

RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
Product Name:	Digital Signage
Test Model:	MWE-CS01
Sample ID:	HC-C-202412-0086-01-02#
Environmental Conditions	
Temperature:	24.5℃
Relative Humidity:	47%
Test Voltage:	AC 120V/60Hz
Test Engineer:	Rick Chen
Note: For a more detailed features description, please refer to the report TBR-C-202412-0086-82 The report only show the worst case data.	

Contents

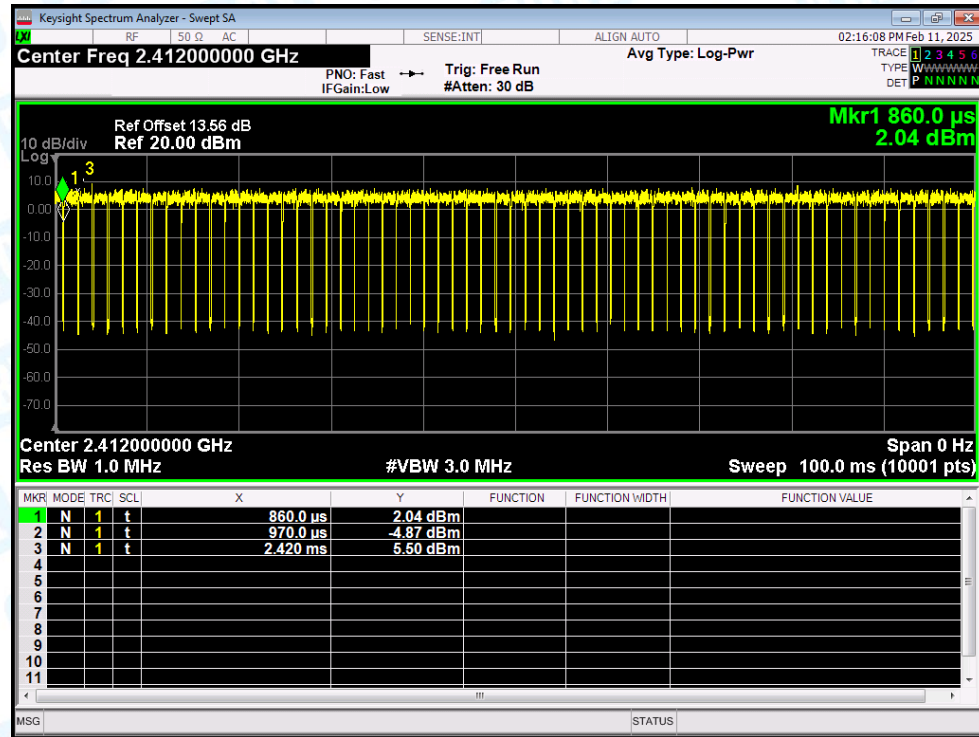
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1.Duty Cycle

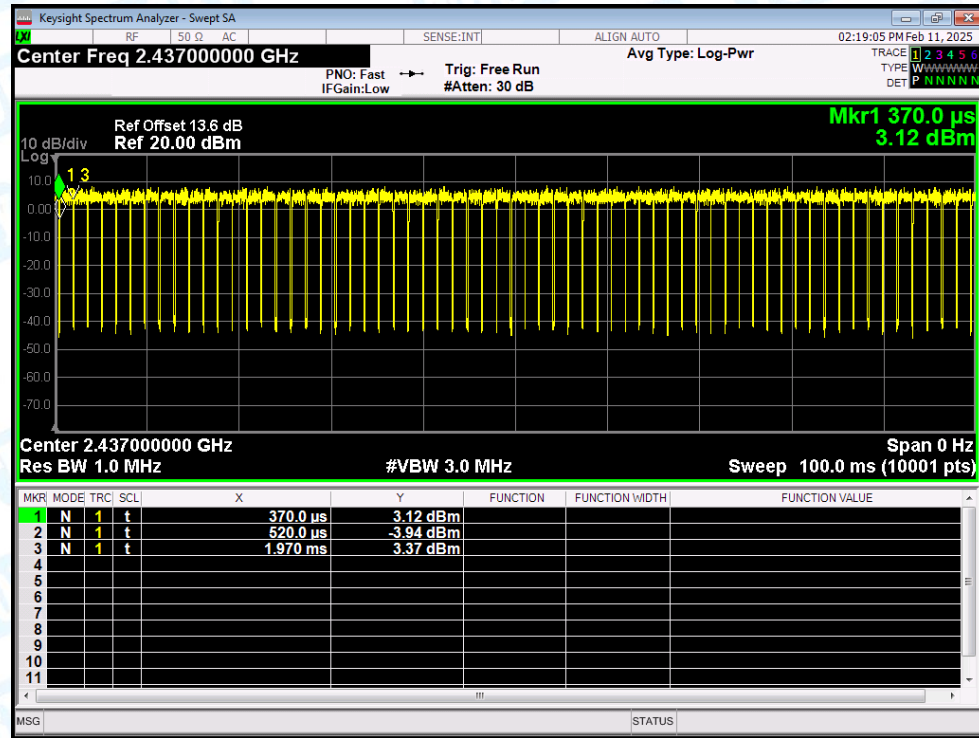
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	ax(VHT20)	2412	Ant1	92.95	0.32	0.69
NVNT	ax(VHT20)	2437	Ant1	90.63	0.43	0.69
NVNT	ax(VHT20)	2462	Ant1	96.69	0.15	0.68
NVNT	ax(VHT40)	2422	Ant1	83.15	0.8	1.35
NVNT	ax(VHT40)	2437	Ant1	87.21	0.59	1.33
NVNT	ax(VHT40)	2452	Ant1	81.52	0.89	1.33
NVNT	b	2412	Ant1	99.11	0.04	0.08
NVNT	b	2437	Ant1	99.19	0.04	0.08
NVNT	b	2462	Ant1	99.11	0.04	0.08
NVNT	g	2412	Ant1	92.27	0.35	0.49
NVNT	g	2437	Ant1	92.27	0.35	0.49
NVNT	g	2462	Ant1	92.69	0.33	0.49
NVNT	n(HT20)	2412	Ant1	93.6	0.29	0.53
NVNT	n(HT20)	2437	Ant1	94.03	0.27	0.53
NVNT	n(HT20)	2462	Ant1	91.75	0.37	0.53
NVNT	n(HT40)	2422	Ant1	94.9	0.23	1.08
NVNT	n(HT40)	2437	Ant1	94.95	0.23	1.06
NVNT	n(HT40)	2452	Ant1	94.9	0.23	1.08

Test Graphs

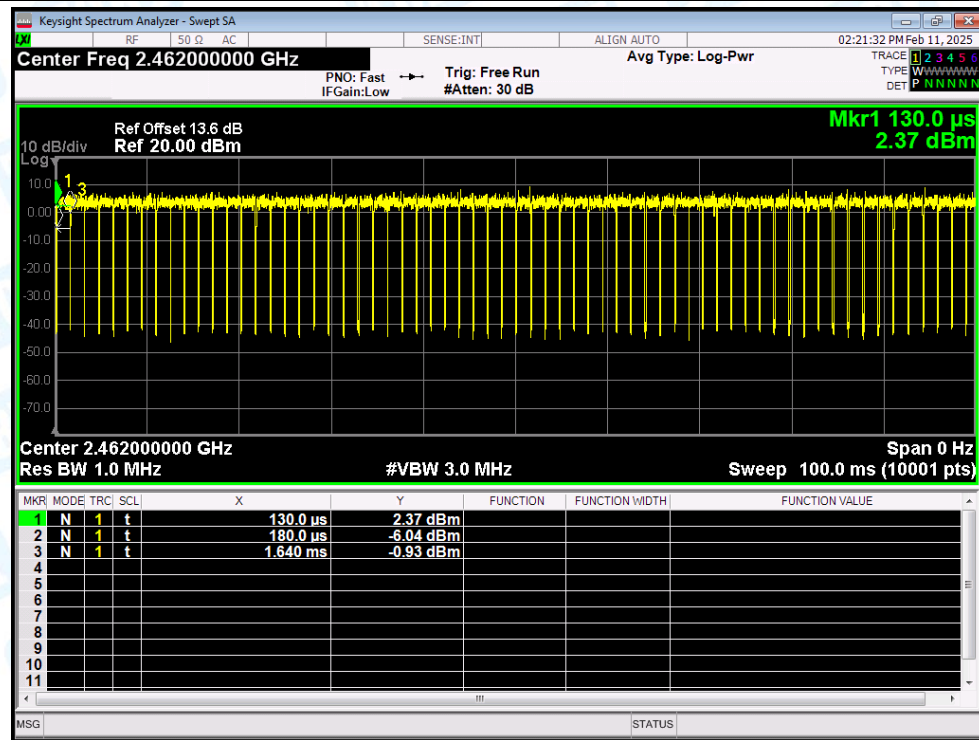
Duty Cycle NVNT ax(VHT20) 2412MHz Ant1



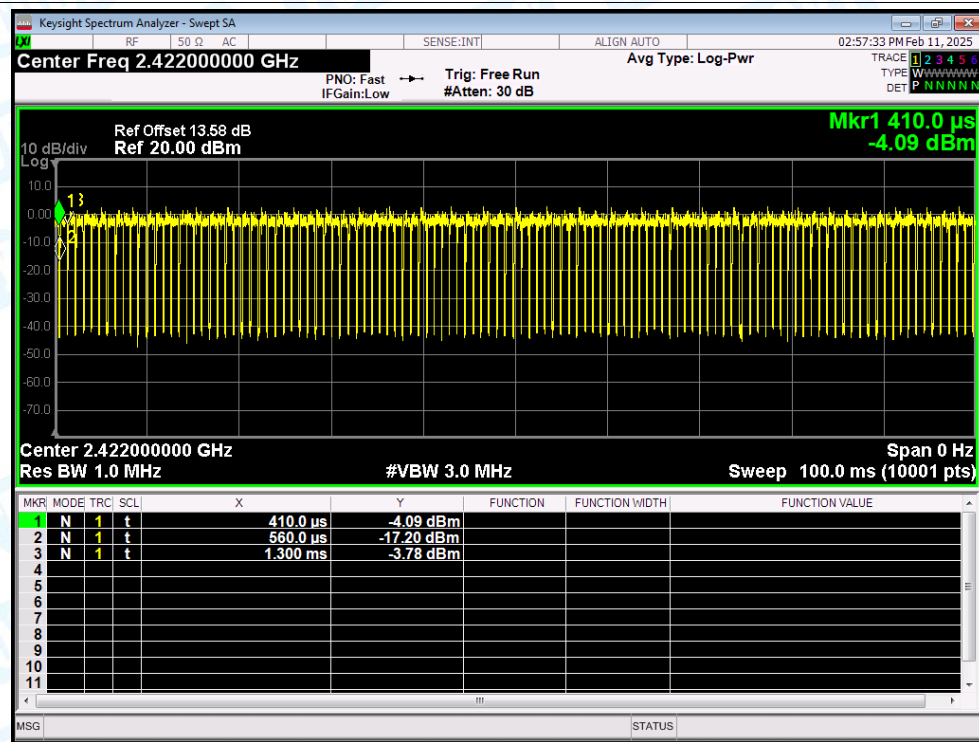
Duty Cycle NVNT ax(VHT20) 2437MHz Ant1



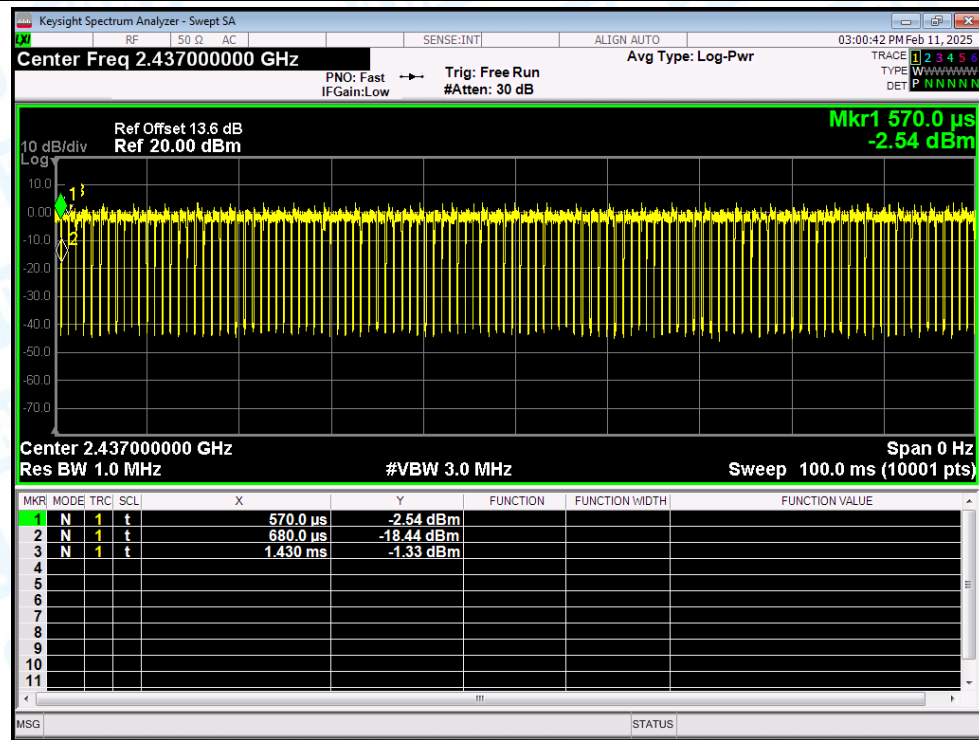
Duty Cycle NVNT ax(VHT20) 2462MHz Ant1



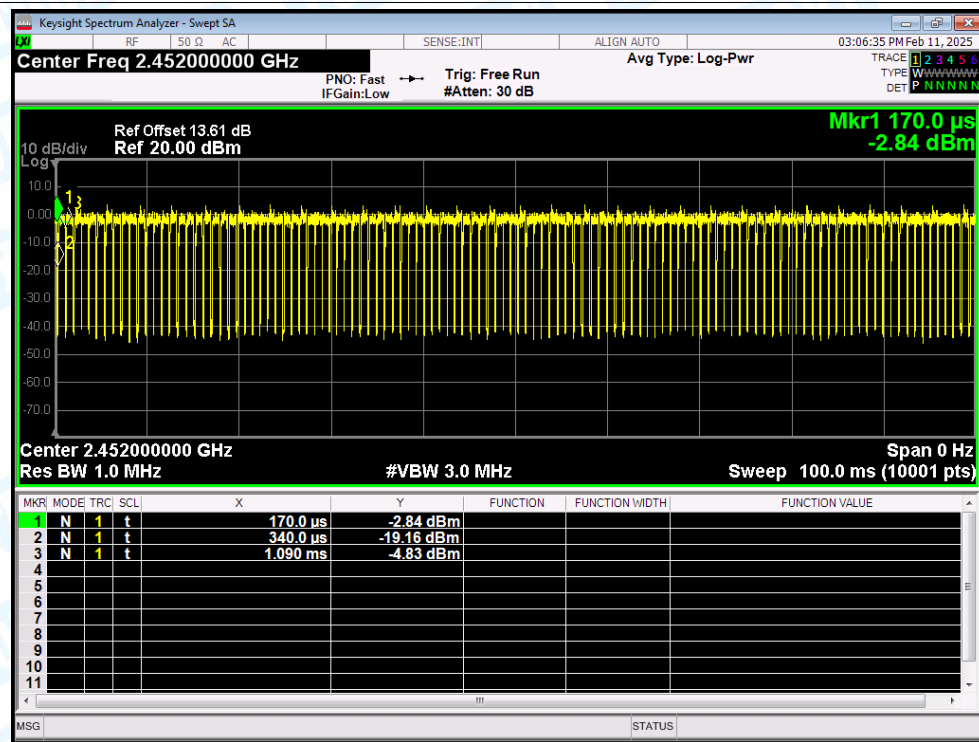
Duty Cycle NVNT ax(VHT40) 2422MHz Ant1



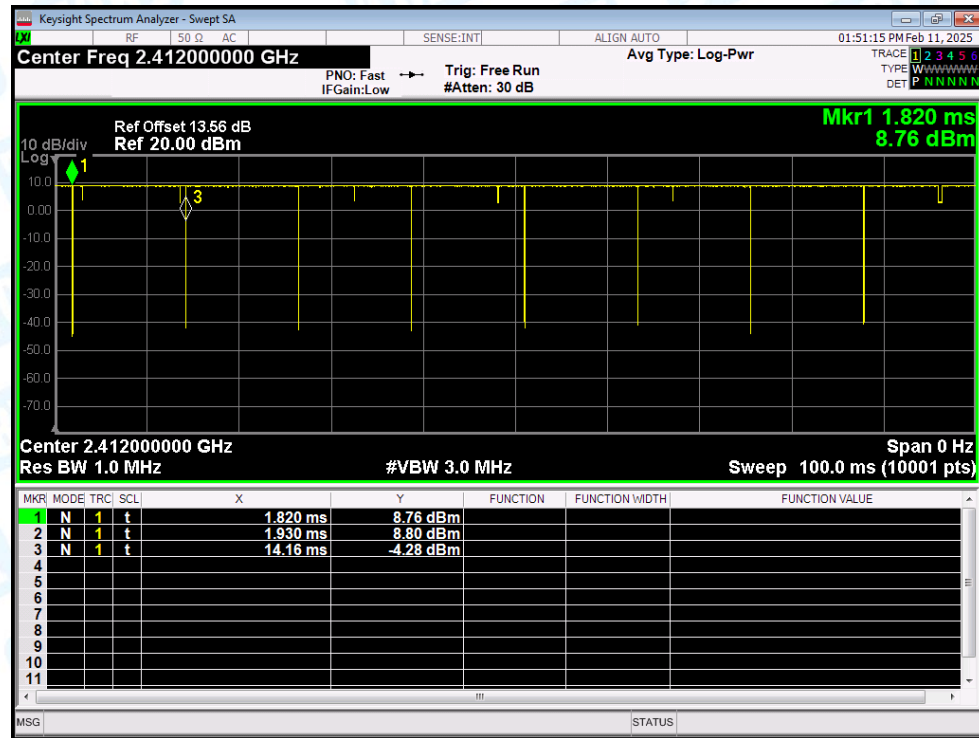
Duty Cycle NVNT ax(VHT40) 2437MHz Ant1



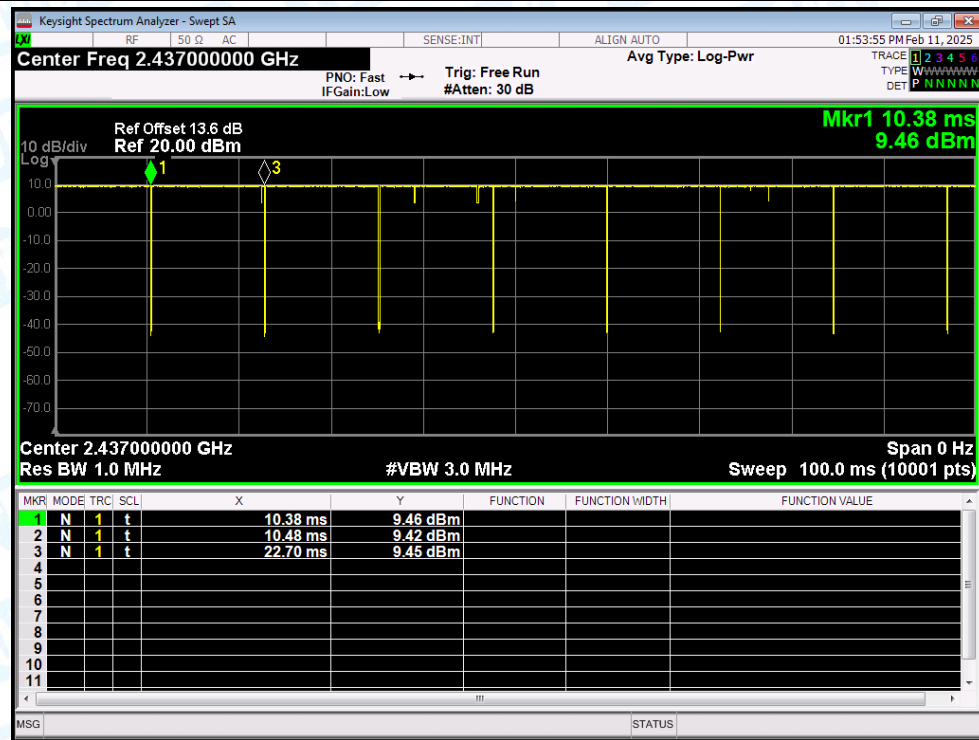
Duty Cycle NVNT ax(VHT40) 2452MHz Ant1



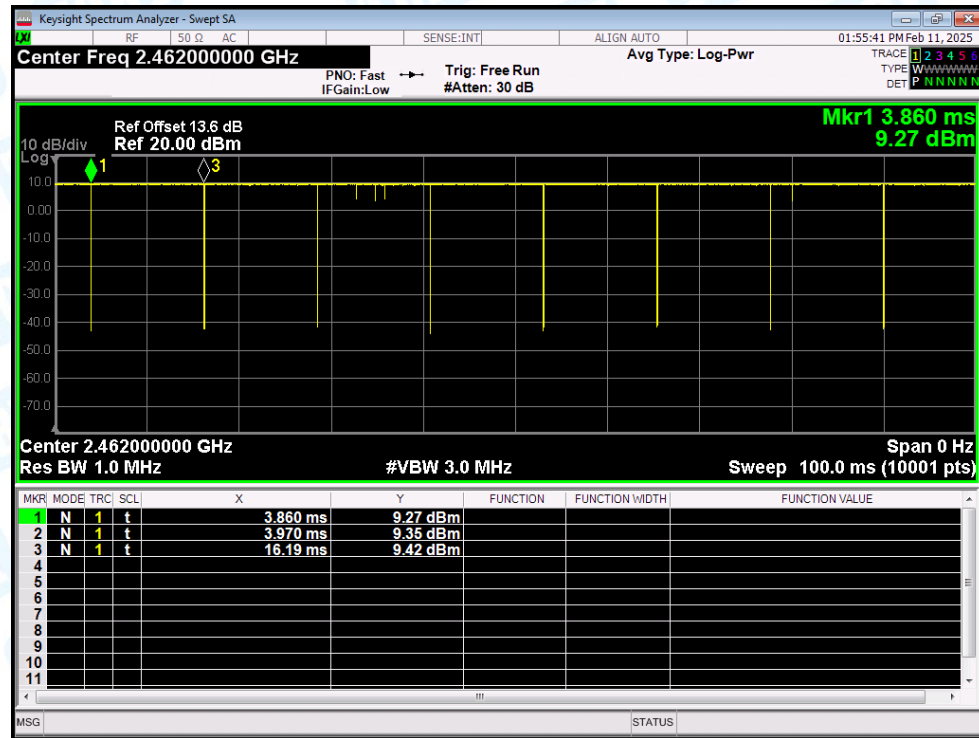
Duty Cycle NVNT b 2412MHz Ant1



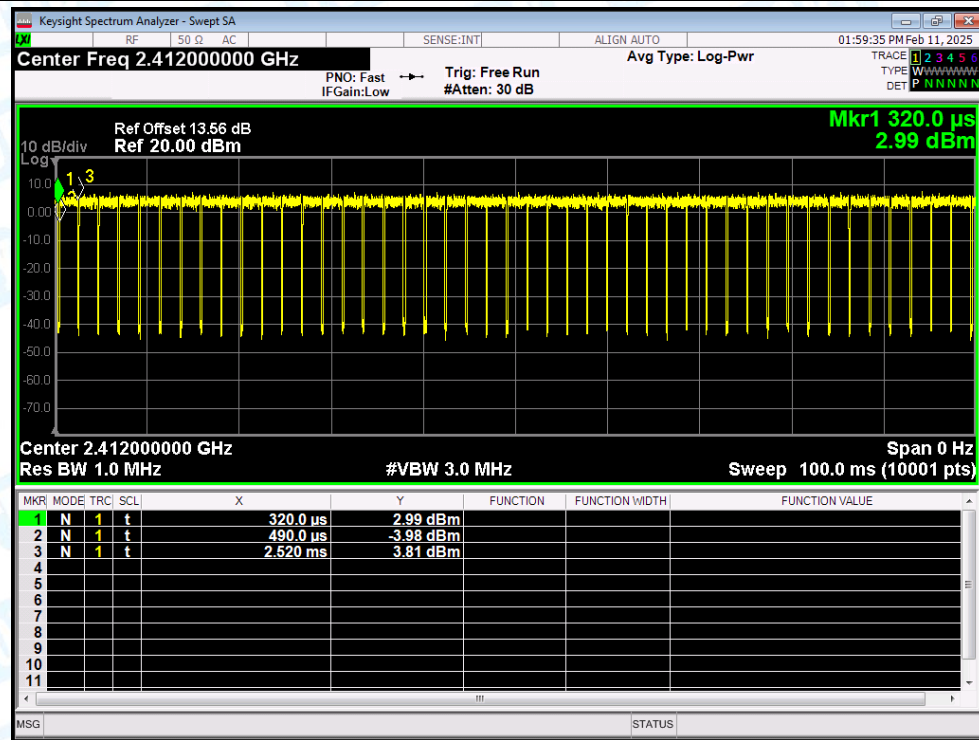
Duty Cycle NVNT b 2437MHz Ant1



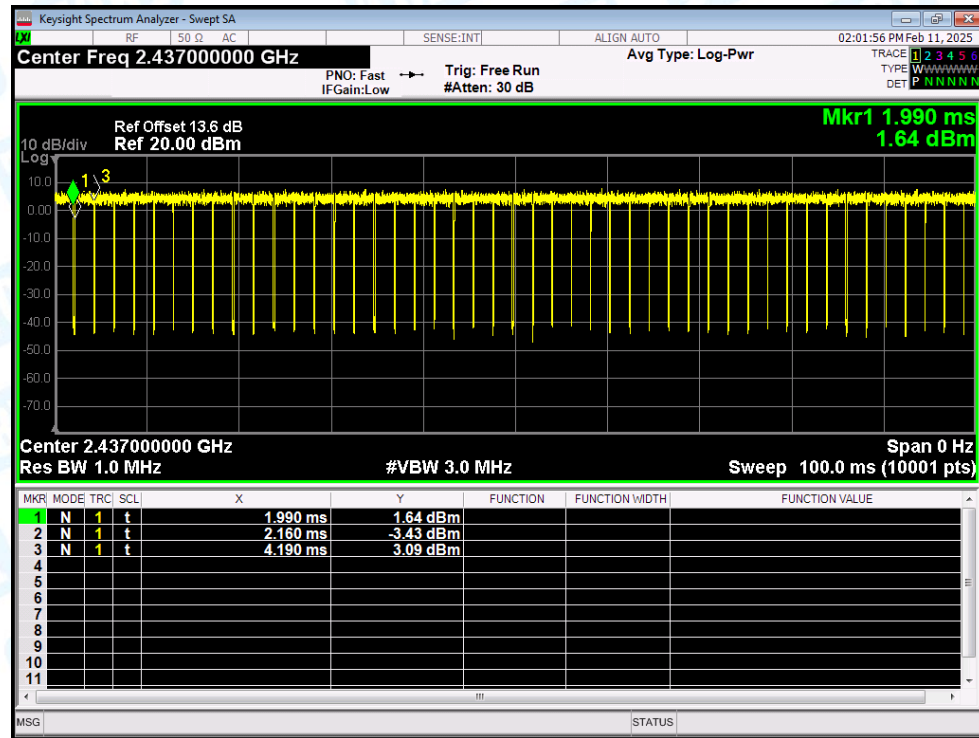
Duty Cycle NVNT b 2462MHz Ant1



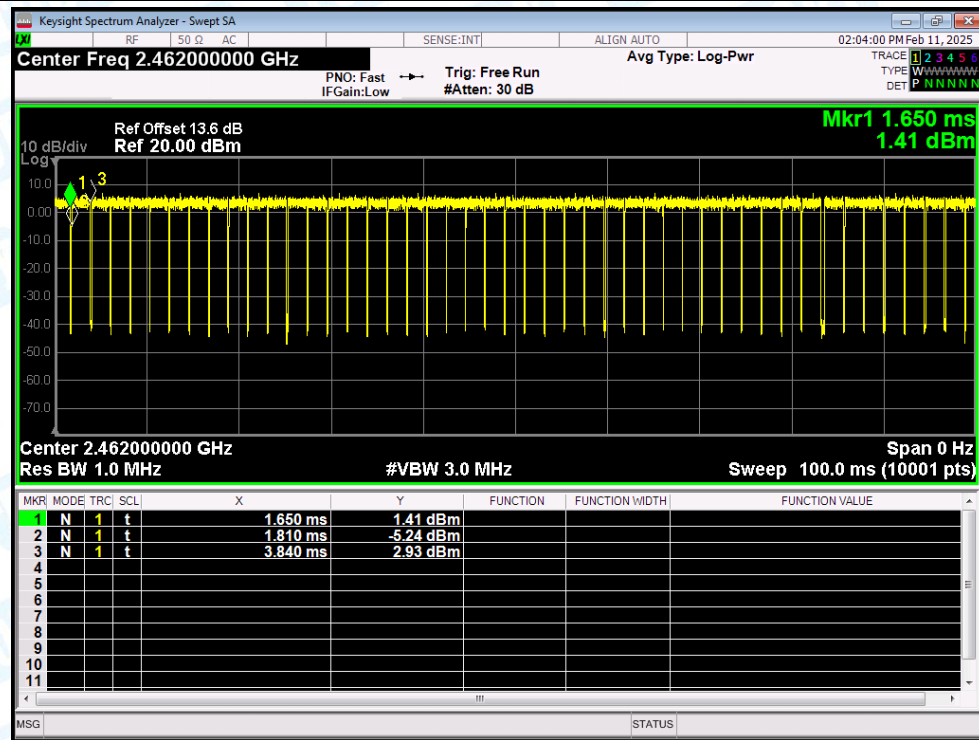
Duty Cycle NVNT g 2412MHz Ant1



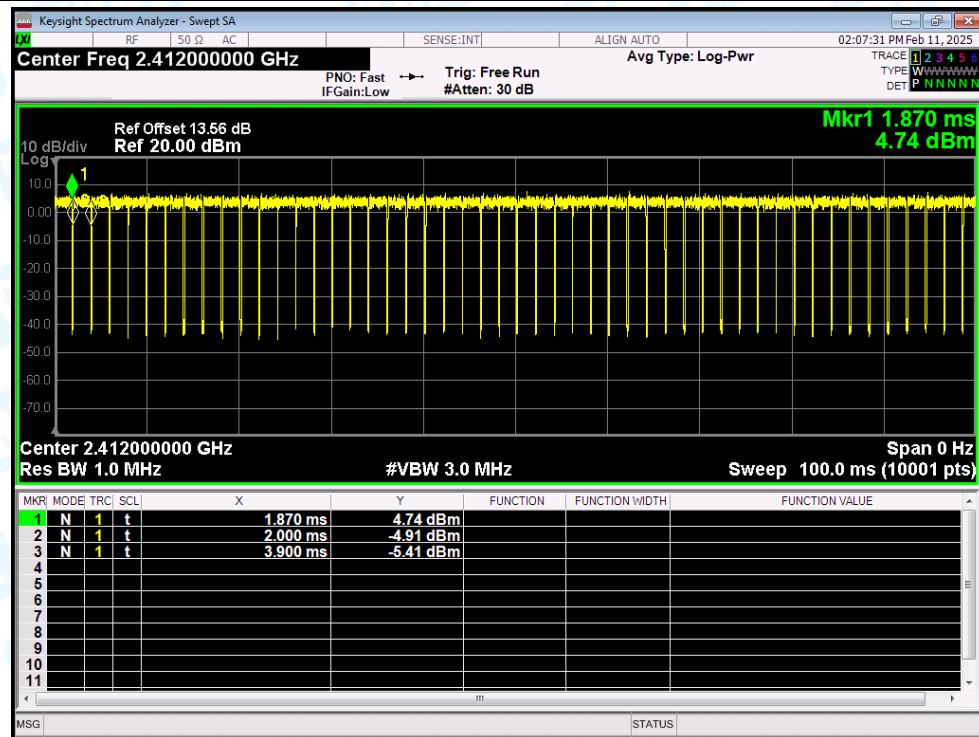
Duty Cycle NVNT g 2437MHz Ant1



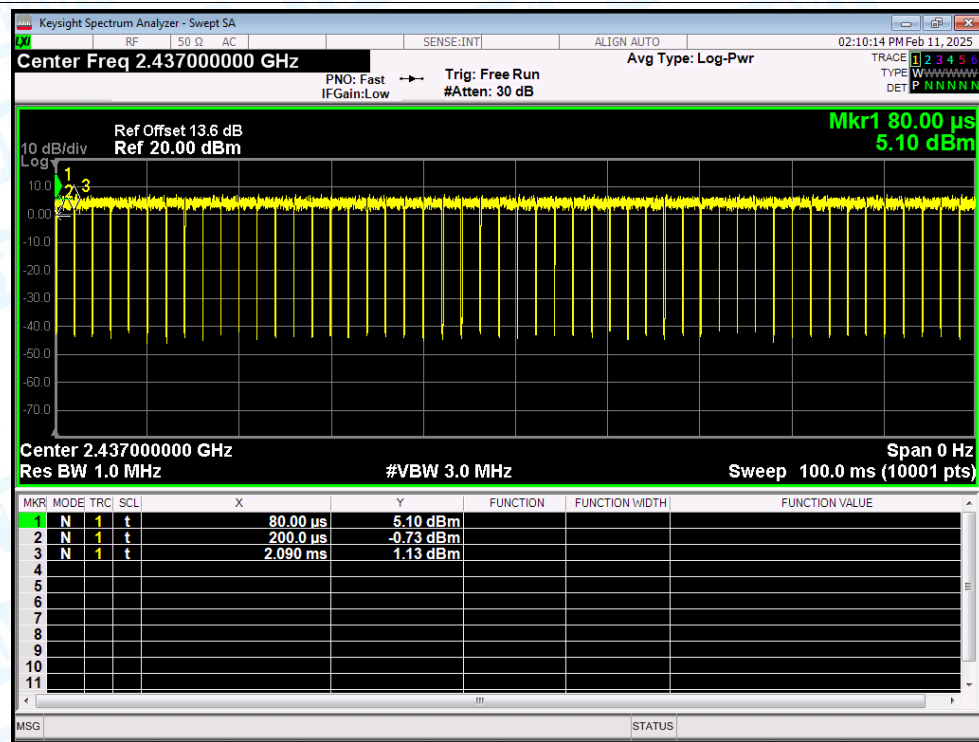
Duty Cycle NVNT g 2462MHz Ant1



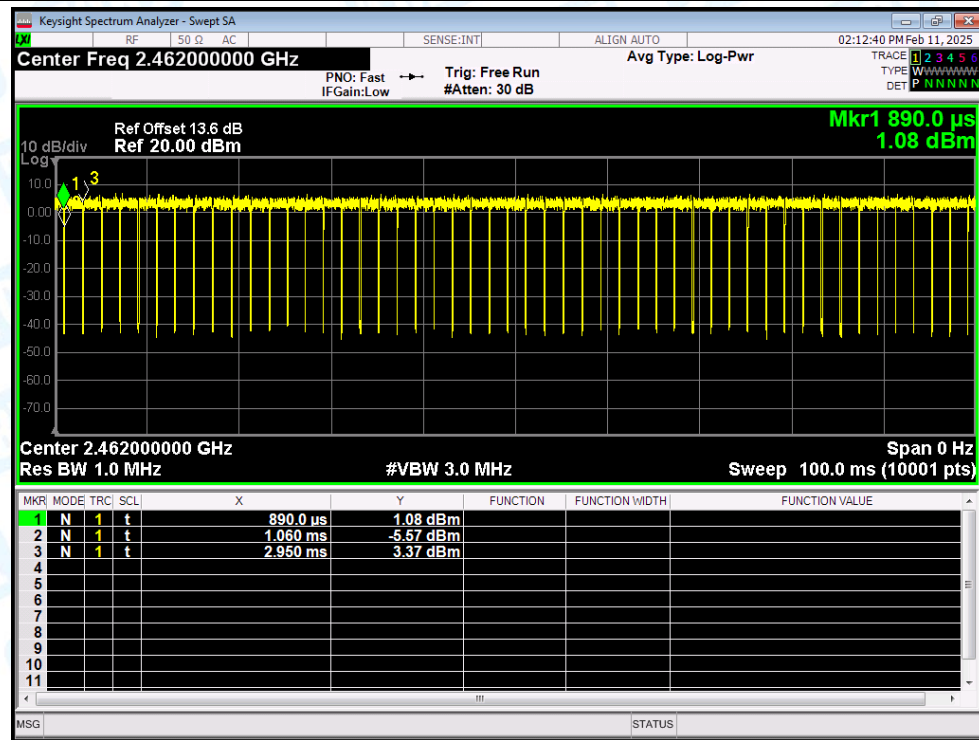
Duty Cycle NVNT n(HT20) 2412MHz Ant1



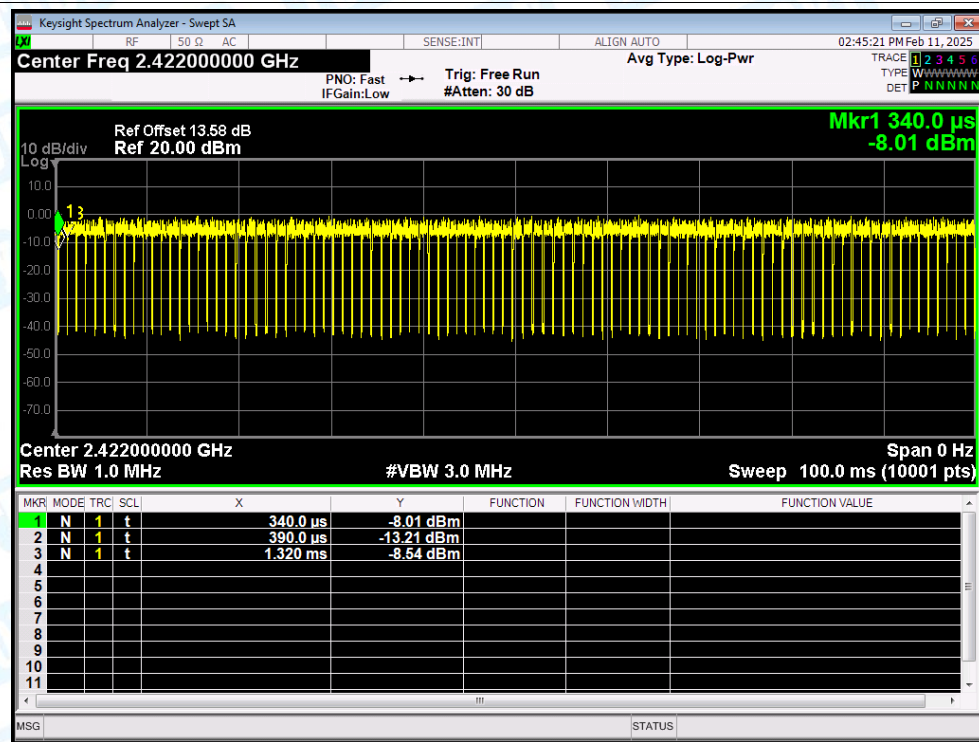
Duty Cycle NVNT n(HT20) 2437MHz Ant1



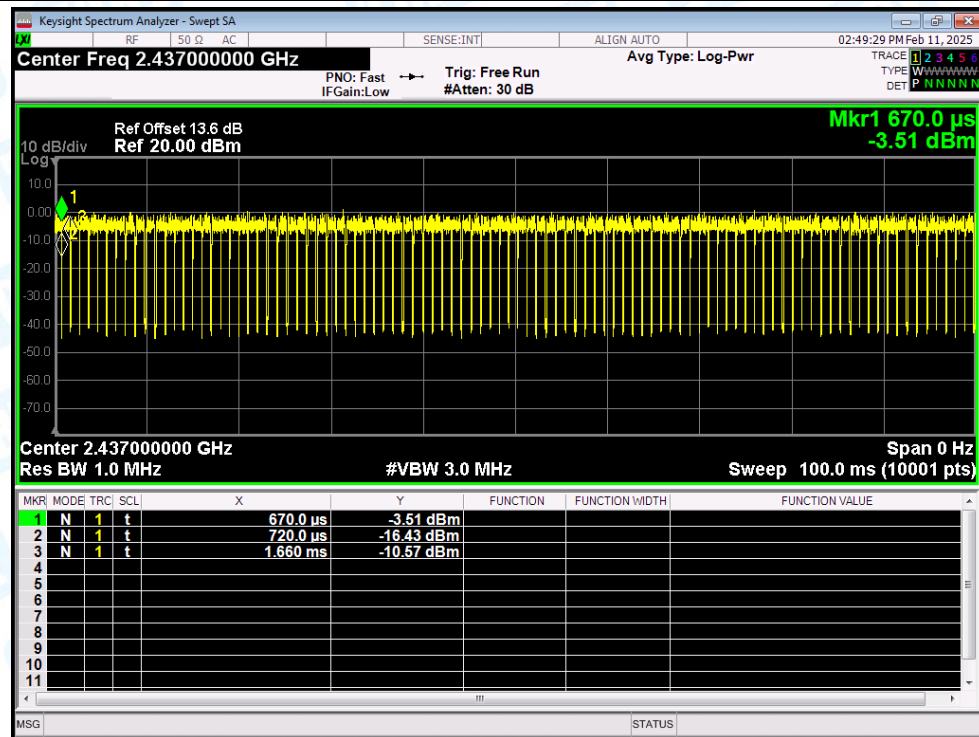
Duty Cycle NVNT n(HT20) 2462MHz Ant1



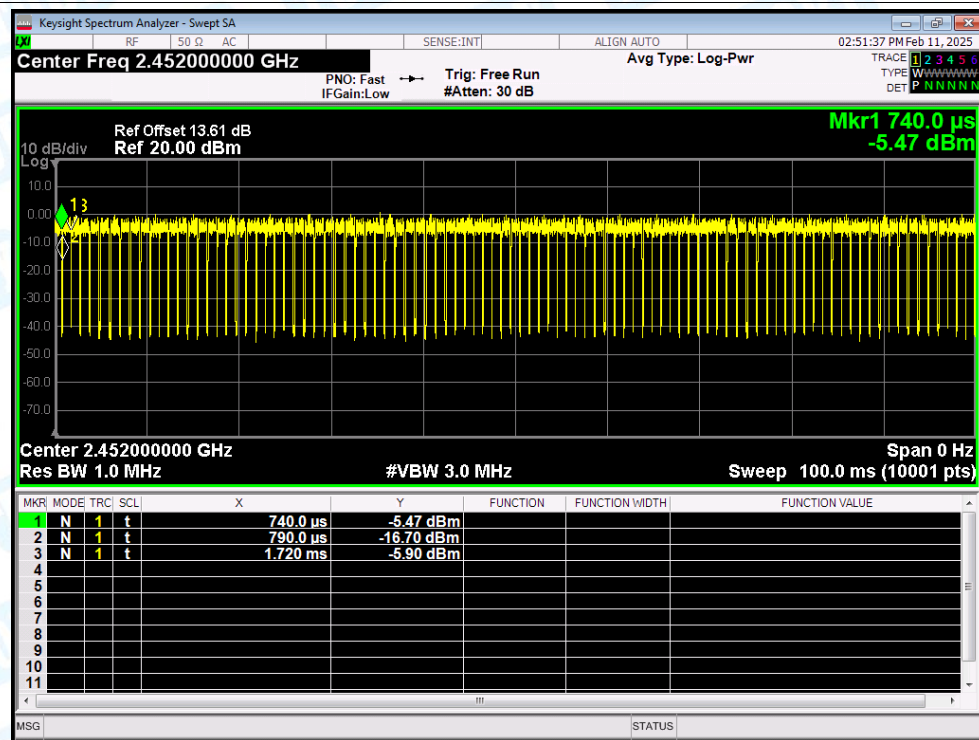
Duty Cycle NVNT n(HT40) 2422MHz Ant1



Duty Cycle NVNT n(HT40) 2437MHz Ant1



Duty Cycle NVNT n(HT40) 2452MHz Ant1



2.Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	ax(VHT20)	2412	Ant1	11.22	30	Pass
NVNT	ax(VHT20)	2437	Ant1	11.62	30	Pass
NVNT	ax(VHT20)	2462	Ant1	10.43	30	Pass
NVNT	ax(VHT40)	2422	Ant1	9.5	30	Pass
NVNT	ax(VHT40)	2437	Ant1	9.9	30	Pass
NVNT	ax(VHT40)	2452	Ant1	10.08	30	Pass
NVNT	b	2412	Ant1	13.38	30	Pass
NVNT	b	2437	Ant1	13.49	30	Pass
NVNT	b	2462	Ant1	13.45	30	Pass
NVNT	g	2412	Ant1	11.29	30	Pass
NVNT	g	2437	Ant1	11.56	30	Pass
NVNT	g	2462	Ant1	10.64	30	Pass
NVNT	n(HT20)	2412	Ant1	11.2	30	Pass
NVNT	n(HT20)	2437	Ant1	11.48	30	Pass
NVNT	n(HT20)	2462	Ant1	10.6	30	Pass
NVNT	n(HT40)	2422	Ant1	8.87	30	Pass
NVNT	n(HT40)	2437	Ant1	9.53	30	Pass
NVNT	n(HT40)	2452	Ant1	9.46	30	Pass

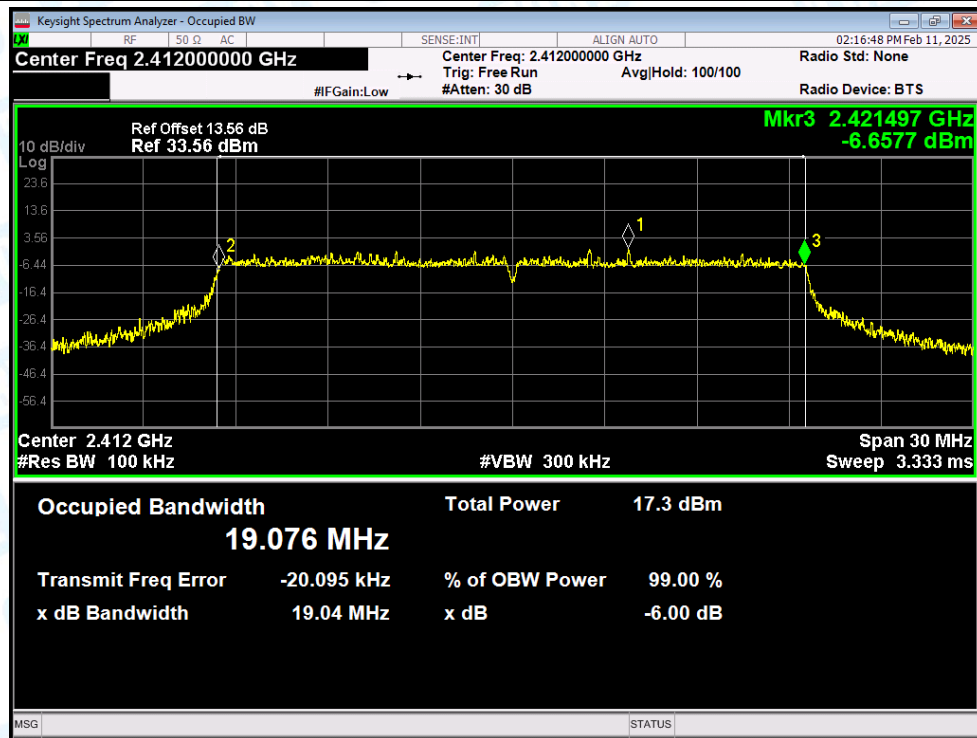
Note: The duty factor has been compensated into the result.

3.-6dB Bandwidth

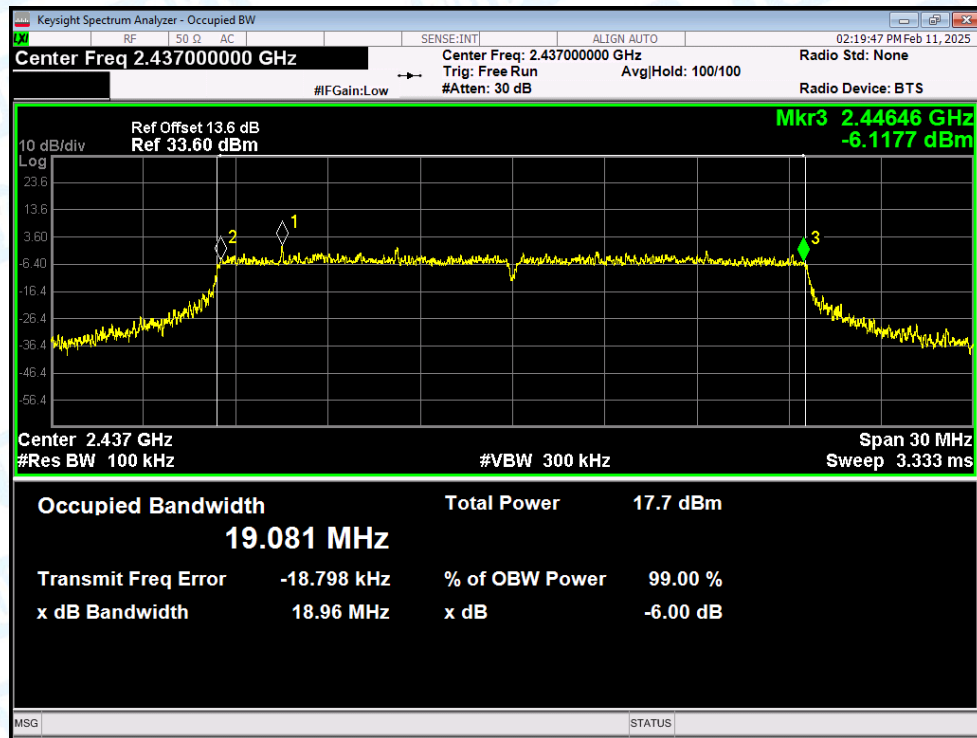
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	ax(VHT20)	2412	Ant1	19.04	0.5	Pass
NVNT	ax(VHT20)	2437	Ant1	18.96	0.5	Pass
NVNT	ax(VHT20)	2462	Ant1	18.92	0.5	Pass
NVNT	ax(VHT40)	2422	Ant1	37.83	0.5	Pass
NVNT	ax(VHT40)	2437	Ant1	37.85	0.5	Pass
NVNT	ax(VHT40)	2452	Ant1	37.92	0.5	Pass
NVNT	b	2412	Ant1	7.57	0.5	Pass
NVNT	b	2437	Ant1	8.08	0.5	Pass
NVNT	b	2462	Ant1	8.06	0.5	Pass
NVNT	g	2412	Ant1	16.34	0.5	Pass
NVNT	g	2437	Ant1	16.29	0.5	Pass
NVNT	g	2462	Ant1	16.33	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.57	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.58	0.5	Pass
NVNT	n(HT20)	2462	Ant1	17.31	0.5	Pass
NVNT	n(HT40)	2422	Ant1	36.31	0.5	Pass
NVNT	n(HT40)	2437	Ant1	36.3	0.5	Pass
NVNT	n(HT40)	2452	Ant1	35.98	0.5	Pass

Test Graphs

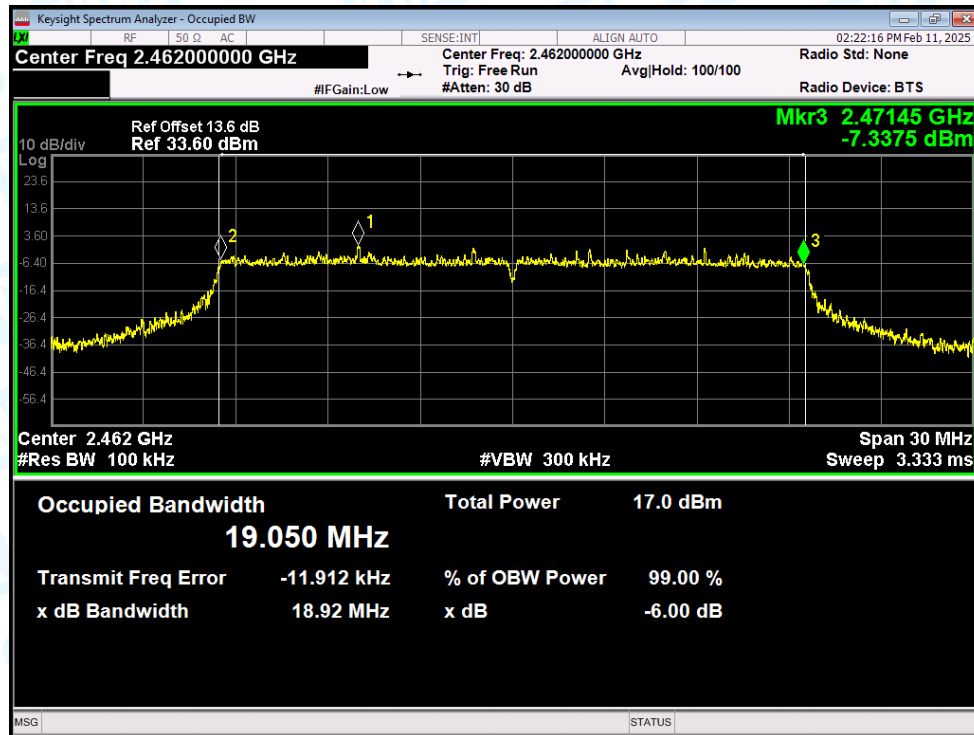
-6dB Bandwidth NVNT ax(VHT20) 2412MHz Ant1



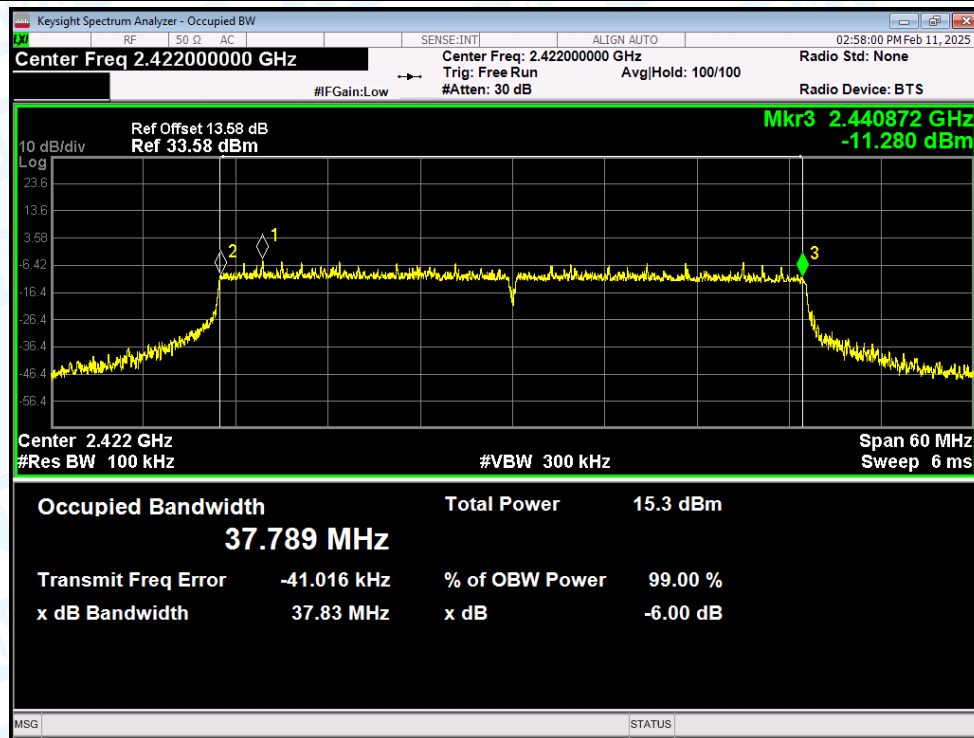
-6dB Bandwidth NVNT ax(VHT20) 2437MHz Ant1



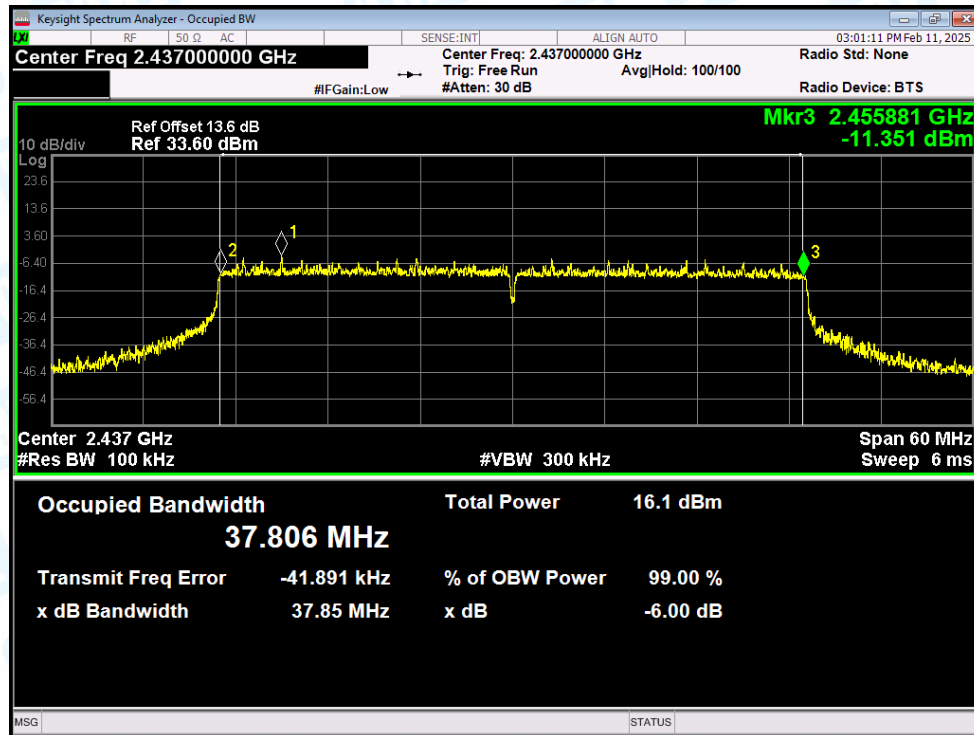
-6dB Bandwidth NVNT ax(VHT20) 2462MHz Ant1



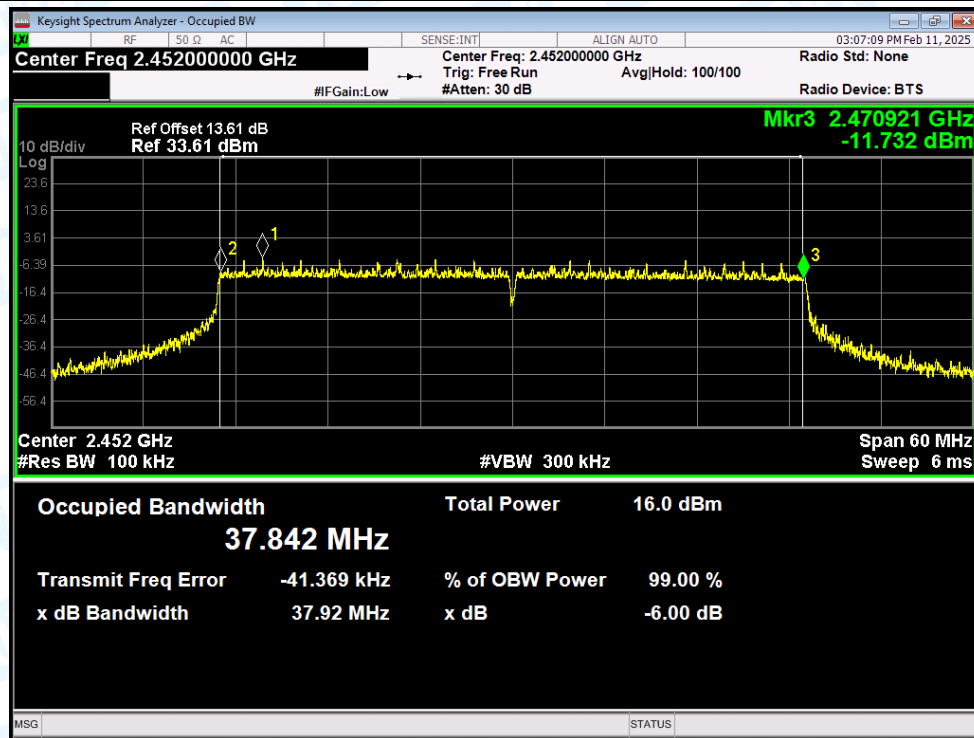
-6dB Bandwidth NVNT ax(VHT40) 2422MHz Ant1



-6dB Bandwidth NVNT ax(VHT40) 2437MHz Ant1



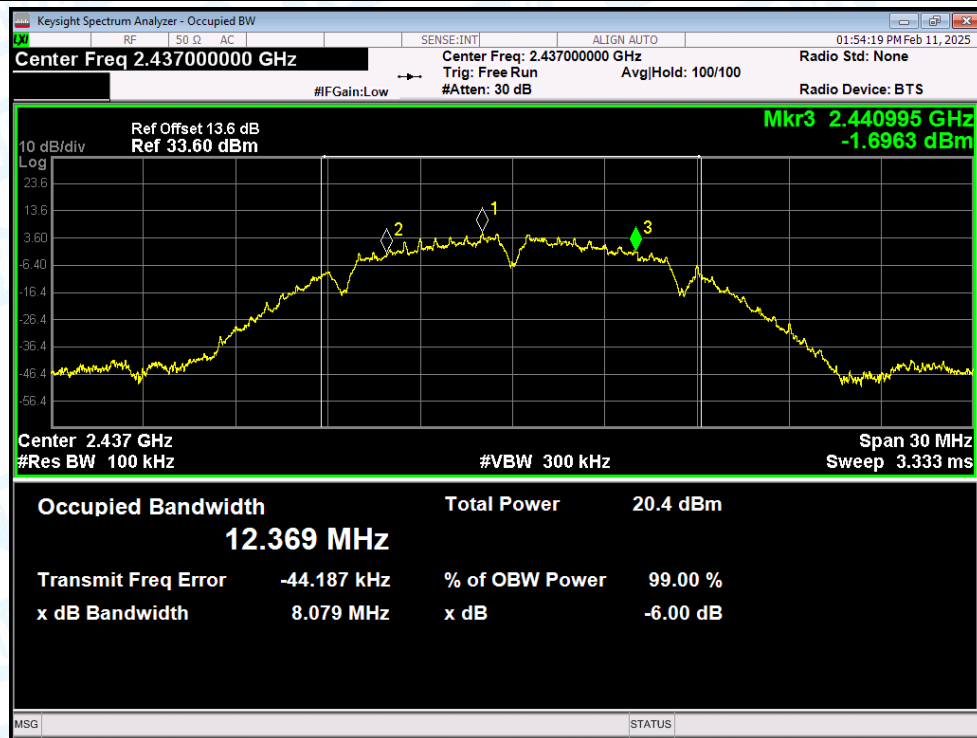
-6dB Bandwidth NVNT ax(VHT40) 2452MHz Ant1



-6dB Bandwidth NVNT b 2412MHz Ant1



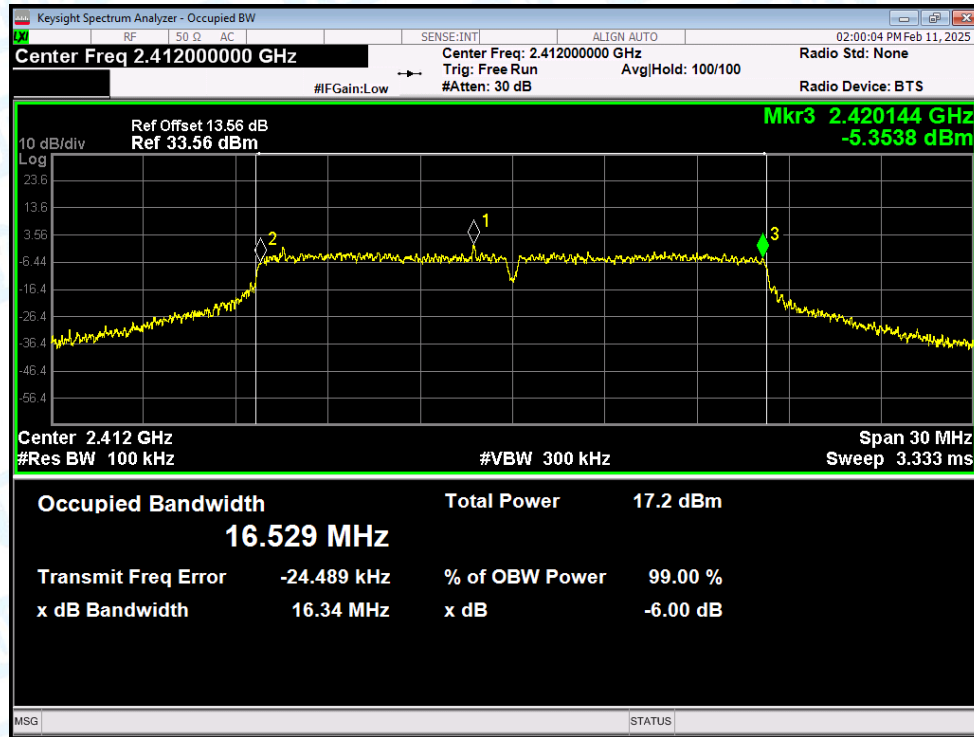
-6dB Bandwidth NVNT b 2437MHz Ant1



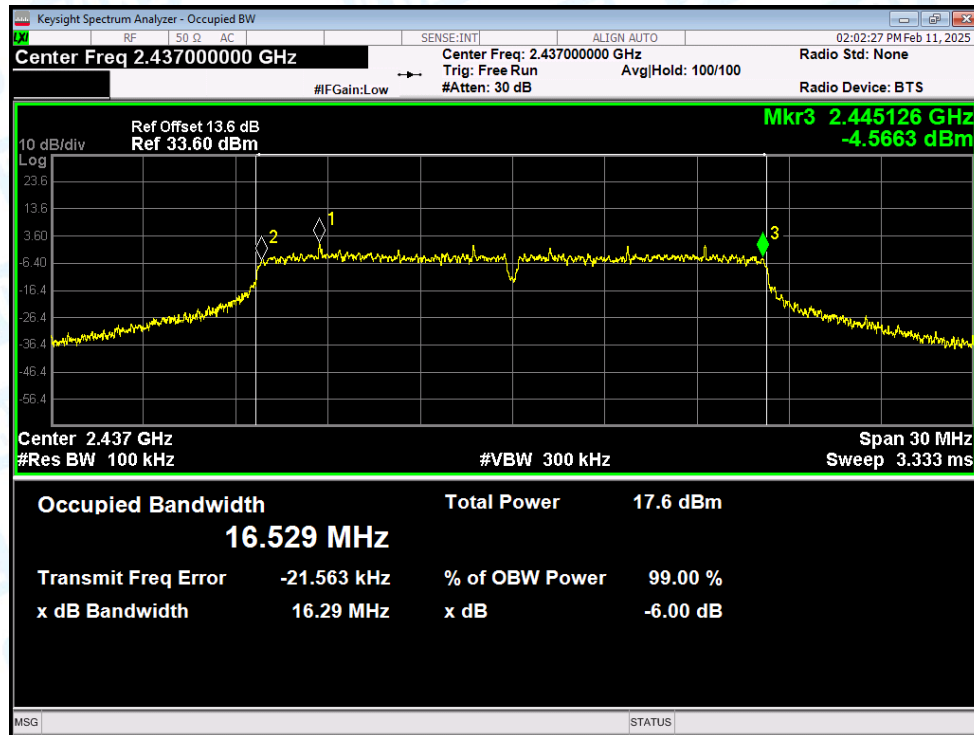
-6dB Bandwidth NVNT b 2462MHz Ant1



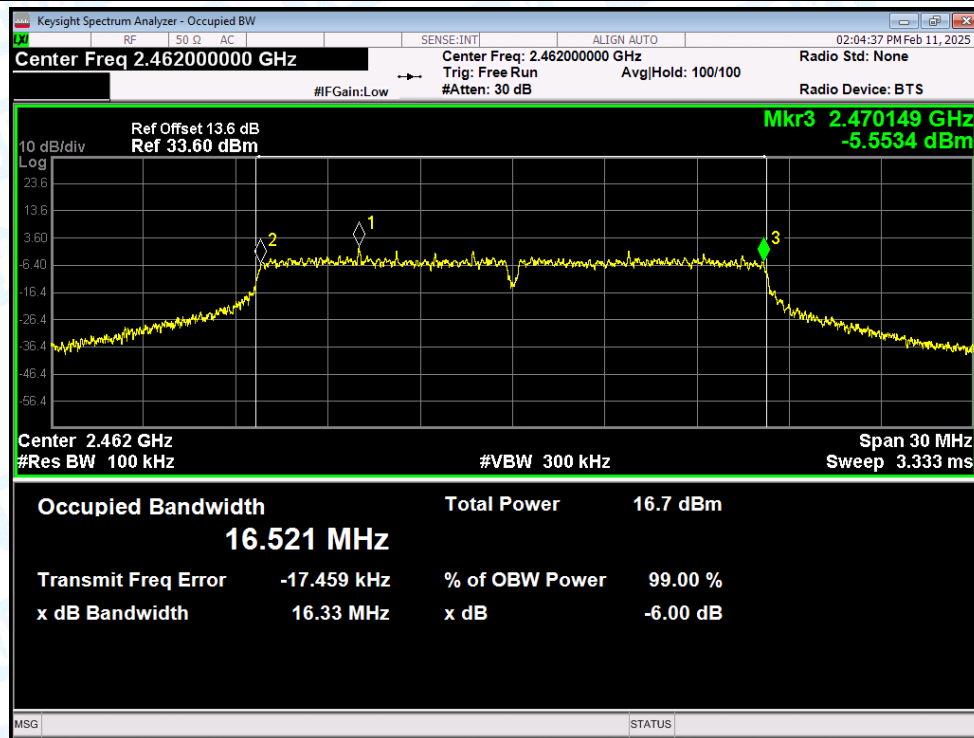
-6dB Bandwidth NVNT g 2412MHz Ant1



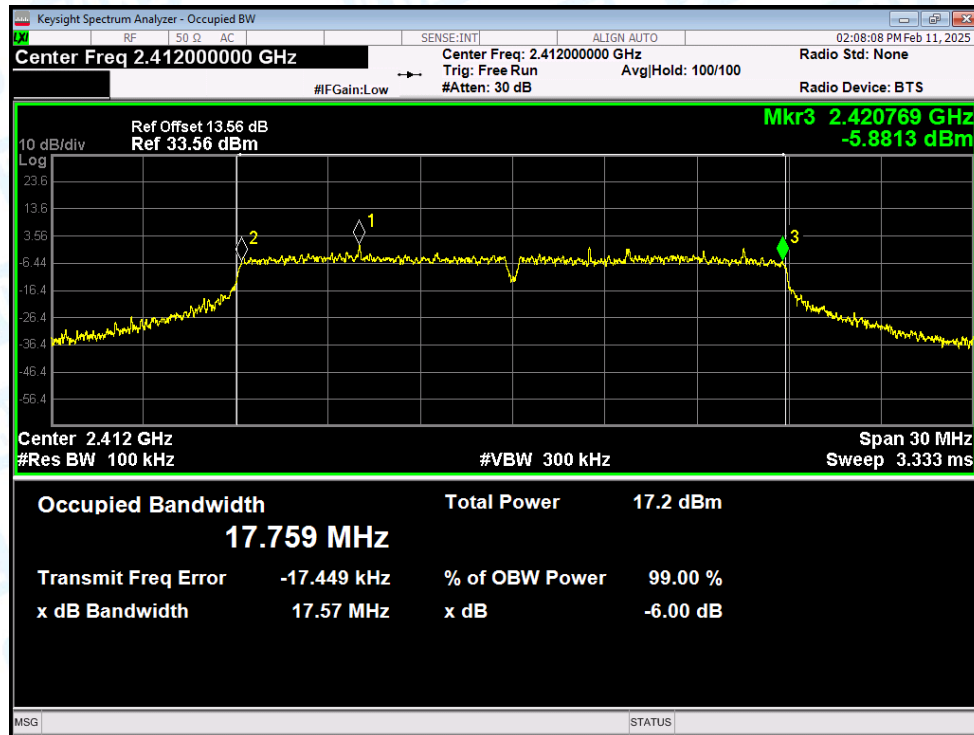
-6dB Bandwidth NVNT g 2437MHz Ant1



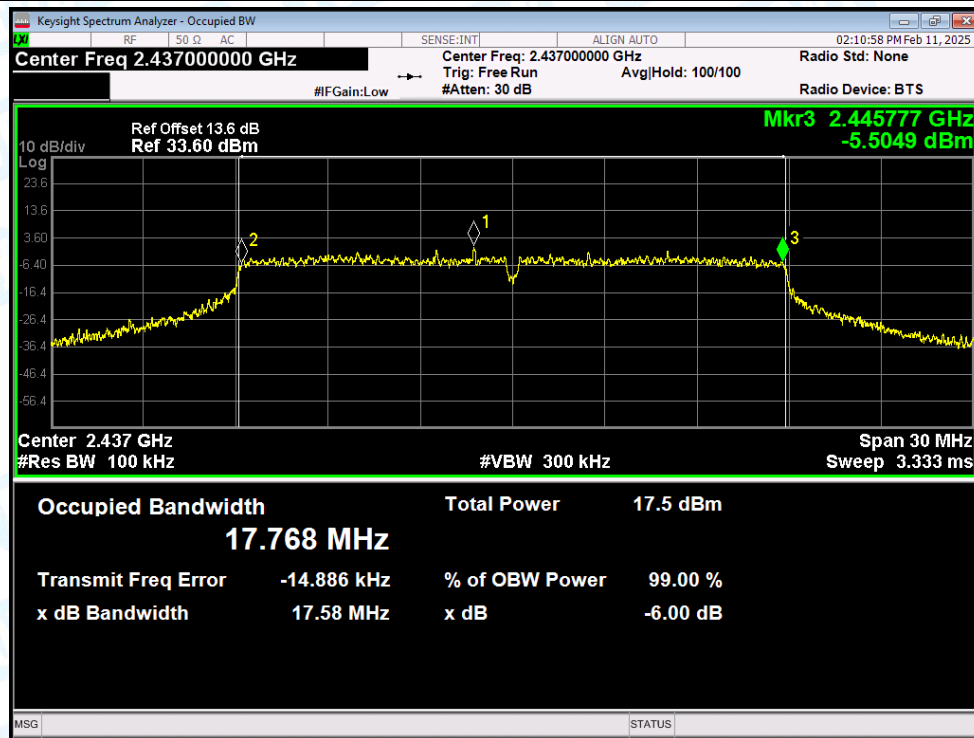
-6dB Bandwidth NVNT g 2462MHz Ant1



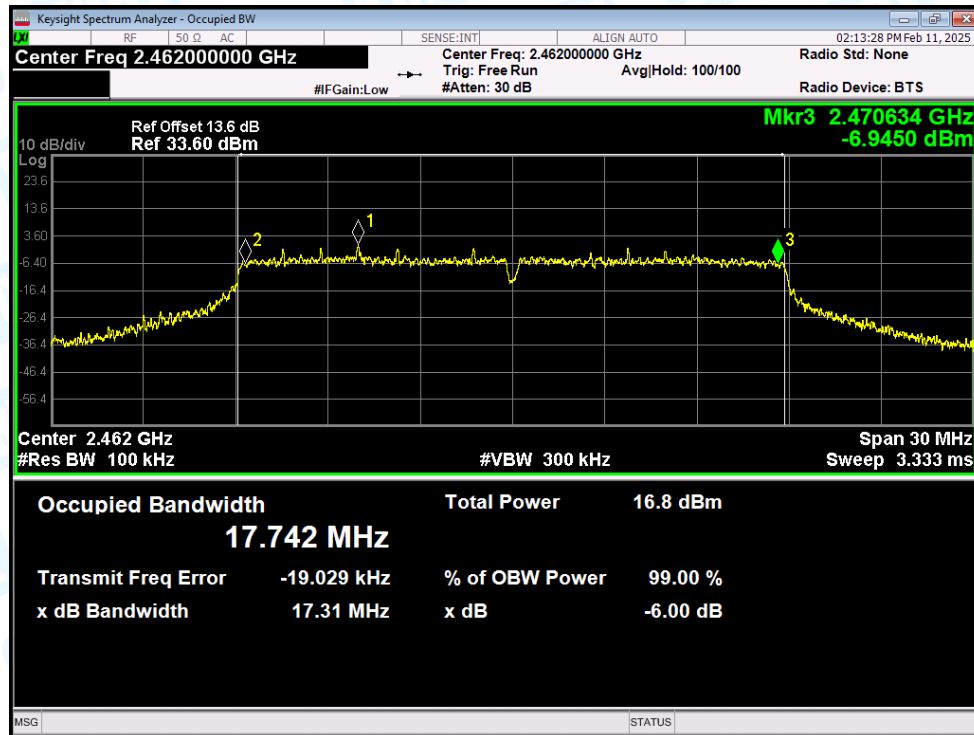
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



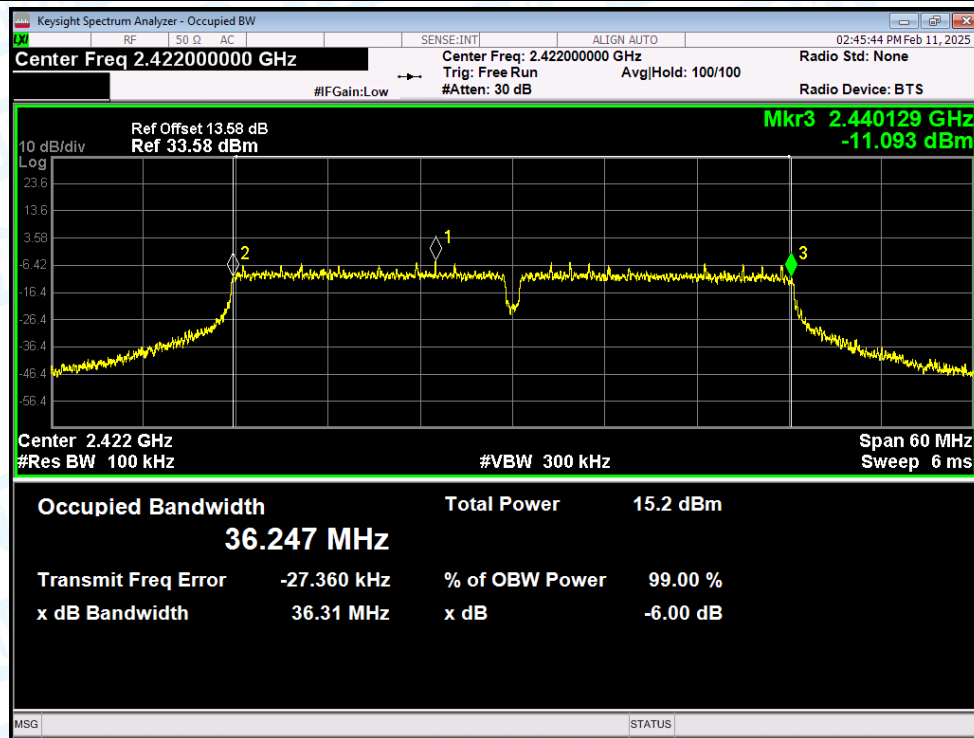
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



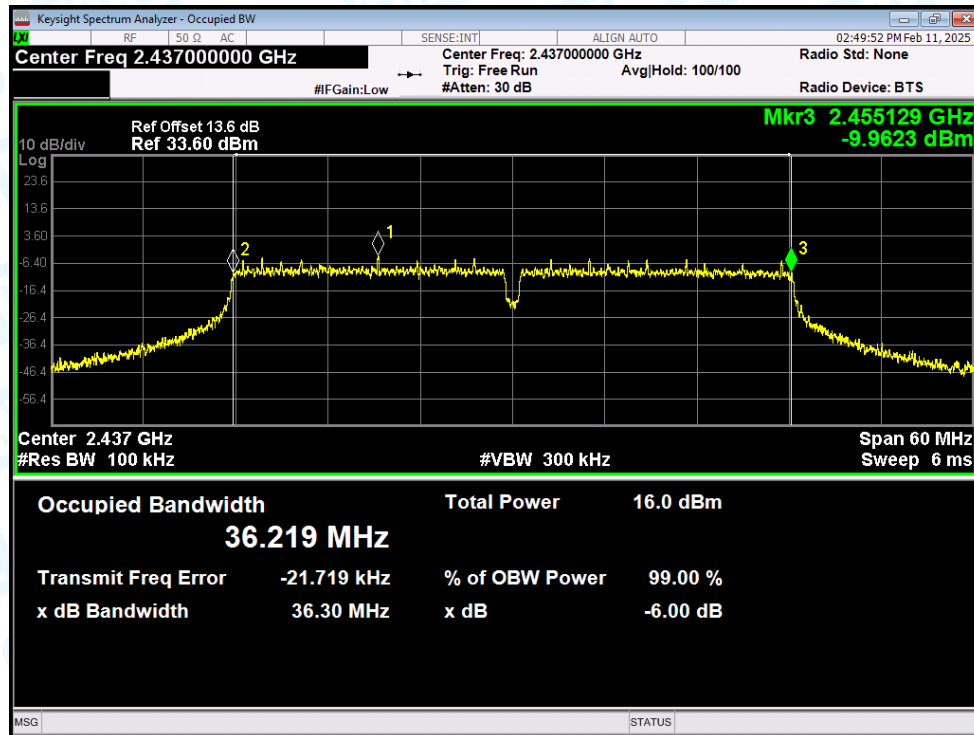
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



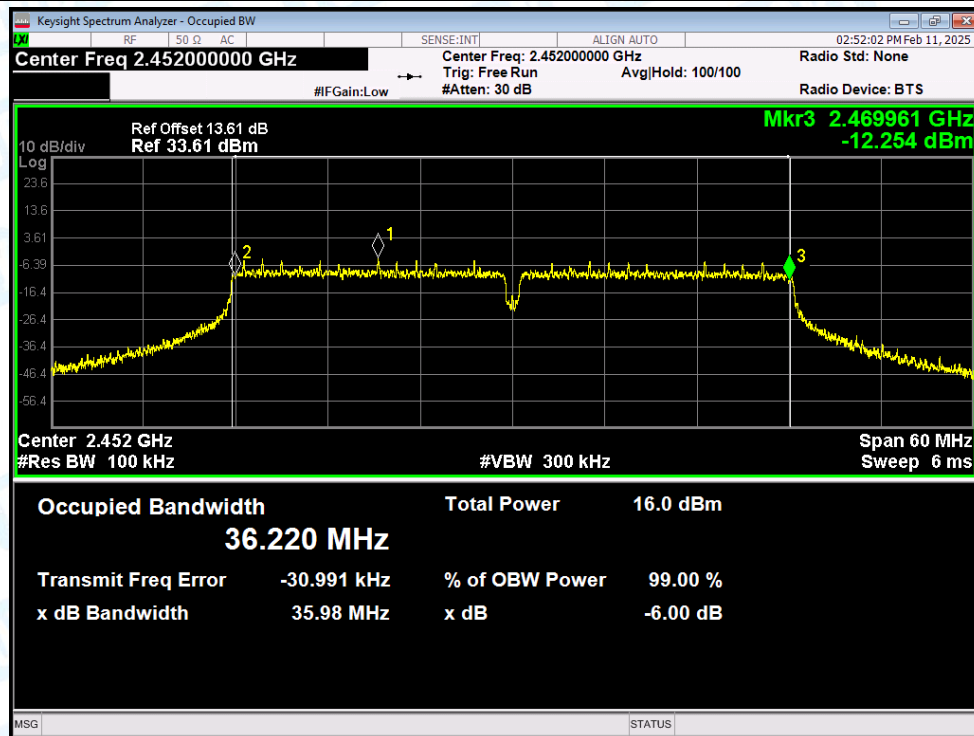
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2437MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2452MHz Ant1

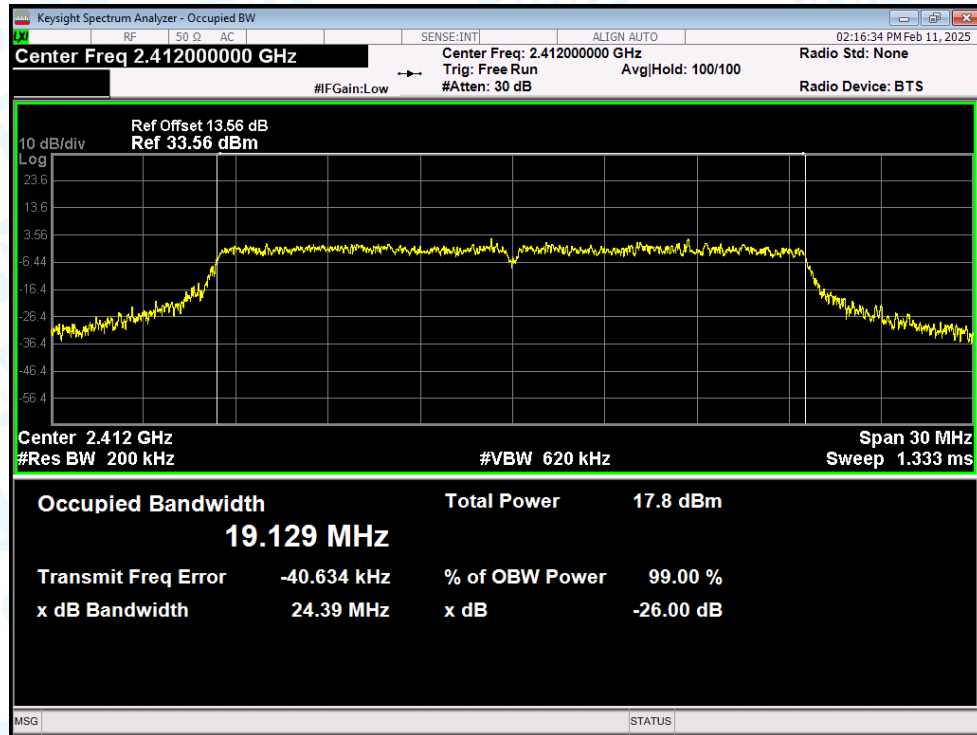


4.Occupied Channel Bandwidth

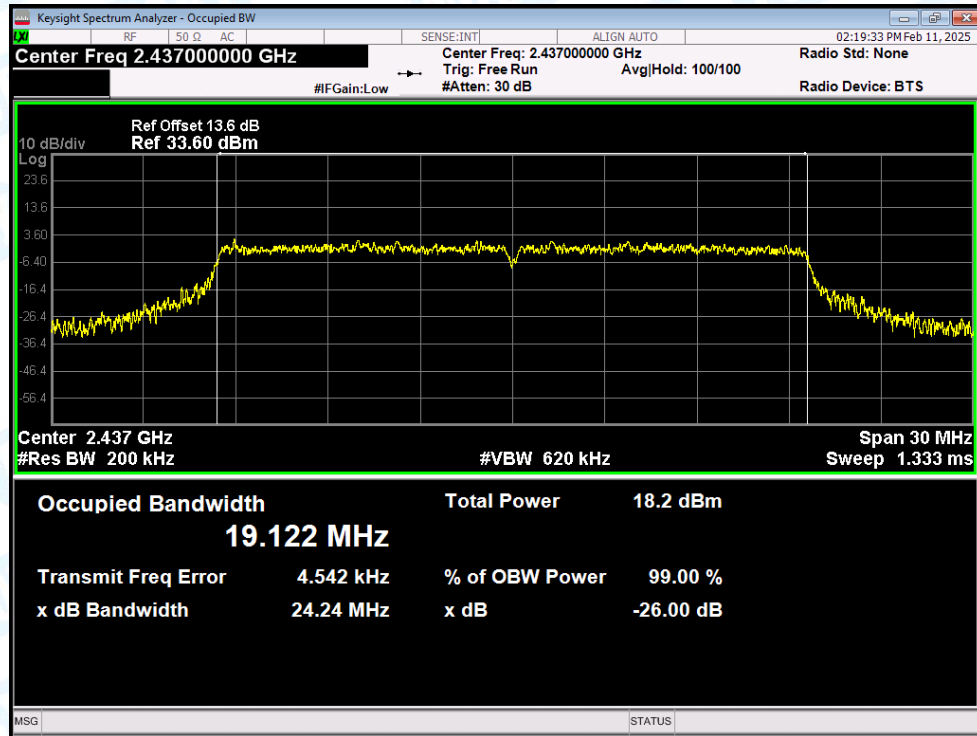
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	ax(VHT20)	2412	Ant1	19.129
NVNT	ax(VHT20)	2437	Ant1	19.122
NVNT	ax(VHT20)	2462	Ant1	19.164
NVNT	ax(VHT40)	2422	Ant1	37.997
NVNT	ax(VHT40)	2437	Ant1	37.946
NVNT	ax(VHT40)	2452	Ant1	37.987
NVNT	b	2412	Ant1	12.504
NVNT	b	2437	Ant1	12.401
NVNT	b	2462	Ant1	12.419
NVNT	g	2412	Ant1	16.789
NVNT	g	2437	Ant1	16.737
NVNT	g	2462	Ant1	16.74
NVNT	n(HT20)	2412	Ant1	17.948
NVNT	n(HT20)	2437	Ant1	17.936
NVNT	n(HT20)	2462	Ant1	17.928
NVNT	n(HT40)	2422	Ant1	36.552
NVNT	n(HT40)	2437	Ant1	36.596
NVNT	n(HT40)	2452	Ant1	36.55

Test Graphs

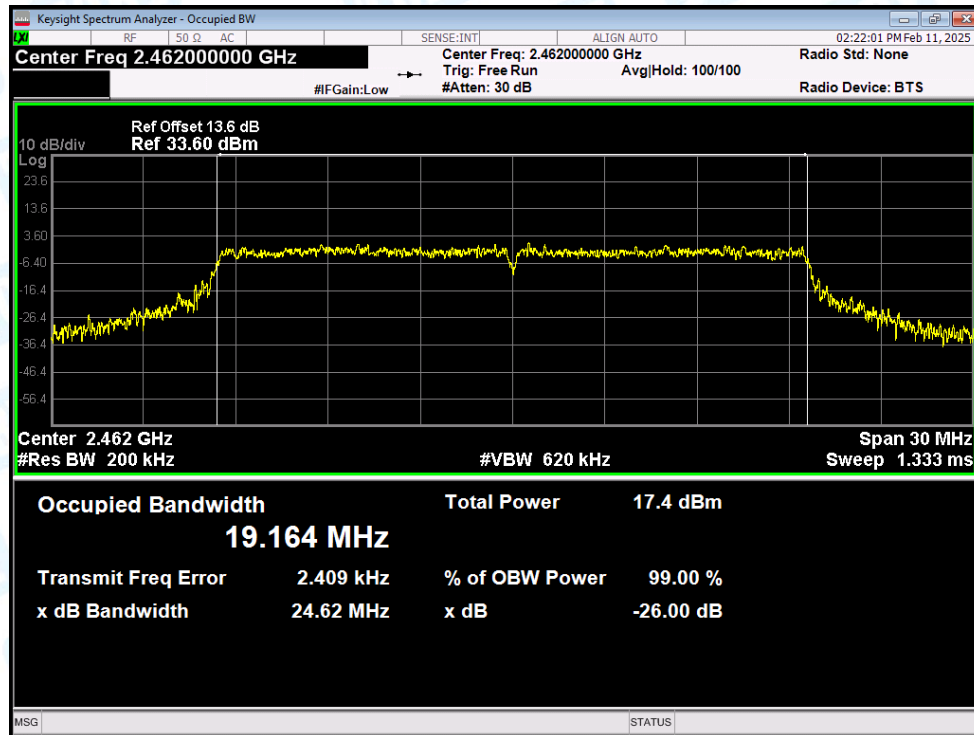
OBW NVNT ax(VHT20) 2412MHz Ant1



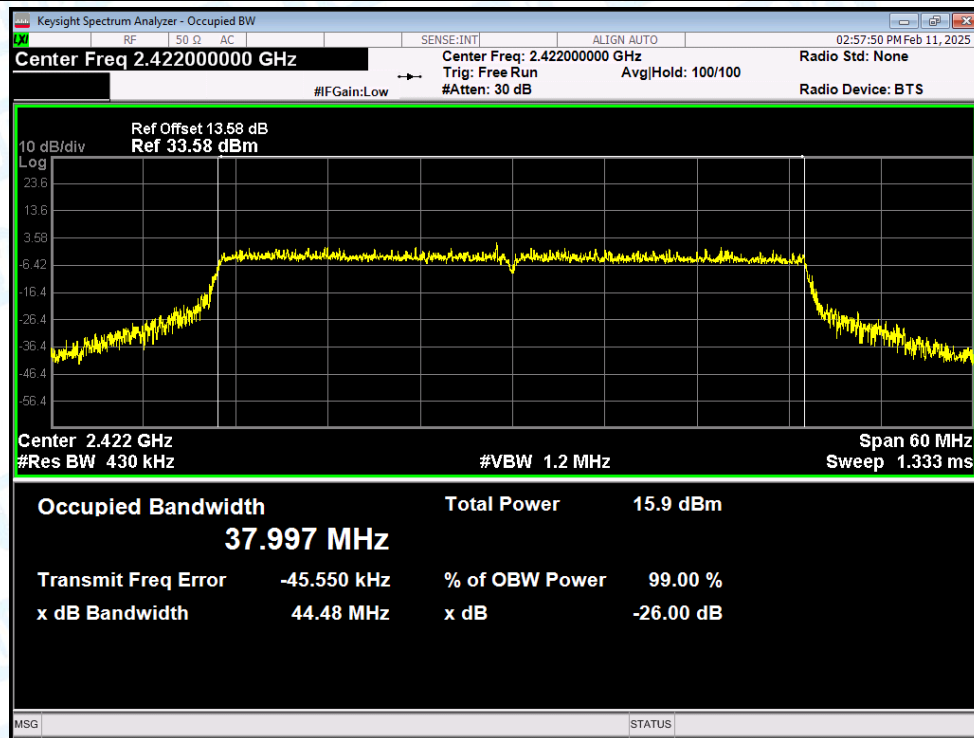
OBW NVNT ax(VHT20) 2437MHz Ant1



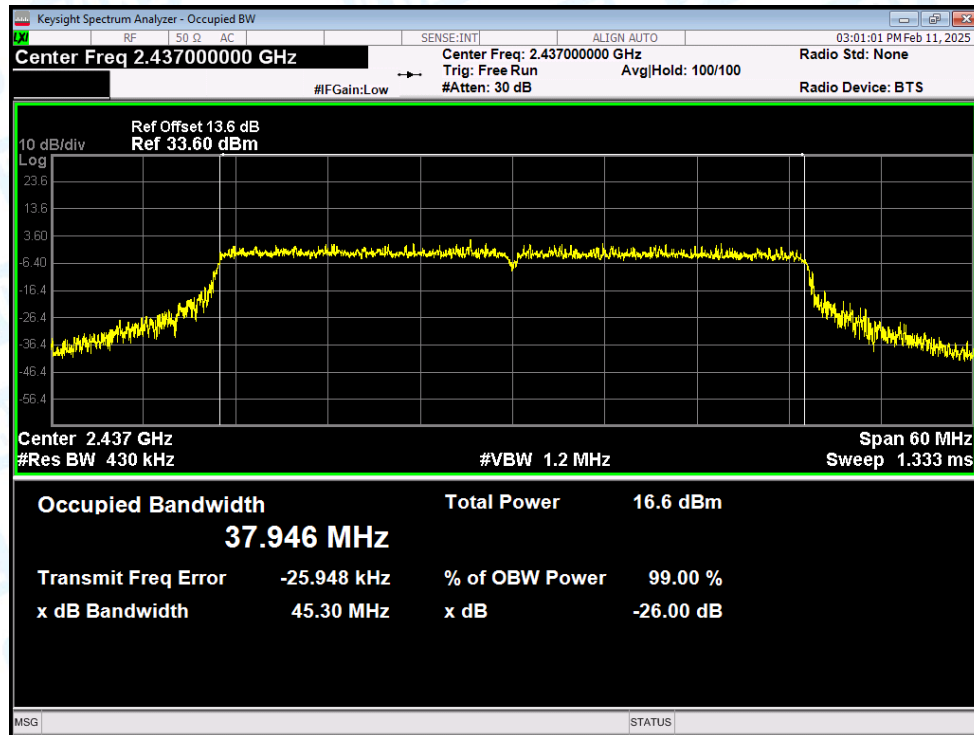
OBW NVNT ax(VHT20) 2462MHz Ant1



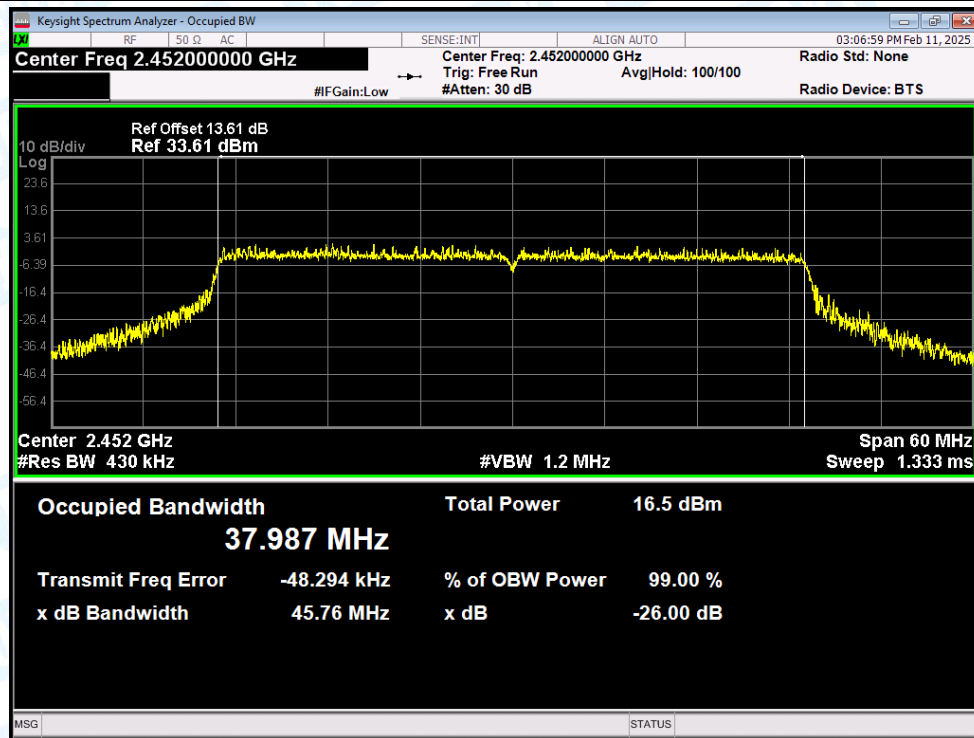
OBW NVNT ax(VHT40) 2422MHz Ant1

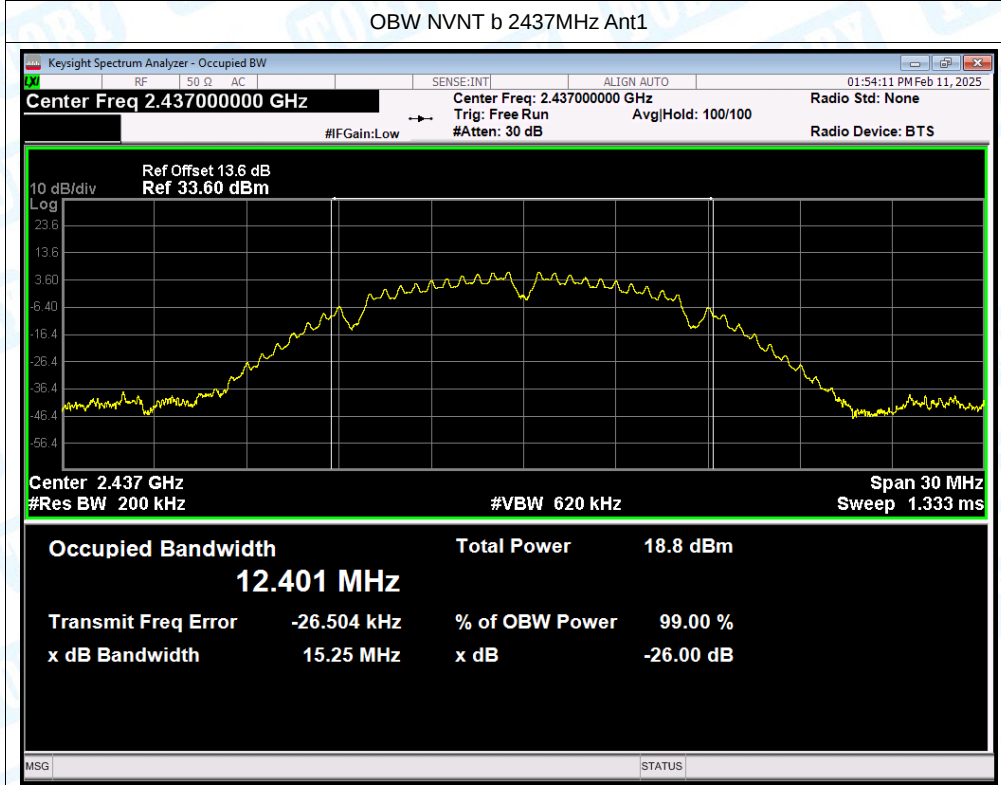
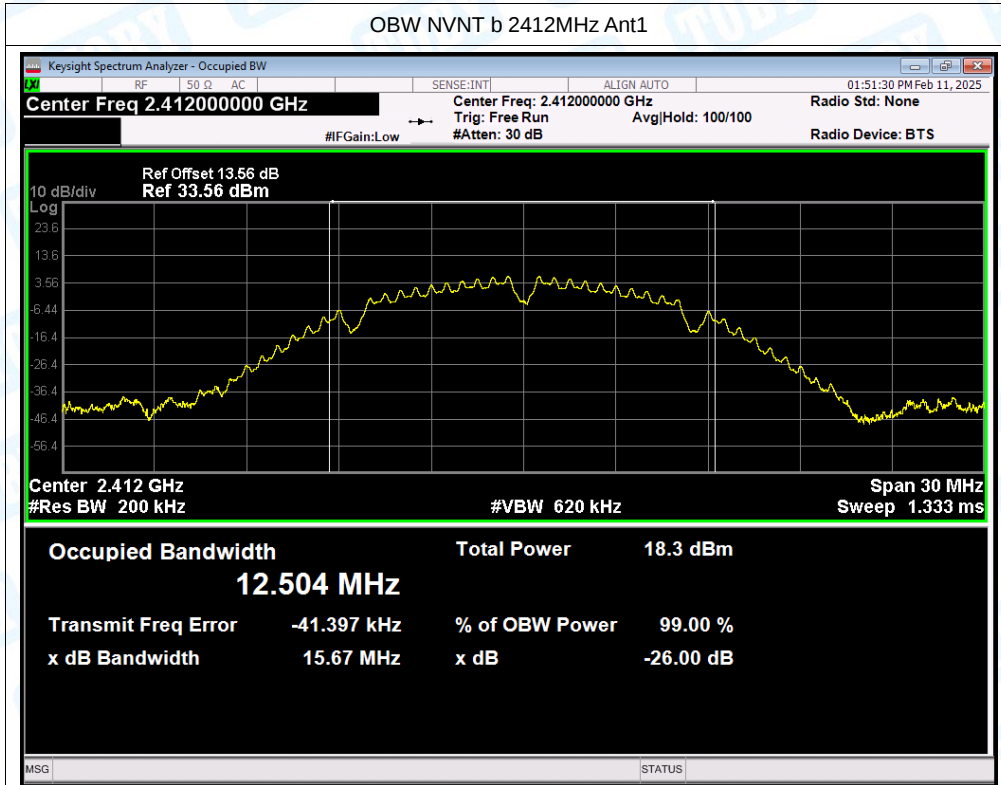


OBW NVNT ax(VHT40) 2437MHz Ant1

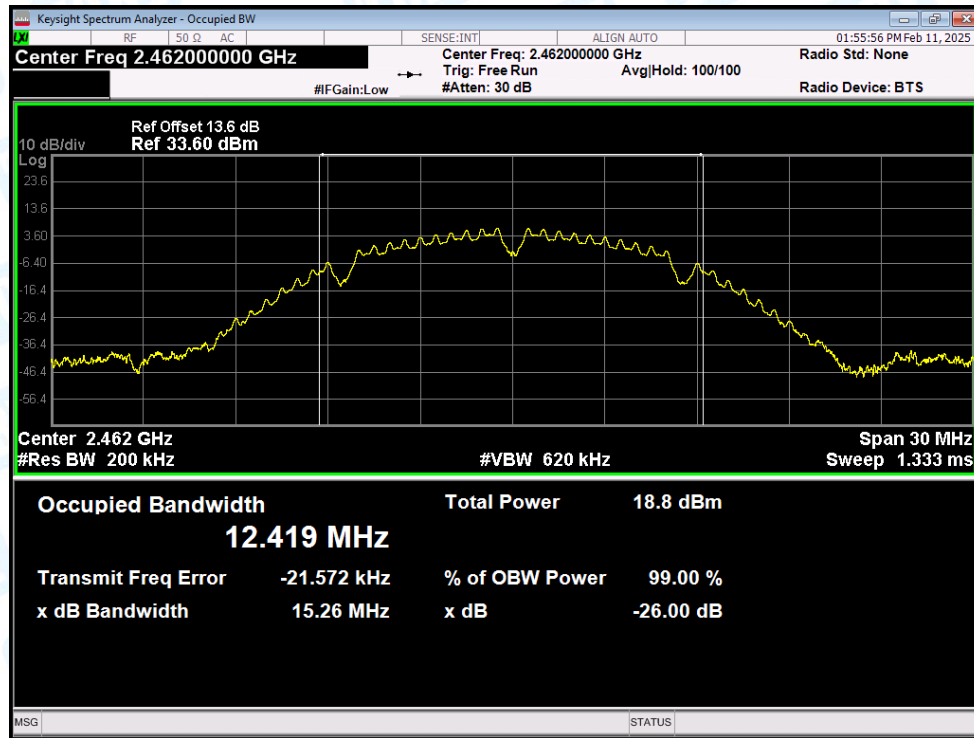


OBW NVNT ax(VHT40) 2452MHz Ant1

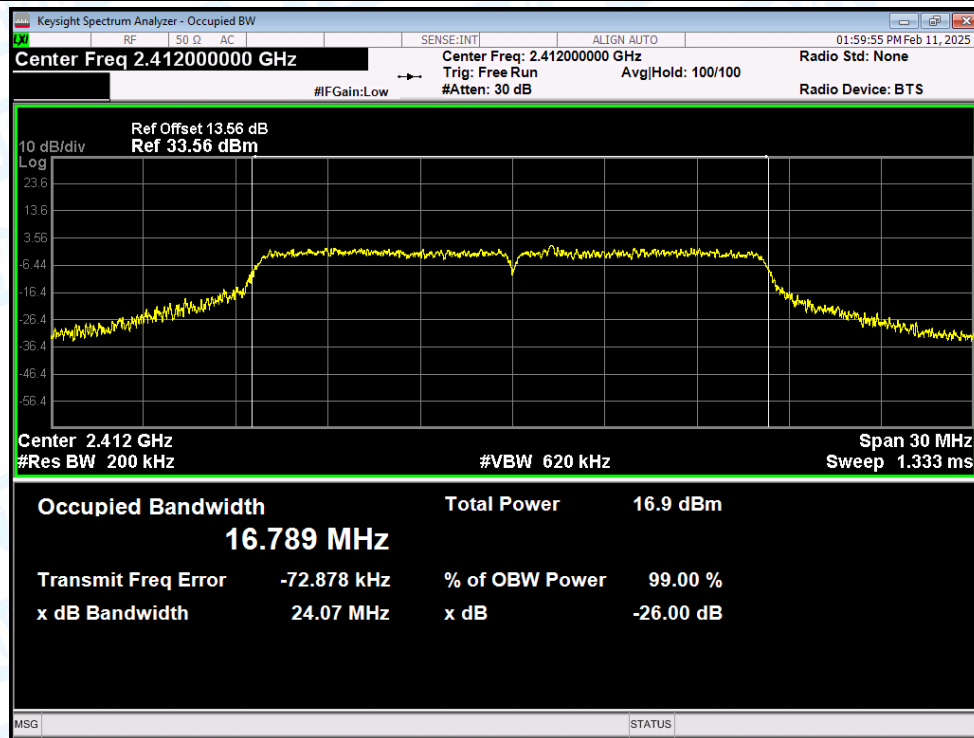




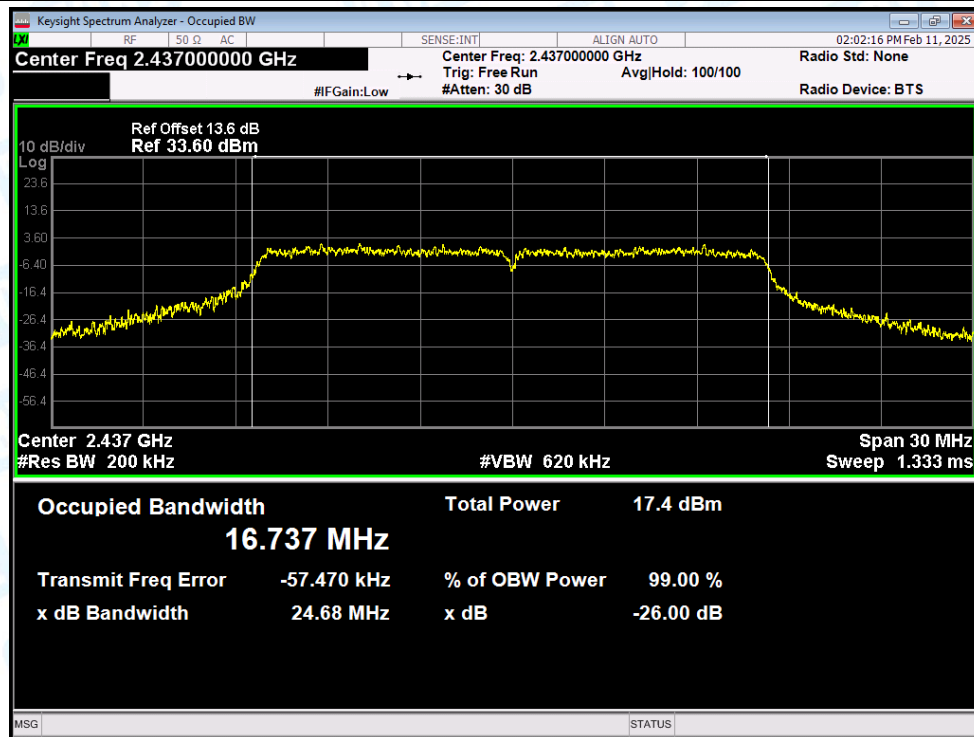
OBW NVNT b 2462MHz Ant1



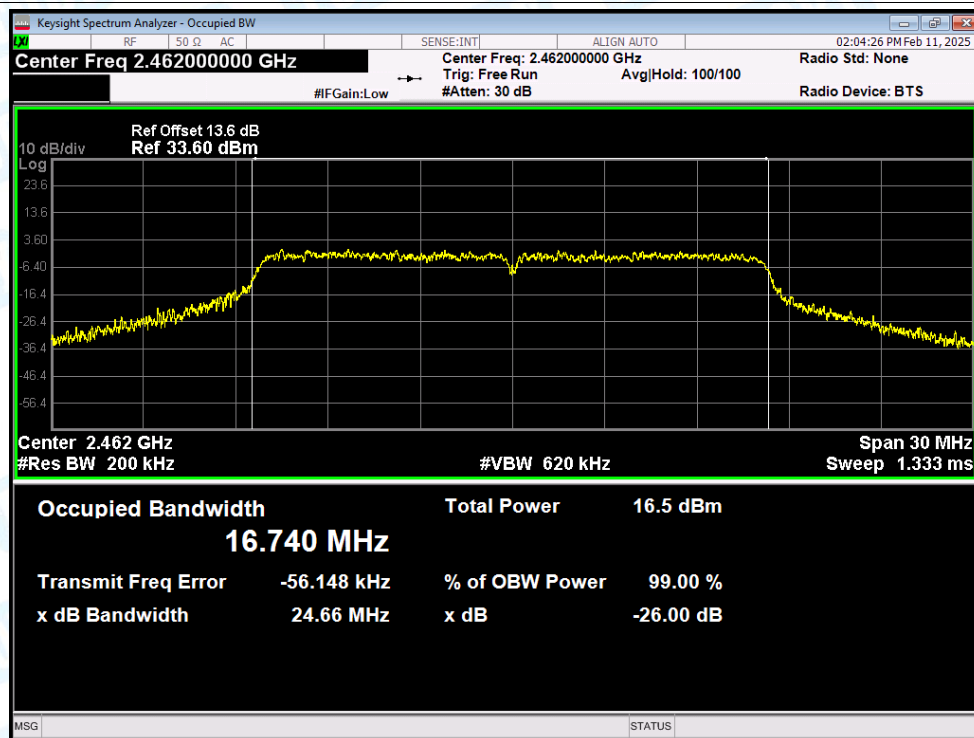
OBW NVNT g 2412MHz Ant1



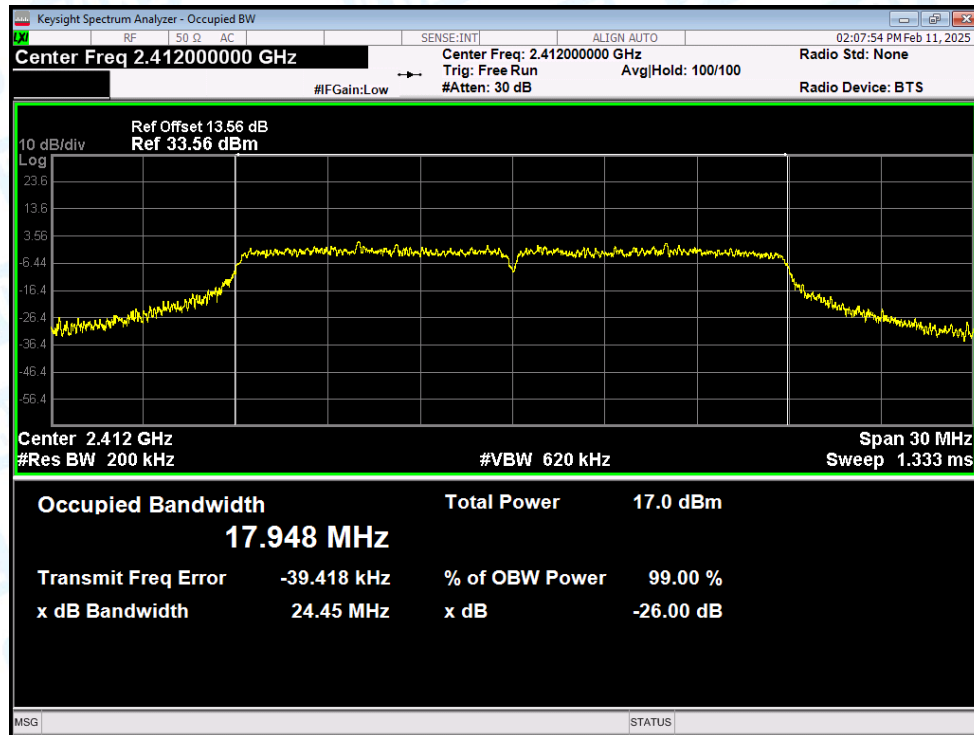
OBW NVNT g 2437MHz Ant1



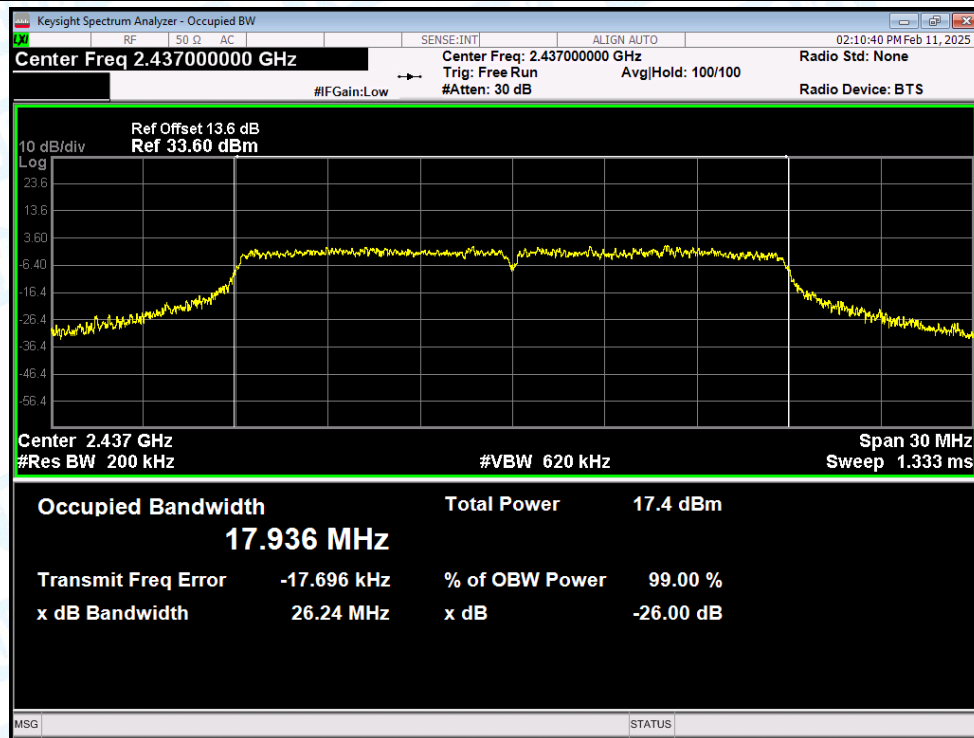
OBW NVNT g 2462MHz Ant1



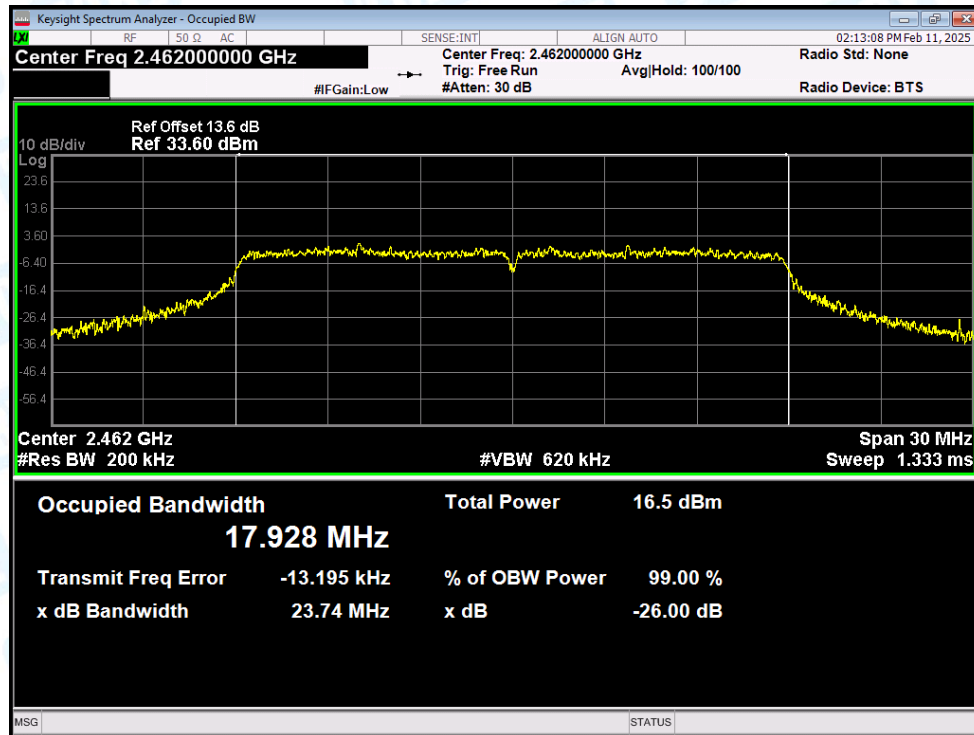
OBW NVNT n(HT20) 2412MHz Ant1



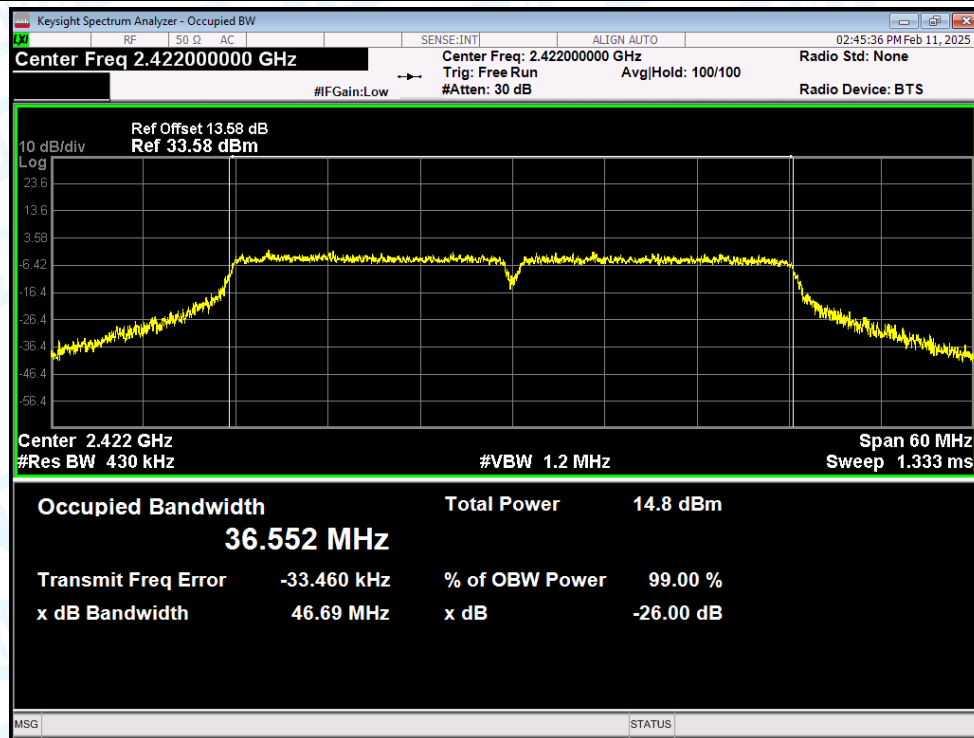
OBW NVNT n(HT20) 2437MHz Ant1



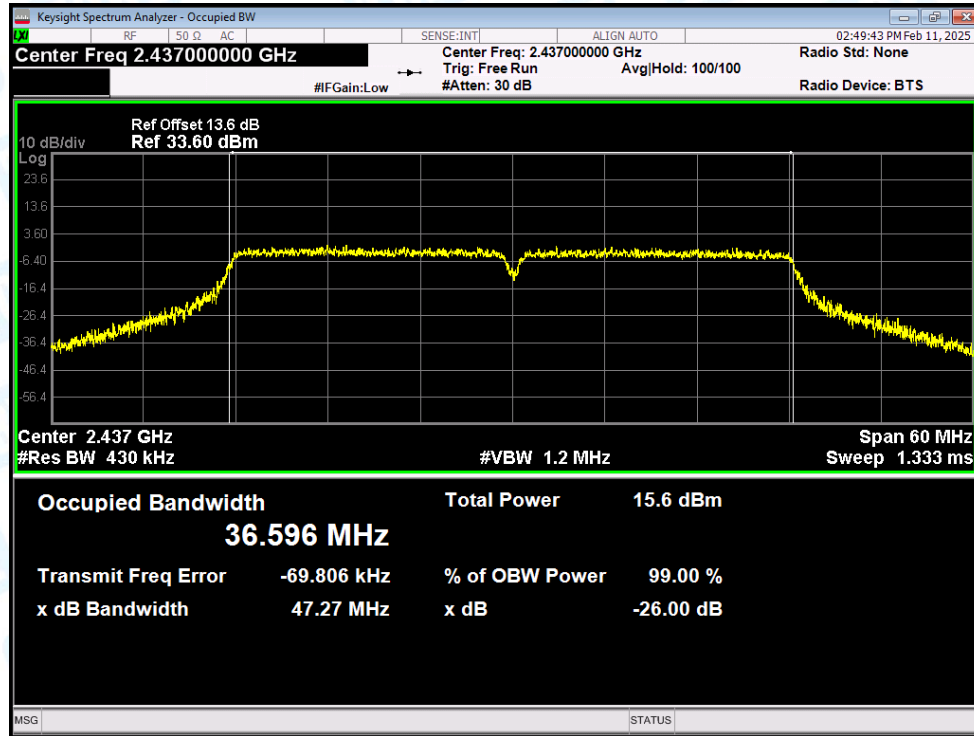
OBW NVNT n(HT20) 2462MHz Ant1



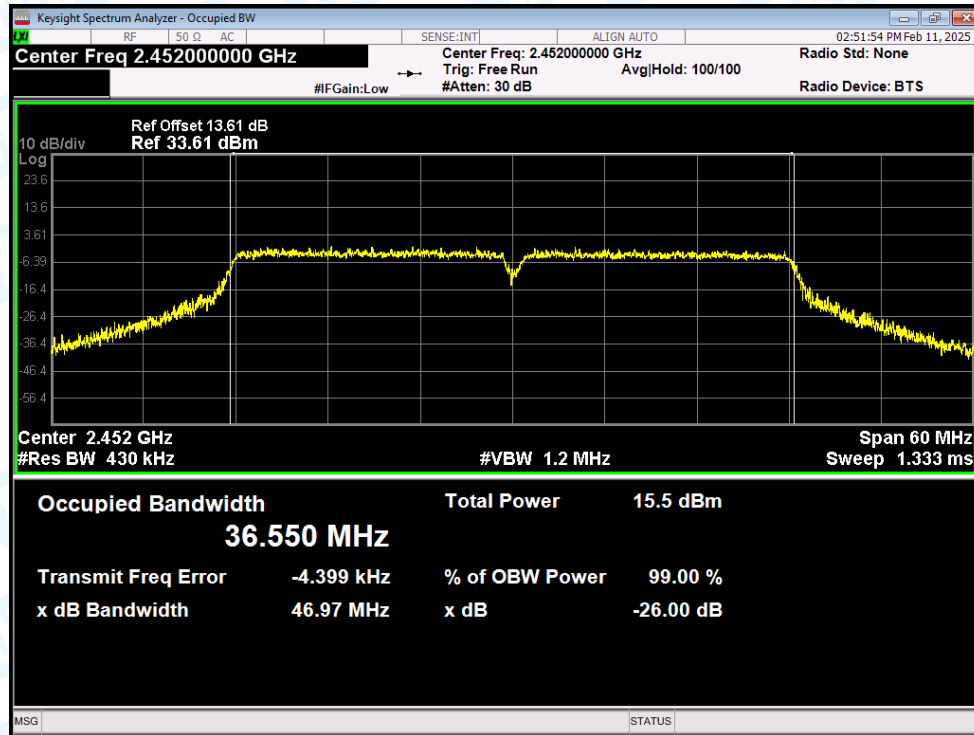
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2437MHz Ant1



OBW NVNT n(HT40) 2452MHz Ant1

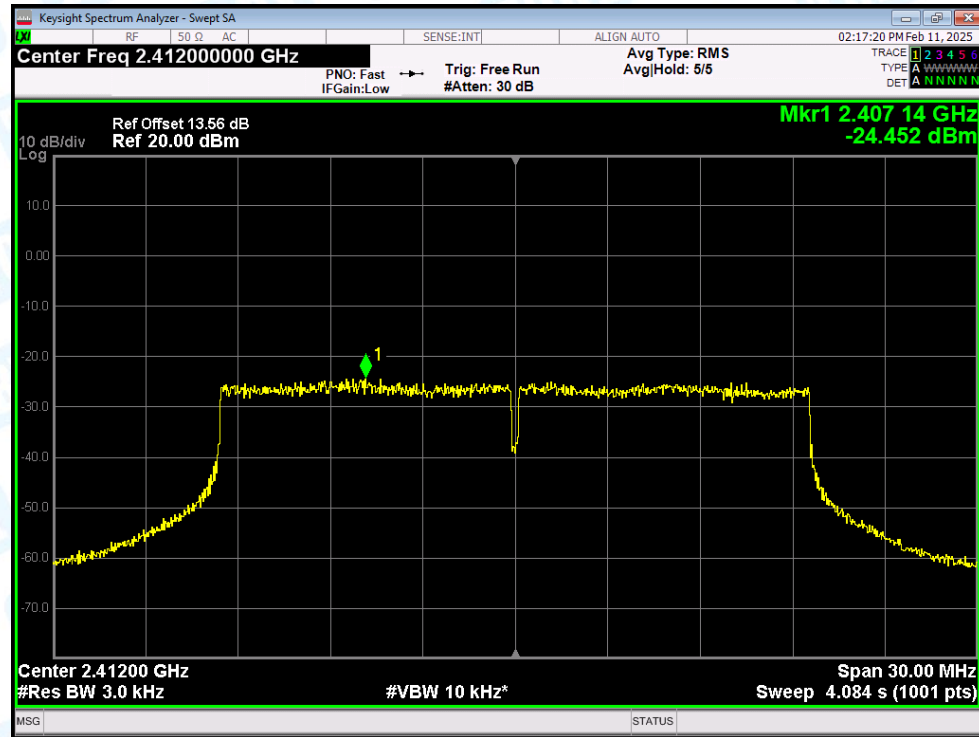


5.Maximum Power Spectral Density Level

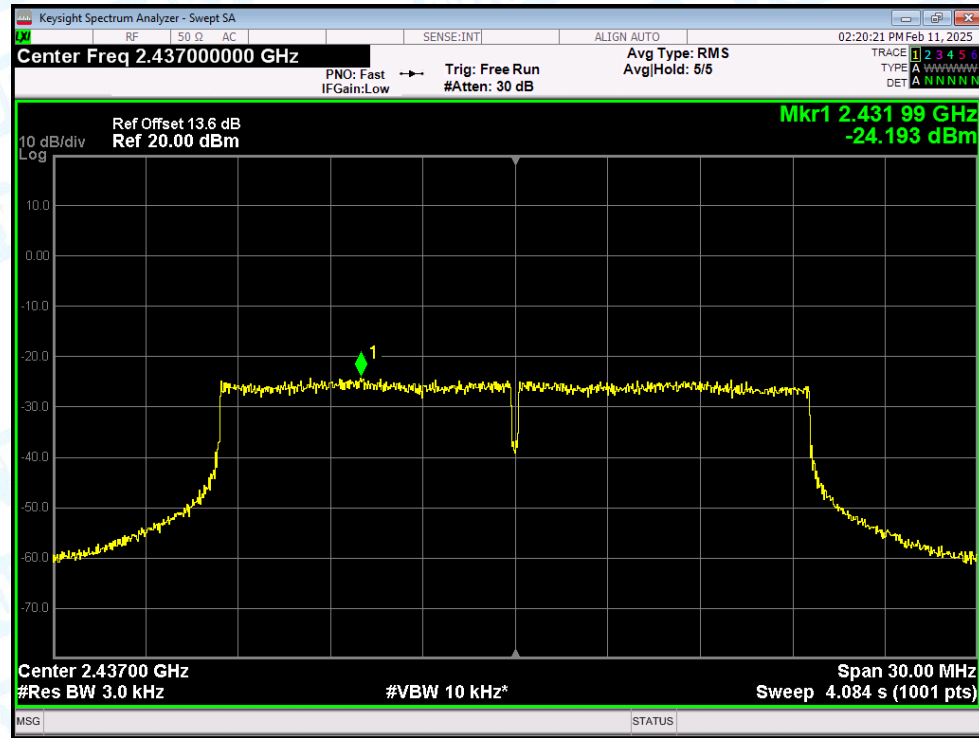
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	ax(VHT20)	2412	Ant1	-24.452	8	Pass
NVNT	ax(VHT20)	2437	Ant1	-24.193	8	Pass
NVNT	ax(VHT20)	2462	Ant1	-25.132	8	Pass
NVNT	ax(VHT40)	2422	Ant1	-30.217	8	Pass
NVNT	ax(VHT40)	2437	Ant1	-29.571	8	Pass
NVNT	ax(VHT40)	2452	Ant1	-29.682	8	Pass
NVNT	b	2412	Ant1	-11.513	8	Pass
NVNT	b	2437	Ant1	-17.241	8	Pass
NVNT	b	2462	Ant1	-16.81	8	Pass
NVNT	g	2412	Ant1	-23.143	8	Pass
NVNT	g	2437	Ant1	-22.613	8	Pass
NVNT	g	2462	Ant1	-23.139	8	Pass
NVNT	n(HT20)	2412	Ant1	-23.327	8	Pass
NVNT	n(HT20)	2437	Ant1	-22.89	8	Pass
NVNT	n(HT20)	2462	Ant1	-23.447	8	Pass
NVNT	n(HT40)	2422	Ant1	-28.938	8	Pass
NVNT	n(HT40)	2437	Ant1	-28.256	8	Pass
NVNT	n(HT40)	2452	Ant1	-28.632	8	Pass

Test Graphs

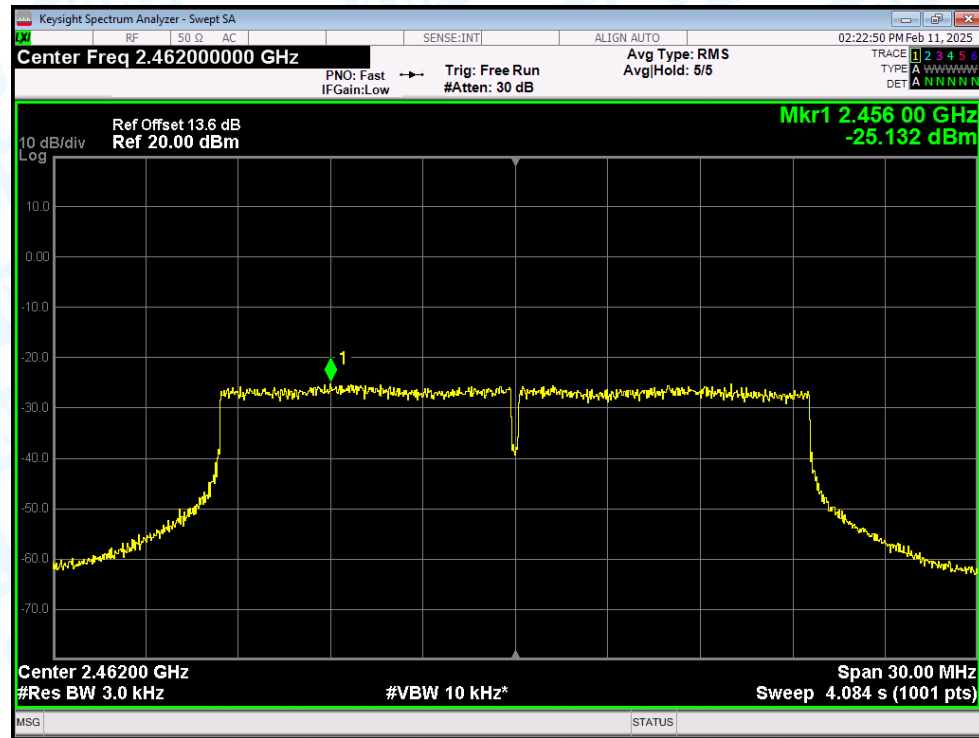
PSD NVNT ax(VHT20) 2412MHz Ant1



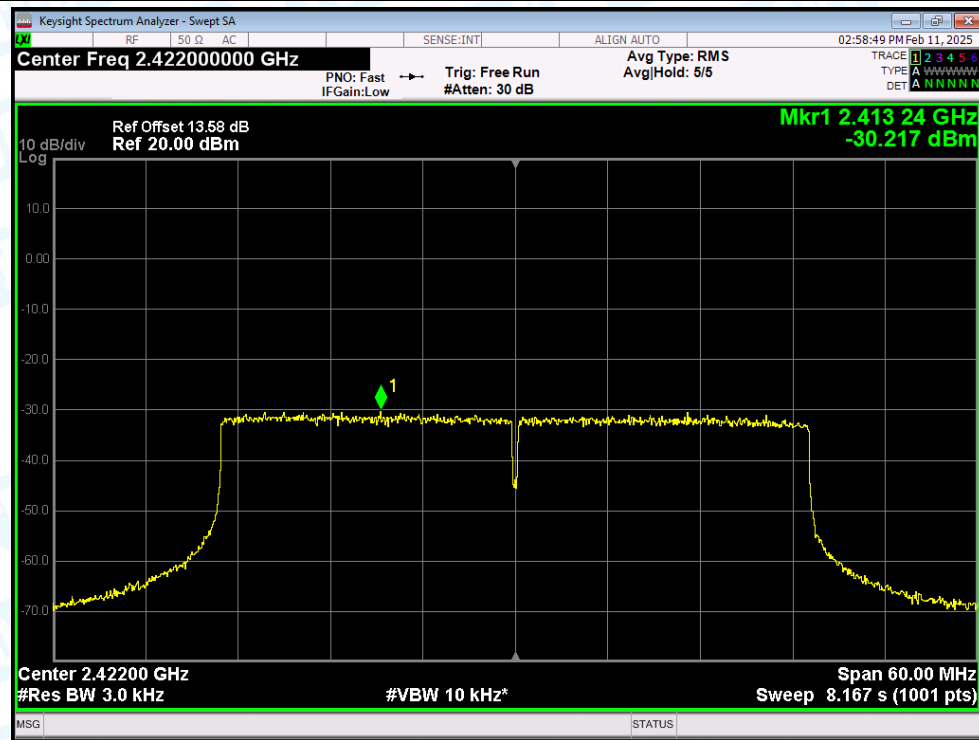
PSD NVNT ax(VHT20) 2437MHz Ant1

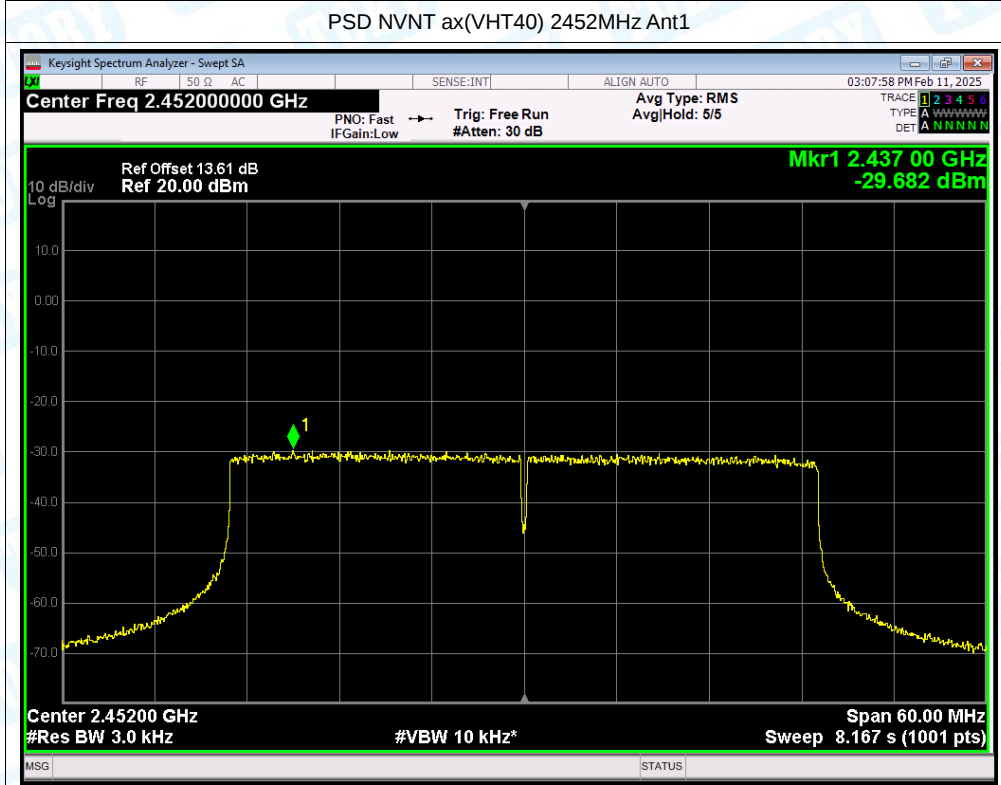
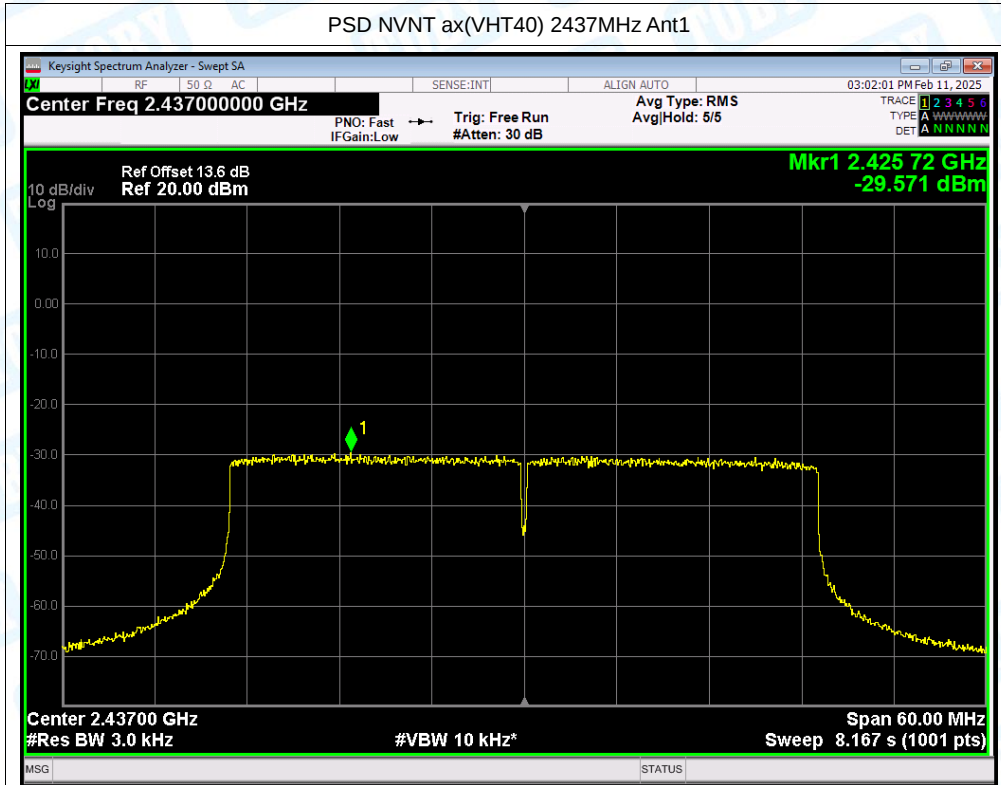


PSD NVNT ax(VHT20) 2462MHz Ant1



PSD NVNT ax(VHT40) 2422MHz Ant1





PSD NVNT b 2412MHz Ant1



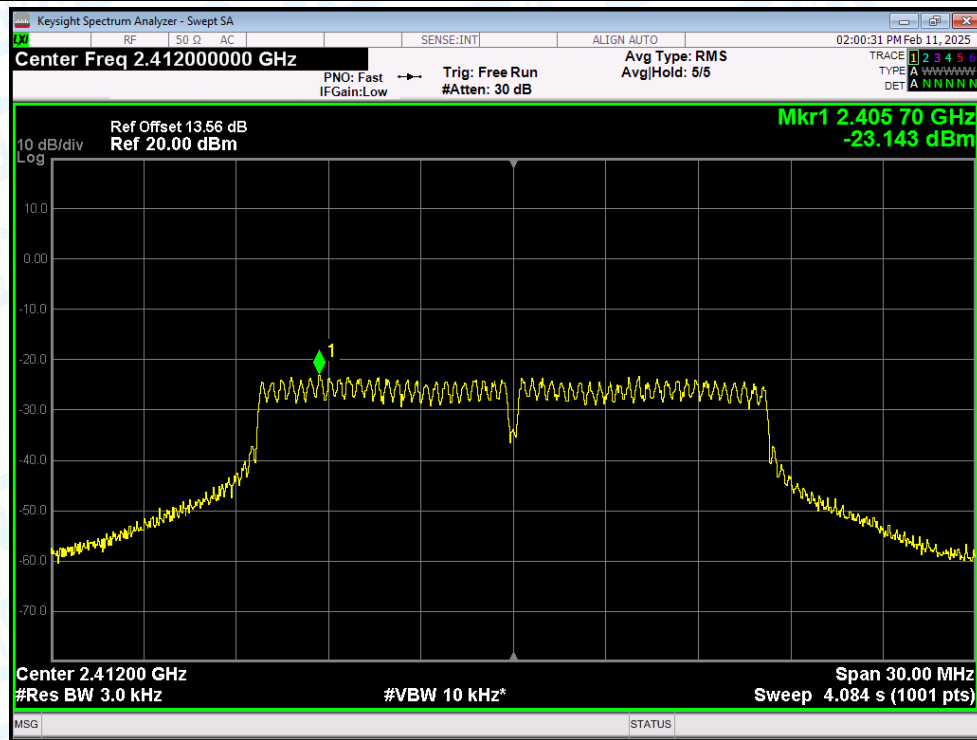
PSD NVNT b 2437MHz Ant1



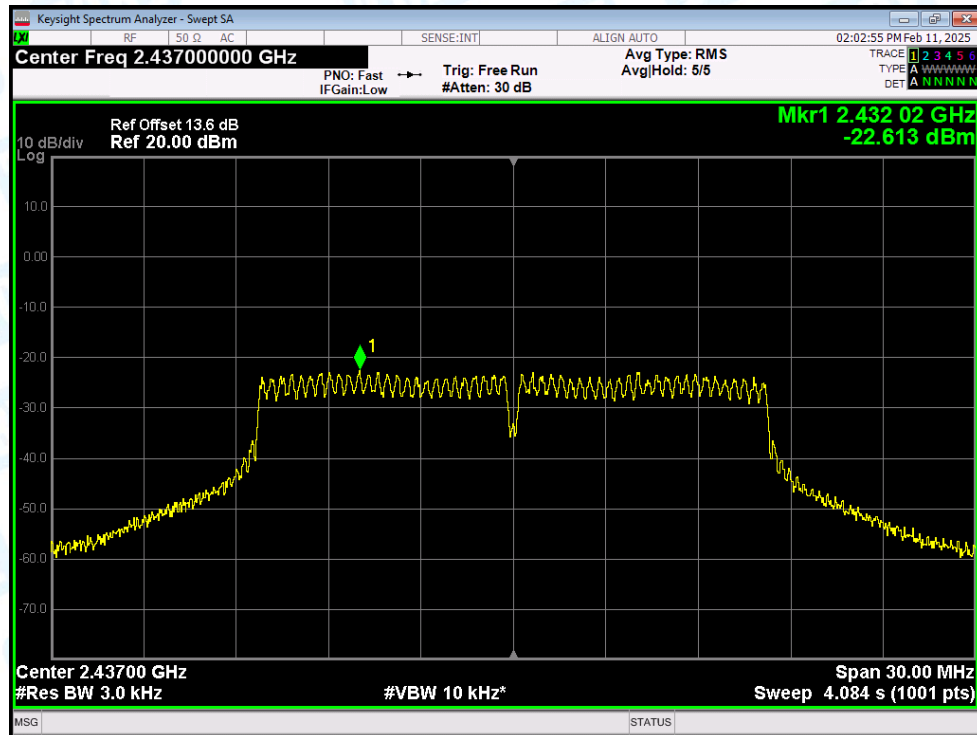
PSD NVNT b 2462MHz Ant1



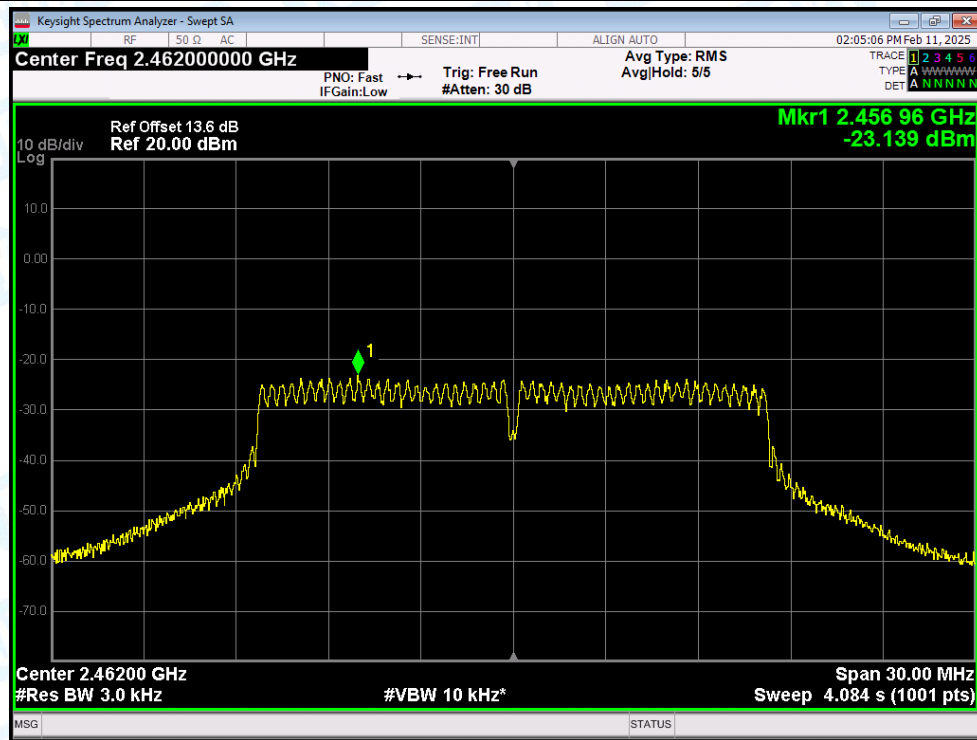
PSD NVNT g 2412MHz Ant1



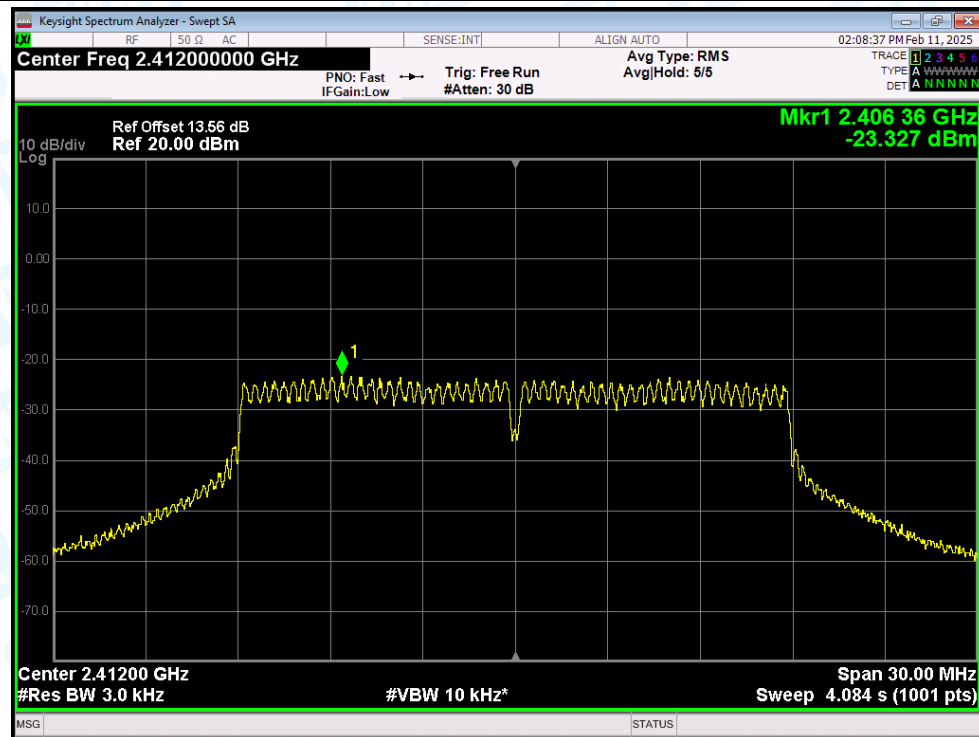
PSD NVNT g 2437MHz Ant1



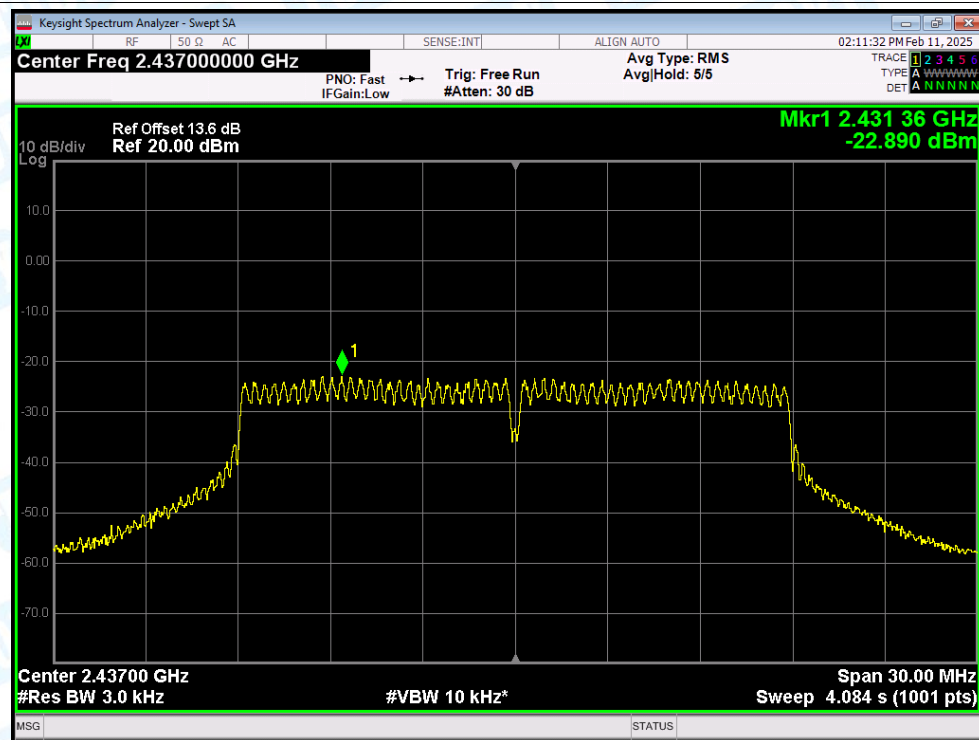
PSD NVNT g 2462MHz Ant1



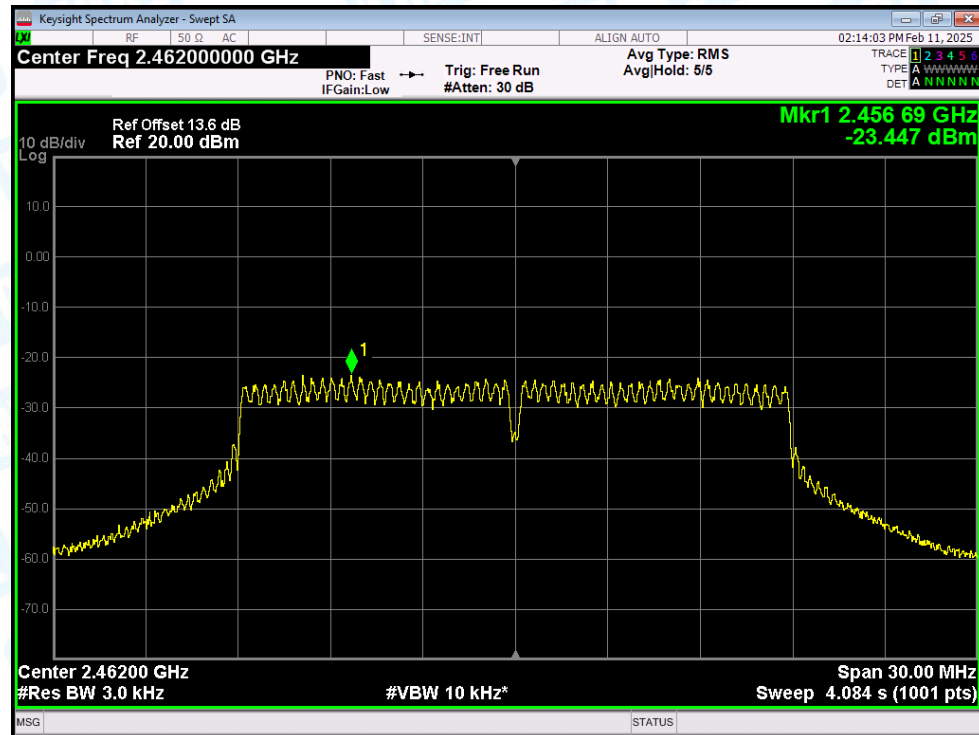
PSD NVNT n(HT20) 2412MHz Ant1



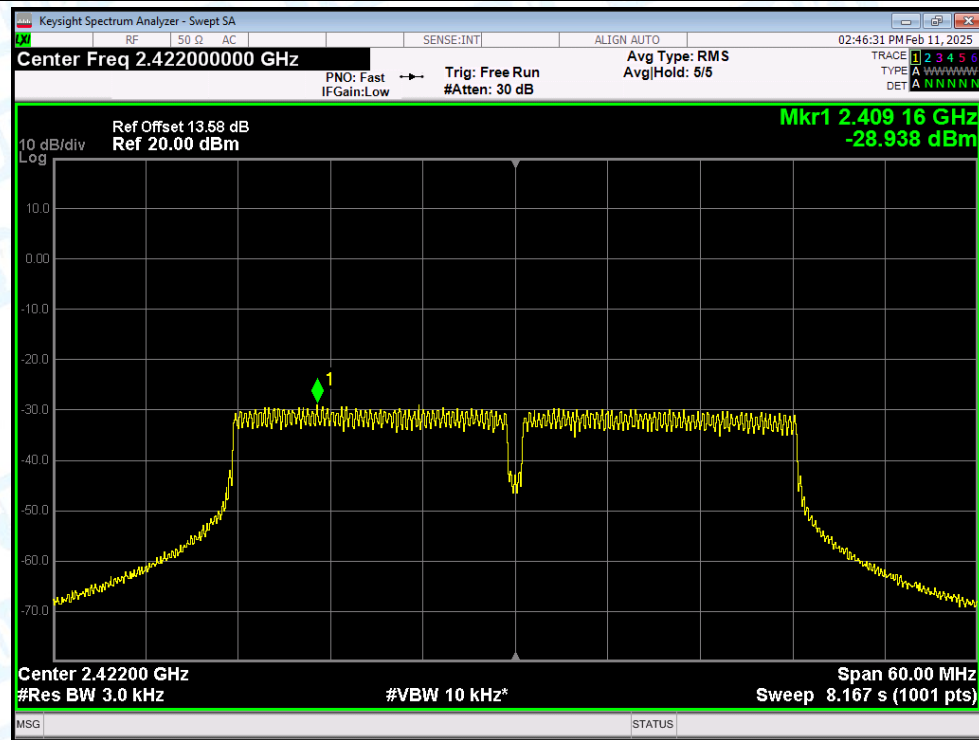
PSD NVNT n(HT20) 2437MHz Ant1



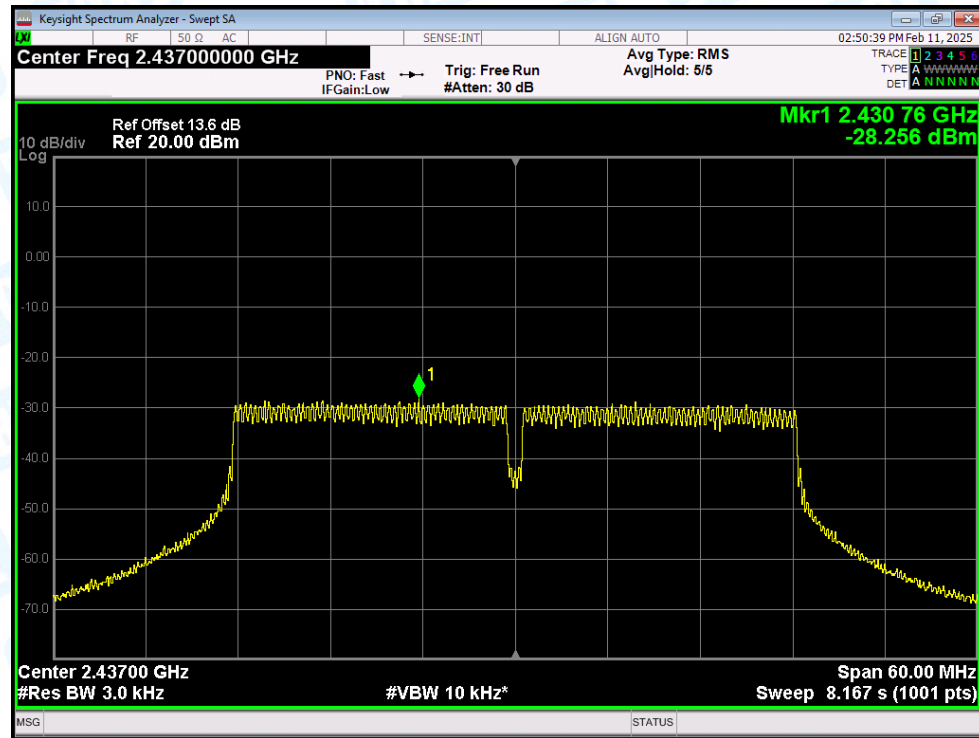
PSD NVNT n(HT20) 2462MHz Ant1



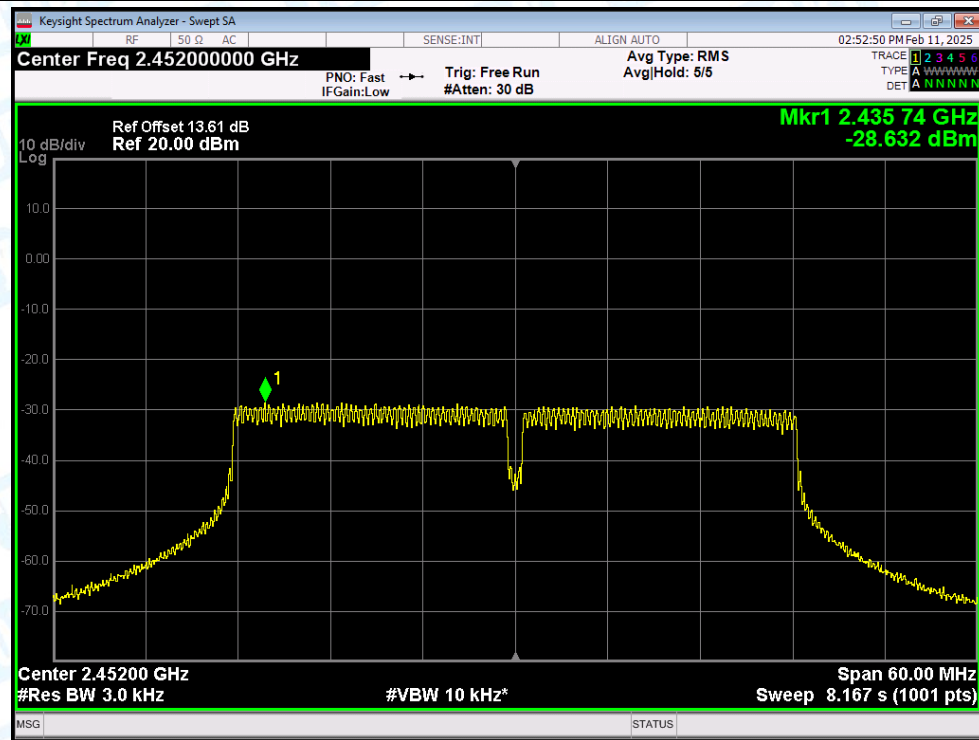
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1

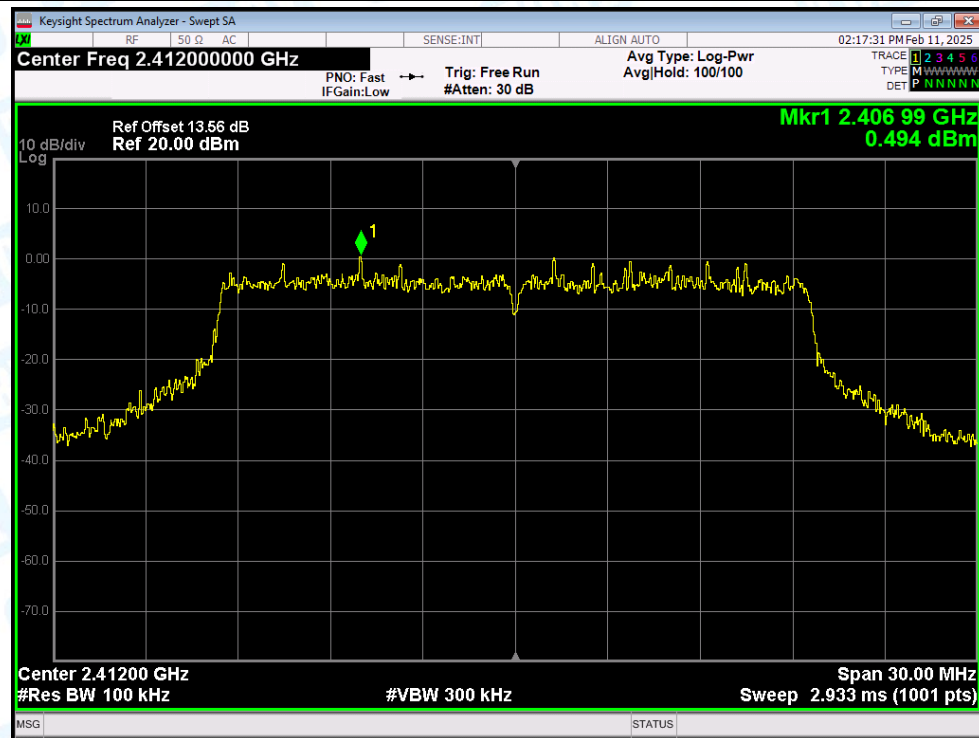


6.Band Edge

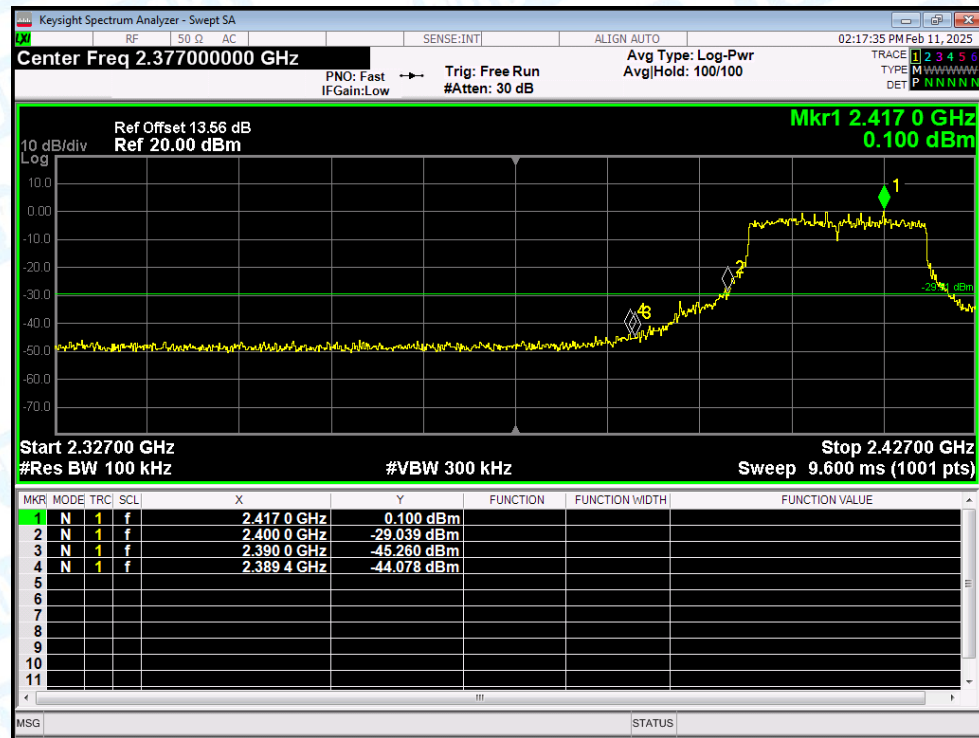
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	ax(VHT20)	2412	Ant1	-44.57	-30	Pass
NVNT	ax(VHT20)	2462	Ant1	-42.84	-30	Pass
NVNT	ax(VHT40)	2422	Ant1	-36.53	-30	Pass
NVNT	ax(VHT40)	2452	Ant1	-35.82	-30	Pass
NVNT	b	2412	Ant1	-50.35	-30	Pass
NVNT	b	2462	Ant1	-51.21	-30	Pass
NVNT	g	2412	Ant1	-44.74	-30	Pass
NVNT	g	2462	Ant1	-41.91	-30	Pass
NVNT	n(HT20)	2412	Ant1	-44.4	-30	Pass
NVNT	n(HT20)	2462	Ant1	-43.98	-30	Pass
NVNT	n(HT40)	2422	Ant1	-37.22	-30	Pass
NVNT	n(HT40)	2452	Ant1	-37.42	-30	Pass

Test Graphs

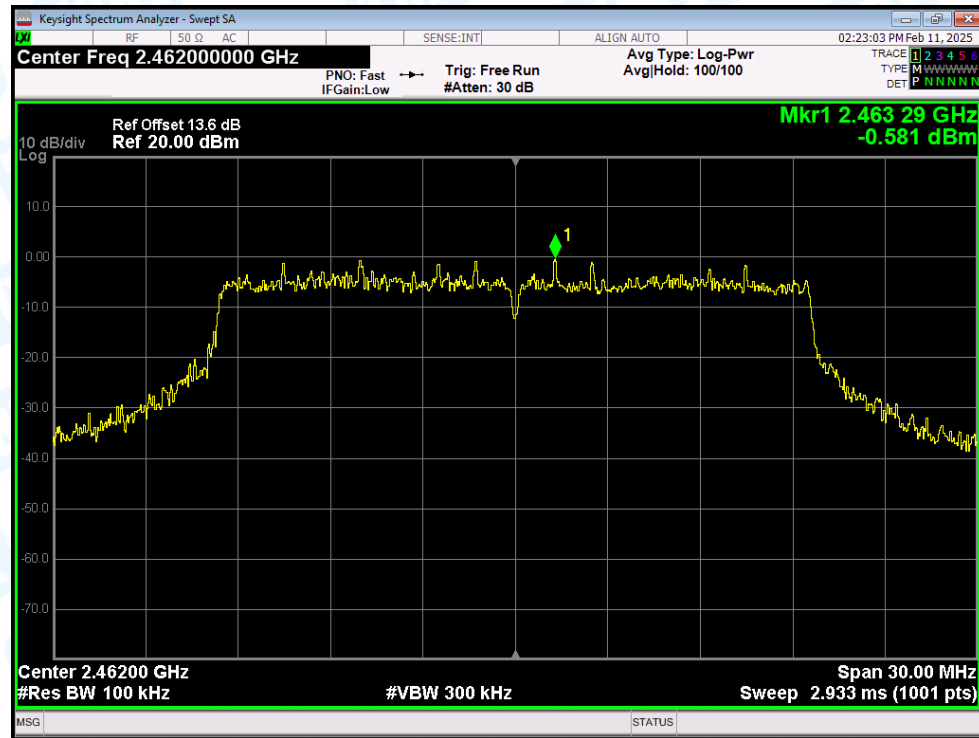
Band Edge NVNT ax(VHT20) 2412MHz Ant1 Ref



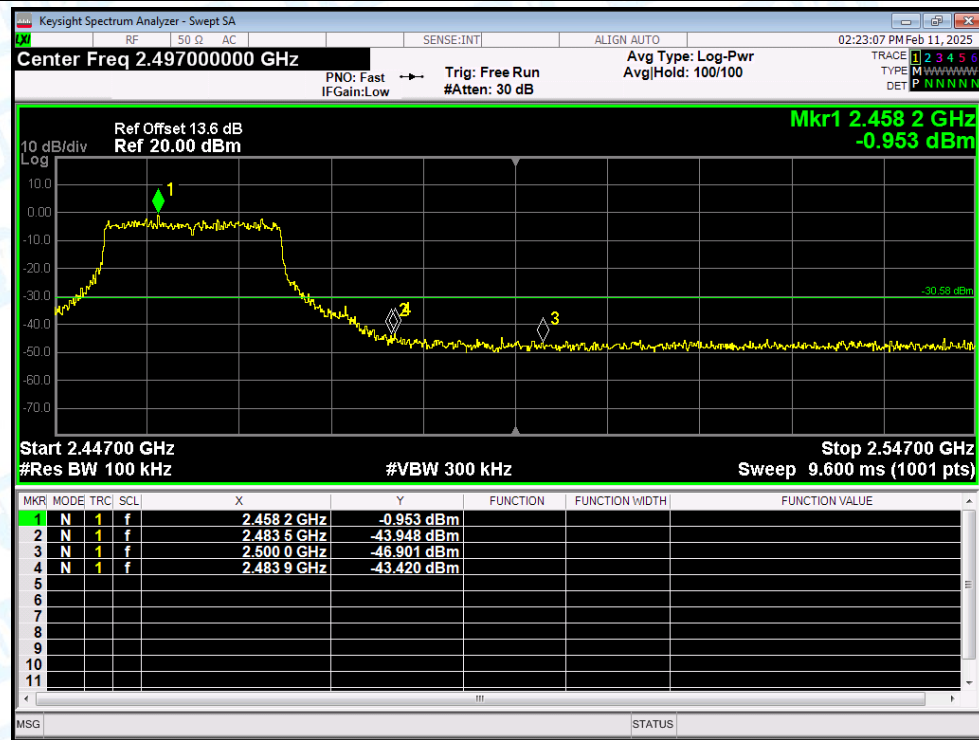
Band Edge NVNT ax(VHT20) 2412MHz Ant1 Emission



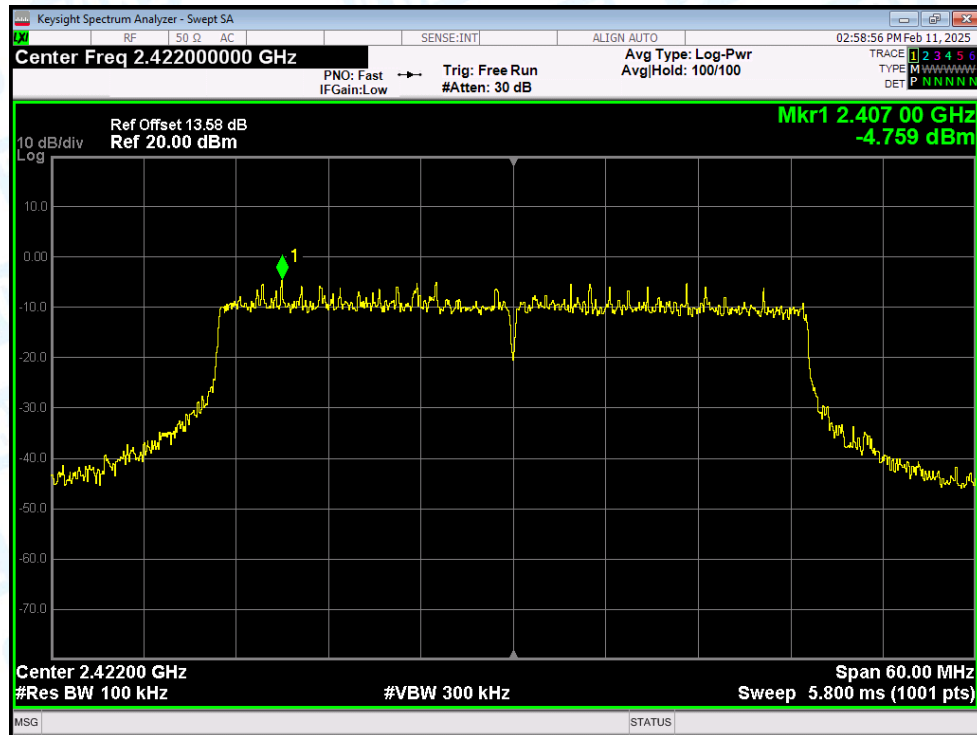
Band Edge NVNT ax(VHT20) 2462MHz Ant1 Ref



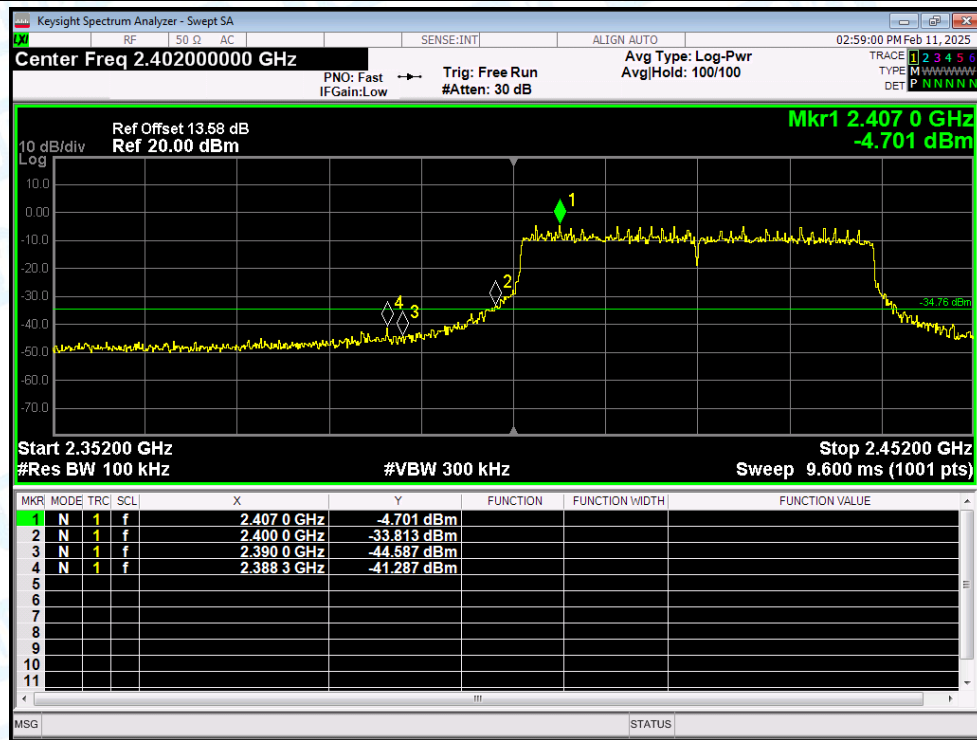
Band Edge NVNT ax(VHT20) 2462MHz Ant1 Emission



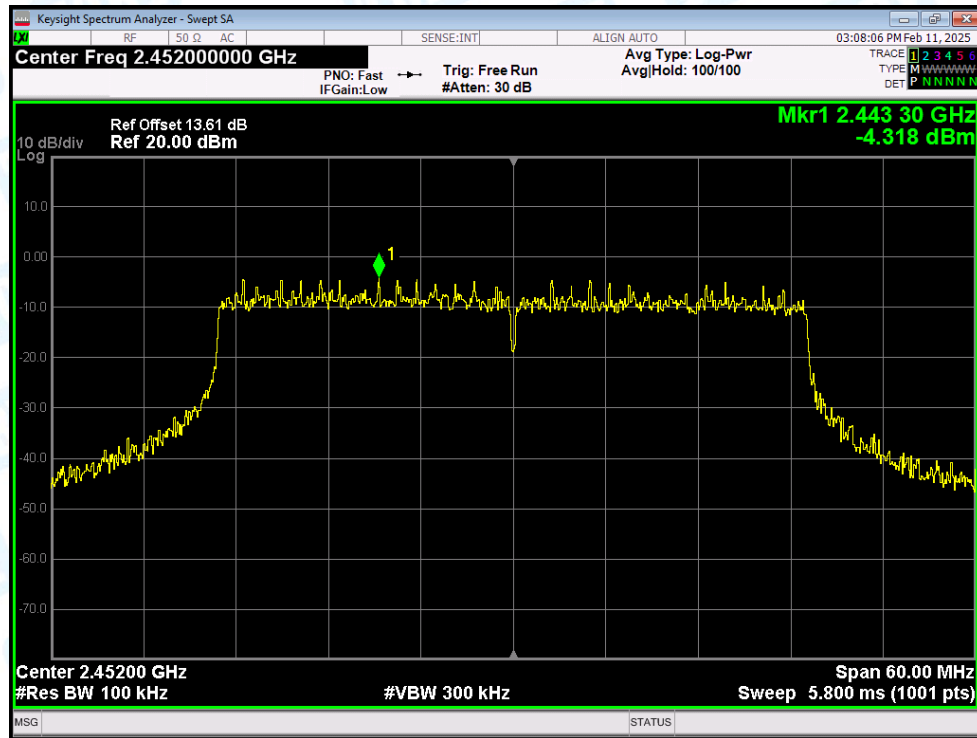
Band Edge NVNT ax(VHT40) 2422MHz Ant1 Ref



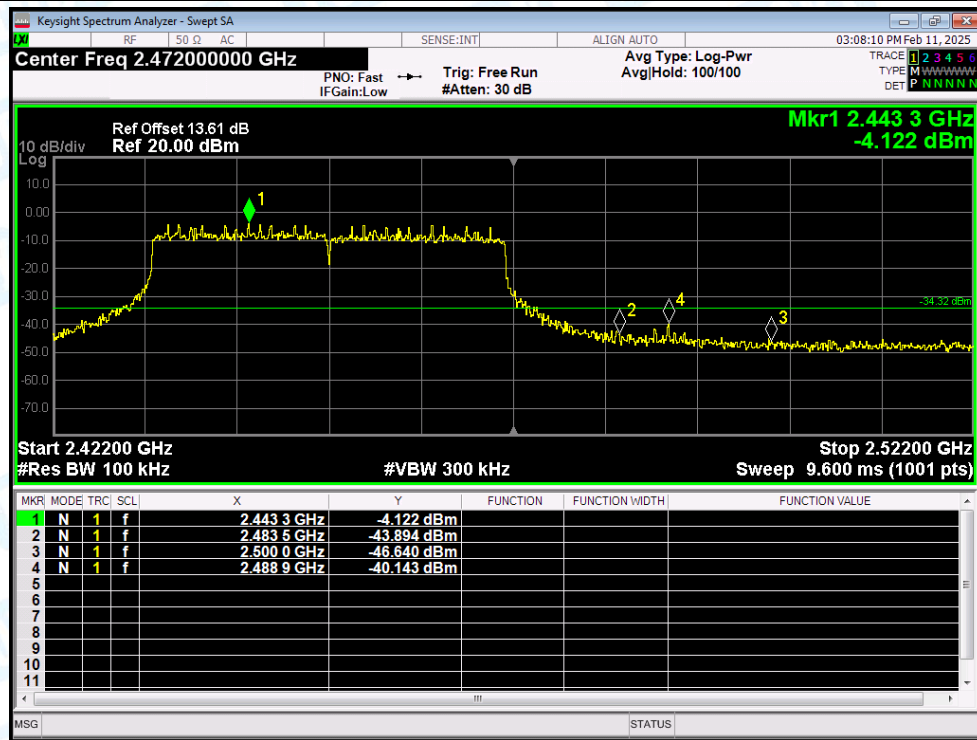
Band Edge NVNT ax(VHT40) 2422MHz Ant1 Emission



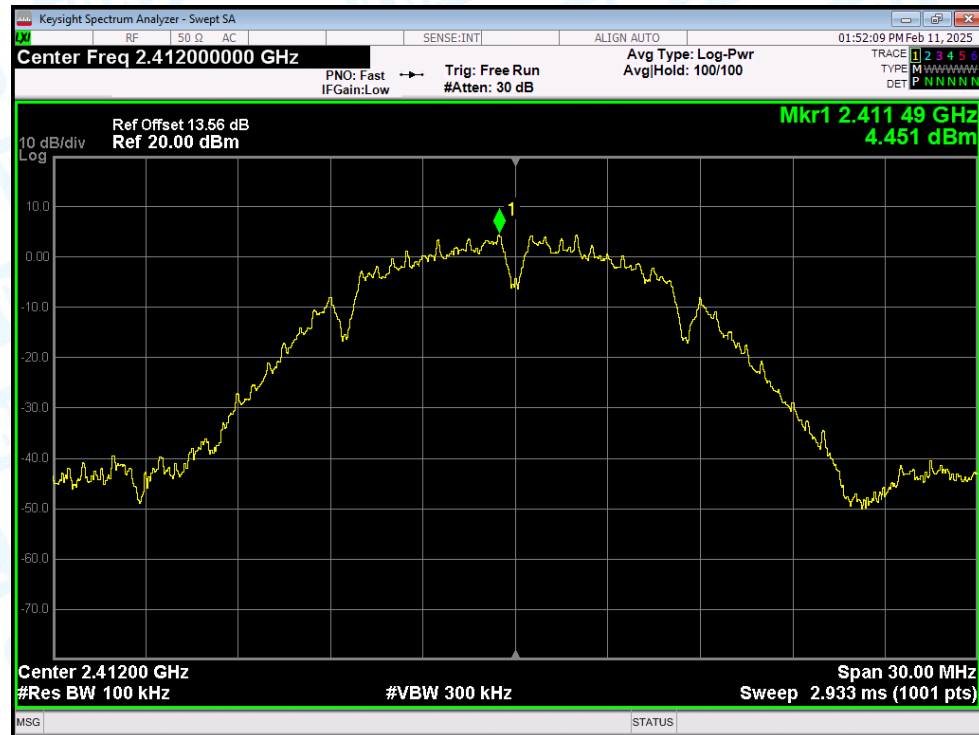
Band Edge NVNT ax(VHT40) 2452MHz Ant1 Ref



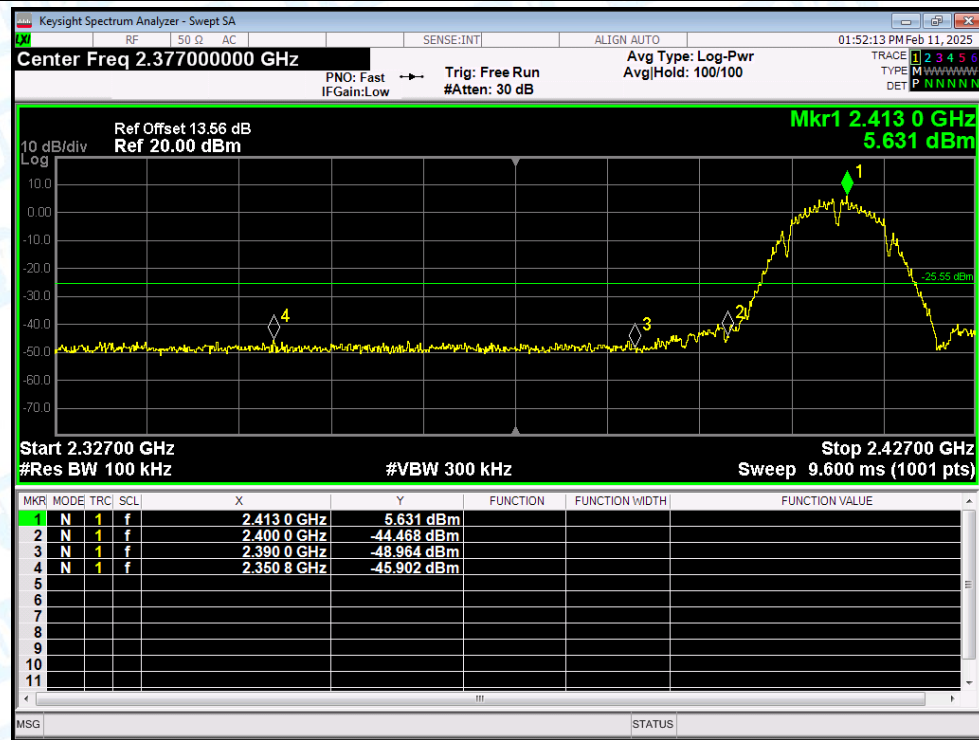
Band Edge NVNT ax(VHT40) 2452MHz Ant1 Emission



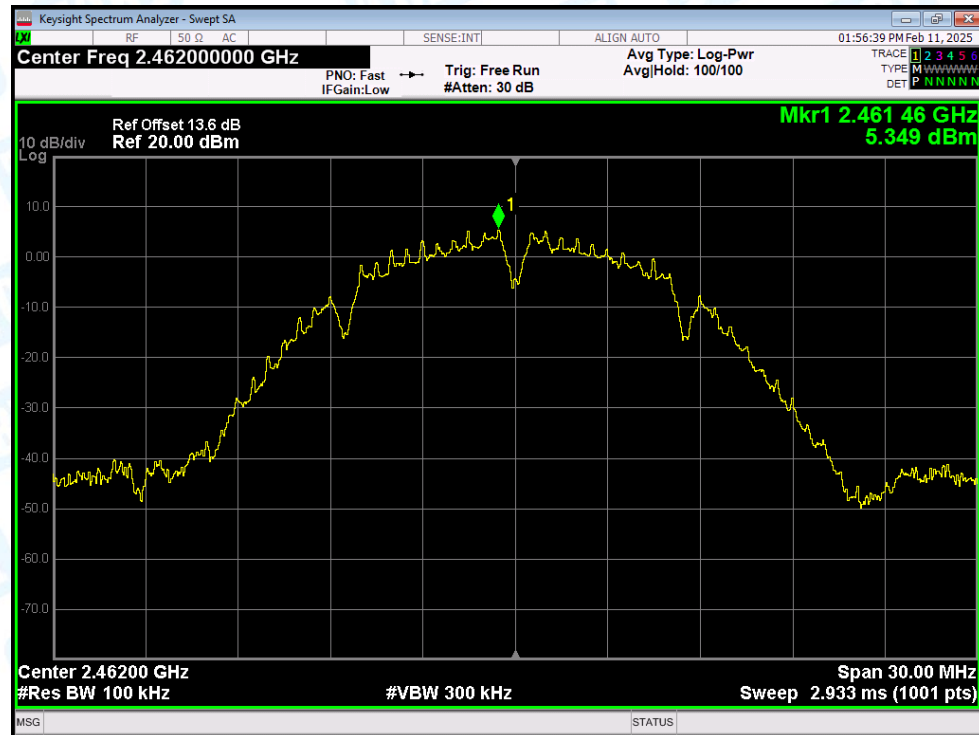
Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission



Band Edge NVNT b 2462MHz Ant1 Ref



Band Edge NVNT b 2462MHz Ant1 Emission

