

## Appendix for Band 13

Product Name: 4G Vehicle GPS Tracker

Model No: JM-VL01

### Appendix A: Average Power Output Data

#### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	23.71	PASS
Band13	5MHz	QPSK	23205	1RB#12	23.72	PASS
Band13	5MHz	QPSK	23205	1RB#24	23.75	PASS
Band13	5MHz	QPSK	23205	12RB#0	22.47	PASS
Band13	5MHz	QPSK	23205	12RB#6	22.52	PASS
Band13	5MHz	QPSK	23205	12RB#13	22.61	PASS
Band13	5MHz	QPSK	23205	25RB#0	22.67	PASS
Band13	5MHz	QPSK	23230	1RB#0	23.67	PASS
Band13	5MHz	QPSK	23230	1RB#12	23.62	PASS
Band13	5MHz	QPSK	23230	1RB#24	23.51	PASS
Band13	5MHz	QPSK	23230	12RB#0	22.57	PASS
Band13	5MHz	QPSK	23230	12RB#6	22.58	PASS
Band13	5MHz	QPSK	23230	12RB#13	22.62	PASS
Band13	5MHz	QPSK	23230	25RB#0	22.61	PASS
Band13	5MHz	QPSK	23255	1RB#0	23.82	PASS
Band13	5MHz	QPSK	23255	1RB#12	23.66	PASS
Band13	5MHz	QPSK	23255	1RB#24	23.73	PASS
Band13	5MHz	QPSK	23255	12RB#0	22.62	PASS
Band13	5MHz	QPSK	23255	12RB#6	22.61	PASS
Band13	5MHz	QPSK	23255	12RB#13	22.44	PASS
Band13	5MHz	QPSK	23255	25RB#0	22.63	PASS
Band13	5MHz	16QAM	23205	1RB#0	21.91	PASS
Band13	5MHz	16QAM	23205	1RB#12	22.05	PASS
Band13	5MHz	16QAM	23205	1RB#24	21.94	PASS
Band13	5MHz	16QAM	23205	12RB#0	21.38	PASS

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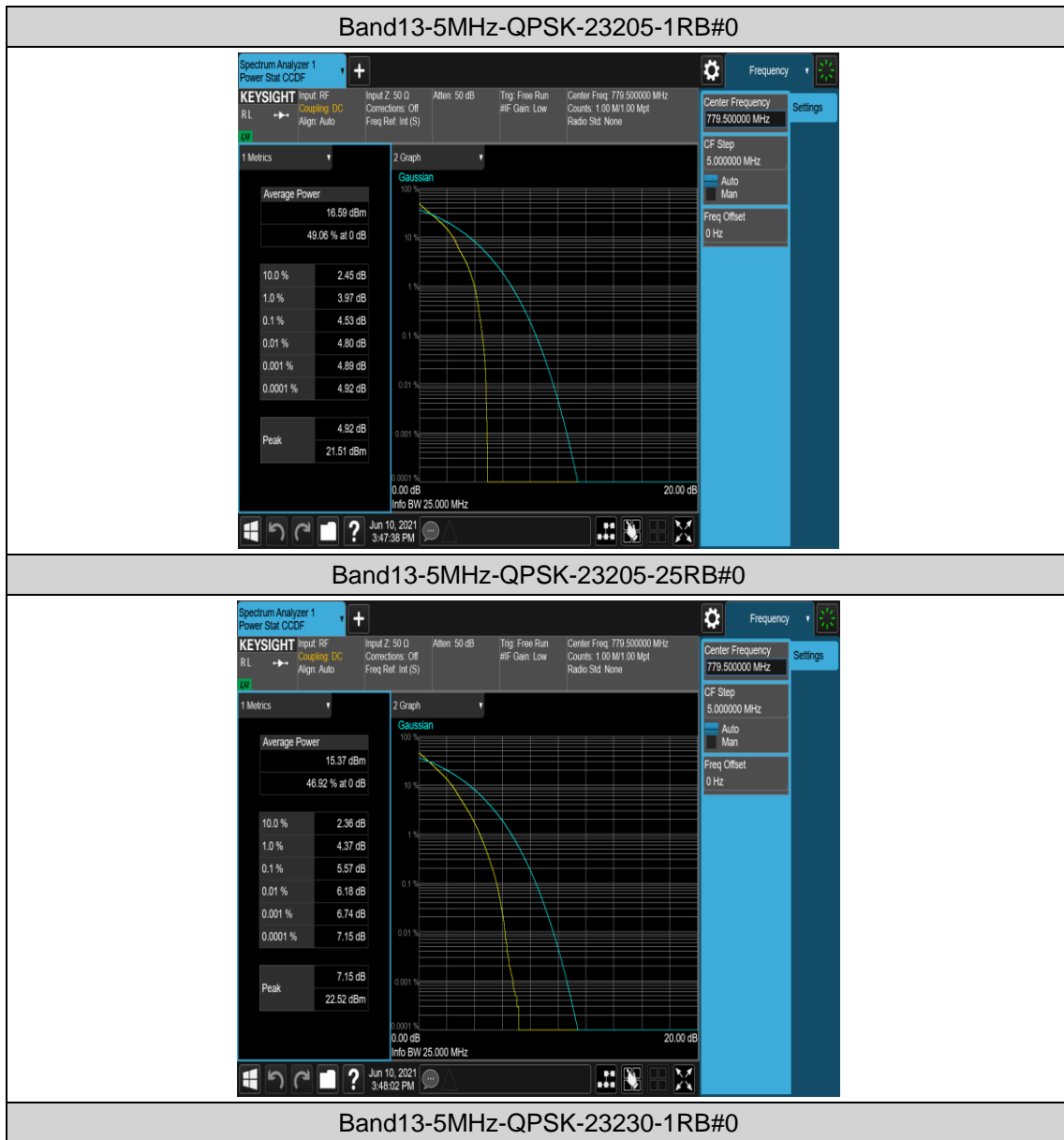
Band13	5MHz	16QAM	23205	12RB#6	21.39	PASS
Band13	5MHz	16QAM	23205	12RB#13	21.58	PASS
Band13	5MHz	16QAM	23205	25RB#0	21.66	PASS
Band13	5MHz	16QAM	23230	1RB#0	22.42	PASS
Band13	5MHz	16QAM	23230	1RB#12	22.22	PASS
Band13	5MHz	16QAM	23230	1RB#24	22.38	PASS
Band13	5MHz	16QAM	23230	12RB#0	21.53	PASS
Band13	5MHz	16QAM	23230	12RB#6	21.53	PASS
Band13	5MHz	16QAM	23230	12RB#13	21.34	PASS
Band13	5MHz	16QAM	23230	25RB#0	21.42	PASS
Band13	5MHz	16QAM	23255	1RB#0	22.19	PASS
Band13	5MHz	16QAM	23255	1RB#12	22.30	PASS
Band13	5MHz	16QAM	23255	1RB#24	22.23	PASS
Band13	5MHz	16QAM	23255	12RB#0	21.41	PASS
Band13	5MHz	16QAM	23255	12RB#6	21.38	PASS
Band13	5MHz	16QAM	23255	12RB#13	21.34	PASS
Band13	5MHz	16QAM	23255	25RB#0	21.48	PASS
Band13	10MHz	QPSK	23230	1RB#0	23.71	PASS
Band13	10MHz	QPSK	23230	1RB#24	23.68	PASS
Band13	10MHz	QPSK	23230	1RB#49	23.56	PASS
Band13	10MHz	QPSK	23230	25RB#0	22.75	PASS
Band13	10MHz	QPSK	23230	25RB#12	22.76	PASS
Band13	10MHz	QPSK	23230	25RB#25	22.57	PASS
Band13	10MHz	QPSK	23230	50RB#0	22.58	PASS
Band13	10MHz	16QAM	23230	1RB#0	21.87	PASS
Band13	10MHz	16QAM	23230	1RB#24	21.97	PASS
Band13	10MHz	16QAM	23230	1RB#49	21.93	PASS
Band13	10MHz	16QAM	23230	25RB#0	21.76	PASS
Band13	10MHz	16QAM	23230	25RB#12	21.76	PASS
Band13	10MHz	16QAM	23230	25RB#25	21.40	PASS
Band13	10MHz	16QAM	23230	50RB#0	21.69	PASS

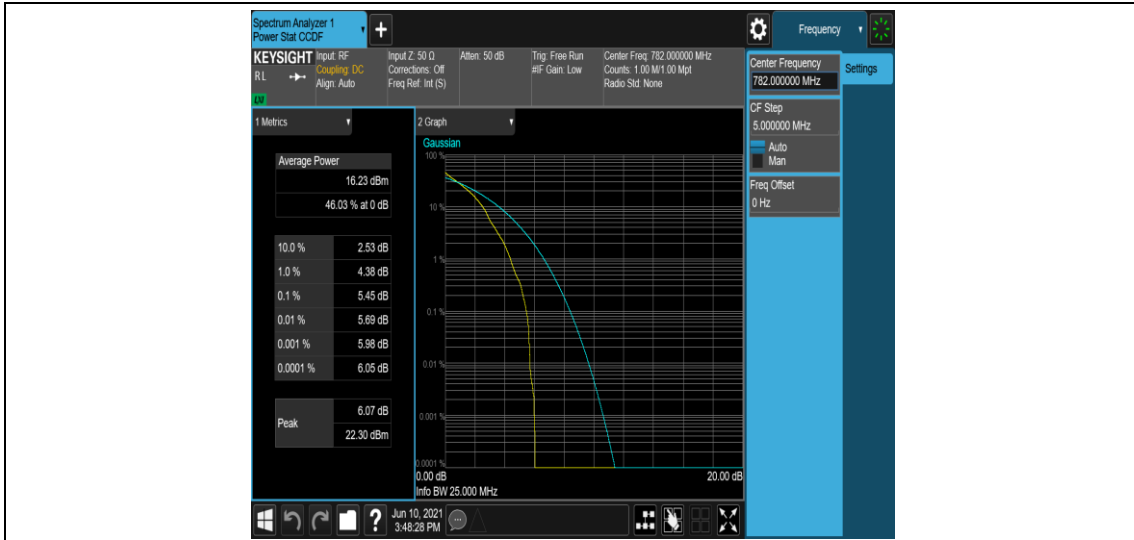
## Appendix B: Peak-to-Average Ratio(CCDF)

### Test Result

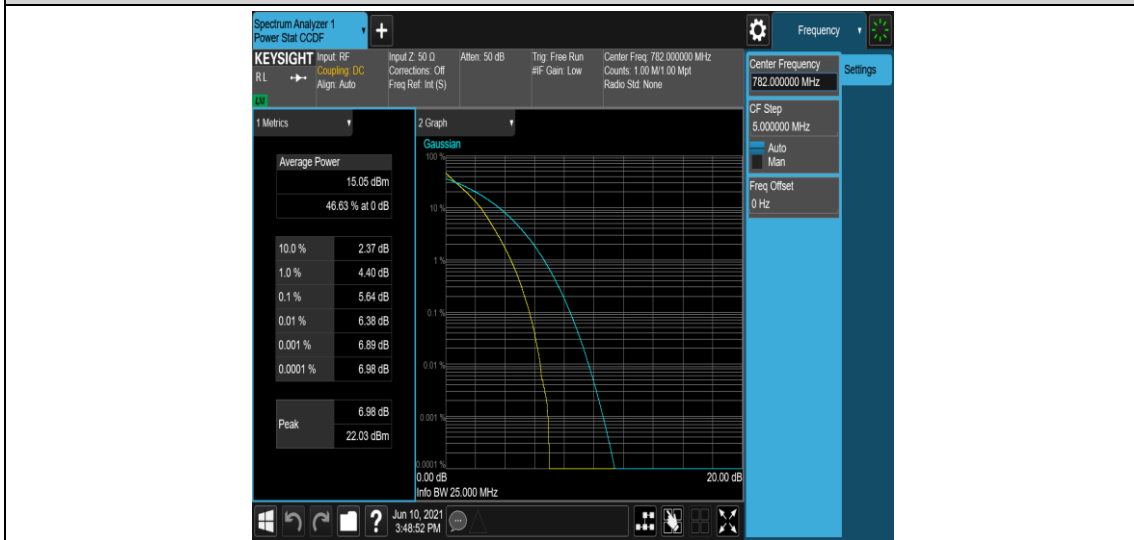
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	4.53	13	PASS
Band13	5MHz	QPSK	23205	25RB#0	5.57	13	PASS
Band13	5MHz	QPSK	23230	1RB#0	5.45	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	5.64	13	PASS
Band13	5MHz	QPSK	23255	1RB#0	5.45	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	5.49	13	PASS
Band13	5MHz	16QAM	23205	1RB#0	5.35	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	6.26	13	PASS
Band13	5MHz	16QAM	23230	1RB#0	6.08	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	6.30	13	PASS
Band13	5MHz	16QAM	23255	1RB#0	6.17	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	6.22	13	PASS
Band13	10MHz	QPSK	23230	1RB#0	4.65	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	5.61	13	PASS
Band13	10MHz	16QAM	23230	1RB#0	5.55	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	6.38	13	PASS

### Test Graphs





Band13-5MHz-QPSK-23230-25RB#0



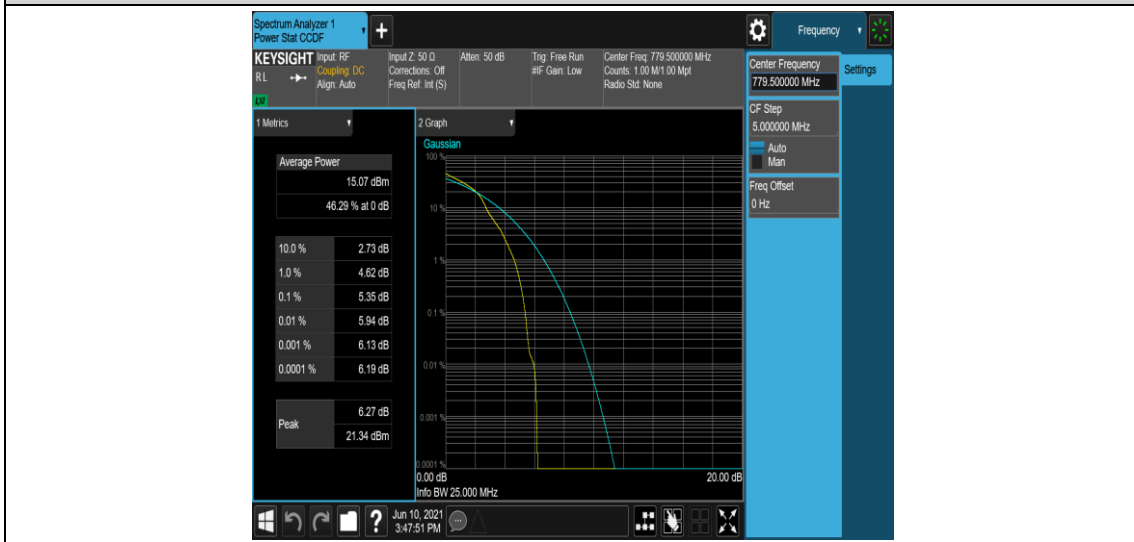
Band13-5MHz-QPSK-23255-1RB#0



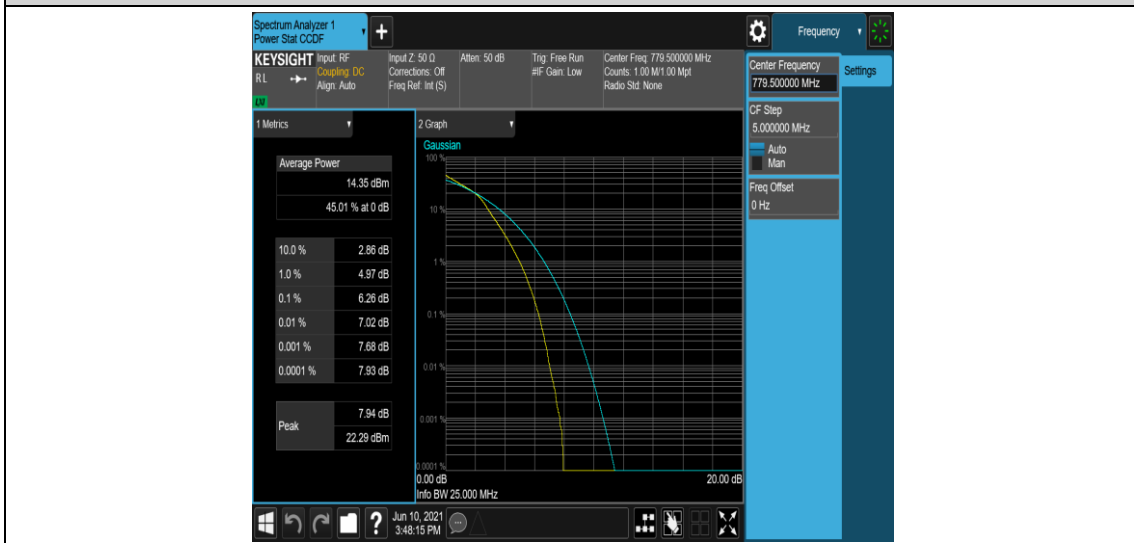
Band13-5MHz-QPSK-23255-25RB#0



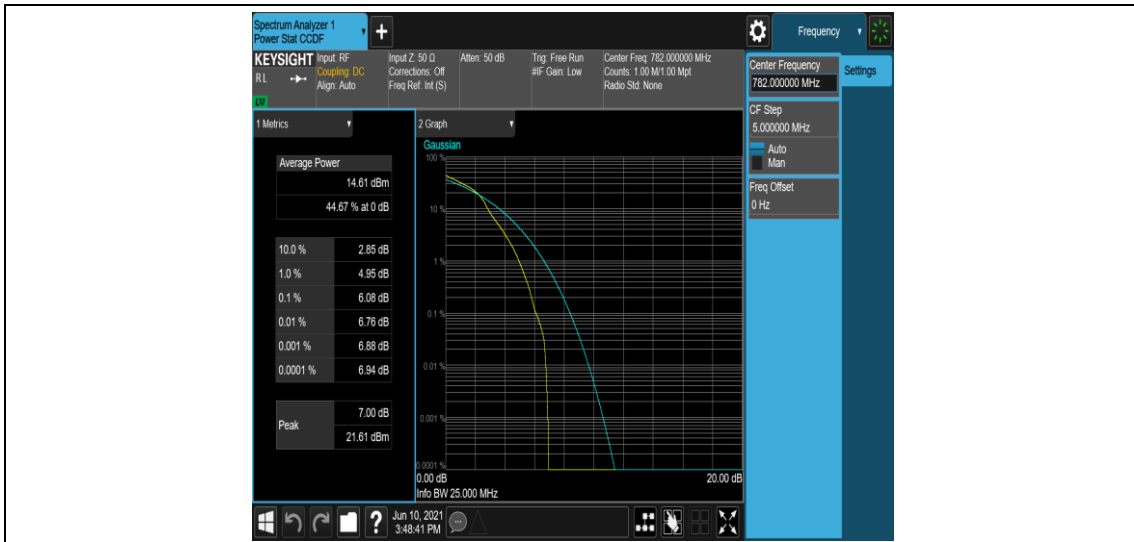
Band13-5MHz-16QAM-23205-1RB#0



Band13-5MHz-16QAM-23205-25RB#0



Band13-5MHz-16QAM-23230-1RB#0



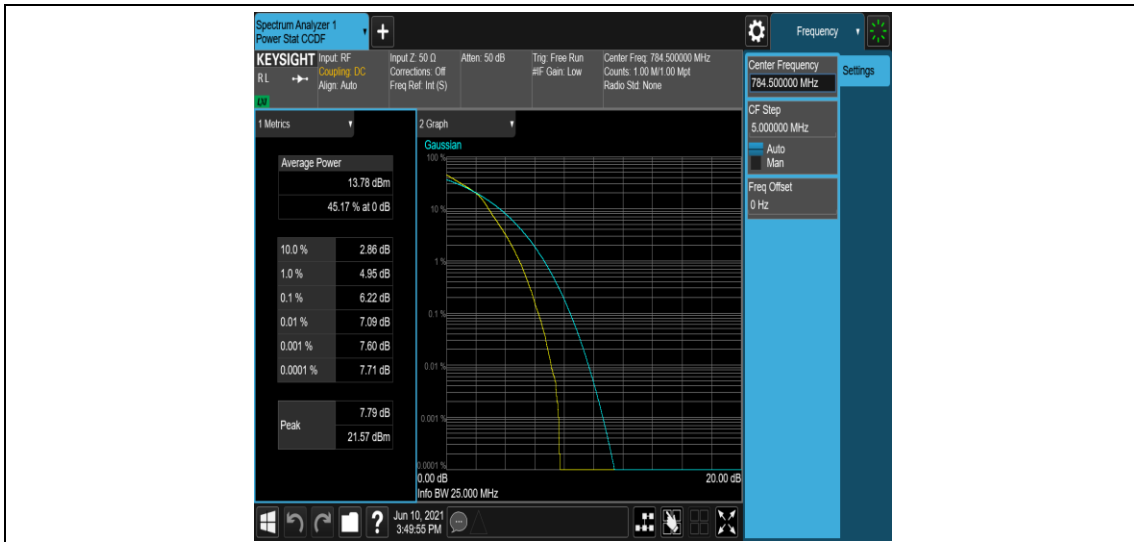
Band13-5MHz-16QAM-23230-25RB#0



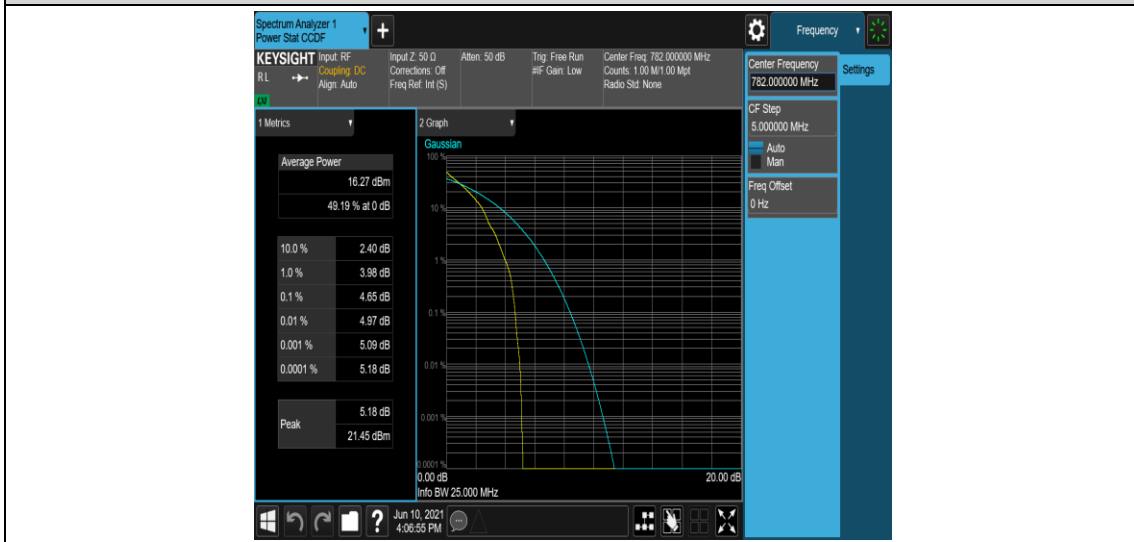
Band13-5MHz-16QAM-23255-1RB#0



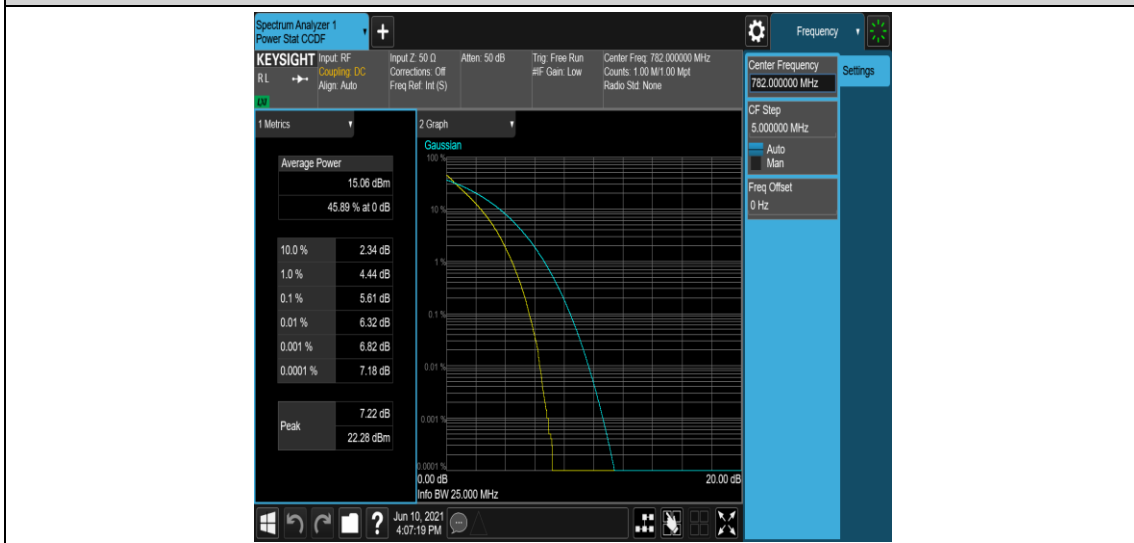
Band13-5MHz-16QAM-23255-25RB#0



Band13-10MHz-QPSK-23230-1RB#0

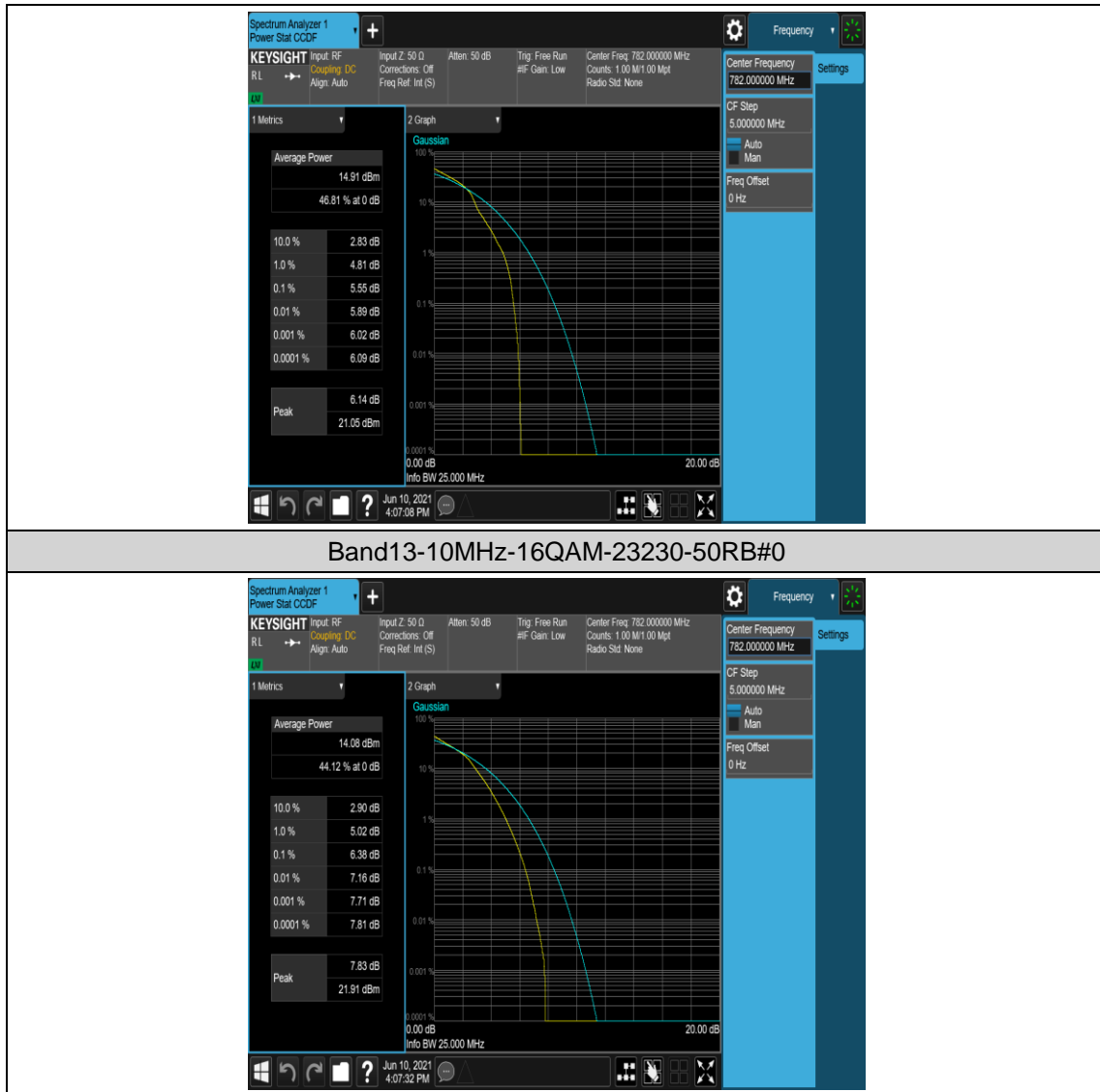


Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-1RB#0



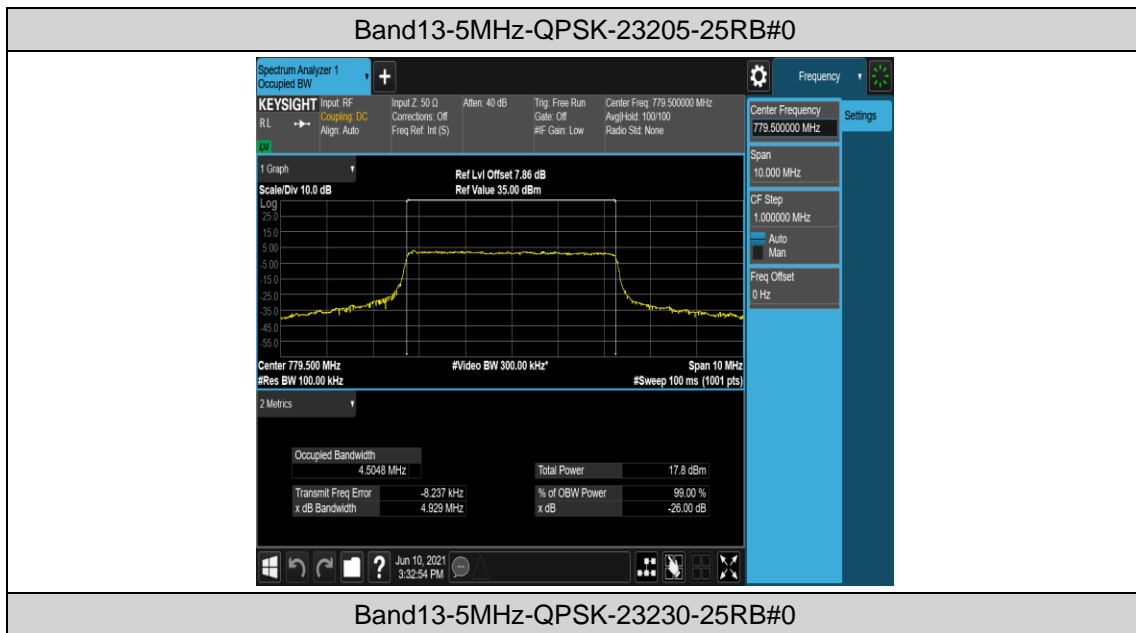


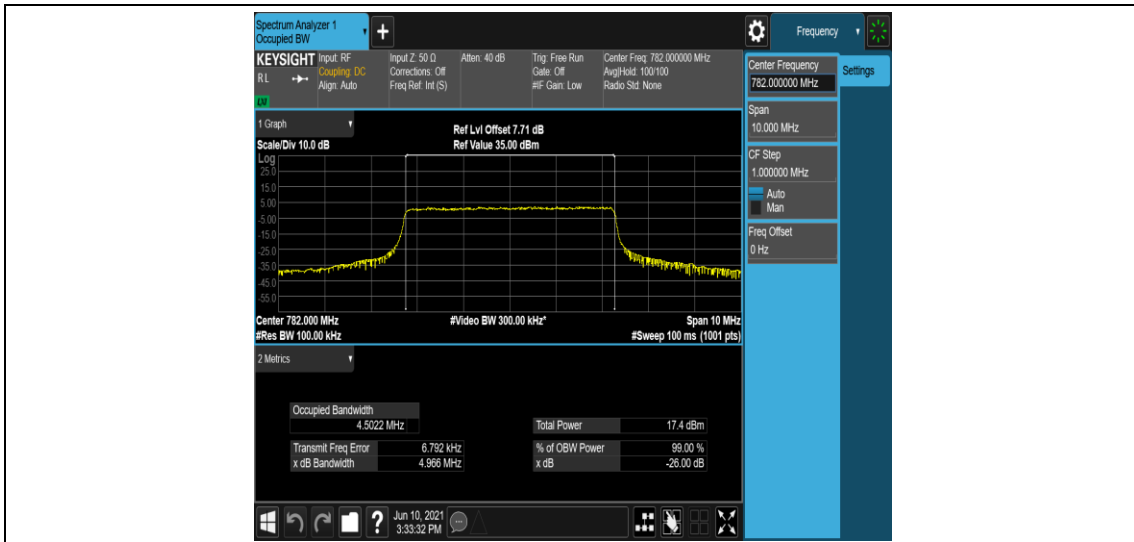
## Appendix C: 26dB Bandwidth and Occupied Bandwidth

### Test Result

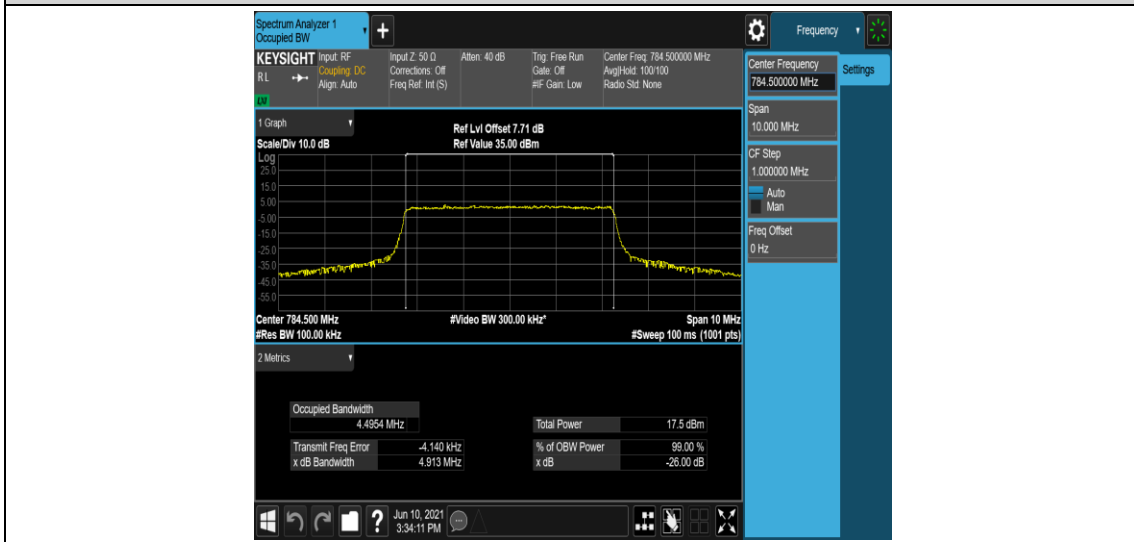
Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.5048	4.929	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5022	4.966	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.4954	4.913	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.5070	4.939	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.4988	4.989	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5050	4.889	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.9915	9.593	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.9928	9.715	PASS

### Test Graphs

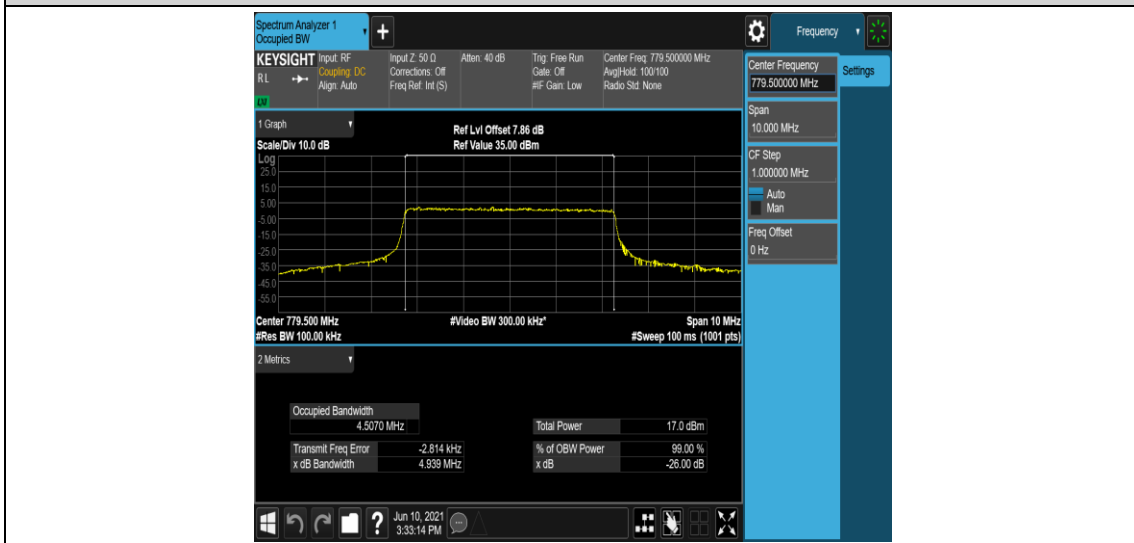




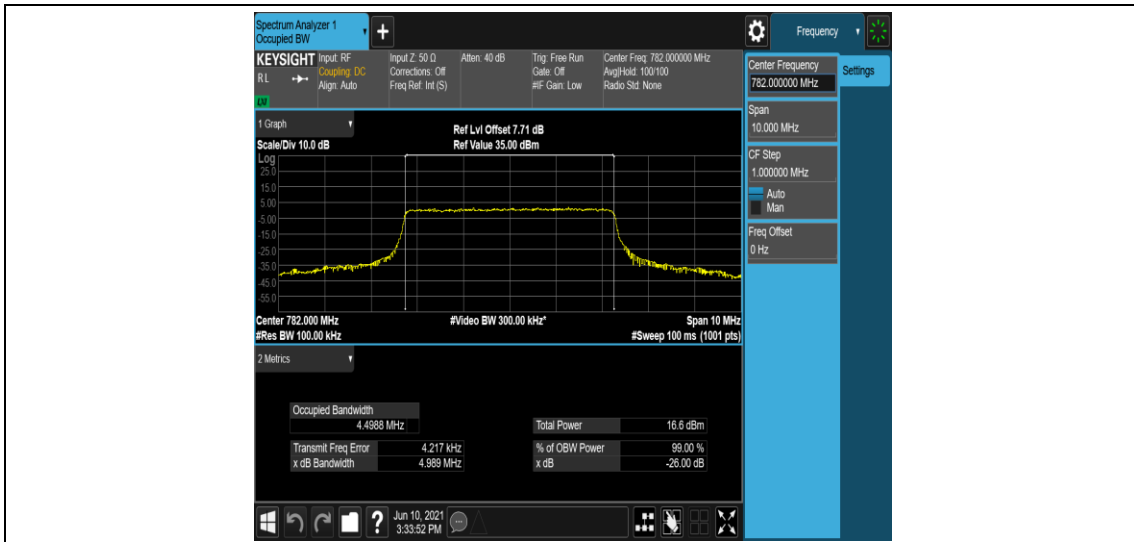
Band13-5MHz-QPSK-23255-25RB#0



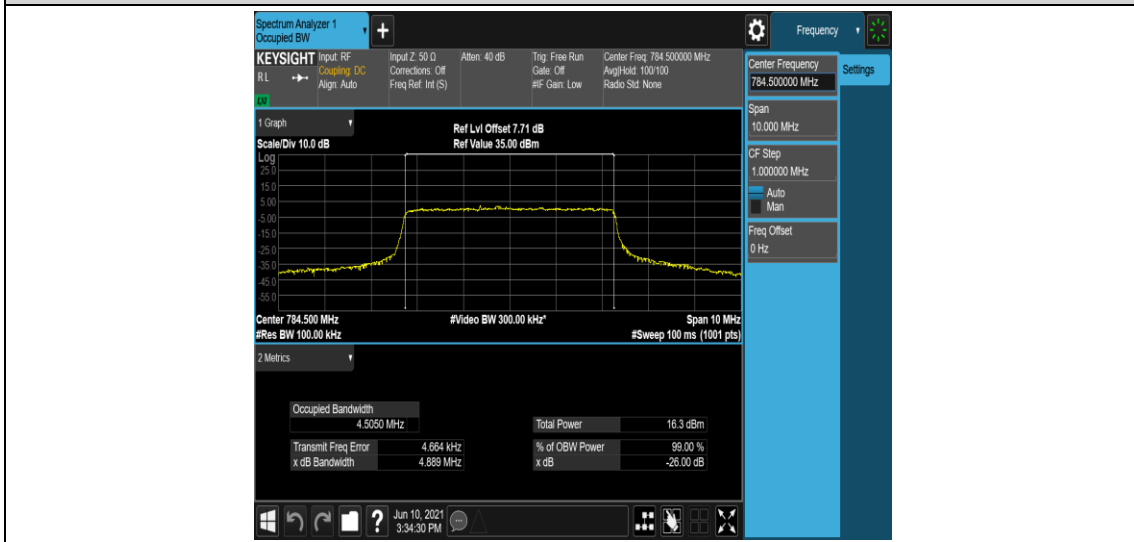
Band13-5MHz-16QAM-23205-25RB#0



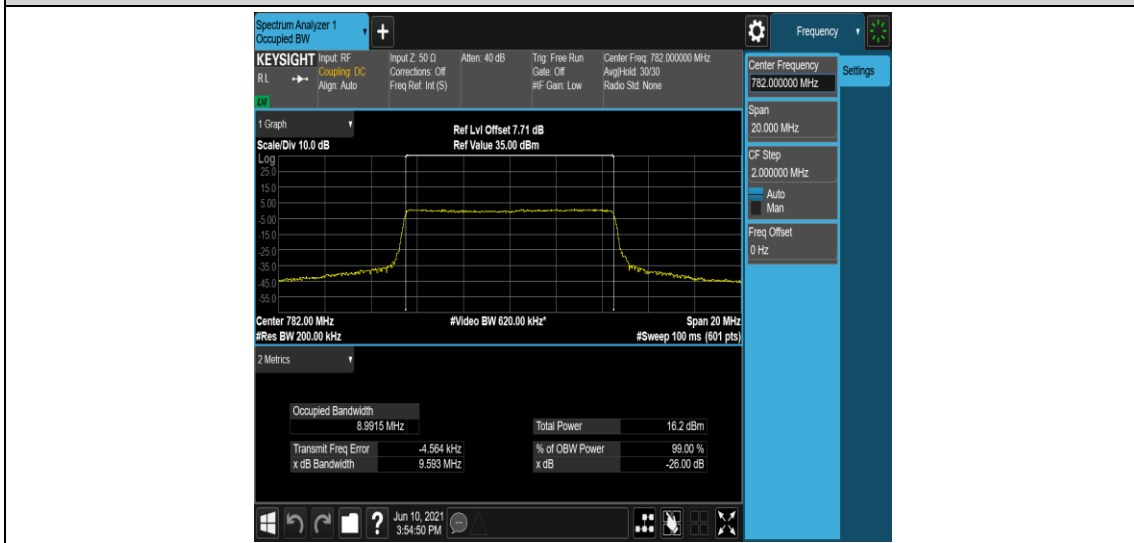
Band13-5MHz-16QAM-23230-25RB#0



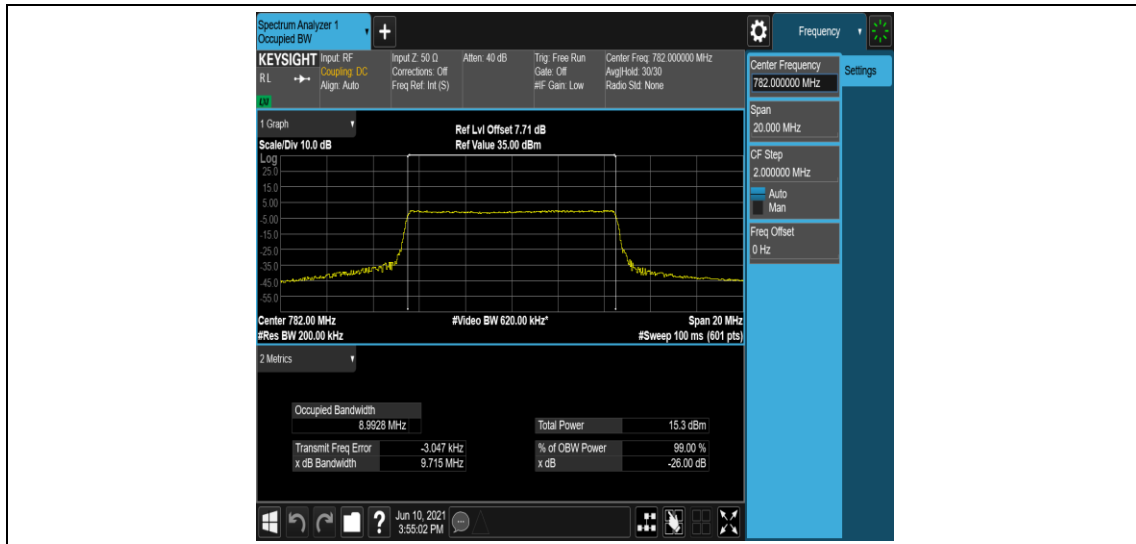
Band13-5MHz-16QAM-23255-25RB#0



Band13-10MHz-QPSK-23230-50RB#0



Band13-10MHz-16QAM-23230-50RB#0

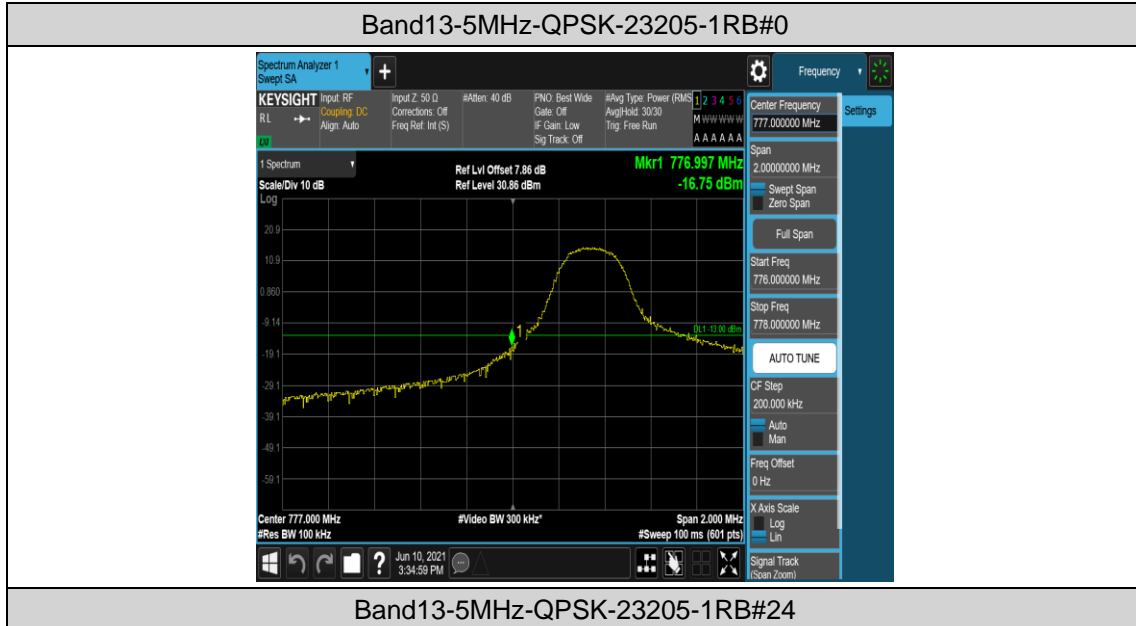


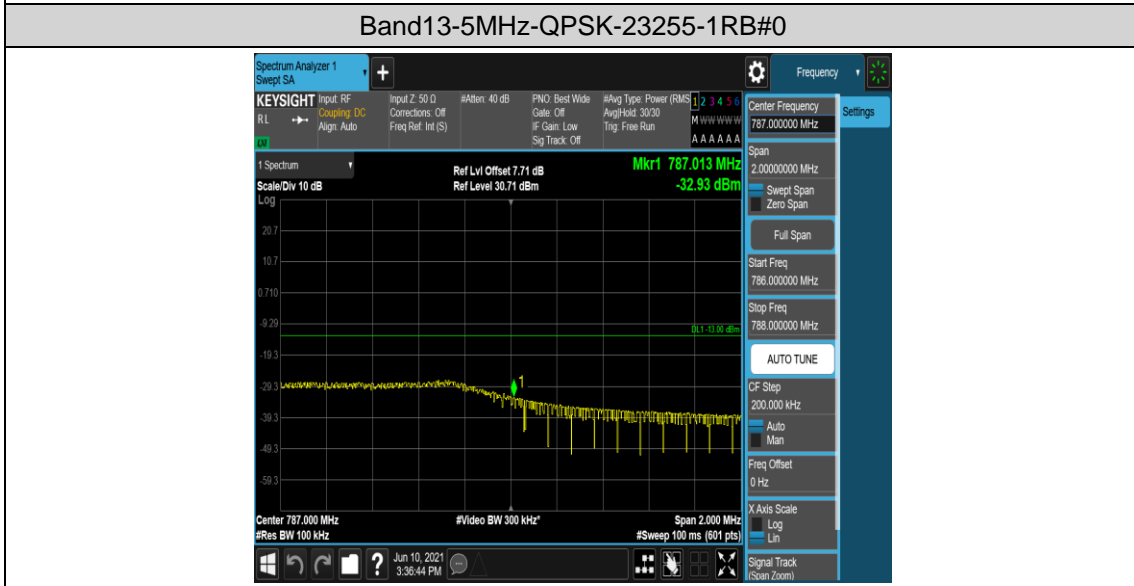
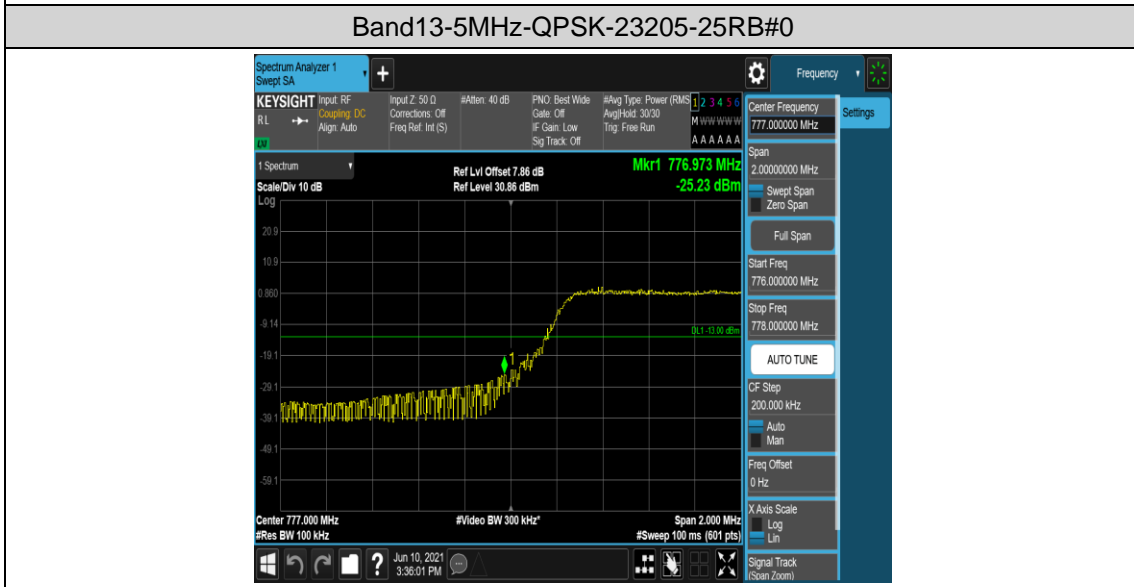
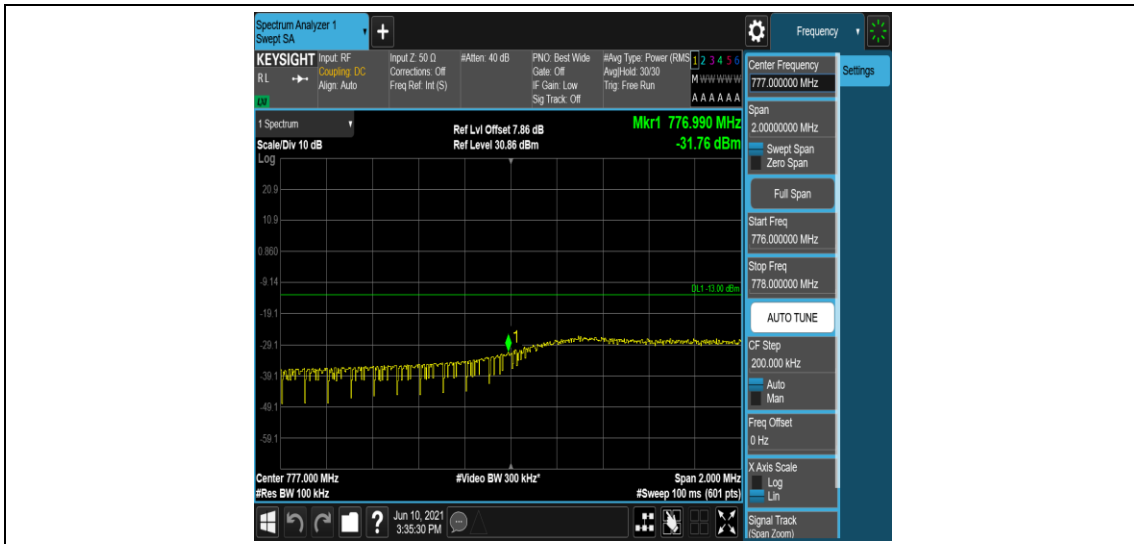
## Appendix D: Band Edge

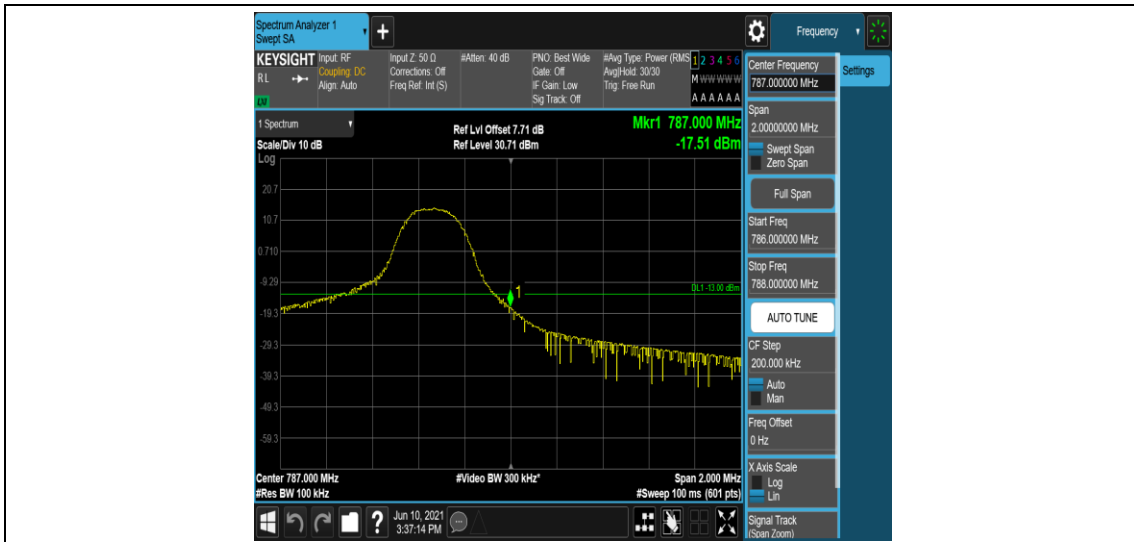
### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	-16.75	PASS
Band13	5MHz	QPSK	23205	1RB#24	-31.76	PASS
Band13	5MHz	QPSK	23205	25RB#0	-25.23	PASS
Band13	5MHz	QPSK	23255	1RB#0	-32.93	PASS
Band13	5MHz	QPSK	23255	1RB#24	-17.51	PASS
Band13	5MHz	QPSK	23255	25RB#0	-26.59	PASS
Band13	5MHz	16QAM	23205	1RB#0	-20.21	PASS
Band13	5MHz	16QAM	23205	1RB#24	-32.89	PASS
Band13	5MHz	16QAM	23205	25RB#0	-27.39	PASS
Band13	5MHz	16QAM	23255	1RB#0	-34.21	PASS
Band13	5MHz	16QAM	23255	1RB#24	-18.65	PASS
Band13	5MHz	16QAM	23255	25RB#0	-26.35	PASS

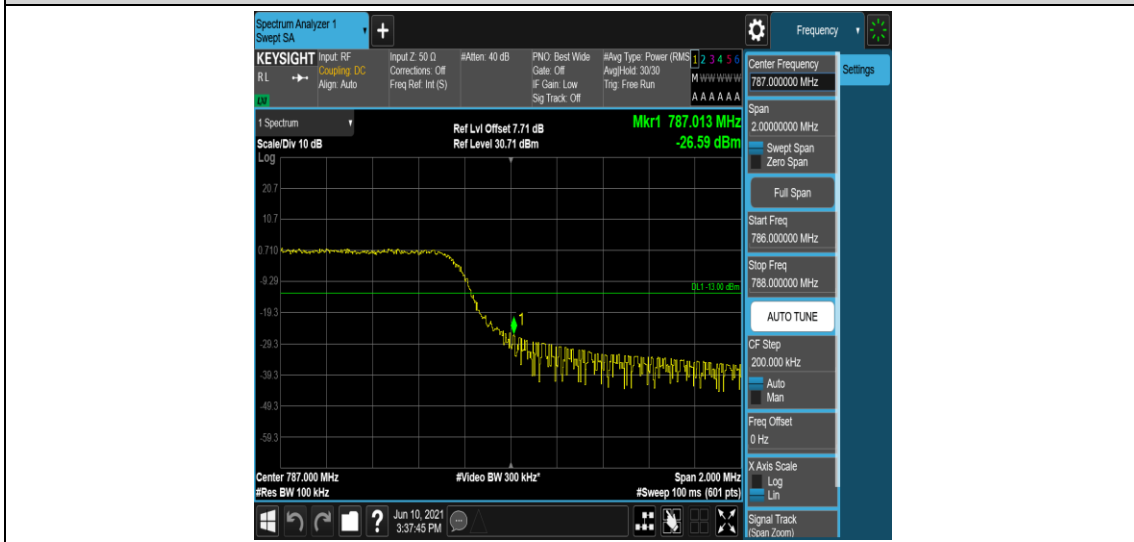
### Test Graphs



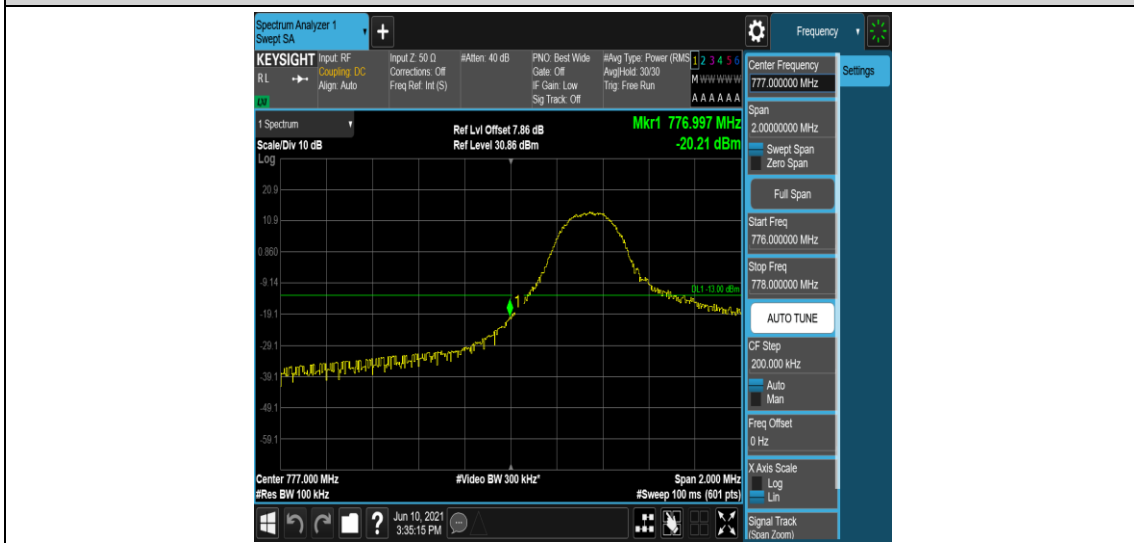




Band13-5MHz-QPSK-23255-25RB#0

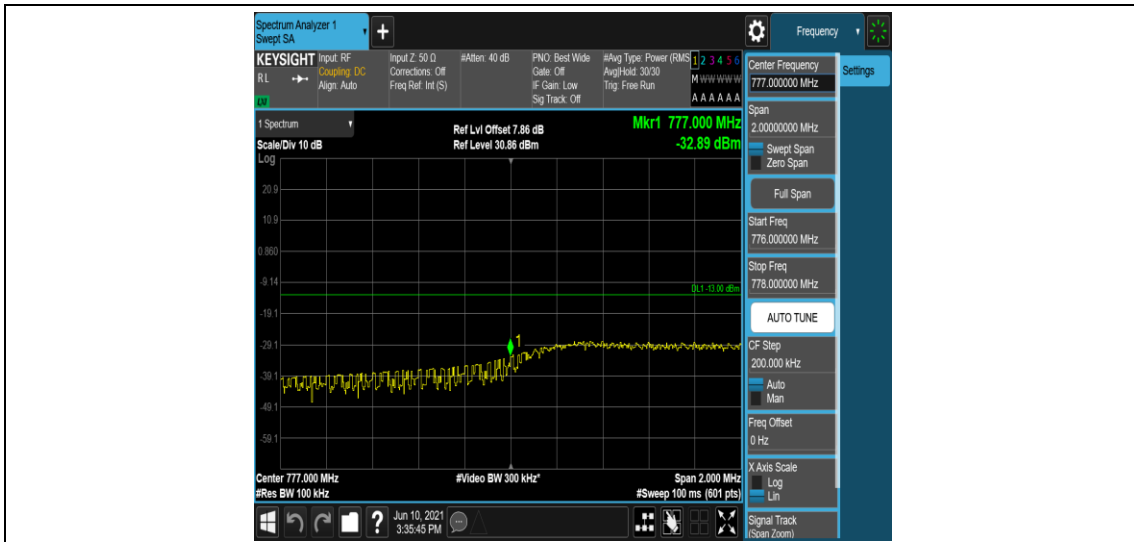


Band13-5MHz-16QAM-23205-1RB#0

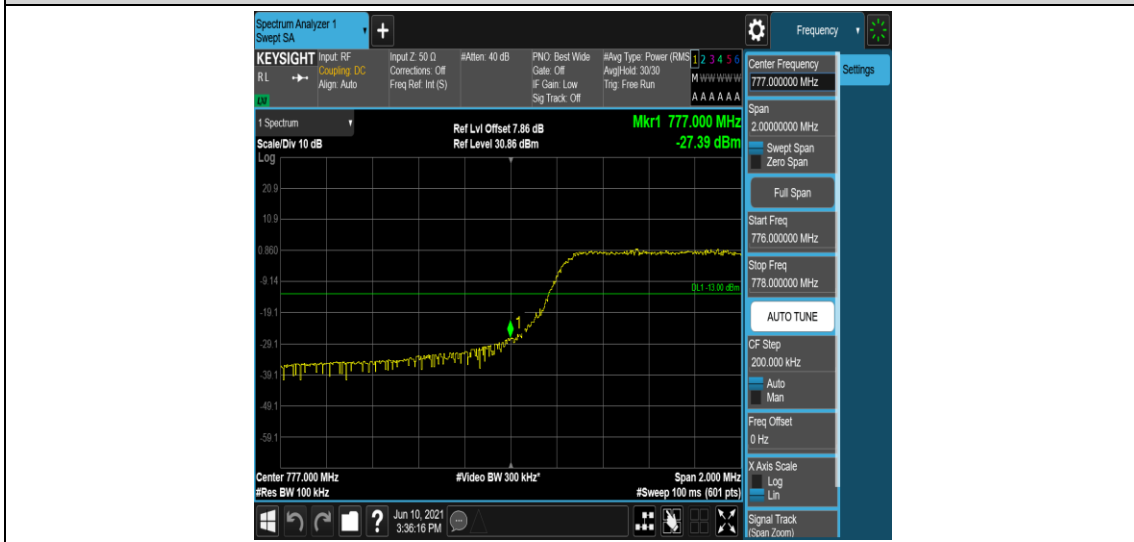


Band13-5MHz-16QAM-23205-1RB#24





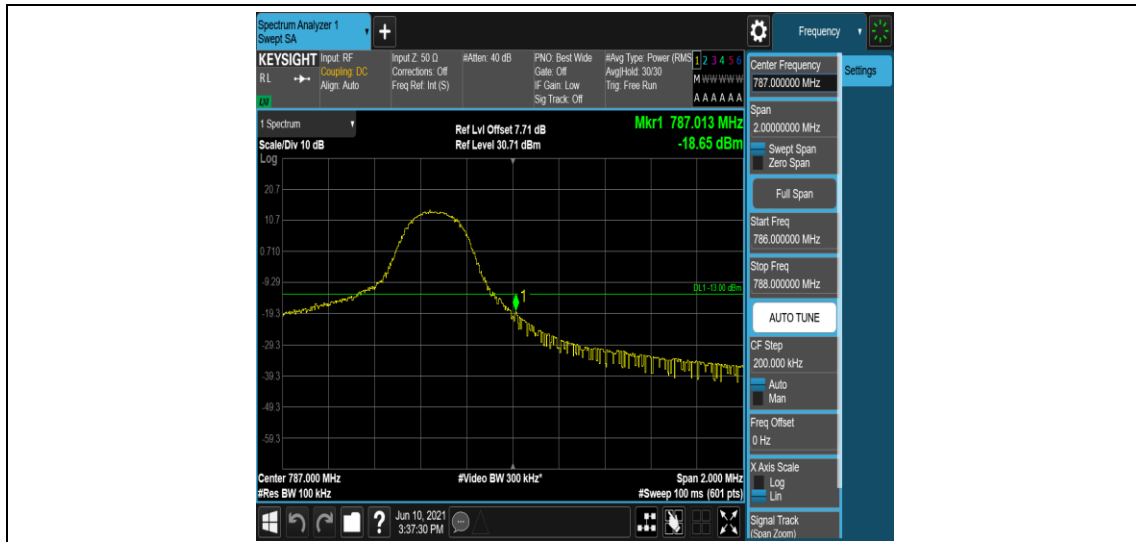
Band13-5MHz-16QAM-23205-25RB#0



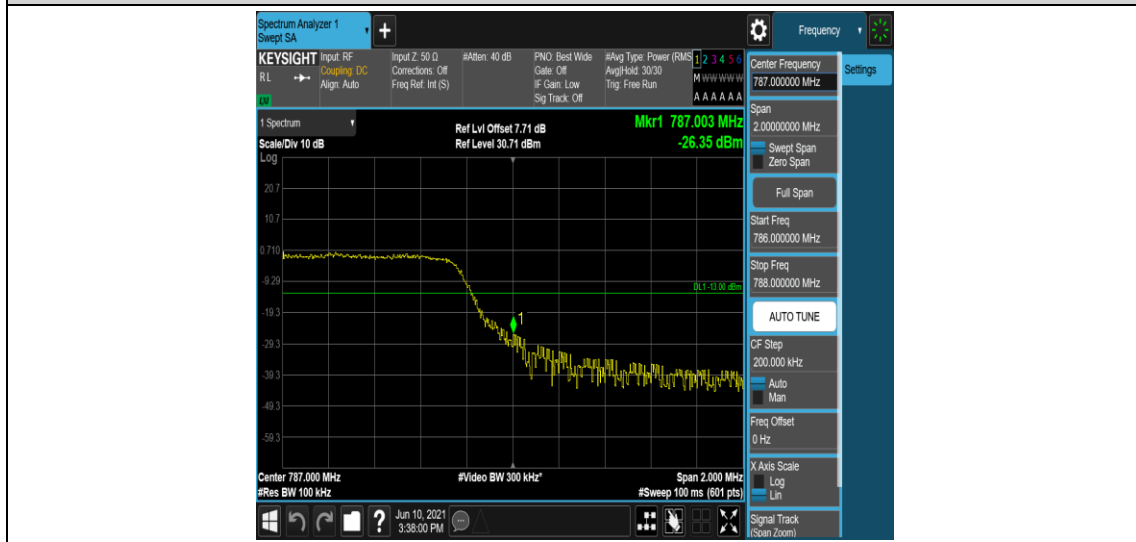
Band13-5MHz-16QAM-23255-1RB#0



Band13-5MHz-16QAM-23255-1RB#24



Band13-5MHz-16QAM-23255-25RB#0



## Appendix E: Conducted Spurious Emission

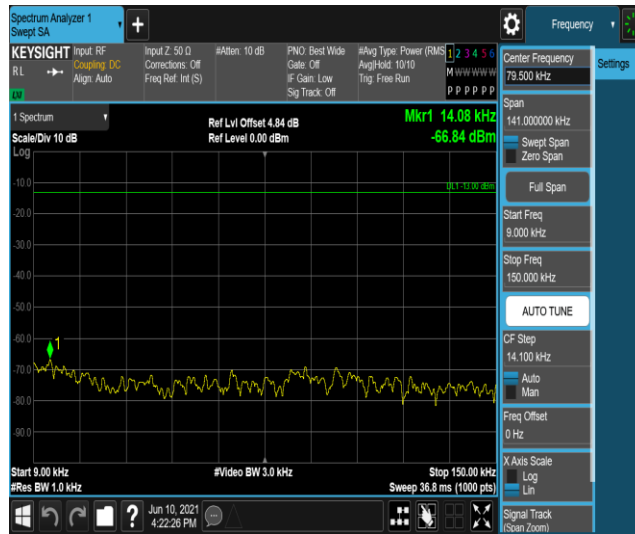
### Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Verdict
Band13	5MHz	QPSK	23205	1RB#0	Range1:0.009~0.15MHz	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range2:0.15~30MHz	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range3:30~1000MHz	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range5:763~775MHz	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range6:793~805MHz	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range4:1000~10000MHz	PASS
Band13	5MHz	QPSK	23205	1RB#0	Range7:1559~1610MHz	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range1:0.009~0.15MHz	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range2:0.15~30MHz	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range3:30~1000MHz	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range5:763~775MHz	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range6:793~805MHz	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range4:1000~10000MHz	PASS
Band13	5MHz	QPSK	23230	1RB#0	Range7:1559~1610MHz	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range1:0.009~0.15MHz	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range2:0.15~30MHz	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range3:30~1000MHz	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range5:763~775MHz	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range6:793~805MHz	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range4:1000~10000MHz	PASS
Band13	5MHz	QPSK	23255	1RB#0	Range7:1559~1610MHz	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range1:0.009~0.15MHz	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range2:0.15~30MHz	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range3:30~1000MHz	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range5:763~775MHz	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range6:793~805MHz	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range4:1000~10000MHz	PASS
Band13	5MHz	16QAM	23205	1RB#0	Range7:1559~1610MHz	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range1:0.009~0.15MHz	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range2:0.15~30MHz	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range3:30~1000MHz	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range5:763~775MHz	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range6:793~805MHz	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range4:1000~10000MHz	PASS
Band13	5MHz	16QAM	23230	1RB#0	Range7:1559~1610MHz	PASS

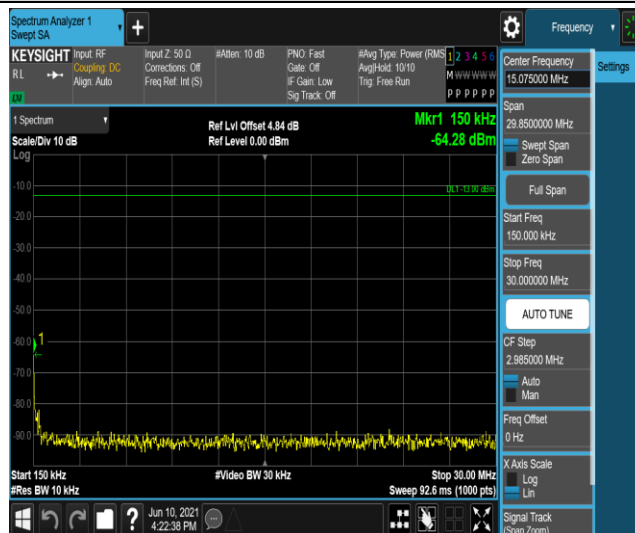
Band13	5MHz	16QAM	23255	1RB#0	Range1:0.009~0.15MHz	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range2:0.15~30MHz	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range3:30~1000MHz	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range5:763~775MHz	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range6:793~805MHz	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range4:1000~10000MHz	PASS
Band13	5MHz	16QAM	23255	1RB#0	Range7:1559~1610MHz	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range1:0.009~0.15MHz	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range2:0.15~30MHz	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range3:30~1000MHz	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range5:763~775MHz	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range6:793~805MHz	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range4:1000~10000MHz	PASS
Band13	10MHz	QPSK	23230	1RB#0	Range7:1559~1610MHz	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range1:0.009~0.15MHz	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range2:0.15~30MHz	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range3:30~1000MHz	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range5:763~775MHz	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range6:793~805MHz	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range4:1000~10000MHz	PASS
Band13	10MHz	16QAM	23230	1RB#0	Range7:1559~1610MHz	PASS

### Test Graphs

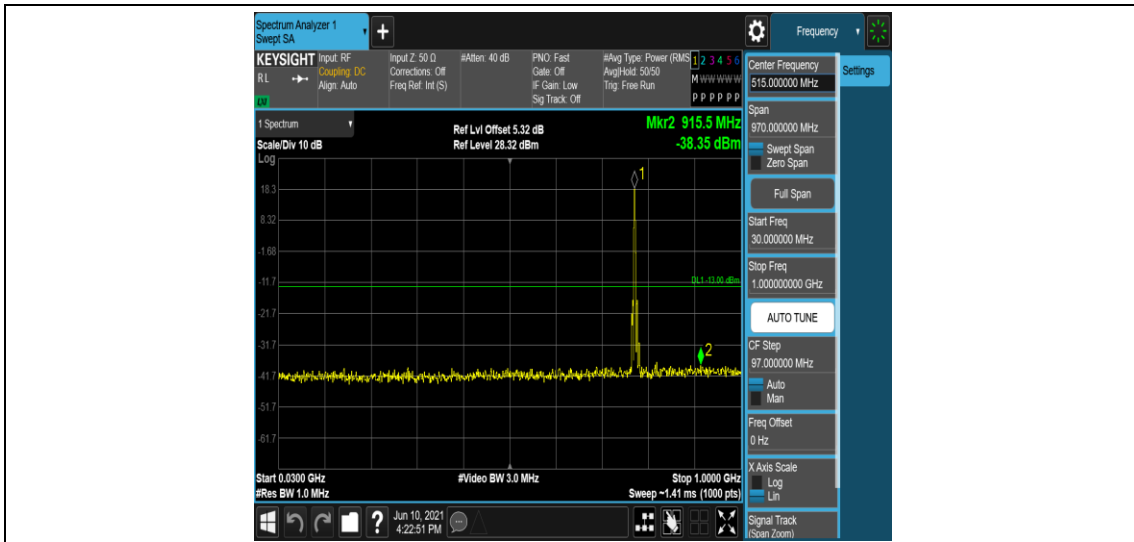
Band13-5MHz-QPSK-23205-1RB#0-Range1:0.009~0.15MHz



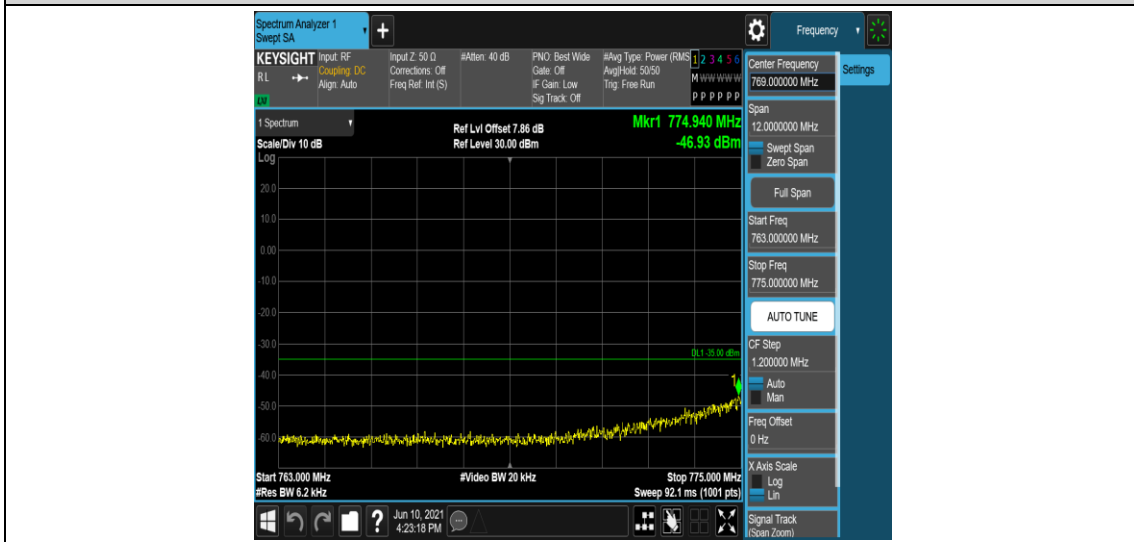
Band13-5MHz-QPSK-23205-1RB#0-Range2:0.15~30MHz



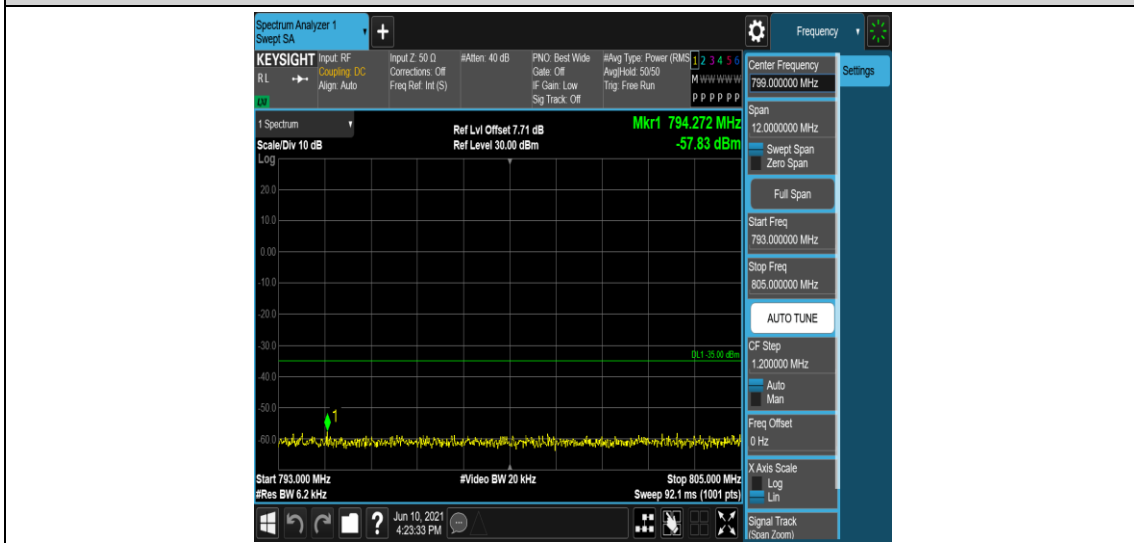
Band13-5MHz-QPSK-23205-1RB#0-Range3:30~1000MHz



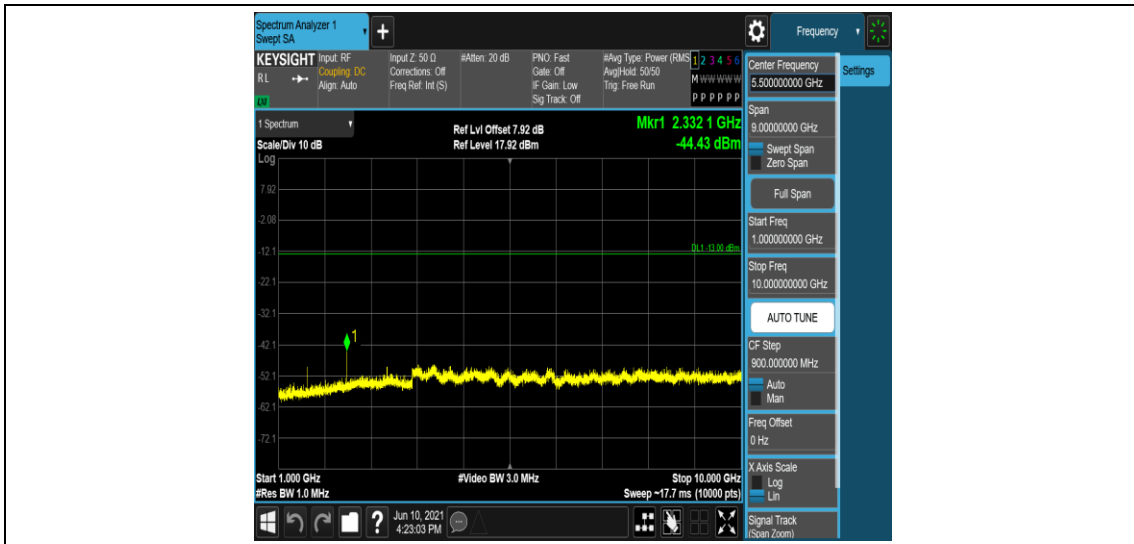
Band13-5MHz-QPSK-23205-1RB#0-Range5:763~775MHz



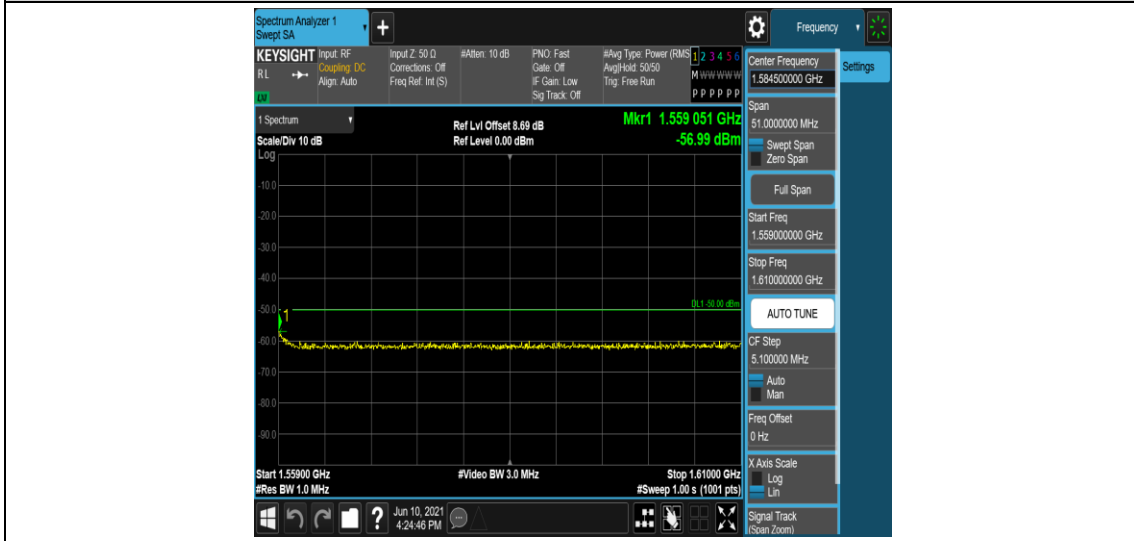
Band13-5MHz-QPSK-23205-1RB#0-Range6:793~805MHz



Band13-5MHz-QPSK-23205-1RB#0-Range4:1000~10000MHz



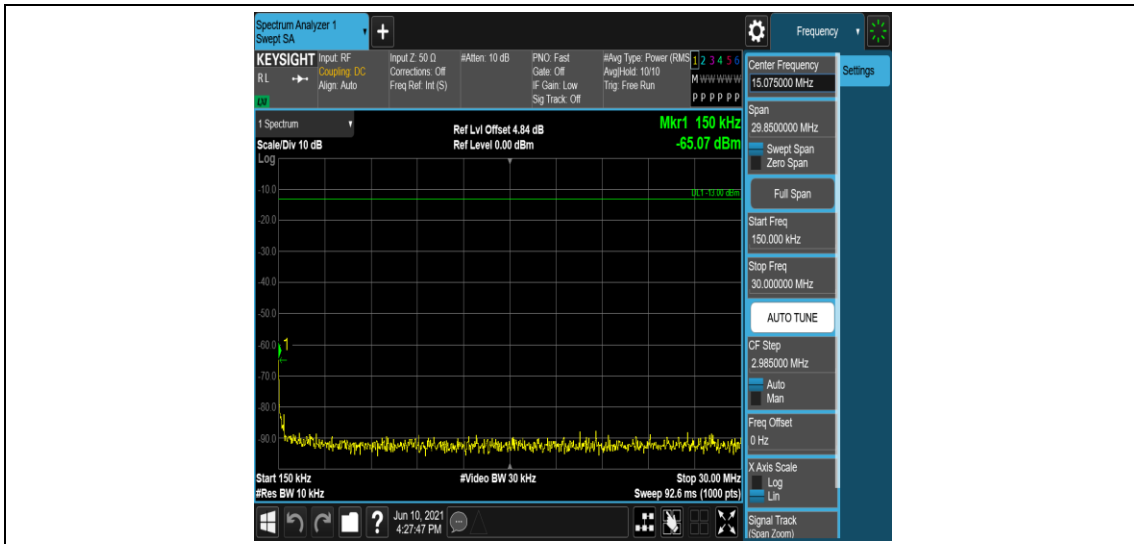
Band13-5MHz-QPSK-23205-1RB#0-Range7:1559~1610MHz



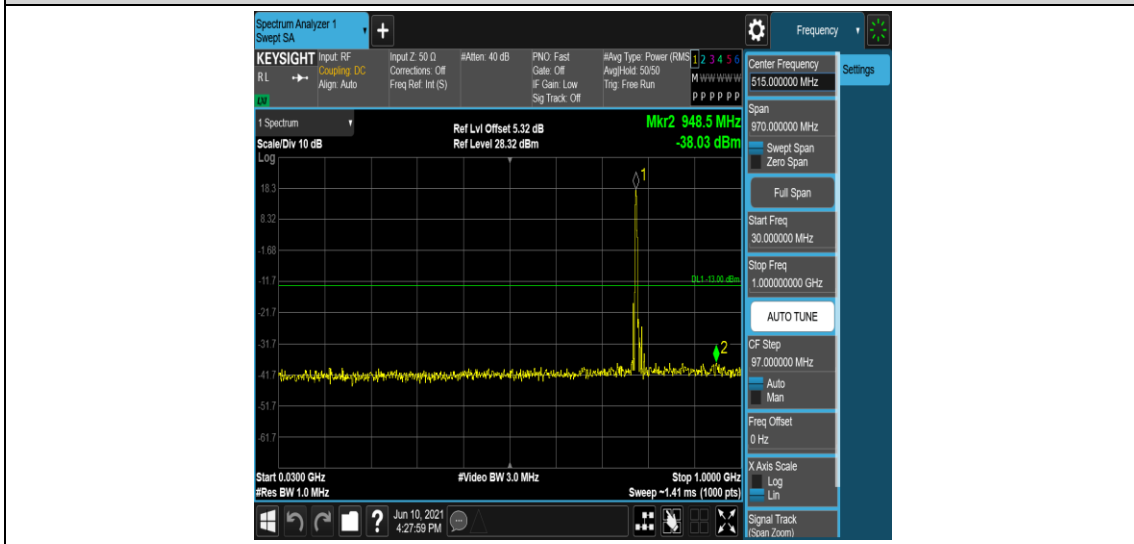
Band13-5MHz-QPSK-23230-1RB#0-Range1:0.009~0.15MHz



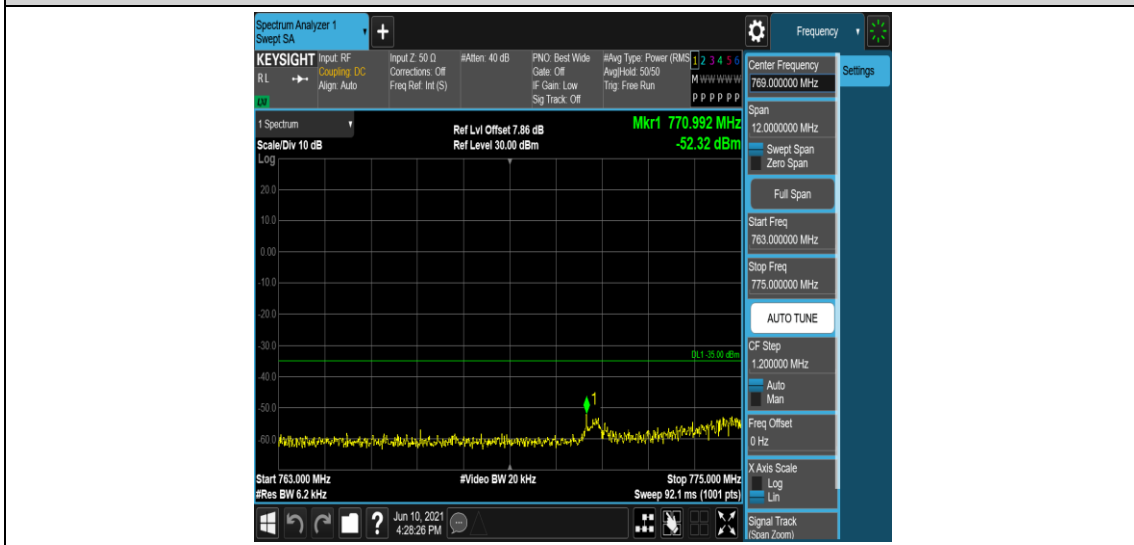
Band13-5MHz-QPSK-23230-1RB#0-Range2:0.15~30MHz



Band13-5MHz-QPSK-23230-1RB#0-Range3:30~1000MHz

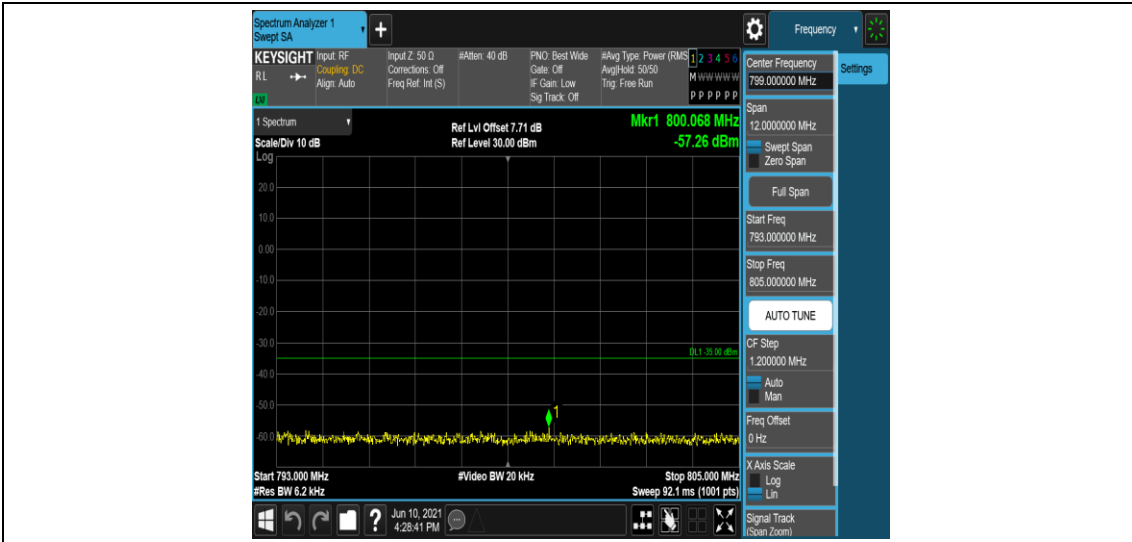


Band13-5MHz-QPSK-23230-1RB#0-Range5:763~775MHz

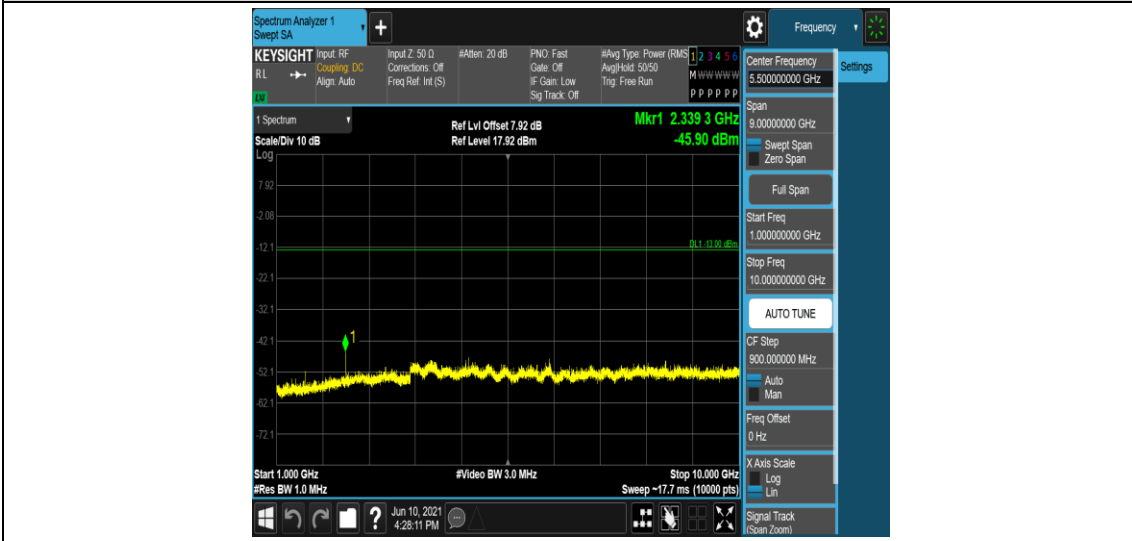


Band13-5MHz-QPSK-23230-1RB#0-Range6:793~805MHz

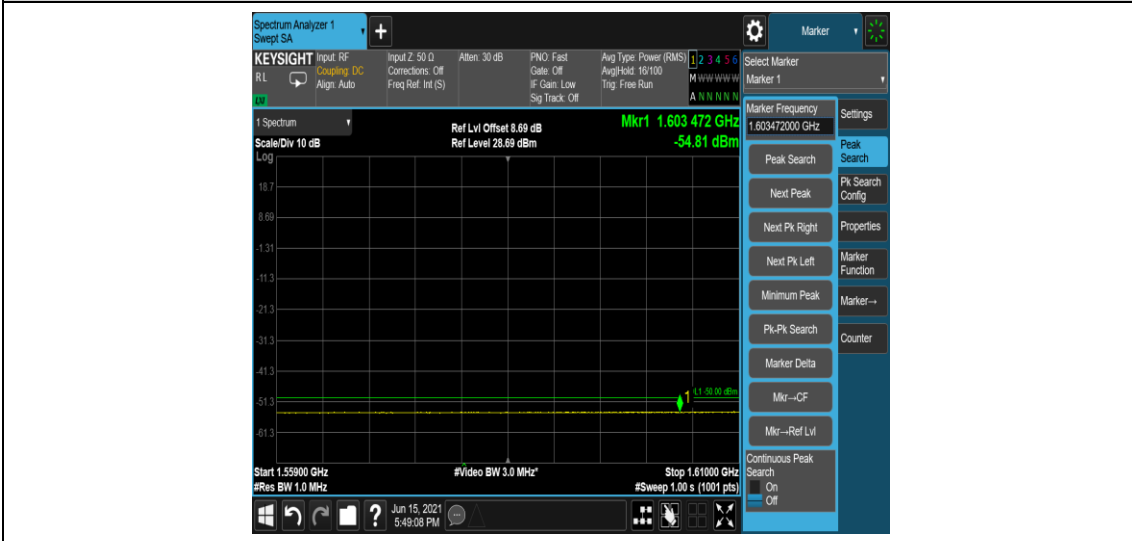




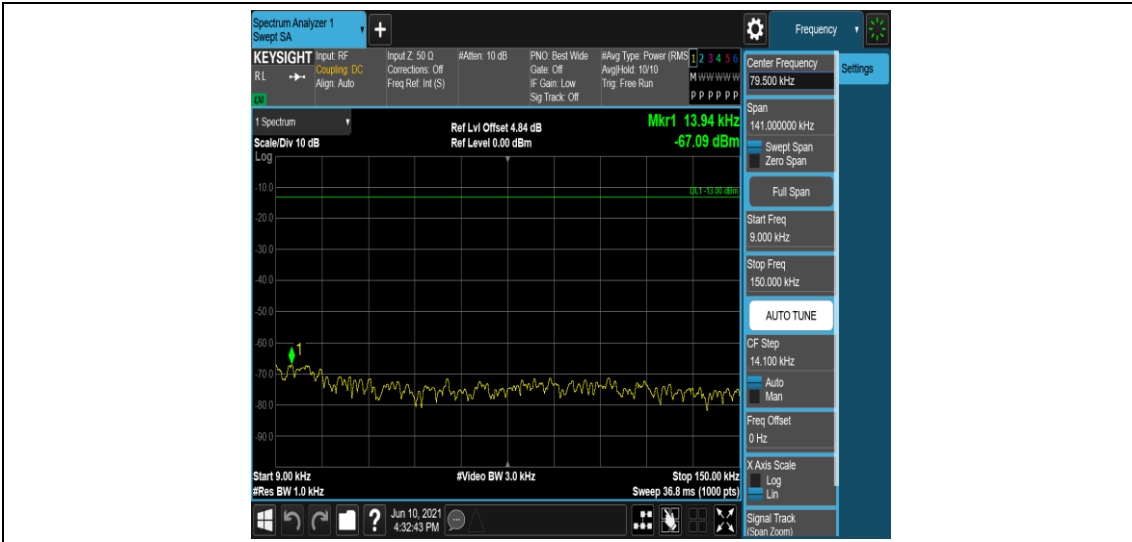
Band13-5MHz-QPSK-23230-1RB#0-Range4:1000~10000MHz



Band13-5MHz-QPSK-23230-1RB#0-Range7:1559~1610MHz



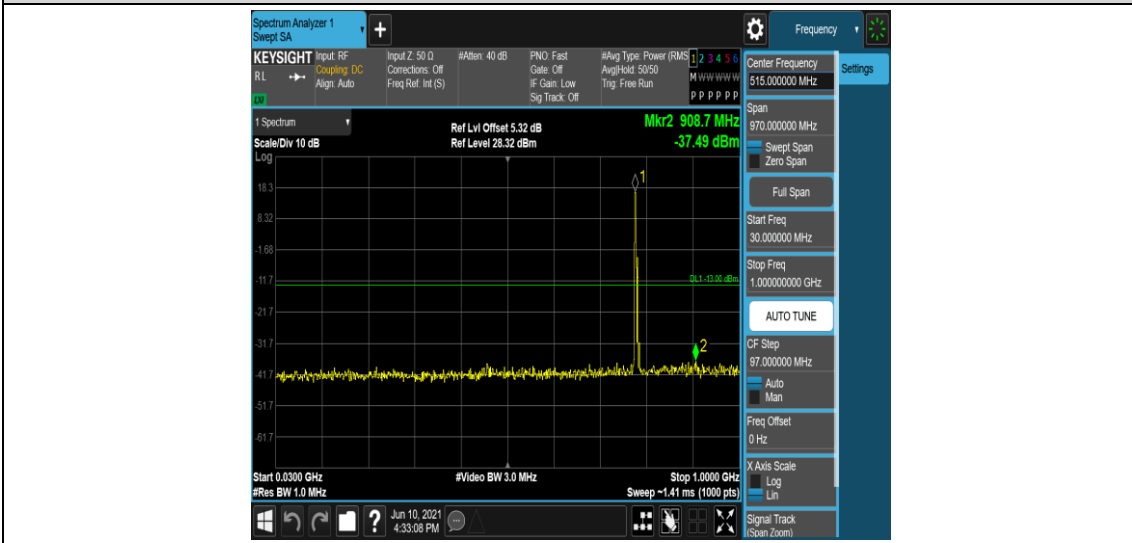
Band13-5MHz-QPSK-23255-1RB#0-Range1:0.009~0.15MHz



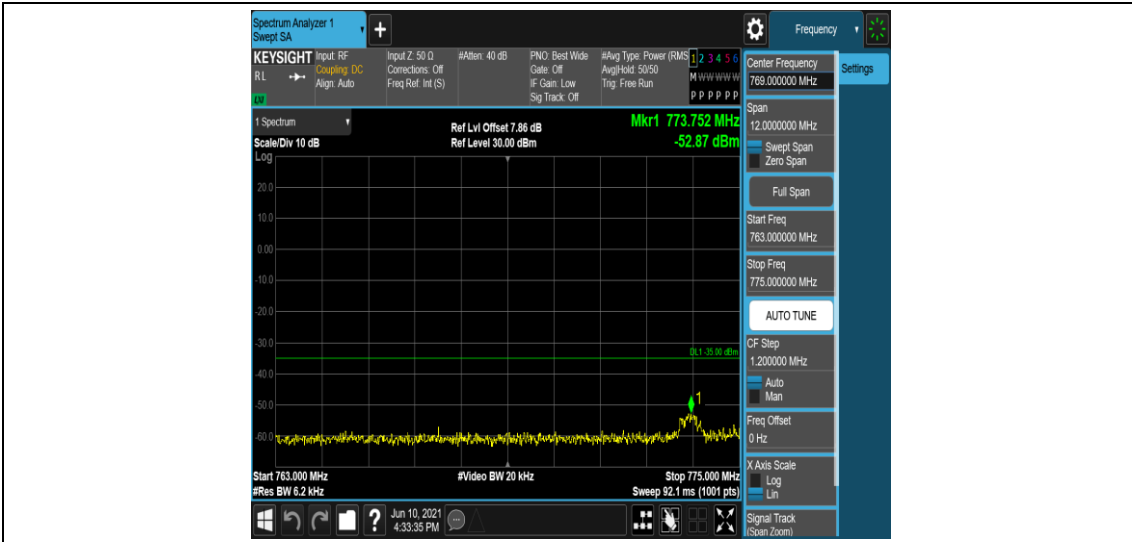
Band13-5MHz-QPSK-23255-1RB#0-Range2:0.15~30MHz



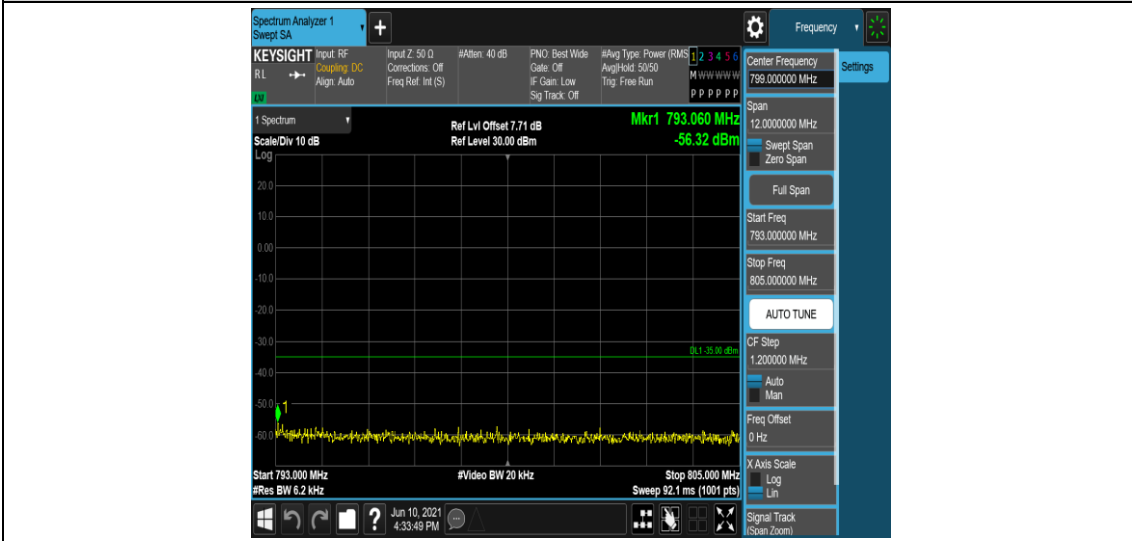
Band13-5MHz-QPSK-23255-1RB#0-Range3:30~1000MHz



Band13-5MHz-QPSK-23255-1RB#0-Range5:763~775MHz



Band13-5MHz-QPSK-23255-1RB#0-Range6:793~805MHz



Band13-5MHz-QPSK-23255-1RB#0-Range4:1000~10000MHz



Band13-5MHz-QPSK-23255-1RB#0-Range7:1559~1610MHz