

# RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
<b>Product Name:</b>	Smart POS Payment Terminal
<b>Test Model:</b>	CM30
<b>Sample ID:</b>	202311-0170-7-2#
Environmental Conditions	
<b>Temperature:</b>	25°C
<b>Relative Humidity:</b>	55%
<b>Test Voltage:</b>	DC 24V
<b>Test Engineer:</b>	Yan zhen ming
Note: For a more detailed features description, please refer to the report TBR-C-202311-0170-82 The report only show the worst case data.	

## Contents

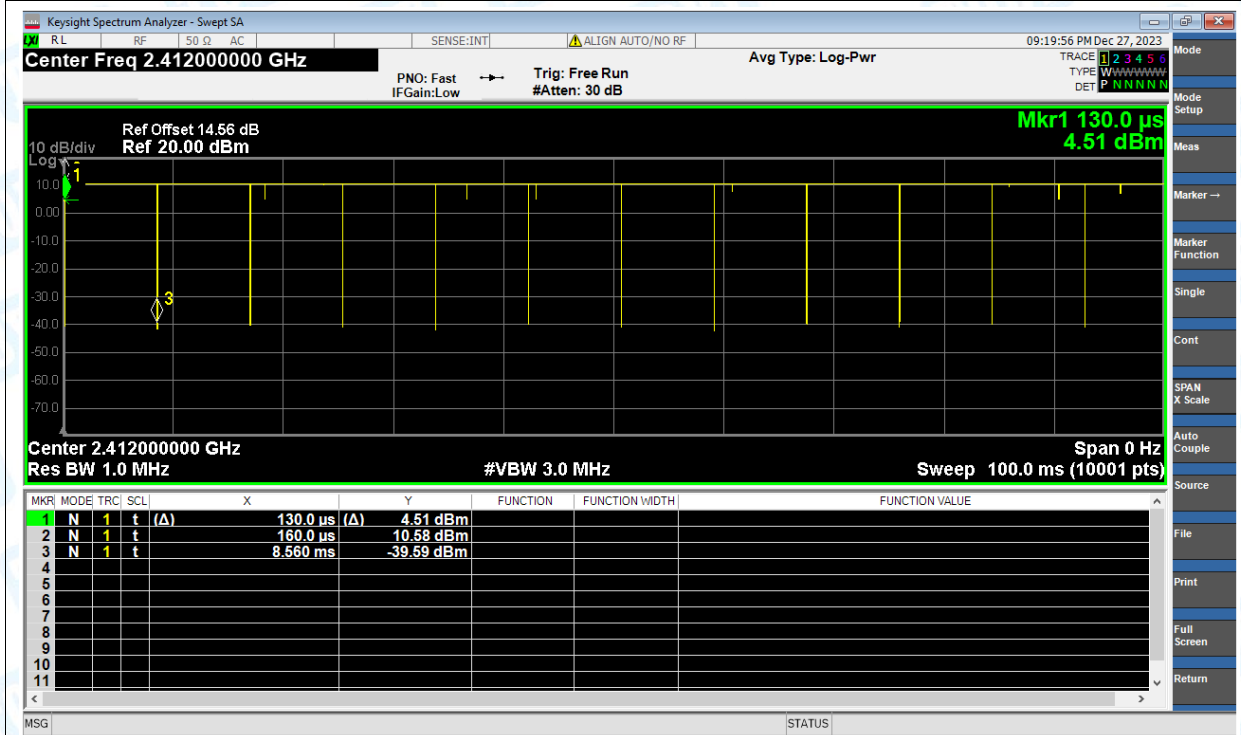
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# 1. Duty Cycle

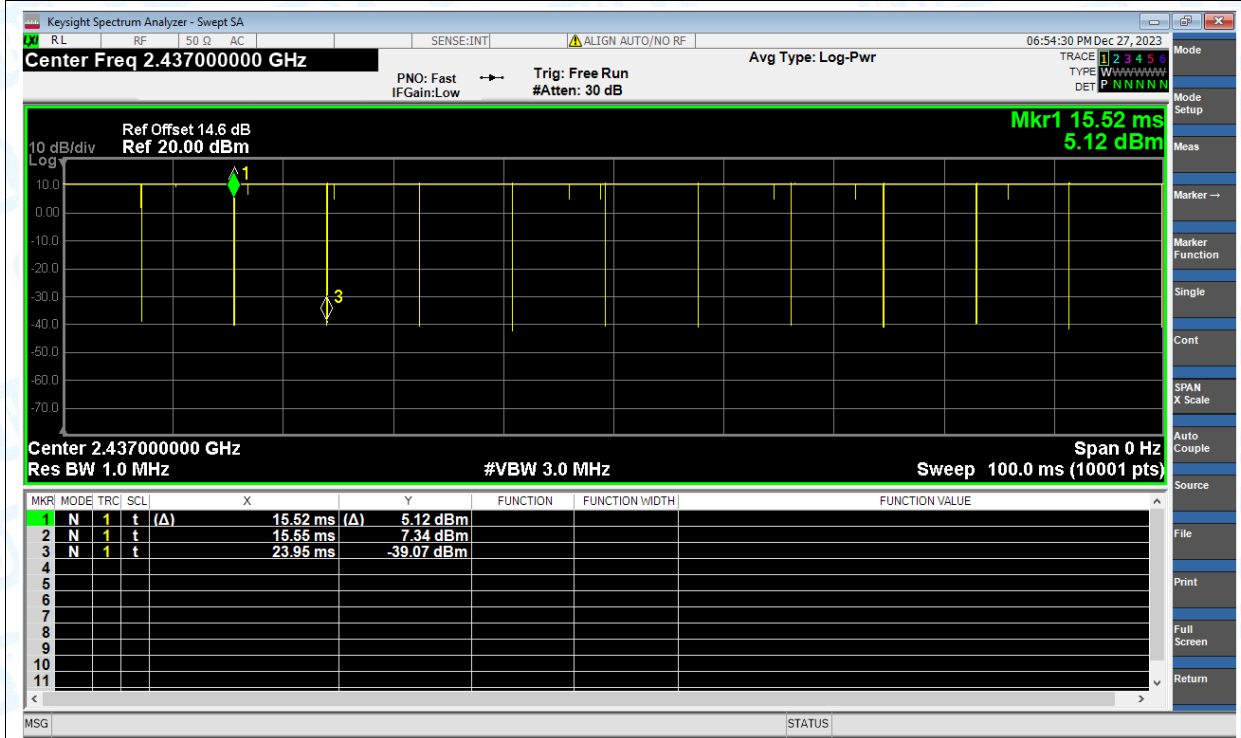
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	99.64	0.02	0.12
NVNT	b	2437	Ant1	99.64	0.02	0.12
NVNT	b	2462	Ant1	99.76	0.01	0.12
NVNT	g	2412	Ant1	96.53	0.15	0.72
NVNT	g	2437	Ant1	98.59	0.06	0.71
NVNT	g	2462	Ant1	97.22	0.12	0.71
NVNT	n(HT20)	2412	Ant1	98.53	0.06	0.75
NVNT	n(HT20)	2437	Ant1	97.01	0.13	0.77
NVNT	n(HT20)	2462	Ant1	98.52	0.06	0.75
NVNT	n(HT40)	2422	Ant1	93.79	0.28	1.54
NVNT	n(HT40)	2437	Ant1	93.93	0.27	1.54
NVNT	n(HT40)	2452	Ant1	93.8	0.28	1.54

Test Graphs

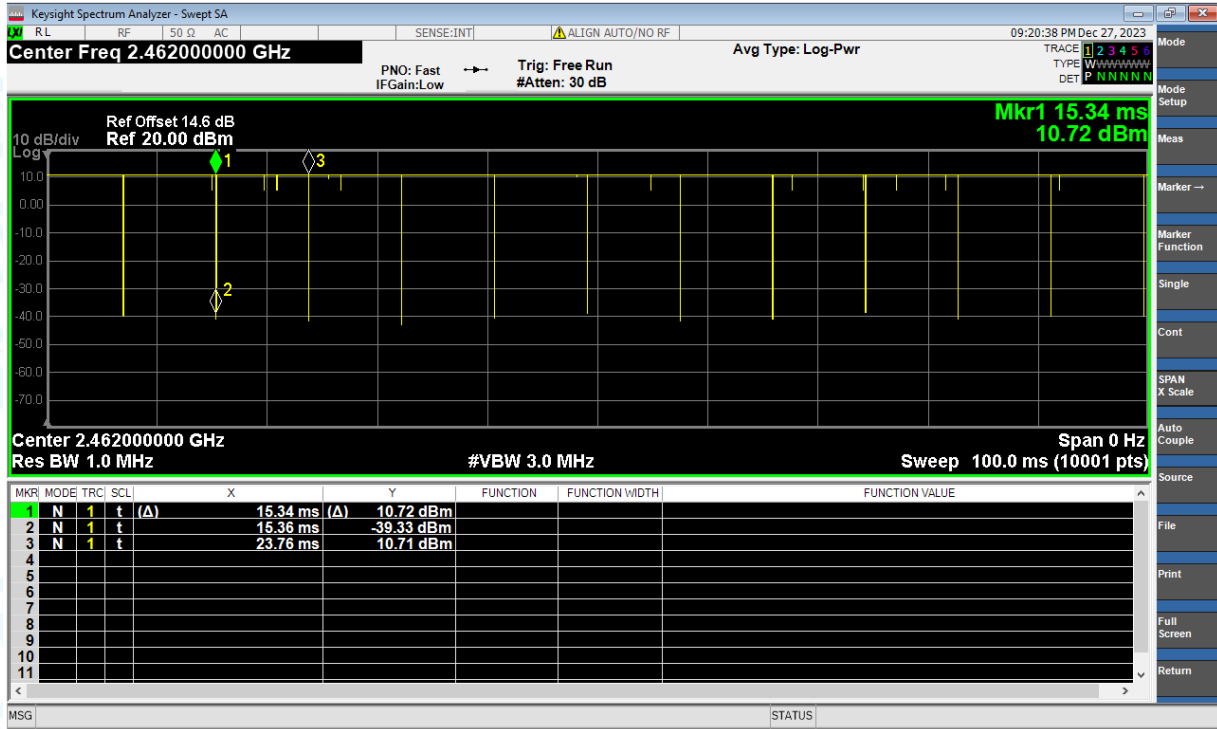
Duty Cycle NVNT b 2412MHz Ant1



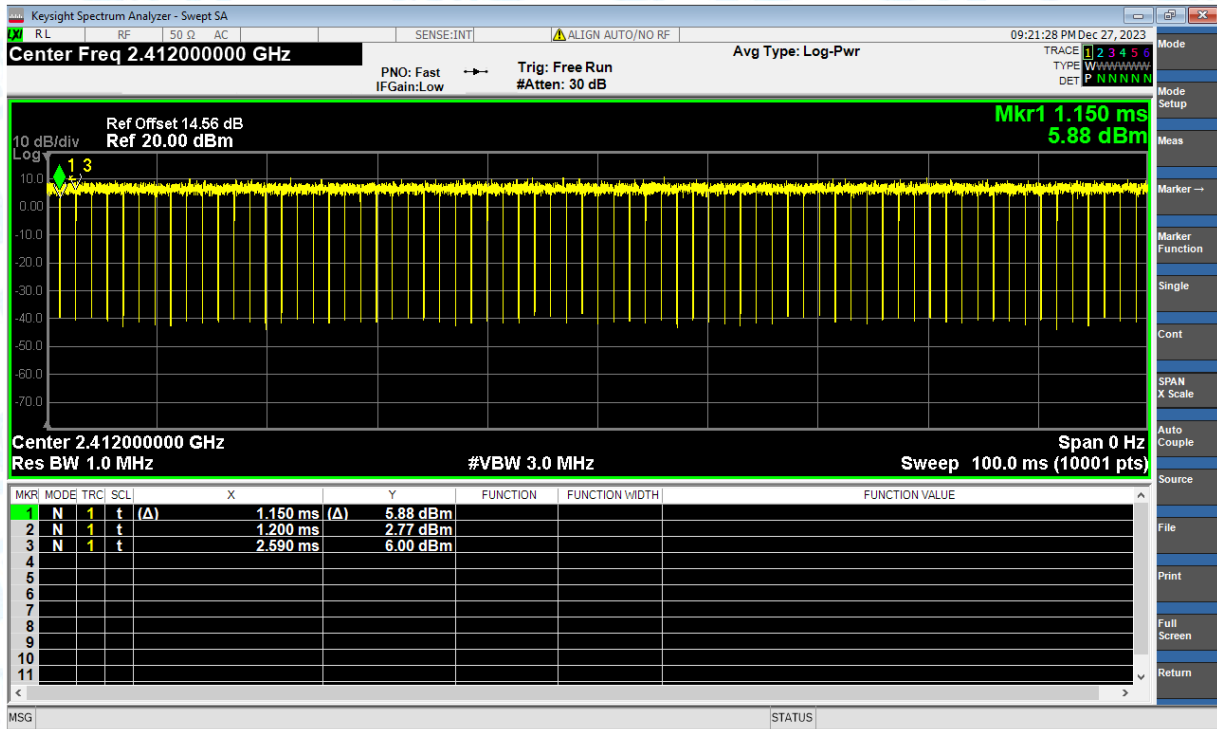
Duty Cycle NVNT b 2437MHz Ant1



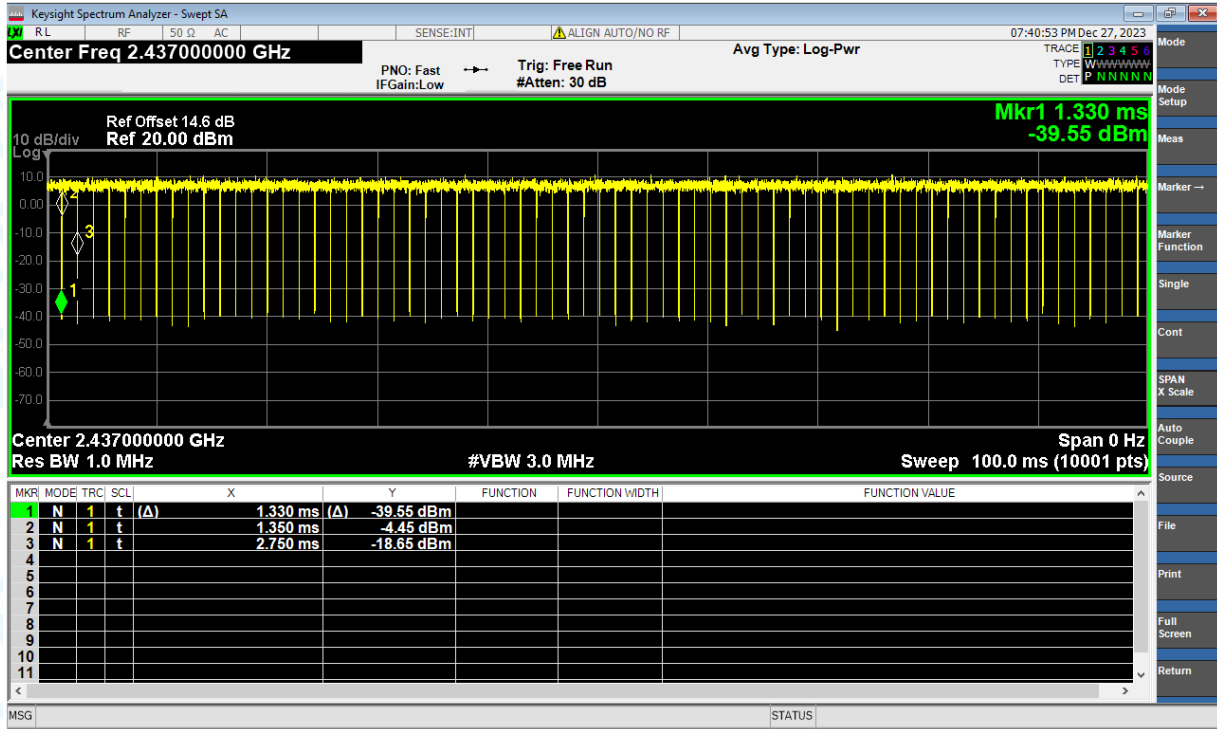
Duty Cycle NVNT b 2462MHz Ant1



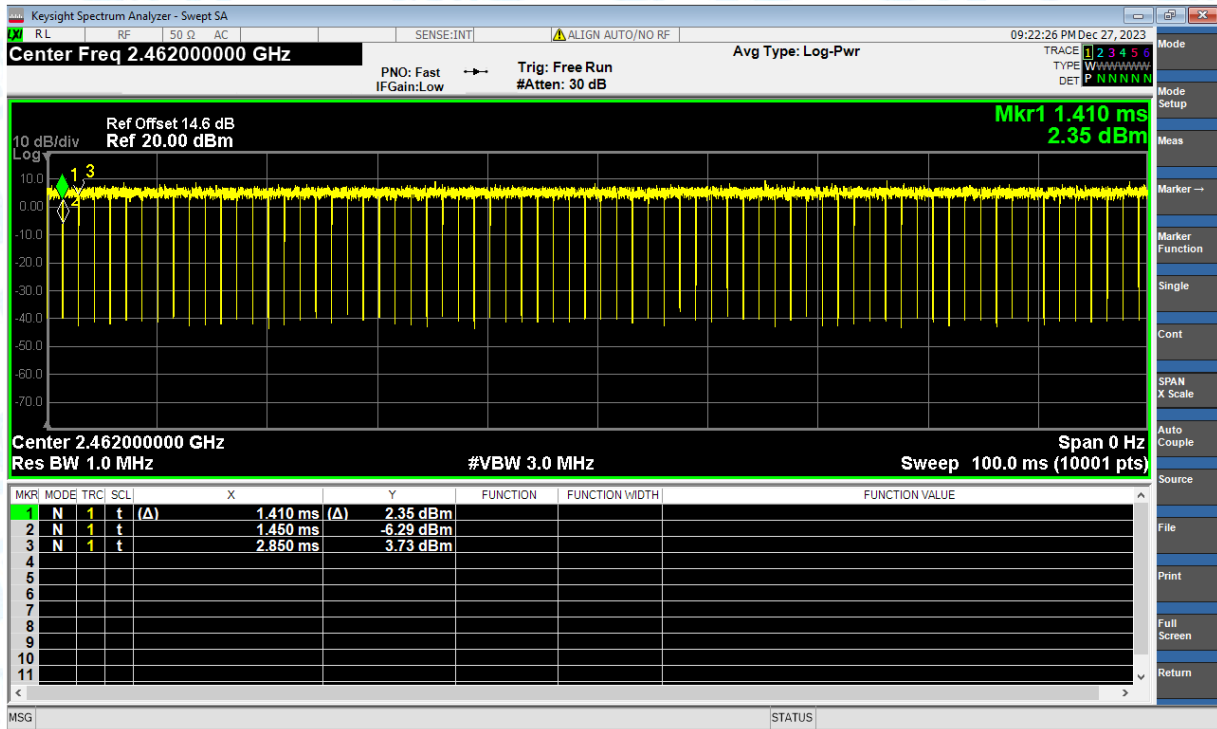
Duty Cycle NVNT g 2412MHz Ant1



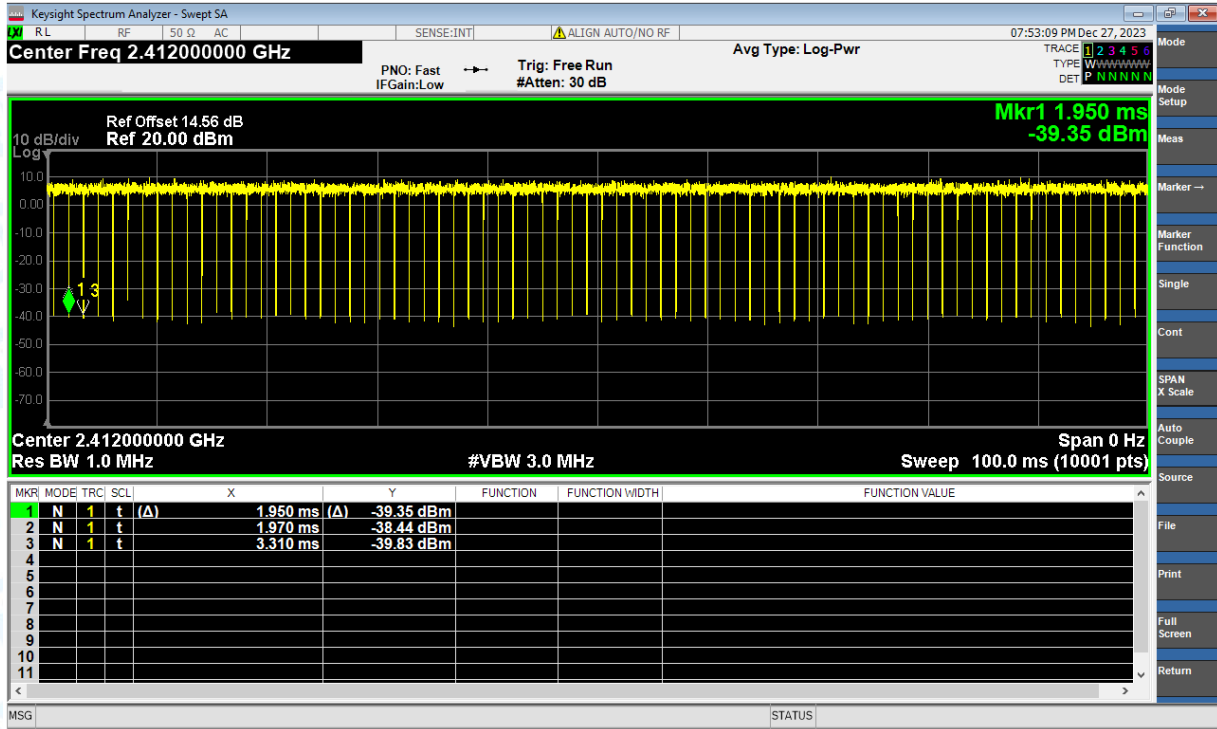
Duty Cycle NVNT g 2437MHz Ant1



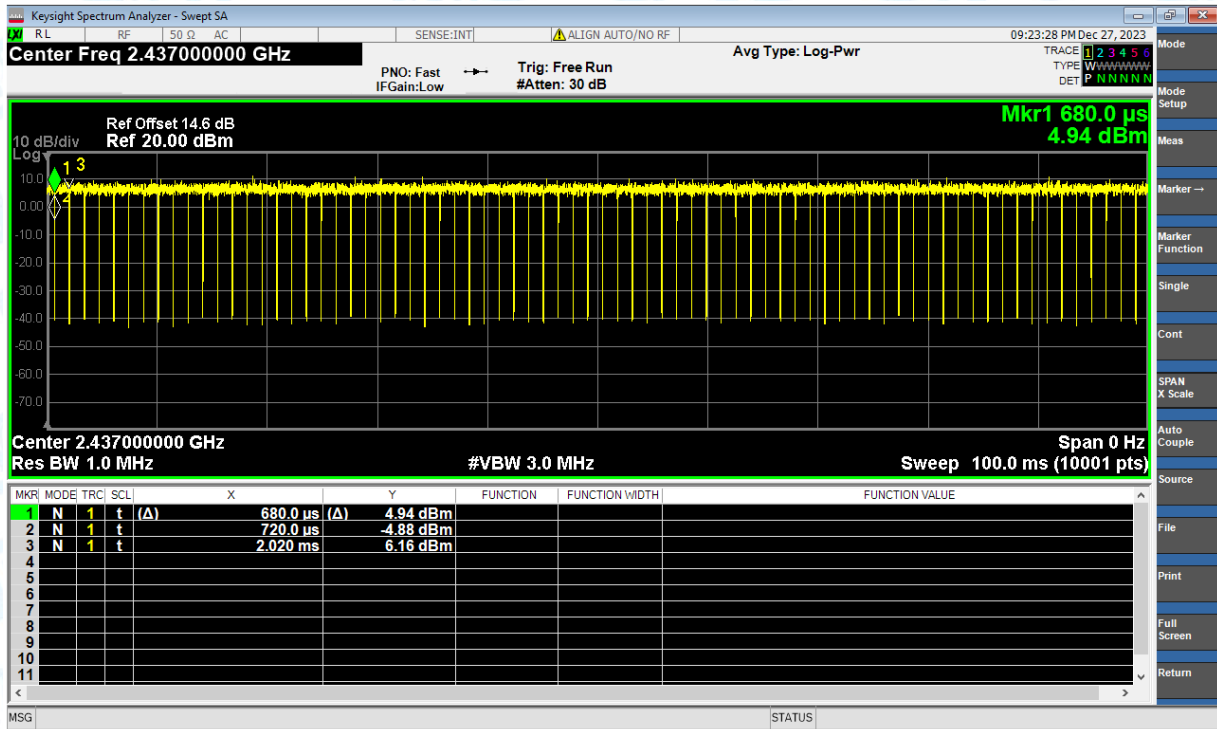
Duty Cycle NVNT g 2462MHz Ant1



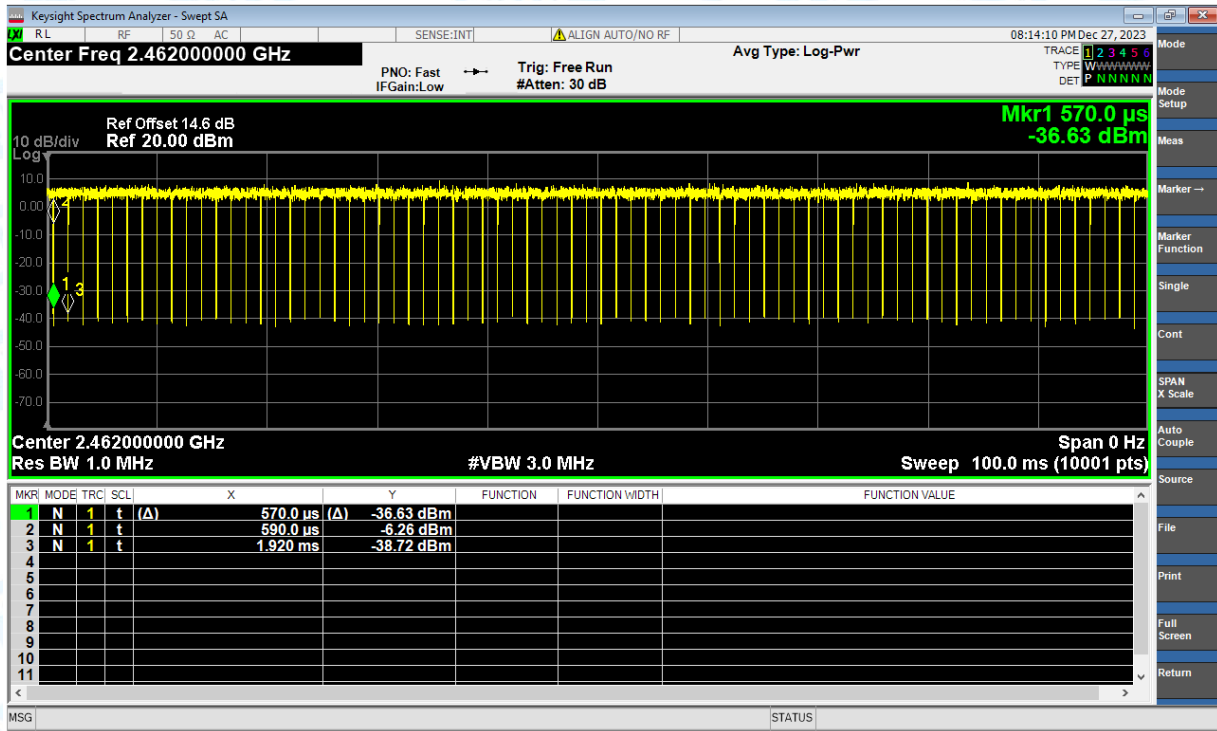
Duty Cycle NVNT n(HT20) 2412MHz Ant1



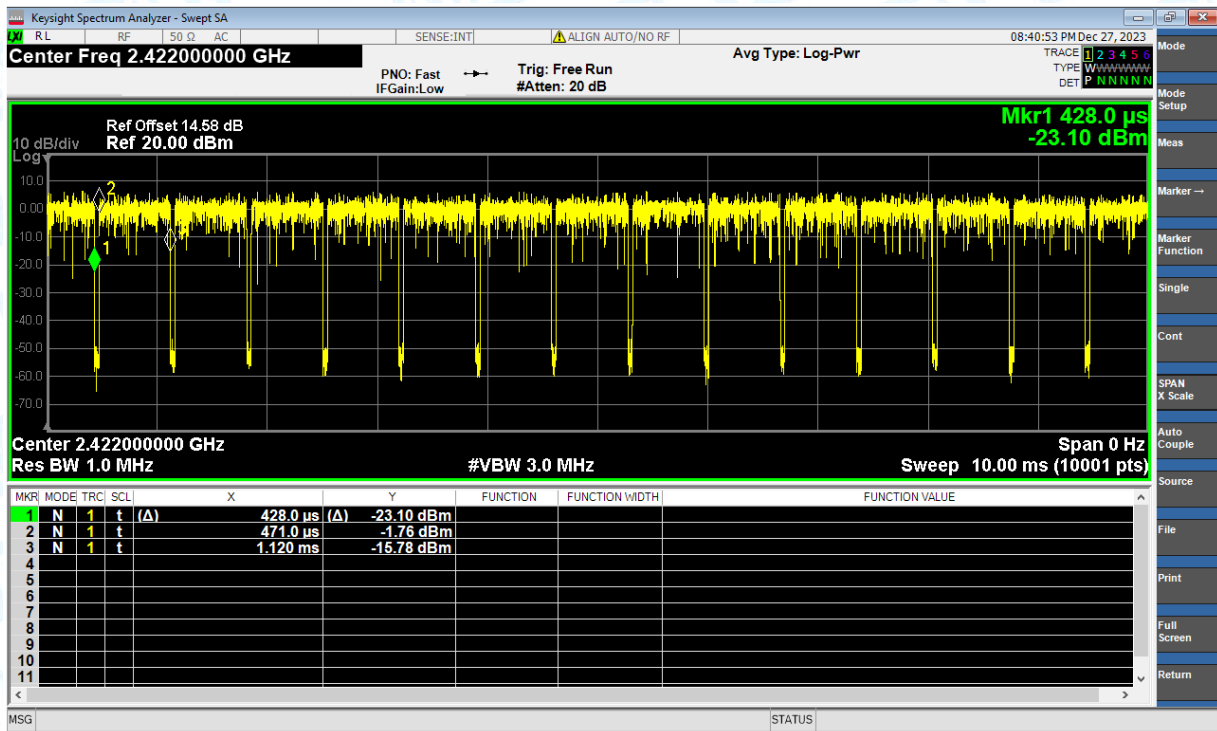
Duty Cycle NVNT n(HT20) 2437MHz Ant1



Duty Cycle NVNT n(HT20) 2462MHz Ant1

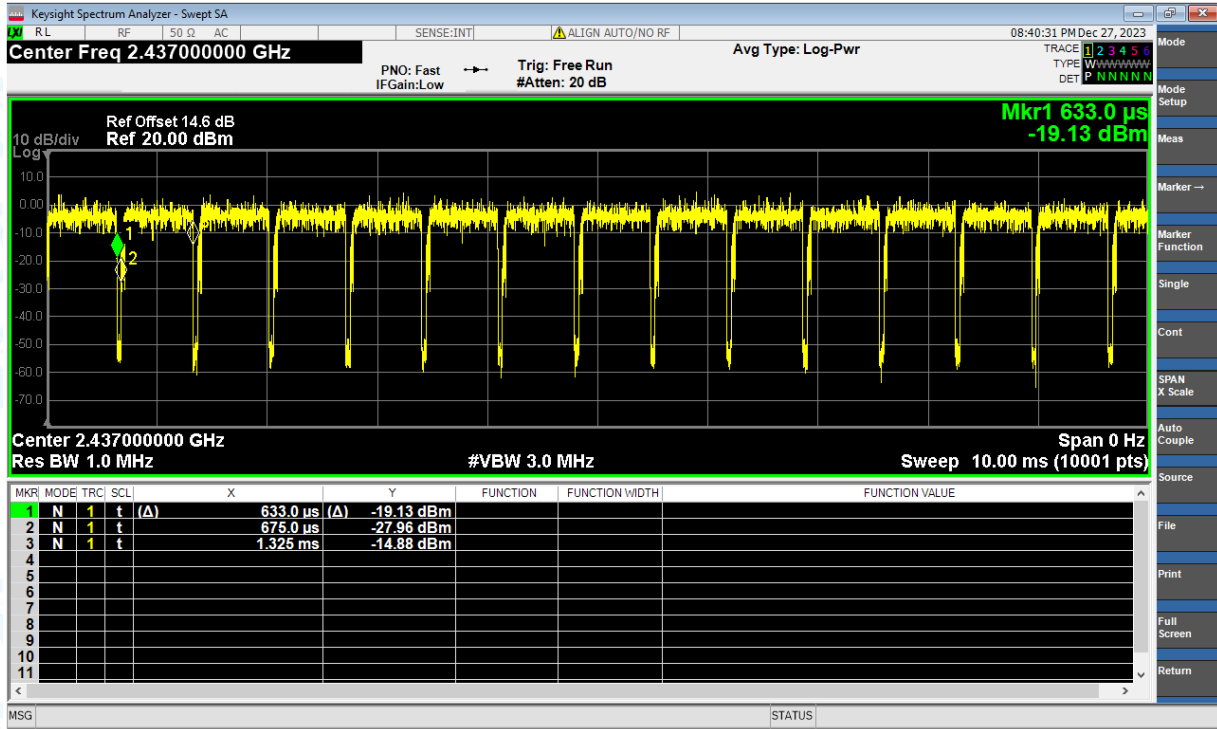


Duty Cycle NVNT n(HT40) 2422MHz Ant1

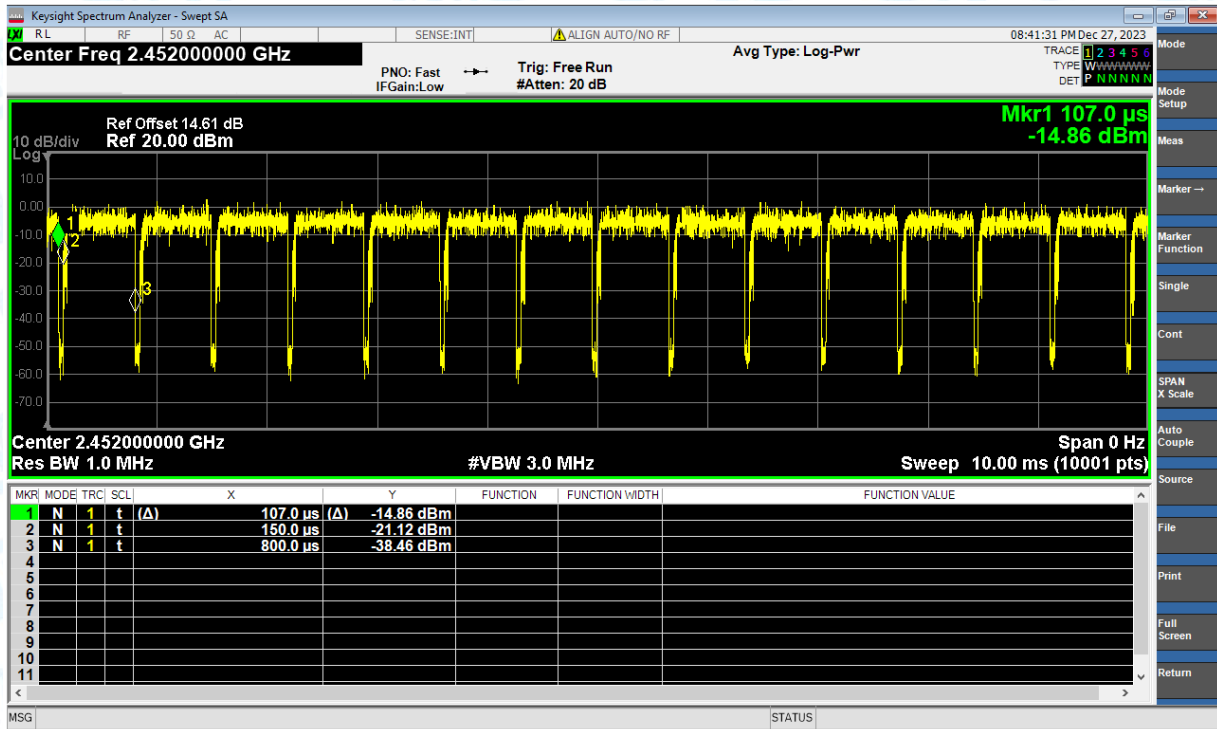




Duty Cycle NVNT n(HT40) 2437MHz Ant1



Duty Cycle NVNT n(HT40) 2452MHz Ant1



## 2. Maximum Conducted Output Power

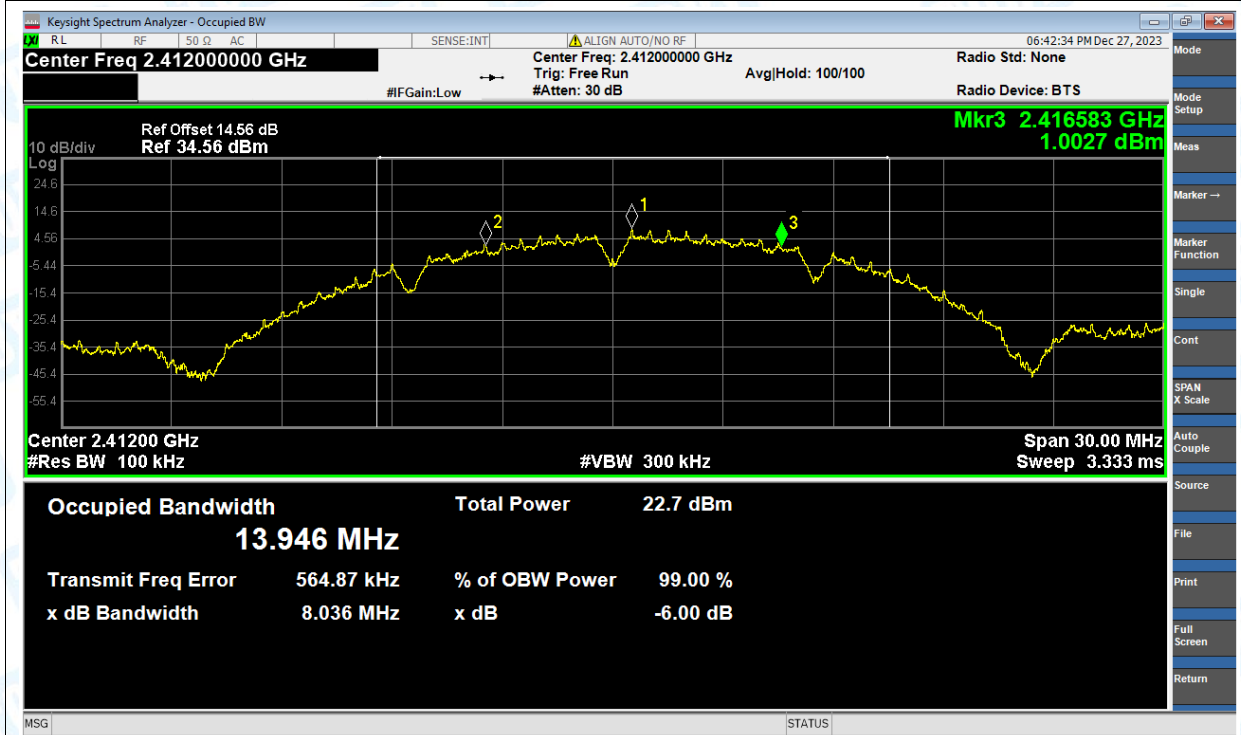
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	15.48	0	15.48	30	Pass
NVNT	b	2437	Ant1	15.48	0.02	15.5	30	Pass
NVNT	b	2462	Ant1	13.16	0.02	13.18	30	Pass
NVNT	g	2412	Ant1	12.09	0.03	12.12	30	Pass
NVNT	g	2437	Ant1	13.54	0.06	13.6	30	Pass
NVNT	g	2462	Ant1	12.01	0.12	12.13	30	Pass
NVNT	n(HT20)	2412	Ant1	12.5	0.06	12.56	30	Pass
NVNT	n(HT20)	2437	Ant1	13.55	0.03	13.58	30	Pass
NVNT	n(HT20)	2462	Ant1	12.06	0.06	12.12	30	Pass
NVNT	n(HT40)	2422	Ant1	12.05	0.13	12.18	30	Pass
NVNT	n(HT40)	2437	Ant1	12.7	0.12	12.82	30	Pass
NVNT	n(HT40)	2452	Ant1	10.24	0.28	10.52	30	Pass

### 3. -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	8.04	0.5	Pass
NVNT	b	2437	Ant1	8.05	0.5	Pass
NVNT	b	2462	Ant1	8.59	0.5	Pass
NVNT	g	2412	Ant1	14.45	0.5	Pass
NVNT	g	2437	Ant1	10.7	0.5	Pass
NVNT	g	2462	Ant1	14.61	0.5	Pass
NVNT	n(HT20)	2412	Ant1	13.86	0.5	Pass
NVNT	n(HT20)	2437	Ant1	13.83	0.5	Pass
NVNT	n(HT20)	2462	Ant1	12.58	0.5	Pass
NVNT	n(HT40)	2422	Ant1	17.55	0.5	Pass
NVNT	n(HT40)	2437	Ant1	18.72	0.5	Pass
NVNT	n(HT40)	2452	Ant1	36.42	0.5	Pass

Test Graphs

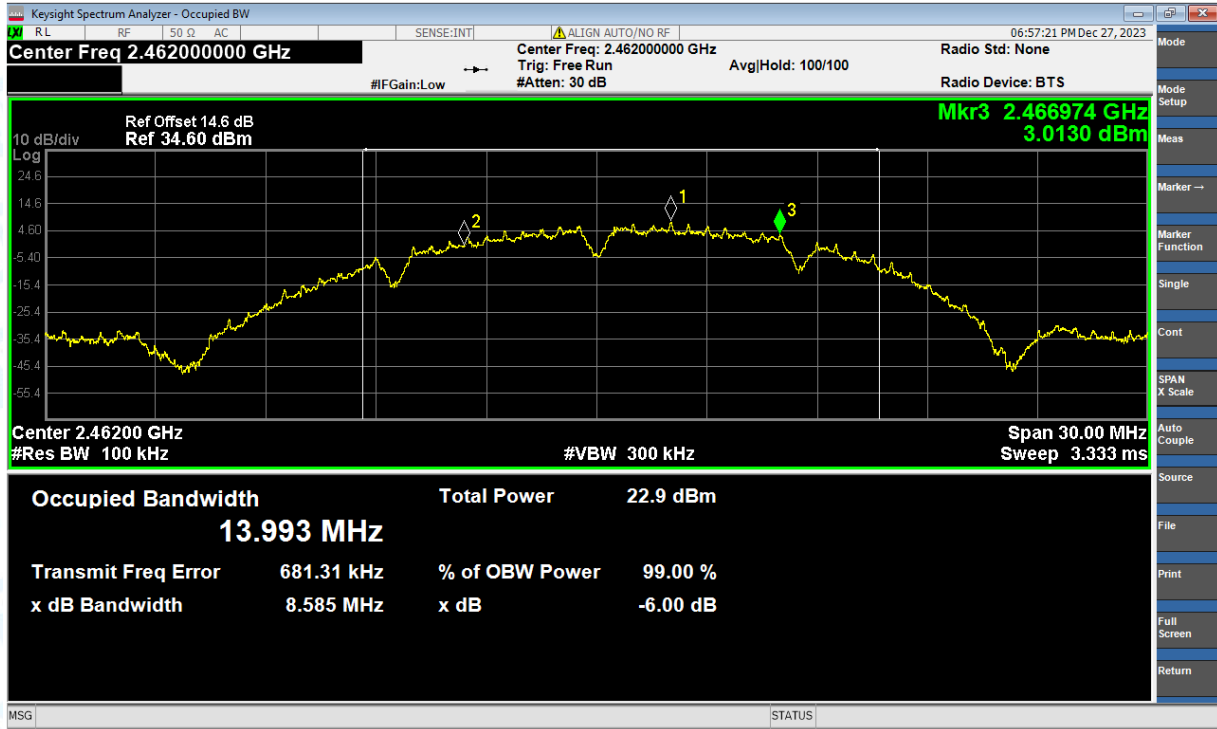
-6dB Bandwidth NVNT b 2412MHz Ant1



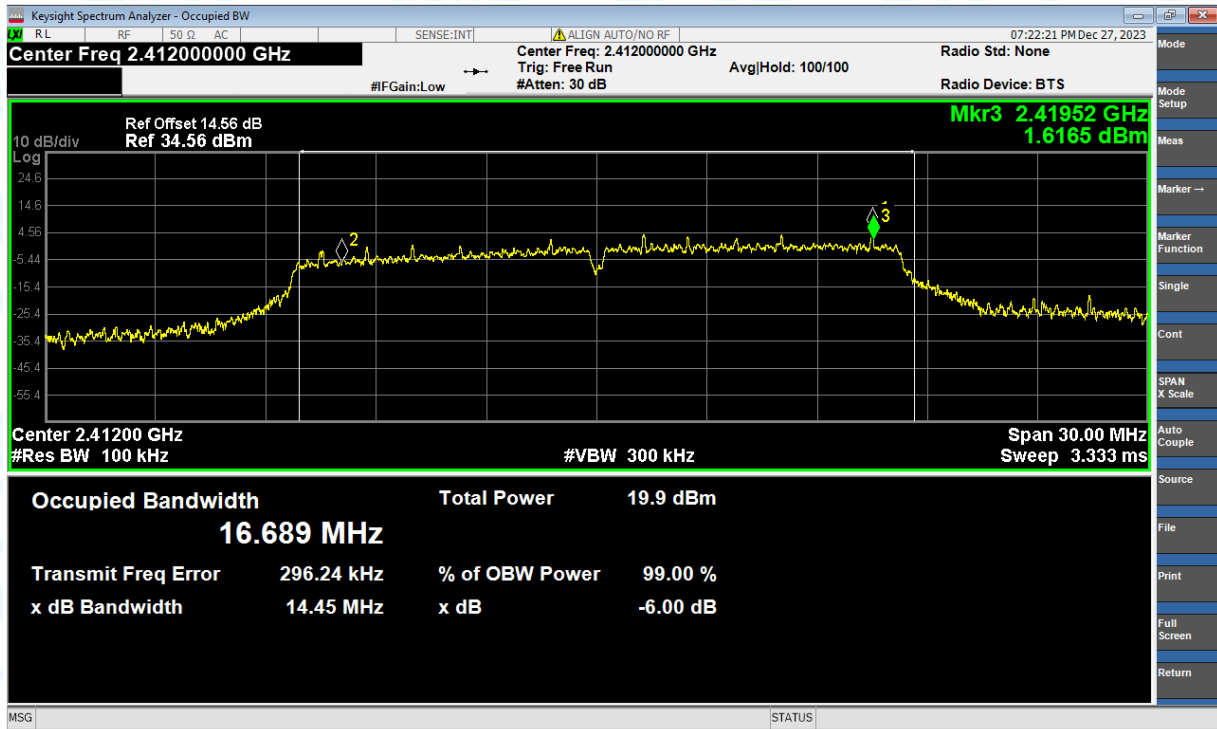
-6dB Bandwidth NVNT b 2437MHz Ant1



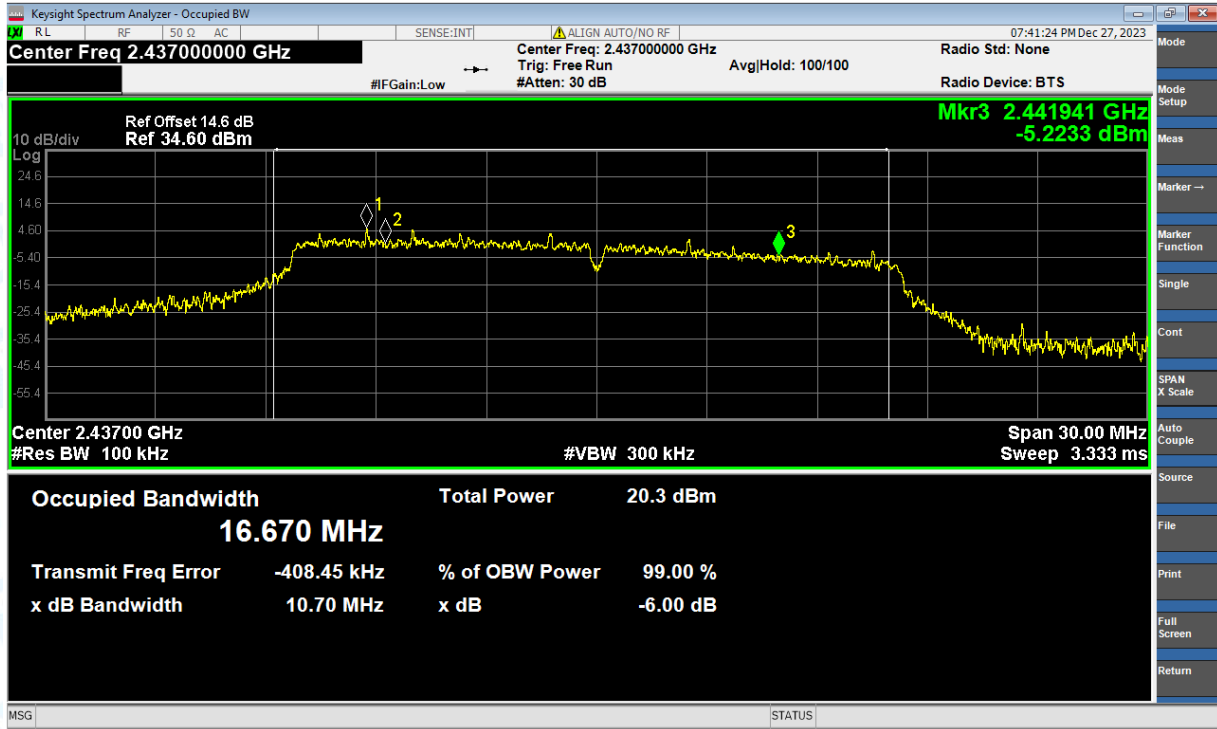
-6dB Bandwidth NVNT b 2462MHz Ant1



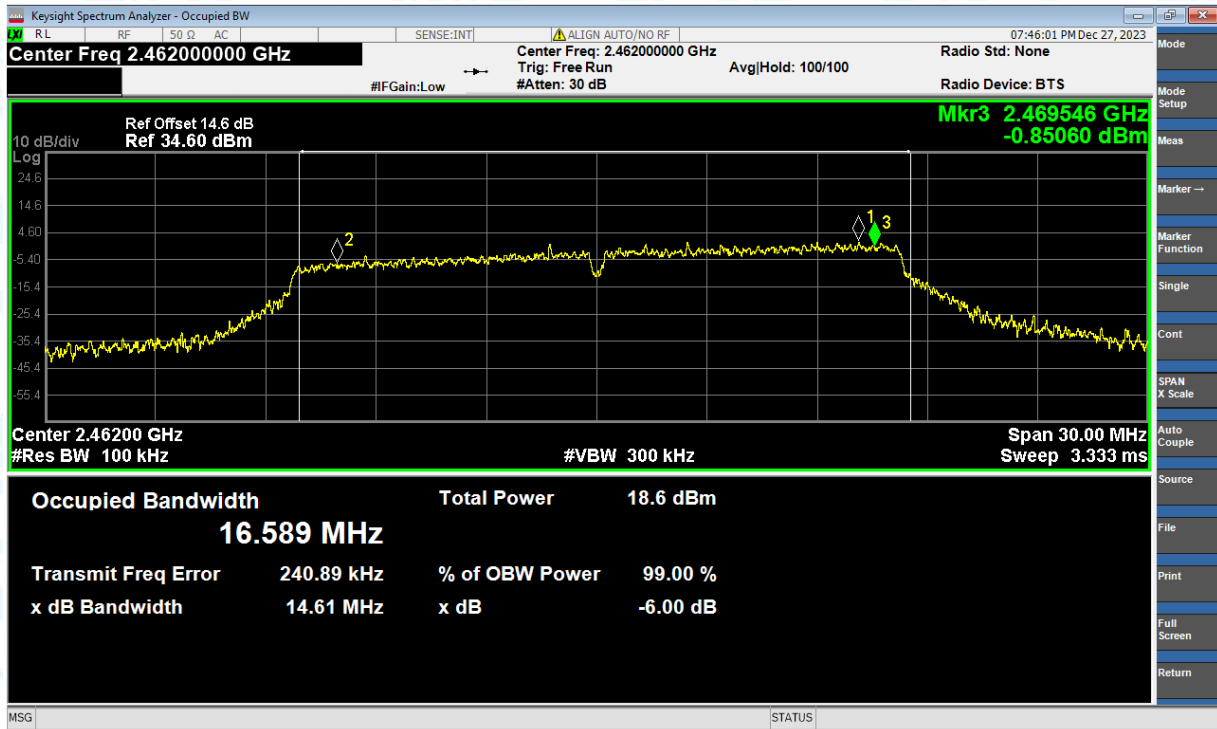
-6dB Bandwidth NVNT g 2412MHz Ant1



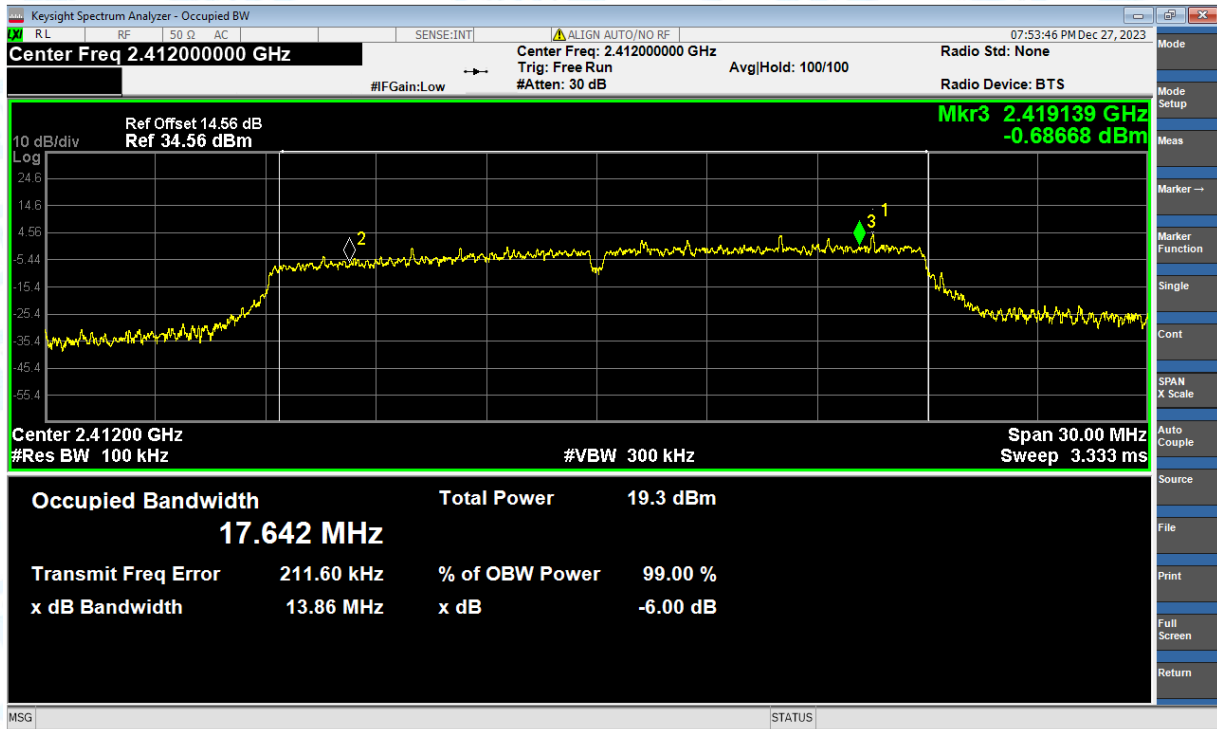
-6dB Bandwidth NVNT g 2437MHz Ant1



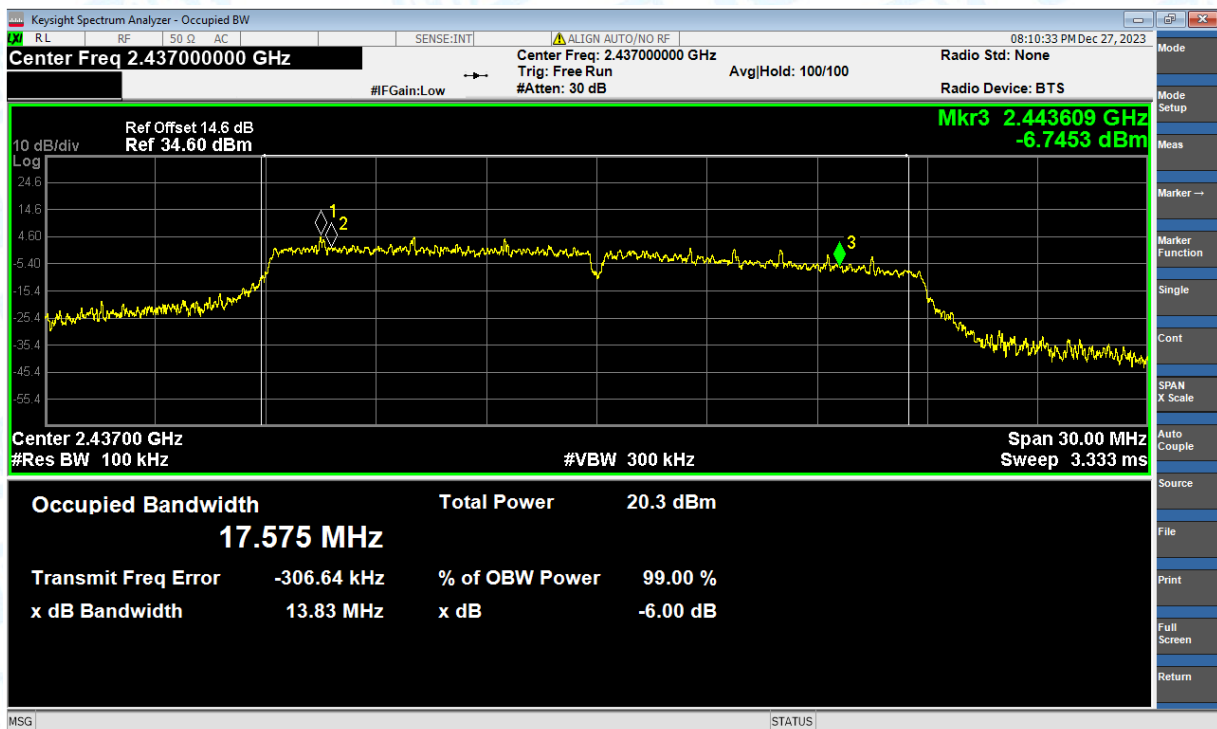
-6dB Bandwidth NVNT g 2462MHz Ant1



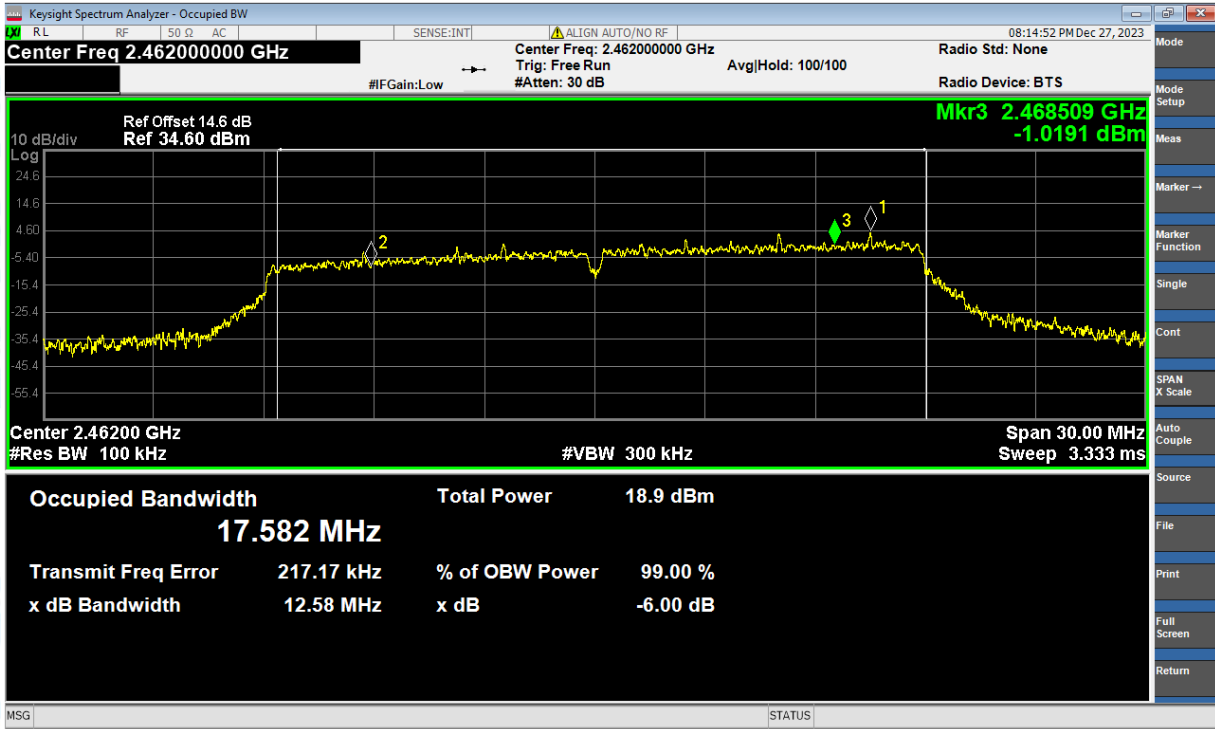
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



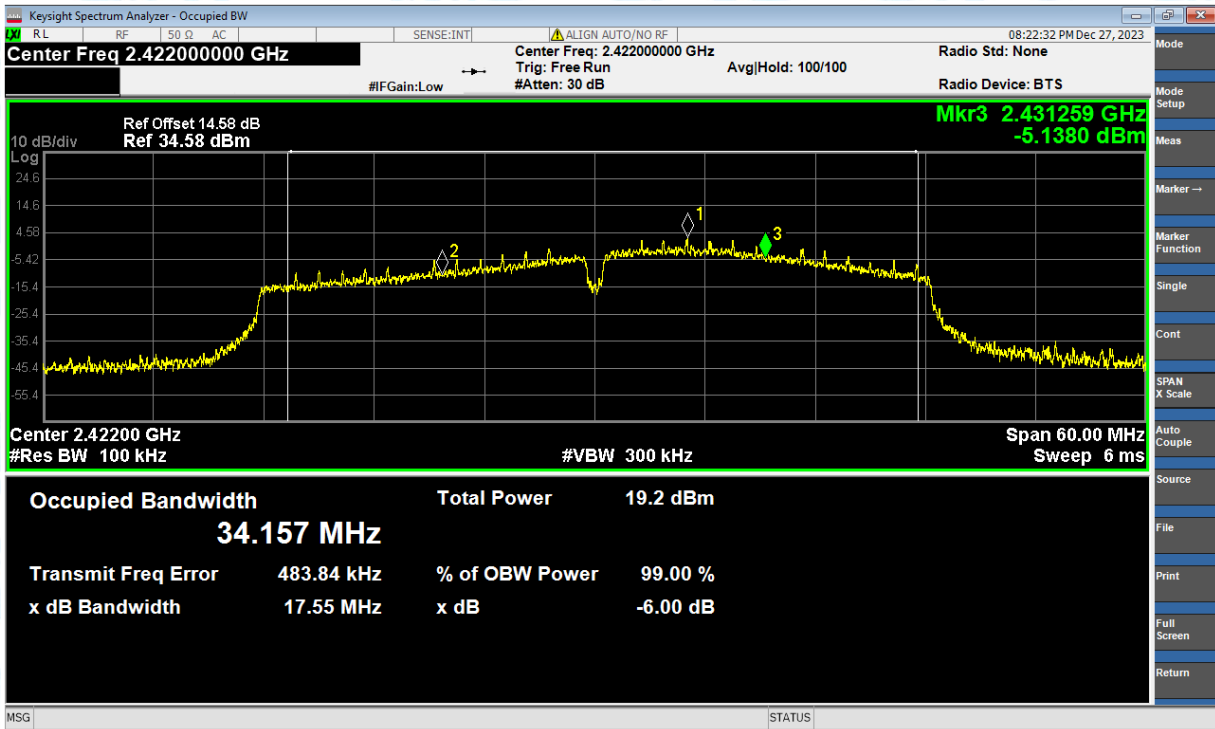
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



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

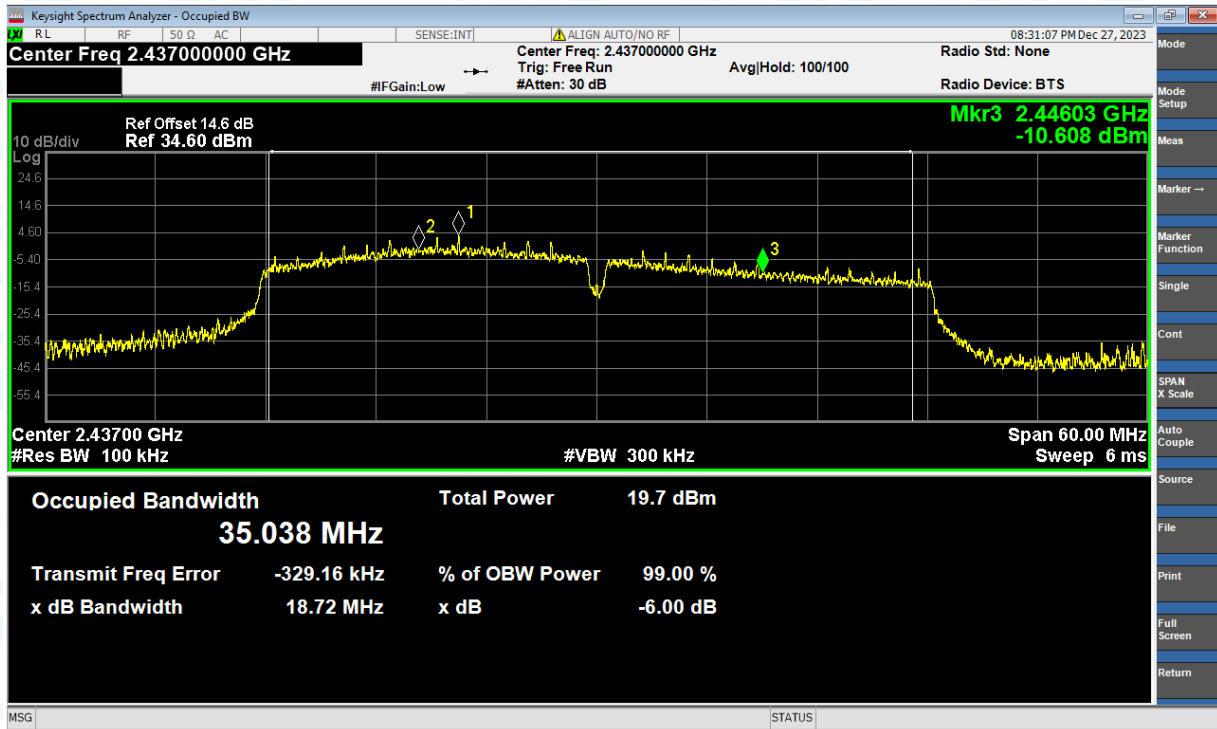


-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1

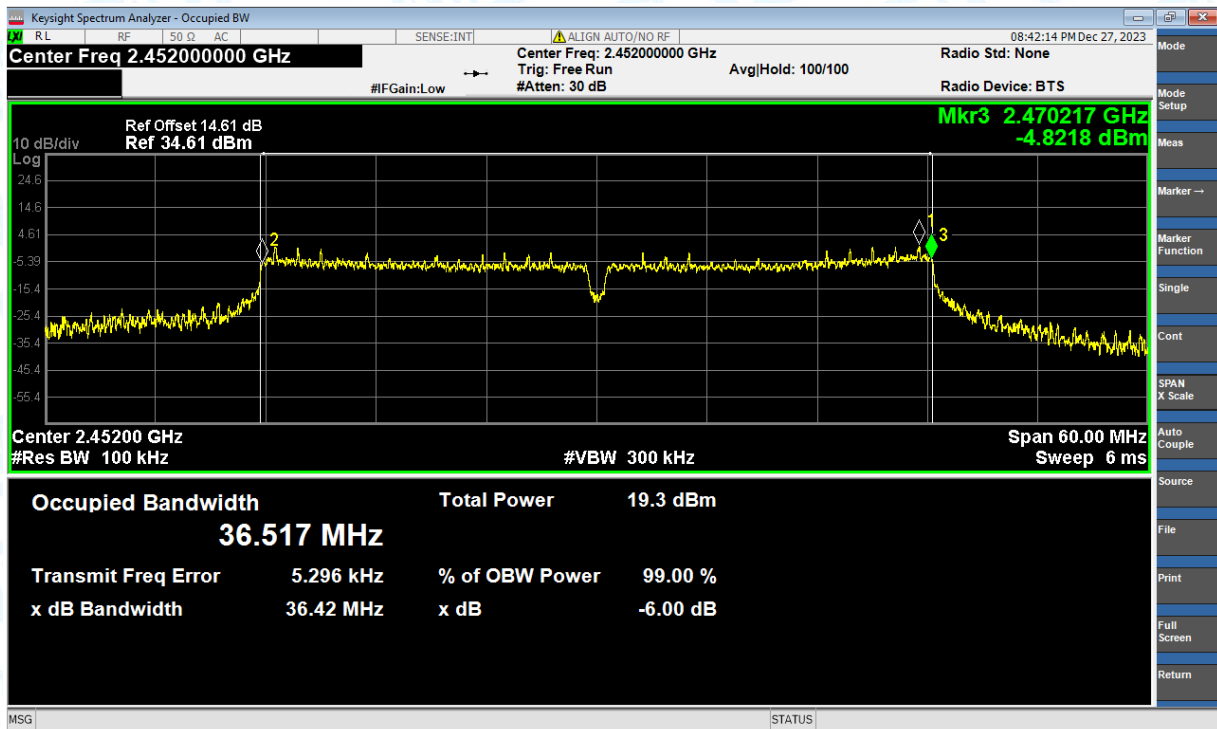




-6dB Bandwidth NVNT n(HT40) 2437MHz Ant1



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

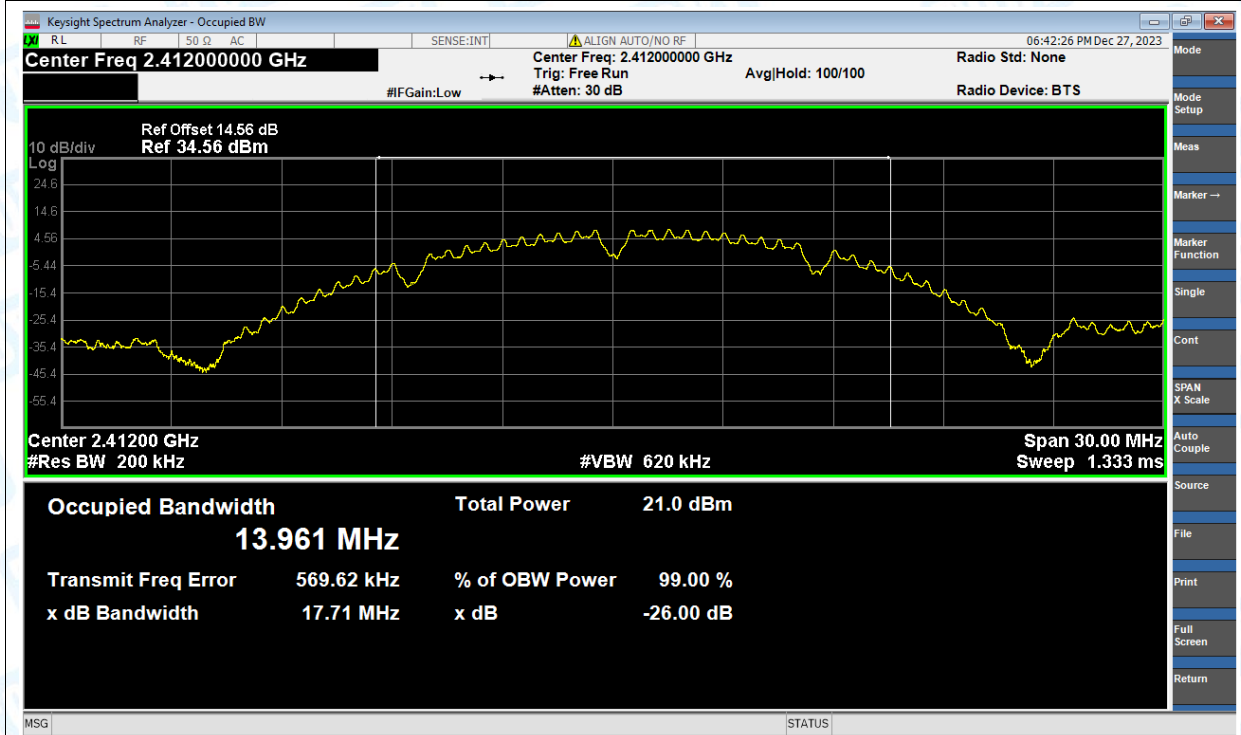


## 4. Occupied Channel Bandwidth

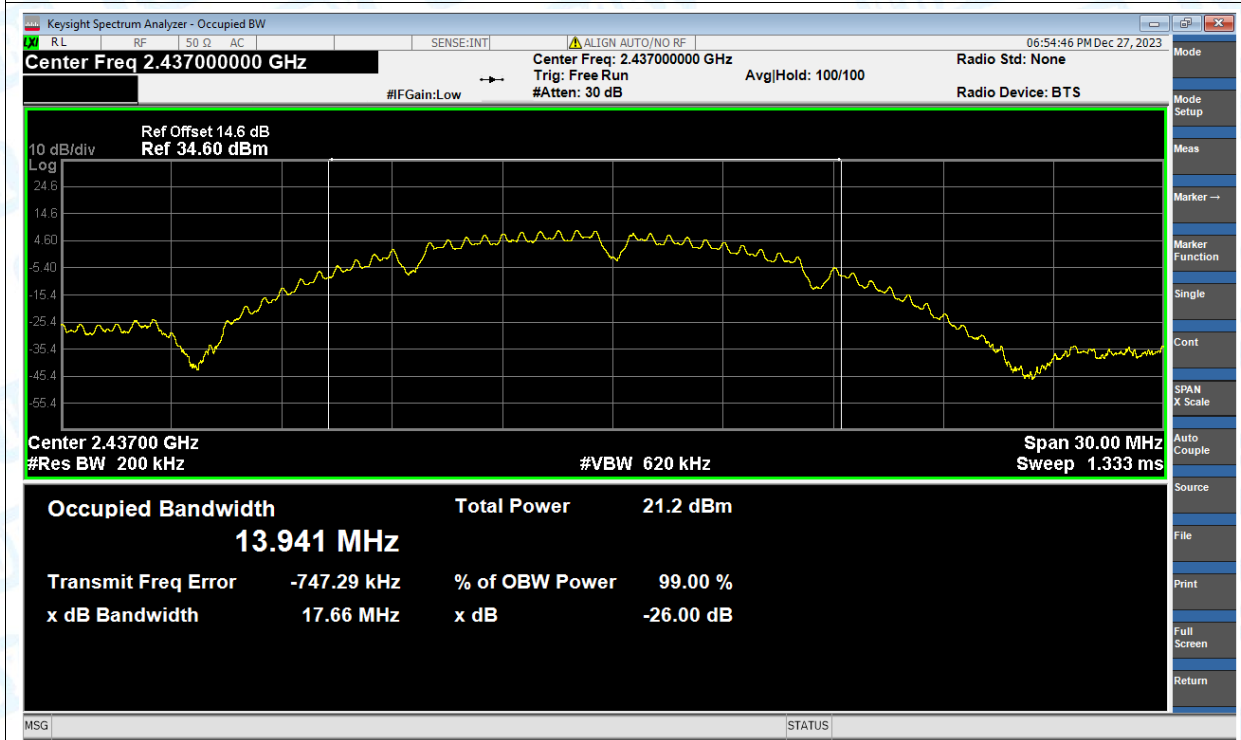
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.961
NVNT	b	2437	Ant1	13.941
NVNT	b	2462	Ant1	14.052
NVNT	g	2412	Ant1	16.914
NVNT	g	2437	Ant1	16.828
NVNT	g	2462	Ant1	16.711
NVNT	n(HT20)	2412	Ant1	17.74
NVNT	n(HT20)	2437	Ant1	17.684
NVNT	n(HT20)	2462	Ant1	17.681
NVNT	n(HT40)	2422	Ant1	34.395
NVNT	n(HT40)	2437	Ant1	35.068
NVNT	n(HT40)	2452	Ant1	37.28

Test Graphs

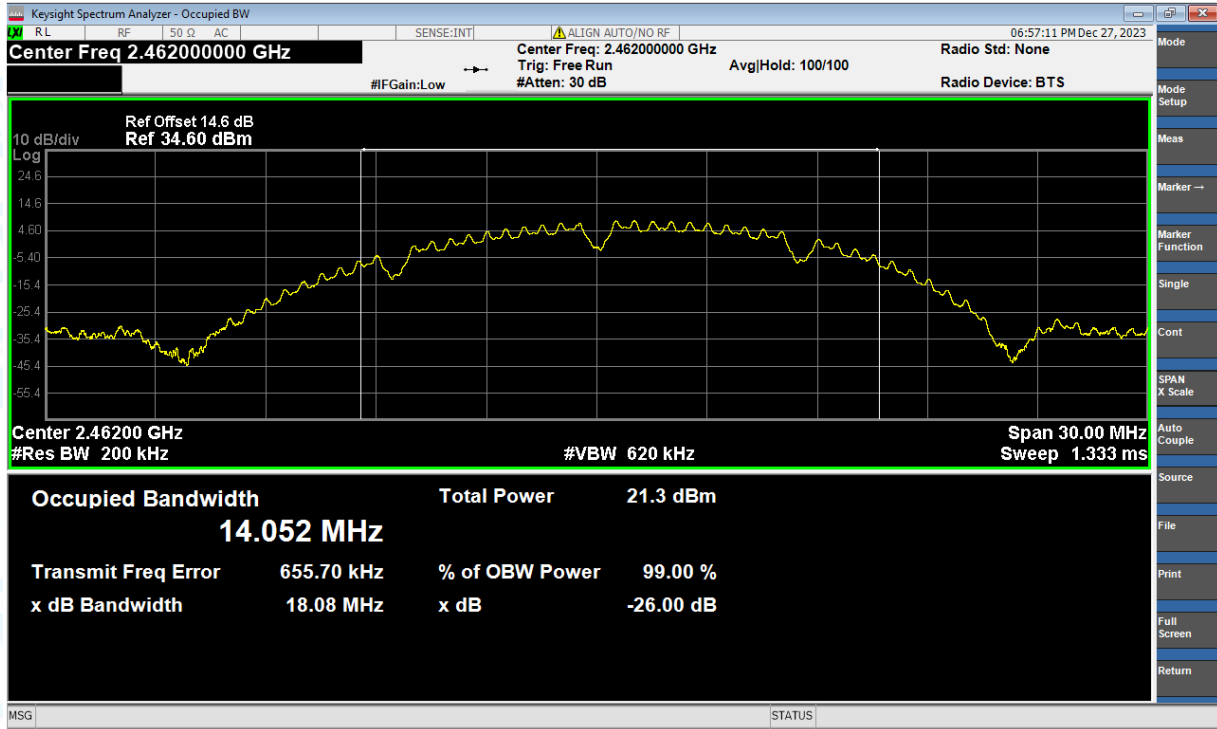
OBW NVNT b 2412MHz Ant1



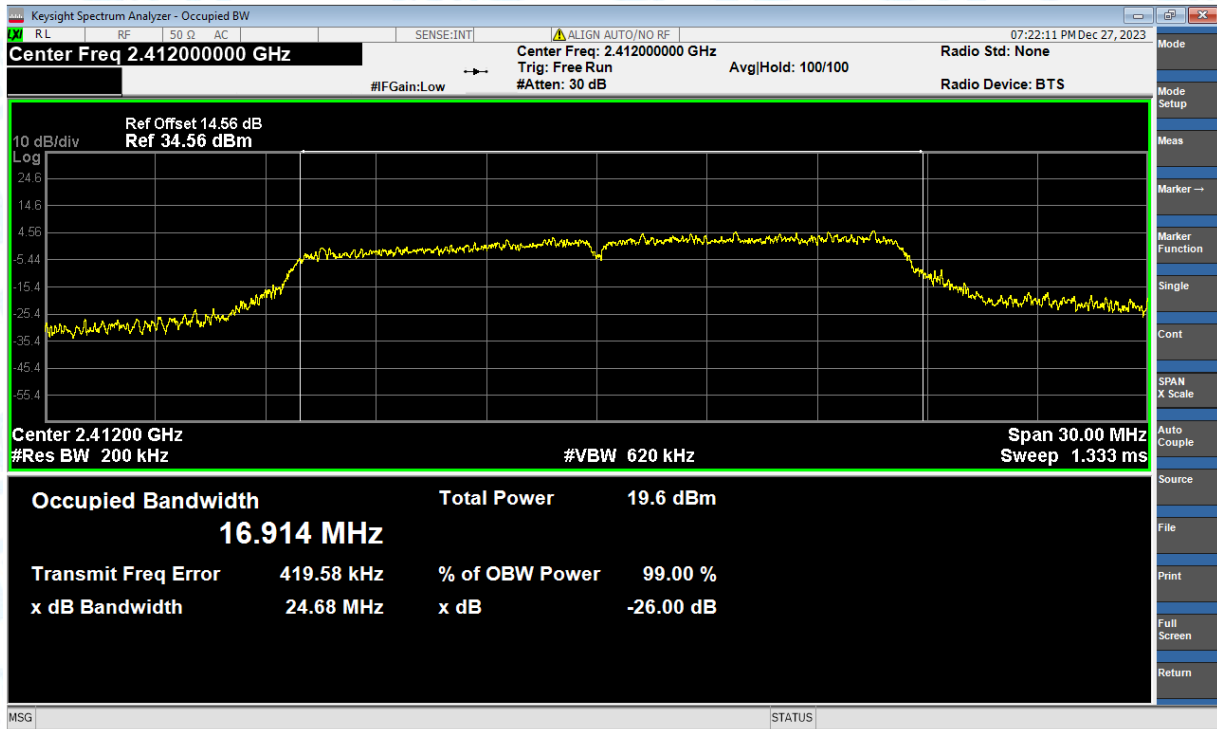
OBW NVNT b 2437MHz Ant1



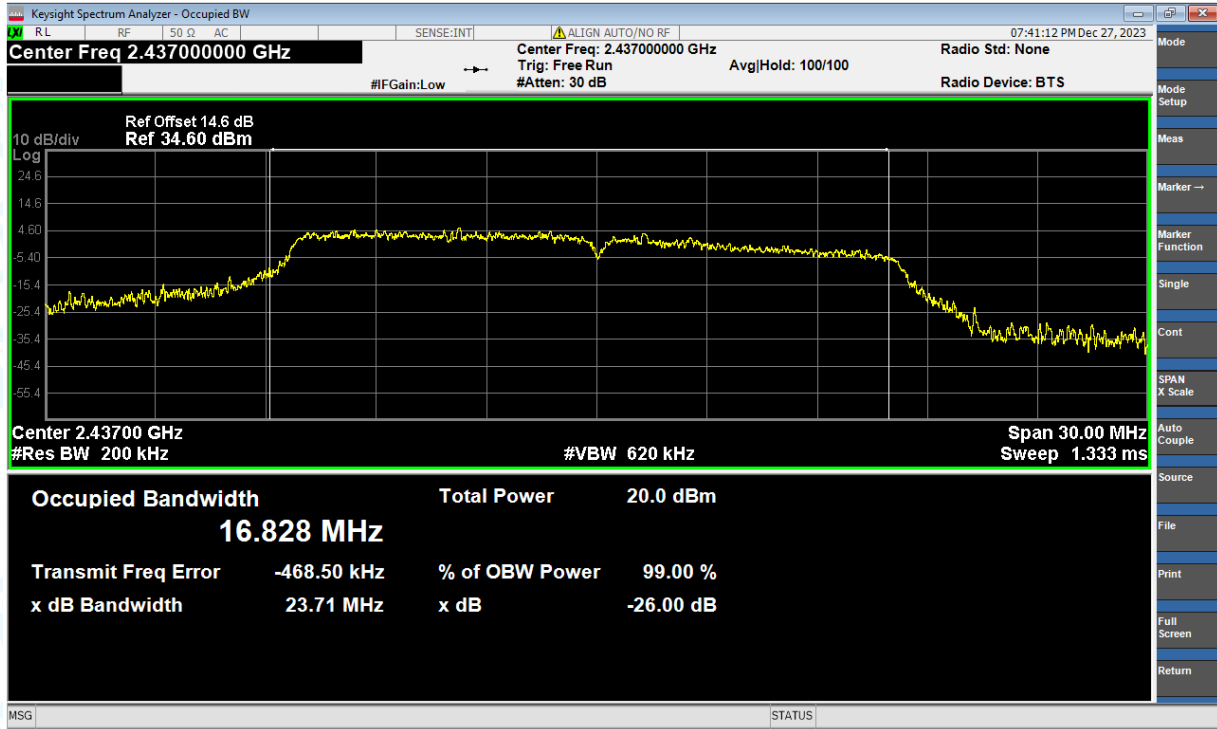
OBW NVNT b 2462MHz Ant1



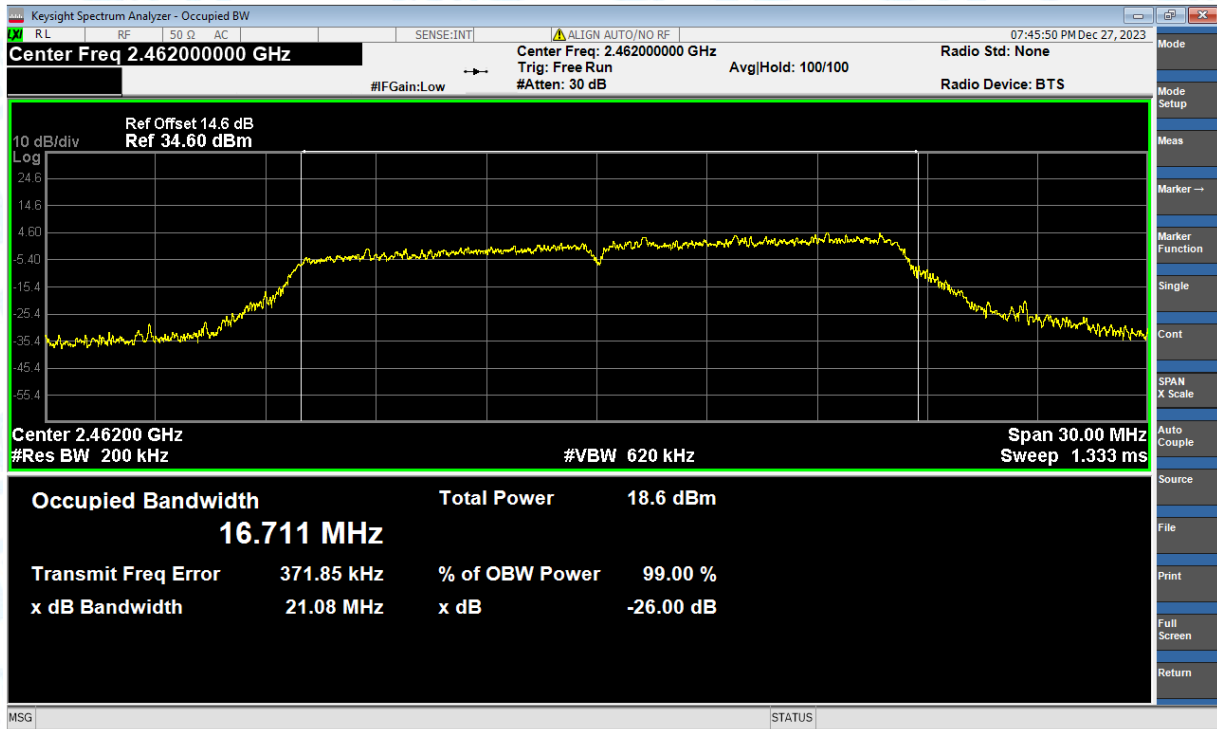
OBW NVNT g 2412MHz Ant1



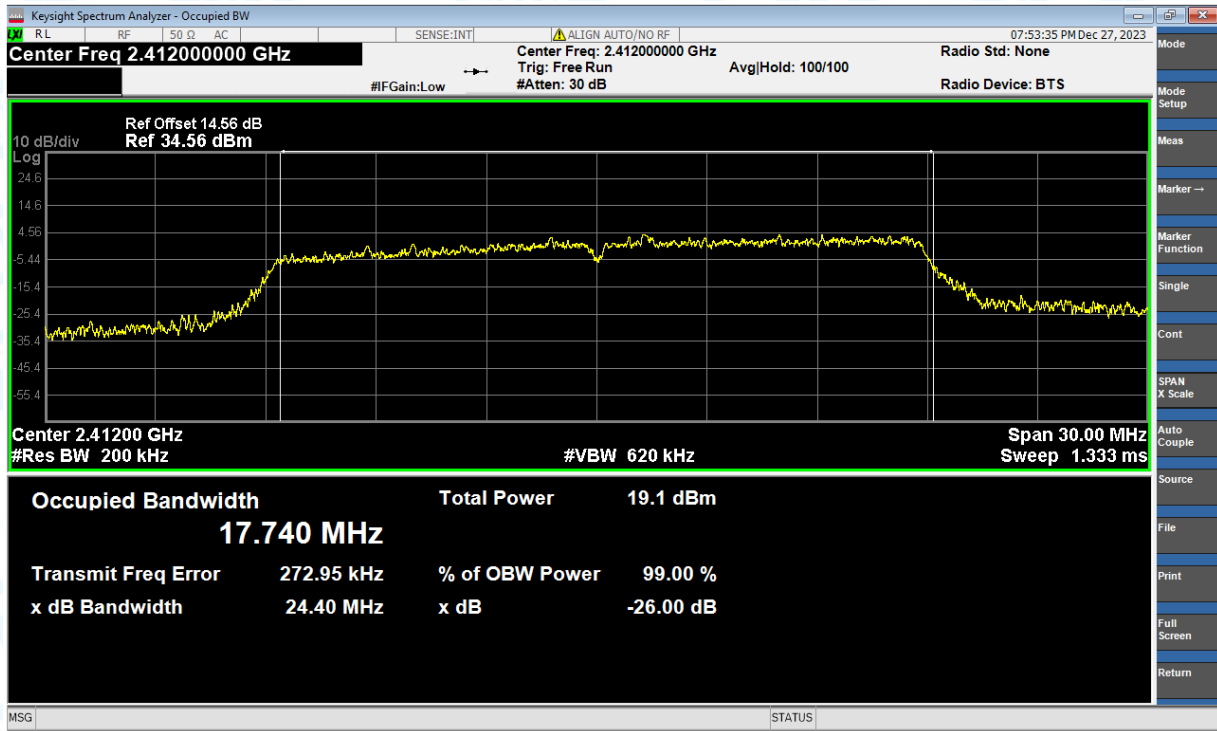
OBW NVNT g 2437MHz Ant1



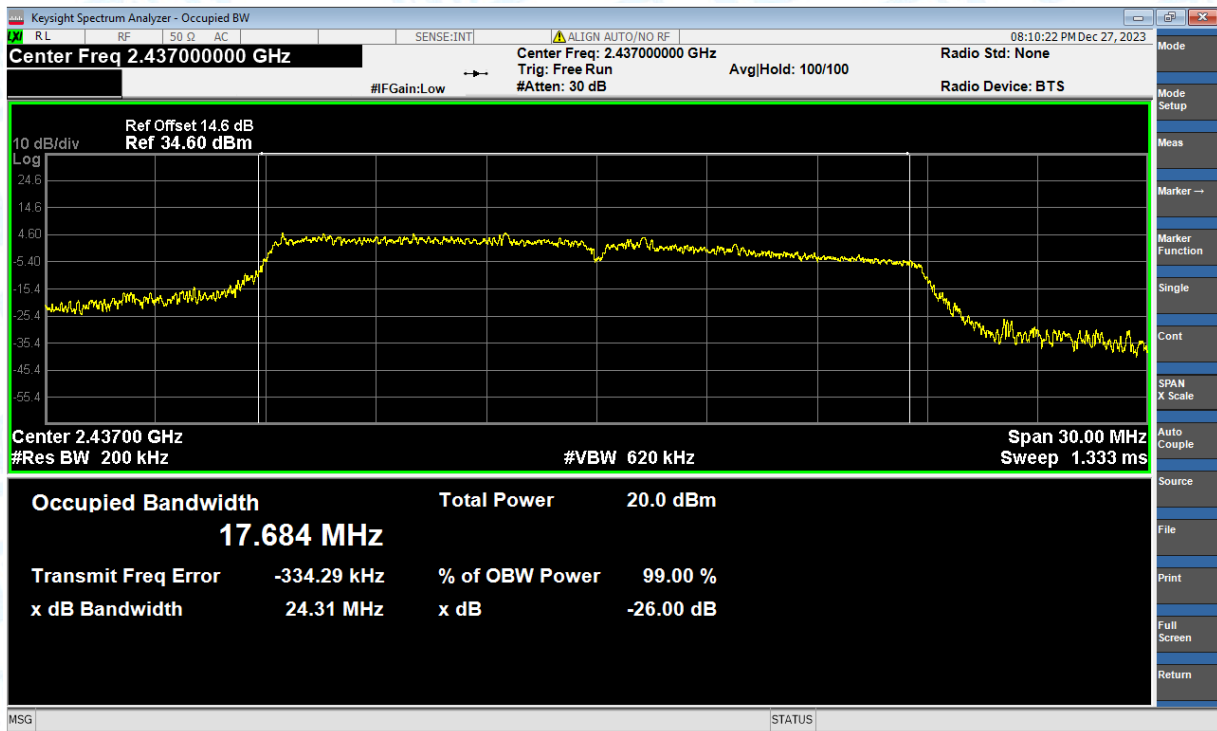
OBW NVNT g 2462MHz Ant1



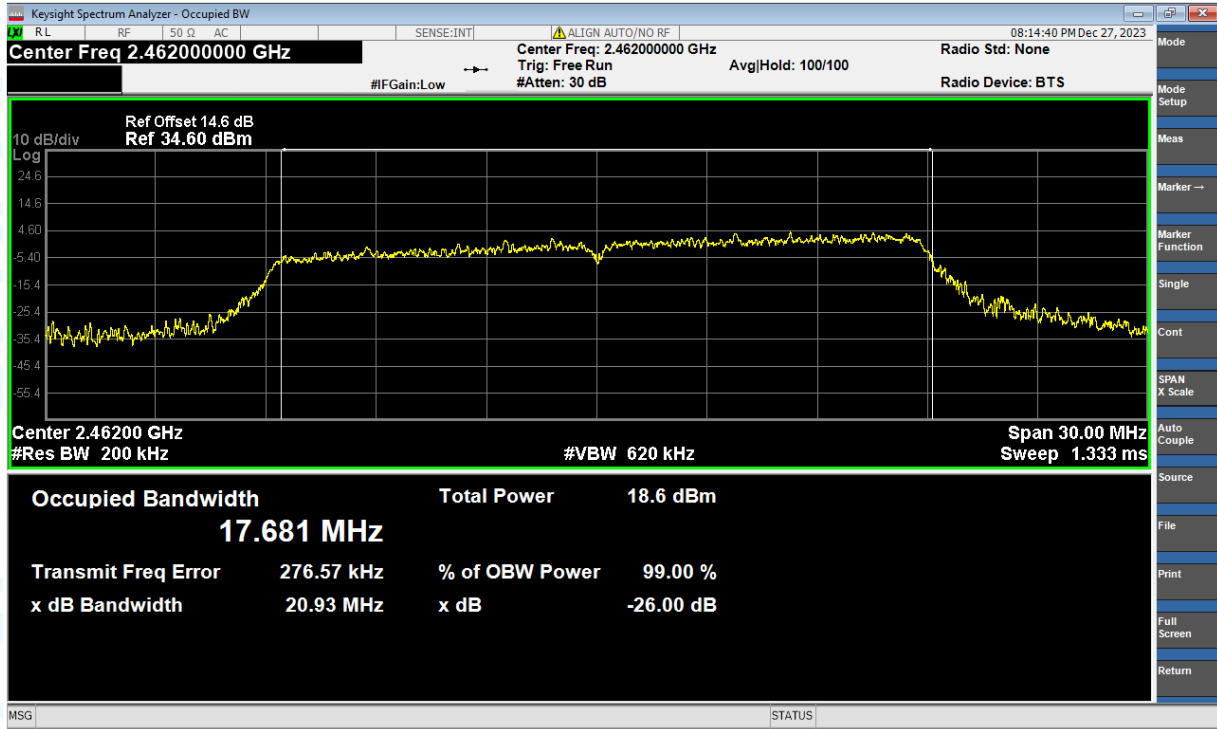
OBW NVNT n(HT20) 2412MHz Ant1



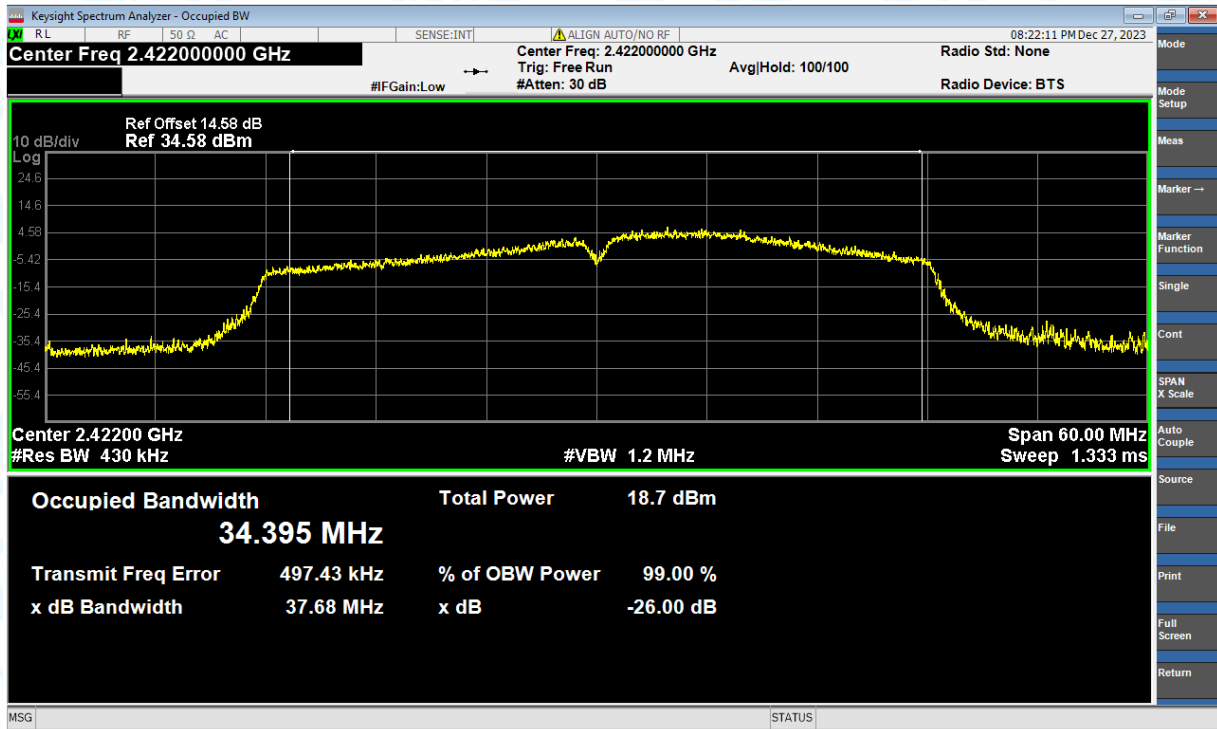
OBW NVNT n(HT20) 2437MHz Ant1



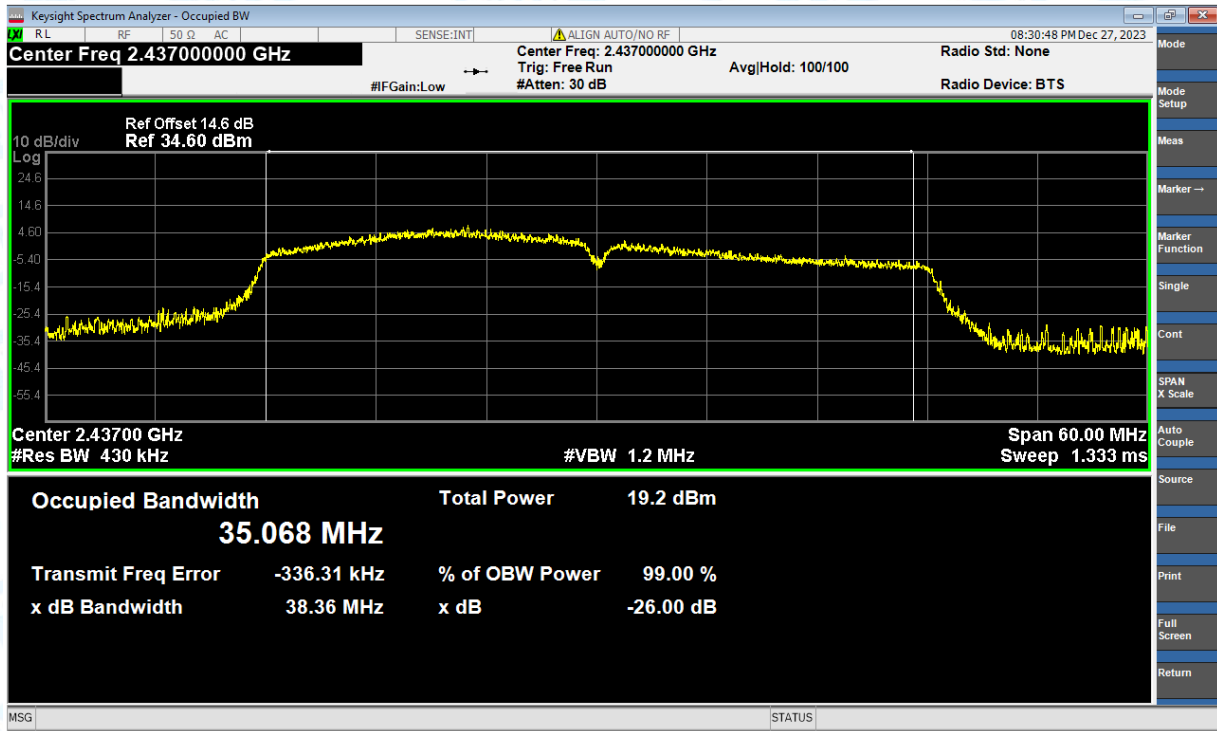
OBW NVNT n(HT20) 2462MHz Ant1



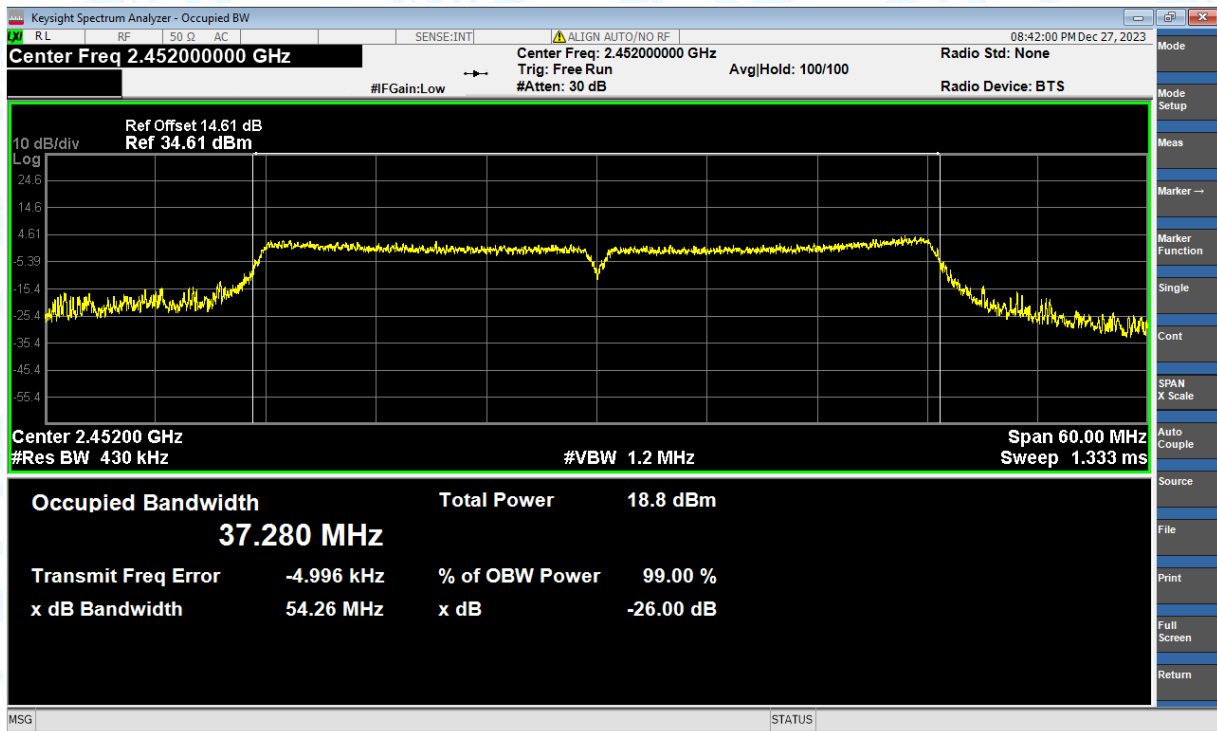
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2437MHz Ant1



OBW NVNT n(HT40) 2452MHz Ant1



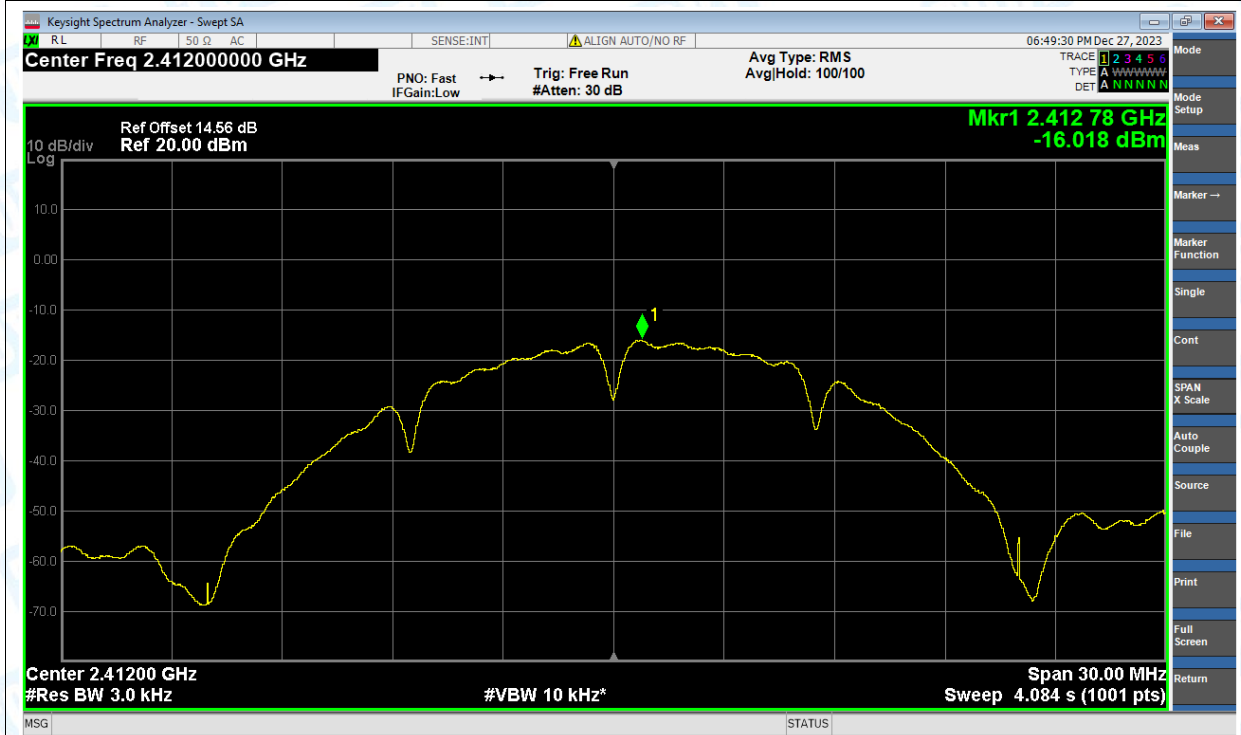


## 5. Maximum Power Spectral Density Level

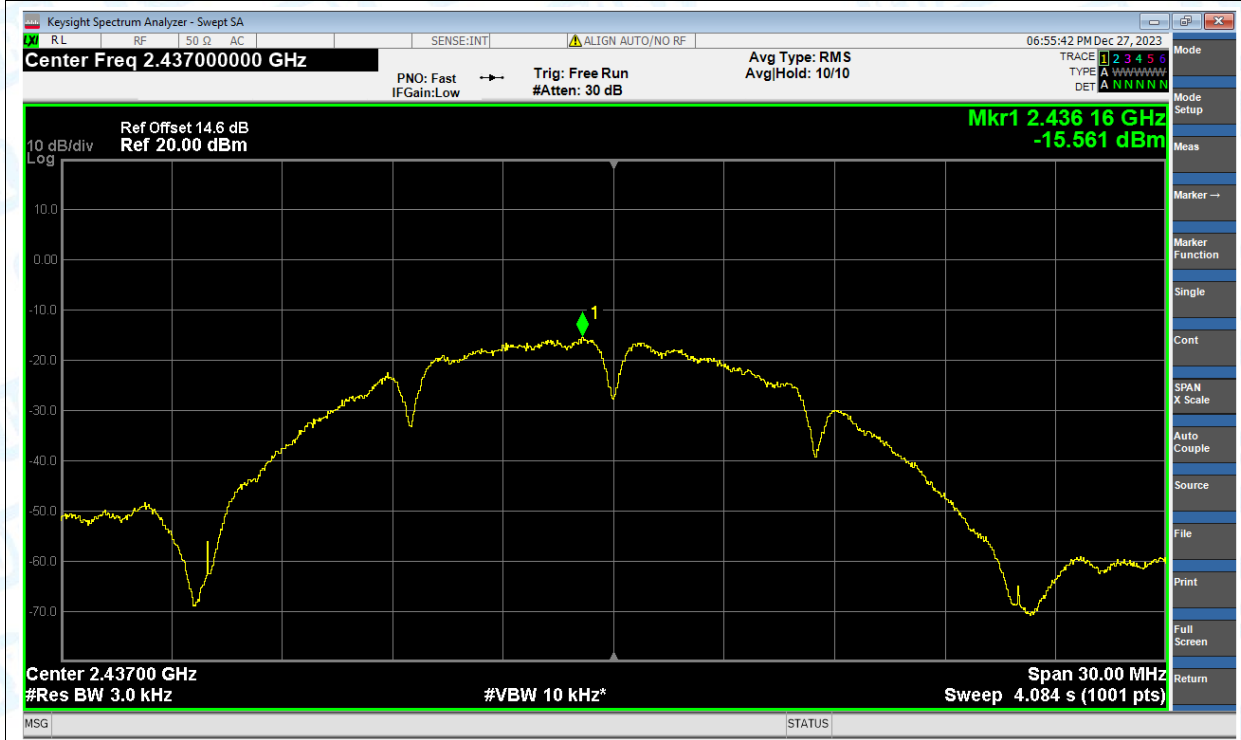
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-16.018	8	Pass
NVNT	b	2437	Ant1	-15.561	8	Pass
NVNT	b	2462	Ant1	-15.86	8	Pass
NVNT	g	2412	Ant1	-19.626	8	Pass
NVNT	g	2437	Ant1	-18.854	8	Pass
NVNT	g	2462	Ant1	-19.774	8	Pass
NVNT	n(HT20)	2412	Ant1	-20.256	8	Pass
NVNT	n(HT20)	2437	Ant1	-19.033	8	Pass
NVNT	n(HT20)	2462	Ant1	-19.656	8	Pass
NVNT	n(HT40)	2422	Ant1	-20.966	8	Pass
NVNT	n(HT40)	2437	Ant1	-20.878	8	Pass
NVNT	n(HT40)	2452	Ant1	-22.626	8	Pass

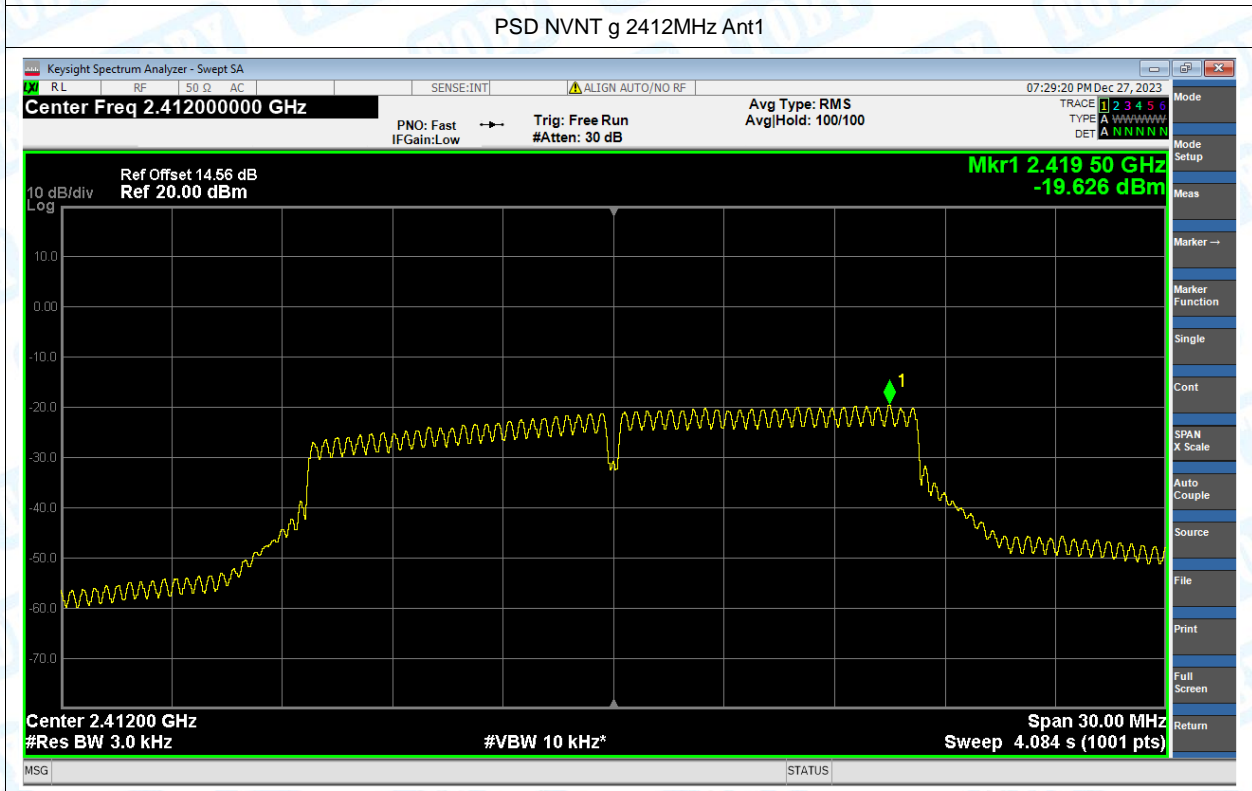
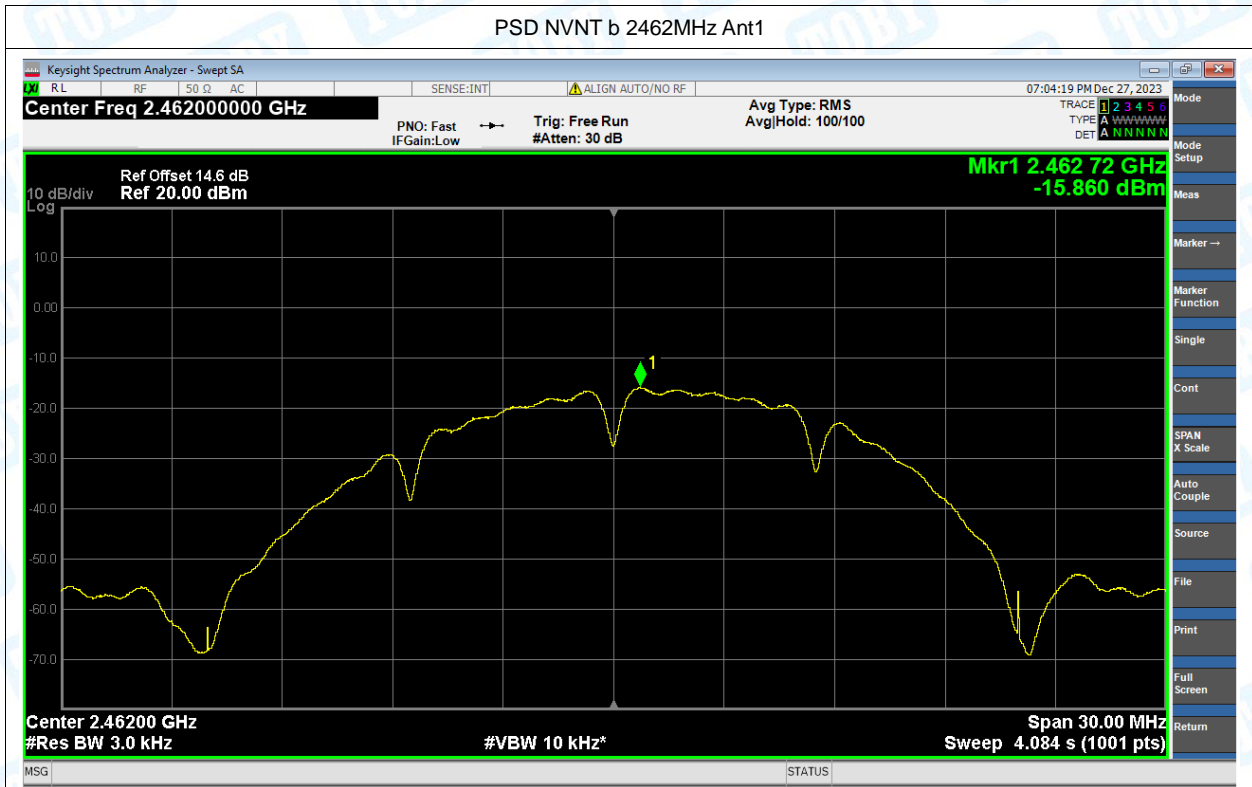
Test Graphs

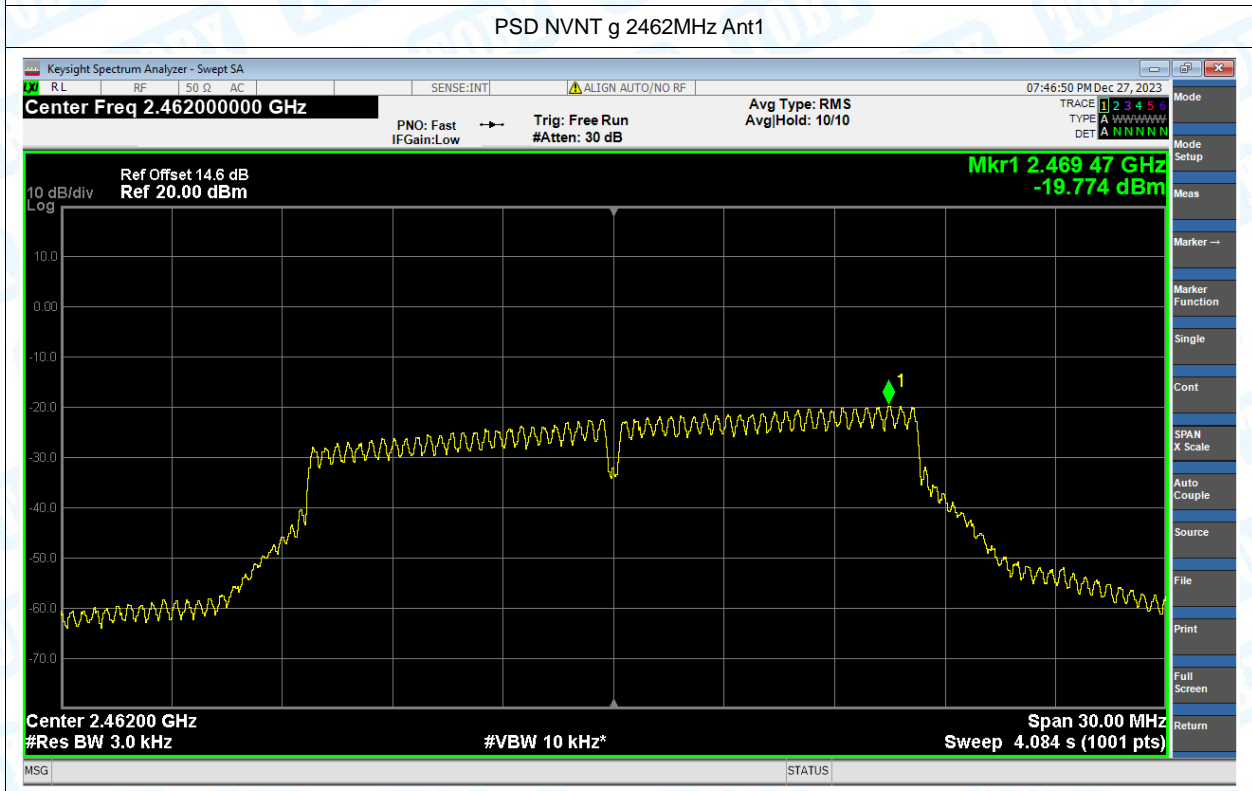
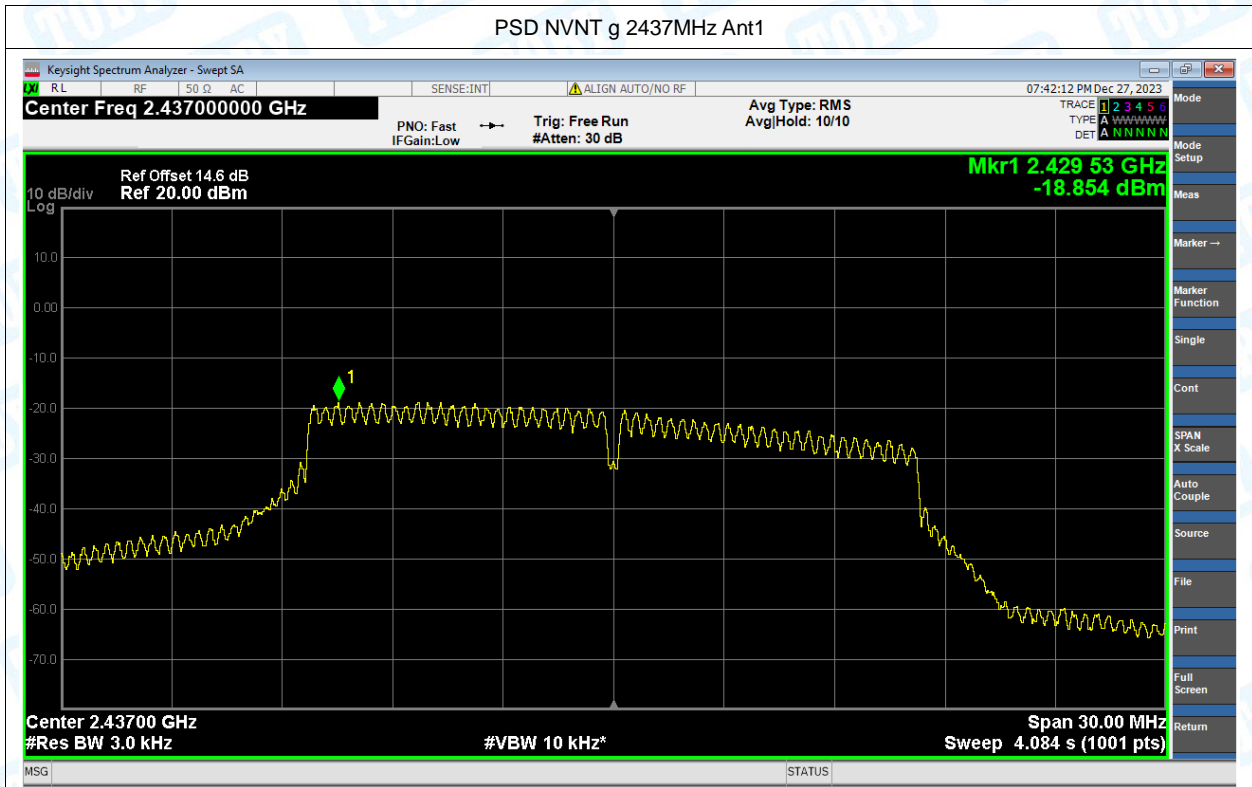
PSD NVNT b 2412MHz Ant1

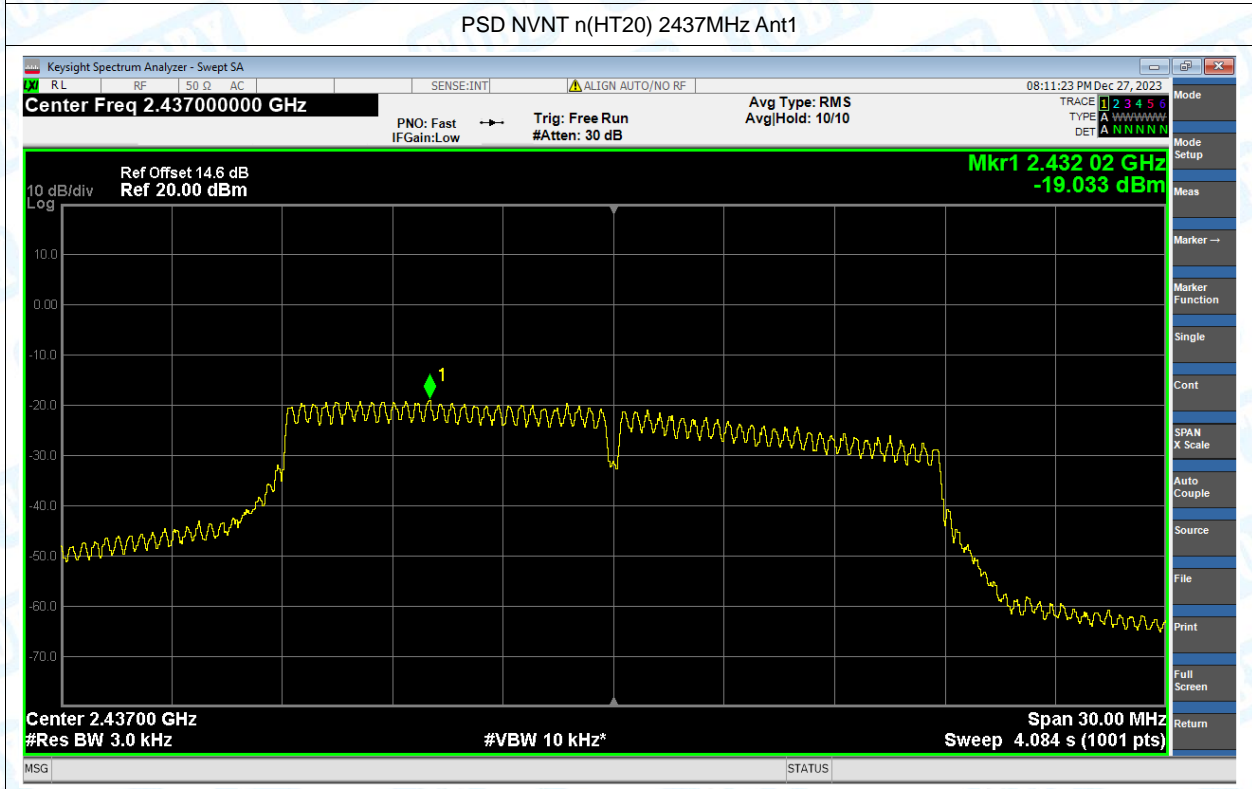
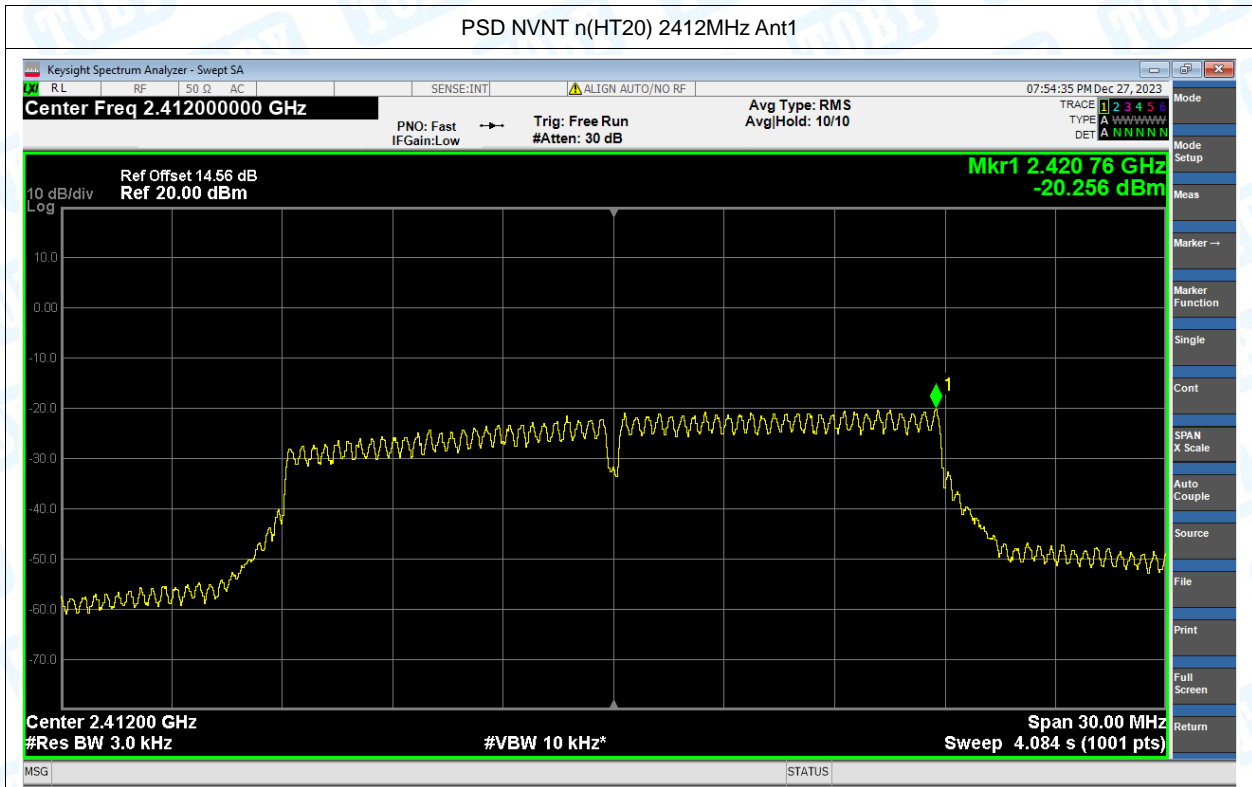


PSD NVNT b 2437MHz Ant1

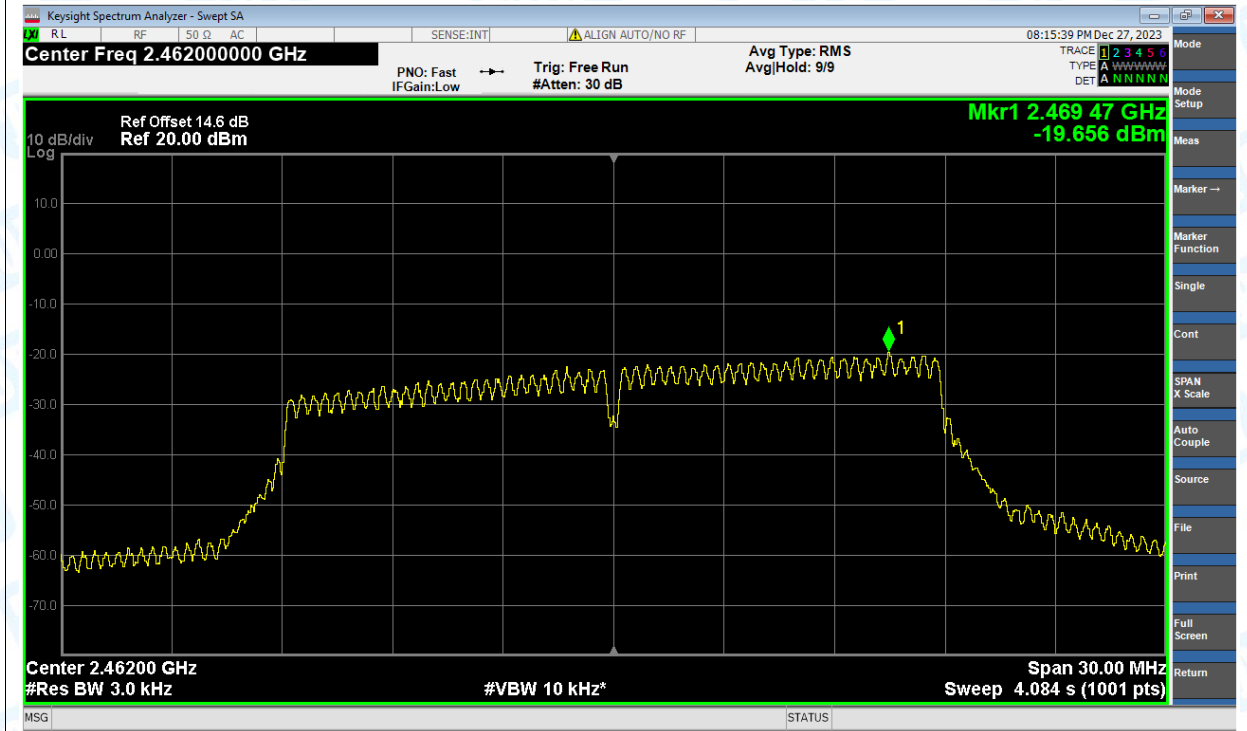




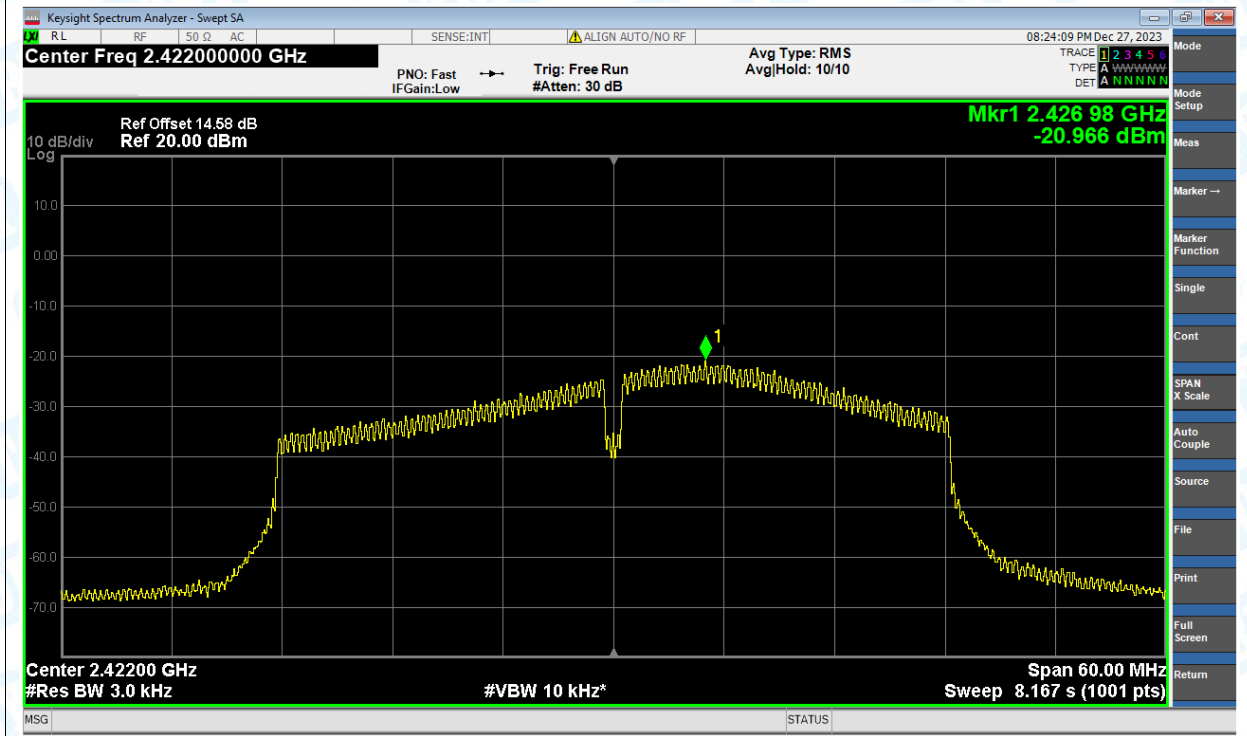




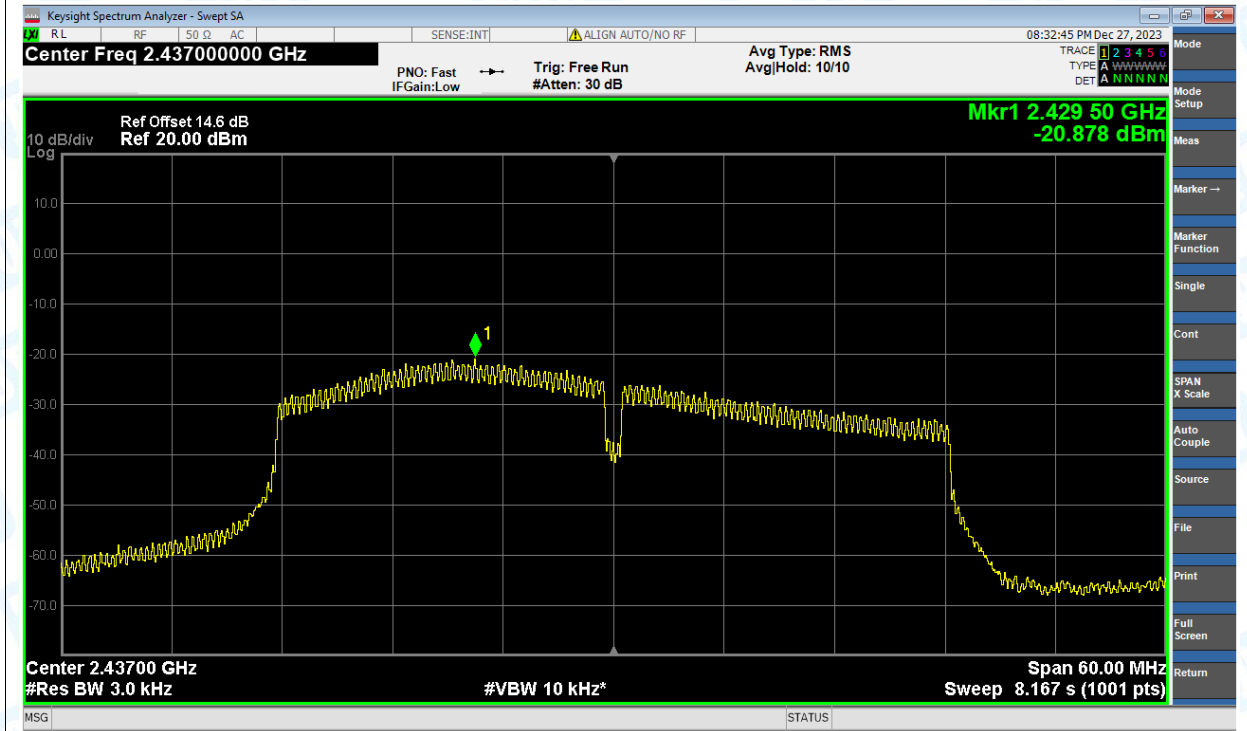
PSD NVNT n(HT20) 2462MHz Ant1



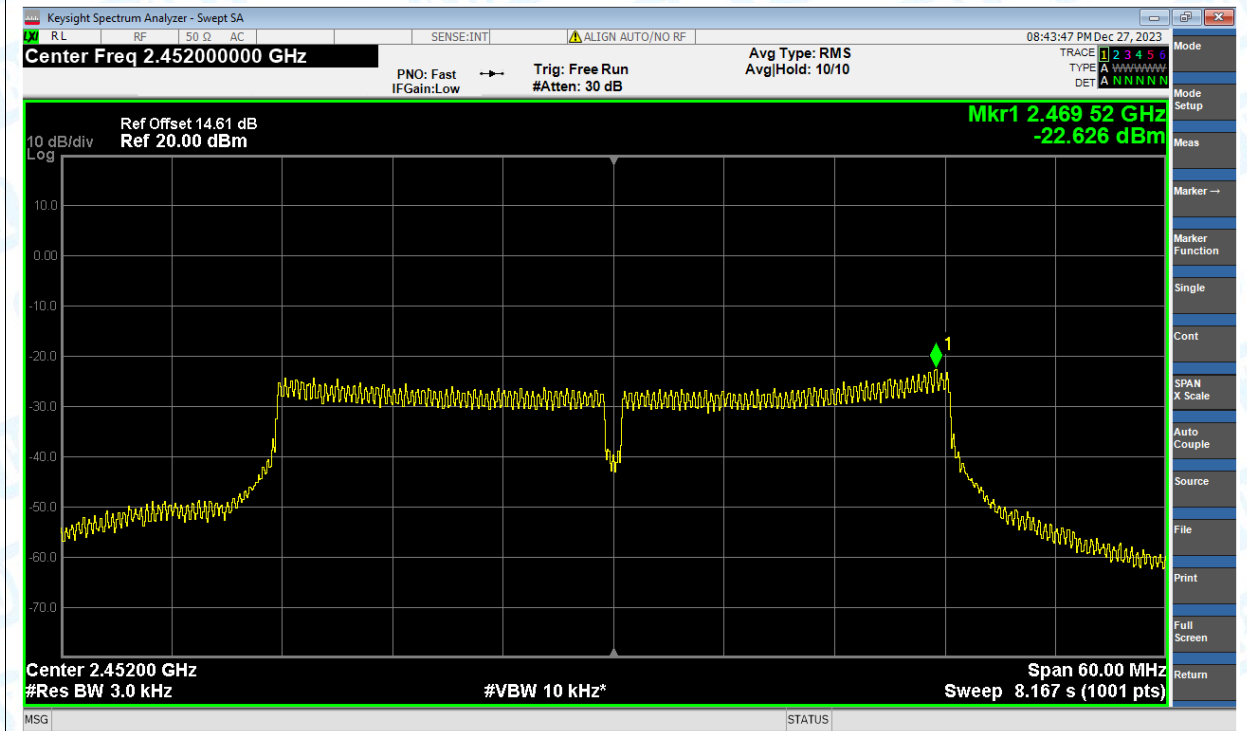
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1



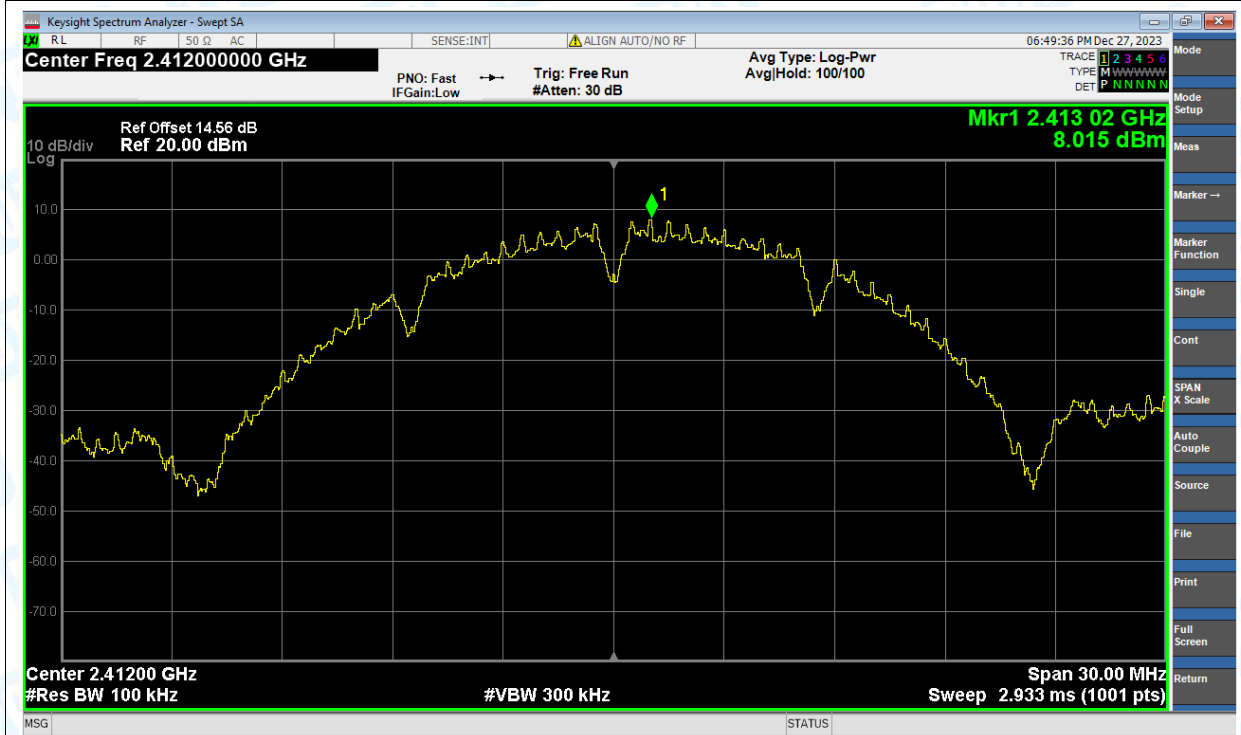
## 6. Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-50.73	-30	Pass
NVNT	b	2462	Ant1	-48.85	-30	Pass
NVNT	g	2412	Ant1	-46.86	-30	Pass
NVNT	g	2462	Ant1	-50.59	-30	Pass
NVNT	n(HT20)	2412	Ant1	-45.07	-30	Pass
NVNT	n(HT20)	2462	Ant1	-46.68	-30	Pass
NVNT	n(HT40)	2422	Ant1	-46.17	-30	Pass
NVNT	n(HT40)	2452	Ant1	-33.82	-30	Pass

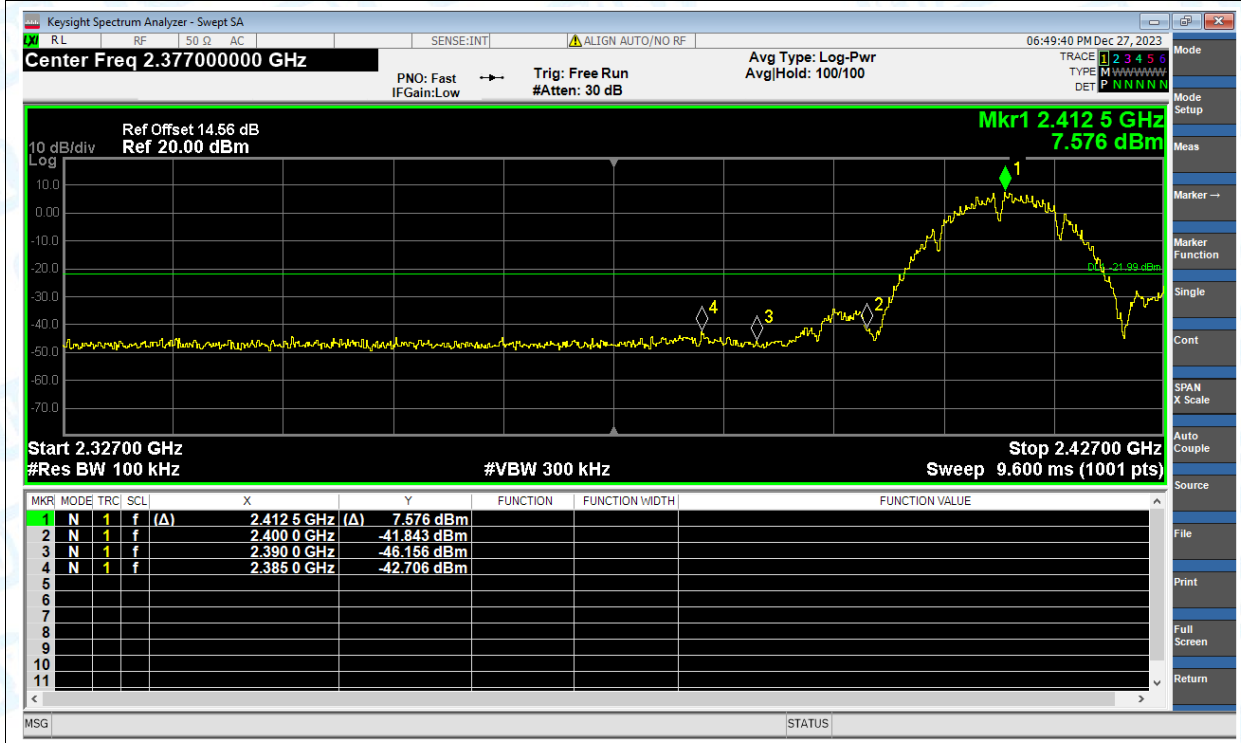


Test Graphs

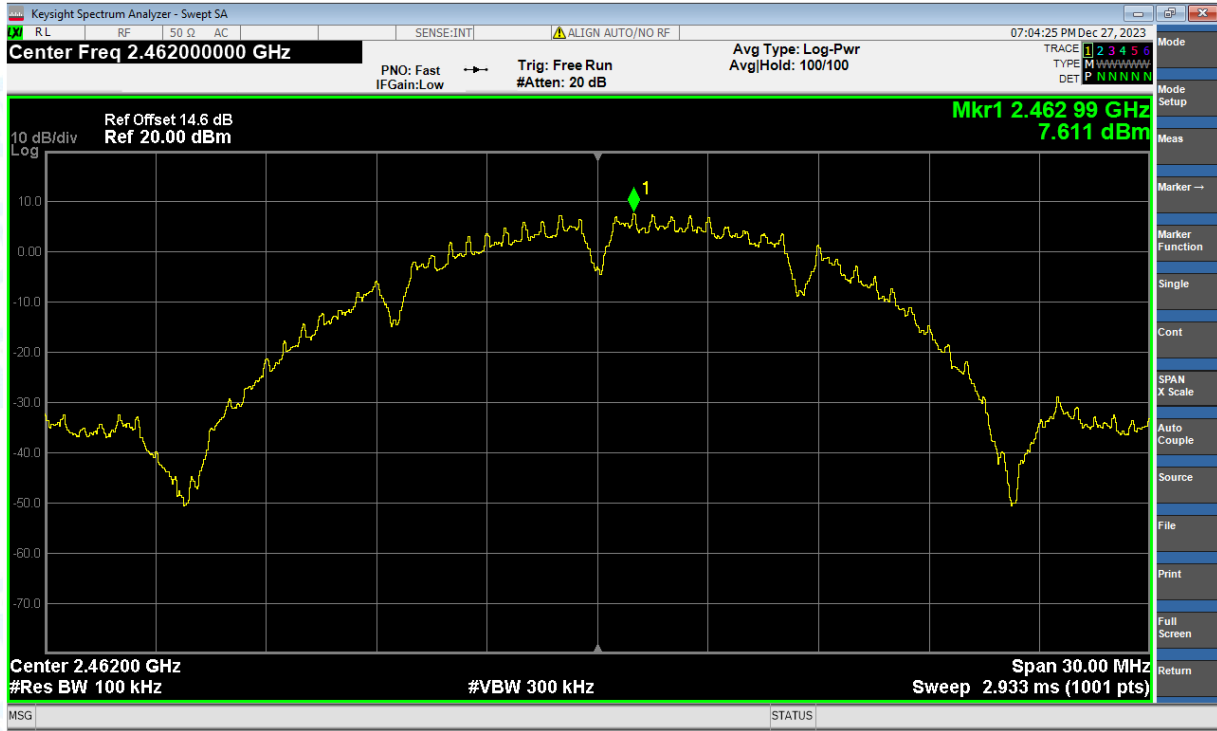
Band Edge NVNT b 2412MHz Ant1 Ref



Band Edge NVNT b 2412MHz Ant1 Emission



Band Edge NVNT b 2462MHz Ant1 Ref



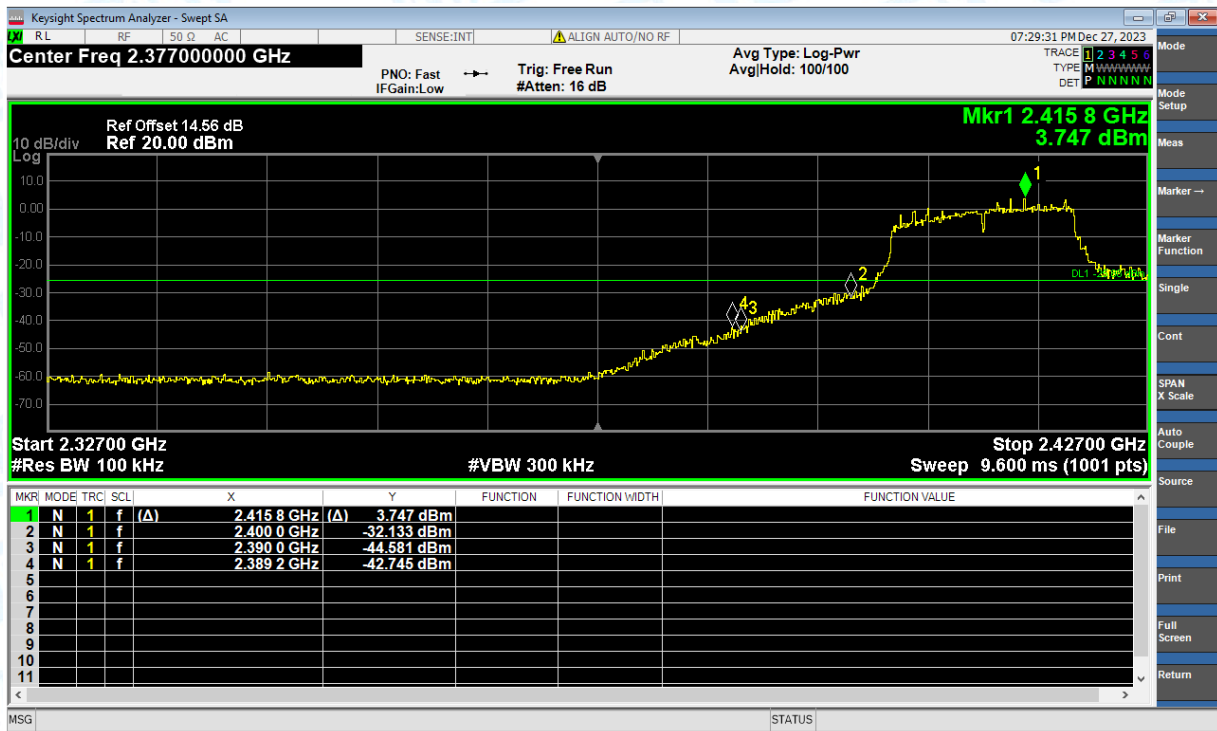
Band Edge NVNT b 2462MHz Ant1 Emission



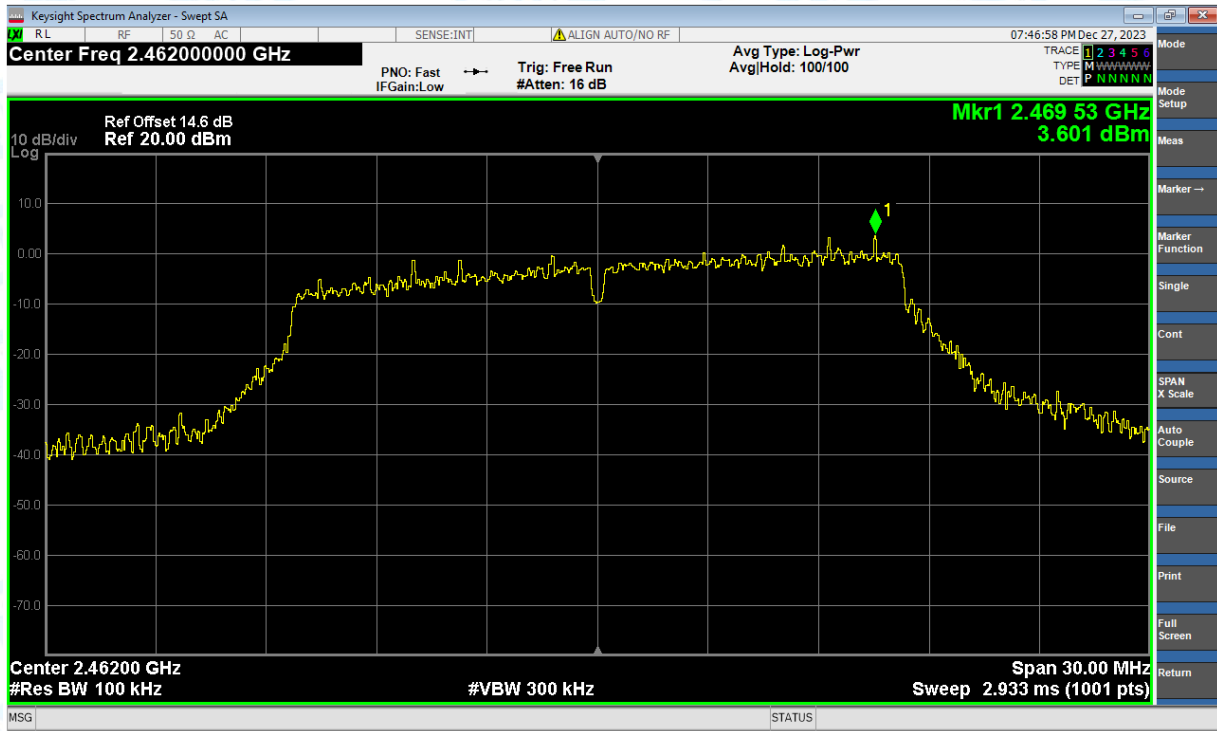
Band Edge NVNT g 2412MHz Ant1 Ref



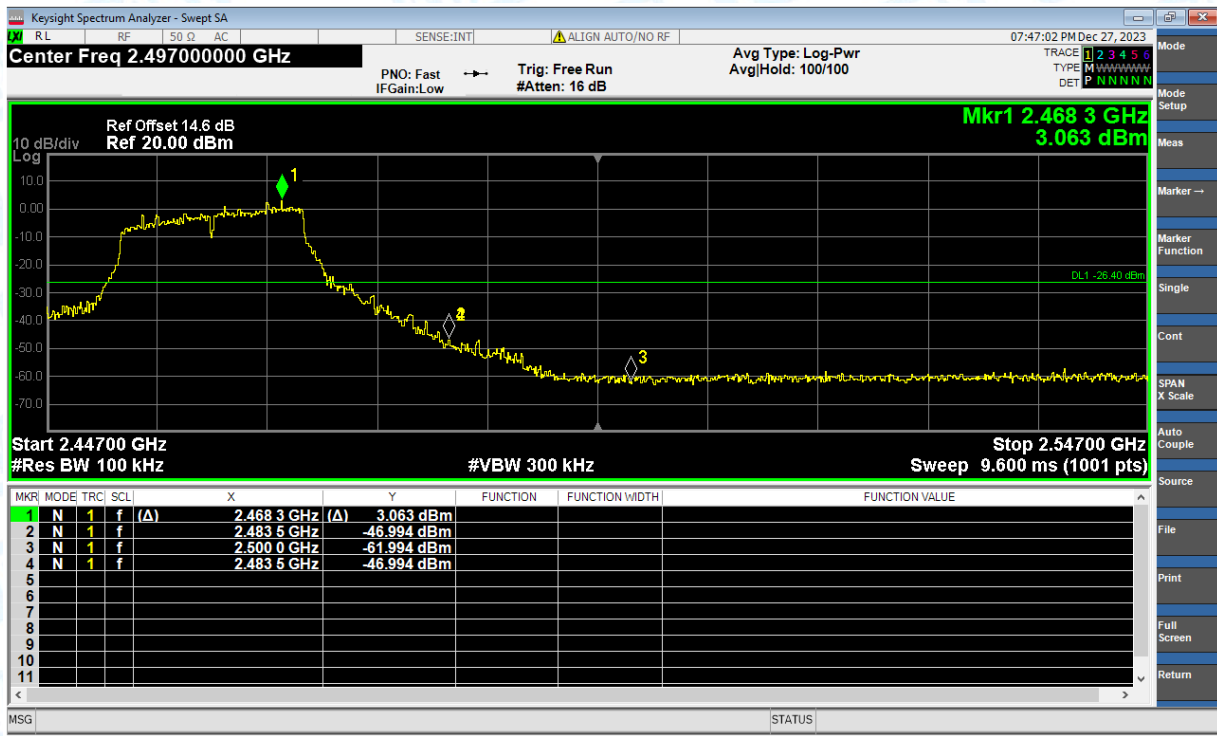
Band Edge NVNT g 2412MHz Ant1 Emission



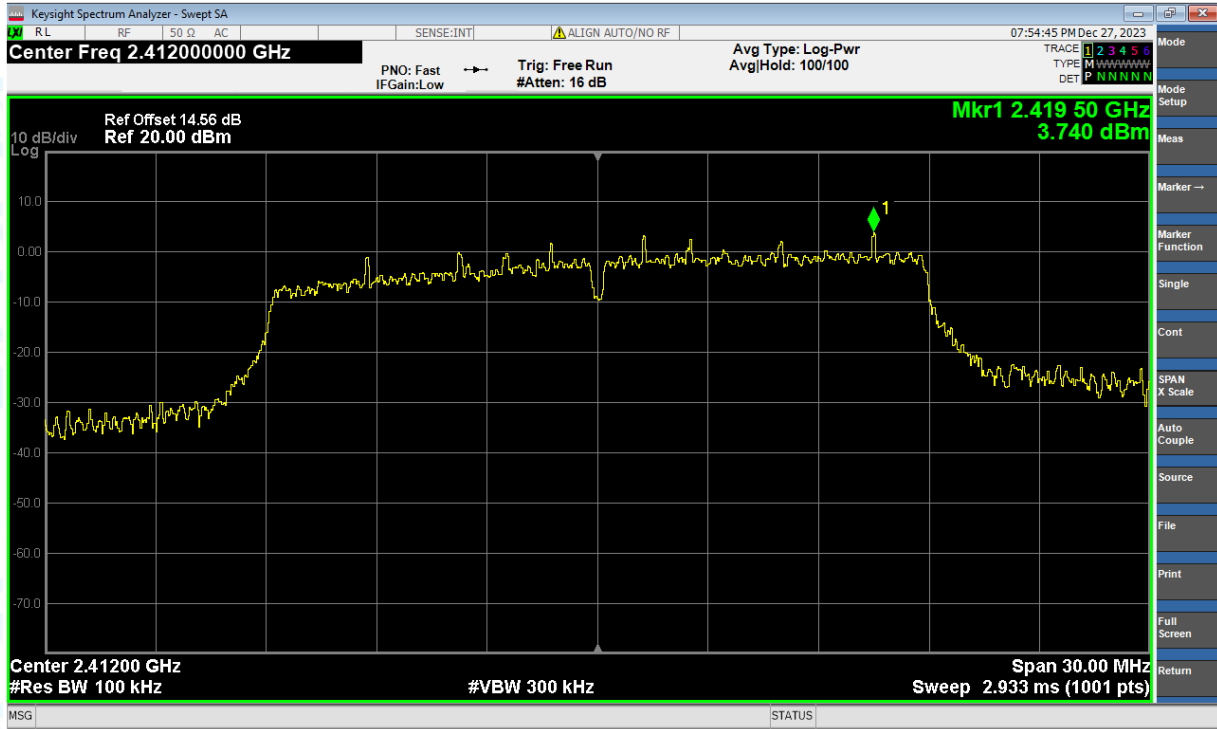
Band Edge NVNT g 2462MHz Ant1 Ref



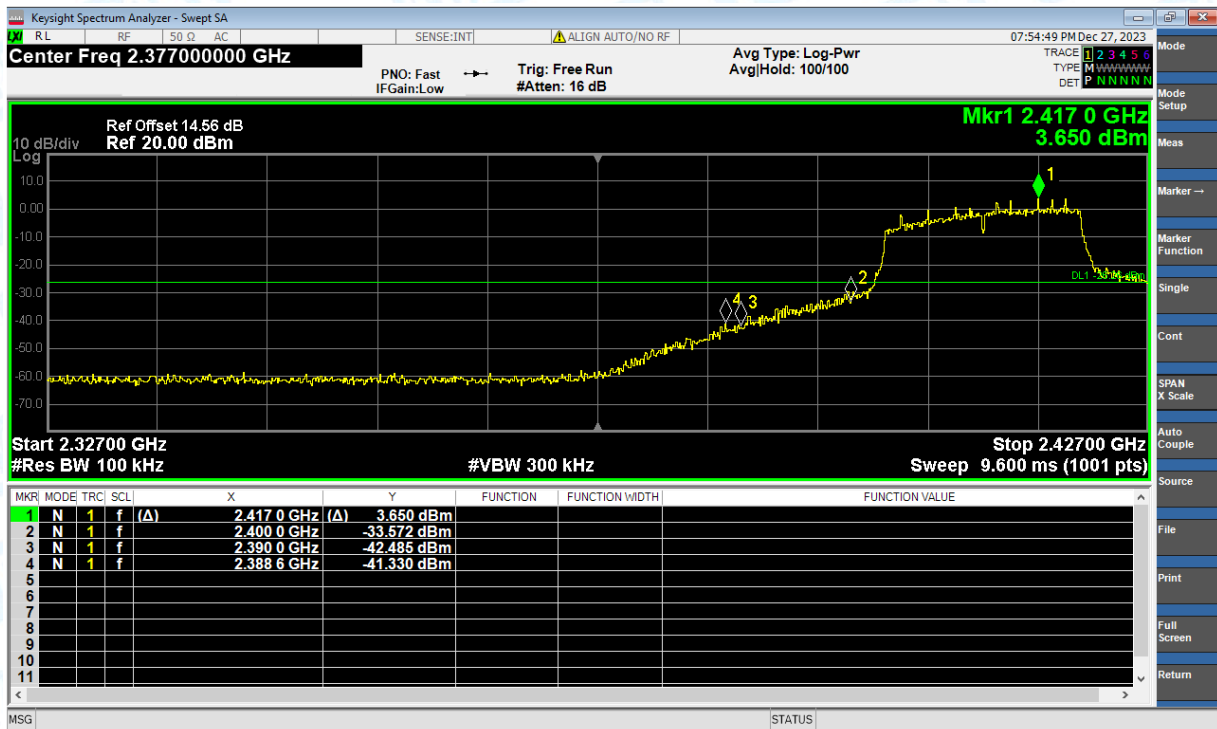
Band Edge NVNT g 2462MHz Ant1 Emission



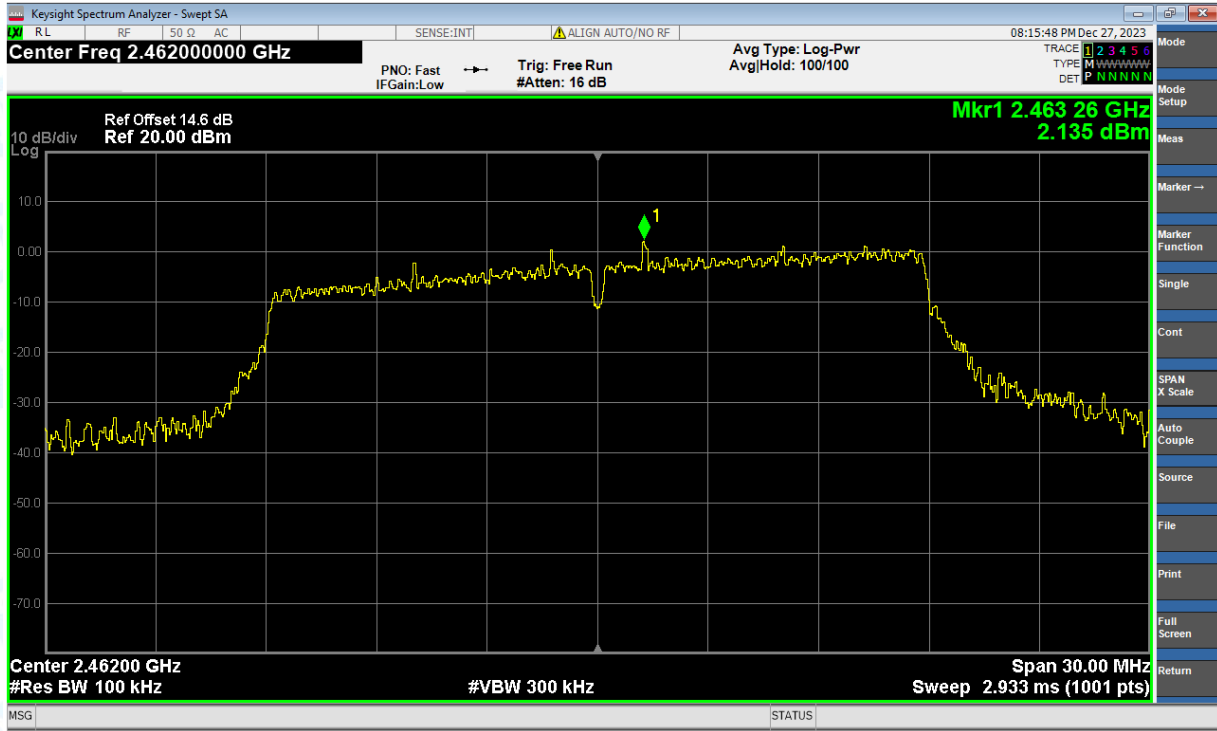
Band Edge NVNT n(HT20) 2412MHz Ant1 Ref



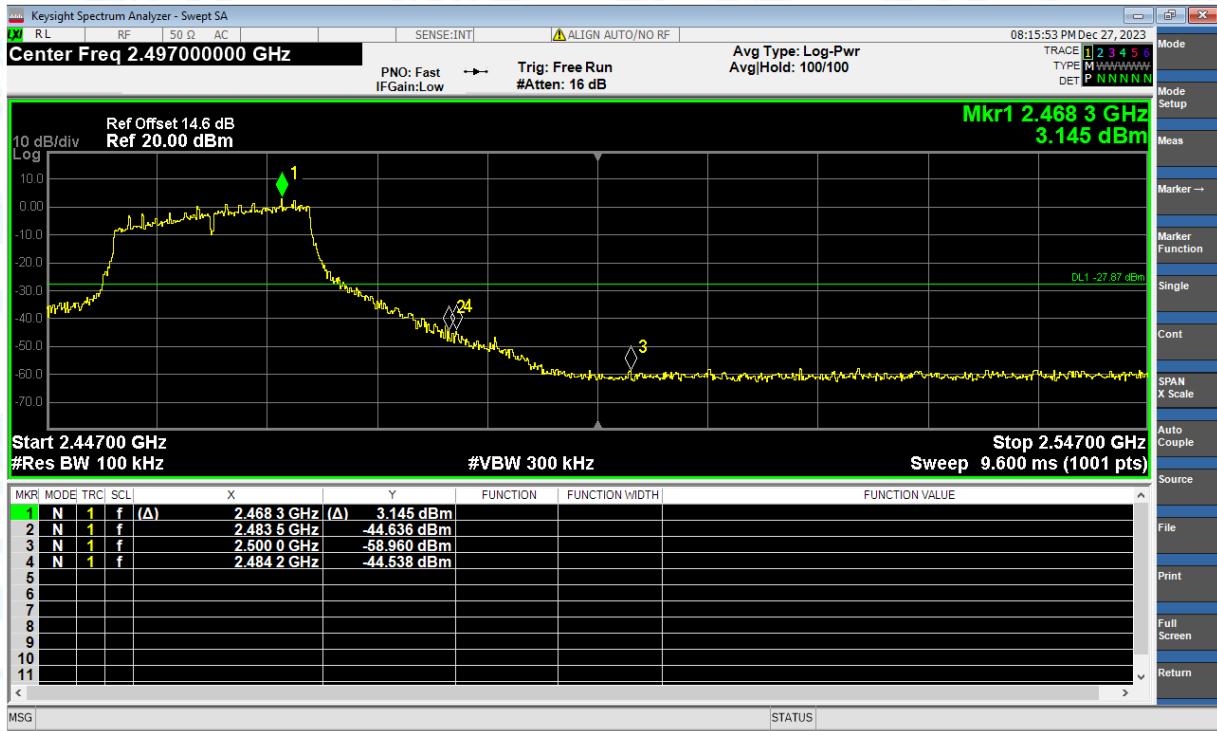
Band Edge NVNT n(HT20) 2412MHz Ant1 Emission



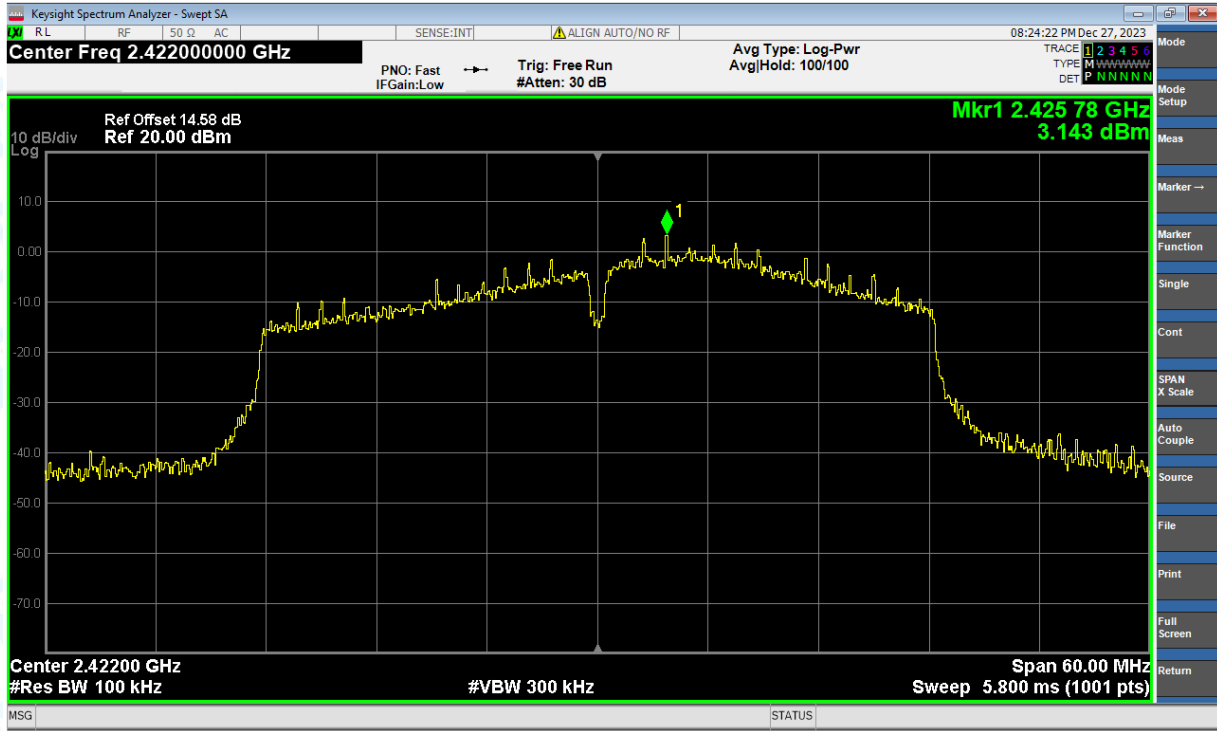
Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



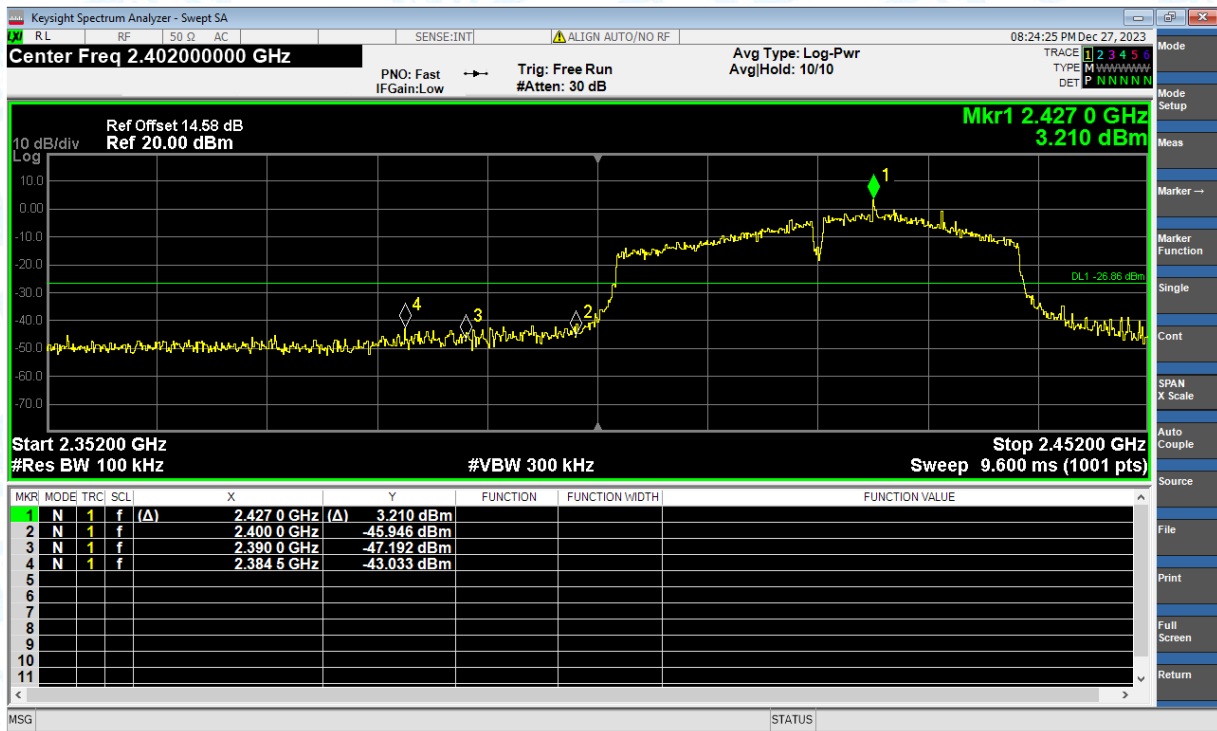
Band Edge NVNT n(HT20) 2462MHz Ant1 Emission



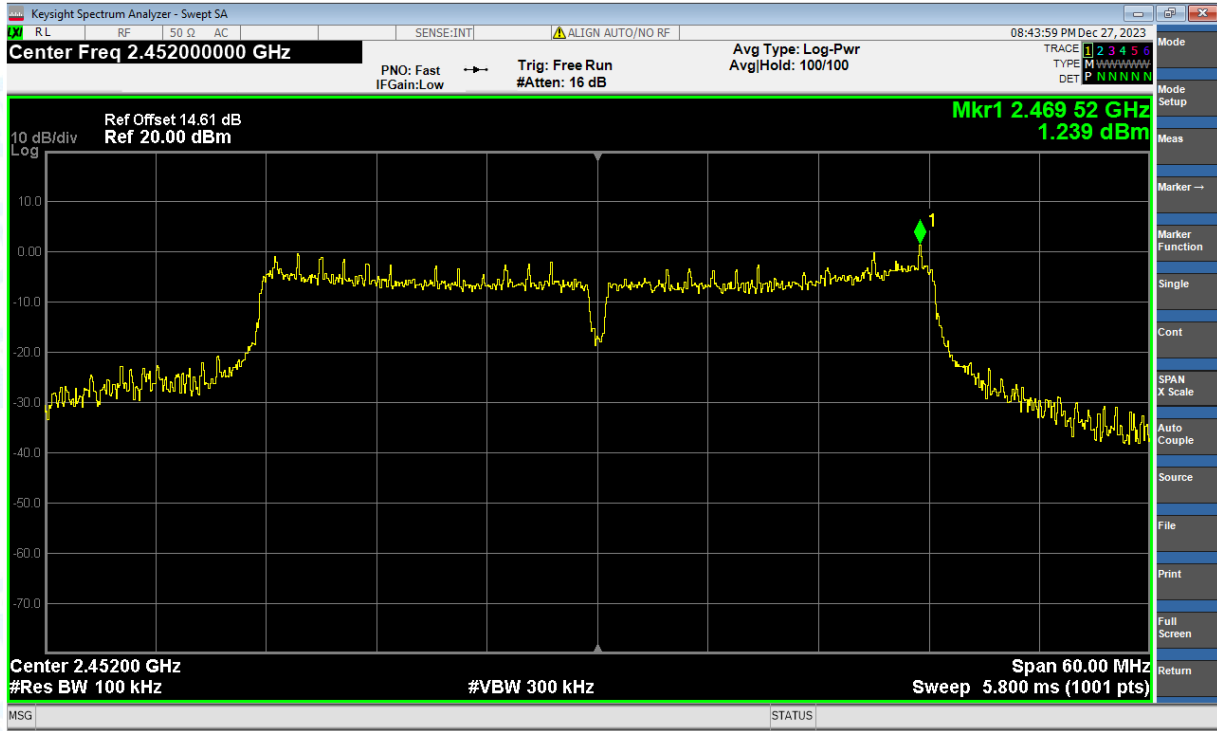
Band Edge NVNT n(HT40) 2422MHz Ant1 Ref



Band Edge NVNT n(HT40) 2422MHz Ant1 Emission



Band Edge NVNT n(HT40) 2452MHz Ant1 Ref



Band Edge NVNT n(HT40) 2452MHz Ant1 Emission



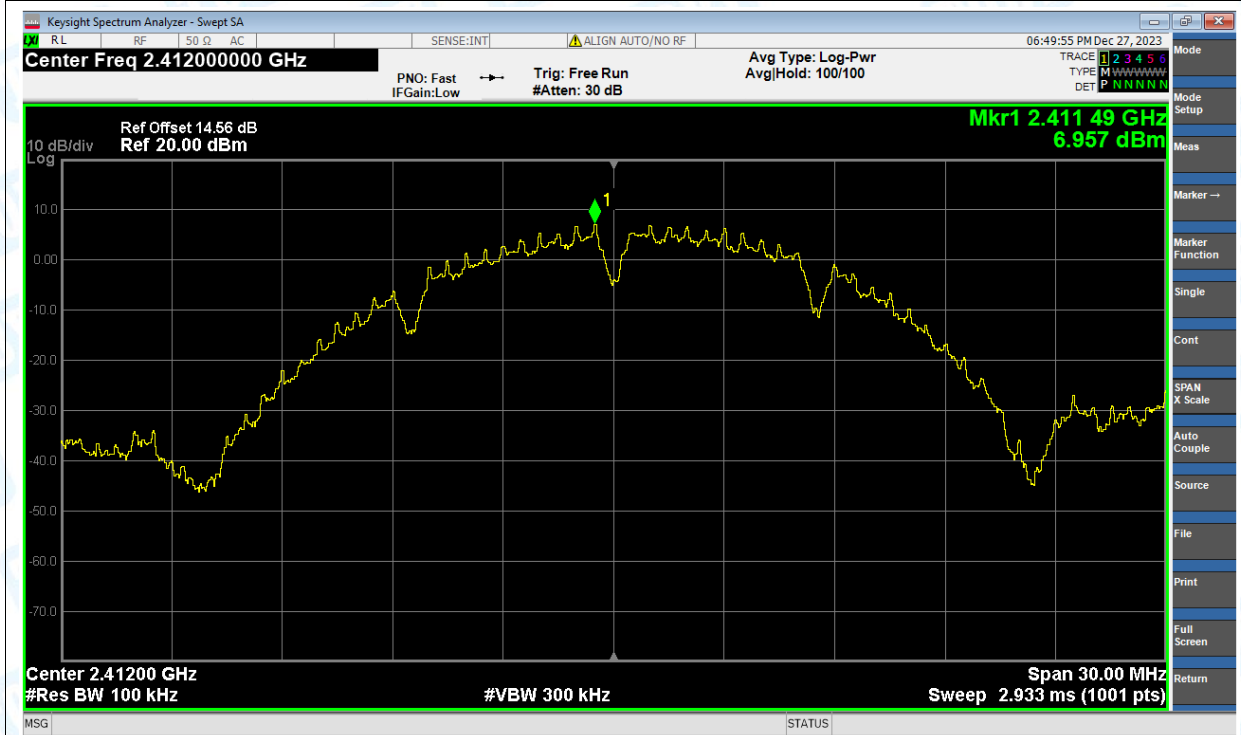


## 7. Conducted RF Spurious Emission

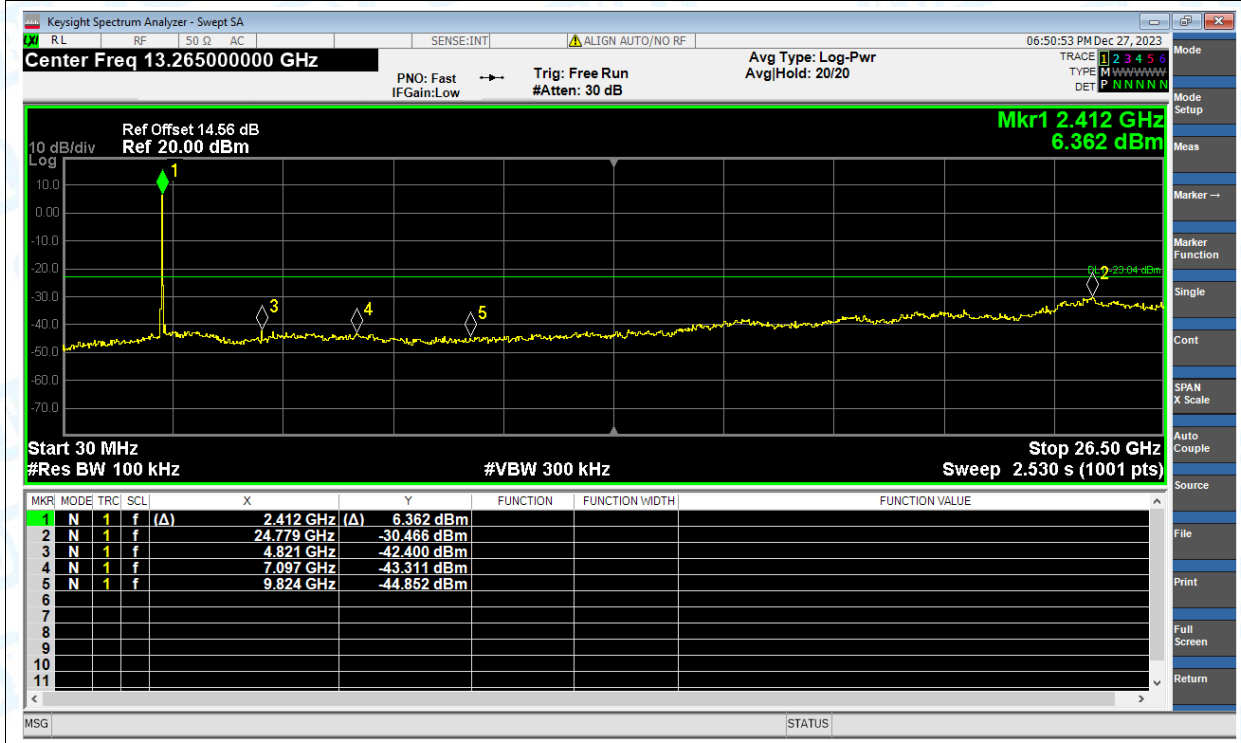
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-37.43	-30	Pass
NVNT	b	2437	Ant1	-37.96	-30	Pass
NVNT	b	2462	Ant1	-47.4	-30	Pass
NVNT	g	2412	Ant1	-32.95	-30	Pass
NVNT	g	2437	Ant1	-33.64	-30	Pass
NVNT	g	2462	Ant1	-34.64	-30	Pass
NVNT	n(HT20)	2412	Ant1	-43.04	-30	Pass
NVNT	n(HT20)	2437	Ant1	-35.24	-30	Pass
NVNT	n(HT20)	2462	Ant1	-33.86	-30	Pass
NVNT	n(HT40)	2422	Ant1	-43.04	-30	Pass
NVNT	n(HT40)	2437	Ant1	-33.13	-30	Pass
NVNT	n(HT40)	2452	Ant1	-39.11	-30	Pass

Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref



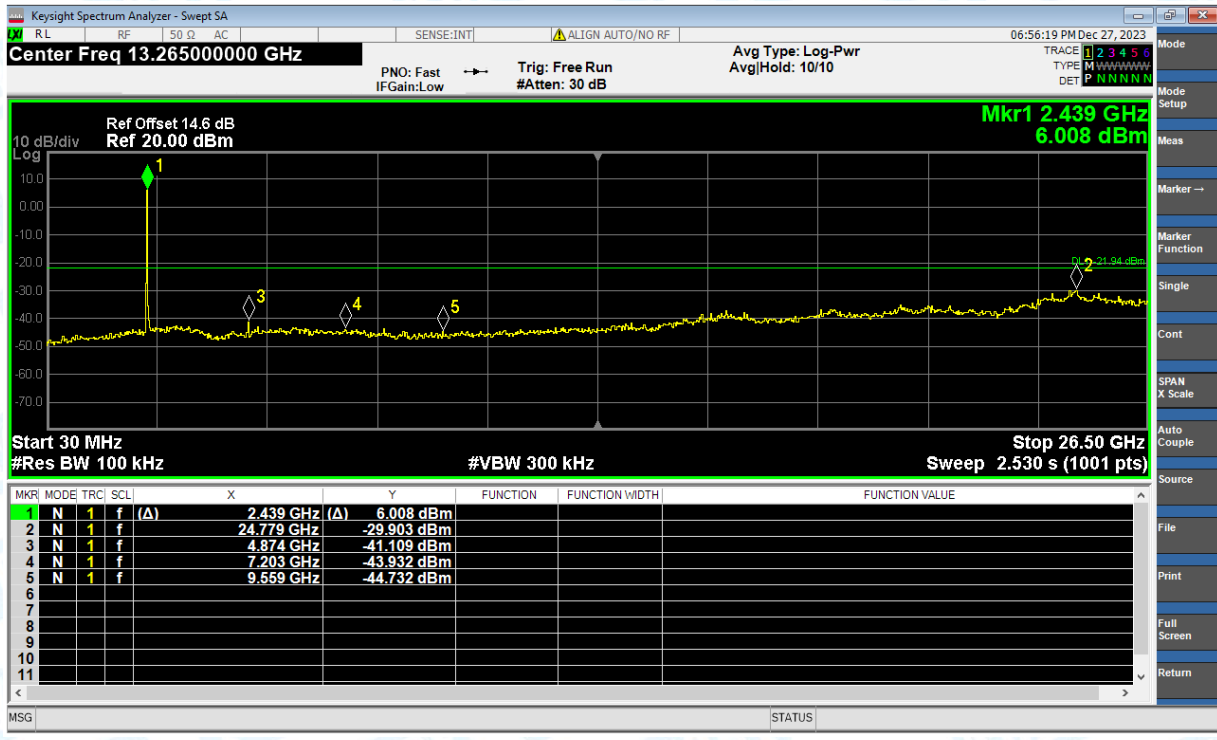
Tx. Spurious NVNT b 2412MHz Ant1 Emission



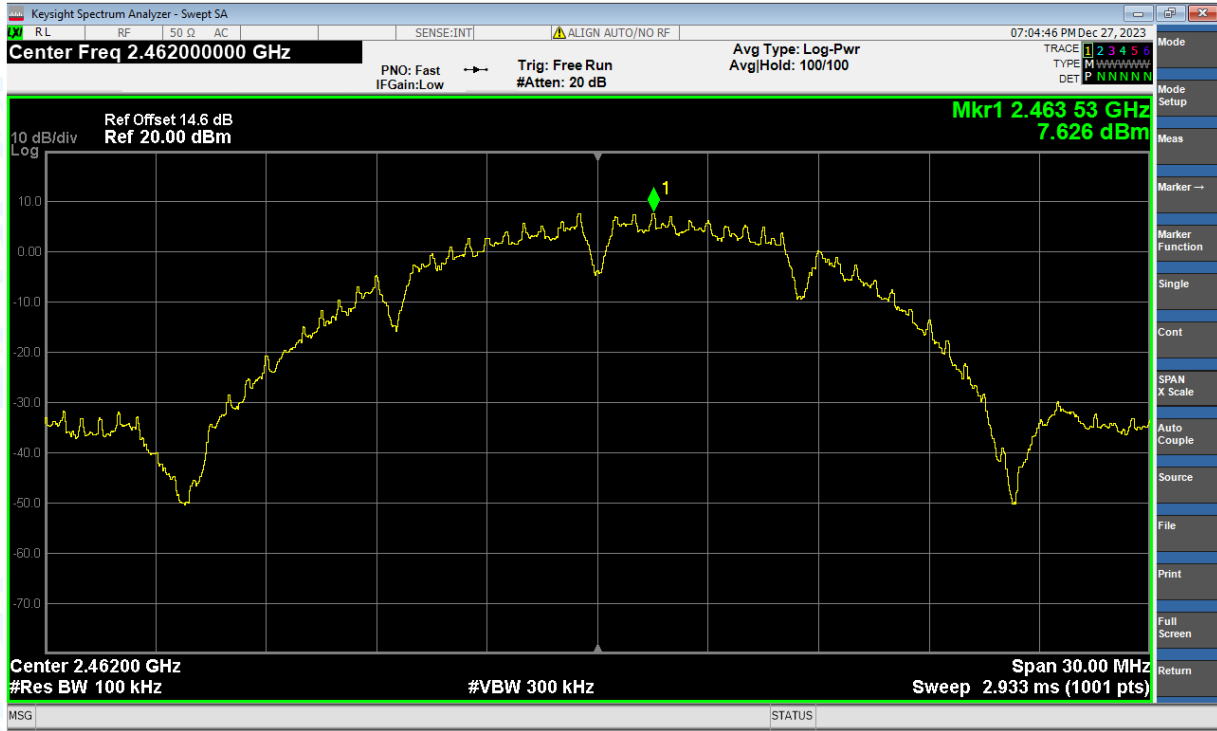
Tx. Spurious NVNT b 2437MHz Ant1 Ref



Tx. Spurious NVNT b 2437MHz Ant1 Emission



Tx. Spurious NVNT b 2462MHz Ant1 Ref



Tx. Spurious NVNT b 2462MHz Ant1 Emission

