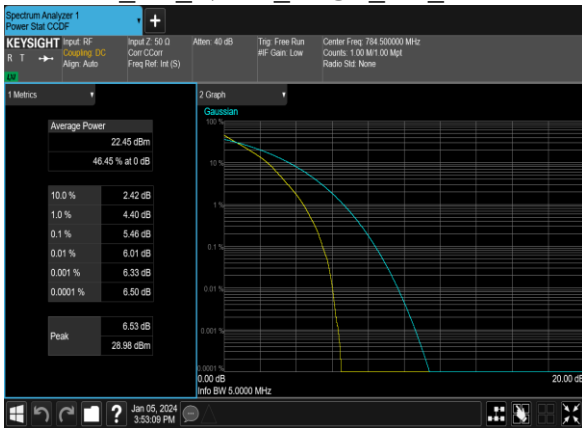


B13\_5M\_QPSK\_25@0\_CH\_23255



B13\_5M\_16QAM\_25@0\_CH\_23255

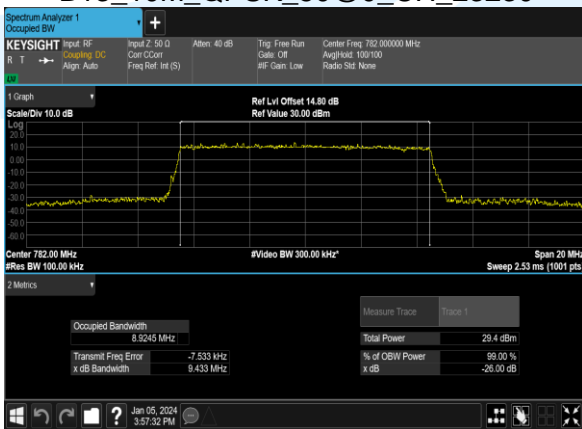


### Occupied Bandwidth

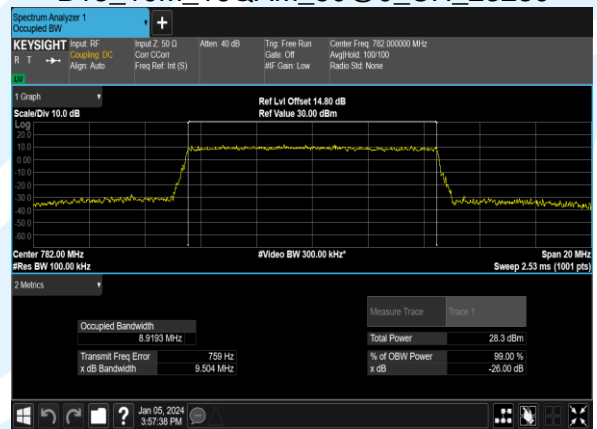
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
13	10.0	23230	782.0	QPSK	50@0	8.9245	9.433
13	10.0	23230	782.0	16QAM	50@0	8.9193	9.504
13	5.0	23205	779.5	QPSK	25@0	4.4574	4.736
13	5.0	23205	779.5	16QAM	25@0	4.4547	4.781
13	5.0	23230	782.0	QPSK	25@0	4.4495	4.803
13	5.0	23230	782.0	16QAM	25@0	4.4562	4.759
13	5.0	23255	784.5	QPSK	25@0	4.4851	4.807
13	5.0	23255	784.5	16QAM	25@0	4.4635	4.800

### Test Graphs

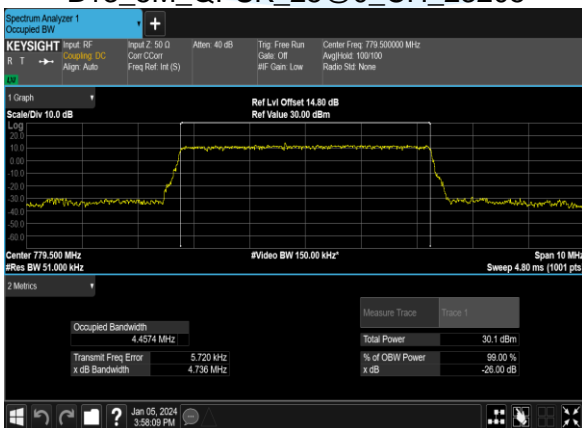
B13\_10M\_QPSK\_50@0\_CH\_23230



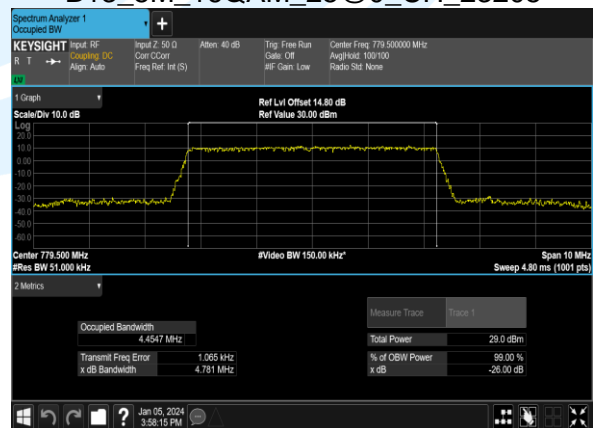
B13\_10M\_16QAM\_50@0\_CH\_23230



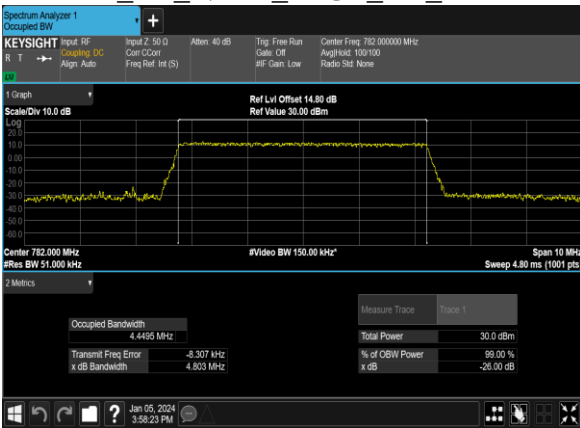
B13\_5M\_QPSK\_25@0\_CH\_23205



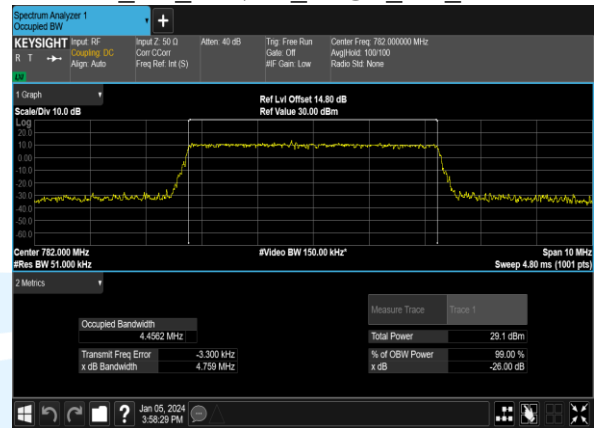
B13\_5M\_16QAM\_25@0\_CH\_23205



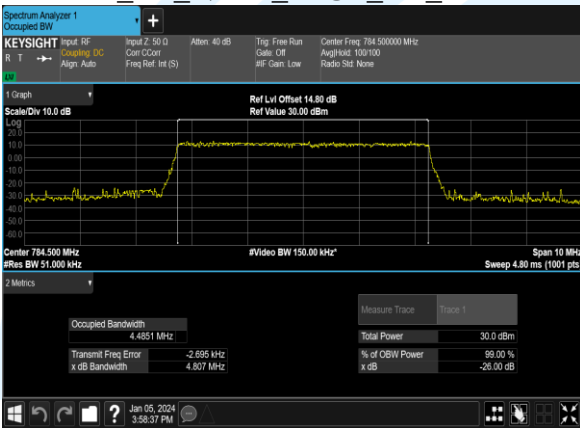
B13\_5M\_QPSK\_25@0\_CH\_23230



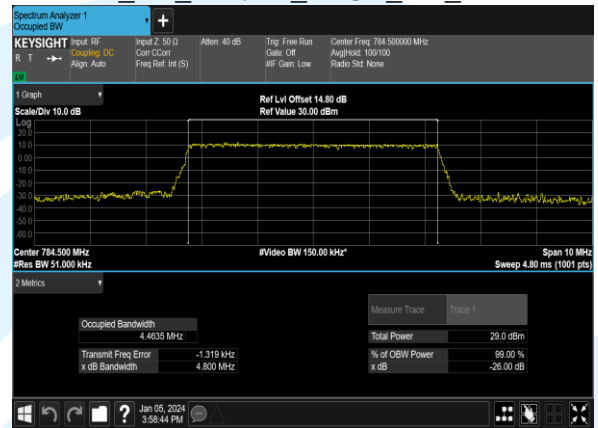
B13\_5M\_16QAM\_25@0\_CH\_23230



B13\_5M\_QPSK\_25@0\_CH\_23255



B13\_5M\_16QAM\_25@0\_CH\_23255



### Conducted Spurious Emissions

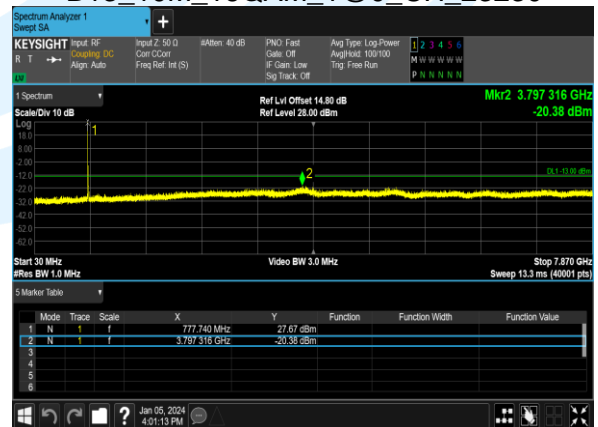
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dBm)	Limit (dBm)	Verdict
13	10.0	23230	782.0	QPSK	1@0	-21.28	-13	PASS
13	10.0	23230	782.0	16QAM	1@0	-20.38	-13	PASS
13	5.0	23205	779.5	QPSK	1@0	-21.17	-13	PASS
13	5.0	23205	779.5	16QAM	1@0	-20.22	-13	PASS
13	5.0	23230	782.0	QPSK	1@0	-20.9	-13	PASS
13	5.0	23230	782.0	16QAM	1@0	-21.26	-13	PASS
13	5.0	23255	784.5	QPSK	1@0	-21.02	-13	PASS
13	5.0	23255	784.5	16QAM	1@0	-21.43	-13	PASS

### Test Graphs

B13\_10M\_QPSK\_1@0\_CH\_23230



B13\_10M\_16QAM\_1@0\_CH\_23230



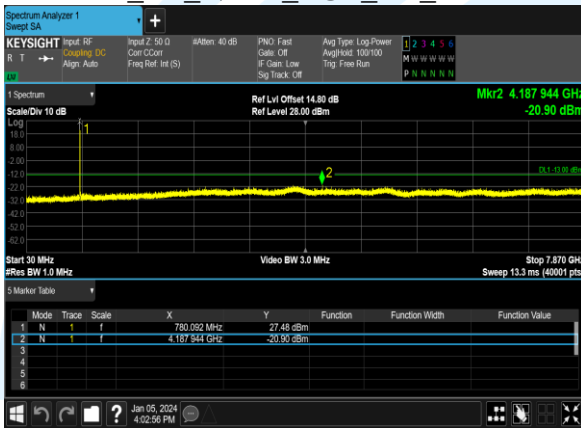
B13\_5M\_QPSK\_1@0\_CH\_23205



B13\_5M\_16QAM\_1@0\_CH\_23205



B13\_5M\_QPSK\_1@0\_CH\_23230



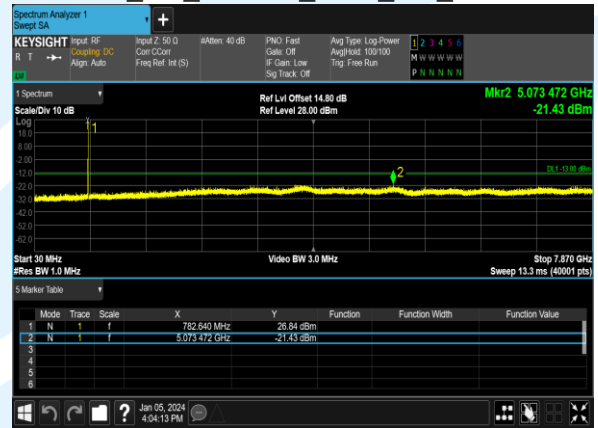
B13\_5M\_16QAM\_1@0\_CH\_23230



B13\_5M\_QPSK\_1@0\_CH\_23255



B13\_5M\_16QAM\_1@0\_CH\_23255



## Conducted Band Edge

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result	Verdict
13	10.0	23230	782.0	QPSK	1@0	see graph	PASS
13	10.0	23230	782.0	QPSK	1@49	see graph	PASS
13	10.0	23230	782.0	QPSK	50@0	see graph	PASS
13	10.0	23230	782.0	16QAM	1@0	see graph	PASS
13	10.0	23230	782.0	16QAM	1@49	see graph	PASS
13	10.0	23230	782.0	16QAM	50@0	see graph	PASS
13	5.0	23205	779.5	QPSK	1@0	see graph	PASS
13	5.0	23205	779.5	QPSK	25@0	see graph	PASS
13	5.0	23205	779.5	16QAM	1@0	see graph	PASS
13	5.0	23205	779.5	16QAM	25@0	see graph	PASS
13	5.0	23255	784.5	QPSK	1@24	see graph	PASS
13	5.0	23255	784.5	QPSK	25@0	see graph	PASS
13	5.0	23255	784.5	16QAM	1@24	see graph	PASS
13	5.0	23255	784.5	16QAM	25@0	see graph	PASS

## Test Graphs

B13\_10M\_QPSK\_50@0\_CH\_23230



Date: 4\_JAN\_2024 03:37:48

B13\_10M\_QPSK\_1@0\_CH\_23230



Date: 4\_JAN\_2024 03:35:33

B13\_10M\_QPSK\_1@49\_CH\_23230



Date: 4\_JAN\_2024 03:33:17

B13\_10M\_16QAM\_50@0\_CH\_23230



Date: 4\_JAN\_2024 03:37:12

## 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

B13\_10M\_16QAM\_1@0\_CH\_23230



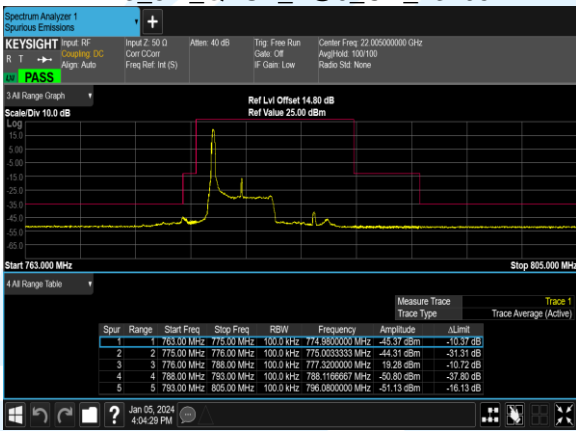
Date: 4, JAN, 2024 03:36:09

B13\_10M\_16QAM\_1@49\_CH\_23230



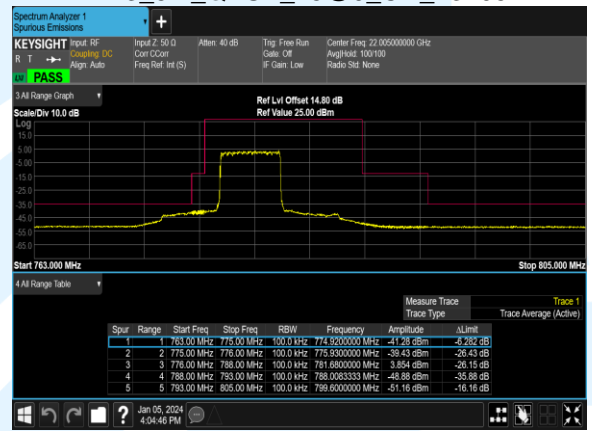
Date: 4, JAN, 2024 03:31:31

B13\_5M\_QPSK\_1@0\_CH\_23205



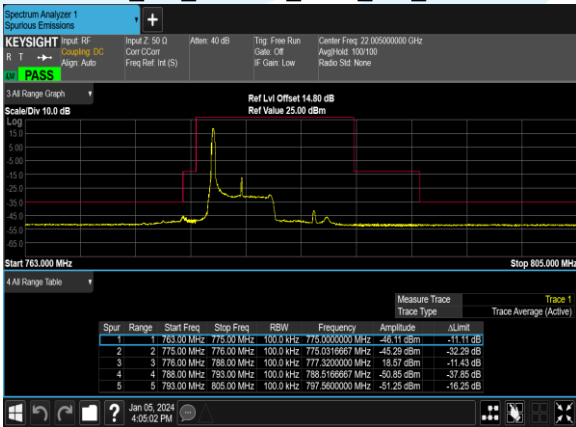
Jan 05, 2024 4:04:29 PM

B13\_5M\_QPSK\_25@0\_CH\_23205



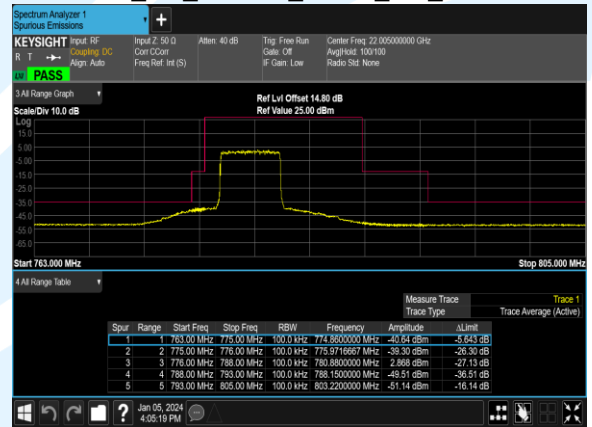
Jan 05, 2024 4:04:46 PM

B13\_5M\_16QAM\_1@0\_CH\_23205



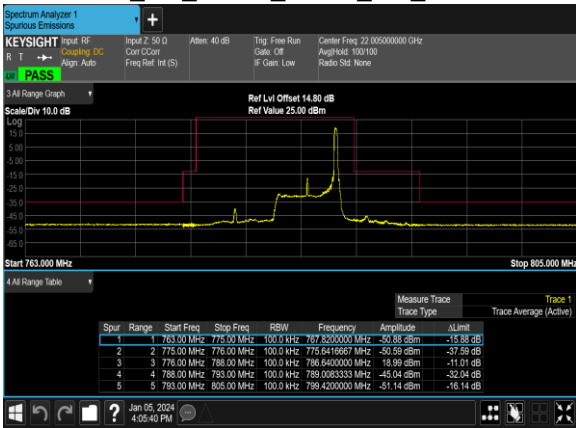
Jan 05, 2024 4:06:02 PM

B13\_5M\_16QAM\_25@0\_CH\_23205

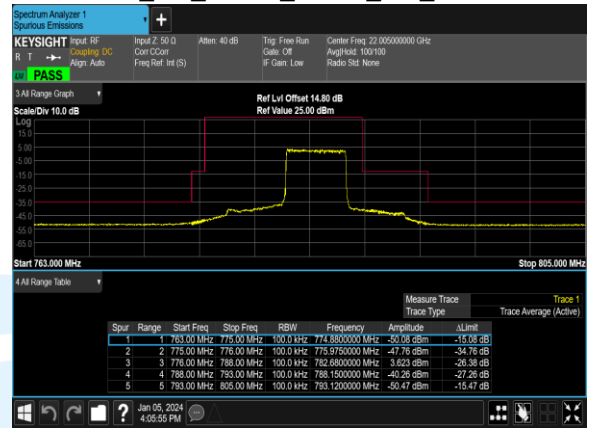


Jan 05, 2024 4:06:19 PM

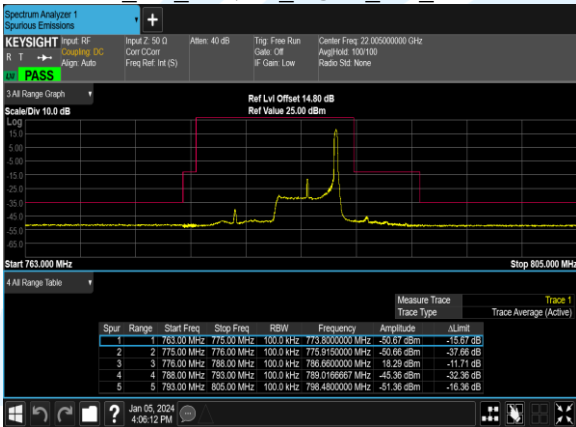
B13\_5M\_QPSK\_1@24\_CH\_23255



B13\_5M\_QPSK\_25@0\_CH\_23255



B13\_5M\_16QAM\_1@24\_CH\_23255



B13\_5M\_16QAM\_25@0\_CH\_23255



## A.7 LTE BAND 17

### Peak to Average Ratio

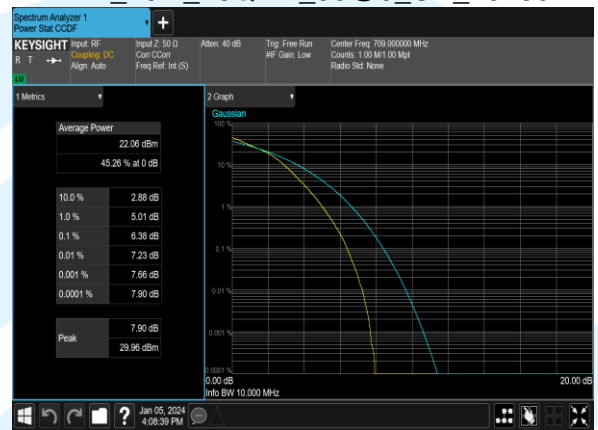
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
17	10.0	23780	709.0	QPSK	50@0	5.58	13	PASS
17	10.0	23780	709.0	16QAM	50@0	6.38	13	PASS
17	10.0	23790	710.0	QPSK	50@0	5.58	13	PASS
17	10.0	23790	710.0	16QAM	50@0	6.37	13	PASS
17	10.0	23800	711.0	QPSK	50@0	5.63	13	PASS
17	10.0	23800	711.0	16QAM	50@0	6.39	13	PASS
17	5.0	23755	706.5	QPSK	25@0	5.87	13	PASS
17	5.0	23755	706.5	16QAM	25@0	6.46	13	PASS
17	5.0	23790	710.0	QPSK	25@0	5.66	13	PASS
17	5.0	23790	710.0	16QAM	25@0	6.36	13	PASS
17	5.0	23825	713.5	QPSK	25@0	5.80	13	PASS
17	5.0	23825	713.5	16QAM	25@0	6.45	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



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



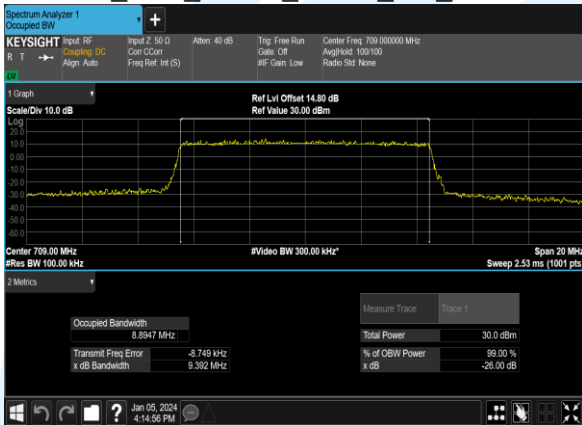


## Occupied Bandwidth

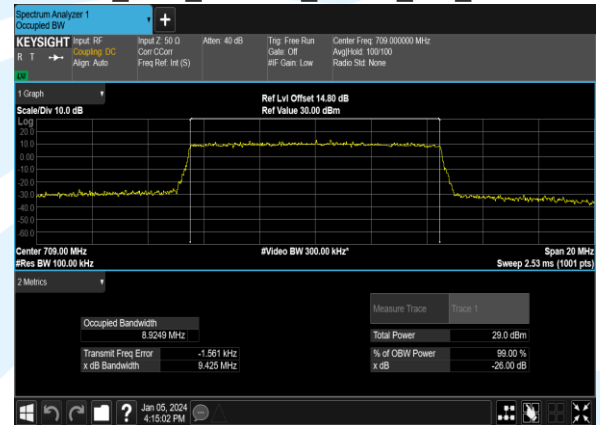
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	OBW (MHz)	26dB BW (MHz)
17	10.0	23780	709.0	QPSK	50@0	8.8947	9.392
17	10.0	23780	709.0	16QAM	50@0	8.9249	9.425
17	10.0	23790	710.0	QPSK	50@0	8.9161	9.521
17	10.0	23790	710.0	16QAM	50@0	8.9102	9.435
17	10.0	23800	711.0	QPSK	50@0	8.9280	9.516
17	10.0	23800	711.0	16QAM	50@0	8.9214	9.449
17	5.0	23755	706.5	QPSK	25@0	4.4557	4.806
17	5.0	23755	706.5	16QAM	25@0	4.4633	4.795
17	5.0	23790	710.0	QPSK	25@0	4.4644	4.807
17	5.0	23790	710.0	16QAM	25@0	4.4584	4.753
17	5.0	23825	713.5	QPSK	25@0	4.4808	4.788
17	5.0	23825	713.5	16QAM	25@0	4.4657	4.765

## Test Graphs

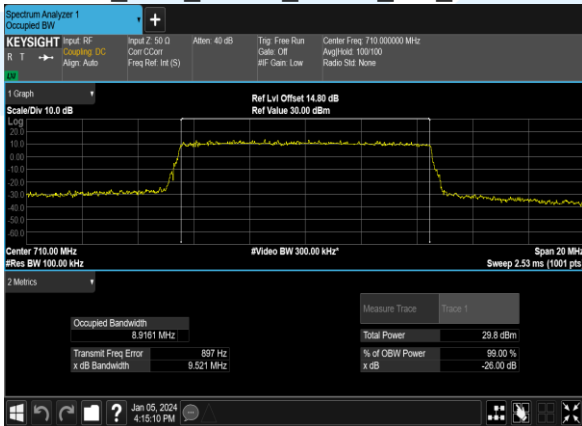
B17\_10M\_QPSK\_50@0\_CH\_23780



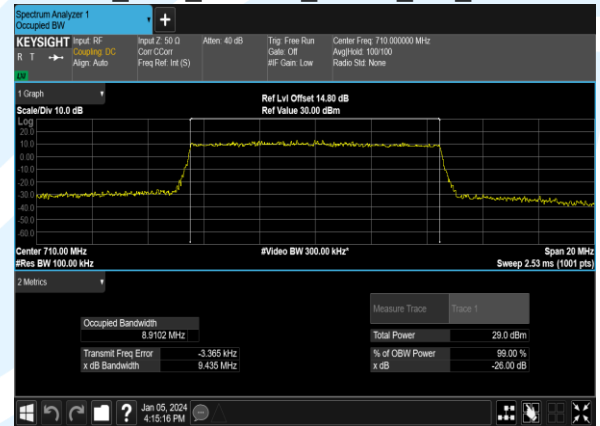
B17\_10M\_16QAM\_50@0\_CH\_23780



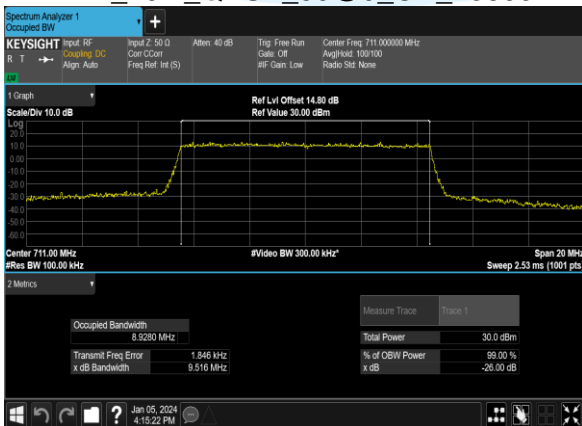
B17\_10M\_QPSK\_50@0\_CH\_23790



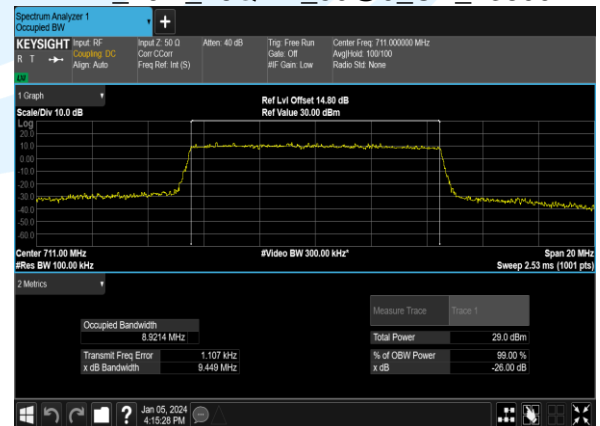
B17\_10M\_16QAM\_50@0\_CH\_23790



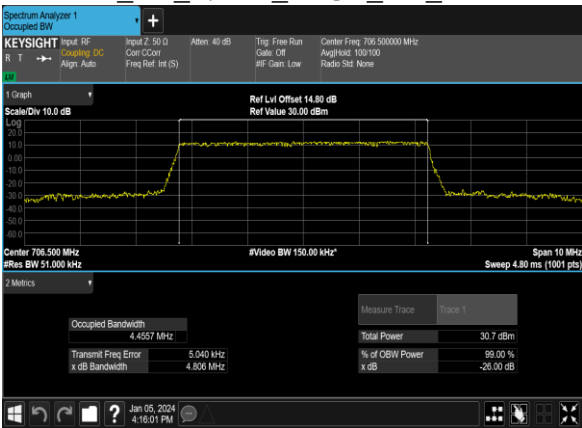
B17\_10M\_QPSK\_50@0\_CH\_23800



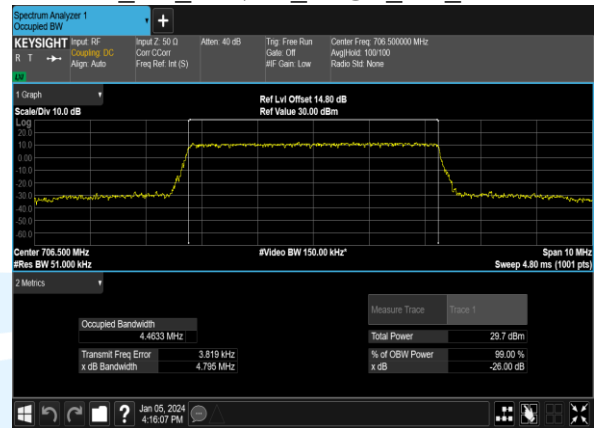
B17\_10M\_16QAM\_50@0\_CH\_23800



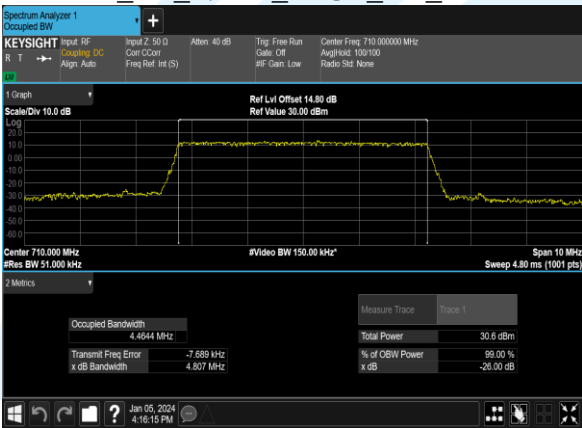
B17\_5M\_QPSK\_25@0\_CH\_23755



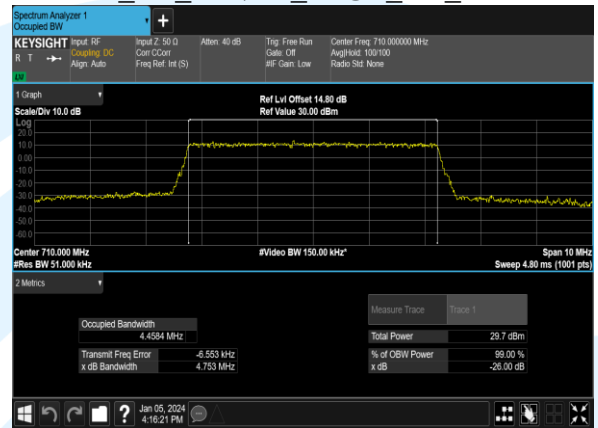
B17\_5M\_16QAM\_25@0\_CH\_23755



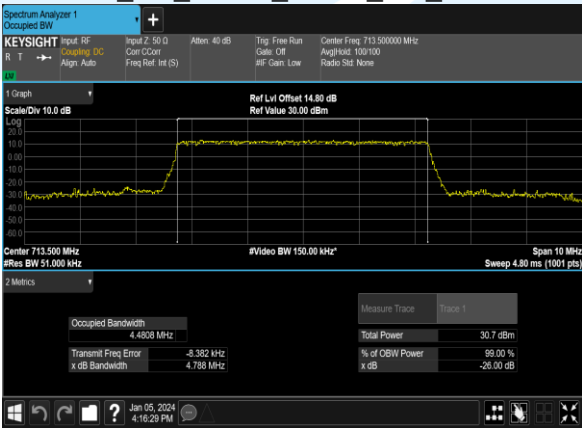
B17\_5M\_QPSK\_25@0\_CH\_23790



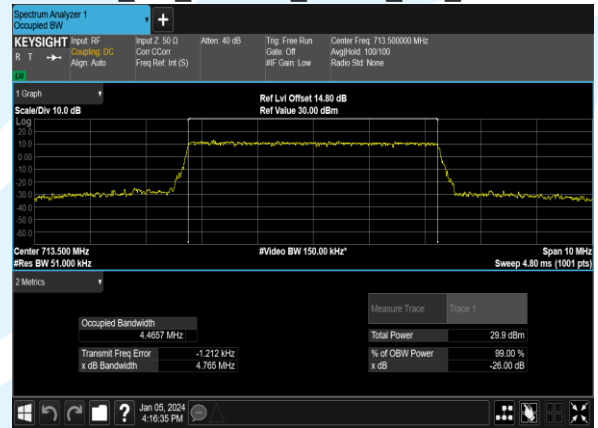
B17\_5M\_16QAM\_25@0\_CH\_23790



B17\_5M\_QPSK\_25@0\_CH\_23825



B17\_5M\_16QAM\_25@0\_CH\_23825

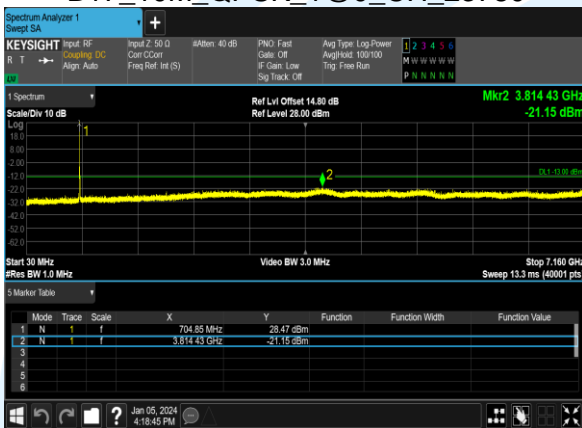


## Conducted Spurious Emissions

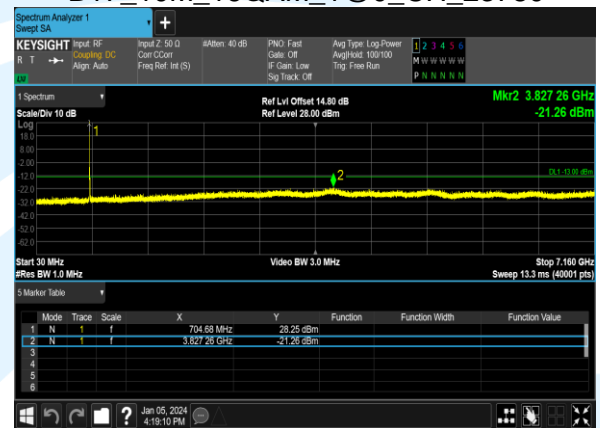
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dBm)	Limit (dBm)	Verdict
17	10.0	23780	709.0	QPSK	1@0	-21.15	-13	PASS
17	10.0	23780	709.0	16QAM	1@0	-21.26	-13	PASS
17	10.0	23790	710.0	QPSK	1@0	-20.88	-13	PASS
17	10.0	23790	710.0	16QAM	1@0	-21.14	-13	PASS
17	10.0	23800	711.0	QPSK	1@0	-20.91	-13	PASS
17	10.0	23800	711.0	16QAM	1@0	-21.57	-13	PASS
17	5.0	23755	706.5	QPSK	1@0	-21.22	-13	PASS
17	5.0	23755	706.5	16QAM	1@0	-21.29	-13	PASS
17	5.0	23790	710.0	QPSK	1@0	-21.41	-13	PASS
17	5.0	23790	710.0	16QAM	1@0	-20.63	-13	PASS
17	5.0	23825	713.5	QPSK	1@0	-20.85	-13	PASS
17	5.0	23825	713.5	16QAM	1@0	-21.27	-13	PASS

## Test Graphs

B17\_10M\_QPSK\_1@0\_CH\_23780



B17\_10M\_16QAM\_1@0\_CH\_23780



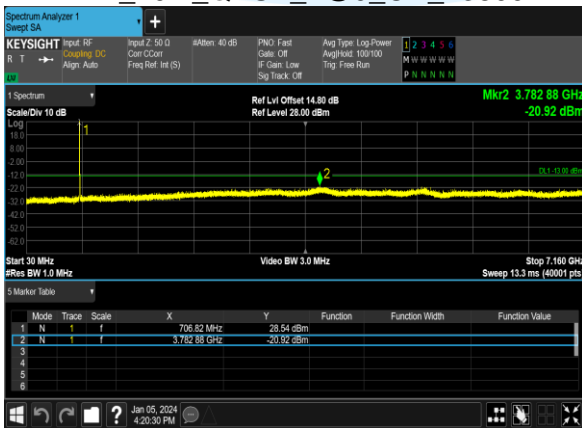
B17\_10M\_QPSK\_1@0\_CH\_23790



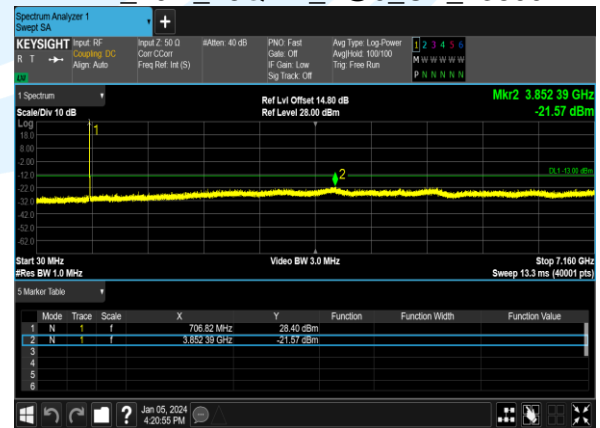
B17\_10M\_16QAM\_1@0\_CH\_23790



B17\_10M\_QPSK\_1@0\_CH\_23800



B17\_10M\_16QAM\_1@0\_CH\_23800



## 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

B17\_5M\_QPSK\_1@0\_CH\_23755



B17\_5M\_16QAM\_1@0\_CH\_23755



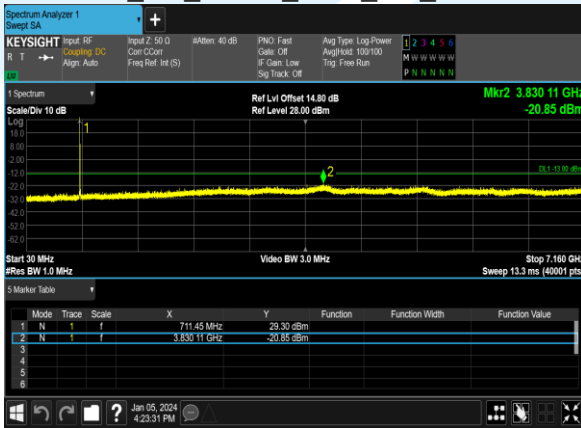
B17\_5M\_QPSK\_1@0\_CH\_23790



B17\_5M\_16QAM\_1@0\_CH\_23790



B17\_5M\_QPSK\_1@0\_CH\_23825



B17\_5M\_16QAM\_1@0\_CH\_23825

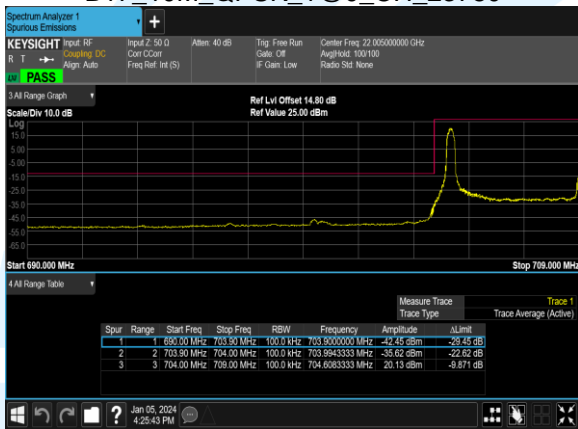


## Conducted Band Edge

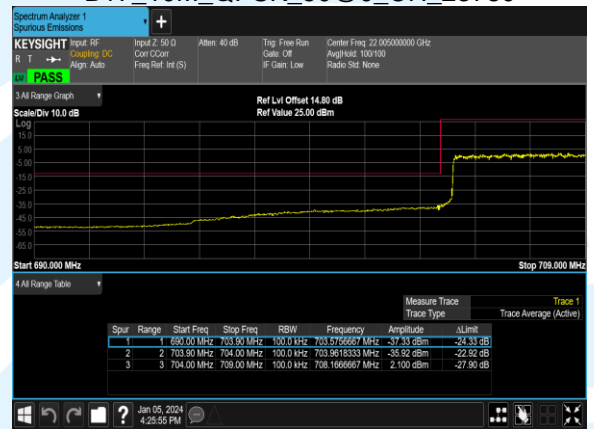
Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result	Verdict
17	10.0	23780	709.0	QPSK	1@0	see graph	PASS
17	10.0	23780	709.0	QPSK	50@0	see graph	PASS
17	10.0	23780	709.0	16QAM	1@0	see graph	PASS
17	10.0	23780	709.0	16QAM	50@0	see graph	PASS
17	10.0	23800	711.0	QPSK	1@49	see graph	PASS
17	10.0	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	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	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

## Test Graphs

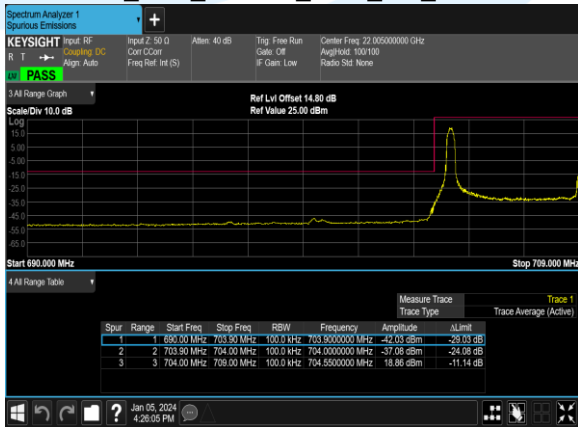
B17\_10M\_QPSK\_1@0\_CH\_23780



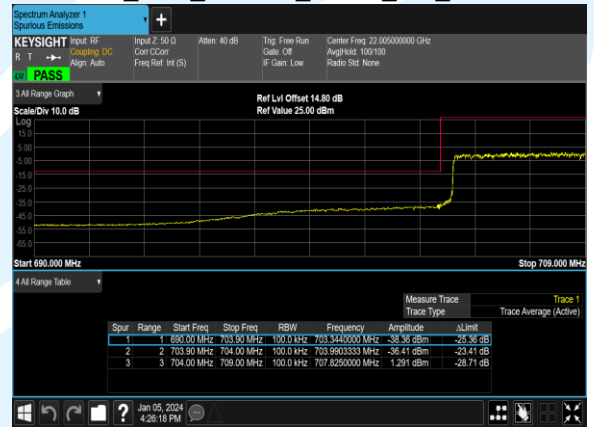
B17\_10M\_QPSK\_50@0\_CH\_23780



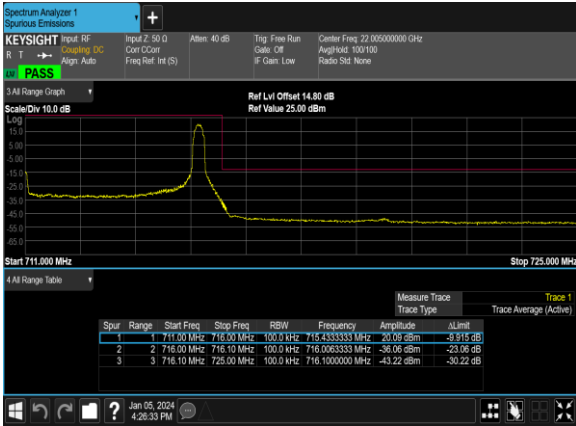
B17\_10M\_16QAM\_1@0\_CH\_23780



B17\_10M\_16QAM\_50@0\_CH\_23780



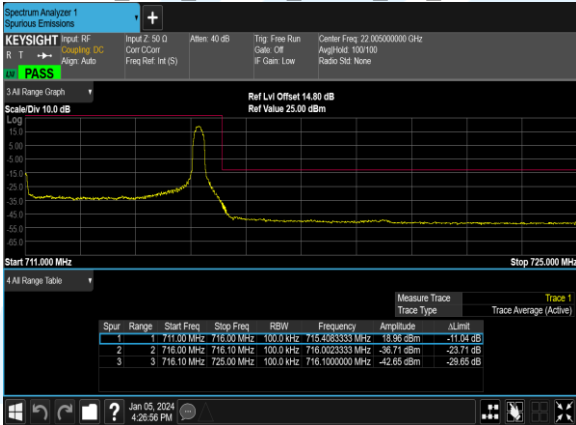
B17\_10M\_QPSK\_1@49\_CH\_23800



B17\_10M\_QPSK\_50@0\_CH\_23800



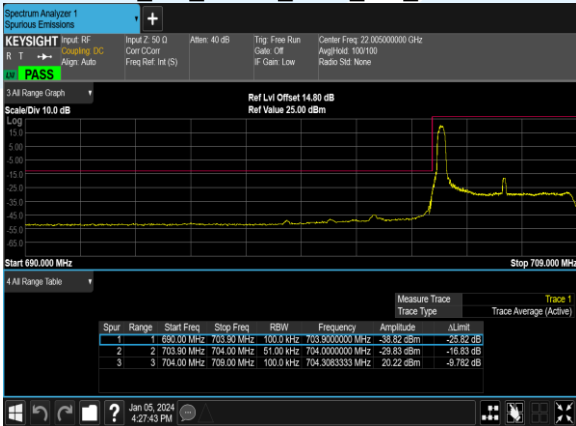
B17\_10M\_16QAM\_1@49\_CH\_23800



B17\_10M\_16QAM\_50@0\_CH\_23800



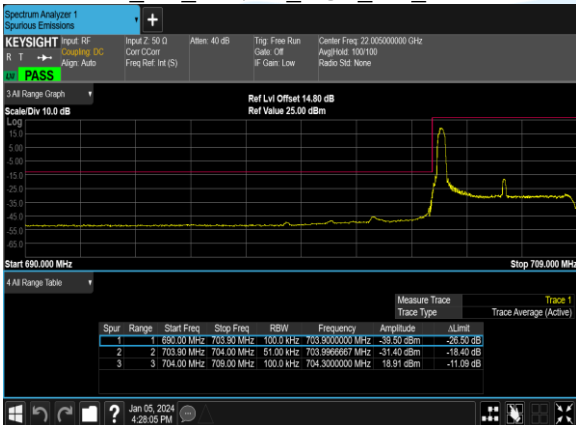
B17\_5M\_QPSK\_1@0\_CH\_23755



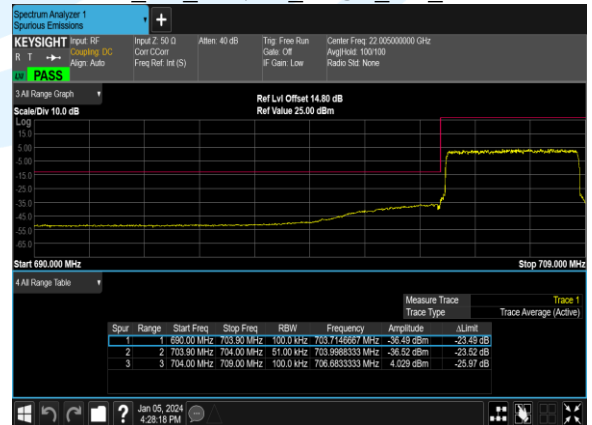
B17\_5M\_QPSK\_25@0\_CH\_23755



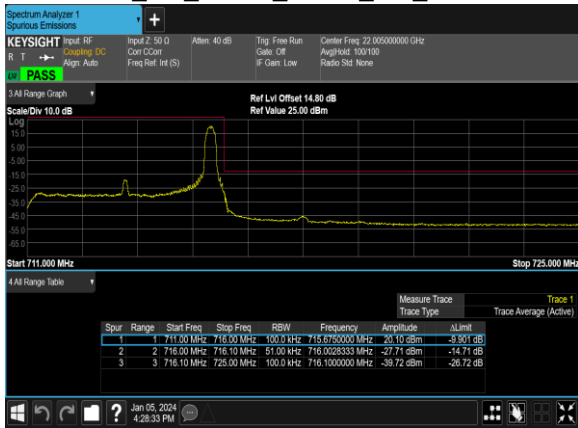
B17\_5M\_16QAM\_1@0\_CH\_23755



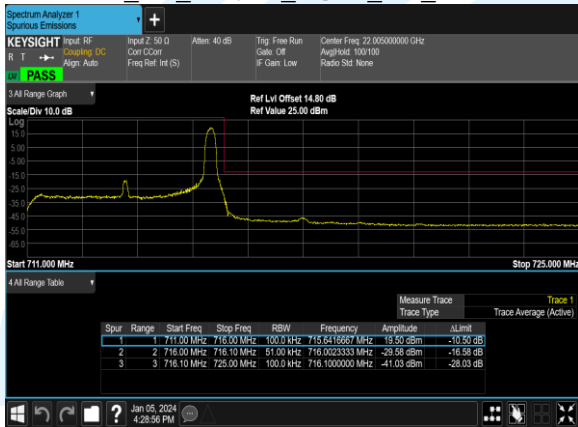
B17\_5M\_16QAM\_25@0\_CH\_23755



B17\_5M\_QPSK\_1@24\_CH\_23825



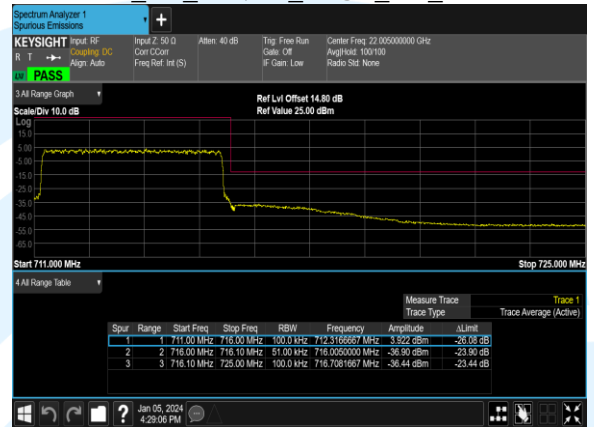
B17\_5M\_16QAM\_1@24\_CH\_23825



B17\_5M\_QPSK\_25@0\_CH\_23825



B17\_5M\_16QAM\_25@0\_CH\_23825



### A.8 LTE BAND 25

#### Peak to Average Ratio

Band	Bandwidth (MHz)	Channel	Freq (MHz)	Modulation	RB	Result (dB)	Limit (dB)	Verdict
25	20.0	26140	1860.0	QPSK	100@0	5.76	13	PASS
25	20.0	26140	1860.0	16QAM	100@0	6.50	13	PASS
25	20.0	26365	1882.5	QPSK	100@0	5.72	13	PASS
25	20.0	26365	1882.5	16QAM	100@0	6.51	13	PASS
25	20.0	26590	1905.0	QPSK	100@0	5.71	13	PASS
25	20.0	26590	1905.0	16QAM	100@0	6.44	13	PASS
25	15.0	26115	1857.5	QPSK	75@0	5.57	13	PASS
25	15.0	26115	1857.5	16QAM	75@0	6.34	13	PASS
25	15.0	26365	1882.5	QPSK	75@0	5.58	13	PASS
25	15.0	26365	1882.5	16QAM	75@0	6.34	13	PASS
25	15.0	26615	1907.5	QPSK	75@0	5.53	13	PASS
25	15.0	26615	1907.5	16QAM	75@0	6.29	13	PASS
25	10.0	26090	1855.0	QPSK	50@0	5.67	13	PASS
25	10.0	26090	1855.0	16QAM	50@0	6.48	13	PASS
25	10.0	26365	1882.5	QPSK	50@0	5.70	13	PASS
25	10.0	26365	1882.5	16QAM	50@0	6.51	13	PASS
25	10.0	26640	1910.0	QPSK	50@0	5.60	13	PASS
25	10.0	26640	1910.0	16QAM	50@0	6.42	13	PASS
25	5.0	26065	1852.5	QPSK	25@0	5.73	13	PASS
25	5.0	26065	1852.5	16QAM	25@0	6.41	13	PASS
25	5.0	26365	1882.5	QPSK	25@0	5.81	13	PASS
25	5.0	26365	1882.5	16QAM	25@0	6.49	13	PASS
25	5.0	26665	1912.5	QPSK	25@0	5.46	13	PASS
25	5.0	26665	1912.5	16QAM	25@0	6.23	13	PASS
25	3.0	26055	1851.5	QPSK	15@0	5.53	13	PASS
25	3.0	26055	1851.5	16QAM	15@0	6.44	13	PASS
25	3.0	26365	1882.5	QPSK	15@0	5.61	13	PASS
25	3.0	26365	1882.5	16QAM	15@0	6.48	13	PASS
25	3.0	26675	1913.5	QPSK	15@0	5.35	13	PASS
25	3.0	26675	1913.5	16QAM	15@0	6.13	13	PASS
25	1.4	26047	1850.7	QPSK	6@0	5.59	13	PASS
25	1.4	26047	1850.7	16QAM	6@0	6.38	13	PASS
25	1.4	26365	1882.5	QPSK	6@0	5.74	13	PASS
25	1.4	26365	1882.5	16QAM	6@0	6.47	13	PASS
25	1.4	26683	1914.3	QPSK	6@0	5.22	13	PASS
25	1.4	26683	1914.3	16QAM	6@0	6.03	13	PASS