

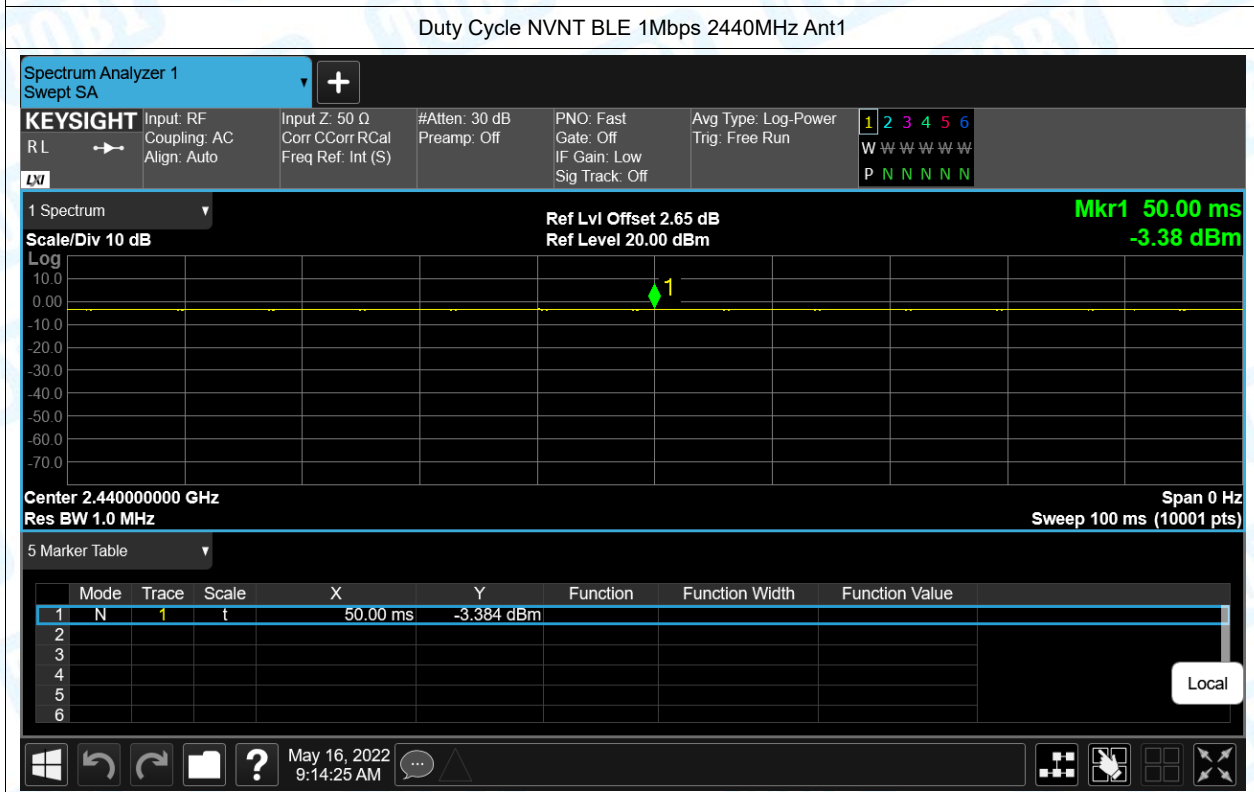
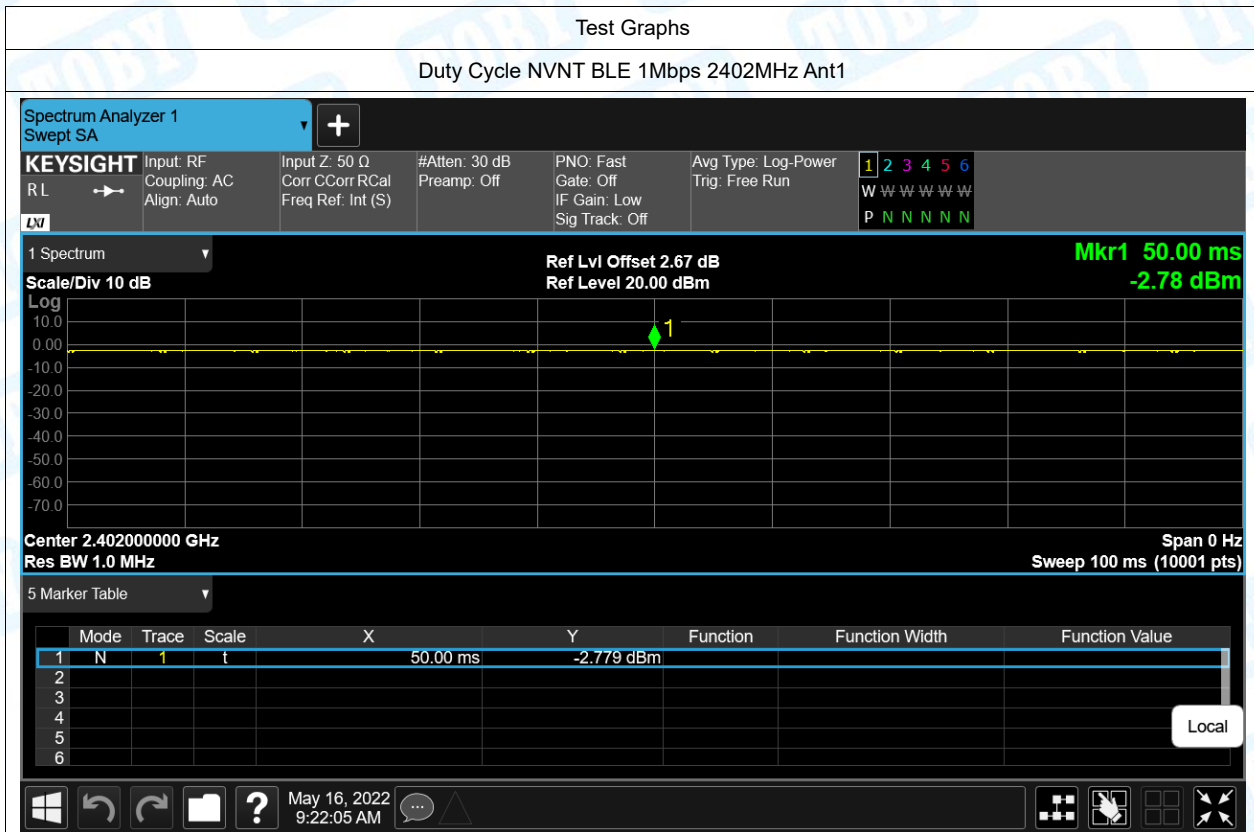
RF Test Data for Bluetooth LE

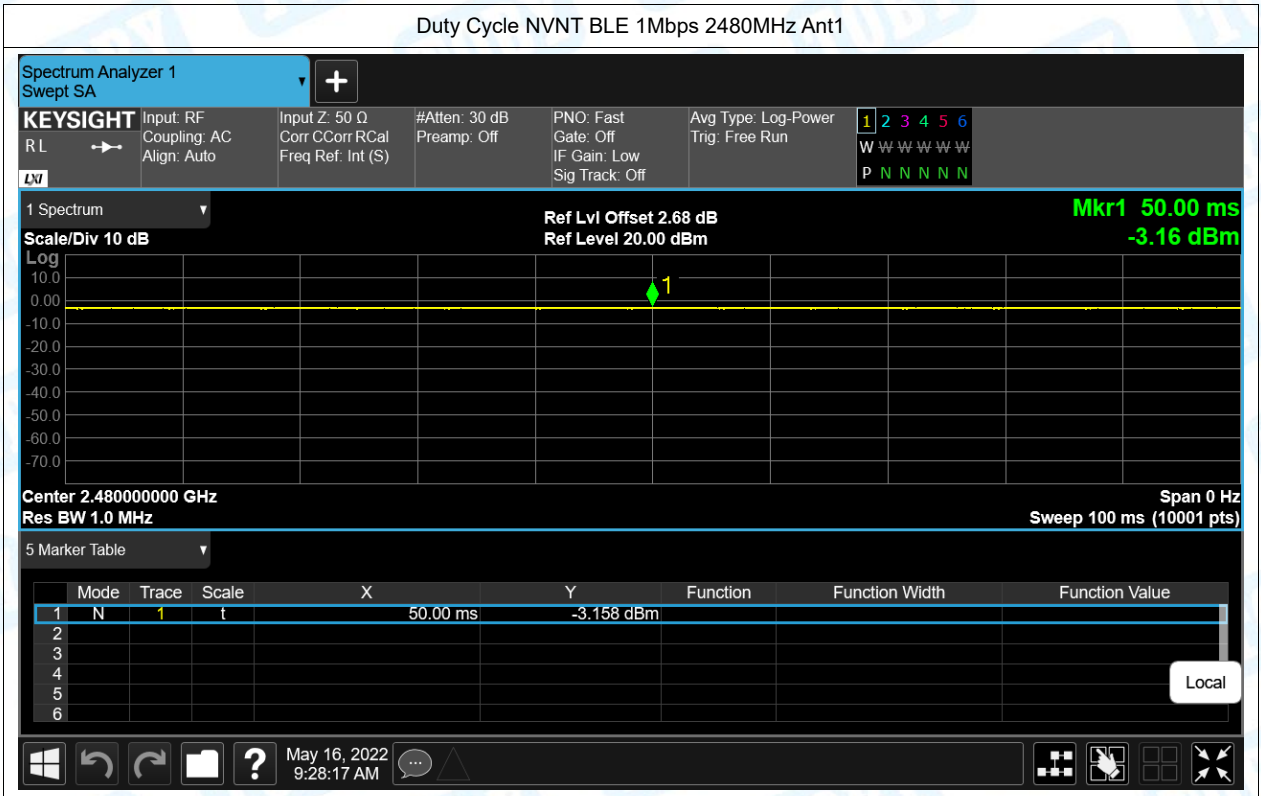
(Conducted Measurements)

General Description of EUT	
Product Name:	Smart PTZ Battery Camera
Test Model:	CQ1
Sample ID:	202204-0397-11-2#
Environmental Conditions	
Temperature:	24℃
Relative Humidity:	50%
Test Voltage:	DC3.7V
Test Engineer:	Liufeng
Note: For a more detailed features description, please refer to the report TBR-C-202204-0397-16.	

Duty Cycle

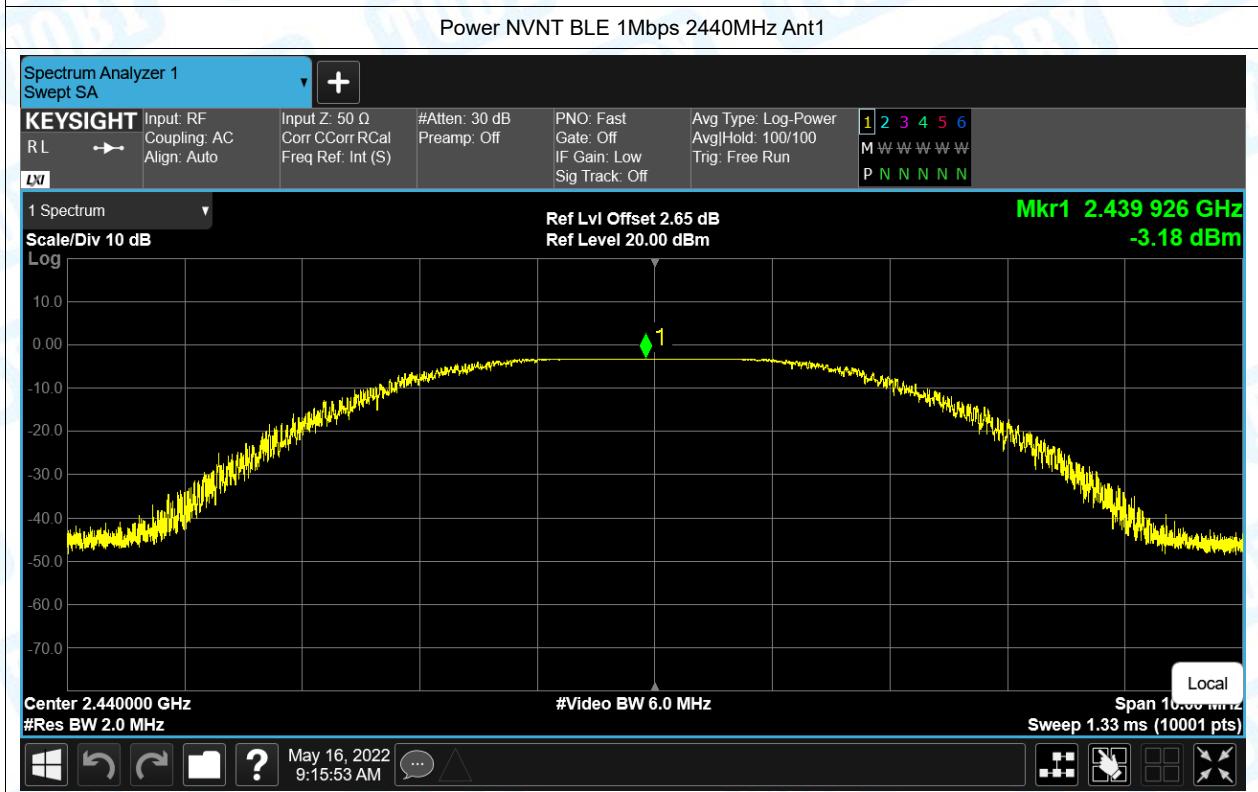
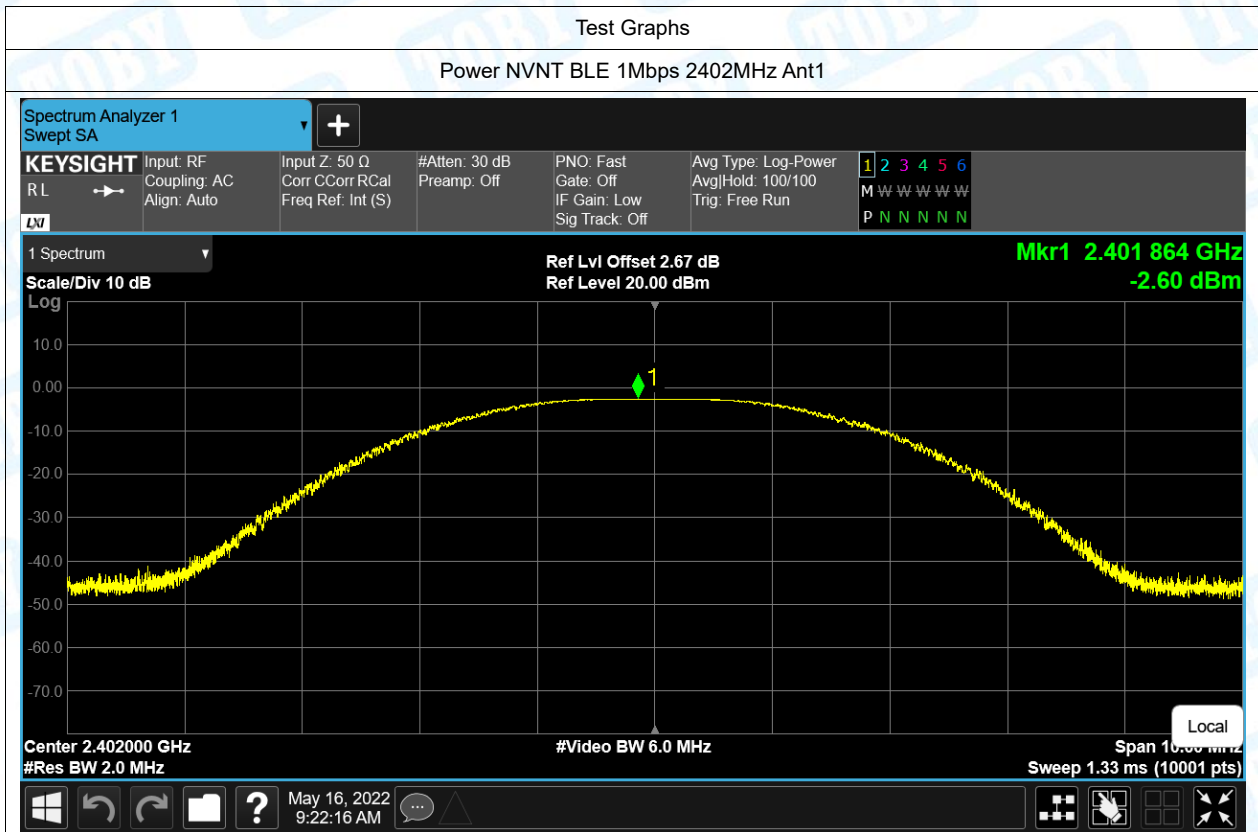
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1Mbps	2402	Ant1	100	0	0
NVNT	BLE 1Mbps	2440	Ant1	100	0	0
NVNT	BLE 1Mbps	2480	Ant1	100	0	0

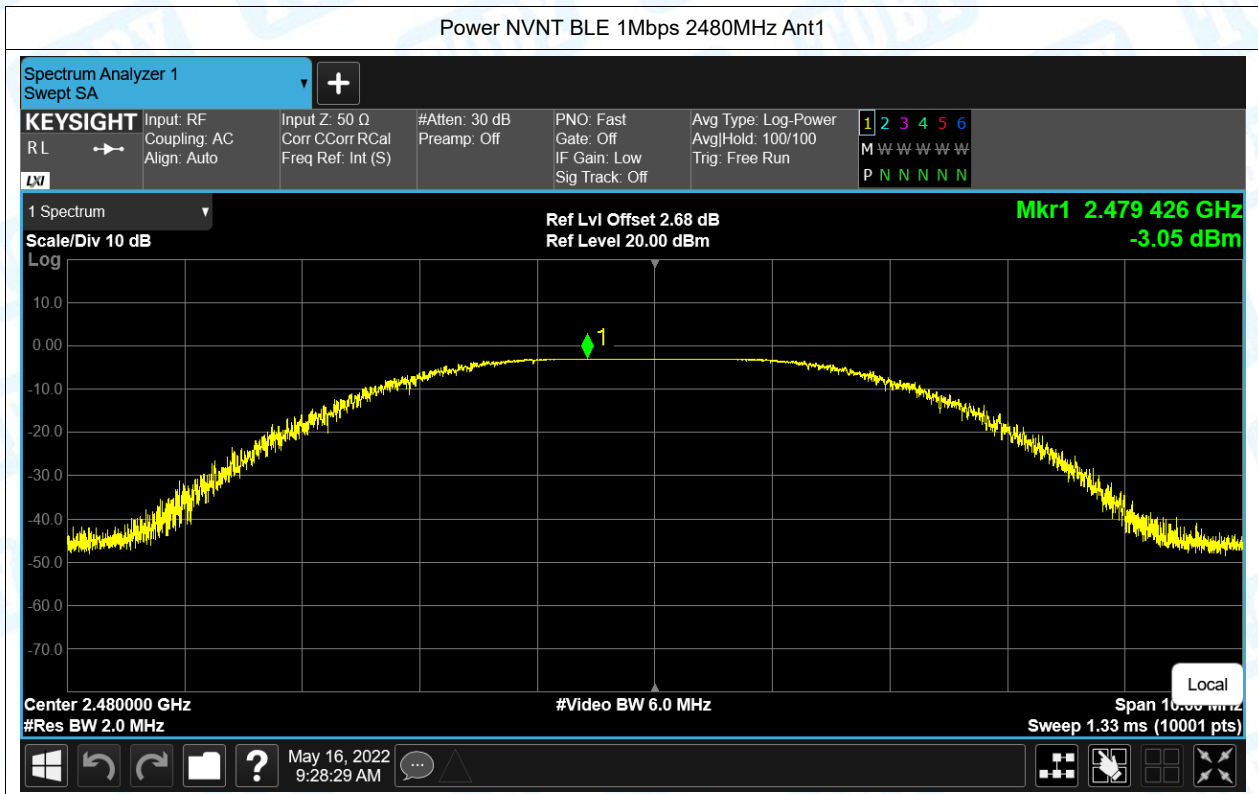




Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-2.60	30	Pass
NVNT	BLE 1Mbps	2440	Ant1	-3.18	30	Pass
NVNT	BLE 1Mbps	2480	Ant1	-3.05	30	Pass





-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.8606	0.5	Pass
NVNT	BLE 1Mbps	2440	Ant1	1.407	0.5	Pass
NVNT	BLE 1Mbps	2480	Ant1	1.491	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1



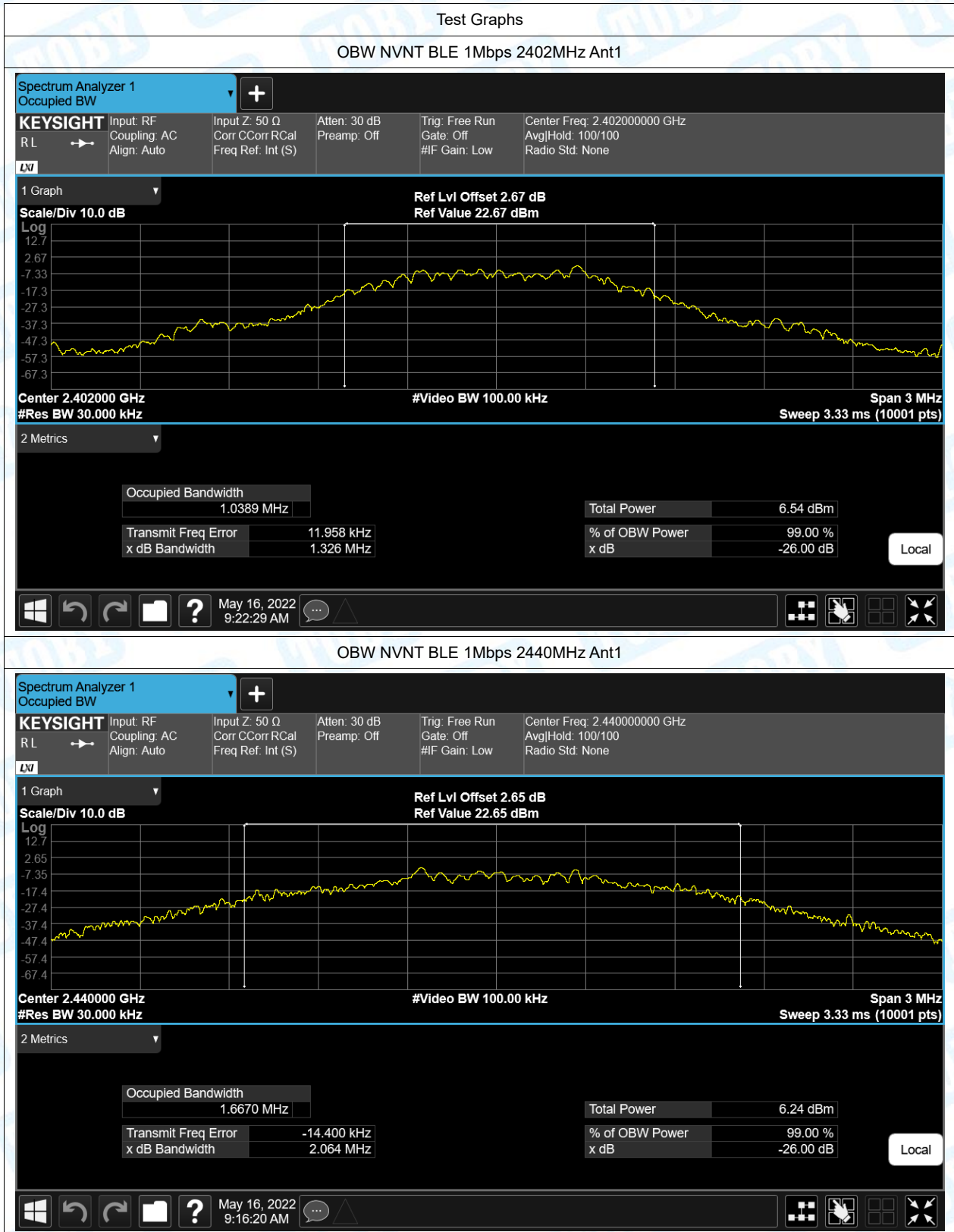
-6dB Bandwidth NVNT BLE 1Mbps 2440MHz Ant1

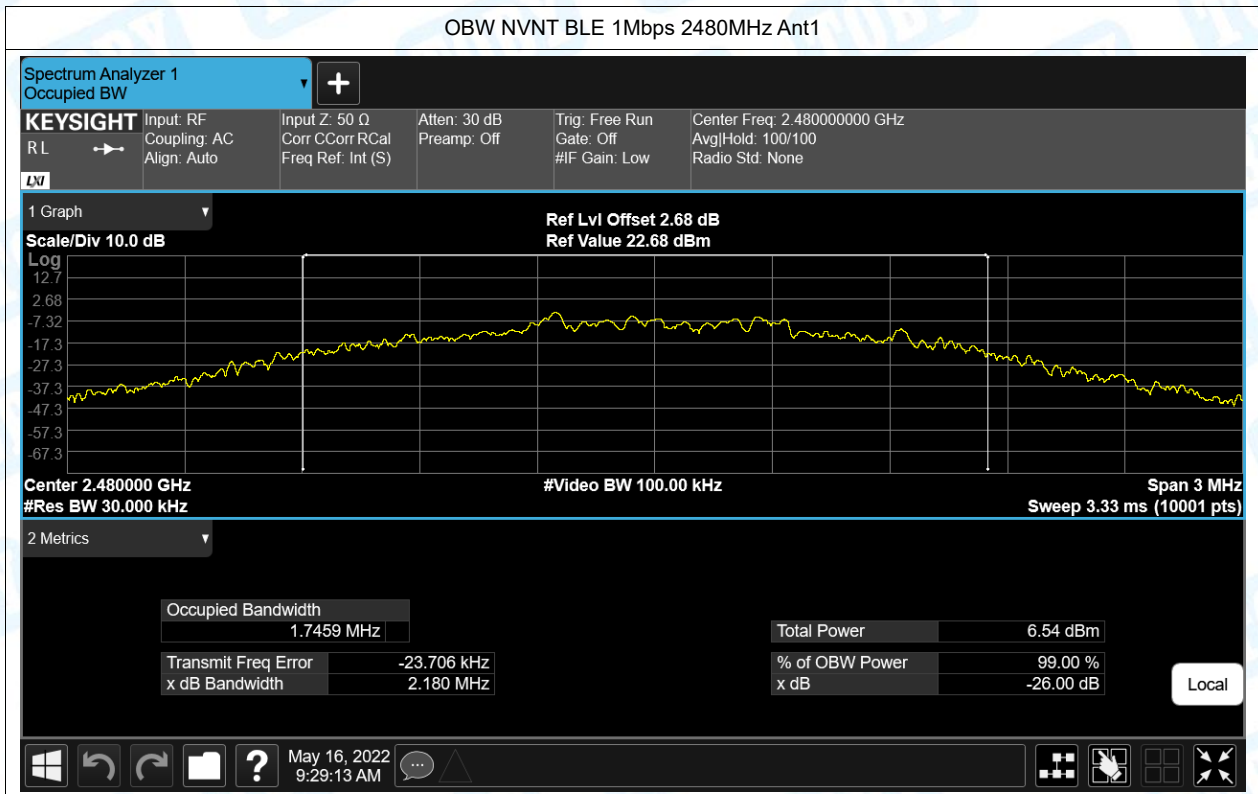




Occupied Channel Bandwidth

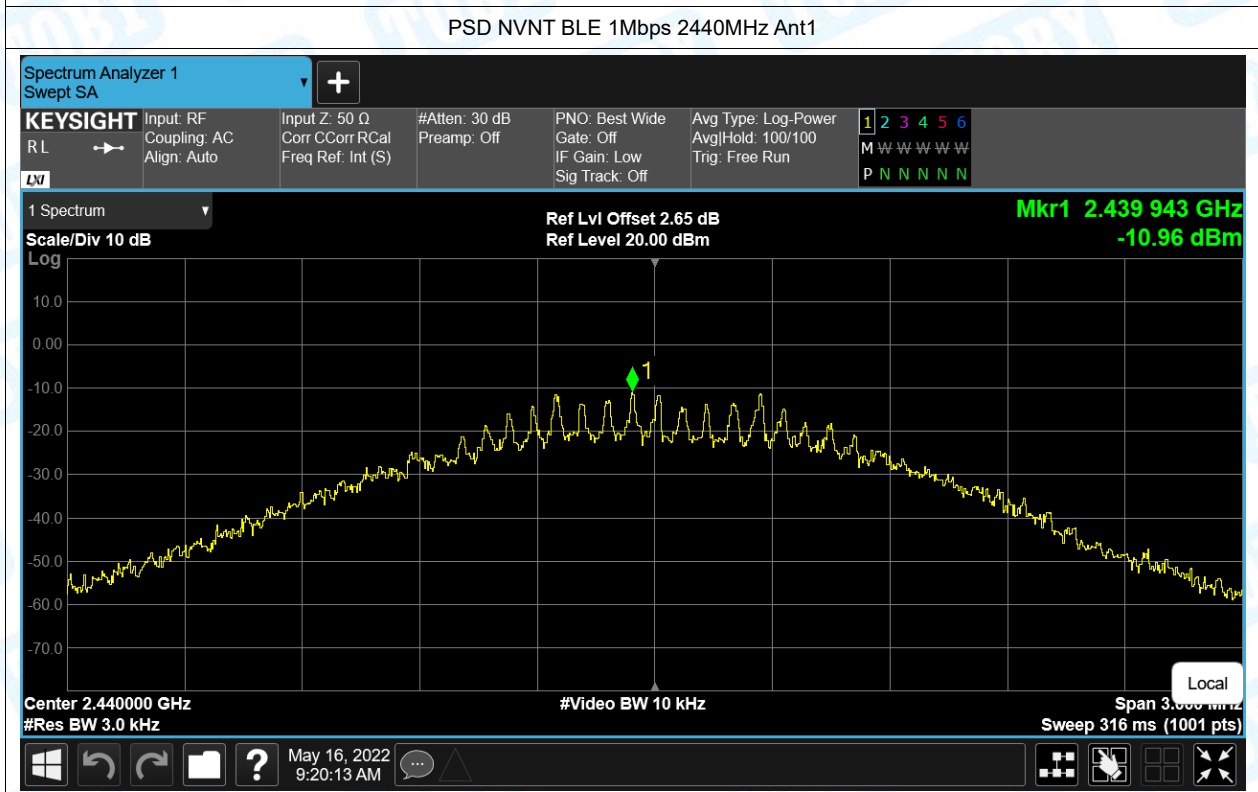
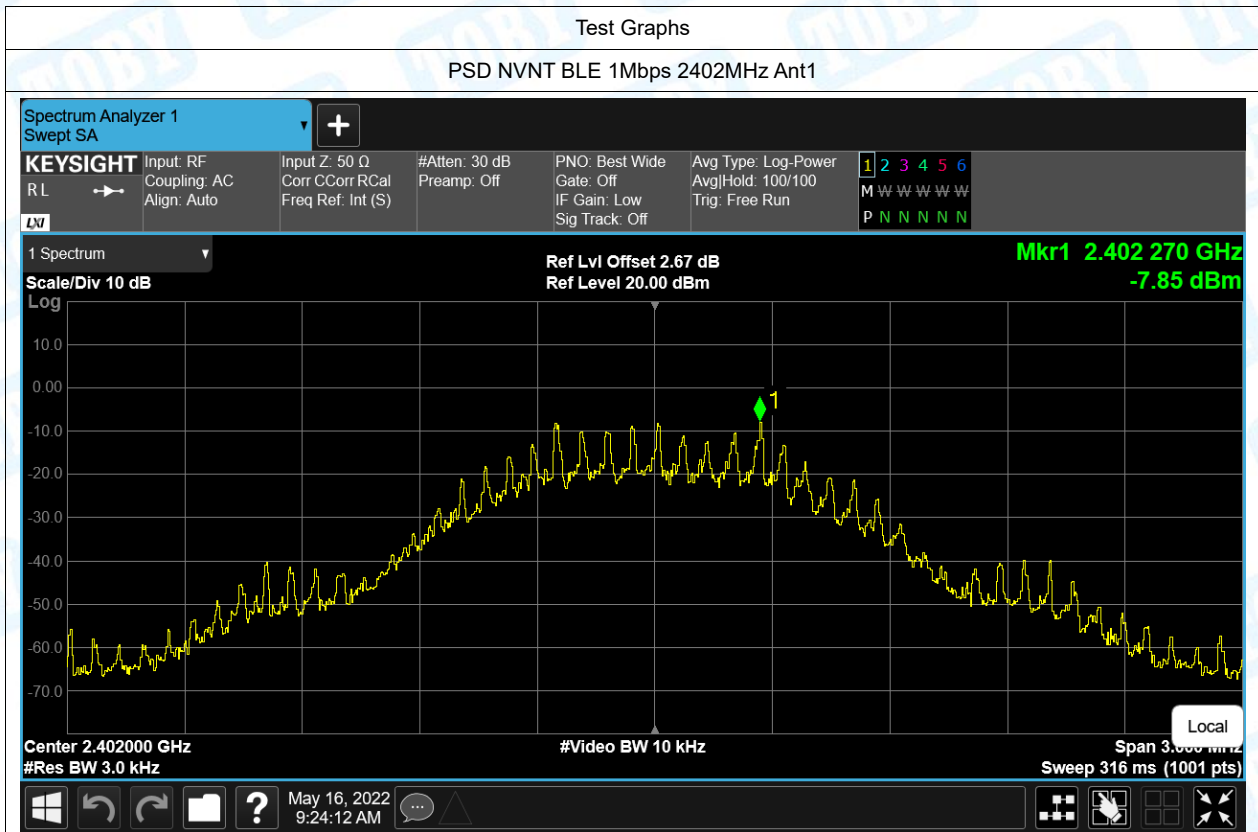
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1Mbps	2402	Ant1	1.039
NVNT	BLE 1Mbps	2440	Ant1	1.667
NVNT	BLE 1Mbps	2480	Ant1	1.746

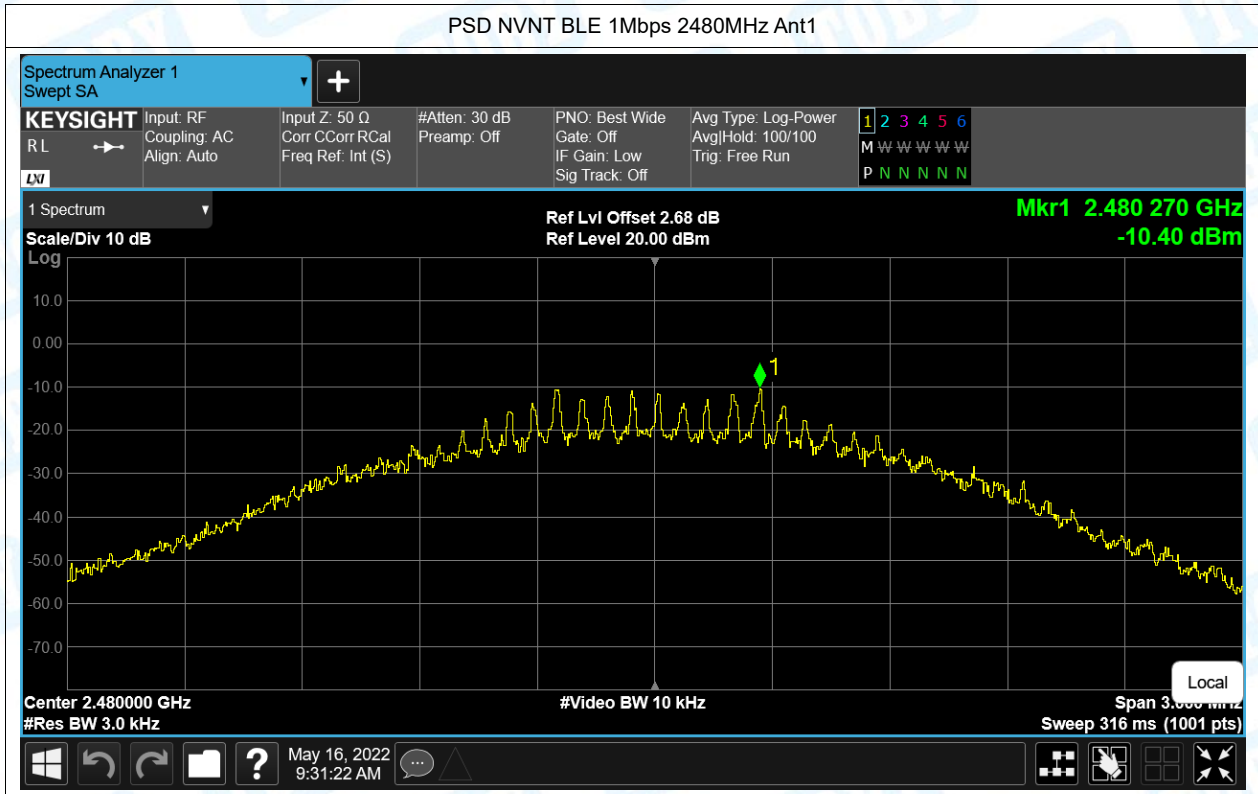




Maximum Power Spectral Density Level

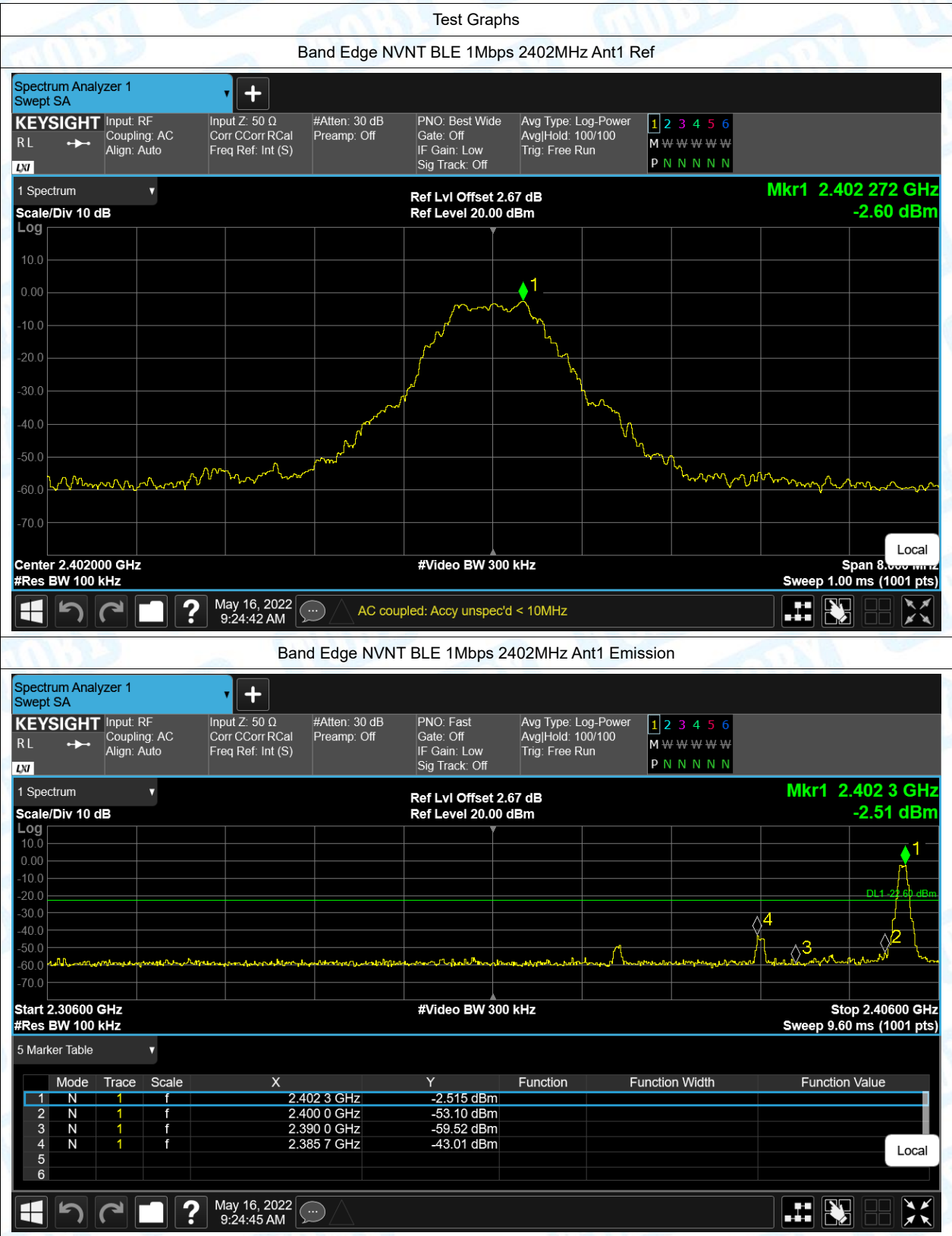
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-7.848	8	Pass
NVNT	BLE 1Mbps	2440	Ant1	-10.958	8	Pass
NVNT	BLE 1Mbps	2480	Ant1	-10.401	8	Pass





Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-40.41	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-45.5	-20	Pass



Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Emission

Spectrum Analyzer 1
Swept SA

KEYSIGHT

Input: RF
Coupling: AC
Align: Auto

Input Z: 50 Ω
Corr C: Corr
RCal: Freq Ref: Int (S)

#Atten: 30 dB
Preamp: Off

PNO: Fast
Gate: Off
IF Gain: Low
Sig Track: Off

Avg Type: Log-Power
Avg/Hold: 100/100
Trig: Free Run

1 2 3 4 5 6
M W W W W W
P N N N N N

1 Spectrum

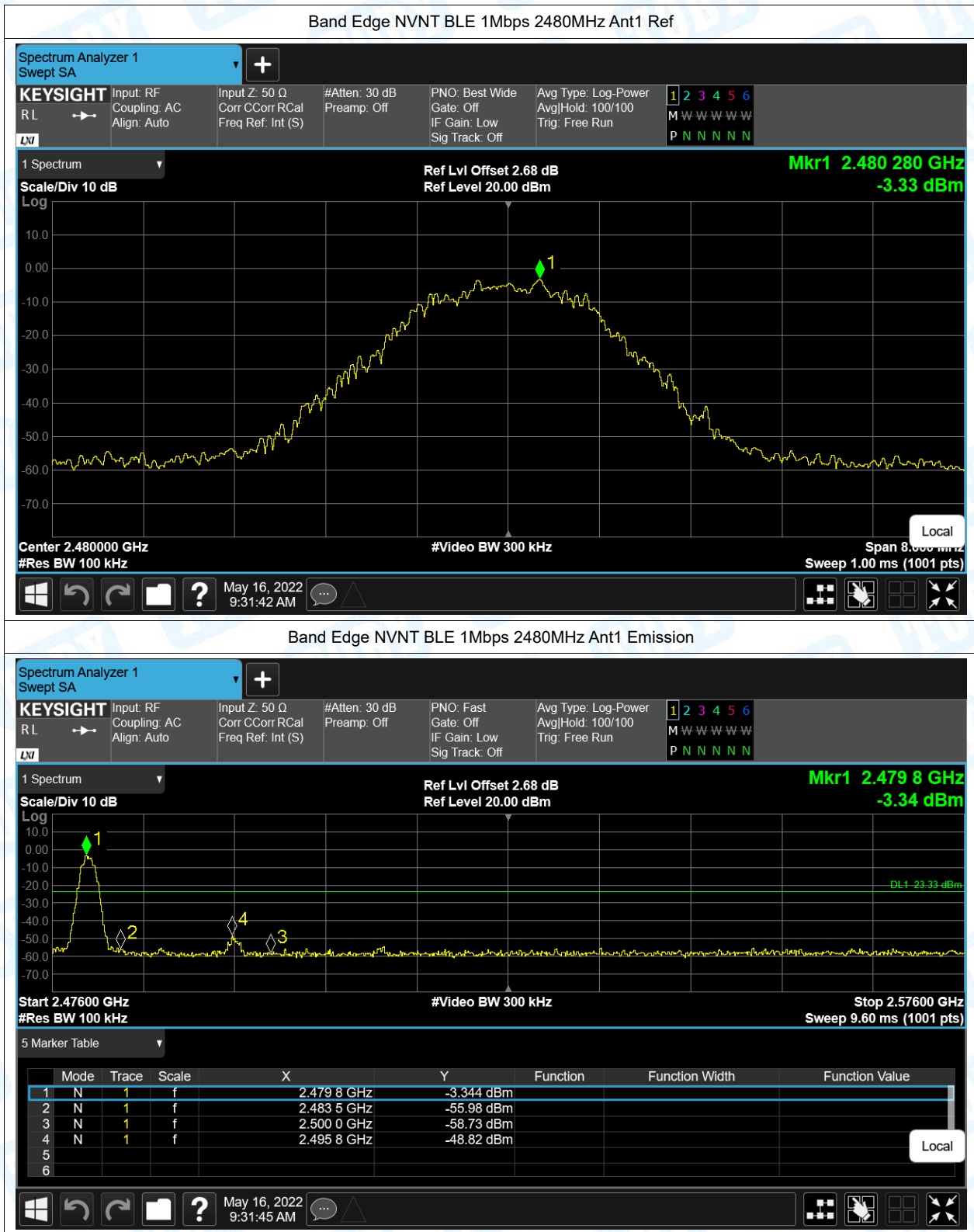
Scale/Div 10 dB

Log

Ref Lvl Offset 2.67 dB
Ref Level 20.00 dBmMkr1 2.402 3 GHz
-2.51 dBmStart 2.30600 GHz
#Res BW 100 kHz
#Video BW 300 kHzStop 2.40600 GHz
Sweep 9.60 ms (1001 pts)

May 16, 2022 9:24:45 AM

Local



Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-39.81	-20	Pass
NVNT	BLE 1Mbps	2440	Ant1	-38.93	-20	Pass



Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Emission

Spectrum Analyzer 1

Swept SA

KEYSIGHT

Input: RF

Coupling: AC

Align: Auto

Input Z: 50 Ω

Corr CCorr RCal

Freq Ref: Int (S)

#Atten: 30 dB

Preamp: Off

PNO: Fast

Gate: Off

IF Gain: Low

Sig Track: Off

Avg Type: Log-Power

AvgJHold: 10/10

Trig: Free Run

1 2 3 4 5 6

M W W W W W

P N N N N N

1 Spectrum

Scale/Div 10 dB

Log

Ref Lvl Offset 2.67 dB

Ref Level 20.00 dBm

Mkr1 2.412 GHz

-4.26 dBm

DL1 -22.66 dBm

Start 30 MHz

#Video BW 300 kHz

Stop 26.50 GHz

#Res BW 100 kHz

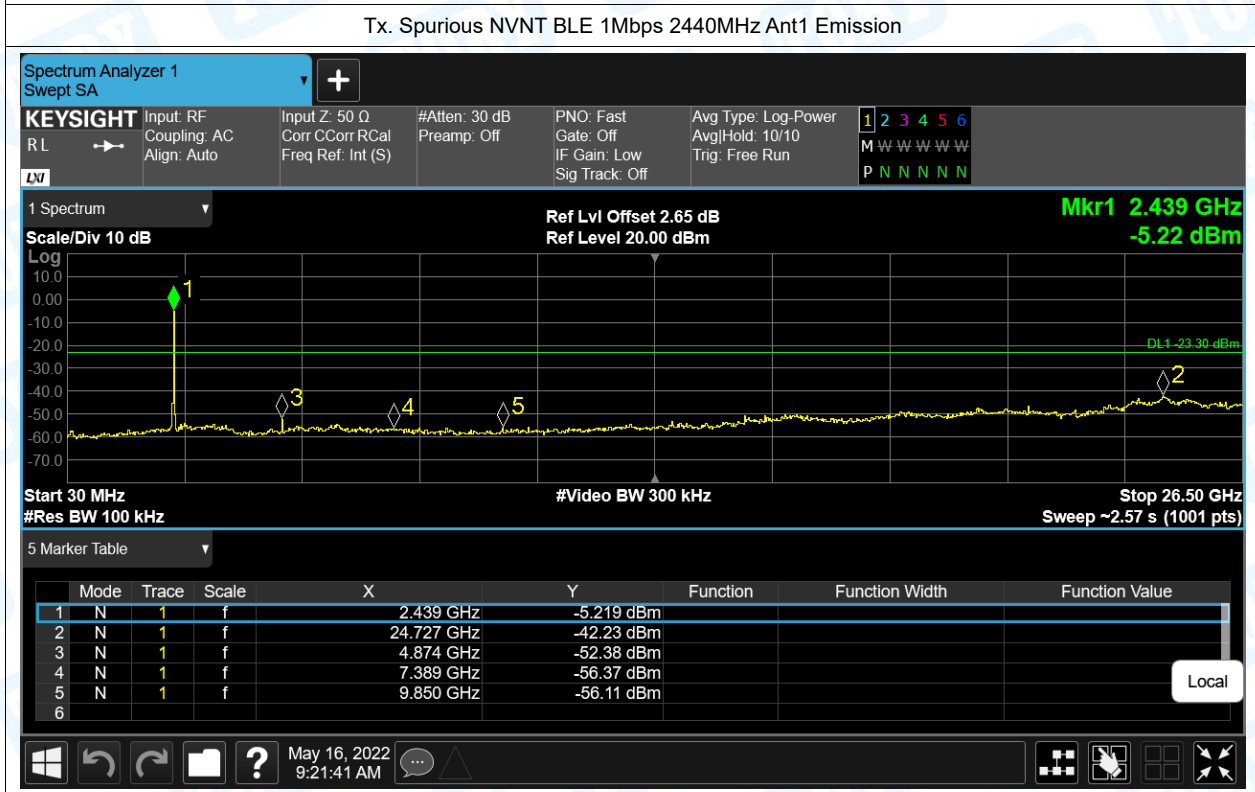
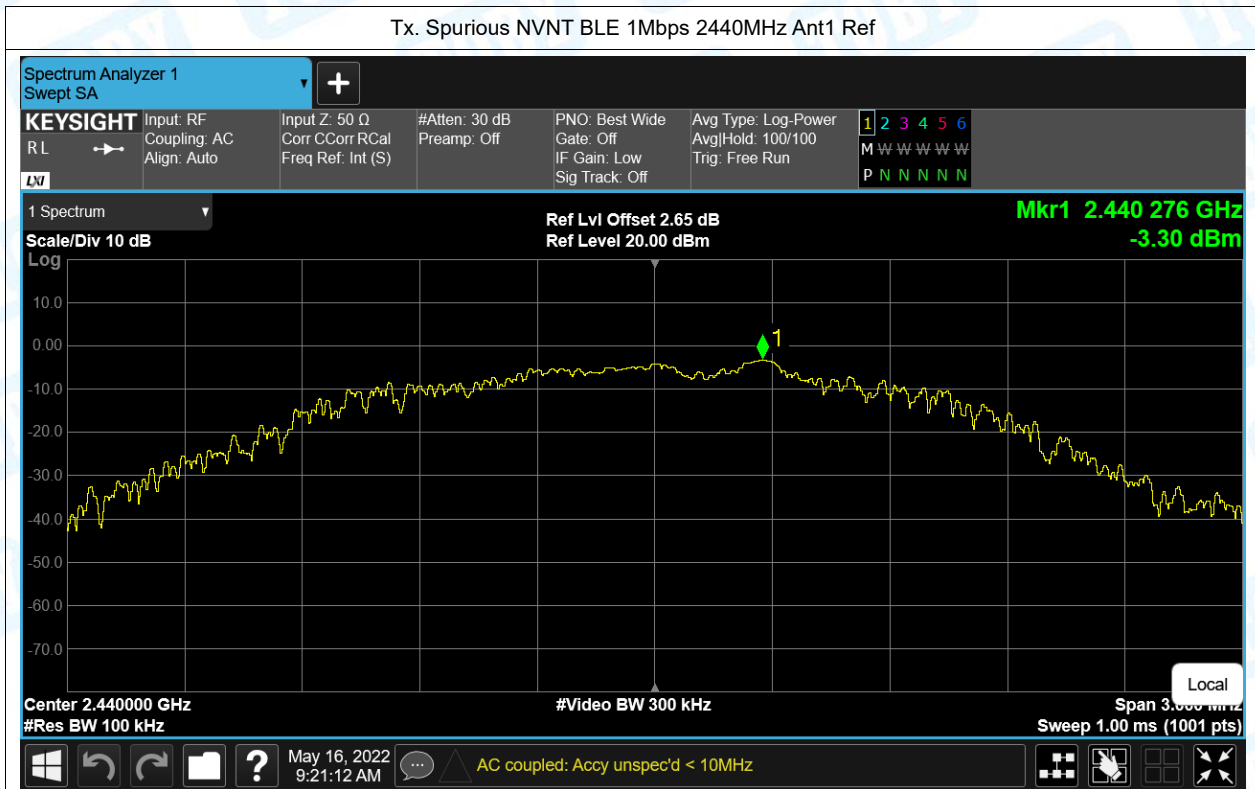
Sweep ~2.57 s (1001 pts)

Local

5 Marker Table

	Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.412 GHz	-4.255 dBm			
2	N	1	f	24.753 GHz	-42.47 dBm			
3	N	1	f	4.795 GHz	-52.20 dBm			
4	N	1	f	7.309 GHz	-55.16 dBm			
5	N	1	f	9.453 GHz	-57.58 dBm			
6								

May 16, 2022 9:27:35 AM

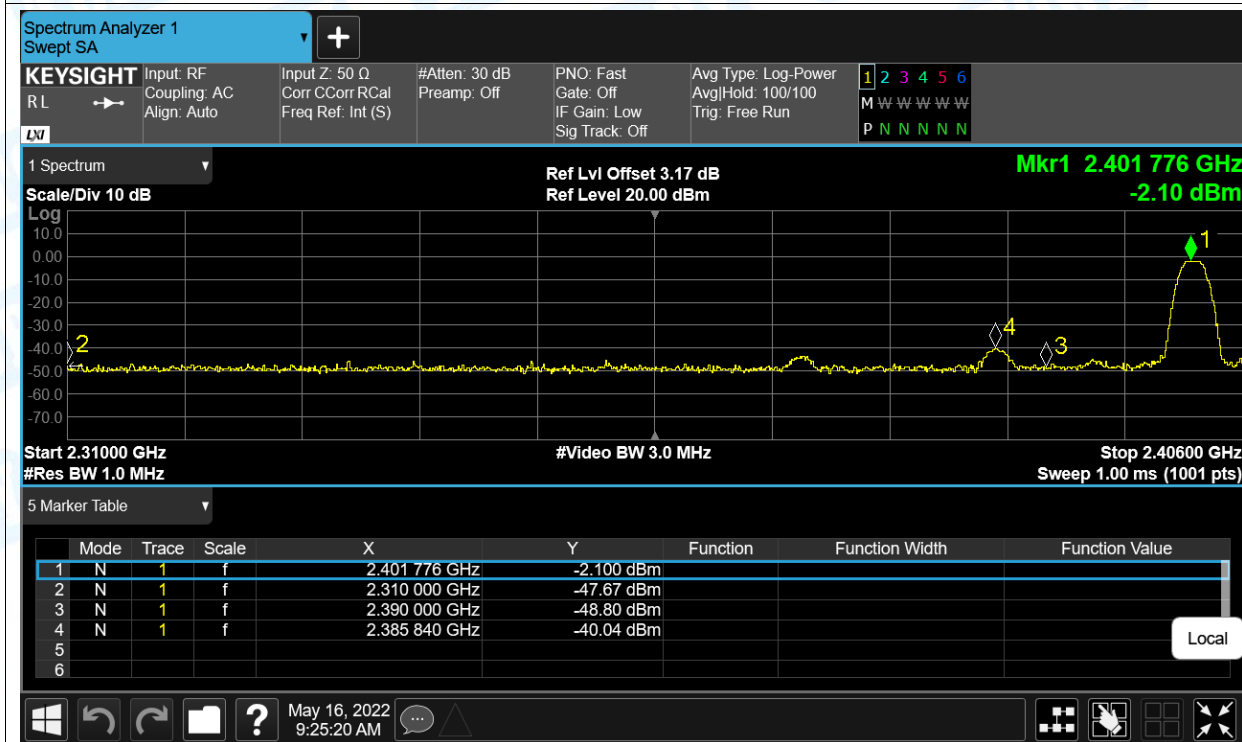


Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	2310	-47.67	2	49.59	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2310	-59.13	2	38.13	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2385.84	-40.04	2	57.22	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2386.032	-44.53	2	52.73	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-48.83	2	48.43	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-58.91	2	38.35	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-46.14	2	51.12	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-57.01	2	40.25	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2495.8	-42.72	2	54.54	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2496.016	-50.88	2	46.38	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-49.83	2	47.43	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-58.77	2	38.49	Average	54	Pass

Test Graphs

Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Peak



Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Average

