

# RF Test Data for 2.4G (Conducted Measurements)

General Description of EUT	
Product Name:	2.4G remote control
Test Model:	SJ-GY-19K-
Sample ID:	HC-C-202311-0239-01-02
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 3V
Test Engineer:	Zhouzhen
Note: For a more detailed features description, please refer to the report TBR-C-202311-0239-3 The report only show the worst case data.	



## Contents

1.Duty Cycle.....	3
2.Maximum Conducted Output Power .....	6
3.-6dB Bandwidth.....	9
4.Occupied Channel Bandwidth.....	12
5.Maximum Power Spectral Density Level.....	15
6.Band Edge.....	18
7.Conducted RF Spurious Emission.....	21
8.Restrict Band.....	25

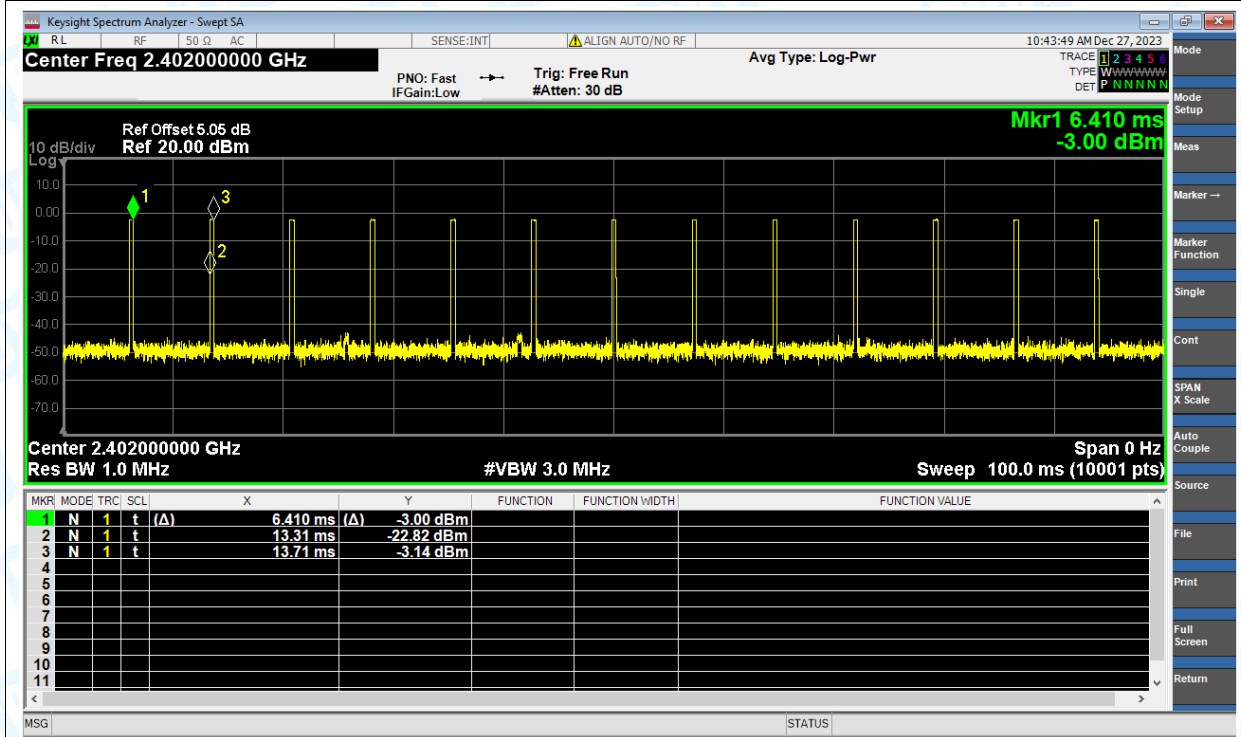


## 1. Duty Cycle

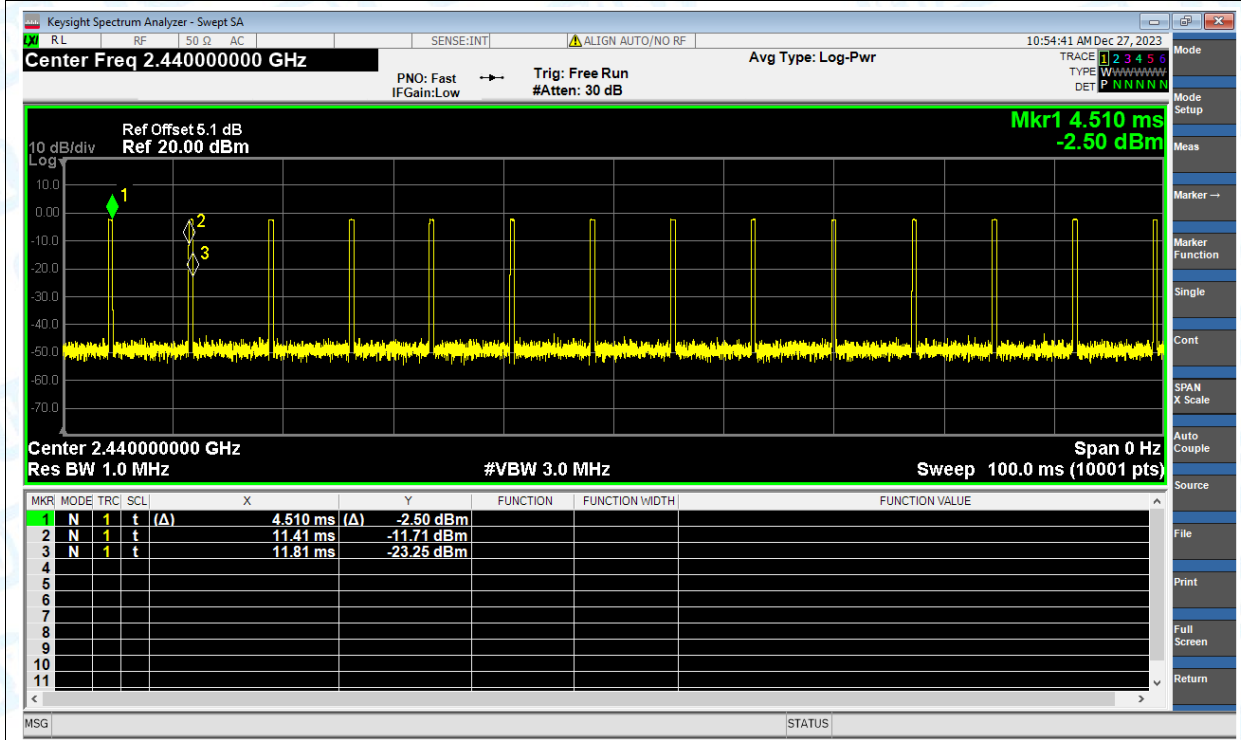
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	2.4G	2402	Ant1	5.48	12.61	2.5
NVNT	2.4G	2440	Ant1	5.48	12.61	2.5
NVNT	2.4G	2480	Ant1	5.49	12.6	2.5

Test Graphs

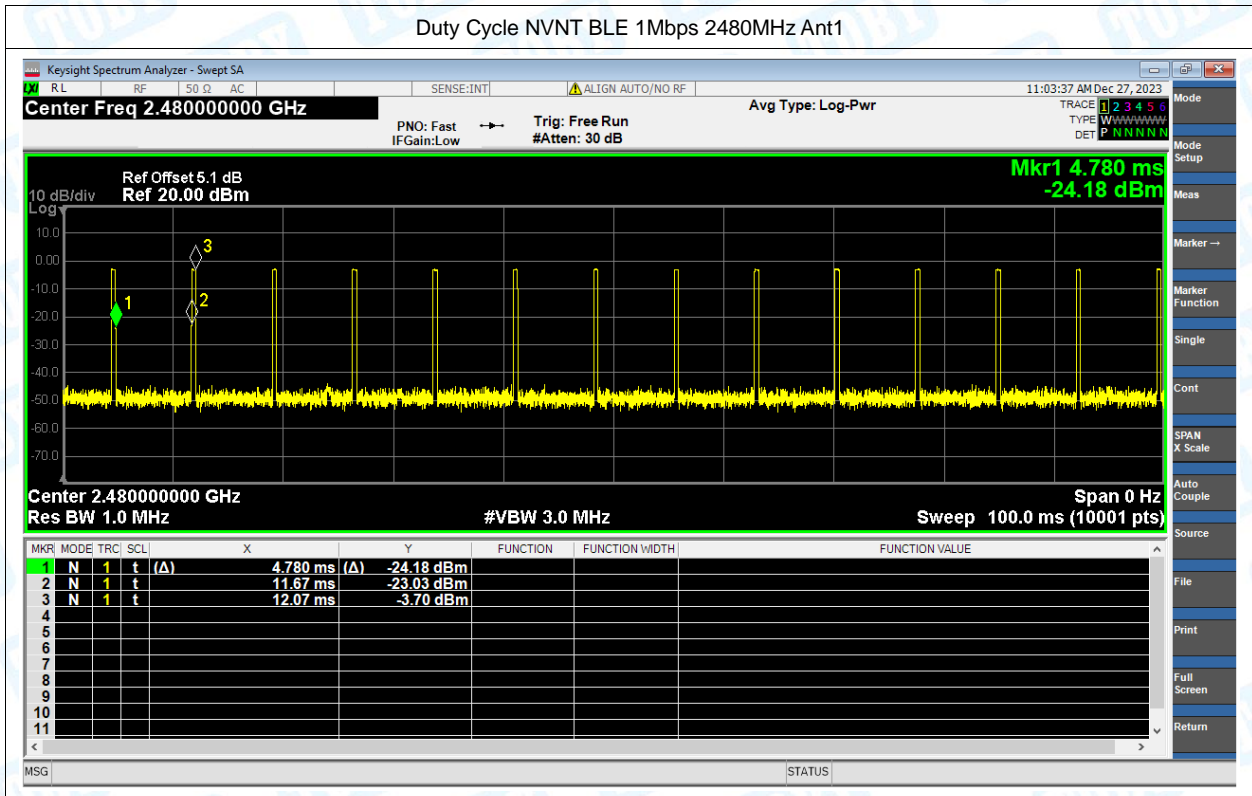
Duty Cycle NVNT BLE 1Mbps 2402MHz Ant1



Duty Cycle NVNT BLE 1Mbps 2440MHz Ant1







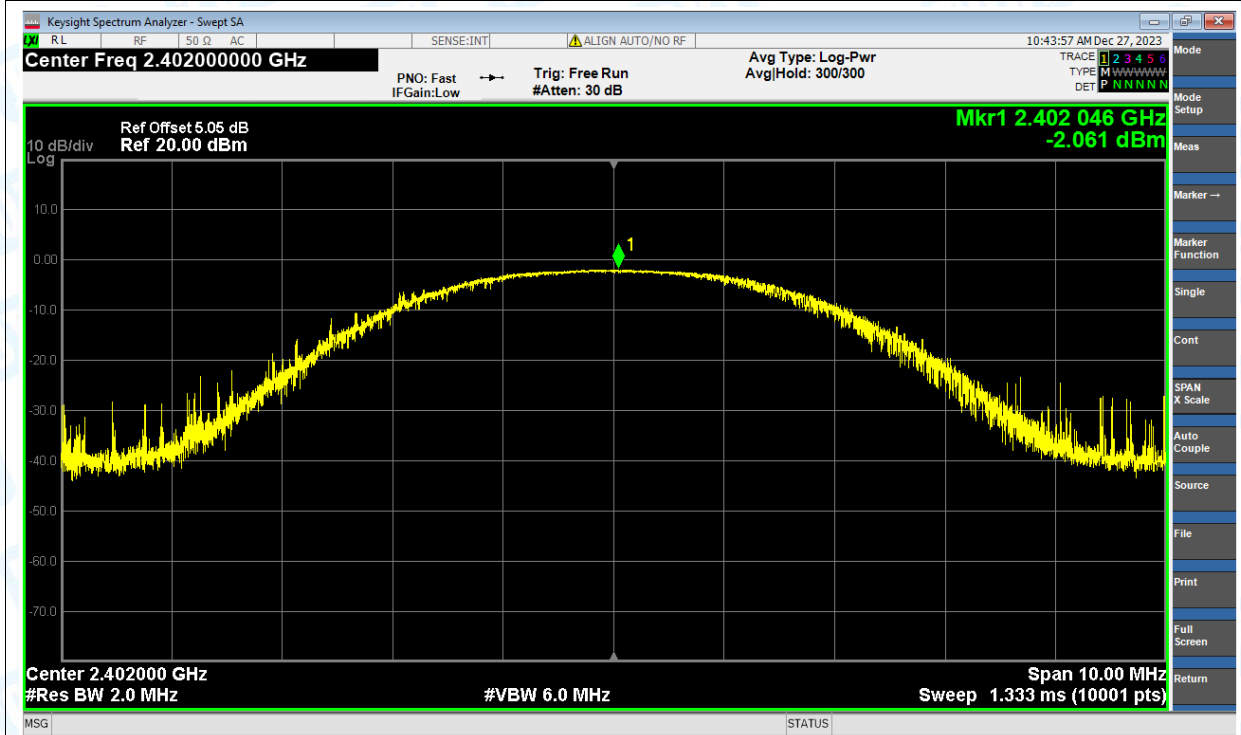
## 2.Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	2.4G	2402	Ant1	-2.061	0	-2.061	30	Pass
NVNT	2.4G	2440	Ant1	-2.024	0	-2.024	30	Pass
NVNT	2.4G	2480	Ant1	-2.766	0	-2.766	30	Pass

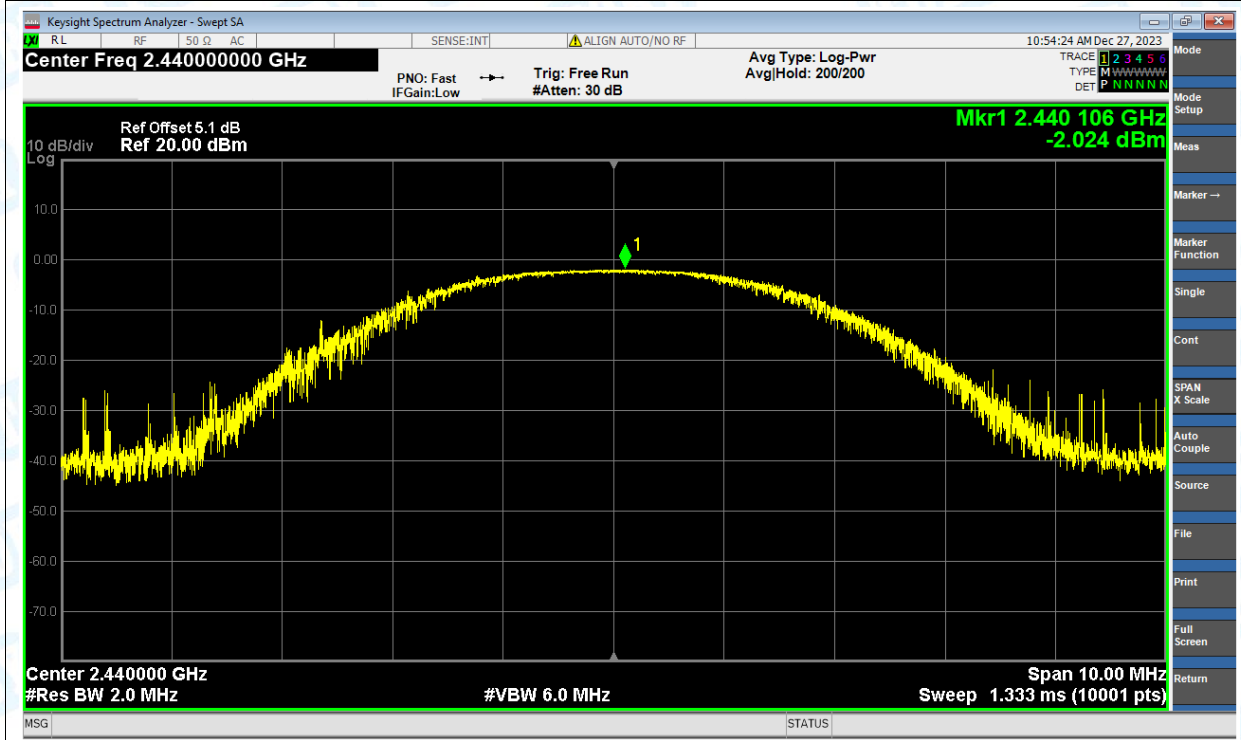


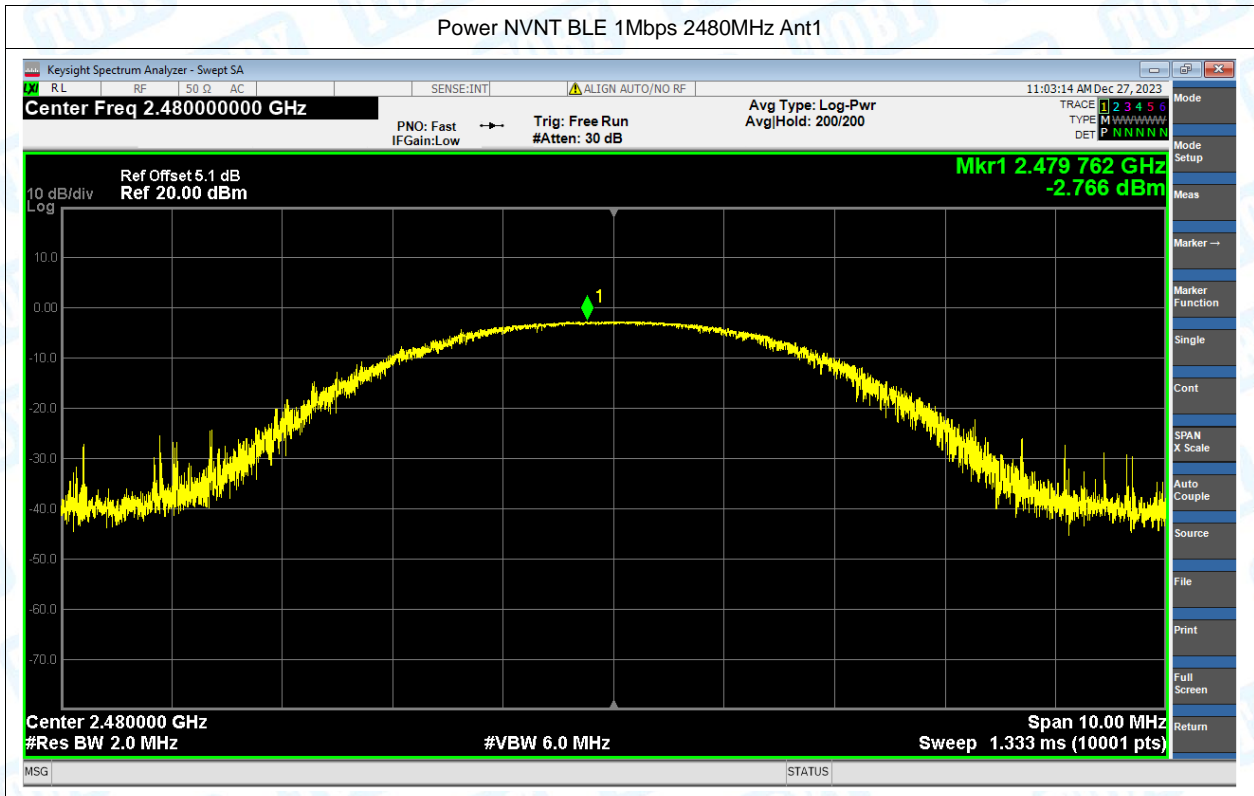
Test Graphs

Power NVNT BLE 1Mbps 2402MHz Ant1



Power NVNT BLE 1Mbps 2440MHz Ant1





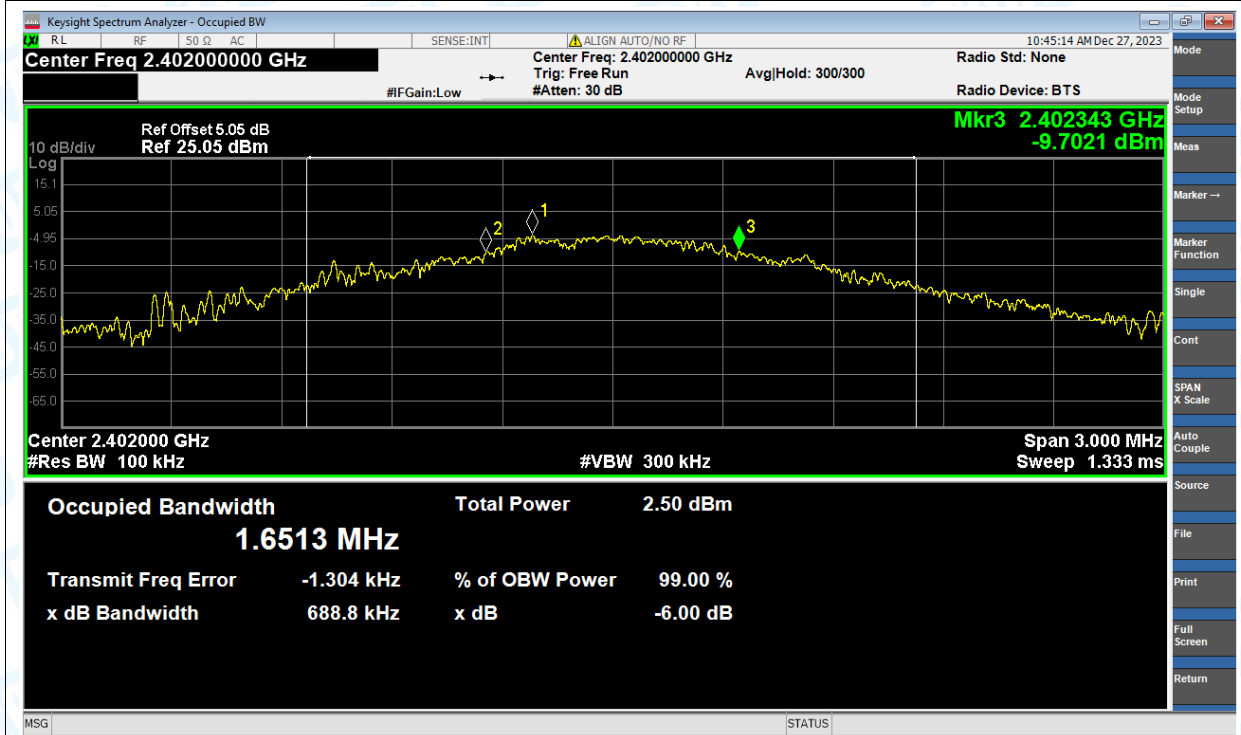


### 3.-6dB Bandwidth

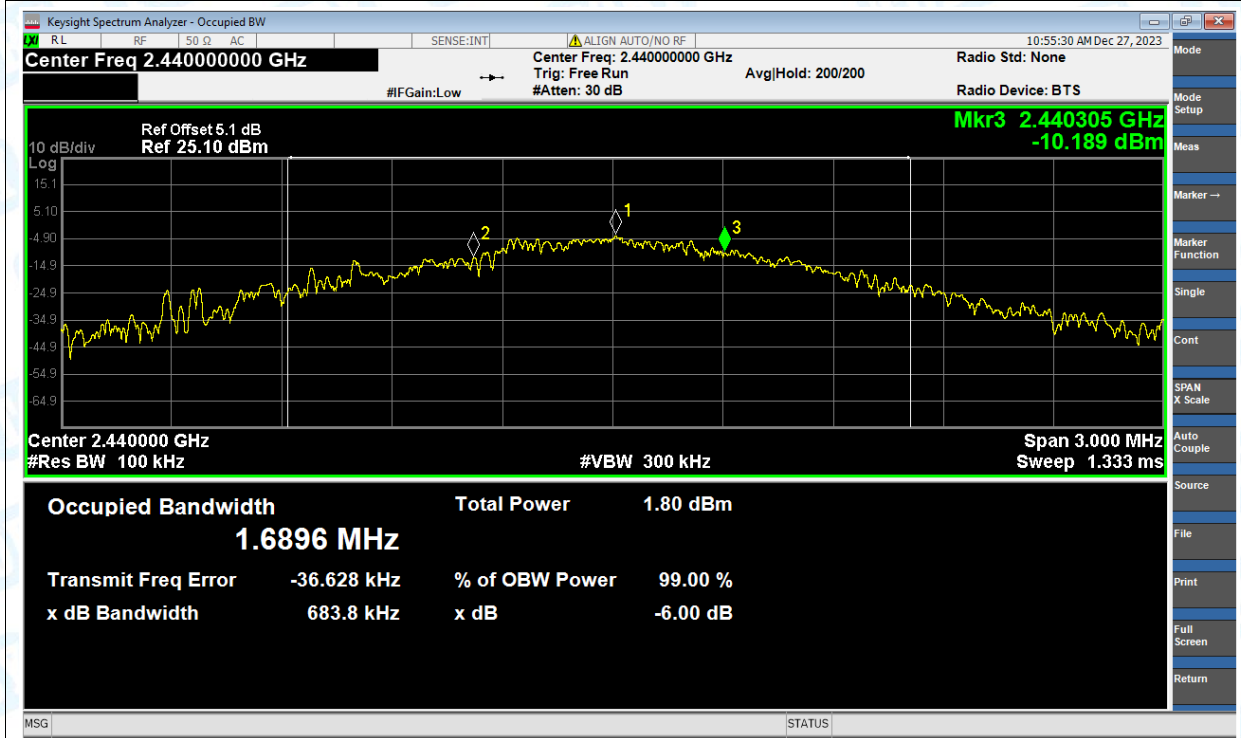
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	2.4G	2402	Ant1	0.69	0.5	Pass
NVNT	2.4G	2440	Ant1	0.68	0.5	Pass
NVNT	2.4G	2480	Ant1	0.59	0.5	Pass

Test Graphs

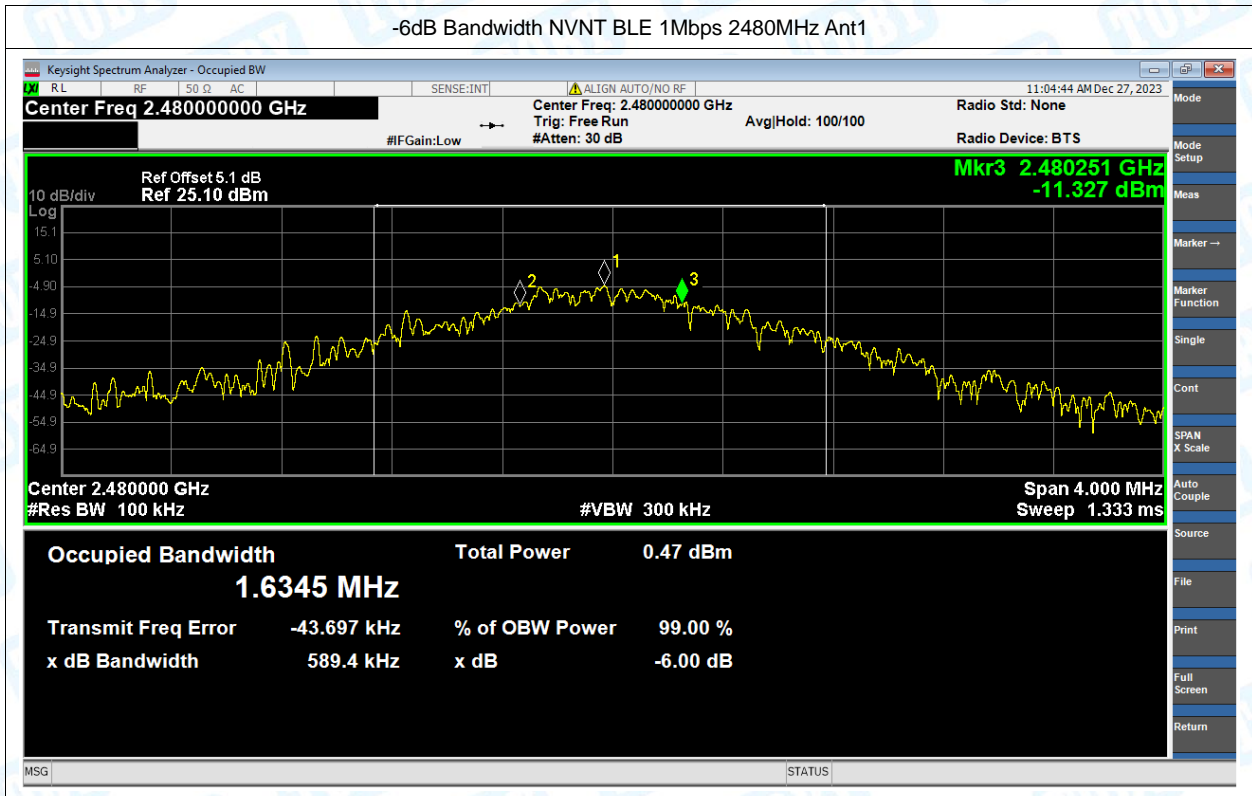
-6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1Mbps 2440MHz Ant1







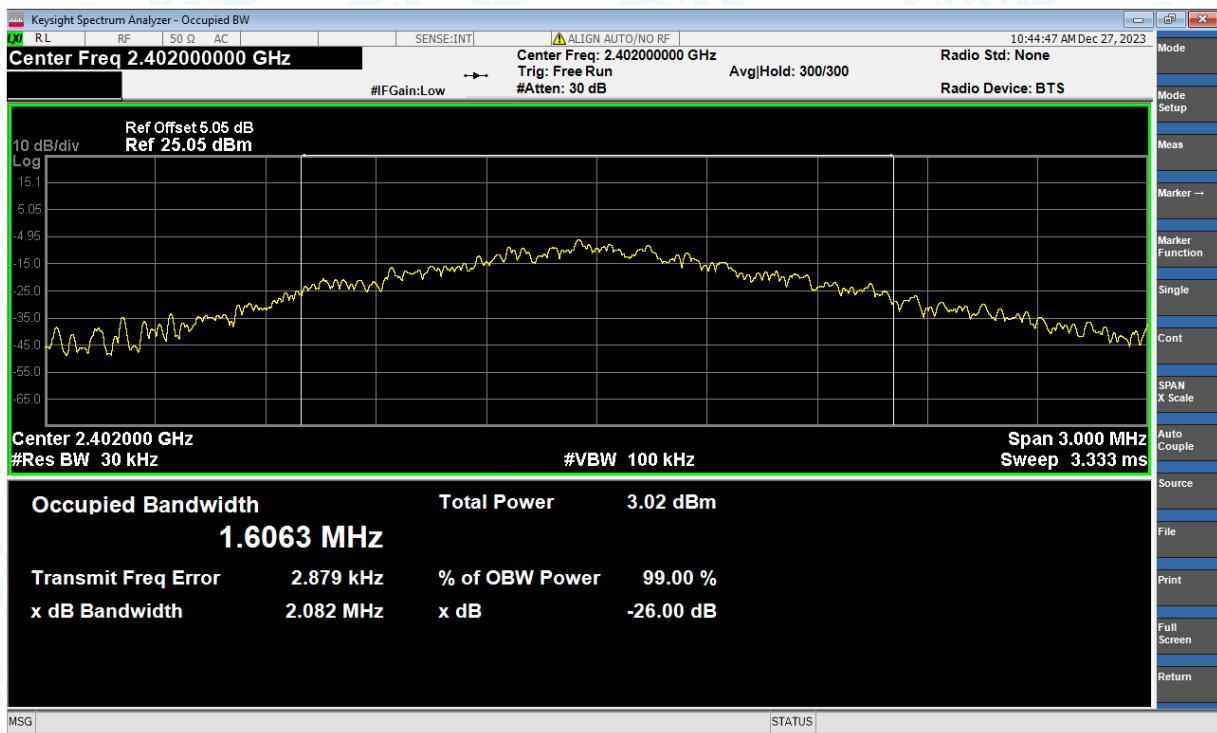
## 4.Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	2.4G	2402	Ant1	1.606
NVNT	2.4G	2440	Ant1	1.613
NVNT	2.4G	2480	Ant1	1.565

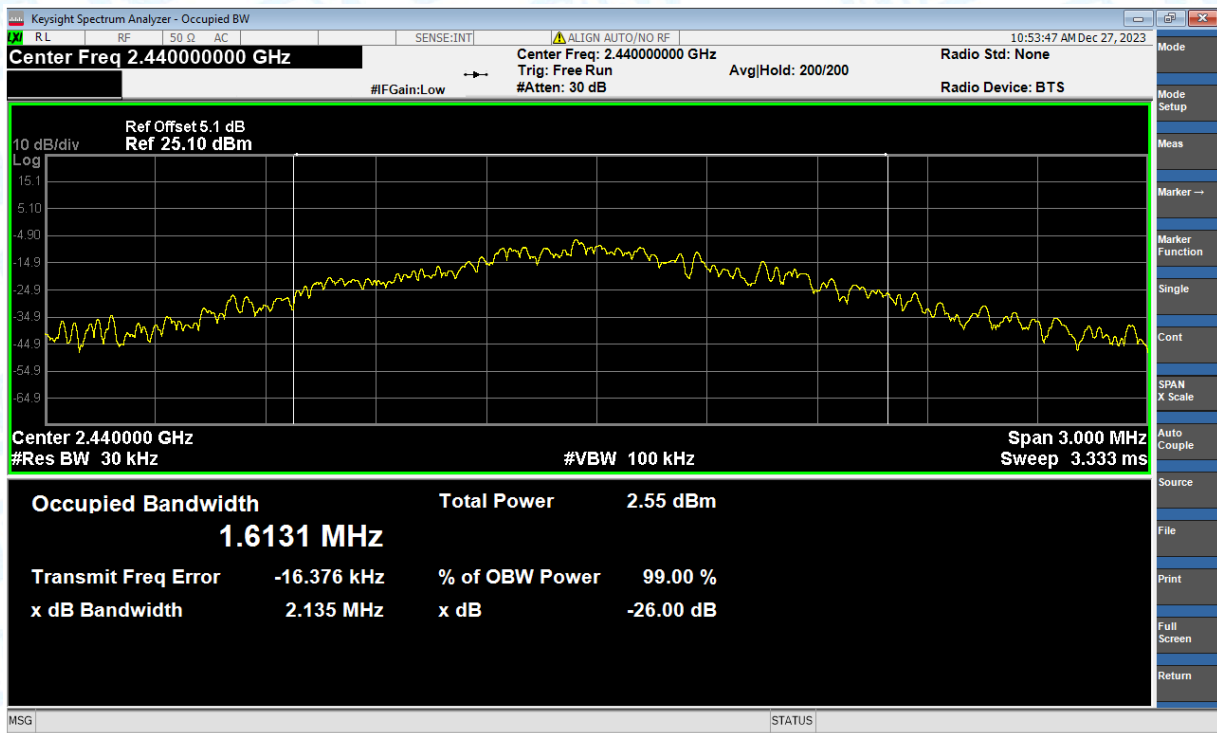


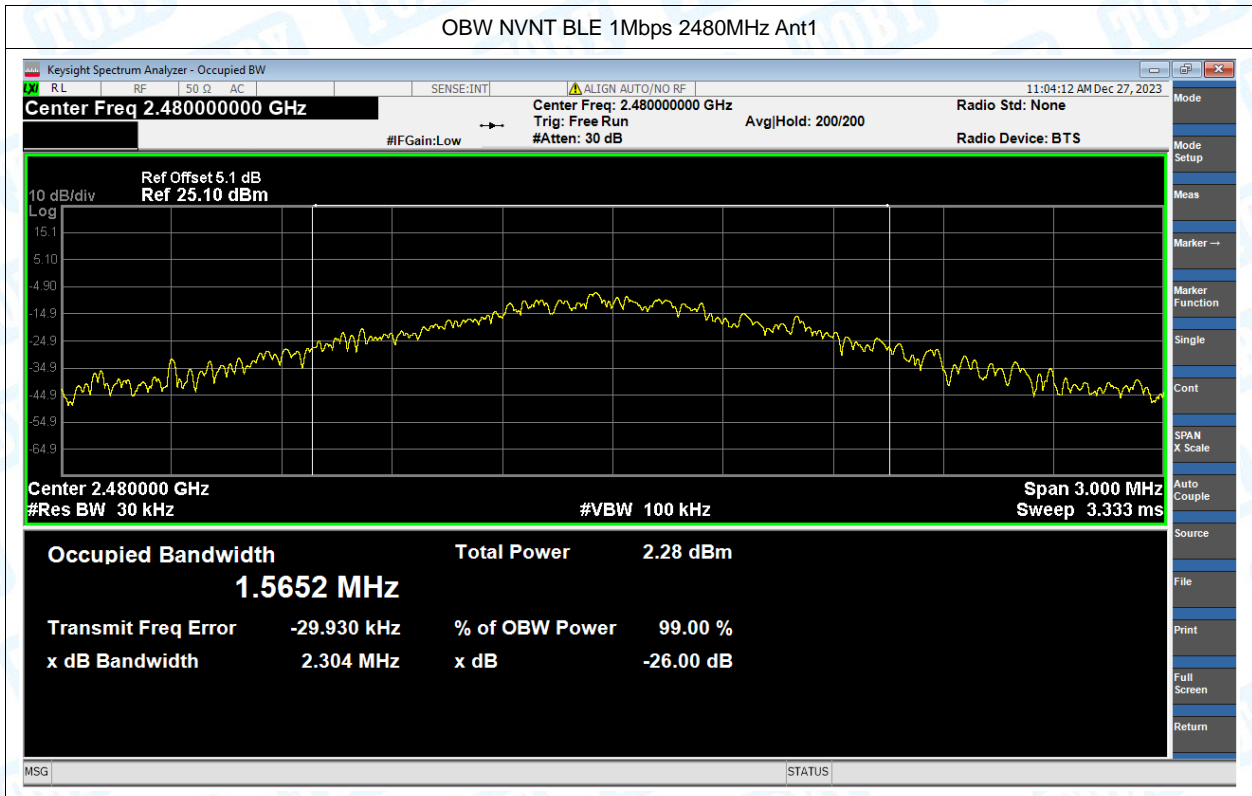
Test Graphs

OBW NVNT BLE 1Mbps 2402MHz Ant1



OBW NVNT BLE 1Mbps 2440MHz Ant1





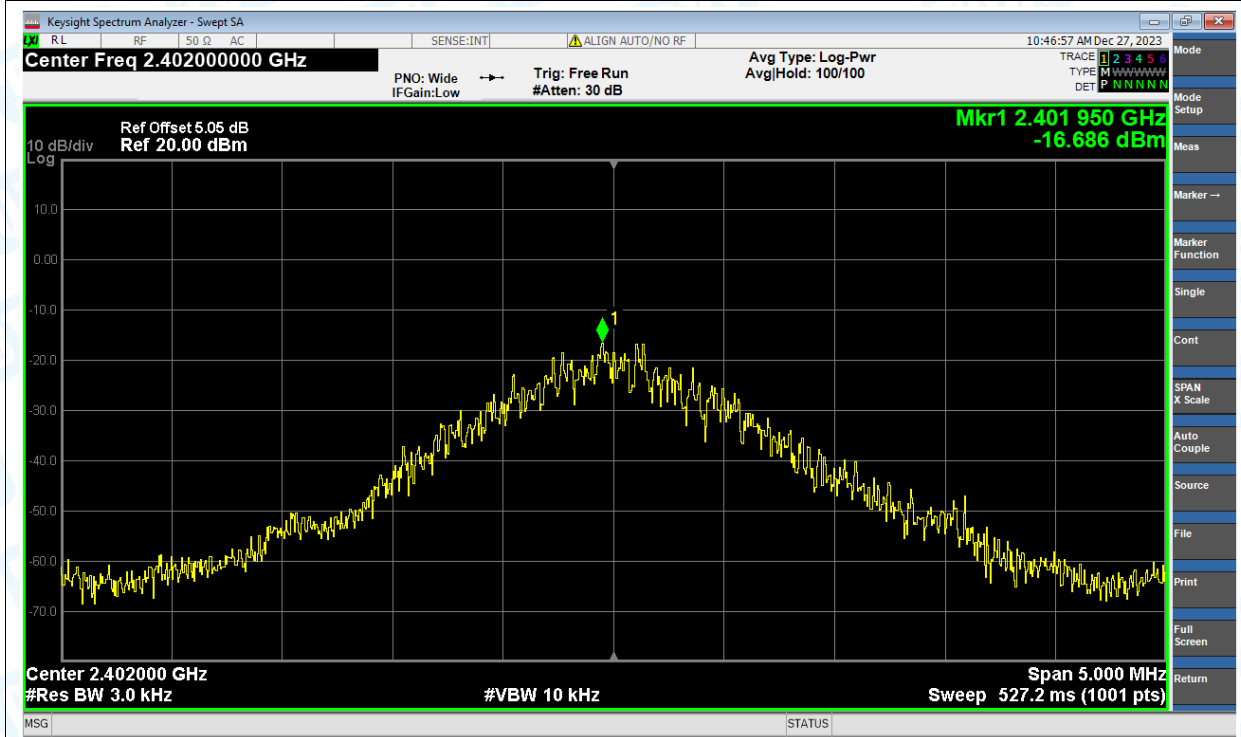


## 5. Maximum Power Spectral Density Level

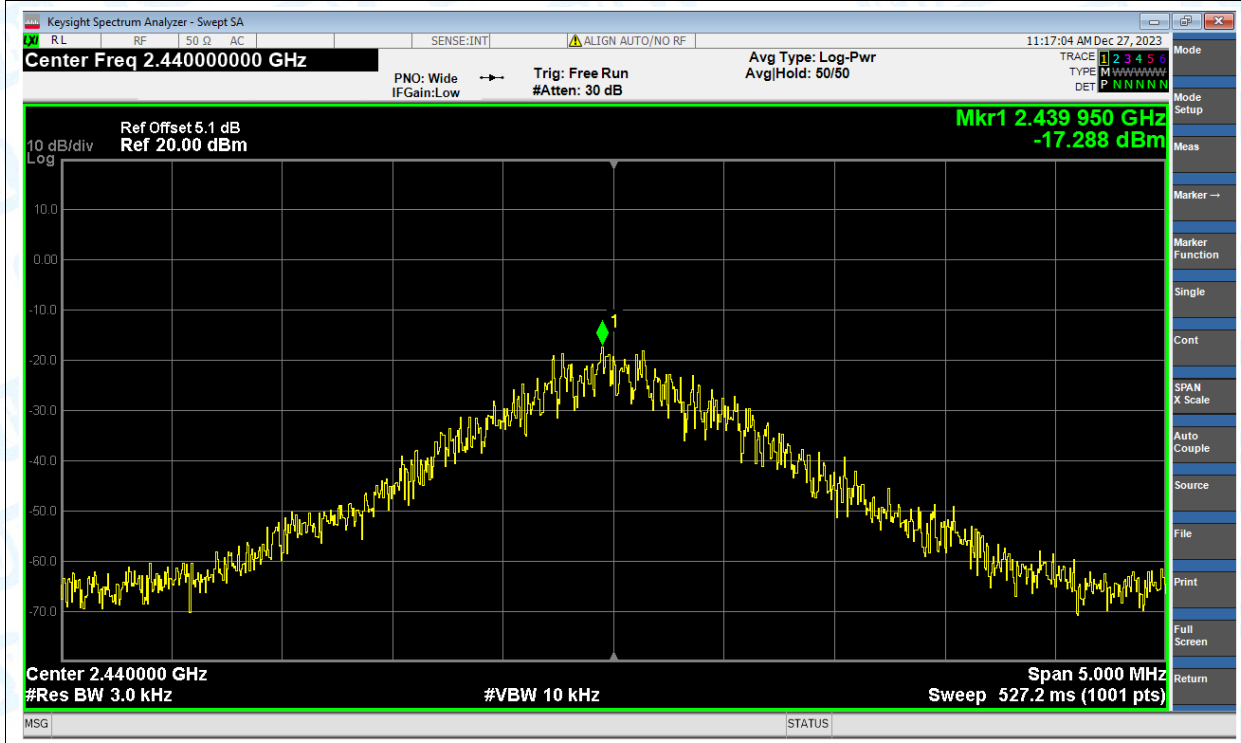
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	2.4G	2402	Ant1	-16.686	8	Pass
NVNT	2.4G	2440	Ant1	-17.288	8	Pass
NVNT	2.4G	2480	Ant1	-17.698	8	Pass

Test Graphs

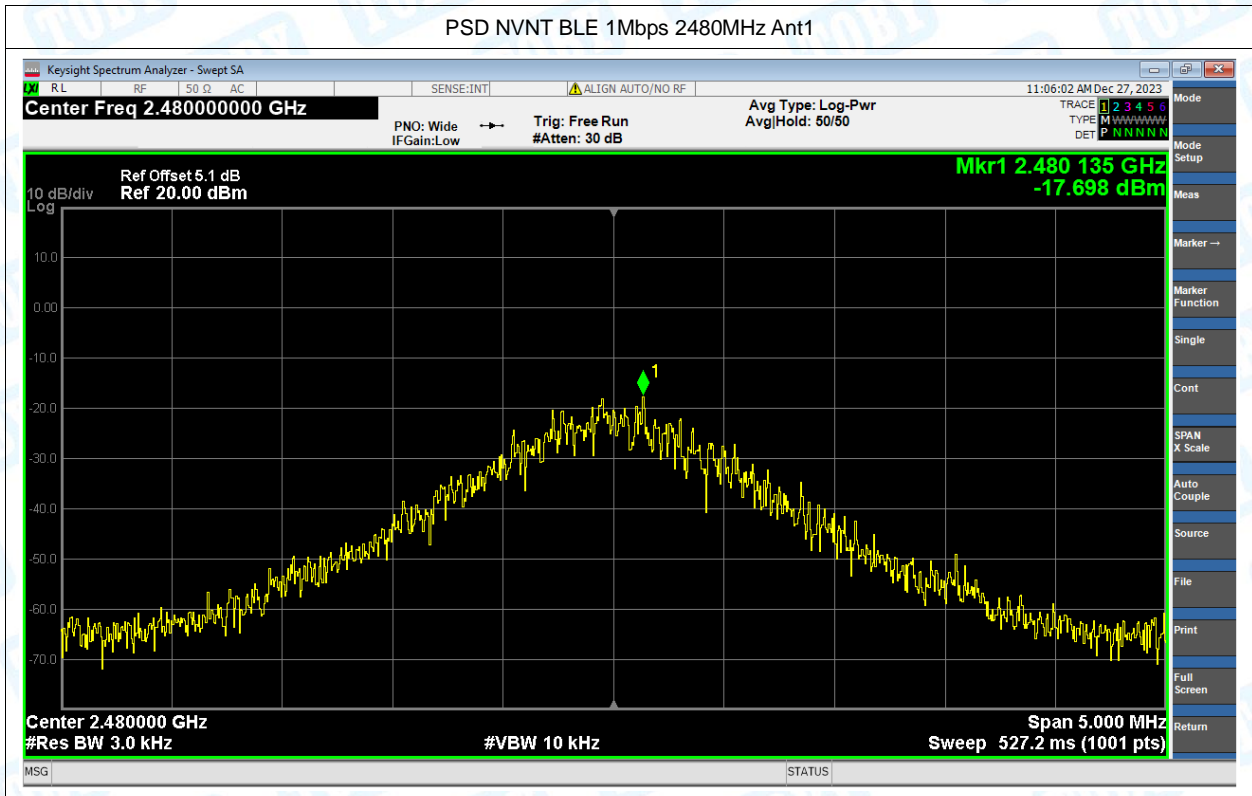
PSD NVNT BLE 1Mbps 2402MHz Ant1



PSD NVNT BLE 1Mbps 2440MHz Ant1







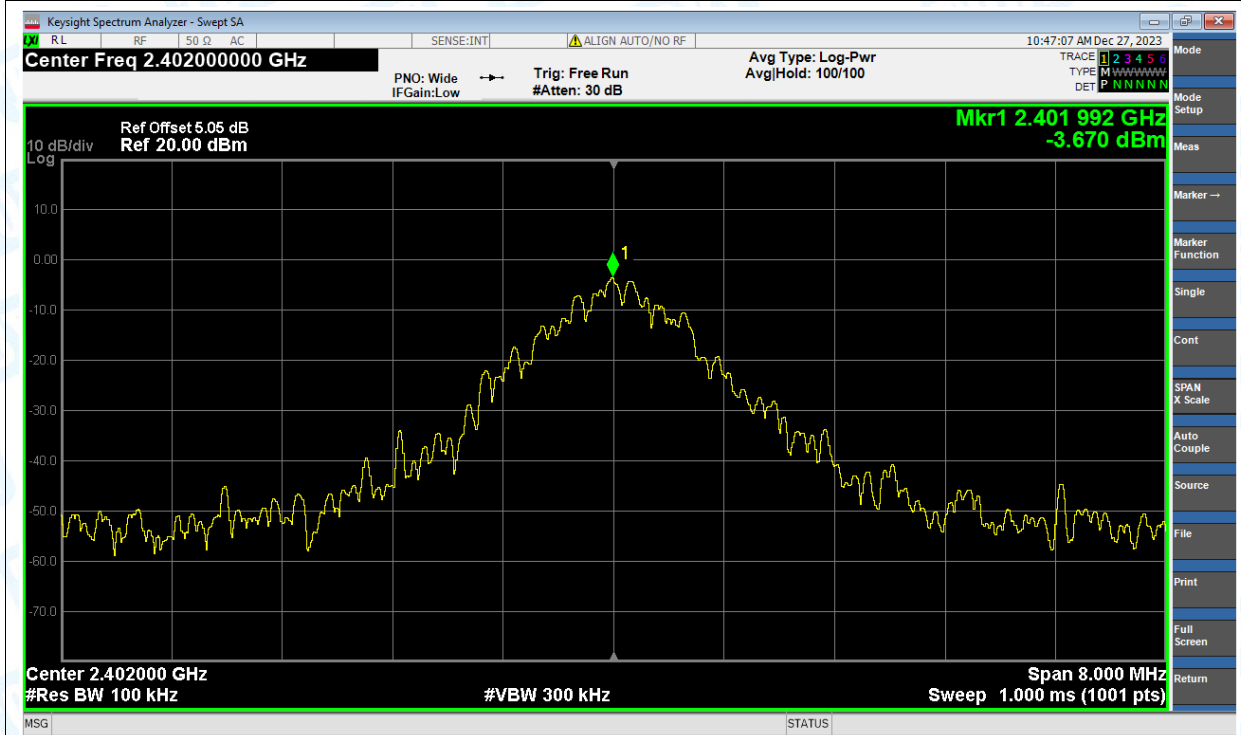
## 6.Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	2.4G	2402	Ant1	-43.96	-20	Pass
NVNT	2.4G	2480	Ant1	-40.23	-20	Pass

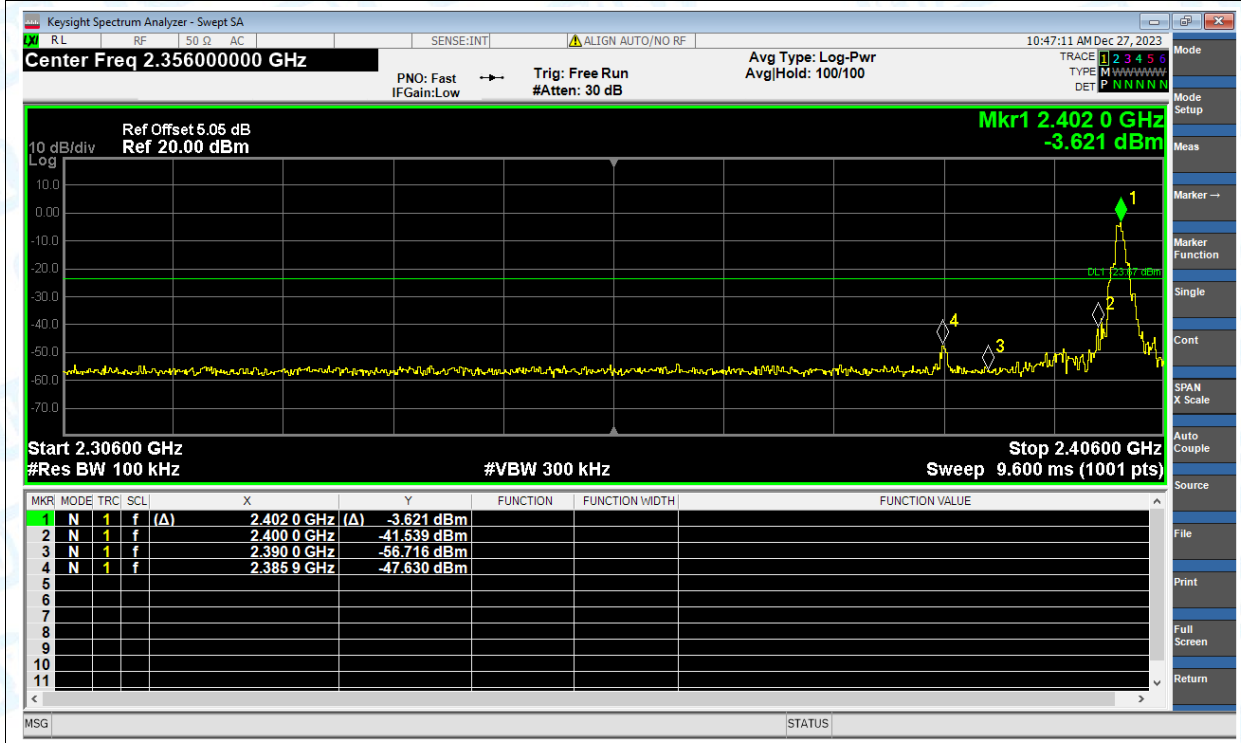


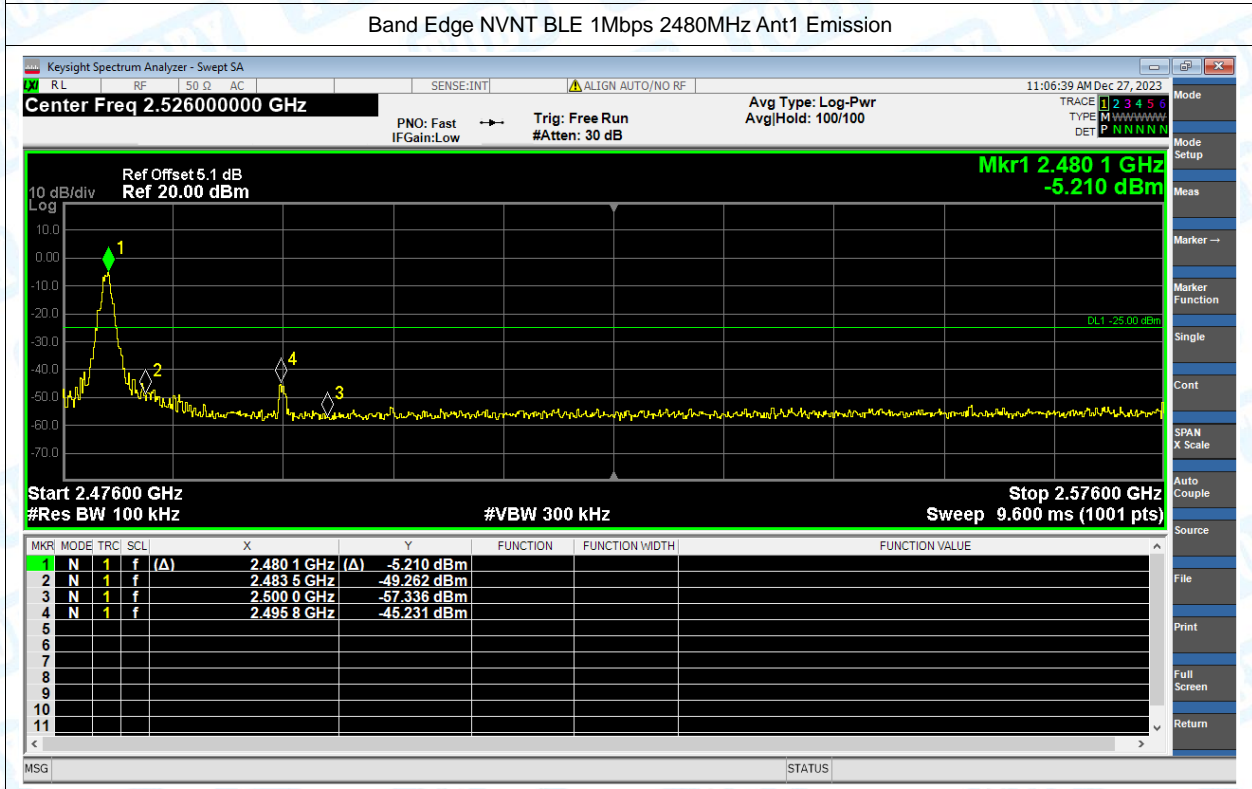
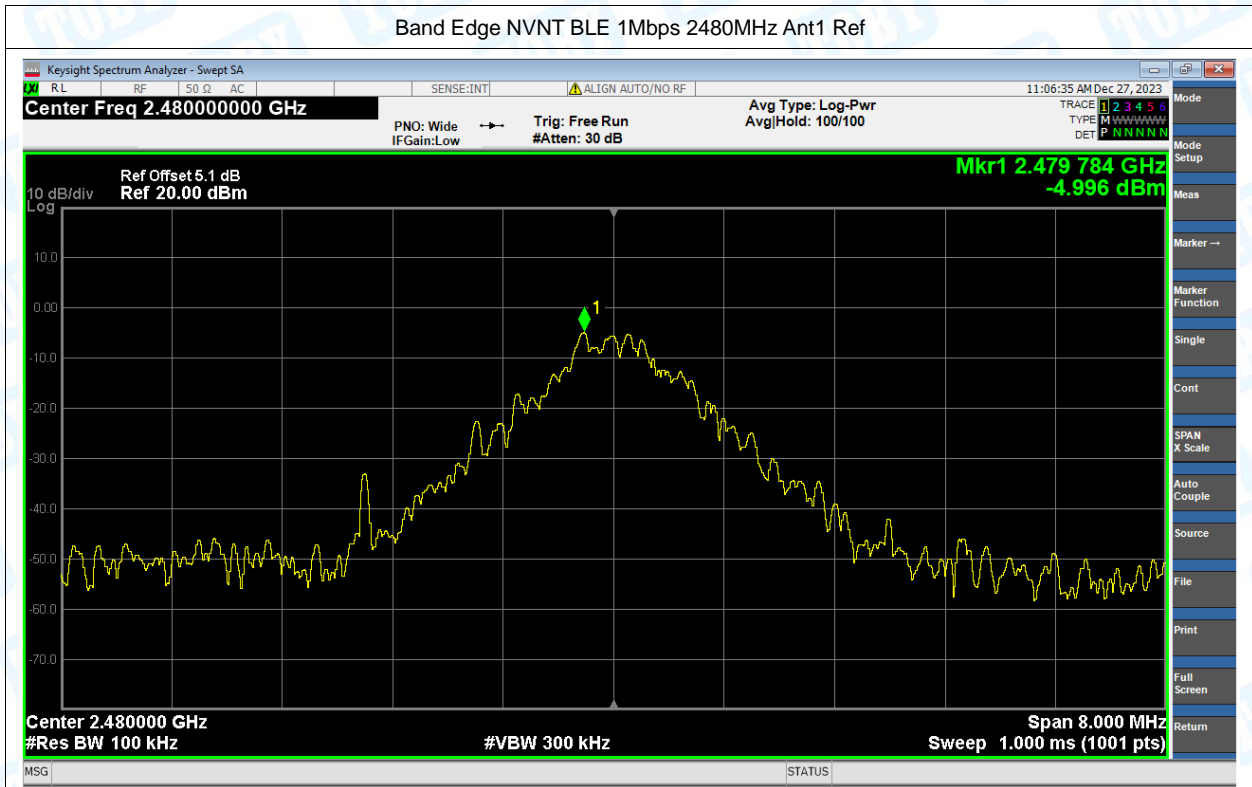
Test Graphs

Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Ref



Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Emission





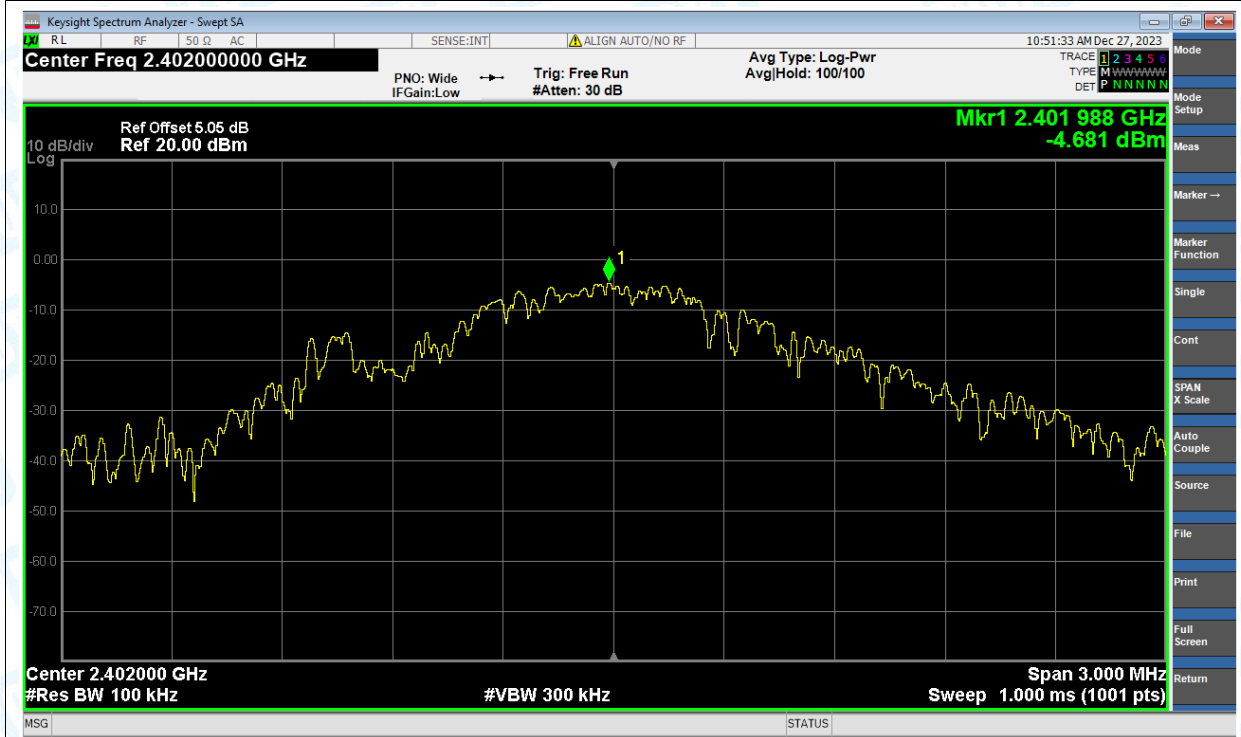


## 7. Conducted RF Spurious Emission

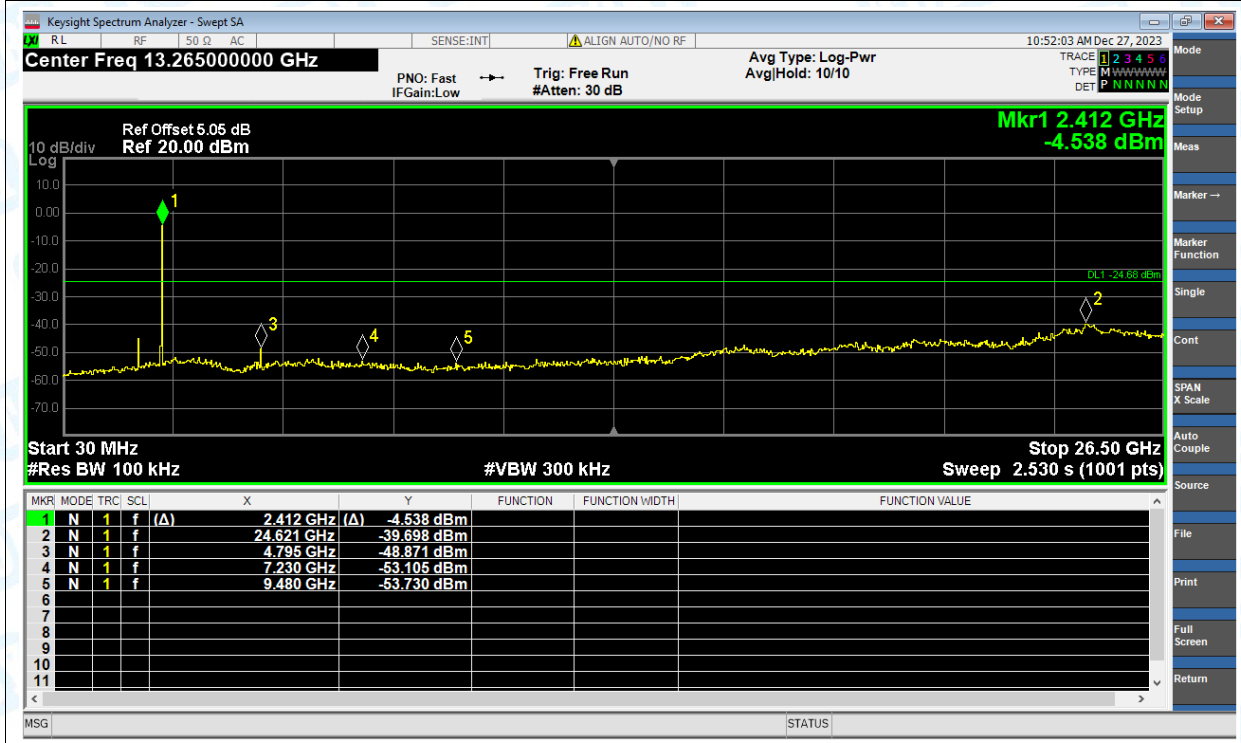
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	2.4G	2402	Ant1	-35.02	-20	Pass
NVNT	2.4G	2440	Ant1	-35.28	-20	Pass
NVNT	2.4G	2480	Ant1	-34.65	-20	Pass

Test Graphs

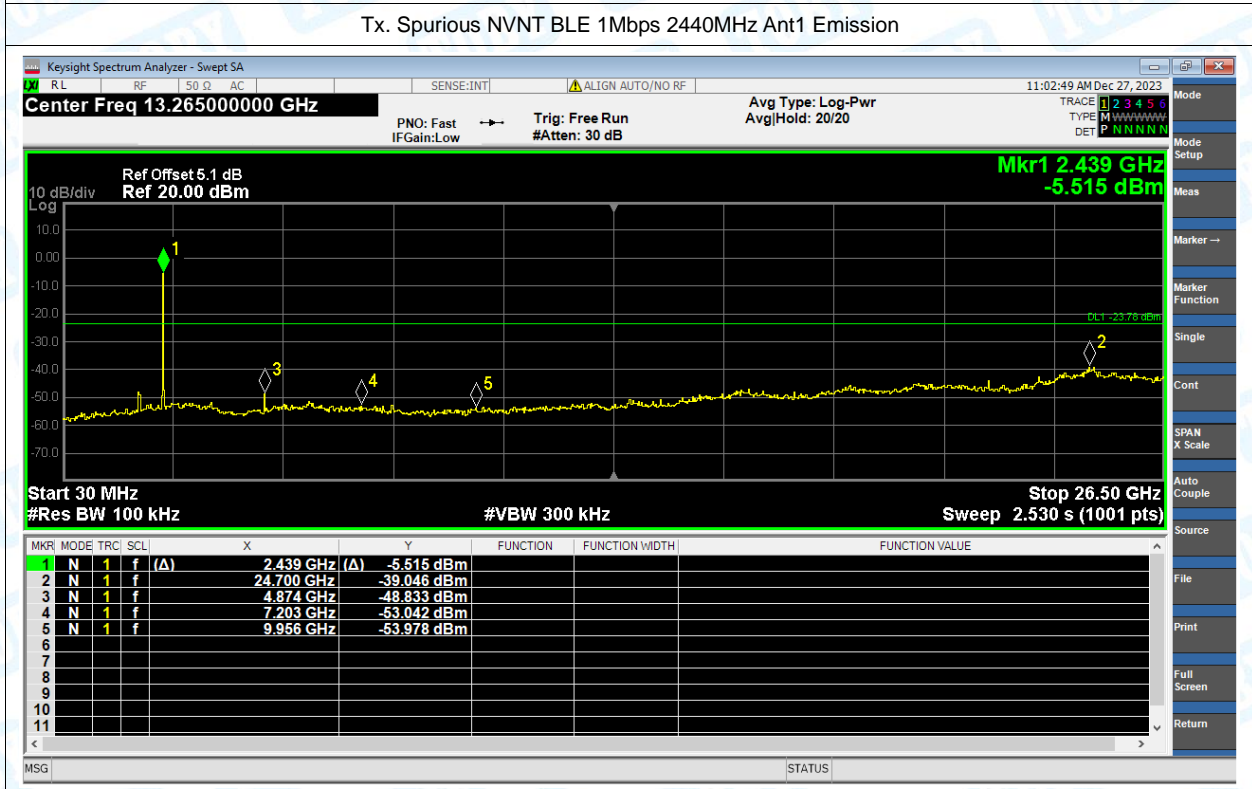
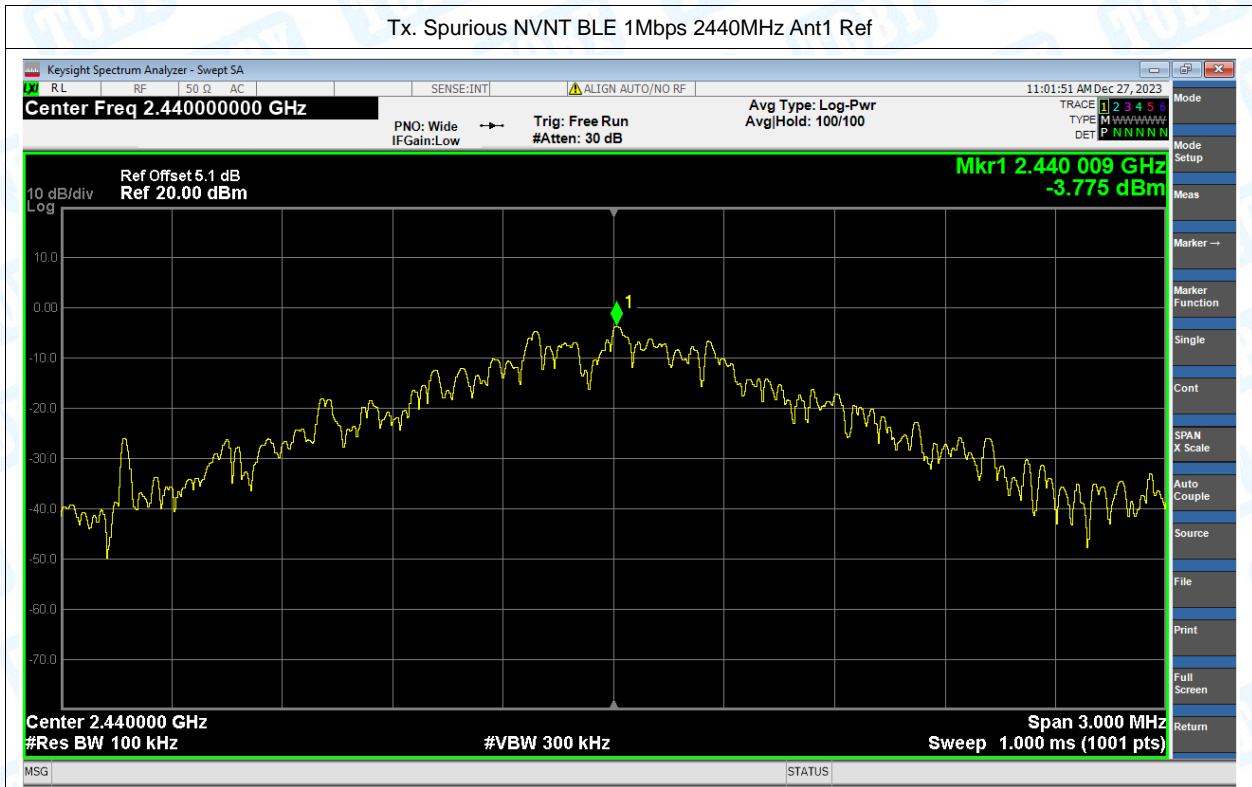
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Ref



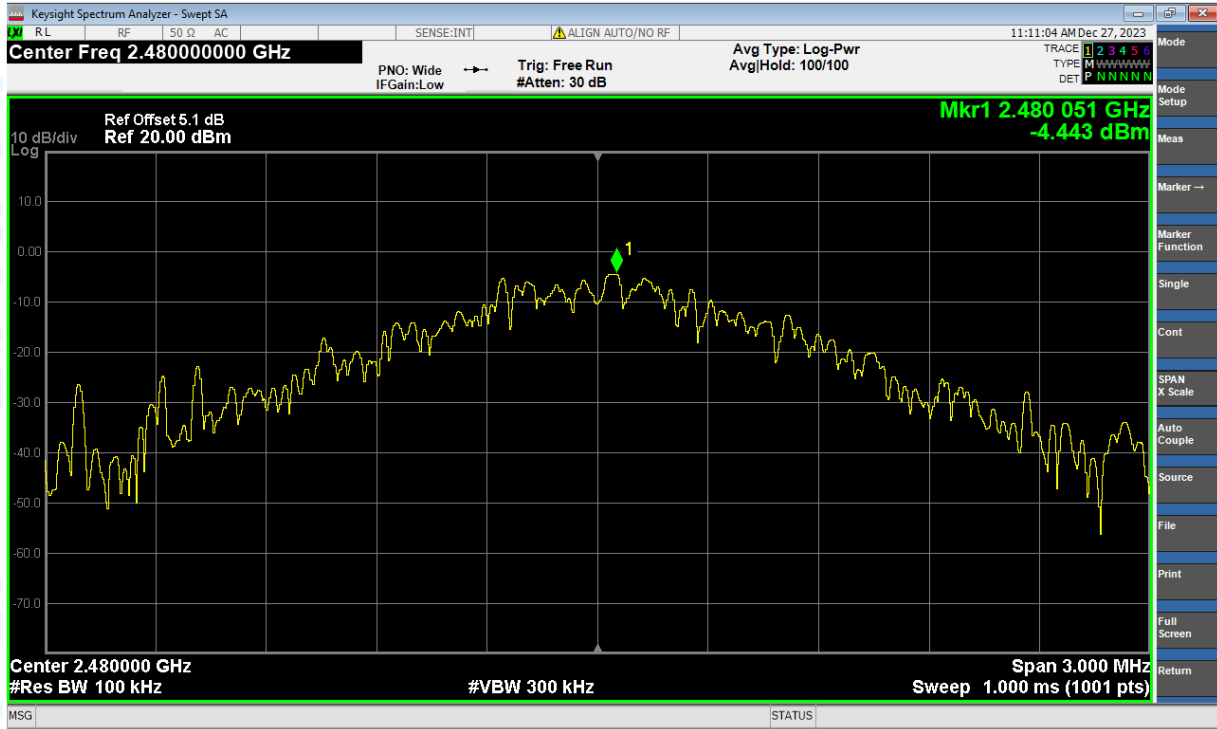
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Emission



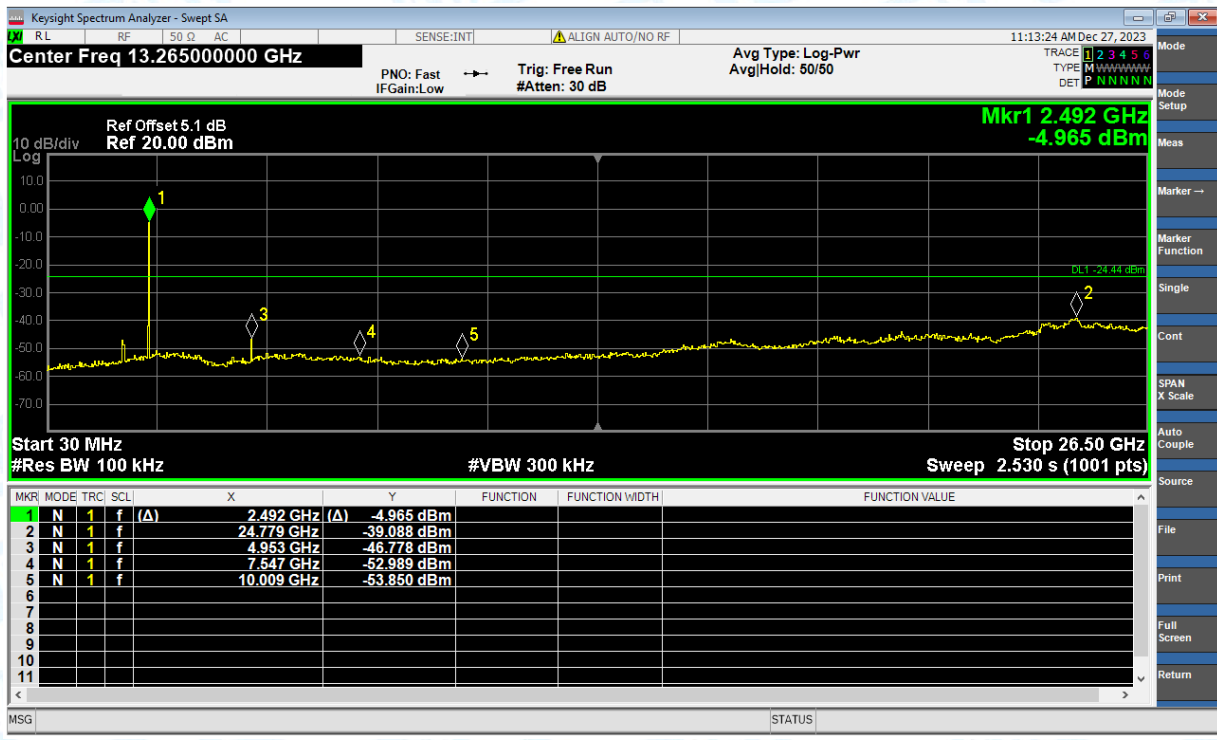




Tx. Spurious NVNT BLE 1Mbps 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 1Mbps 2480MHz Ant1 Emission



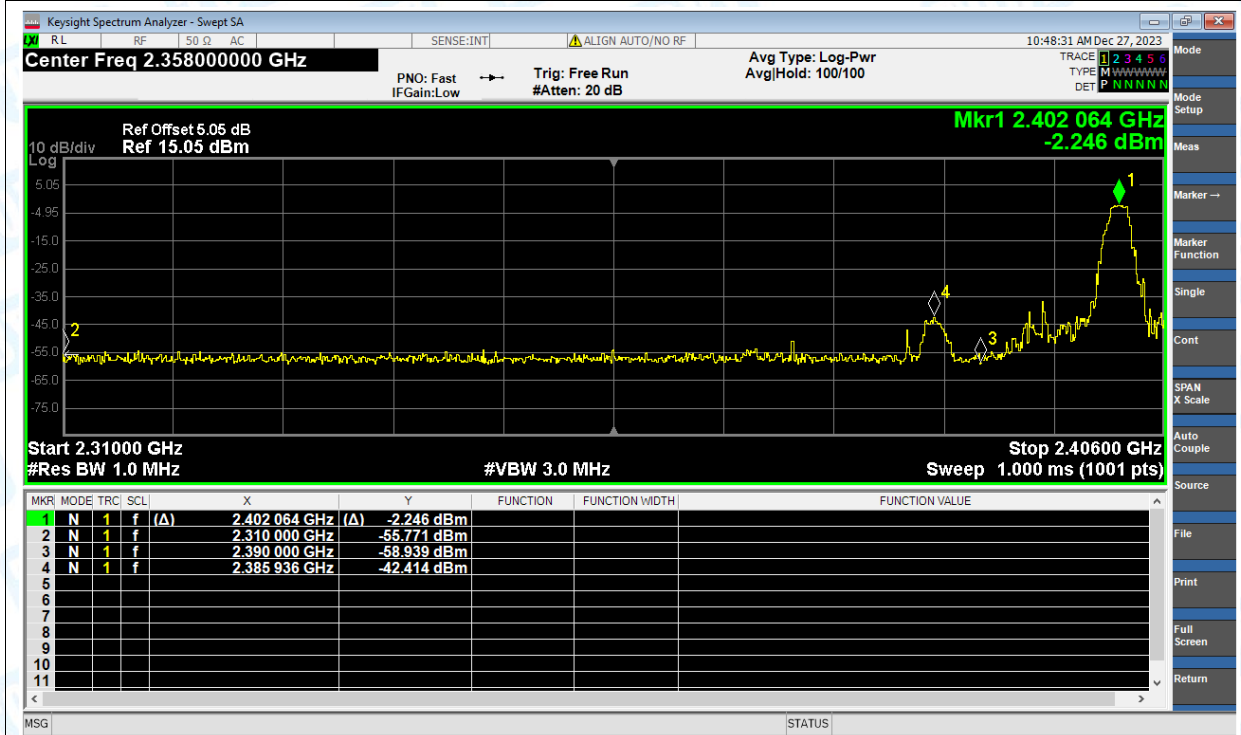


## 8.Restrict Band

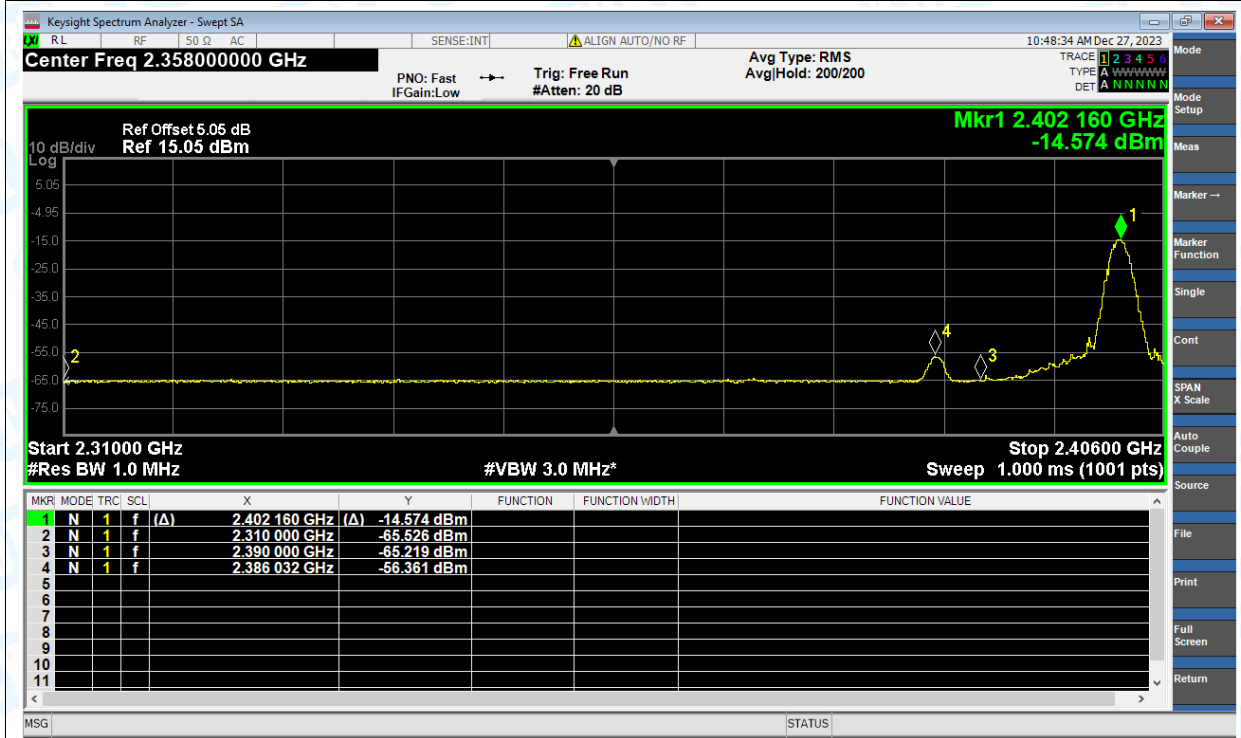
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBUV/m)	Detector	Limit (dBUV/m)	Verdict
NVNT	2.4G	2402	Ant1	2310	-55.77	2	-	41.49	Peak	74	Pass
NVNT	2.4G	2402	Ant1	2310	-65.53	2	12.61	44.34	Average	54	Pass
NVNT	2.4G	2402	Ant1	2385.936	-42.41	2	-	54.85	Peak	74	Pass
NVNT	2.4G	2402	Ant1	2386.032	-56.36	2	12.61	53.51	Average	54	Pass
NVNT	2.4G	2402	Ant1	2390	-58.94	2	-	38.32	Peak	74	Pass
NVNT	2.4G	2402	Ant1	2390	-65.22	2	12.61	44.65	Average	54	Pass
NVNT	2.4G	2480	Ant1	2483.5	-43.81	2	-	53.45	Peak	74	Pass
NVNT	2.4G	2480	Ant1	2483.5	-58.05	2	12.6	51.81	Average	54	Pass
NVNT	2.4G	2480	Ant1	2484.52	-39.36	2	-	57.9	Peak	74	Pass
NVNT	2.4G	2480	Ant1	2484.76	-56.12	2	12.6	53.74	Average	54	Pass
NVNT	2.4G	2480	Ant1	2500	-56.24	2	-	41.02	Peak	74	Pass
NVNT	2.4G	2480	Ant1	2500	-64.69	2	12.6	45.17	Average	54	Pass

Test Graphs

Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Peak

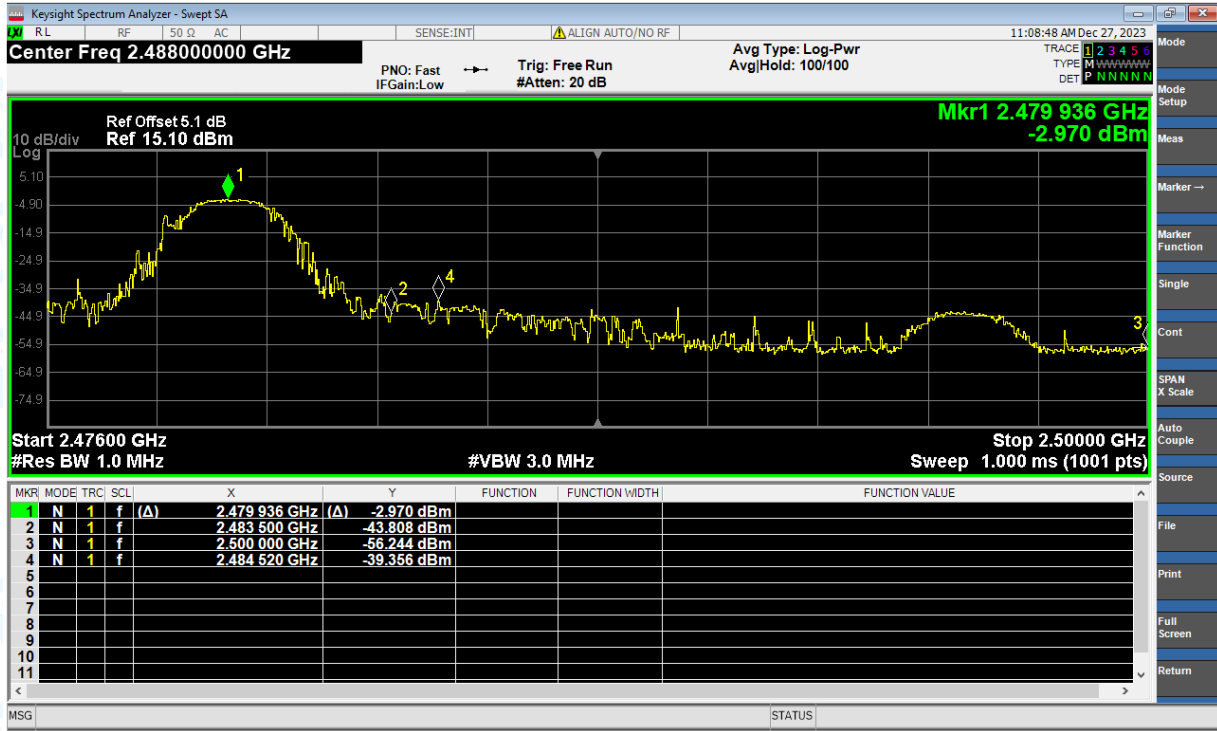


Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Average





Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Peak



Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Average

