

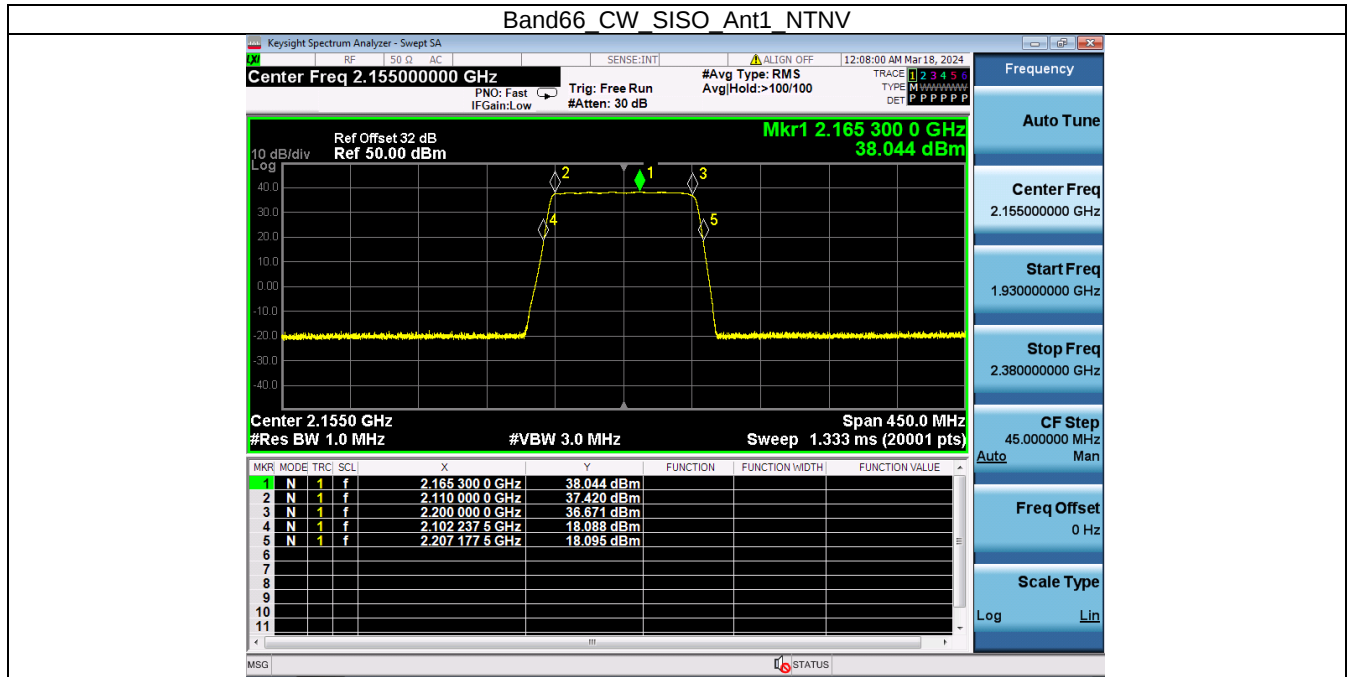
1. Out of band rejection

1.1 Band66

1.1.1 Test Result

Band: 66 / NTNV							
Signal	Sweep Frequency Range (MHz)	TX Type	ANT	F0 (MHz)	FL (MHz)	FH (MHz)	Verdict
CW	1970 - 2320	SISO	1	2165.300	2102.300	2207.300	Pass

1.1.2 Test Graph



2. AGC threshold

2.1 Band66

2.1.1 Test Result

Band: 66 / NTNV					
Signal	Frequency (MHz)	TX Type	ANT	AGC Threshold (dBm)	Verdict
GMSK 0.2MHz	2165.3	SISO	1	-3.30	Pass
AWGN 5MHz	2165.3	SISO	1	-3.30	Pass

3. Input-versus-output signal comparison

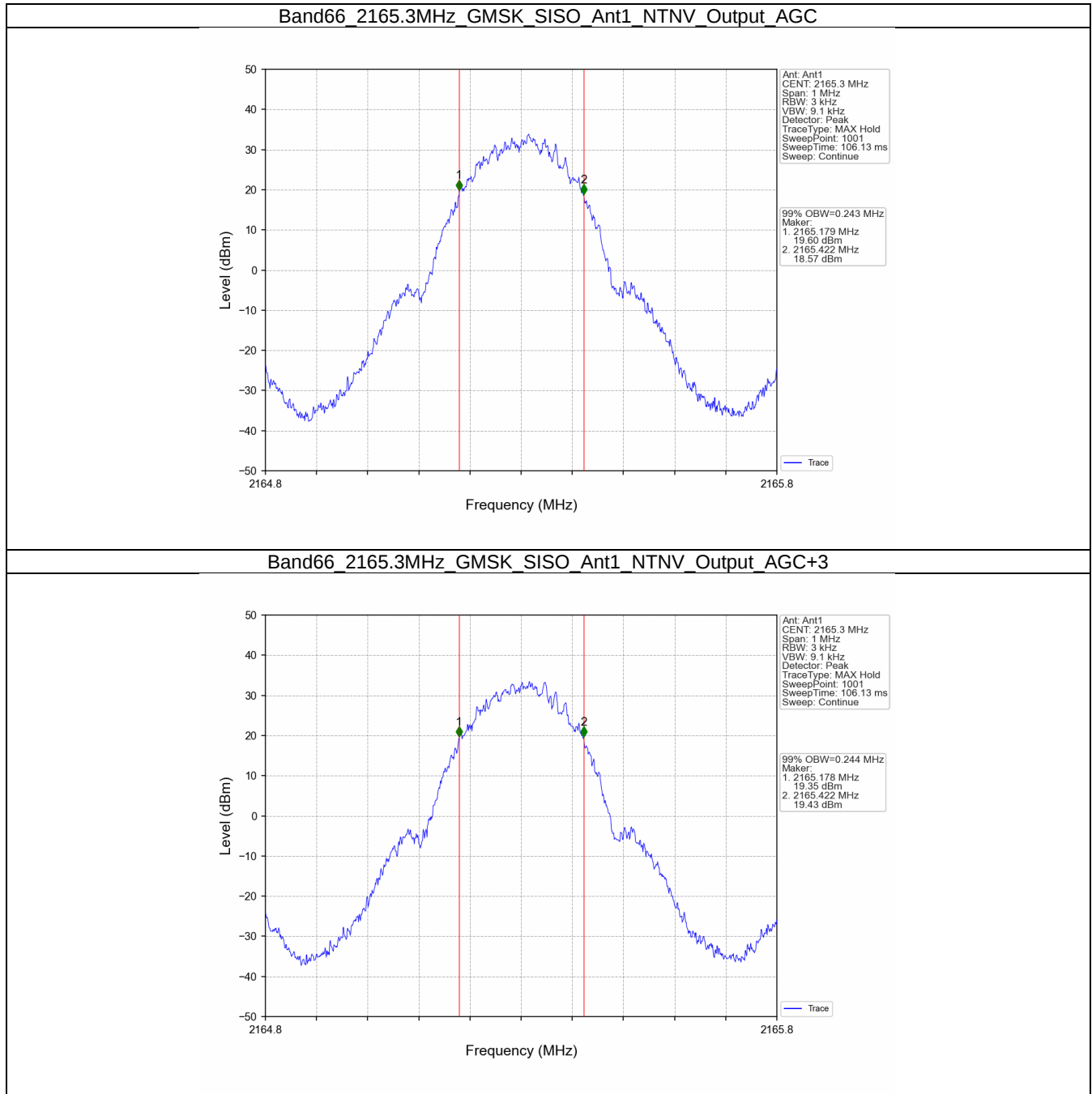
3.1 Band66_OBW

3.1.1 Test Result

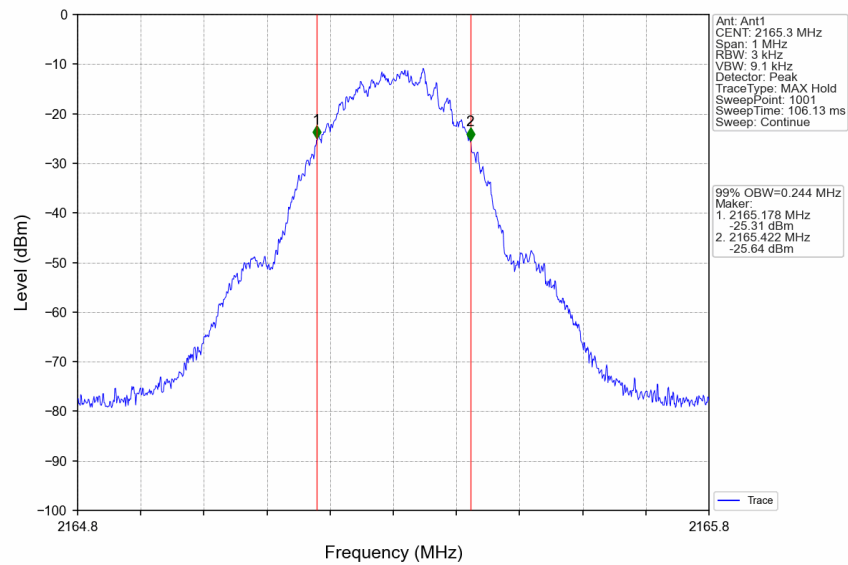
Band: 66 / NTNV									
Signal			TX Type	ANT	99% OBW (MHz)		Deviation (%)	Limit (%)	Verdict
Type	Level (dBm)	Frequency (MHz)			Output	Input			
GMSK 0.2MHz	-3.3	2165.3	SISO	1	0.243	0.244	0.41	<5.00	Pass
	-0.3	2165.3	SISO	1	0.244	0.245	0.41	<5.00	Pass
AWGN 5MHz	-3.3	2165.3	SISO	1	4.533	4.520	0.29	<5.00	Pass
	-0.3	2165.3	SISO	1	4.535	4.531	0.09	<5.00	Pass

Deviation= [(Output - Input)/ Input] * 100

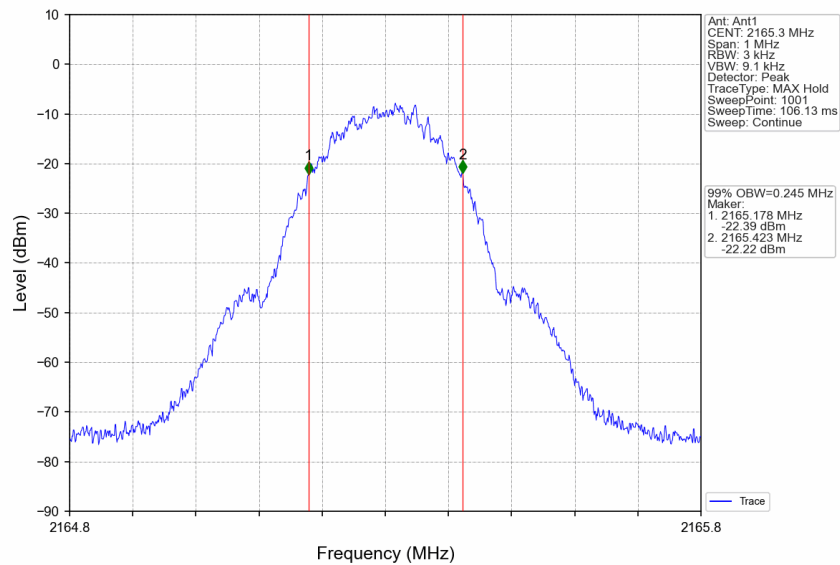
3.1.2 Test Graph



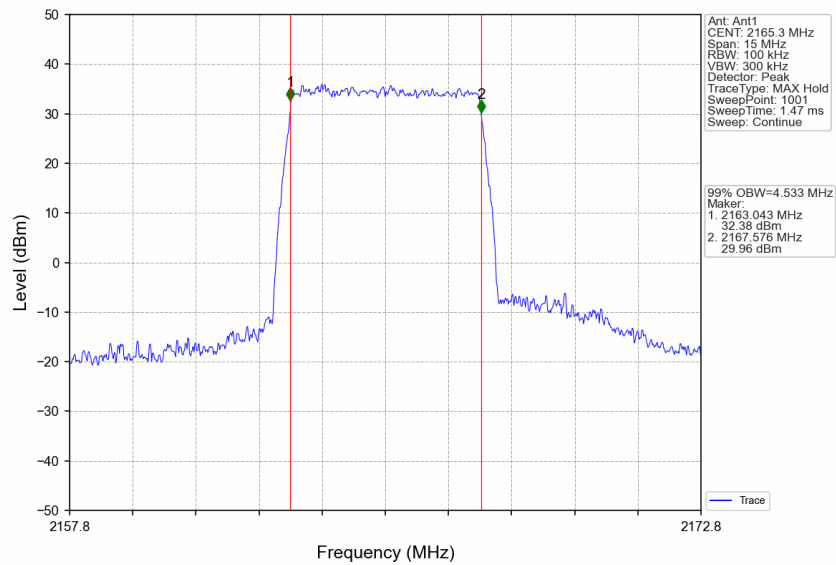
Band66_2165.3MHz_GMSK_SISO_Ant1_NTNV_Input_AGC



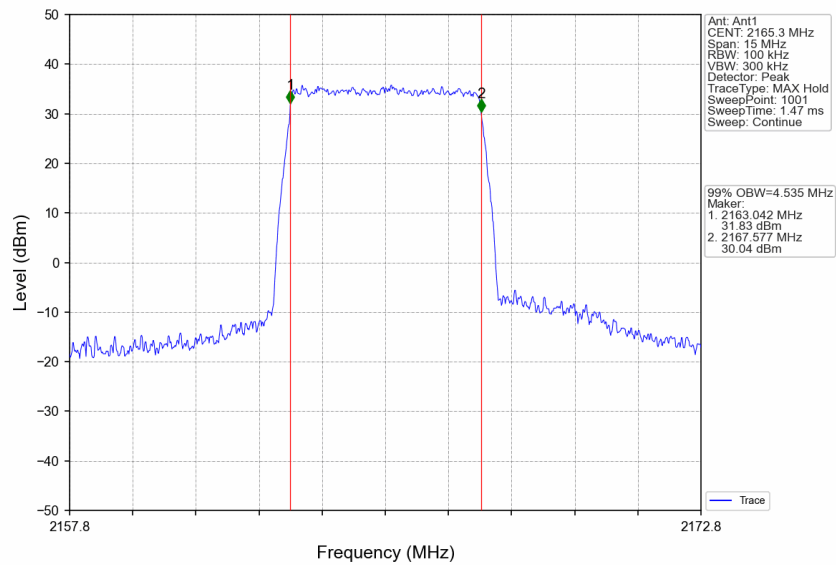
Band66_2165.3MHz_GMSK_SISO_Ant1_NTNV_Input_AGC+3



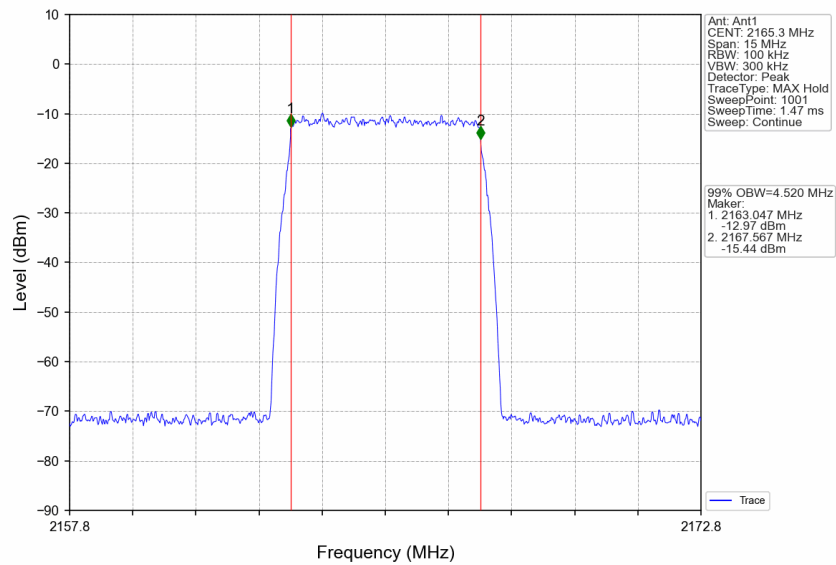
Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_Output_AGC



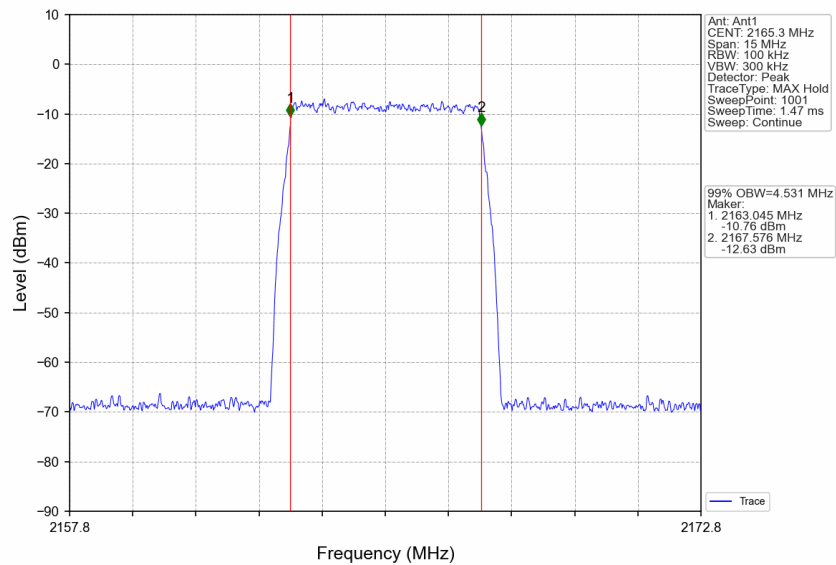
Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_Output_AGC+3



Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_Input_AGC



Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_Input_AGC+3



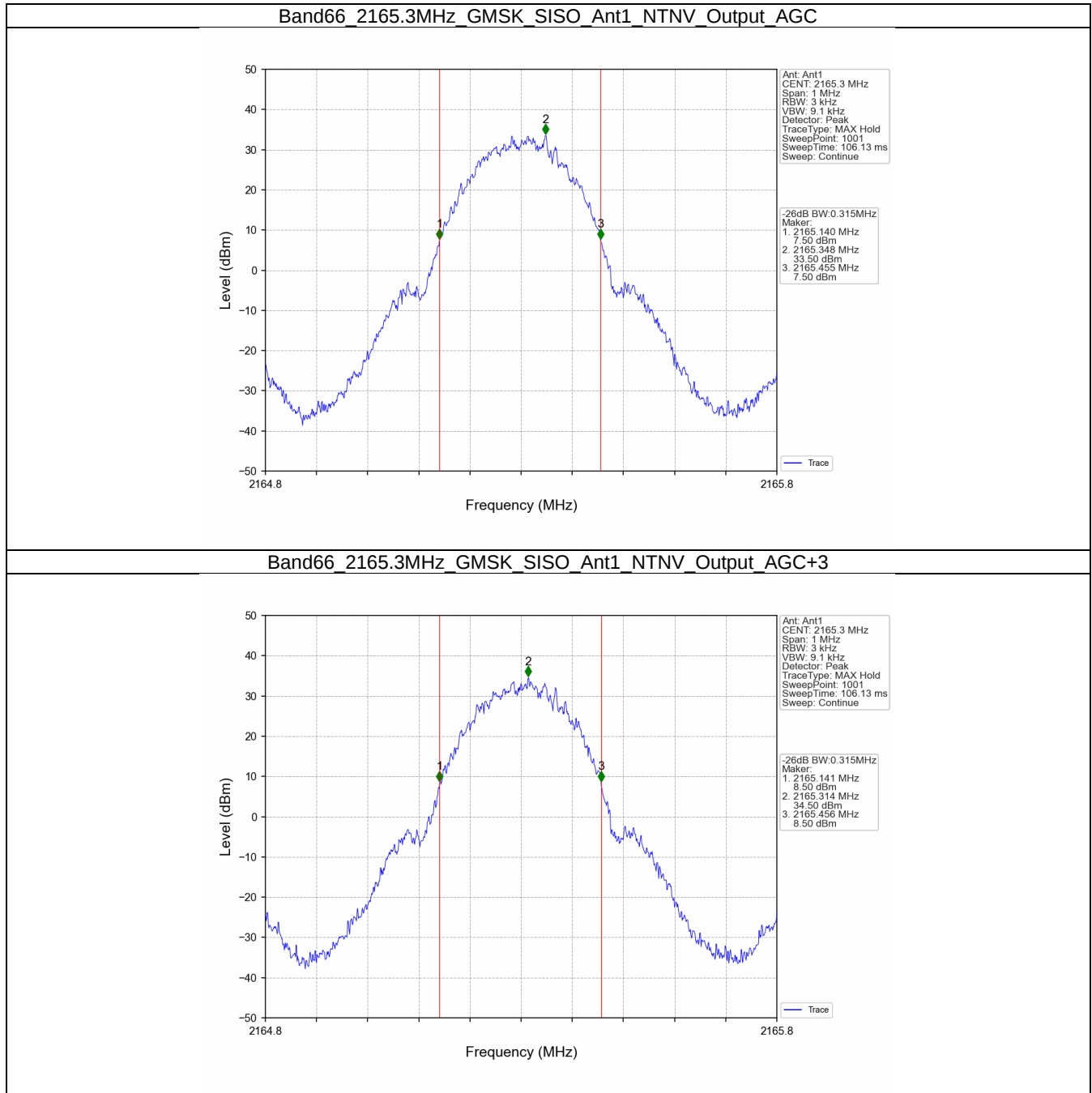
3.2 Band66_EBW

3.2.1 Test Result

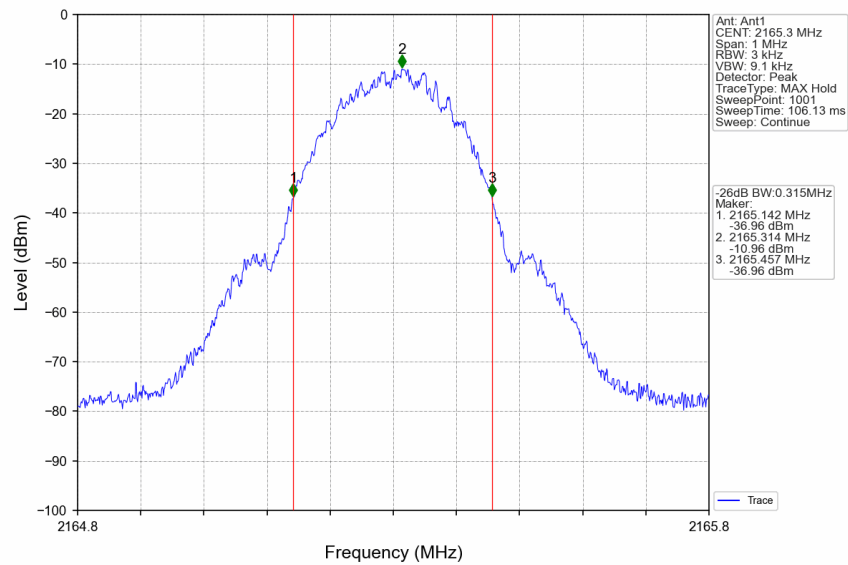
Band: 66 / NTNV									
Signal			TX Type	ANT	26dB EBW (MHz)		Deviation (%)	Limit (%)	Verdict
Type	Level (dBm)	Frequency (MHz)			Output	Input			
GMSK 0.2MHz	-3.3	2165.3	SISO	1	0.315	0.315	0.00	<5.00	Pass
	-0.3	2165.3	SISO	1	0.315	0.313	0.64	<5.00	Pass
AWGN 5MHz	-3.3	2165.3	SISO	1	5.054	5.055	0.02	<5.00	Pass
	-0.3	2165.3	SISO	1	5.061	5.046	0.30	<5.00	Pass

Deviation= [(Output - Input)/ Input] * 100

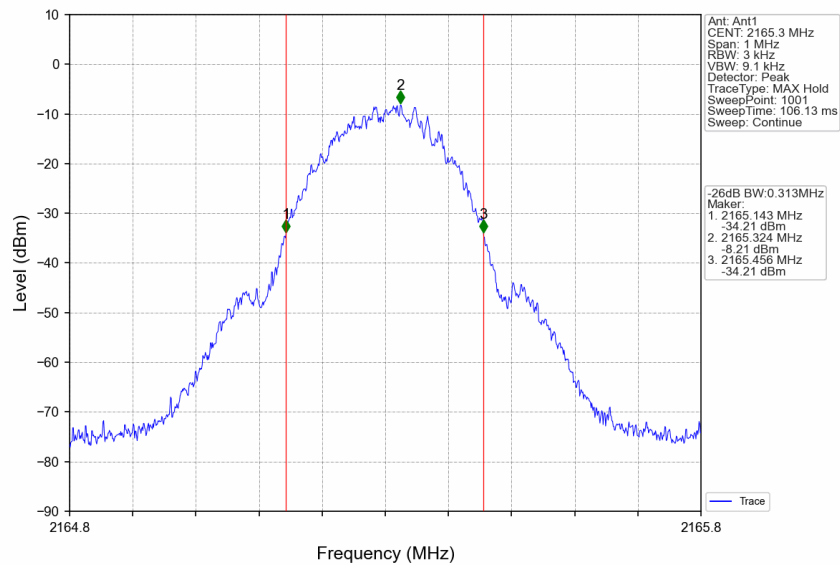
3.2.2 Test Graph



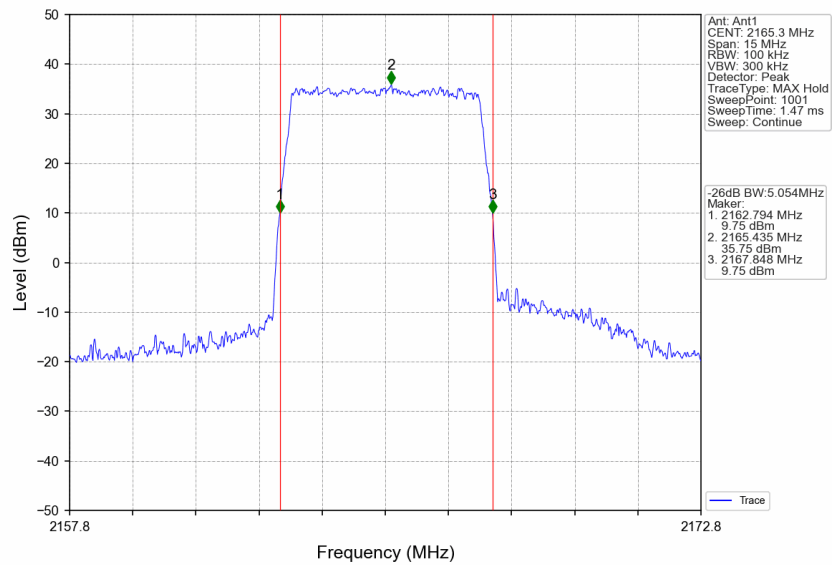
Band66_2165.3MHz_GMSK_SISO_Ant1_NTNV_Input_AGC



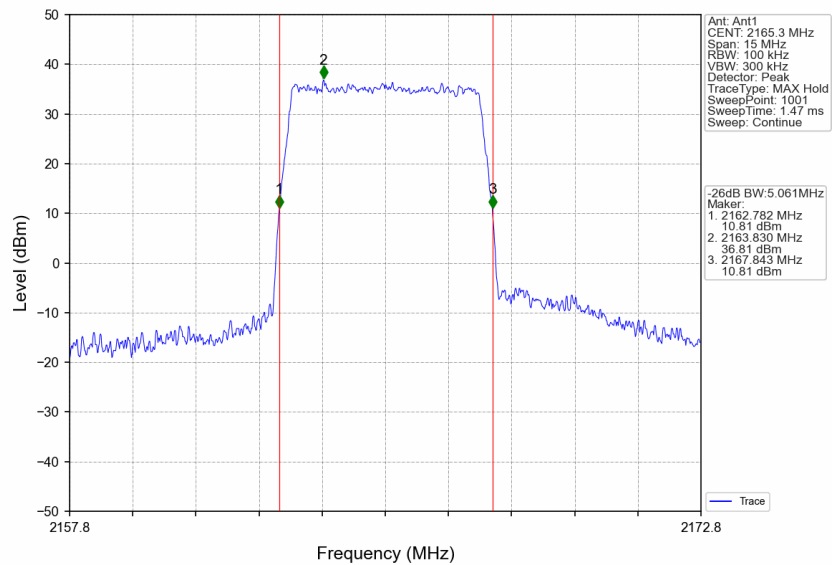
Band66_2165.3MHz_GMSK_SISO_Ant1_NTNV_Input_AGC+3



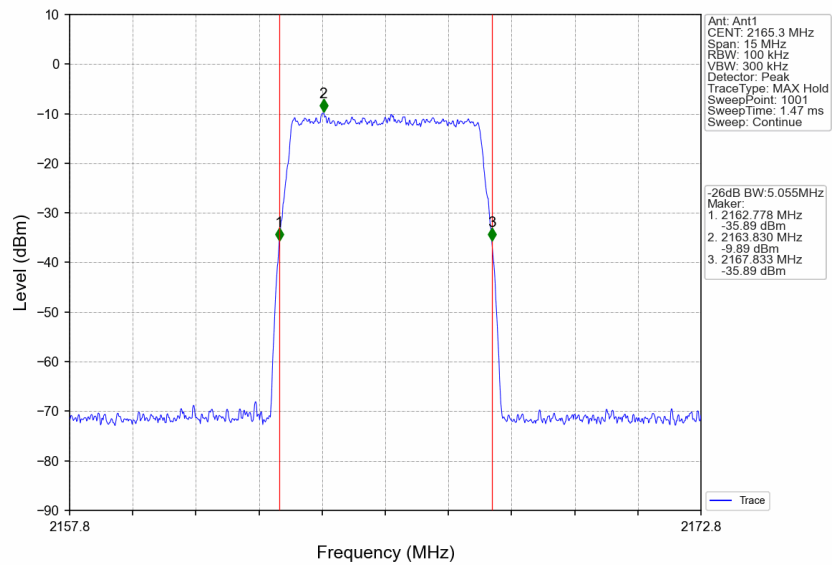
Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_Output_AGC



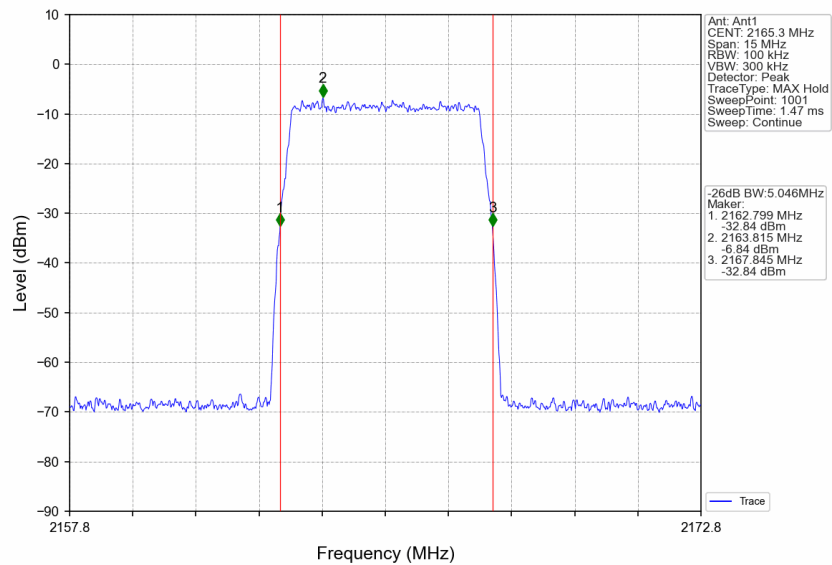
Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_Output_AGC+3



Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_Input_AGC



Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_Input_AGC+3



4. Input/output power and amplifier/booster gain

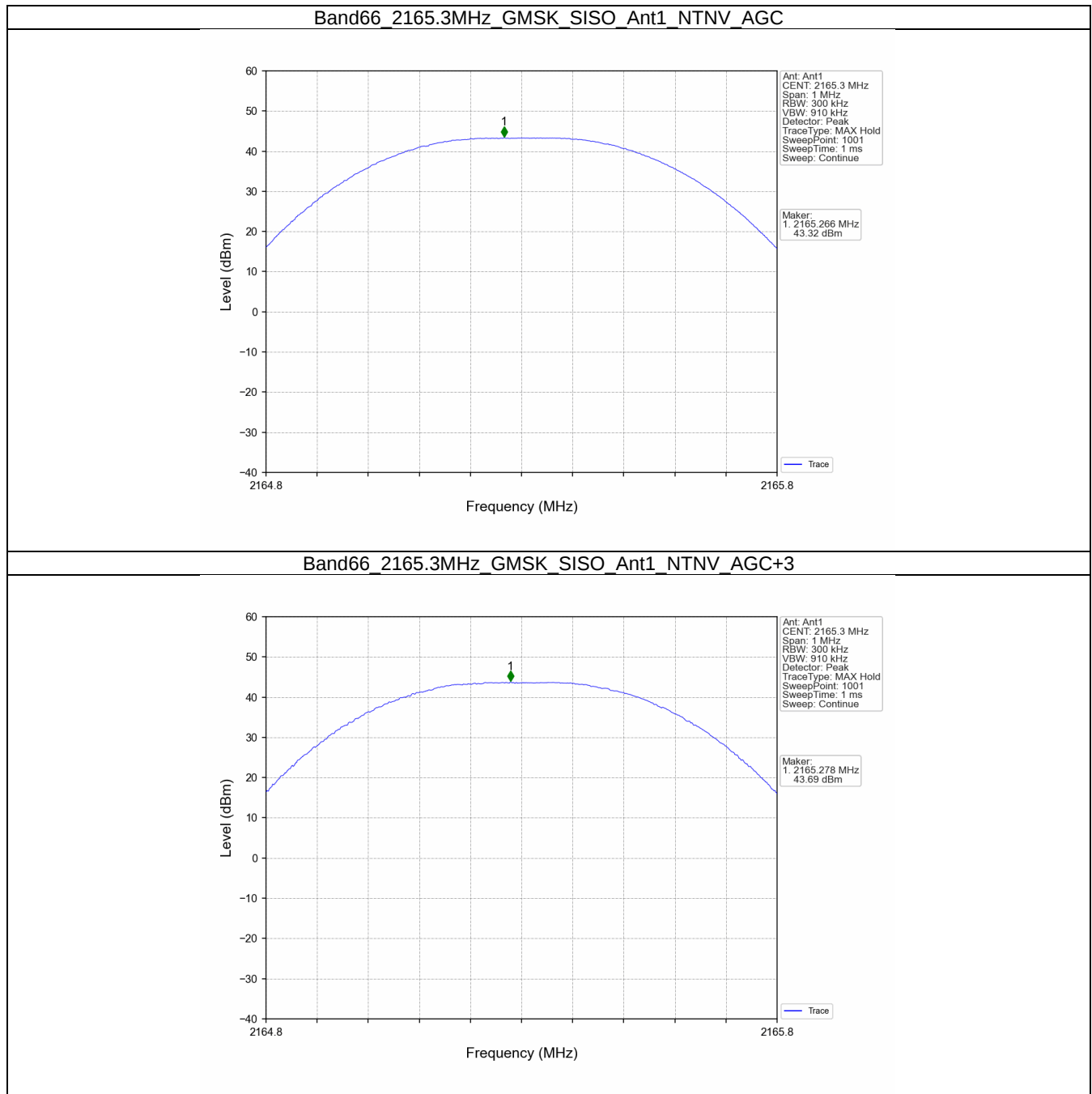
4.1 Band66_EIRP

4.1.1 Test Result

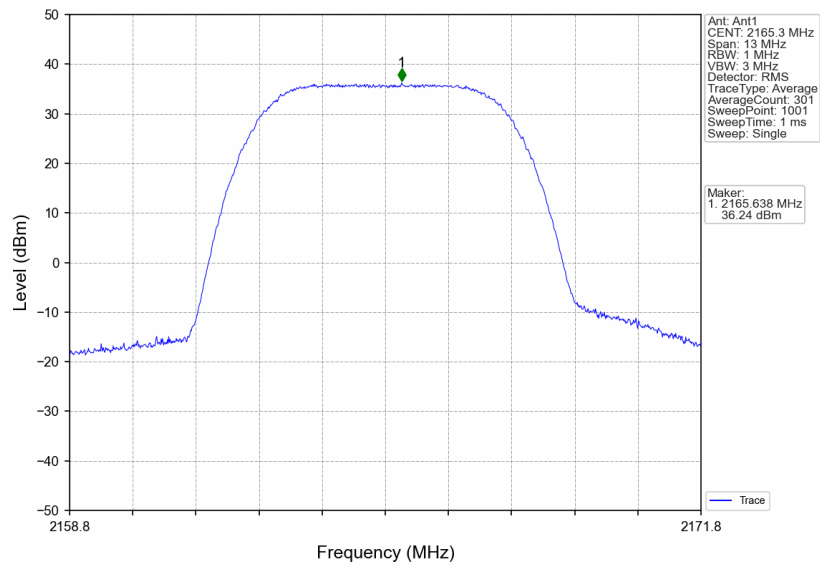
Band: 66 / NTNV										
Signal			TX Type	ANT	Conducted Power (dBm/MHz)		EIRP (dBm/MHz)		Booster Gain (dB)	Verdict
Type	Level (dBm)	Frequency (MHz)			Output	Input	Result	Limit		
GMSK	-3.3	2165.3	SISO	1	43.32	-3.27	58.32	<=65	46.59	Pass
0.2MHz	-0.3	2165.3	SISO	1	43.69	-0.25	58.69	<=65	/	Pass
AWGN	-3.3	2165.3	SISO	1	36.24	-10.29	51.24	<=65	46.53	Pass
5MHz	-0.3	2165.3	SISO	1	36.55	-7.26	51.55	<=65	/	Pass

Band: 66 / NTNV						
Signal			Conducted Power (dBm)	EIRP (dBm)	Limit (dBm)	Verdict
Type	Level (dBm)	Frequency (MHz)	SISO	SISO		
GMSK	-3.3	2165.3	43.32	58.32	/	Pass
0.2MHz	-0.3	2165.3	43.69	58.69	/	Pass
AWGN	-3.3	2165.3	43.23	58.23	/	Pass
5MHz	-0.3	2165.3	43.54	58.54	/	Pass

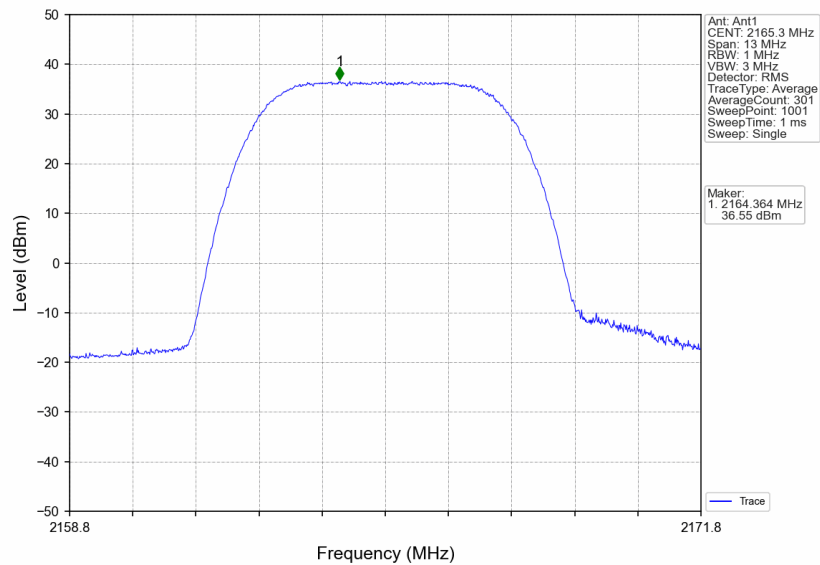
4.1.2 Test Graph



Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_AGC



Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_AGC+3

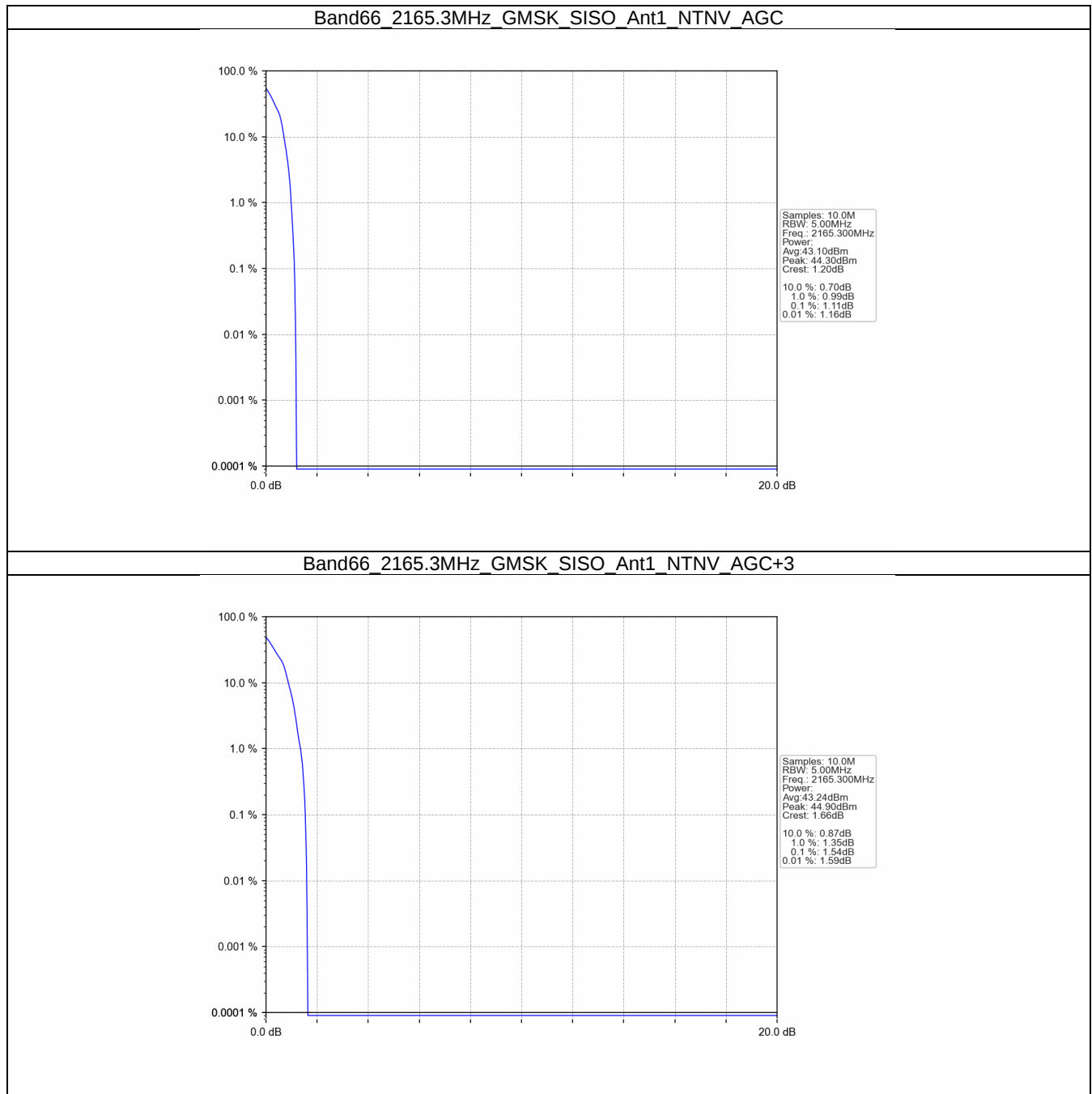


4.2 Band66_PAPR

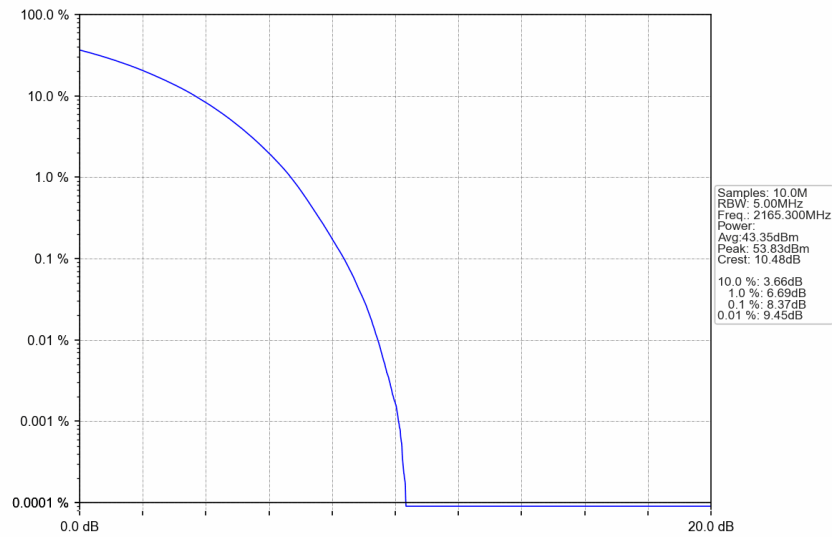
4.2.1 Test Result

Band: 66 / NTNV							
Signal			TX Type	ANT	PAPR (dB)		Verdict
Type	Level (dBm)	Frequency (MHz)			Result	Limit	
GMSK 0.2MHz	-3.3	2165.3	SISO	1	1.11	<=13	Pass
	-0.3	2165.3	SISO	1	1.54	<=13	Pass
AWGN 5MHz	-3.3	2165.3	SISO	1	8.37	<=13	Pass
	-0.3	2165.3	SISO	1	8.40	<=13	Pass

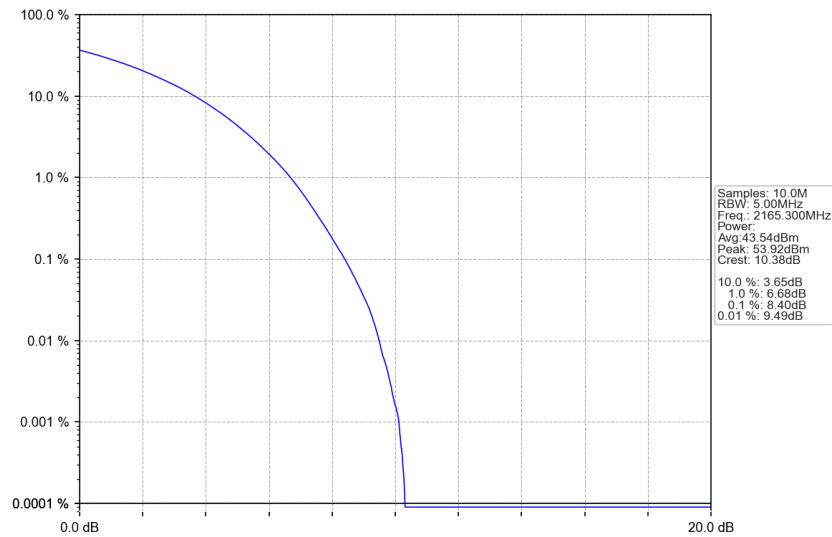
4.2.2 Test Graph



Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_AGC



Band66_2165.3MHz_AWGN_SISO_Ant1_NTNV_AGC+3



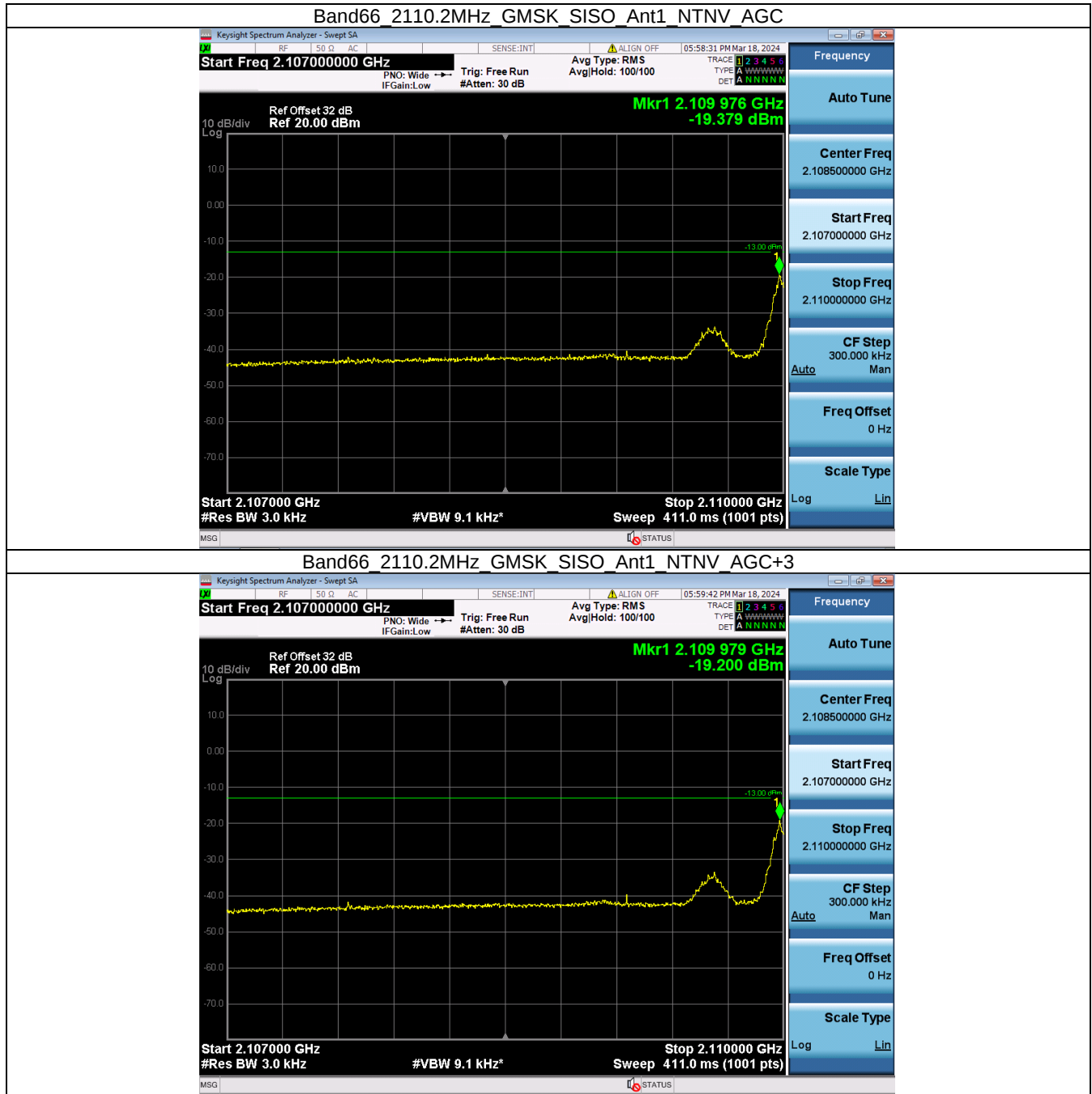
5. Out-of-band/out-of-block (including intermodulation) emissions

5.1 Band66

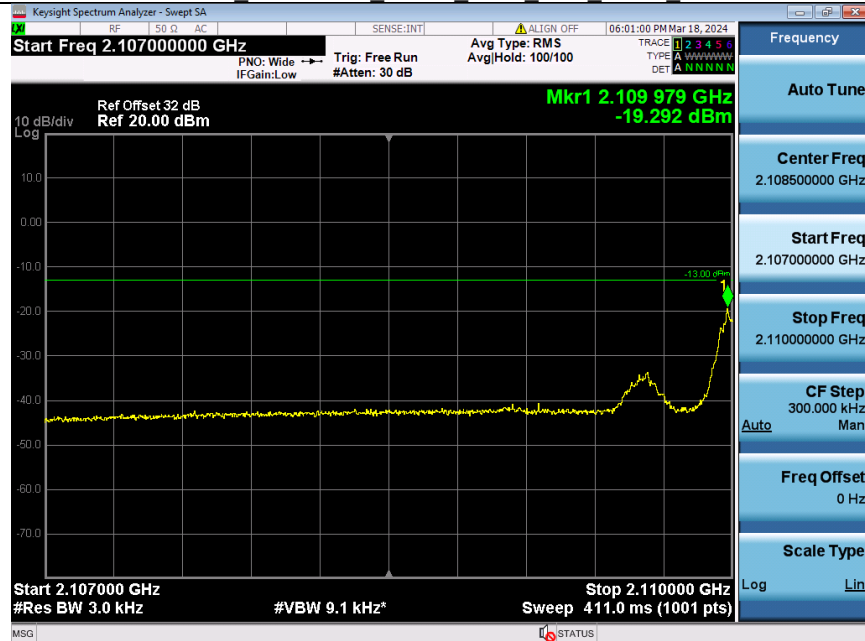
5.1.1 Test Result

Band: 66 / NTNV									
Signal				Channel	TX Type	ANT	OOB (dBm)		Verdict
Input	Type	Level (dBm)	Frequency (MHz)				Result	Limit	
Two	GMSK 0.2MHz	-3.3	2110.2	LCH	SISO	1	-19.379	Refer To Test Graph	Pass
		-0.3	2110.2	LCH	SISO	1	-19.200	Refer To Test Graph	Pass
One	GMSK 0.2MHz	-3.3	2110.2	LCH	SISO	1	-19.292	Refer To Test Graph	Pass
		-0.3	2110.2	LCH	SISO	1	-19.762	Refer To Test Graph	Pass
Two	GMSK 0.2MHz	-3.3	2199.8	HCH	SISO	1	-22.133	Refer To Test Graph	Pass
		-0.3	2199.8	HCH	SISO	1	-21.792	Refer To Test Graph	Pass
One	GMSK 0.2MHz	-3.3	2199.8	HCH	SISO	1	-22.815	Refer To Test Graph	Pass
		-0.3	2199.8	HCH	SISO	1	-21.925	Refer To Test Graph	Pass
Two	AWGN 5MHz	-3.3	2112.5	LCH	SISO	1	-19.095	Refer To Test Graph	Pass
		-0.3	2112.5	LCH	SISO	1	-18.131	Refer To Test Graph	Pass
One	AWGN 5MHz	-3.3	2112.5	LCH	SISO	1	-18.389	Refer To Test Graph	Pass
		-0.3	2112.5	LCH	SISO	1	-18.037	Refer To Test Graph	Pass
Two	AWGN 5MHz	-3.3	2197.5	HCH	SISO	1	-20.337	Refer To Test Graph	Pass
		-0.3	2197.5	HCH	SISO	1	-19.661	Refer To Test Graph	Pass
One	AWGN 5MHz	-3.3	2197.5	HCH	SISO	1	-19.810	Refer To Test Graph	Pass
		-0.3	2197.5	HCH	SISO	1	-18.950	Refer To Test Graph	Pass

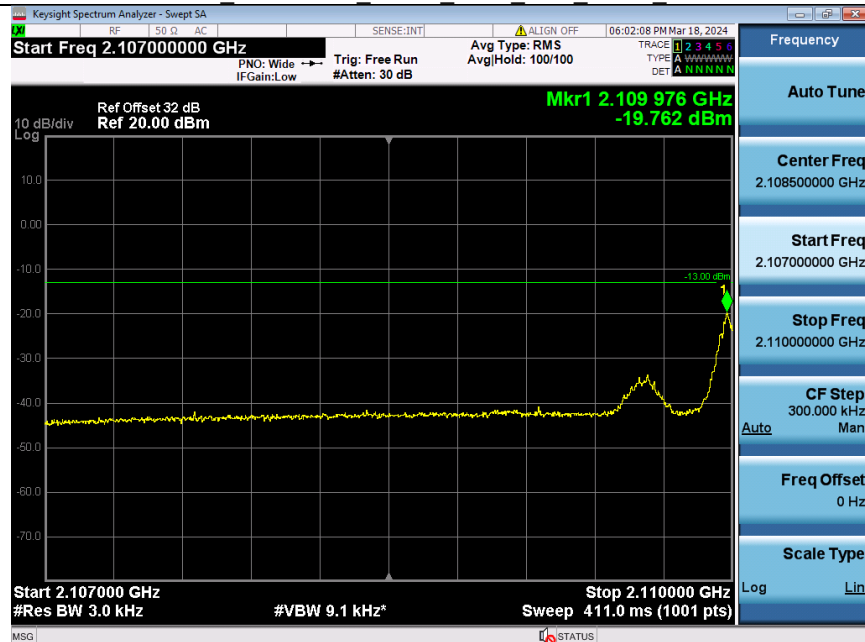
5.1.2 Test Graph



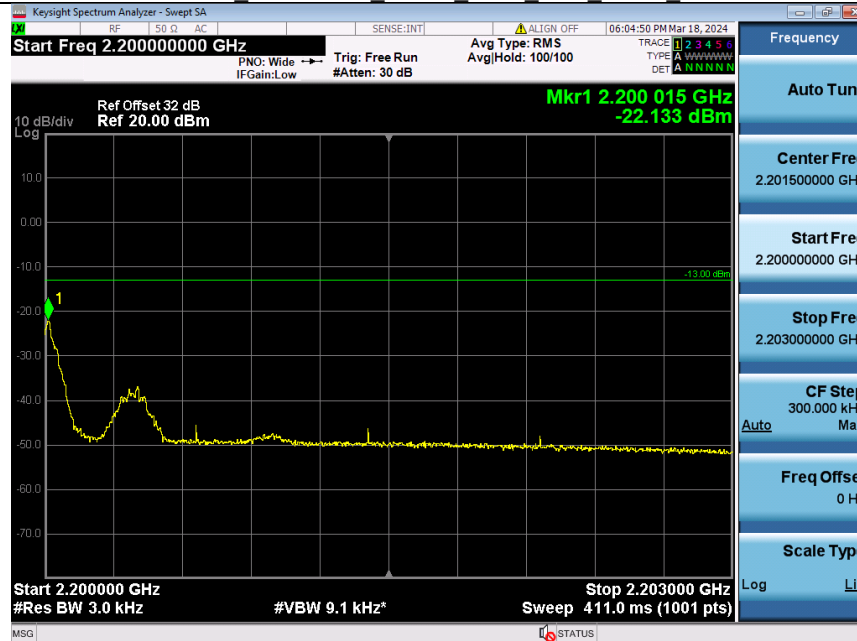
Band66 2110.2MHz GMSK SISO Ant1 NTN AGC



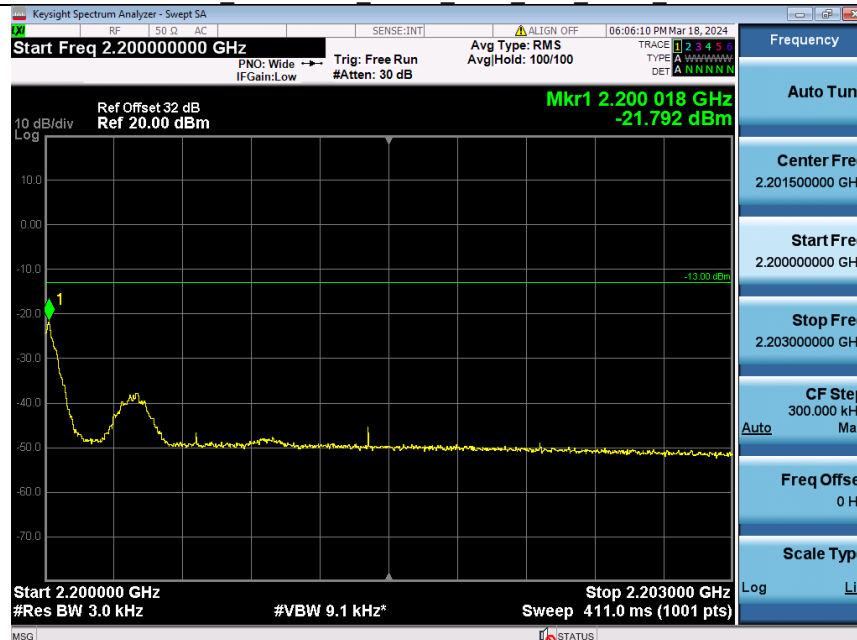
Band66 2110.2MHz GMSK SISO Ant1 NTN AGC+3



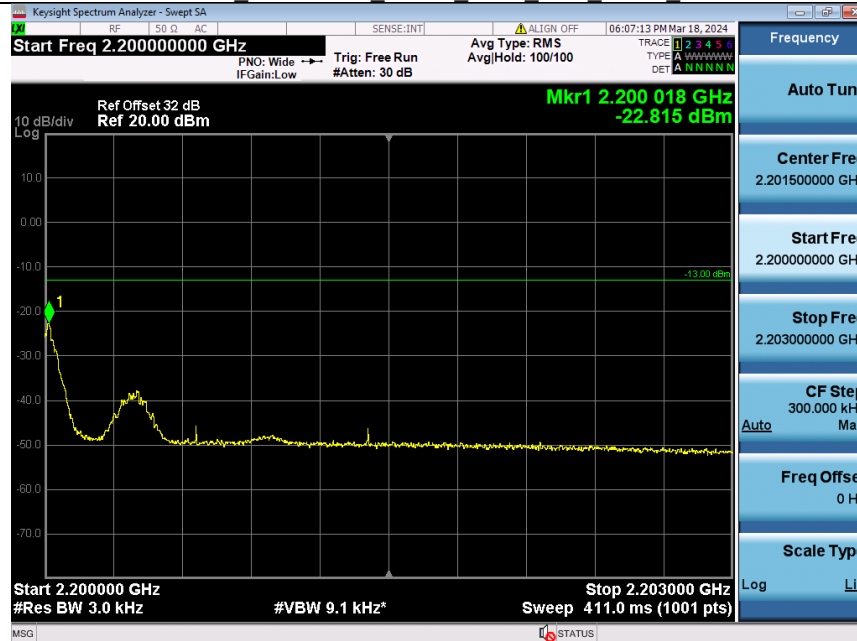
Band66 2199.8MHz_GMSK_SISO_Ant1_NTNV_AGC



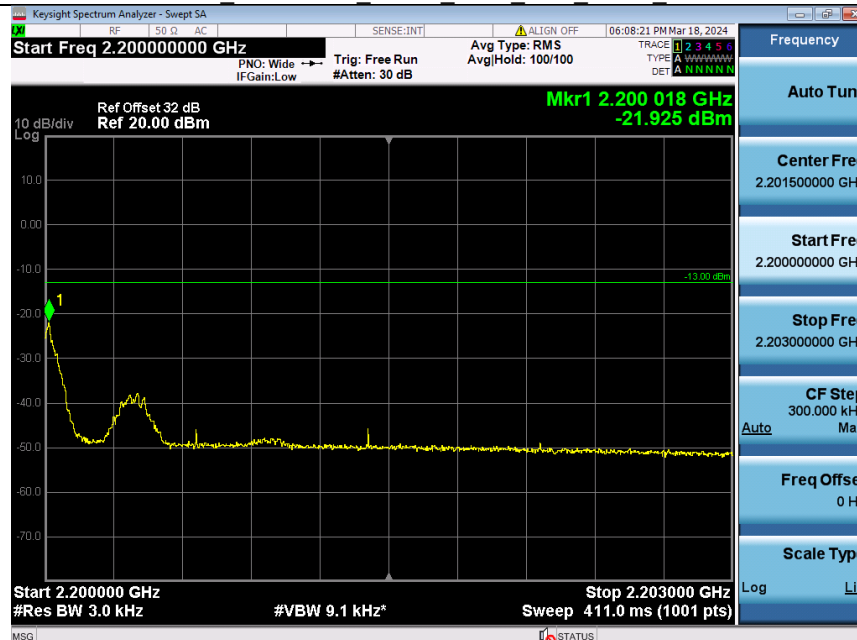
Band66 2199.8MHz_GMSK_SISO_Ant1_NTNV_AGC+3



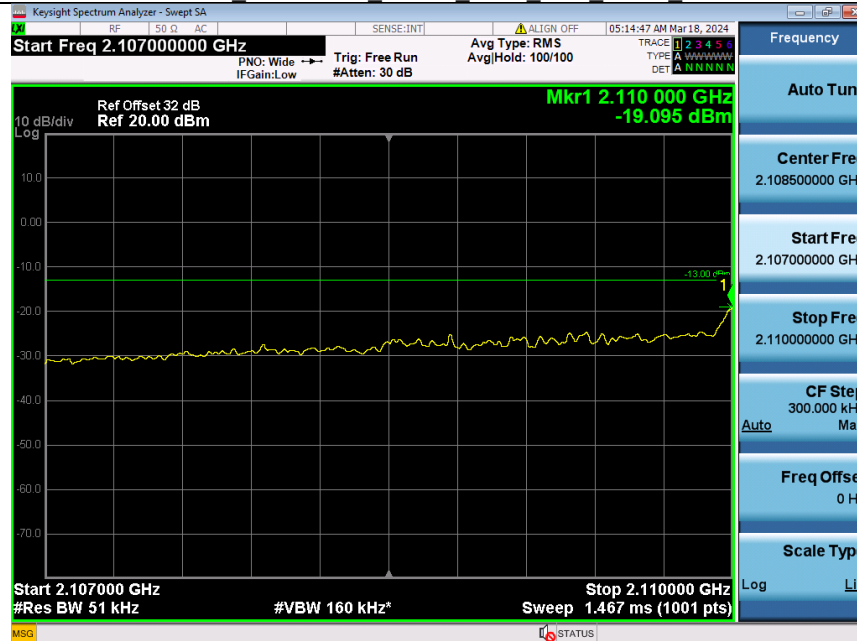
Band66 2199.8MHz_GMSK_SISO_Ant1_NTNV_AGC



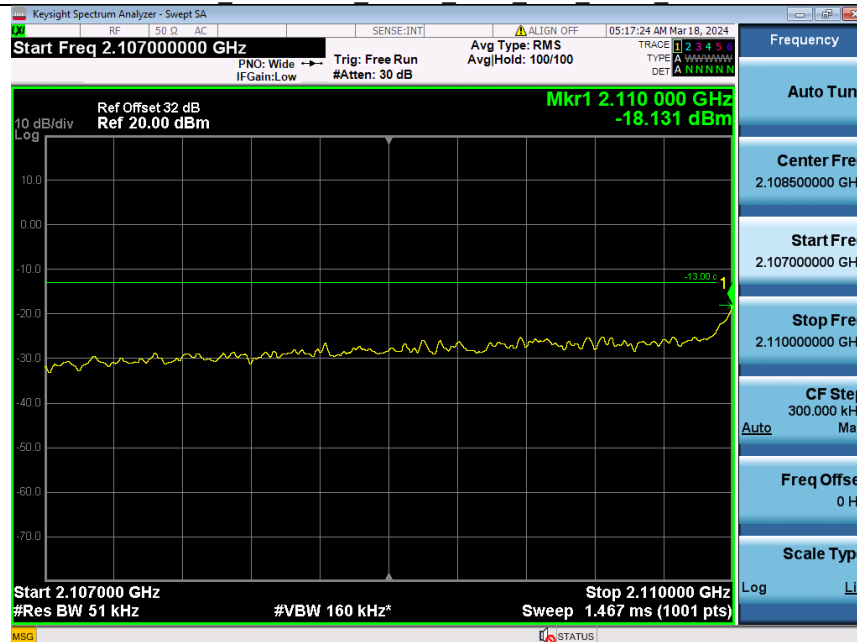
Band66 2199.8MHz_GMSK_SISO_Ant1_NTNV_AGC+3



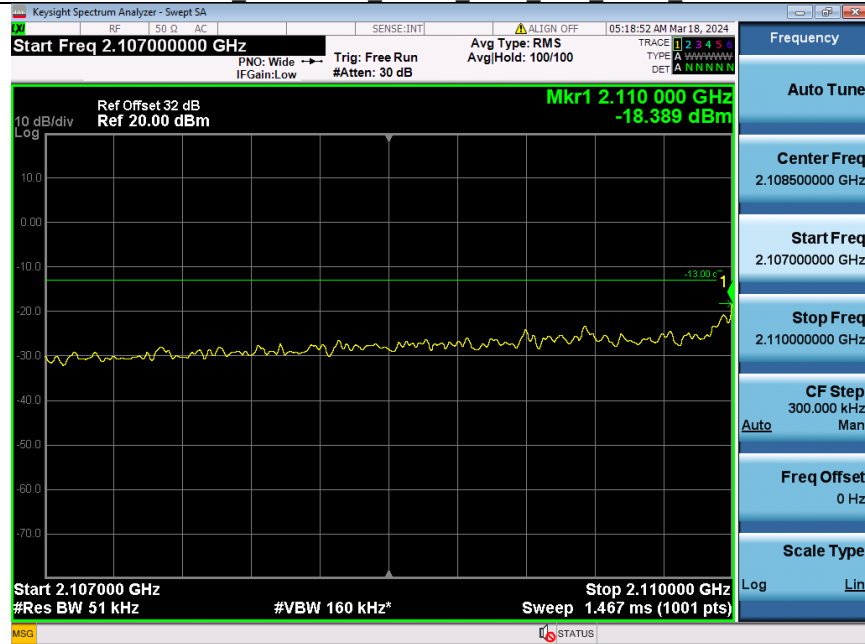
Band66 2112.5MHz AWGN SISO Ant1 NTN AGC



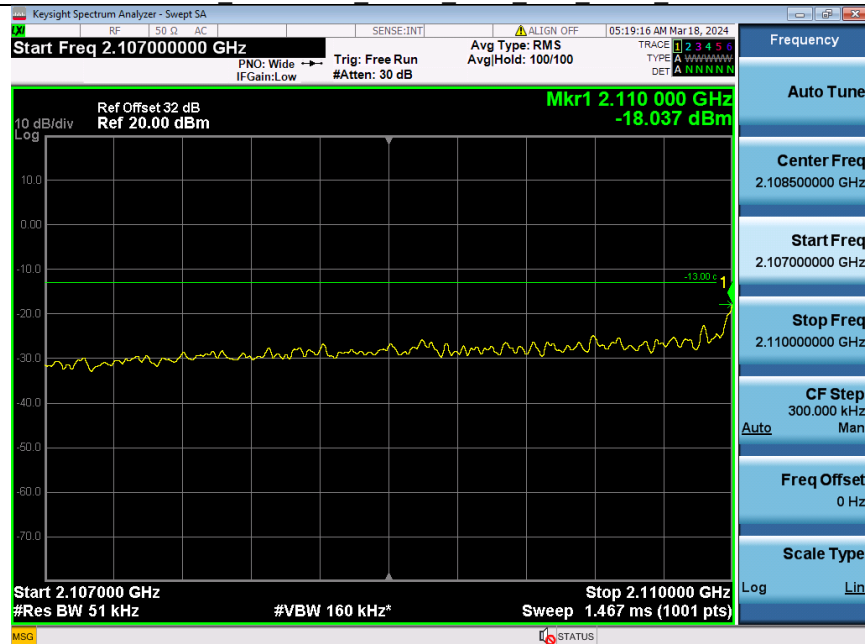
Band66 2112.5MHz AWGN SISO Ant1 NTN AGC+3



Band66 2112.5MHz AWGN SISO Ant1 NTN AGC



Band66 2112.5MHz AWGN SISO Ant1 NTN AGC+3



Band66 2197.5MHz AWGN SISO Ant1 NTN AGC



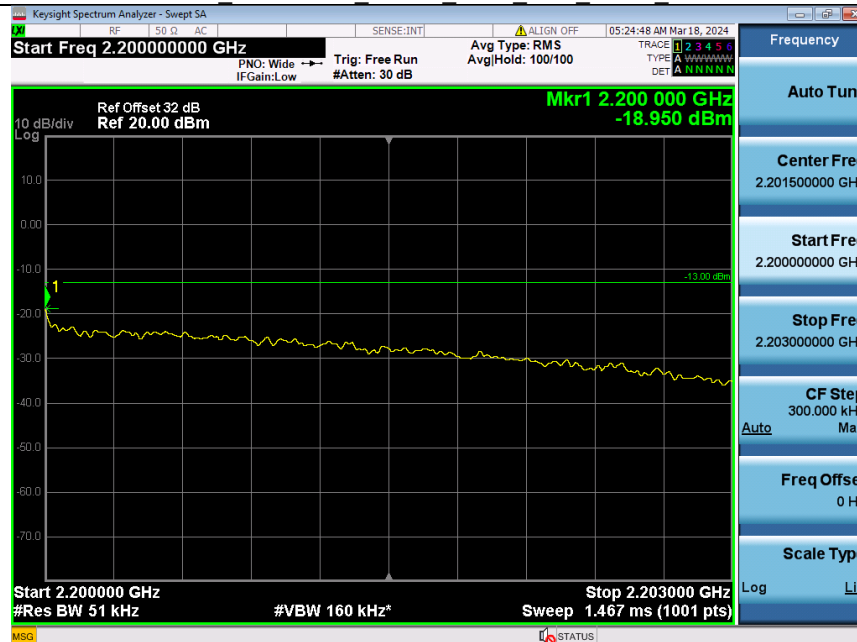
Band66 2197.5MHz AWGN SISO Ant1 NTN AGC+3



Band66 2197.5MHz AWGN SISO Ant1 NTN AGC



Band66 2197.5MHz AWGN SISO Ant1 NTN AGC+3



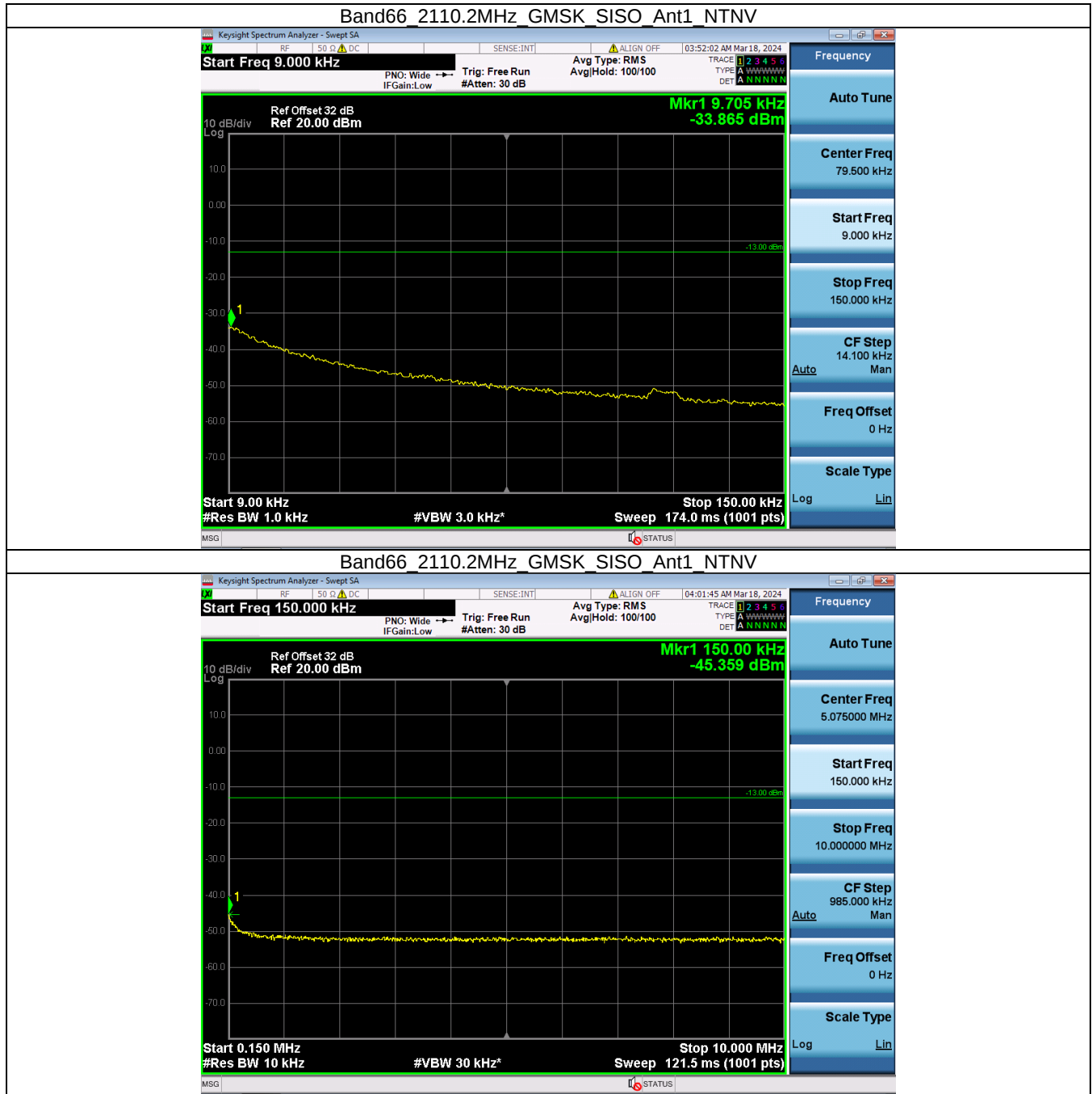
6. Spurious emissions

6.1 Band66

6.1.1 Test Result

Band: 66 / NTVN								
Signal			Channel	TX Type	ANT	SE (dBm)		Verdict
Type	Level (dBm)	Frequency (MHz)				Result	Limit	
GMSK 0.2MHz	-3.3	2110.2	LCH	SISO	1	Refer To Test Graph		Pass
		2155	MCH	SISO	1	Refer To Test Graph		Pass
		2199.8	HCH	SISO	1	Refer To Test Graph		Pass
AWGN 5MHz	-3.3	2112.5	LCH	SISO	1	Refer To Test Graph		Pass
		2155	MCH	SISO	1	Refer To Test Graph		Pass
		2197.5	HCH	SISO	1	Refer To Test Graph		Pass

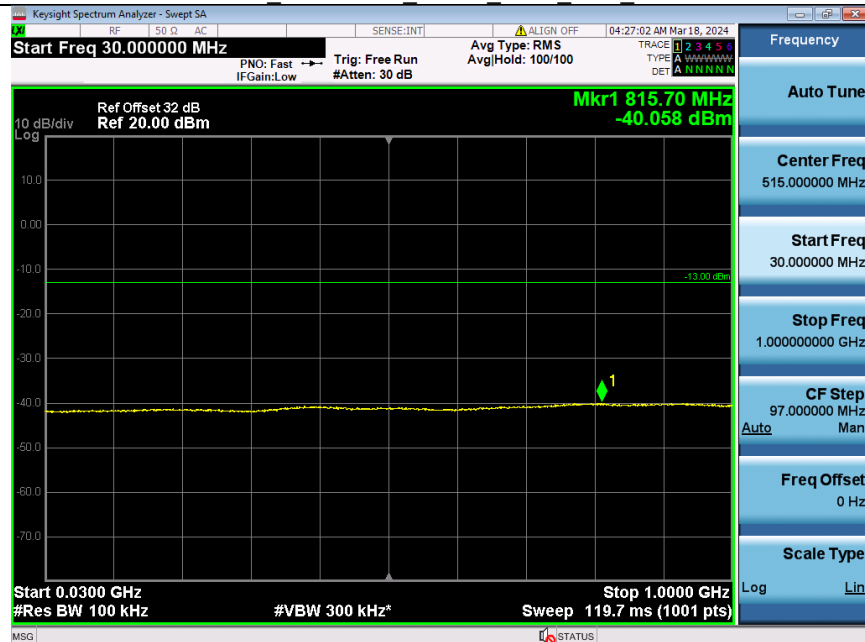
6.1.2 Test Graph



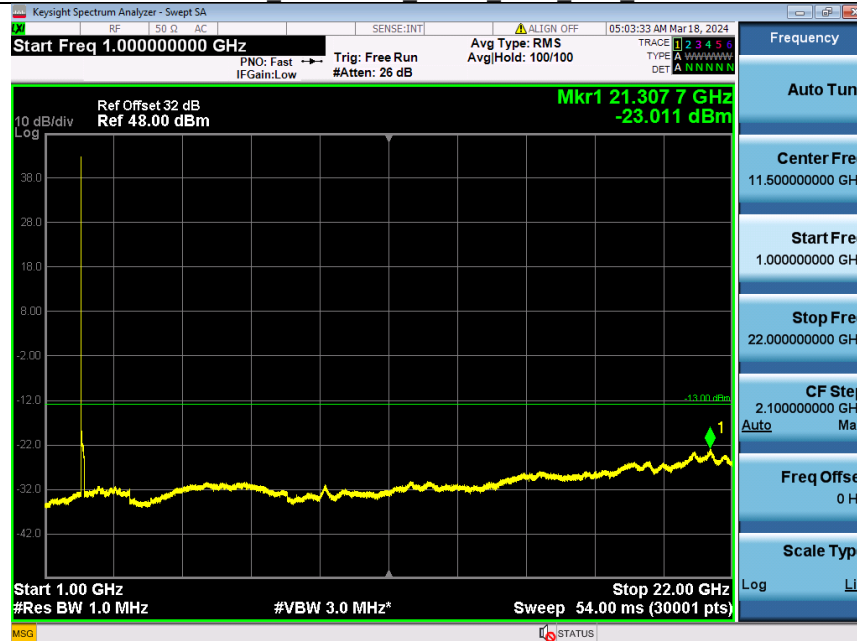
Band66 2110.2MHz_GMSK_SISO_Ant1_NTNV



Band66 2110.2MHz_GMSK_SISO_Ant1_NTNV



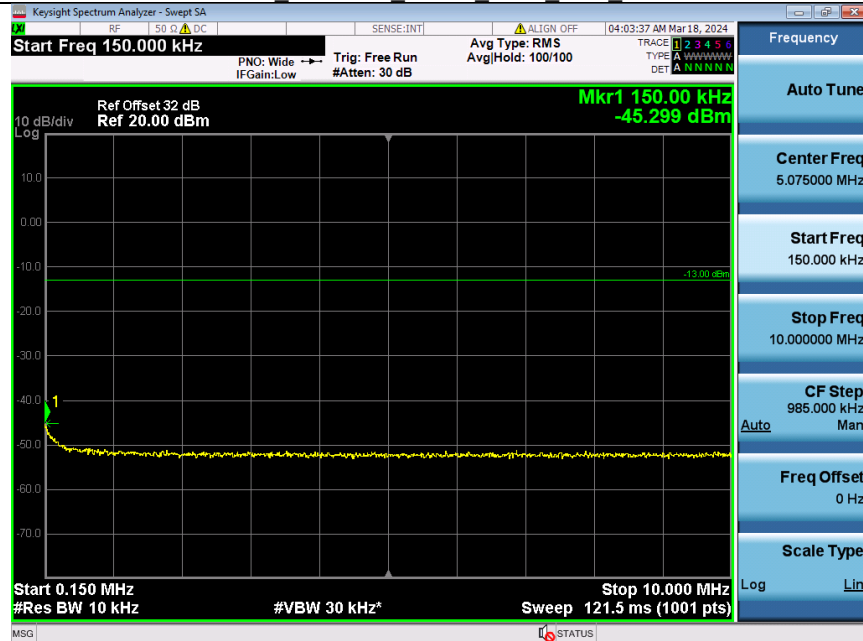
Band66 2110.2MHz_GMSK_SISO_Ant1_NTNV



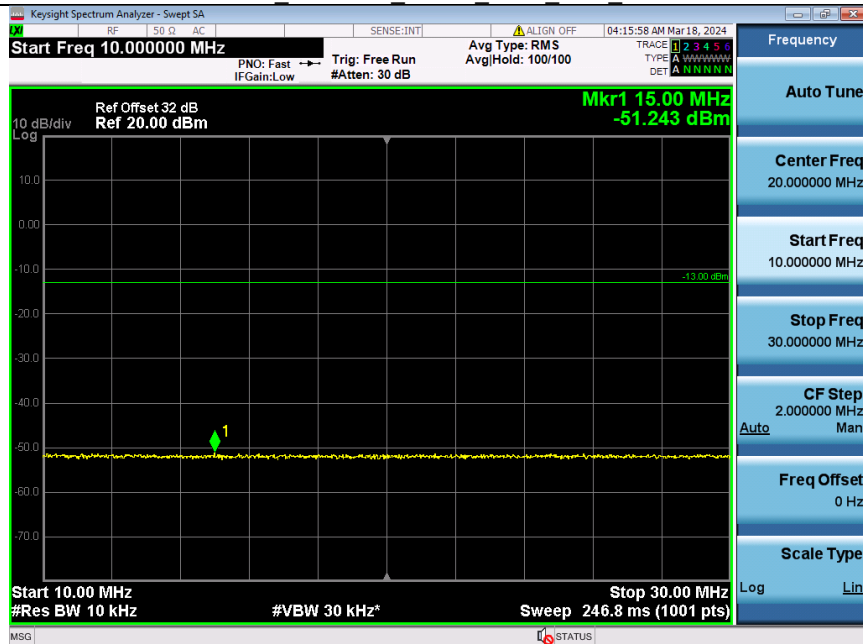
Band66 2155MHz_GMSK_SISO_Ant1_NTNV



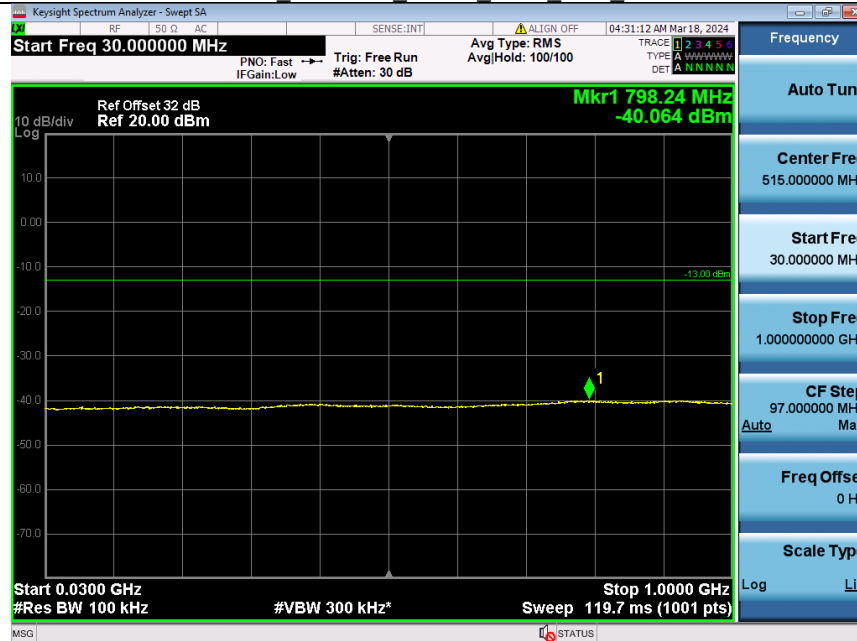
Band66_2155MHz_GMSK_SISO_Ant1_NTNV



Band66_2155MHz_GMSK_SISO_Ant1_NTNV



Band66_2155MHz_GMSK_SISO_Ant1_NTNV



Band66_2155MHz_GMSK_SISO_Ant1_NTNV



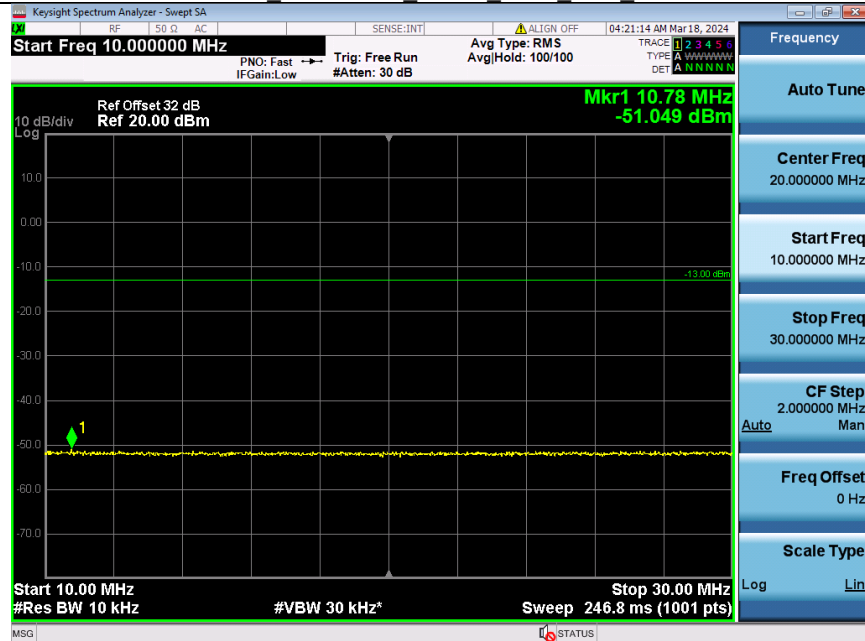
Band66 2199.8MHz_GMSK_SISO_Ant1_NTNV



Band66 2199.8MHz_GMSK_SISO_Ant1_NTNV



Band66 2199.8MHz_GMSK_SISO_Ant1_NTNV



Band66 2199.8MHz_GMSK_SISO_Ant1_NTNV



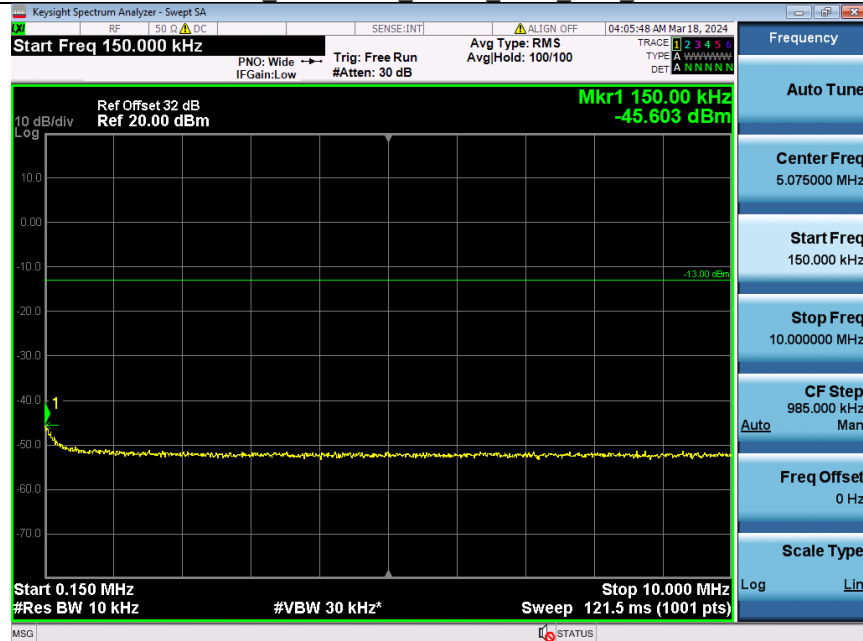
Band66 2199.8MHz_GMSK_SISO_Ant1_NTNV



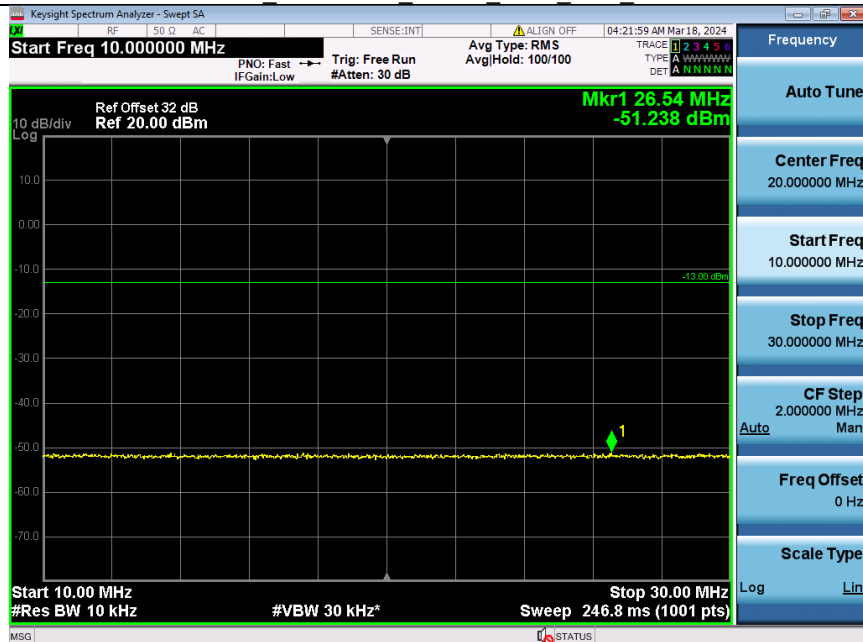
Band66 2112.5MHz_AWGN_SISO_Ant1_NTNV



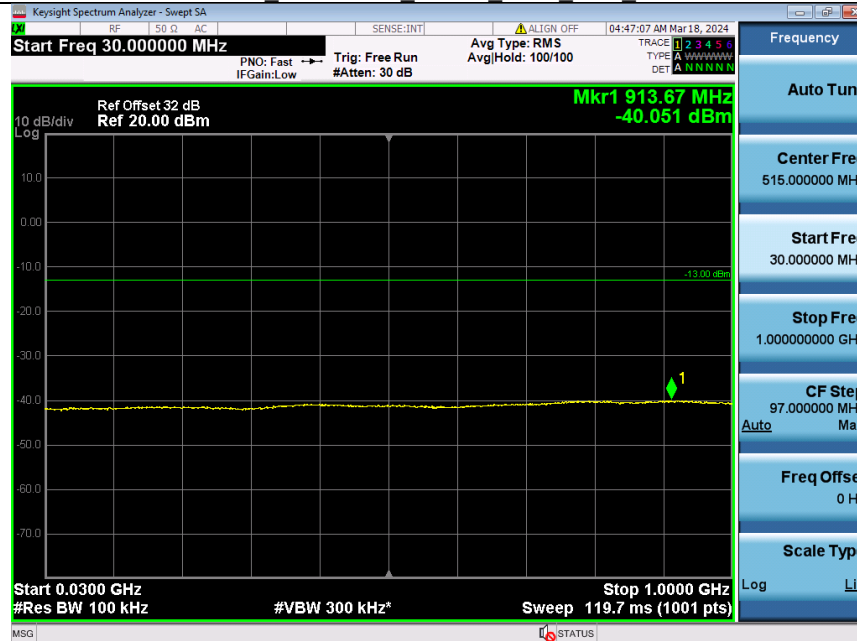
Band66 2112.5MHz AWGN SISO Ant1 NTN



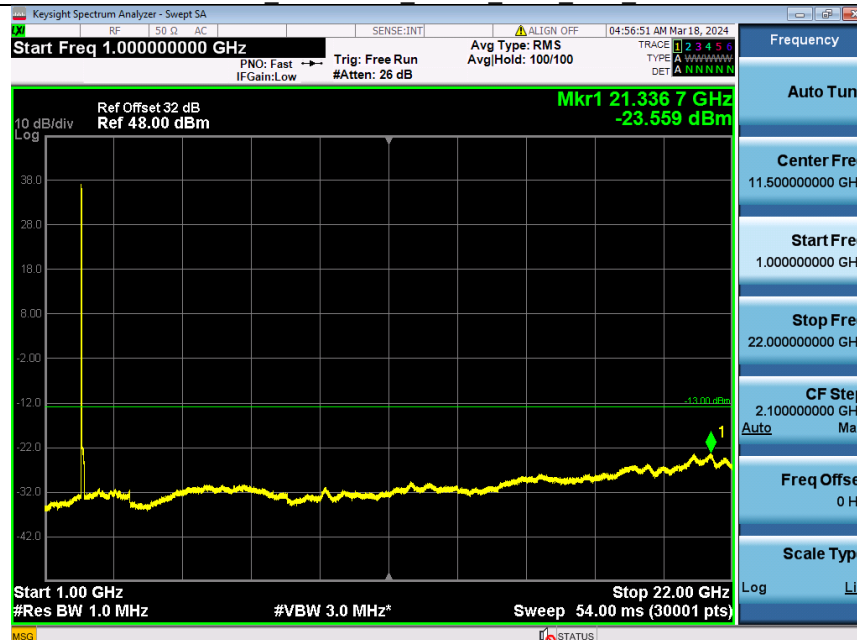
Band66 2112.5MHz AWGN SISO Ant1 NTN



Band66 2112.5MHz AWGN SISO Ant1 NTN



Band66 2112.5MHz AWGN SISO Ant1 NTN



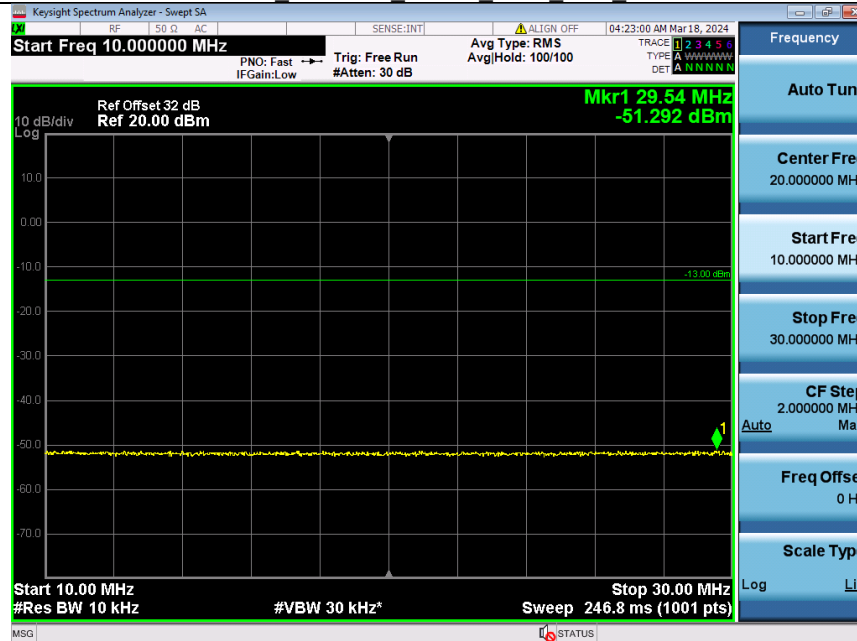
Band66_2155MHz_AWGN_SISO_Ant1_NTNV



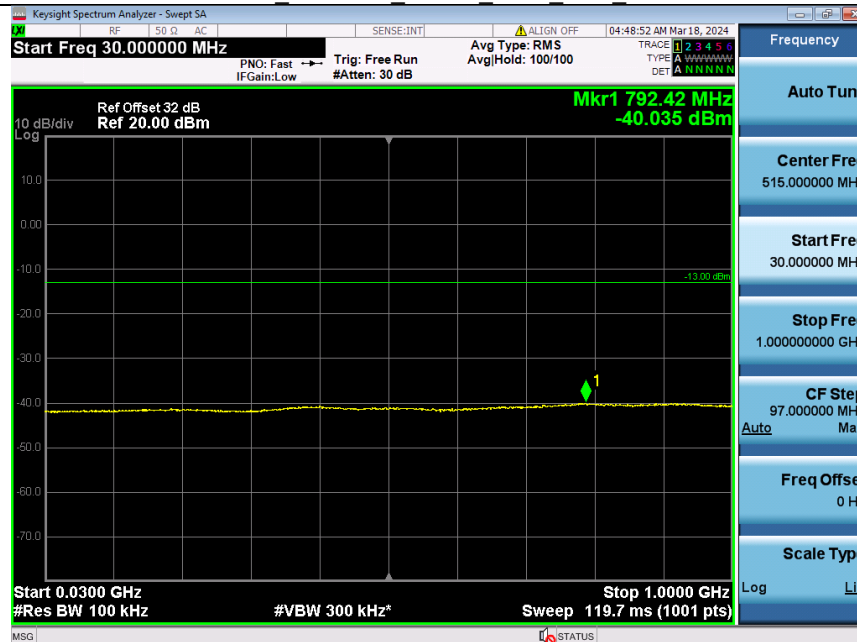
Band66_2155MHz_AWGN_SISO_Ant1_NTNV



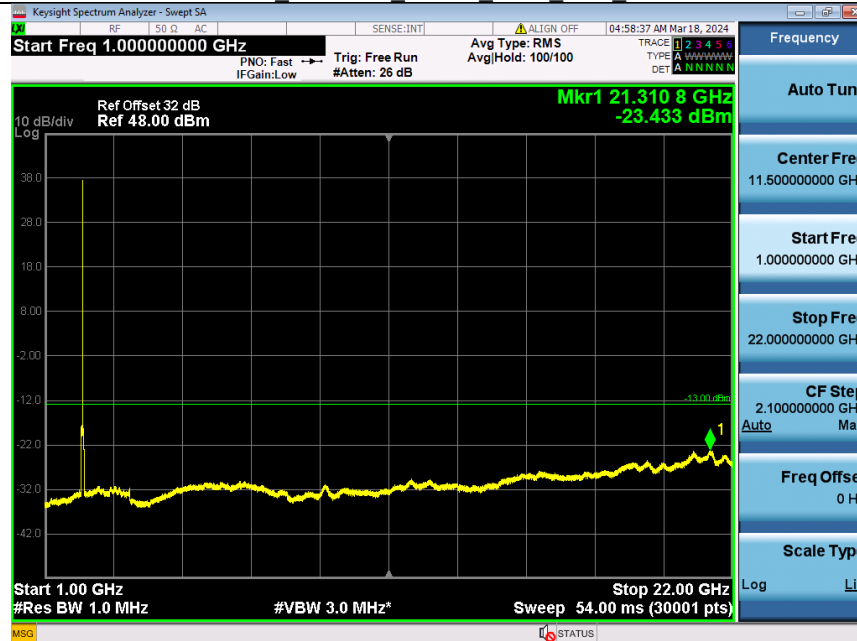
Band66_2155MHz_AWGN_SISO_Ant1_NTNV



Band66_2155MHz_AWGN_SISO_Ant1_NTNV



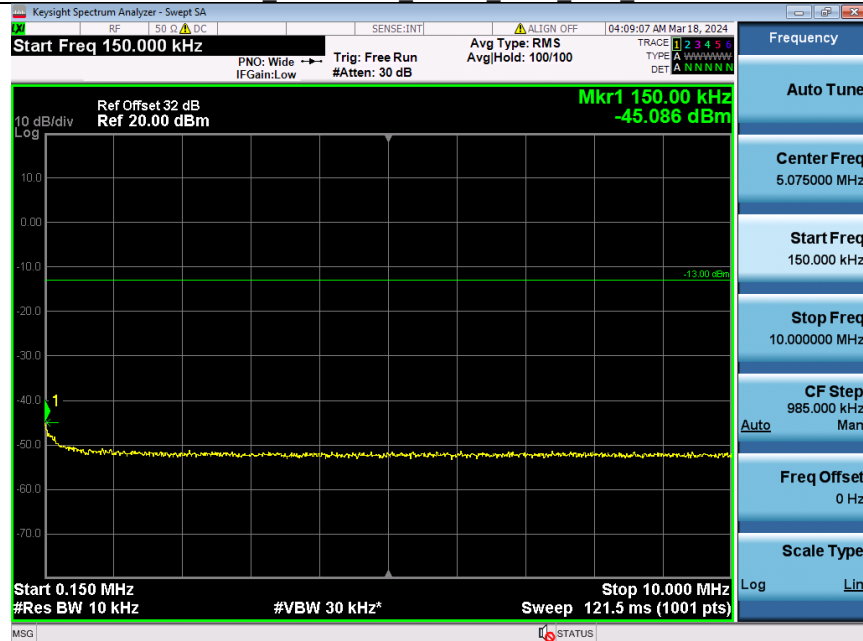
Band66_2155MHz_AWGN_SISO_Ant1_NTNV



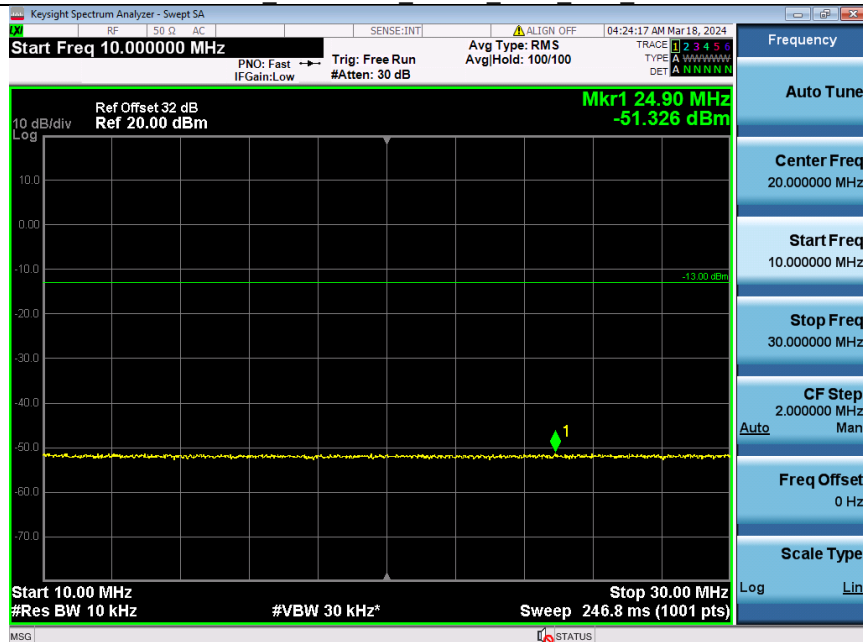
Band66_2197.5MHz_AWGN_SISO_Ant1_NTNV



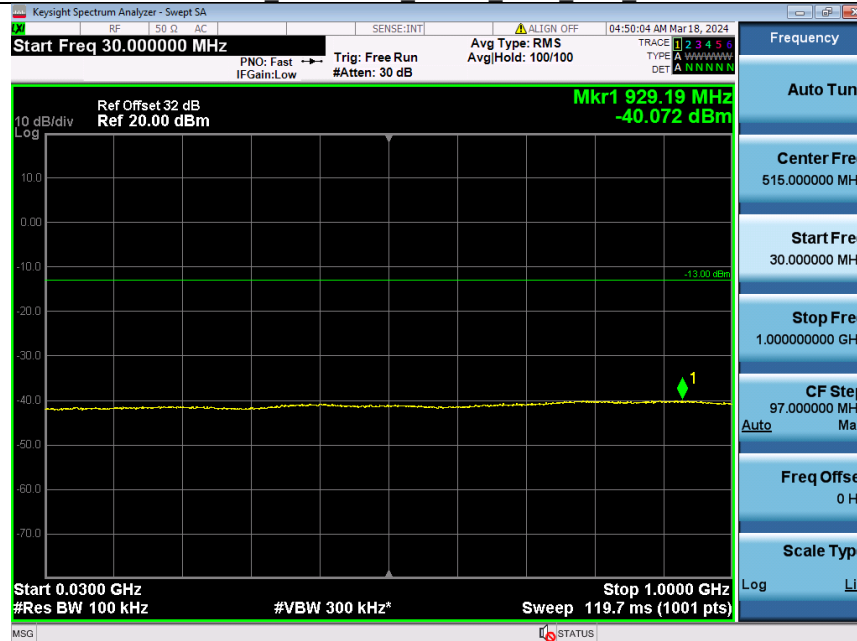
Band66 2197.5MHz AWGN SISO Ant1 NTN



Band66 2197.5MHz AWGN SISO Ant1 NTN



Band66 2197.5MHz AWGN SISO Ant1 NTN



Band66 2197.5MHz AWGN SISO Ant1 NTN



7. Frequency stability measurements

7.1 Band66_Ant1

7.1.1 Test Result

Band: 66 / NTNV							
Signal			Temp (°C)	Voltage (VAC)	Freq. Error (Hz)	Tolerance (ppm)	Verdict
Type	Level (dBm)	Frequency (MHz)					
CW	-3.3	2110.1	20	27.5	12	0.0057	Pass
				28.0	11	0.0052	Pass
				28.5	9	0.0043	Pass
			-30	28.0	10	0.0047	Pass
			-20	28.0	13	0.0062	Pass
			-10	28.0	10	0.0047	Pass
			0	28.0	8	0.0038	Pass
			10	28.0	11	0.0052	Pass
			30	28.0	13	0.0062	Pass
			40	28.0	12	0.0057	Pass
			55	28.0	14	0.0066	Pass
		2155	20	27.5	10	0.0046	Pass
				28.0	11	0.0051	Pass
				28.5	9	0.0042	Pass
			-30	28.0	12	0.0056	Pass
			-20	28.0	8	0.0037	Pass
			-10	28.0	11	0.0051	Pass
			0	28.0	10	0.0046	Pass
			10	28.0	7	0.0032	Pass
			30	28.0	12	0.0056	Pass
			40	28.0	13	0.0060	Pass
			55	28.0	9	0.0042	Pass
		2199.9	20	27.5	9	0.0041	Pass
				28.0	10	0.0045	Pass
				28.5	8	0.0036	Pass
			-30	28.0	12	0.0055	Pass
			-20	28.0	11	0.0050	Pass
			-10	28.0	13	0.0059	Pass
			0	28.0	15	0.0068	Pass
			10	28.0	10	0.0045	Pass
			30	28.0	7	0.0032	Pass
			40	28.0	12	0.0055	Pass
			55	28.0	13	0.0059	Pass

8. Radiated Spurious Emissions

8.1 Band66_Ant1

8.1.1 Test Result

GMSK 2110.2MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
404.1	Horizontal	-70.12	-13	-57.12	Pass
608.6	Horizontal	-65.95	-13	-52.95	Pass
932.3	Horizontal	-56.14	-13	-43.14	Pass
1360.0	Horizontal	-56.55	-13	-43.55	Pass
2760.6	Horizontal	-51.53	-13	-38.53	Pass
6508.4	Horizontal	-47.38	-13	-34.38	Pass
384.3	Vertical	-69.49	-13	-56.49	Pass
598.2	Vertical	-63.74	-13	-50.74	Pass
974.6	Vertical	-61.36	-13	-48.36	Pass
1356.9	Vertical	-60.96	-13	-47.96	Pass
2758.2	Vertical	-54.94	-13	-41.94	Pass
6522.2	Vertical	-51.56	-13	-38.56	Pass

GMSK 2155MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
365.4	Horizontal	-70.91	-13	-57.91	Pass
566.3	Horizontal	-62.78	-13	-49.78	Pass
937.3	Horizontal	-58.84	-13	-45.84	Pass
1355.1	Horizontal	-56.42	-13	-43.42	Pass
2757.9	Horizontal	-54.20	-13	-41.20	Pass
6514.6	Horizontal	-47.19	-13	-34.19	Pass
364.4	Vertical	-70.84	-13	-57.84	Pass
602.1	Vertical	-65.32	-13	-52.32	Pass
927.8	Vertical	-59.48	-13	-46.48	Pass
1370.5	Vertical	-60.15	-13	-47.15	Pass
2762.8	Vertical	-51.70	-13	-38.70	Pass
6517.5	Vertical	-49.68	-13	-36.68	Pass

GMSK 2199.8MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
396.2	Horizontal	-70.31	-13	-57.31	Pass
587.3	Horizontal	-63.20	-13	-50.20	Pass
931.0	Horizontal	-56.35	-13	-43.35	Pass
1329.8	Horizontal	-58.01	-13	-45.01	Pass
2747.8	Horizontal	-54.61	-13	-41.61	Pass
6503.8	Horizontal	-50.16	-13	-37.16	Pass
370.2	Vertical	-71.28	-13	-58.28	Pass
570.0	Vertical	-66.01	-13	-53.01	Pass
942.2	Vertical	-56.98	-13	-43.98	Pass
1333.0	Vertical	-59.10	-13	-46.10	Pass
2755.0	Vertical	-53.59	-13	-40.59	Pass
6477.2	Vertical	-47.75	-13	-34.75	Pass

AWGN 2112.5MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
411.0	Horizontal	-66.76	-13	-53.76	Pass
569.5	Horizontal	-62.17	-13	-49.17	Pass
973.0	Horizontal	-59.30	-13	-46.30	Pass
1337.1	Horizontal	-58.60	-13	-45.60	Pass
2772.1	Horizontal	-51.86	-13	-38.86	Pass
6509.4	Horizontal	-48.01	-13	-35.01	Pass
380.8	Vertical	-71.24	-13	-58.24	Pass
594.7	Vertical	-61.39	-13	-48.39	Pass
972.7	Vertical	-58.70	-13	-45.70	Pass
1358.5	Vertical	-60.76	-13	-47.76	Pass
2733.6	Vertical	-55.55	-13	-42.55	Pass
6481.2	Vertical	-46.40	-13	-33.40	Pass

AWGN 2155MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
392.5	Horizontal	-69.75	-13	-56.75	Pass
584.6	Horizontal	-64.00	-13	-51.00	Pass
931.1	Horizontal	-60.37	-13	-47.37	Pass
1346.4	Horizontal	-58.03	-13	-45.03	Pass
2728.2	Horizontal	-53.26	-13	-40.26	Pass
6515.6	Horizontal	-51.46	-13	-38.46	Pass
367.8	Vertical	-71.97	-13	-58.97	Pass
567.1	Vertical	-64.29	-13	-51.29	Pass
941.3	Vertical	-59.94	-13	-46.94	Pass
1341.8	Vertical	-57.26	-13	-44.26	Pass
2753.7	Vertical	-55.76	-13	-42.76	Pass
6486.0	Vertical	-49.48	-13	-36.48	Pass

AWGN 2197.5MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
380.3	Horizontal	-71.00	-13	-58.00	Pass
595.3	Horizontal	-63.76	-13	-50.76	Pass
930.2	Horizontal	-59.66	-13	-46.66	Pass
1355.0	Horizontal	-61.28	-13	-48.28	Pass
2729.5	Horizontal	-51.36	-13	-38.36	Pass
6502.2	Horizontal	-49.85	-13	-36.85	Pass
391.5	Vertical	-68.44	-13	-55.44	Pass
589.1	Vertical	-65.51	-13	-52.51	Pass
929.8	Vertical	-56.65	-13	-43.65	Pass
1363.6	Vertical	-60.43	-13	-47.43	Pass
2726.3	Vertical	-52.08	-13	-39.08	Pass
6477.8	Vertical	-49.92	-13	-36.92	Pass