Appendix B

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Handheld game console

Test Model: Q9

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Ling Zhu

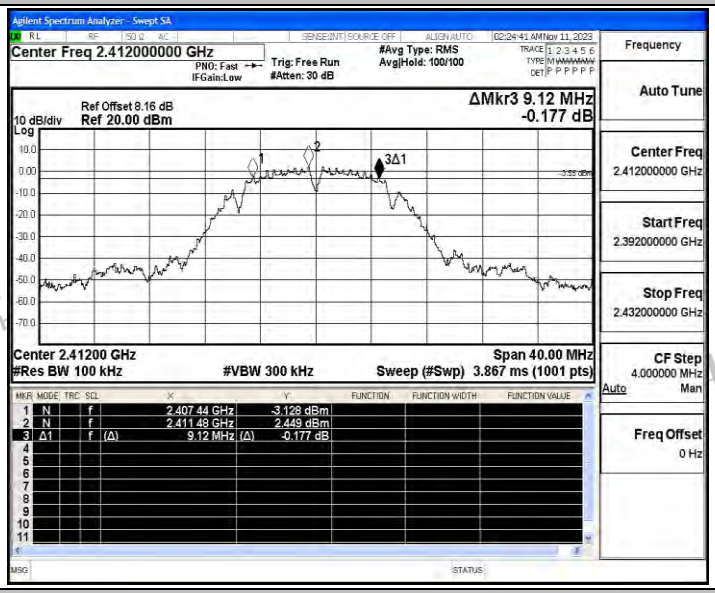
B.1 DTS Bandwidth

Test Result

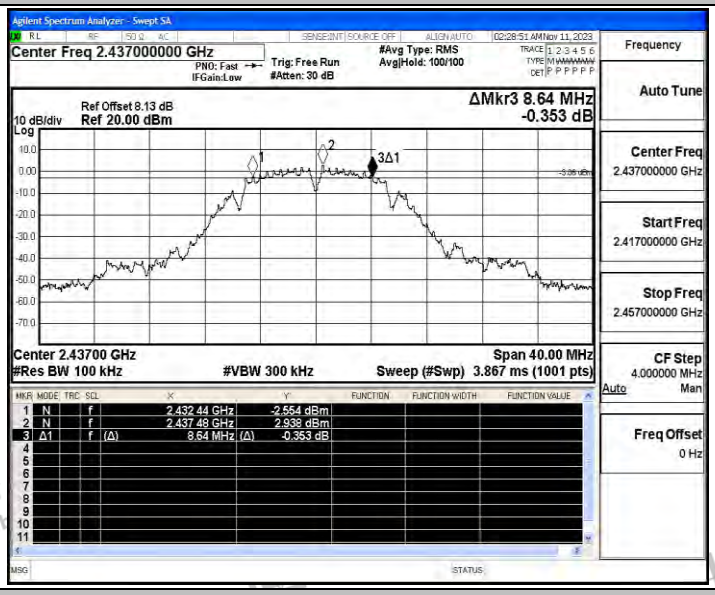
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant0	2412	9.120	2407.440	2416.560	0.5	PASS
		2437	8.640	2432.440	2441.080	0.5	PASS
		2462	9.040	2457.480	2466.520	0.5	PASS
11G	Ant0	2412	15.960	2403.880	2419.840	0.5	PASS
		2437	14.760	2429.480	2444.240	0.5	PASS
		2462	16.040	2454.080	2470.120	0.5	PASS
11N20SISO	Ant0	2412	15.440	2404.400	2419.840	0.5	PASS
		2437	13.880	2429.440	2443.320	0.5	PASS
		2462	15.120	2454.440	2469.560	0.5	PASS
11N40SISO	Ant0	2422	35.120	2404.480	2439.600	0.5	PASS
		2437	35.840	2419.080	2454.920	0.5	PASS
		2452	35.760	2434.160	2469.920	0.5	PASS

Test Graphs

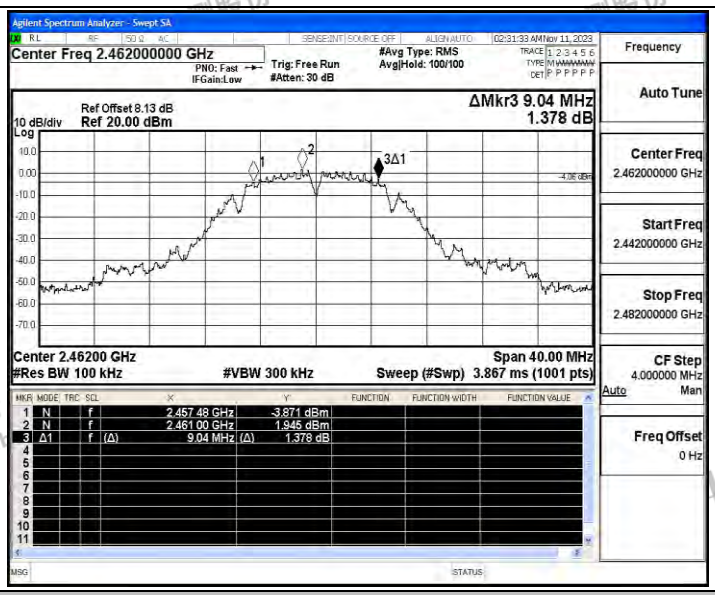
11B_Ant0_2412



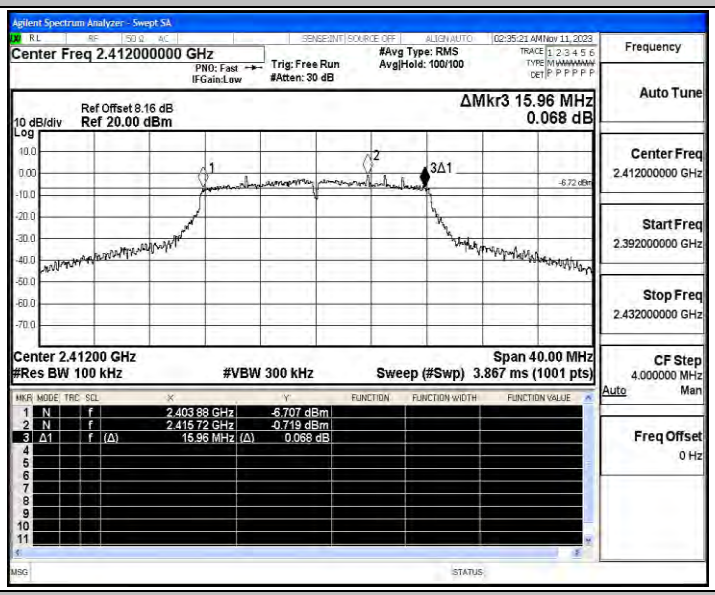
11B_Ant0_2437



11B_Ant0_2462



11G_Ant0_2412



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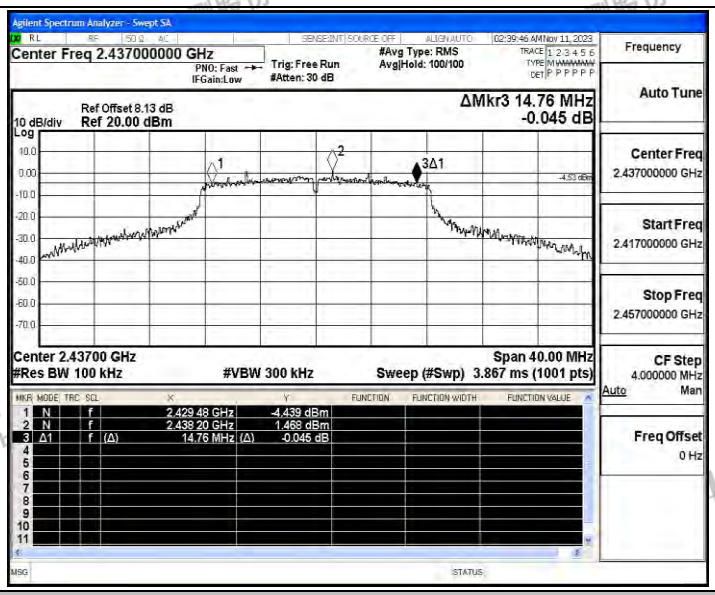

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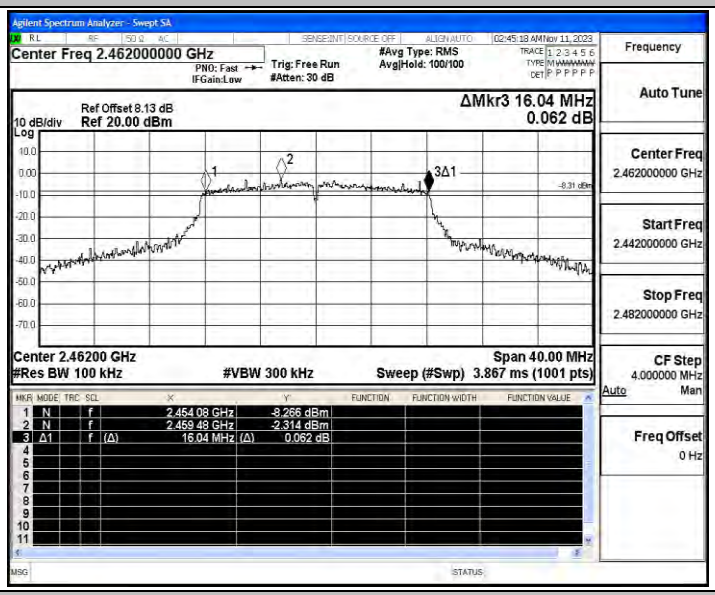
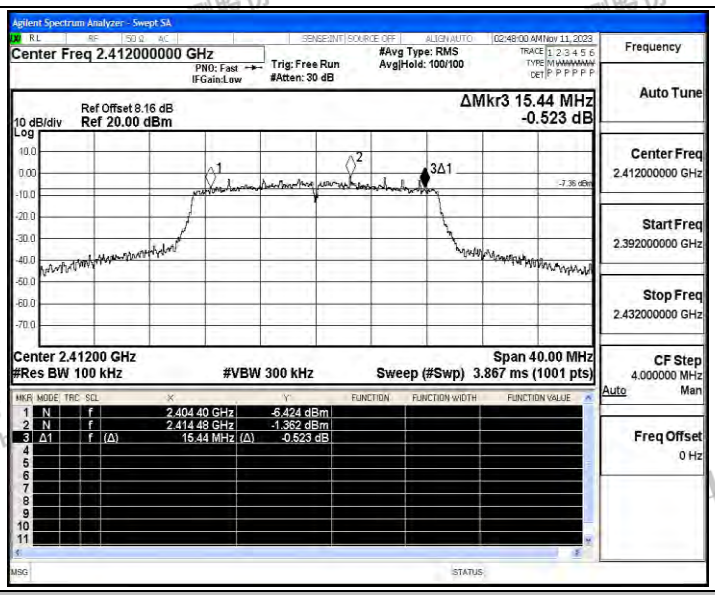
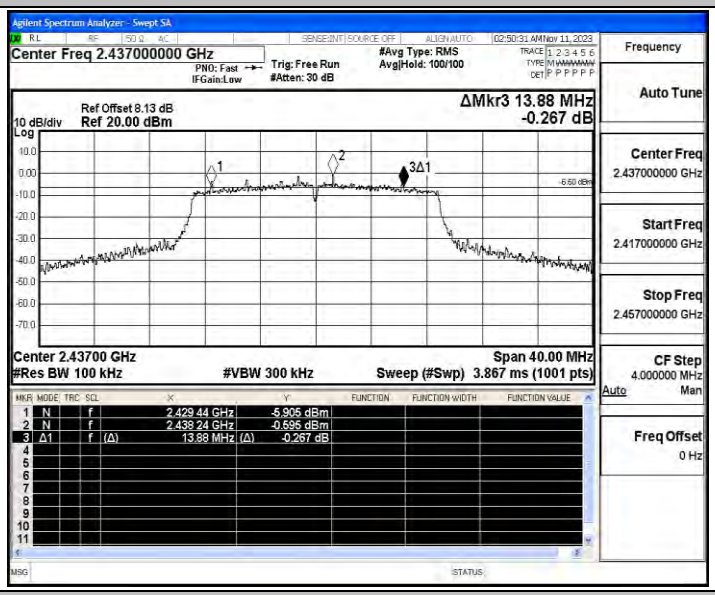


11N20SISO_Ant0_2412



11N20SISO_Ant0_2437



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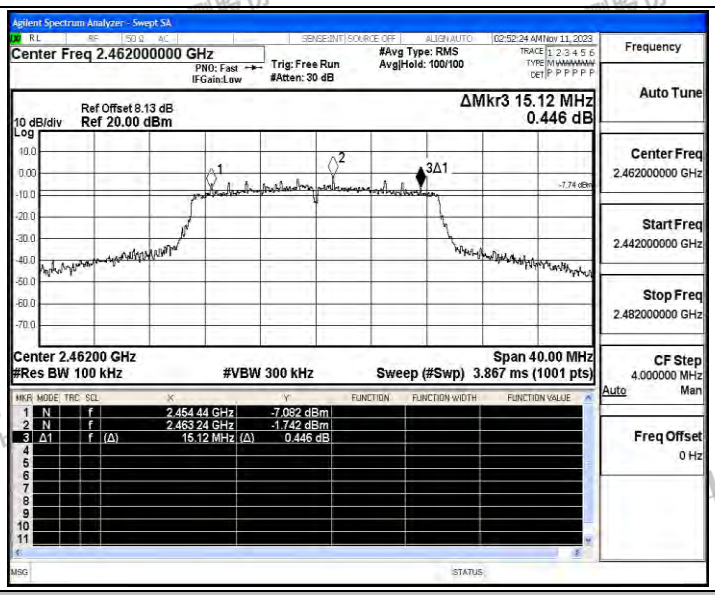
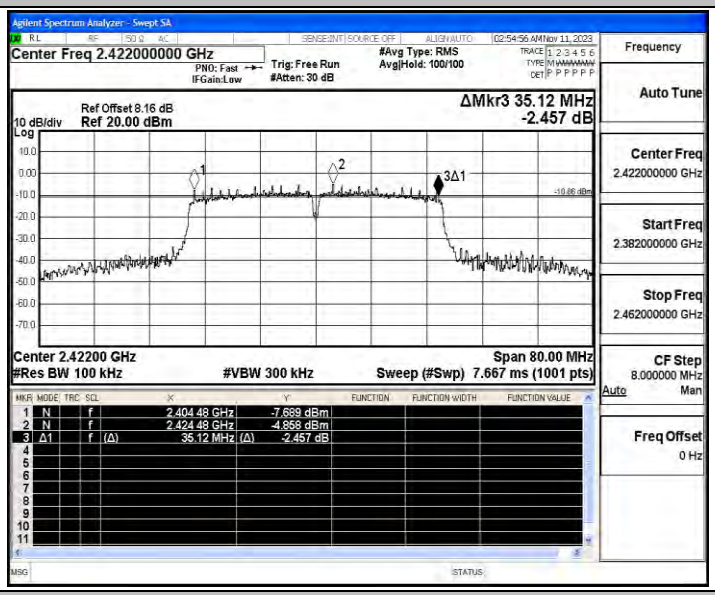
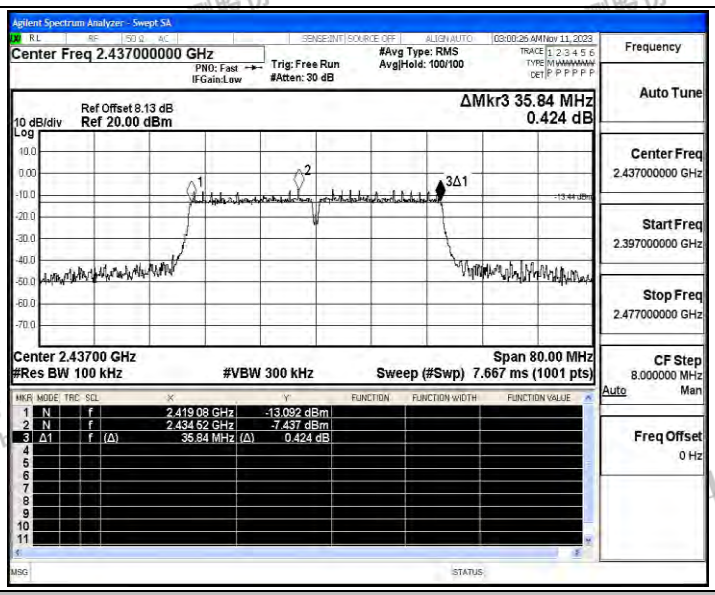


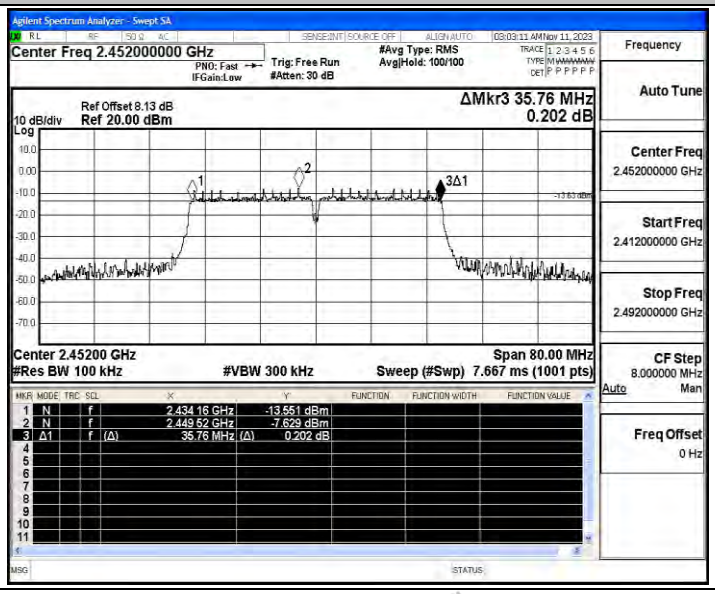
11N40SISO_Ant0_2422



11N40SISO_Ant0_2437



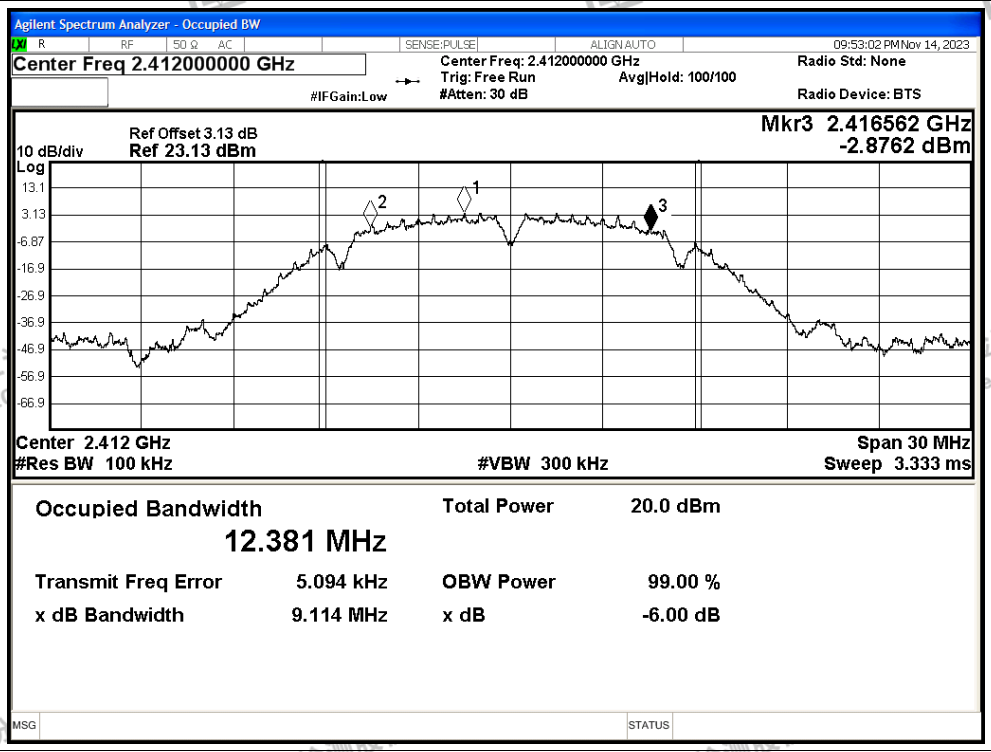
11N40SISO_Ant0_2452



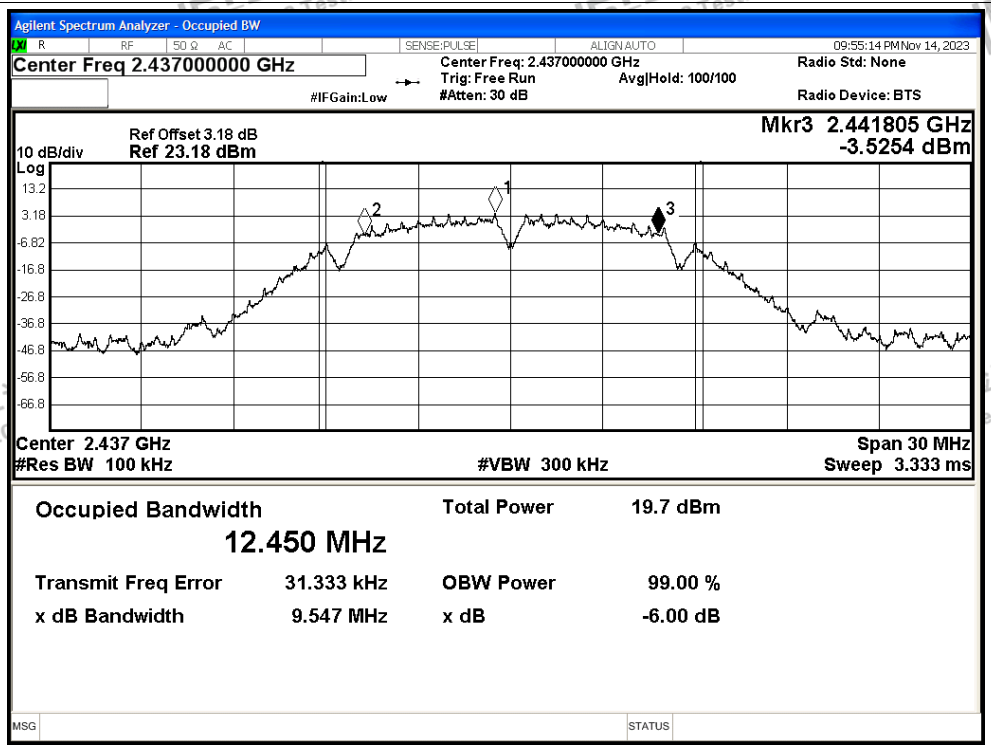
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.114	>=0.5	Pass
NVNT	b	2437	Ant1	9.547	>=0.5	Pass
NVNT	b	2462	Ant1	9.037	>=0.5	Pass
NVNT	g	2412	Ant1	16.349	>=0.5	Pass
NVNT	g	2437	Ant1	16.319	>=0.5	Pass
NVNT	g	2462	Ant1	16.348	>=0.5	Pass
NVNT	n20	2412	Ant1	17.598	>=0.5	Pass
NVNT	n20	2437	Ant1	17.569	>=0.5	Pass
NVNT	n20	2462	Ant1	17.609	>=0.5	Pass
NVNT	n40	2422	Ant1	36.036	>=0.5	Pass
NVNT	n40	2437	Ant1	35.473	>=0.5	Pass
NVNT	n40	2452	Ant1	35.662	>=0.5	Pass

Test Graphs

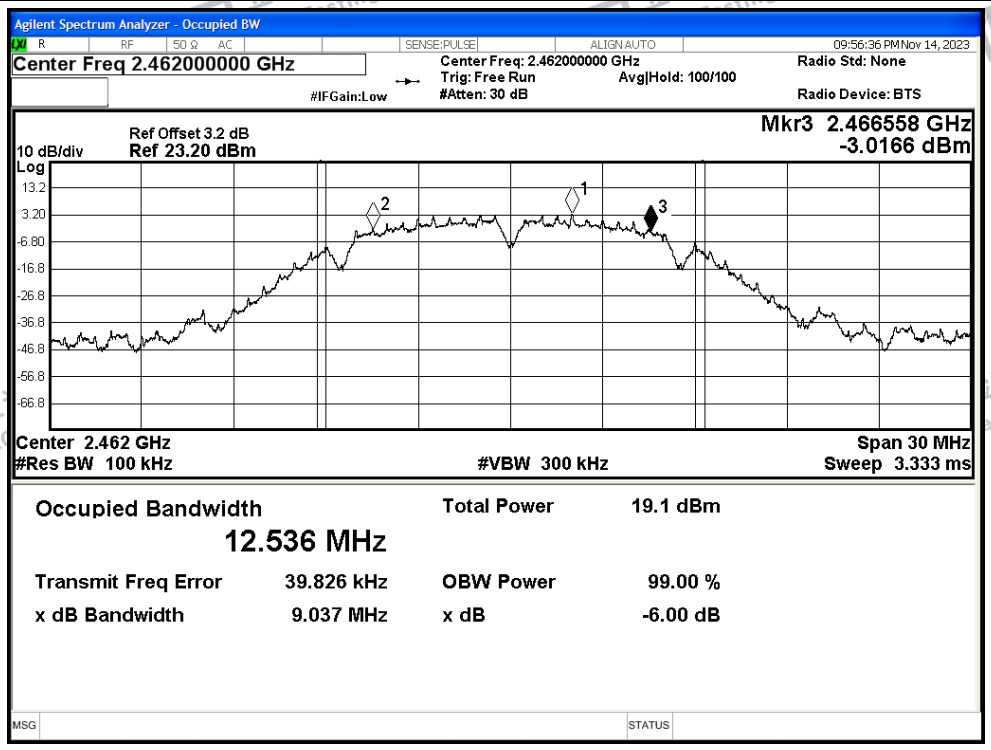
-6dB Bandwidth NVNT b 2412MHz Ant1



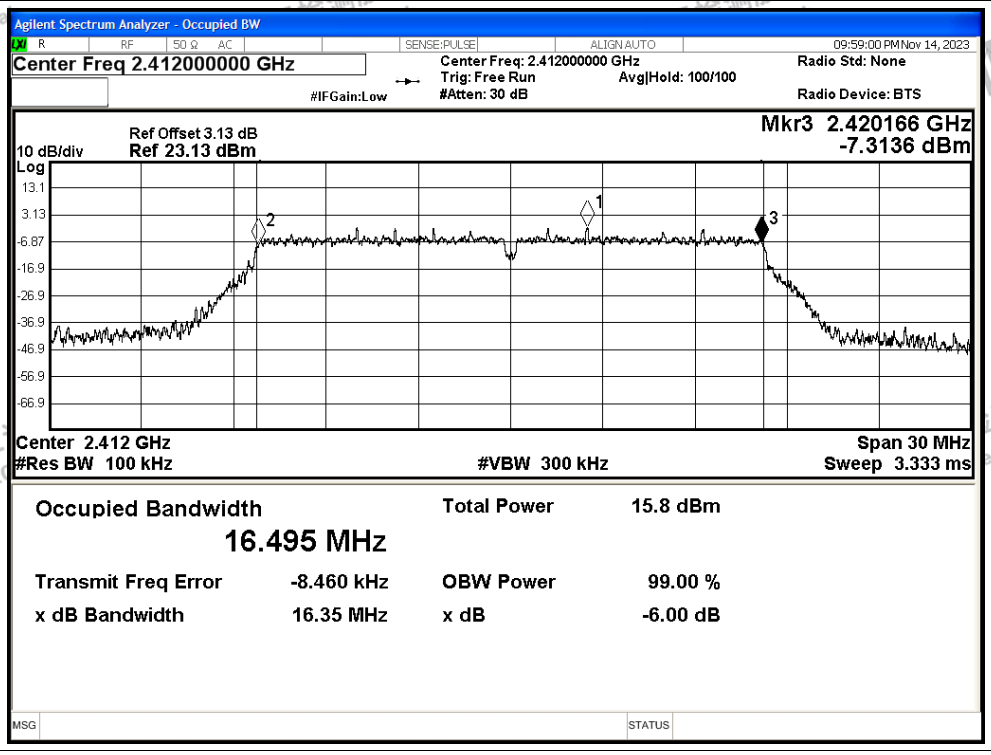
-6dB Bandwidth NVNT b 2437MHz Ant1



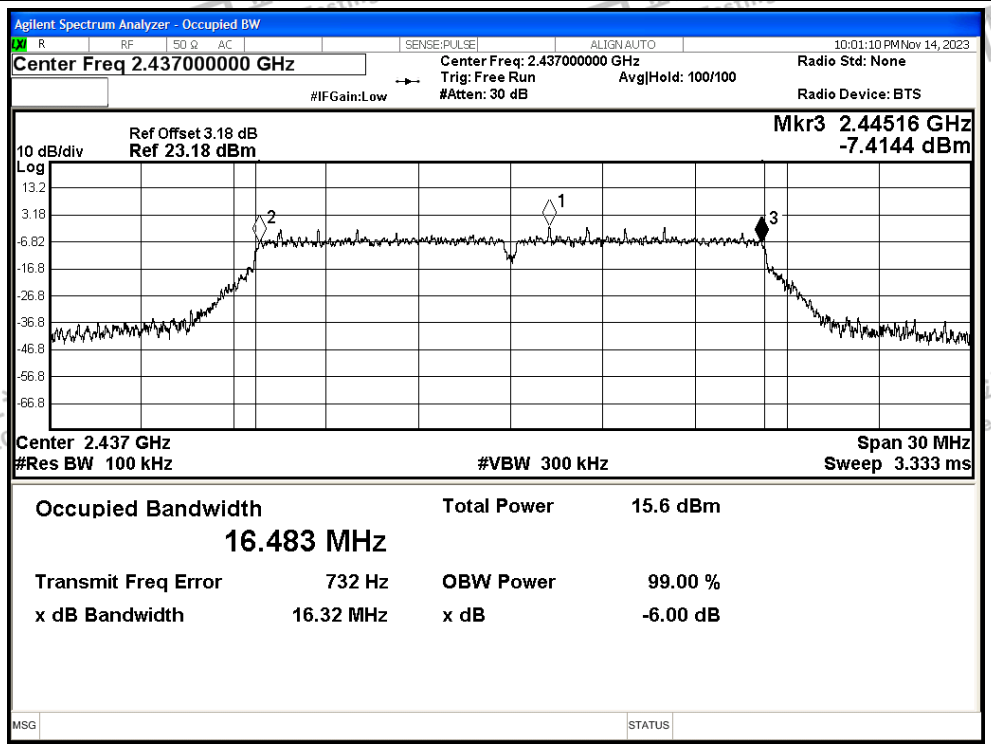
-6dB Bandwidth NVNT b 2462MHz Ant1



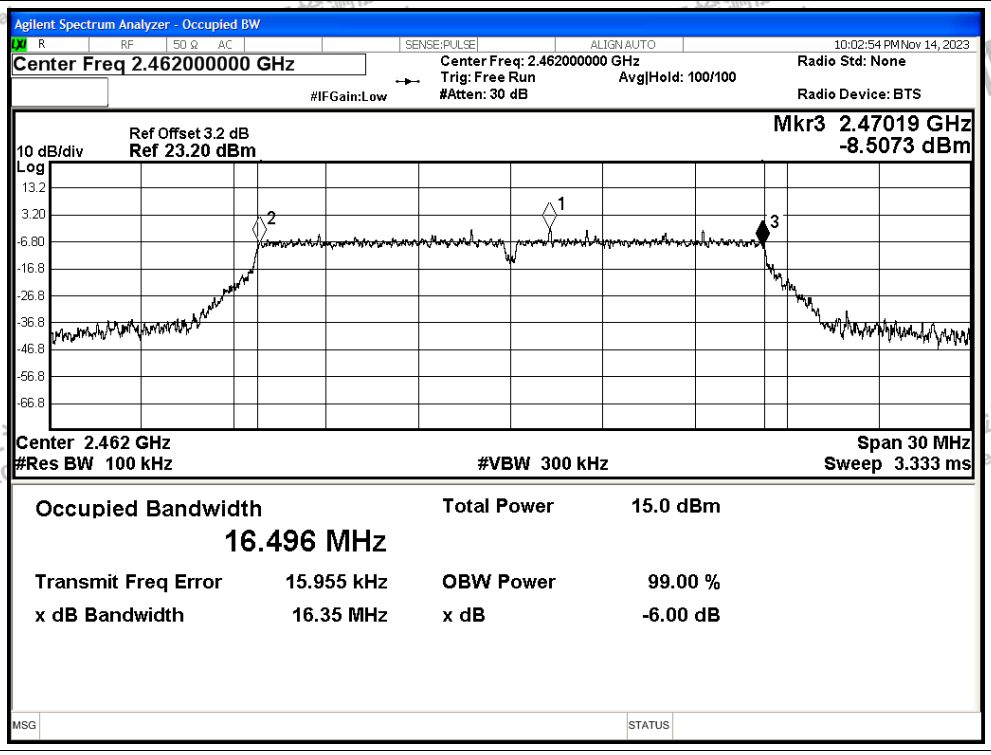
-6dB Bandwidth NVNT g 2412MHz Ant1



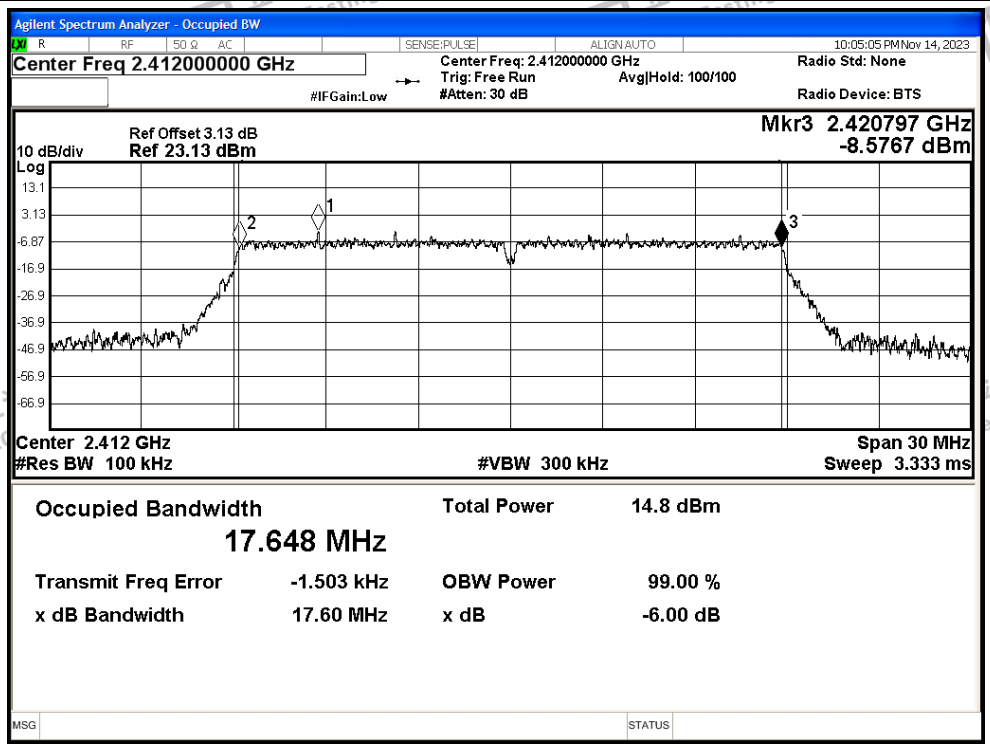
-6dB Bandwidth NVNT g 2437MHz Ant1



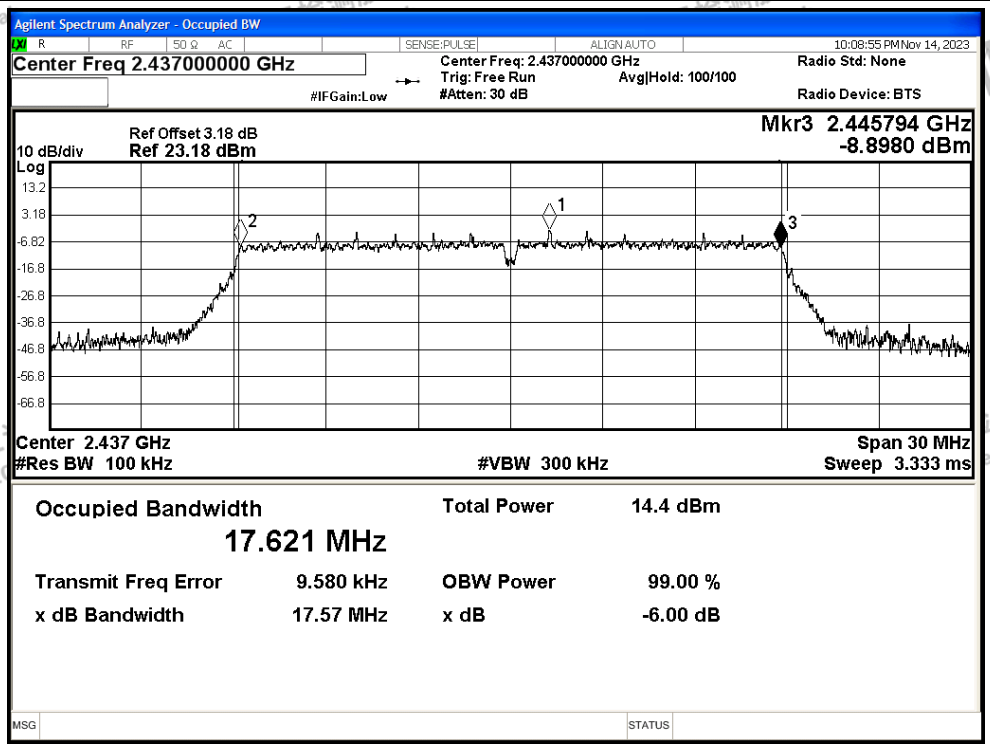
-6dB Bandwidth NVNT g 2462MHz Ant1



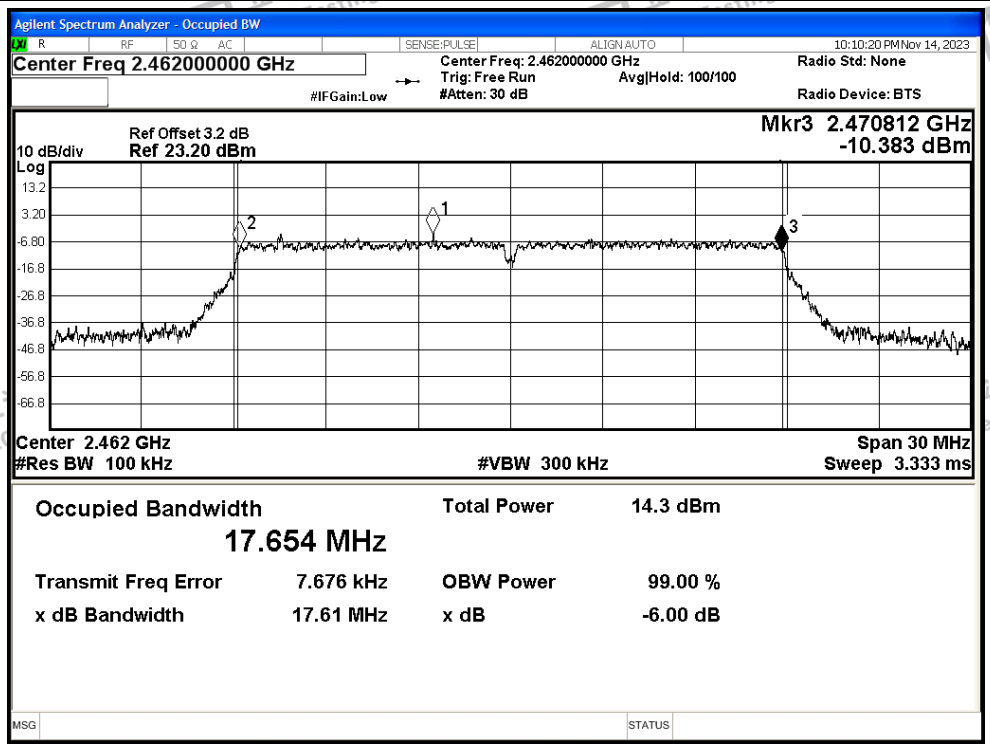
-6dB Bandwidth NVNT n20 2412MHz Ant1



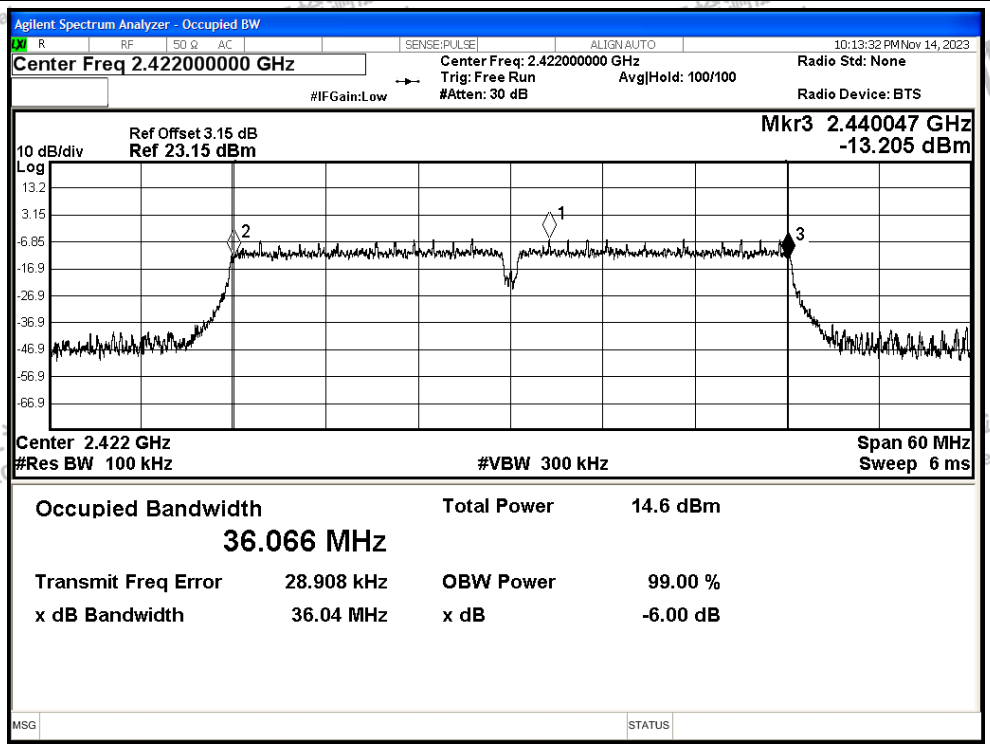
-6dB Bandwidth NVNT n20 2437MHz Ant1



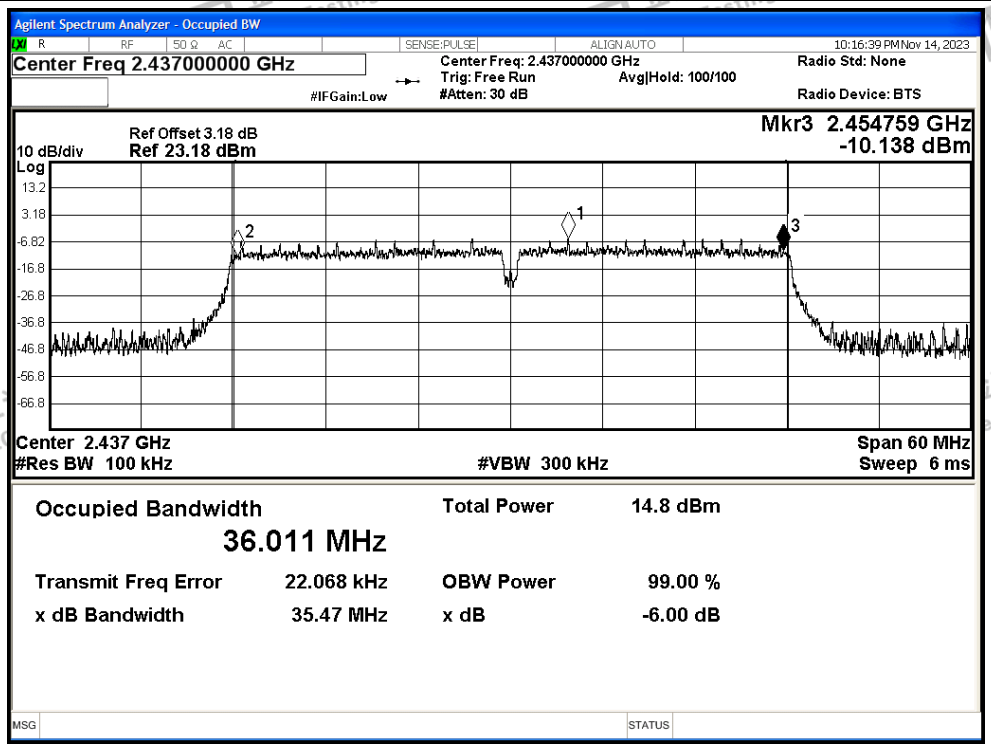
-6dB Bandwidth NVNT n20 2462MHz Ant1



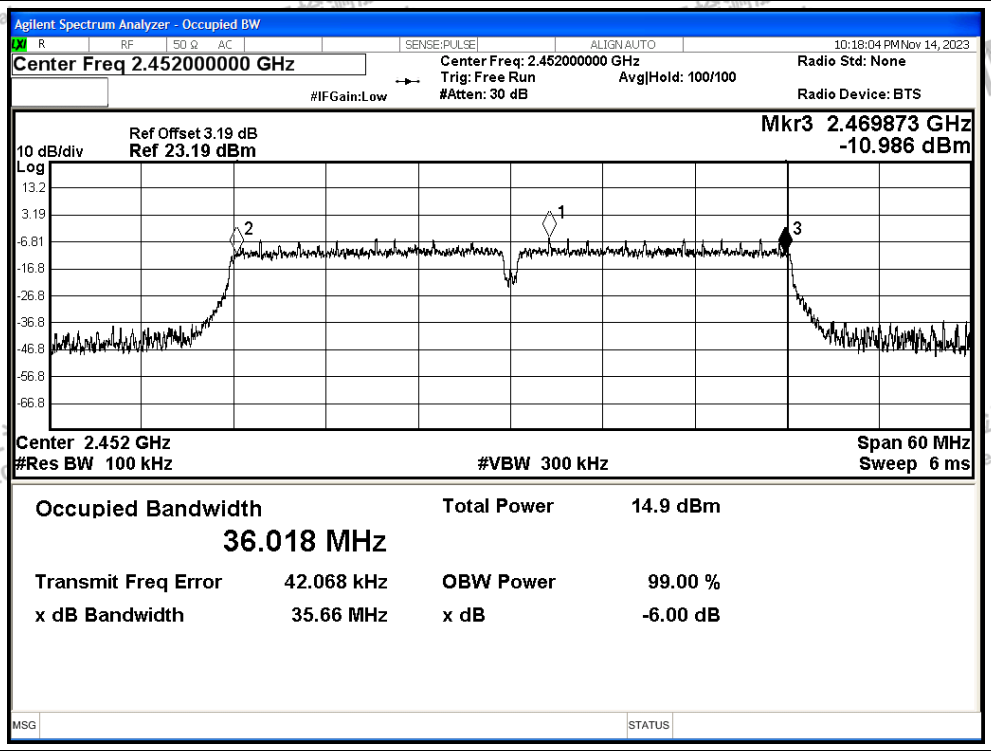
-6dB Bandwidth NVNT n40 2422MHz Ant1



-6dB Bandwidth NVNT n40 2437MHz Ant1



-6dB Bandwidth NVNT n40 2452MHz Ant1



B.2 Maximum conducted output power

Test Result Peak

TestMode	Antenna	Freq(MHz)	Peak Power[dBm]	Conducted Limit[dBm]	Verdict
11B	Ant0	2412	14.47	≤30.00	PASS
		2437	14.48	≤30.00	PASS
		2462	13.71	≤30.00	PASS
11G	Ant0	2412	17.20	≤30.00	PASS
		2437	18.32	≤30.00	PASS
		2462	15.42	≤30.00	PASS
11N20SISO	Ant0	2412	16.10	≤30.00	PASS
		2437	15.81	≤30.00	PASS
		2462	14.54	≤30.00	PASS
11N40SISO	Ant0	2422	15.01	≤30.00	PASS
		2437	12.91	≤30.00	PASS
		2452	12.79	≤30.00	PASS

Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant1	15.04	30	Pass
b	2437	Ant1	14.67	30	Pass
b	2462	Ant1	14.10	30	Pass
g	2412	Ant1	14.59	30	Pass
g	2437	Ant1	14.40	30	Pass
g	2462	Ant1	13.52	30	Pass
n20	2412	Ant1	13.43	30	Pass
n20	2437	Ant1	13.00	30	Pass
n20	2462	Ant1	13.07	30	Pass
n40	2422	Ant1	13.01	30	Pass
n40	2437	Ant1	13.31	30	Pass
n40	2452	Ant1	13.32	30	Pass

MIMO

TestMode	Frequency (MHz)	Result[dBm]			Limit[dBm]	Verdict
		Ant0	Ant1	Ant0+ Ant1		
11N20SISO	2412	16.10	13.43	17.98	30.00	PASS
	2437	15.81	13.00	17.64	30.00	PASS
	2462	14.54	13.07	16.88	30.00	PASS
11N40SISO	2422	15.01	13.01	17.13	30.00	PASS
	2437	12.91	13.31	16.12	30.00	PASS
	2452	12.79	13.32	16.07	30.00	PASS

B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Freq(MHz)	Result [dBm/3-100kHz]	Limit [dBm/3kHz]	Verdict
11B	Ant0	2412	-11.69	≤8.00	PASS
		2437	-9.47	≤8.00	PASS
		2462	-11.9	≤8.00	PASS
11G	Ant0	2412	-12.77	≤8.00	PASS
		2437	-11.99	≤8.00	PASS
		2462	-14.15	≤8.00	PASS
11N20SISO	Ant0	2412	-14.98	≤8.00	PASS
		2437	-14.12	≤8.00	PASS
		2462	-14.17	≤8.00	PASS
11N40SISO	Ant0	2422	-18.65	≤8.00	PASS
		2437	-21.87	≤8.00	PASS
		2452	-21.11	≤8.00	PASS

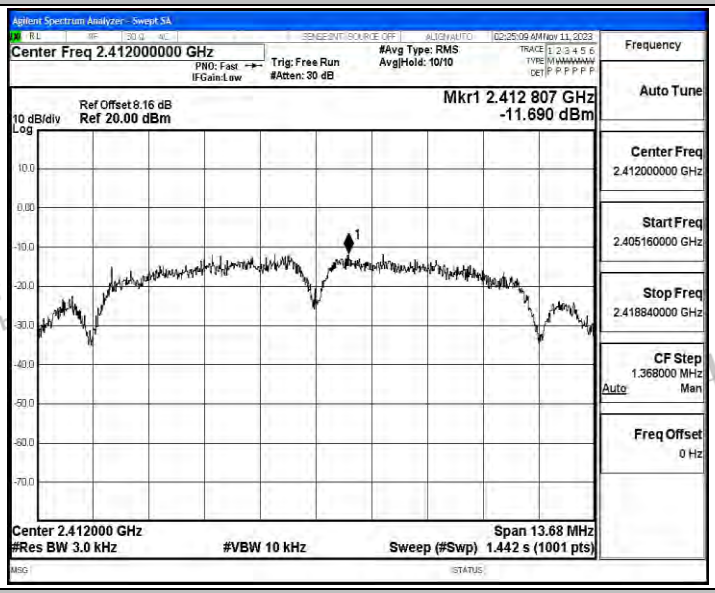
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-9.49	8.00	Pass
NVNT	b	2437	Ant1	-9.79	8.00	Pass
NVNT	b	2462	Ant1	2.61	8.00	Pass
NVNT	g	2412	Ant1	-15.77	8.00	Pass
NVNT	g	2437	Ant1	-14.74	8.00	Pass
NVNT	g	2462	Ant1	-17.03	8.00	Pass
NVNT	n20	2412	Ant1	-15.54	8.00	Pass
NVNT	n20	2437	Ant1	-17.83	8.00	Pass
NVNT	n20	2462	Ant1	-17.52	8.00	Pass
NVNT	n40	2422	Ant1	-19.97	8.00	Pass
NVNT	n40	2437	Ant1	-20	8.00	Pass
NVNT	n40	2452	Ant1	-18.6	8.00	Pass

MIMO

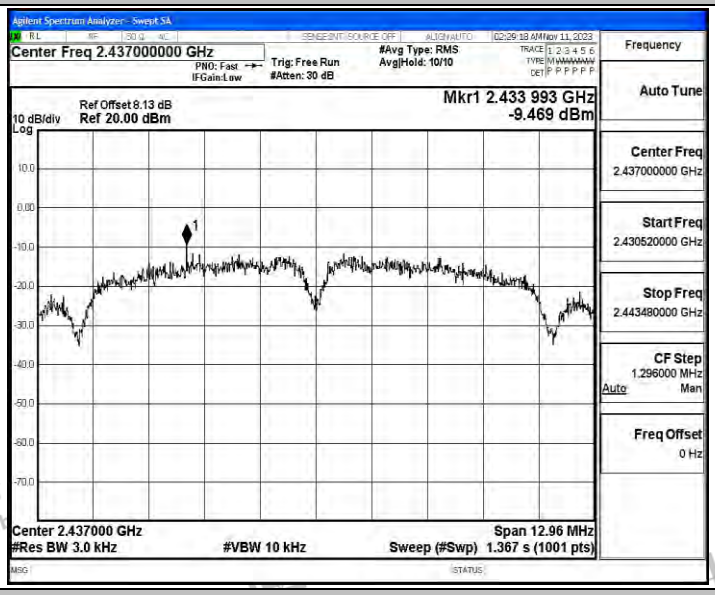
TestMode	Frequency (MHz)	Result[dBm/3kHz]			Limit[dBm/3kHz]	Verdict
		Ant0	Ant1	Ant0+ Ant1		
11N20SISO	2412	-14.98	-15.54	-12.24	8.00	PASS
	2437	-14.12	-17.83	-12.58	8.00	PASS
	2462	-14.17	-17.52	-12.52	8.00	PASS
11N40SISO	2422	-18.65	-19.97	-16.25	8.00	PASS
	2437	-21.87	-20	-17.82	8.00	PASS
	2452	-21.11	-18.6	-16.67	8.00	PASS

Test Graphs

11B_Ant0_2412



11B_Ant0_2437



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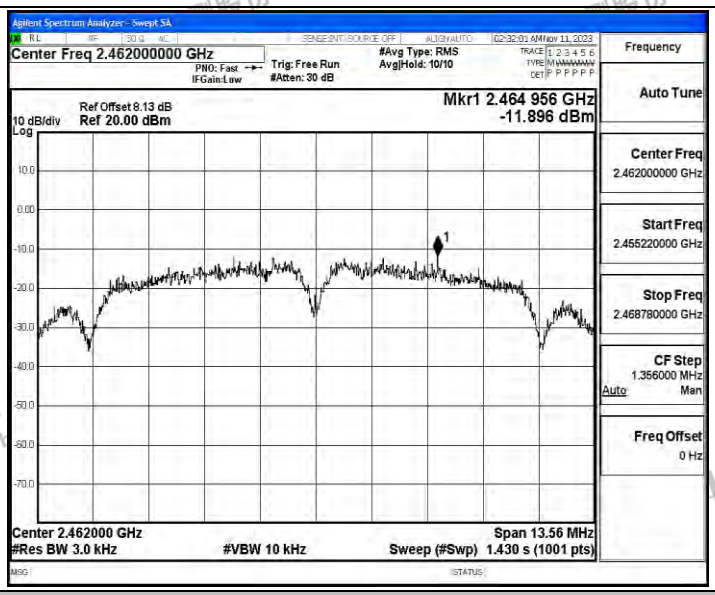
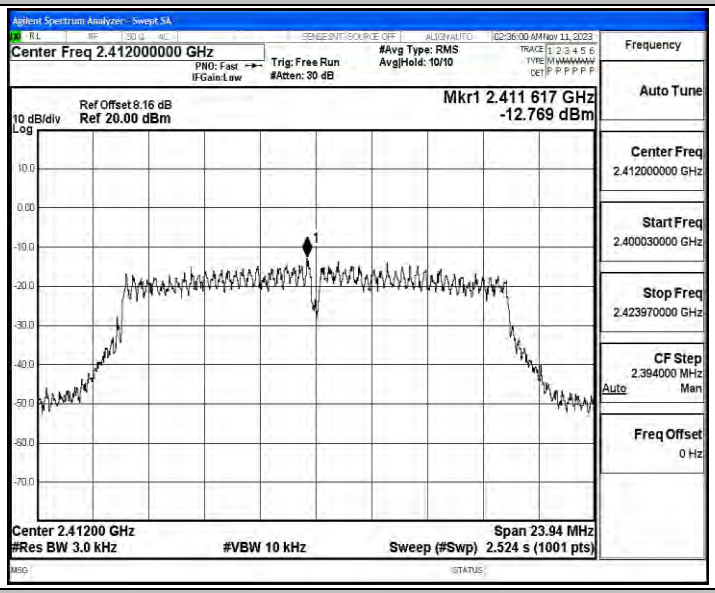
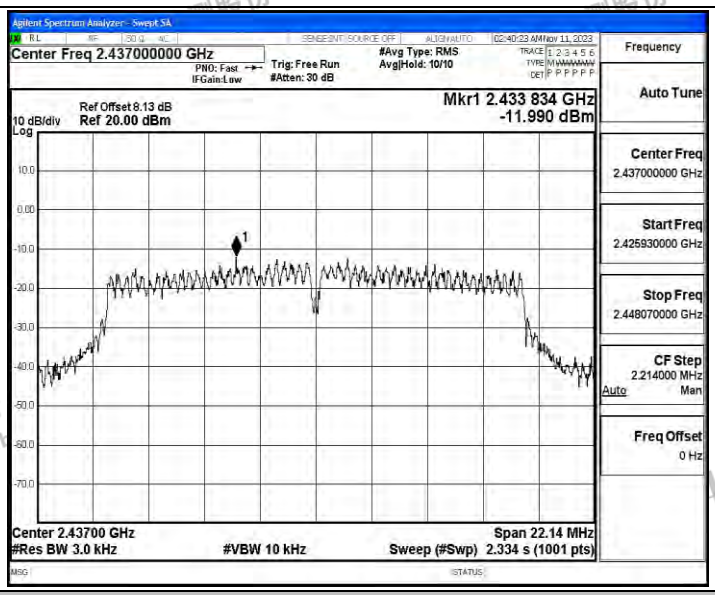


11G_Ant0_2412



11G_Ant0_2437



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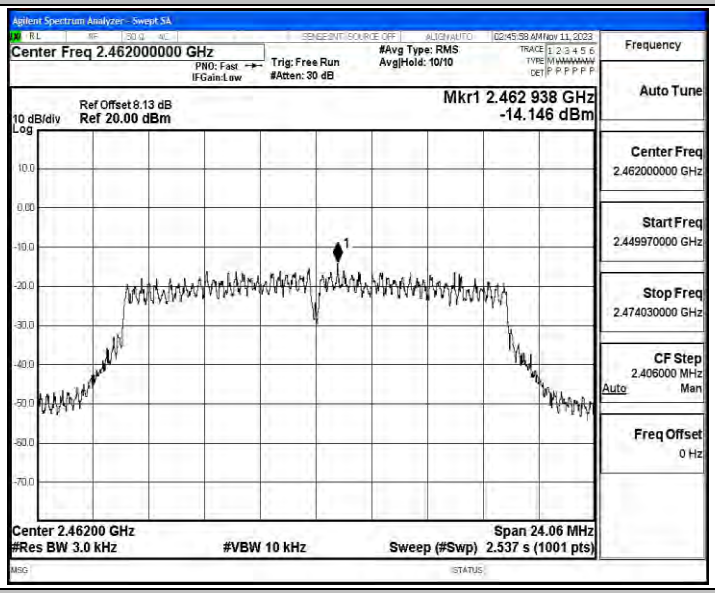
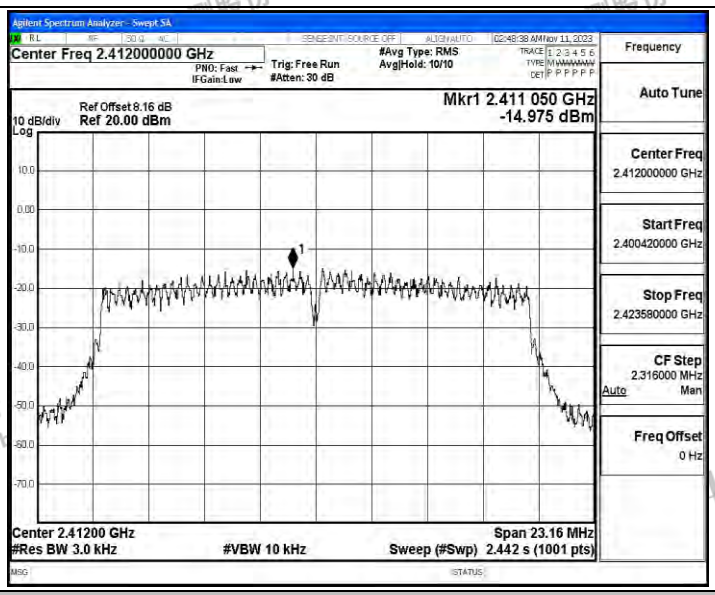
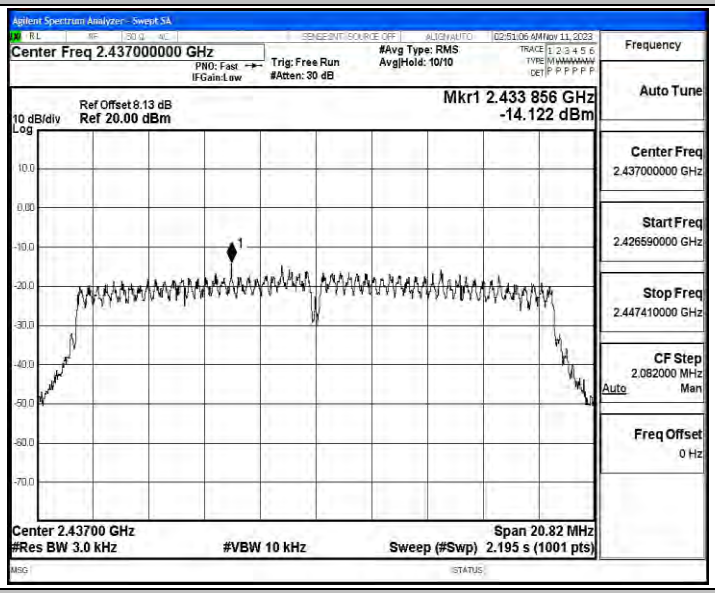


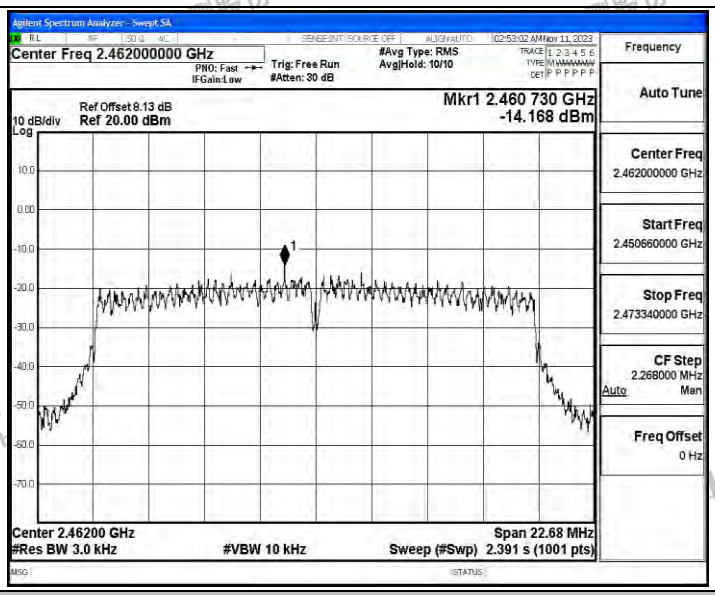
11N20SISO_Ant0_2412



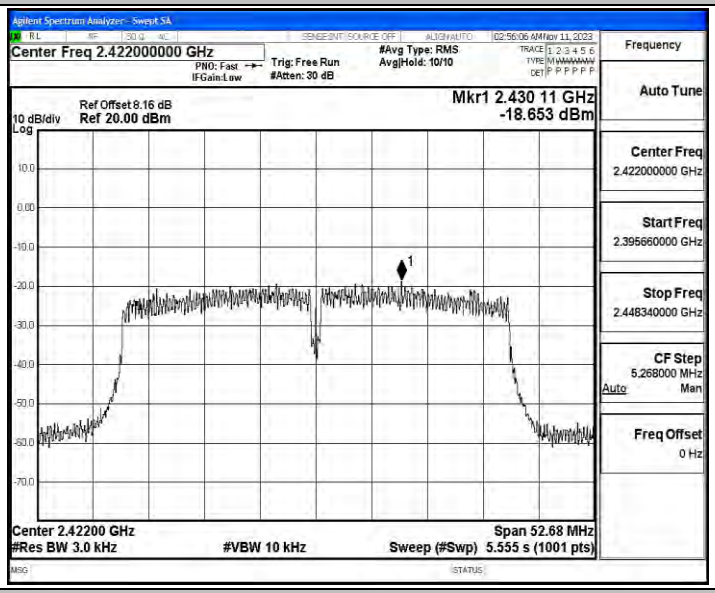
11N20SISO_Ant0_2437



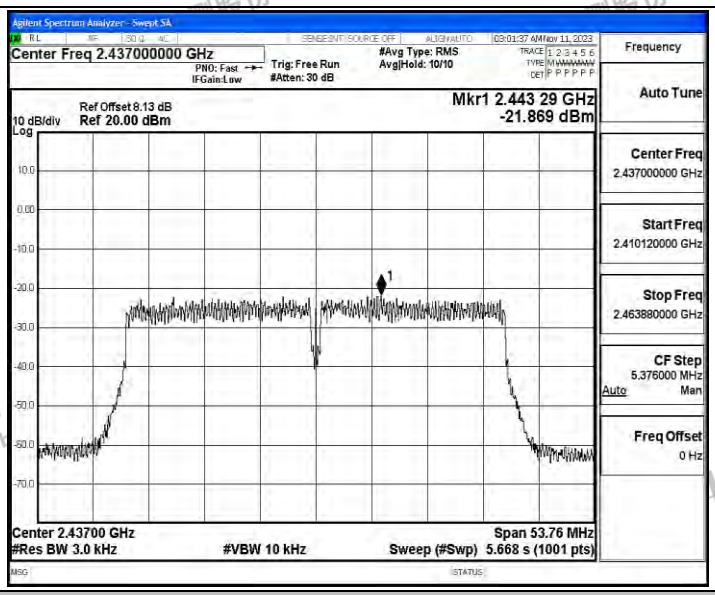
11N20SISO_Ant0_2462



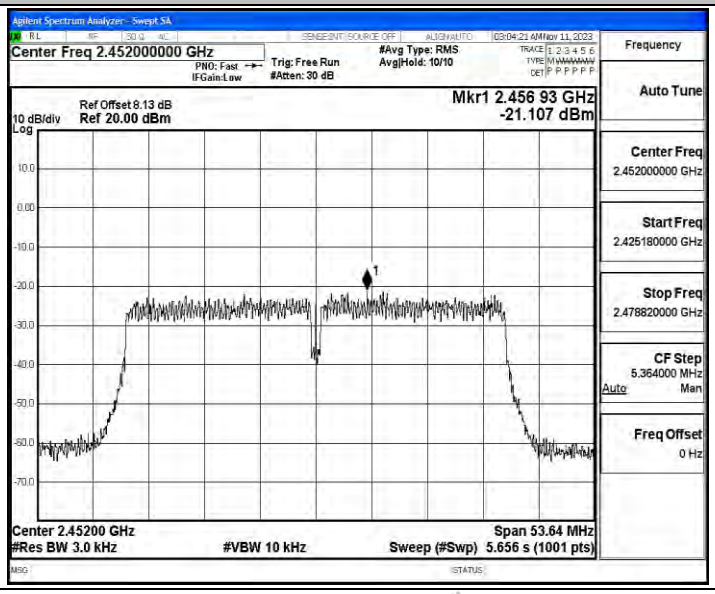
11N40SISO_Ant0_2422



11N40SISO_Ant0_2437

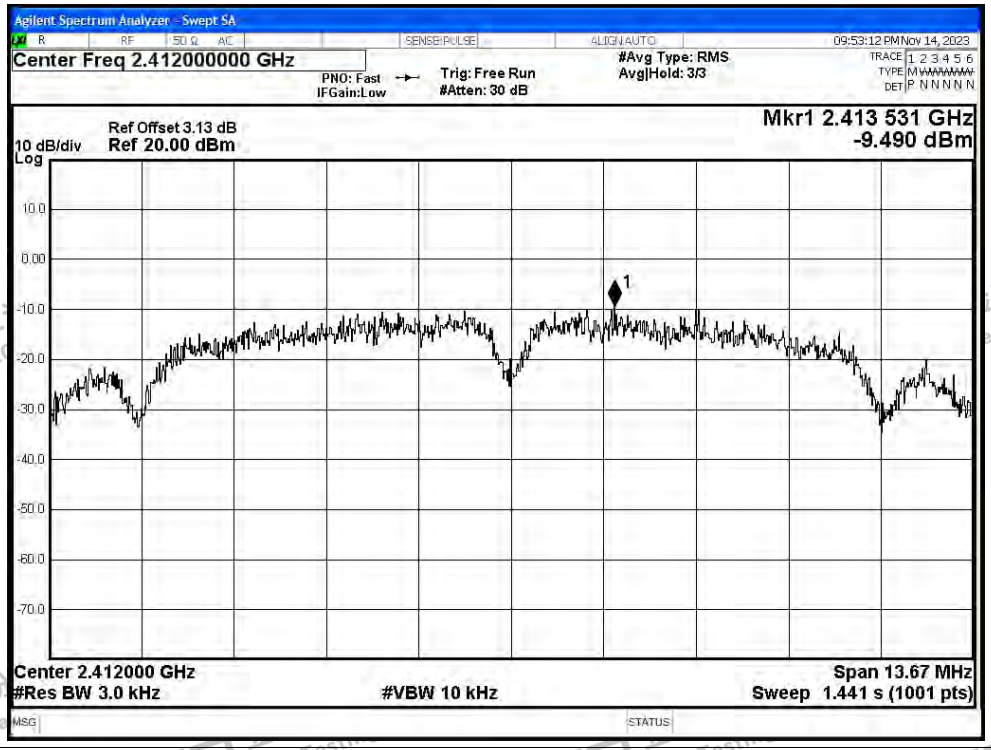


11N40SISO_Ant0_2452

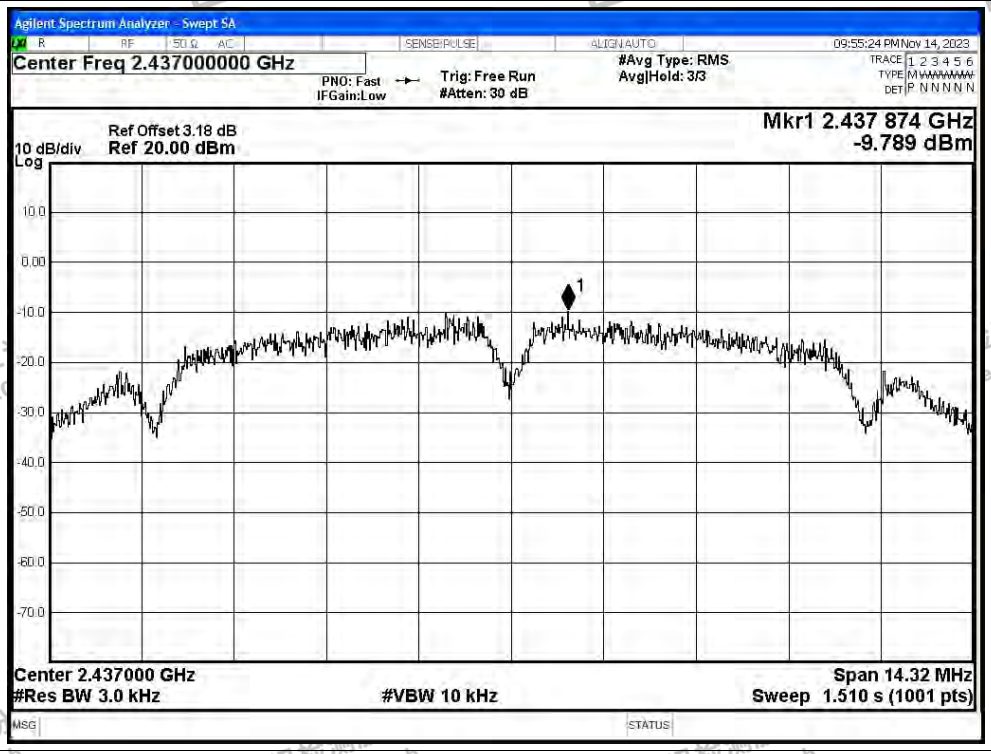


Test Graphs

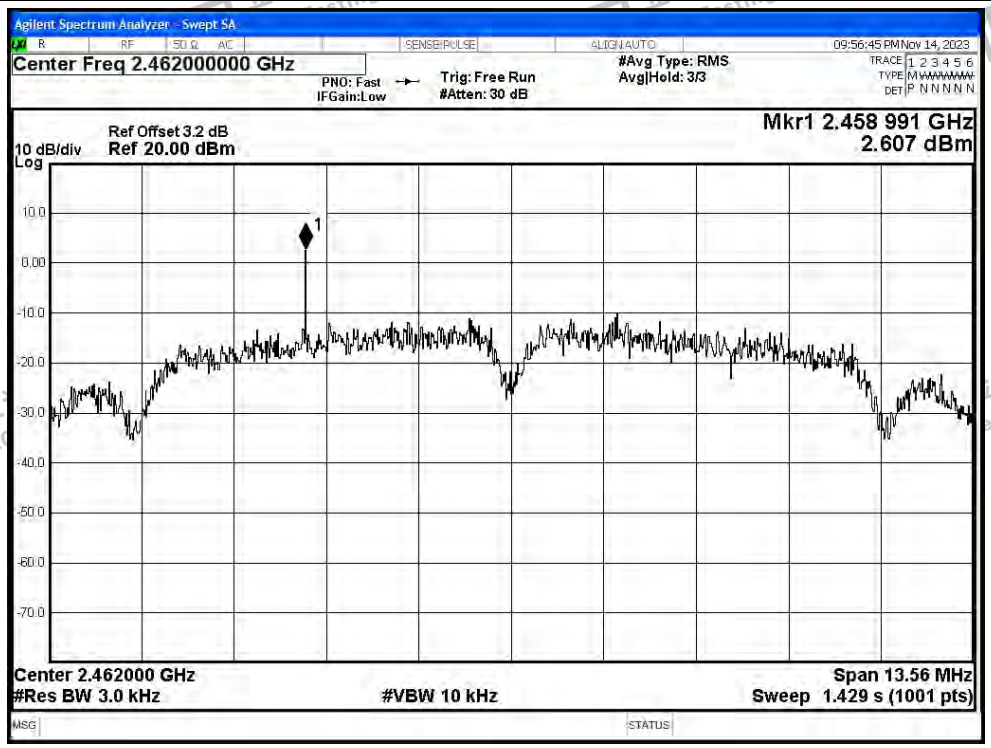
PSD NVNT b 2412MHz Ant1



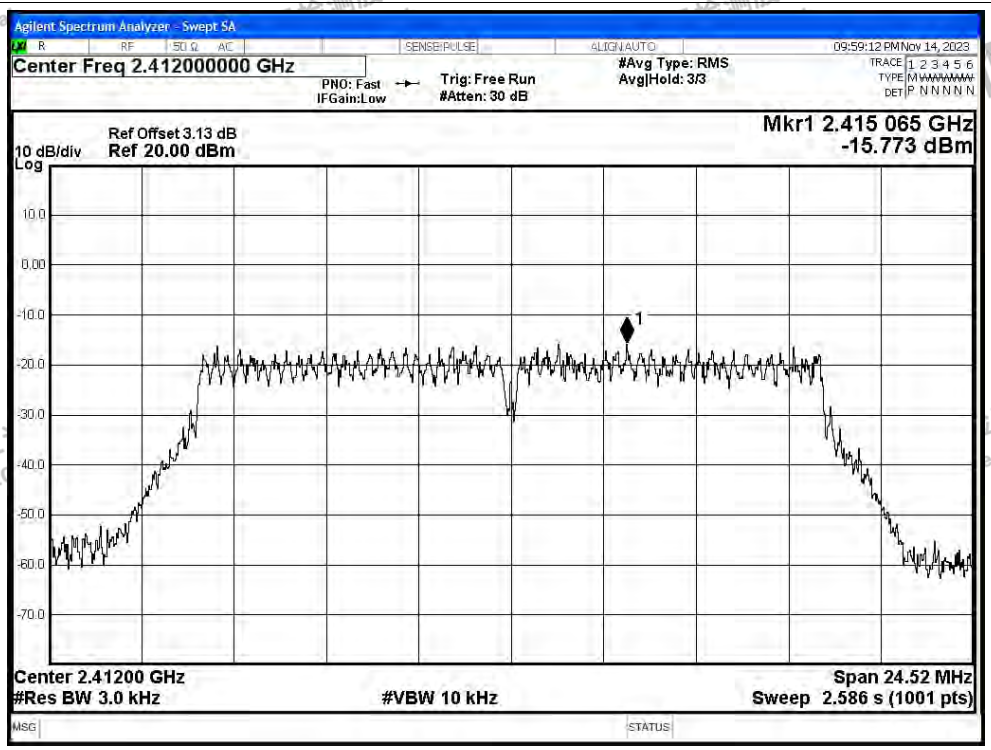
PSD NVNT b 2437MHz Ant1



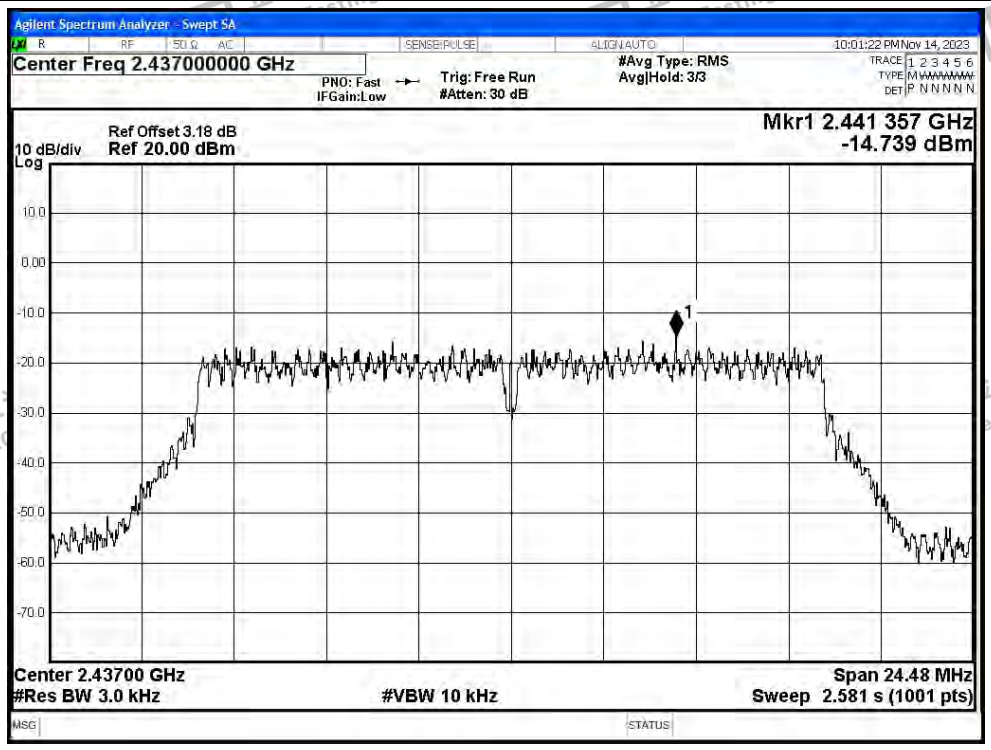
PSD NVNT b 2462MHz Ant1



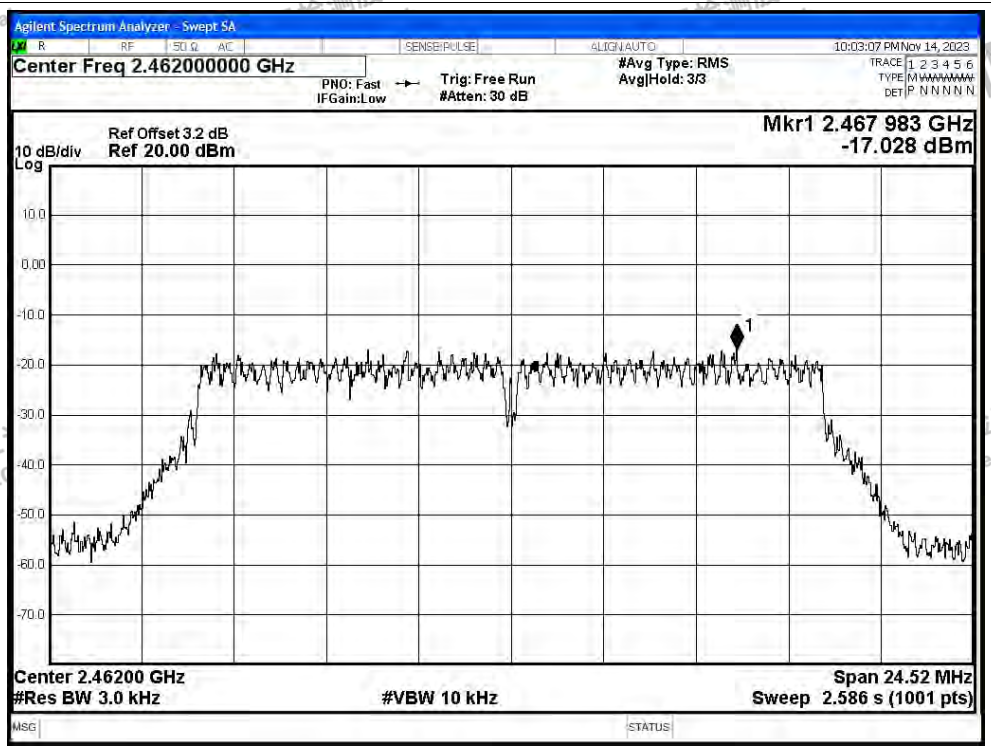
PSD NVNT g 2412MHz Ant1



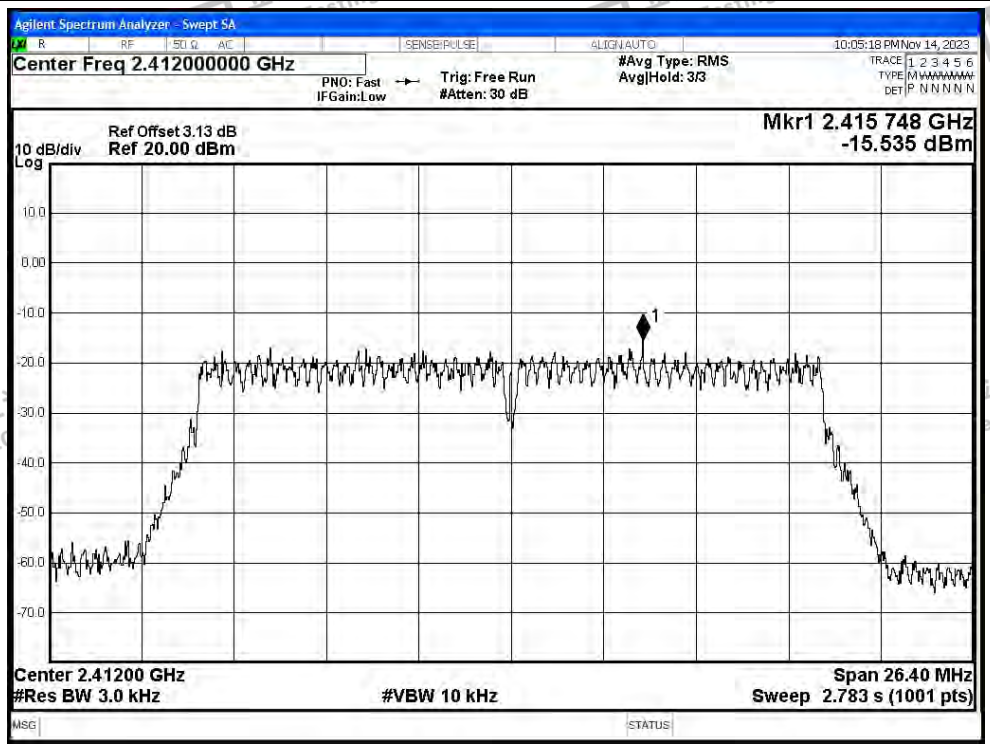
PSD NVNT g 2437MHz Ant1



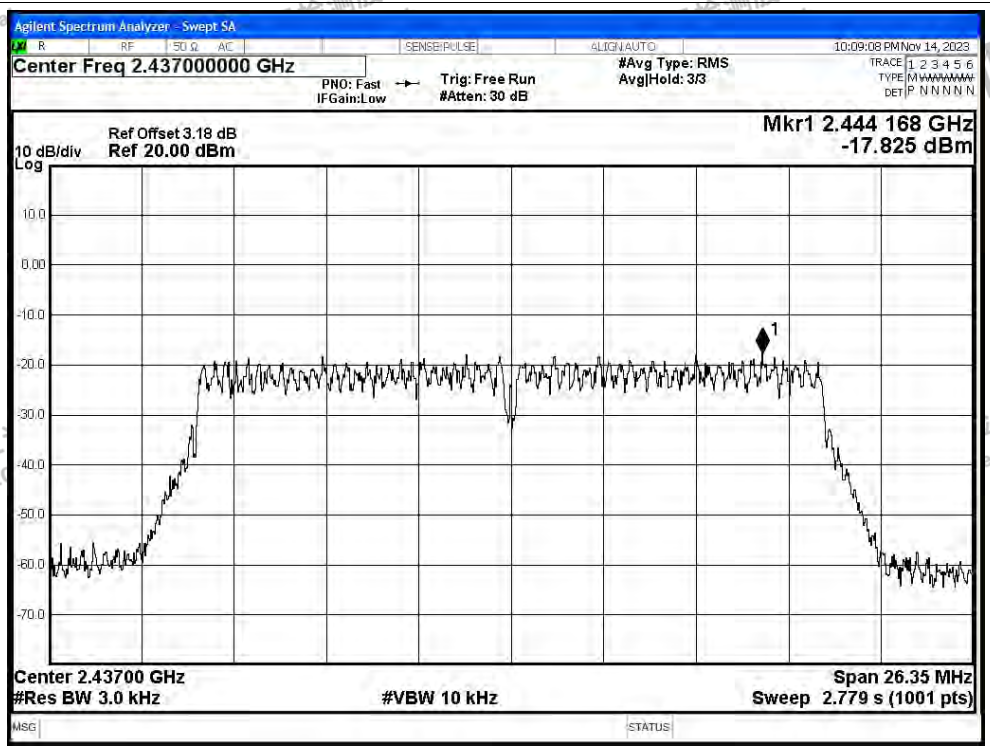
PSD NVNT g 2462MHz Ant1



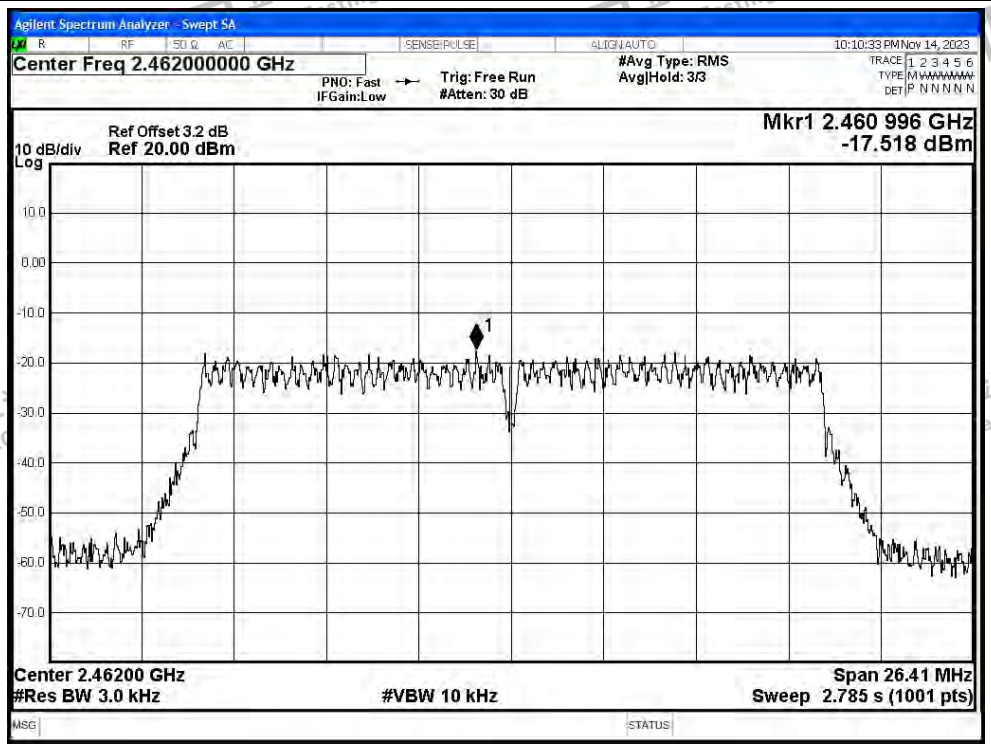
PSD NVNT n20 2412MHz Ant1



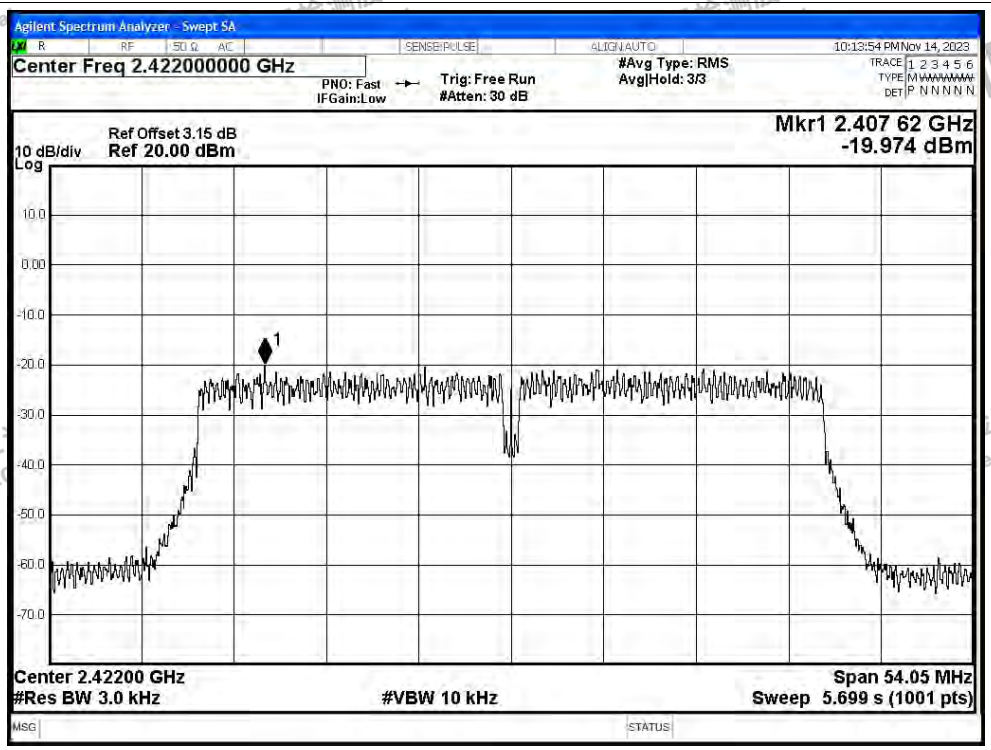
PSD NVNT n20 2437MHz Ant1



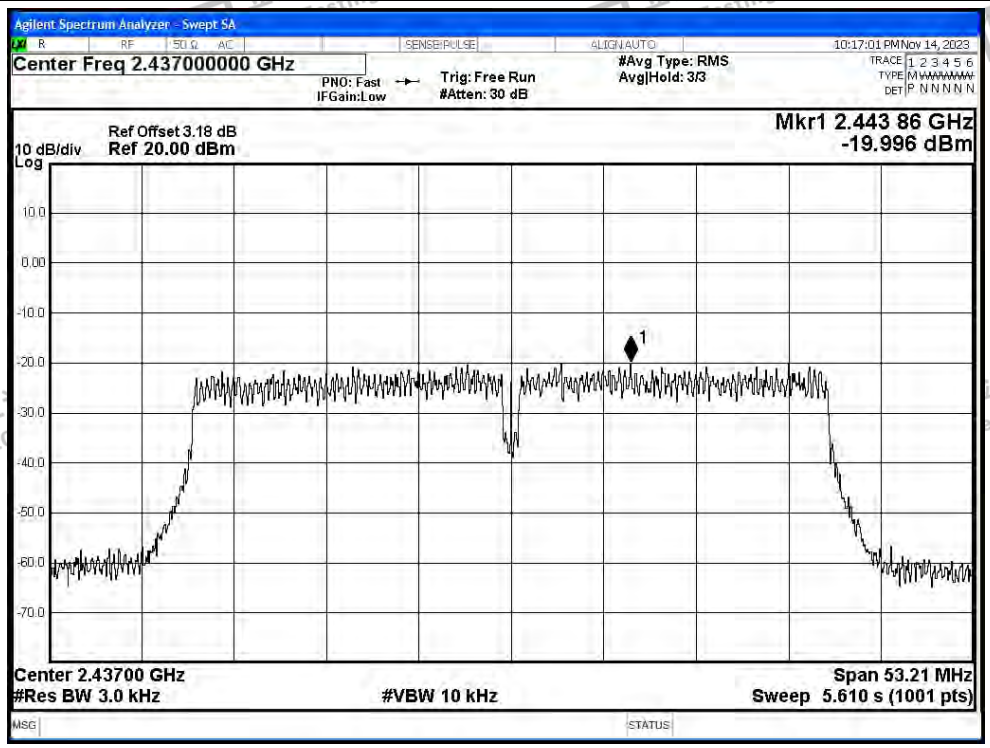
PSD NVNT n20 2462MHz Ant1



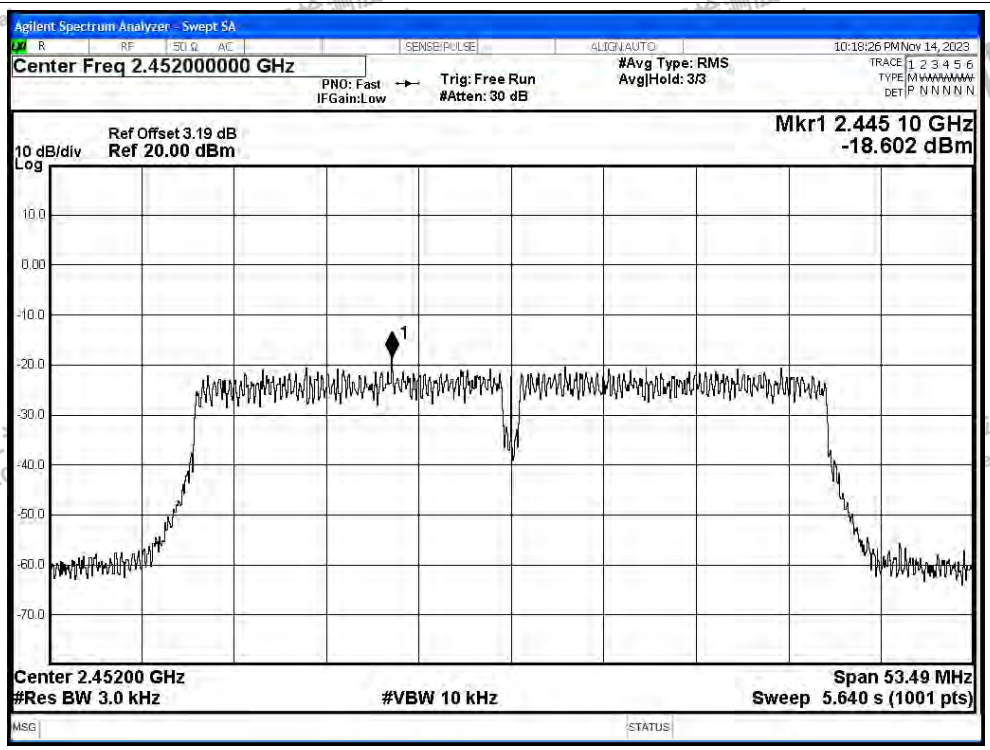
PSD NVNT n40 2422MHz Ant1



PSD NVNT n40 2437MHz Ant1



PSD NVNT n40 2452MHz Ant1



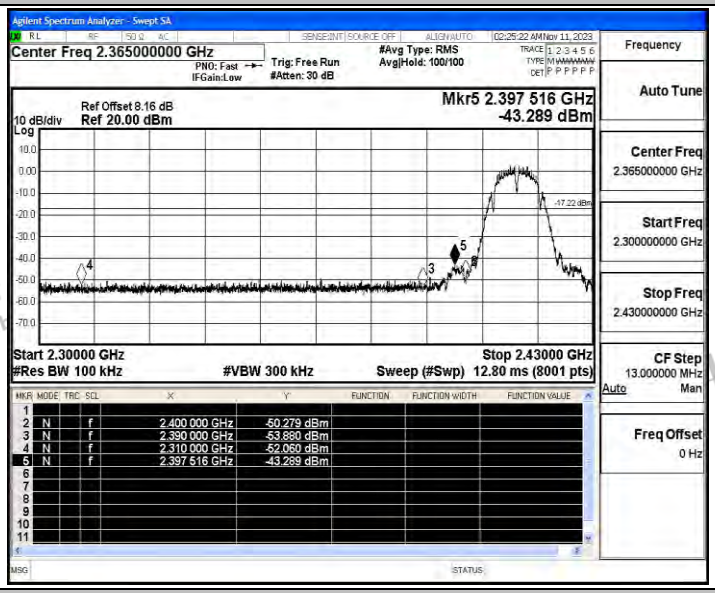
B.4 Band edge measurements

Test Result

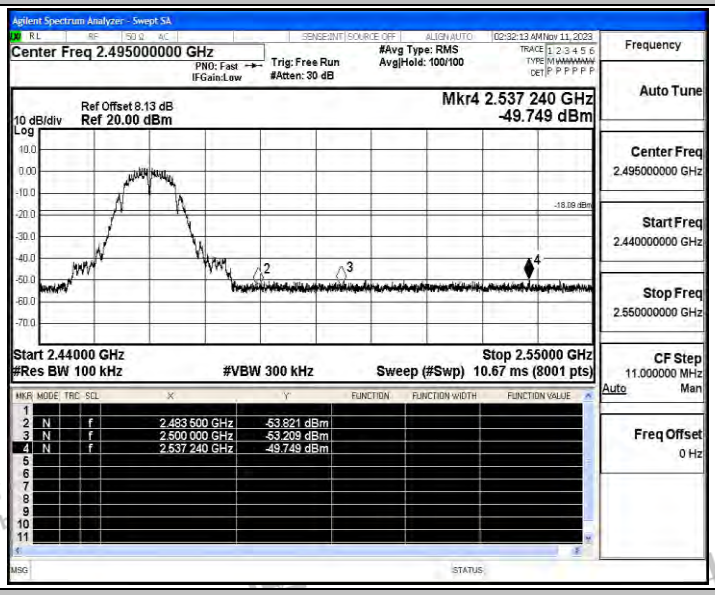
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
11B	Ant0	Low	2412	2.78	-43.29	≤-17.22	PASS
		High	2462	1.91	-49.75	≤-18.09	PASS
11G	Ant0	Low	2412	0.75	-31.78	≤-19.25	PASS
		High	2462	-1.34	-46.09	≤-21.34	PASS
11N20SISO	Ant0	Low	2412	-1.36	-34.68	≤-21.36	PASS
		High	2462	-2.35	-45.2	≤-22.35	PASS
11N40SISO	Ant0	Low	2422	-5.07	-36.8	≤-25.07	PASS
		High	2452	-7.78	-41.52	≤-27.78	PASS

Test Graphs

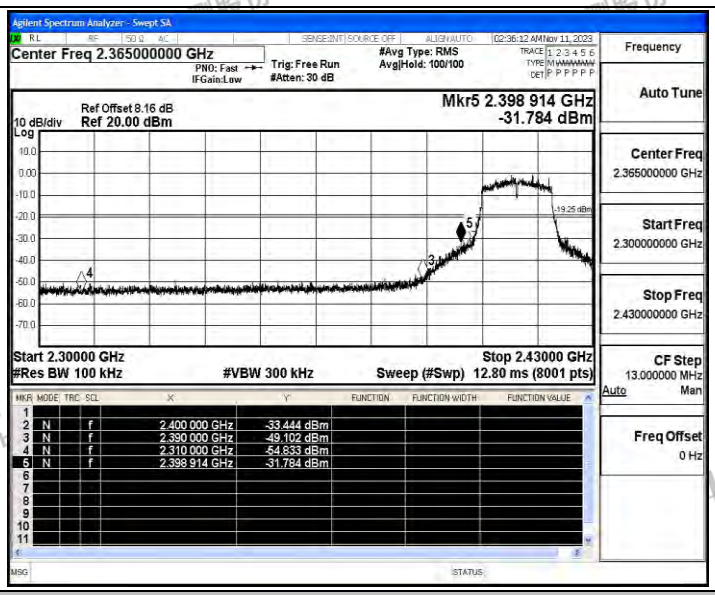
11B_Ant0_Low_2412



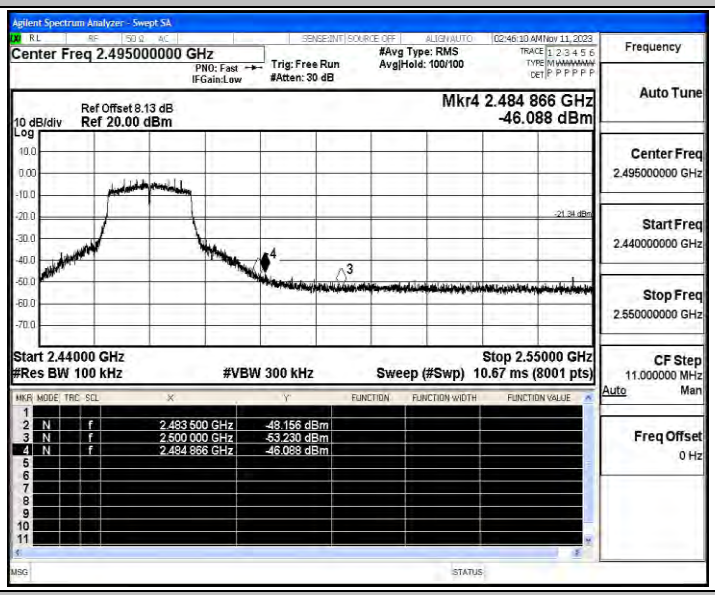
11B_Ant0_High_2462



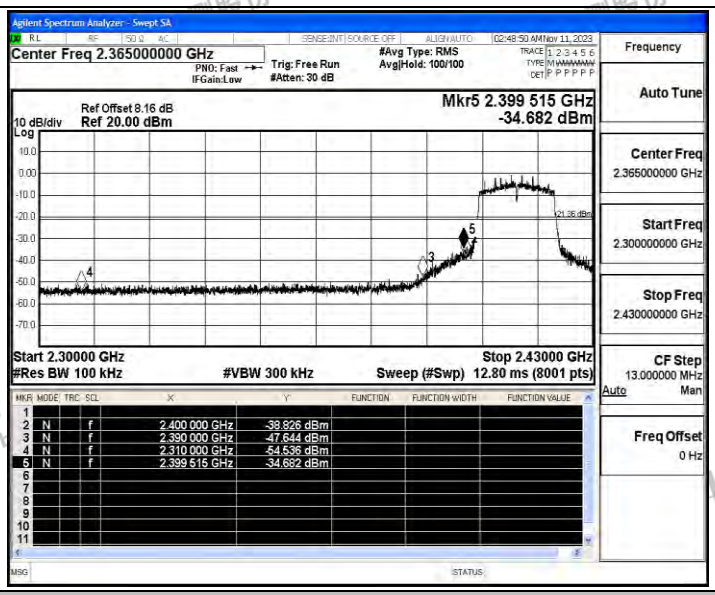
11G_Ant0_Low_2412



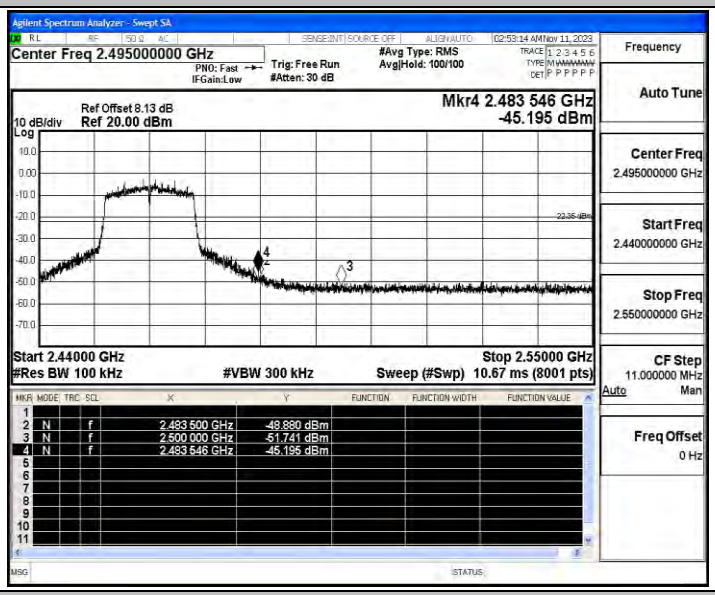
11G_Ant0_High_2462



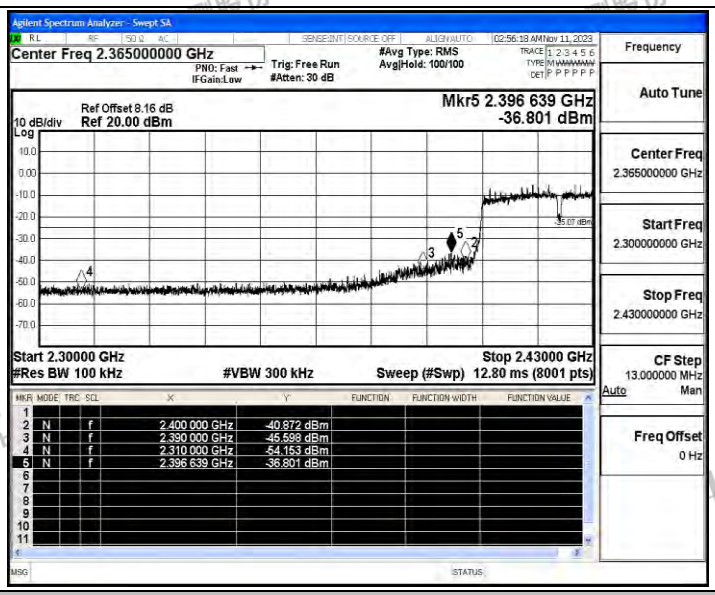
11N20SISO_Ant0_Low_2412



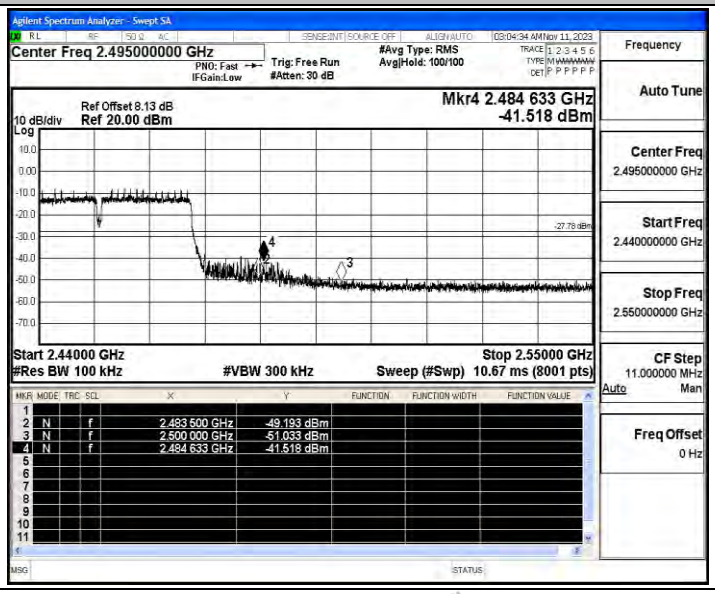
11N20SISO_Ant0_High_2462



11N40SISO_Ant0_Low_2422



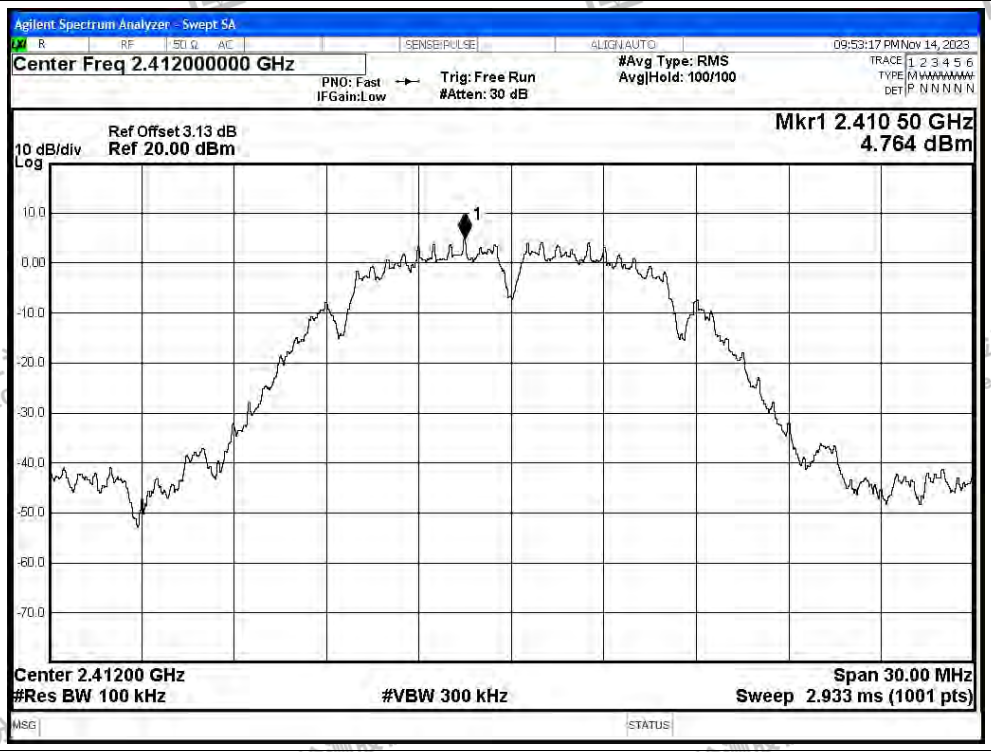
11N40SISO_Ant0_High_2452



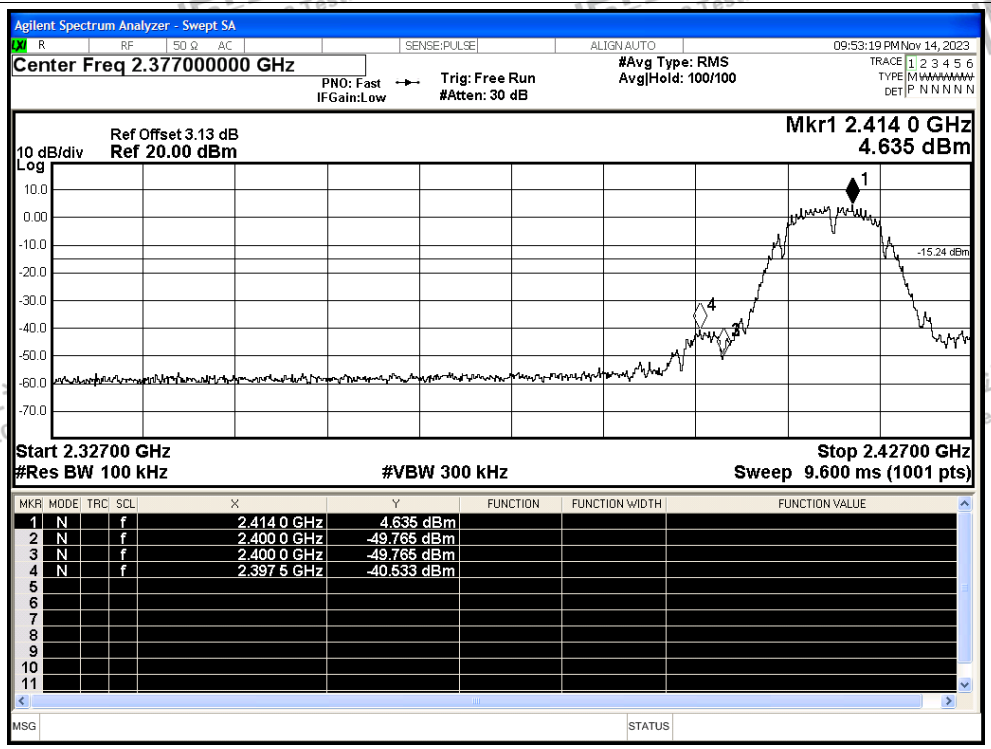
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-45.3	-20	Pass
NVNT	b	2462	Ant1	-58.84	-20	Pass
NVNT	g	2412	Ant1	-35.58	-20	Pass
NVNT	g	2462	Ant1	-45.6	-20	Pass
NVNT	n20	2412	Ant1	-37.33	-20	Pass
NVNT	n20	2462	Ant1	-44.56	-20	Pass
NVNT	n40	2422	Ant1	-33.77	-20	Pass
NVNT	n40	2452	Ant1	-32.73	-20	Pass

Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref

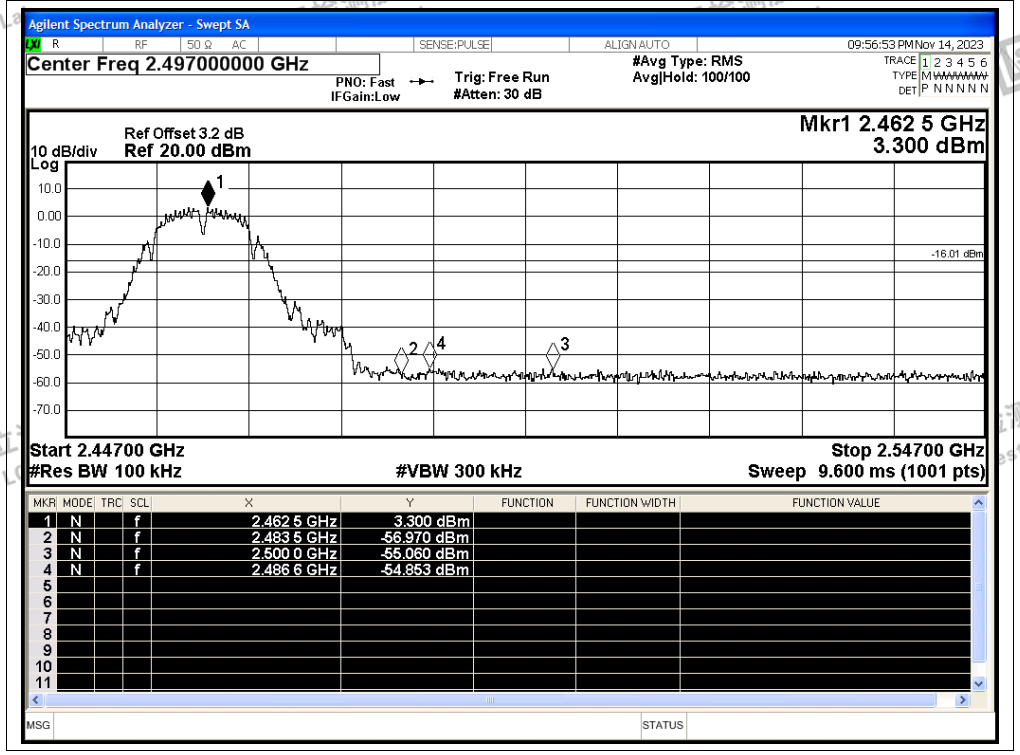


Band Edge NVNT b 2412MHz Ant1 Emission

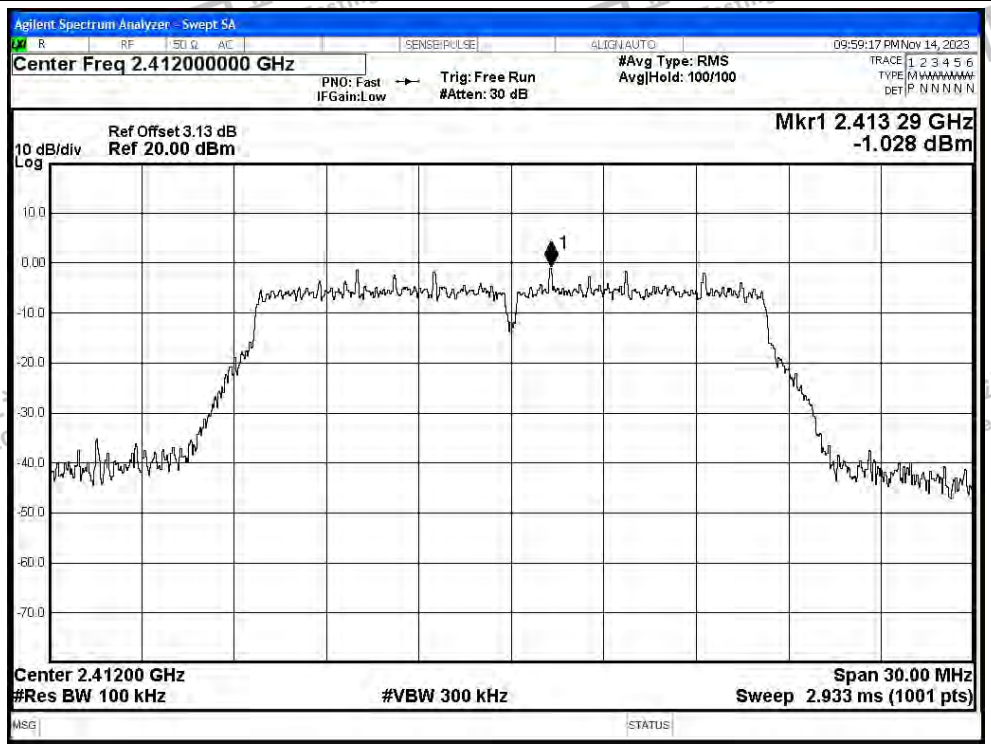


Band Edge NVNT b 2462MHz Ant1 Ref

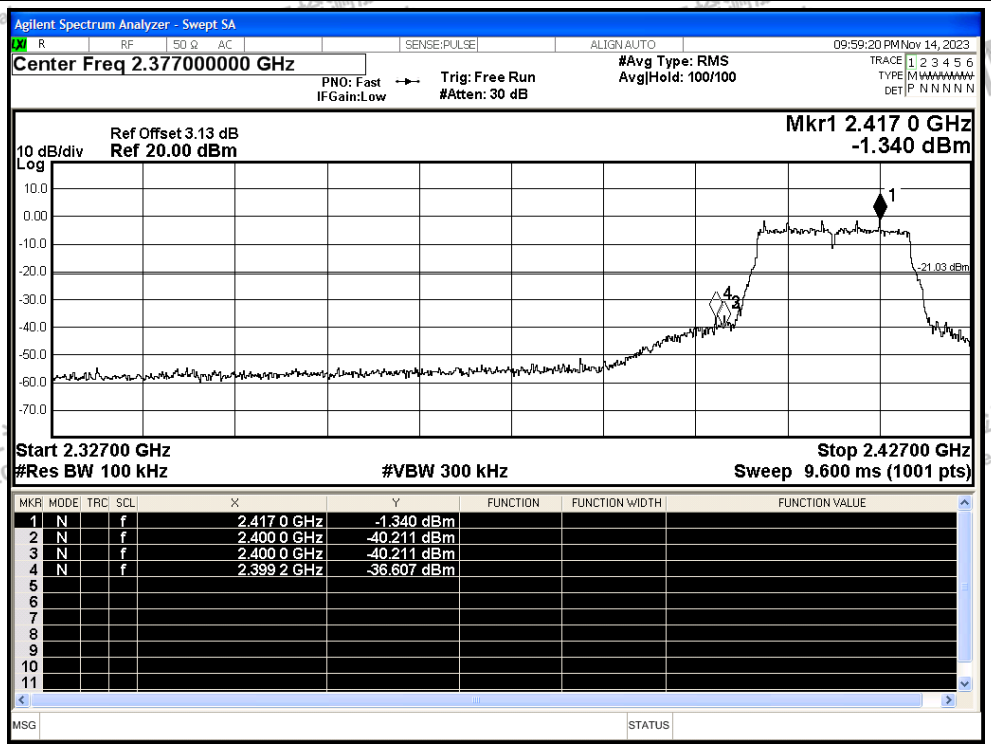
Band Edge NVNT b 2462MHz Ant1 Emission



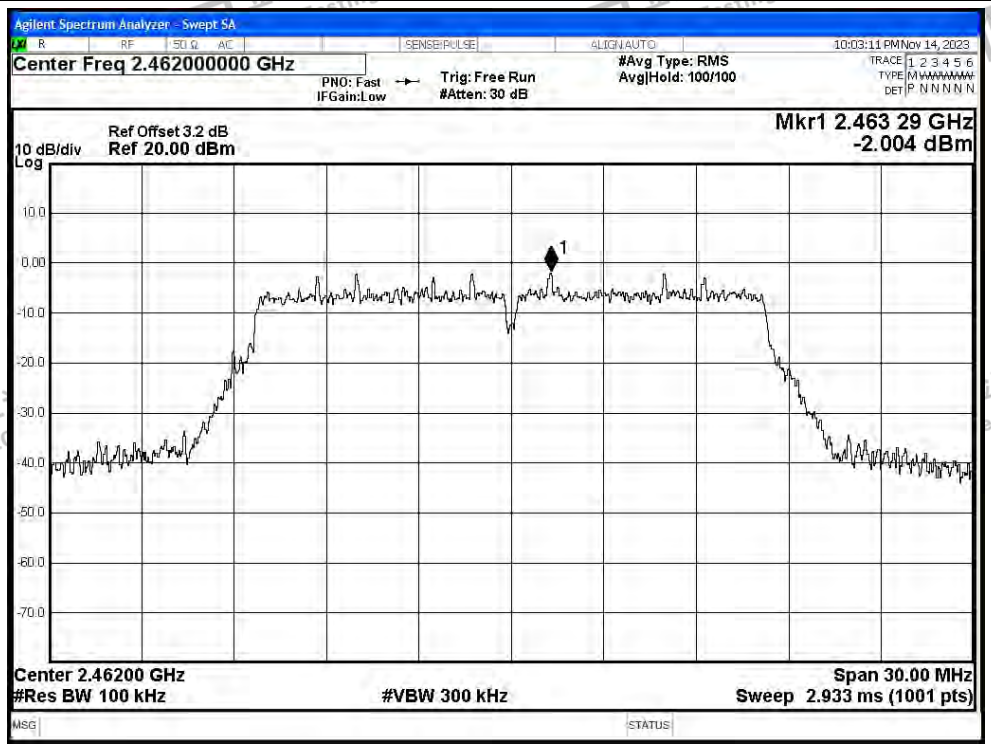
Band Edge NVNT g 2412MHz Ant1 Ref



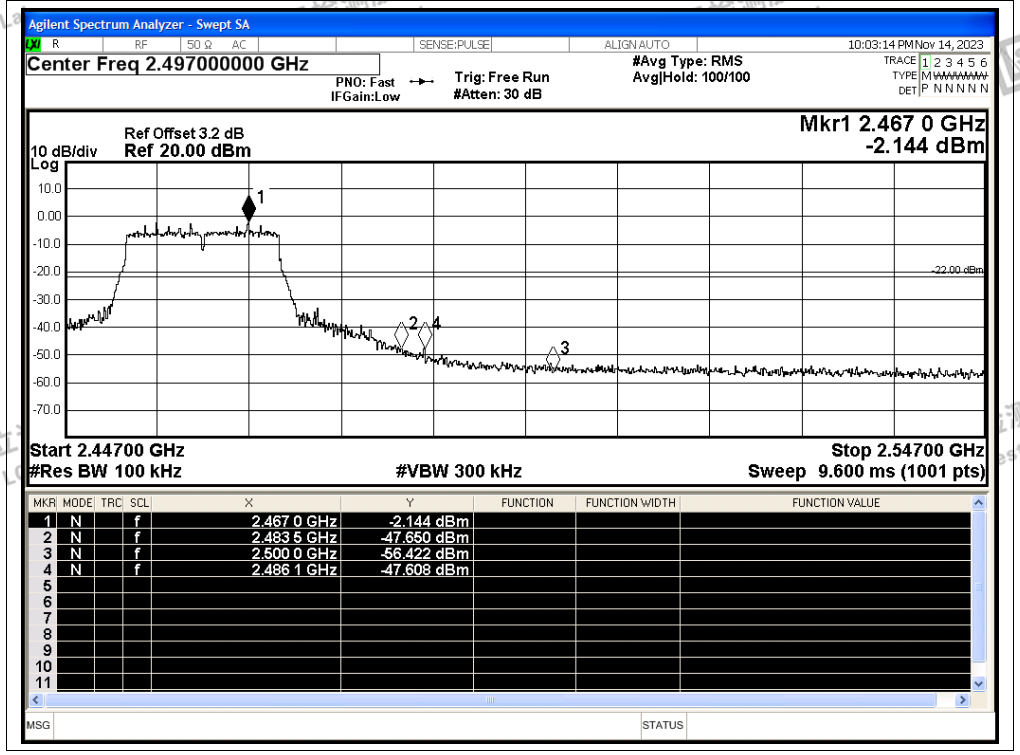
Band Edge NVNT g 2412MHz Ant1 Emission



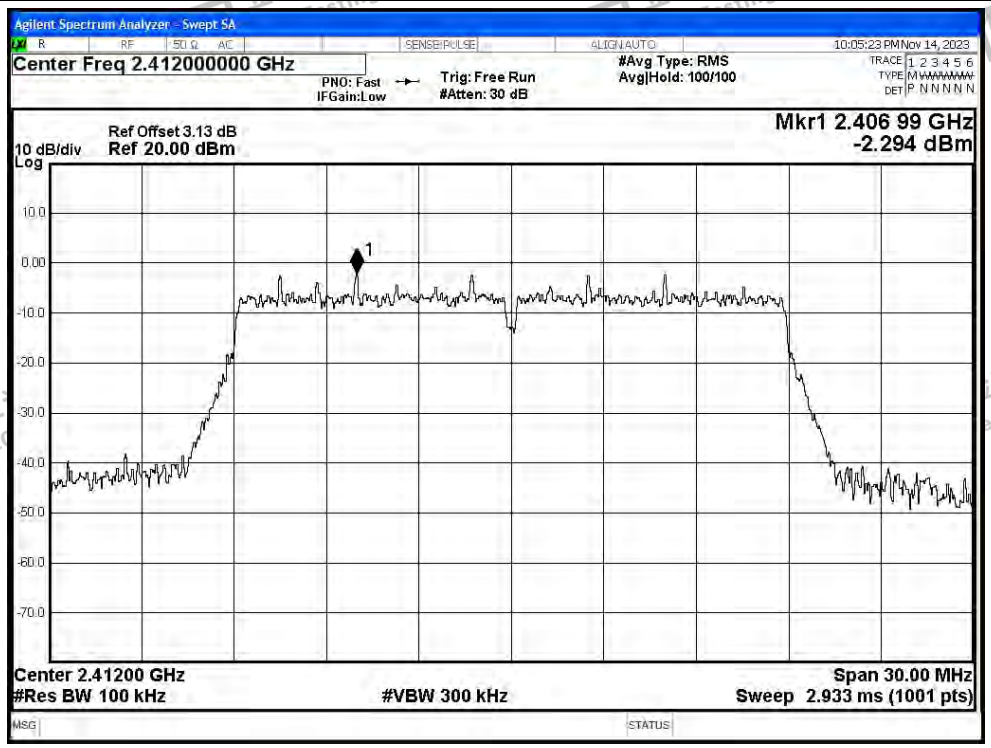
Band Edge NVNT g 2462MHz Ant1 Ref



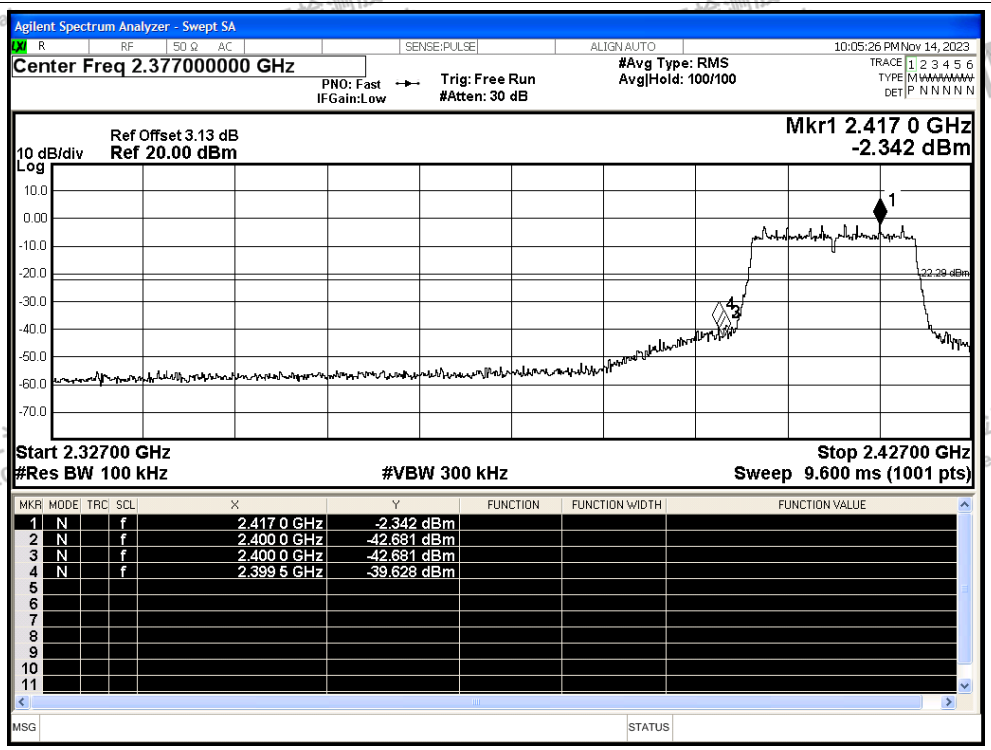
Band Edge NVNT g 2462MHz Ant1 Emission



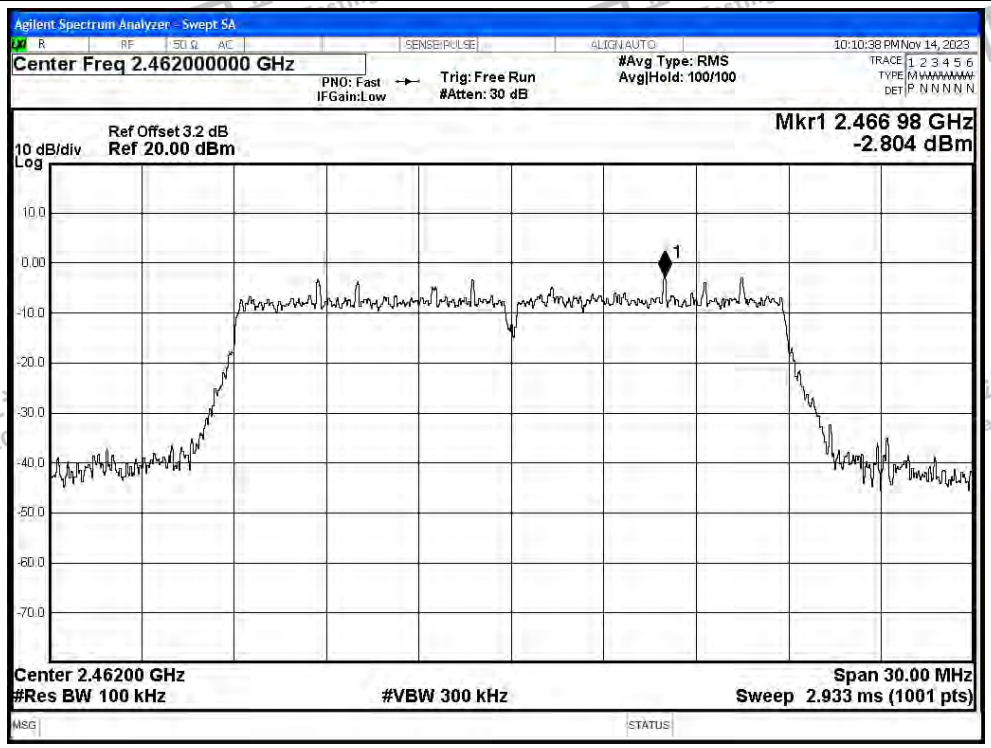
Band Edge NVNT n20 2412MHz Ant1 Ref



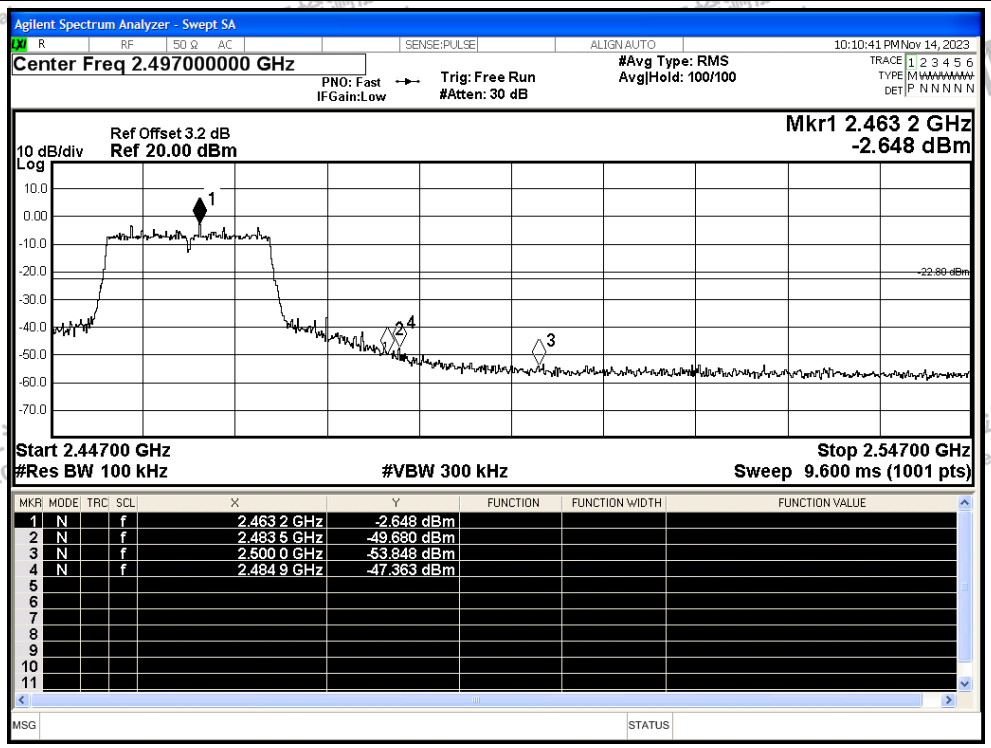
Band Edge NVNT n20 2412MHz Ant1 Emission



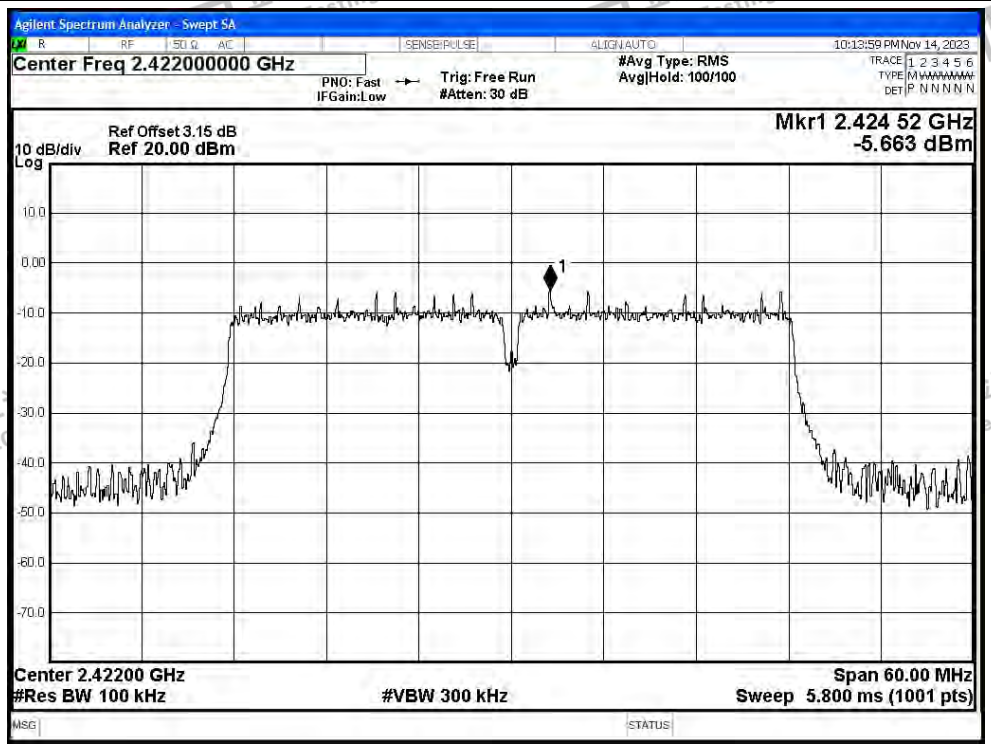
Band Edge NVNT n20 2462MHz Ant1 Ref



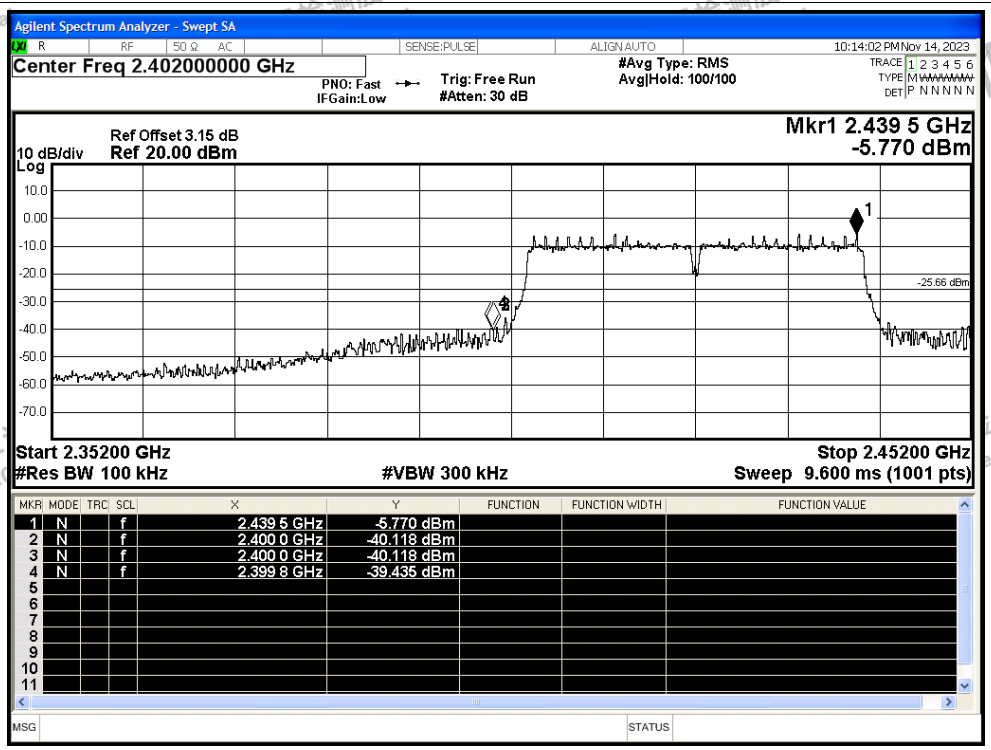
Band Edge NVNT n20 2462MHz Ant1 Emission



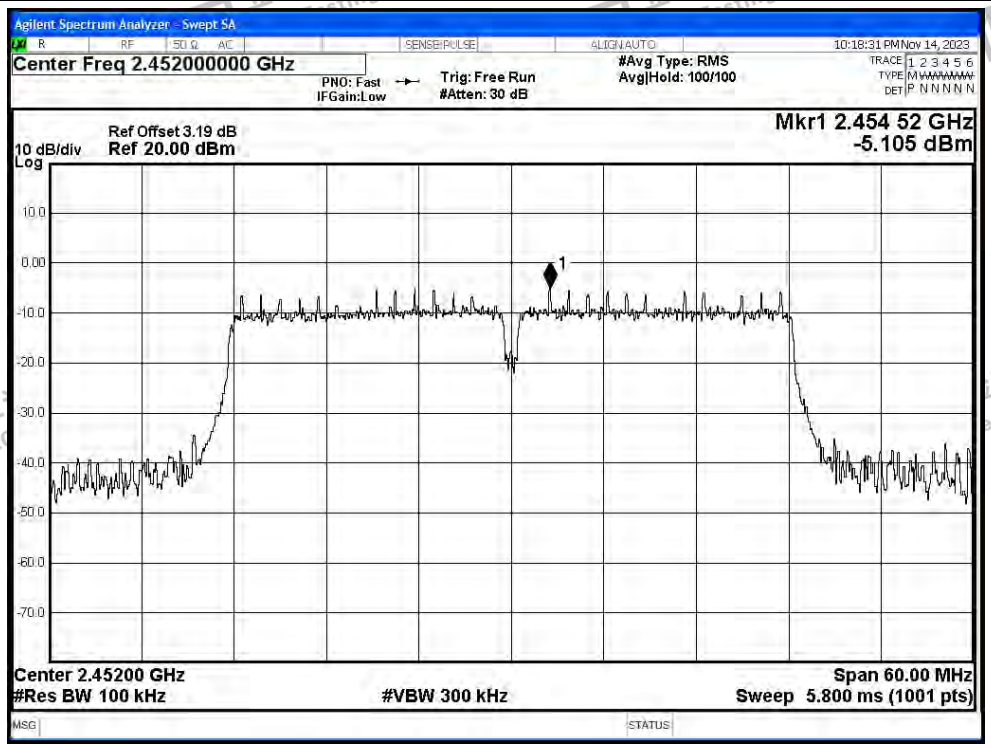
Band Edge NVNT n40 2422MHz Ant1 Ref



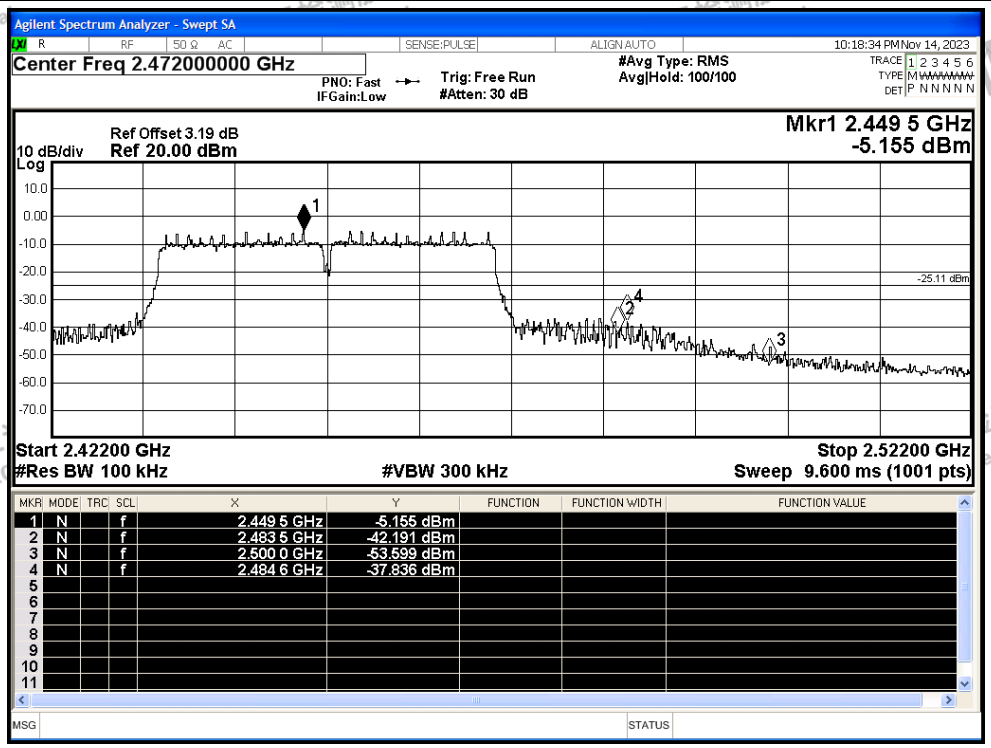
Band Edge NVNT n40 2422MHz Ant1 Emission



Band Edge NVNT n40 2452MHz Ant1 Ref



Band Edge NVNT n40 2452MHz Ant1 Emission



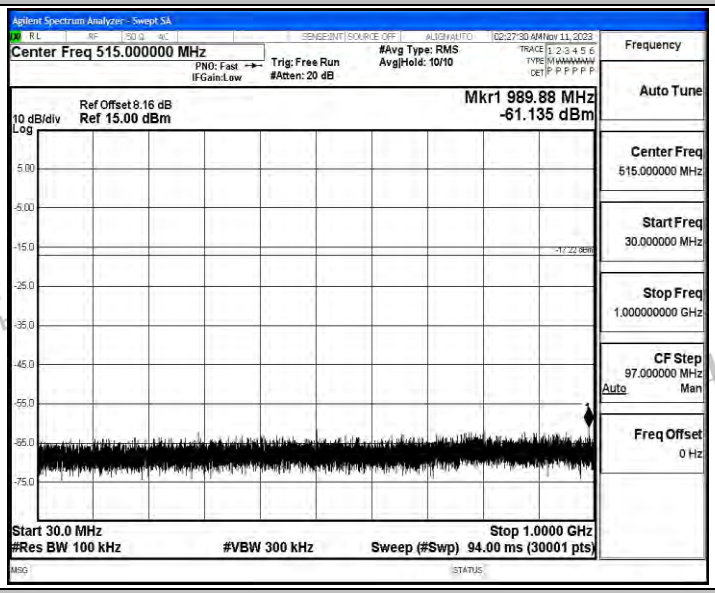
B.5 Conducted Spurious Emission

Test Result

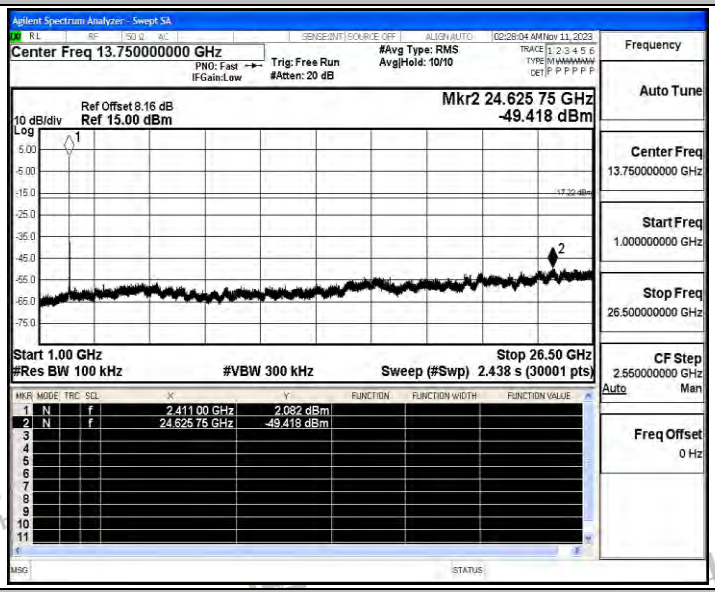
TestMode	Antenna	Freq(MHz)	FreqRange [Mhz]	RefLevel [dBm]	Result [dBm]	Limit [dBm]	Verdict
11B	Ant0	2412	30~1000	2.78	-61.14	≤-17.22	PASS
			1000~26500	2.78	-49.42	≤-17.22	PASS
		2437	30~1000	2.87	-61.16	≤-17.13	PASS
			1000~26500	2.87	-49.08	≤-17.13	PASS
		2462	30~1000	1.91	-61.54	≤-18.09	PASS
			1000~26500	1.91	-49.45	≤-18.09	PASS
11G	Ant0	2412	30~1000	0.75	-61.19	≤-19.25	PASS
			1000~26500	0.75	-48.88	≤-19.25	PASS
		2437	30~1000	2.34	-61.61	≤-17.66	PASS
			1000~26500	2.34	-48.89	≤-17.66	PASS
		2462	30~1000	-1.34	-60.69	≤-21.34	PASS
			1000~26500	-1.34	-48.57	≤-21.34	PASS
11N20SISO	Ant0	2412	30~1000	-1.36	-60.74	≤-21.36	PASS
			1000~26500	-1.36	-49.59	≤-21.36	PASS
		2437	30~1000	-1.17	-61.73	≤-21.17	PASS
			1000~26500	-1.17	-49.54	≤-21.17	PASS
		2462	30~1000	-2.35	-61.87	≤-22.35	PASS
			1000~26500	-2.35	-46.44	≤-22.35	PASS
11N40SISO	Ant0	2422	30~1000	-5.07	-61.27	≤-25.07	PASS
			1000~26500	-5.07	-43.67	≤-25.07	PASS
		2437	30~1000	-7.53	-61.8	≤-27.53	PASS
			1000~26500	-7.53	-47.14	≤-27.53	PASS
		2452	30~1000	-7.78	-61.33	≤-27.78	PASS
			1000~26500	-7.78	-48.77	≤-27.78	PASS

Test Graphs

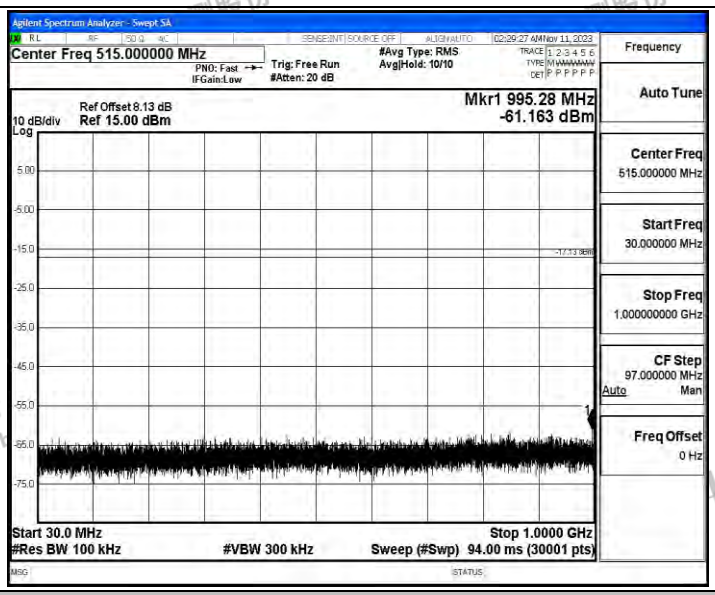
11B_Ant0_2412_30~1000



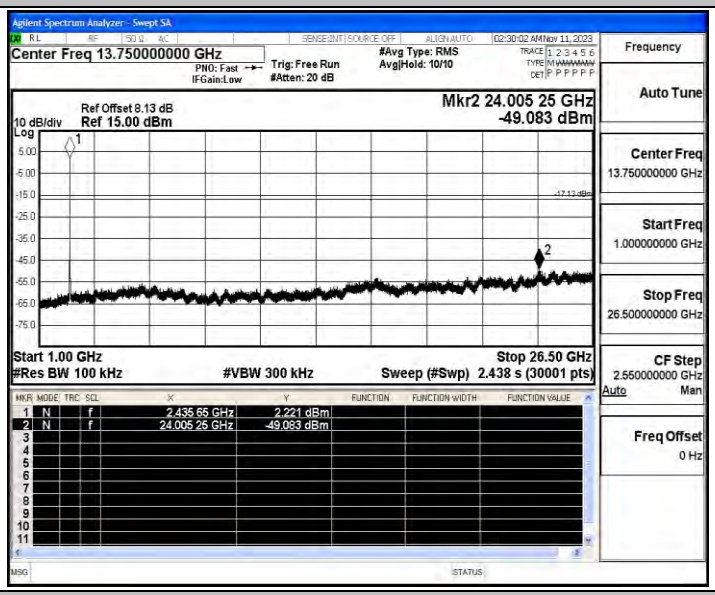
11B_Ant0_2412_1000~26500



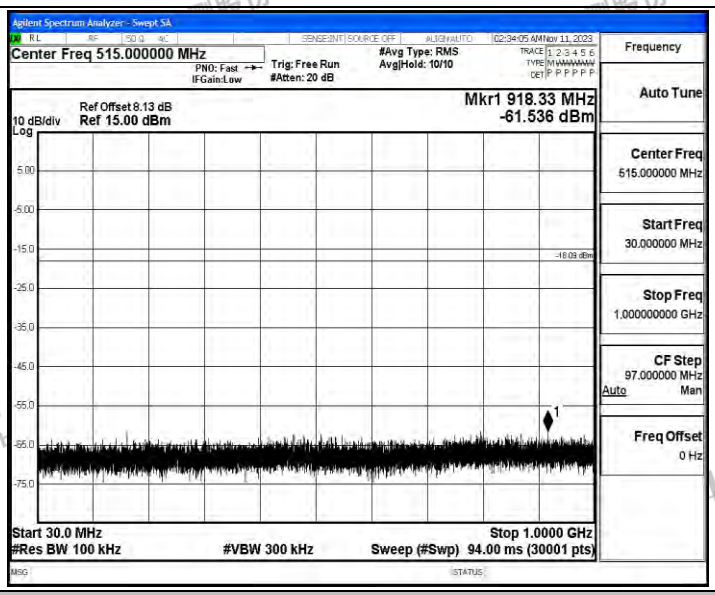
11B_Ant0_2437_30~1000



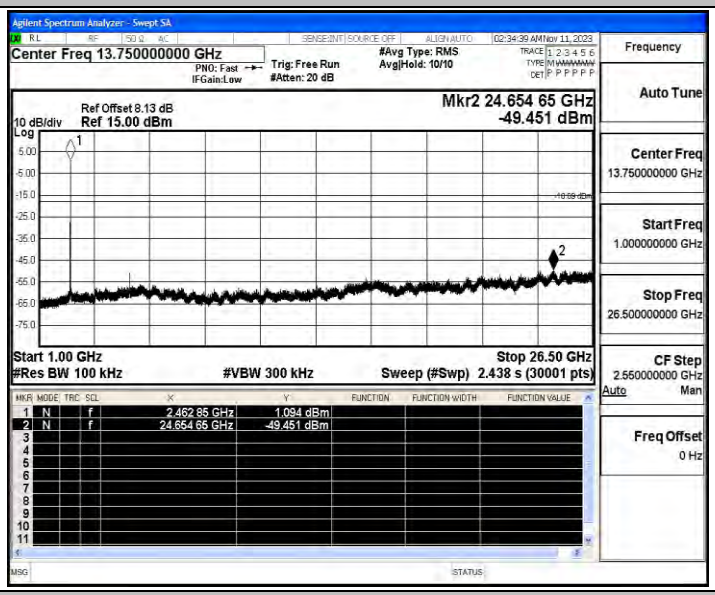
11B_Ant0_2437_1000~26500



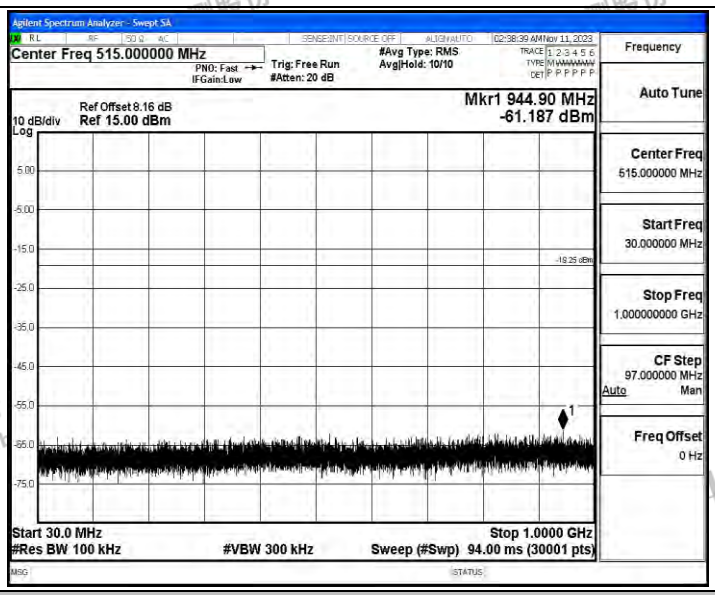
11B_Ant0_2462_30~1000



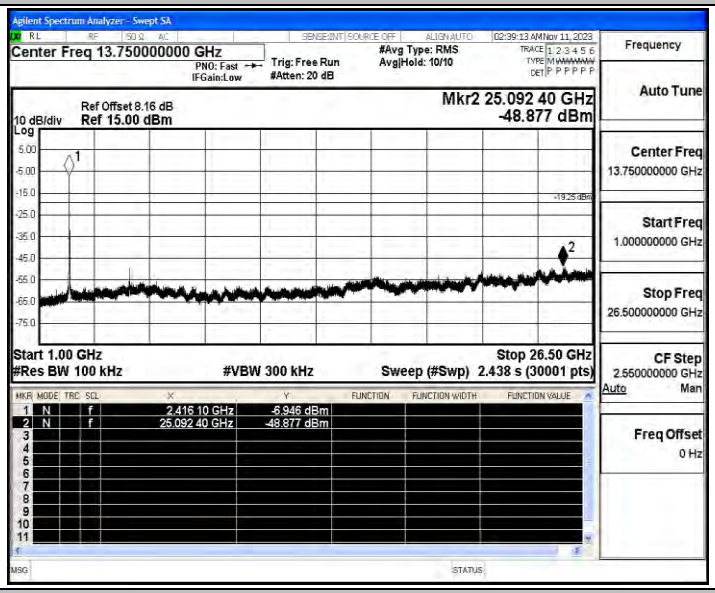
11B_Ant0_2462_1000~26500



11G_Ant0_2412_30~1000



11G_Ant0_2412_1000~26500



11G_Ant0_2437_30~1000