



Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Smart LED Strip Lights

Test Model: N1-6

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Eason Zhou
Supervised by:	Nick Peng





B.1 DTS Bandwidth

Test Result

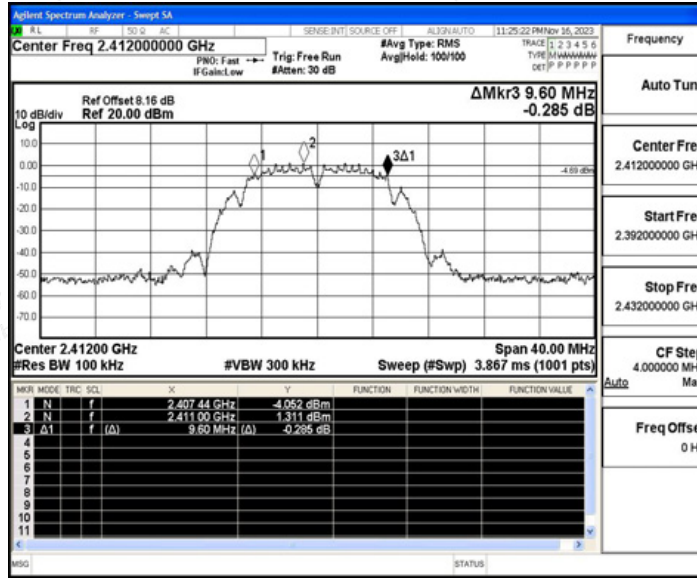
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	9.600	2407.440	2417.040	0.5	PASS
		2437	10.040	2432.000	2442.040	0.5	PASS
		2462	9.120	2457.440	2466.560	0.5	PASS
11G	Ant1	2412	16.320	2403.840	2420.160	0.5	PASS
		2437	16.240	2428.880	2445.120	0.5	PASS
		2462	16.280	2453.880	2470.160	0.5	PASS
11N20SISO	Ant1	2412	16.640	2403.680	2420.320	0.5	PASS
		2437	16.920	2428.400	2445.320	0.5	PASS
		2462	16.840	2453.520	2470.360	0.5	PASS
11N40SISO	Ant1	2422	35.600	2404.320	2439.920	0.5	PASS
		2437	35.840	2419.080	2454.920	0.5	PASS
		2452	35.440	2434.320	2469.760	0.5	PASS



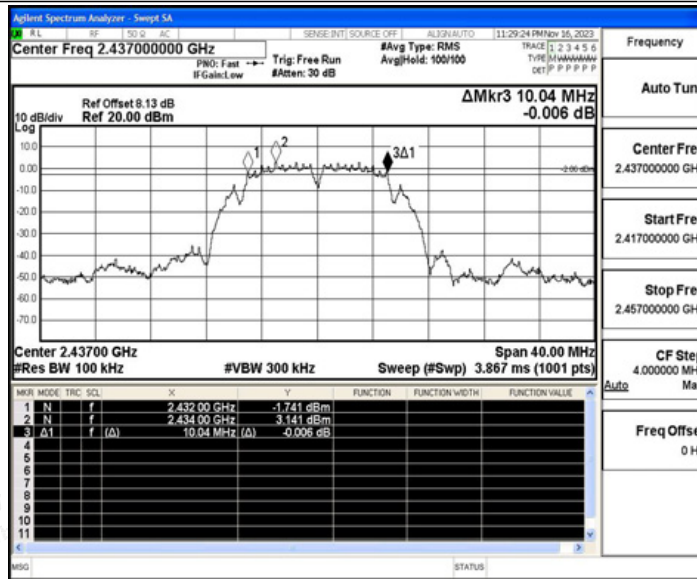


Test Graphs

11B_Ant1_2412

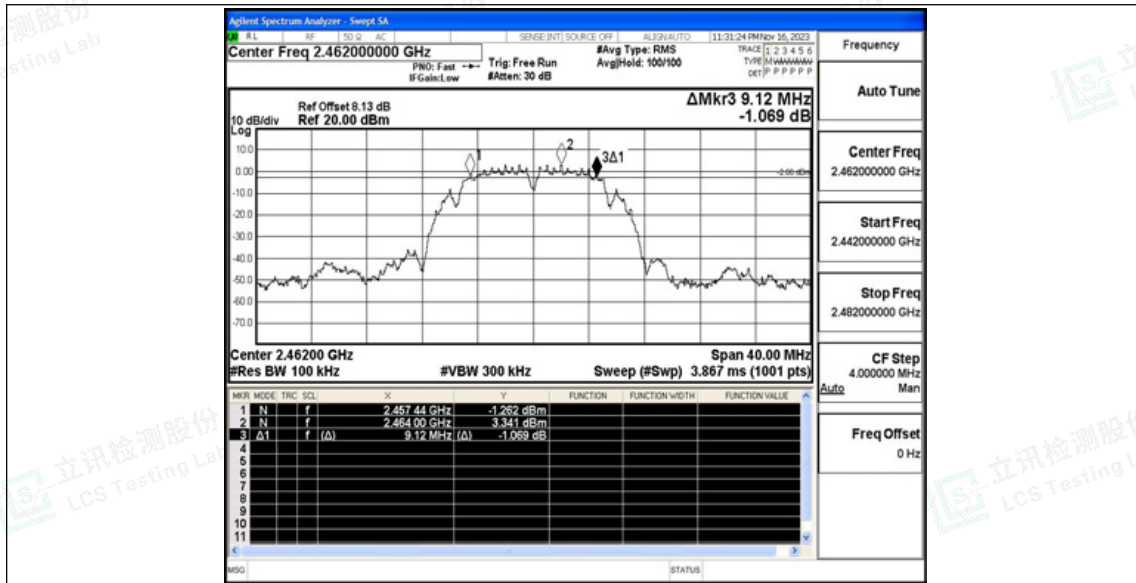


11B_Ant1_2437

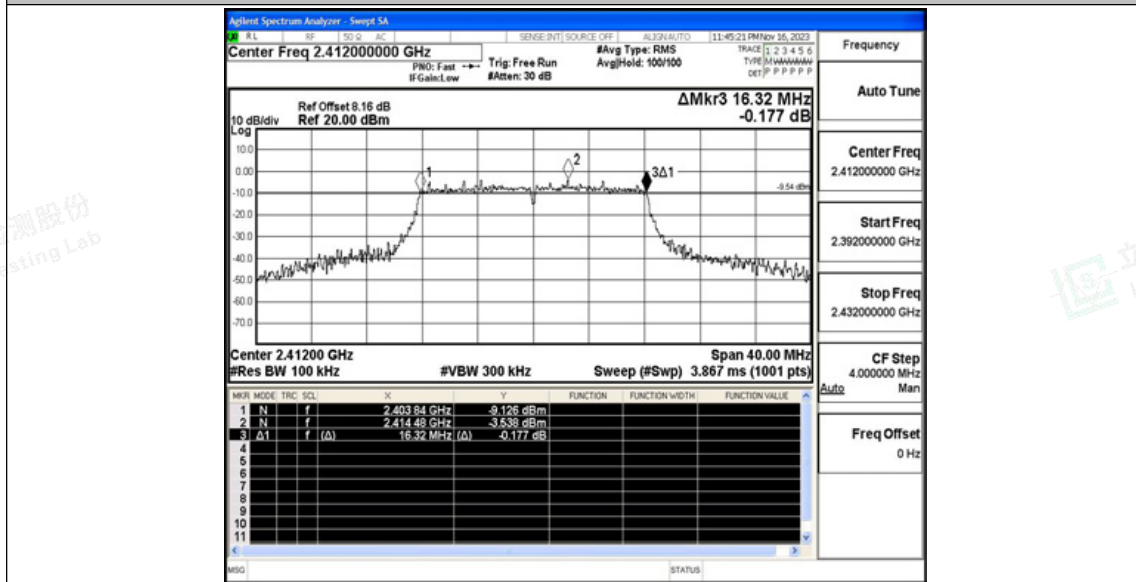


11B_Ant1_2462



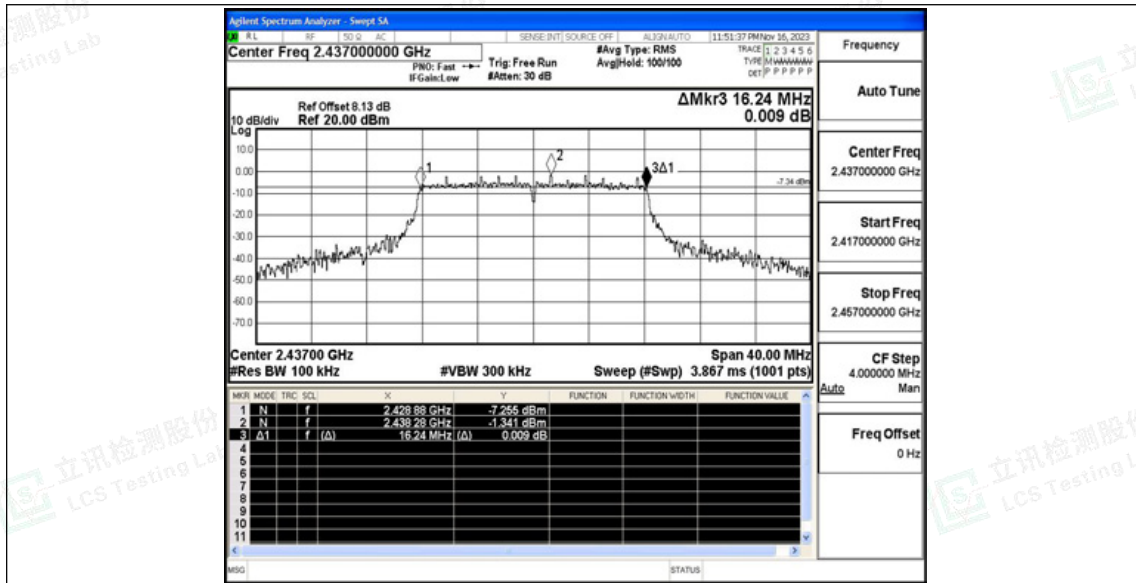


11G_Ant1_2412

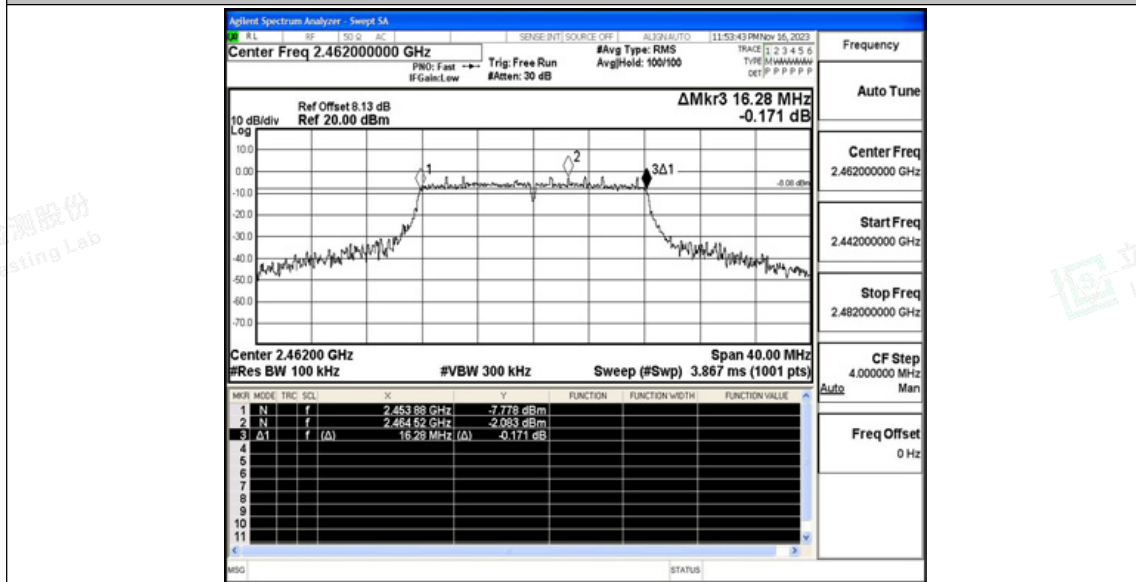


11G_Ant1_2437



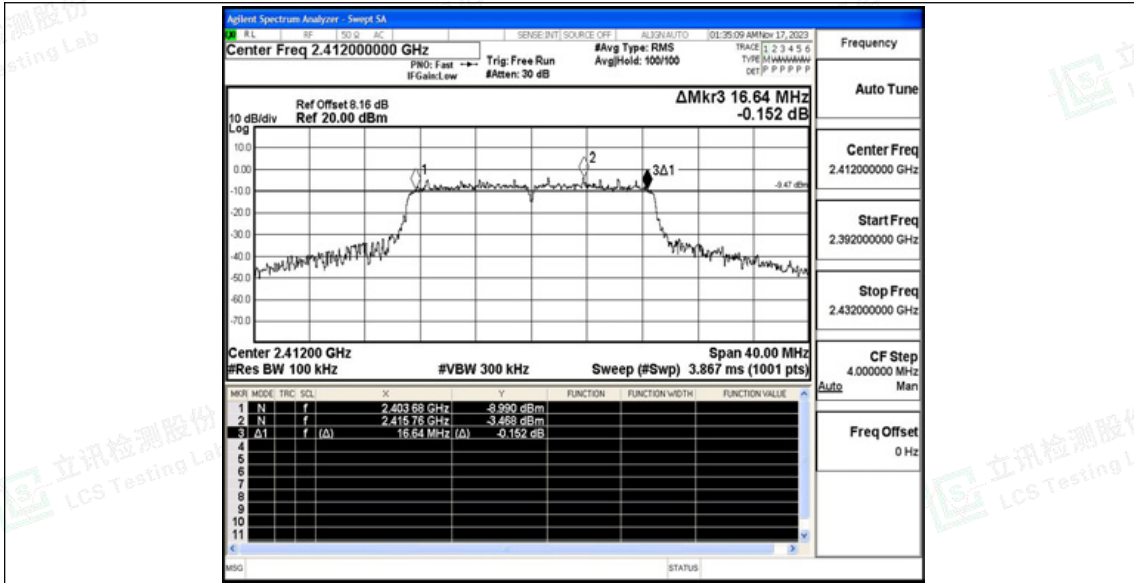


11G_Ant1_2462

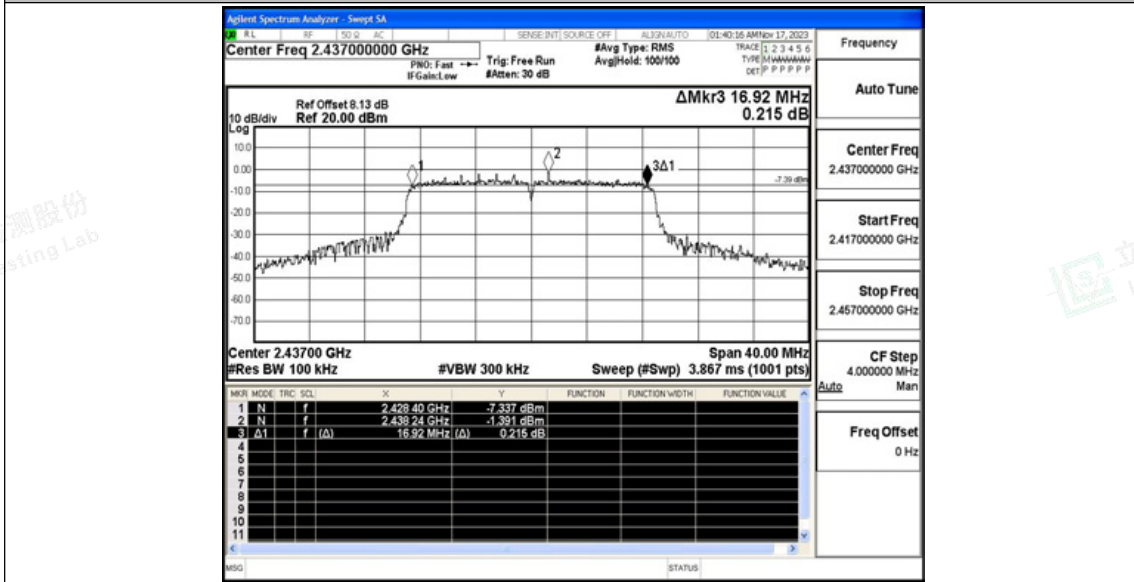


11N20SISO_Ant1_2412



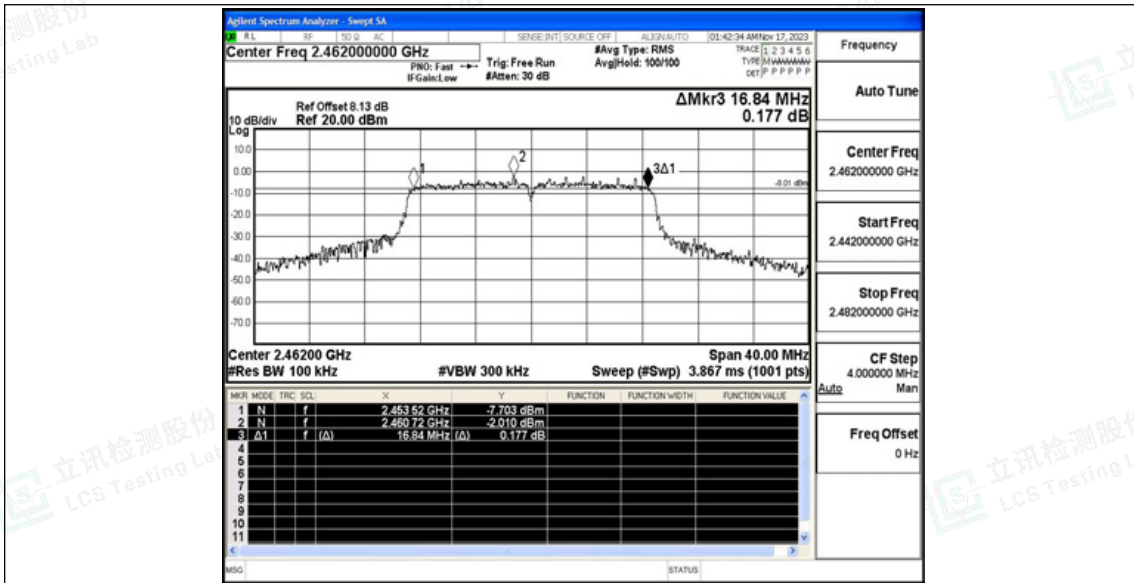


11N20SISO_Ant1_2437

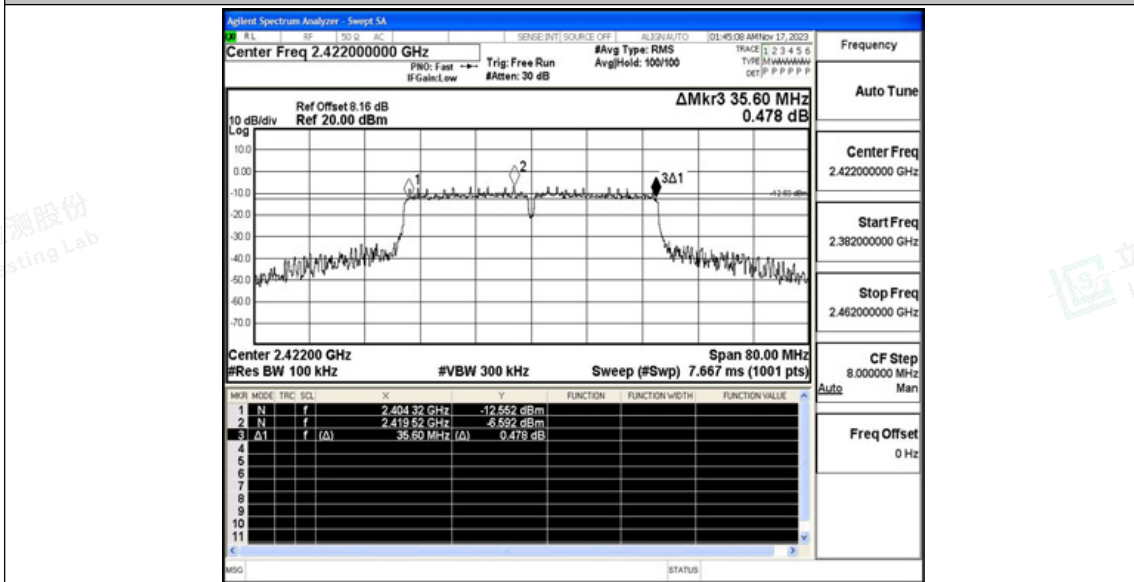


11N20SISO_Ant1_2462



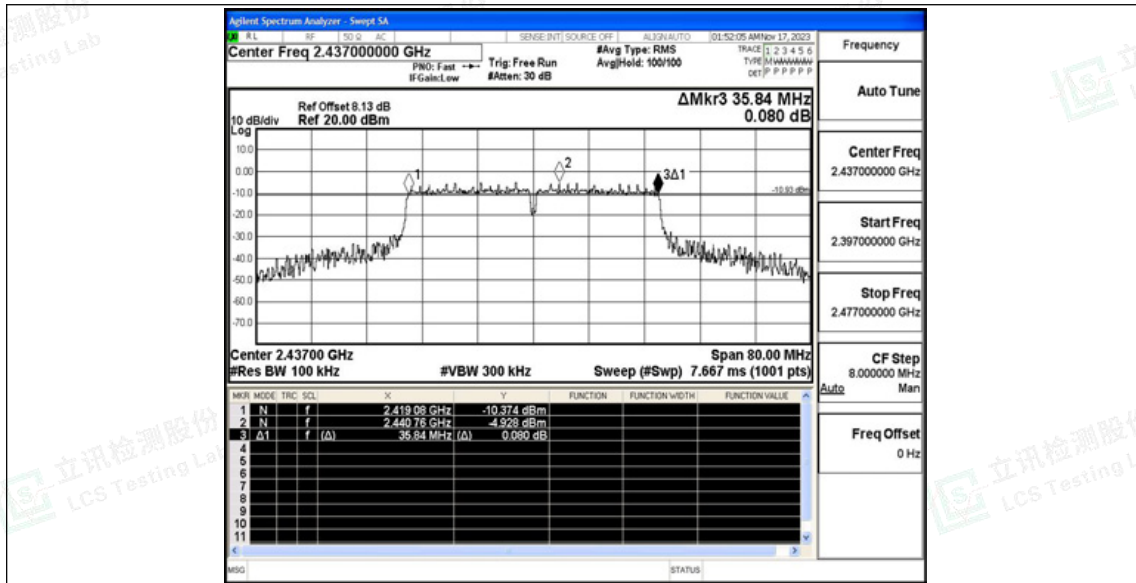


11N40SISO_Ant1_2422

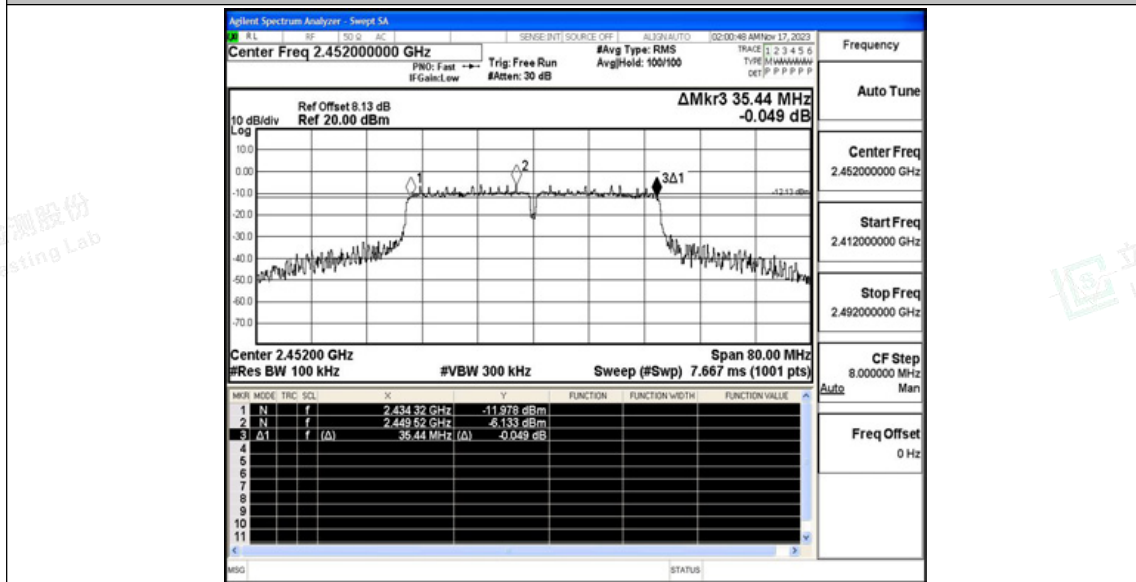


11N40SISO_Ant1_2437





11N40SISO_Ant1_2452





B.2 Occupied Channel Bandwidth

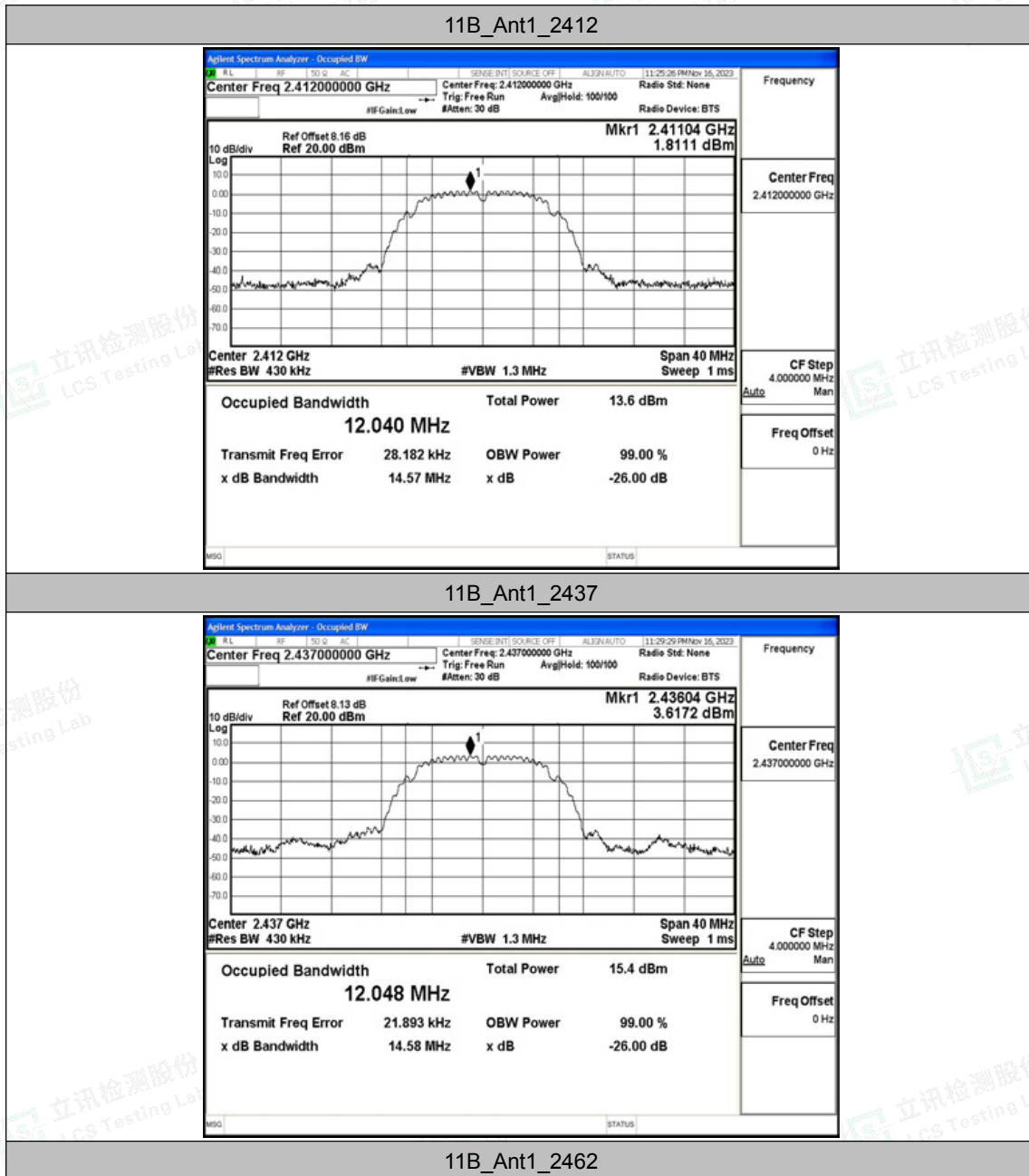
Test Result

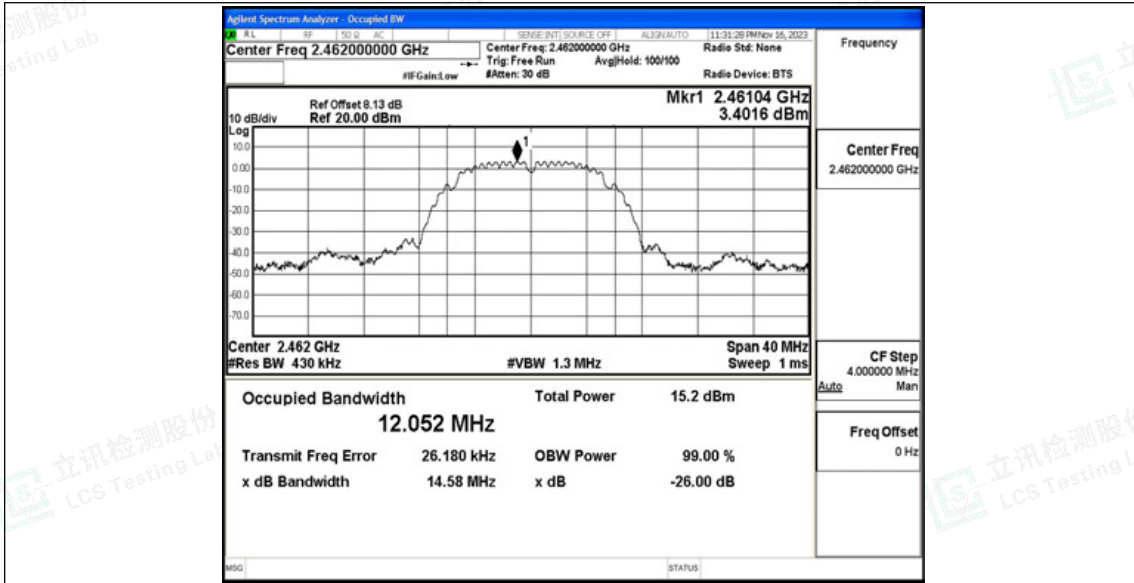
TestMode	Antenna	Freq(MHz)	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	12.040	2406.0082	2418.0482	---	---
		2437	12.048	2430.9979	2443.0459	---	---
		2462	12.052	2456.0002	2468.0522	---	---
11G	Ant1	2412	16.699	2403.6537	2420.3527	---	---
		2437	16.720	2428.6410	2445.3610	---	---
		2462	16.715	2453.6628	2470.3778	---	---
11N20SISO	Ant1	2412	17.722	2403.1264	2420.8484	---	---
		2437	17.663	2428.1516	2445.8146	---	---
		2462	17.648	2453.1610	2470.8090	---	---
11N40SISO	Ant1	2422	36.240	2403.8744	2440.1144	---	---
		2437	36.252	2418.8741	2455.1261	---	---
		2452	36.215	2433.8804	2470.0954	---	---



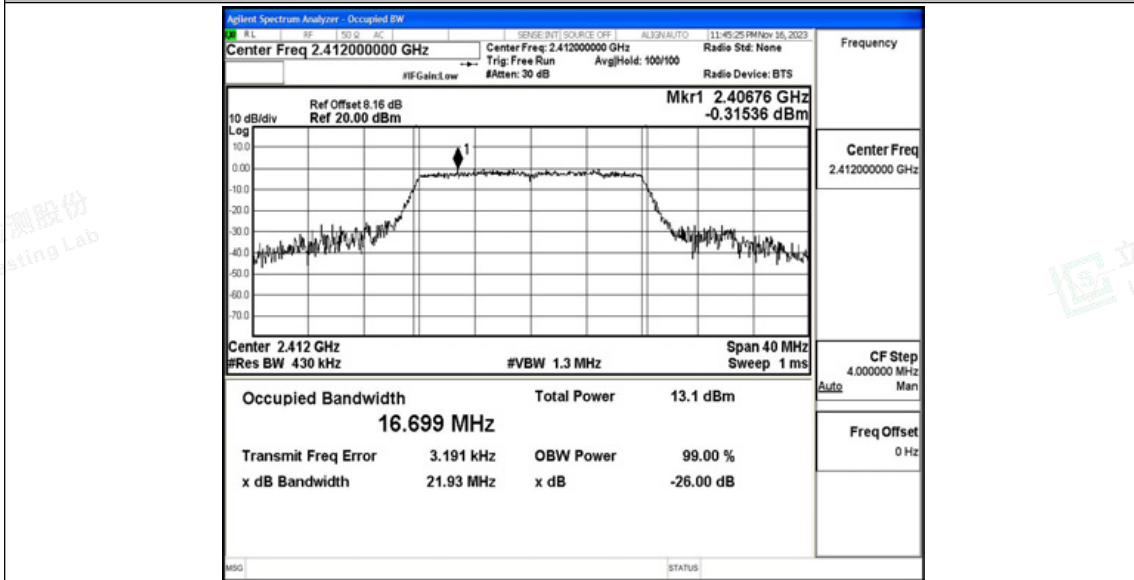


Test Graphs



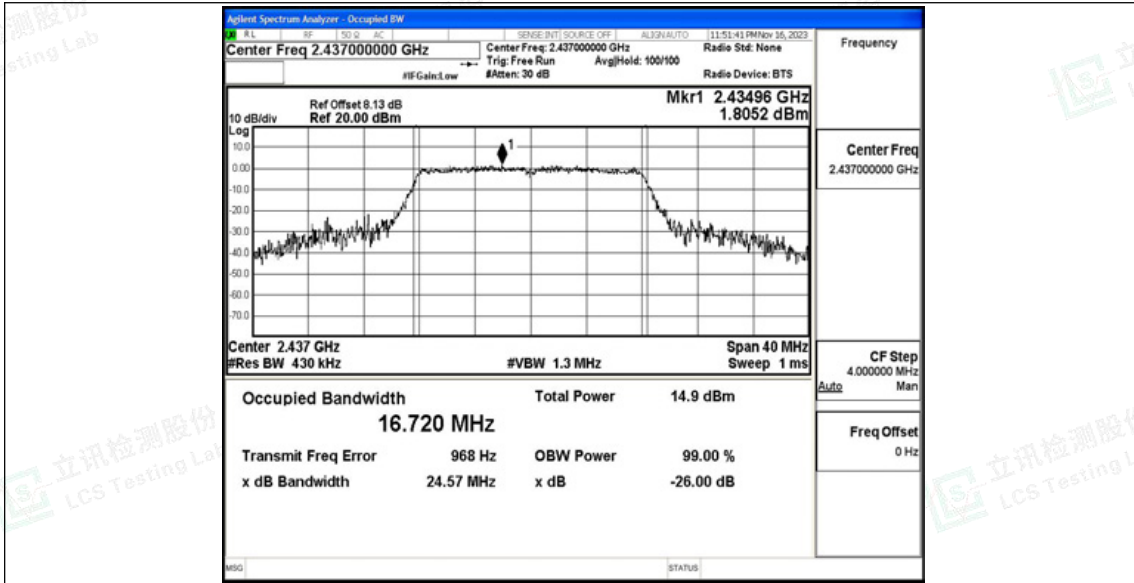


11G_Ant1_2412

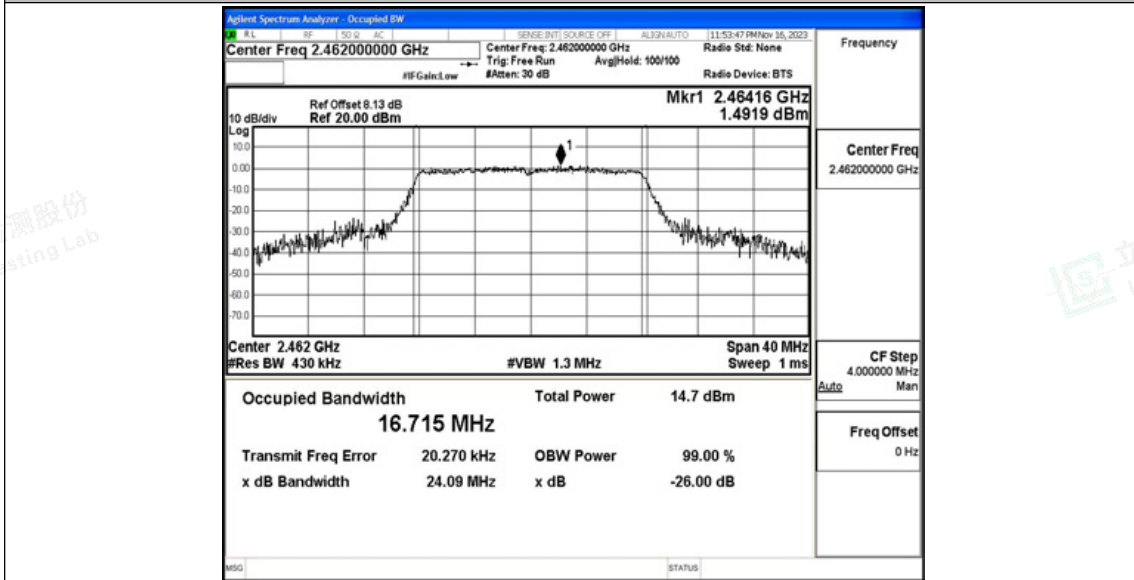


11G_Ant1_2437



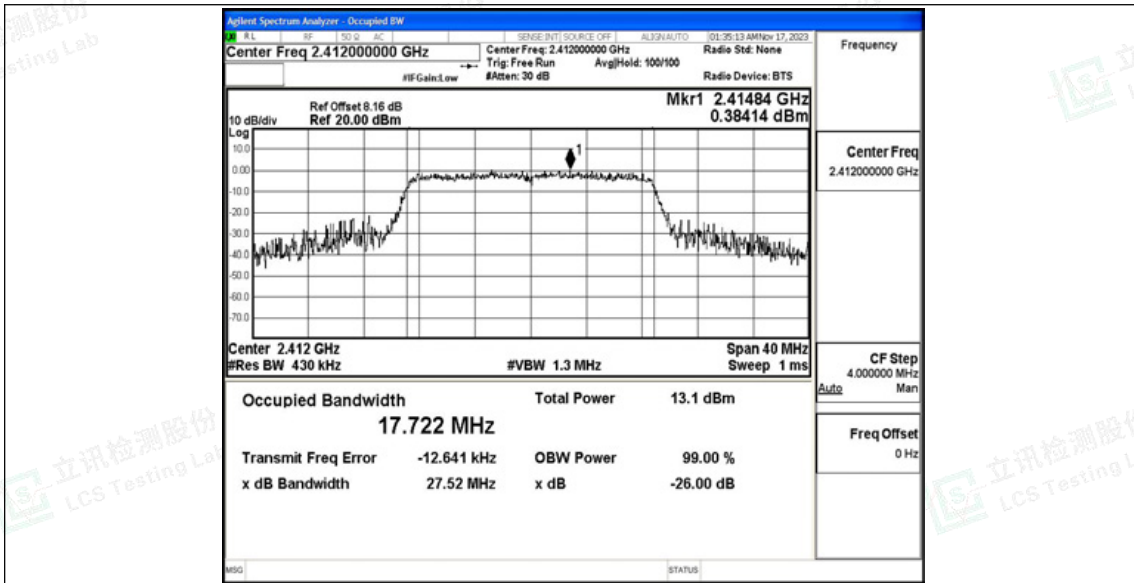


11G_Ant1_2462

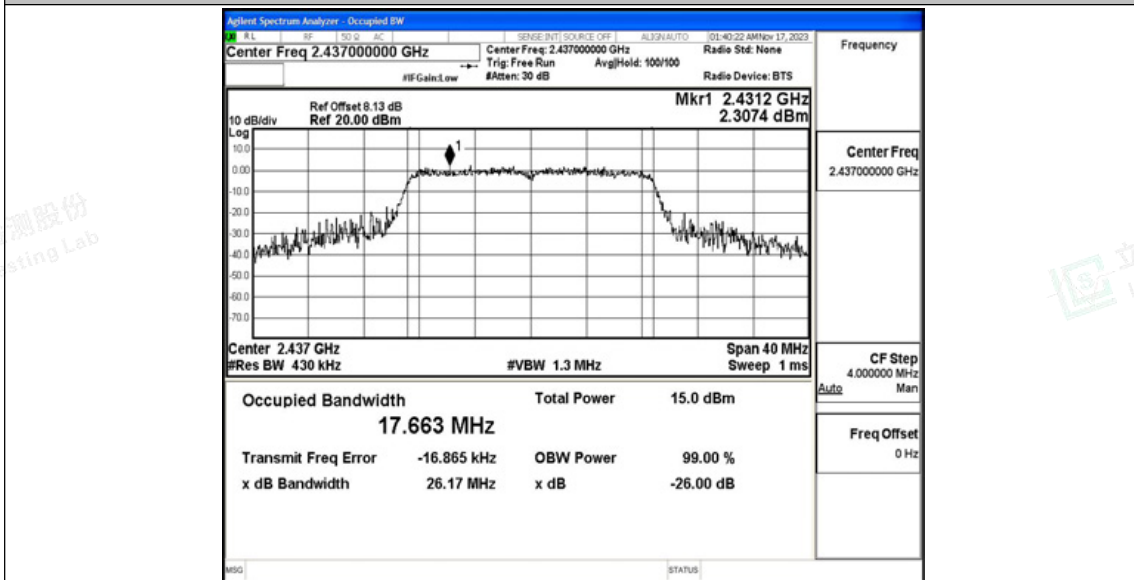


11N20SISO_Ant1_2412



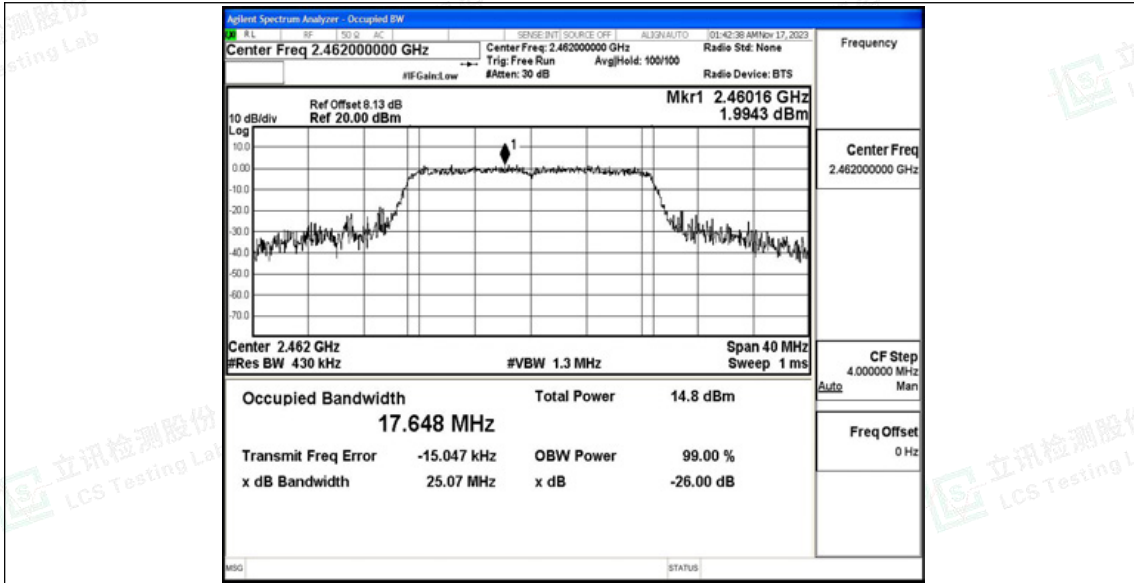


11N20SISO_Ant1_2437

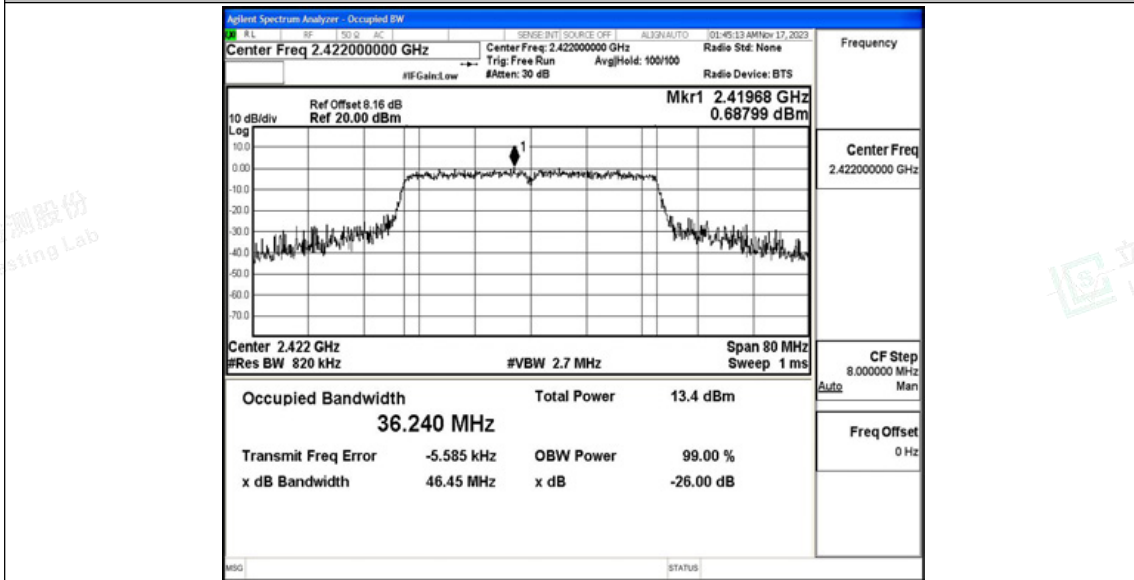


11N20SISO_Ant1_2462



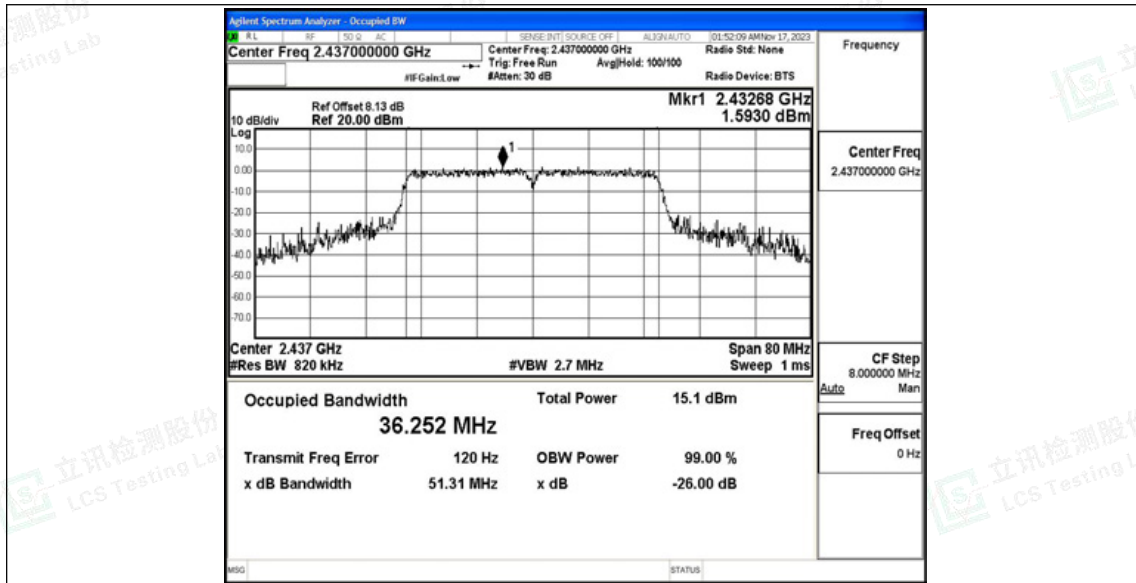


11N40SISO_Ant1_2422

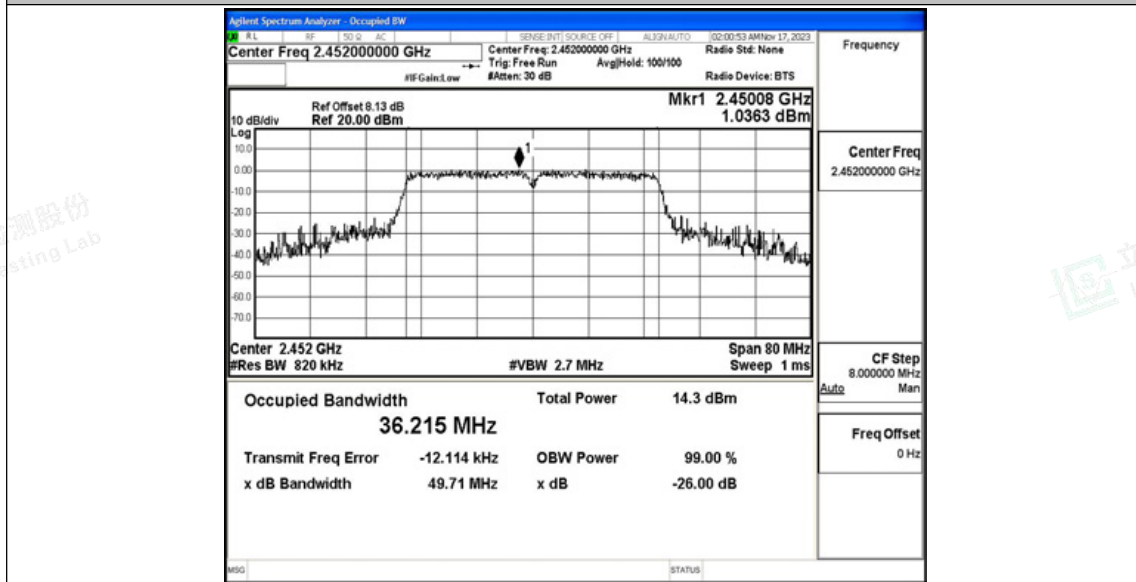


11N40SISO_Ant1_2437





11N40SISO_Ant1_2452





B.3 Maximum peak conducted output power

Test Result

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant1	2412	13.75	≤30.00	PASS
		2437	15.64	≤30.00	PASS
		2462	15.41	≤30.00	PASS
11G	Ant1	2412	13.72	≤30.00	PASS
		2437	15.78	≤30.00	PASS
		2462	15.77	≤30.00	PASS
11N20SISO	Ant1	2412	14.02	≤30.00	PASS
		2437	15.77	≤30.00	PASS
		2462	15.60	≤30.00	PASS
11N40SISO	Ant1	2422	13.68	≤30.00	PASS
		2437	15.89	≤30.00	PASS
		2452	14.49	≤30.00	PASS

EIRP

TestMode	Antenna	Freq(MHz)	Maximum Peak Output Power [dBm]	Antenna Gain	Report EIRP Power(dBm)	EIRP Limit[dBm]	Verdict
11B	Ant1	2412	13.75	4.54	18.29	≤36.00	PASS
		2437	15.64	4.54	20.18	≤36.00	PASS
		2462	15.41	4.54	19.95	≤36.00	PASS
11G	Ant1	2412	13.72	4.54	18.26	≤36.00	PASS
		2437	15.78	4.54	20.32	≤36.00	PASS
		2462	15.77	4.54	20.31	≤36.00	PASS
11N20SISO	Ant1	2412	14.02	4.54	18.56	≤36.00	PASS
		2437	15.77	4.54	20.31	≤36.00	PASS
		2462	15.60	4.54	20.14	≤36.00	PASS
11N40SISO	Ant1	2422	13.68	4.54	18.22	≤36.00	PASS
		2437	15.89	4.54	20.43	≤36.00	PASS
		2452	14.49	4.54	19.03	≤36.00	PASS





B.4 Maximum power spectral density

Test Result

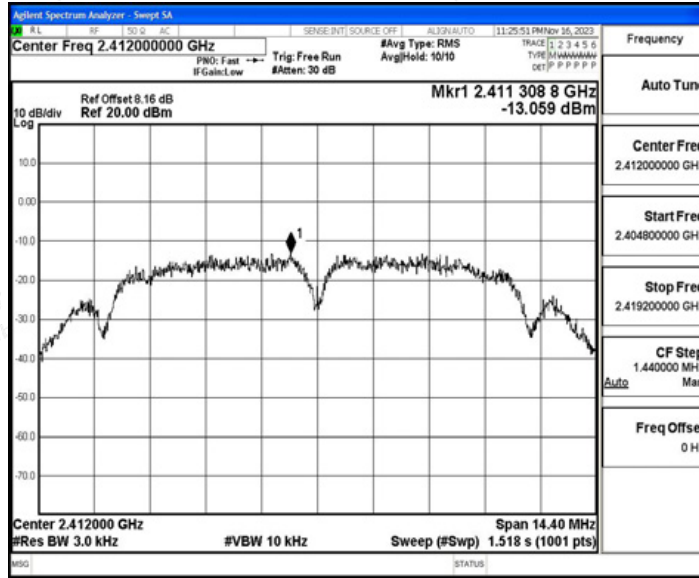
TestMode	Antenna	Freq(MHz)	Result [dBm/3kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant1	2412	-13.06	≤8.00	PASS
		2437	-7.48	≤8.00	PASS
		2462	-10.94	≤8.00	PASS
11G	Ant1	2412	-18.06	≤8.00	PASS
		2437	-15.81	≤8.00	PASS
		2462	-16.4	≤8.00	PASS
11N20SISO	Ant1	2412	-17.57	≤8.00	PASS
		2437	-15.98	≤8.00	PASS
		2462	-16.92	≤8.00	PASS
11N40SISO	Ant1	2422	-21.36	≤8.00	PASS
		2437	-18.52	≤8.00	PASS
		2452	-21	≤8.00	PASS



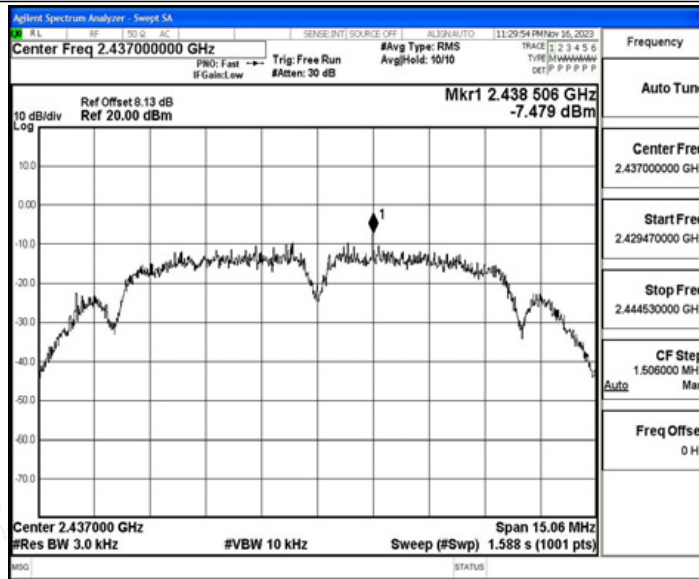


Test Graphs

11B_Ant1_2412

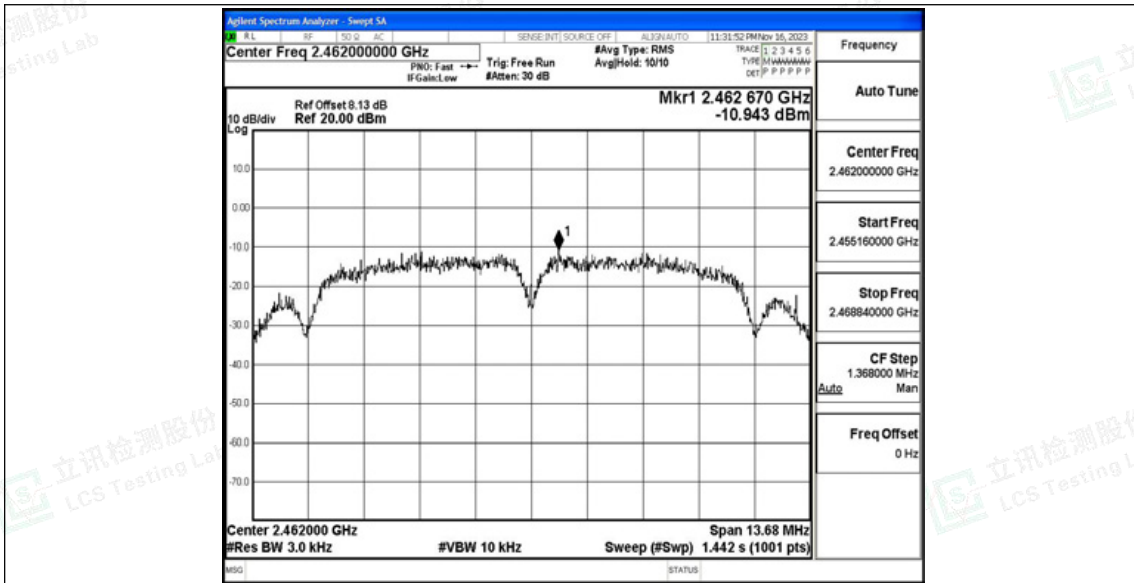


11B_Ant1_2437

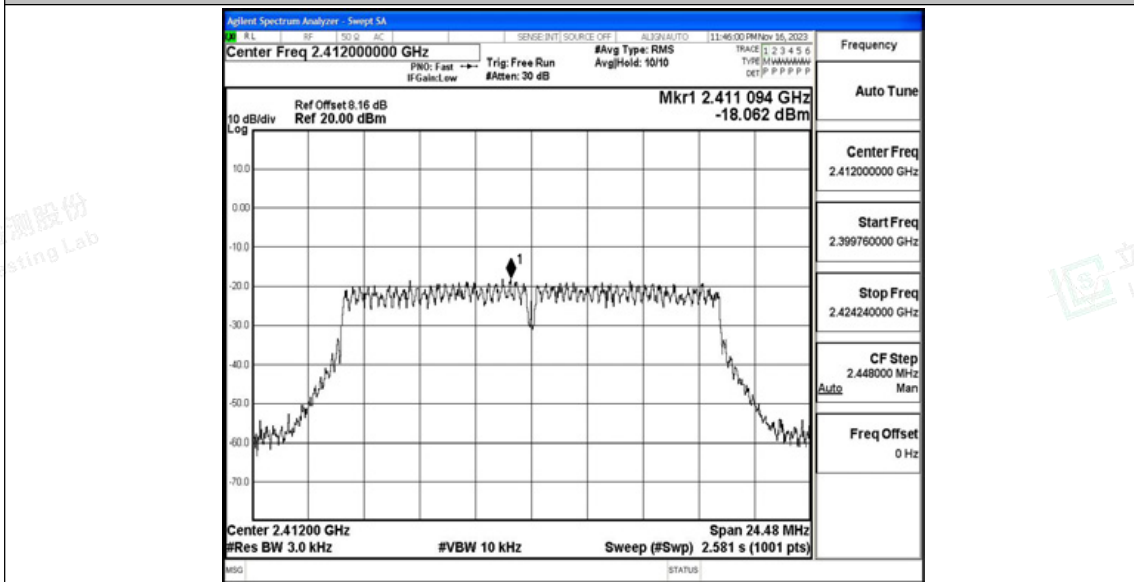


11B_Ant1_2462



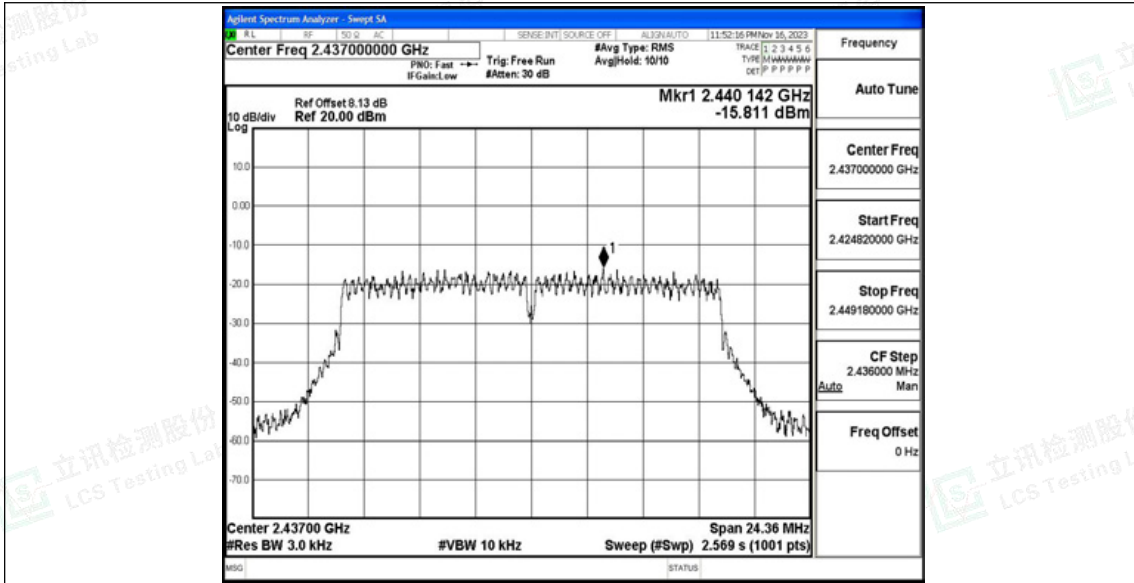


11G_Ant1_2412

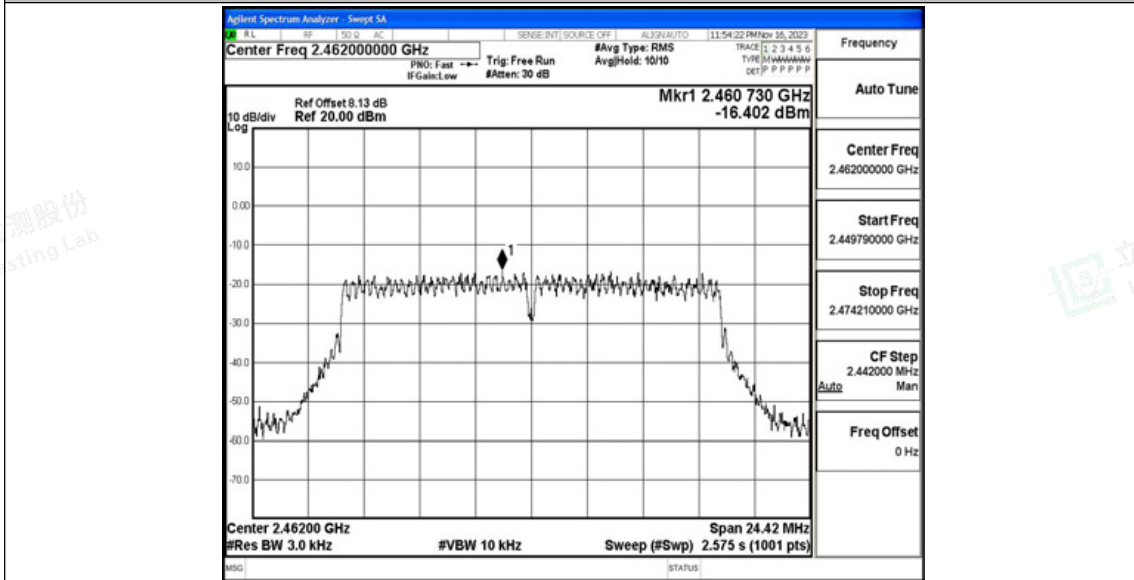


11G_Ant1_2437



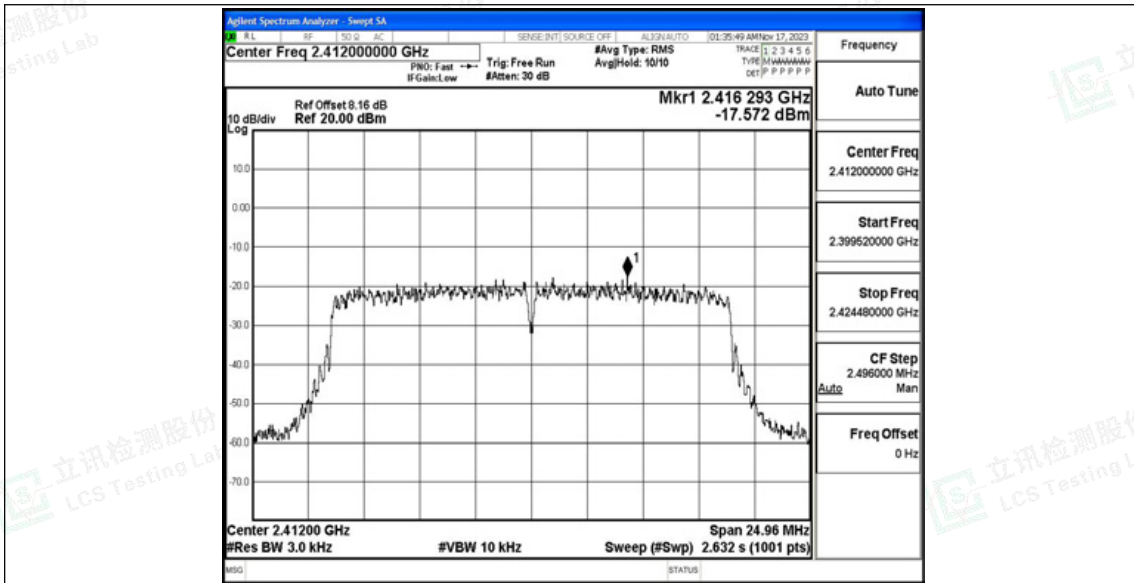


11G_Ant1_2462

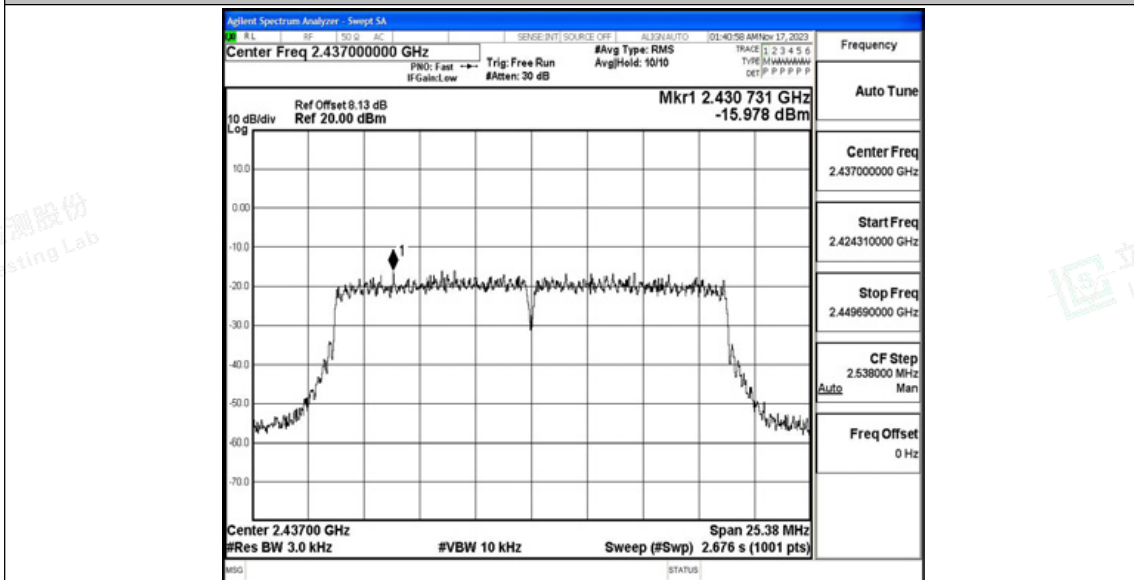


11N20SISO_Ant1_2412



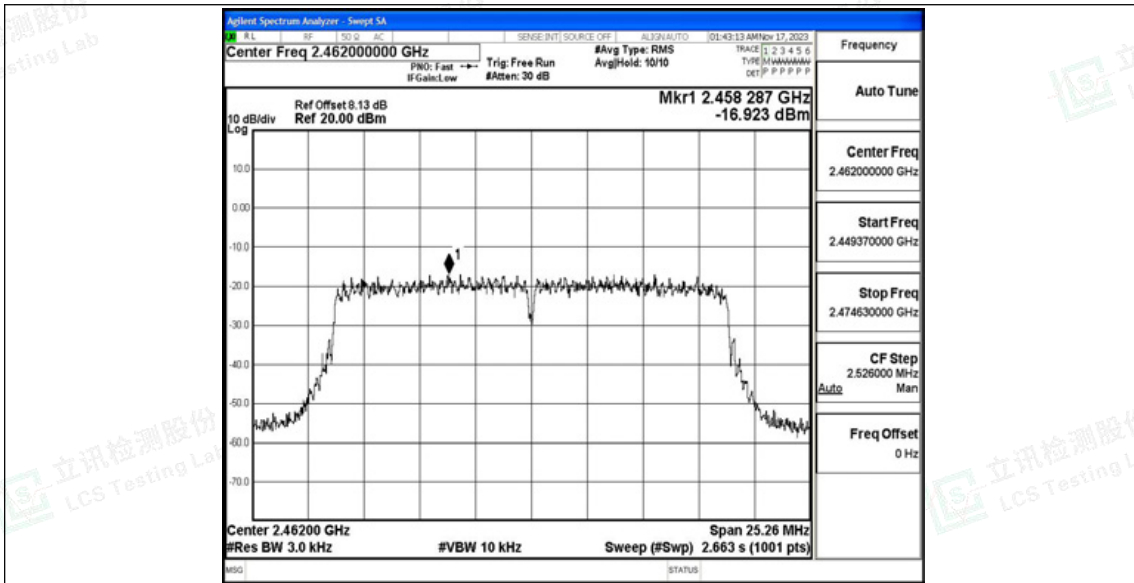


11N20SISO_Ant1_2437

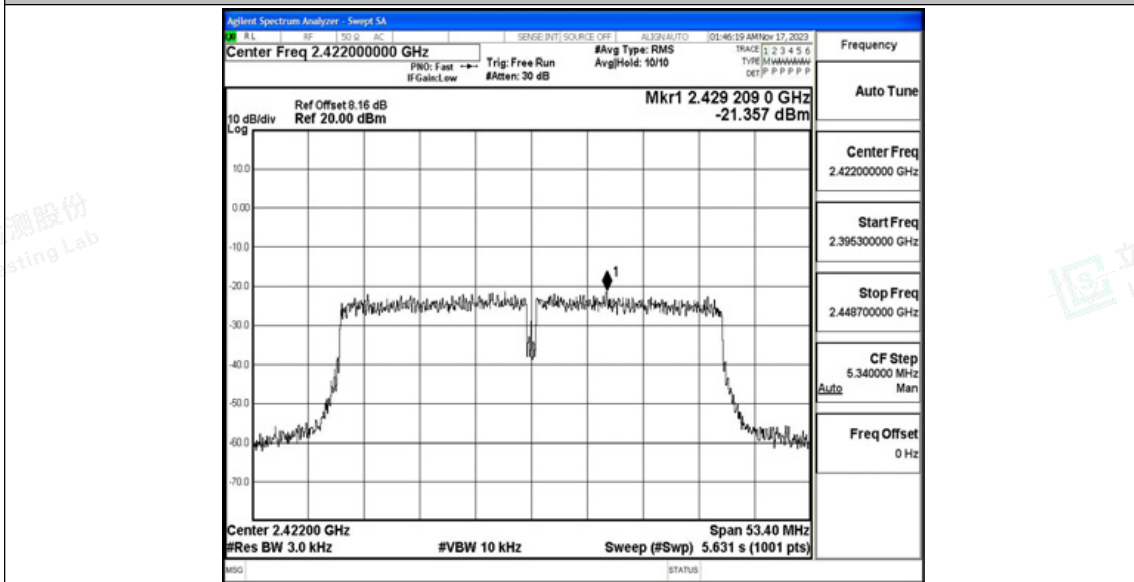


11N20SISO_Ant1_2462



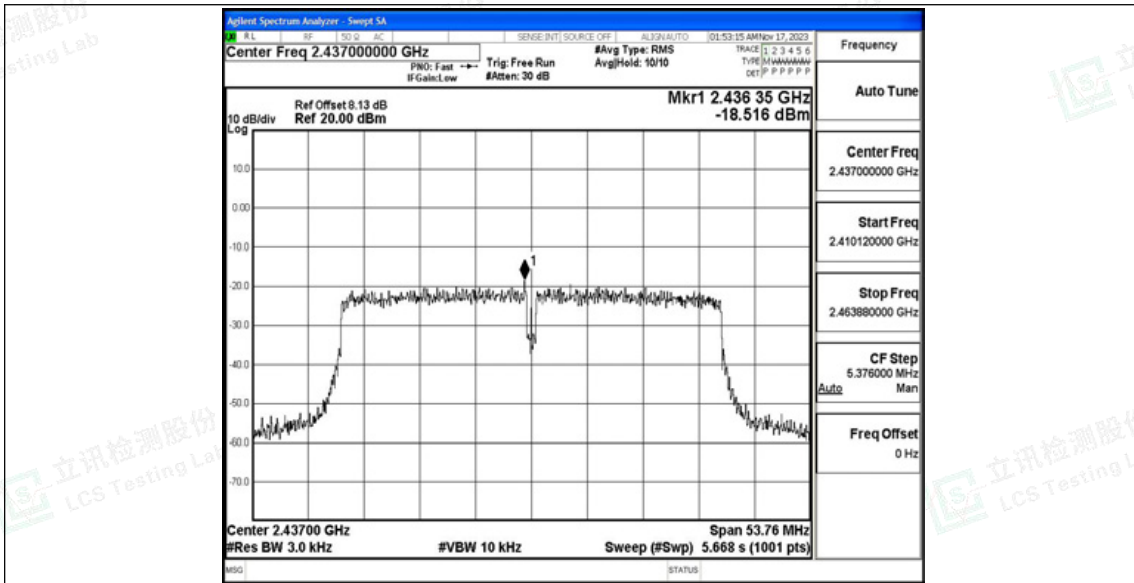


11N40SISO_Ant1_2422

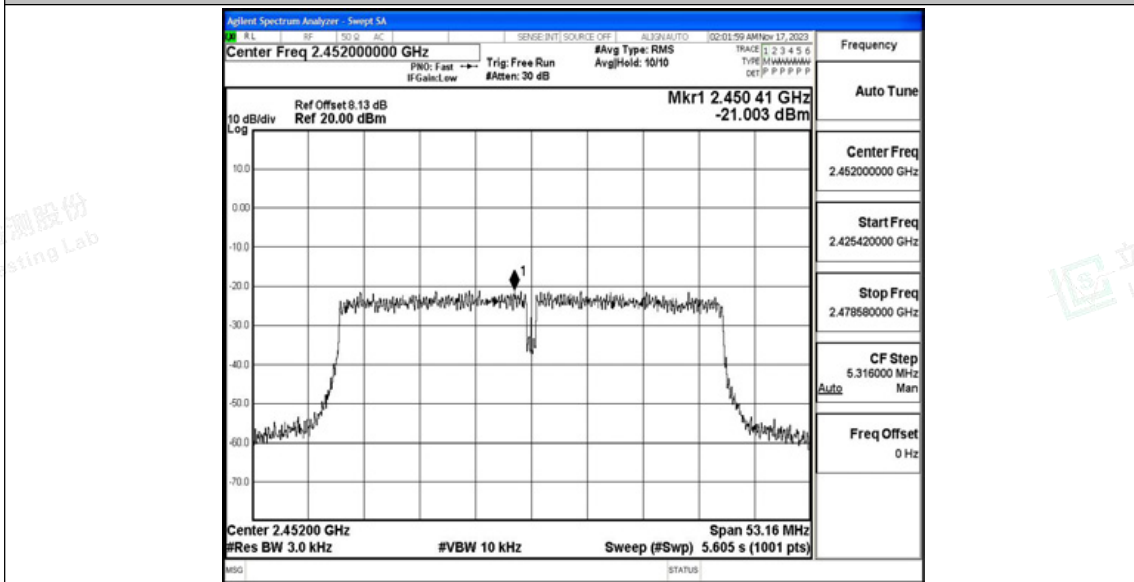


11N40SISO_Ant1_2437





11N40SISO_Ant1_2452





B.5 Band edge measurements

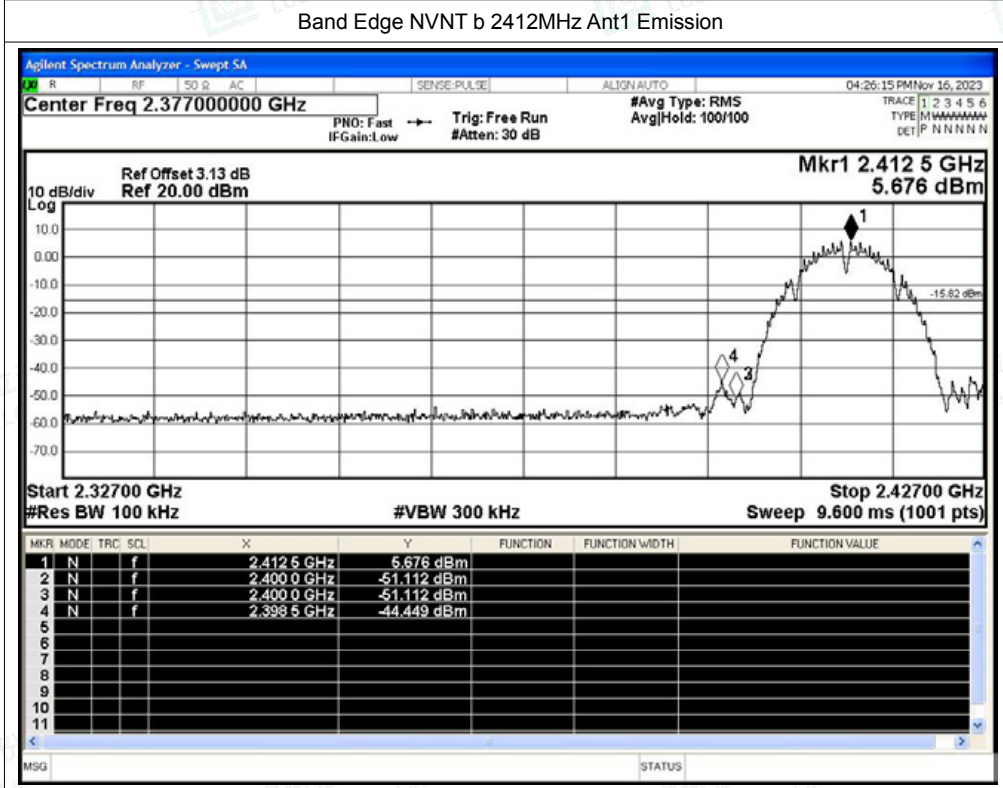
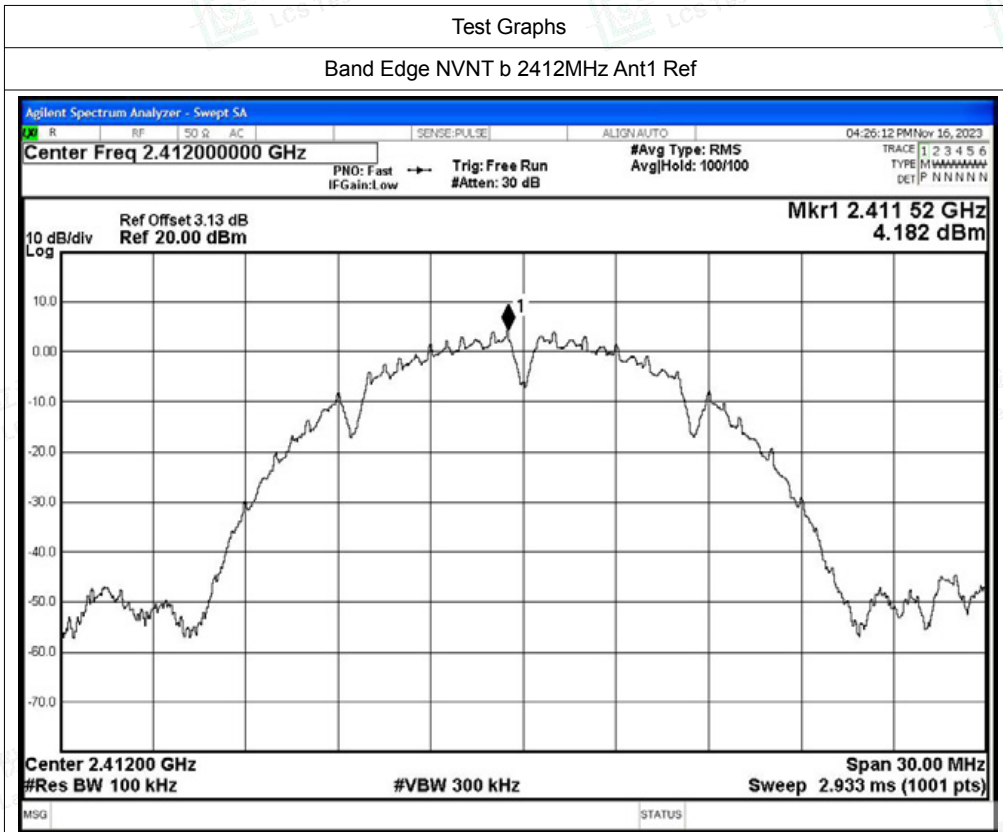
Test Result

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-48.63	-20	Pass
NVNT	b	2462	Ant1	-57.93	-20	Pass
NVNT	g	2412	Ant1	-43.46	-20	Pass
NVNT	g	2462	Ant1	-49.15	-20	Pass
NVNT	n20	2412	Ant1	-46.35	-20	Pass
NVNT	n20	2462	Ant1	-49.81	-20	Pass
NVNT	n40	2422	Ant1	-38.62	-20	Pass
NVNT	n40	2452	Ant1	-39.97	-20	Pass



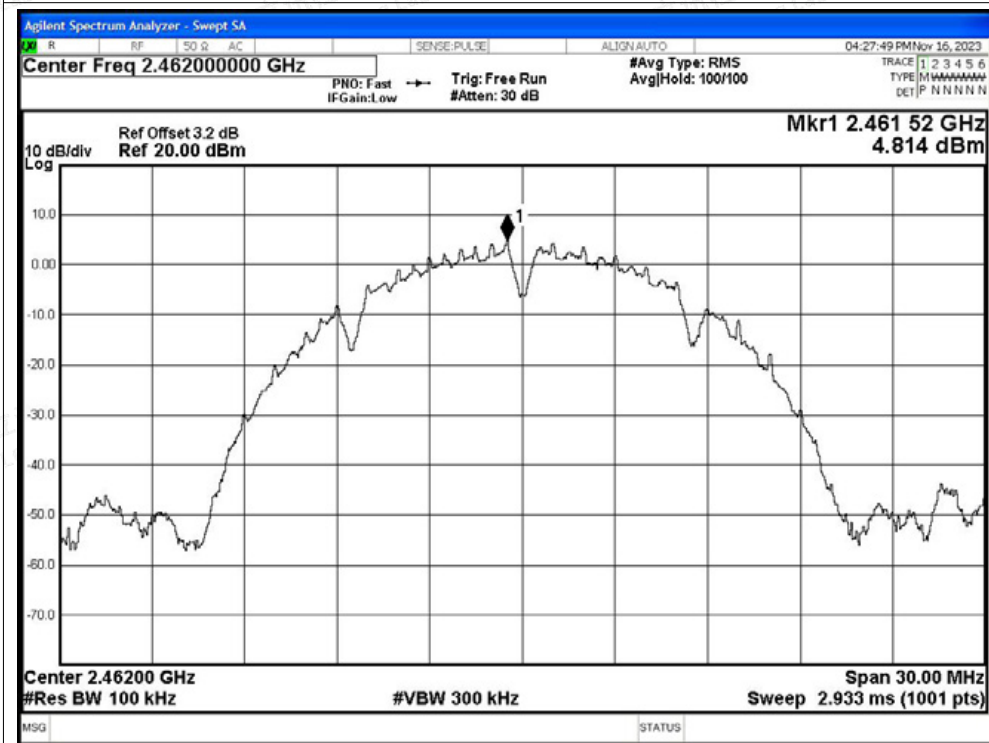


Test Graphs

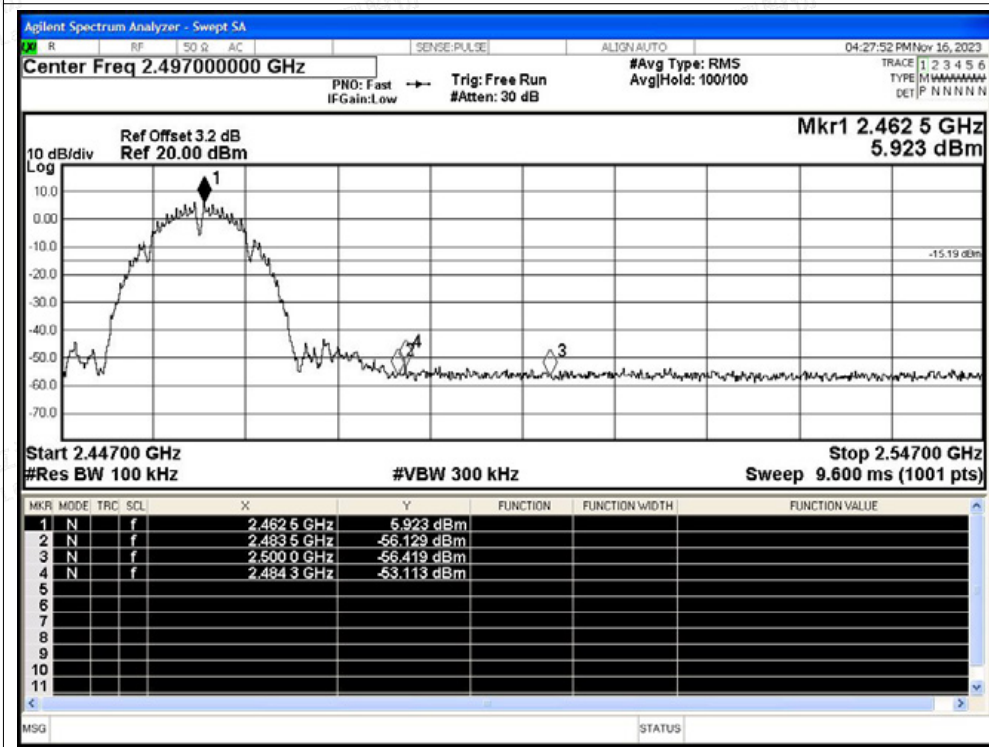




Band Edge NVNT b 2462MHz Ant1 Ref

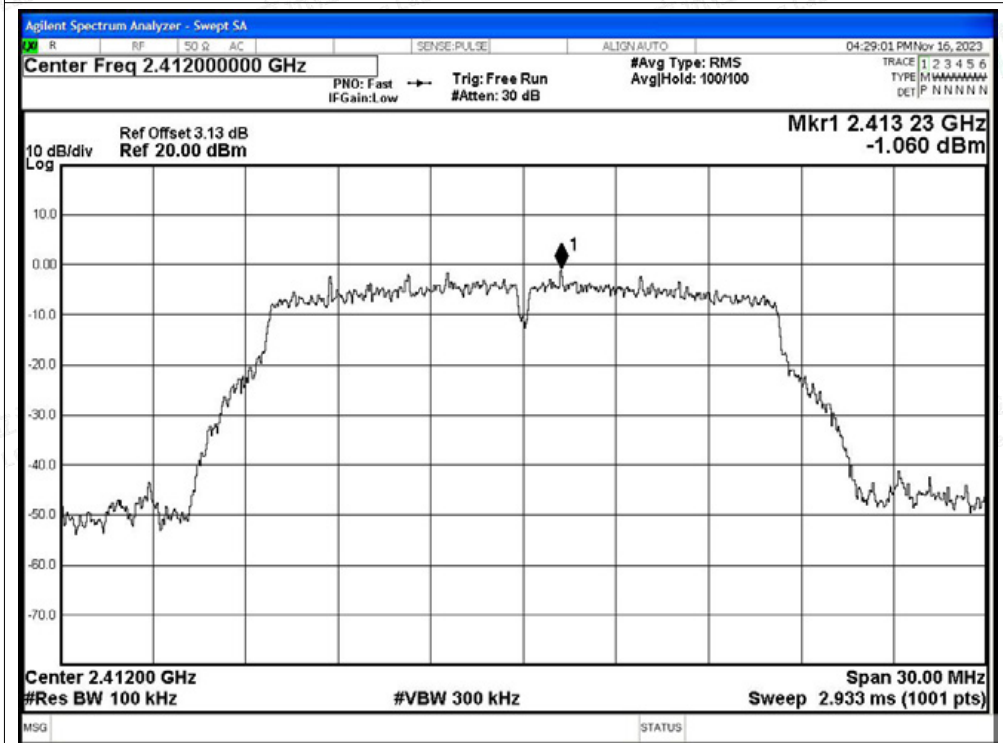


Band Edge NVNT b 2462MHz Ant1 Emission

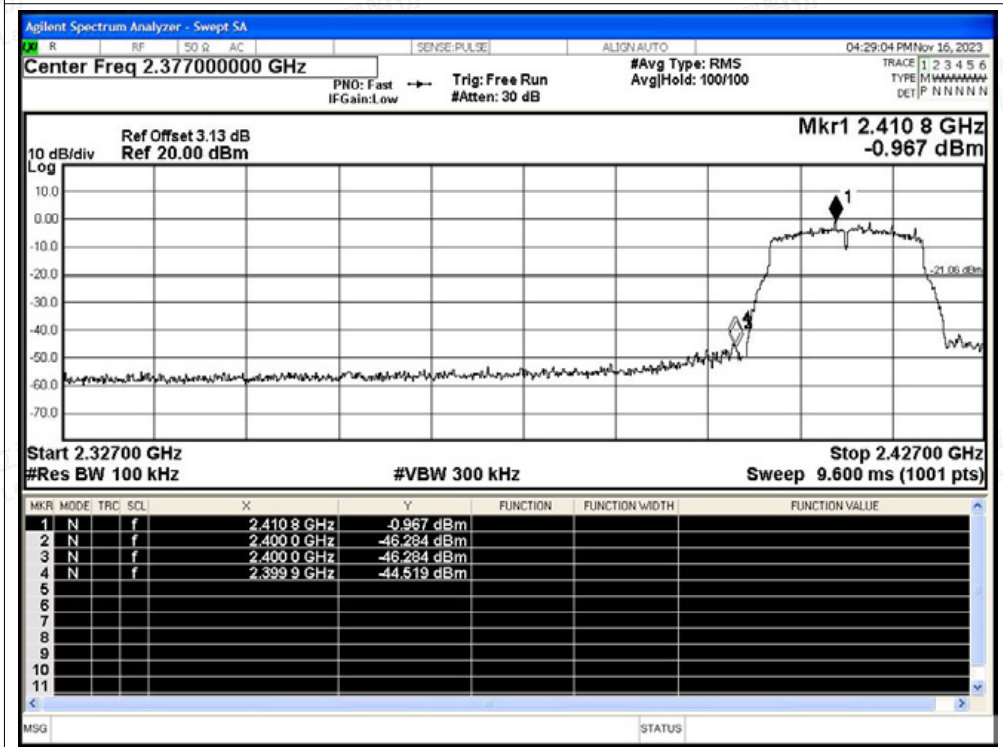




Band Edge NVNT g 2412MHz Ant1 Ref

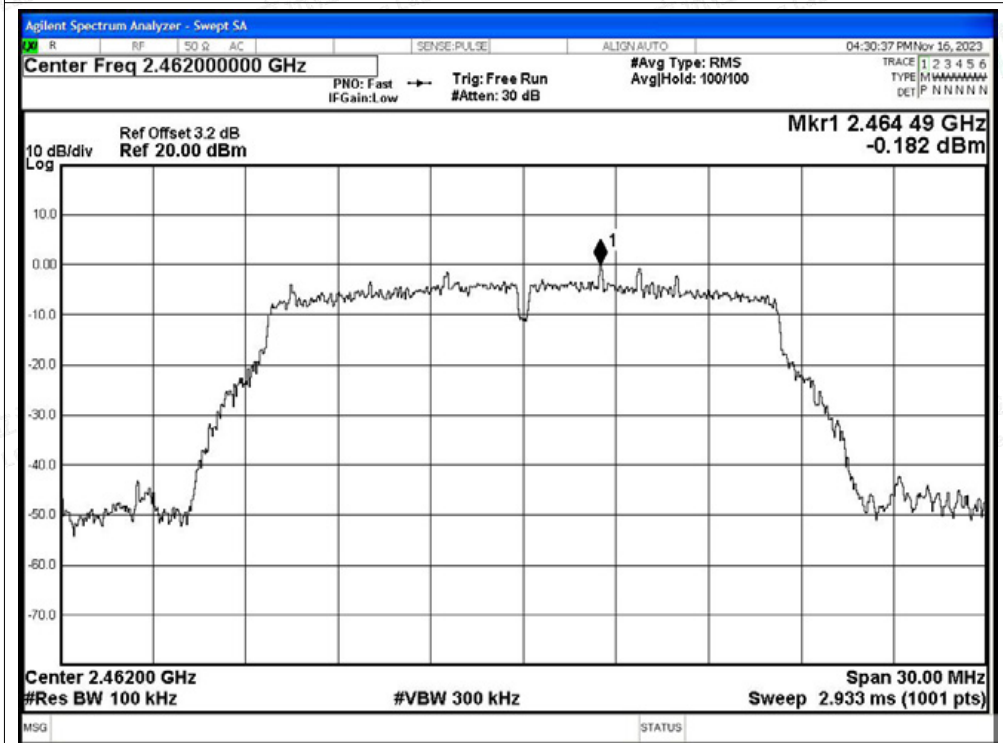


Band Edge NVNT g 2412MHz Ant1 Emission

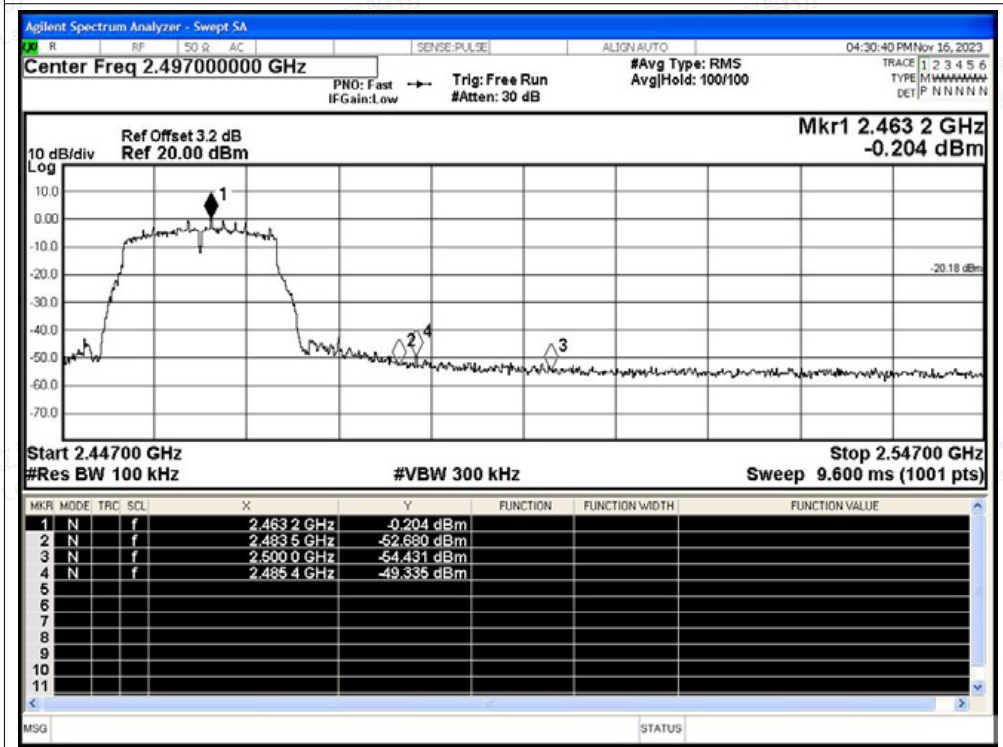




Band Edge NVNT g 2462MHz Ant1 Ref

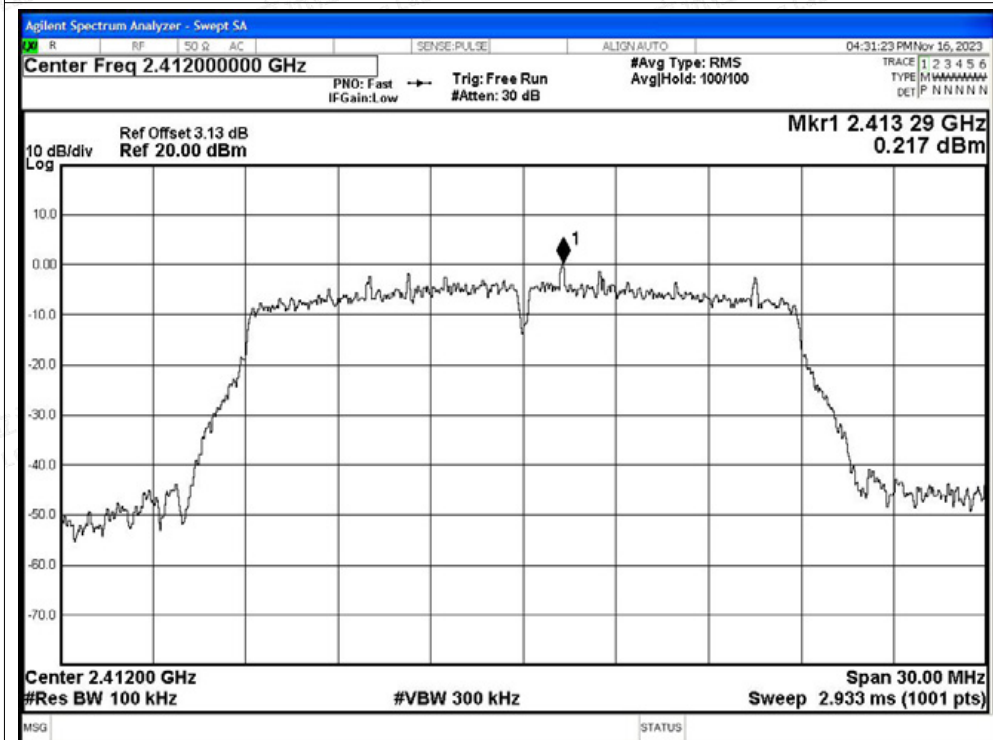


Band Edge NVNT g 2462MHz Ant1 Emission

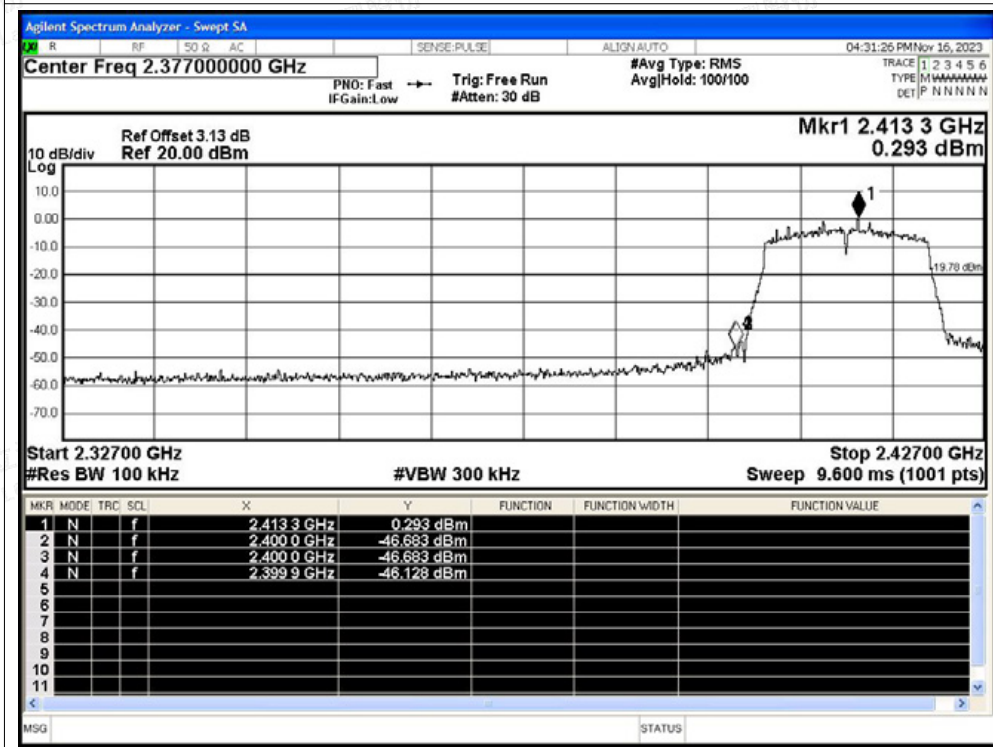




Band Edge NVNT n20 2412MHz Ant1 Ref

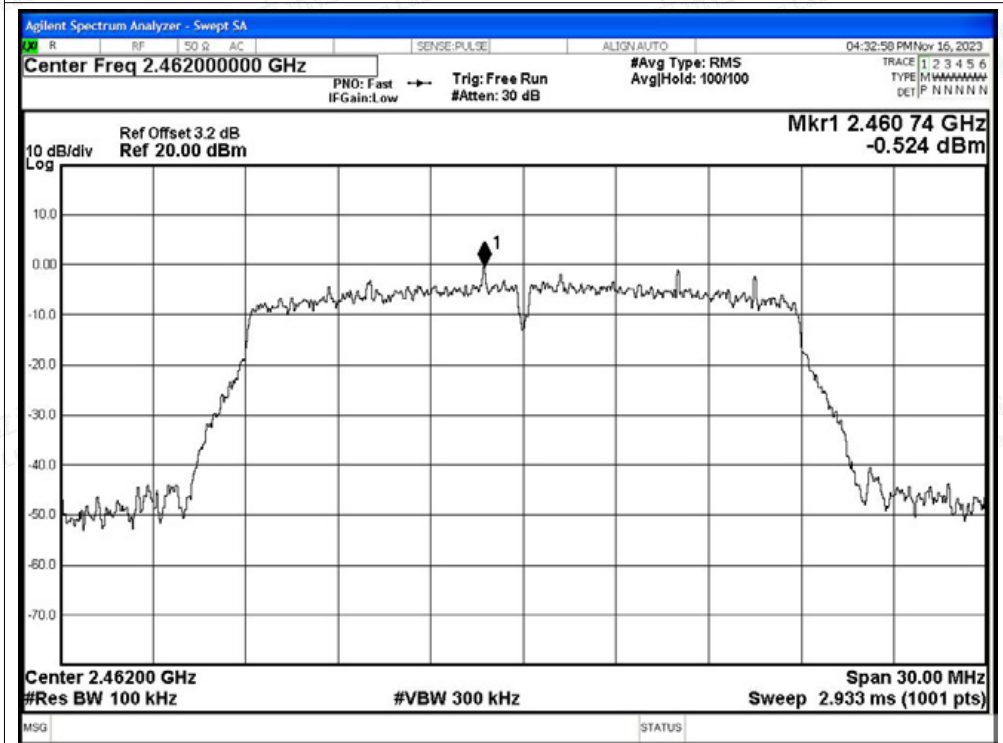


Band Edge NVNT n20 2412MHz Ant1 Emission

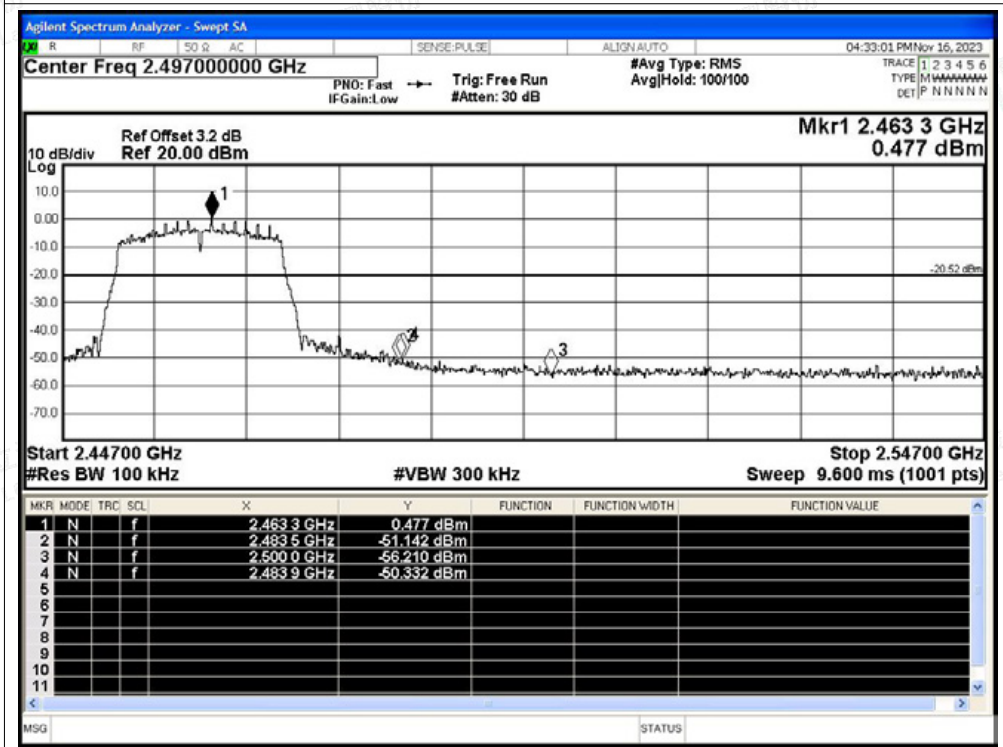




Band Edge NVNT n20 2462MHz Ant1 Ref

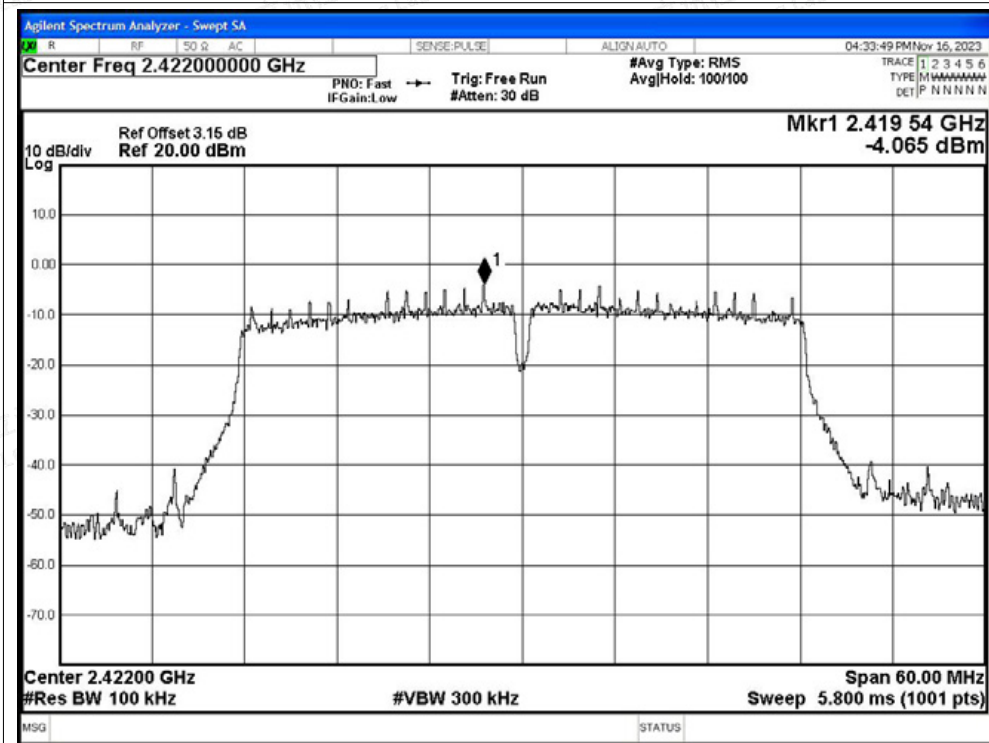


Band Edge NVNT n20 2462MHz Ant1 Emission

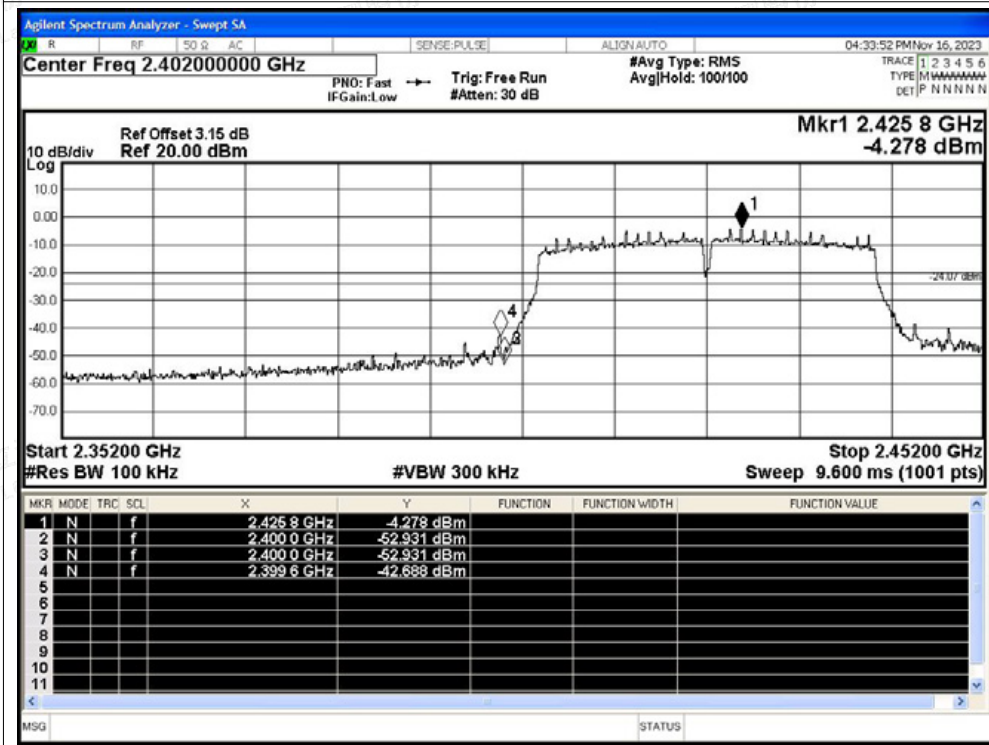




Band Edge NVNT n40 2422MHz Ant1 Ref

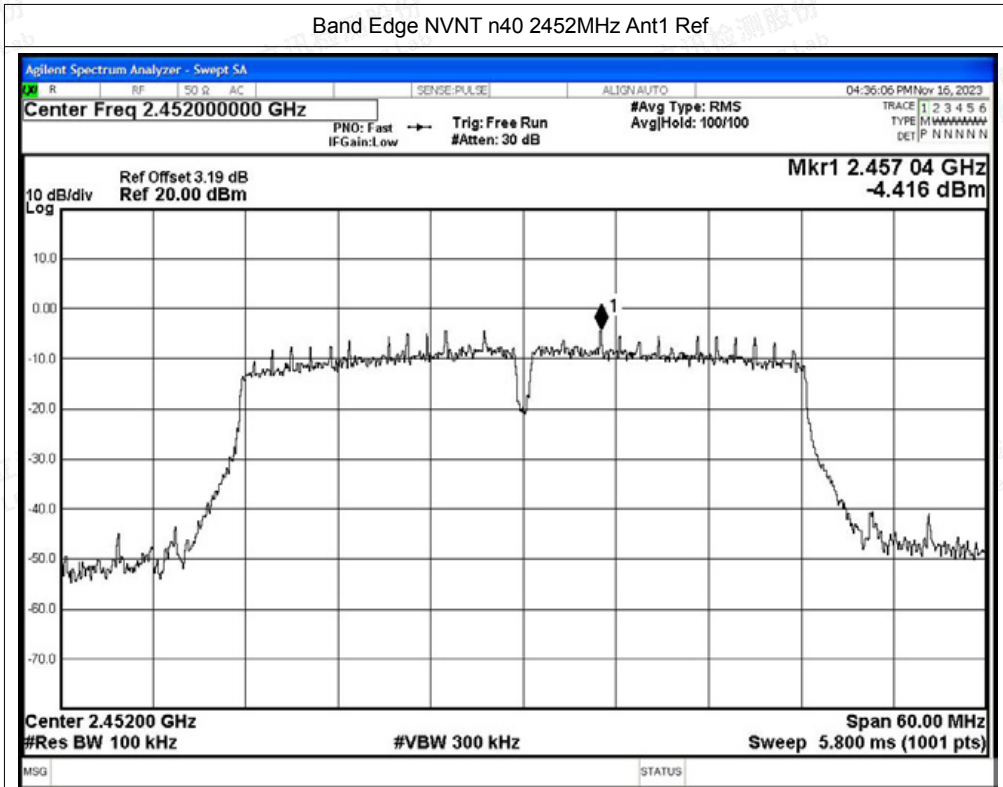


Band Edge NVNT n40 2422MHz Ant1 Emission

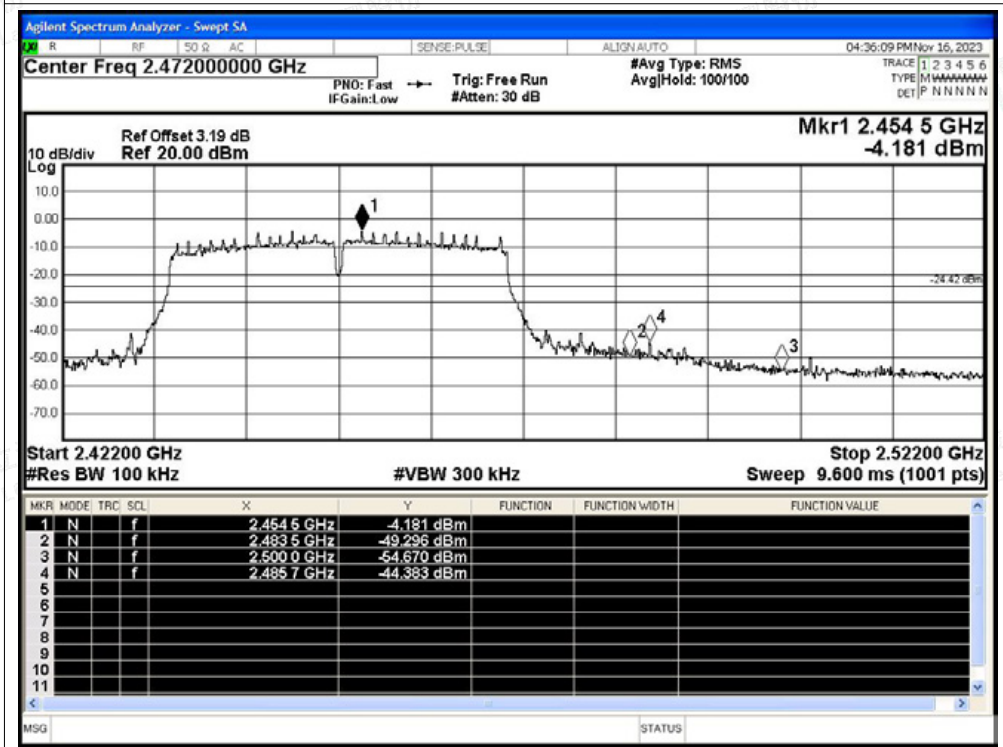




Band Edge NVNT n40 2452MHz Ant1 Ref



Band Edge NVNT n40 2452MHz Ant1 Emission





B.6 Conducted Spurious Emission

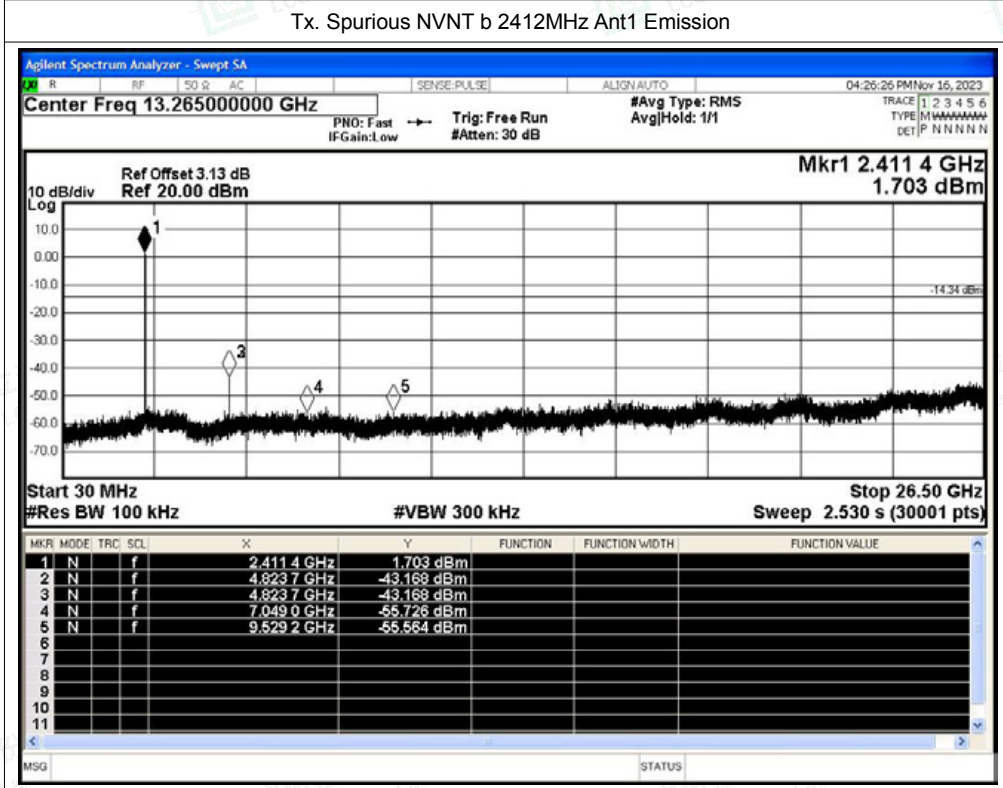
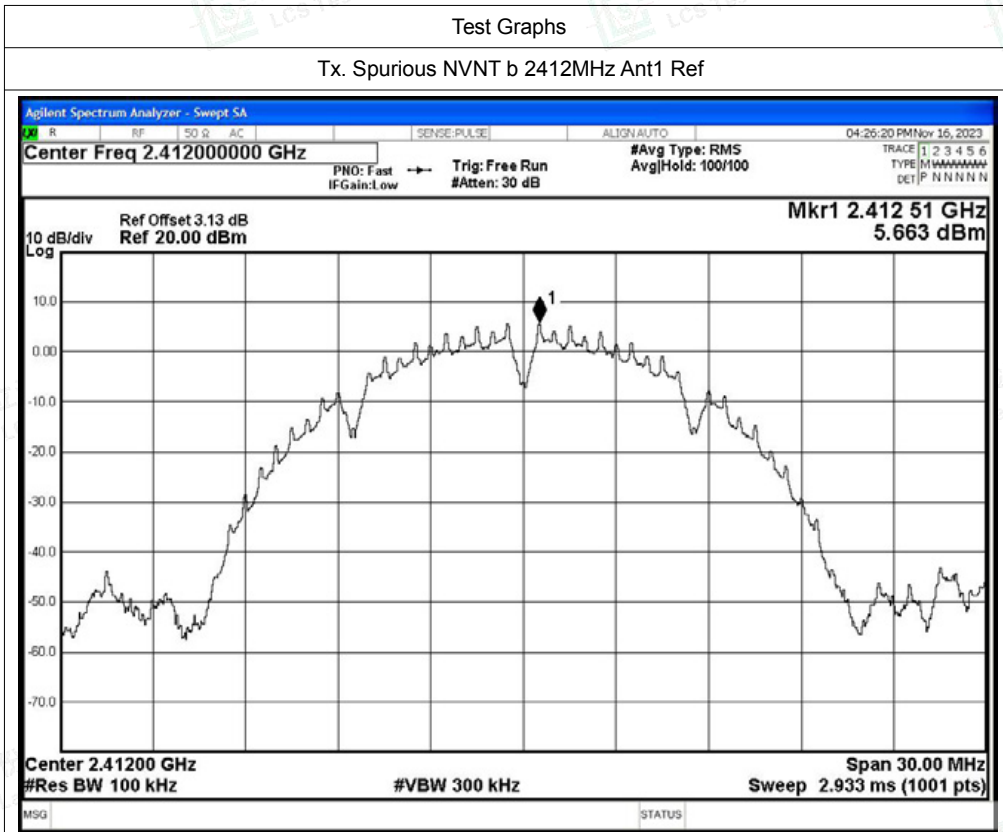
Test Result

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-48.83	-20	Pass
NVNT	b	2437	Ant1	-48.54	-20	Pass
NVNT	b	2462	Ant1	-51.41	-20	Pass
NVNT	g	2412	Ant1	-44.56	-20	Pass
NVNT	g	2437	Ant1	-44.49	-20	Pass
NVNT	g	2462	Ant1	-45.19	-20	Pass
NVNT	n20	2412	Ant1	-45.1	-20	Pass
NVNT	n20	2437	Ant1	-44.43	-20	Pass
NVNT	n20	2462	Ant1	-44.65	-20	Pass
NVNT	n40	2422	Ant1	-40.84	-20	Pass
NVNT	n40	2437	Ant1	-41.6	-20	Pass
NVNT	n40	2452	Ant1	-40.89	-20	Pass



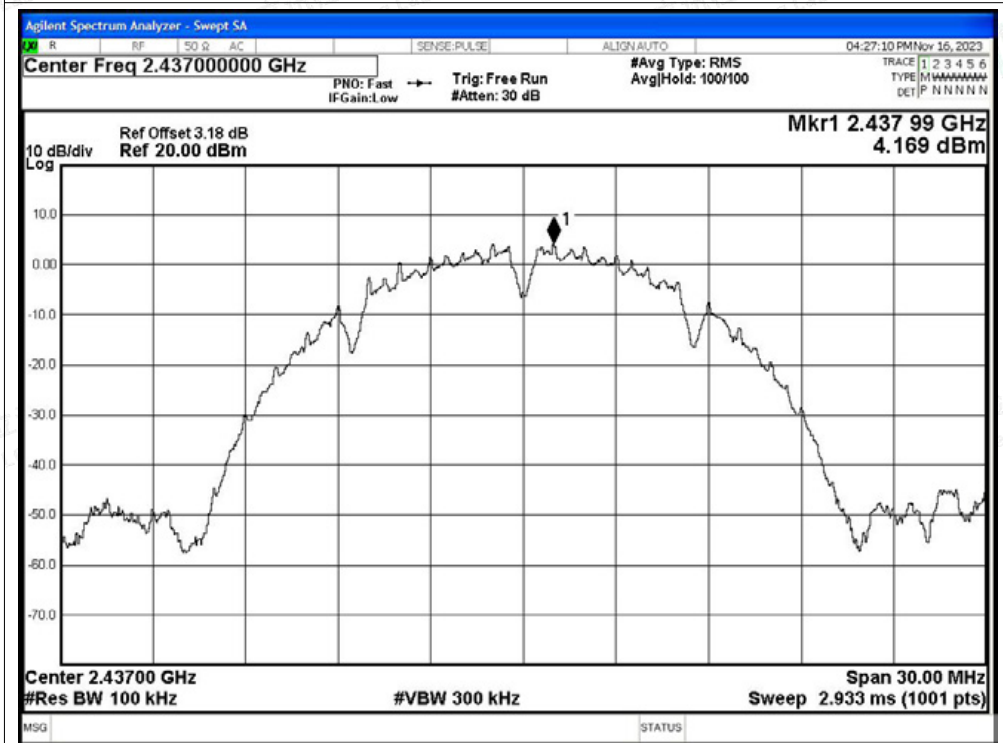


Test Graphs

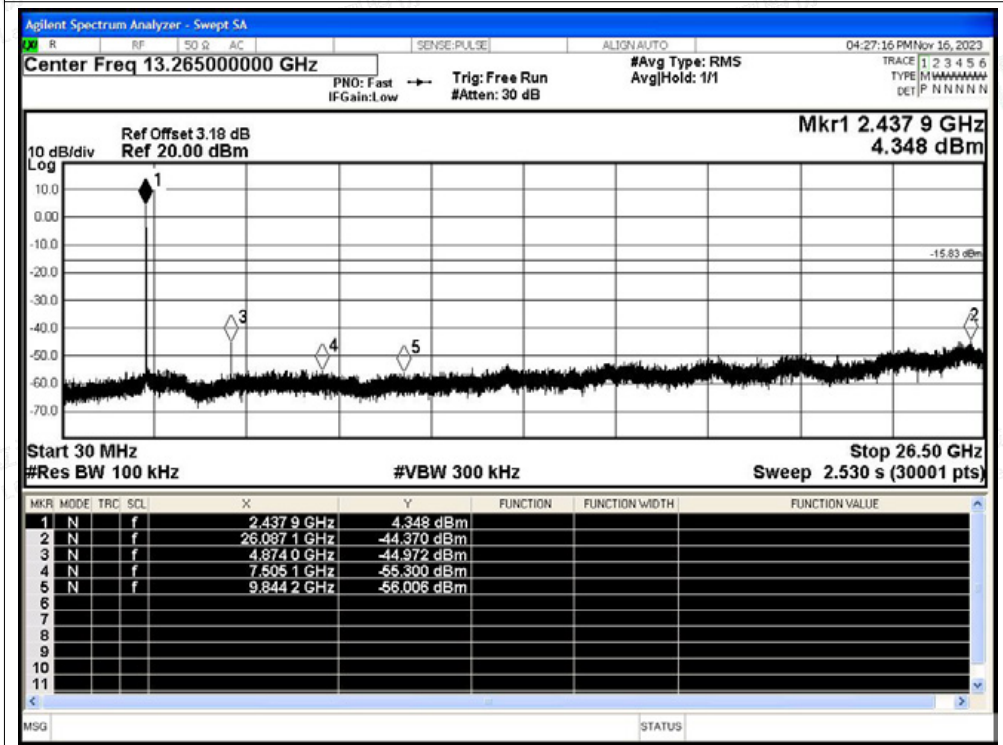




Tx. Spurious NVNT b 2437MHz Ant1 Ref

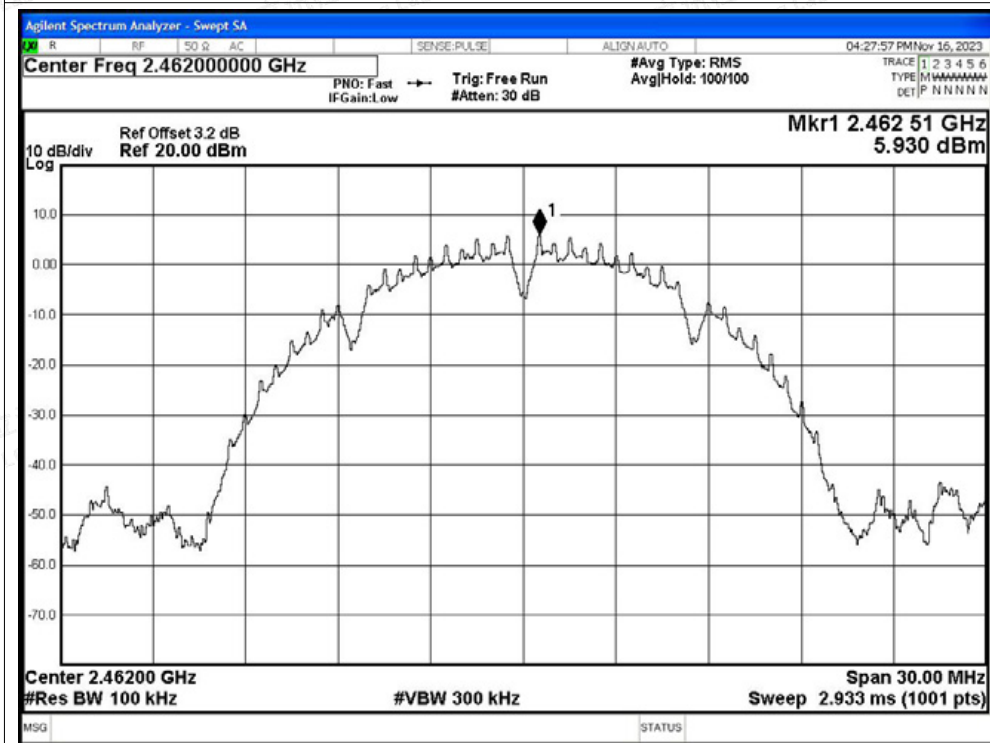


Tx. Spurious NVNT b 2437MHz Ant1 Emission

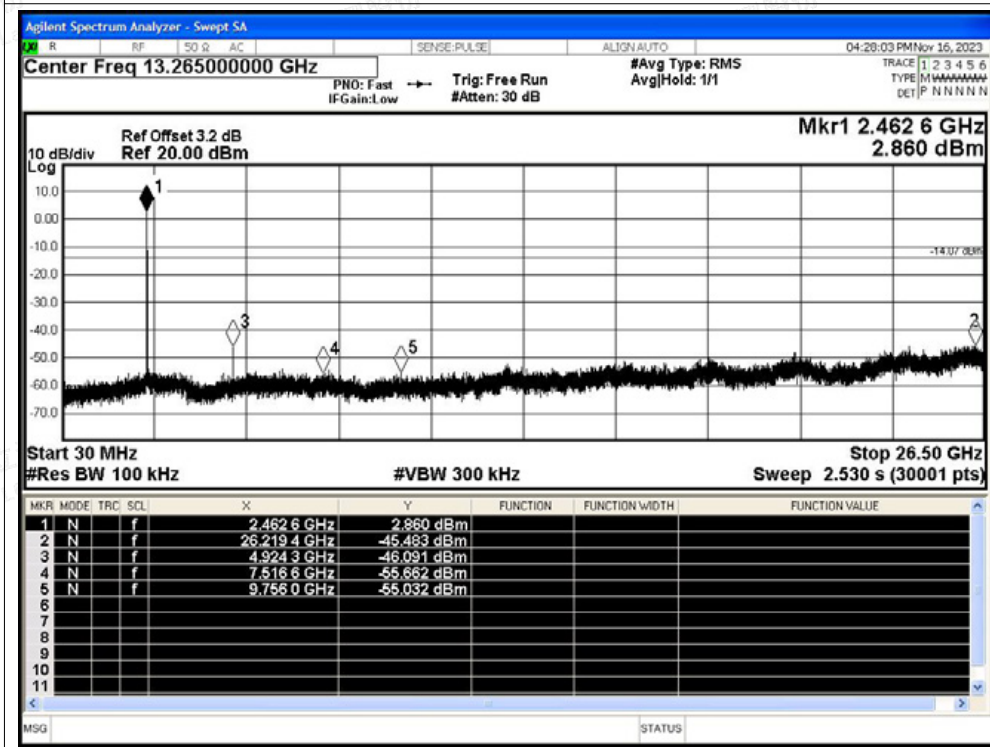




Tx. Spurious NVNT b 2462MHz Ant1 Ref

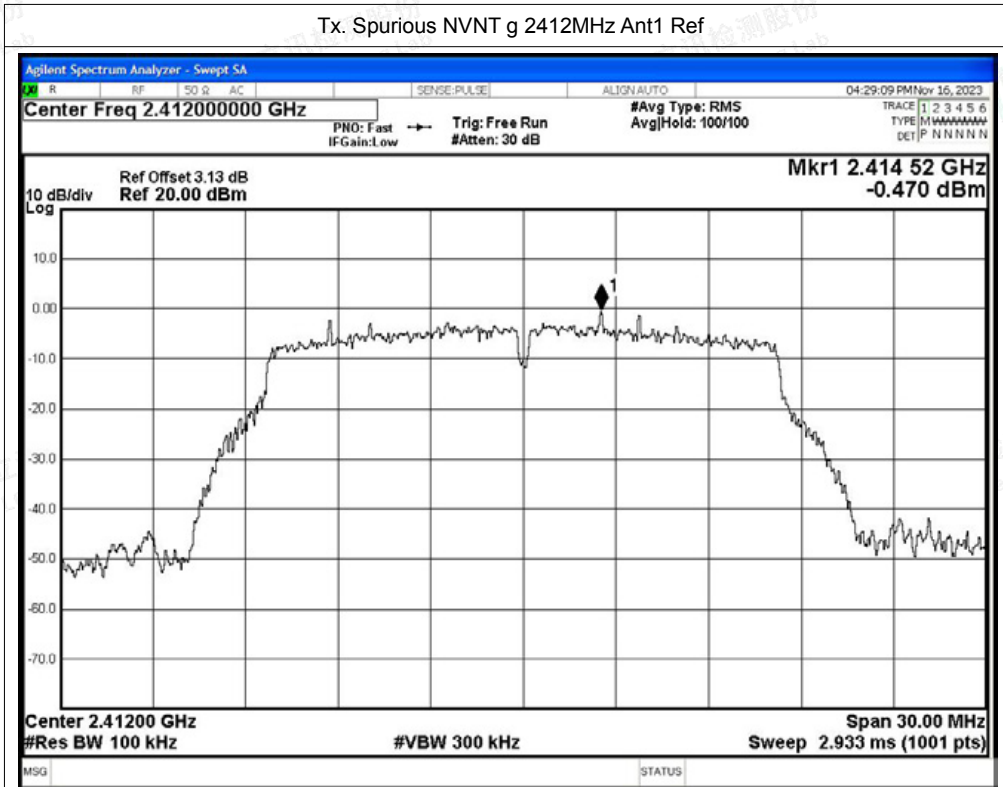


Tx. Spurious NVNT b 2462MHz Ant1 Emission

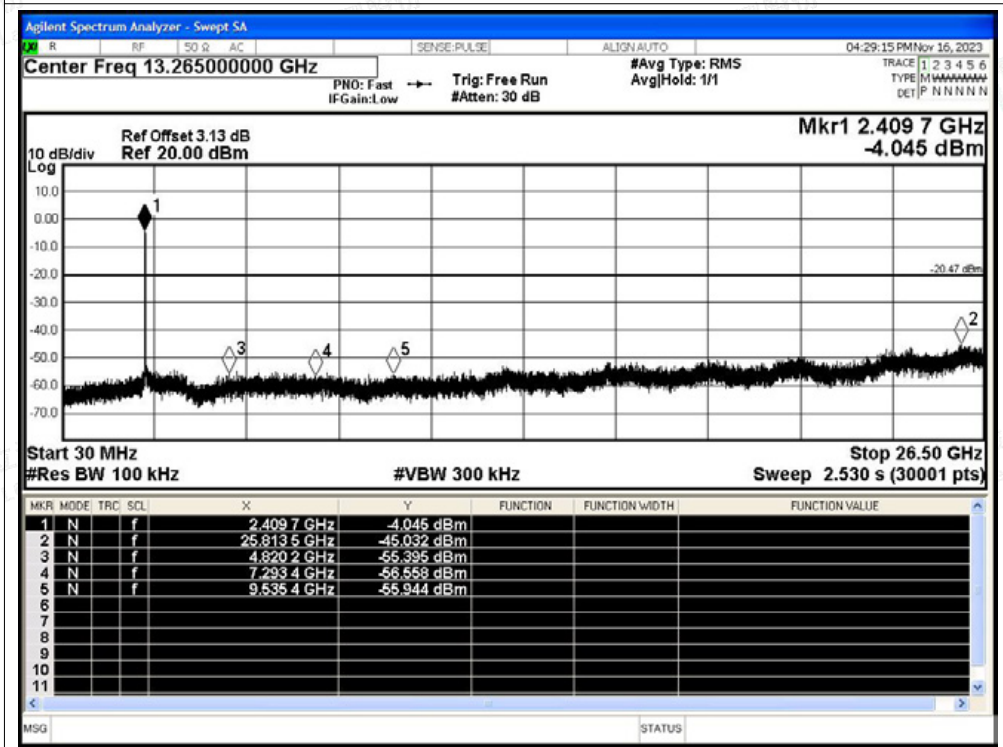




Tx. Spurious NVNT g 2412MHz Ant1 Ref

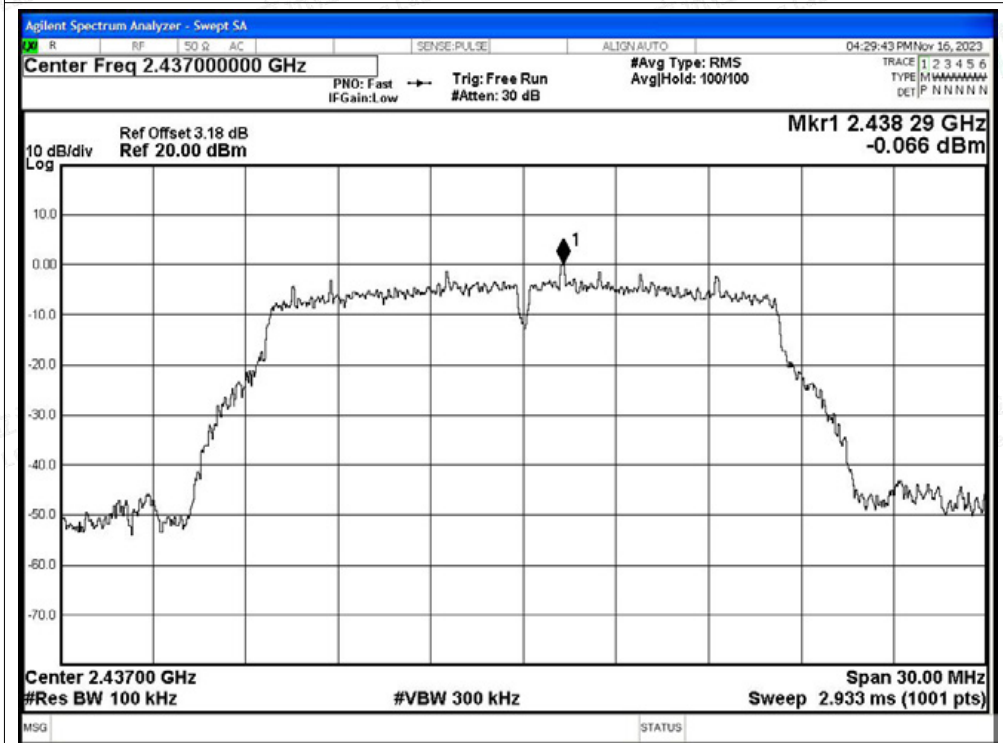


Tx. Spurious NVNT g 2412MHz Ant1 Emission

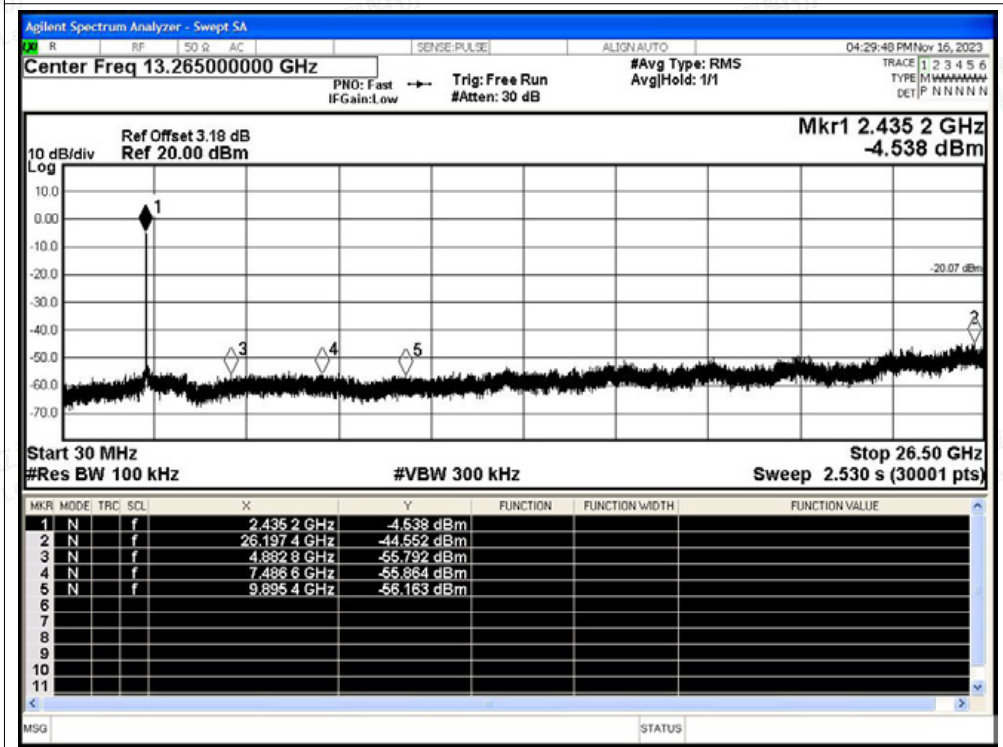




Tx. Spurious NVNT g 2437MHz Ant1 Ref

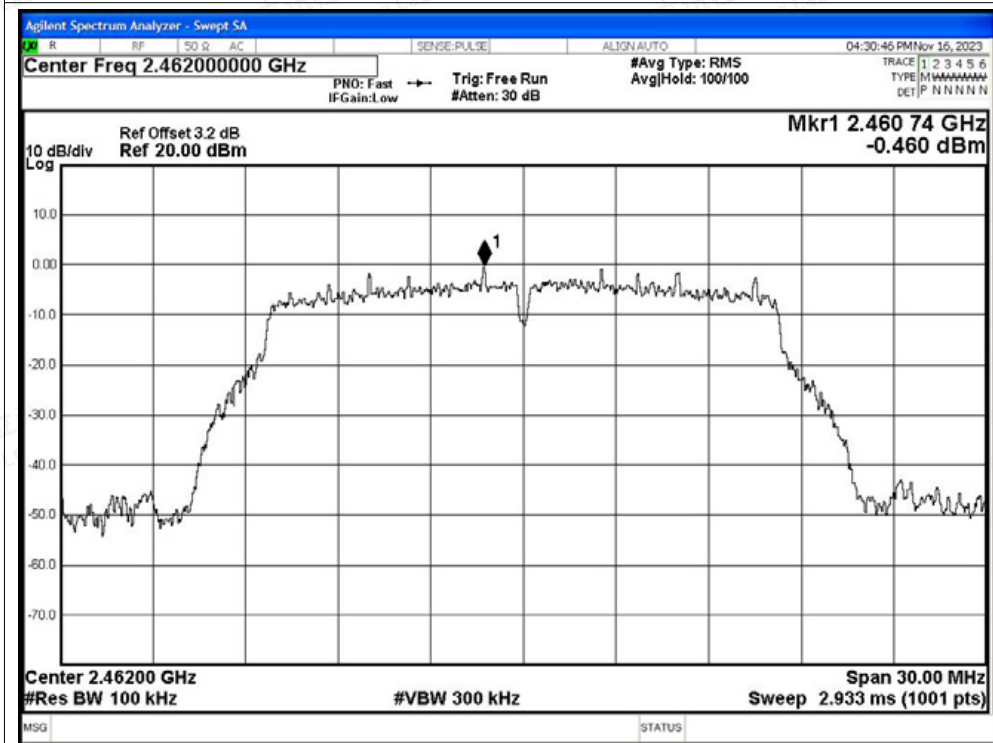


Tx. Spurious NVNT g 2437MHz Ant1 Emission

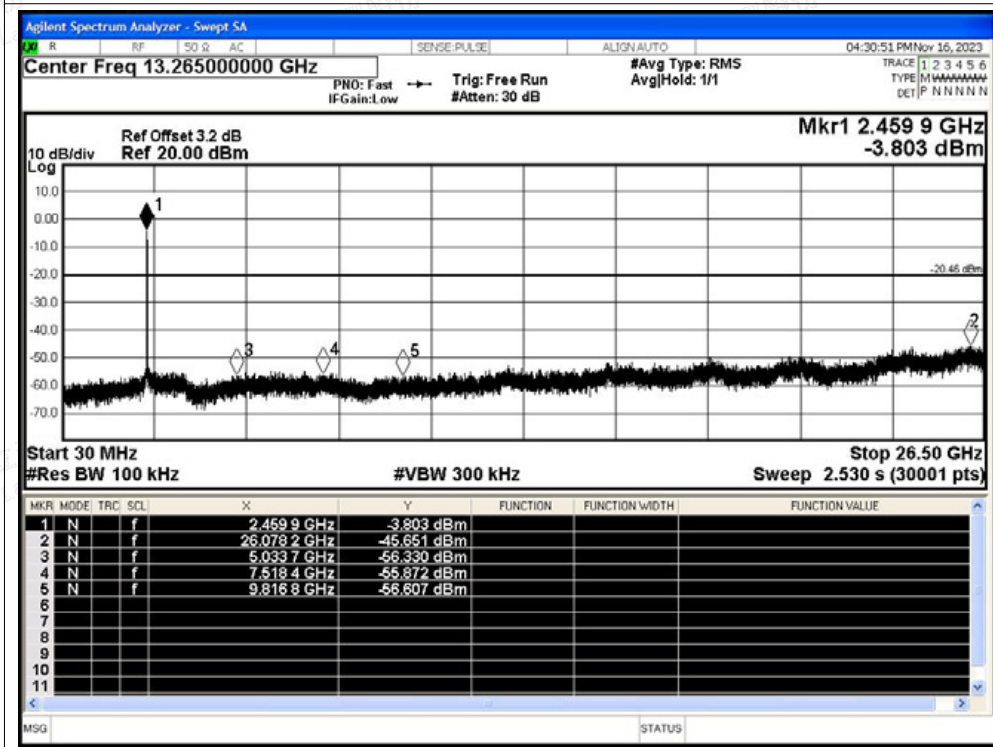




Tx. Spurious NVNT g 2462MHz Ant1 Ref

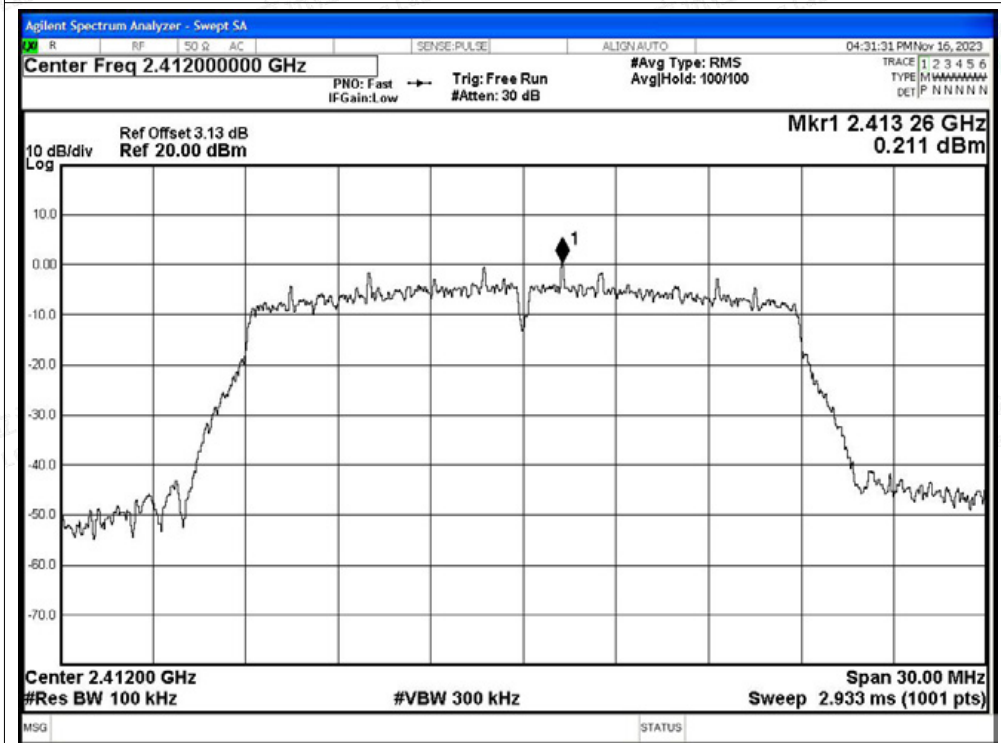


Tx. Spurious NVNT g 2462MHz Ant1 Emission





Tx. Spurious NVNT n20 2412MHz Ant1 Ref



Tx. Spurious NVNT n20 2412MHz Ant1 Emission

