

FCC Test Report

ANNEX 1 2.4GWIFI

FCC ID: 2A8NR-Z91

Applicant: ShenZhen ZCS Technology CO.,LTD

Address: 202C, G2 Building, TCL World E City, Zhongshan Yuan Road, Nanshan District, Shenzhen, China.

Manufacturer: ShenZhen ZCS Technology CO.,LTD

Address: 202C, G2 Building, TCL World E City, Zhongshan Yuan Road, Nanshan District, Shenzhen, China.

EUT: Smart Pos

Trade Mark: ZCS

Model Number: Z91
Z90, Z92, Z93, Z100, Z70

Date of Receipt: Apr. 15, 2022

Test Date: Apr. 15, 2022 – May. 05, 2022

Date of Report: Sep. 05, 2022

Prepared By: Shenzhen DL Testing Technology Co., Ltd.

Address: 101-201, Building C, Shuanghuan, No.8, Baoqing Road, Baolong Industrial Zone, Baolong Street, Longgang District, Shenzhen, Guangdong, China

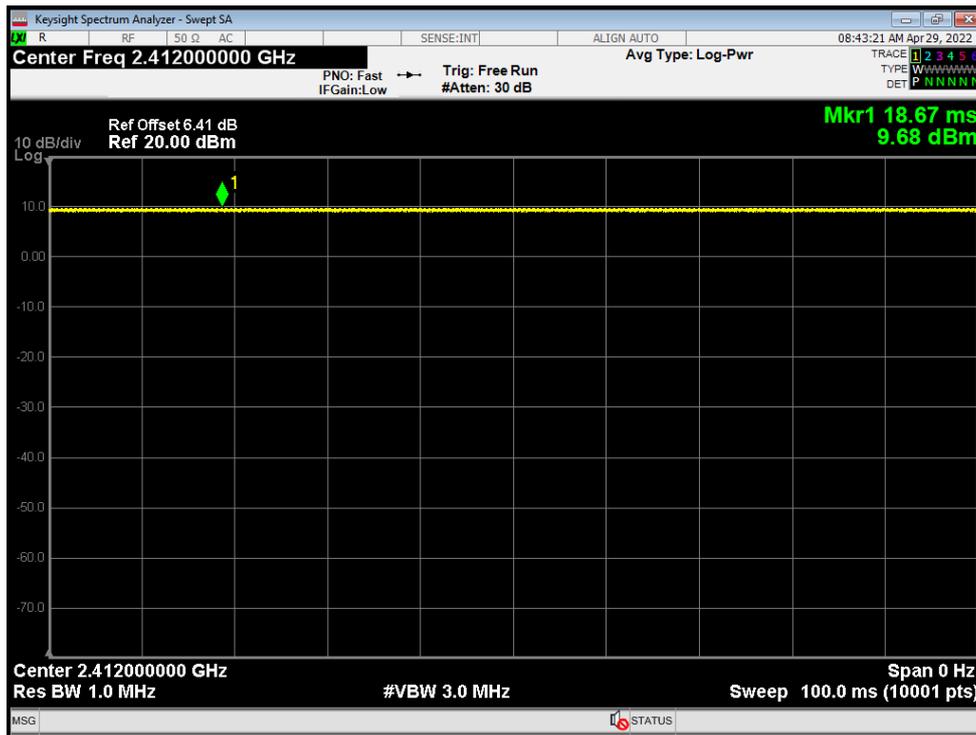
Applicable Standards: FCC PART 15 C 15.247
ANSI C63.10:2013

Test Result: Pass

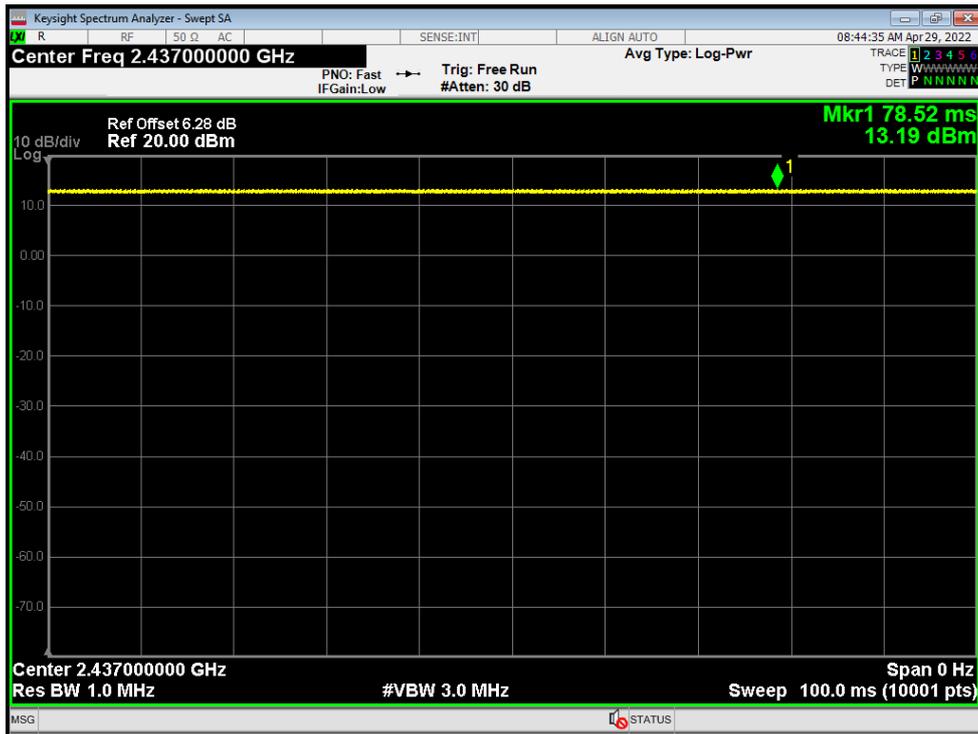
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	b	2412	Ant1	100	0
NVNT	b	2437	Ant1	100	0
NVNT	b	2462	Ant1	100	0
NVNT	g	2412	Ant1	100	0
NVNT	g	2437	Ant1	100	0
NVNT	g	2462	Ant1	100	0
NVNT	n20	2412	Ant1	100	0
NVNT	n20	2437	Ant1	100	0
NVNT	n20	2462	Ant1	100	0
NVNT	n40	2422	Ant1	100	0
NVNT	n40	2437	Ant1	100	0
NVNT	n40	2452	Ant1	100	0

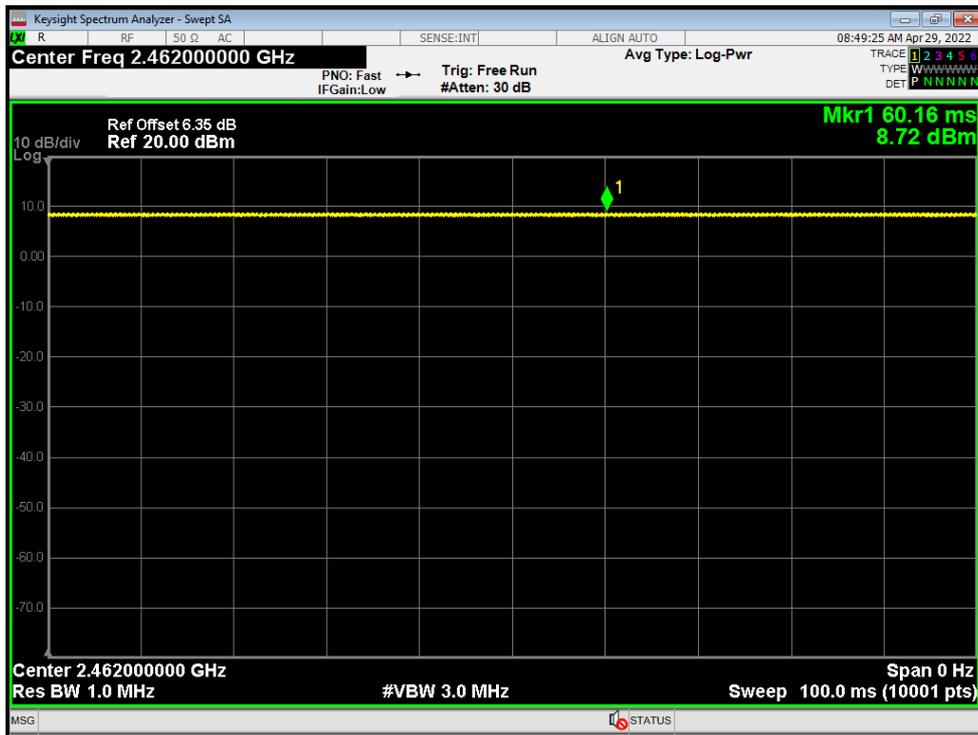
Duty Cycle NVNT b 2412MHz Ant1



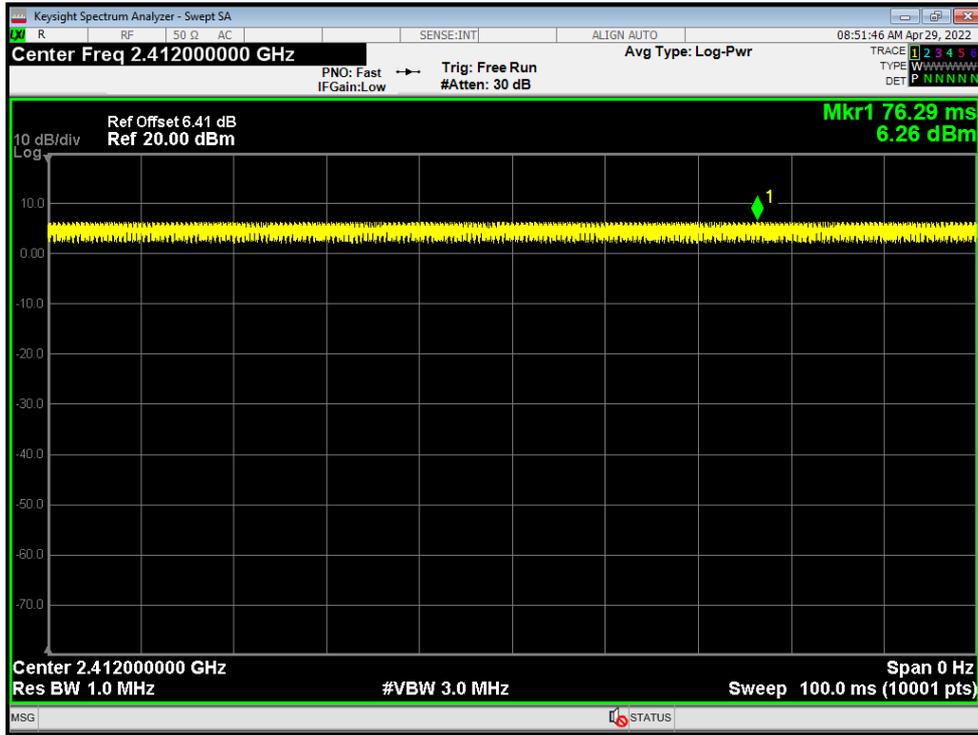
Duty Cycle NVNT b 2437MHz Ant1



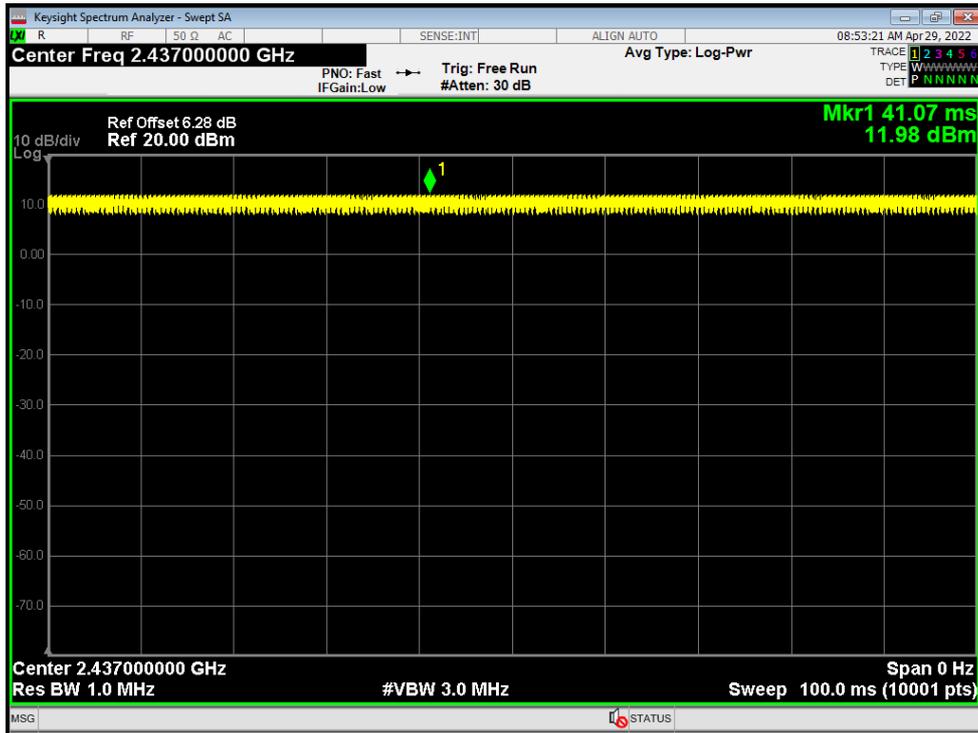
Duty Cycle NVNT b 2462MHz Ant1



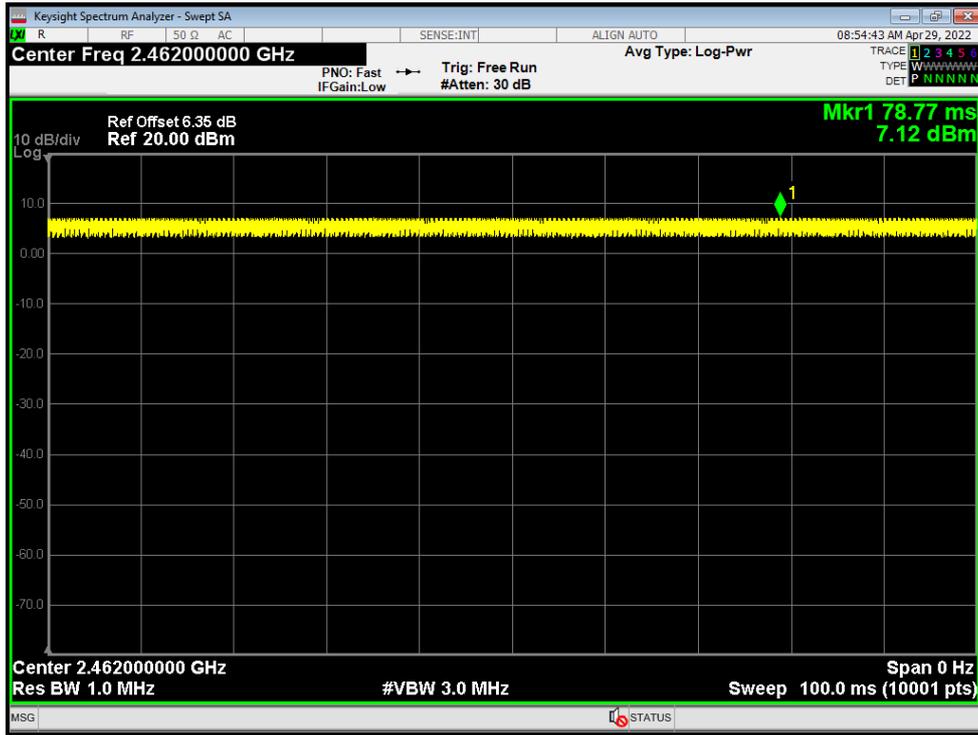
Duty Cycle NVNT g 2412MHz Ant1



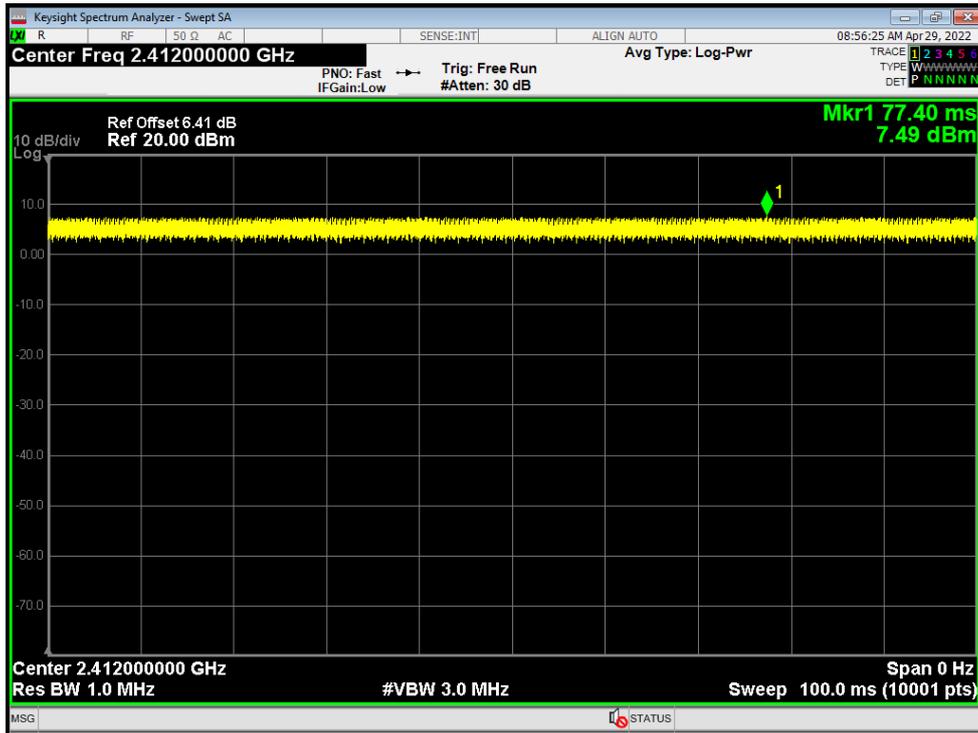
Duty Cycle NVNT g 2437MHz Ant1



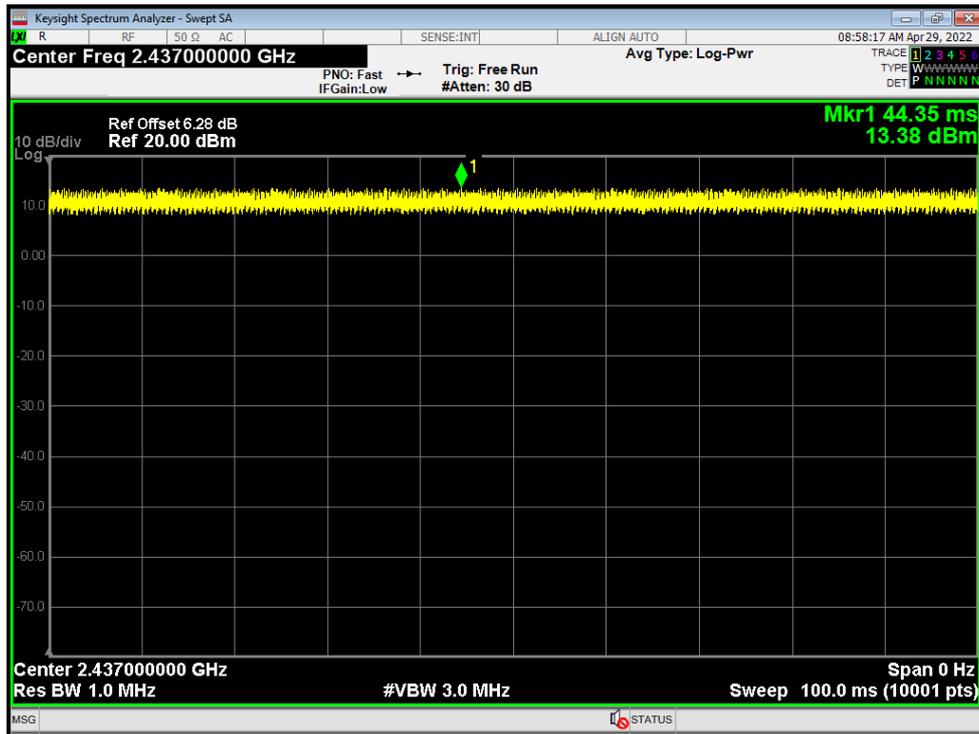
Duty Cycle NVNT g 2462MHz Ant1



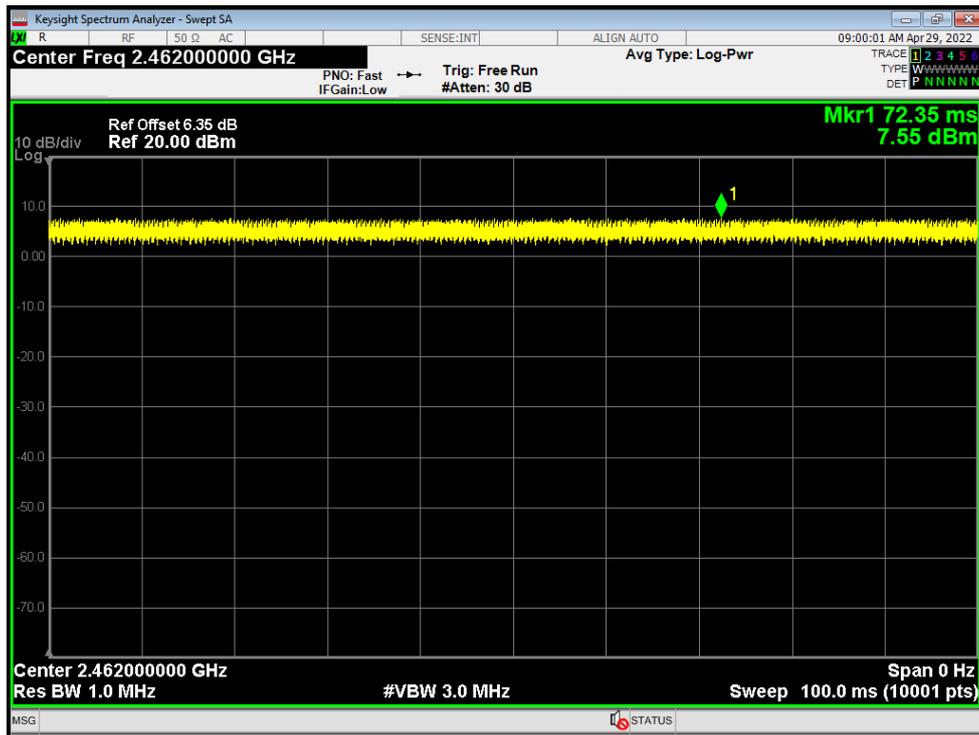
Duty Cycle NVNT n20 2412MHz Ant1



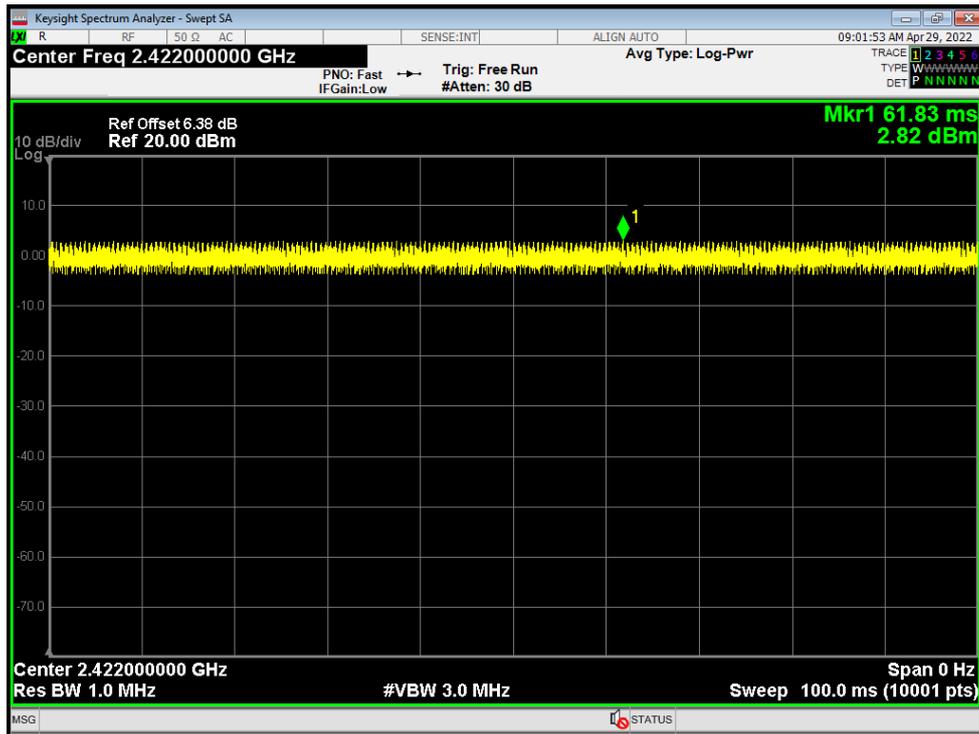
Duty Cycle NVNT n20 2437MHz Ant1



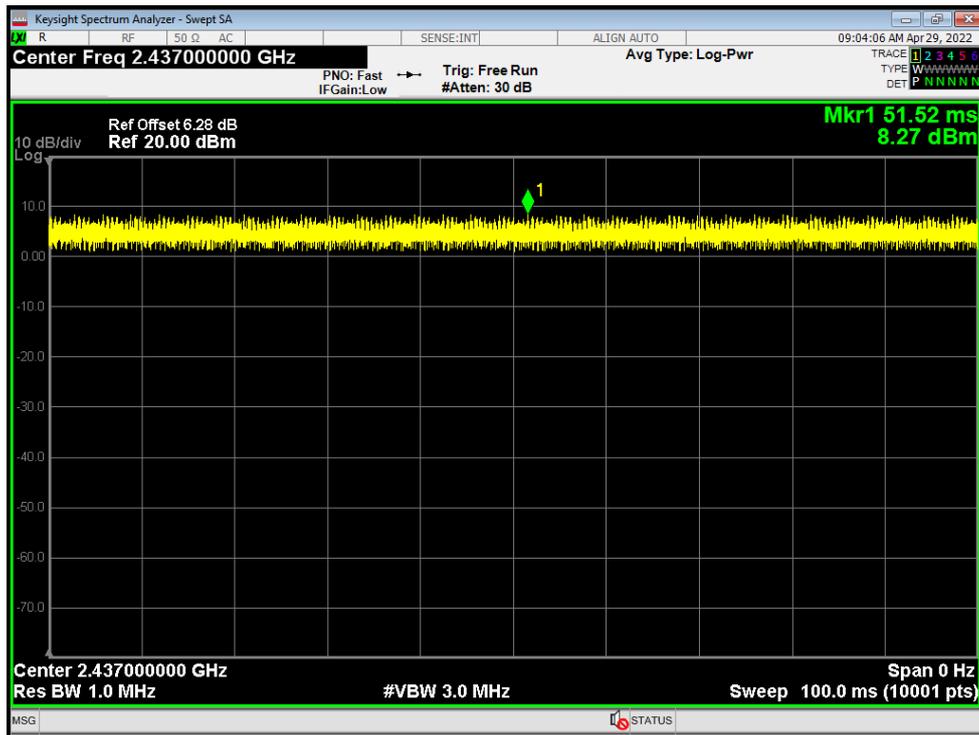
Duty Cycle NVNT n20 2462MHz Ant1



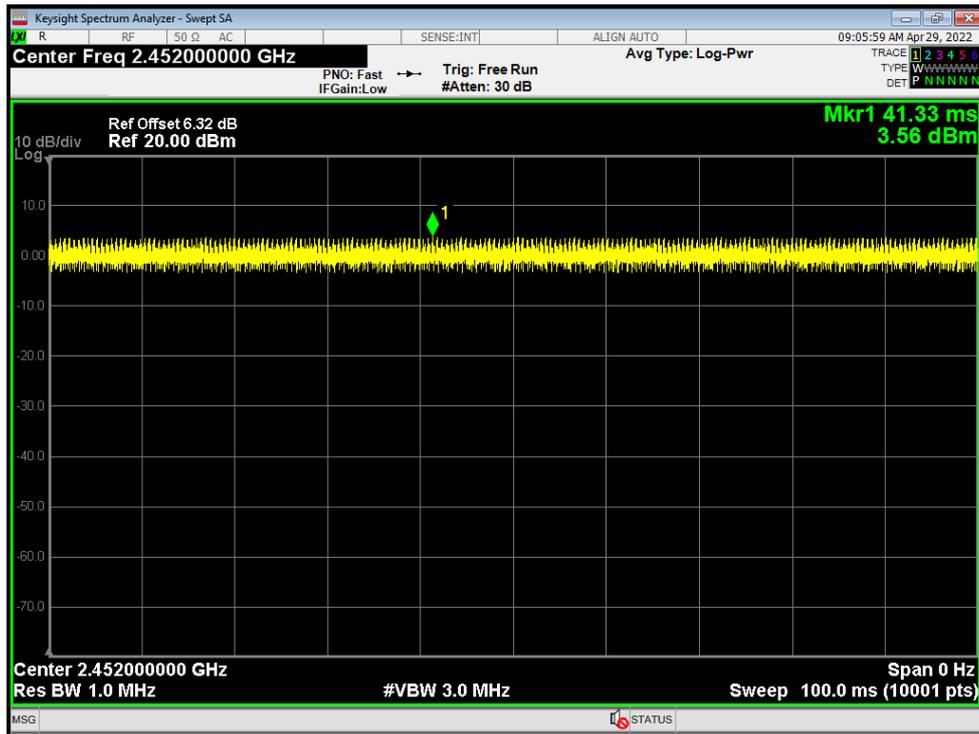
Duty Cycle NVNT n40 2422MHz Ant1



Duty Cycle NVNT n40 2437MHz Ant1



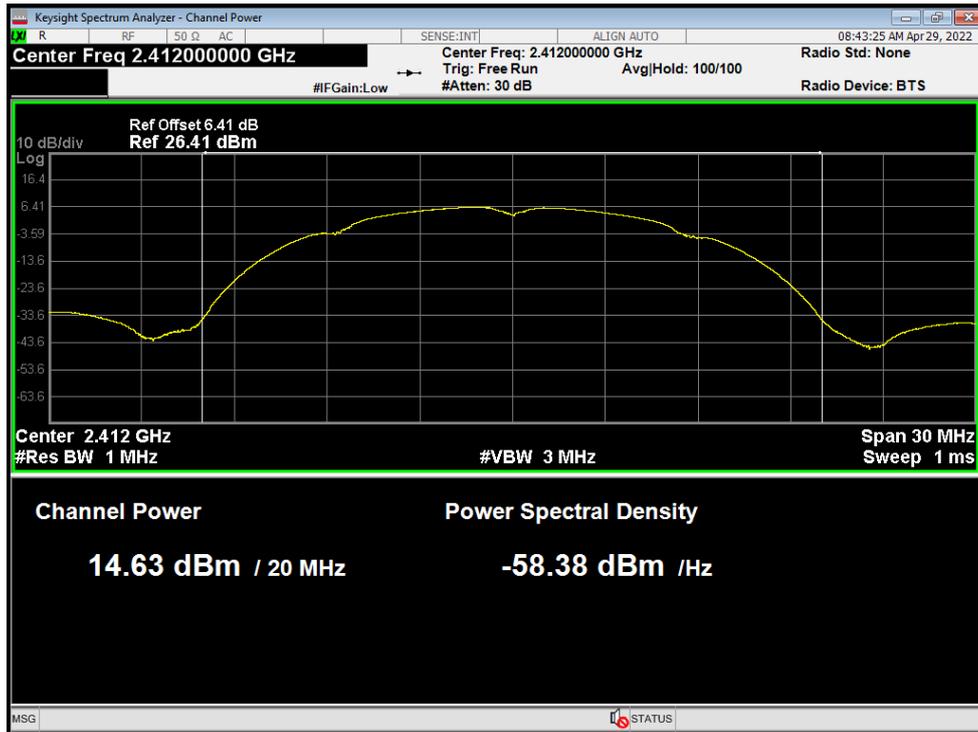
Duty Cycle NVNT n40 2452MHz Ant1



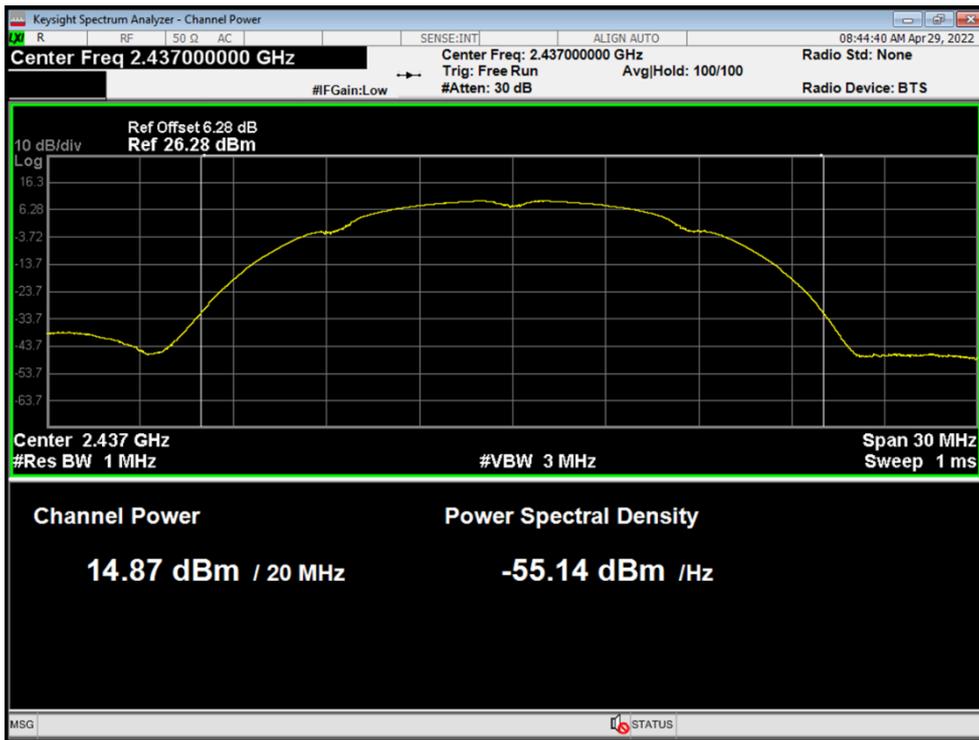
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	14.63	0	14.63	30	Pass
NVNT	b	2437	Ant1	14.87	0	14.87	30	Pass
NVNT	b	2462	Ant1	14.69	0	14.69	30	Pass
NVNT	g	2412	Ant1	13.37	0	13.37	30	Pass
NVNT	g	2437	Ant1	13.04	0	13.04	30	Pass
NVNT	g	2462	Ant1	13.98	0	13.98	30	Pass
NVNT	n20	2412	Ant1	13.03	0	13.03	30	Pass
NVNT	n20	2437	Ant1	13.62	0	13.62	30	Pass
NVNT	n20	2462	Ant1	13.88	0	13.88	30	Pass
NVNT	n40	2422	Ant1	13.41	0	13.41	30	Pass
NVNT	n40	2437	Ant1	13.29	0	13.29	30	Pass
NVNT	n40	2452	Ant1	13.45	0	13.45	30	Pass

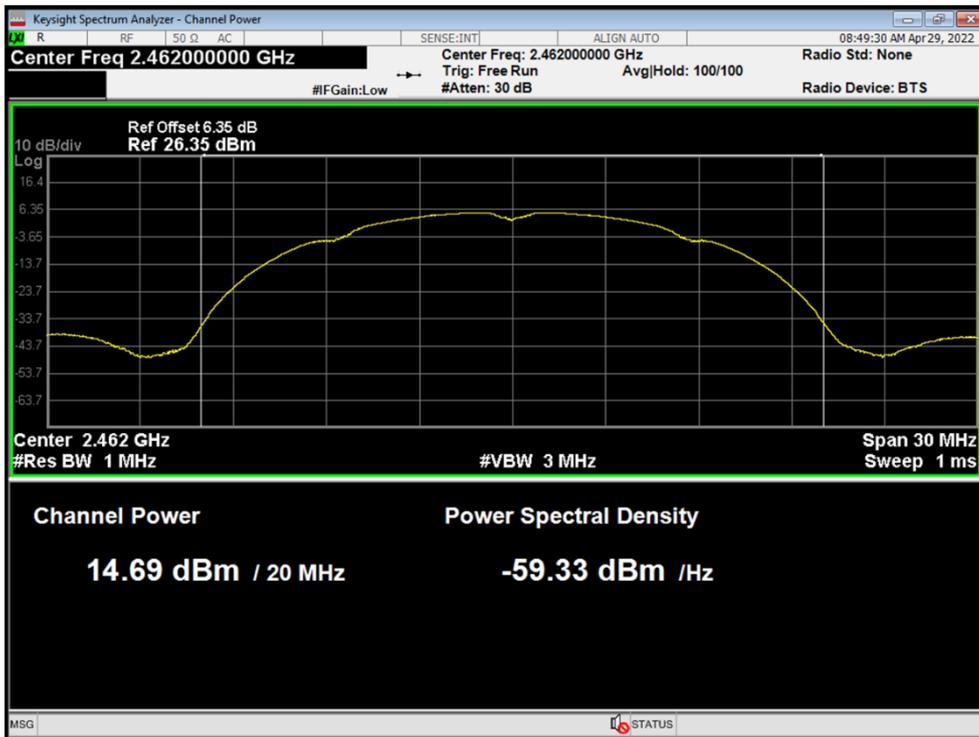
Power NVNT b 2412MHz Ant1



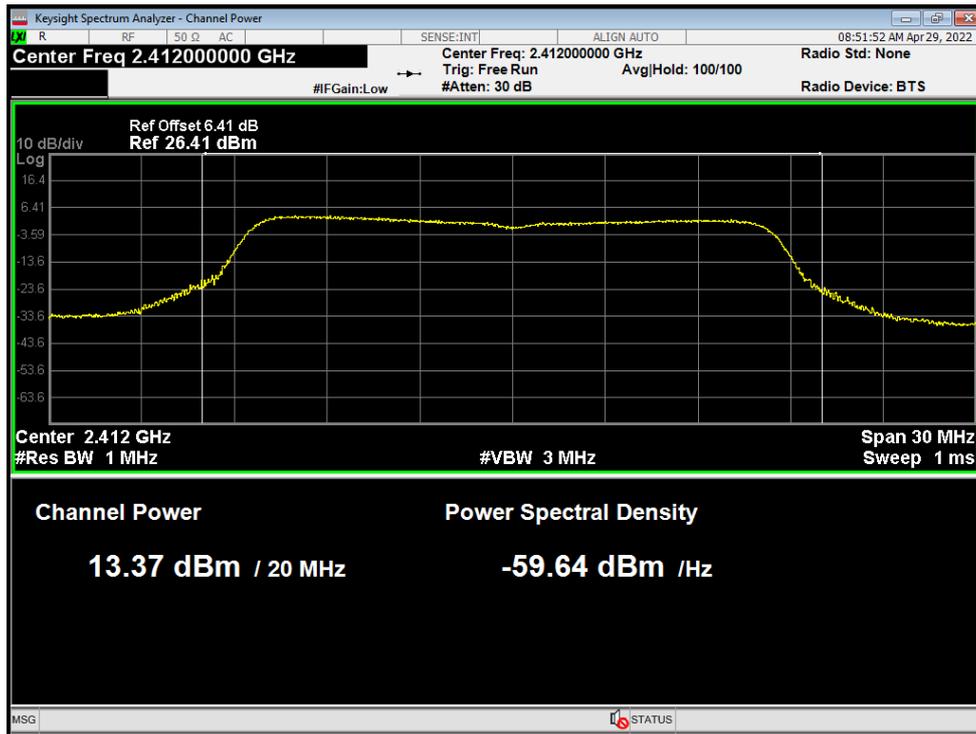
Power NVNT b 2437MHz Ant1



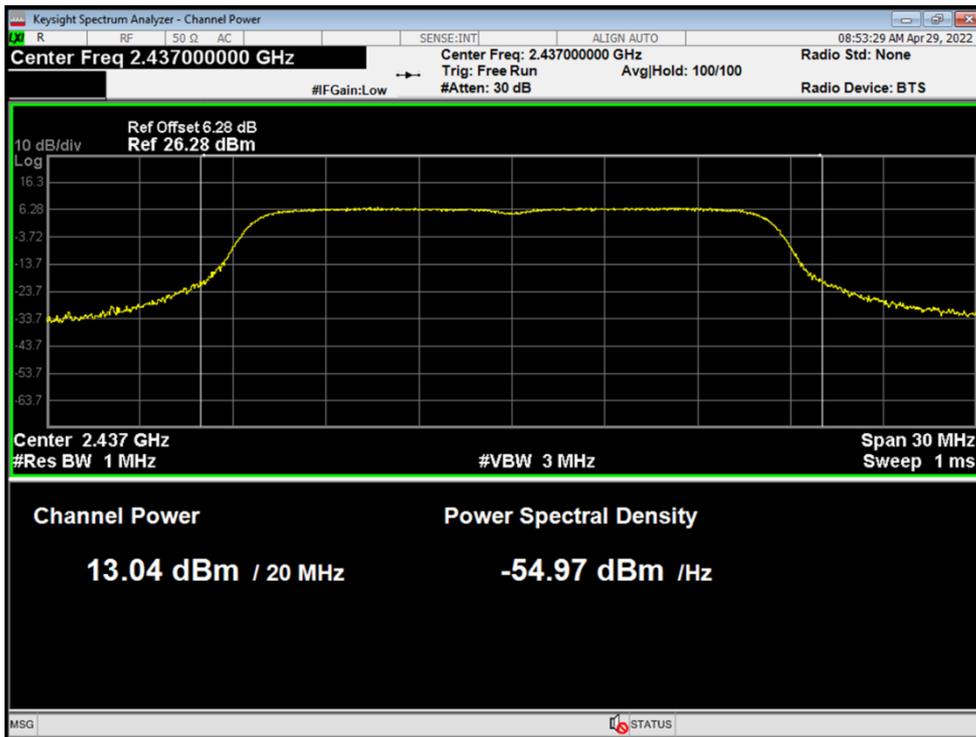
Power NVNT b 2462MHz Ant1



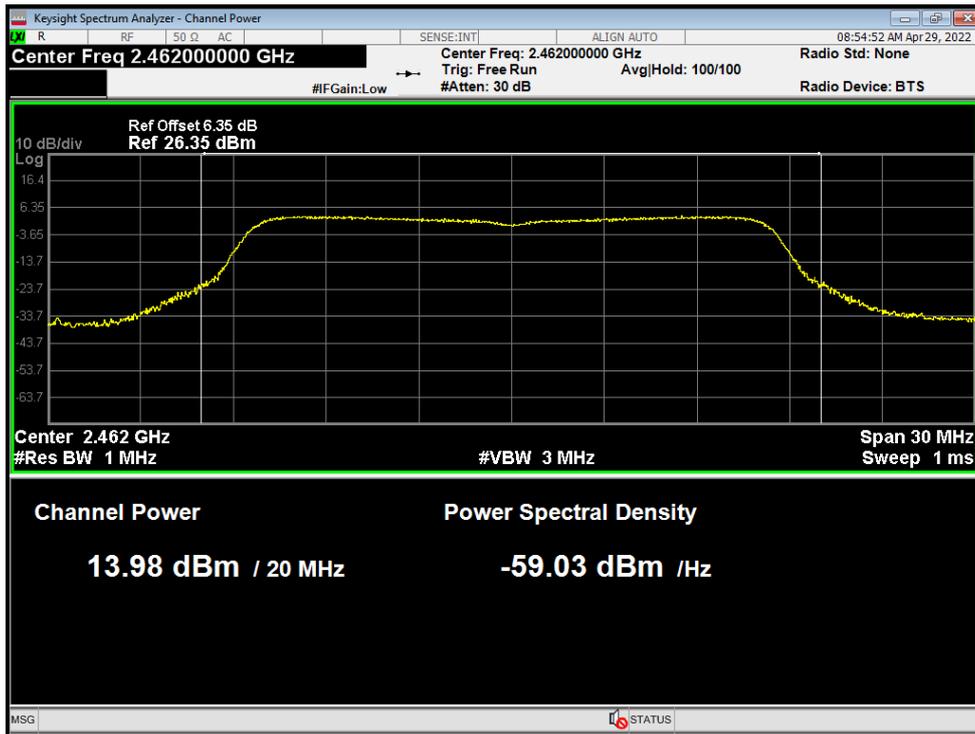
Power NVNT g 2412MHz Ant1



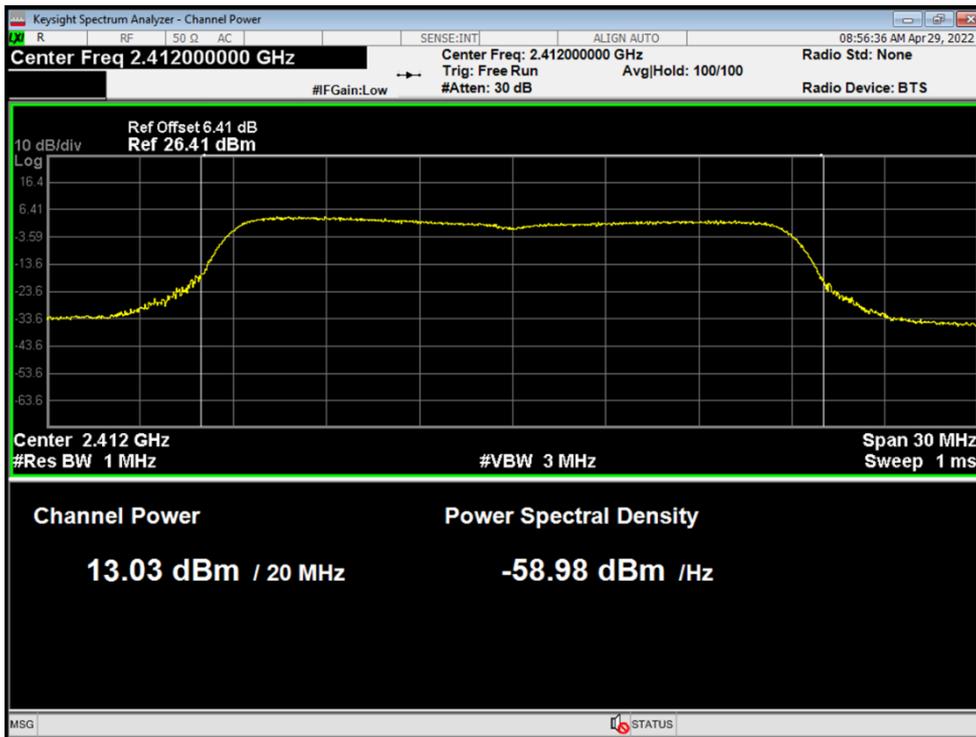
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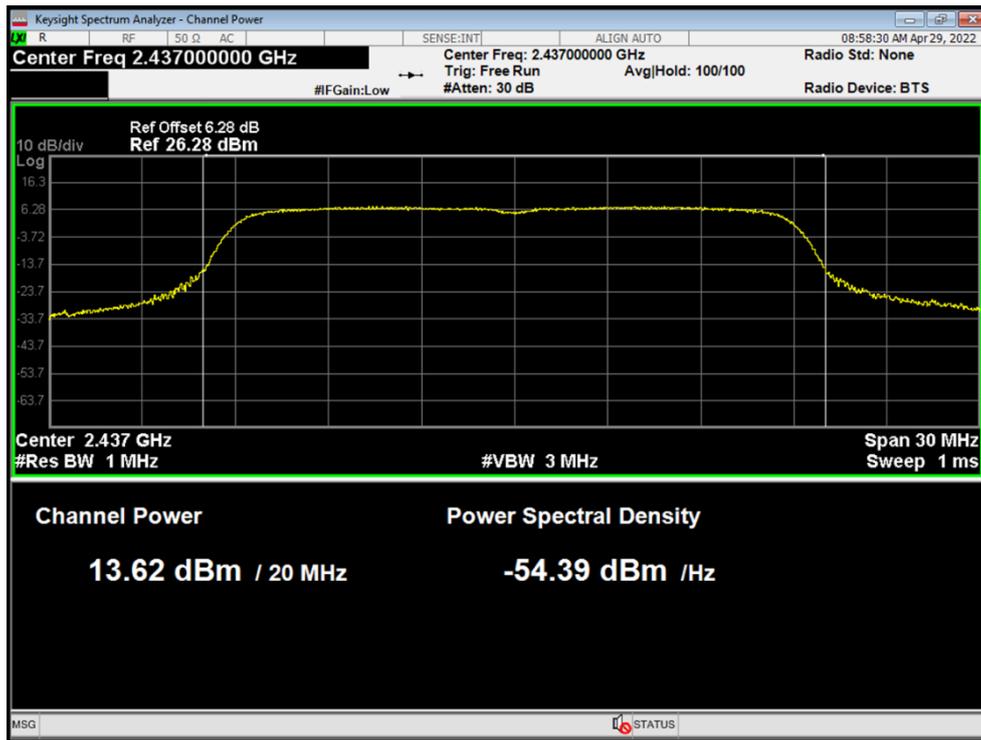
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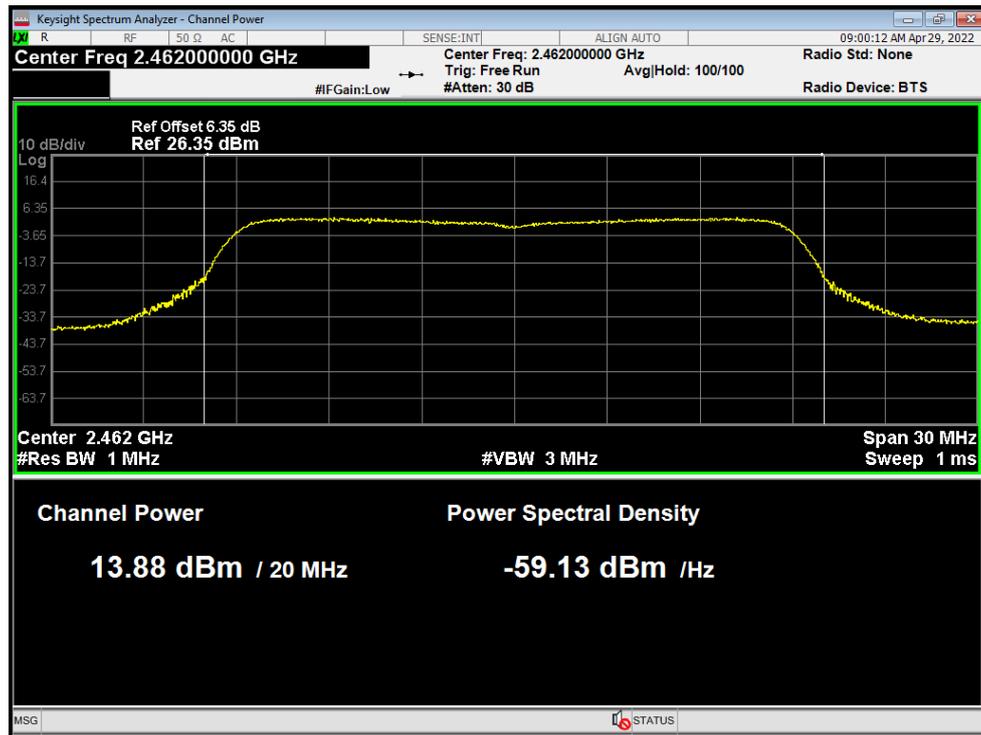
Power NVNT n20 2412MHz Ant1



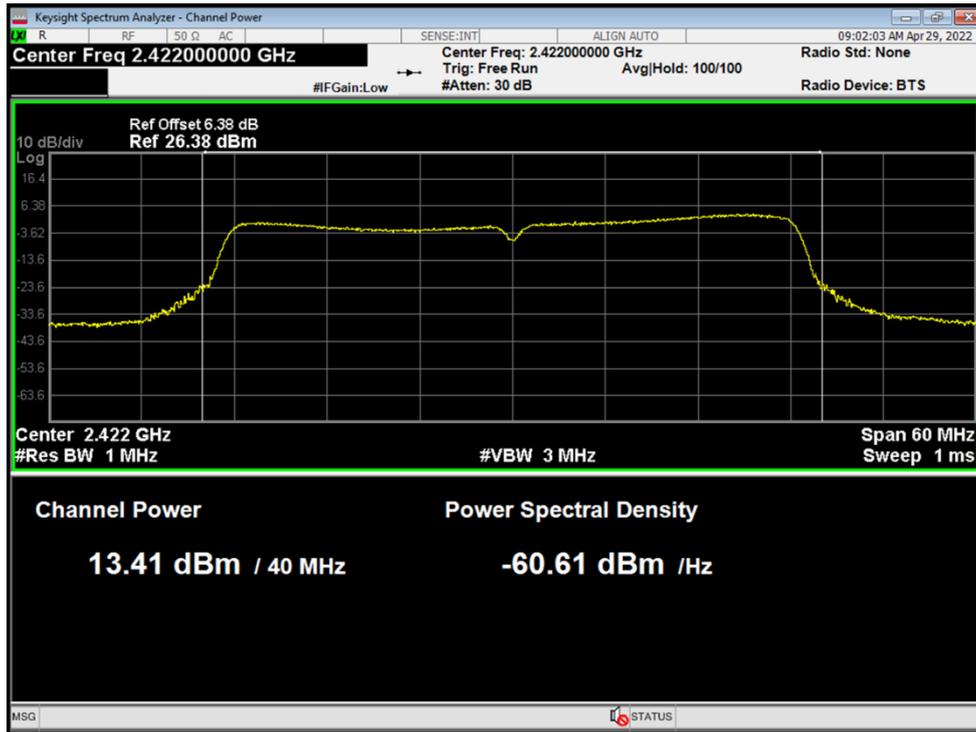
Power NVNT n20 2437MHz Ant1



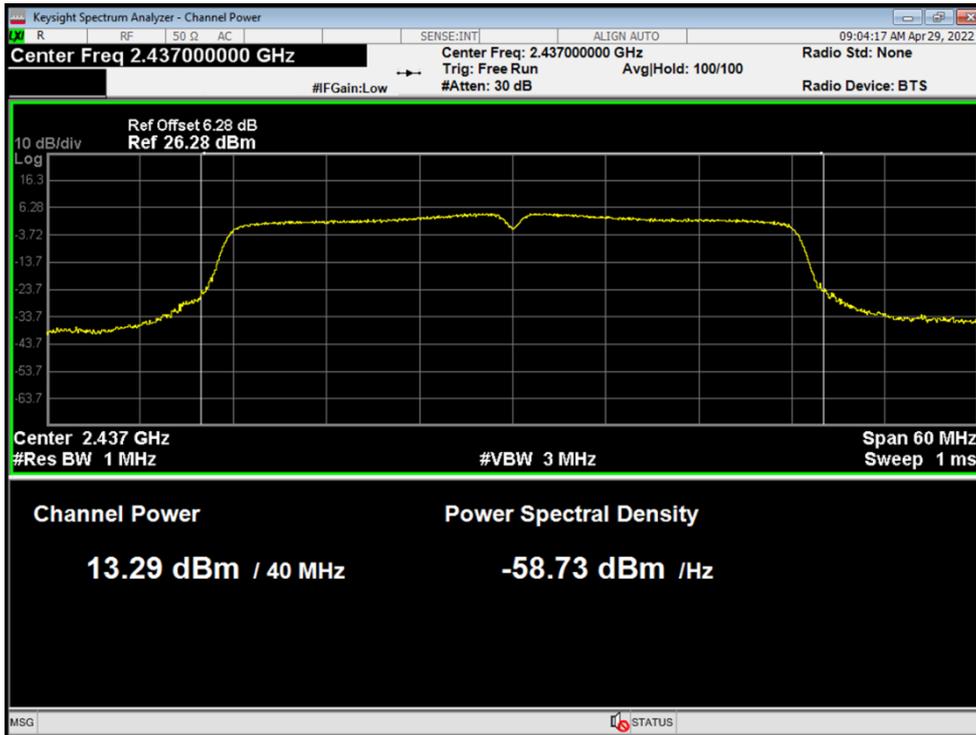
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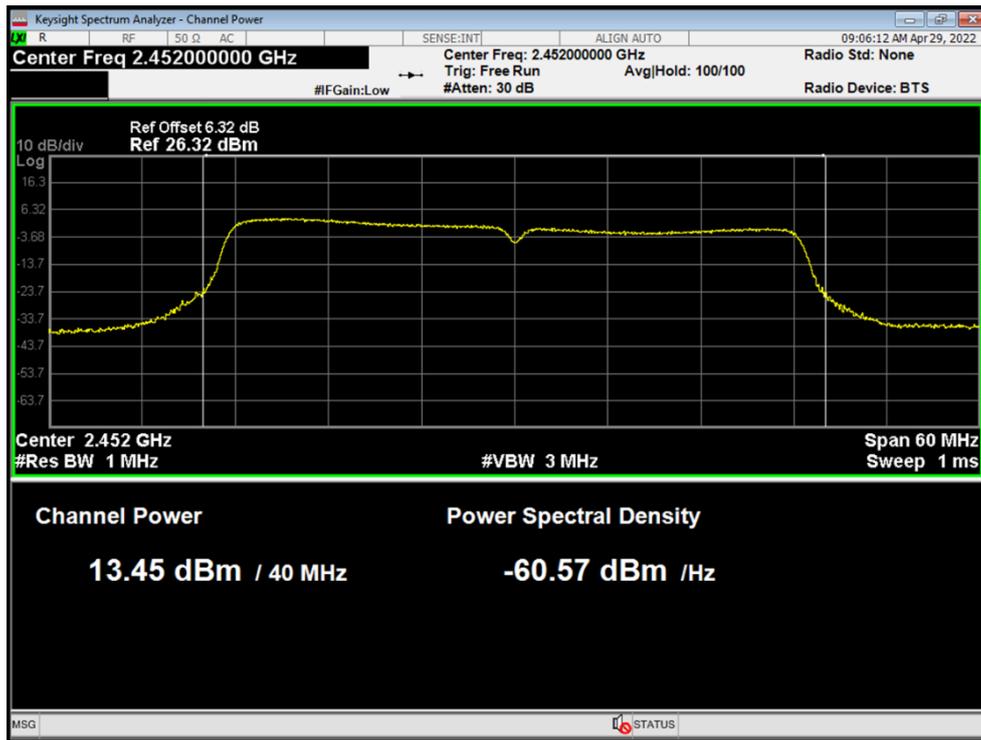
Power NVNT n40 2422MHz Ant1



Power NVNT n40 2437MHz Ant1



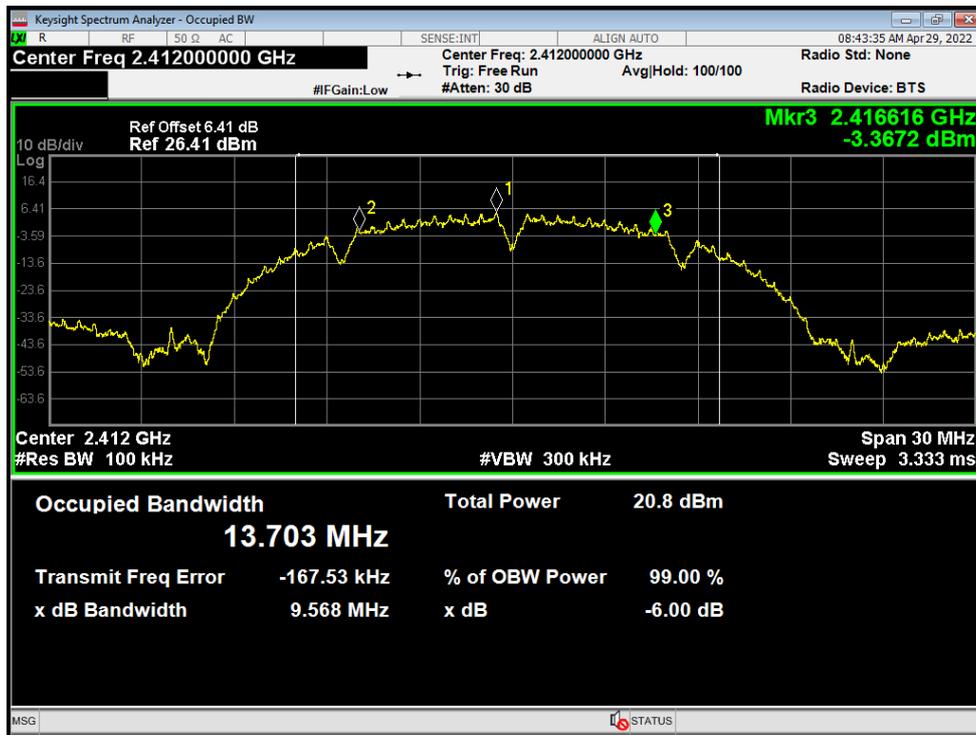
Power NVNT n40 2452MHz Ant1



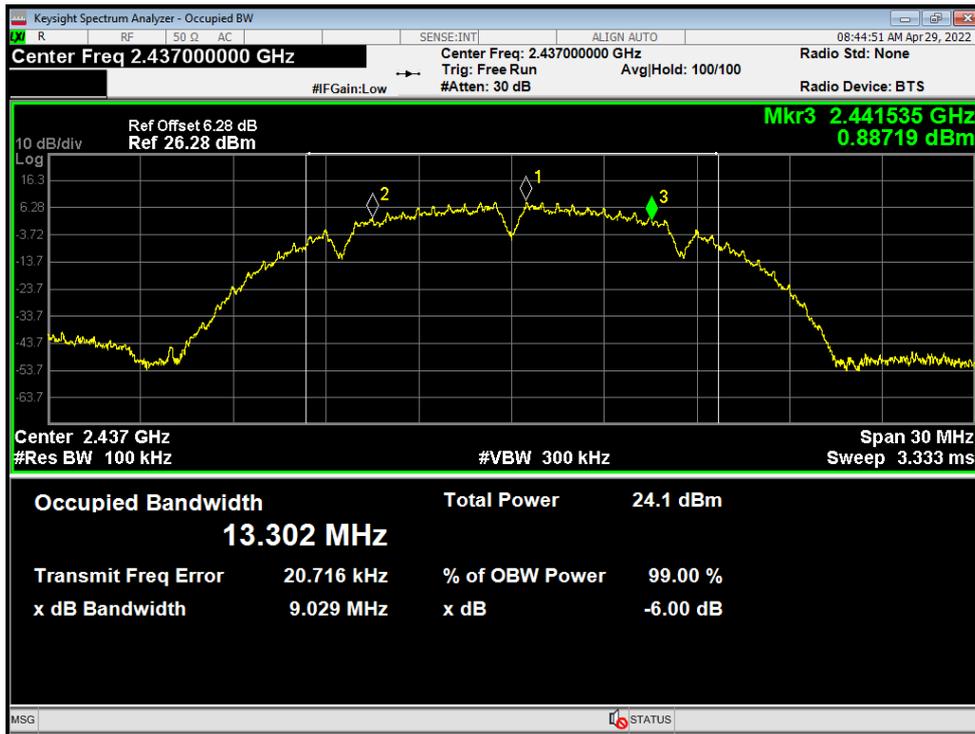
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.568	0.5	Pass
NVNT	b	2437	Ant1	9.029	0.5	Pass
NVNT	b	2462	Ant1	9.53	0.5	Pass
NVNT	g	2412	Ant1	16.457	0.5	Pass
NVNT	g	2437	Ant1	16.444	0.5	Pass
NVNT	g	2462	Ant1	16.55	0.5	Pass
NVNT	n20	2412	Ant1	17.694	0.5	Pass
NVNT	n20	2437	Ant1	17.580	0.5	Pass
NVNT	n20	2462	Ant1	17.750	0.5	Pass
NVNT	n40	2422	Ant1	36.431	0.5	Pass
NVNT	n40	2437	Ant1	36.072	0.5	Pass
NVNT	n40	2452	Ant1	36.408	0.5	Pass

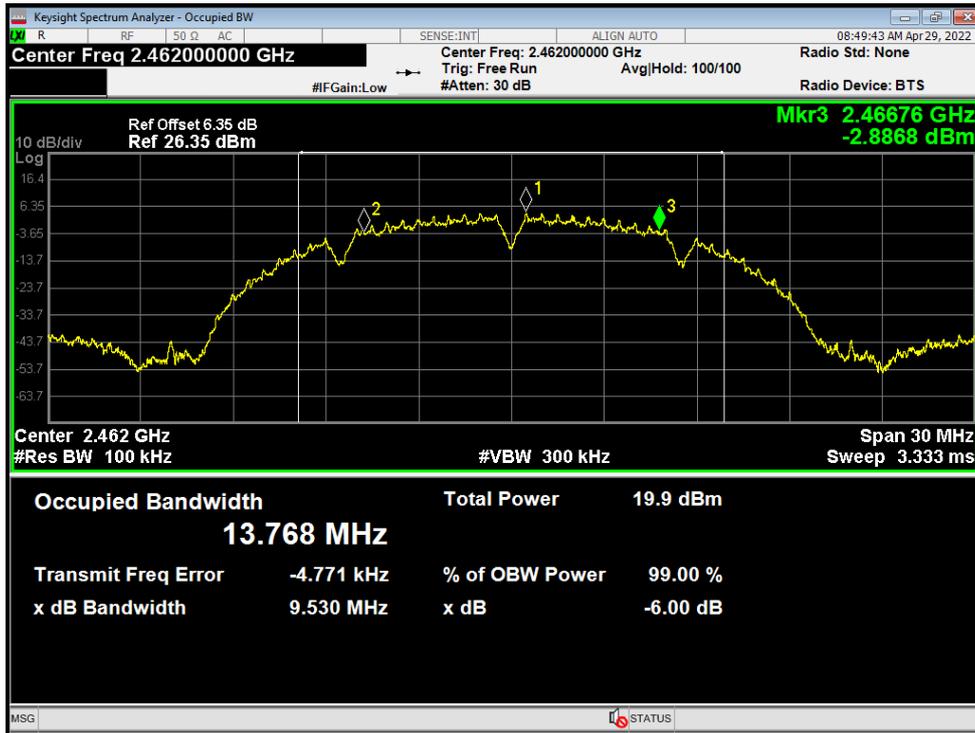
-6dB Bandwidth NVNT b 2412MHz Ant1



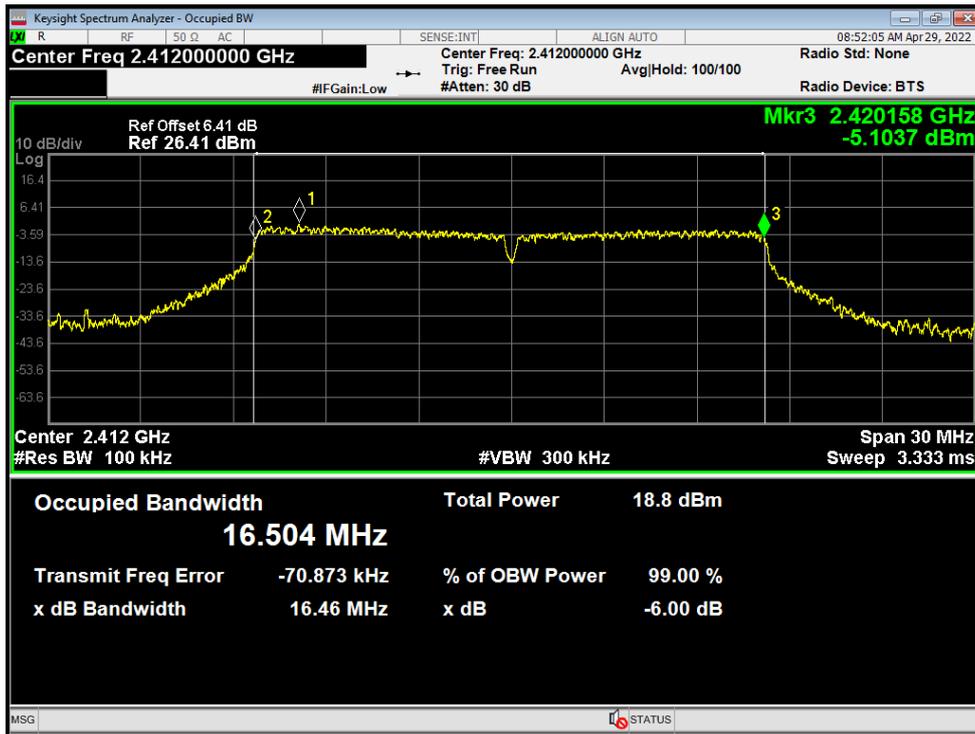
-6dB Bandwidth NVNT b 2437MHz Ant1



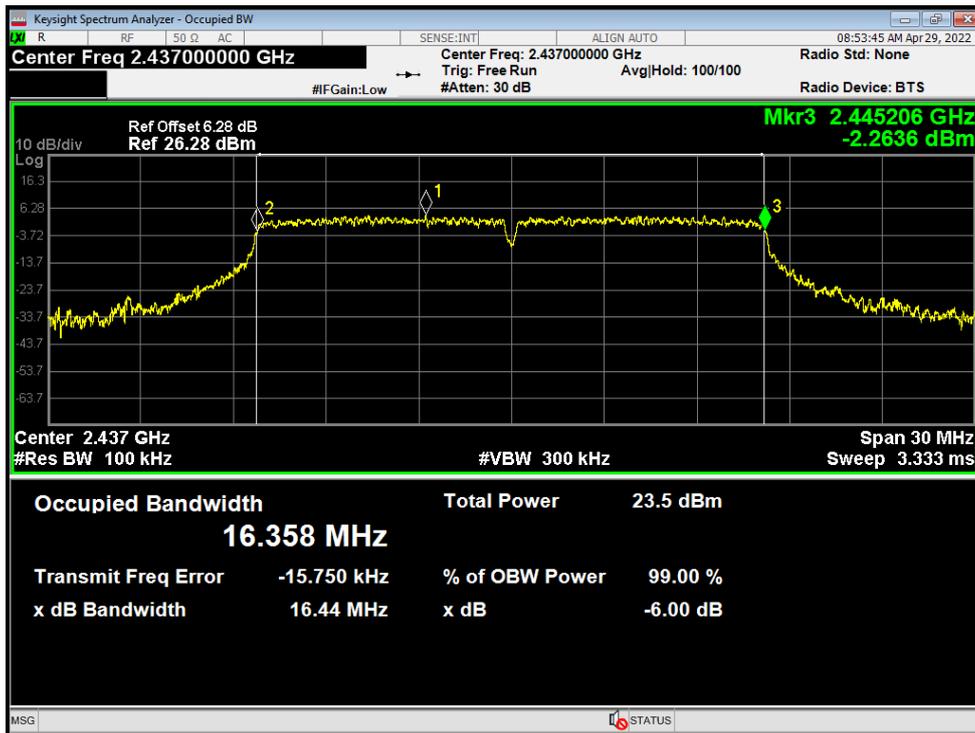
-6dB Bandwidth NVNT b 2462MHz Ant1



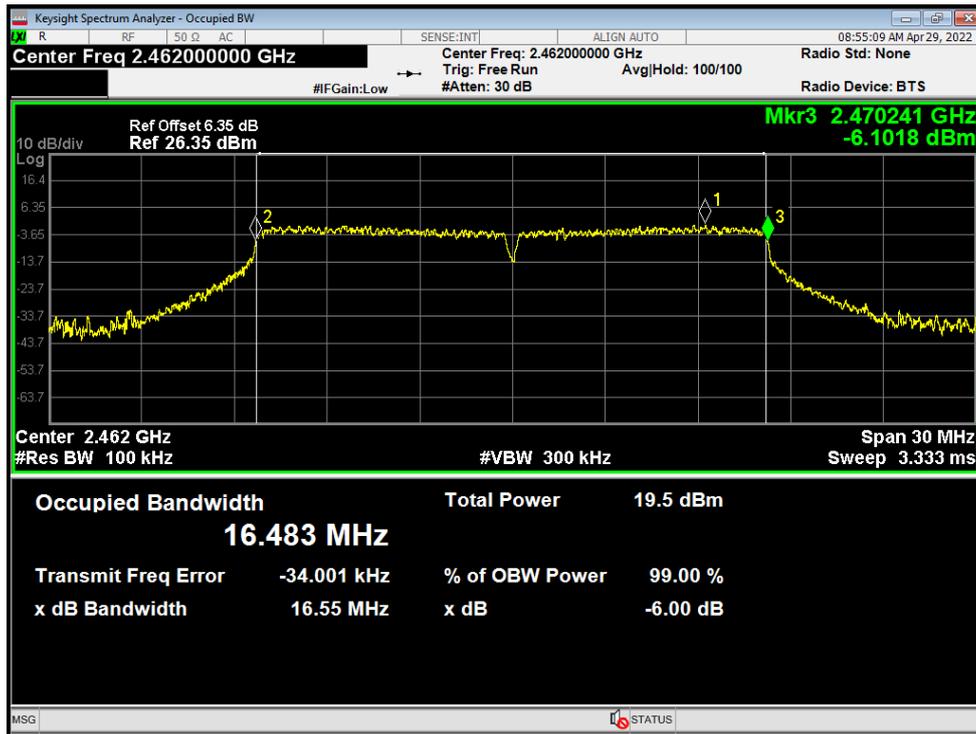
-6dB Bandwidth NVNT g 2412MHz Ant1



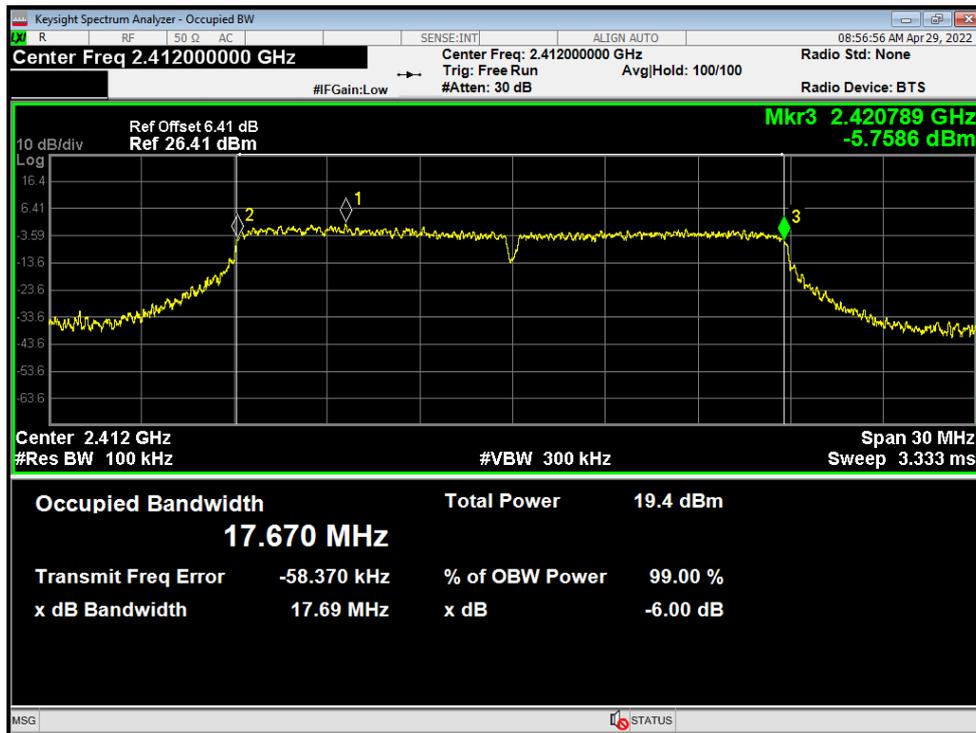
-6dB Bandwidth NVNT g 2437MHz Ant1



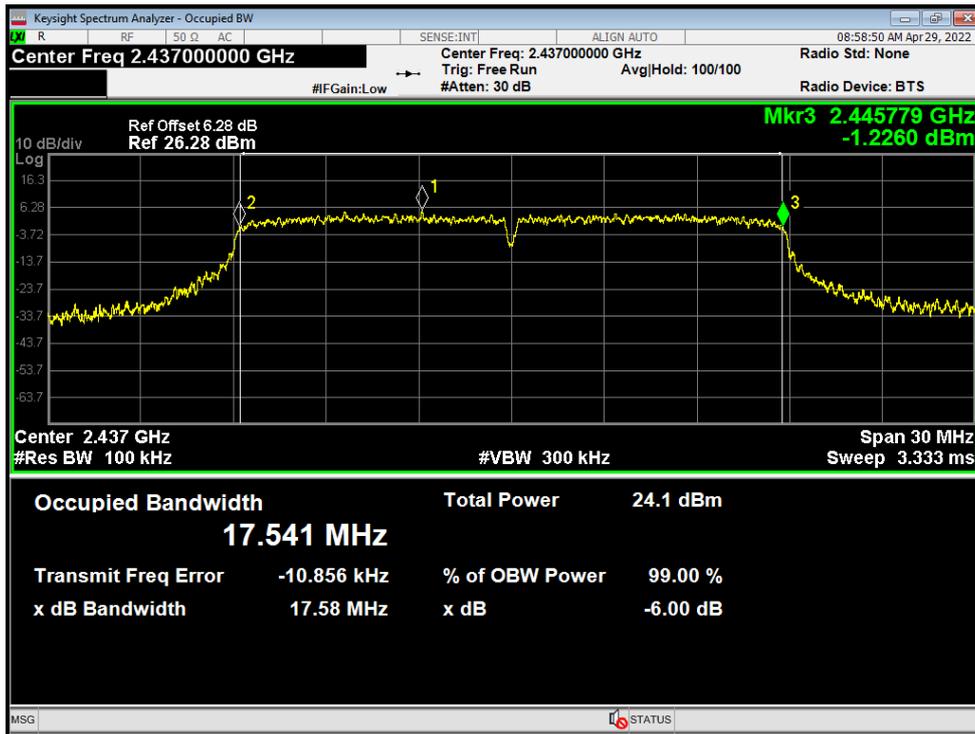
-6dB Bandwidth NVNT g 2462MHz Ant1



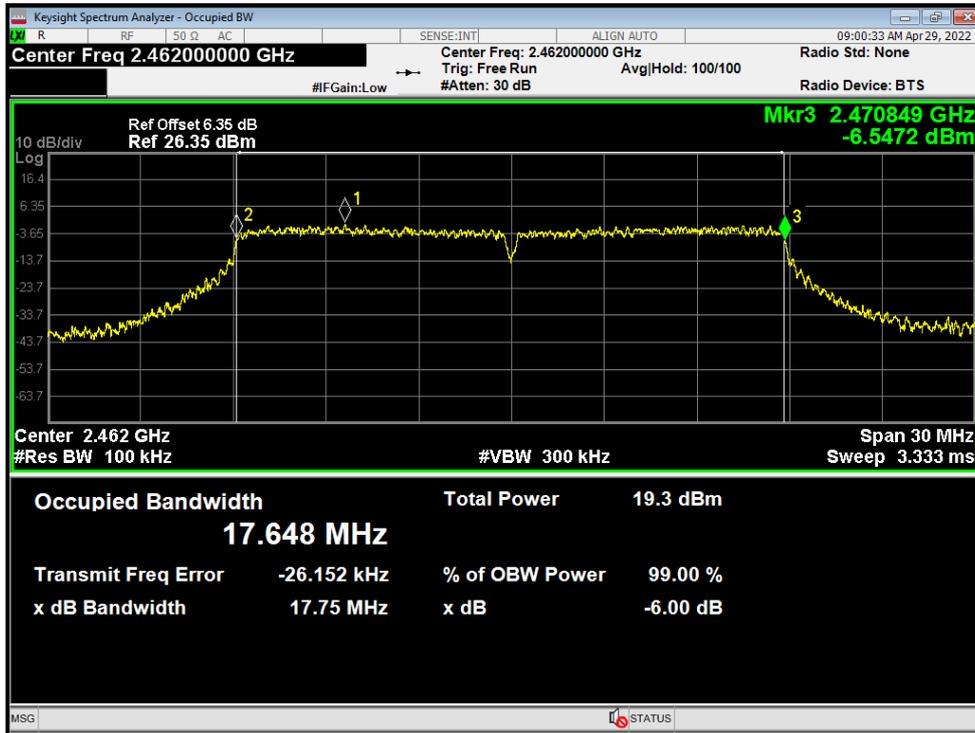
-6dB Bandwidth NVNT n20 2412MHz Ant1



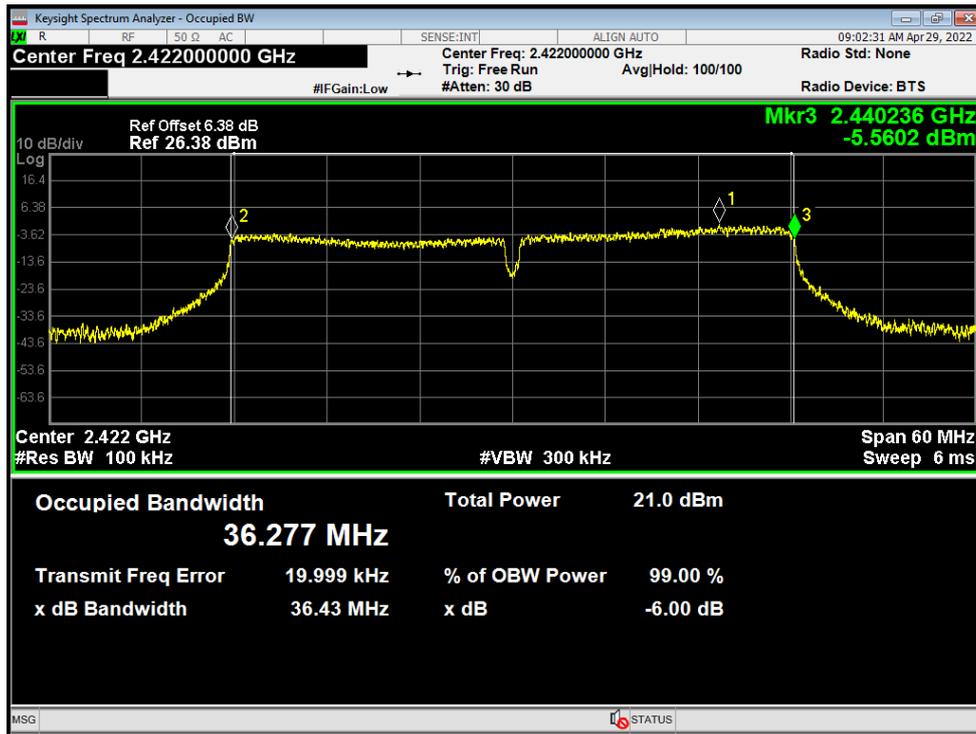
-6dB Bandwidth NVNT n20 2437MHz Ant1



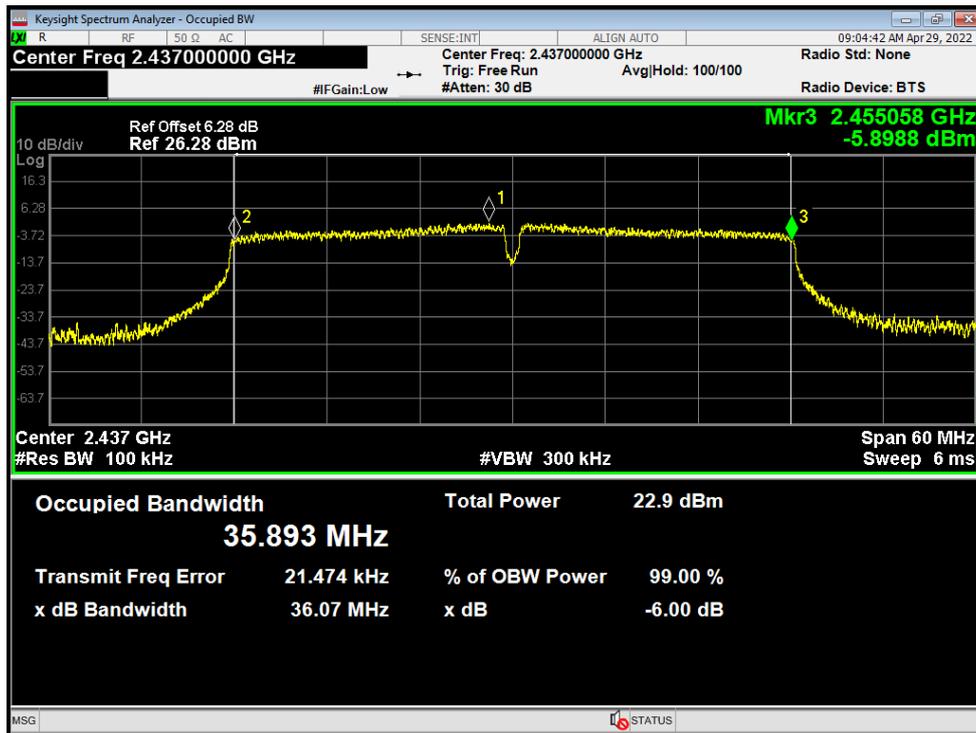
-6dB Bandwidth NVNT n20 2462MHz Ant1



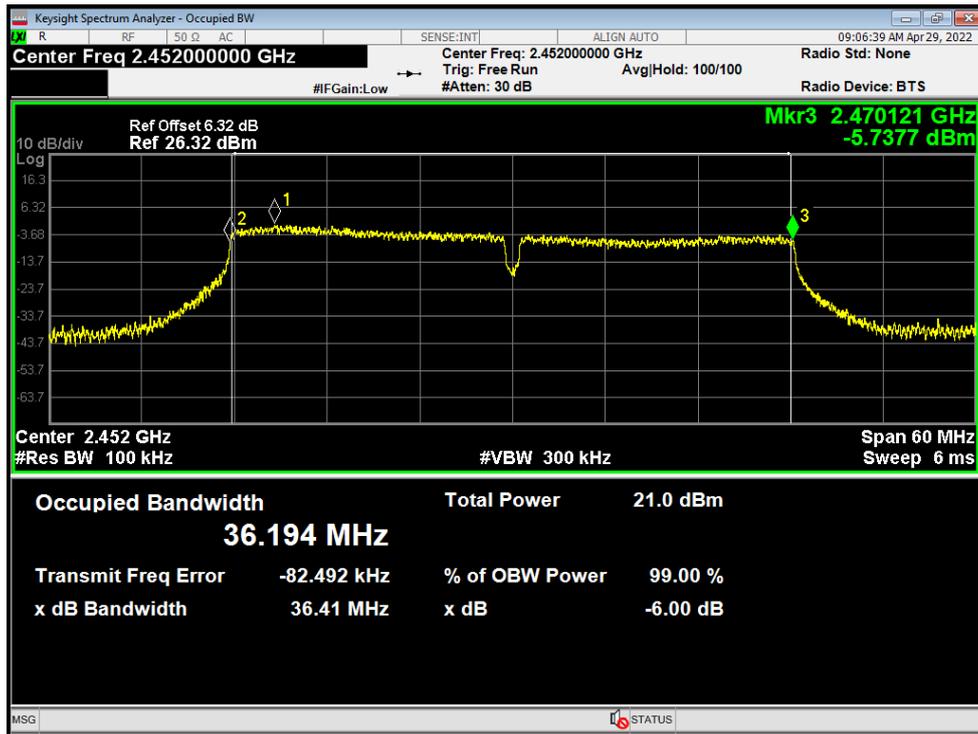
-6dB Bandwidth NVNT n40 2422MHz Ant1



-6dB Bandwidth NVNT n40 2437MHz Ant1



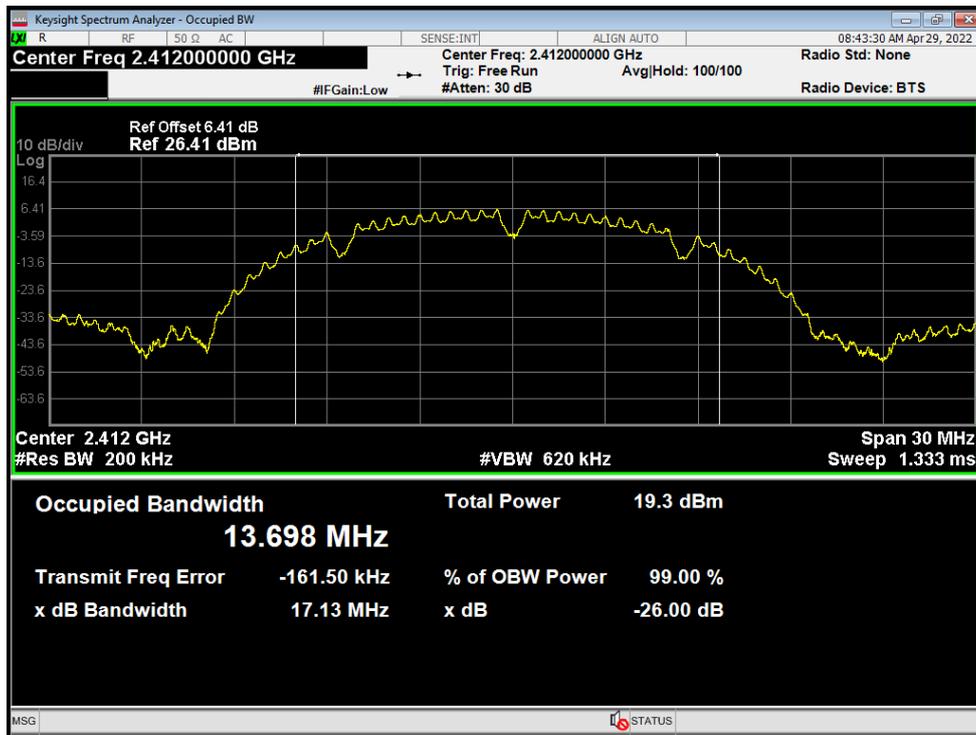
-6dB Bandwidth NVNT n40 2452MHz Ant1



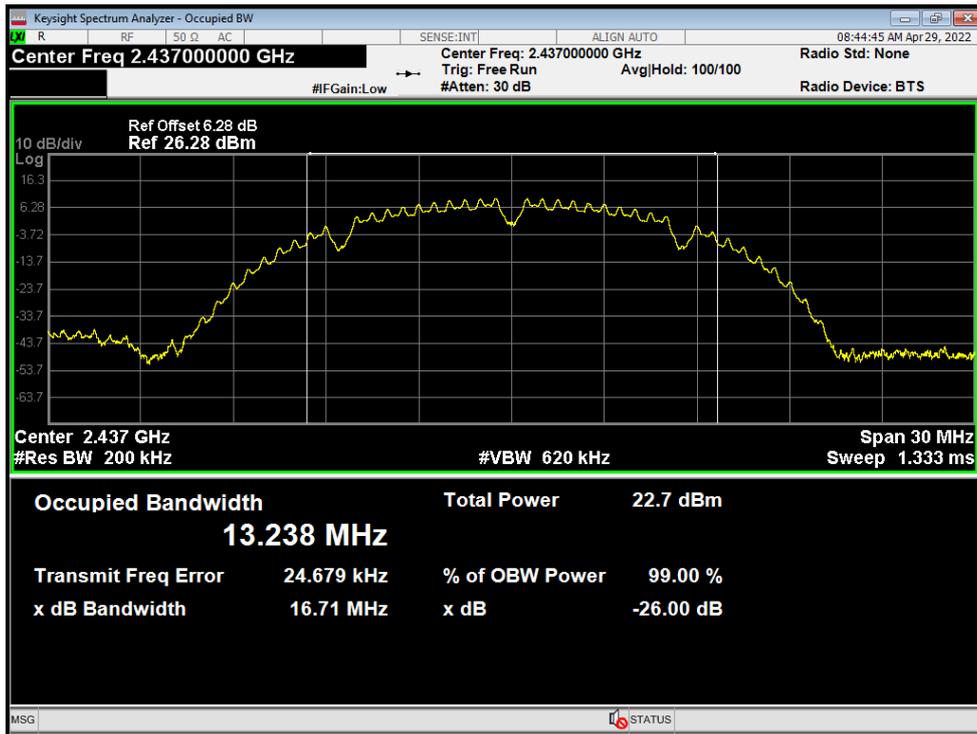
Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.69835469
NVNT	b	2437	Ant1	13.2384724
NVNT	b	2462	Ant1	13.81652187
NVNT	g	2412	Ant1	16.65020658
NVNT	g	2437	Ant1	16.39124564
NVNT	g	2462	Ant1	16.60418411
NVNT	n20	2412	Ant1	17.77281415
NVNT	n20	2437	Ant1	17.56216505
NVNT	n20	2462	Ant1	17.73657999
NVNT	n40	2422	Ant1	36.52820627
NVNT	n40	2437	Ant1	35.98331621
NVNT	n40	2452	Ant1	36.44060954

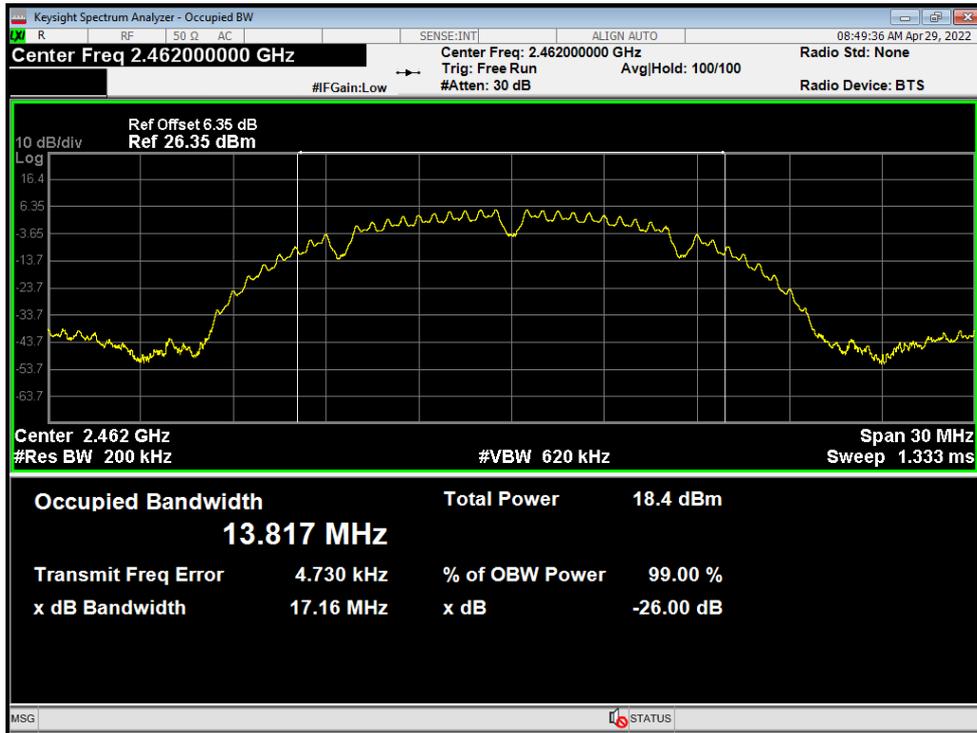
OBW NVNT b 2412MHz Ant1



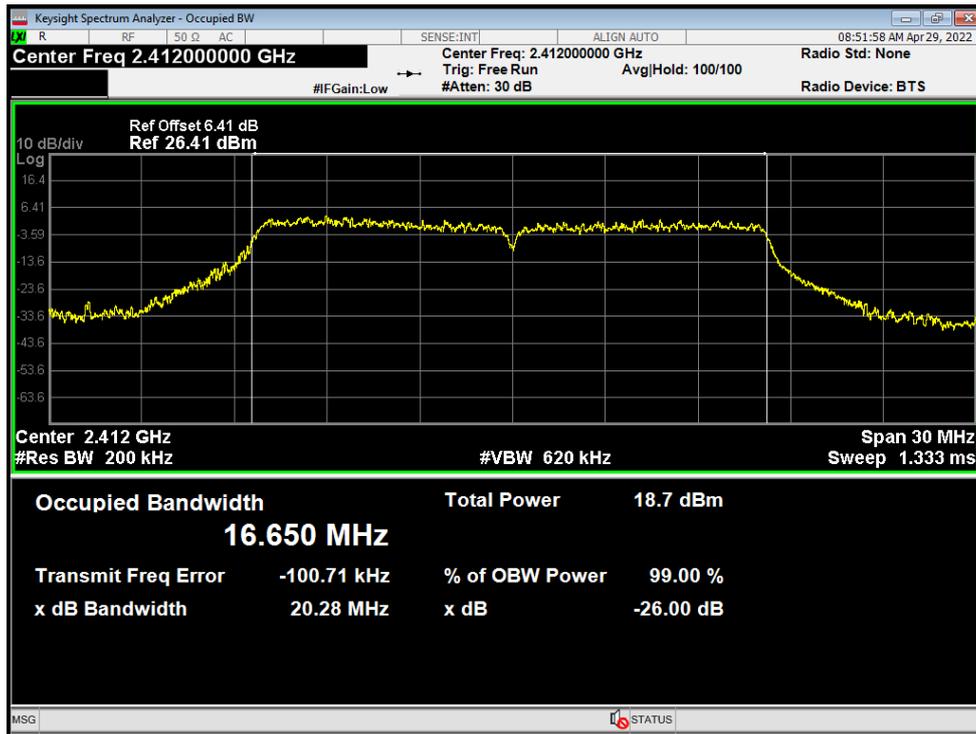
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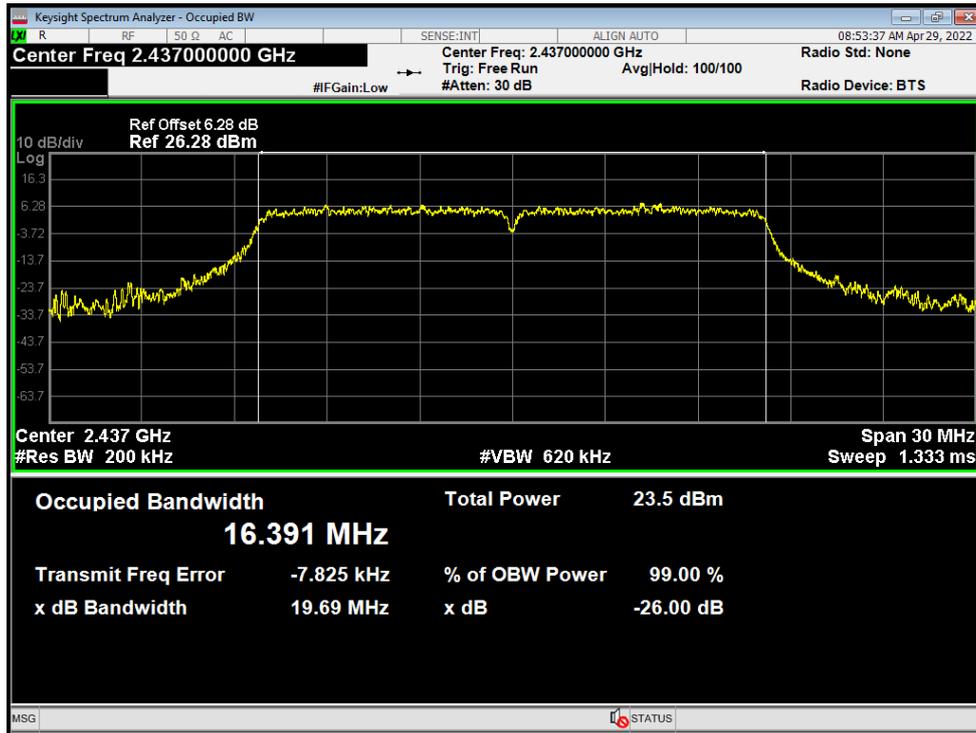
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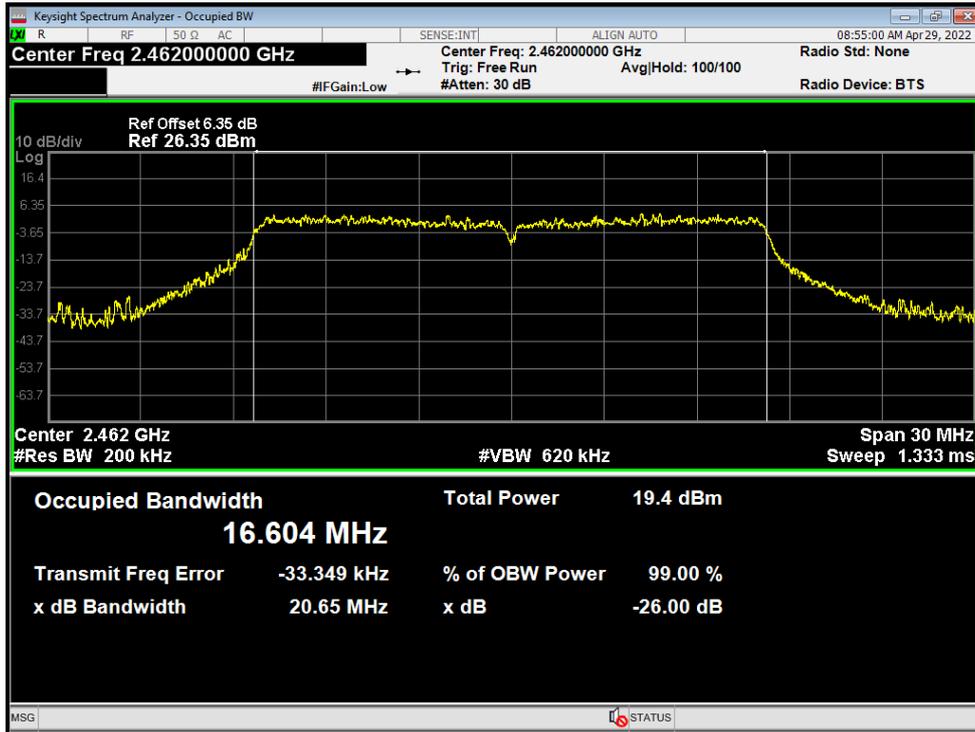
OBW NVNT g 2412MHz Ant1



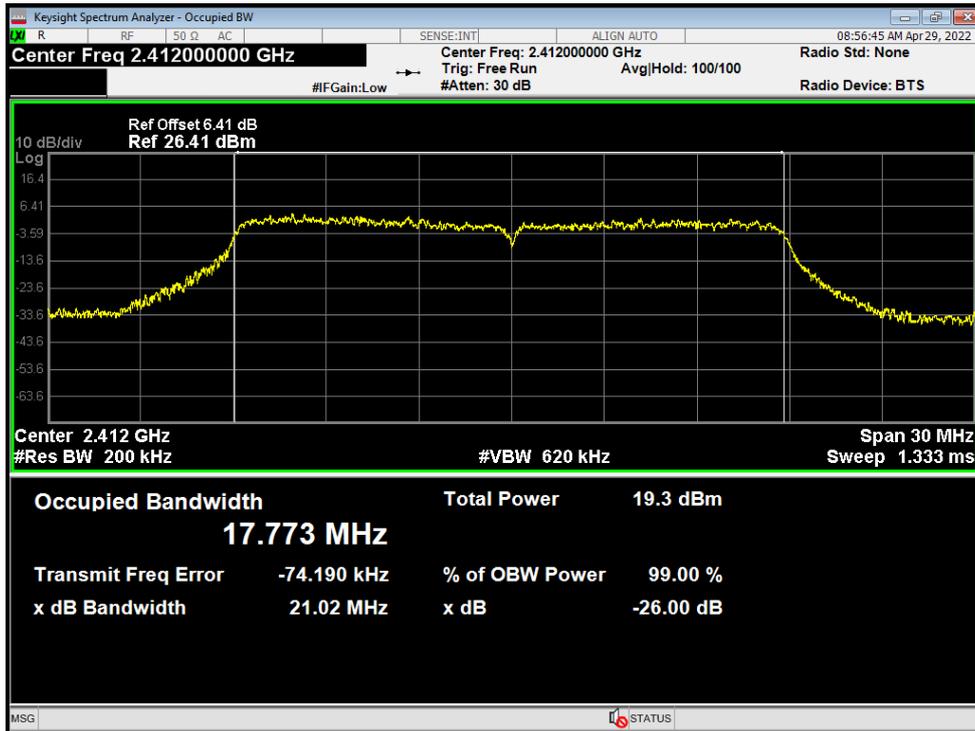
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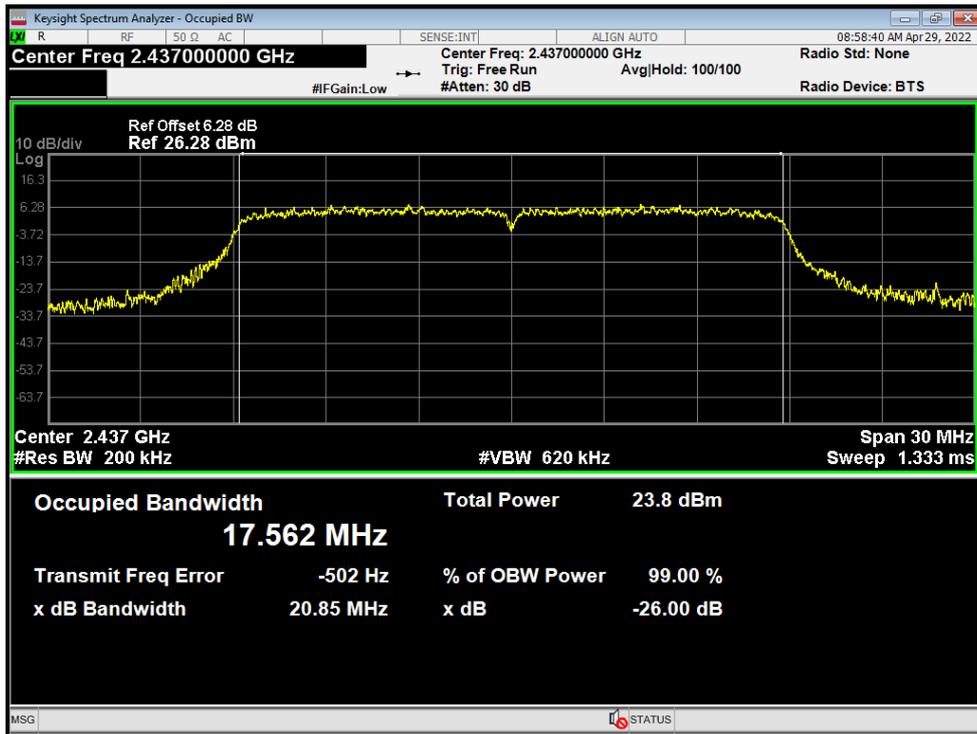
OBW NVNT g 2462MHz Ant1



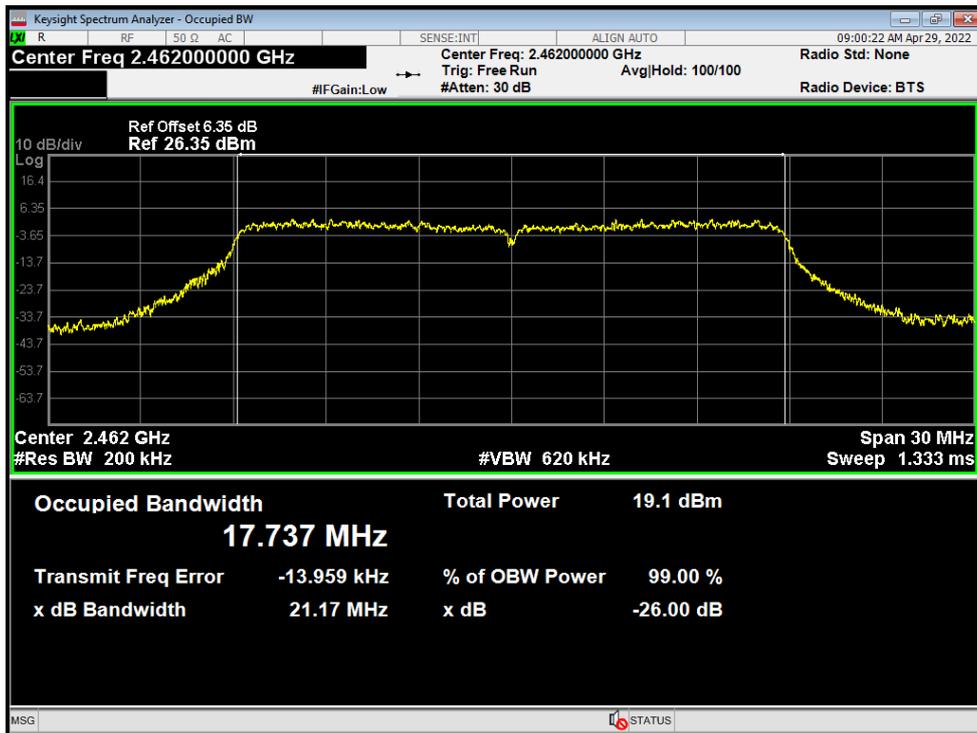
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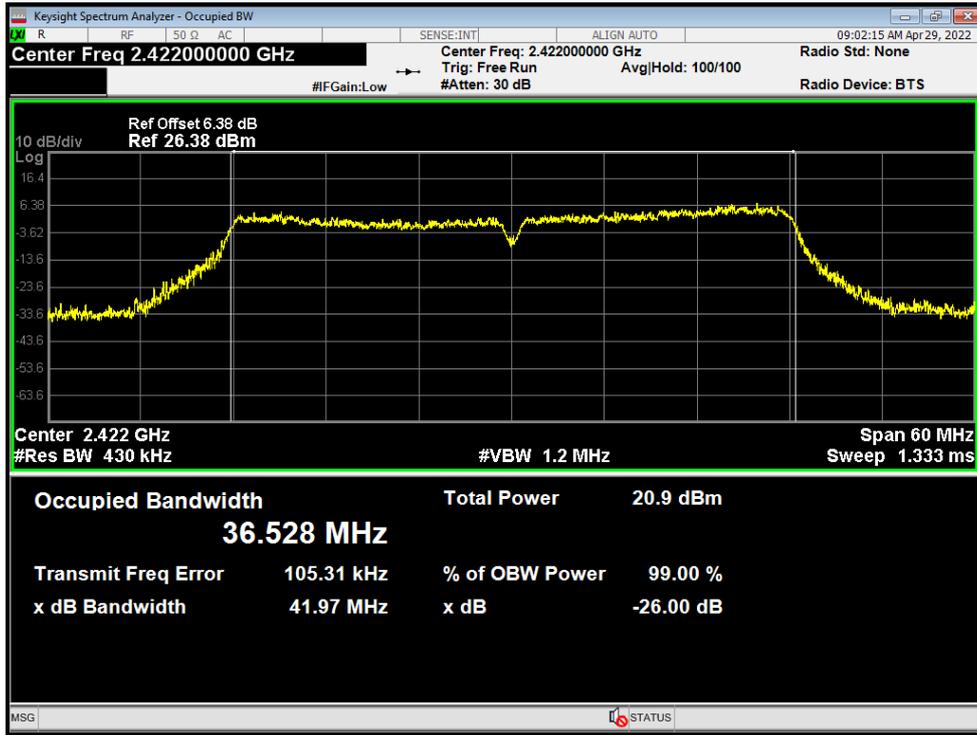
OBW NVNT n20 2437MHz Ant1



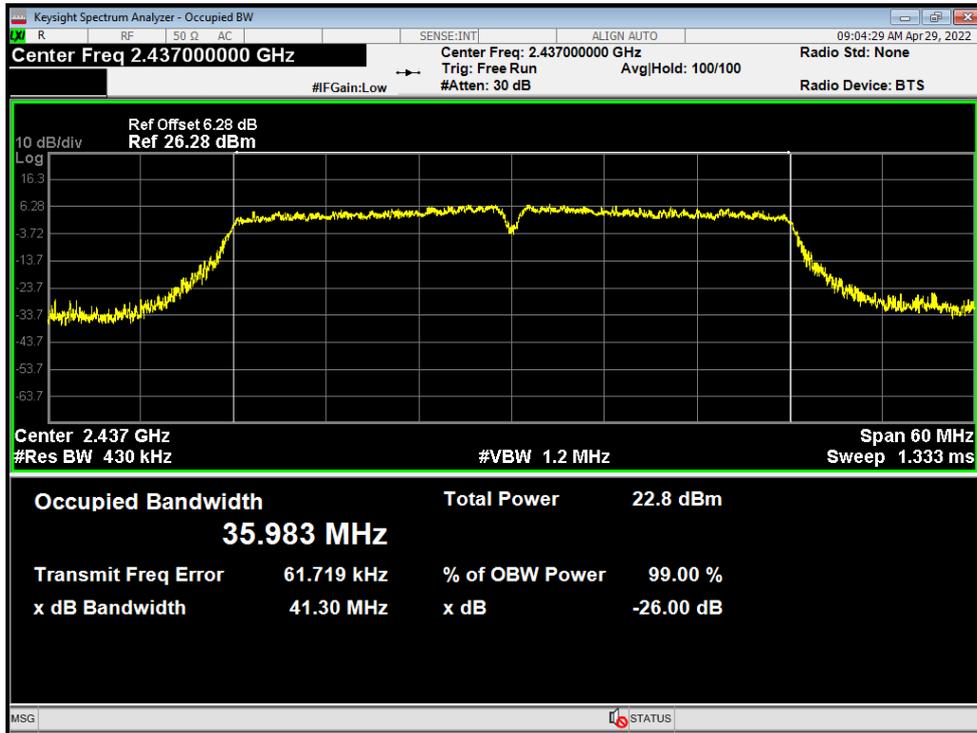
OBW NVNT n20 2462MHz Ant1



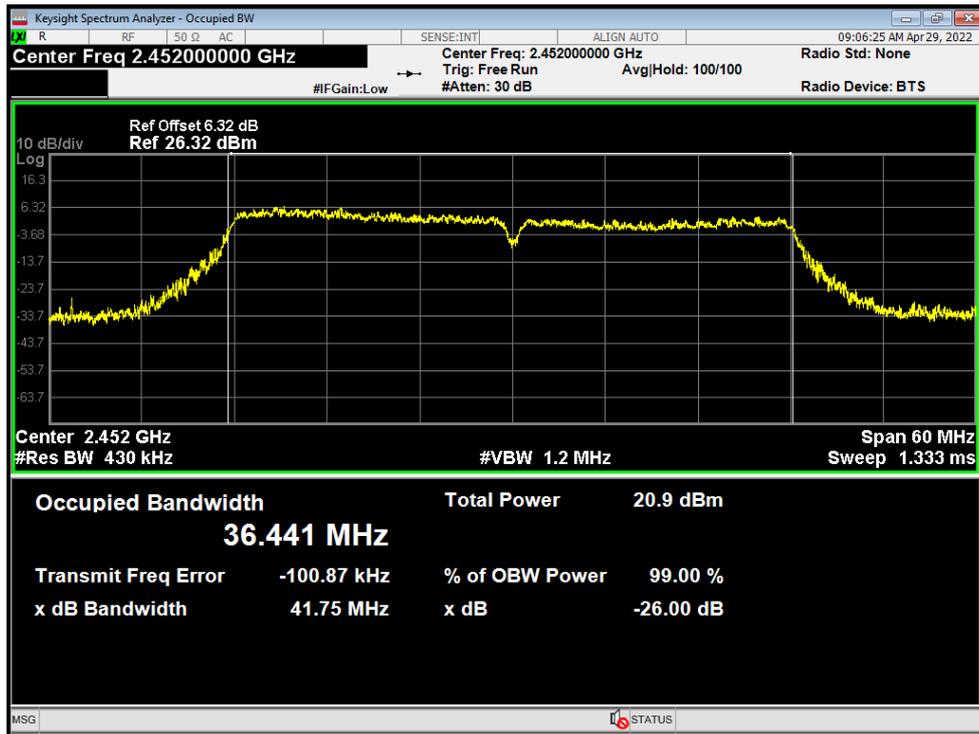
OBW NVNT n40 2422MHz Ant1



OBW NVNT n40 2437MHz Ant1



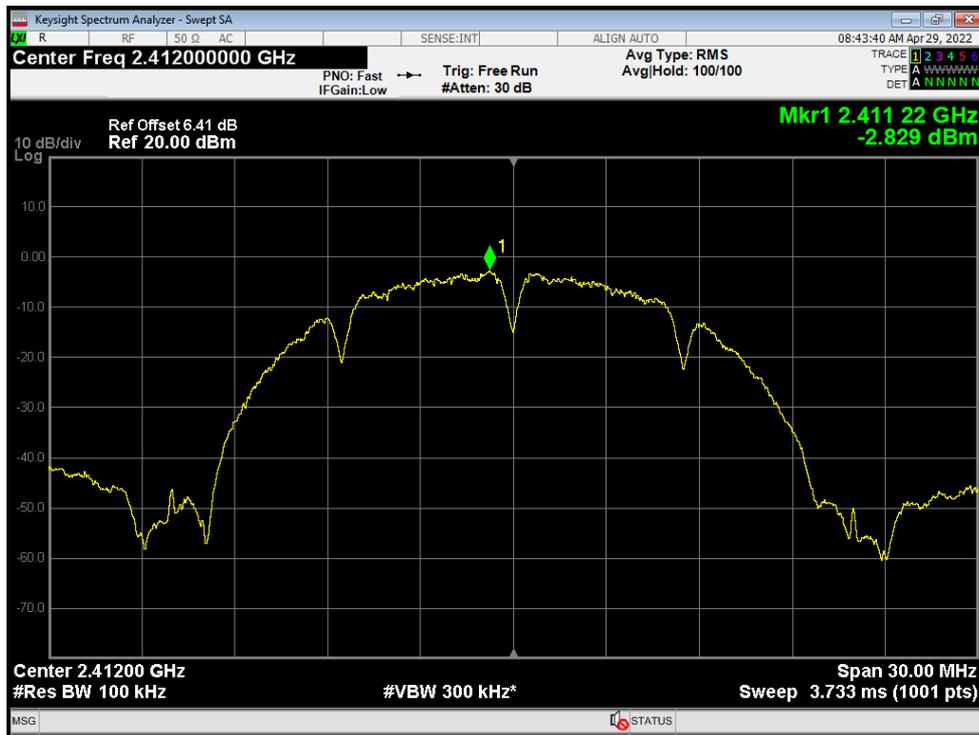
OBW NVNT n40 2452MHz Ant1



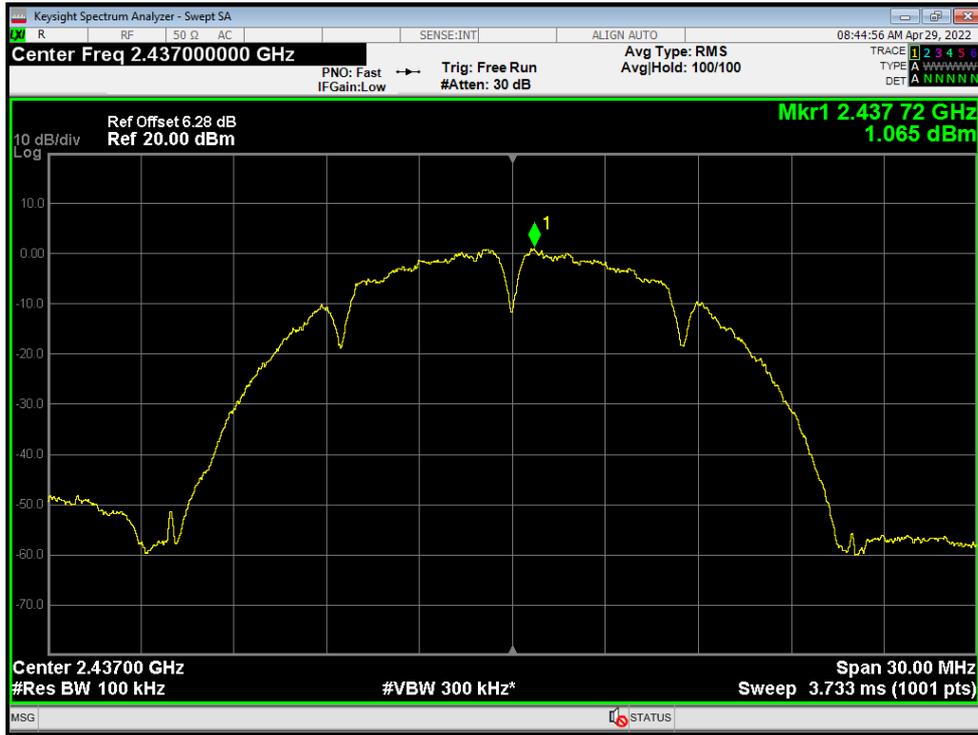
Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-2.829	8	Pass
NVNT	b	2437	Ant1	1.065	8	Pass
NVNT	b	2462	Ant1	-3.757	8	Pass
NVNT	g	2412	Ant1	-5.789	8	Pass
NVNT	g	2437	Ant1	-2.113	8	Pass
NVNT	g	2462	Ant1	-5.449	8	Pass
NVNT	n20	2412	Ant1	-5.159	8	Pass
NVNT	n20	2437	Ant1	-1.649	8	Pass
NVNT	n20	2462	Ant1	-6.327	8	Pass
NVNT	n40	2422	Ant1	-5.98	8	Pass
NVNT	n40	2437	Ant1	-5.081	8	Pass
NVNT	n40	2452	Ant1	-5.998	8	Pass

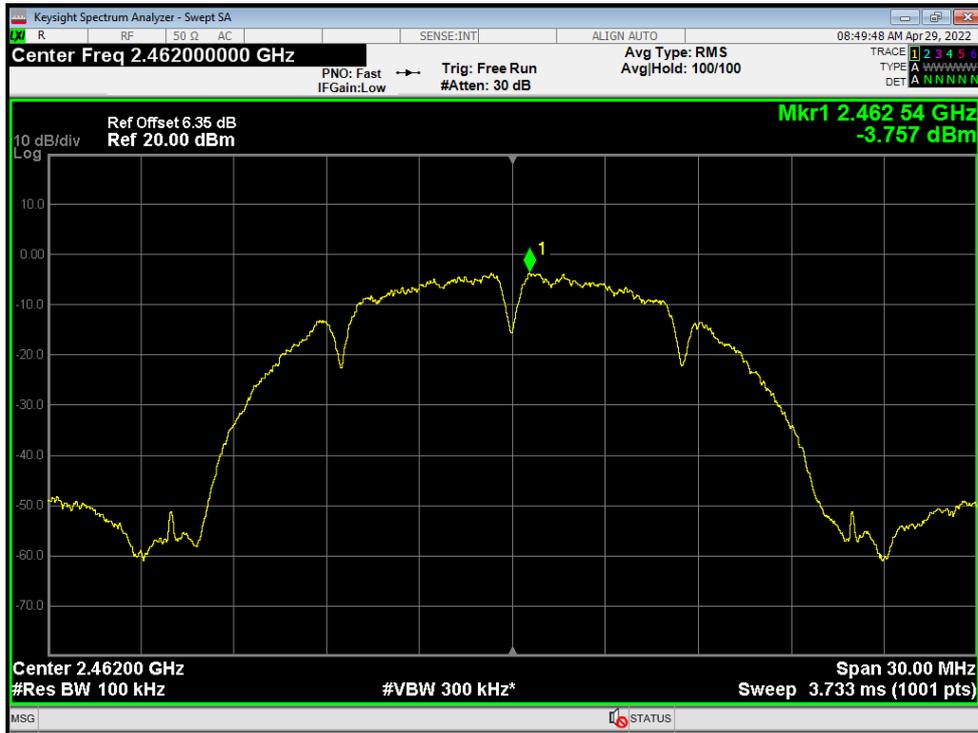
PSD NVNT b 2412MHz Ant1



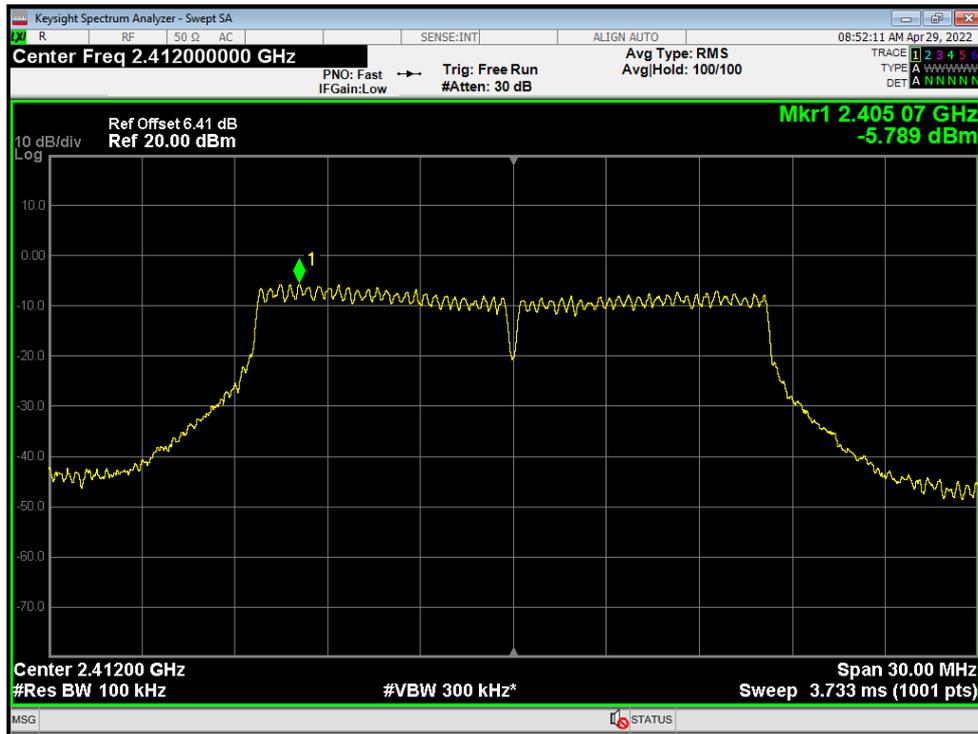
PSD NVNT b 2437MHz Ant1



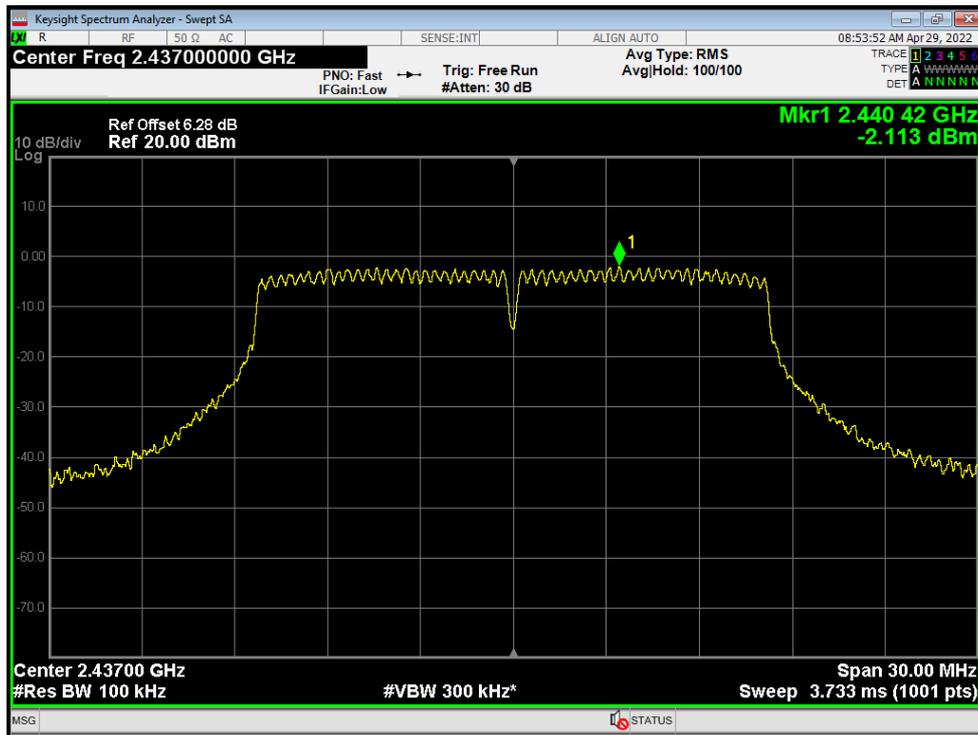
PSD NVNT b 2462MHz Ant1



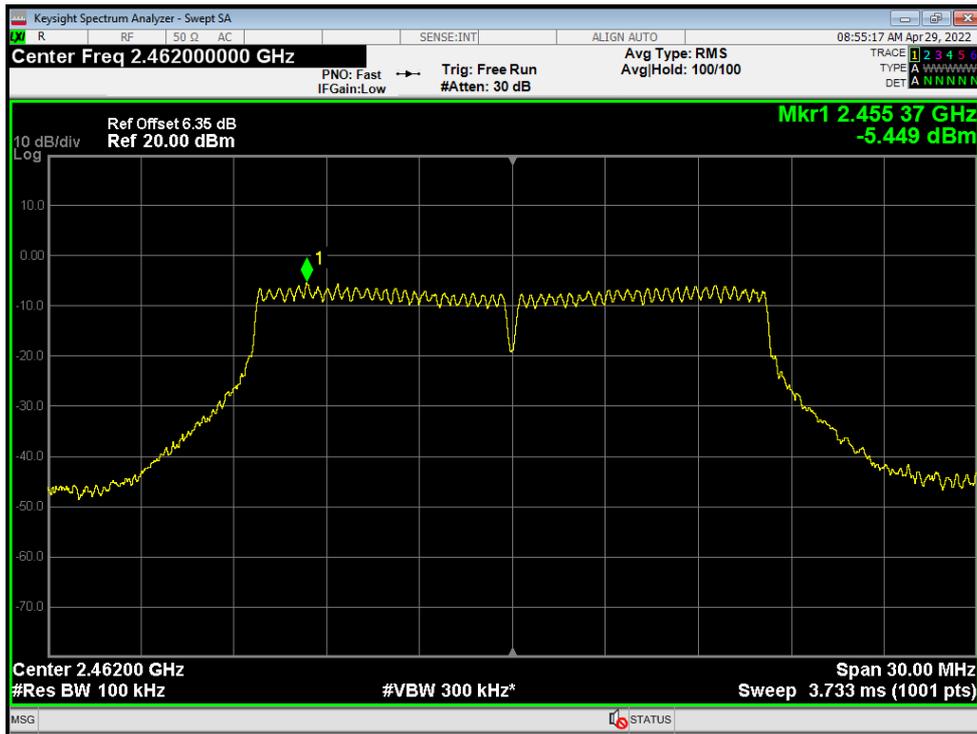
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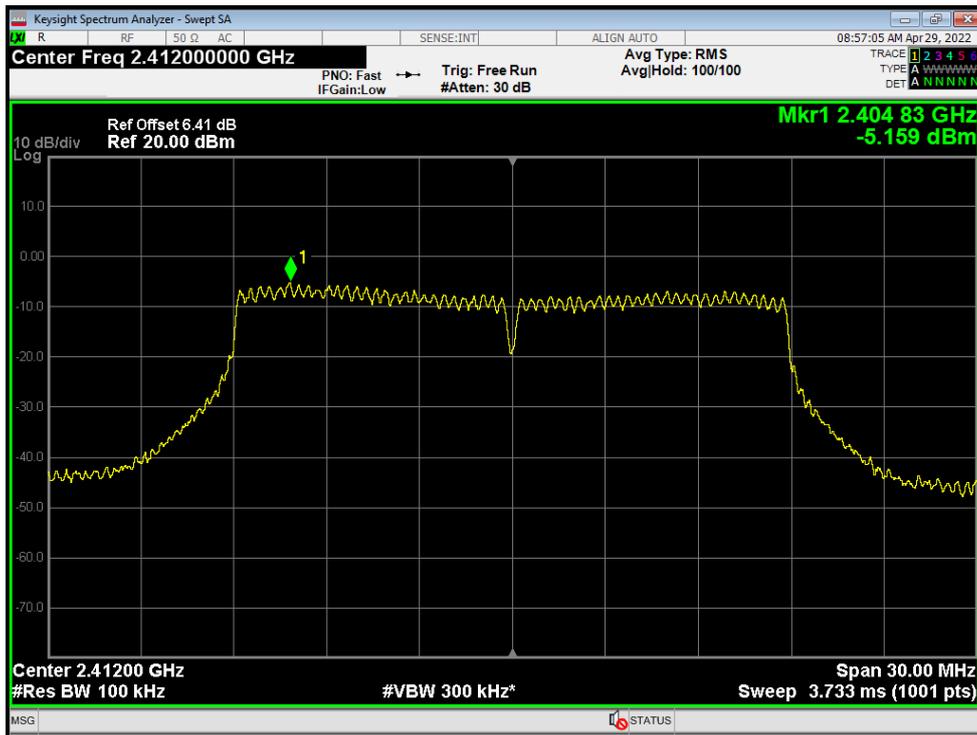
PSD NVNT g 2437MHz Ant1



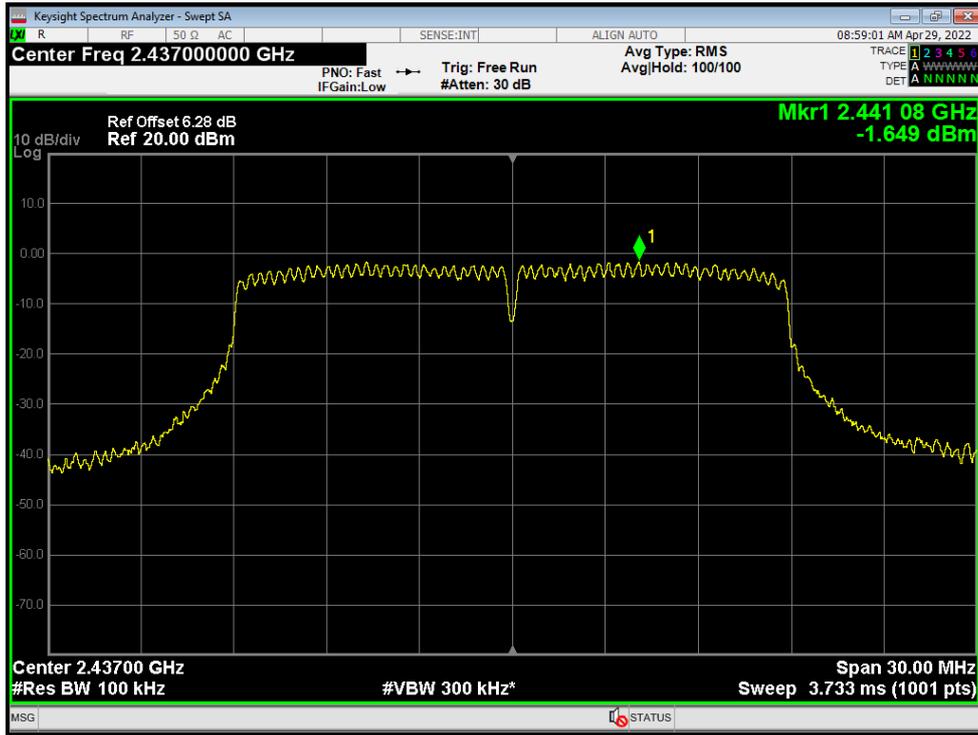
PSD NVNT g 2462MHz Ant1



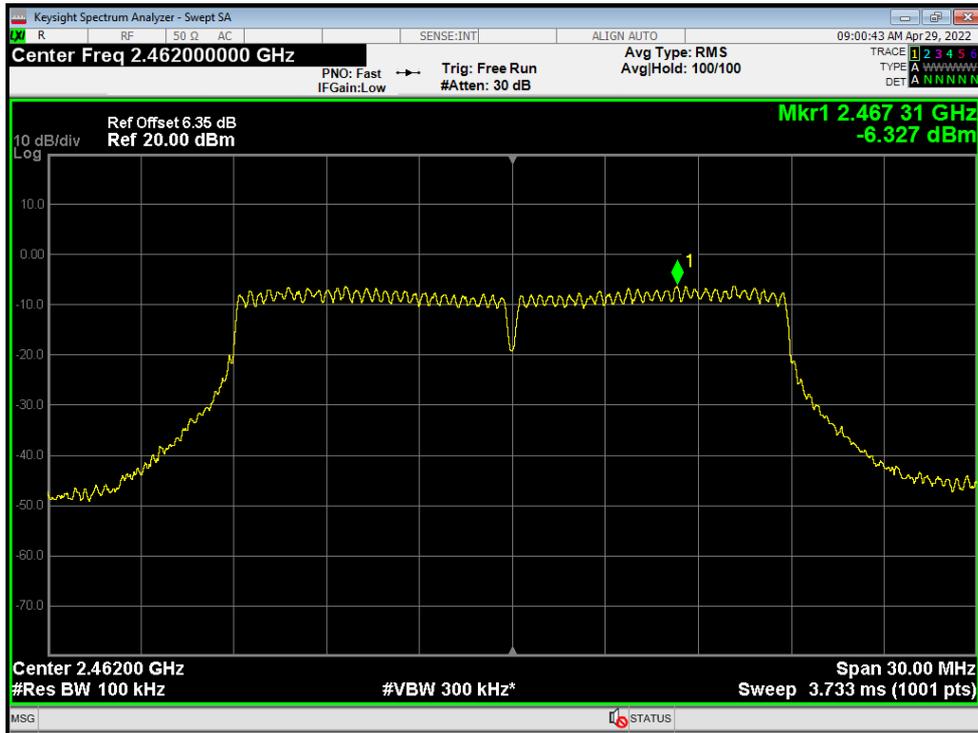
PSD NVNT n20 2412MHz Ant1



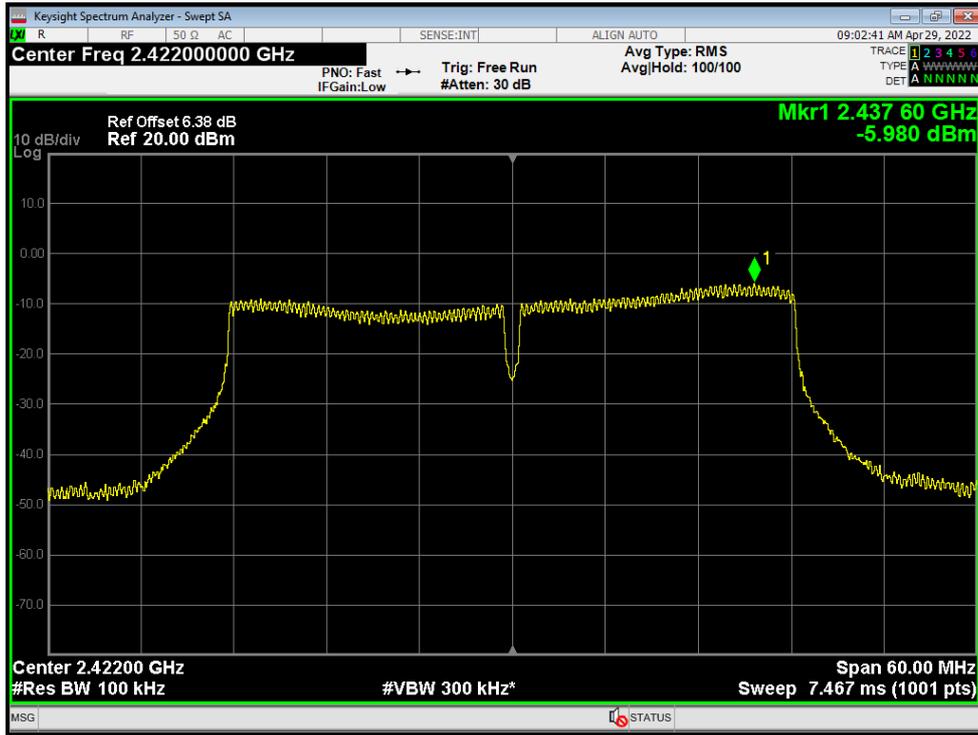
PSD NVNT n20 2437MHz Ant1



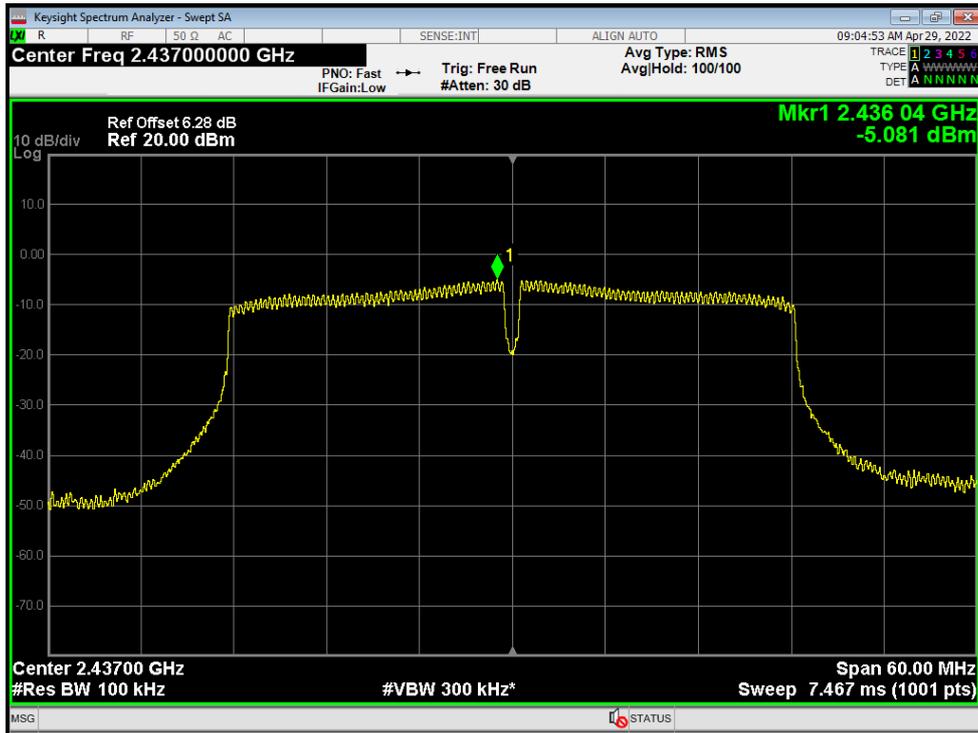
PSD NVNT n20 2462MHz Ant1



PSD NVNT n40 2422MHz Ant1



PSD NVNT n40 2437MHz Ant1



PSD NVNT n40 2452MHz Ant1



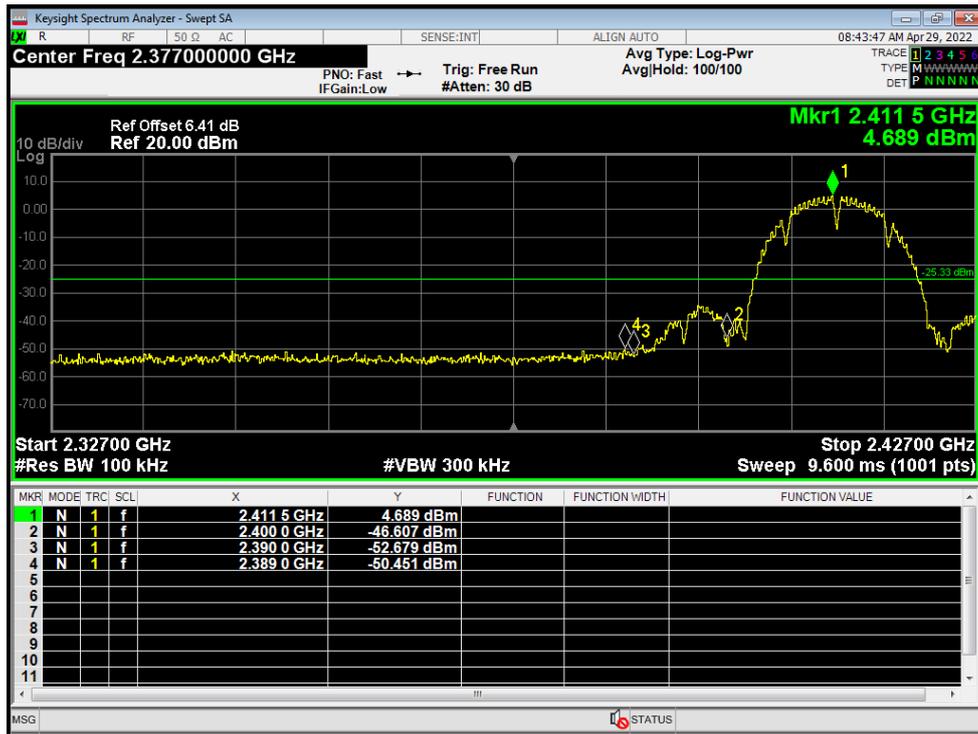
Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-55.13	-30	Pass
NVNT	b	2462	Ant1	-53.39	-30	Pass
NVNT	g	2412	Ant1	-42.4	-30	Pass
NVNT	g	2462	Ant1	-39.45	-30	Pass
NVNT	n20	2412	Ant1	-36.03	-30	Pass
NVNT	n20	2462	Ant1	-38.67	-30	Pass
NVNT	n40	2422	Ant1	-37.2	-30	Pass
NVNT	n40	2452	Ant1	-36.41	-30	Pass

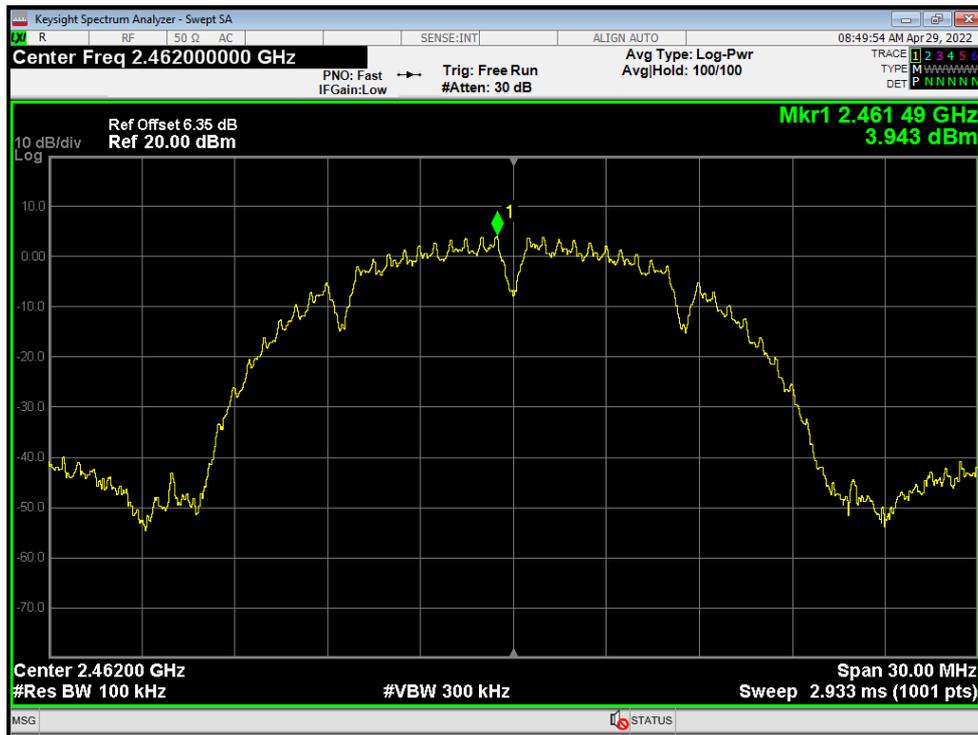
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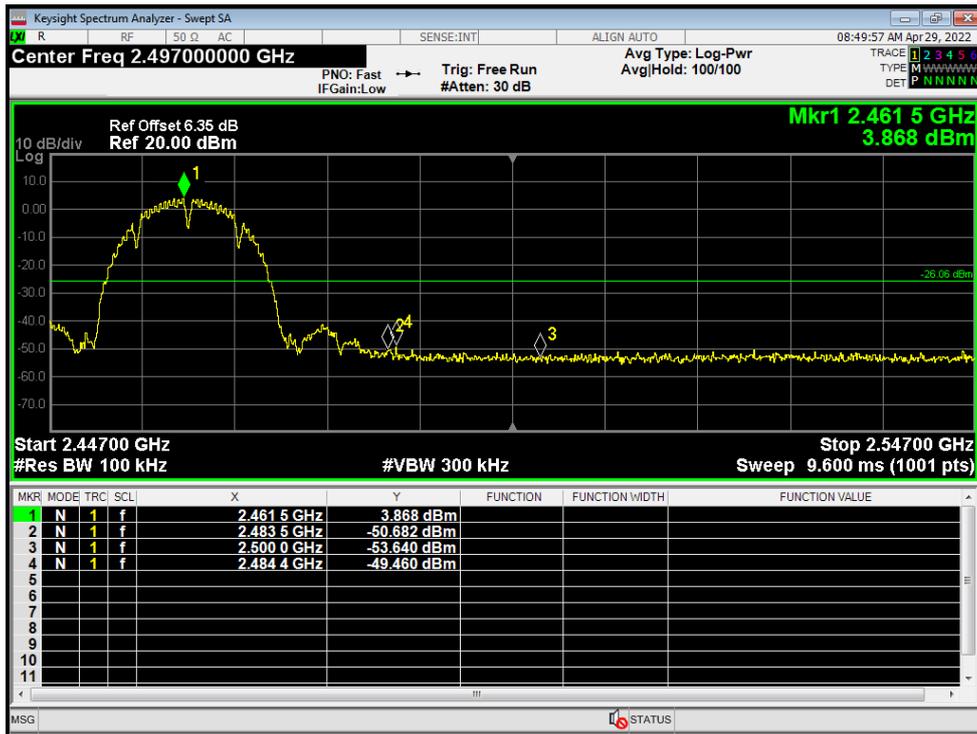
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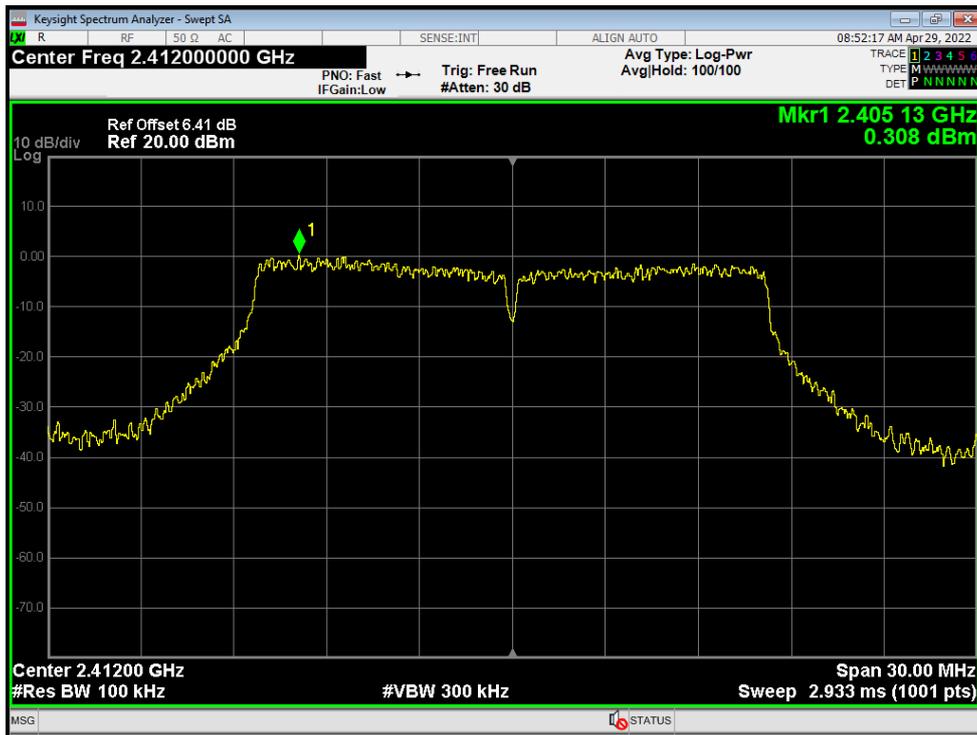
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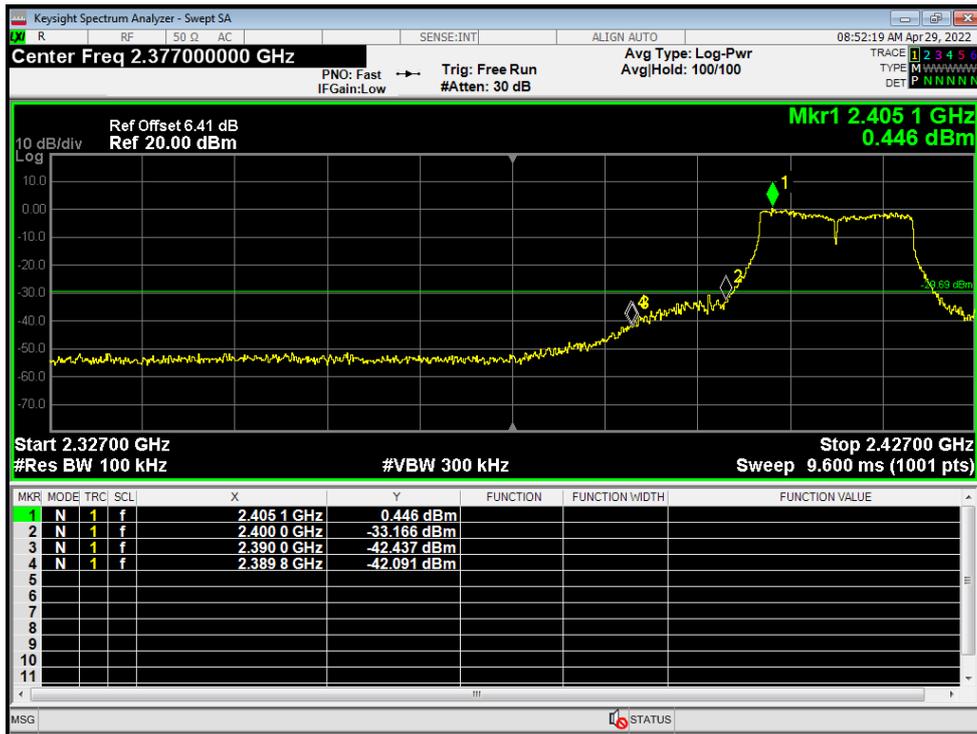
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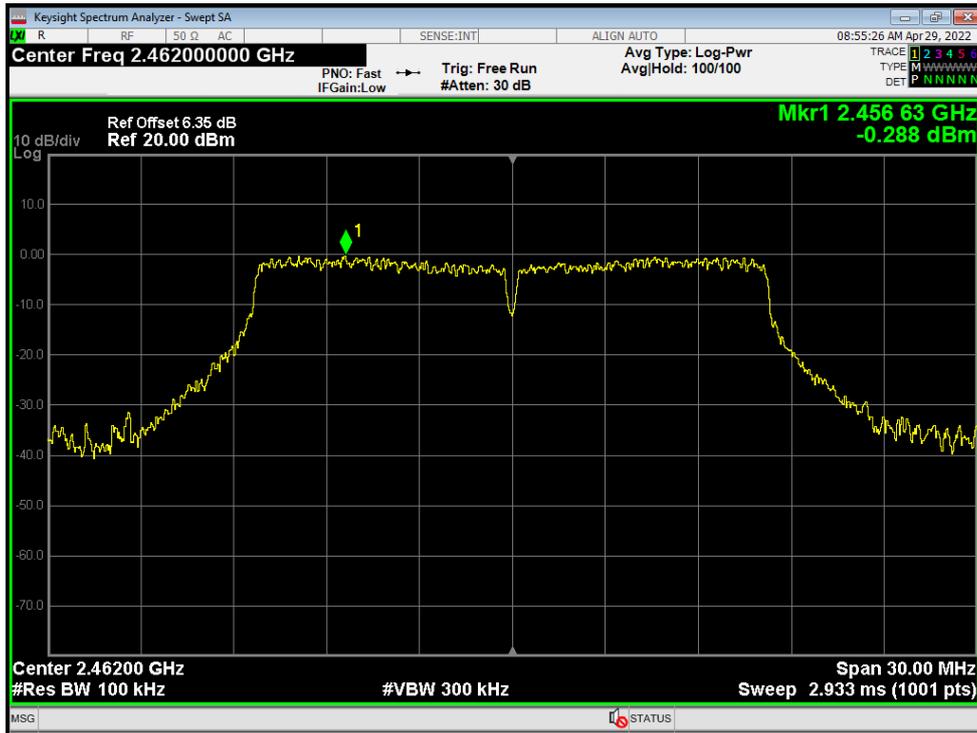
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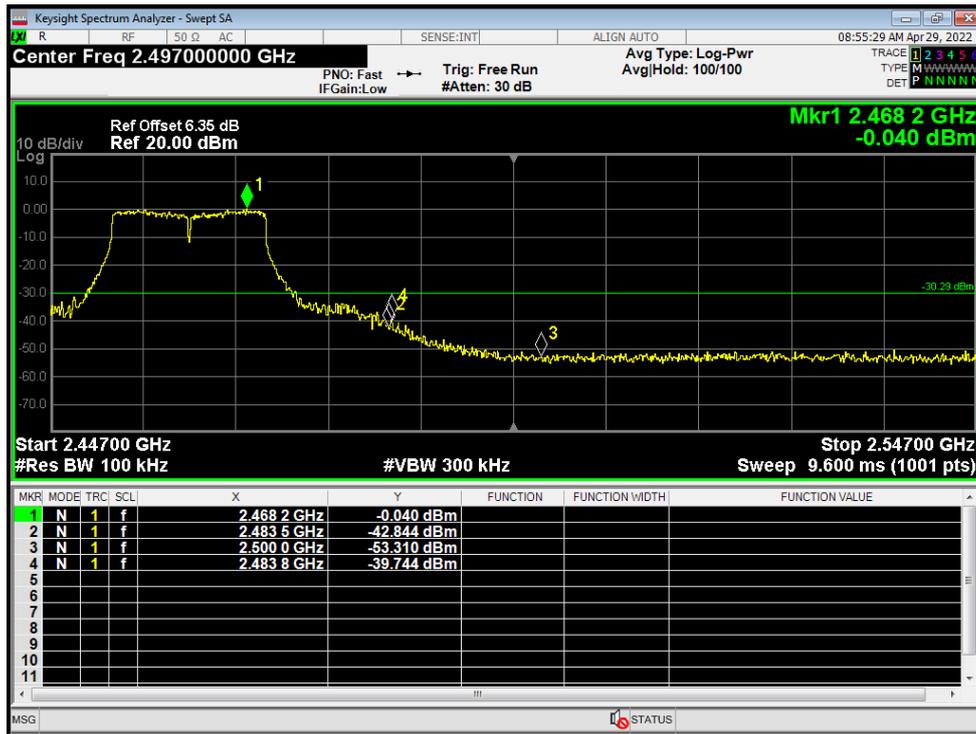
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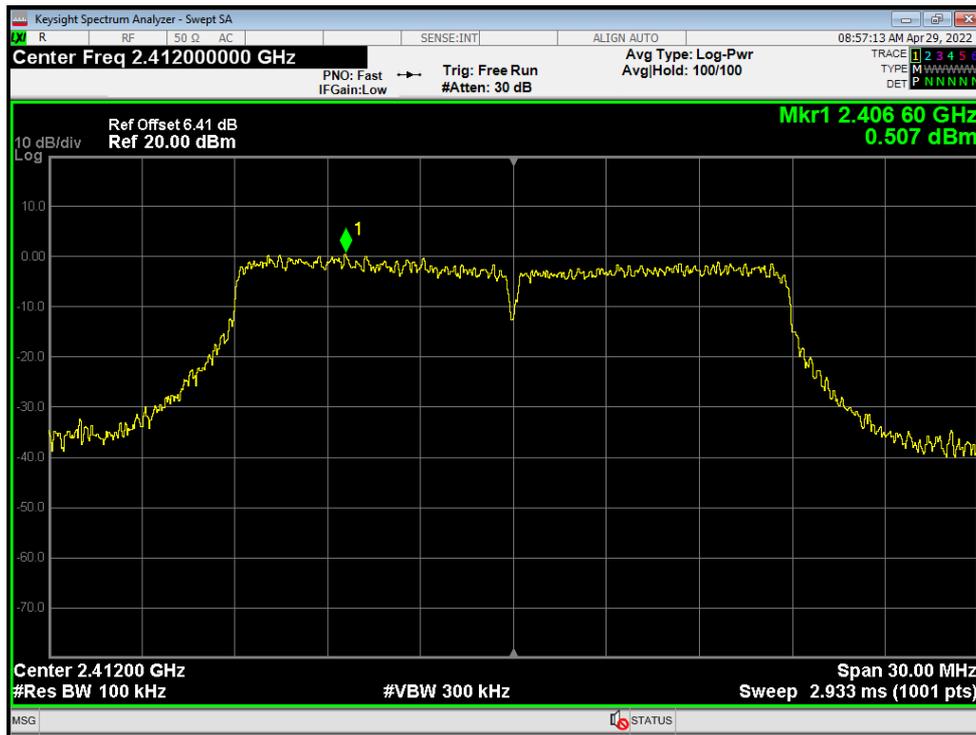
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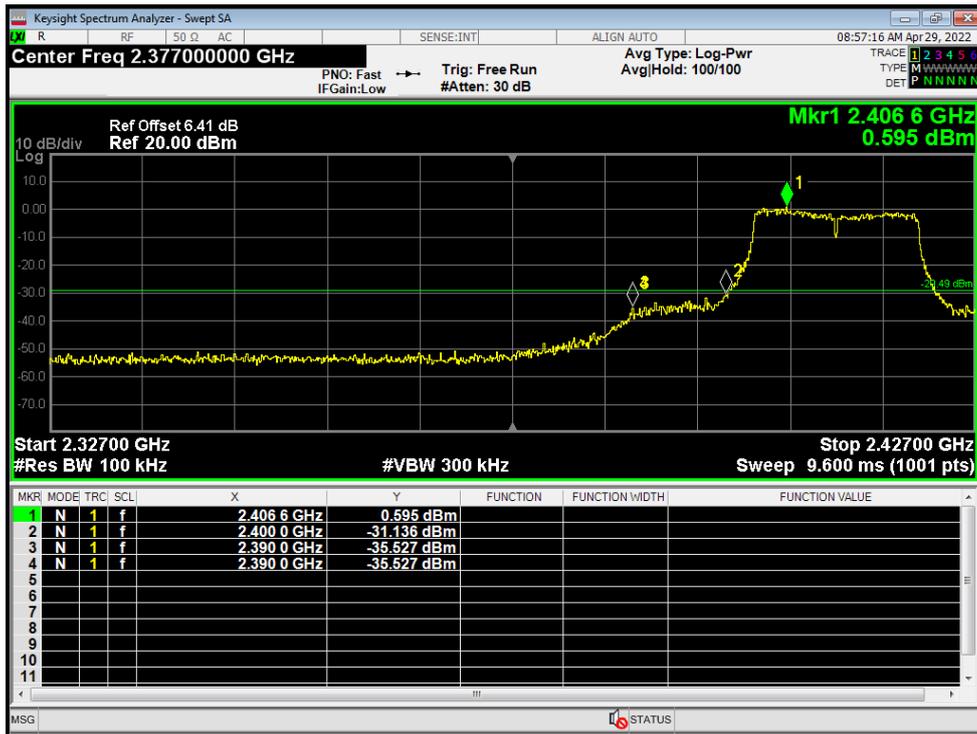
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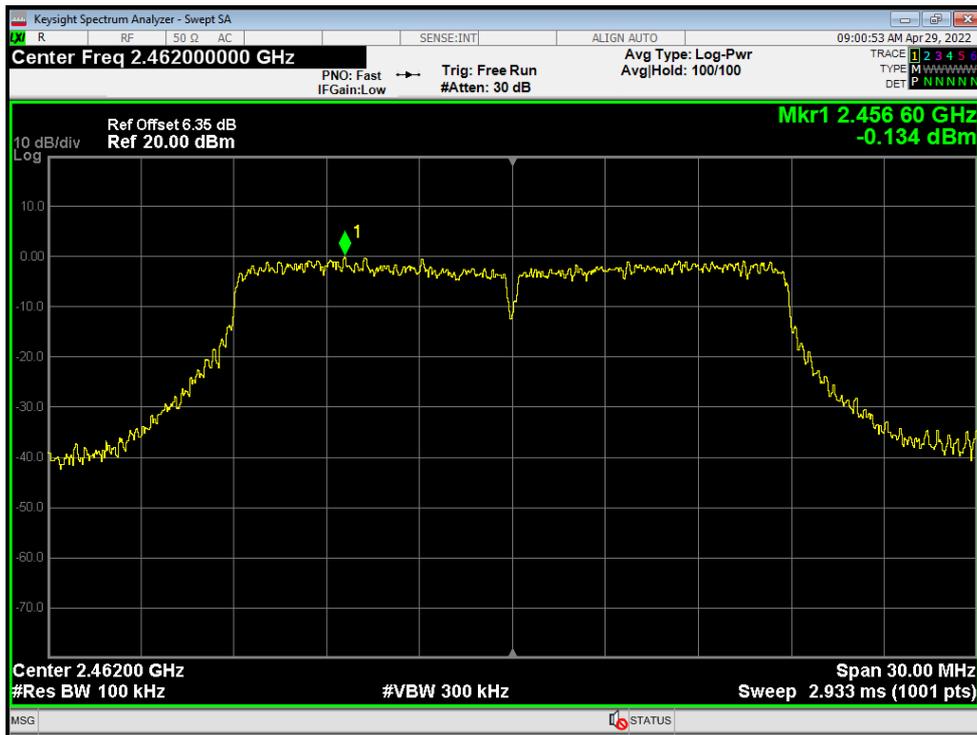
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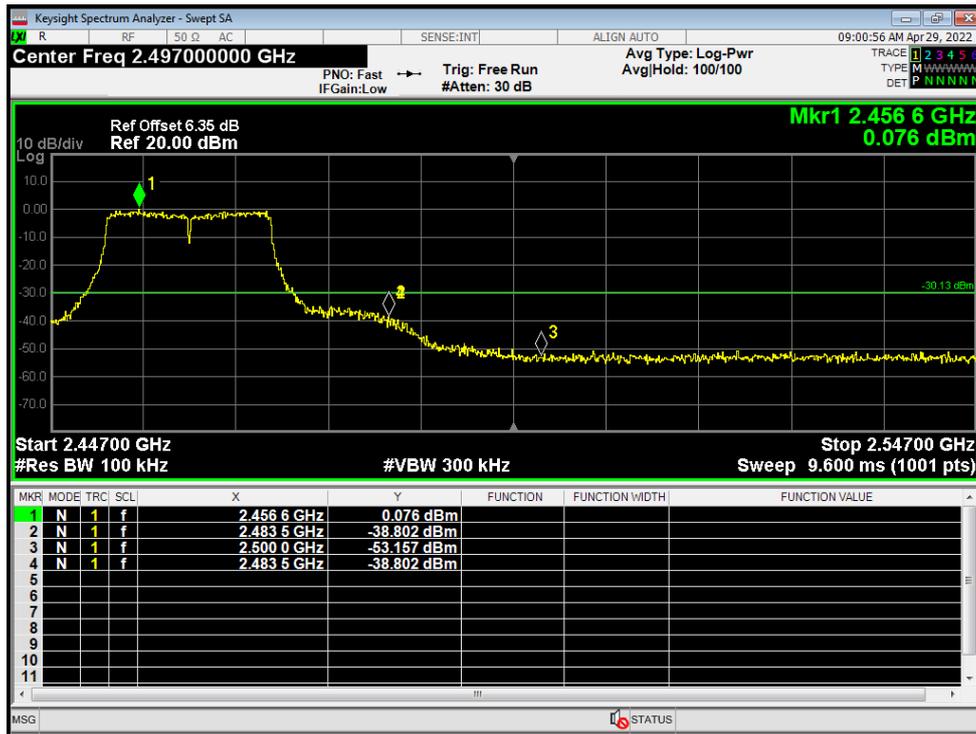
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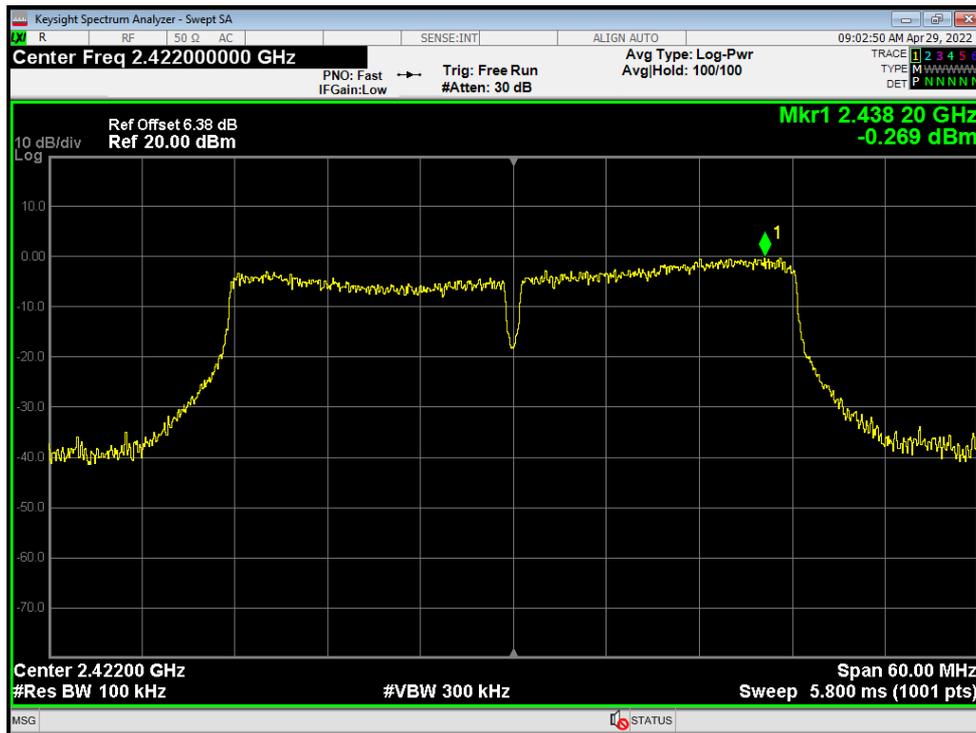
Band Edge NVNT n20 2462MHz Ant1 Ref



Band Edge NVNT n20 2462MHz Ant1 Emission



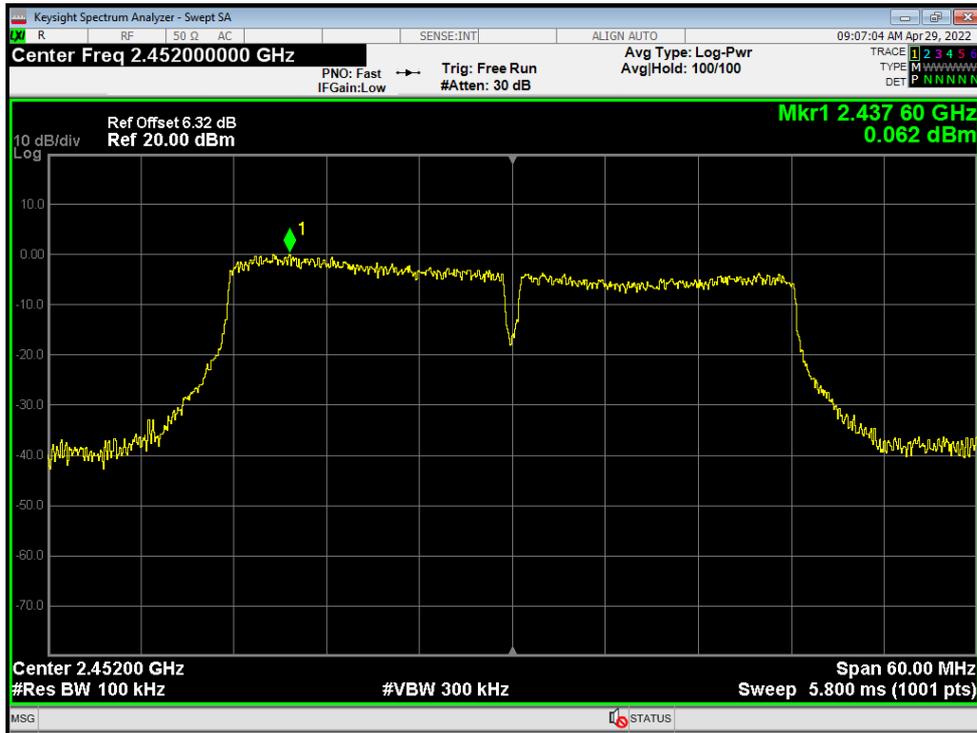
Band Edge NVNT n40 2422MHz Ant1 Ref



Band Edge NVNT n40 2422MHz Ant1 Emission



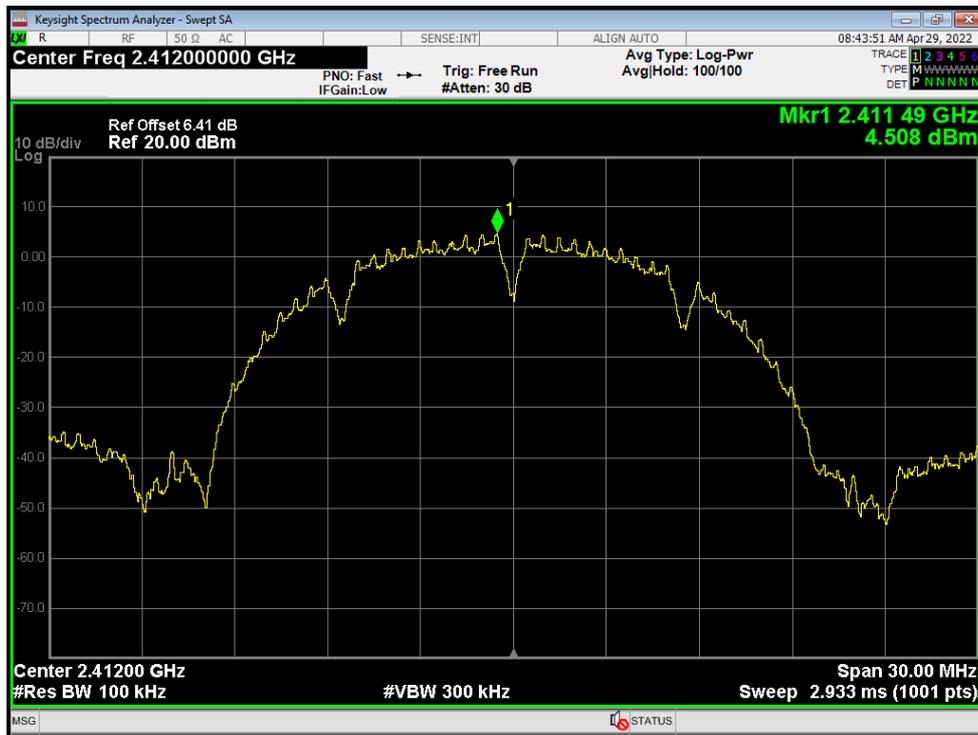
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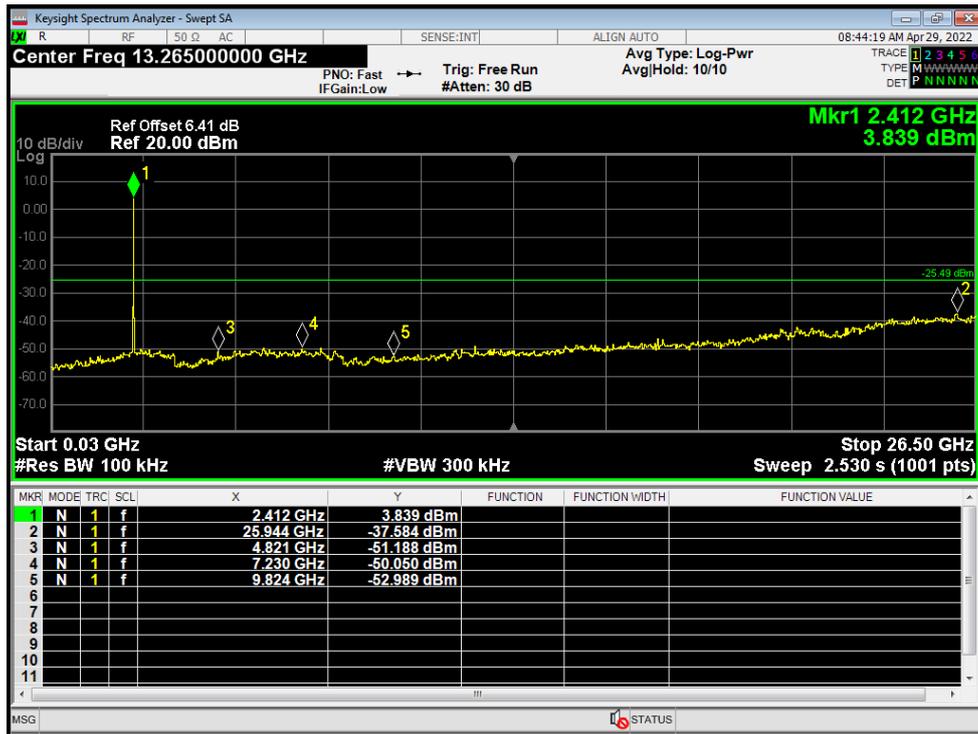
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-42.09	-30	Pass
NVNT	b	2437	Ant1	-46.21	-30	Pass
NVNT	b	2462	Ant1	-40.85	-30	Pass
NVNT	g	2412	Ant1	-37.68	-30	Pass
NVNT	g	2437	Ant1	-41.2	-30	Pass
NVNT	g	2462	Ant1	-36.16	-30	Pass
NVNT	n20	2412	Ant1	-37.98	-30	Pass
NVNT	n20	2437	Ant1	-41.33	-30	Pass
NVNT	n20	2462	Ant1	-37.22	-30	Pass
NVNT	n40	2422	Ant1	-37.27	-30	Pass
NVNT	n40	2437	Ant1	-38.12	-30	Pass
NVNT	n40	2452	Ant1	-36.74	-30	Pass

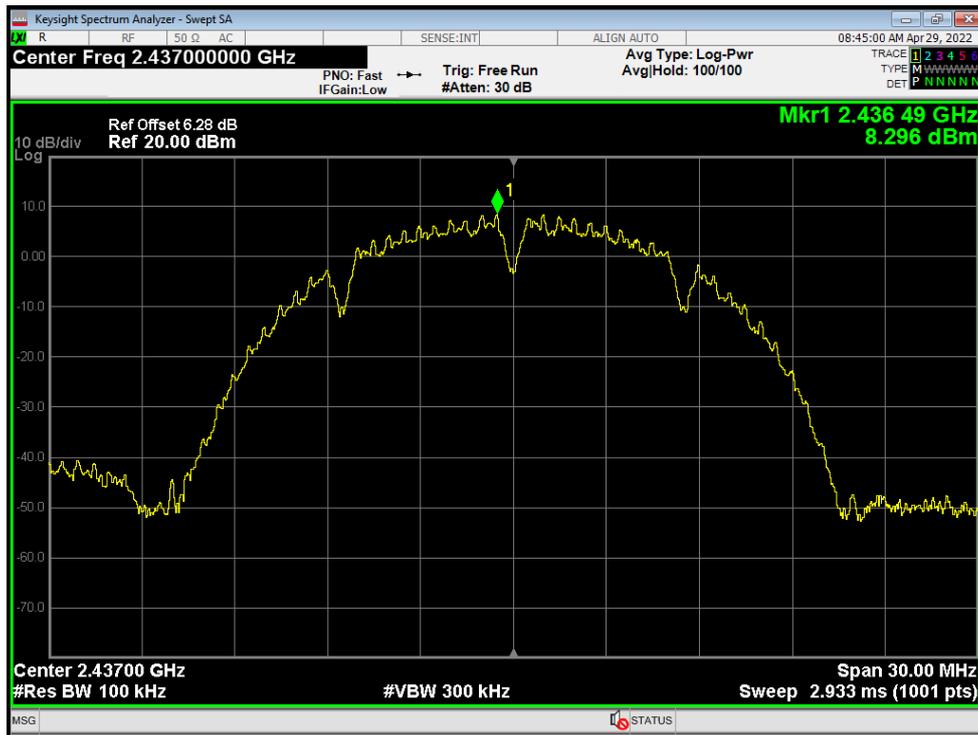
Tx. Spurious NVNT b 2412MHz Ant1 Ref



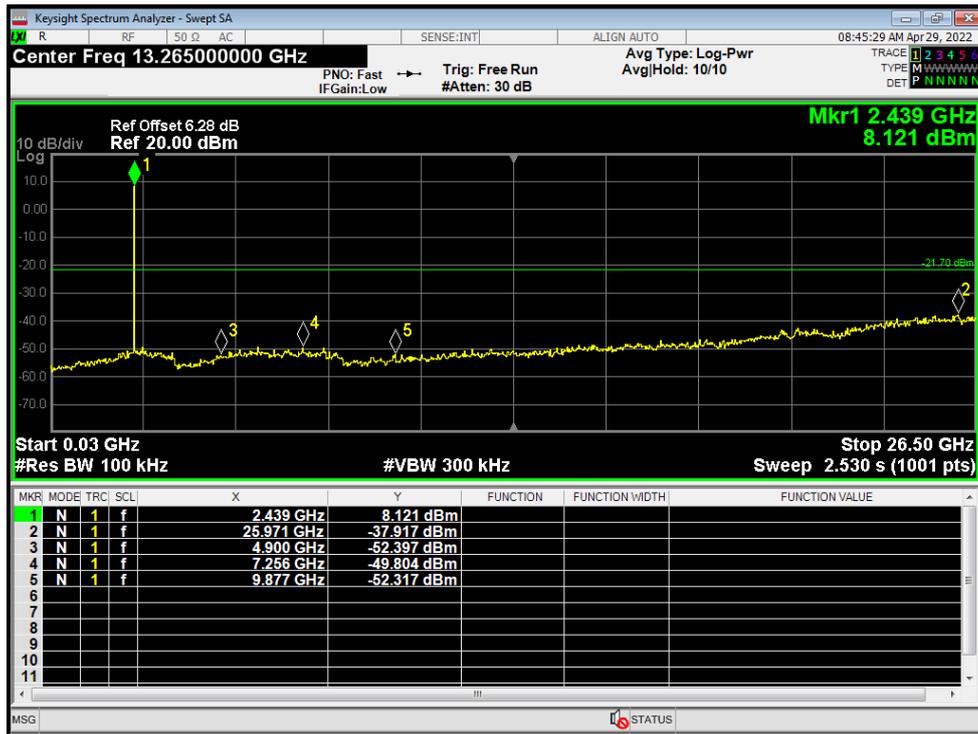
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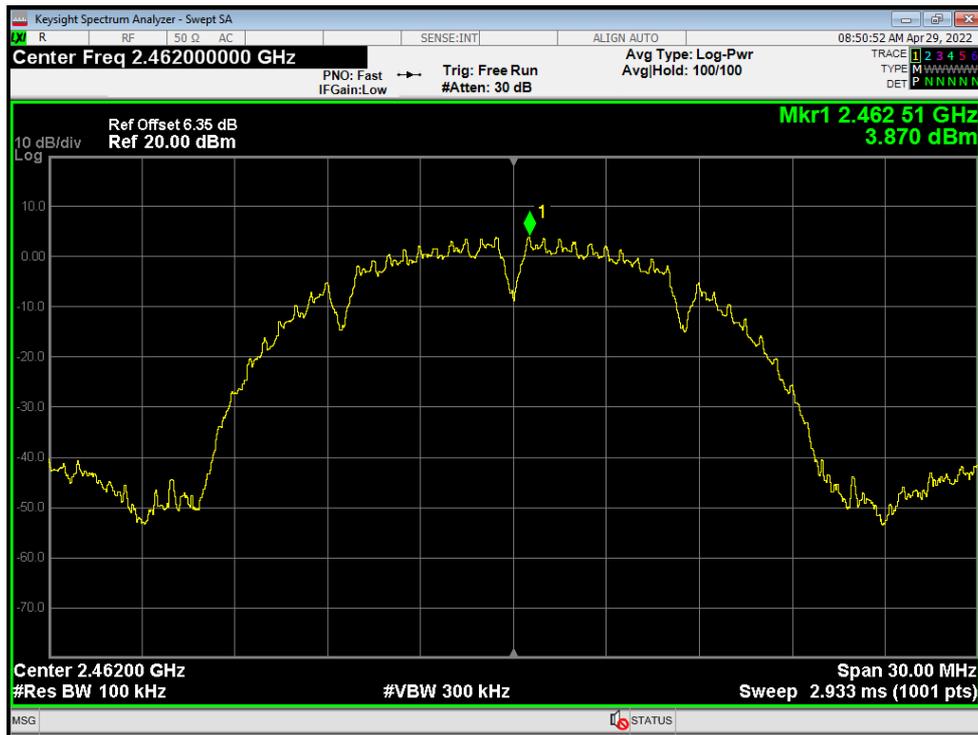
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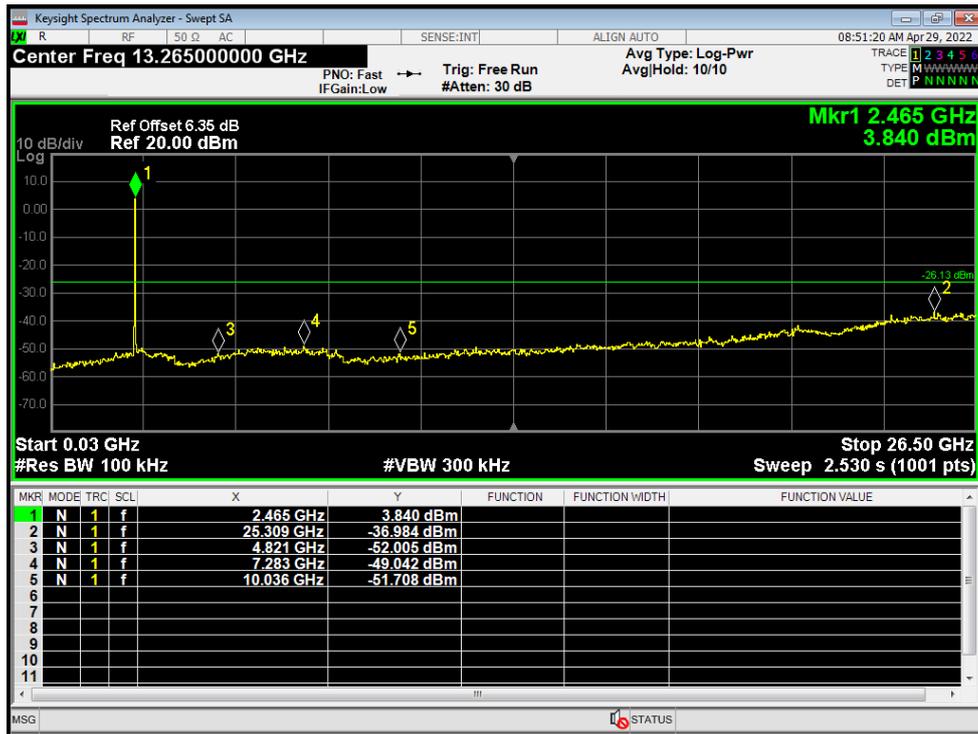
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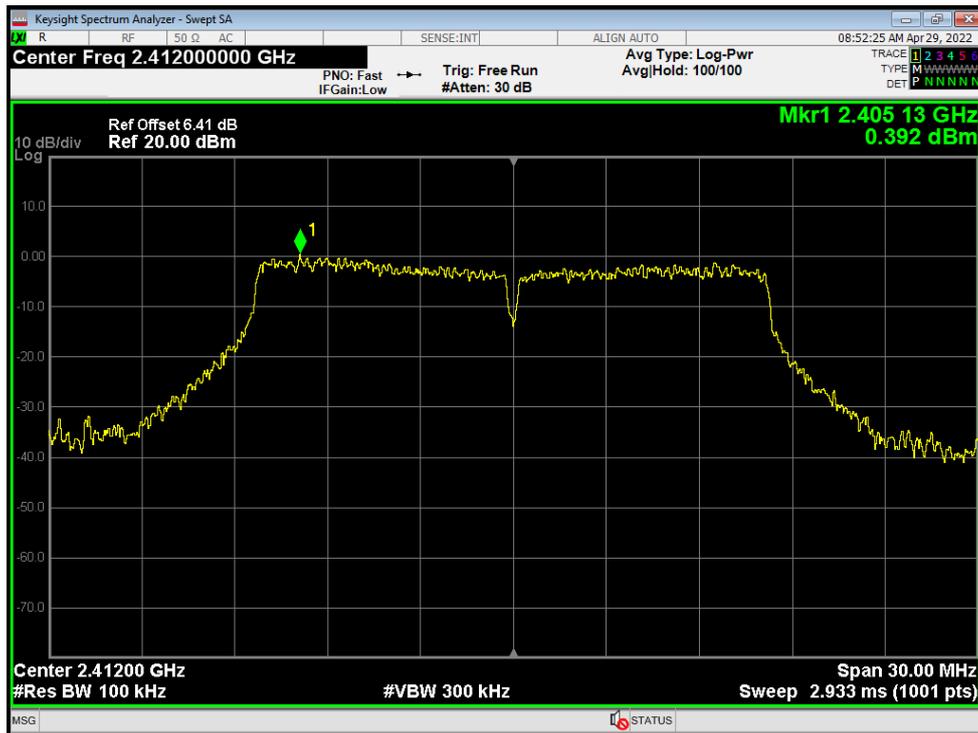
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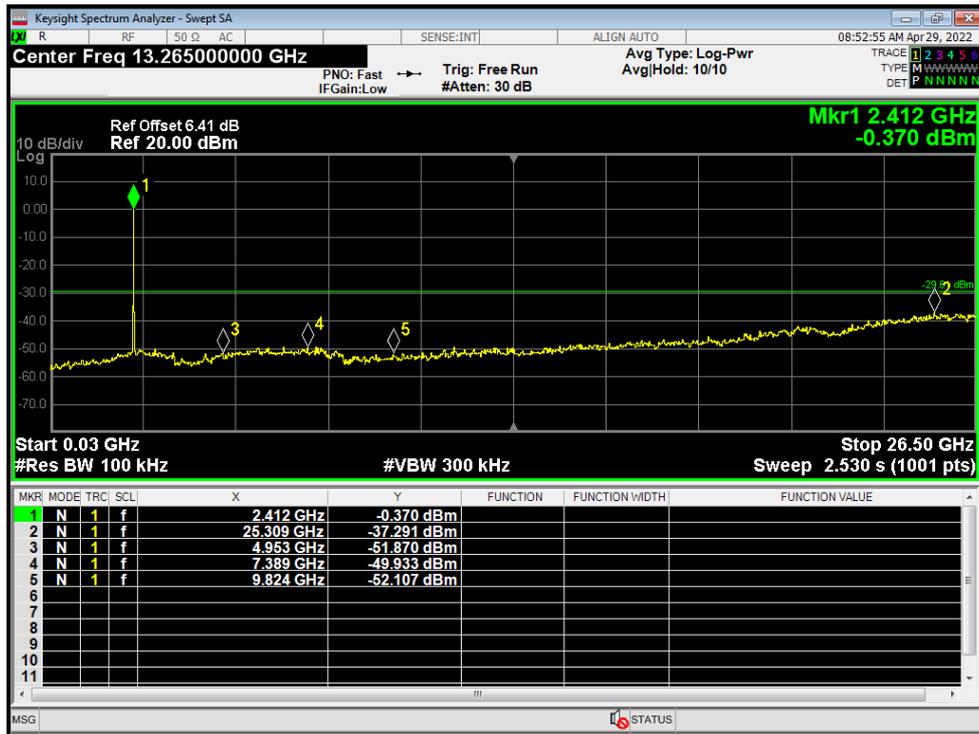
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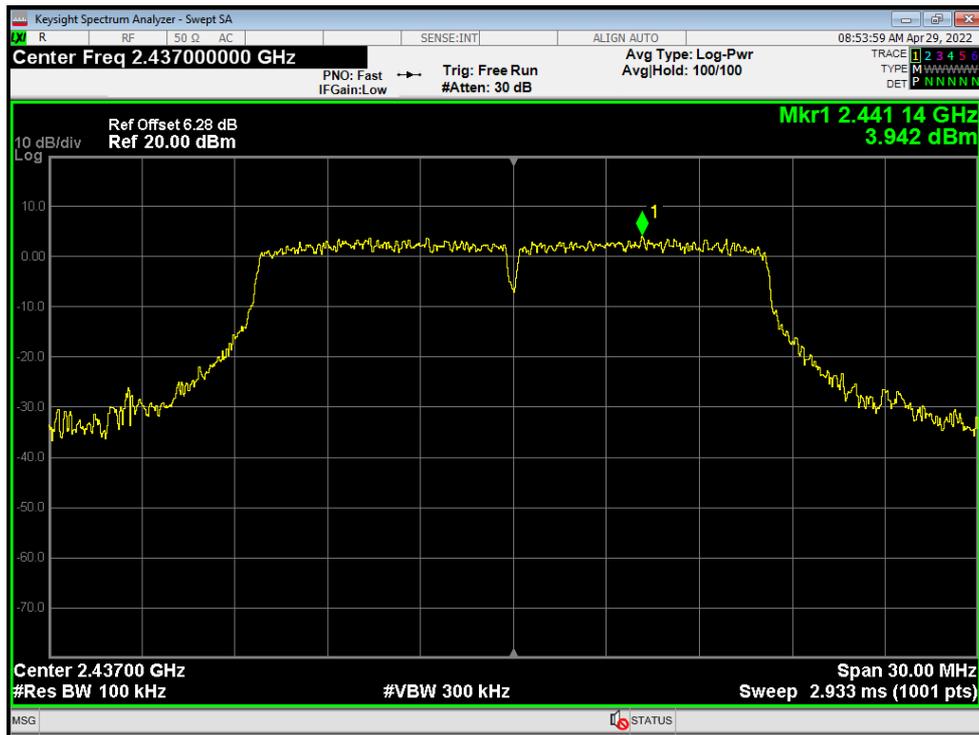
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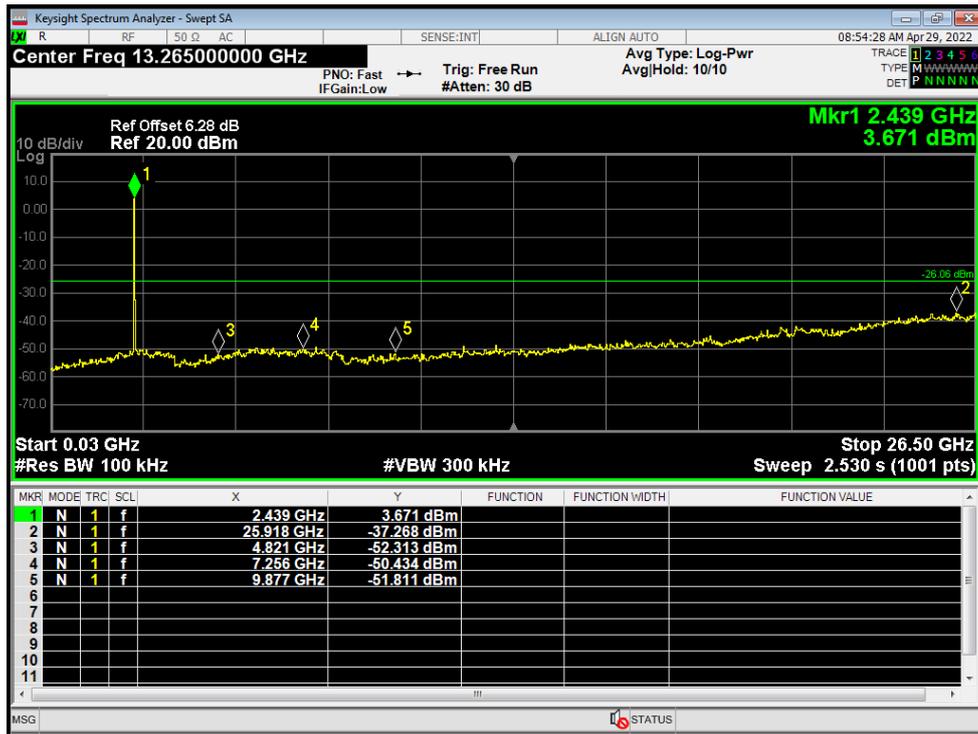
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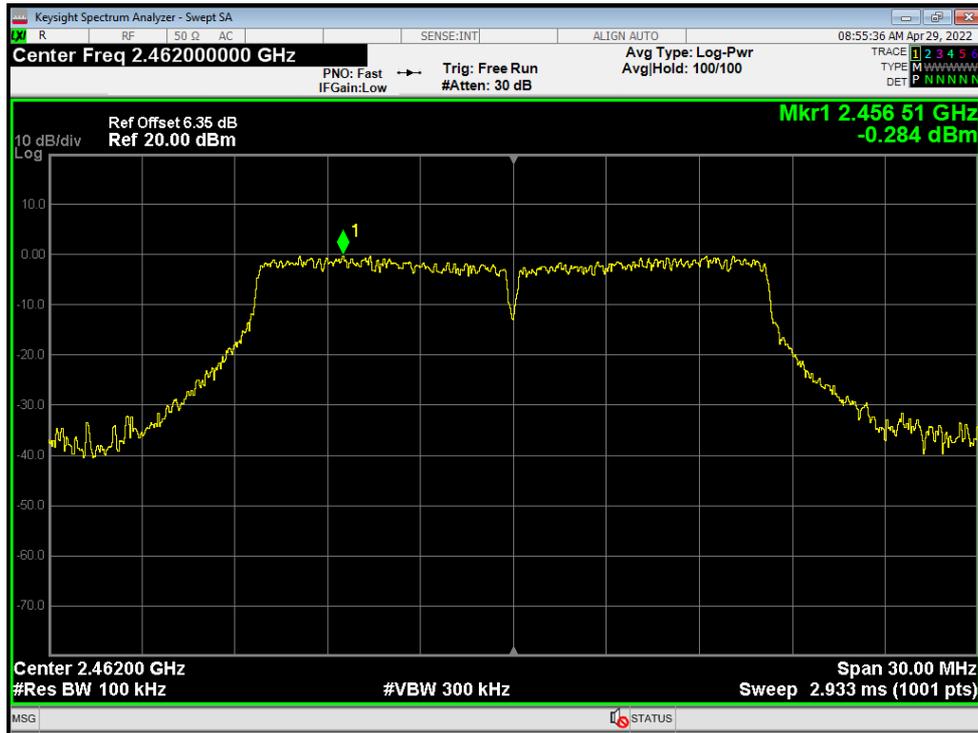
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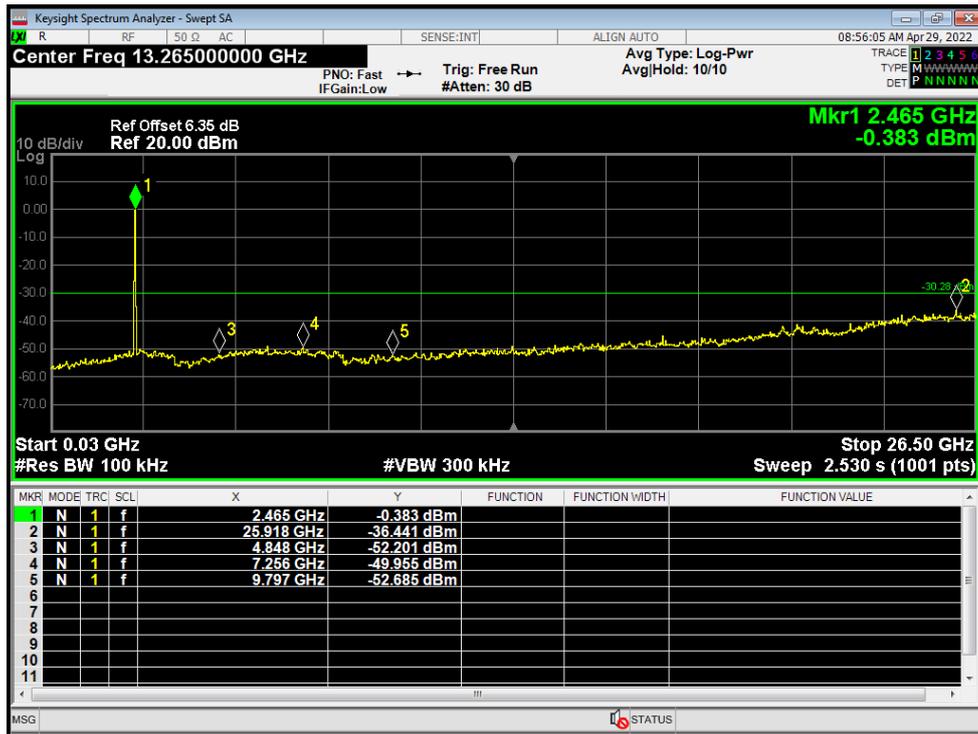
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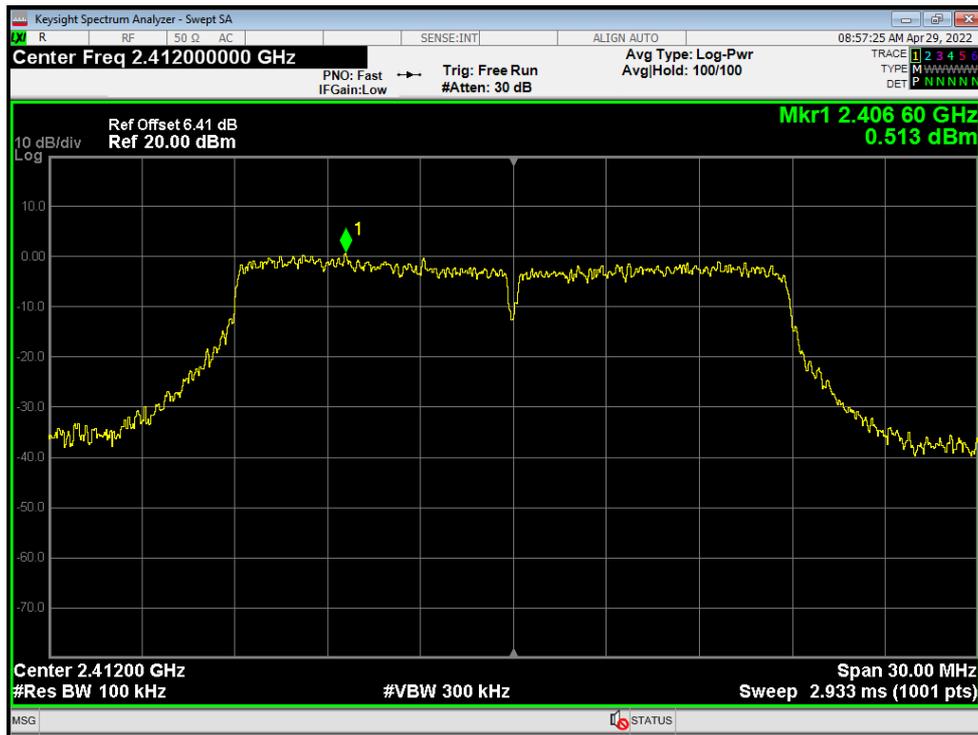
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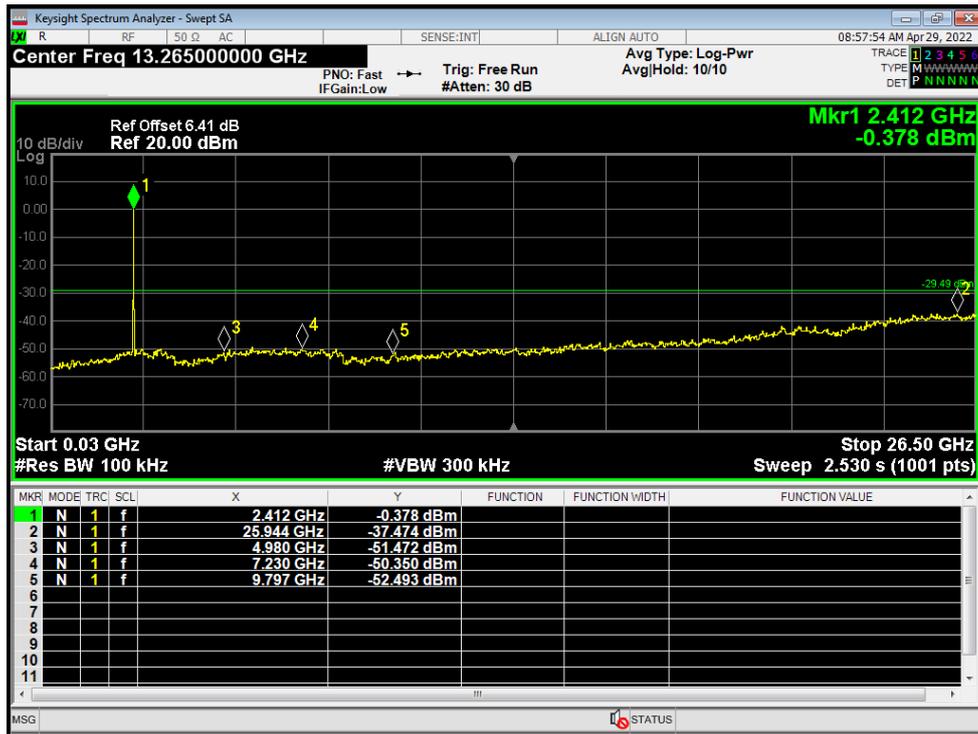
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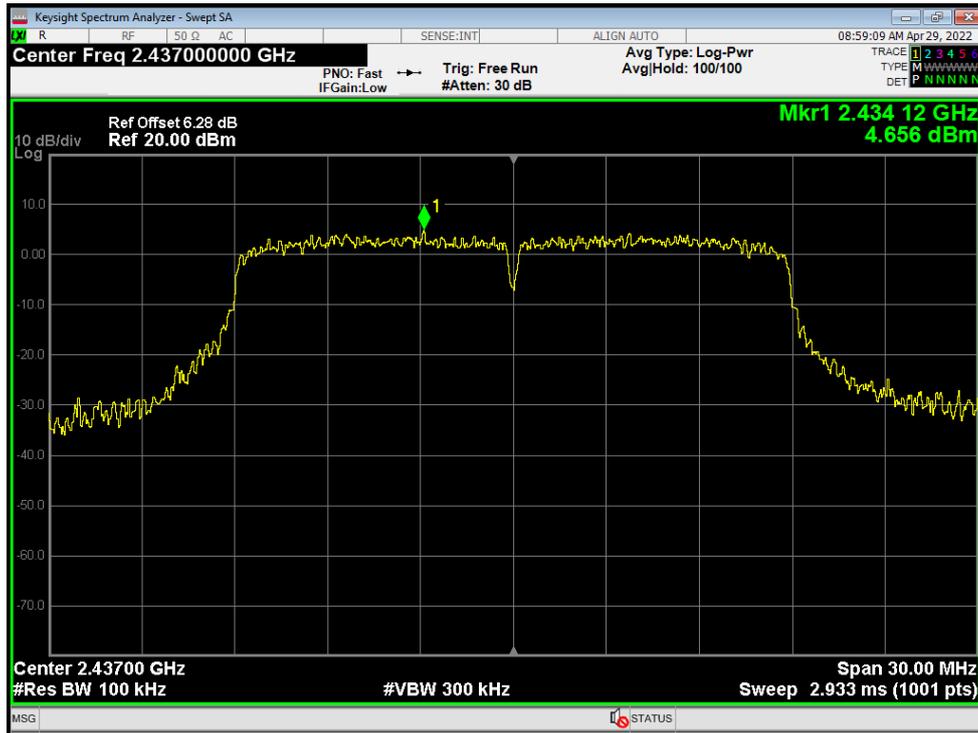
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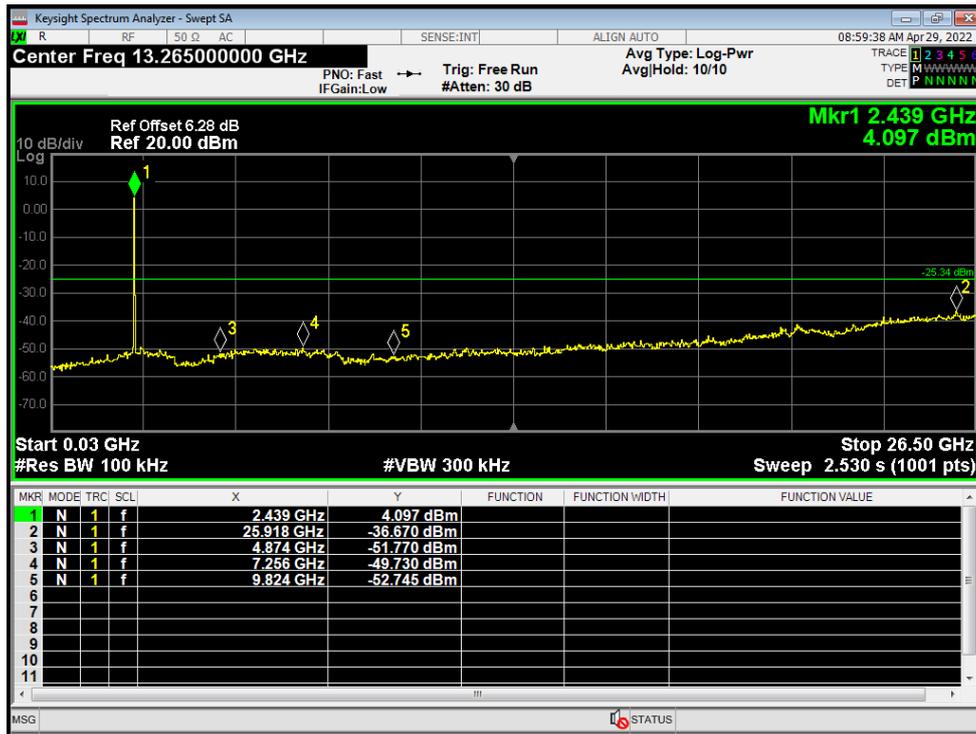
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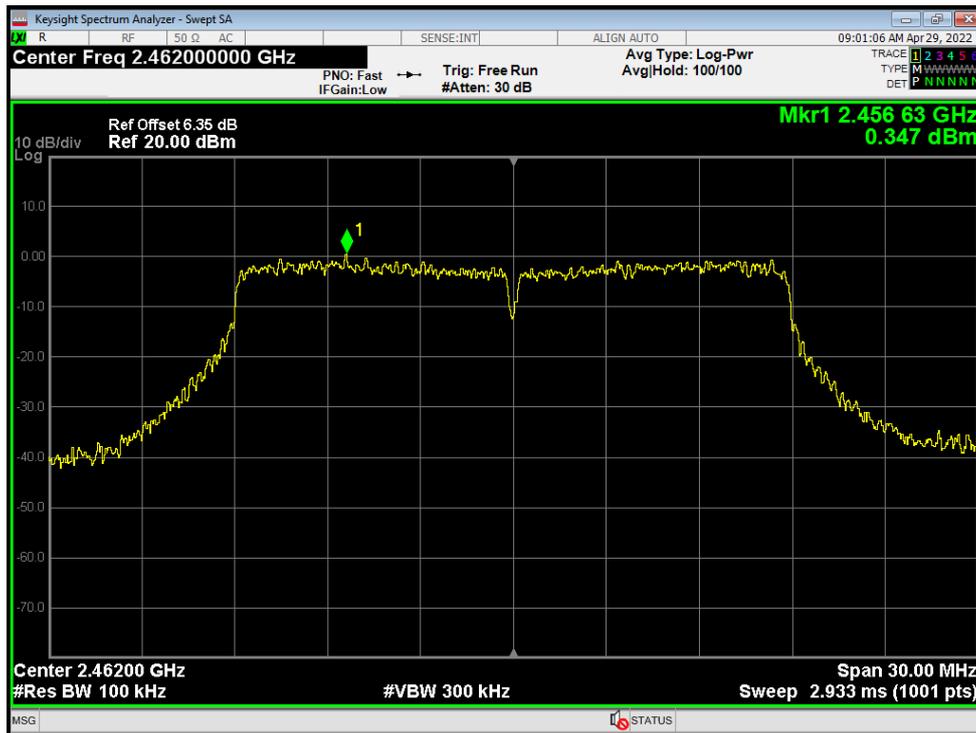
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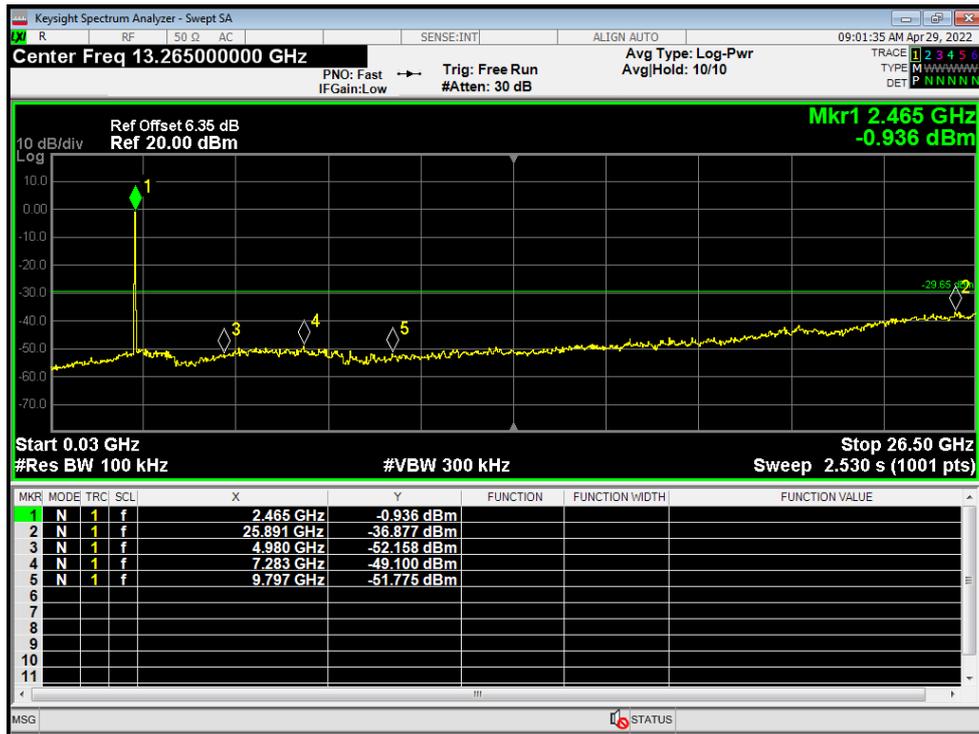
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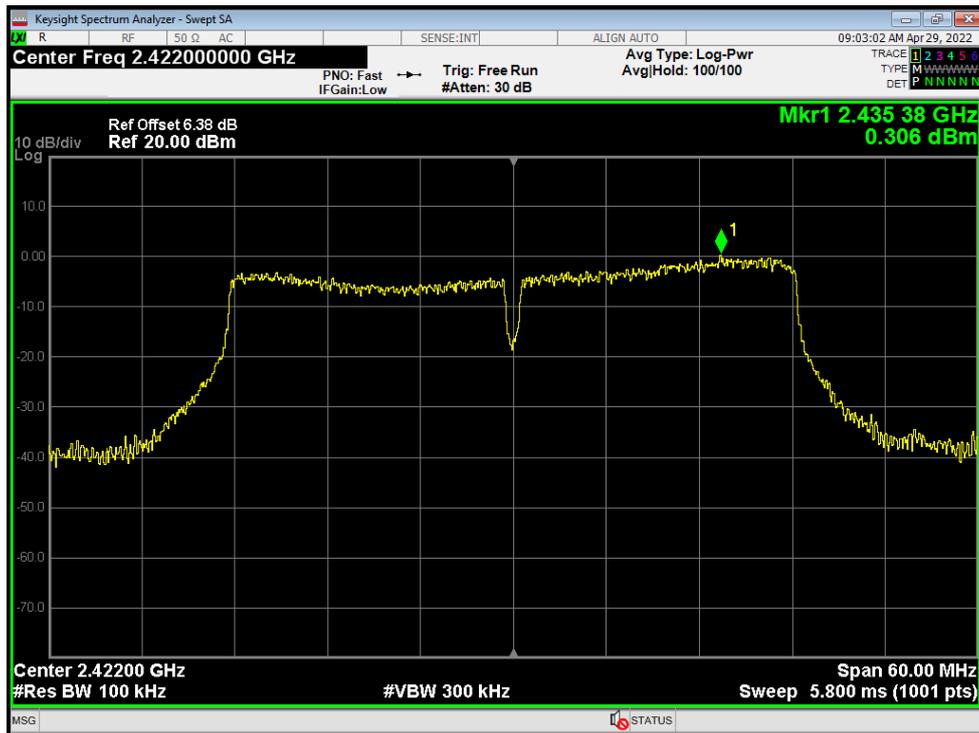
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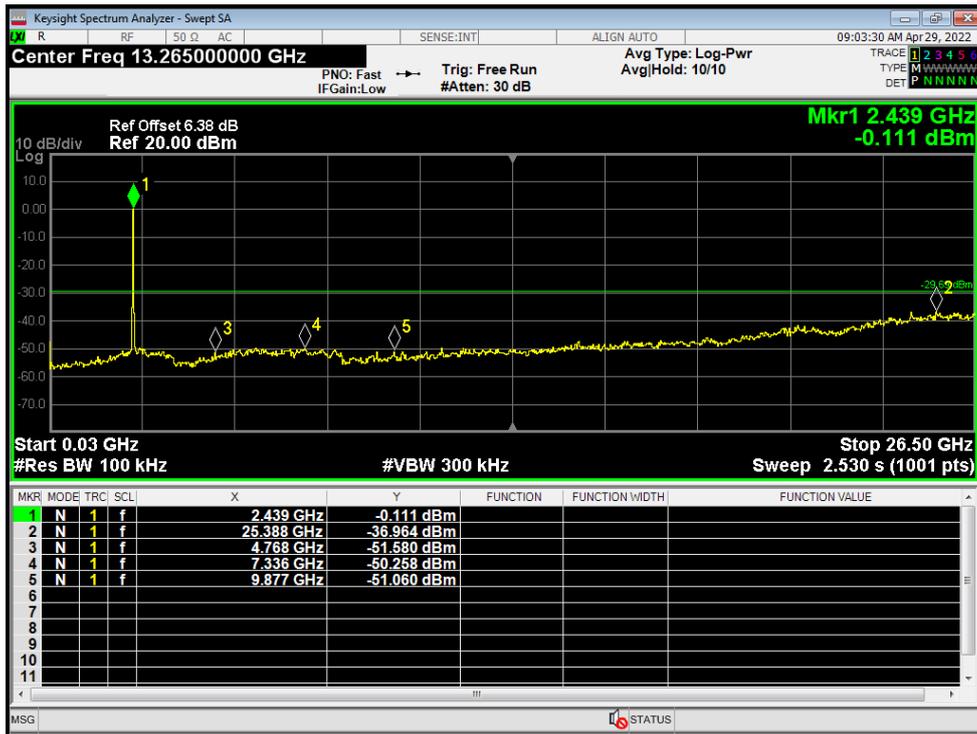
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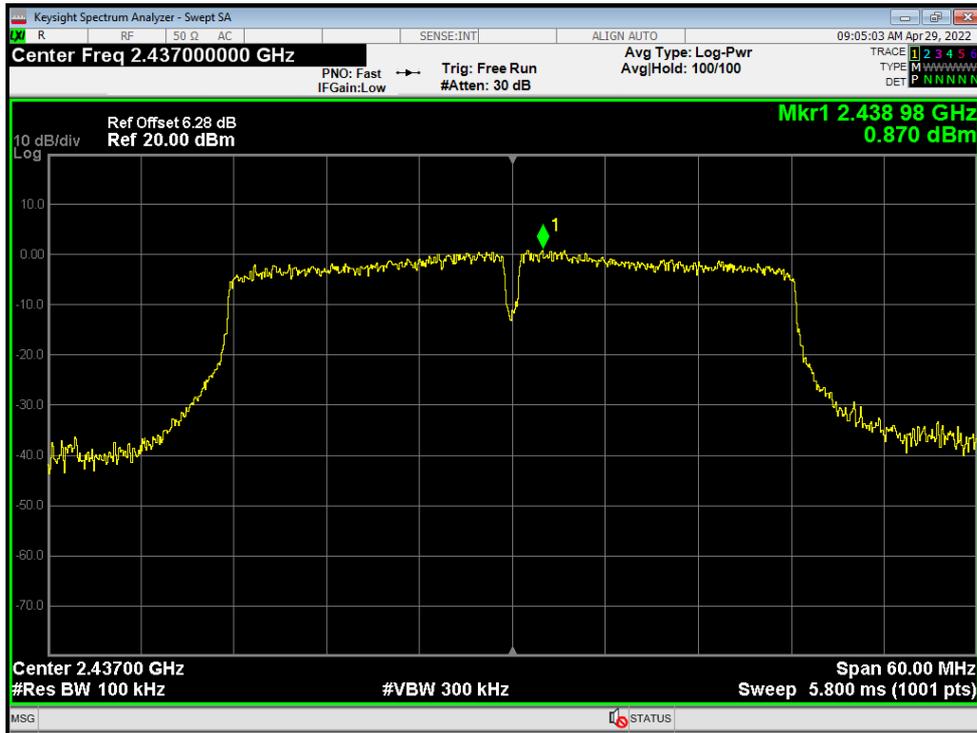
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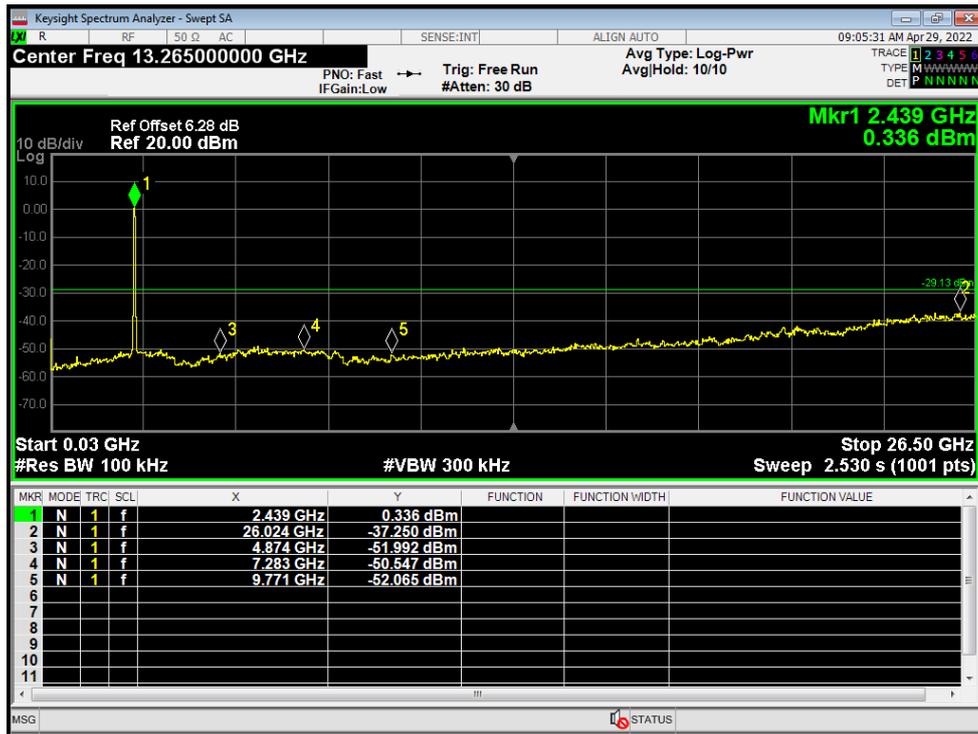
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Tx. Spurious NVNT n40 2437MHz Ant1 Ref



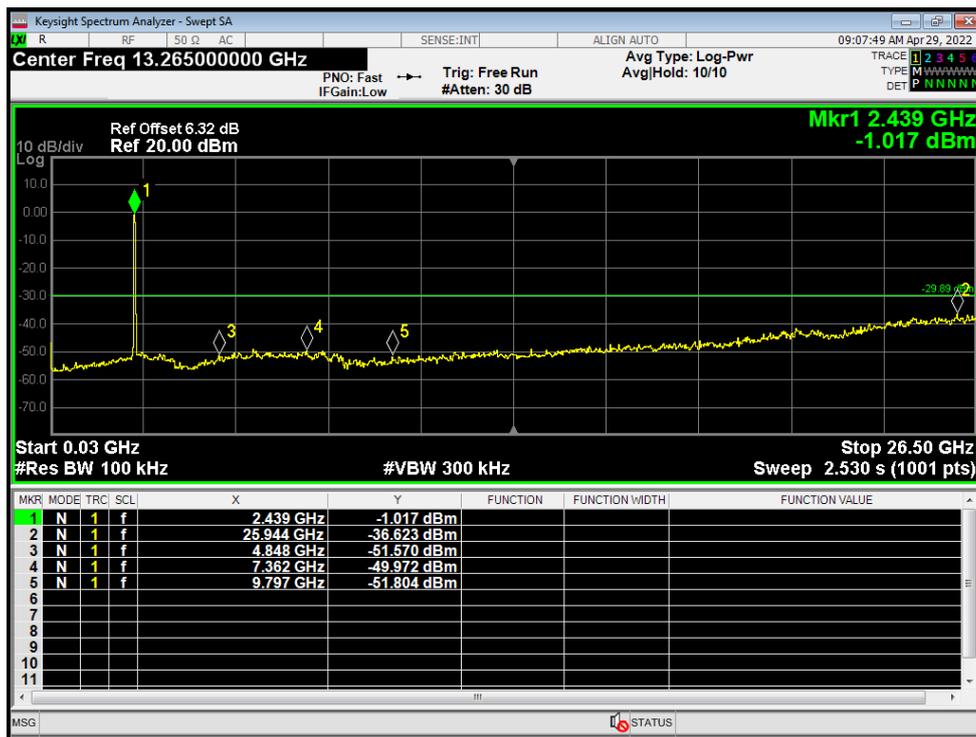
Tx. Spurious NVNT n40 2437MHz Ant1 Emission



Tx. Spurious NVNT n40 2452MHz Ant1 Ref



Tx. Spurious NVNT n40 2452MHz Ant1 Emission



***** END OF REPORT *****