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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	505.17	500	Pass
NVNT	ANT1	1Mbps	2440.00	519.63	500	Pass
NVNT	ANT1	1Mbps	2480	526.27	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	1.054
NVNT	ANT1	1Mbps	2440.00	1.086
NVNT	ANT1	1Mbps	2480	1.109

99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2402

99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2440

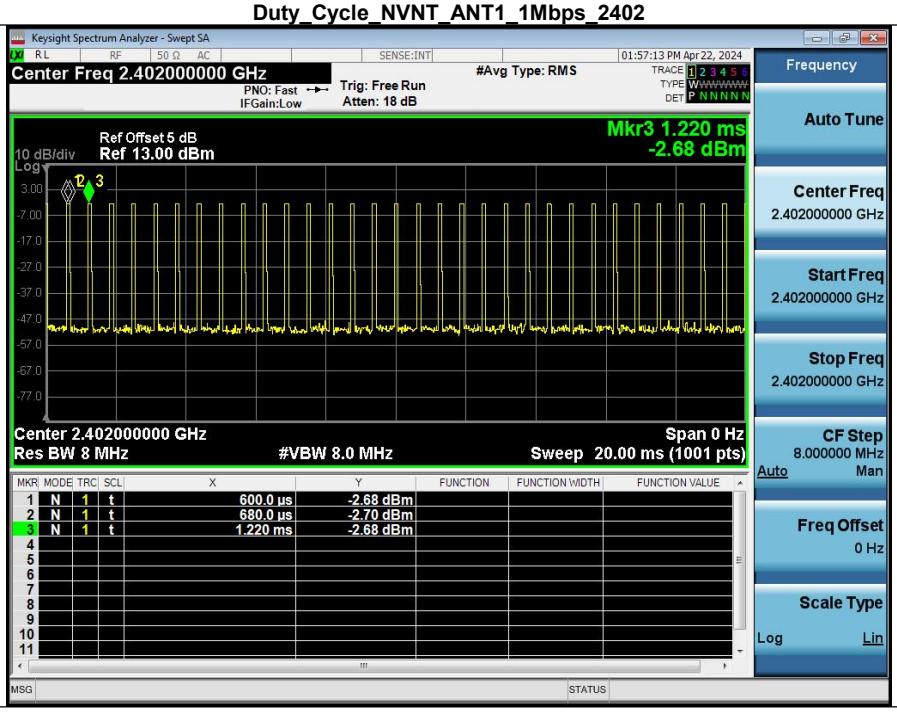
99%_Occupied_Bandwidth_NVNT_ANT1_1Mbps_2480

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
03:37:32 PM Apr 22, 2024
Frequency
Ref Offset 4.65 dB
10 dB/div
Ref 8.30 dBm
Center Freq
2.480000000 GHz
Center 2.48 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 3 MHz
Sweep 3.2 ms
CF Step
300.000 kHz
Auto
Man
Occupied Bandwidth
1.1092 MHz
Total Power 2.20 dBm
Transmit Freq Error 9.229 kHz
% of OBW Power 99.00 %
x dB Bandwidth 1.430 MHz
x dB -26.00 dB
Freq Offset
0 Hz

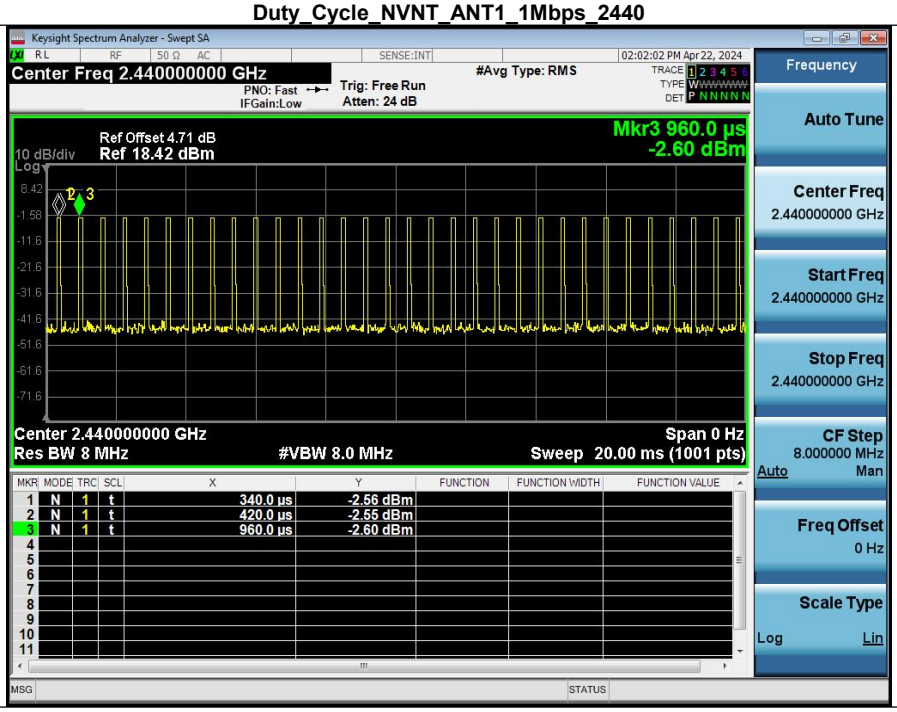
3. Duty Cycle

Condition	Antenna	Rate	Frequency (MHz)	Dutycycle(%)	Duty_factor
NVNT	ANT1	1Mbps	2402	16.13	7.92
NVNT	ANT1	1Mbps	2440.00	12.90	8.89
NVNT	ANT1	1Mbps	2480	15.63	8.06

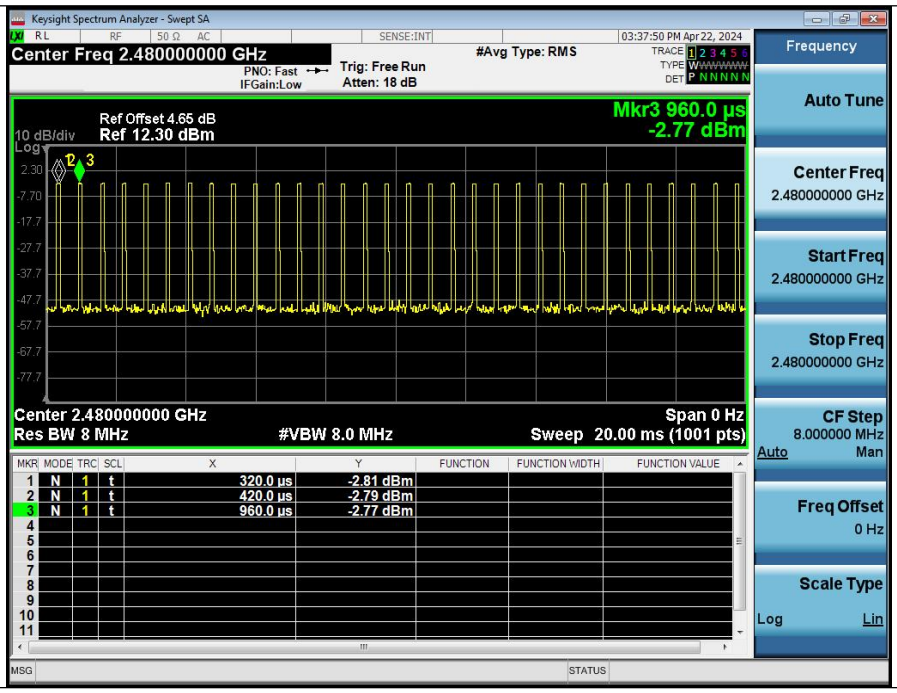
Duty_Cycle_NVNT_ANT1_1Mbps_2402



Duty_Cycle_NVNT_ANT1_1Mbps_2440



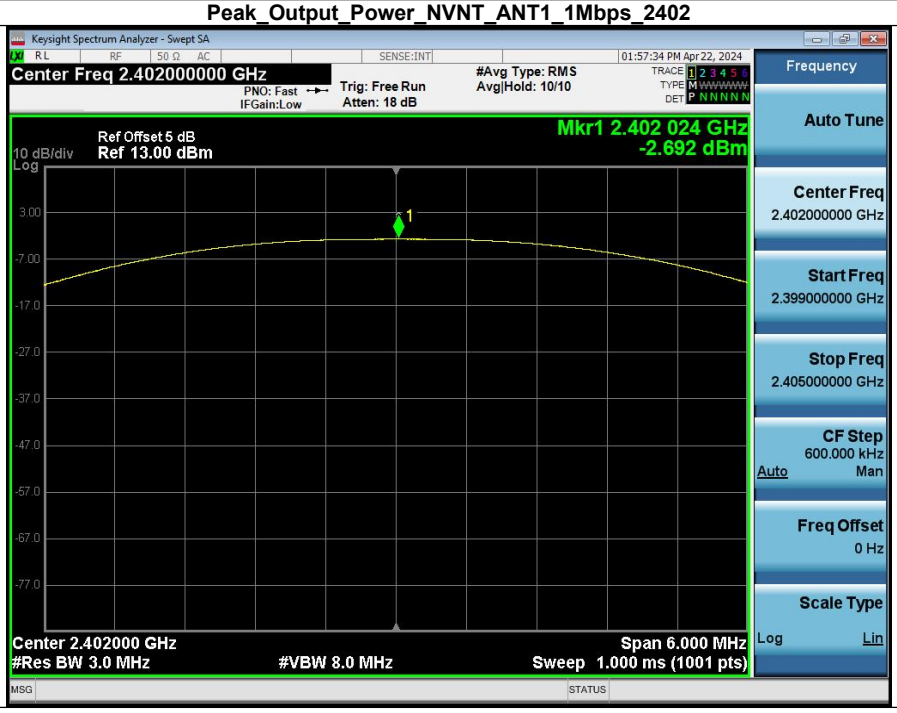
Duty_Cycle_NVNT_ANT1_1Mbps_2480


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 18 dB
#Avg Type: RMS
03:37:50 PM Apr 22, 2024
Ref Offset 4.65 dB
10 dB/div
Ref 12.30 dBm
Mkr3 960.0 µs
-2.77 dBm
Center 2.480000000 GHz
Res BW 8 MHz
#VBW 8.0 MHz
Span 0 Hz
Sweep 20.00 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 t 320.0 µs -2.81 dBm
2 N 1 t 420.0 µs -2.79 dBm
3 N 1 t 960.0 µs -2.77 dBm
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
MSG
STATUS

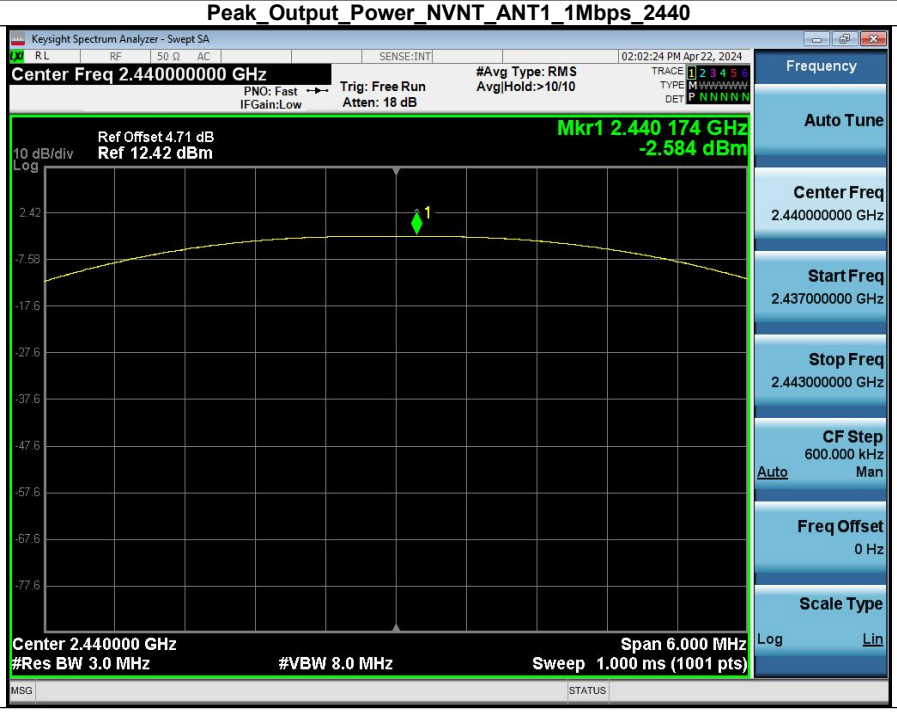
4. Peak Output Power

Condition	Antenna	Rate	Frequency (MHz)	Max. Conducted Power(dBm)	Max. Conducted Power(mW)	Limit(mW)	Result
NVNT	ANT1	1Mbps	2402	-2.69	0.54	1000	Pass
NVNT	ANT1	1Mbps	2440.00	-2.58	0.55	1000	Pass
NVNT	ANT1	1Mbps	2480	-2.78	0.53	1000	Pass

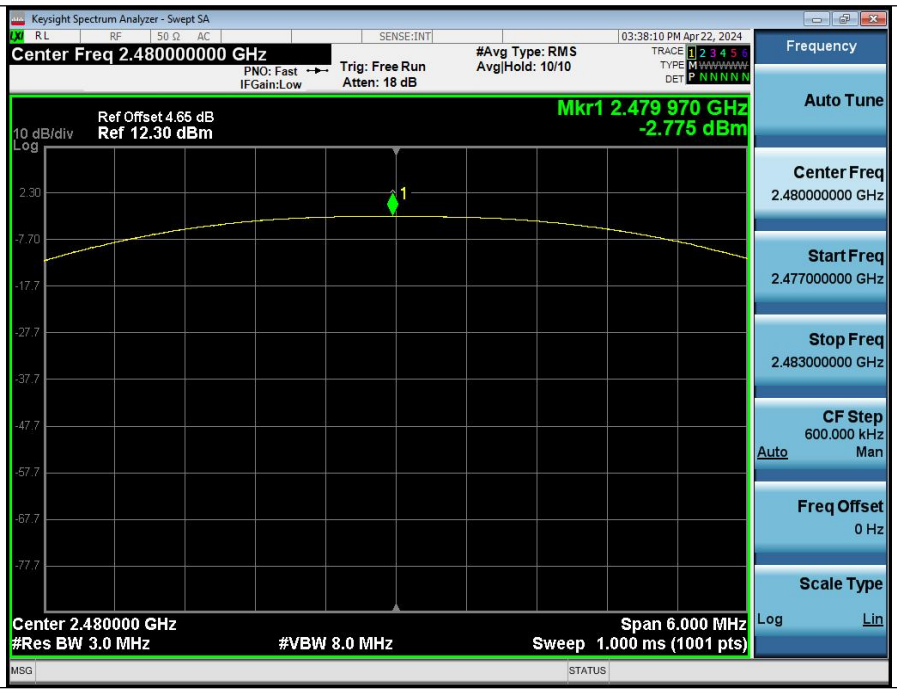
Peak_Output_Power_NVNT_ANT1_1Mbps_2402



Peak_Output_Power_NVNT_ANT1_1Mbps_2440



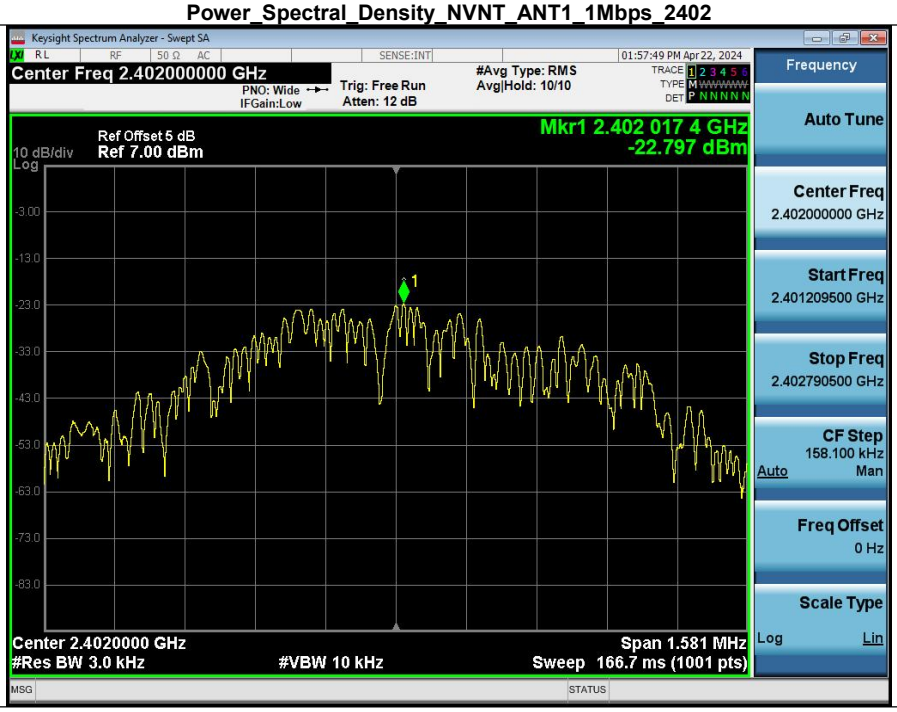
Peak_Output_Power_NVNT_ANT1_1Mbps_2480


Keysight Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 18 dB
#Avg Type: RMS
Avg|Hold: 10/10
03:38:10 PM Apr 22, 2024
Ref Offset 4.65 dB
10 dB/div
Ref 12.30 dBm
Log
Mkr1 2.479 970 GHz
-2.775 dBm
Center 2.480000 GHz
#Res BW 3.0 MHz
#VBW 8.0 MHz
Span 6.000 MHz
Sweep 1.000 ms (1001 pts)
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

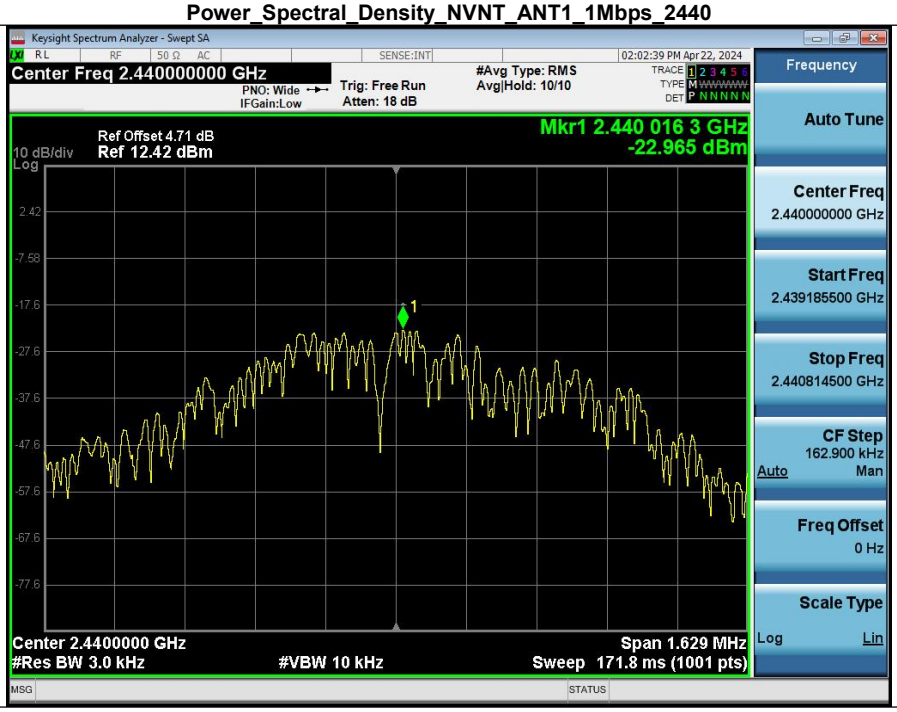
5. Power Spectral Density

Condition	Antenna	Rate	Frequency (MHz)	Power Spectral Density(dBm)	Limit(dBm/3kHz)	Result
NVNT	ANT1	1Mbps	2402	-22.80	8	Pass
NVNT	ANT1	1Mbps	2440.00	-22.97	8	Pass
NVNT	ANT1	1Mbps	2480	-23.45	8	Pass

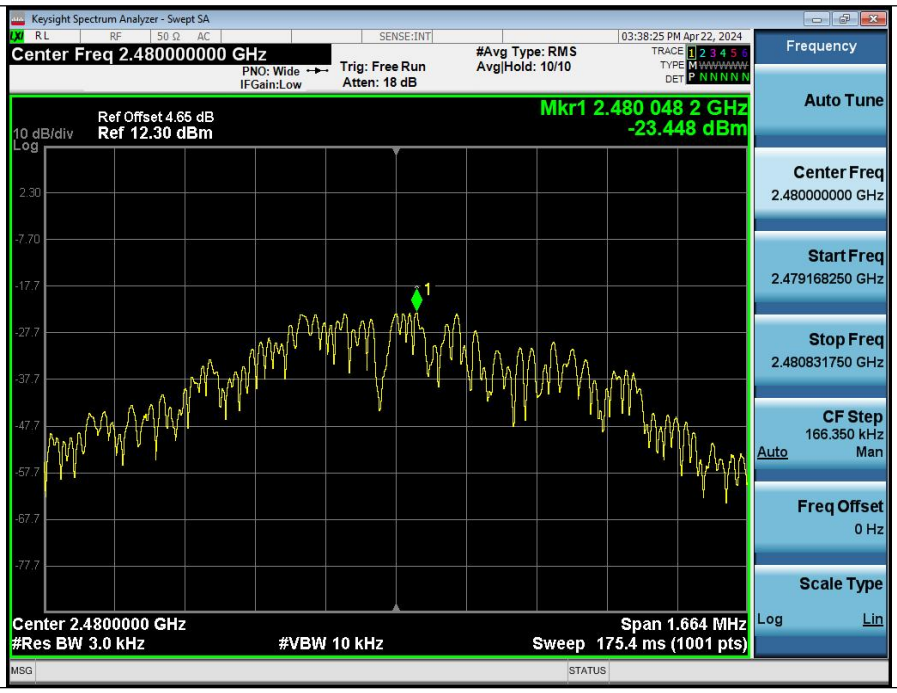
Power_Spectral_Density_NVNT_ANT1_1Mbps_2402



Power_Spectral_Density_NVNT_ANT1_1Mbps_2440



Power_Spectral_Density_NVNT_ANT1_1Mbps_2480

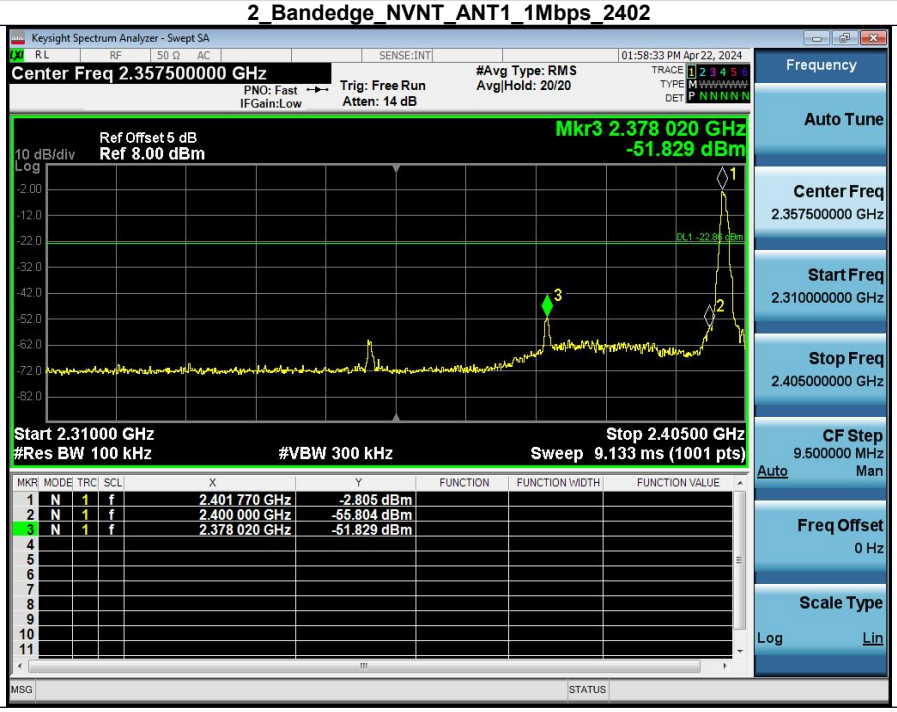

Keysight Spectrum Analyzer - Swept SA
Center Freq 2.480000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 18 dB
#Avg Type: RMS
Avg|Hold: 10/10
03:38:25 PM Apr 22, 2024
Ref Offset 4.65 dB
10 dB/div
Ref 12.30 dBm
Log
Mkr1 2.480 048 2 GHz
-23.448 dBm
Center 2.4800000 GHz
#Res BW 3.0 kHz
#VBW 10 kHz
Span 1.664 MHz
Sweep 175.4 ms (1001 pts)
Frequency
Auto Tune
Center Freq
2.480000000 GHz
Start Freq
2.479168250 GHz
Stop Freq
2.480831750 GHz
CF Step
166.350 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	2378.020	-51.829	-22.860	Pass
NVNT	ANT1	1Mbps	2480	2483.600	-59.912	-22.923	Pass

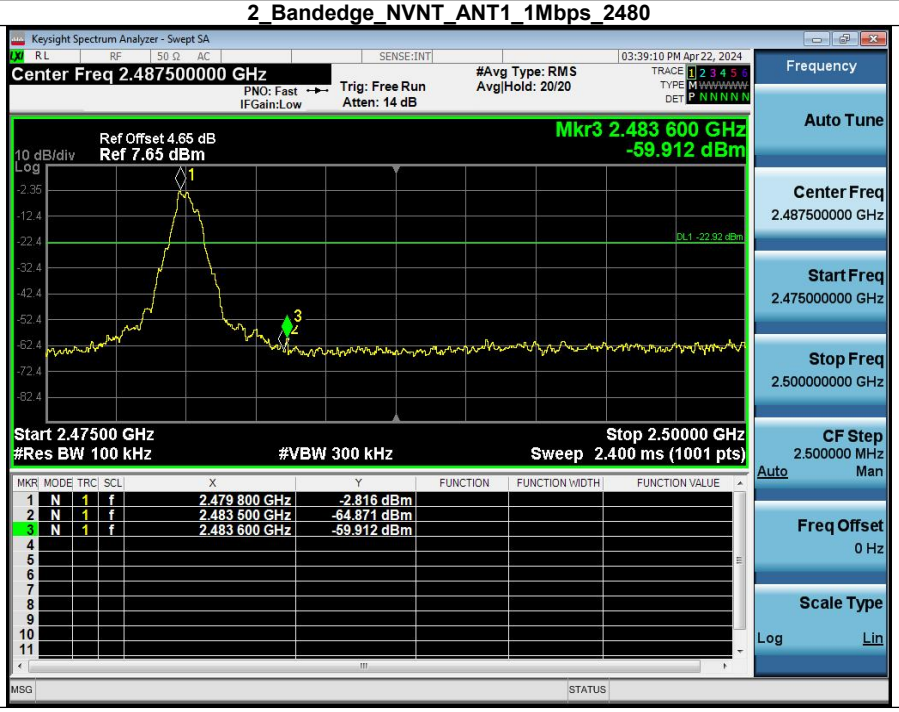
1_Reference_Level_NVNT_ANT1_1Mbps_2402

2_Bandedge_NVNT_ANT1_1Mbps_2402



1_Reference_Level_NVNT_ANT1_1Mbps_2480

2_Bandedge_NVNT_ANT1_1Mbps_2480

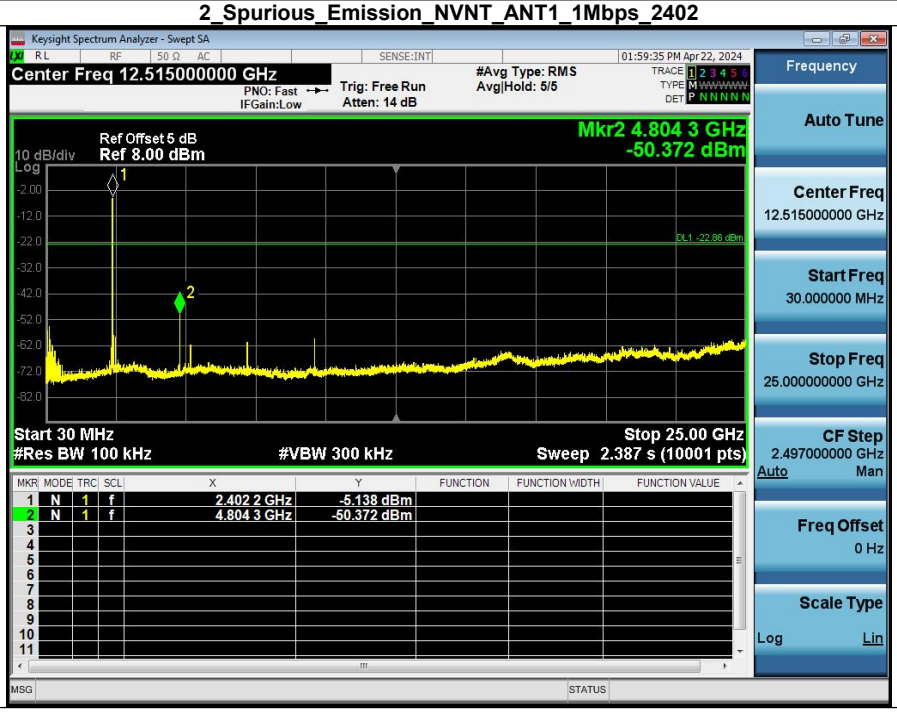


7. Spurious Emission

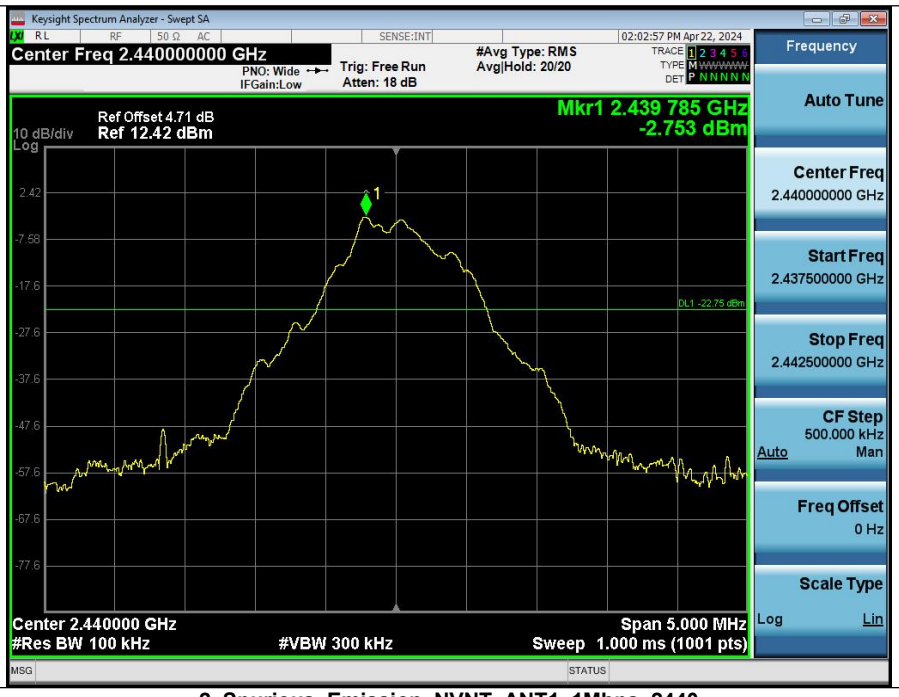
Condition	Antenna	Rate	TX_Frequency(MHz)	Spurious MAX.Value(dBm)	Limit	Result
NVNT	ANT1	1Mbps	2402	-50.372	-22.860	Pass
NVNT	ANT1	1Mbps	2440.00	-49.974	-22.753	Pass
NVNT	ANT1	1Mbps	2480	-51.619	-22.923	Pass

1_Reference_Level_NVNT_ANT1_1Mbps_2402

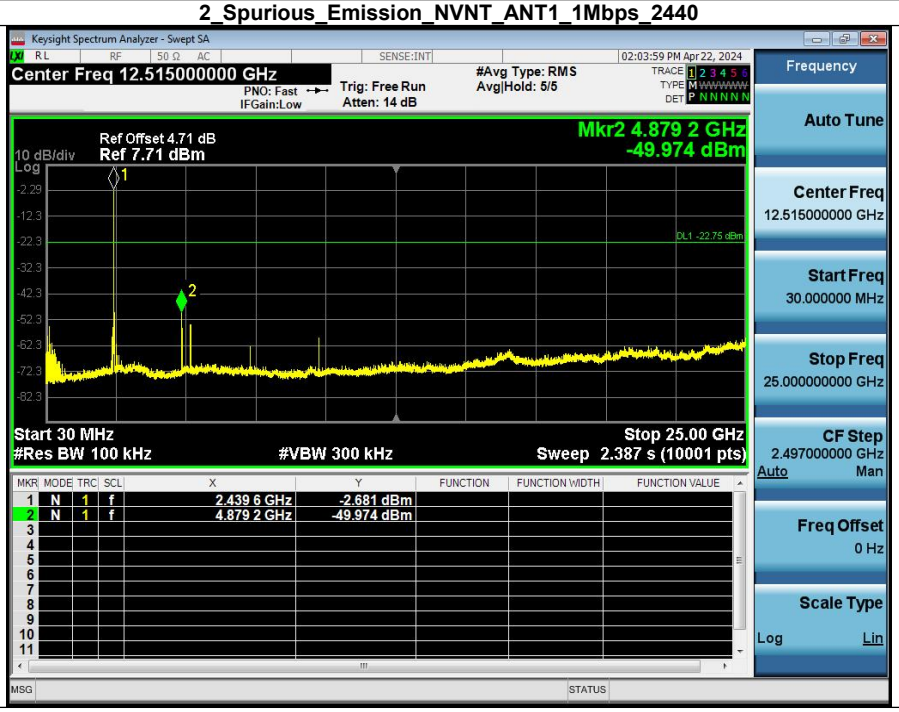
2_Spurious_Emission_NVNT_ANT1_1Mbps_2402

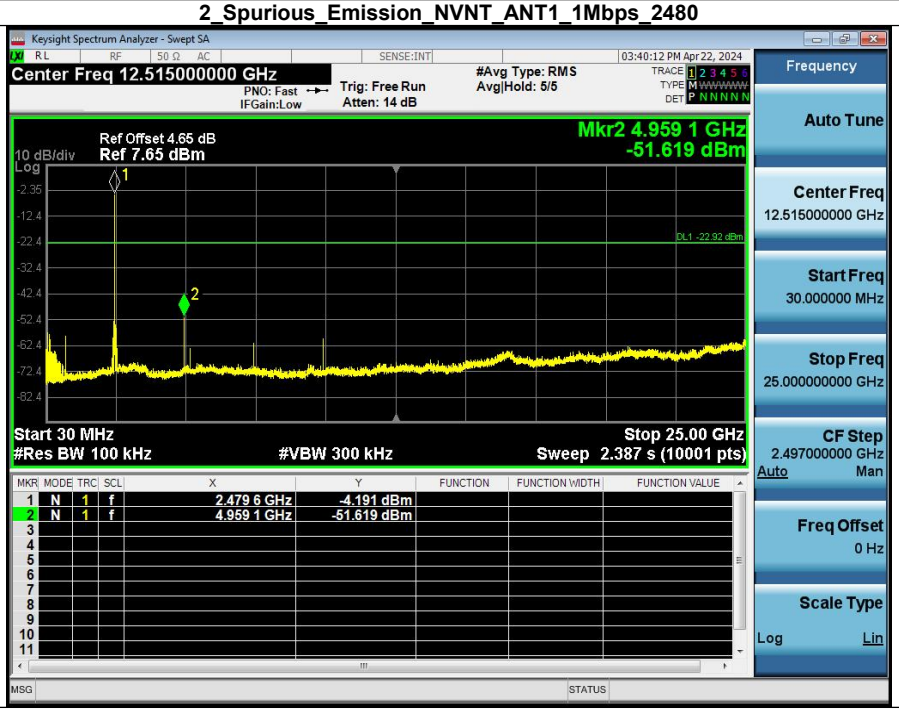


1_Reference_Level_NVNT_ANT1_1Mbps_2440



2_Spurious_Emission_NVNT_ANT1_1Mbps_2440



1_Reference_Level_NVNT_ANT1_1Mbps_2480

2_Spurious_Emission_NVNT_ANT1_1Mbps_2480