

LTE Band13 Test Data

Project No. : ENS2111040057W00207R

Company: : Micro-Star Int'l Co.,Ltd.

EUT : Tablet

Model Number : MS-ND52-Gen2

Number of Samples : 1

Sample Number : 1#

Tested By : Tracy Hu

Reviewed By : Joe Xia

Appendix A: Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	22.37	PASS
Band13	5MHz	QPSK	23205	1RB#12	22.68	PASS
Band13	5MHz	QPSK	23205	1RB#24	22.55	PASS
Band13	5MHz	QPSK	23205	12RB#0	21.37	PASS
Band13	5MHz	QPSK	23205	12RB#6	21.37	PASS
Band13	5MHz	QPSK	23205	12RB#13	21.36	PASS
Band13	5MHz	QPSK	23205	25RB#0	21.41	PASS
Band13	5MHz	QPSK	23230	1RB#0	22.30	PASS
Band13	5MHz	QPSK	23230	1RB#12	22.43	PASS
Band13	5MHz	QPSK	23230	1RB#24	22.42	PASS
Band13	5MHz	QPSK	23230	12RB#0	21.35	PASS
Band13	5MHz	QPSK	23230	12RB#6	21.44	PASS
Band13	5MHz	QPSK	23230	12RB#13	21.39	PASS
Band13	5MHz	QPSK	23230	25RB#0	21.37	PASS
Band13	5MHz	QPSK	23255	1RB#0	22.30	PASS
Band13	5MHz	QPSK	23255	1RB#12	22.63	PASS
Band13	5MHz	QPSK	23255	1RB#24	22.50	PASS
Band13	5MHz	QPSK	23255	12RB#0	21.36	PASS
Band13	5MHz	QPSK	23255	12RB#6	21.34	PASS
Band13	5MHz	QPSK	23255	12RB#13	21.39	PASS
Band13	5MHz	QPSK	23255	25RB#0	21.35	PASS
Band13	5MHz	16QAM	23205	1RB#0	21.59	PASS
Band13	5MHz	16QAM	23205	1RB#12	21.44	PASS
Band13	5MHz	16QAM	23205	1RB#24	21.46	PASS
Band13	5MHz	16QAM	23205	12RB#0	20.41	PASS
Band13	5MHz	16QAM	23205	12RB#6	20.43	PASS
Band13	5MHz	16QAM	23205	12RB#13	20.42	PASS
Band13	5MHz	16QAM	23205	25RB#0	20.45	PASS
Band13	5MHz	16QAM	23230	1RB#0	21.41	PASS
Band13	5MHz	16QAM	23230	1RB#12	21.55	PASS
Band13	5MHz	16QAM	23230	1RB#24	21.50	PASS
Band13	5MHz	16QAM	23230	12RB#0	20.50	PASS
Band13	5MHz	16QAM	23230	12RB#6	20.49	PASS

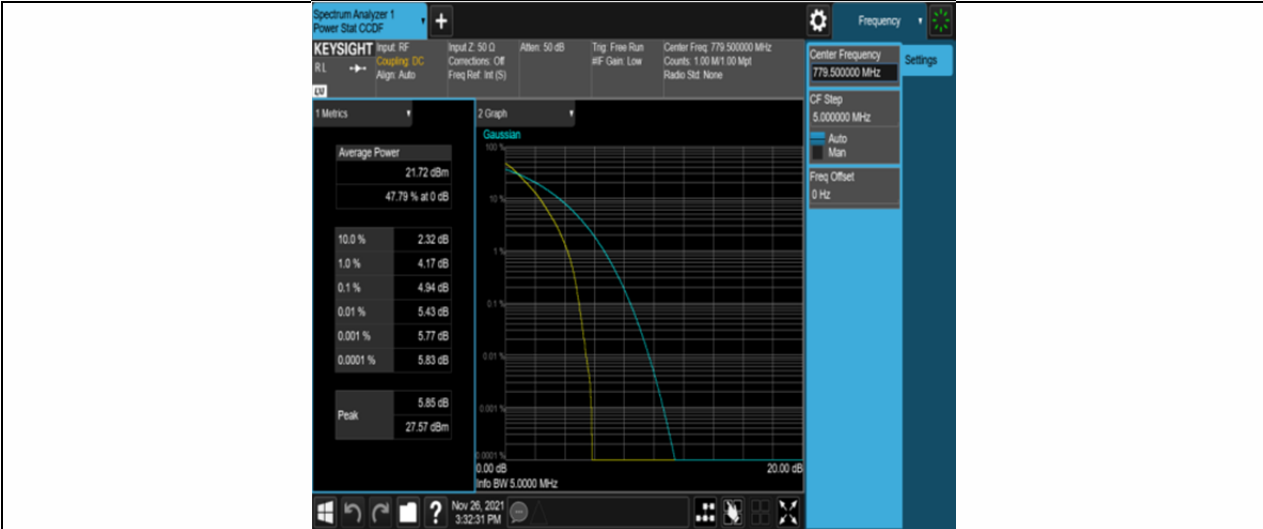
Band13	5MHz	16QAM	23230	12RB#13	20.46	PASS
Band13	5MHz	16QAM	23230	25RB#0	20.36	PASS
Band13	5MHz	16QAM	23255	1RB#0	21.32	PASS
Band13	5MHz	16QAM	23255	1RB#12	21.45	PASS
Band13	5MHz	16QAM	23255	1RB#24	21.40	PASS
Band13	5MHz	16QAM	23255	12RB#0	20.40	PASS
Band13	5MHz	16QAM	23255	12RB#6	20.40	PASS
Band13	5MHz	16QAM	23255	12RB#13	20.39	PASS
Band13	5MHz	16QAM	23255	25RB#0	20.46	PASS
Band13	10MHz	QPSK	23230	1RB#0	22.33	PASS
Band13	10MHz	QPSK	23230	1RB#24	22.53	PASS
Band13	10MHz	QPSK	23230	1RB#49	22.42	PASS
Band13	10MHz	QPSK	23230	25RB#0	21.47	PASS
Band13	10MHz	QPSK	23230	25RB#12	21.45	PASS
Band13	10MHz	QPSK	23230	25RB#25	21.37	PASS
Band13	10MHz	QPSK	23230	50RB#0	21.55	PASS
Band13	10MHz	16QAM	23230	1RB#0	21.64	PASS
Band13	10MHz	16QAM	23230	1RB#24	21.42	PASS
Band13	10MHz	16QAM	23230	1RB#49	21.48	PASS
Band13	10MHz	16QAM	23230	25RB#0	20.38	PASS
Band13	10MHz	16QAM	23230	25RB#12	20.34	PASS
Band13	10MHz	16QAM	23230	25RB#25	20.41	PASS
Band13	10MHz	16QAM	23230	50RB#0	20.53	PASS

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

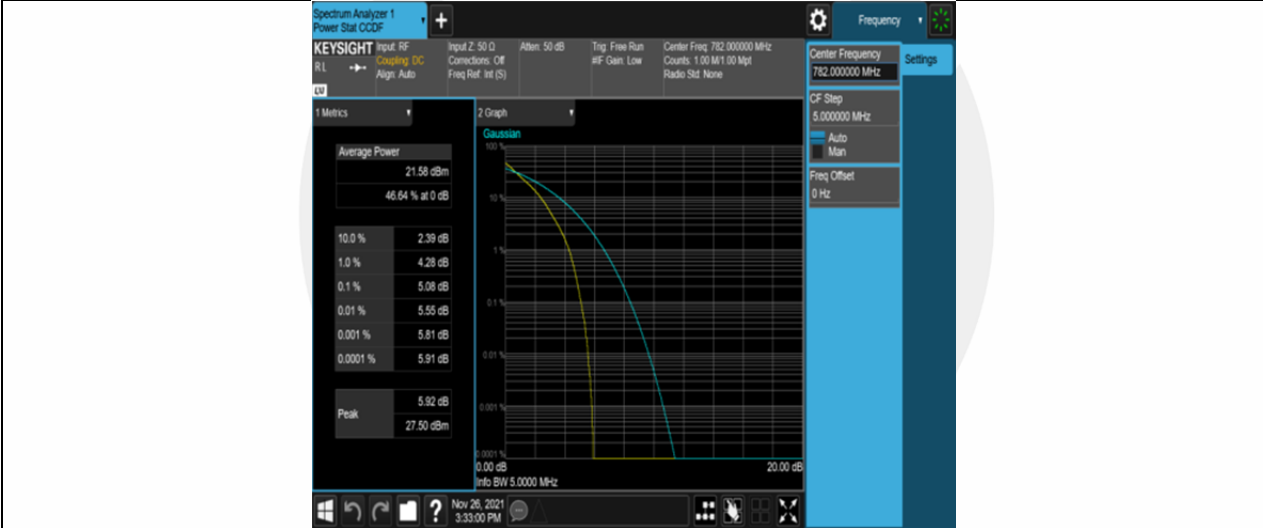
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.94	13	PASS
Band13	5MHz	QPSK	23230	25RB#0	5.08	13	PASS
Band13	5MHz	QPSK	23255	25RB#0	5.41	13	PASS
Band13	5MHz	16QAM	23205	25RB#0	5.72	13	PASS
Band13	5MHz	16QAM	23230	25RB#0	5.74	13	PASS
Band13	5MHz	16QAM	23255	25RB#0	6.18	13	PASS
Band13	10MHz	QPSK	23230	50RB#0	4.79	13	PASS
Band13	10MHz	16QAM	23230	50RB#0	6.07	13	PASS

Test Graphs



Band13-5MHz-QPSK-23205-25RB#0



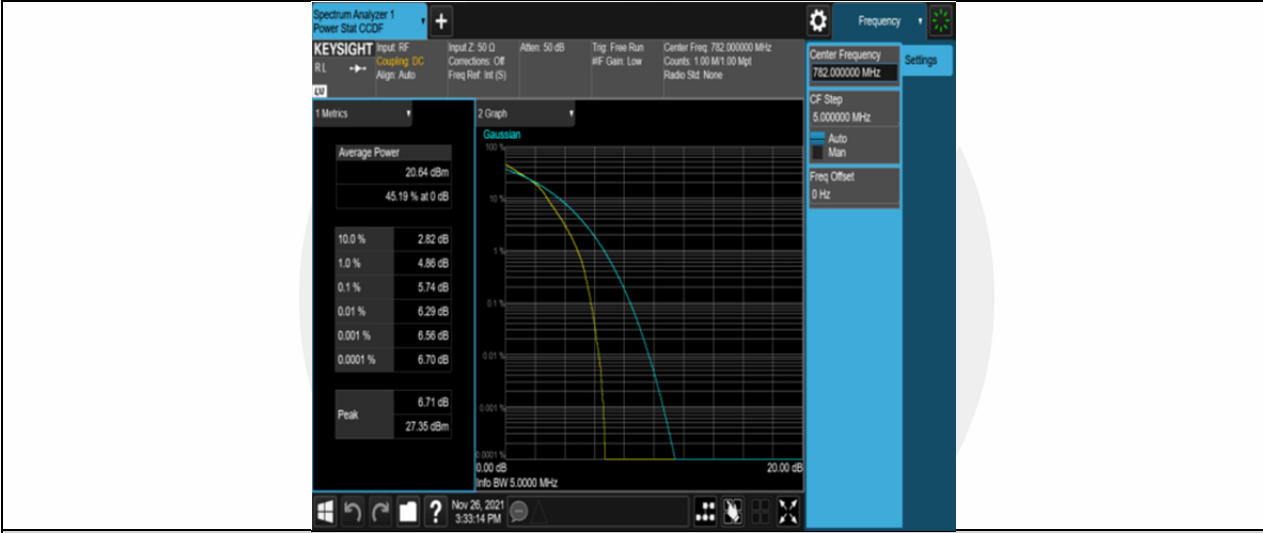
Band13-5MHz-QPSK-23230-25RB#0



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



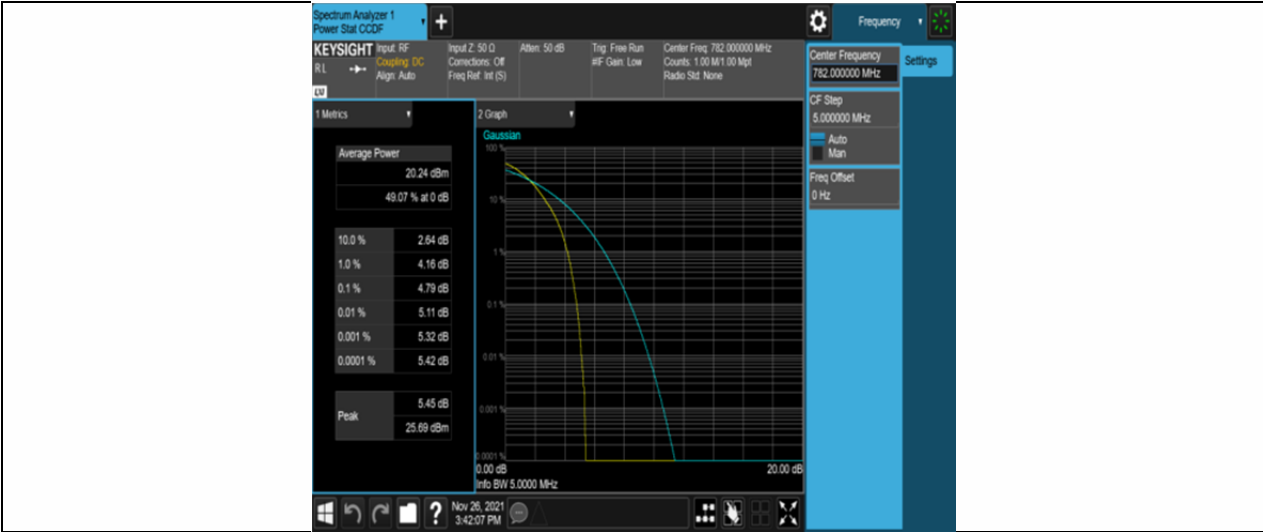
Band13-5MHz-16QAM-23205-25RB#0



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



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



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



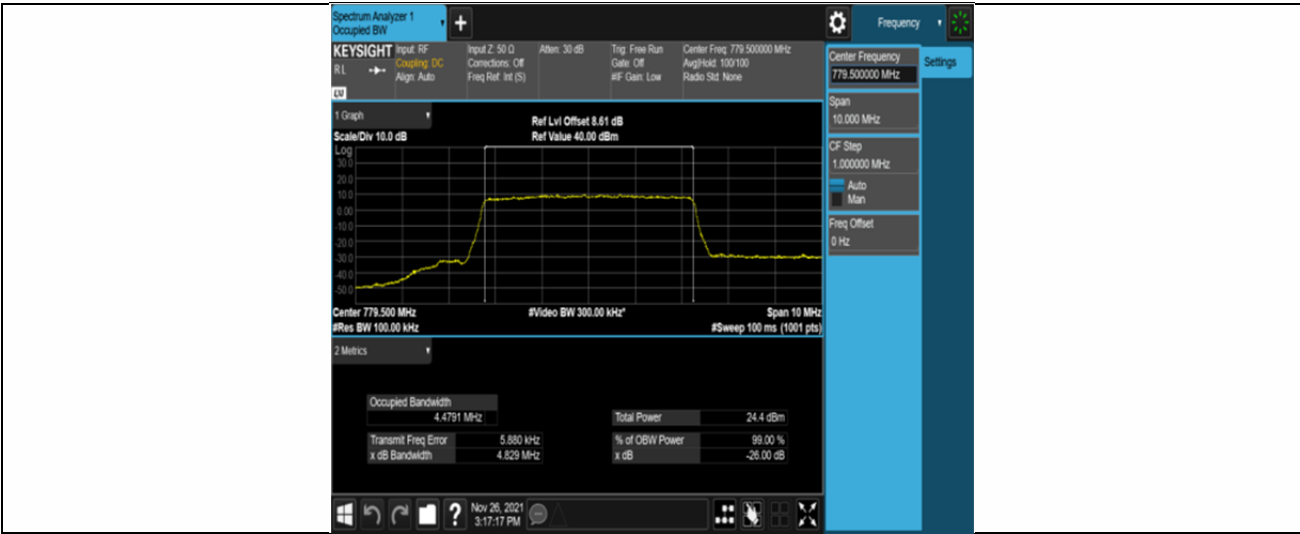
Band13-10MHz-16QAM-23230-50RB#0

Appendix C: 26dB Bandwidth and Occupied Bandwidth

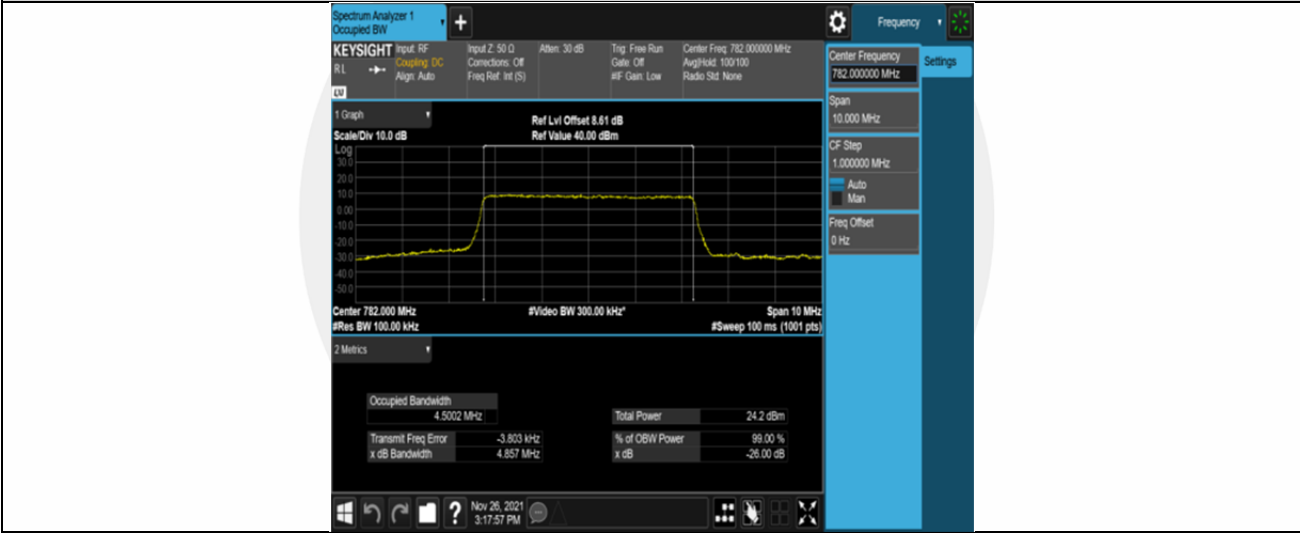
Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.4791	4.829	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5002	4.857	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.5121	4.856	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.4840	4.805	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5009	4.877	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.5136	4.877	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.9680	9.513	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.9530	9.545	PASS

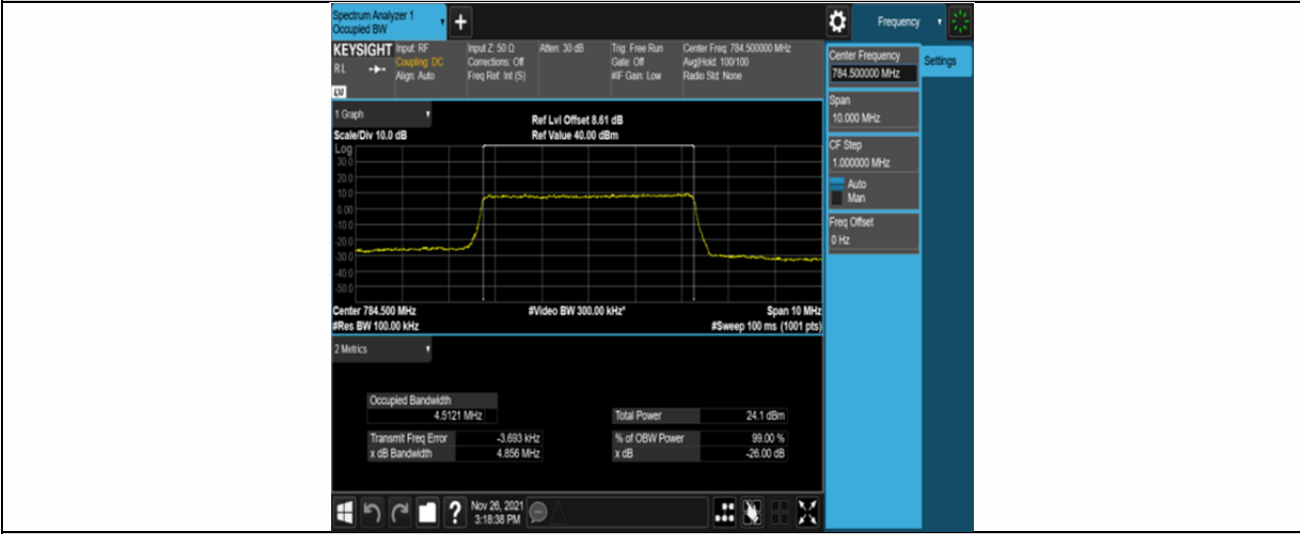
Test Graphs



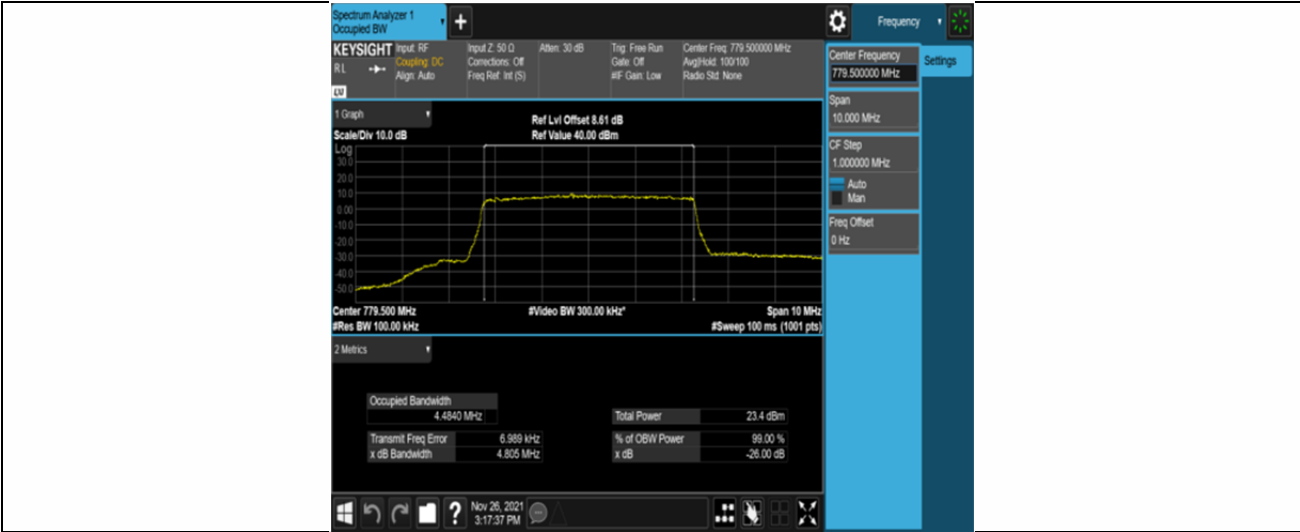
Band13-5MHz-QPSK-23205-25RB#0



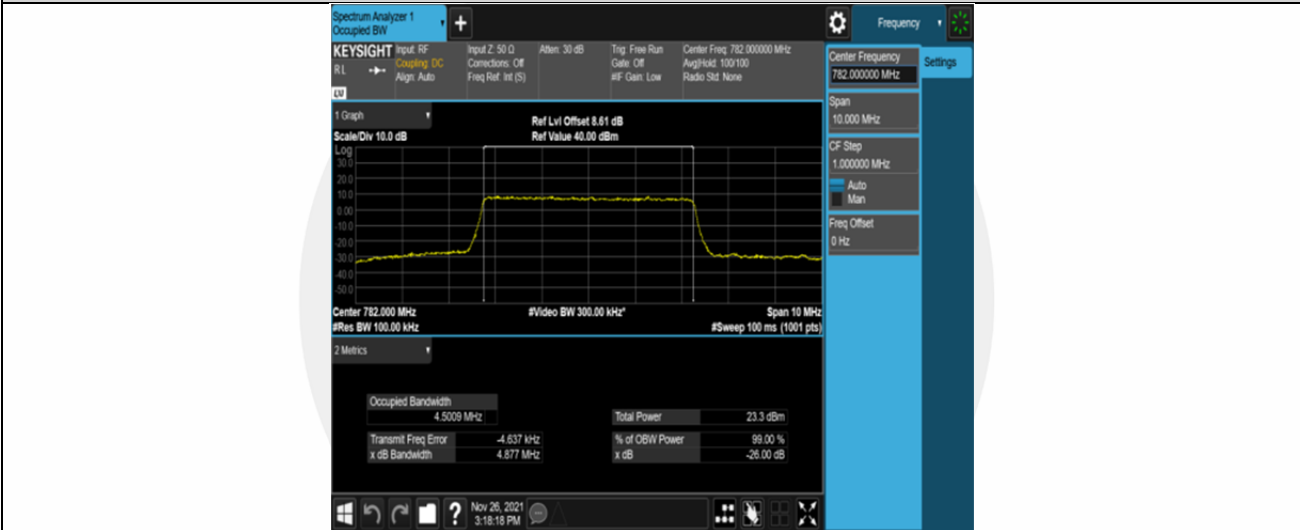
Band13-5MHz-QPSK-23230-25RB#0



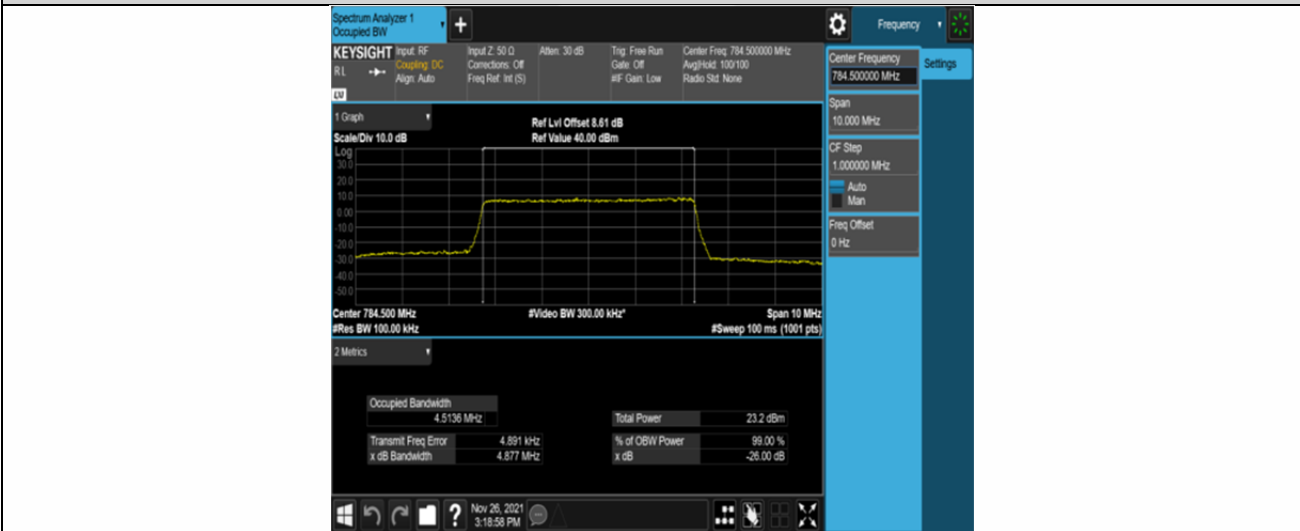
Band13-5MHz-QPSK-23255-25RB#0



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



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



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

Appendix D: Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Config.	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	-28.31	PASS
Band13	5MHz	QPSK	23255	25RB#0	-25.99	PASS
Band13	5MHz	16QAM	23205	25RB#0	-29.65	PASS
Band13	5MHz	16QAM	23255	25RB#0	-27.02	PASS
Band13	10MHz	QPSK	23230	50RB#0	-28.77,-28.87	PASS
Band13	10MHz	16QAM	23230	50RB#0	-30.22,-29.10	PASS



Test Graphs



Band13-5MHz-QPSK-23205-25RB#0



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



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

Appendix E: Conducted Spurious Emission

Test Result

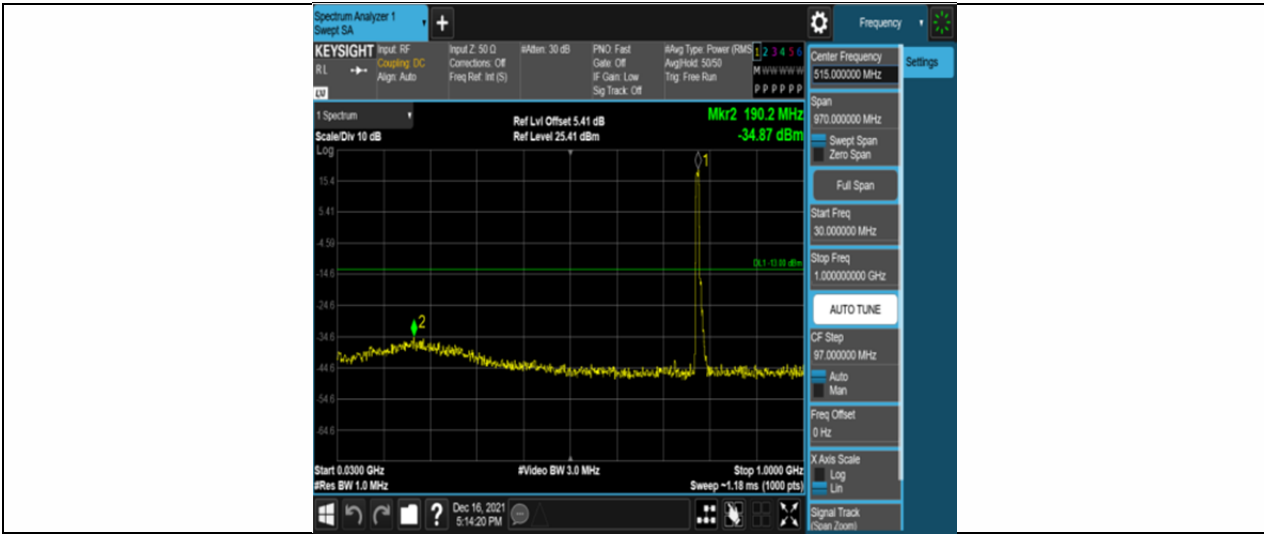
Band	Bandwidth	Modulation	Channel	RB Configuration	Frequency Range	Result (dBm)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	Range1:30~1000MHz	-34.87	PASS
Band13	5MHz	QPSK	23205	25RB#0	Range3:763~775MHz	-56.55	PASS
Band13	5MHz	QPSK	23205	25RB#0	Range4:793~805MHz	-58.32	PASS
Band13	5MHz	QPSK	23205	25RB#0	Range2:1000~10000MHz	-34.53	PASS
Band13	5MHz	QPSK	23205	25RB#0	Range5:1559~1610MHz	-58.64	PASS
Band13	5MHz	QPSK	23230	25RB#0	Range1:30~1000MHz	-34.75	PASS
Band13	5MHz	QPSK	23230	25RB#0	Range3:763~775MHz	-72.79	PASS
Band13	5MHz	QPSK	23230	25RB#0	Range4:793~805MHz	-72.93	PASS
Band13	5MHz	QPSK	23230	25RB#0	Range2:1000~10000MHz	-36.87	PASS
Band13	5MHz	QPSK	23230	25RB#0	Range5:1559~1610MHz	-57.8	PASS
Band13	5MHz	QPSK	23255	25RB#0	Range1:30~1000MHz	-34.52	PASS
Band13	5MHz	QPSK	23255	25RB#0	Range3:763~775MHz	-71.86	PASS
Band13	5MHz	QPSK	23255	25RB#0	Range4:793~805MHz	-72.71	PASS
Band13	5MHz	QPSK	23255	25RB#0	Range2:1000~10000MHz	-36.4	PASS
Band13	5MHz	QPSK	23255	25RB#0	Range5:1559~1610MHz	-57.37	PASS
Band13	5MHz	16QAM	23205	25RB#0	Range1:30~1000MHz	-34.97	PASS
Band13	5MHz	16QAM	23205	25RB#0	Range3:763~775MHz	-72.22	PASS

					75MHz		
Band13	5MHz	16QAM	23205	25RB#0	Range4:793~805MHz	-72.63	PASS
Band13	5MHz	16QAM	23205	25RB#0	Range2:1000~10000MHz	-36.05	PASS
Band13	5MHz	16QAM	23205	25RB#0	Range5:1559~1610MHz	-57.72	PASS
Band13	5MHz	16QAM	23230	25RB#0	Range1:30~1000MHz	-34.92	PASS
Band13	5MHz	16QAM	23230	25RB#0	Range3:763~775MHz	-72.49	PASS
Band13	5MHz	16QAM	23230	25RB#0	Range4:793~805MHz	-73.18	PASS
Band13	5MHz	16QAM	23230	25RB#0	Range2:1000~10000MHz	-35.98	PASS
Band13	5MHz	16QAM	23230	25RB#0	Range5:1559~1610MHz	-57.97	PASS
Band13	5MHz	16QAM	23255	25RB#0	Range1:30~1000MHz	-34.84	PASS
Band13	5MHz	16QAM	23255	25RB#0	Range3:763~775MHz	-72.72	PASS
Band13	5MHz	16QAM	23255	25RB#0	Range4:793~805MHz	-72.43	PASS
Band13	5MHz	16QAM	23255	25RB#0	Range2:1000~10000MHz	-35.39	PASS
Band13	5MHz	16QAM	23255	25RB#0	Range5:1559~1610MHz	-58.1	PASS
Band13	10MHz	QPSK	23230	50RB#0	Range1:30~1000MHz	-35.45	PASS
Band13	10MHz	QPSK	23230	50RB#0	Range3:763~775MHz	-63.69	PASS
Band13	10MHz	QPSK	23230	50RB#0	Range4:793~805MHz	-39.91	PASS
Band13	10MHz	QPSK	23230	50RB#0	Range2:1000~10000MHz	-34.78	PASS
Band13	10MHz	QPSK	23230	50RB#0	Range5:1559~1610MHz	-56.17	PASS

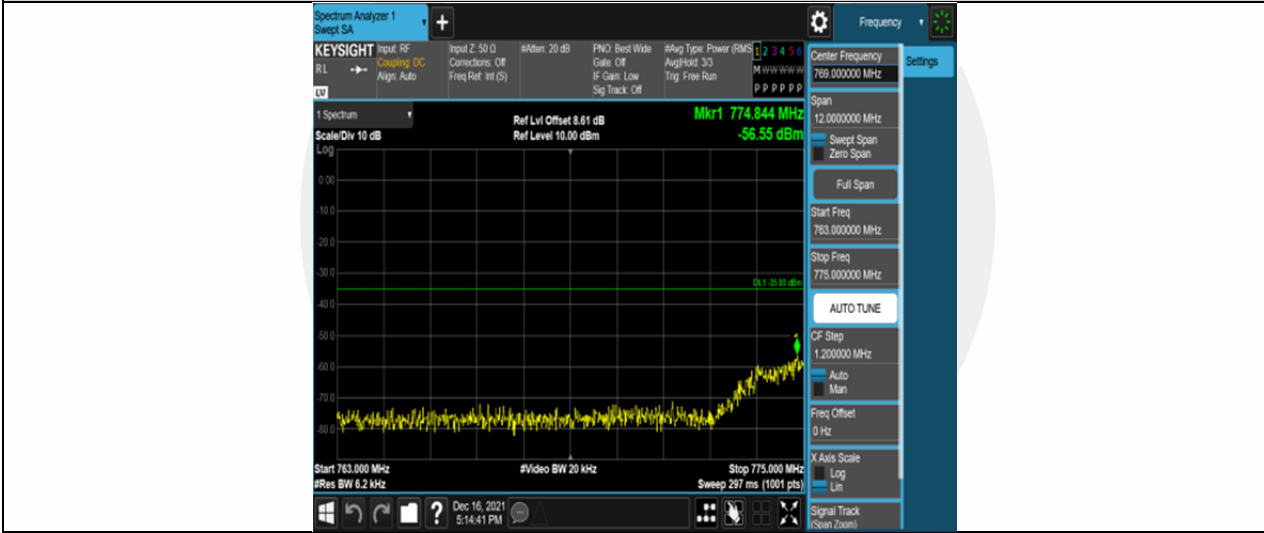
Band13	10MHz	16QAM	23230	50RB#0	Range1:30~1000MHz	-34.5	PASS
Band13	10MHz	16QAM	23230	50RB#0	Range3:763~775MHz	-72.25	PASS
Band13	10MHz	16QAM	23230	50RB#0	Range4:793~805MHz	-72.49	PASS
Band13	10MHz	16QAM	23230	50RB#0	Range2:1000~10000MHz	-36.04	PASS
Band13	10MHz	16QAM	23230	50RB#0	Range5:1559~1610MHz	-57.7	PASS



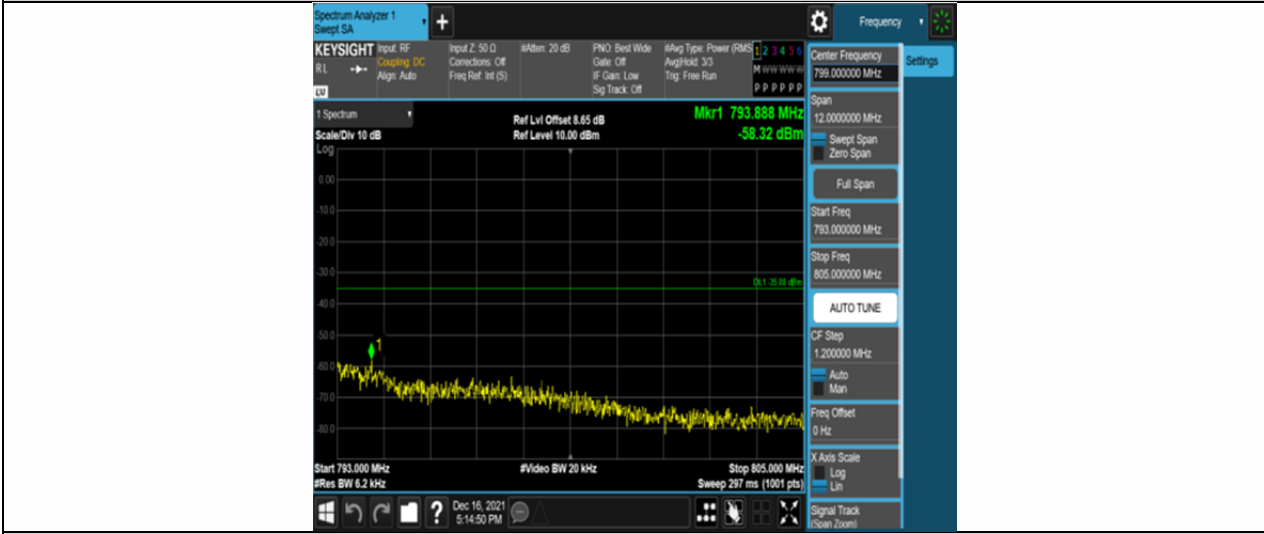
Test Graphs



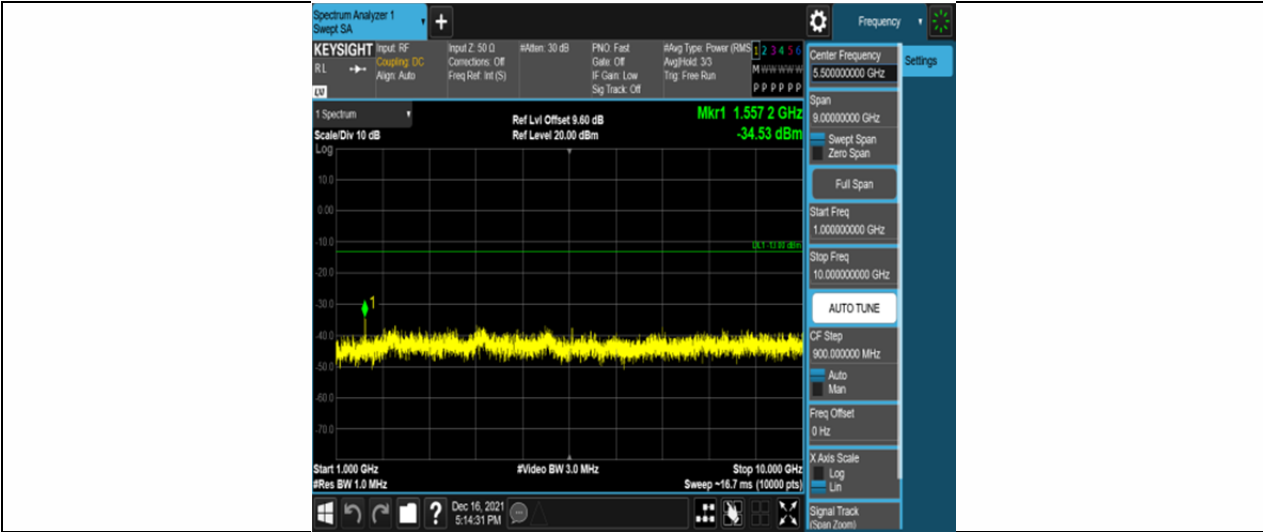
Band13-5MHz-QPSK-23205-25RB#0-Range1:30~1000MHz



Band13-5MHz-QPSK-23205-25RB#0-Range3:763~775MHz



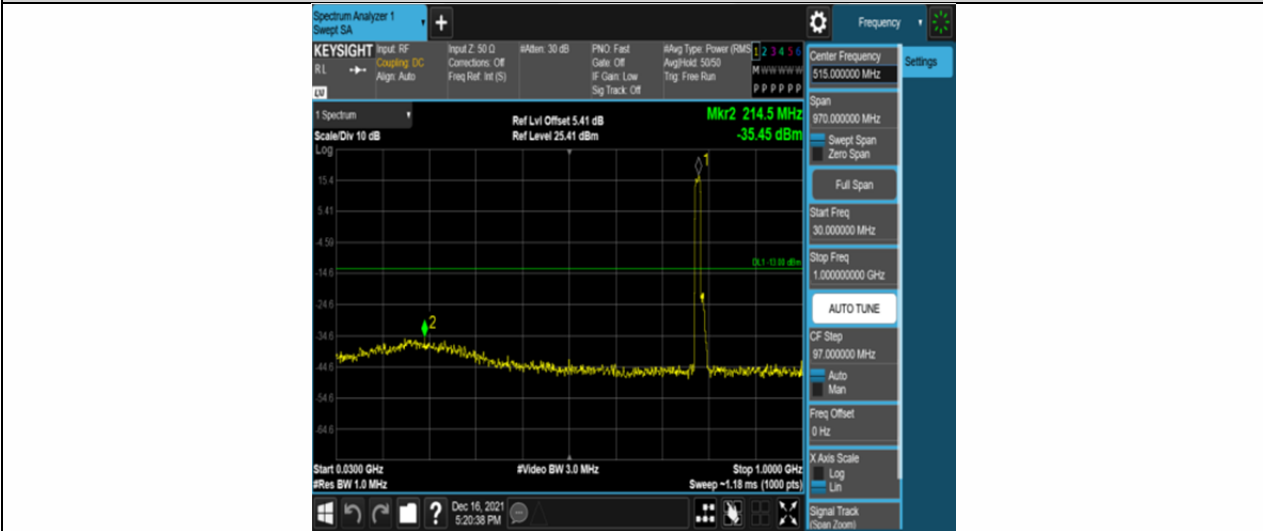
Band13-5MHz-QPSK-23205-25RB#0-Range4:793~805MHz



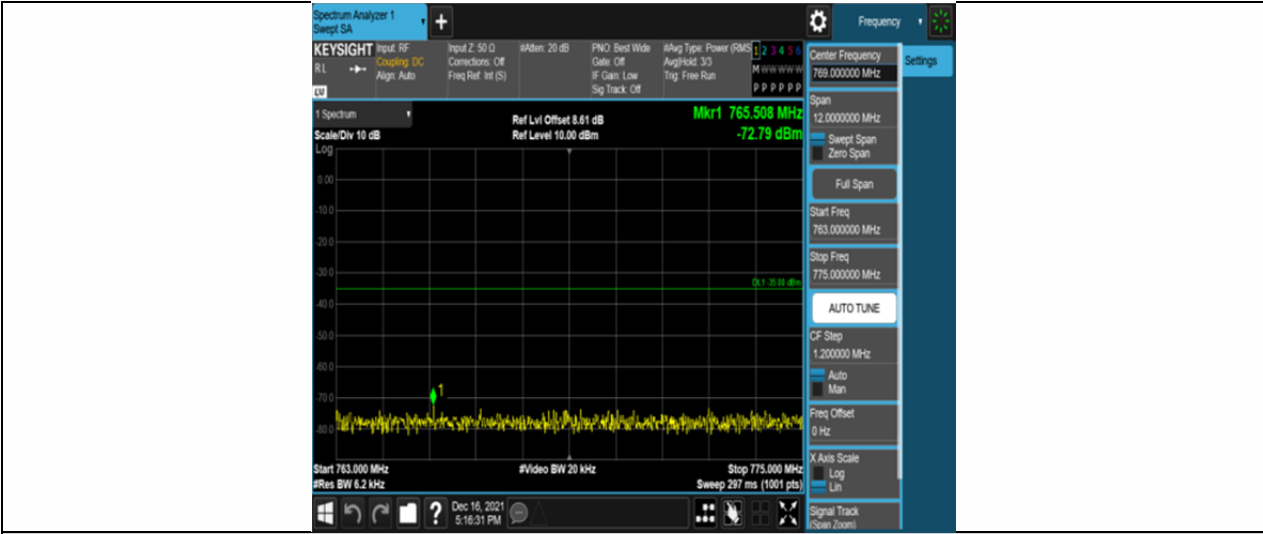
Band13-5MHz-QPSK-23205-25RB#0-Range2: 1000~10000MHz



Band13-5MHz-QPSK-23205-25RB#0-Range5: 1559~1610MHz



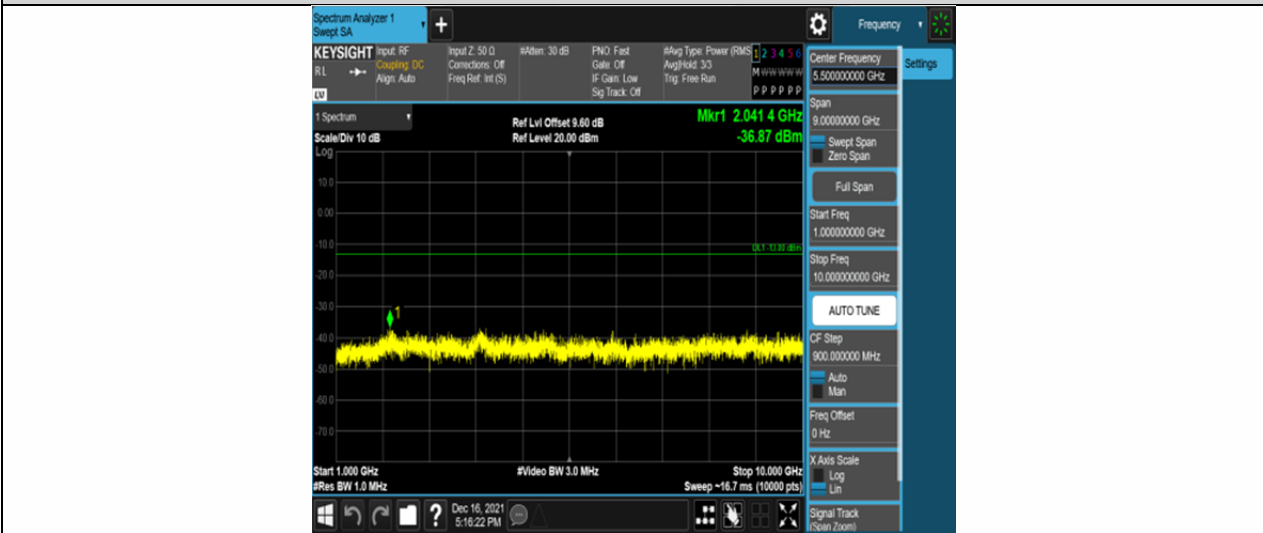
Band13-5MHz-QPSK-23230-25RB#0-Range1:30~1000MHz



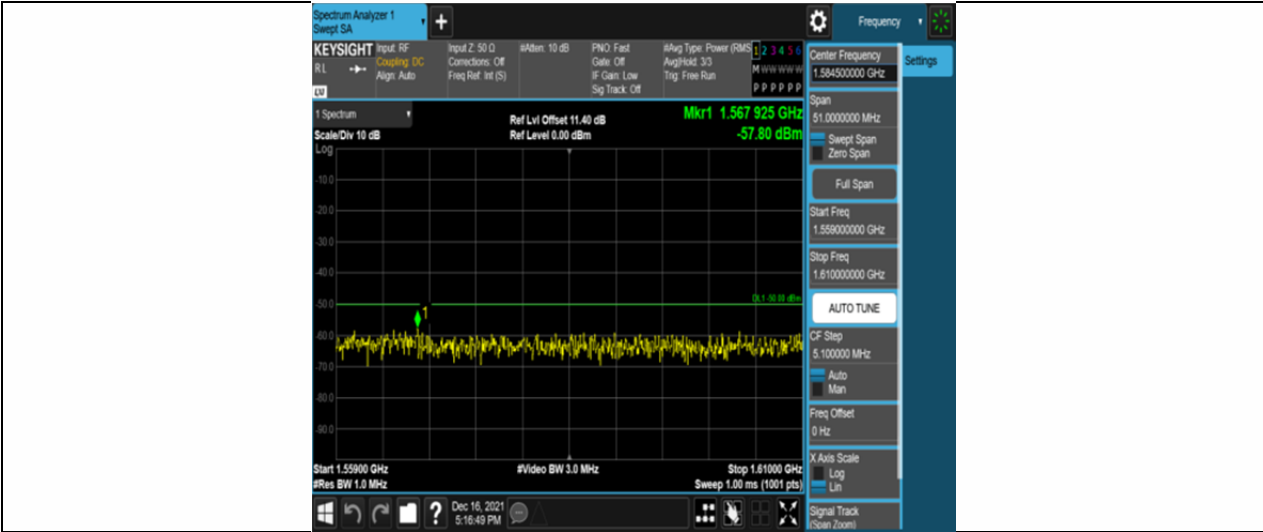
Band13-5MHz-QPSK-23230-25RB#0-Range3:763~775MHz



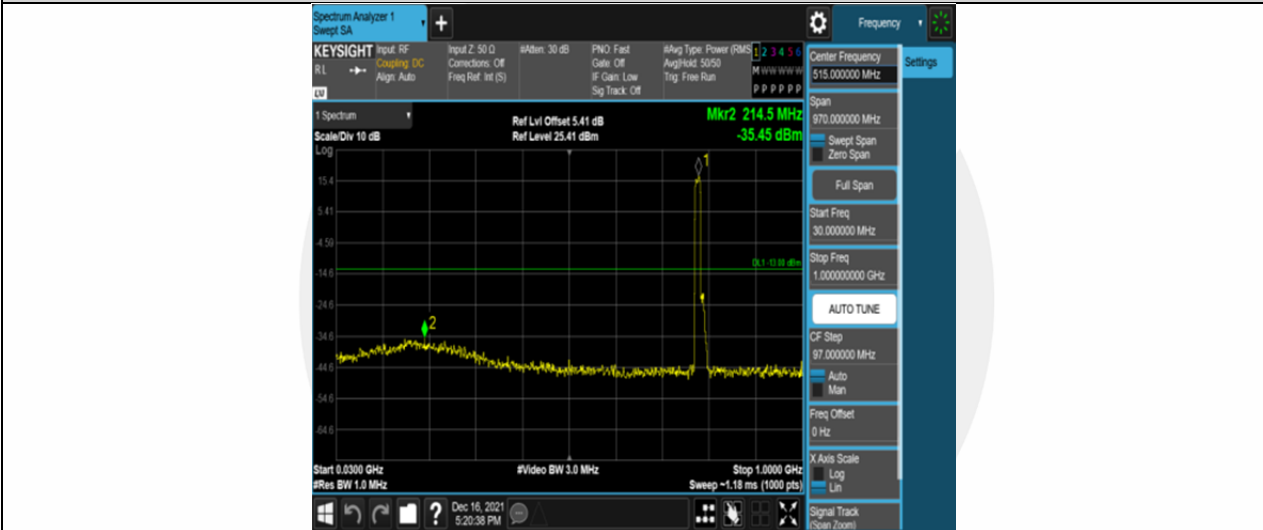
Band13-5MHz-QPSK-23230-25RB#0-Range4:793~805MHz



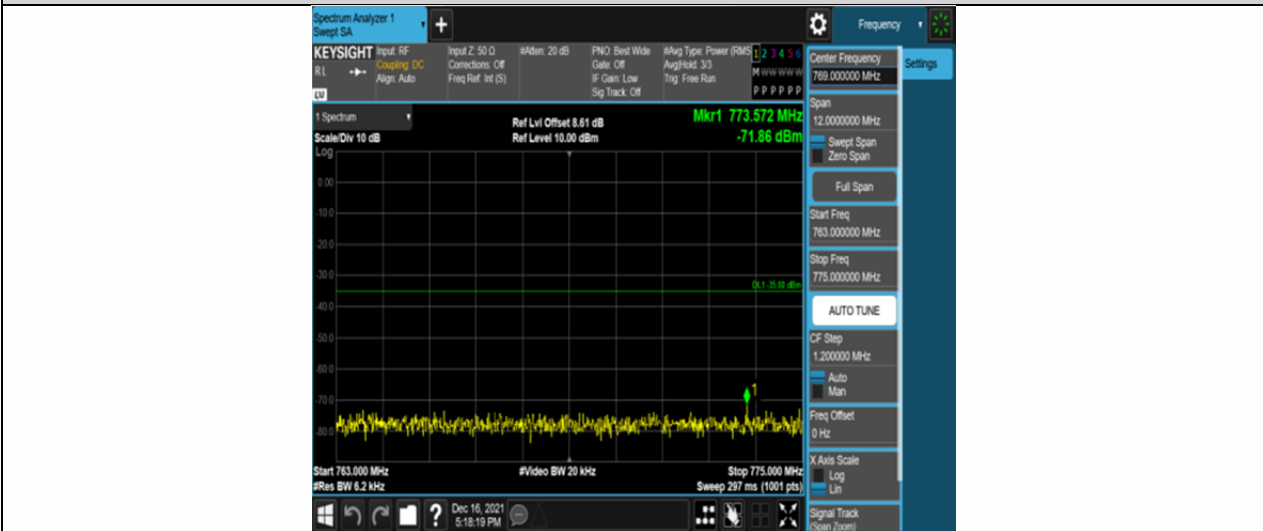
Band13-5MHz-QPSK-23230-25RB#0-Range2:1000~10000MHz



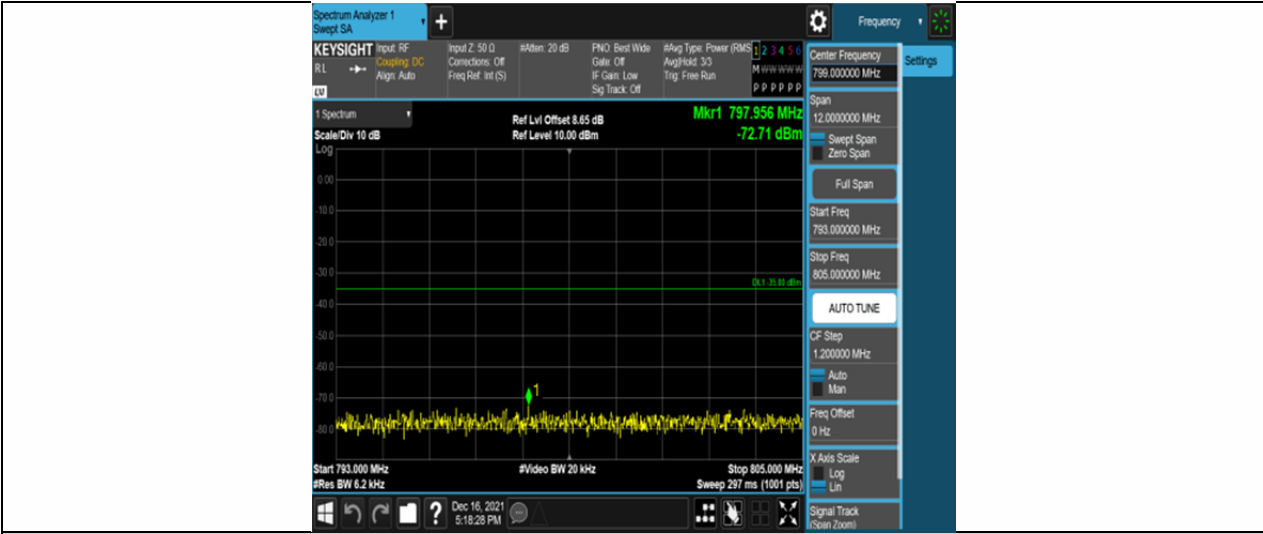
Band13-5MHz-QPSK-23230-25RB#0-Range5:1559~1610MHz



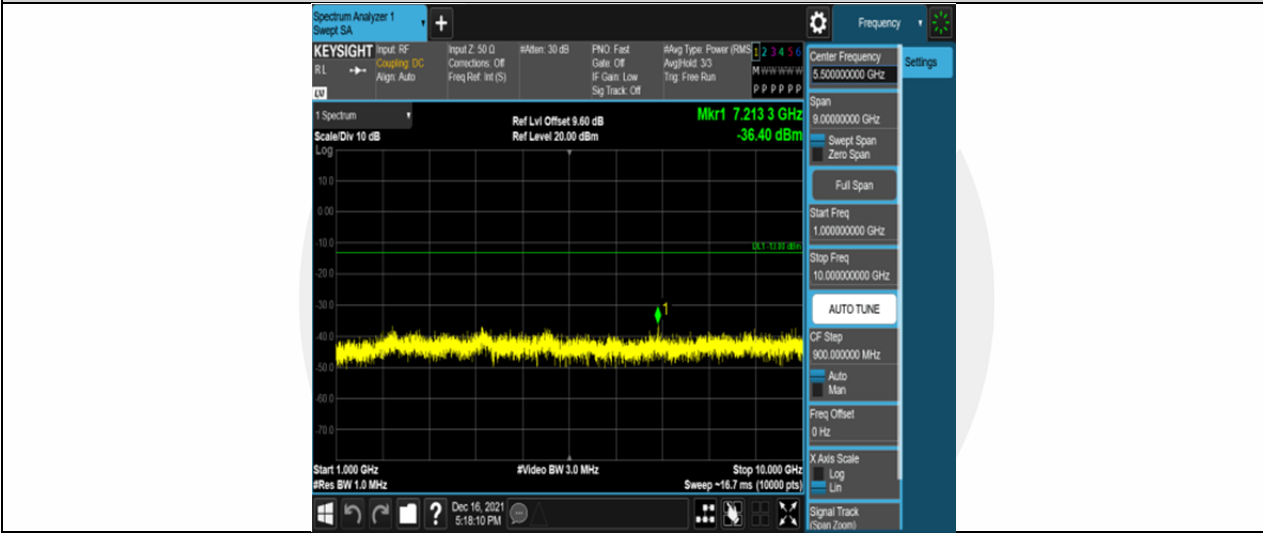
Band13-5MHz-QPSK-23255-25RB#0-Range1:30~1000MHz



Band13-5MHz-QPSK-23255-25RB#0-Range3:763~775MHz



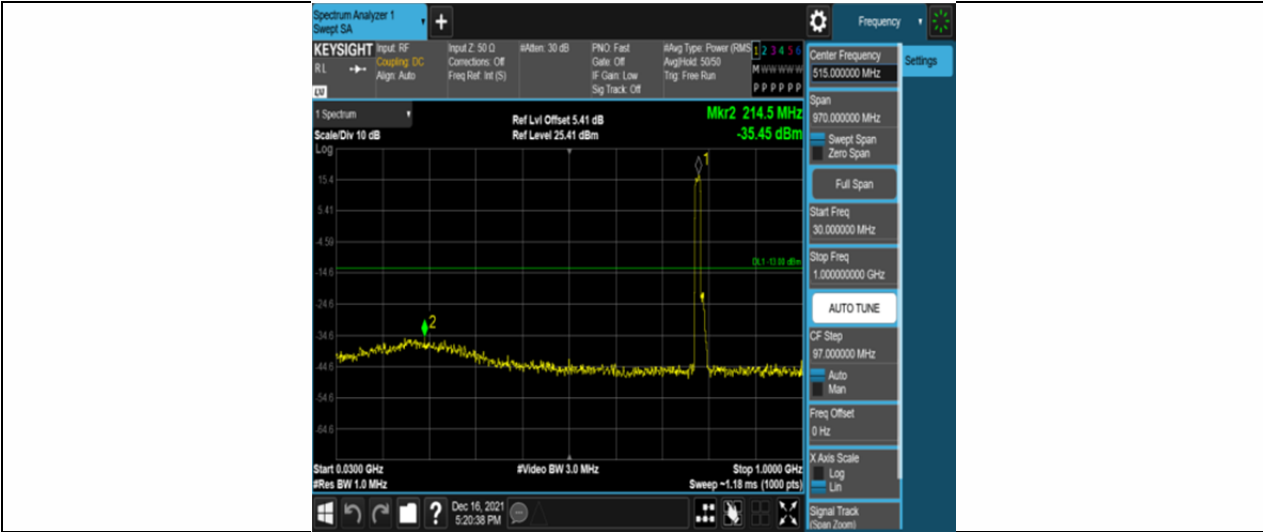
Band13-5MHz-QPSK-23255-25RB#0-Range4:793~805MHz



Band13-5MHz-QPSK-23255-25RB#0-Range2:1000~10000MHz



Band13-5MHz-QPSK-23255-25RB#0-Range5:1559~1610MHz



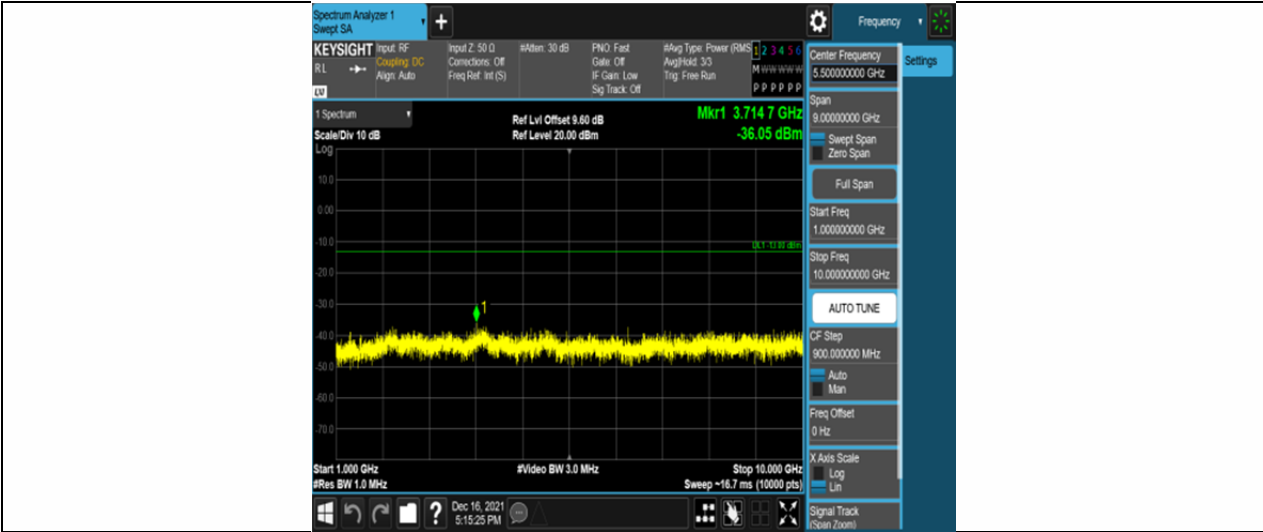
Band13-5MHz-16QAM-23205-25RB#0-Range1:30~1000MHz



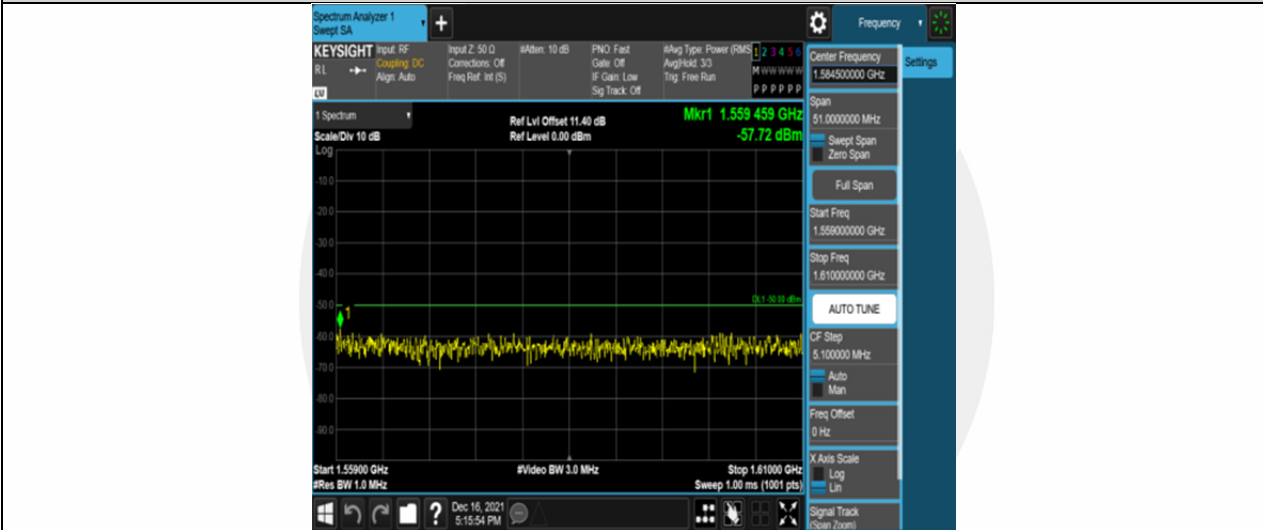
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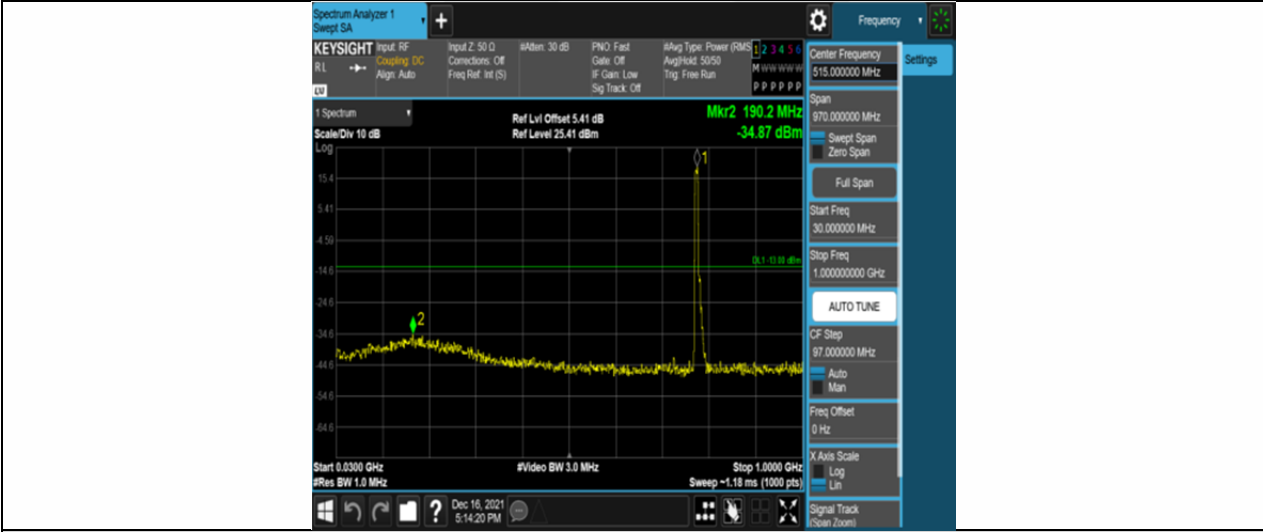
Band13-5MHz-16QAM-23205-25RB#0-Range4:793~805MHz



Band13-5MHz-16QAM-23205-25RB#0-Range2:1000~10000MHz



Band13-5MHz-16QAM-23205-25RB#0-Range5:1559~1610MHz



Band13-5MHz-16QAM-23230-25RB#0-Range1:30~1000MHz