Appendix-A LTE Band 30

Effective (Isotropic) Radiated Power Output Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	EIRP (dBm)	Verdict
Band30	5MHz	QPSK	27685	1RB#0	19.70	22.7	PASS
Band30	5MHz	QPSK	27685	1RB#12	19.98	22.98	PASS
Band30	5MHz	QPSK	27685	1RB#24	19.95	22.95	PASS
Band30	5MHz	16QAM	27685	1RB#0	18.7	21.7	PASS
Band30	5MHz	16QAM	27685	1RB#12	18.95	21.95	PASS
Band30	5MHz	16QAM	27685	1RB#24	18.83	21.83	PASS
Band30	5MHz	64QAM	27685	1RB#0	17.71	20.71	PASS
Band30	5MHz	64QAM	27685	1RB#12	18.21	21.21	PASS
Band30	5MHz	64QAM	27685	1RB#24	17.82	20.82	PASS
Band30	5MHz	256QAM	27685	1RB#0	14.82	17.82	PASS
Band30	5MHz	256QAM	27685	1RB#12	15	18	PASS
Band30	5MHz	256QAM	27685	1RB#24	14.67	17.67	PASS
Band30	5MHz	QPSK	27710	1RB#0	19.73	22.73	PASS
Band30	5MHz	QPSK	27710	1RB#12	19.83	22.83	PASS
Band30	5MHz	QPSK	27710	1RB#24	19.86	22.86	PASS
Band30	5MHz	16QAM	27710	1RB#0	19.41	22.41	PASS
Band30	5MHz	16QAM	27710	1RB#12	18.87	21.87	PASS
Band30	5MHz	16QAM	27710	1RB#24	18.94	21.94	PASS
Band30	5MHz	64QAM	27710	1RB#0	17.81	20.81	PASS
Band30	5MHz	64QAM	27710	1RB#12	18.02	21.02	PASS
Band30	5MHz	64QAM	27710	1RB#24	17.76	20.76	PASS
Band30	5MHz	256QAM	27710	1RB#0	14.53	17.53	PASS
Band30	5MHz	256QAM	27710	1RB#12	14.91	17.91	PASS
Band30	5MHz	256QAM	27710	1RB#24	14.51	17.51	PASS
Band30	5MHz	QPSK	27735	1RB#0	19.91	22.91	PASS
Band30	5MHz	QPSK	27735	1RB#12	19.71	22.71	PASS
Band30	5MHz	QPSK	27735	1RB#24	19.80	22.8	PASS
Band30	5MHz	16QAM	27735	1RB#0	19.07	22.07	PASS
Band30	5MHz	16QAM	27735	1RB#12	18.62	21.62	PASS
Band30	5MHz	16QAM	27735	1RB#24	18.98	21.98	PASS
Band30	5MHz	64QAM	27735	1RB#0	17.73	20.73	PASS
Band30	5MHz	64QAM	27735	1RB#12	18.03	21.03	PASS
Band30	5MHz	64QAM	27735	1RB#24	17.98	20.98	PASS
Band30	5MHz	256QAM	27735	1RB#0	14.61	17.61	PASS
Band30	5MHz	256QAM	27735	1RB#12	14.99	17.99	PASS
Band30	5MHz	256QAM	27735	1RB#24	14.73	17.73	PASS

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Band30	10MHz	QPSK	27710	1RB#0	19.79	22.79	PASS
Band30	10MHz	QPSK	27710	1RB#24	19.88	22.88	PASS
Band30	10MHz	QPSK	27710	1RB#49	19.77	22.77	PASS
Band30	10MHz	16QAM	27710	1RB#0	19.06	22.06	PASS
Band30	10MHz	16QAM	27710	1RB#24	18.91	21.91	PASS
Band30	10MHz	16QAM	27710	1RB#49	18.61	21.61	PASS
Band30	10MHz	64QAM	27710	1RB#0	17.83	20.83	PASS
Band30	10MHz	64QAM	27710	1RB#24	18.02	21.02	PASS
Band30	10MHz	64QAM	27710	1RB#49	17.78	20.78	PASS
Band30	10MHz	256QAM	27710	1RB#0	14.65	17.65	PASS
Band30	10MHz	256QAM	27710	1RB#24	14.78	17.78	PASS
Band30	10MHz	256QAM	27710	1RB#49	14.48	17.48	PASS

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Maximum_power_spectral_density

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm/5MHz)	Result (dBm/5MHz)	Result (dBm/5MHz)	Verdict
Band30	5MHz	QPSK	27685	1RB#0	20.52	23.52	23.98	PASS
Band30	5MHz	QPSK	27685	1RB#12	20.49	23.49	23.98	PASS
Band30	5MHz	QPSK	27685	1RB#24	20.51	23.51	23.98	PASS
Band30	5MHz	QPSK	27710	1RB#0	20.31	23.31	23.98	PASS
Band30	5MHz	QPSK	27710	1RB#12	20.37	23.37	23.98	PASS
Band30	5MHz	QPSK	27710	1RB#24	20.63	23.63	23.98	PASS
Band30	5MHz	QPSK	27735	1RB#0	20.47	23.47	23.98	PASS
Band30	5MHz	QPSK	27735	1RB#12	20.49	23.49	23.98	PASS
Band30	5MHz	QPSK	27735	1RB#24	20.36	23.36	23.98	PASS
Band30	10MHz	QPSK	27710	1RB#0	20.51	23.51	23.98	PASS
Band30	10MHz	QPSK	27710	1RB#24	20.48	23.48	23.98	PASS
Band30	10MHz	QPSK	27710	1RB#49	20.44	23.44	23.98	PASS

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Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dB)	Limit (dB)	Verdict
Band30	10MHz	QPSK	27710	50RB#0	4.60	13	PASS
Band30	10MHz	16QAM	27710	50RB#0	5.63	13	PASS
Band30	10MHz	64QAM	27710	50RB#0	6.52	13	PASS
Band30	10MHz	256QAM	27710	50RB#0	7.01	13	PASS

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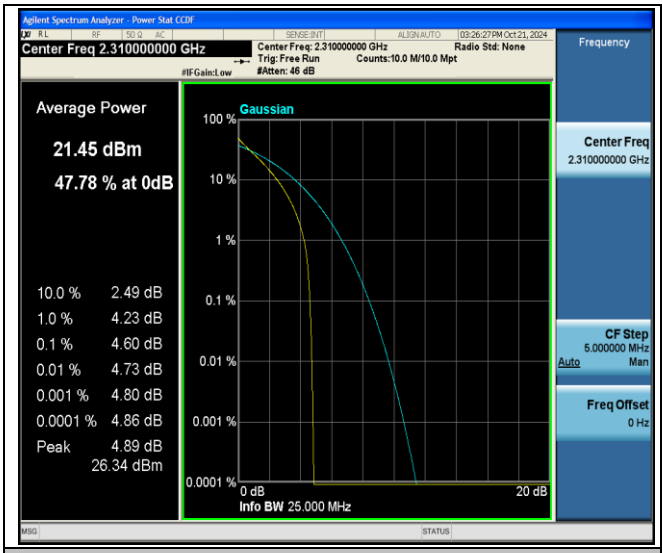
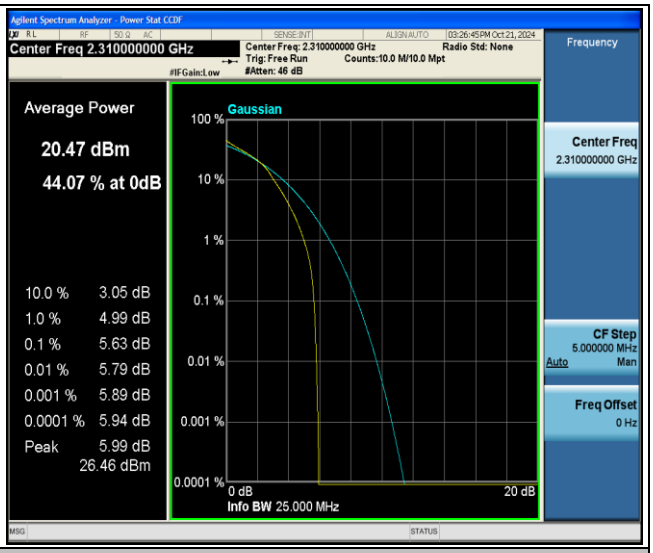
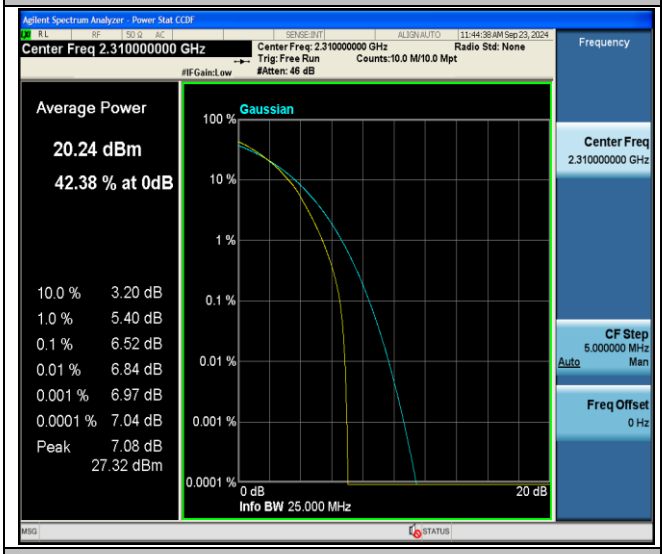
Test Graphs



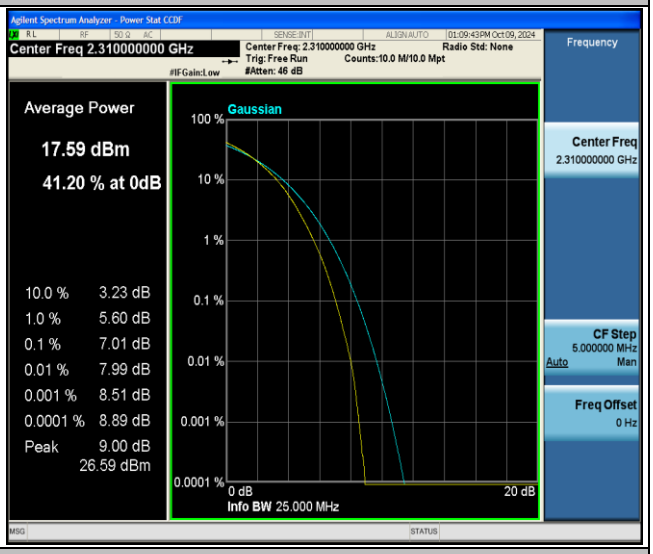
Band30-10MHz-QPSK-27710-50RB#0-PASS



Band30-10MHz-16QAM-27710-50RB#0-PASS



Band30-10MHz-64QAM-27710-50RB#0-PASS



Band30-10MHz-256QAM-27710-50RB#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
Band30	5MHz	QPSK	27685	25RB#0	4.4987	5.081	PASS
Band30	5MHz	QPSK	27710	25RB#0	4.5012	5.144	PASS
Band30	5MHz	QPSK	27735	25RB#0	4.5041	5.106	PASS
Band30	5MHz	16QAM	27685	25RB#0	4.5143	5.133	PASS
Band30	5MHz	16QAM	27710	25RB#0	4.5033	5.090	PASS
Band30	5MHz	16QAM	27735	25RB#0	4.4970	5.131	PASS
Band30	5MHz	256QAM	27685	25RB#0	4.5073	5.132	PASS
Band30	5MHz	256QAM	27710	25RB#0	4.5057	5.128	PASS
Band30	5MHz	256QAM	27735	25RB#0	4.5063	5.196	PASS
Band30	10MHz	QPSK	27710	50RB#0	8.9807	9.949	PASS
Band30	10MHz	16QAM	27710	50RB#0	9.0056	10.06	PASS
Band30	10MHz	64QAM	27710	50RB#0	9.0119	10.04	PASS
Band30	10MHz	256QAM	27710	50RB#0	8.9960	10.04	PASS

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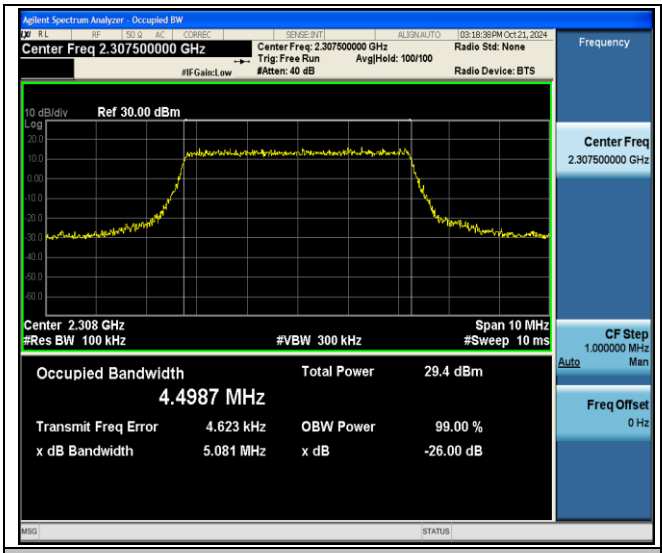
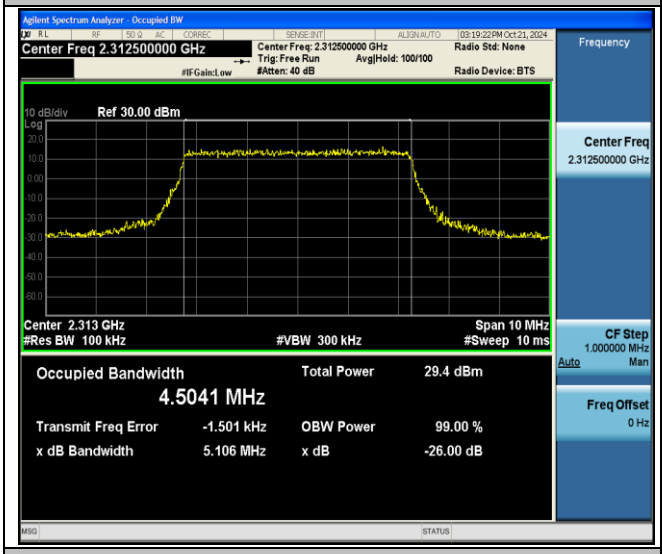
Test Graphs

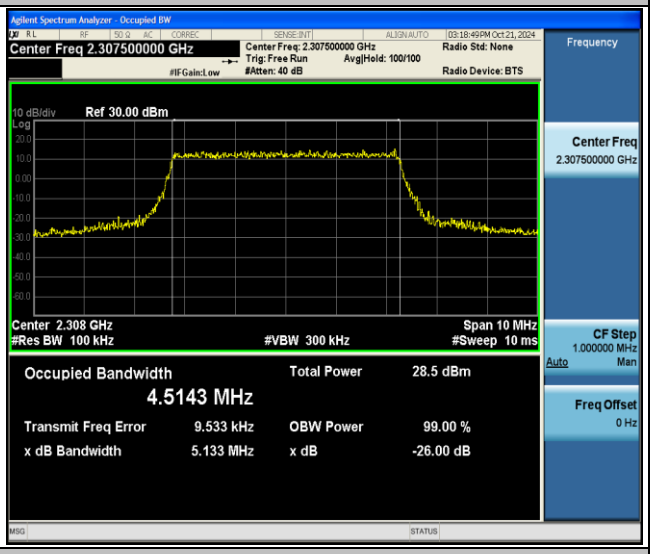


Band30-5MHz-QPSK-27685-25RB#0-PASS

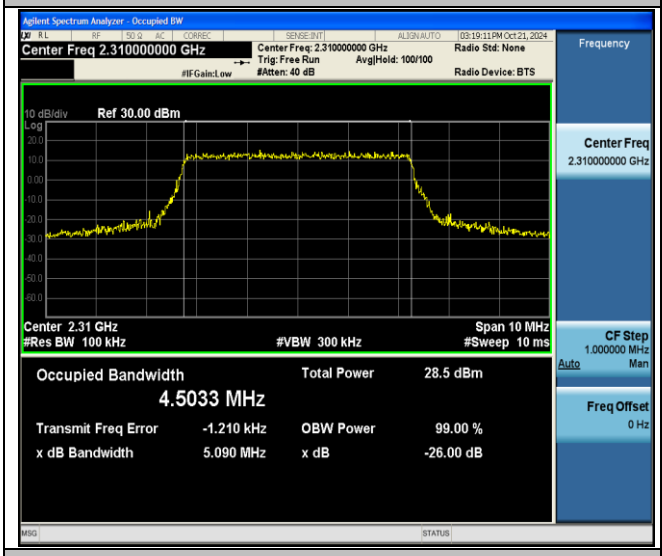
Band30-5MHz-QPSK-27710-25RB#0-PASS



Band30-5MHz-QPSK-27735-25RB#0-PASS



Band30-5MHz-16QAM-27685-25RB#0-PASS



Band30-5MHz-16QAM-27710-25RB#0-PASS

Band30-5MHz-16QAM-27735-25RB#0-PASS

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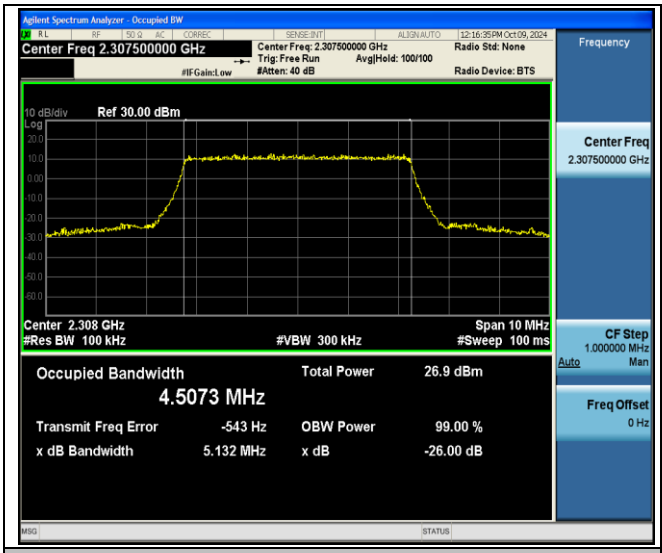
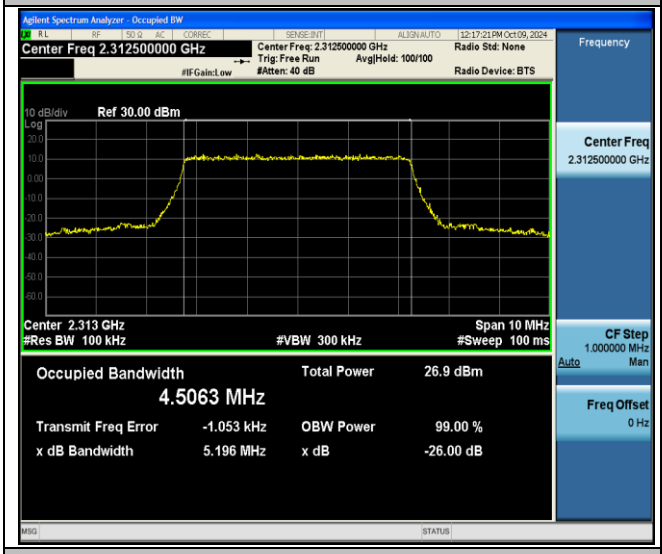


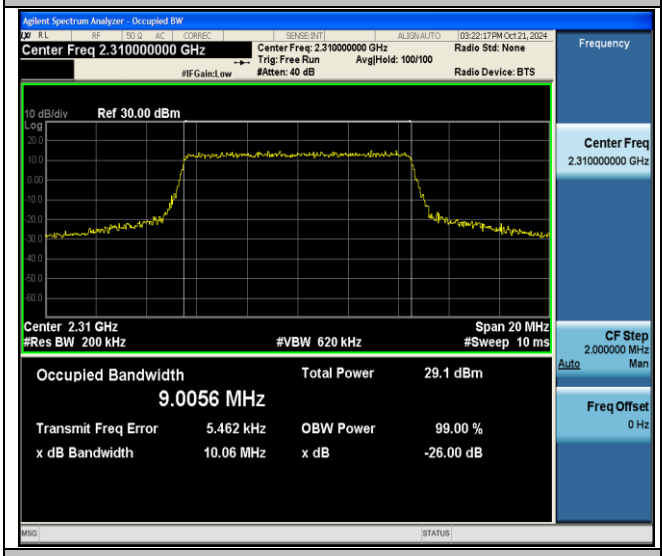
Band30-5MHz-256QAM-27685-25RB#0-PASS

Band30-5MHz-256QAM-27710-25RB#0-PASS

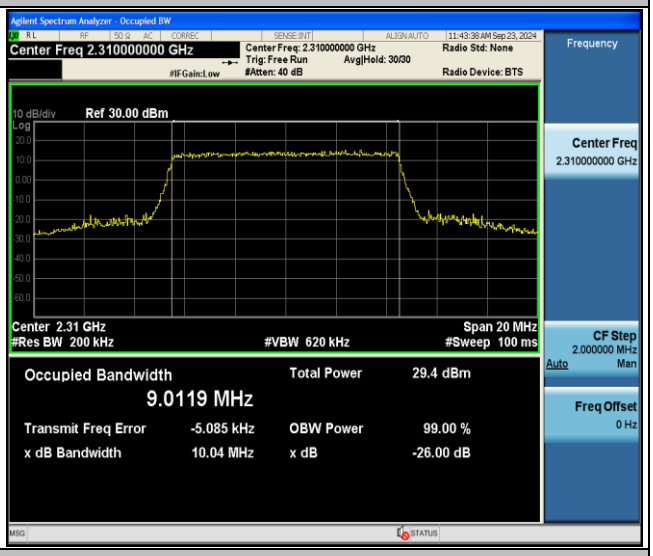


Band30-5MHz-256QAM-27735-25RB#0-PASS

Band30-10MHz-QPSK-27710-50RB#0-PASS



Band30-10MHz-16QAM-27710-50RB#0-PASS



Band30-10MHz-64QAM-27710-50RB#0-PASS

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Band30-10MHz-256QAM-27710-50RB#0-PASS

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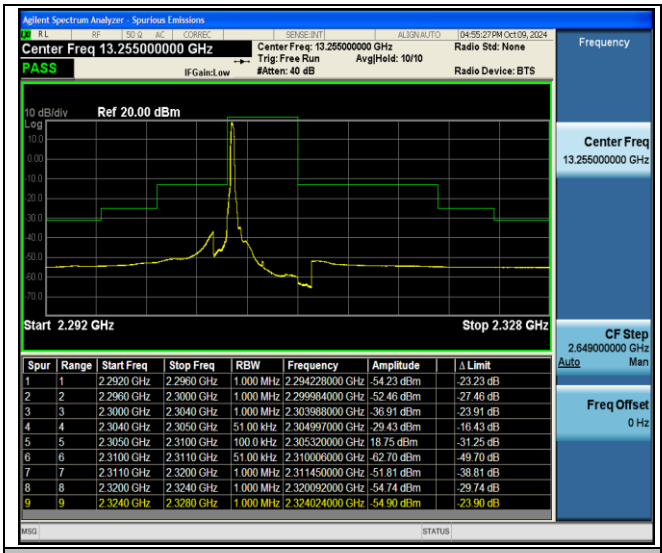
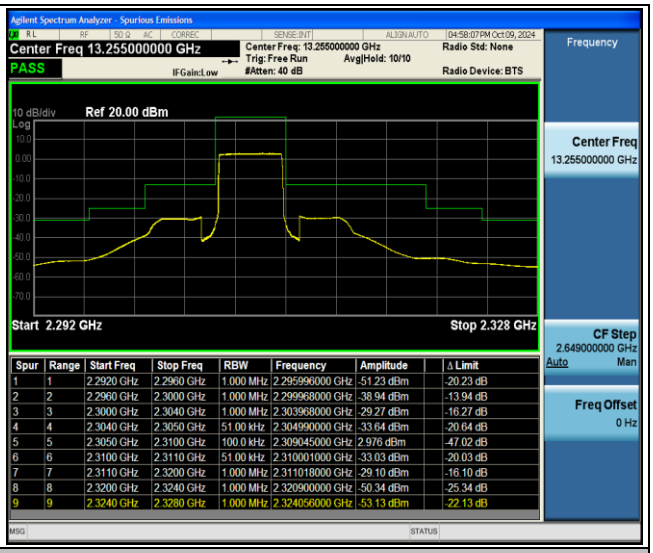
Band Edge

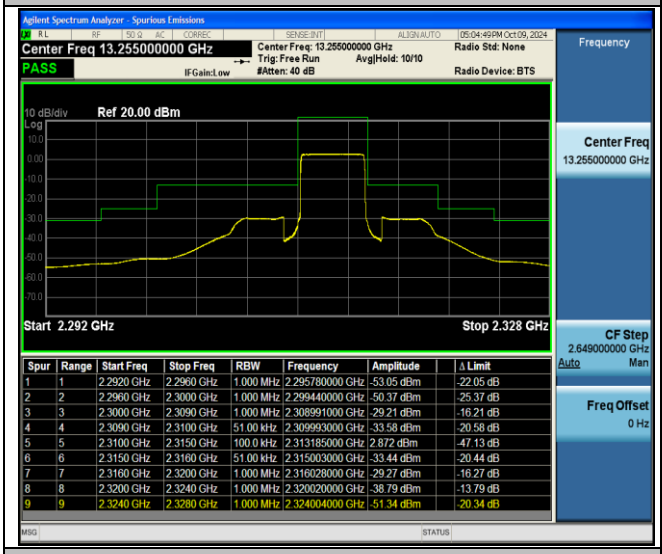
Test Graphs



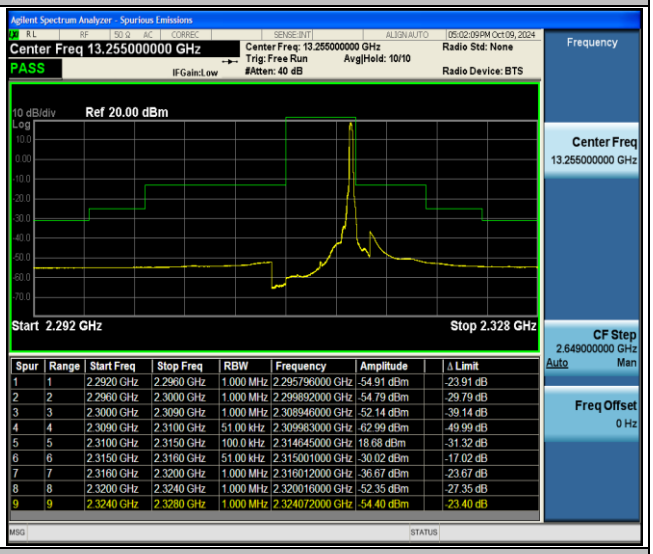
Band30-5MHz-QPSK-27685-1RB#0-PASS



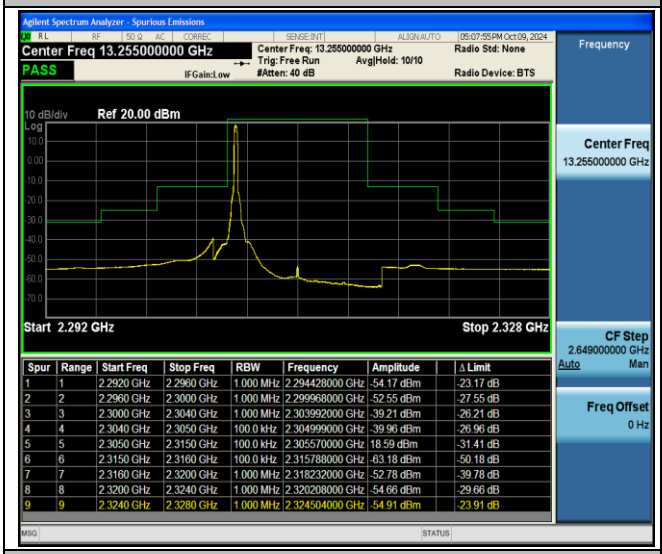
Band30-5MHz-QPSK-27685-25RB#0-PASS



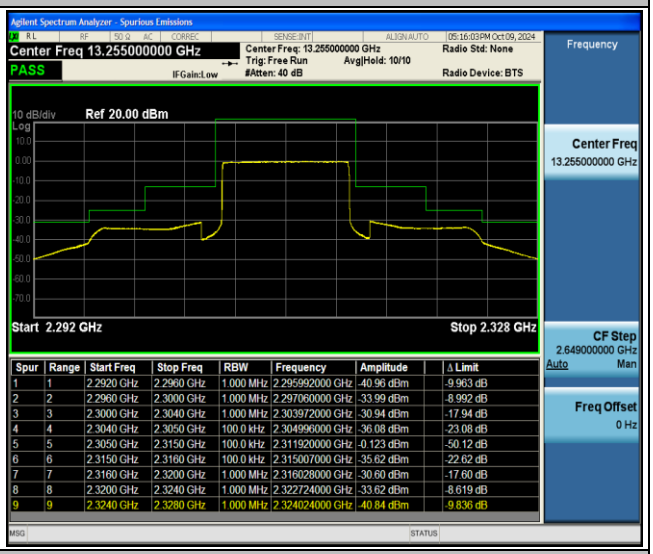
Band30-5MHz-QPSK-27735-25RB#0-PASS



Band30-5MHz-QPSK-27735-1RB#24-PASS



Band30-10MHz-QPSK-27710-1RB#0-PASS



Band30-10MHz-QPSK-27710-50RB#0-PASS

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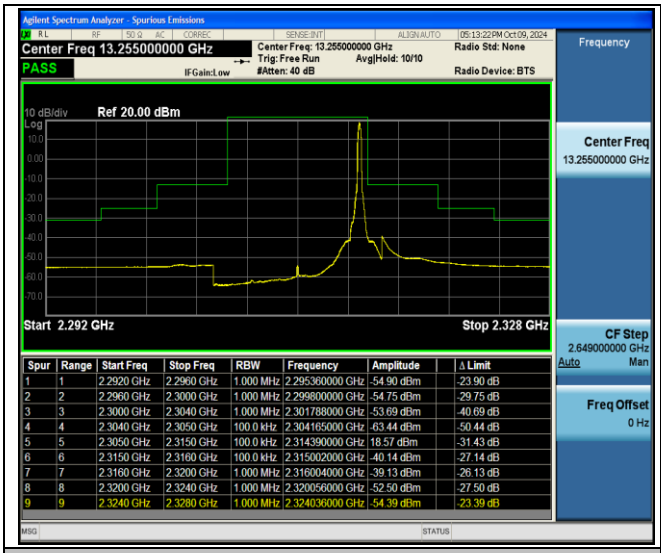

Spur	Range	Start Freq	Stop Freq	RBW	Frequency	Amplitude	Δ Limit
1	1	2.2920 GHz	2.2960 GHz	1.000 MHz	2.295360000 GHz	-54.90 dBm	-23.90 dB
2	2	2.2960 GHz	2.3000 GHz	1.000 MHz	2.299800000 GHz	-54.75 dBm	-29.75 dB
3	3	2.3000 GHz	2.3040 GHz	1.000 MHz	2.301788000 GHz	-53.69 dBm	-40.69 dB
4	4	2.3040 GHz	2.3050 GHz	100.0 kHz	2.304165000 GHz	-63.44 dBm	-50.44 dB
5	5	2.3050 GHz	2.3150 GHz	100.0 kHz	2.314390000 GHz	18.57 dBm	-31.43 dB
6	6	2.3150 GHz	2.3160 GHz	100.0 kHz	2.315002000 GHz	-40.14 dBm	-27.14 dB
7	7	2.3160 GHz	2.3200 GHz	1.000 MHz	2.316004000 GHz	-39.13 dBm	-26.13 dB
8	8	2.3200 GHz	2.3240 GHz	1.000 MHz	2.320056000 GHz	-52.50 dBm	-27.50 dB
9	9	2.3240 GHz	2.3280 GHz	1.000 MHz	2.324036000 GHz	-54.39 dBm	-23.39 dB

Band30-10MHz-QPSK-27710-1RB#49-PASS

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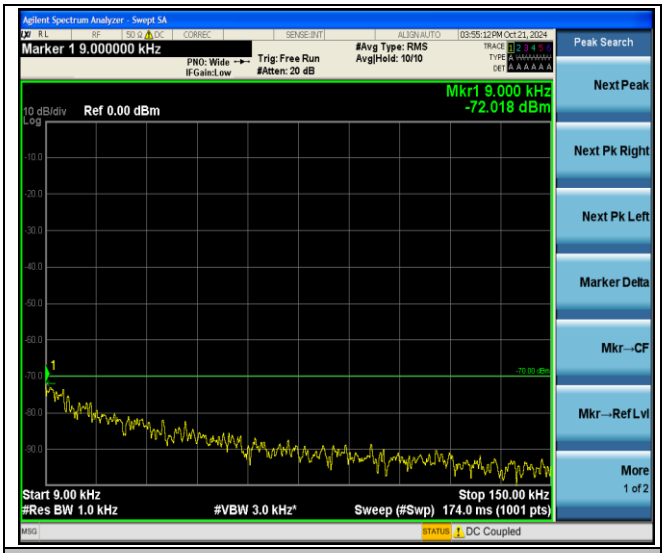
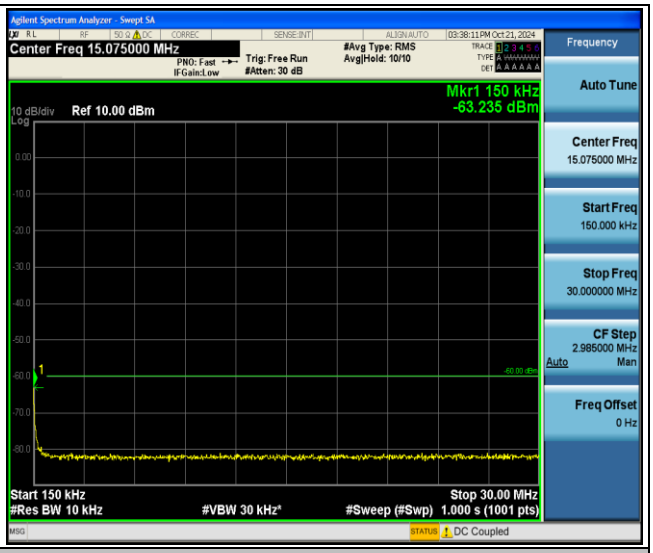
Conducted Spurious Emission

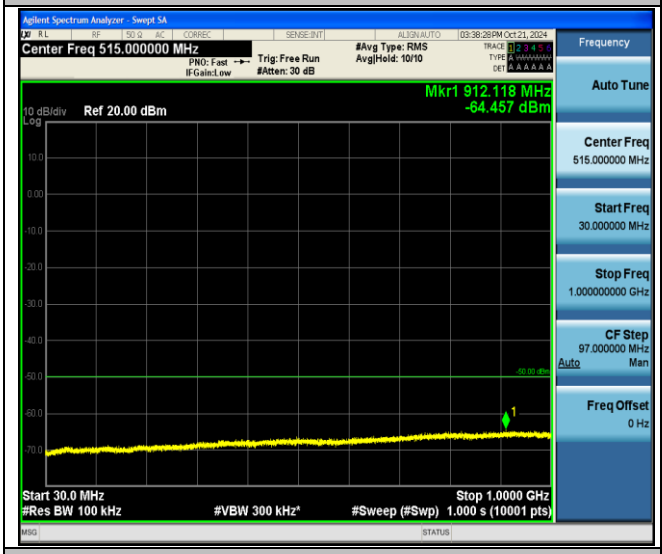
Test Graphs



Band30-10MHz-QPSK-27710-1RB#0-0.009~0.15-PASS

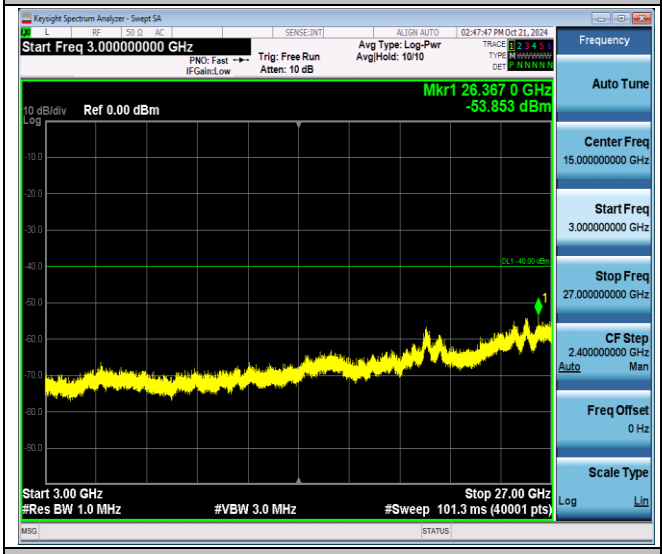


Band30-10MHz-QPSK-27710-1RB#0-0.15~30-PASS



Band30-10MHz-QPSK-27710-1RB#0-30~1000-PASS

Band30-10MHz-QPSK-27710-1RB#0-1000~3000-PASS



Band30-10MHz-QPSK-27710-1RB#0-3000~27000-FAIL

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Frequency Stability

Test Result

Voltage									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Verdict
Band30	10MHz	QPSK	27710	50RB#0	VN	NT	-1.50	-0.000649	PASS
Band30	10MHz	QPSK	27710	50RB#0	VL	NT	-1.60	-0.000693	PASS
Band30	10MHz	QPSK	27710	50RB#0	VH	NT	-1.50	-0.000649	PASS

Temperature									
Band	Bandwidth	Modulation	Channel	RB Configure	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Verdict
Band30	10MHz	QPSK	27710	50RB#0	NV	-30	-0.80	-0.000346	PASS
Band30	10MHz	QPSK	27710	50RB#0	NV	-20	-2.30	-0.000996	PASS
Band30	10MHz	QPSK	27710	50RB#0	NV	-10	-1.10	-0.000476	PASS
Band30	10MHz	QPSK	27710	50RB#0	NV	30	-1.40	-0.000606	PASS
Band30	10MHz	QPSK	27710	50RB#0	NV	40	-0.90	-0.000390	PASS
Band30	10MHz	QPSK	27710	50RB#0	NV	50	0.50	0.000216	PASS
Band30	10MHz	QPSK	27710	50RB#0	NV	0	0.30	0.000130	PASS
Band30	10MHz	QPSK	27710	50RB#0	NV	10	-1.70	-0.000736	PASS
Band30	10MHz	QPSK	27710	50RB#0	NV	20	-0.20	-0.000087	PASS

~The End~

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