

A.5 LTE BAND 17

Peak to Average Ratio

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
17	10.0	23780	709.0	QPSK	50@0	5.57	13	PASS
17	10.0	23780	709.0	16QAM	50@0	6.35	13	PASS
17	10.0	23790	710.0	QPSK	50@0	5.49	13	PASS
17	10.0	23790	710.0	16QAM	50@0	6.35	13	PASS
17	10.0	23800	711.0	QPSK	50@0	5.50	13	PASS
17	10.0	23800	711.0	16QAM	50@0	6.26	13	PASS
17	5.0	23755	706.5	QPSK	25@0	5.69	13	PASS
17	5.0	23755	706.5	16QAM	25@0	6.35	13	PASS
17	5.0	23790	710.0	QPSK	25@0	5.52	13	PASS
17	5.0	23790	710.0	16QAM	25@0	6.23	13	PASS
17	5.0	23825	713.5	QPSK	25@0	5.50	13	PASS
17	5.0	23825	713.5	16QAM	25@0	6.22	13	PASS
17	10.0	23780	709.0	64QAM	50@0	6.36	13	PASS
17	10.0	23790	710.0	64QAM	50@0	6.35	13	PASS
17	10.0	23800	711.0	64QAM	50@0	6.29	13	PASS
17	5.0	23755	706.5	64QAM	25@0	6.39	13	PASS
17	5.0	23790	710.0	64QAM	25@0	6.30	13	PASS
17	5.0	23825	713.5	64QAM	25@0	6.19	13	PASS

Test Graphs

B17 10M QPSK 50@0 CH 23780



B17 10M 16QAM 50@0 CH 23780



B17 10M QPSK 50@0 CH 23790



B17 10M 16QAM 50@0 CH 23790



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B17_10M QPSK 50@0 CH 23800



B17_10M 16QAM 50@0 CH 23800



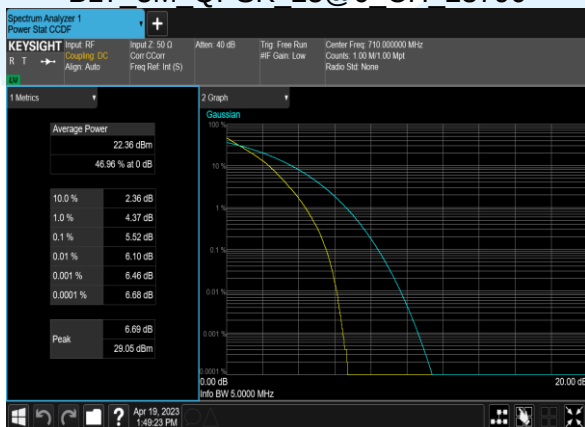
B17_5M QPSK 25@0 CH 23755



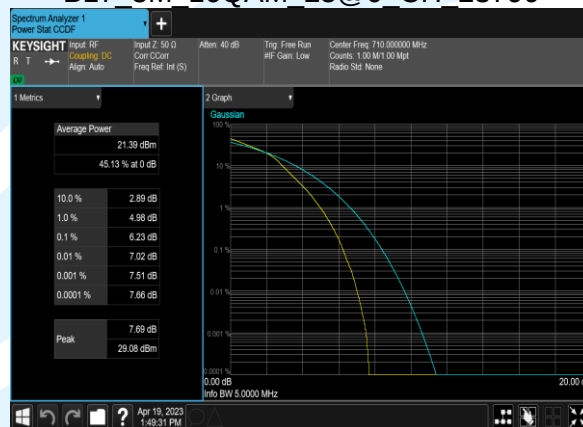
B17_5M 16QAM 25@0 CH 23755



B17_5M QPSK 25@0 CH 23790



B17_5M 16QAM 25@0 CH 23790



B17_5M QPSK 25@0 CH 23825



B17_5M 16QAM 25@0 CH 23825



B17 10M 64QAM 50@0 CH 23780



B17 10M 64QAM 50@0 CH 23790



B17 10M 64QAM 50@0 CH 23800



B17 5M 64QAM 25@0 CH 23755



B17 5M 64QAM 25@0 CH 23790



B17 5M 64QAM 25@0 CH 23825



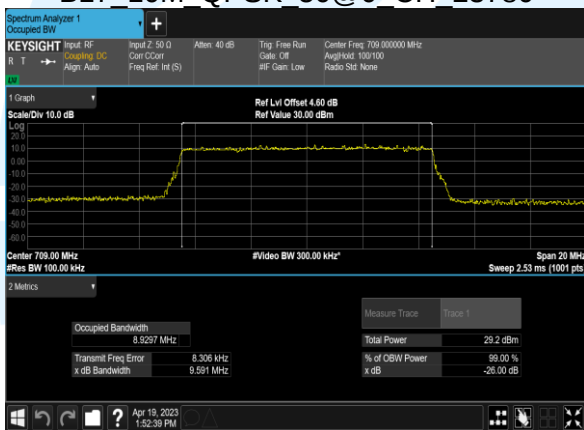
Occupied Bandwidth

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
17	10.0	23780	709.0	QPSK	50@0	8.9297	9.591
17	10.0	23780	709.0	16QAM	50@0	8.9226	9.625
17	10.0	23790	710.0	QPSK	50@0	8.9291	9.587
17	10.0	23790	710.0	16QAM	50@0	8.9343	9.665
17	10.0	23800	711.0	QPSK	50@0	8.9131	9.563
17	10.0	23800	711.0	16QAM	50@0	8.9282	9.657
17	5.0	23755	706.5	QPSK	25@0	4.4670	4.882
17	5.0	23755	706.5	16QAM	25@0	4.4648	4.847
17	5.0	23790	710.0	QPSK	25@0	4.4609	4.862
17	5.0	23790	710.0	16QAM	25@0	4.4712	4.872
17	5.0	23825	713.5	QPSK	25@0	4.4701	4.846
17	5.0	23825	713.5	16QAM	25@0	4.4609	4.877

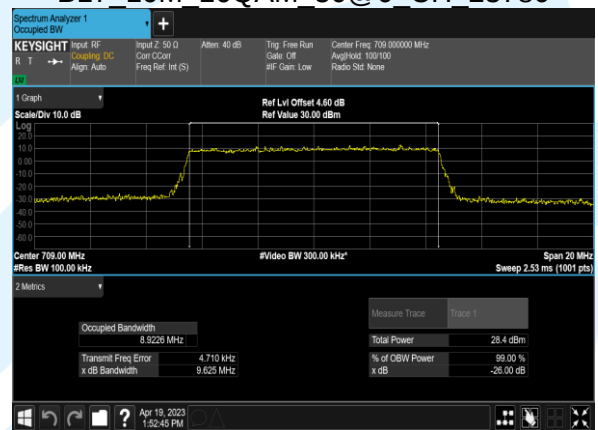
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
17	10.0	23780	709.0	64QAM	50@0	8.9302	9.683
17	10.0	23790	710.0	64QAM	50@0	8.9221	9.624
17	10.0	23800	711.0	64QAM	50@0	8.9294	9.587
17	5.0	23755	706.5	64QAM	25@0	4.4618	4.900
17	5.0	23790	710.0	64QAM	25@0	4.4529	4.899
17	5.0	23825	713.5	64QAM	25@0	4.4689	4.896

Test Graphs

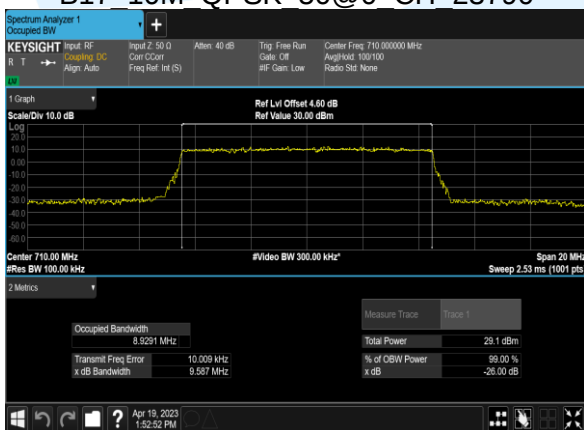
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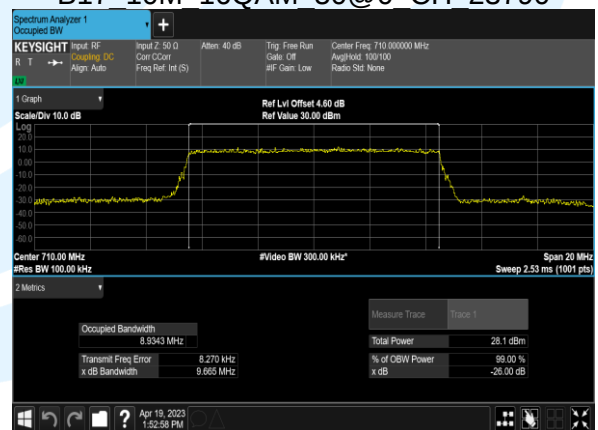
B17_10M_16QAM_50@0_CH_23780



B17_10M_QPSK_50@0_CH_23790



B17_10M_16QAM_50@0_CH_23790



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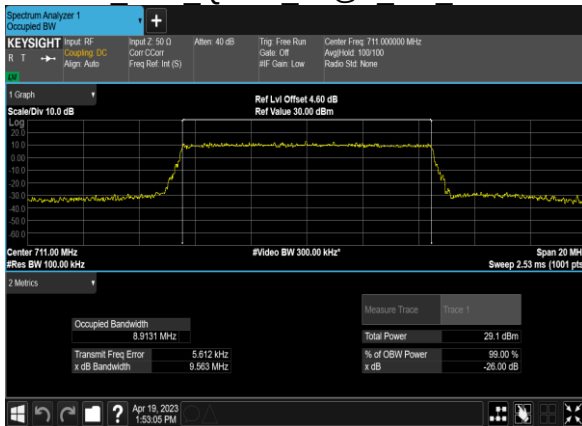
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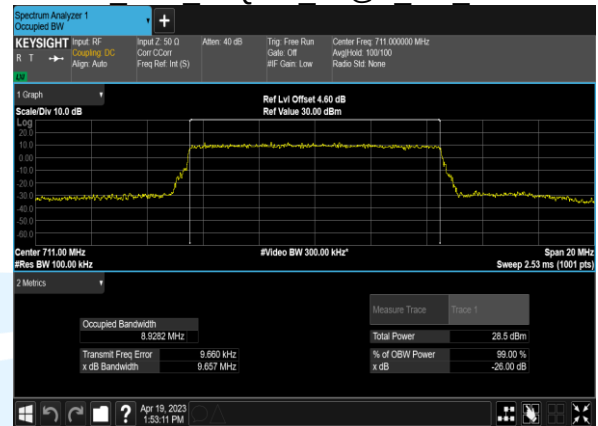
<http://www.uttlab.com>

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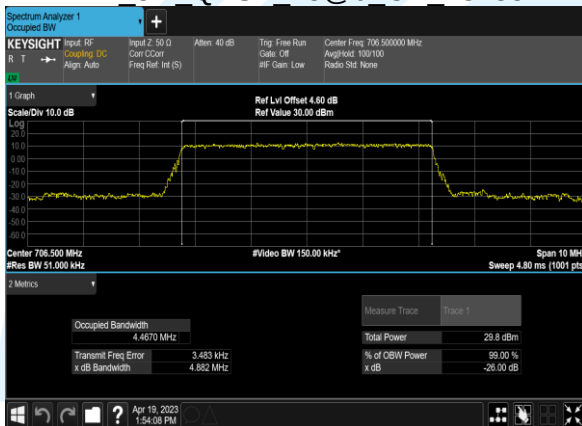
B17_10M QPSK 50@0 CH 23800



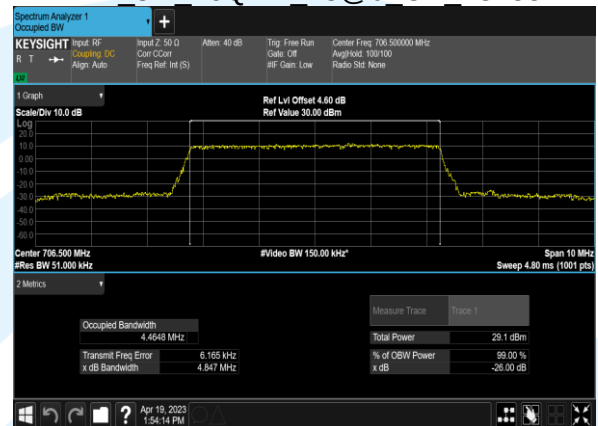
B17_10M 16QAM 50@0 CH 23800



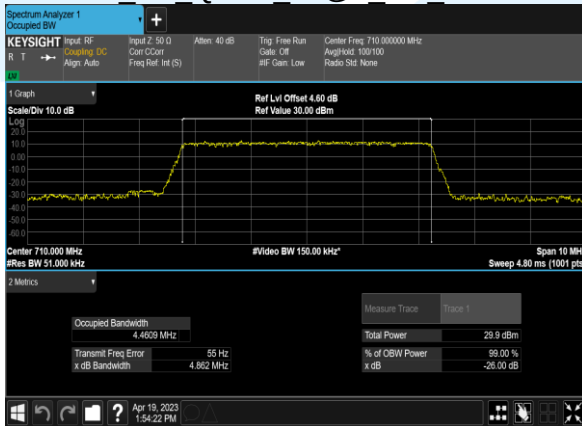
B17_5M QPSK 25@0 CH 23755



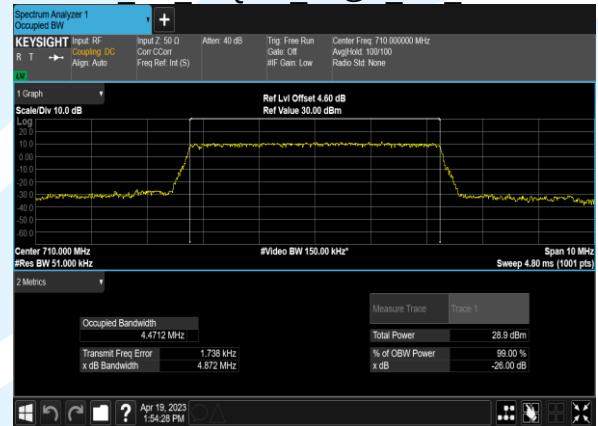
B17_5M 16QAM 25@0 CH 23755



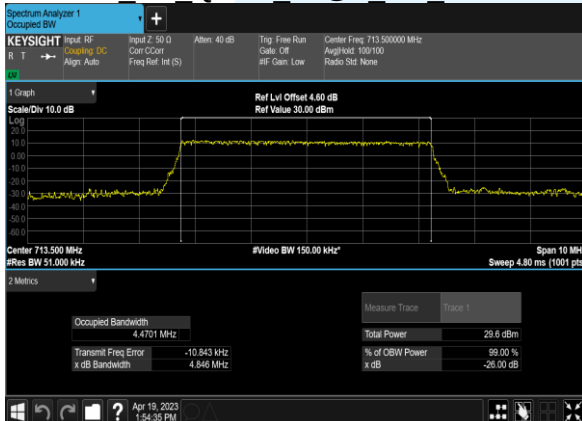
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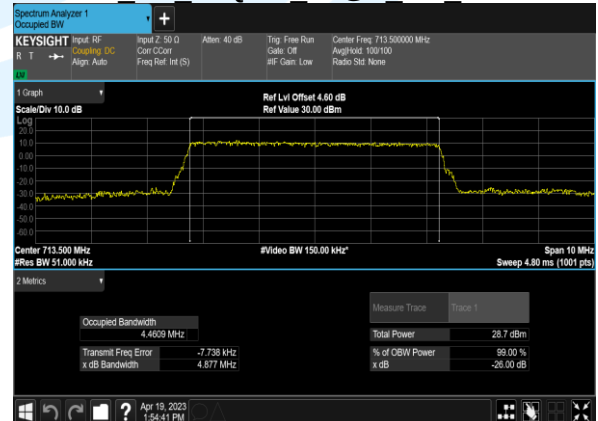
B17_5M 16QAM 25@0 CH 23790



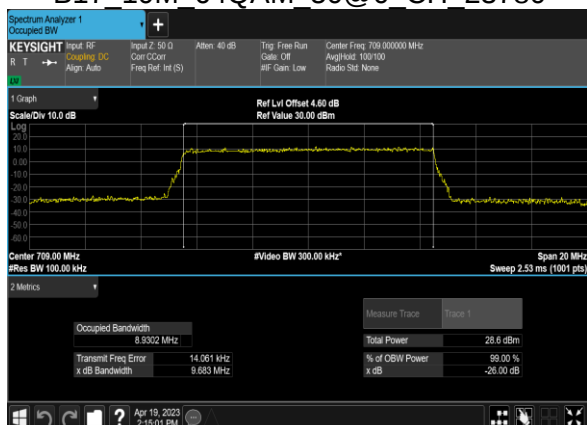
B17_5M QPSK 25@0 CH 23825



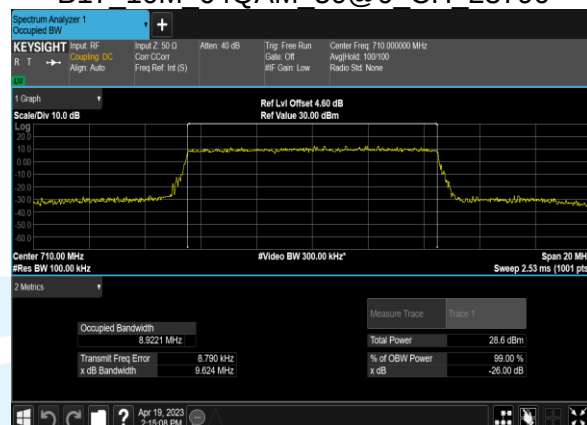
B17_5M 16QAM 25@0 CH 23825



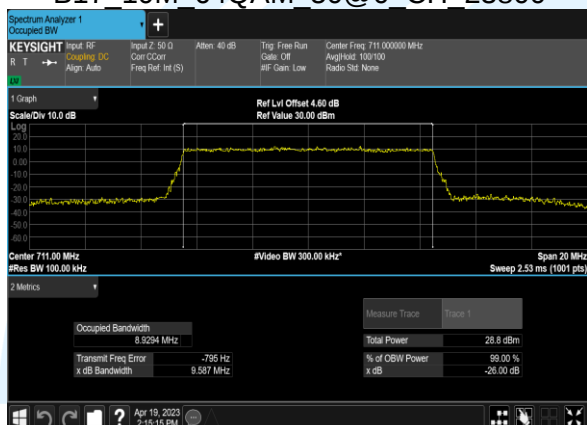
B17 10M 64QAM 50@0 CH 23780



B17 10M 64QAM 50@0 CH 23790



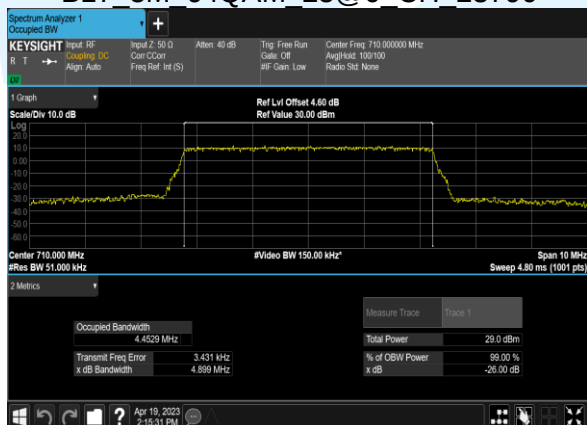
B17 10M 64QAM 50@0 CH 23800



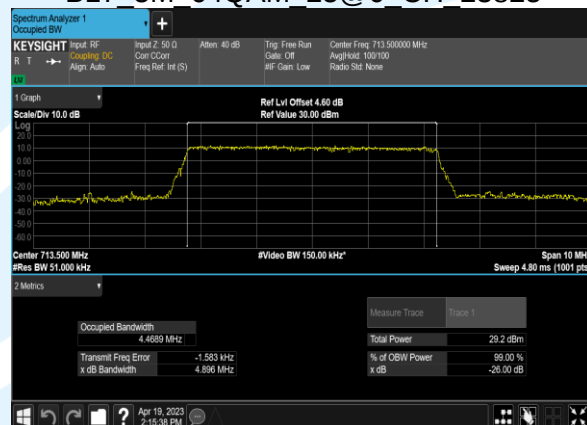
B17 5M 64QAM 25@0 CH 23755



B17 5M 64QAM 25@0 CH 23790



B17 5M 64QAM 25@0 CH 23825



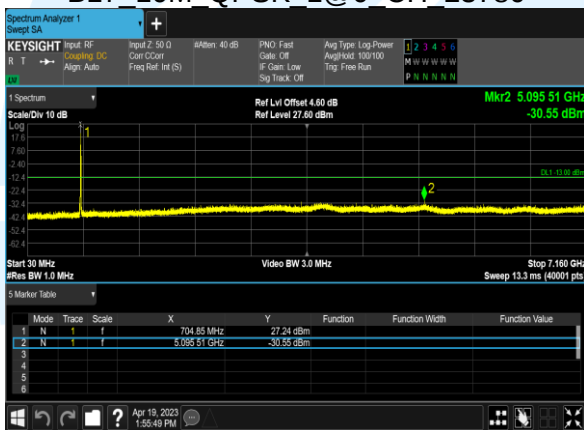
Conducted Spurious Emissions

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dBm)	Limit (dBm)	Verdict
17	10.0	23780	709.0	QPSK	1@0	-30.55	-13	PASS
17	10.0	23780	709.0	16QAM	1@0	-31.69	-13	PASS
17	10.0	23790	710.0	QPSK	1@0	-30.0	-13	PASS
17	10.0	23790	710.0	16QAM	1@0	-30.32	-13	PASS
17	10.0	23800	711.0	QPSK	1@0	-29.93	-13	PASS
17	10.0	23800	711.0	16QAM	1@0	-29.92	-13	PASS
17	5.0	23755	706.5	QPSK	1@0	-27.49	-13	PASS
17	5.0	23755	706.5	16QAM	1@0	-31.09	-13	PASS
17	5.0	23790	710.0	QPSK	1@0	-29.84	-13	PASS
17	5.0	23790	710.0	16QAM	1@0	-30.13	-13	PASS
17	5.0	23825	713.5	QPSK	1@0	-27.89	-13	PASS
17	5.0	23825	713.5	16QAM	1@0	-28.59	-13	PASS

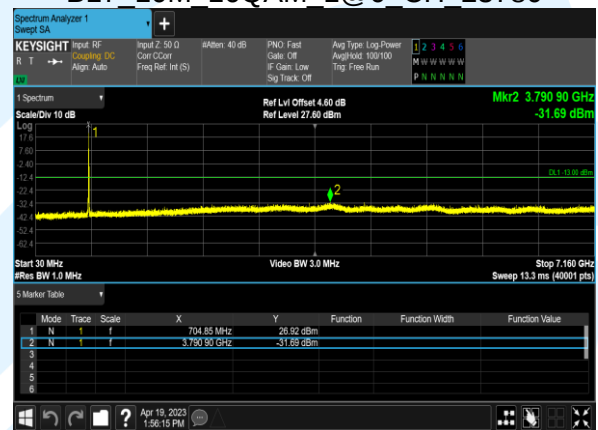
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dBm)	Limit (dBm)	Verdict
17	10.0	23780	709.0	64QAM	1@0	-31.25	-13	PASS
17	10.0	23790	710.0	64QAM	1@0	-26.62	-13	PASS
17	10.0	23800	711.0	64QAM	1@0	-30.37	-13	PASS
17	5.0	23755	706.5	64QAM	1@0	-29.71	-13	PASS
17	5.0	23790	710.0	64QAM	1@0	-27.98	-13	PASS
17	5.0	23825	713.5	64QAM	1@0	-26.53	-13	PASS

Test Graphs

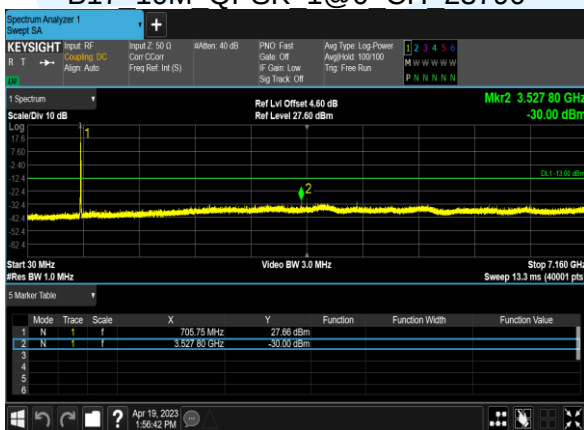
B17 10M QPSK 1@0 CH 23780



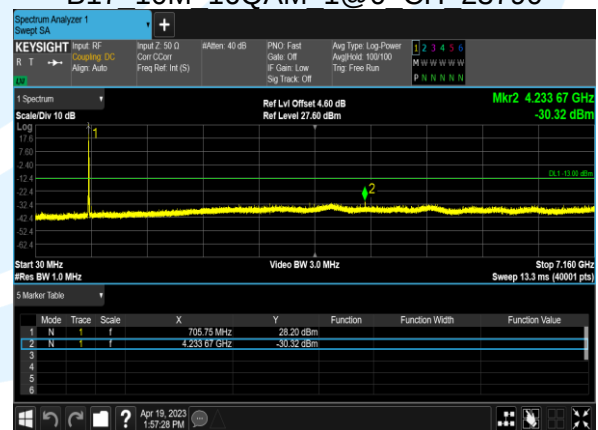
B17 10M 16QAM 1@0 CH 23780



B17 10M QPSK 1@0 CH 23790



B17 10M 16QAM 1@0 CH 23790



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B17 10M QPSK 1@0 CH 23800



B17 10M 16QAM 1@0 CH 23800



B17 5M QPSK 1@0 CH 23755



B17 5M 16QAM 1@0 CH 23755



B17 5M QPSK 1@0 CH 23790



B17 5M 16QAM 1@0 CH 23790



B17 5M QPSK 1@0 CH 23825



B17 5M 16QAM 1@0 CH 23825



B17 10M 64QAM 1@0 CH 23780



B17 10M 64QAM 1@0 CH 23790



B17 10M 64QAM 1@0 CH 23800



B17 5M 64QAM 1@0 CH 23755



B17 5M 64QAM 1@0 CH 23790



B17 5M 64QAM 1@0 CH 23825

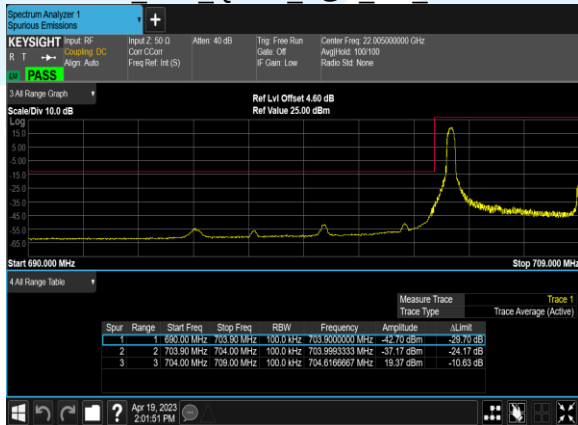


Conducted Band Edge

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result	Verdict
17	10.0	23780	709.0	QPSK	1@0	see graph	PASS
17	10.0	23780	709.0	QPSK	50@0	see graph	PASS
17	10.0	23780	709.0	16QAM	1@0	see graph	PASS
17	10.0	23780	709.0	16QAM	50@0	see graph	PASS
17	10.0	23780	709.0	64QAM	1@0	see graph	PASS
17	10.0	23780	709.0	64QAM	50@0	see graph	PASS
17	10.0	23800	711.0	QPSK	1@49	see graph	PASS
17	10.0	23800	711.0	QPSK	50@0	see graph	PASS
17	10.0	23800	711.0	16QAM	1@49	see graph	PASS
17	10.0	23800	711.0	16QAM	50@0	see graph	PASS
17	10.0	23800	711.0	64QAM	1@49	see graph	PASS
17	10.0	23800	711.0	64QAM	50@0	see graph	PASS
17	5.0	23755	706.5	QPSK	1@0	see graph	PASS
17	5.0	23755	706.5	QPSK	25@0	see graph	PASS
17	5.0	23755	706.5	16QAM	1@0	see graph	PASS
17	5.0	23755	706.5	16QAM	25@0	see graph	PASS
17	5.0	23755	706.5	64QAM	1@0	see graph	PASS
17	5.0	23755	706.5	64QAM	25@0	see graph	PASS
17	5.0	23825	713.5	QPSK	1@24	see graph	PASS
17	5.0	23825	713.5	QPSK	25@0	see graph	PASS
17	5.0	23825	713.5	16QAM	1@24	see graph	PASS
17	5.0	23825	713.5	16QAM	25@0	see graph	PASS
17	5.0	23825	713.5	64QAM	1@24	see graph	PASS
17	5.0	23825	713.5	64QAM	25@0	see graph	PASS
17	10.0	23780	709.0	64QAM	1@0	see graph	PASS
17	10.0	23780	709.0	64QAM	50@0	see graph	PASS
17	10.0	23800	711.0	64QAM	1@49	see graph	PASS
17	10.0	23800	711.0	64QAM	50@0	see graph	PASS
17	5.0	23755	706.5	64QAM	1@0	see graph	PASS
17	5.0	23755	706.5	64QAM	25@0	see graph	PASS
17	5.0	23825	713.5	64QAM	1@24	see graph	PASS
17	5.0	23825	713.5	64QAM	25@0	see graph	PASS

Test Graphs

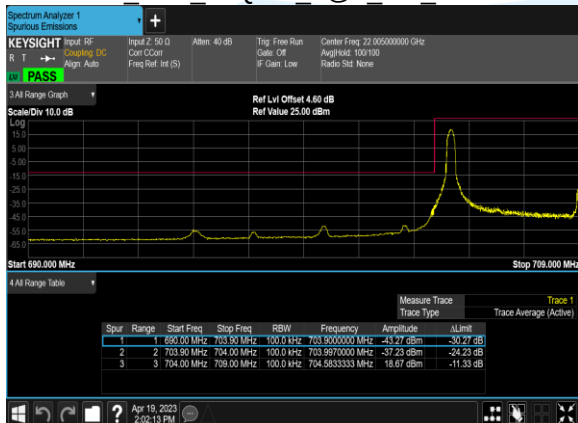
B17 10M QPSK 1@0 CH 23780



B17 10M QPSK 50@0 CH 23780



B17 10M 16QAM 1@0 CH 23780



B17 10M 16QAM 50@0 CH 23780



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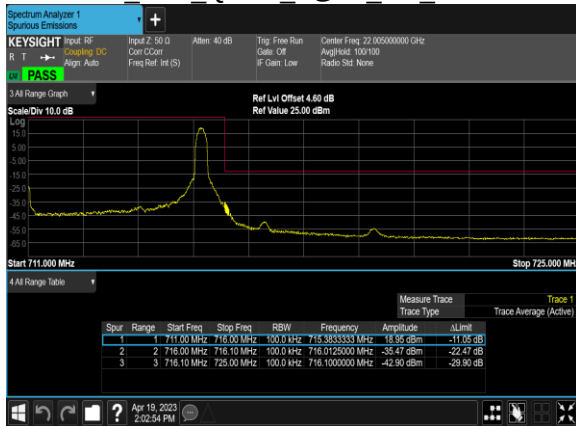
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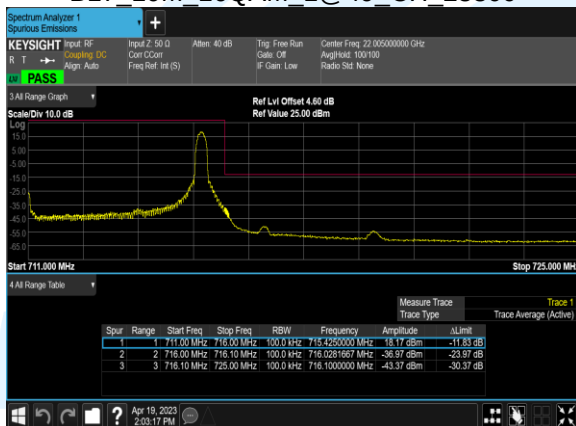
B17 10M QPSK 1@49 CH 23800



B17 10M QPSK 50@0 CH 23800



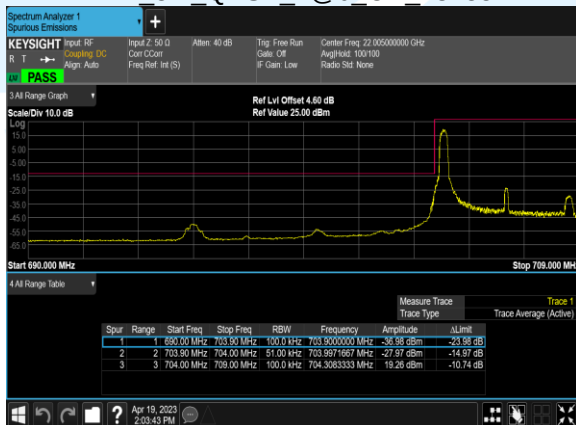
B17 10M 16QAM 1@49 CH 23800



B17 10M 16QAM 50@0 CH 23800



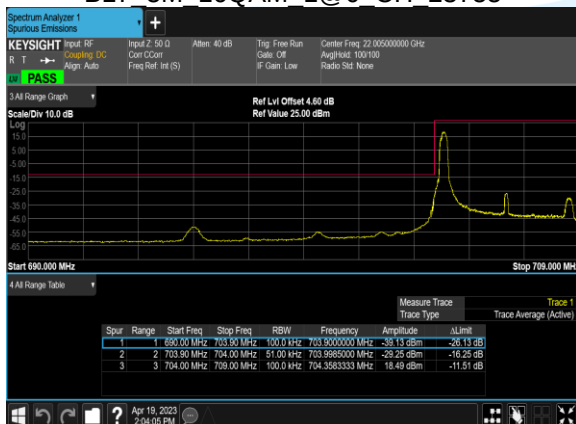
B17 5M QPSK 1@0 CH 23755



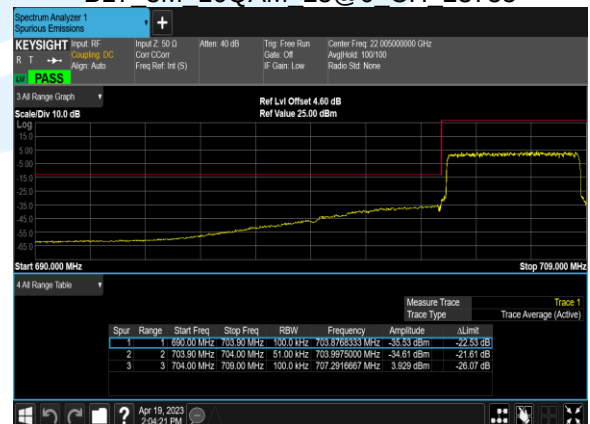
B17 5M QPSK 25@0 CH 23755



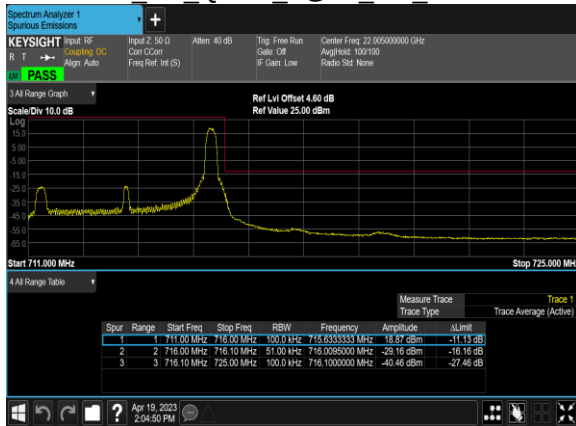
B17 5M 16QAM 1@0 CH 23755



B17 5M 16QAM 25@0 CH 23755



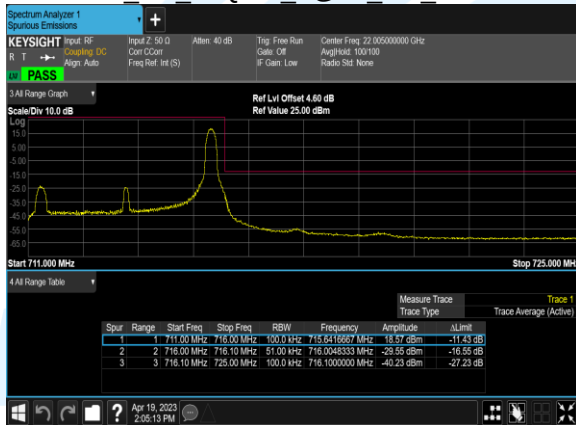
B17 5M QPSK 1@24 CH 23825



B17 5M QPSK 25@0 CH 23825



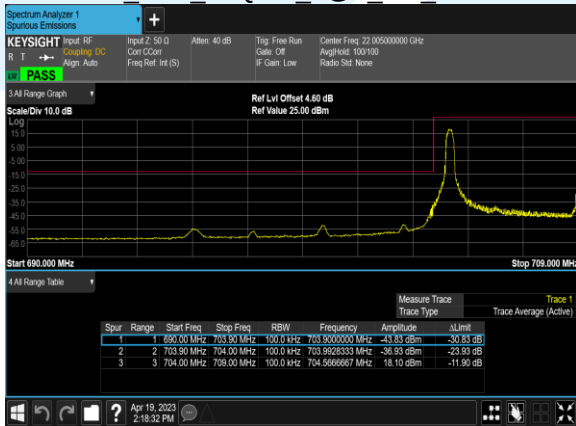
B17 5M 16QAM 1@24 CH 23825



B17 5M 16QAM 25@0 CH 23825



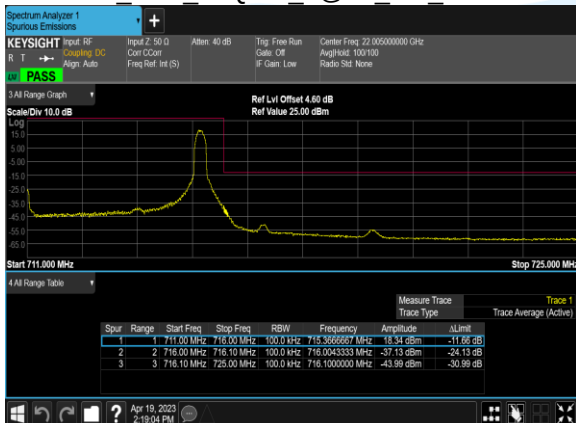
B17 10M 64QAM 1@0 CH 23780



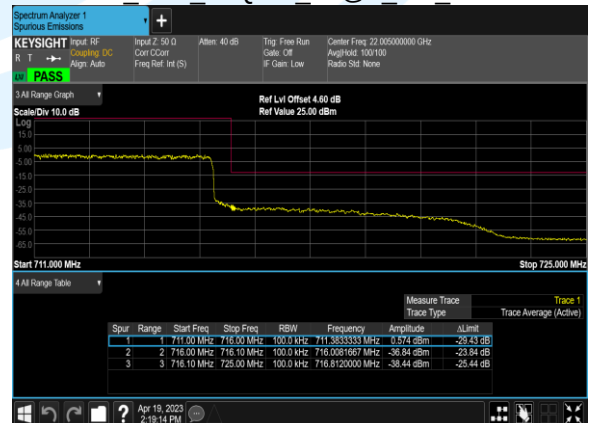
B17 10M 64QAM 50@0 CH 23780



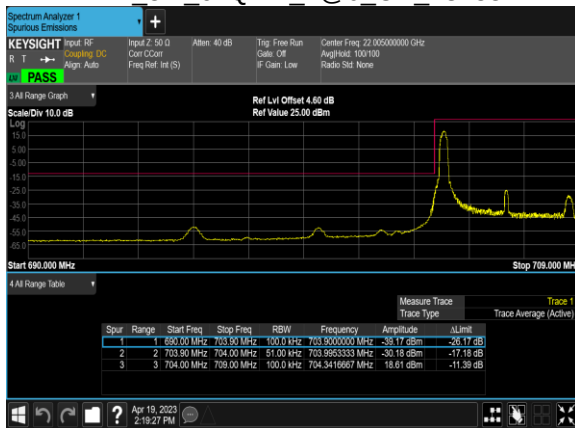
B17 10M 64QAM 1@49 CH 23800



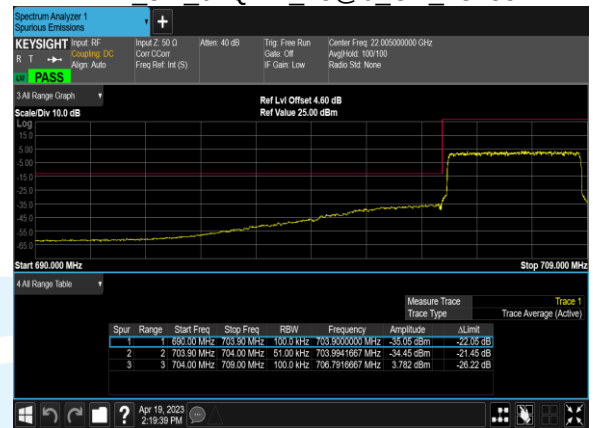
B17 10M 64QAM 50@0 CH 23800



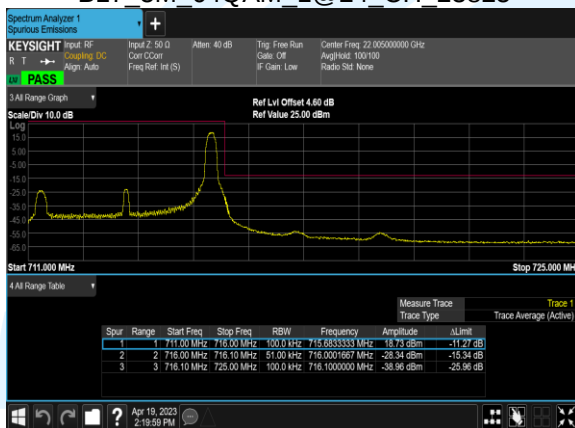
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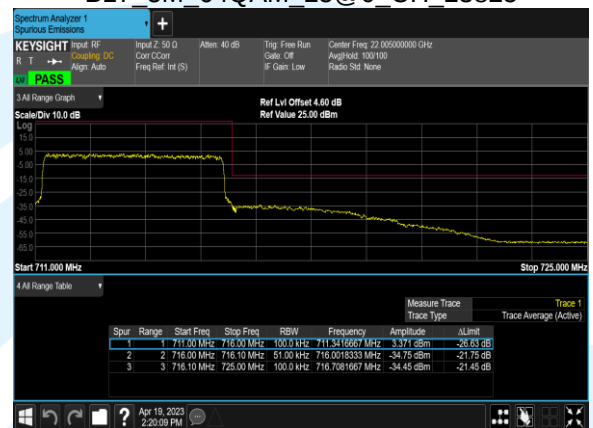
B17 5M 64QAM 25@0 CH 23755



B17 5M 64QAM 1@24 CH 23825



B17 5M 64QAM 25@0 CH 23825



A.6 LTE BAND 38

Peak to Average Ratio

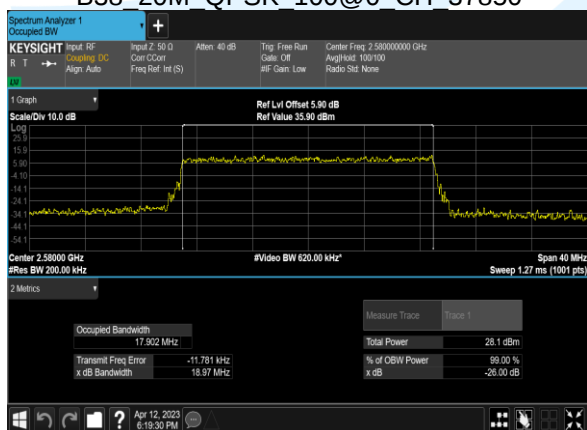
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
38	20.0	37850	2580.0	QPSK	100@0	6.66	13	PASS
38	20.0	37850	2580.0	16QAM	100@0	7.60	13	PASS
38	20.0	38000	2595.0	QPSK	100@0	6.53	13	PASS
38	20.0	38000	2595.0	16QAM	100@0	7.29	13	PASS
38	20.0	38150	2610.0	QPSK	100@0	6.67	13	PASS
38	20.0	38150	2610.0	16QAM	100@0	7.53	13	PASS
38	15.0	37825	2577.5	QPSK	75@0	6.63	13	PASS
38	15.0	37825	2577.5	16QAM	75@0	8.05	13	PASS
38	15.0	38000	2595.0	QPSK	75@0	6.50	13	PASS
38	15.0	38000	2595.0	16QAM	75@0	7.47	13	PASS
38	15.0	38175	2612.5	QPSK	75@0	6.70	13	PASS
38	15.0	38175	2612.5	16QAM	75@0	7.30	13	PASS
38	10.0	37800	2575.0	QPSK	50@0	6.88	13	PASS
38	10.0	37800	2575.0	16QAM	50@0	7.26	13	PASS
38	10.0	38000	2595.0	QPSK	50@0	6.20	13	PASS
38	10.0	38000	2595.0	16QAM	50@0	7.01	13	PASS
38	10.0	38200	2615.0	QPSK	50@0	6.79	13	PASS
38	10.0	38200	2615.0	16QAM	50@0	7.38	13	PASS
38	5.0	37775	2572.5	QPSK	25@0	6.07	13	PASS
38	5.0	37775	2572.5	16QAM	25@0	7.25	13	PASS
38	5.0	38000	2595.0	QPSK	25@0	6.07	13	PASS
38	5.0	38000	2595.0	16QAM	25@0	7.01	13	PASS
38	5.0	38225	2617.5	QPSK	25@0	6.53	13	PASS
38	5.0	38225	2617.5	16QAM	25@0	6.81	13	PASS
38	20.0	37850	2580.0	64QAM	100@0	7.35	13	PASS
38	20.0	38000	2595.0	64QAM	100@0	8.00	13	PASS
38	20.0	38150	2610.0	64QAM	100@0	7.28	13	PASS
38	15.0	37825	2577.5	64QAM	75@0	7.87	13	PASS
38	15.0	38000	2595.0	64QAM	75@0	7.43	13	PASS
38	15.0	38175	2612.5	64QAM	75@0	7.40	13	PASS
38	10.0	37800	2575.0	64QAM	50@0	7.32	13	PASS
38	10.0	38000	2595.0	64QAM	50@0	7.22	13	PASS
38	10.0	38200	2615.0	64QAM	50@0	7.57	13	PASS
38	5.0	37775	2572.5	64QAM	25@0	7.14	13	PASS
38	5.0	38000	2595.0	64QAM	25@0	6.85	13	PASS
38	5.0	38225	2617.5	64QAM	25@0	6.77	13	PASS

Occupied Bandwidth

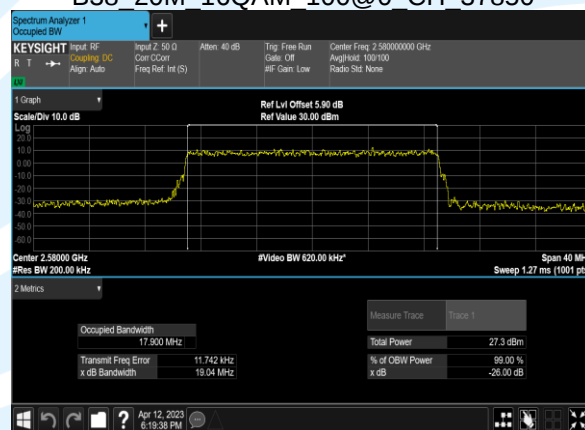
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
38	20.0	37850	2580.0	QPSK	100@0	17.902	18.97
38	20.0	37850	2580.0	16QAM	100@0	17.900	19.04
38	20.0	38000	2595.0	QPSK	100@0	17.840	18.90
38	20.0	38000	2595.0	16QAM	100@0	17.865	19.20
38	20.0	38150	2610.0	QPSK	100@0	17.860	19.25
38	20.0	38150	2610.0	16QAM	100@0	17.851	18.97
38	15.0	37825	2577.5	QPSK	75@0	13.353	14.28
38	15.0	37825	2577.5	16QAM	75@0	13.375	14.31
38	15.0	38000	2595.0	QPSK	75@0	13.453	14.50
38	15.0	38000	2595.0	16QAM	75@0	13.411	14.47
38	15.0	38175	2612.5	QPSK	75@0	13.415	14.68
38	15.0	38175	2612.5	16QAM	75@0	13.441	14.27
38	10.0	37800	2575.0	QPSK	50@0	8.9607	9.555
38	10.0	37800	2575.0	16QAM	50@0	8.9290	9.680
38	10.0	38000	2595.0	QPSK	50@0	8.9006	9.446
38	10.0	38000	2595.0	16QAM	50@0	8.9406	9.593
38	10.0	38200	2615.0	QPSK	50@0	8.9502	9.613
38	10.0	38200	2615.0	16QAM	50@0	8.9296	9.531
38	5.0	37775	2572.5	QPSK	25@0	4.4585	4.797
38	5.0	37775	2572.5	16QAM	25@0	4.4535	4.847
38	5.0	38000	2595.0	QPSK	25@0	4.4703	4.802
38	5.0	38000	2595.0	16QAM	25@0	4.4386	4.833
38	5.0	38225	2617.5	QPSK	25@0	4.4621	4.768
38	5.0	38225	2617.5	16QAM	25@0	4.4552	4.816
38	20.0	37850	2580.0	64QAM	100@0	17.890	19.14
38	20.0	38000	2595.0	64QAM	100@0	17.895	19.35
38	20.0	38150	2610.0	64QAM	100@0	17.857	18.86
38	15.0	37825	2577.5	64QAM	75@0	13.437	14.42
38	15.0	38000	2595.0	64QAM	75@0	13.399	14.35
38	15.0	38175	2612.5	64QAM	75@0	13.404	14.22
38	10.0	37800	2575.0	64QAM	50@0	8.9475	9.624
38	10.0	38000	2595.0	64QAM	50@0	8.9434	9.515
38	10.0	38200	2615.0	64QAM	50@0	8.9290	9.646
38	5.0	37775	2572.5	64QAM	25@0	4.4493	4.856
38	5.0	38000	2595.0	64QAM	25@0	4.4494	4.839
38	5.0	38225	2617.5	64QAM	25@0	4.4519	4.810

Test Graphs

B38 20M QPSK 100@0 CH 37850



B38 20M 16QAM 100@0 CH 37850



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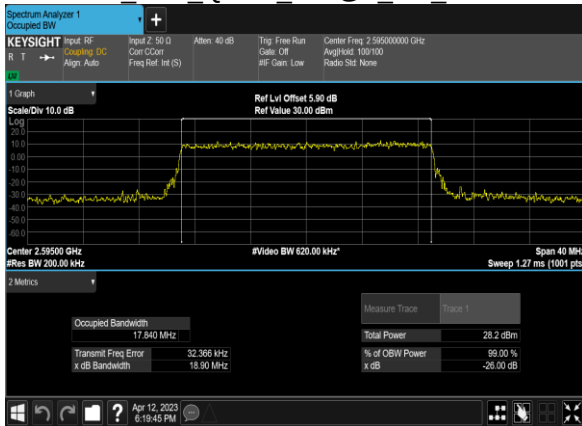
Fax: +86-755-28230886

E-mail: info@uttlab.com

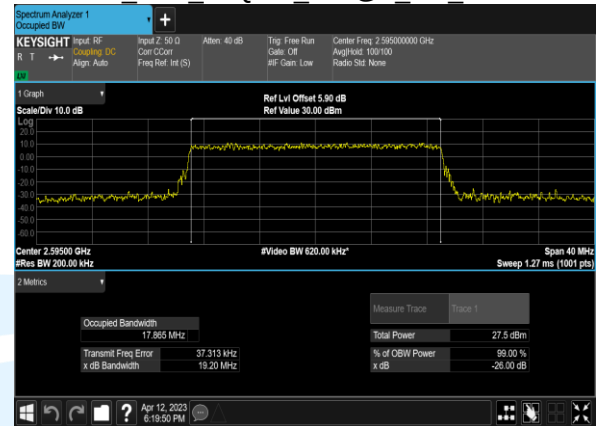
<http://www.uttlab.com>

UTTR-RF-FCC4G-V1.1

B38 20M QPSK 100@0 CH 38000



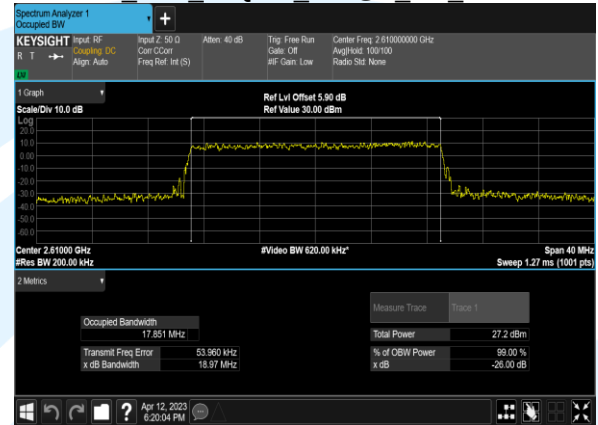
B38 20M 16QAM 100@0 CH 38000



B38 20M QPSK 100@0 CH 38150



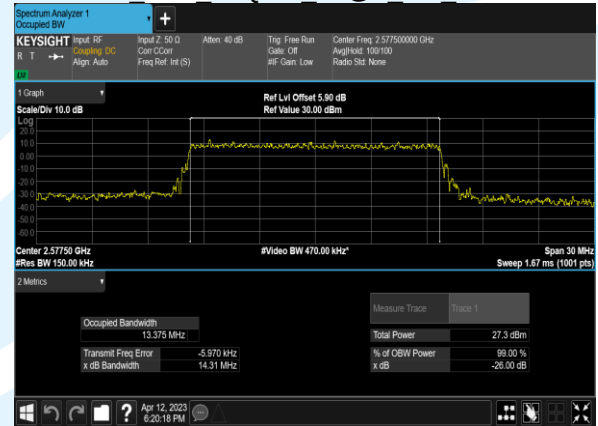
B38 20M 16QAM 100@0 CH 38150



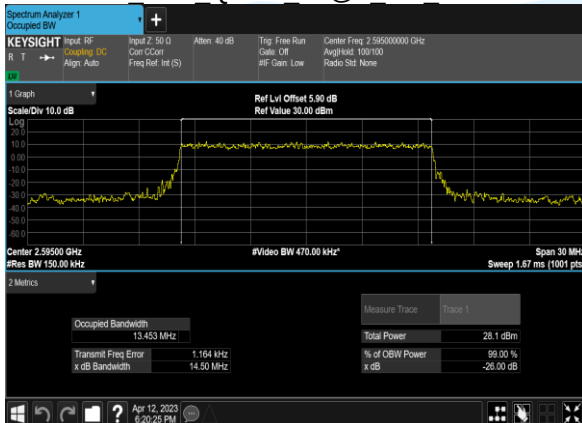
B38 15M QPSK 75@0 CH 37825



B38 15M 16QAM 75@0 CH 37825



B38 15M QPSK 75@0 CH 38000



B38 15M 16QAM 75@0 CH 38000

