

Appendix for Test Report

FCC ID: 2ATWZ-S0

Product Name: Real-Time Multisensor

Model No: S0

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Conducted output power (EIRP)

Band	Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Power (dBm)	Gain (dBi)	EIRP (dBm)	EIRP (mW)	EIRP Limit (mW)	Verdict
Band40(2350-2360)	5	39175	1	#0	QPSK	23.41	0.18	23.59	228.56	250	PASS
Band40(2350-2360)	5	39175	1	#Mid	QPSK	23.27	0.18	23.45	221.31	250	PASS
Band40(2350-2360)	5	39175	1	#Max	QPSK	23.41	0.18	23.59	228.56	250	PASS
Band40(2350-2360)	5	39175	12	#0	QPSK	22.34	0.18	22.52	178.65	250	PASS
Band40(2350-2360)	5	39175	12	#Mid	QPSK	22.30	0.18	22.48	177.01	250	PASS
Band40(2350-2360)	5	39175	12	#Max	QPSK	22.35	0.18	22.53	179.06	250	PASS
Band40(2350-2360)	5	39175	25	#0	QPSK	22.36	0.18	22.54	179.47	250	PASS
Band40(2350-2360)	5	39175	1	#0	16QAM	22.89	0.18	23.07	202.77	250	PASS
Band40(2350-2360)	5	39175	1	#Mid	16QAM	22.80	0.18	22.98	198.61	250	PASS
Band40(2350-2360)	5	39175	1	#Max	16QAM	22.95	0.18	23.13	205.59	250	PASS
Band40(2350-2360)	5	39175	12	#0	16QAM	21.34	0.18	21.52	141.91	250	PASS
Band40(2350-2360)	5	39175	12	#Mid	16QAM	21.31	0.18	21.49	140.93	250	PASS
Band40(2350-2360)	5	39175	12	#Max	16QAM	21.35	0.18	21.53	142.23	250	PASS
Band40(2350-2360)	5	39175	25	#0	16QAM	21.44	0.18	21.62	145.21	250	PASS
Band40(2350-2360)	5	39200	1	#0	QPSK	23.38	0.18	23.56	226.99	250	PASS
Band40(2350-2360)	5	39200	1	#Mid	QPSK	23.28	0.18	23.46	221.82	250	PASS
Band40(2350-2360)	5	39200	1	#Max	QPSK	23.44	0.18	23.62	230.14	250	PASS
Band40(2350-2360)	5	39200	12	#0	QPSK	22.29	0.18	22.47	176.60	250	PASS
Band40(2350-2360)	5	39200	12	#Mid	QPSK	22.25	0.18	22.43	174.9	250	PASS

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Band40(2350-2360)	5	39200	12	#Max	QPSK	22.29	0.18	22.47	176.6 0	250	PASS
Band40(2350-2360)	5	39200	25	#0	QPSK	22.33	0.18	22.51	178.2 4	250	PASS
Band40(2350-2360)	5	39200	1	#0	16QAM	22.60	0.18	22.78	189.6 7	250	PASS
Band40(2350-2360)	5	39200	1	#Mid	16QAM	22.49	0.18	22.67	184.9 3	250	PASS
Band40(2350-2360)	5	39200	1	#Max	16QAM	22.62	0.18	22.80	190.5 5	250	PASS
Band40(2350-2360)	5	39200	12	#0	16QAM	21.32	0.18	21.50	141.2 5	250	PASS
Band40(2350-2360)	5	39200	12	#Mid	16QAM	21.28	0.18	21.46	139.9 6	250	PASS
Band40(2350-2360)	5	39200	12	#Max	16QAM	21.32	0.18	21.50	141.2 5	250	PASS
Band40(2350-2360)	5	39200	25	#0	16QAM	21.39	0.18	21.57	143.5 5	250	PASS
Band40(2350-2360)	5	39225	1	#0	QPSK	23.29	0.18	23.47	222.3 3	250	PASS
Band40(2350-2360)	5	39225	1	#Mid	QPSK	23.17	0.18	23.35	216.2 7	250	PASS
Band40(2350-2360)	5	39225	1	#Max	QPSK	23.31	0.18	23.49	223.3 6	250	PASS
Band40(2350-2360)	5	39225	12	#0	QPSK	22.30	0.18	22.48	177.0 1	250	PASS
Band40(2350-2360)	5	39225	12	#Mid	QPSK	22.13	0.18	22.31	170.2 2	250	PASS
Band40(2350-2360)	5	39225	12	#Max	QPSK	22.17	0.18	22.35	171.7 9	250	PASS
Band40(2350-2360)	5	39225	25	#0	QPSK	22.17	0.18	22.35	171.7 9	250	PASS
Band40(2350-2360)	5	39225	1	#0	16QAM	22.75	0.18	22.93	196.3 4	250	PASS
Band40(2350-2360)	5	39225	1	#Mid	16QAM	22.66	0.18	22.84	192.3 1	250	PASS
Band40(2350-2360)	5	39225	1	#Max	16QAM	22.93	0.18	23.11	204.6 4	250	PASS
Band40(2350-2360)	5	39225	12	#0	16QAM	21.36	0.18	21.54	142.5 6	250	PASS
Band40(2350-2360)	5	39225	12	#Mid	16QAM	21.20	0.18	21.38	137.4 0	250	PASS
Band40(2350-2360)	5	39225	12	#Max	16QAM	21.33	0.18	21.51	141.5	250	PASS

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Band40(2350-2360)	5	39225	25	#0	16QAM	21.26	0.18	21.44	139.3 2	250	PASS
Band40(2350-2360)	10	39200	1	#0	QPSK	23.36	0.18	23.54	225.9 4	250	PASS
Band40(2350-2360)	10	39200	1	#Mid	QPSK	23.27	0.18	23.45	221.3 1	250	PASS
Band40(2350-2360)	10	39200	1	#Max	QPSK	23.43	0.18	23.61	229.6 1	250	PASS
Band40(2350-2360)	10	39200	25	#0	QPSK	22.36	0.18	22.54	179.4 7	250	PASS
Band40(2350-2360)	10	39200	25	#Mid	QPSK	22.33	0.18	22.51	178.2 4	250	PASS
Band40(2350-2360)	10	39200	25	#Max	QPSK	22.41	0.18	22.59	181.5 5	250	PASS
Band40(2350-2360)	10	39200	50	#0	QPSK	22.38	0.18	22.56	180.3 0	250	PASS
Band40(2350-2360)	10	39200	1	#0	16QAM	22.86	0.18	23.04	201.3 7	250	PASS
Band40(2350-2360)	10	39200	1	#Mid	16QAM	22.80	0.18	22.98	198.6 1	250	PASS
Band40(2350-2360)	10	39200	1	#Max	16QAM	22.97	0.18	23.15	206.5 4	250	PASS
Band40(2350-2360)	10	39200	25	#0	16QAM	21.38	0.18	21.56	143.2 2	250	PASS
Band40(2350-2360)	10	39200	25	#Mid	16QAM	21.36	0.18	21.54	142.5 6	250	PASS
Band40(2350-2360)	10	39200	25	#Max	16QAM	21.45	0.18	21.63	145.5 5	250	PASS

Note: EIRP = Power + Gain

Frequency stability

<i>Band</i>	<i>Bandwidth (MHz)</i>	<i>UL Channel</i>	<i>RB Size</i>	<i>RB Position</i>	<i>Modulation</i>	<i>Result(Hz)</i>	<i>Result (ppm)</i>	<i>Low Limit (ppm)</i>	<i>high Limit (ppm)</i>	<i>Verdict</i>
Band40(2350-2360)	10	39200	50	#0	QPSK	-3.98	-0.002	-2.5	2.5	PASS

Peak-to-Average Ratio

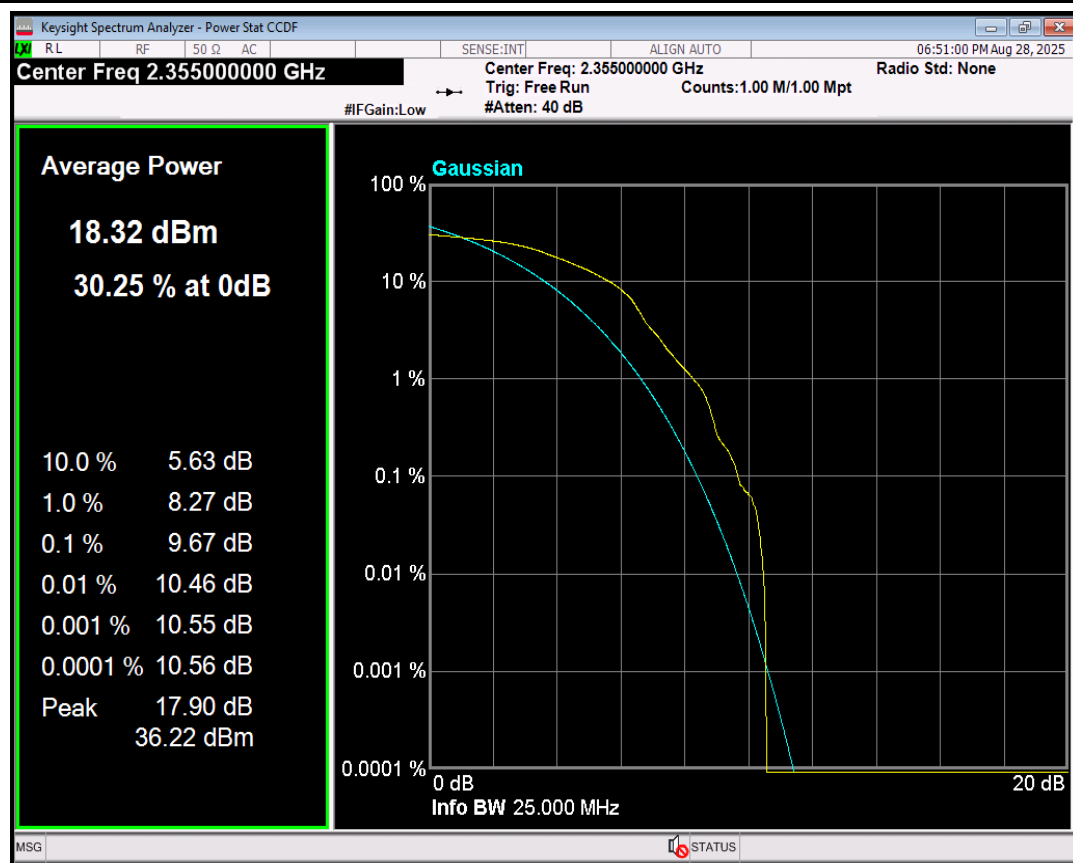
<i>Band</i>	<i>Bandwidth (MHz)</i>	<i>UL Channel</i>	<i>RB Size</i>	<i>RB Position</i>	<i>Modulation</i>	<i>Result (dB)</i>	<i>high Limit (dB)</i>	<i>Verdict</i>
Band40(2350-2360)	5	39175	1	#0	QPSK	8.82	13	PASS
Band40(2350-2360)	5	39175	1	#0	16QAM	9.90	13	PASS
Band40(2350-2360)	5	39200	1	#0	QPSK	9.52	13	PASS
Band40(2350-2360)	5	39200	1	#0	16QAM	9.67	13	PASS
Band40(2350-2360)	5	39225	1	#0	QPSK	8.23	13	PASS
Band40(2350-2360)	5	39225	1	#0	16QAM	8.81	13	PASS
Band40(2350-2360)	10	39200	1	#0	QPSK	7.81	13	PASS
Band40(2350-2360)	10	39200	1	#0	16QAM	10.10	13	PASS



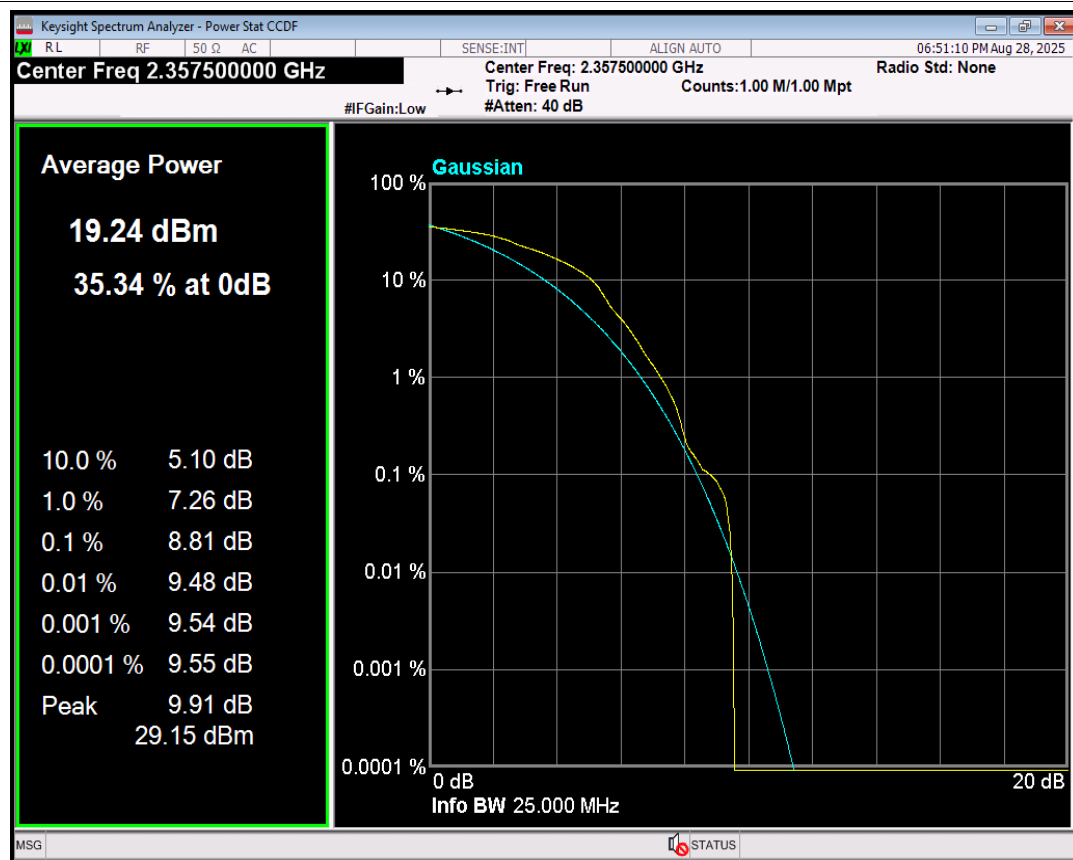
Band40(2350-2360) 16QAM BW=10MHz Channel=39200 RB Size=1 Position=#0



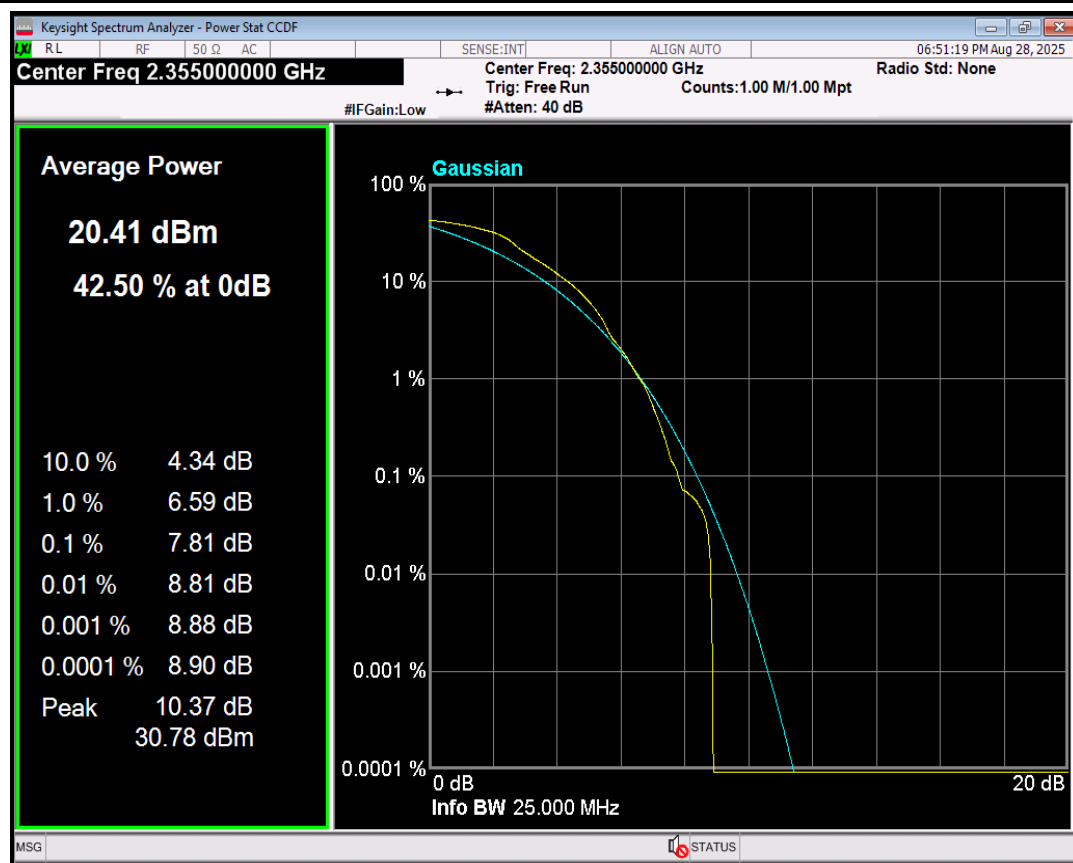
Band40(2350-2360) 16QAM BW=5MHz Channel=39175 RB Size=1 Position=#0



Band40(2350-2360) 16QAM BW=5MHz Channel=39200 RB Size=1 Position=#0



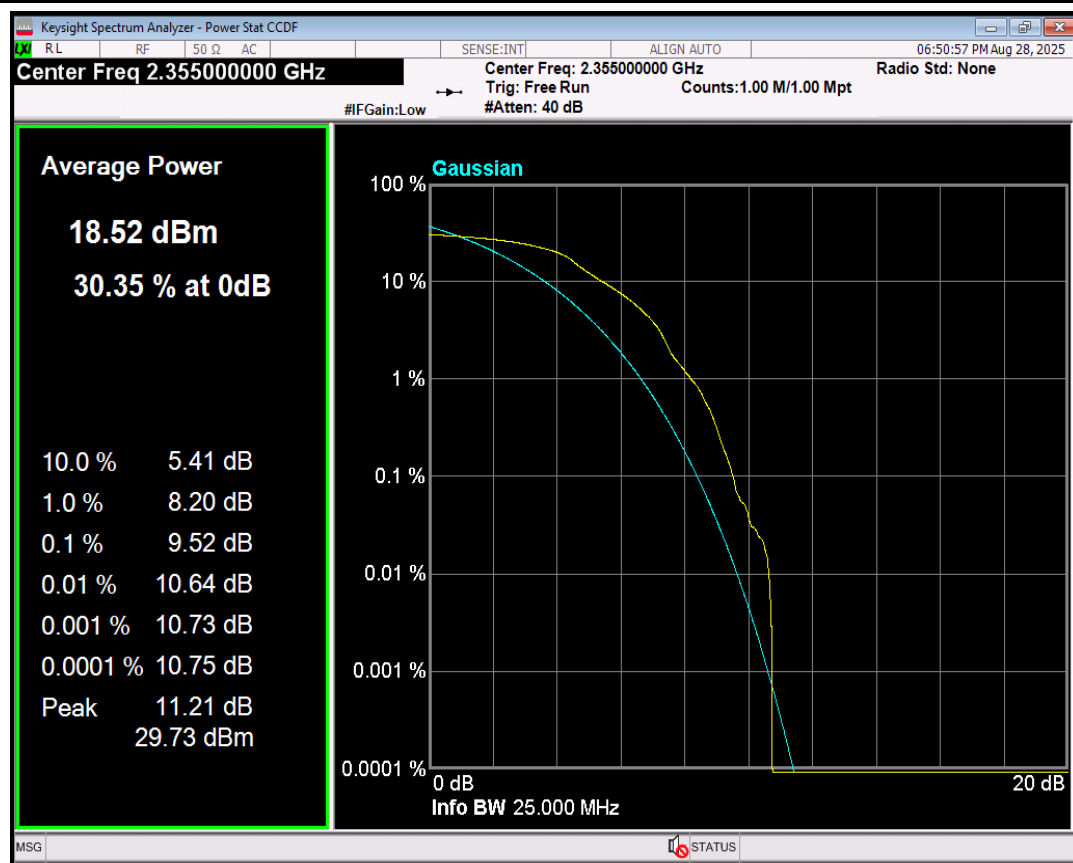
Band40(2350-2360) 16QAM BW=5MHz Channel=39225 RB Size=1 Position=#0



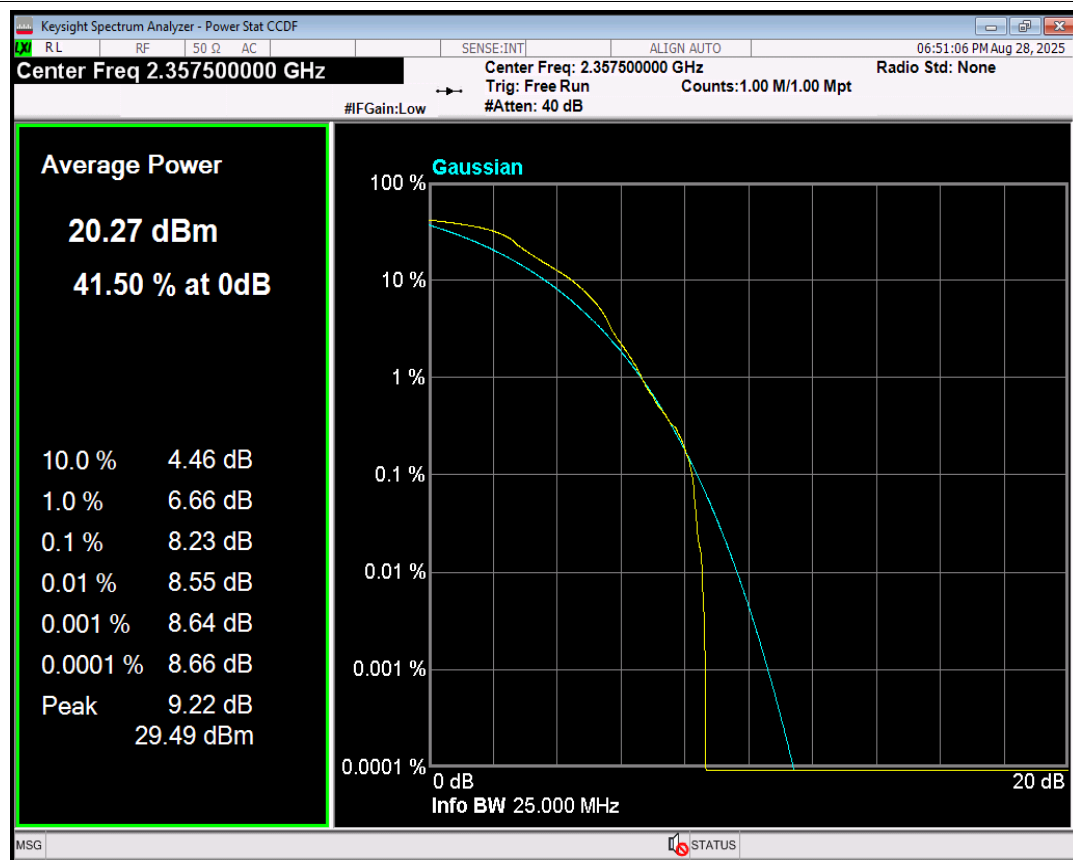
Band40(2350-2360) QPSK BW=10MHz Channel=39200 RB Size=1 Position=#0



Band40(2350-2360) QPSK BW=5MHz Channel=39175 RB Size=1 Position=#0



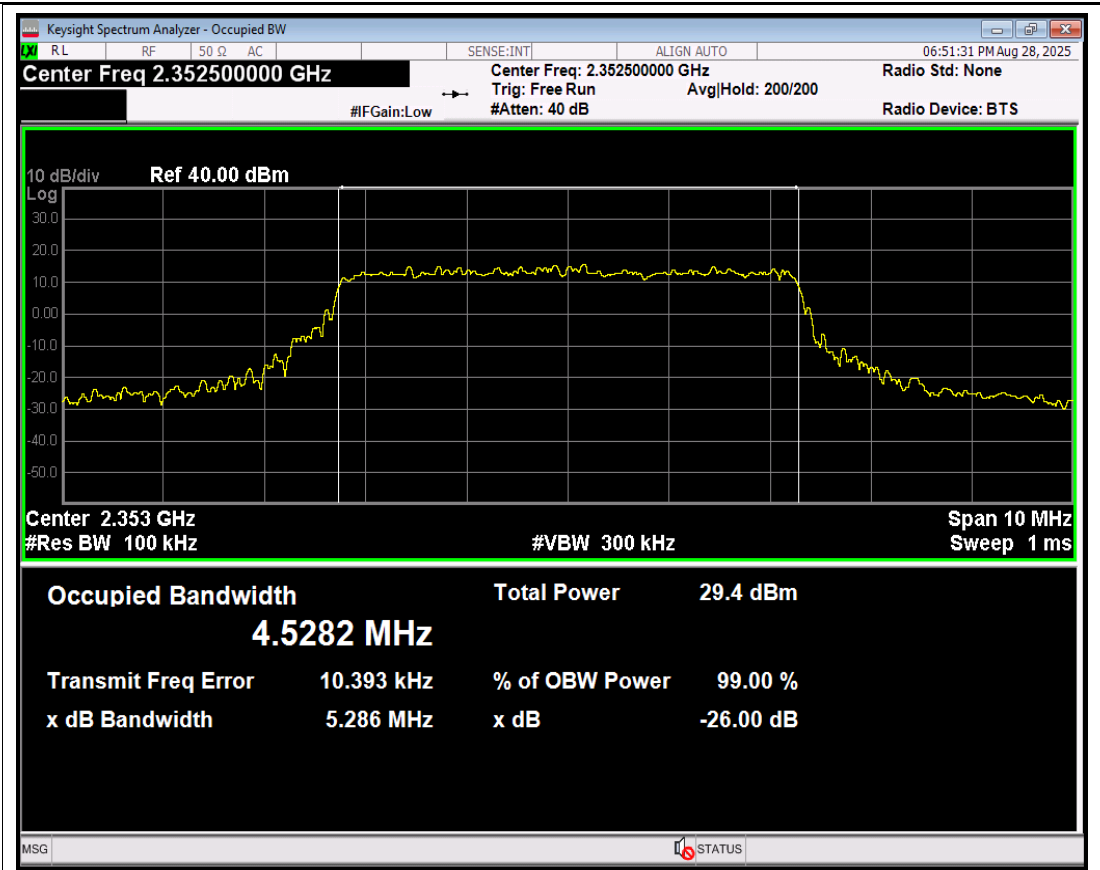
Band40(2350-2360) QPSK BW=5MHz Channel=39200 RB Size=1 Position=#0



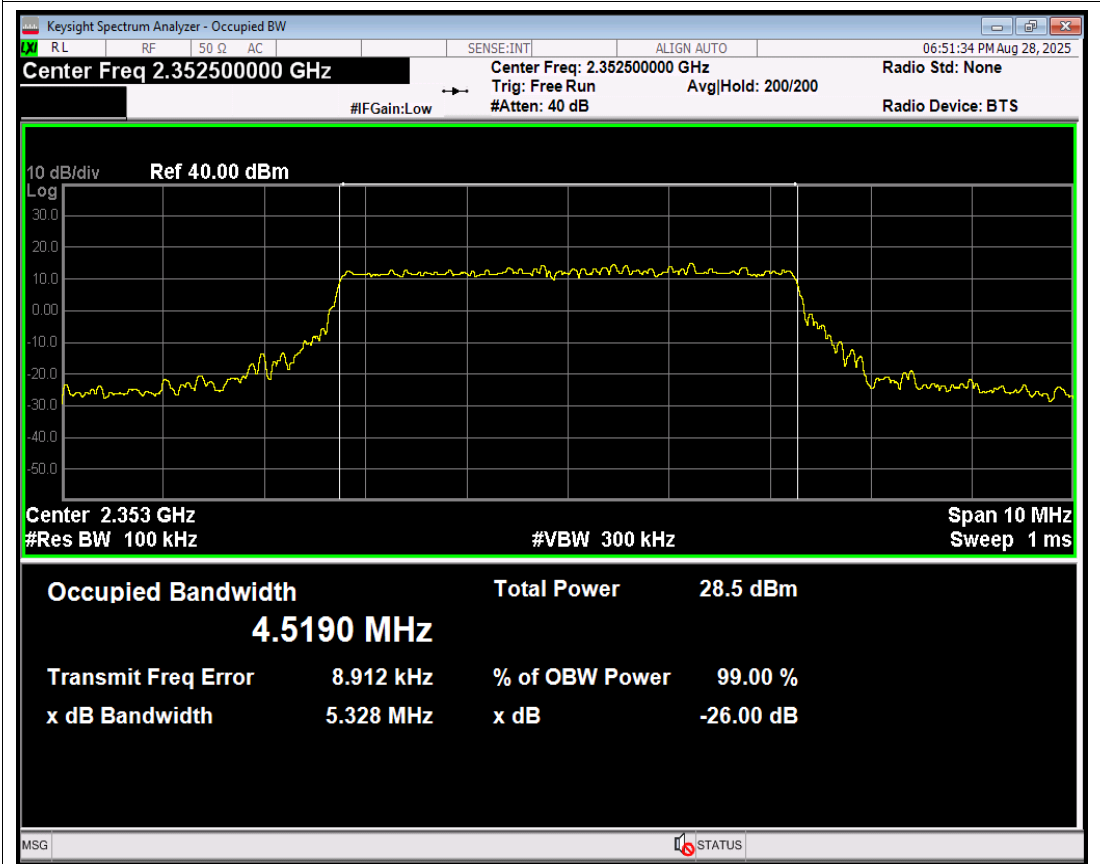
Band40(2350-2360) QPSK BW=5MHz Channel=39225 RB Size=1 Position=#0

Occupied bandwidth

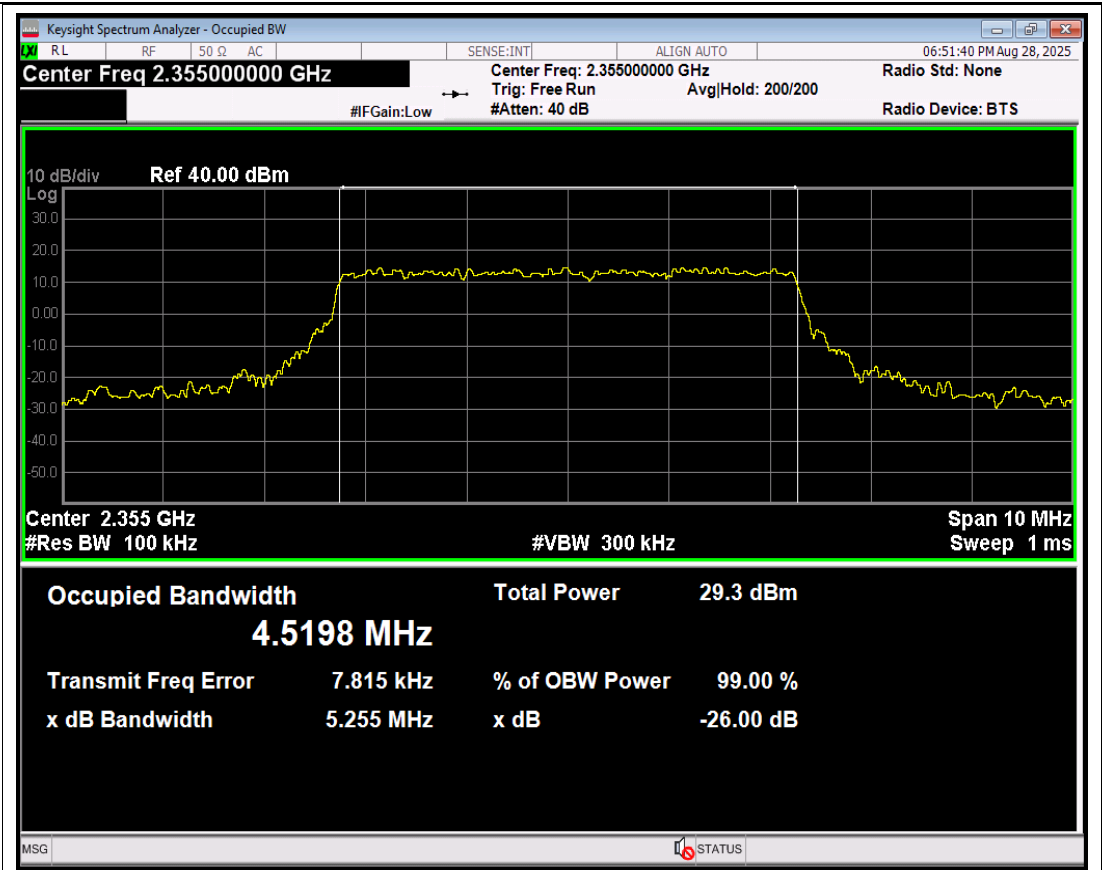
<i>Band</i>	<i>Bandwidth (MHz)</i>	<i>UL Channel</i>	<i>RB Size</i>	<i>RB Position</i>	<i>Modulation</i>	<i>99% OBW (MHz)</i>	<i>-26dB EBW (MHz)</i>	<i>Verdict</i>
Band40(2350-2360)	5	39175	25	#0	QPSK	4.528	5.286	PASS
Band40(2350-2360)	5	39175	25	#0	16QAM	4.519	5.328	PASS
Band40(2350-2360)	5	39200	25	#0	QPSK	4.520	5.255	PASS
Band40(2350-2360)	5	39200	25	#0	16QAM	4.514	5.389	PASS
Band40(2350-2360)	5	39225	25	#0	QPSK	4.511	5.453	PASS
Band40(2350-2360)	5	39225	25	#0	16QAM	4.545	5.779	PASS
Band40(2350-2360)	10	39200	50	#0	QPSK	8.966	9.870	PASS



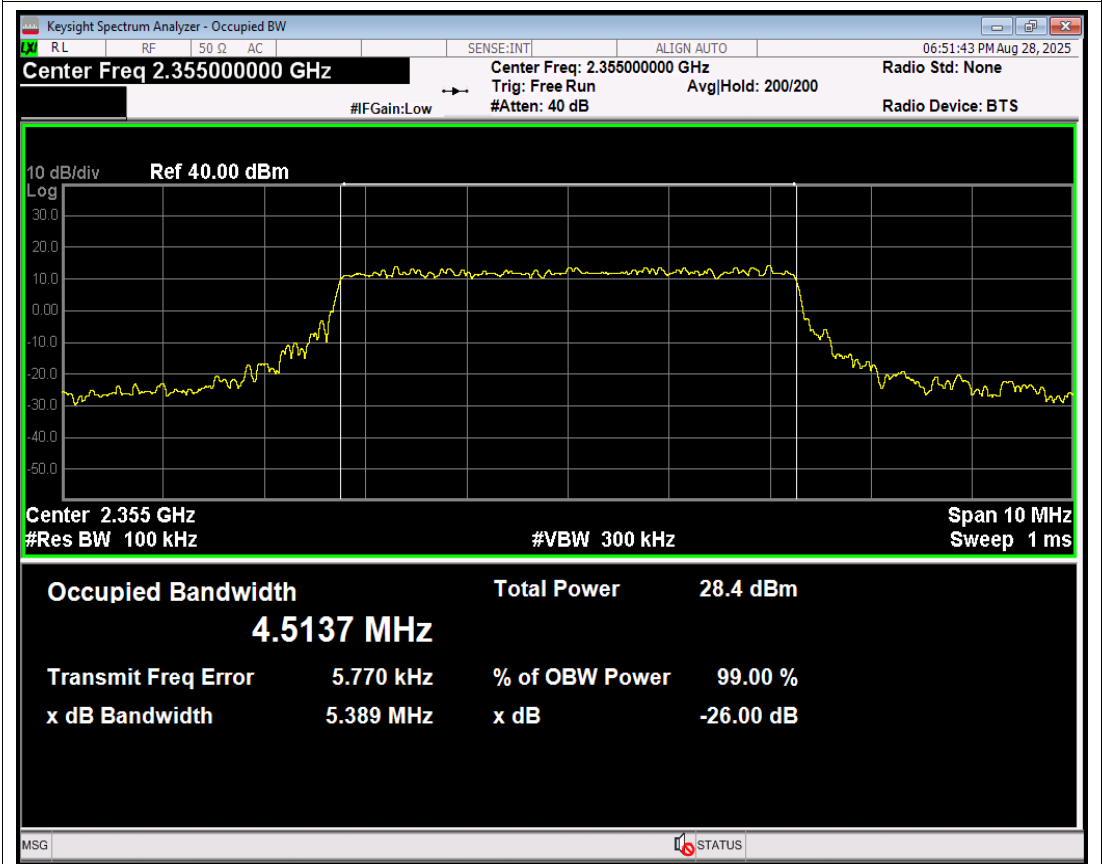
Band40(2350-2360) QPSK BW=5MHz Channel=39175 RB Size=25 Position=#0



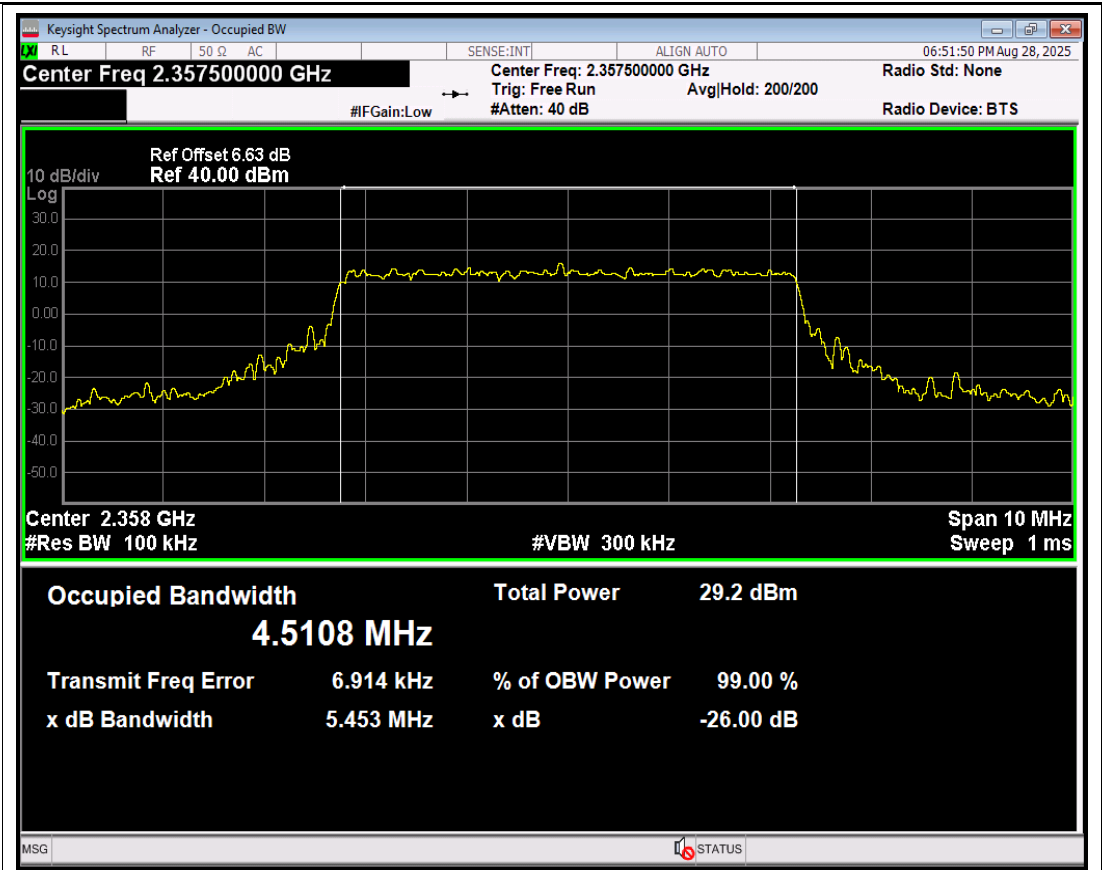
Band40(2350-2360) 16QAM BW=5MHz Channel=39175 RB Size=25 Position=#0



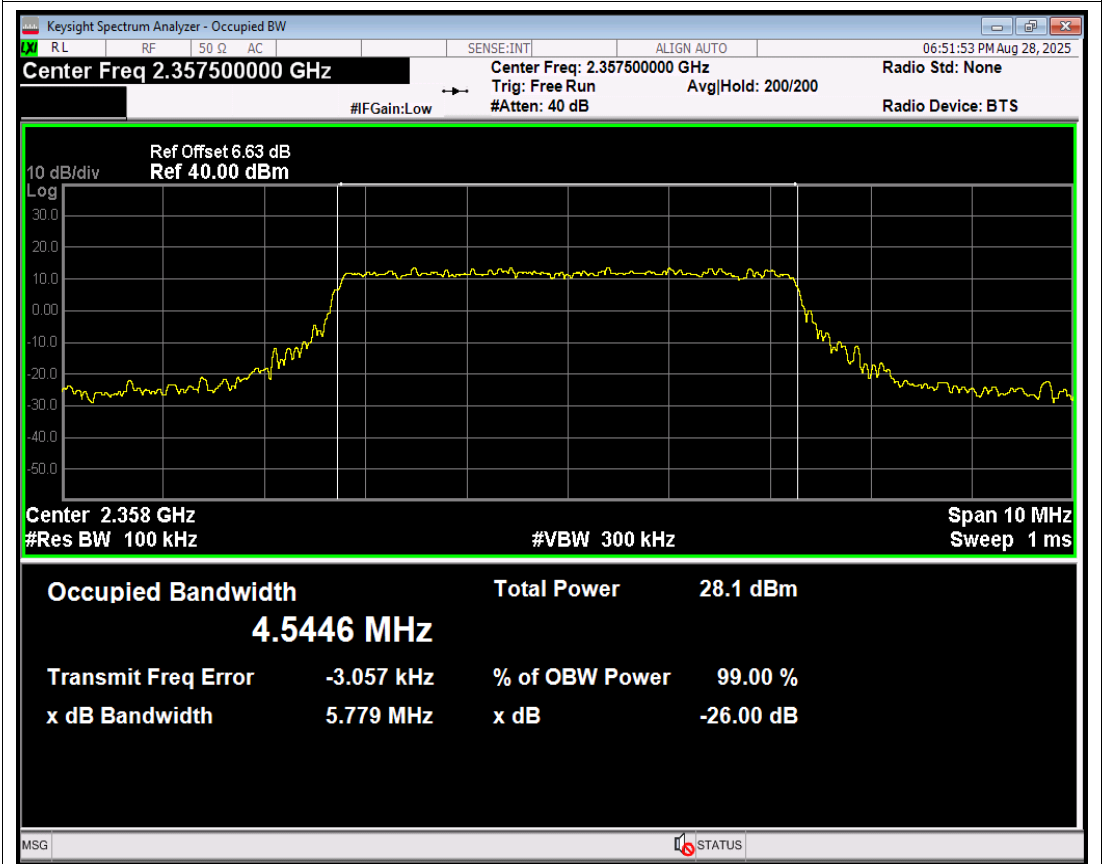
Band40(2350-2360) QPSK BW=5MHz Channel=39200 RB Size=25 Position=#0



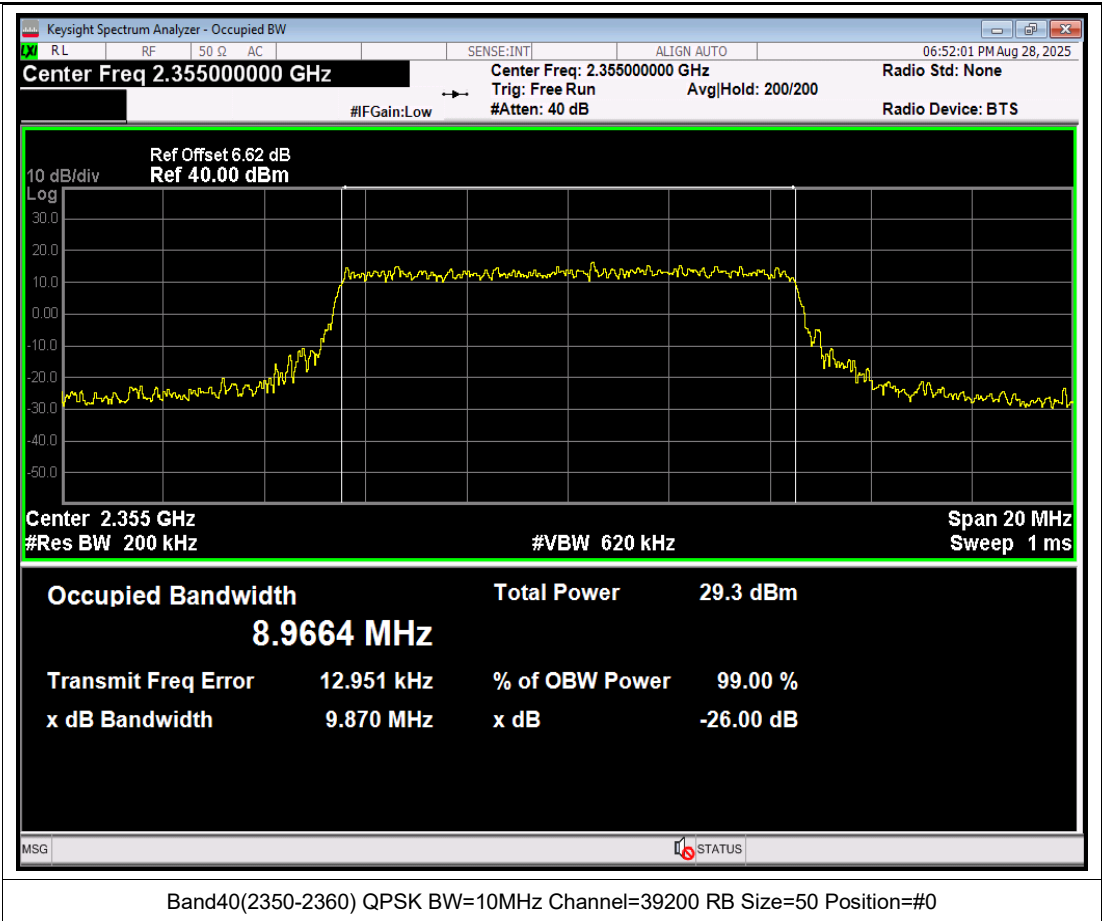
Band40(2350-2360) 16QAM BW=5MHz Channel=39200 RB Size=25 Position=#0



Band40(2350-2360) QPSK BW=5MHz Channel=39225 RB Size=25 Position=#0

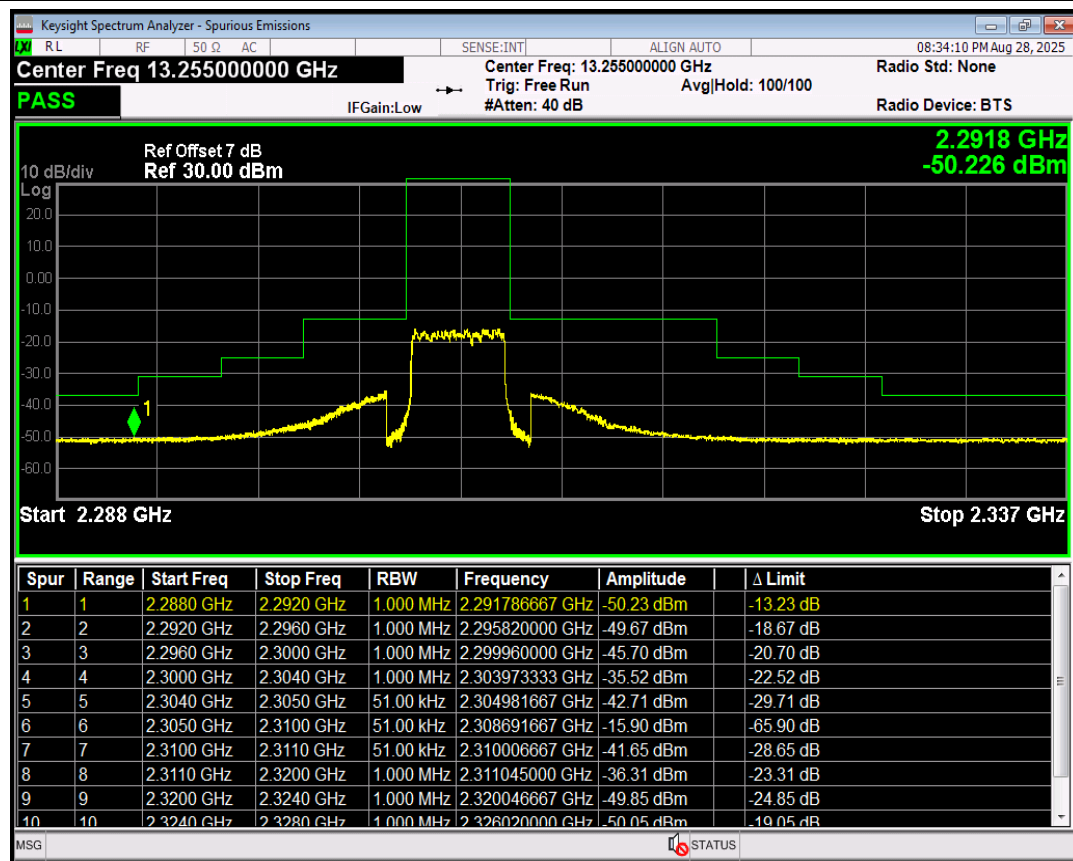


Band40(2350-2360) 16QAM BW=5MHz Channel=39225 RB Size=25 Position=#0

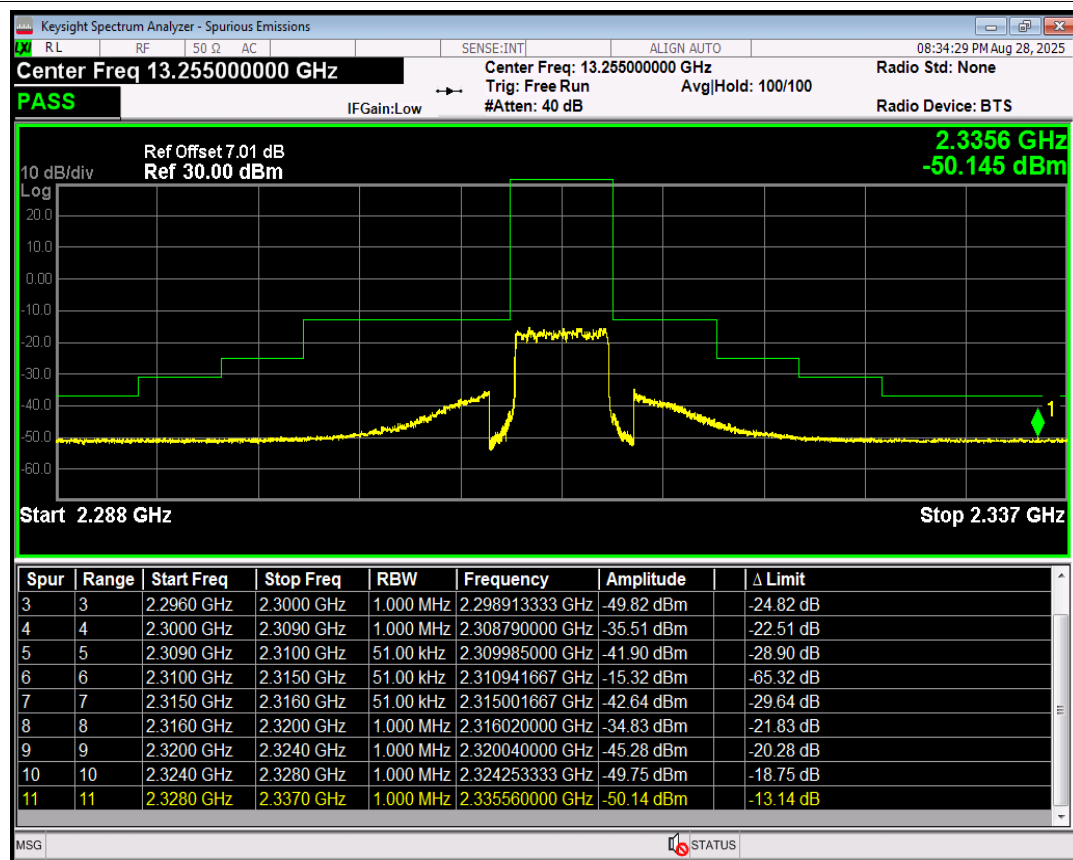


Band edge

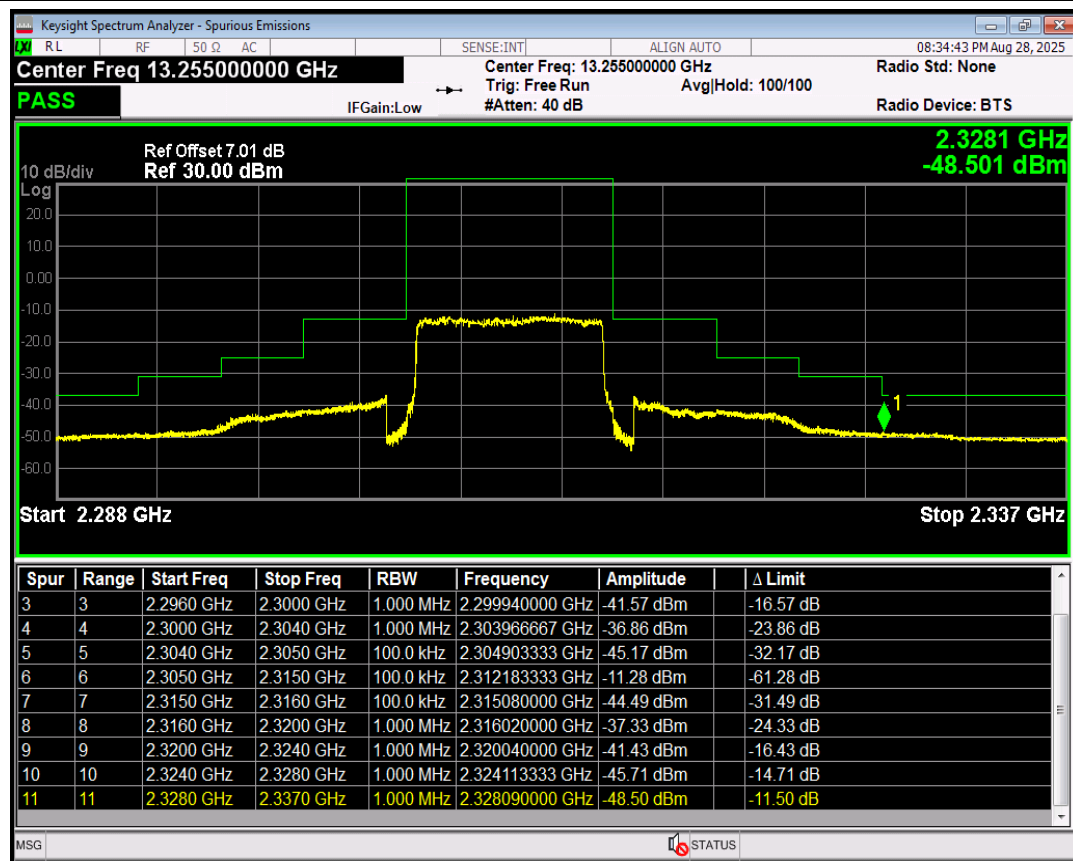
<i>Band</i>	<i>Bandwidth (MHz)</i>	<i>UL Channel</i>	<i>RB Size</i>	<i>RB Position</i>	<i>Modulation</i>	<i>Spur Freq (MHz)</i>	<i>Spur Level (dBm)</i>	<i>Limit (dBm)</i>	<i>Verdict</i>
Band40(2305-2315)	5	38725	25	#0	QPSK	2330.40	-50.20	-37	PASS
Band40(2305-2315)	5	38725	25	#0	16QAM	2291.79	-50.23	-37	PASS
Band40(2305-2315)	5	38775	25	#0	QPSK	2289.44	-50.28	-37	PASS
Band40(2305-2315)	5	38775	25	#0	16QAM	2335.56	-50.14	-37	PASS
Band40(2305-2315)	10	38750	50	#0	QPSK	2328.09	-48.50	-37	PASS



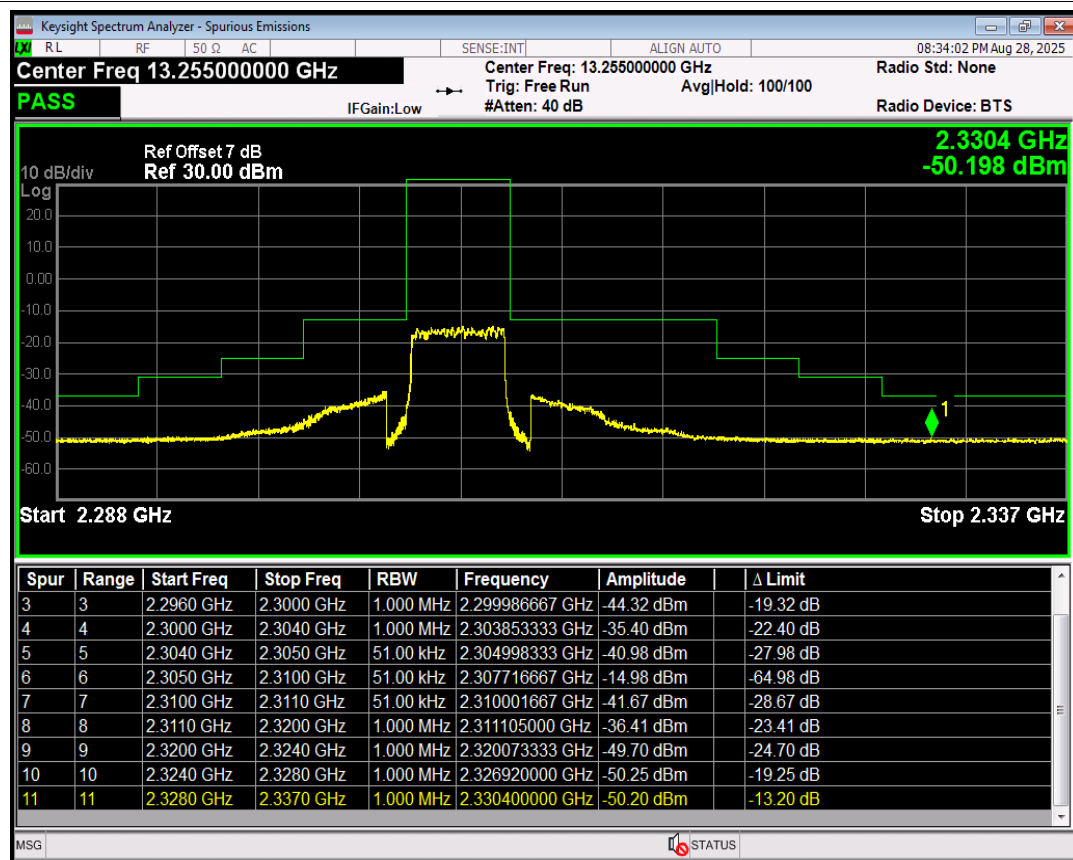
Band40(2305-2315) 16QAM BW=5MHz Channel=38725 RB Size=25 Position=#0



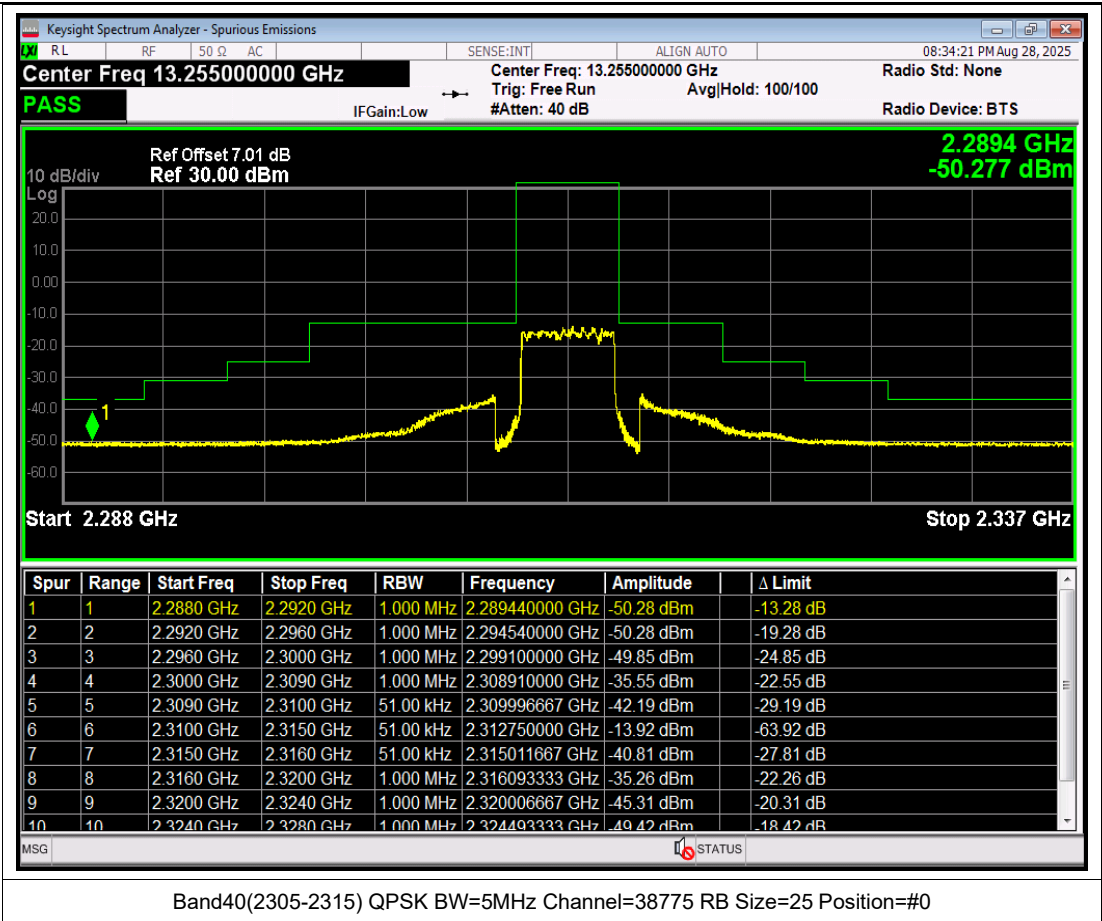
Band40(2305-2315) 16QAM BW=5MHz Channel=38775 RB Size=25 Position=#0



Band40(2305-2315) QPSK BW=10MHz Channel=38750 RB Size=50 Position=#0

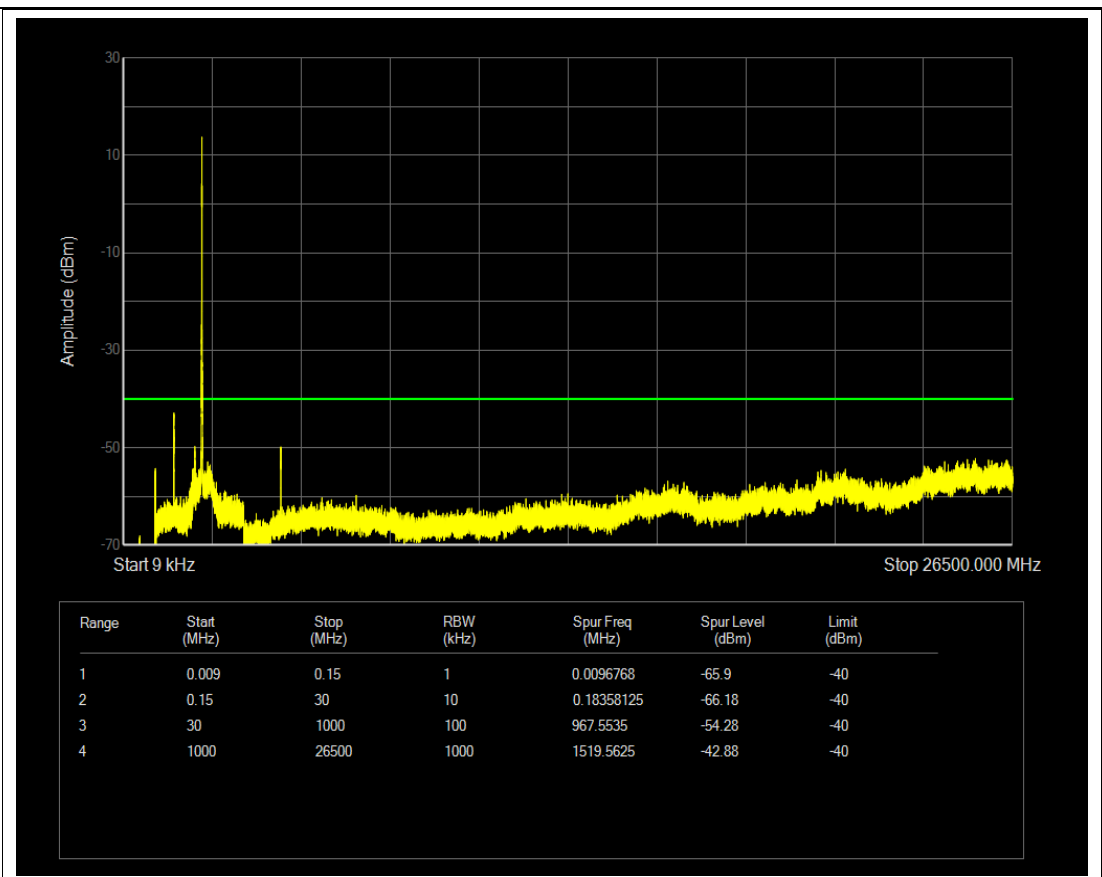


Band40(2305-2315) QPSK BW=5MHz Channel=38725 RB Size=25 Position=#0

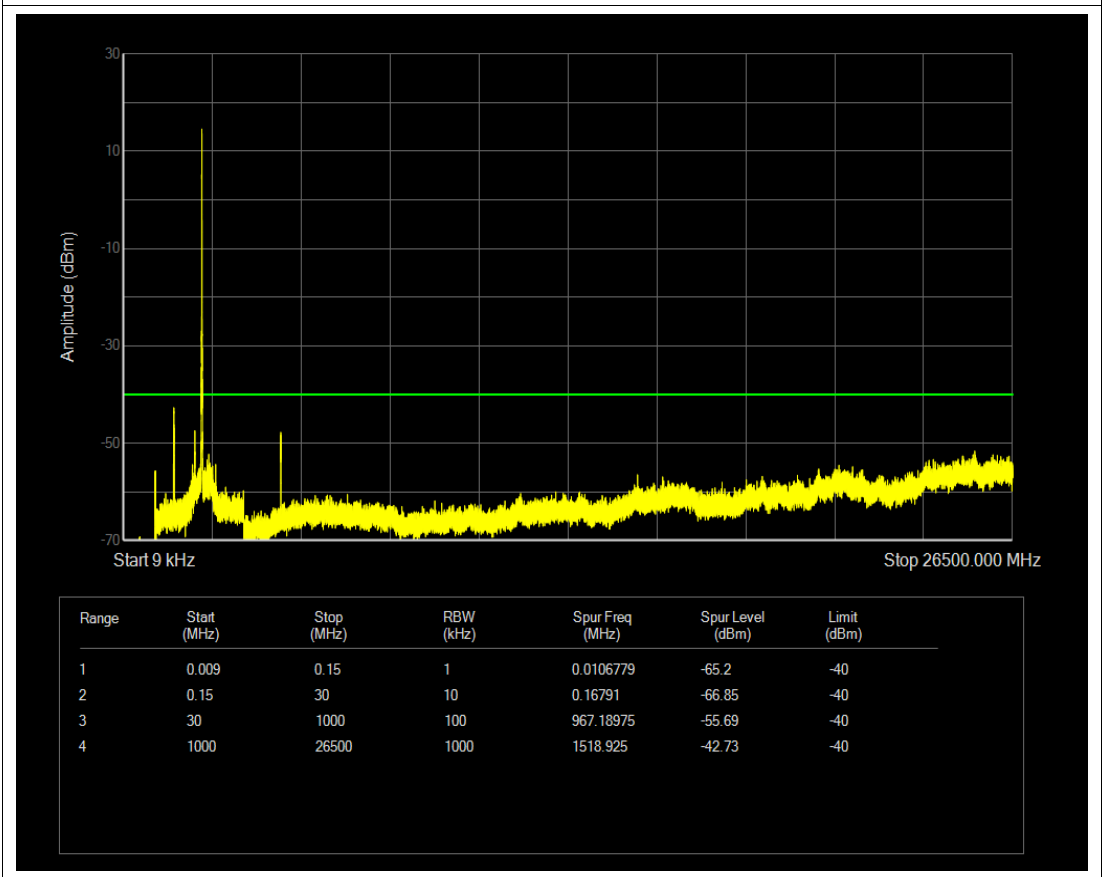


Out-of-band emissions

<i>Band</i>	<i>Bandwidth (MHz)</i>	<i>UL Channel</i>	<i>RB Size</i>	<i>RB Position</i>	<i>Modulation</i>	<i>Spur Freq (MHz)</i>	<i>Spur Level (dBm)</i>	<i>Limit (dBm)</i>	<i>Verdict</i>
Band40(2350-2360)	5	39175	25	#0	QPSK	1519.56	-42.88	-40	PASS
Band40(2350-2360)	5	39175	25	#0	16QAM	1518.93	-42.73	-40	PASS
Band40(2350-2360)	5	39200	25	#0	QPSK	1530.40	-42.20	-40	PASS
Band40(2350-2360)	5	39200	25	#0	16QAM	1529.76	-42.49	-40	PASS
Band40(2350-2360)	5	39225	25	#0	QPSK	1543.79	-43.70	-40	PASS
Band40(2350-2360)	5	39225	25	#0	16QAM	1543.79	-40.63	-40	PASS
Band40(2350-2360)	10	39200	50	#0	QPSK	1537.41	-44.24	-40	PASS



Band40(2350-2360) QPSK BW=5MHz Channel=39175 RB Size=25 Position=#0



Band40(2350-2360) 16QAM BW=5MHz Channel=39175 RB Size=25 Position=#0

