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FCC ID BLE
FCC_BLE (Part15.247) Test Data

1. -6dB Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	-6dB BW(kHz)	limit(kHz)	Result
NVNT	ANT1	1Mbps	2402	538.56	500	Pass
NVNT	ANT1	1Mbps	2440.00	515.33	500	Pass
NVNT	ANT1	1Mbps	2480	517.36	500	Pass

-6dB_Bandwidth_NVNT_ANT1_1Mbps_2402

-6dB_Bandwidth_NVNT_ANT1_1Mbps_2440

-6dB_Bandwidth_NVNT_ANT1_1Mbps_2480

2. 99% Occupied Bandwidth

Condition	Antenna	Rate	Frequency (MHz)	99%%BW(MHz)
NVNT	ANT1	1Mbps	2402	1.031
NVNT	ANT1	1Mbps	2440.00	1.030
NVNT	ANT1	1Mbps	2480	1.025

99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2402

99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2440

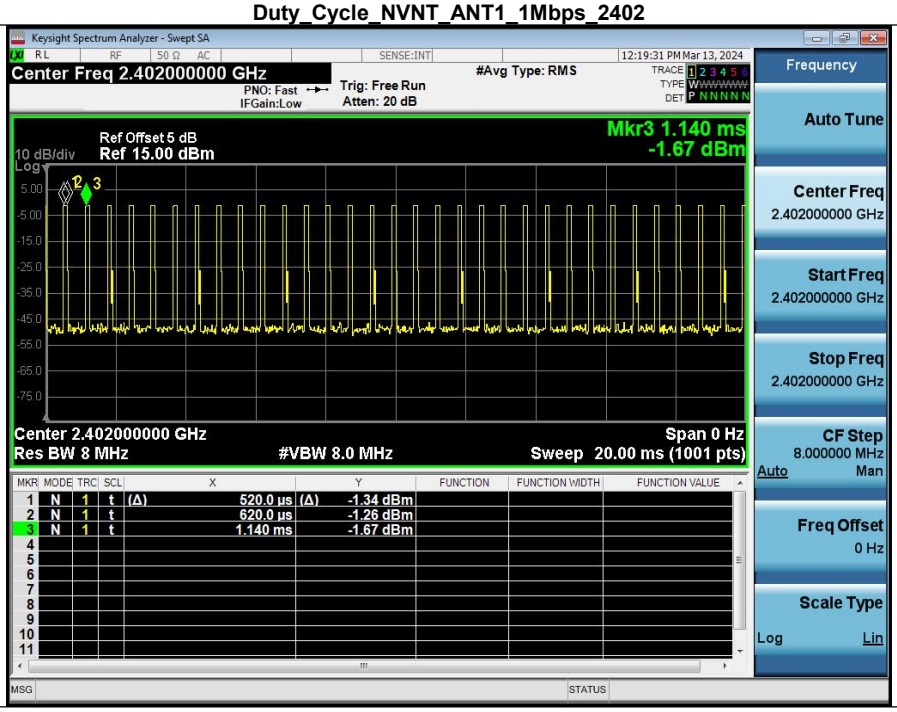
99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2480

Keysight Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold: 10/10
#Atten: 30 dB
Radio Std: None
Radio Device: BTS
12:27:24 PM Mar 13, 2024
#IFGain:Low
Ref Offset 4.65 dB
10 dB/div
Ref 8.30 dBm
Log
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
Occupied Bandwidth
1.0254 MHz
Total Power 2.77 dBm
Transmit Freq Error 43.501 kHz
% of OBW Power 99.00 %
x dB Bandwidth 1.272 MHz
x dB -26.00 dB
Frequency
Center Freq
2.480000000 GHz
CF Step
300.000 kHz
Auto
Man
Freq Offset
0 Hz

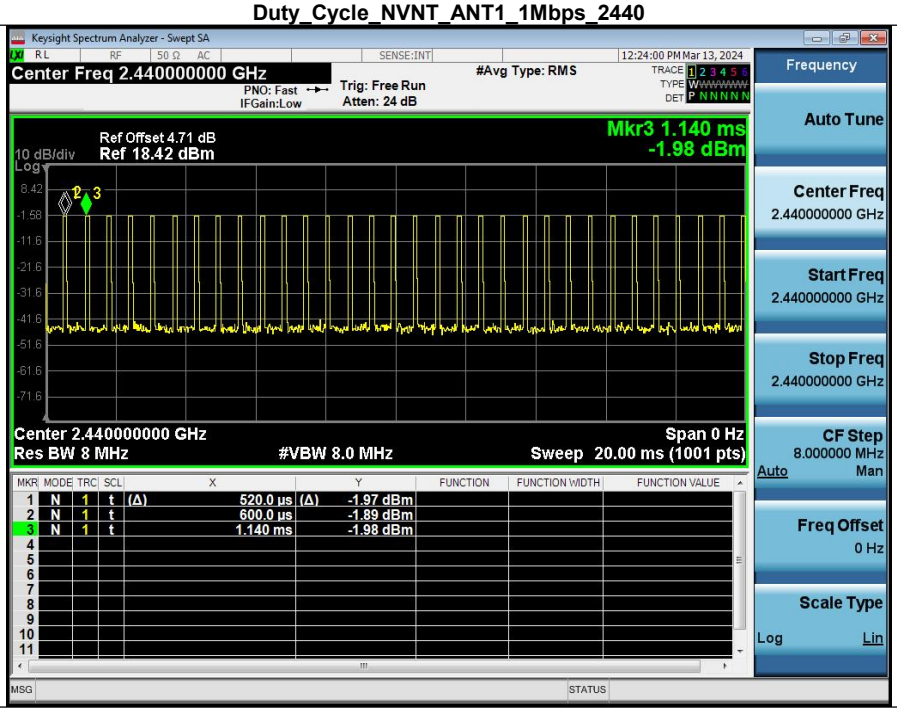
3. Duty Cycle

Condition	Antenna	Rate	Frequency (MHz)	Dutycycle(%)	Duty_factor
NVNT	ANT1	1Mbps	2402	19.35	7.13
NVNT	ANT1	1Mbps	2440.00	12.90	8.89
NVNT	ANT1	1Mbps	2480	16.13	7.92

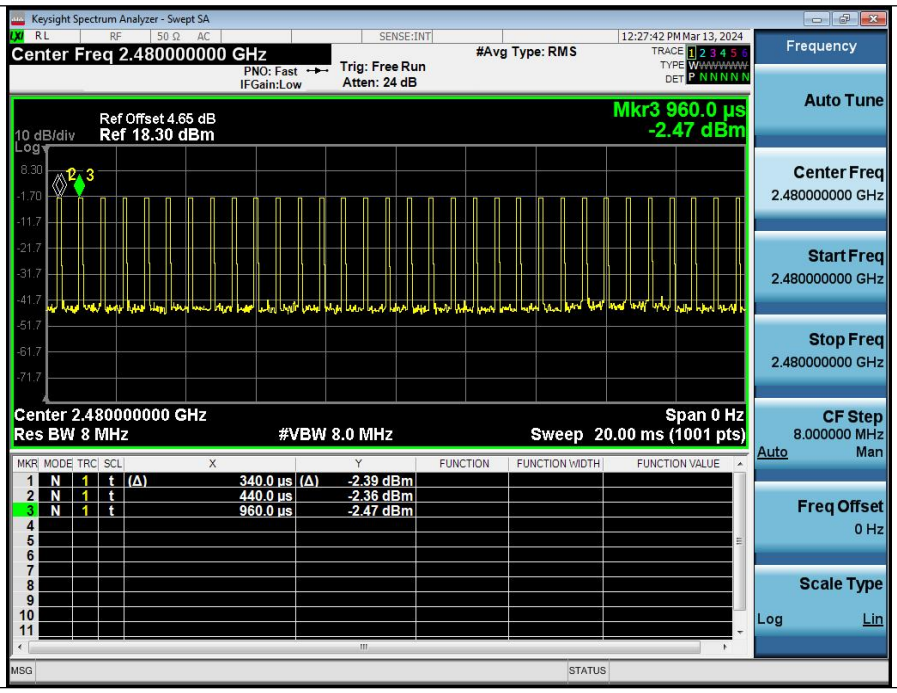
Duty_Cycle_NVNT_ANT1_1Mbps_2402



Duty_Cycle_NVNT_ANT1_1Mbps_2440



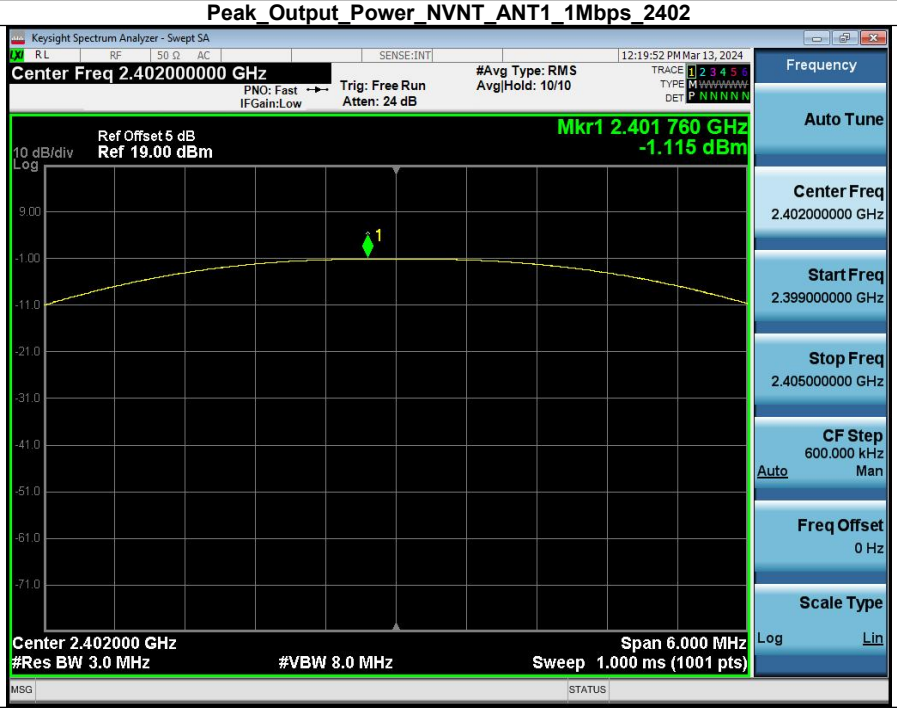
Duty_Cycle_NVNT_ANT1_1Mbps_2480


Keysight Spectrum Analyzer - Swept SA
12:27:42 PM Mar 13, 2024
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 24 dB
#Avg Type: RMS
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.480000000 GHz
Stop Freq
2.480000000 GHz
CF Step
8.000000 MHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin
Ref Offset 4.65 dB
10 dB/div
Ref 18.30 dBm
Mkr3 960.0 µs
-2.47 dBm
Center 2.480000000 GHz
Span 0 Hz
Res BW 8 MHz
#VBW 8.0 MHz
Sweep 20.00 ms (1001 pts)
1 N 1 t (Δ) 340.0 µs (Δ) -2.39 dBm
2 N 1 t 440.0 µs -2.36 dBm
3 N 1 t 960.0 µs -2.47 dBm

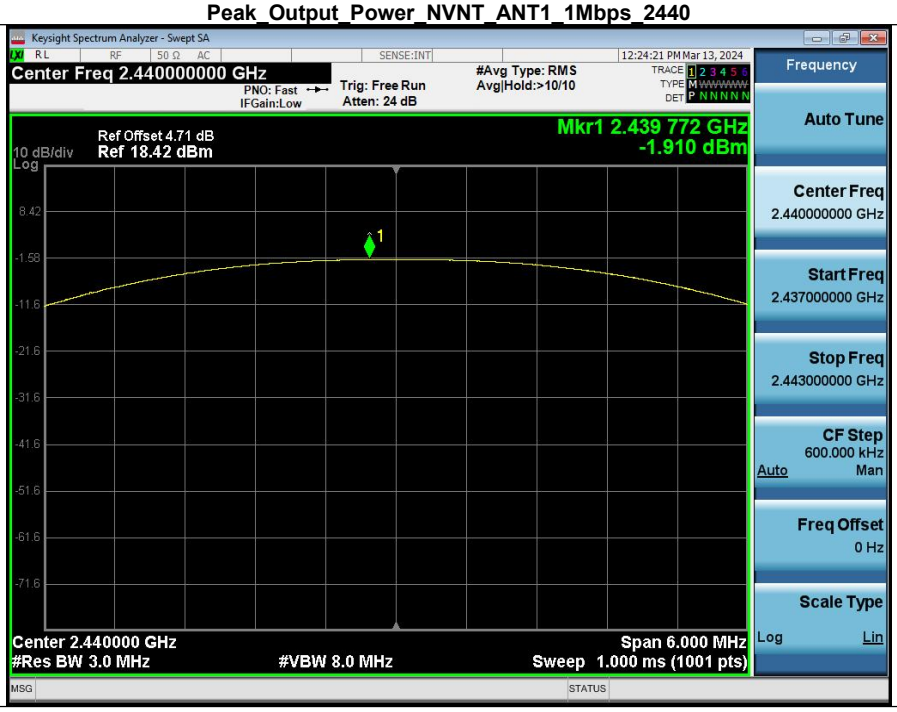
4. Peak Output Power

Frequency (MHz)	Max. Conducted Power(dBm)	Limit(mW)	Ant Gain（dBi）	EIRP (dBm)	EIRP Limit(mW)	Result
2402	-1.12	30	3.49	2.37	36	Pass
2440.00	-1.91	30	3.49	1.58	36	Pass
2480	-2.37	30	3.49	1.12	36	Pass

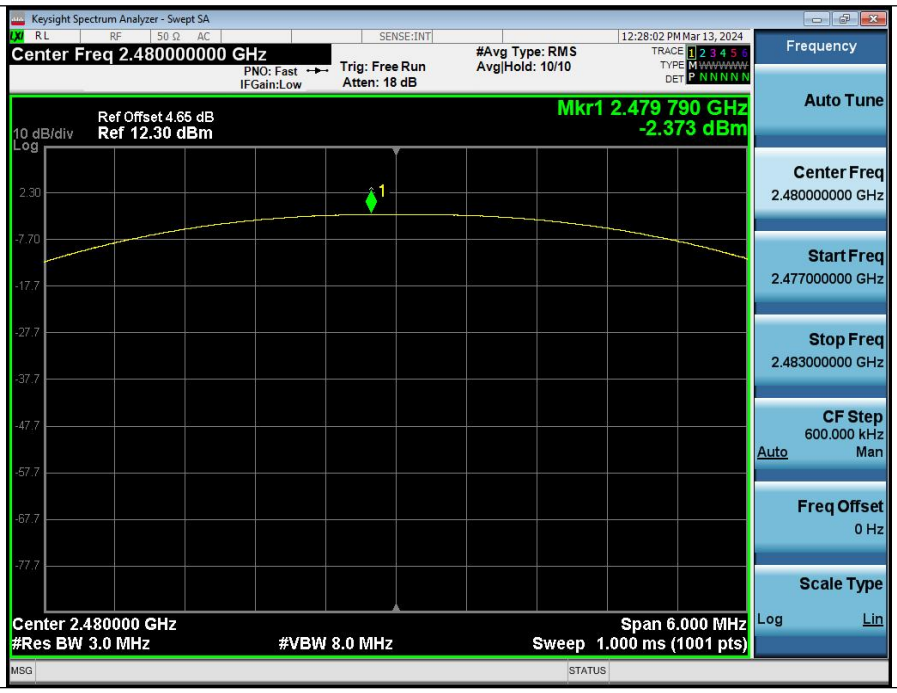
Peak_Output_Power_NVNT_ANT1_1Mbps_2402



Peak_Output_Power_NVNT_ANT1_1Mbps_2440



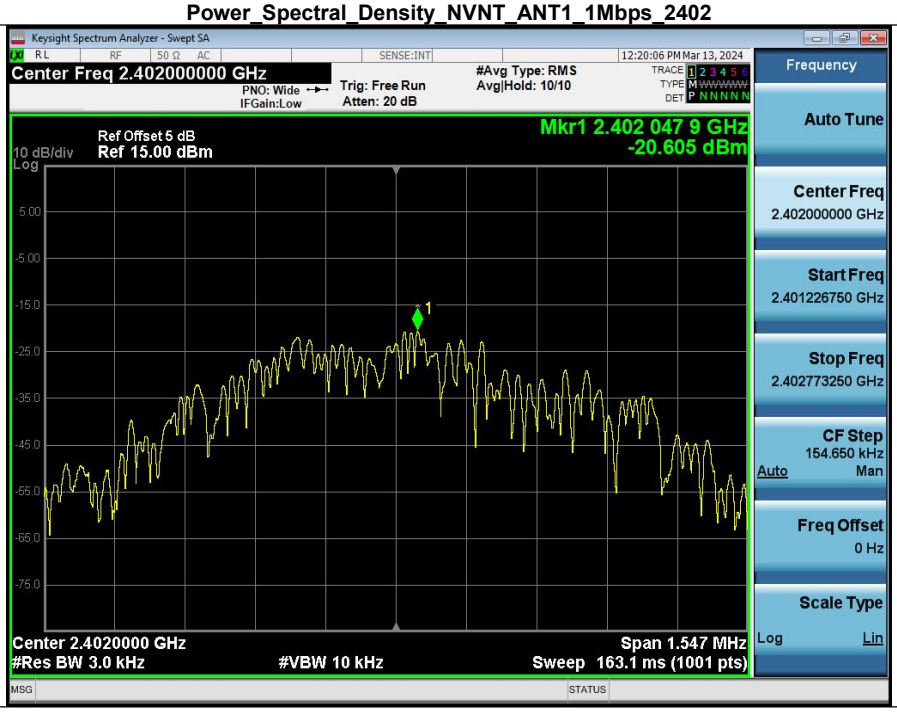
Peak_Output_Power_NVNT_ANT1_1Mbps_2480


Keysight Spectrum Analyzer - Swept SA
RL
RF
50 Ω AC
SENSE:INT
12:28:02 PM Mar 13, 2024
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 18 dB
#Avg Type: RMS
Avg|Hold: 10/10
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
Ref Offset 4.65 dB
10 dB/div
Ref 12.30 dBm
Log
Mkr1 2.479 790 GHz
-2.373 dBm
2.30
-7.70
-17.7
-27.7
-37.7
-47.7
-57.7
-67.7
-77.7
Center 2.480000 GHz
#Res BW 3.0 MHz
#VBW 8.0 MHz
Span 6.000 MHz
Sweep 1.000 ms (1001 pts)
MSG
STATUS
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.477000000 GHz
Stop Freq
2.483000000 GHz
CF Step
600.000 kHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

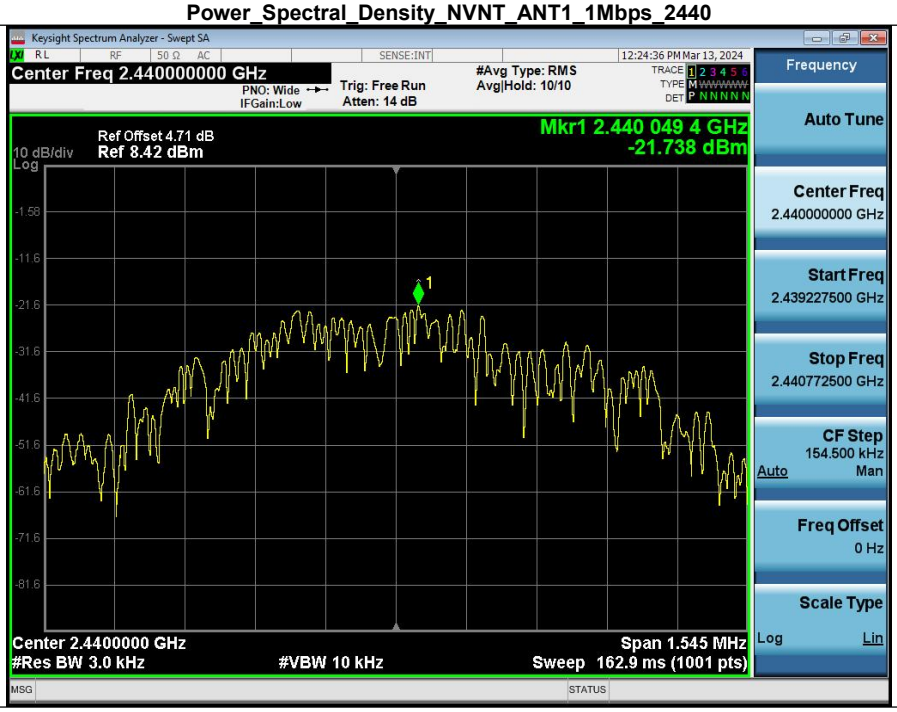
5. Power Spectral Density

Condition	Antenna	Rate	Frequency (MHz)	Power Spectral Density(dBm)	Limit(dBm/3kHz)	Result
NVNT	ANT1	1Mbps	2402	-20.61	8	Pass
NVNT	ANT1	1Mbps	2440.00	-21.74	8	Pass
NVNT	ANT1	1Mbps	2480	-22.16	8	Pass

Power_Spectral_Density_NVNT_ANT1_1Mbps_2402



Power_Spectral_Density_NVNT_ANT1_1Mbps_2440



Power_Spectral_Density_NVNT_ANT1_1Mbps_2480

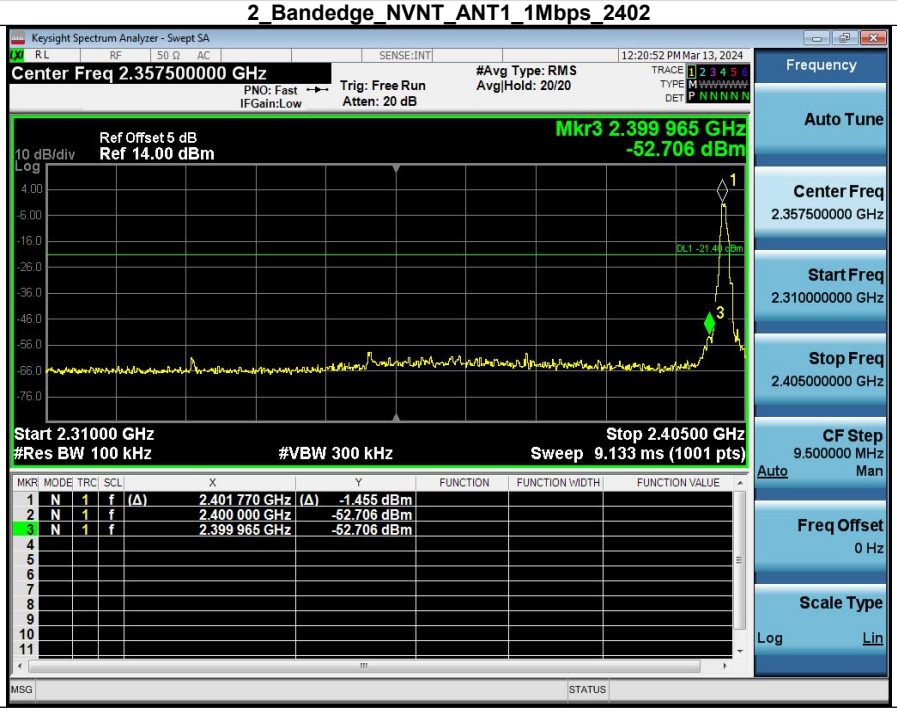
Keysight Spectrum Analyzer - Swept SA
12:28:17 PM Mar 13, 2024
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 14 dB
#Avg Type: RMS
Avg|Hold: 10/10
Ref Offset 4.65 dB
10 dB/div
Ref 8.30 dBm
Mkr1 2.480 050 7 GHz
-22.164 dBm
Center 2.4800000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 1.538 MHz
Sweep 162.1 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.479231250 GHz
Stop Freq
2.480768750 GHz
CF Step
153.750 kHz
Auto
Man
Freq Offset
0 Hz
Scale Type
Log
Lin

6. Bandedge

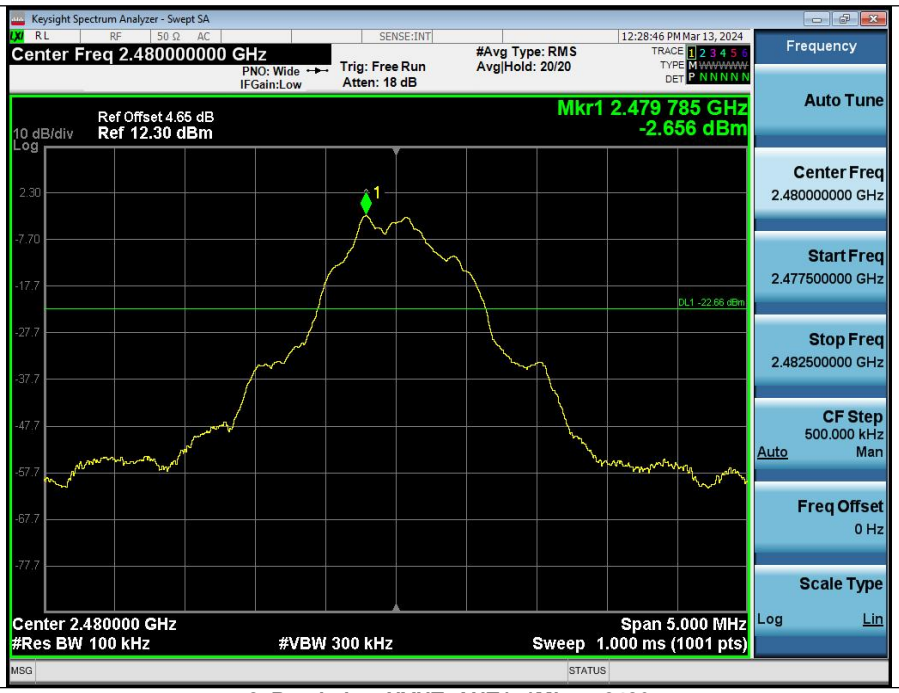
Condition	Antenna	Rate	TX_Frequency (MHz)	Max. Mark Frequency (MHz)	Spurious level(dBm)	limit(dBm)	Result
NVNT	ANT1	1Mbps	2402	2399.965	-52.706	-21.395	Pass
NVNT	ANT1	1Mbps	2480	2483.675	-65.826	-22.656	Pass

1_Reference_Level_NVNT_ANT1_1Mbps_2402

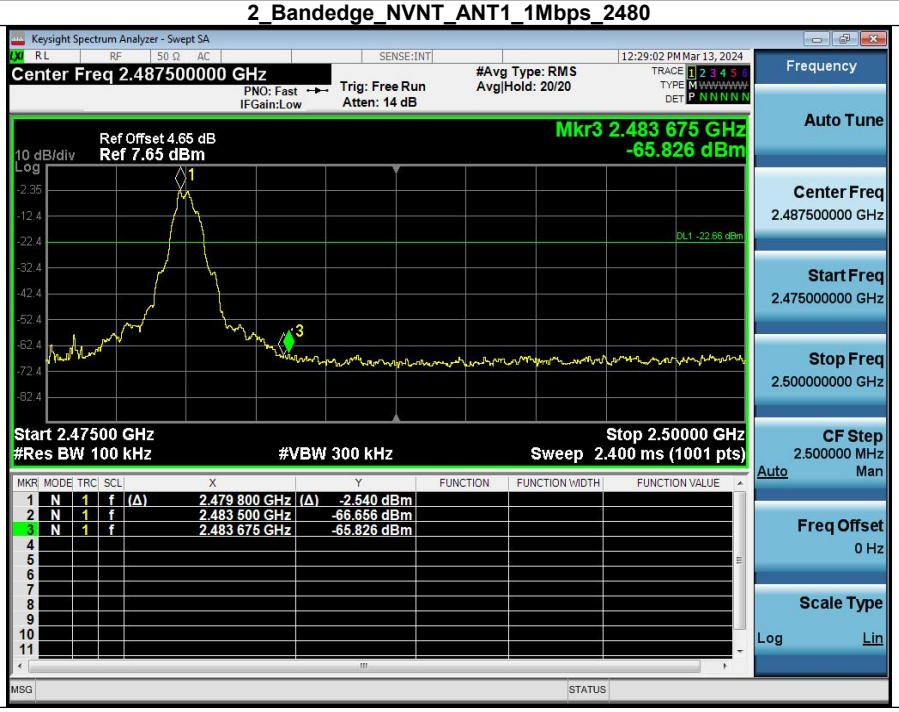
2_Bandedge_NVNT_ANT1_1Mbps_2402



1_Reference_Level_NVNT_ANT1_1Mbps_2480



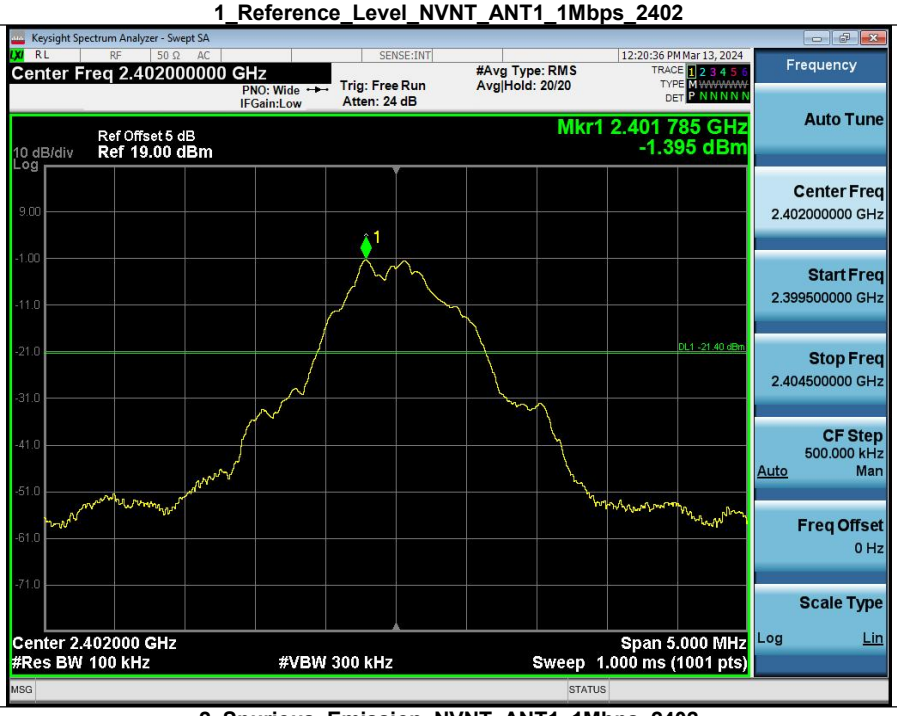
2_Bandedge_NVNT_ANT1_1Mbps_2480



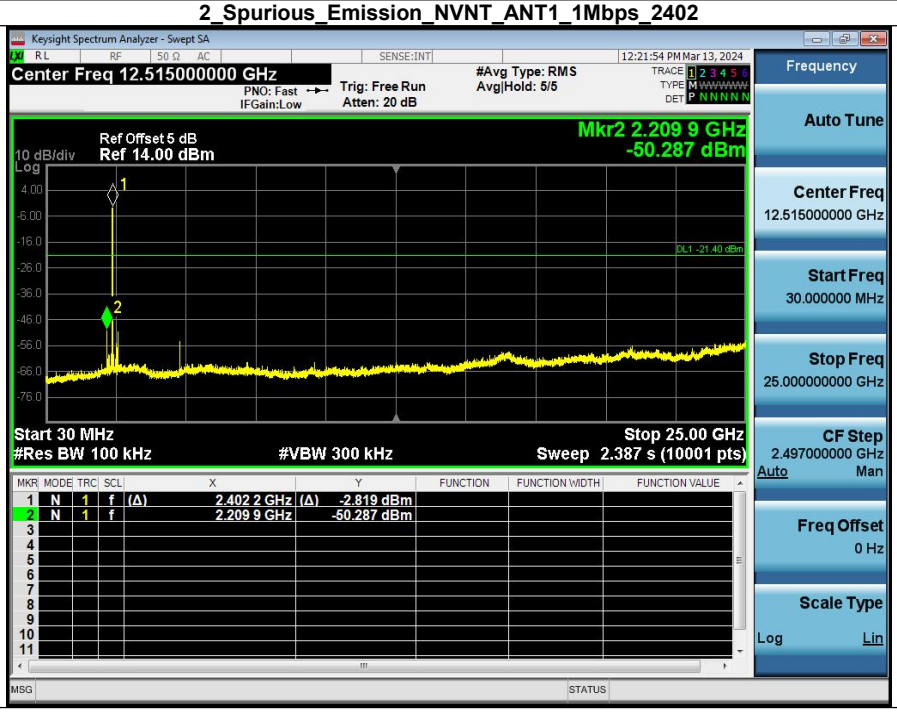
7. Spurious Emission

Condition	Antenna	Rate	TX_Frequency(MHz)	Spurious MAX.Value(dBm)	Limit	Result
NVNT	ANT1	1Mbps	2402	-50.287	-21.395	Pass
NVNT	ANT1	1Mbps	2440.00	-49.986	-22.272	Pass
NVNT	ANT1	1Mbps	2480	-48.483	-22.656	Pass

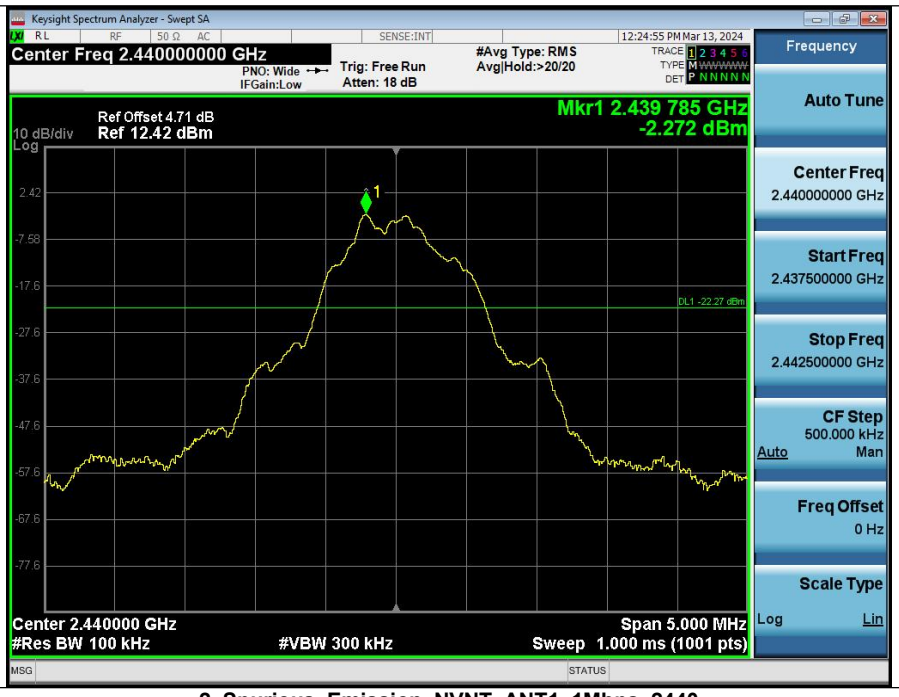
1_Reference_Level_NVNT_ANT1_1Mbps_2402



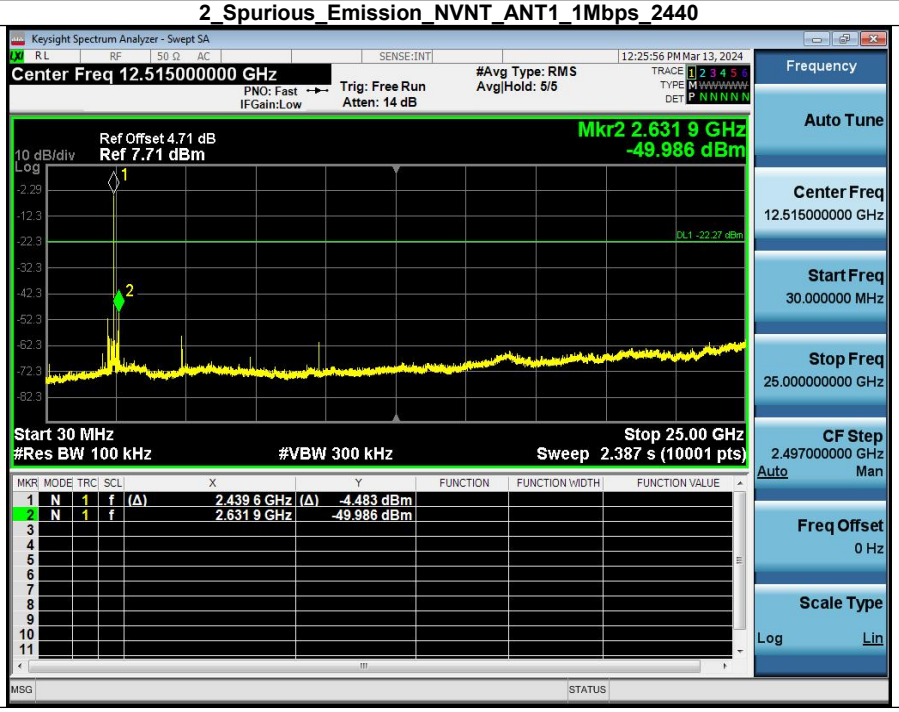
2_Spurious_Emission_NVNT_ANT1_1Mbps_2402



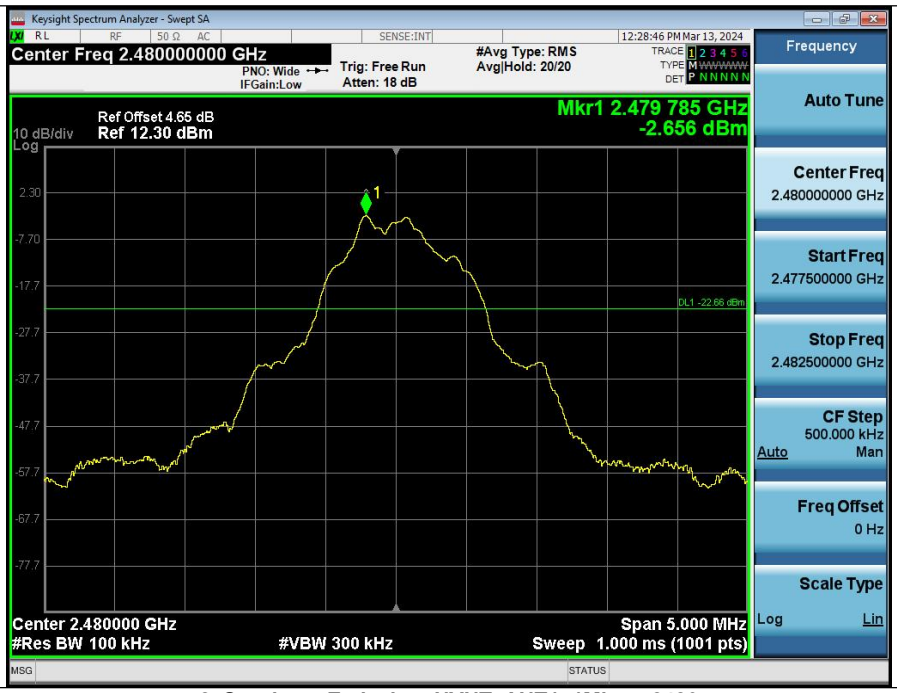
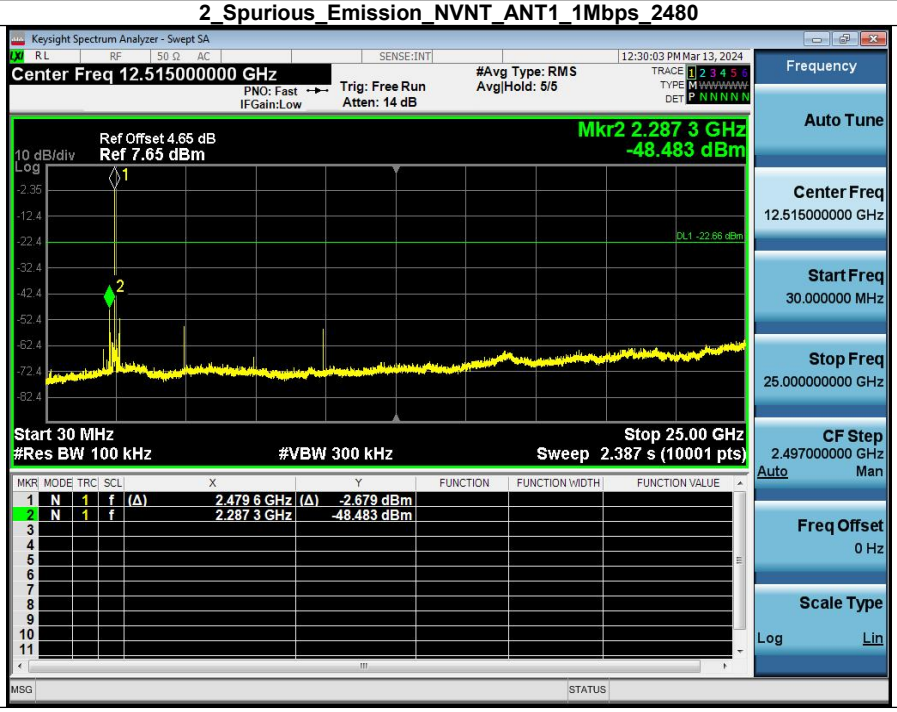
1_Reference_Level_NVNT_ANT1_1Mbps_2440



2_Spurious_Emission_NVNT_ANT1_1Mbps_2440



1_Reference_Level_NVNT_ANT1_1Mbps_2480



2_Spurious_Emission_NVNT_ANT1_1Mbps_2480