1. Out of band rejection

1.1 Test Result

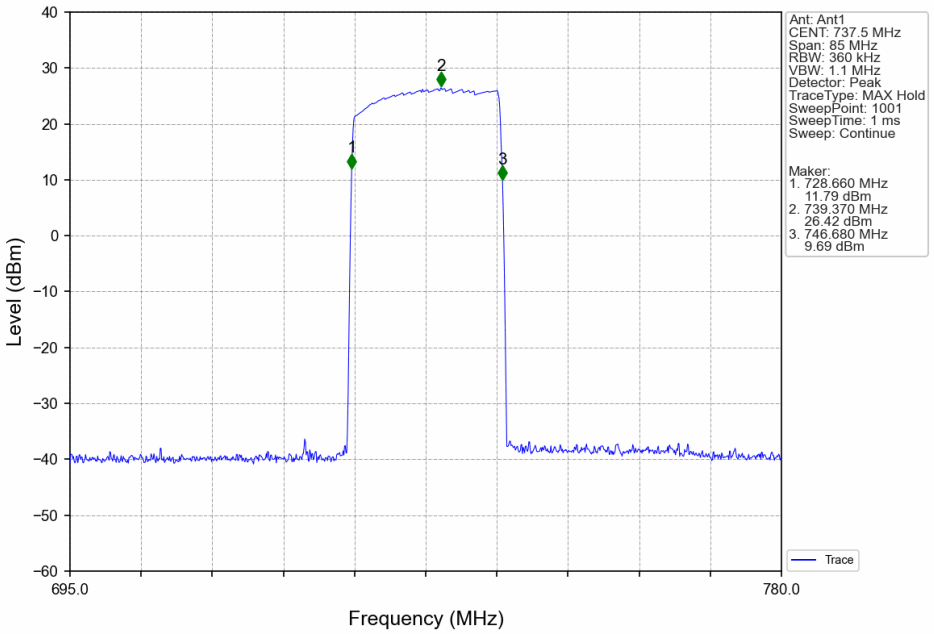
1.1.1 Band12

Band: 12 / NTNV							
Signal	Sweep Frequency Range (MHz)	TX Type	ANT	F0 (MHz)	FL (MHz)	FH (MHz)	Verdict
CW	695 - 780	SISO	1	739.370	728.660	746.680	Pass

1.2 Test Graph

1.2.1 Band12

Band12_CW_SISO_Ant1_NTNV



2. AGC threshold

2.1 Test Result

2.1.1 Band12

Band: 12 / NTNV					
Signal	Frequency (MHz)	TX Type	ANT	AGC Threshold (dBm)	Verdict
GMSK 0.2MHz	739.37	SISO	1	-0.30	Pass
AWGN 5MHz	739.37	SISO	1	-0.30	Pass
AWGN 100MHz	739.37	SISO	1	-0.30	Pass

3. Input-versus-output signal comparison

3.1 Test Result

3.1.1 Band12_OBW

Band: 12 / NTNV							
Signal			TX Type	ANT	99% OBW (MHz)		Verdict
Type	Level (dBm)	Frequency (MHz)			Output	Input	
GMSK 0.2MHz	2.7	739.37	SISO	1	0.245	0.244	Pass
	-0.3	739.37	SISO	1	0.243	0.245	Pass
AWGN 5MHz	2.7	739.37	SISO	1	4.555	4.550	Pass
	-0.3	739.37	SISO	1	4.542	4.547	Pass
AWGN 100MHz	2.7	739.37	SISO	1	17.792	97.486	Pass
	-0.3	739.37	SISO	1	17.757	97.375	Pass

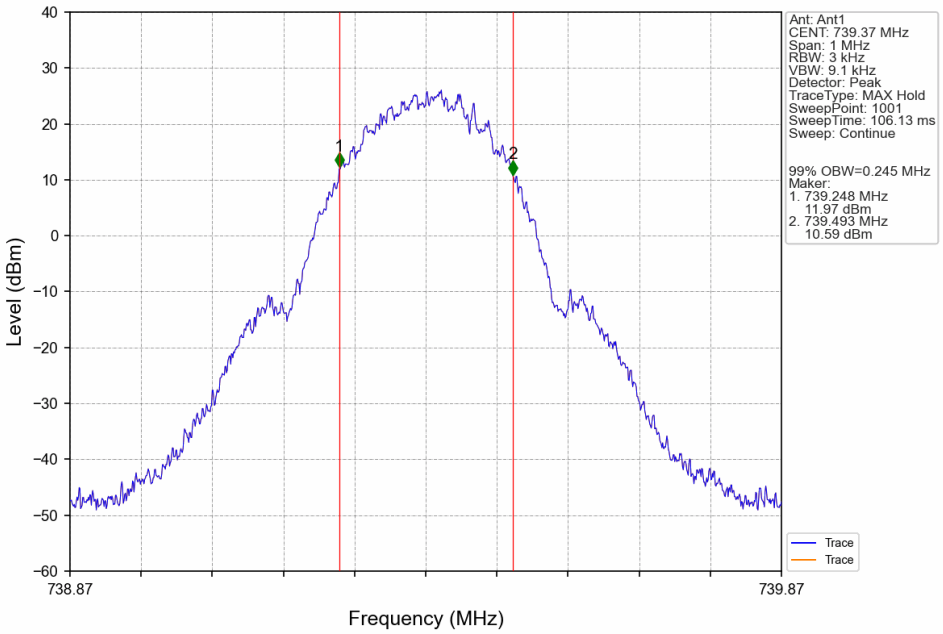
3.1.2 Band12_EBW

Band: 12 / NTNV							
Signal			TX Type	ANT	26dB EBW (MHz)		Verdict
Type	Level (dBm)	Frequency (MHz)			Output	Input	
GMSK 0.2MHz	2.7	739.37	SISO	1	0.316	0.316	Pass
	-0.3	739.37	SISO	1	0.313	0.314	Pass
AWGN 5MHz	2.7	739.37	SISO	1	5.139	5.148	Pass
	-0.3	739.37	SISO	1	5.139	5.128	Pass
AWGN 100MHz	2.7	739.37	SISO	1	19.842	100.908	Pass
	-0.3	739.37	SISO	1	19.791	100.763	Pass

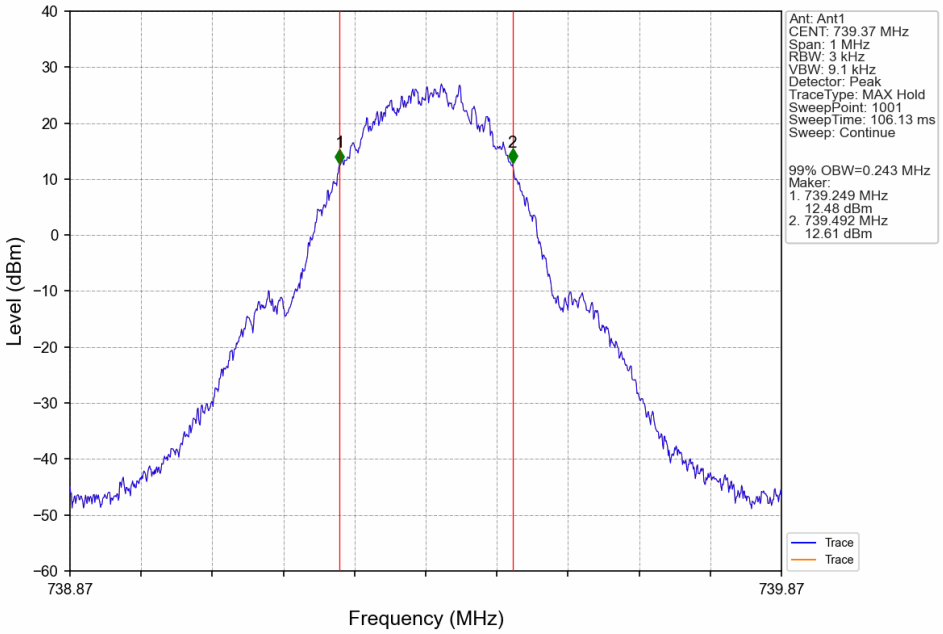
3.2 Test Graph

3.2.1 Band12_OBW

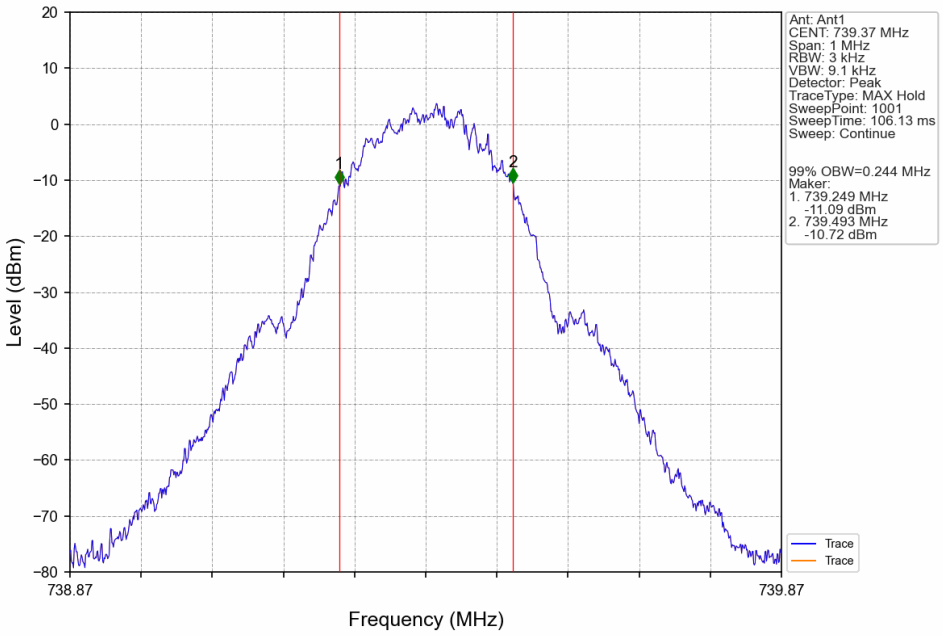
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_Output_AGC+3



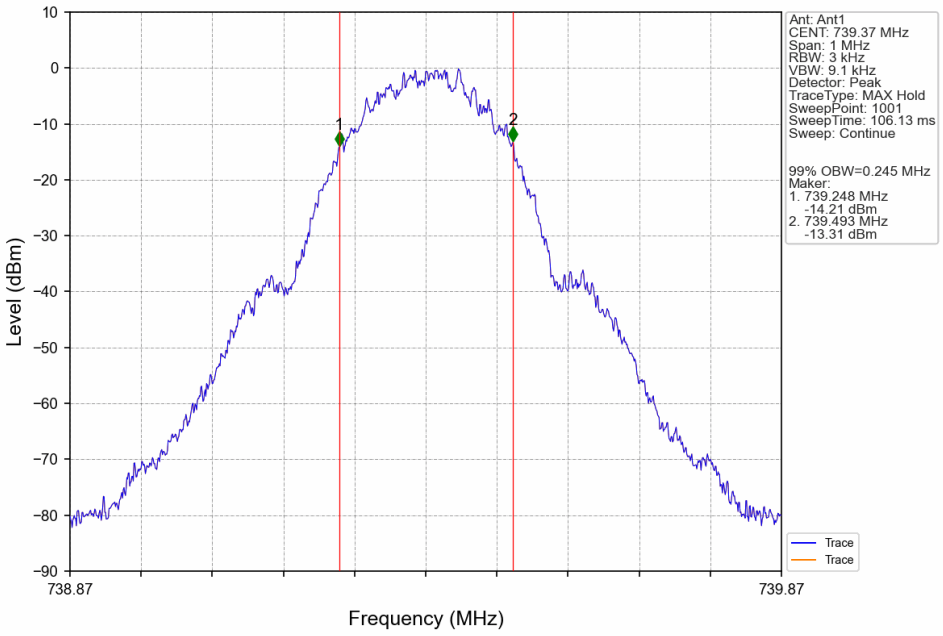
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_Output_AGC



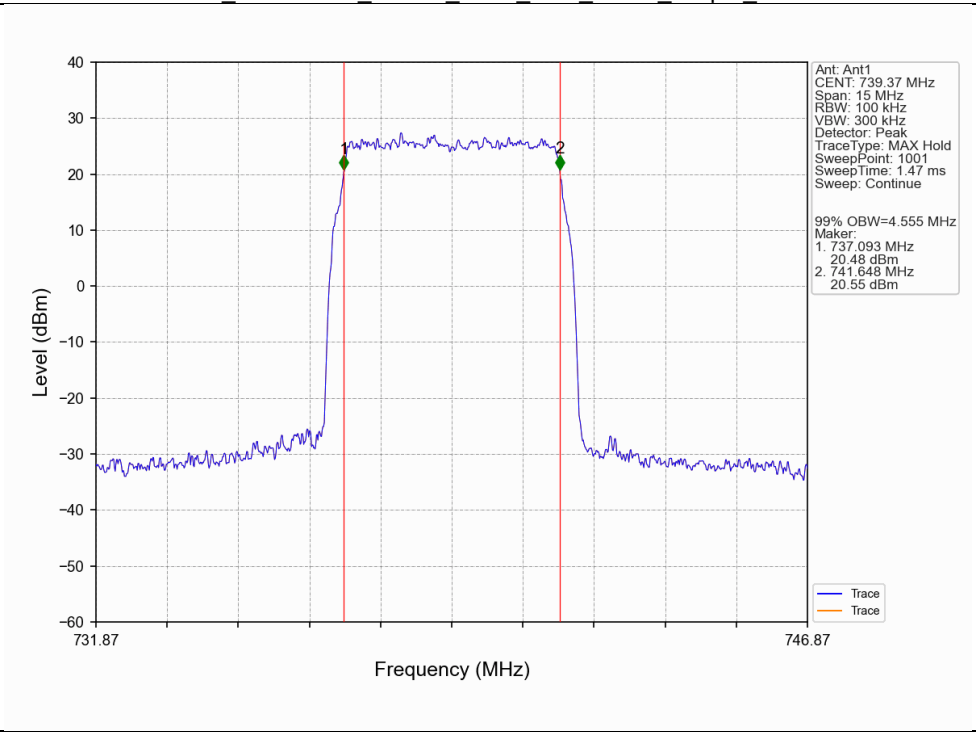
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_Input_AGC+3



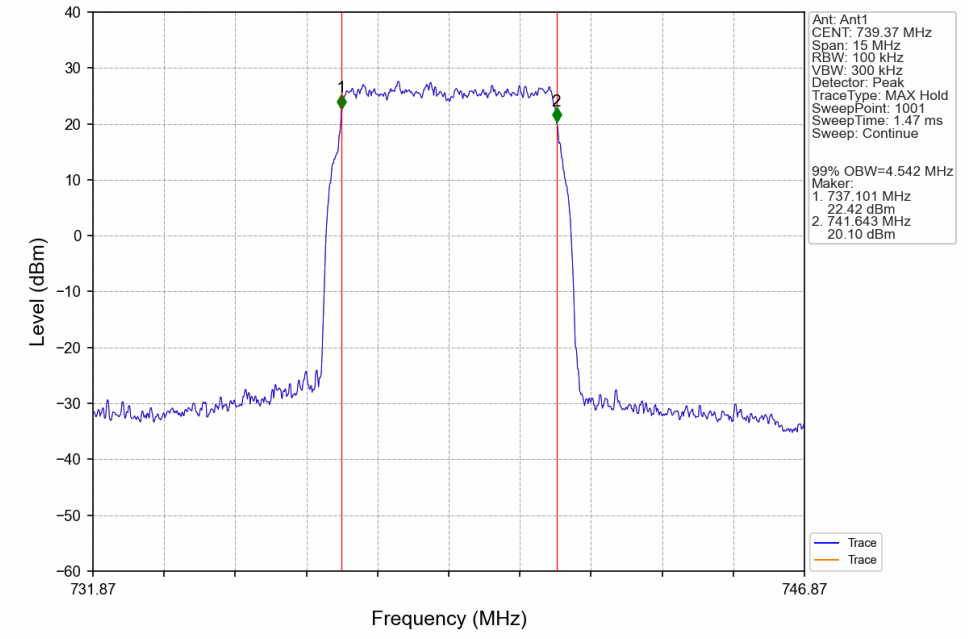
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_Input_AGC



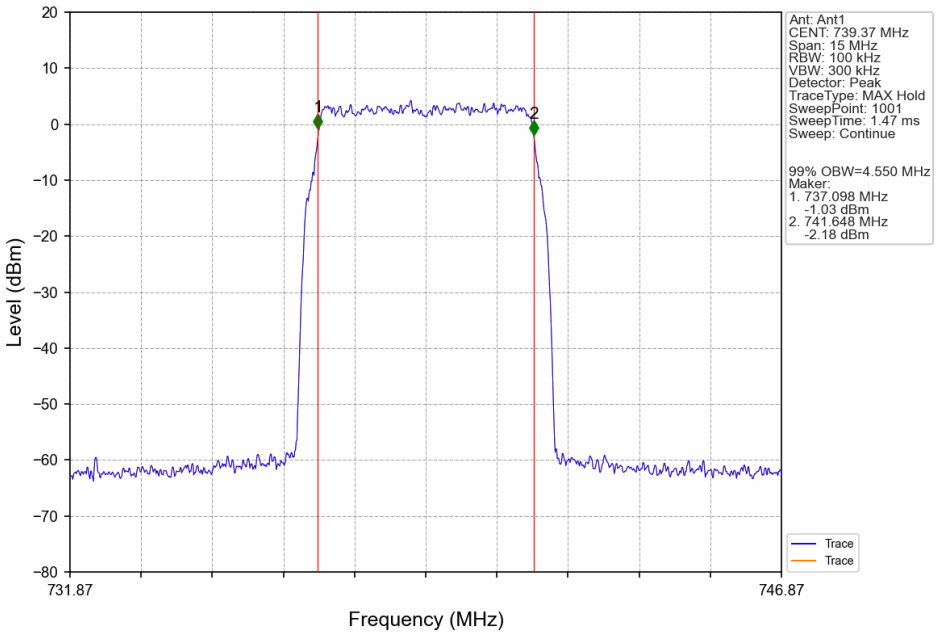
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_Output_AGC+3



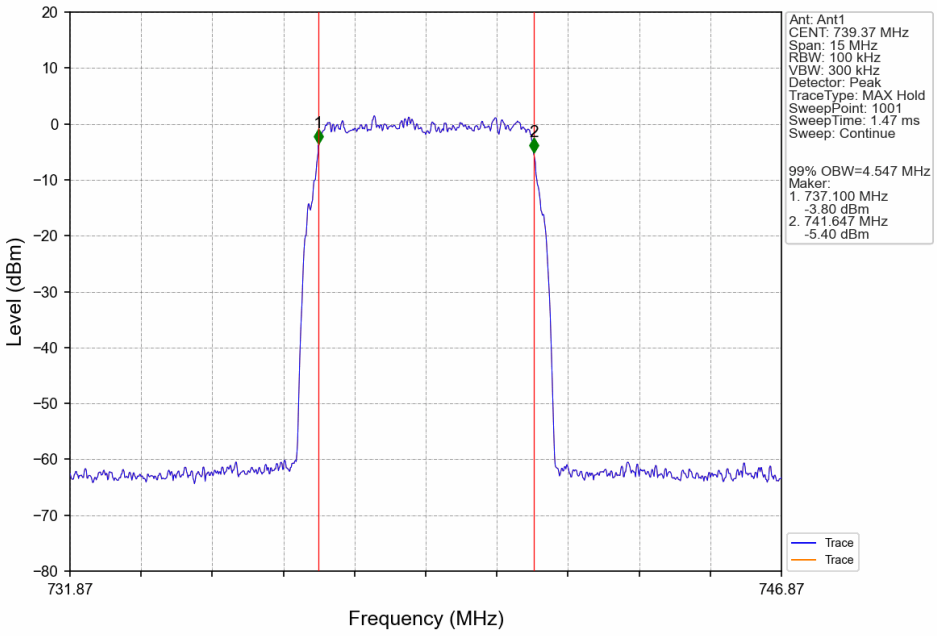
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_Output_AGC



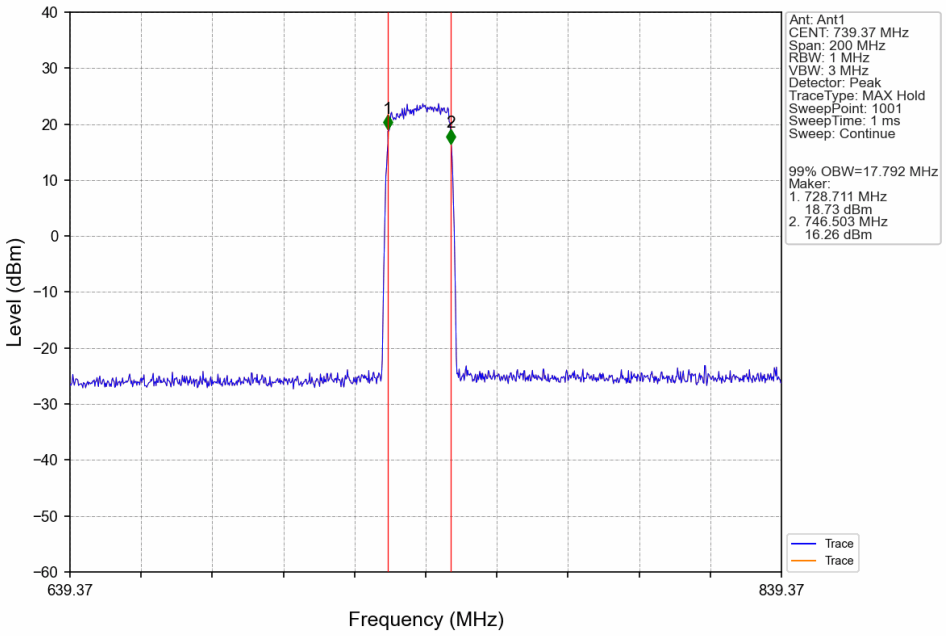
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_Input_AGC+3



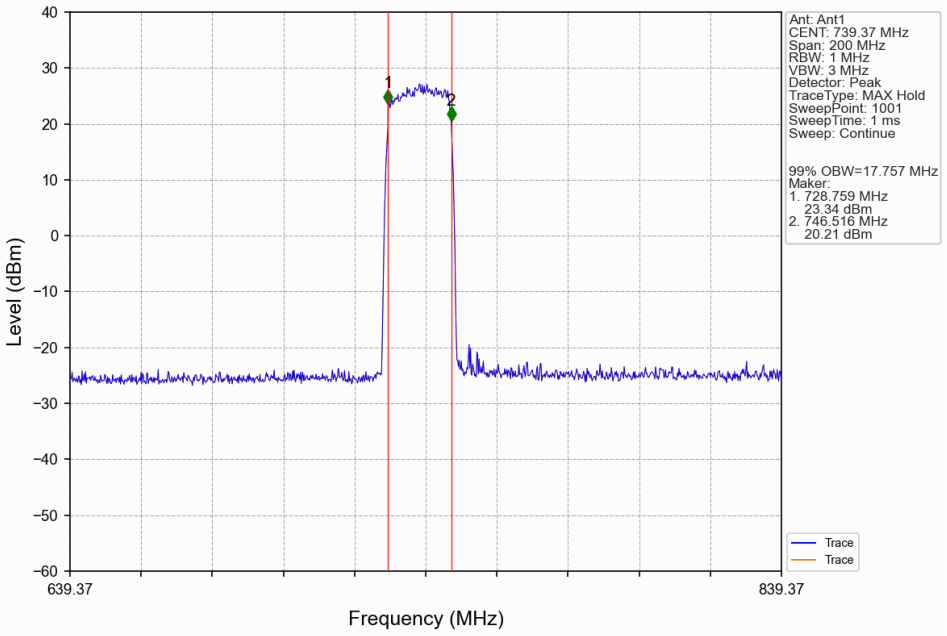
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_Input_AGC



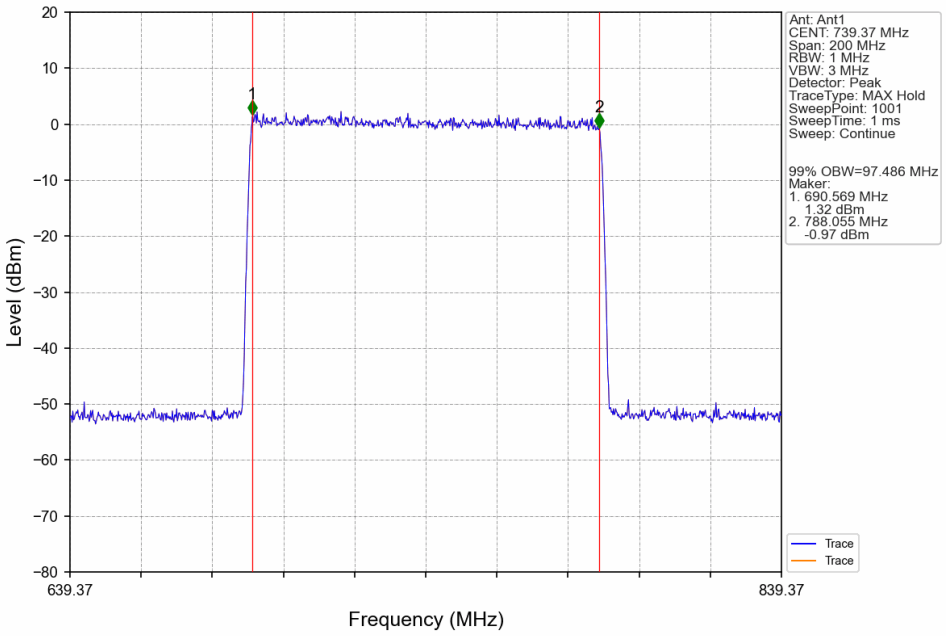
Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_Output_AGC+3



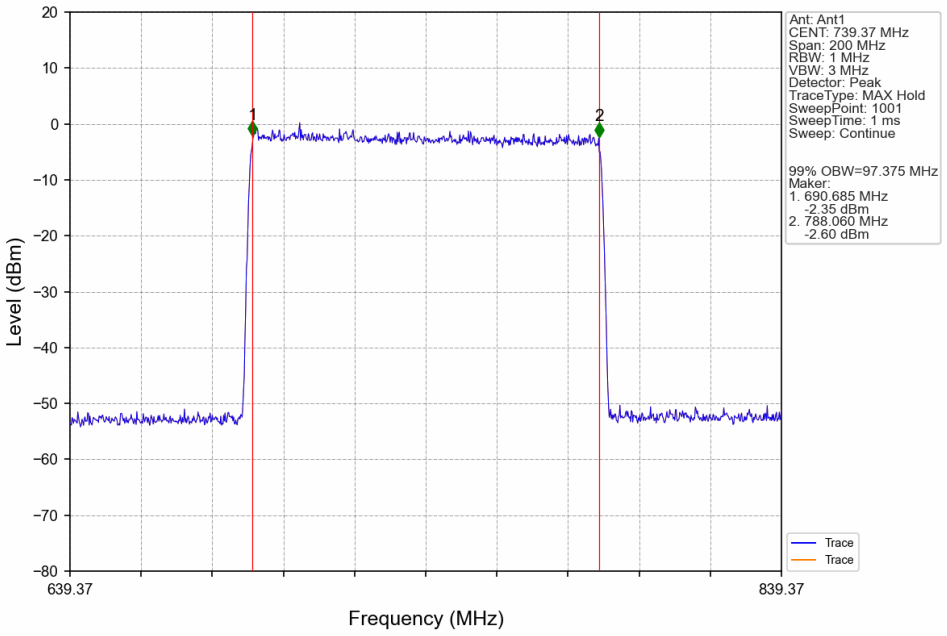
Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_Output_AGC



Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_Input_AGC+3

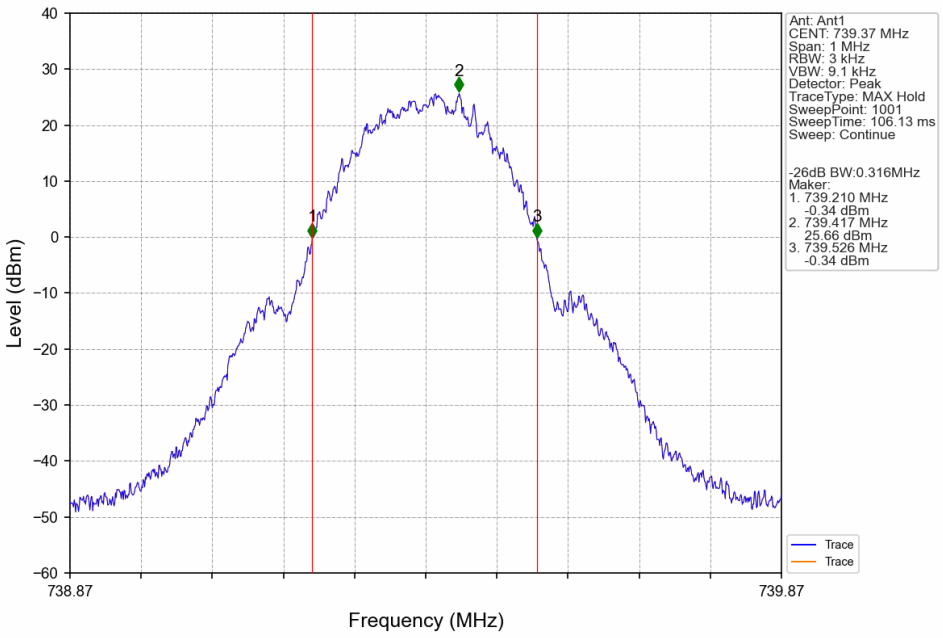


Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_Input_AGC

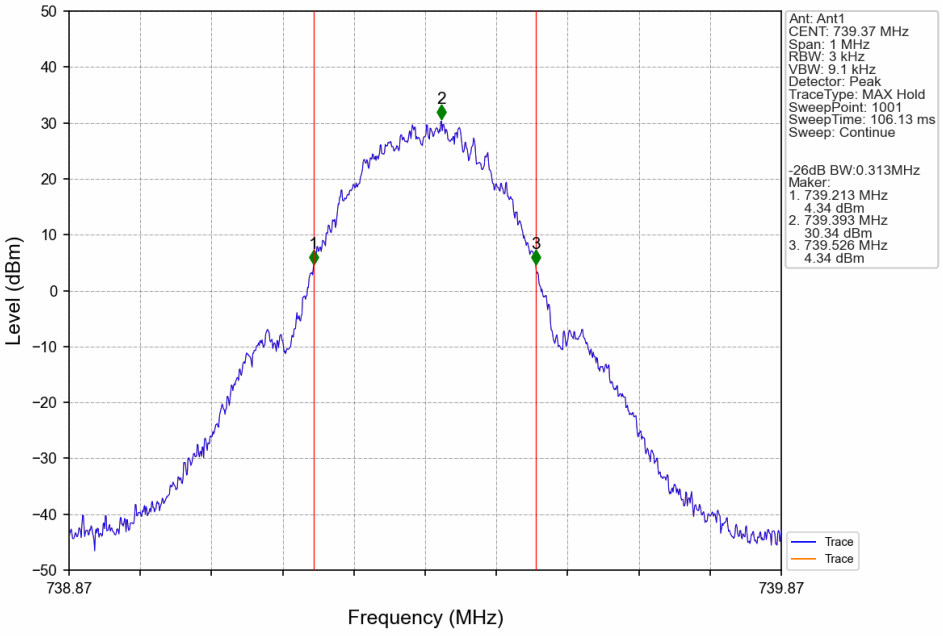


3.2.2 Band12_EBW

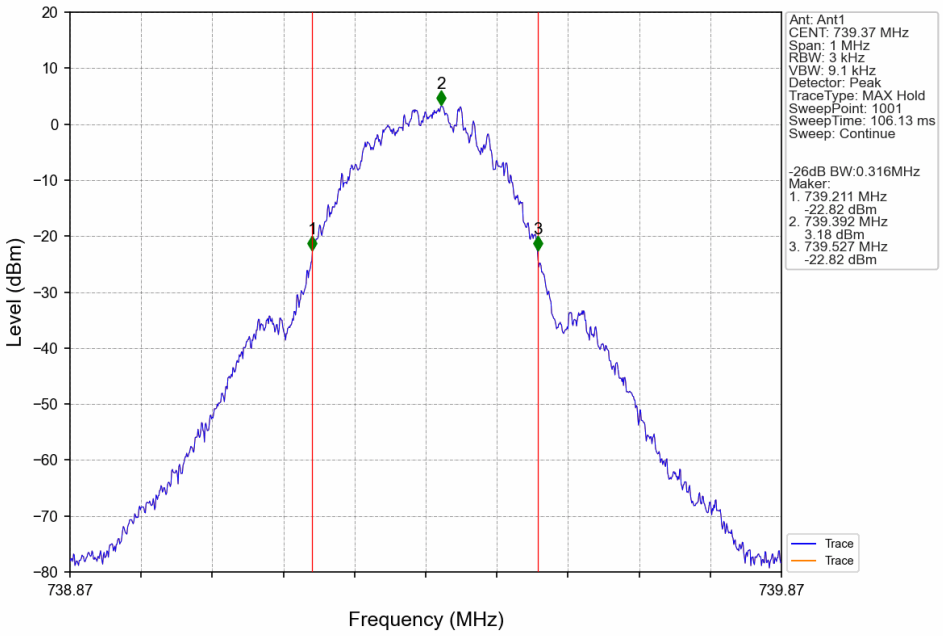
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_Output_AGC+3



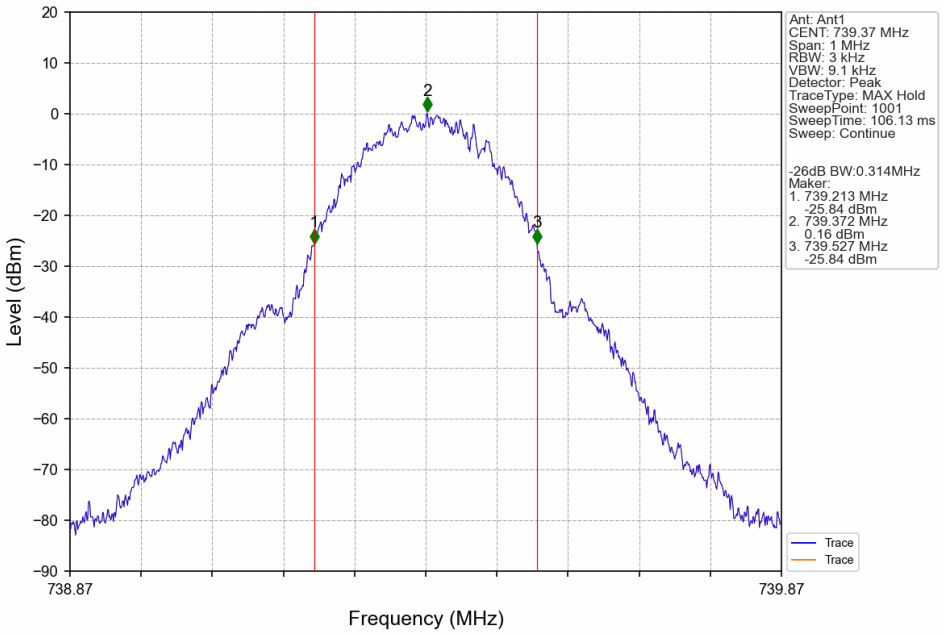
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_Output_AGC



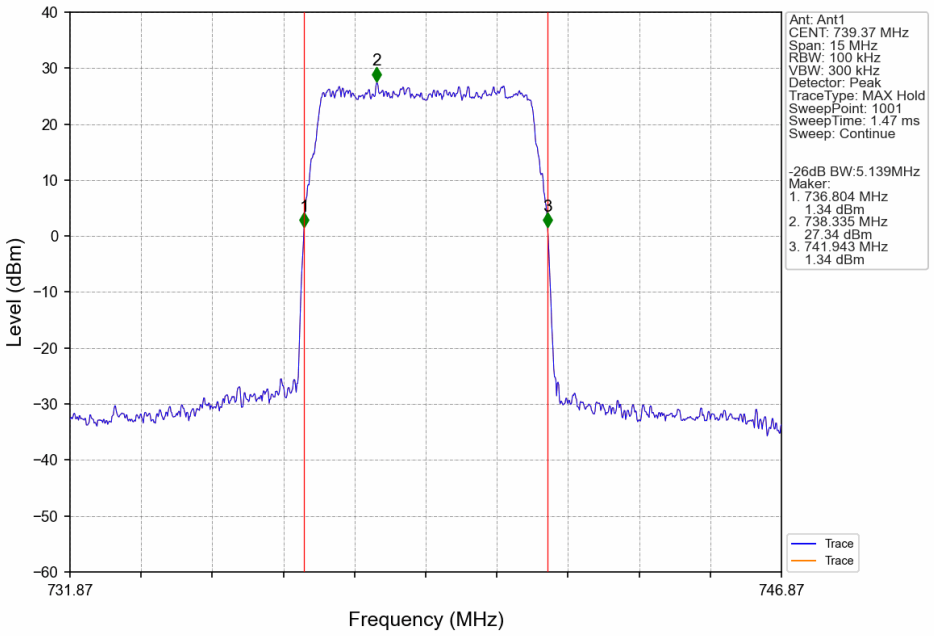
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_Input_AGC+3



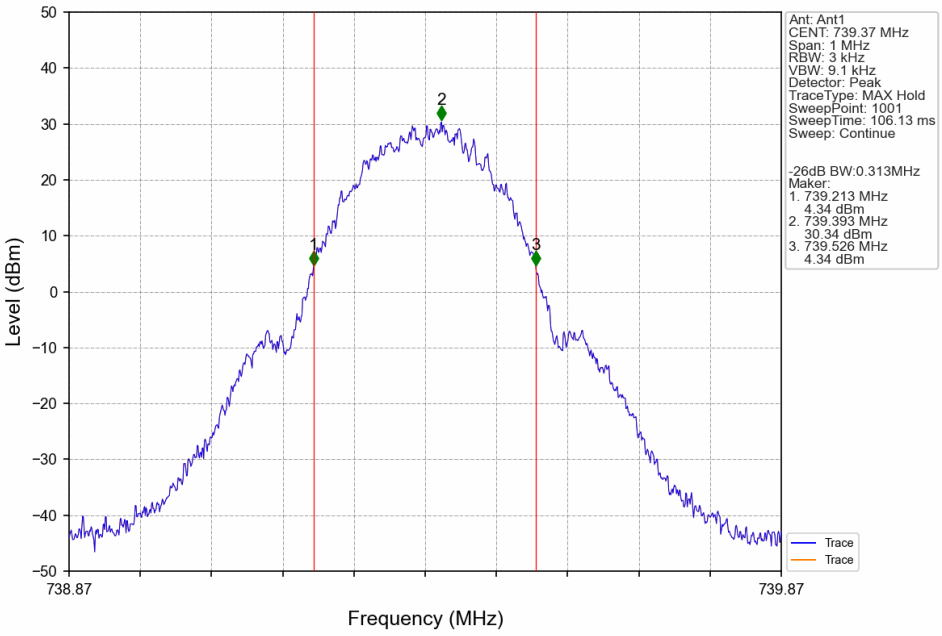
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_Input_AGC



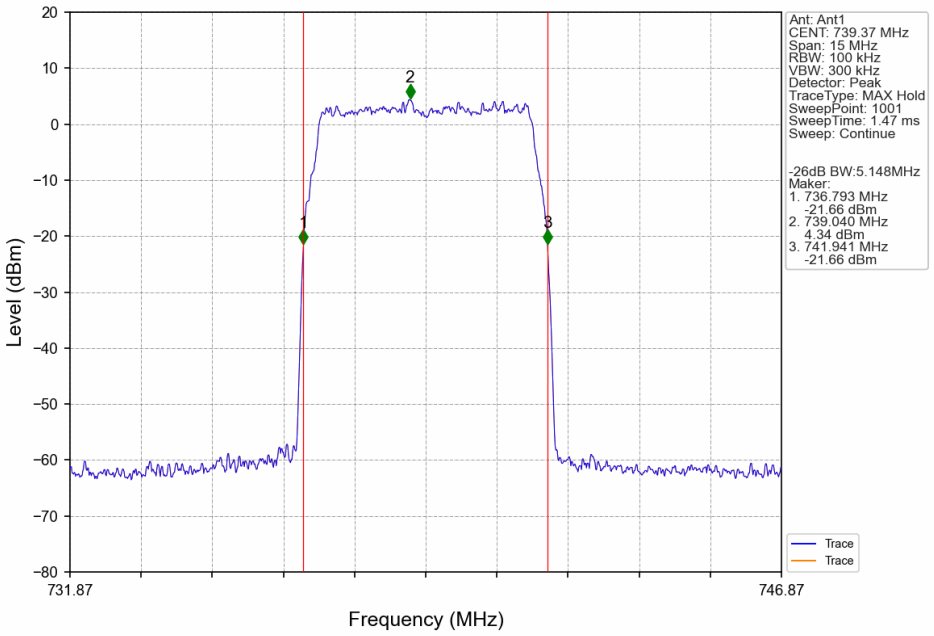
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_Output_AGC+3



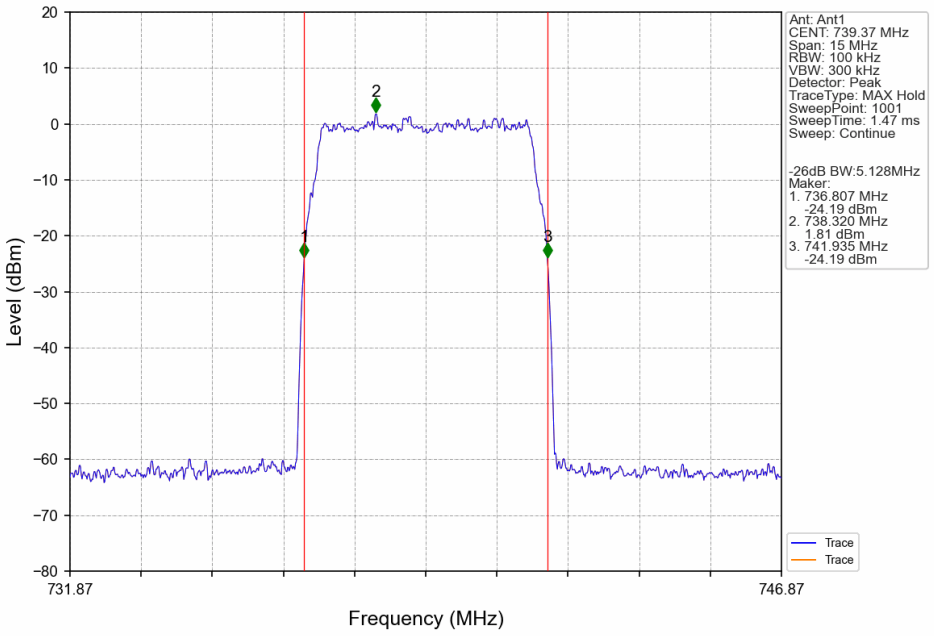
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_Output_AGC



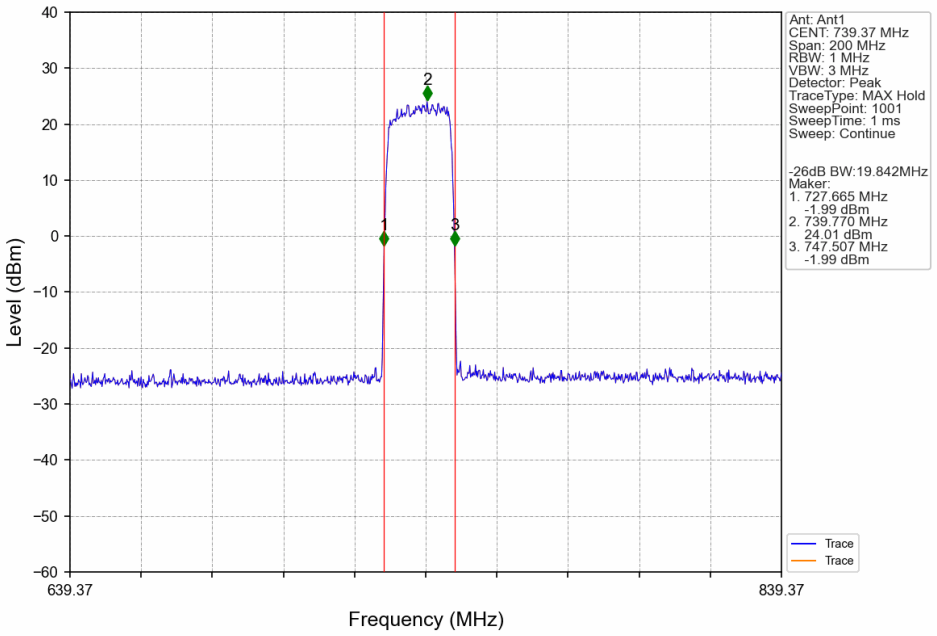
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_Input_AGC+3



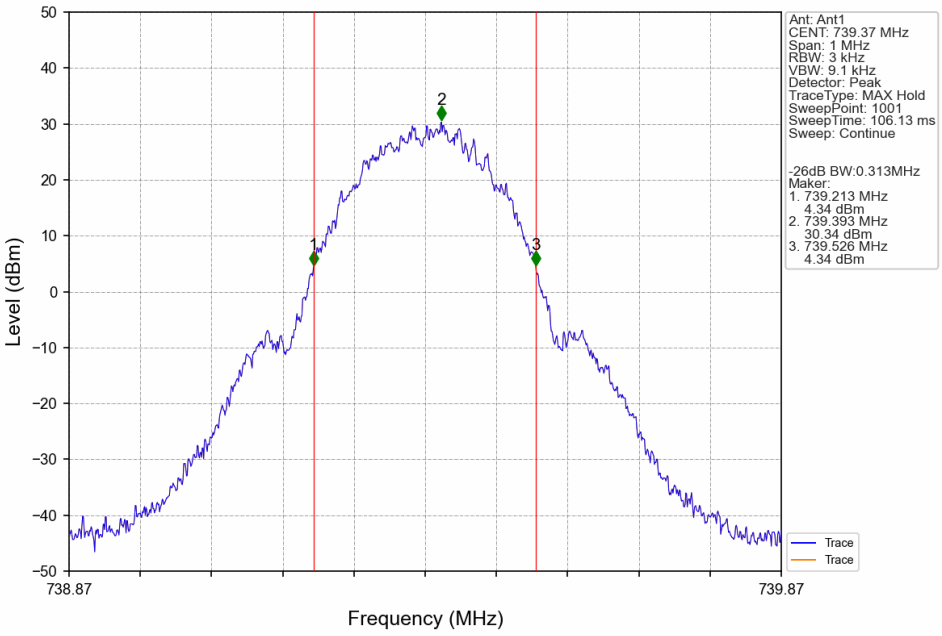
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_Input_AGC



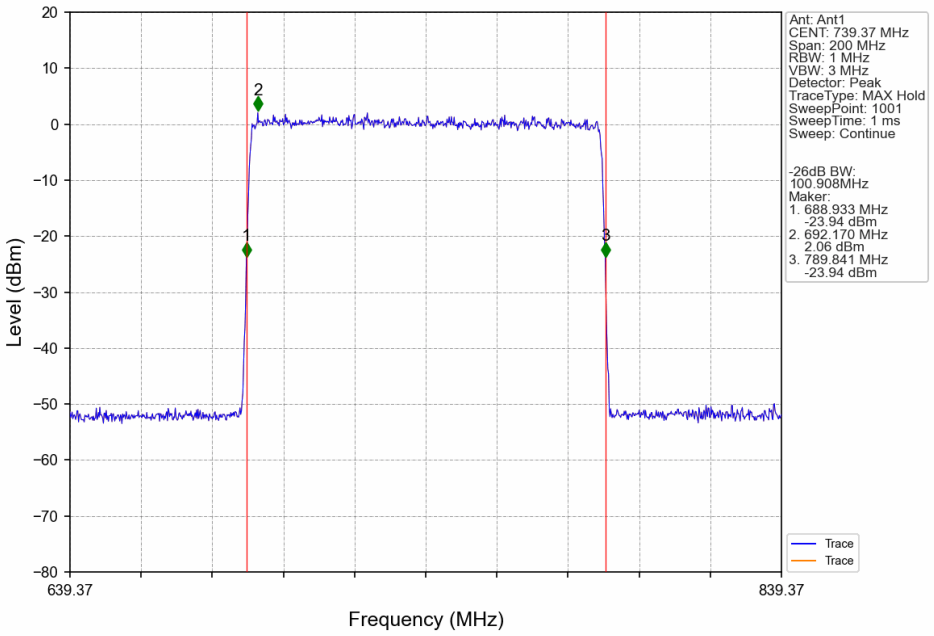
Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_Output_AGC+3



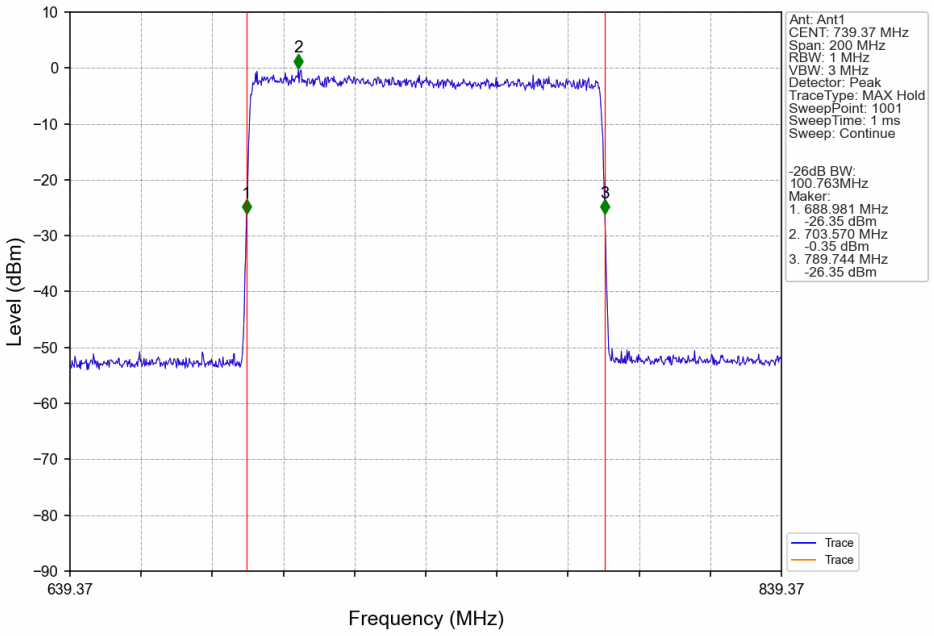
Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_Output_AGC



Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_Input_AGC+3



Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_Input_AGC



4. Input/output power and amplifier/booster gain

4.1 Test Result

4.1.1 Band12_ERIP

Band: 12 / NTNV										
Signal			TX Type	ANT	Conducted Power (dBm//MHz)		ERP (dBm/MHz)		Booster Gain (dB)	Verdict
Type	Level (dBm)	Frequency (MHz)			Output	Input	Result	Limit		
GMSK	-0.3	739.37	SISO	1	33.05	-0.45	42.90	<=60	33.50	Pass
0.2MHz	2.7	739.37	SISO	1	33.54	2.64	43.39	<=60	/	Pass
AWGN	-0.3	739.37	SISO	1	26.44	-7.02	36.29	<=60	33.46	Pass
5MHz	2.7	739.37	SISO	1	26.52	-4.03	36.37	<=60	/	Pass
AWGN	-0.3	739.37	SISO	1	13.74	-19.78	23.59	<=60	33.52	Pass
100MHz	2.7	739.37	SISO	1	13.76	-16.77	23.61	<=60	/	Pass

Signal			ANT	Conducted Power (dBm)	ERP (dBm)	Limit	Verdict
Type	Level (dBm)	Frequency (MHz)		SISO	SISO		
GMSK	-0.3	739.37	1	33.05	42.90	/	Pass
0.2MHz	2.7	739.37	1	33.54	43.39	/	Pass
AWGN	-0.3	739.37	1	33.43	43.28	/	Pass
5MHz	2.7	739.37	1	33.51	43.36	/	Pass
AWGN	-0.3	739.37	1	33.74	43.59	/	Pass
100MHz	2.7	739.37	1	33.76	43.61	/	Pass

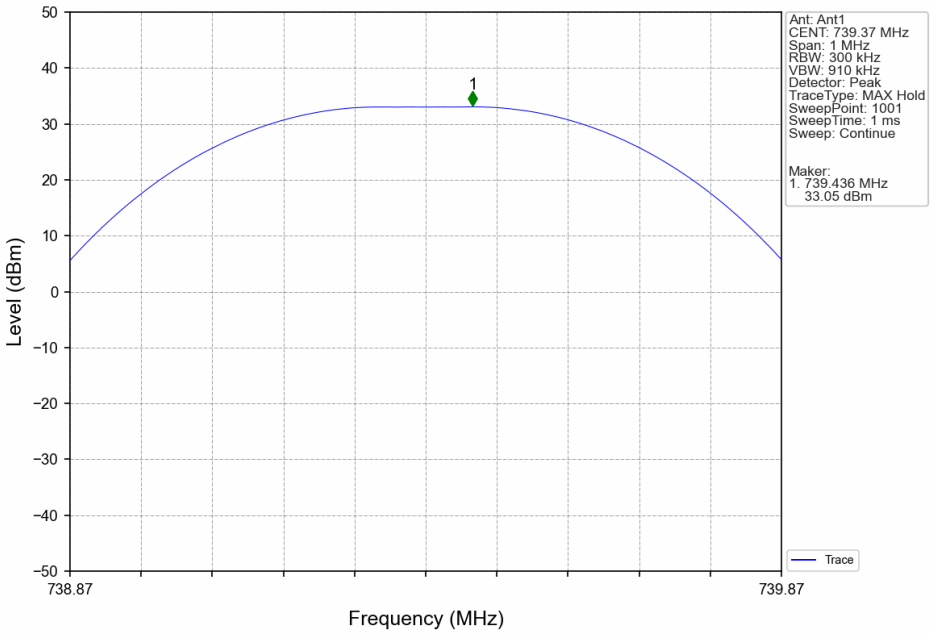
4.1.2 Band12_PAPR

Band: 12 / NTNV							
Signal			TX Type	ANT	PAPR (dB)		Verdict
Type	Level (dBm)	Frequency (MHz)			Result	Limit	
GMSK	-0.3	739.37	SISO	1	0.27	<=13	Pass
0.2MHz	2.7	739.37	SISO	1	0.22	<=13	Pass
AWGN	-0.3	739.37	SISO	1	8.26	<=13	Pass
5MHz	2.7	739.37	SISO	1	8.24	<=13	Pass
AWGN	-0.3	739.37	SISO	1	8.44	<=13	Pass
100MHz	2.7	739.37	SISO	1	8.43	<=13	Pass

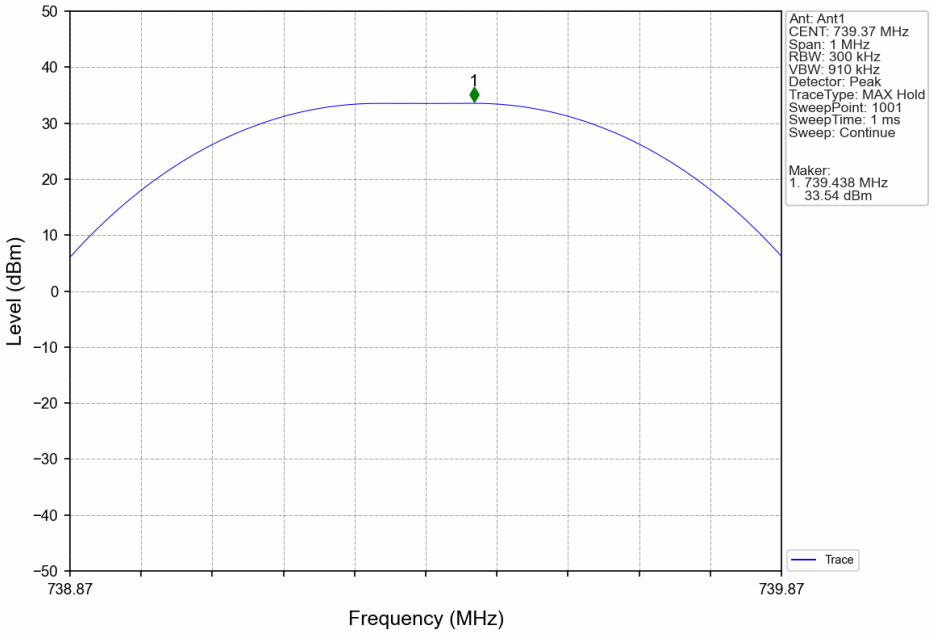
4.2 Test Graph

4.2.1 Band12_ERP

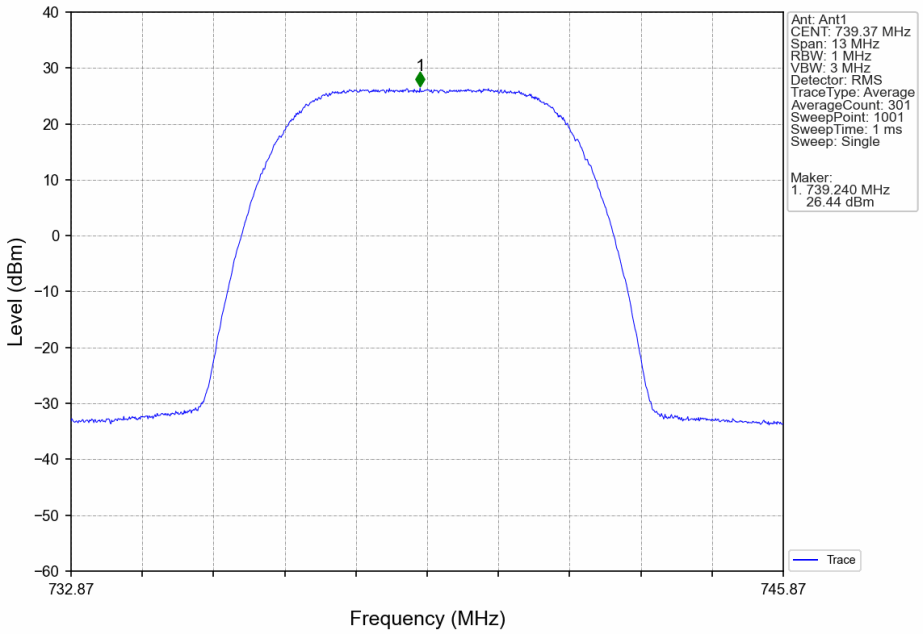
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_AGC



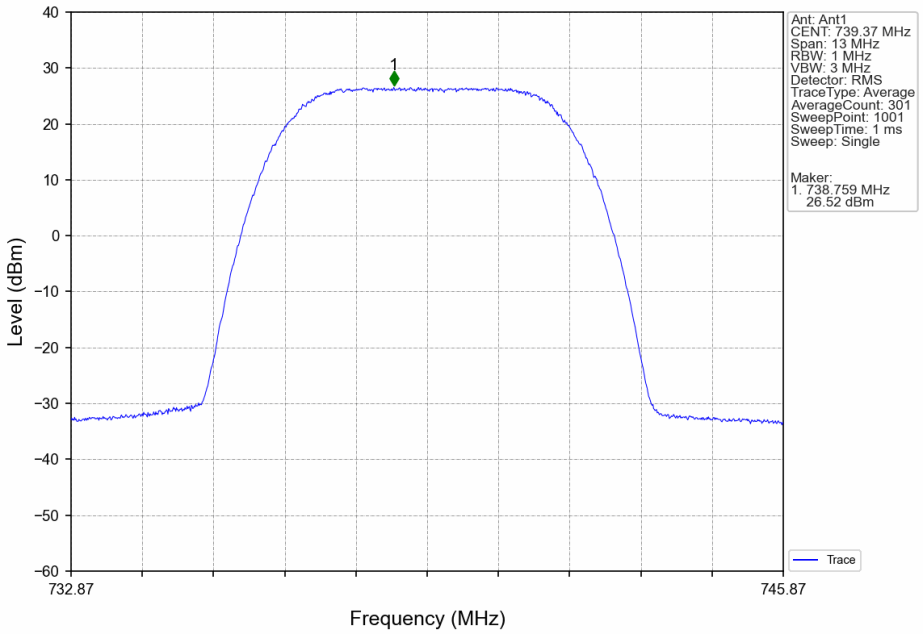
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_AGC+3



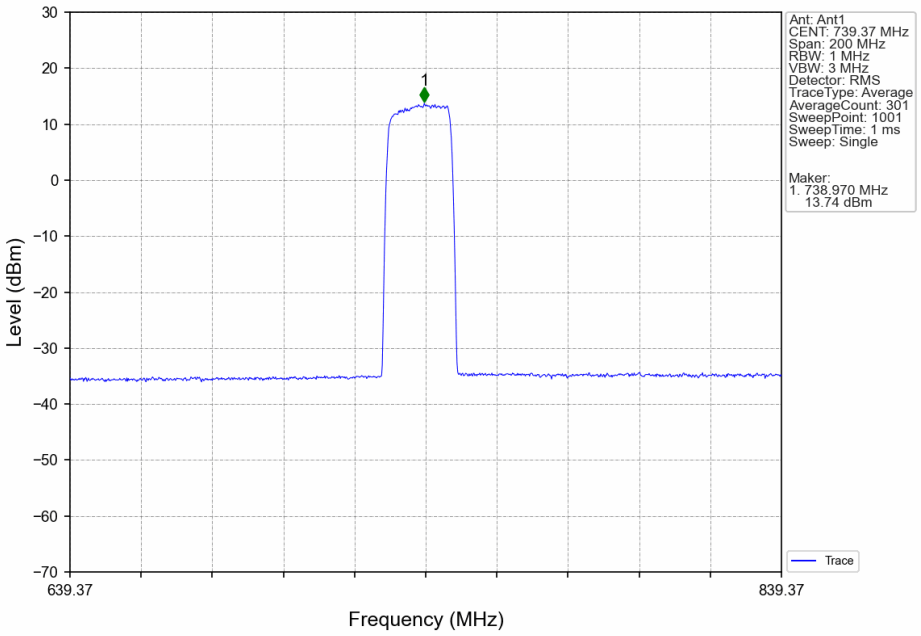
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_AGC



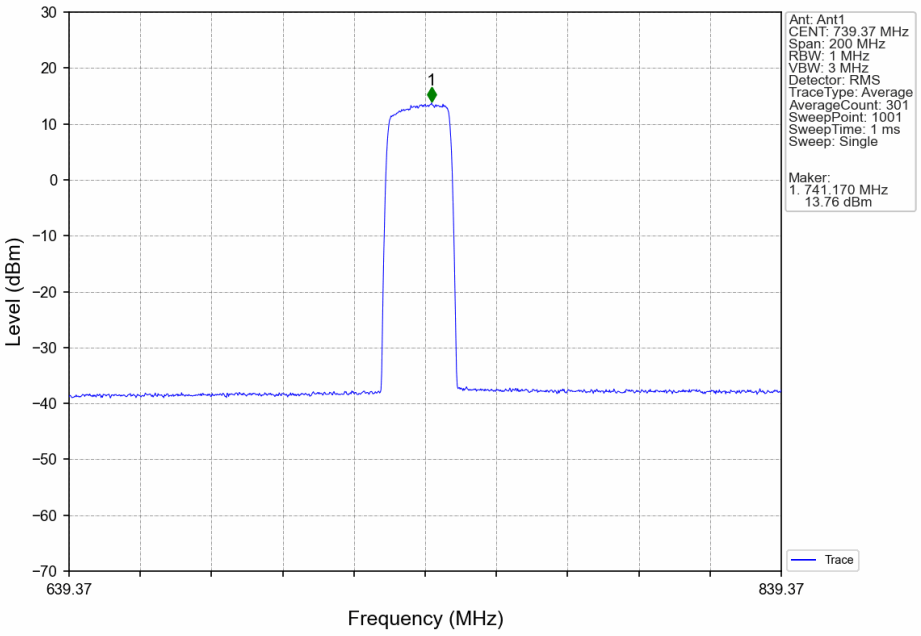
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_AGC+3



Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_AGC

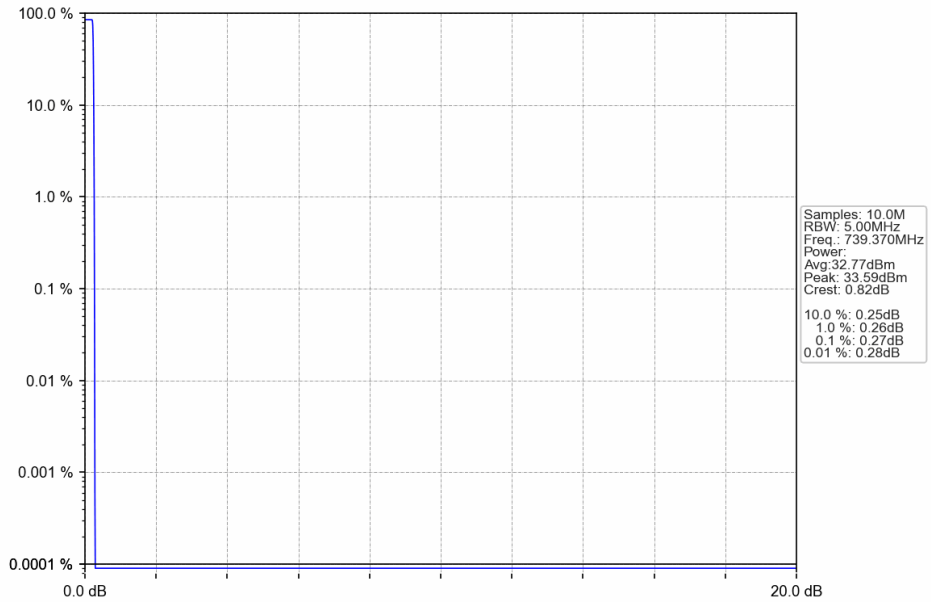


Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_AGC+3

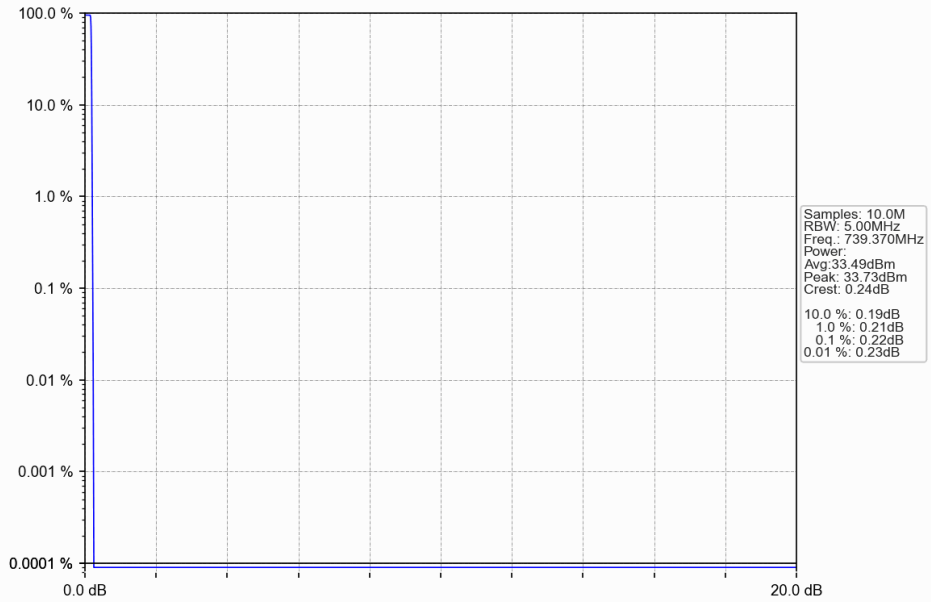


4.2.2 Band12_PAPR

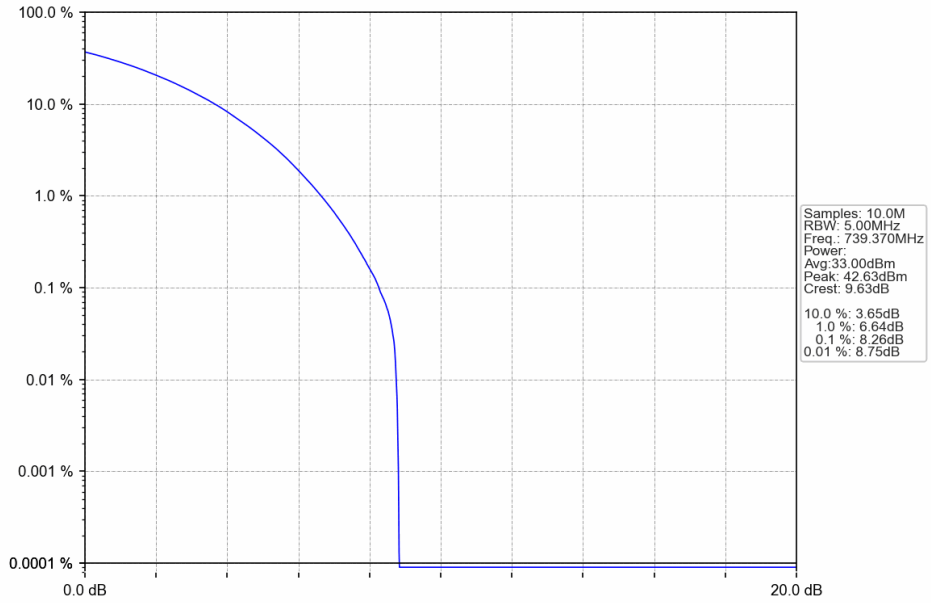
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_AGC



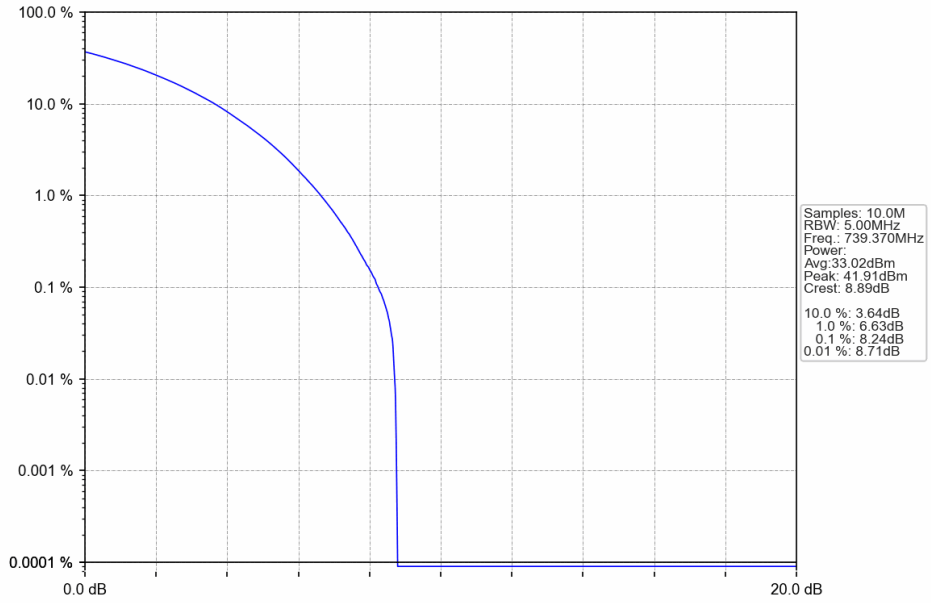
Band12_739.37MHz_GMSK_SISO_Ant1_NTNV_AGC+3



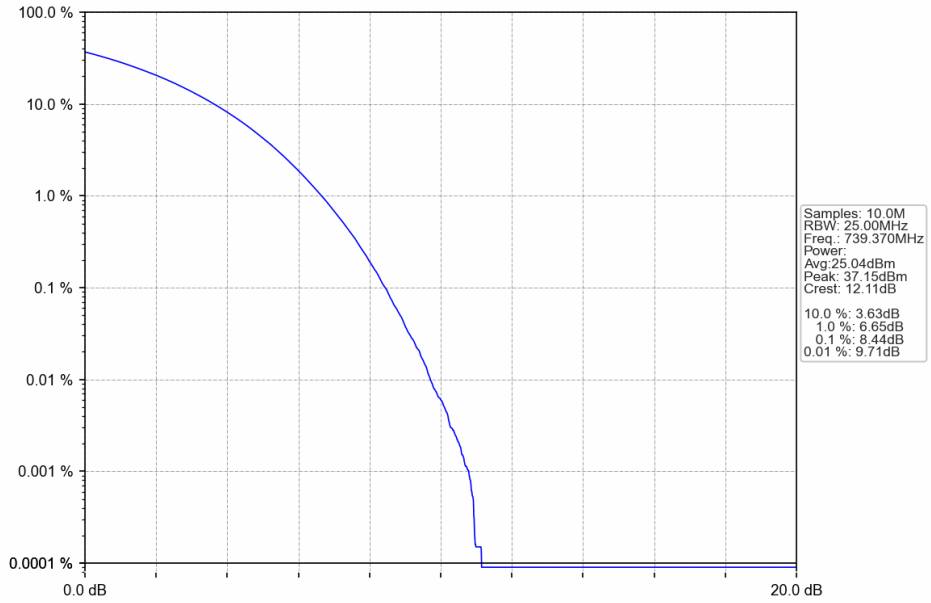
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_AGC



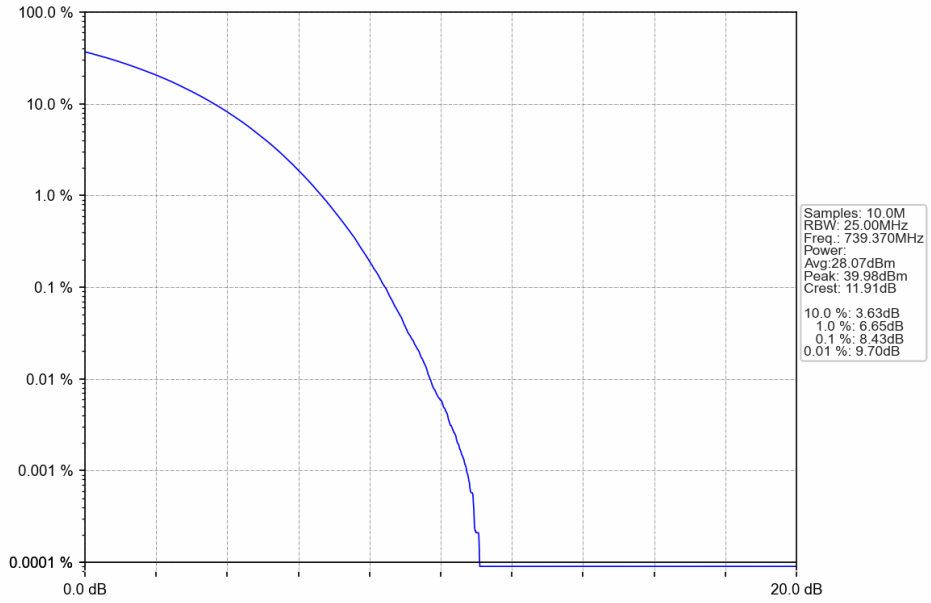
Band12_739.37MHz_AWGN_SISO_Ant1_NTNV_AGC+3



Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_AGC



Band12_739.37MHz_Broad100MHz_SISO_Ant1_NTNV_AGC+3



5. Out-of-band/out-of-block (including intermodulation) emissions

5.1 Test Result

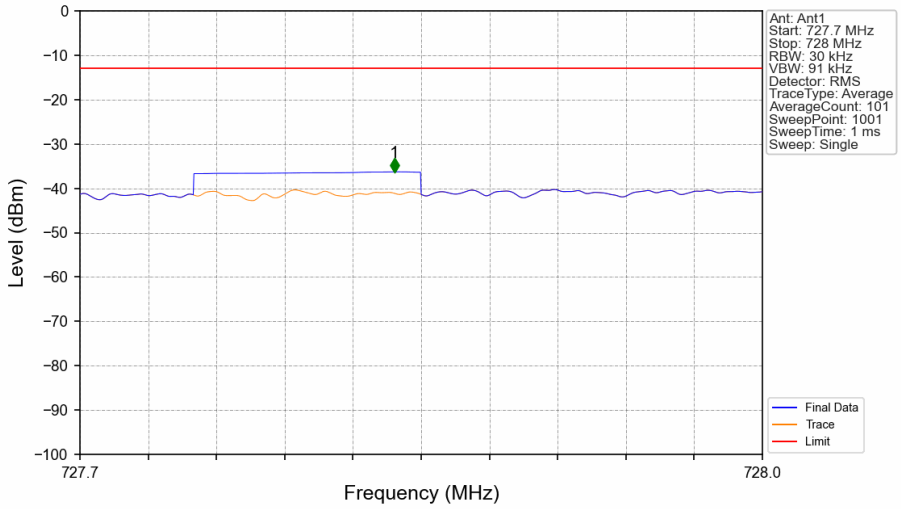
5.1.1 Band12

Band: 12 / NTNV									
Signal				Channel	TX Type	ANT	OOB (dBm)		Verdict
Input	Type	Level (dBm)	Frequency (MHz)				Result	Limit	
Two	GMSK 0.2MHz	-0.3	729.2	LCH	SISO	1	-36.29	Refer To Test Graph	Pass
		2.7	729.2	LCH	SISO	1	-36.79	Refer To Test Graph	Pass
One	GMSK 0.2MHz	-0.3	729.2	LCH	SISO	1	-36.50	Refer To Test Graph	Pass
		2.7	729.2	LCH	SISO	1	-34.32	Refer To Test Graph	Pass
Two	GMSK 0.2MHz	-0.3	745.8	HCH	SISO	1	-20.17	Refer To Test Graph	Pass
		2.7	745.8	HCH	SISO	1	-21.96	Refer To Test Graph	Pass
One	GMSK 0.2MHz	-0.3	745.8	HCH	SISO	1	-19.10	Refer To Test Graph	Pass
		2.7	745.8	HCH	SISO	1	-19.06	Refer To Test Graph	Pass
Two	AWGN 5MHz	-0.3	731.5	LCH	SISO	1	-29.69	Refer To Test Graph	Pass
		2.7	731.5	LCH	SISO	1	-33.97	Refer To Test Graph	Pass
One	AWGN 5MHz	-0.3	731.5	LCH	SISO	1	-37.80	Refer To Test Graph	Pass
		2.7	731.5	LCH	SISO	1	-35.06	Refer To Test Graph	Pass
Two	AWGN 5MHz	-0.3	743.5	HCH	SISO	1	-22.25	Refer To Test Graph	Pass
		2.7	743.5	HCH	SISO	1	-22.05	Refer To Test Graph	Pass
One	AWGN 5MHz	-0.3	743.5	HCH	SISO	1	-23.55	Refer To Test Graph	Pass
		2.7	743.5	HCH	SISO	1	-23.12	Refer To Test Graph	Pass
Two	AWGN 100MHz	-0.3	779	LCH	SISO	1	-50.62	Refer To Test Graph	Pass
		2.7	779	LCH	SISO	1	-45.21	Refer To Test Graph	Pass
One	AWGN 100MHz	-0.3	779	LCH	SISO	1	-52.31	Refer To Test Graph	Pass
		2.7	779	LCH	SISO	1	-50.53	Refer To Test Graph	Pass
Two	AWGN 100MHz	-0.3	696	HCH	SISO	1	-40.53	Refer To Test Graph	Pass
		2.7	696	HCH	SISO	1	-37.33	Refer To Test Graph	Pass
One	AWGN 100MHz	-0.3	696	HCH	SISO	1	-43.02	Refer To Test Graph	Pass
		2.7	696	HCH	SISO	1	-39.77	Refer To Test Graph	Pass

5.2 Test Graph

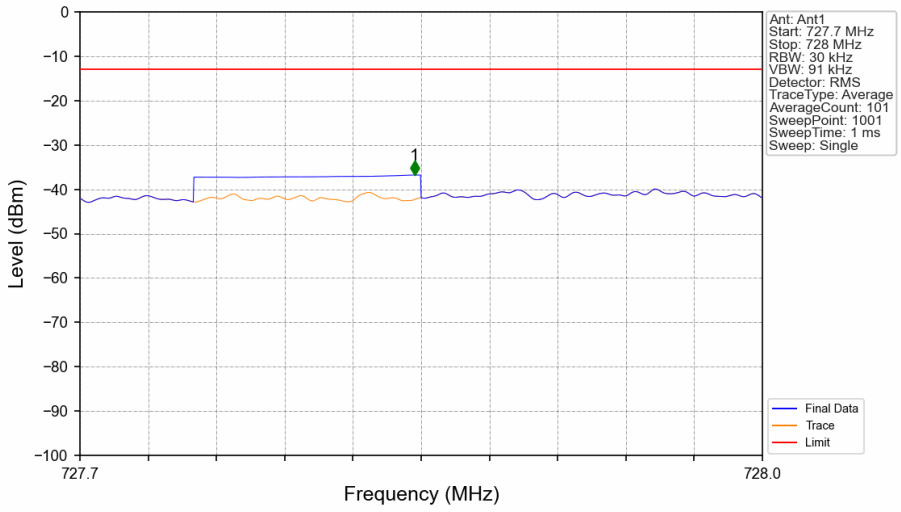
5.2.1 Band12

Band12_729.2MHz_GMSK_SISO_Ant1_NTNV_AGC



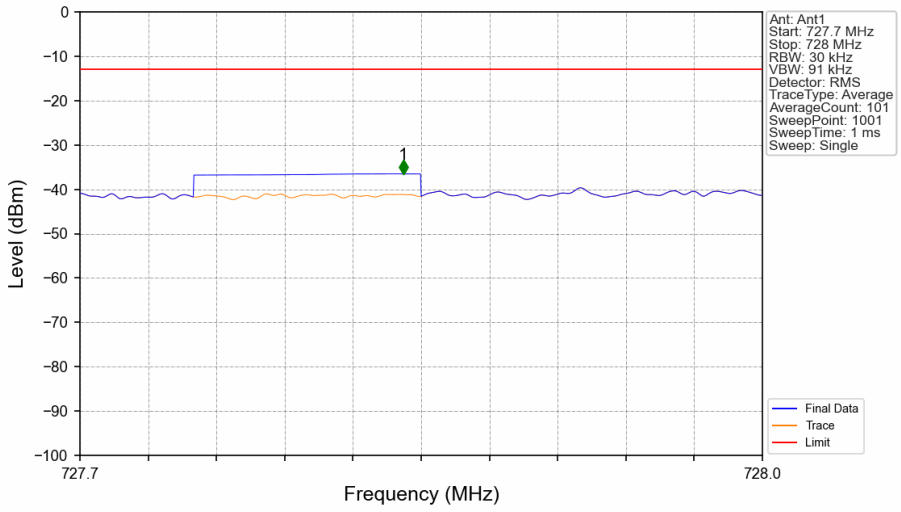
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.838	-36.29	-13	Pass

Band12_729.2MHz_GMSK_SISO_Ant1_NTNV_AGC+3



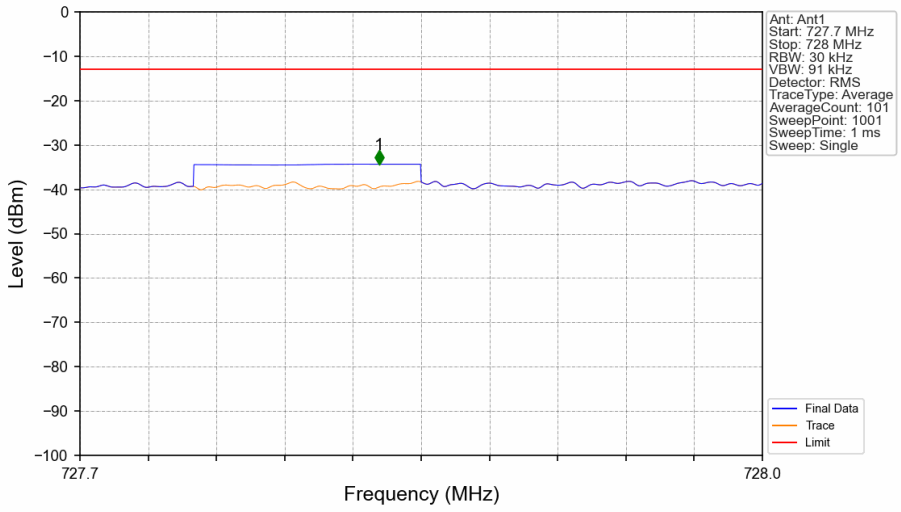
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.847	-36.79	-13	Pass

Band12_729.2MHz_GMSK_SISO_Ant1_NTNV_AGC



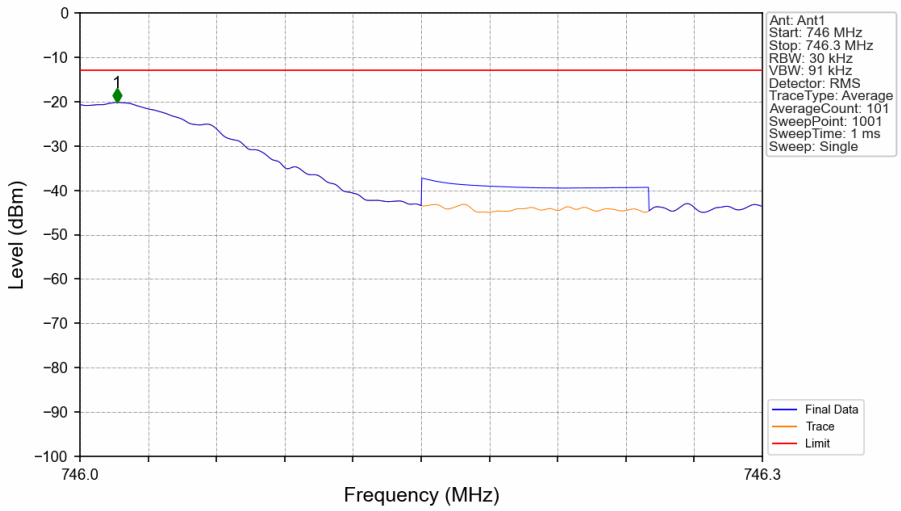
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.842	-36.50	-13	Pass

Band12_729.2MHz_GMSK_SISO_Ant1_NTNV_AGC+3



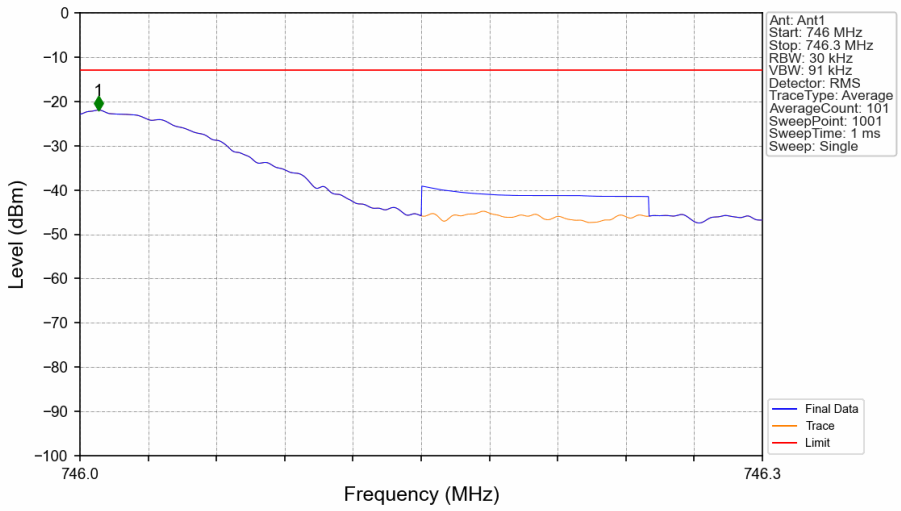
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.831	-34.32	-13	Pass

Band12_745.8MHz_GMSK_SISO_Ant1_NTNV_AGC



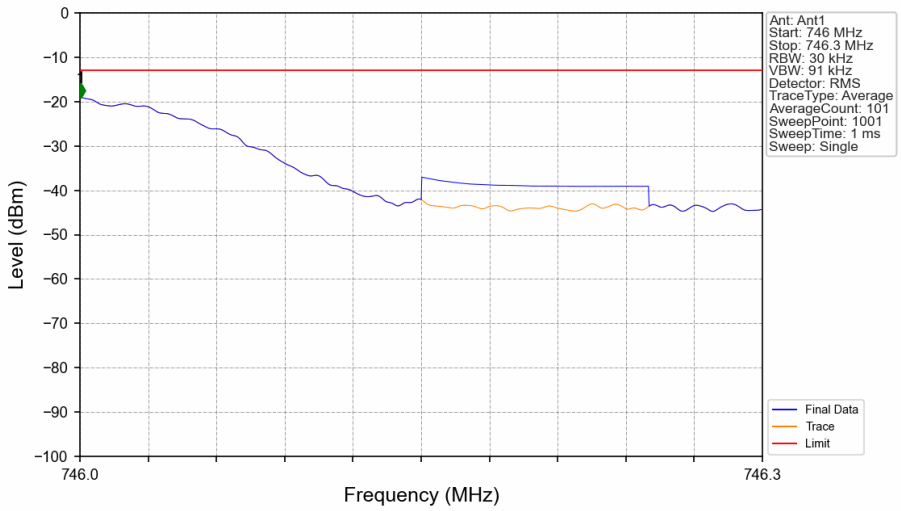
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.016	-20.17	-13	Pass

Band12_745.8MHz_GMSK_SISO_Ant1_NTNV_AGC+3



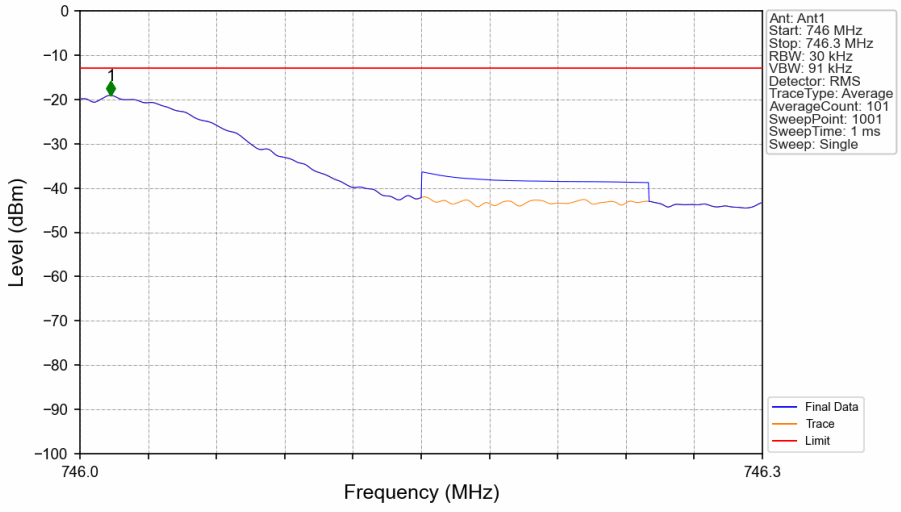
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.008	-21.96	-13	Pass

Band12_745.8MHz_GMSK_SISO_Ant1_NTNV_AGC



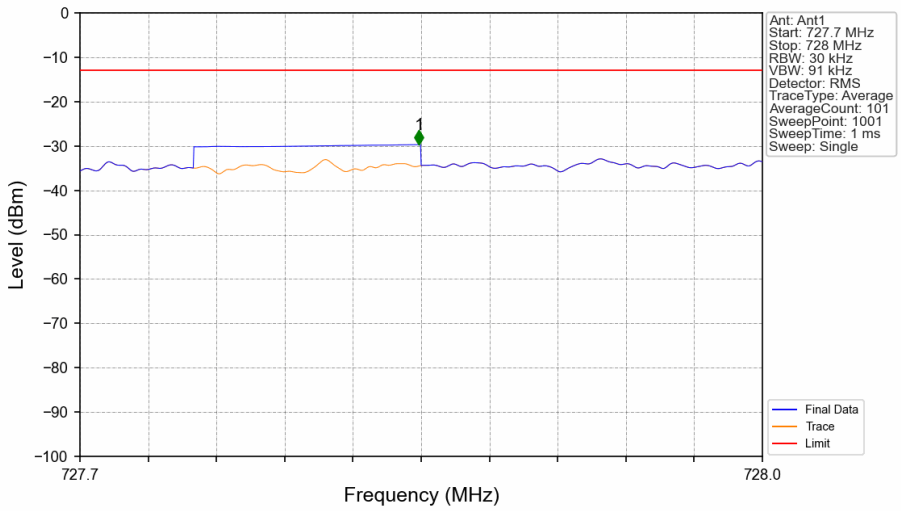
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.000	-19.10	-13	Pass

Band12_745.8MHz_GMSK_SISO_Ant1_NTNV_AGC+3



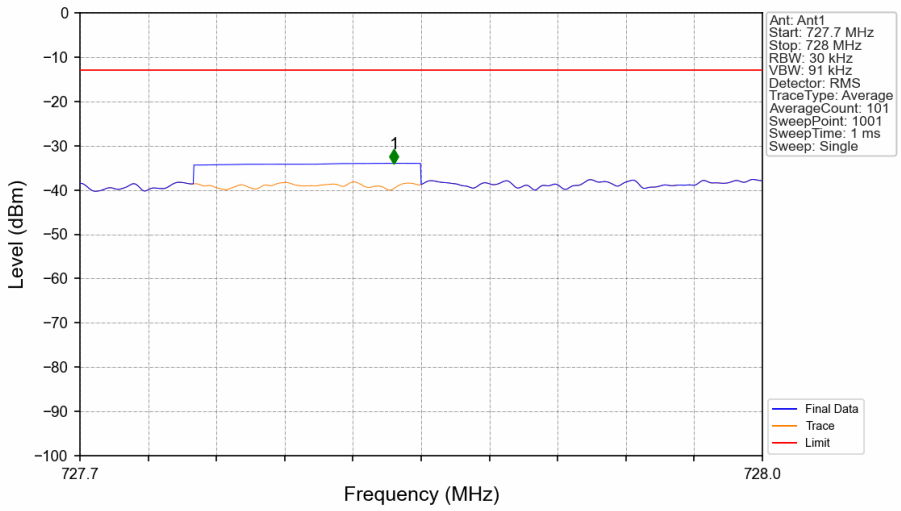
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.014	-19.06	-13	Pass

Band12_731.5MHz_AWGN_SISO_Ant1_NTNV_AGC



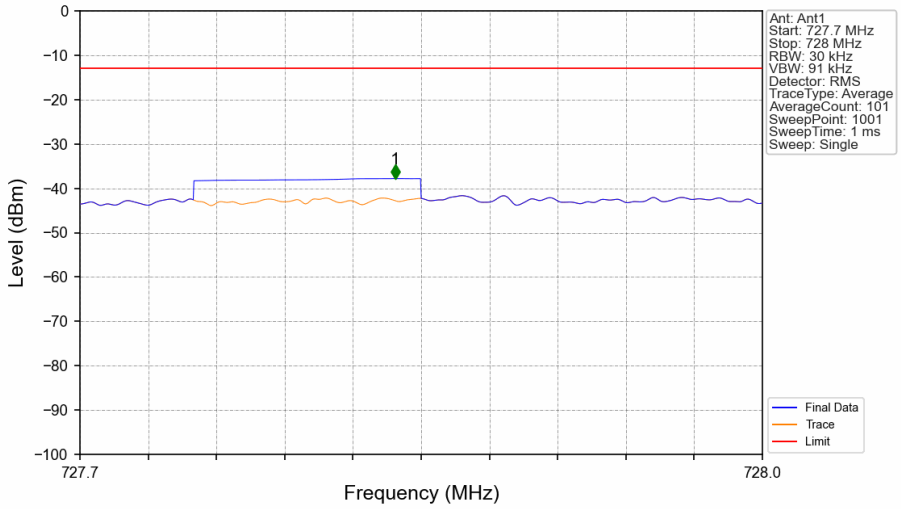
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.849	-29.69	-13	Pass

Band12_731.5MHz_AWGN_SISO_Ant1_NTNV_AGC+3



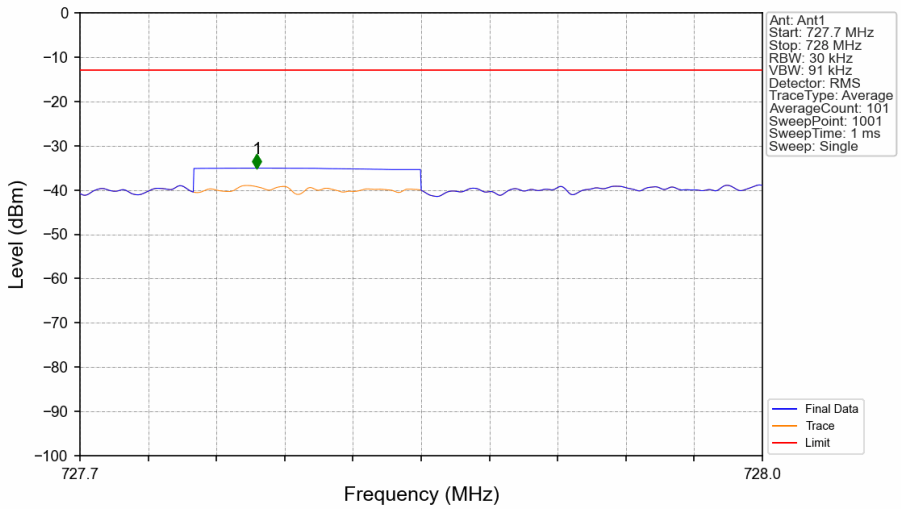
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.838	-33.97	-13	Pass

Band12_731.5MHz_AWGN_SISO_Ant1_NTNV_AGC



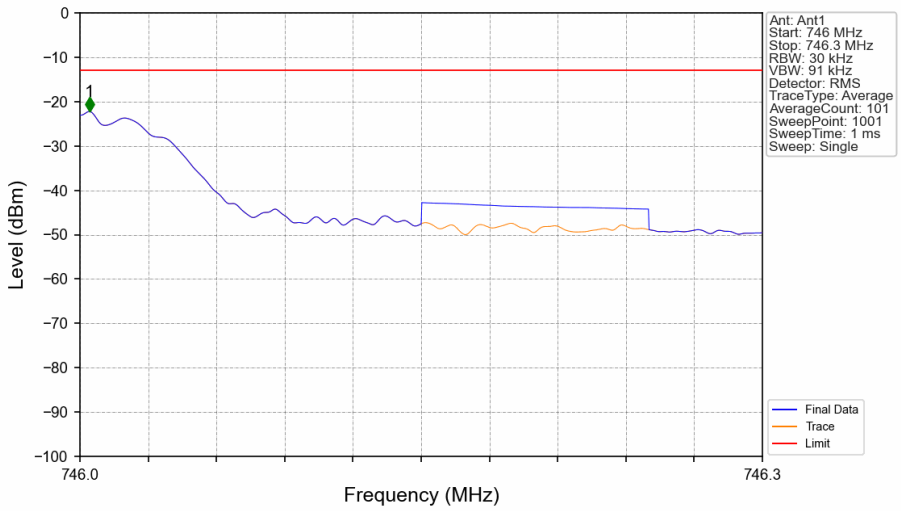
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.839	-37.80	-13	Pass

Band12_731.5MHz_AWGN_SISO_Ant1_NTNV_AGC+3



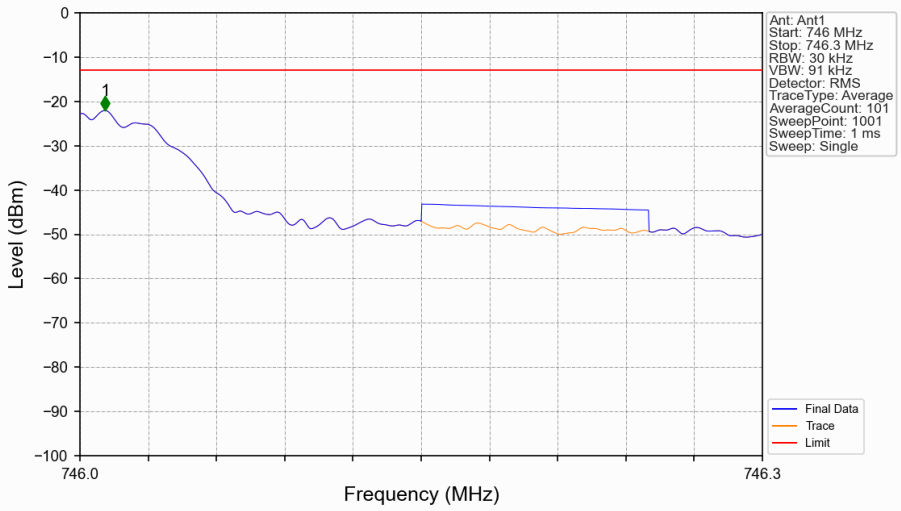
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.778	-35.06	-13	Pass

Band12_743.5MHz_AWGN_SISO_Ant1_NTNV_AGC



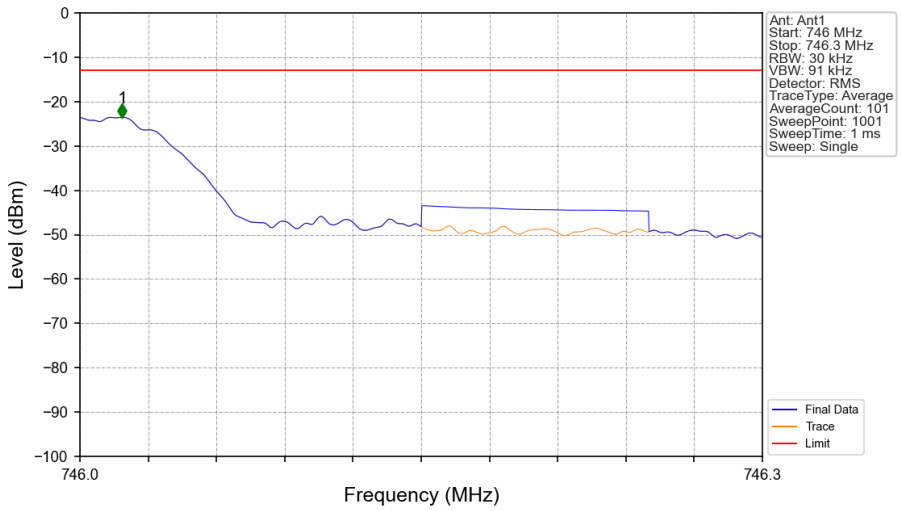
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.004	-22.24	-13	Pass

Band12_743.5MHz_AWGN_SISO_Ant1_NTNV_AGC+3



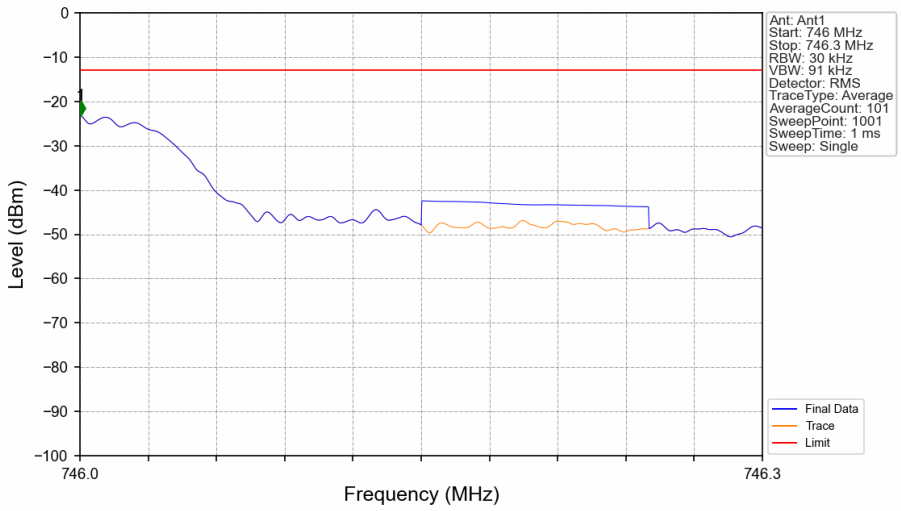
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.011	-22.05	-13	Pass

Band12_743.5MHz_AWGN_SISO_Ant1_NTNV_AGC



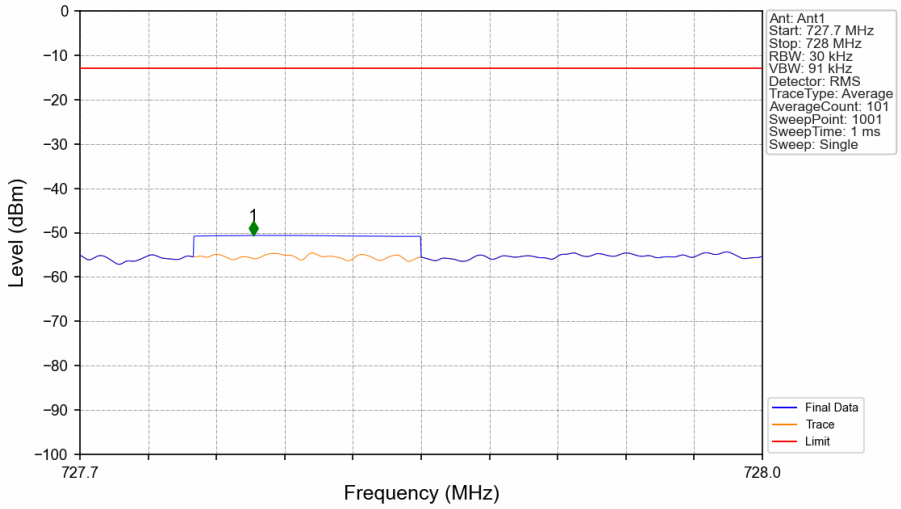
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.019	-23.55	-13	Pass

Band12_743.5MHz_AWGN_SISO_Ant1_NTNV_AGC+3



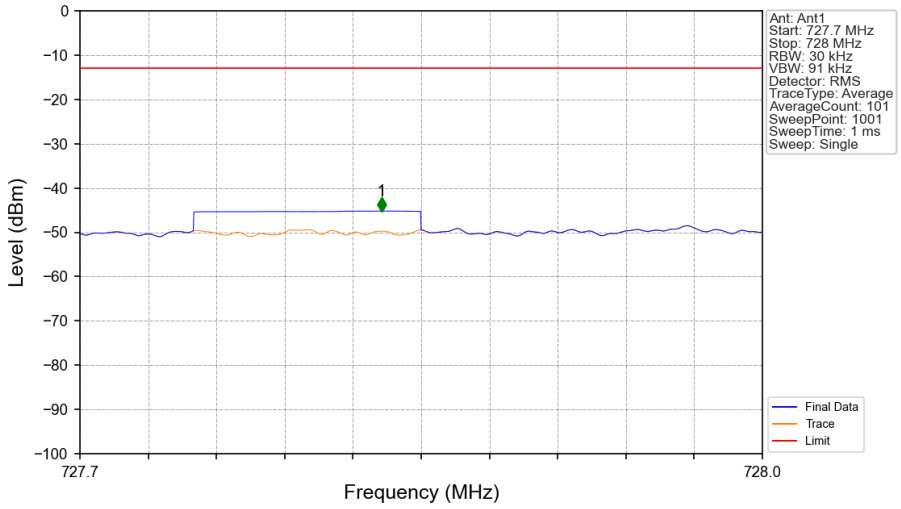
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.000	-23.12	-13	Pass

Band12_779MHz_Broad100MHz_SISO_Ant1_NTNV_AGC



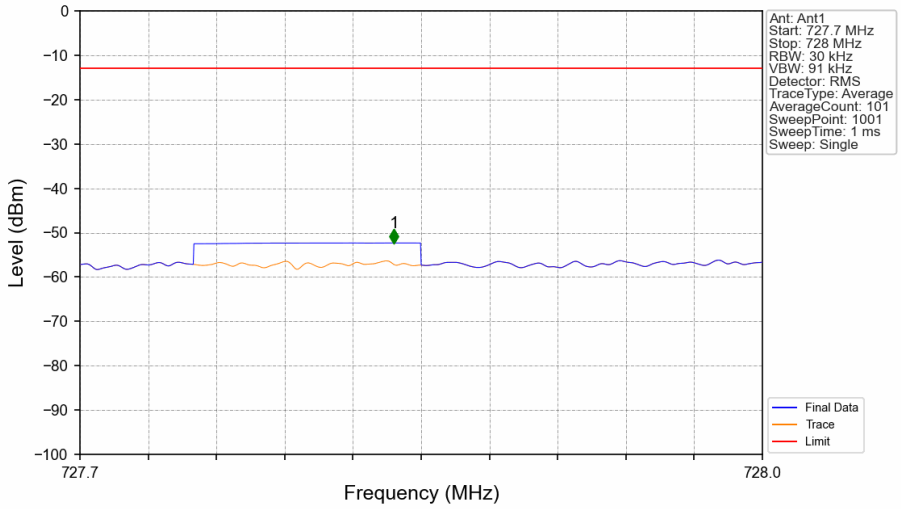
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.776	-50.62	-13	Pass

Band12_779MHz_Broad100MHz_SISO_Ant1_NTNV_AGC+3



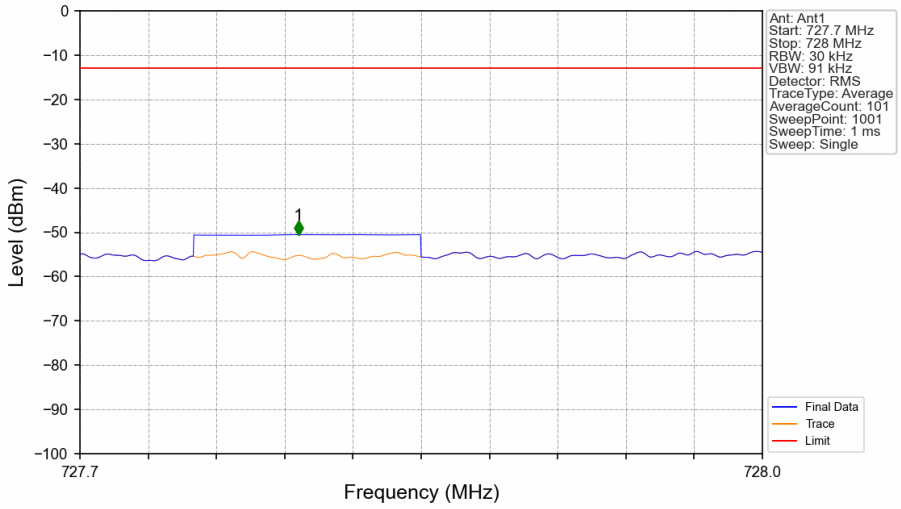
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.833	-45.21	-13	Pass

Band12_779MHz_Broad100MHz_SISO_Ant1_NTNV_AGC



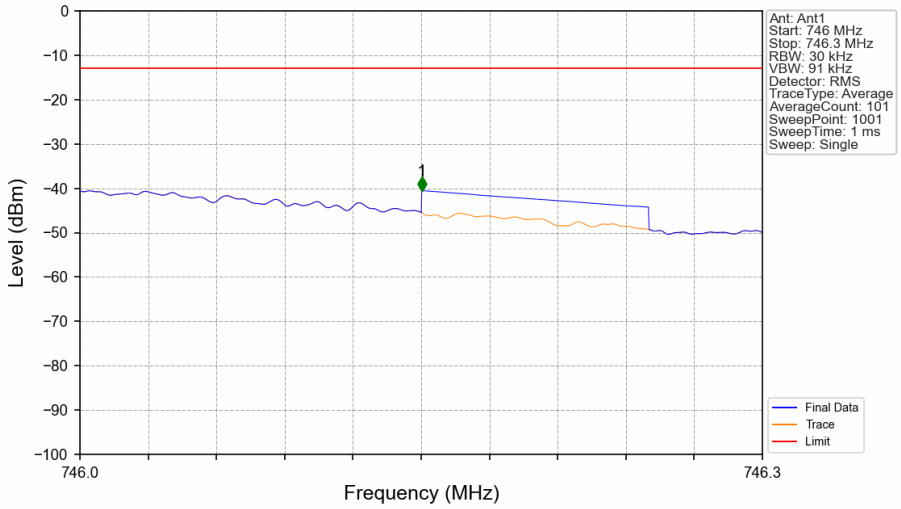
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.838	-52.31	-13	Pass

Band12_779MHz_Broad100MHz_SISO_Ant1_NTNV_AGC+3



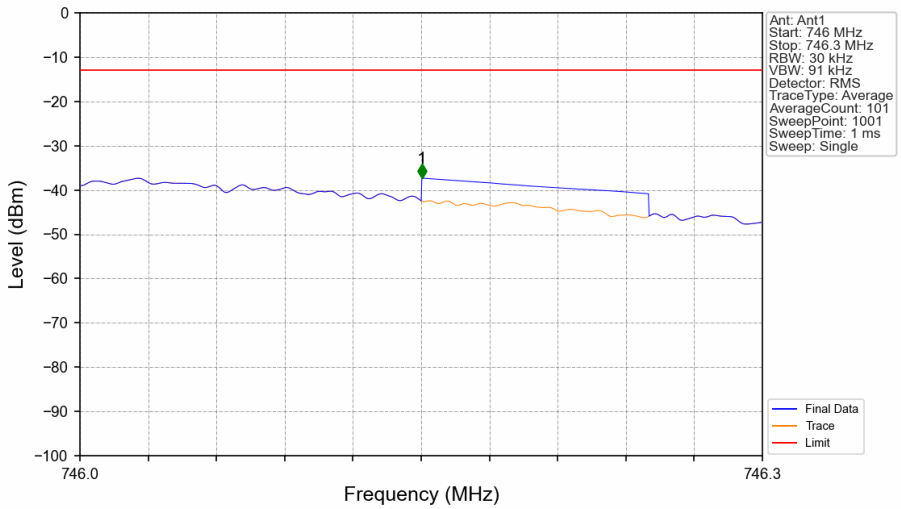
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
727.7	728	0.03	/	1	727.796	-50.53	-13	Pass

Band12_696MHz_Broad100MHz_SISO_Ant1_NTNV_AGC



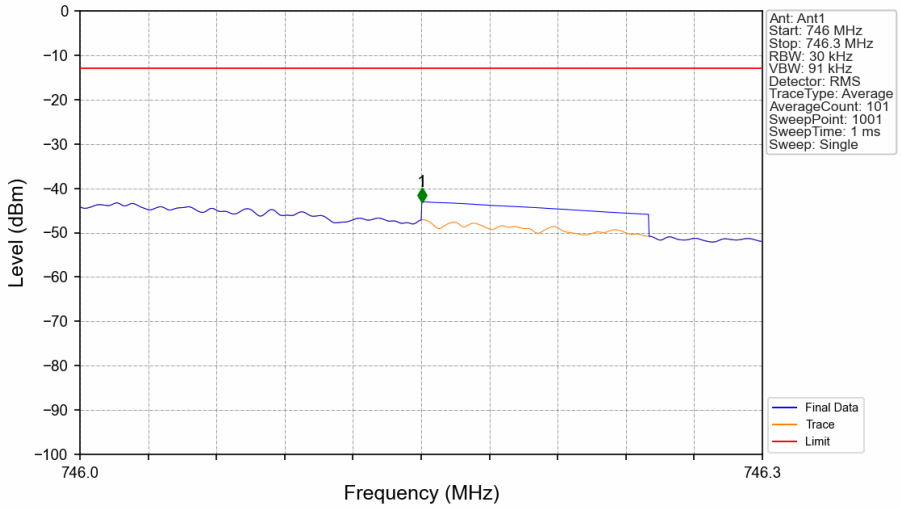
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.150	-40.53	-13	Pass

Band12_696MHz_Broad100MHz_SISO_Ant1_NTNV_AGC+3



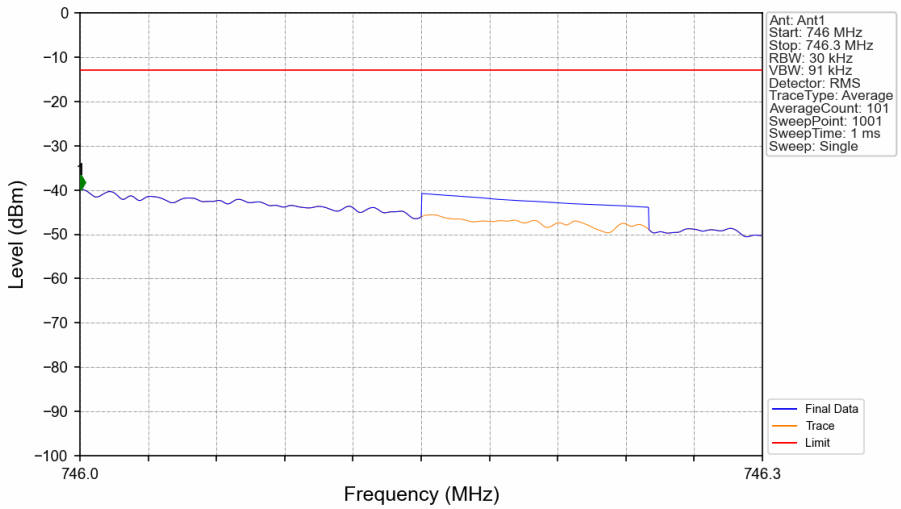
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.150	-37.33	-13	Pass

Band12_696MHz_Broad100MHz_SISO_Ant1_NTNV_AGC



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.150	-43.02	-13	Pass

Band12_696MHz_Broad100MHz_SISO_Ant1_NTNV_AGC+3



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
746	746.3	0.1	CHP	1	746.000	-39.77	-13	Pass

6. Spurious emissions

6.1 Test Result

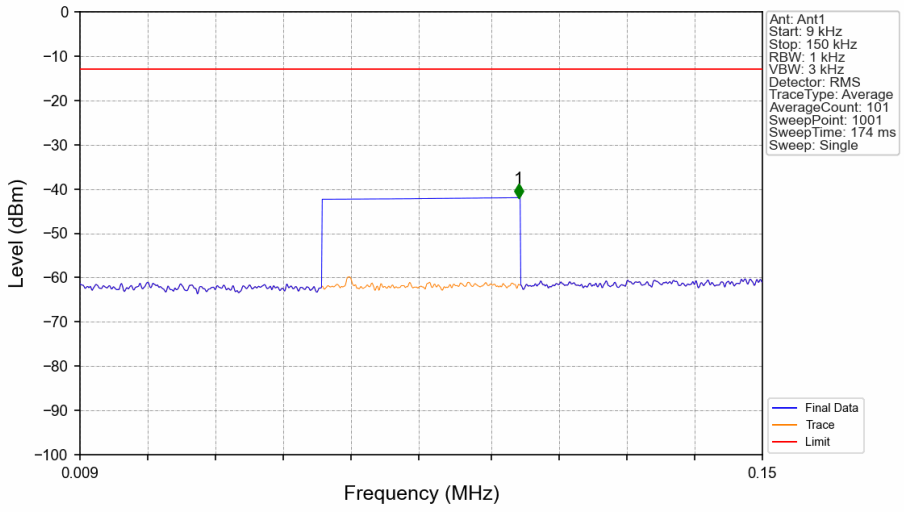
6.1.1 Band12

Band: 12 / NTNV								
Signal			Channel	TX Type	ANT	SE (dBm)		Verdict
Type	Level (dBm)	Frequency (MHz)				Result	Limit	
GMSK 0.2MHz	-0.3	729.2	LCH	SISO	1	Refer To Test Graph		Pass
		737.5	MCH	SISO	1	Refer To Test Graph		Pass
		745.8	HCH	SISO	1	Refer To Test Graph		Pass
AWGN 5MHz	-0.3	731.5	LCH	SISO	1	Refer To Test Graph		Pass
		737.5	MCH	SISO	1	Refer To Test Graph		Pass
		743.5	HCH	SISO	1	Refer To Test Graph		Pass
AWGN 100MHz	-0.3	779	LCH	SISO	1	Refer To Test Graph		Pass
		737.5	MCH	SISO	1	Refer To Test Graph		Pass
		696	HCH	SISO	1	Refer To Test Graph		Pass

6.2 Test Graph

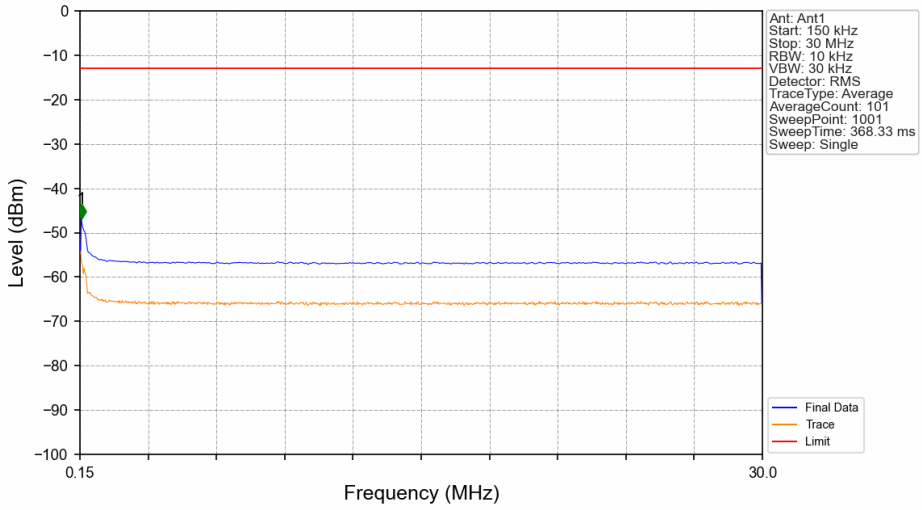
6.2.1 Band12

Band12_729.2MHz_GMSK_SISO_Ant1_NTNV



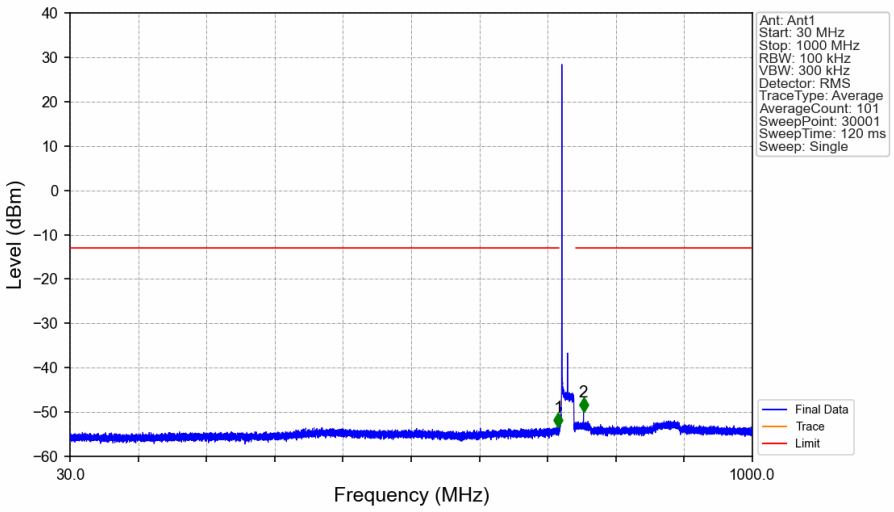
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	0.1	CHP	1	0.100	-41.95	-13	Pass

Band12_729.2MHz_GMSK_SISO_Ant1_NTNV



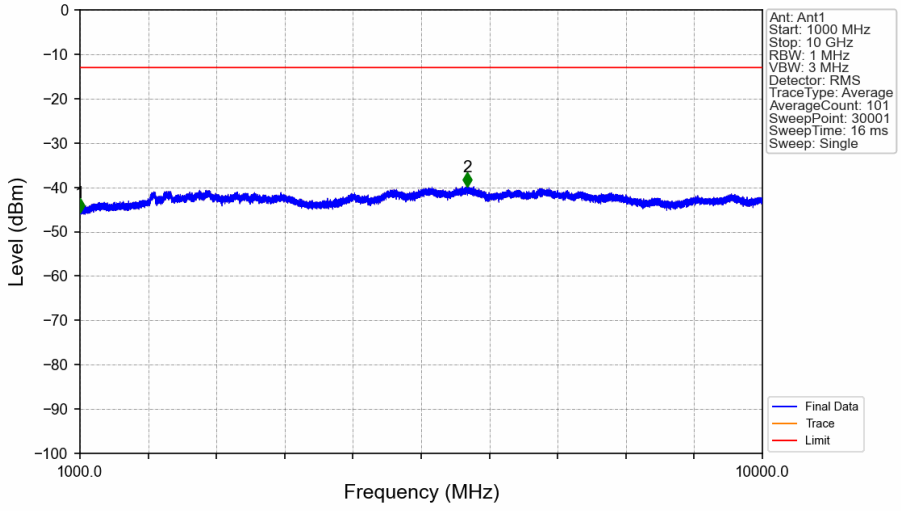
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	0.1	CHP	1	0.210	-46.69	-13	Pass

Band12_729.2MHz_GMSK_SISO_Ant1_NTNV



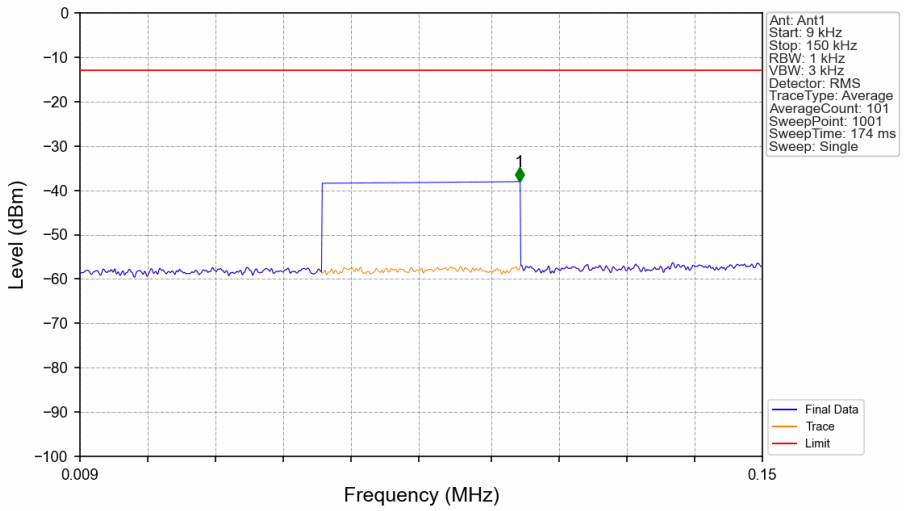
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	726.7	0.1	/	1	723.809	-53.42	-13	Pass
726.7	749.3	0.1	/	/	/	/	/	/
749.3	1000	0.1	/	2	759.893	-49.97	-13	Pass

Band12_729.2MHz_GMSK_SISO_Ant1_NTNV



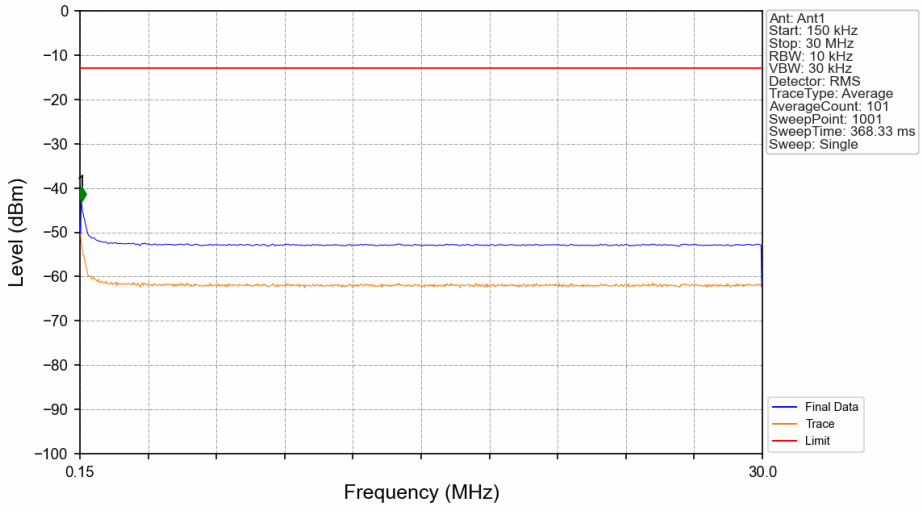
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-45.72	-13	Pass
1000	10000	1	/	2	6109.600	-39.77	-13	Pass

Band12_737.5MHz_GMSK_SISO_Ant1_NTNV



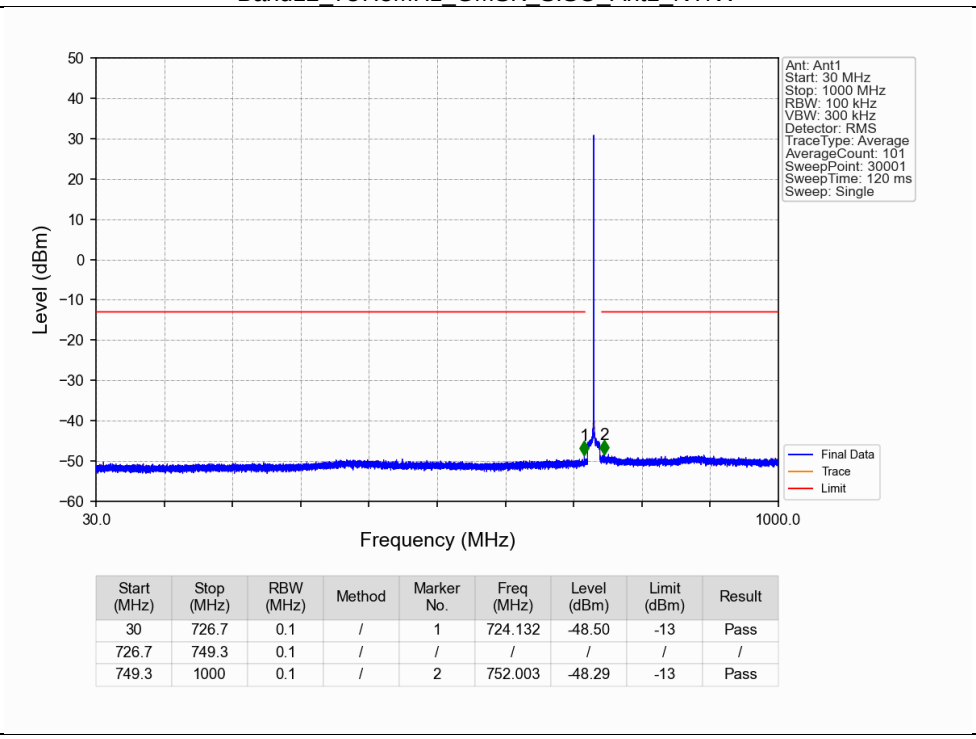
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	0.1	CHP	1	0.100	-38.03	-13	Pass

Band12_737.5MHz_GMSK_SISO_Ant1_NTNV



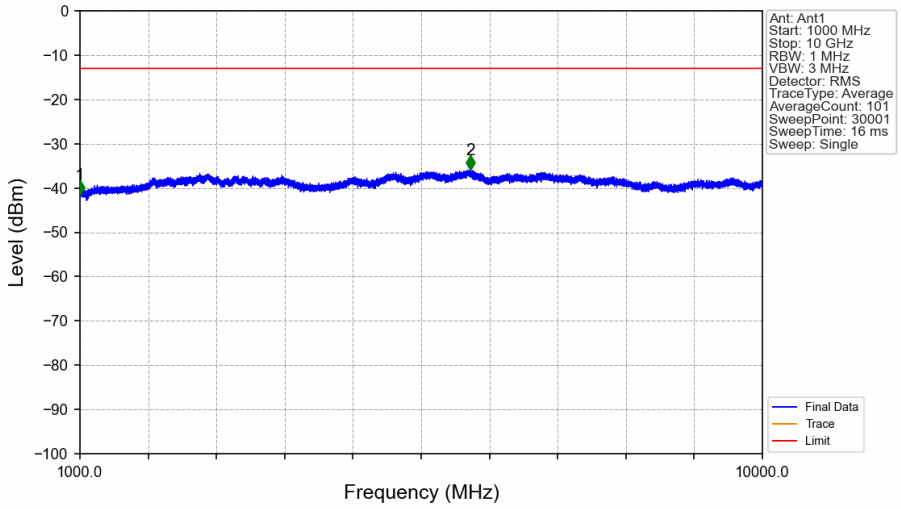
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	0.1	CHP	1	0.210	-42.99	-13	Pass

Band12_737.5MHz_GMSK_SISO_Ant1_NTNV



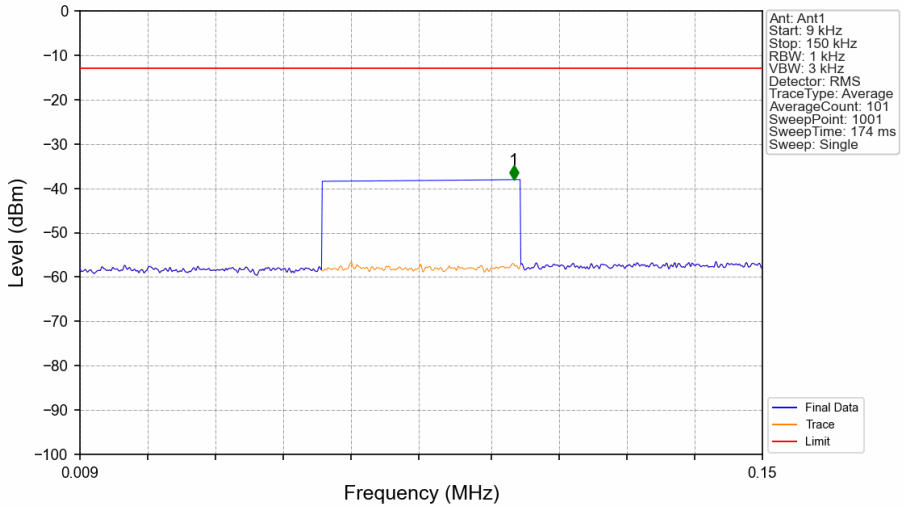
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	726.7	0.1	/	1	724.132	-48.50	-13	Pass
726.7	749.3	0.1	/	/	/	/	/	/
749.3	1000	0.1	/	2	752.003	-48.29	-13	Pass

Band12_737.5MHz_GMSK_SISO_Ant1_NTNV



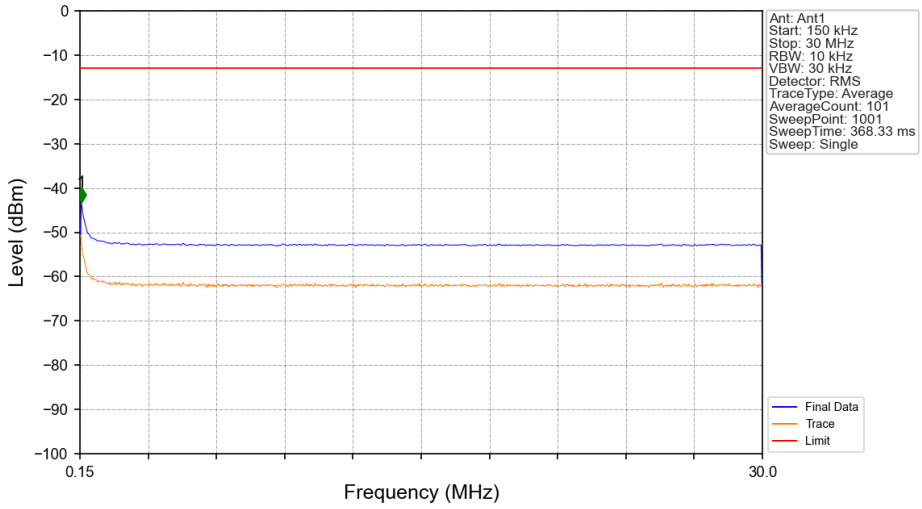
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-41.49	-13	Pass
1000	10000	1	/	2	6150.400	-35.84	-13	Pass

Band12_745.8MHz_GMSK_SISO_Ant1_NTNV



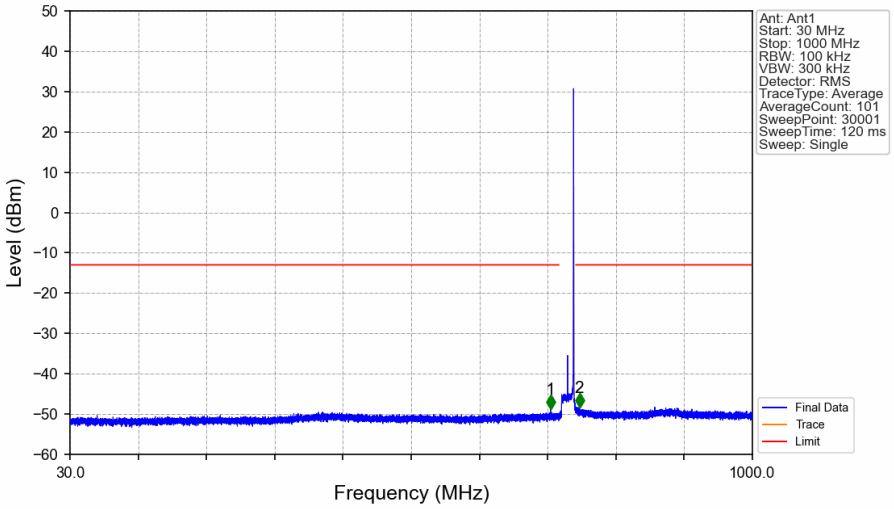
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	0.1	CHP	1	0.099	-38.04	-13	Pass

Band12_745.8MHz_GMSK_SISO_Ant1_NTNV



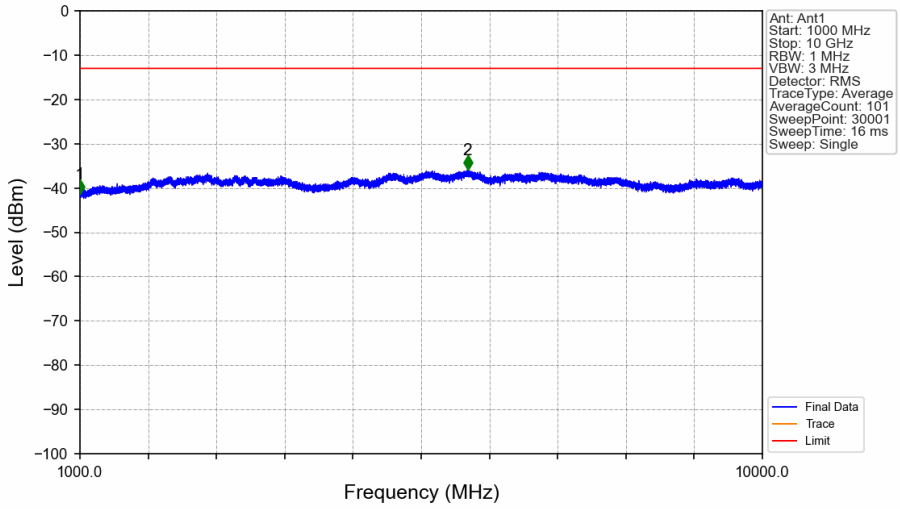
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	0.1	CHP	1	0.210	-43.05	-13	Pass

Band12_745.8MHz_GMSK_SISO_Ant1_NTNV



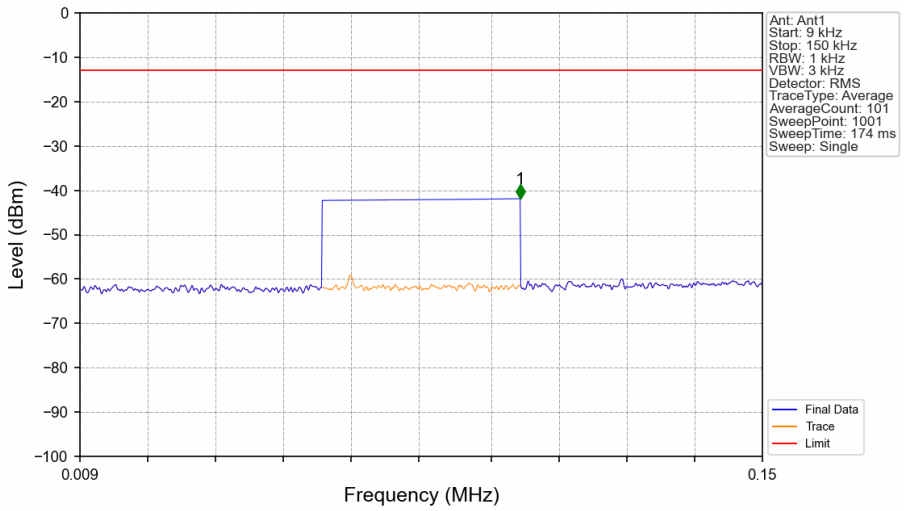
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	726.7	0.1	/	1	713.106	-48.68	-13	Pass
726.7	749.3	0.1	/	/	/	/	/	/
749.3	1000	0.1	/	2	754.267	-48.23	-13	Pass

Band12_745.8MHz_GMSK_SISO_Ant1_NTNV



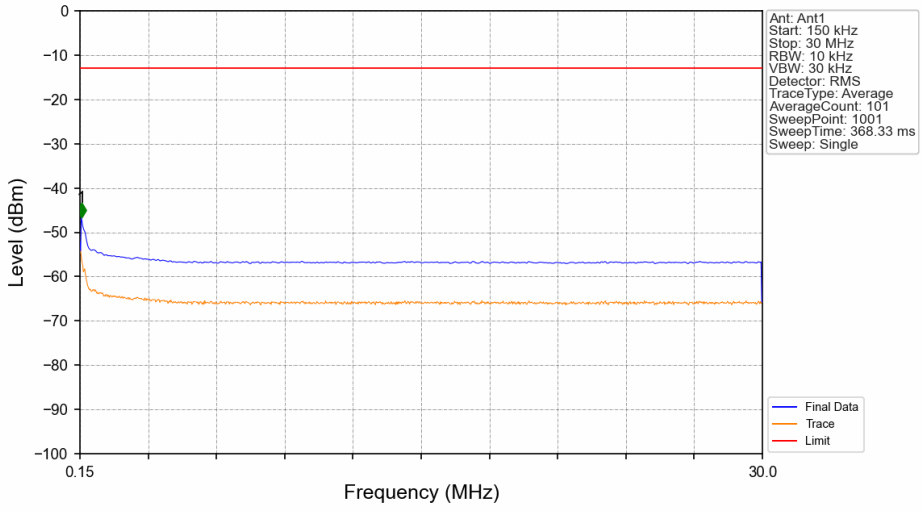
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-41.36	-13	Pass
1000	10000	1	/	2	6112.900	-35.84	-13	Pass

Band12_731.5MHz_AWGN_SISO_Ant1_NTNV



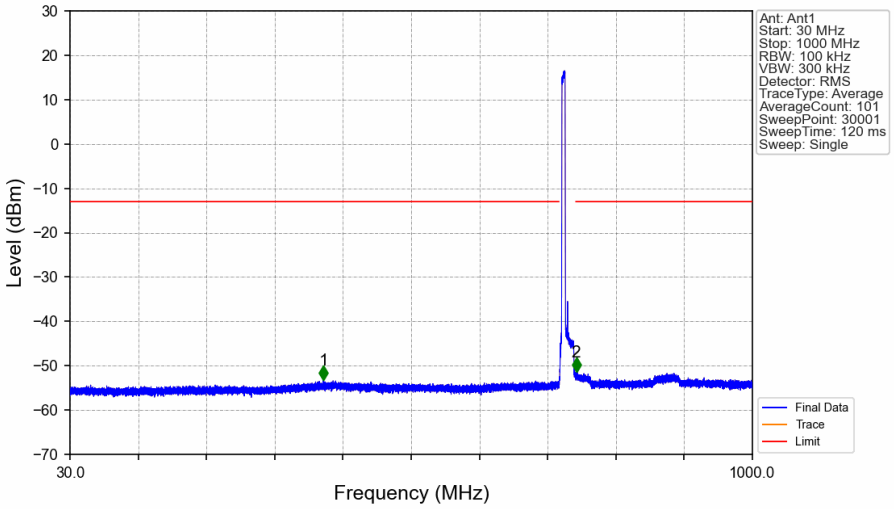
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	0.1	CHP	1	0.100	-41.89	-13	Pass

Band12_731.5MHz_AWGN_SISO_Ant1_NTNV



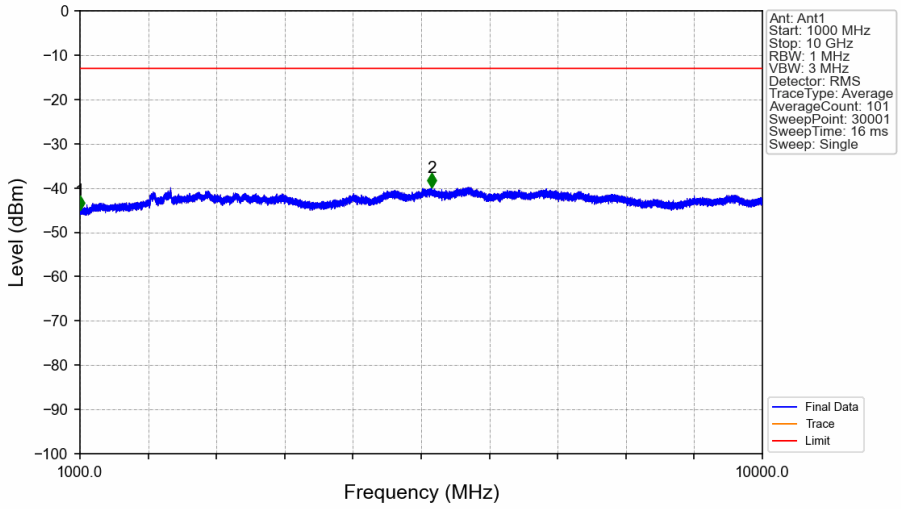
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	0.1	CHP	1	0.210	-46.50	-13	Pass

Band12_731.5MHz_AWGN_SISO_Ant1_NTNV



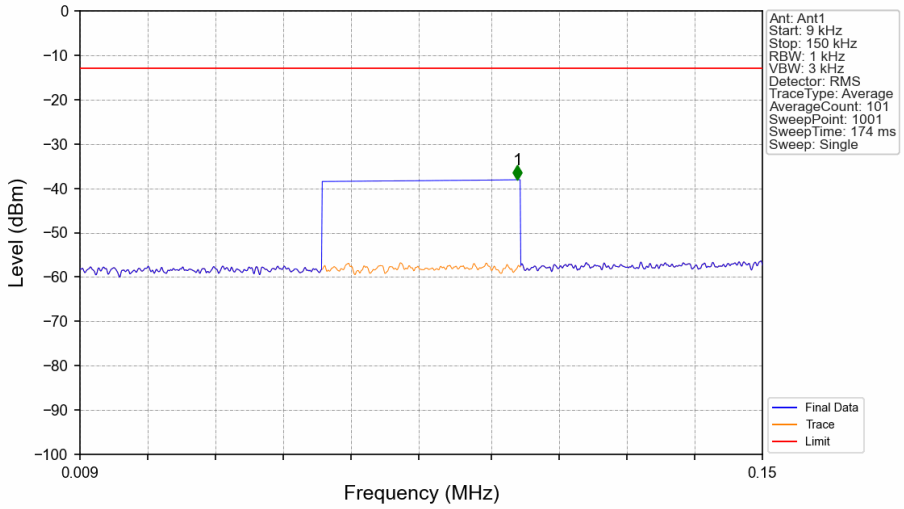
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	726.7	0.1	/	1	390.161	-53.22	-13	Pass
726.7	749.3	0.1	/	/	/	/	/	/
749.3	1000	0.1	/	2	749.481	-51.40	-13	Pass

Band12_731.5MHz_AWGN_SISO_Ant1_NTNV



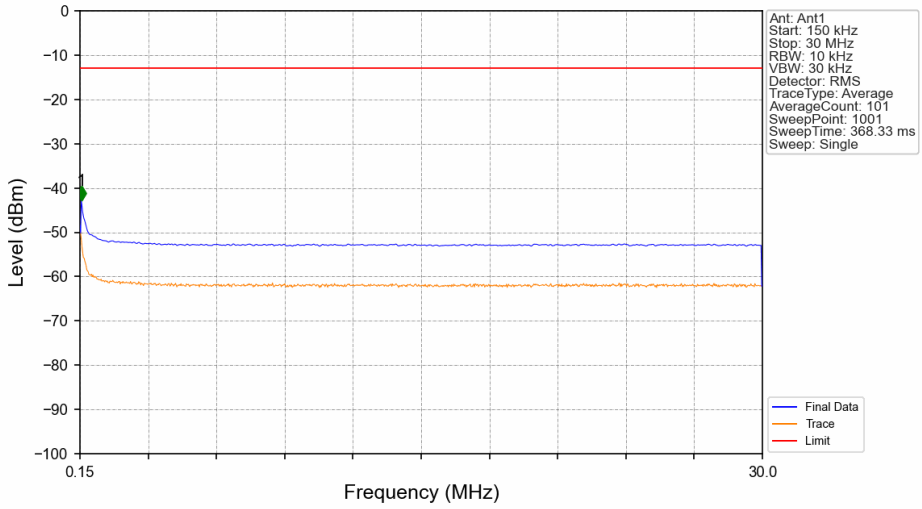
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-44.96	-13	Pass
1000	10000	1	/	2	5641.600	-39.79	-13	Pass

Band12_737.5MHz_AWGN_SISO_Ant1_NTNV



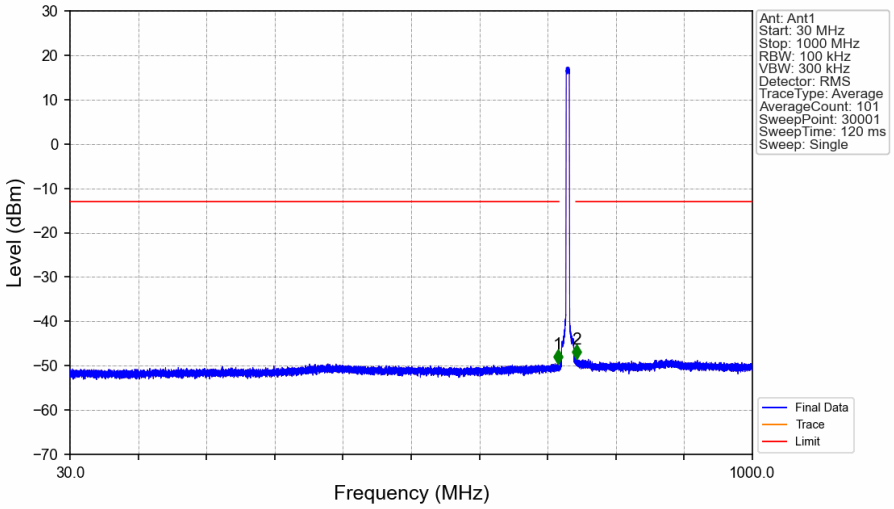
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	0.1	CHP	1	0.099	-38.07	-13	Pass

Band12_737.5MHz_AWGN_SISO_Ant1_NTNV



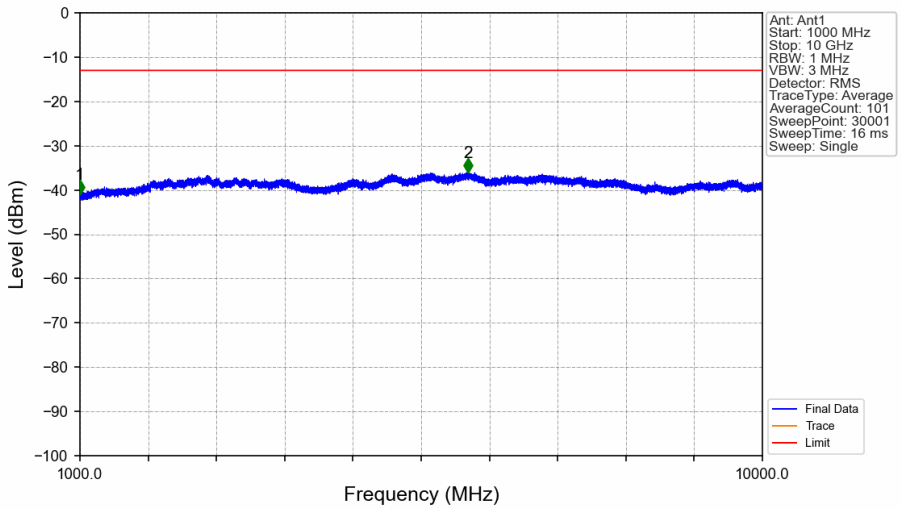
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	0.1	CHP	1	0.210	-42.73	-13	Pass

Band12_737.5MHz_AWGN_SISO_Ant1_NTNV



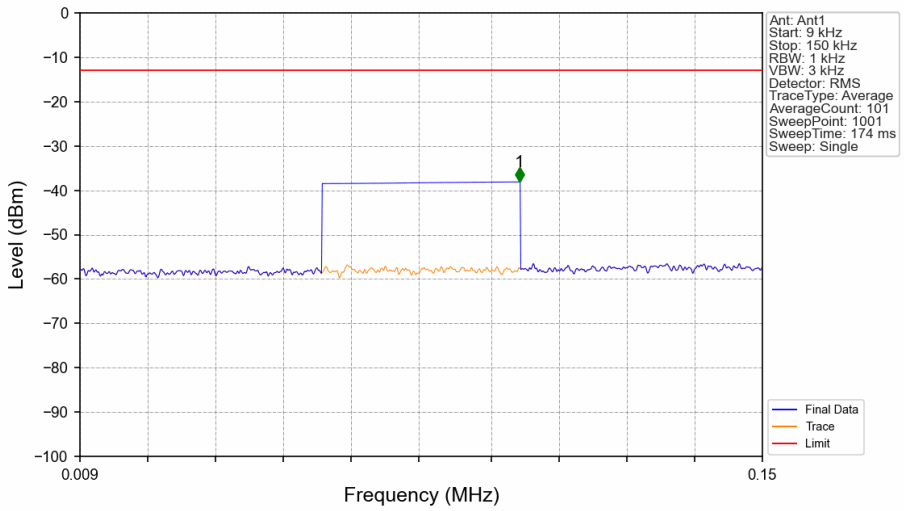
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	726.7	0.1	/	1	723.194	-49.50	-13	Pass
726.7	749.3	0.1	/	/	/	/	/	/
749.3	1000	0.1	/	2	749.708	-48.47	-13	Pass

Band12_737.5MHz_AWGN_SISO_Ant1_NTNV



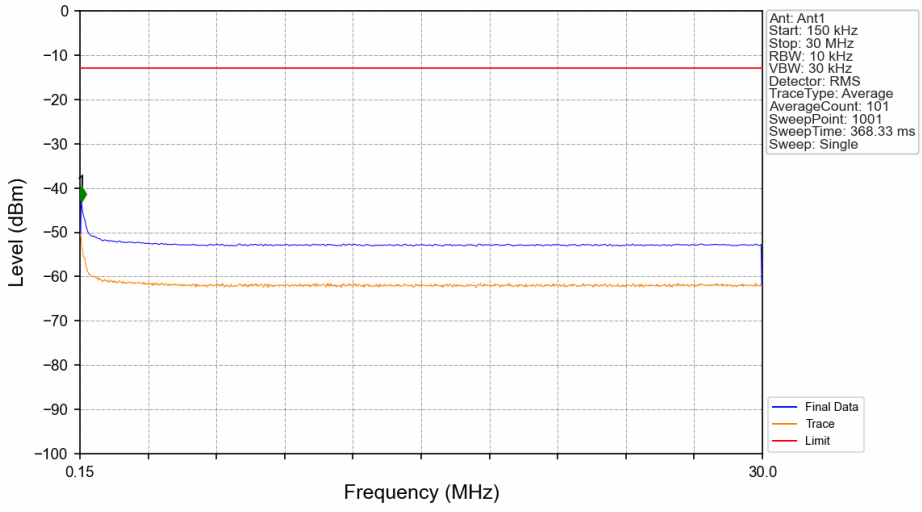
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-40.89	-13	Pass
1000	10000	1	/	2	6116.500	-35.99	-13	Pass

Band12_743.5MHz_AWGN_SISO_Ant1_NTNV



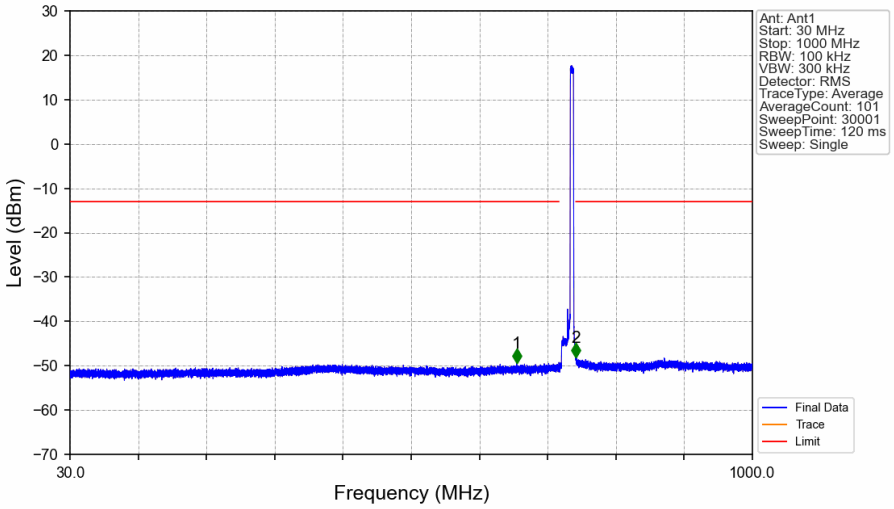
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	0.1	CHP	1	0.100	-38.10	-13	Pass

Band12_743.5MHz_AWGN_SISO_Ant1_NTNV



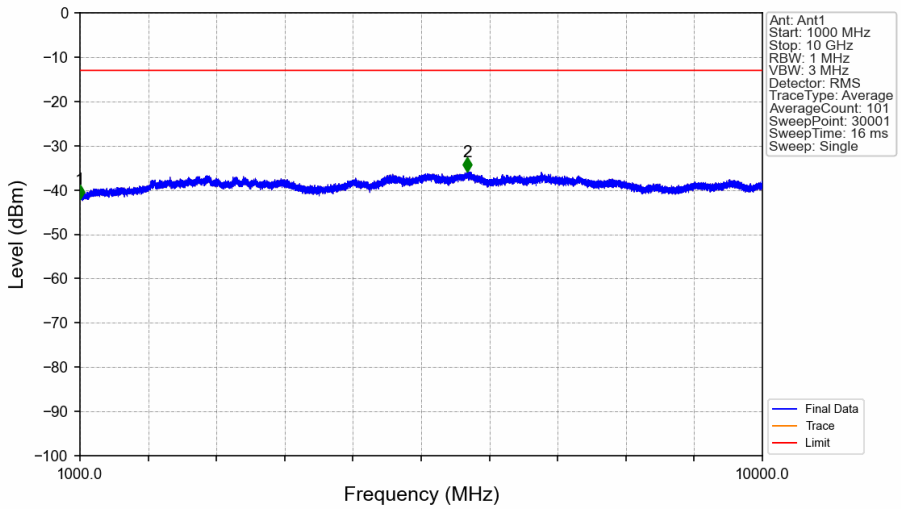
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	0.1	CHP	1	0.210	-42.93	-13	Pass

Band12_743.5MHz_AWGN_SISO_Ant1_NTNV



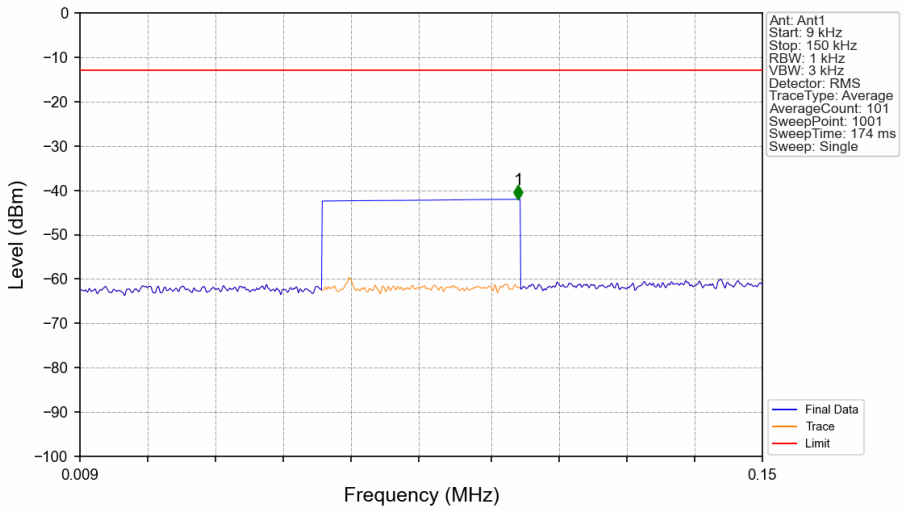
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	726.7	0.1	/	1	664.994	-49.39	-13	Pass
726.7	749.3	0.1	/	/	/	/	/	/
749.3	1000	0.1	/	2	749.320	-48.10	-13	Pass

Band12_743.5MHz_AWGN_SISO_Ant1_NTNV



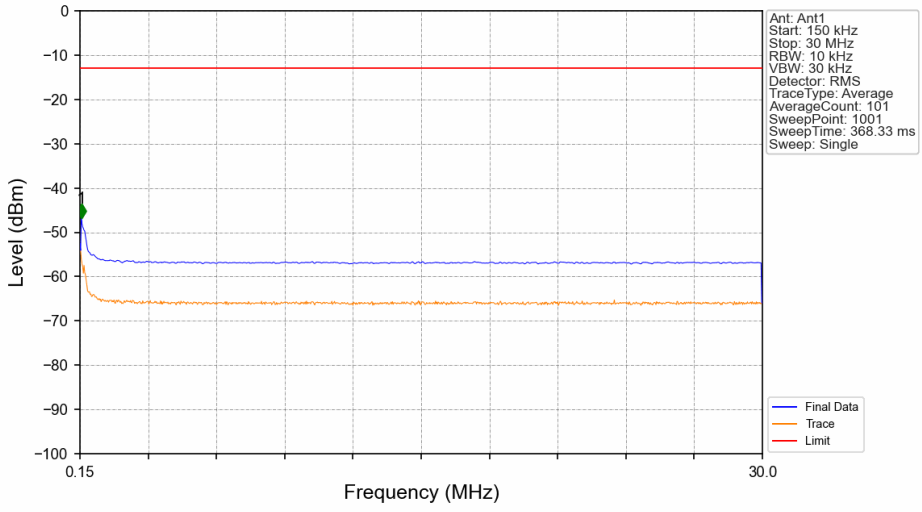
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-41.97	-13	Pass
1000	10000	1	/	2	6107.500	-35.89	-13	Pass

Band12_779MHz_Broad100MHz_SISO_Ant1_NTNV



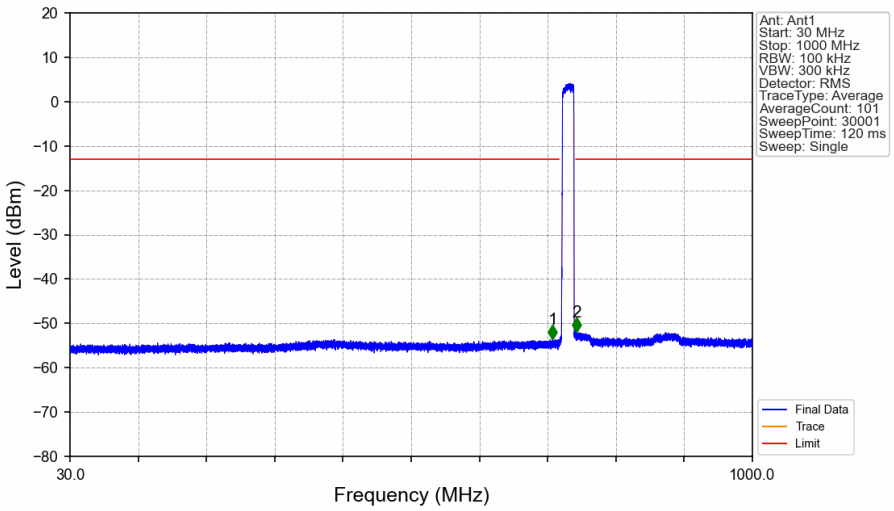
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	0.1	CHP	1	0.100	-42.02	-13	Pass

Band12_779MHz_Broad100MHz_SISO_Ant1_NTNV



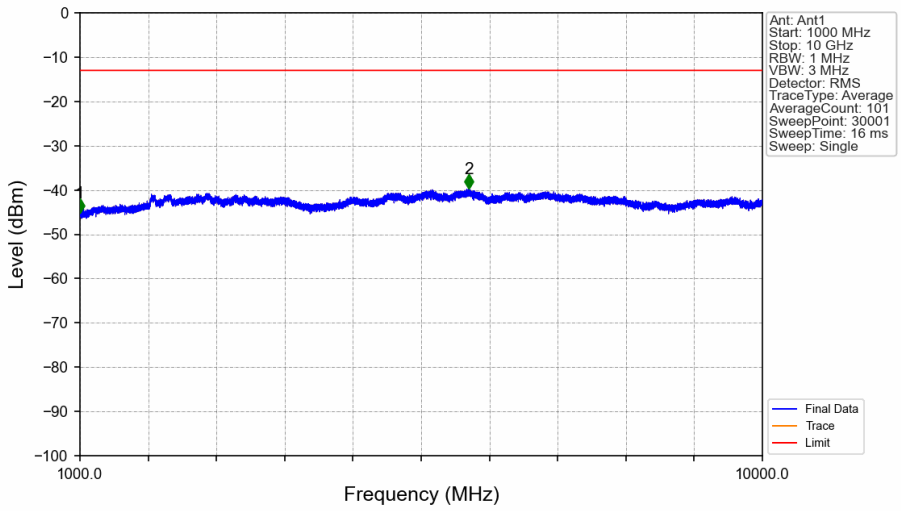
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	0.1	CHP	1	0.210	-46.70	-13	Pass

Band12_779MHz_Broad100MHz_SISO_Ant1_NTNV



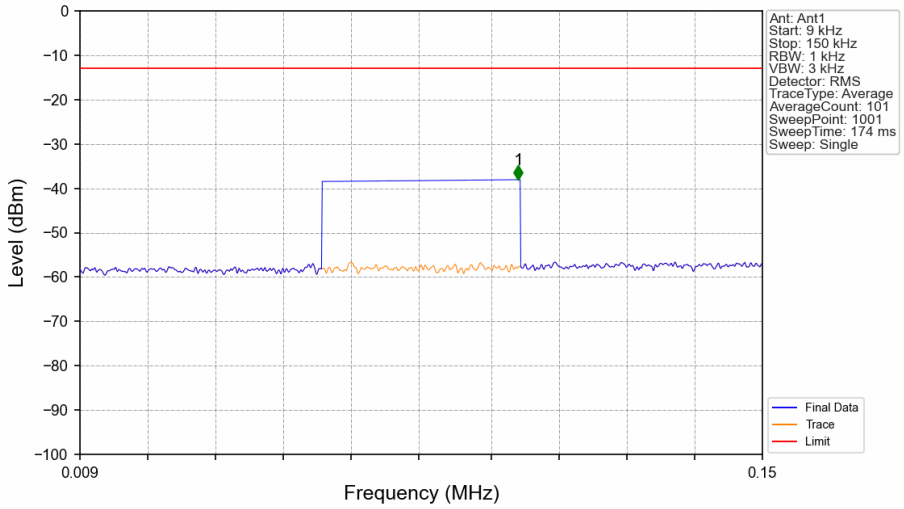
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	726.7	0.1	/	1	715.952	-53.45	-13	Pass
726.7	749.3	0.1	/	/	/	/	/	/
749.3	1000	0.1	/	2	750.548	-51.83	-13	Pass

Band12_779MHz_Broad100MHz_SISO_Ant1_NTNV



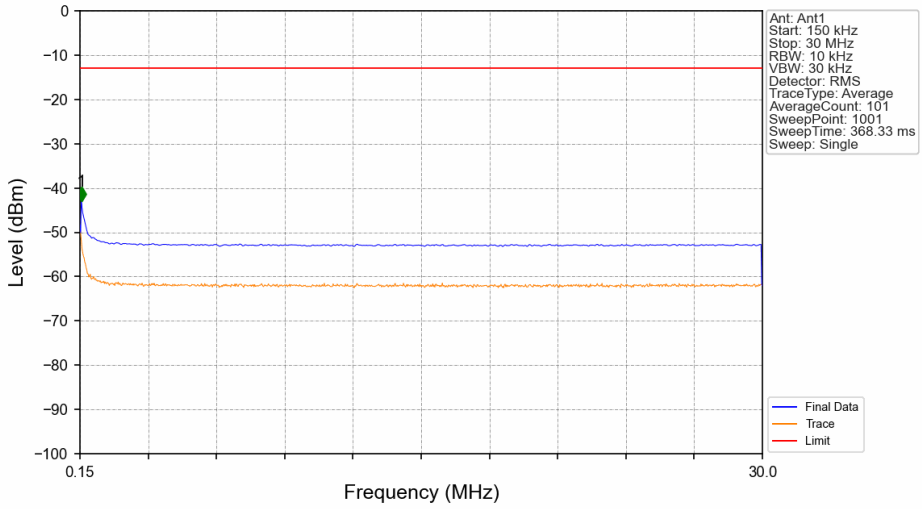
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-45.16	-13	Pass
1000	10000	1	/	2	6127.000	-39.72	-13	Pass

Band12_737.5MHz_Broad100MHz_SISO_Ant1_NTNV



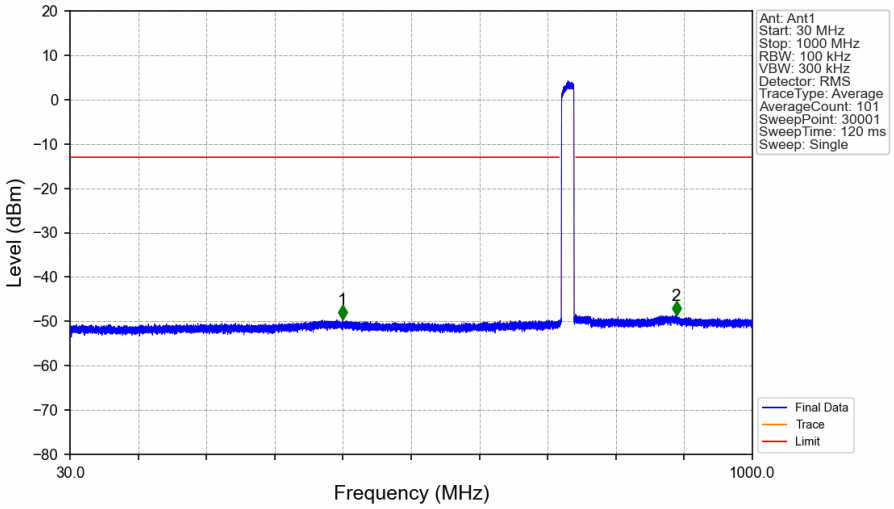
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	0.1	CHP	1	0.100	-38.05	-13	Pass

Band12_737.5MHz_Broad100MHz_SISO_Ant1_NTNV



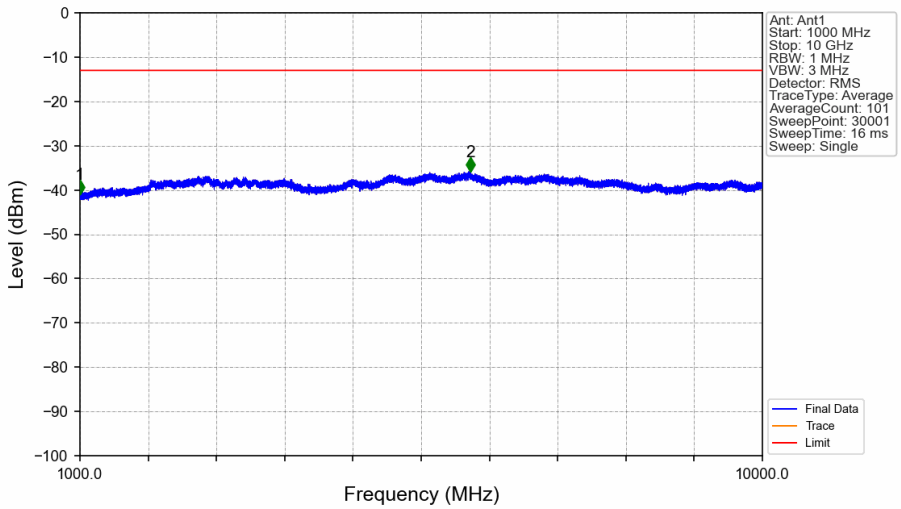
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	0.1	CHP	1	0.210	-42.86	-13	Pass

Band12_737.5MHz_Broad100MHz_SISO_Ant1_NTNV



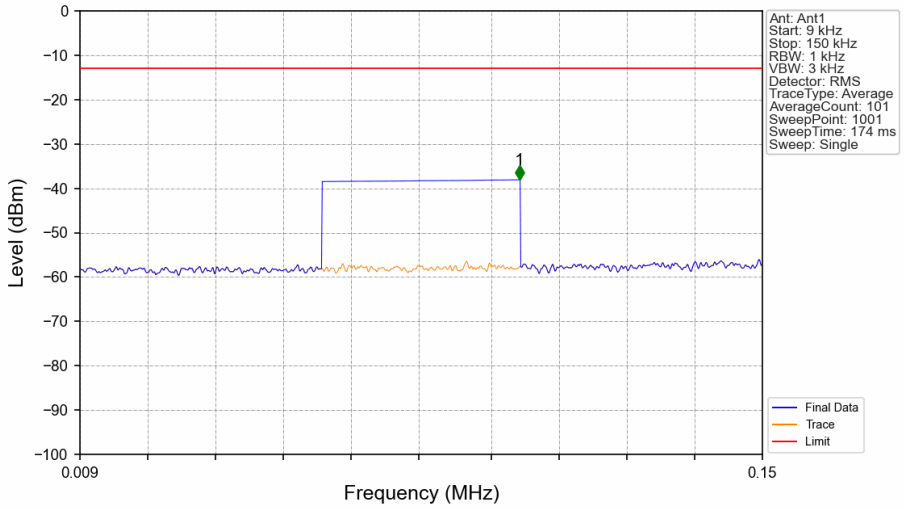
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	726.7	0.1	/	1	417.030	-49.58	-13	Pass
726.7	749.3	0.1	/	/	/	/	/	/
749.3	1000	0.1	/	2	891.748	-48.53	-13	Pass

Band12_737.5MHz_Broad100MHz_SISO_Ant1_NTNV



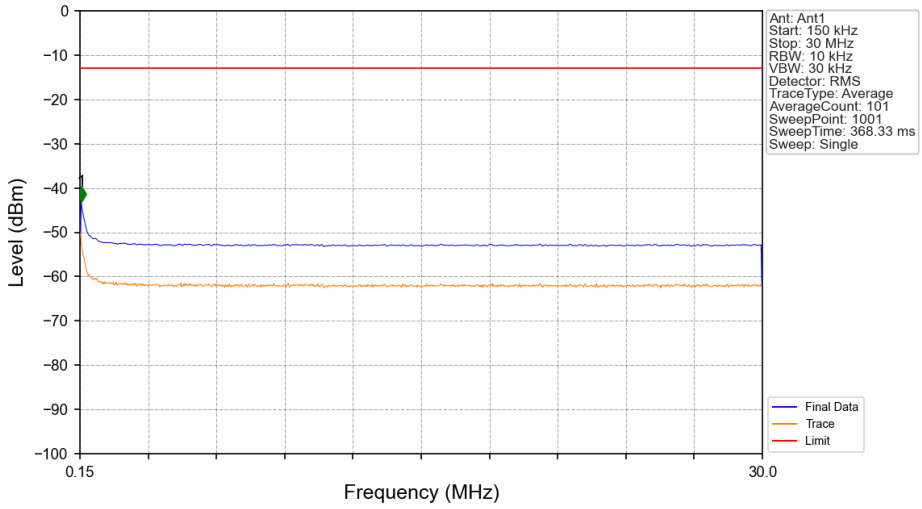
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-40.90	-13	Pass
1000	10000	1	/	2	6147.700	-35.78	-13	Pass

Band12_696MHz_Broad100MHz_SISO_Ant1_NTNV



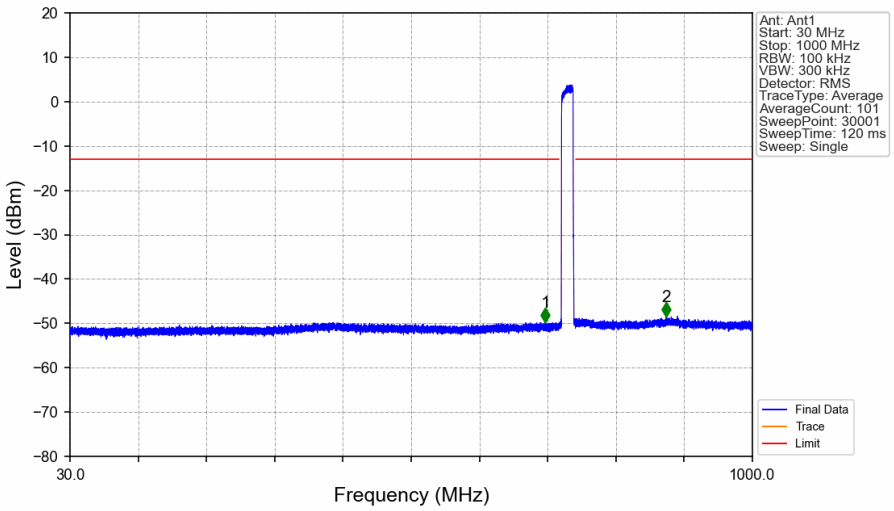
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	0.1	CHP	1	0.100	-38.08	-13	Pass

Band12_696MHz_Broad100MHz_SISO_Ant1_NTNV



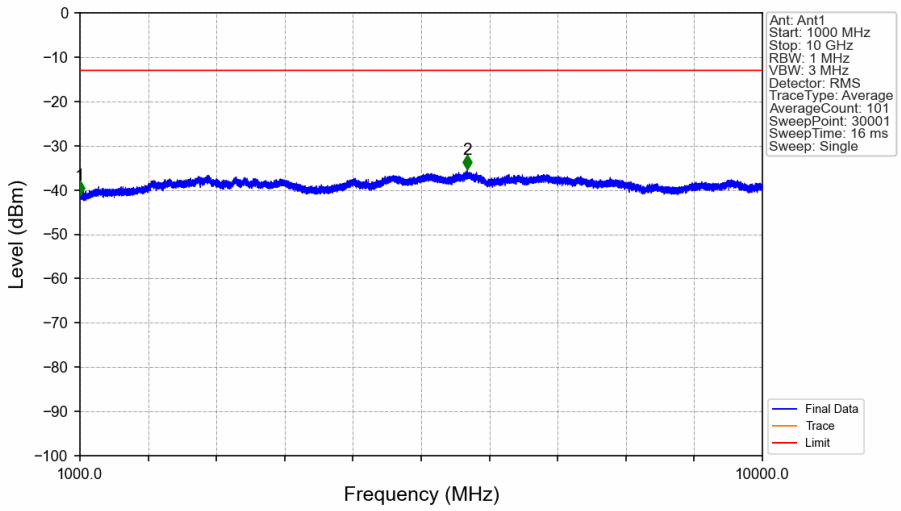
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	0.1	CHP	1	0.210	-42.97	-13	Pass

Band12_696MHz_Broad100MHz_SISO_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	726.7	0.1	/	1	705.605	-49.64	-13	Pass
726.7	749.3	0.1	/	/	/	/	/	/
749.3	1000	0.1	/	2	877.166	-48.36	-13	Pass

Band12_696MHz_Broad100MHz_SISO_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	1000	1	/	1	1000.000	-41.18	-13	Pass
1000	10000	1	/	2	6108.100	-35.24	-13	Pass

7. Frequency stability measurements

7.1 Test Result

7.1.1 Band12_Ant1

Band: 12 / NTNV							
Signal			Temp (°C)	Voltage (VAC)	Freq. Error (Hz)	Tolerance (ppm)	Verdict
Type	Level (dBm)	Frequency (MHz)					
CW	-0.3	729.1	20	102	12	0.0165	Pass
				120	10	0.0137	Pass
				138	8	0.0110	Pass
			-40	120	13	0.0178	Pass
			-30	120	5	0.0069	Pass
			-20	120	9	0.0123	Pass
			-10	120	5	0.0069	Pass
			0	120	6	0.0082	Pass
			10	120	7	0.0096	Pass
			30	120	6	0.0082	Pass
			40	120	7	0.0096	Pass
			50	120	11	0.0151	Pass
			55	120	13	0.0178	Pass
		737.5	20	102	15	0.0203	Pass
				120	13	0.0176	Pass
				138	11	0.0149	Pass
			-40	120	10	0.0136	Pass
			-30	120	8	0.0108	Pass
			-20	120	7	0.0095	Pass
			-10	120	6	0.0081	Pass
			0	120	12	0.0163	Pass
			10	120	13	0.0176	Pass
			30	120	11	0.0149	Pass
			40	120	8	0.0108	Pass
			50	120	9	0.0122	Pass
			55	120	11	0.0149	Pass
		745.9	20	102	13	0.0174	Pass
				120	12	0.0161	Pass
				138	8	0.0107	Pass
			-40	120	9	0.0121	Pass
			-30	120	7	0.0094	Pass
			-20	120	14	0.0188	Pass
			-10	120	12	0.0161	Pass
			0	120	11	0.0147	Pass
			10	120	12	0.0161	Pass
			30	120	10	0.0134	Pass
			40	120	8	0.0107	Pass
			50	120	10	0.0134	Pass
			55	120	12	0.0161	Pass

8. Radiated Spurious Emissions

8.1 Band12_Ant1

8.1.1 Test Result

GMSK 729.2MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
119.694	Horizontal	-69.06	-13	-56.06	Pass
374.102	Horizontal	-63.63	-13	-50.63	Pass
819.625	Horizontal	-66.49	-13	-53.49	Pass
2185.940	Horizontal	-61.13	-13	-48.13	Pass
4000.080	Horizontal	-62.53	-13	-49.53	Pass
6014.230	Horizontal	-63.18	-13	-50.18	Pass
87.804	Vertical	-68.41	-13	-55.41	Pass
382.222	Vertical	-65.65	-13	-52.65	Pass
805.015	Vertical	-65.25	-13	-52.25	Pass
2186.490	Vertical	-60.52	-13	-47.52	Pass
3999.120	Vertical	-61.49	-13	-48.49	Pass
6001.590	Vertical	-64.90	-13	-51.90	Pass

GMSK 737.5MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
106.094	Horizontal	-68.78	-13	-55.78	Pass
398.102	Horizontal	-64.17	-13	-51.17	Pass
805.315	Horizontal	-68.51	-13	-55.51	Pass
2176.460	Horizontal	-68.02	-13	-55.02	Pass
3988.360	Horizontal	-61.04	-13	-48.04	Pass
5982.500	Horizontal	-67.17	-13	-54.17	Pass
100.764	Vertical	-64.51	-13	-51.51	Pass
405.372	Vertical	-68.29	-13	-55.29	Pass
819.105	Vertical	-62.85	-13	-49.85	Pass
2210.510	Vertical	-63.33	-13	-50.33	Pass
4020.990	Vertical	-65.38	-13	-52.38	Pass
5990.500	Vertical	-66.08	-13	-53.08	Pass

GMSK 745.8MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
117.104	Horizontal	-68.30	-13	-55.30	Pass
397.102	Horizontal	-68.28	-13	-55.28	Pass
797.655	Horizontal	-67.60	-13	-54.60	Pass
2181.090	Horizontal	-63.77	-13	-50.77	Pass
3987.380	Horizontal	-59.43	-13	-46.43	Pass
6013.290	Horizontal	-69.28	-13	-56.28	Pass
94.854	Vertical	-63.42	-13	-50.42	Pass
383.372	Vertical	-65.81	-13	-52.81	Pass
790.625	Vertical	-67.35	-13	-54.35	Pass
2178.070	Vertical	-61.29	-13	-48.29	Pass
3986.220	Vertical	-61.14	-13	-48.14	Pass
6014.830	Vertical	-69.24	-13	-56.24	Pass

AWGN 731.5MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
89.604	Horizontal	-63.34	-13	-50.34	Pass
370.182	Horizontal	-67.87	-13	-54.87	Pass
774.545	Horizontal	-69.96	-13	-56.96	Pass
2215.560	Horizontal	-60.61	-13	-47.61	Pass
3995.200	Horizontal	-65.93	-13	-52.93	Pass
6018.300	Horizontal	-68.82	-13	-55.82	Pass
111.574	Vertical	-67.51	-13	-54.51	Pass
388.082	Vertical	-70.06	-13	-57.06	Pass
813.965	Vertical	-64.14	-13	-51.14	Pass
2200.220	Vertical	-61.31	-13	-48.31	Pass
4009.710	Vertical	-59.88	-13	-46.88	Pass
5986.370	Vertical	-63.29	-13	-50.29	Pass

AWGN 737.5MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
118.364	Horizontal	-63.15	-13	-50.15	Pass
383.682	Horizontal	-70.21	-13	-57.21	Pass
799.065	Horizontal	-69.16	-13	-56.16	Pass
2221.290	Horizontal	-62.60	-13	-49.60	Pass
3992.080	Horizontal	-61.69	-13	-48.69	Pass
6015.380	Horizontal	-68.00	-13	-55.00	Pass
100.554	Vertical	-62.75	-13	-49.75	Pass
370.852	Vertical	-66.37	-13	-53.37	Pass
782.625	Vertical	-67.60	-13	-54.60	Pass
2182.160	Vertical	-62.06	-13	-49.06	Pass
3976.280	Vertical	-66.58	-13	-53.58	Pass
5985.690	Vertical	-66.24	-13	-53.24	Pass

AWGN 743.5MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
95.924	Horizontal	-68.51	-13	-55.51	Pass
383.302	Horizontal	-67.23	-13	-54.23	Pass
792.895	Horizontal	-64.20	-13	-51.20	Pass
2202.780	Horizontal	-66.49	-13	-53.49	Pass
3996.250	Horizontal	-60.67	-13	-47.67	Pass
6000.350	Horizontal	-62.36	-13	-49.36	Pass
123.344	Vertical	-68.33	-13	-55.33	Pass
380.432	Vertical	-71.20	-13	-58.20	Pass
813.005	Vertical	-66.41	-13	-53.41	Pass
2207.300	Vertical	-67.40	-13	-54.40	Pass
3991.140	Vertical	-59.30	-13	-46.30	Pass
5991.600	Vertical	-66.70	-13	-53.70	Pass

100M 779MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
102.184	Horizontal	-62.45	-13	-49.45	Pass
369.172	Horizontal	-64.17	-13	-51.17	Pass
785.635	Horizontal	-69.79	-13	-56.79	Pass
2215.350	Horizontal	-67.31	-13	-54.31	Pass
3977.500	Horizontal	-64.40	-13	-51.40	Pass
5987.800	Horizontal	-69.53	-13	-56.53	Pass
92.024	Vertical	-66.39	-13	-53.39	Pass
382.962	Vertical	-63.72	-13	-50.72	Pass
789.815	Vertical	-70.26	-13	-57.26	Pass
2182.270	Vertical	-67.84	-13	-54.84	Pass
4010.090	Vertical	-60.43	-13	-47.43	Pass
6016.550	Vertical	-68.04	-13	-55.04	Pass

100M 737.5MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
86.474	Horizontal	-66.59	-13	-53.59	Pass
401.162	Horizontal	-63.92	-13	-50.92	Pass
797.335	Horizontal	-68.48	-13	-55.48	Pass
2175.060	Horizontal	-65.15	-13	-52.15	Pass
3978.590	Horizontal	-62.27	-13	-49.27	Pass
6020.330	Horizontal	-62.47	-13	-49.47	Pass
118.054	Vertical	-67.05	-13	-54.05	Pass
367.032	Vertical	-66.66	-13	-53.66	Pass
796.025	Vertical	-63.92	-13	-50.92	Pass
2181.750	Vertical	-67.31	-13	-54.31	Pass
4009.720	Vertical	-60.45	-13	-47.45	Pass
6001.270	Vertical	-69.83	-13	-56.83	Pass

100M 696MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
106.454	Horizontal	-62.81	-13	-49.81	Pass
409.072	Horizontal	-66.93	-13	-53.93	Pass
796.785	Horizontal	-65.31	-13	-52.31	Pass
2208.630	Horizontal	-62.79	-13	-49.79	Pass
4001.590	Horizontal	-65.08	-13	-52.08	Pass
5991.730	Horizontal	-63.58	-13	-50.58	Pass
114.024	Vertical	-61.55	-13	-48.55	Pass
401.262	Vertical	-70.39	-13	-57.39	Pass
804.105	Vertical	-65.91	-13	-52.91	Pass
2192.680	Vertical	-60.62	-13	-47.62	Pass
4013.800	Vertical	-61.47	-13	-48.47	Pass
5989.650	Vertical	-62.58	-13	-49.58	Pass