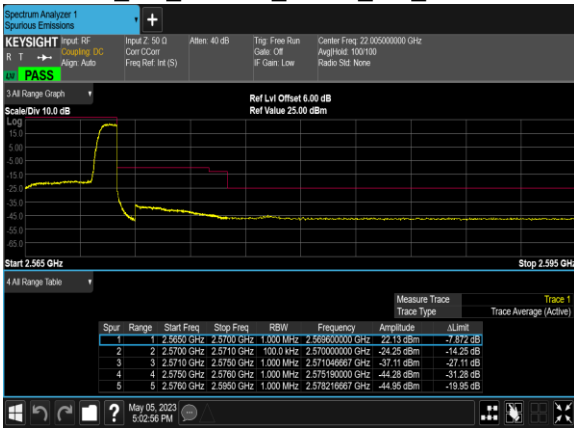
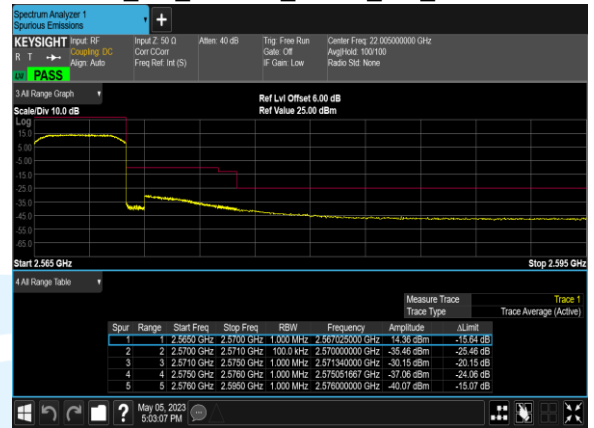


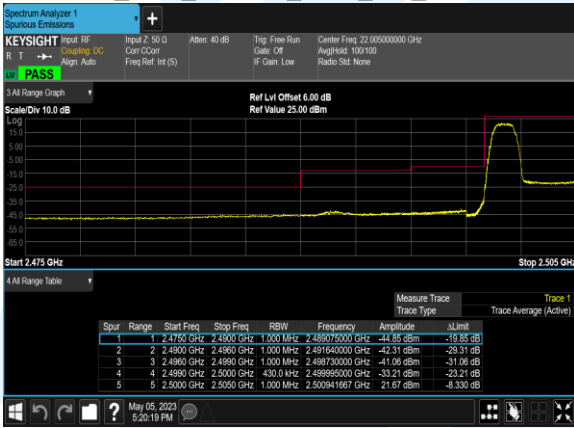
B7\_5M\_16QAM\_1@24\_CH\_21425



B7\_5M\_16QAM\_25@0\_CH\_21425



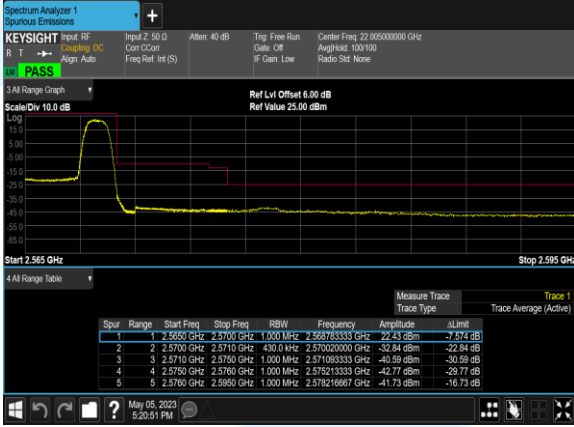
B7\_20M\_64QAM\_1@0\_CH\_20850



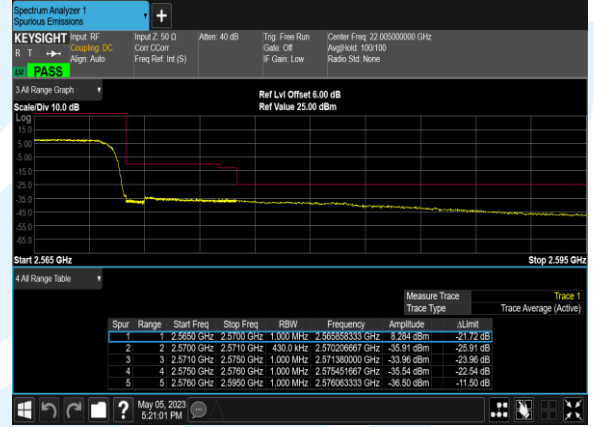
B7\_20M\_64QAM\_100@0\_CH\_20850



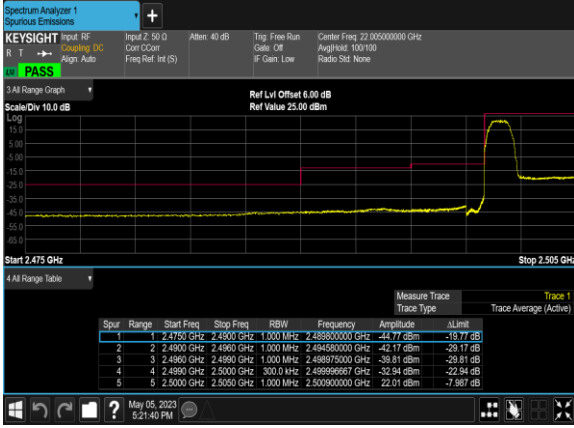
B7\_20M\_64QAM\_1@99\_CH\_21350



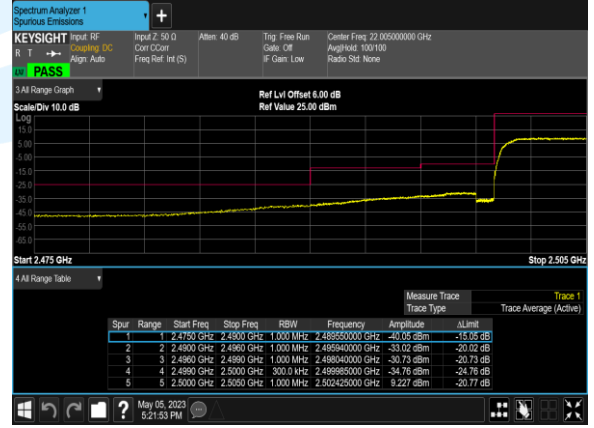
B7\_20M\_64QAM\_100@0\_CH\_21350



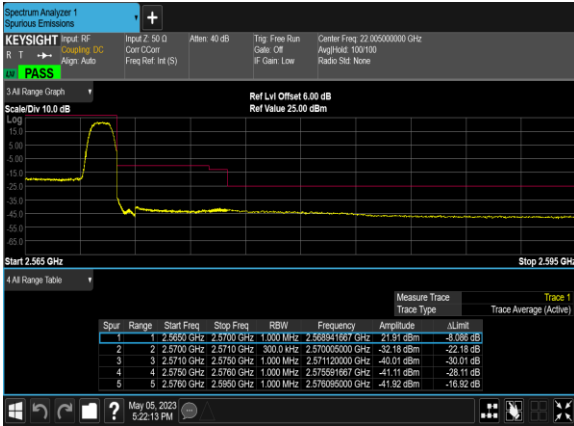
B7\_15M\_64QAM\_1@0\_CH\_20825



B7\_15M\_64QAM\_75@0\_CH\_20825



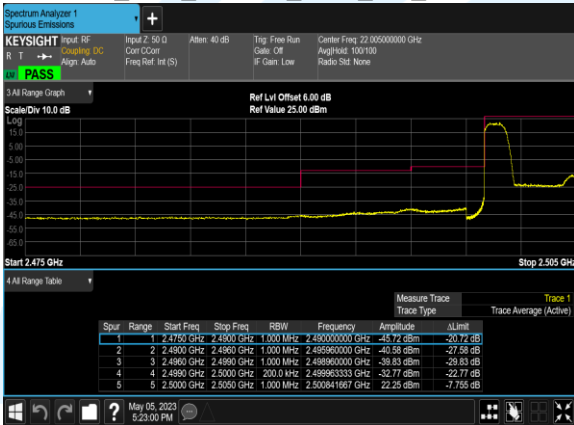
B7\_15M\_64QAM\_1@74\_CH\_21375



B7\_15M\_64QAM\_75@0\_CH\_21375



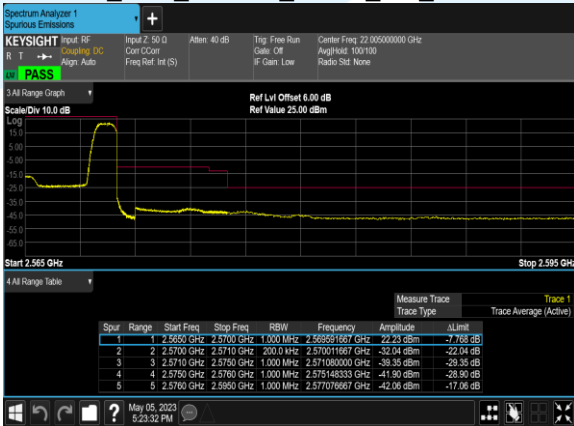
B7\_10M\_64QAM\_1@0\_CH\_20800



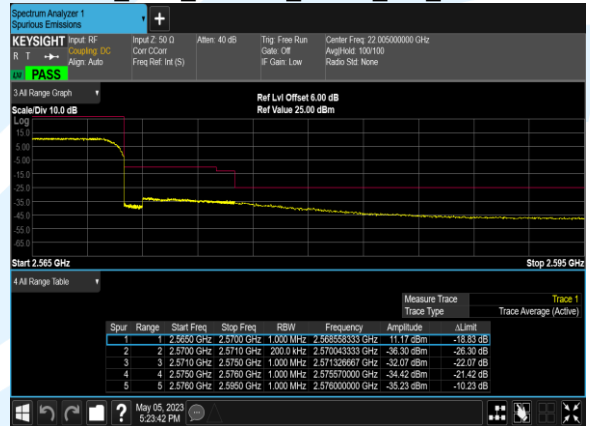
B7\_10M\_64QAM\_50@0\_CH\_20800



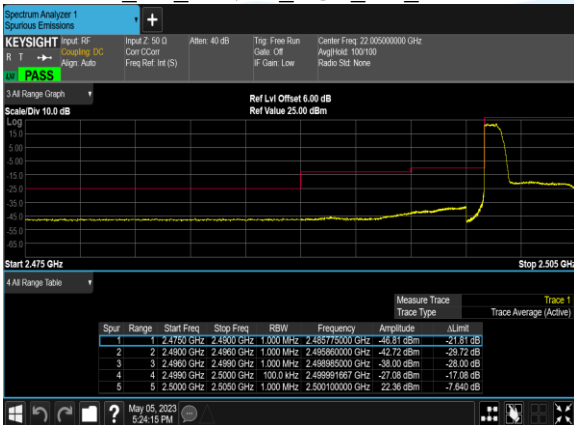
B7\_10M\_64QAM\_1@49\_CH\_21400



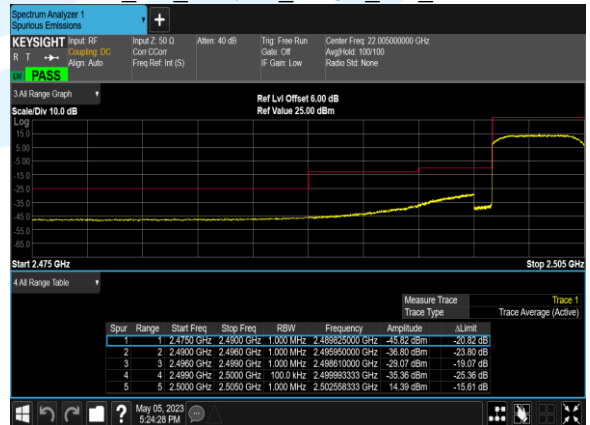
B7\_10M\_64QAM\_50@0\_CH\_21400



B7\_5M\_64QAM\_1@0\_CH\_20775



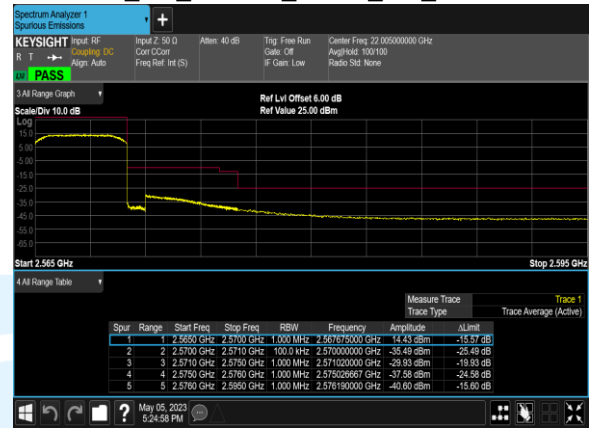
B7\_5M\_64QAM\_25@0\_CH\_20775



B7\_5M\_64QAM\_1@24\_CH\_21425



B7\_5M\_64QAM\_25@0\_CH\_21425



## Shenzhen UnionTrust Quality and Technology Co., Ltd.

Address: Unit D/E of 9/F and 16/F, Block A, Building 6, Baoneng science and technology park, Longhua district, Shenzhen, China

Tel: +86-755-28230888

Fax: +86-755-28230886

E-mail: info@uttlab.com

<http://www.uttlab.com>

UTTR-RF-FCC4G-V1.1

### A.5 LTE BAND 12

#### Peak to Average Ratio

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
12	10.0	23060	704.0	QPSK	50@0	5.81	13	PASS
12	10.0	23060	704.0	16QAM	50@0	6.66	13	PASS
12	10.0	23095	707.5	QPSK	50@0	5.90	13	PASS
12	10.0	23095	707.5	16QAM	50@0	6.68	13	PASS
12	10.0	23130	711.0	QPSK	50@0	5.57	13	PASS
12	10.0	23130	711.0	16QAM	50@0	6.46	13	PASS
12	5.0	23035	701.5	QPSK	25@0	5.85	13	PASS
12	5.0	23035	701.5	16QAM	25@0	6.58	13	PASS
12	5.0	23095	707.5	QPSK	25@0	6.06	13	PASS
12	5.0	23095	707.5	16QAM	25@0	6.77	13	PASS
12	5.0	23155	713.5	QPSK	25@0	5.53	13	PASS
12	5.0	23155	713.5	16QAM	25@0	6.32	13	PASS
12	3.0	23025	700.5	QPSK	15@0	5.63	13	PASS
12	3.0	23025	700.5	16QAM	15@0	6.60	13	PASS
12	3.0	23095	707.5	QPSK	15@0	5.81	13	PASS
12	3.0	23095	707.5	16QAM	15@0	6.76	13	PASS
12	3.0	23165	714.5	QPSK	15@0	5.39	13	PASS
12	3.0	23165	714.5	16QAM	15@0	6.22	13	PASS
12	1.4	23017	699.7	QPSK	6@0	5.81	13	PASS
12	1.4	23017	699.7	16QAM	6@0	6.65	13	PASS
12	1.4	23095	707.5	QPSK	6@0	5.98	13	PASS
12	1.4	23095	707.5	16QAM	6@0	6.80	13	PASS
12	1.4	23173	715.3	QPSK	6@0	5.29	13	PASS
12	1.4	23173	715.3	16QAM	6@0	6.09	13	PASS

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
12	10.0	23060	704.0	64QAM	50@0	6.60	13	PASS
12	10.0	23095	707.5	64QAM	50@0	6.65	13	PASS
12	10.0	23130	711.0	64QAM	50@0	6.43	13	PASS
12	5.0	23035	701.5	64QAM	25@0	6.54	13	PASS
12	5.0	23095	707.5	64QAM	25@0	6.74	13	PASS
12	5.0	23155	713.5	64QAM	25@0	6.27	13	PASS
12	3.0	23025	700.5	64QAM	15@0	6.57	13	PASS
12	3.0	23095	707.5	64QAM	15@0	6.75	13	PASS
12	3.0	23165	714.5	64QAM	15@0	6.22	13	PASS
12	1.4	23017	699.7	64QAM	6@0	6.61	13	PASS
12	1.4	23095	707.5	64QAM	6@0	6.79	13	PASS
12	1.4	23173	715.3	64QAM	6@0	6.05	13	PASS

## Test Graphs

B12\_10M\_QPSK\_50@0\_CH\_23060



B12\_10M\_16QAM\_50@0\_CH\_23060



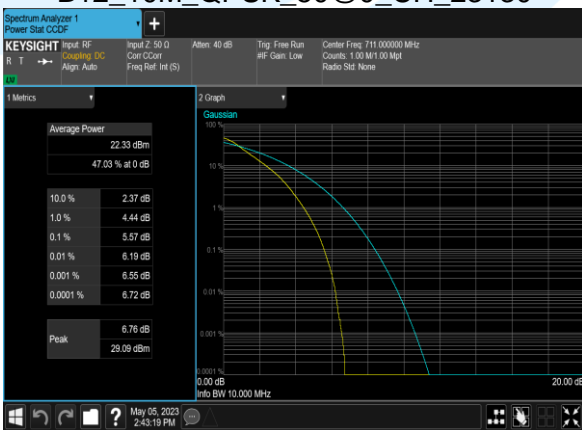
B12\_10M\_QPSK\_50@0\_CH\_23095



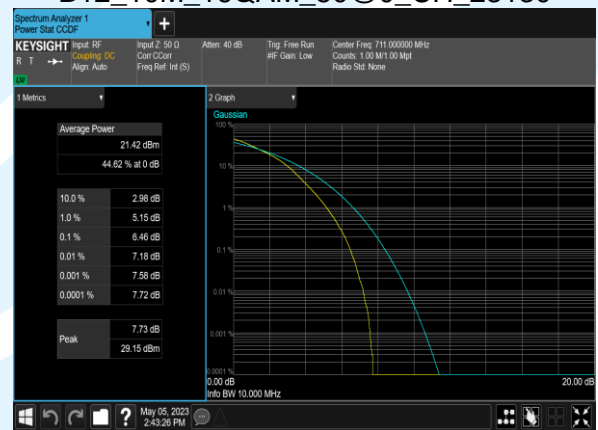
B12\_10M\_16QAM\_50@0\_CH\_23095



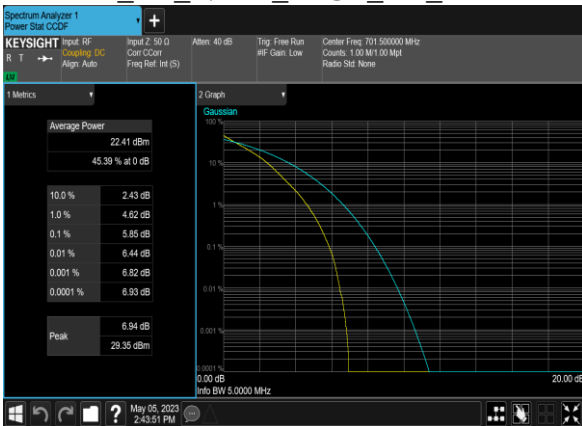
B12\_10M\_QPSK\_50@0\_CH\_23130



B12\_10M\_16QAM\_50@0\_CH\_23130



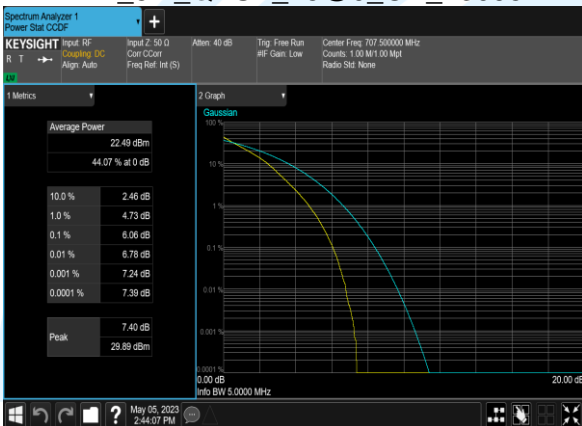
B12\_5M\_QPSK\_25@0\_CH\_23035



B12\_5M\_16QAM\_25@0\_CH\_23035



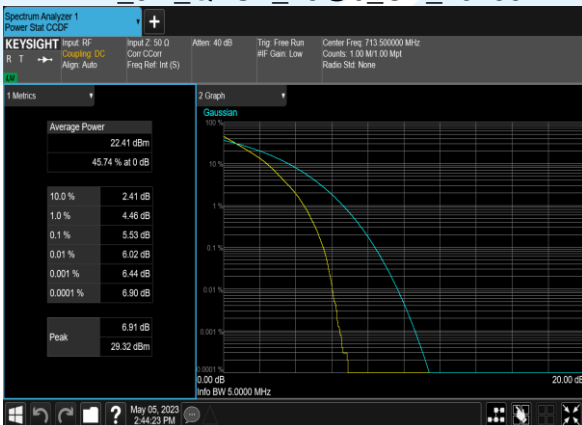
B12\_5M\_QPSK\_25@0\_CH\_23095



B12\_5M\_16QAM\_25@0\_CH\_23095



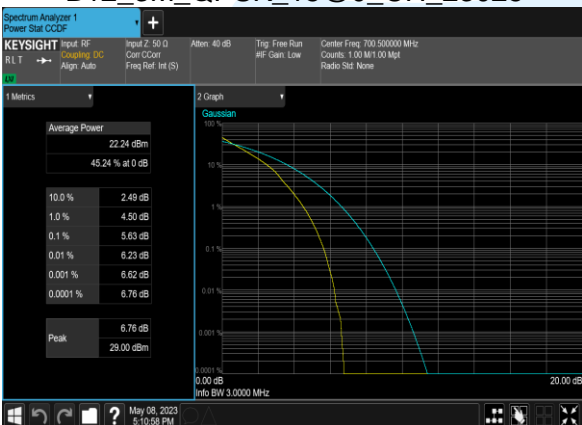
B12\_5M\_QPSK\_25@0\_CH\_23155



B12\_5M\_16QAM\_25@0\_CH\_23155



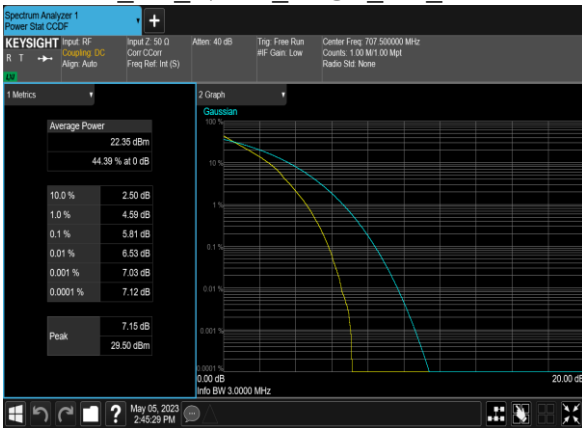
B12\_3M\_QPSK\_15@0\_CH\_23025



B12\_3M\_16QAM\_15@0\_CH\_23025



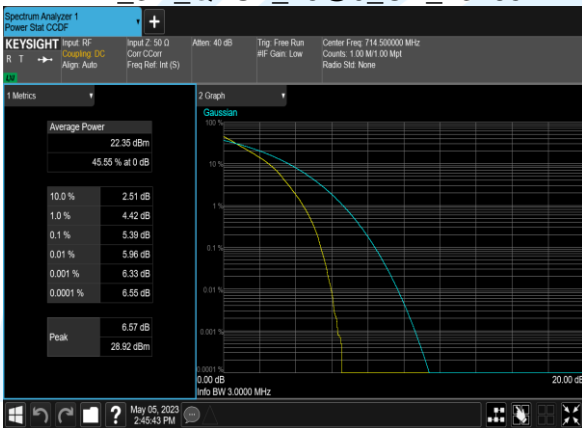
B12\_3M\_QPSK\_15@0\_CH\_23095



B12\_3M\_16QAM\_15@0\_CH\_23095



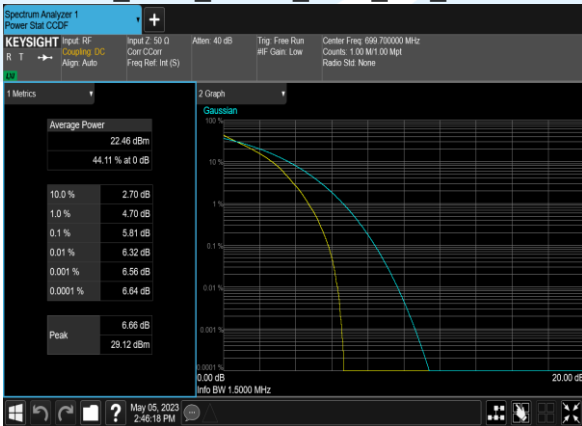
B12\_3M\_QPSK\_15@0\_CH\_23165



B12\_3M\_16QAM\_15@0\_CH\_23165



B12\_1.4M\_QPSK\_6@0\_CH\_23017



B12\_1.4M\_16QAM\_6@0\_CH\_23017



B12\_1.4M\_QPSK\_6@0\_CH\_23095



B12\_1.4M\_16QAM\_6@0\_CH\_23095



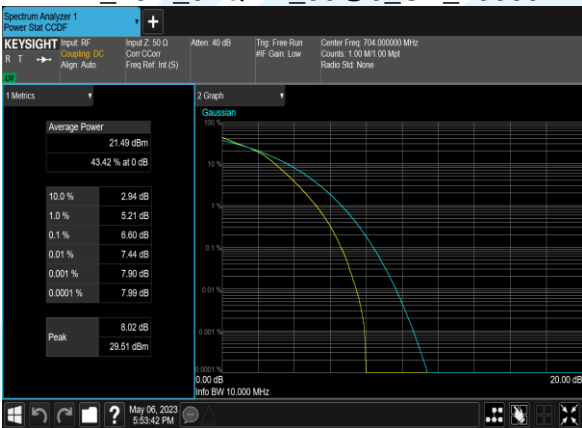
B12\_1.4M\_QPSK\_6@0\_CH\_23173



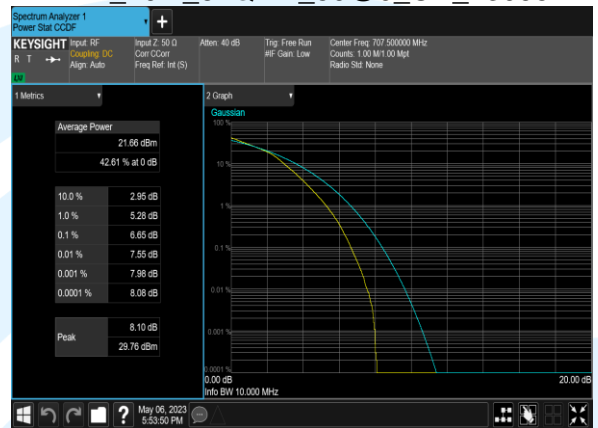
B12\_1.4M\_16QAM\_6@0\_CH\_23173



B12\_10M\_64QAM\_50@0\_CH\_23060



B12\_10M\_64QAM\_50@0\_CH\_23095



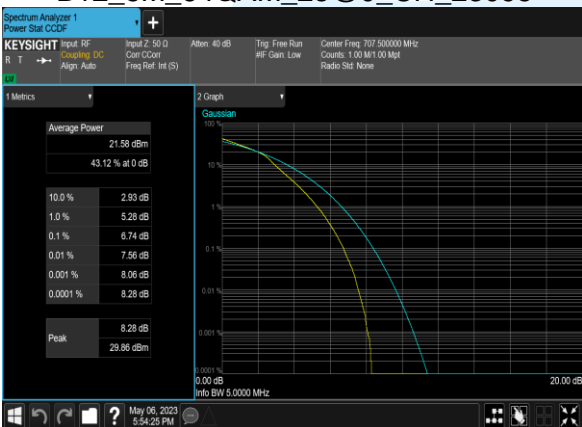
B12\_10M\_64QAM\_50@0\_CH\_23130



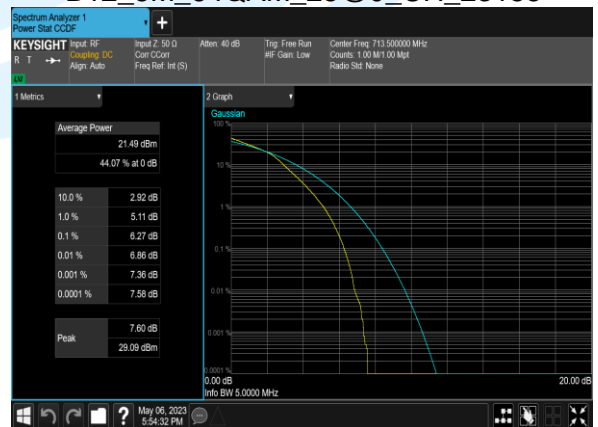
B12\_5M\_64QAM\_25@0\_CH\_23035



B12\_5M\_64QAM\_25@0\_CH\_23095

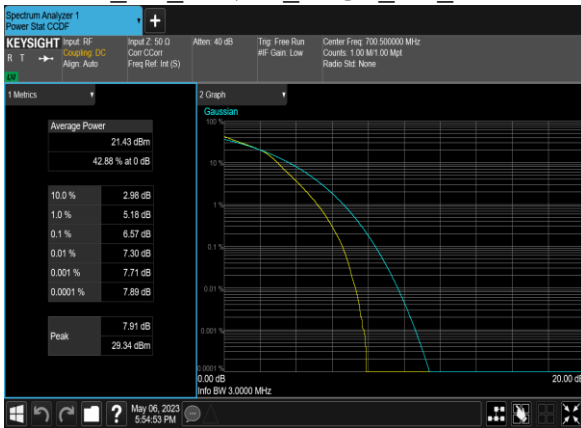


B12\_5M\_64QAM\_25@0\_CH\_23155





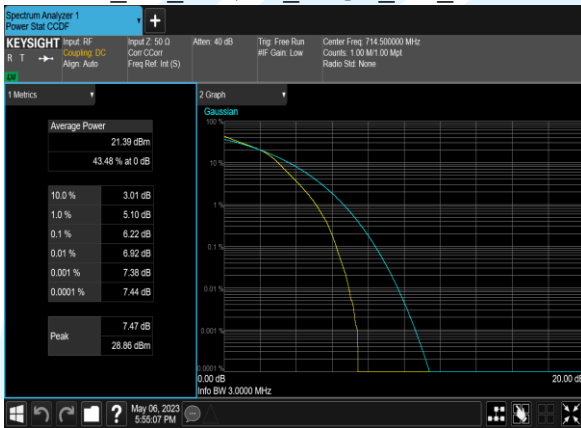
B12\_3M\_64QAM\_15@0\_CH\_23025



B12\_3M\_64QAM\_15@0\_CH\_23095



B12\_3M\_64QAM\_15@0\_CH\_23165



B12\_1.4M\_64QAM\_6@0\_CH\_23017



B12\_1.4M\_64QAM\_6@0\_CH\_23095



B12\_1.4M\_64QAM\_6@0\_CH\_23173



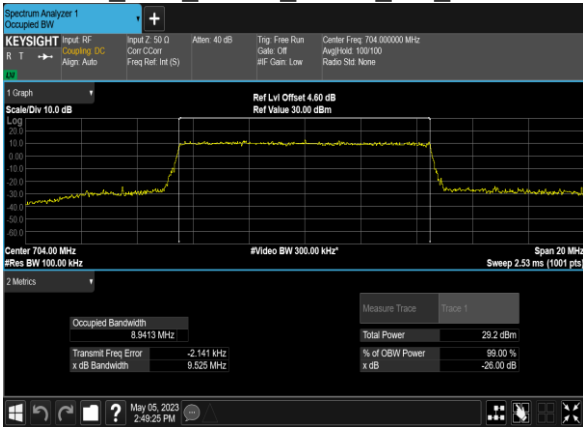
**Occupied Bandwidth**

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
12	10.0	23060	704.0	QPSK	50@0	8.9413	9.525
12	10.0	23060	704.0	16QAM	50@0	8.9368	9.473
12	10.0	23095	707.5	QPSK	50@0	8.9396	9.602
12	10.0	23095	707.5	16QAM	50@0	8.9696	9.612
12	10.0	23130	711.0	QPSK	50@0	8.8965	9.402
12	10.0	23130	711.0	16QAM	50@0	8.9330	9.474
12	5.0	23035	701.5	QPSK	25@0	4.4539	4.749
12	5.0	23035	701.5	16QAM	25@0	4.4629	4.843
12	5.0	23095	707.5	QPSK	25@0	4.4652	4.823
12	5.0	23095	707.5	16QAM	25@0	4.4664	4.802
12	5.0	23155	713.5	QPSK	25@0	4.4692	4.803
12	5.0	23155	713.5	16QAM	25@0	4.4520	4.833
12	3.0	23025	700.5	QPSK	15@0	2.6804	2.902
12	3.0	23025	700.5	16QAM	15@0	2.6737	2.909
12	3.0	23095	707.5	QPSK	15@0	2.6654	2.882
12	3.0	23095	707.5	16QAM	15@0	2.6687	2.915
12	3.0	23165	714.5	QPSK	15@0	2.6707	2.877
12	3.0	23165	714.5	16QAM	15@0	2.6710	2.908
12	1.4	23017	699.7	QPSK	6@0	1.0776	1.222
12	1.4	23017	699.7	16QAM	6@0	1.0795	1.231
12	1.4	23095	707.5	QPSK	6@0	1.0796	1.231
12	1.4	23095	707.5	16QAM	6@0	1.0788	1.252
12	1.4	23173	715.3	QPSK	6@0	1.0781	1.229
12	1.4	23173	715.3	16QAM	6@0	1.0778	1.218

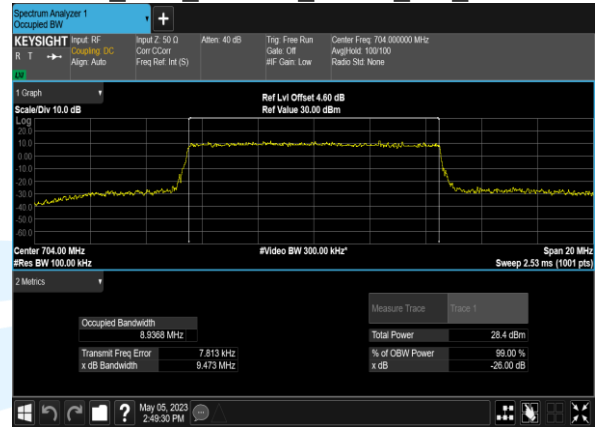
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
12	10.0	23060	704.0	64QAM	50@0	8.9287	9.371
12	10.0	23095	707.5	64QAM	50@0	8.9579	9.497
12	10.0	23130	711.0	64QAM	50@0	8.9029	9.446
12	5.0	23035	701.5	64QAM	25@0	4.4649	4.812
12	5.0	23095	707.5	64QAM	25@0	4.4614	4.799
12	5.0	23155	713.5	64QAM	25@0	4.4546	4.794
12	3.0	23025	700.5	64QAM	15@0	2.6688	2.883
12	3.0	23095	707.5	64QAM	15@0	2.6686	2.875
12	3.0	23165	714.5	64QAM	15@0	2.6721	2.902
12	1.4	23017	699.7	64QAM	6@0	1.0794	1.236
12	1.4	23095	707.5	64QAM	6@0	1.0804	1.246
12	1.4	23173	715.3	64QAM	6@0	1.0770	1.212

## Test Graphs

B12\_10M\_QPSK\_50@0\_CH\_23060



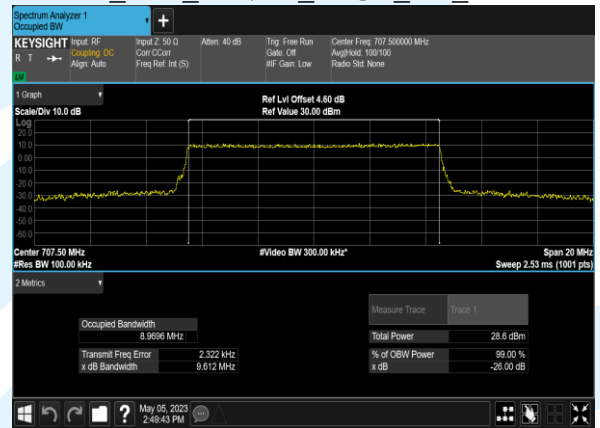
B12\_10M\_16QAM\_50@0\_CH\_23060



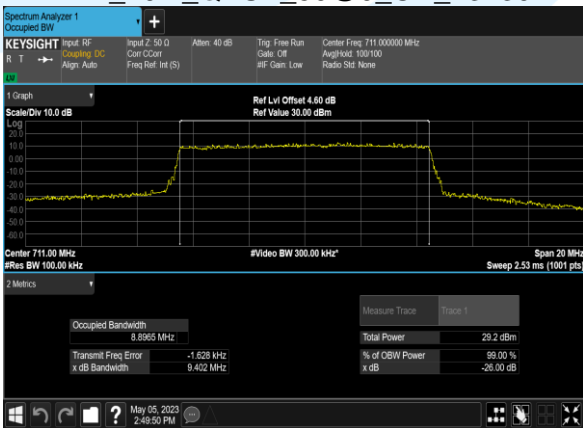
B12\_10M\_QPSK\_50@0\_CH\_23095



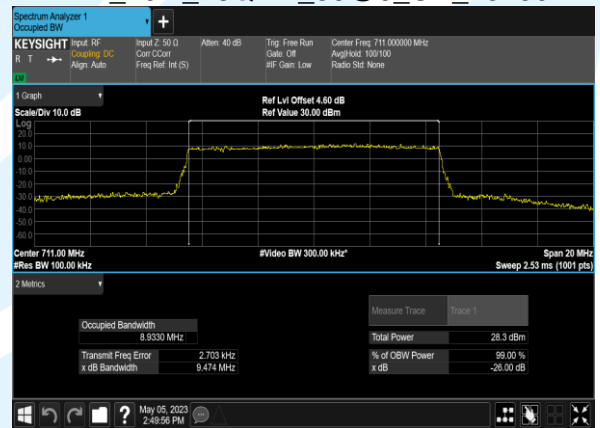
B12\_10M\_16QAM\_50@0\_CH\_23095



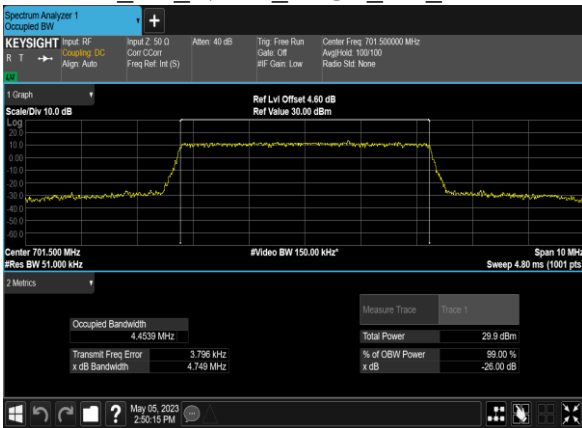
B12\_10M\_QPSK\_50@0\_CH\_23130



B12\_10M\_16QAM\_50@0\_CH\_23130



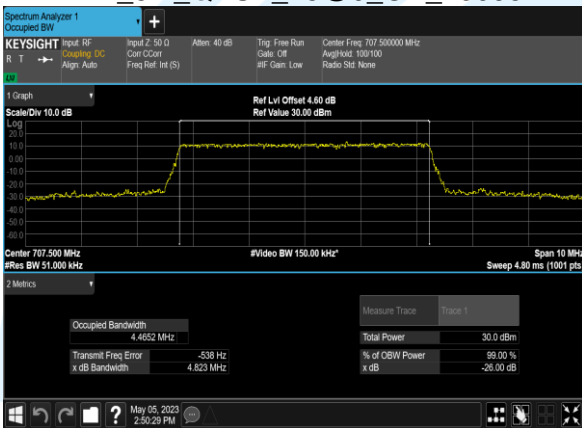
B12\_5M\_QPSK\_25@0\_CH\_23035



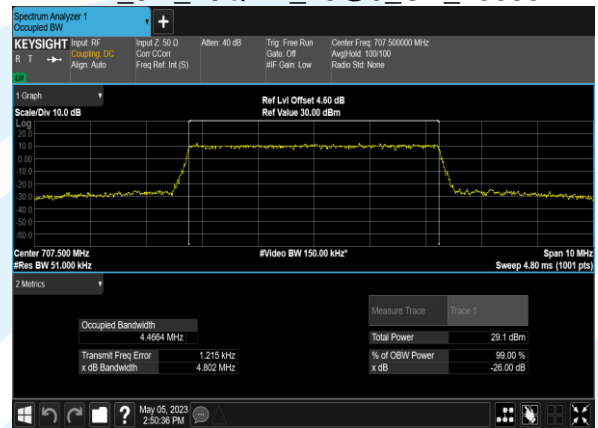
B12\_5M\_16QAM\_25@0\_CH\_23035



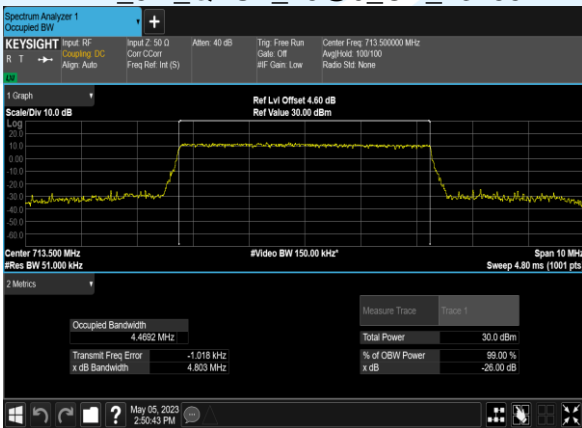
B12\_5M\_QPSK\_25@0\_CH\_23095



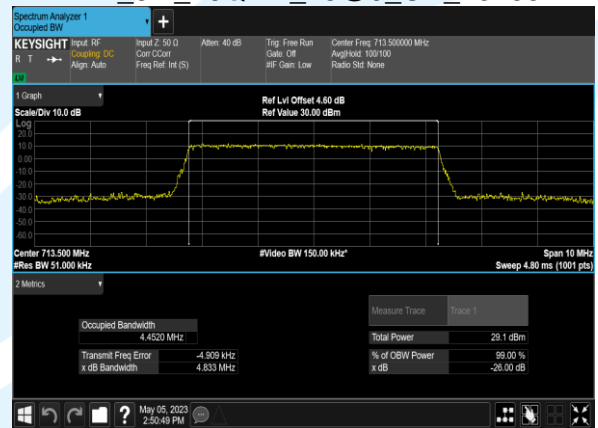
B12\_5M\_16QAM\_25@0\_CH\_23095



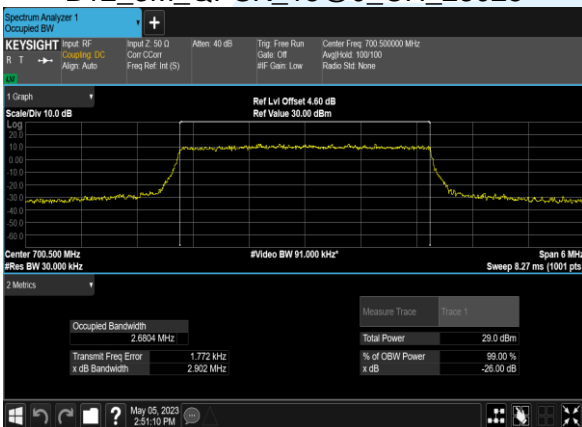
B12\_5M\_QPSK\_25@0\_CH\_23155



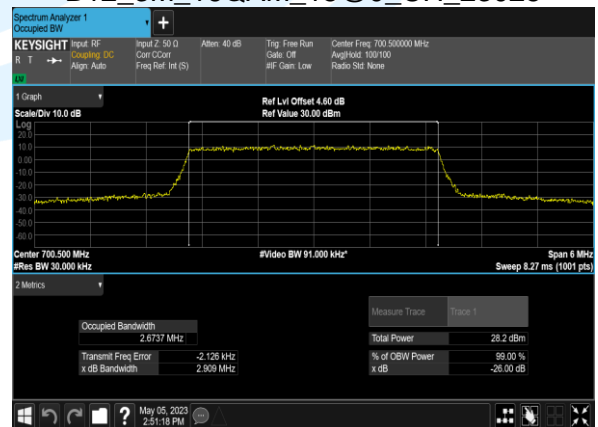
B12\_5M\_16QAM\_25@0\_CH\_23155



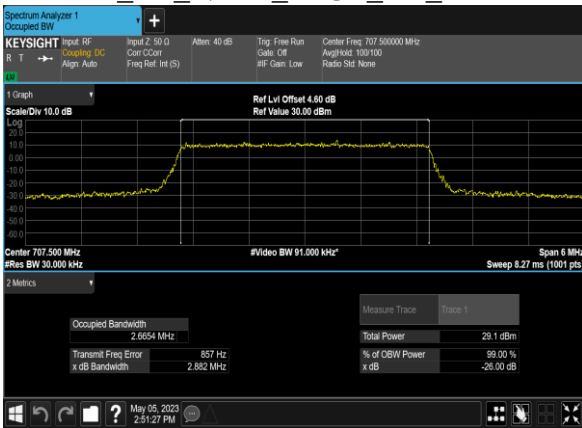
B12\_3M\_QPSK\_15@0\_CH\_23025



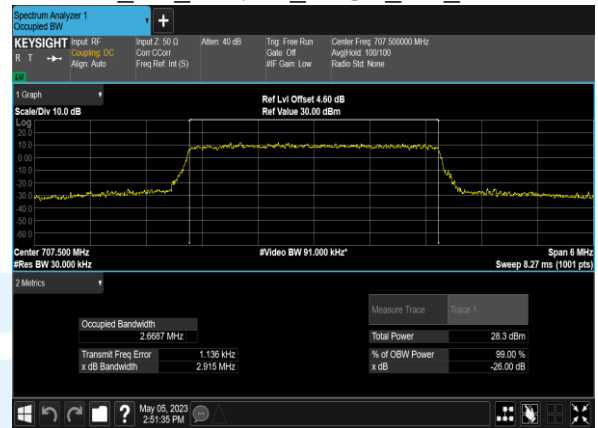
B12\_3M\_16QAM\_15@0\_CH\_23025



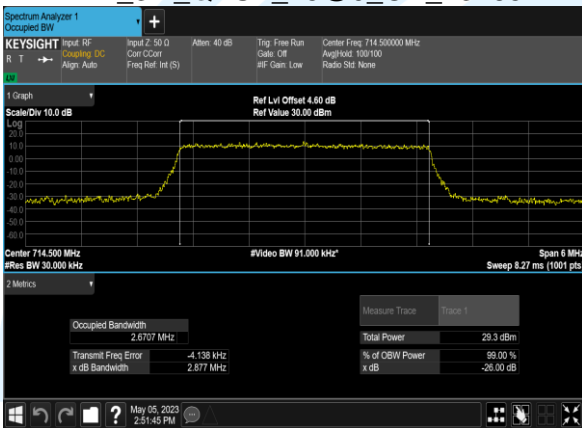
B12\_3M\_QPSK\_15@0\_CH\_23095



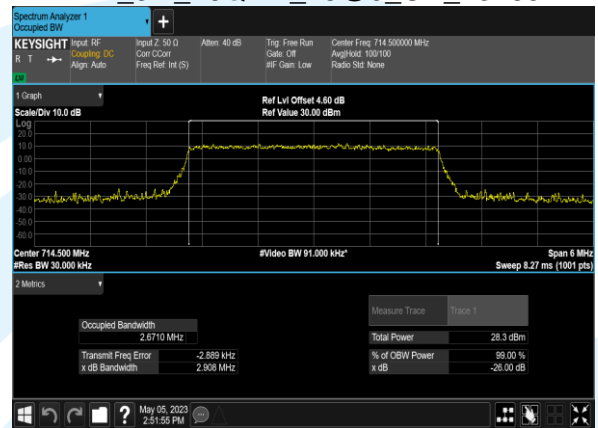
B12\_3M\_16QAM\_15@0\_CH\_23095



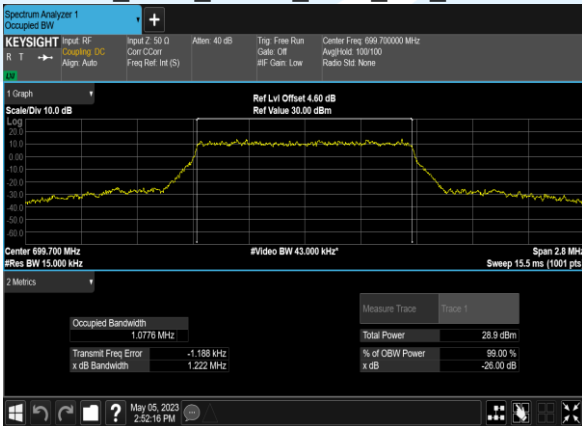
B12\_3M\_QPSK\_15@0\_CH\_23165



B12\_3M\_16QAM\_15@0\_CH\_23165



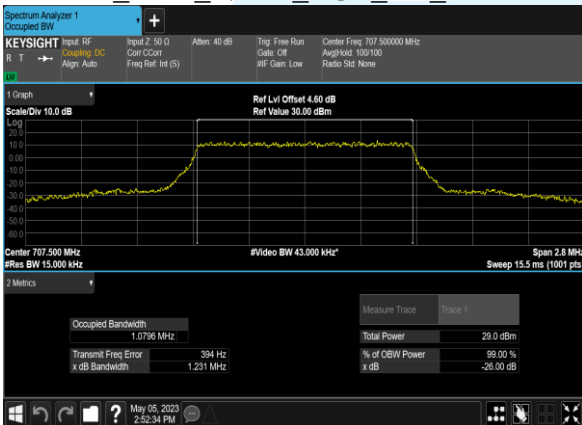
B12\_1.4M\_QPSK\_6@0\_CH\_23017



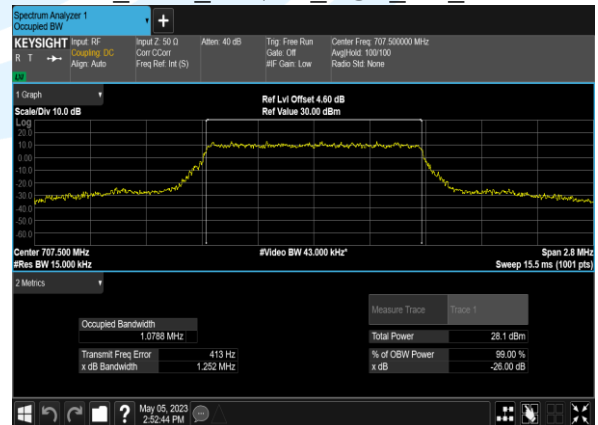
B12\_1.4M\_16QAM\_6@0\_CH\_23017



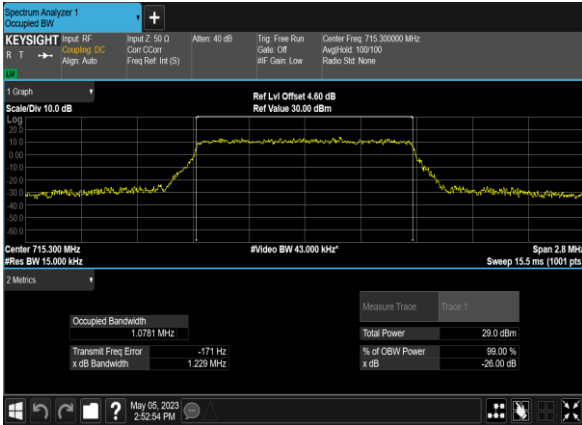
B12\_1.4M\_QPSK\_6@0\_CH\_23095



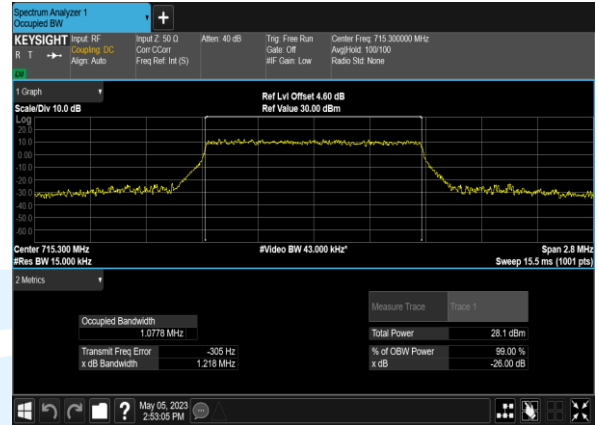
B12\_1.4M\_16QAM\_6@0\_CH\_23095



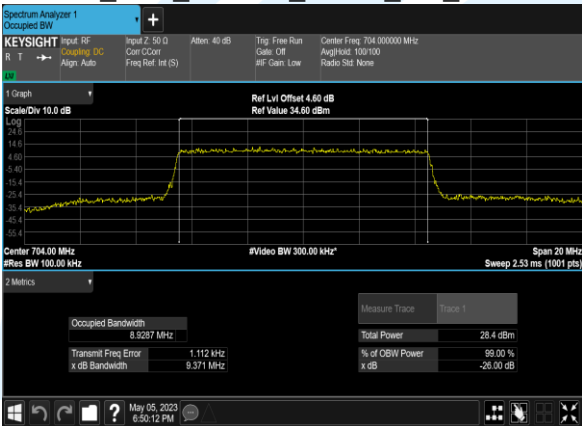
B12\_1.4M\_QPSK\_6@0\_CH\_23173



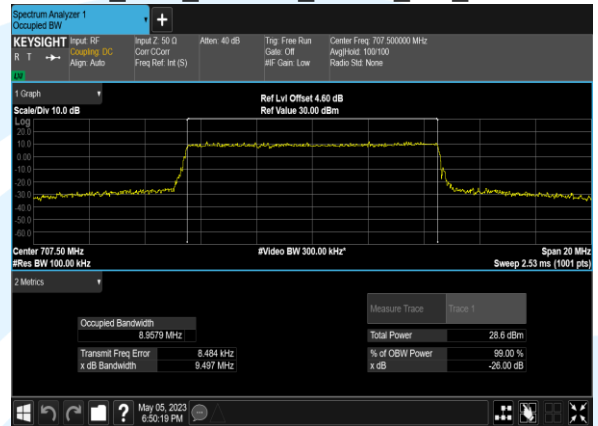
B12\_1.4M\_16QAM\_6@0\_CH\_23173



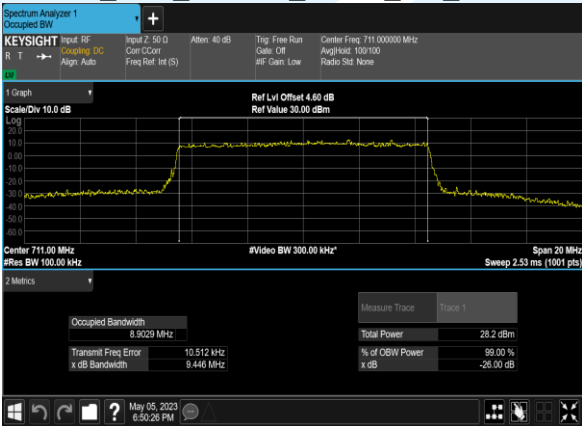
B12\_10M\_64QAM\_50@0\_CH\_23060



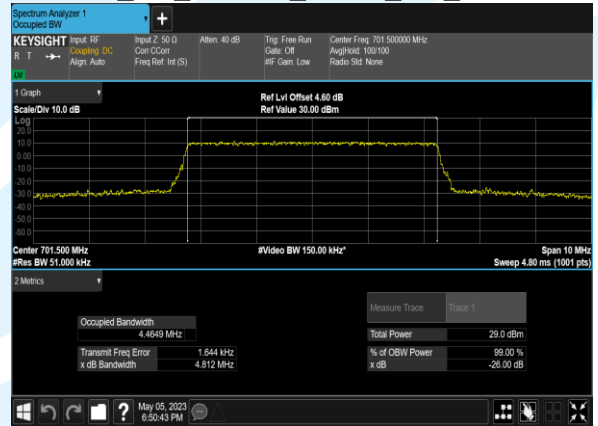
B12\_10M\_64QAM\_50@0\_CH\_23095



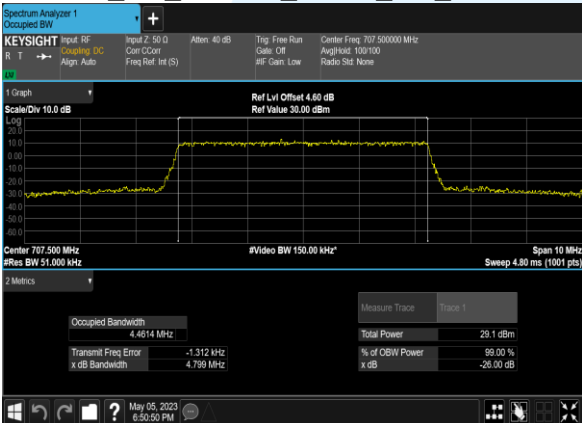
B12\_10M\_64QAM\_50@0\_CH\_23130



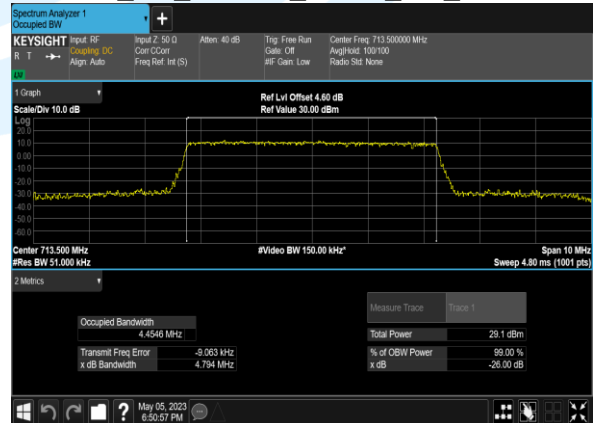
B12\_5M\_64QAM\_25@0\_CH\_23035



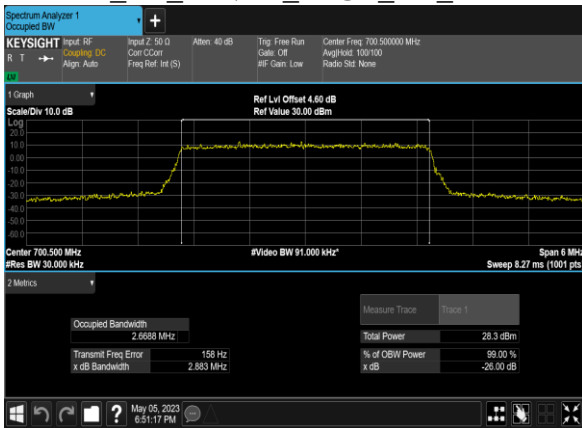
B12\_5M\_64QAM\_25@0\_CH\_23095



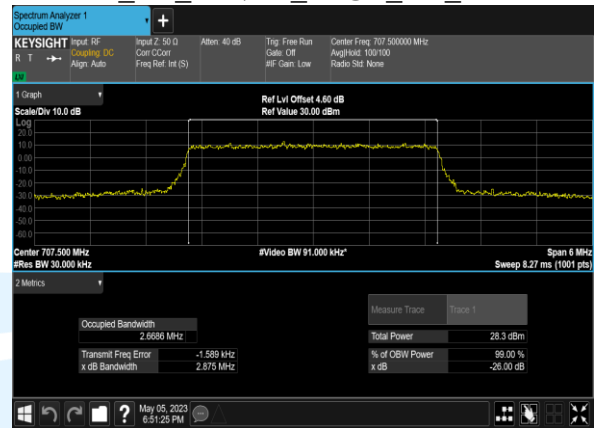
B12\_5M\_64QAM\_25@0\_CH\_23155



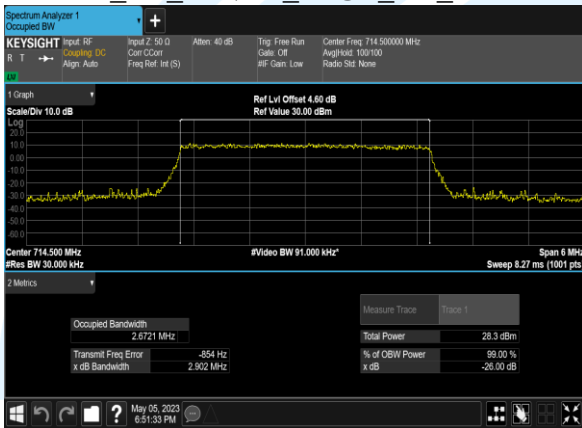
B12\_3M\_64QAM\_15@0\_CH\_23025



B12\_3M\_64QAM\_15@0\_CH\_23095



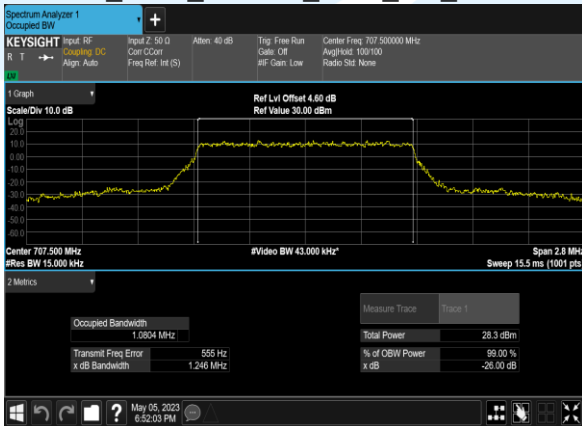
B12\_3M\_64QAM\_15@0\_CH\_23165



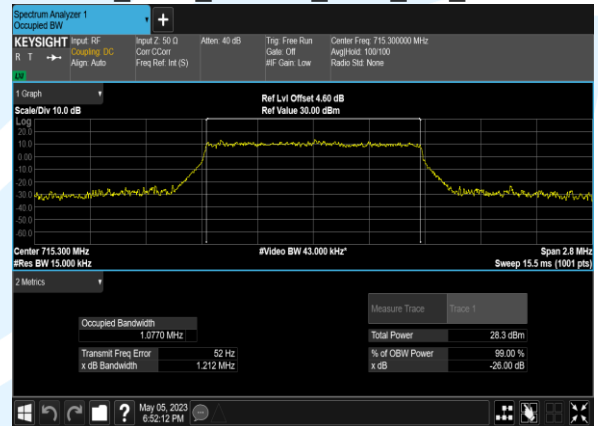
B12\_1.4M\_64QAM\_6@0\_CH\_23017



B12\_1.4M\_64QAM\_6@0\_CH\_23095



B12\_1.4M\_64QAM\_6@0\_CH\_23173



**Conducted Spurious Emissions**

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dBm)	Limit (dBm)	Verdict
12	10.0	23060	704.0	QPSK	1@0	-31.32	-13	PASS
12	10.0	23060	704.0	16QAM	1@0	-31.25	-13	PASS
12	10.0	23095	707.5	QPSK	1@0	-31.48	-13	PASS
12	10.0	23095	707.5	16QAM	1@0	-31.21	-13	PASS
12	10.0	23130	711.0	QPSK	1@0	-31.21	-13	PASS
12	10.0	23130	711.0	16QAM	1@0	-29.09	-13	PASS
12	5.0	23035	701.5	QPSK	1@0	-30.81	-13	PASS
12	5.0	23035	701.5	16QAM	1@0	-31.44	-13	PASS
12	5.0	23095	707.5	QPSK	1@0	-31.03	-13	PASS
12	5.0	23095	707.5	16QAM	1@0	-30.96	-13	PASS
12	5.0	23155	713.5	QPSK	1@0	-30.71	-13	PASS
12	5.0	23155	713.5	16QAM	1@0	-31.65	-13	PASS
12	3.0	23025	700.5	QPSK	1@0	-29.5	-13	PASS
12	3.0	23025	700.5	16QAM	1@0	-30.85	-13	PASS
12	3.0	23095	707.5	QPSK	1@0	-30.84	-13	PASS
12	3.0	23095	707.5	16QAM	1@0	-30.1	-13	PASS
12	3.0	23165	714.5	QPSK	1@0	-31.14	-13	PASS
12	3.0	23165	714.5	16QAM	1@0	-31.46	-13	PASS
12	1.4	23017	699.7	QPSK	1@0	-30.73	-13	PASS
12	1.4	23017	699.7	16QAM	1@0	-31.41	-13	PASS
12	1.4	23095	707.5	QPSK	1@0	-30.62	-13	PASS
12	1.4	23095	707.5	16QAM	1@0	-30.75	-13	PASS
12	1.4	23173	715.3	QPSK	1@0	-30.98	-13	PASS
12	1.4	23173	715.3	16QAM	1@0	-30.95	-13	PASS

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dBm)	Limit (dBm)	Verdict
12	10.0	23060	704.0	64QAM	1@0	-30.32	-13	PASS
12	10.0	23095	707.5	64QAM	1@0	-31.05	-13	PASS
12	10.0	23130	711.0	64QAM	1@0	-31.47	-13	PASS
12	5.0	23035	701.5	64QAM	1@0	-31.31	-13	PASS
12	5.0	23095	707.5	64QAM	1@0	-30.77	-13	PASS
12	5.0	23155	713.5	64QAM	1@0	-31.12	-13	PASS
12	3.0	23025	700.5	64QAM	1@0	-30.93	-13	PASS
12	3.0	23095	707.5	64QAM	1@0	-31.15	-13	PASS
12	3.0	23165	714.5	64QAM	1@0	-31.2	-13	PASS
12	1.4	23017	699.7	64QAM	1@0	-31.59	-13	PASS
12	1.4	23095	707.5	64QAM	1@0	-30.7	-13	PASS
12	1.4	23173	715.3	64QAM	1@0	-31.12	-13	PASS