ANNEX WIFI TEST DATA
FCC ID: 2BMFB-X3100

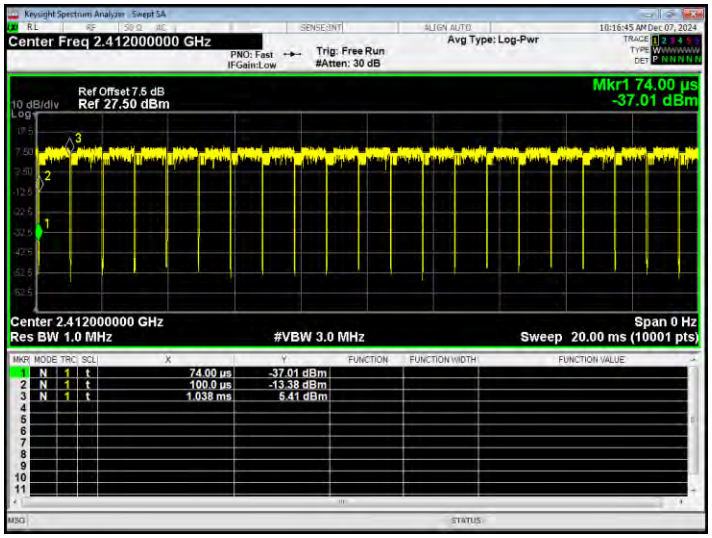
Applicant:	FIREPIT INC.
Address:	1401 LAVACA ST PMB 40573 AUSTIN,TX,78701 United States of America
Manufacturer:	Umeox Innovations Co., Ltd
Address:	1901, Block A, Building 8, Shenzhen International Innovation Valley, Dashi 1st Road, Xili Community, Xili Subdistrict, Nanshan District, Shenzhen, China
EUT:	Pinwheel Watch
Trade Mark:	Pinwheel
Model Number:	X3100
Date of Receipt:	Nov. 15, 2024
Test Date:	Nov. 15, 2024 - Dec. 05, 2024
Date of Report:	Dec. 05, 2024
Prepared By:	Shenzhen DL Testing Technology Co., Ltd.
Address:	101-201, Comprehensive Building, Tongzhou Electronics Longgang Factory Area, No.1 Baolong Fifth Road, Baolong Community, Baolong Street, Longgang District, Shenzhen, China
Applicable Standards:	FCC PART 15 C 15.247 ANSI C63.10:2013
Test Result:	Pass

Duty Cycle

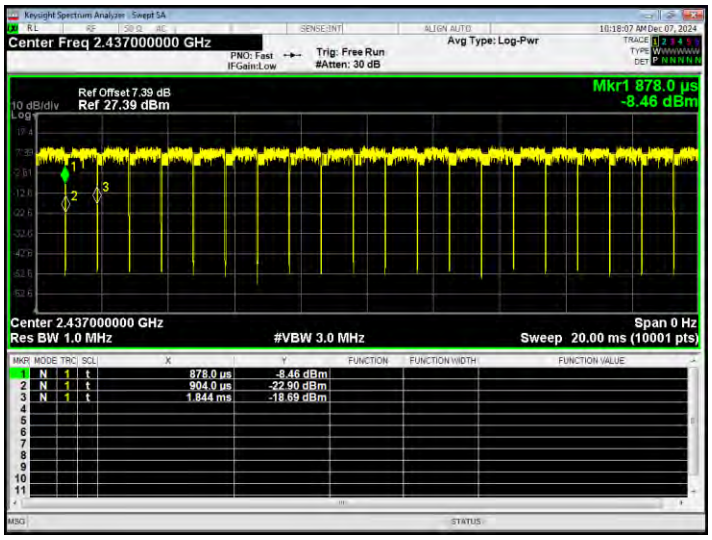
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	b	2412	Ant1	97.3	0.12
NVNT	b	2437	Ant1	97.31	0.12
NVNT	b	2462	Ant1	97.31	0.12
NVNT	g	2412	Ant1	84.91	0.71
NVNT	g	2437	Ant1	84.91	0.71
NVNT	g	2462	Ant1	84.91	0.71
NVNT	n20	2412	Ant1	84	0.76
NVNT	n20	2437	Ant1	84	0.76
NVNT	n20	2462	Ant1	83.84	0.77
NVNT	n40	2422	Ant1	54.26	2.66
NVNT	n40	2437	Ant1	76.12	1.19
NVNT	n40	2452	Ant1	76.12	1.19

Note: （T3-T2）/(T3-T1）

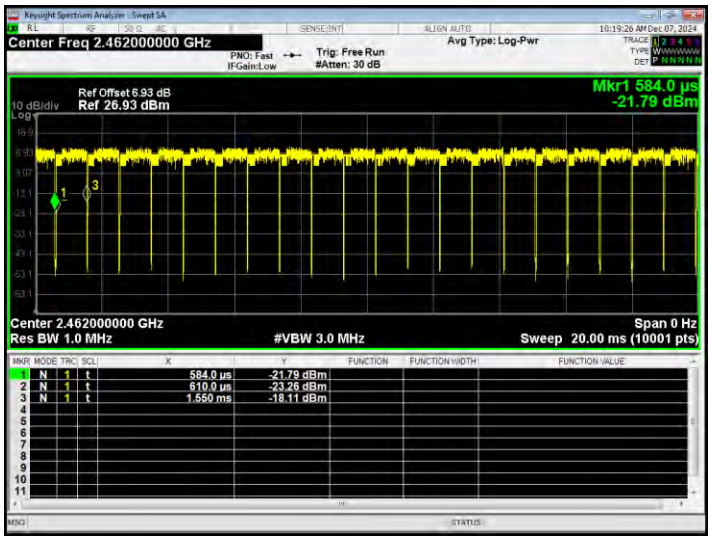
Duty Cycle NVNT b 2412MHz Ant1



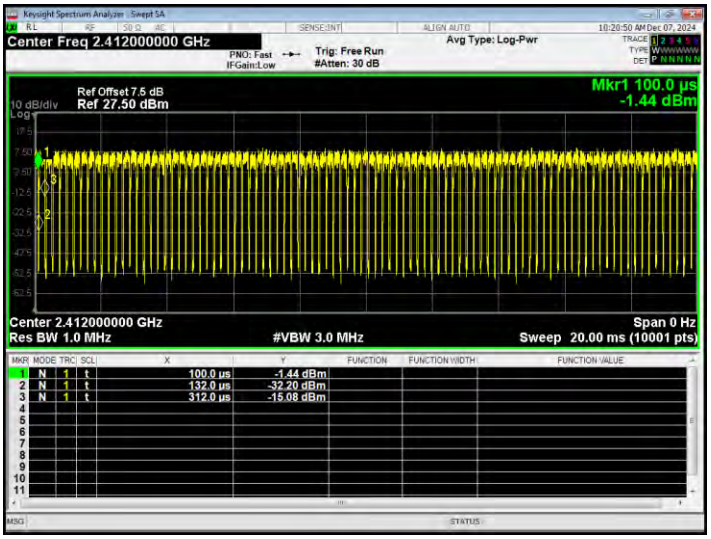
Duty Cycle NVNT b 2437MHz Ant1



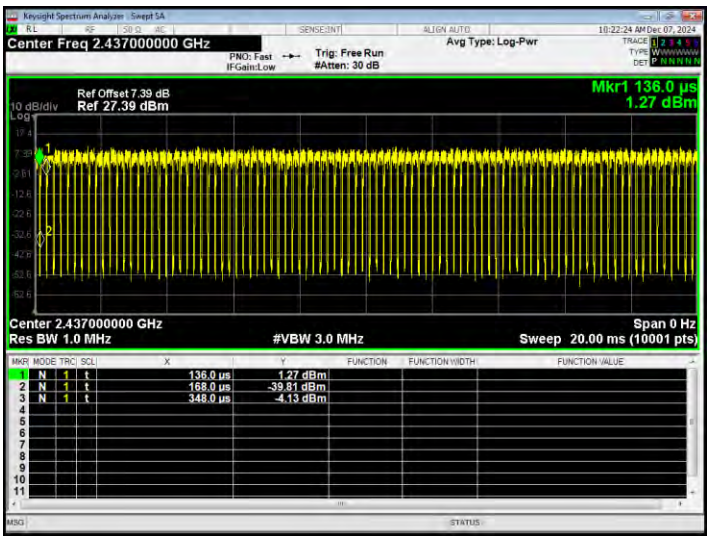
Duty Cycle NVNT b 2462MHz Ant1



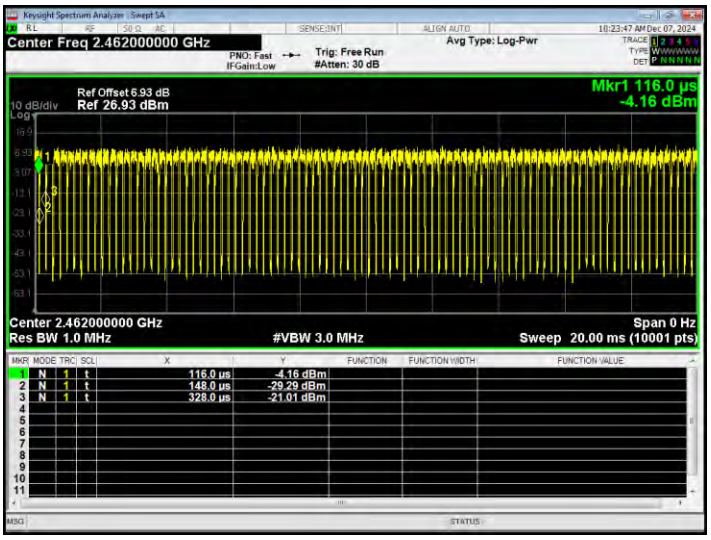
Duty Cycle NVNT g 2412MHz Ant1



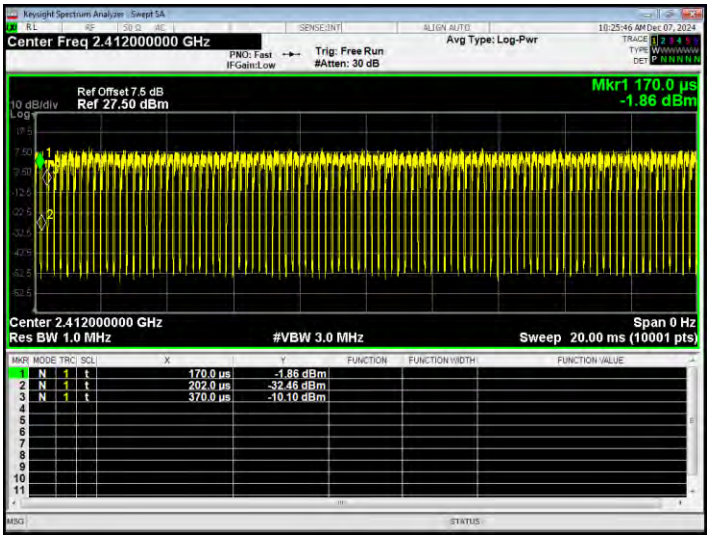
Duty Cycle NVNT g 2437MHz Ant1



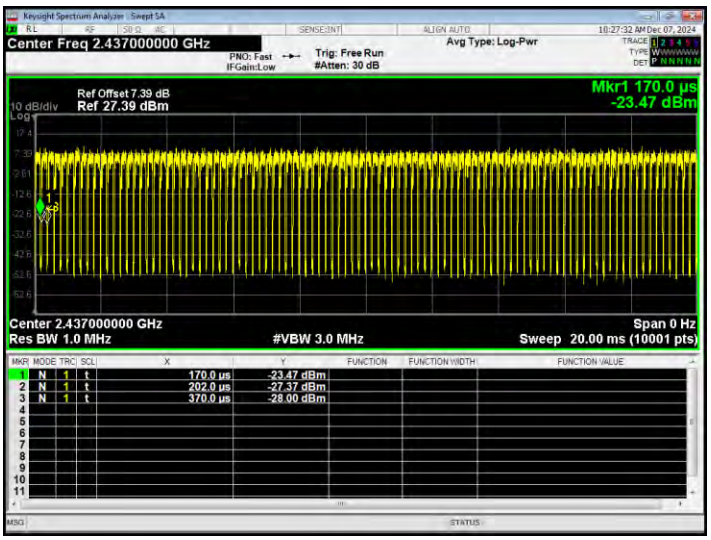
Duty Cycle NVNT g 2462MHz Ant1



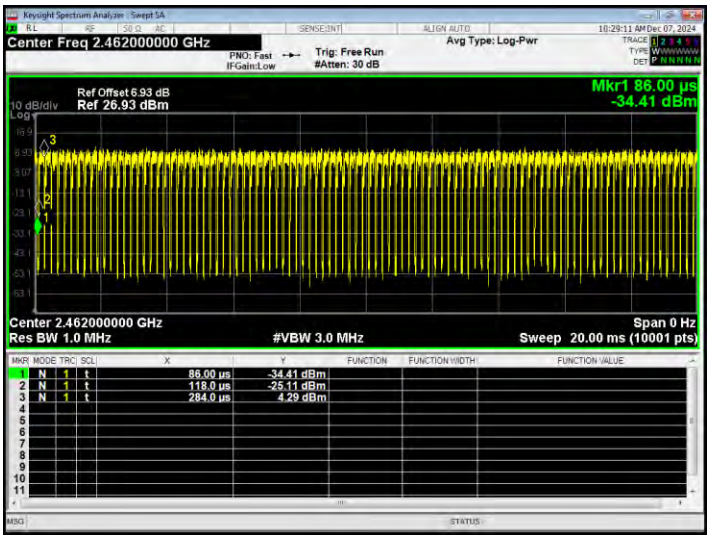
Duty Cycle NVNT n20 2412MHz Ant1



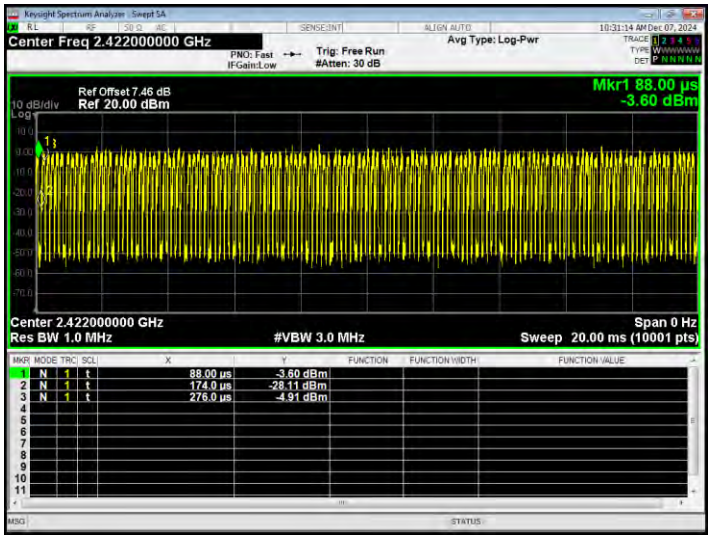
Duty Cycle NVNT n20 2437MHz Ant1



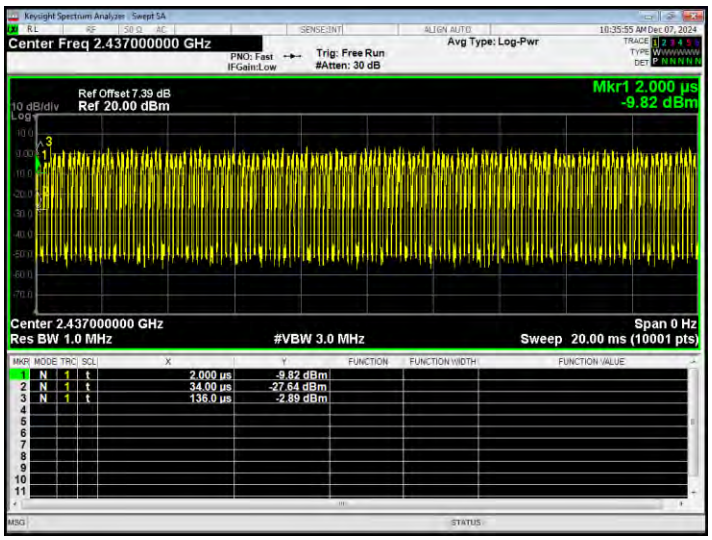
Duty Cycle NVNT n20 2462MHz Ant1



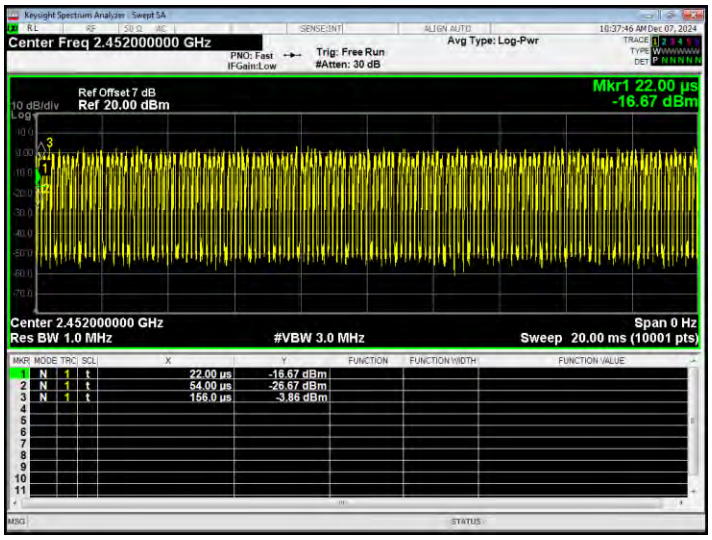
Duty Cycle NVNT n40 2422MHz Ant1



Duty Cycle NVNT n40 2437MHz Ant1



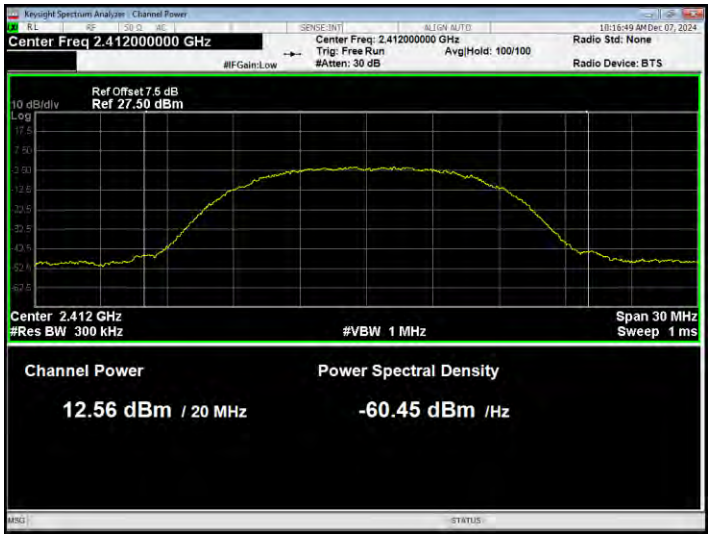
Duty Cycle NVNT n40 2452MHz Ant1



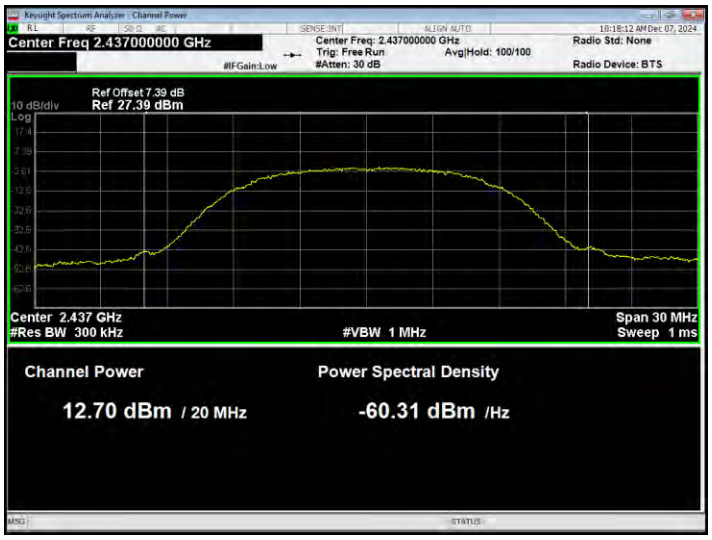
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	12.561	0.12	12.68	30	Pass
NVNT	b	2437	Ant1	12.702	0.12	12.82	30	Pass
NVNT	b	2462	Ant1	12.106	0.12	12.23	30	Pass
NVNT	g	2412	Ant1	12.828	0.71	13.54	30	Pass
NVNT	g	2437	Ant1	12.273	0.71	12.98	30	Pass
NVNT	g	2462	Ant1	12.585	0.71	13.30	30	Pass
NVNT	n20	2412	Ant1	12.713	0.76	13.47	30	Pass
NVNT	n20	2437	Ant1	12.882	0.76	13.64	30	Pass
NVNT	n20	2462	Ant1	12.061	0.77	12.83	30	Pass
NVNT	n40	2422	Ant1	10.959	2.66	13.62	30	Pass
NVNT	n40	2437	Ant1	10.276	1.19	11.47	30	Pass
NVNT	n40	2452	Ant1	10.74	1.19	11.93	30	Pass

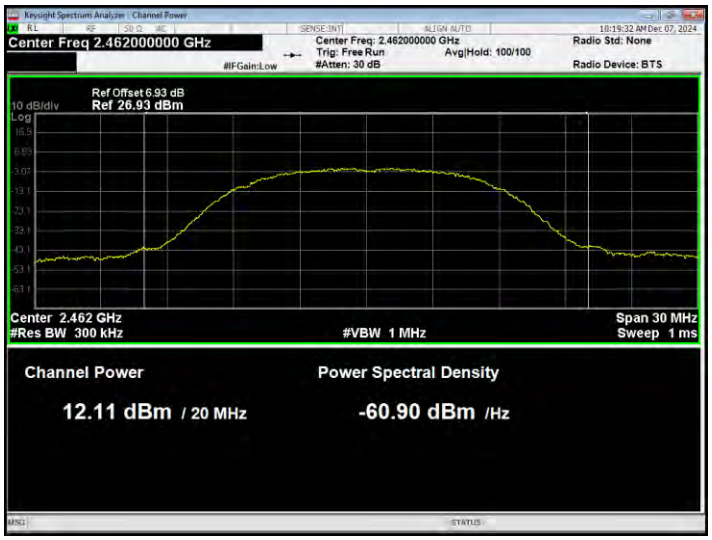
Power NVNT b 2412MHz Ant1



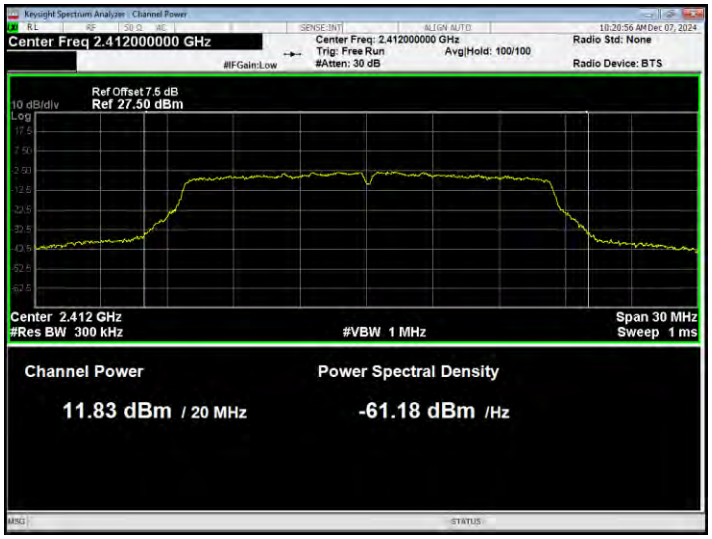
Power NVNT b 2437MHz Ant1



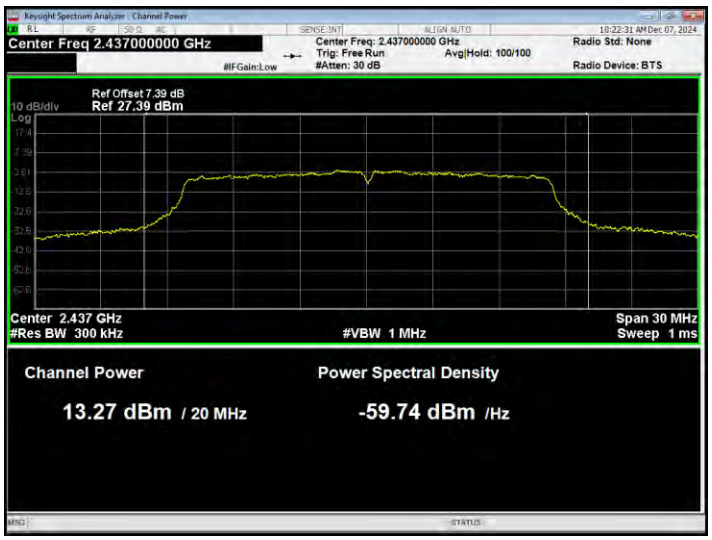
Power NVNT b 2462MHz Ant1



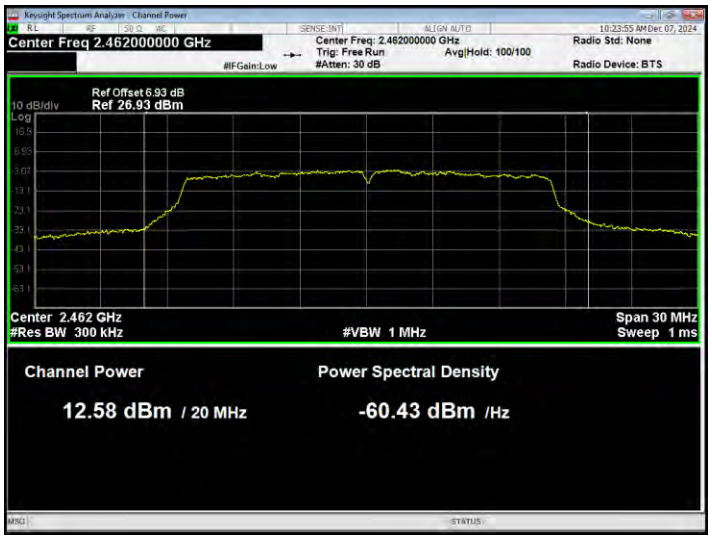
Power NVNT g 2412MHz Ant1



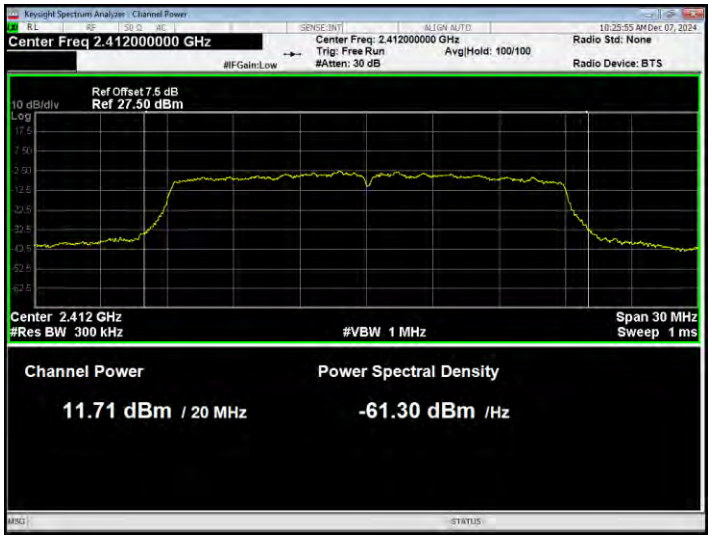
Power NVNT g 2437MHz Ant1



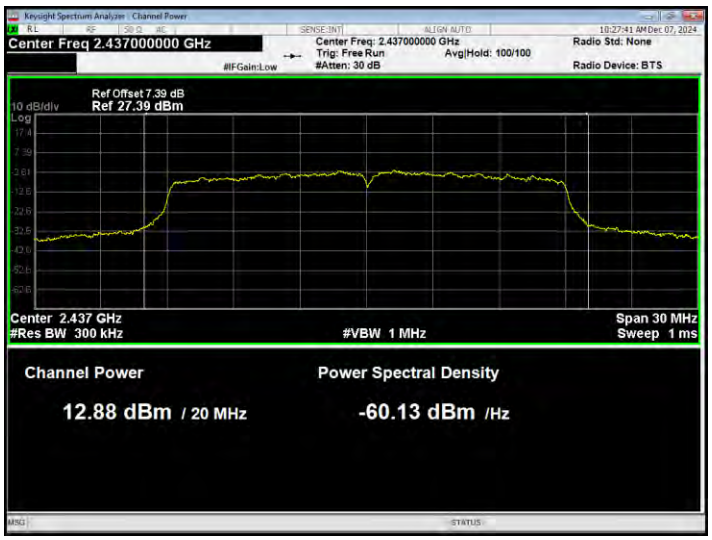
Power NVNT g 2462MHz Ant1



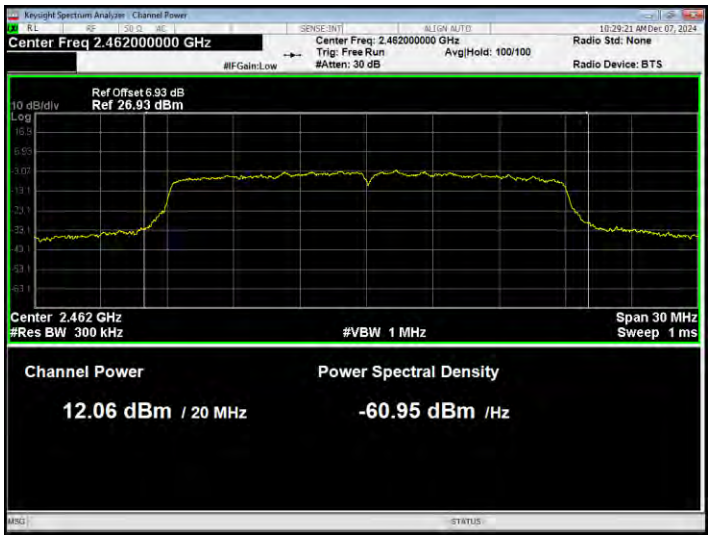
Power NVNT n20 2412MHz Ant1



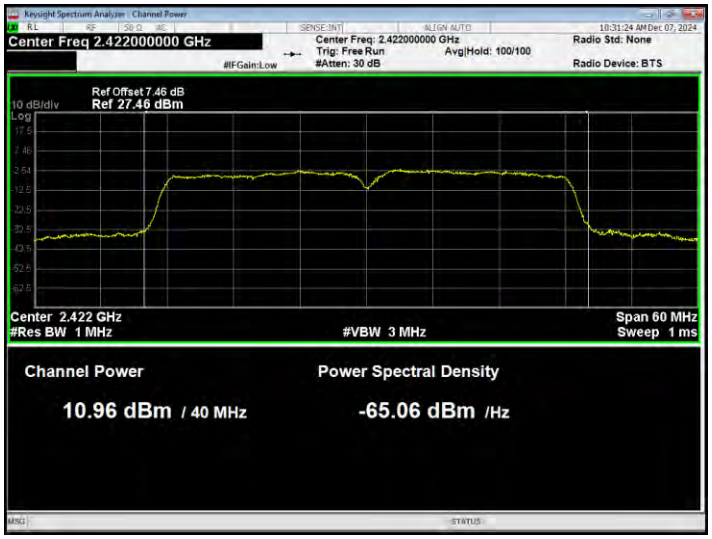
Power NVNT n20 2437MHz Ant1



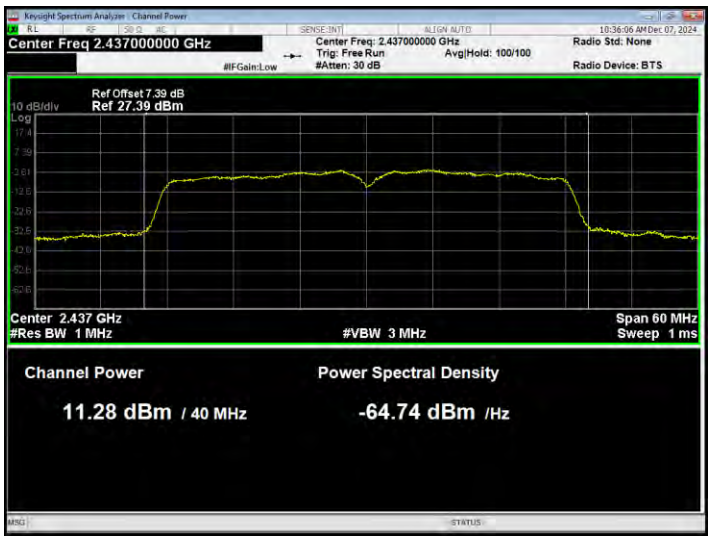
Power NVNT n20 2462MHz Ant1



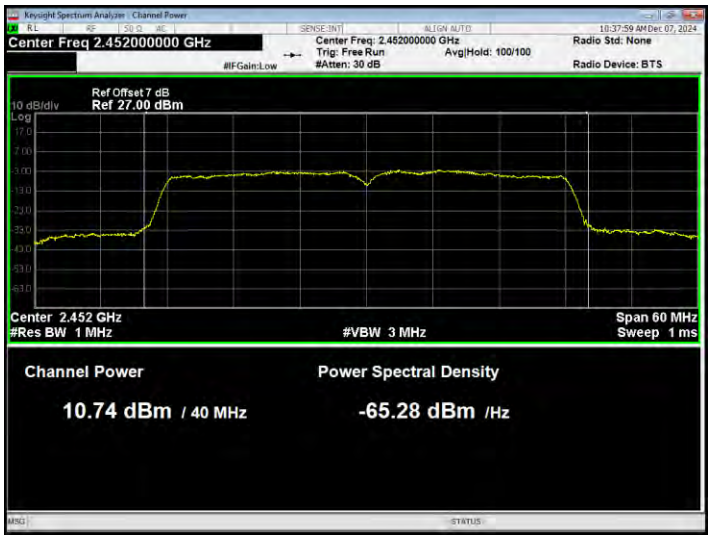
Power NVNT n40 2422MHz Ant1



Power NVNT n40 2437MHz Ant1



Power NVNT n40 2452MHz Ant1



-6dB Bandwidth

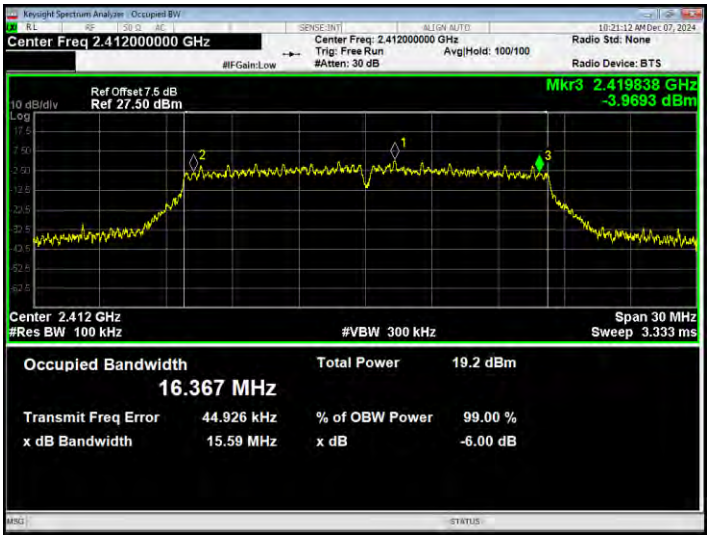
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.549	0.5	Pass
NVNT	b	2437	Ant1	9.303	0.5	Pass
NVNT	b	2462	Ant1	9.289	0.5	Pass
NVNT	g	2412	Ant1	15.587	0.5	Pass
NVNT	g	2437	Ant1	16.298	0.5	Pass
NVNT	g	2462	Ant1	15.702	0.5	Pass
NVNT	n20	2412	Ant1	15.99	0.5	Pass
NVNT	n20	2437	Ant1	15.694	0.5	Pass
NVNT	n20	2462	Ant1	16.346	0.5	Pass
NVNT	n40	2422	Ant1	35.664	0.5	Pass
NVNT	n40	2437	Ant1	35.108	0.5	Pass
NVNT	n40	2452	Ant1	35.446	0.5	Pass

-6dB Bandwidth NVNT b 2412MHz Ant1

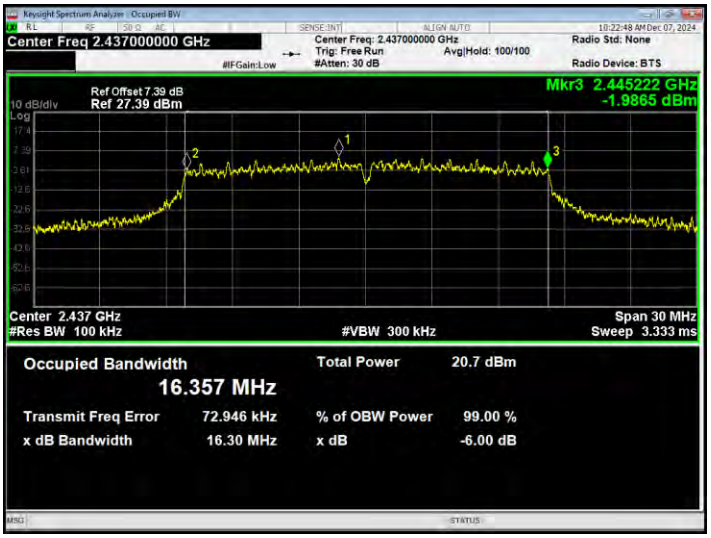
-6dB Bandwidth NVNT b 2437MHz Ant1

-6dB Bandwidth NVNT b 2462MHz Ant1

-6dB Bandwidth NVNT g 2412MHz Ant1



-6dB Bandwidth NVNT g 2437MHz Ant1

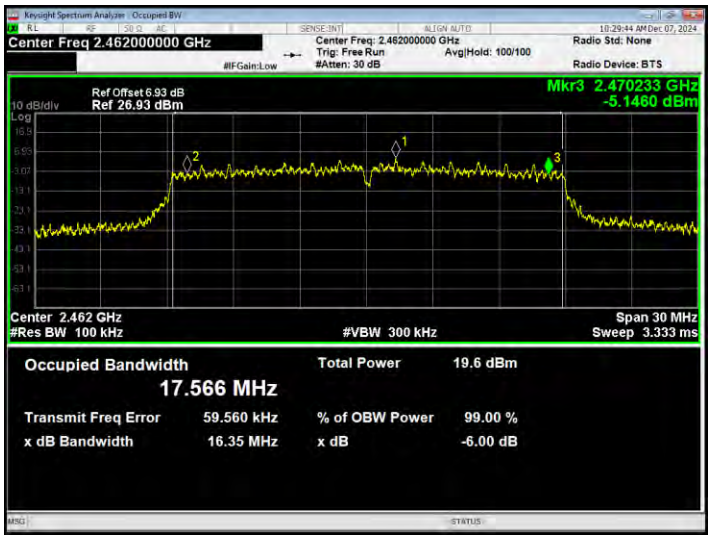


-6dB Bandwidth NVNT g 2462MHz Ant1

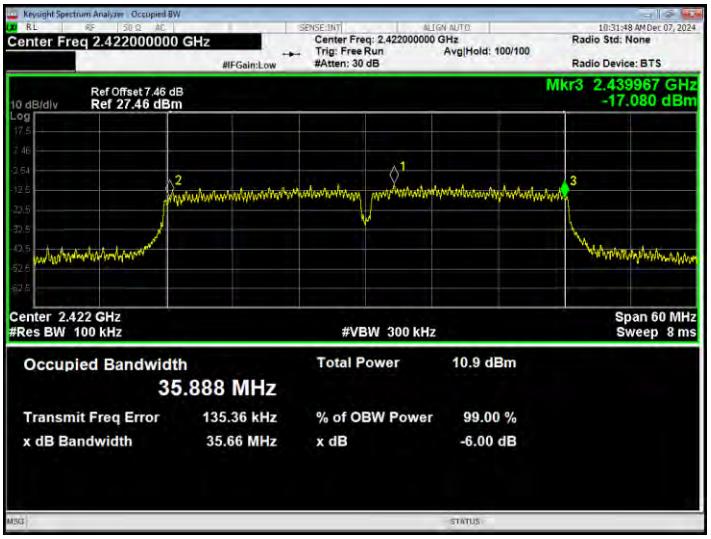
-6dB Bandwidth NVNT n20 2412MHz Ant1

-6dB Bandwidth NVNT n20 2437MHz Ant1

-6dB Bandwidth NVNT n20 2462MHz Ant1

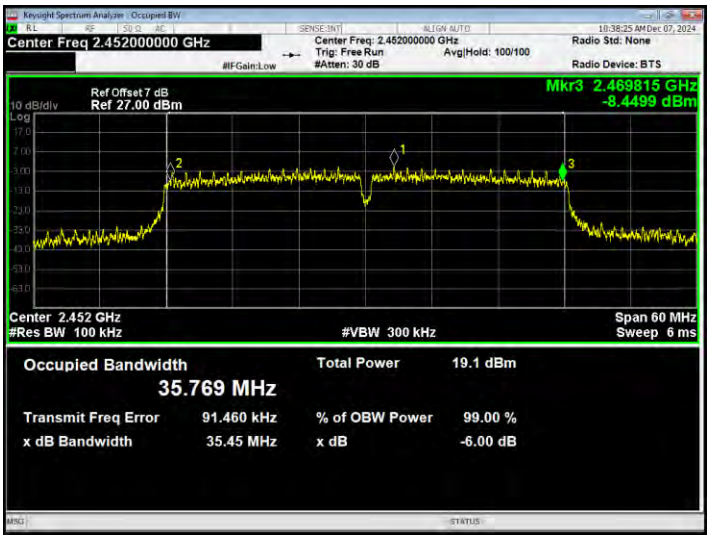


-6dB Bandwidth NVNT n40 2422MHz Ant1



-6dB Bandwidth NVNT n40 2437MHz Ant1

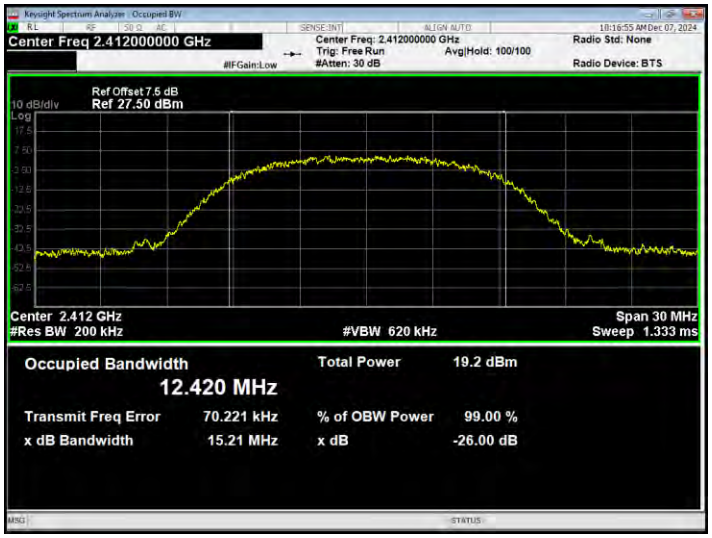
-6dB Bandwidth NVNT n40 2452MHz Ant1



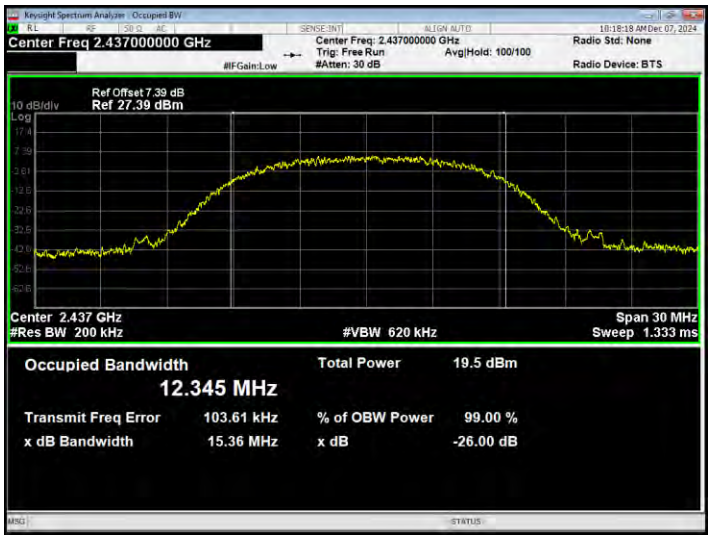
Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	12.41957516
NVNT	b	2437	Ant1	12.34467856
NVNT	b	2462	Ant1	12.47126726
NVNT	g	2412	Ant1	16.44551475
NVNT	g	2437	Ant1	16.45499179
NVNT	g	2462	Ant1	16.45864636
NVNT	n20	2412	Ant1	17.58039878
NVNT	n20	2437	Ant1	17.59036052
NVNT	n20	2462	Ant1	17.58451837
NVNT	n40	2422	Ant1	36.00450987
NVNT	n40	2437	Ant1	35.92873766
NVNT	n40	2452	Ant1	35.98637692

OBW NVNT b 2412MHz Ant1

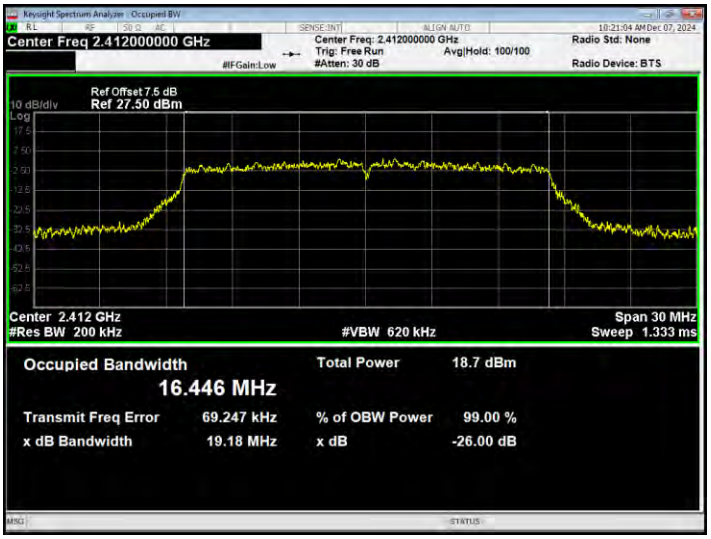


OBW NVNT b 2437MHz Ant1

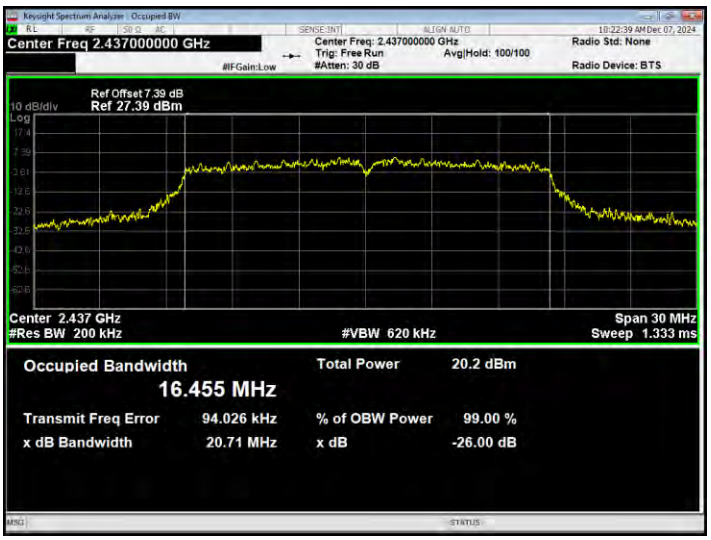


OBW NVNT b 2462MHz Ant1

OBW NVNT g 2412MHz Ant1

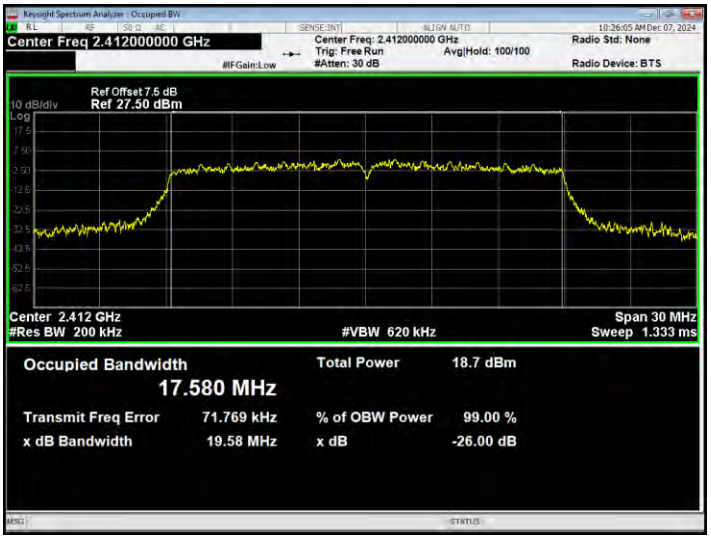


OBW NVNT g 2437MHz Ant1

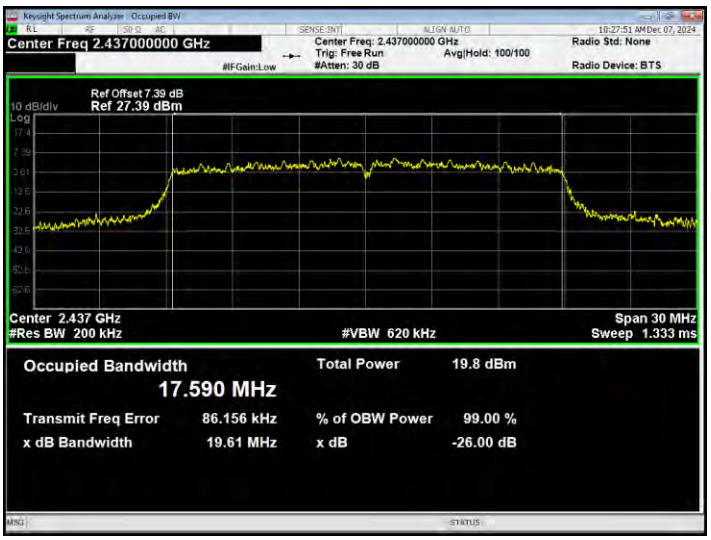


OBW NVNT g 2462MHz Ant1

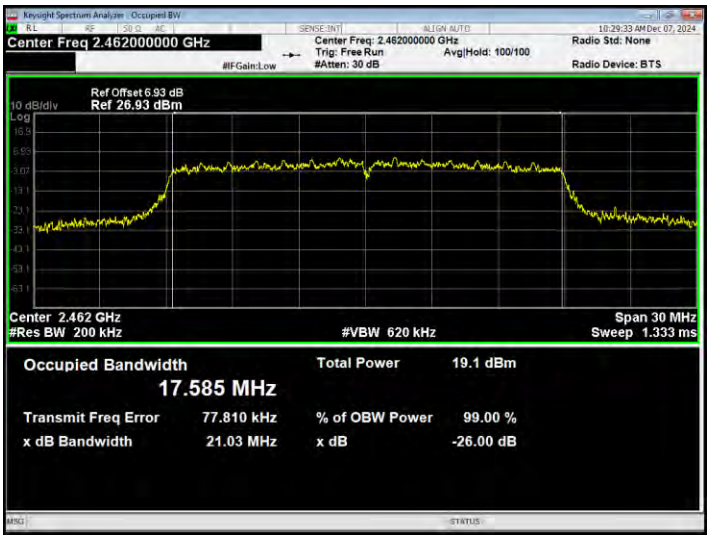
OBW NVNT n20 2412MHz Ant1



OBW NVNT n20 2437MHz Ant1



OBW NVNT n20 2462MHz Ant1



OBW NVNT n40 2422MHz Ant1

OBW NVNT n40 2437MHz Ant1

OBW NVNT n40 2452MHz Ant1

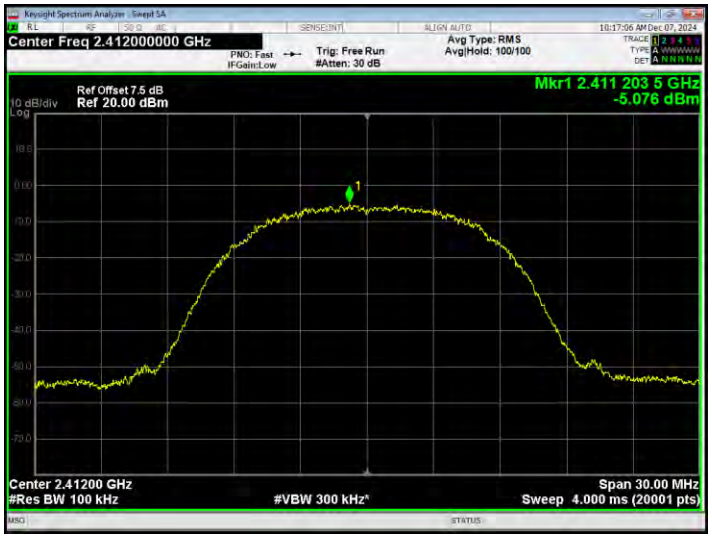
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Reading(dBm)	Duty Factor (dB)	Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-5.076	0.12	15.23	-20.19	8	Pass
NVNT	b	2437	Ant1	-4.83	0.12	15.23	-19.94	8	Pass
NVNT	b	2462	Ant1	-5.697	0.12	15.23	-20.81	8	Pass
NVNT	g	2412	Ant1	-6.00	0.71	15.23	-20.52	8	Pass
NVNT	g	2437	Ant1	-4.373	0.71	15.23	-18.89	8	Pass
NVNT	g	2462	Ant1	-5.355	0.71	15.23	-19.88	8	Pass
NVNT	n20	2412	Ant1	-5.381	0.76	15.23	-19.85	8	Pass
NVNT	n20	2437	Ant1	-4.565	0.76	15.23	-19.04	8	Pass
NVNT	n20	2462	Ant1	-5.328	0.77	15.23	-19.79	8	Pass
NVNT	n40	2422	Ant1	-9.276	2.66	15.23	-21.85	8	Pass
NVNT	n40	2437	Ant1	-8.559	1.19	15.23	-22.60	8	Pass
NVNT	n40	2452	Ant1	-9.298	1.19	15.23	-23.34	8	Pass

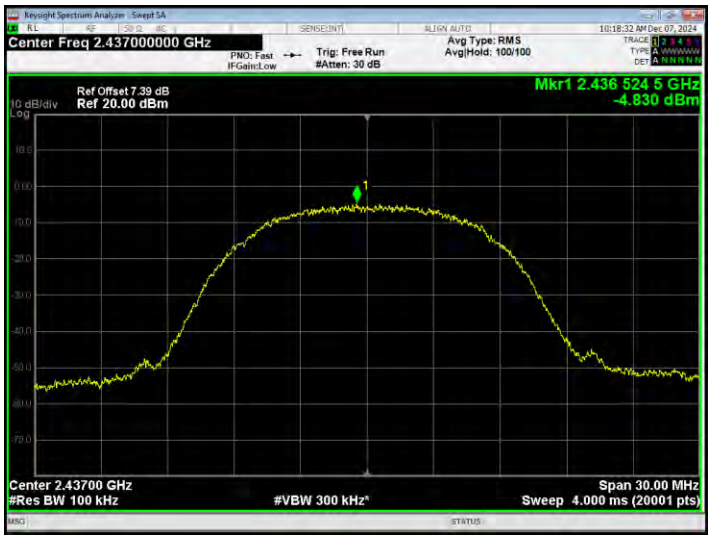
Factor=10log(100k/3k)=15.23

Total PSD=Reading+Duty factor-Factor

PSD NVNT b 2412MHz Ant1

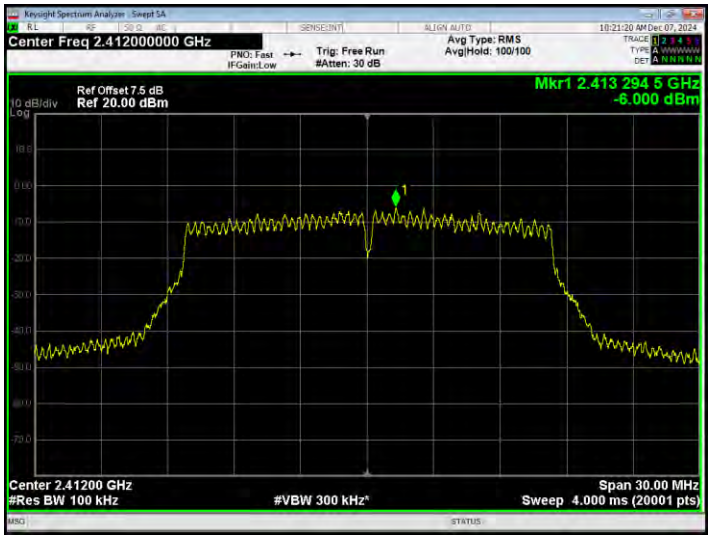


PSD NVNT b 2437MHz Ant1

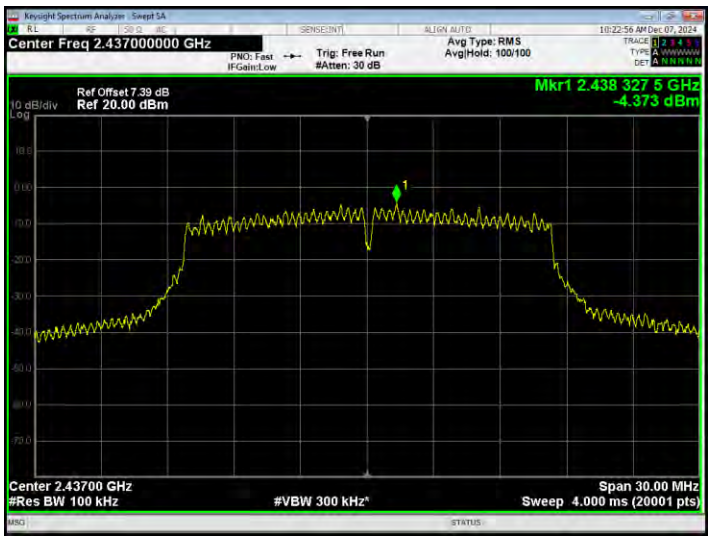


PSD NVNT b 2462MHz Ant1

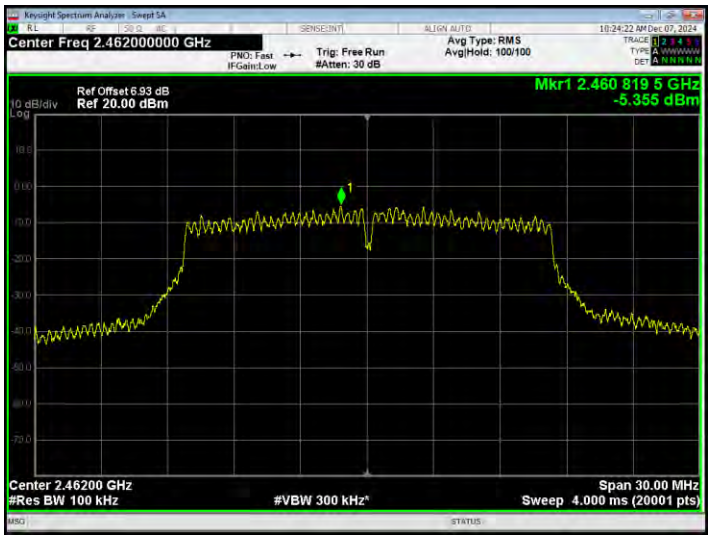
PSD NVNT g 2412MHz Ant1



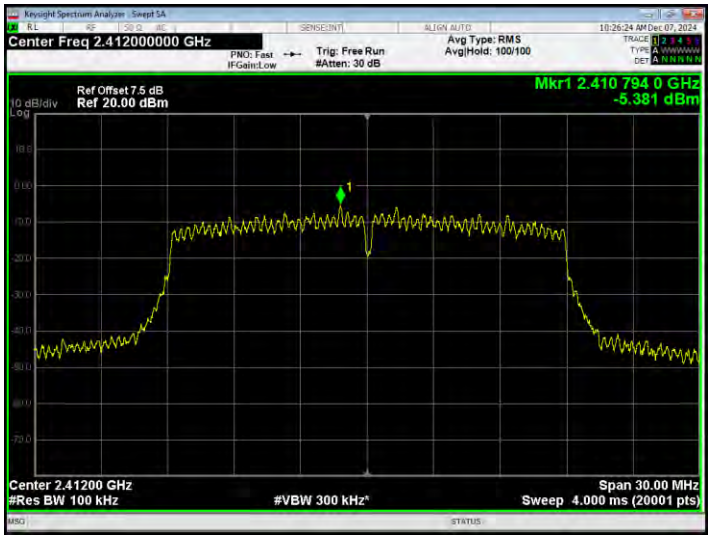
PSD NVNT g 2437MHz Ant1



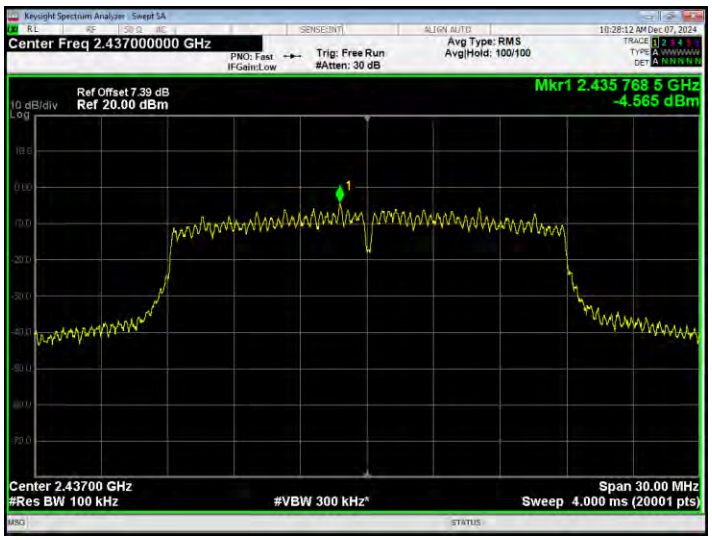
PSD NVNT g 2462MHz Ant1



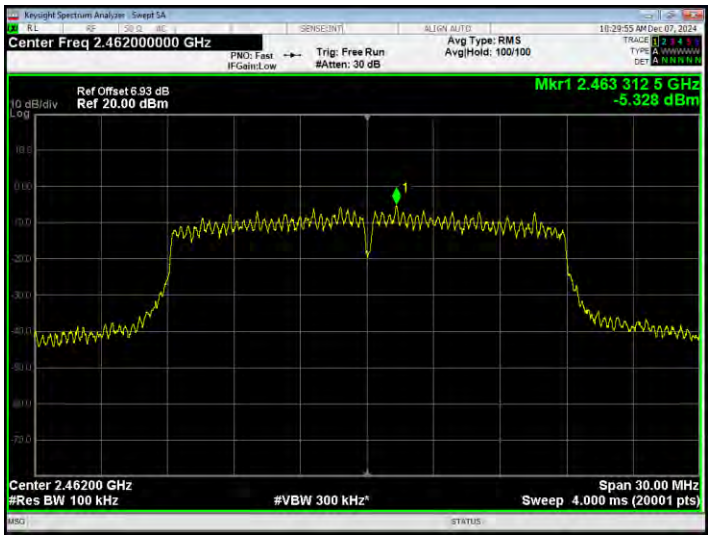
PSD NVNT n20 2412MHz Ant1



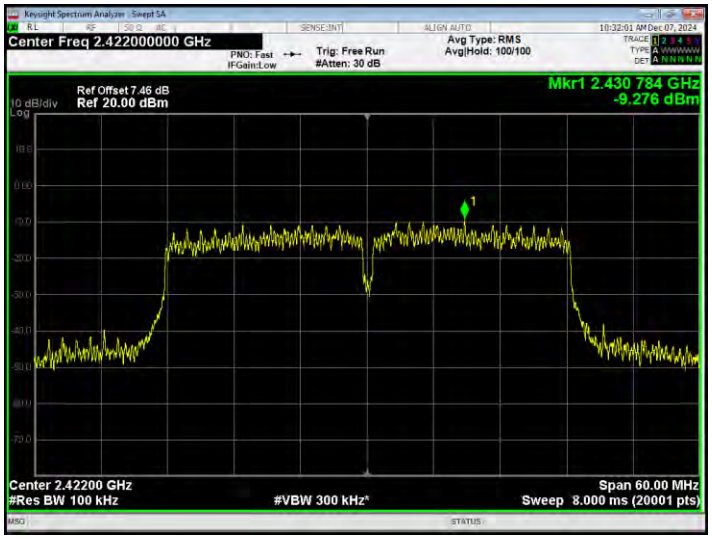
PSD NVNT n20 2437MHz Ant1



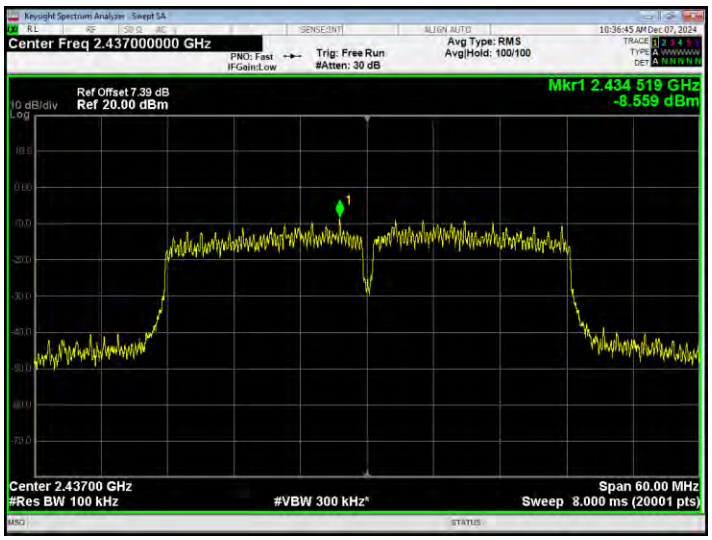
PSD NVNT n20 2462MHz Ant1



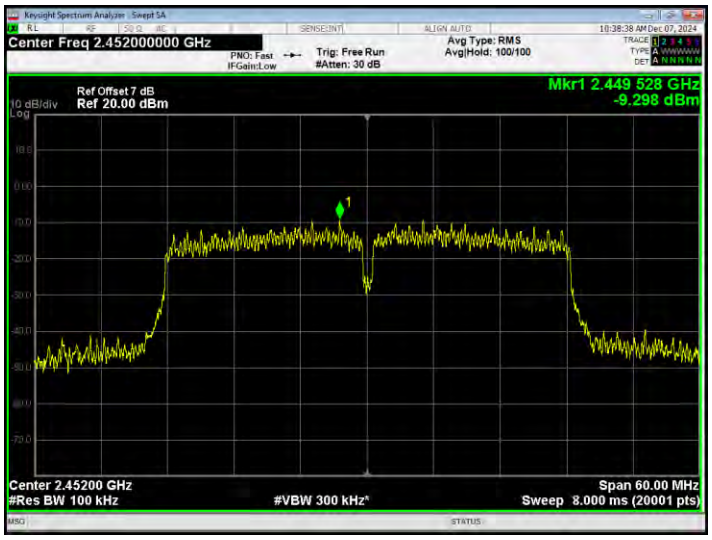
PSD NVNT n40 2422MHz Ant1



PSD NVNT n40 2437MHz Ant1



PSD NVNT n40 2452MHz Ant1

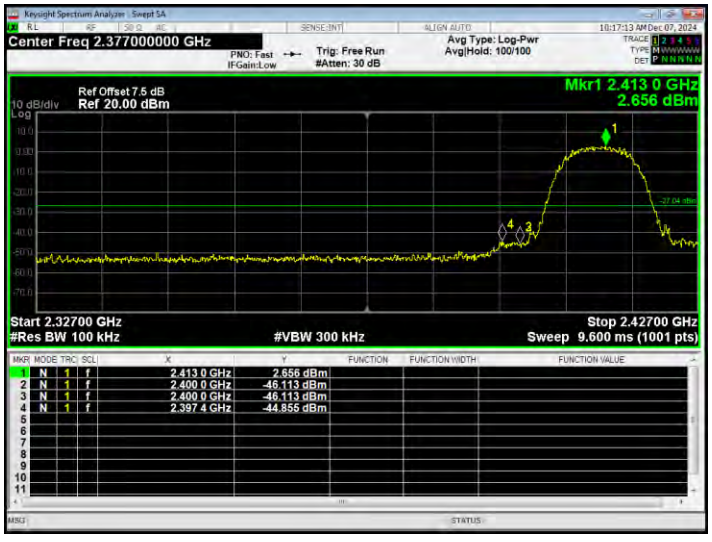


Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-47.81	-30	Pass
NVNT	b	2462	Ant1	-53.47	-30	Pass
NVNT	g	2412	Ant1	-36.33	-30	Pass
NVNT	g	2462	Ant1	-41.42	-30	Pass
NVNT	n20	2412	Ant1	-35.64	-30	Pass
NVNT	n20	2462	Ant1	-41.68	-30	Pass
NVNT	n40	2422	Ant1	-30.3	-30	Pass
NVNT	n40	2452	Ant1	-30.86	-30	Pass

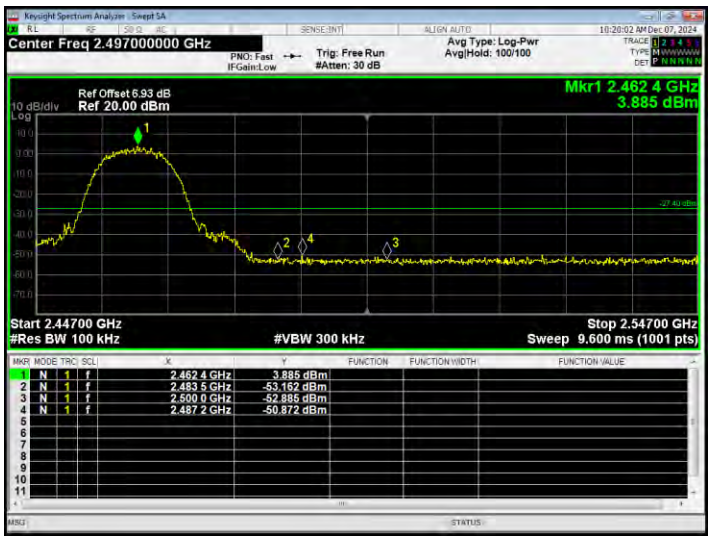
Band Edge NVNT b 2412MHz Ant1 Ref

Band Edge NVNT b 2412MHz Ant1 Emission

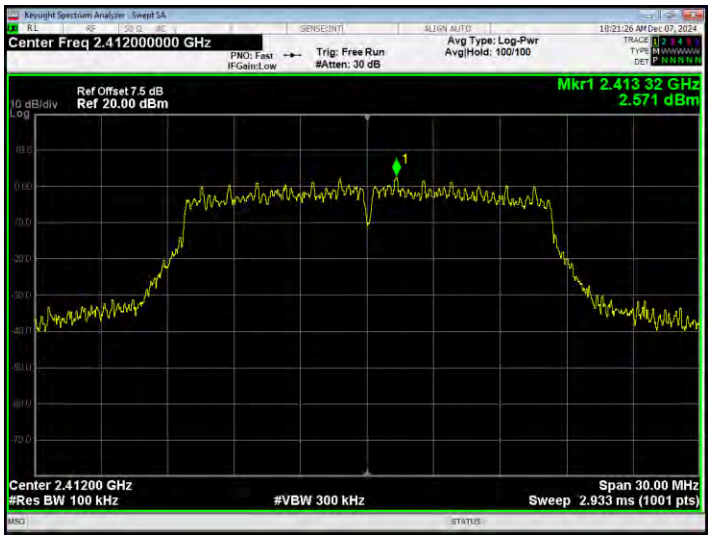


Band Edge NVNT b 2462MHz Ant1 Ref

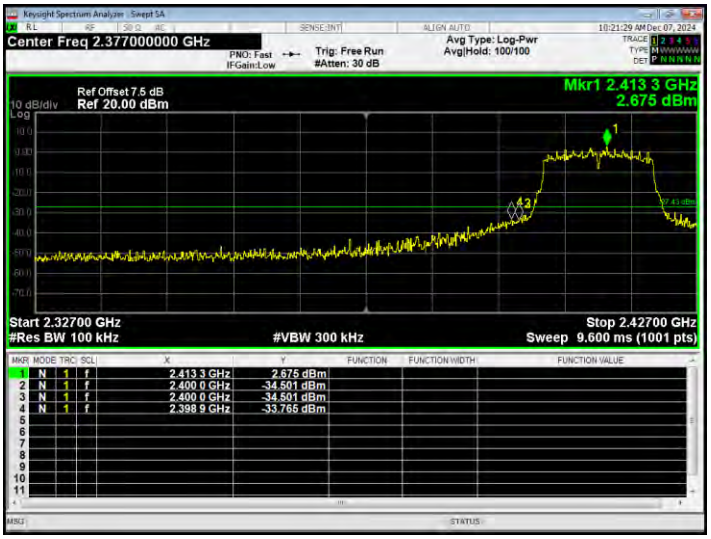
Band Edge NVNT b 2462MHz Ant1 Emission



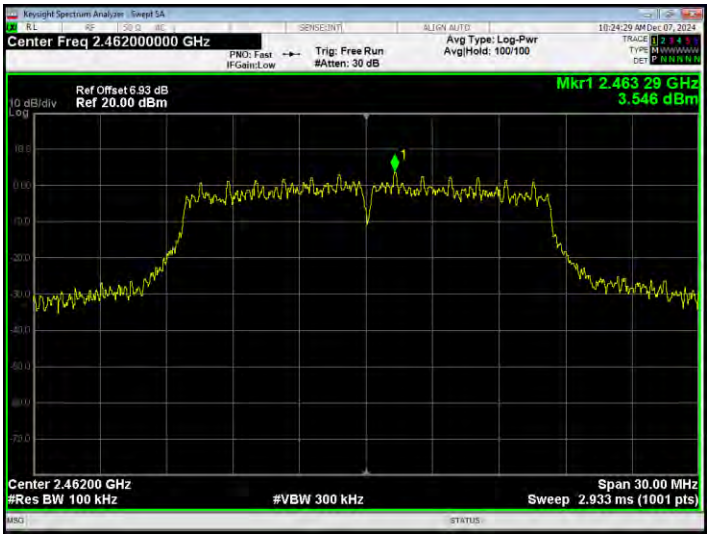
Band Edge NVNT g 2412MHz Ant1 Ref



Band Edge NVNT g 2412MHz Ant1 Emission

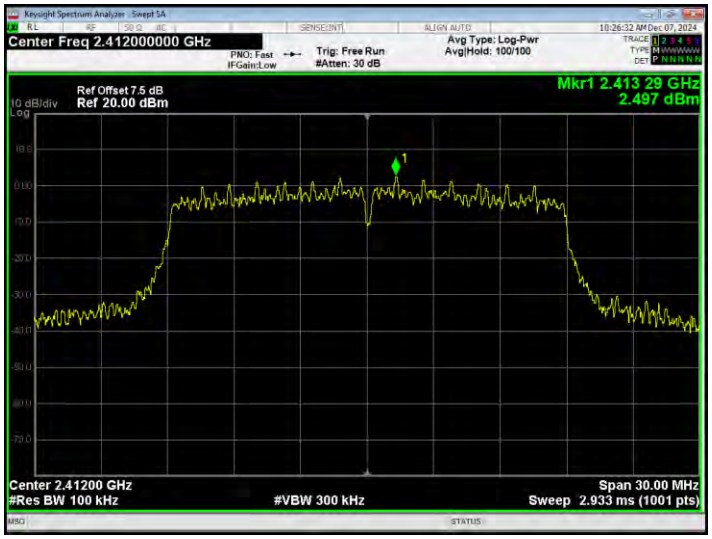


Band Edge NVNT g 2462MHz Ant1 Ref

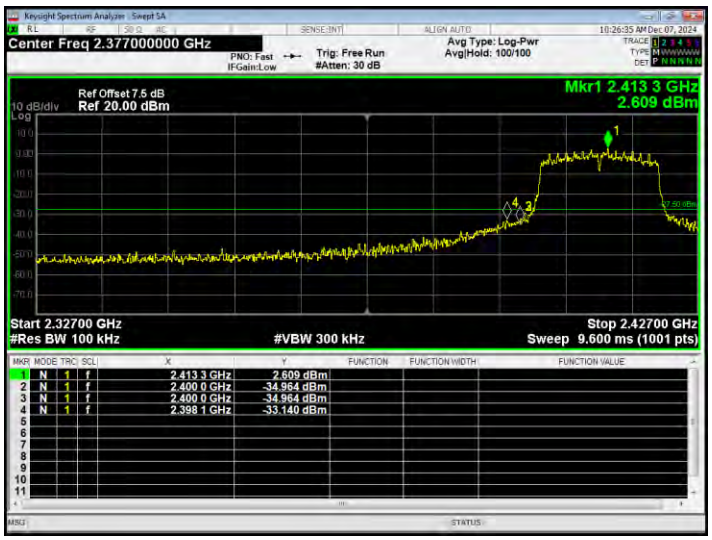


Band Edge NVNT g 2462MHz Ant1 Emission

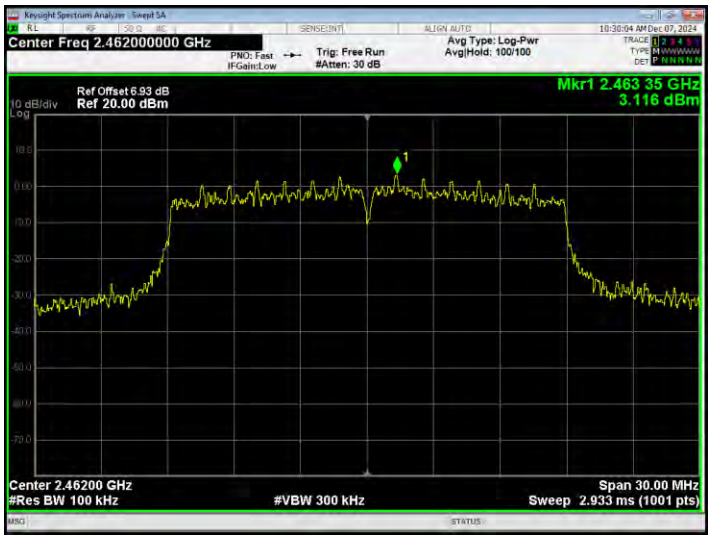
Band Edge NVNT n20 2412MHz Ant1 Ref



Band Edge NVNT n20 2412MHz Ant1 Emission

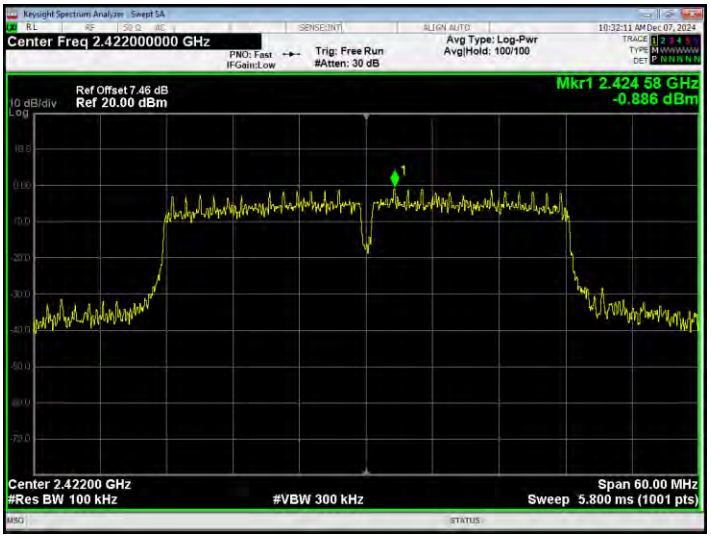


Band Edge NVNT n20 2462MHz Ant1 Ref

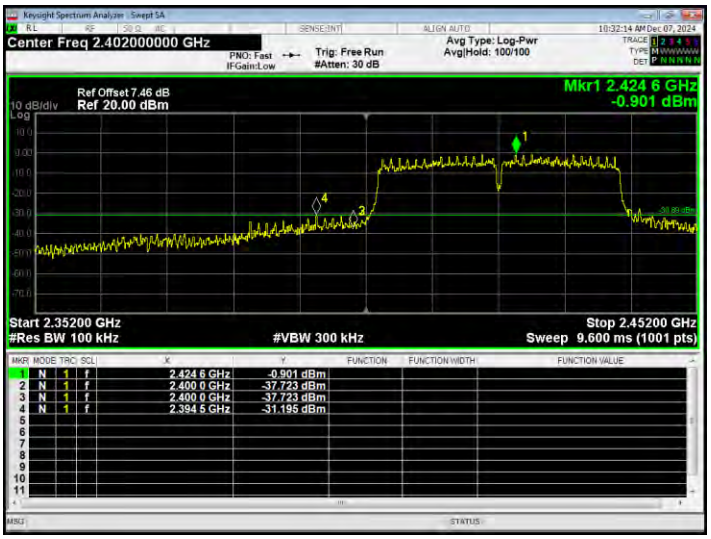


Band Edge NVNT n20 2462MHz Ant1 Emission

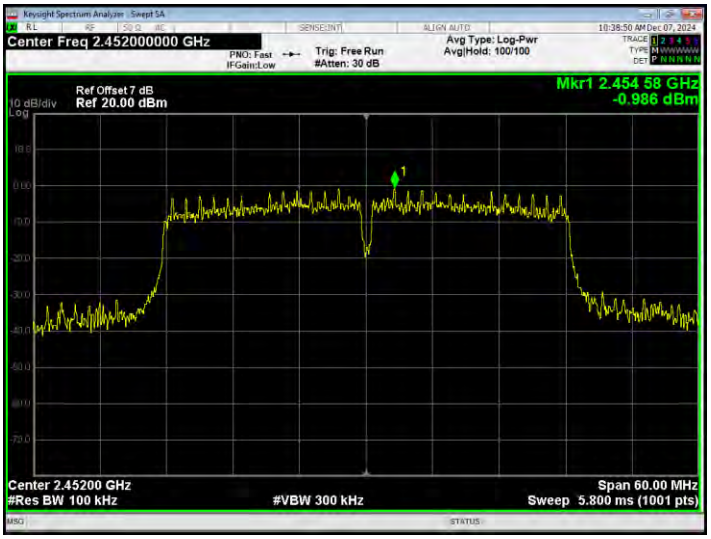
Band Edge NVNT n40 2422MHz Ant1 Ref



Band Edge NVNT n40 2422MHz Ant1 Emission



Band Edge NVNT n40 2452MHz Ant1 Ref

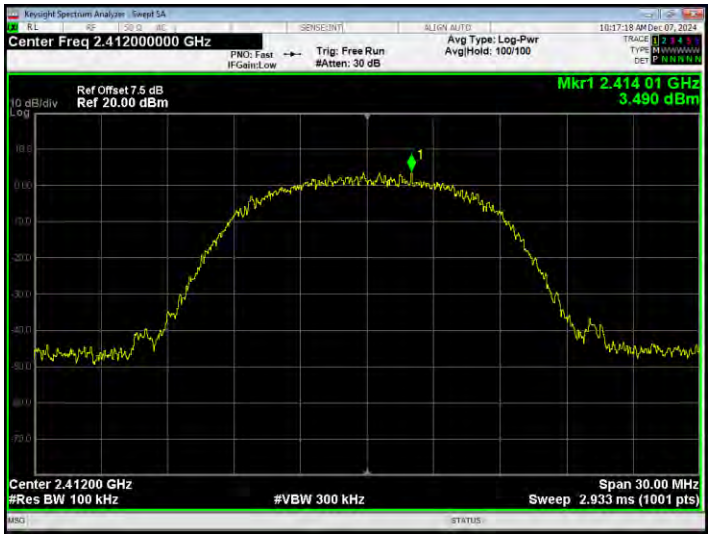


Band Edge NVNT n40 2452MHz Ant1 Emission

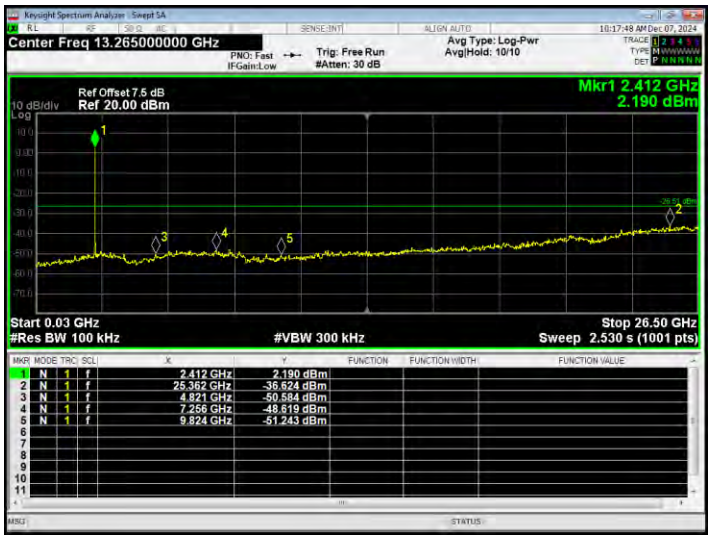
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-40.11	-30	Pass
NVNT	b	2437	Ant1	-40.13	-30	Pass
NVNT	b	2462	Ant1	-38.48	-30	Pass
NVNT	g	2412	Ant1	-37.67	-30	Pass
NVNT	g	2437	Ant1	-40.5	-30	Pass
NVNT	g	2462	Ant1	-39.15	-30	Pass
NVNT	n20	2412	Ant1	-39.03	-30	Pass
NVNT	n20	2437	Ant1	-40.11	-30	Pass
NVNT	n20	2462	Ant1	-38.15	-30	Pass
NVNT	n40	2422	Ant1	-35.22	-30	Pass
NVNT	n40	2437	Ant1	-36.49	-30	Pass
NVNT	n40	2452	Ant1	-35.74	-30	Pass

Tx. Spurious NVNT b 2412MHz Ant1 Ref

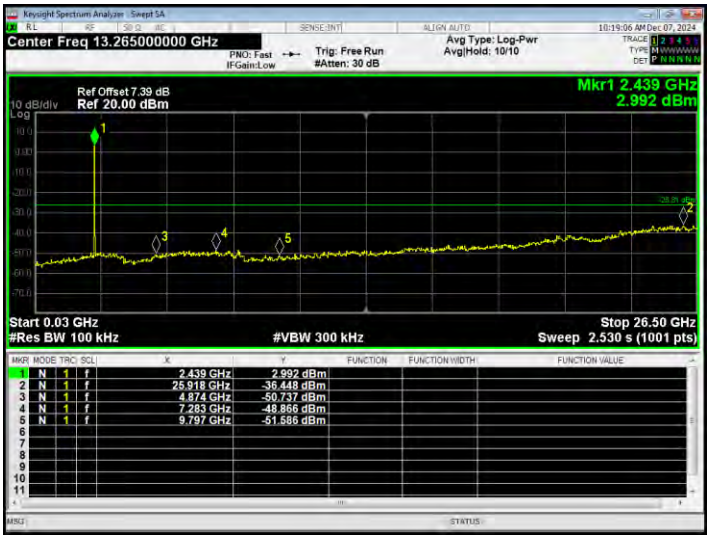


Tx. Spurious NVNT b 2412MHz Ant1 Emission



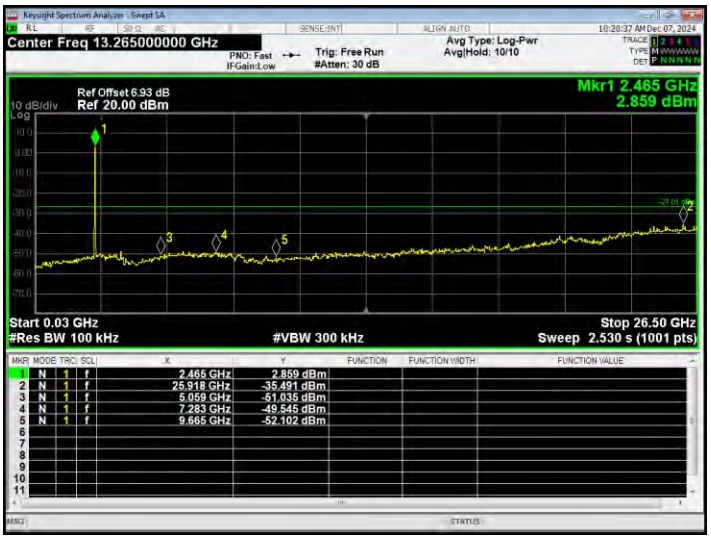
Tx. Spurious NVNT b 2437MHz Ant1 Ref

Tx. Spurious NVNT b 2437MHz Ant1 Emission

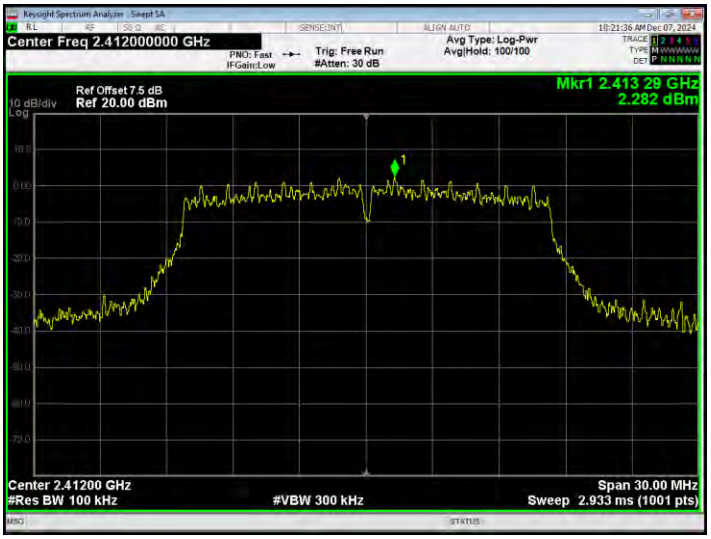


Tx. Spurious NVNT b 2462MHz Ant1 Ref

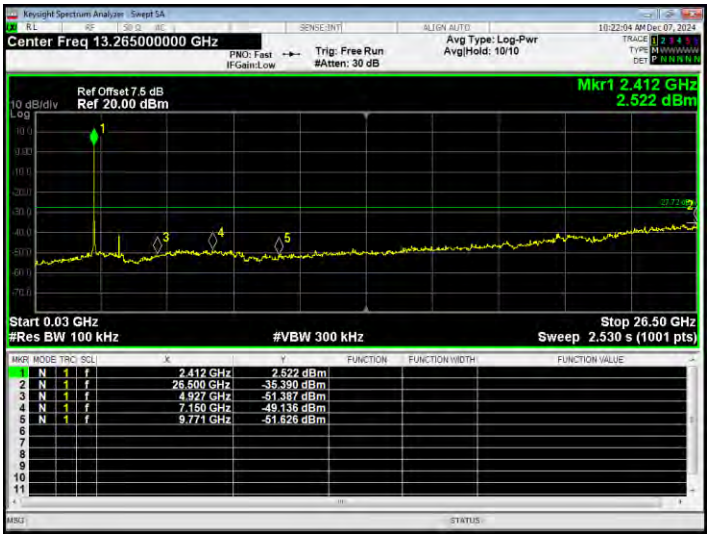
Tx. Spurious NVNT b 2462MHz Ant1 Emission



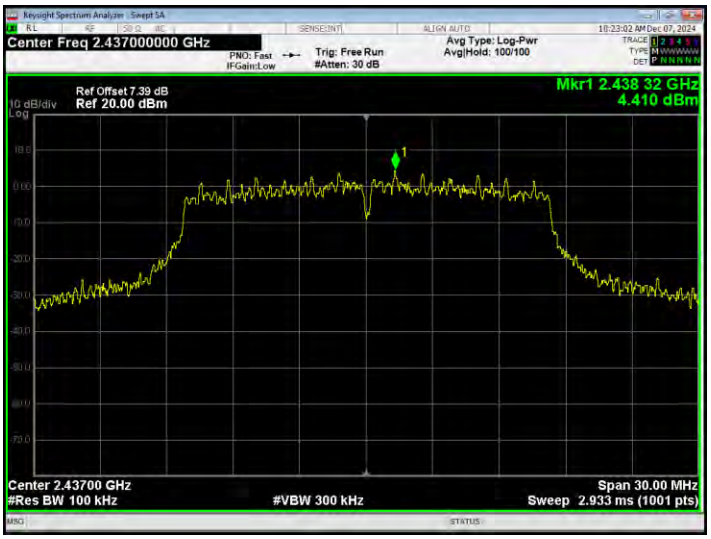
Tx. Spurious NVNT g 2412MHz Ant1 Ref



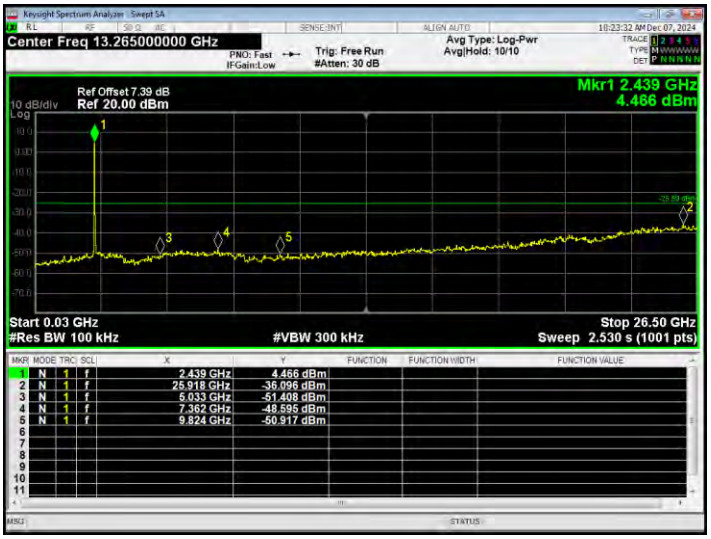
Tx. Spurious NVNT g 2412MHz Ant1 Emission



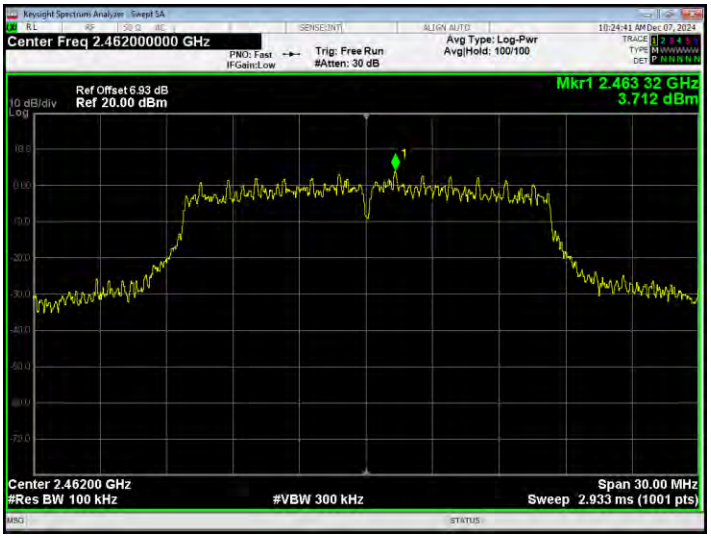
Tx. Spurious NVNT g 2437MHz Ant1 Ref



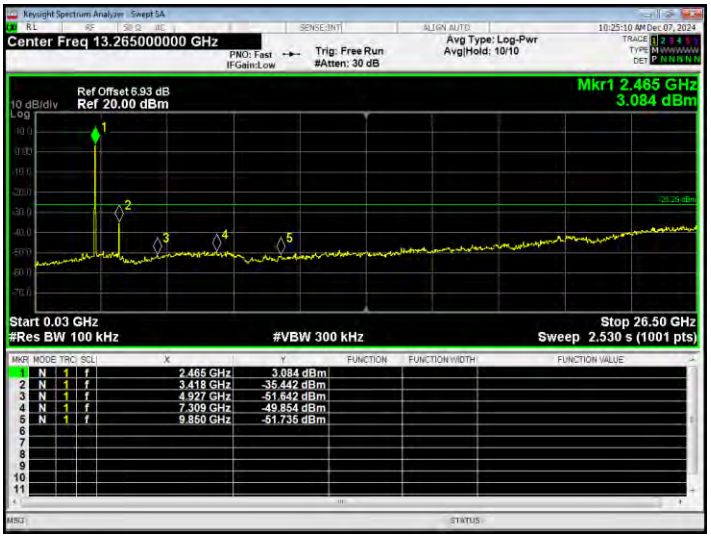
Tx. Spurious NVNT g 2437MHz Ant1 Emission



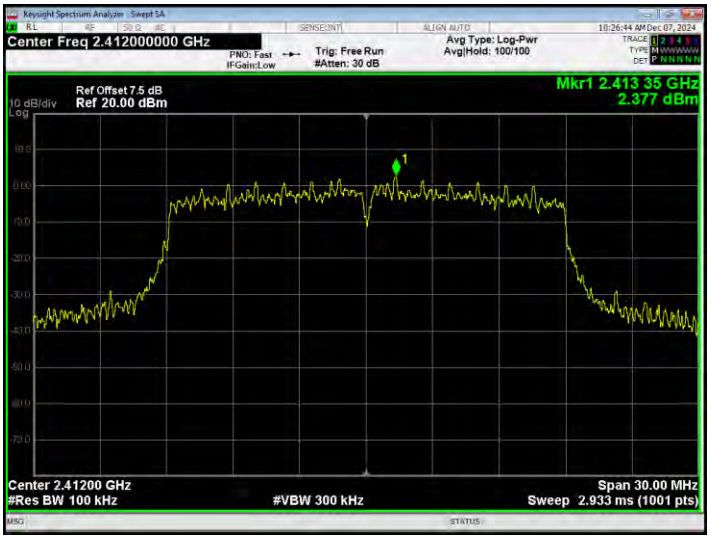
Tx. Spurious NVNT g 2462MHz Ant1 Ref



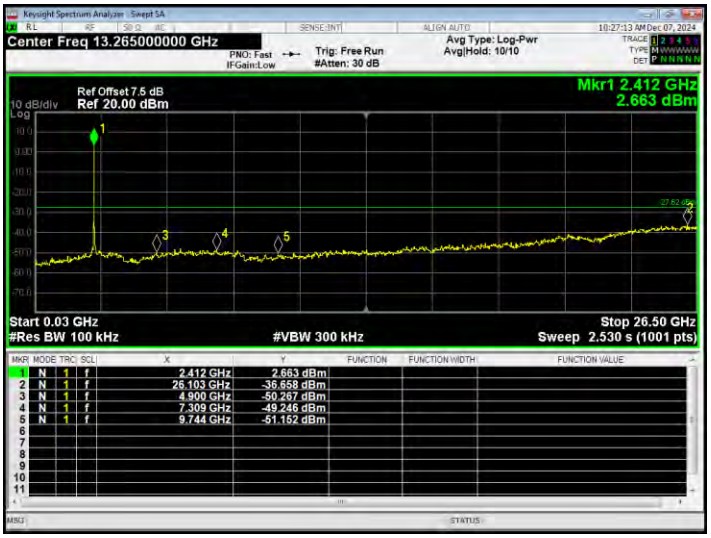
Tx. Spurious NVNT g 2462MHz Ant1 Emission



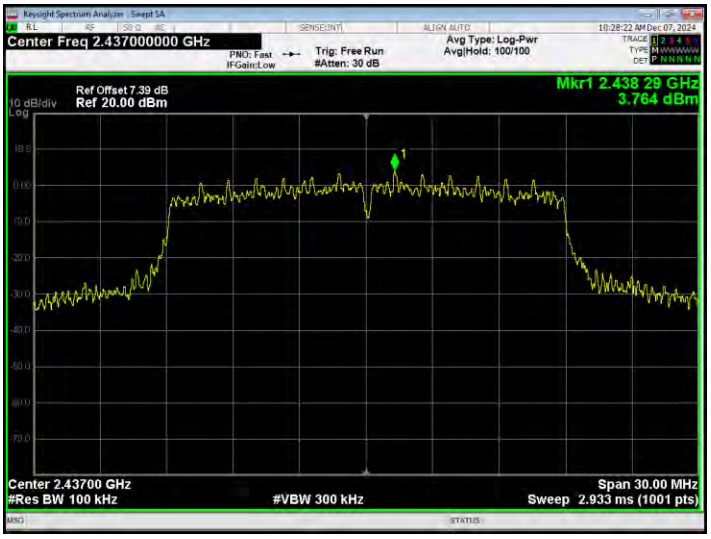
Tx. Spurious NVNT n20 2412MHz Ant1 Ref



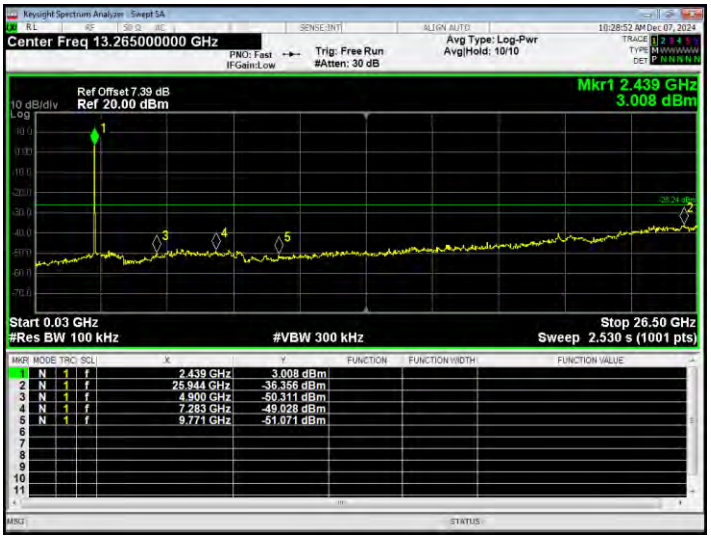
Tx. Spurious NVNT n20 2412MHz Ant1 Emission



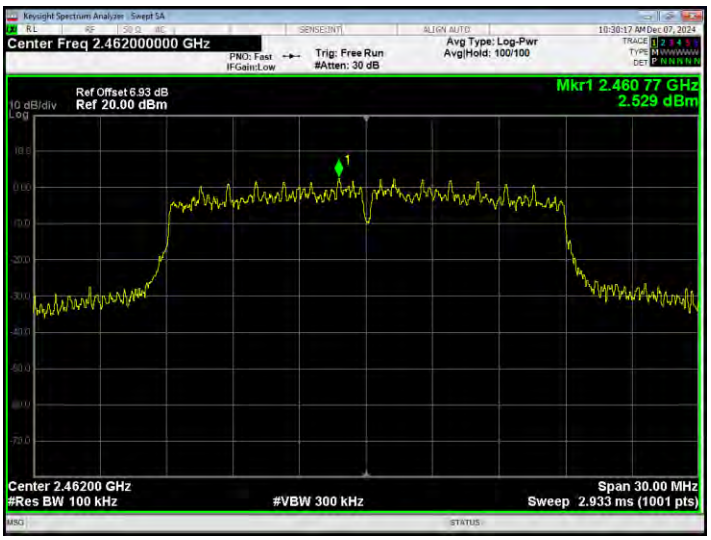
Tx. Spurious NVNT n20 2437MHz Ant1 Ref



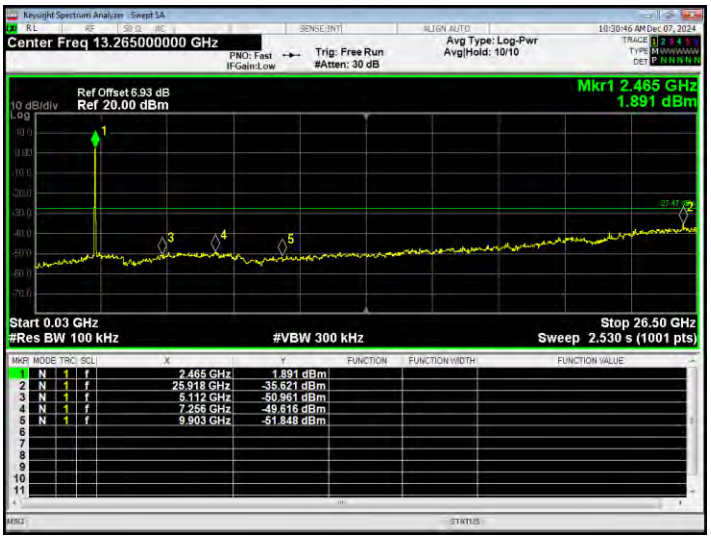
Tx. Spurious NVNT n20 2437MHz Ant1 Emission



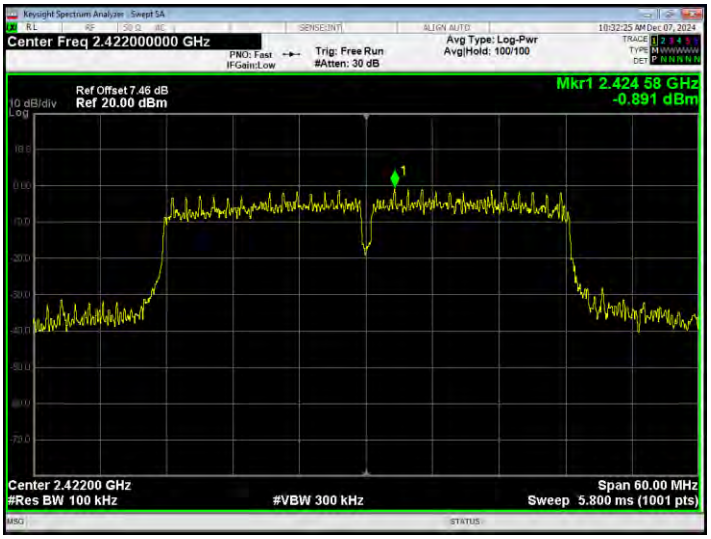
Tx. Spurious NVNT n20 2462MHz Ant1 Ref



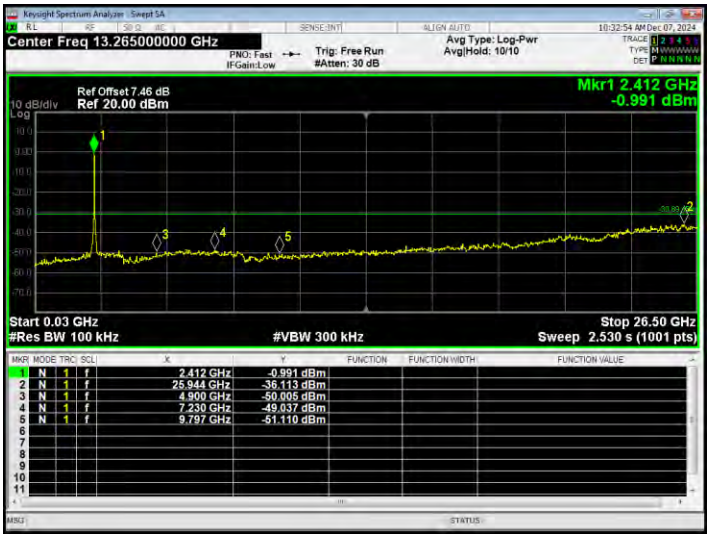
Tx. Spurious NVNT n20 2462MHz Ant1 Emission



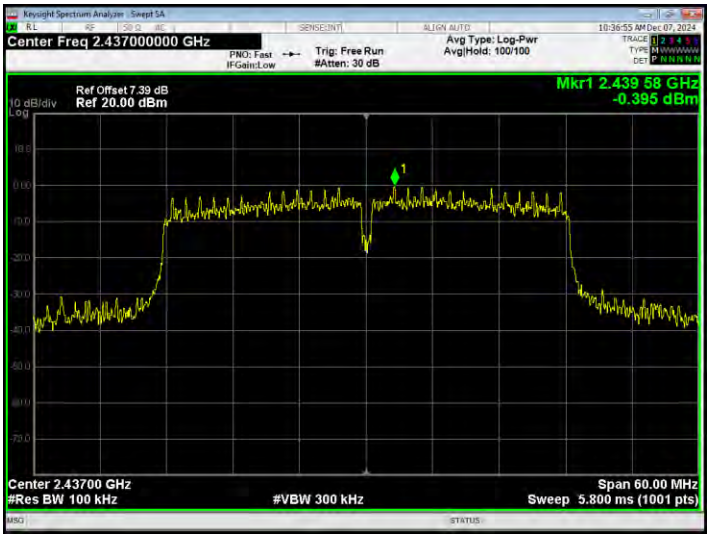
Tx. Spurious NVNT n40 2422MHz Ant1 Ref



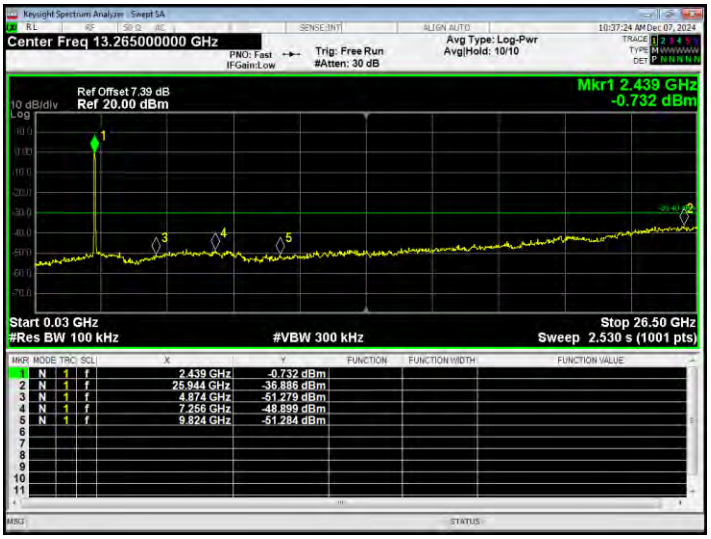
Tx. Spurious NVNT n40 2422MHz Ant1 Emission



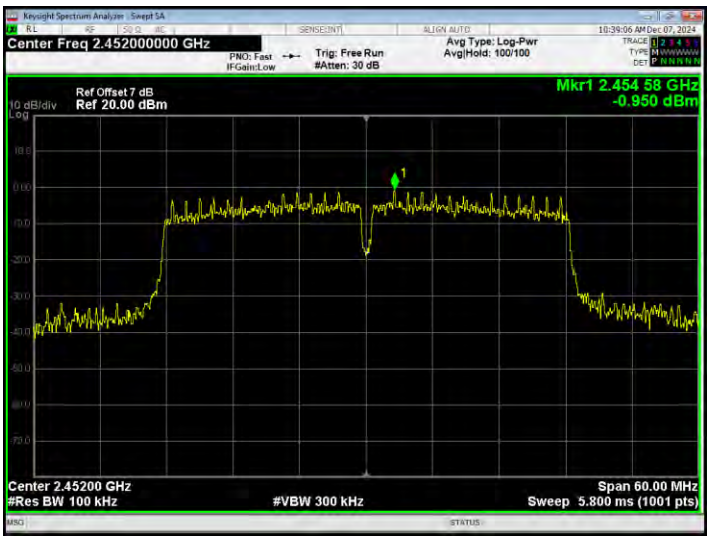
Tx. Spurious NVNT n40 2437MHz Ant1 Ref



Tx. Spurious NVNT n40 2437MHz Ant1 Emission



Tx. Spurious NVNT n40 2452MHz Ant1 Ref



Tx. Spurious NVNT n40 2452MHz Ant1 Emission