

FCC LTE NB-IOT Band 12 Test Data

General Description of EUT	
Product Name:	AirSuite Glance LTE
Test Model:	ASCM1420
Sample ID:	C-202305-0005-01-2#
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 5V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202305-0005-81 . The report only show the worst case data.	

Contents

FCC LTE NB-IOT Band 12 Test Data	1
1: Conducted Power Data for NB1	3
1.1 Test Result.....	3
2: Peak-to-Average Ratio(CCDF) for NB1.....	4
2.1 Test Result.....	4
2.2 Test Graphs	5
3: Emission Bandwidth for NB1.....	9
3.1 Test Result.....	9
3.2 Test Graphs	10
4: Band Edge for NB1	16
4.1 Test Result.....	16
4.2 Test Graphs	17
5: Conducted Spurious Emission for NB1.....	24
5.1 Test Result.....	24
5.2 Test Graphs	30
6: Frequency Stability for NB1.....	50
6.1 Test Result.....	50

1: Conducted Power Data for NB1

1.1 Test Result

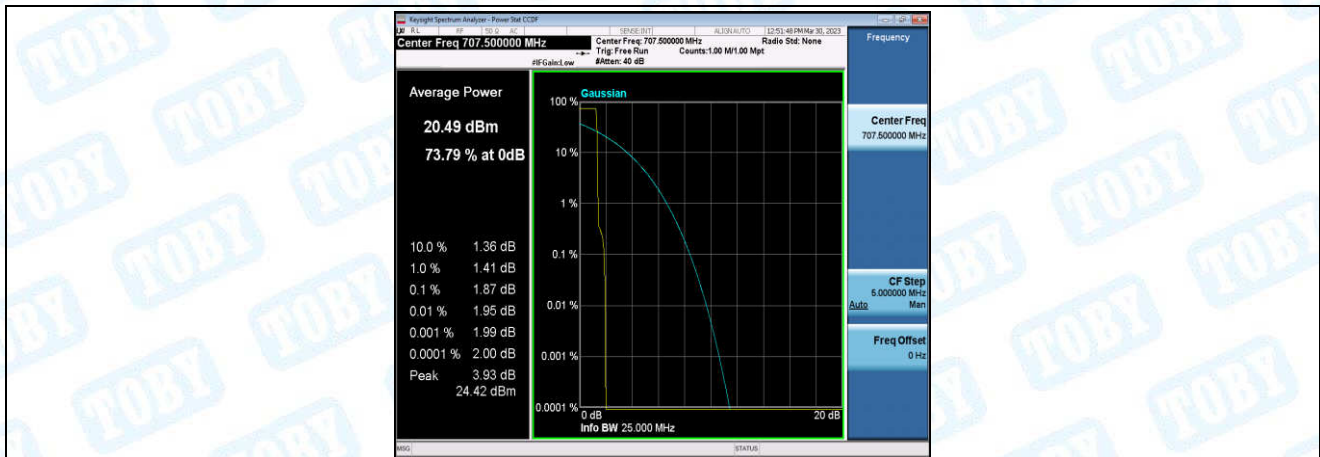
Band	OpMode	BW	Modu	Channel	Tones	Result (dBm)	Verdict
Band12	Stand-Alone	3.75kHz	BPSK	23011	1@0	23.60	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23011	1@47	23.55	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23095	1@0	23.76	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23095	1@47	23.70	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23179	1@0	23.45	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23179	1@47	23.47	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@0	23.61	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@47	23.58	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	23.62	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	23.67	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23179	1@0	23.45	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23179	1@47	23.40	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@0	23.63	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@11	23.55	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	3@3	23.51	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@0	23.81	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@11	23.70	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	3@3	23.60	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@0	23.61	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@11	23.60	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	3@3	23.46	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	1@0	23.35	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	1@11	23.54	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	3@3	23.52	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	23.69	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	23.68	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	3@3	23.63	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	1@0	23.51	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	1@11	23.50	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	3@3	23.42	PASS

2: Peak-to-Average Ratio(CCDF) for NB1

2.1 Test Result

Band	OpMode	BW	Modu	Channel	Tones	Result (dBm)	Limit (dBm)	Verdict
Band12	Stand-Alone	3.75kHz	BPSK	23095	1@0	1.87	<=13	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23095	1@47	1.57	<=13	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	2.83	<=13	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	2.05	<=13	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@0	3.35	<=13	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@11	2.87	<=13	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	3@3	9.43	<=13	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	8.56	<=13	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	5.77	<=13	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	3@3	7.75	<=13	PASS

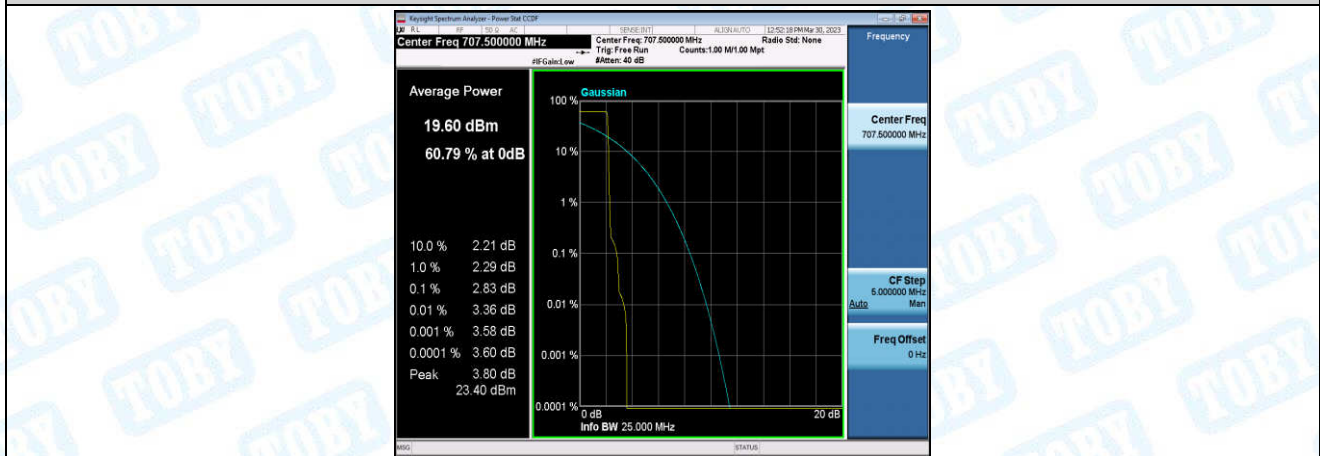
2.2 Test Graphs



Band12-Stand-Alone-NaN-BPSK-23095-1@0-3.75kHz-1.87-<=13-PASS



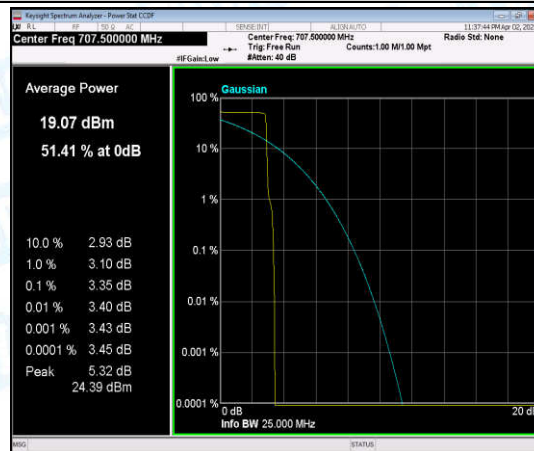
Band12-Stand-Alone-NaN-BPSK-23095-1@47-3.75kHz-1.57-<=13-PASS



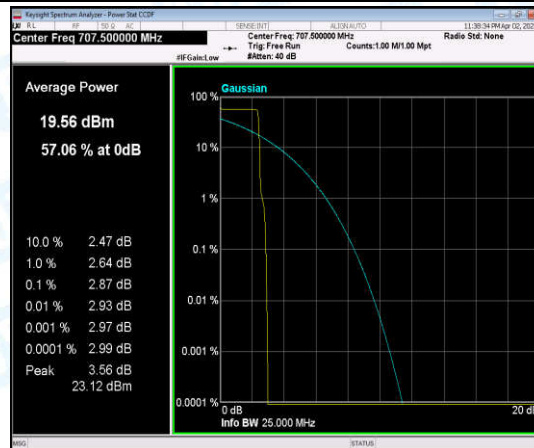
Band12-Stand-Alone-NaN-QPSK-23095-1@0-3.75kHz-2.83-<=13-PASS



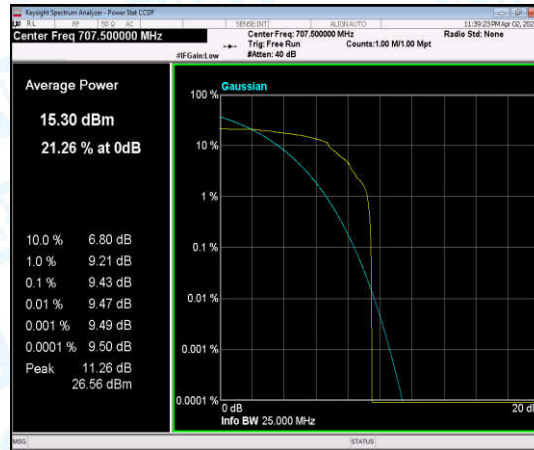
Band12-Stand-Alone-NaN-QPSK-23095-1@47-3.75kHz-2.05-<=13-PASS



Band12-Stand-Alone-NaN-BPSK-23095-1@0-15kHz-3.35-<=13-PASS



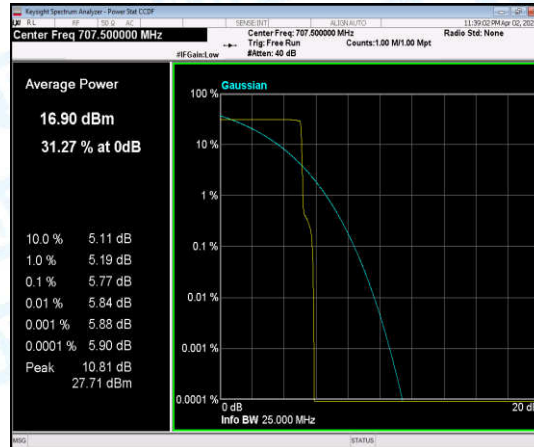
Band12-Stand-Alone-NaN-BPSK-23095-1@11-15kHz-2.87-<=13-PASS



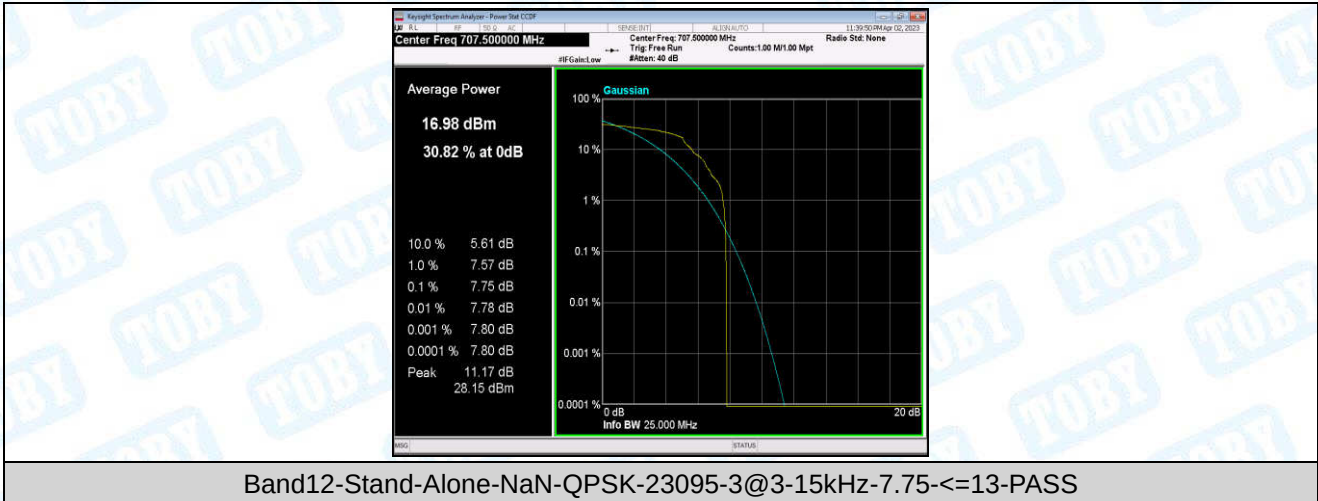
Band12-Stand-Alone-NaN-BPSK-23095-3@3-15kHz-9.43-<=13-PASS



Band12-Stand-Alone-NaN-QPSK-23095-1@0-15kHz-8.56-<=13-PASS



Band12-Stand-Alone-NaN-QPSK-23095-1@11-15kHz-5.77-<=13-PASS



3: Emission Bandwidth for NB1

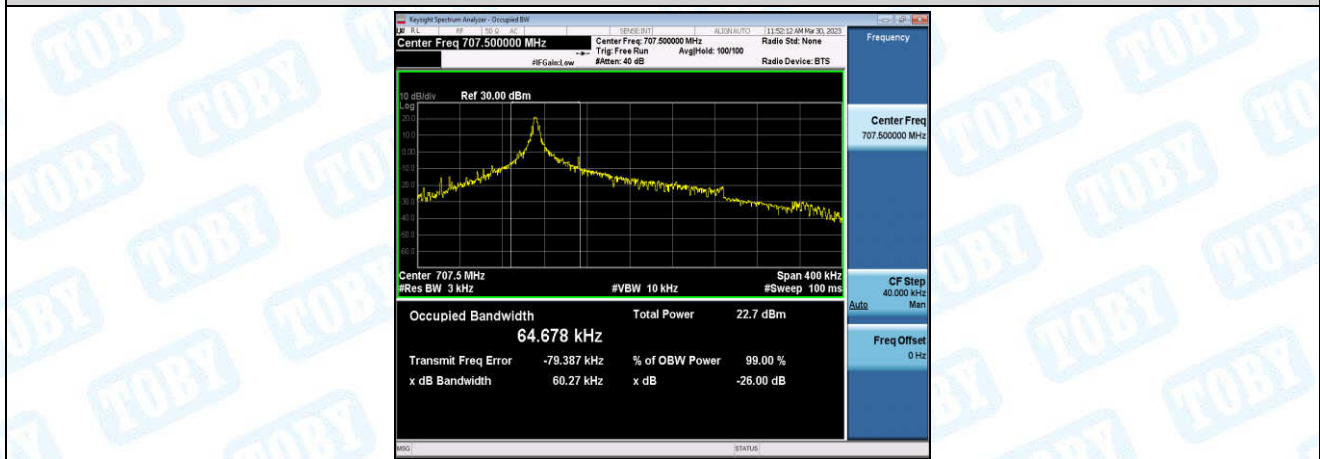
3.1 Test Result

Band	OpMode	BW	Modu	Channel	Tones	Occupied Bandwidth (MHz)	Result (MHz)	Verdict
Band12	Stand-Alone	3.75kHz	BPSK	23011	1@0	0.0719	0.0507	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23095	1@0	0.0647	0.0603	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23179	1@0	0.0719	0.0507	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@0	0.0885	0.0545	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	0.0878	0.0542	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23179	1@0	0.0881	0.0542	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@0	0.1350	0.1244	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	12@0	0.1857	0.2905	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@0	0.1349	0.1251	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	12@0	0.1866	0.2798	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@0	0.1355	0.1245	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	12@0	0.1868	0.2859	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	1@0	0.1473	0.1458	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	12@0	0.1858	0.2921	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	0.1473	0.1592	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	12@0	0.1884	0.2998	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	1@0	0.1485	0.1439	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	12@0	0.1867	0.2887	PASS

3.2 Test Graphs



Band12-Stand-Alone-NaN-BPSK-23011-1@0-3.75kHz-0.0507-PASS



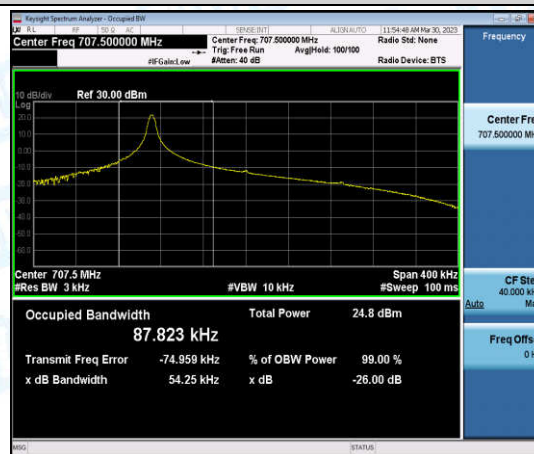
Band12-Stand-Alone-NaN-BPSK-23095-1@0-3.75kHz-0.0603-PASS



Band12-Stand-Alone-NaN-BPSK-23179-1@0-3.75kHz-0.0507-PASS



Band12-Stand-Alone-NaN-QPSK-23011-1@0-3.75kHz-0.0545-PASS



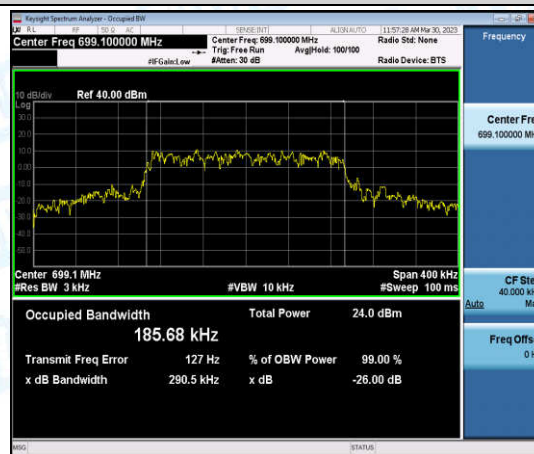
Band12-Stand-Alone-NaN-QPSK-23095-1@0-3.75kHz-0.0542-PASS



Band12-Stand-Alone-NaN-QPSK-23179-1@0-3.75kHz-0.0542-PASS



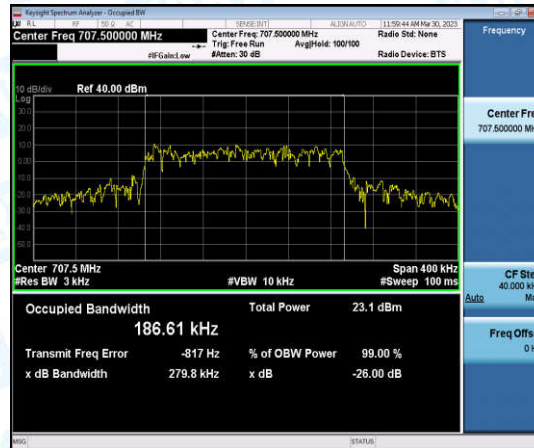
Band12-Stand-Alone-NaN-BPSK-23011-1@0-15kHz-0.1244-PASS



Band12-Stand-Alone-NaN-BPSK-23011-12@0-15kHz-0.2905-PASS



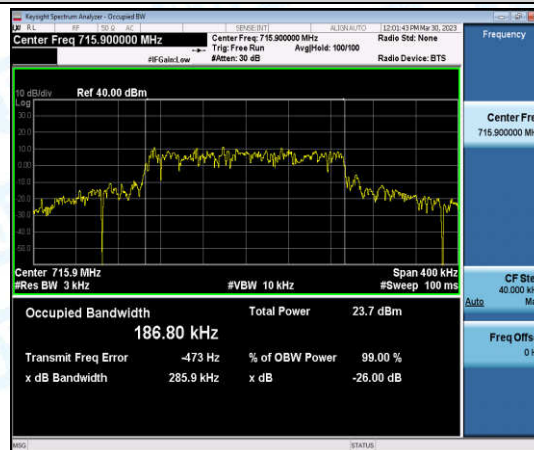
Band12-Stand-Alone-NaN-BPSK-23095-1@0-15kHz-0.1251-PASS



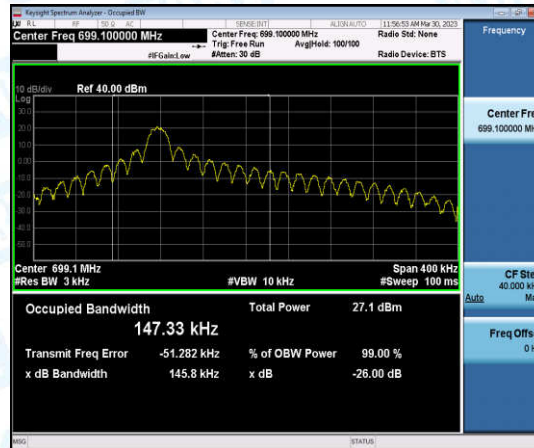
Band12-Stand-Alone-NaN-BPSK-23095-12@0-15kHz-0.2798-PASS



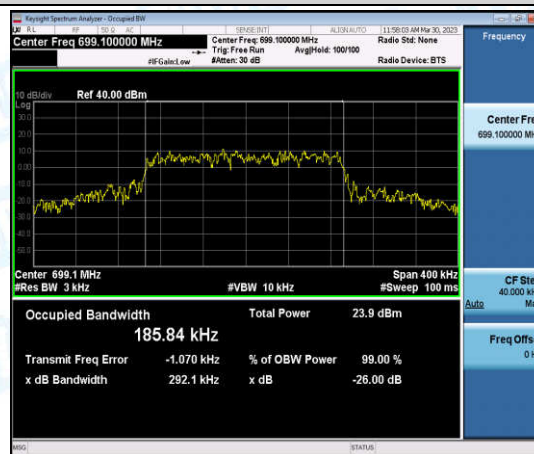
Band12-Stand-Alone-NaN-BPSK-23179-1@0-15kHz-0.1245-PASS



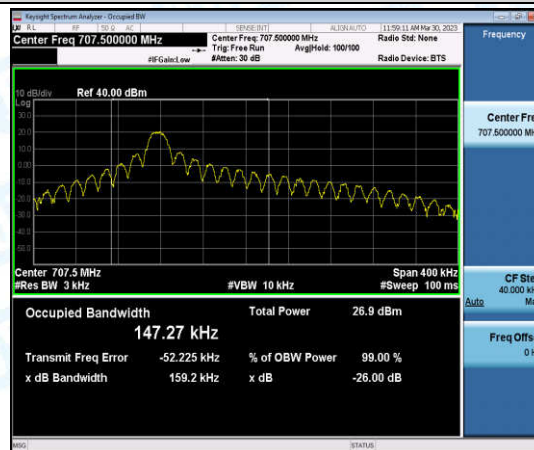
Band12-Stand-Alone-NaN-BPSK-23179-12@0-15kHz-0.2859-PASS



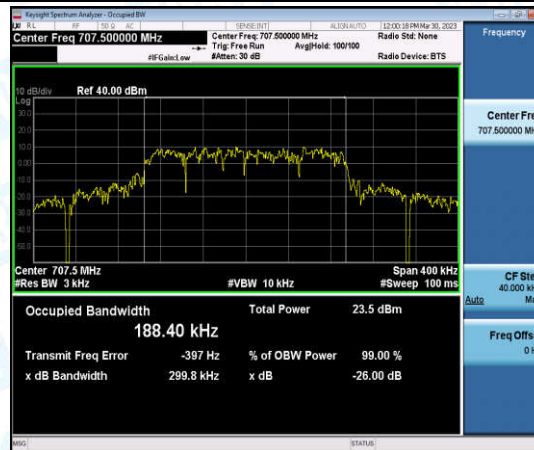
Band12-Stand-Alone-NaN-QPSK-23011-1@0-15kHz-0.1458-PASS



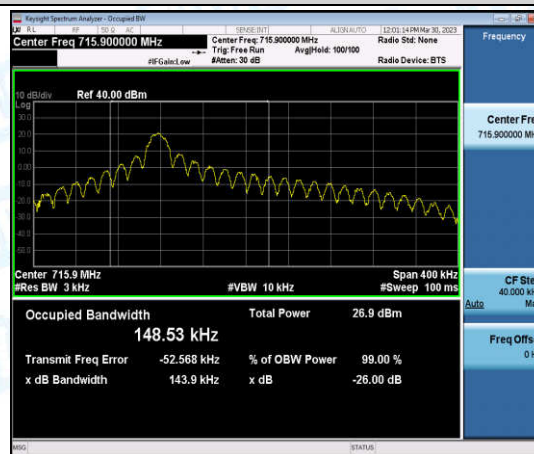
Band12-Stand-Alone-NaN-QPSK-23011-12@0-15kHz-0.2921-PASS



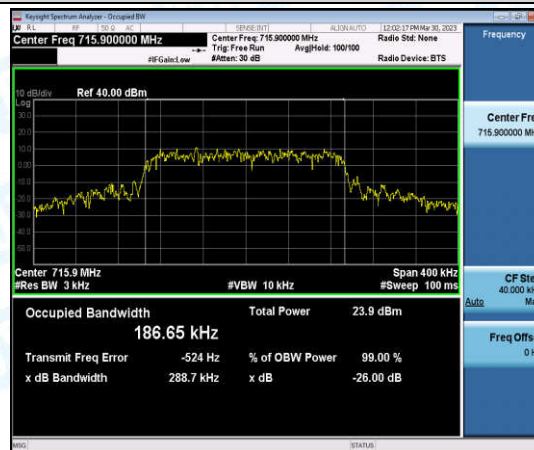
Band12-Stand-Alone-NaN-QPSK-23095-1@0-15kHz-0.1592-PASS



Band12-Stand-Alone-NaN-QPSK-23095-12@0-15kHz-0.2998-PASS



Band12-Stand-Alone-NaN-QPSK-23179-1@0-15kHz-0.1439-PASS



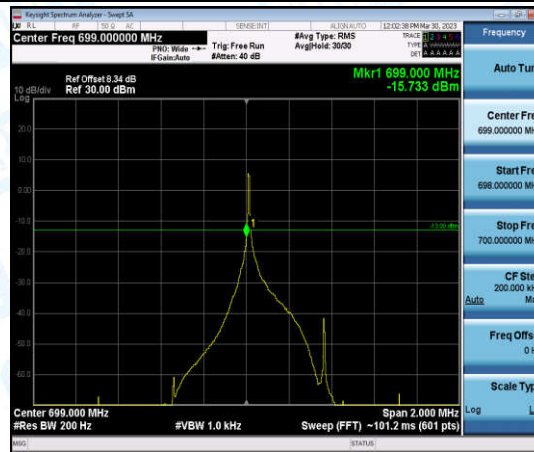
Band12-Stand-Alone-NaN-QPSK-23179-12@0-15kHz-0.2887-PASS

4: Band Edge for NB1

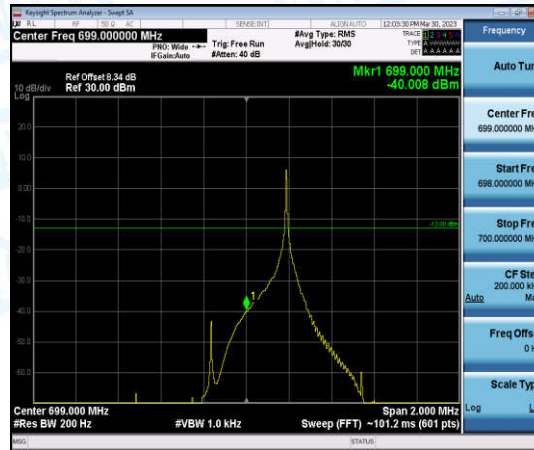
4.1 Test Result

Band	OpMode	BW	Modu	Channel	Tones	Result (dBm)	Verdict
Band12	Stand-Alone	3.75kHz	BPSK	23011	1@0	-15.73	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23011	1@47	-40.01	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23179	1@0	-39.96	PASS
Band12	Stand-Alone	3.75kHz	BPSK	23179	1@47	-15.81	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@0	-17.81	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@47	-38.76	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23179	1@0	-40.95	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23179	1@47	-16.98	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@0	-16.69	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@11	-36.44	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	12@0	-41.14	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@0	-35.96	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@11	-16.46	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	12@0	-43.65	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	1@0	-17.76	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	1@11	-35.67	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	12@0	-42.28	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	1@0	-37.98	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	1@11	-18.75	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	12@0	-41.40	PASS

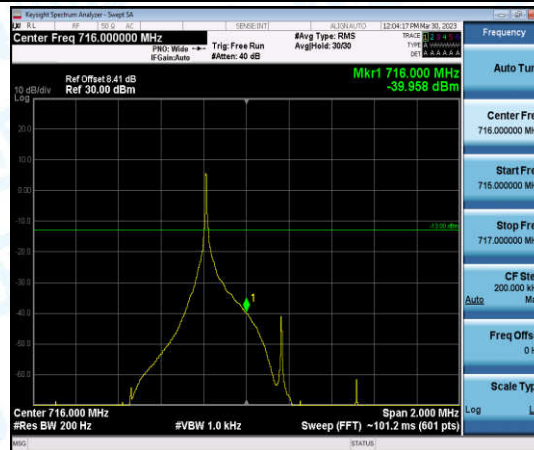
4.2 Test Graphs



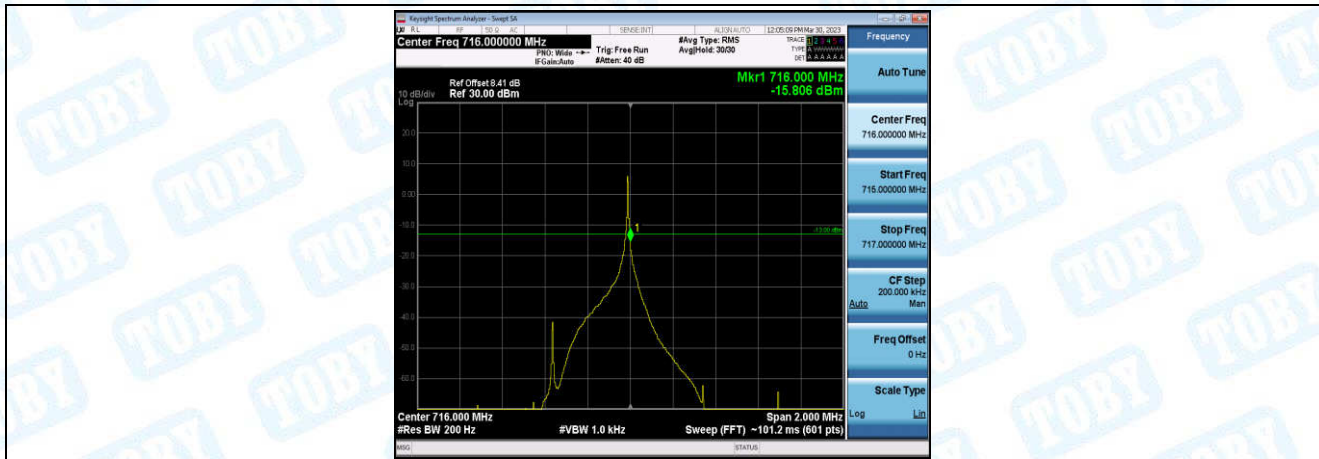
Band12-Stand-Alone-NaN-BPSK-23011-1@0-3.75kHz--15.73-PASS



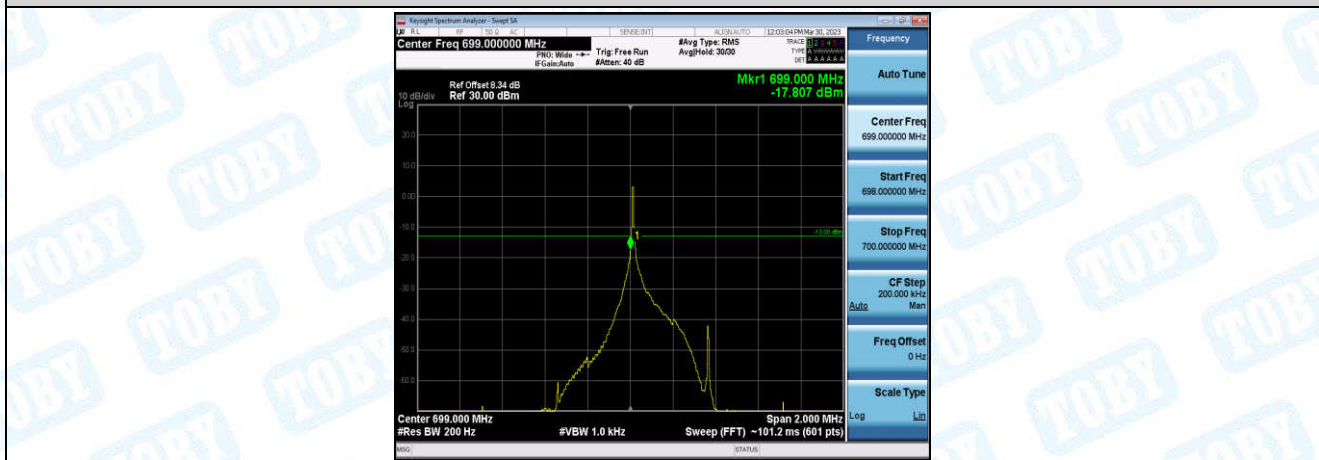
Band12-Stand-Alone-NaN-BPSK-23011-1@47-3.75kHz--40.01-PASS



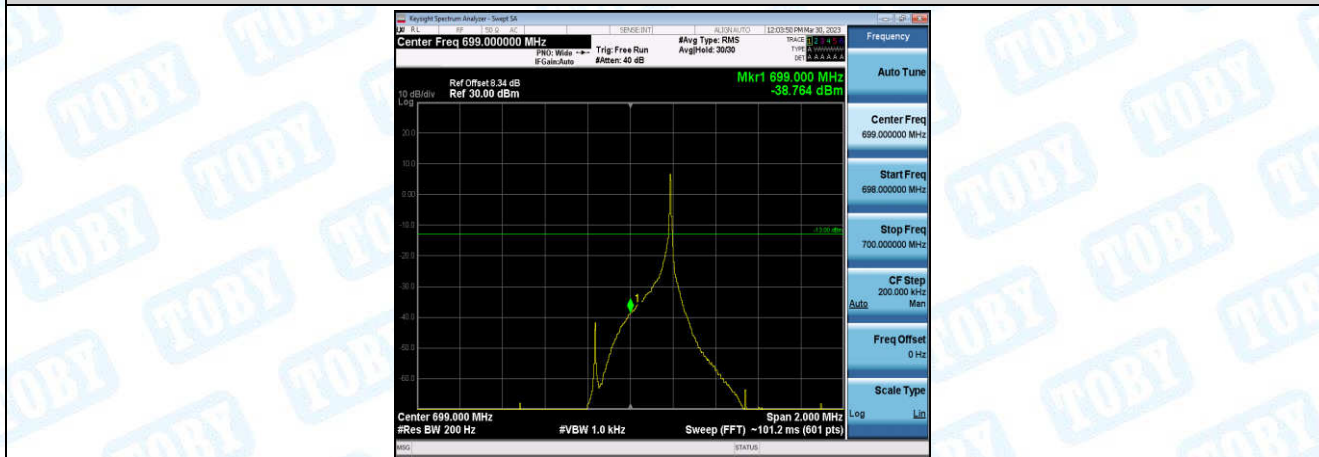
Band12-Stand-Alone-NaN-BPSK-23179-1@0-3.75kHz--39.96-PASS



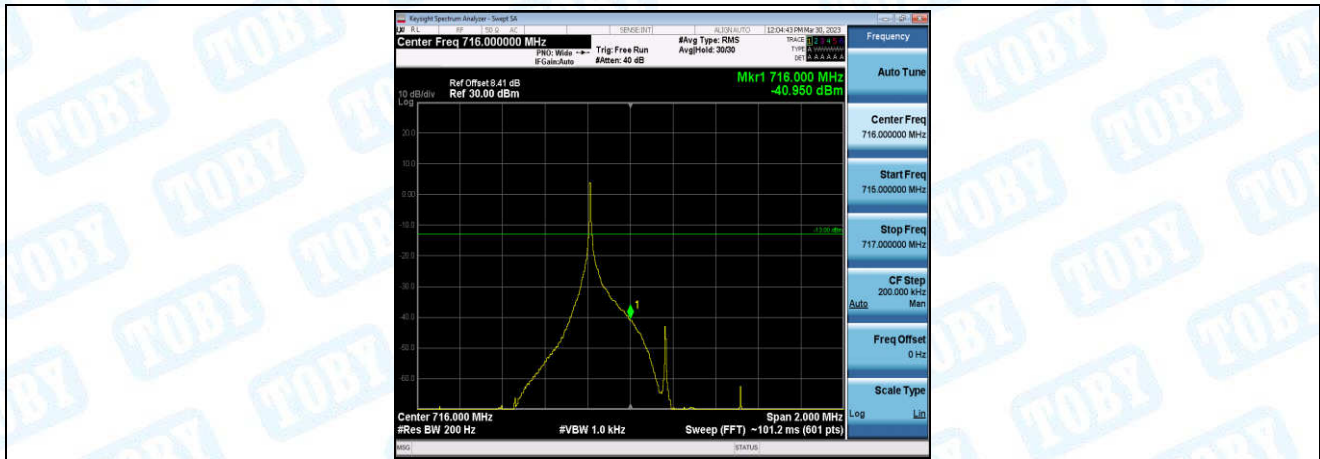
Band12-Stand-Alone-NaN-BPSK-23179-1@47-3.75kHz--15.81-PASS



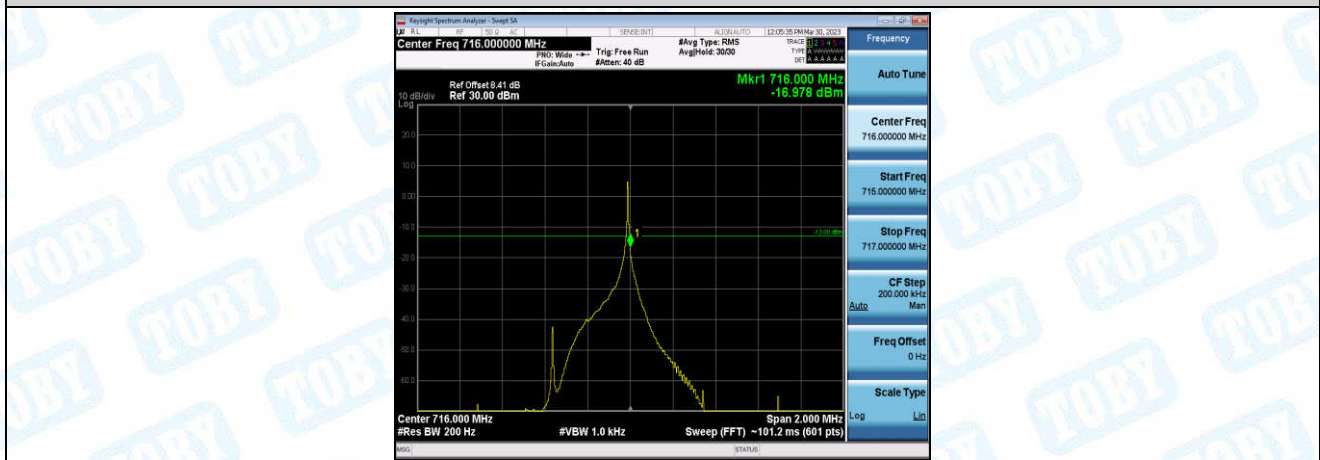
Band12-Stand-Alone-NaN-QPSK-23011-1@0-3.75kHz--17.81-PASS



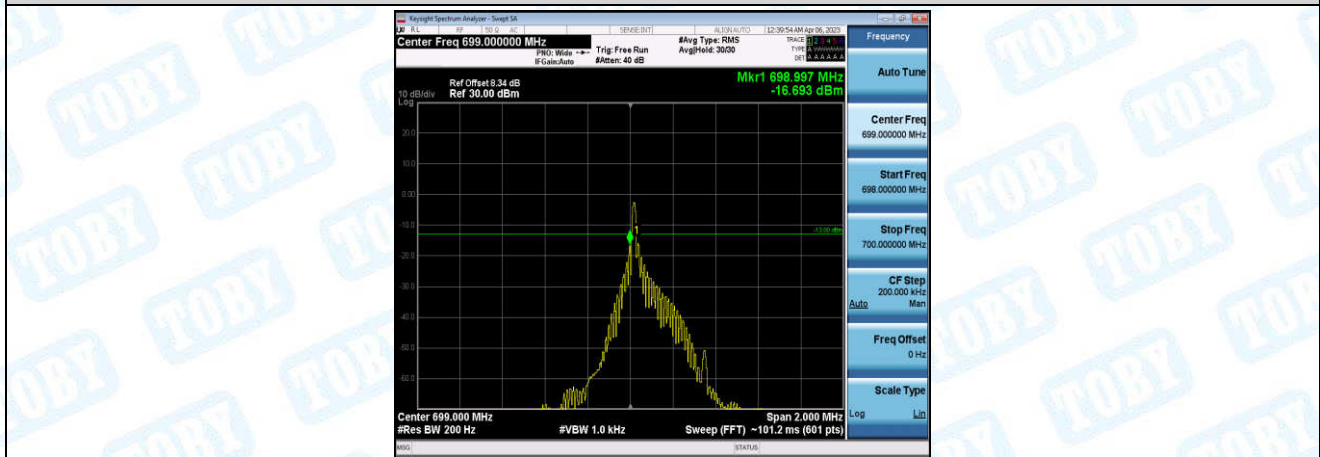
Band12-Stand-Alone-NaN-QPSK-23011-1@47-3.75kHz--38.76-PASS



Band12-Stand-Alone-NaN-QPSK-23179-1@0-3.75kHz--40.95-PASS



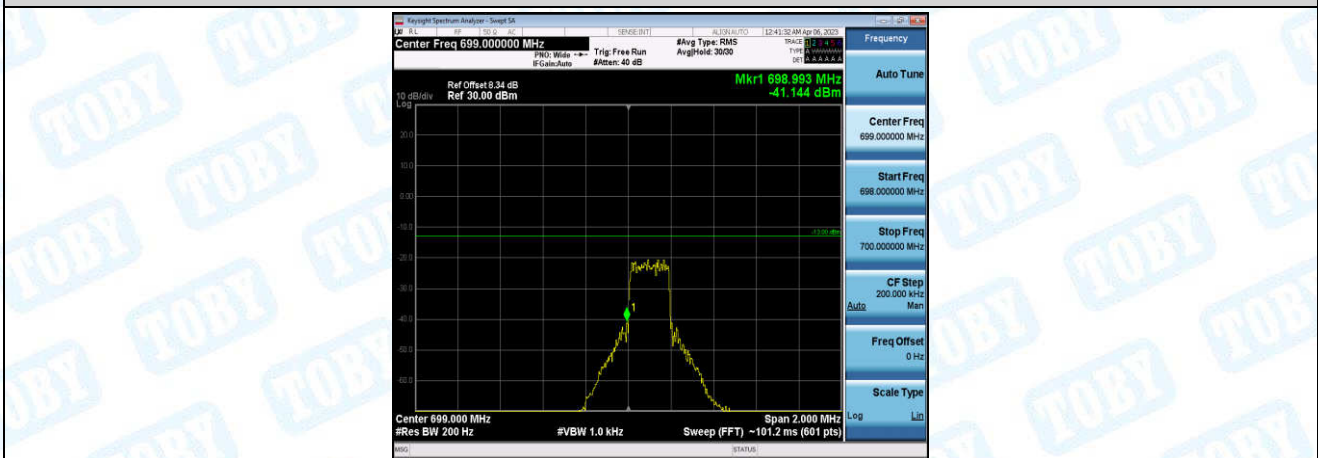
Band12-Stand-Alone-NaN-QPSK-23179-1@47-3.75kHz--16.98-PASS



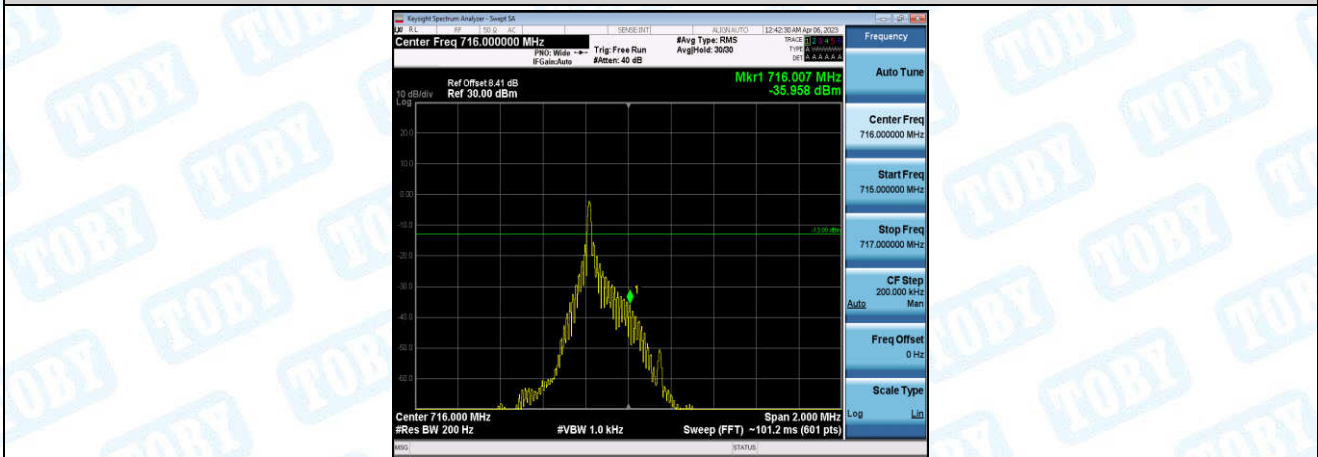
Band12-Stand-Alone-NaN-BPSK-23011-1@0-15kHz--16.69-PASS



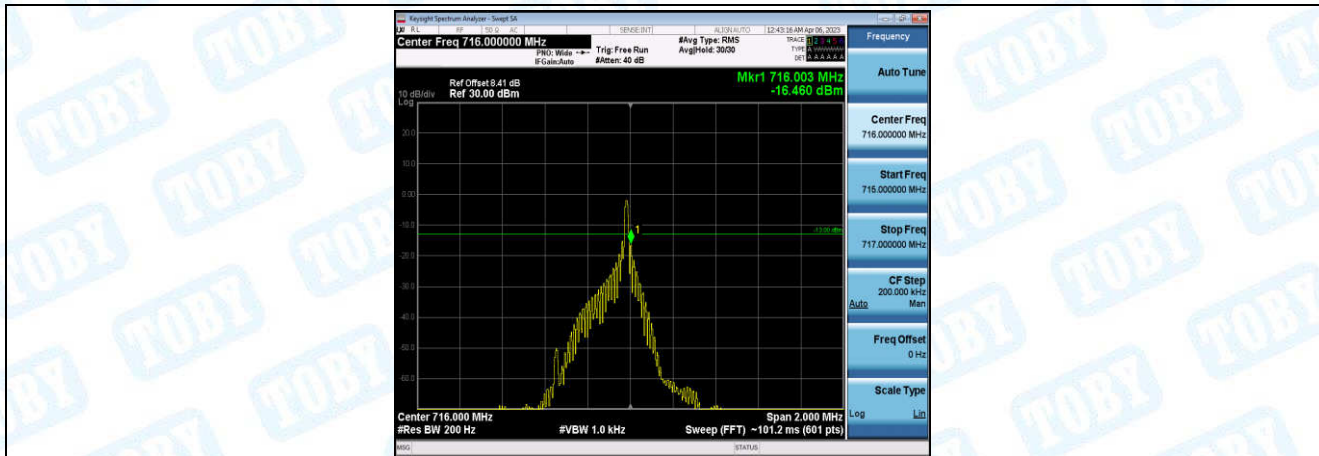
Band12-Stand-Alone-NaN-BPSK-23011-1@11-15kHz--36.44-PASS



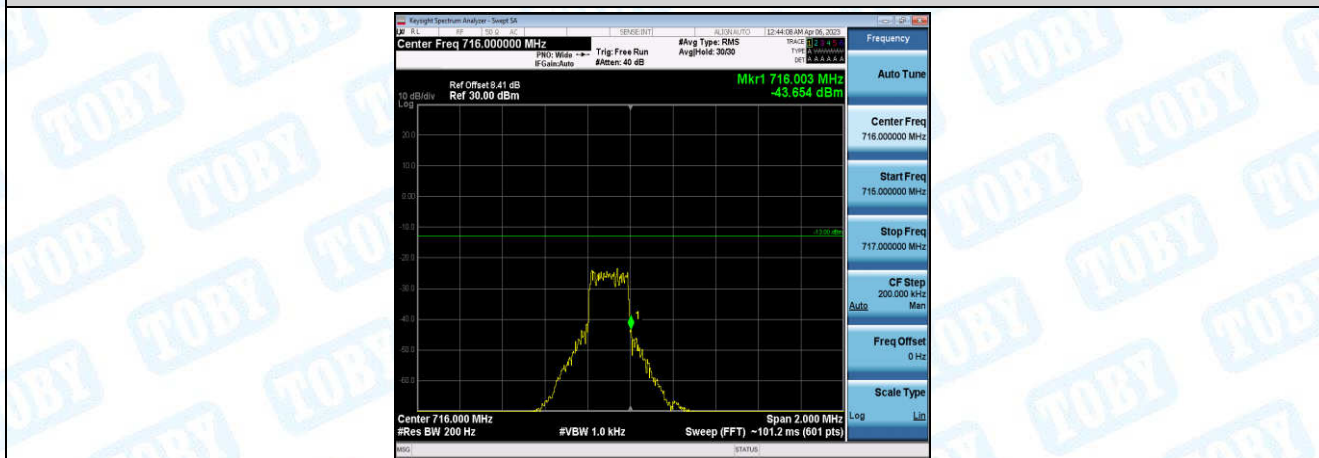
Band12-Stand-Alone-NaN-BPSK-23011-12@0-15kHz--41.14-PASS



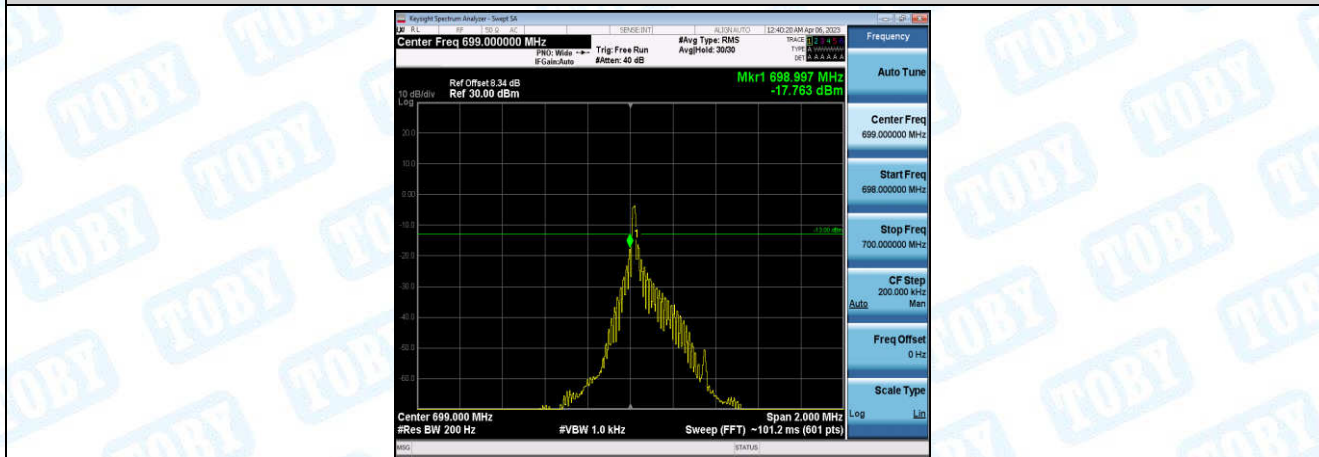
Band12-Stand-Alone-NaN-BPSK-23179-1@0-15kHz--35.96-PASS



Band12-Stand-Alone-NaN-BPSK-23179-1@11-15kHz--16.46-PASS



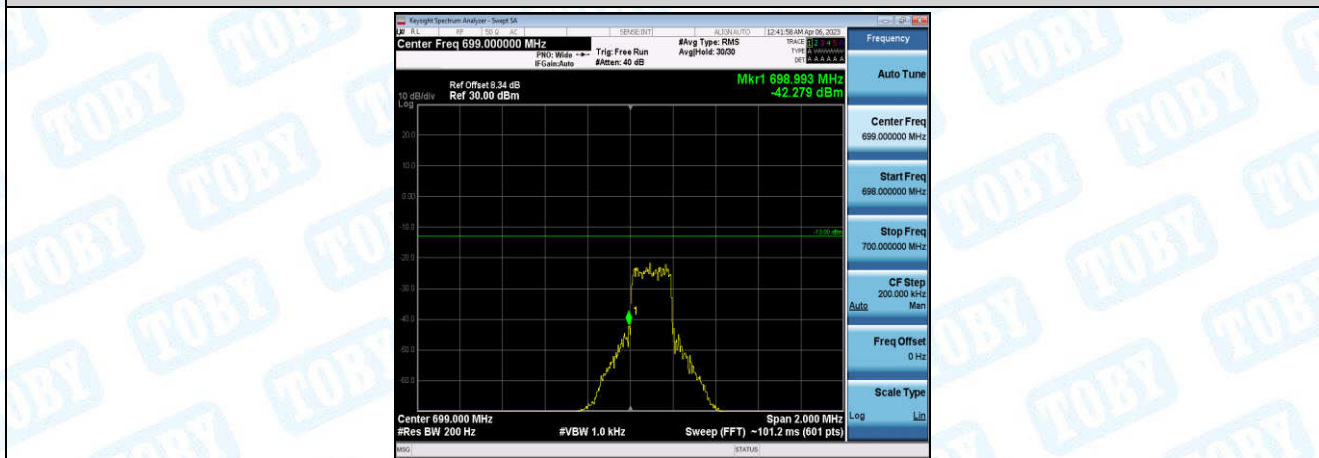
Band12-Stand-Alone-NaN-BPSK-23179-12@0-15kHz--43.65-PASS



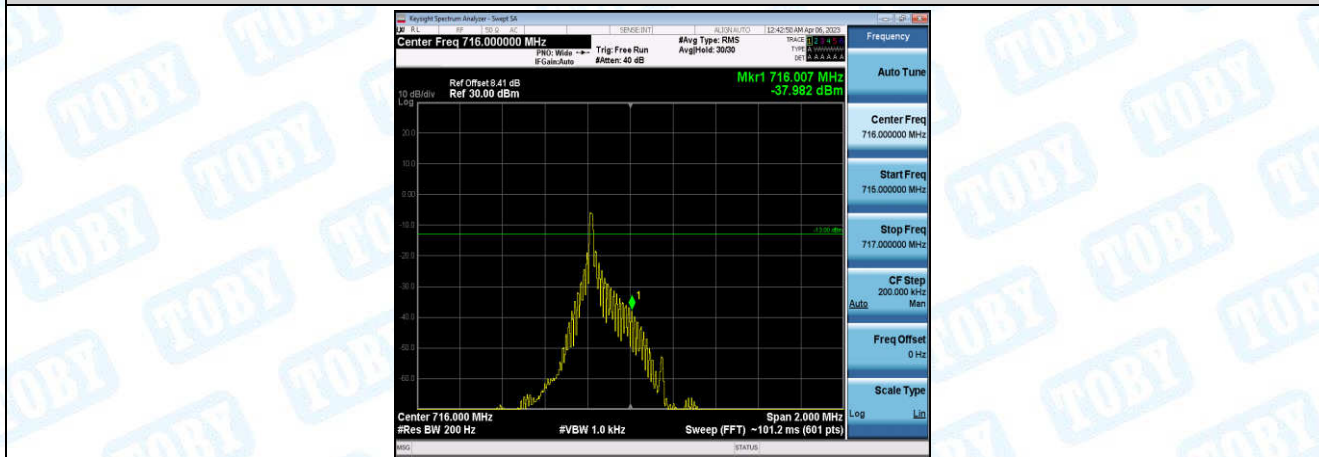
Band12-Stand-Alone-NaN-QPSK-23011-1@0-15kHz--17.76-PASS



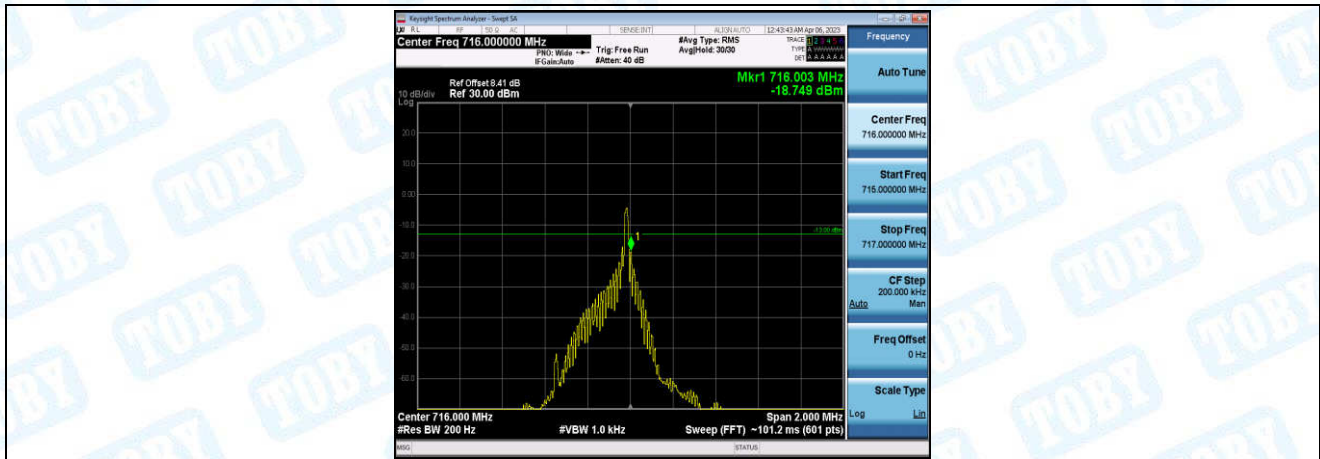
Band12-Stand-Alone-NaN-QPSK-23011-1@11-15kHz--35.67-PASS



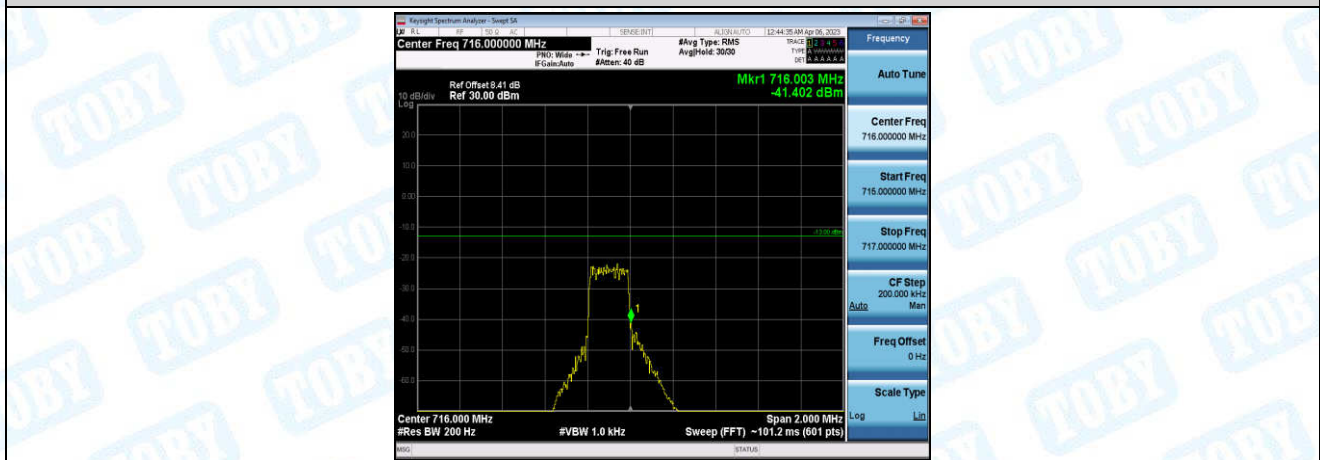
Band12-Stand-Alone-NaN-QPSK-23011-12@0-15kHz--42.28-PASS



Band12-Stand-Alone-NaN-QPSK-23179-1@0-15kHz--37.98-PASS



Band12-Stand-Alone-NaN-QPSK-23179-1@11-15kHz--18.75-PASS



Band12-Stand-Alone-NaN-QPSK-23179-12@0-15kHz--41.40-PASS

5: Conducted Spurious Emission for NB1

5.1 Test Result

Band	OpMode	BW	Modu	Channel	Tones	Freq Start [MHz]	Freq Stop [MHz]	Result (dBm)	Limit (dBm)	Verdict
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@0	0.009	0.15	0.009~0.15MHz @-61.99dBm	-33	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@0	0.15	30	0.15~30MHz @-67.35dBm	-23	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@0	30	1000	30~1000MHz @-59.54dBm	-13	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@0	1000	10000	1000~10000MHz @-44.94dBm	-13	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@47	0.009	0.15	0.009~0.15MHz @-64.76dBm	-33	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@47	0.15	30	0.15~30MHz @-65.54dBm	-23	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@47	30	1000	30~1000MHz @-59.05dBm	-13	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23011	1@47	1000	10000	1000~10000MHz @-46.2dBm	-13	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	0.009	0.15	0.009~0.15MHz @-61.55dBm	-33	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	0.15	30	0.15~30MHz	-23	PASS

								@-67.4 1dBm		
Band12	Stand-Alo ne	3.75kHz	QPSK	23095	1@0	30	1000	30~100 0MHz @-59.1 5dBm	-13	PASS
Band12	Stand-Alo ne	3.75kHz	QPSK	23095	1@0	1000	1000 0	1000~1 0000M Hz@-4 7.51dB m	-13	PASS
Band12	Stand-Alo ne	3.75kHz	QPSK	23095	1@47	0.009	0.15	0.009~ 0.15MH z@-63. 45dBm	-33	PASS
Band12	Stand-Alo ne	3.75kHz	QPSK	23095	1@47	0.15	30	0.15~3 0MHz @-71d Bm	-23	PASS
Band12	Stand-Alo ne	3.75kHz	QPSK	23095	1@47	30	1000	30~100 0MHz @-59.1 9dBm	-13	PASS
Band12	Stand-Alo ne	3.75kHz	QPSK	23095	1@47	1000	1000 0	1000~1 0000M Hz@-4 7.3dBm	-13	PASS
Band12	Stand-Alo ne	3.75kHz	QPSK	23179	1@0	0.009	0.15	0.009~ 0.15MH z@-62. 49dBm	-33	PASS
Band12	Stand-Alo ne	3.75kHz	QPSK	23179	1@0	0.15	30	0.15~3 0MHz @-68.6 1dBm	-23	PASS
Band12	Stand-Alo ne	3.75kHz	QPSK	23179	1@0	30	1000	30~100 0MHz @-59.2 3dBm	-13	PASS
Band12	Stand-Alo ne	3.75kHz	QPSK	23179	1@0	1000	1000 0	1000~1 0000M Hz@-4 7.33dB m	-13	PASS

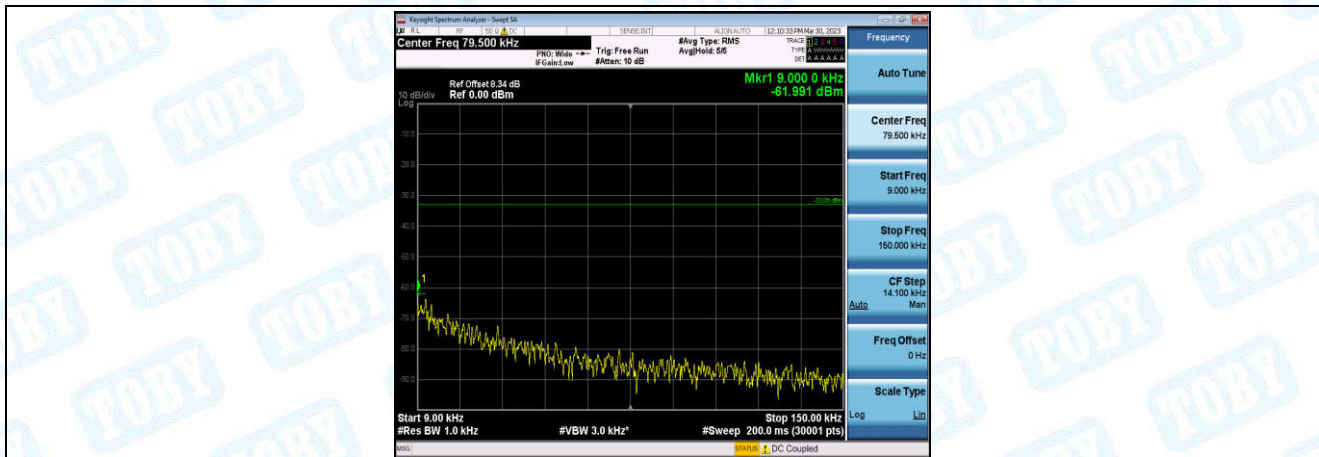
Band12	Stand-Alone	3.75kHz	QPSK	23179	1@47	0.009	0.15	0.009~0.15MHz z@-64.23dBm	-33	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23179	1@47	0.15	30	0.15~30MHz @-68.79dBm	-23	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23179	1@47	30	1000	30~1000MHz @-59.09dBm	-13	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23179	1@47	1000	10000	1000~10000MHz @-47.51dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@0	0.009	0.15	0.009~0.15MHz z@-61.72dBm	-33	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@0	0.15	30	0.15~30MHz @-67.55dBm	-23	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@0	30	1000	30~1000MHz @-58.96dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@0	1000	10000	1000~10000MHz @-46.41dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@11	0.009	0.15	0.009~0.15MHz z@-63.56dBm	-33	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@11	0.15	30	0.15~30MHz @-65.88dBm	-23	PASS
Band12	Stand-Alone	15kHz	BPSK	23011	1@11	30	1000	30~1000MHz @-59.1	-13	PASS

								6dBm		
Band12	Stand-Alone	15kHz	BPSK	23011	1@11	1000	10000	1000~10000MHz@-47.82dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@0	0.009	0.15	0.009~0.15MHz@-62.39dBm	-33	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@0	0.15	30	0.15~30MHz@-67.83dBm	-23	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@0	30	1000	30~1000MHz@-59.17dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@0	1000	10000	1000~10000MHz@-47.47dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@11	0.009	0.15	0.009~0.15MHz@-61.56dBm	-33	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@11	0.15	30	0.15~30MHz@-67.74dBm	-23	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@11	30	1000	30~1000MHz@-59.54dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23095	1@11	1000	10000	1000~10000MHz@-47.72dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@0	0.009	0.15	0.009~0.15MHz@-61.59dBm	-33	PASS

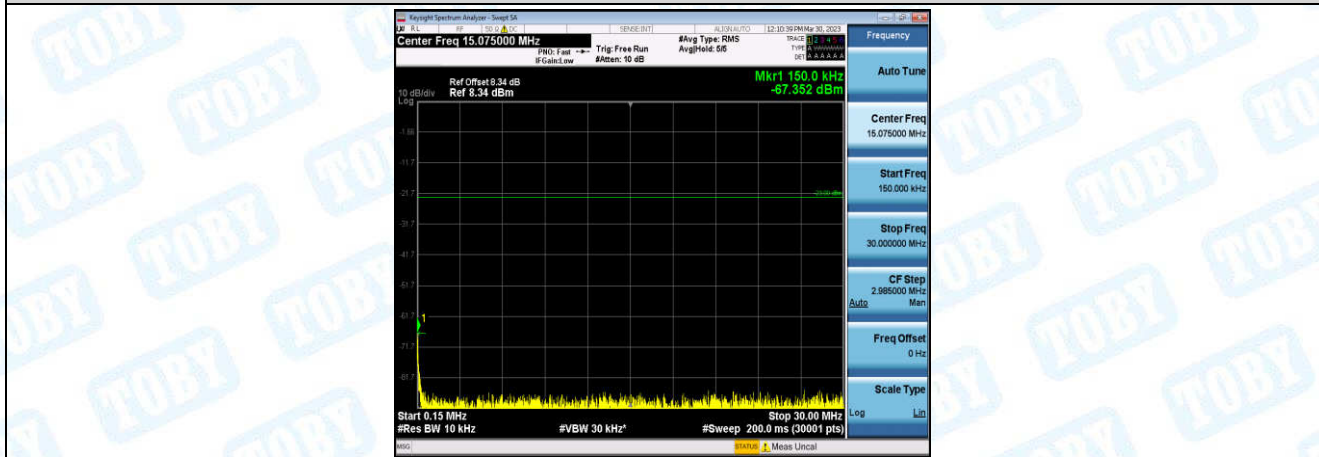
Band12	Stand-Alone	15kHz	BPSK	23179	1@0	0.15	30	0.15~30MHz @-66.55dBm	-23	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@0	30	1000	30~1000MHz @-59.54dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@0	1000	10000	1000~10000MHz @-47.58dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@11	0.009	0.15	0.009~0.15MHz @-63.47dBm	-33	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@11	0.15	30	0.15~30MHz @-65.13dBm	-23	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@11	30	1000	30~1000MHz @-58.77dBm	-13	PASS
Band12	Stand-Alone	15kHz	BPSK	23179	1@11	1000	10000	1000~10000MHz @-47.38dBm	-13	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	12@0	0.009	0.15	0.009~0.15MHz @-64.01dBm	-33	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	12@0	0.15	30	0.15~30MHz @-66.25dBm	-23	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	12@0	30	1000	30~1000MHz @-59.61dBm	-13	PASS
Band12	Stand-Alone	15kHz	QPSK	23011	12@0	1000	10000	1000~10000MHz @-4	-13	PASS

								7.3dBm		
Band12	Stand-Alone	15kHz	QPSK	23095	12@0	0.009	0.15	0.009~0.15MHz @-63.29dBm	-33	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	12@0	0.15	30	0.15~30MHz @-68.84dBm	-23	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	12@0	30	1000	30~1000MHz @-59.47dBm	-13	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	12@0	1000	10000	1000~10000MHz @-46.93dBm	-13	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	12@0	0.009	0.15	0.009~0.15MHz @-64.55dBm	-33	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	12@0	0.15	30	0.15~30MHz @-68.1dBm	-23	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	12@0	30	1000	30~1000MHz @-59.29dBm	-13	PASS
Band12	Stand-Alone	15kHz	QPSK	23179	12@0	1000	10000	1000~10000MHz @-47.76dBm	-13	PASS

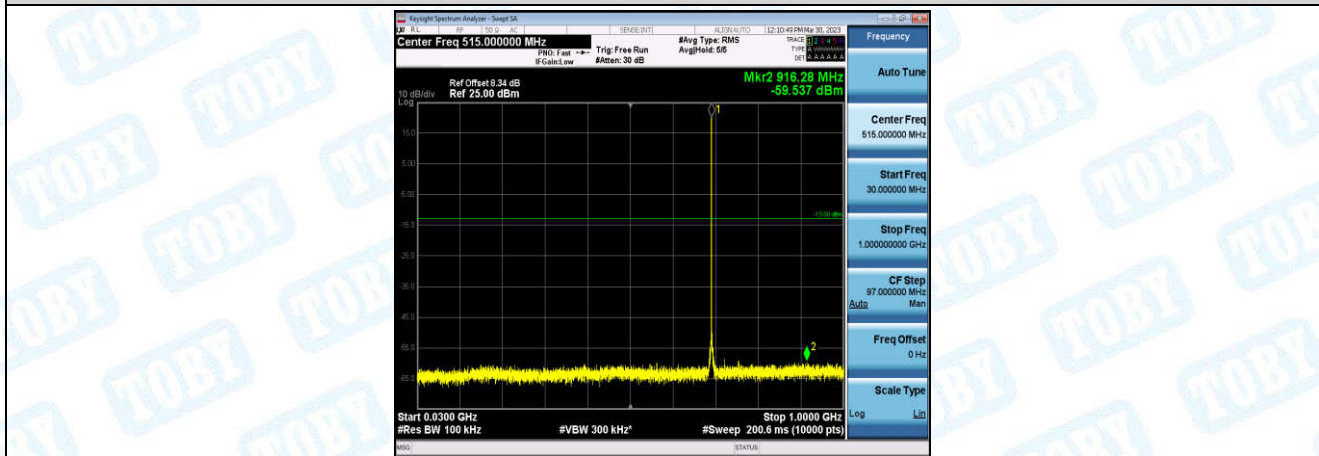
5.2 Test Graphs



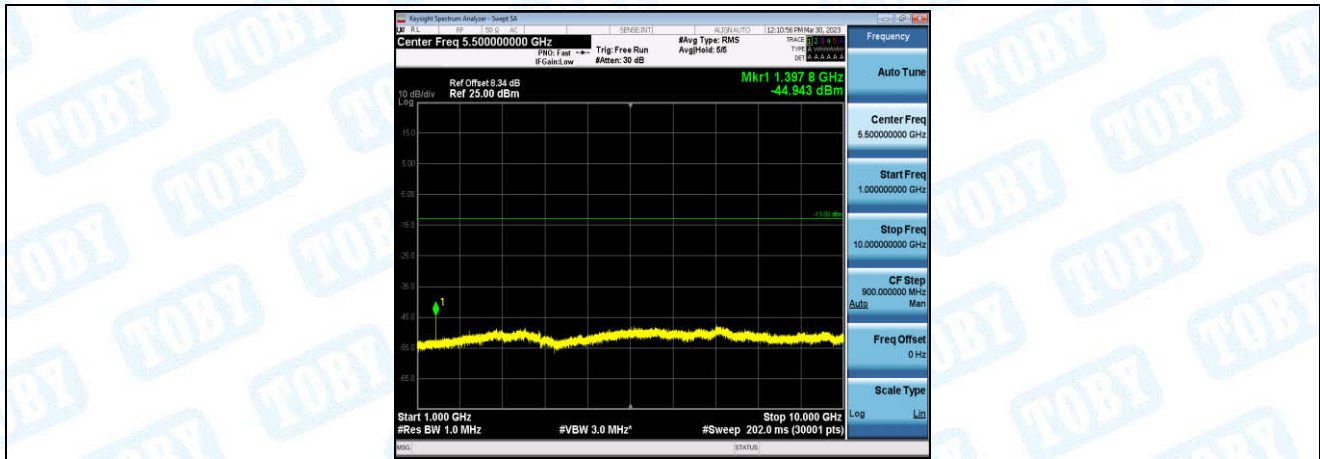
Band12-Stand-Alone-NaN-QPSK-23011-1@0-3.75kHz-0.009-0.15-0.009~0.15MHz@-61.99dBm--33-PASS



Band12-Stand-Alone-NaN-QPSK-23011-1@0-3.75kHz-0.15-30-0.15~30MHz@-67.35dBm--23-PASS

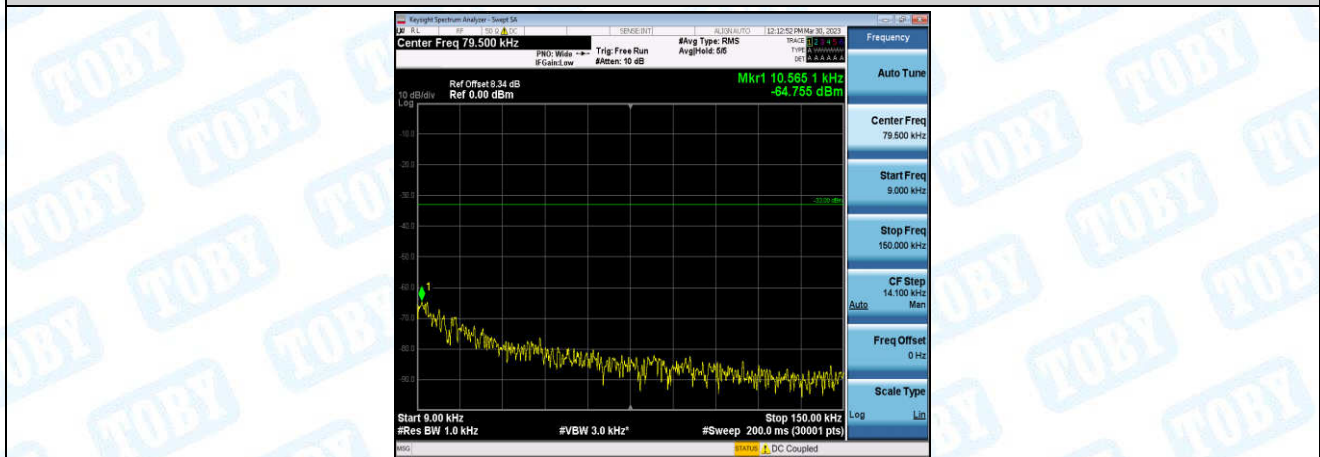


Band12-Stand-Alone-NaN-QPSK-23011-1@0-3.75kHz-30-1000-30~1000MHz@-59.54dBm--13-PASS

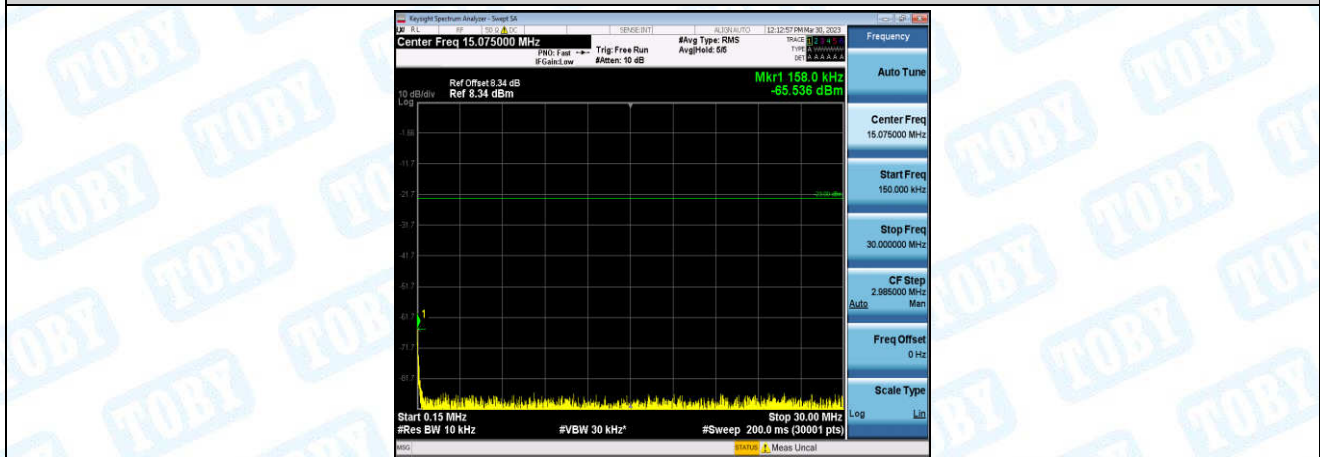


Band12-Stand-Alone-NaN-QPSK-23011-1@0-3.75kHz-1000-10000-1000~10000MHz@-44.94dBm--13-PAS

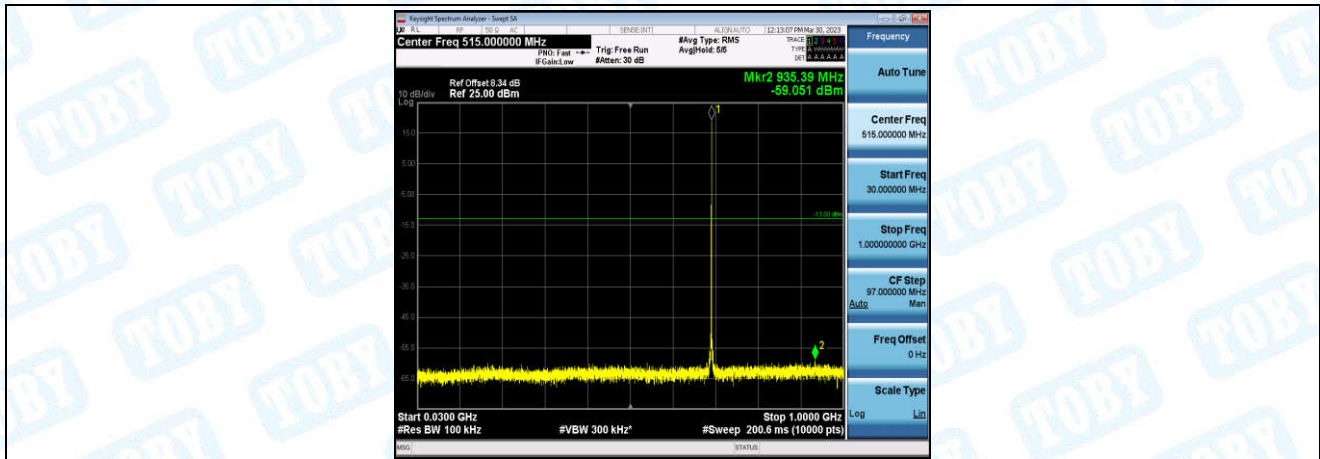
S



Band12-Stand-Alone-NaN-QPSK-23011-1@47-3.75kHz-0.009-0.15-0.009~0.15MHz@-64.76dBm--33-PASS



Band12-Stand-Alone-NaN-QPSK-23011-1@47-3.75kHz-0.15-30-0.15~30MHz@-65.54dBm--23-PASS

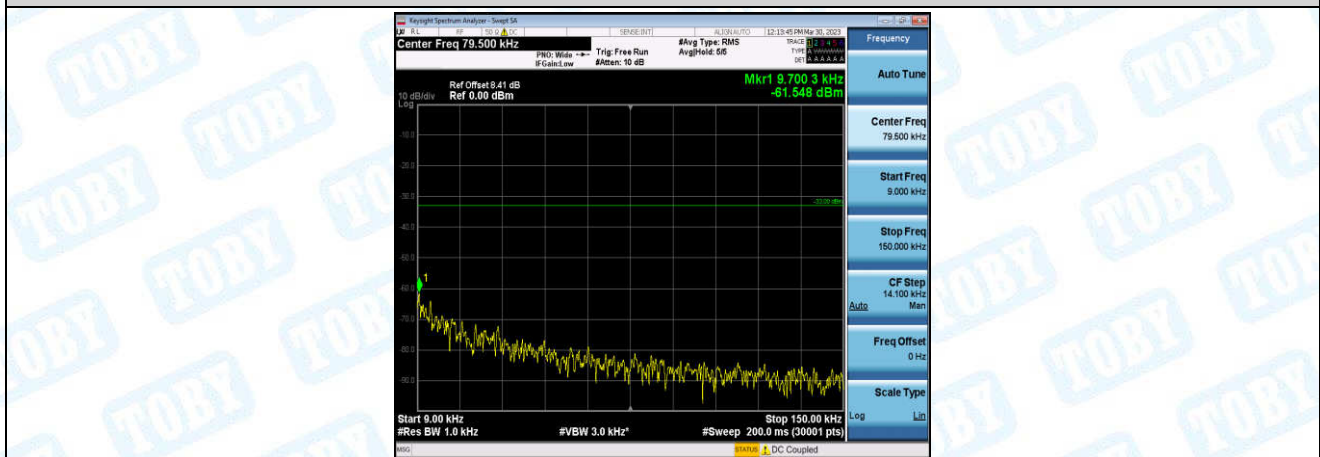


Band12-Stand-Alone-NaN-QPSK-23011-1@47-3.75kHz-30-1000-30~1000MHz@-59.05dBm--13-PASS

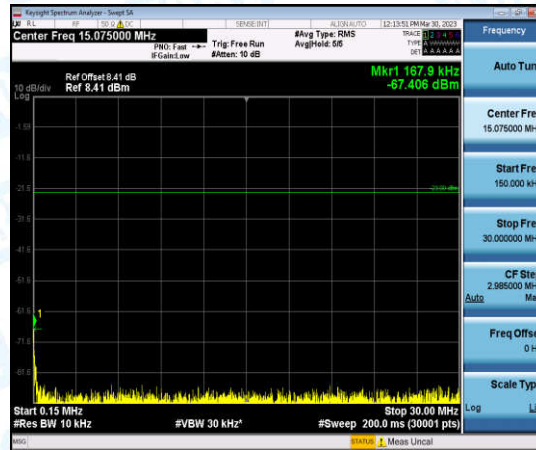


Band12-Stand-Alone-NaN-QPSK-23011-1@47-3.75kHz-1000-10000-1000~10000MHz@-46.2dBm--13-PAS

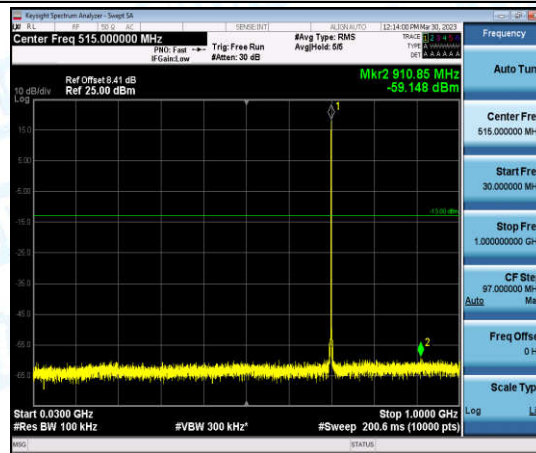
S



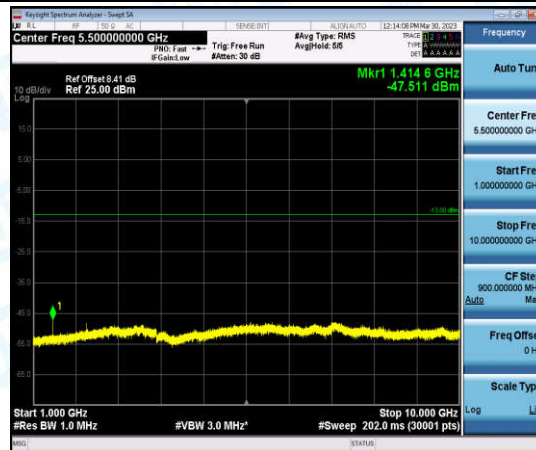
Band12-Stand-Alone-NaN-QPSK-23095-1@0-3.75kHz-0.009-0.15-0.009~0.15MHz@-61.55dBm--33-PASS



Band12-Stand-Alone-NaN-QPSK-23095-1@0-3.75kHz-0.15-30-0.15~30MHz@-67.41dBm--23-PASS

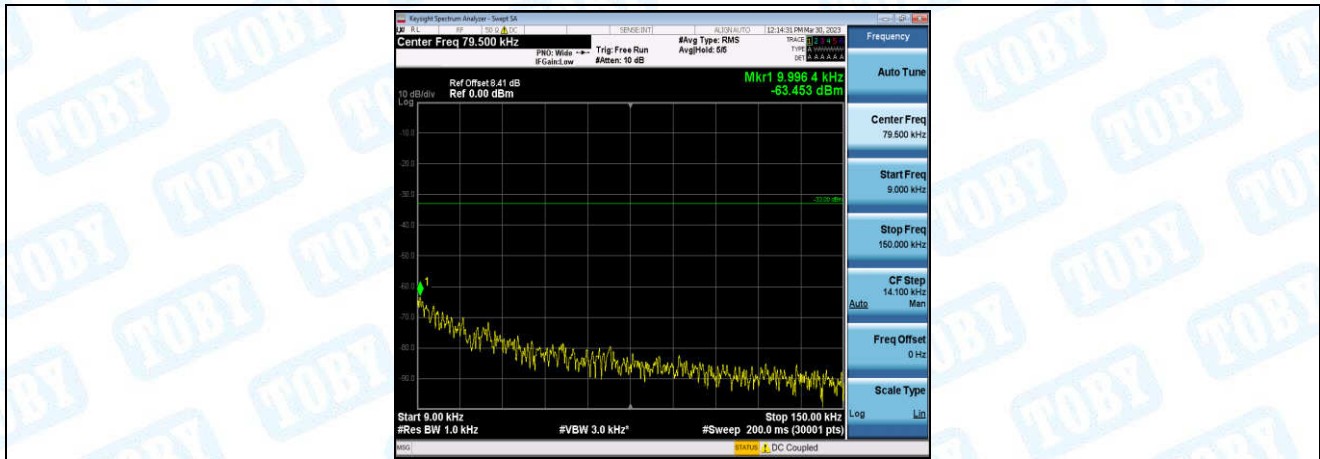


Band12-Stand-Alone-NaN-QPSK-23095-1@0-3.75kHz-30-1000-30~1000MHz@-59.15dBm--13-PASS

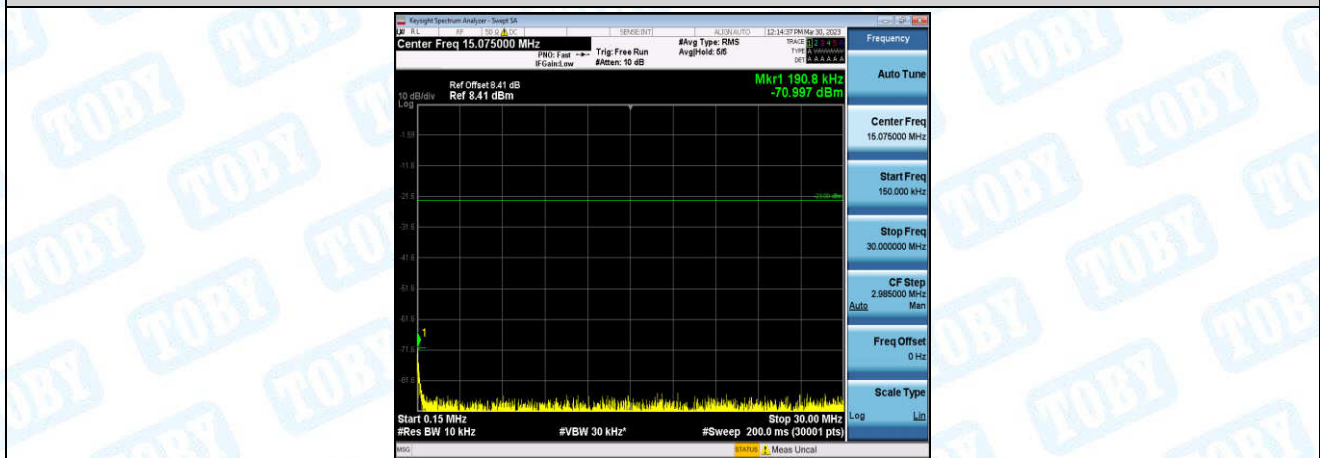


Band12-Stand-Alone-NaN-QPSK-23095-1@0-3.75kHz-1000-10000-1000~10000MHz@-47.51dBm--13-PAS

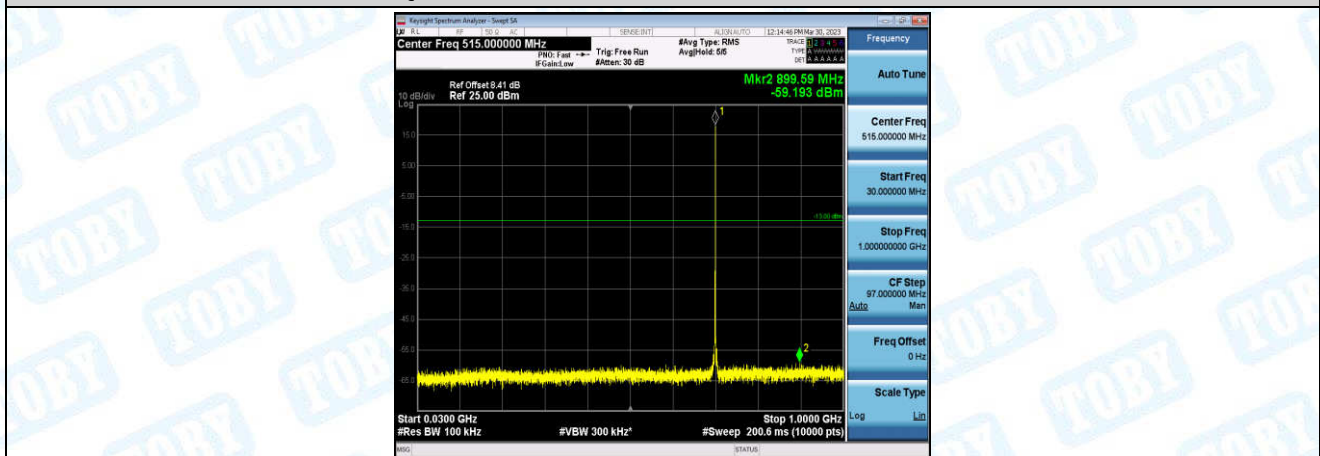
S



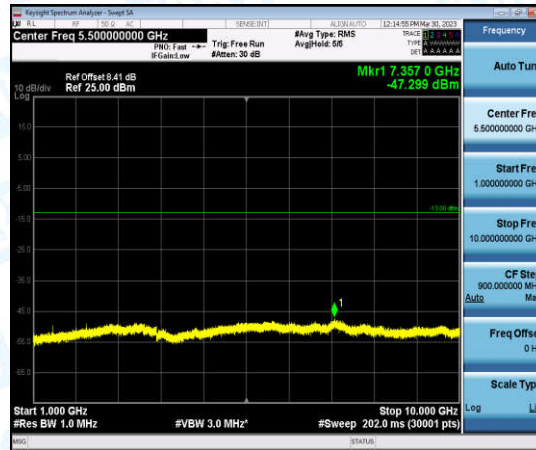
Band12-Stand-Alone-NaN-QPSK-23095-1@47-3.75kHz-0.009-0.15-0.009~0.15MHz@-63.45dBm--33-PASS



Band12-Stand-Alone-NaN-QPSK-23095-1@47-3.75kHz-0.15-30-0.15~30MHz@-71dBm--23-PASS

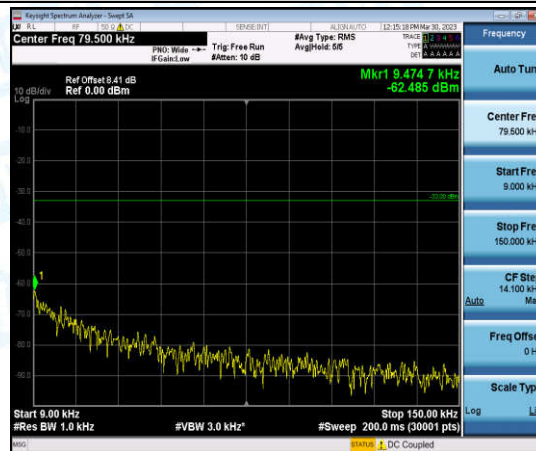


Band12-Stand-Alone-NaN-QPSK-23095-1@47-3.75kHz-30-1000-30~1000MHz@-59.19dBm--13-PASS

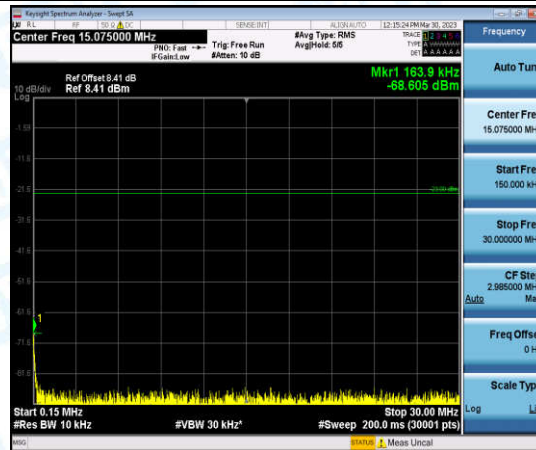


Band12-Stand-Alone-NaN-QPSK-23095-1@47-3.75kHz-1000-10000-1000~10000MHz@-47.3dBm--13-PAS

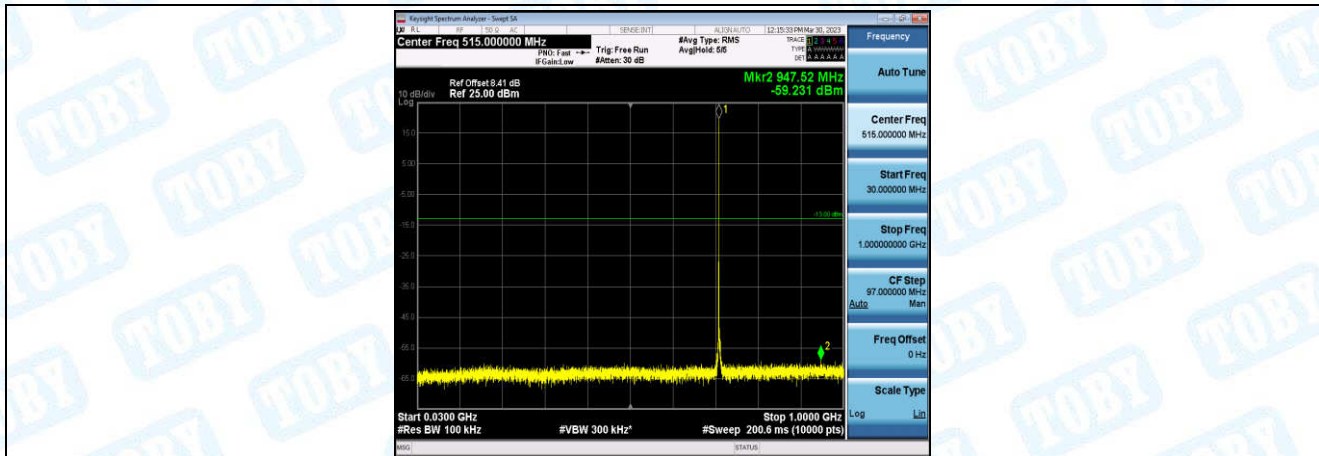
S



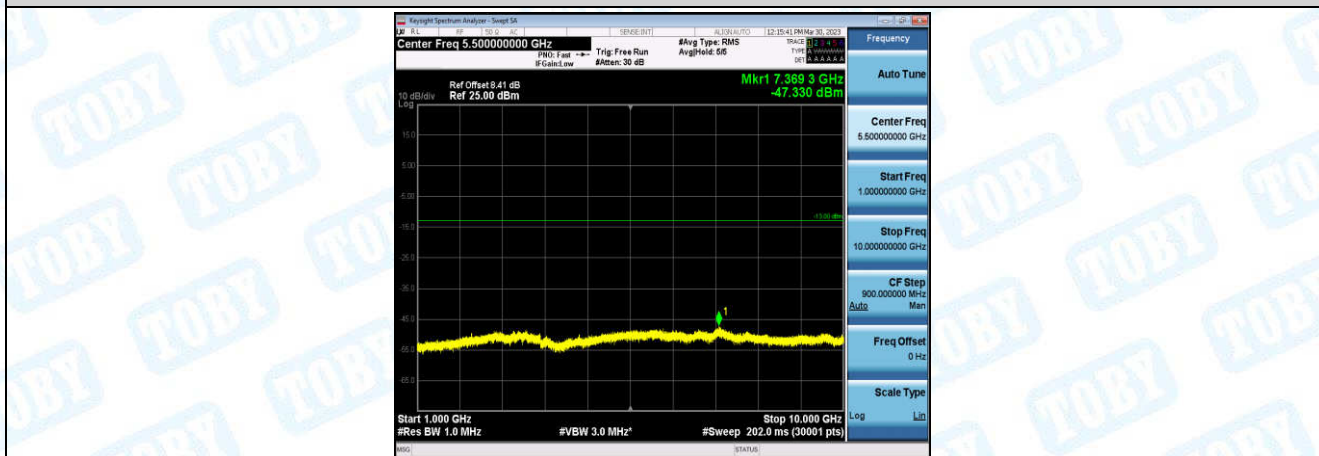
Band12-Stand-Alone-NaN-QPSK-23179-1@0-3.75kHz-0.009-0.15-0.009~0.15MHz@-62.49dBm--33-PASS



Band12-Stand-Alone-NaN-QPSK-23179-1@0-3.75kHz-0.15-30-0.15~30MHz@-68.61dBm--23-PASS

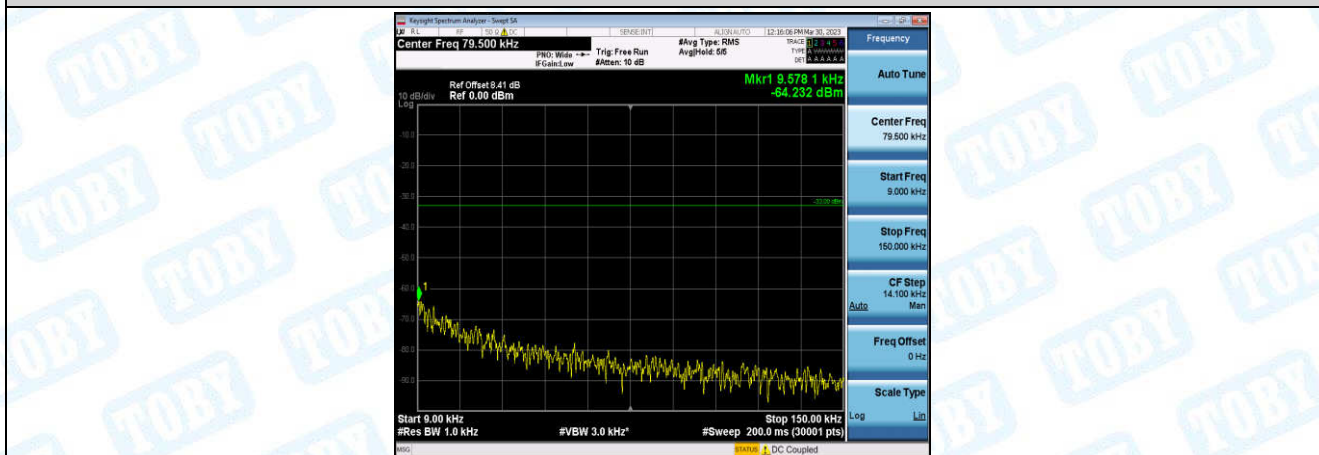


Band12-Stand-Alone-NaN-QPSK-23179-1@0-3.75kHz-30-1000-30~1000MHz@-59.23dBm--13-PASS

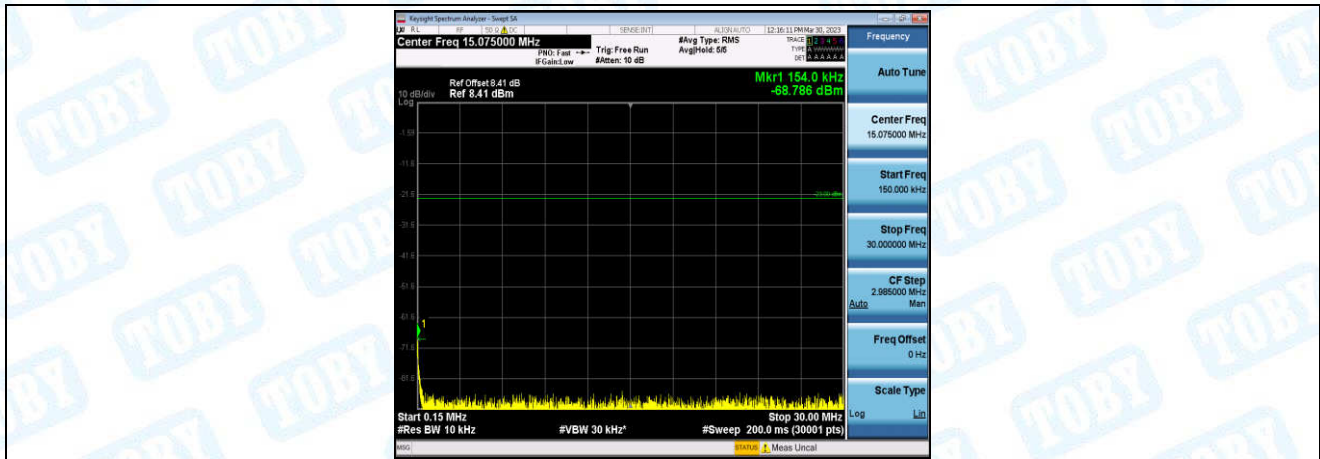


Band12-Stand-Alone-NaN-QPSK-23179-1@0-3.75kHz-1000-10000-1000~10000MHz@-47.33dBm--13-PAS

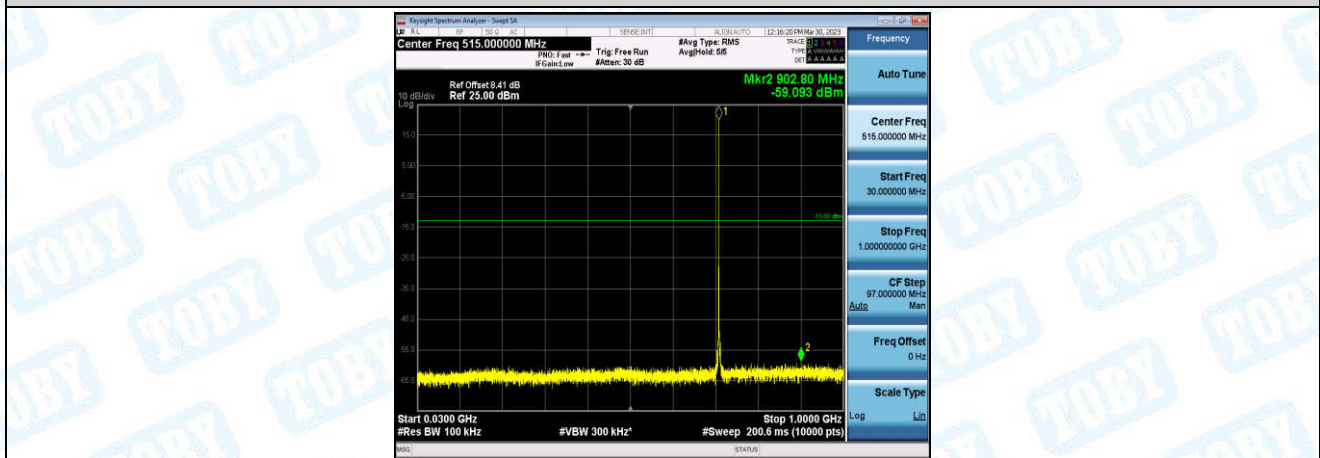
S



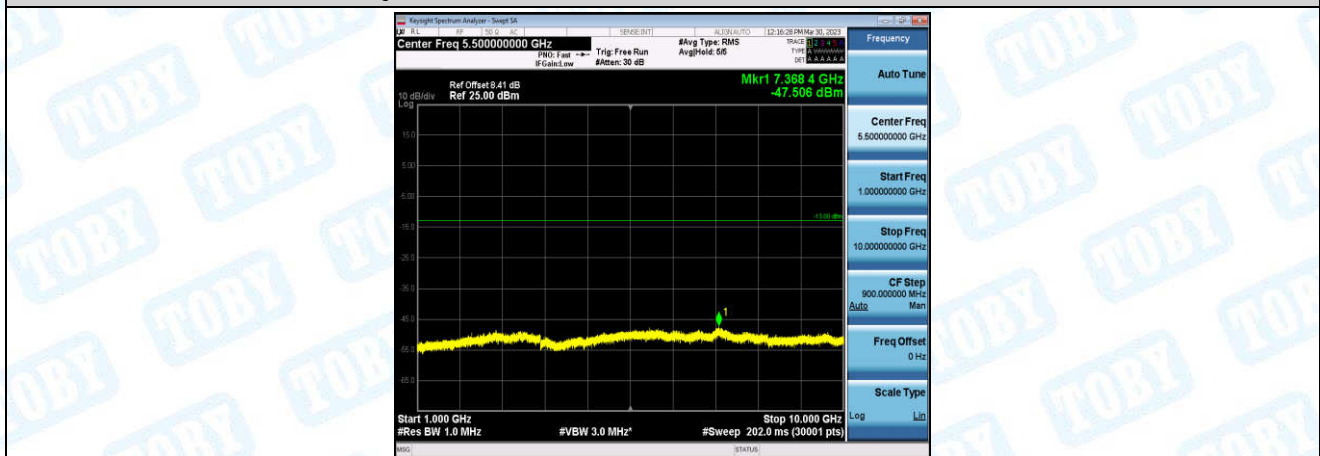
Band12-Stand-Alone-NaN-QPSK-23179-1@47-3.75kHz-0.009-0.15-0.009~0.15MHz@-64.23dBm--33-PASS



Band12-Stand-Alone-NaN-QPSK-23179-1@47-3.75kHz-0.15-30-0.15~30MHz@-68.79dBm--23-PASS

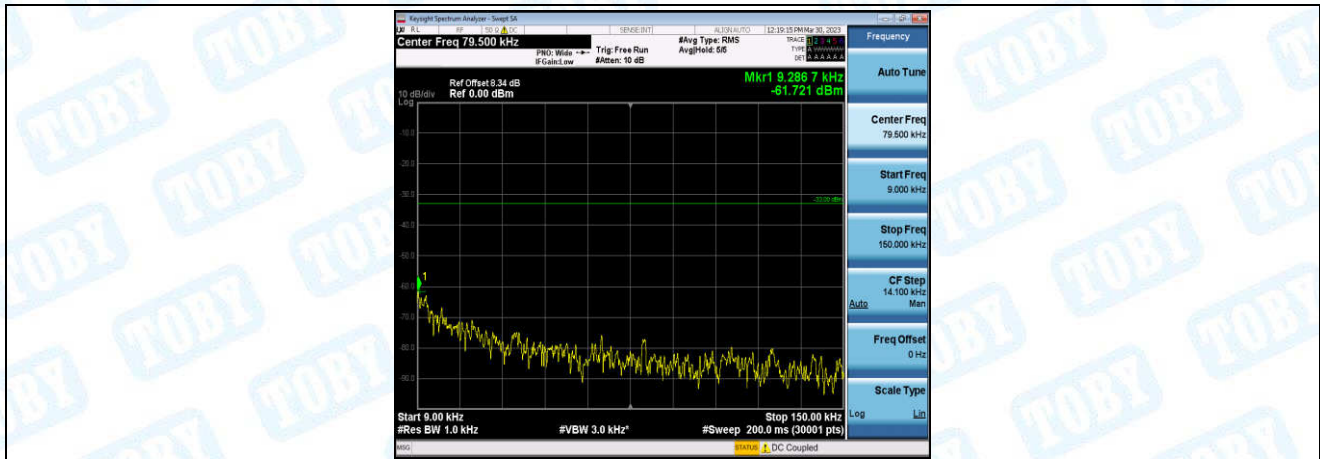


Band12-Stand-Alone-NaN-QPSK-23179-1@47-3.75kHz-30-1000-30~1000MHz@-59.09dBm--13-PASS

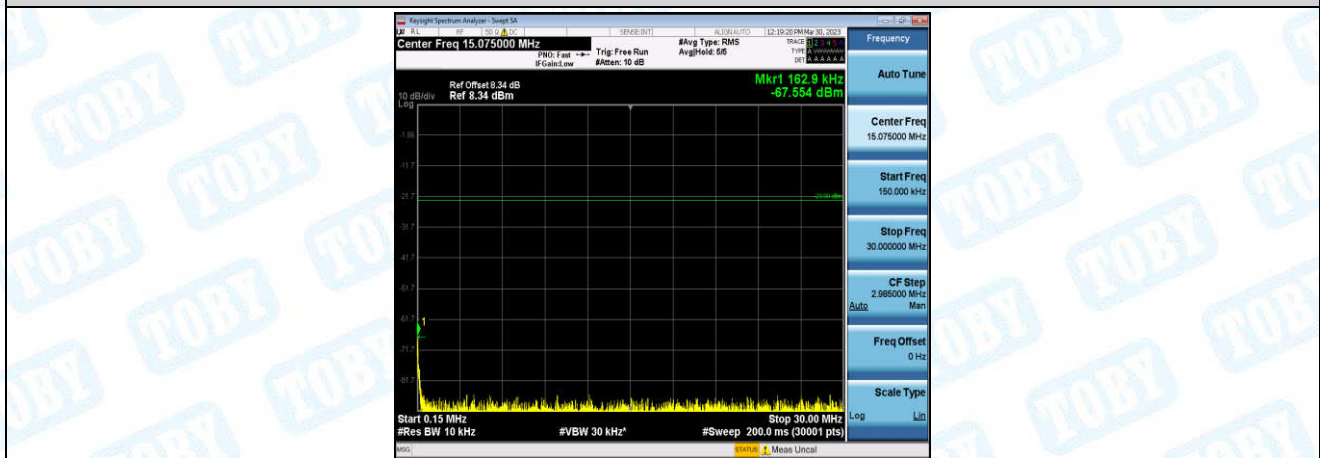


Band12-Stand-Alone-NaN-QPSK-23179-1@47-3.75kHz-1000-10000-1000~10000MHz@-47.51dBm--13-PA

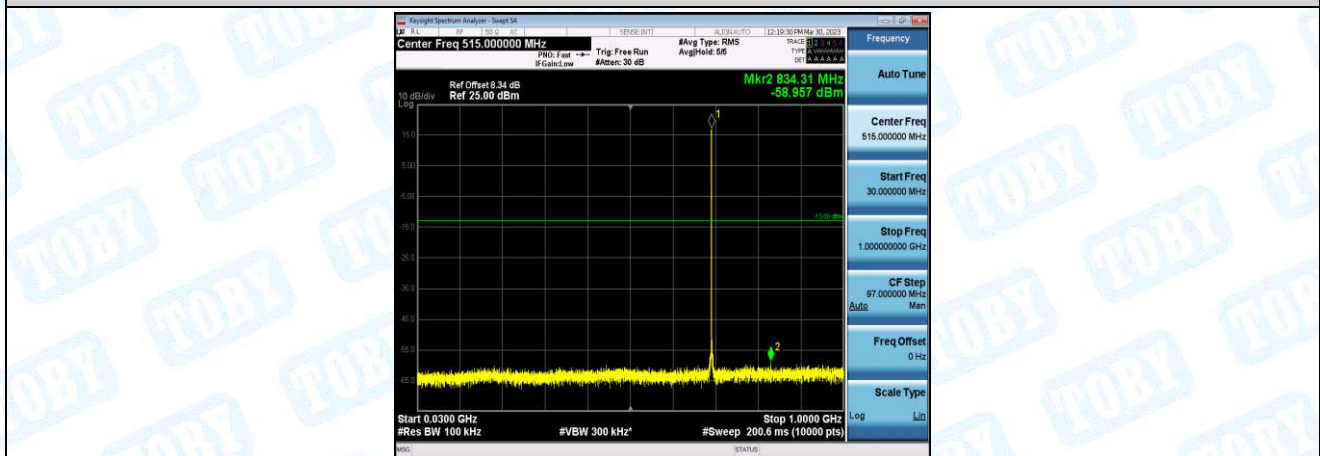
SS



Band12-Stand-Alone-NaN-BPSK-23011-1@0-15kHz-0.009-0.15-0.009~0.15MHz@-61.72dBm--33-PASS



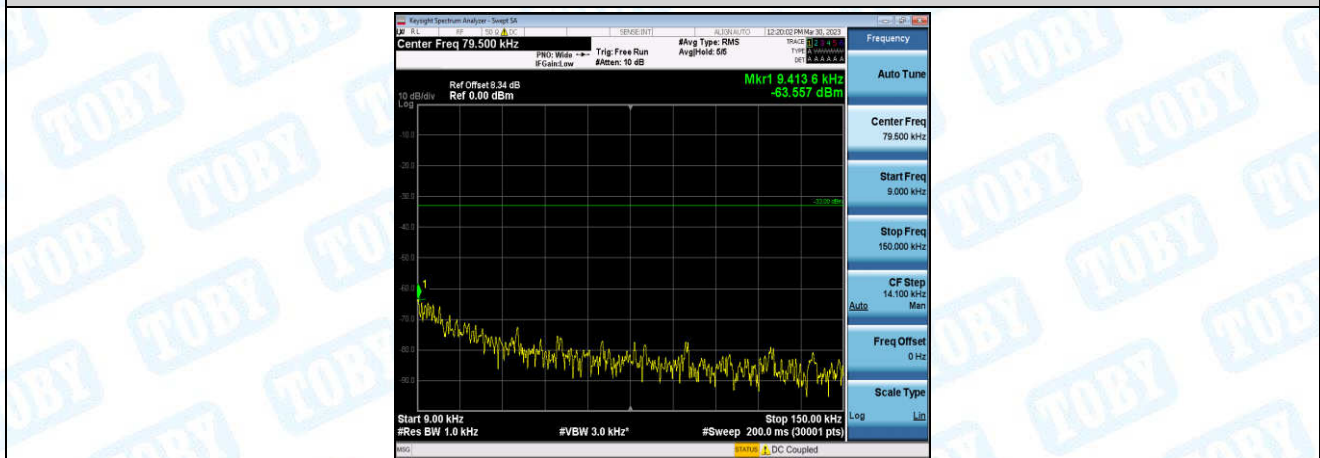
Band12-Stand-Alone-NaN-BPSK-23011-1@0-15kHz-0.15-30-0.15~30MHz@-67.55dBm--23-PASS



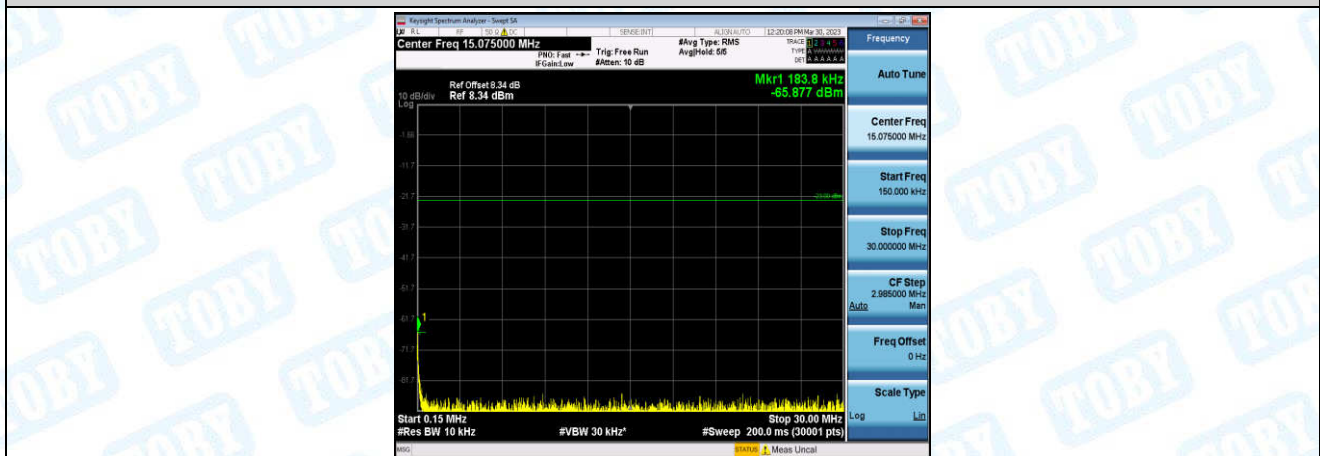
Band12-Stand-Alone-NaN-BPSK-23011-1@0-15kHz-30-1000-30~1000MHz@-58.96dBm--13-PASS



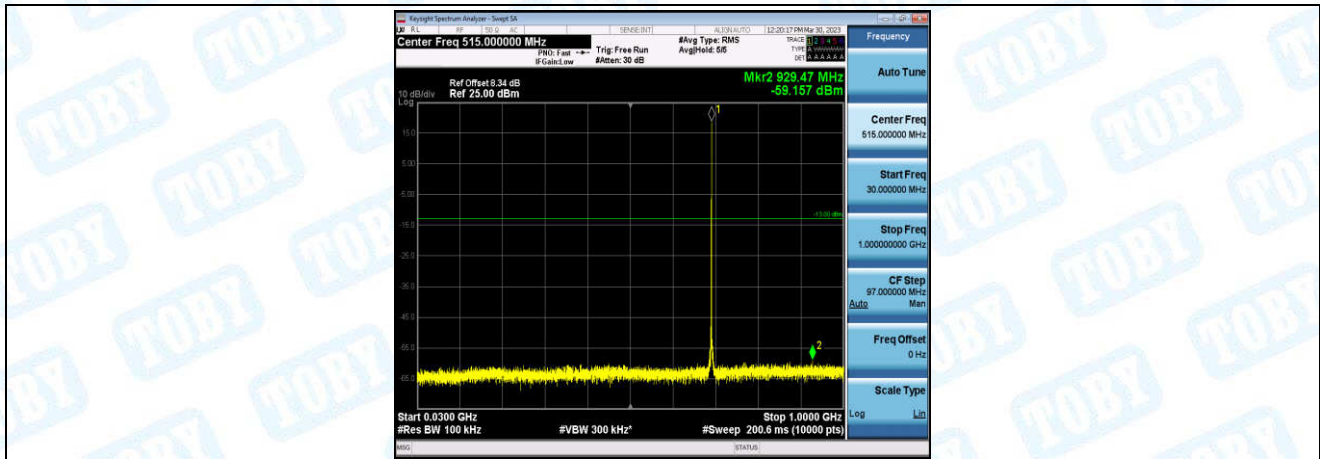
Band12-Stand-Alone-NaN-BPSK-23011-1@0-15kHz-1000-10000-1000~10000MHz@-46.41dBm--13-PASS



Band12-Stand-Alone-NaN-BPSK-23011-1@11-15kHz-0.009-0.15-0.009~0.15MHz@-63.56dBm--33-PASS



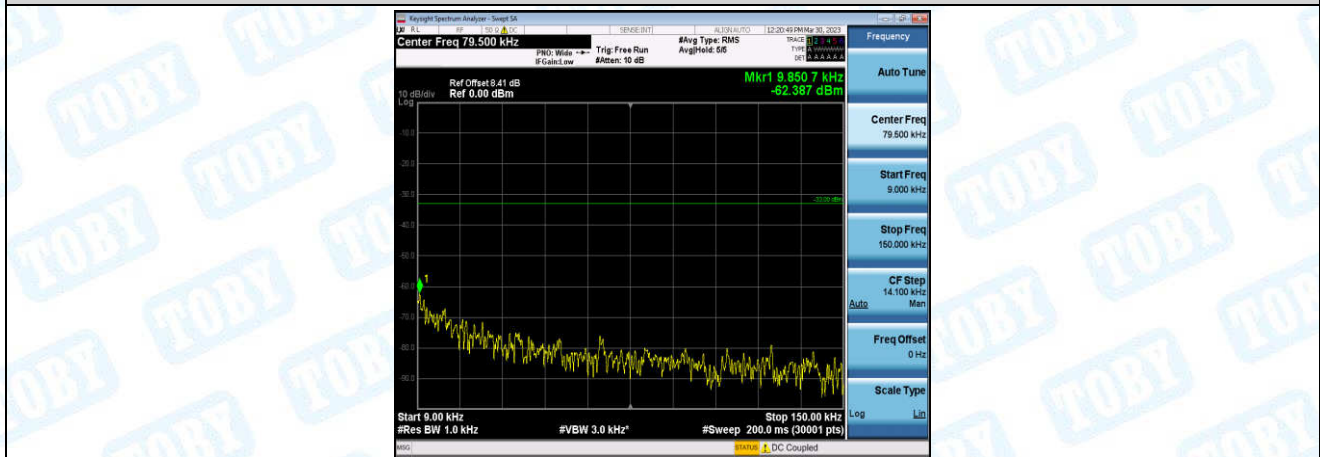
Band12-Stand-Alone-NaN-BPSK-23011-1@11-15kHz-0.15-30-0.15~30MHz@-65.88dBm--23-PASS



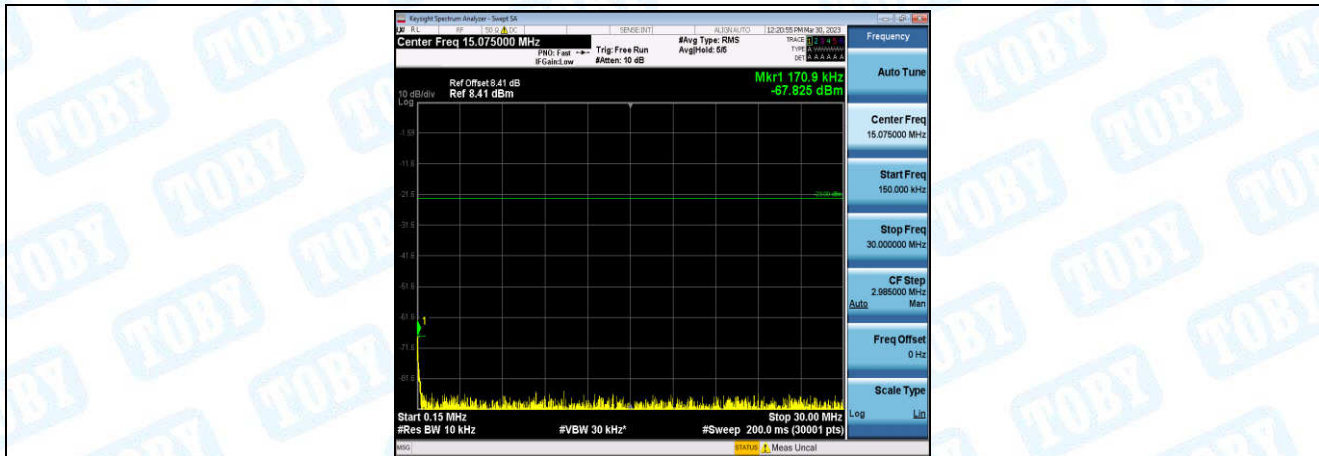
Band12-Stand-Alone-NaN-BPSK-23011-1@11-15kHz-30-1000-30~1000MHz@-59.16dBm--13-PASS



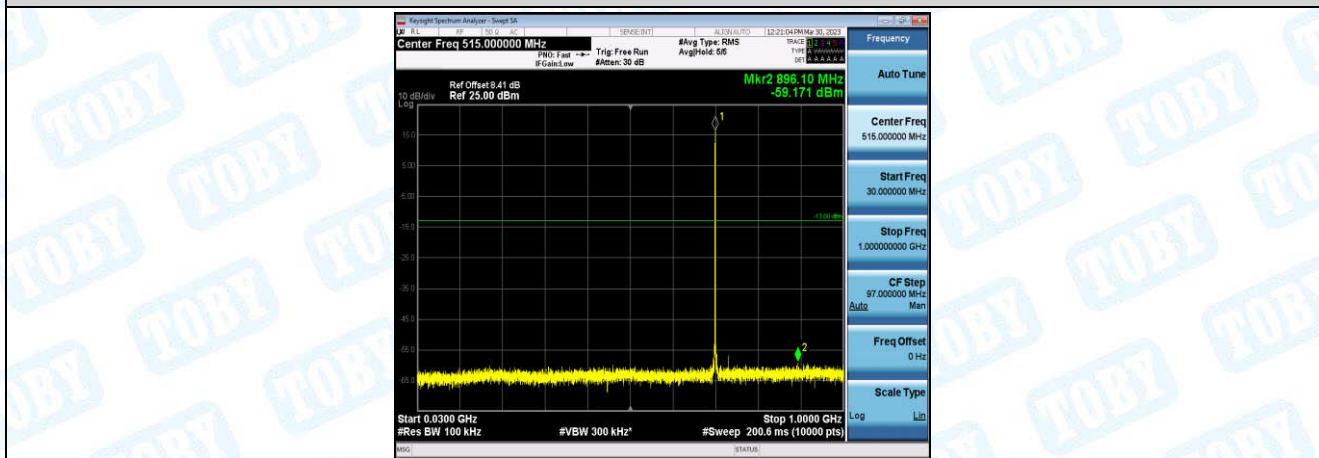
Band12-Stand-Alone-NaN-BPSK-23011-1@11-15kHz-1000-10000-1000~10000MHz@-47.82dBm--13-PASS



Band12-Stand-Alone-NaN-BPSK-23095-1@0-15kHz-0.009-0.15-0.009~0.15MHz@-62.39dBm--33-PASS



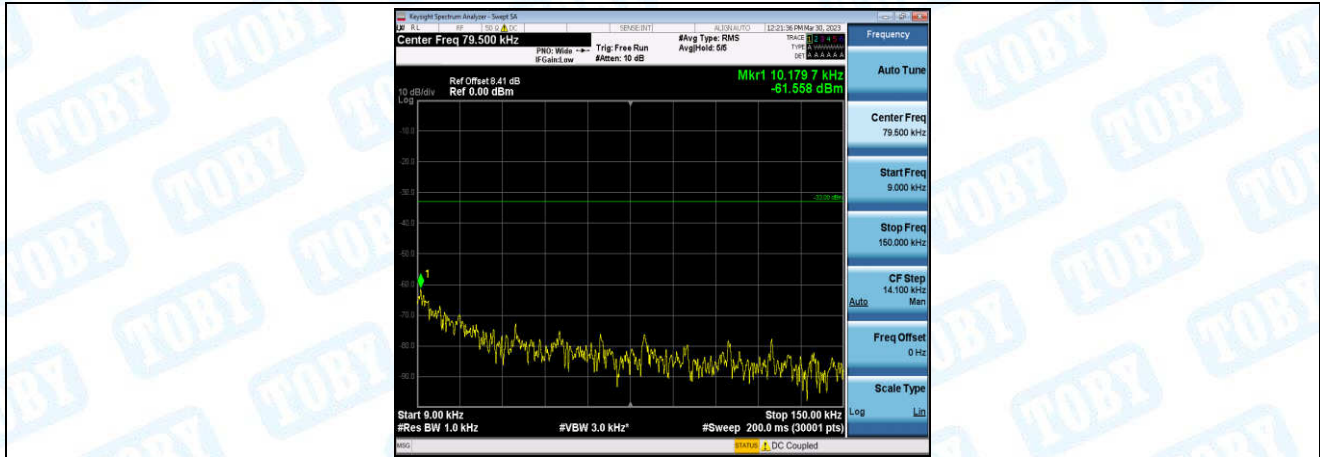
Band12-Stand-Alone-Na-N-BPSK-23095-1@0-15kHz-0.15-30-0.15~30MHz@-67.83dBm--23-PASS



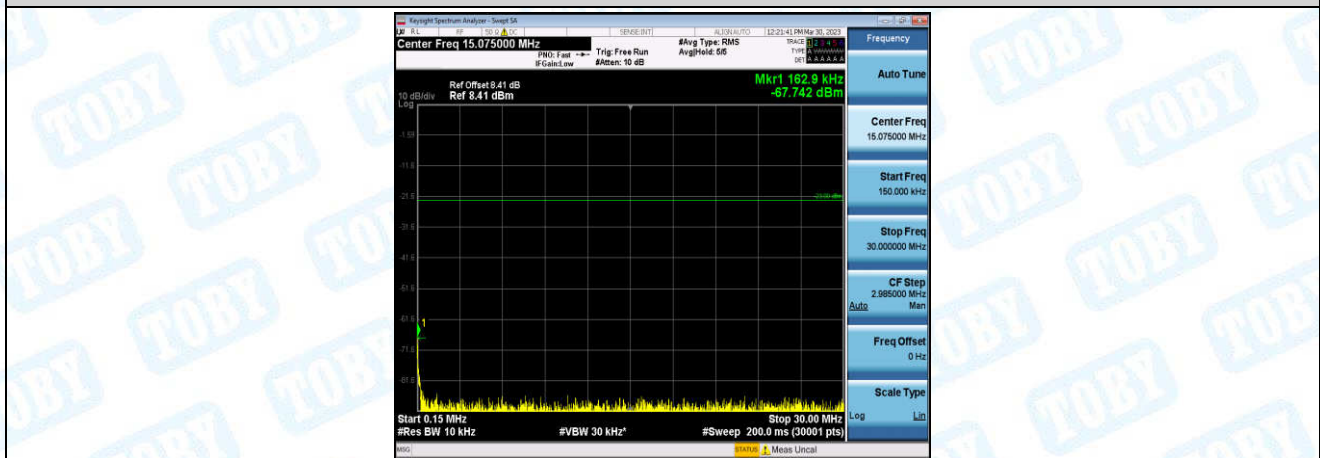
Band12-Stand-Alone-Na-N-BPSK-23095-1@0-15kHz-30-1000-30~1000MHz@-59.17dBm--13-PASS



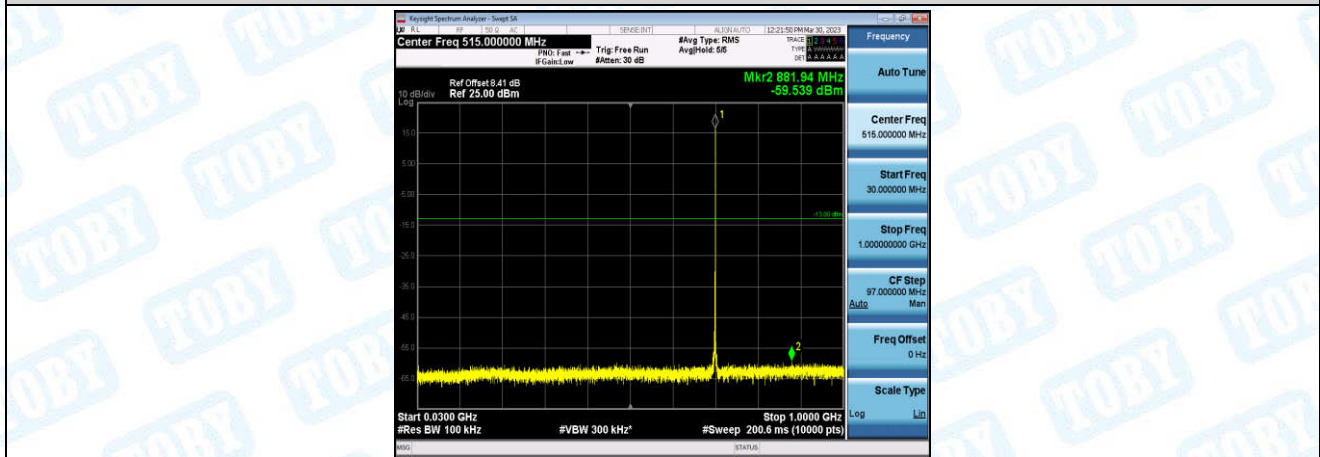
Band12-Stand-Alone-Na-N-BPSK-23095-1@0-15kHz-1000-10000-1000~10000MHz@-47.47dBm--13-PASS



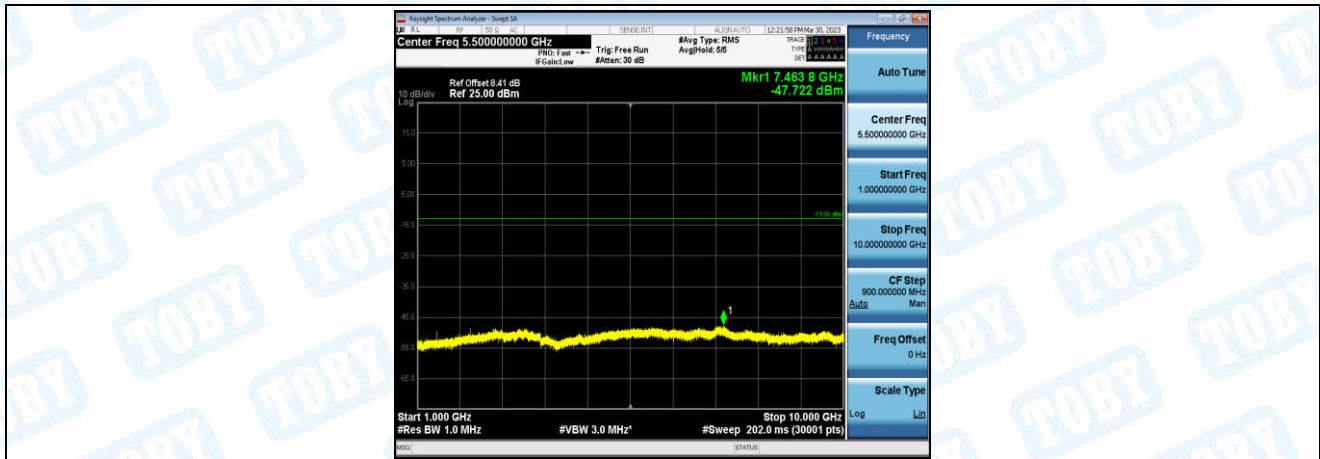
Band12-Stand-Alone-NaN-BPSK-23095-1@11-15kHz-0.009-0.15-0.009~0.15MHz@-61.56dBm--33-PASS



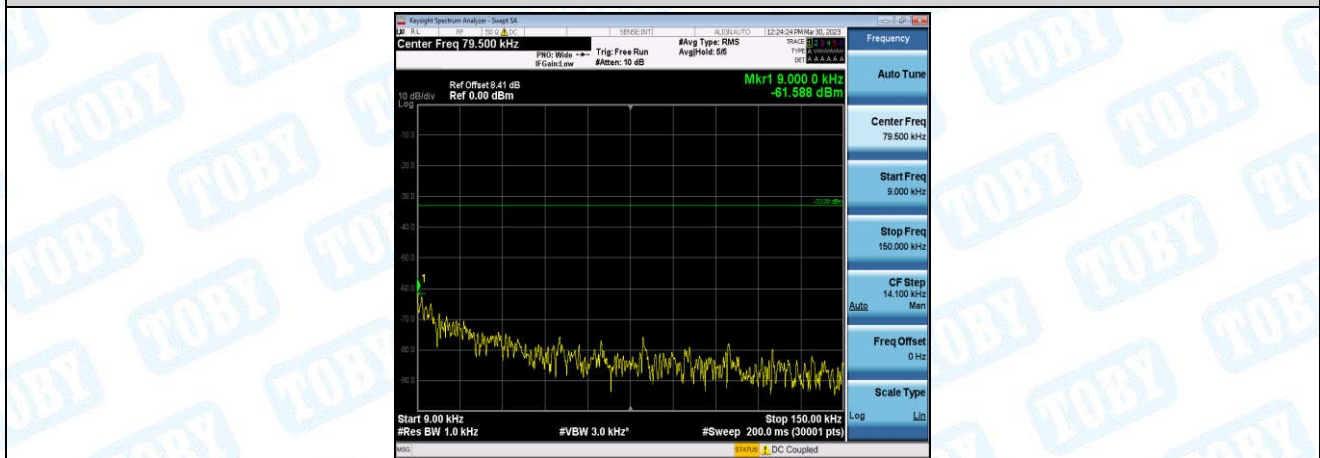
Band12-Stand-Alone-NaN-BPSK-23095-1@11-15kHz-0.15-30-0.15~30MHz@-67.74dBm--23-PASS



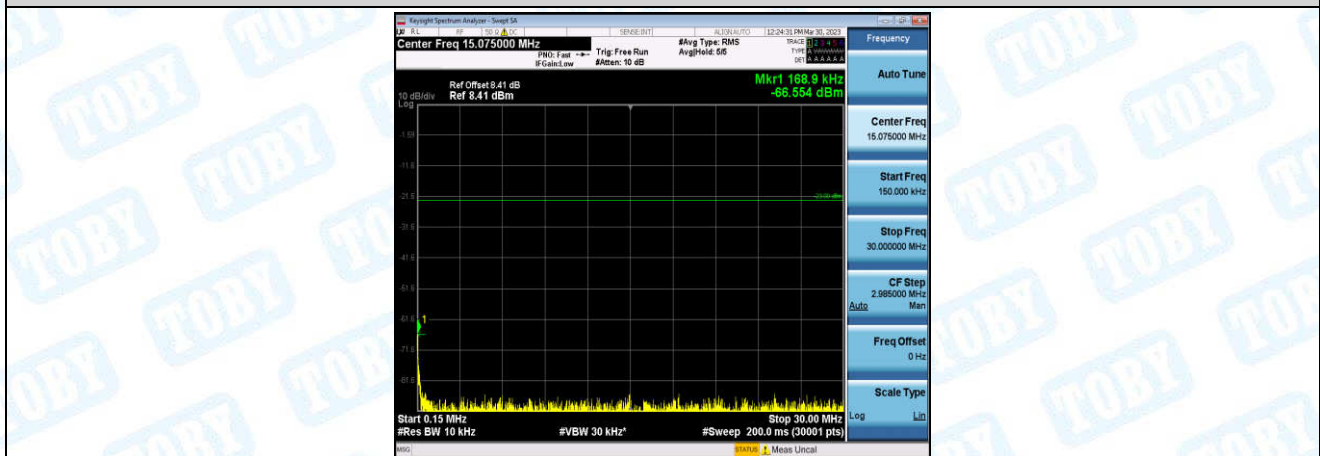
Band12-Stand-Alone-NaN-BPSK-23095-1@11-15kHz-30-1000-30~1000MHz@-59.54dBm--13-PASS



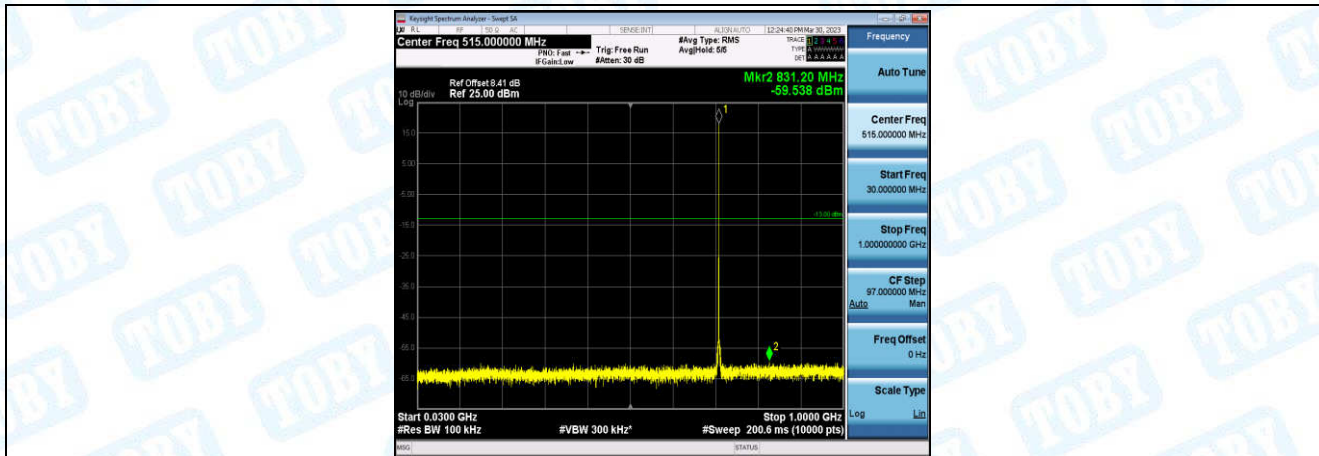
Band12-Stand-Alone-NaN-BPSK-23095-1@11-15kHz-1000-10000-1000~10000MHz@-47.72dBm--13-PASS



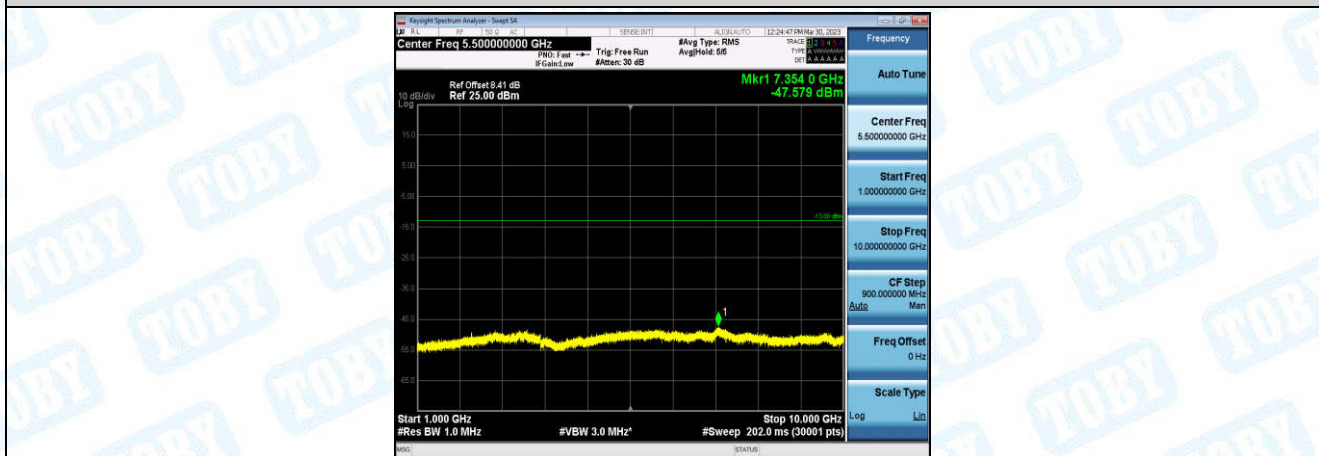
Band12-Stand-Alone-NaN-BPSK-23179-1@0-15kHz-0.009-0.15-0.009~0.15MHz@-61.59dBm--33-PASS



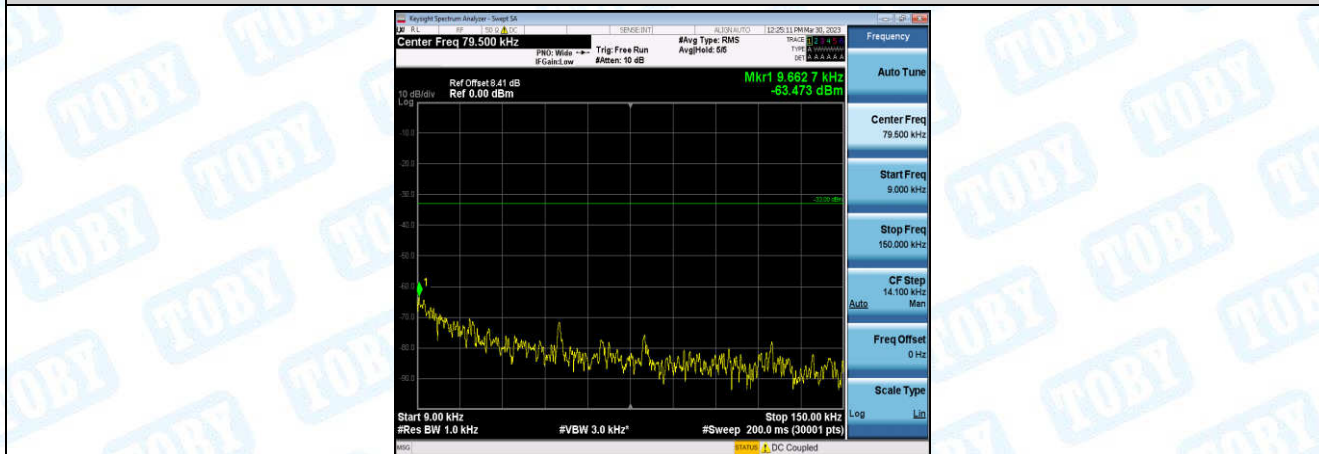
Band12-Stand-Alone-NaN-BPSK-23179-1@0-15kHz-0.15-30-0.15~30MHz@-66.55dBm--23-PASS



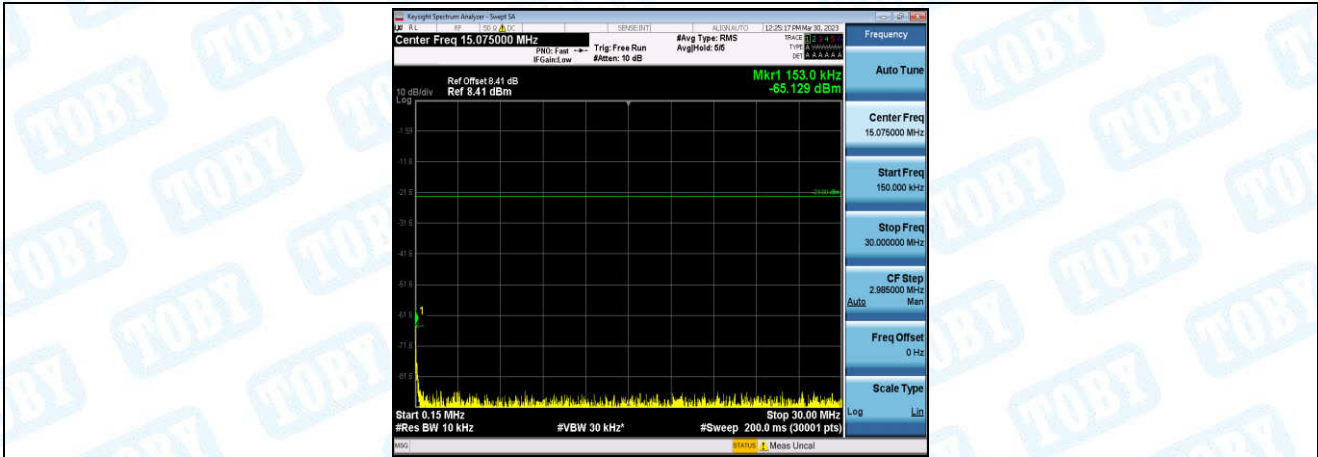
Band12-Stand-Alone-NaN-BPSK-23179-1@0-15kHz-30-1000-30~1000MHz@-59.54dBm--13-PASS



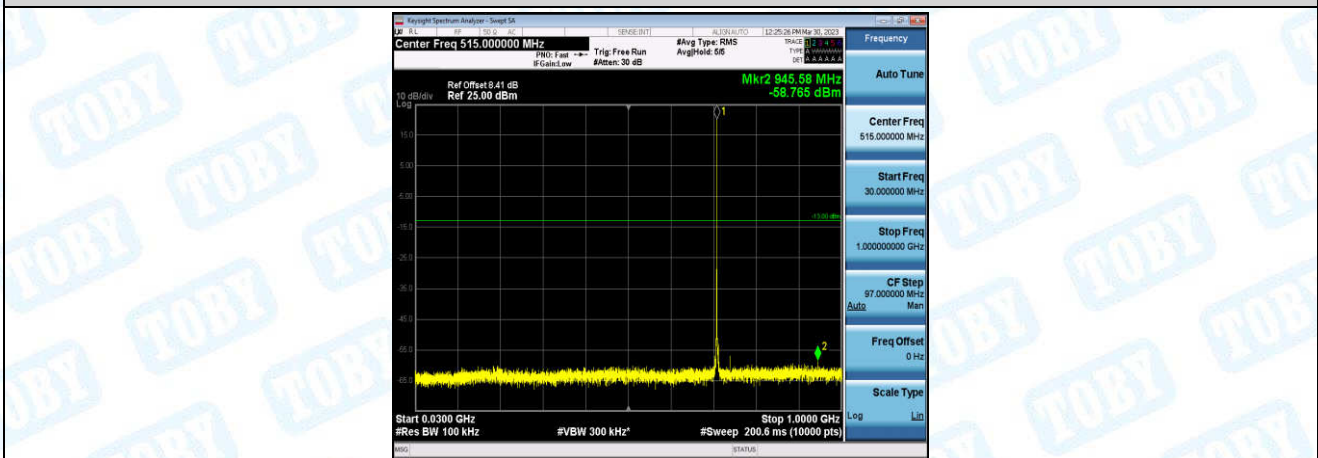
Band12-Stand-Alone-NaN-BPSK-23179-1@0-15kHz-1000-10000-1000~1000MHz@-47.58dBm--13-PASS



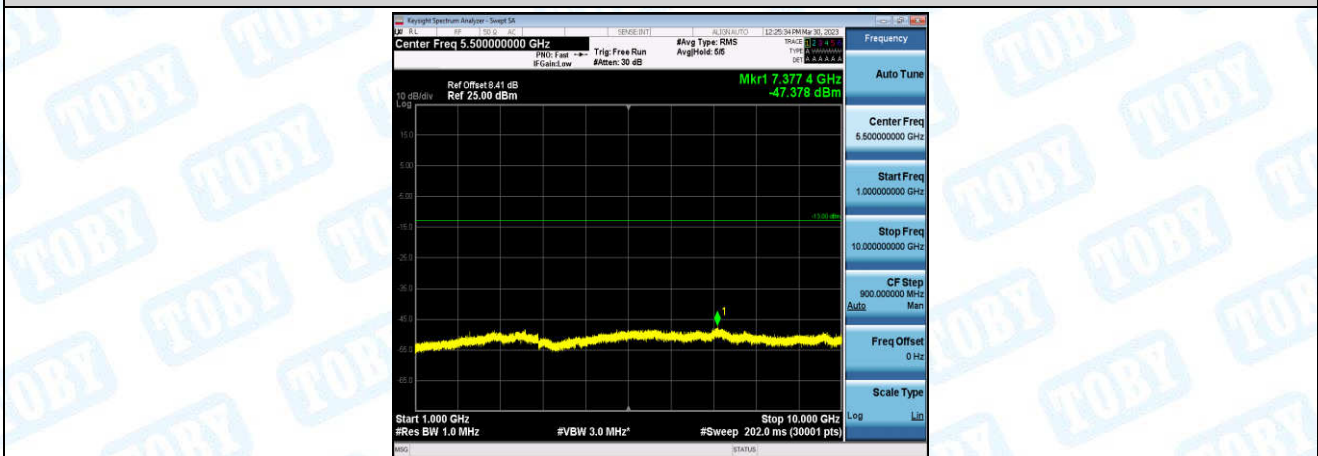
Band12-Stand-Alone-NaN-BPSK-23179-1@11-15kHz-0.009-0.15-0.009~0.15MHz@-63.47dBm--33-PASS



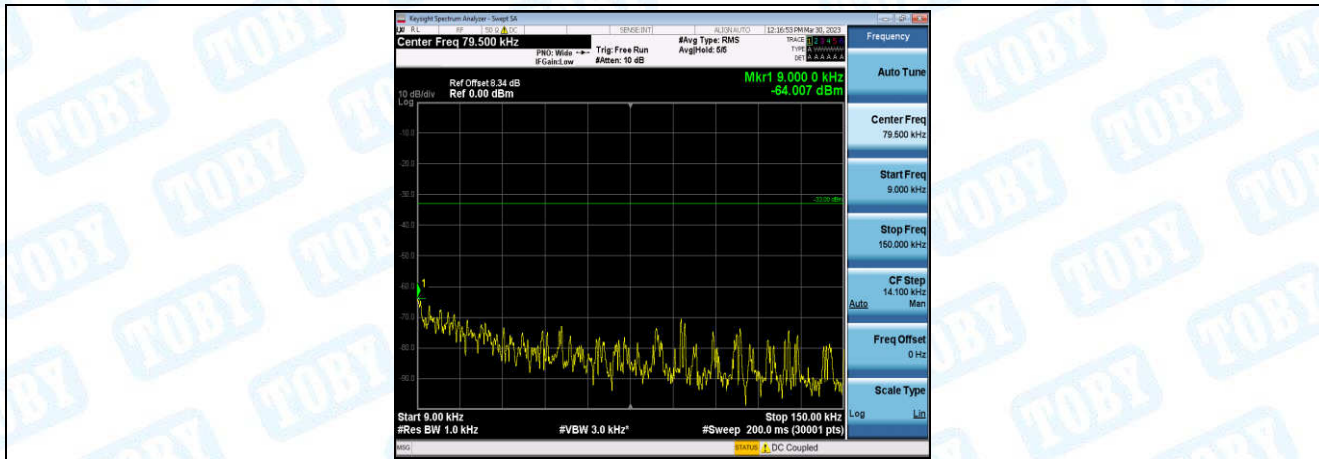
Band12-Stand-Alone-NaN-BPSK-23179-1@11-15kHz-0.15-30-0.15~30MHz@-65.13dBm--23-PASS



Band12-Stand-Alone-NaN-BPSK-23179-1@11-15kHz-30-1000-30~1000MHz@-58.77dBm--13-PASS



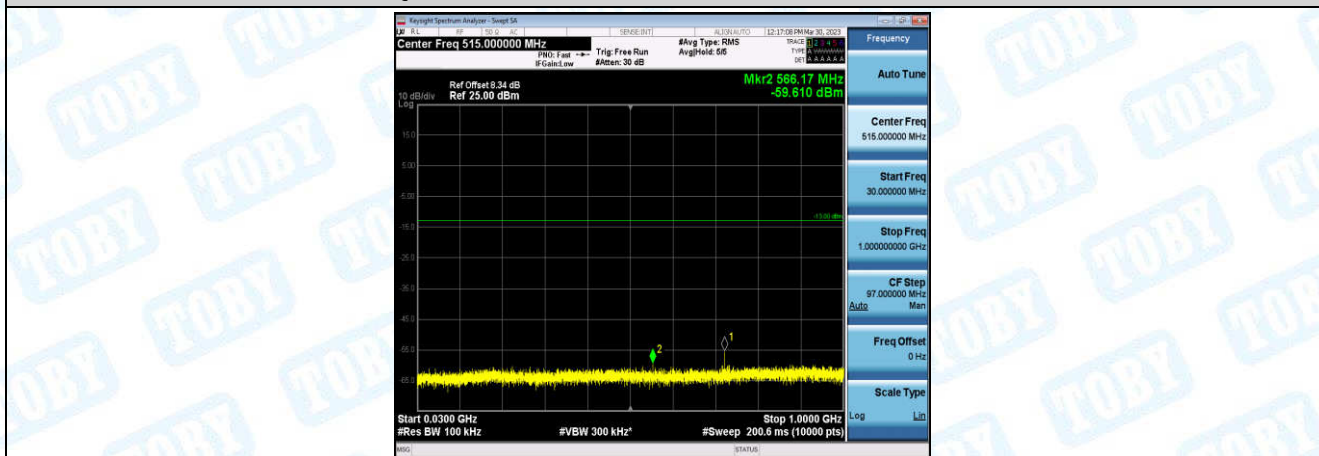
Band12-Stand-Alone-NaN-BPSK-23179-1@11-15kHz-1000-10000-1000~10000MHz@-47.38dBm--13-PASS



Band12-Stand-Alone-NaN-QPSK-23011-12@0-15kHz-0.009-0.15-0.009~0.15MHz@-64.01dBm--33-PASS



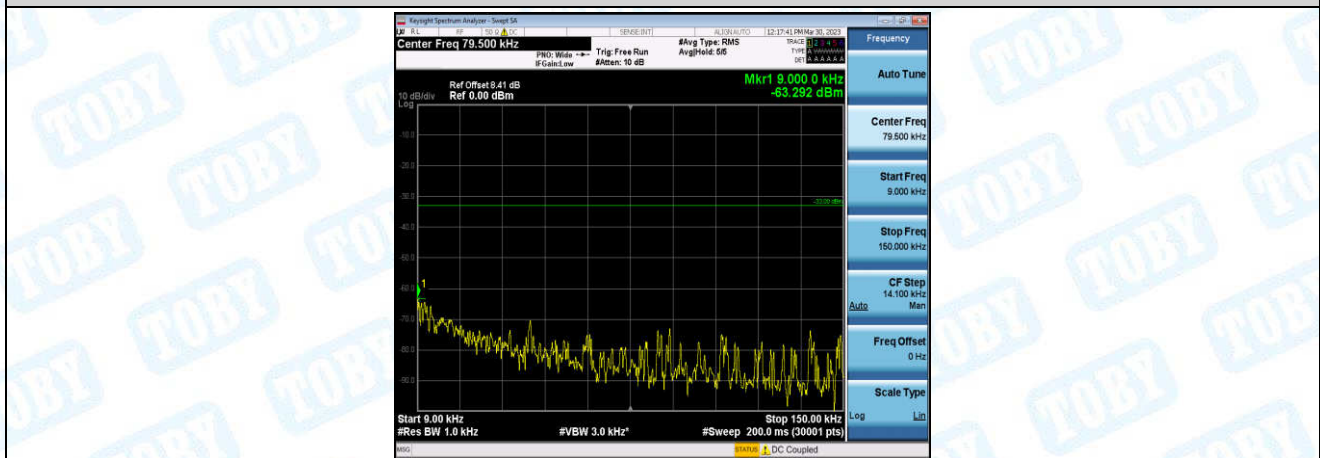
Band12-Stand-Alone-NaN-QPSK-23011-12@0-15kHz-0.15-30-0.15~30MHz@-66.25dBm--23-PASS



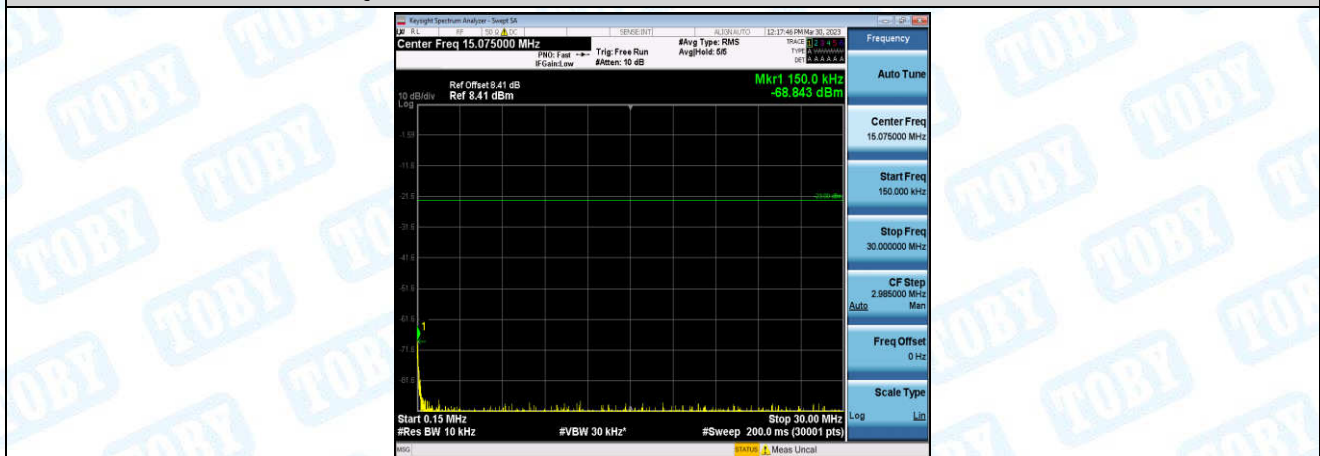
Band12-Stand-Alone-NaN-QPSK-23011-12@0-15kHz-30-1000-30~1000MHz@-59.61dBm--13-PASS



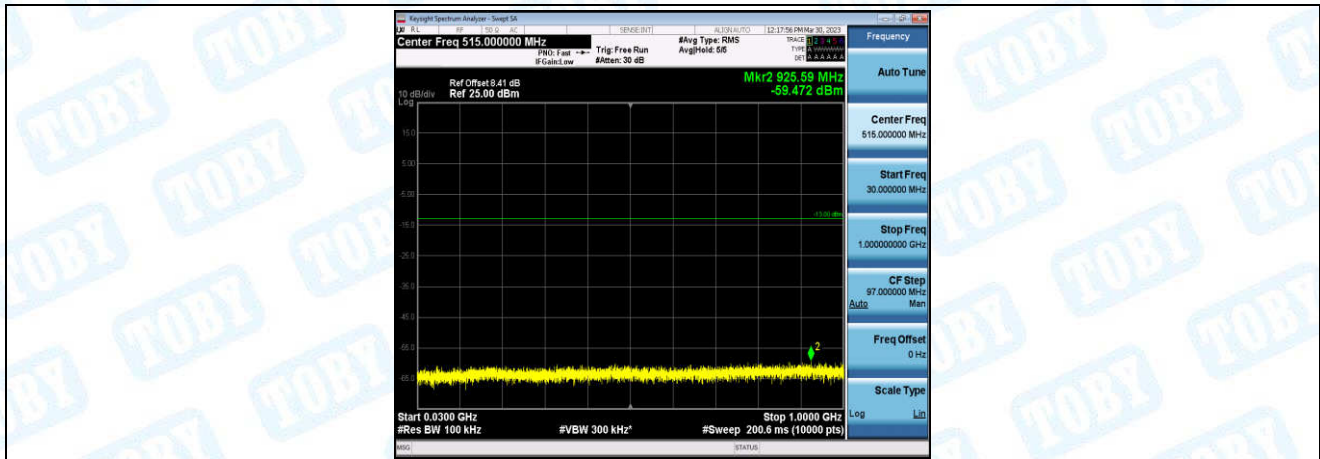
Band12-Stand-Alone-NaN-QPSK-23011-12@0-15kHz-1000-10000-1000~10000MHz@-47.3dBm--13-PASS



Band12-Stand-Alone-NaN-QPSK-23095-12@0-15kHz-0.009-0.15-0.009~0.15MHz@-63.29dBm--33-PASS



Band12-Stand-Alone-NaN-QPSK-23095-12@0-15kHz-0.15-30-0.15~30MHz@-68.84dBm--23-PASS

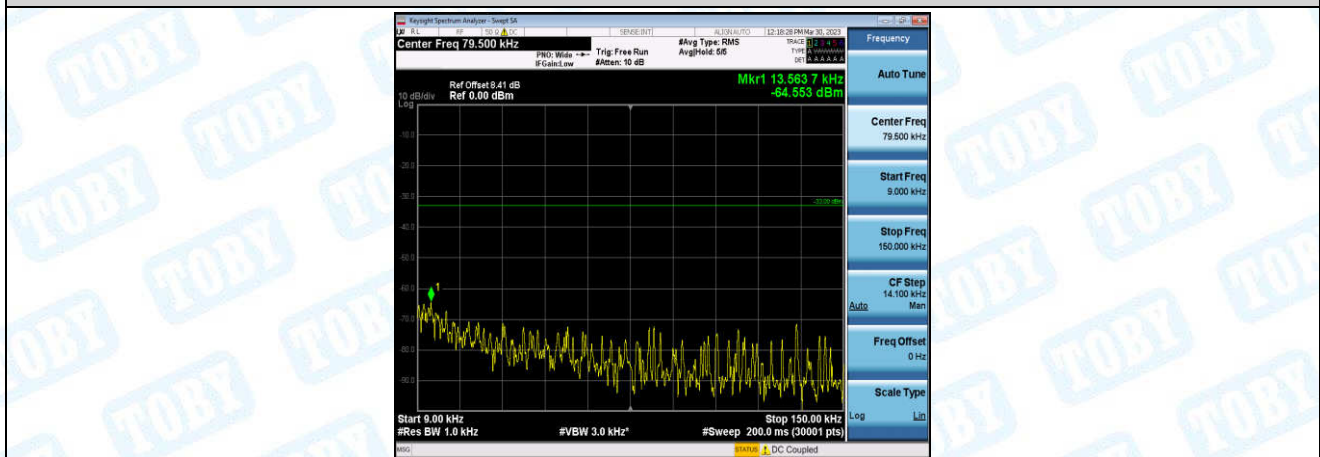


Band12-Stand-Alone-NaN-QPSK-23095-12@0-15kHz-30-1000-30~1000MHz@-59.47dBm--13-PASS

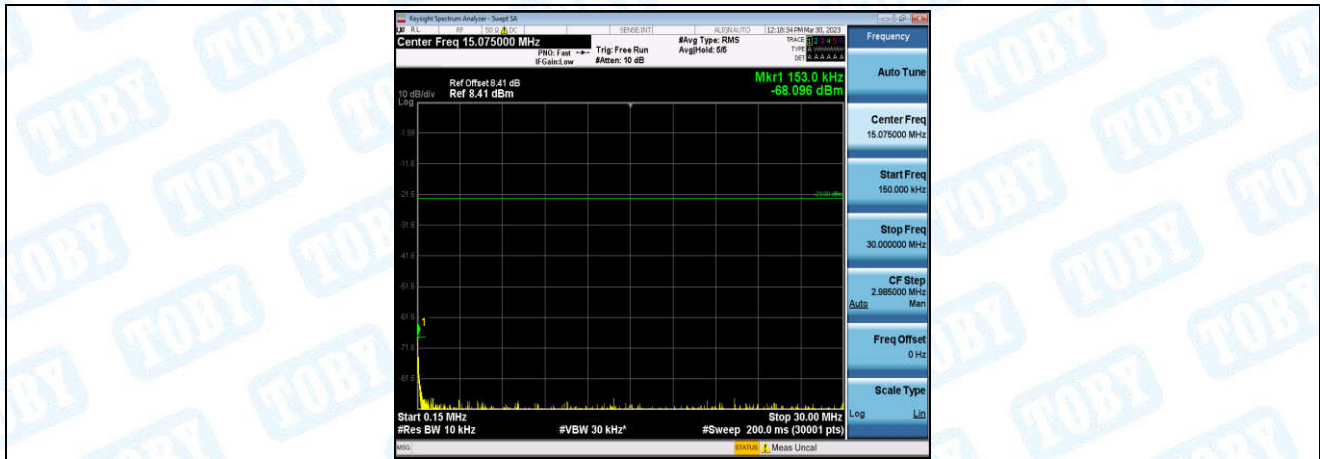


Band12-Stand-Alone-NaN-QPSK-23095-12@0-15kHz-1000-10000-1000~10000MHz@-46.93dBm--13-PAS

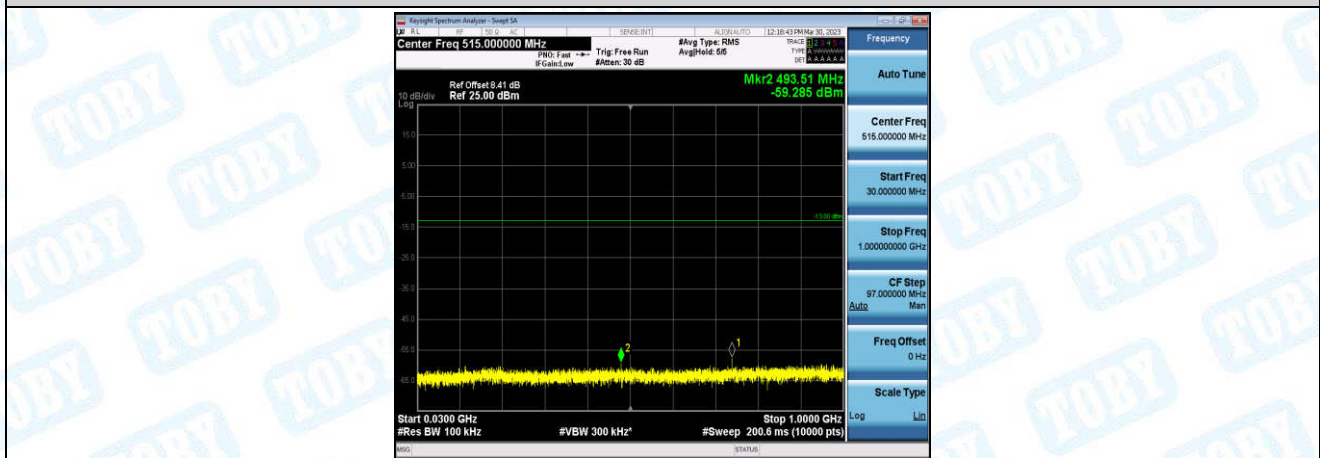
S



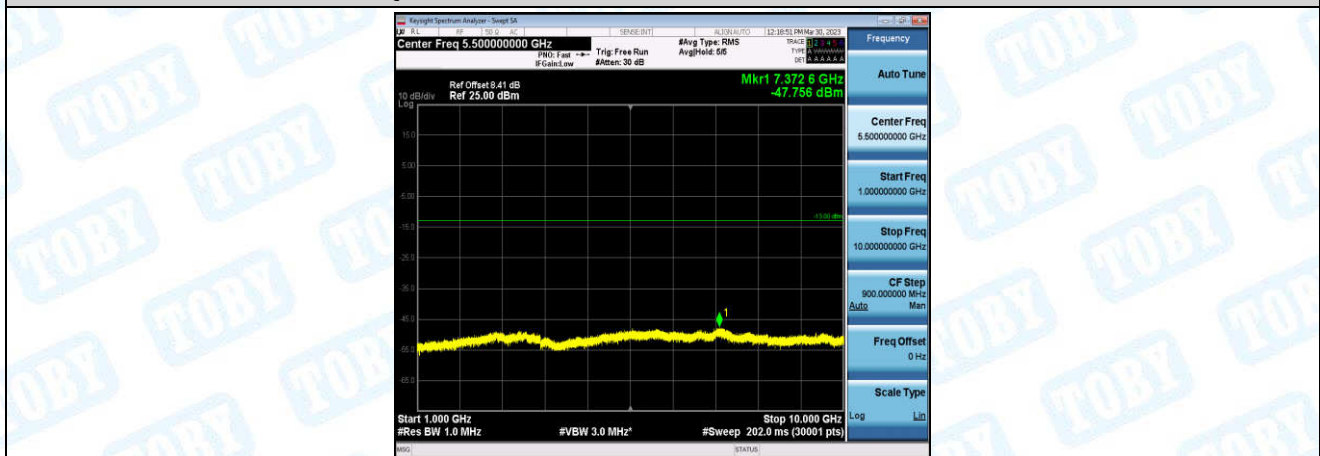
Band12-Stand-Alone-NaN-QPSK-23179-12@0-15kHz-0.009-0.15-0.009~0.15MHz@-64.55dBm--33-PASS



Band12-Stand-Alone-Na-N-QPSK-23179-12@0-15kHz-0.15-30-0.15~30MHz@-68.1dBm--23-PASS



Band12-Stand-Alone-Na-N-QPSK-23179-12@0-15kHz-30-1000-30~1000MHz@-59.29dBm--13-PASS



Band12-Stand-Alone-Na-N-QPSK-23179-12@0-15kHz-1000-10000-1000~10000MHz@-47.76dBm--13-PAS

S

6: Frequency Stability for NB1

6.1 Test Result

Band	OpMode	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	VH	NT	-14.55	-0.020565	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	VL	NT	-14.24	-0.020127	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	VN	NT	-15.61	-0.022064	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	VH	NT	-1.92	-0.002714	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	VL	NT	-9.74	-0.013767	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	VN	NT	-11.74	-0.016594	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	VH	NT	-15.85	-0.022403	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	VL	NT	-16.45	-0.023251	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	VN	NT	-17.48	-0.024707	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	VH	NT	-17.36	-0.024537	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	VL	NT	-18.54	-0.026205	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	VN	NT	4.37	0.006177	±2.5	PASS

Band	OpMode	Bandwidth	Modulation	Channel	Tones	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	NV	60	6.38	0.009018	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	NV	-20	6.59	0.009314	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	NV	-10	7.87	0.011124	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	NV	0	8.80	0.012438	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	NV	10	4.87	0.006883	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	NV	20	7.42	0.010488	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	NV	30	8.50	0.012014	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	NV	40	9.13	0.012905	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@0	NV	-30	4.09	0.005781	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	NV	30	-7.37	-0.010417	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	NV	20	11.73	0.016580	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	NV	10	8.30	0.011731	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	NV	0	3.67	0.005187	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	NV	-10	12.07	0.017060	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	NV	40	2.83	0.004000	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	NV	-30	6.44	0.009102	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	NV	60	8.53	0.012057	±2.5	PASS
Band12	Stand-Alone	3.75kHz	QPSK	23095	1@47	NV	-20	9.93	0.014035	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	NV	60	5.41	0.007647	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	NV	-20	-3.01	-0.004254	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	NV	-10	3.68	0.005201	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	NV	0	5.12	0.007237	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	NV	10	5.32	0.007519	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	NV	20	-8.22	-0.011618	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	NV	30	3.23	0.004565	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	NV	40	5.43	0.007675	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@0	NV	-30	-7.63	-0.010784	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	NV	40	6.29	0.008890	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	NV	30	4.50	0.006360	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	NV	20	3.46	0.004890	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	NV	10	-6.50	-0.009187	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	NV	0	-18.04	-0.025498	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	NV	-10	-18.21	-0.025739	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	NV	-30	3.29	0.004650	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	NV	60	-18.06	-0.025527	±2.5	PASS
Band12	Stand-Alone	15kHz	QPSK	23095	1@11	NV	-20	4.78	0.006756	±2.5	PASS

-----END OF THE REPORT-----