Appendix-A LTE Band 13

Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	ERP (dBm)	Limit (dBm)	Verdict
Band13	5MHz	QPSK	23205	1RB#0	24.19	23.87	44.77	PASS
Band13	5MHz	QPSK	23205	25RB#0	23.36	23.04	44.77	PASS
Band13	5MHz	QPSK	23205	1RB#12	24.33	24.01	44.77	PASS
Band13	5MHz	QPSK	23205	1RB#24	24.25	23.93	44.77	PASS
Band13	5MHz	QPSK	23230	1RB#0	24.25	23.93	44.77	PASS
Band13	5MHz	QPSK	23230	25RB#0	23.33	23.01	44.77	PASS
Band13	5MHz	QPSK	23230	1RB#12	24.25	23.93	44.77	PASS
Band13	5MHz	QPSK	23230	1RB#24	24.08	23.76	44.77	PASS
Band13	5MHz	QPSK	23255	1RB#0	24.23	23.91	44.77	PASS
Band13	5MHz	QPSK	23255	25RB#0	23.19	22.87	44.77	PASS
Band13	5MHz	QPSK	23255	1RB#12	24.19	23.87	44.77	PASS
Band13	5MHz	QPSK	23255	1RB#24	24.13	23.81	44.77	PASS
Band13	5MHz	16QAM	23205	1RB#0	23.48	23.16	44.77	PASS
Band13	5MHz	16QAM	23205	25RB#0	22.37	22.05	44.77	PASS
Band13	5MHz	16QAM	23205	1RB#12	23.68	23.36	44.77	PASS
Band13	5MHz	16QAM	23205	1RB#24	23.70	23.38	44.77	PASS
Band13	5MHz	16QAM	23230	1RB#0	23.58	23.26	44.77	PASS
Band13	5MHz	16QAM	23230	25RB#0	22.32	22	44.77	PASS
Band13	5MHz	16QAM	23230	1RB#12	23.64	23.32	44.77	PASS
Band13	5MHz	16QAM	23230	1RB#24	23.50	23.18	44.77	PASS
Band13	5MHz	16QAM	23255	1RB#0	23.55	23.23	44.77	PASS
Band13	5MHz	16QAM	23255	25RB#0	22.18	21.86	44.77	PASS
Band13	5MHz	16QAM	23255	1RB#12	23.46	23.14	44.77	PASS
Band13	5MHz	16QAM	23255	1RB#24	23.27	22.95	44.77	PASS
Band13	5MHz	64QAM	23205	1RB#0	22.36	22.04	44.77	PASS
Band13	5MHz	64QAM	23205	25RB#0	21.22	20.9	44.77	PASS
Band13	5MHz	64QAM	23205	1RB#12	22.14	21.82	44.77	PASS
Band13	5MHz	64QAM	23205	1RB#24	22.19	21.87	44.77	PASS
Band13	5MHz	64QAM	23230	1RB#0	22.34	22.02	44.77	PASS
Band13	5MHz	64QAM	23230	25RB#0	21.09	20.77	44.77	PASS
Band13	5MHz	64QAM	23230	1RB#12	22.27	21.95	44.77	PASS
Band13	5MHz	64QAM	23230	1RB#24	22.24	21.92	44.77	PASS
Band13	5MHz	64QAM	23255	1RB#0	22.20	21.88	44.77	PASS
Band13	5MHz	64QAM	23255	25RB#0	21.05	20.73	44.77	PASS
Band13	5MHz	64QAM	23255	1RB#12	22.31	21.99	44.77	PASS
Band13	5MHz	64QAM	23255	1RB#24	22.17	21.85	44.77	PASS
Band13	5MHz	256QAM	23205	1RB#0	19.24	18.92	44.77	PASS

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Band13	5MHz	256QAM	23205	25RB#0	19.37	19.05	44.77	PASS
Band13	5MHz	256QAM	23205	1RB#12	19.50	19.18	44.77	PASS
Band13	5MHz	256QAM	23205	1RB#24	19.22	18.9	44.77	PASS
Band13	5MHz	256QAM	23230	1RB#0	19.63	19.31	44.77	PASS
Band13	5MHz	256QAM	23230	25RB#0	19.27	18.95	44.77	PASS
Band13	5MHz	256QAM	23230	1RB#12	19.38	19.06	44.77	PASS
Band13	5MHz	256QAM	23230	1RB#24	19.11	18.79	44.77	PASS
Band13	5MHz	256QAM	23255	1RB#0	19.56	19.24	44.77	PASS
Band13	5MHz	256QAM	23255	25RB#0	19.12	18.8	44.77	PASS
Band13	5MHz	256QAM	23255	1RB#12	19.41	19.09	44.77	PASS
Band13	5MHz	256QAM	23255	1RB#24	19.22	18.9	44.77	PASS
Band13	10MHz	QPSK	23230	1RB#0	24.26	23.94	44.77	PASS
Band13	10MHz	QPSK	23230	50RB#0	23.41	23.09	44.77	PASS
Band13	10MHz	QPSK	23230	1RB#24	24.23	23.91	44.77	PASS
Band13	10MHz	QPSK	23230	1RB#49	24.02	23.7	44.77	PASS
Band13	10MHz	16QAM	23230	1RB#0	23.39	23.07	44.77	PASS
Band13	10MHz	16QAM	23230	50RB#0	22.38	22.06	44.77	PASS
Band13	10MHz	16QAM	23230	1RB#24	23.40	23.08	44.77	PASS
Band13	10MHz	16QAM	23230	1RB#49	23.41	23.09	44.77	PASS
Band13	10MHz	64QAM	23230	1RB#0	22.41	22.09	44.77	PASS
Band13	10MHz	64QAM	23230	50RB#0	21.17	20.85	44.77	PASS
Band13	10MHz	64QAM	23230	1RB#24	22.33	22.01	44.77	PASS
Band13	10MHz	64QAM	23230	1RB#49	22.29	21.97	44.77	PASS
Band13	10MHz	256QAM	23230	1RB#0	19.38	19.06	44.77	PASS
Band13	10MHz	256QAM	23230	50RB#0	19.29	18.97	44.77	PASS
Band13	10MHz	256QAM	23230	1RB#24	19.41	19.09	44.77	PASS
Band13	10MHz	256QAM	23230	1RB#49	19.18	18.86	44.77	PASS

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Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band13	10MHz	QPSK	23230	100RB#0	5.02	13	PASS
Band13	10MHz	16QAM	23230	100RB#0	5.98	13	PASS
Band13	10MHz	64QAM	23230	100RB#0	5.92	13	PASS
Band13	10MHz	256QAM	23230	100RB#0	6.74	13	PASS

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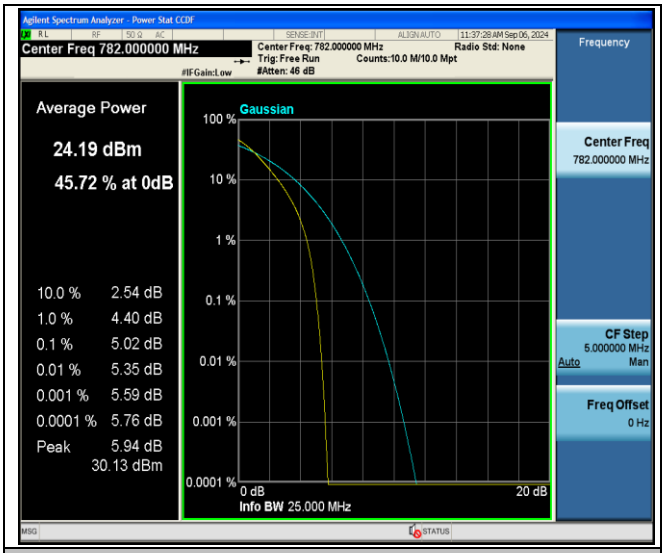
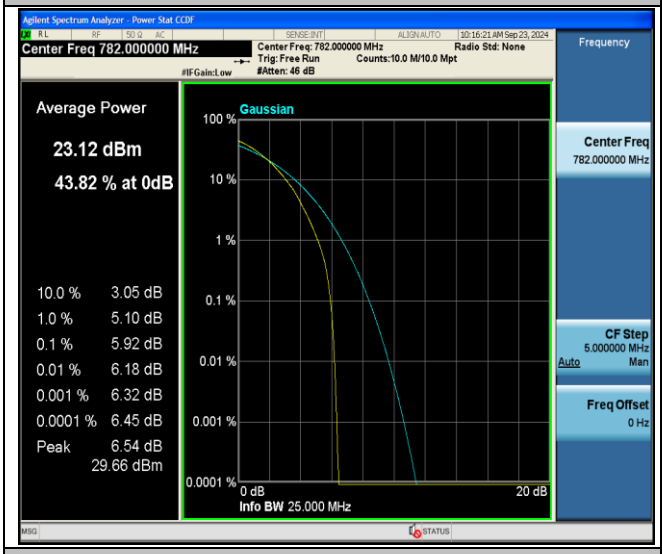
Test Graphs

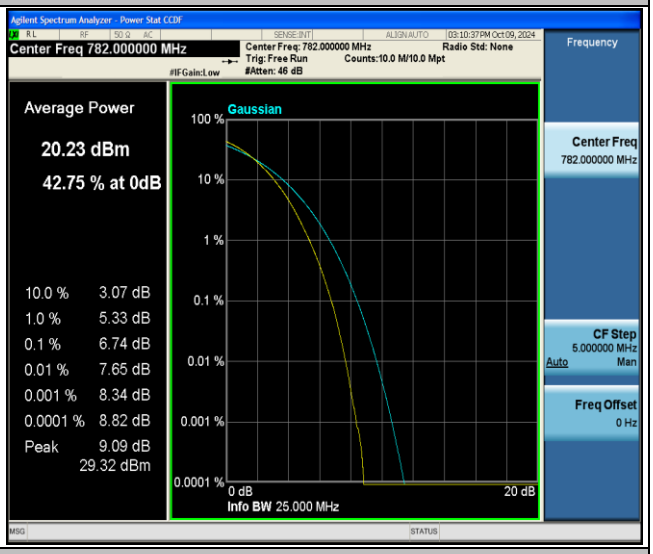


Band13-10MHz-QPSK-23230-100RB#0-PASS

Band13-10MHz-16QAM-23230-100RB#0-PASS



Band13-10MHz-64QAM-23230-100RB#0-PASS



Band13-10MHz-256QAM-23230-100RB#0-PASS

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26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	OBW (MHz)	26dB EBW (MHz)	Verdict
Band13	5MHz	QPSK	23205	25RB#0	4.4989	5.106	PASS
Band13	5MHz	QPSK	23230	25RB#0	4.5229	5.129	PASS
Band13	5MHz	QPSK	23255	25RB#0	4.4947	5.155	PASS
Band13	5MHz	16QAM	23205	25RB#0	4.4973	5.112	PASS
Band13	5MHz	16QAM	23230	25RB#0	4.5149	5.134	PASS
Band13	5MHz	16QAM	23255	25RB#0	4.4943	5.087	PASS
Band13	5MHz	64QAM	23205	25RB#0	4.4977	5.131	PASS
Band13	5MHz	64QAM	23230	25RB#0	4.5243	5.178	PASS
Band13	5MHz	64QAM	23255	25RB#0	4.4989	5.147	PASS
Band13	5MHz	256QAM	23205	25RB#0	4.5022	5.115	PASS
Band13	5MHz	256QAM	23230	25RB#0	4.5161	5.123	PASS
Band13	5MHz	256QAM	23255	25RB#0	4.4902	5.137	PASS
Band13	10MHz	QPSK	23230	50RB#0	8.9711	9.942	PASS
Band13	10MHz	16QAM	23230	50RB#0	8.9878	10.06	PASS
Band13	10MHz	64QAM	23230	50RB#0	8.9734	9.912	PASS
Band13	10MHz	256QAM	23230	50RB#0	8.8435	9.342	PASS

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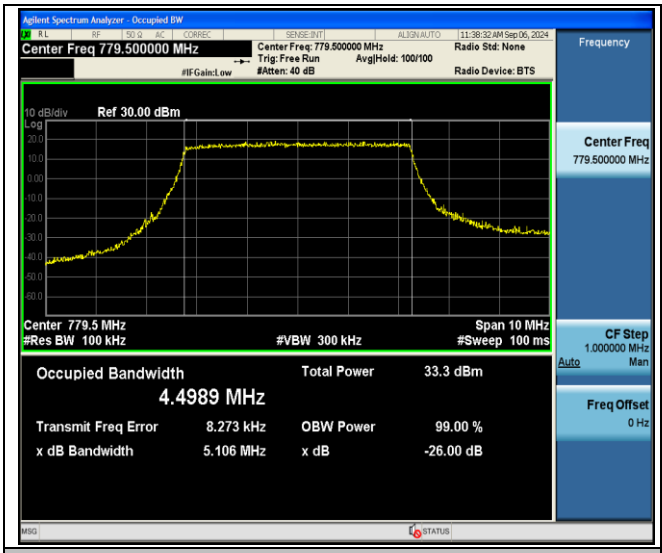
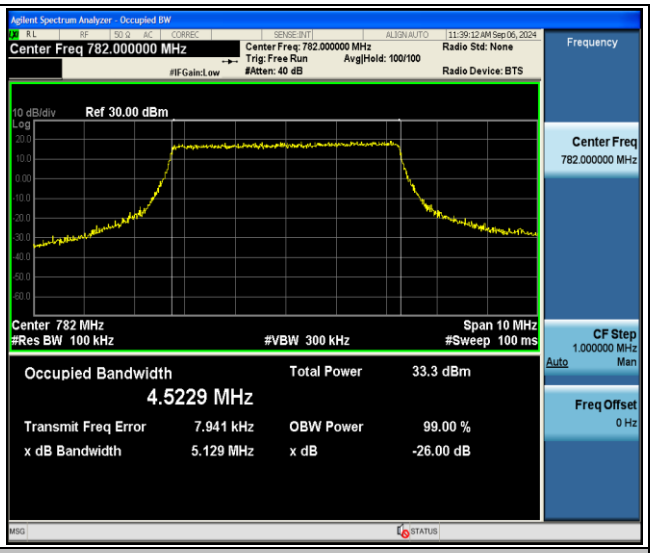
Test Graphs



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



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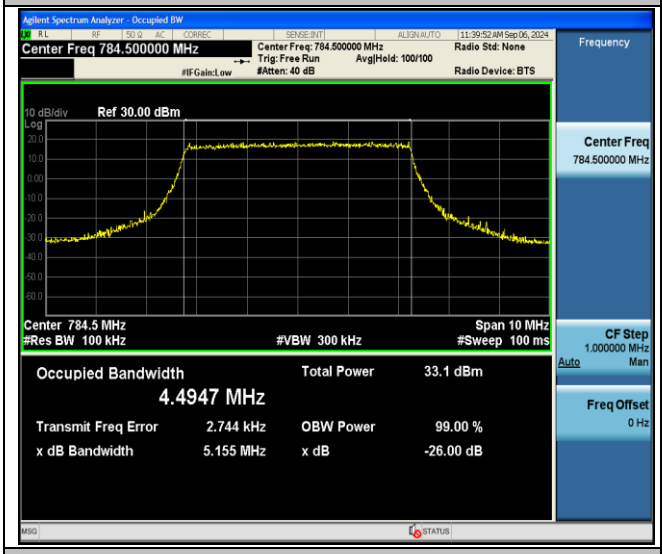

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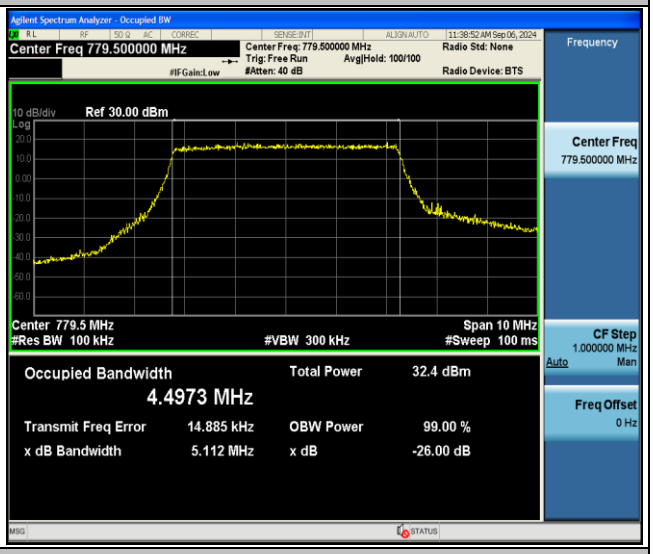

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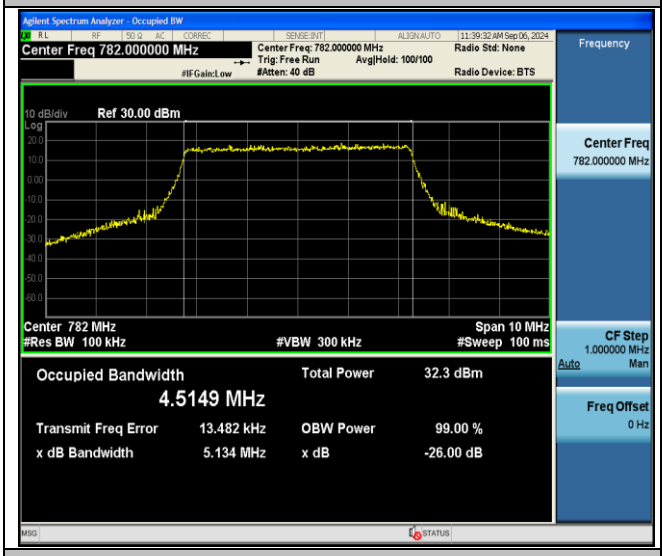
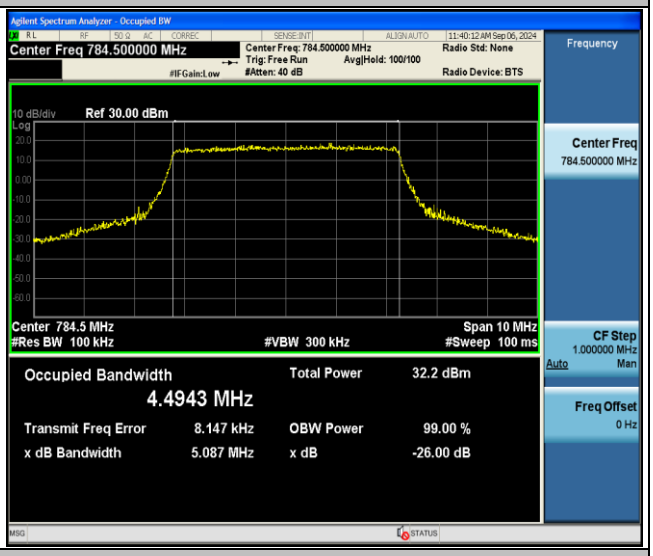


Band13-5MHz-16QAM-23230-25RB#0-PASS



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

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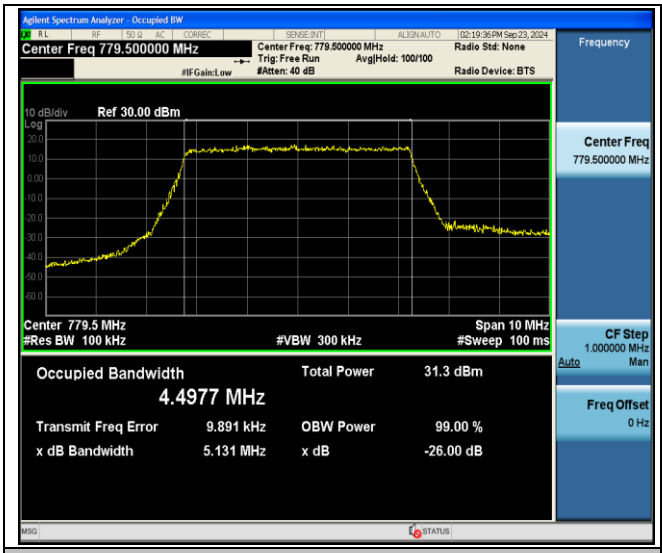
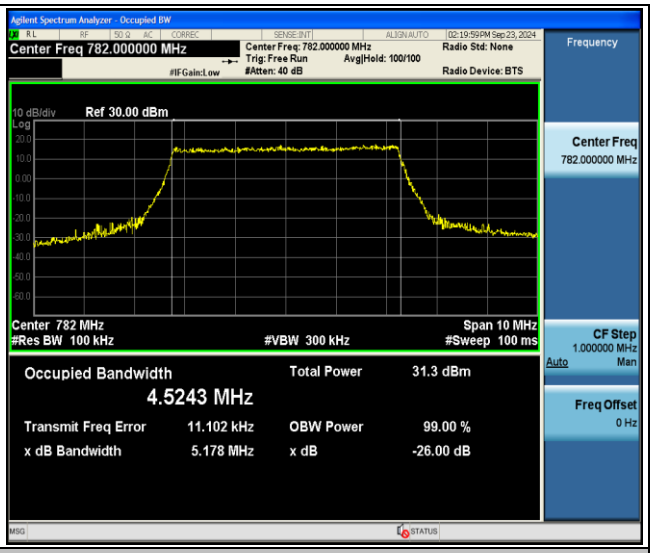


Band13-5MHz-64QAM-23205-25RB#0-PASS



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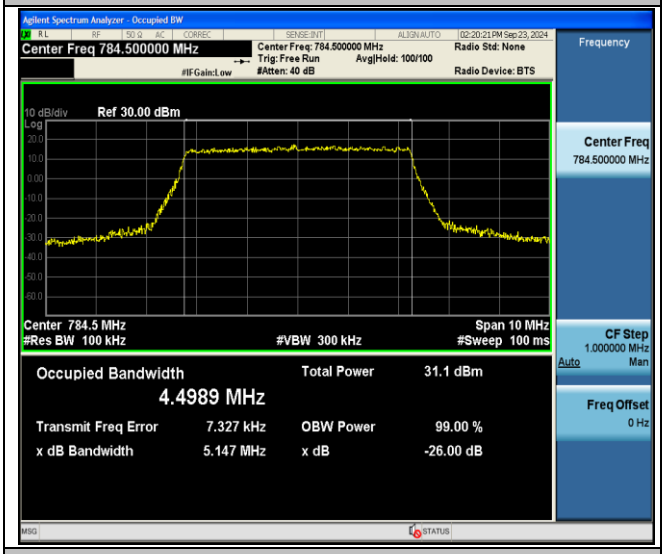
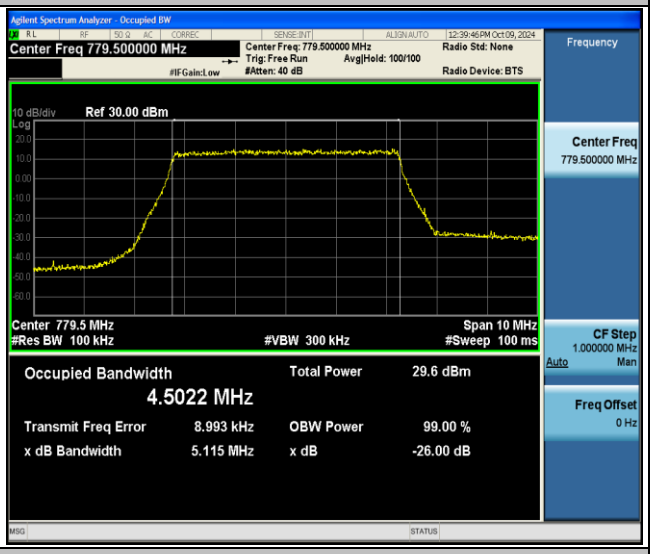
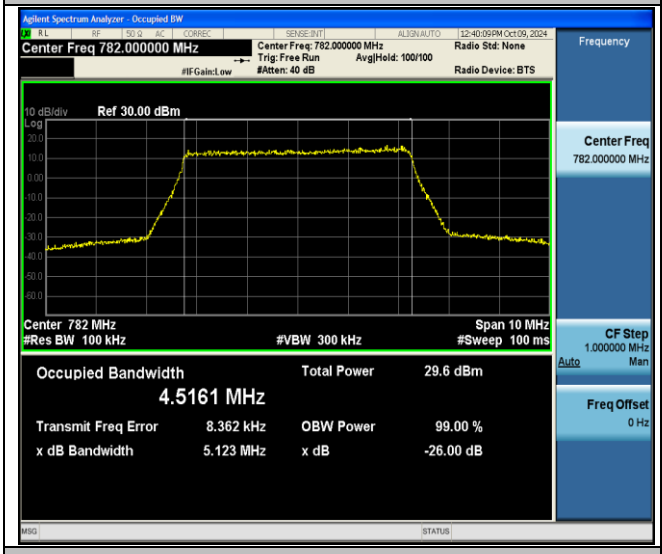


Band13-5MHz-64QAM-23255-25RB#0-PASS



Band13-5MHz-256QAM-23205-25RB#0-PASS



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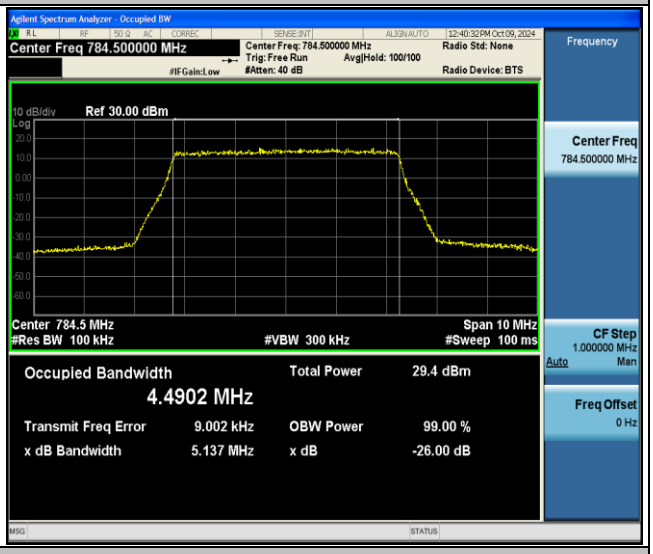

Band13-5MHz-256QAM-23255-25RB#0-PASS

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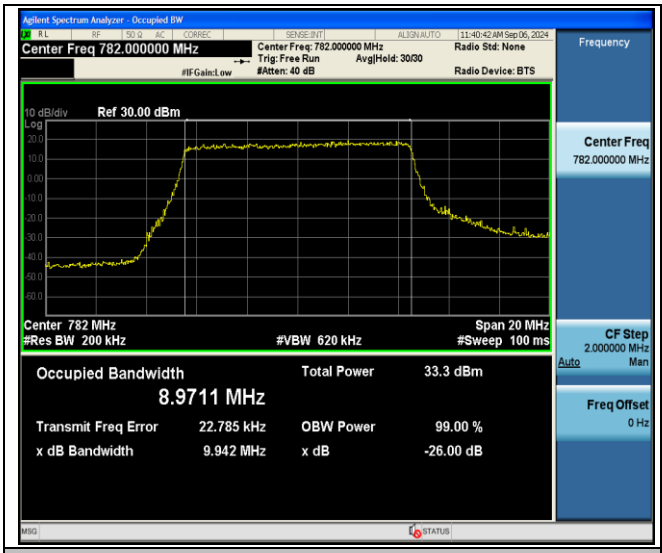
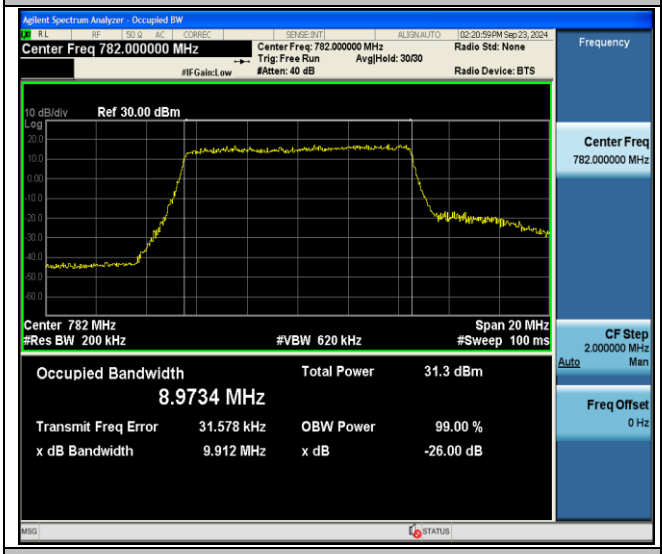


Band13-10MHz-QPSK-23230-50RB#0-PASS

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



Band13-10MHz-64QAM-23230-50RB#0-PASS

Band13-10MHz-256QAM-23230-50RB#0-PASS

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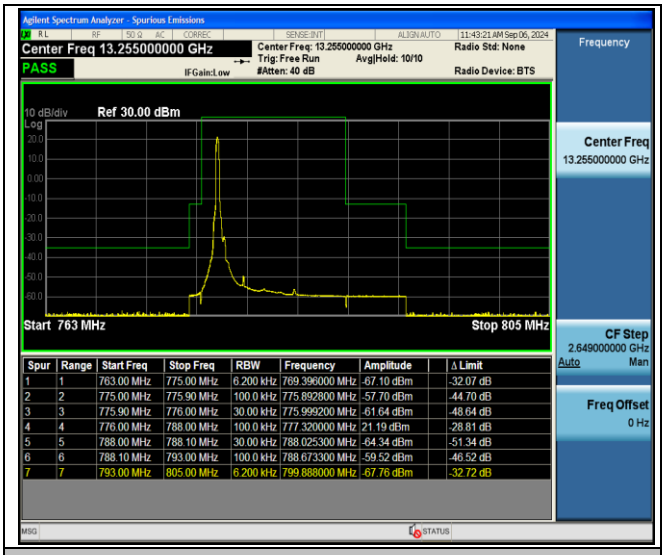
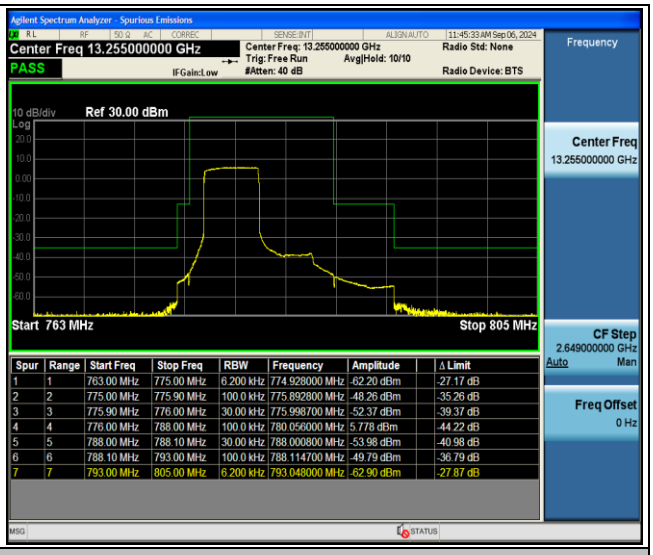
Band Edge

Test Graphs



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



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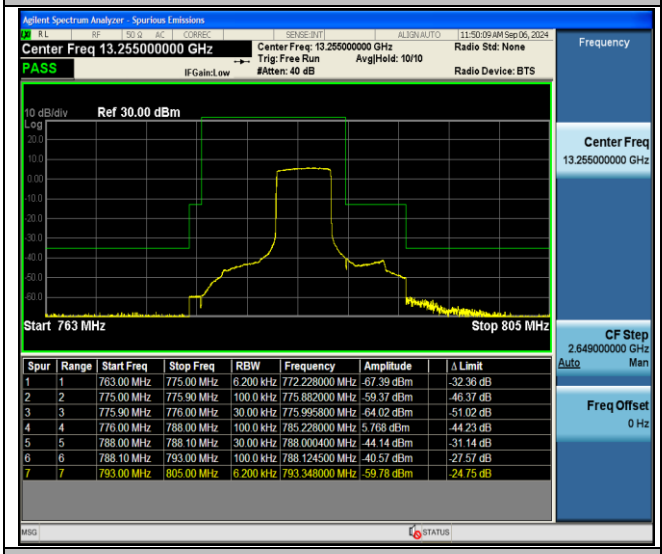
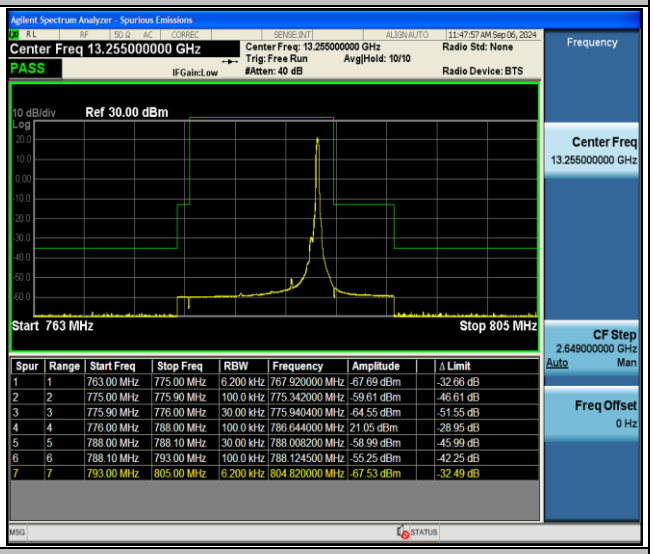
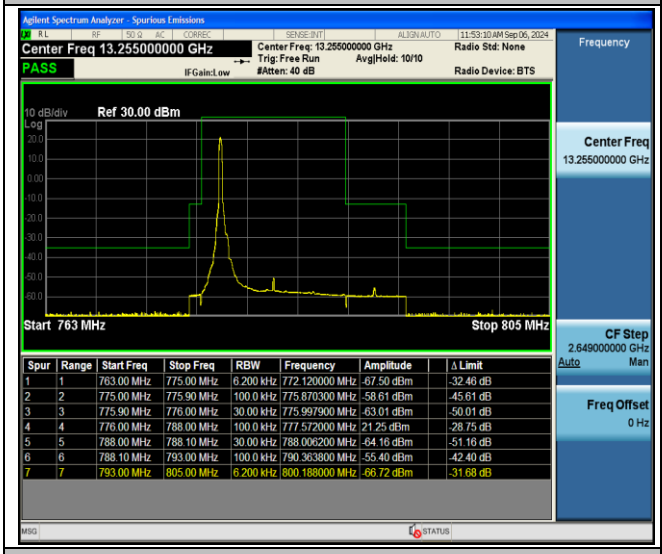


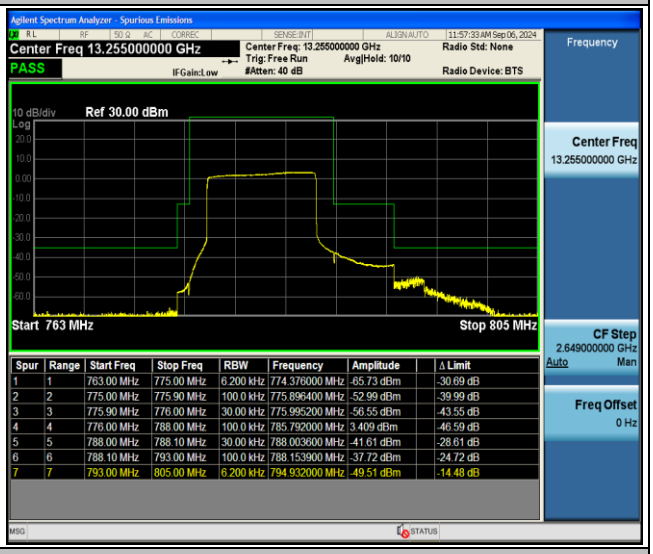
Band13-5MHz-QPSK-23255-25RB#0-PASS



Band13-5MHz-QPSK-23255-1RB#24-PASS



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



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

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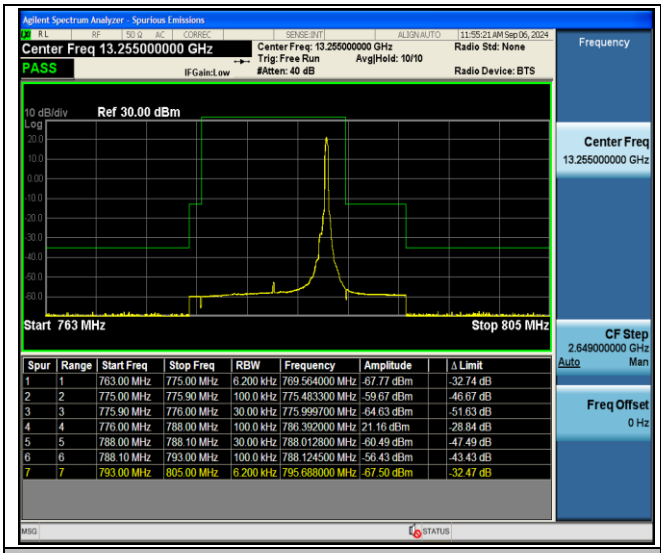

Band13-10MHz-QPSK-23230-1RB#49-PASS

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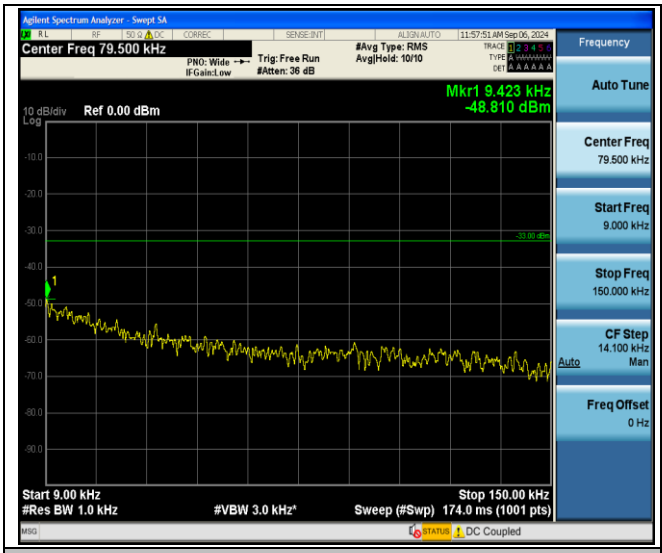
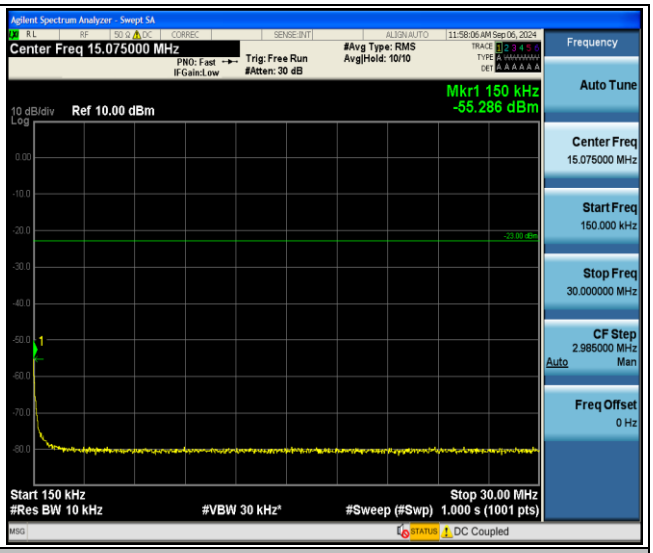
Conducted Spurious Emission

Test Graphs



Band13-10MHz-QPSK-23230-1RB#0-0.009~0.15-PASS



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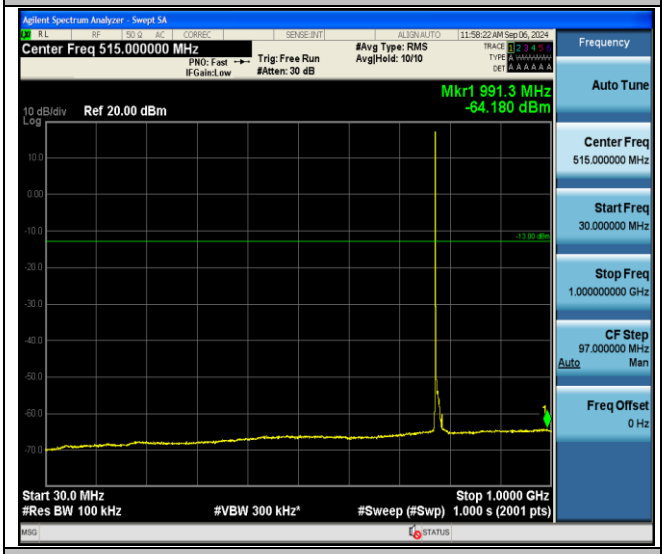
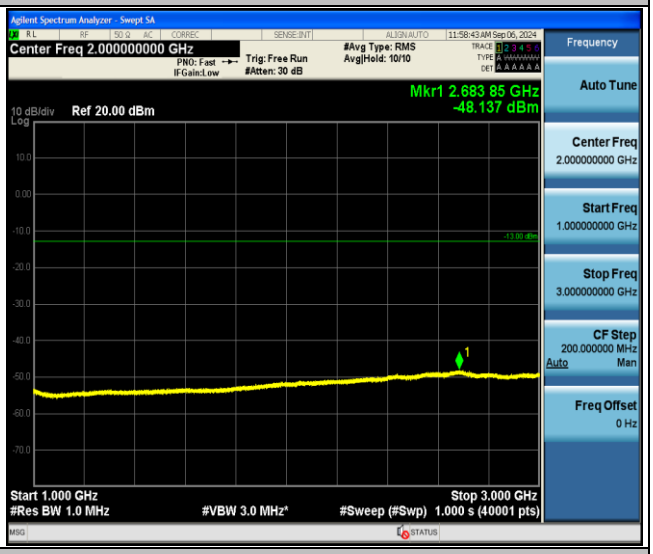
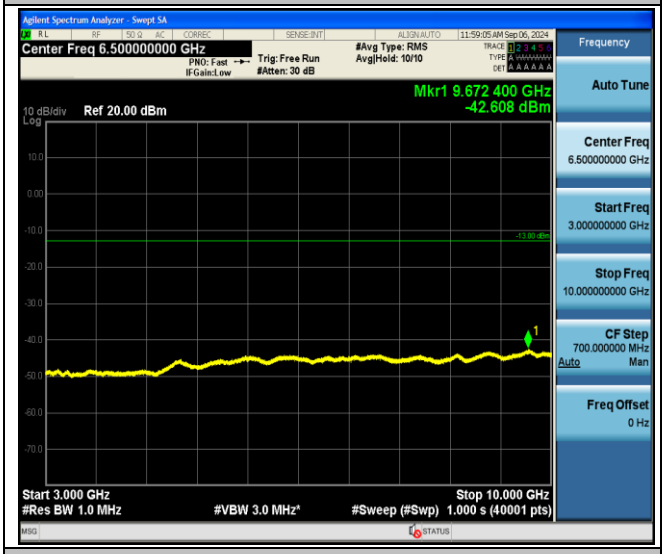


Band13-10MHz-QPSK-23230-1RB#0-30~1000-PASS



Band13-10MHz-QPSK-23230-1RB#0-1000~3000-PASS



Band13-10MHz-QPSK-23230-1RB#0-3000~10000-PASS

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Frequency Stability

Test Result

Voltage									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Verdict
Band13	10MHz	QPSK	23230	100RB#0	VN	NT	0.10	0.000128	PASS
Band13	10MHz	QPSK	23230	100RB#0	VL	NT	-0.50	-0.000639	PASS
Band13	10MHz	QPSK	23230	100RB#0	VH	NT	-2.30	-0.002941	PASS

Temperature									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Verdict
Band13	10MHz	QPSK	23230	100RB#0	NV	-30	0.10	0.000128	PASS
Band13	10MHz	QPSK	23230	100RB#0	NV	-20	1.90	0.002430	PASS
Band13	10MHz	QPSK	23230	100RB#0	NV	-10	0.30	0.000384	PASS
Band13	10MHz	QPSK	23230	100RB#0	NV	0	0.10	0.000128	PASS
Band13	10MHz	QPSK	23230	100RB#0	NV	10	-1.00	-0.001279	PASS
Band13	10MHz	QPSK	23230	100RB#0	NV	20	-0.20	-0.000256	PASS
Band13	10MHz	QPSK	23230	100RB#0	NV	30	0.80	0.001023	PASS
Band13	10MHz	QPSK	23230	100RB#0	NV	40	2.10	0.002685	PASS
Band13	10MHz	QPSK	23230	100RB#0	NV	50	0.90	0.001151	PASS

~The End~

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