

ANNEX D TEST DATA

For

Project No.:	8433EU010221W
Client:	Cheerlux (Shenzhen) Electronic Technology Co., Ltd.
Product Name:	Projector
Model No.:	C6
Technology:	Bluetooth (BDR&EDR)
Test Engineer:	<i>Mikey zhu</i>
Test Date:	2025-07-01

Test Summary

Item	Result
Frequency Error	Pass
Occupied Bandwidth	Pass
Antenna Power	Pass
Dwell Time	Pass
Spurious Emission Intensity	Pass
Secondary Radiated Emission	Pass

1. Frequency Error

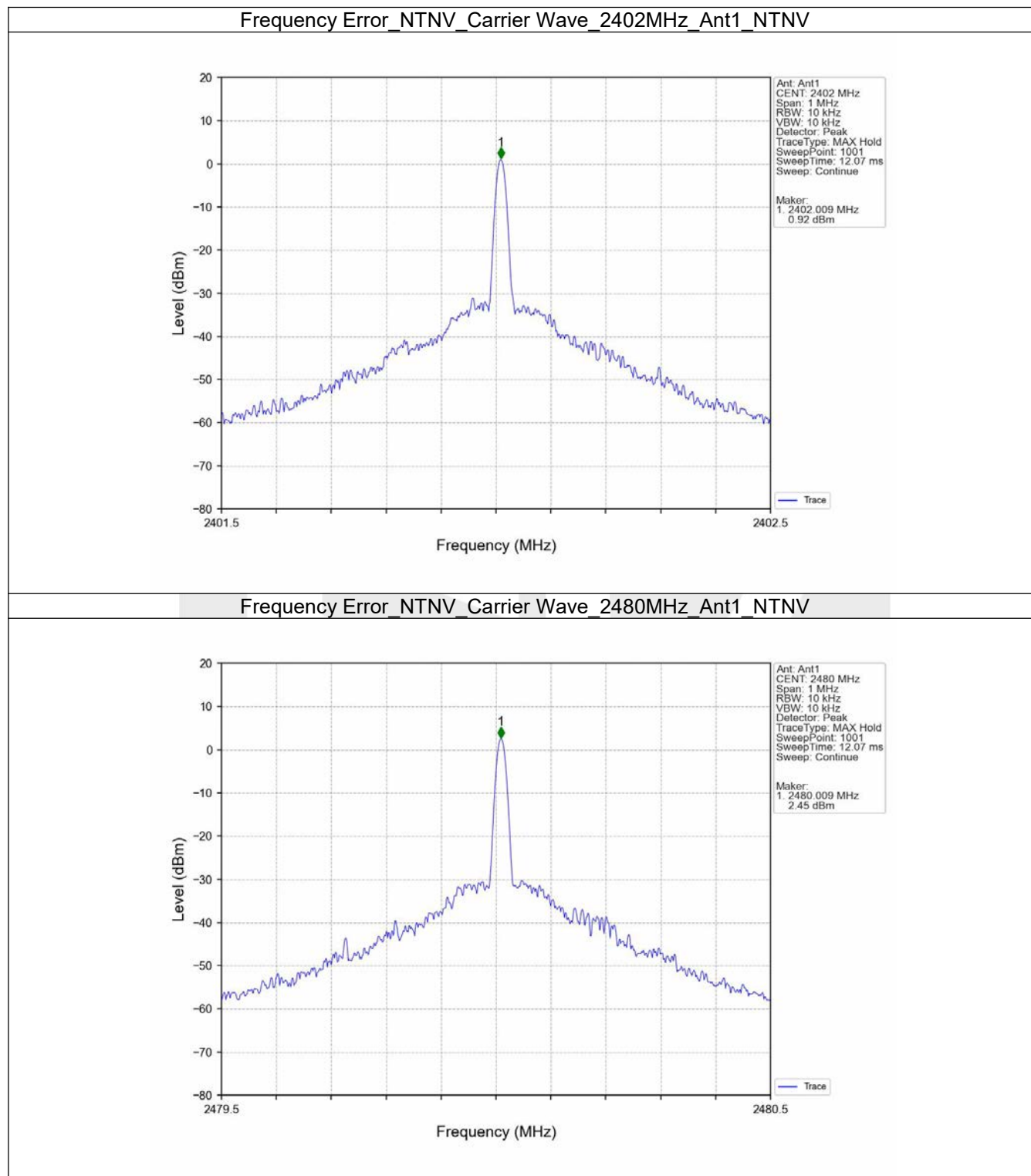
1.1 Test Result

1.1.1 Ant1

Ant1								
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Measured Frequency (MHz)	Tolerance (ppm)		Verdict
						Result	Limit	
NTNV	Carrier Wave	SISO	2402	DH5	2402.009	3.75	-50 to 50	Pass
			2480	DH5	2480.009	3.63	-50 to 50	Pass

1.2 Test Graph

1.2.1 Ant1



2. Occupied Bandwidth

2.1 Test Result

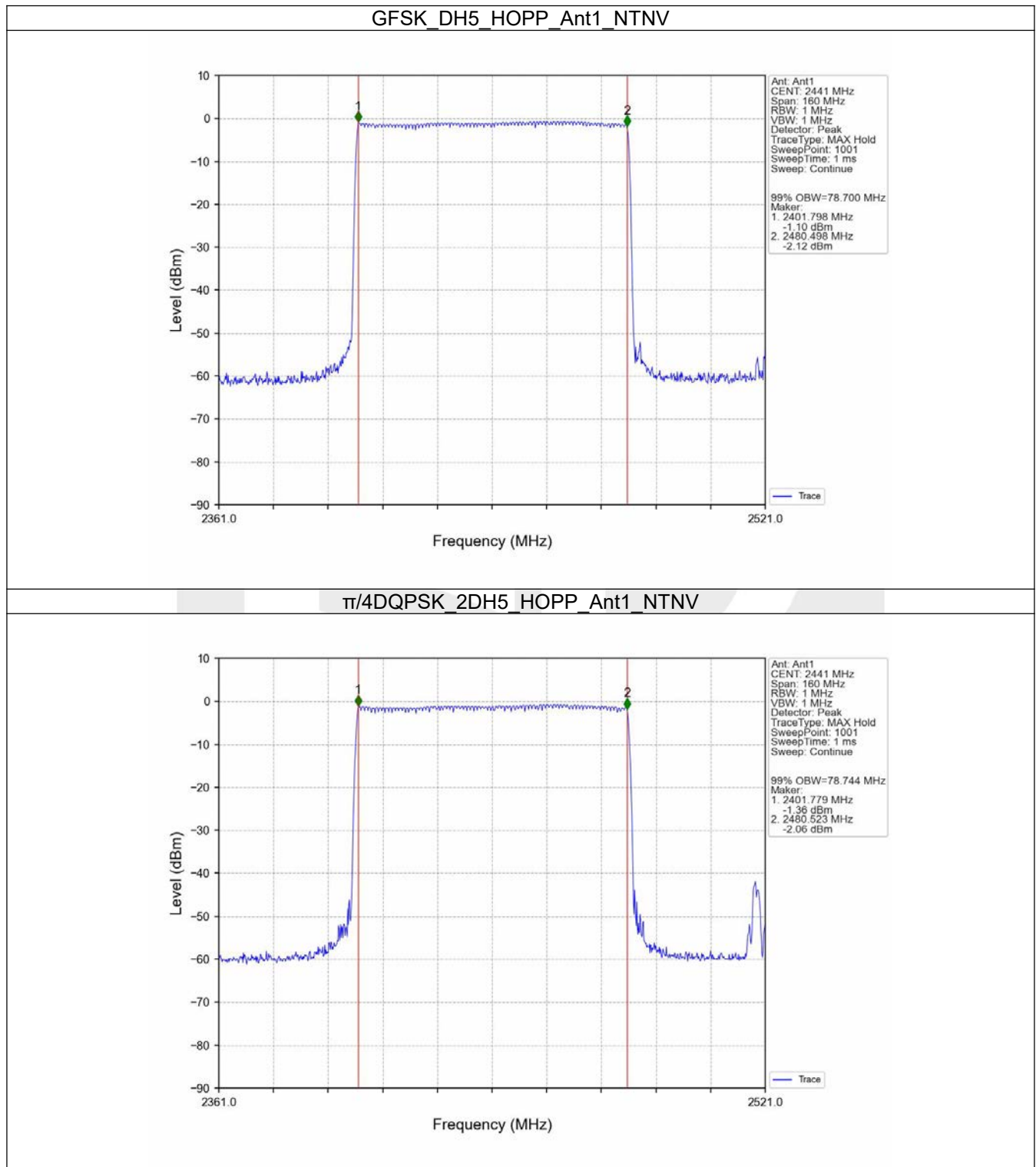
2.1.1 OBW

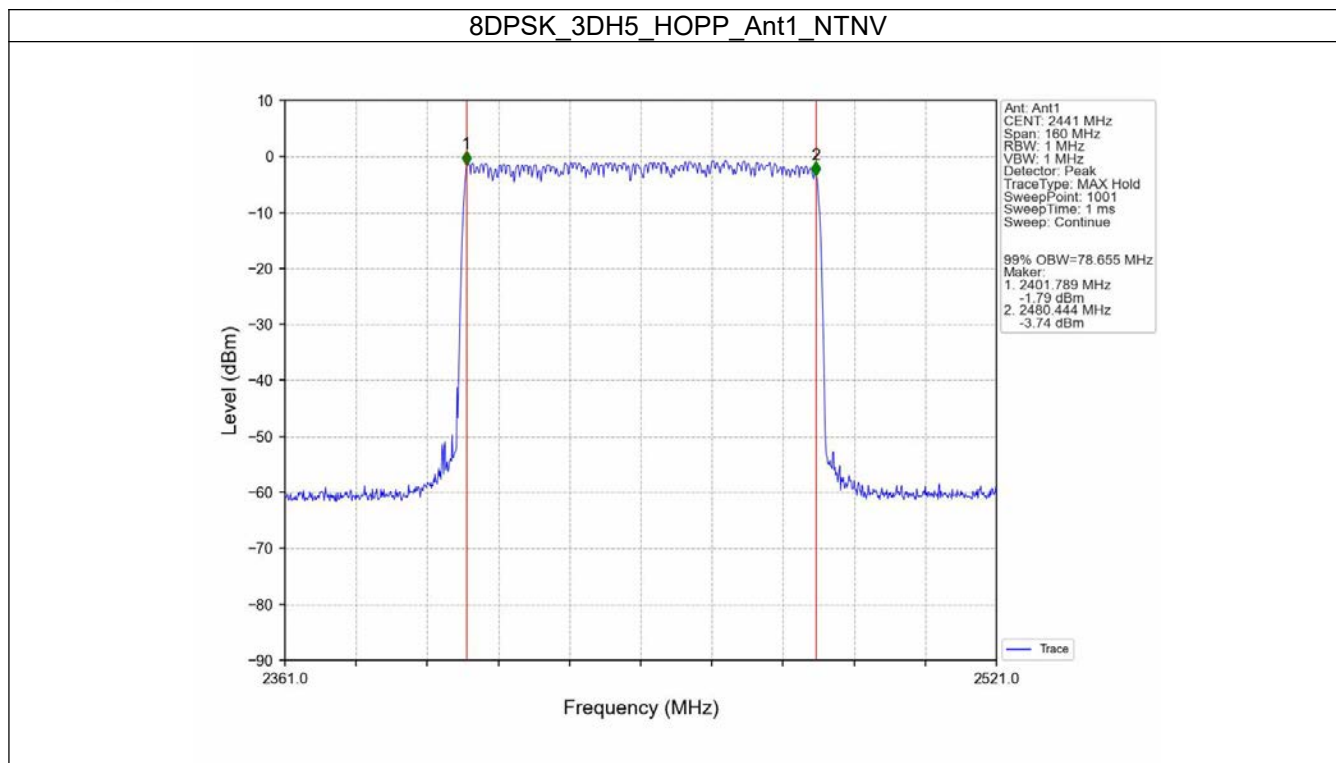
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	99% Occupied Bandwidth (MHz)		Verdict
					ANT1	Limit	
NTNV	GFSK	SISO	HOPP	DH5	78.700	<=83.5	Pass
	$\pi/4$ DQPSK	SISO	HOPP	2DH5	78.744	<=83.5	Pass
	8DPSK	SISO	HOPP	3DH5	78.655	<=83.5	Pass



2.2 Test Graph

2.2.1 OBW





3. Spread Bandwidth

3.1 Test Result

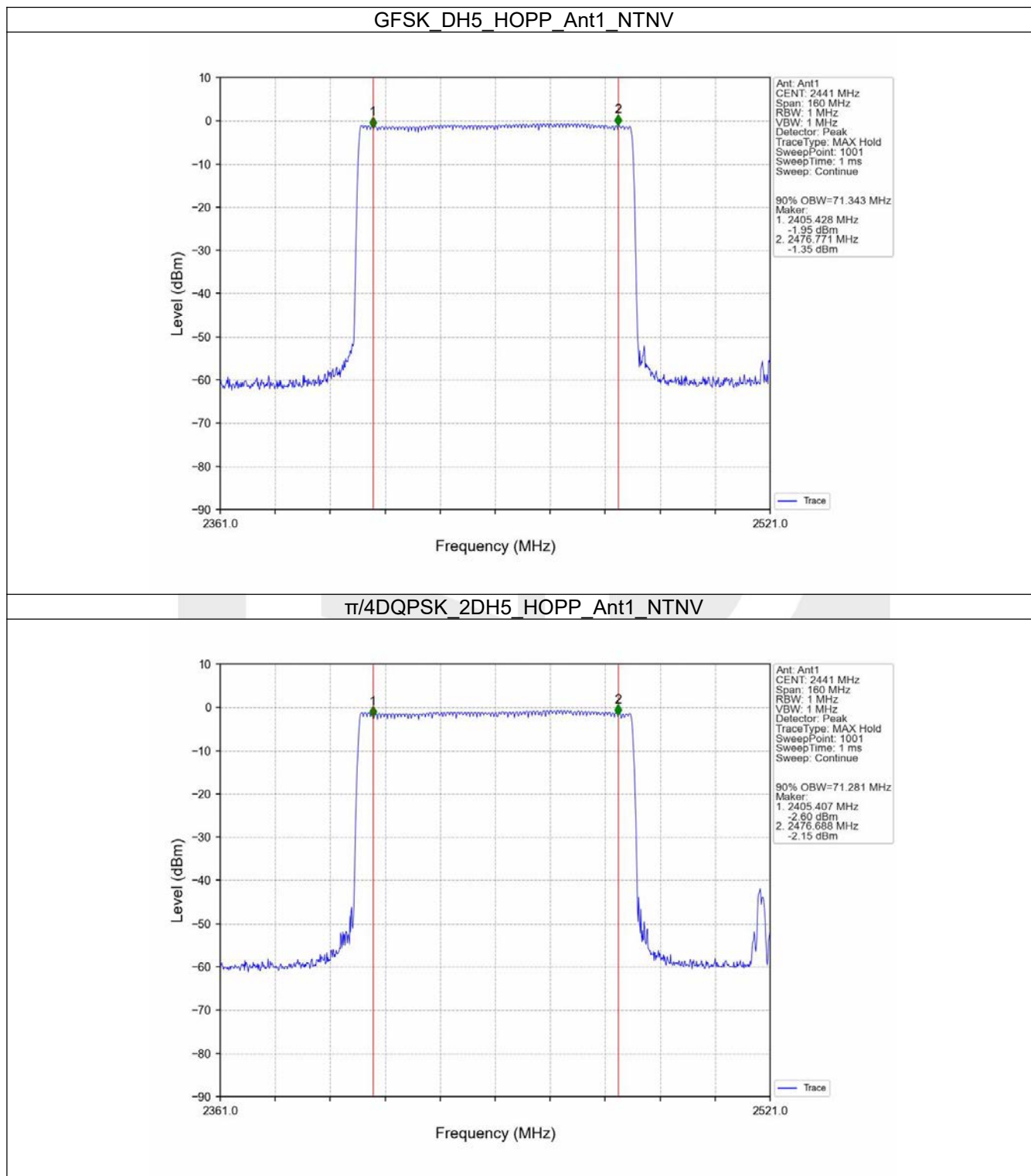
3.1.1 SPBW

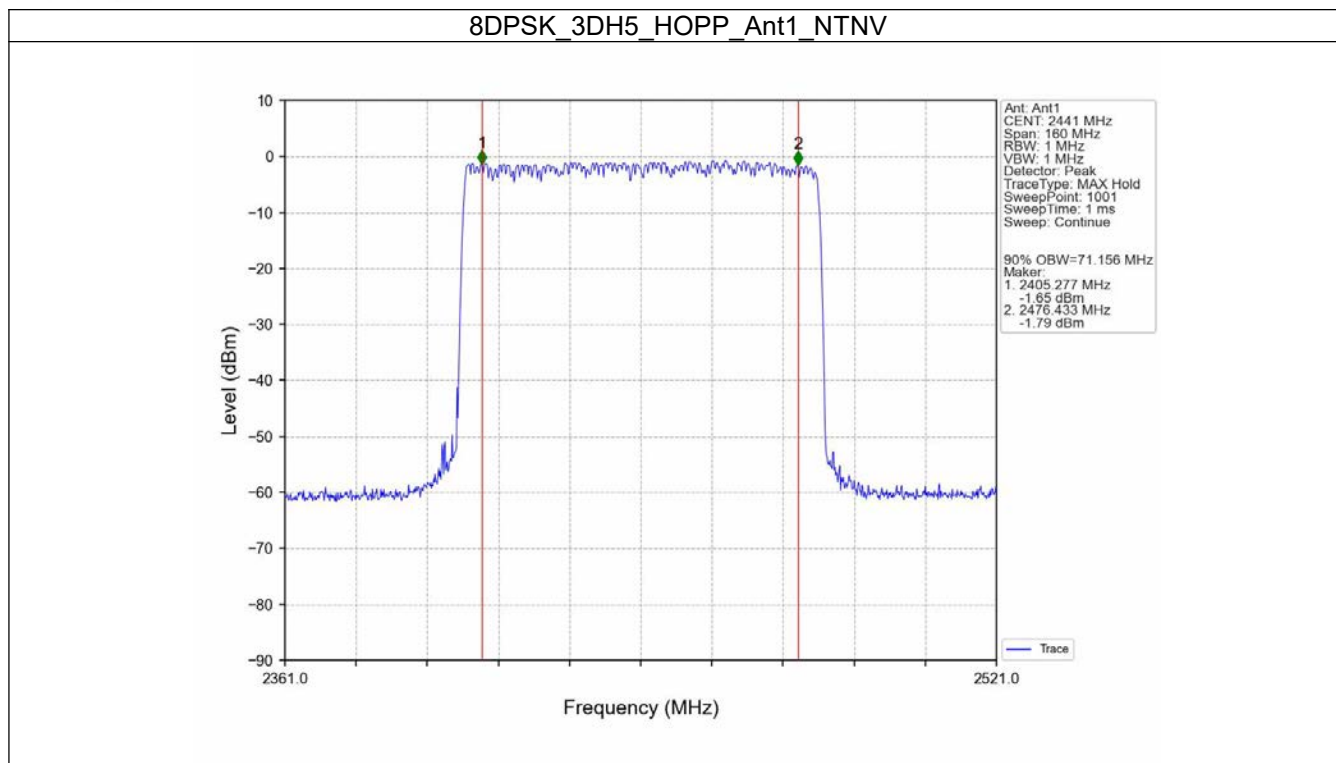
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Spread Bandwidth (MHz)		Verdict
					ANT1	Limit	
NTNV	GFSK	SISO	HOPP	DH5	71.343	/	Only For Report
	$\pi/4$ DQPSK	SISO	HOPP	2DH5	71.281	/	Only For Report
	8DPSK	SISO	HOPP	3DH5	71.156	/	Only For Report



3.2 Test Graph

3.2.1 SPBW





4. Antenna Power

4.1 Test Result

4.1.1 Power

ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Total power (mW)			Antenna Power Density PD (mW / MHz)	Nominal Power (mW/MHz)	Tolerance (%)		Verdict
					dBm	mW	Spread Bandwidth (MHz)			Measure d	Limit	
NTNV	GFSK	SISO	HOPP	DH5	-2.66	0.542	71.343	0.008	0.02	-60.00	20	Pass
	$\pi/4$ DQPSK	SISO	HOPP	2DH5	-4.60	0.347	71.281	0.005	0.02	-75.00	20	Pass
	8DPSK	SISO	HOPP	3DH5	-5.72	0.288	71.156	0.004	0.02	-80.00	20	Pass
Note: 1. Antenna Power Density PD = Total power (mW) / Spread Spectrum Bandwidth MHz												

4.2.1 EIRP

ENV	Mode	TX Type	Frequency (MHz)	ANT	Gain (dBi)	Measured Power (dBm/MHz)	EIRP (dBm/MHz)		Verdict
							Result	Limit	
NTNV	GFSK	SISO	HOPP	1	2.86	-20.969	-18.11	6.91	Pass
	π/4DQPSK		HOPP	1	2.86	-23.010	-20.15	6.91	Pass
	8DPSK		HOPP	1	2.86	-23.979	-21.12	6.91	Pass
Note: E.I.R.P = Measured Power + Antenna Gain									

5. Dwell Time

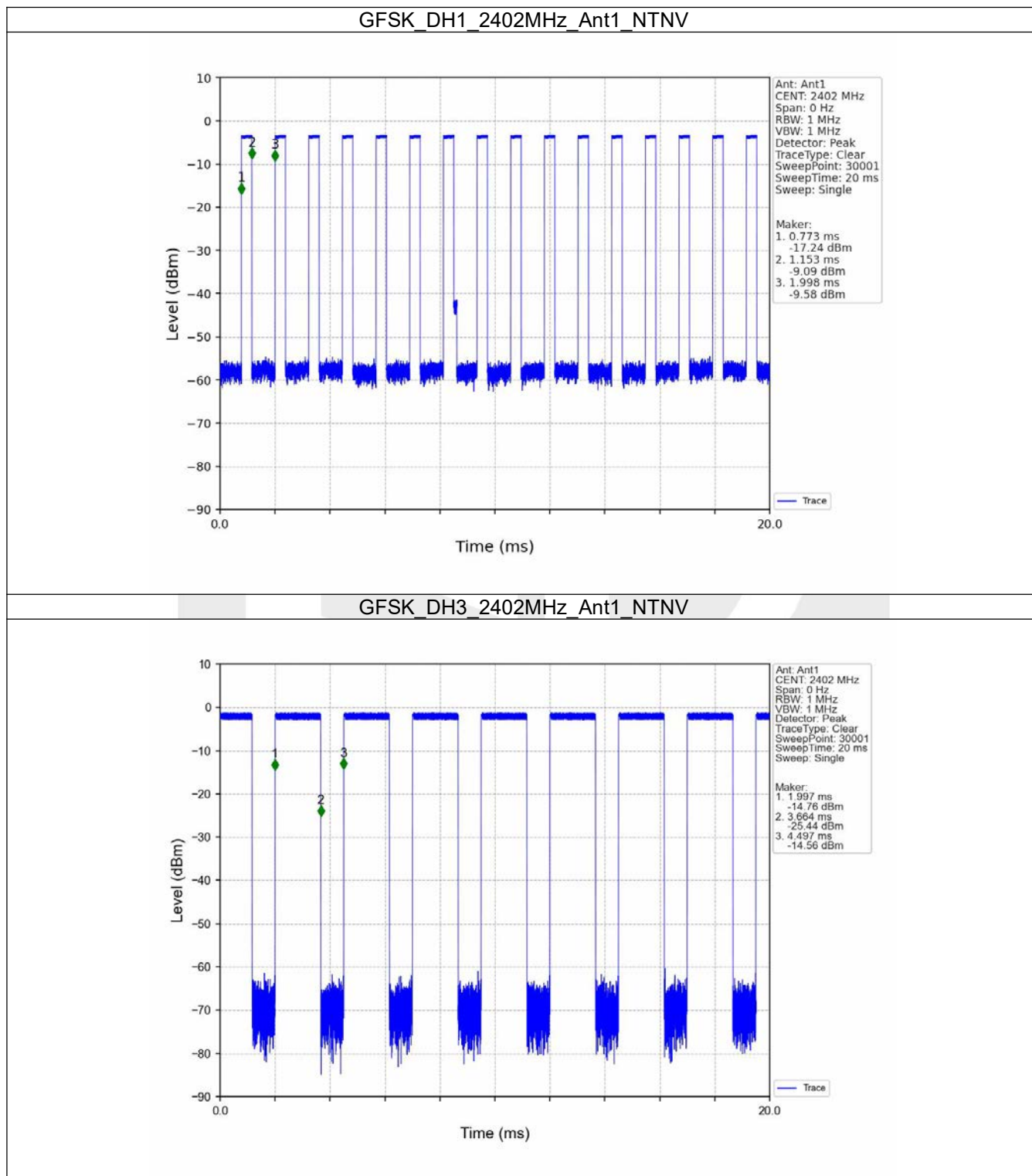
5.1 Test Result

5.1.1 Ant1

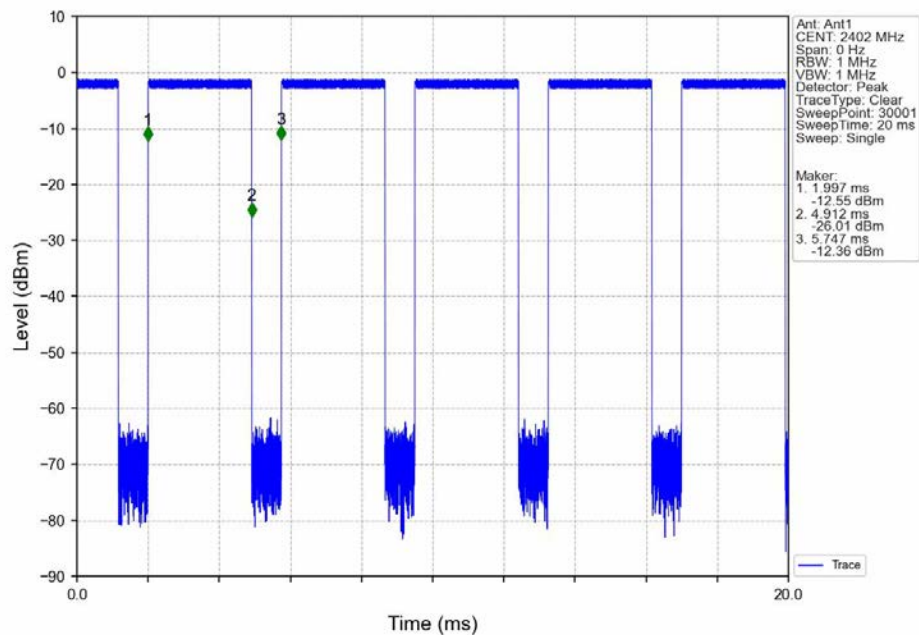
Ant1											
ENV	Mode	TX Type	Frequency (MHz)	Packet Type	Spreading Rate	T_on (ms)	Period (ms)	Hopp Number	Dwell Time (ms)		Verdict
NTNV	GFSK	SISO	2402	DH1	71.343	0.380	1.225	79	110.792	<=400	Pass
				DH3	71.343	1.667	2.500	79	240.868	<=400	Pass
				DH5	71.343	2.915	3.750	79	280.796	<=400	Pass
			2480	DH1	71.343	0.411	1.250	79	118.773	<=400	Pass
				DH3	71.343	1.667	2.500	79	240.868	<=400	Pass
				DH5	71.343	2.915	3.750	79	280.796	<=400	Pass
	$\pi/4$ DQPSK	SISO	2402	2DH1	71.281	0.422	1.250	79	121.845	<=400	Pass
				2DH3	71.281	1.673	2.500	79	241.525	<=400	Pass
				2DH5	71.281	2.921	3.750	79	281.130	<=400	Pass
			2480	2DH1	71.281	0.421	1.250	79	121.557	<=400	Pass
				2DH3	71.281	1.673	2.500	79	241.525	<=400	Pass
				2DH5	71.281	2.921	3.750	79	281.130	<=400	Pass
	8DPSK	SISO	2402	3DH1	71.156	0.421	1.250	79	121.343	<=400	Pass
				3DH3	71.156	1.671	2.500	79	240.814	<=400	Pass
				3DH5	71.156	2.923	3.750	79	280.829	<=400	Pass
			2480	3DH1	71.156	0.422	1.250	79	121.632	<=400	Pass
				3DH3	71.156	1.671	2.500	79	240.814	<=400	Pass
				3DH5	71.156	2.922	3.750	79	280.733	<=400	Pass

5.2 Test Graph

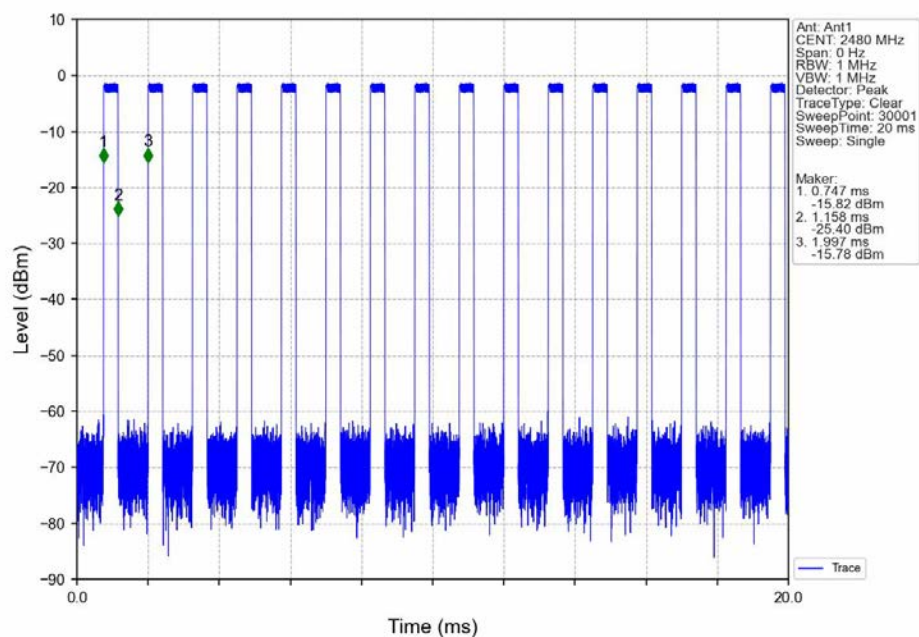
5.2.1 Ant1



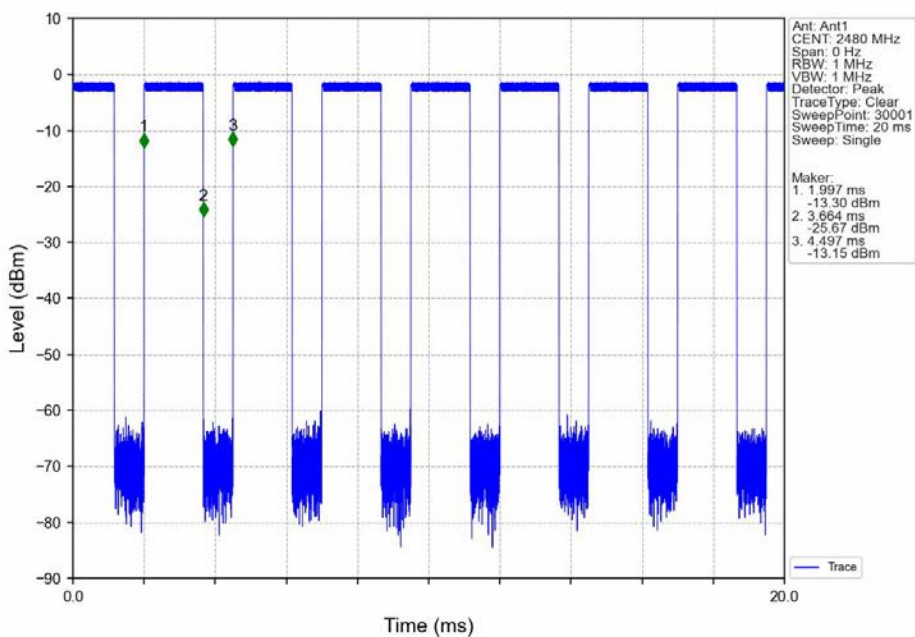
GFSK_DH5_2402MHz_Ant1_NTNV



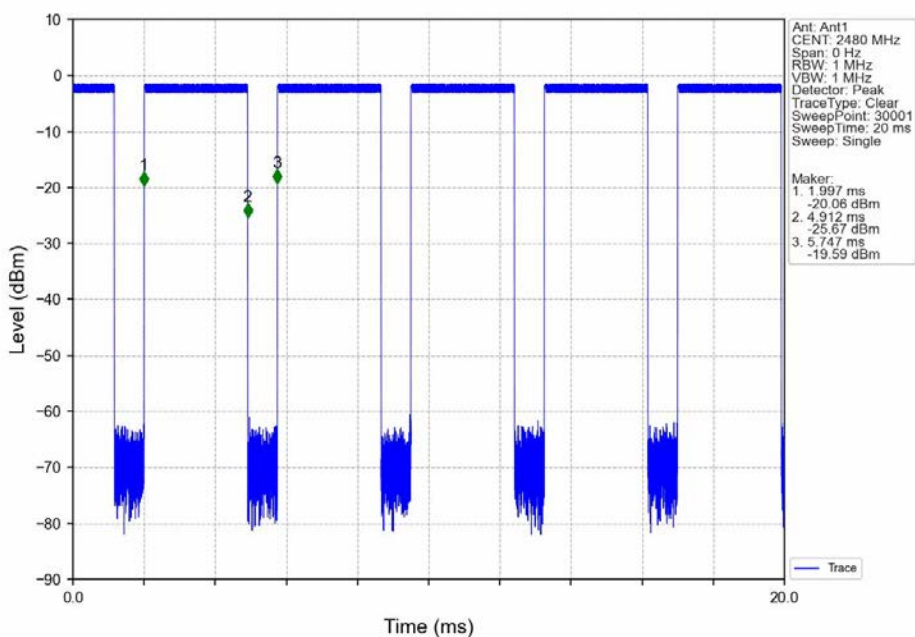
GFSK_DH1_2480MHz_Ant1_NTNV



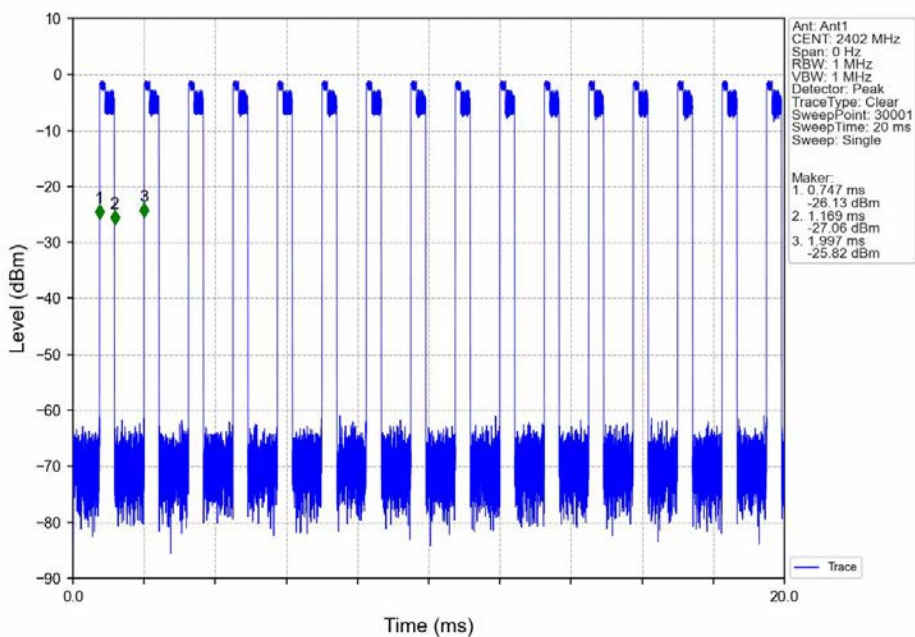
GFSK_DH3_2480MHz_Ant1_NTNV



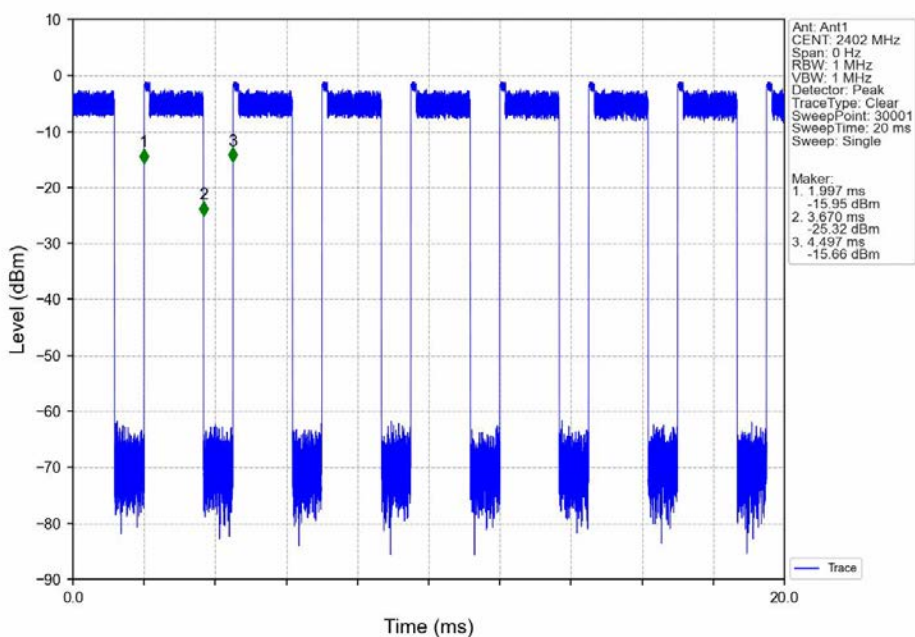
GFSK_DH5_2480MHz_Ant1_NTNV



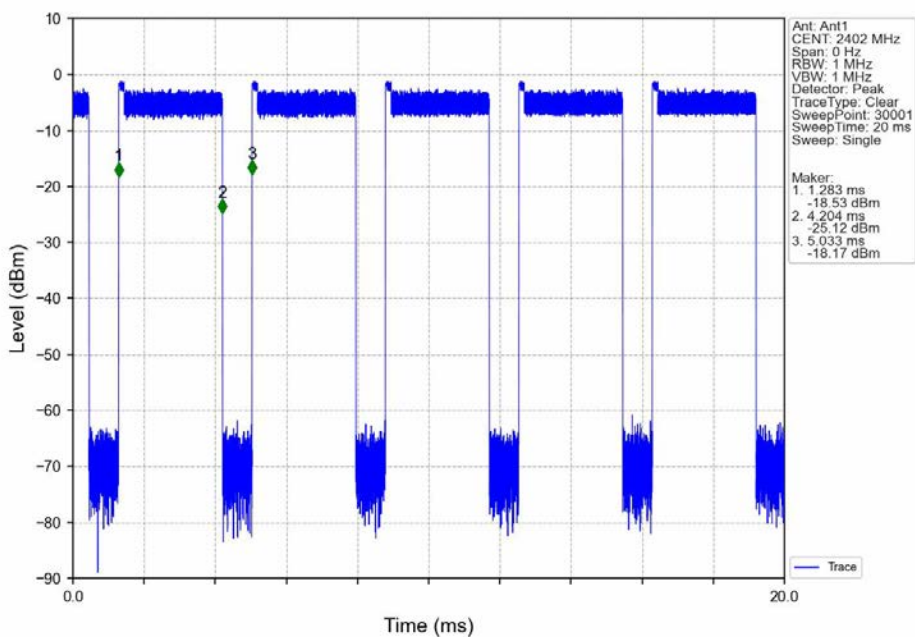
$\pi/4$ DQPSK_2DH1_2402MHz_Ant1_NTNV



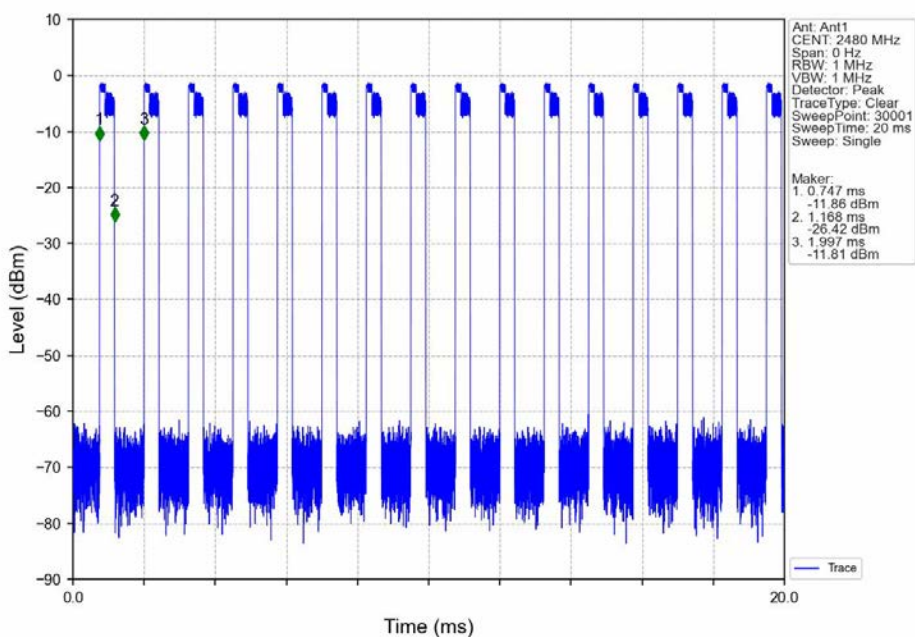
$\pi/4$ DQPSK_2DH3_2402MHz_Ant1_NTNV



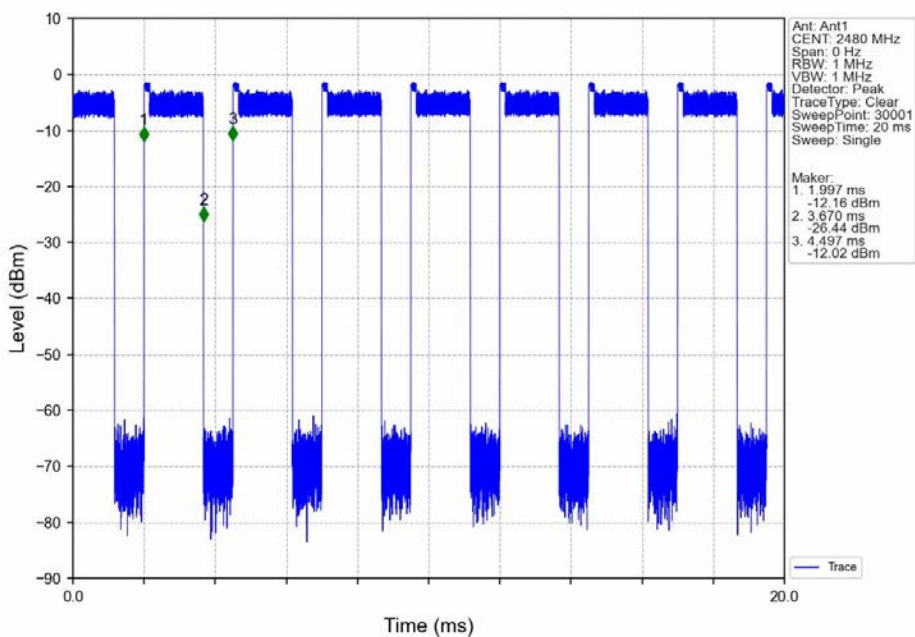
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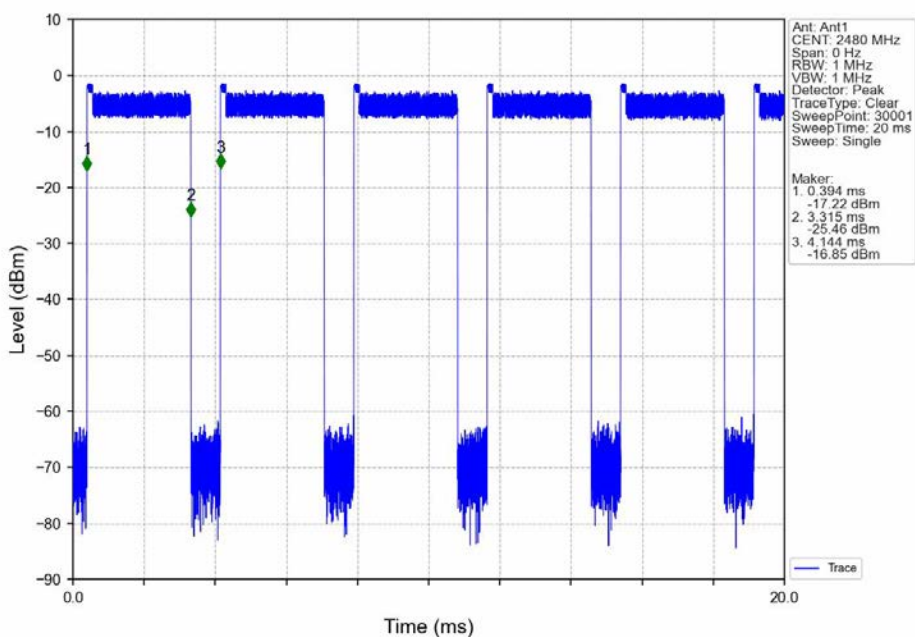
$\pi/4$ DQPSK_2DH1_2480MHz_Ant1_NTNV



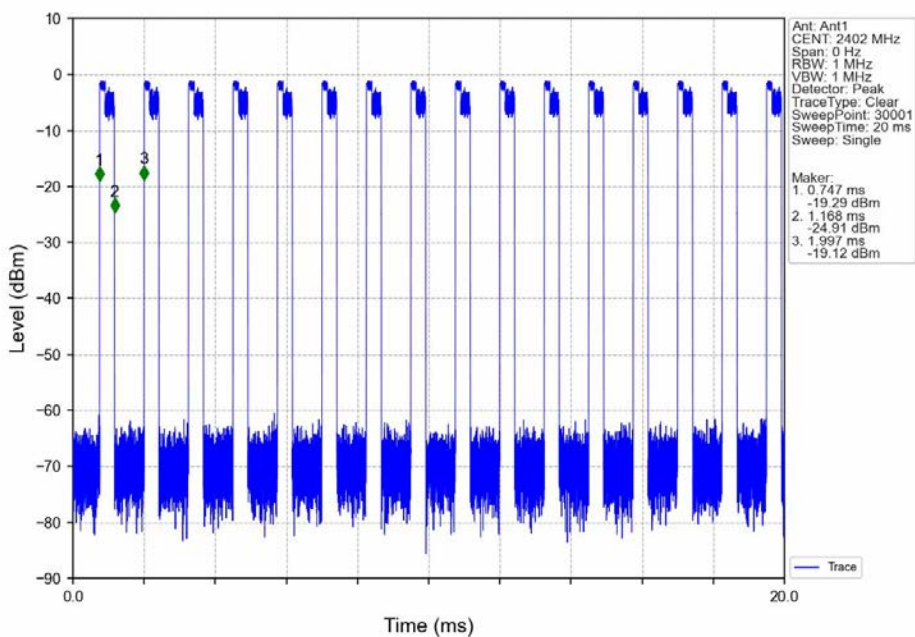
$\pi/4$ DQPSK_2DH3_2480MHz_Ant1_NTNV



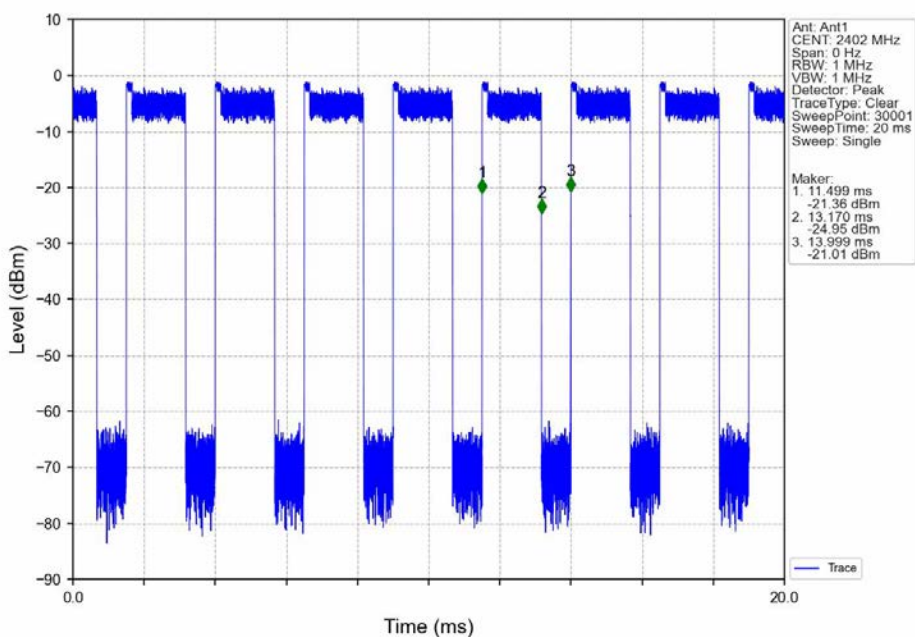
$\pi/4$ DQPSK_2DH5_2480MHz_Ant1_NTNV



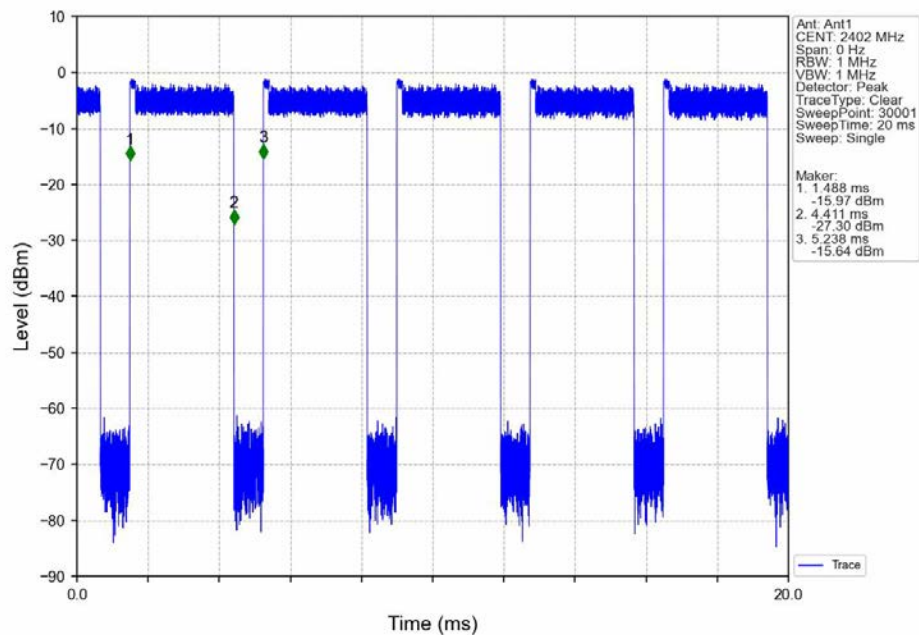
8DPSK_3DH1_2402MHz_Ant1_NTNV



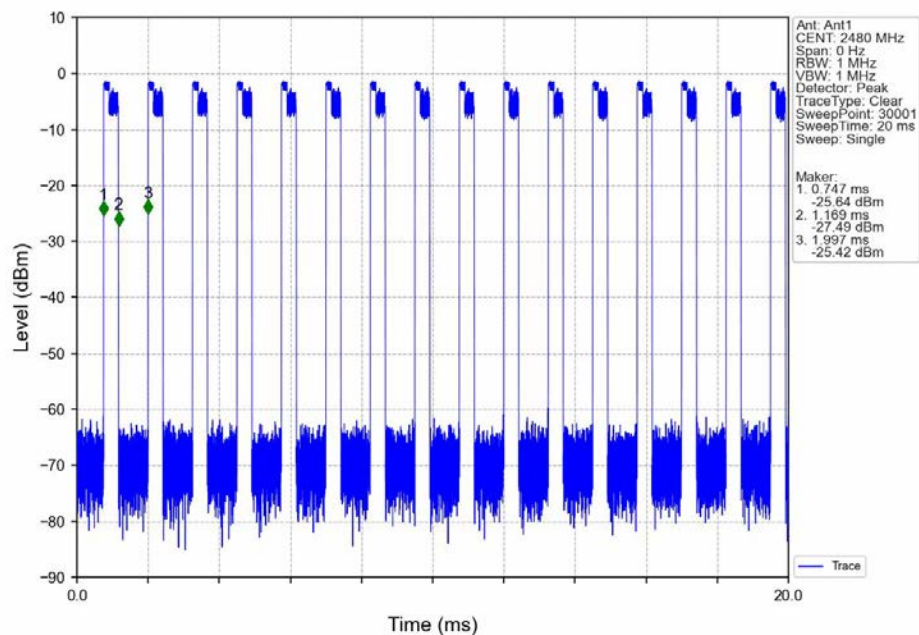
8DPSK_3DH3_2402MHz_Ant1_NTNV



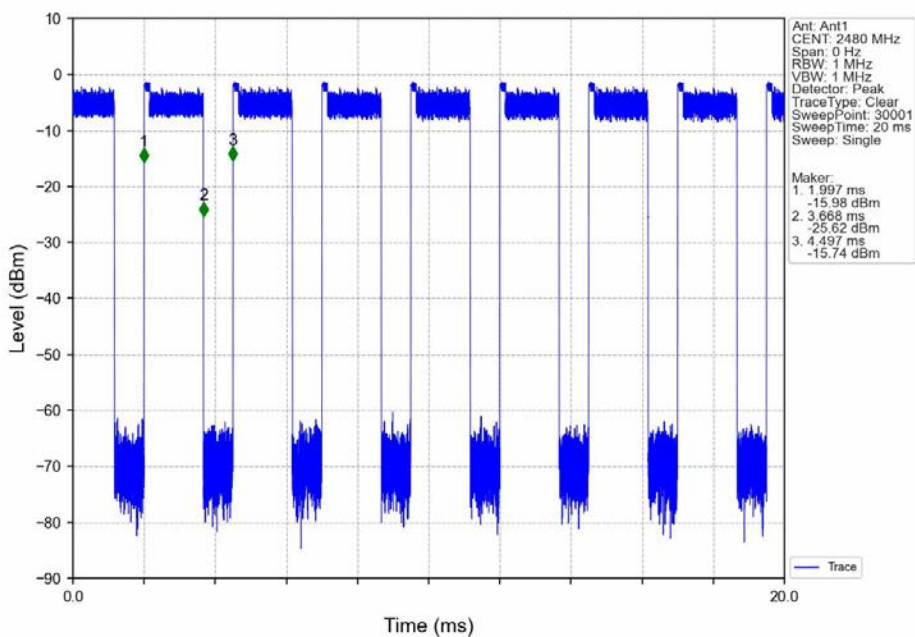
8DPSK_3DH5_2402MHz_Ant1_NTNV



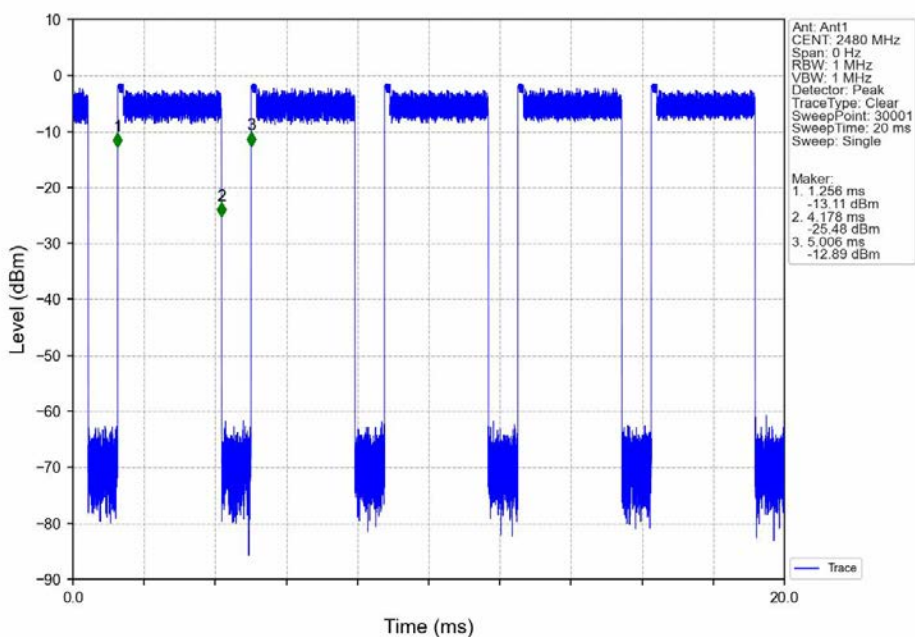
8DPSK_3DH1_2480MHz_Ant1_NTNV



8DPSK_3DH3_2480MHz_Ant1_NTNV



8DPSK_3DH5_2480MHz_Ant1_NTNV



6. Spurious Emission Intensity

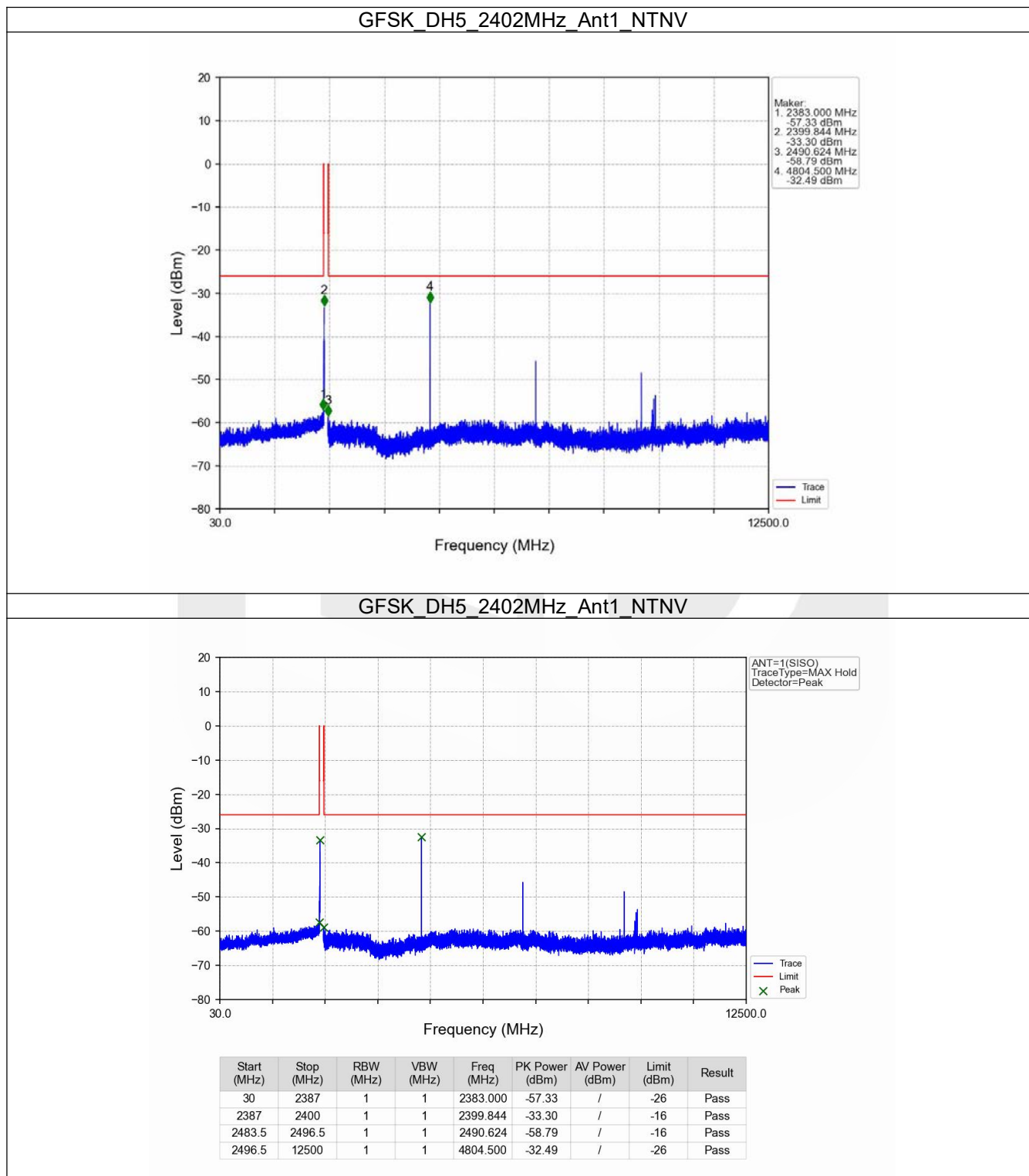
6.1 Test Result

6.1.1 TxSe_NTNV

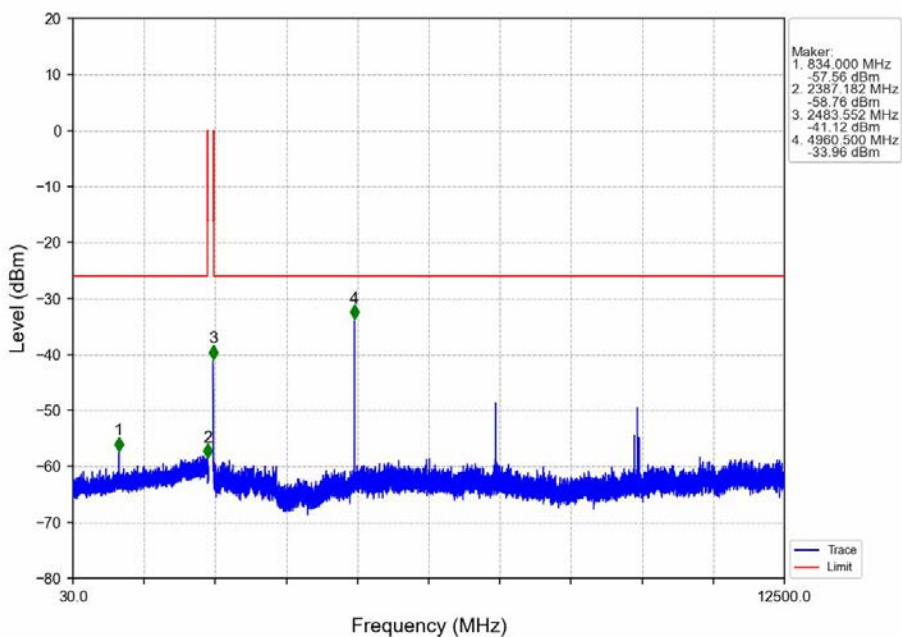
NTNV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (uW /MHz)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm /MHz)	PK Power (uW /MHz)	AV Power (dBm /MHz)	AV Power (uW /MHz)		
GFSK	SISO	2402	1	30	2387	2383	-57.33	0.002	/	/	2.5	Pass
				2387	2400	2399.844	-33.30	0.468	/	/	25	Pass
				2483.5	2496.5	2490.624	-58.79	0.001	/	/	25	Pass
				2496.5	12500	4804.5	-32.49	0.564	/	/	2.5	Pass
		2480	1	30	2387	834	-57.56	0.002	/	/	2.5	Pass
				2387	2400	2387.182	-58.76	0.001	/	/	25	Pass
				2483.5	2496.5	2483.552	-41.12	0.077	/	/	25	Pass
				2496.5	12500	4960.5	-33.96	0.402	/	/	2.5	Pass
π /4DQPSK	SISO	2402	1	30	2387	2354.5	-57.69	0.002	/	/	2.5	Pass
				2387	2400	2399.922	-37.06	0.197	/	/	25	Pass
				2483.5	2496.5	2487.049	-58.86	0.001	/	/	25	Pass
				2496.5	12500	4804.5	-32.68	0.540	/	/	2.5	Pass
		2480	1	30	2387	2359.5	-58.10	0.002	/	/	2.5	Pass
				2387	2400	2394.033	-59.12	0.001	/	/	25	Pass
				2483.5	2496.5	2483.656	-44.16	0.038	/	/	25	Pass
				2496.5	12500	4960.5	-35.28	0.296	/	/	2.5	Pass
8DPSK	SISO	2402	1	30	2387	2372.5	-57.72	0.002	/	/	2.5	Pass
				2387	2400	2399.896	-36.03	0.249	/	/	25	Pass
				2483.5	2496.5	2485.203	-58.89	0.001	/	/	25	Pass
				2496.5	12500	4804.5	-33.46	0.451	/	/	2.5	Pass
		2480	1	30	2387	2278.5	-56.97	0.002	/	/	2.5	Pass
				2387	2400	2397.855	-59.22	0.001	/	/	25	Pass
				2483.5	2496.5	2483.565	-43.56	0.044	/	/	25	Pass
				2496.5	12500	4960.5	-36.63	0.217	/	/	2.5	Pass

6.2 Test Graph

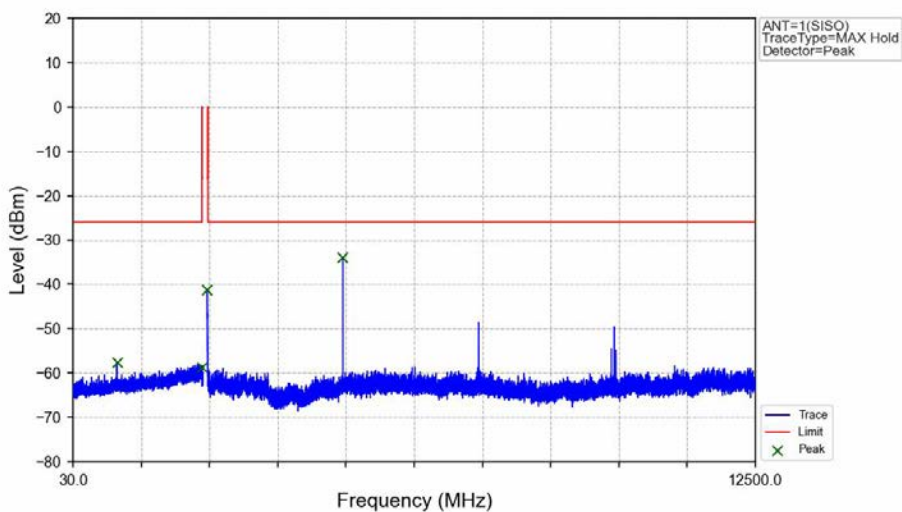
6.2.1 TxSe_NTNV



GFSK_DH5_2480MHz_Ant1_NTNV

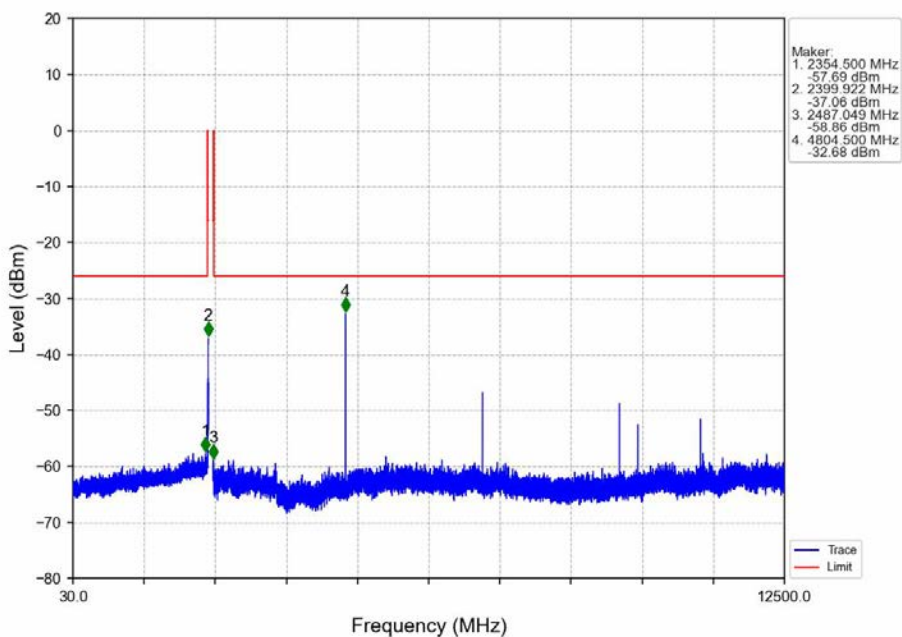


GFSK_DH5_2480MHz_Ant1_NTNV

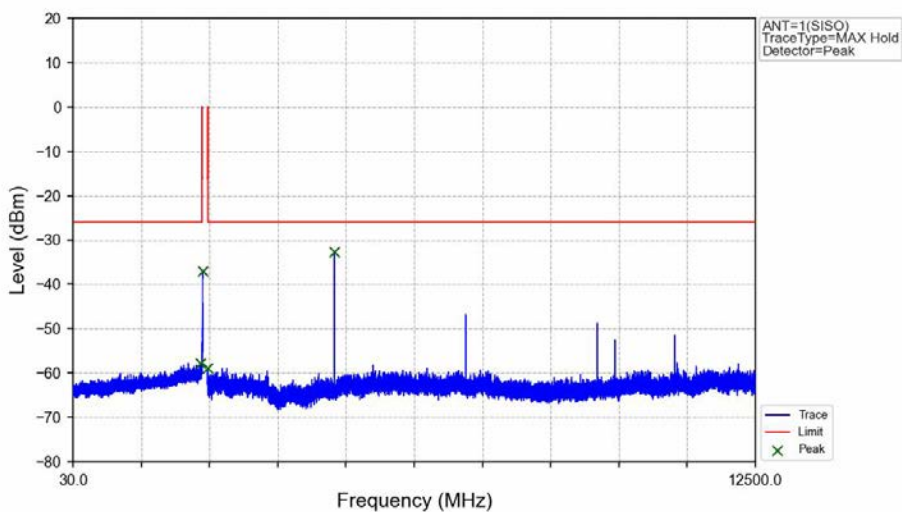


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	834.000	-57.56	/	-26	Pass
2387	2400	1	1	2387.182	-58.76	/	-16	Pass
2483.5	2496.5	1	1	2483.552	-41.12	/	-16	Pass
2496.5	12500	1	1	4960.500	-33.96	/	-26	Pass

$\pi/4$ DQPSK_2DH5_2402MHz_Ant1_NTNV

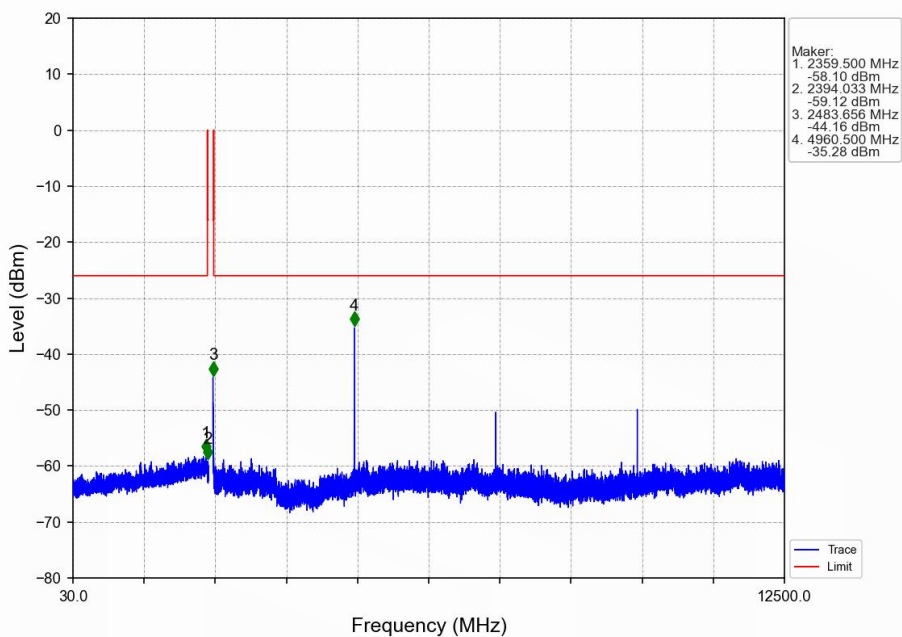


$\pi/4$ DQPSK_2DH5_2402MHz_Ant1_NTNV

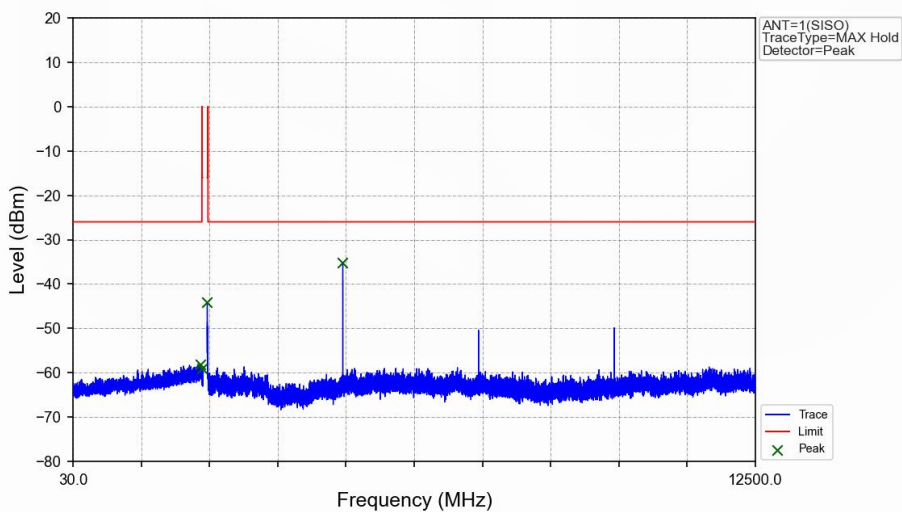


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2354.500	-57.69	/	-26	Pass
2387	2400	1	1	2399.922	-37.06	/	-16	Pass
2483.5	2496.5	1	1	2487.049	-58.86	/	-16	Pass
2496.5	12500	1	1	4804.500	-32.68	/	-26	Pass

$\pi/4$ DQPSK_2DH5_2480MHz_Ant1_NTNV

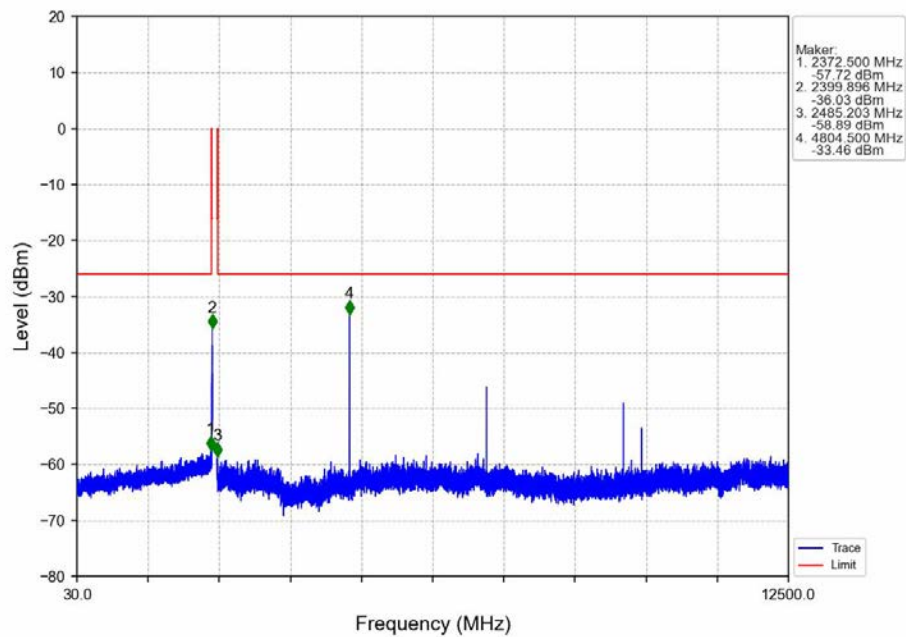


$\pi/4$ DQPSK_2DH5_2480MHz_Ant1_NTNV

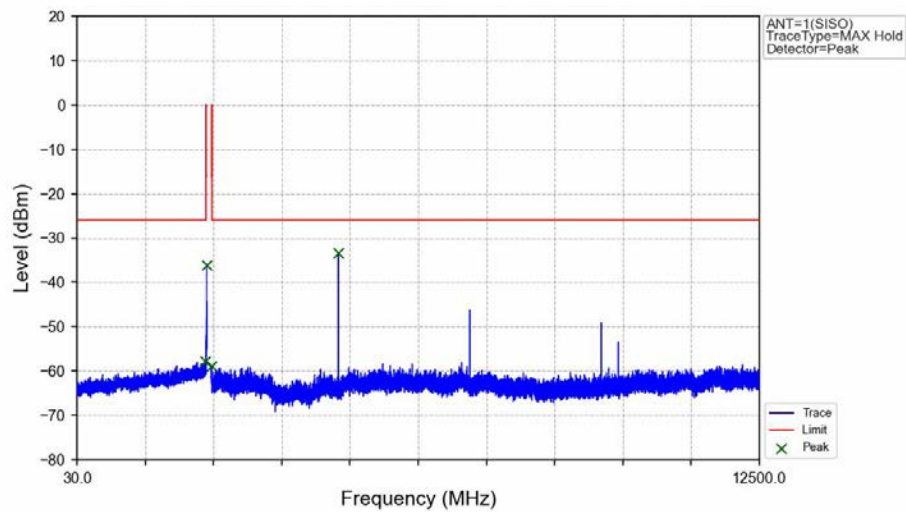


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2359.500	-58.10	/	-26	Pass
2387	2400	1	1	2394.033	-59.12	/	-16	Pass
2483.5	2496.5	1	1	2483.656	-44.16	/	-16	Pass
2496.5	12500	1	1	4960.500	-35.28	/	-26	Pass

8DPSK_3DH5_2402MHz_Ant1_NTNV

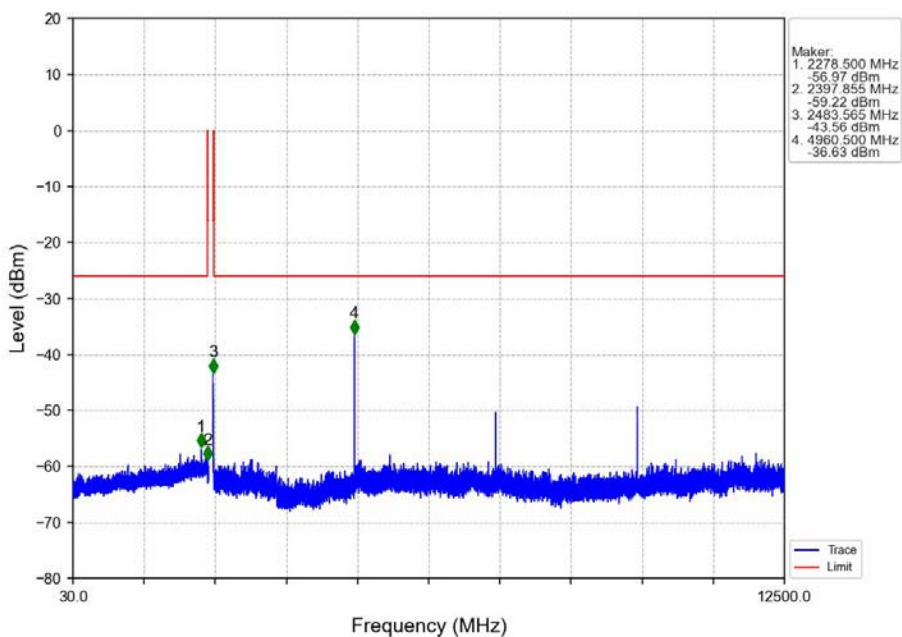


8DPSK_3DH5_2402MHz_Ant1_NTNV

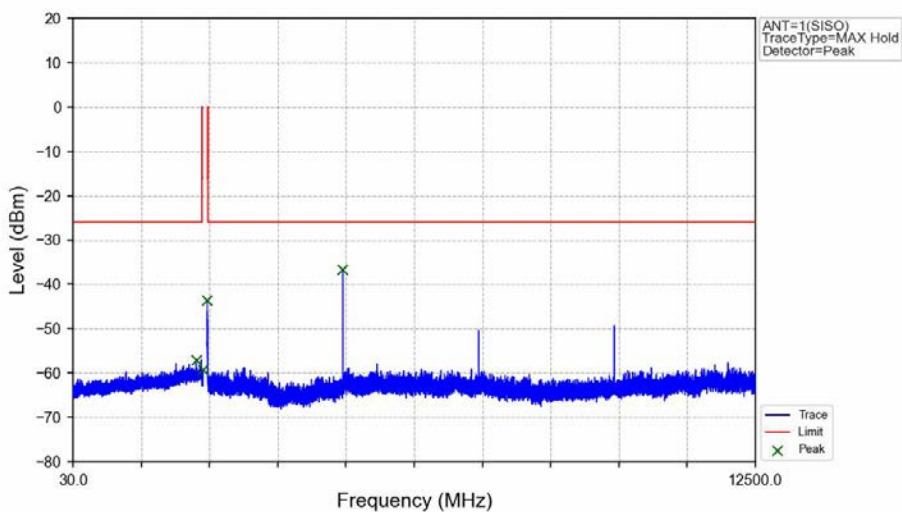


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2372.500	-57.72	/	-26	Pass
2387	2400	1	1	2399.896	-36.03	/	-16	Pass
2483.5	2496.5	1	1	2485.203	-58.89	/	-16	Pass
2496.5	12500	1	1	4804.500	-33.46	/	-26	Pass

8DPSK_3DH5_2480MHz_Ant1_NTNV



8DPSK_3DH5_2480MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	2387	1	1	2278.500	-56.97	/	-26	Pass
2387	2400	1	1	2397.855	-59.22	/	-16	Pass
2483.5	2496.5	1	1	2483.565	-43.56	/	-16	Pass
2496.5	12500	1	1	4960.500	-36.63	/	-26	Pass

7. Secondary Radiated Emission

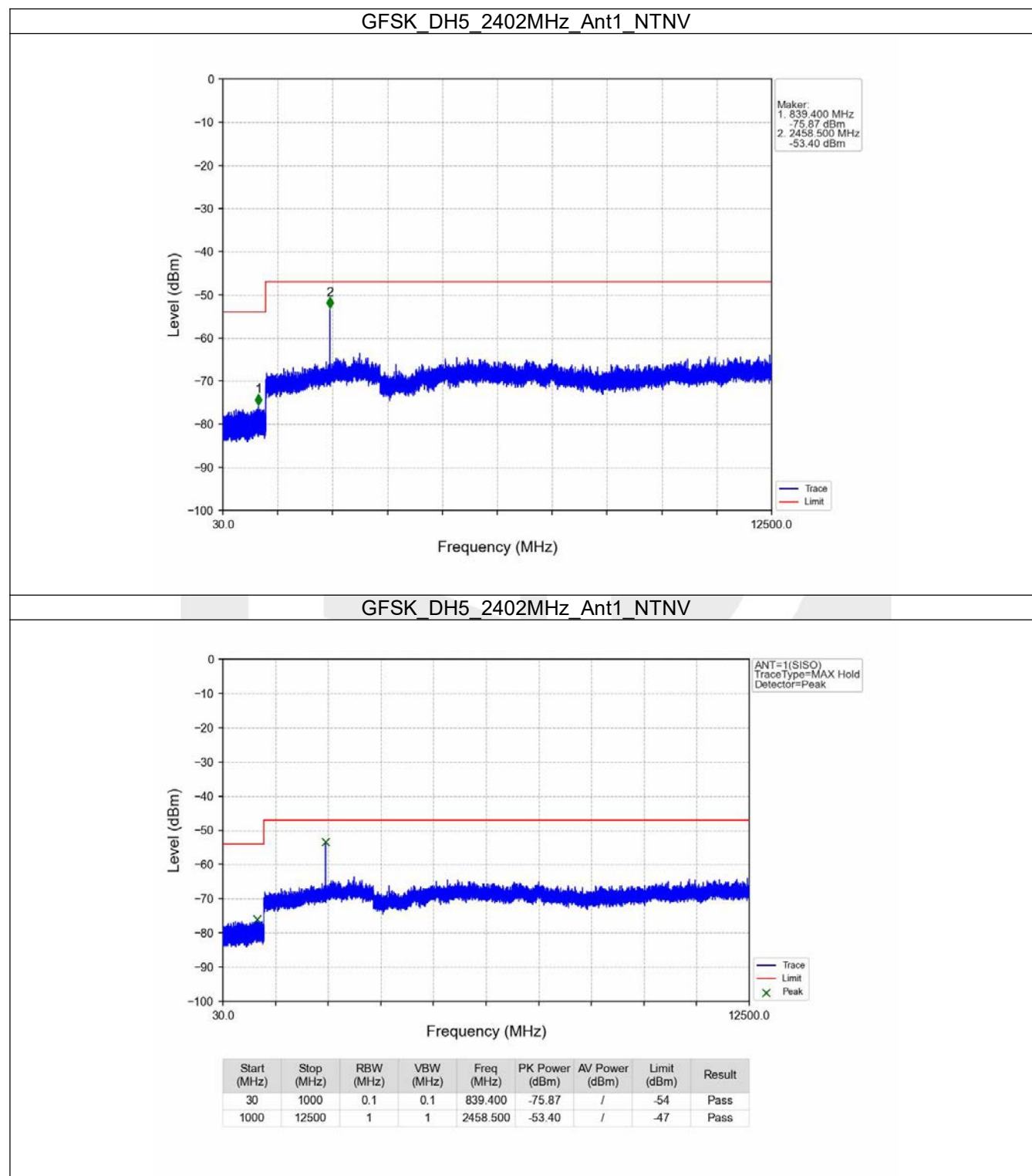
7.1 Test Result

7.1.1 RxSe_NTNV

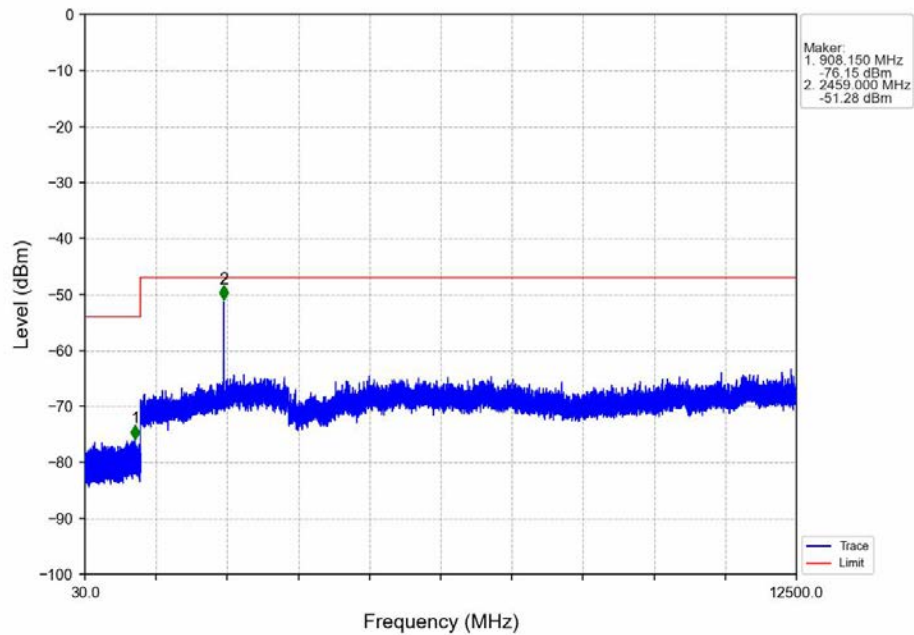
NTNV												
Mode	TX Type	Freq. (MHz)	ANT	Freq. Range		Marker					Limit (nW)	Verdict
				Start (MHz)	Stop (MHz)	Freq. (MHz)	PK Power (dBm)	PK Power (nW)	AV Power (dBm)	AV Power (nW)		
GFSK	SISO	2402	1	30	1000	839.4	-75.87	0.026	/	/	4	Pass
				1000	12500	2458.5	-53.40	4.571	/	/	20	Pass
		2480	1	30	1000	908.15	-76.15	0.024	/	/	4	Pass
				1000	12500	2459	-51.28	7.447	-76.95	0.020	20	Pass
π /4DQPSK	SISO	2402	1	30	1000	804.2	-75.71	0.027	/	/	4	Pass
				1000	12500	11563.5	-63.63	0.434	/	/	20	Pass
		2480	1	30	1000	902.5	-75.60	0.028	/	/	4	Pass
				1000	12500	2448	-57.92	1.614	/	/	20	Pass
8DPSK	SISO	2402	1	30	1000	770	-75.85	0.026	/	/	4	Pass
				1000	12500	2459	-53.20	4.786	/	/	20	Pass
		2480	1	30	1000	405.45	-75.86	0.026	/	/	4	Pass
				1000	12500	2458.5	-54.02	3.963	/	/	20	Pass

7.2 Test Graph

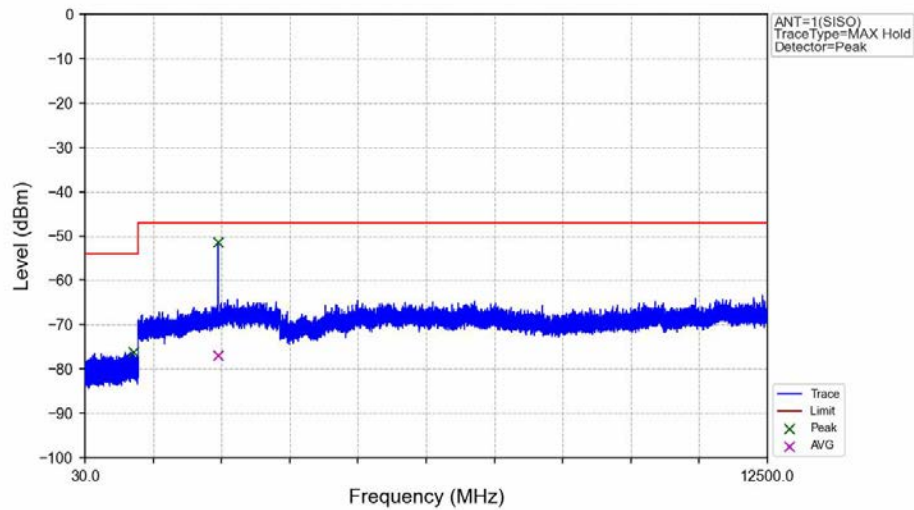
7.2.1 RxSe_NTNV



GFSK_DH5_2480MHz_Ant1_NTNV

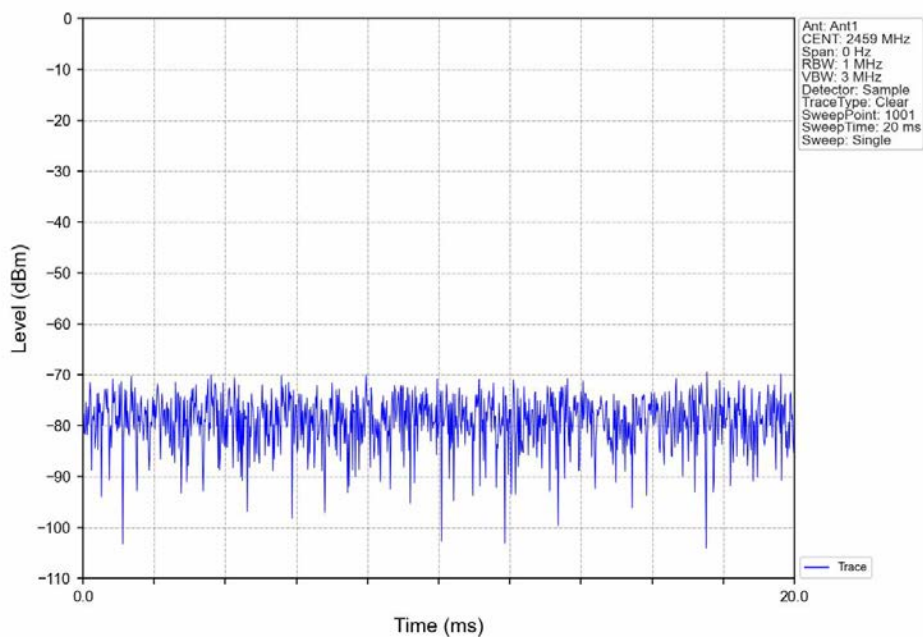


GFSK_DH5_2480MHz_Ant1_NTNV

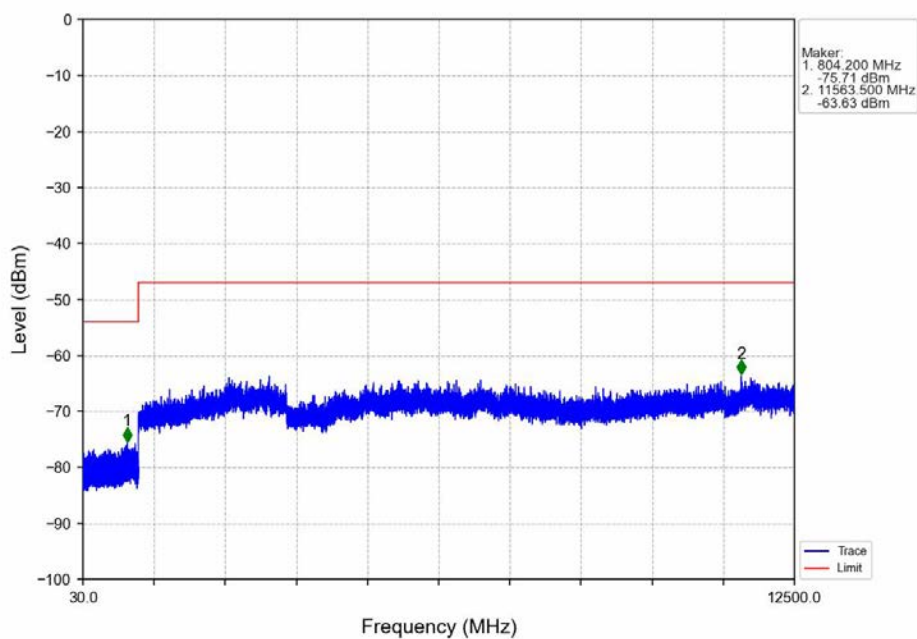


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	908.150	-76.15	/	-54	Pass
1000	12500	1	1	2459.000	-51.28	-76.95	-47	Pass

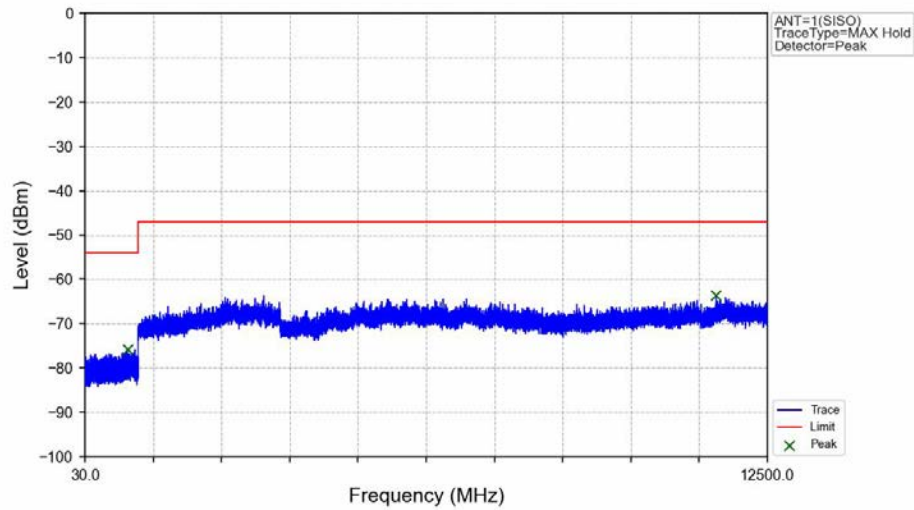
GFSK_DH5_2480MHz_Ant1_NTNV



$\pi/4$ DQPSK_2DH5_2402MHz_Ant1_NTNV

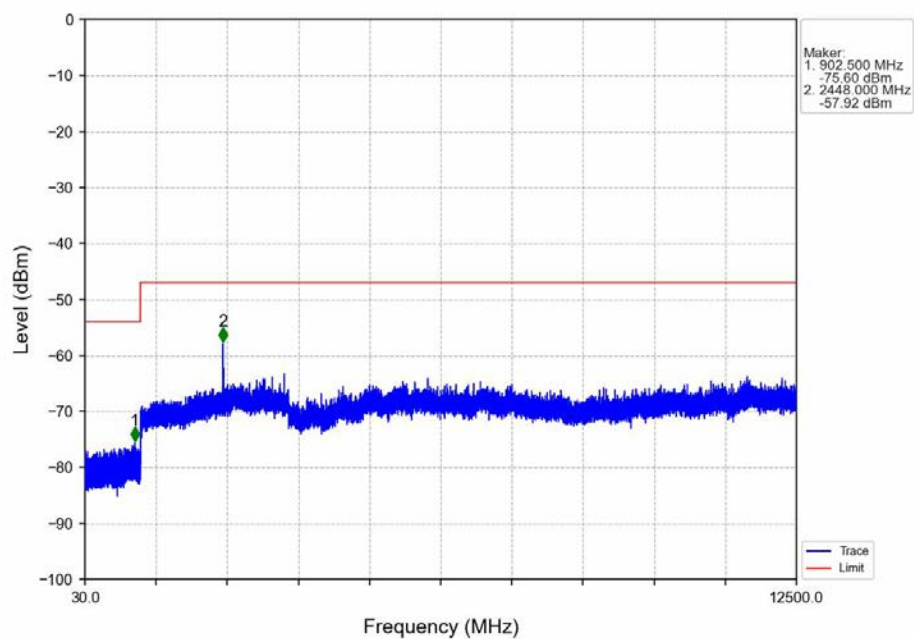


π /4DQPSK_2DH5_2402MHz_Ant1_NTNV

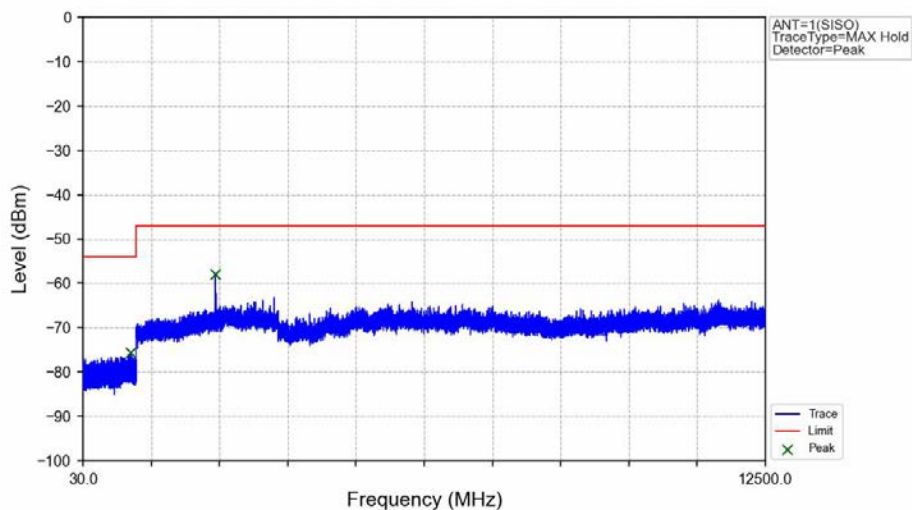


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	804.200	-75.71	/	-54	Pass
1000	12500	1	1	11563.500	-63.63	/	-47	Pass

π /4DQPSK_2DH5_2480MHz_Ant1_NTNV

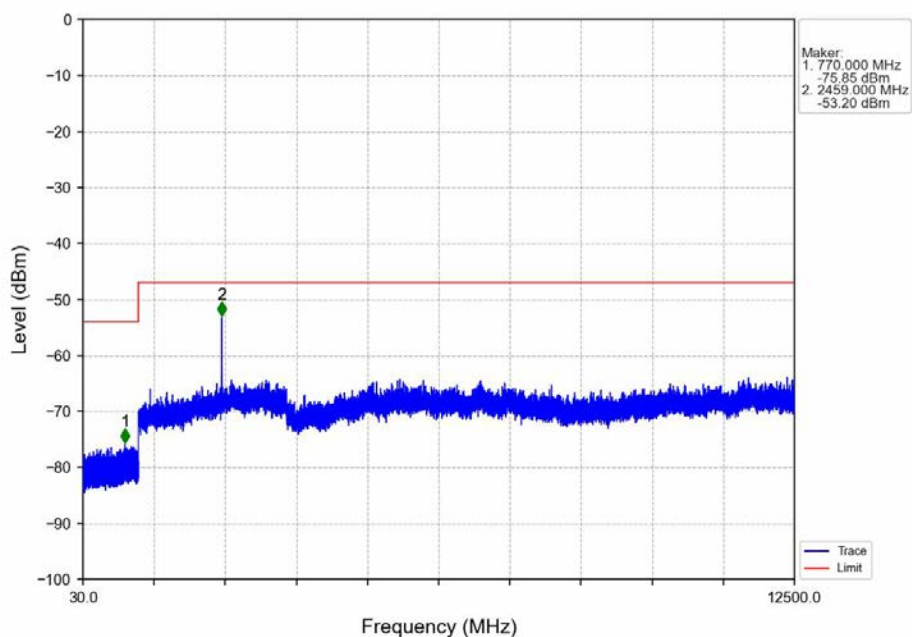


π /4DQPSK_2DH5_2480MHz_Ant1_NTNV

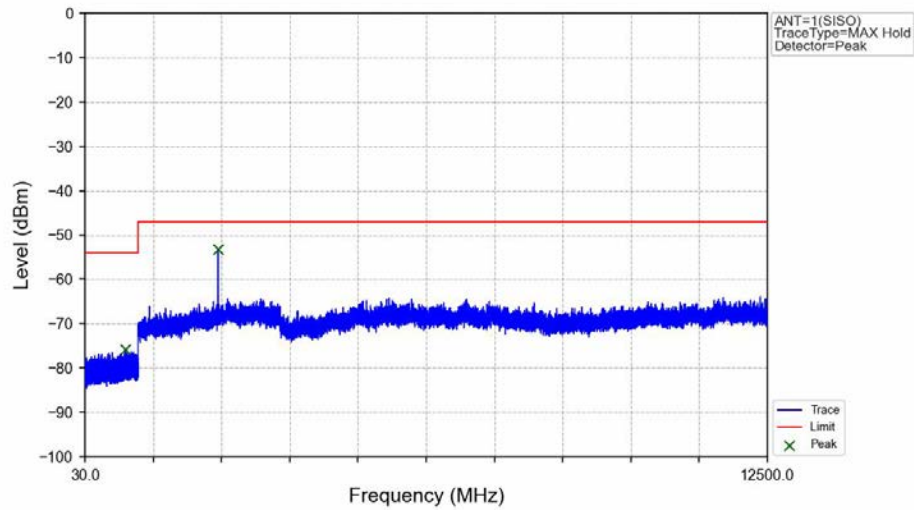


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	902.500	-75.60	/	-54	Pass
1000	12500	1	1	2448.000	-57.92	/	-47	Pass

8DPSK_3DH5_2402MHz_Ant1_NTNV

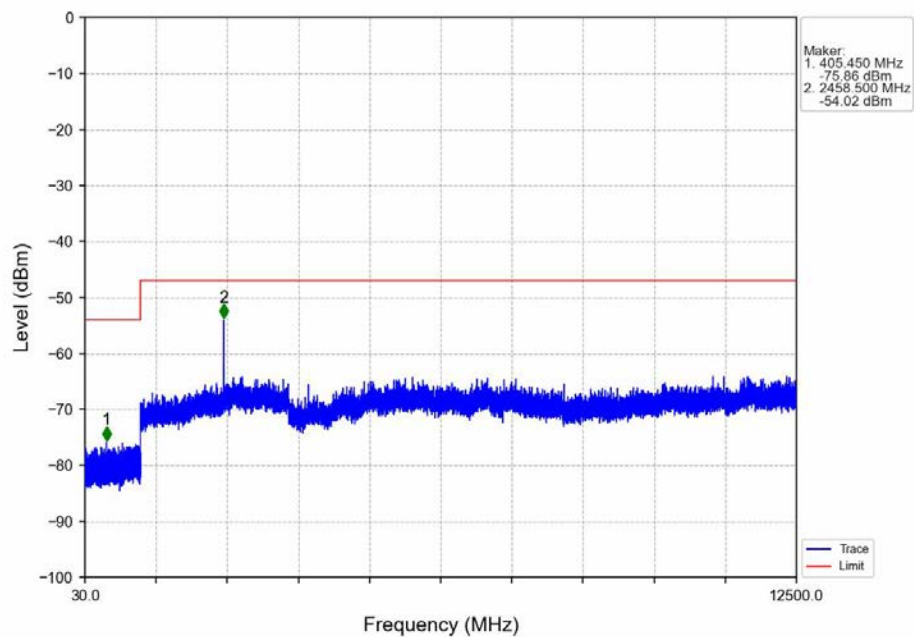


8DPSK_3DH5_2402MHz_Ant1_NTNV

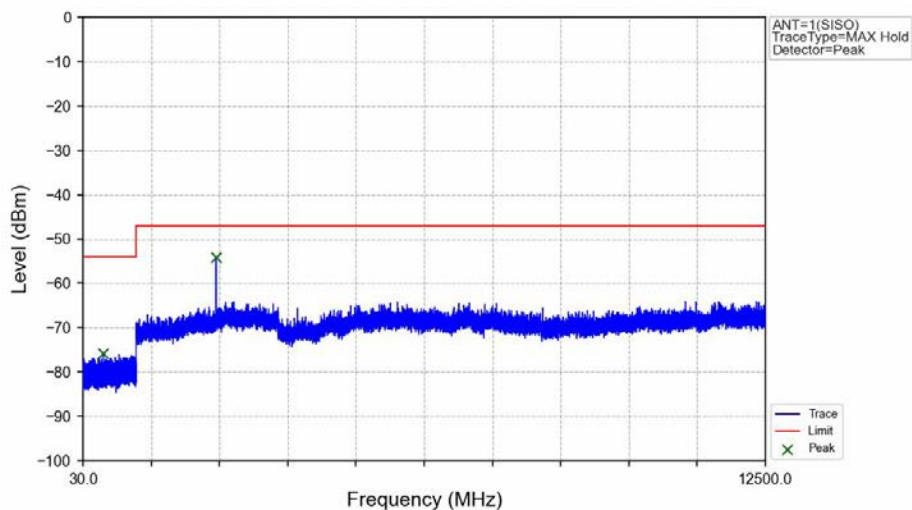


Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	AV Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	770.000	-75.85	/	-54	Pass
1000	12500	1	1	2459.000	-53.20	/	-47	Pass

8DPSK_3DH5_2480MHz_Ant1_NTNV



8DPSK_3DH5_2480MHz_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	VBW (MHz)	Freq (MHz)	PK Power (dBm)	A/V Power (dBm)	Limit (dBm)	Result
30	1000	0.1	0.1	405.450	-75.86	/	-54	Pass
1000	12500	1	1	2458.500	-54.02	/	-47	Pass

----- End of Report -----