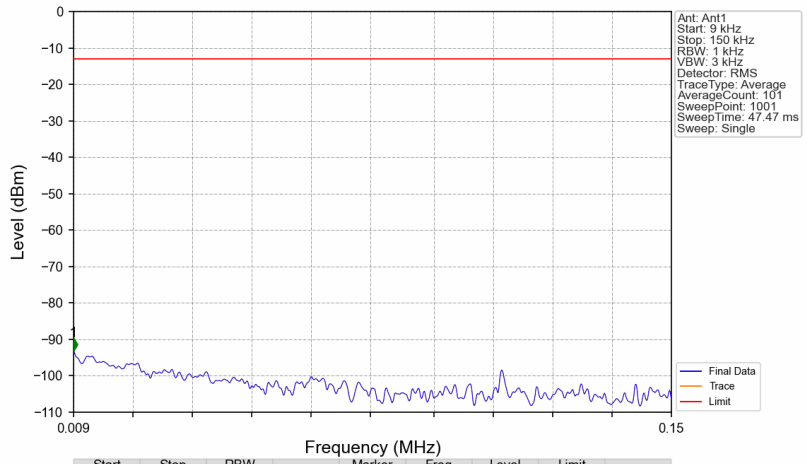
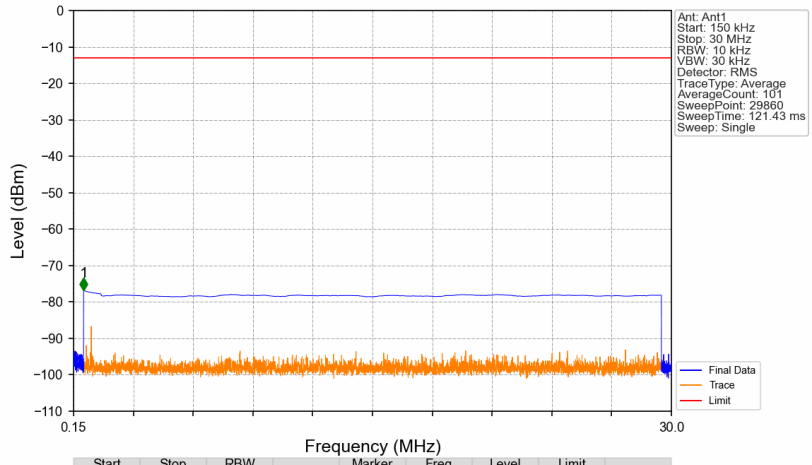
6.1.2 Test Graph

Band41_2498.5MHz_AWGN_SISO_Ant1_NTNV



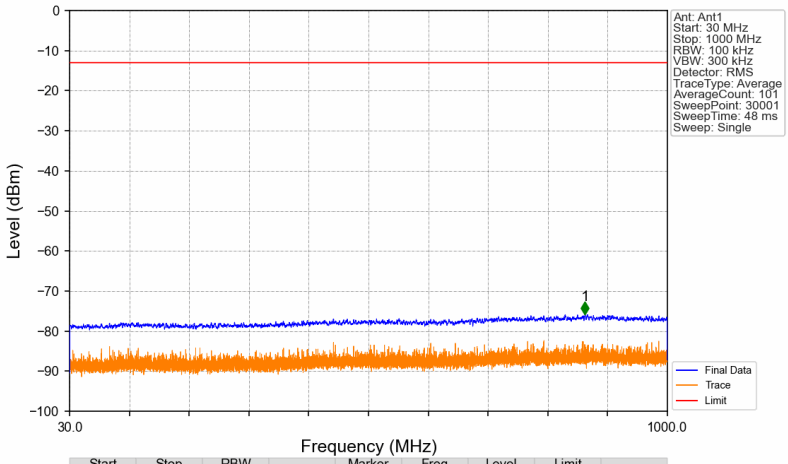
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	1	/	1	0.009	-93.05	-13	Pass

Band41_2498.5MHz_AWGN_SISO_Ant1_NTNV



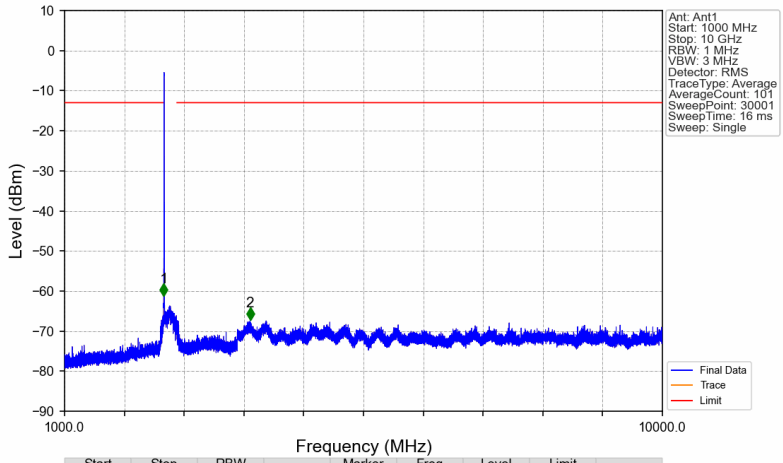
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	1	CHP	1	0.651	-76.83	-13	Pass

Band41_2498.5MHz_AWGN_SISO_Ant1_NTNV



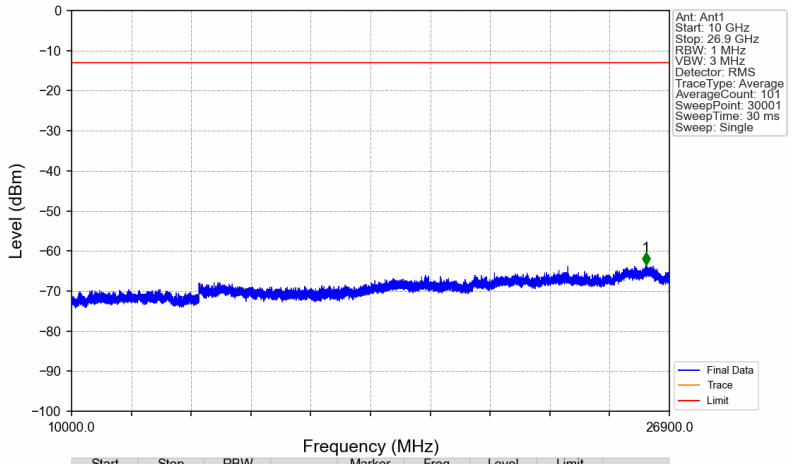
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	866.302	-75.77	-13	Pass

Band41_2498.5MHz_AWGN_SISO_Ant1_NTNV



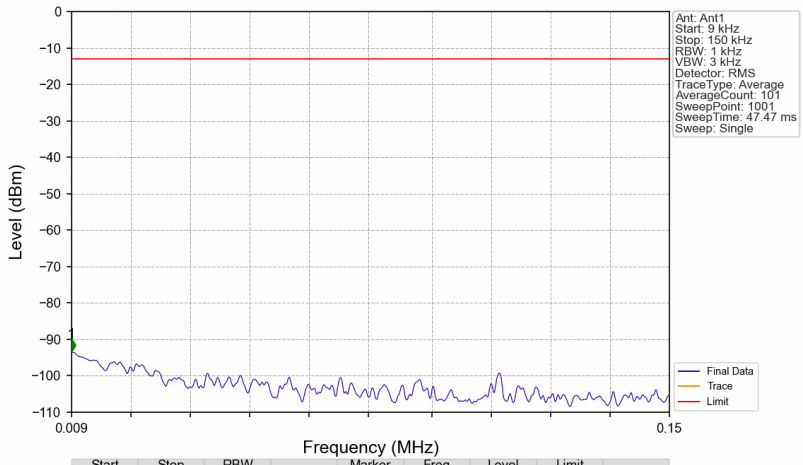
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	2696	1	/	1	2492.500	-61.29	-13	Pass
2696	2696	1	/	/	/	/	/	/
2696	10000	1	/	2	3792.700	-67.31	-13	Pass

Band41_2498.5MHz_AWGN_SISO_Ant1_NTNV



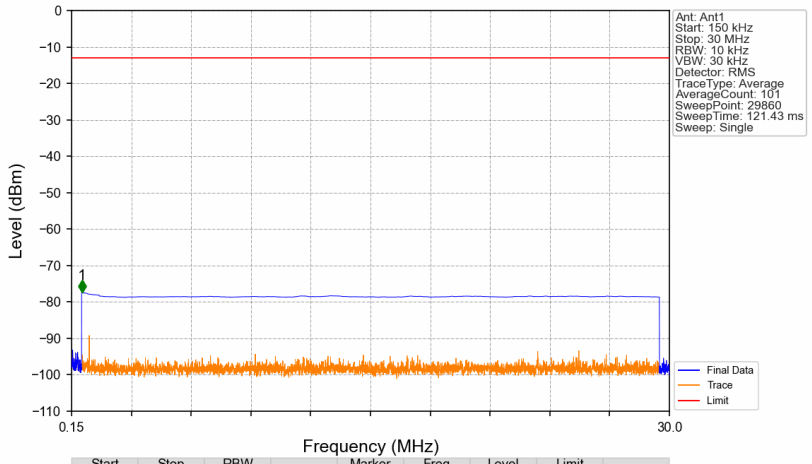
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
10000	26900	1	/	1	26235.830	-63.53	-13	Pass

Band41_2593MHz_AWGN_SISO_Ant1_NTNV



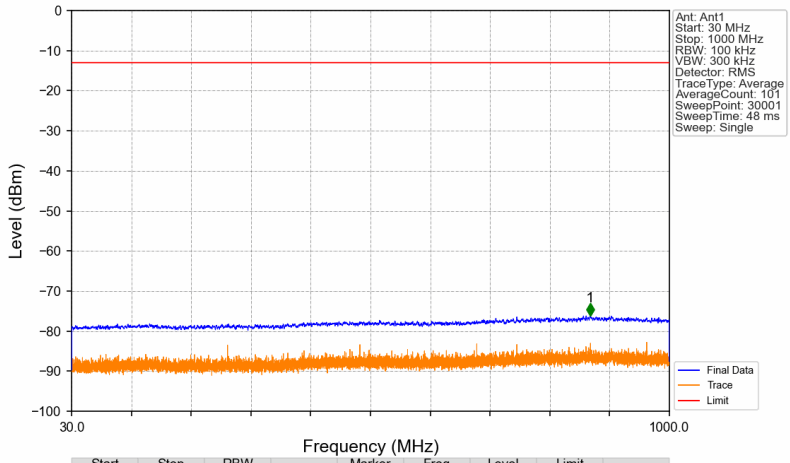
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	1	/	1	0.009	-93.39	-13	Pass

Band41_2593MHz_AWGN_SISO_Ant1_NTNV



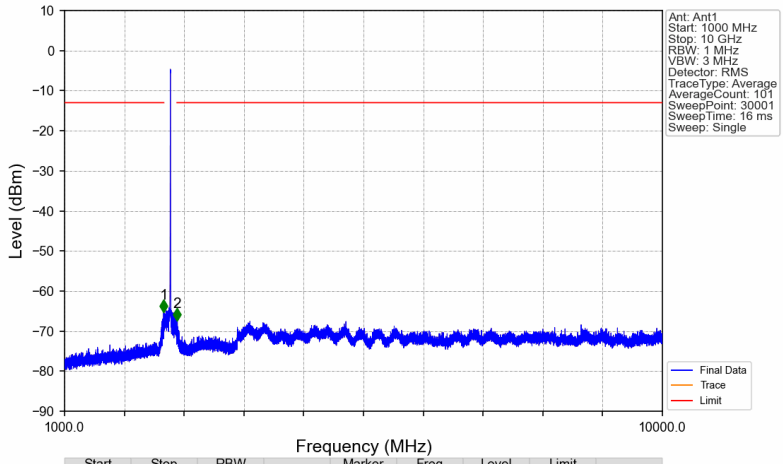
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	1	CHP	1	0.671	-77.37	-13	Pass

Band41_2593MHz_AWGN_SISO_Ant1_NTNV



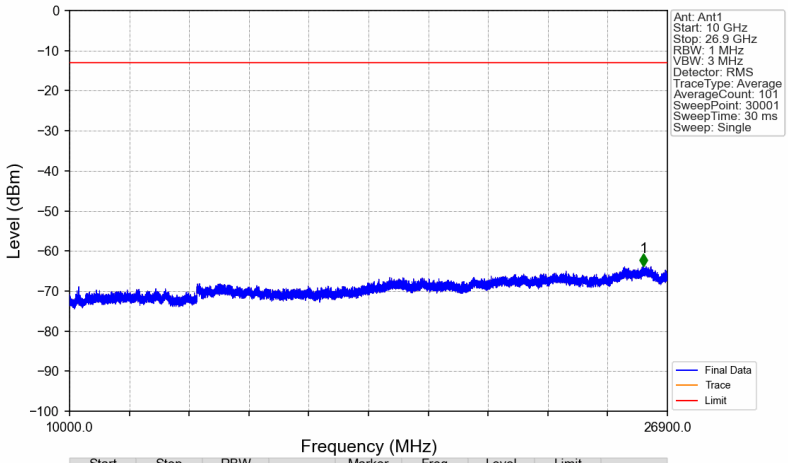
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	871.443	-76.13	-13	Pass

Band41_2593MHz_AWGN_SISO_Ant1_NTNV



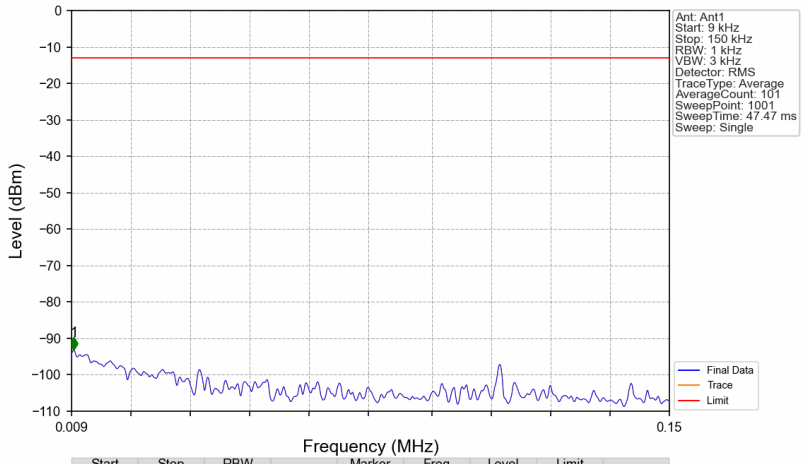
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	2696	1	/	1	2490.700	-65.30	-13	Pass
2696	2696	1	/	/	/	/	/	/
2696	10000	1	/	2	2694.700	-67.38	-13	Pass

Band41_2593MHz_AWGN_SISO_Ant1_NTNV



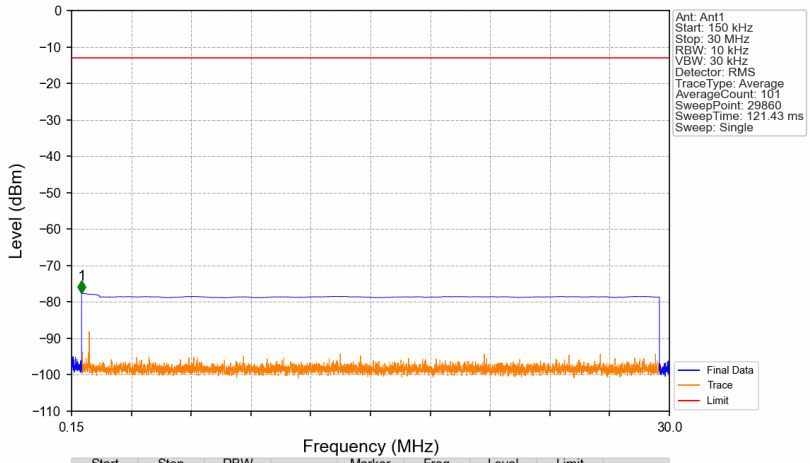
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
10000	26900	1	/	1	26227.380	-63.77	-13	Pass

Band41_2687.5MHz_AWGN_SISO_Ant1_NTNV



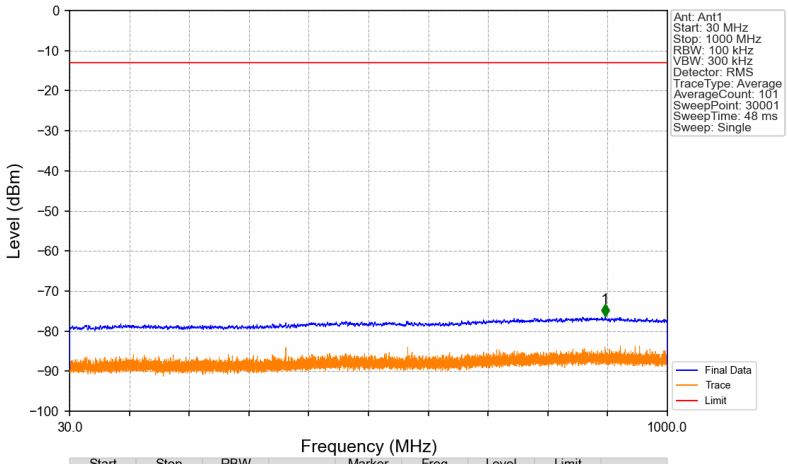
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	1	/	1	0.010	-93.21	-13	Pass

Band41_2687.5MHz_AWGN_SISO_Ant1_NTNV



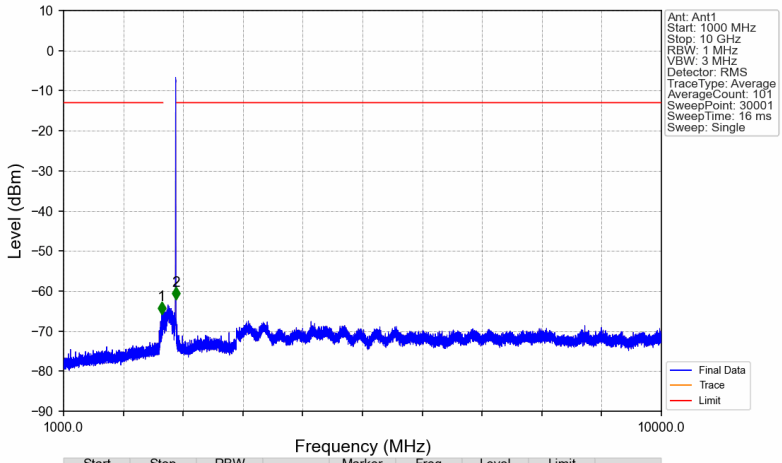
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	1	CHP	1	0.651	-77.60	-13	Pass

Band41_2687.5MHz_AWGN_SISO_Ant1_NTNV



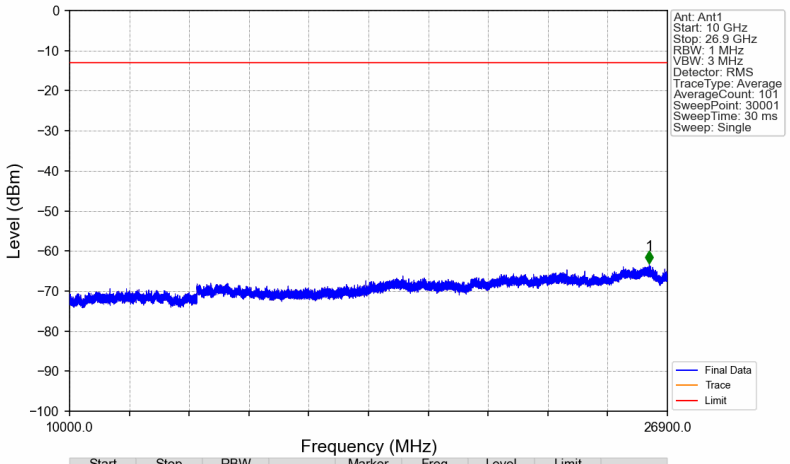
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	899.088	-76.34	-13	Pass

Band41_2687.5MHz_AWGN_SISO_Ant1_NTNV



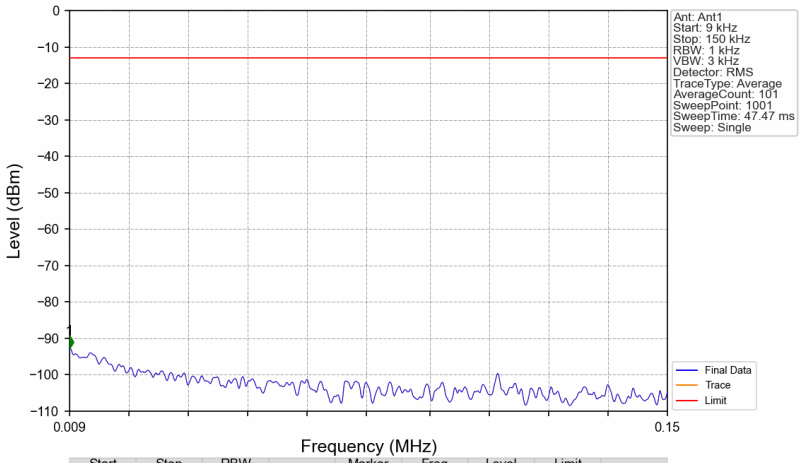
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	2696	1	/	1	2478.700	-65.78	-13	Pass
2696	2696	1	/	/	/	/	/	/
2696	10000	1	/	2	2693.200	-62.11	-13	Pass

Band41_2687.5MHz_AWGN_SISO_Ant1_NTNV



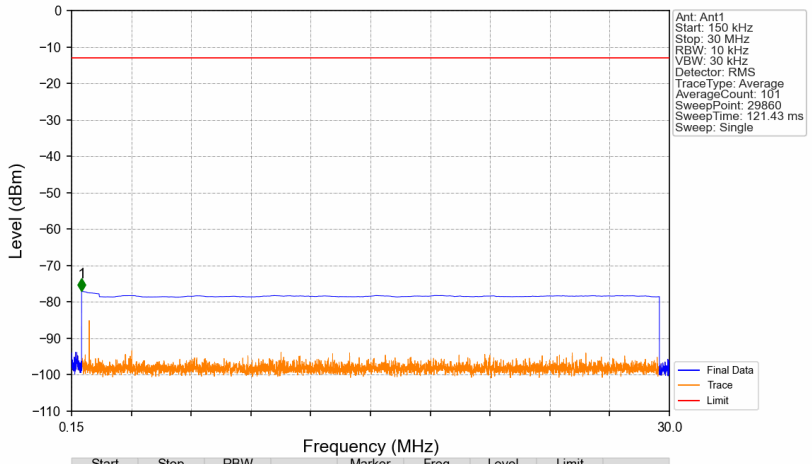
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
10000	26900	1	/	1	26389.057	-63.20	-13	Pass

Band41_2496.1MHz_GMSK_SISO_Ant1_NTNV



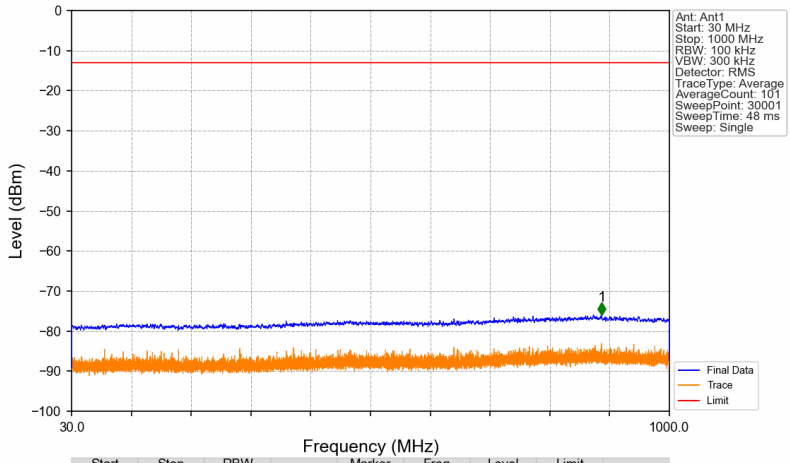
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	1	/	1	0.009	-92.76	-13	Pass

Band41_2496.1MHz_GMSK_SISO_Ant1_NTNV



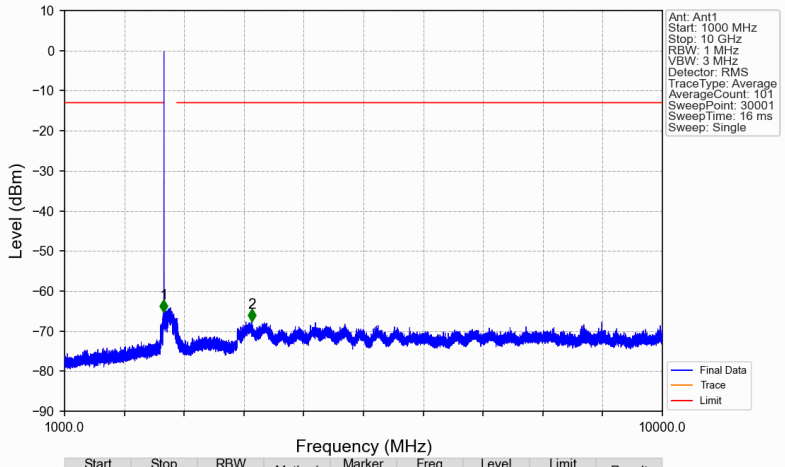
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	1	CHP	1	0.651	-77.05	-13	Pass

Band41_2496.1MHz_GMSK_SISO_Ant1_NTNV



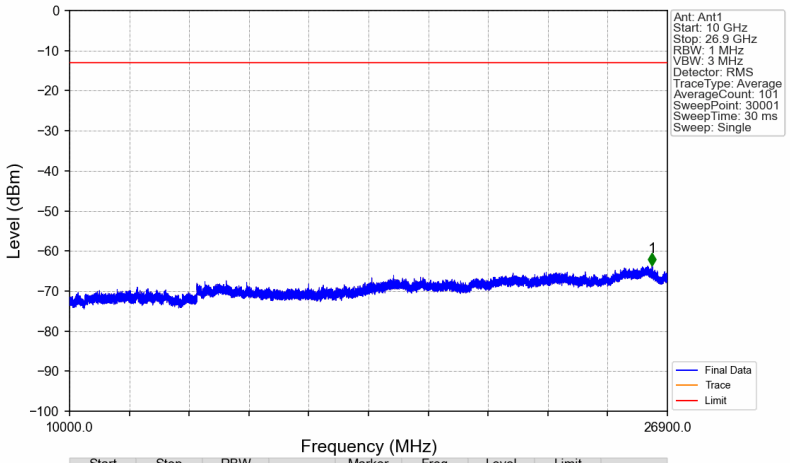
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	890.228	-75.95	-13	Pass

Band41_2496.1MHz_GMSK_SISO_Ant1_NTNV



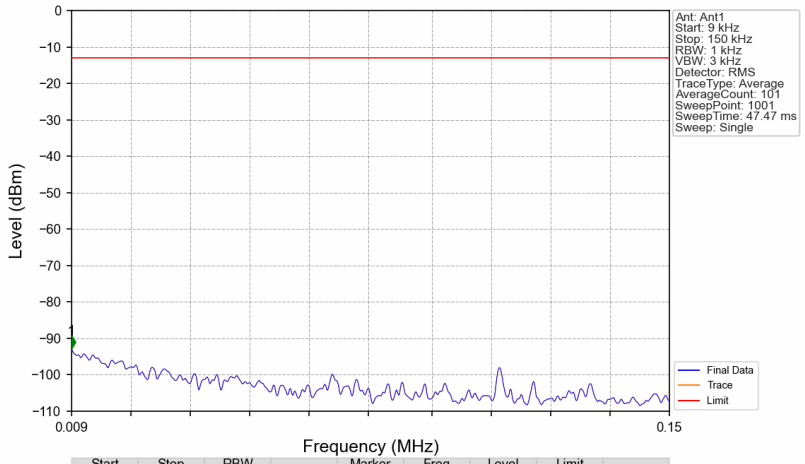
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	2696	1	/	1	2490.100	-65.34	-13	Pass
2696	2696	1	/	/	/	/	/	/
2696	10000	1	/	2	3817.600	-67.58	-13	Pass

Band41_2496.1MHz_GMSK_SISO_Ant1_NTNV



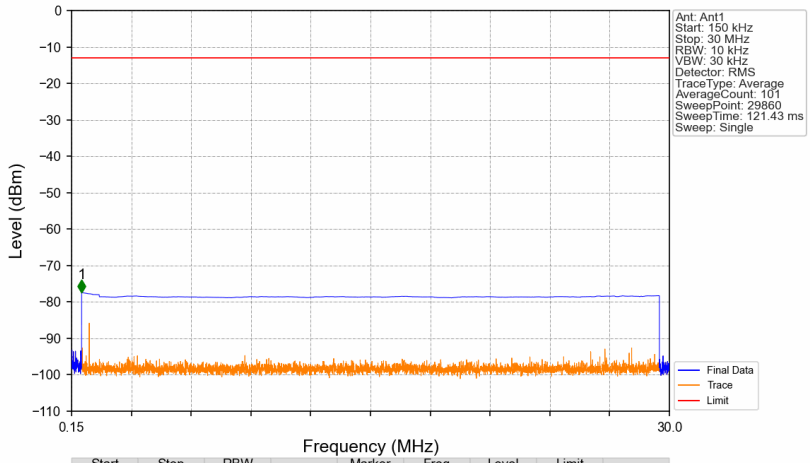
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
10000	26900	1	/	1	26465.107	-63.71	-13	Pass

Band41_2593MHz_GMSK_SISO_Ant1_NTNV



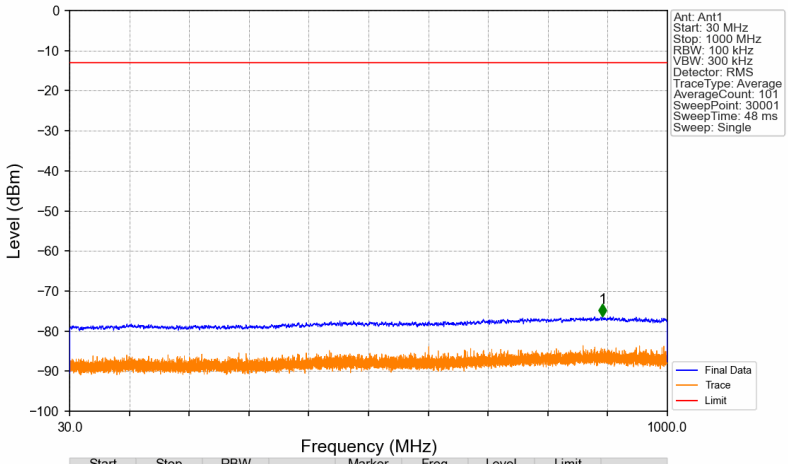
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	1	/	1	0.009	-92.71	-13	Pass

Band41_2593MHz_GMSK_SISO_Ant1_NTNV



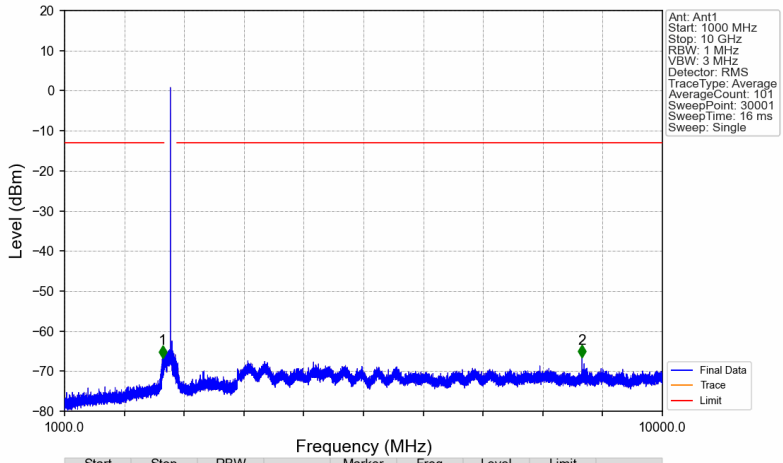
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	1	CHP	1	0.651	-77.34	-13	Pass

Band41_2593MHz_GMSK_SISO_Ant1_NTNV



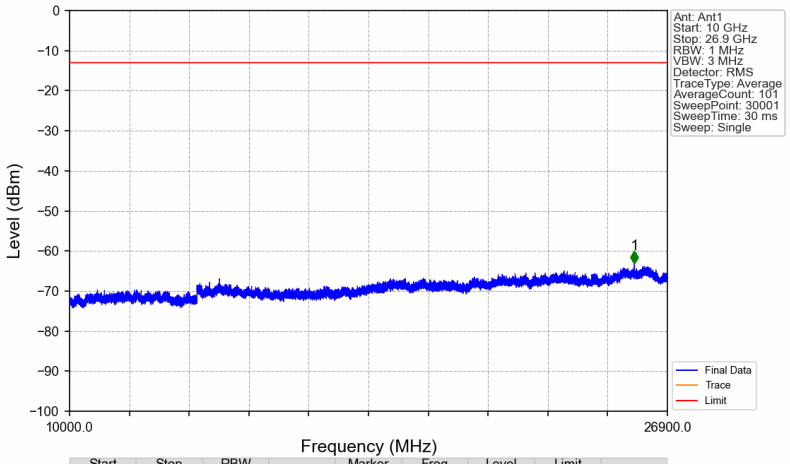
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	894.852	-76.37	-13	Pass

Band41_2593MHz_GMSK_SISO_Ant1_NTNV



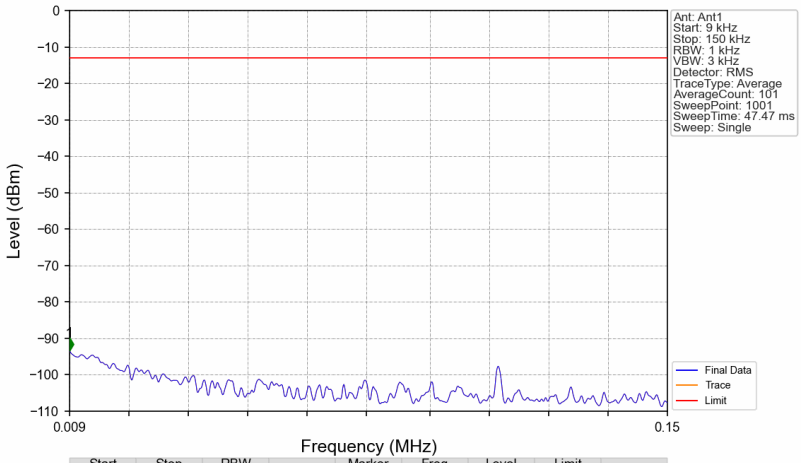
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	2696	1	/	1	2474.800	-66.69	-13	Pass
2696	2696	1	/	/	/	/	/	/
2696	10000	1	/	2	8789.800	-66.65	-13	Pass

Band41_2593MHz_GMSK_SISO_Ant1_NTNV



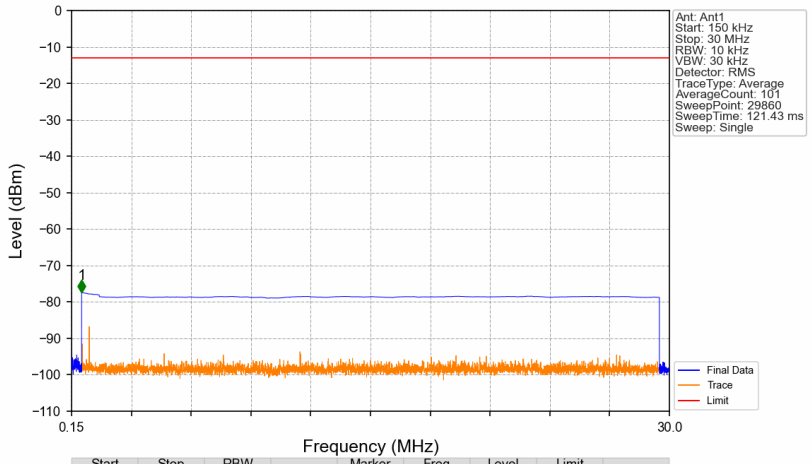
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
10000	26900	1	/	1	25965.430	-63.05	-13	Pass

Band41_2689.9MHz_GMSK_SISO_Ant1_NTNV



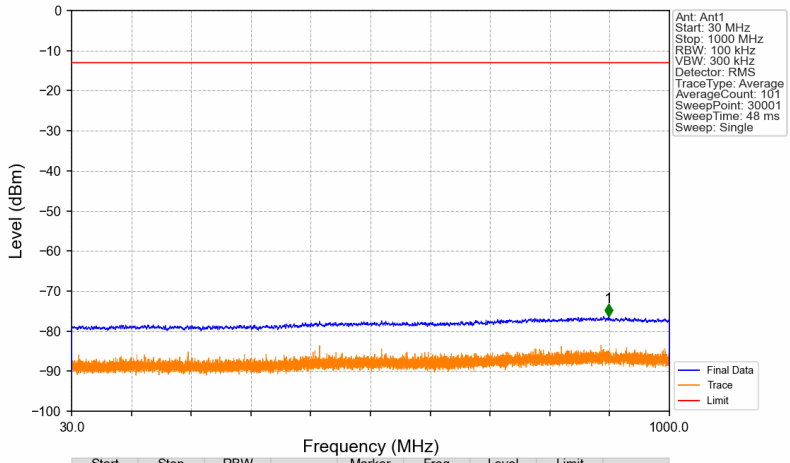
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.009	0.15	1	/	1	0.009	-93.29	-13	Pass

Band41_2689.9MHz_GMSK_SISO_Ant1_NTNV



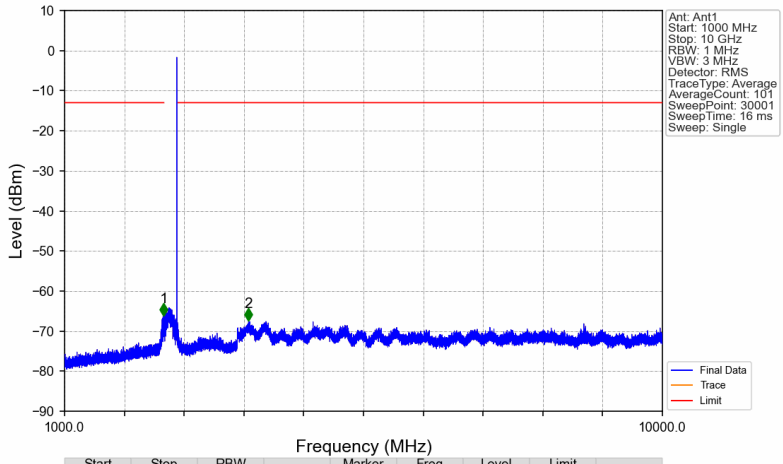
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
0.15	30	1	CHP	1	0.651	-77.44	-13	Pass

Band41_2689.9MHz_GMSK_SISO_Ant1_NTNV



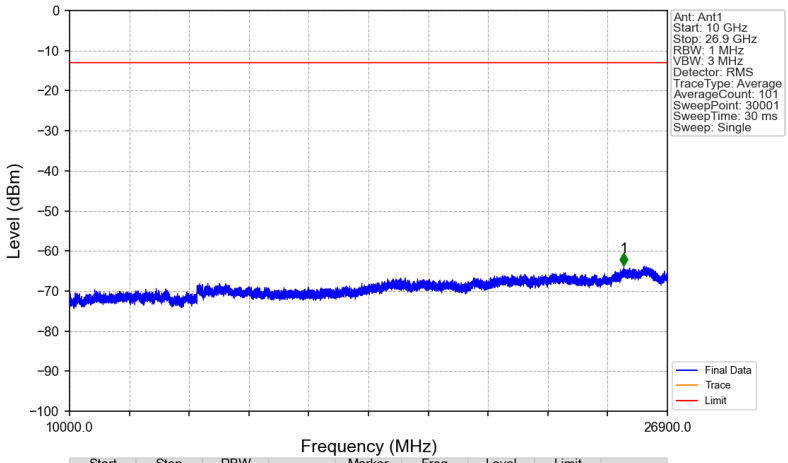
Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
30	1000	1	CHP	1	901.448	-76.30	-13	Pass

Band41_2689.9MHz_GMSK_SISO_Ant1_NTNV



Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
1000	2696	1	/	1	2492.200	-66.23	-13	Pass
2696	2696	1	/	/	/	/	/	/
2696	10000	1	/	2	3770.500	-67.50	-13	Pass

Band41_2689.9MHz_GMSK_SISO_Ant1_NTNV

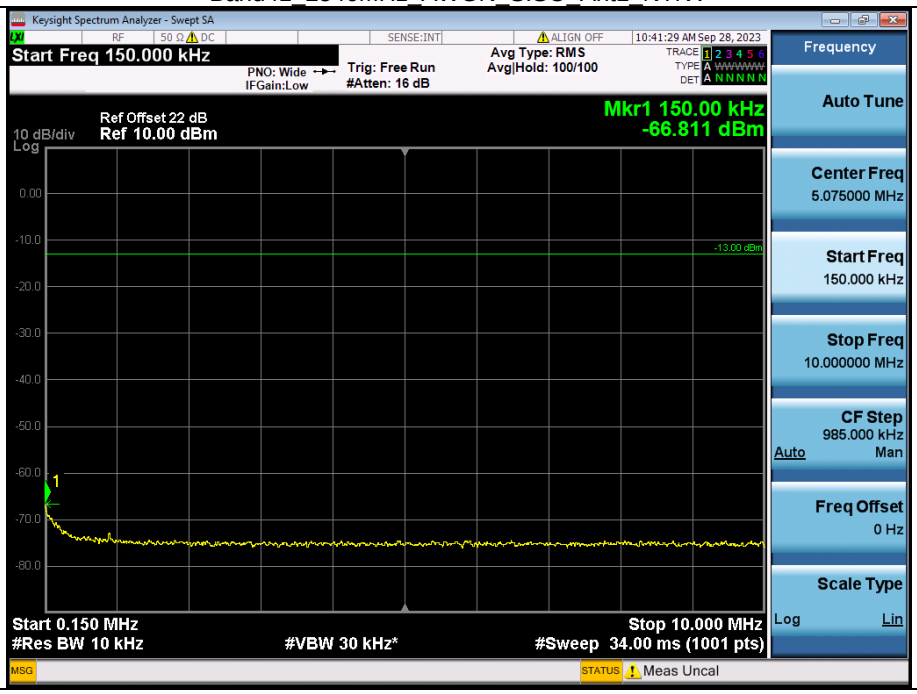


Start (MHz)	Stop (MHz)	RBW (MHz)	Method	Marker No.	Freq (MHz)	Level (dBm)	Limit (dBm)	Result
10000	26900	1	/	1	25669.680	-63.71	-13	Pass

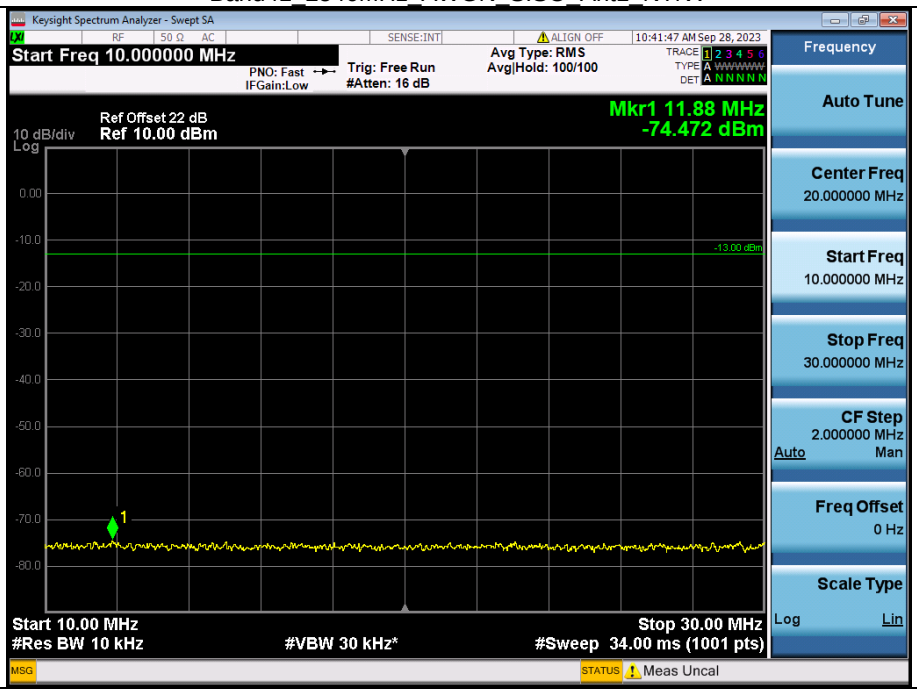
For 100MHz BW

Band41_2546MHz_AWGN_SISO_Ant1_NTNV

Band41_2546MHz_AWGN_SISO_Ant1_NTNV

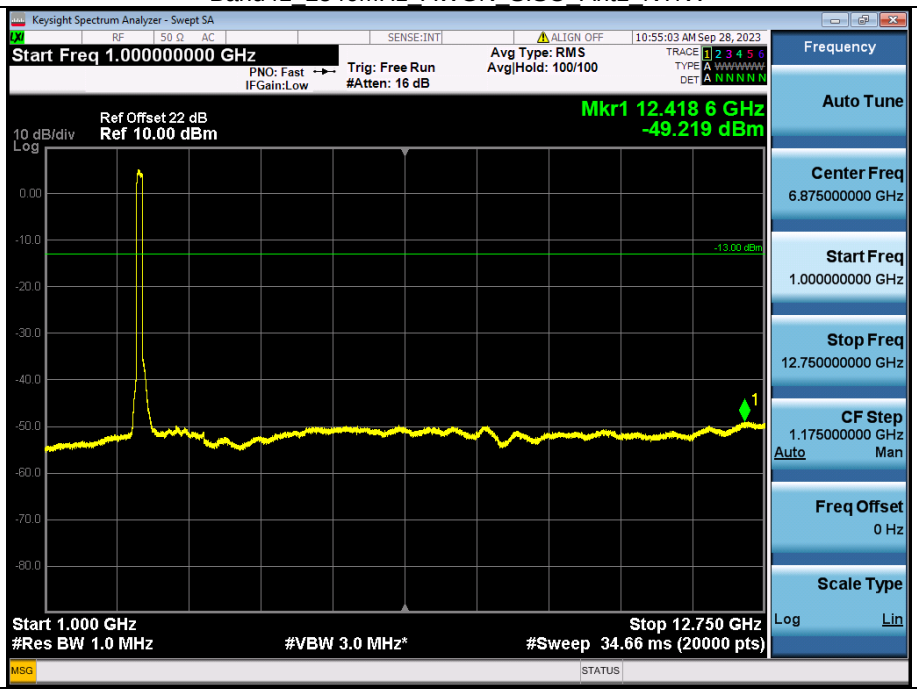


Band41_2546MHz_AWGN_SISO_Ant1_NTNV

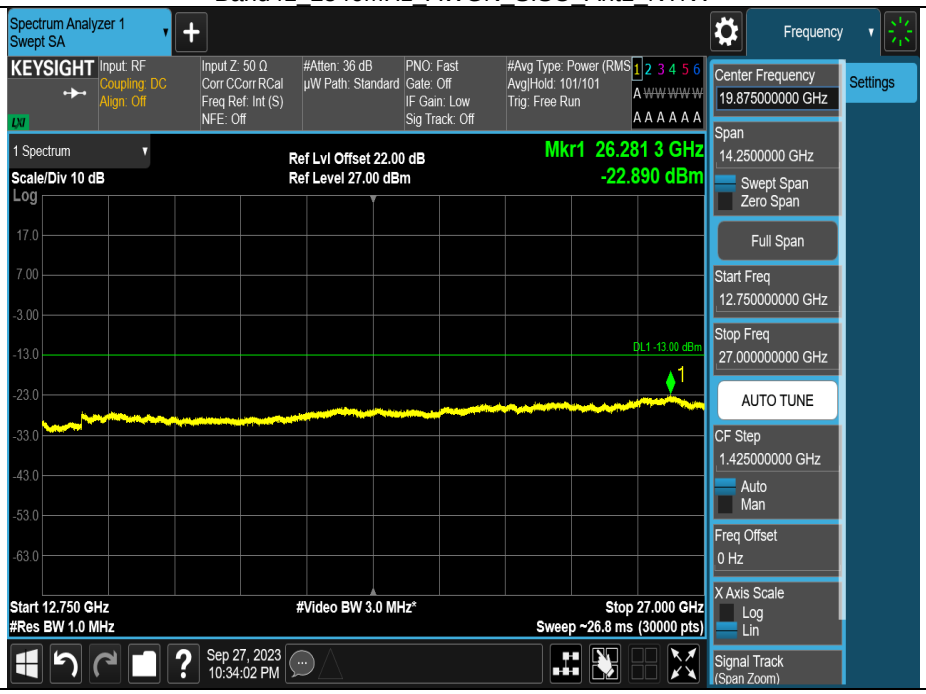


Band41_2546MHz_AWGN_SISO_Ant1_NTNV

Band41_2546MHz_AWGN_SISO_Ant1_NTNV

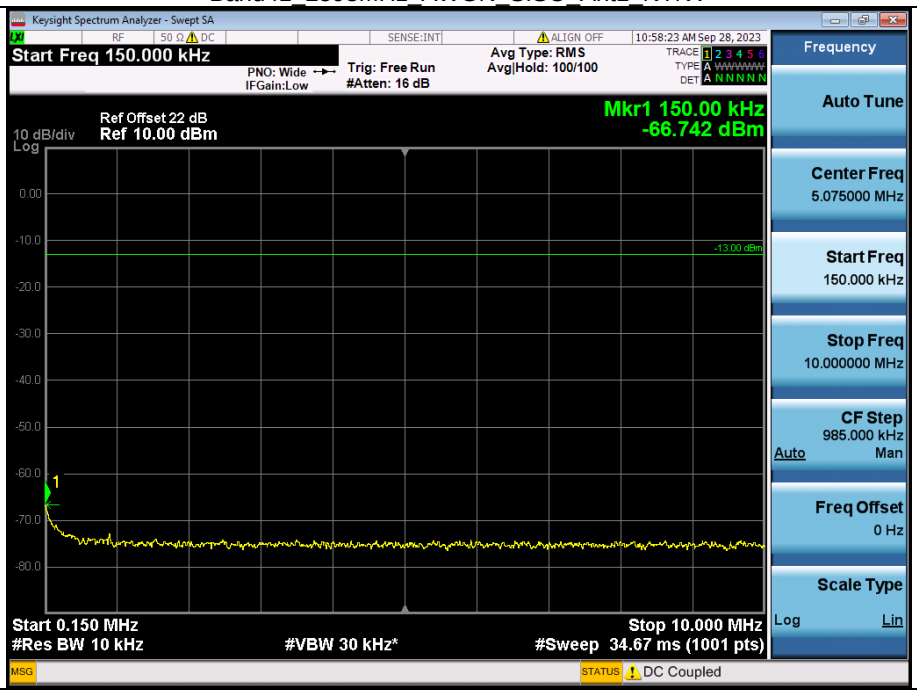


Band41_2546MHz_AWGN_SISO_Ant1_NTNV

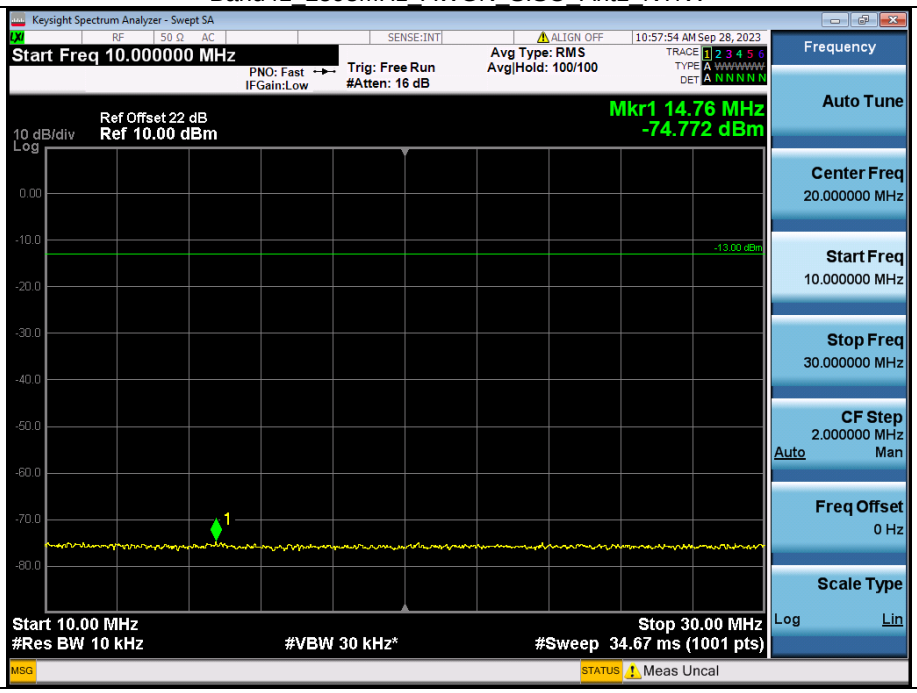


Band41_2593MHz_AWGN_SISO_Ant1_NTNV

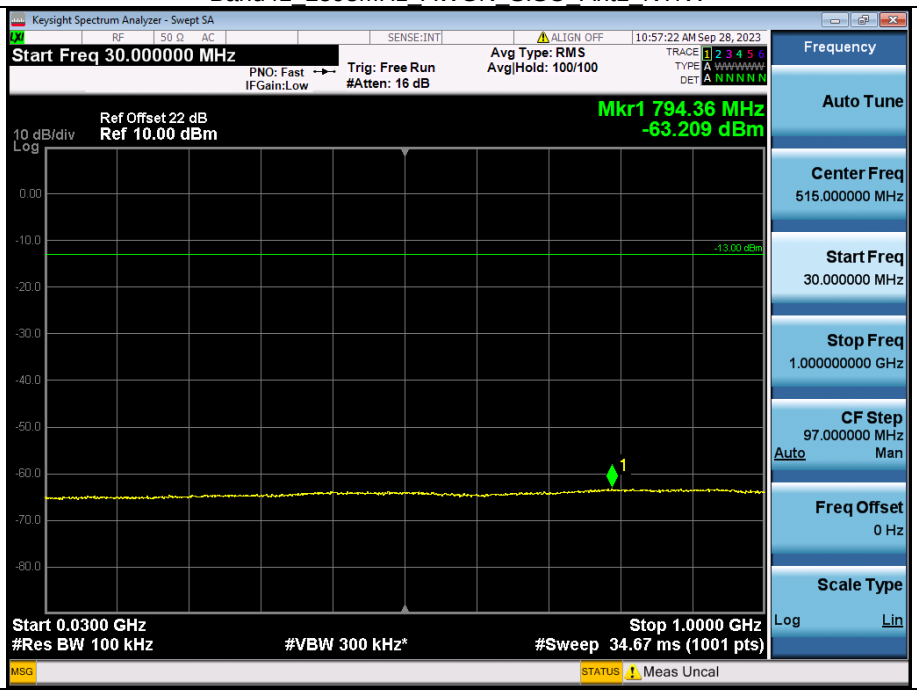
Band41_2593MHz_AWGN_SISO_Ant1_NTNV



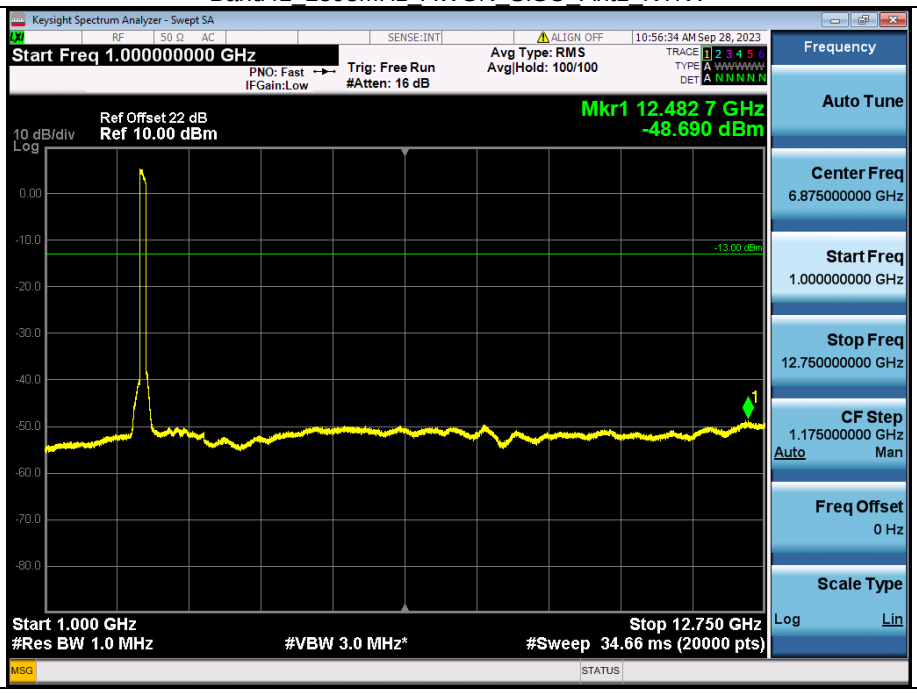
Band41_2593MHz_AWGN_SISO_Ant1_NTNV



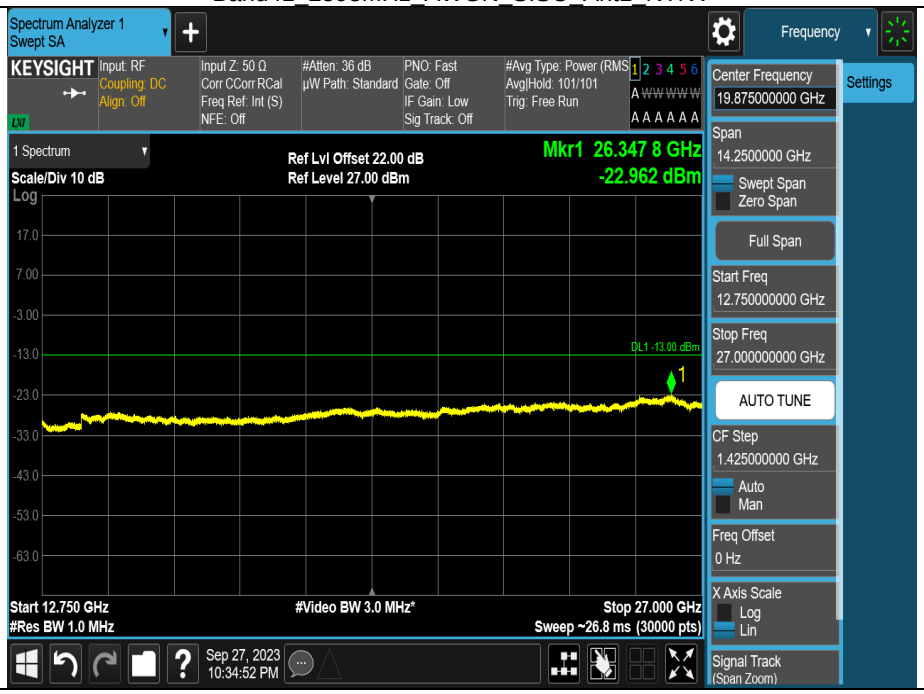
Band41_2593MHz_AWGN_SISO_Ant1_NTNV



Band41_2593MHz_AWGN_SISO_Ant1_NTNV

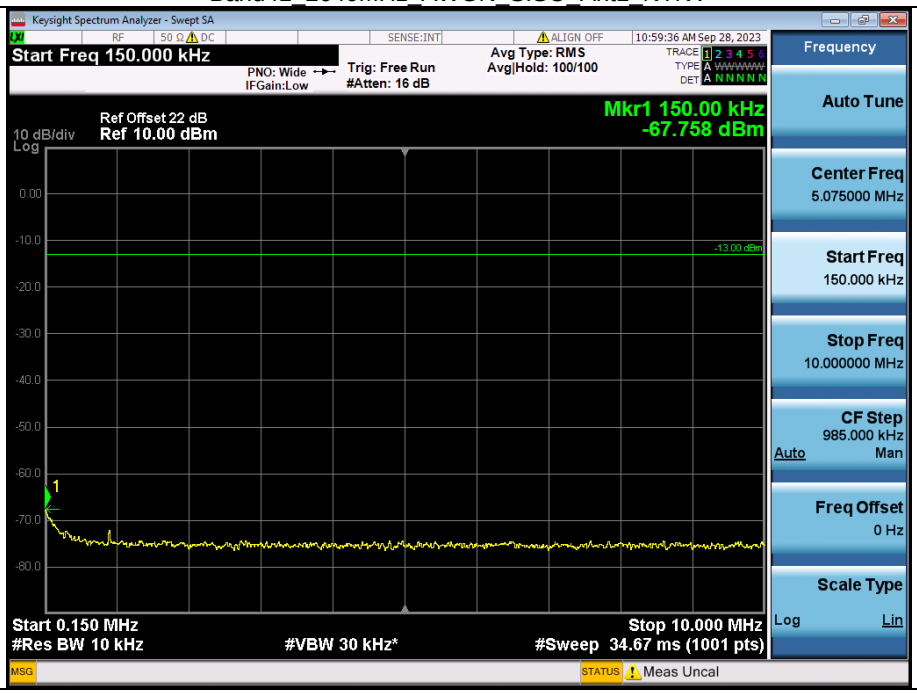


Band41_2593MHz_AWGN_SISO_Ant1_NTNV

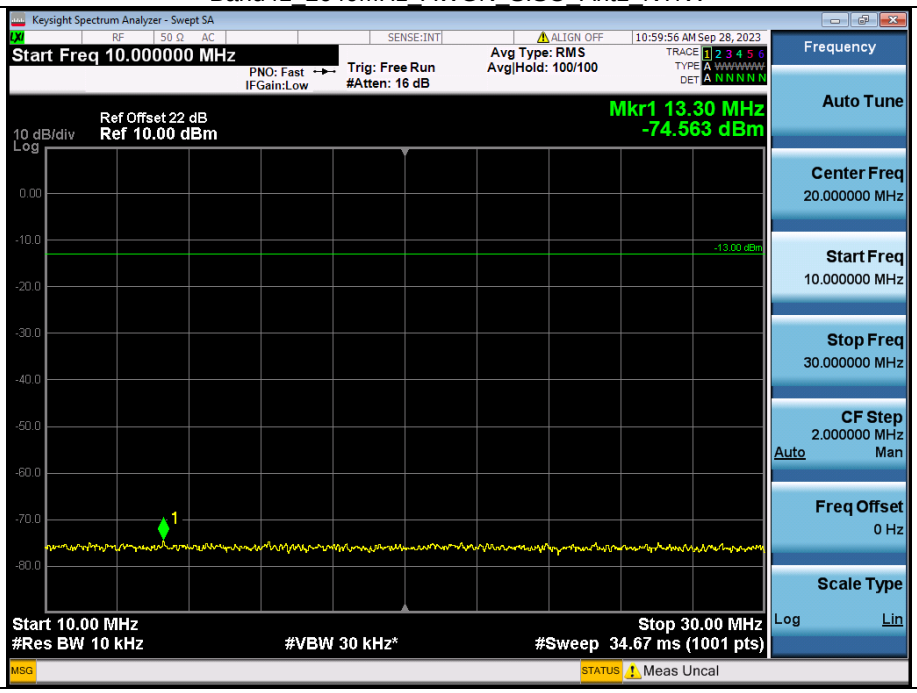


Band41_2640MHz_AWGN_SISO_Ant1_NTNV

Band41_2640MHz_AWGN_SISO_Ant1_NTNV

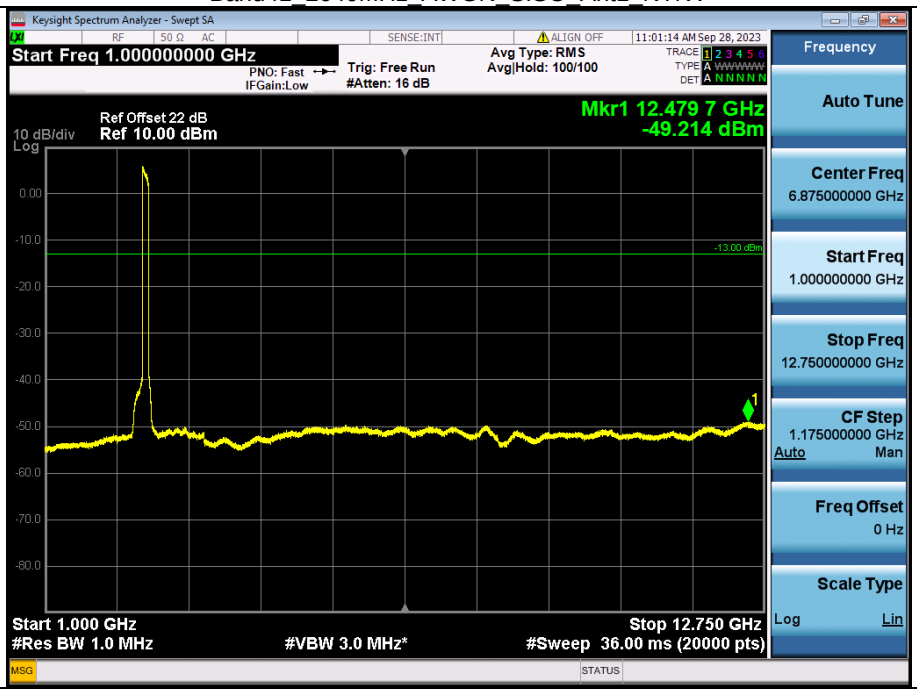


Band41_2640MHz_AWGN_SISO_Ant1_NTNV

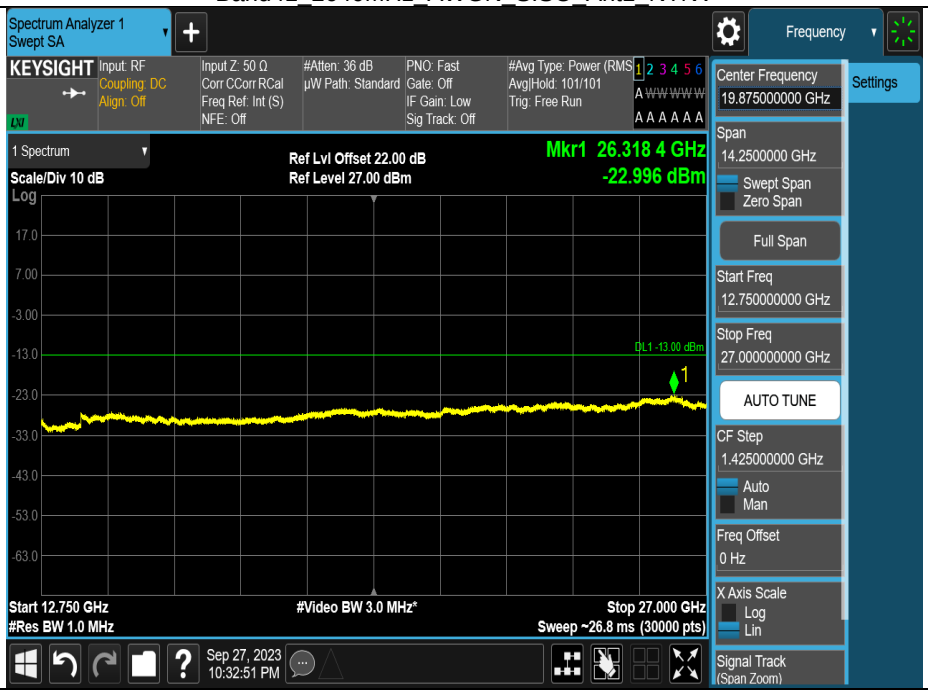


Band41_2640MHz_AWGN_SISO_Ant1_NTNV

Band41_2640MHz_AWGN_SISO_Ant1_NTNV



Band41_2640MHz_AWGN_SISO_Ant1_NTNV



7. Frequency stability measurements

7.1 Band41_Ant1

7.1.1 Test Result

Band: 41 / NTNV							
Signal			Temp (°C)	Voltage (VAC)	Freq. Error (Hz)	Tolerance (ppm)	Verdict
Type	Level (dBm)	Frequency (MHz)					
CW	-4	2496.1	20	102	-103	-0.04126	Pass
				120	-104	-0.04166	Pass
				138	-105	-0.04207	Pass
			-30	120	-108	-0.04327	Pass
			-20	120	-107	-0.04287	Pass
			-10	120	-109	-0.04367	Pass
			0	120	-111	-0.04447	Pass
			10	120	-102	-0.04086	Pass
			30	120	-105	-0.04207	Pass
			40	120	-106	-0.04247	Pass
			50	120	-105	-0.04207	Pass
		2593	20	102	-110	-0.04242	Pass
				120	-103	-0.03972	Pass
				138	-105	-0.04049	Pass
			-30	120	-102	-0.03934	Pass
			-20	120	-104	-0.04011	Pass
			-10	120	-104	-0.04011	Pass
			0	120	-103	-0.03972	Pass
			10	120	-102	-0.03934	Pass
			30	120	-101	-0.03895	Pass
			40	120	-100	-0.03857	Pass
			50	120	-109	-0.04204	Pass
		2689.9	20	102	-102	-0.03792	Pass
				120	-111	-0.04127	Pass
				138	-109	-0.04052	Pass
			-30	120	-108	-0.04015	Pass
			-20	120	-110	-0.04089	Pass
			-10	120	-111	-0.04127	Pass
			0	120	-112	-0.04164	Pass
			10	120	-103	-0.03829	Pass
			30	120	-102	-0.03792	Pass

			40	120	-101	-0.03755	Pass
			50	120	-100	-0.03718	Pass

8. Radiated Spurious Emissions

8.1 Bandn 41

8.1.1 Test Result

AWGN 2498.5MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
95.444	Horizontal	-66.44	-13	-53.44	Pass
288.218	Horizontal	-59.54	-13	-46.54	Pass
685.182	Horizontal	-57.57	-13	-44.57	Pass
2408.03	Horizontal	-49.66	-13	-36.66	Pass
6028.09	Horizontal	-52.40	-13	-39.40	Pass
11319.91	Horizontal	-39.29	-13	-26.29	Pass
121.060	Vertical	-65.80	-13	-52.8	Pass
260.315	Vertical	-59.97	-13	-46.97	Pass
709.019	Vertical	-57.82	-13	-44.82	Pass
2607.48	Vertical	-49.47	-13	-36.47	Pass
6098.04	Vertical	-50.74	-13	-37.74	Pass
11265.74	Vertical	-38.88	-13	-25.88	Pass

AWGN 2593MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
102.120	Horizontal	-66.17	-13	-53.17	Pass
255.065	Horizontal	-59.41	-13	-46.41	Pass
714.169	Horizontal	-59.26	-13	-46.26	Pass
2502.92	Horizontal	-53.86	-13	-40.86	Pass
6037.98	Horizontal	-47.60	-13	-34.60	Pass
11307.90	Horizontal	-37.69	-13	-24.69	Pass
93.644	Vertical	-62.47	-13	-49.47	Pass
327.178	Vertical	-60.52	-13	-47.52	Pass
691.772	Vertical	-59.35	-13	-46.35	Pass
2604.48	Vertical	-51.31	-13	-38.31	Pass
6099.20	Vertical	-49.27	-13	-36.27	Pass
11329.11	Vertical	-41.48	-13	-28.48	Pass

AWGN 2687.5MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
130.084	Horizontal	-69.50	-13	-56.50	Pass
279.428	Horizontal	-57.68	-13	-44.68	Pass
699.102	Horizontal	-57.96	-13	-44.96	Pass
2463.08	Horizontal	-53.67	-13	-40.67	Pass
6025.06	Horizontal	-53.91	-13	-40.91	Pass
11329.10	Horizontal	-37.60	-13	-24.60	Pass
111.060	Vertical	-62.10	-13	-49.10	Pass
248.515	Vertical	-58.76	-13	-45.76	Pass
701.919	Vertical	-56.81	-13	-43.81	Pass
2580.61	Vertical	-48.65	-13	-35.65	Pass
6095.70	Vertical	-53.27	-13	-40.27	Pass
11304.55	Vertical	-40.40	-13	-27.40	Pass

GMSK 2496.2MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
97.954	Horizontal	-67.11	-13	-54.11	Pass
286.308	Horizontal	-59.66	-13	-46.66	Pass
556.942	Horizontal	-63.23	-13	-50.23	Pass
2981.28	Horizontal	-48.07	-13	-35.07	Pass
6317.67	Horizontal	-47.99	-13	-34.99	Pass
11862.94	Horizontal	-41.72	-13	-28.72	Pass
109.29	Vertical	-65.09	-13	-52.09	Pass
226.175	Vertical	-58.89	-13	-45.89	Pass
607.879	Vertical	-62.85	-13	-49.85	Pass
3004.89	Vertical	-49.33	-13	-36.33	Pass
6512.29	Vertical	-47.97	-13	-34.97	Pass
12005.65	Vertical	-43.76	-13	-30.76	Pass

GMSK 2593MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
107.820	Horizontal	-63.89	-13	-50.89	Pass
204.035	Horizontal	-62.03	-13	-49.03	Pass
594.279	Horizontal	-59.12	-13	-46.12	Pass
2986.37	Horizontal	-52.32	-13	-39.32	Pass
6301.25	Horizontal	-49.14	-13	-36.14	Pass
11840.96	Horizontal	-36.52	-13	-23.52	Pass
126.134	Vertical	-67.45	-13	-54.45	Pass
292.508	Vertical	-58.39	-13	-45.39	Pass
557.112	Vertical	-63.87	-13	-50.87	Pass
3015.70	Vertical	-51.43	-13	-38.43	Pass
6496.76	Vertical	-54.42	-13	-41.42	Pass
11988.30	Vertical	-36.88	-13	-23.88	Pass

GMSK 2689.8MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
110.344	Horizontal	-64.81	-13	-51.81	Pass
302.688	Horizontal	-61.91	-13	-48.91	Pass
569.892	Horizontal	-58.42	-13	-45.42	Pass
2998.13	Horizontal	-50.07	-13	-37.07	Pass
6328.20	Horizontal	-53.74	-13	-40.74	Pass
11884.11	Horizontal	-39.07	-13	-26.07	Pass
106.110	Vertical	-68.45	-13	-55.45	Pass
242.945	Vertical	-58.93	-13	-45.93	Pass
600.839	Vertical	-61.16	-13	-48.16	Pass
2987.25	Vertical	-47.95	-13	-34.95	Pass
6494.44	Vertical	-50.67	-13	-37.67	Pass
12023.28	Vertical	-40.74	-13	-27.74	Pass

For 100MHz BW

AWGN 2546MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
95.320	Horizontal	-69.52	-13	-56.52	Pass
220.755	Horizontal	-61.59	-13	-48.59	Pass
603.649	Horizontal	-59.01	-13	-46.01	Pass
2662.79	Horizontal	-50.32	-13	-37.32	Pass
6097.66	Horizontal	-50.74	-13	-37.74	Pass
12082.79	Horizontal	-36.91	-13	-23.91	Pass
105.674	Vertical	-62.70	-13	-49.70	Pass
271.618	Vertical	-60.44	-13	-47.44	Pass
570.532	Vertical	-58.47	-13	-45.47	Pass
2686.49	Vertical	-54.44	-13	-41.44	Pass
5907.41	Vertical	-50.84	-13	-37.84	Pass
11711.63	Vertical	-42.92	-13	-29.92	Pass

AWGN 2593MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
112.390	Horizontal	-67.65	-13	-54.65	Pass
243.055	Horizontal	-61.81	-13	-48.81	Pass
615.109	Horizontal	-56.73	-13	-43.73	Pass
2696.76	Horizontal	-52.58	-13	-39.58	Pass
6114.95	Horizontal	-49.47	-13	-36.47	Pass
12043.98	Horizontal	-38.53	-13	-25.53	Pass
131.854	Vertical	-67.97	-13	-54.97	Pass
282.018	Vertical	-60.60	-13	-47.60	Pass
560.942	Vertical	-62.44	-13	-49.44	Pass
2707.28	Vertical	-51.07	-13	-38.07	Pass
5925.23	Vertical	-52.09	-13	-39.09	Pass
11736.41	Vertical	-42.45	-13	-29.45	Pass

AWGN 2640MHz					
Frequency	Spurious Emission Polarization and Level		Limit	Over Limit	Verdict
MHz	Polarization	dBm	dBm	dB	
100.184	Horizontal	-65.33	-13	-52.33	Pass
261.928	Horizontal	-56.57	-13	-43.57	Pass
576.012	Horizontal	-63.90	-13	-50.90	Pass
2661.56	Horizontal	-50.95	-13	-37.95	Pass
6113.39	Horizontal	-54.93	-13	-41.93	Pass
12045.13	Horizontal	-38.65	-13	-25.65	Pass
84.230	Vertical	-65.70	-13	-52.70	Pass
206.965	Vertical	-64.25	-13	-51.25	Pass
628.539	Vertical	-61.19	-13	-48.19	Pass
2681.05	Vertical	-50.14	-13	-37.14	Pass
5925.84	Vertical	-48.53	-13	-35.53	Pass
11746.12	Vertical	-43.80	-13	-30.80	Pass