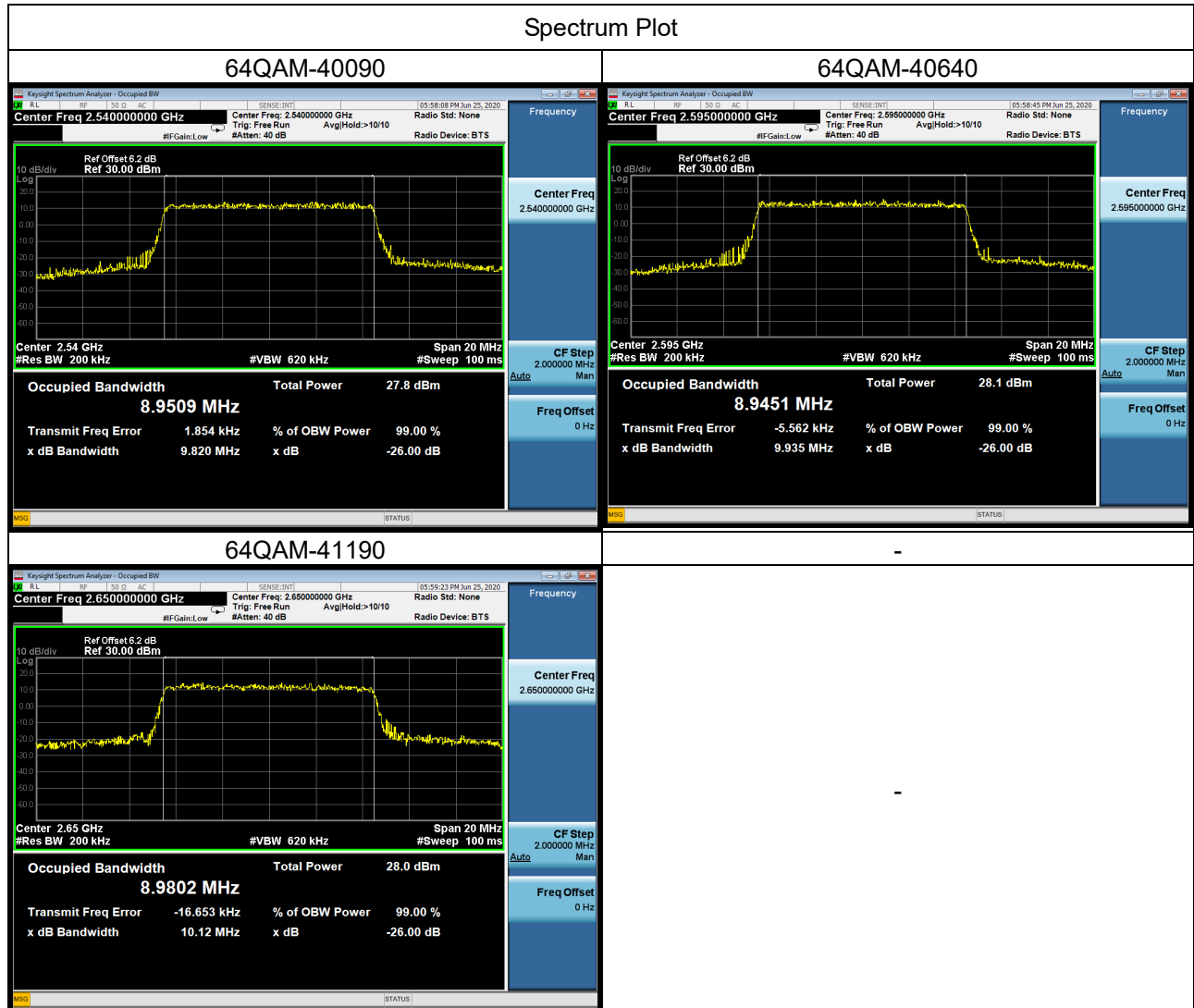
Spectrum Plot



LTE Band 41_10M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40090	2540	8.9559	40090	2540	9.823
40640	2595	8.9722	40640	2595	9.854
41190	2650	9.0039	41190	2650	9.912
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40090	2540	8.9542	40090	2540	9.708
40640	2595	8.9695	40640	2595	10.43
41190	2650	8.9858	41190	2650	10.00
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40090	2540	8.9509	40090	2540	9.820
40640	2595	8.9451	40640	2595	8.935
41190	2650	8.9802	41190	2650	10.12

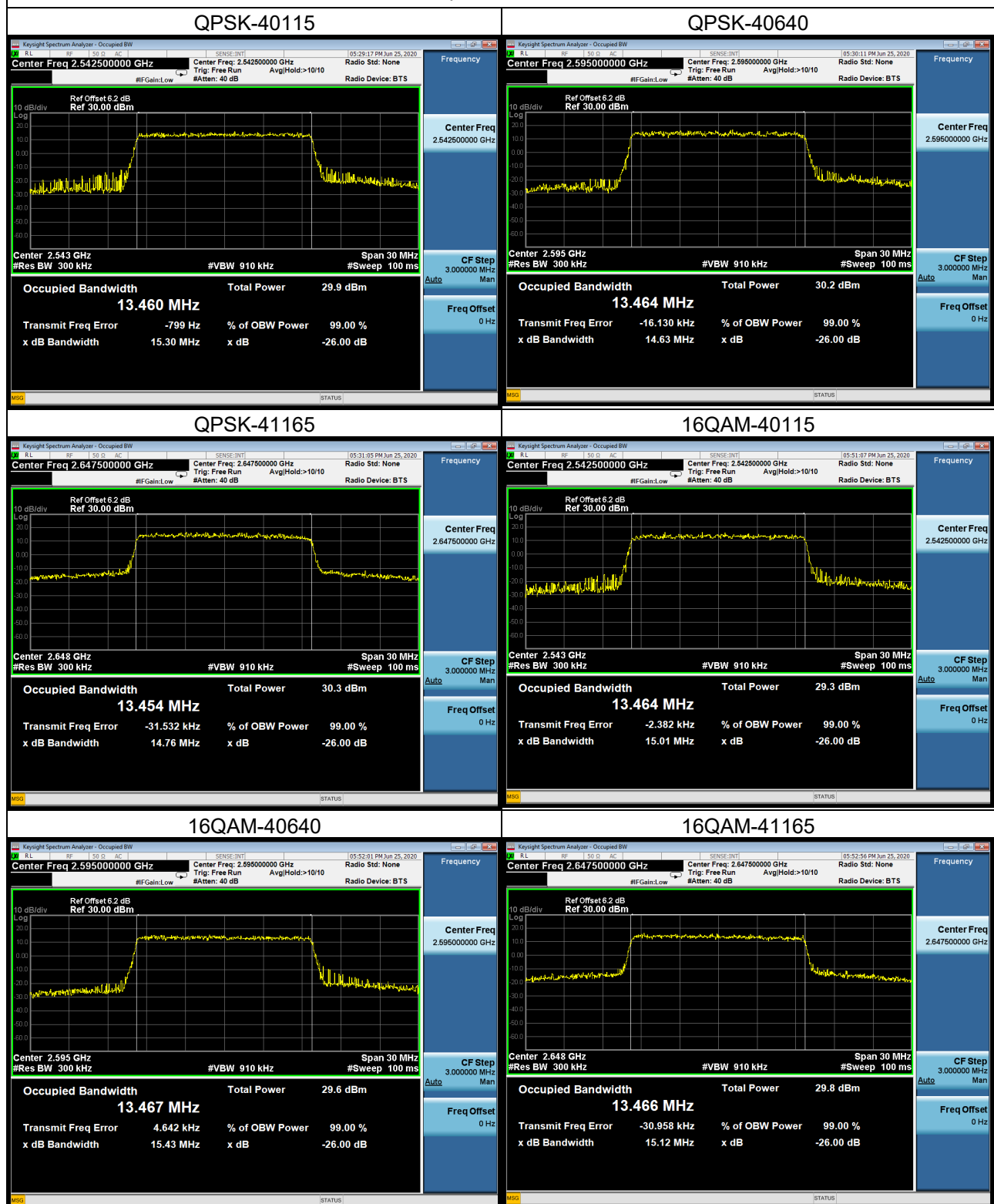
Spectrum Plot



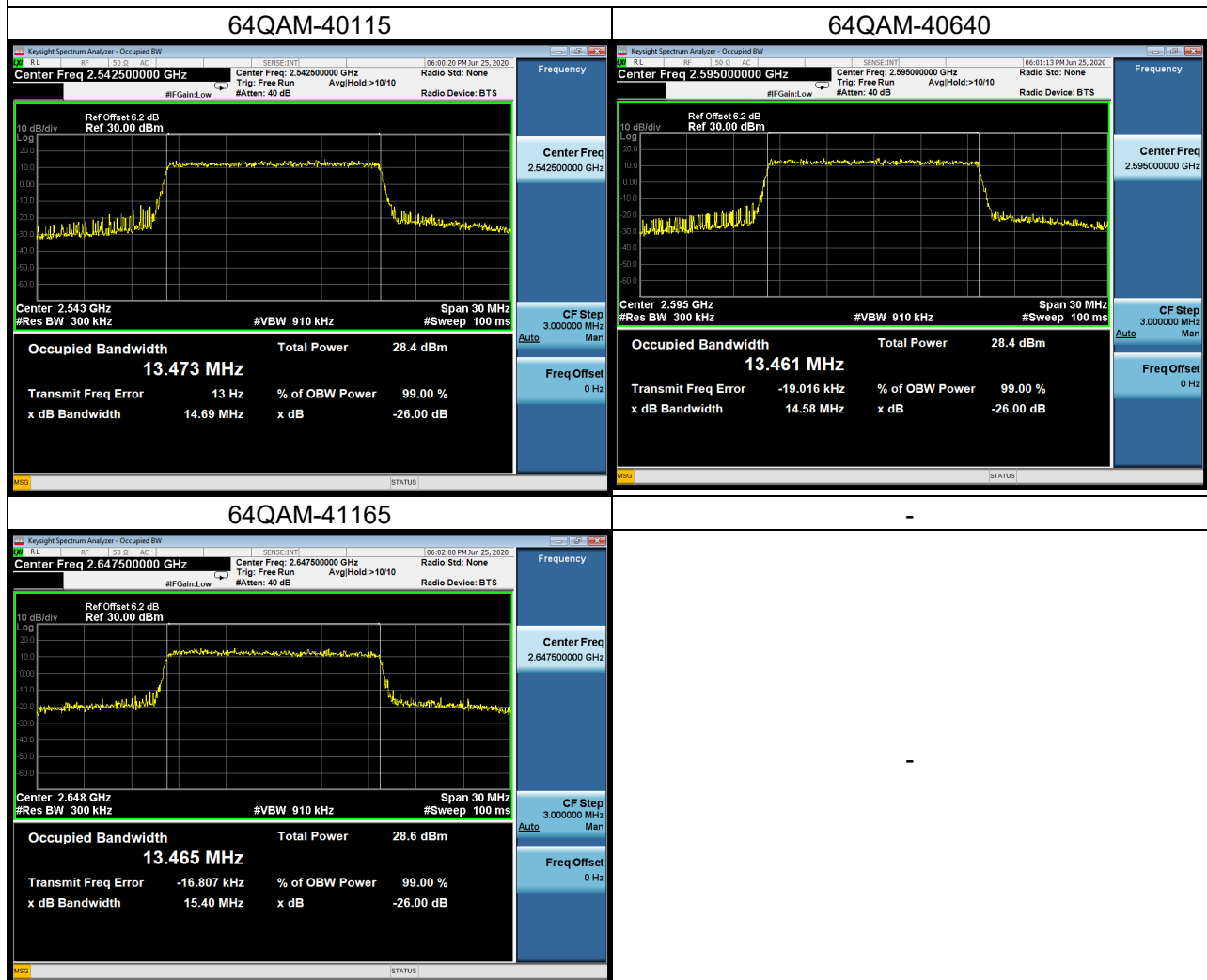


LTE Band 41_15M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40115	2542.5	13.460	40115	2542.5	15.30
40640	2595	13.464	40640	2595	14.63
41165	2647.5	13.454	41165	2647.5	14.76
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40115	2542.5	13.464	40115	2542.5	15.01
40640	2595	13.467	40640	2595	15.43
41165	2647.5	13.466	41165	2647.5	15.12
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40115	2542.5	13.473	40115	2542.5	14.69
40640	2595	13.461	40640	2595	14.58
41165	2647.5	13.465	41165	2647.5	15.40

Spectrum Plot

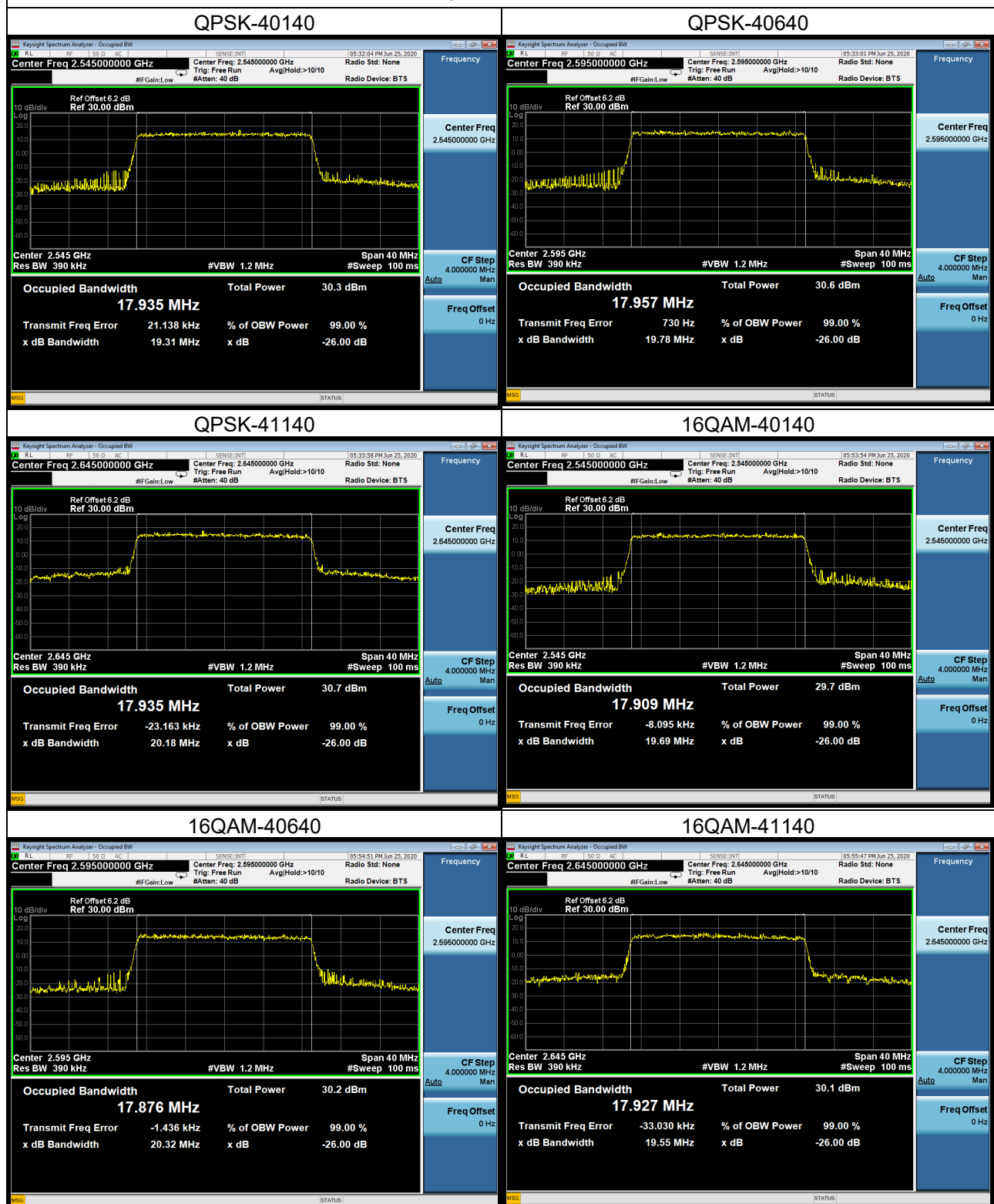


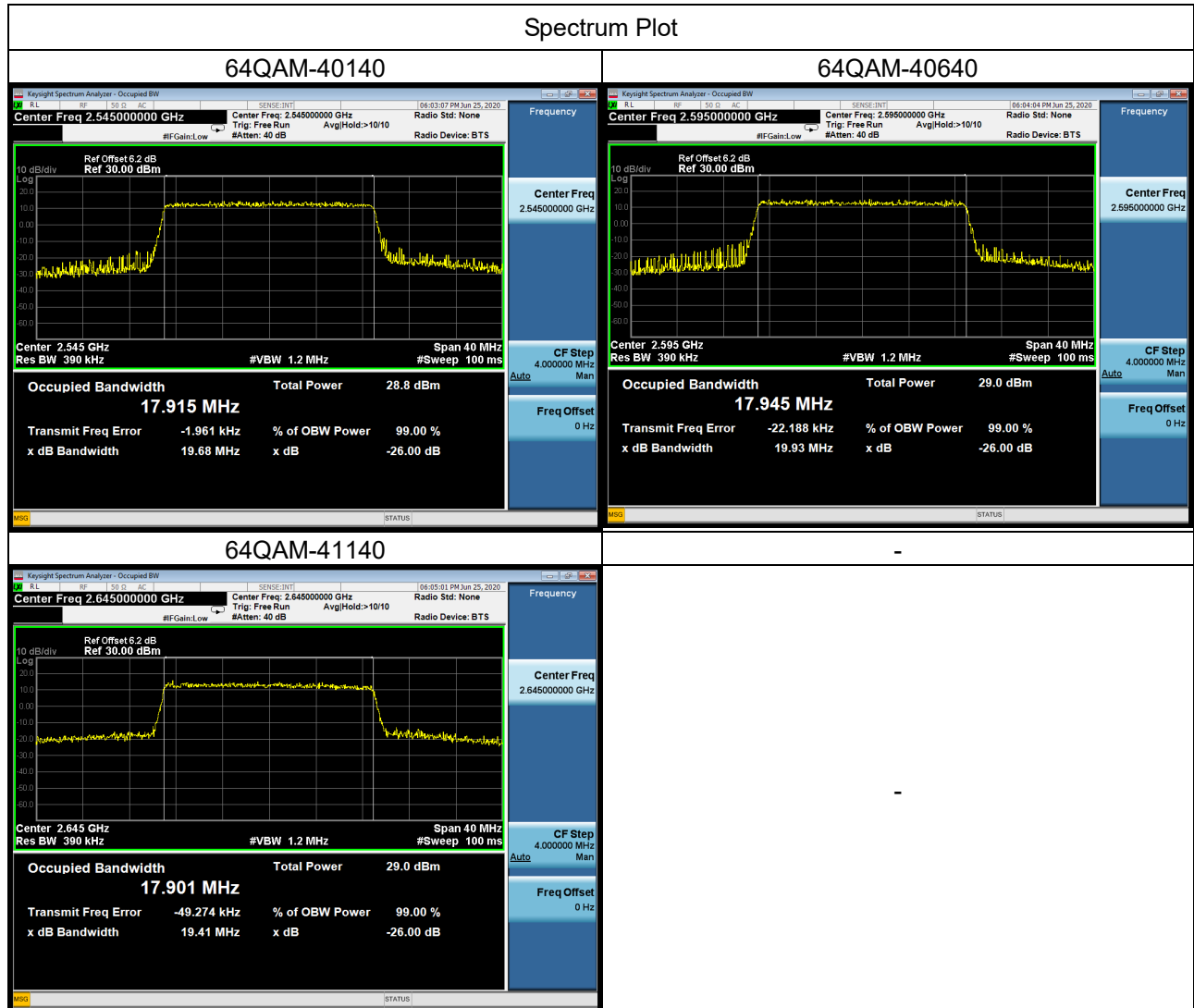
Spectrum Plot



LTE Band 41_20M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40140	2545	17.935	40140	2545	19.31
40640	2595	17.957	40640	2595	19.78
41140	2645	17.935	41140	2645	20.18
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40140	2545	17.909	40140	2545	19.69
40640	2595	17.876	40640	2595	20.32
41140	2645	17.927	41140	2645	19.55
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
40140	2545	17.915	40140	2545	19.68
40640	2595	17.945	40640	2595	19.93
41140	2645	17.901	41140	2645	19.41

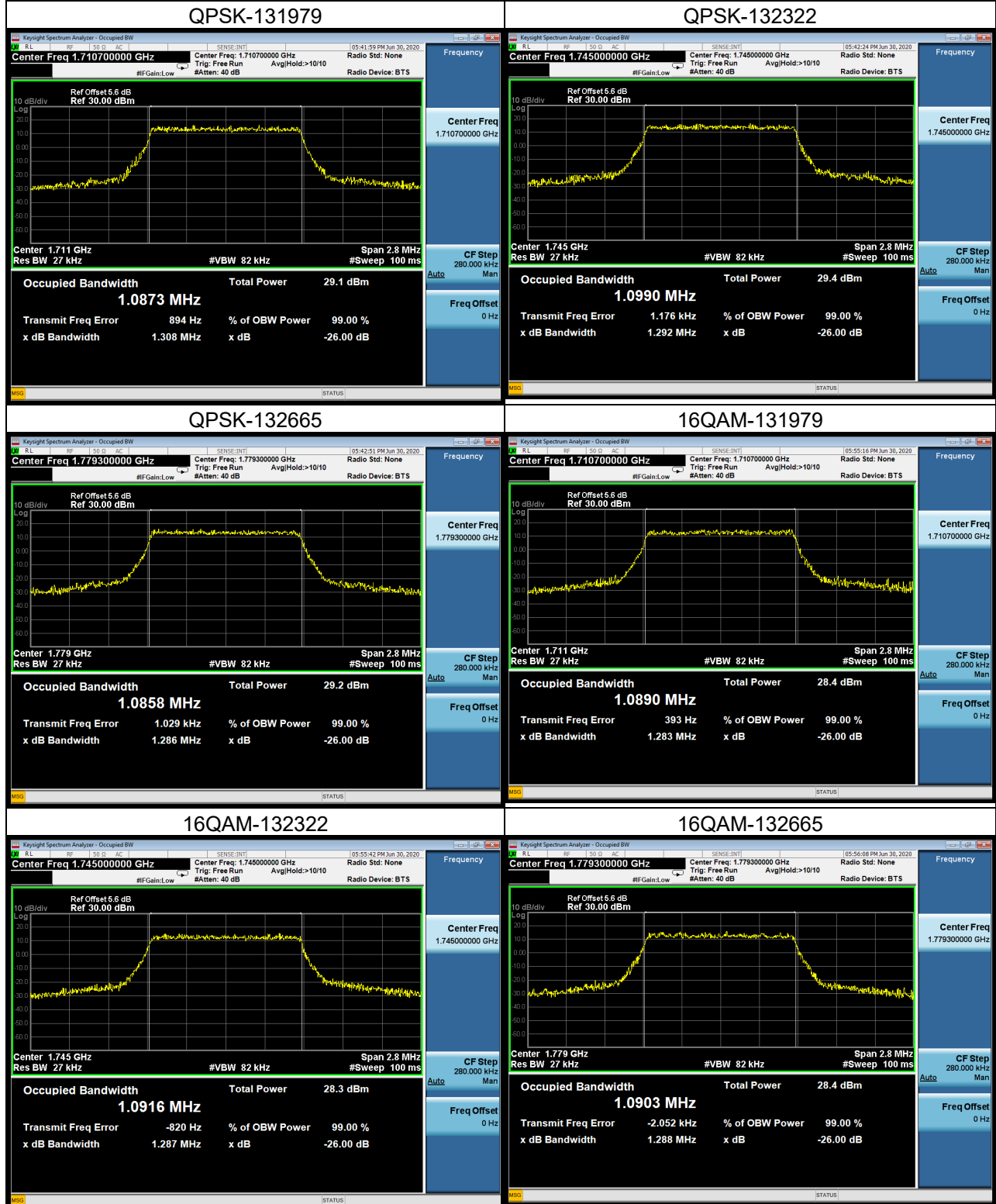
Spectrum Plot



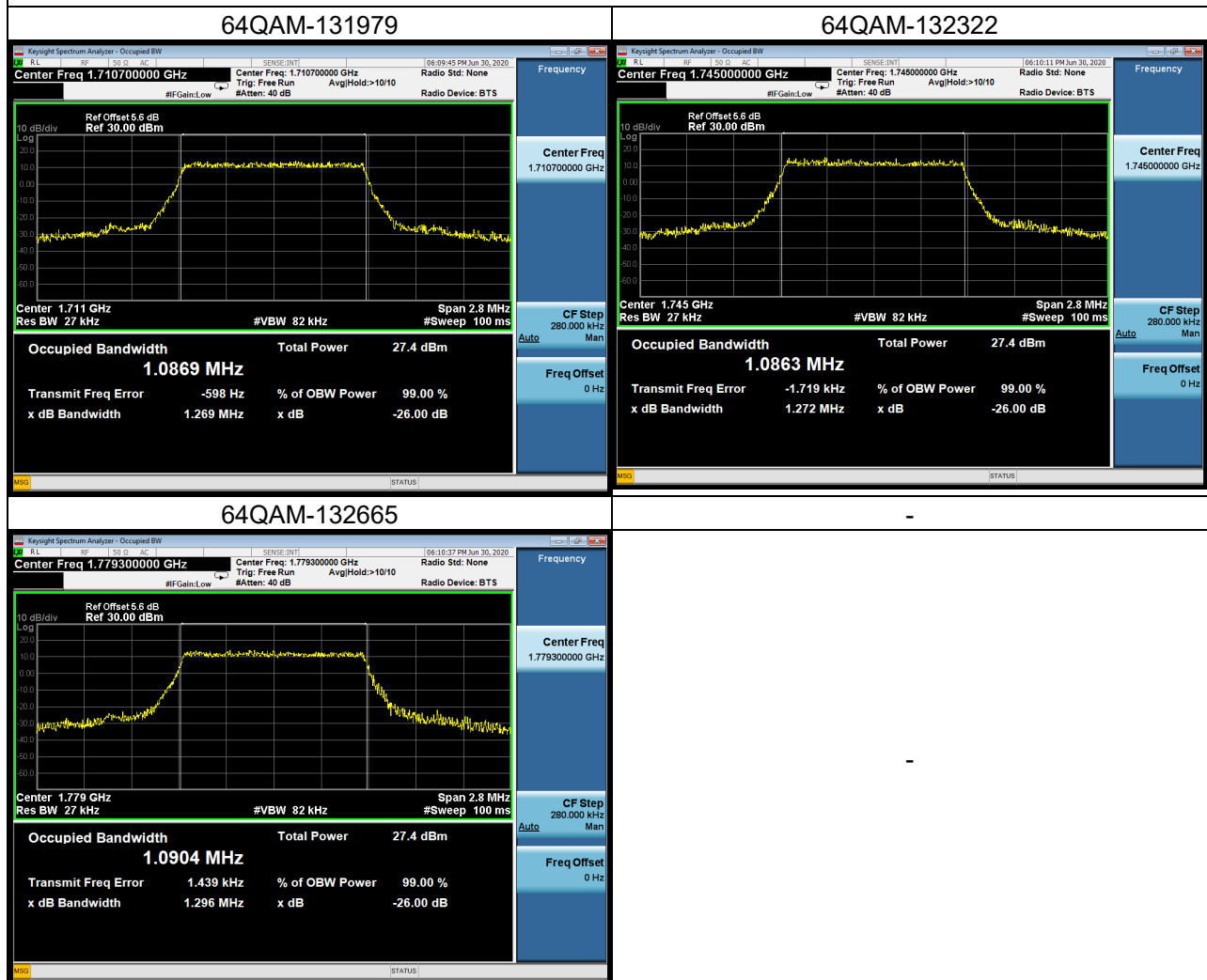


LTE Band 66_1.4M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131979	1710.7	1.0873	131979	1710.7	1.308
132322	1745	1.0990	132322	1745	1.292
132665	1779.3	1.0858	132665	1779.3	1.286
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131979	1710.7	1.0890	131979	1710.7	1.283
132322	1745	1.0916	132322	1745	1.287
132665	1779.3	1.0903	132665	1779.3	1.288
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131979	1710.7	1.0869	131979	1710.7	1.269
132322	1745	1.0863	132322	1745	1.272
132665	1779.3	1.0904	132665	1779.3	1.296

Spectrum Plot

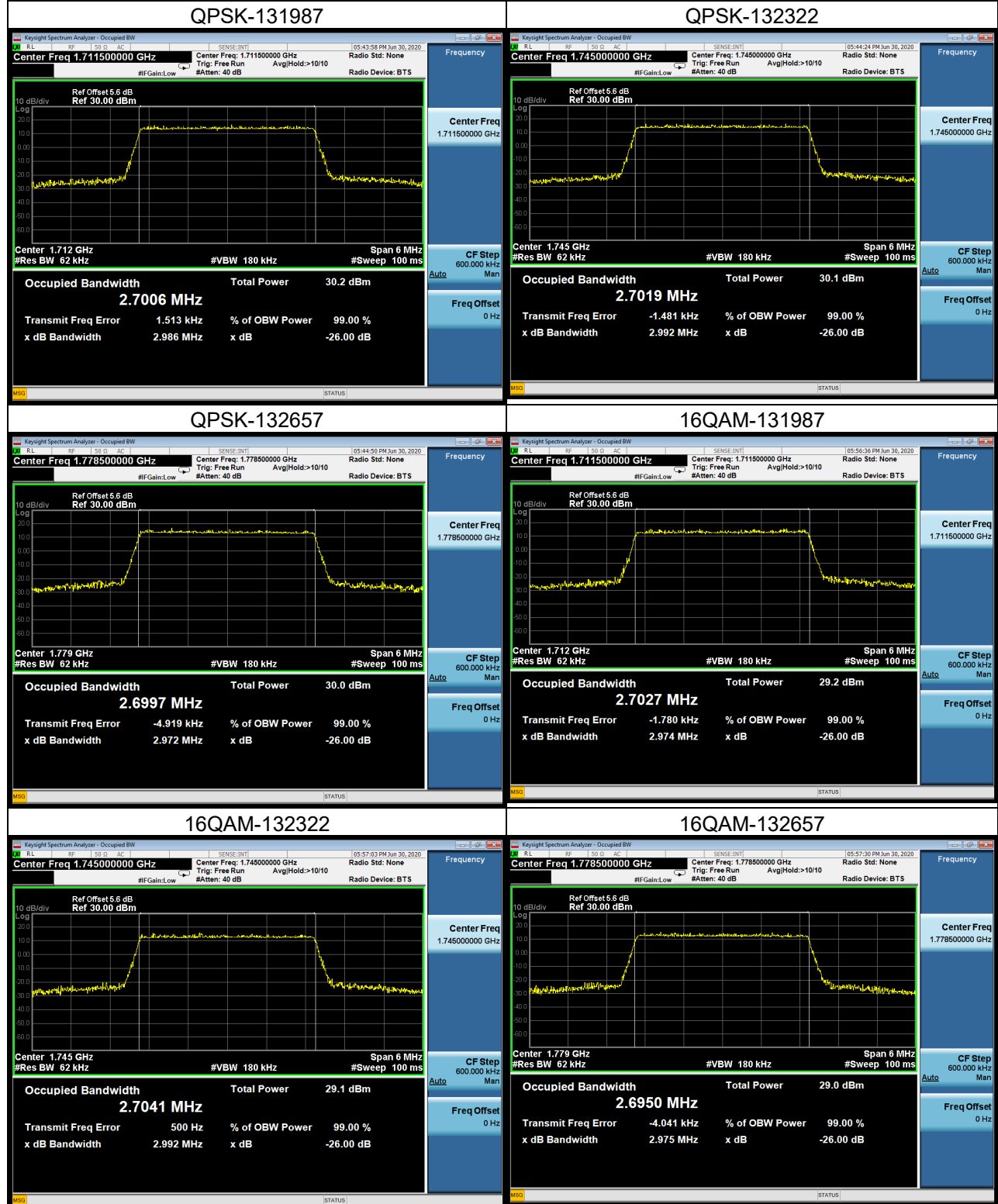


Spectrum Plot

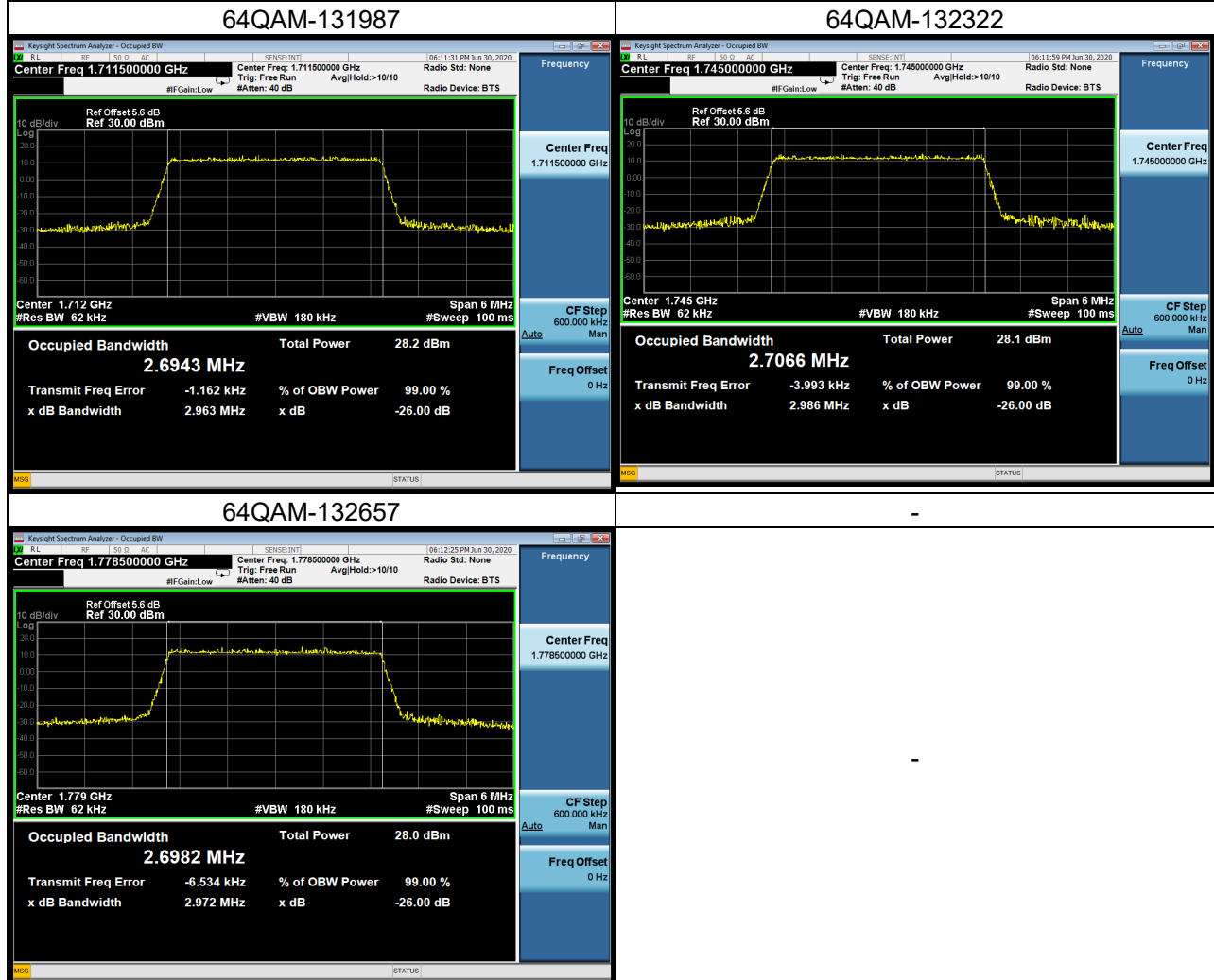


LTE Band 66_3M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131987	1711.5	2.7006	131987	1711.5	2.986
132322	1745	2.7019	132322	1745	2.992
132657	1778.5	2.6997	132657	1778.5	2.972
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131987	1711.5	2.7027	131987	1711.5	2.974
132322	1745	2.7041	132322	1745	2.992
132657	1778.5	2.6950	132657	1778.5	2.975
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131987	1711.5	2.6943	131987	1711.5	2.963
132322	1745	2.7066	132322	1745	2.986
132657	1778.5	2.6982	132657	1778.5	2.972

Spectrum Plot

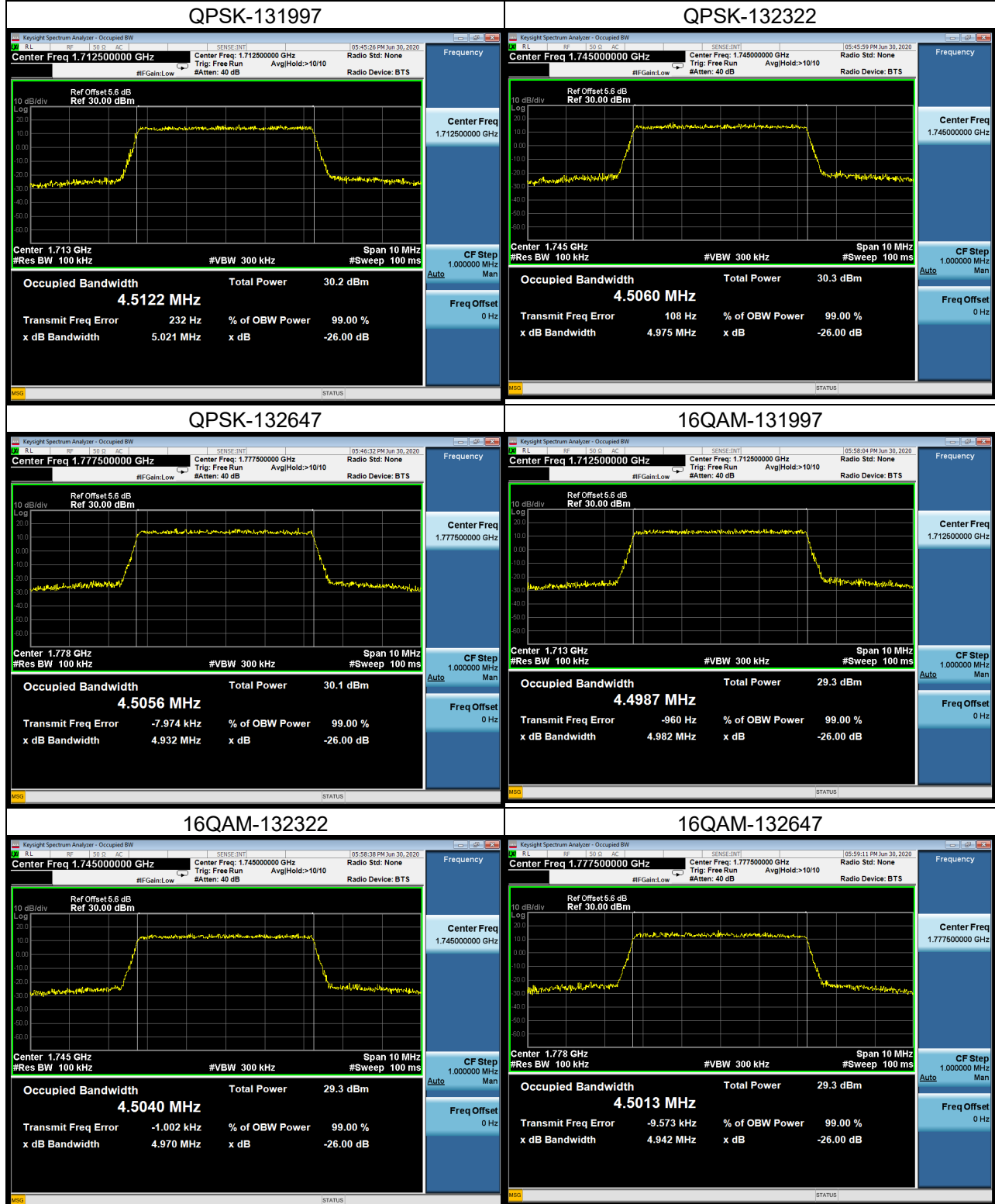


Spectrum Plot



LTE Band 66_5M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131997	1712.5	4.5122	131997	1712.5	5.021
132322	1745	4.5060	132322	1745	4.975
132647	1777.5	4.5056	132647	1777.5	4.932
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131997	1712.5	4.4987	131997	1712.5	4.982
132322	1745	4.5040	132322	1745	4.970
132647	1777.5	4.5013	132647	1777.5	4.942
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
131997	1712.5	4.5029	131997	1712.5	4.996
132322	1745	4.5012	132322	1745	4.975
132647	1777.5	4.5013	132647	1777.5	4.993

Spectrum Plot



Spectrum Plot



LTE Band 66_10M					
QPSK					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
132022	1715	8.9721	132022	1715	9.924
132322	1745	8.9683	132322	1745	9.932
132622	1775	8.9665	132622	1775	9.869
16QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
132022	1715	8.9647	132022	1715	9.854
132322	1745	8.9663	132322	1745	9.843
132622	1775	8.9630	132622	1775	9.796
64QAM					
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	Channel	Frequency (MHz)	26dB Bandwidth (MHz)
132022	1715	8.9721	132022	1715	9.853
132322	1745	8.9617	132322	1745	9.824
132622	1775	8.9525	132622	1775	9.805