Appendix C

RF Test Data for 2.4G WIFI (Conducted Measurement)

Product Name: IPTV Set-Top Box

Test Model: SML-5045W

Environmental Conditions

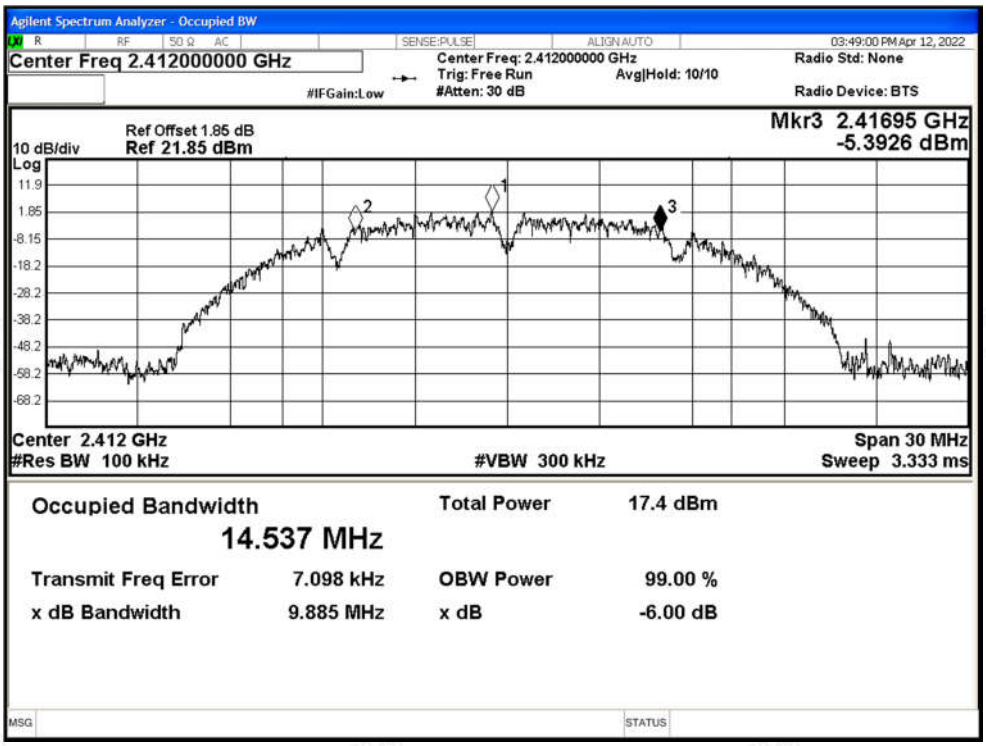
Temperature:	23.5℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Wunder Wu
Supervised by:	Li Huan

C.1 -6dB Bandwidth

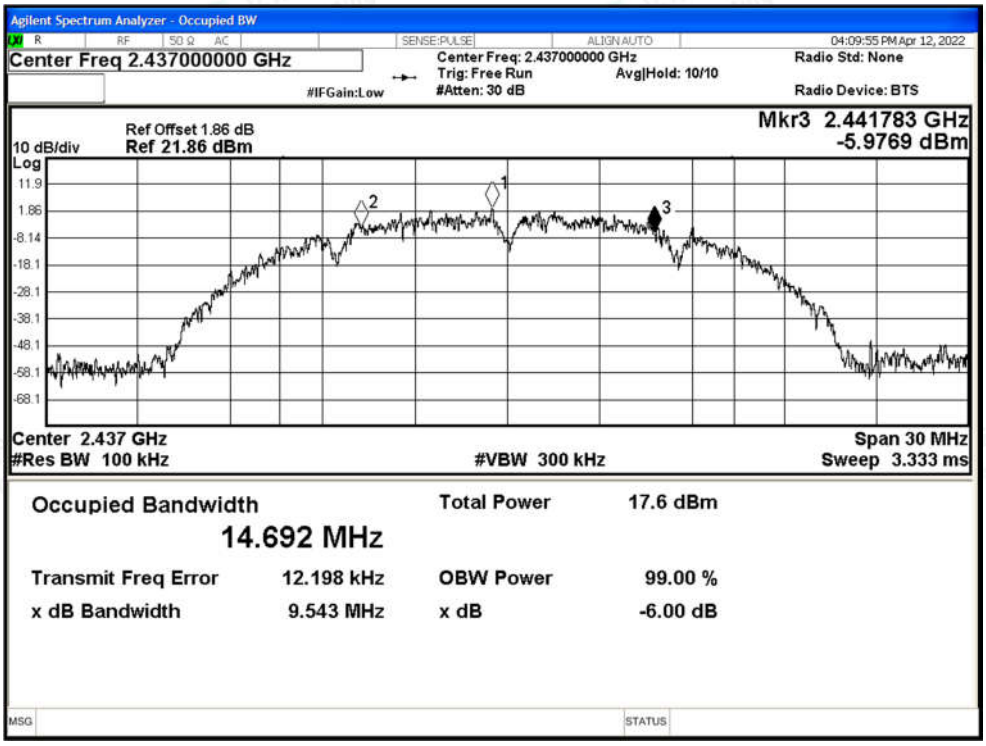
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant0	9.885	0.5	Pass
NVNT	b	2437	Ant0	9.543	0.5	Pass
NVNT	b	2462	Ant0	10.821	0.5	Pass
NVNT	g	2412	Ant0	15.092	0.5	Pass
NVNT	g	2437	Ant0	15.91	0.5	Pass
NVNT	g	2462	Ant0	16.318	0.5	Pass
NVNT	n20	2412	Ant0	17.532	0.5	Pass
NVNT	n20	2437	Ant0	17.641	0.5	Pass
NVNT	n20	2462	Ant0	16.907	0.5	Pass
NVNT	n40	2422	Ant0	30.055	0.5	Pass
NVNT	n40	2437	Ant0	34.058	0.5	Pass
NVNT	n40	2452	Ant0	35.772	0.5	Pass

Test Graphs

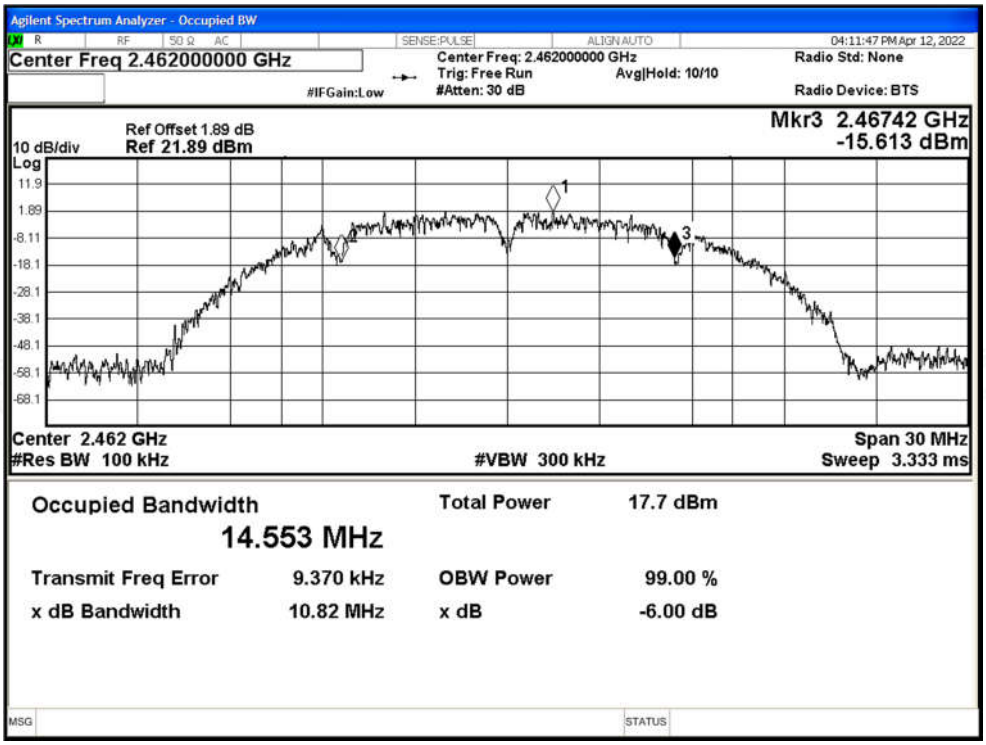
-6dB Bandwidth NVNT b 2412MHz Ant0



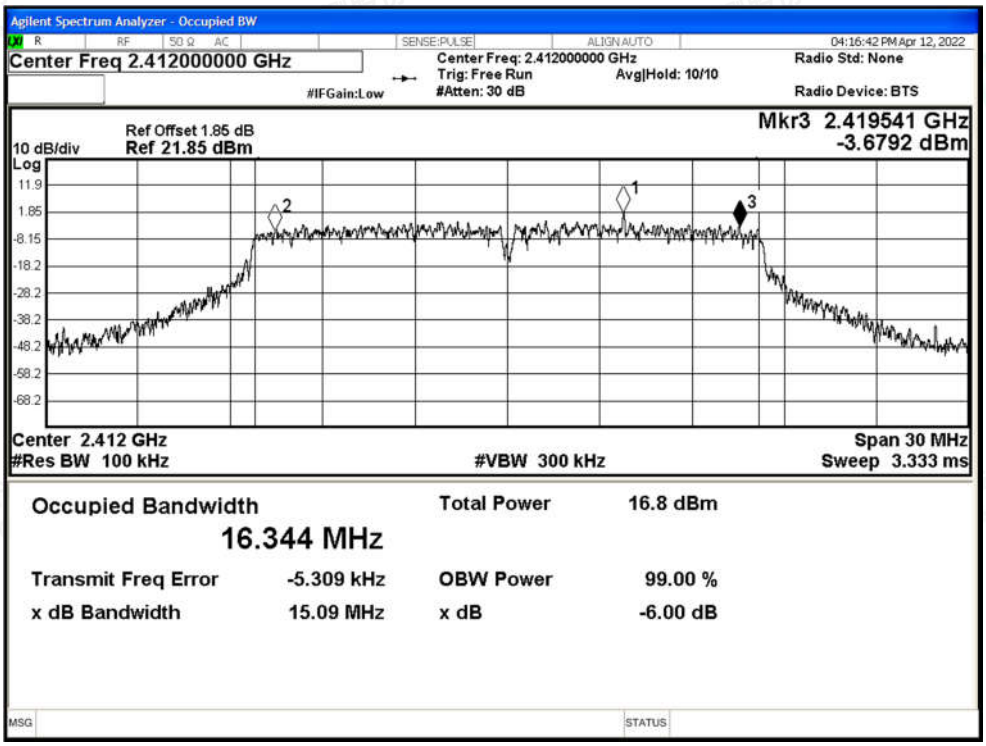
-6dB Bandwidth NVNT b 2437MHz Ant0



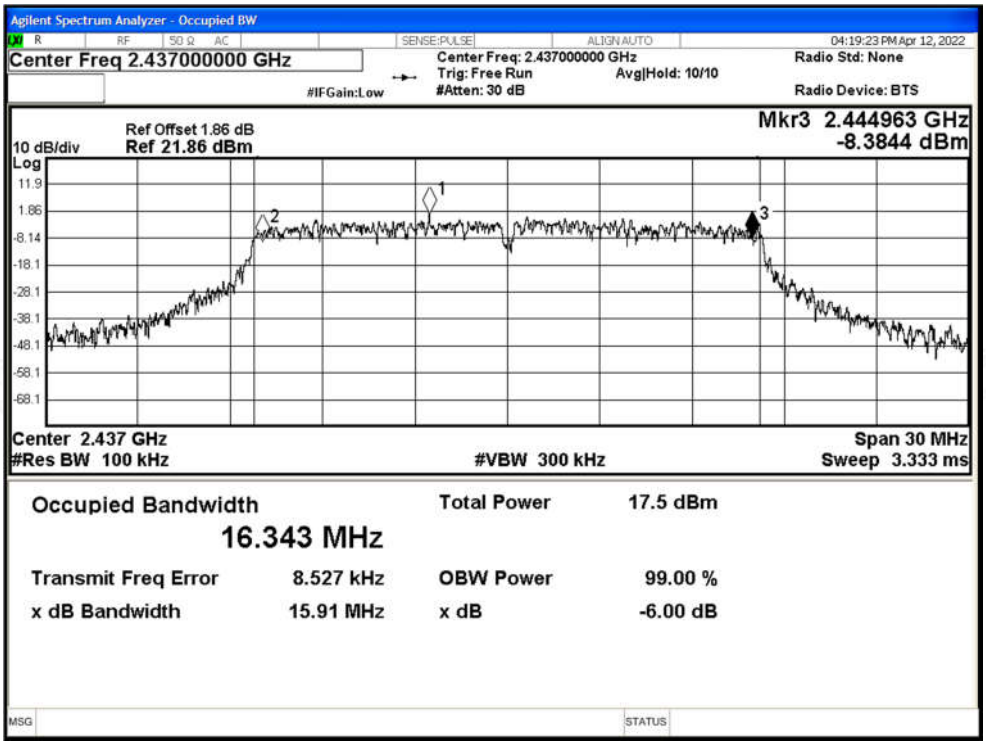
-6dB Bandwidth NVNT b 2462MHz Ant0



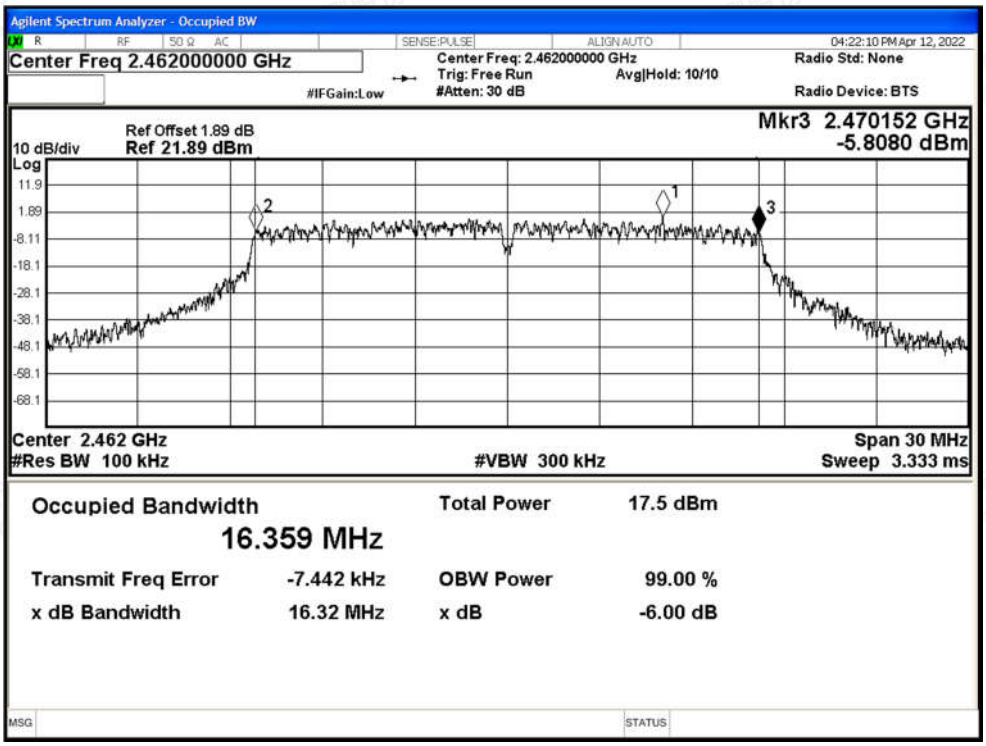
-6dB Bandwidth NVNT g 2412MHz Ant0



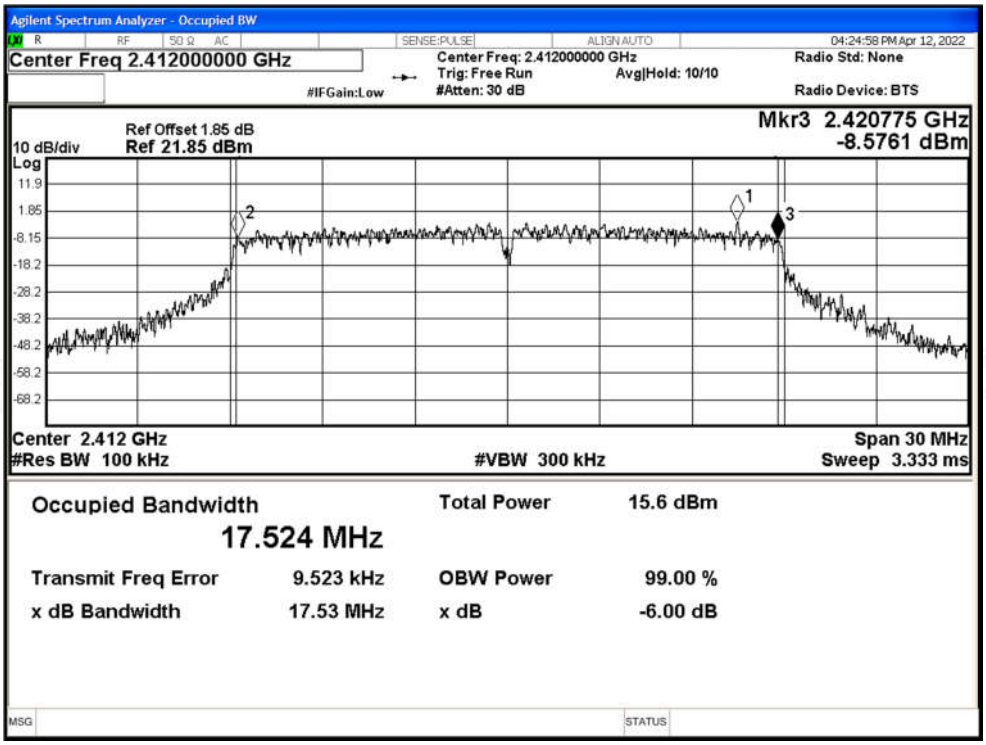
-6dB Bandwidth NVNT g 2437MHz Ant0



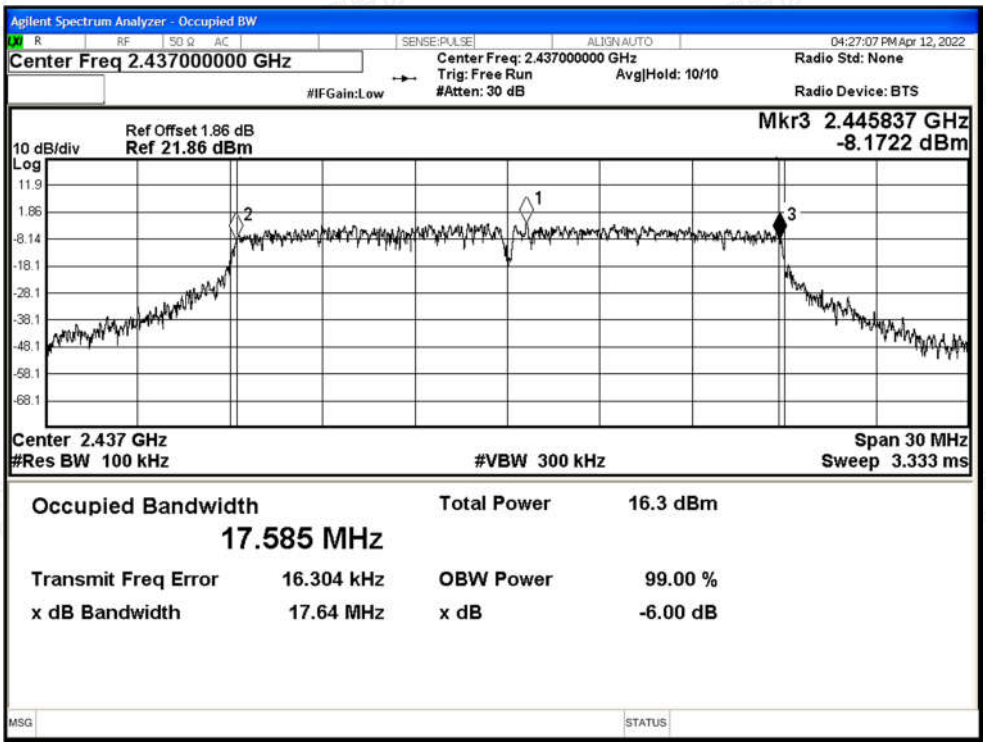
-6dB Bandwidth NVNT g 2462MHz Ant0



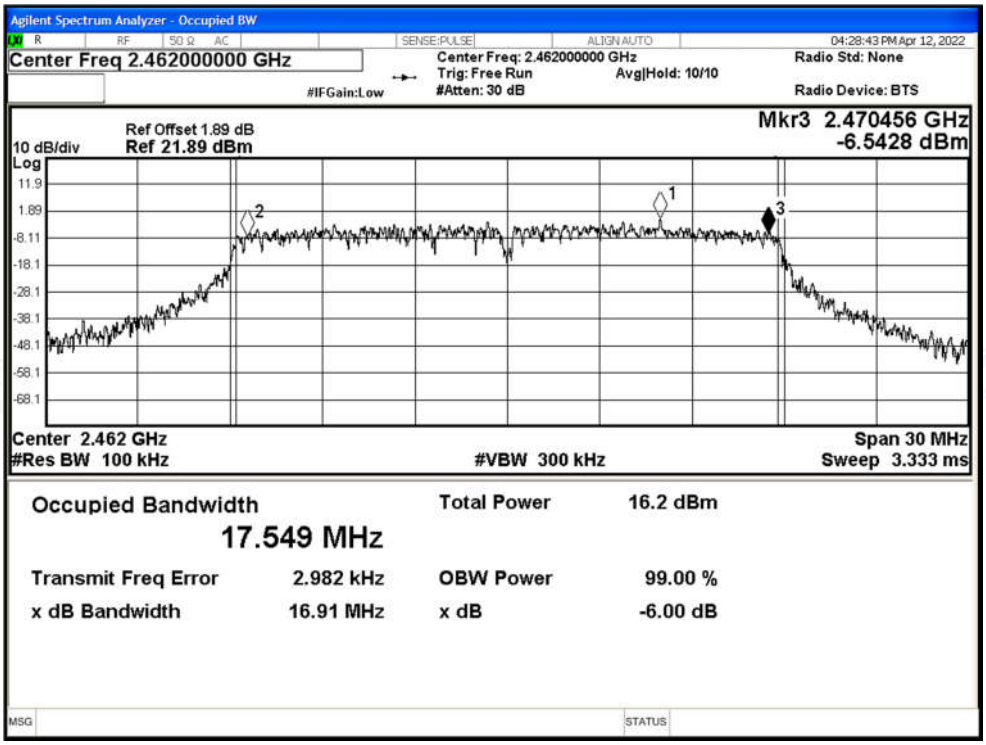
-6dB Bandwidth NVNT n20 2412MHz Ant0



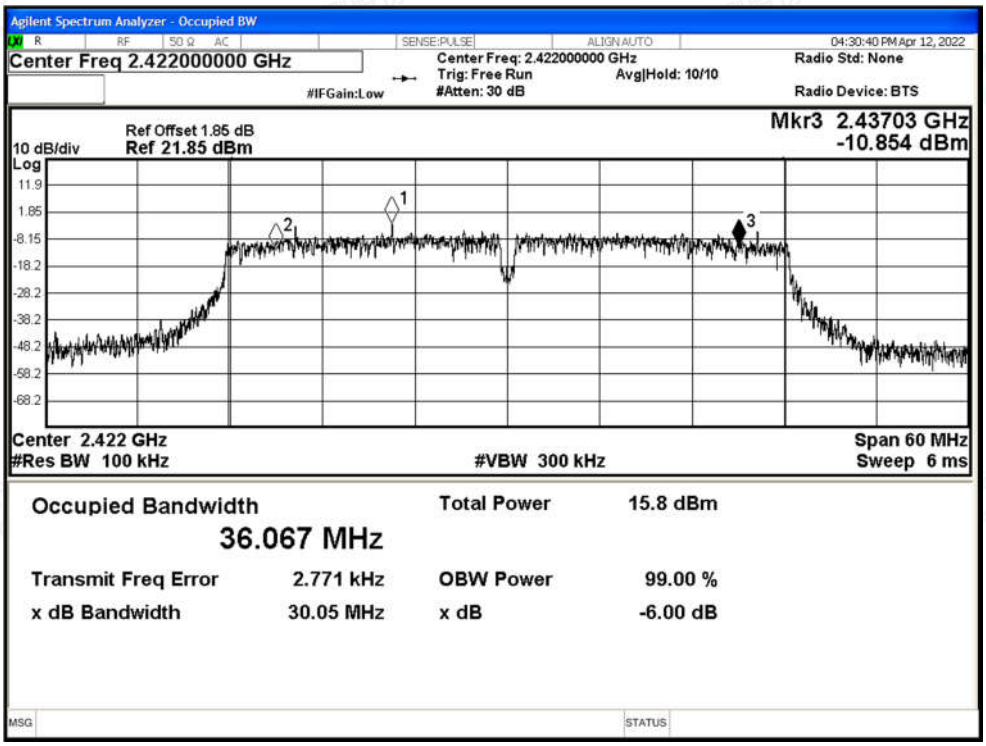
-6dB Bandwidth NVNT n20 2437MHz Ant0



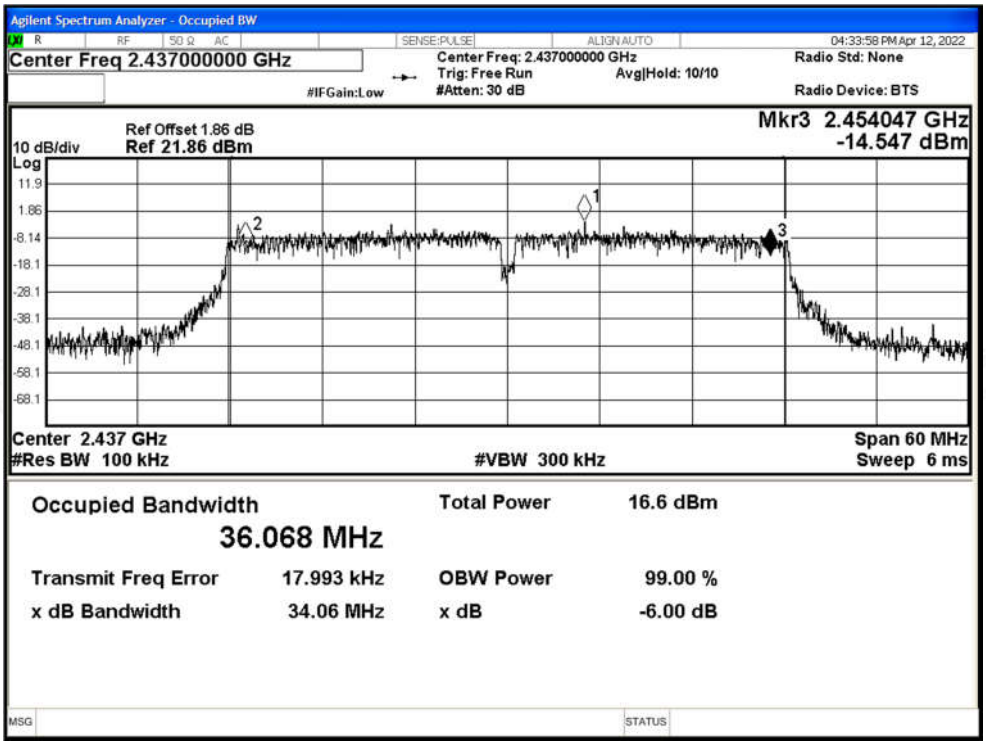
-6dB Bandwidth NVNT n20 2462MHz Ant0



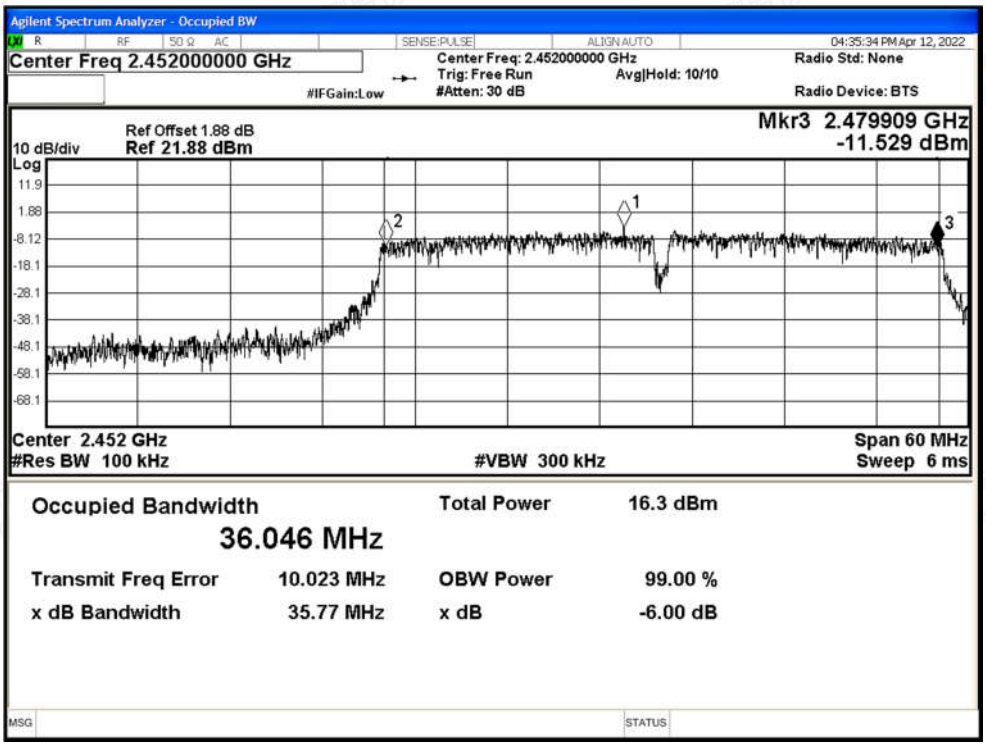
-6dB Bandwidth NVNT n40 2422MHz Ant0



-6dB Bandwidth NVNT n40 2437MHz Ant0



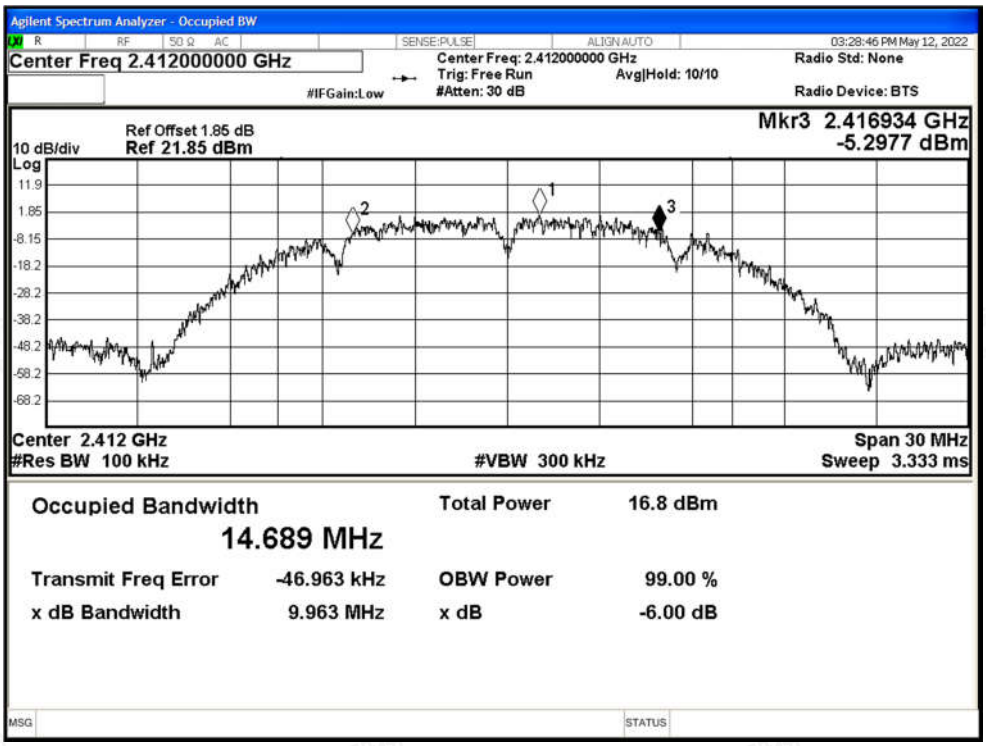
-6dB Bandwidth NVNT n40 2452MHz Ant0



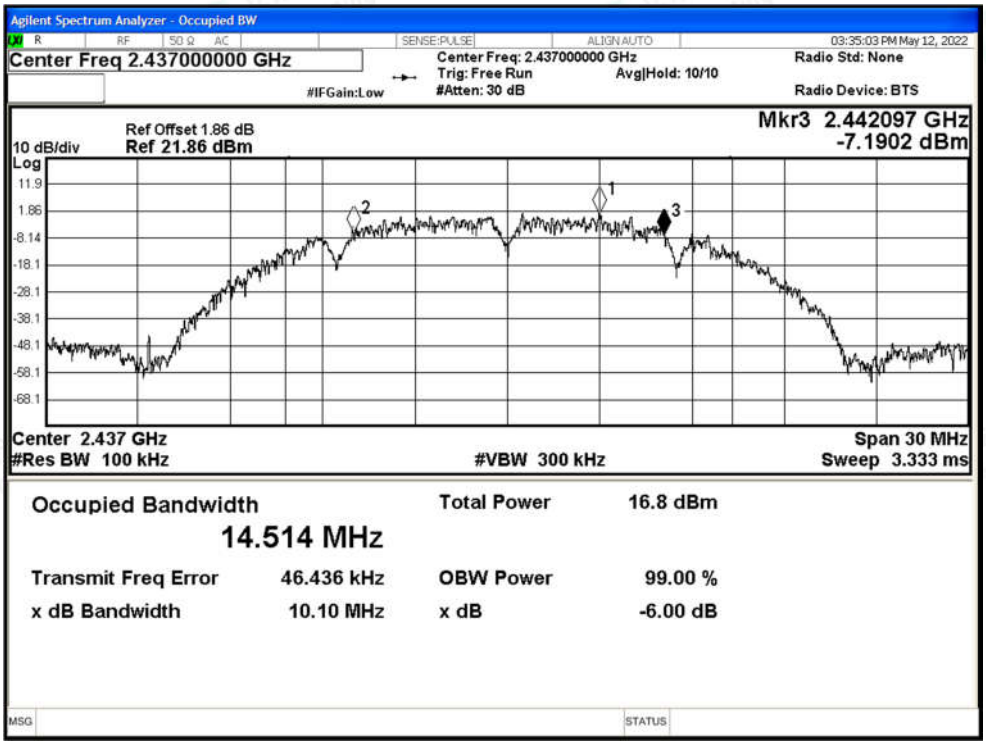
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.963	0.5	Pass
NVNT	b	2437	Ant1	10.102	0.5	Pass
NVNT	b	2462	Ant1	10.062	0.5	Pass
NVNT	g	2412	Ant1	16.351	0.5	Pass
NVNT	g	2437	Ant1	16.307	0.5	Pass
NVNT	g	2462	Ant1	16.362	0.5	Pass
NVNT	n20	2412	Ant1	17.287	0.5	Pass
NVNT	n20	2437	Ant1	16.326	0.5	Pass
NVNT	n20	2462	Ant1	15.418	0.5	Pass
NVNT	n40	2422	Ant1	30.907	0.5	Pass
NVNT	n40	2437	Ant1	33.189	0.5	Pass
NVNT	n40	2452	Ant1	33.868	0.5	Pass

Test Graphs

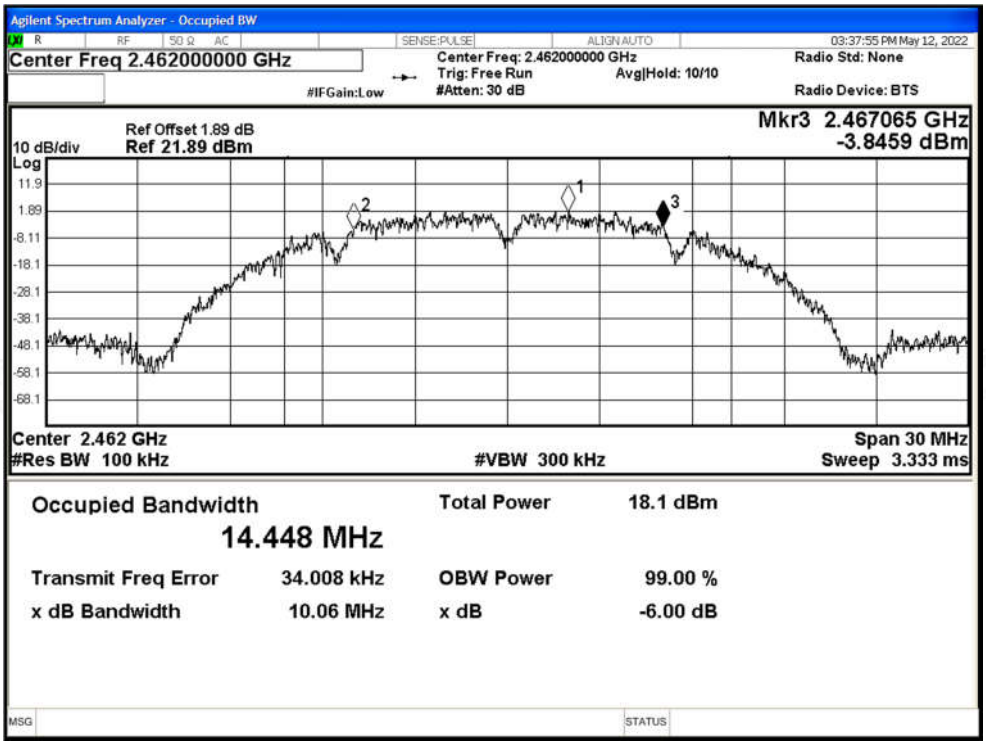
-6dB Bandwidth NVNT b 2412MHz Ant1



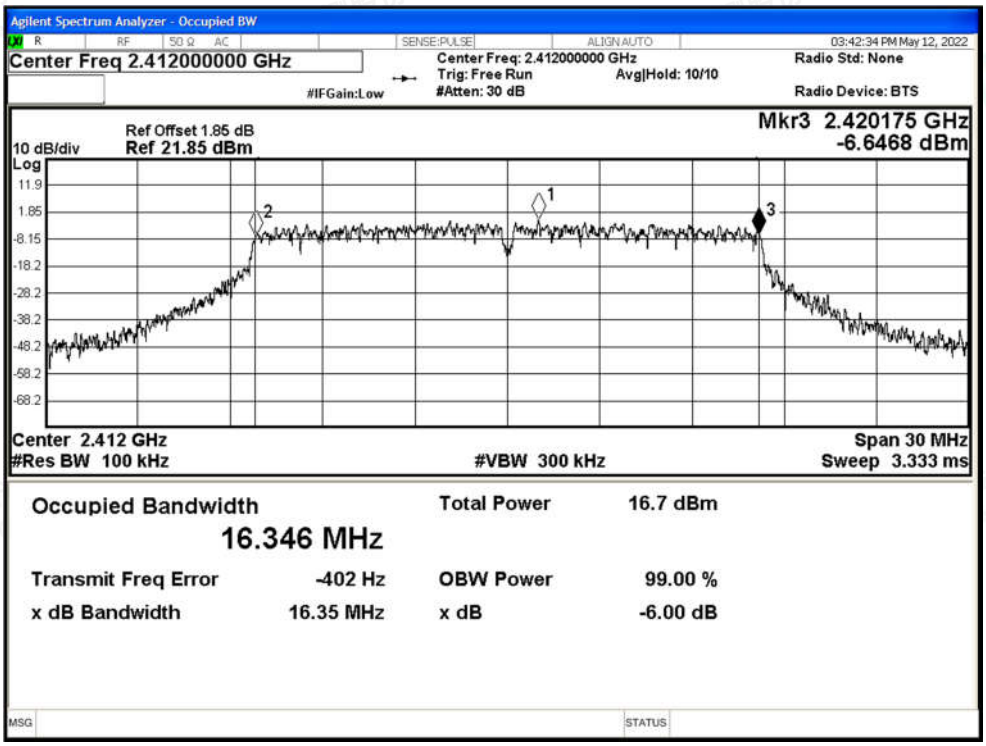
-6dB Bandwidth NVNT b 2437MHz Ant1



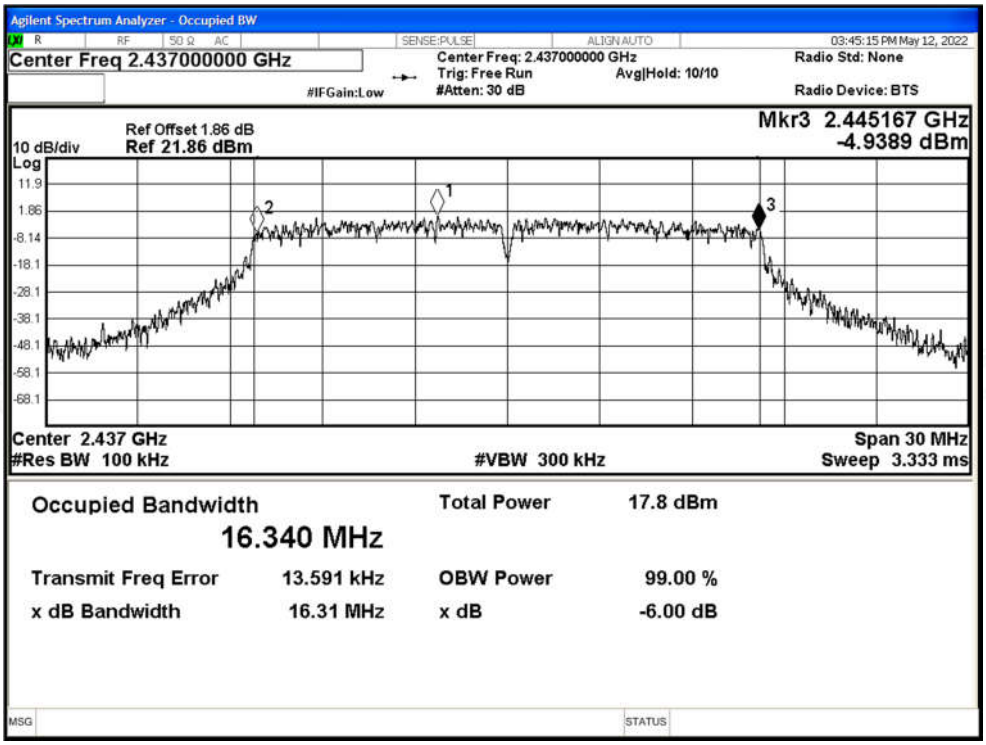
-6dB Bandwidth NVNT b 2462MHz Ant1



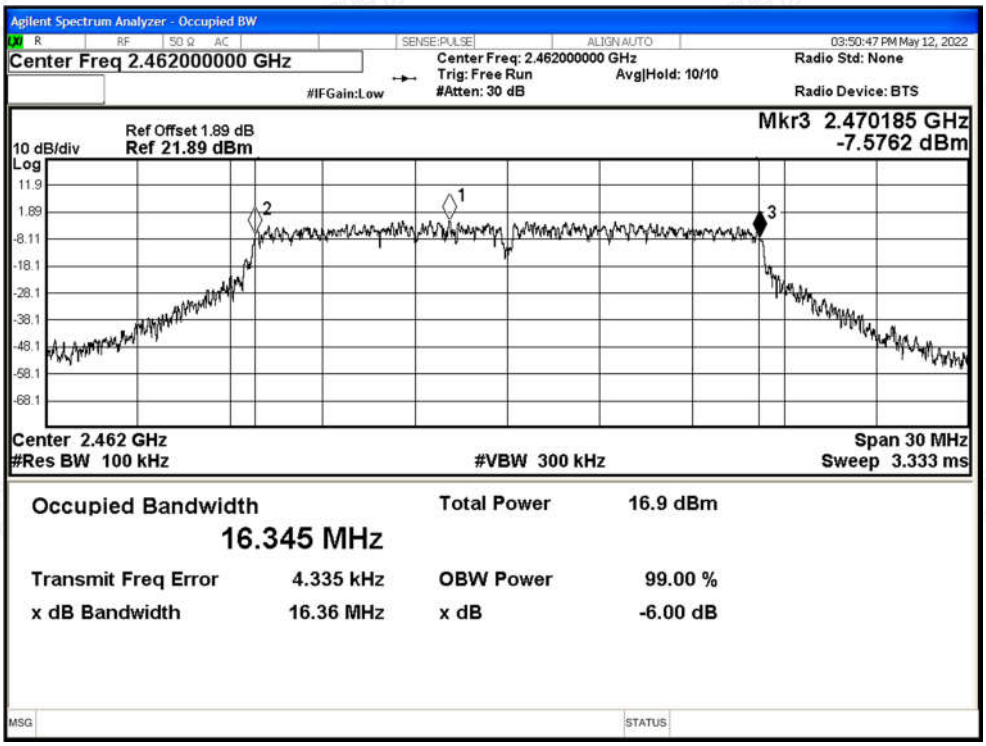
-6dB Bandwidth NVNT g 2412MHz Ant1



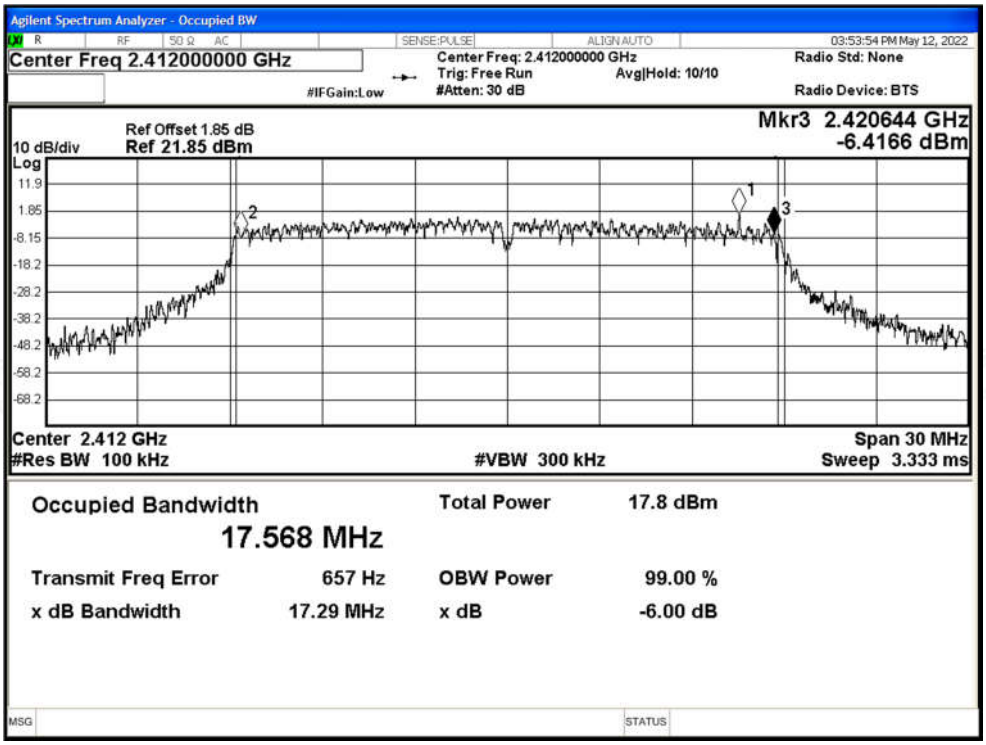
-6dB Bandwidth NVNT g 2437MHz Ant1



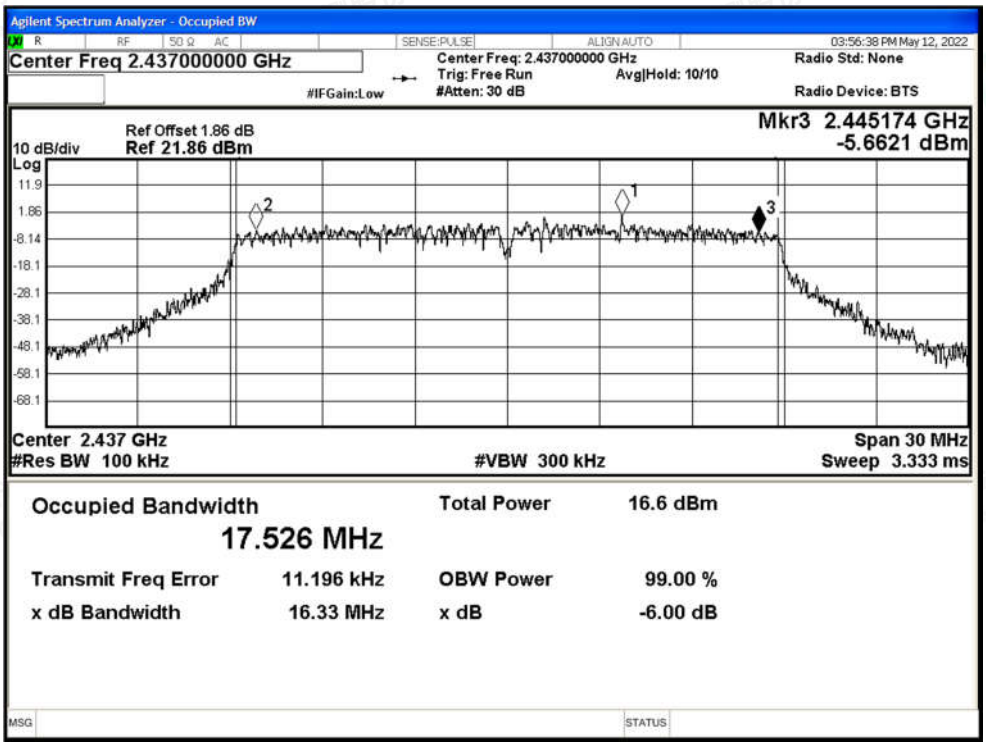
-6dB Bandwidth NVNT g 2462MHz Ant1



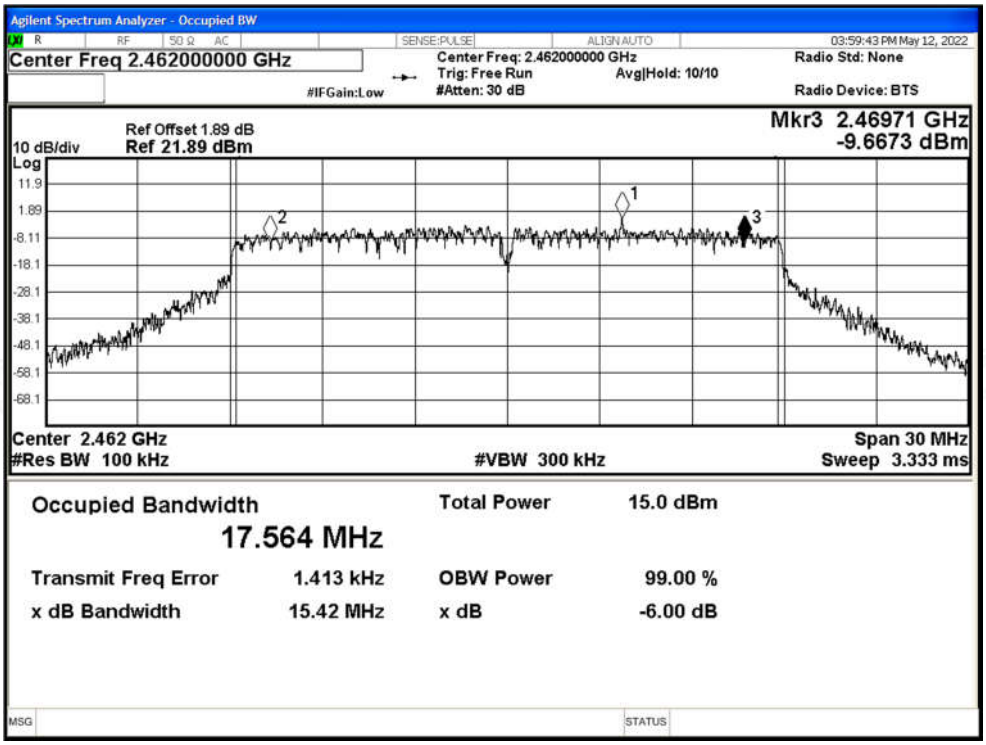
-6dB Bandwidth NVNT n20 2412MHz Ant1



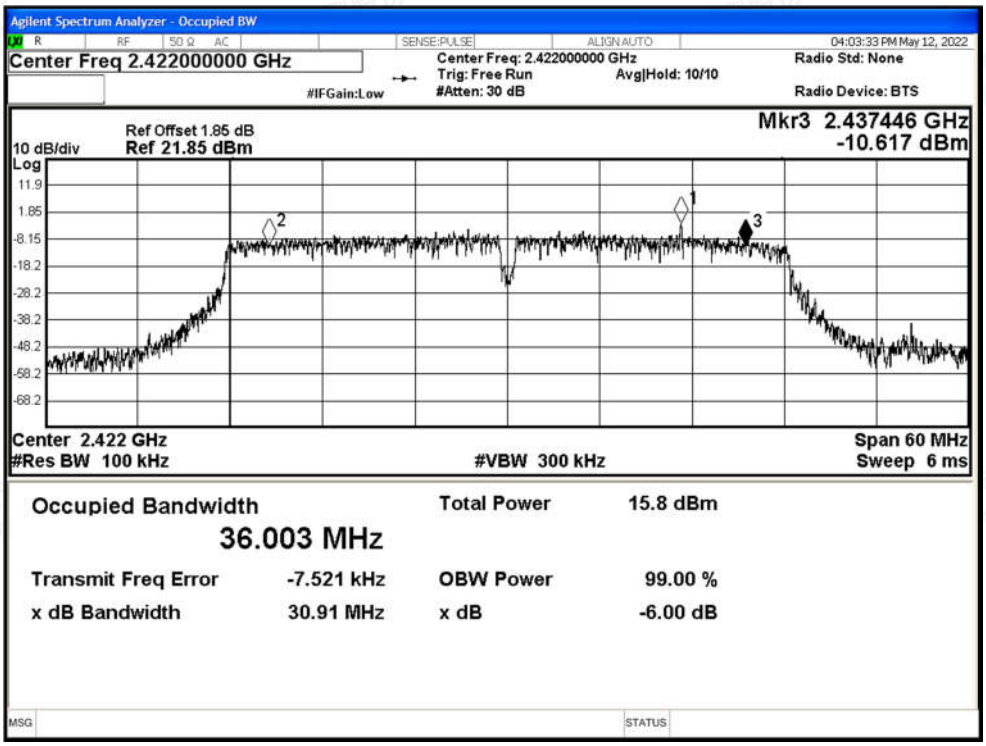
-6dB Bandwidth NVNT n20 2437MHz Ant1



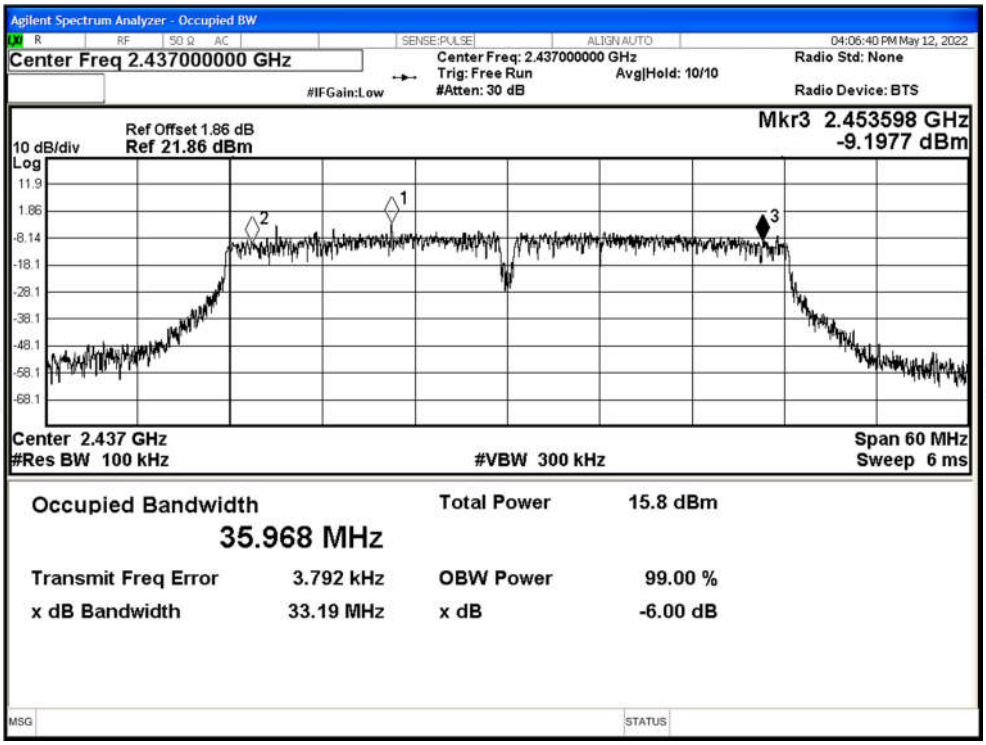
-6dB Bandwidth NVNT n20 2462MHz Ant1



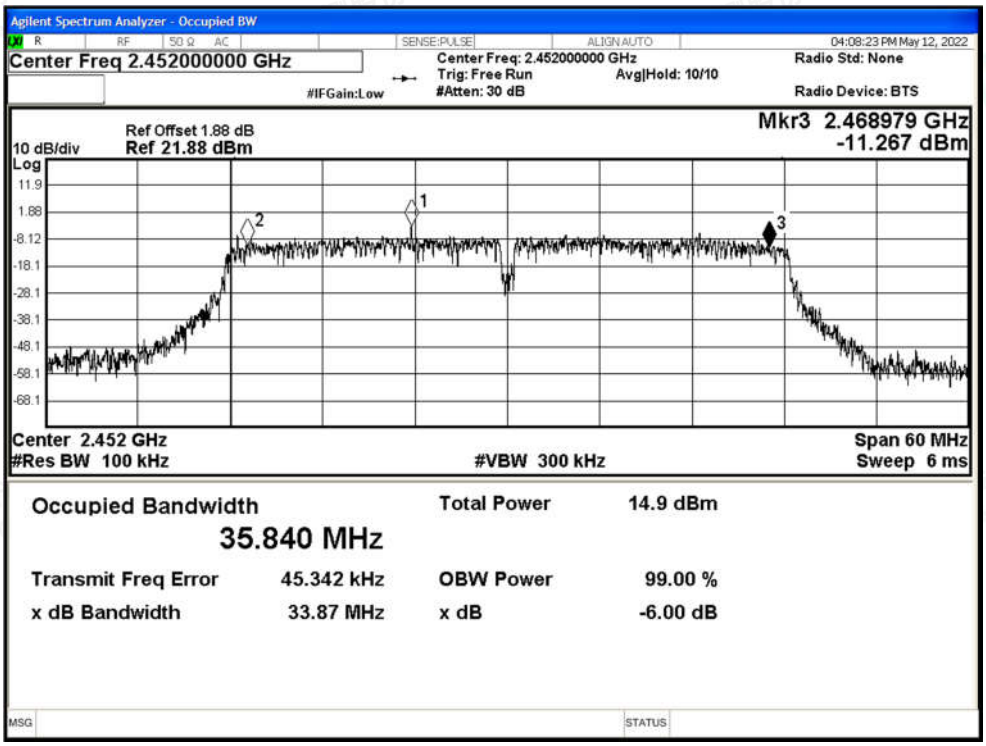
-6dB Bandwidth NVNT n40 2422MHz Ant1



-6dB Bandwidth NVNT n40 2437MHz Ant1



-6dB Bandwidth NVNT n40 2452MHz Ant1



C.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant0	13.9	0	13.9	30	Pass
NVNT	b	2437	Ant0	14.21	0	14.21	30	Pass
NVNT	b	2462	Ant0	14.32	0	14.32	30	Pass
NVNT	g	2412	Ant0	15.88	0	15.88	30	Pass
NVNT	g	2437	Ant0	16.21	0	16.21	30	Pass
NVNT	g	2462	Ant0	16.15	0	16.15	30	Pass
NVNT	n20	2412	Ant0	14.44	0	14.44	30	Pass
NVNT	n20	2437	Ant0	15.29	0	15.29	30	Pass
NVNT	n20	2462	Ant0	16.82	0	16.82	30	Pass
NVNT	n40	2422	Ant0	14.47	0	14.47	30	Pass
NVNT	n40	2437	Ant0	15.2	0	15.2	30	Pass
NVNT	n40	2452	Ant0	14.4	0	14.4	30	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	13.45	0	13.45	30	Pass
NVNT	b	2437	Ant1	13.15	0	13.15	30	Pass
NVNT	b	2462	Ant1	14.5	0	14.5	30	Pass
NVNT	g	2412	Ant1	15.6	0	15.6	30	Pass
NVNT	g	2437	Ant1	16.68	0	16.68	30	Pass
NVNT	g	2462	Ant1	15.7	0	15.7	30	Pass
NVNT	n20	2412	Ant1	16.74	0	16.74	30	Pass
NVNT	n20	2437	Ant1	15.38	0	15.38	30	Pass
NVNT	n20	2462	Ant1	15.58	0	15.58	30	Pass
NVNT	n40	2422	Ant1	14.74	0	14.74	30	Pass
NVNT	n40	2437	Ant1	14.28	0	14.28	30	Pass
NVNT	n40	2452	Ant1	13.49	0	13.49	30	Pass

MIMO

Condition	Mode	Frequency (MHz)	Total Power (dBm)			Limit (dBm)	Verdict
			ANT0	ANT1	ANT0+ANT1		
NVNT	n20	2412	14.44	16.74	18.75	30	Pass
NVNT	n20	2437	15.29	15.38	18.35	30	Pass
NVNT	n20	2462	16.82	15.58	19.25	30	Pass
NVNT	n40	2422	14.47	14.74	17.62	30	Pass
NVNT	n40	2437	15.2	14.28	17.77	30	Pass
NVNT	n40	2452	14.4	13.49	16.98	30	Pass

C.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant0	-10.18	0	-10.18	8	Pass
NVNT	b	2437	Ant0	-10.6	0	-10.6	8	Pass
NVNT	b	2462	Ant0	-9.73	0	-9.73	8	Pass
NVNT	g	2412	Ant0	-12.09	0	-12.09	8	Pass
NVNT	g	2437	Ant0	-11.8	0	-11.8	8	Pass
NVNT	g	2462	Ant0	-11.44	0	-11.44	8	Pass
NVNT	n20	2412	Ant0	-14.01	0	-14.01	8	Pass
NVNT	n20	2437	Ant0	-12.37	0	-12.37	8	Pass
NVNT	n20	2462	Ant0	-12.5	0	-12.5	8	Pass
NVNT	n40	2422	Ant0	-16.78	0	-16.78	8	Pass
NVNT	n40	2437	Ant0	-14.32	0	-14.32	8	Pass
NVNT	n40	2452	Ant0	-15.65	0	-15.65	8	Pass

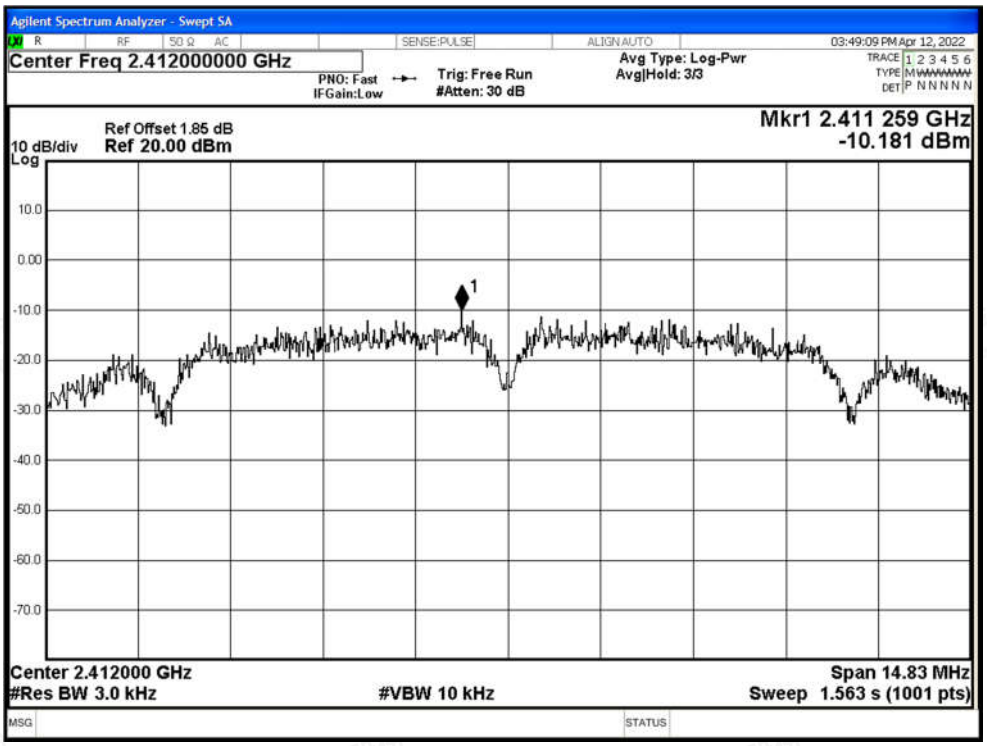
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-11.99	0	-11.99	8	Pass
NVNT	b	2437	Ant1	-10.73	0	-10.73	8	Pass
NVNT	b	2462	Ant1	-9.65	0	-9.65	8	Pass
NVNT	g	2412	Ant1	-12.87	0	-12.87	8	Pass
NVNT	g	2437	Ant1	-12.31	0	-12.31	8	Pass
NVNT	g	2462	Ant1	-12.29	0	-12.29	8	Pass
NVNT	n20	2412	Ant1	-11.85	0	-11.85	8	Pass
NVNT	n20	2437	Ant1	-12.34	0	-12.34	8	Pass
NVNT	n20	2462	Ant1	-13.35	0	-13.35	8	Pass
NVNT	n40	2422	Ant1	-16.38	0	-16.38	8	Pass
NVNT	n40	2437	Ant1	-16.02	0	-16.02	8	Pass
NVNT	n40	2452	Ant1	-16.33	0	-16.33	8	Pass

MIMO

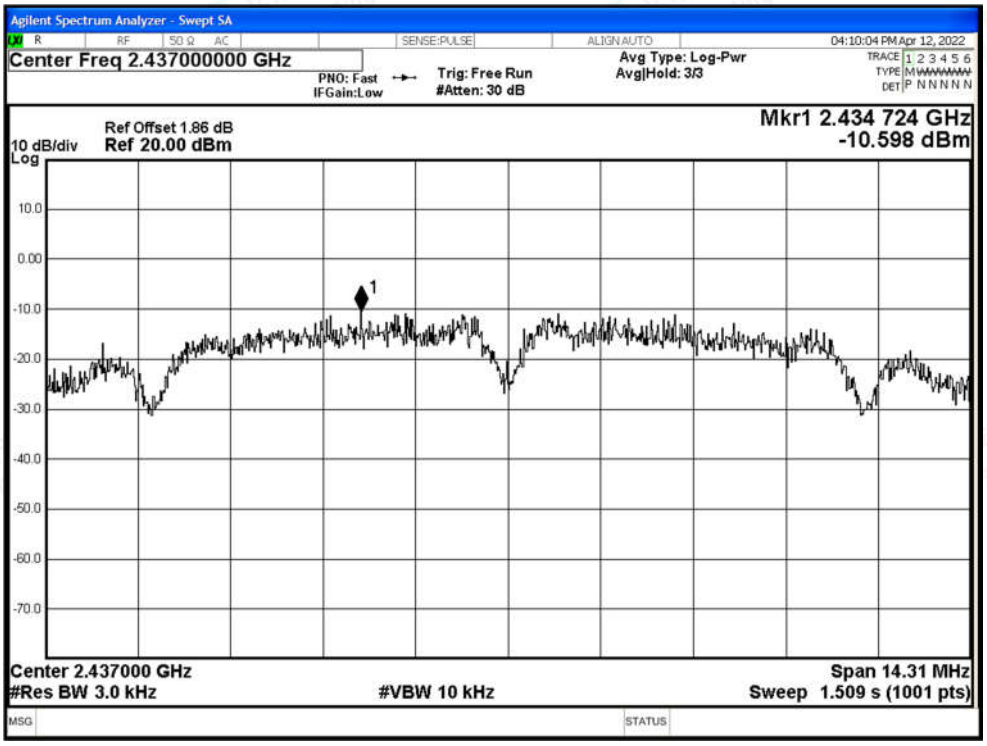
Condition	Mode	Frequency (MHz)	Total PSD (dBm/3kHz)			Limit (dBm/3kHz)	Verdict
			ANT0	ANT1	ANT0+ANT1		
NVNT	n20	2412	-14.01	-11.85	-9.79	8	Pass
NVNT	n20	2437	-12.37	-12.34	-9.34	8	Pass
NVNT	n20	2462	-12.5	-13.35	-9.89	8	Pass
NVNT	n40	2422	-16.78	-16.38	-13.57	8	Pass
NVNT	n40	2437	-14.32	-16.02	-12.08	8	Pass
NVNT	n40	2452	-15.65	-16.33	-12.97	8	Pass

Test Graphs

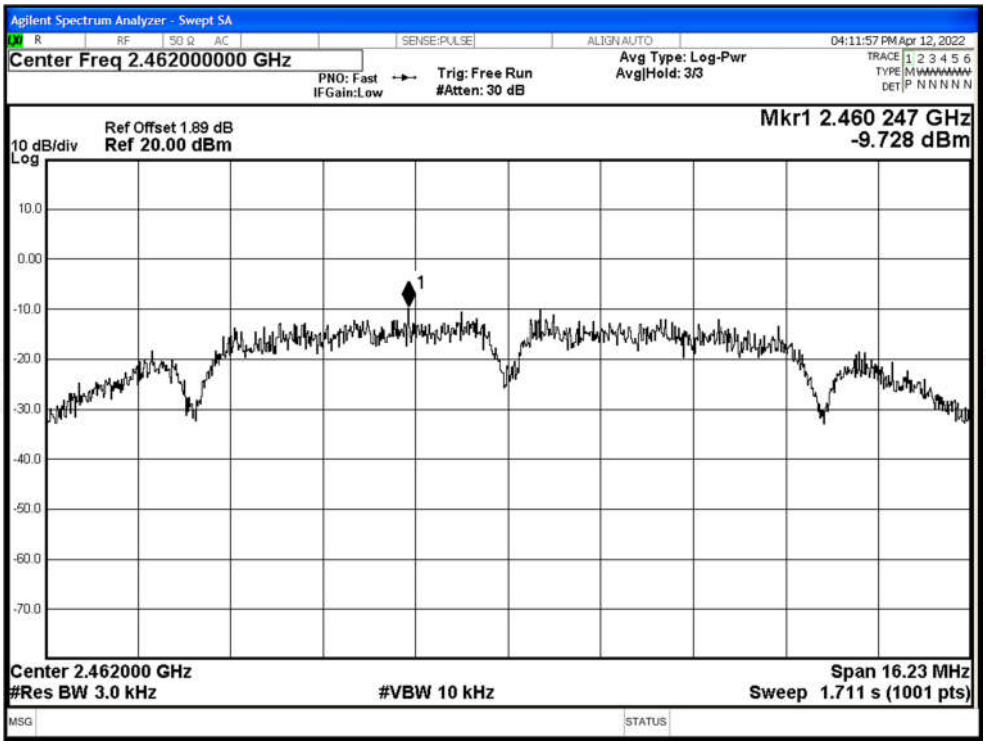
PSD NVNT b 2412MHz Ant0



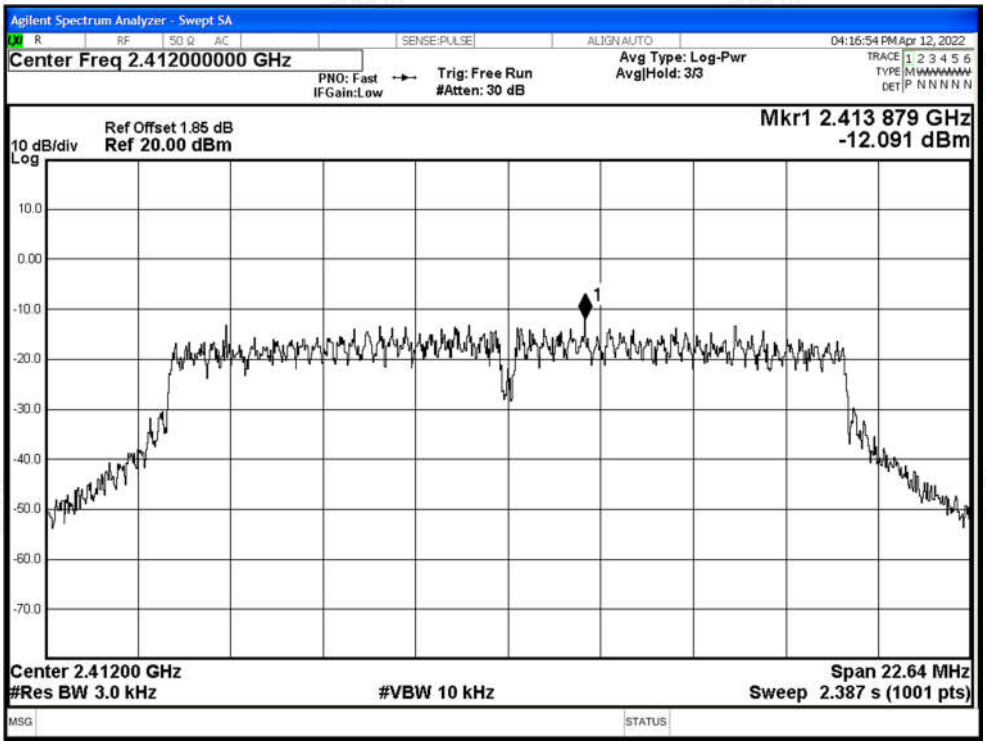
PSD NVNT b 2437MHz Ant0



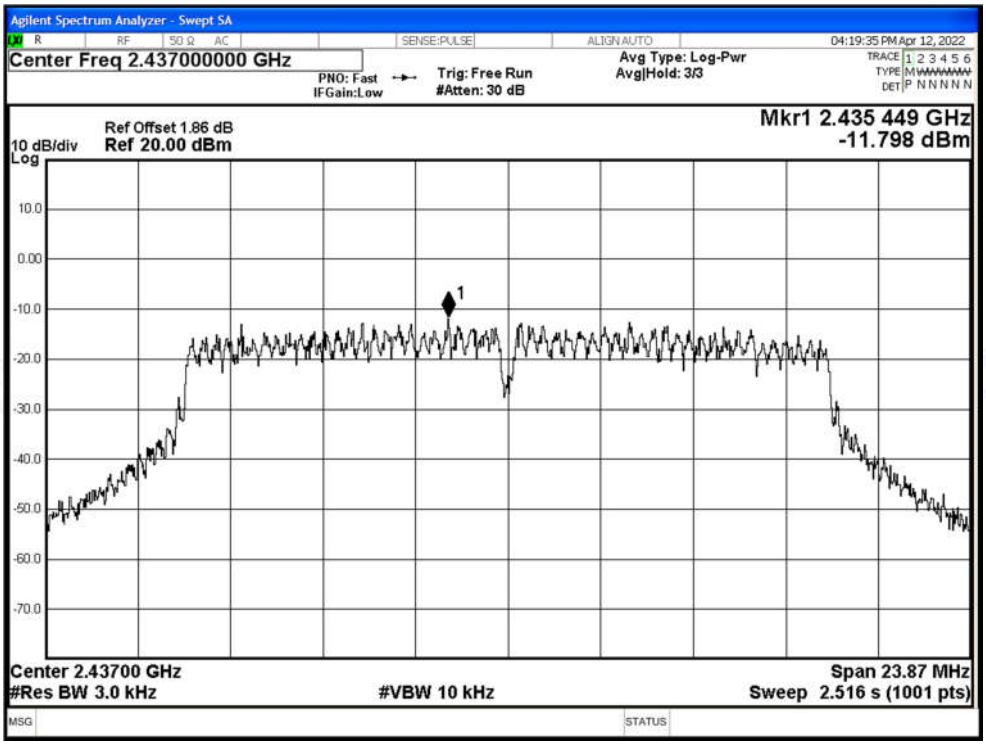
PSD NVNT b 2462MHz Ant0



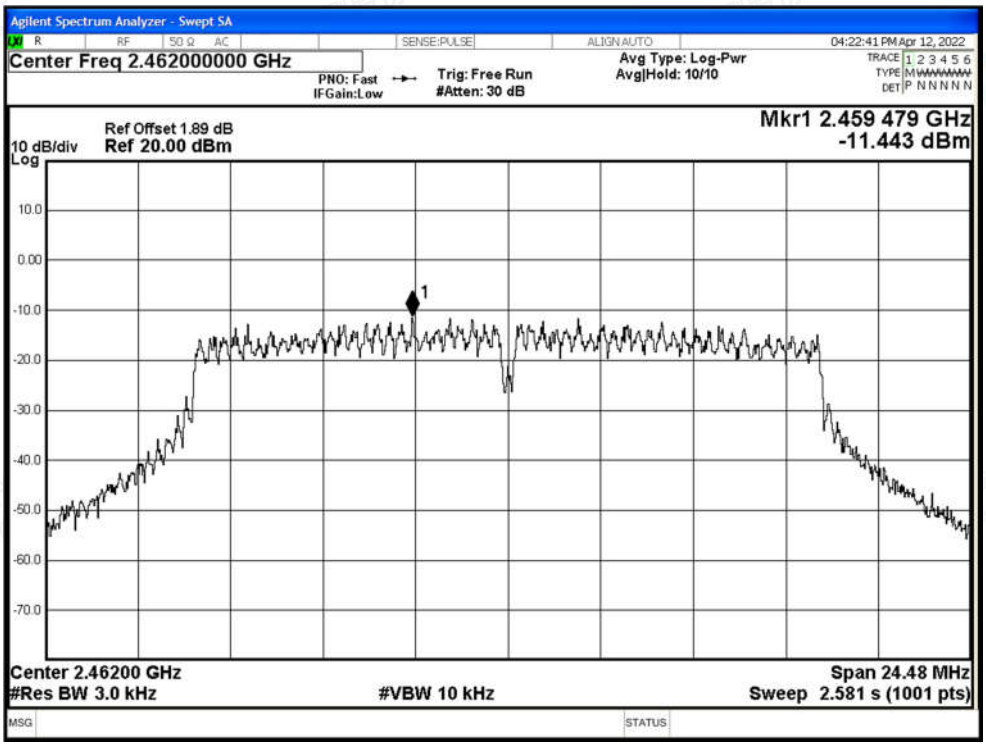
PSD NVNT g 2412MHz Ant0



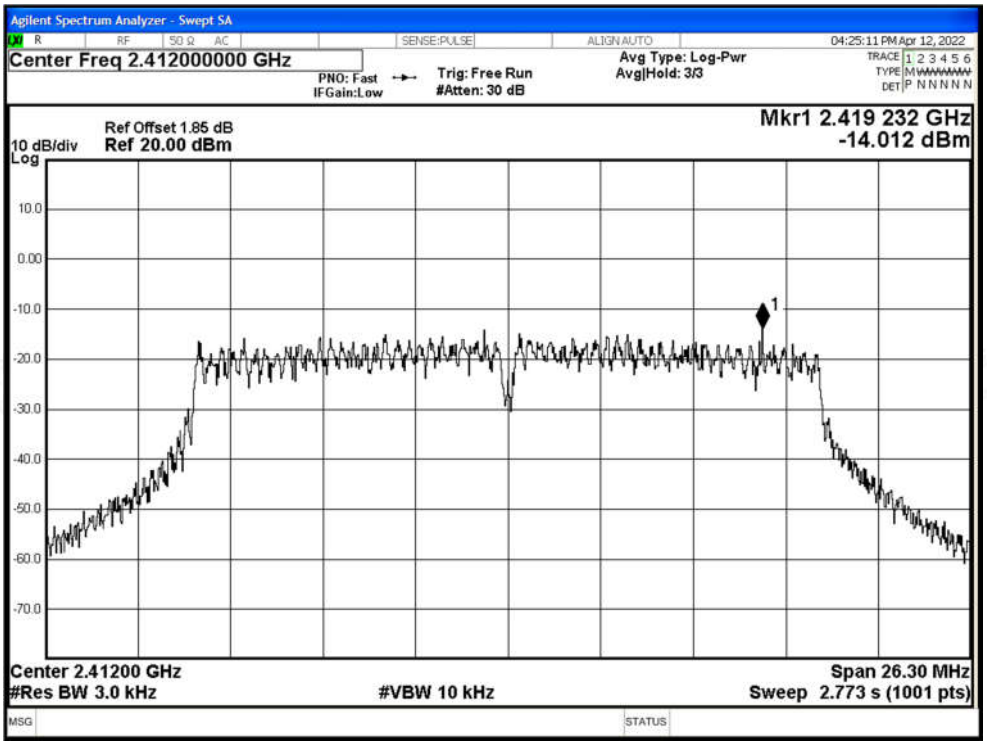
PSD NVNT g 2437MHz Ant0



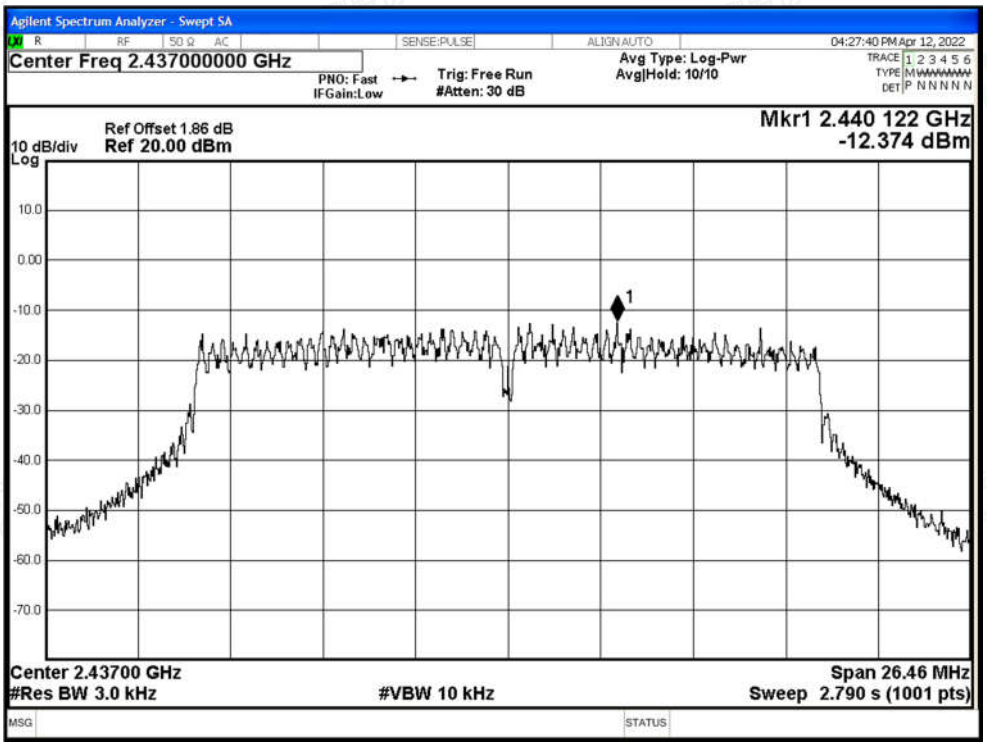
PSD NVNT g 2462MHz Ant0



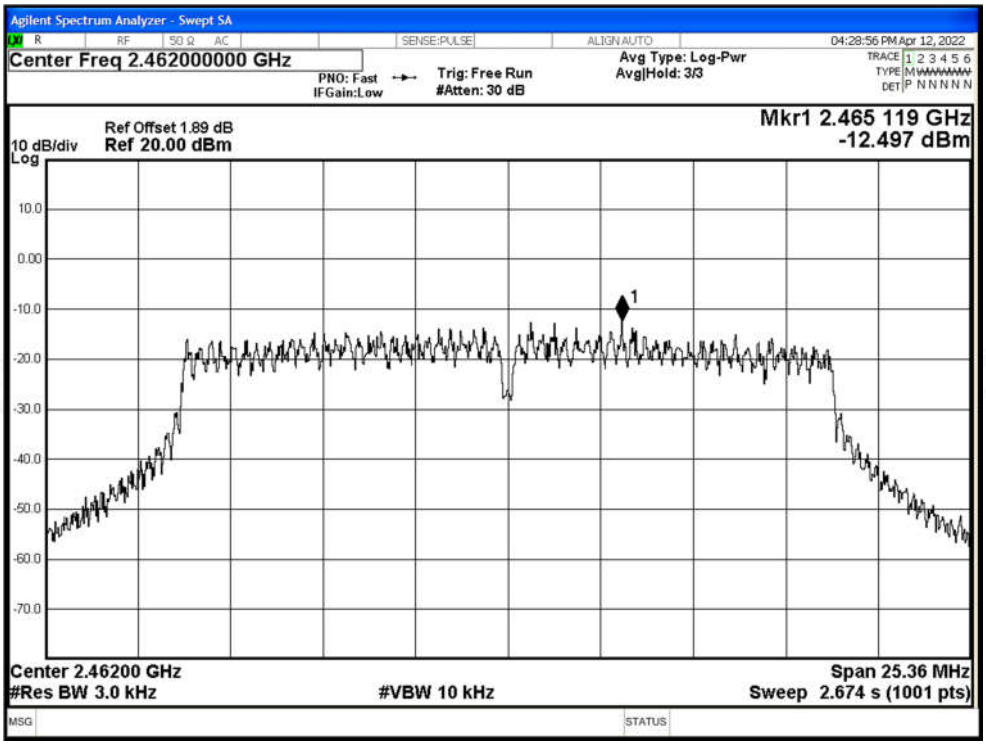
PSD NVNT n20 2412MHz Ant0



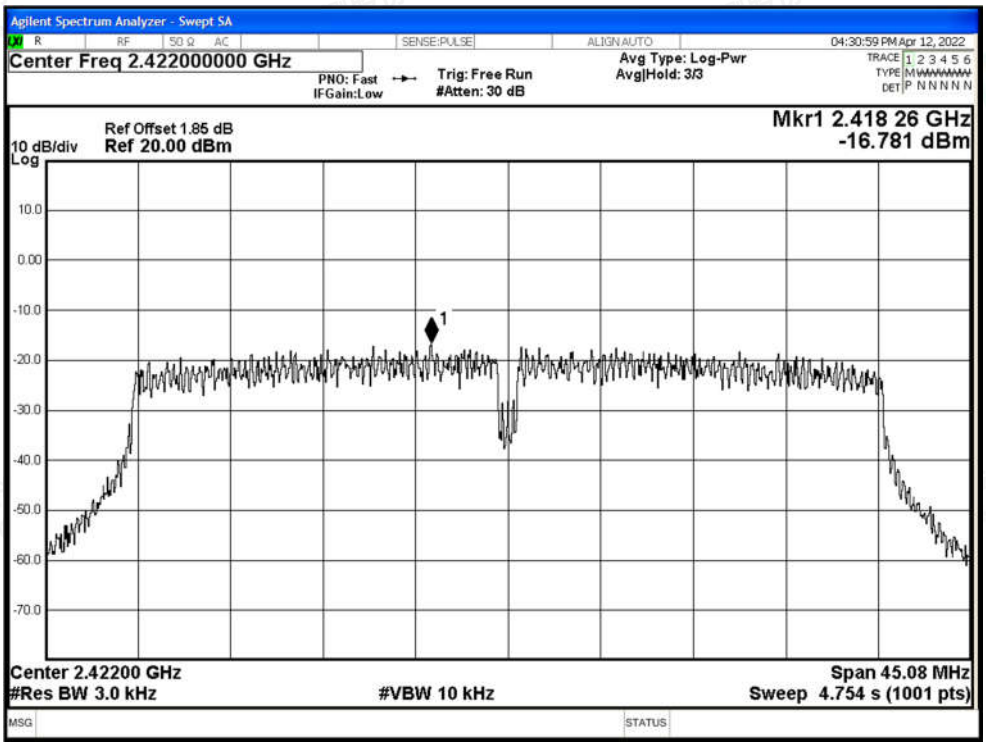
PSD NVNT n20 2437MHz Ant0



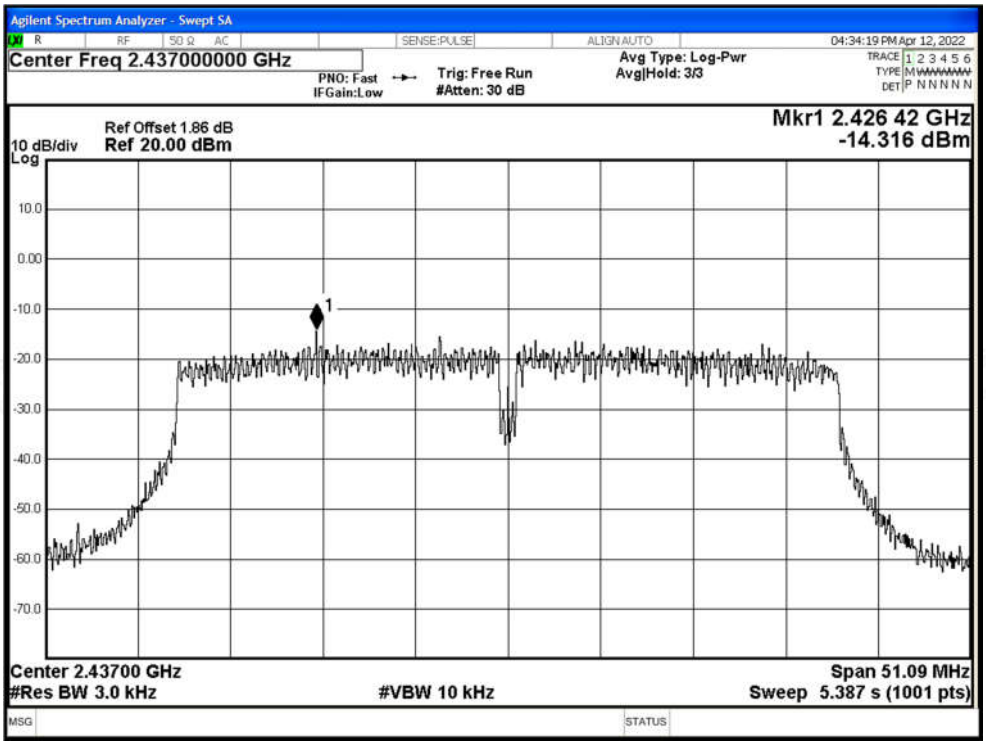
PSD NVNT n20 2462MHz Ant0



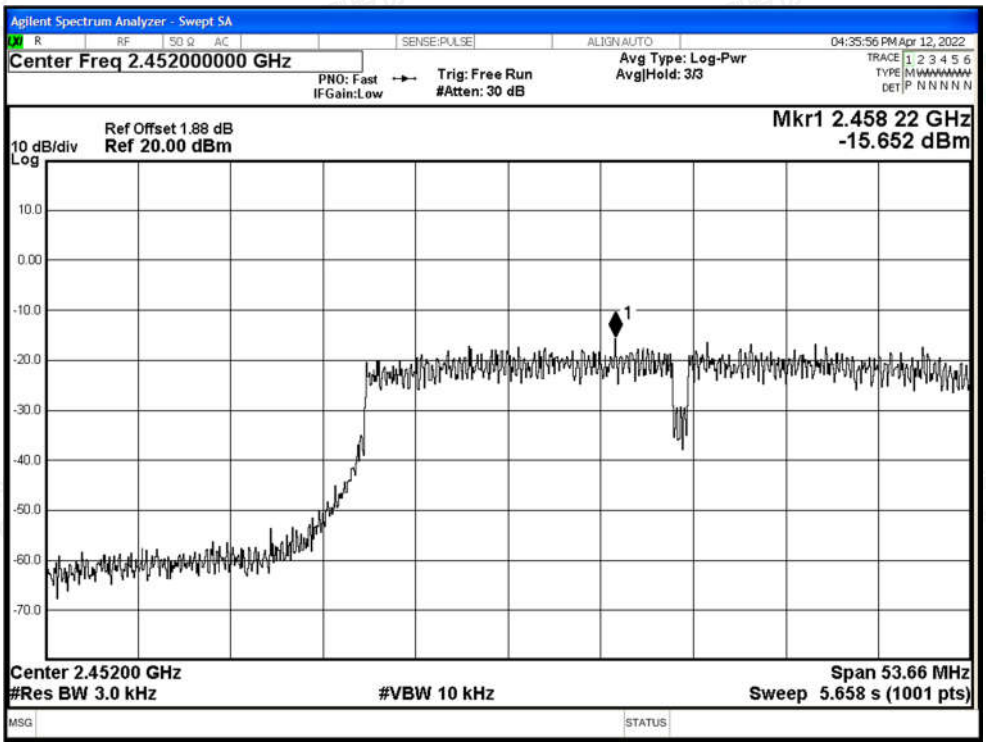
PSD NVNT n40 2422MHz Ant0



PSD NVNT n40 2437MHz Ant0

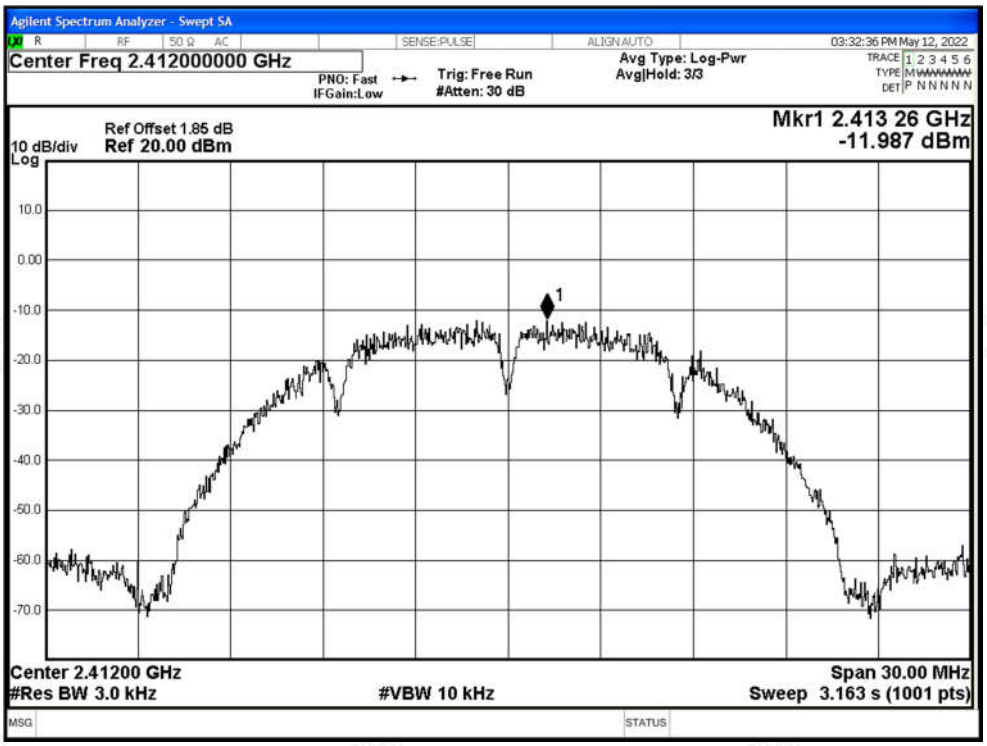


PSD NVNT n40 2452MHz Ant0

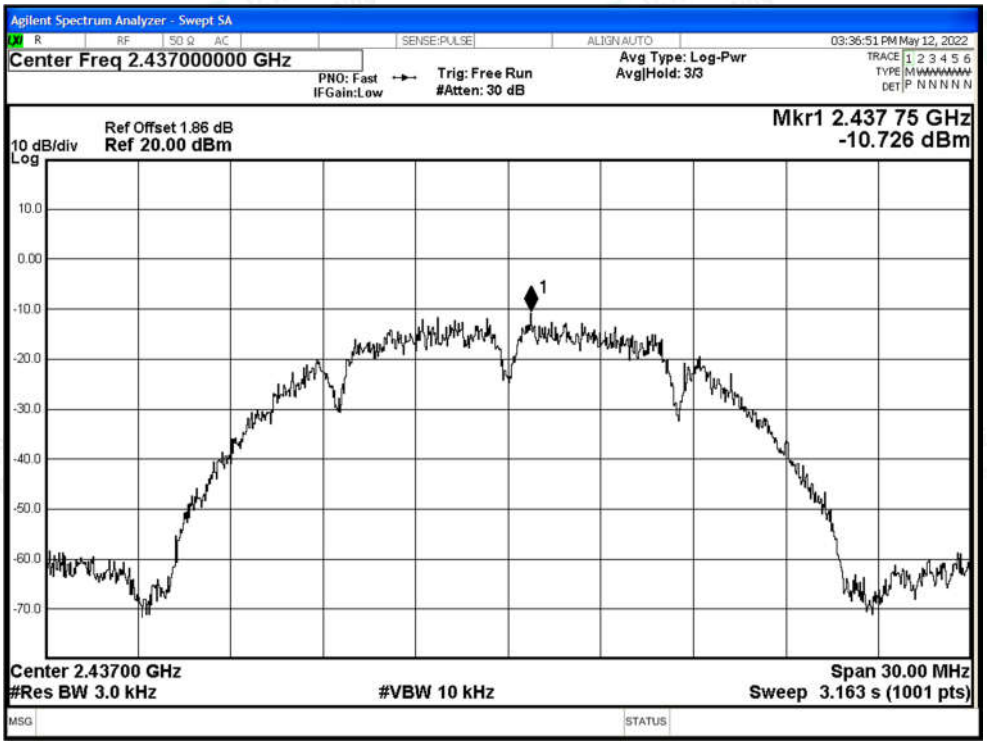


Test Graphs

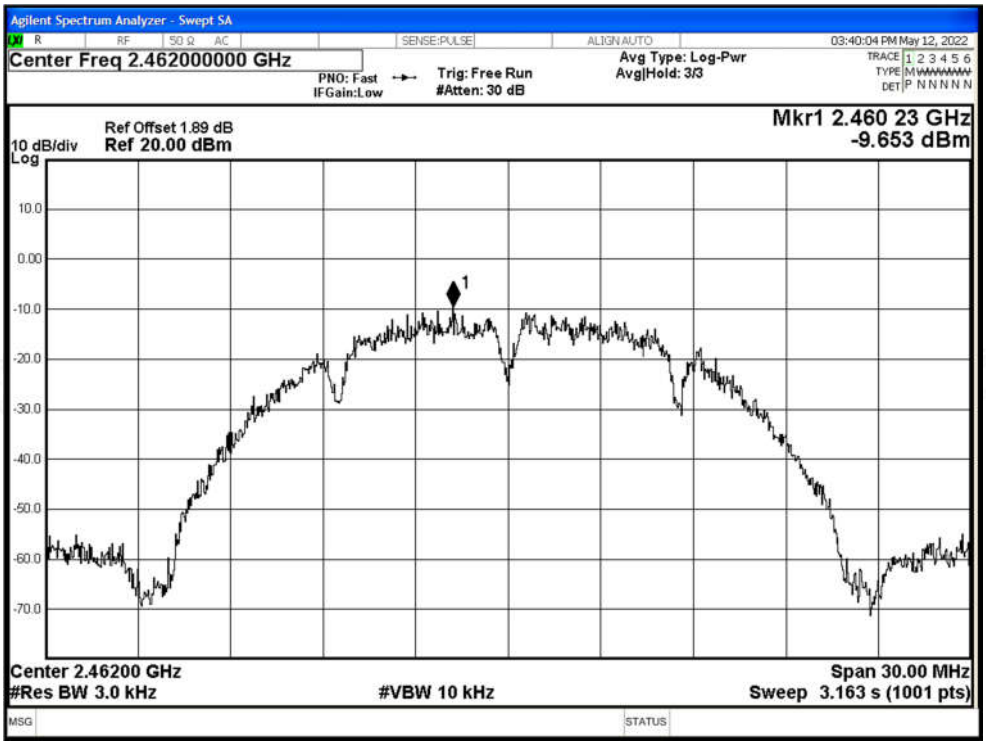
PSD NVNT b 2412MHz Ant1



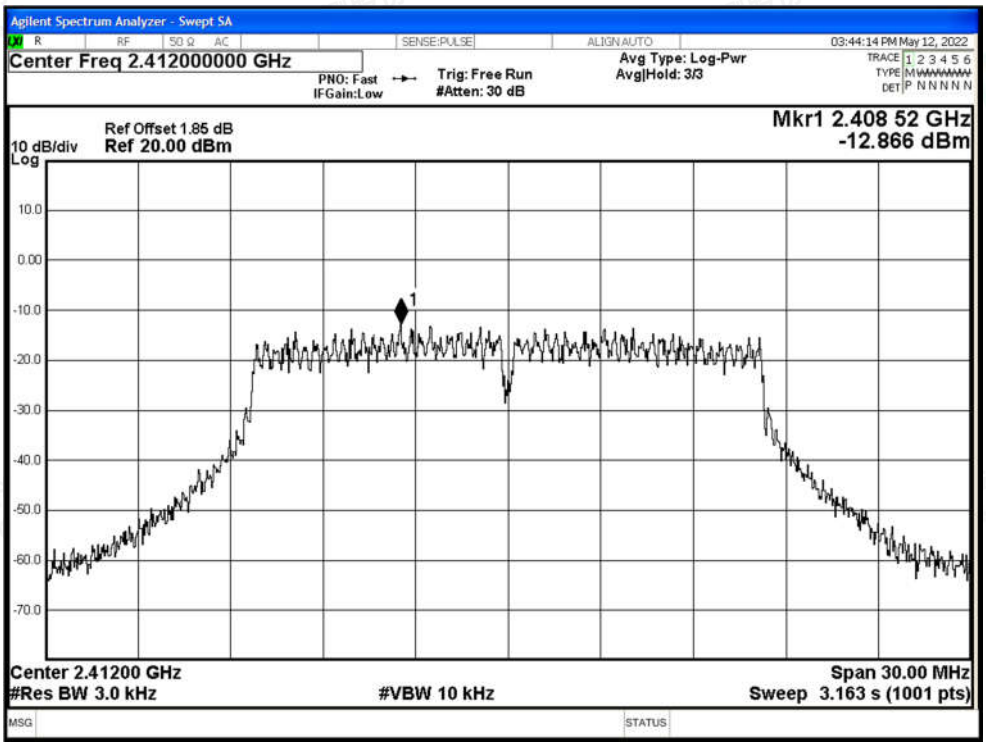
PSD NVNT b 2437MHz Ant1



PSD NVNT b 2462MHz Ant1



PSD NVNT g 2412MHz Ant1



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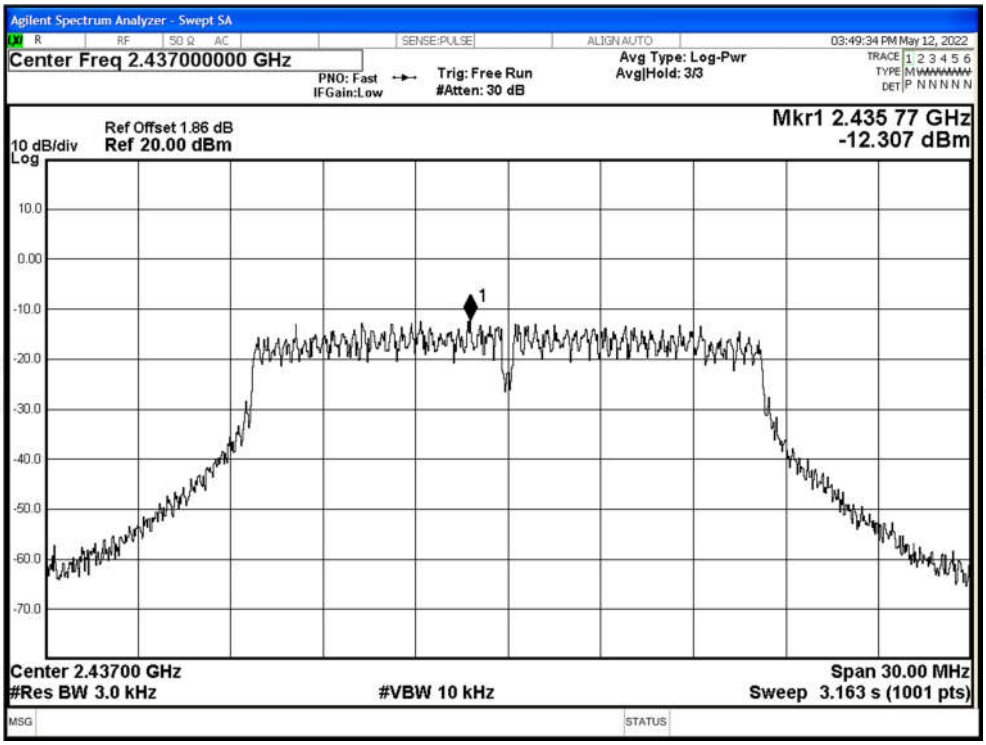
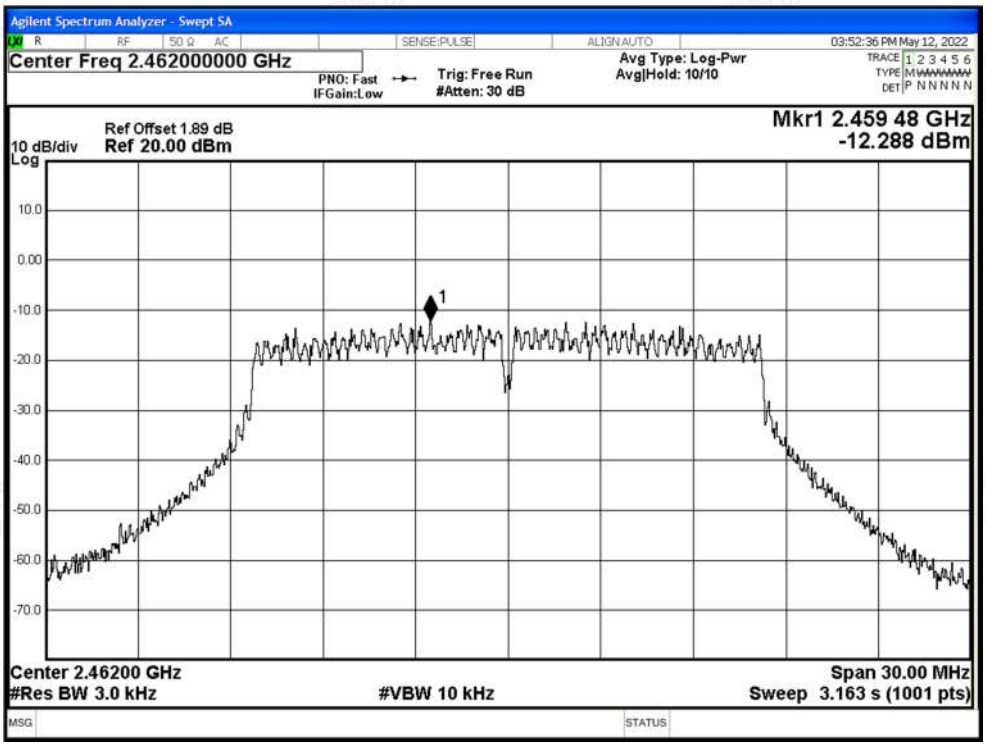
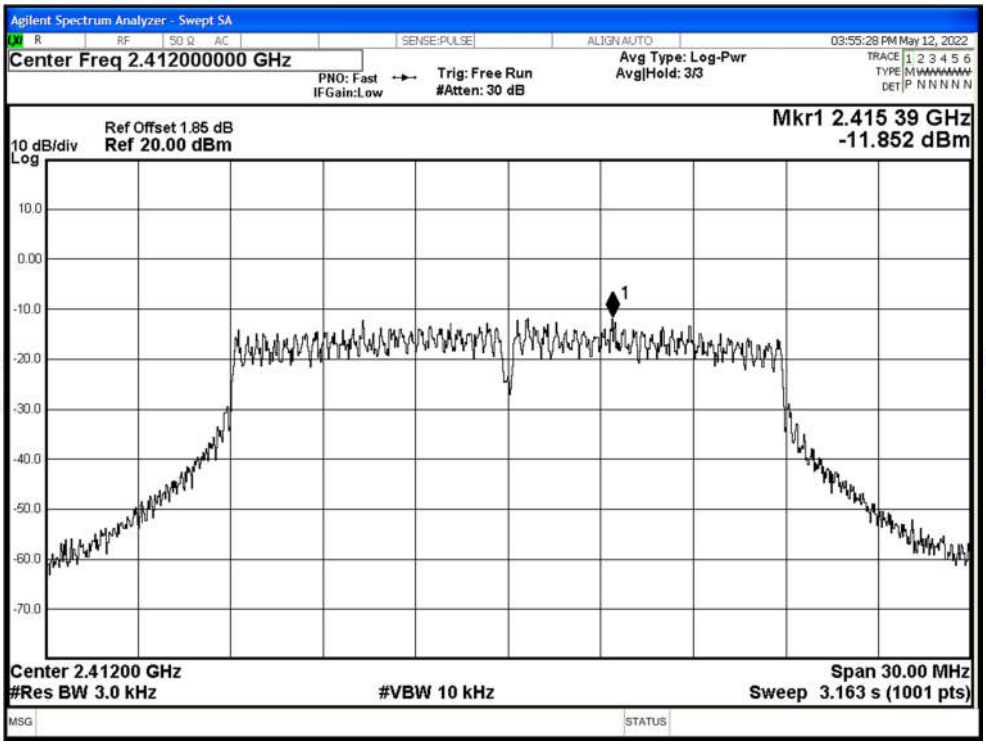


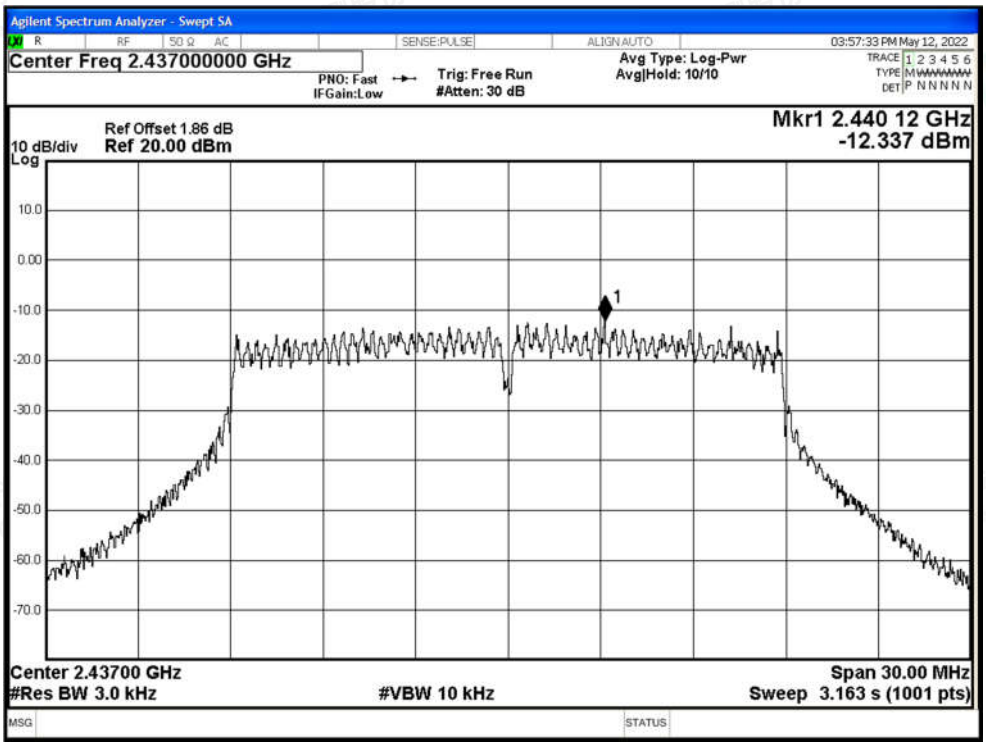
PSD NVNT g 2462MHz Ant1



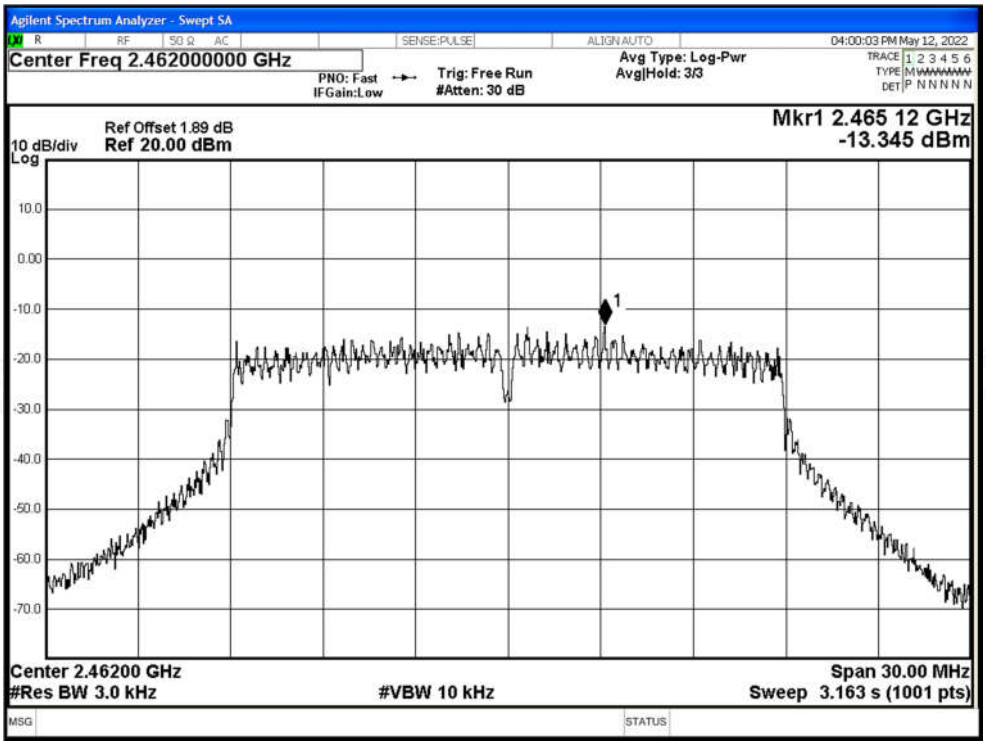
PSD NVNT n20 2412MHz Ant1



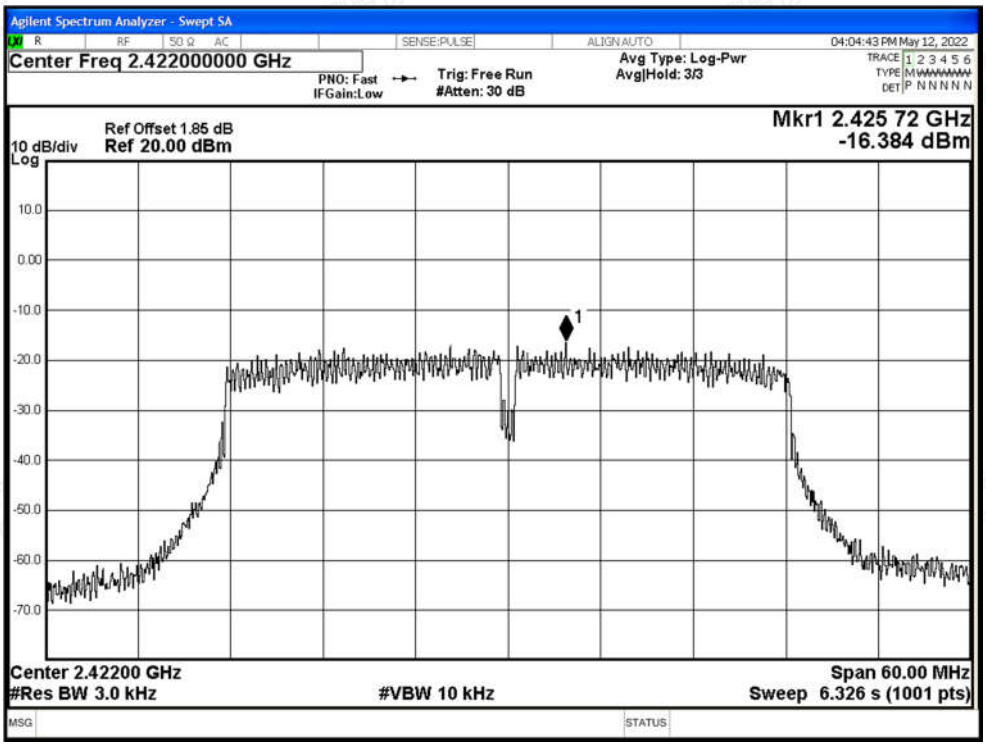
PSD NVNT n20 2437MHz Ant1



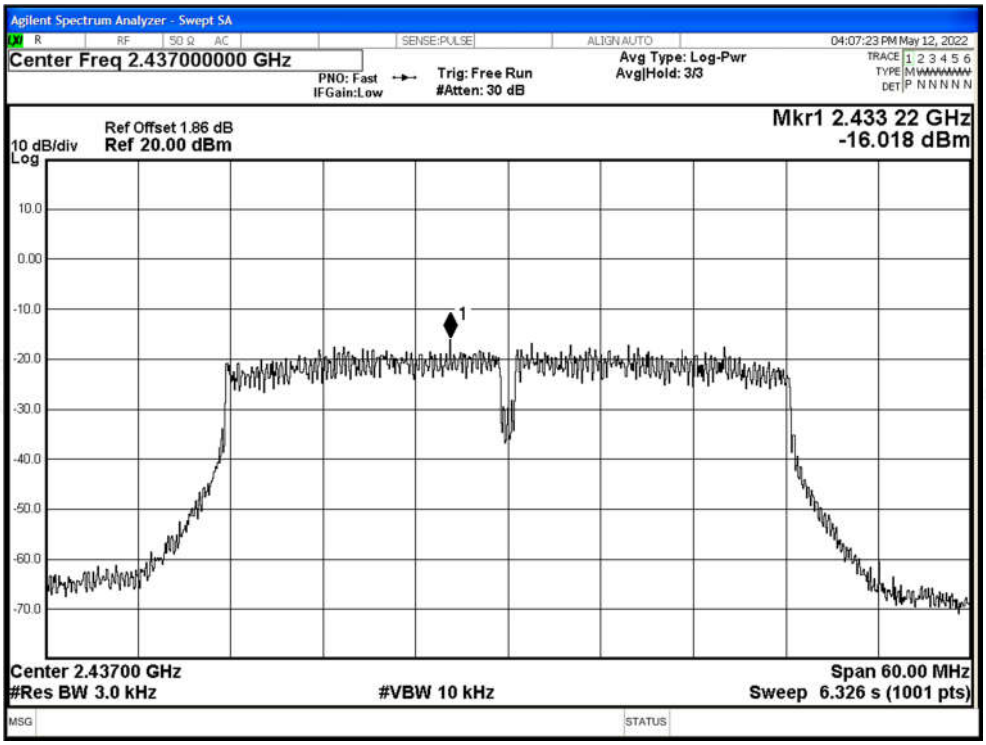
PSD NVNT n20 2462MHz Ant1



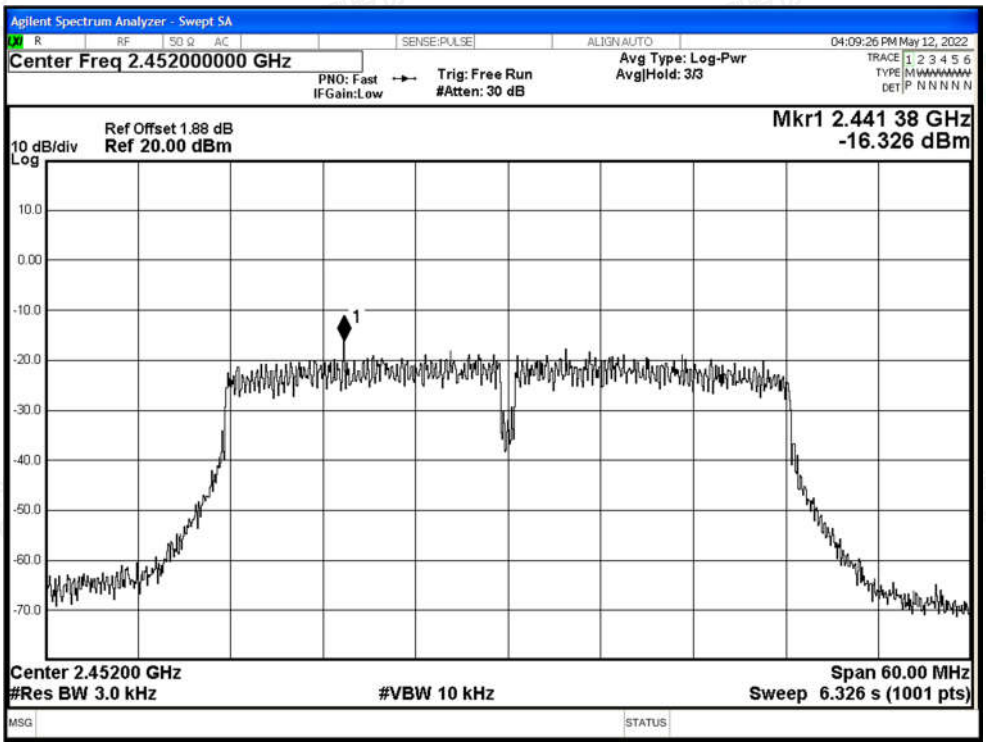
PSD NVNT n40 2422MHz Ant1



PSD NVNT n40 2437MHz Ant1



PSD NVNT n40 2452MHz Ant1

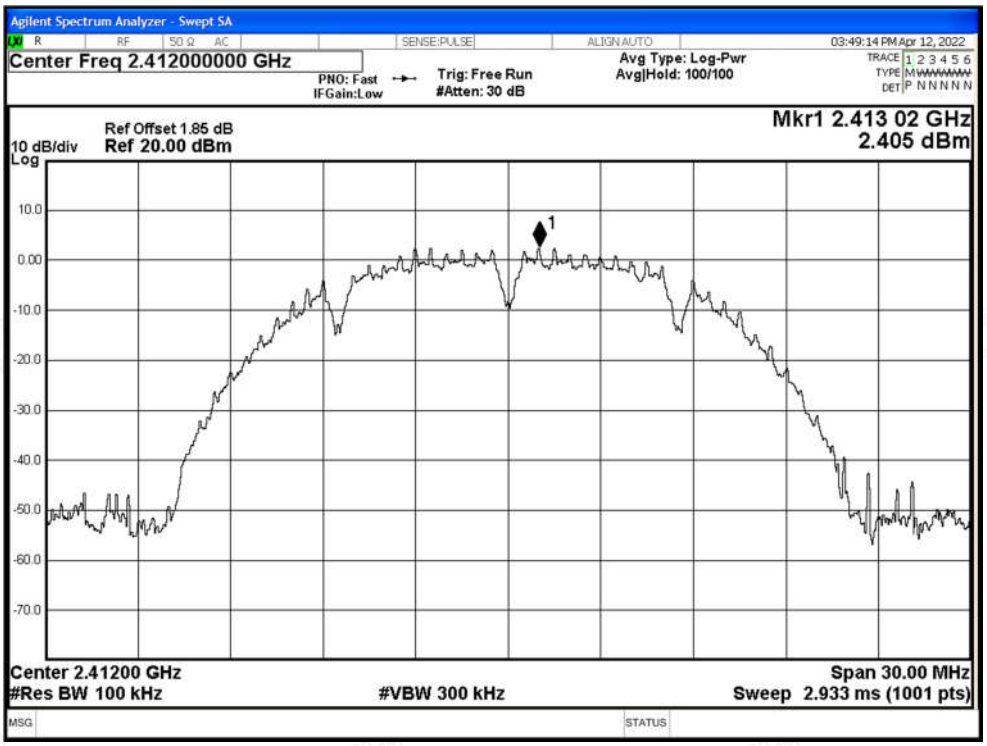


C.4 Band Edge

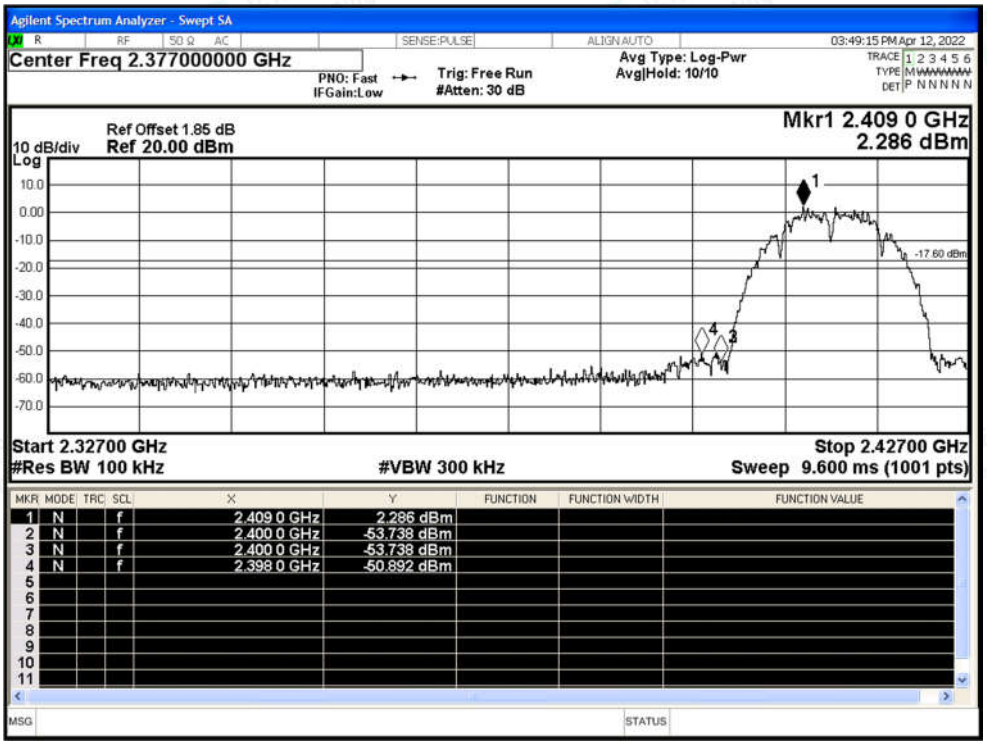
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant0	-53.3	-20	Pass
NVNT	b	2462	Ant0	-59.31	-20	Pass
NVNT	g	2412	Ant0	-37.98	-20	Pass
NVNT	g	2462	Ant0	-48.04	-20	Pass
NVNT	n20	2412	Ant0	-35.98	-20	Pass
NVNT	n20	2462	Ant0	-49.9	-20	Pass
NVNT	n40	2422	Ant0	-40.34	-20	Pass
NVNT	n40	2452	Ant0	-37.31	-20	Pass

Test Graphs

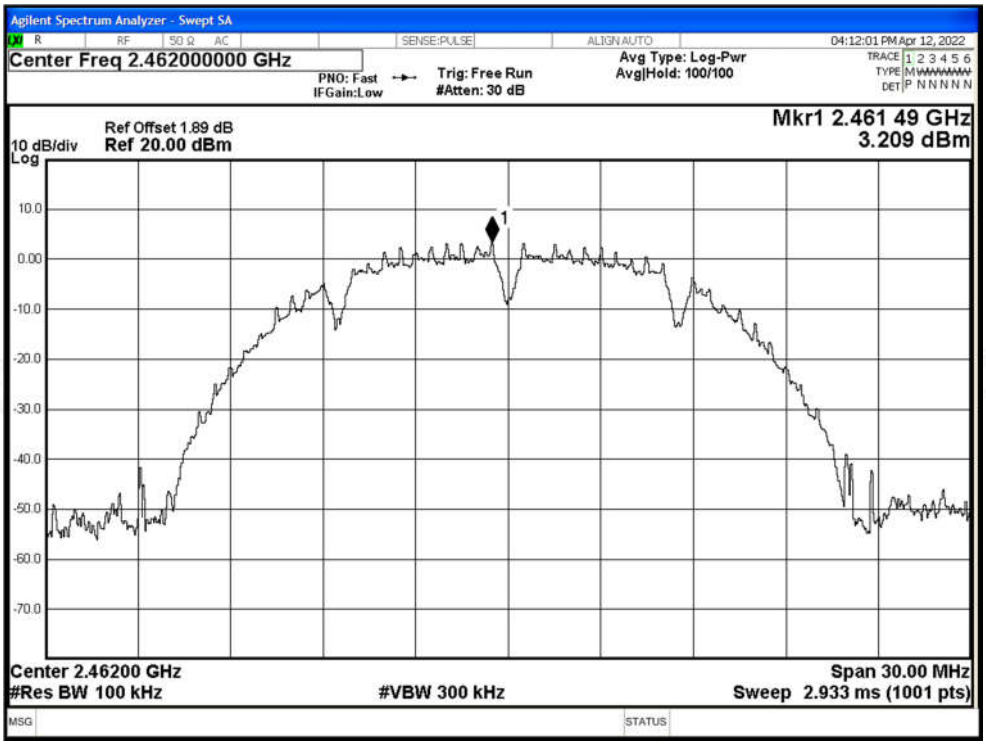
Band Edge NVNT b 2412MHz Ant0 Ref



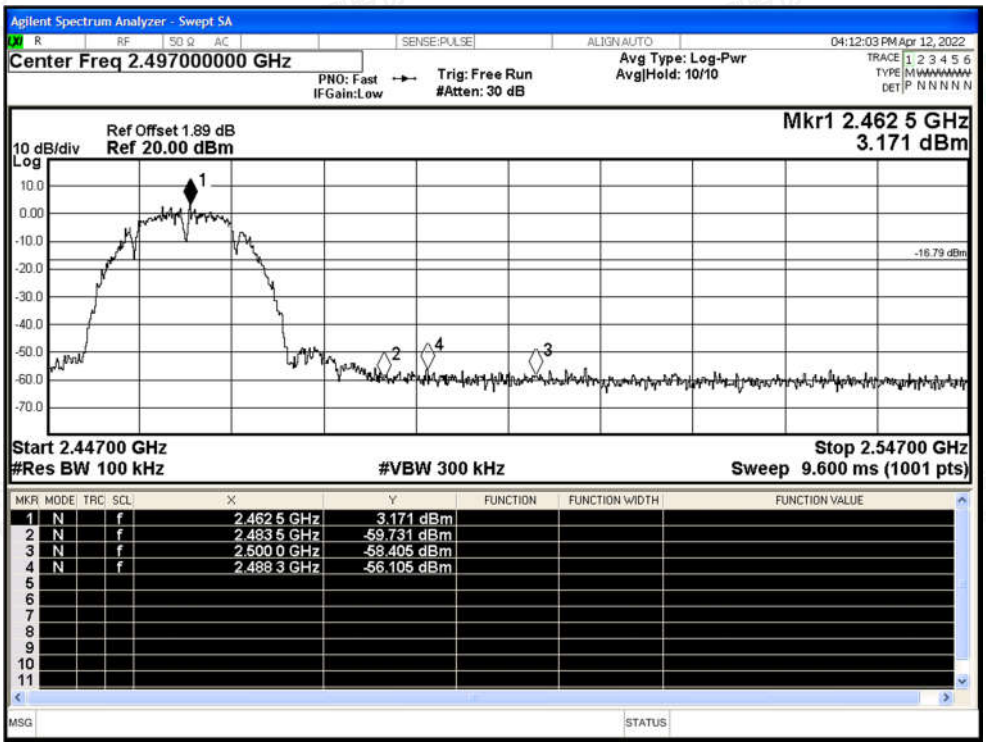
Band Edge NVNT b 2412MHz Ant0 Emission



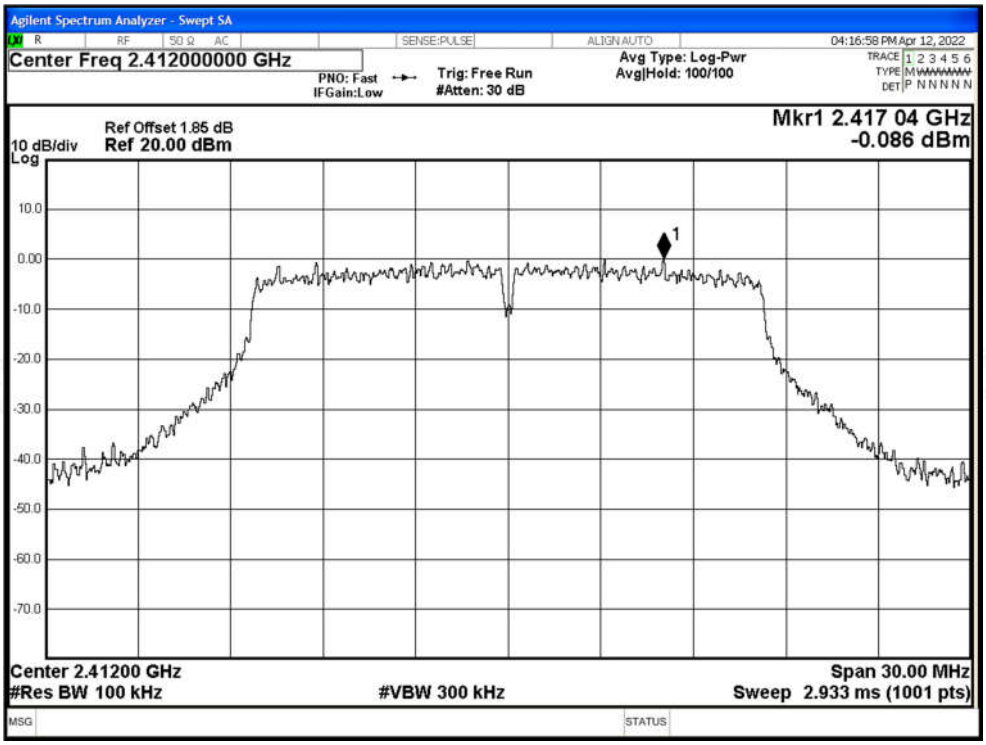
Band Edge NVNT b 2462MHz Ant0 Ref



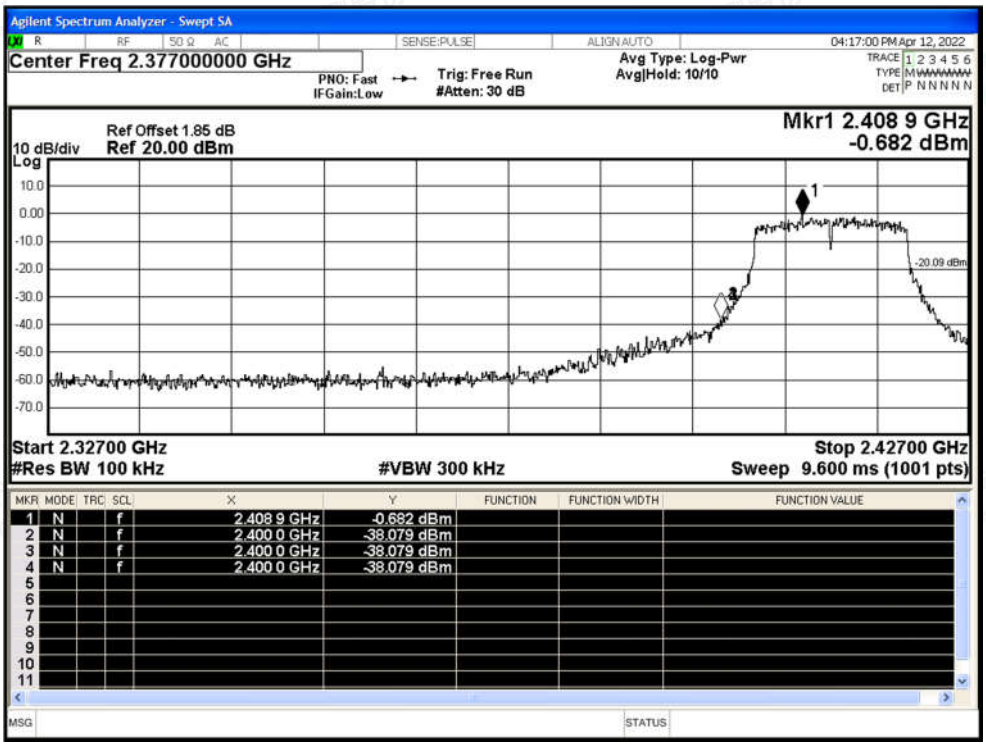
Band Edge NVNT b 2462MHz Ant0 Emission



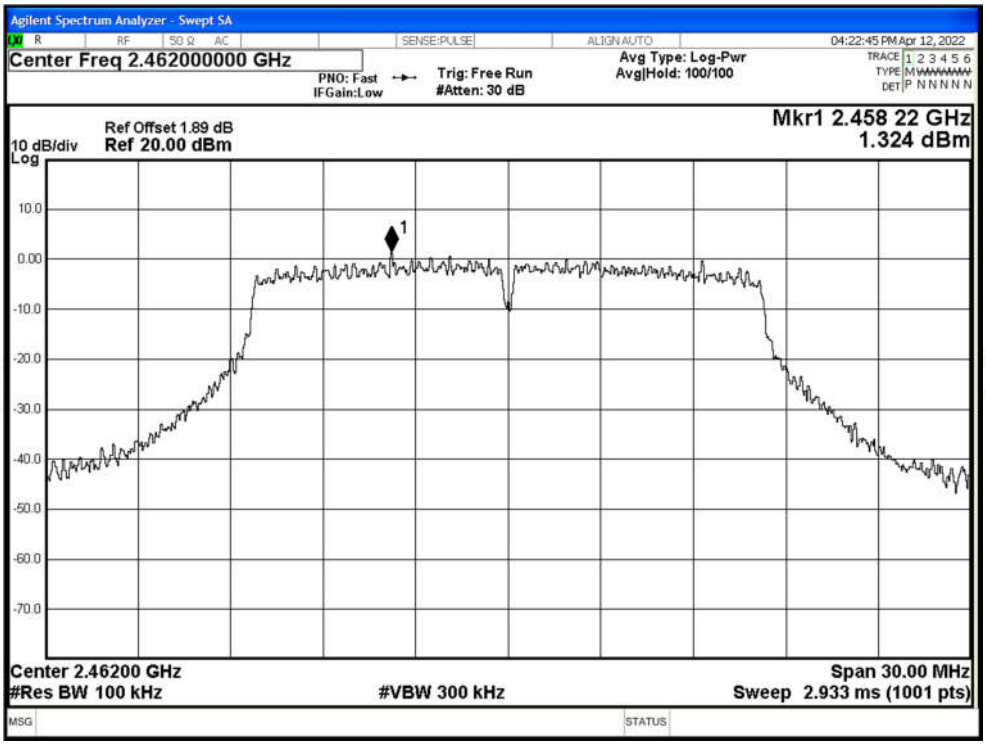
Band Edge NVNT g 2412MHz Ant0 Ref



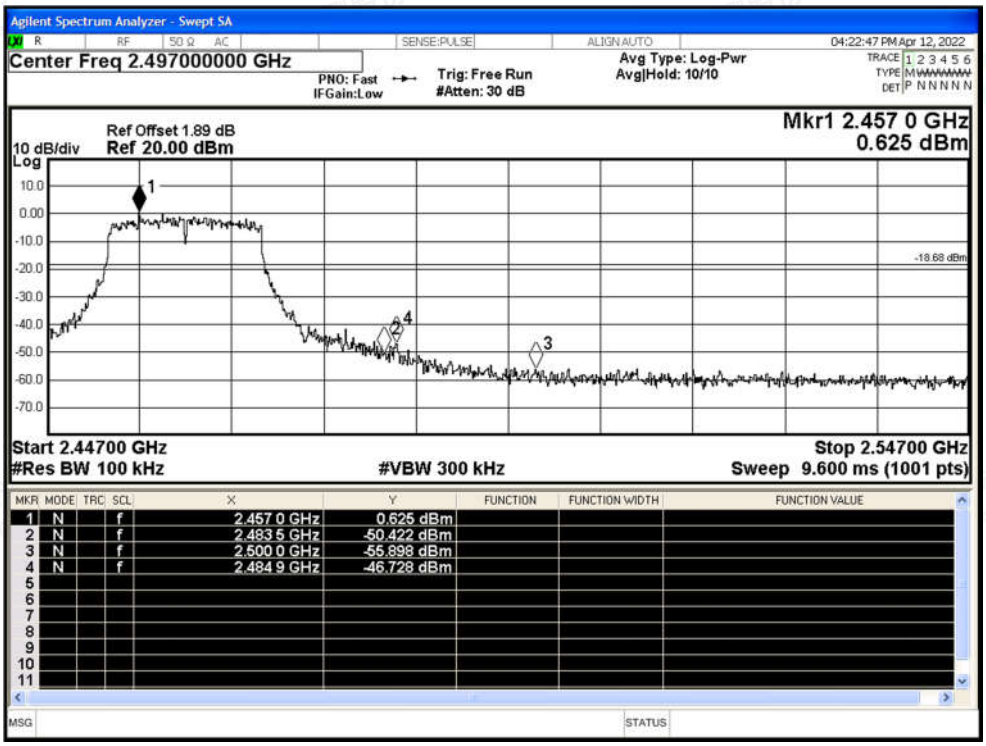
Band Edge NVNT g 2412MHz Ant0 Emission



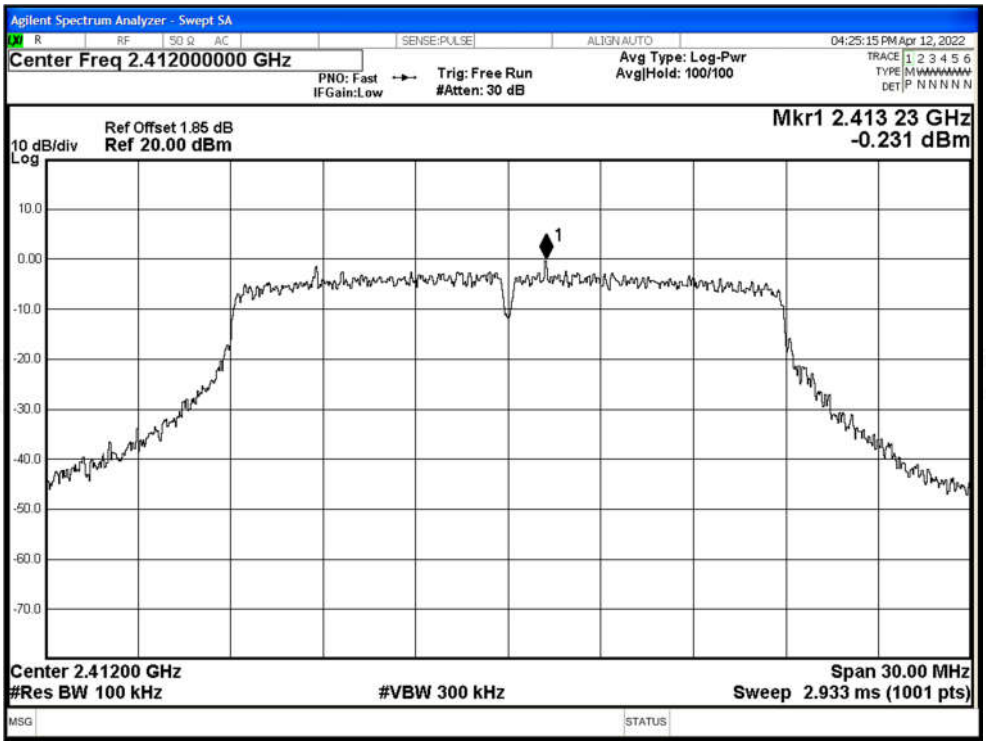
Band Edge NVNT g 2462MHz Ant0 Ref



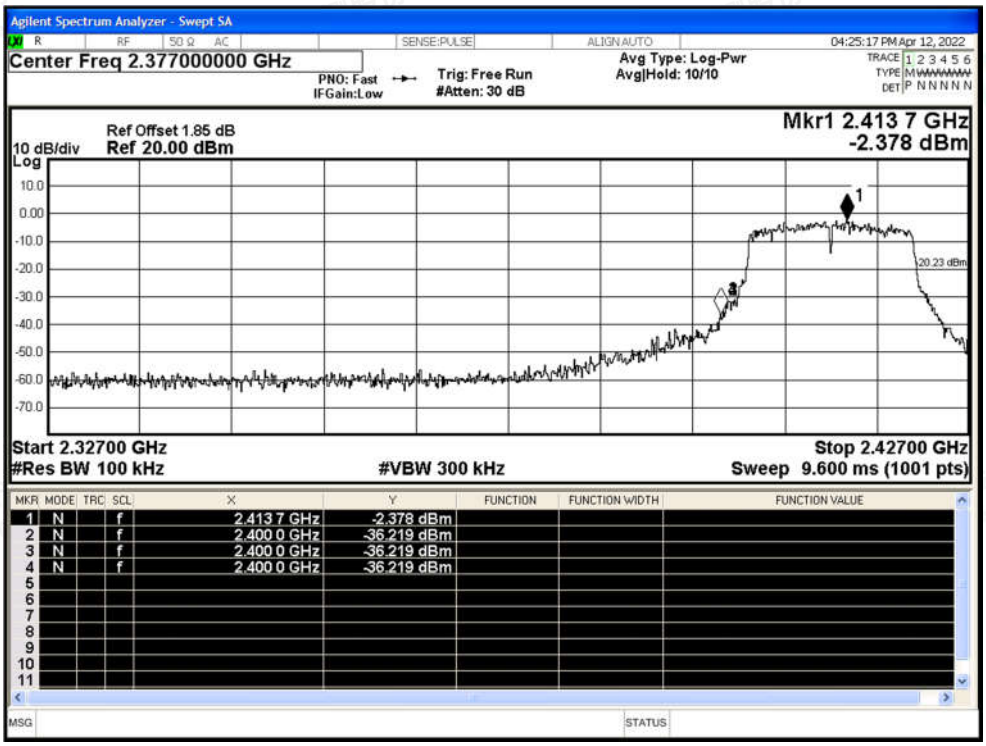
Band Edge NVNT g 2462MHz Ant0 Emission



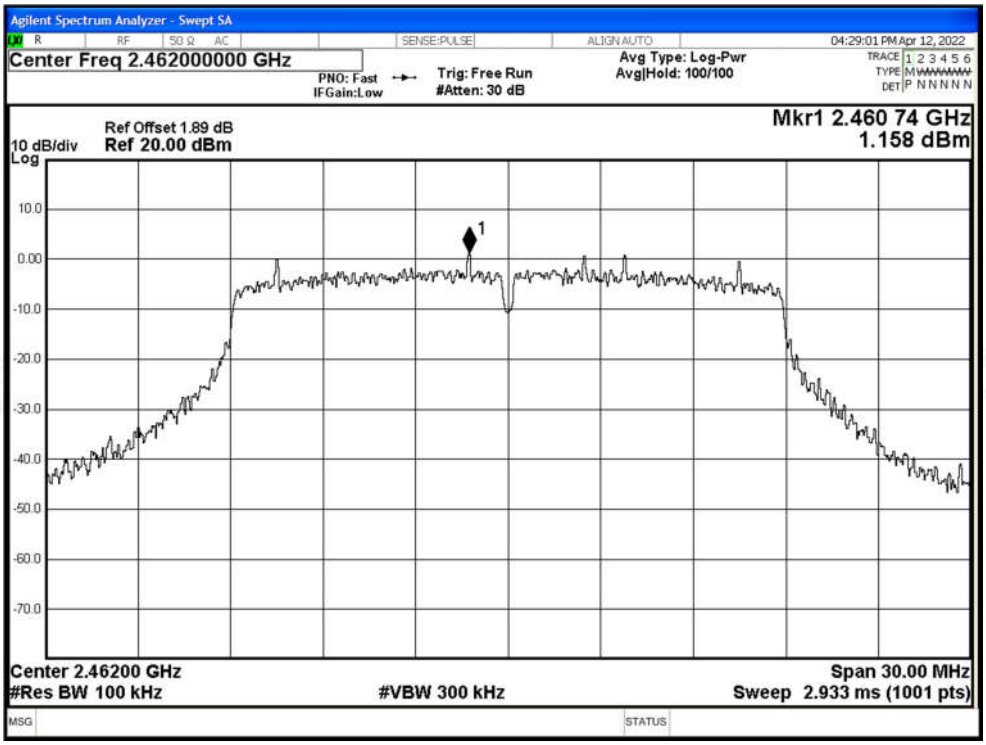
Band Edge NVNT n20 2412MHz Ant0 Ref



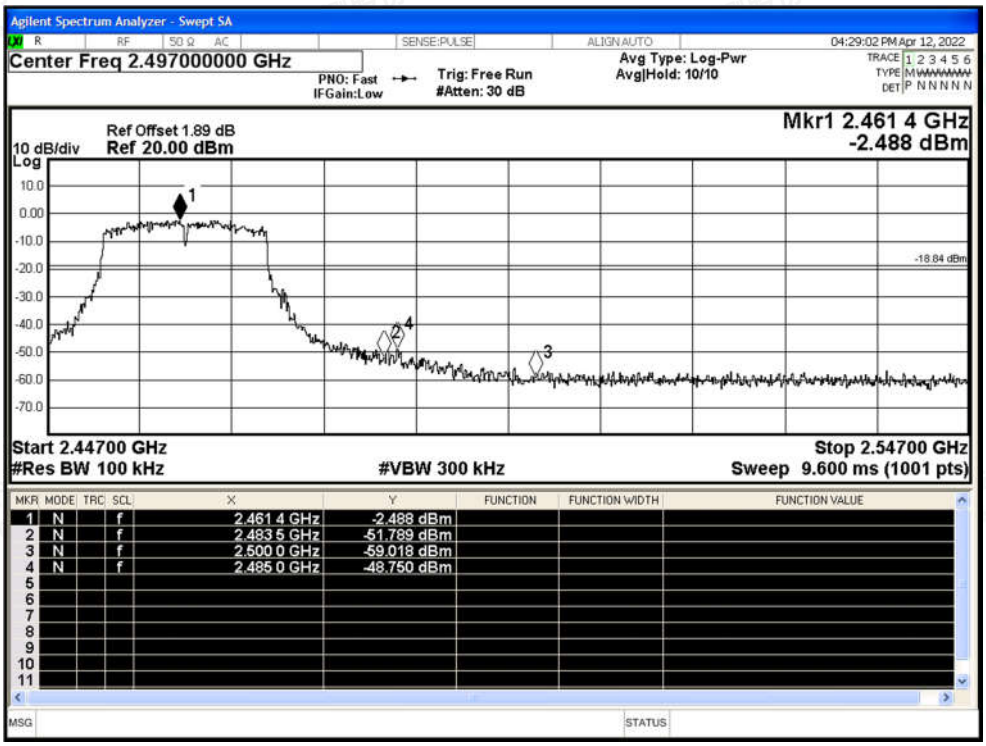
Band Edge NVNT n20 2412MHz Ant0 Emission



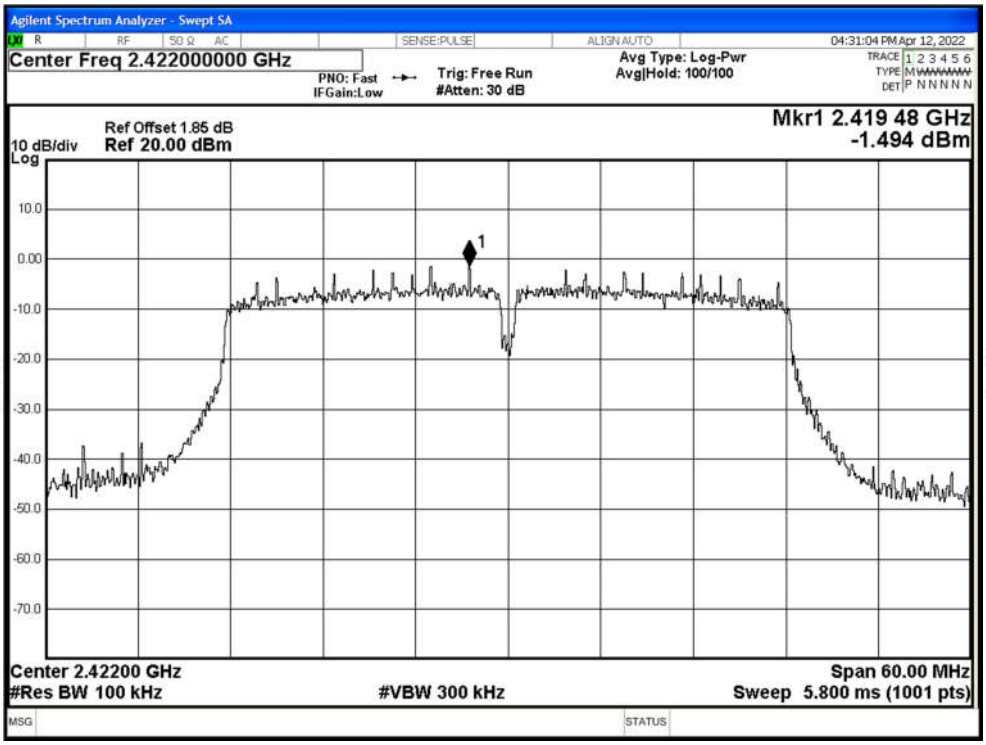
Band Edge NVNT n20 2462MHz Ant0 Ref



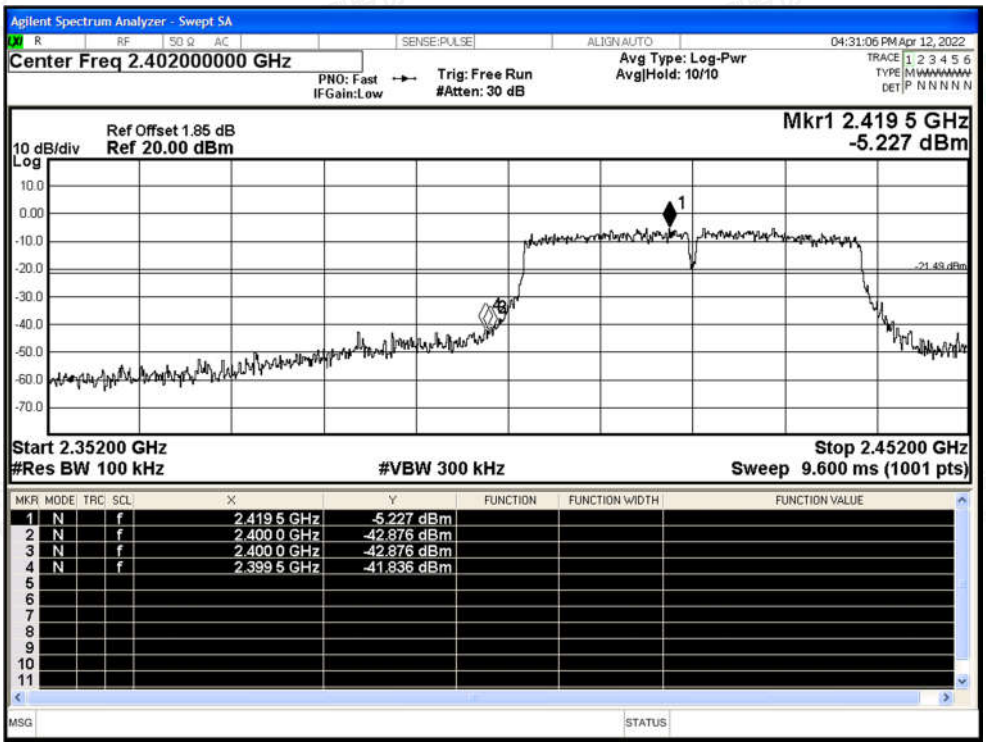
Band Edge NVNT n20 2462MHz Ant0 Emission



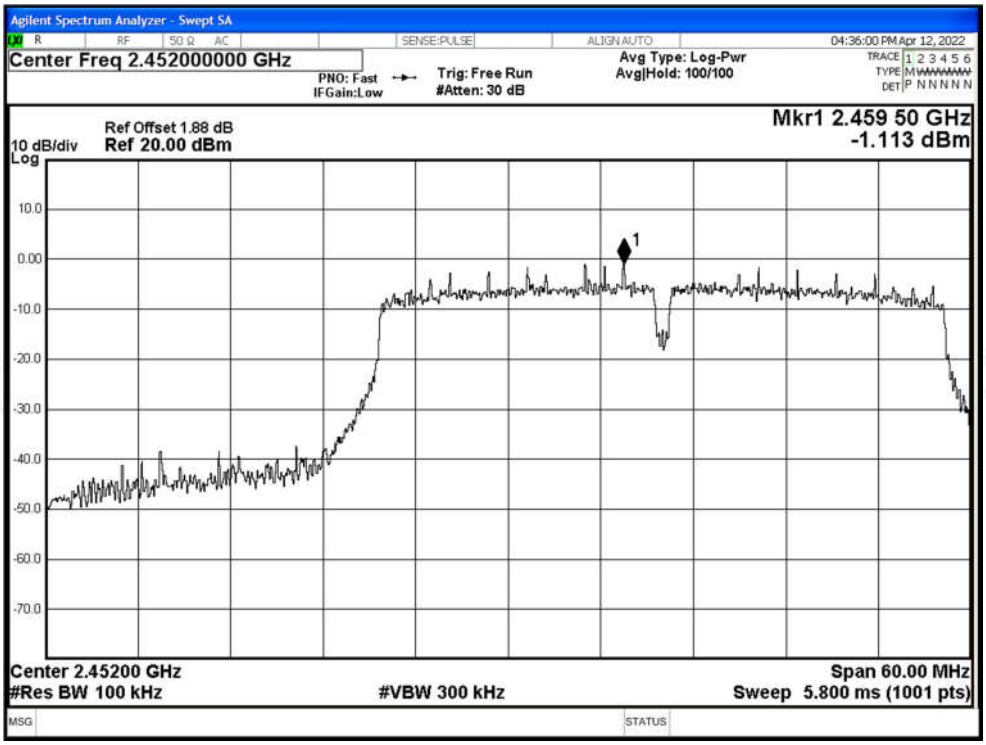
Band Edge NVNT n40 2422MHz Ant0 Ref



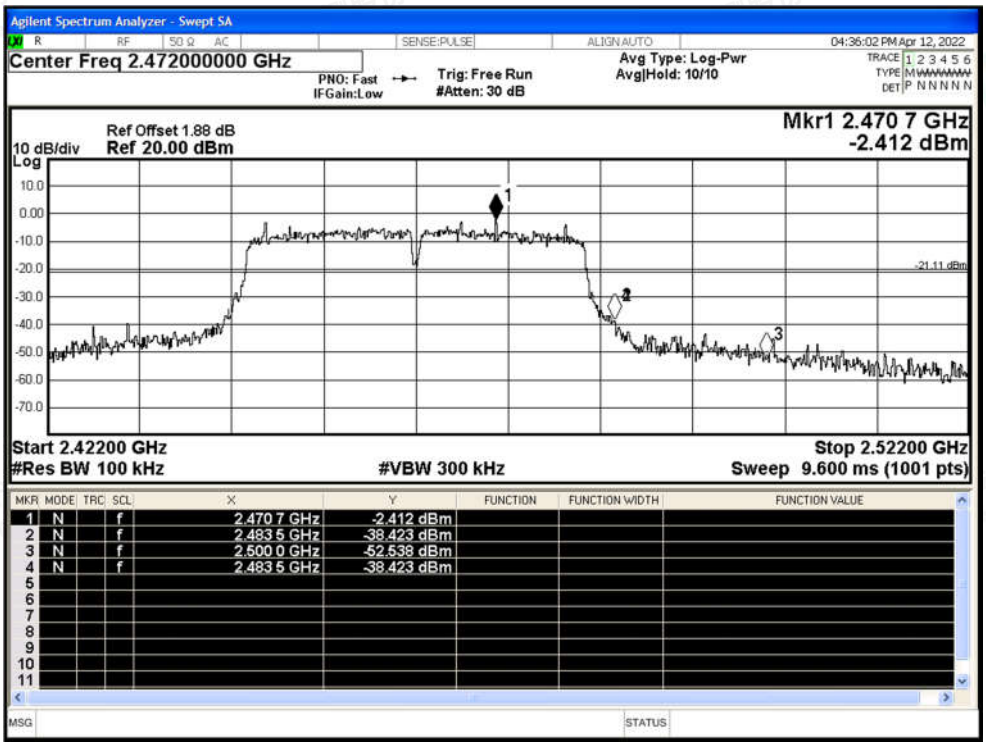
Band Edge NVNT n40 2422MHz Ant0 Emission



Band Edge NVNT n40 2452MHz Ant0 Ref



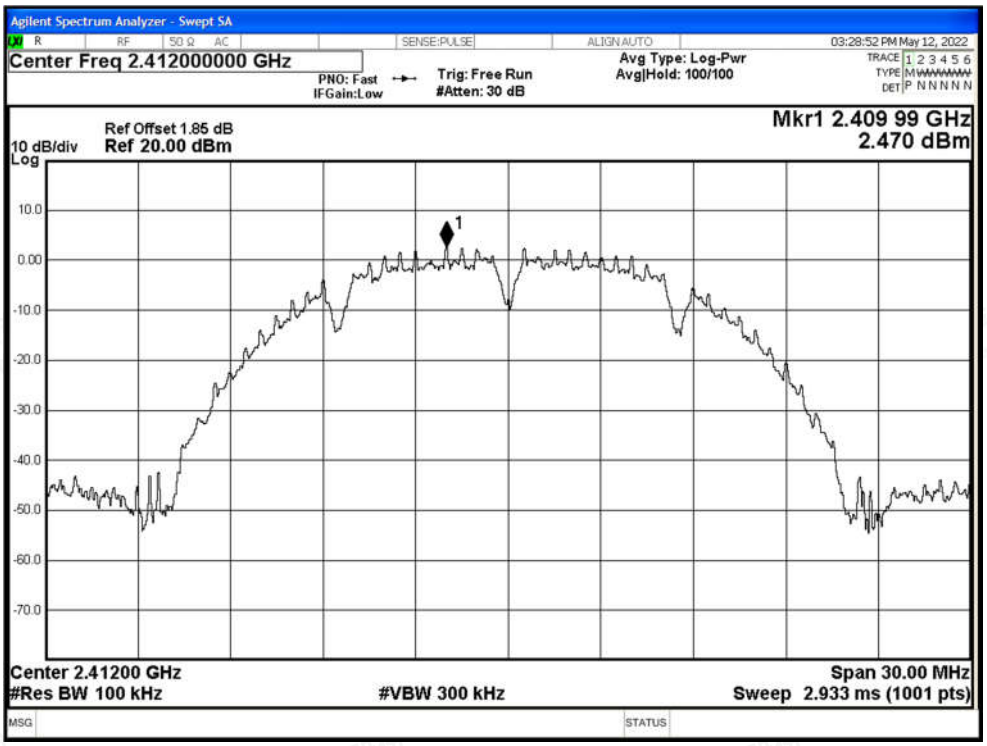
Band Edge NVNT n40 2452MHz Ant0 Emission



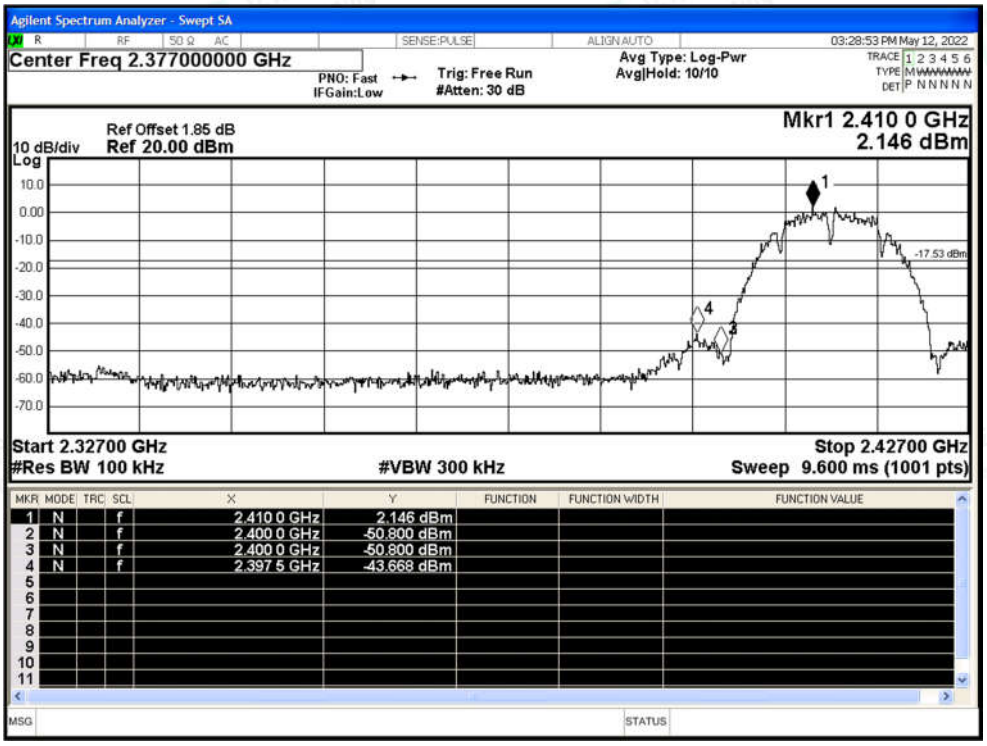
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-46.14	-20	Pass
NVNT	b	2462	Ant1	-60.53	-20	Pass
NVNT	g	2412	Ant1	-41.15	-20	Pass
NVNT	g	2462	Ant1	-54.75	-20	Pass
NVNT	n20	2412	Ant1	-37.85	-20	Pass
NVNT	n20	2462	Ant1	-55.33	-20	Pass
NVNT	n40	2422	Ant1	-42.2	-20	Pass
NVNT	n40	2452	Ant1	-49.84	-20	Pass

Test Graphs

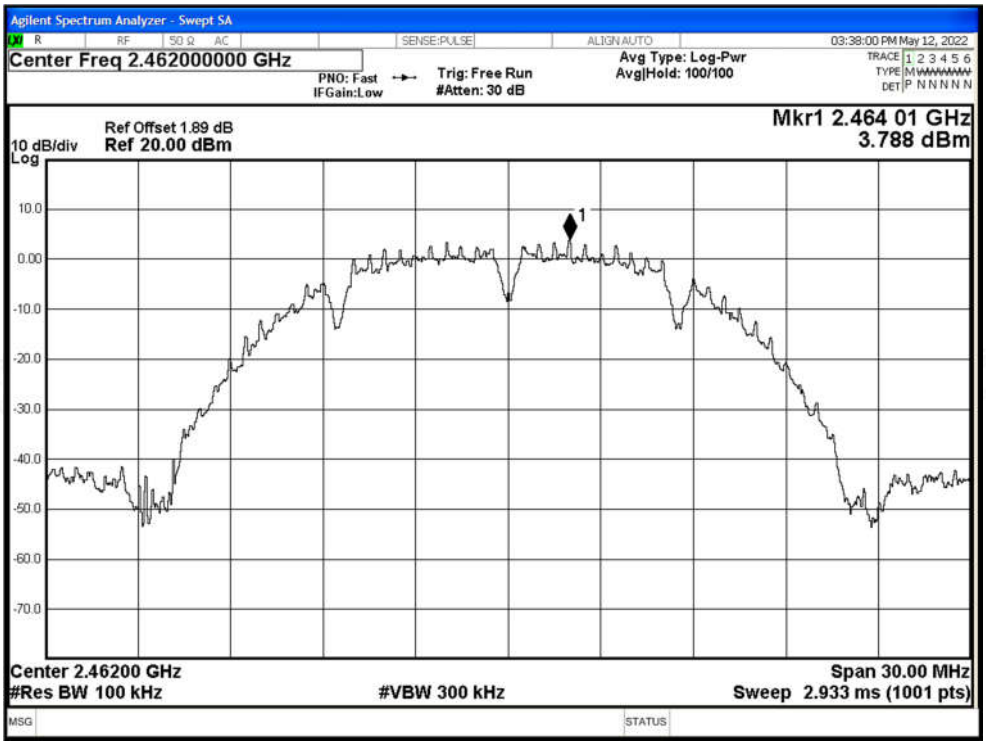
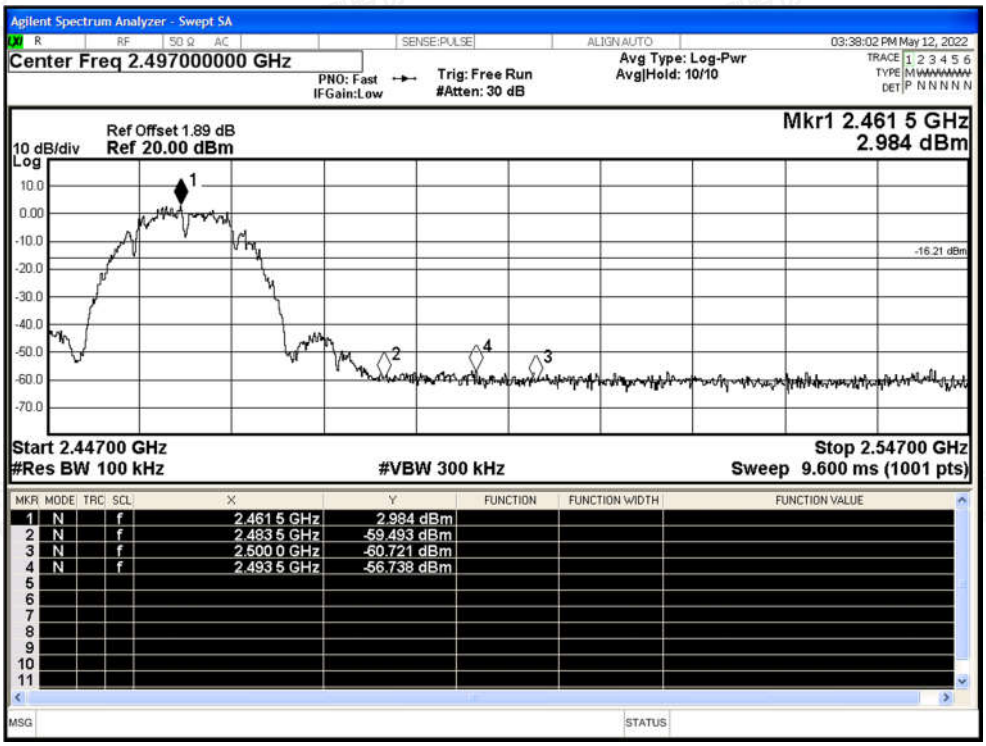
Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission



Band Edge NVNT b 2462MHz Ant1 Ref



Band Edge NVNT b 2462MHz Ant1 Emission