

RF Test Data for Bluetooth LE

(Conducted Measurements)

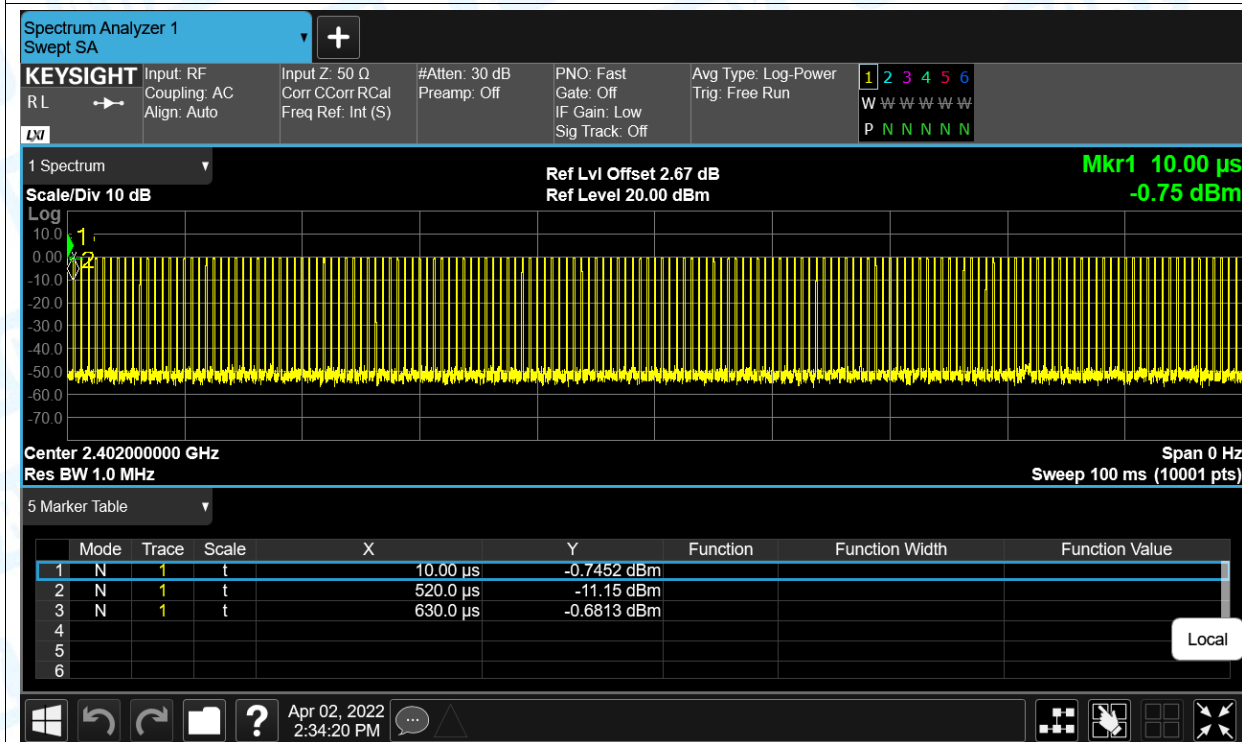
General Description of EUT	
Product Name:	Bluetooth Foot Switch
Test Model:	FS2016BT1_D
Sample ID:	RW-C-202203-0242-1-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 5V
Test Engineer:	Huang jian ping
Note: For a more detailed features description, please refer to the report TBR-C-202203-0242-1	

1. Duty Cycle

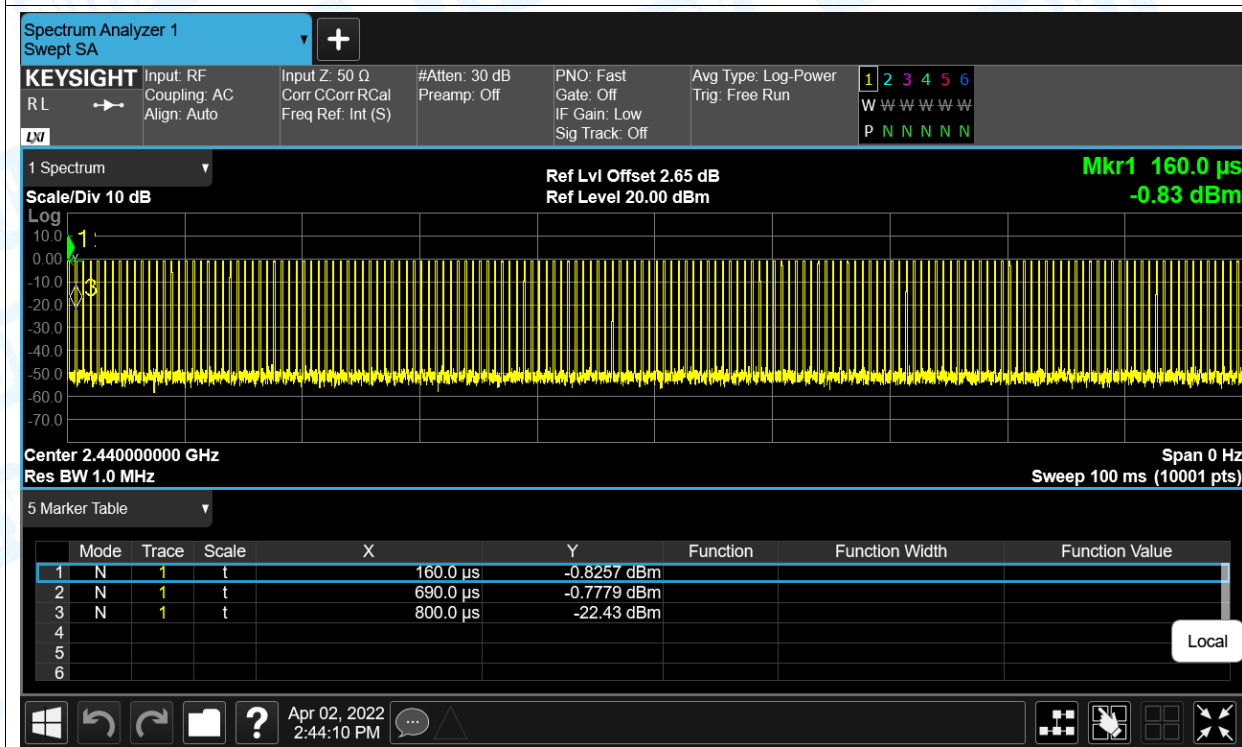
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1Mbps	2402	Ant1	18.83	7.25	9.09
NVNT	BLE 1Mbps	2440	Ant1	18.94	7.23	9.09
NVNT	BLE 1Mbps	2480	Ant1	18.76	7.27	9.09

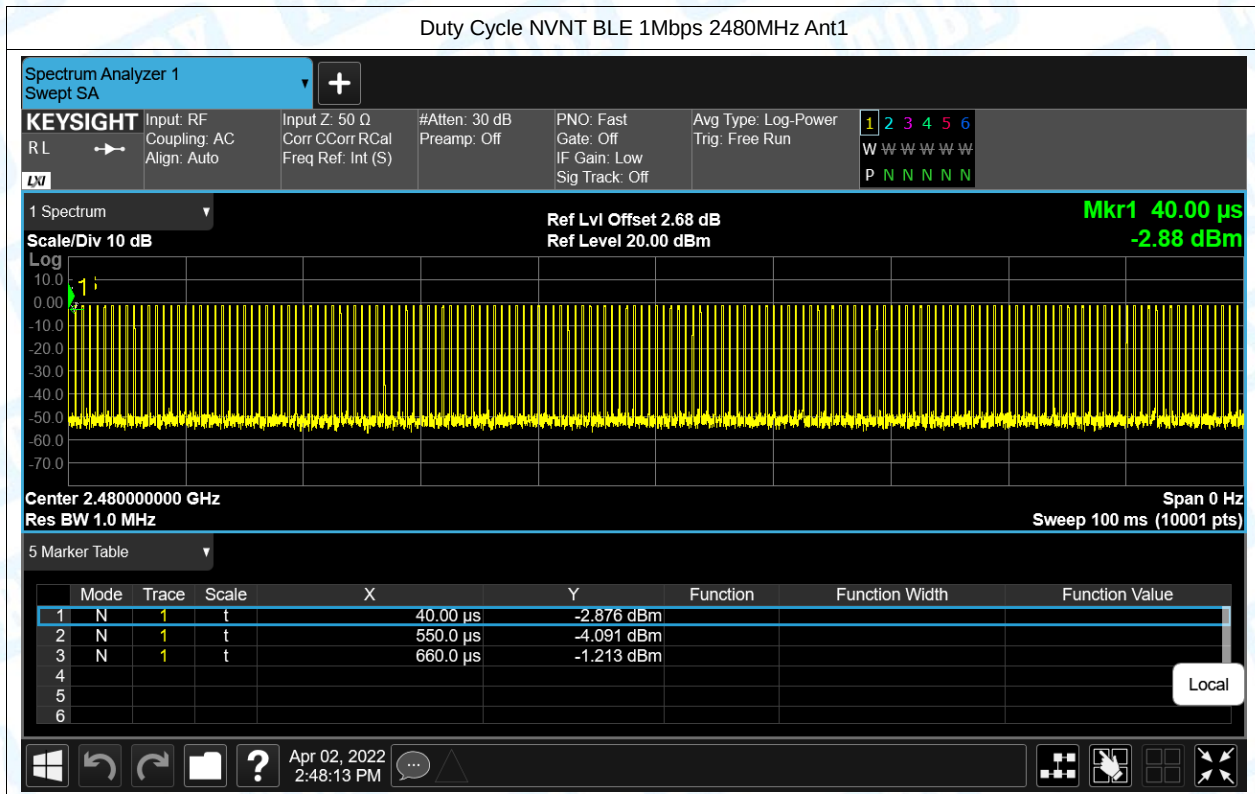
Test Graphs

Duty Cycle NVNT BLE 1Mbps 2402MHz Ant1



Duty Cycle NVNT BLE 1Mbps 2440MHz Ant1



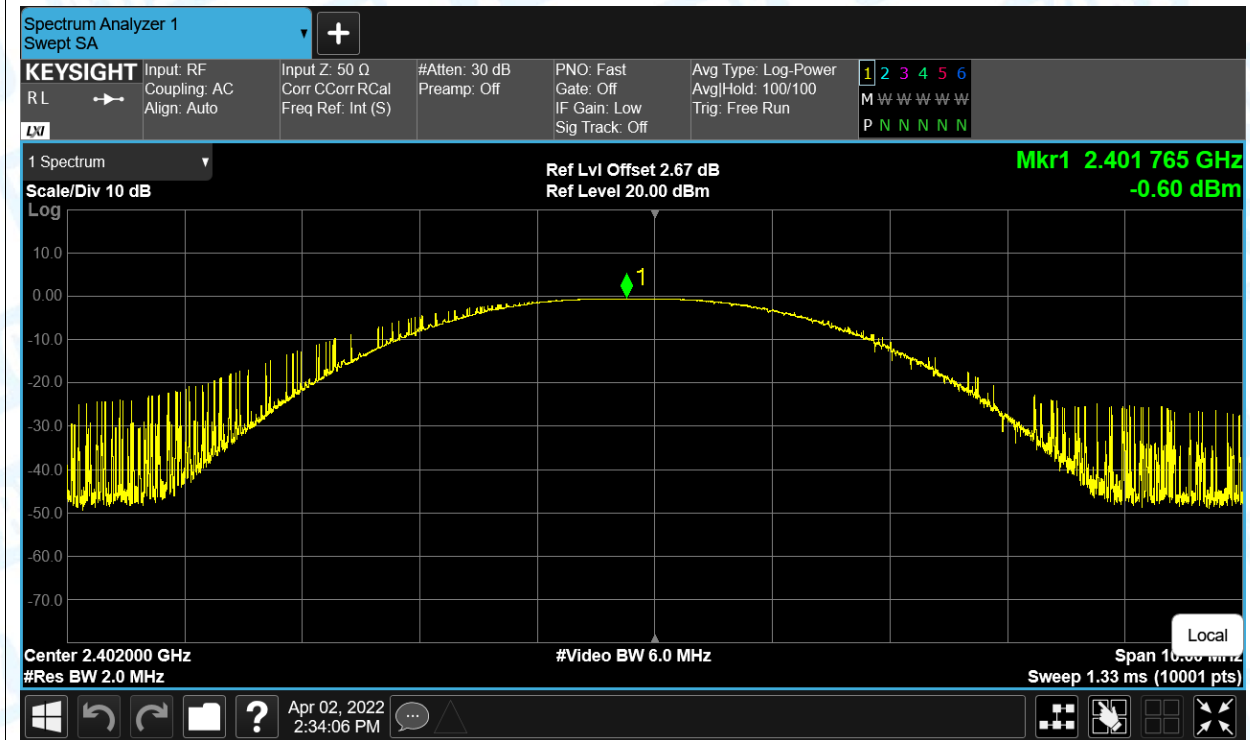


2. Maximum Conducted Output Power

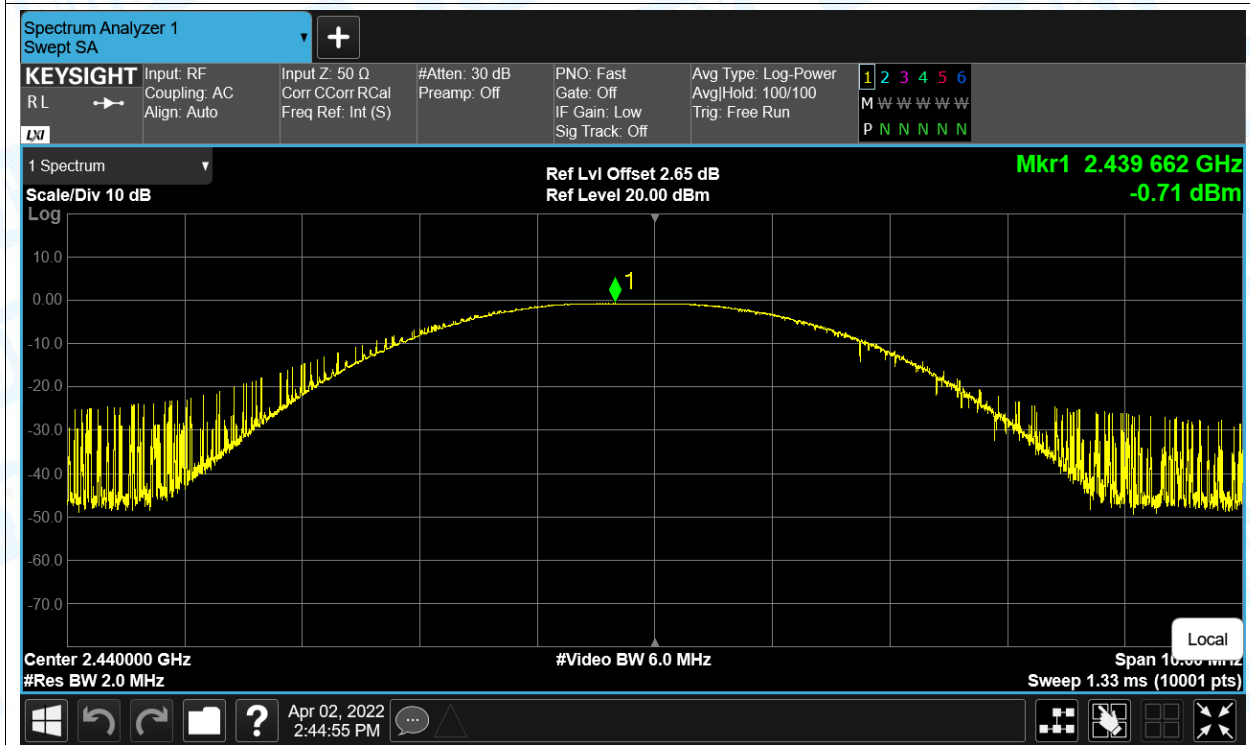
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-0.6	30	Pass
NVNT	BLE 1Mbps	2440	Ant1	-0.714	30	Pass
NVNT	BLE 1Mbps	2480	Ant1	-1.104	30	Pass

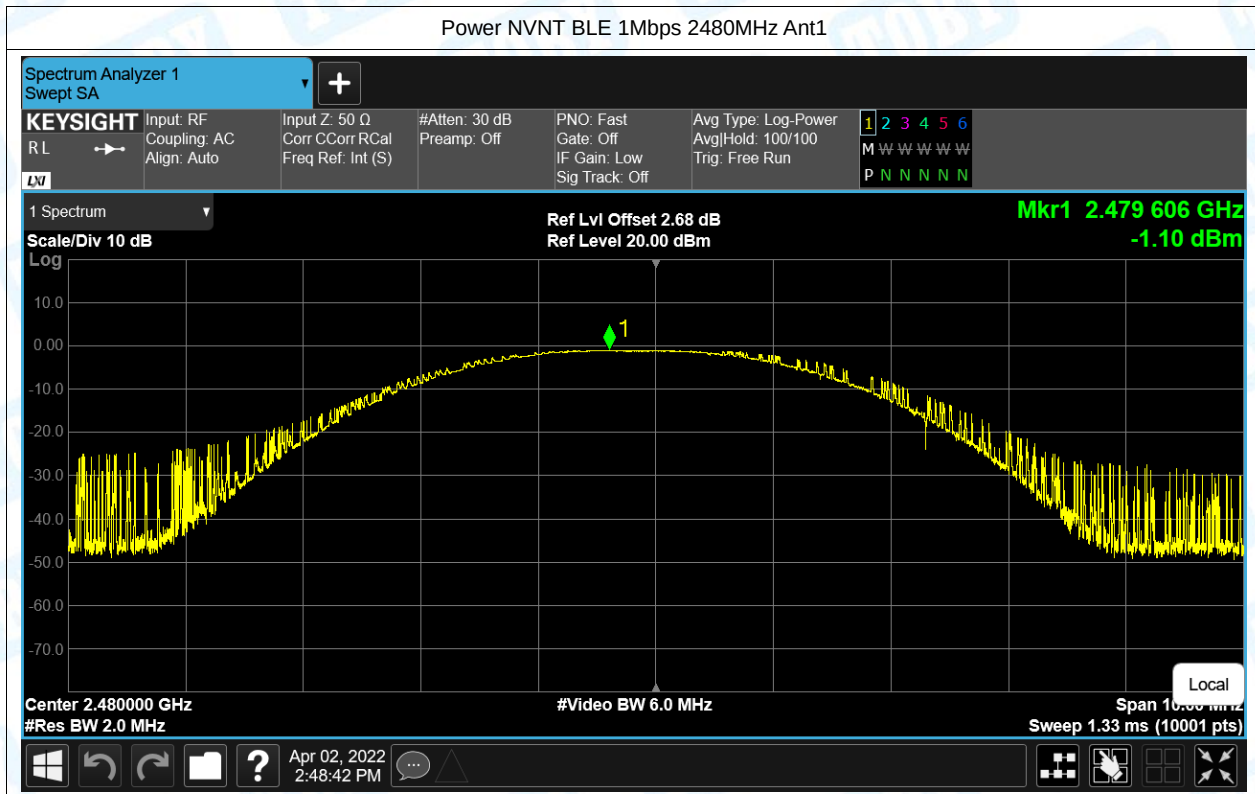
Test Graphs

Power NVNT BLE 1Mbps 2402MHz Ant1



Power NVNT BLE 1Mbps 2440MHz Ant1





3. -6dB Bandwidth

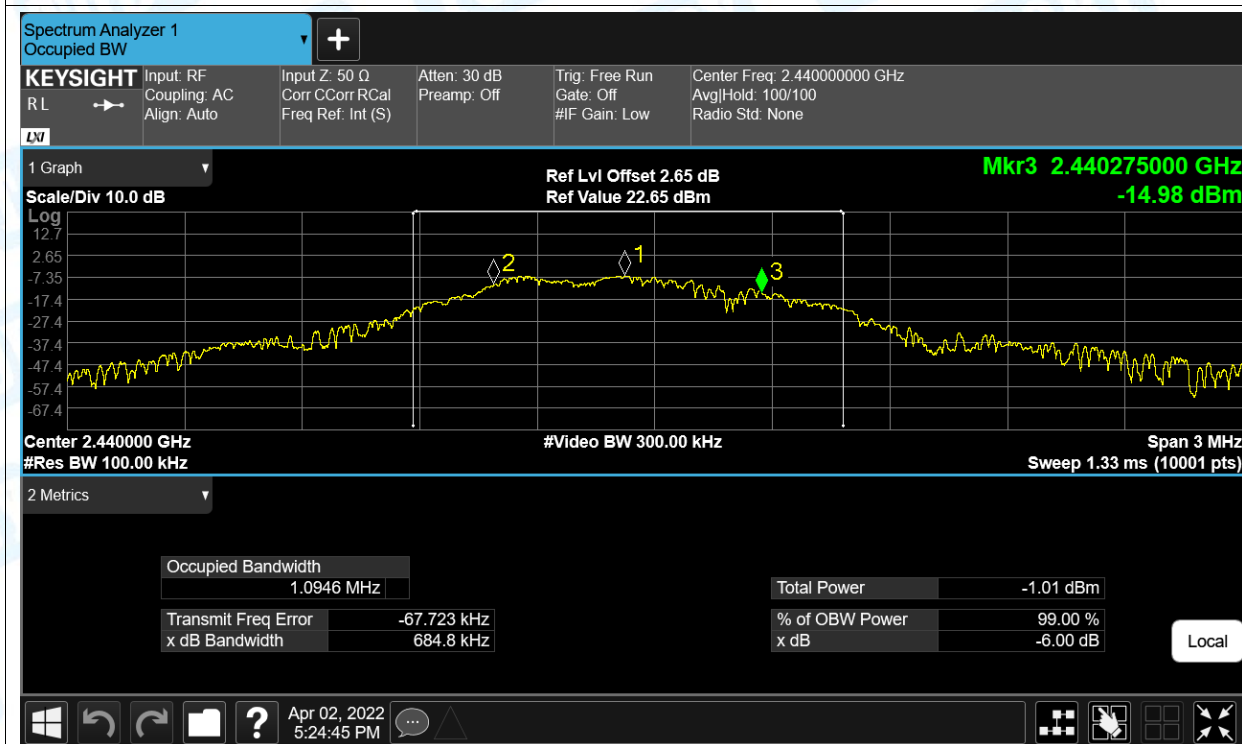
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.66	0.5	Pass
NVNT	BLE 1Mbps	2440	Ant1	0.68	0.5	Pass
NVNT	BLE 1Mbps	2480	Ant1	0.66	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1Mbps 2440MHz Ant1



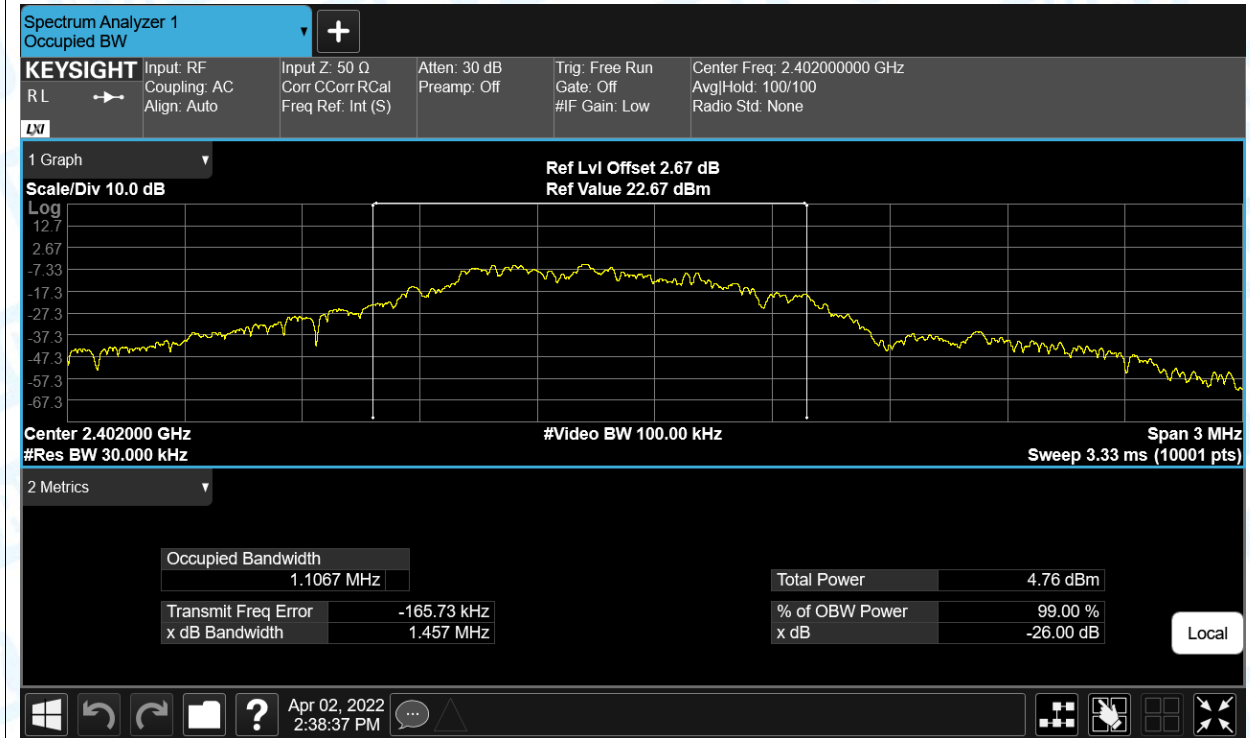


4. Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1Mbps	2402	Ant1	1.107
NVNT	BLE 1Mbps	2440	Ant1	1.045
NVNT	BLE 1Mbps	2480	Ant1	1.163

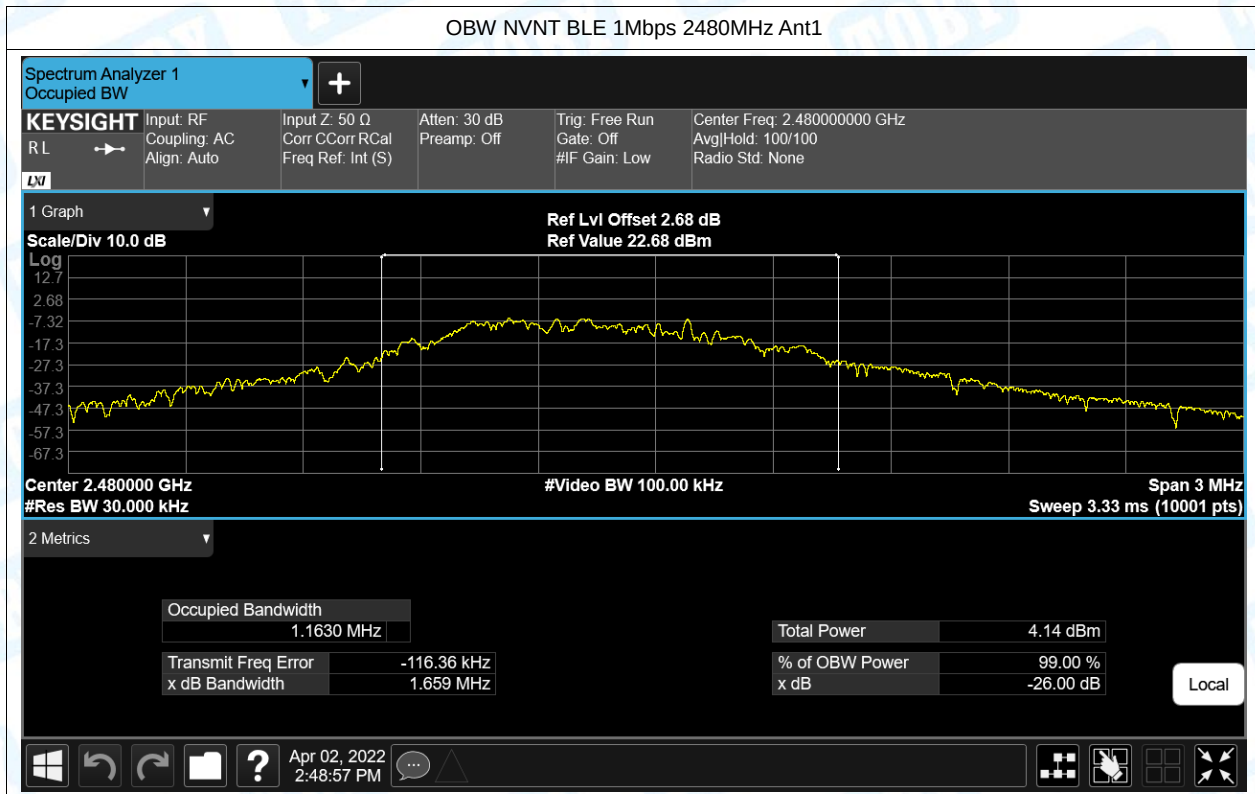
Test Graphs

OBW NVNT BLE 1Mbps 2402MHz Ant1



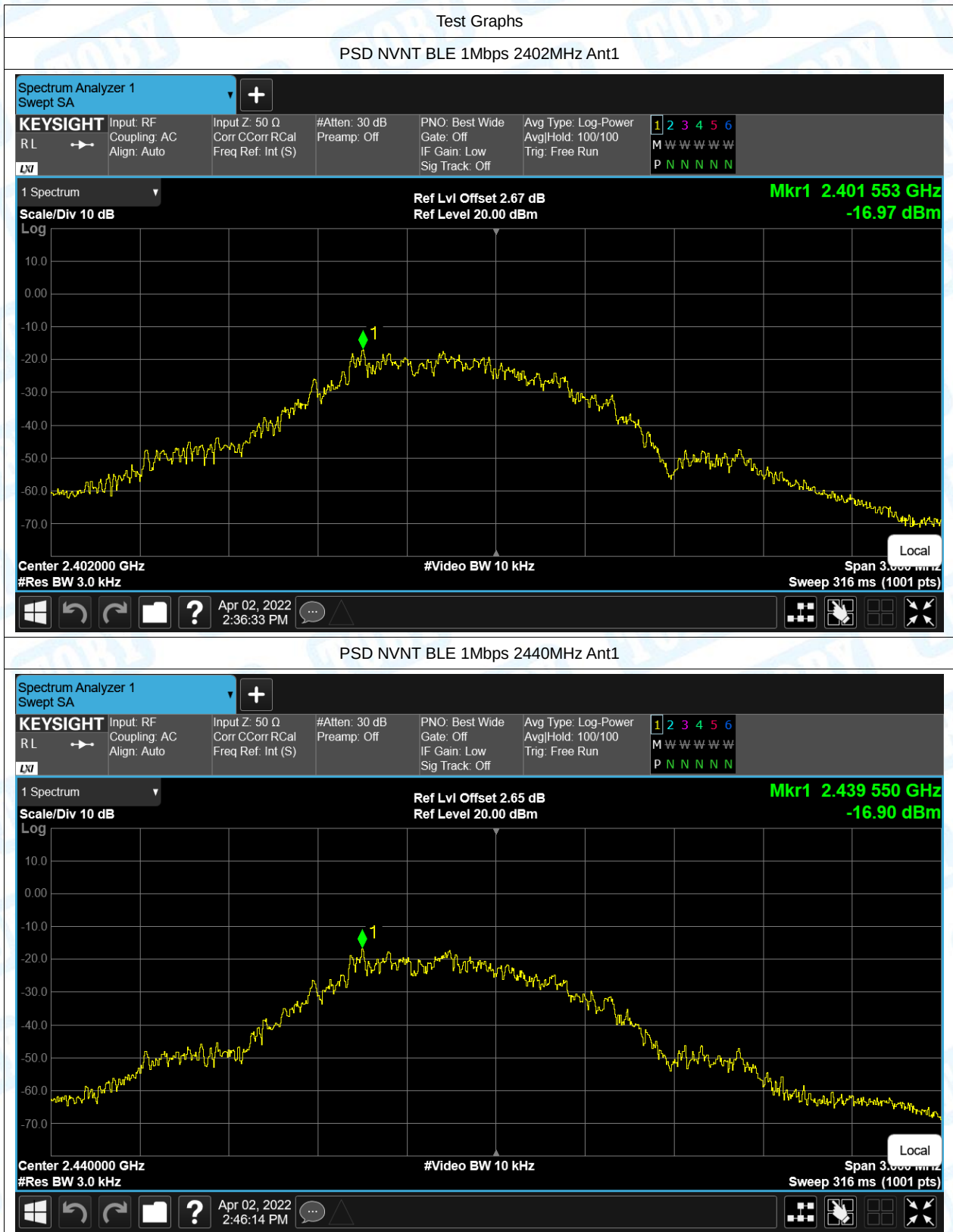
OBW NVNT BLE 1Mbps 2440MHz Ant1

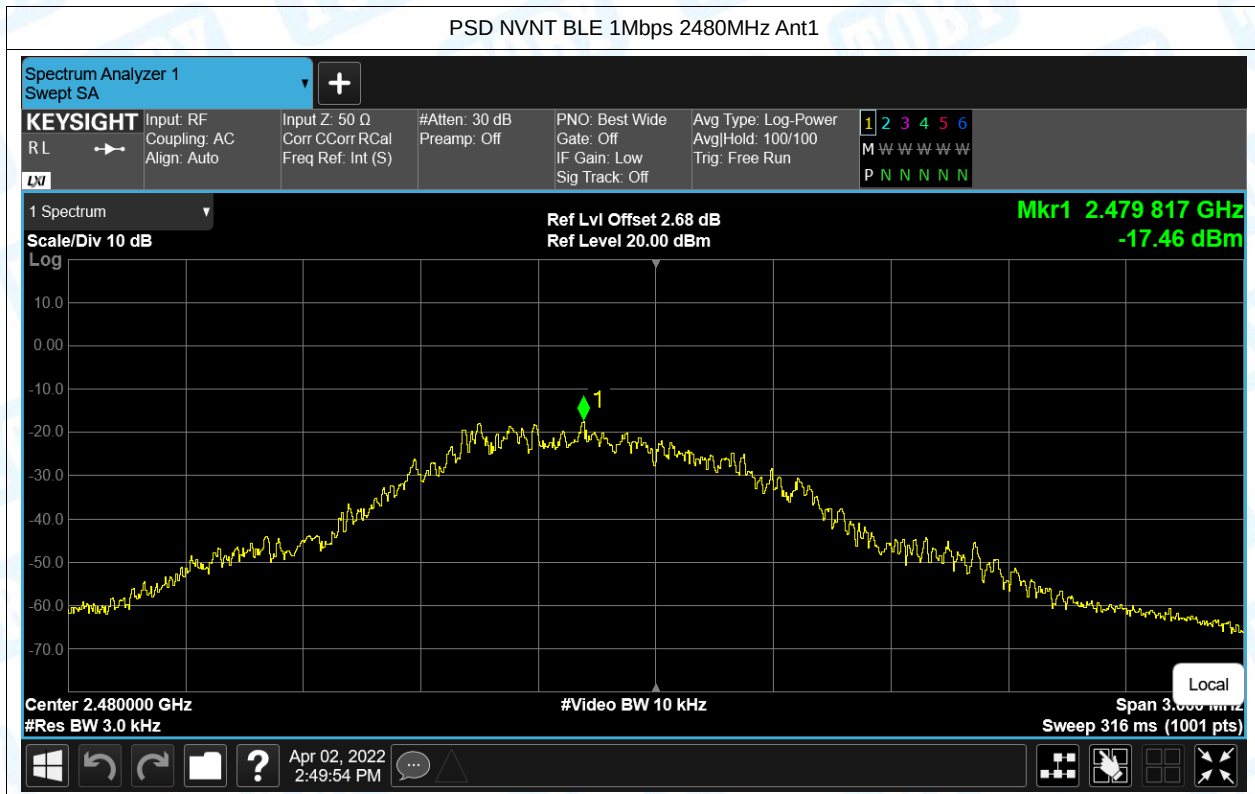




5. Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-16.974	8	Pass
NVNT	BLE 1Mbps	2440	Ant1	-16.902	8	Pass
NVNT	BLE 1Mbps	2480	Ant1	-17.46	8	Pass

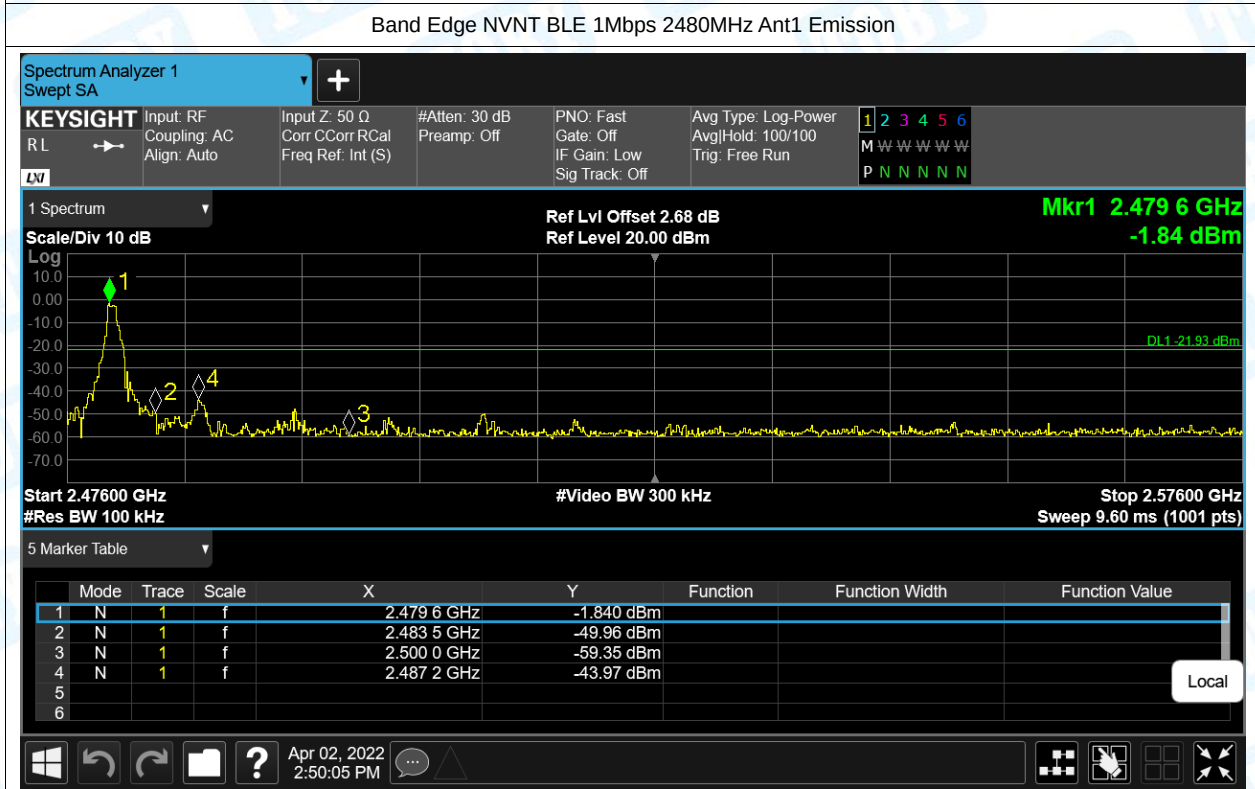
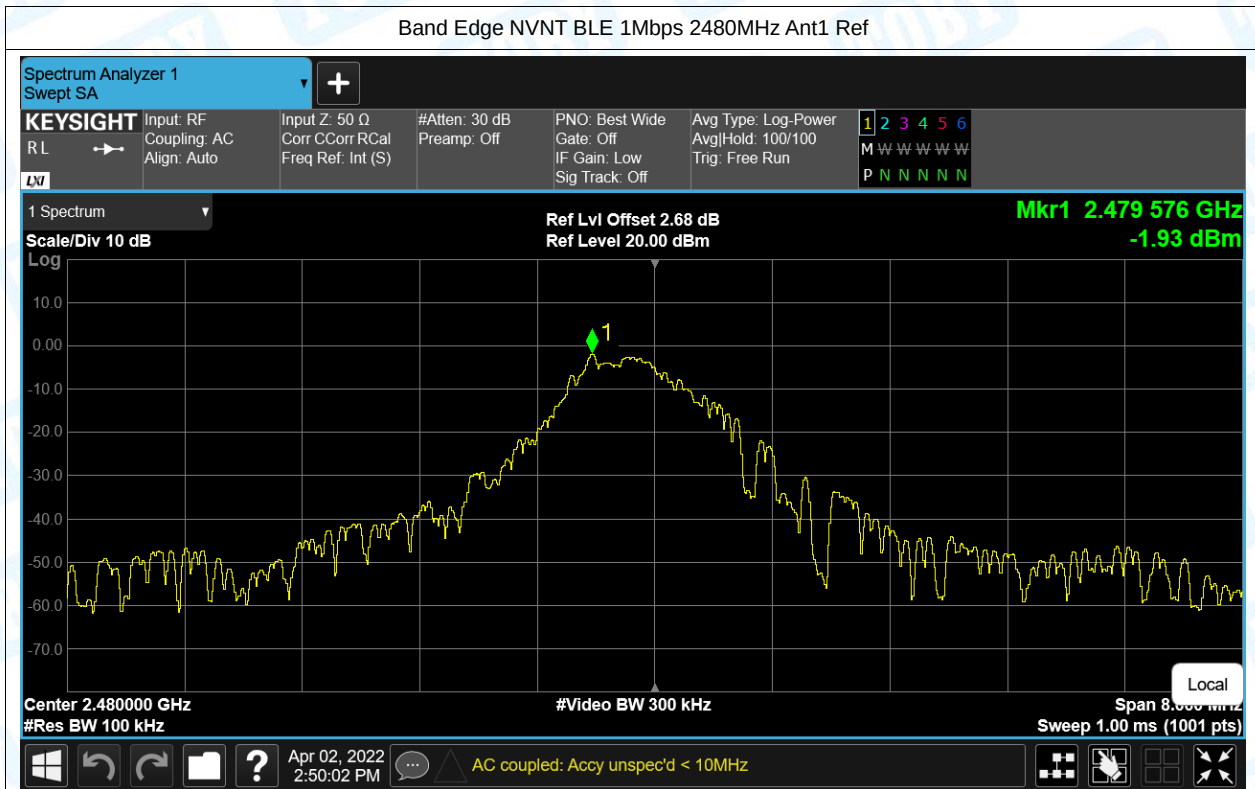




6. Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-47.52	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-42.04	-20	Pass





7. Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-33	-20	Pass
NVNT	BLE 1Mbps	2440	Ant1	-34.19	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-33.85	-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
Avg/Hold: 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

Ref Lvl Offset 2.67 dB
Ref Level 20.00 dBmMkr1 2.412 GHz
-3.04 dBm

Start 30 MHz

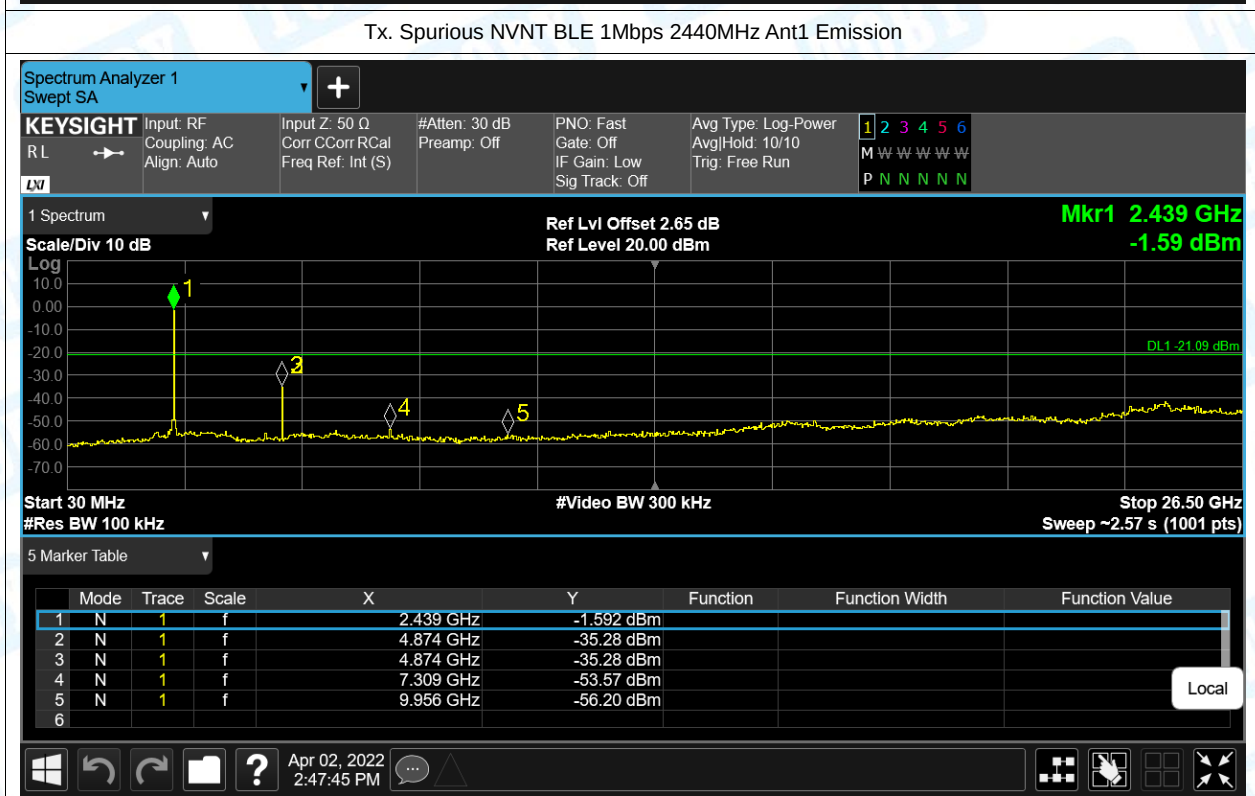
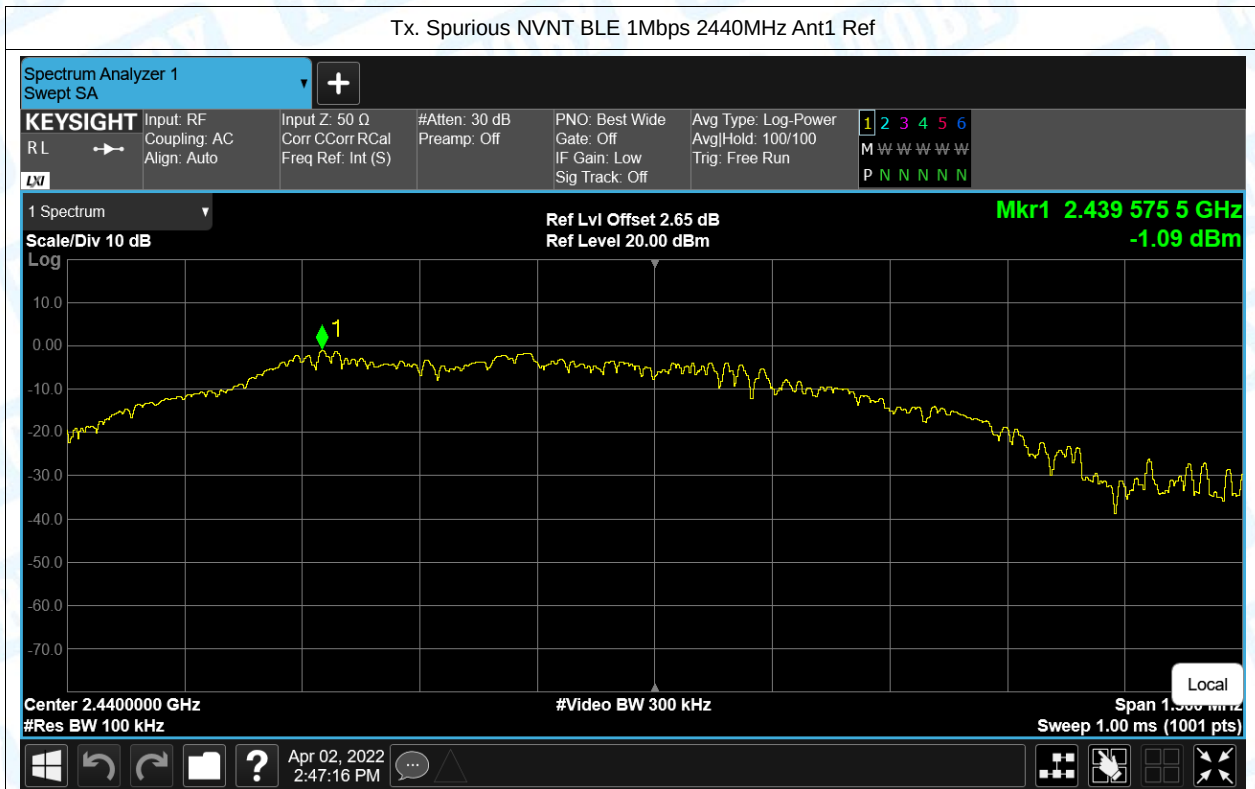
#Res BW 100 kHz

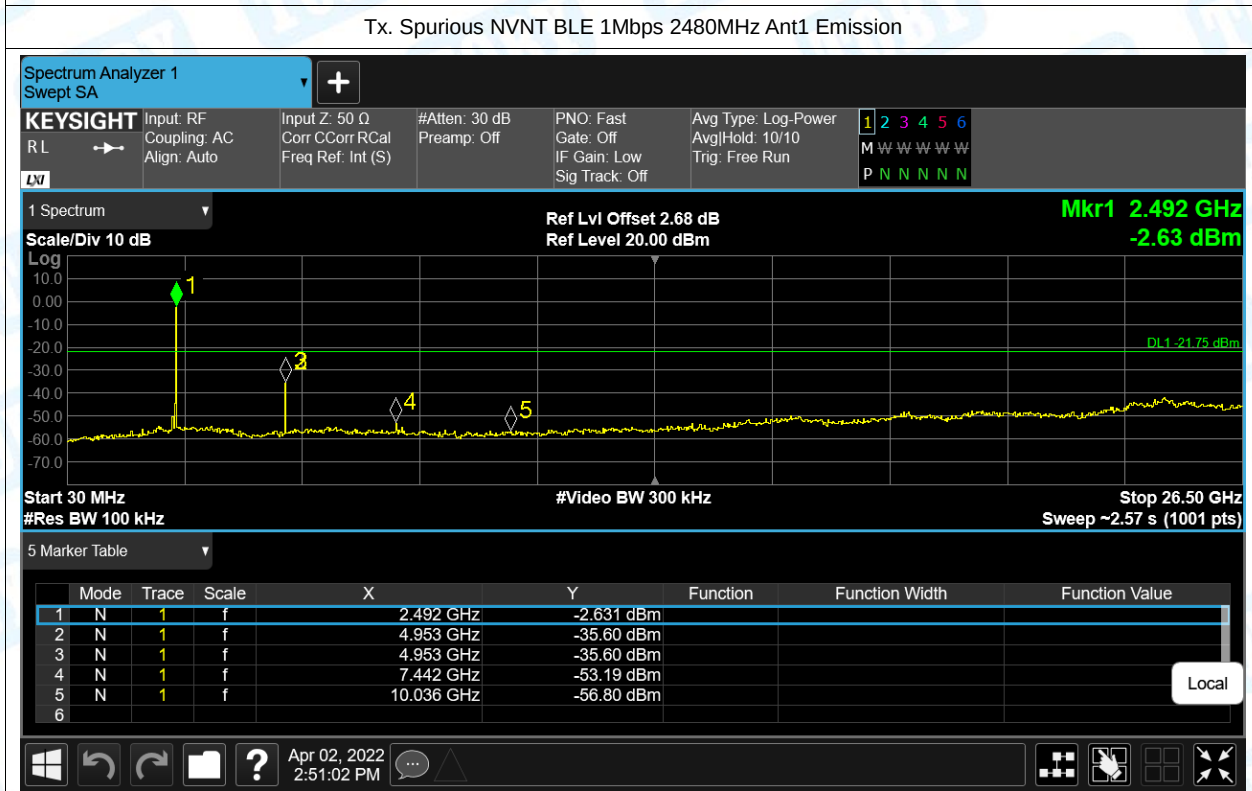
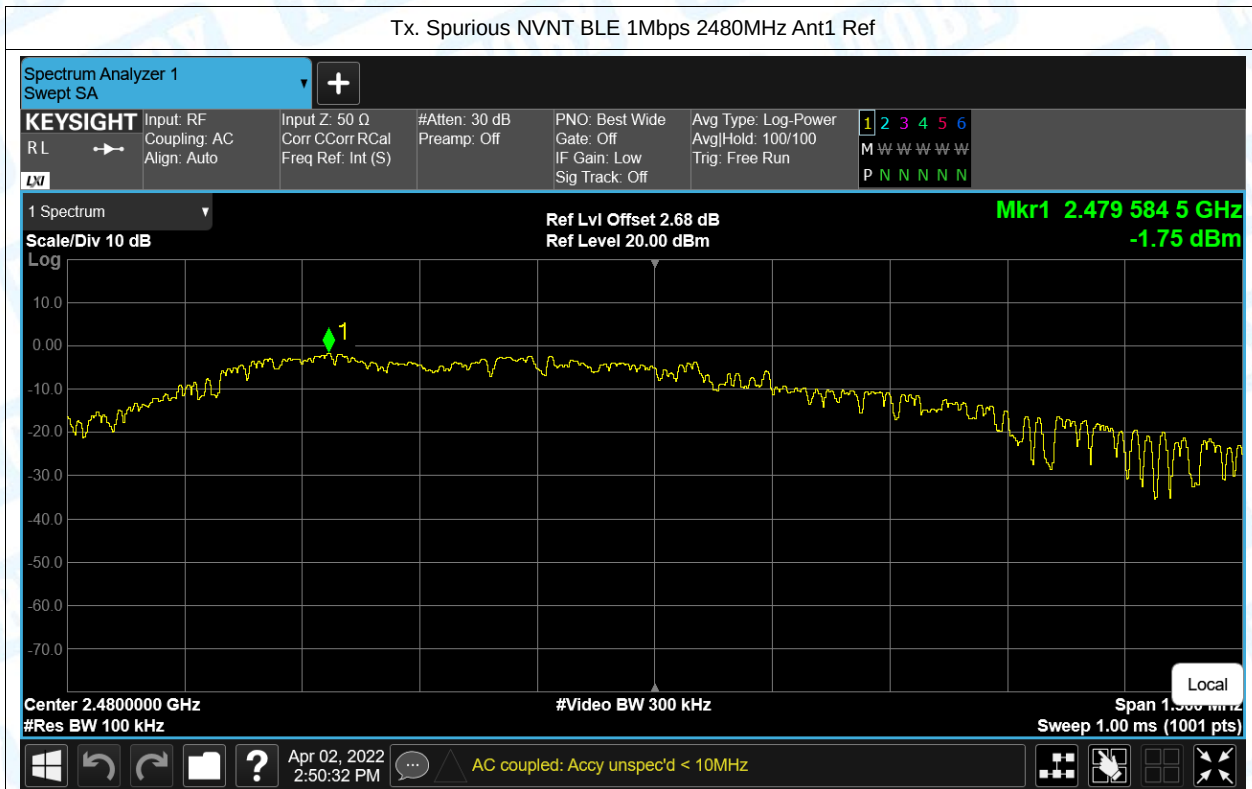
#Video BW 300 kHz

Stop 26.50 GHz

Sweep ~2.57 s (1001 pts)

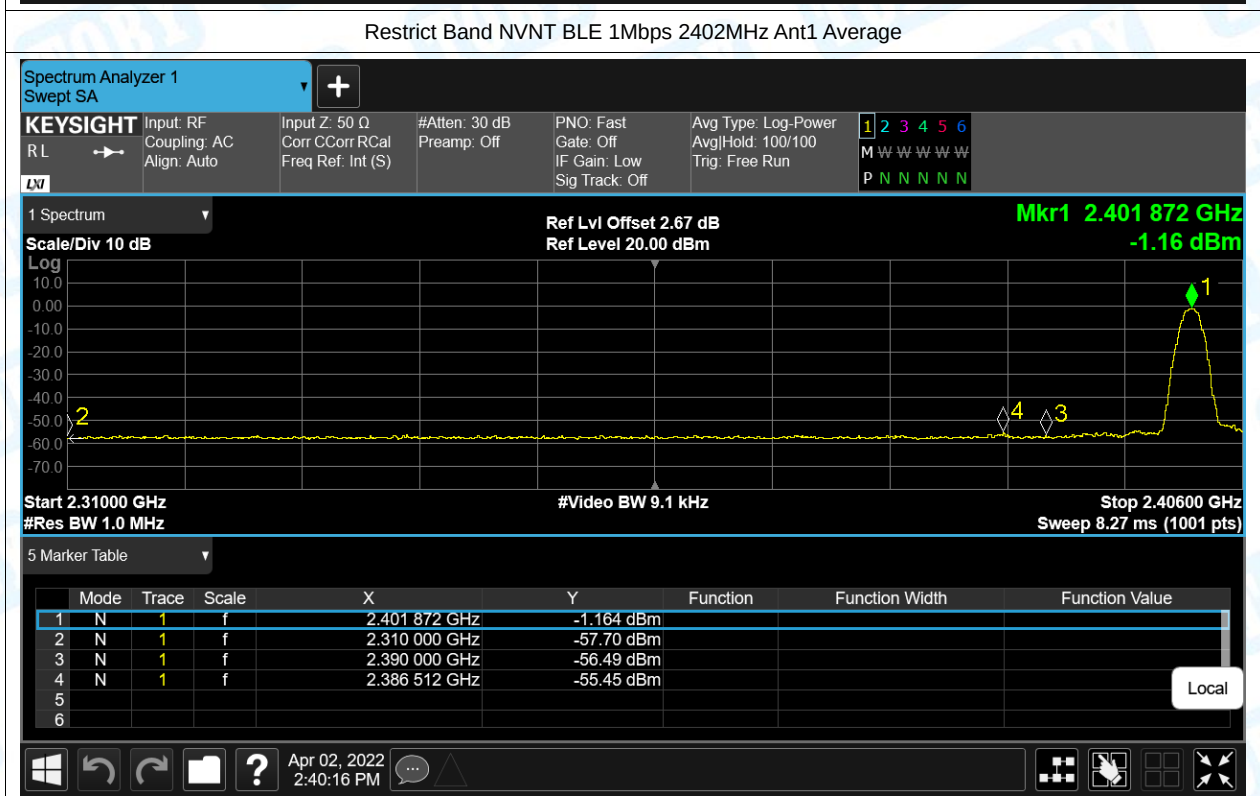
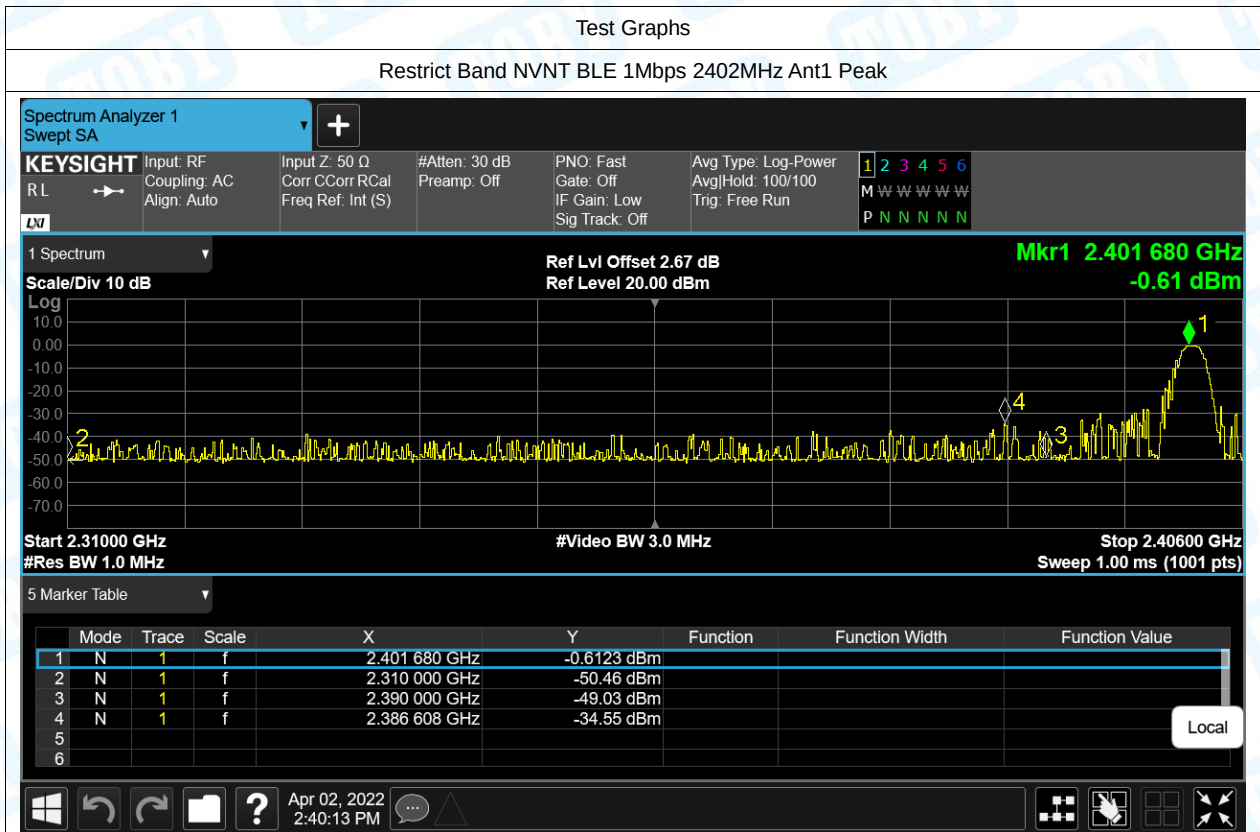
5 Marker Table

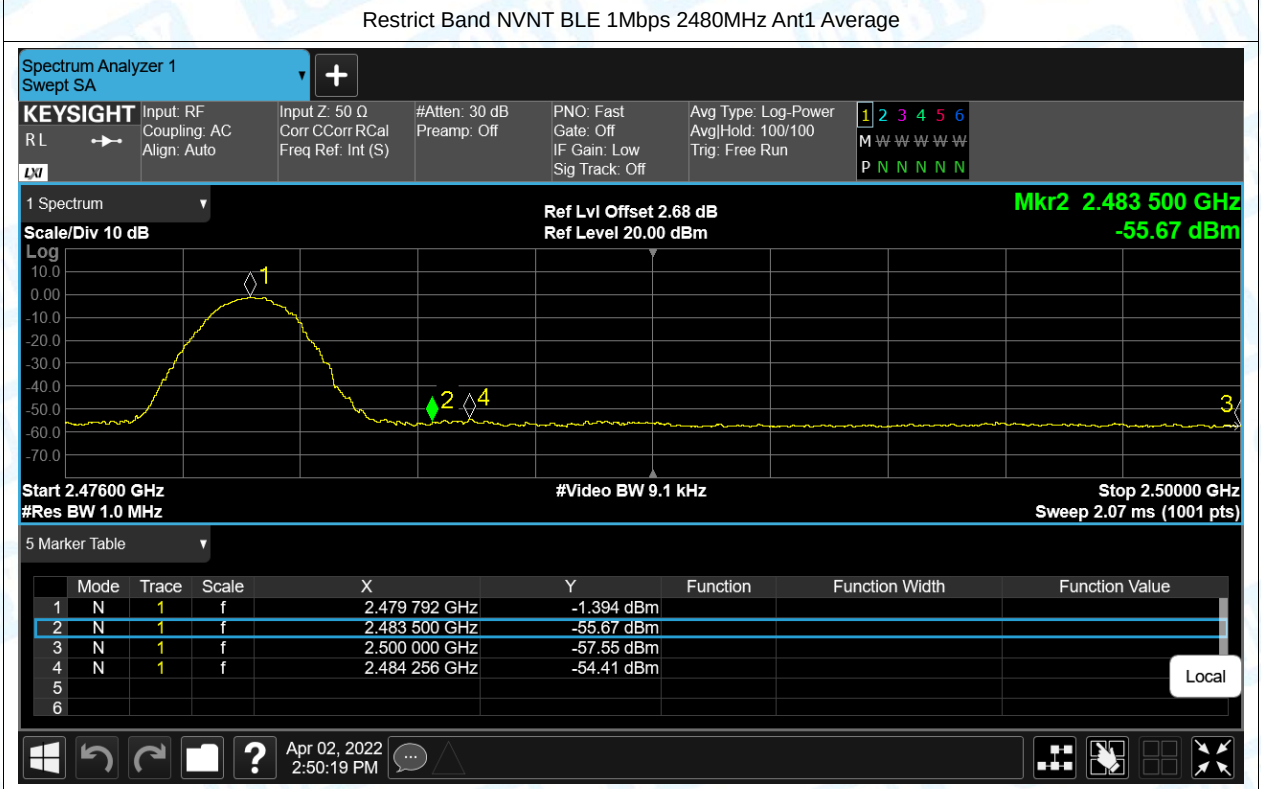
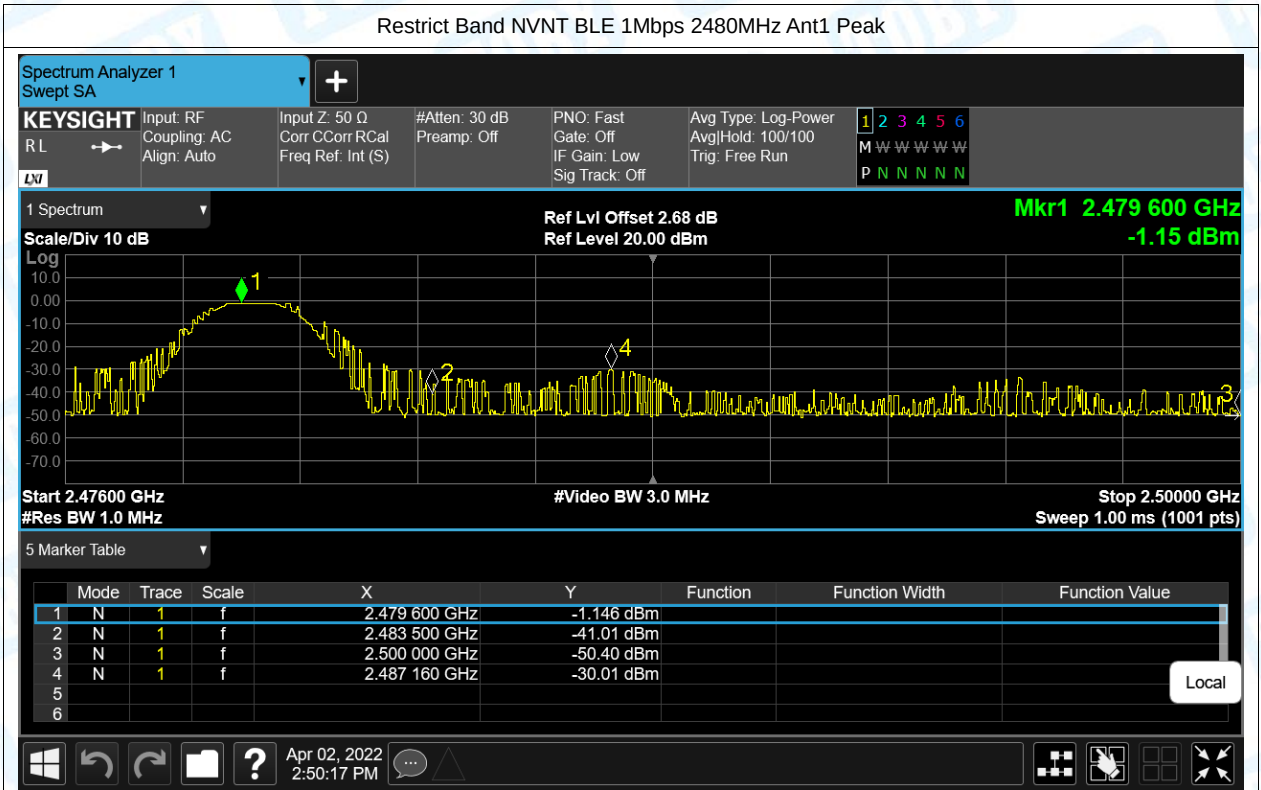




8. Restrict Band

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	-50.46	2	46.8	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2310	-57.7	2	39.56	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2386.608	-34.55	2	62.71	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2386.512	-55.45	2	41.81	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-48.42	2	48.84	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-57.24	2	40.02	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-41.01	2	56.25	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-55.67	2	41.59	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2487.16	-30.01	2	67.25	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2484.256	-54.41	2	42.85	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-50.4	2	46.86	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-57.55	2	39.71	Average	54	Pass





-----End of the report-----