

FCC Test Report

ANNEX 1 2.4GWIFI

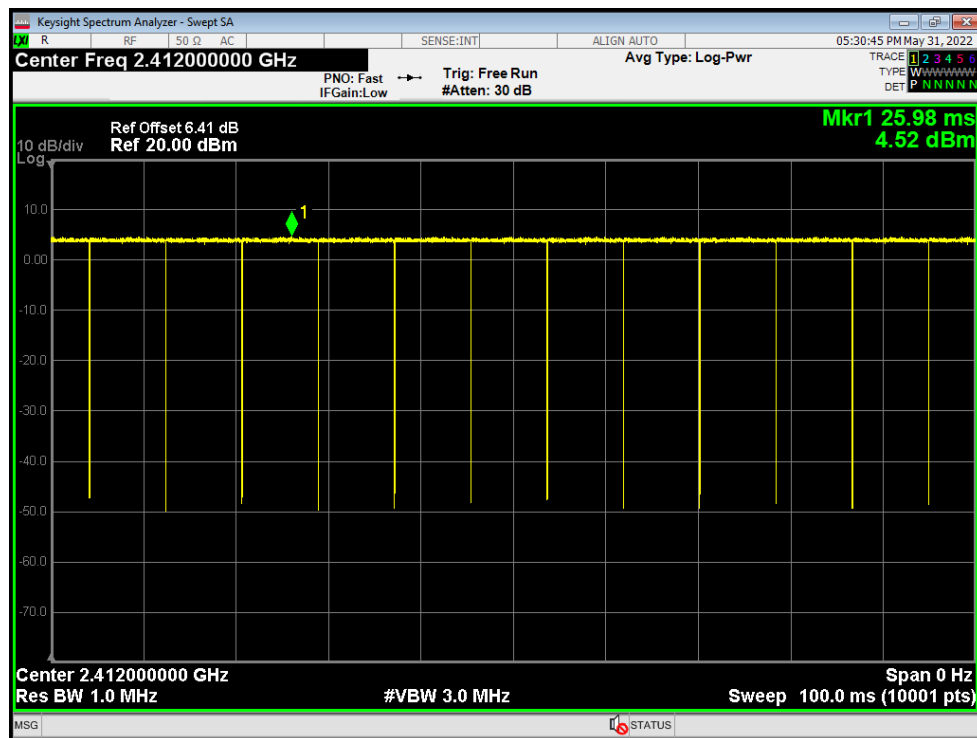
FCC ID: 2A67Q-S800

Applicant:	Shenzhen Zestnation Technology Co.,Ltd.
Address:	02,2/F West Blk.,Laobing Hengfang Industrial Park,Xingye Rd., Laodong Community, Xixiang, Bao'an Dist., Shenzhen, China
Manufacturer:	Shenzhen Zestnation Technology Co.,Ltd.
Address:	02,2/F West Blk., Laobing Hengfang Industrial Park, Xingye Rd., Laodong Community, Xixiang, Bao'an Dist., Shenzhen, China
EUT:	4K Dash Cam
Trade Mark:	N/A
Model Number:	S800, DC005, DC006, DC007, DC008, DC009
Date of Receipt:	May. 25, 2022
Test Date:	May. 25, 2022 – May. 31, 2022
Date of Report:	May. 31, 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

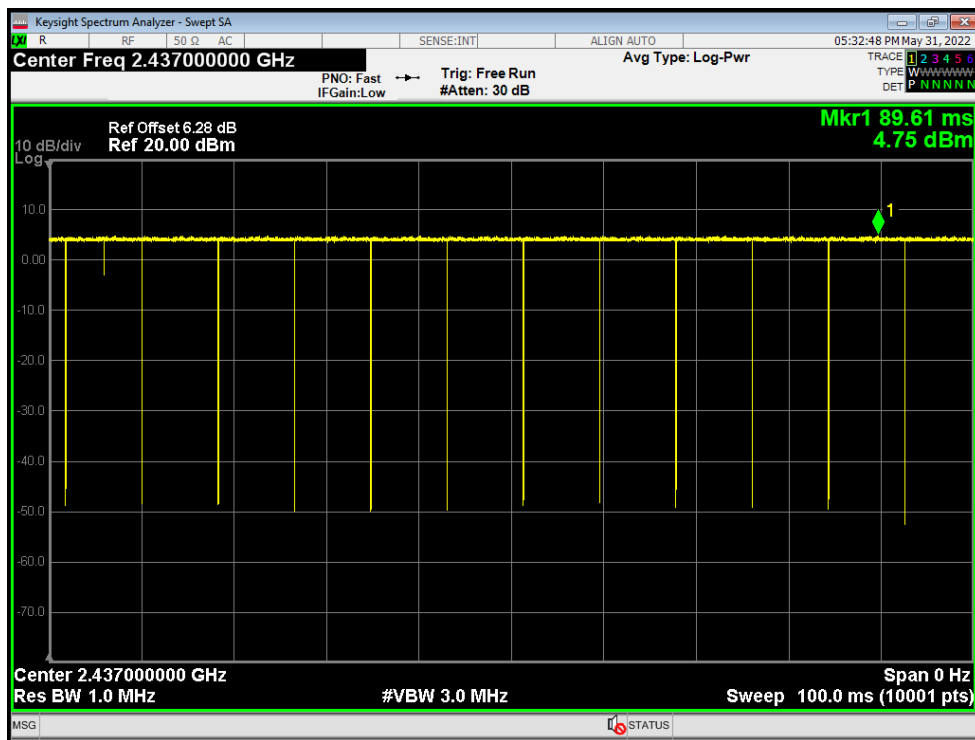
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)
NVNT	b	2412	Ant1	99.49	0.02
NVNT	b	2437	Ant1	99.5	0.02
NVNT	b	2462	Ant1	99.5	0.02
NVNT	g	2412	Ant1	97.07	0.13
NVNT	g	2437	Ant1	97.07	0.13
NVNT	g	2462	Ant1	97.07	0.13
NVNT	n20	2412	Ant1	96.96	0.13
NVNT	n20	2437	Ant1	96.97	0.13
NVNT	n20	2462	Ant1	97	0.13
NVNT	n40	2422	Ant1	94.16	0.26
NVNT	n40	2437	Ant1	93.49	0.29
NVNT	n40	2452	Ant1	93.81	0.28

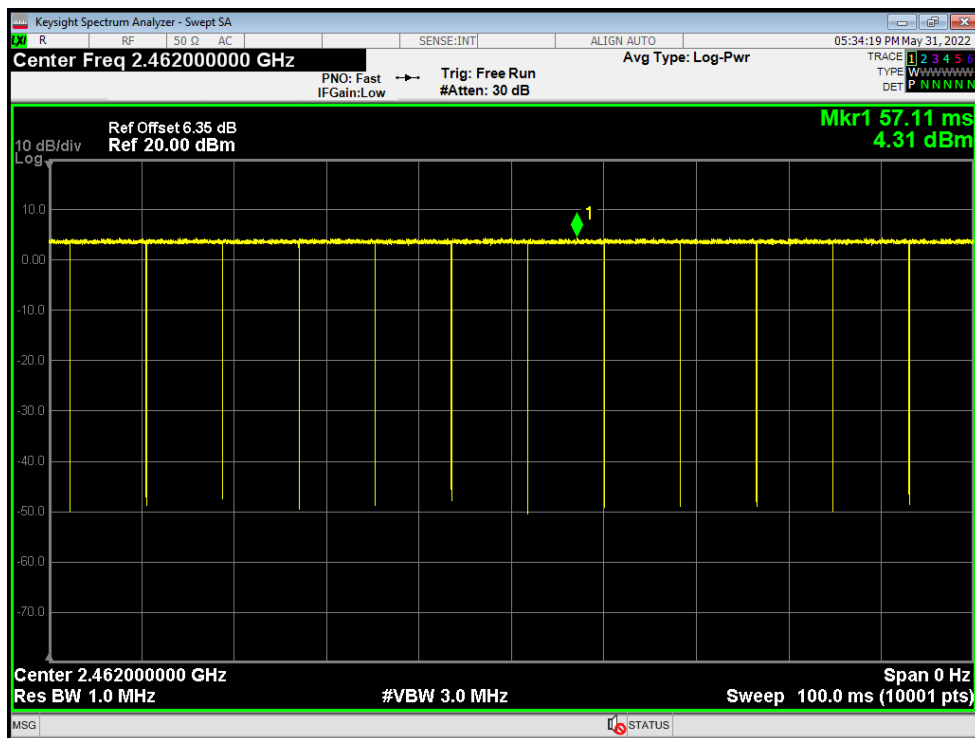
Duty Cycle NVNT b 2412MHz Ant1



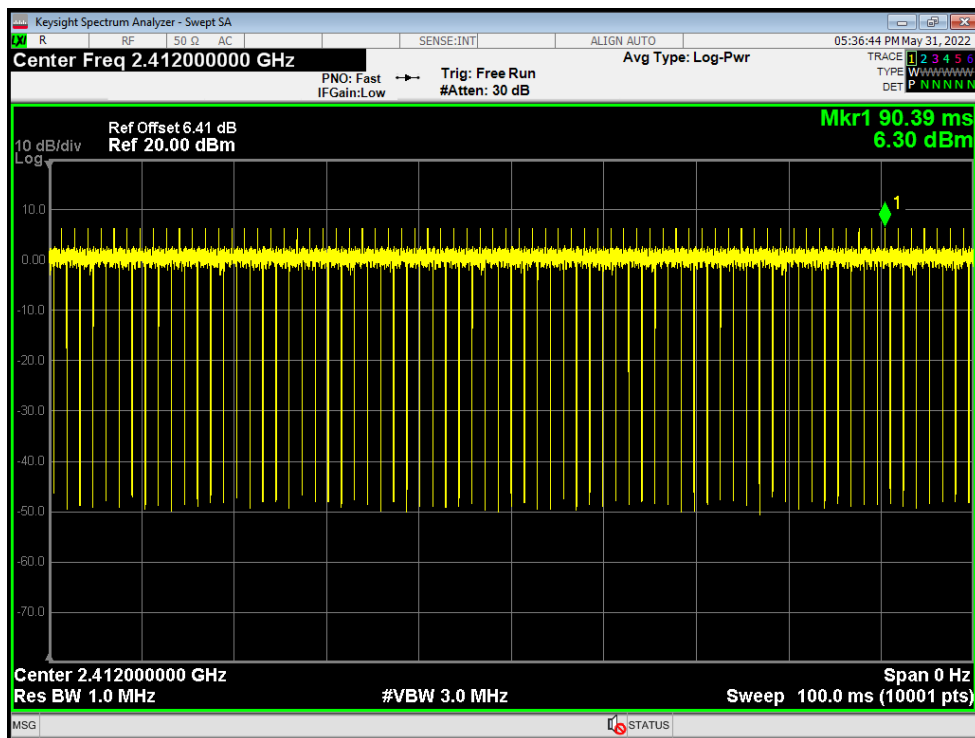
Duty Cycle NVNT b 2437MHz Ant1



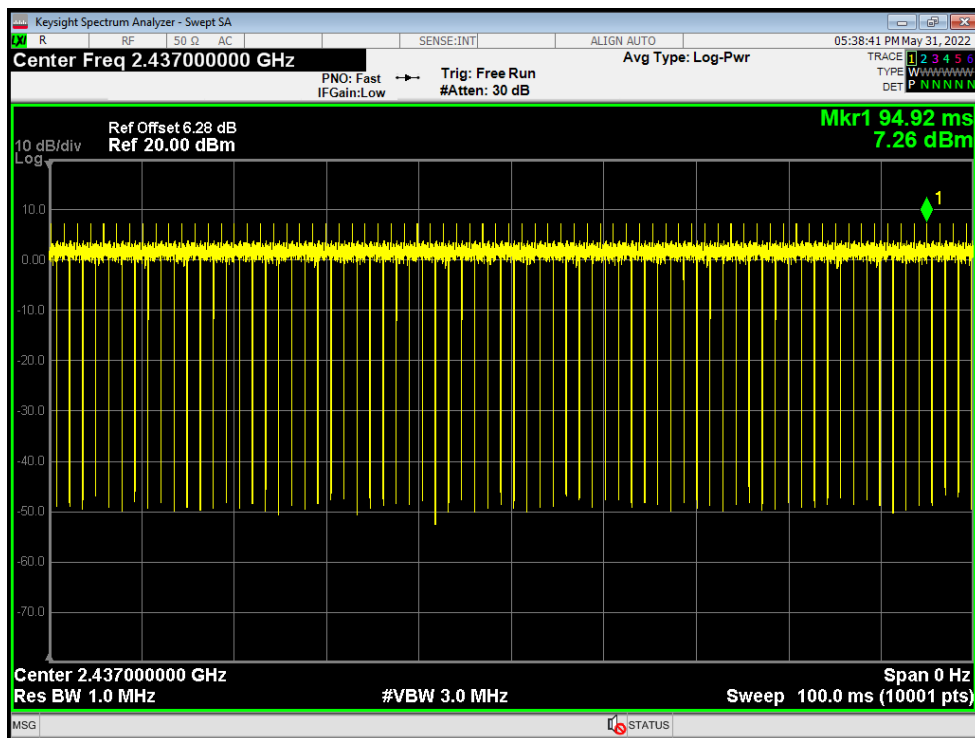
Duty Cycle NVNT b 2462MHz Ant1



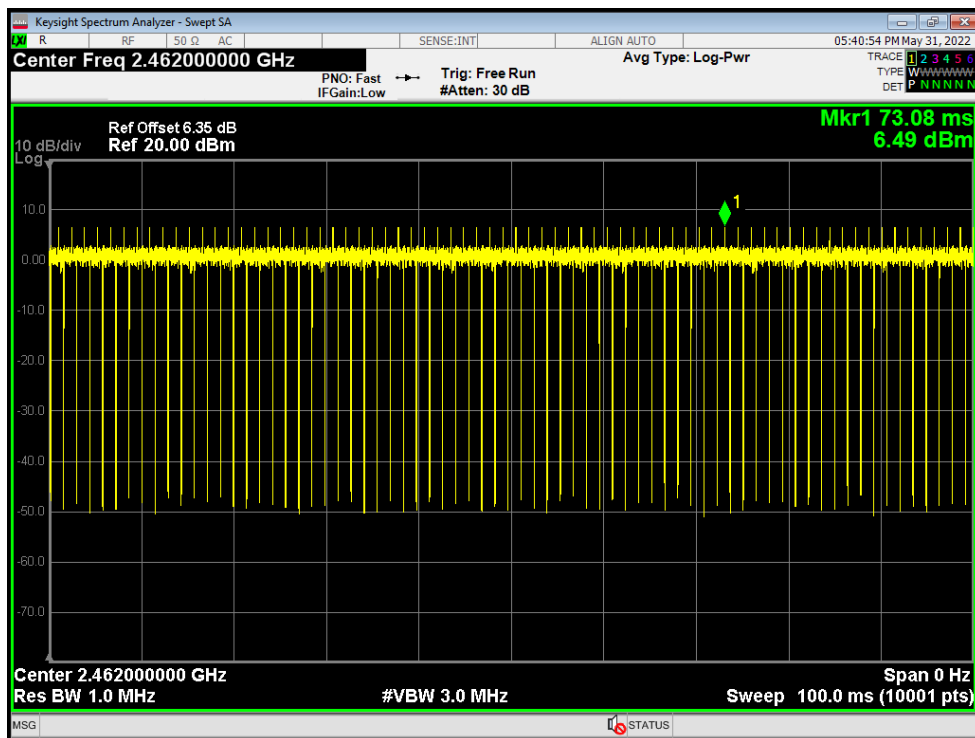
Duty Cycle NVNT g 2412MHz Ant1



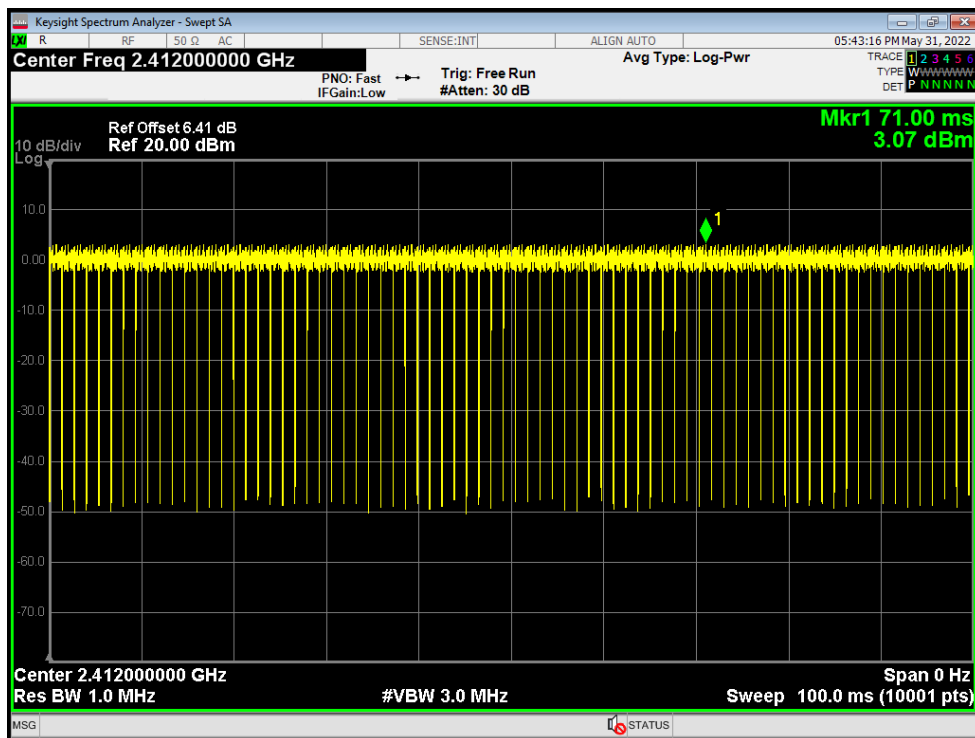
Duty Cycle NVNT g 2437MHz Ant1



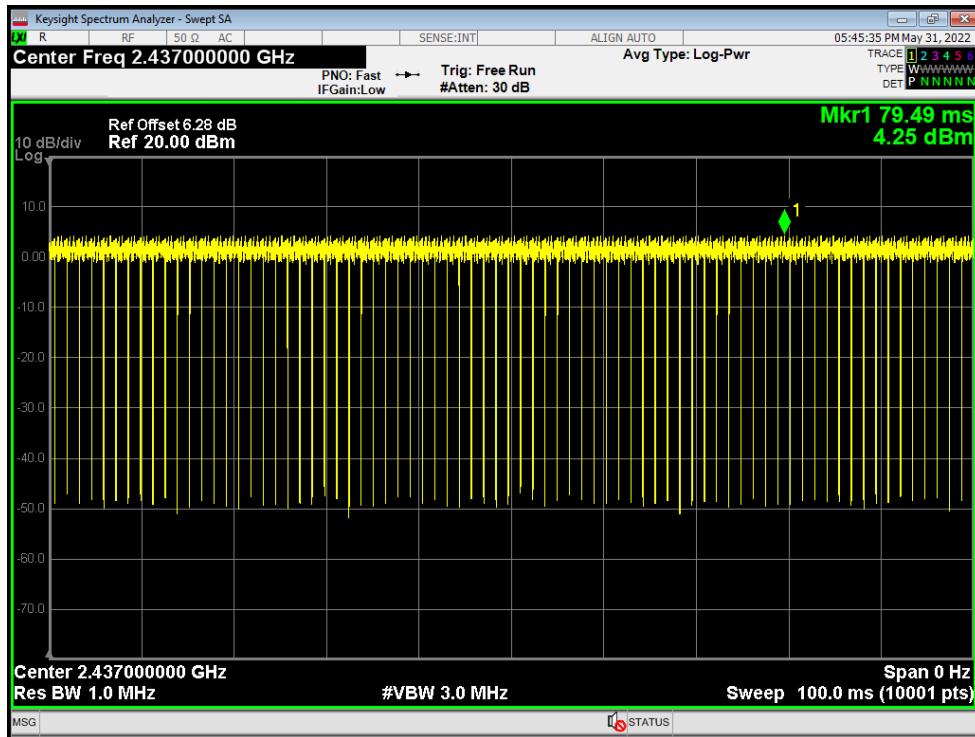
Duty Cycle NVNT g 2462MHz Ant1



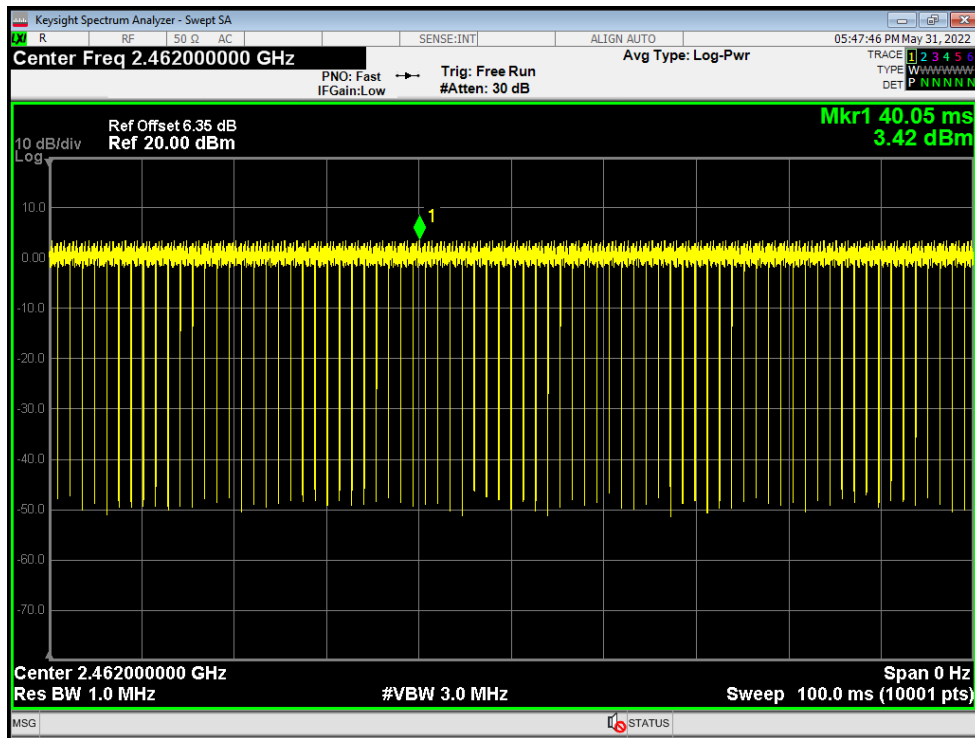
Duty Cycle NVNT n20 2412MHz Ant1



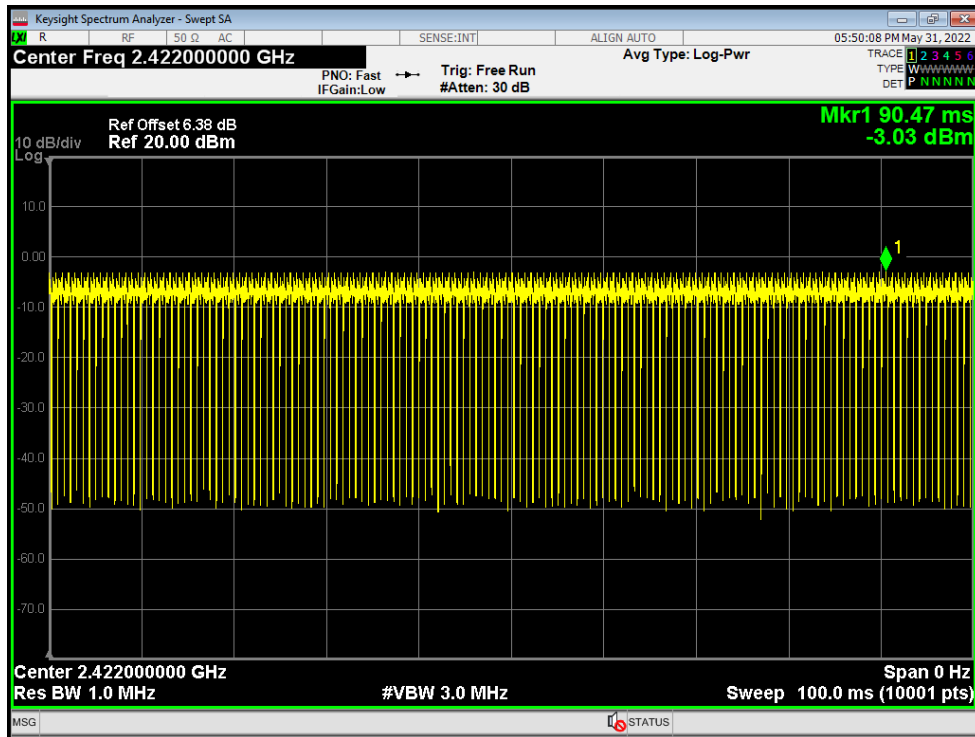
Duty Cycle NVNT n20 2437MHz Ant1



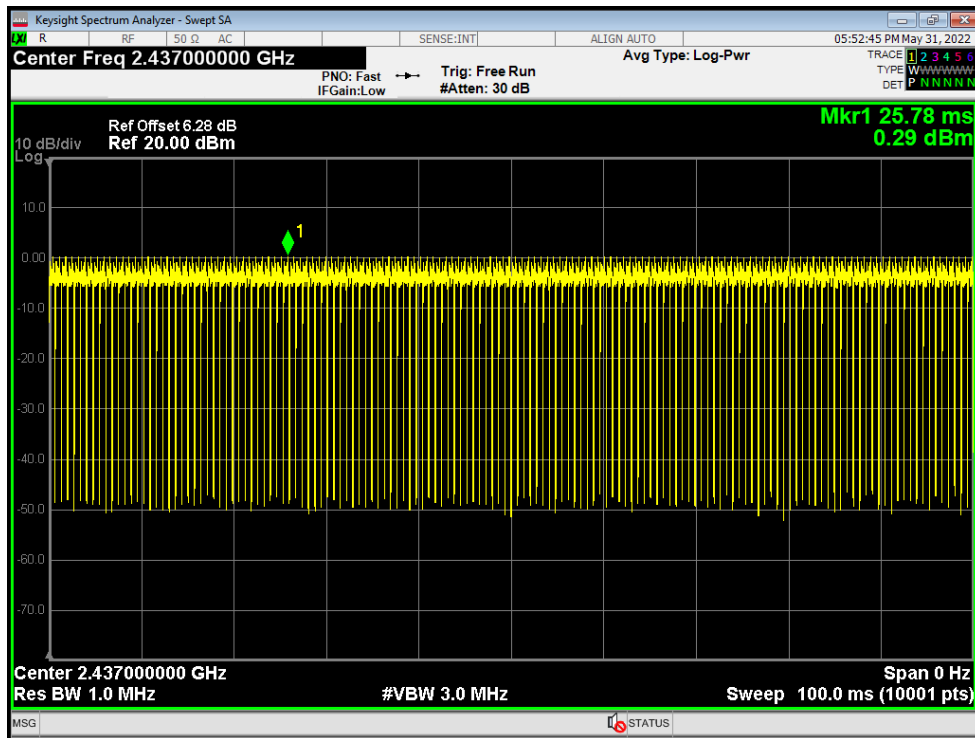
Duty Cycle NVNT n20 2462MHz Ant1



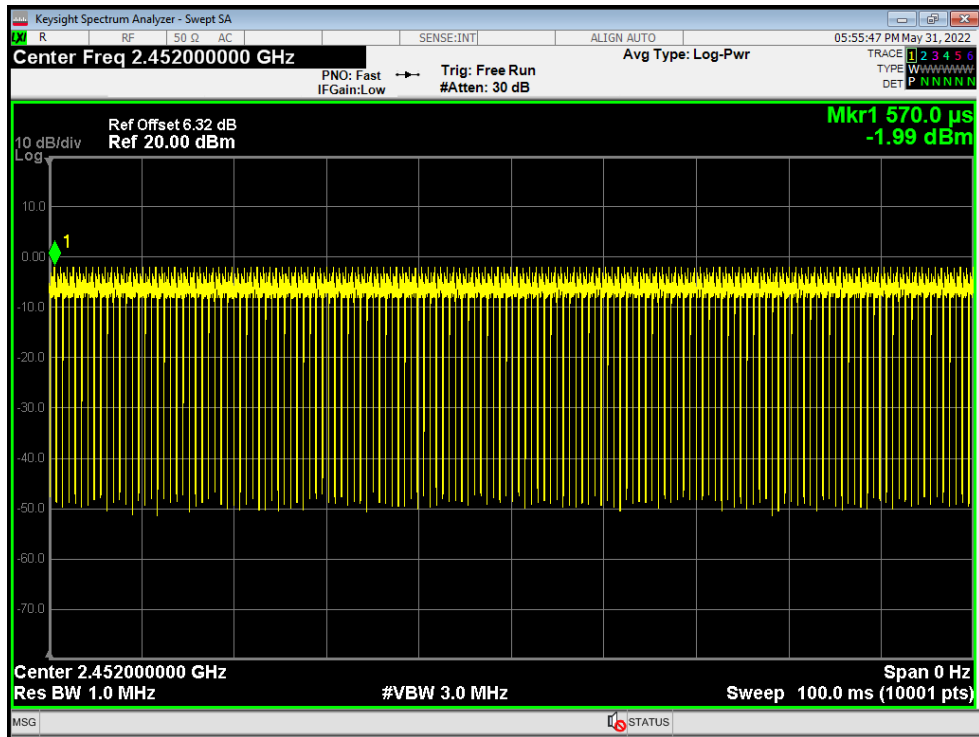
Duty Cycle NVNT n40 2422MHz Ant1



Duty Cycle NVNT n40 2437MHz Ant1



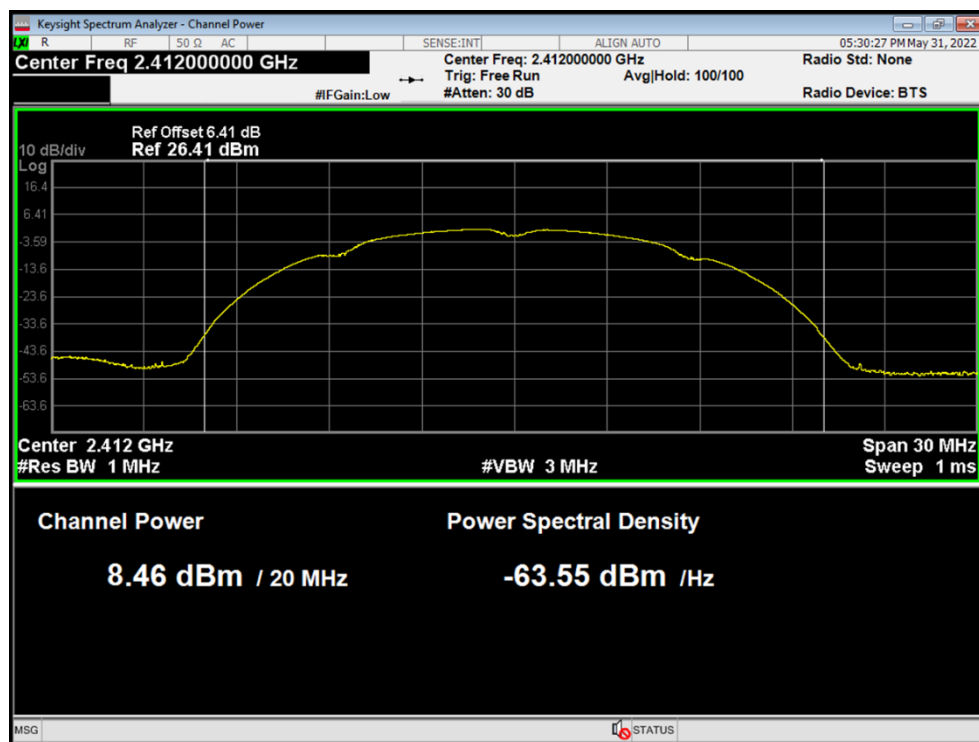
Duty Cycle NVNT n40 2452MHz Ant1



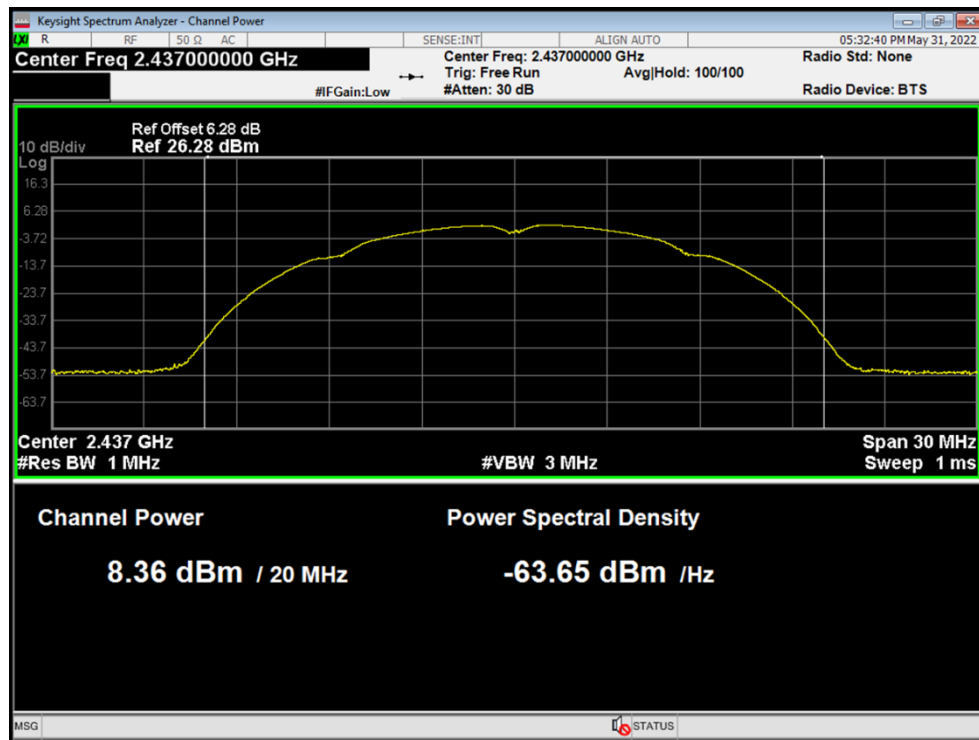
Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	8.46	0.02	8.48	30	Pass
NVNT	b	2437	Ant1	8.36	0.02	8.38	30	Pass
NVNT	b	2462	Ant1	8.70	0.02	8.72	30	Pass
NVNT	g	2412	Ant1	8.59	0.13	8.72	30	Pass
NVNT	g	2437	Ant1	8.69	0.13	8.82	30	Pass
NVNT	g	2462	Ant1	8.65	0.13	8.78	30	Pass
NVNT	n20	2412	Ant1	8.19	0.13	8.32	30	Pass
NVNT	n20	2437	Ant1	8.28	0.13	8.41	30	Pass
NVNT	n20	2462	Ant1	8.41	0.13	8.54	30	Pass
NVNT	n40	2422	Ant1	8.53	0.26	8.79	30	Pass
NVNT	n40	2437	Ant1	8.34	0.29	8.63	30	Pass
NVNT	n40	2452	Ant1	8.75	0.28	9.03	30	Pass

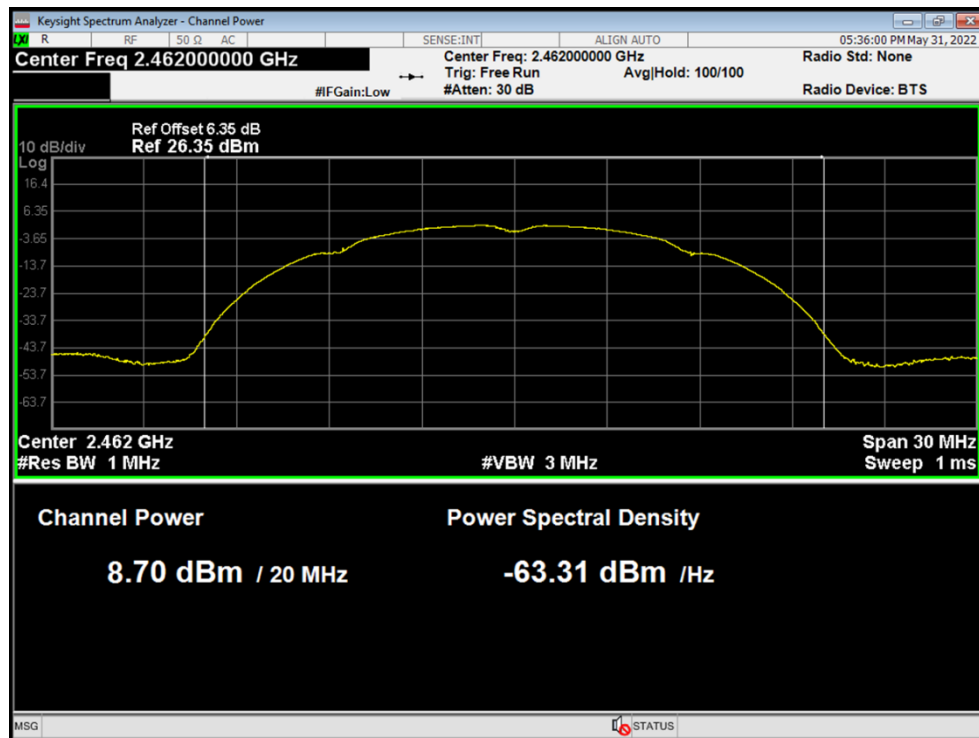
Power NVNT b 2412MHz Ant1



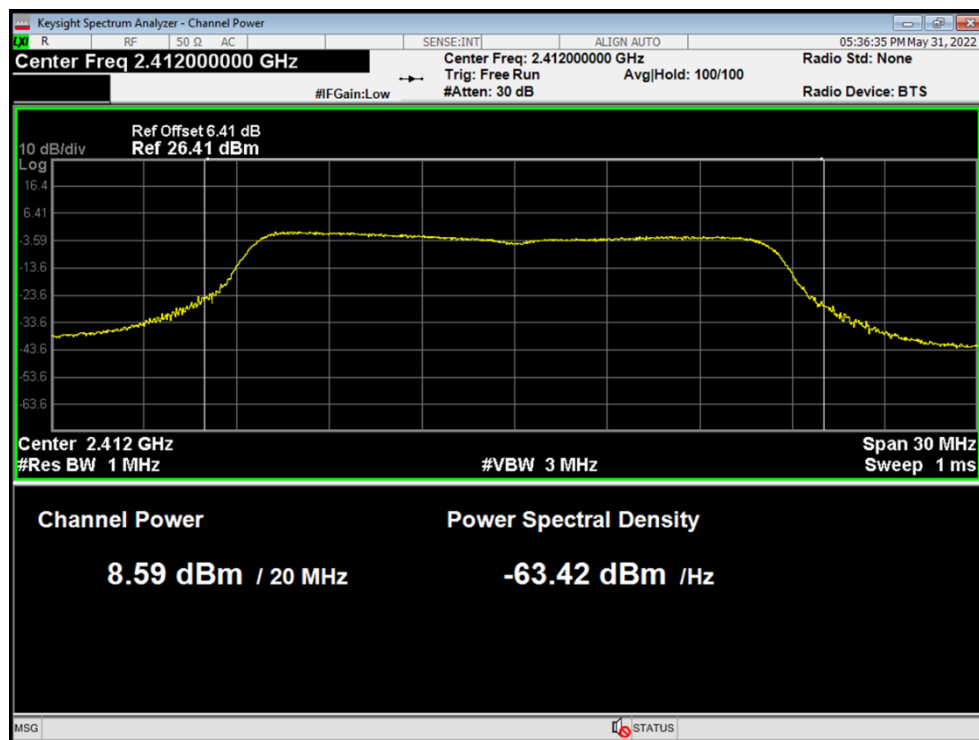
Power NVNT b 2437MHz Ant1



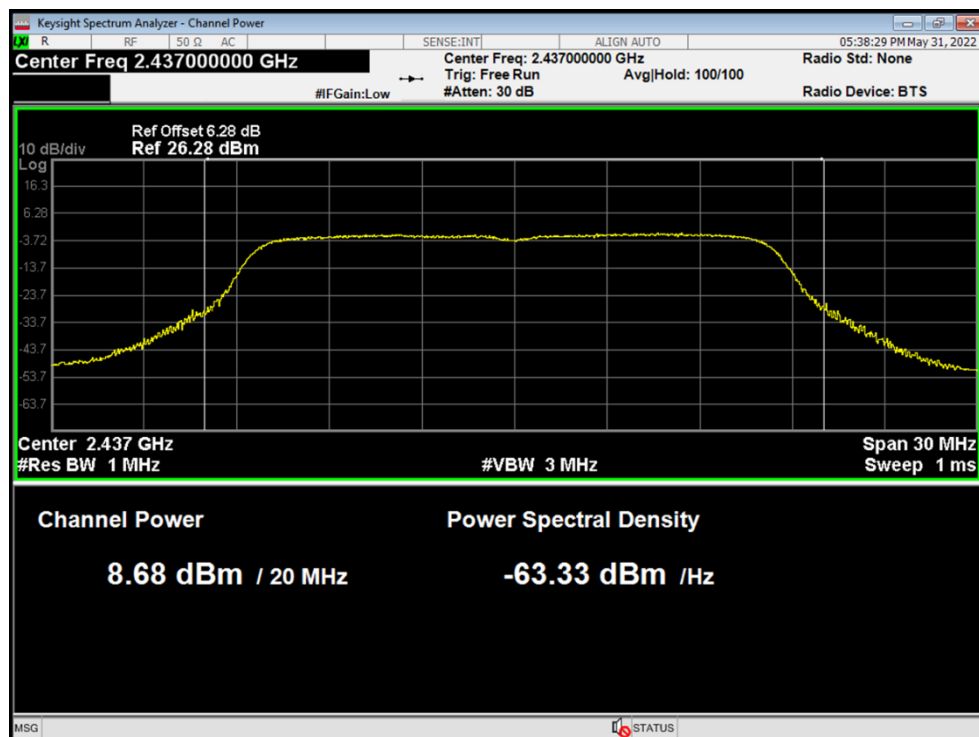
Power NVNT b 2462MHz Ant1



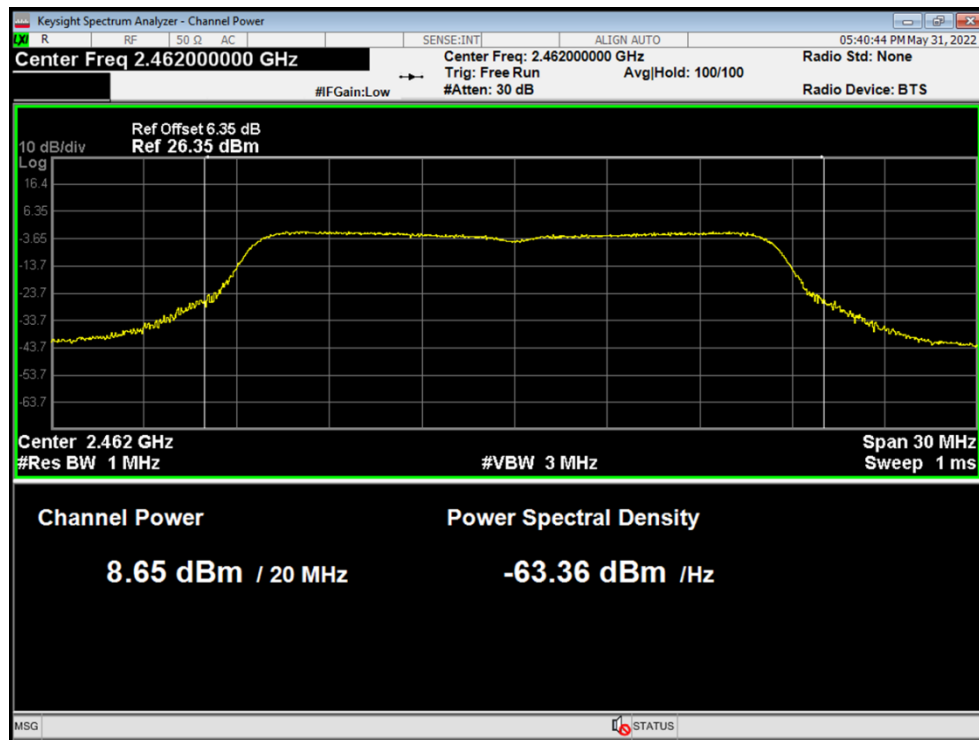
Power NVNT g 2412MHz Ant1



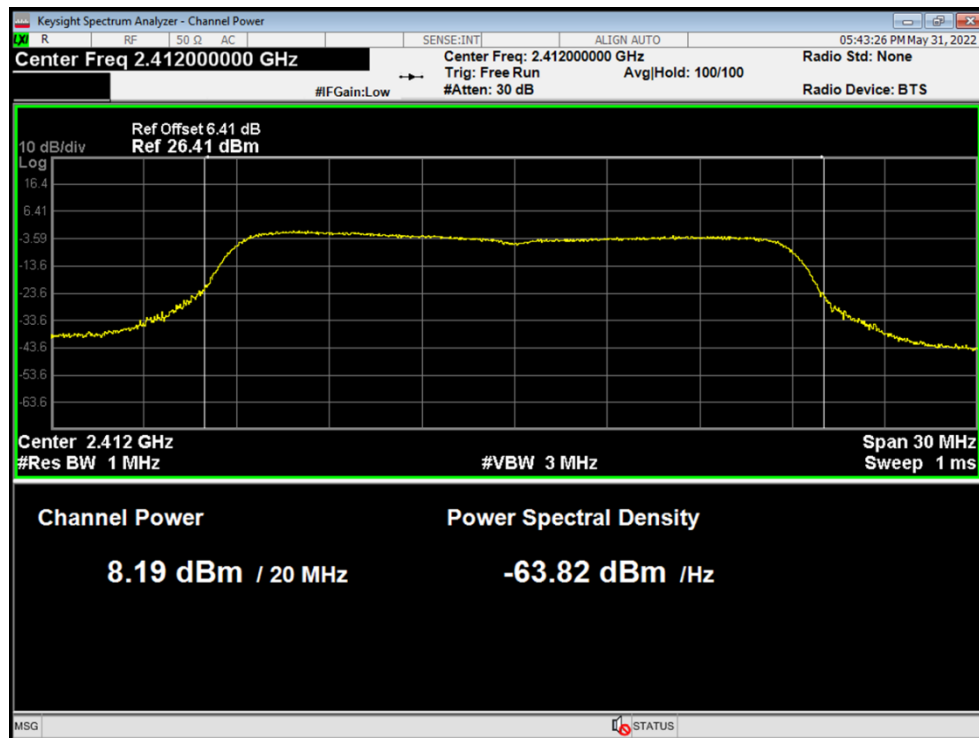
Power NVNT g 2437MHz Ant1



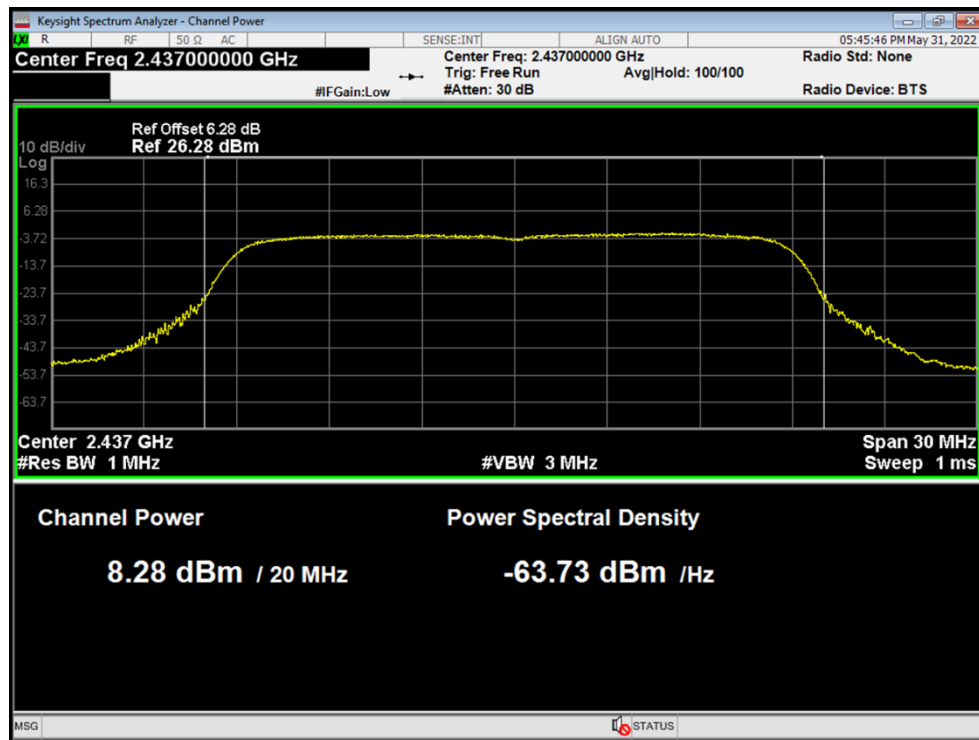
Power NVNT g 2462MHz Ant1



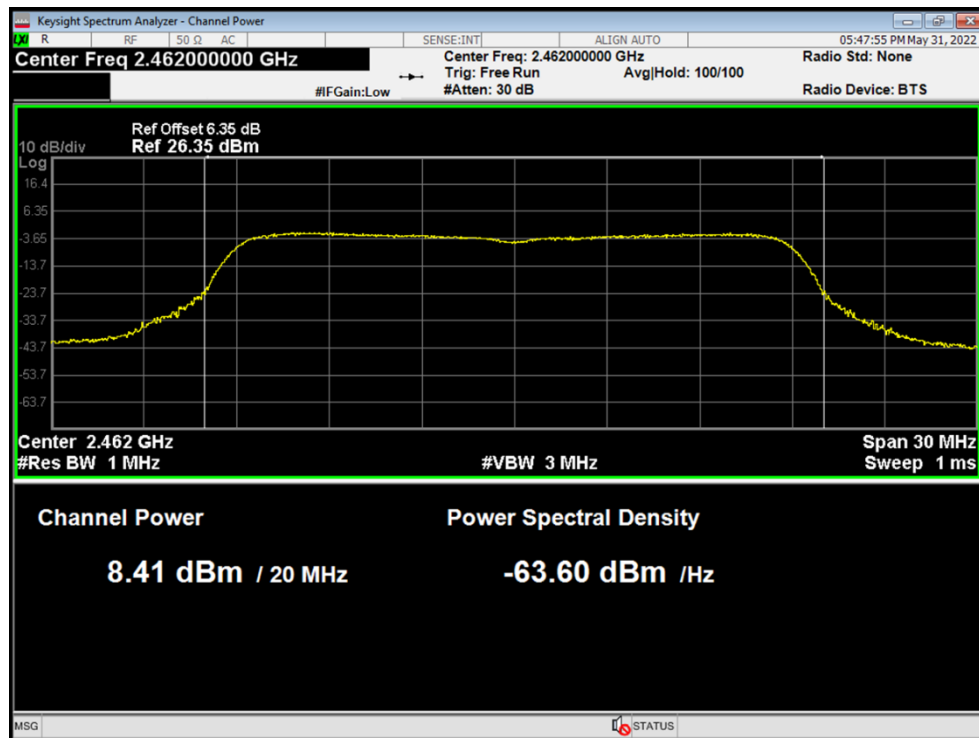
Power NVNT n20 2412MHz Ant1



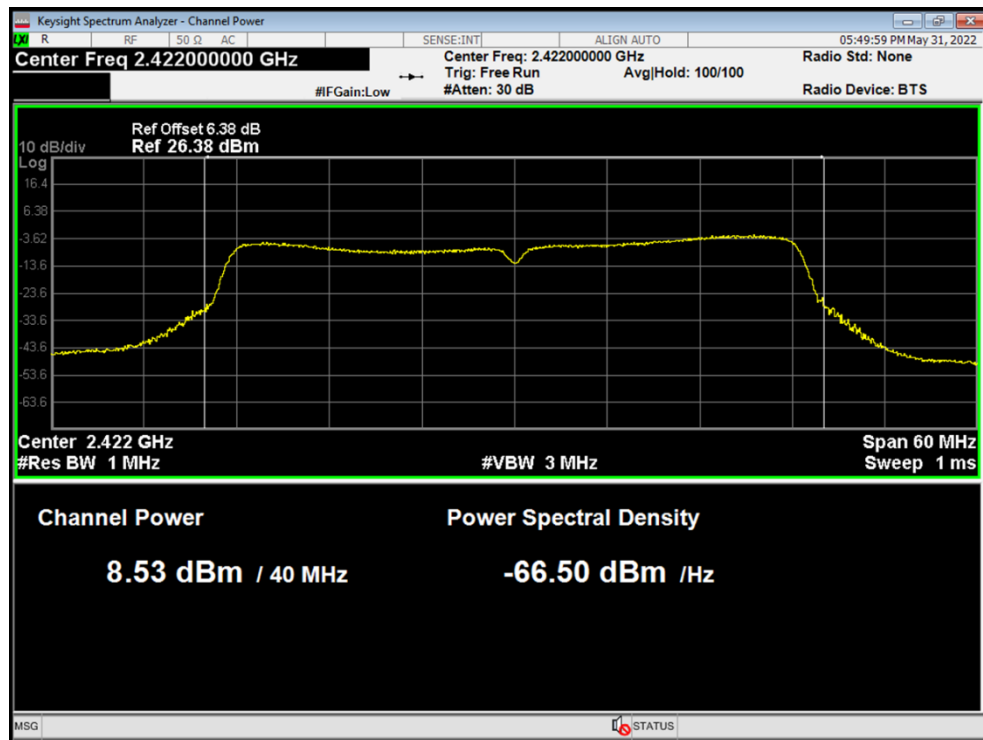
Power NVNT n20 2437MHz Ant1



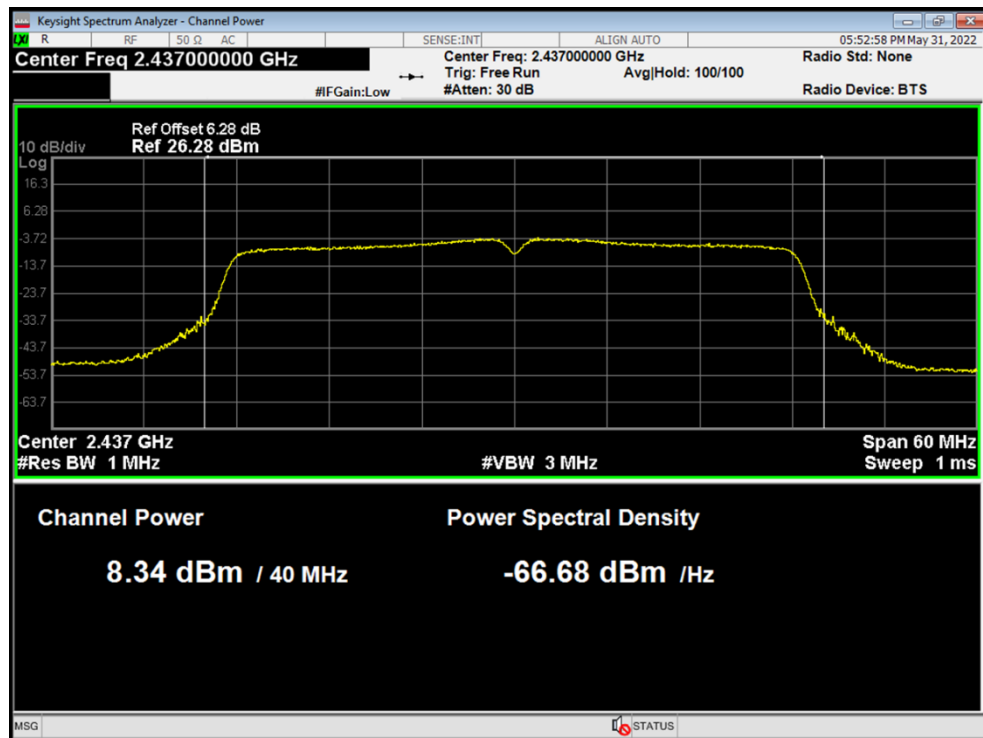
Power NVNT n20 2462MHz Ant1



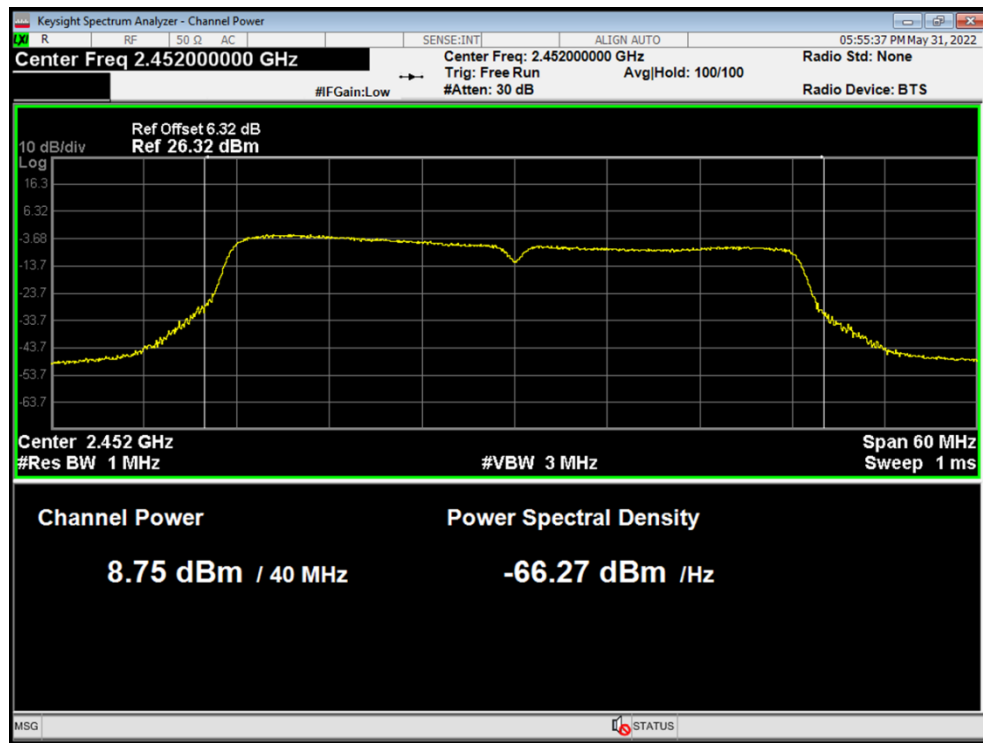
Power NVNT n40 2422MHz Ant1



Power NVNT n40 2437MHz Ant1



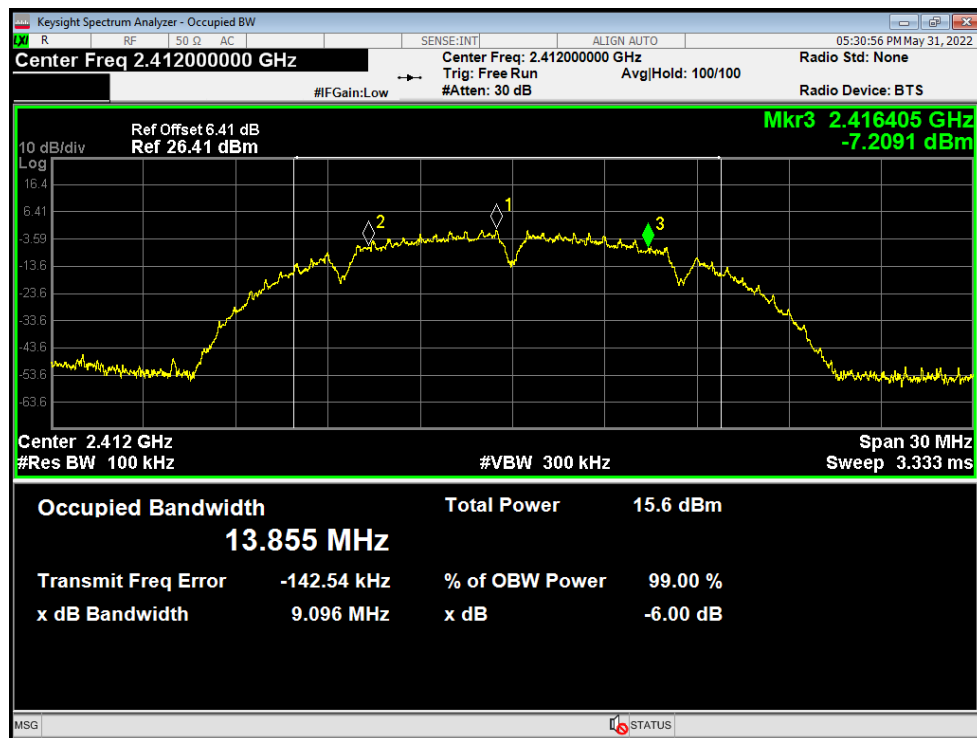
Power NVNT n40 2452MHz Ant1



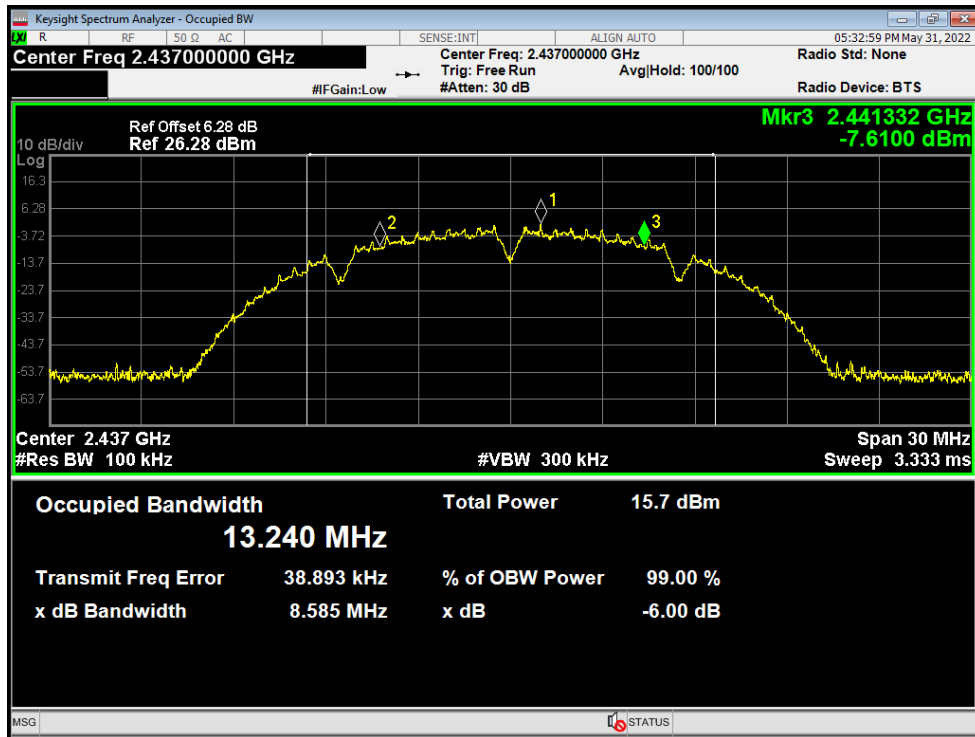
-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.096	0.5	Pass
NVNT	b	2437	Ant1	8.585	0.5	Pass
NVNT	b	2462	Ant1	9.489	0.5	Pass
NVNT	g	2412	Ant1	16.317	0.5	Pass
NVNT	g	2437	Ant1	15.606	0.5	Pass
NVNT	g	2462	Ant1	16.354	0.5	Pass
NVNT	n20	2412	Ant1	16.517	0.5	Pass
NVNT	n20	2437	Ant1	16.059	0.5	Pass
NVNT	n20	2462	Ant1	17.538	0.5	Pass
NVNT	n40	2422	Ant1	34.226	0.5	Pass
NVNT	n40	2437	Ant1	35.056	0.5	Pass
NVNT	n40	2452	Ant1	35.303	0.5	Pass

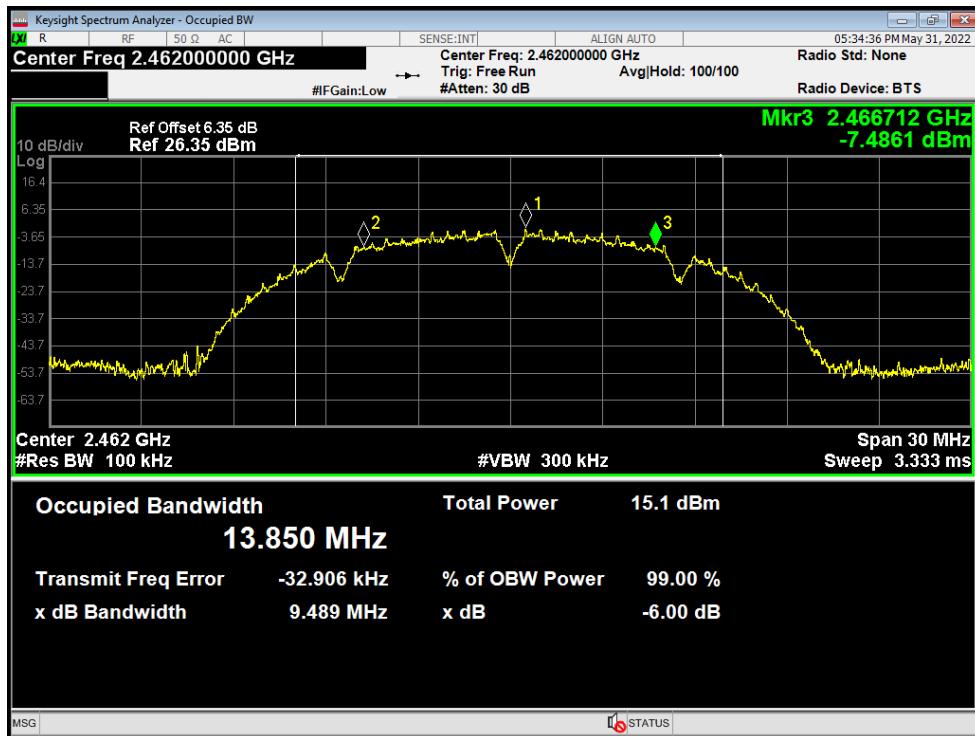
-6dB Bandwidth NVNT b 2412MHz Ant1



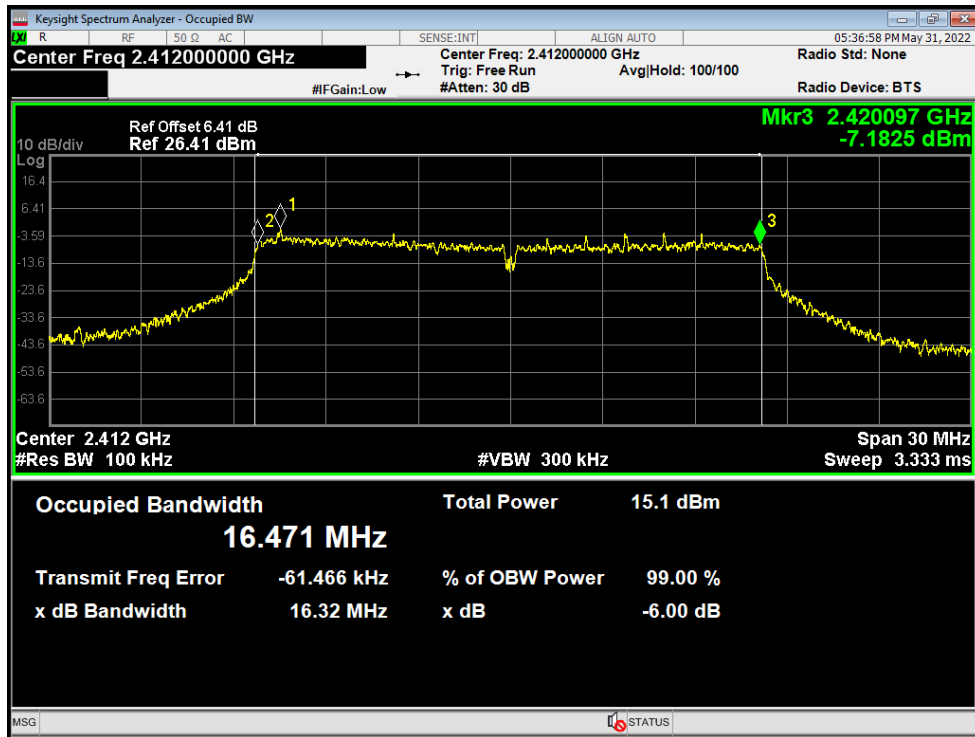
-6dB Bandwidth NVNT b 2437MHz Ant1



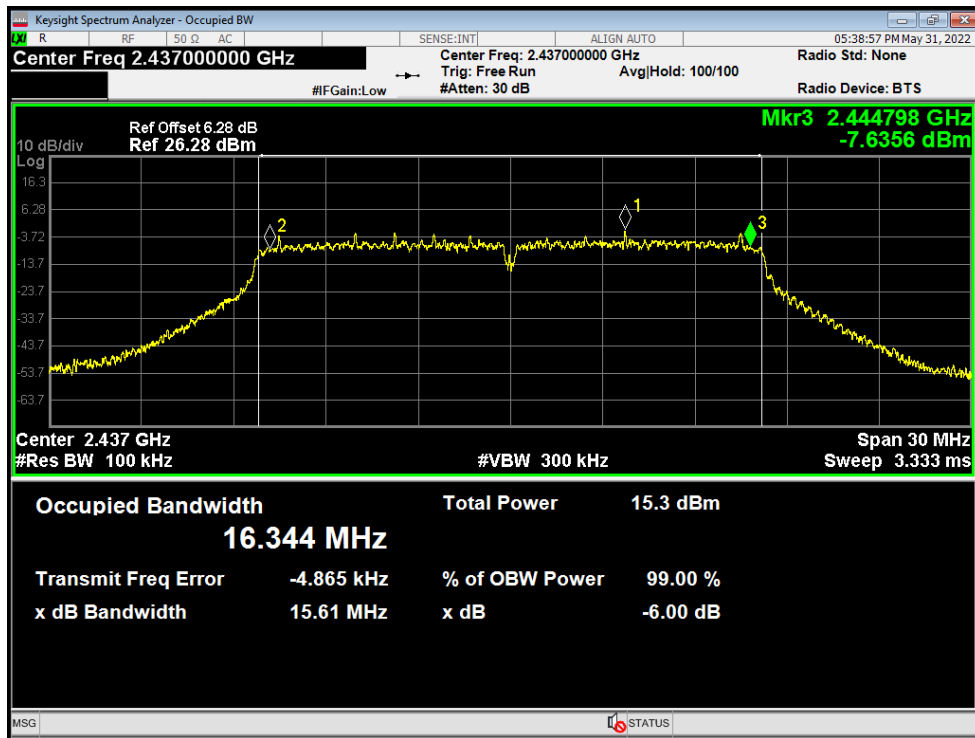
-6dB Bandwidth NVNT b 2462MHz Ant1



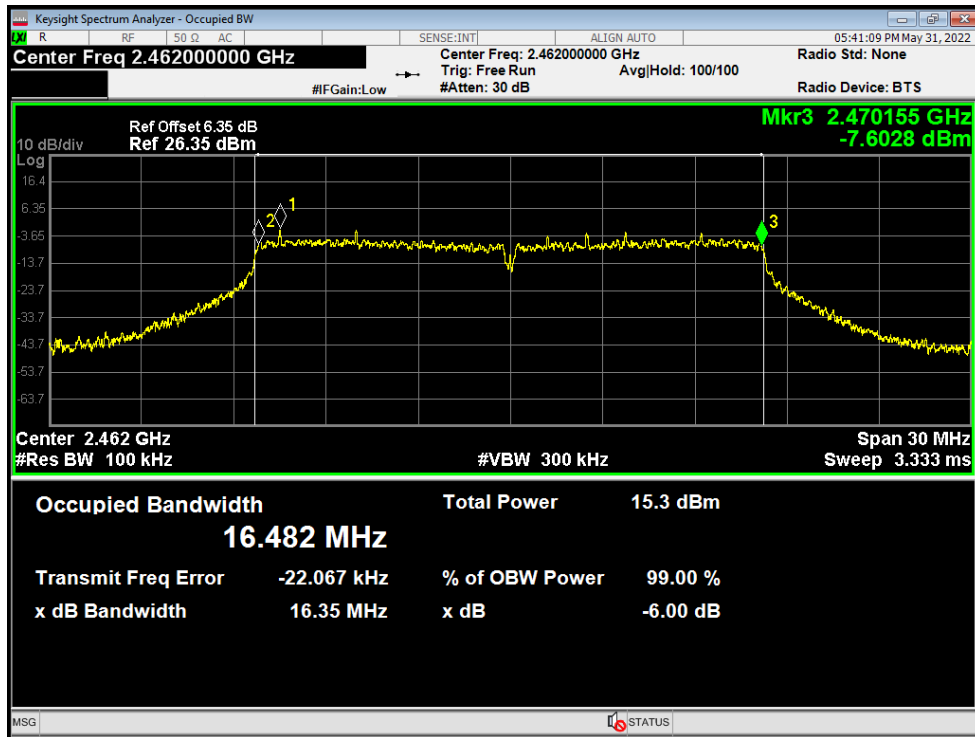
-6dB Bandwidth NVNT g 2412MHz Ant1



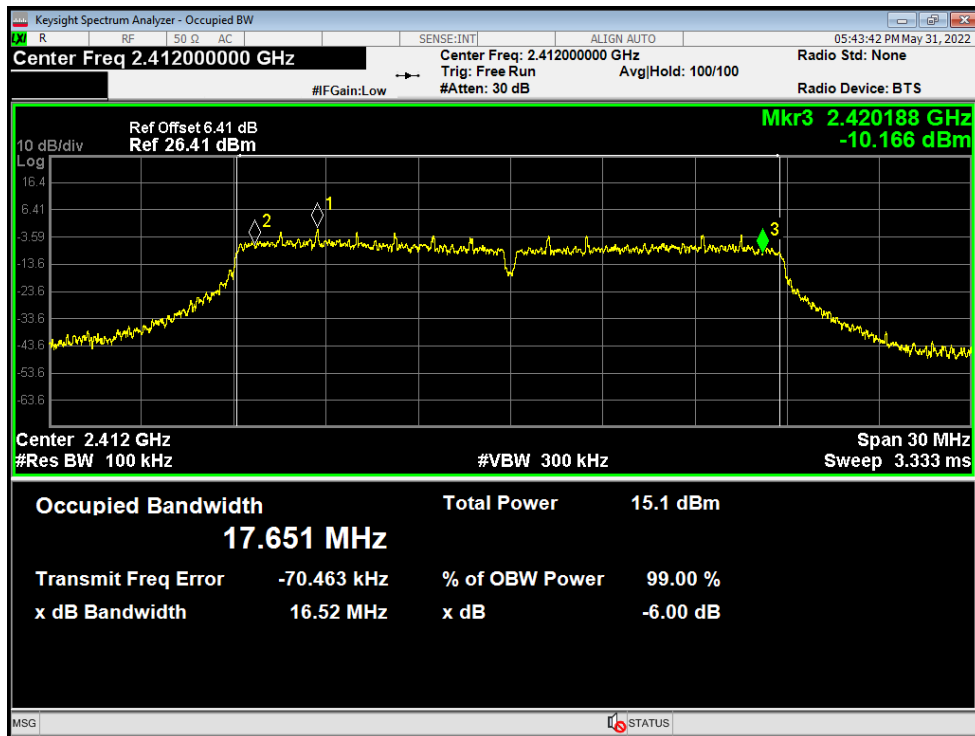
-6dB Bandwidth NVNT g 2437MHz Ant1



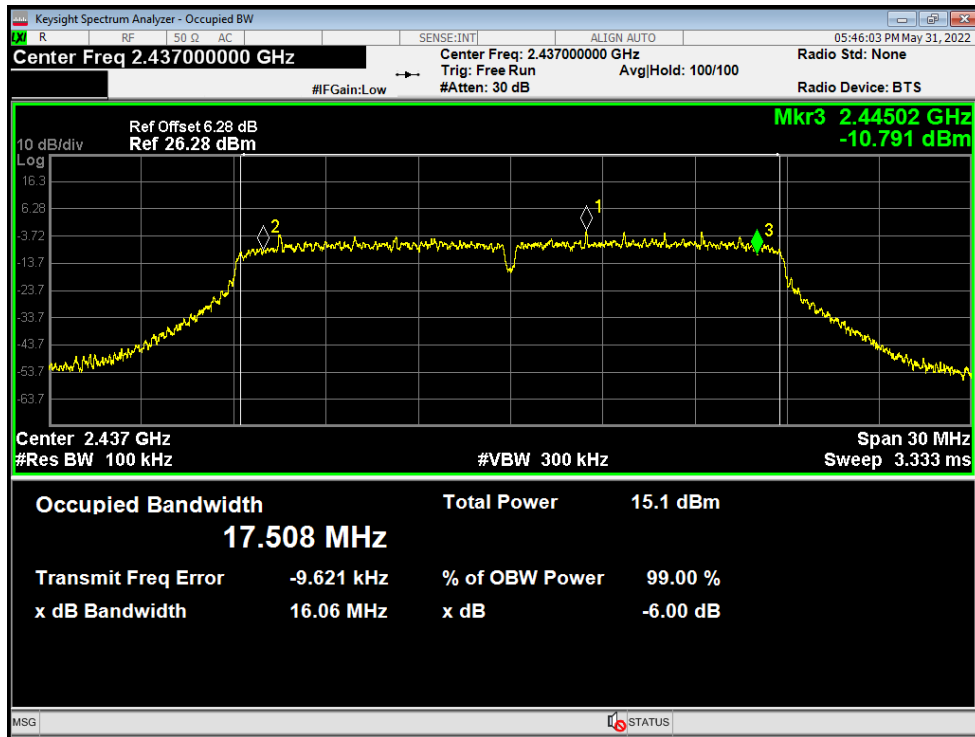
-6dB Bandwidth NVNT g 2462MHz Ant1



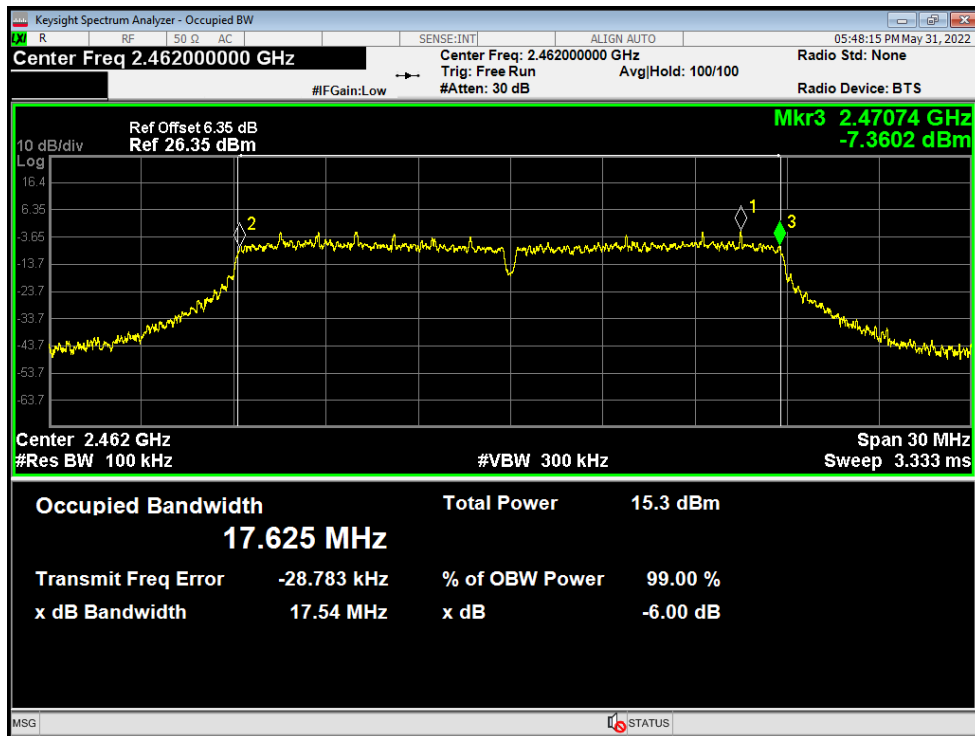
-6dB Bandwidth NVNT n20 2412MHz Ant1



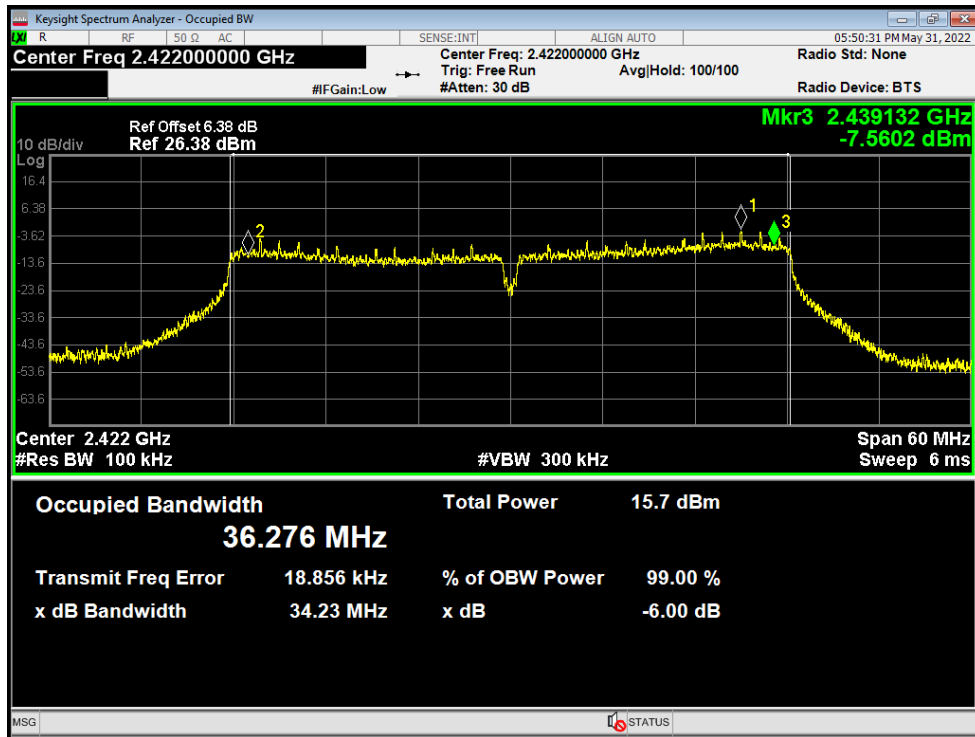
-6dB Bandwidth NVNT n20 2437MHz Ant1



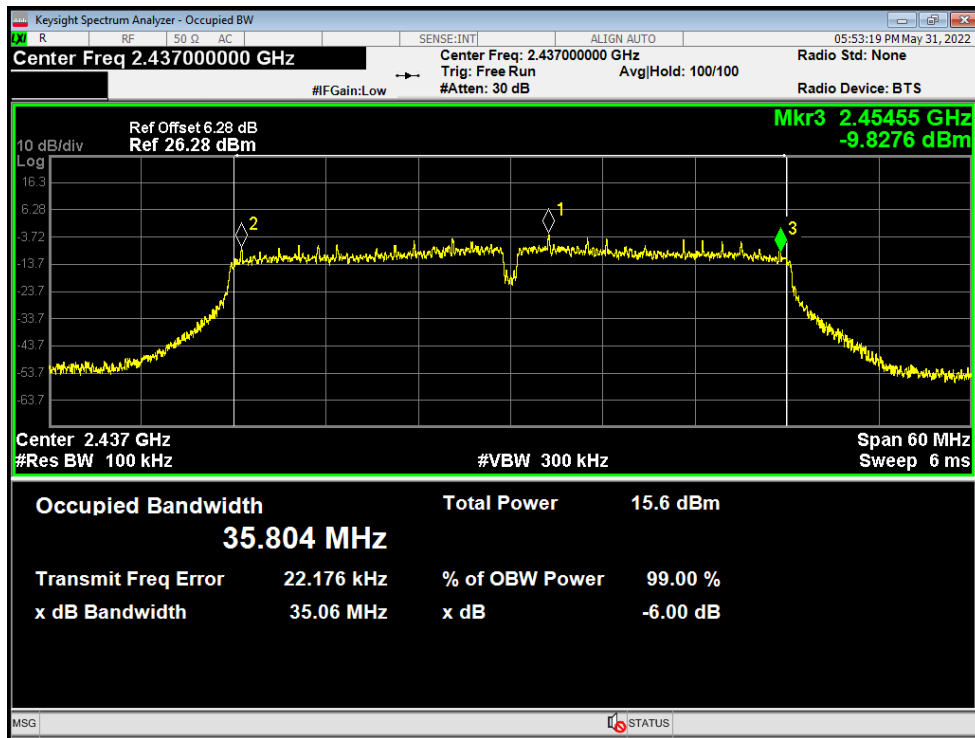
-6dB Bandwidth NVNT n20 2462MHz Ant1



-6dB Bandwidth NVNT n40 2422MHz Ant1



-6dB Bandwidth NVNT n40 2437MHz Ant1



Keysight Spectrum Analyzer - Occupied BW

05:56:24 PM May 31, 2022

Center Freq 2.45200000 GHz

Center Freq: 2.452000000 GHz
 Trig: Free Run
 #Atten: 30 dB

Radio Std: None
 Radio Device: BTS

#FGain:Low

Ref Offset 6.32 dB
 Ref 26.32 dBm

Mkr3 2.469549 GHz
 -12.544 dBm

10 dB/div
 Log

Center 2.452 GHz
 #Res BW 100 kHz

#VBW 300 kHz

Span 60 MHz
 Sweep 6 ms

Occupied Bandwidth

36.146 MHz

Total Power

15.8 dBm

Transmit Freq Error

-102.48 kHz

% of OBW Power

99.00 %

x dB Bandwidth

35.30 MHz

x dB

-6.00 dB

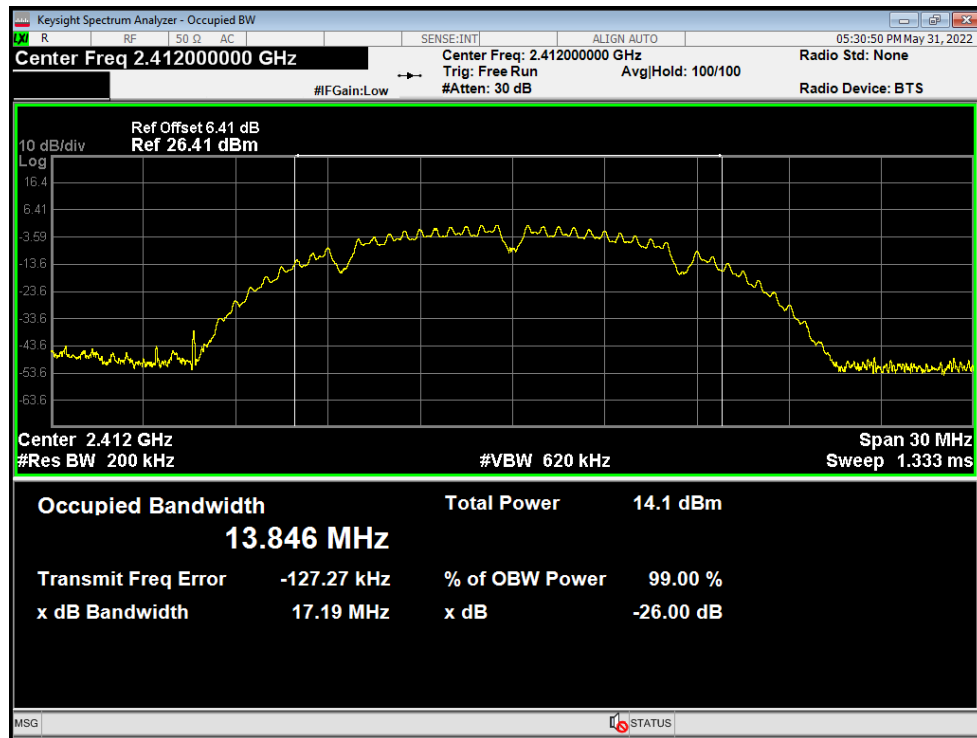
MSG

STATUS

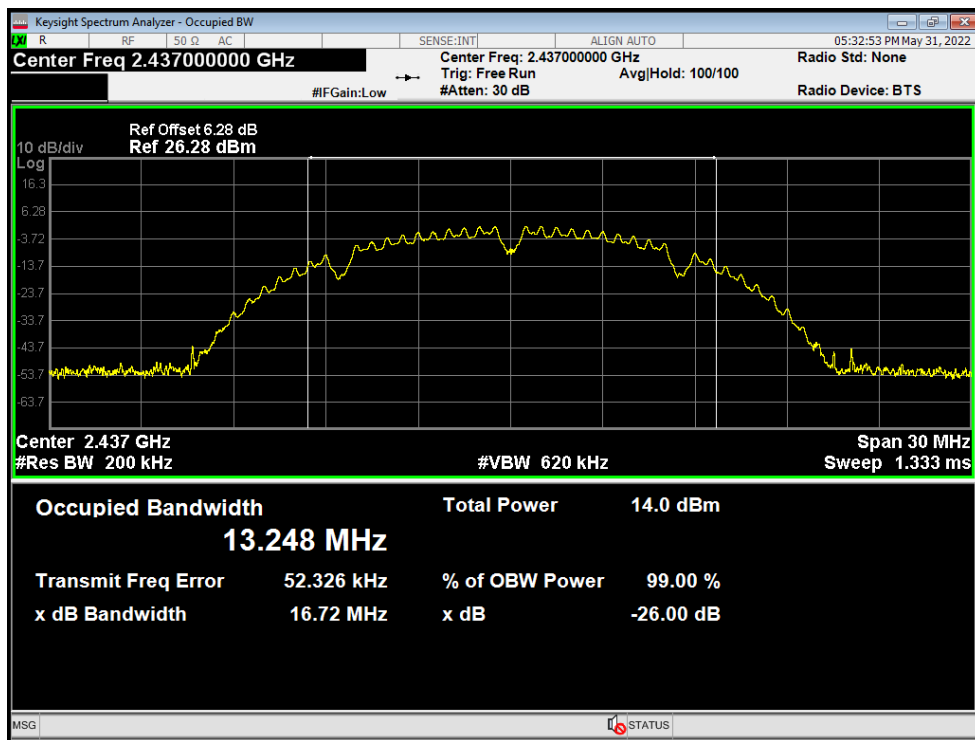
Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.84585755
NVNT	b	2437	Ant1	13.2476097
NVNT	b	2462	Ant1	13.82496977
NVNT	g	2412	Ant1	16.64025038
NVNT	g	2437	Ant1	16.40491715
NVNT	g	2462	Ant1	16.60015414
NVNT	n20	2412	Ant1	17.71900224
NVNT	n20	2437	Ant1	17.49203614
NVNT	n20	2462	Ant1	17.71417405
NVNT	n40	2422	Ant1	36.63233738
NVNT	n40	2437	Ant1	36.01028109
NVNT	n40	2452	Ant1	36.45520636

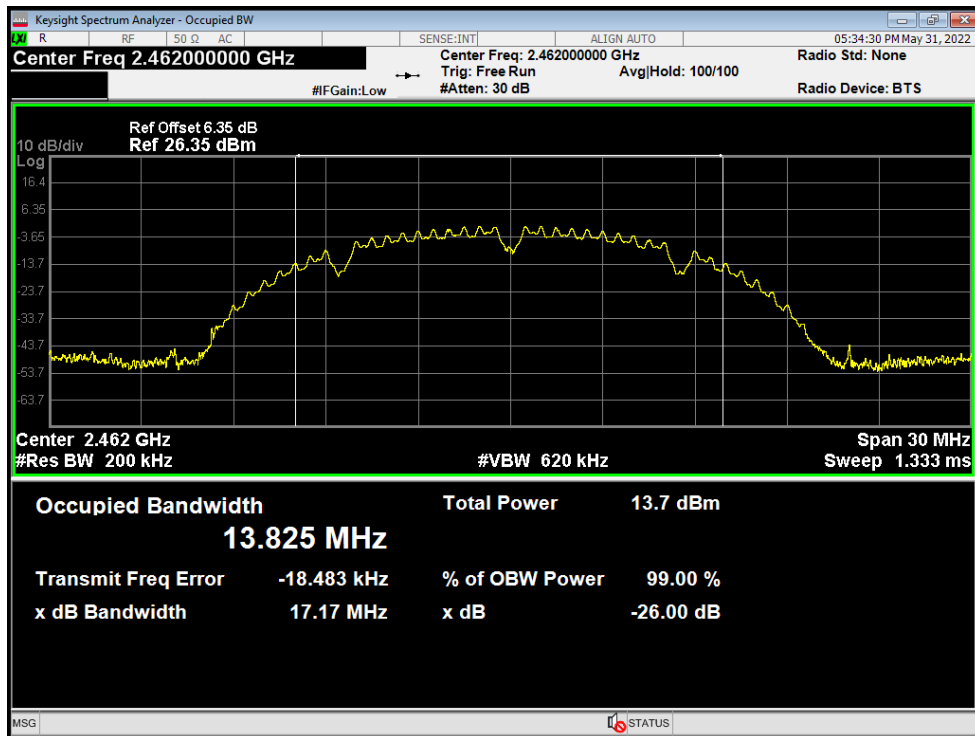
OBW NVNT b 2412MHz Ant1



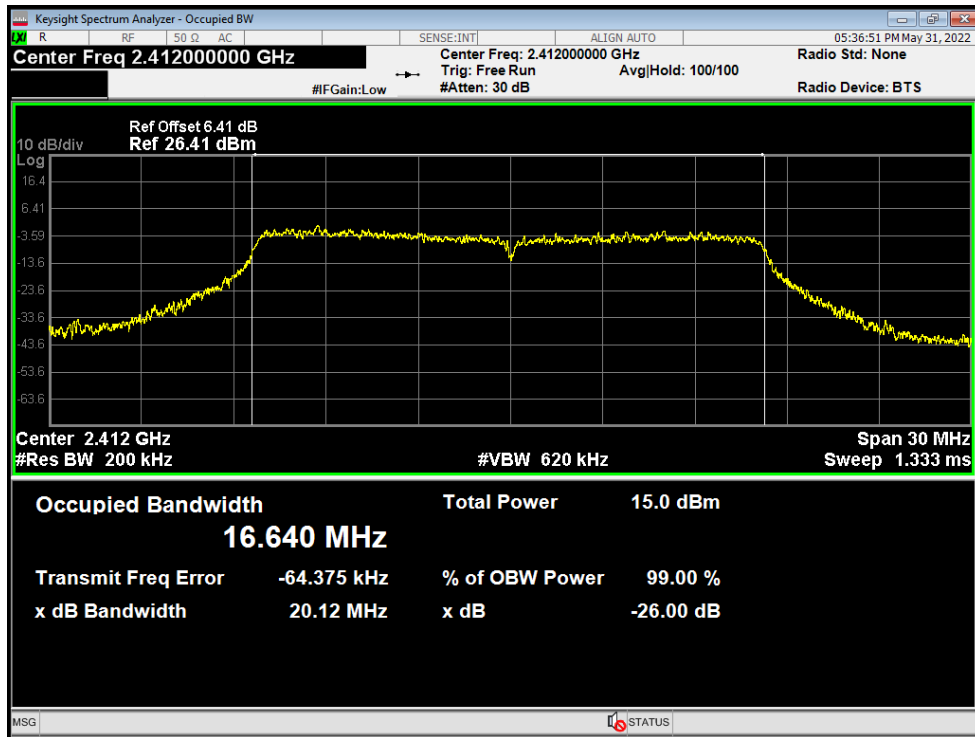
OBW NVNT b 2437MHz Ant1



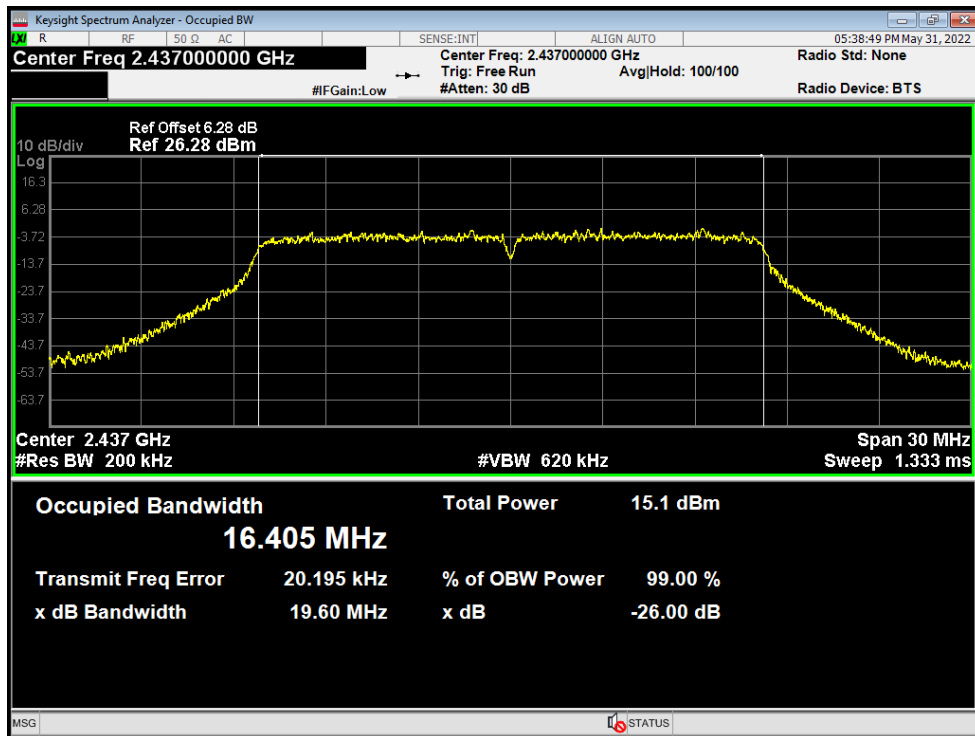
OBW NVNT b 2462MHz Ant1



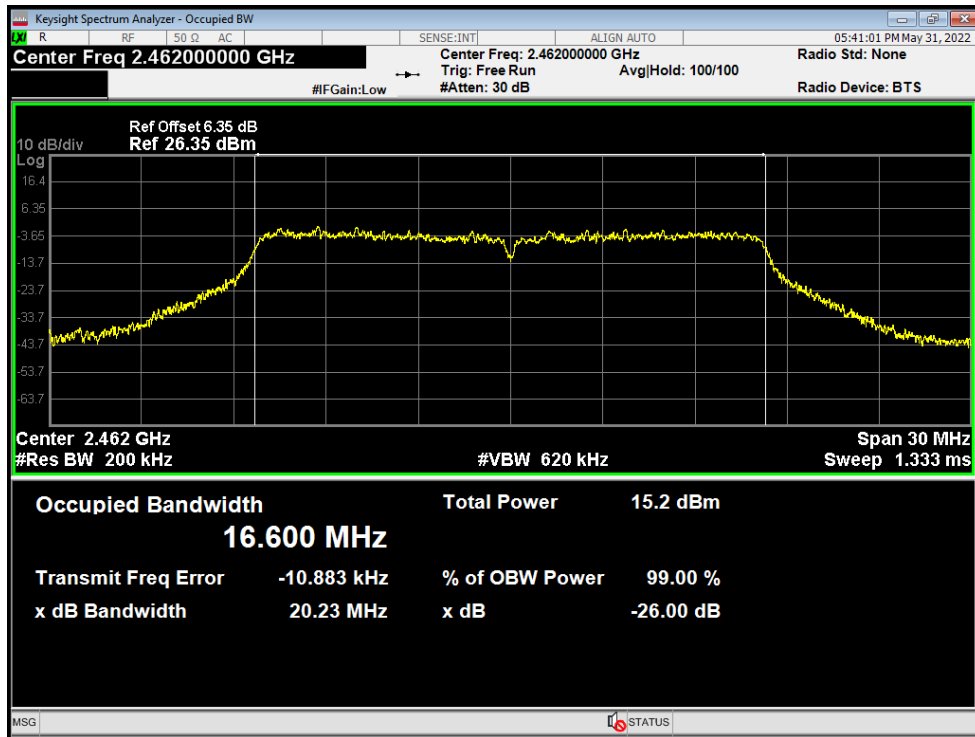
OBW NVNT g 2412MHz Ant1



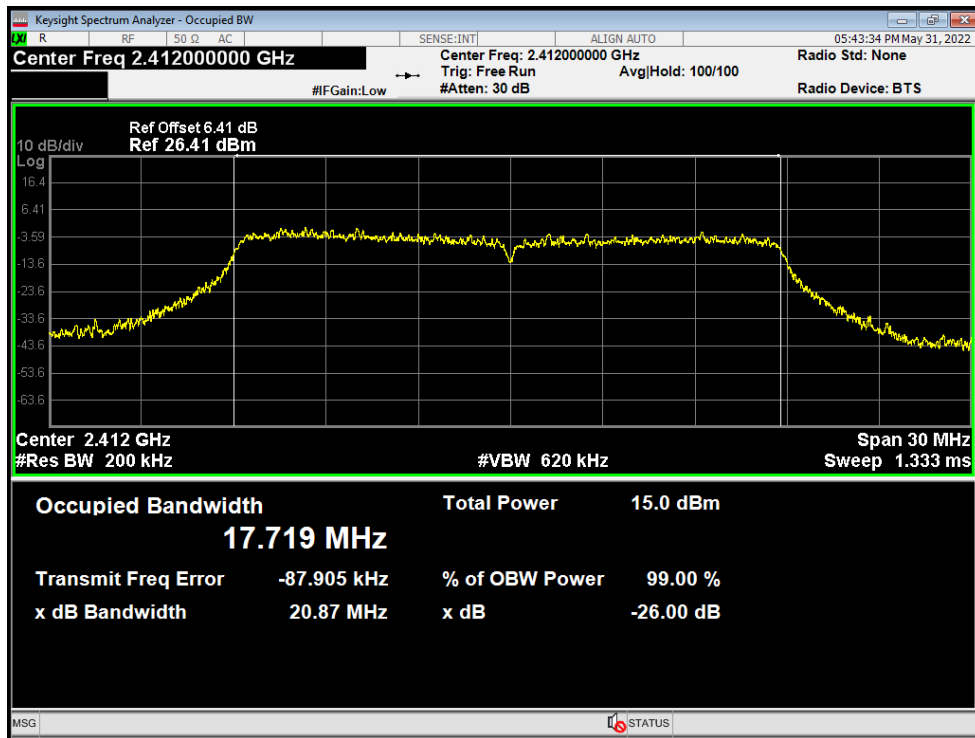
OBW NVNT g 2437MHz Ant1



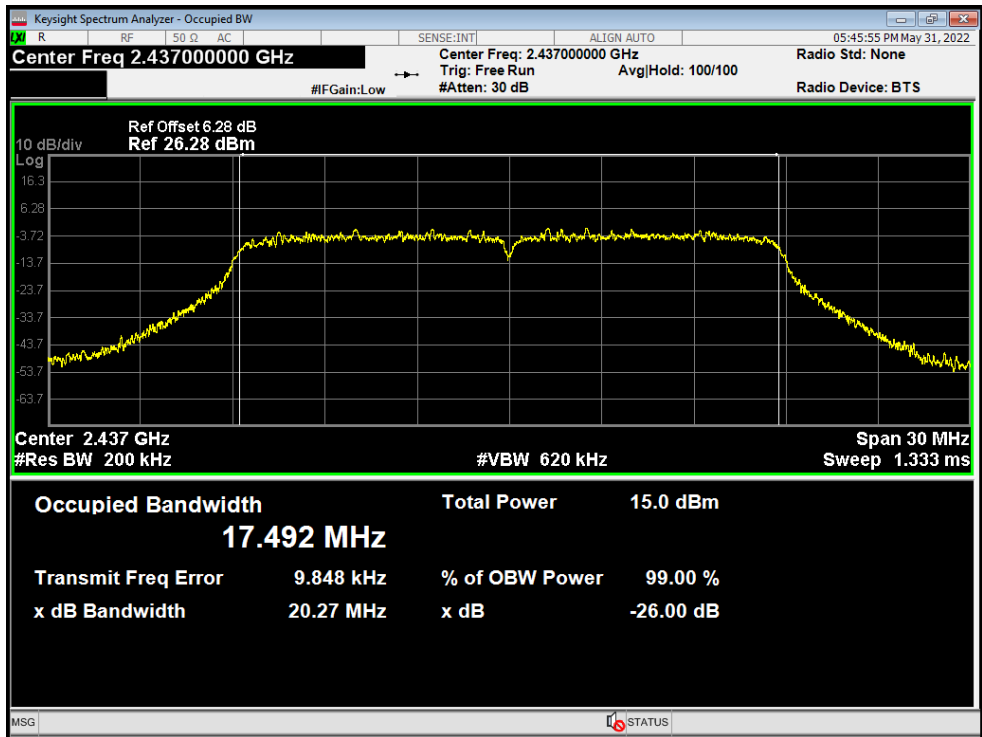
OBW NVNT g 2462MHz Ant1



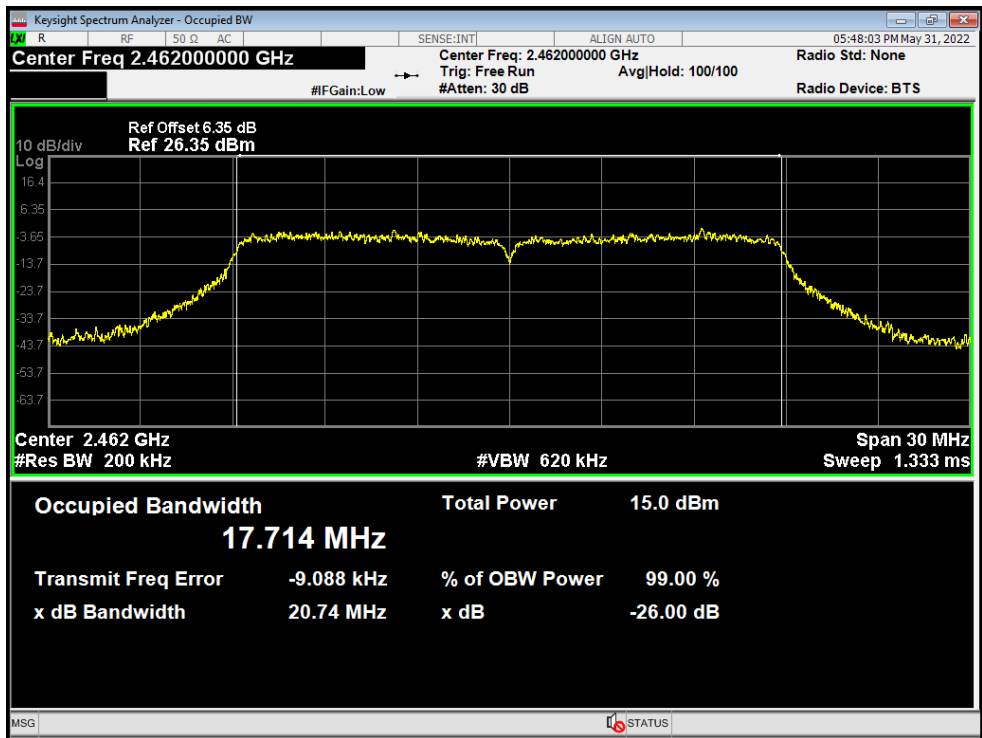
OBW NVNT n20 2412MHz Ant1



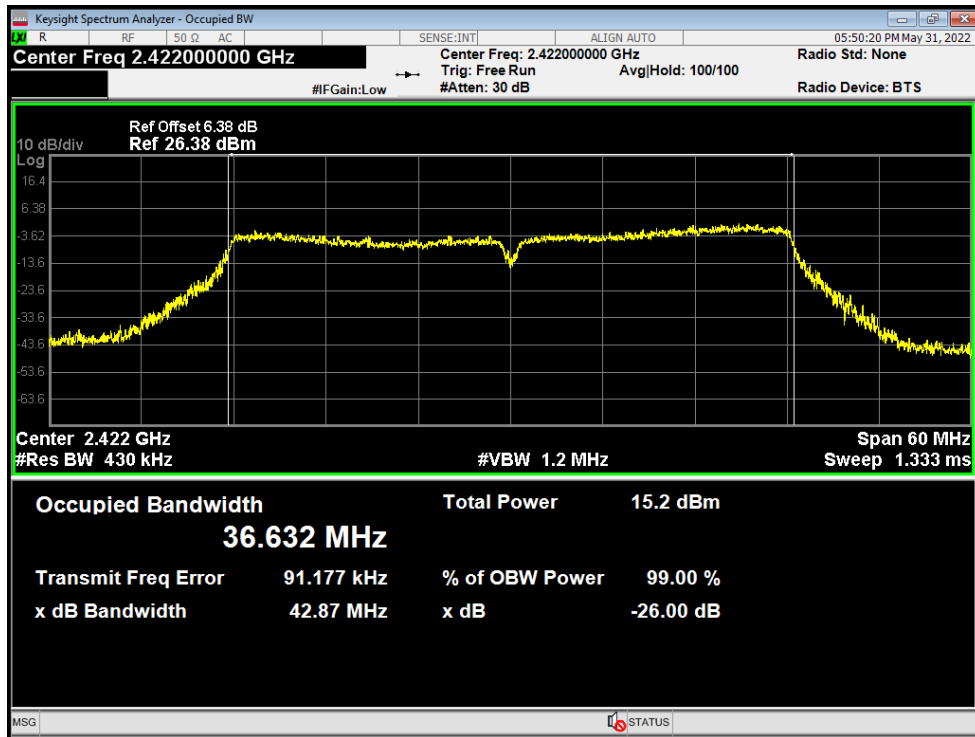
OBW NVNT n20 2437MHz Ant1



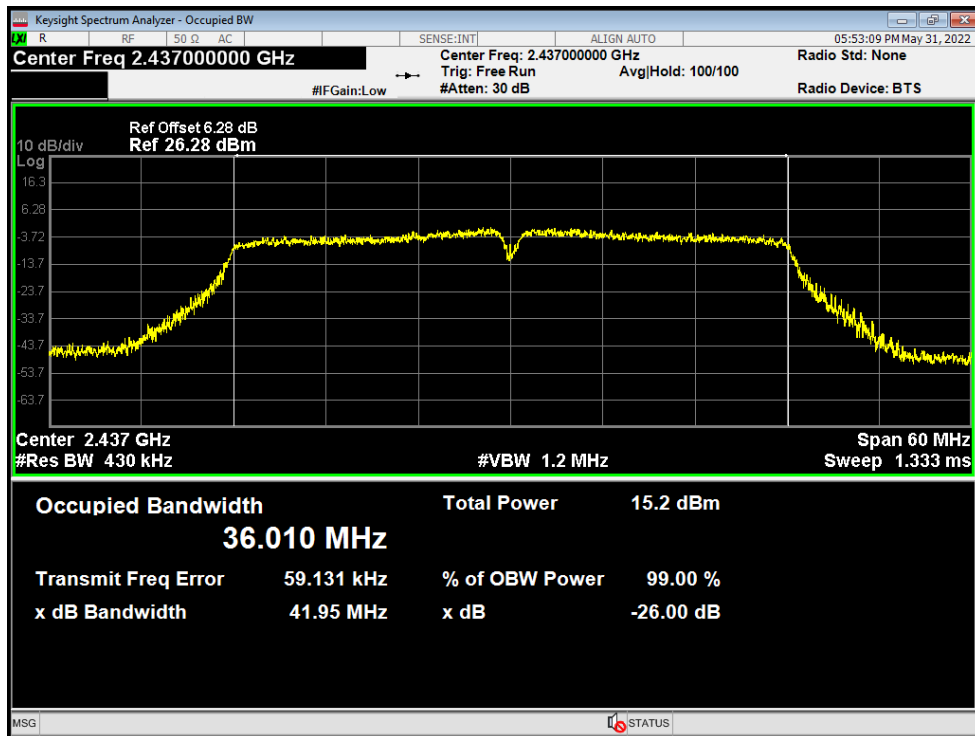
OBW NVNT n20 2462MHz Ant1



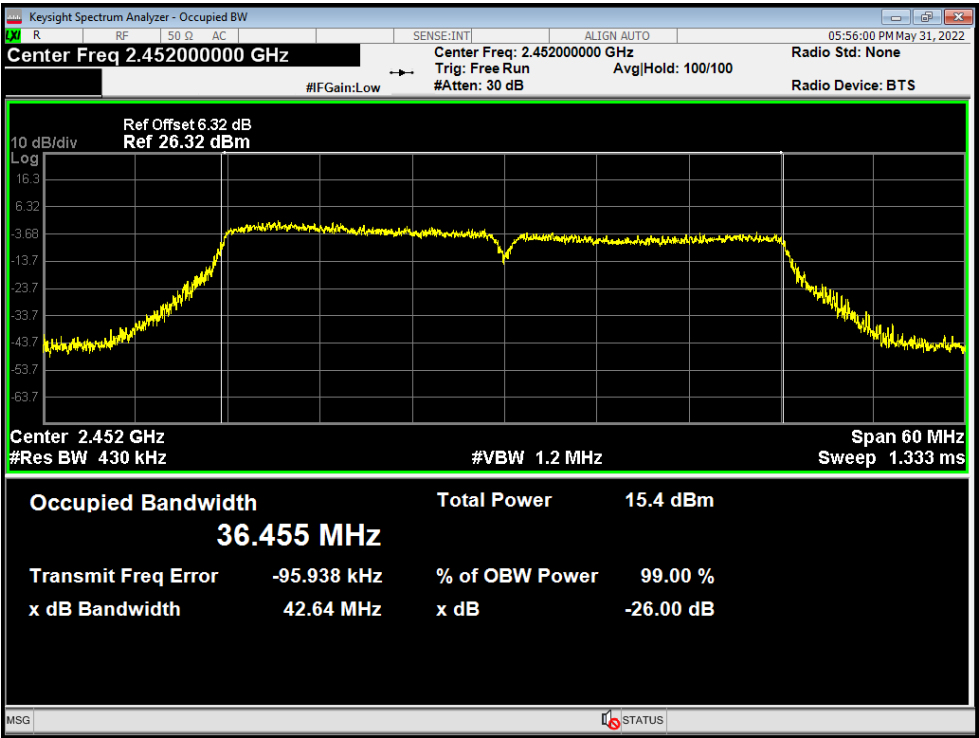
OBW NVNT n40 2422MHz Ant1



OBW NVNT n40 2437MHz Ant1



OBW NVNT n40 2452MHz Ant1

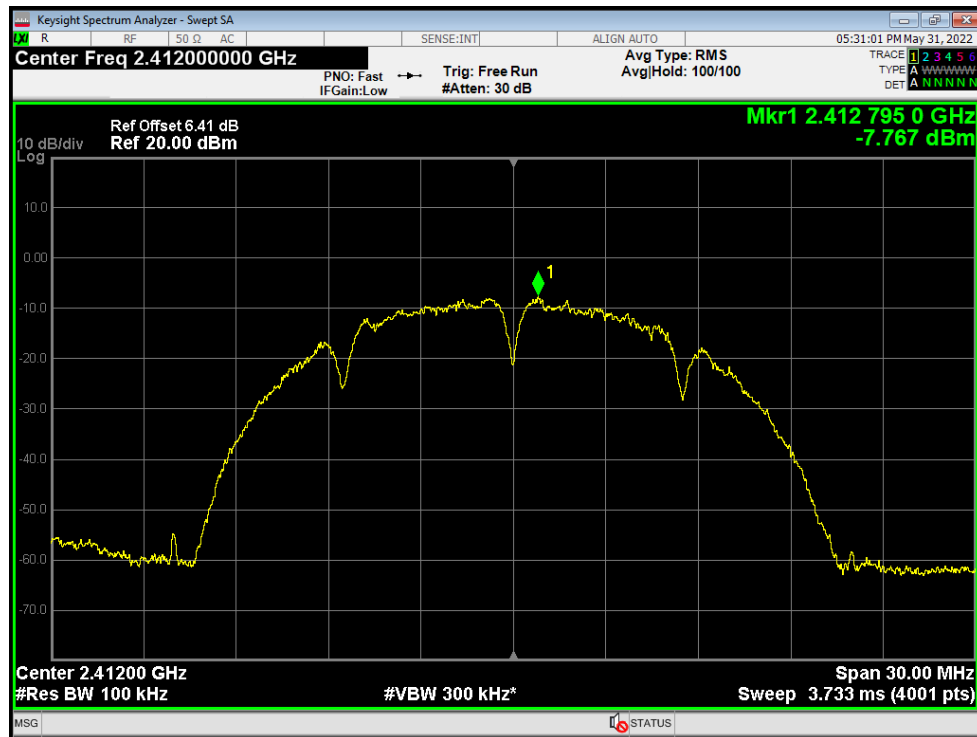


Maximum Power Spectral Density Level

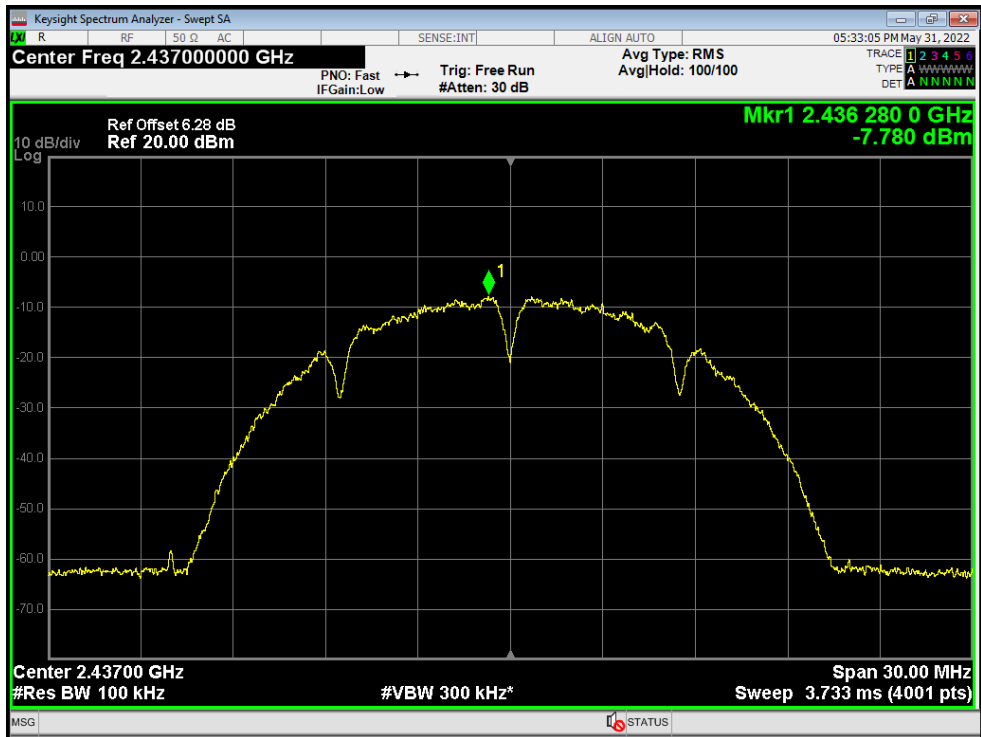
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/100kHz)	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-7.767	-22.996	8	Pass
NVNT	b	2437	Ant1	-7.78	-23.009	8	Pass
NVNT	b	2462	Ant1	-8.41	-23.639	8	Pass
NVNT	g	2412	Ant1	-9.337	-24.566	8	Pass
NVNT	g	2437	Ant1	-10.008	-25.237	8	Pass
NVNT	g	2462	Ant1	-10.17	-25.399	8	Pass
NVNT	n20	2412	Ant1	-9.063	-24.292	8	Pass
NVNT	n20	2437	Ant1	-10.254	-25.483	8	Pass
NVNT	n20	2462	Ant1	-9.742	-24.971	8	Pass
NVNT	n40	2422	Ant1	-10.797	-26.026	8	Pass
NVNT	n40	2437	Ant1	-12	-27.229	8	Pass
NVNT	n40	2452	Ant1	-10.992	-26.221	8	Pass

Note: Max PSD (dBm/3kHz)= Max PSD (dBm/100kHz)-10log(100/3)

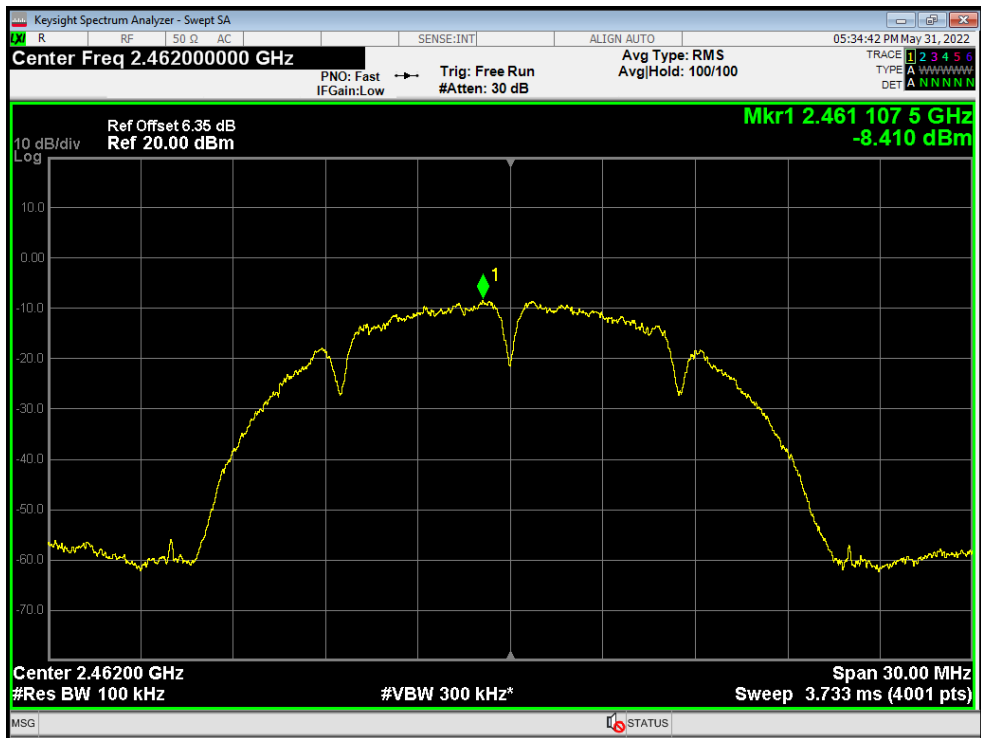
PSD NVNT b 2412MHz Ant1



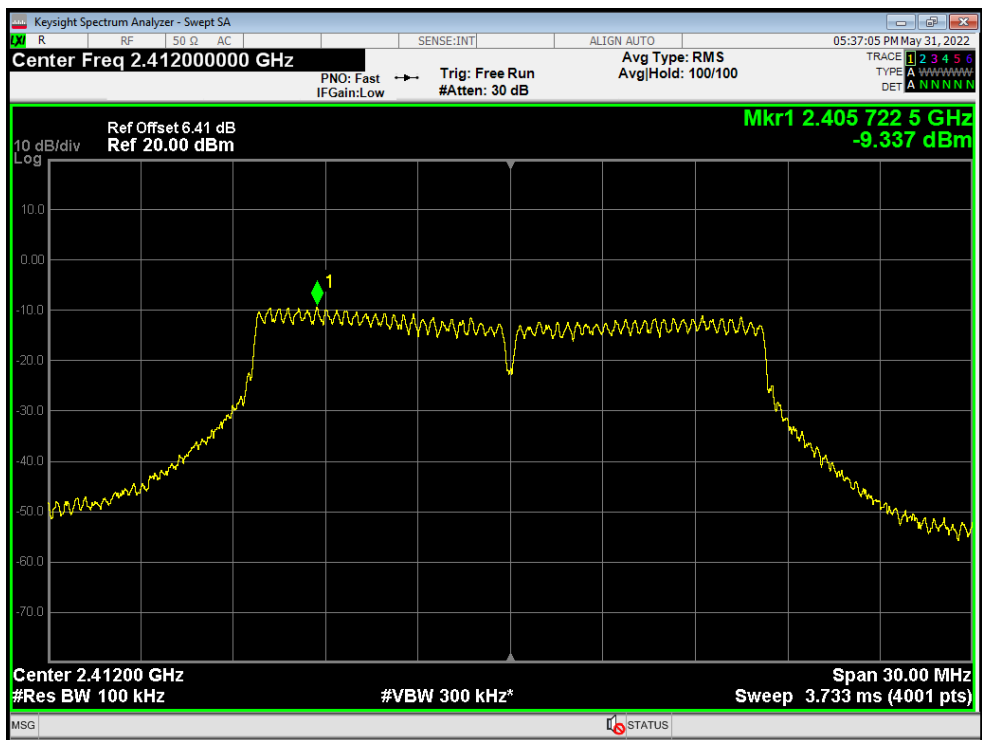
PSD NVNT b 2437MHz Ant1



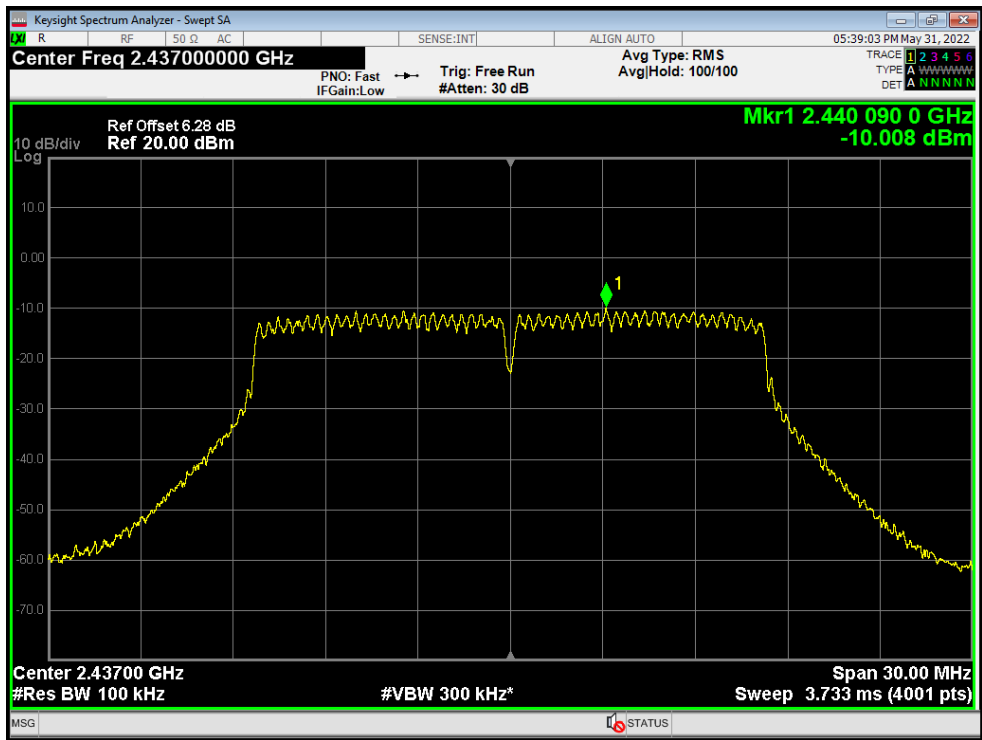
PSD NVNT b 2462MHz Ant1



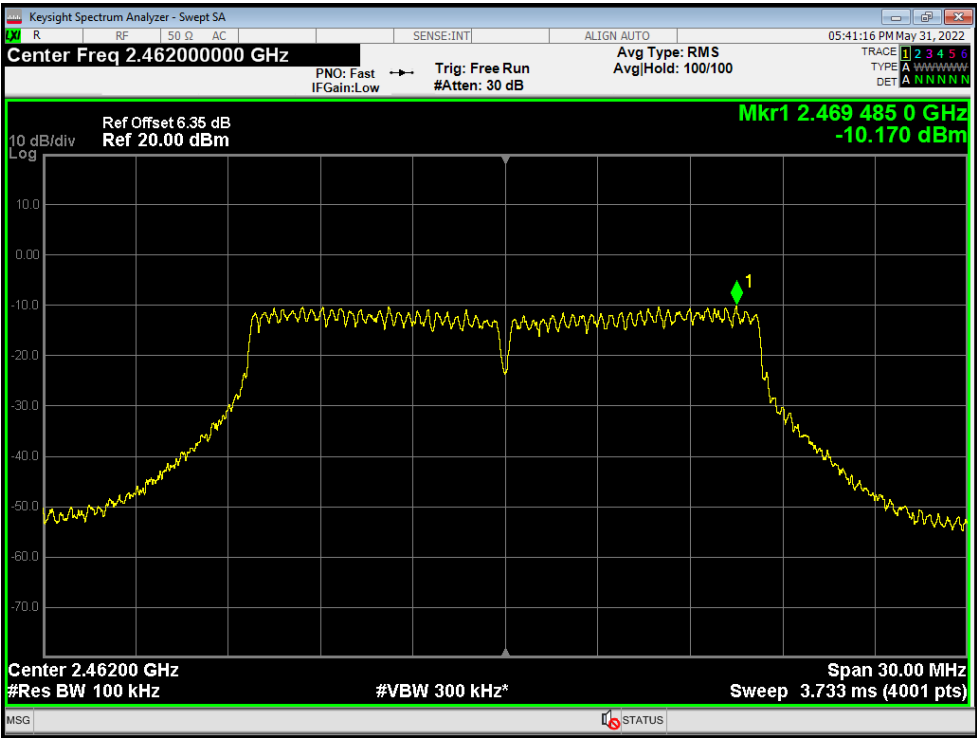
PSD NVNT g 2412MHz Ant1



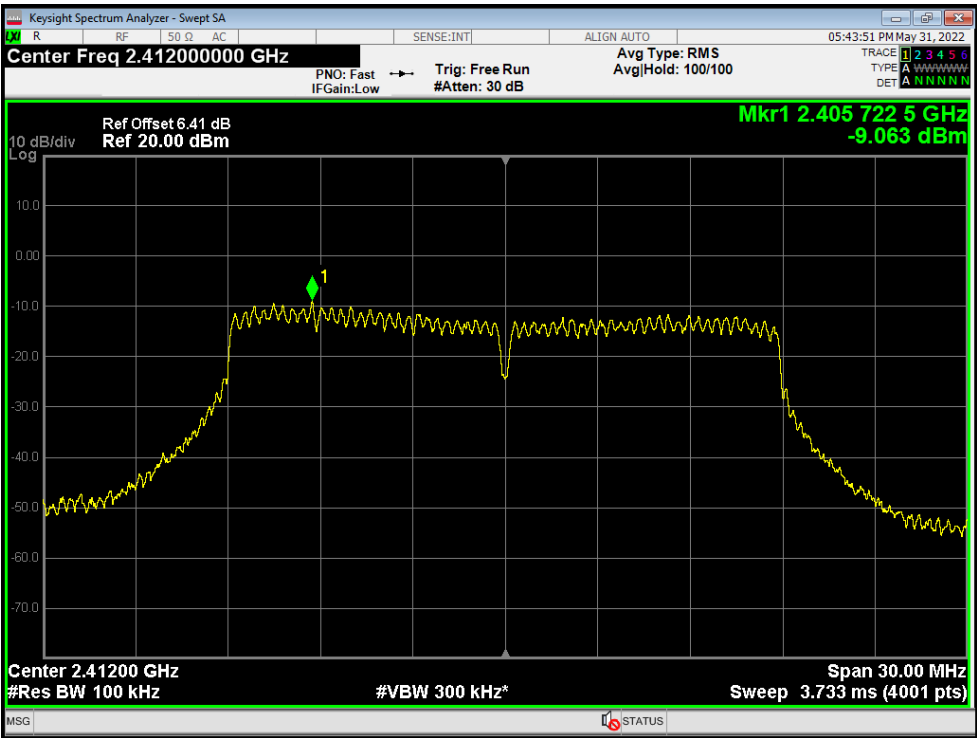
PSD NVNT g 2437MHz Ant1



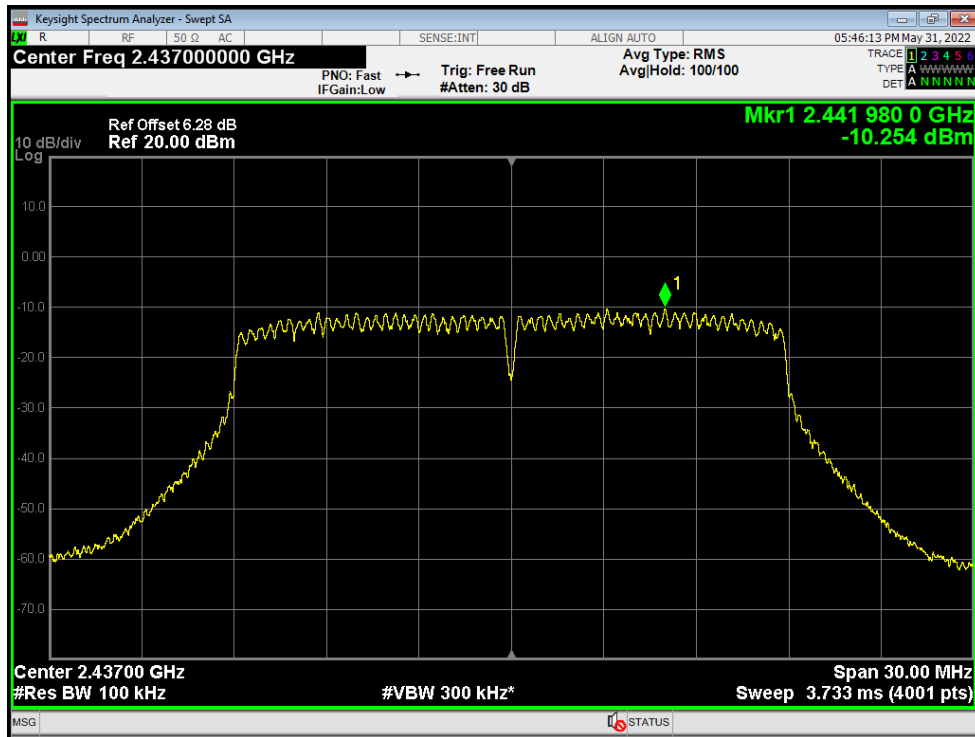
PSD NVNT g 2462MHz Ant1



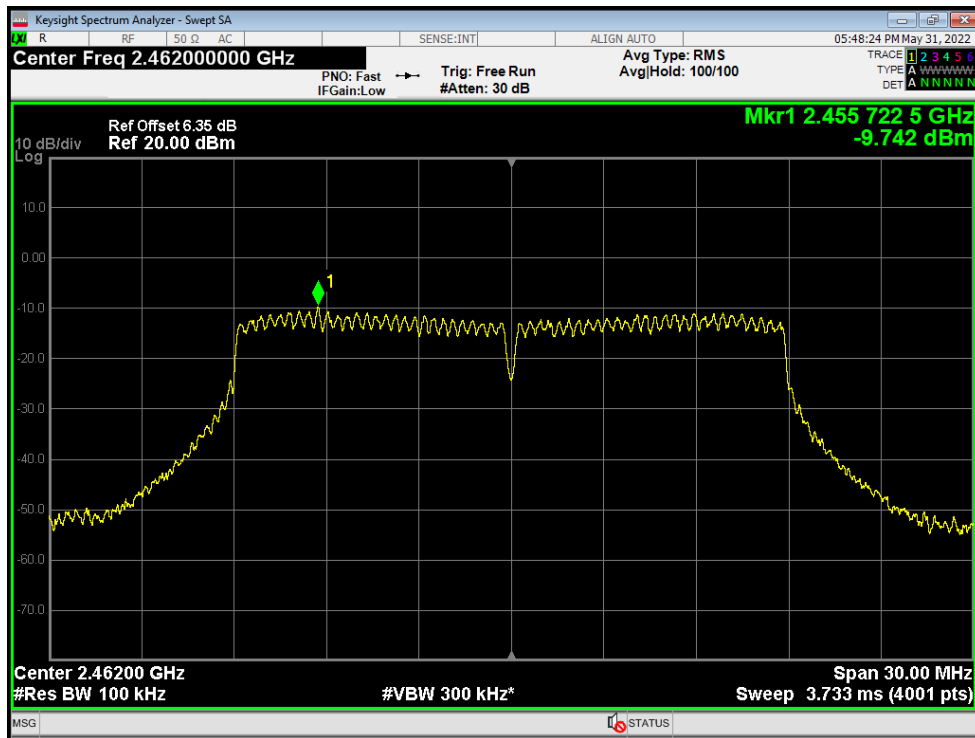
PSD NVNT n20 2412MHz Ant1



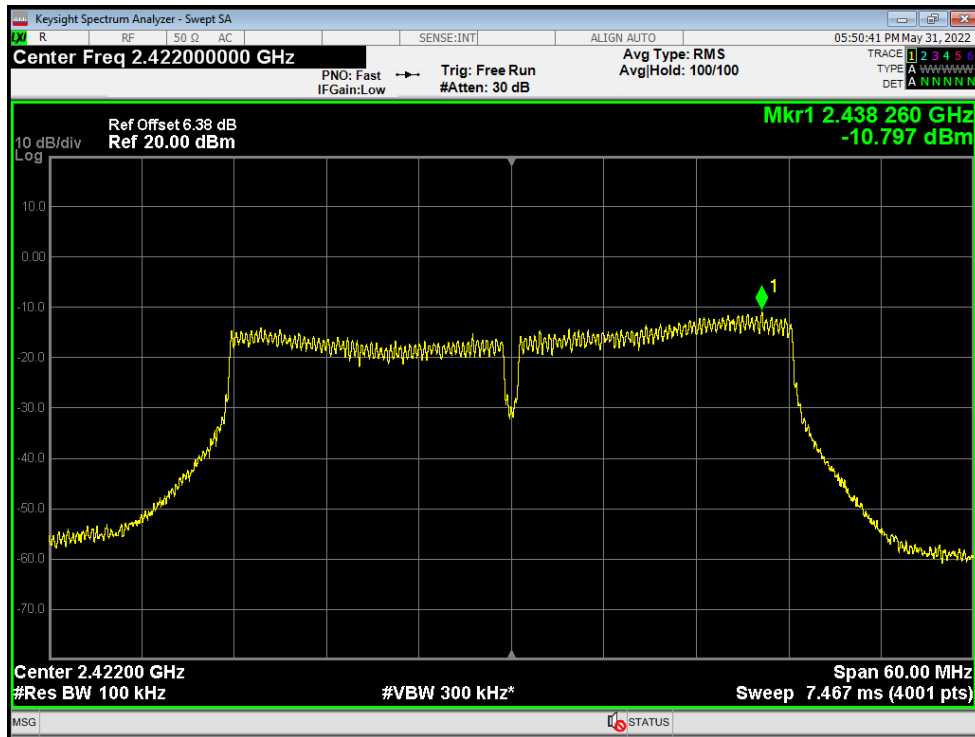
PSD NVNT n20 2437MHz Ant1



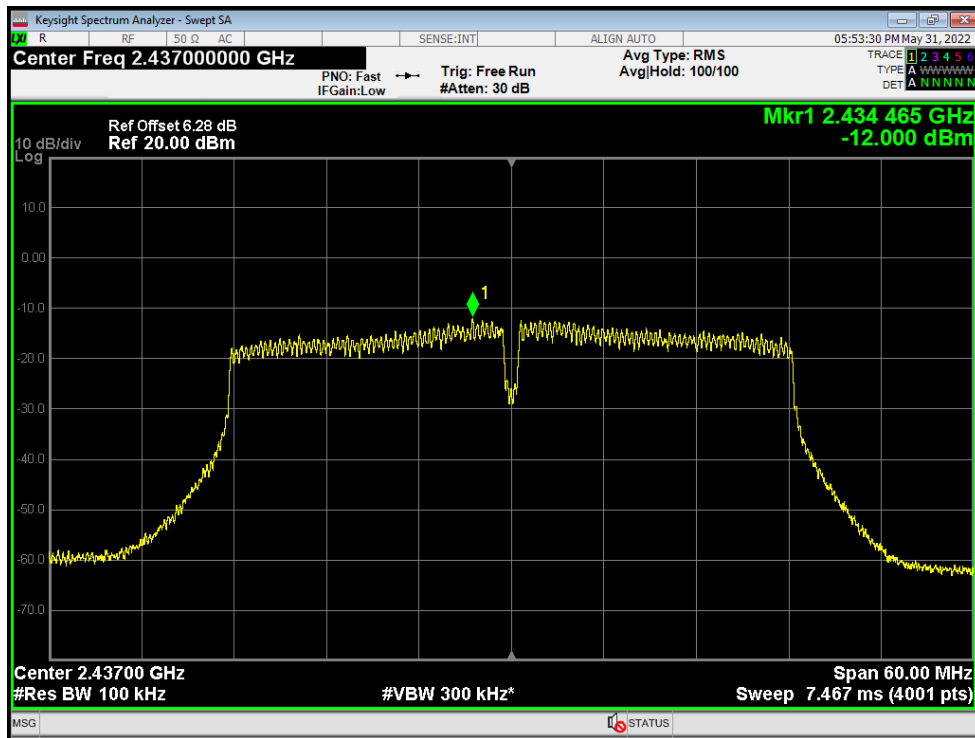
PSD NVNT n20 2462MHz Ant1



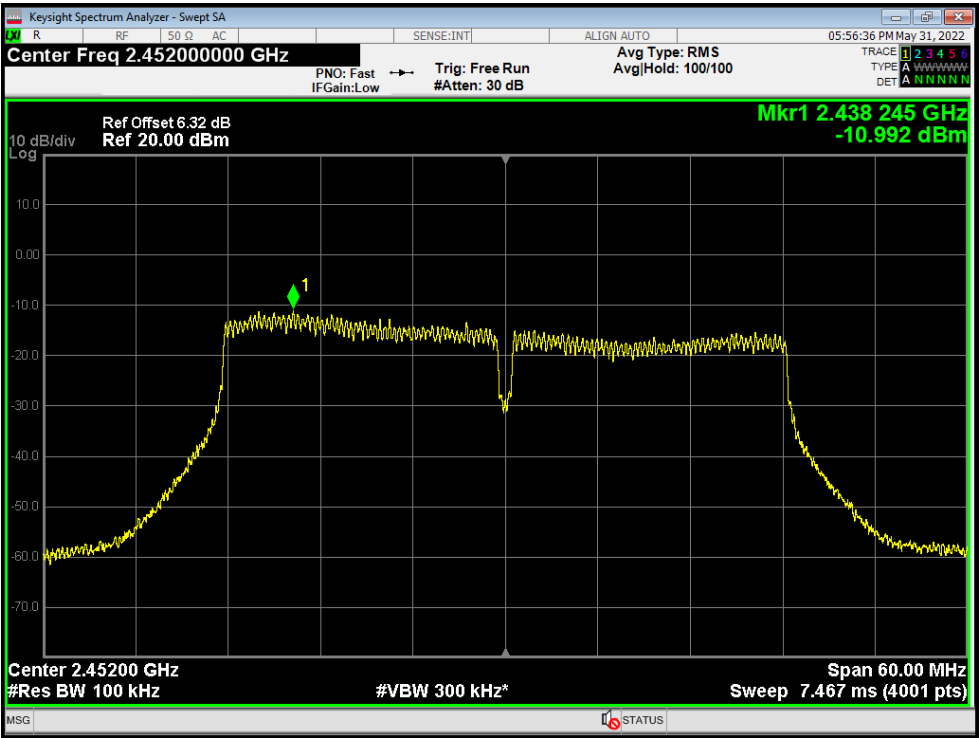
PSD NVNT n40 2422MHz Ant1



PSD NVNT n40 2437MHz Ant1



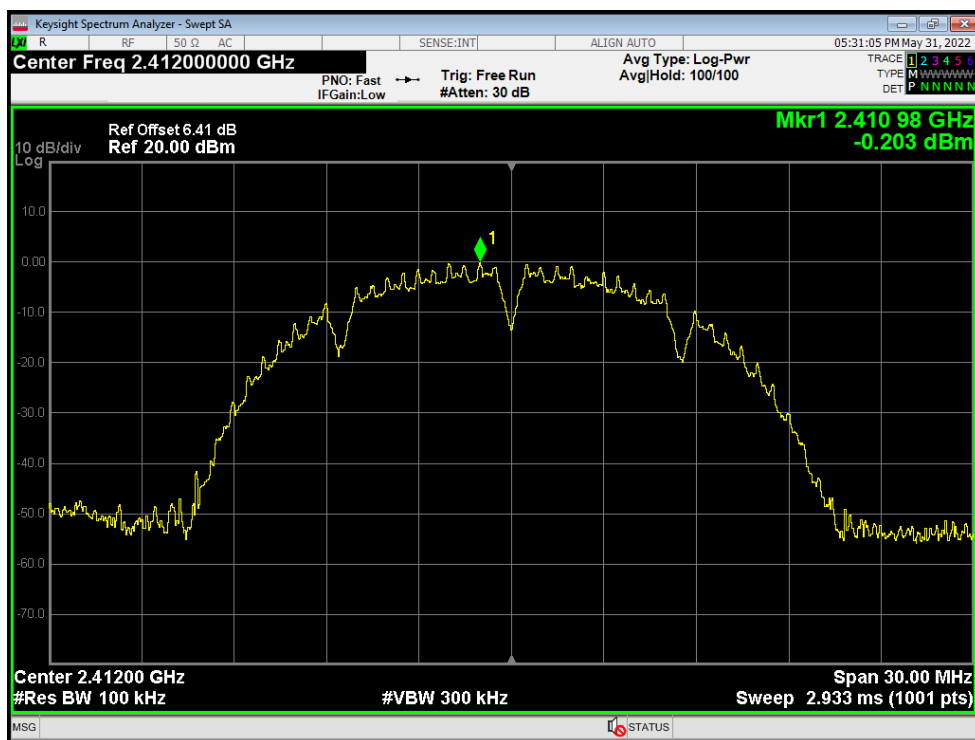
PSD NVNT n40 2452MHz Ant1



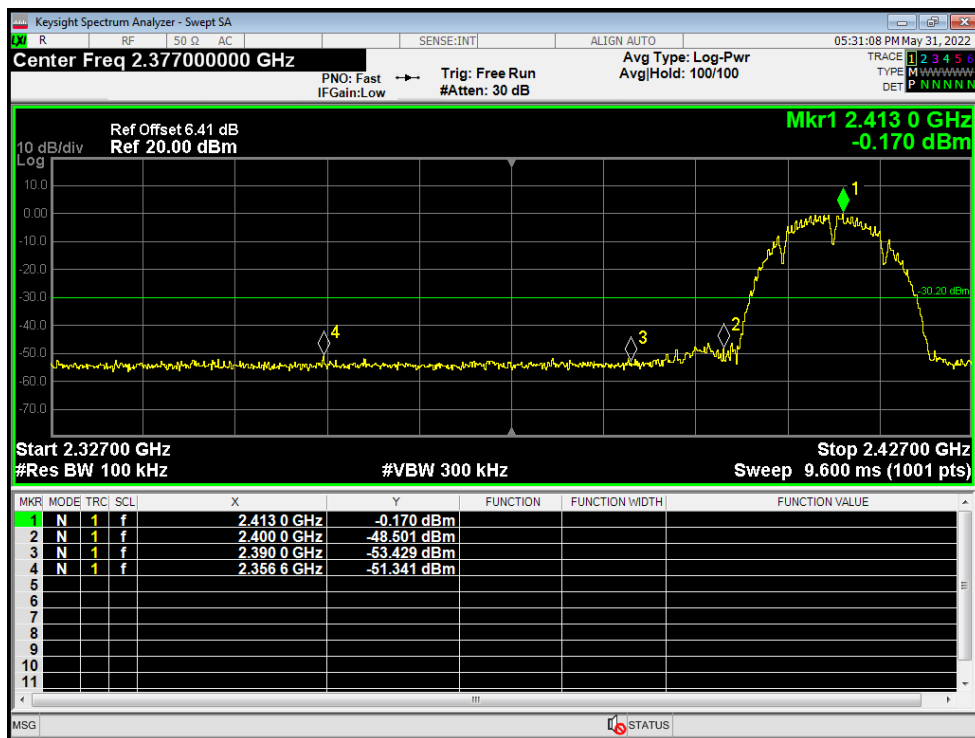
Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-51.14	-30	Pass
NVNT	b	2462	Ant1	-50.04	-30	Pass
NVNT	g	2412	Ant1	-46.78	-30	Pass
NVNT	g	2462	Ant1	-47.49	-30	Pass
NVNT	n20	2412	Ant1	-44.38	-30	Pass
NVNT	n20	2462	Ant1	-45.68	-30	Pass
NVNT	n40	2422	Ant1	-43.13	-30	Pass
NVNT	n40	2452	Ant1	-45.74	-30	Pass

Band Edge NVNT b 2412MHz Ant1 Ref



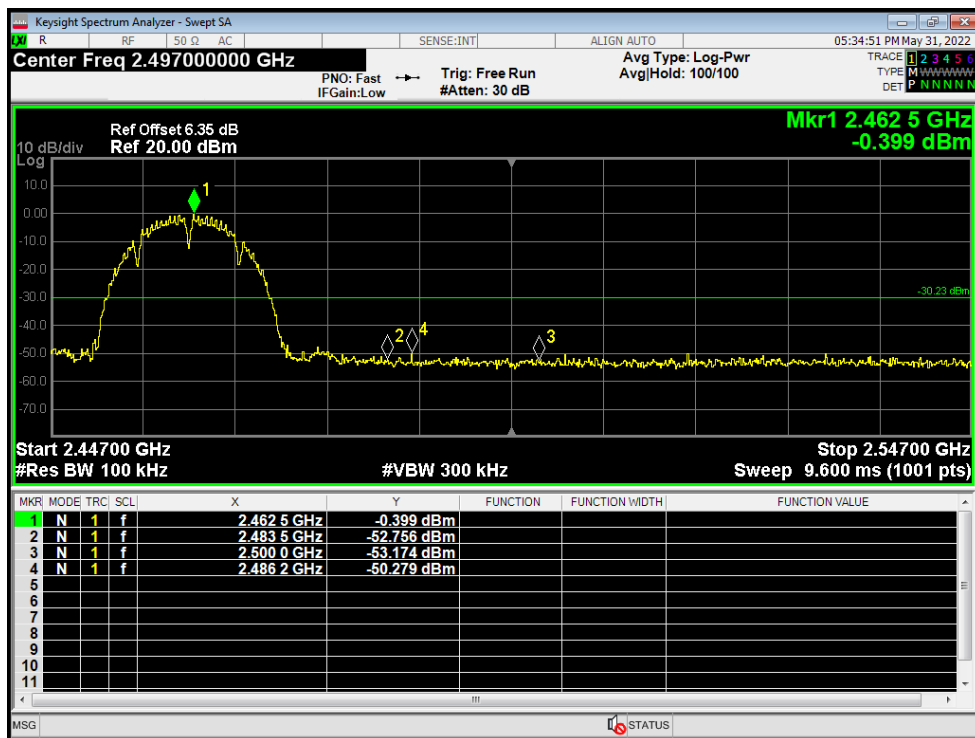
Band Edge NVNT b 2412MHz Ant1 Emission



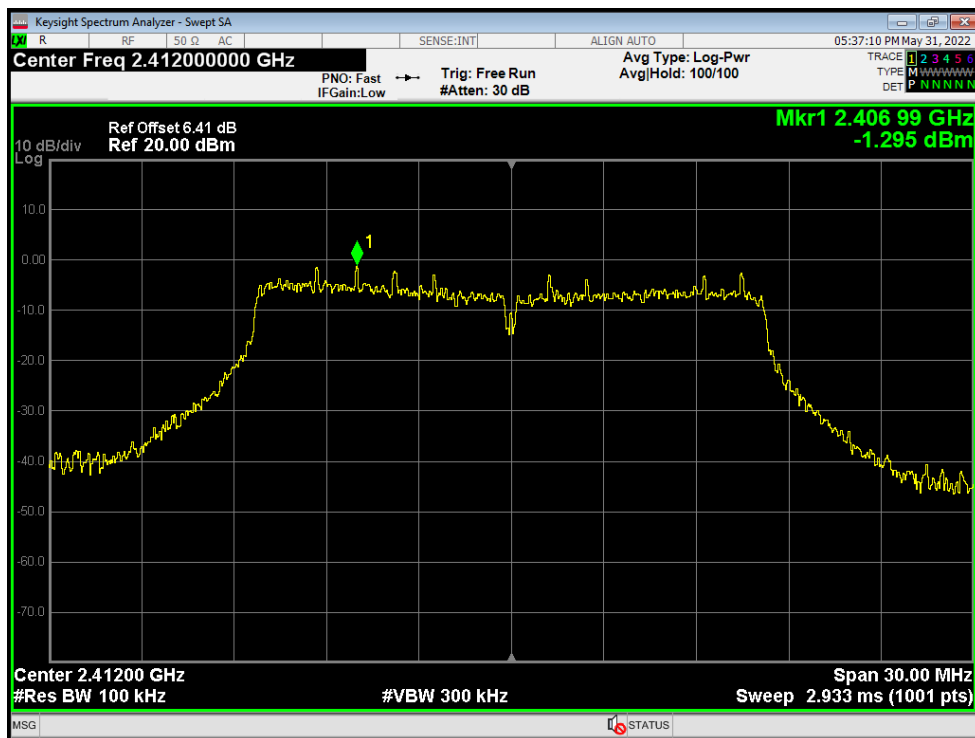
Band Edge NVNT b 2462MHz Ant1 Ref



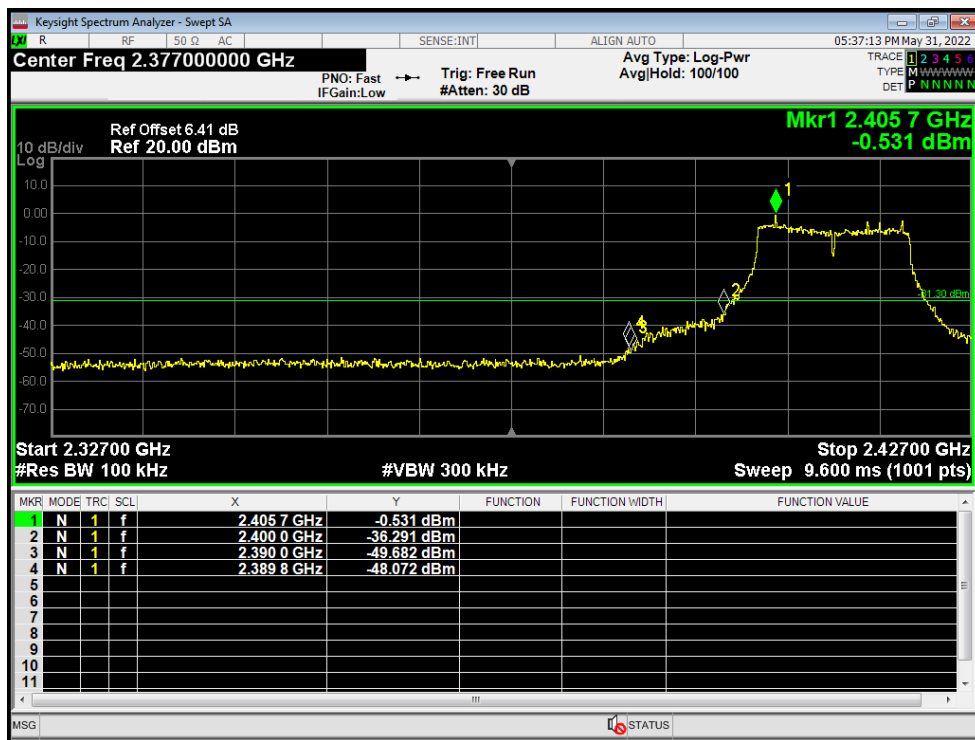
Band Edge NVNT b 2462MHz Ant1 Emission



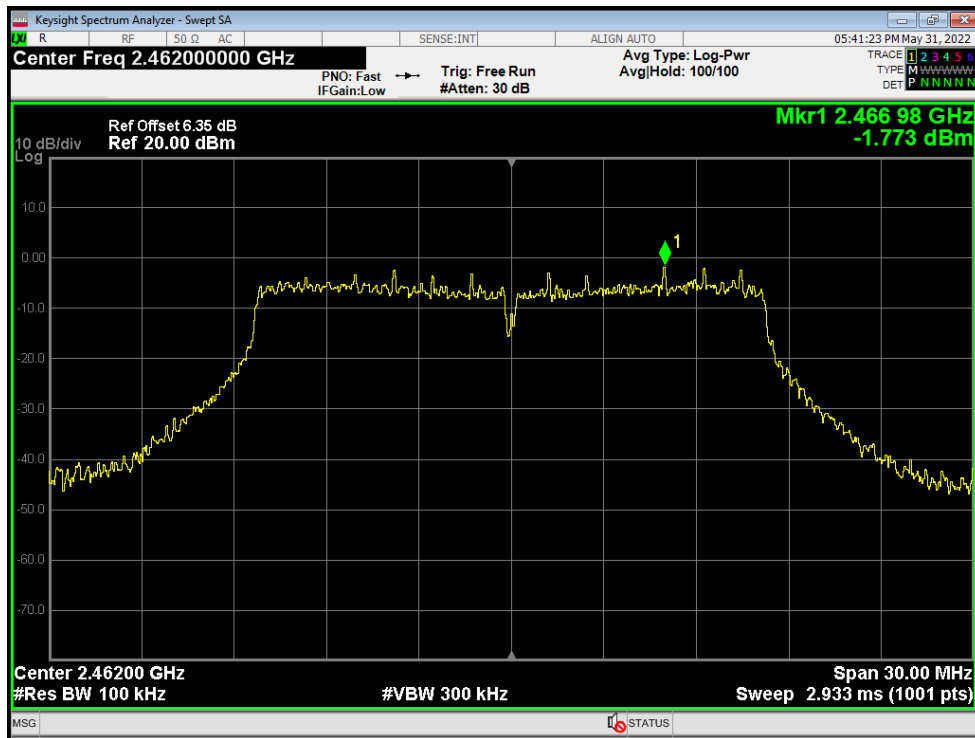
Band Edge NVNT g 2412MHz Ant1 Ref



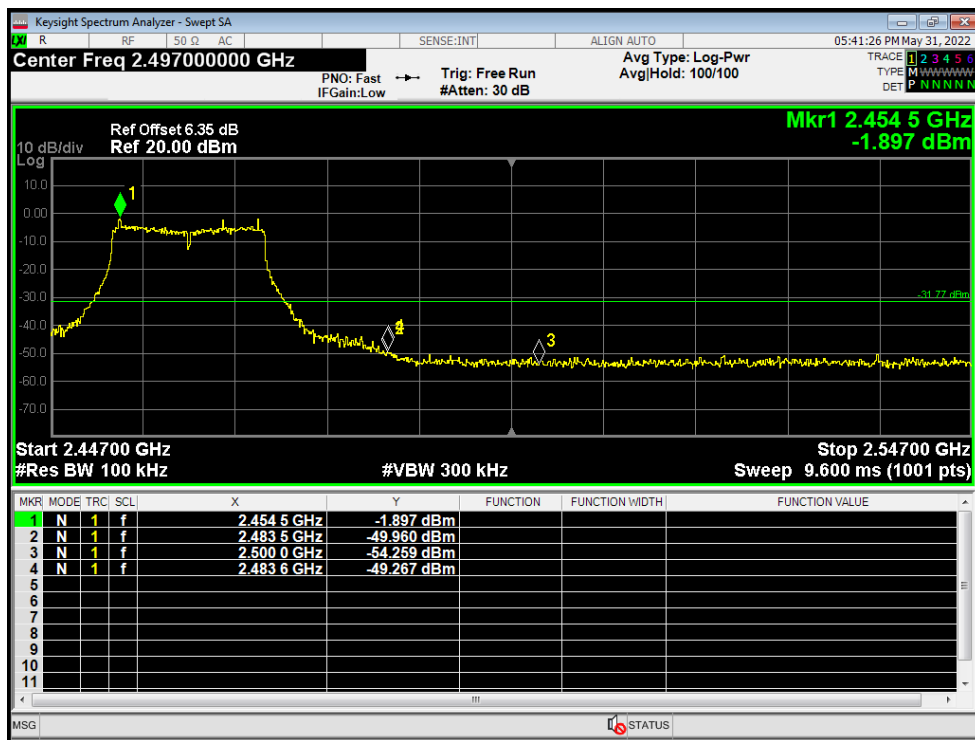
Band Edge NVNT g 2412MHz Ant1 Emission



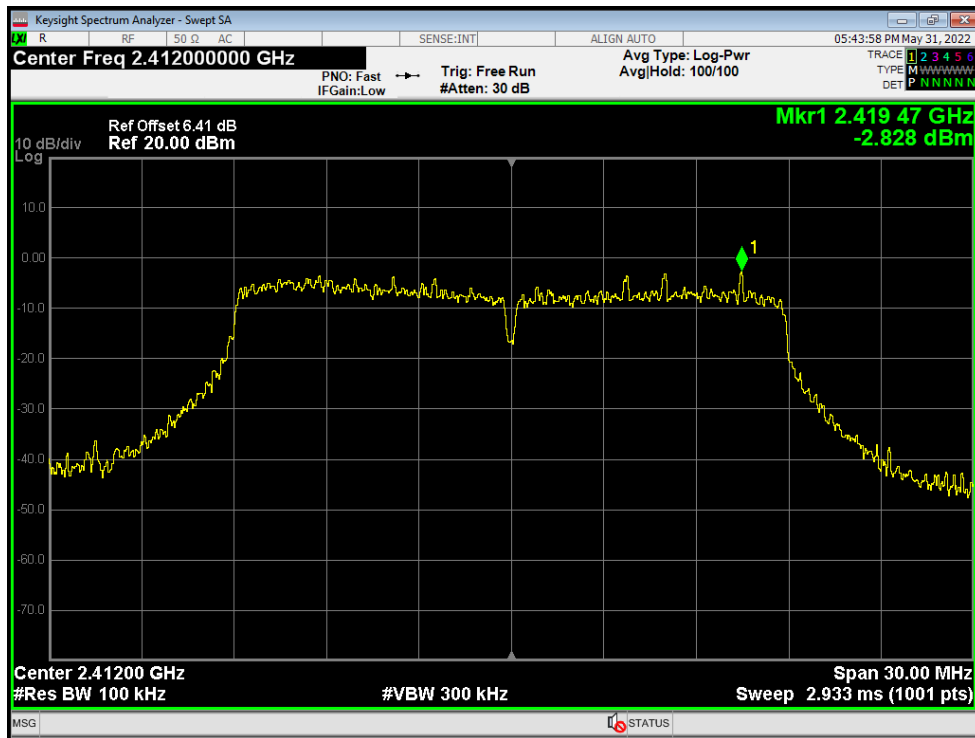
Band Edge NVNT g 2462MHz Ant1 Ref



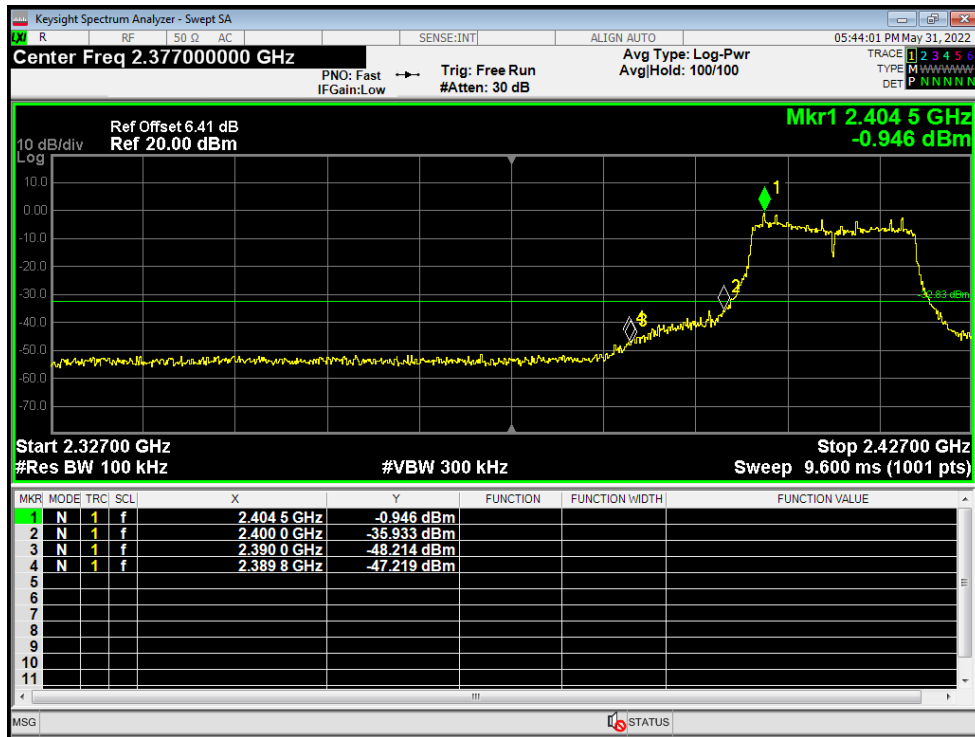
Band Edge NVNT g 2462MHz Ant1 Emission



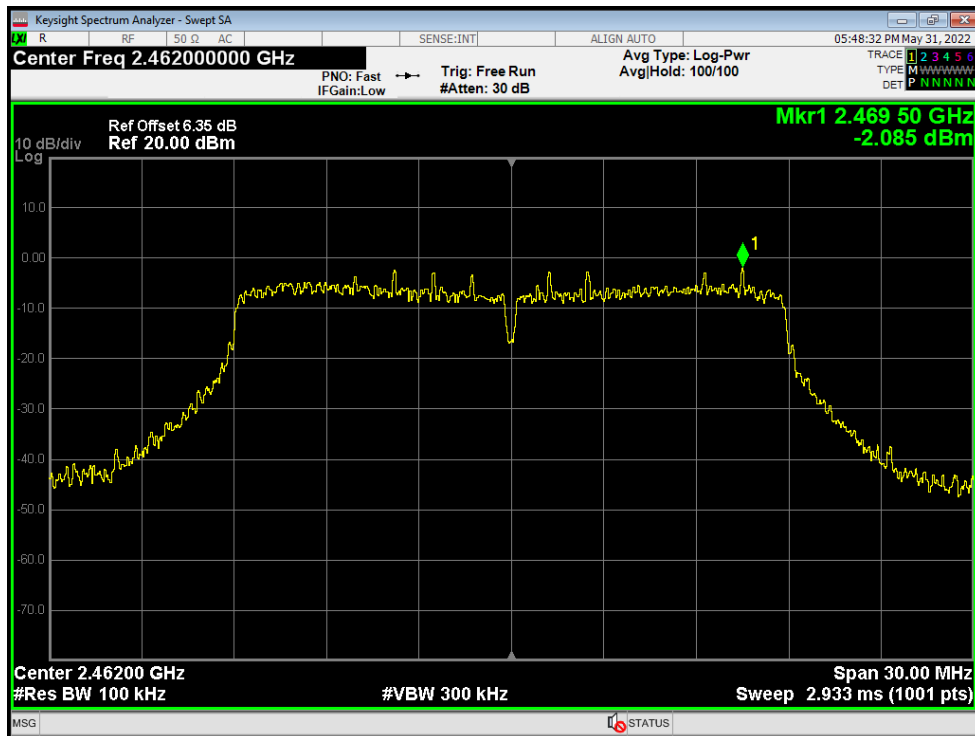
Band Edge NVNT n20 2412MHz Ant1 Ref



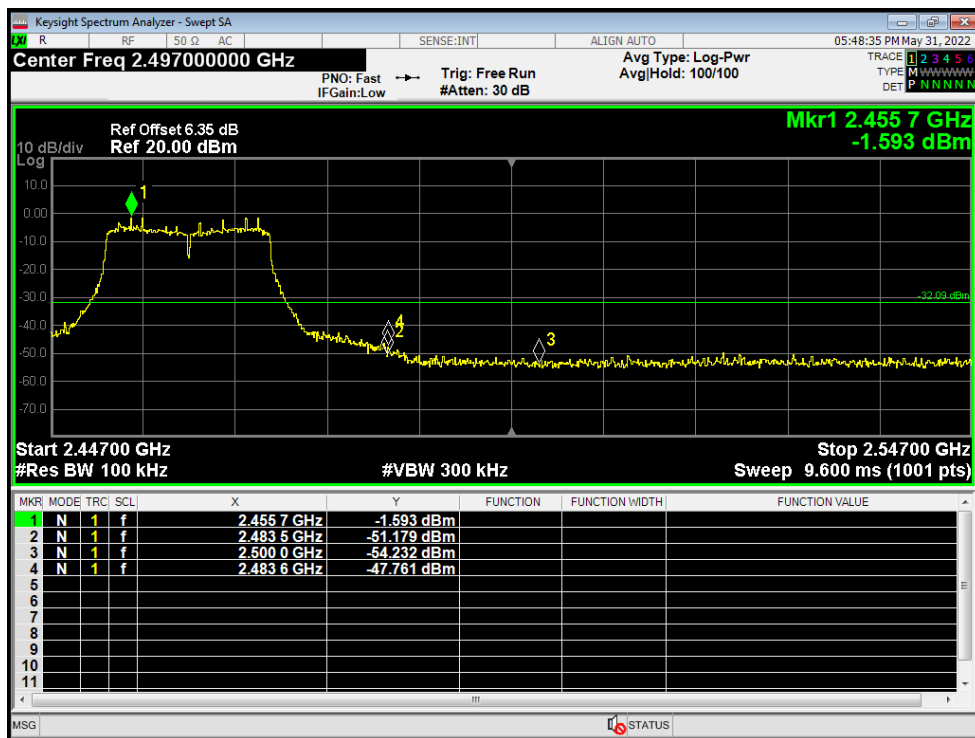
Band Edge NVNT n20 2412MHz Ant1 Emission



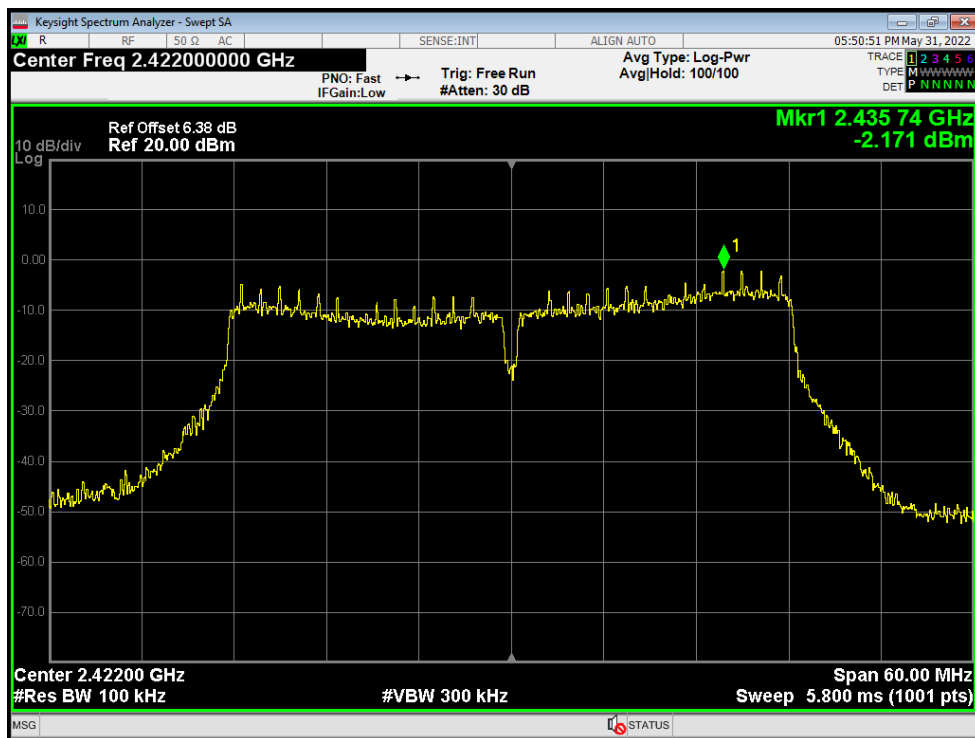
Band Edge NVNT n20 2462MHz Ant1 Ref



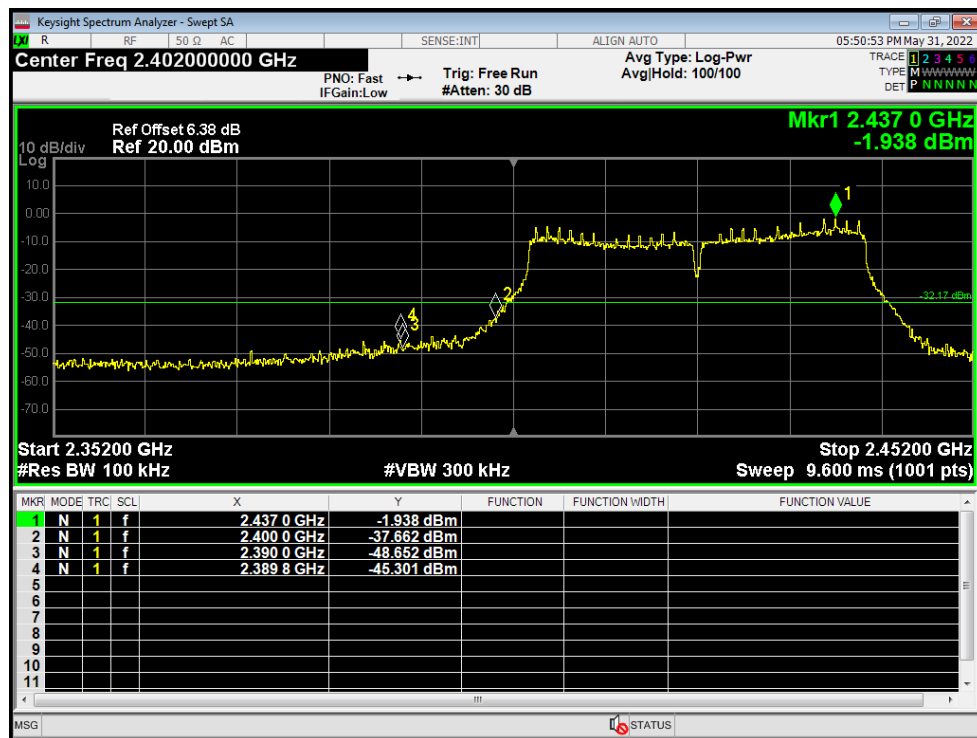
Band Edge NVNT n20 2462MHz Ant1 Emission



Band Edge NVNT n40 2422MHz Ant1 Ref



Band Edge NVNT n40 2422MHz Ant1 Emission



Band Edge NVNT n40 2452MHz Ant1 Ref



Keysight Spectrum Analyzer - Swept SA

R F 50 Ω AC SENSE:INT ALIGN AUTO 05:56:49 PM May 31, 2022

Center Freq 2.47200000 GHz

PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: 100/100

Ref Offset 6.32 dB Ref 20.00 dBm

Mkr1 2.437 0 GHz -2.278 dBm

10 dB/div Log

Start 2.42200 GHz Stop 2.52200 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.437 0 GHz	-2.278 dBm			
2	N	1	f	2.483 5 GHz	-48.771 dBm			
3	N	1	f	2.500 0 GHz	-53.424 dBm			
4	N	1	f	2.484 1 GHz	-47.821 dBm			

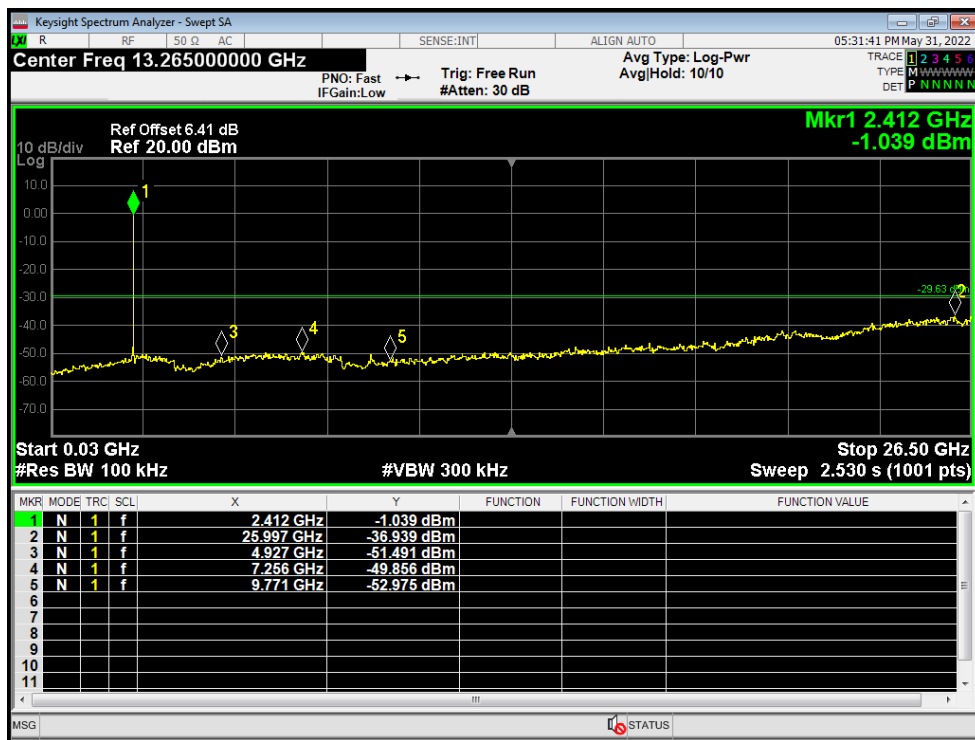
Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-37.3	-30	Pass
NVNT	b	2437	Ant1	-37.37	-30	Pass
NVNT	b	2462	Ant1	-36.4	-30	Pass
NVNT	g	2412	Ant1	-35.8	-30	Pass
NVNT	g	2437	Ant1	-35.34	-30	Pass
NVNT	g	2462	Ant1	-35.52	-30	Pass
NVNT	n20	2412	Ant1	-35.04	-30	Pass
NVNT	n20	2437	Ant1	-35.57	-30	Pass
NVNT	n20	2462	Ant1	-34.82	-30	Pass
NVNT	n40	2422	Ant1	-35.4	-30	Pass
NVNT	n40	2437	Ant1	-34.17	-30	Pass
NVNT	n40	2452	Ant1	-35.41	-30	Pass

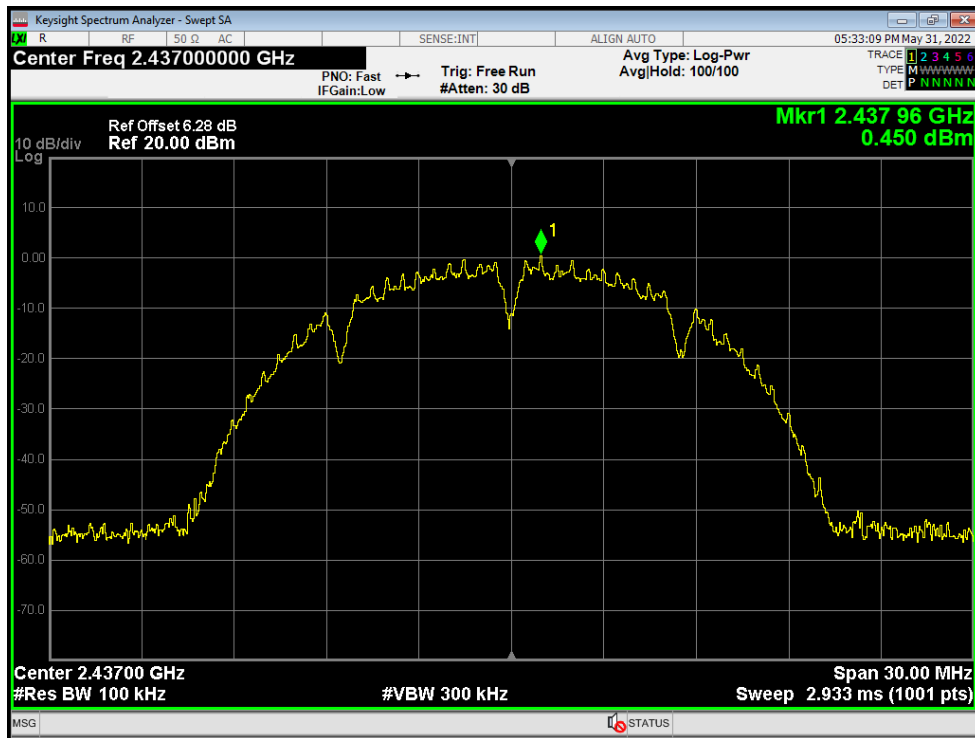
Tx. Spurious NVNT b 2412MHz Ant1 Ref



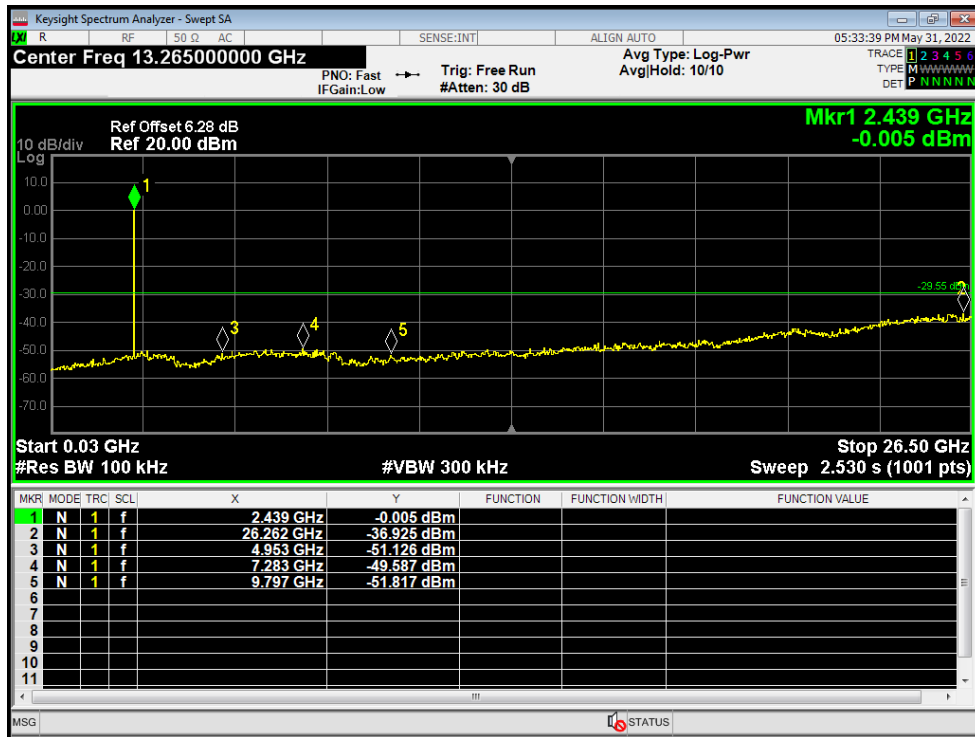
Tx. Spurious NVNT b 2412MHz Ant1 Emission



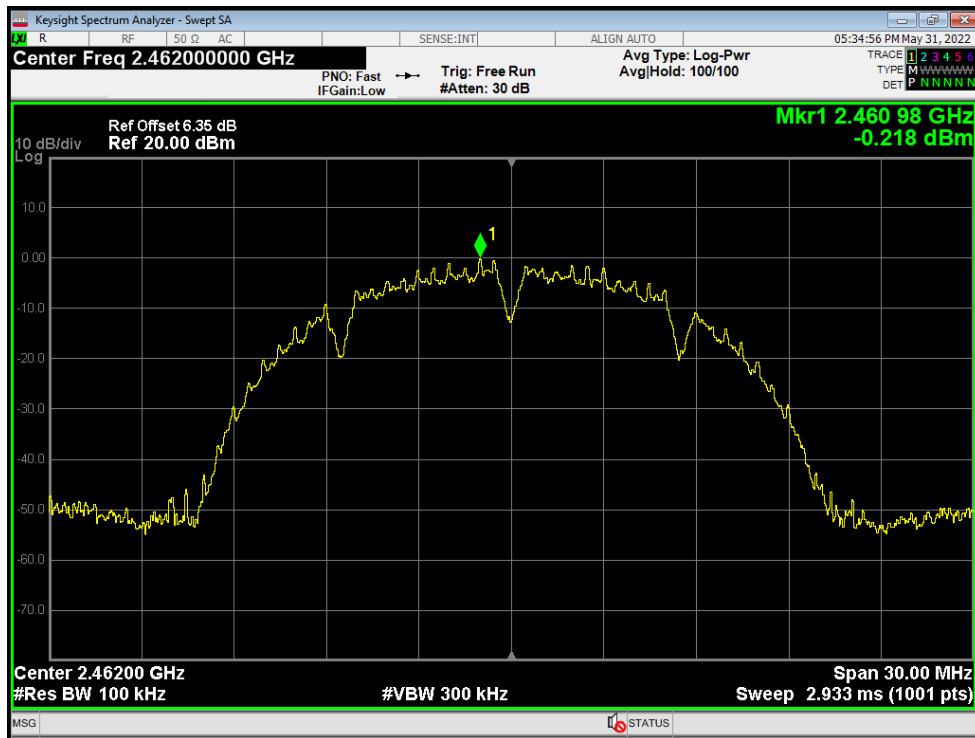
Tx. Spurious NVNT b 2437MHz Ant1 Ref



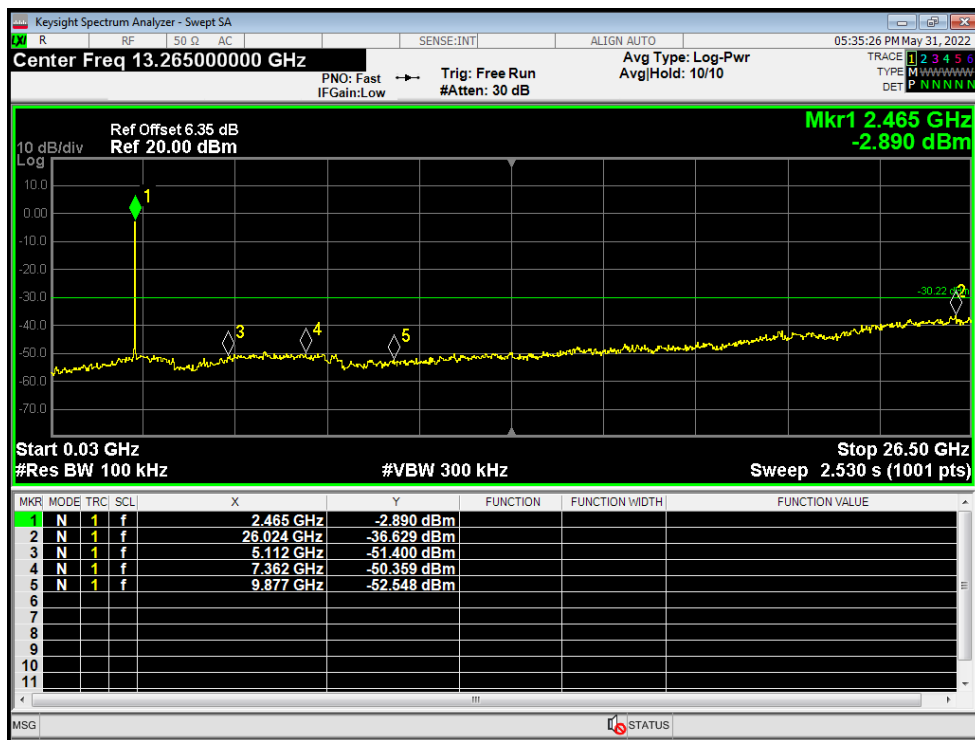
Tx. Spurious NVNT b 2437MHz Ant1 Emission



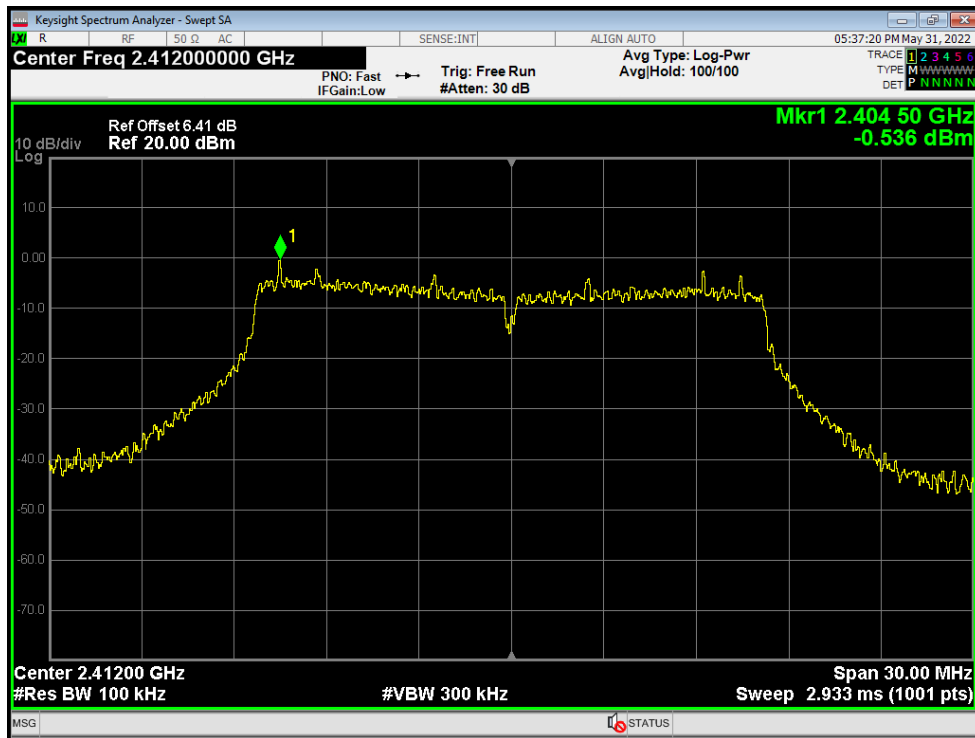
Tx. Spurious NVNT b 2462MHz Ant1 Ref



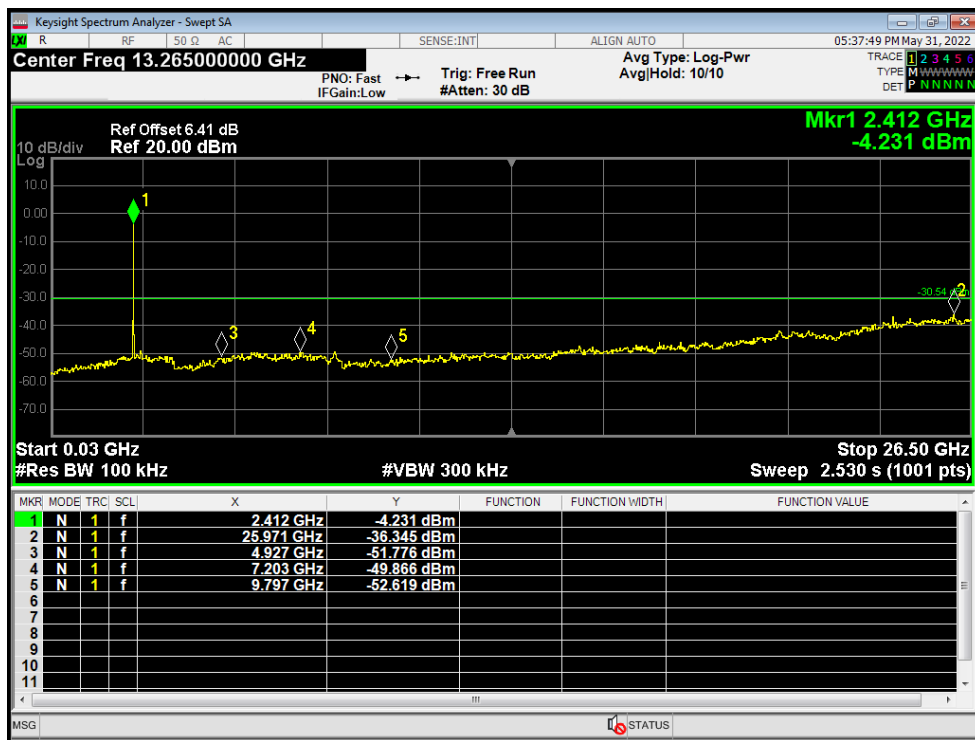
Tx. Spurious NVNT b 2462MHz Ant1 Emission



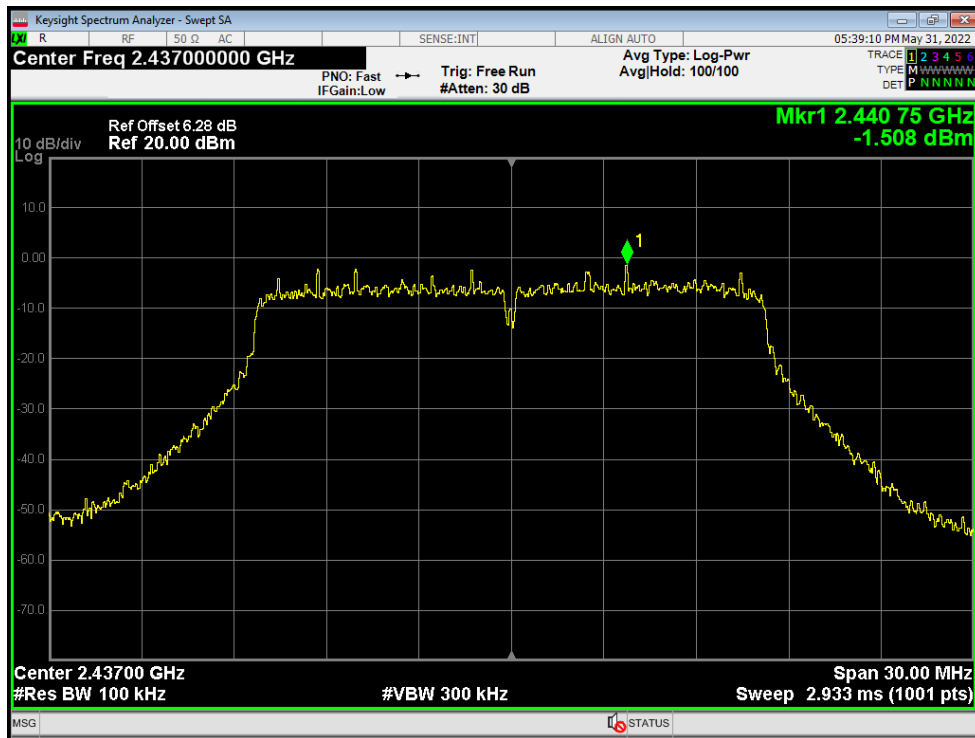
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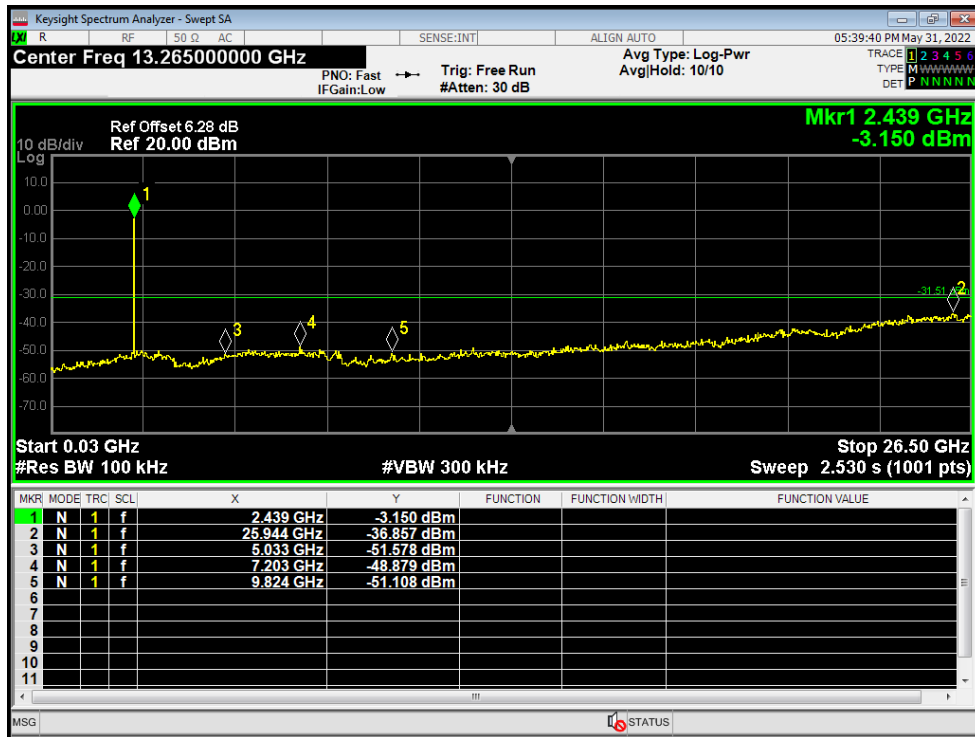
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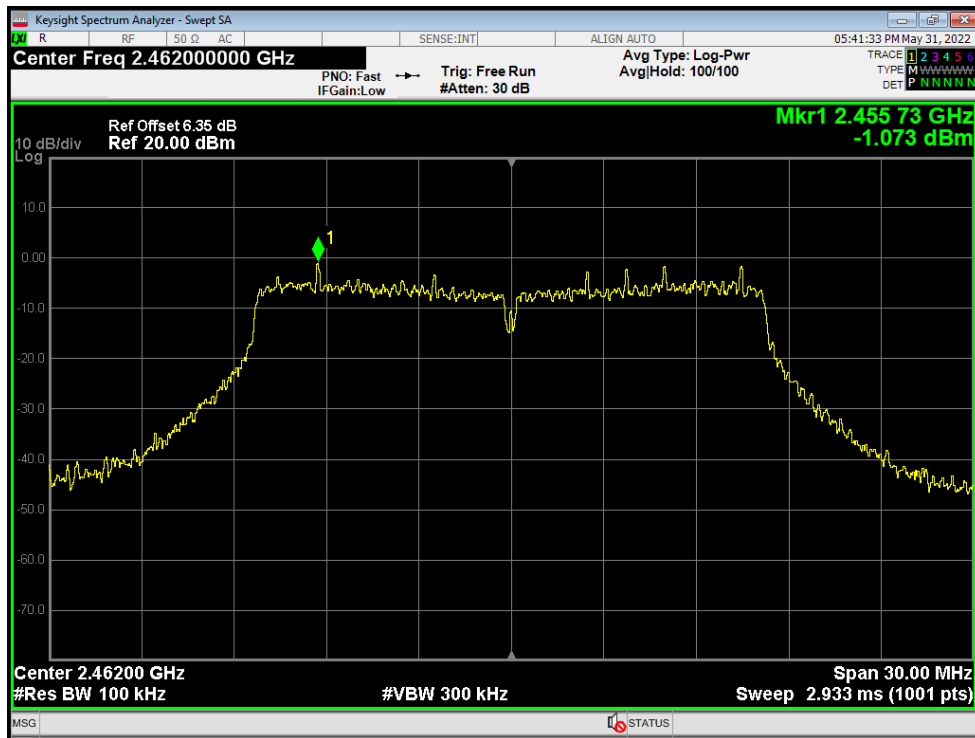
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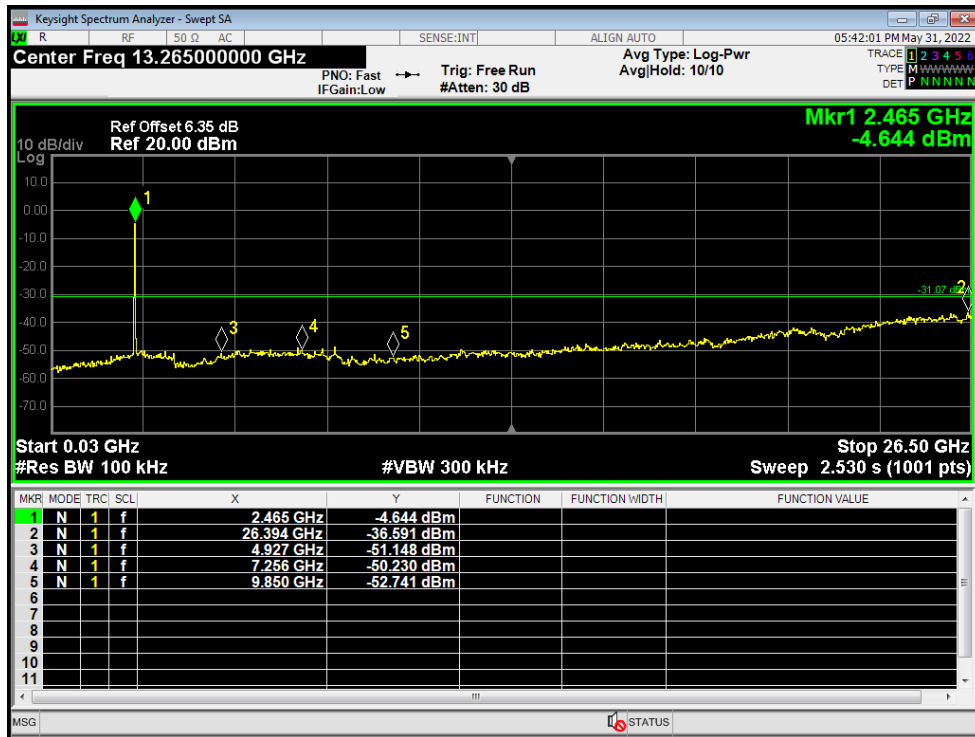
Tx. Spurious NVNT g 2437MHz Ant1 Emission



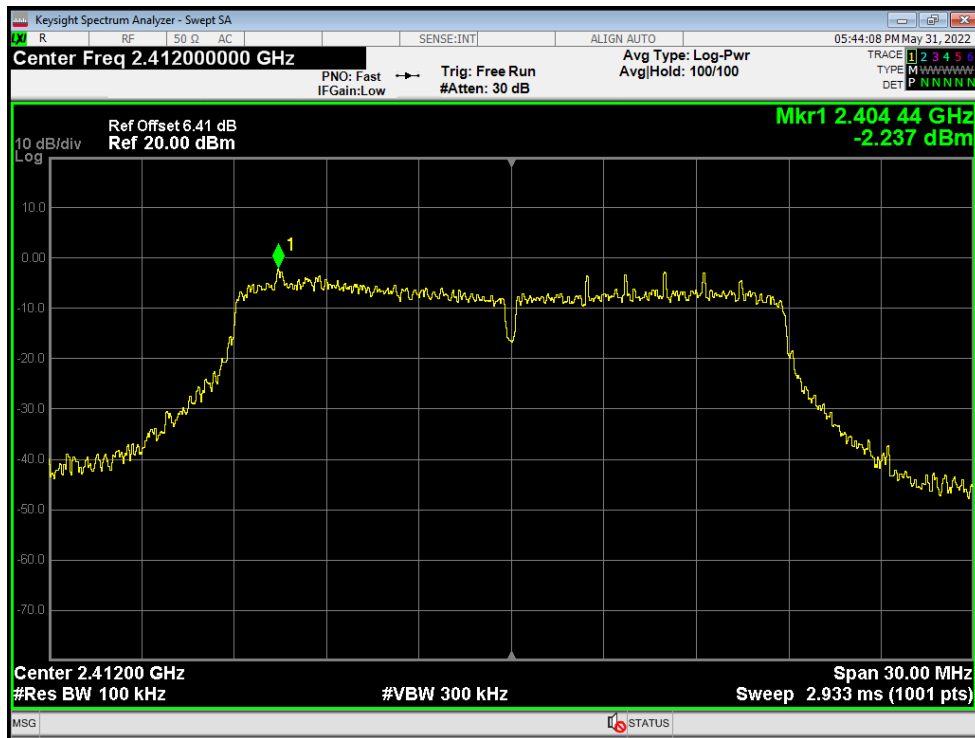
Tx. Spurious NVNT g 2462MHz Ant1 Ref



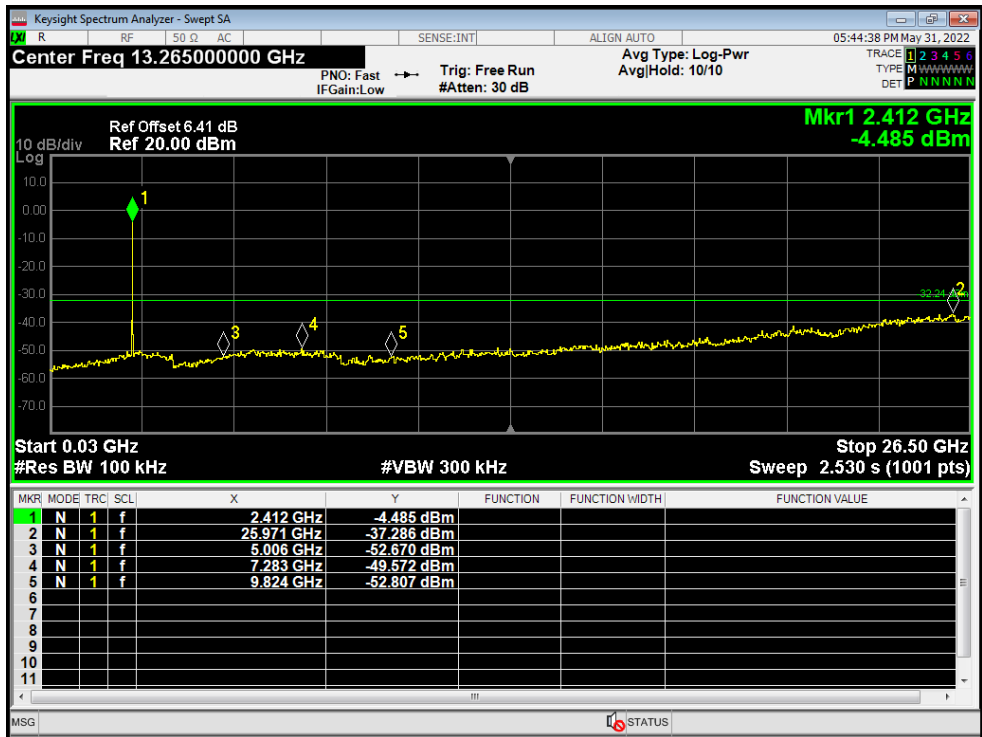
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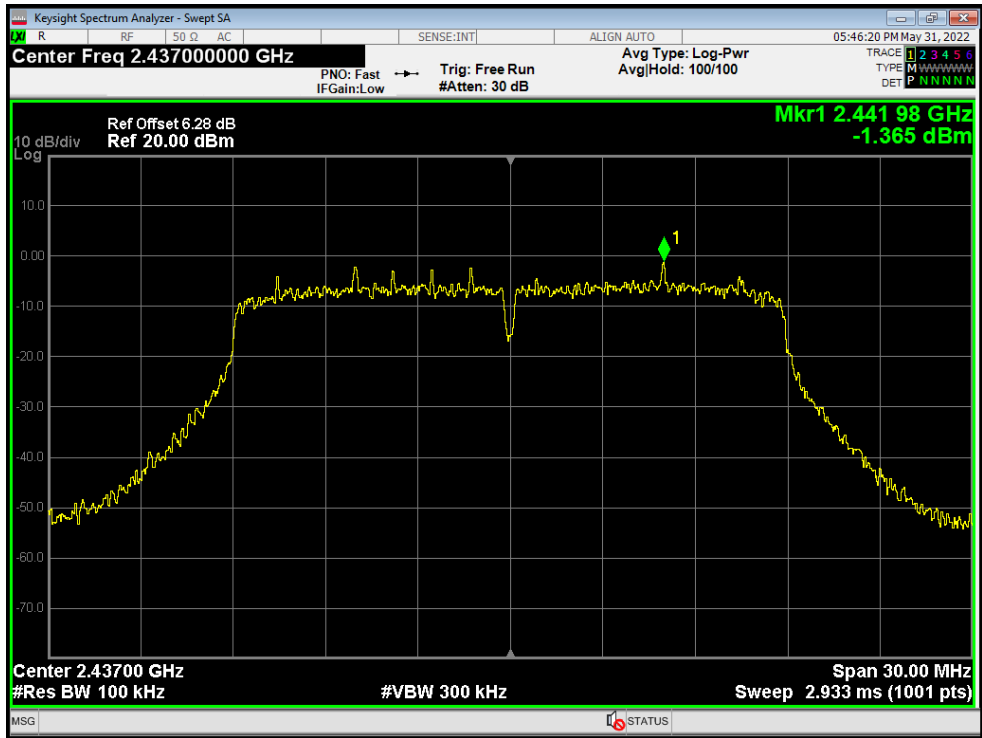
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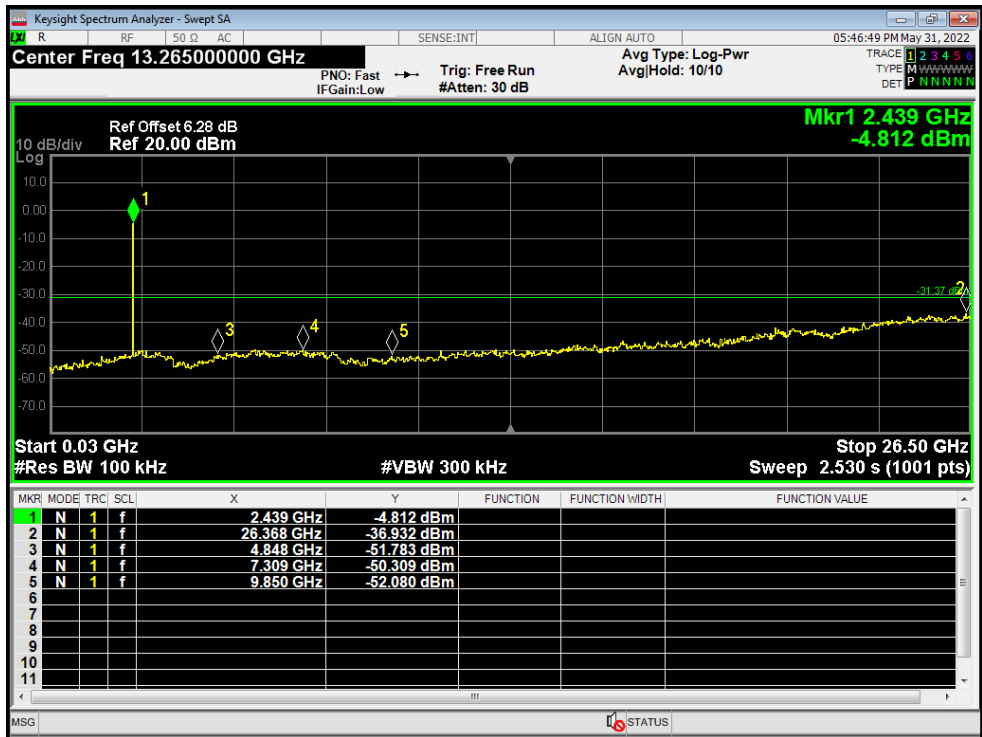
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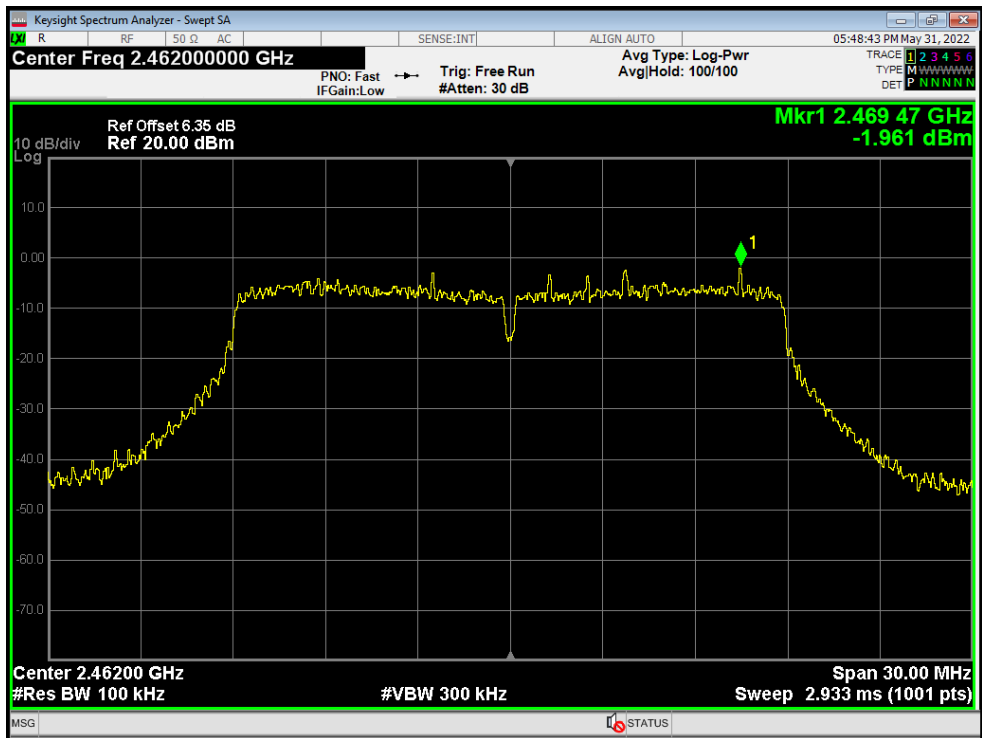
Tx. Spurious NVNT n20 2437MHz Ant1 Ref



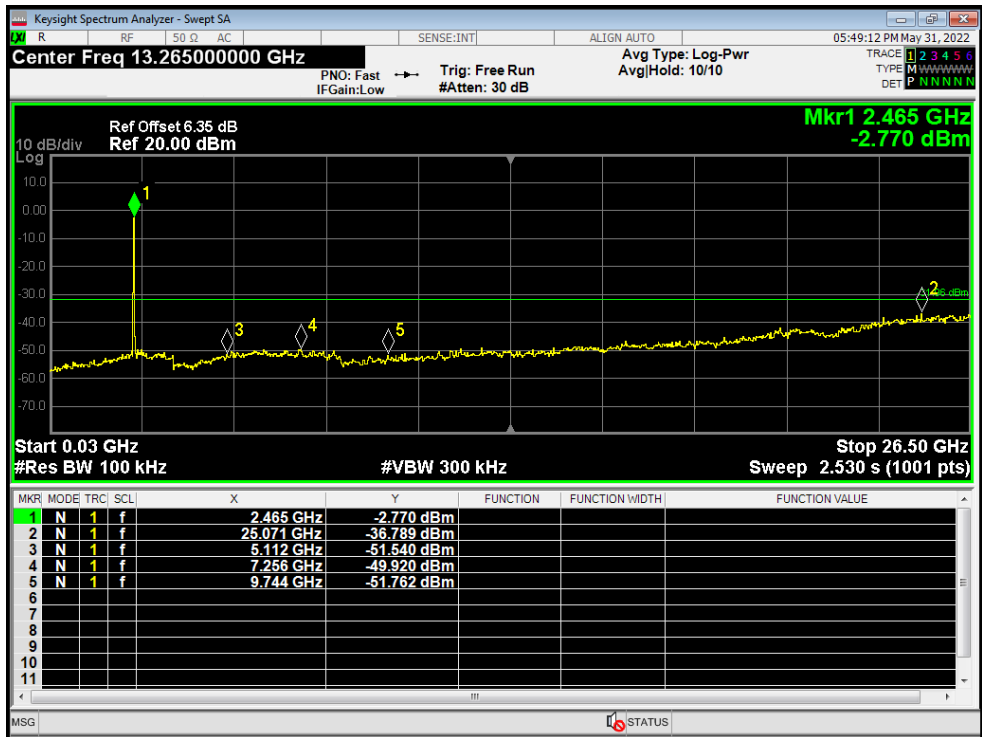
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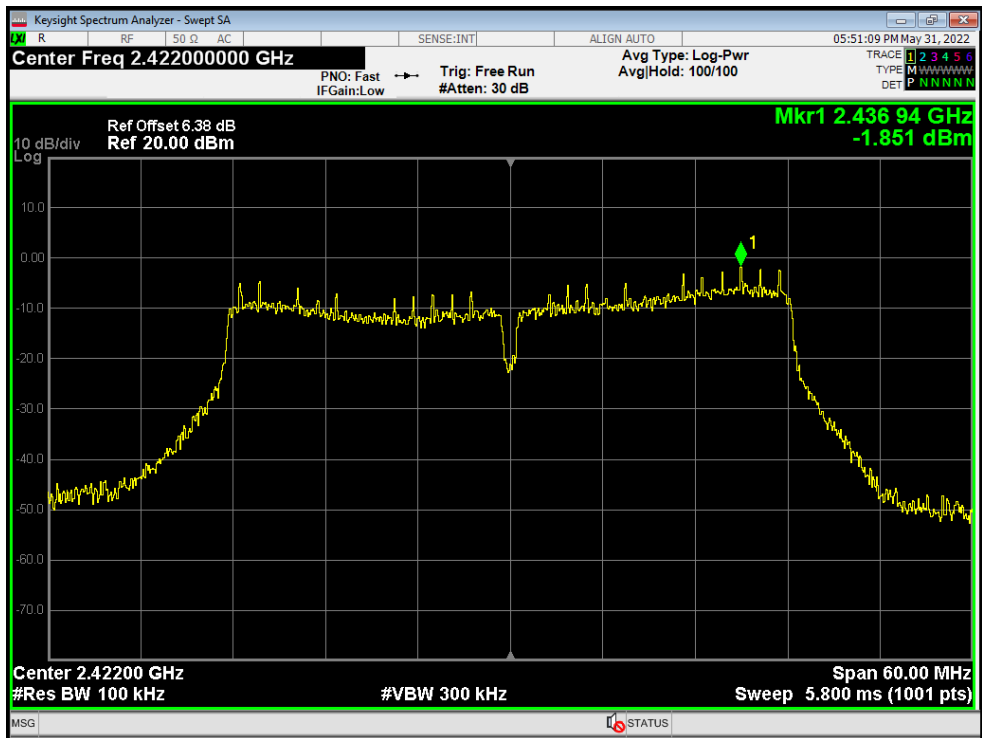
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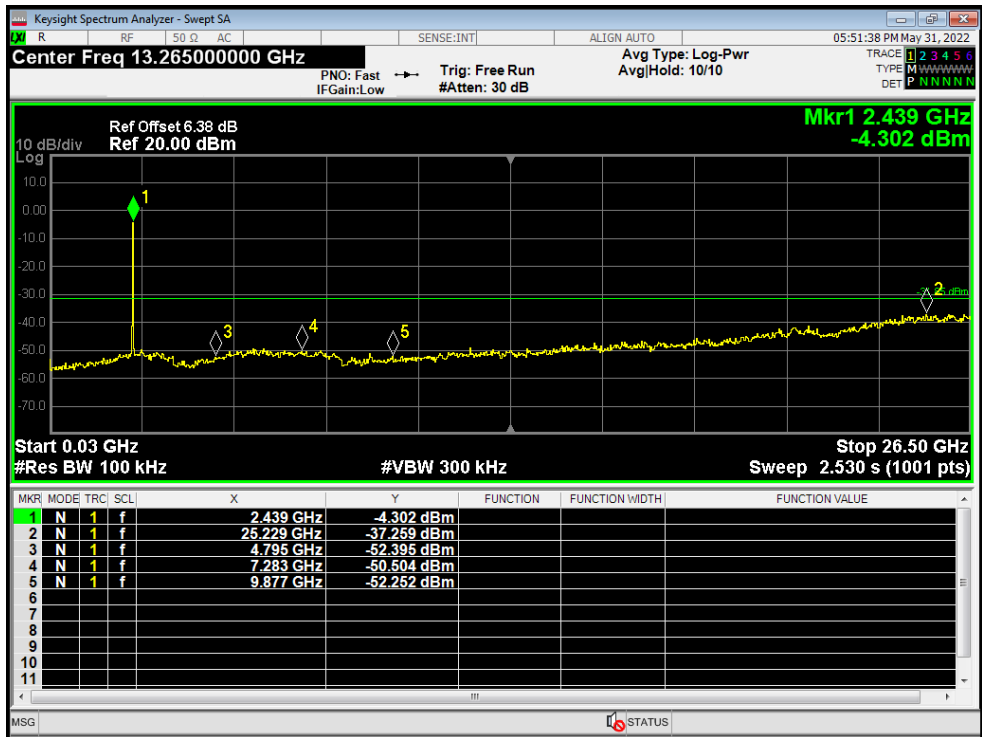
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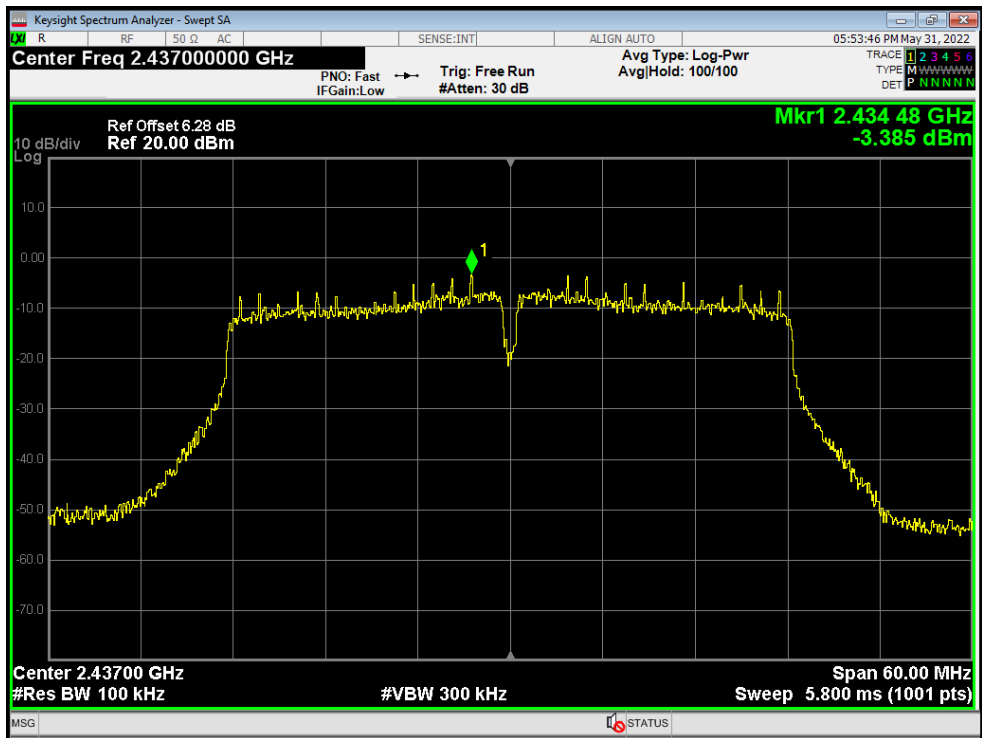
Tx. Spurious NVNT n40 2422MHz Ant1 Ref



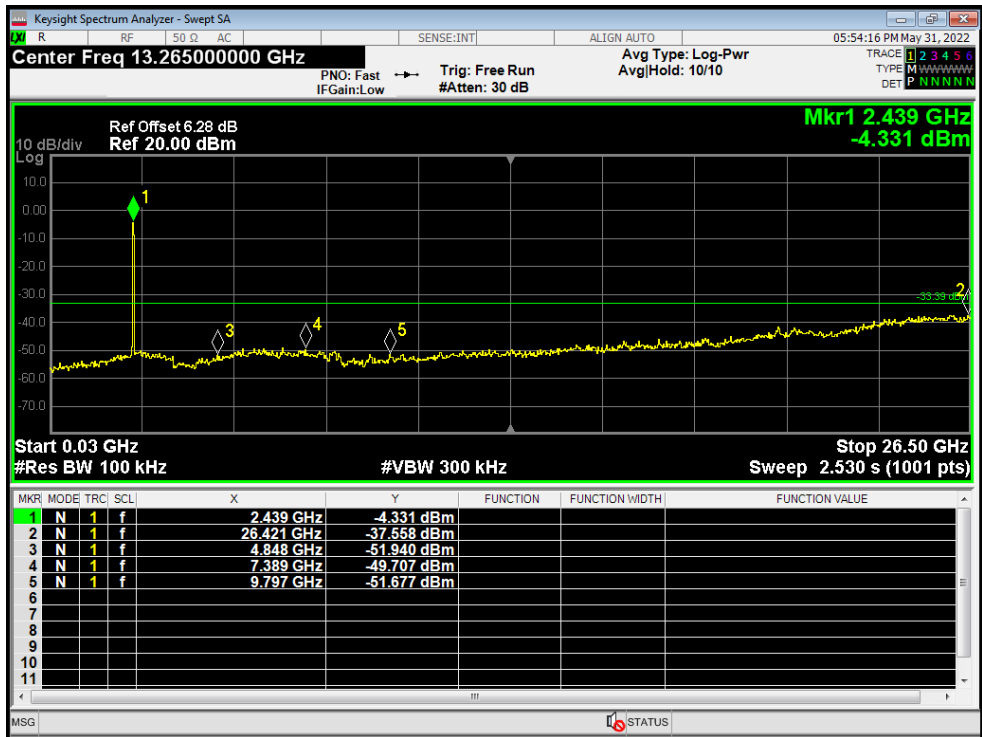
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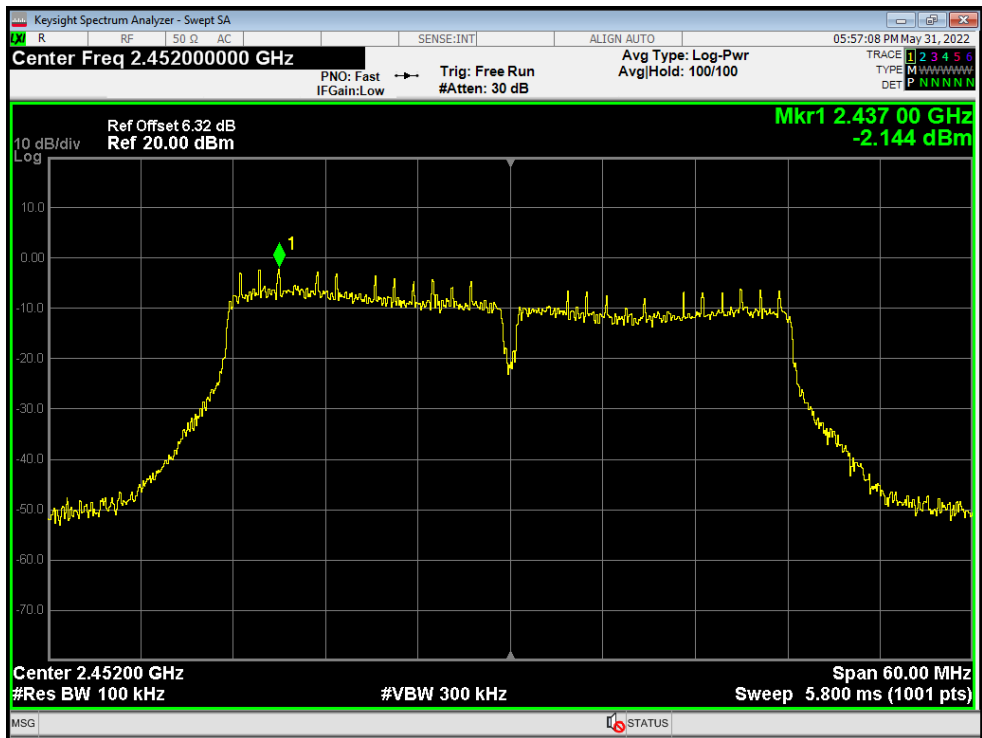
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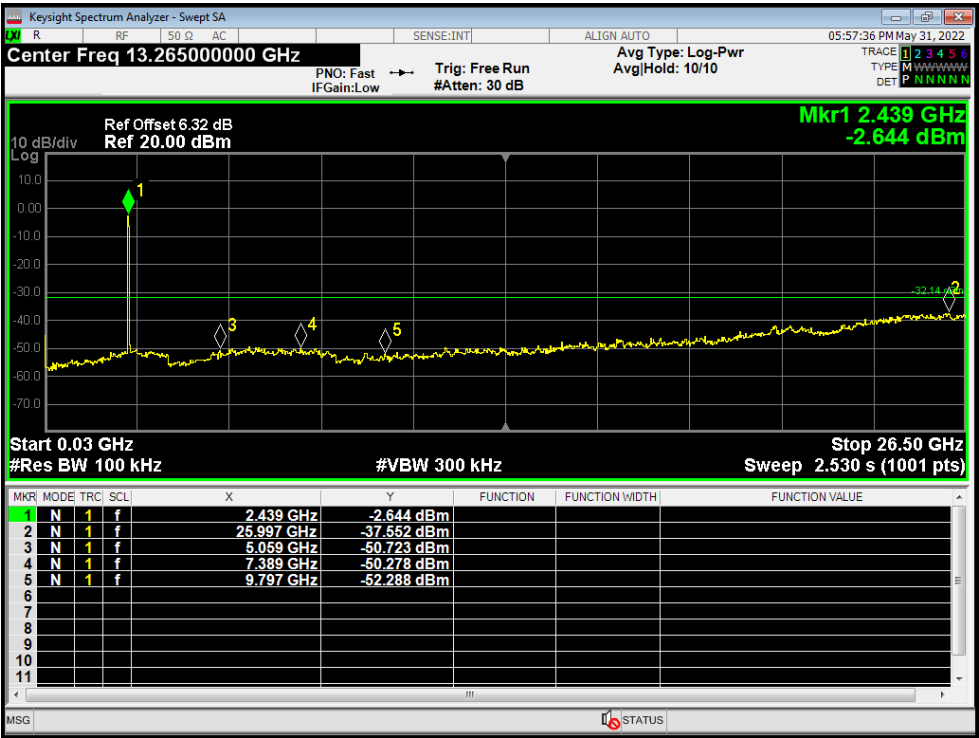
Tx. Spurious NVNT n40 2437MHz Ant1 Emission



Tx. Spurious NVNT n40 2452MHz Ant1 Ref



Tx. Spurious NVNT n40 2452MHz Ant1 Emission



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