

ANNEX 1

FCC Part 15C Test Report

FCC ID: 2BCCG-DELTA

Applicant: Shenzhen Algo Technologies Co., Ltd.

Address: 5th Floor, Building E5, Juyin Technology Industrial Park, Ganli Road, Longgang District, Shenzhen 518116, China

Manufacturer: Shenzhen Algo Technologies Co., Ltd.

Address: 5th Floor, Building E5, Juyin Technology Industrial Park, Ganli Road, Longgang District, Shenzhen 518116, China

EUT: Laser Engraver

Trade Mark: N/A

Model Number: Delta
Delta MK2, Alpha, Alpha MK2, Gamma, Epsilon, Zeta, DIY KIT, DIY KIT Plus, DIY KIT Pro, DIY KIT Plus Pro, DIY KIT MK2, DIY KIT Plus MK2, DIY KIT Pro MK2, DIY KIT Plus Pro MK2, Laser Master 1 MK2, Laser Master 2 MK2

Date of Receipt: Jul. 08, 2023

Test Date: Jul. 08, 2023 - Jul. 22, 2023

Date of Report: Jul. 22, 2023

Prepared By: BTF Testing Lab (Shenzhen) Co., Ltd.

Address: F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

Applicable Standards: FCC PART 15 C 15.247
ANSI C63.10:2013

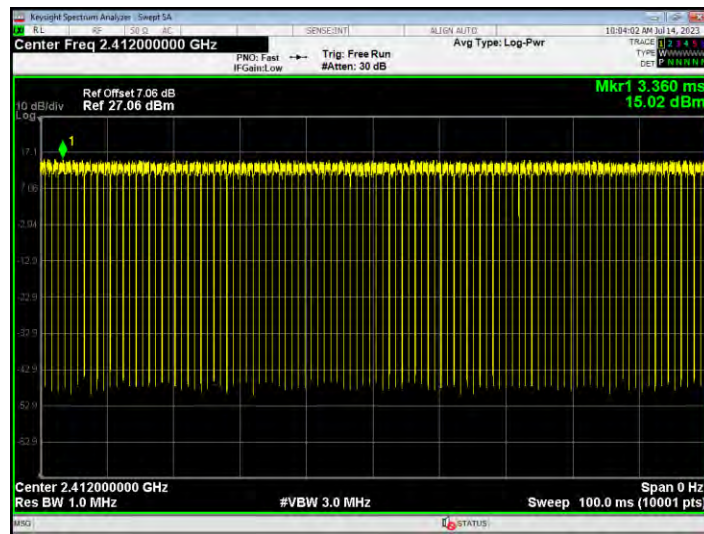
Test Result: Pass

Report Number: BTF230718R01701

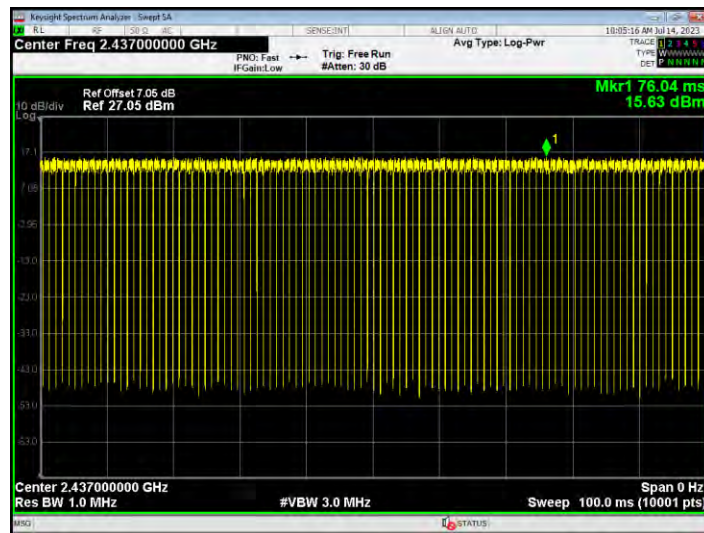
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	b	2412	Ant1	97.3	0.12
NVNT	b	2437	Ant1	97.28	0.12
NVNT	b	2462	Ant1	97.32	0.12
NVNT	g	2412	Ant1	84.93	0.71
NVNT	g	2437	Ant1	85.25	0.69
NVNT	g	2462	Ant1	85.21	0.7
NVNT	n20	2412	Ant1	97.53	0.11
NVNT	n20	2437	Ant1	97.6	0.11
NVNT	n20	2462	Ant1	97.57	0.11
NVNT	n40	2422	Ant1	95.3	0.21
NVNT	n40	2437	Ant1	95.33	0.21
NVNT	n40	2452	Ant1	95.25	0.21

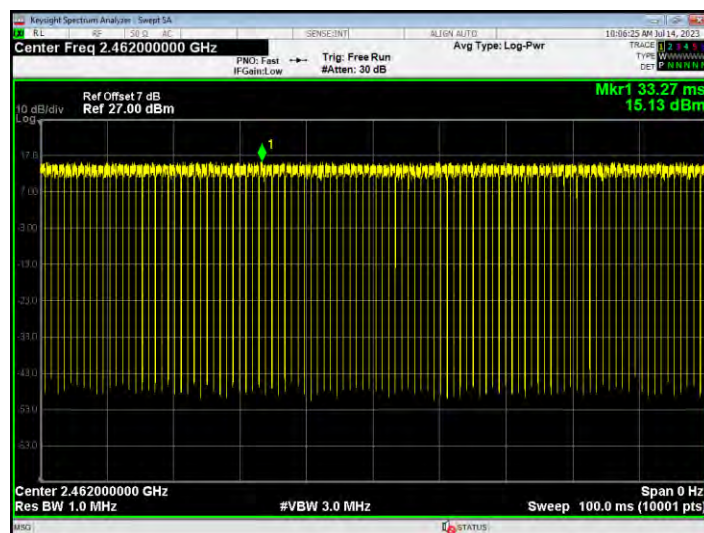
Duty Cycle NVNT b 2412MHz Ant1



Duty Cycle NVNT b 2437MHz Ant1



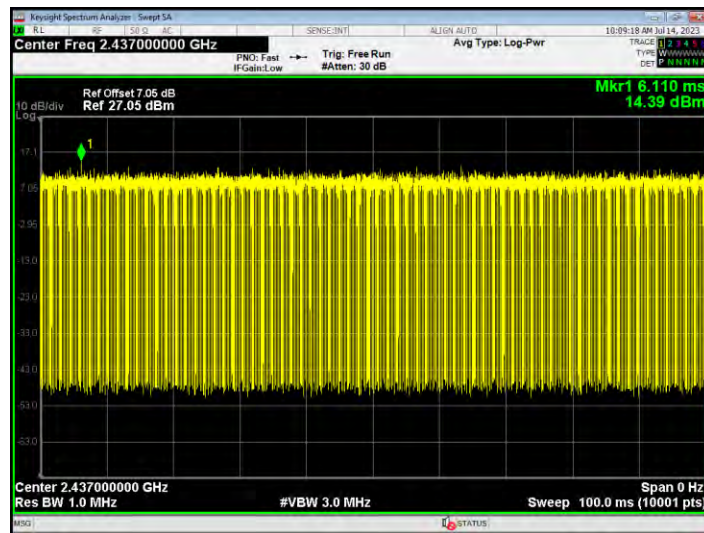
Duty Cycle NVNT b 2462MHz Ant1



Duty Cycle NVNT g 2412MHz Ant1



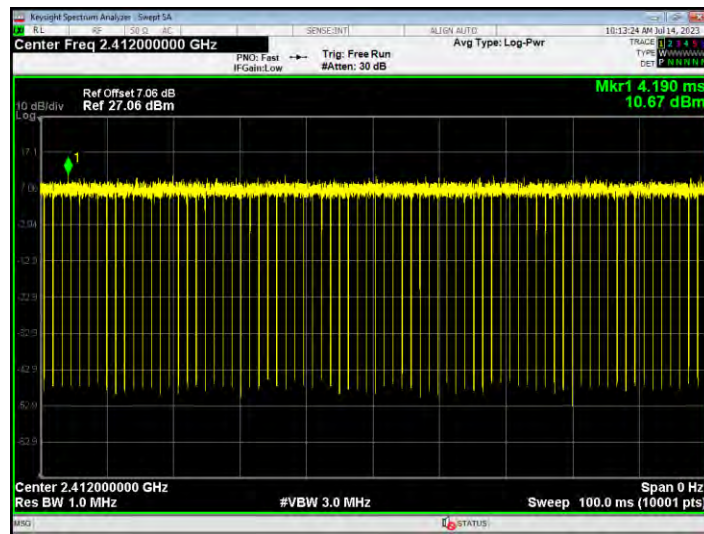
Duty Cycle NVNT g 2437MHz Ant1



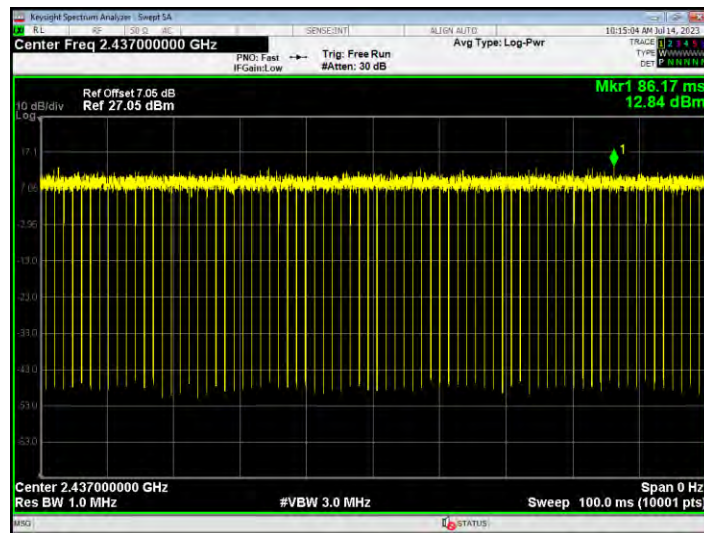
Duty Cycle NVNT g 2462MHz Ant1



Duty Cycle NVNT n20 2412MHz Ant1



Duty Cycle NVNT n20 2437MHz Ant1



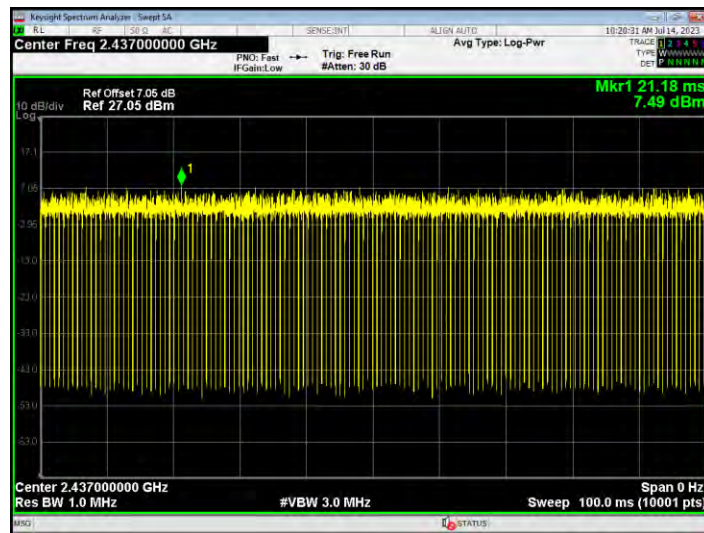
Duty Cycle NVNT n20 2462MHz Ant1



Duty Cycle NVNT n40 2422MHz Ant1



Duty Cycle NVNT n40 2437MHz Ant1



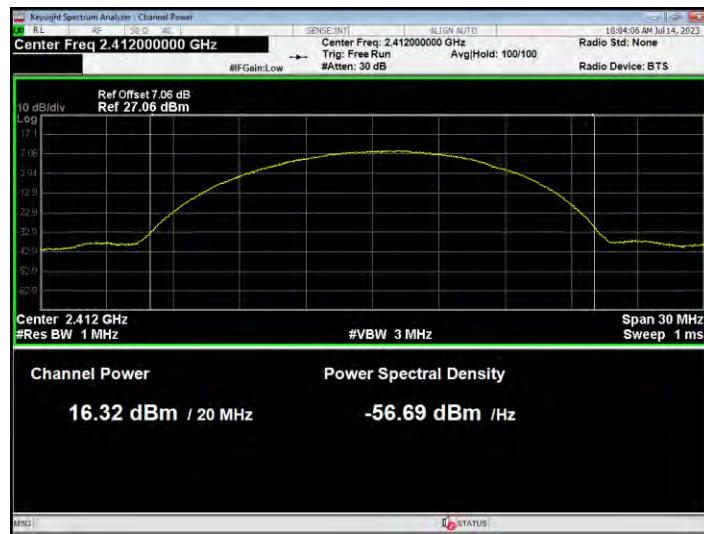
Duty Cycle NVNT n40 2452MHz Ant1



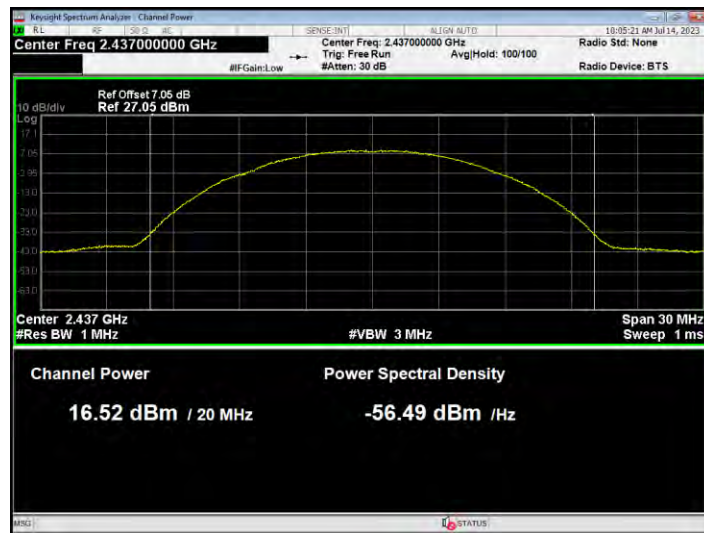
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	16.324	0.12	16.444	30	Pass
NVNT	b	2437	Ant1	16.521	0.12	16.641	30	Pass
NVNT	b	2462	Ant1	15.895	0.12	16.015	30	Pass
NVNT	g	2412	Ant1	13.254	0.71	13.964	30	Pass
NVNT	g	2437	Ant1	13.591	0.69	14.281	30	Pass
NVNT	g	2462	Ant1	12.786	0.7	13.486	30	Pass
NVNT	n20	2412	Ant1	14.271	0.11	14.381	30	Pass
NVNT	n20	2437	Ant1	14.632	0.11	14.742	30	Pass
NVNT	n20	2462	Ant1	13.691	0.11	13.801	30	Pass
NVNT	n40	2422	Ant1	13.907	0.21	14.117	30	Pass
NVNT	n40	2437	Ant1	13.809	0.21	14.019	30	Pass
NVNT	n40	2452	Ant1	13.164	0.21	13.374	30	Pass

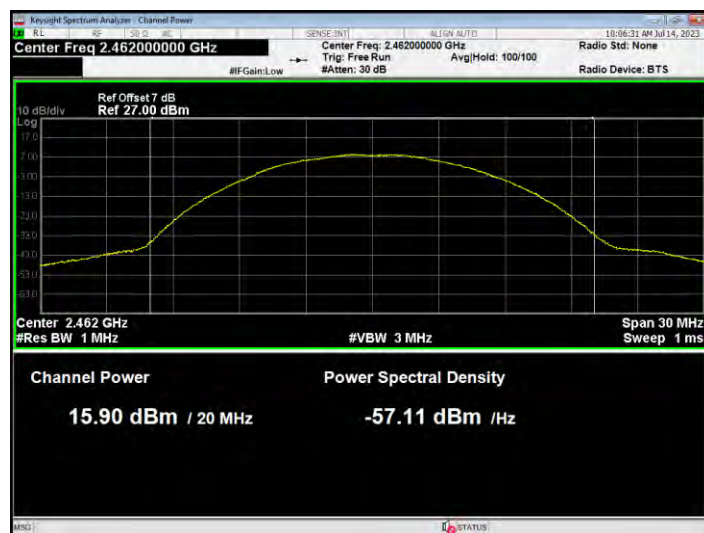
Power NVNT b 2412MHz Ant1



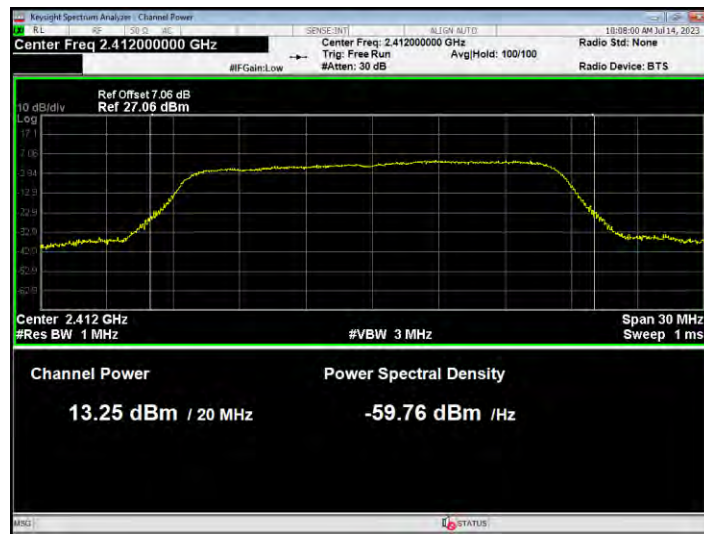
Power NVNT b 2437MHz Ant1



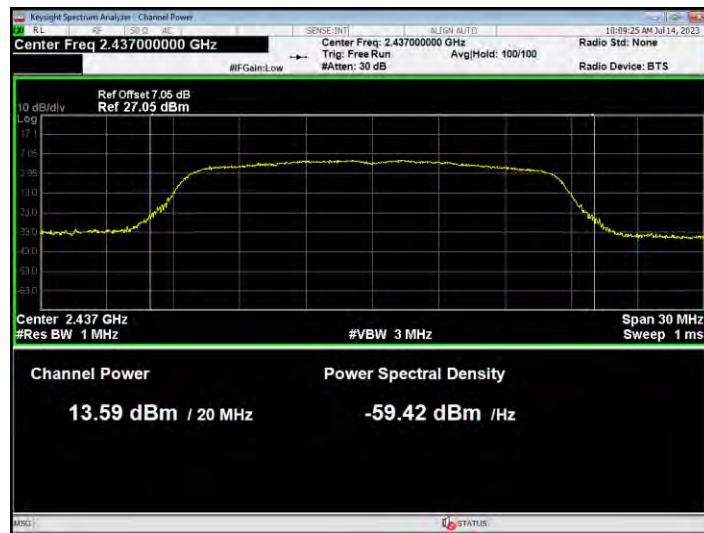
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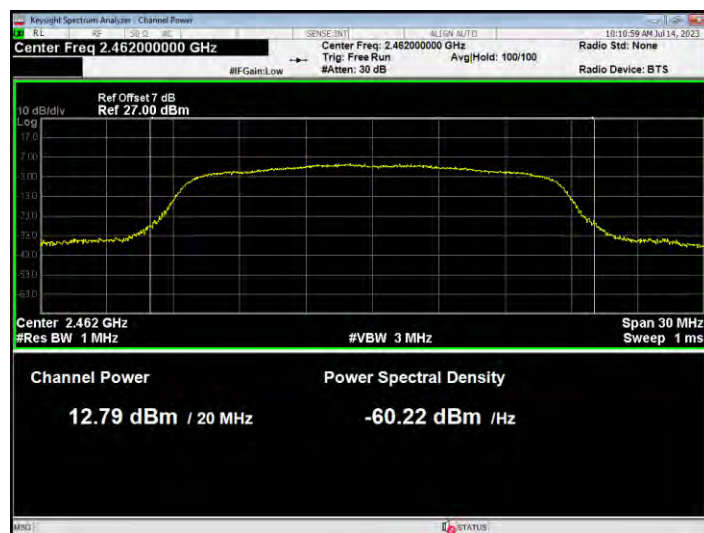
Power NVNT g 2412MHz Ant1



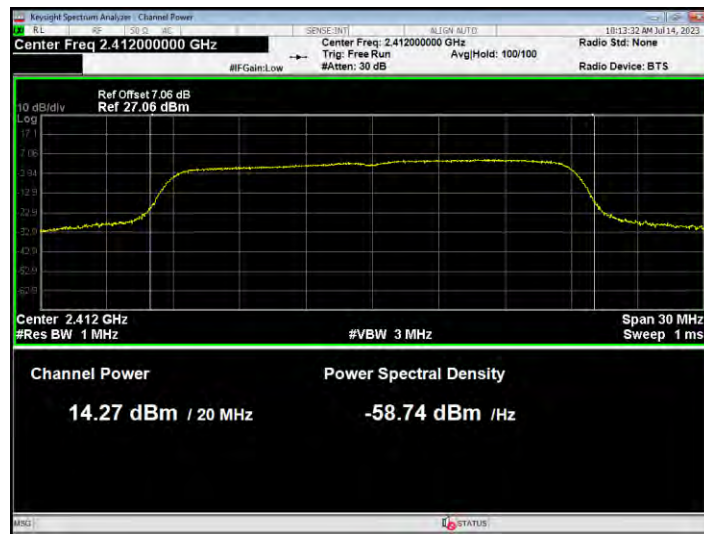
Power NVNT g 2437MHz Ant1



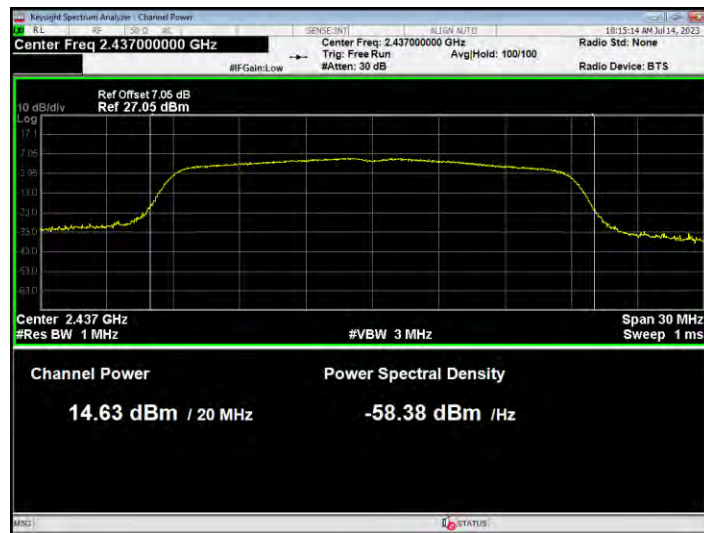
Power NVNT g 2462MHz Ant1



Power NVNT n20 2412MHz Ant1



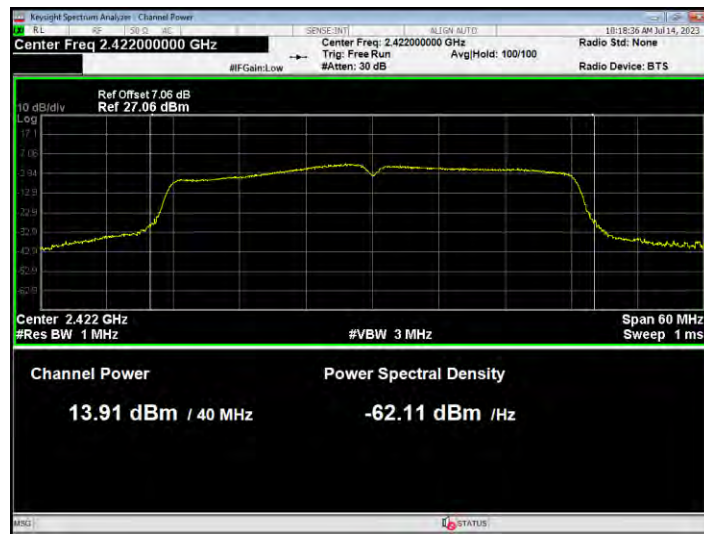
Power NVNT n20 2437MHz Ant1



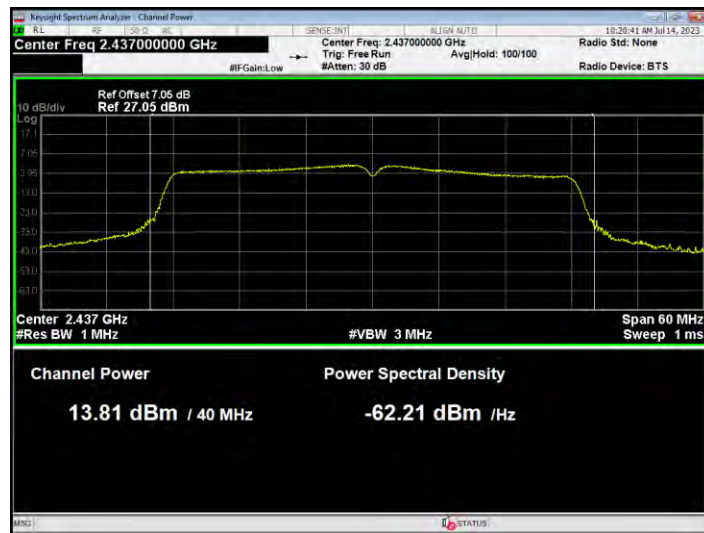
Power NVNT n20 2462MHz Ant1



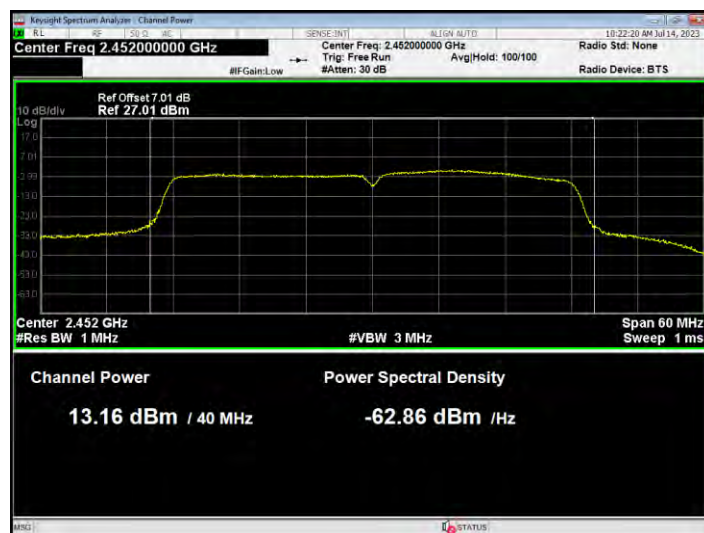
Power NVNT n40 2422MHz Ant1



Power NVNT n40 2437MHz Ant1



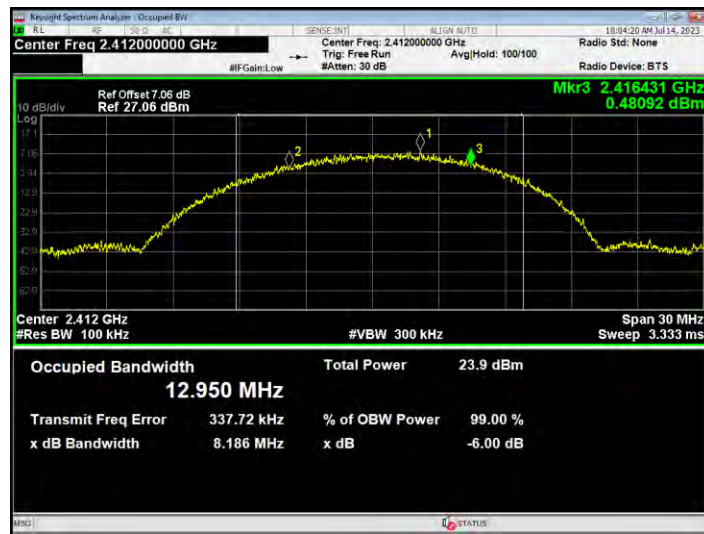
Power NVNT n40 2452MHz Ant1



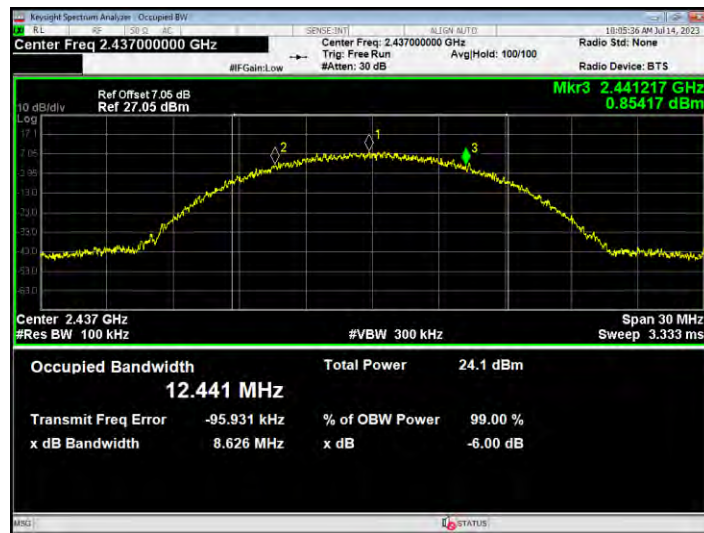
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	8.186	0.5	Pass
NVNT	b	2437	Ant1	8.626	0.5	Pass
NVNT	b	2462	Ant1	7.781	0.5	Pass
NVNT	g	2412	Ant1	15.78	0.5	Pass
NVNT	g	2437	Ant1	15.09	0.5	Pass
NVNT	g	2462	Ant1	15.062	0.5	Pass
NVNT	n20	2412	Ant1	13.839	0.5	Pass
NVNT	n20	2437	Ant1	11.27	0.5	Pass
NVNT	n20	2462	Ant1	13.752	0.5	Pass
NVNT	n40	2422	Ant1	24.141	0.5	Pass
NVNT	n40	2437	Ant1	32.545	0.5	Pass
NVNT	n40	2452	Ant1	34.155	0.5	Pass

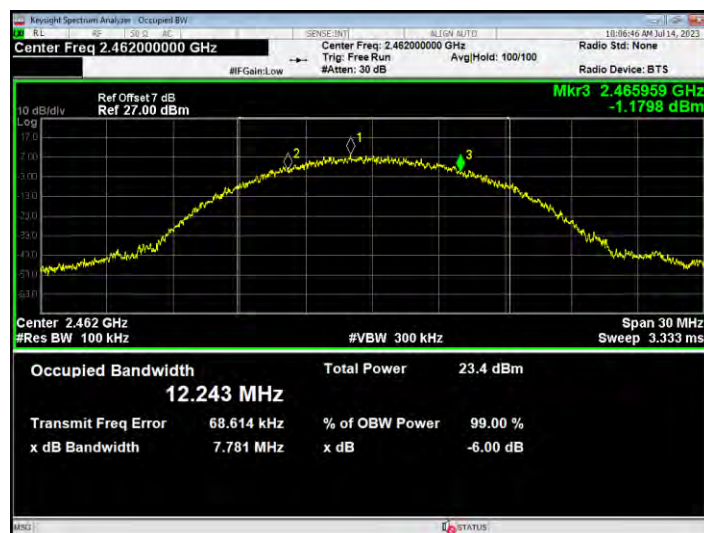
-6dB Bandwidth NVNT b 2412MHz Ant1



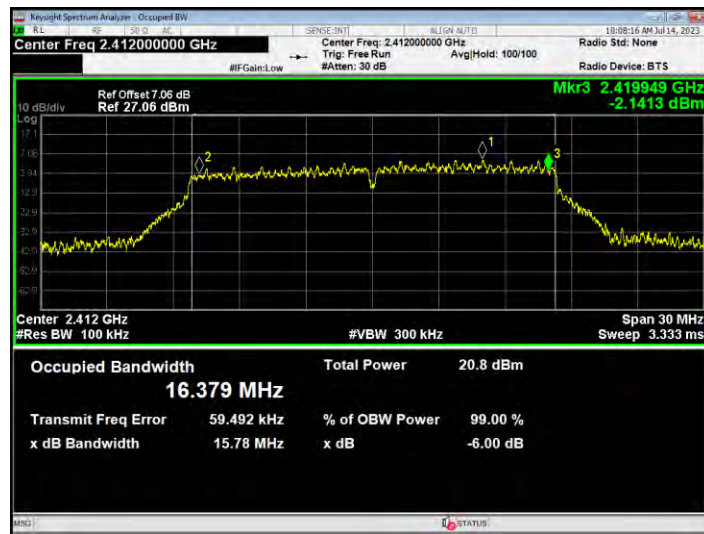
-6dB Bandwidth NVNT b 2437MHz Ant1



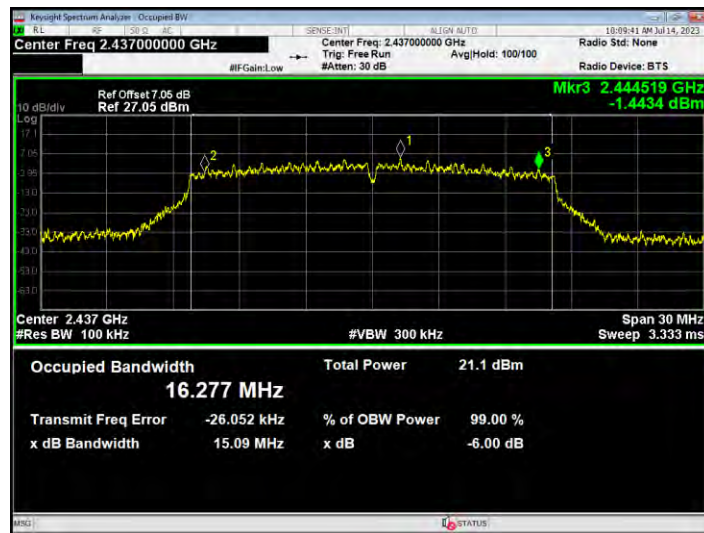
-6dB Bandwidth NVNT b 2462MHz Ant1



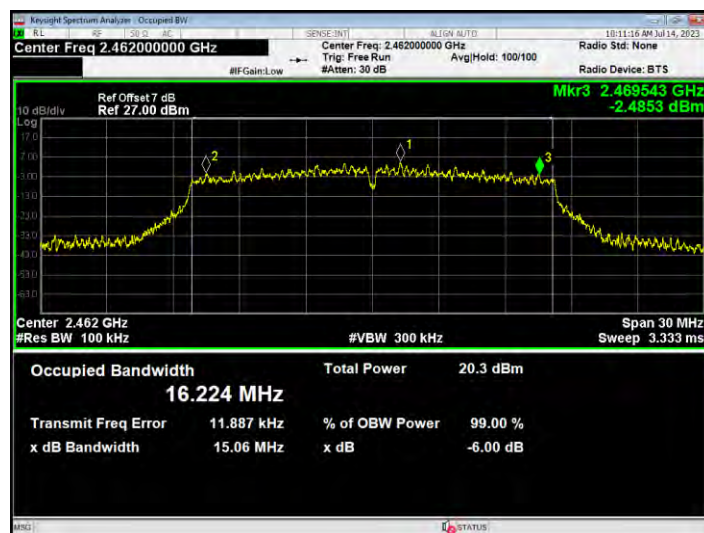
-6dB Bandwidth NVNT g 2412MHz Ant1



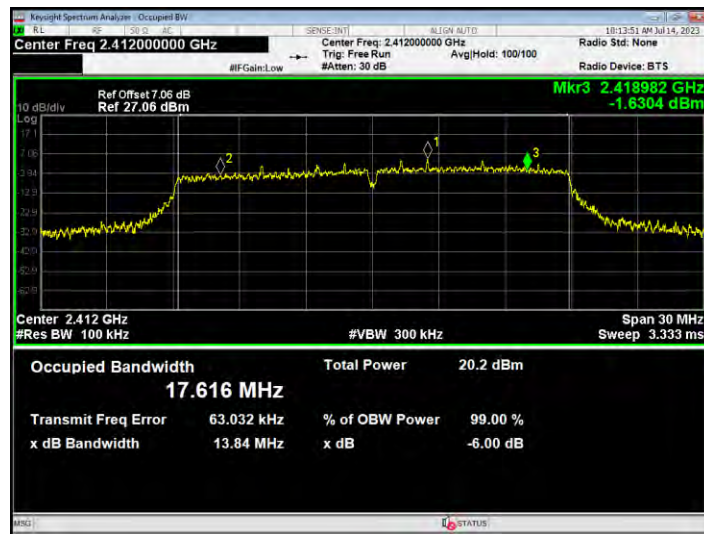
-6dB Bandwidth NVNT g 2437MHz Ant1



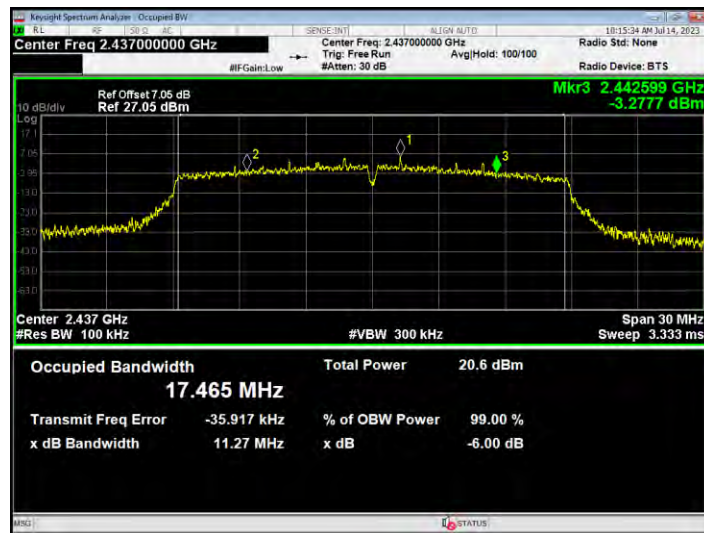
-6dB Bandwidth NVNT g 2462MHz Ant1



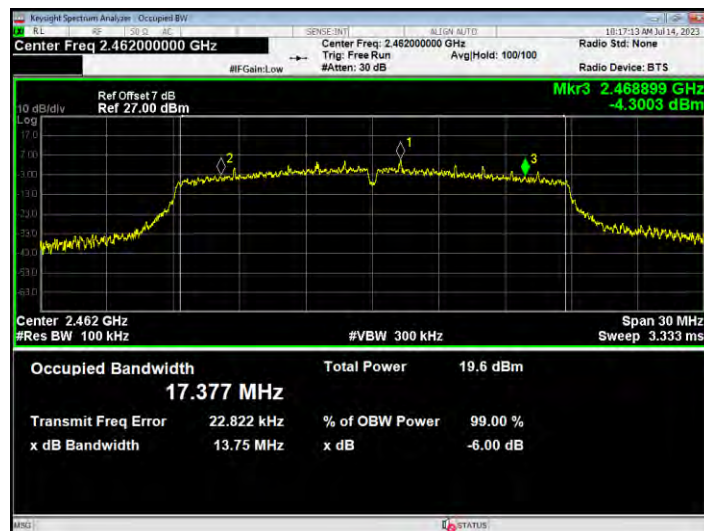
-6dB Bandwidth NVNT n20 2412MHz Ant1



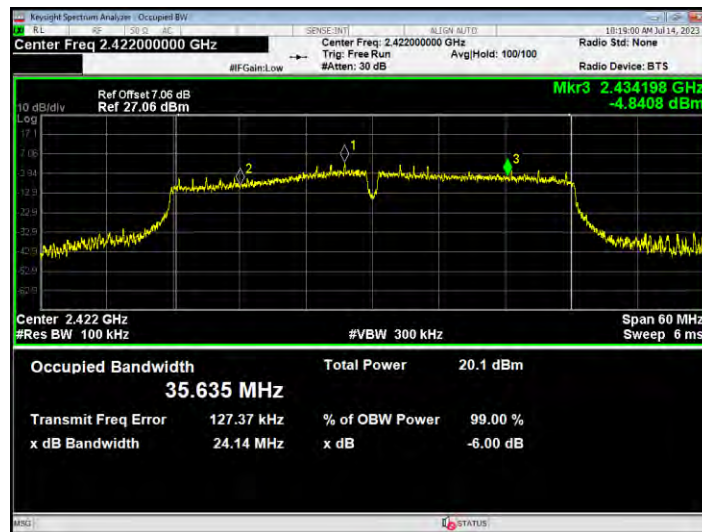
-6dB Bandwidth NVNT n20 2437MHz Ant1



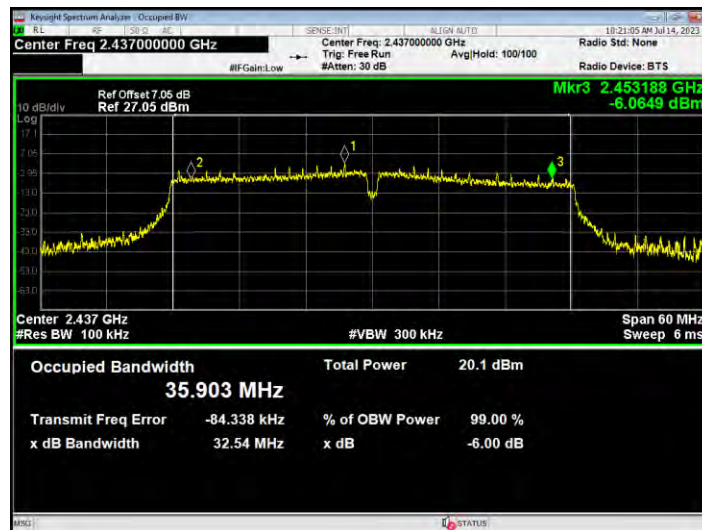
-6dB Bandwidth NVNT n20 2462MHz Ant1



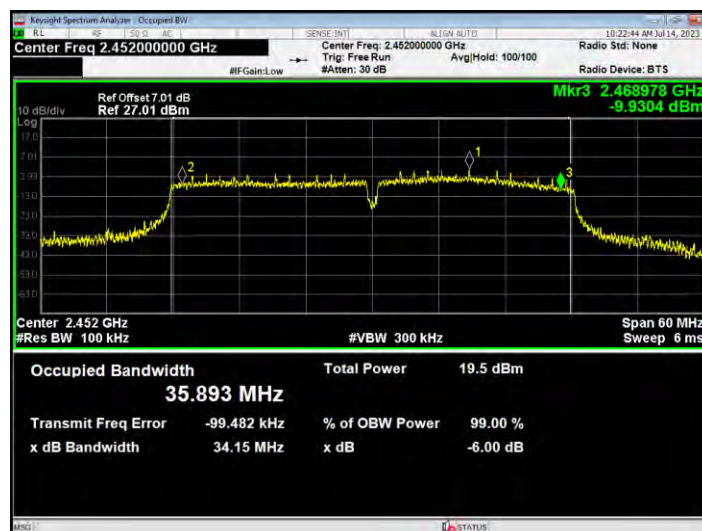
-6dB Bandwidth NVNT n40 2422MHz Ant1



-6dB Bandwidth NVNT n40 2437MHz Ant1



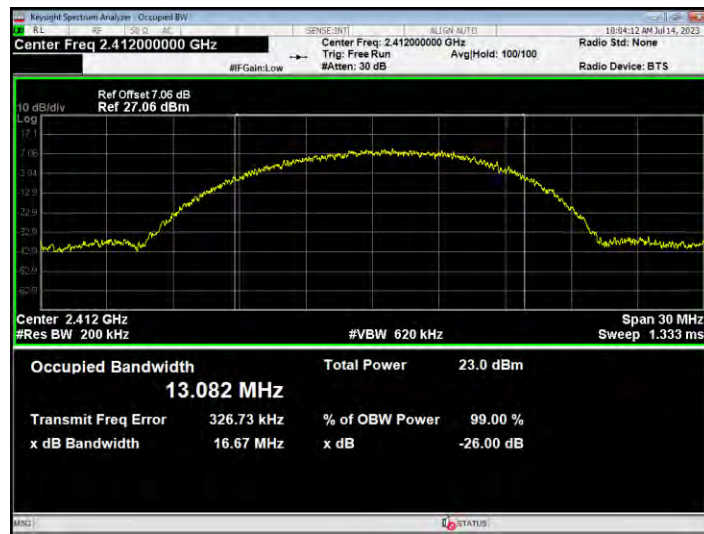
-6dB Bandwidth NVNT n40 2452MHz Ant1



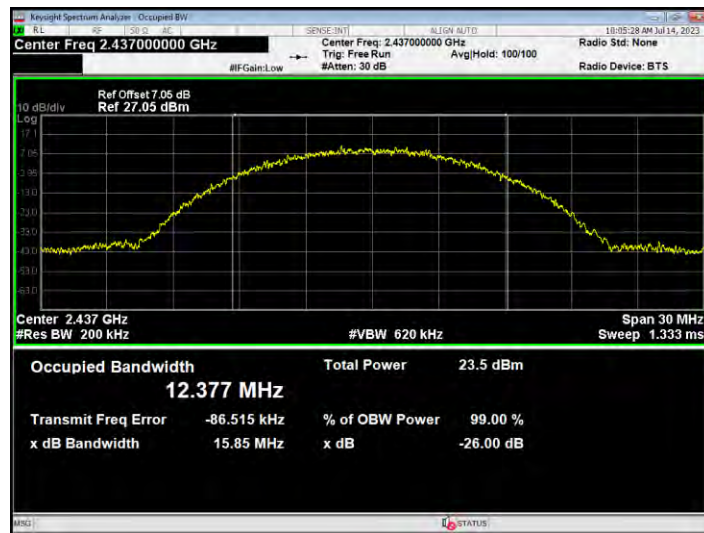
Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.08219702
NVNT	b	2437	Ant1	12.37685407
NVNT	b	2462	Ant1	12.13679644
NVNT	g	2412	Ant1	16.42058755
NVNT	g	2437	Ant1	16.31020986
NVNT	g	2462	Ant1	16.23248089
NVNT	n20	2412	Ant1	17.69172696
NVNT	n20	2437	Ant1	17.47367209
NVNT	n20	2462	Ant1	17.38408023
NVNT	n40	2422	Ant1	35.72082937
NVNT	n40	2437	Ant1	36.0782656
NVNT	n40	2452	Ant1	36.03219066

OBW NVNT b 2412MHz Ant1



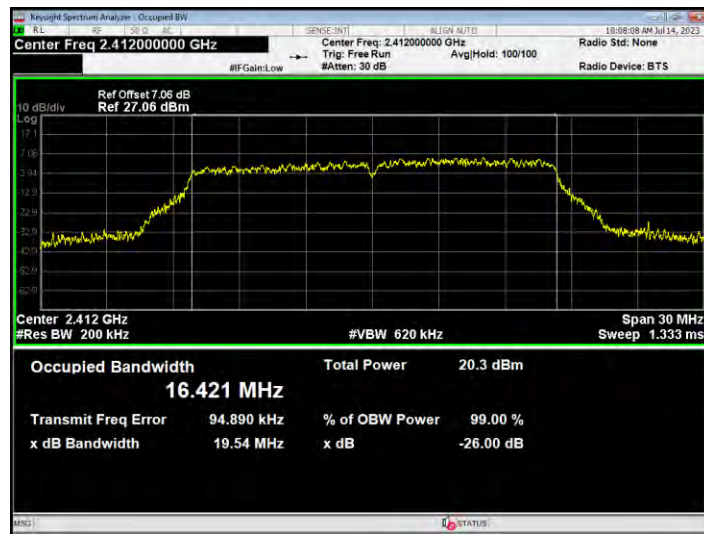
OBW NVNT b 2437MHz Ant1



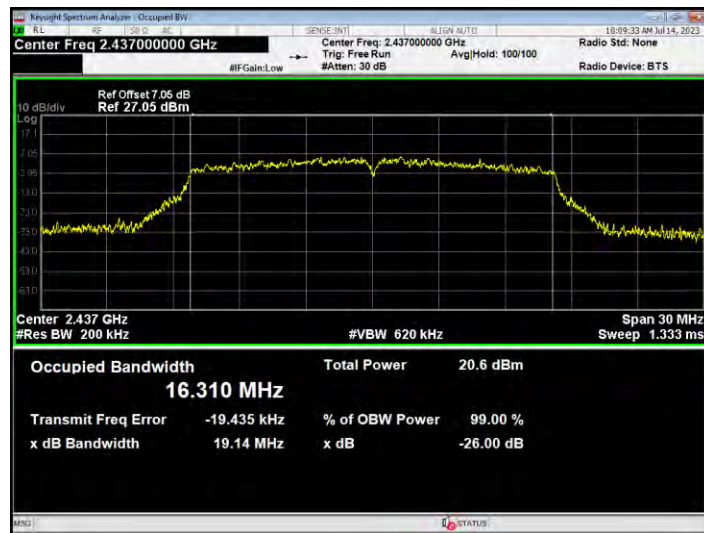
OBW NVNT b 2462MHz Ant1



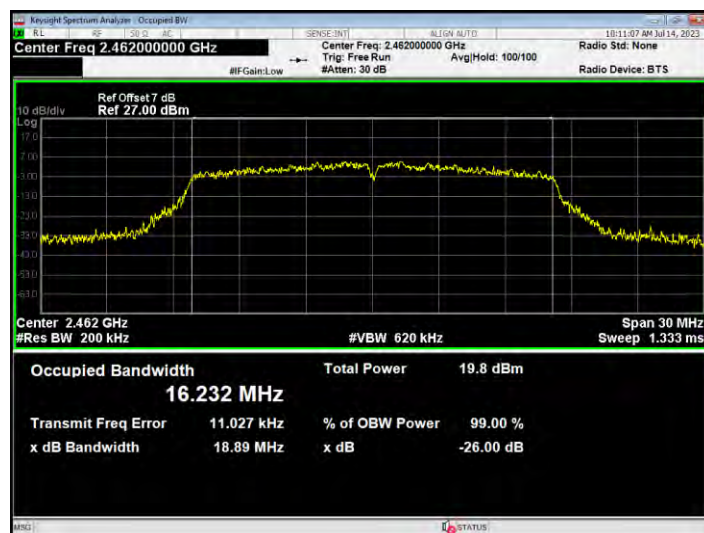
OBW NVNT g 2412MHz Ant1



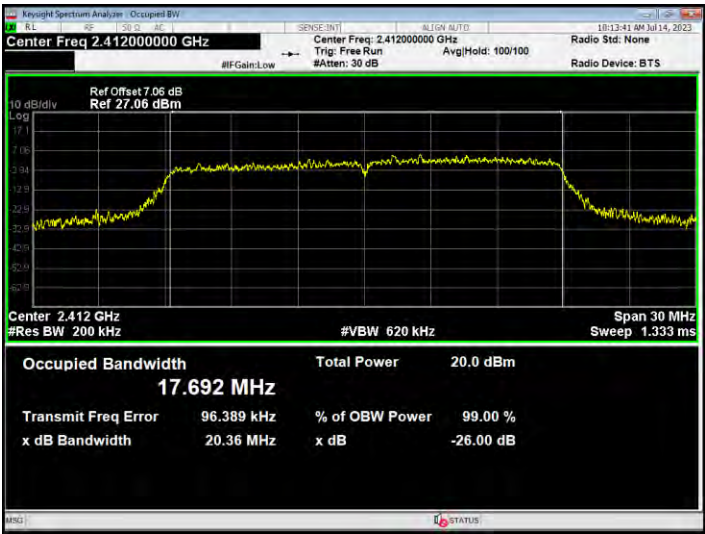
OBW NVNT g 2437MHz Ant1



OBW NVNT g 2462MHz Ant1



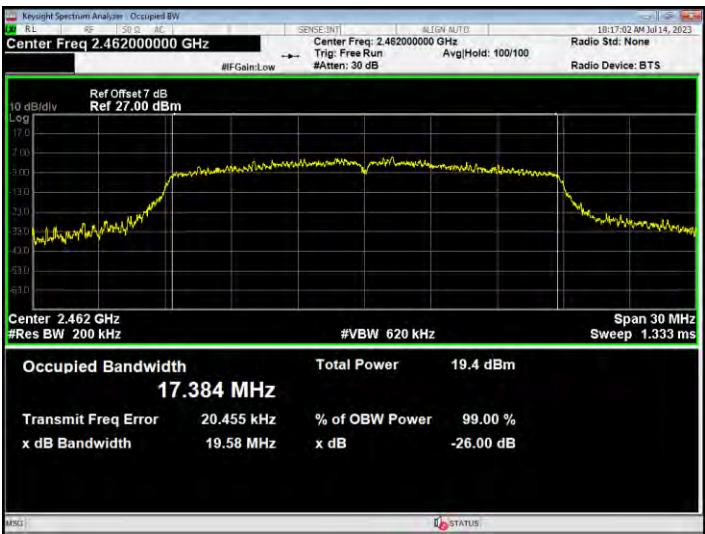
OBW NVNT n20 2412MHz Ant1



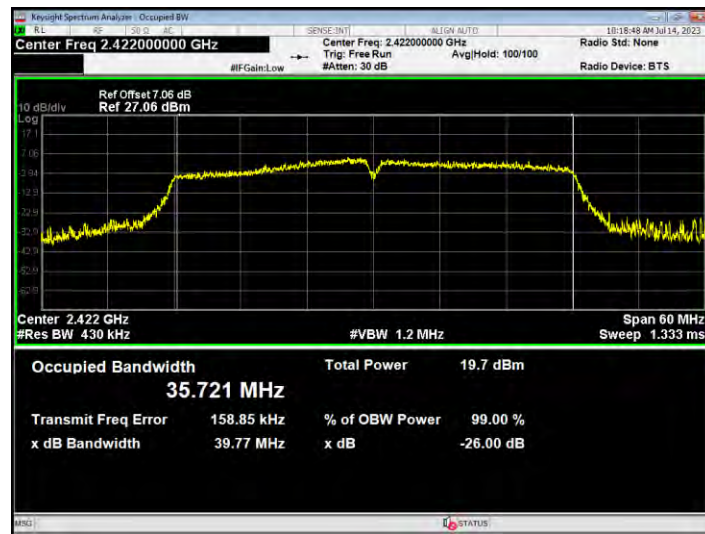
OBW NVNT n20 2437MHz Ant1



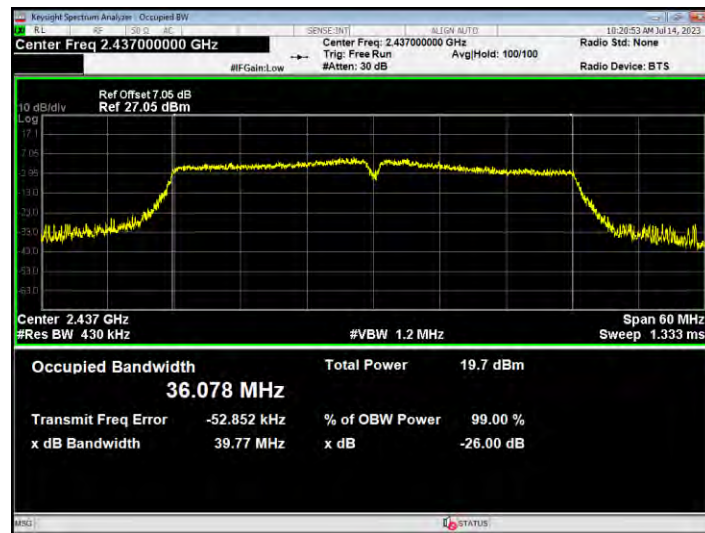
OBW NVNT n20 2462MHz Ant1



OBW NVNT n40 2422MHz Ant1



OBW NVNT n40 2437MHz Ant1



OBW NVNT n40 2452MHz Ant1

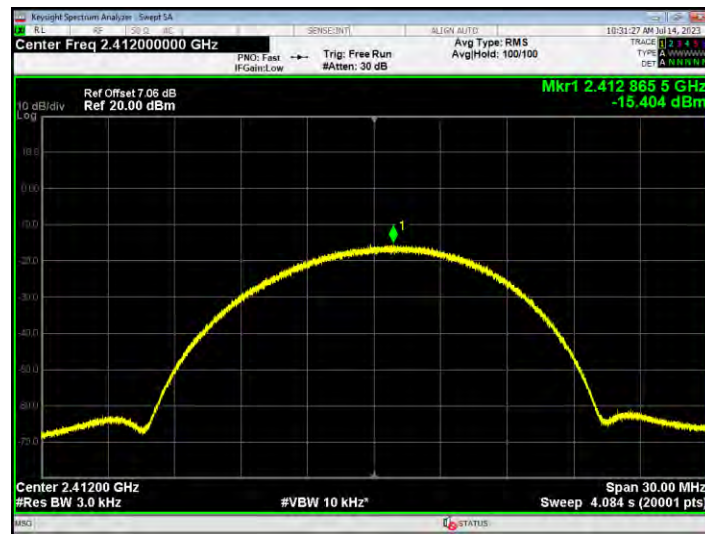


Maximum Power Spectral Density Level

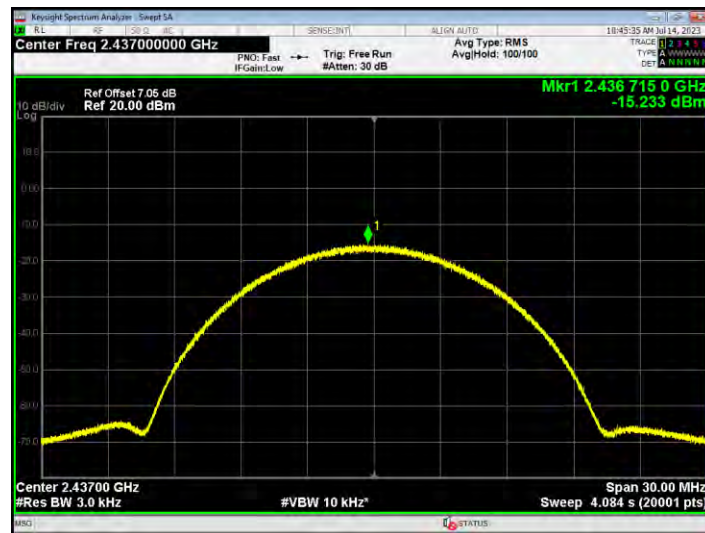
Condition	Mode	Frequency (MHz)	Antenna	Reading (dBm)	Duty Factor (dB)	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-15.404	0.12	-15.28	8	Pass
NVNT	b	2437	Ant1	-15.233	0.12	-15.11	8	Pass
NVNT	b	2462	Ant1	-16.15	0.12	-16.03	8	Pass
NVNT	g	2412	Ant1	-19.455	0.71	-18.75	8	Pass
NVNT	g	2437	Ant1	-19.005	0.69	-18.32	8	Pass
NVNT	g	2462	Ant1	-19.677	0.7	-18.98	8	Pass
NVNT	n20	2412	Ant1	-19.691	0.11	-19.58	8	Pass
NVNT	n20	2437	Ant1	-19.128	0.11	-19.02	8	Pass
NVNT	n20	2462	Ant1	-19.571	0.11	-19.46	8	Pass
NVNT	n40	2422	Ant1	-19.79	0.21	-19.58	8	Pass
NVNT	n40	2437	Ant1	-20.59	0.21	-20.38	8	Pass
NVNT	n40	2452	Ant1	-21.809	0.21	-21.60	8	Pass

Max PSD= Reading+ Duty Factor

PSD NVNT b 2412MHz Ant1



PSD NVNT b 2437MHz Ant1



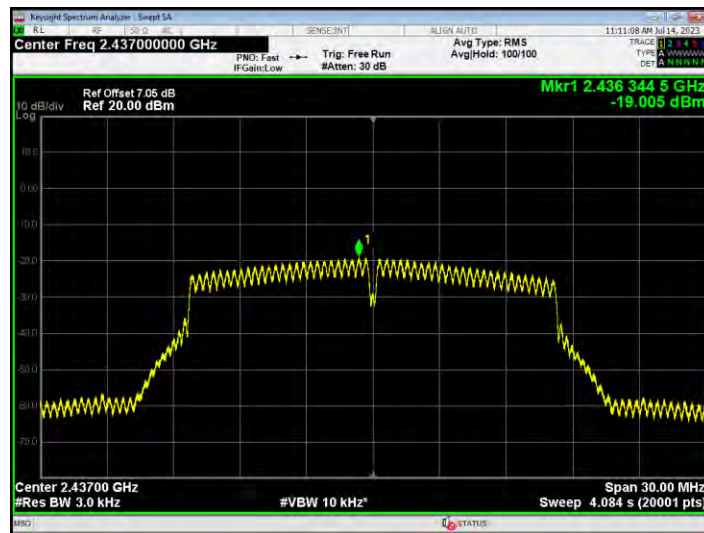
PSD NVNT b 2462MHz Ant1



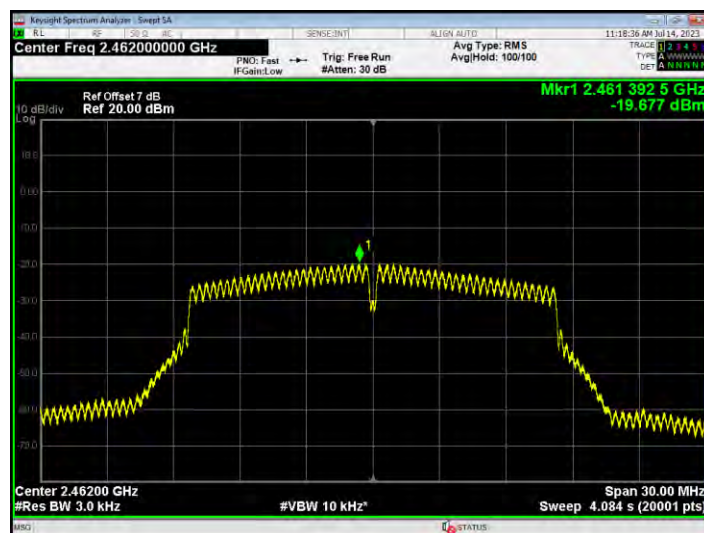
PSD NVNT g 2412MHz Ant1



PSD NVNT g 2437MHz Ant1



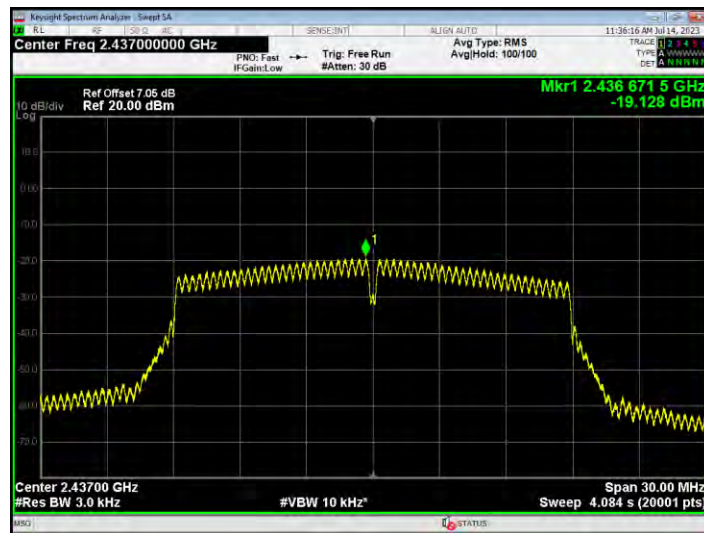
PSD NVNT g 2462MHz Ant1



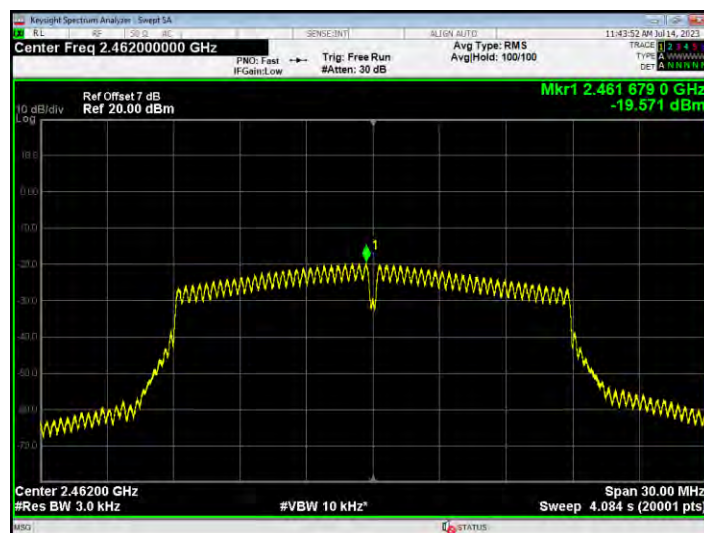
PSD NVNT n20 2412MHz Ant1



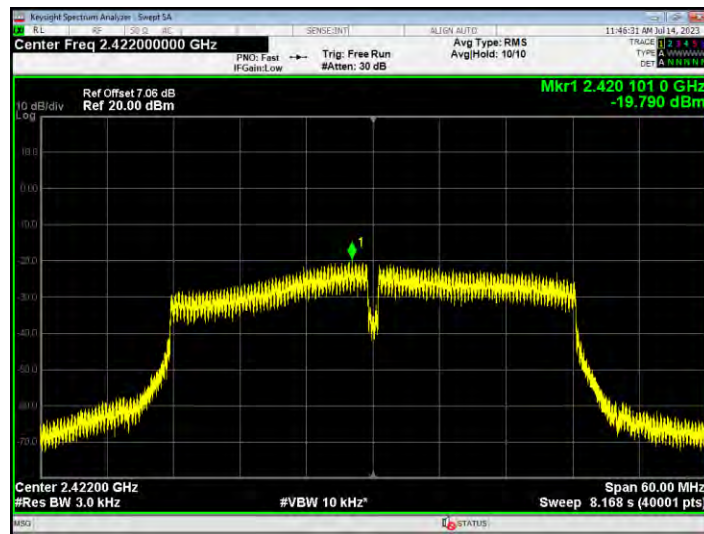
PSD NVNT n20 2437MHz Ant1



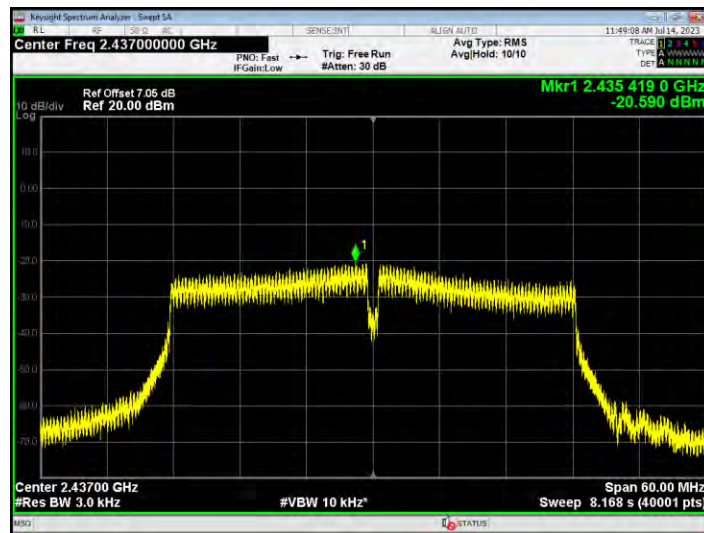
PSD NVNT n20 2462MHz Ant1



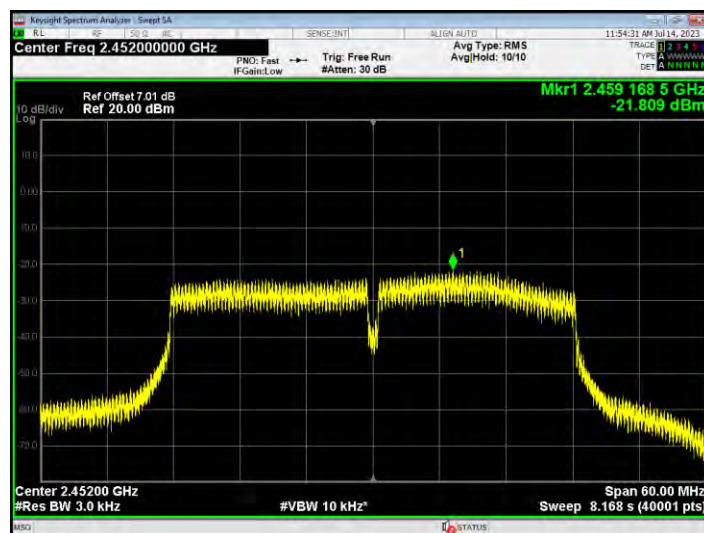
PSD NVNT n40 2422MHz Ant1



PSD NVNT n40 2437MHz Ant1



PSD NVNT n40 2452MHz Ant1



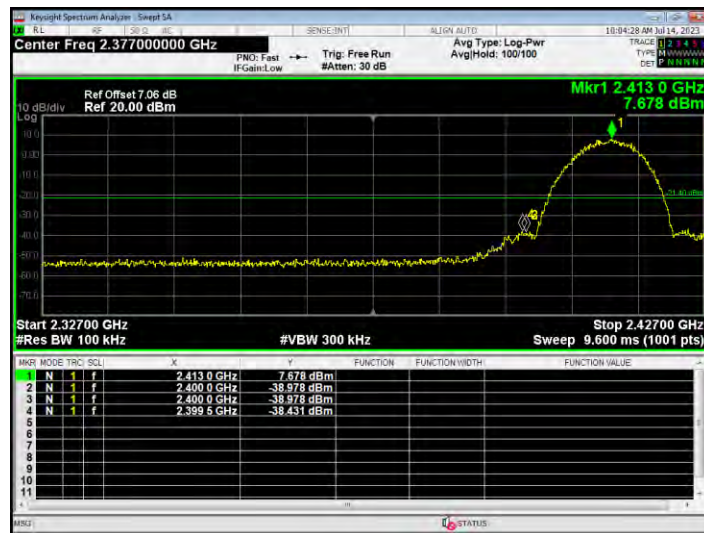
Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-47.03	-30	Pass
NVNT	b	2462	Ant1	-59.04	-30	Pass
NVNT	g	2412	Ant1	-38.4	-30	Pass
NVNT	g	2462	Ant1	-53.64	-30	Pass
NVNT	n20	2412	Ant1	-32.05	-30	Pass
NVNT	n20	2462	Ant1	-53.74	-30	Pass
NVNT	n40	2422	Ant1	-33.08	-30	Pass
NVNT	n40	2452	Ant1	-45.82	-30	Pass

Band Edge NVNT b 2412MHz Ant1 Ref



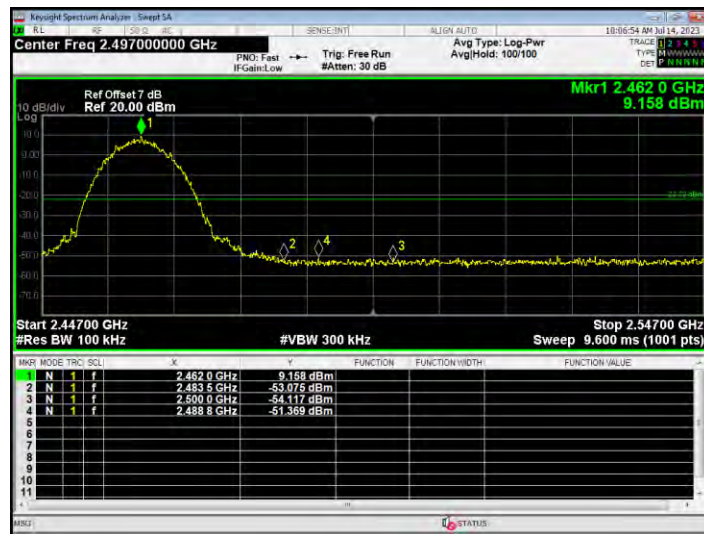
Band Edge NVNT b 2412MHz Ant1 Emission



Band Edge NVNT b 2462MHz Ant1 Ref



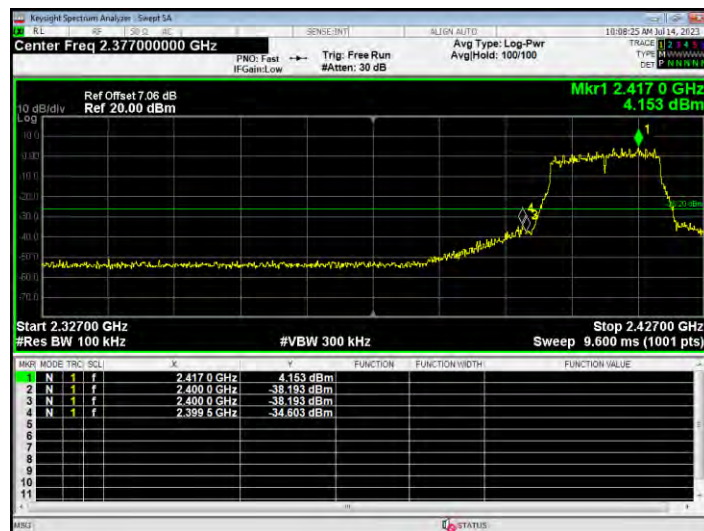
Band Edge NVNT b 2462MHz Ant1 Emission



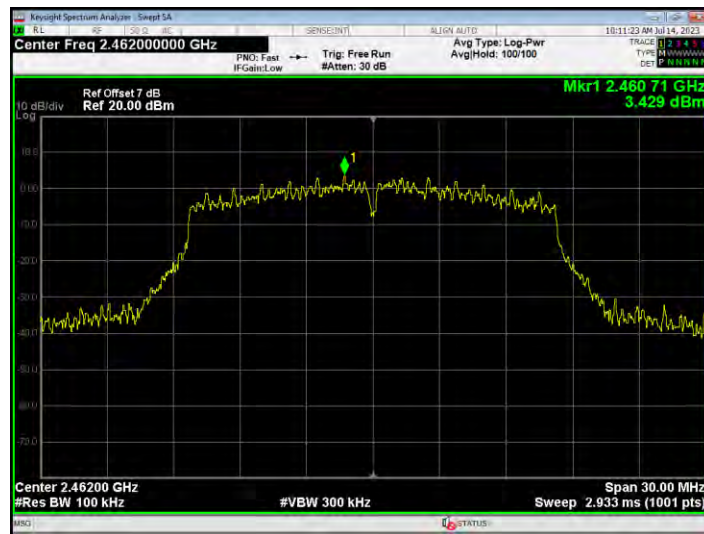
Band Edge NVNT g 2412MHz Ant1 Ref



Band Edge NVNT g 2412MHz Ant1 Emission



Band Edge NVNT g 2462MHz Ant1 Ref



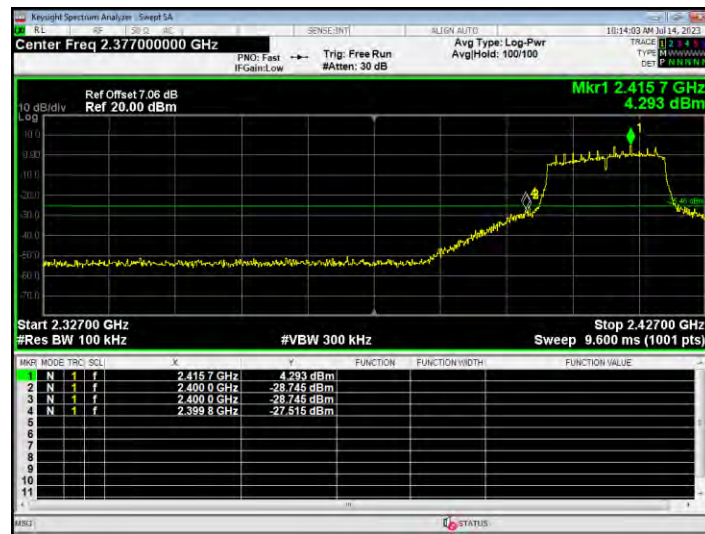
Band Edge NVNT g 2462MHz Ant1 Emission



Band Edge NVNT n20 2412MHz Ant1 Ref



Band Edge NVNT n20 2412MHz Ant1 Emission



Band Edge NVNT n20 2462MHz Ant1 Ref



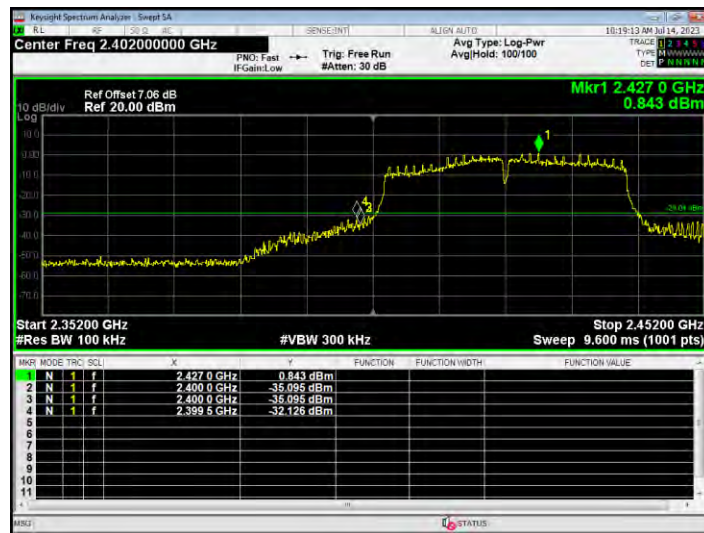
Band Edge NVNT n20 2462MHz Ant1 Emission



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



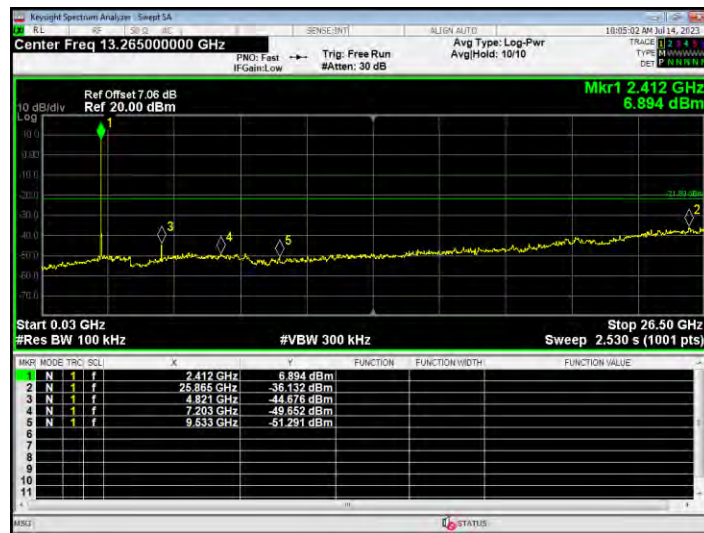
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-44.24	-30	Pass
NVNT	b	2437	Ant1	-45.59	-30	Pass
NVNT	b	2462	Ant1	-44.05	-30	Pass
NVNT	g	2412	Ant1	-39.73	-30	Pass
NVNT	g	2437	Ant1	-40.21	-30	Pass
NVNT	g	2462	Ant1	-40.86	-30	Pass
NVNT	n20	2412	Ant1	-40.22	-30	Pass
NVNT	n20	2437	Ant1	-40.51	-30	Pass
NVNT	n20	2462	Ant1	-38.87	-30	Pass
NVNT	n40	2422	Ant1	-38.19	-30	Pass
NVNT	n40	2437	Ant1	-38.61	-30	Pass
NVNT	n40	2452	Ant1	-37.57	-30	Pass

Tx. Spurious NVNT b 2412MHz Ant1 Ref



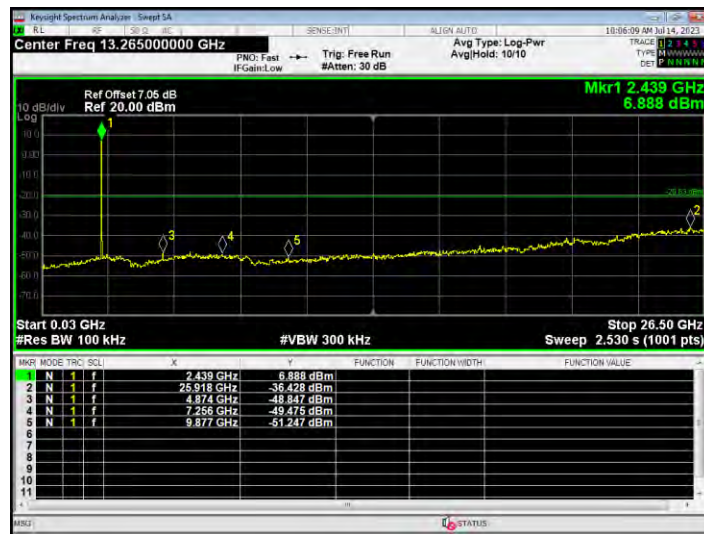
Tx. Spurious NVNT b 2412MHz Ant1 Emission



Tx. Spurious NVNT b 2437MHz Ant1 Ref



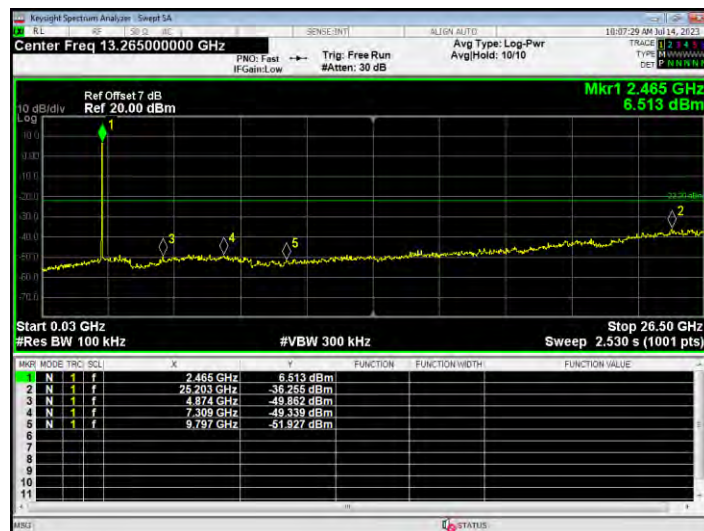
Tx. Spurious NVNT b 2437MHz Ant1 Emission



Tx. Spurious NVNT b 2462MHz Ant1 Ref



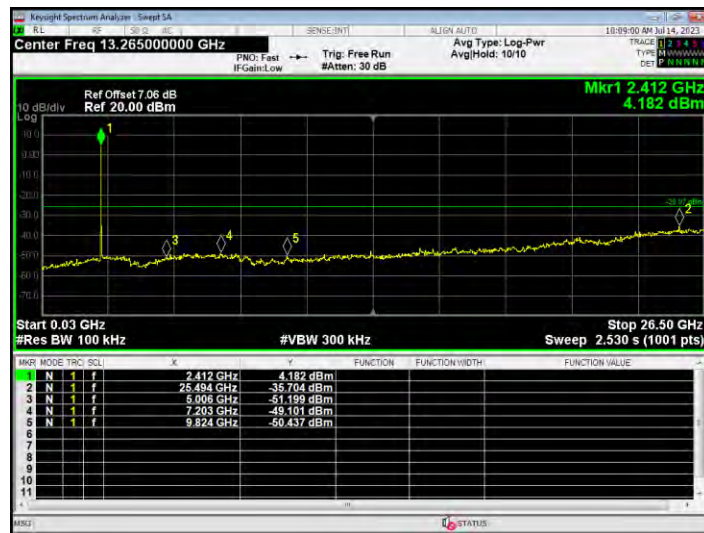
Tx. Spurious NVNT b 2462MHz Ant1 Emission



Tx. Spurious NVNT g 2412MHz Ant1 Ref



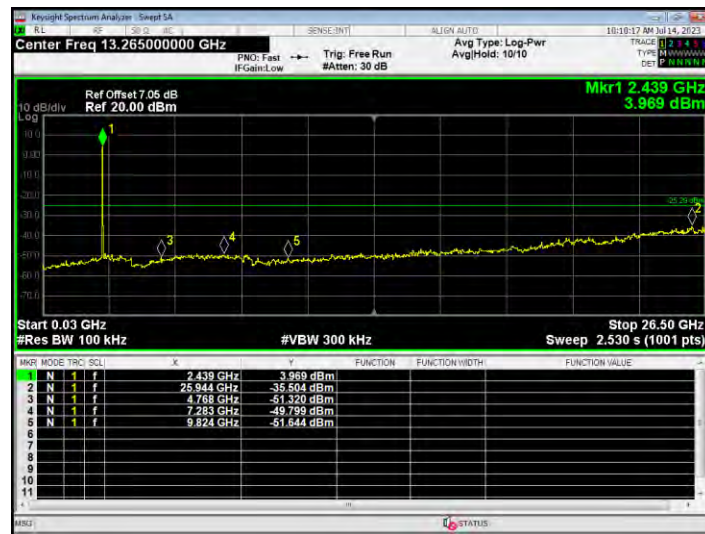
Tx. Spurious NVNT g 2412MHz Ant1 Emission



Tx. Spurious NVNT g 2437MHz Ant1 Ref



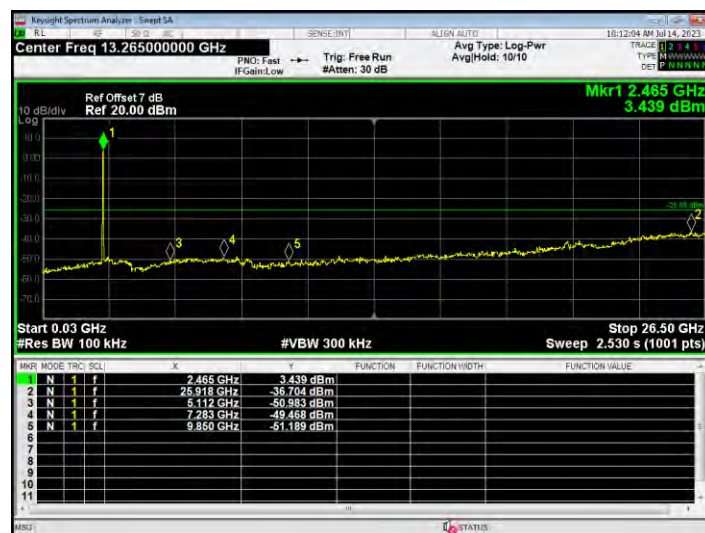
Tx. Spurious NVNT g 2437MHz Ant1 Emission



Tx. Spurious NVNT g 2462MHz Ant1 Ref



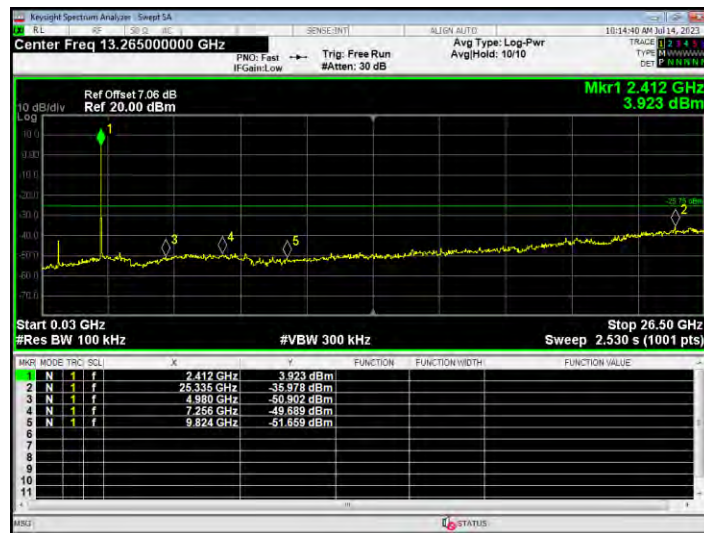
Tx. Spurious NVNT g 2462MHz Ant1 Emission



Tx. Spurious NVNT n20 2412MHz Ant1 Ref



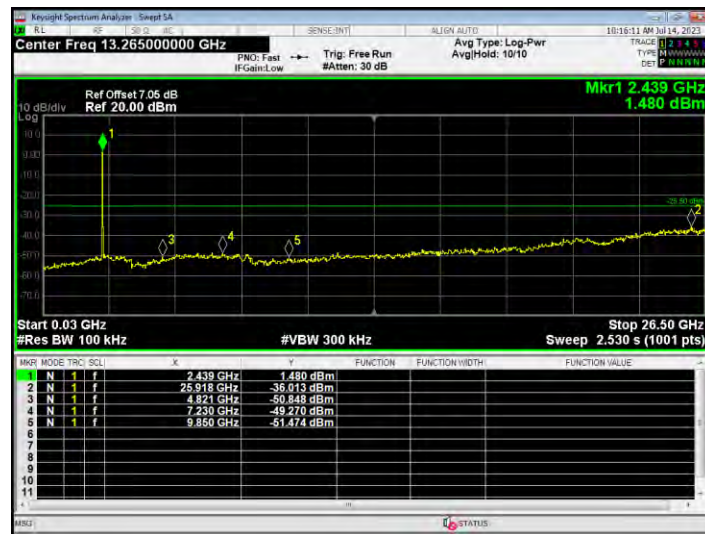
Tx. Spurious NVNT n20 2412MHz Ant1 Emission



Tx. Spurious NVNT n20 2437MHz Ant1 Ref



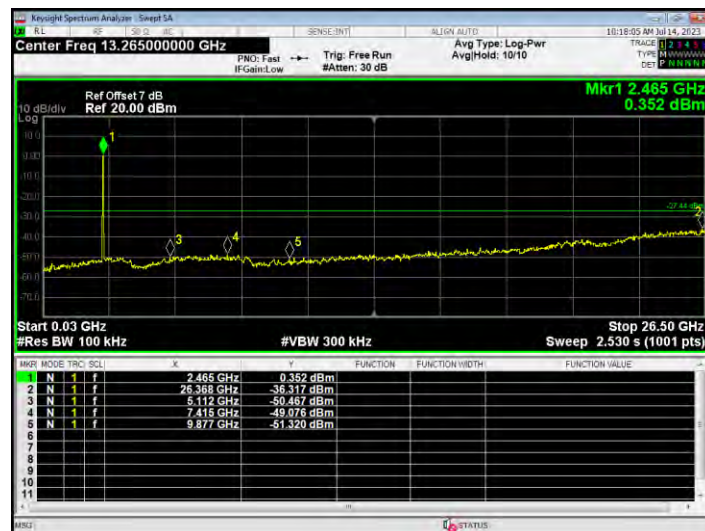
Tx. Spurious NVNT n20 2437MHz Ant1 Emission



Tx. Spurious NVNT n20 2462MHz Ant1 Ref



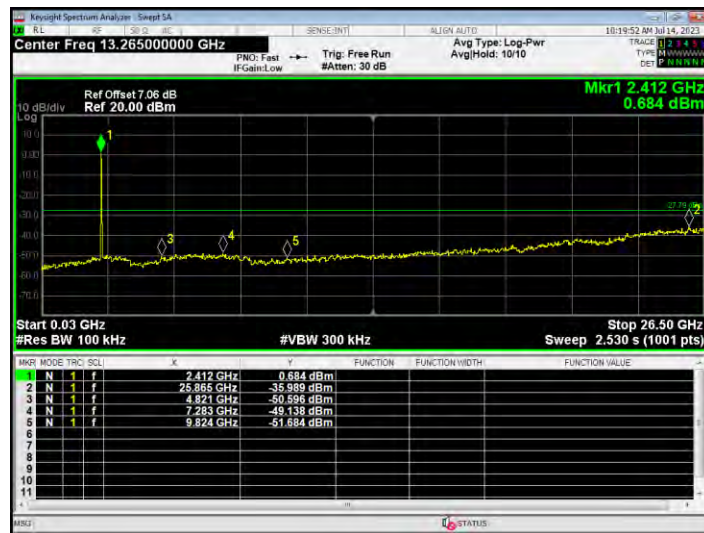
Tx. Spurious NVNT n20 2462MHz Ant1 Emission



Tx. Spurious NVNT n40 2422MHz Ant1 Ref



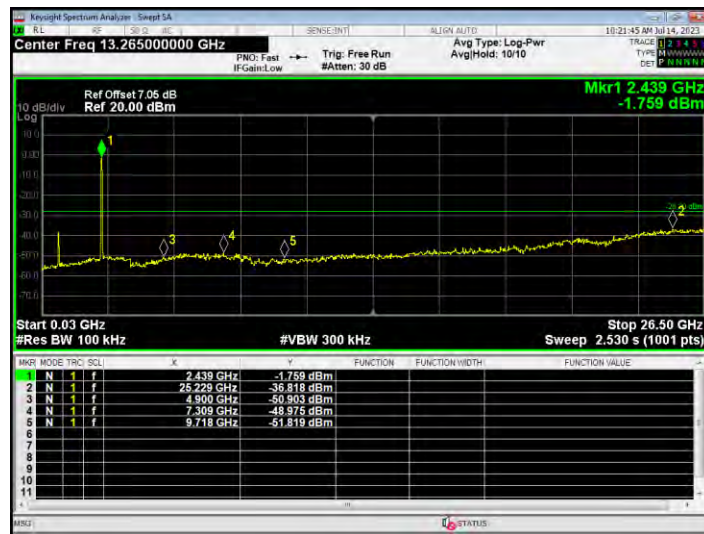
Tx. Spurious NVNT n40 2422MHz Ant1 Emission



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

