Appendix-B LTE Cat M1 Band 13

Effective (Isotropic) Radiated Power Output Data for M1

Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Power (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band13	5MHz	QPSK	23205	1	0	Low	21.17	23.47	34.77	PASS
Band13	5MHz	QPSK	23205	1	5	Low	21.04	23.34	34.77	PASS
Band13	5MHz	QPSK	23205	6	0	Low	20.26	22.56	34.77	PASS
Band13	5MHz	QPSK	23230	1	0	Low	21.02	23.32	34.77	PASS
Band13	5MHz	QPSK	23230	1	5	Low	20.78	23.08	34.77	PASS
Band13	5MHz	QPSK	23230	6	0	Low	20.23	22.53	34.77	PASS
Band13	5MHz	QPSK	23255	1	0	High	20.87	23.17	34.77	PASS
Band13	5MHz	QPSK	23255	1	5	High	20.75	23.05	34.77	PASS
Band13	5MHz	QPSK	23255	6	0	High	20.15	22.45	34.77	PASS
Band13	10MHz	QPSK	23230	1	0	Low	21.14	23.44	34.77	PASS
Band13	10MHz	QPSK	23230	1	5	Low	20.96	23.26	34.77	PASS
Band13	10MHz	QPSK	23230	6	0	Low	20.15	22.45	34.77	PASS
Band13	5MHz	16QAM	23205	1	0	Low	21.54	23.84	34.77	PASS
Band13	5MHz	16QAM	23205	1	5	Low	21.27	23.57	34.77	PASS
Band13	5MHz	16QAM	23205	5	0	Low	20.13	22.43	34.77	PASS
Band13	5MHz	16QAM	23230	1	0	Low	21.29	23.59	34.77	PASS
Band13	5MHz	16QAM	23230	1	5	Low	21.23	23.53	34.77	PASS
Band13	5MHz	16QAM	23230	5	0	Low	20.08	22.38	34.77	PASS
Band13	5MHz	16QAM	23255	1	0	High	20.98	23.28	34.77	PASS
Band13	5MHz	16QAM	23255	1	5	High	20.96	23.26	34.77	PASS
Band13	5MHz	16QAM	23255	5	0	High	20.11	22.41	34.77	PASS
Band13	10MHz	16QAM	23230	1	0	Low	21.39	23.69	34.77	PASS
Band13	10MHz	16QAM	23230	1	5	Low	21.32	23.62	34.77	PASS
Band13	10MHz	16QAM	23230	5	0	Low	21.17	23.47	34.77	PASS

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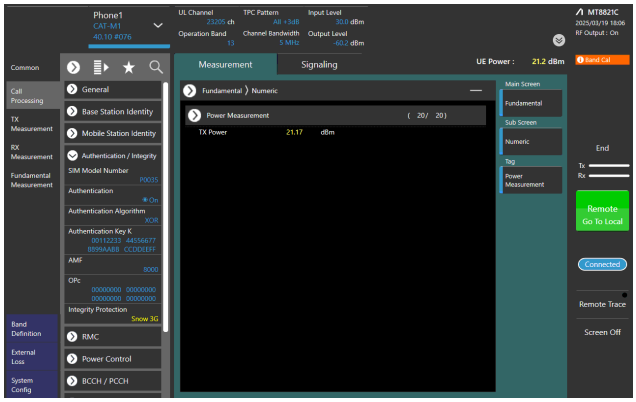
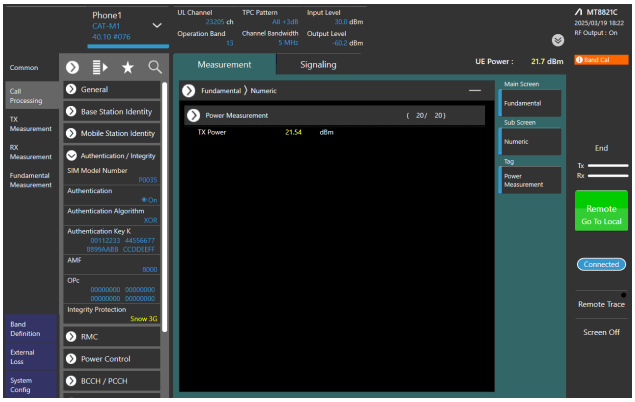
Test Graphs

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

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Peak-to-Average Ratio(CCDF) for M1

Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NBIndex	Result(dB)	Limit(dB)	Verdict
Band13	10MHz	QPSK	23230	6	0	Low	4.59	<=13	PASS
Band13	10MHz	QPSK	23230	6	0	High	4.68	<=13	PASS
Band13	10MHz	16QAM	23230	5	0	Low	4.42	<=13	PASS
Band13	10MHz	16QAM	23230	5	0	High	4.48	<=13	PASS

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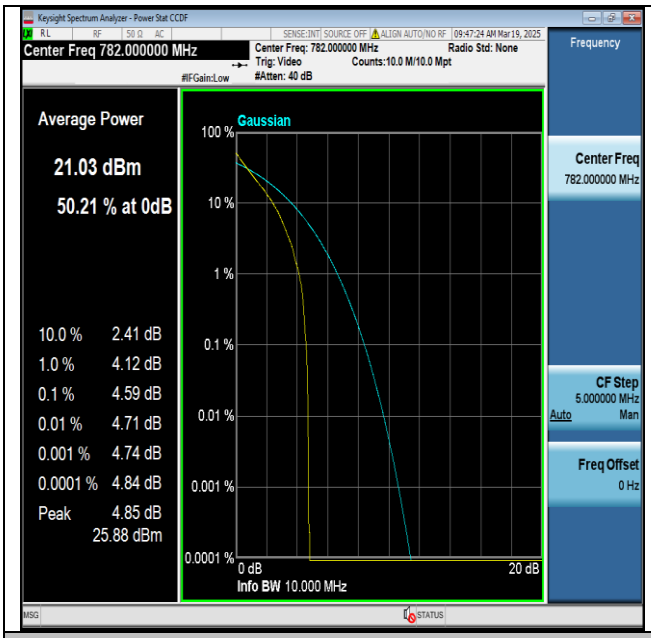
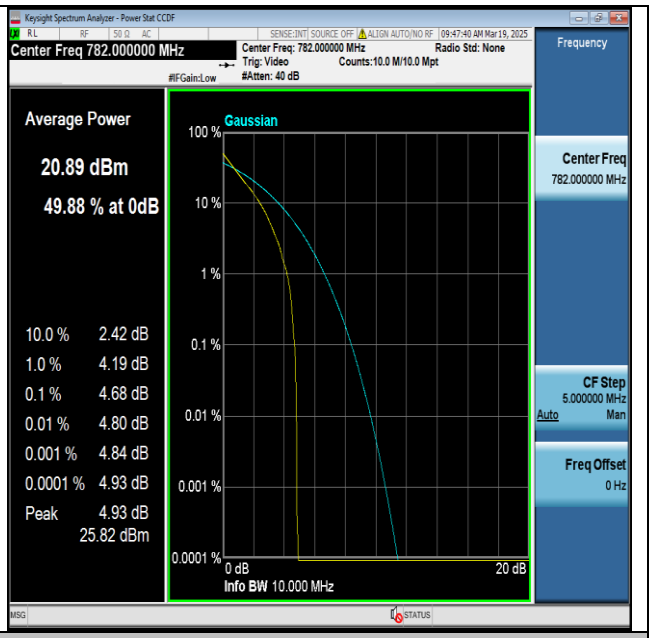
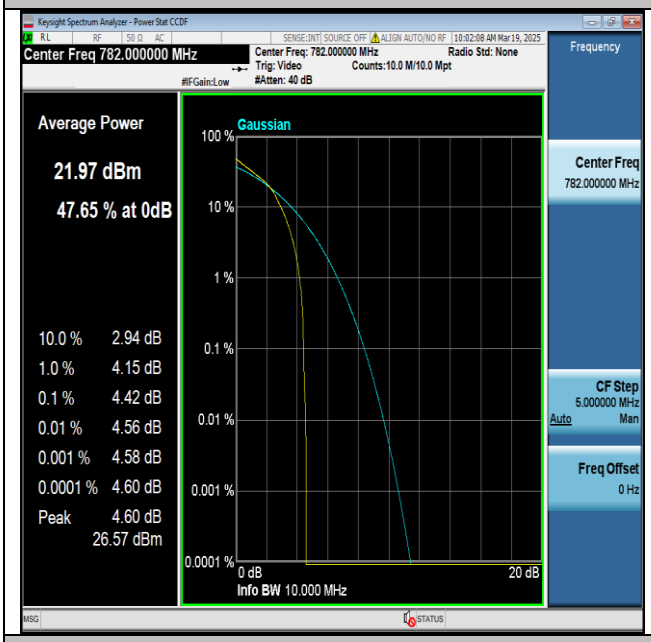
Test Graphs



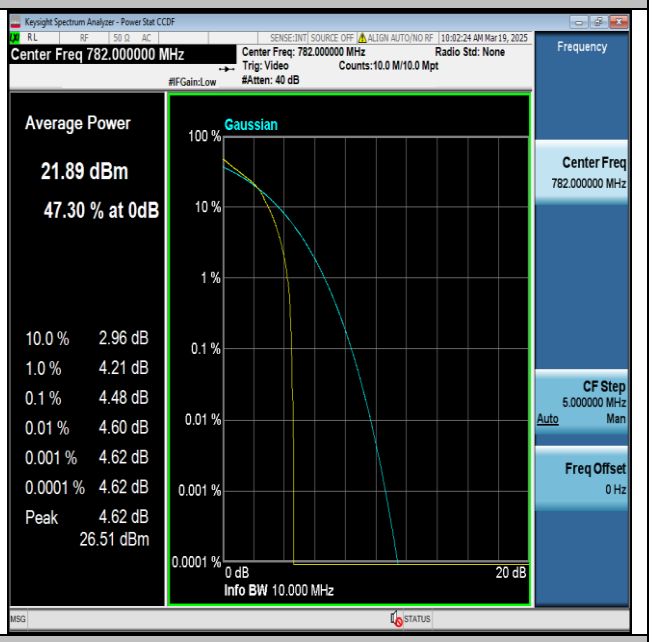
Band13-10MHz-QPSK-23230-PASS



Band13-10MHz-QPSK-23230-PASS



Band13-10MHz-16QAM-23230-PASS



Band13-10MHz-16QAM-23230-PASS

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26dB Bandwidth and Occupied Bandwidth for M1

Test Result

Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band13	5MHz	QPSK	23205	6	0	Low	1.0879	1.254	PASS
Band13	5MHz	QPSK	23230	6	0	Low	1.0871	1.236	PASS
Band13	5MHz	QPSK	23255	6	0	High	1.0856	1.240	PASS
Band13	10MHz	QPSK	23230	6	0	Low	1.0940	1.270	PASS
Band13	10MHz	QPSK	23230	6	0	High	1.0947	1.267	PASS
Band13	5MHz	16QAM	23205	5	0	Low	0.91515	1.092	PASS
Band13	5MHz	16QAM	23230	5	0	Low	0.91952	1.106	PASS
Band13	5MHz	16QAM	23255	5	0	High	0.91129	1.137	PASS
Band13	10MHz	16QAM	23230	5	0	Low	0.91772	1.092	PASS
Band13	10MHz	16QAM	23230	5	0	High	0.92583	1.097	PASS

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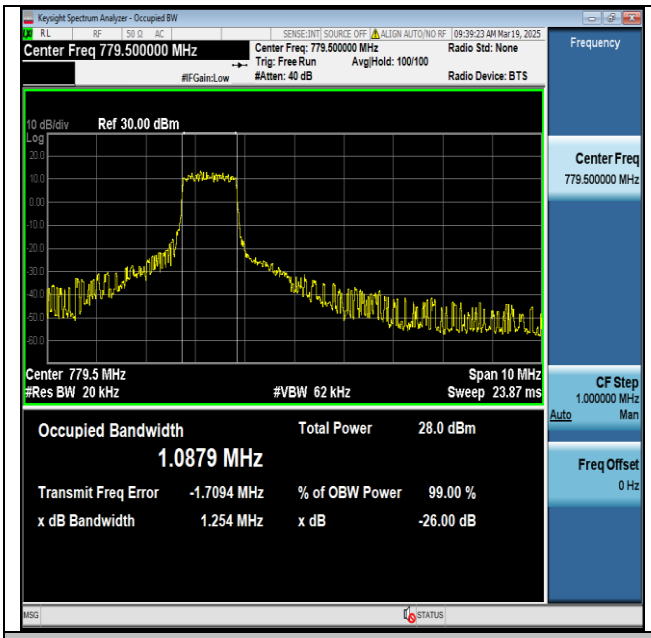
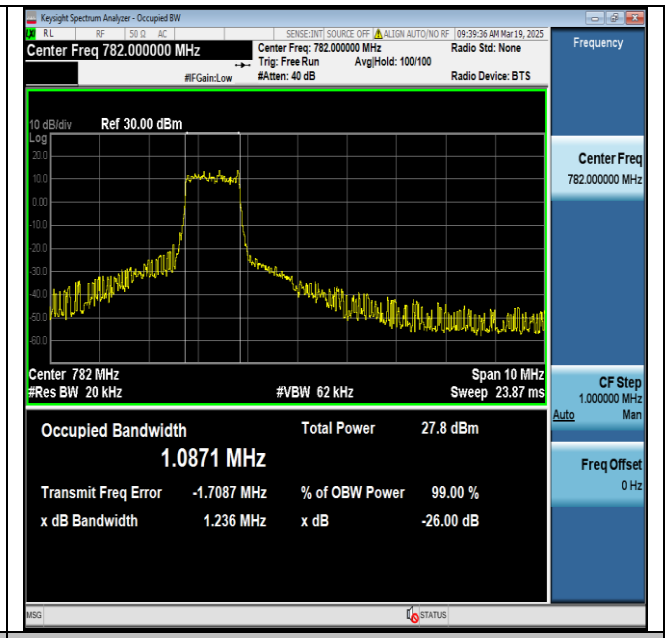
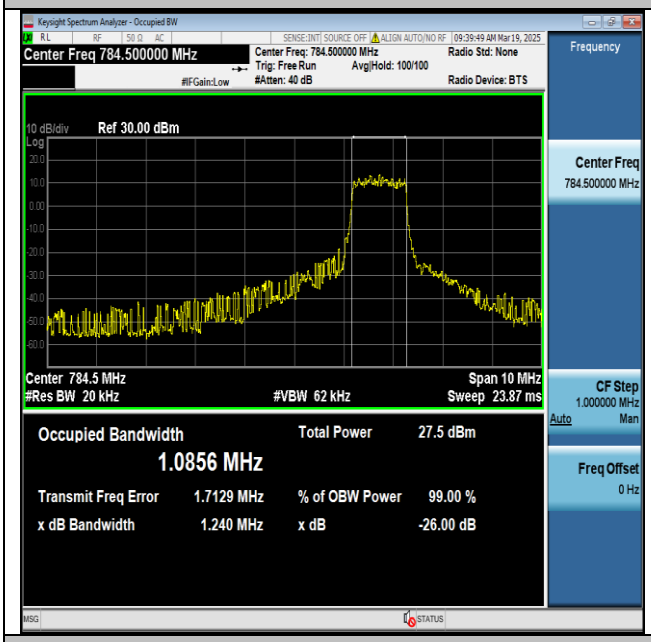
Test Graphs



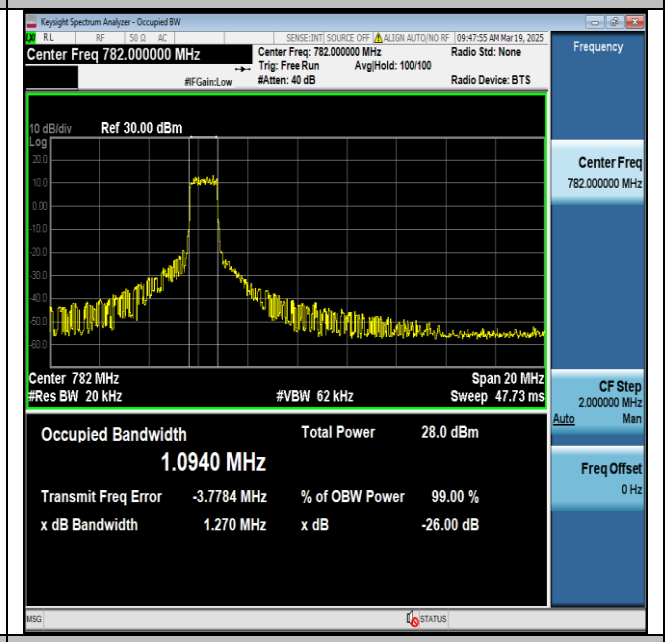
Band13-5MHz-QPSK-23205-PASS



Band13-5MHz-QPSK-23230-PASS



Band13-5MHz-QPSK-23255-PASS



Band13-10MHz-QPSK-23230-PASS

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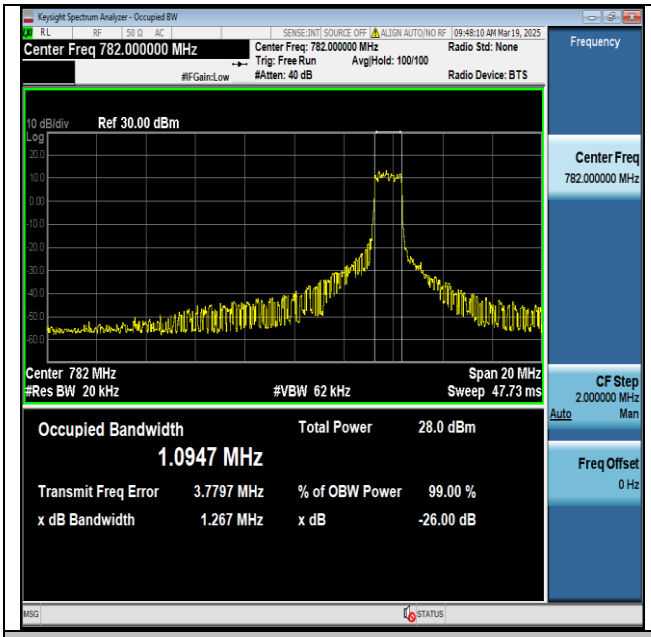
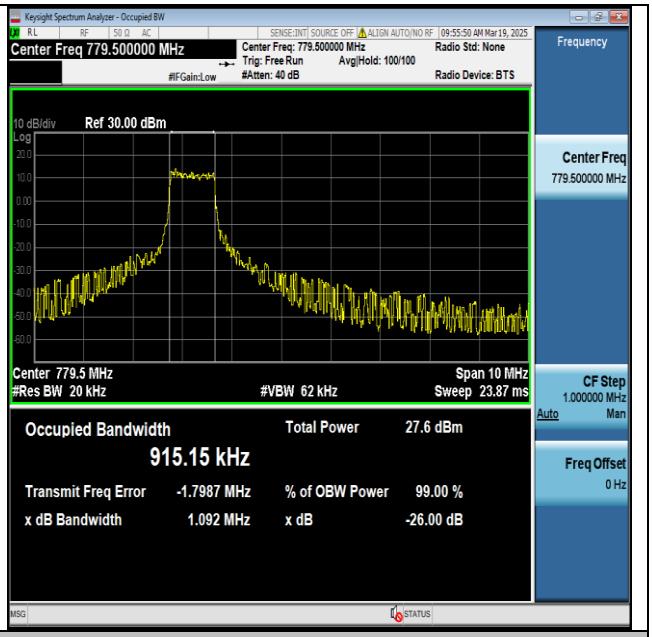
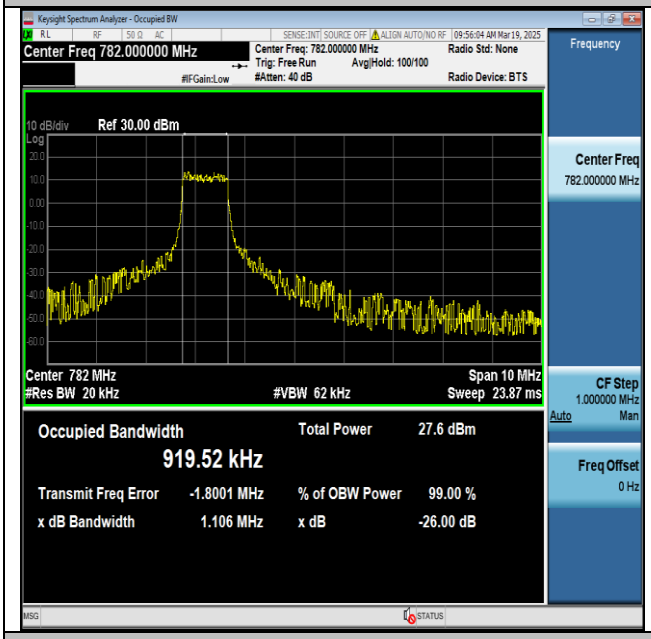


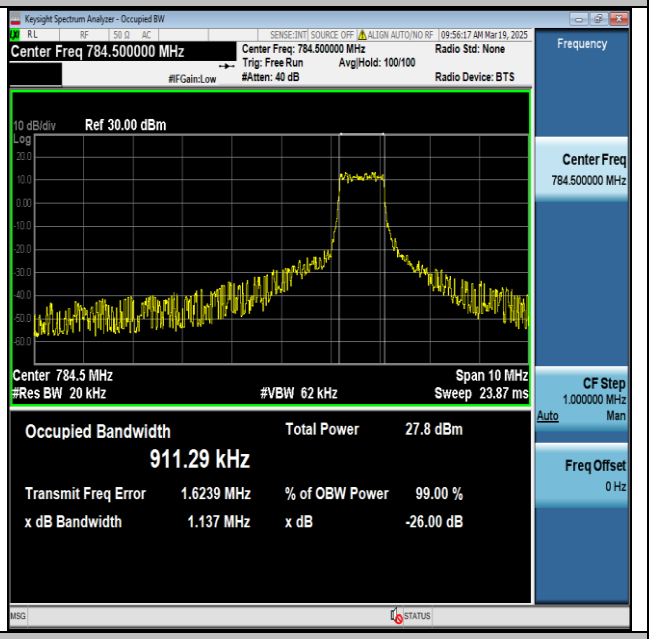
Band13-10MHz-QPSK-23230-PASS



Band13-5MHz-16QAM-23205-PASS



Band13-5MHz-16QAM-23230-PASS



Band13-5MHz-16QAM-23255-PASS

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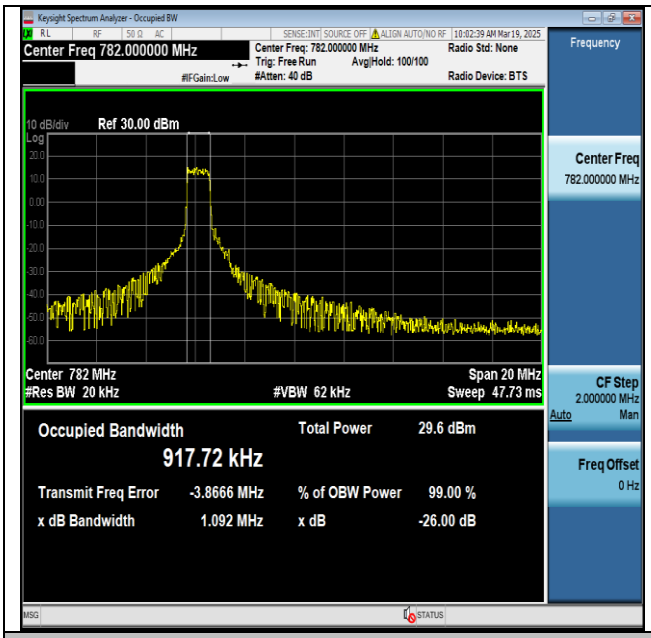
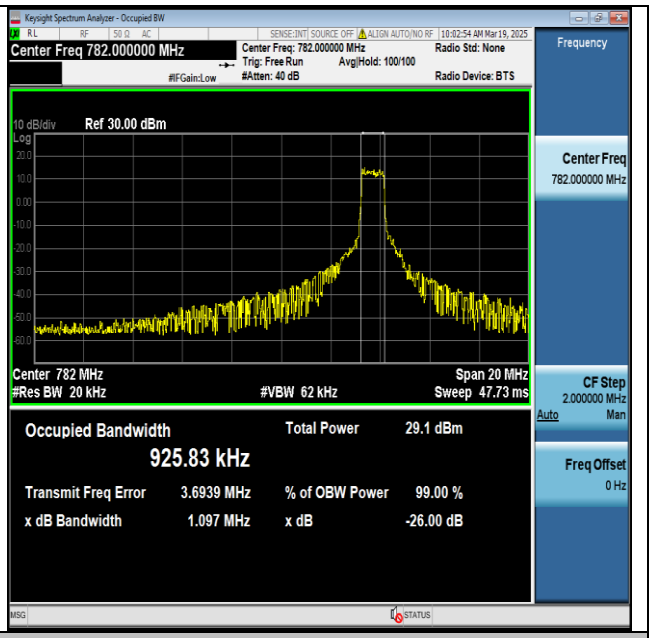


Band13-10MHz-16QAM-23230-PASS



Band13-10MHz-16QAM-23230-PASS

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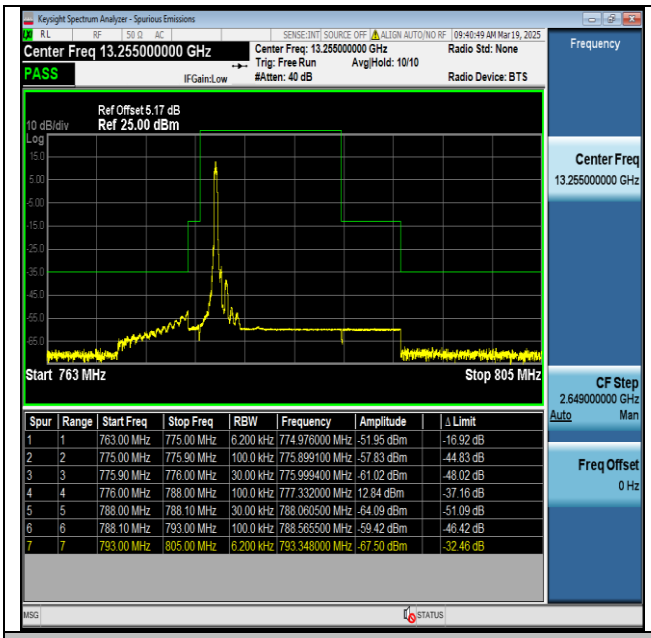
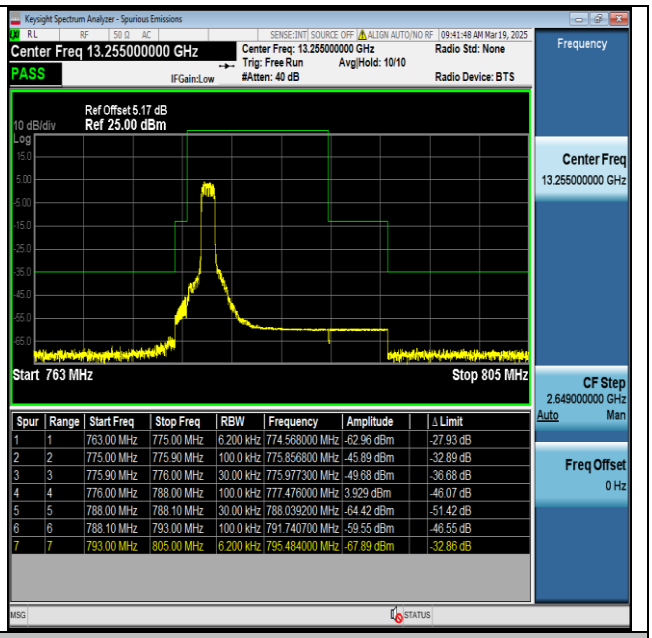
Band Edge for M1

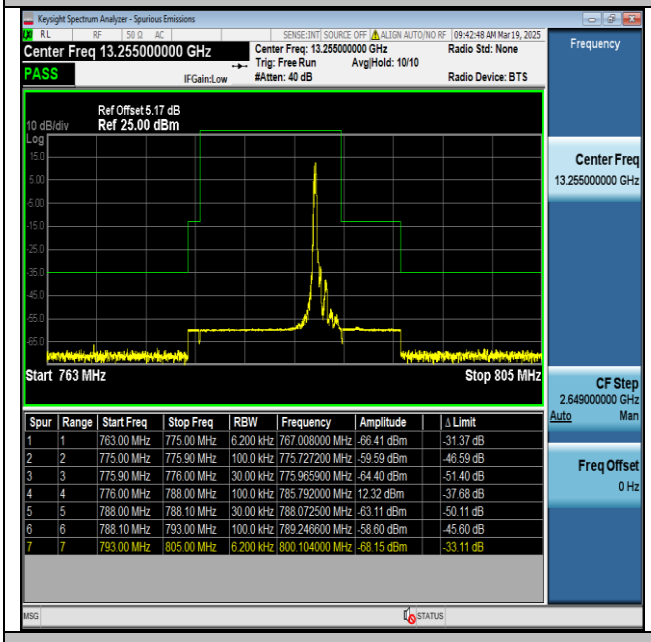
Test Graphs



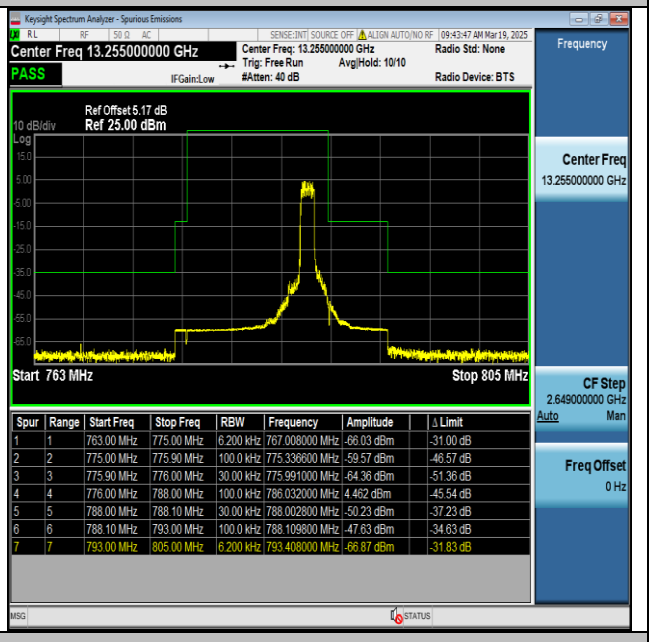
Band13_5MHz_QPSK_23205_1_Low



Band13_5MHz_QPSK_23205_6_Low



Band13_5MHz_QPSK_23255_1_High



Band13_5MHz_QPSK_23255_6_High

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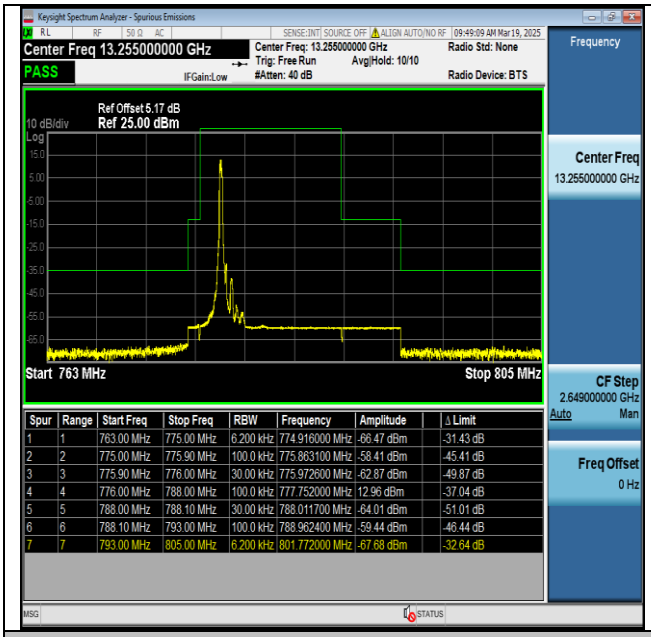
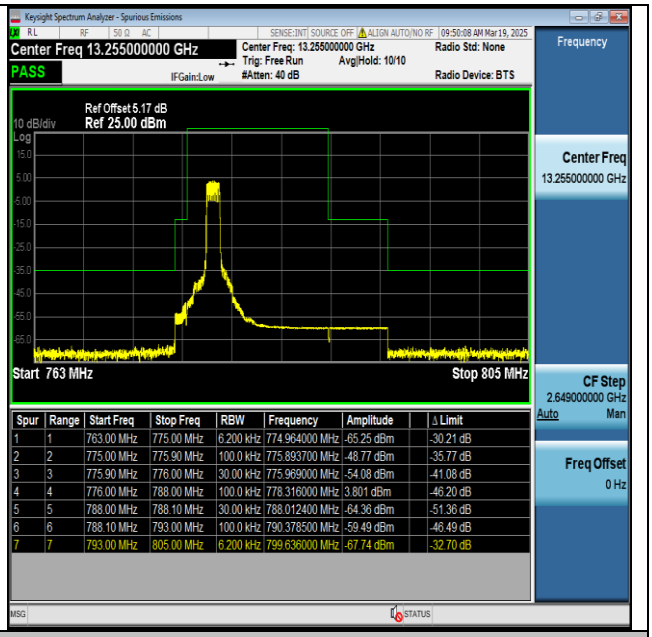
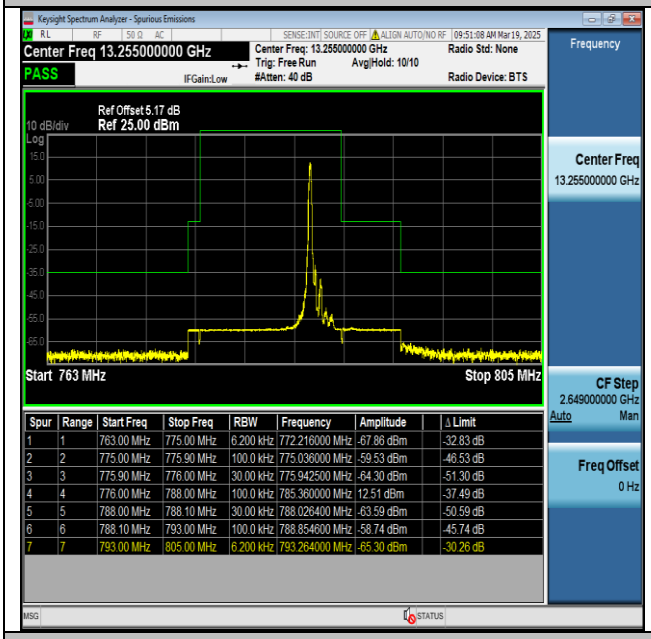


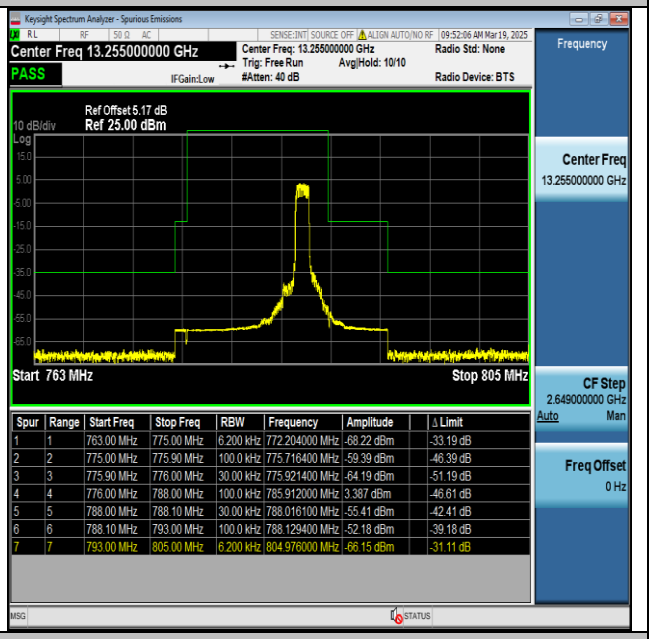
Band13_10MHz_QPSK_23230_1_Low



Band13_10MHz_QPSK_23230_6_Low



Band13_10MHz_QPSK_23230_1_High



Band13_10MHz_QPSK_23230_6_High

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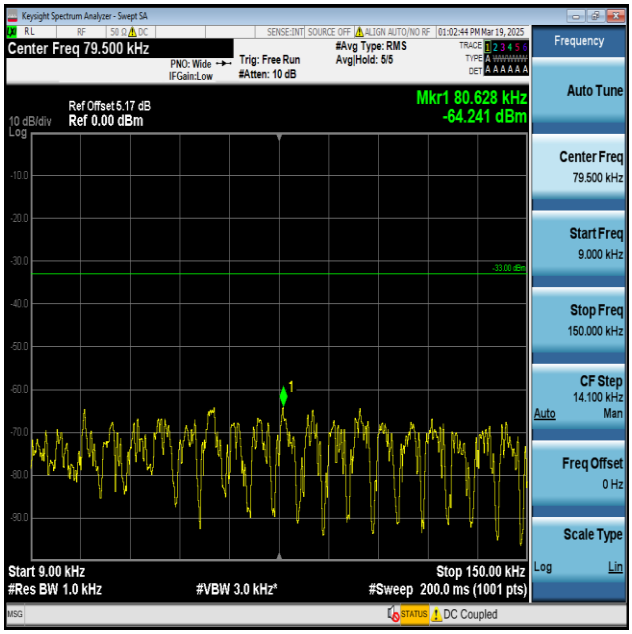
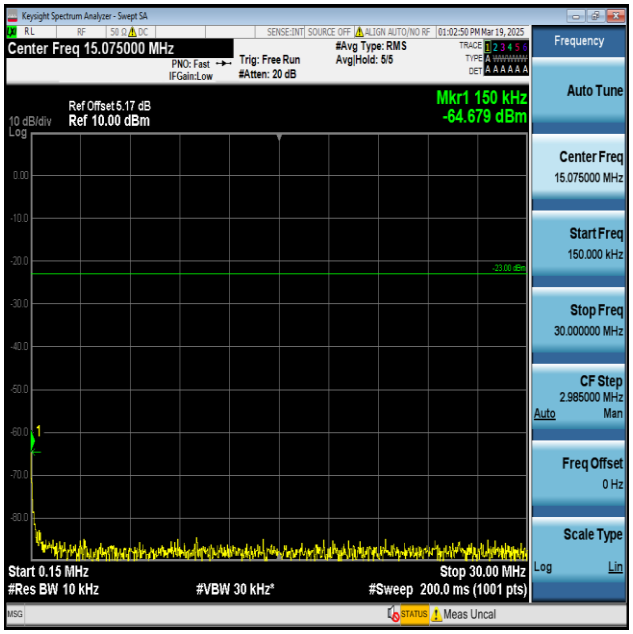
Conducted Spurious Emission for M1

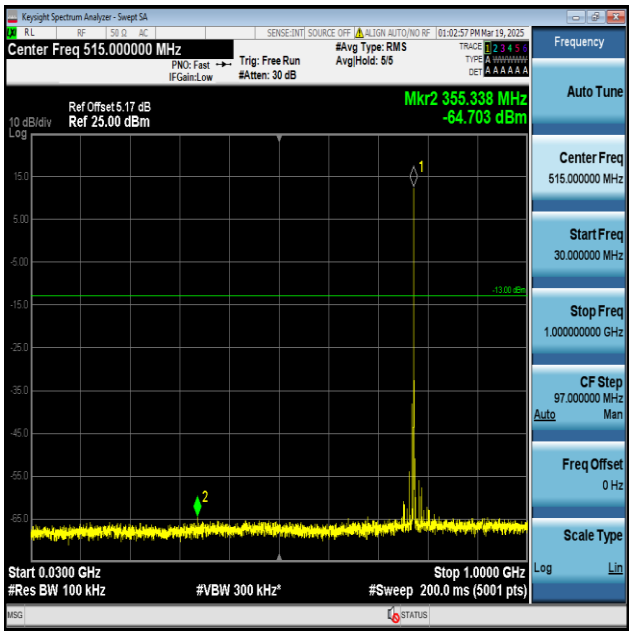
Test Graphs



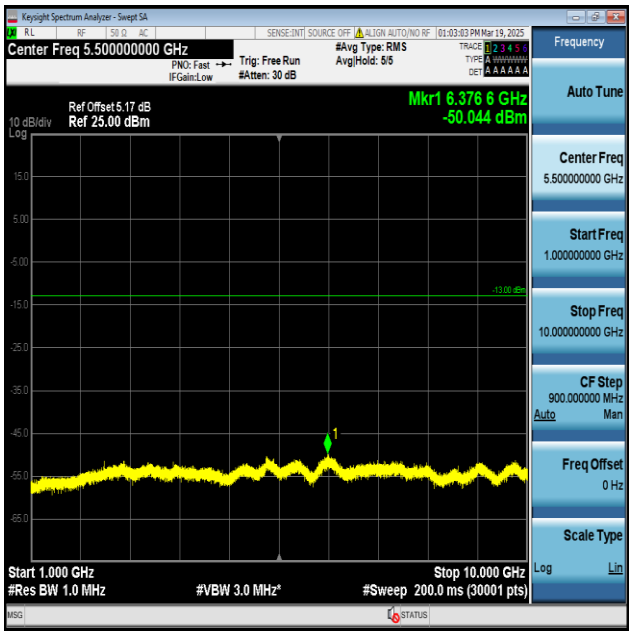
Band13-10MHz-QPSK-23230-PASS_1_Low



Band13-10MHz-QPSK-23230-PASS_1_Low



Band13-10MHz-QPSK-23230-PASS_1_Low



Band13-10MHz-QPSK-23230-PASS_1_Low

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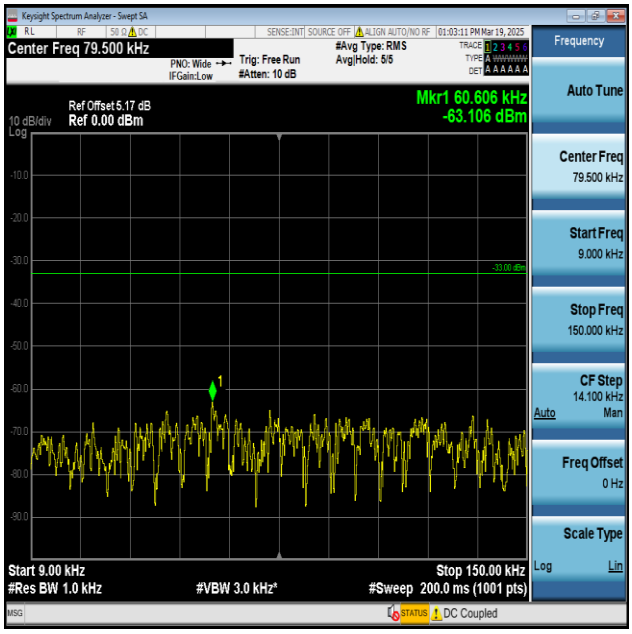
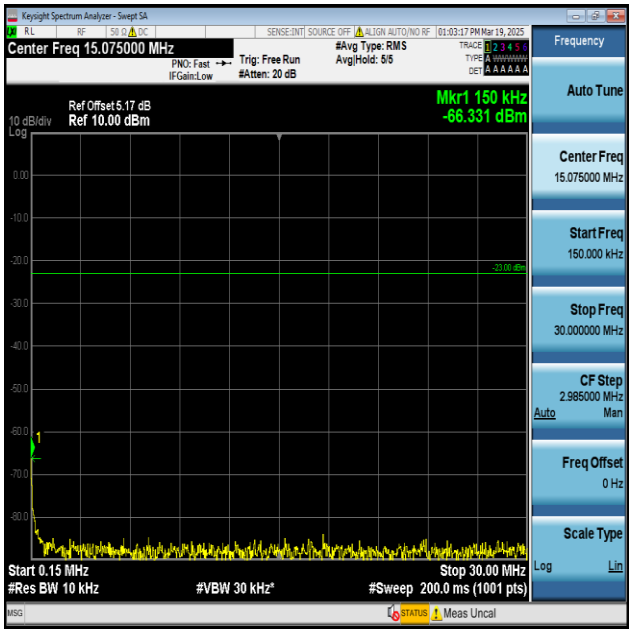
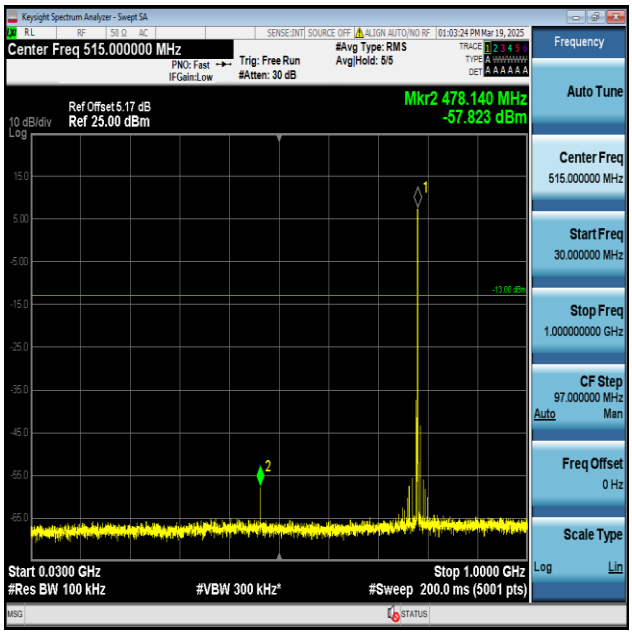


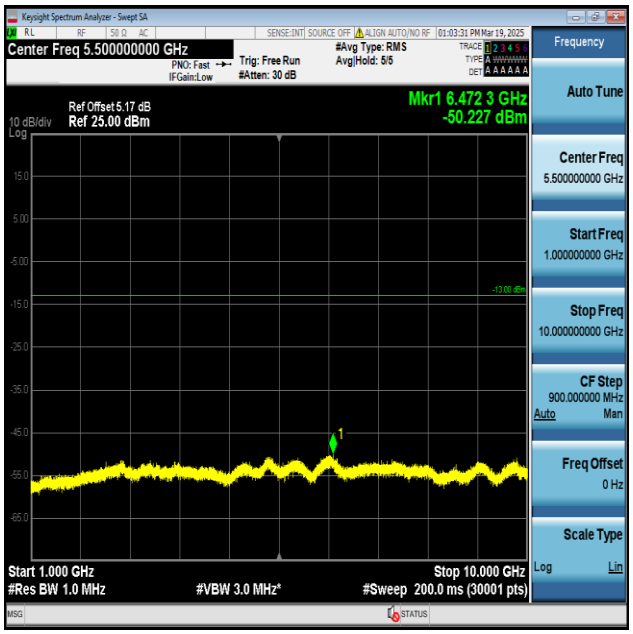
Band13-10MHz-QPSK-23230-PASS_1_High



Band13-10MHz-QPSK-23230-PASS_1_High



Band13-10MHz-QPSK-23230-PASS_1_High



Band13-10MHz-QPSK-23230-PASS_1_High

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Frequency Stability for M1

Test Result

Voltage											
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Verdict
Band13	10MHz	QPSK	23230	6	0	Low	VN	NT	-5.40	-0.006905	PASS
Band13	10MHz	QPSK	23230	6	0	Low	VL	NT	-4.70	-0.006010	PASS
Band13	10MHz	QPSK	23230	6	0	Low	VH	NT	-4.20	-0.005371	PASS

Temperature											
Band	Bandwidth	Modulation	Channel	RB Size	RB Start	NB Index	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Verdict
Band13	10MHz	QPSK	23230	6	0	Low	NV	-30	-6.30	-0.008056	PASS
Band13	10MHz	QPSK	23230	6	0	Low	NV	-20	-5.40	-0.006905	PASS
Band13	10MHz	QPSK	23230	6	0	Low	NV	-10	-5.80	-0.007417	PASS
Band13	10MHz	QPSK	23230	6	0	Low	NV	0	-6.60	-0.008440	PASS
Band13	10MHz	QPSK	23230	6	0	Low	NV	10	-5.10	-0.006522	PASS
Band13	10MHz	QPSK	23230	6	0	Low	NV	20	-5.80	-0.007417	PASS
Band13	10MHz	QPSK	23230	6	0	Low	NV	30	-4.60	-0.005882	PASS
Band13	10MHz	QPSK	23230	6	0	Low	NV	40	-5.10	-0.006522	PASS
Band13	10MHz	QPSK	23230	6	0	Low	NV	50	-6.20	-0.007928	PASS

~The End~

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