RF Test Data for 2.4G WiFi (Conducted Measurements)

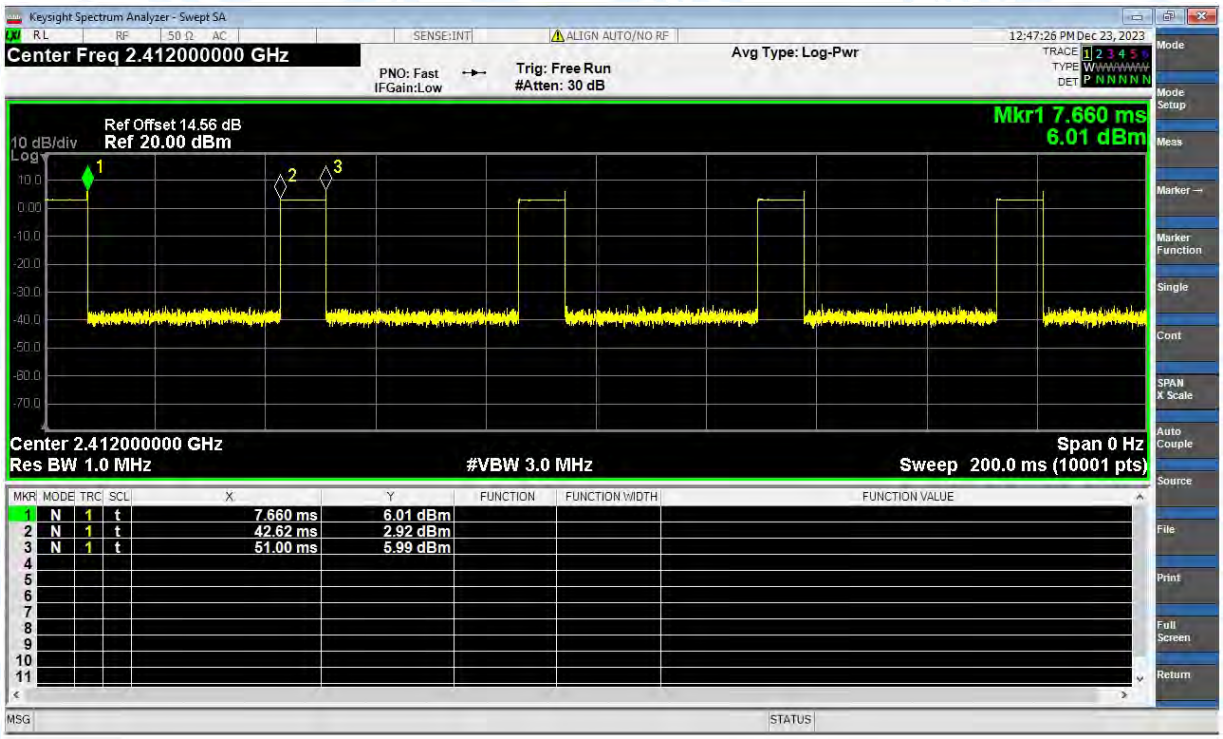
General Description of EUT	
Product Name:	WiFi Temperature & Humidity Sensor
Test Model:	TH01
Sample ID:	202312-0065-10-2#
Environmental Conditions	
Temperature:	24℃
Relative Humidity:	50%
Test Voltage:	DC 3V
Test Engineer:	Yanzhenming
Note: For a more detailed features description, please refer to the report TBR-C-202312-0065-25 The report only show the worst case data.	

Duty Cycle

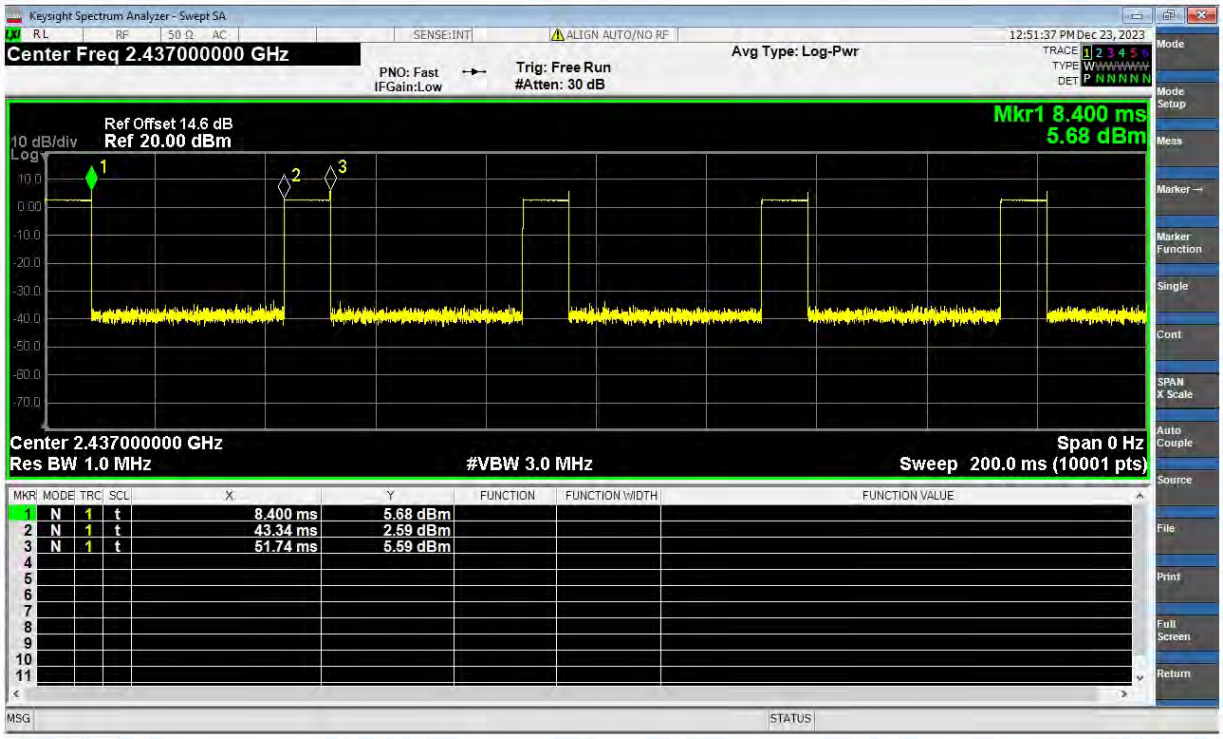
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	19.34	7.14	0.12
NVNT	b	2437	Ant1	19.38	7.13	0.12
NVNT	b	2462	Ant1	19.38	7.13	0.12
NVNT	g	2412	Ant1	10.01	10	0.71
NVNT	g	2437	Ant1	10.01	10	0.71
NVNT	g	2462	Ant1	10.01	10	0.71
NVNT	n(HT20)	2412	Ant1	10.03	9.99	0.76
NVNT	n(HT20)	2437	Ant1	10.03	9.99	0.76
NVNT	n(HT20)	2462	Ant1	9.95	10.02	0.77
NVNT	n(HT40)	2422	Ant1	9.94	10.03	1.54
NVNT	n(HT40)	2437	Ant1	9.95	10.02	1.54
NVNT	n(HT40)	2452	Ant1	9.94	10.03	1.54

Test Graphs

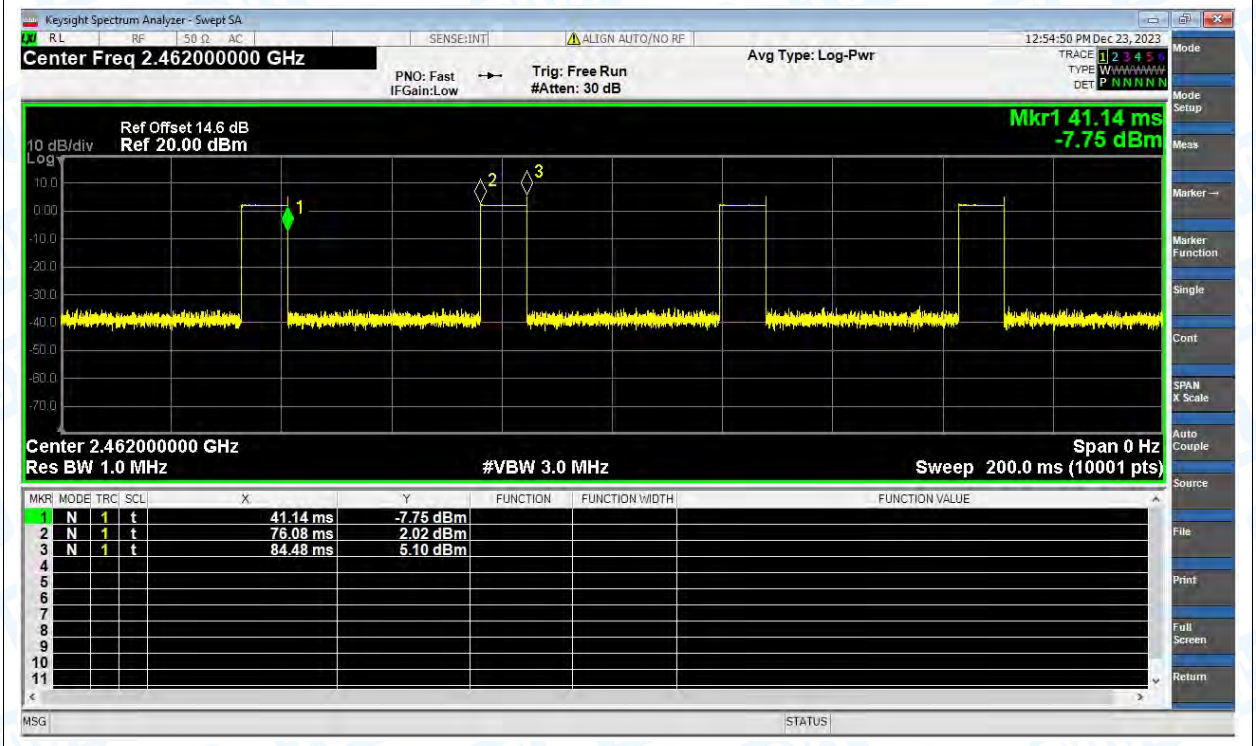
Duty Cycle NVNT b 2412MHz Ant1



Duty Cycle NVNT b 2437MHz Ant1

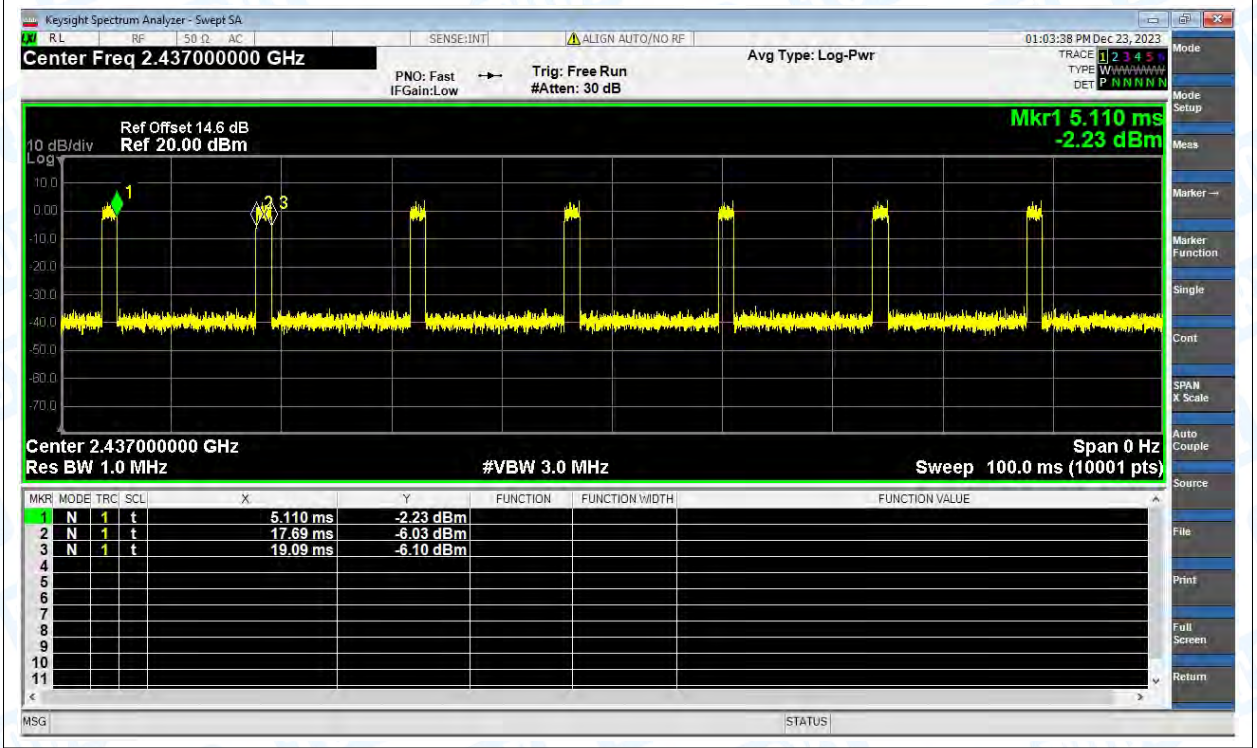


Duty Cycle NVNT b 2462MHz Ant1

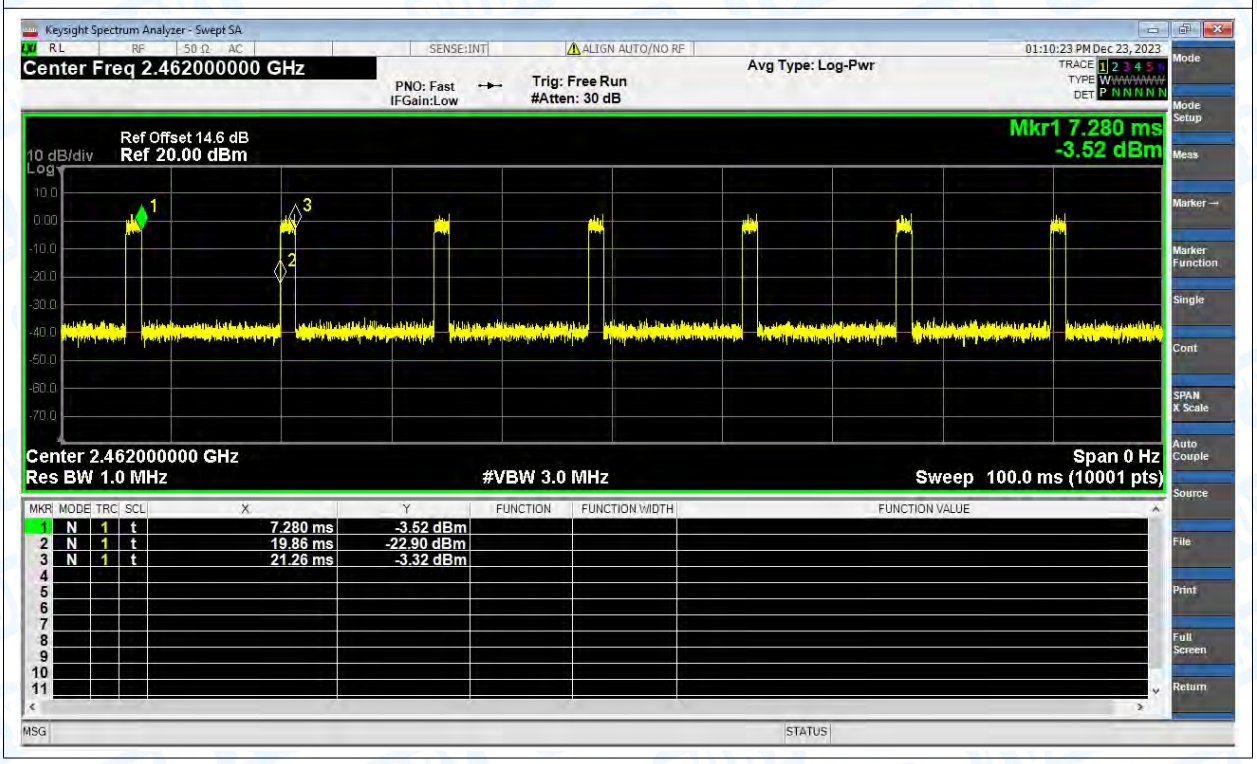


Duty Cycle NVNT g 2412MHz Ant1

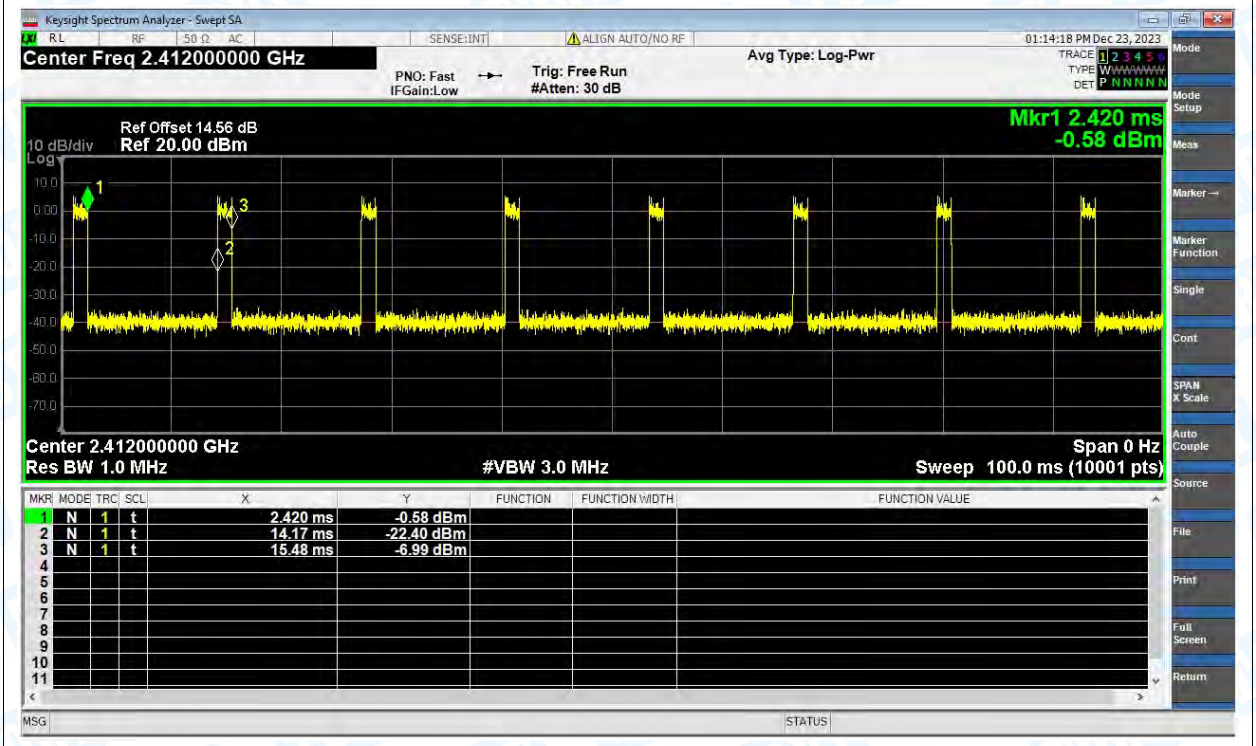
Duty Cycle NVNT g 2437MHz Ant1



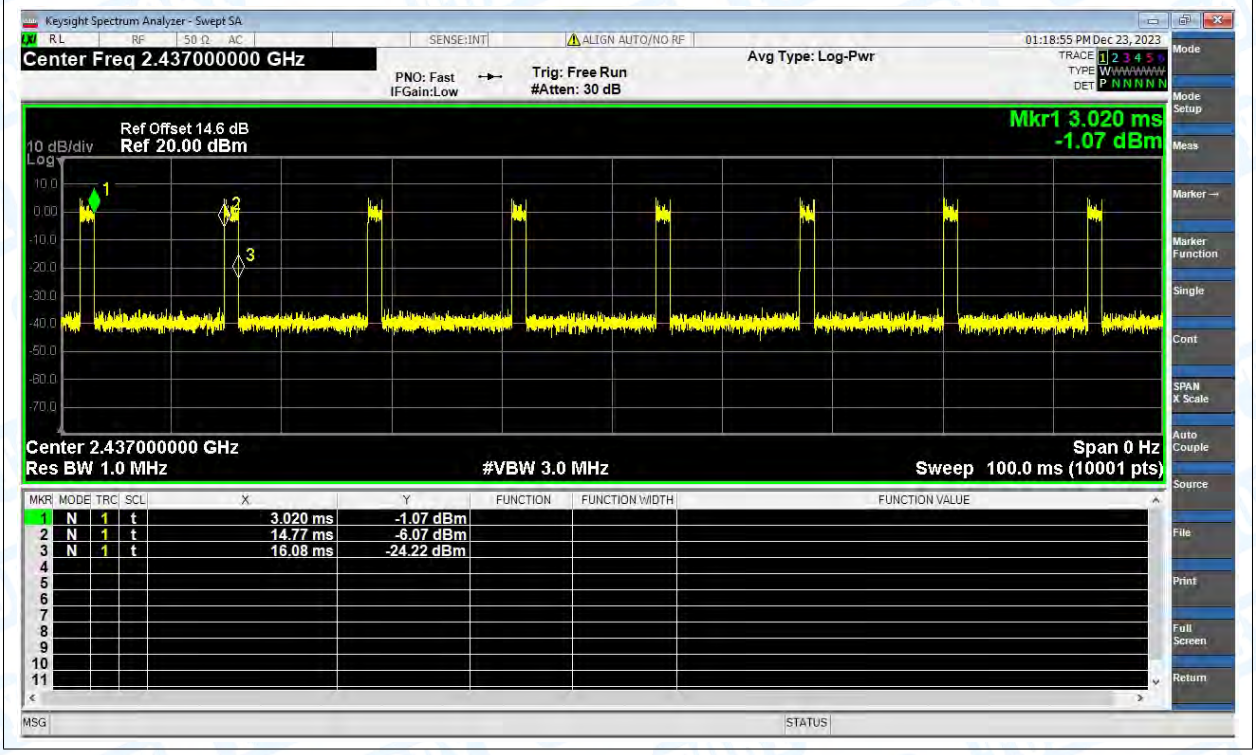
Duty Cycle NVNT g 2462MHz Ant1



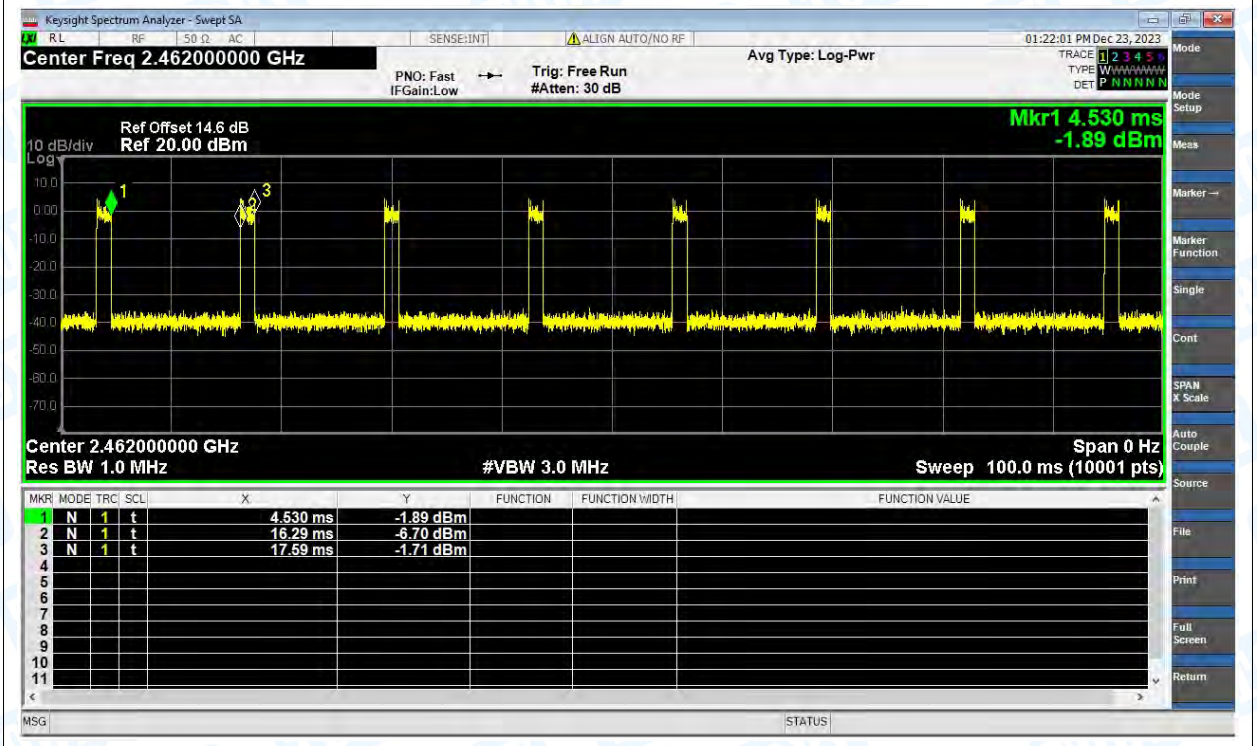
Duty Cycle NVNT n(HT20) 2412MHz Ant1



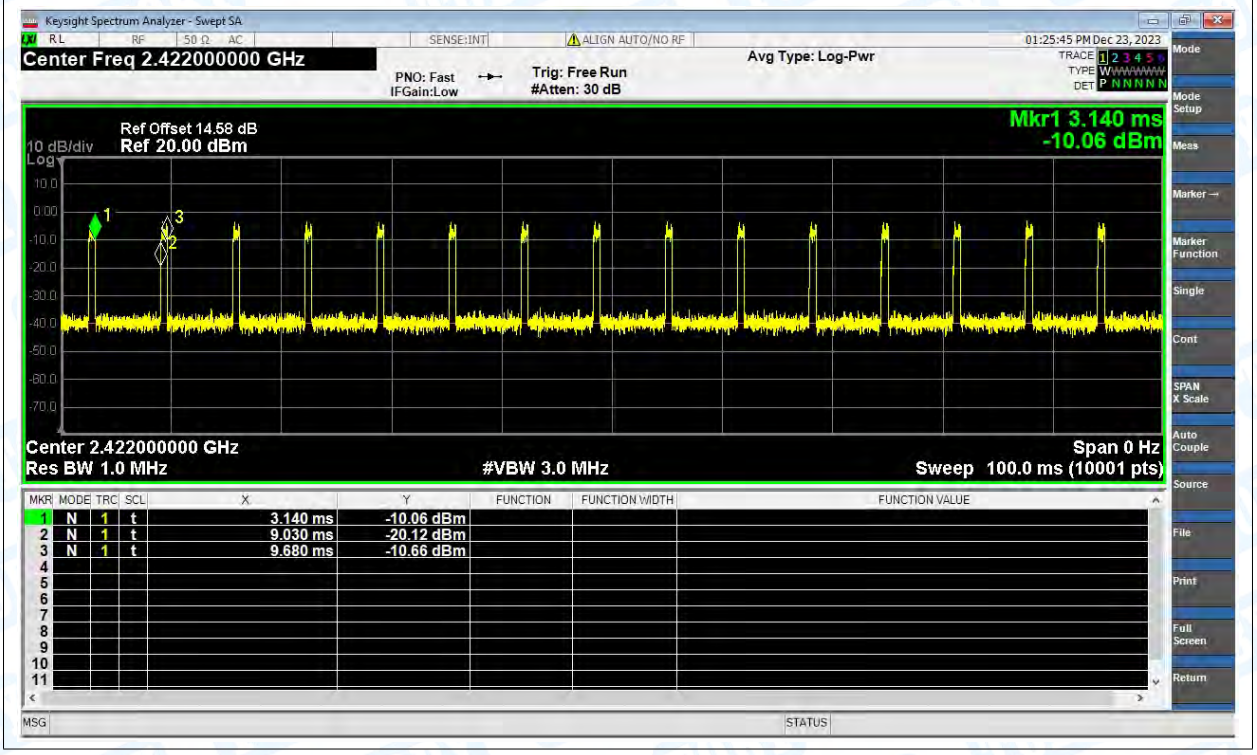
Duty Cycle NVNT n(HT20) 2437MHz Ant1



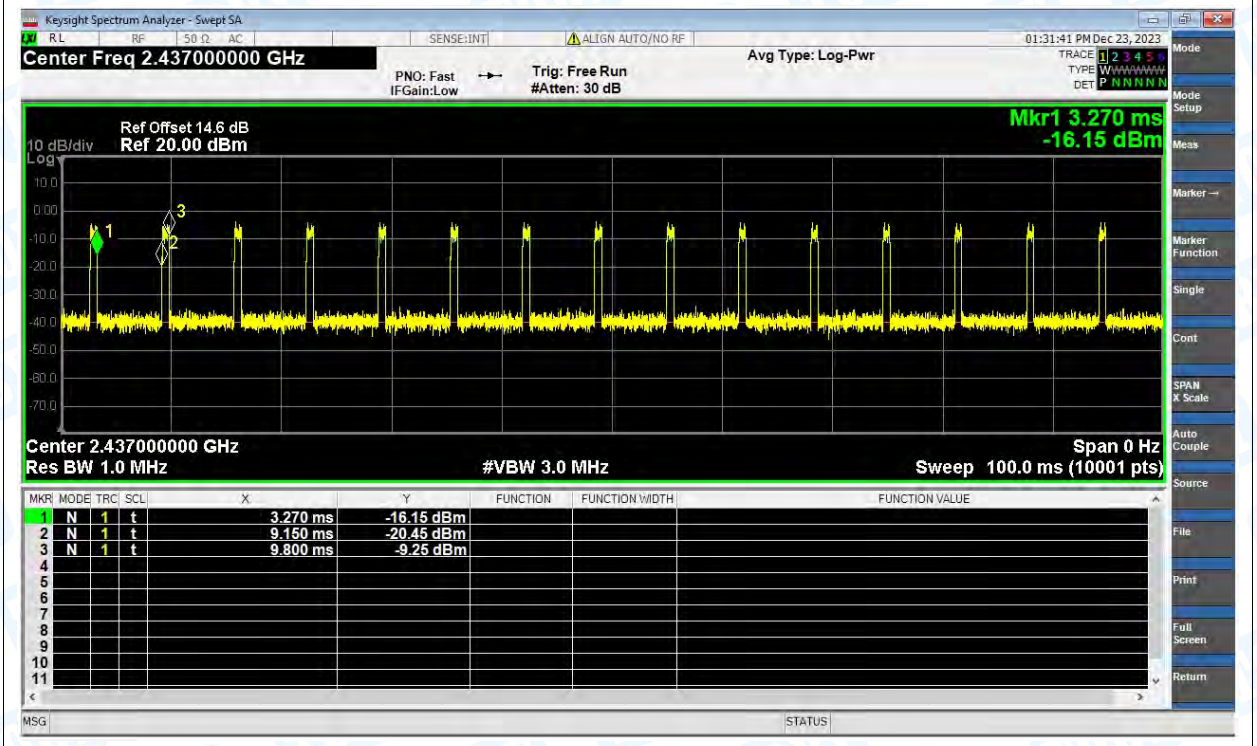
Duty Cycle NVNT n(HT20) 2462MHz Ant1



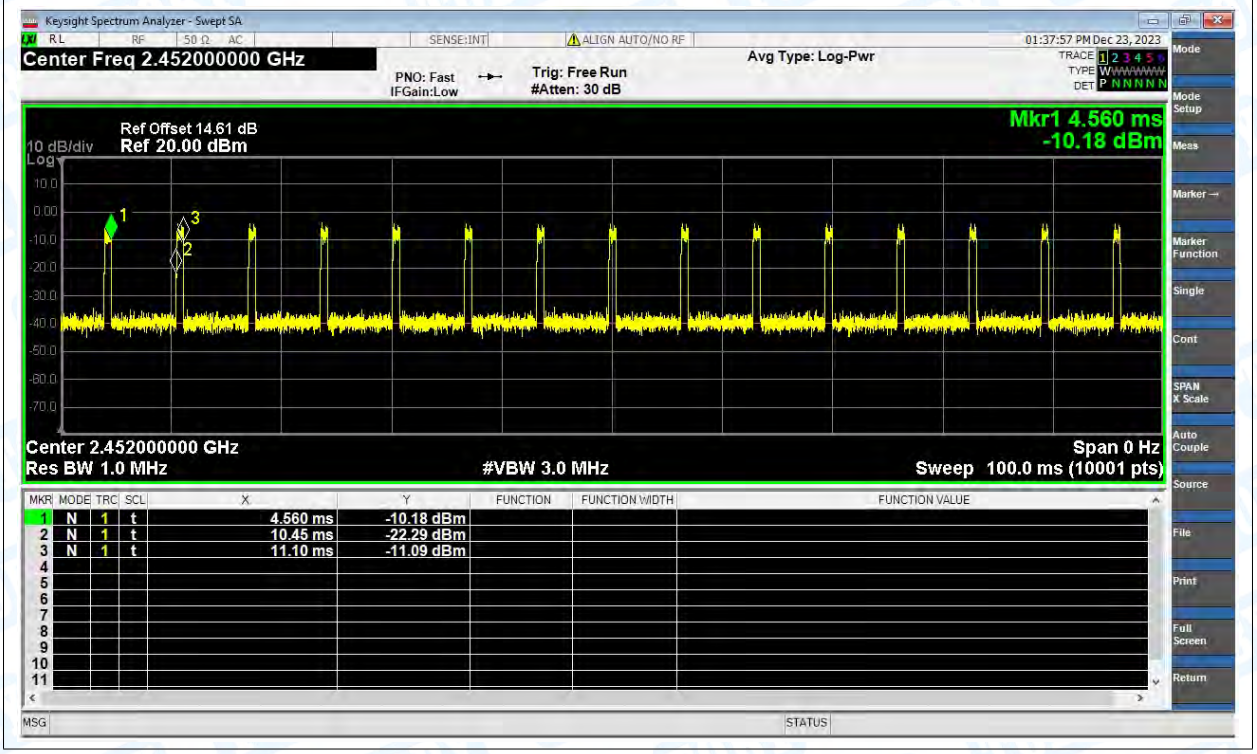
Duty Cycle NVNT n(HT40) 2422MHz Ant1



Duty Cycle NVNT n(HT40) 2437MHz Ant1



Duty Cycle NVNT n(HT40) 2452MHz Ant1



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	9.28	7.14	16.42	30	Pass
NVNT	b	2437	Ant1	8.86	7.13	15.99	30	Pass
NVNT	b	2462	Ant1	8.17	7.13	15.3	30	Pass
NVNT	g	2412	Ant1	6.28	10	16.28	30	Pass
NVNT	g	2437	Ant1	5.73	10	15.73	30	Pass
NVNT	g	2462	Ant1	5.06	10	15.06	30	Pass
NVNT	n(HT20)	2412	Ant1	6.26	9.99	16.25	30	Pass
NVNT	n(HT20)	2437	Ant1	5.64	9.99	15.63	30	Pass
NVNT	n(HT20)	2462	Ant1	4.97	10.02	14.99	30	Pass
NVNT	n(HT40)	2422	Ant1	4.96	10.03	14.99	30	Pass
NVNT	n(HT40)	2437	Ant1	4.35	10.02	14.37	30	Pass
NVNT	n(HT40)	2452	Ant1	4.3	10.03	14.33	30	Pass

-6dB Bandwidth

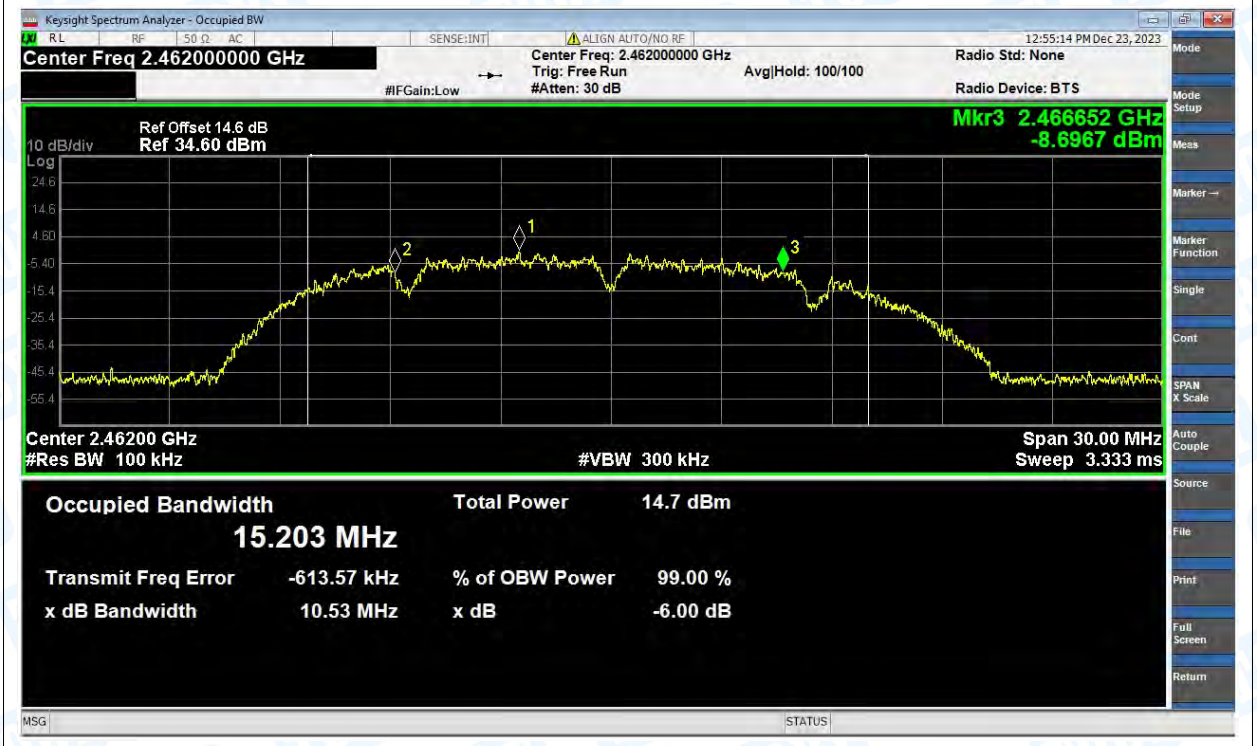
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.58	0.5	Pass
NVNT	b	2437	Ant1	10.49	0.5	Pass
NVNT	b	2462	Ant1	10.53	0.5	Pass
NVNT	g	2412	Ant1	17.15	0.5	Pass
NVNT	g	2437	Ant1	16.72	0.5	Pass
NVNT	g	2462	Ant1	17.1	0.5	Pass
NVNT	n(HT20)	2412	Ant1	18.24	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.81	0.5	Pass
NVNT	n(HT20)	2462	Ant1	16.77	0.5	Pass
NVNT	n(HT40)	2422	Ant1	34.78	0.5	Pass
NVNT	n(HT40)	2437	Ant1	34.86	0.5	Pass
NVNT	n(HT40)	2452	Ant1	34.54	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1

-6dB Bandwidth NVNT b 2437MHz Ant1

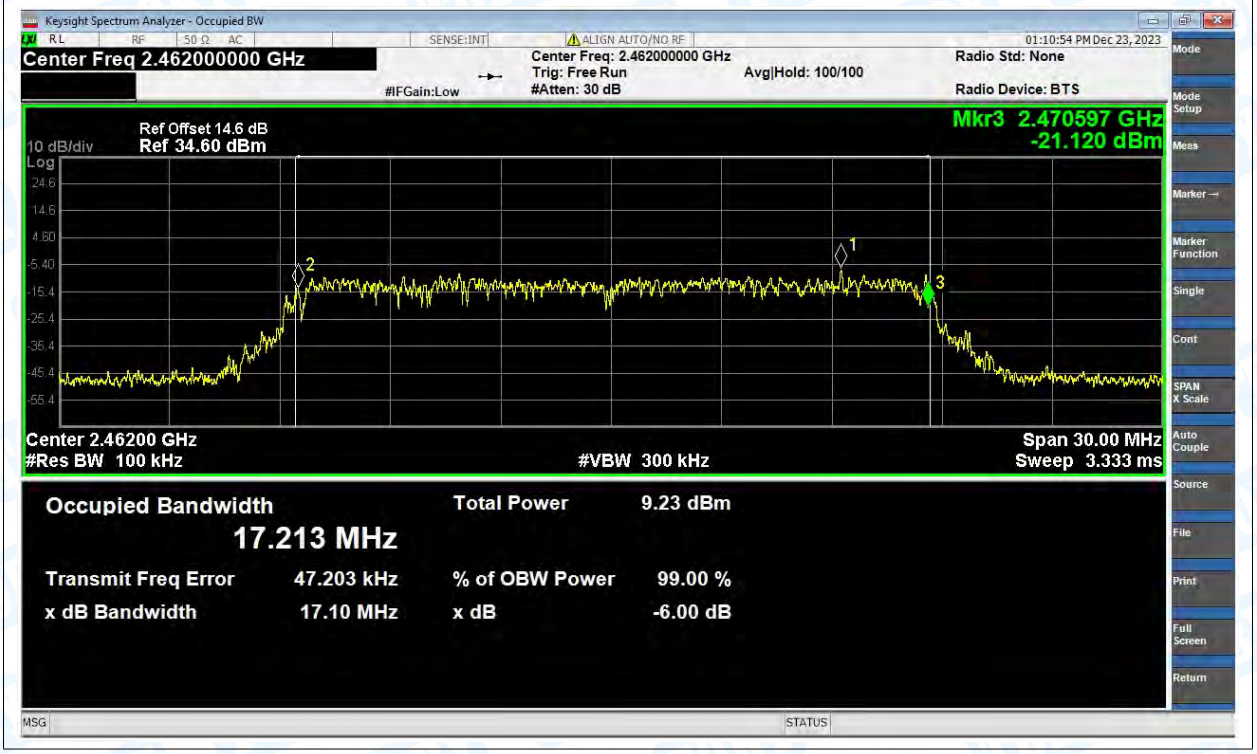
-6dB Bandwidth NVNT b 2462MHz Ant1



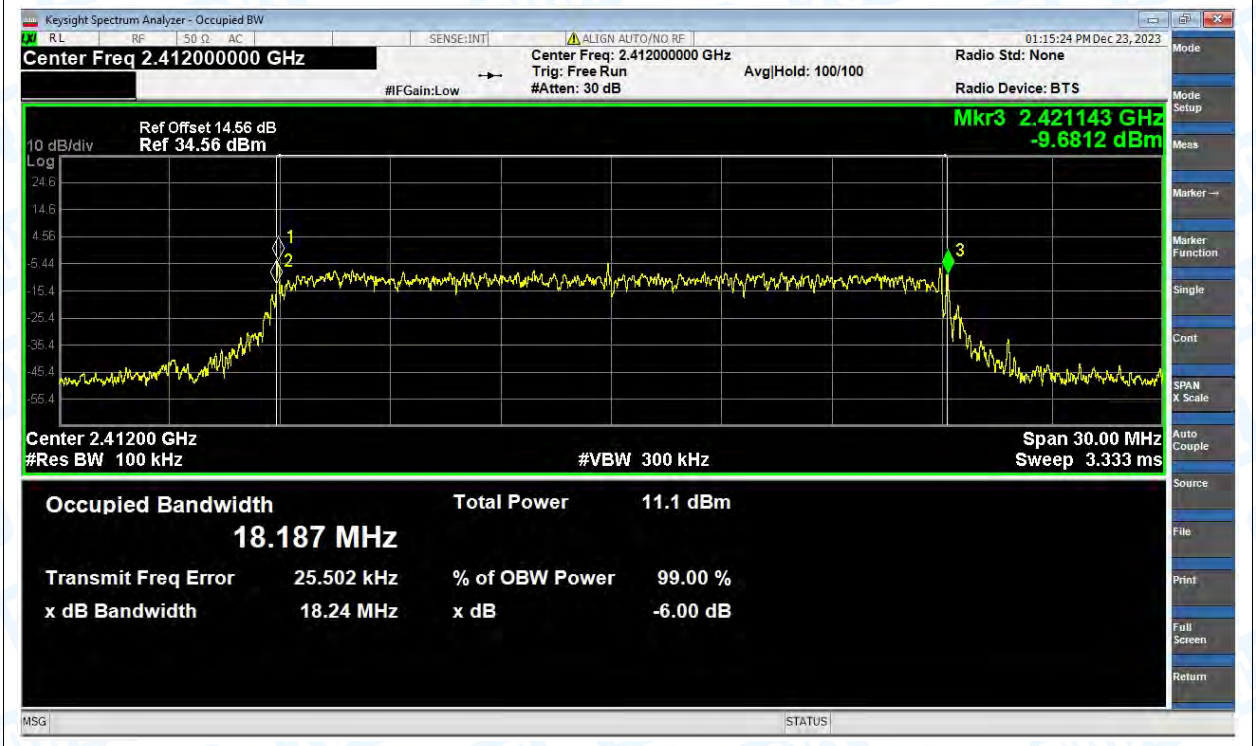
-6dB Bandwidth NVNT g 2412MHz Ant1

-6dB Bandwidth NVNT g 2437MHz Ant1

-6dB Bandwidth NVNT g 2462MHz Ant1

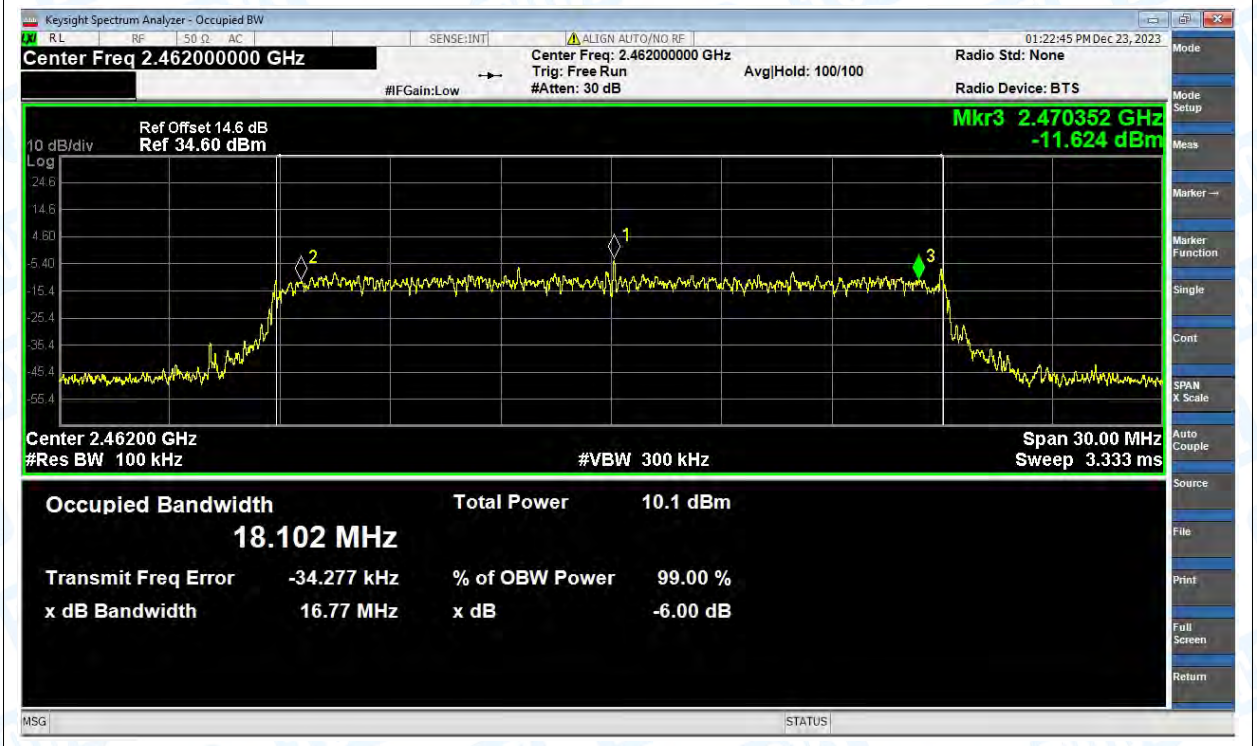


-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1

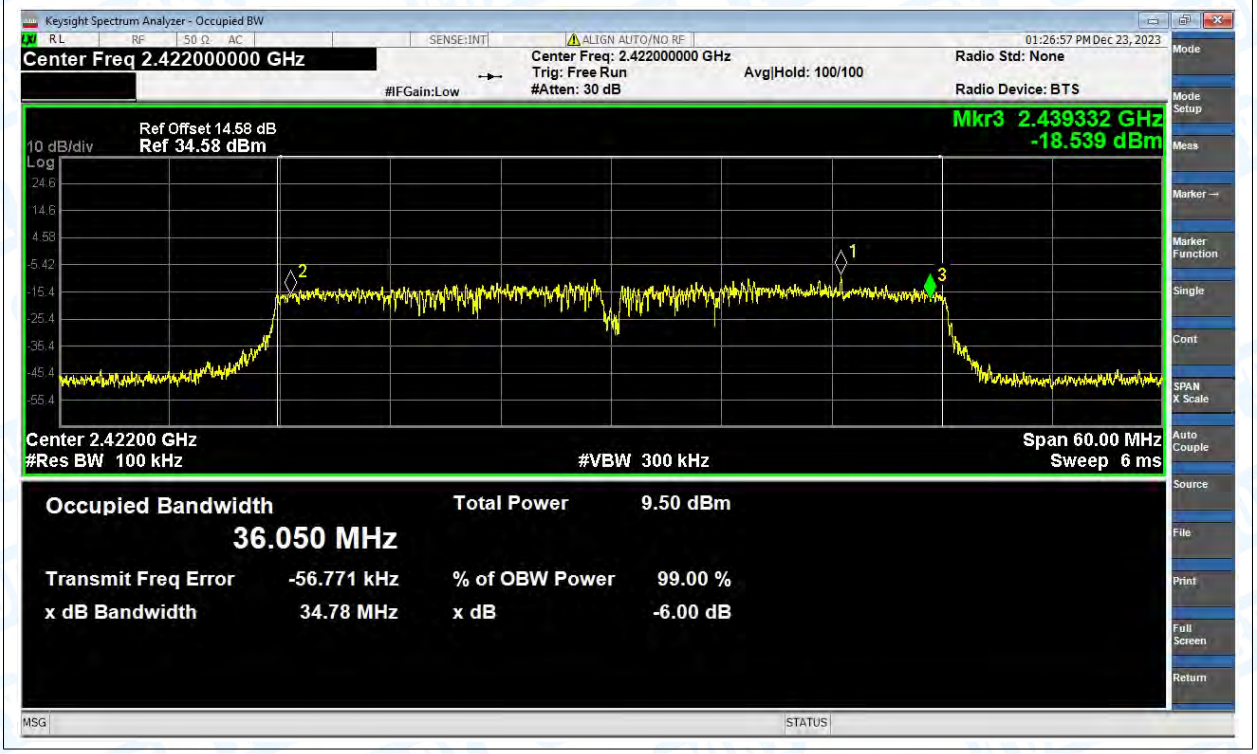


-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1

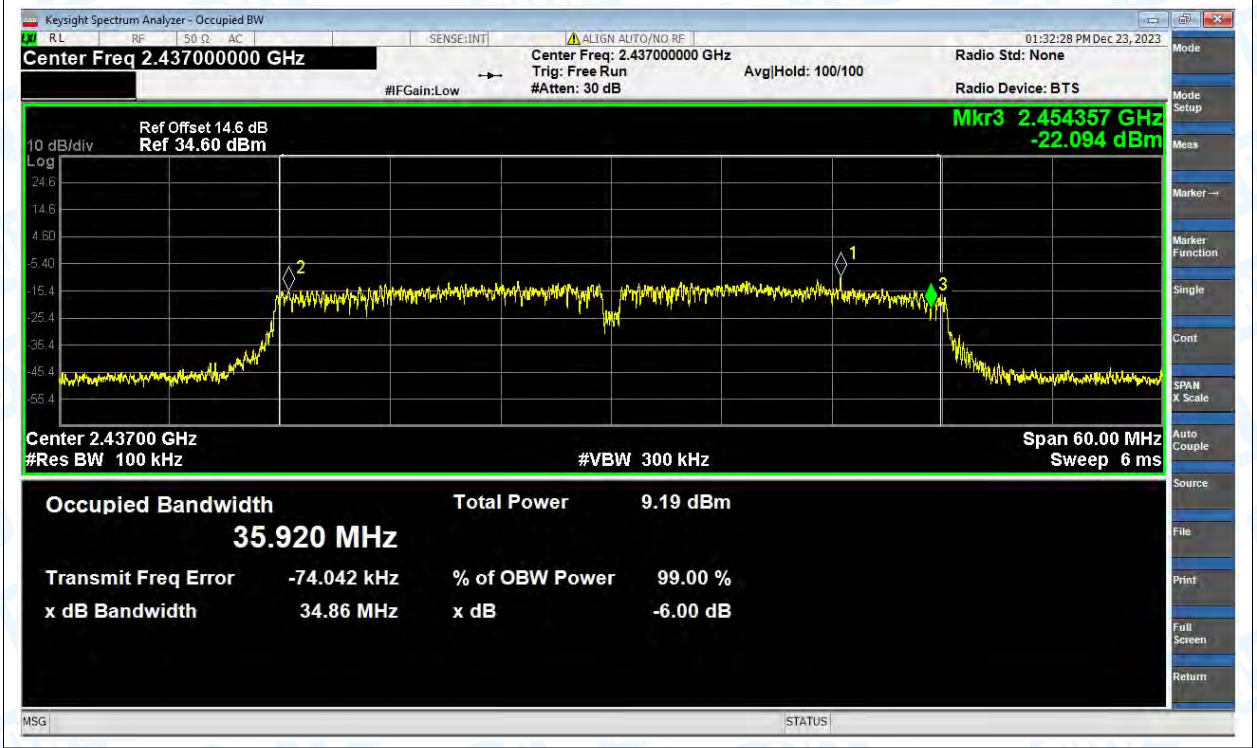
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



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



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



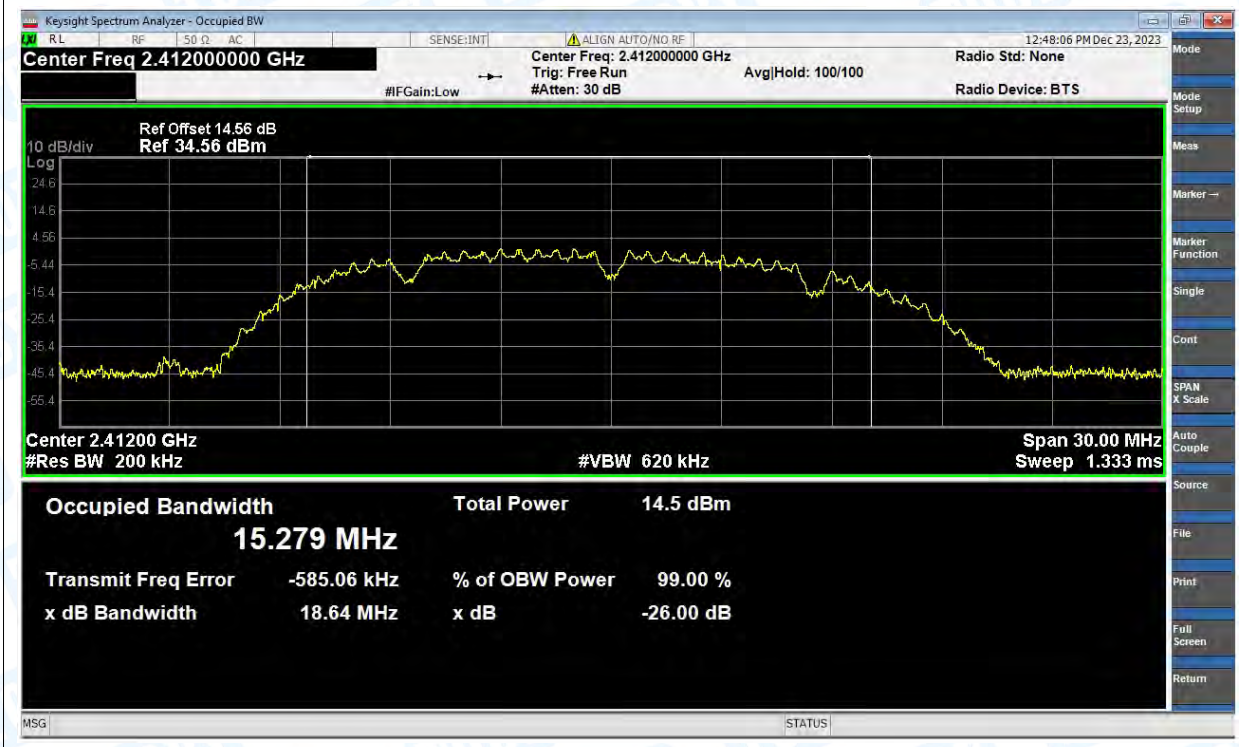
-6dB Bandwidth NVNT n(HT40) 2452MHz Ant1

Occupied Channel Bandwidth

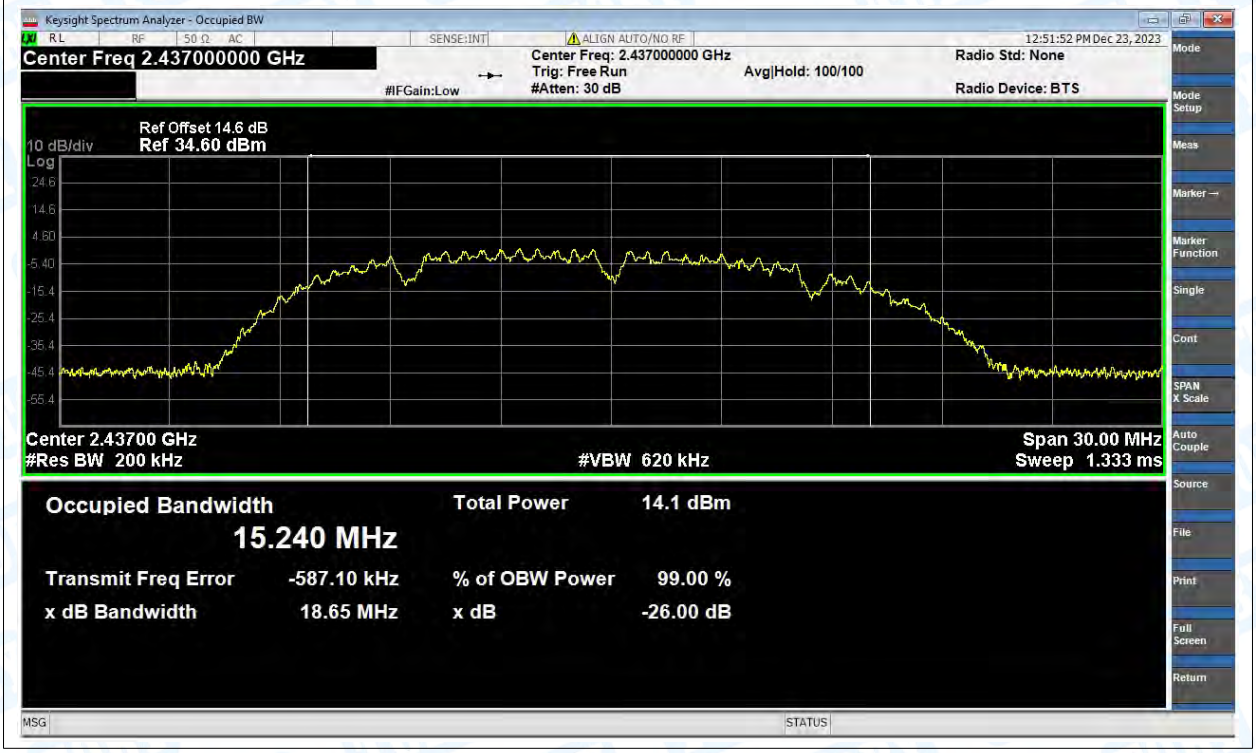
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	15.279
NVNT	b	2437	Ant1	15.24
NVNT	b	2462	Ant1	15.303
NVNT	g	2412	Ant1	16.986
NVNT	g	2437	Ant1	17.262
NVNT	g	2462	Ant1	17.244
NVNT	n(HT20)	2412	Ant1	18.114
NVNT	n(HT20)	2437	Ant1	17.927
NVNT	n(HT20)	2462	Ant1	17.842
NVNT	n(HT40)	2422	Ant1	35.98
NVNT	n(HT40)	2437	Ant1	35.89
NVNT	n(HT40)	2452	Ant1	35.921

Test Graphs

OBW NVNT b 2412MHz Ant1

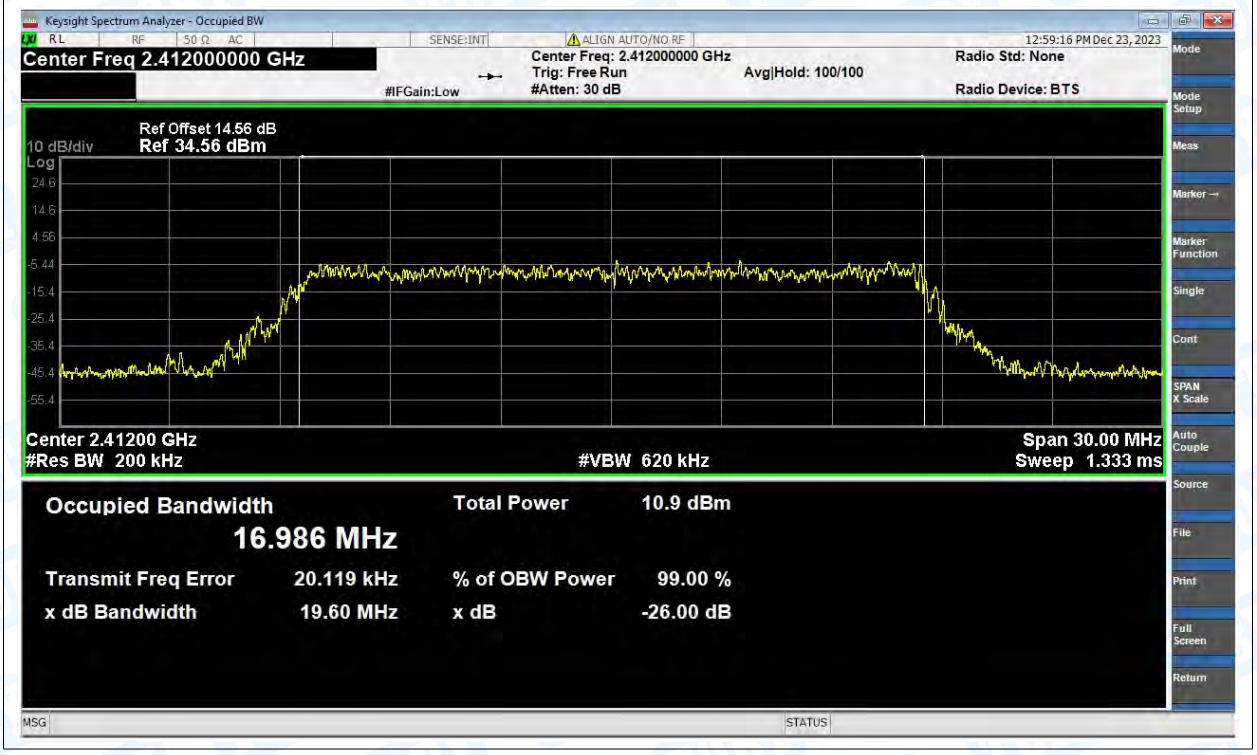


OBW NVNT b 2437MHz Ant1

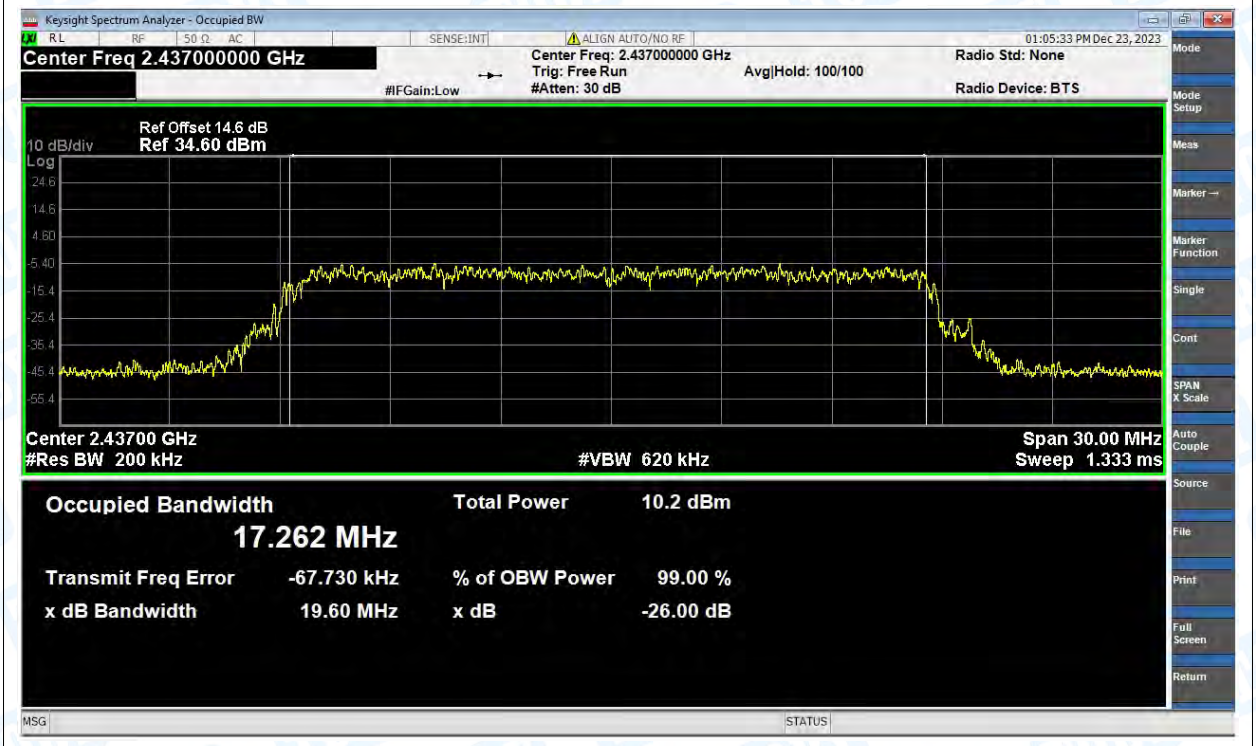


OBW NVNT b 2462MHz Ant1

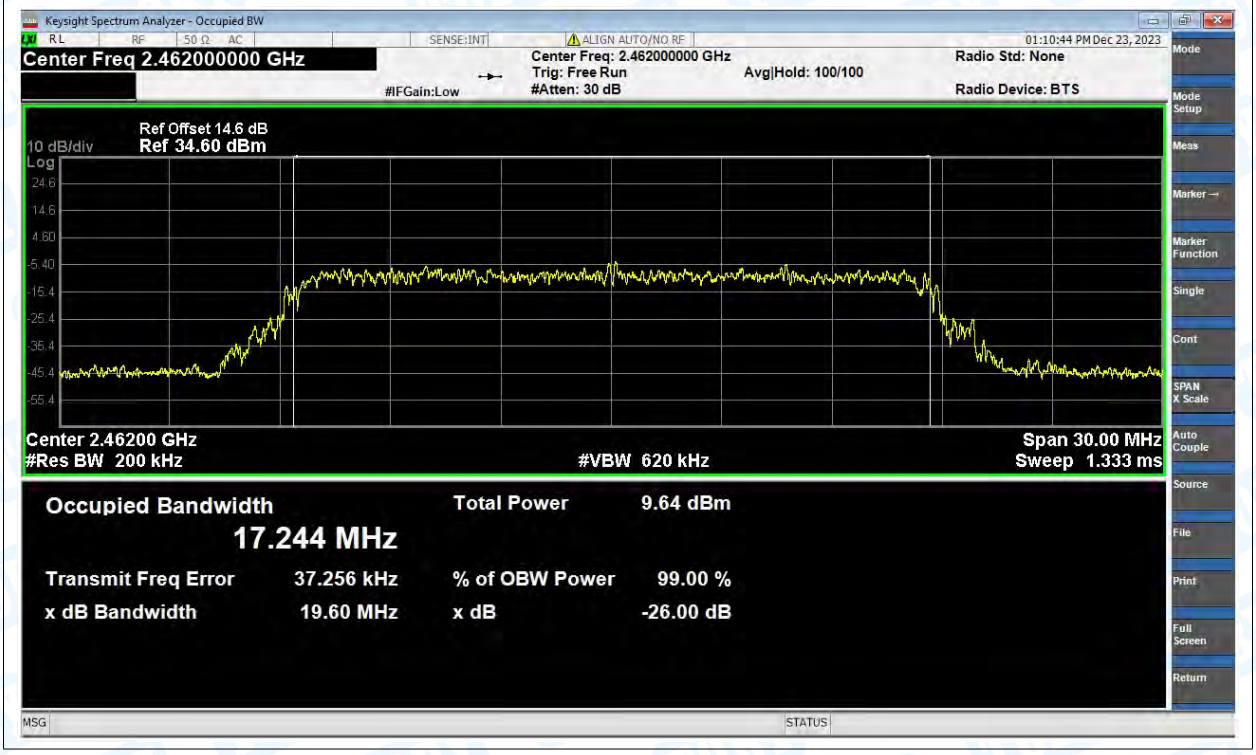
OBW NVNT g 2412MHz Ant1



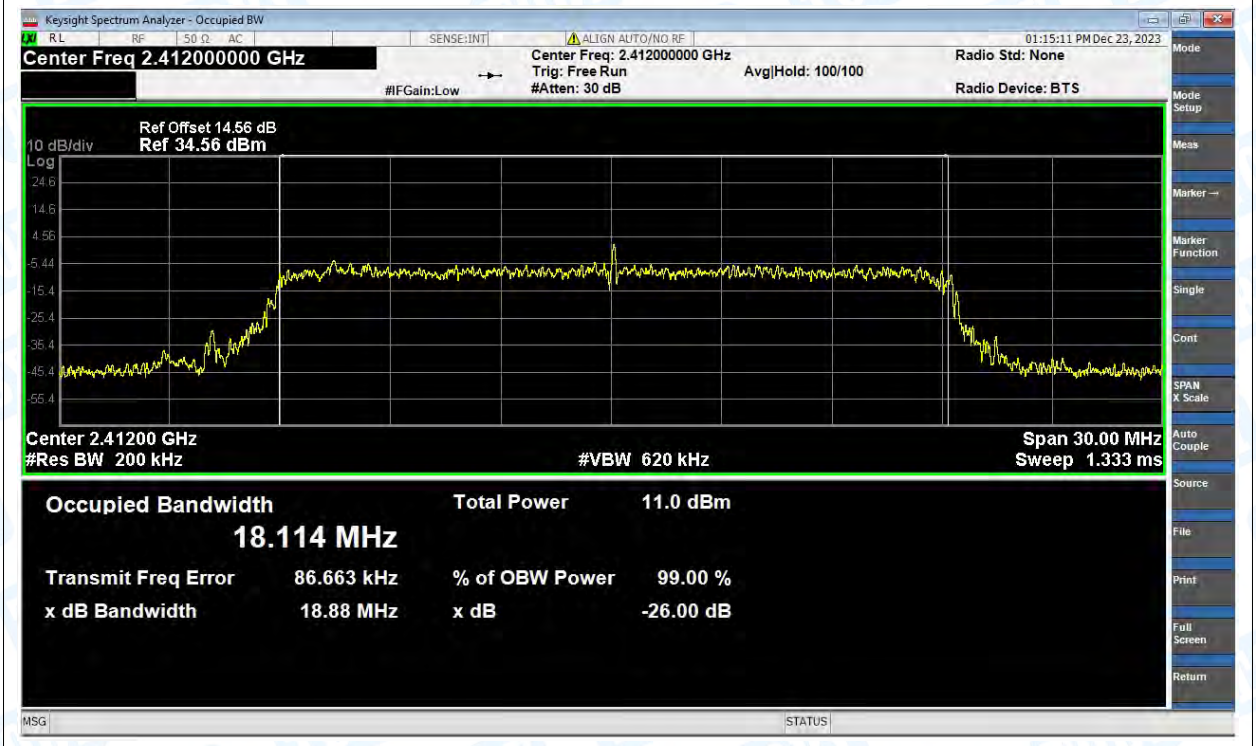
OBW NVNT g 2437MHz Ant1



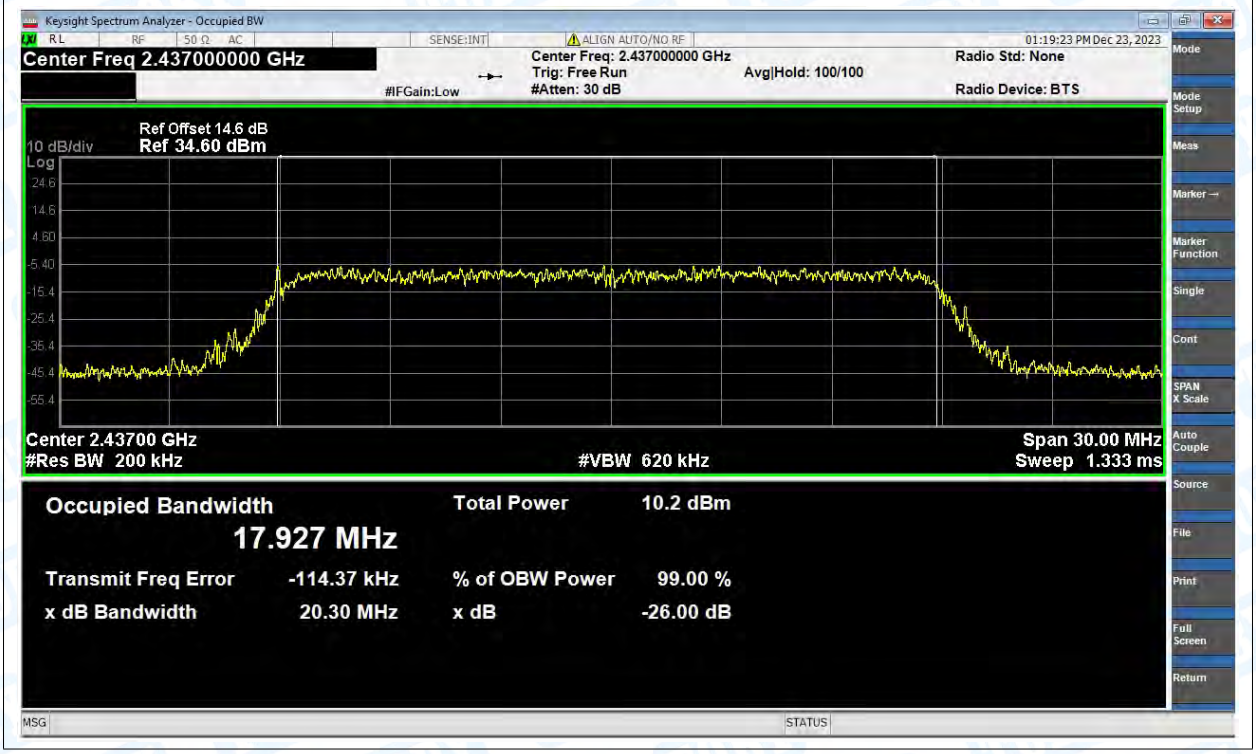
OBW NVNT g 2462MHz Ant1



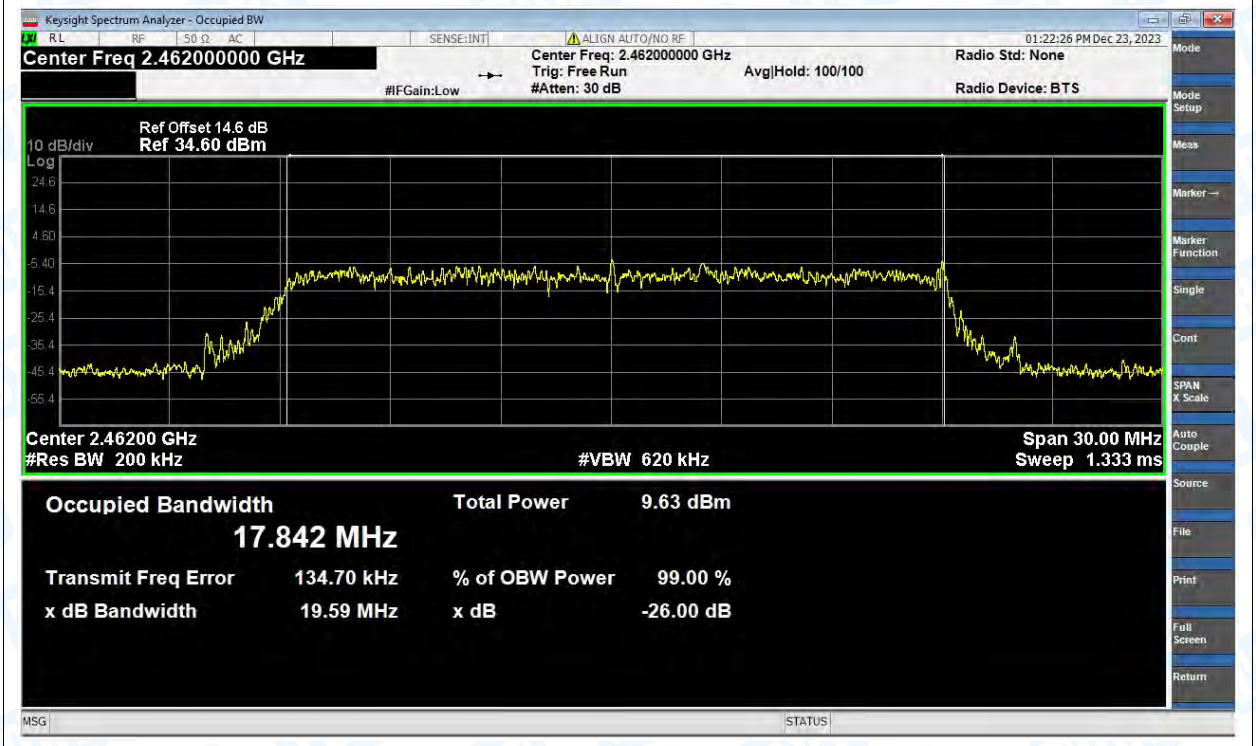
OBW NVNT n(HT20) 2412MHz Ant1



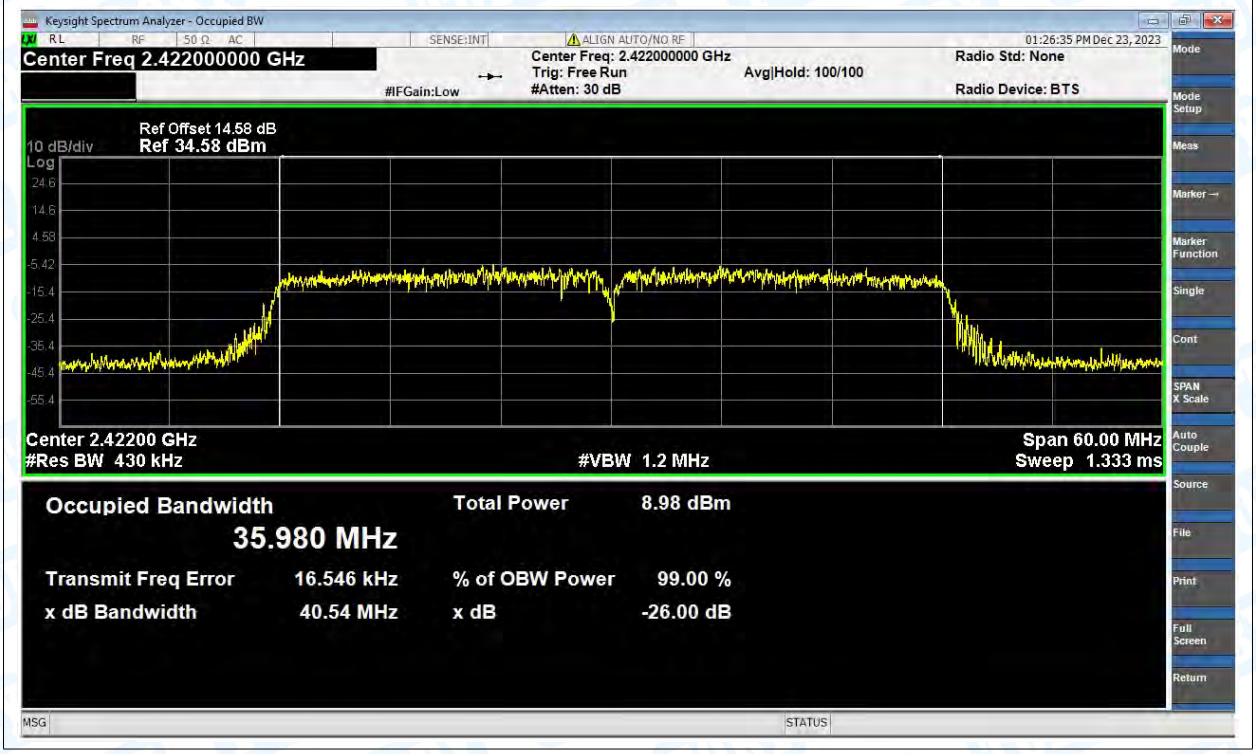
OBW NVNT n(HT20) 2437MHz Ant1



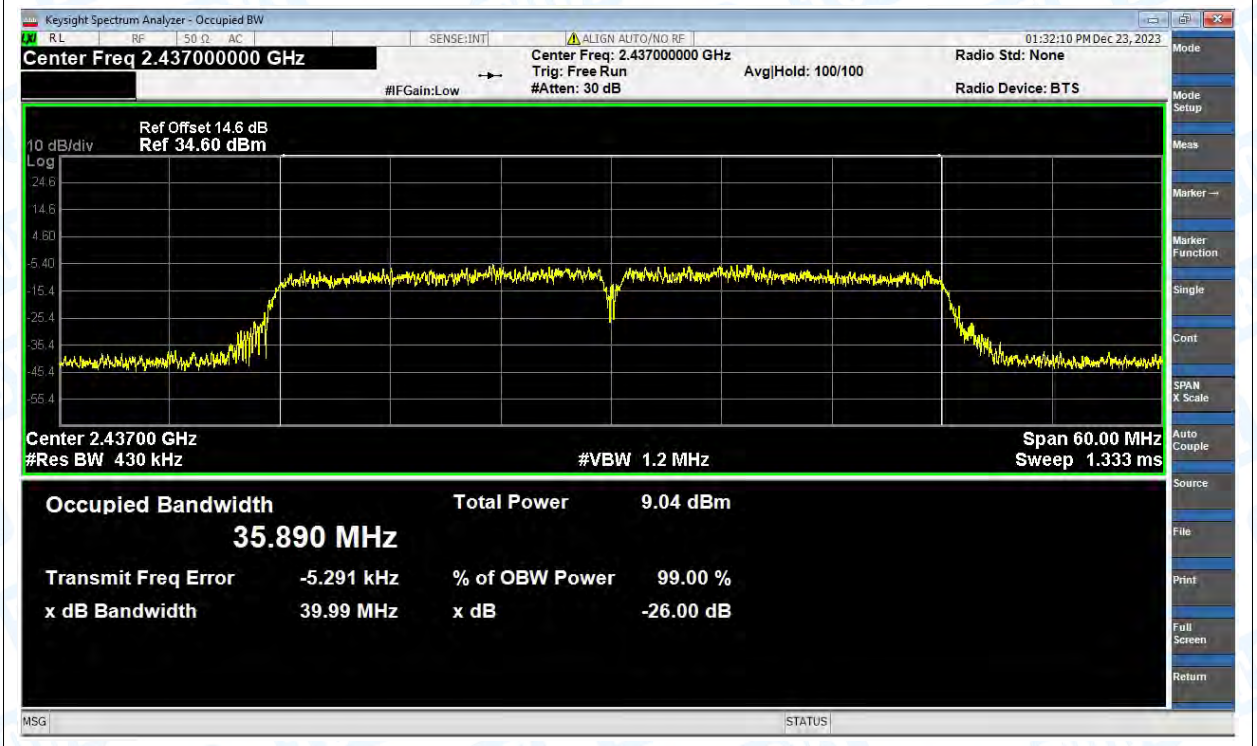
OBW NVNT n(HT20) 2462MHz Ant1



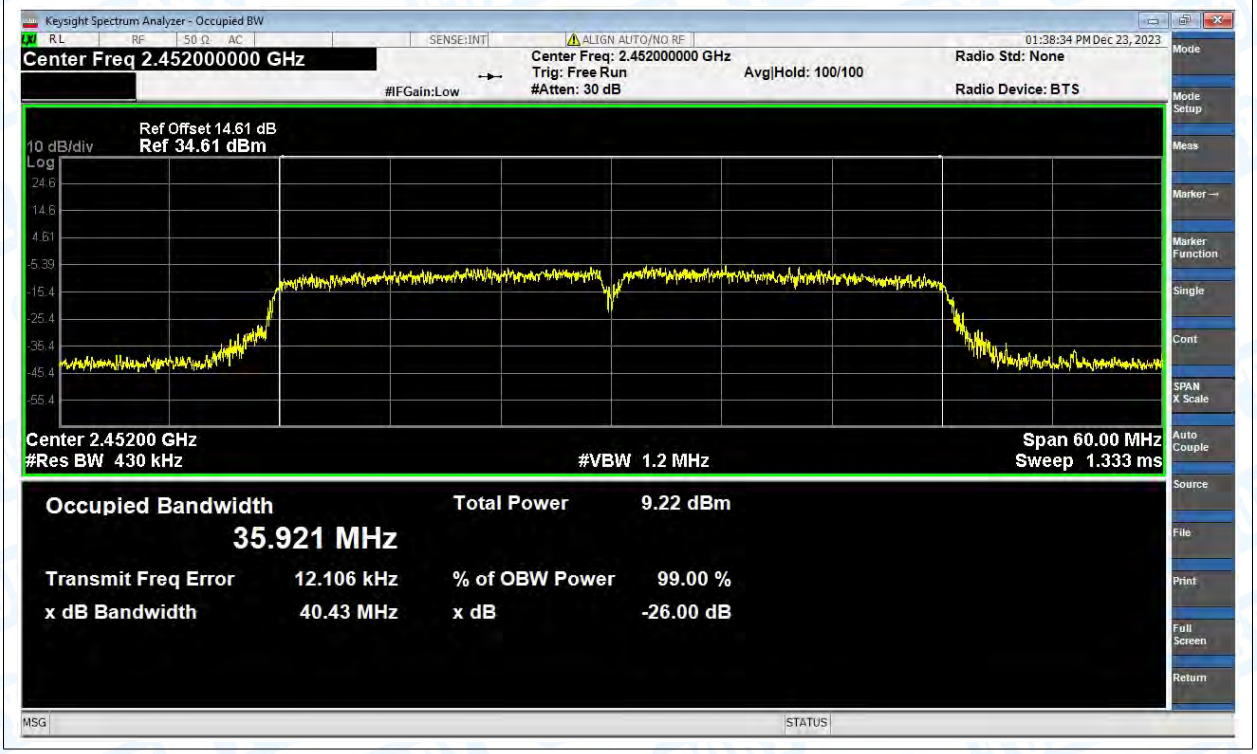
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2437MHz Ant1



OBW NVNT n(HT40) 2452MHz Ant1

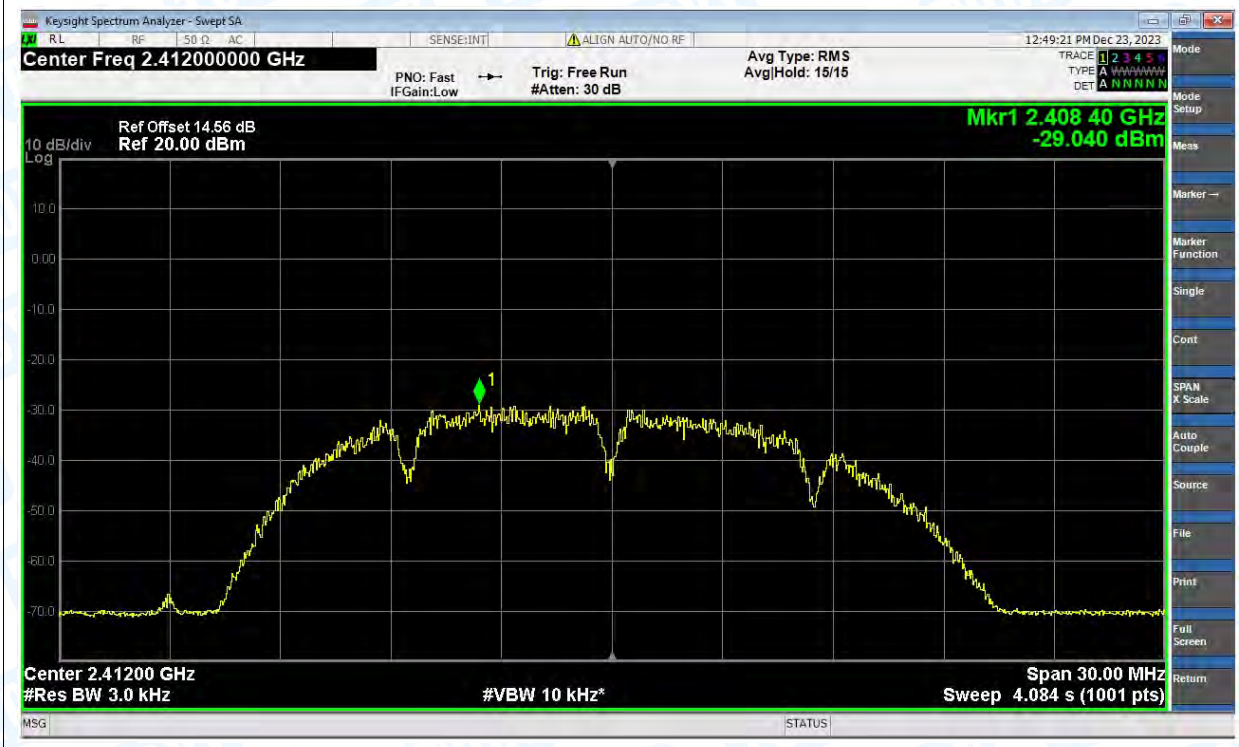


Maximum Power Spectral Density Level

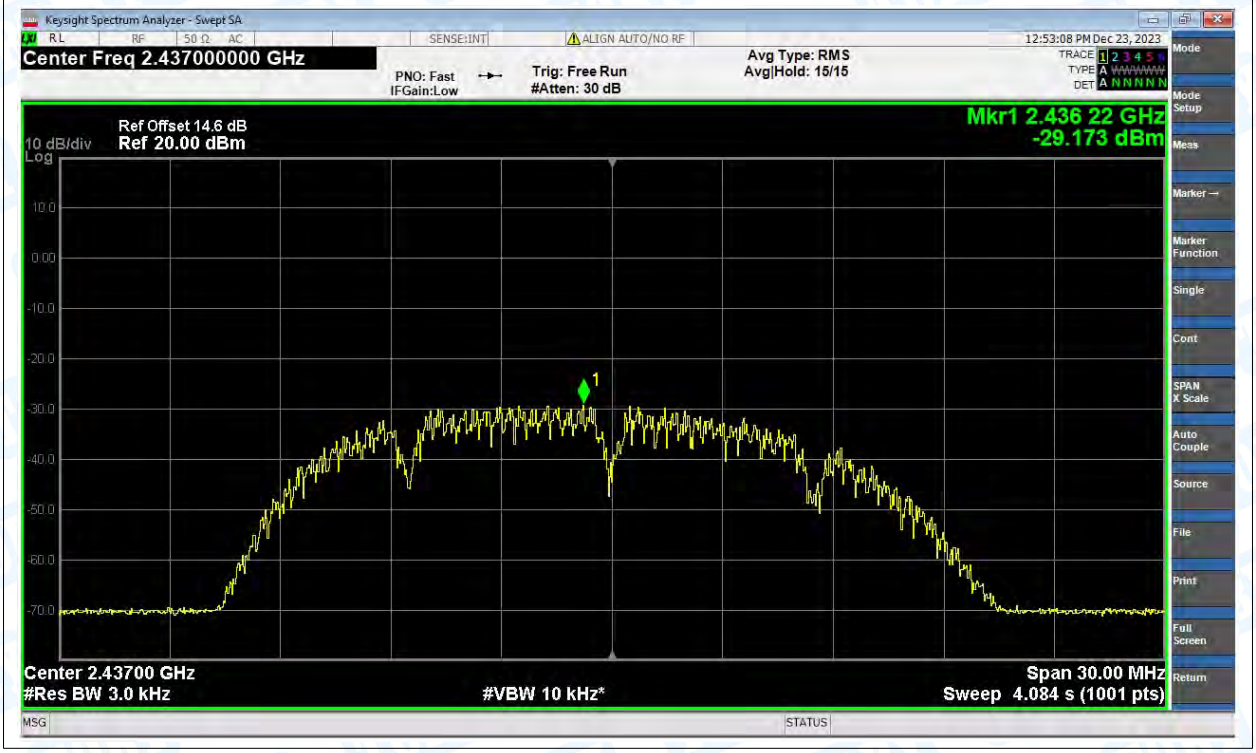
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-29.04	8	Pass
NVNT	b	2437	Ant1	-29.173	8	Pass
NVNT	b	2462	Ant1	-29.512	8	Pass
NVNT	g	2412	Ant1	-35.772	8	Pass
NVNT	g	2437	Ant1	-36.684	8	Pass
NVNT	g	2462	Ant1	-38.054	8	Pass
NVNT	n(HT20)	2412	Ant1	-36.547	8	Pass
NVNT	n(HT20)	2437	Ant1	-36.934	8	Pass
NVNT	n(HT20)	2462	Ant1	-36.63	8	Pass
NVNT	n(HT40)	2422	Ant1	-40.649	8	Pass
NVNT	n(HT40)	2437	Ant1	-41.364	8	Pass
NVNT	n(HT40)	2452	Ant1	-41.506	8	Pass

Test Graphs

PSD NVNT b 2412MHz Ant1

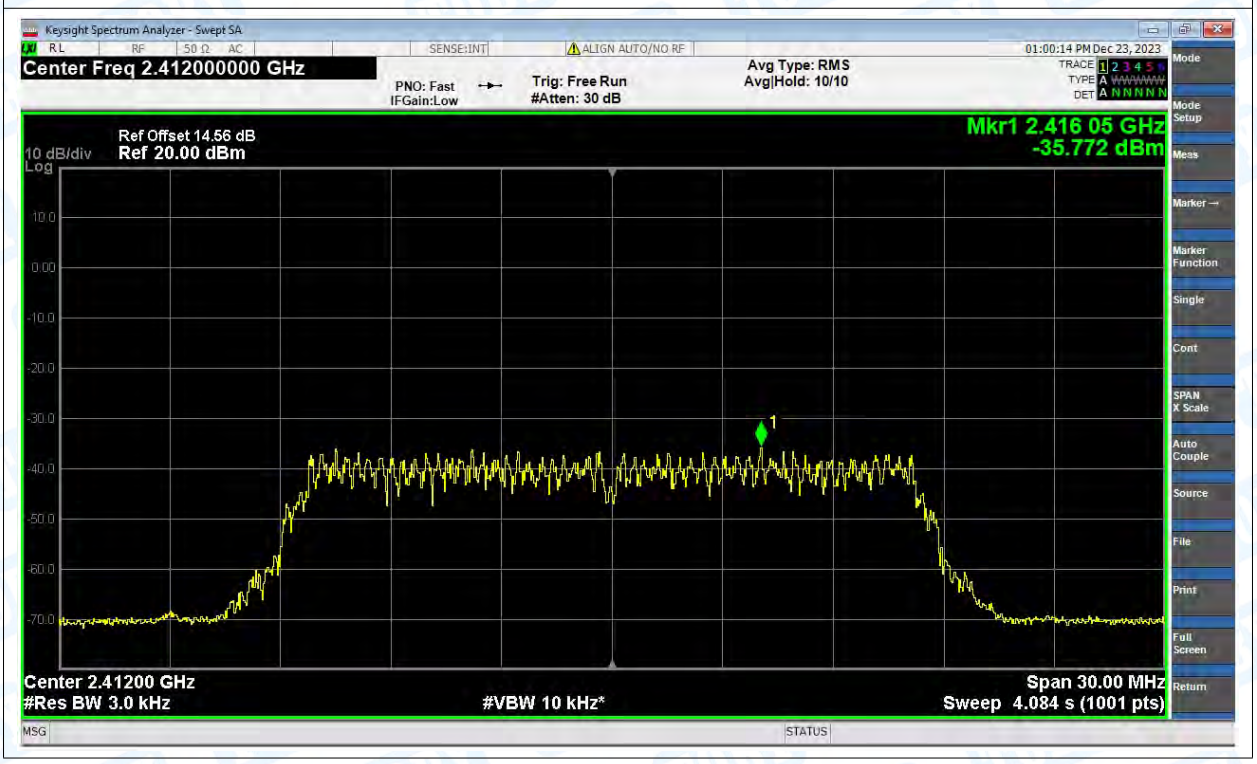


PSD NVNT b 2437MHz Ant1

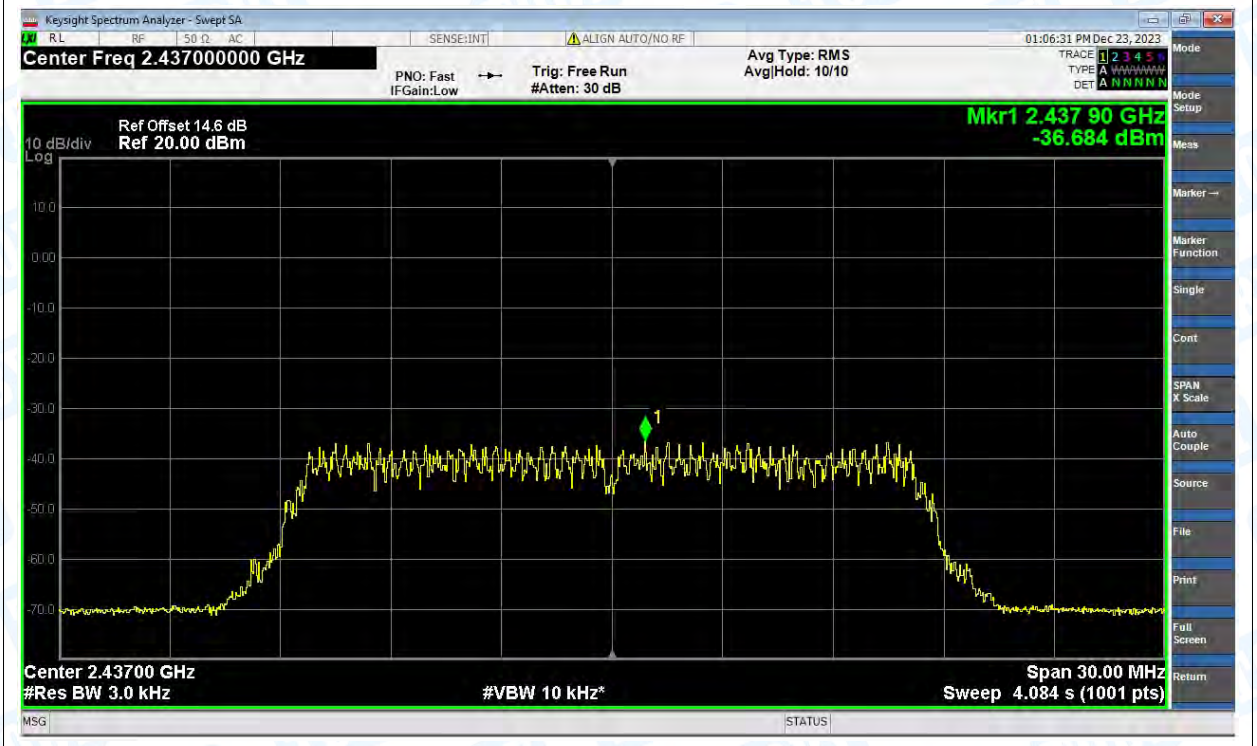


PSD NVNT b 2462MHz Ant1

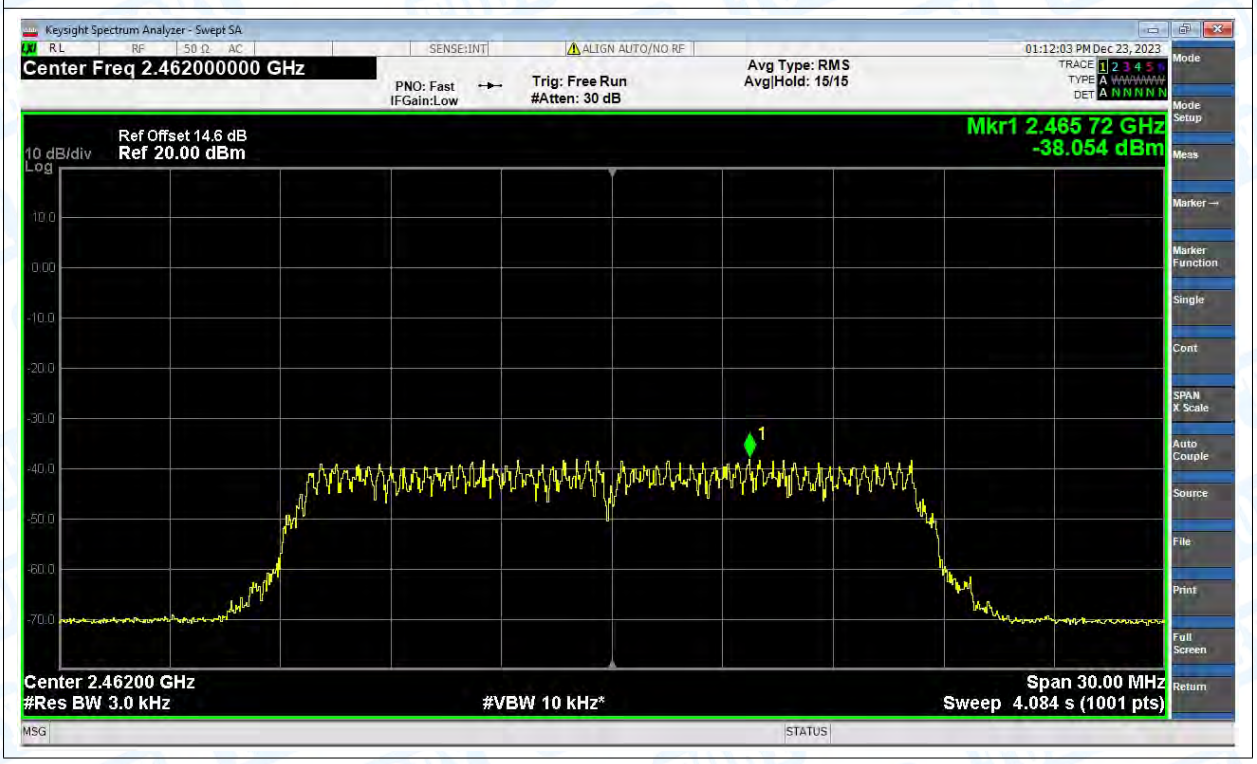
PSD NVNT g 2412MHz Ant1



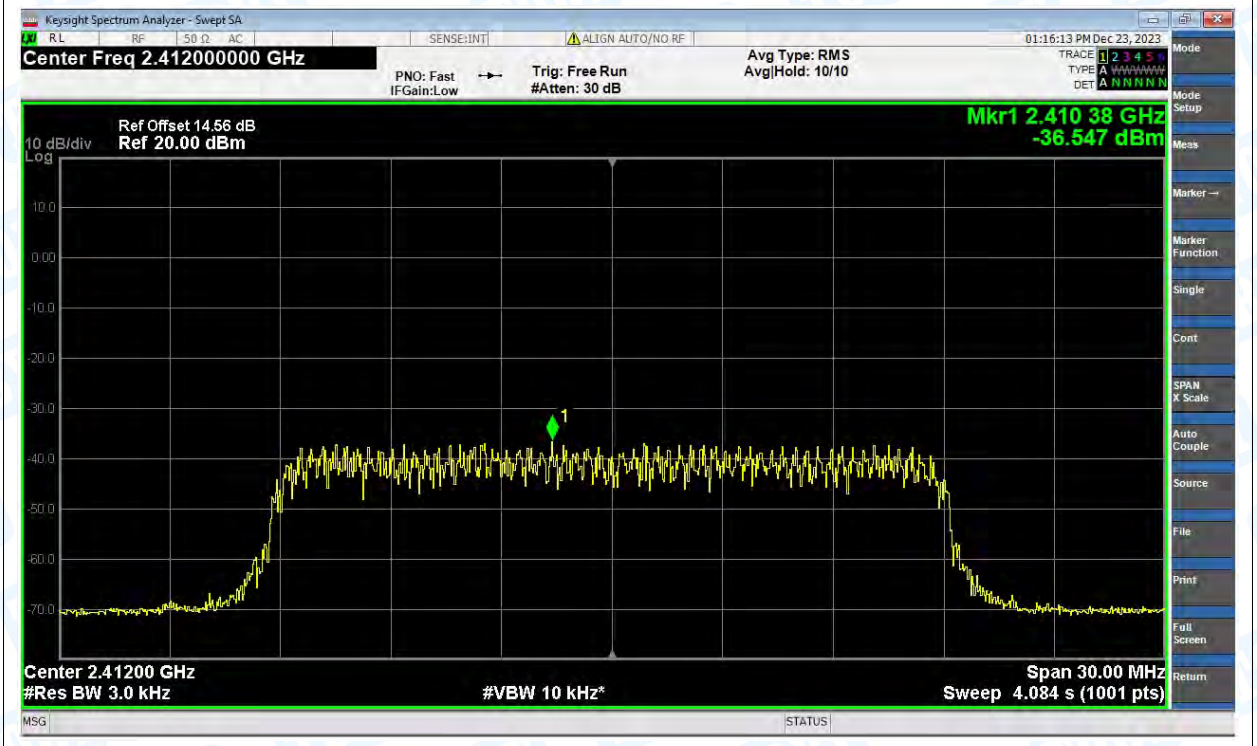
PSD NVNT g 2437MHz Ant1



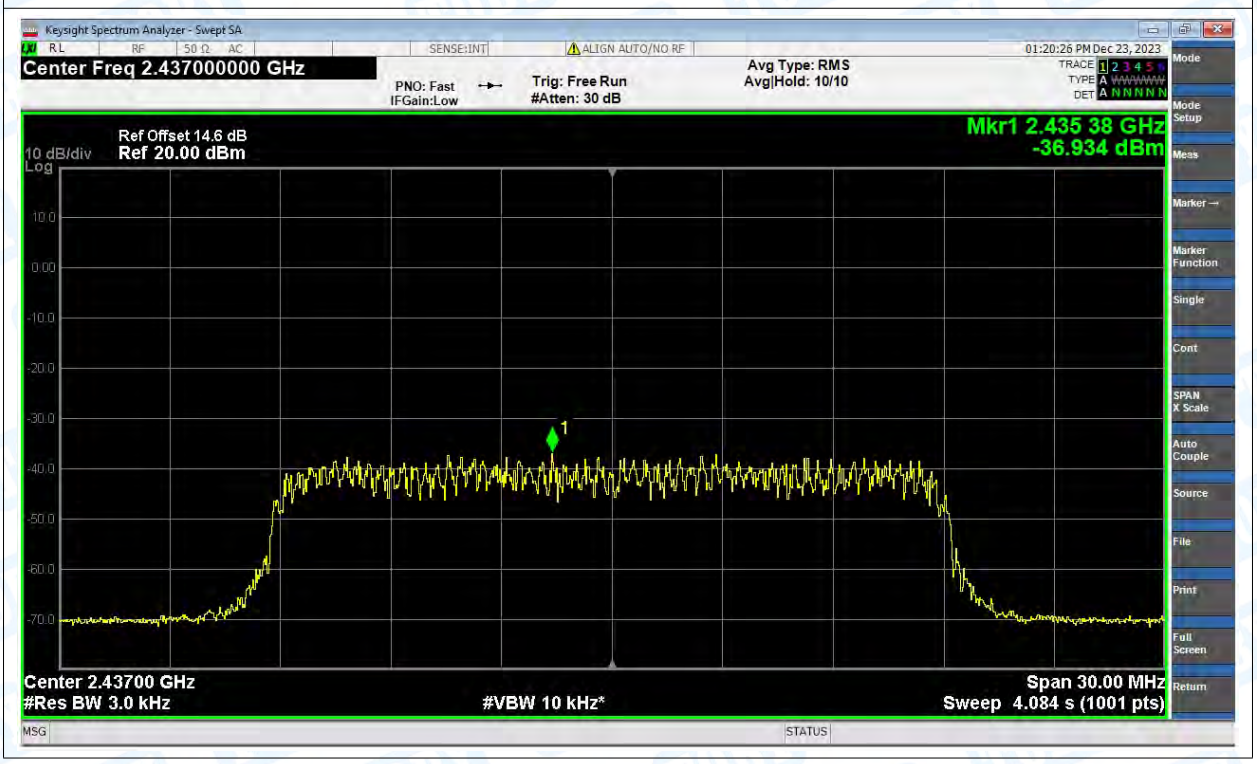
PSD NVNT g 2462MHz Ant1



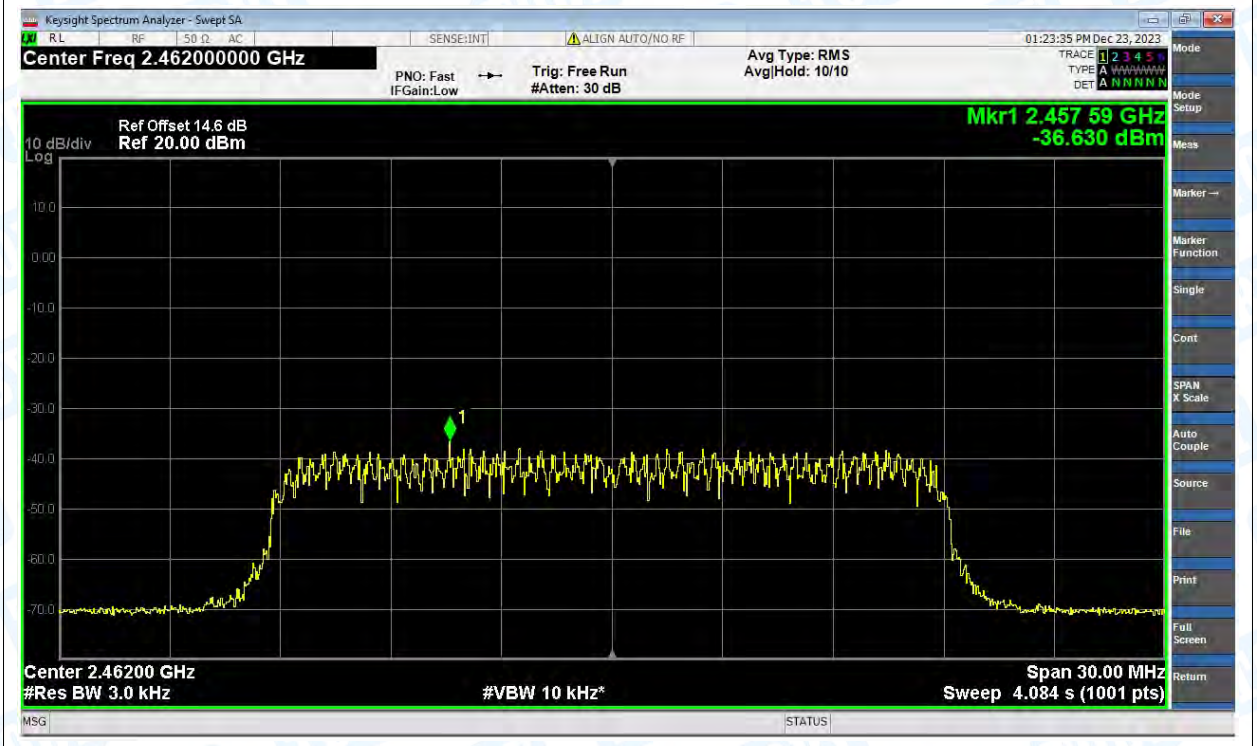
PSD NVNT n(HT20) 2412MHz Ant1



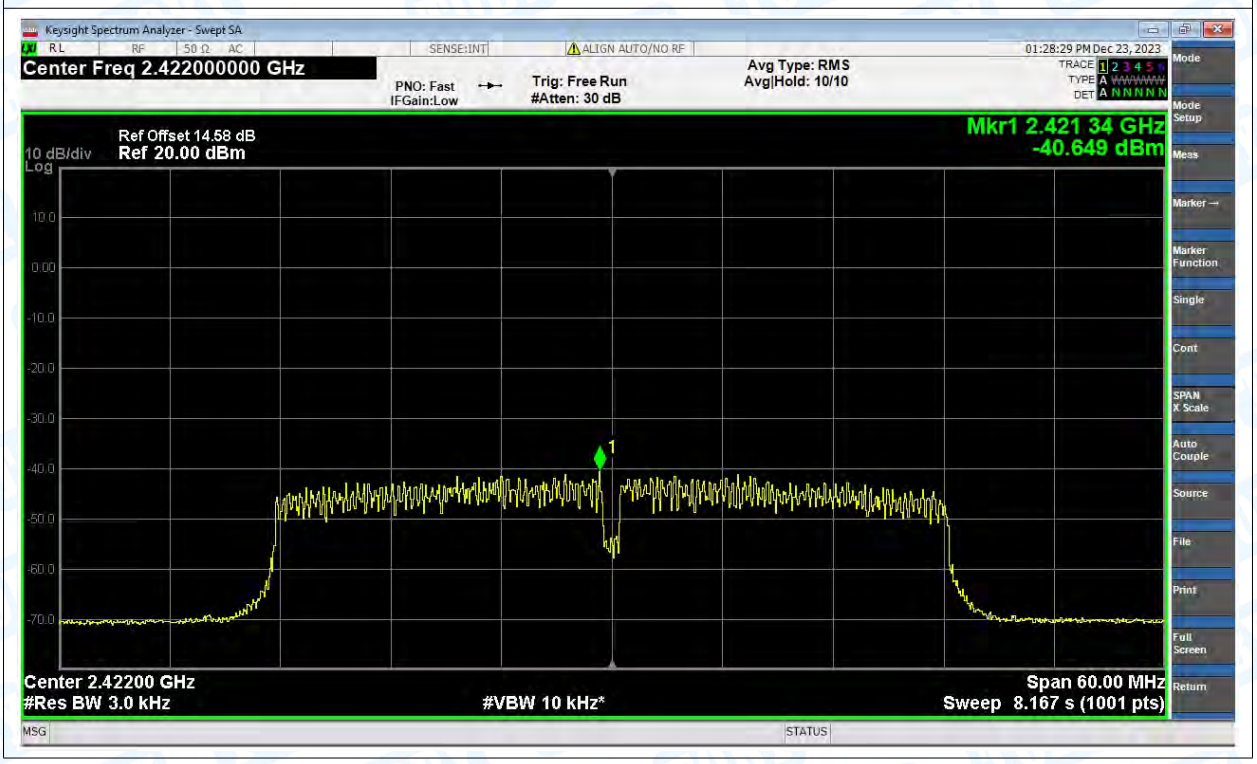
PSD NVNT n(HT20) 2437MHz Ant1



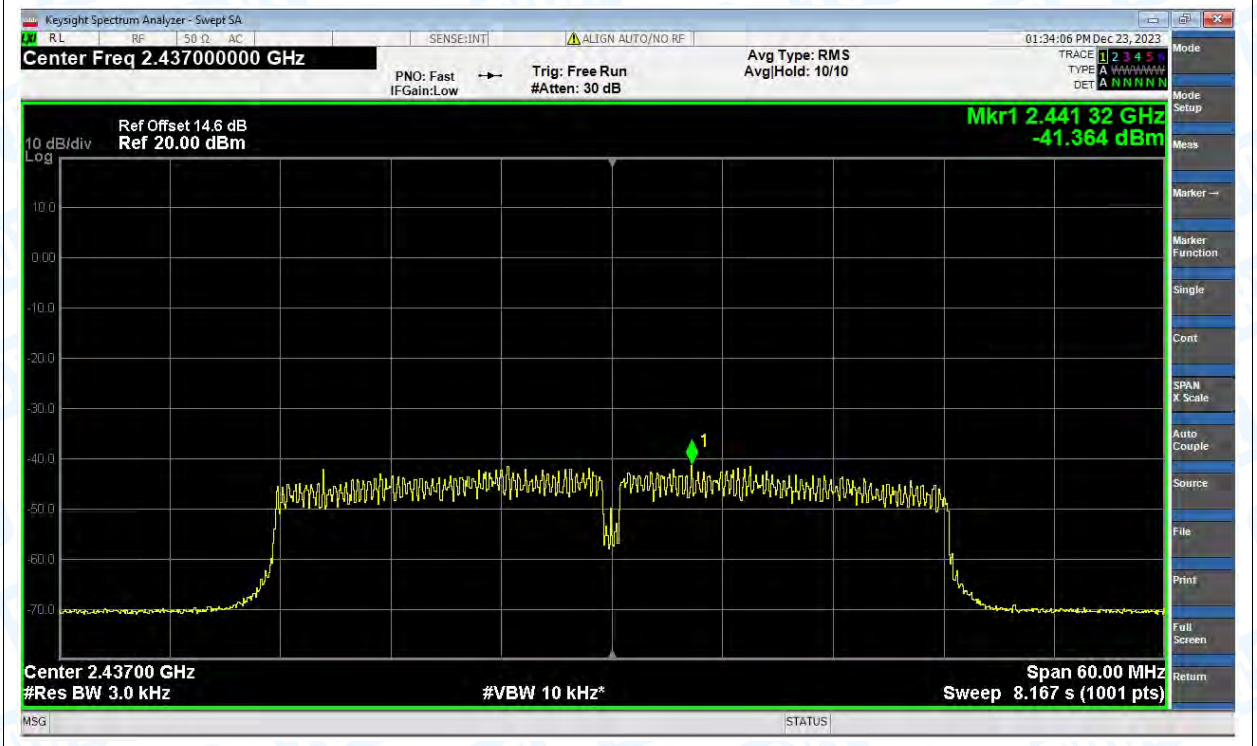
PSD NVNT n(HT20) 2462MHz Ant1



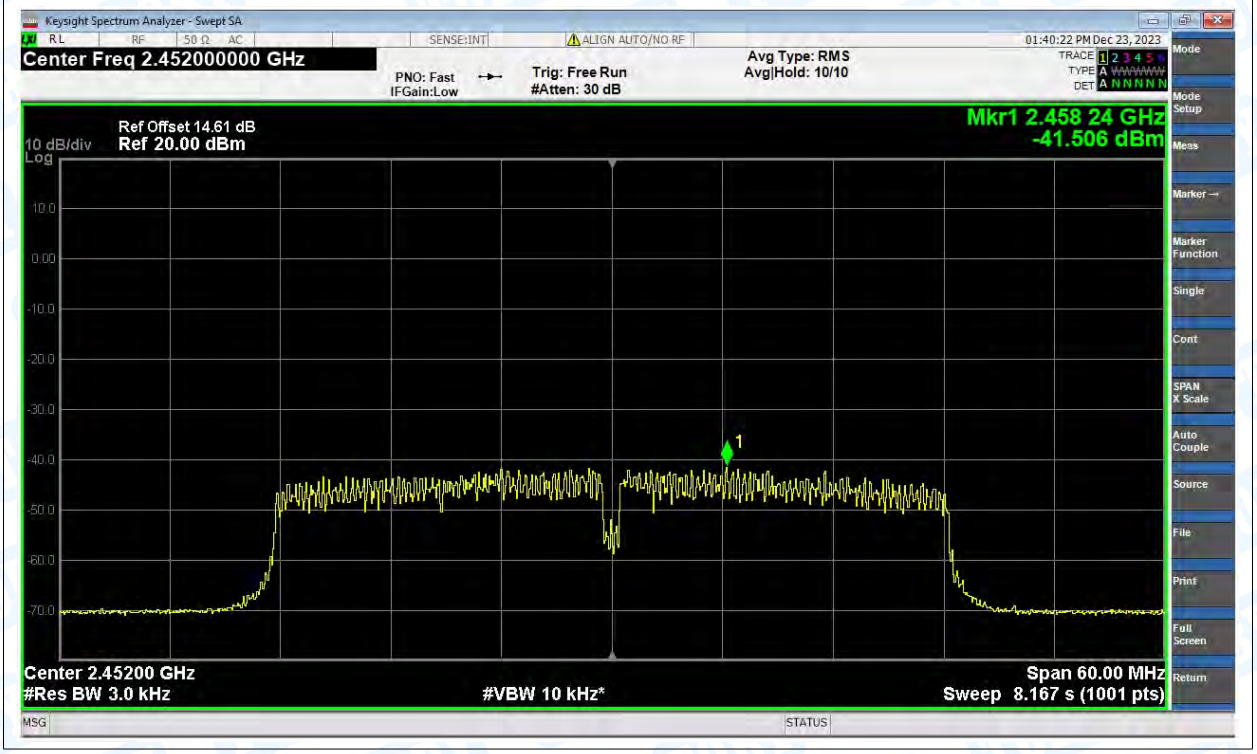
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1



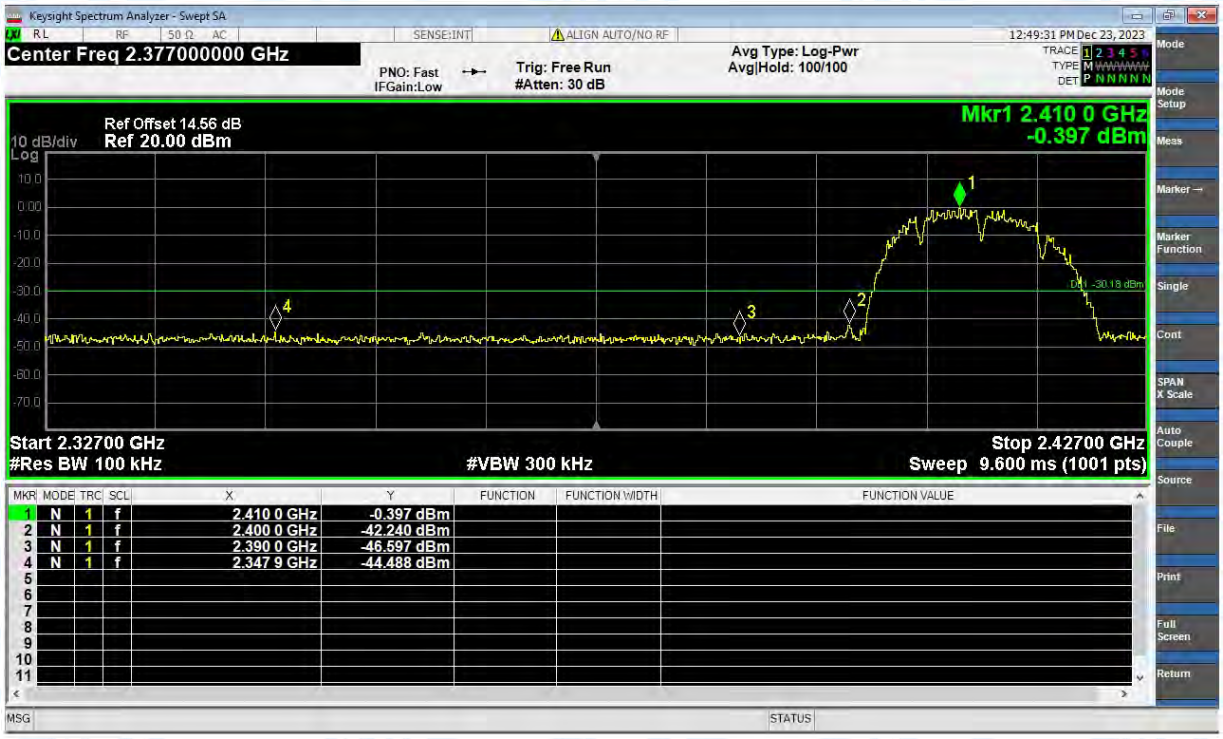
Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-44.31	-30	Pass
NVNT	b	2462	Ant1	-43.61	-30	Pass
NVNT	g	2412	Ant1	-38.32	-30	Pass
NVNT	g	2462	Ant1	-35.76	-30	Pass
NVNT	n(HT20)	2412	Ant1	-41.63	-30	Pass
NVNT	n(HT20)	2462	Ant1	-37.65	-30	Pass
NVNT	n(HT40)	2422	Ant1	-35.62	-30	Pass
NVNT	n(HT40)	2452	Ant1	-35.01	-30	Pass

Test Graphs

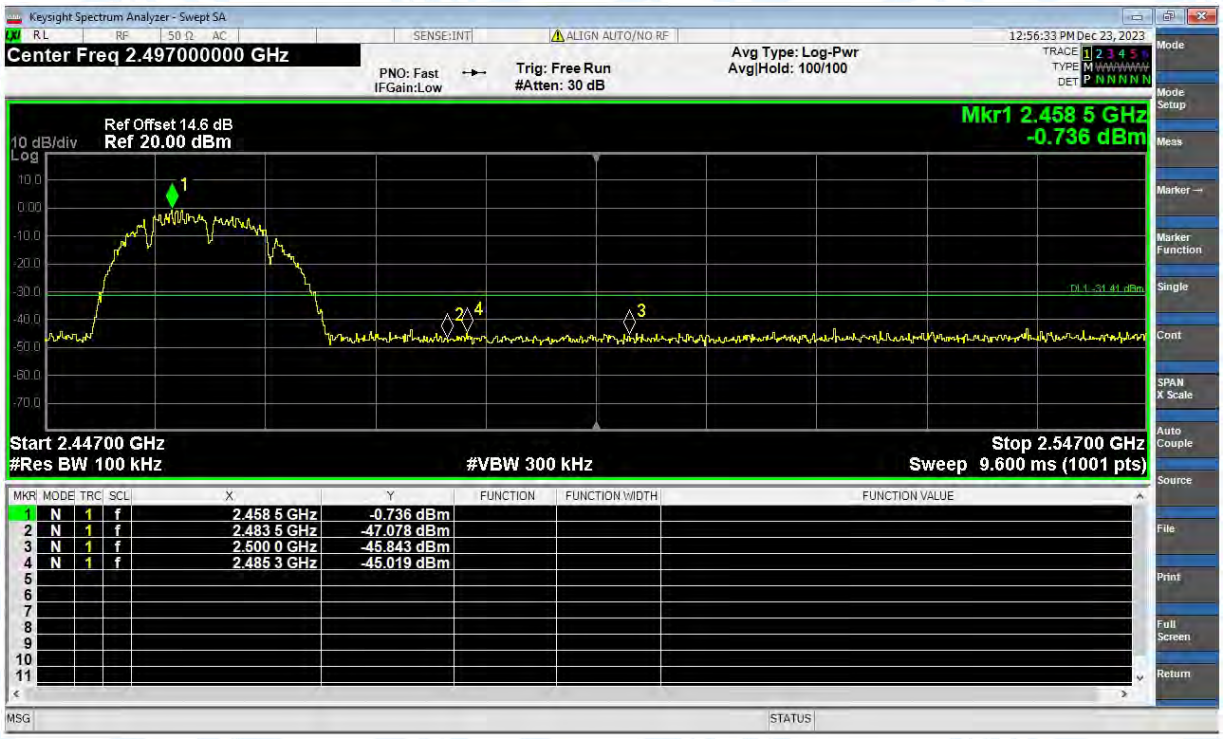
Band Edge NVNT b 2412MHz Ant1 Ref

Band Edge NVNT b 2412MHz Ant1 Emission



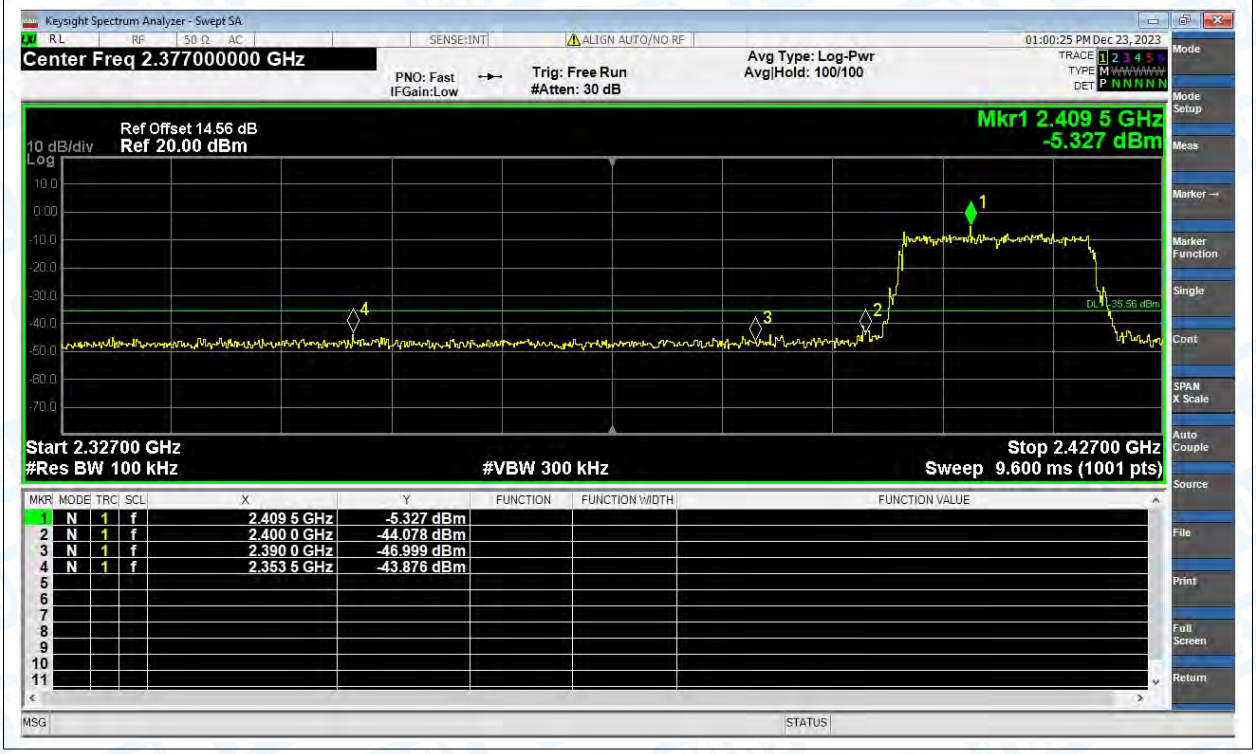
Band Edge NVNT b 2462MHz Ant1 Ref

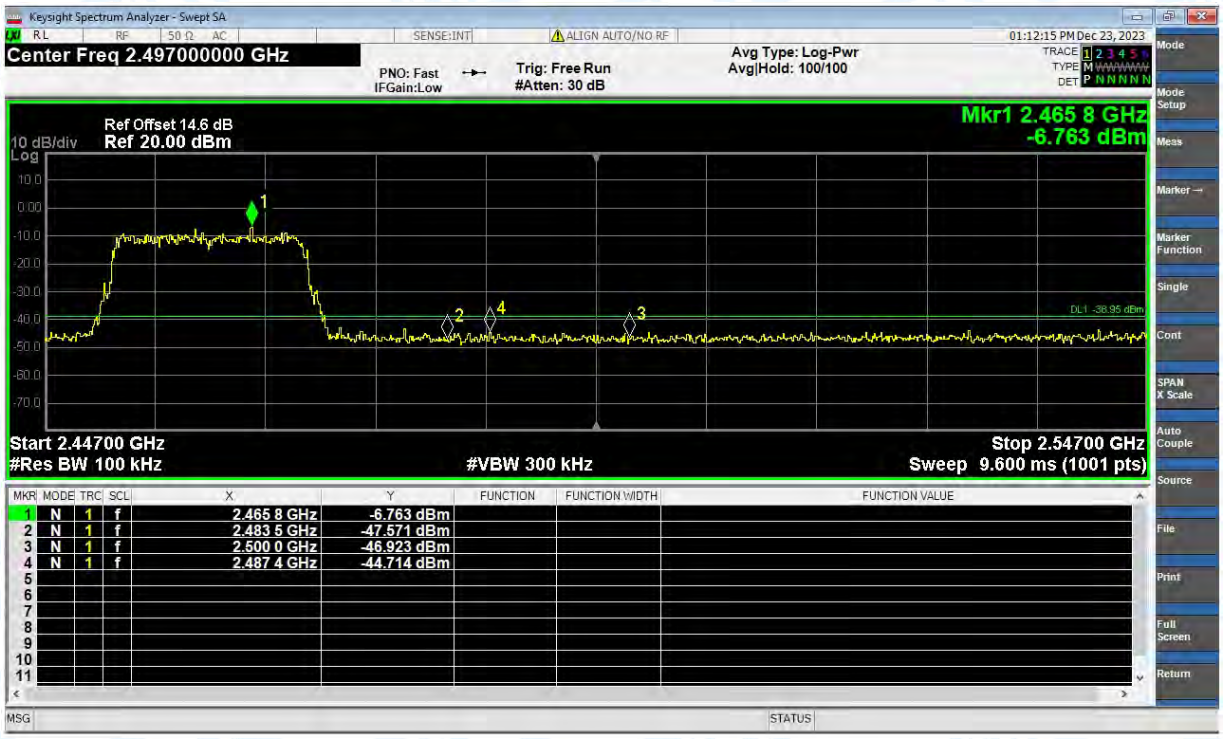
Band Edge NVNT b 2462MHz Ant1 Emission



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