RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
Product Name:	Industrial router
Test Model:	ZR2720N
Sample ID:	202305-0244-4#2
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 12V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202305-0244-5 The report only show the worst case data.	

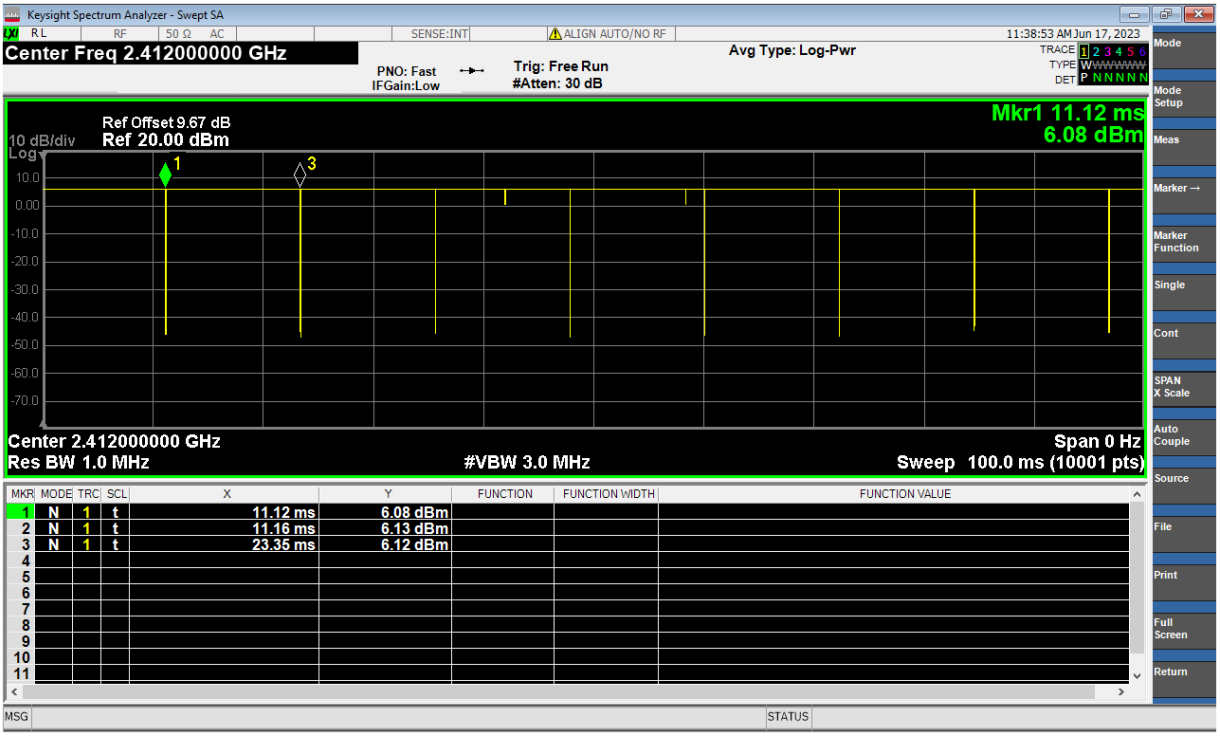
Contents

1. Duty Cycle

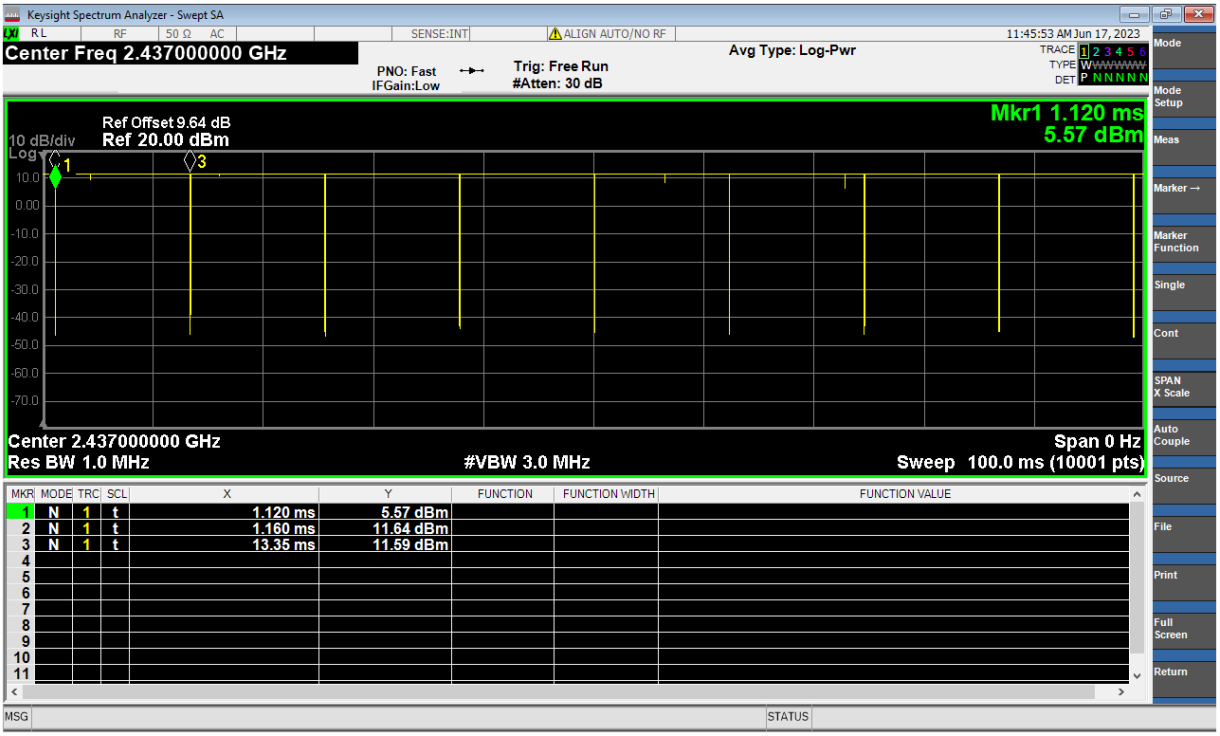
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	99.67	0.01	0.08
NVNT	b	2437	Ant1	99.67	0.01	0.08
NVNT	b	2462	Ant1	99.67	0.01	0.08
NVNT	g	2412	Ant1	97.6	0.11	0.49
NVNT	g	2437	Ant1	97.6	0.11	0.49
NVNT	g	2462	Ant1	97.58	0.11	0.5
NVNT	n(HT20)	2412	Ant1	97.42	0.11	0.53
NVNT	n(HT20)	2437	Ant1	97.42	0.11	0.53
NVNT	n(HT20)	2462	Ant1	97.93	0.09	0.53
NVNT	n(HT40)	2422	Ant1	96.88	0.14	1.08
NVNT	n(HT40)	2437	Ant1	95.88	0.18	1.08
NVNT	n(HT40)	2452	Ant1	96.88	0.14	1.08

Test Graphs

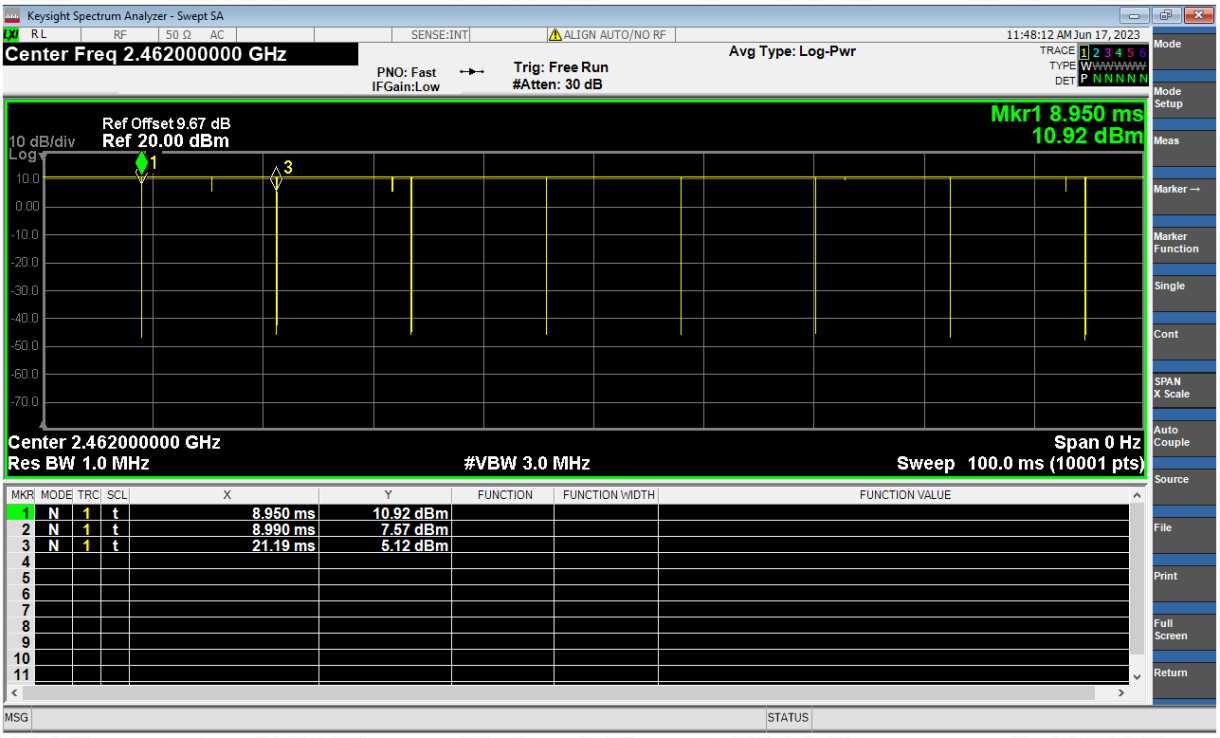
Duty Cycle NVNT b 2412MHz Ant1



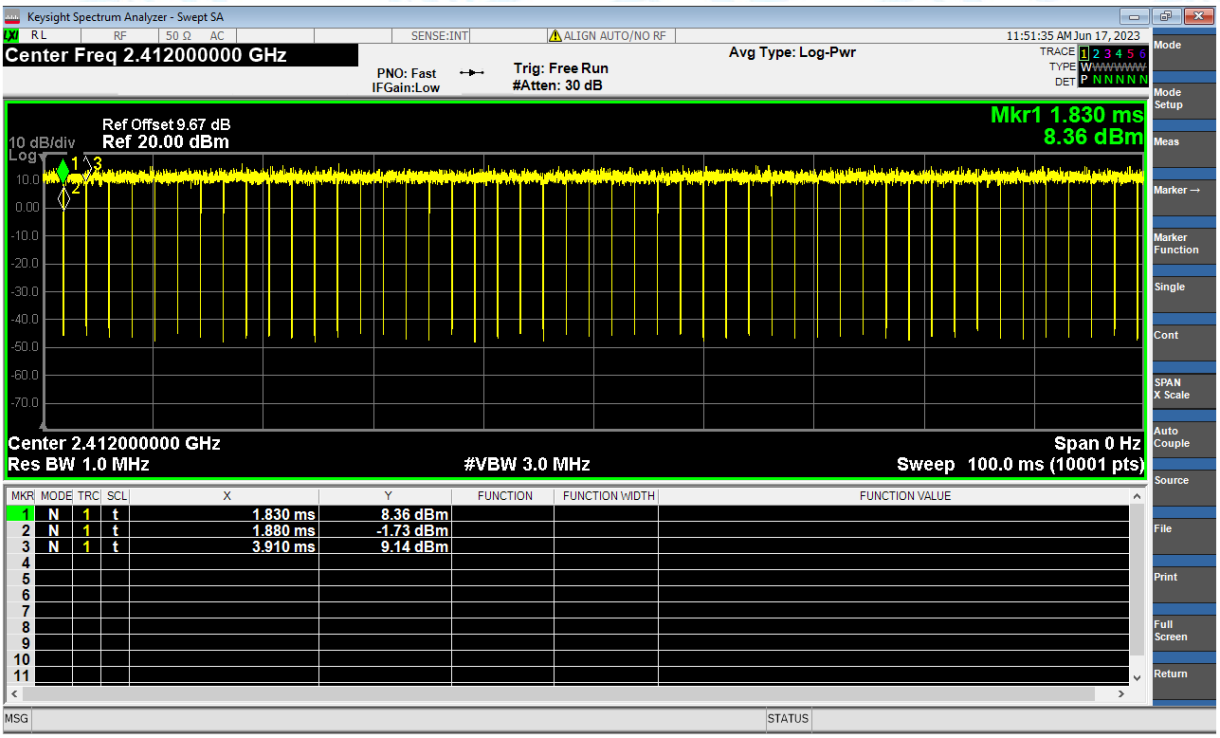
Duty Cycle NVNT b 2437MHz Ant1



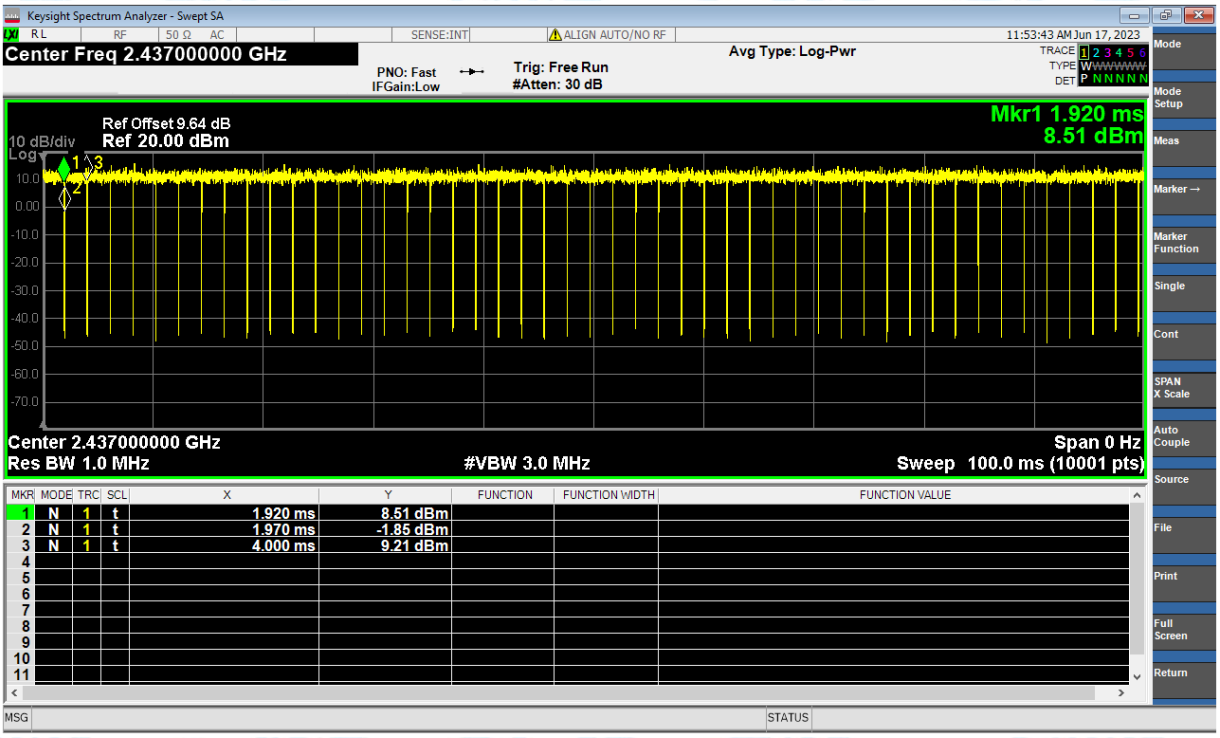
Duty Cycle NVNT b 2462MHz Ant1



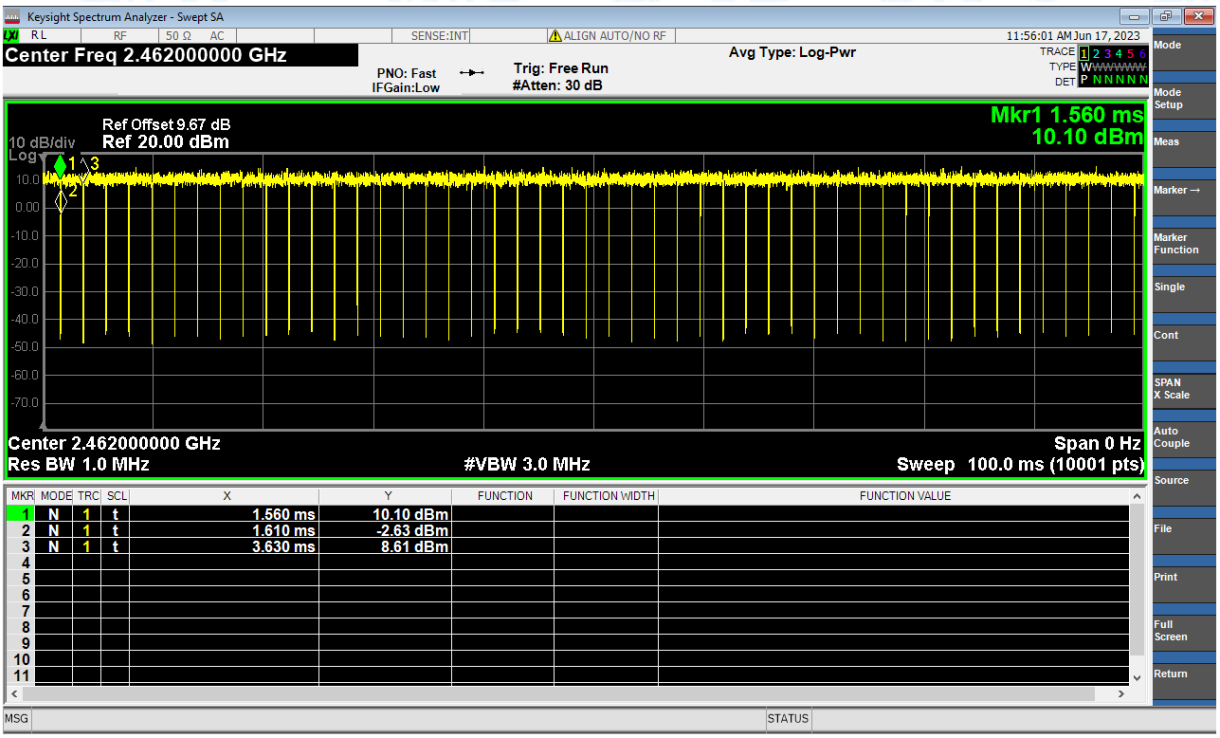
Duty Cycle NVNT g 2412MHz Ant1



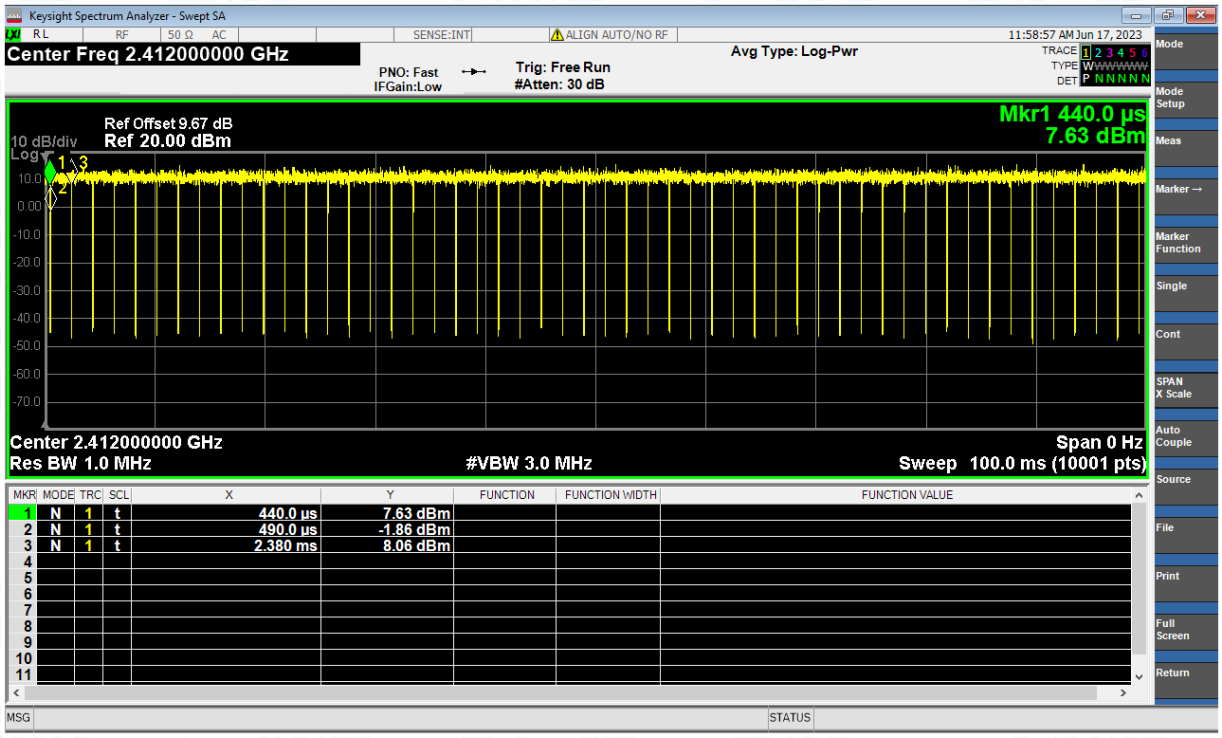
Duty Cycle NVNT g 2437MHz Ant1



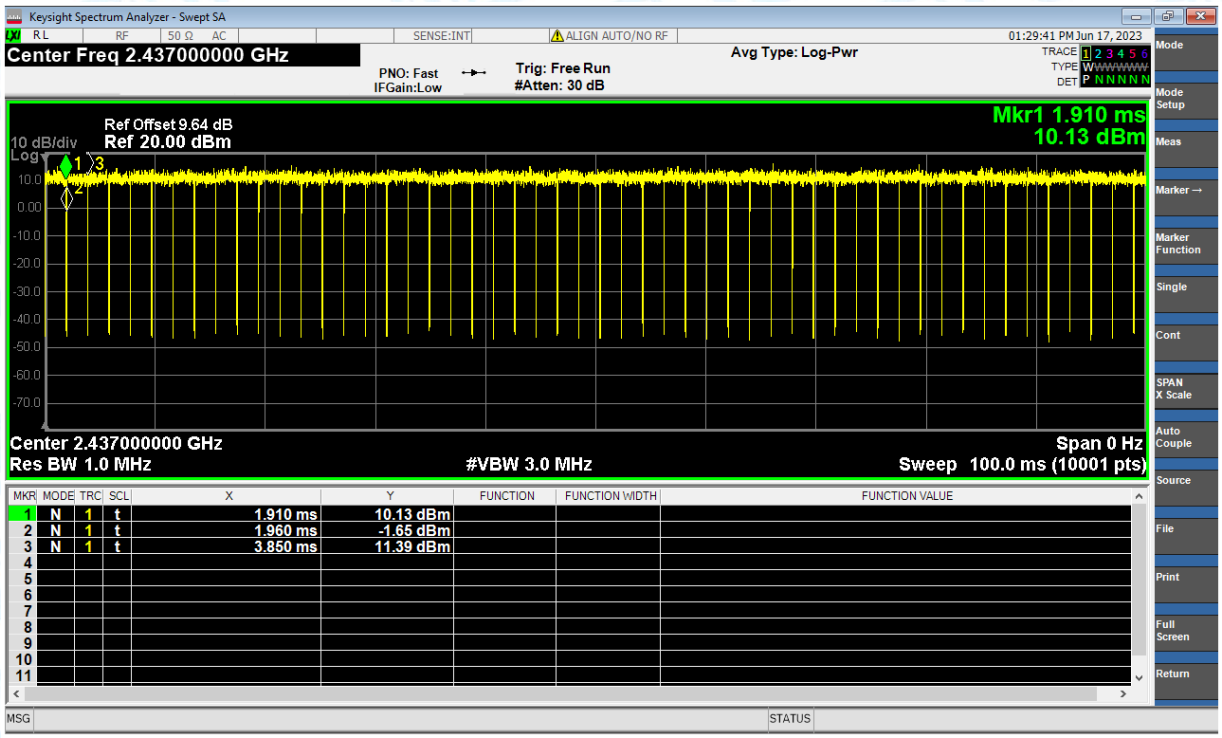
Duty Cycle NVNT g 2462MHz Ant1



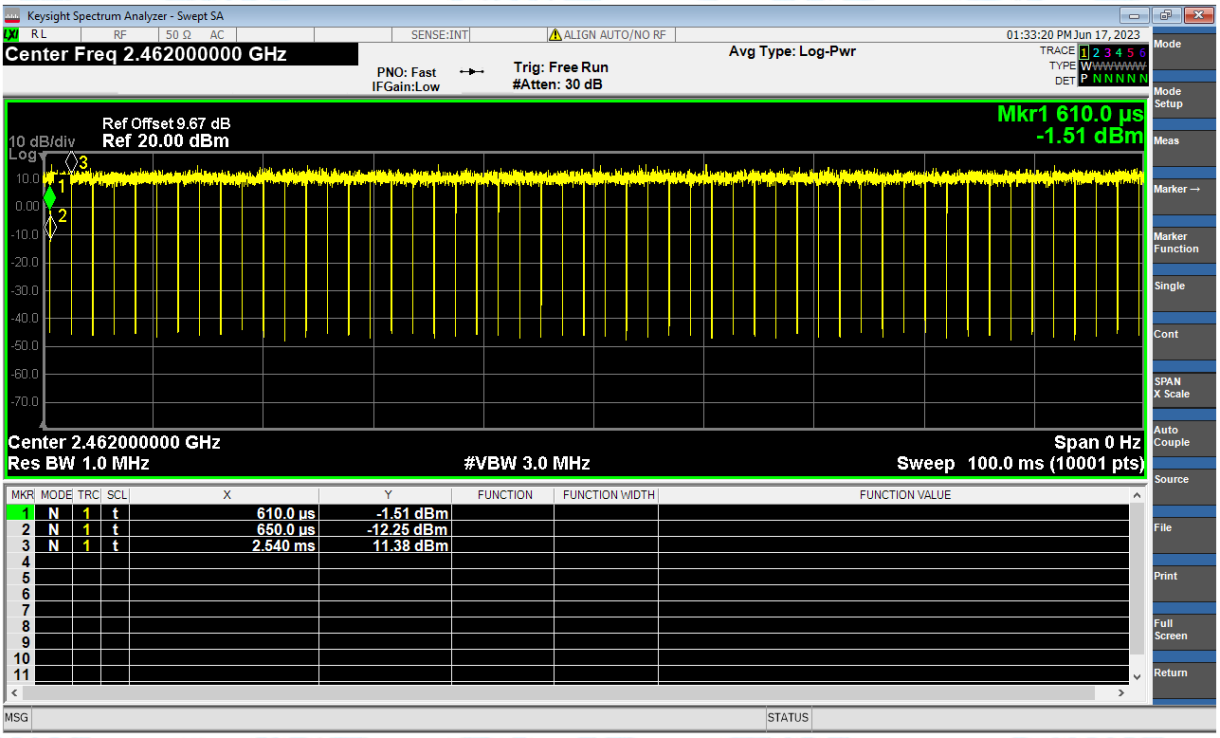
Duty Cycle NVNT n(HT20) 2412MHz Ant1



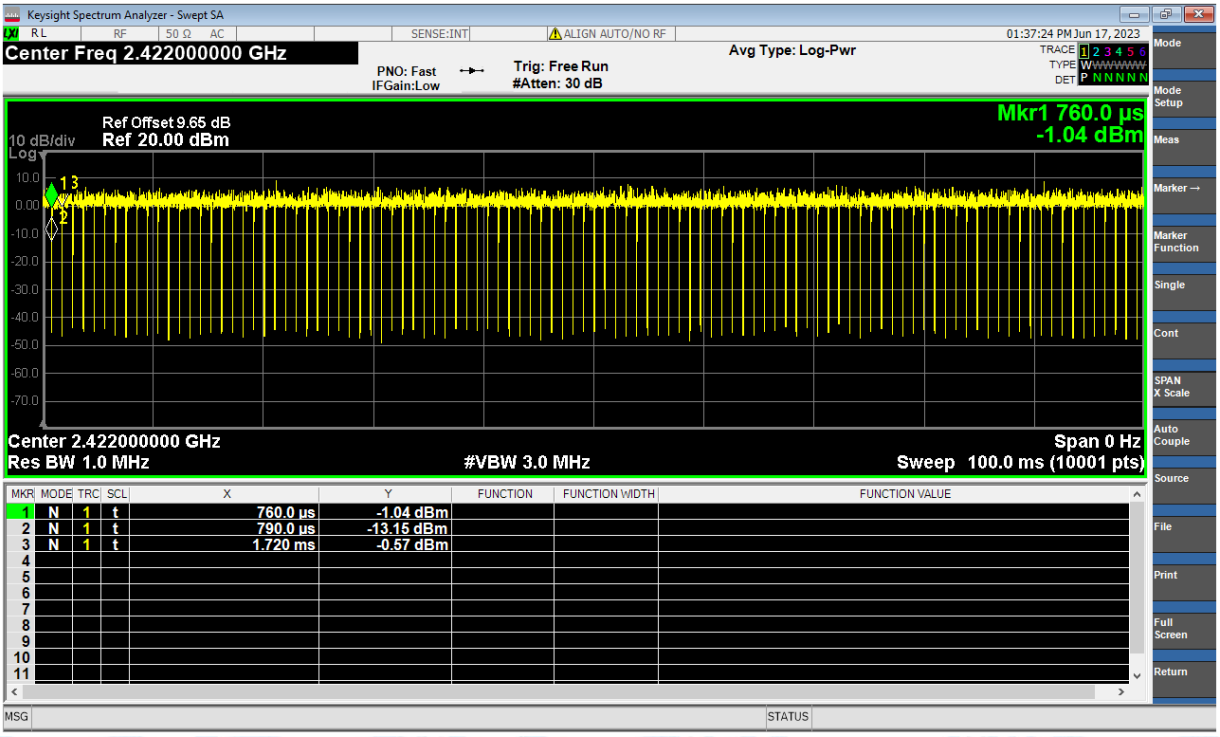
Duty Cycle NVNT n(HT20) 2437MHz Ant1



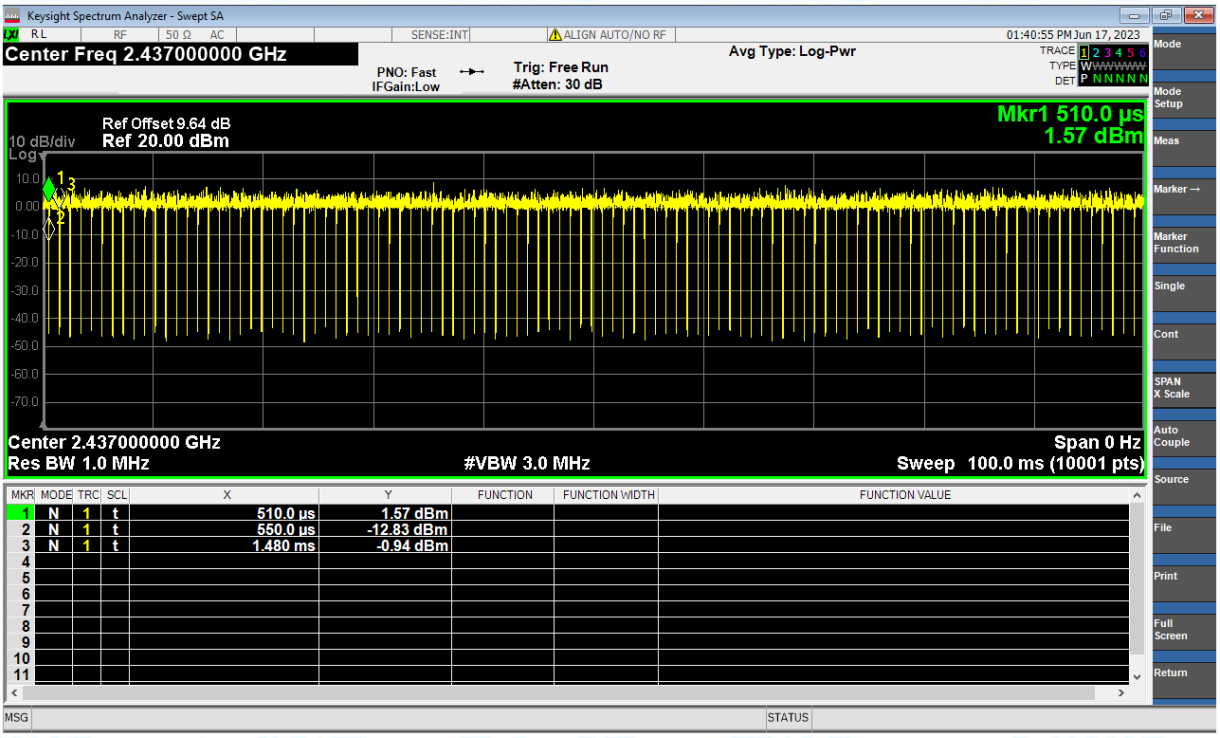
Duty Cycle NVNT n(HT20) 2462MHz Ant1



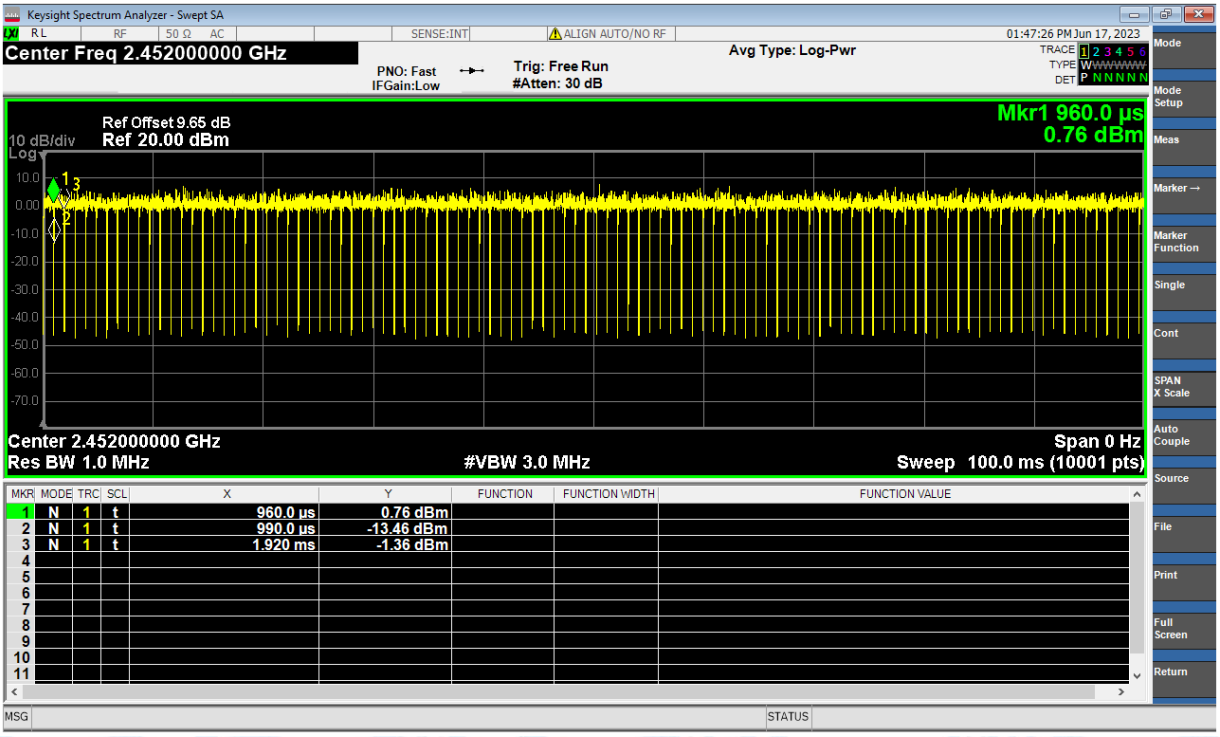
Duty Cycle NVNT n(HT40) 2422MHz Ant1



Duty Cycle NVNT n(HT40) 2437MHz Ant1



Duty Cycle NVNT n(HT40) 2452MHz Ant1



2. Maximum Conducted Output Power

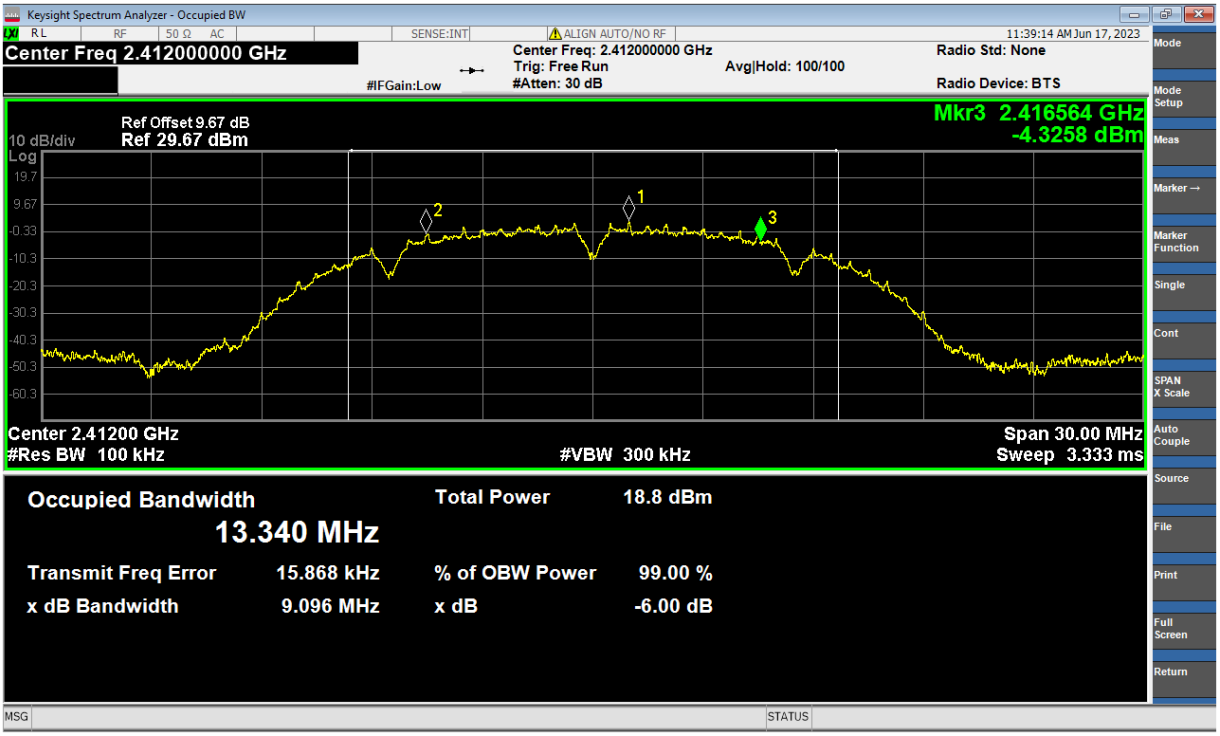
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	17.879	30	Pass
NVNT	b	2437	Ant1	17.706	30	Pass
NVNT	b	2462	Ant1	17.1	30	Pass
NVNT	g	2412	Ant1	17.527	30	Pass
NVNT	g	2437	Ant1	17.311	30	Pass
NVNT	g	2462	Ant1	16.743	30	Pass
NVNT	n(HT20)	2412	Ant1	17.227	30	Pass
NVNT	n(HT20)	2437	Ant1	17.573	30	Pass
NVNT	n(HT20)	2462	Ant1	17.028	30	Pass
NVNT	n(HT40)	2422	Ant1	14.997	30	Pass
NVNT	n(HT40)	2437	Ant1	14.699	30	Pass
NVNT	n(HT40)	2452	Ant1	14.048	30	Pass

3. -6dB Bandwidth

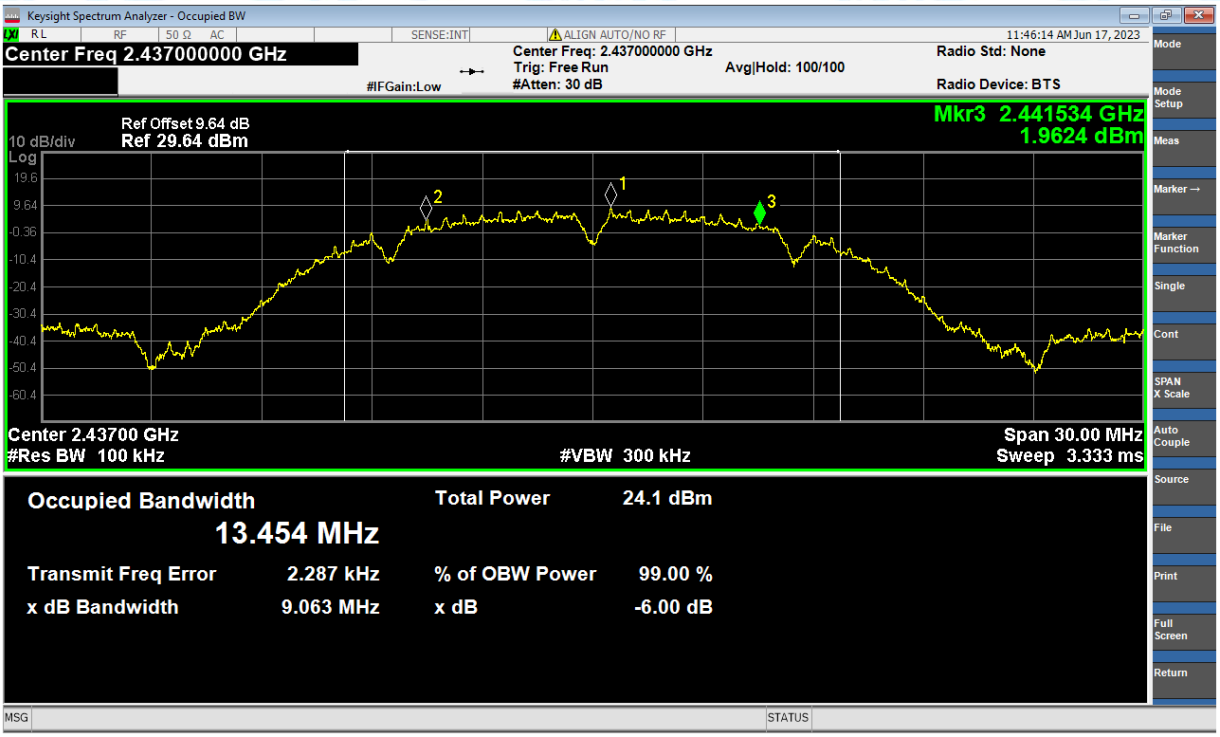
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.1	0.5	Pass
NVNT	b	2437	Ant1	9.06	0.5	Pass
NVNT	b	2462	Ant1	9.56	0.5	Pass
NVNT	g	2412	Ant1	14.46	0.5	Pass
NVNT	g	2437	Ant1	12.38	0.5	Pass
NVNT	g	2462	Ant1	15.08	0.5	Pass
NVNT	n(HT20)	2412	Ant1	13.8	0.5	Pass
NVNT	n(HT20)	2437	Ant1	12.45	0.5	Pass
NVNT	n(HT20)	2462	Ant1	13.54	0.5	Pass
NVNT	n(HT40)	2422	Ant1	30.07	0.5	Pass
NVNT	n(HT40)	2437	Ant1	31.36	0.5	Pass
NVNT	n(HT40)	2452	Ant1	32.62	0.5	Pass

Test Graphs

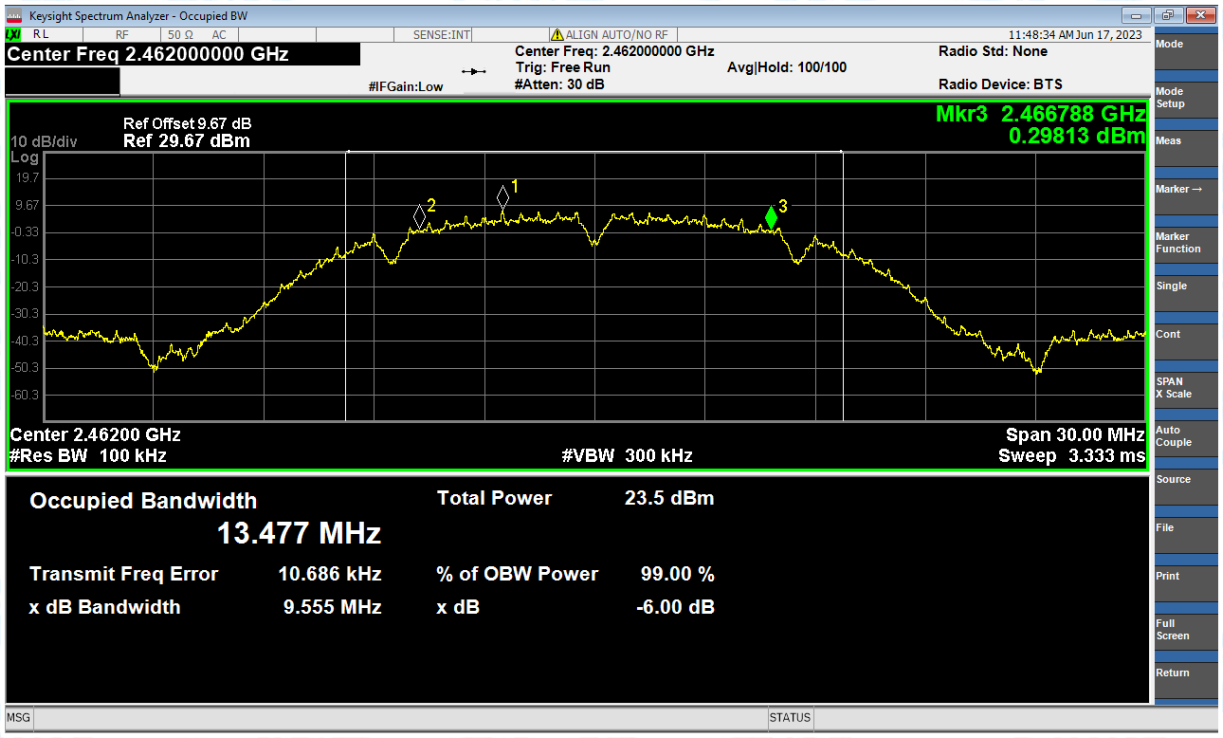
-6dB Bandwidth NVNT b 2412MHz Ant1



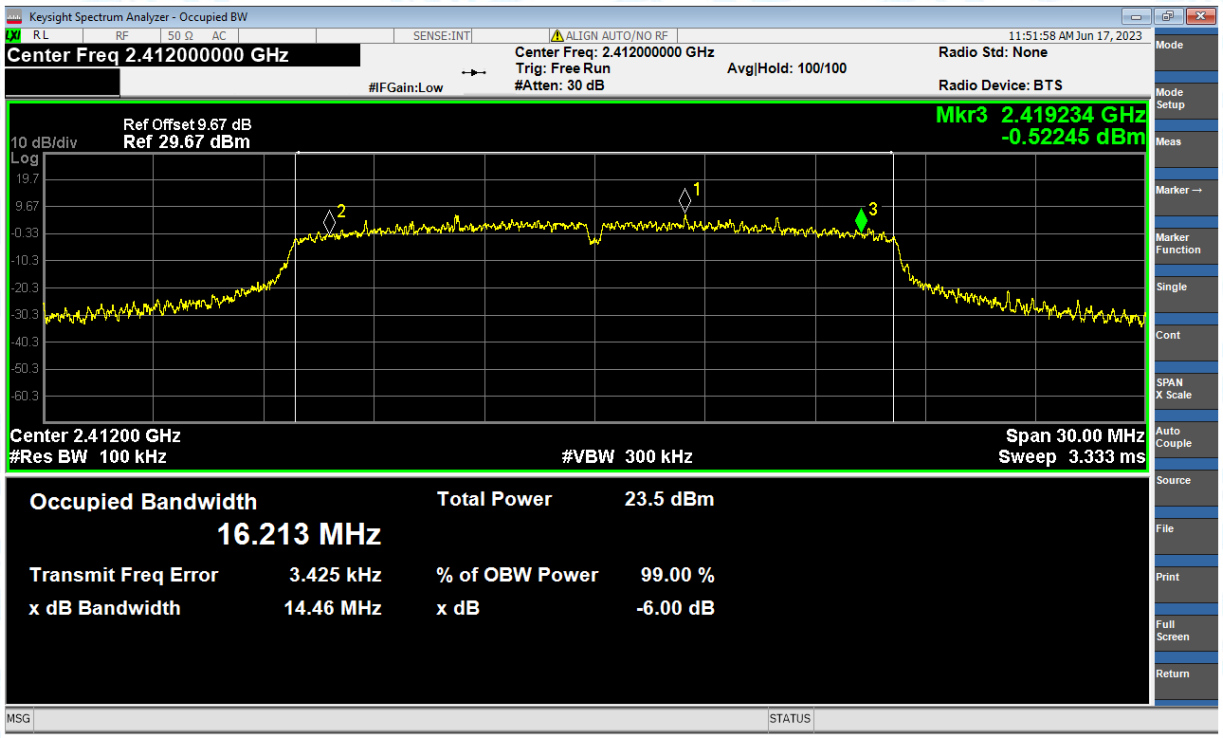
-6dB Bandwidth NVNT b 2437MHz Ant1



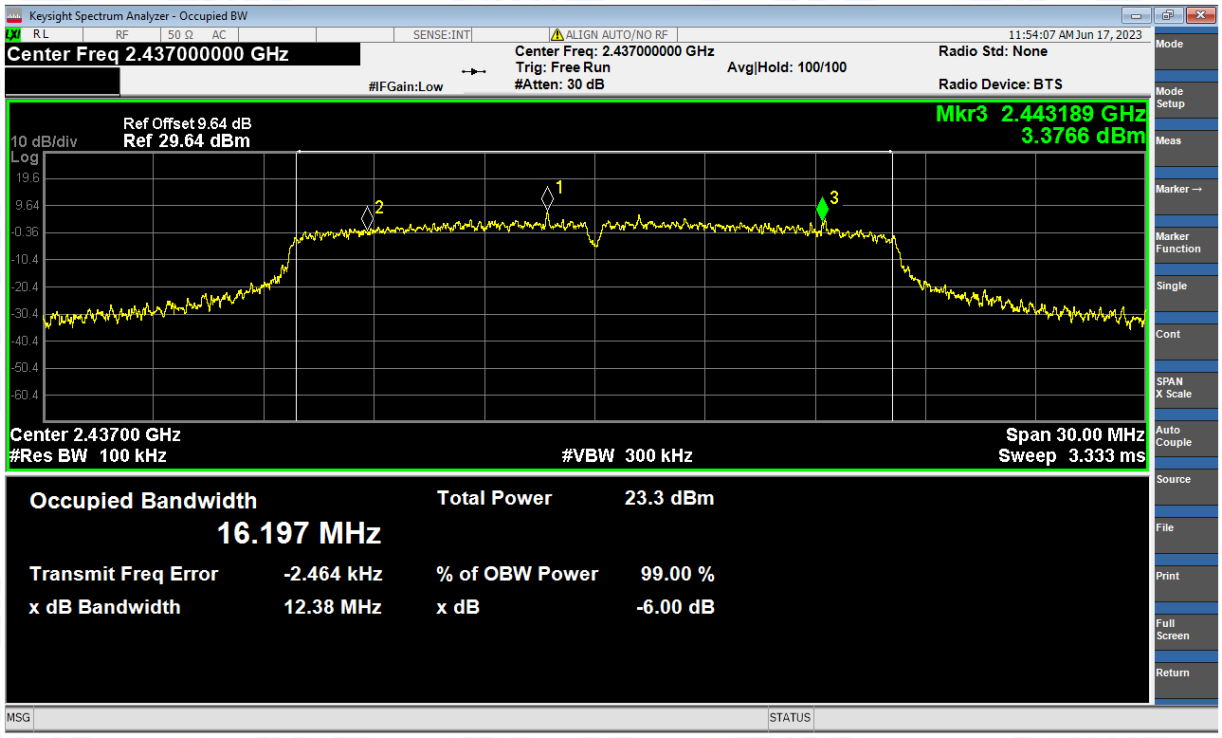
-6dB Bandwidth NVNT b 2462MHz Ant1



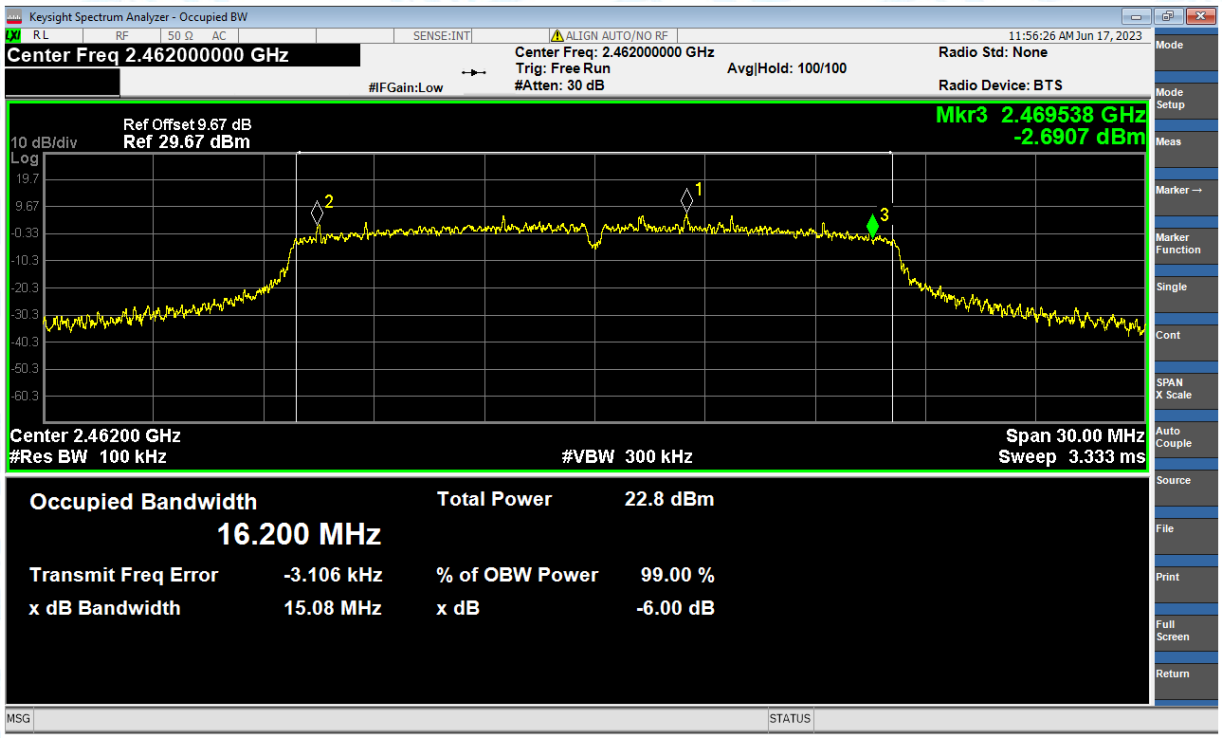
-6dB Bandwidth NVNT g 2412MHz Ant1



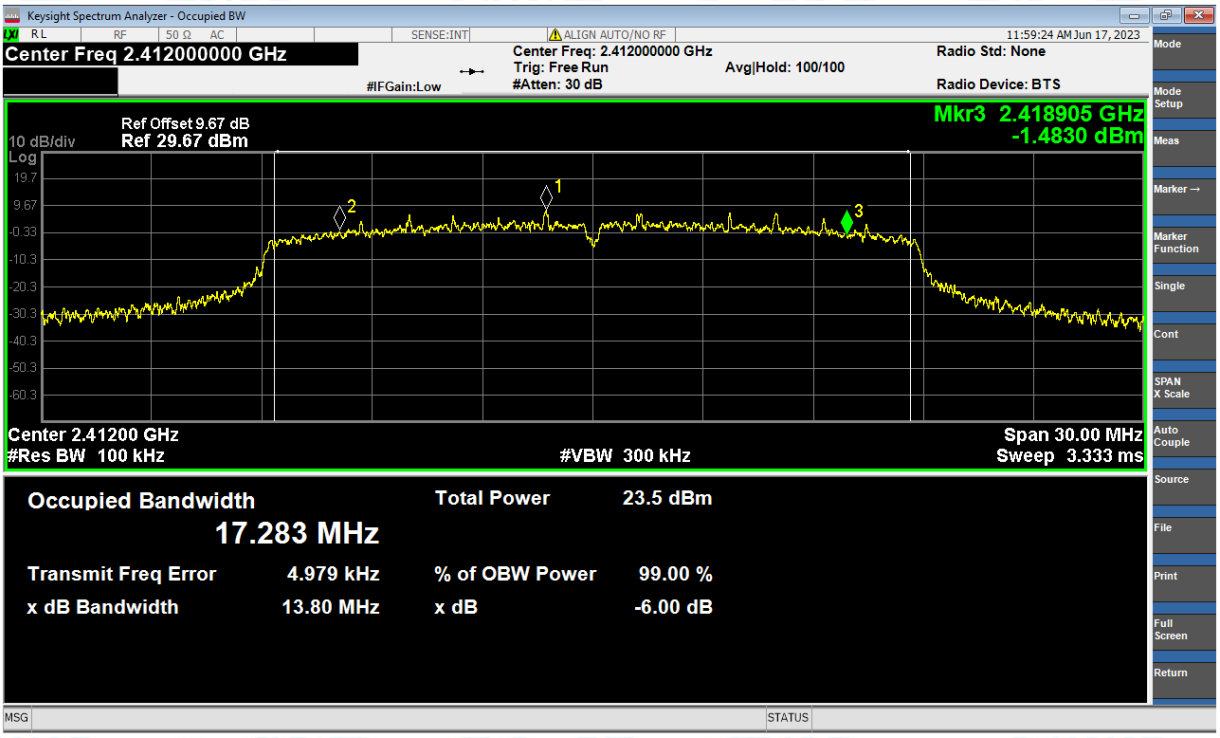
-6dB Bandwidth NVNT g 2437MHz Ant1



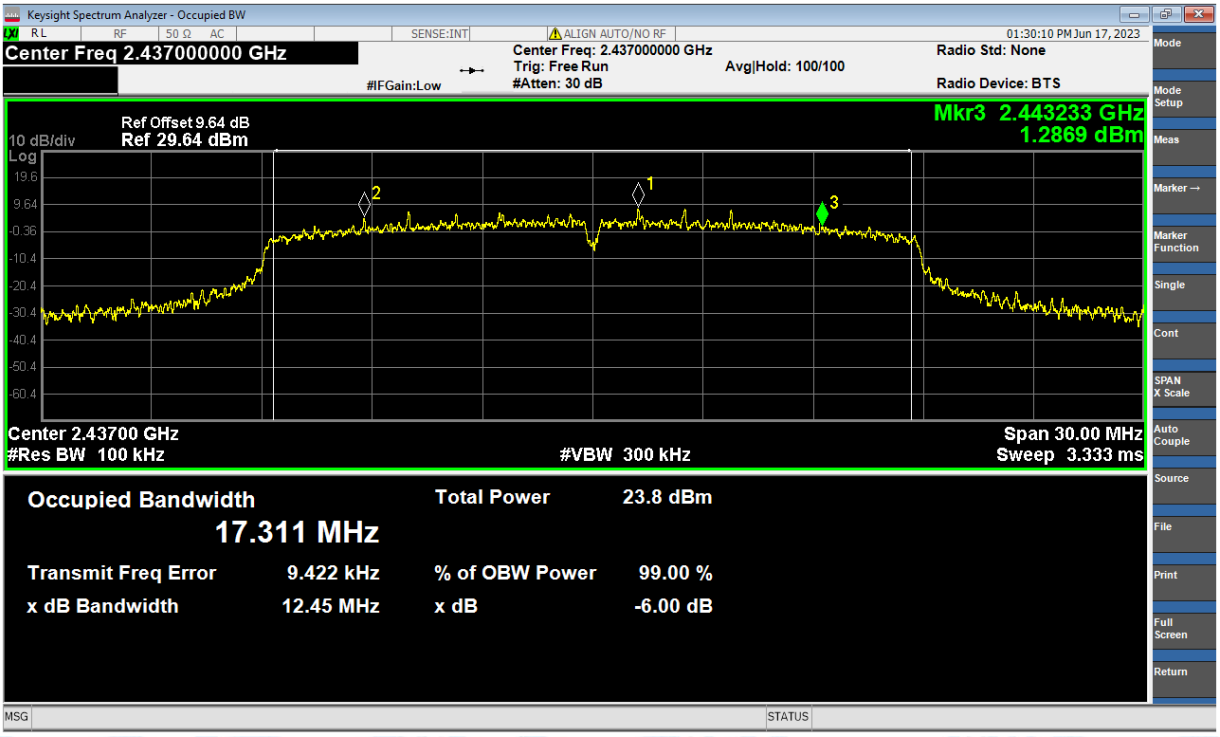
-6dB Bandwidth NVNT g 2462MHz Ant1



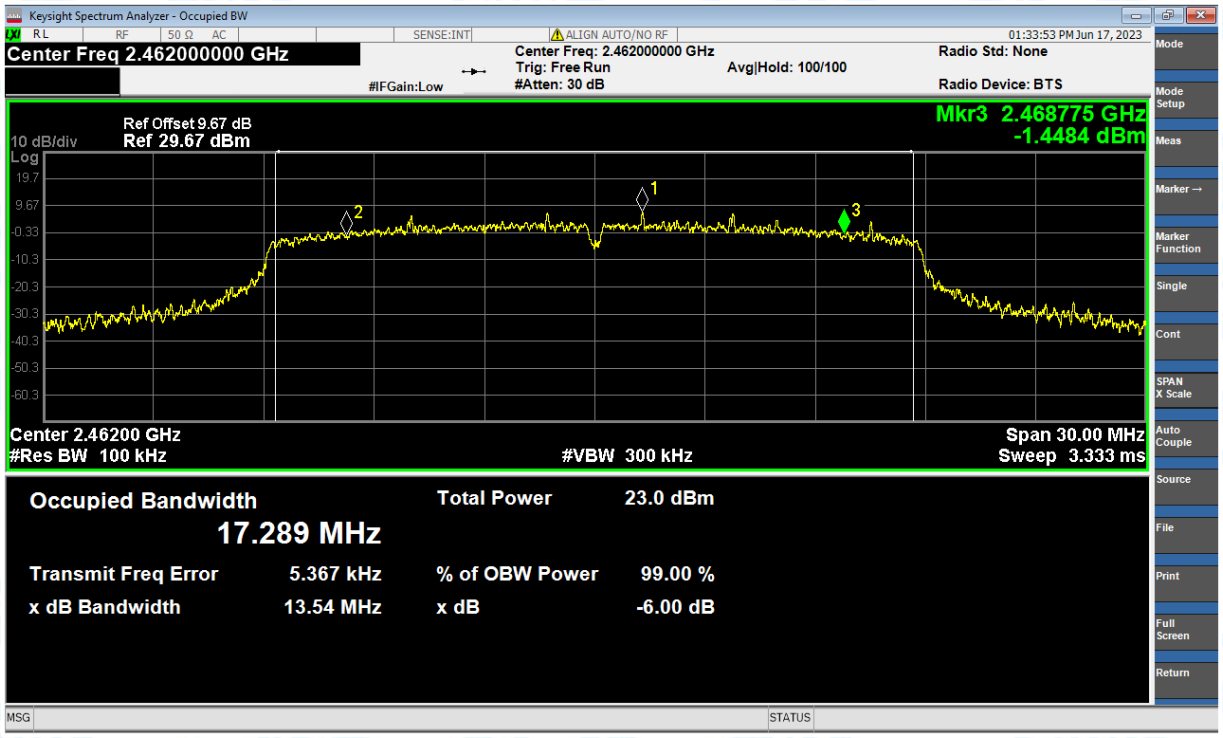
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



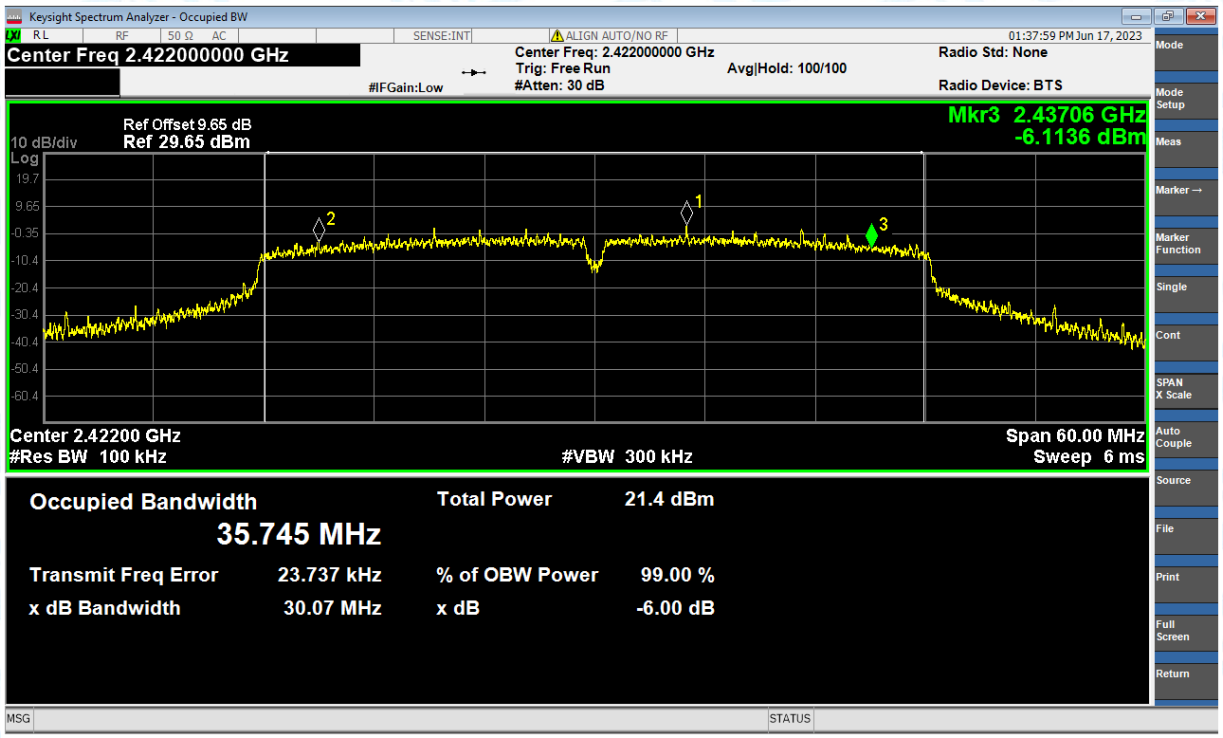
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



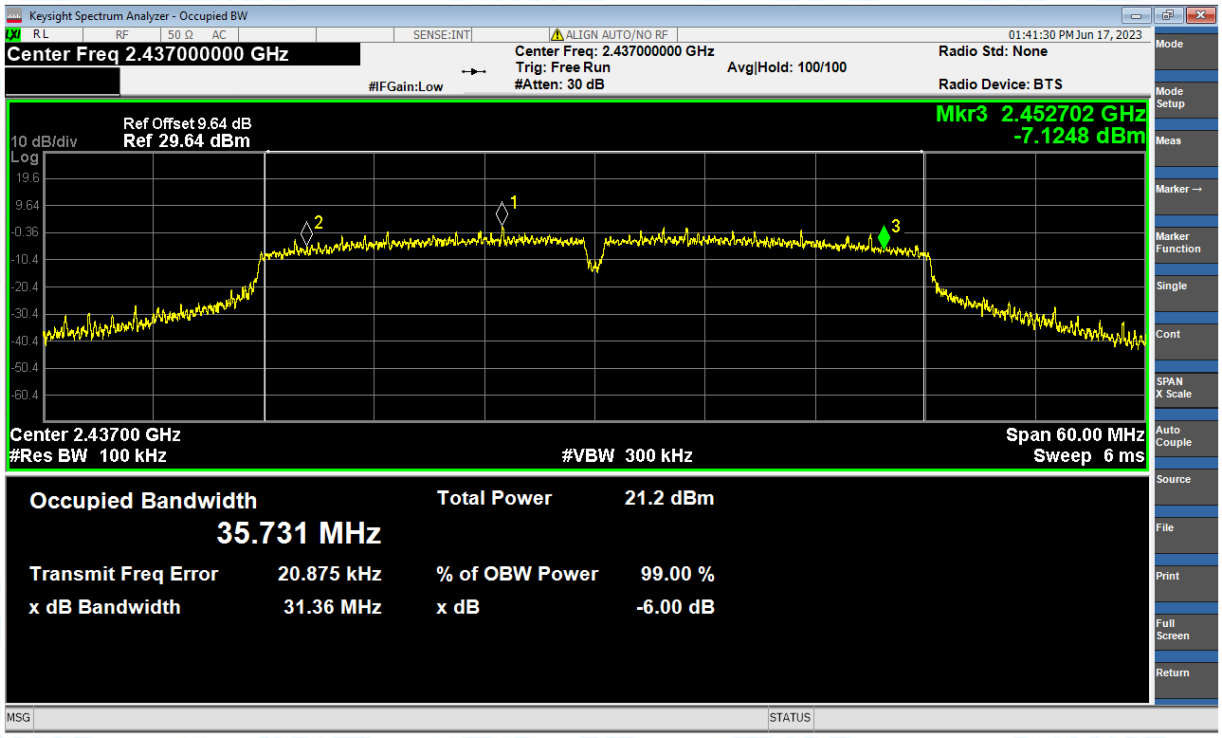
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



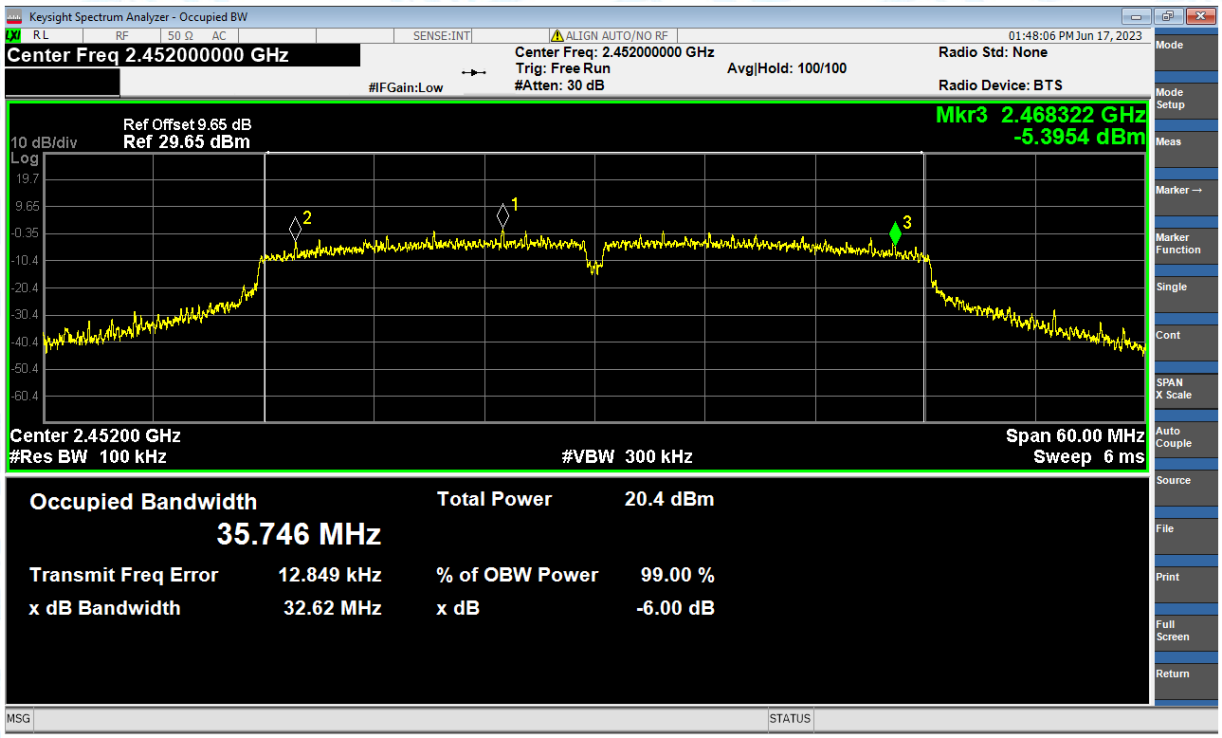
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



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



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

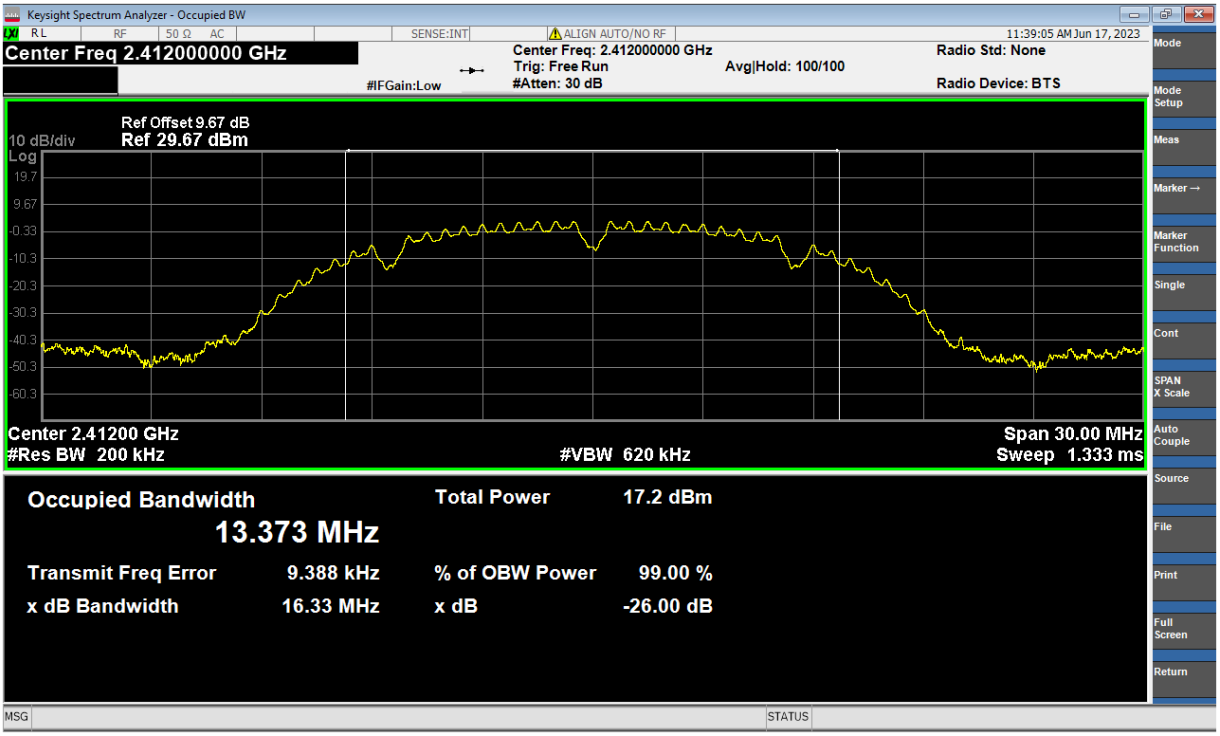


4. Occupied Channel Bandwidth

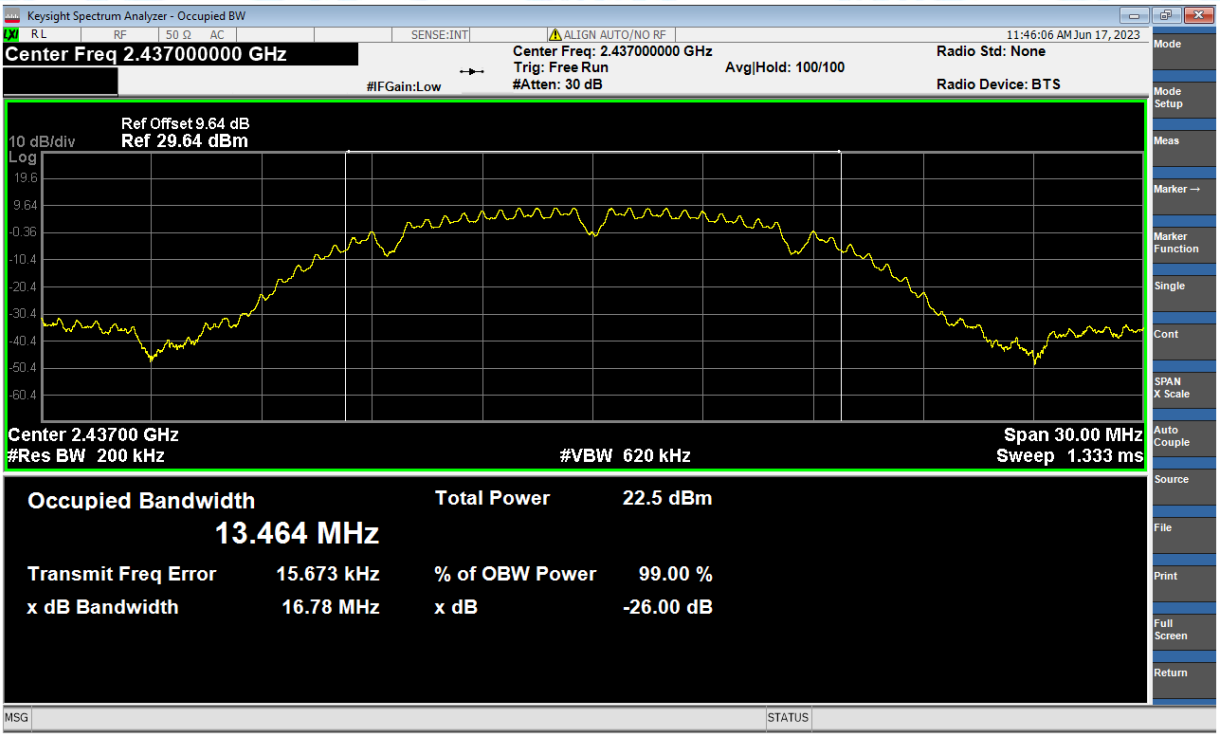
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.373
NVNT	b	2437	Ant1	13.464
NVNT	b	2462	Ant1	13.45
NVNT	g	2412	Ant1	16.203
NVNT	g	2437	Ant1	16.21
NVNT	g	2462	Ant1	16.17
NVNT	n(HT20)	2412	Ant1	17.264
NVNT	n(HT20)	2437	Ant1	17.243
NVNT	n(HT20)	2462	Ant1	17.221
NVNT	n(HT40)	2422	Ant1	35.8
NVNT	n(HT40)	2437	Ant1	35.787
NVNT	n(HT40)	2452	Ant1	35.766

Test Graphs

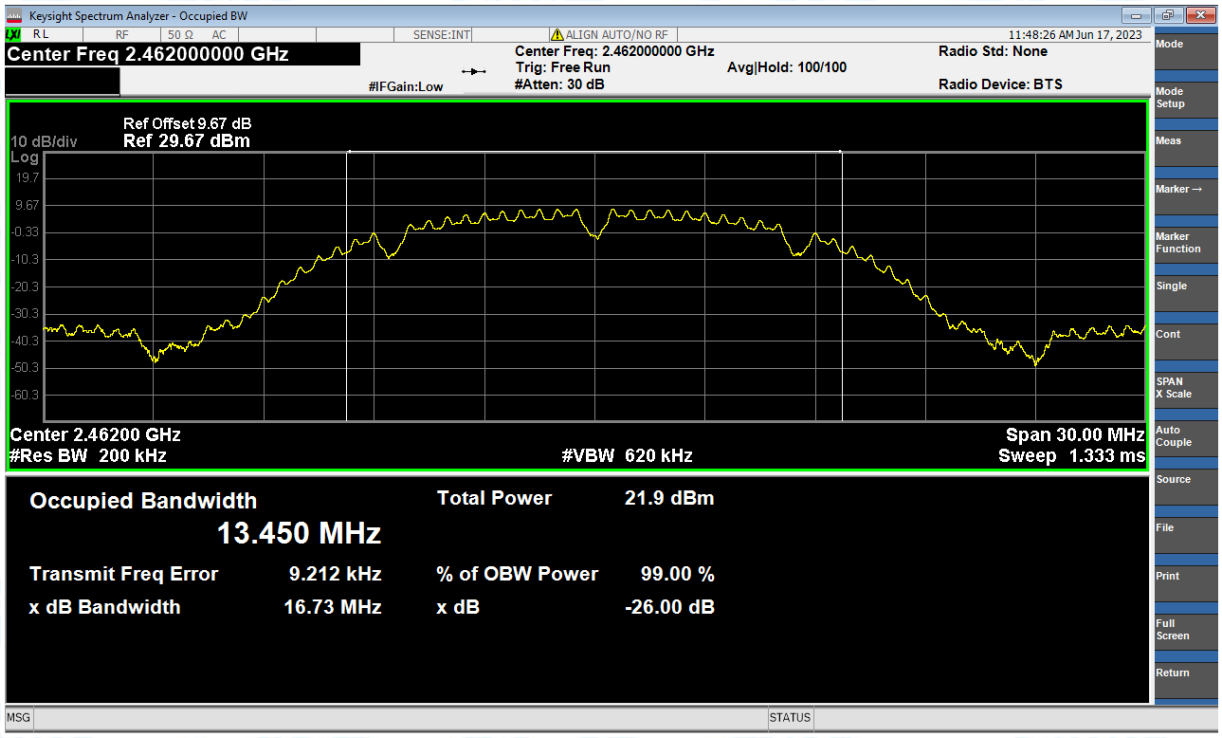
OBW NVNT b 2412MHz Ant1



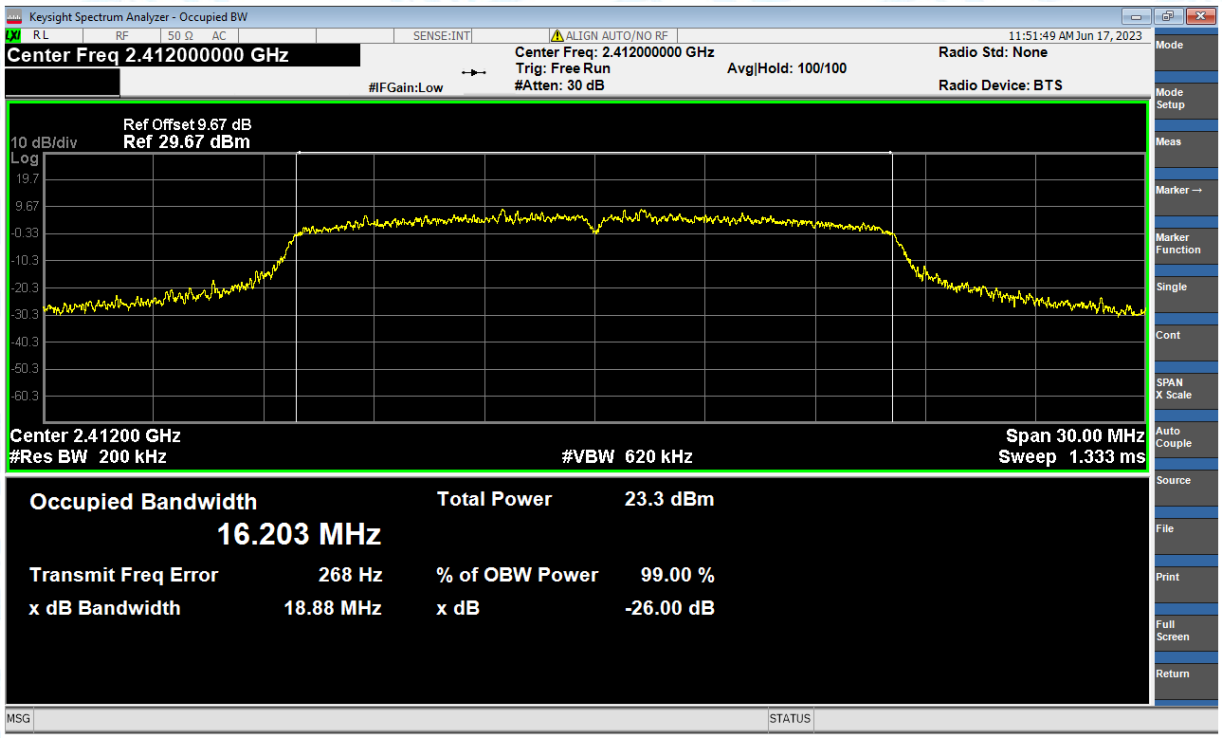
OBW NVNT b 2437MHz Ant1



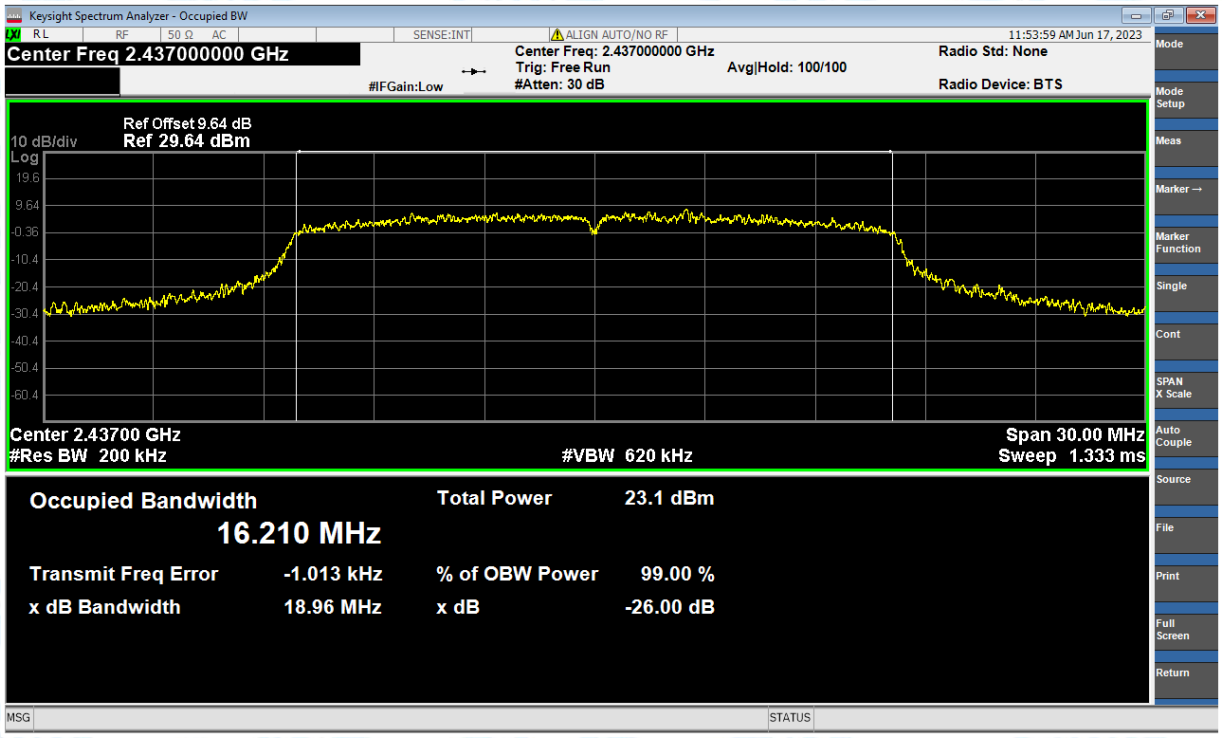
OBW NVNT b 2462MHz Ant1



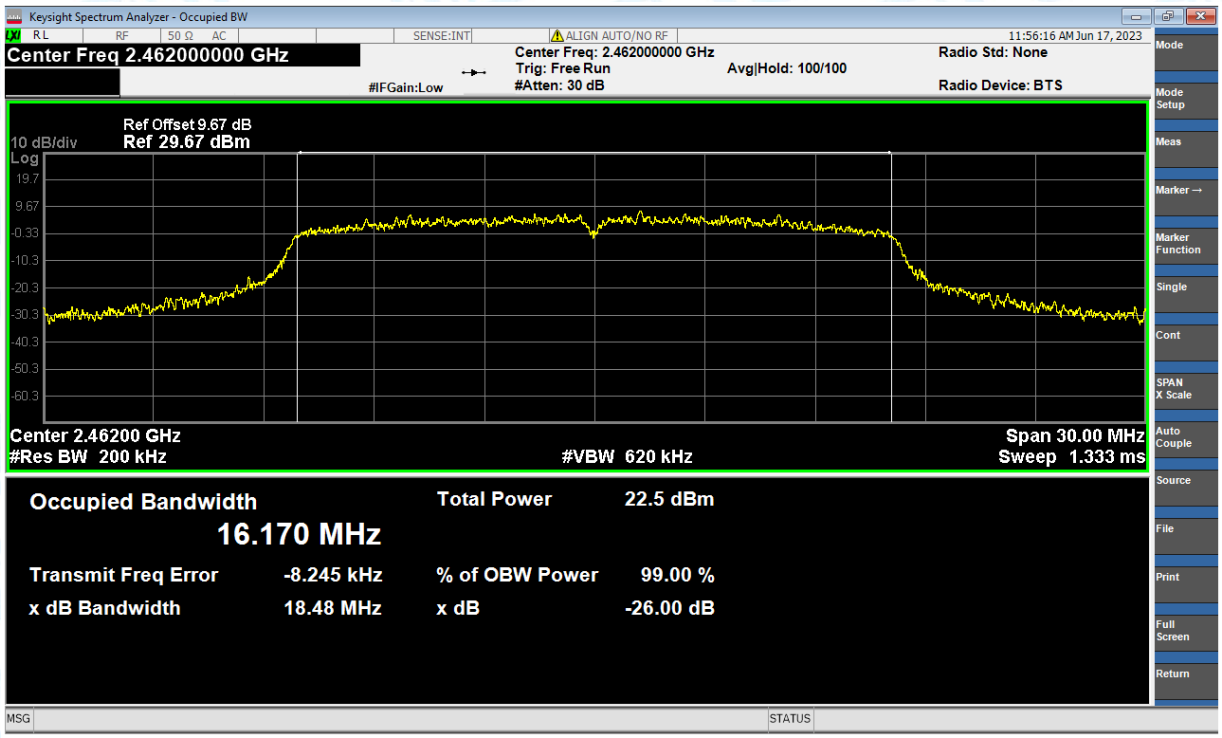
OBW NVNT g 2412MHz Ant1



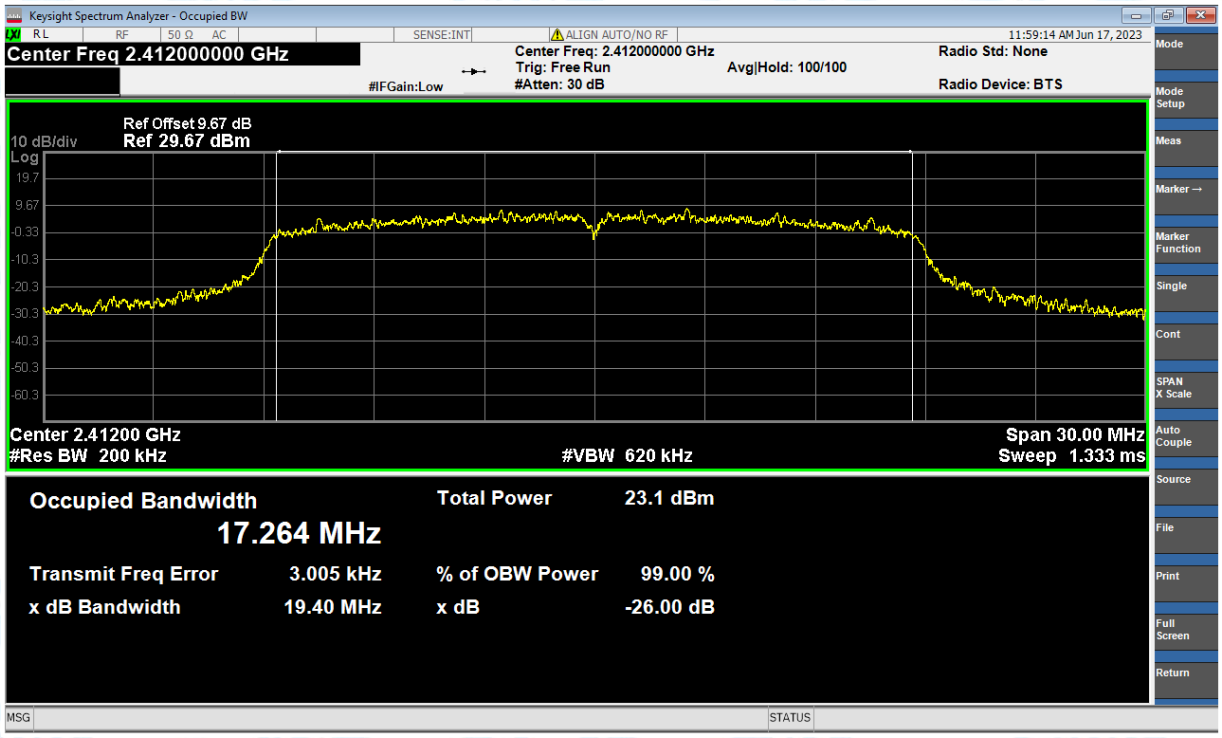
OBW NVNT g 2437MHz Ant1



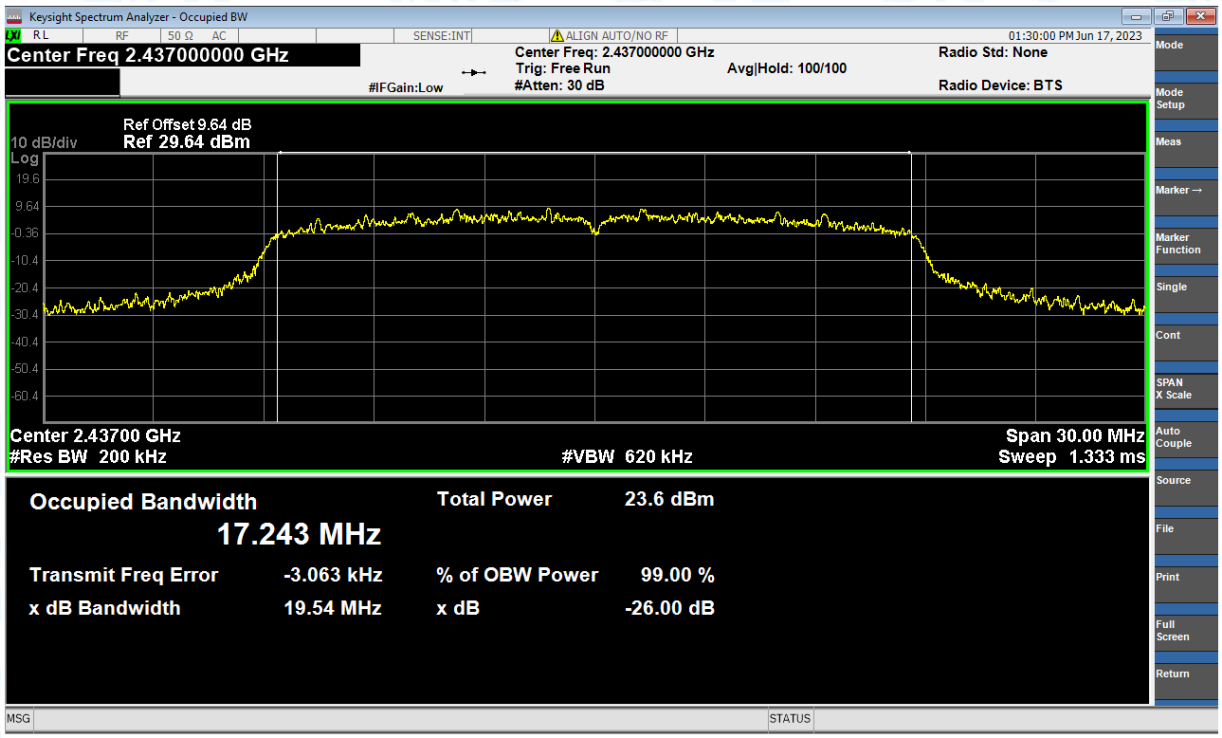
OBW NVNT g 2462MHz Ant1



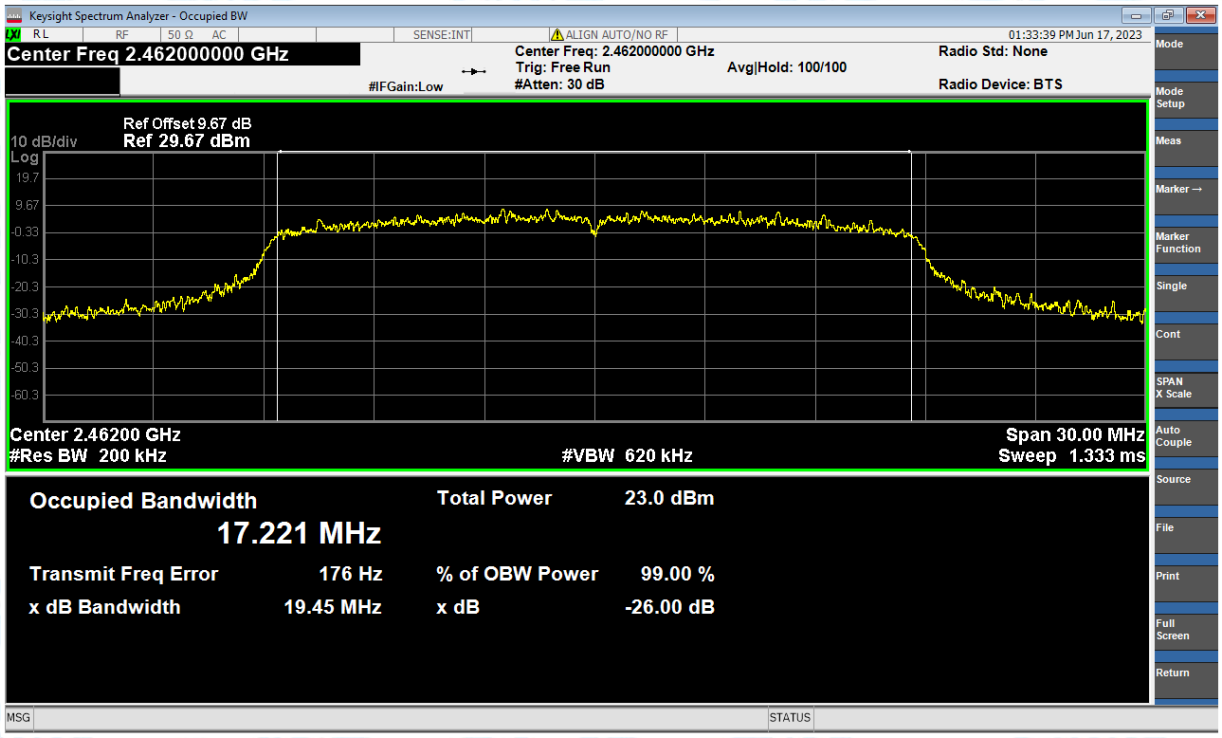
OBW NVNT n(HT20) 2412MHz Ant1



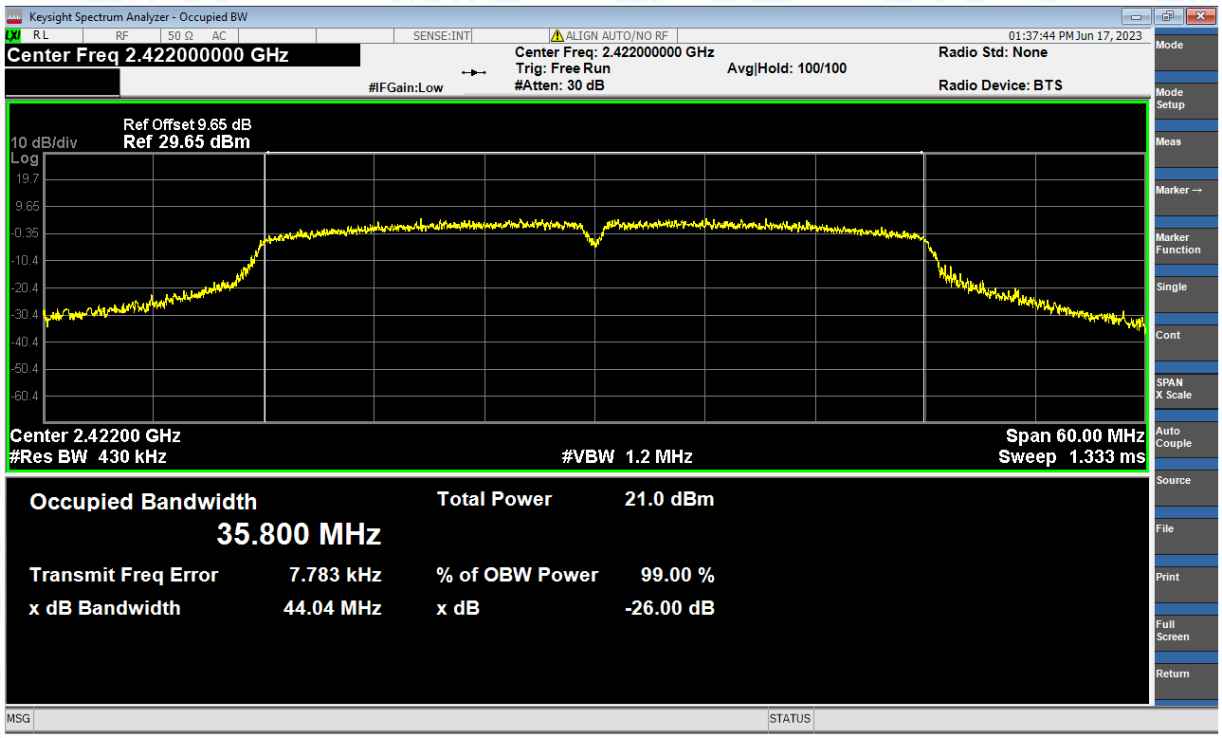
OBW NVNT n(HT20) 2437MHz Ant1



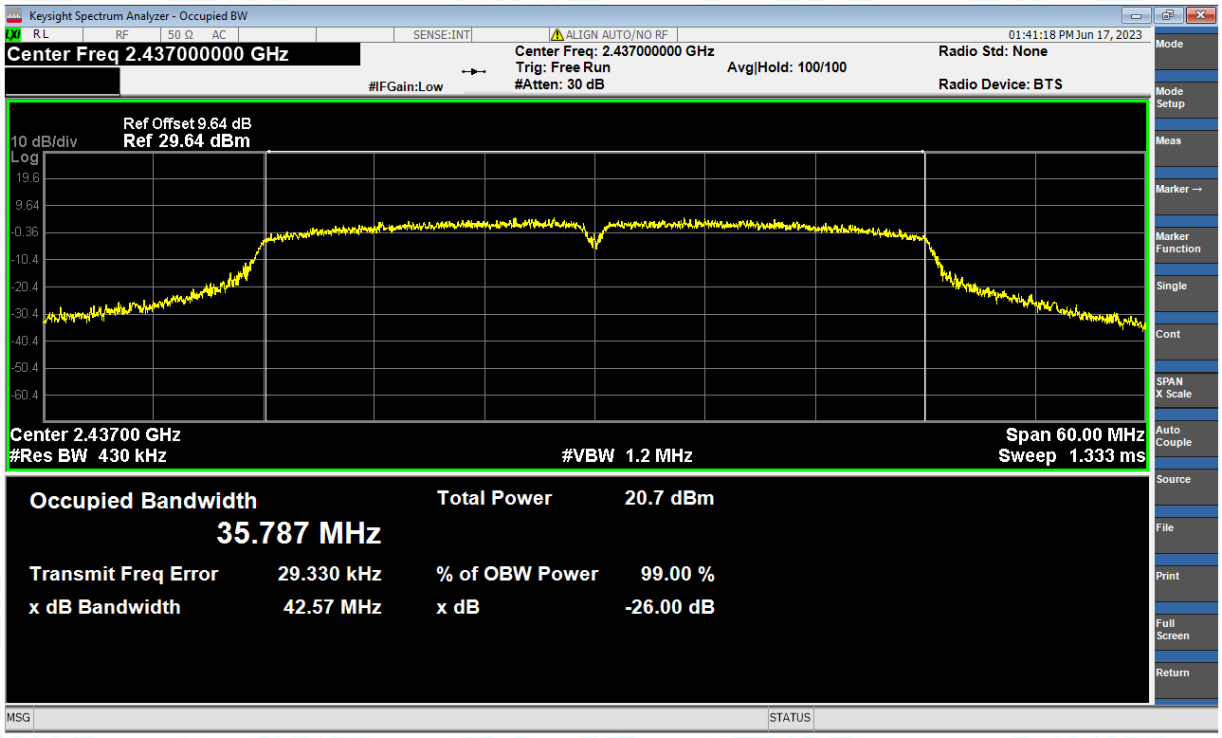
OBW NVNT n(HT20) 2462MHz Ant1



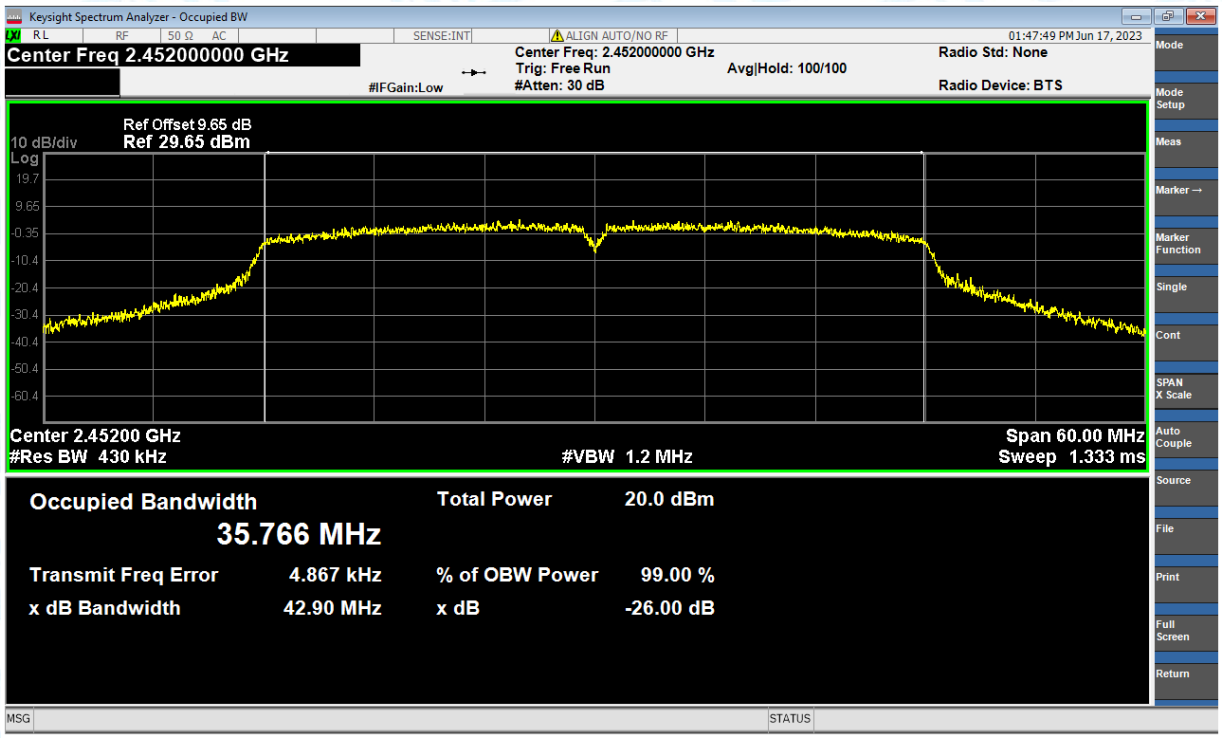
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2437MHz Ant1



OBW NVNT n(HT40) 2452MHz Ant1

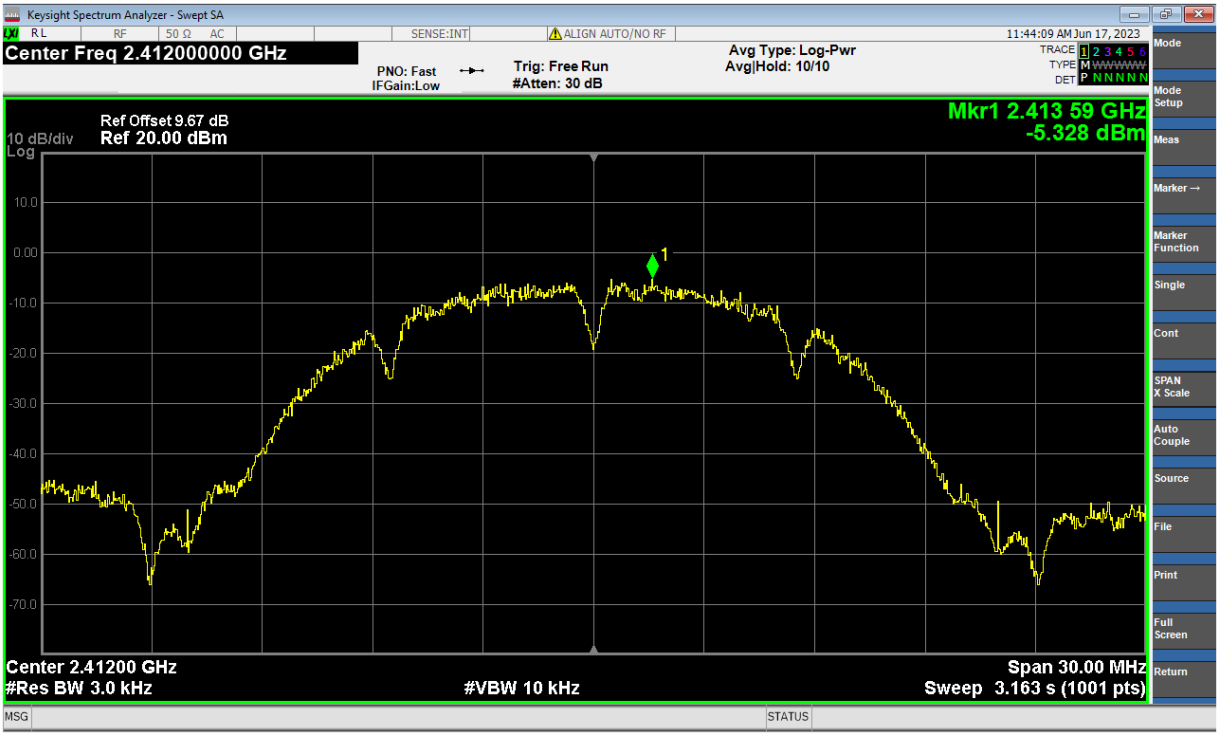


5. Maximum Power Spectral Density Level

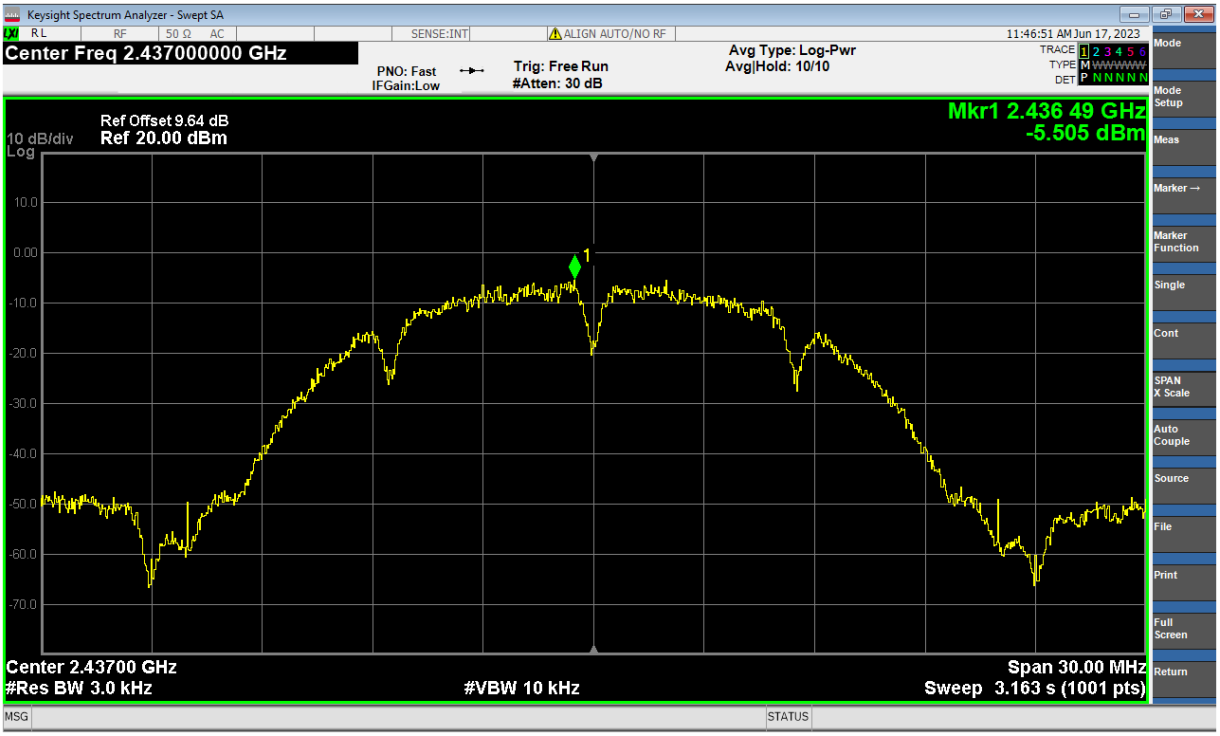
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-5.328	8	Pass
NVNT	b	2437	Ant1	-5.505	8	Pass
NVNT	b	2462	Ant1	-5.52	8	Pass
NVNT	g	2412	Ant1	-6.693	8	Pass
NVNT	g	2437	Ant1	-6.968	8	Pass
NVNT	g	2462	Ant1	-7.609	8	Pass
NVNT	n(HT20)	2412	Ant1	-6.722	8	Pass
NVNT	n(HT20)	2437	Ant1	-6.356	8	Pass
NVNT	n(HT20)	2462	Ant1	-7.054	8	Pass
NVNT	n(HT40)	2422	Ant1	-11.443	8	Pass
NVNT	n(HT40)	2437	Ant1	-12.299	8	Pass
NVNT	n(HT40)	2452	Ant1	-13.206	8	Pass

Test Graphs

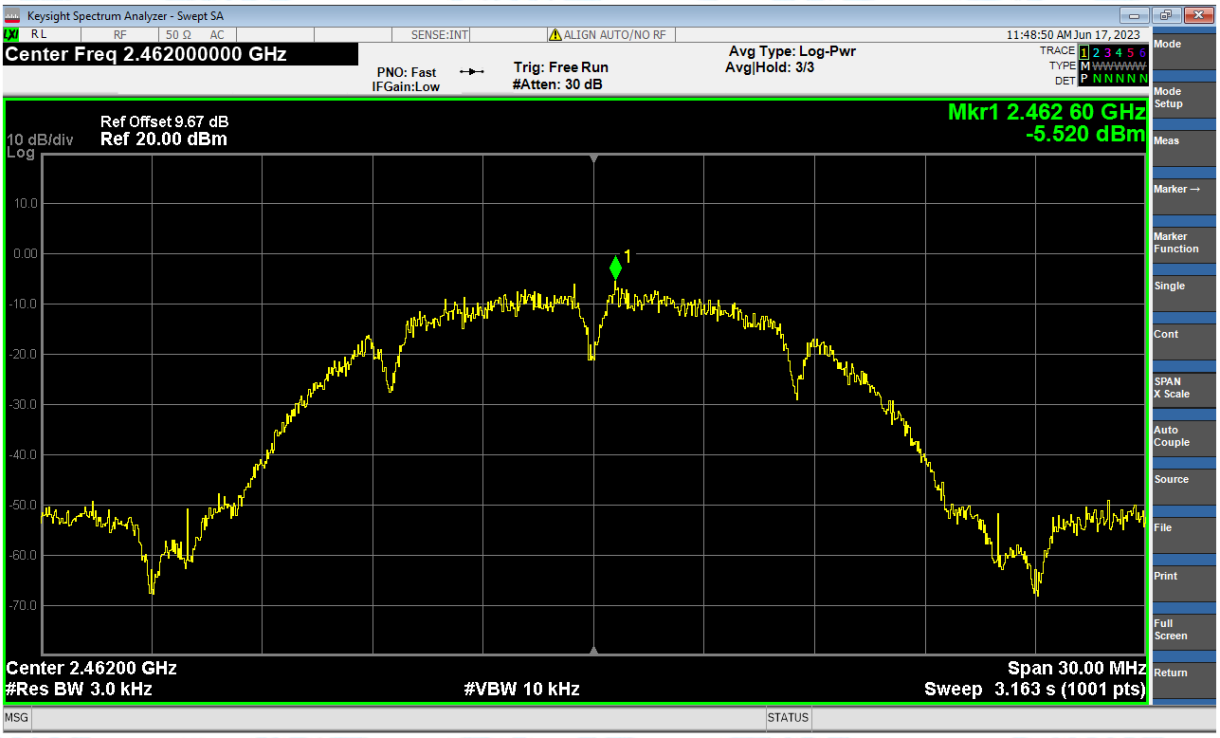
PSD NVNT b 2412MHz Ant1



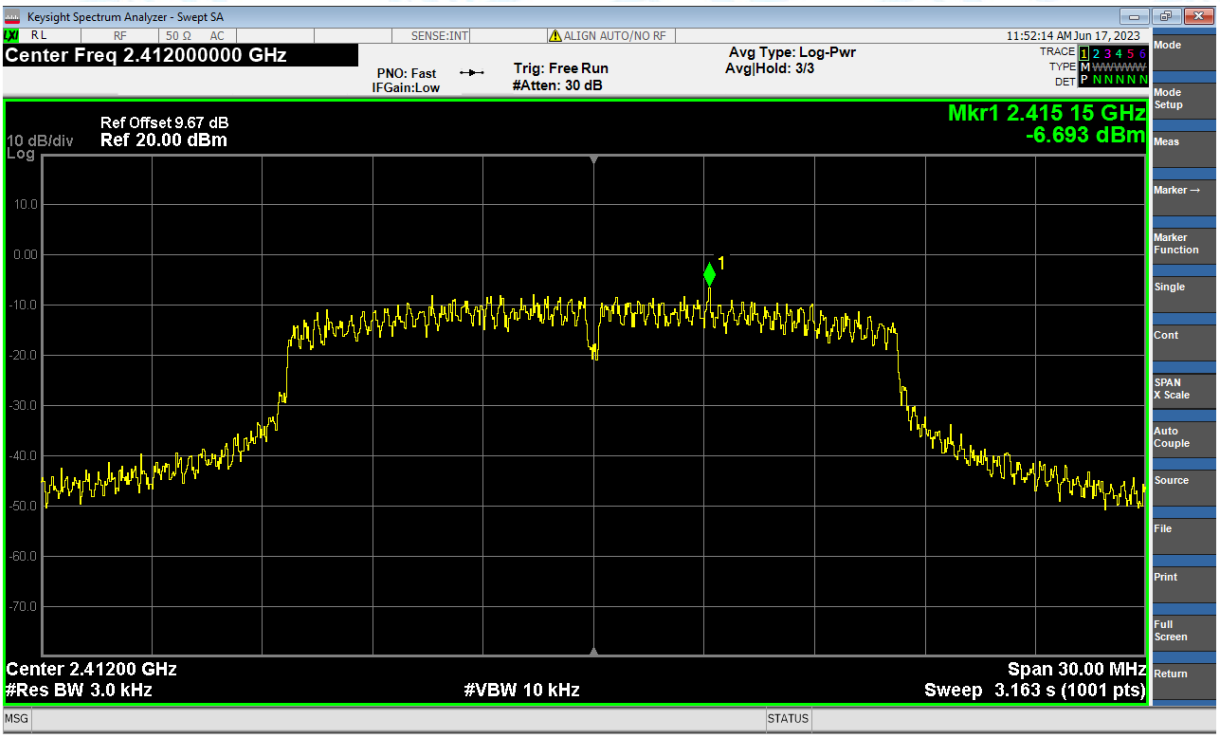
PSD NVNT b 2437MHz Ant1



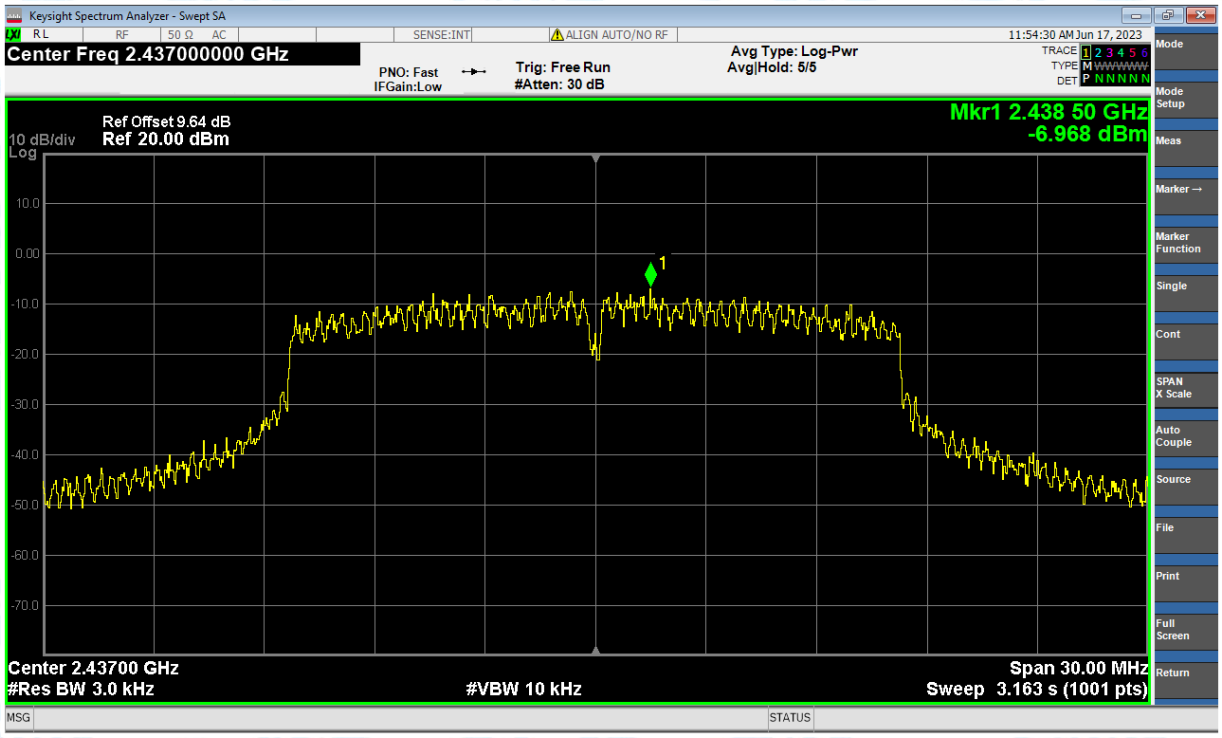
PSD NVNT b 2462MHz Ant1



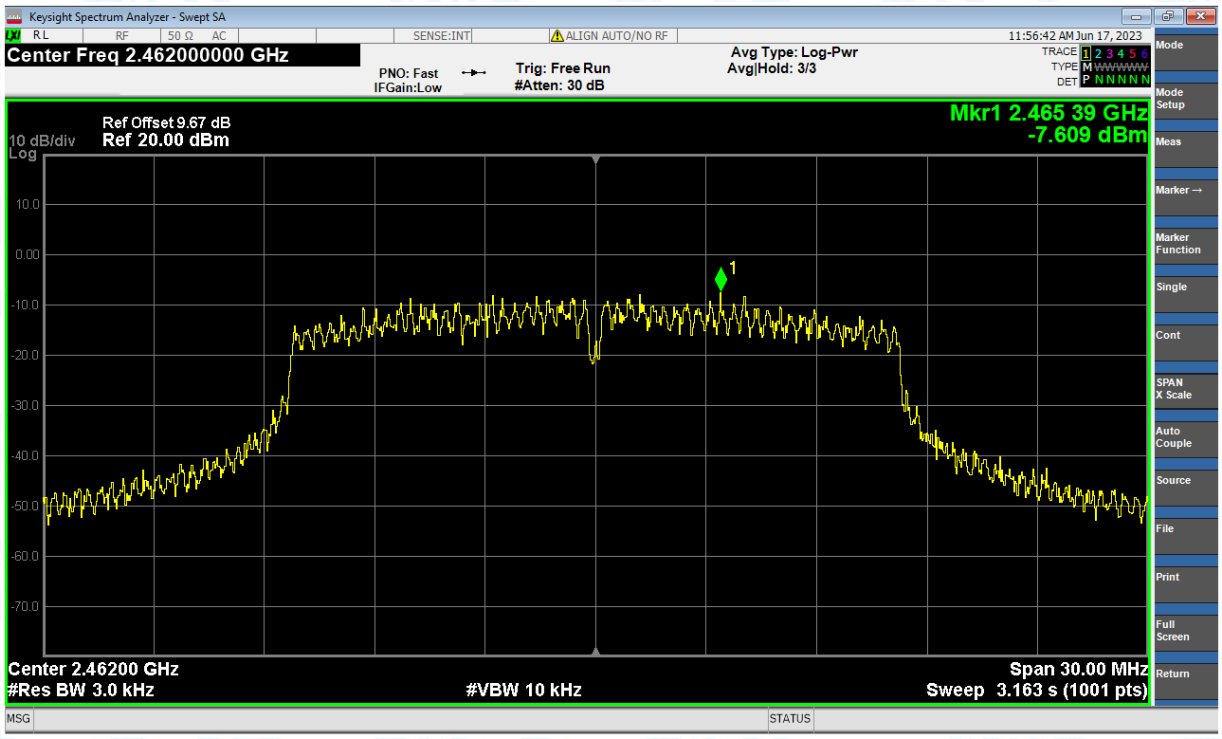
PSD NVNT g 2412MHz Ant1



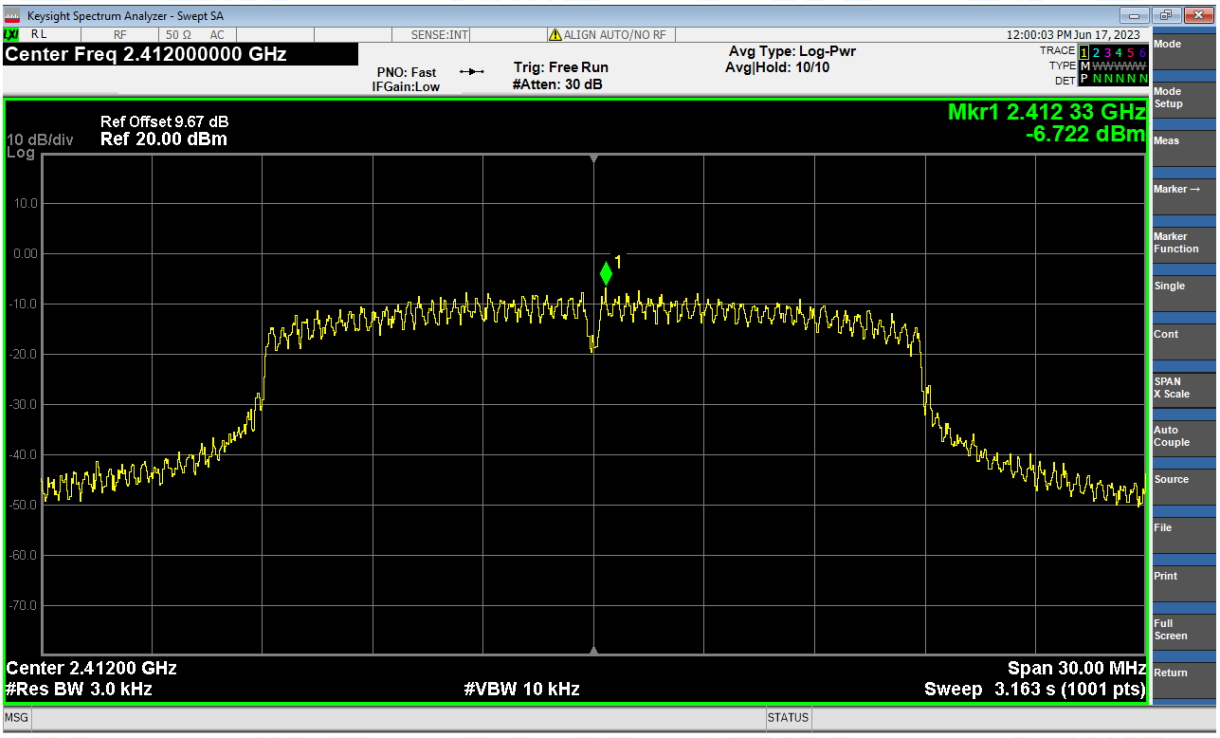
PSD NVNT g 2437MHz Ant1



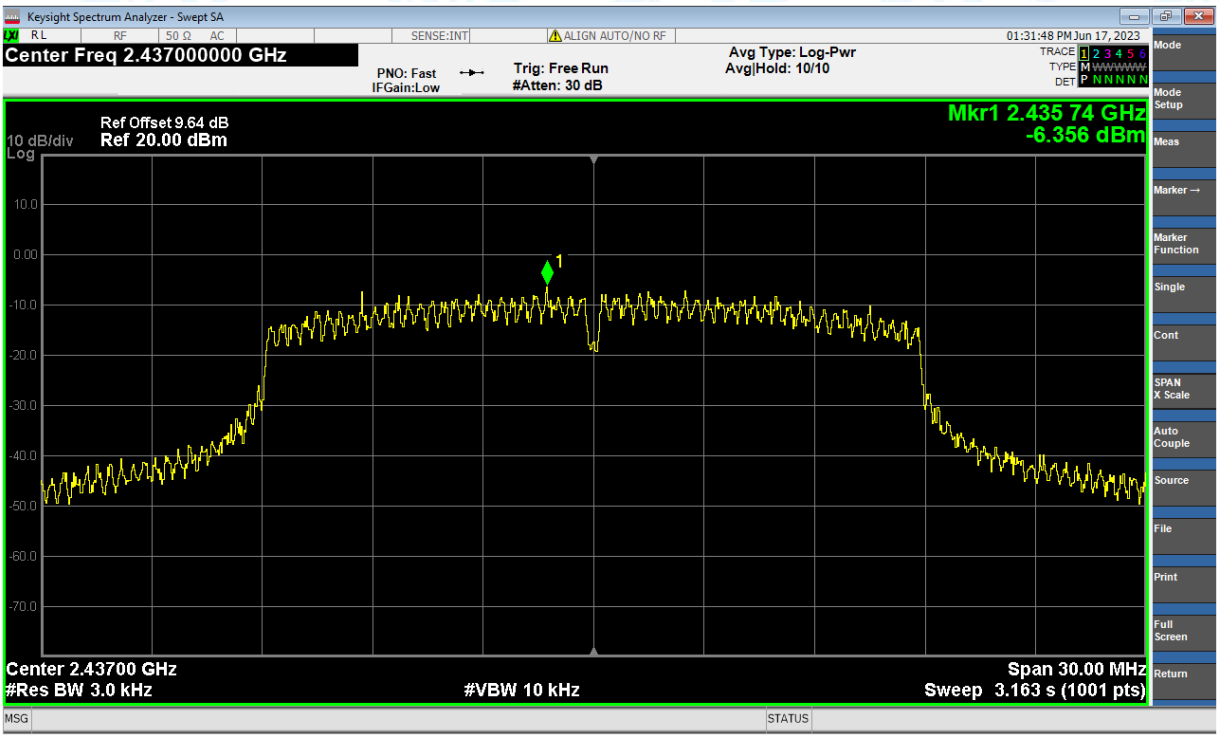
PSD NVNT g 2462MHz Ant1



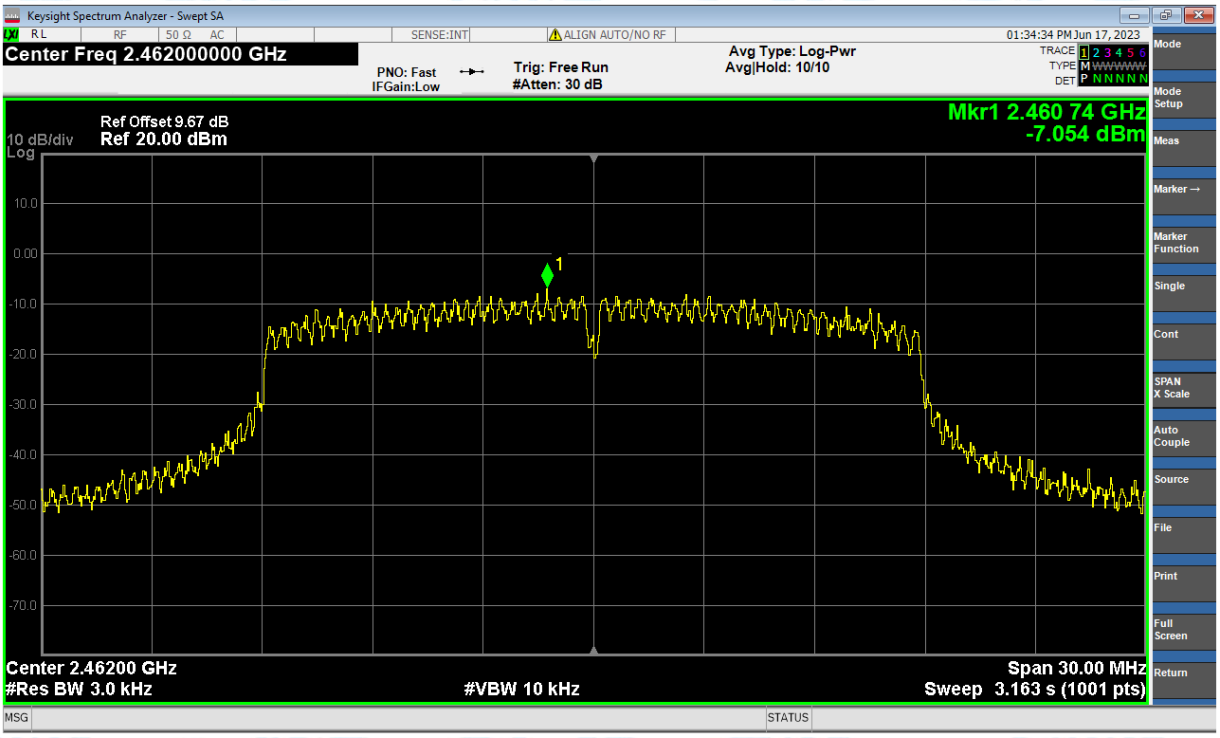
PSD NVNT n(HT20) 2412MHz Ant1



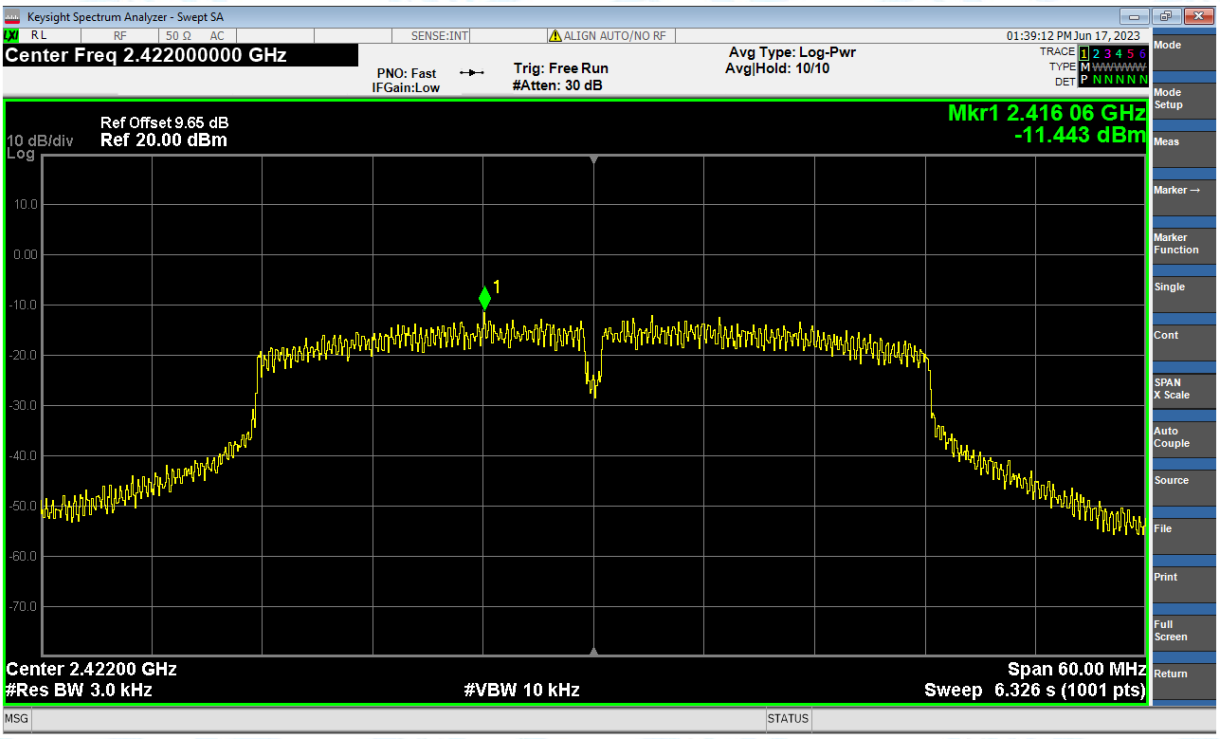
PSD NVNT n(HT20) 2437MHz Ant1



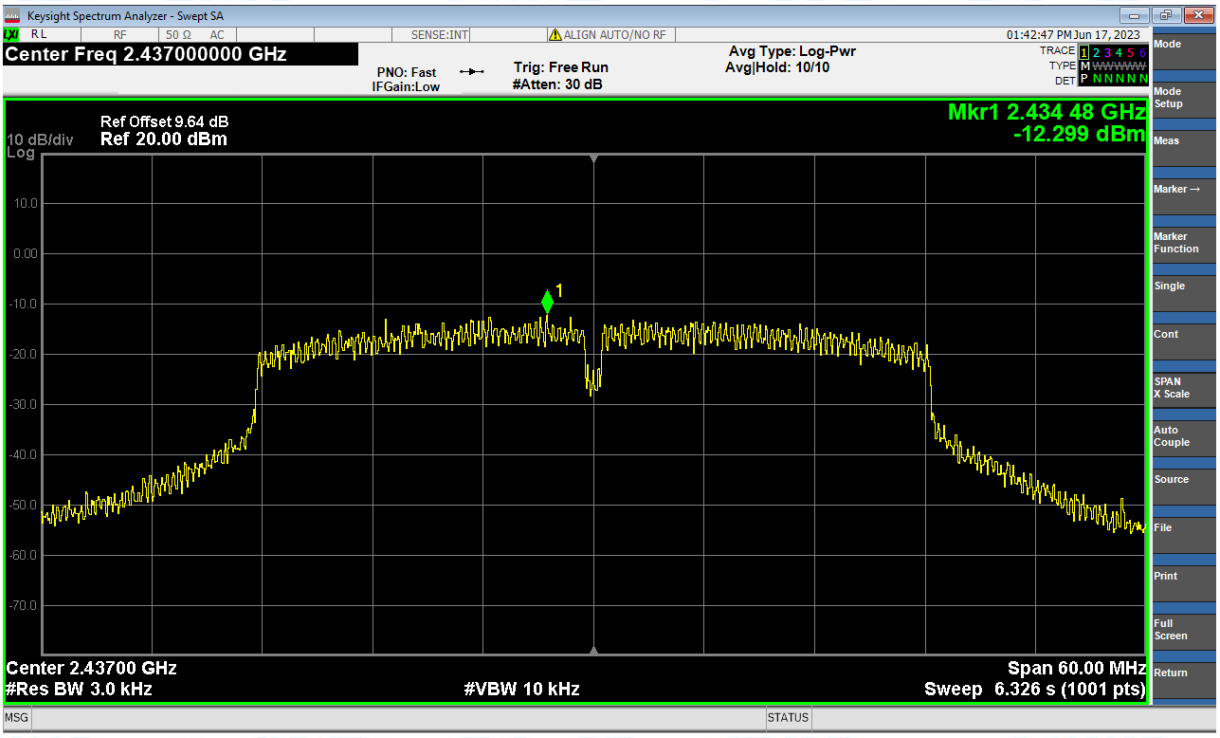
PSD NVNT n(HT20) 2462MHz Ant1



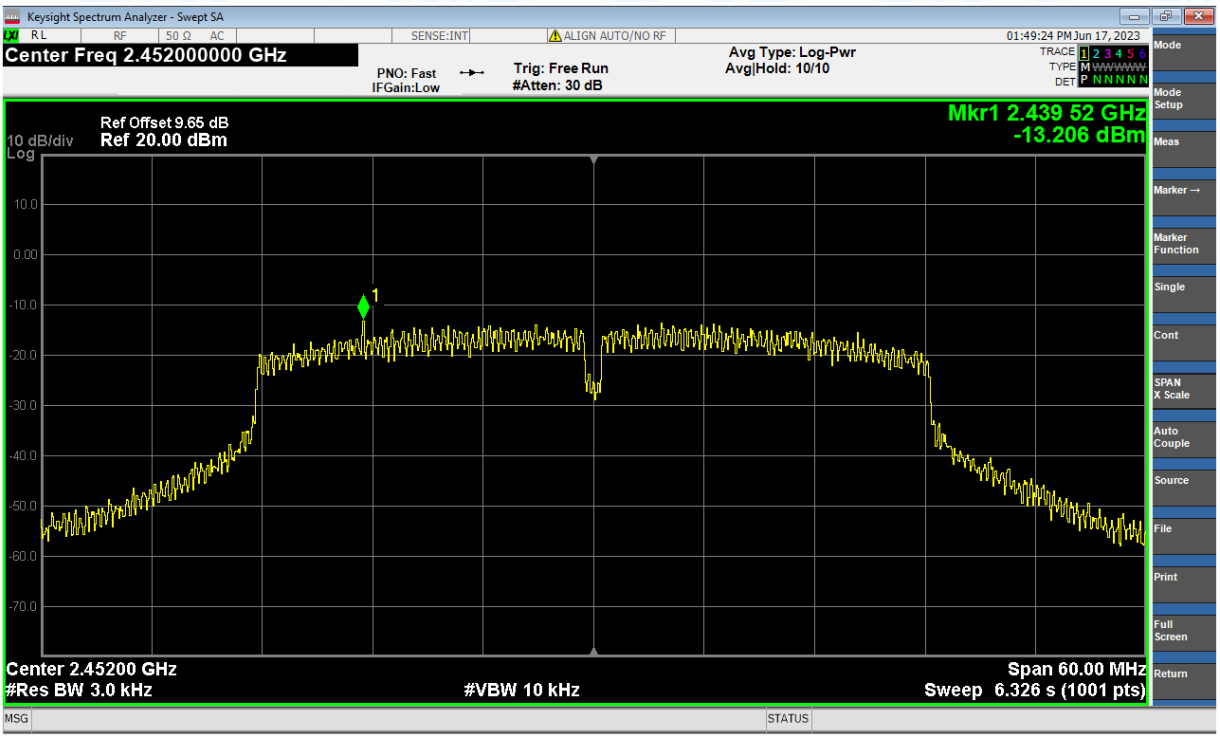
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1

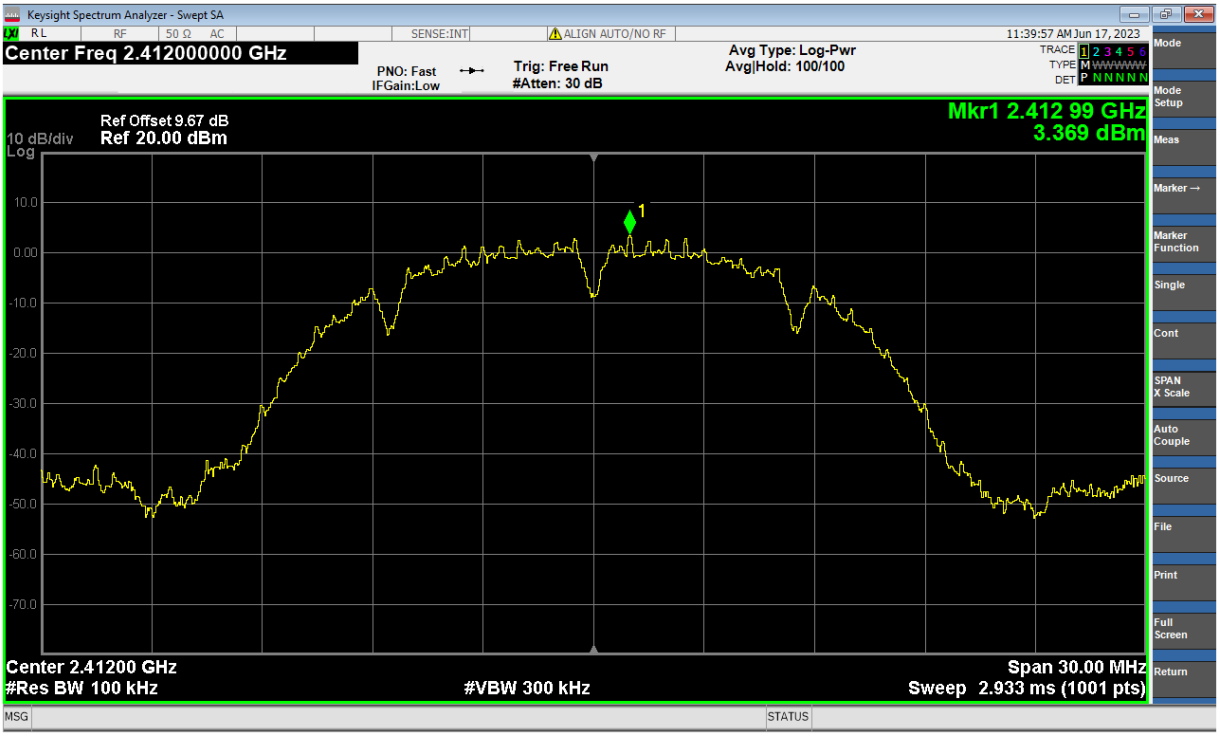


6. Band Edge

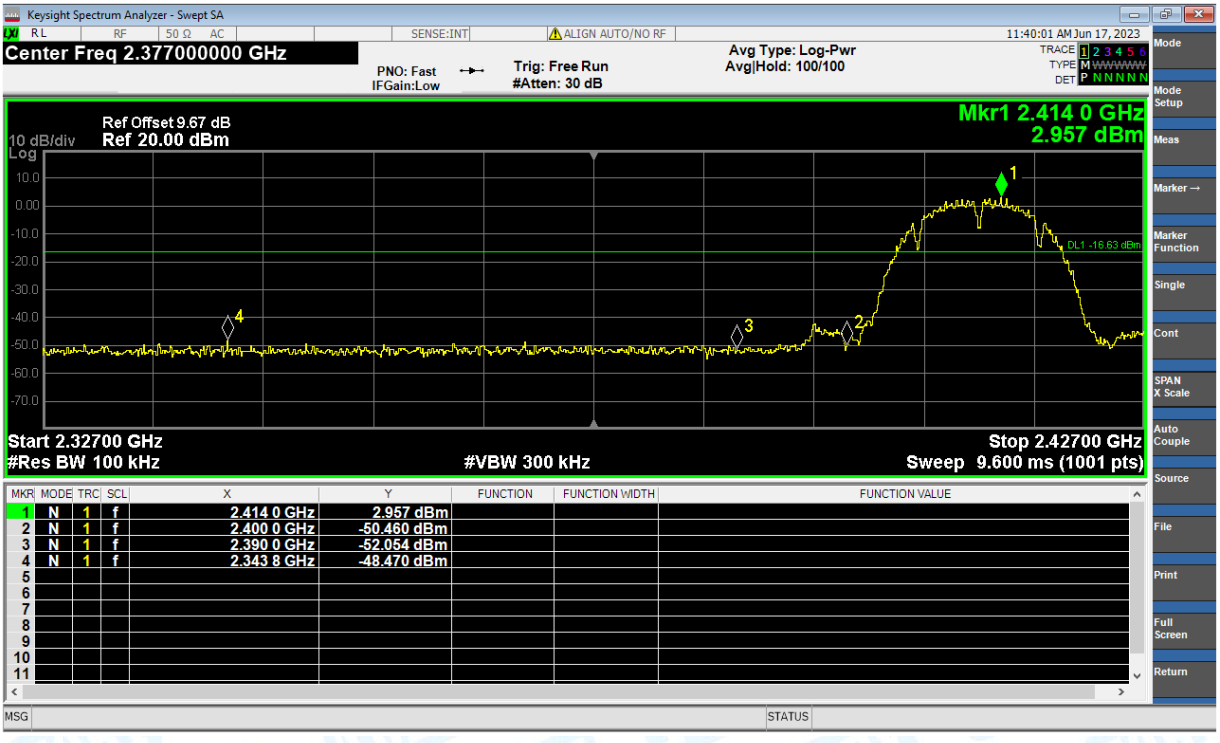
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-51.84	-20	Pass
NVNT	b	2462	Ant1	-53.29	-20	Pass
NVNT	g	2412	Ant1	-47.39	-20	Pass
NVNT	g	2462	Ant1	-48.71	-20	Pass
NVNT	n(HT20)	2412	Ant1	-46.3	-20	Pass
NVNT	n(HT20)	2462	Ant1	-47.44	-20	Pass
NVNT	n(HT40)	2422	Ant1	-33.05	-20	Pass
NVNT	n(HT40)	2452	Ant1	-38.52	-20	Pass

Test Graphs

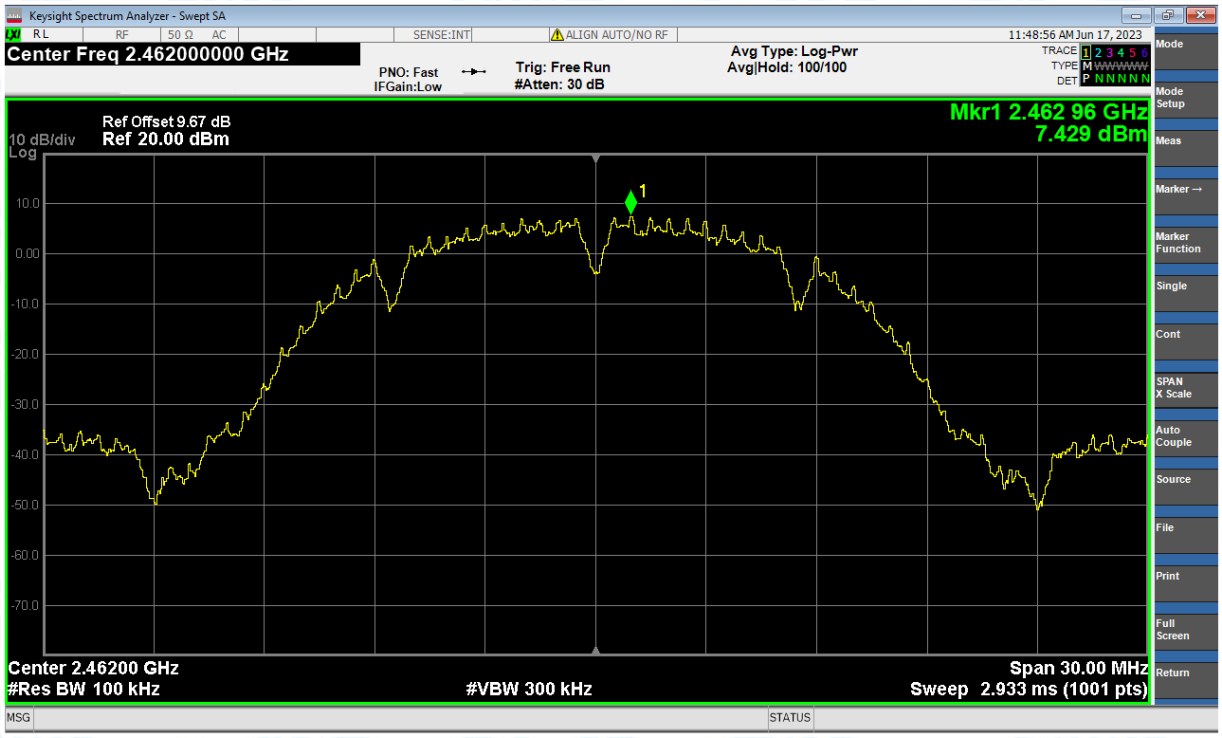
Band Edge NVNT b 2412MHz Ant1 Ref



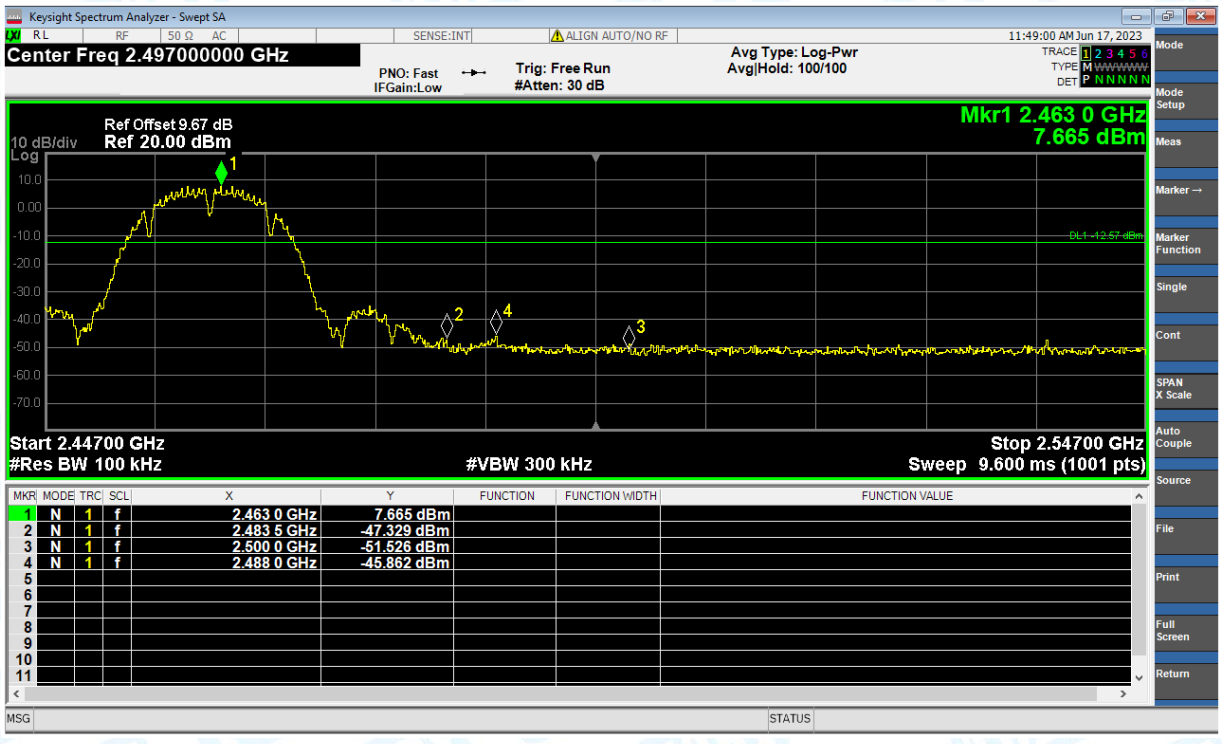
Band Edge NVNT b 2412MHz Ant1 Emission



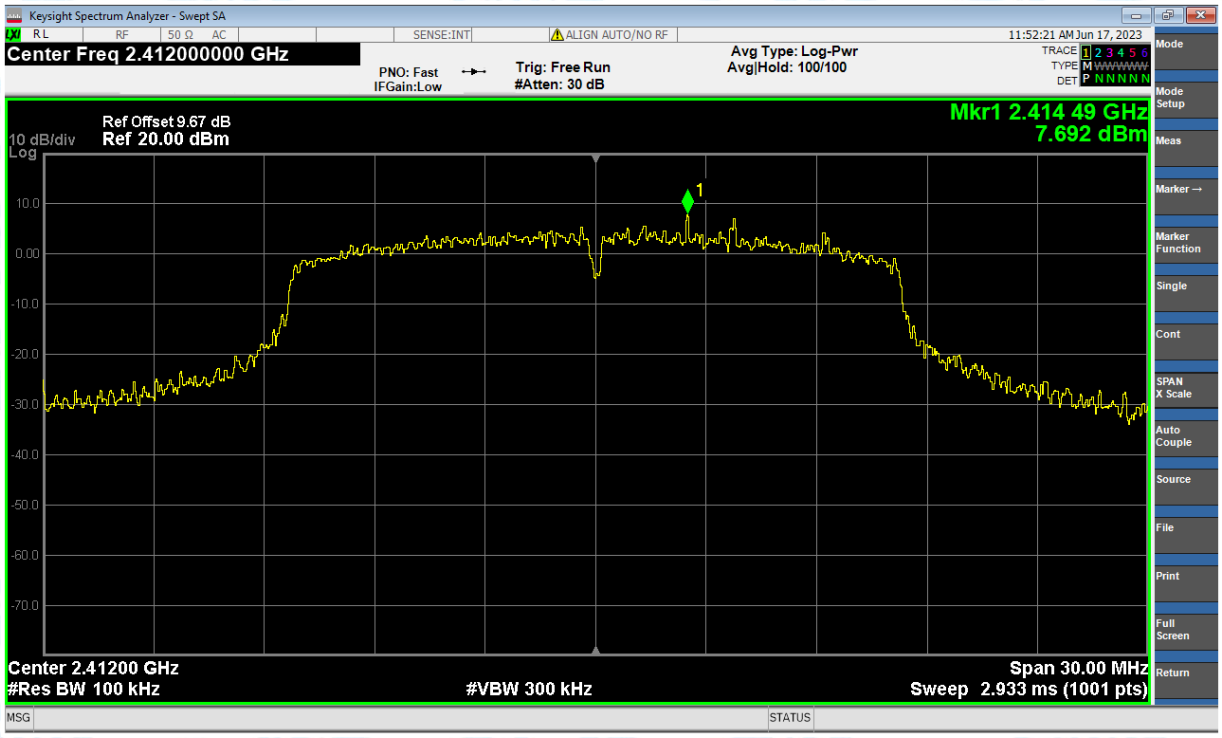
Band Edge NVNT b 2462MHz Ant1 Ref



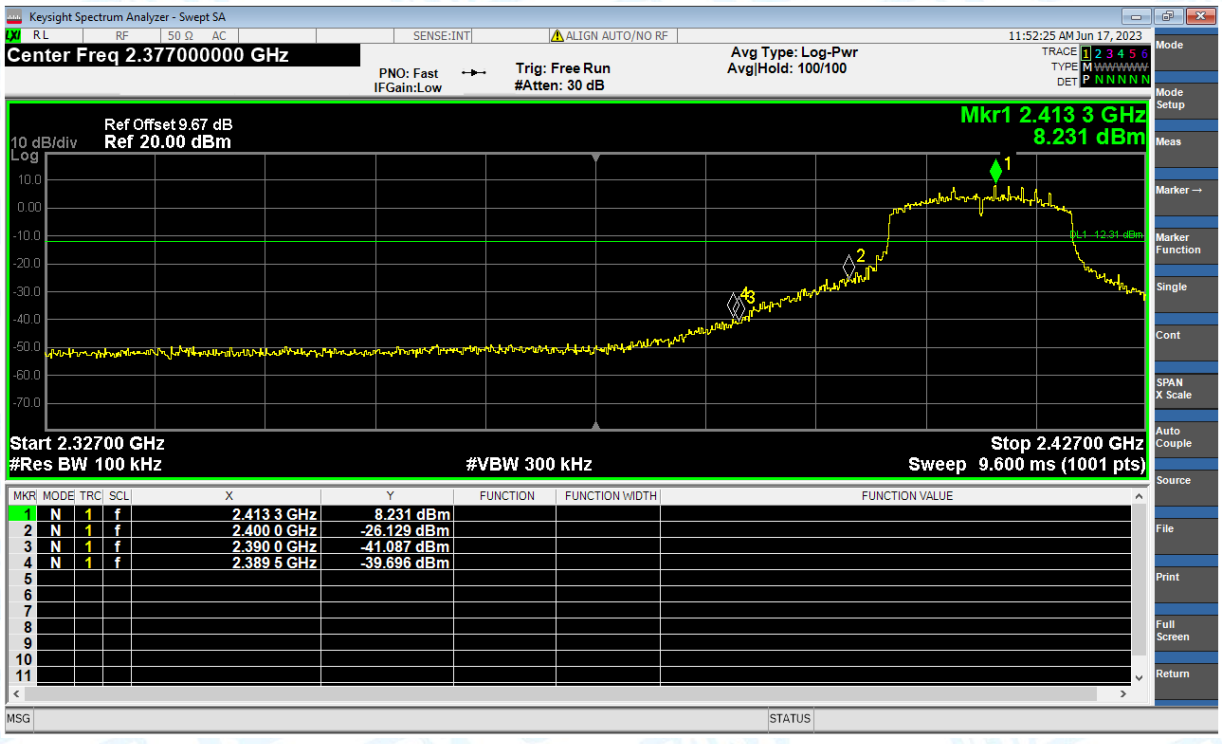
Band Edge NVNT b 2462MHz Ant1 Emission



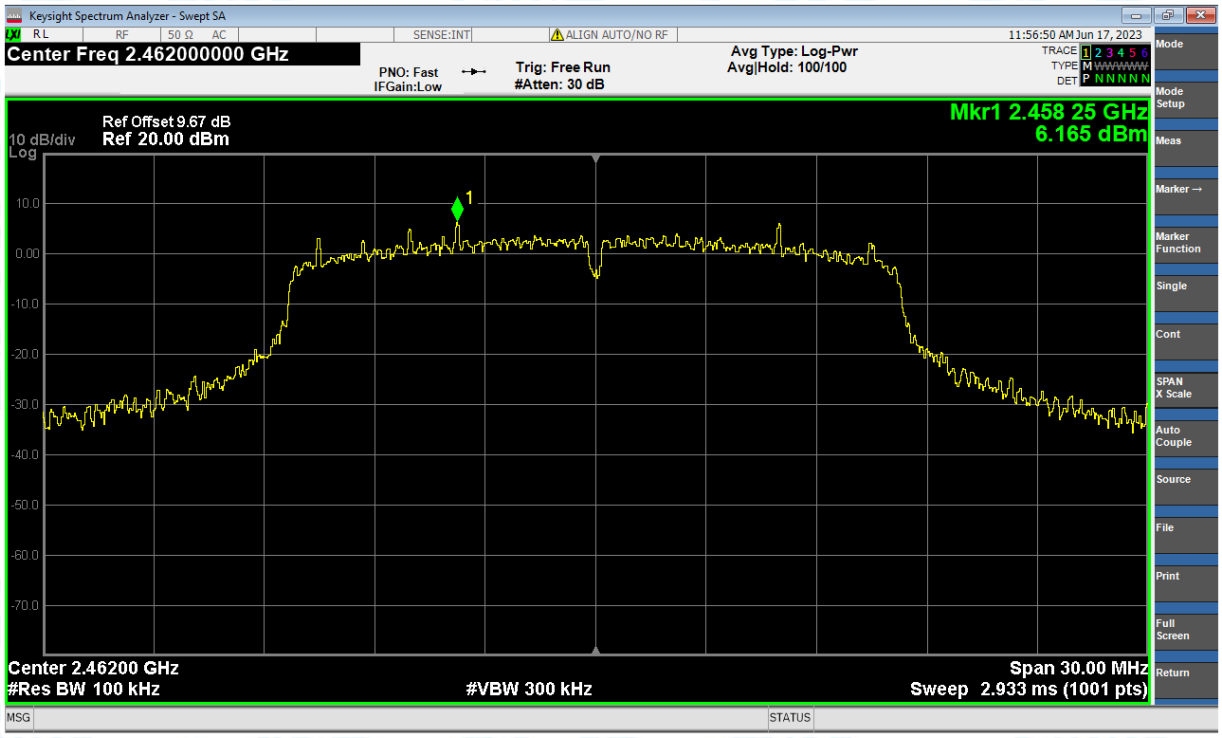
Band Edge NVNT g 2412MHz Ant1 Ref



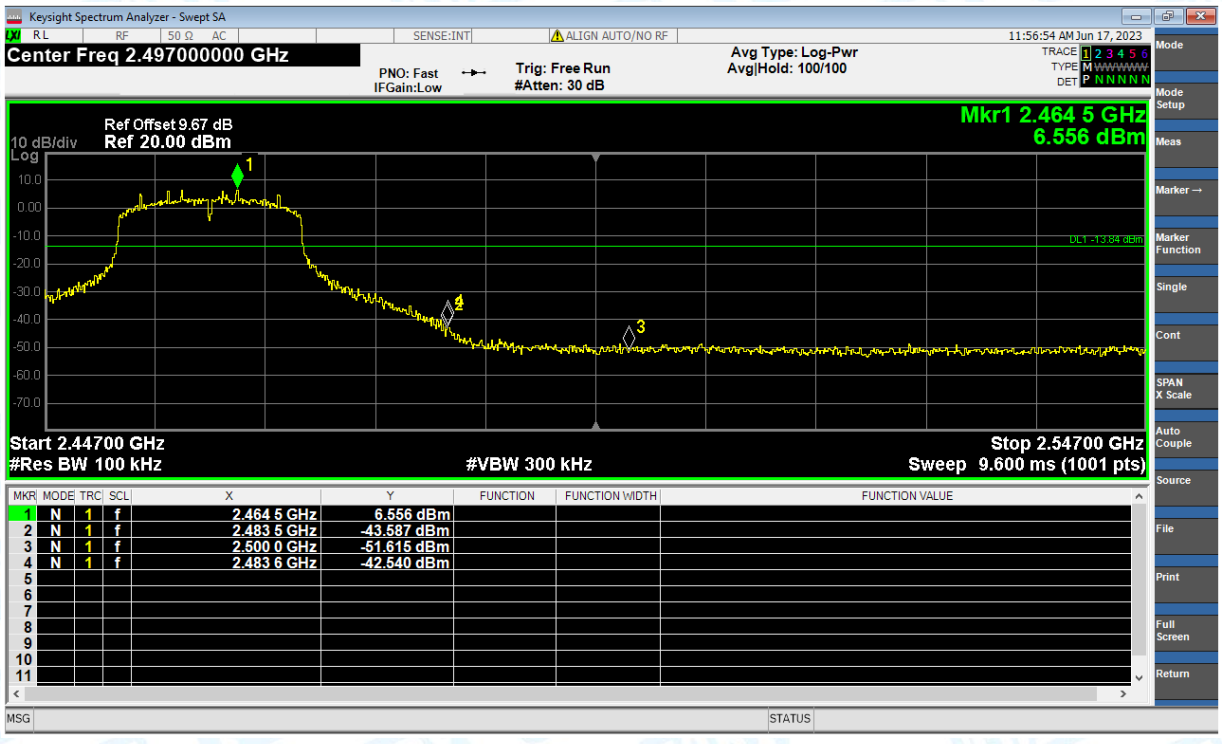
Band Edge NVNT g 2412MHz Ant1 Emission



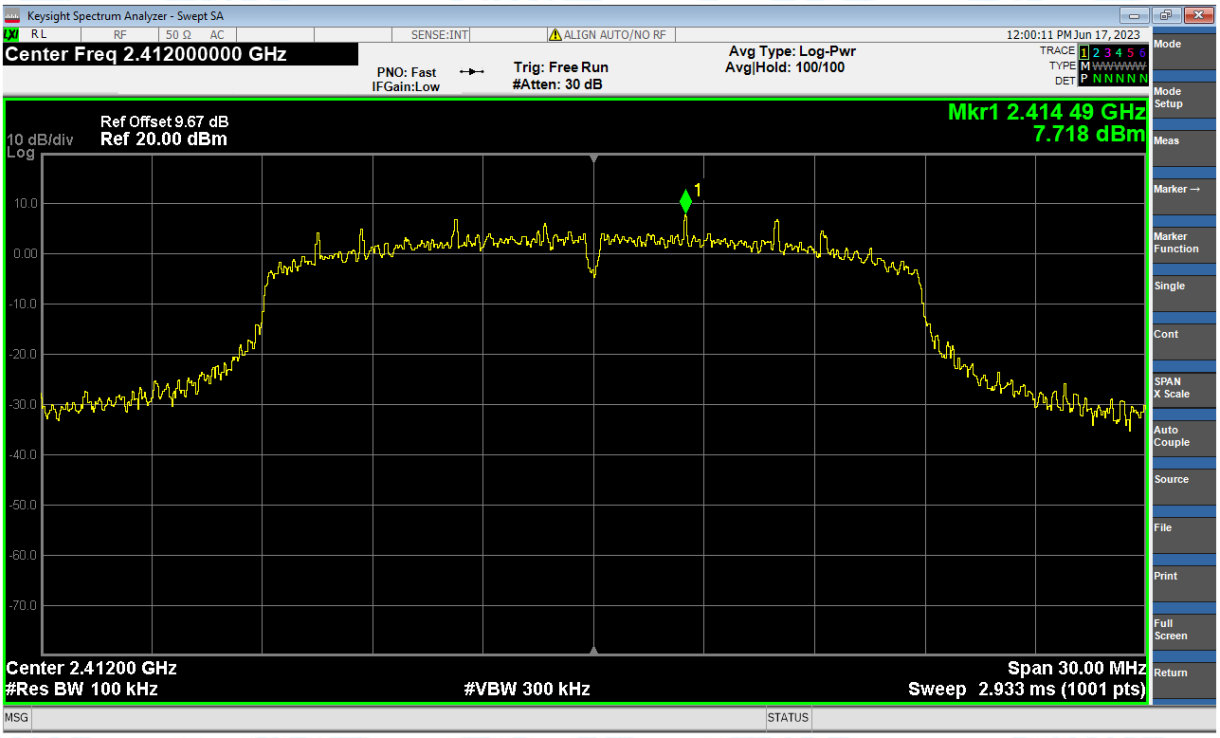
Band Edge NVNT g 2462MHz Ant1 Ref



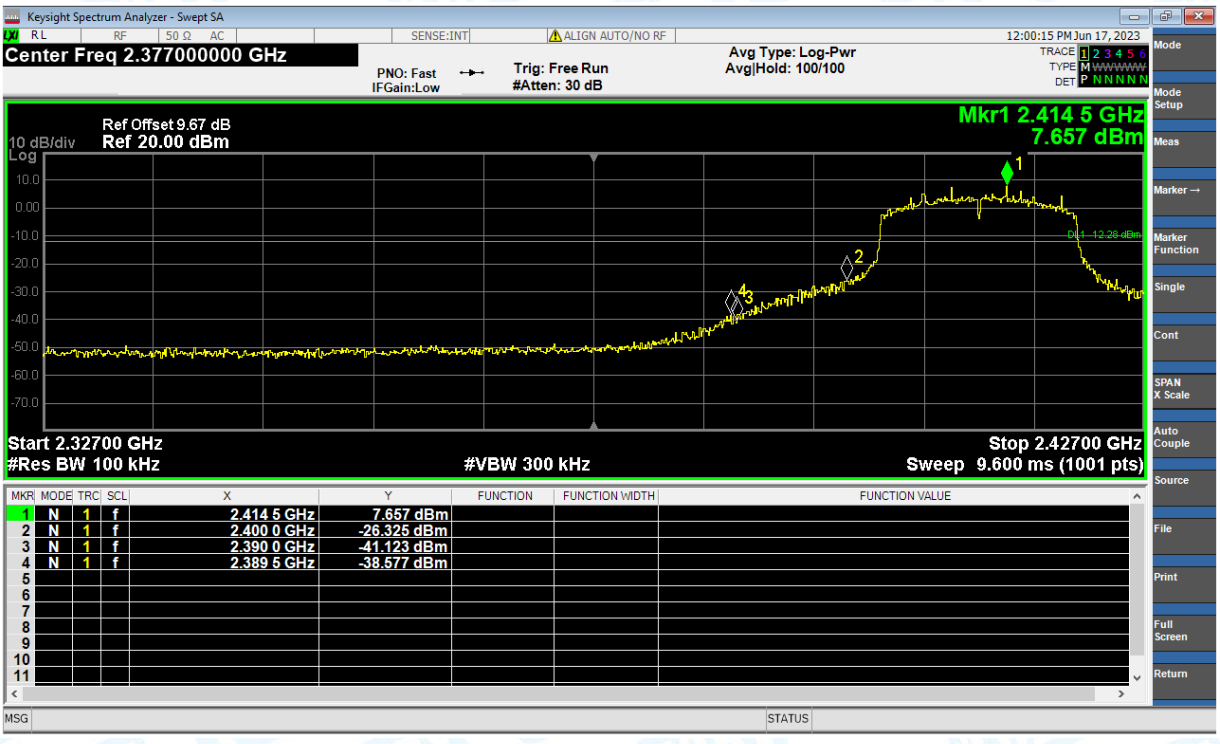
Band Edge NVNT g 2462MHz Ant1 Emission



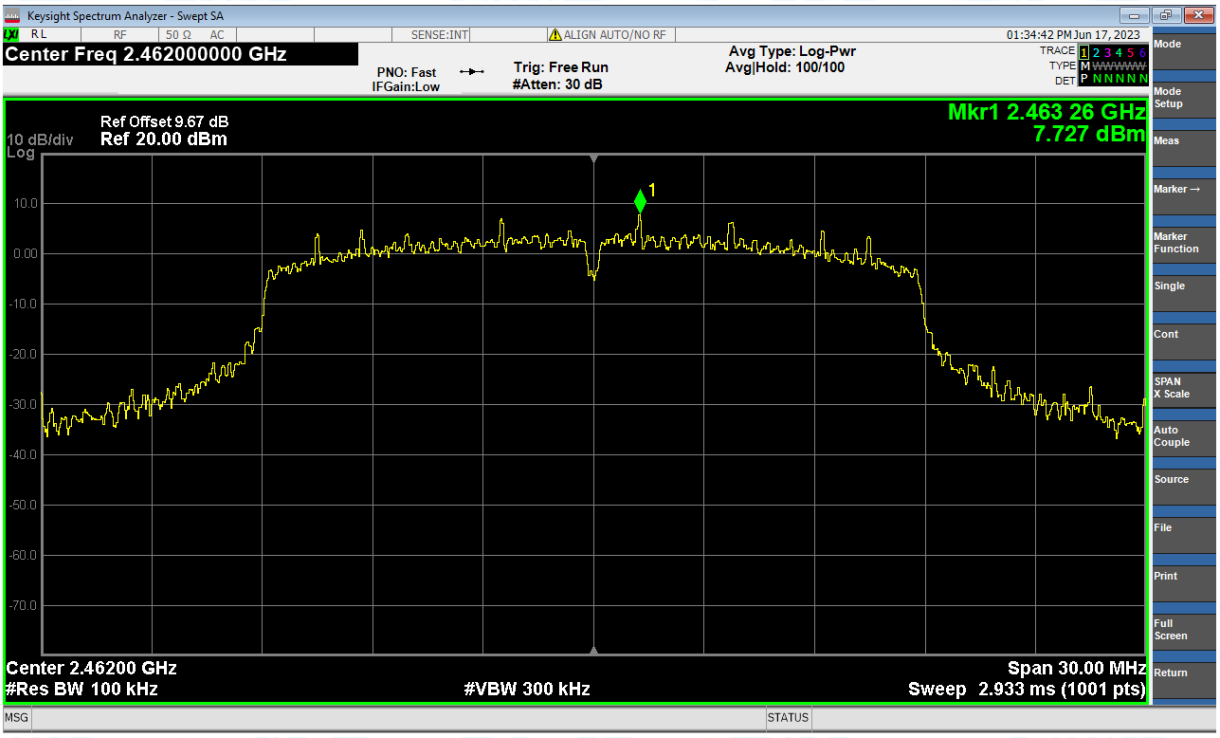
Band Edge NVNT n(HT20) 2412MHz Ant1 Ref



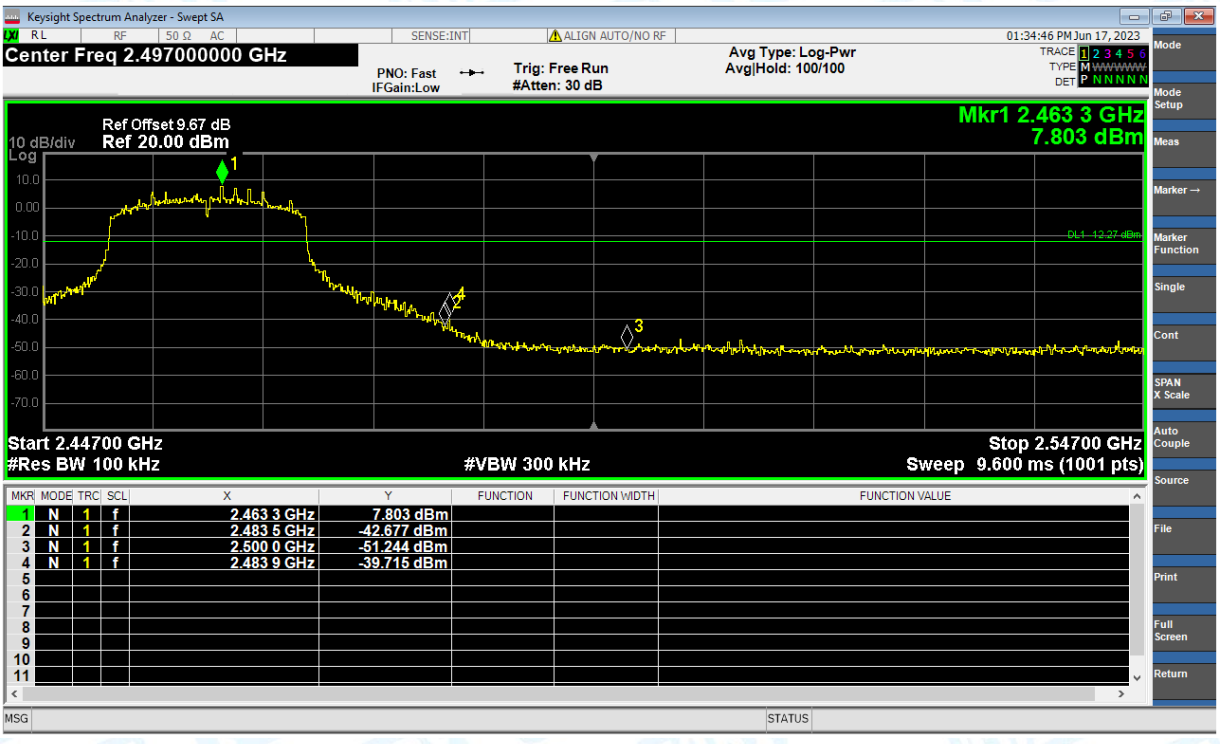
Band Edge NVNT n(HT20) 2412MHz Ant1 Emission



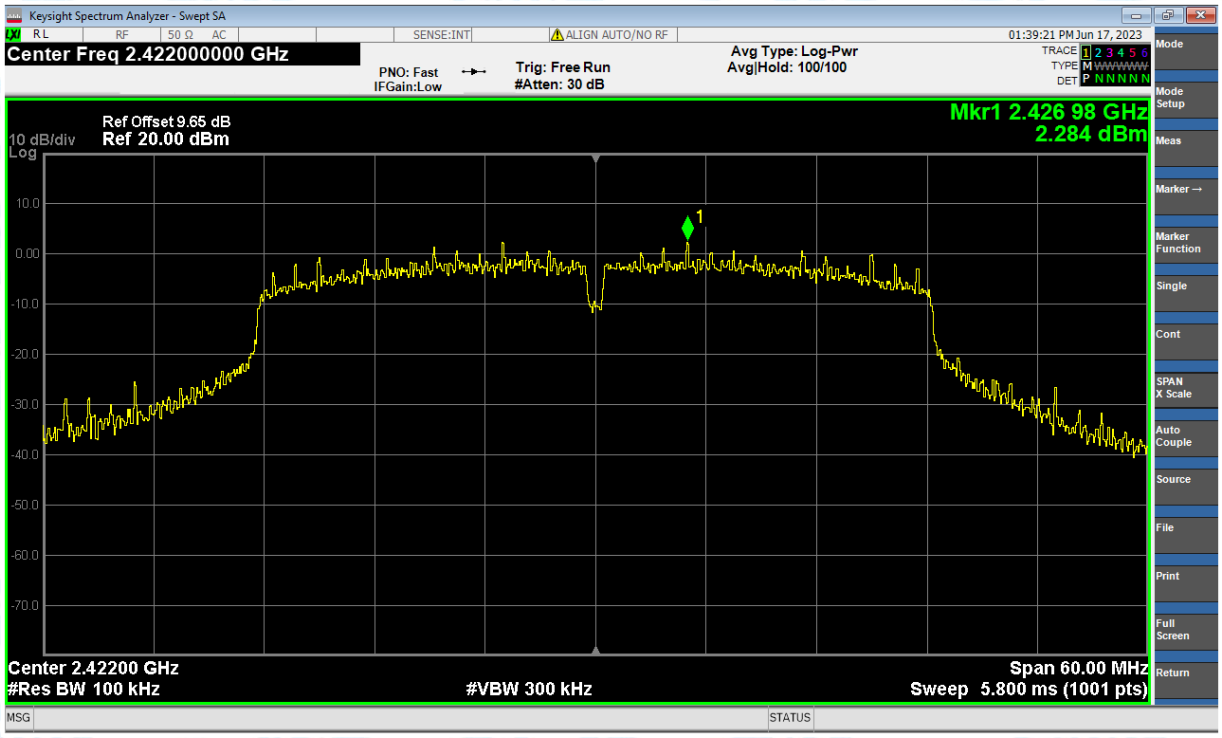
Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



Band Edge NVNT n(HT20) 2462MHz Ant1 Emission

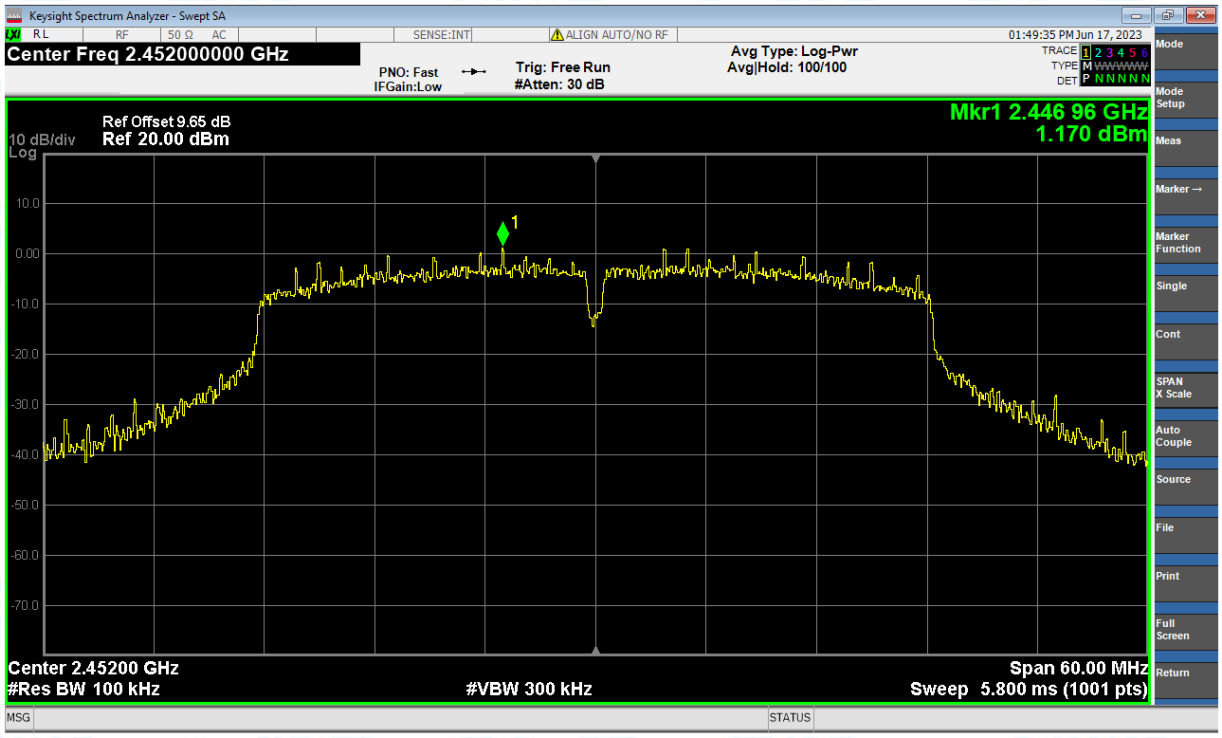


Band Edge NVNT n(HT40) 2422MHz Ant1 Ref



Band Edge NVNT n(HT40) 2422MHz Ant1 Emission

Band Edge NVNT n(HT40) 2452MHz Ant1 Ref



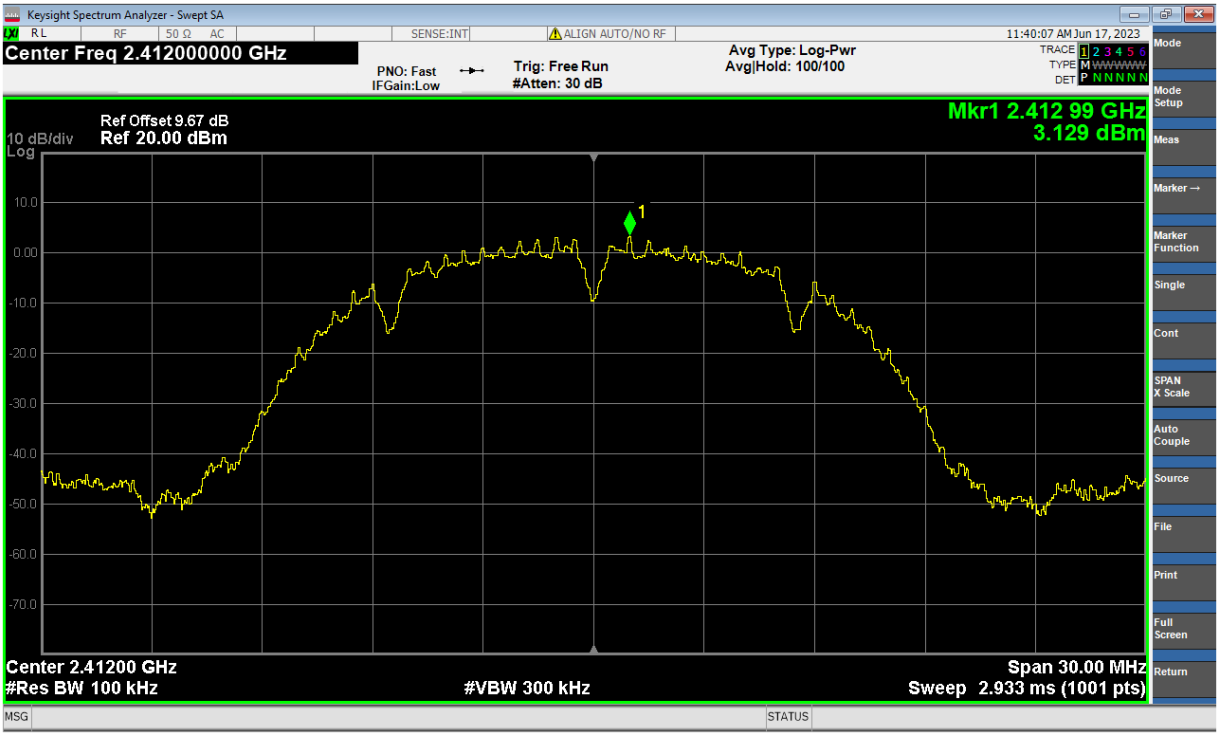
Band Edge NVNT n(HT40) 2452MHz Ant1 Emission

7. Conducted RF Spurious Emission

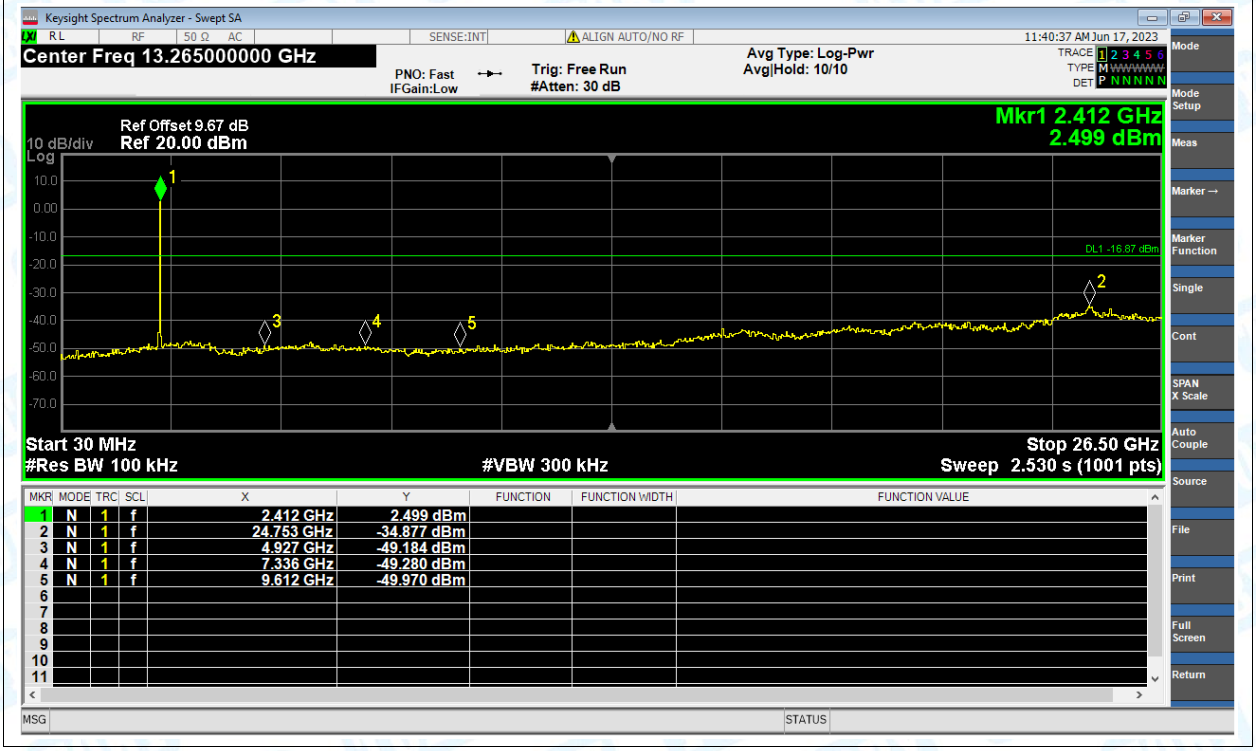
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-38.01	-20	Pass
NVNT	b	2437	Ant1	-41.53	-20	Pass
NVNT	b	2462	Ant1	-42.75	-20	Pass
NVNT	g	2412	Ant1	-42.24	-20	Pass
NVNT	g	2437	Ant1	-40.83	-20	Pass
NVNT	g	2462	Ant1	-42.46	-20	Pass
NVNT	n(HT20)	2412	Ant1	-43.32	-20	Pass
NVNT	n(HT20)	2437	Ant1	-43.05	-20	Pass
NVNT	n(HT20)	2462	Ant1	-41.67	-20	Pass
NVNT	n(HT40)	2422	Ant1	-37.38	-20	Pass
NVNT	n(HT40)	2437	Ant1	-36.6	-20	Pass
NVNT	n(HT40)	2452	Ant1	-36.05	-20	Pass

Test Graphs

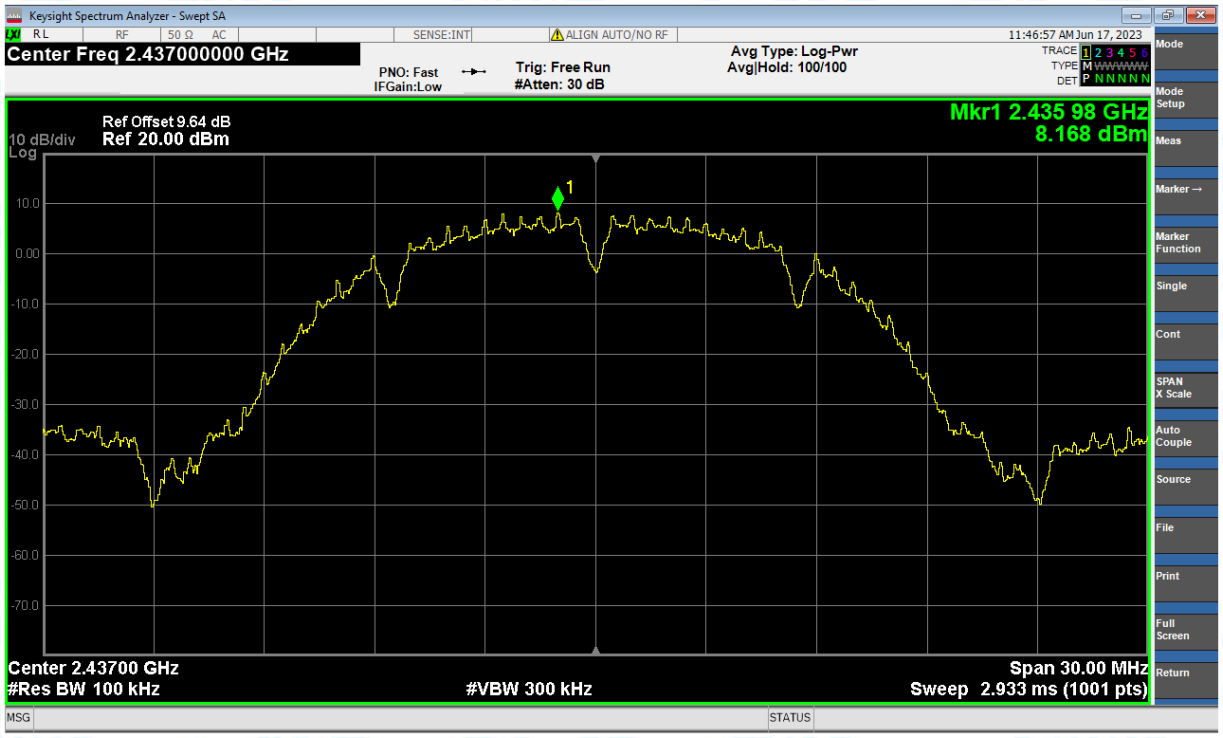
Tx. Spurious NVNT b 2412MHz Ant1 Ref



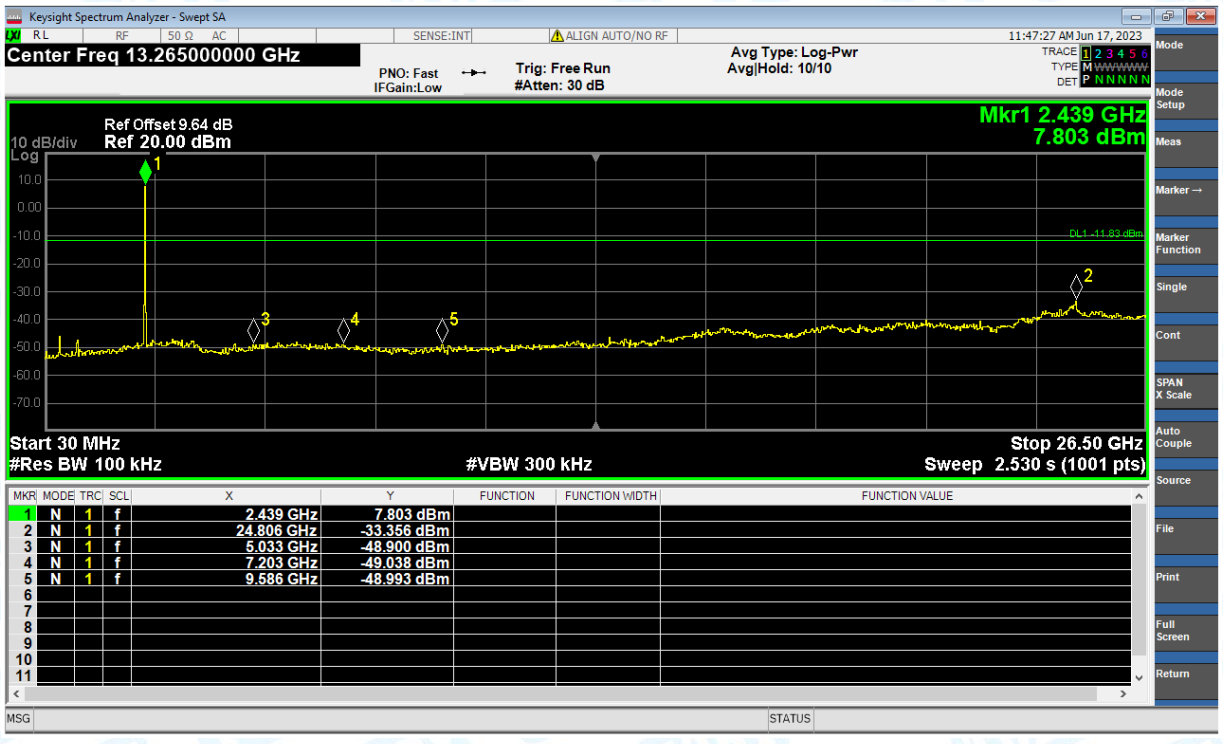
Tx. Spurious NVNT b 2412MHz Ant1 Emission



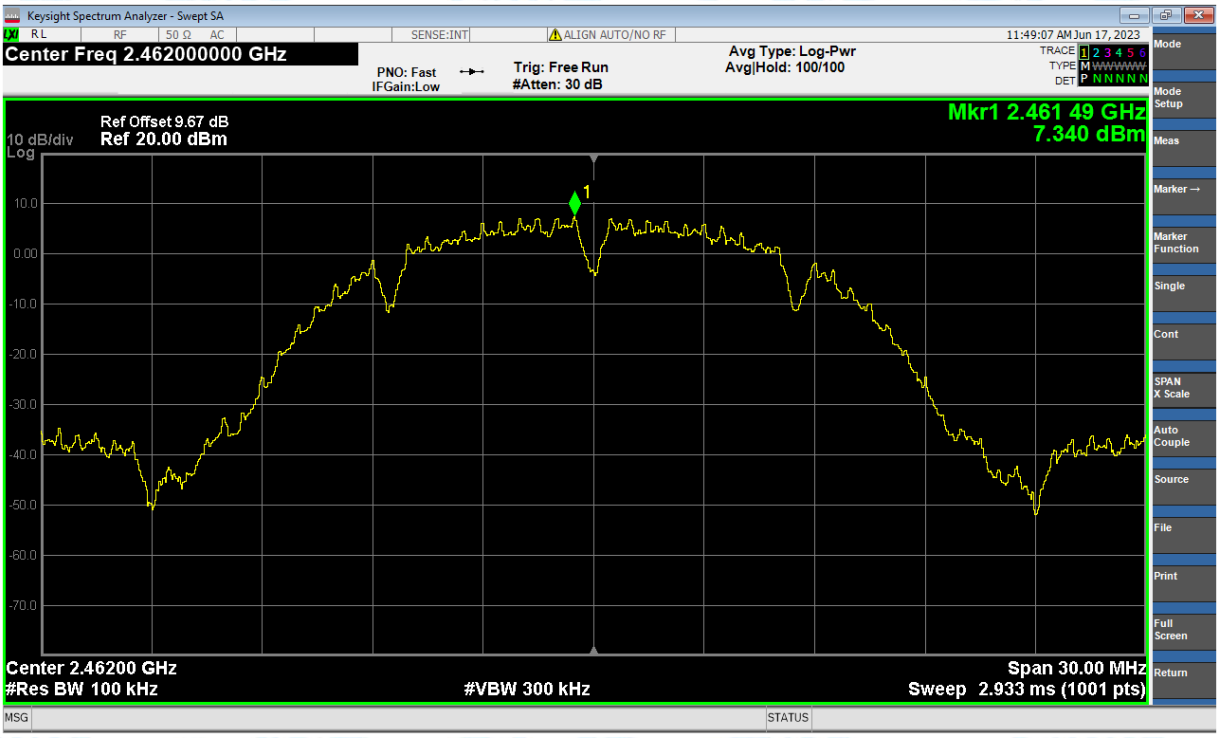
Tx. Spurious NVNT b 2437MHz Ant1 Ref



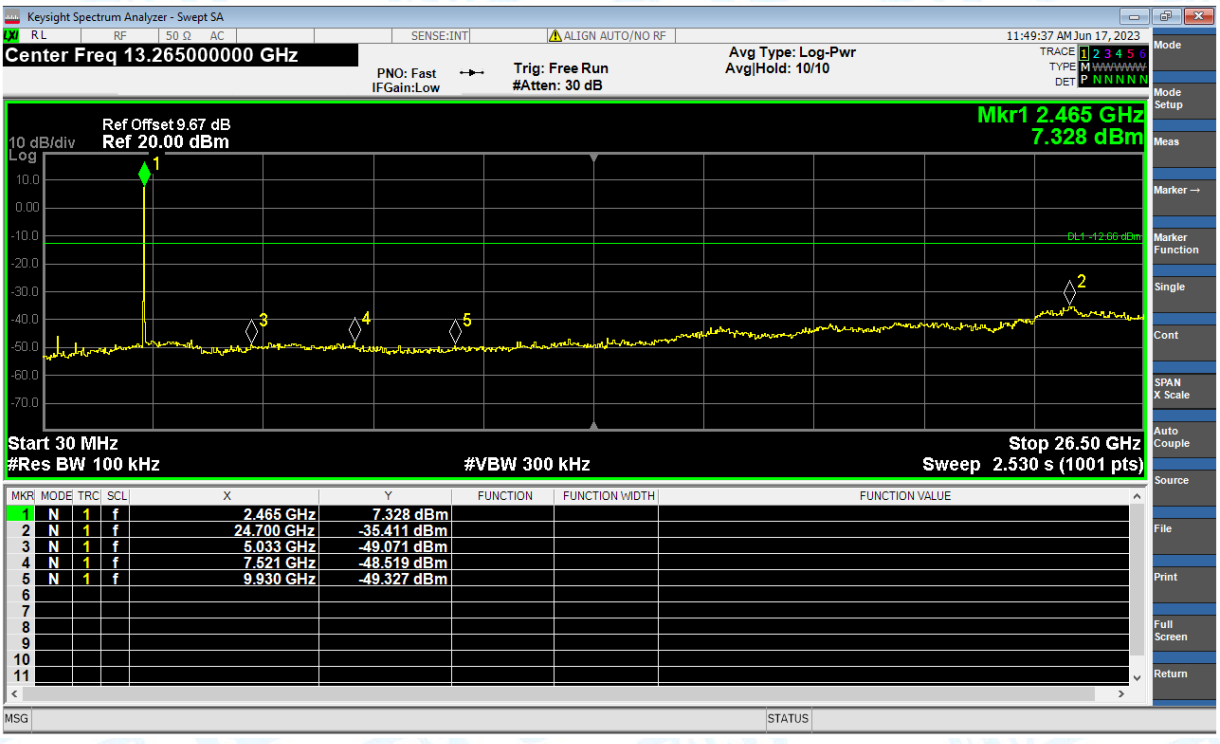
Tx. Spurious NVNT b 2437MHz Ant1 Emission



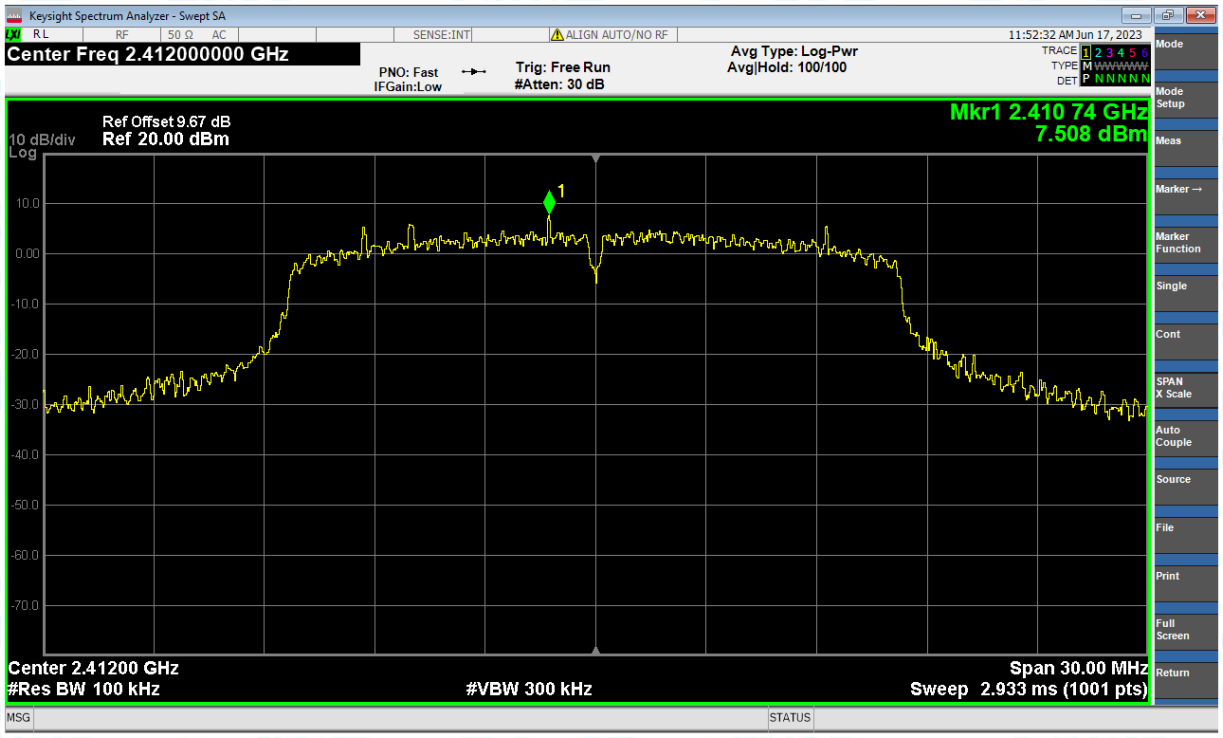
Tx. Spurious NVNT b 2462MHz Ant1 Ref



Tx. Spurious NVNT b 2462MHz Ant1 Emission



Tx. Spurious NVNT g 2412MHz Ant1 Ref



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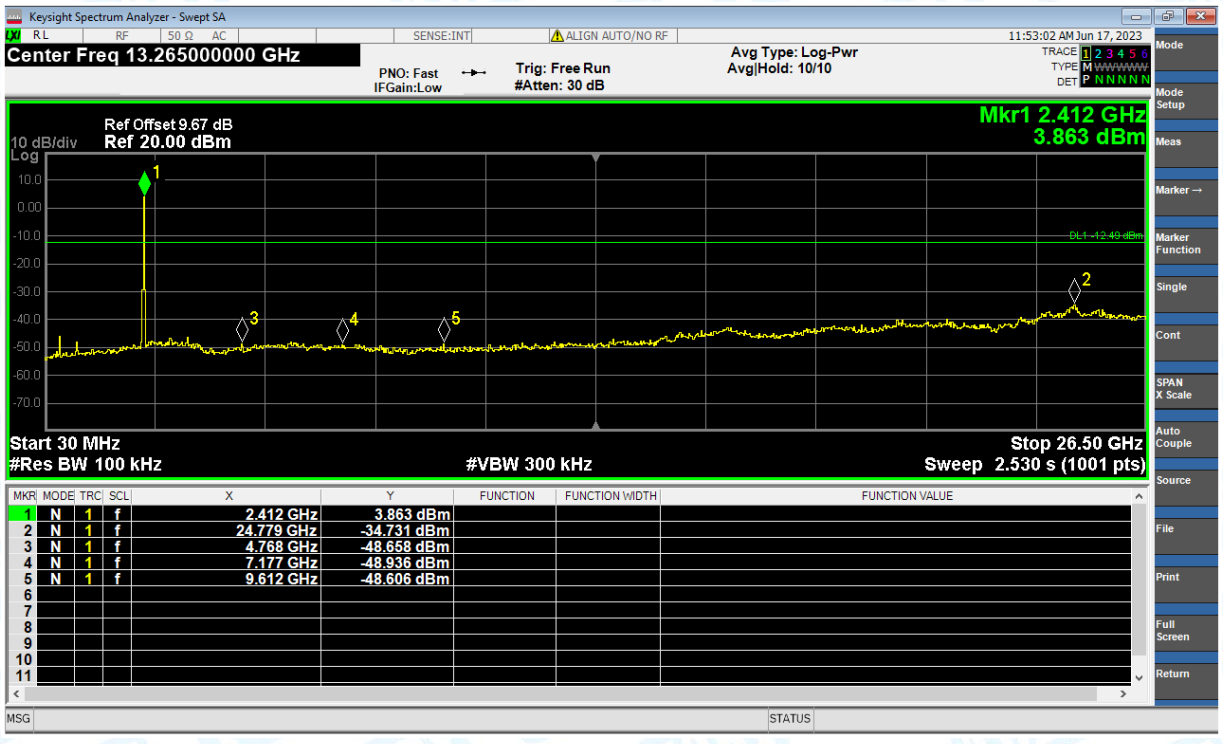

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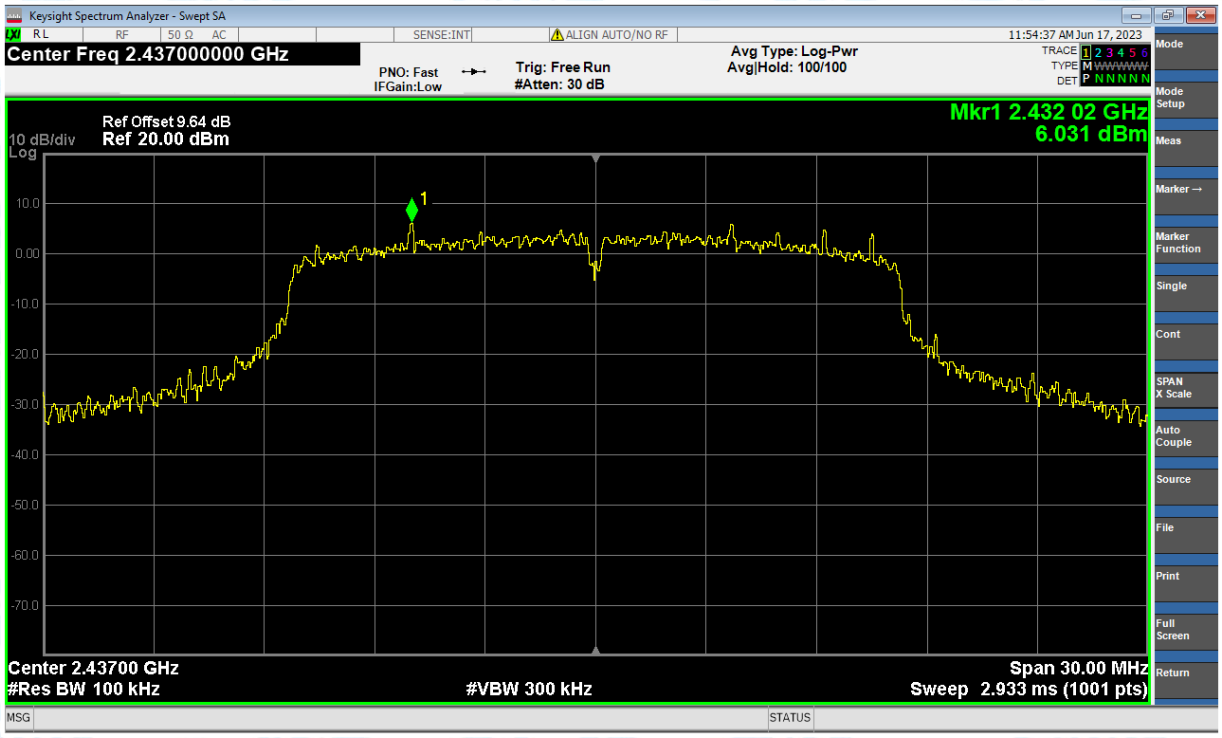

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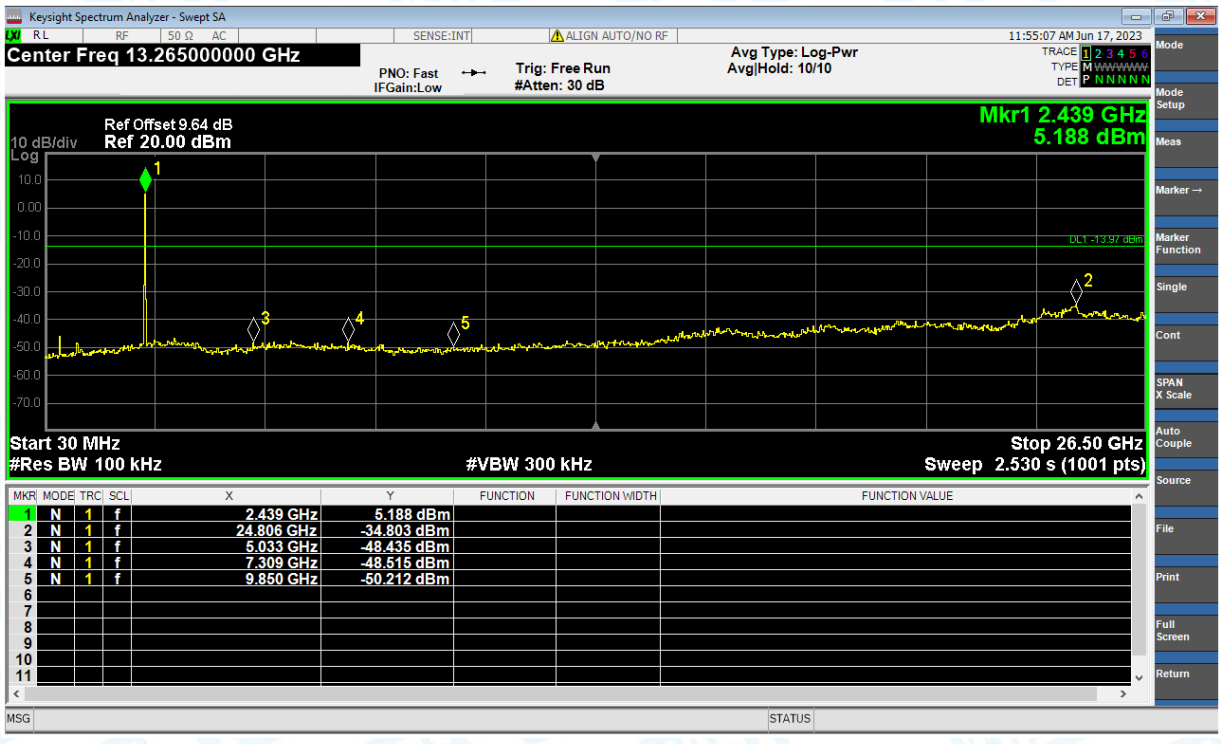
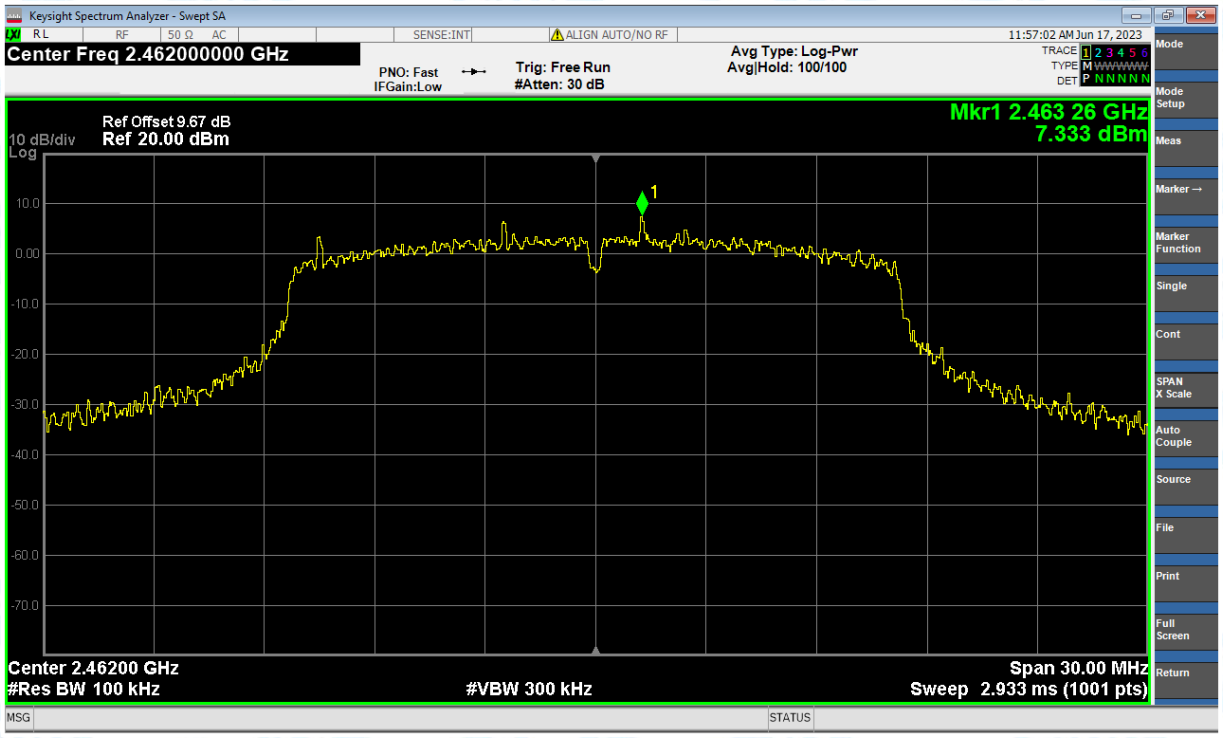
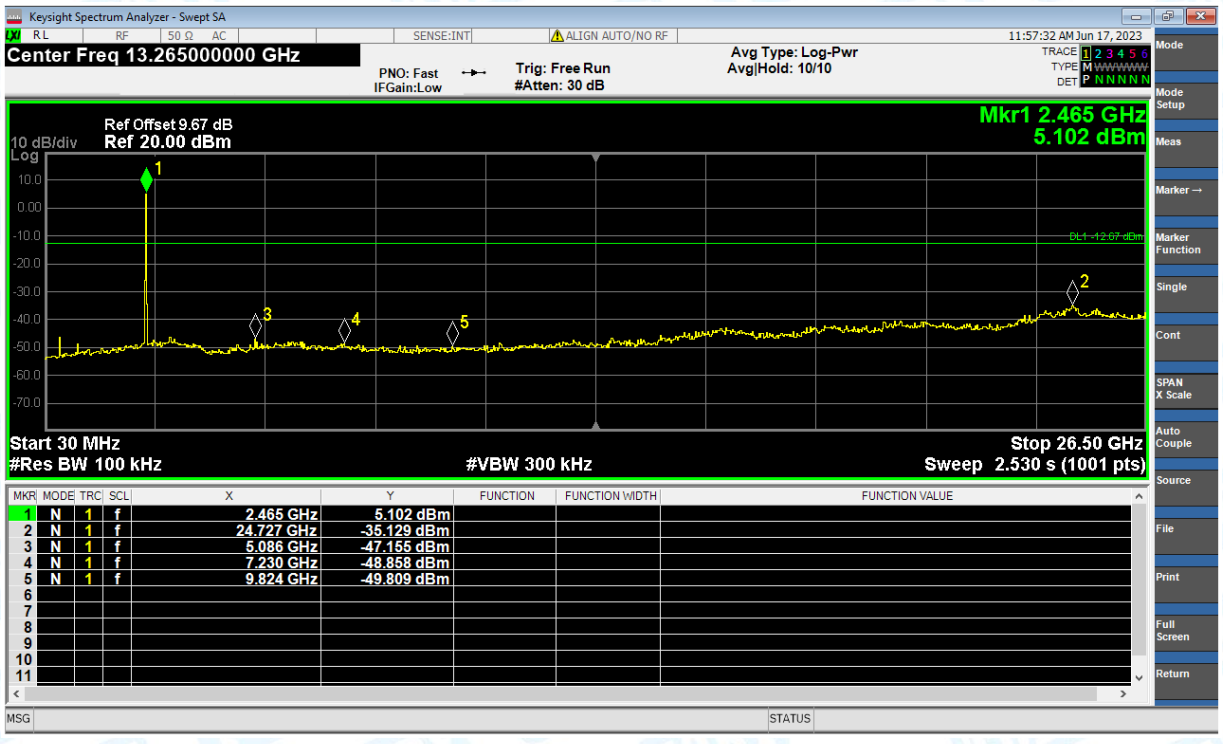


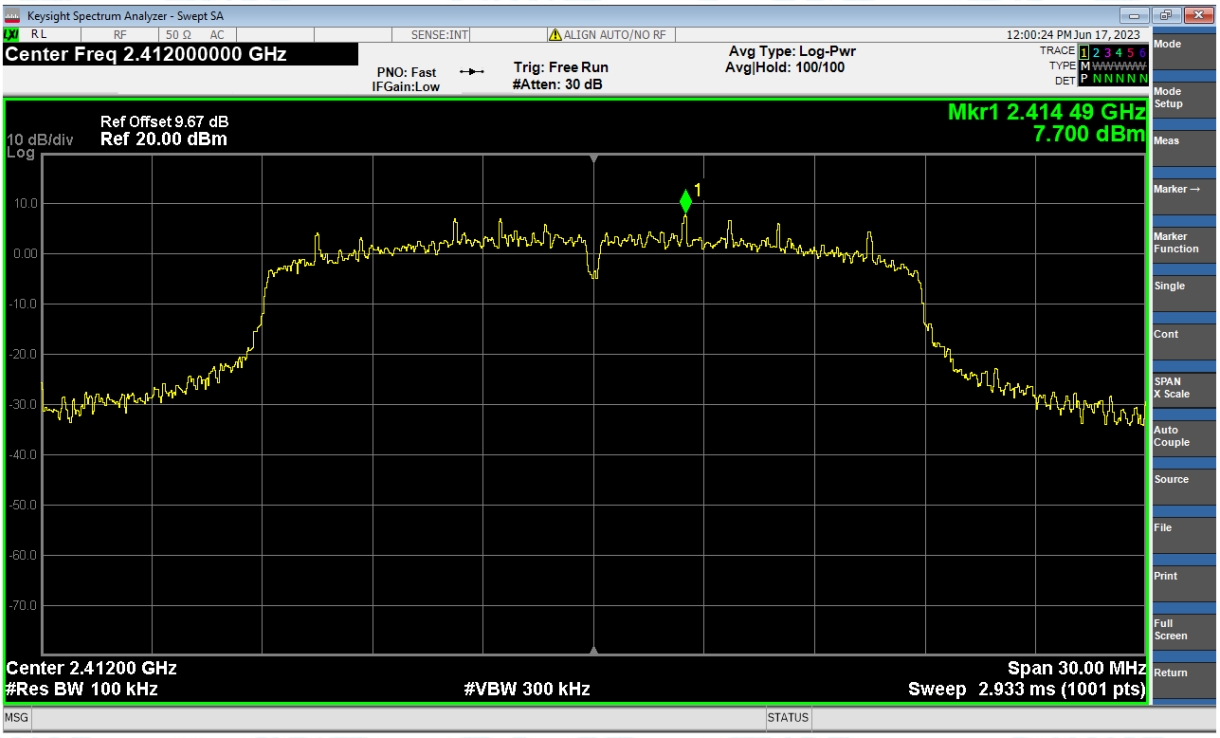
Tx. Spurious NVNT g 2462MHz Ant1 Ref



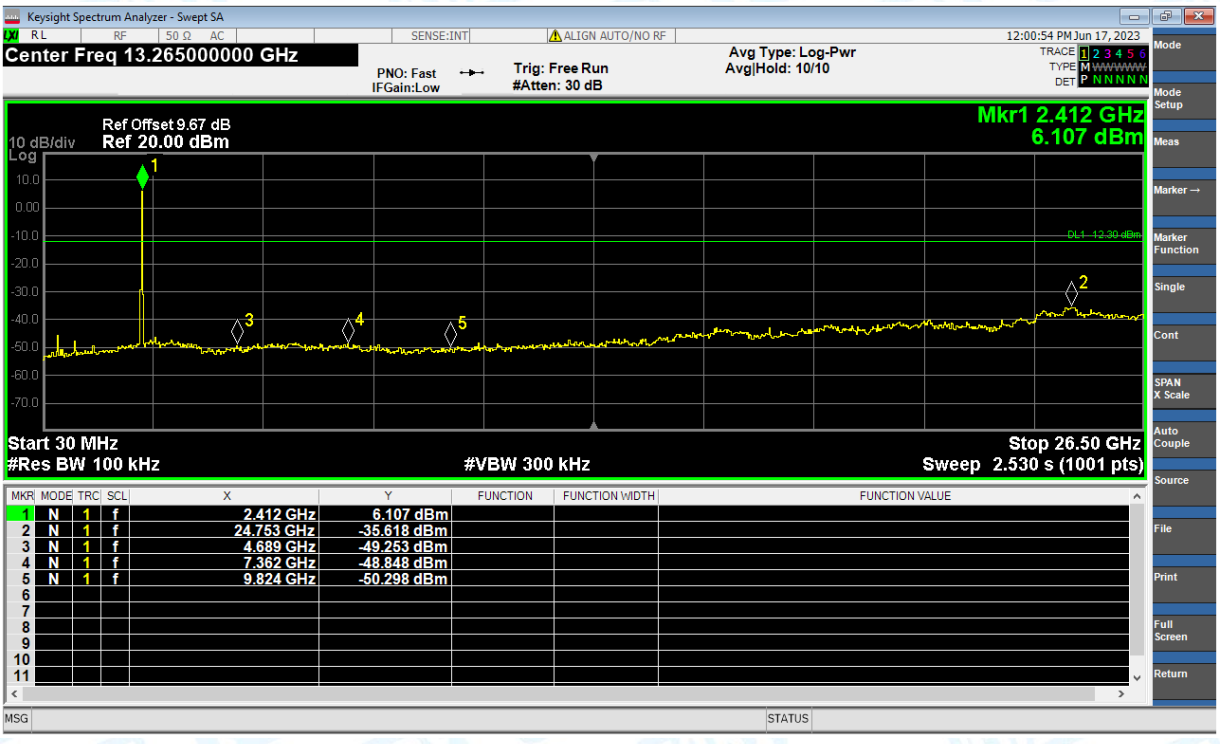
Tx. Spurious NVNT g 2462MHz Ant1 Emission



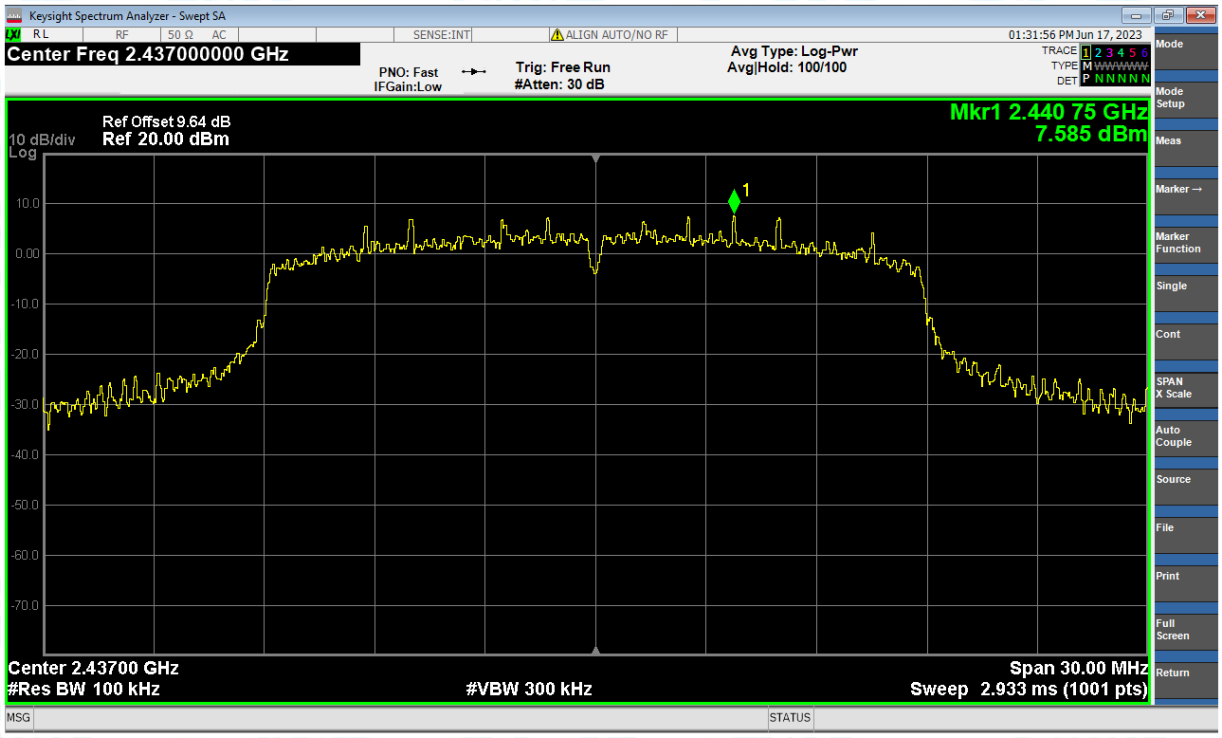
Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Ref



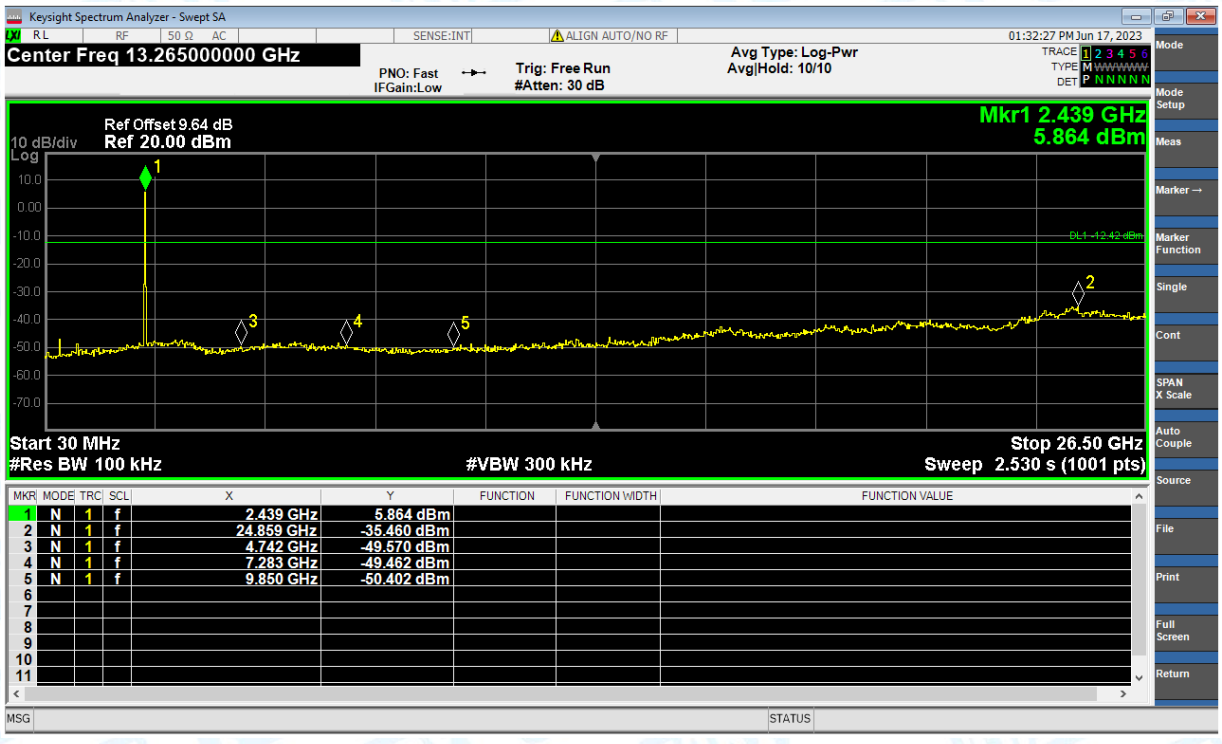
Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Emission



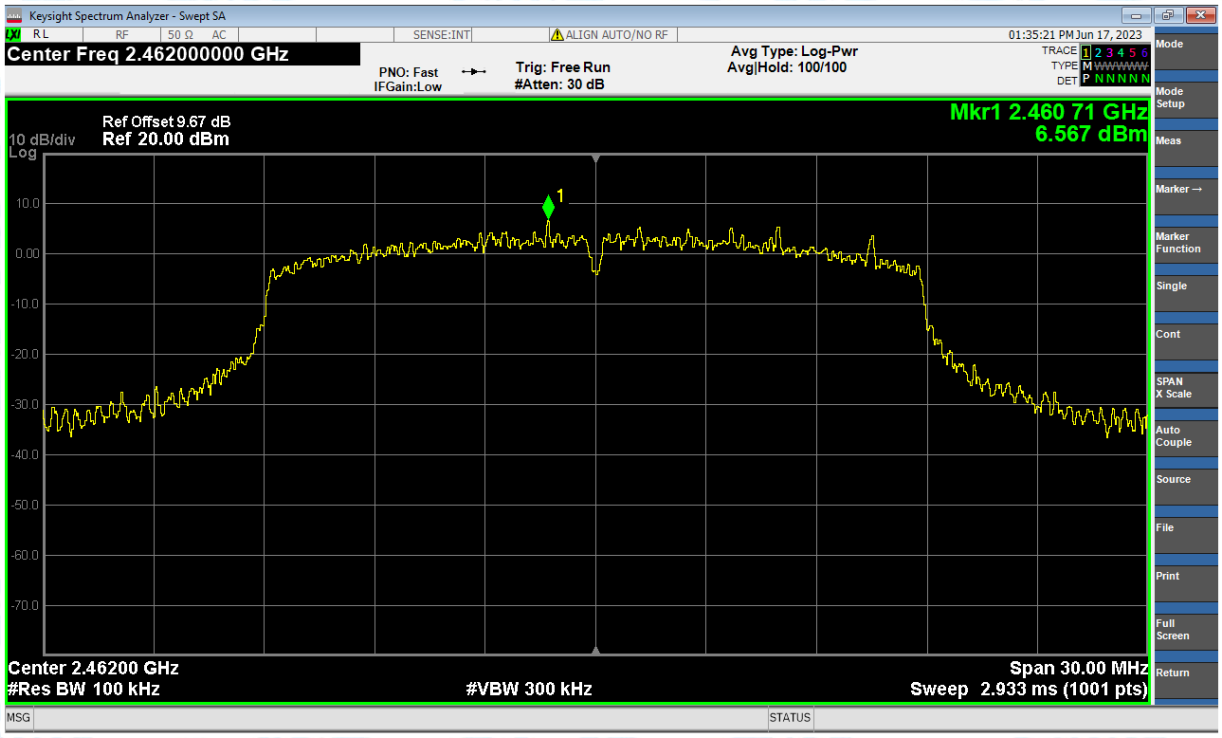
Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Ref



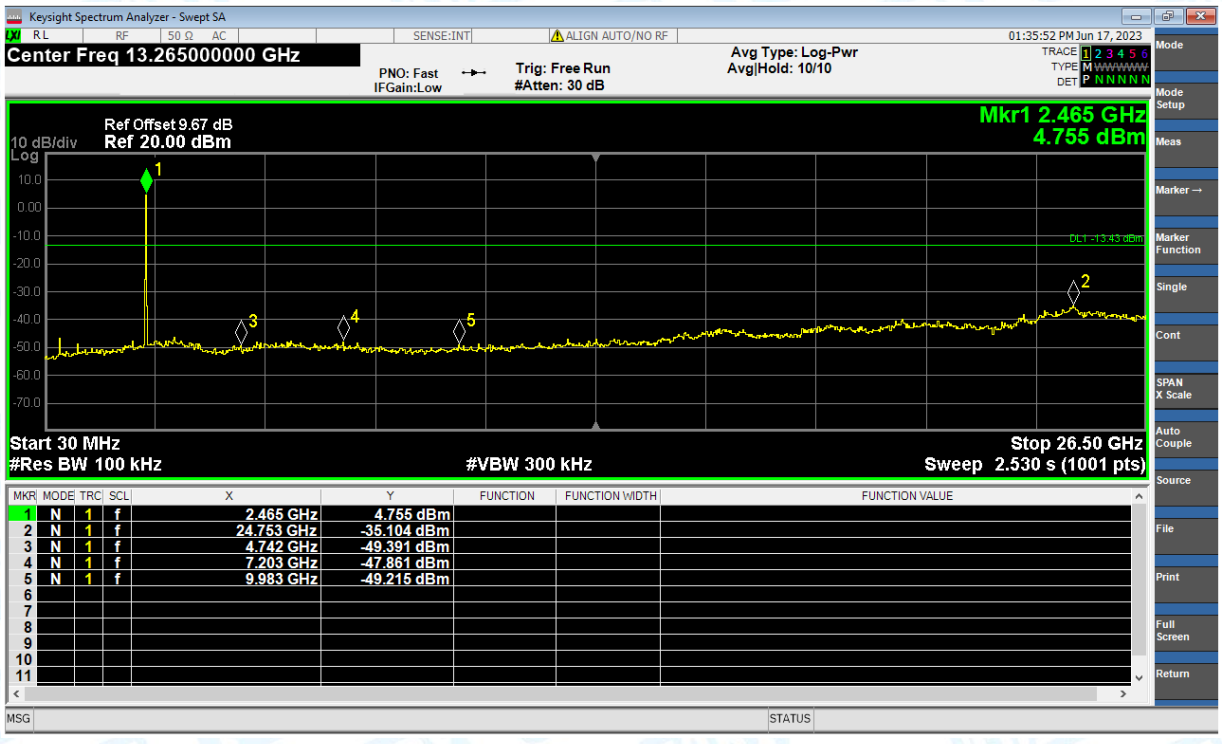
Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Emission



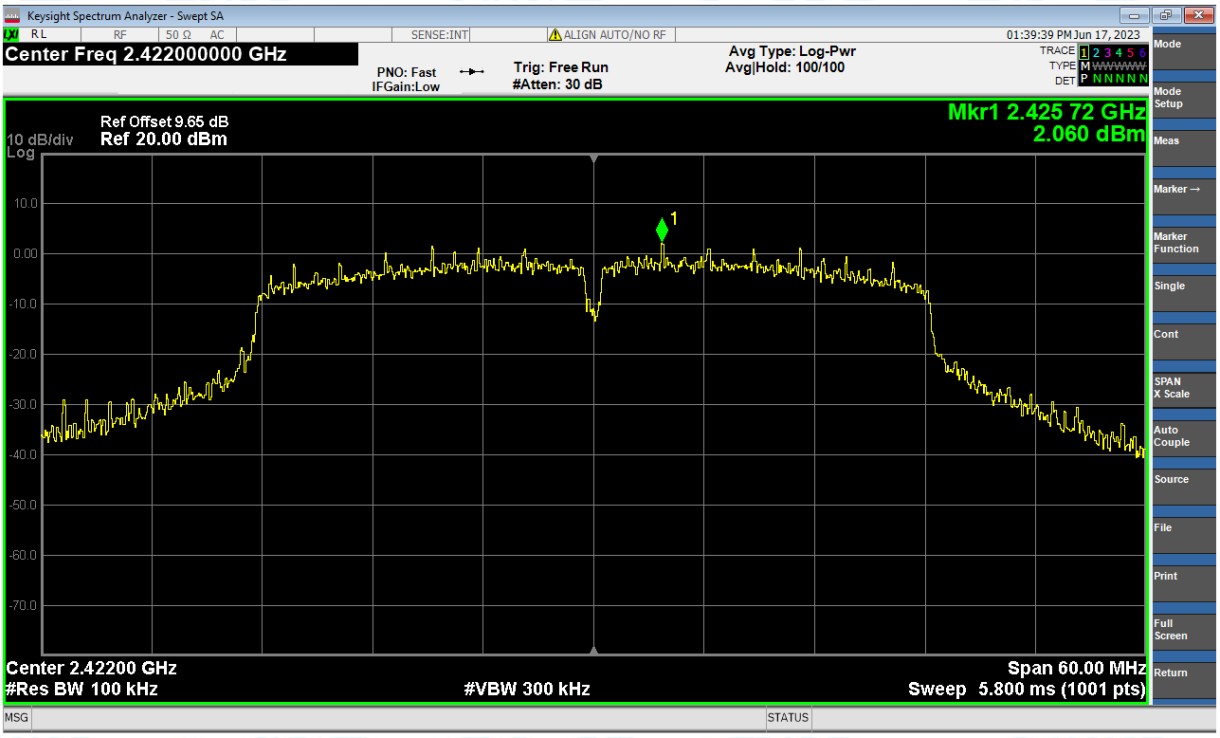
Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Ref



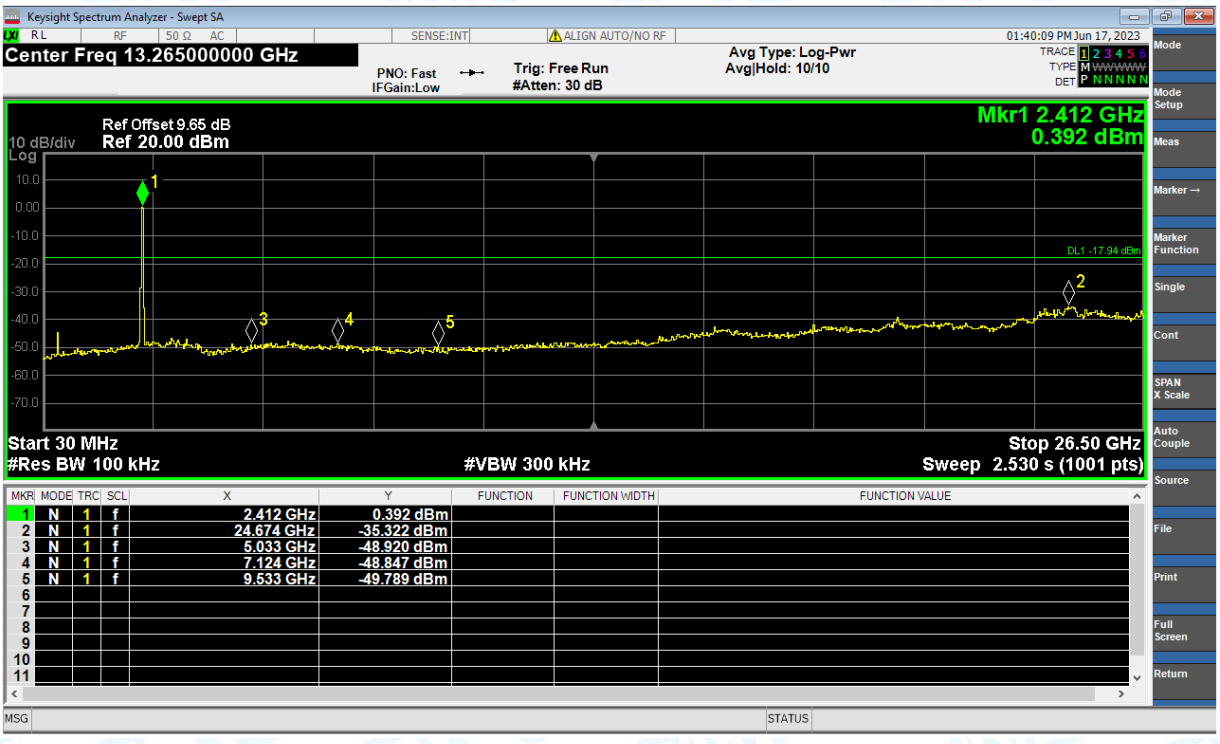
Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Emission



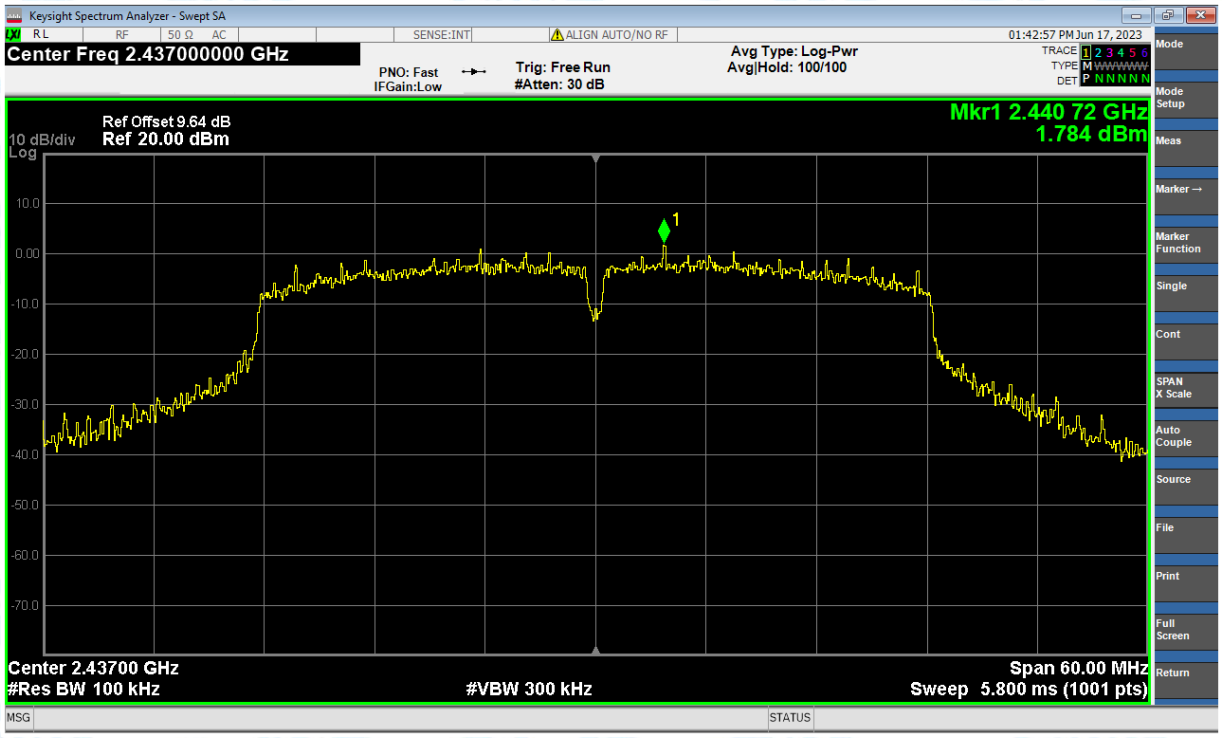
Tx. Spurious NVNT n(HT40) 2422MHz Ant1 Ref



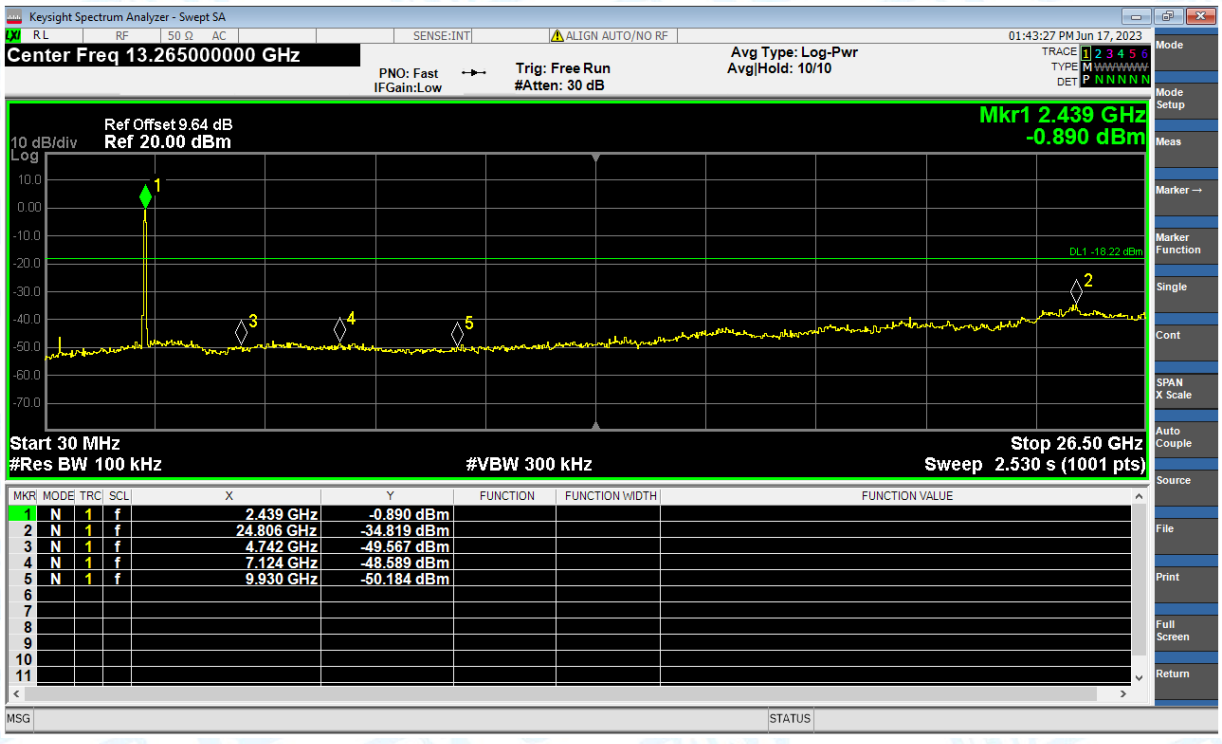
Tx. Spurious NVNT n(HT40) 2422MHz Ant1 Emission



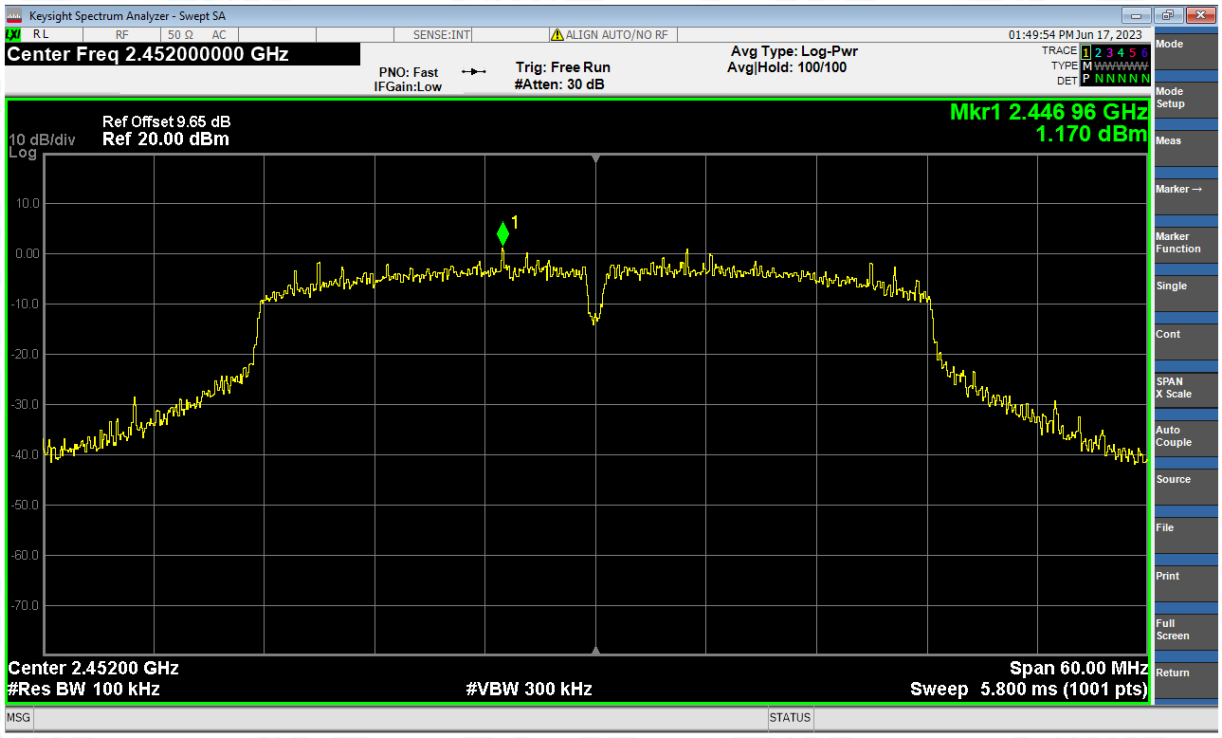
Tx. Spurious NVNT n(HT40) 2437MHz Ant1 Ref



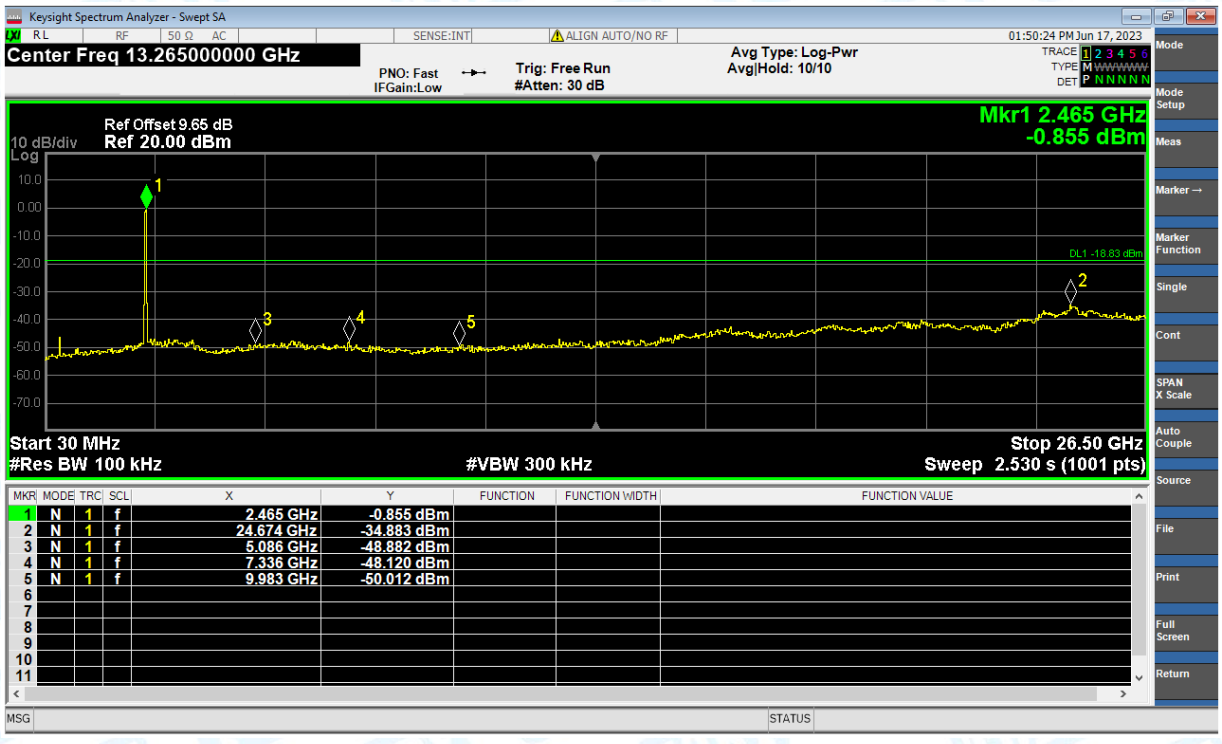
Tx. Spurious NVNT n(HT40) 2437MHz Ant1 Emission



Tx. Spurious NVNT n(HT40) 2452MHz Ant1 Ref



Tx. Spurious NVNT n(HT40) 2452MHz Ant1 Emission



----END OF THE REPORT-----