

# RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
<b>Product Name:</b>	DVR
<b>Test Model:</b>	DVR-BTD8-16
<b>Sample ID:</b>	20211214-13_1-02#
Environmental Conditions	
<b>Temperature:</b>	25°C
<b>Relative Humidity:</b>	55%
<b>Test Voltage:</b>	AC 120V
<b>Test Engineer:</b>	HEJINGCHANG
<p>Note: For a more detailed features description, please refer to the report TB-FCC185582</p>	

## Duty Cycle

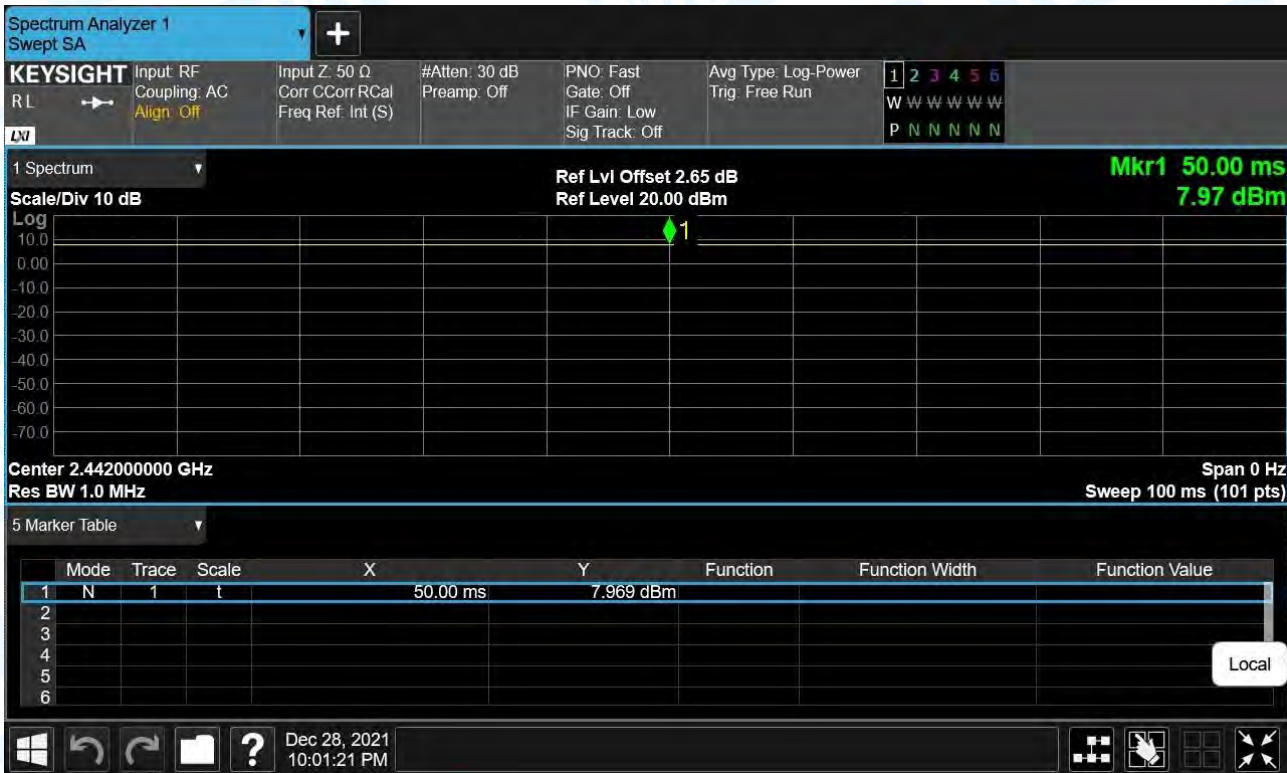
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1Mbps	2402	Ant1	100	0	0
NVNT	BLE 1Mbps	2442	Ant1	100	0	0
NVNT	BLE 1Mbps	2480	Ant1	100	0	0
NVNT	BLE 2Mbps	2402	Ant1	100	0	0
NVNT	BLE 2Mbps	2442	Ant1	100	0	0
NVNT	BLE 2Mbps	2480	Ant1	100	0	0

Test Graphs

Duty Cycle NVNT BLE 1Mbps 2402MHz Ant1



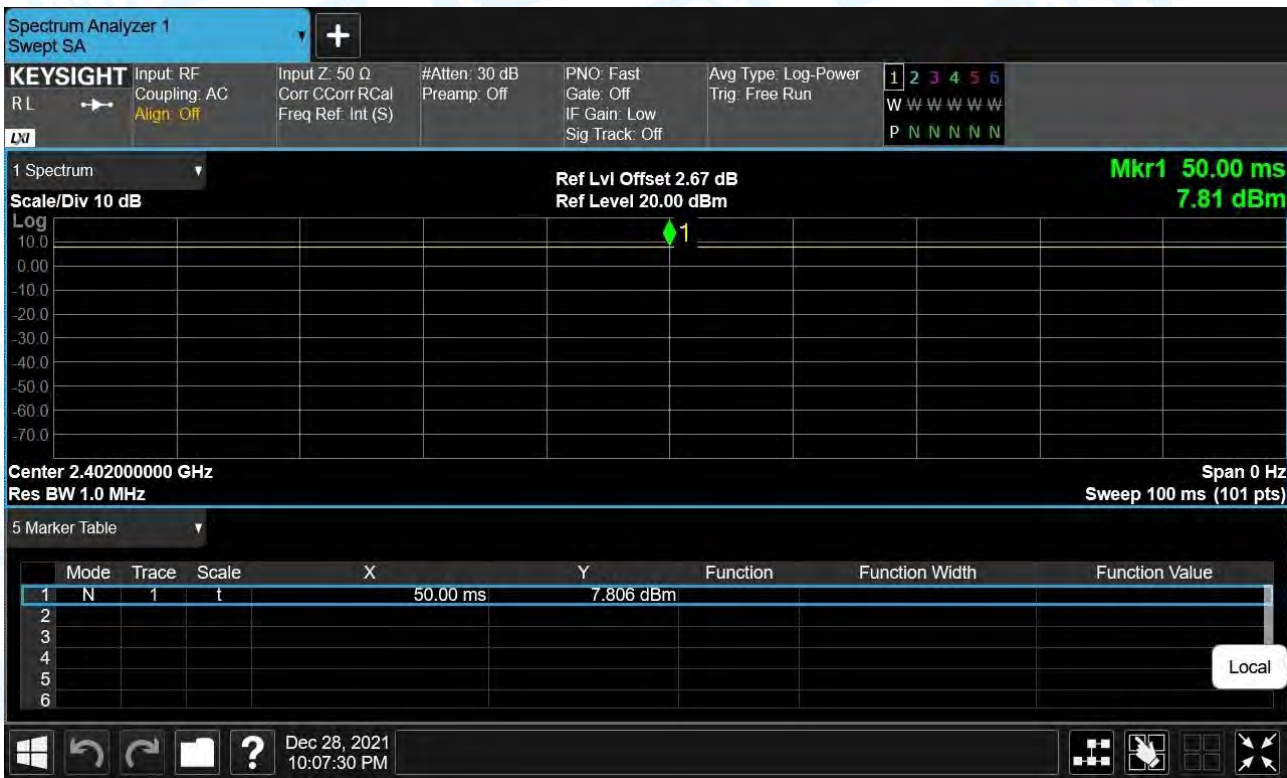
Duty Cycle NVNT BLE 1Mbps 2442MHz Ant1



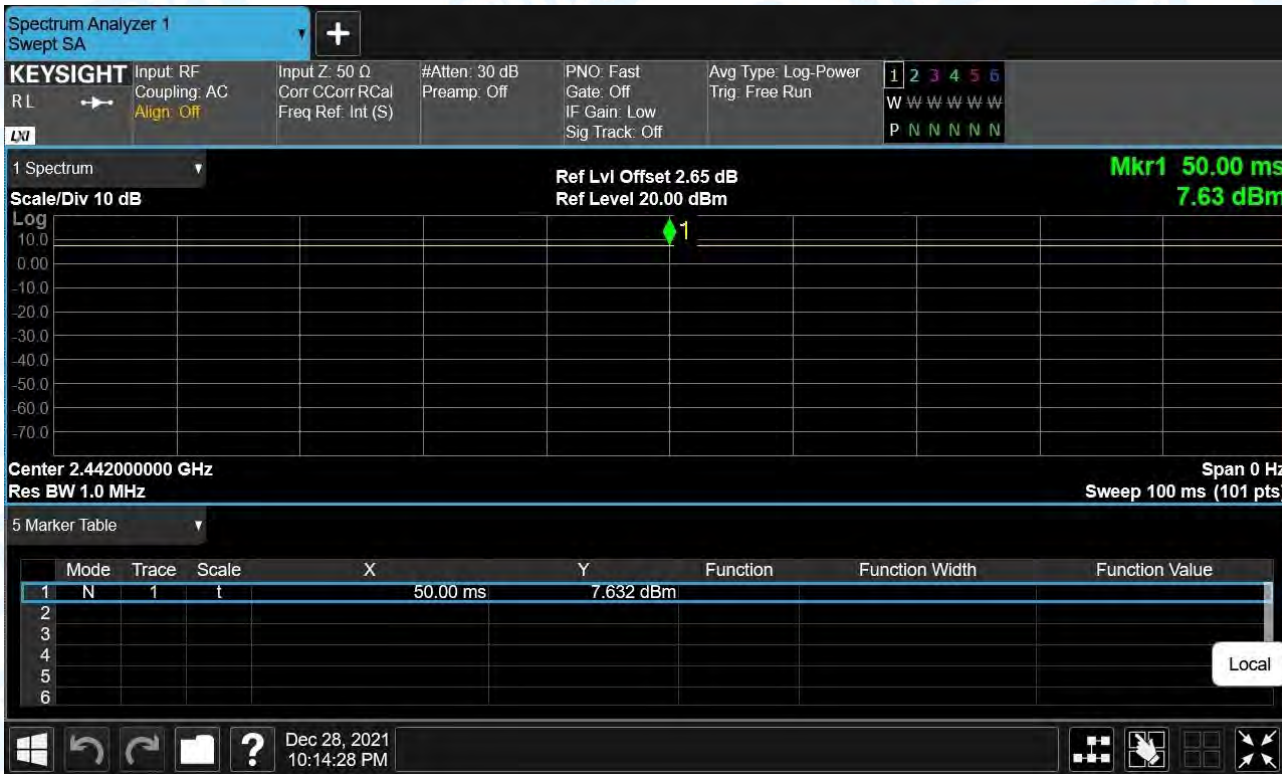
Duty Cycle NVNT BLE 1Mbps 2480MHz Ant1



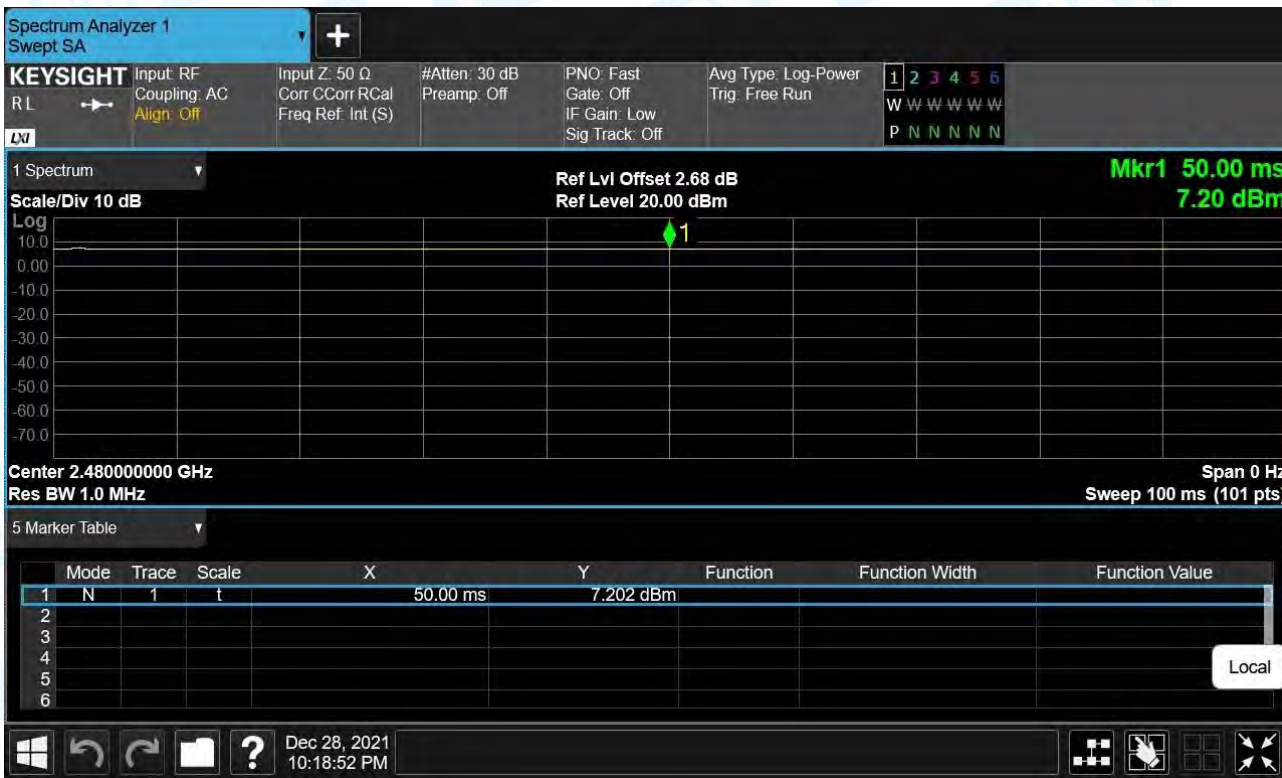
Duty Cycle NVNT BLE 2Mbps 2402MHz Ant1



Duty Cycle NVNT BLE 2Mbps 2442MHz Ant1



Duty Cycle NVNT BLE 2Mbps 2480MHz Ant1

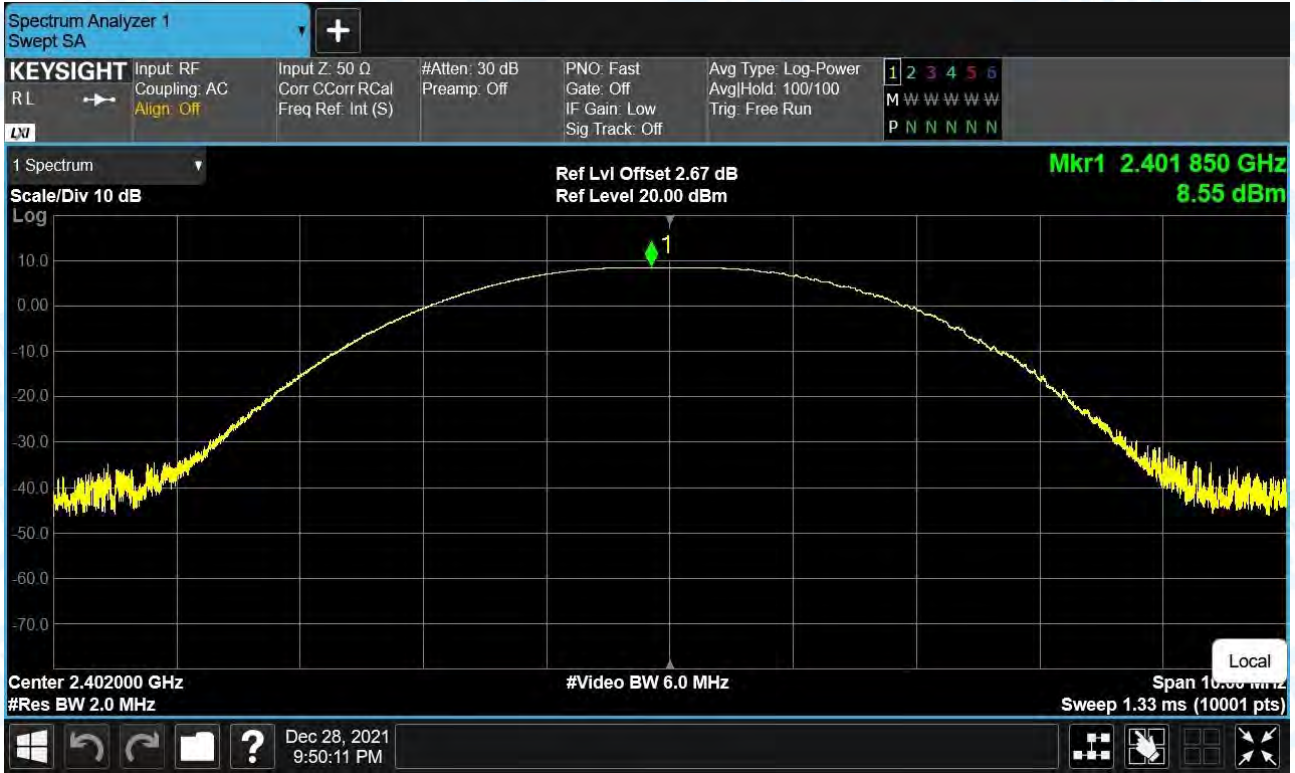


## Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	8.554	0	8.554	30	Pass
NVNT	BLE 1Mbps	2442	Ant1	8.063	0	8.063	30	Pass
NVNT	BLE 1Mbps	2480	Ant1	7.64	0	7.64	30	Pass
NVNT	BLE 2Mbps	2402	Ant1	8.223	0	8.223	30	Pass
NVNT	BLE 2Mbps	2442	Ant1	7.993	0	7.993	30	Pass
NVNT	BLE 2Mbps	2480	Ant1	7.551	0	7.551	30	Pass

Test Graphs

Power NVNT BLE 1Mbps 2402MHz Ant1



Power NVNT BLE 1Mbps 2442MHz Ant1



Power NVNT BLE 1Mbps 2480MHz Ant1



Power NVNT BLE 2Mbps 2402MHz Ant1



Power NVNT BLE 2Mbps 2442MHz Ant1



Power NVNT BLE 2Mbps 2480MHz Ant1





### -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.68	0.5	Pass
NVNT	BLE 1Mbps	2442	Ant1	0.66	0.5	Pass
NVNT	BLE 1Mbps	2480	Ant1	0.66	0.5	Pass
NVNT	BLE 2Mbps	2402	Ant1	1.11	0.5	Pass
NVNT	BLE 2Mbps	2442	Ant1	1.11	0.5	Pass
NVNT	BLE 2Mbps	2480	Ant1	1.09	0.5	Pass

Test Graphs

-6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1



-6dB Bandwidth NVNT BLE 1Mbps 2442MHz Ant1



-6dB Bandwidth NVNT BLE 1Mbps 2480MHz Ant1



-6dB Bandwidth NVNT BLE 2Mbps 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2Mbps 2442MHz Ant1



-6dB Bandwidth NVNT BLE 2Mbps 2480MHz Ant1



## Occupied Channel Bandwidth

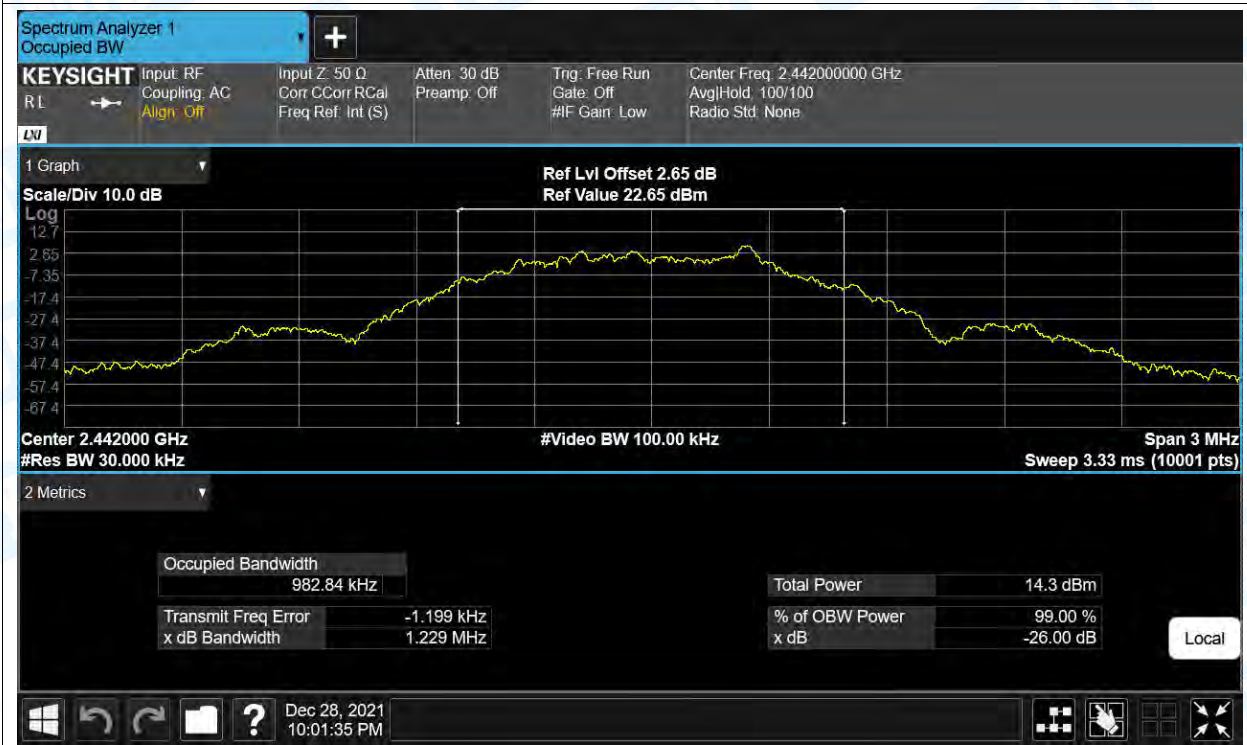
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1Mbps	2402	Ant1	0.974
NVNT	BLE 1Mbps	2442	Ant1	0.983
NVNT	BLE 1Mbps	2480	Ant1	0.993
NVNT	BLE 2Mbps	2402	Ant1	2.018
NVNT	BLE 2Mbps	2442	Ant1	2.025
NVNT	BLE 2Mbps	2480	Ant1	2.006

Test Graphs

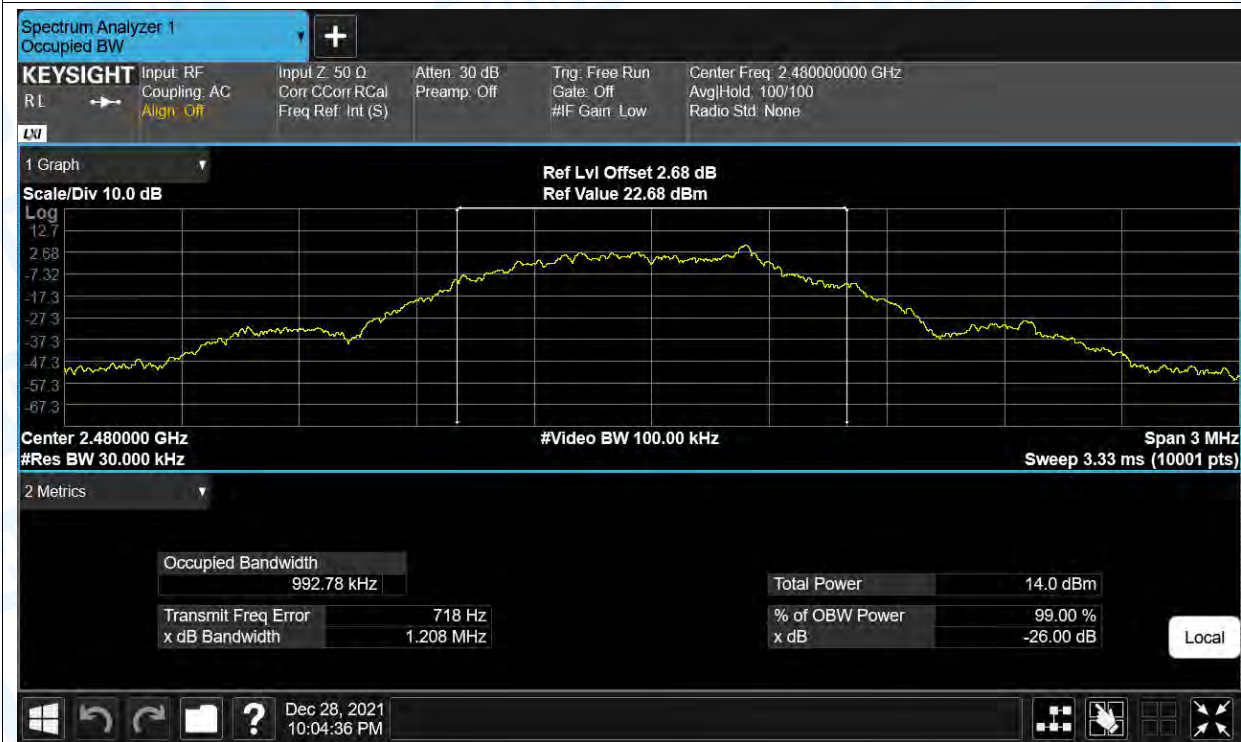
OBW NVNT BLE 1Mbps 2402MHz Ant1



OBW NVNT BLE 1Mbps 2442MHz Ant1



OBW NVNT BLE 1Mbps 2480MHz Ant1



OBW NVNT BLE 2Mbps 2402MHz Ant1



OBW NVNT BLE 2Mbps 2442MHz Ant1



OBW NVNT BLE 2Mbps 2480MHz Ant1



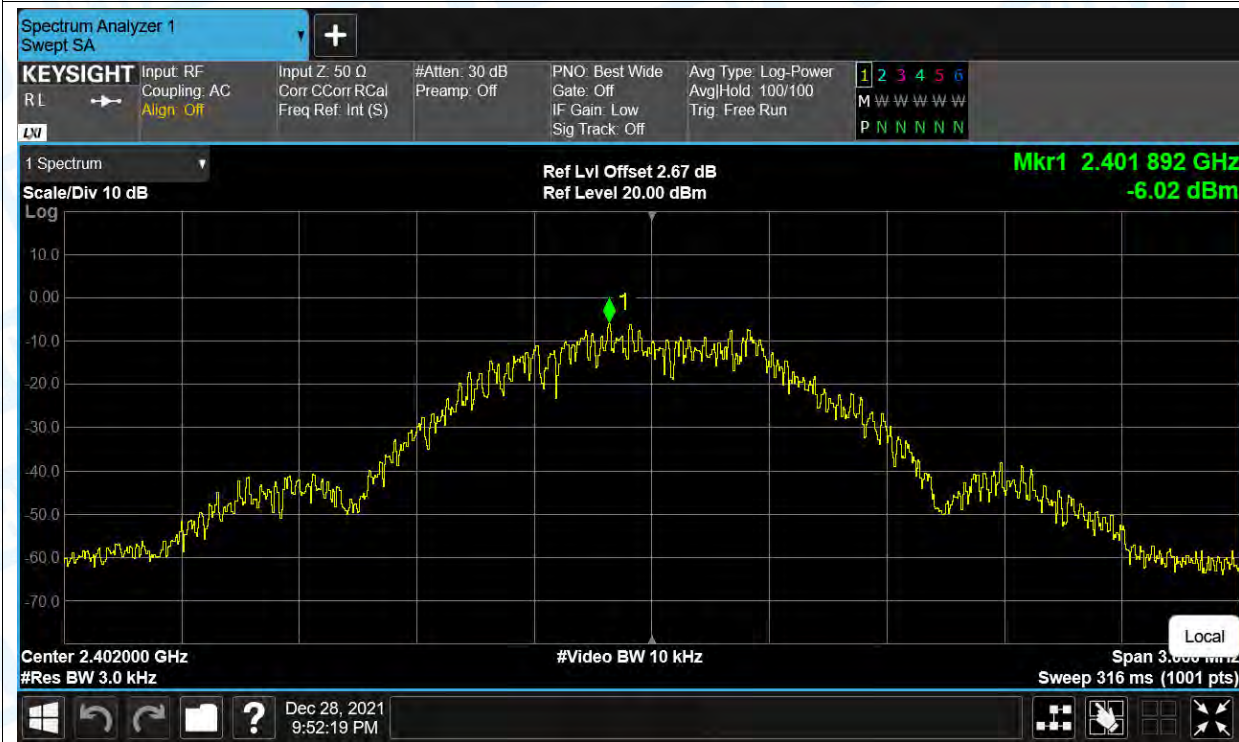


## Maximum Power Spectral Density Level

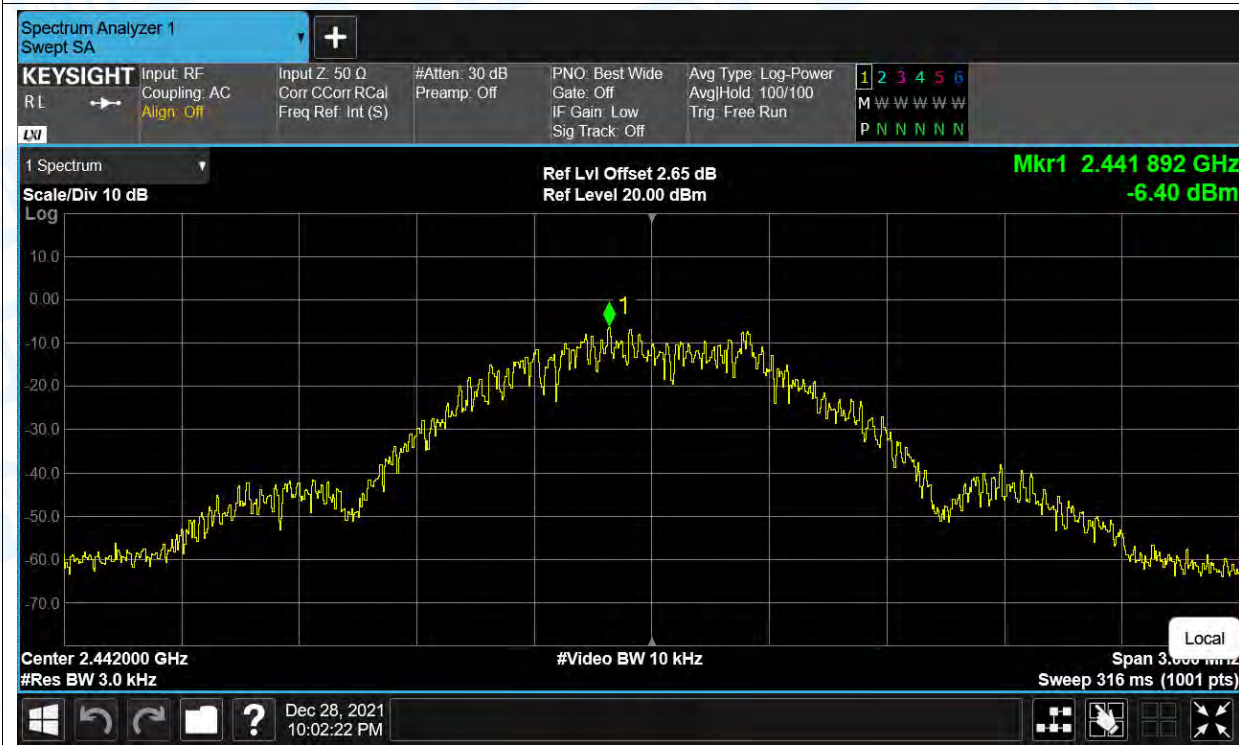
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-6.018	8	Pass
NVNT	BLE 1Mbps	2442	Ant1	-6.399	8	Pass
NVNT	BLE 1Mbps	2480	Ant1	-6.262	8	Pass
NVNT	BLE 2Mbps	2402	Ant1	-8.982	8	Pass
NVNT	BLE 2Mbps	2442	Ant1	-9.123	8	Pass
NVNT	BLE 2Mbps	2480	Ant1	-9.689	8	Pass

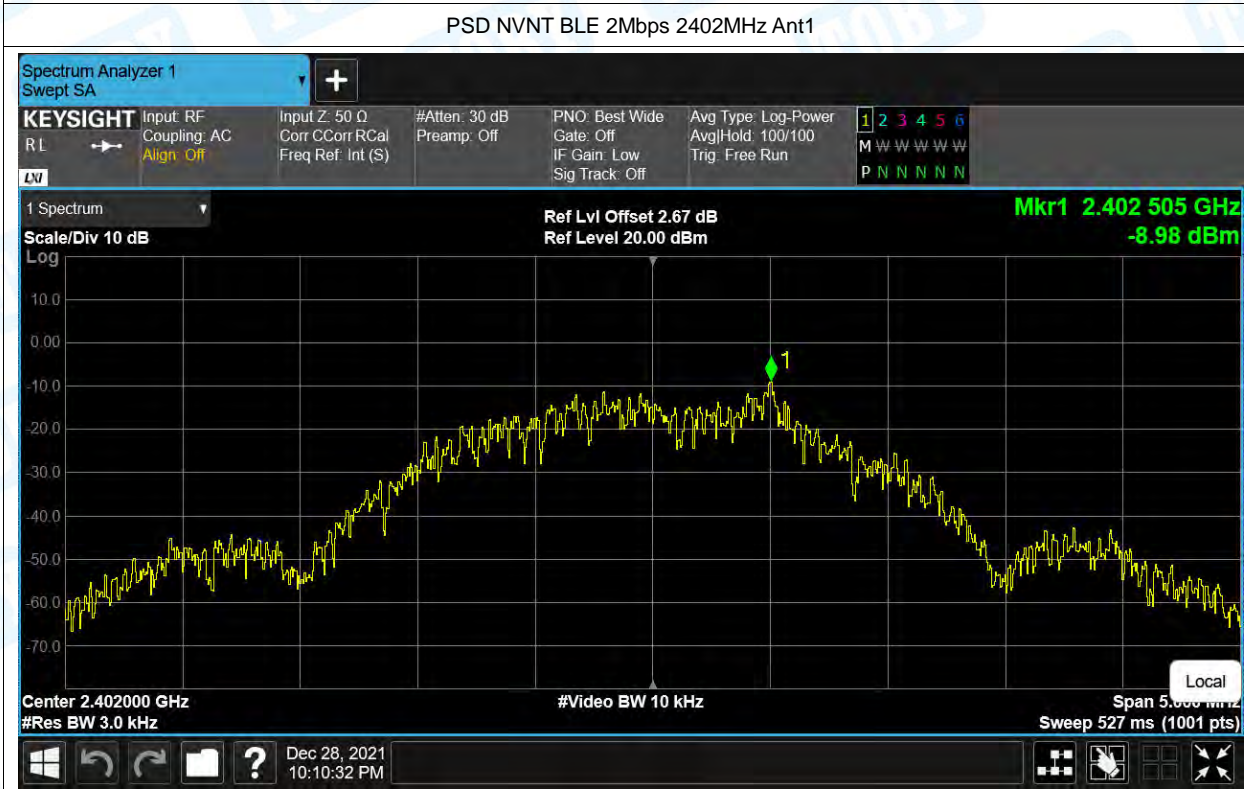
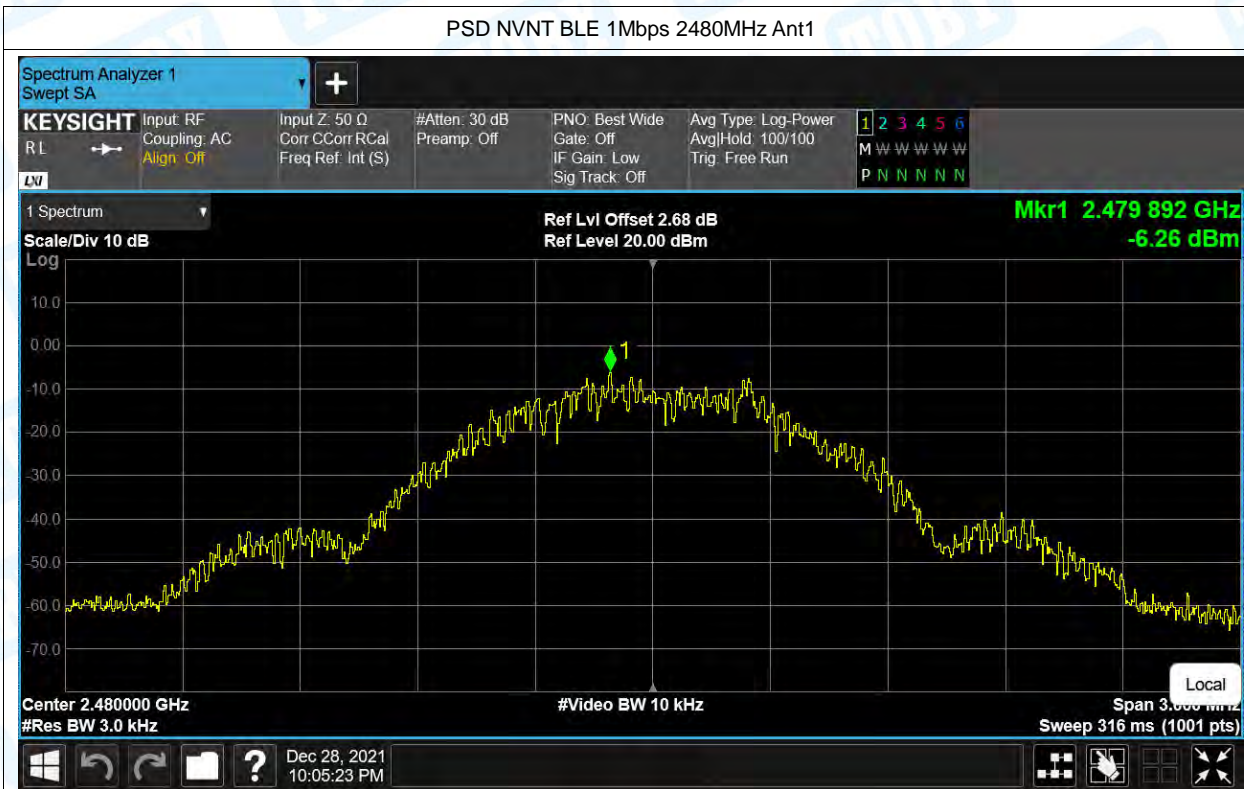
Test Graphs

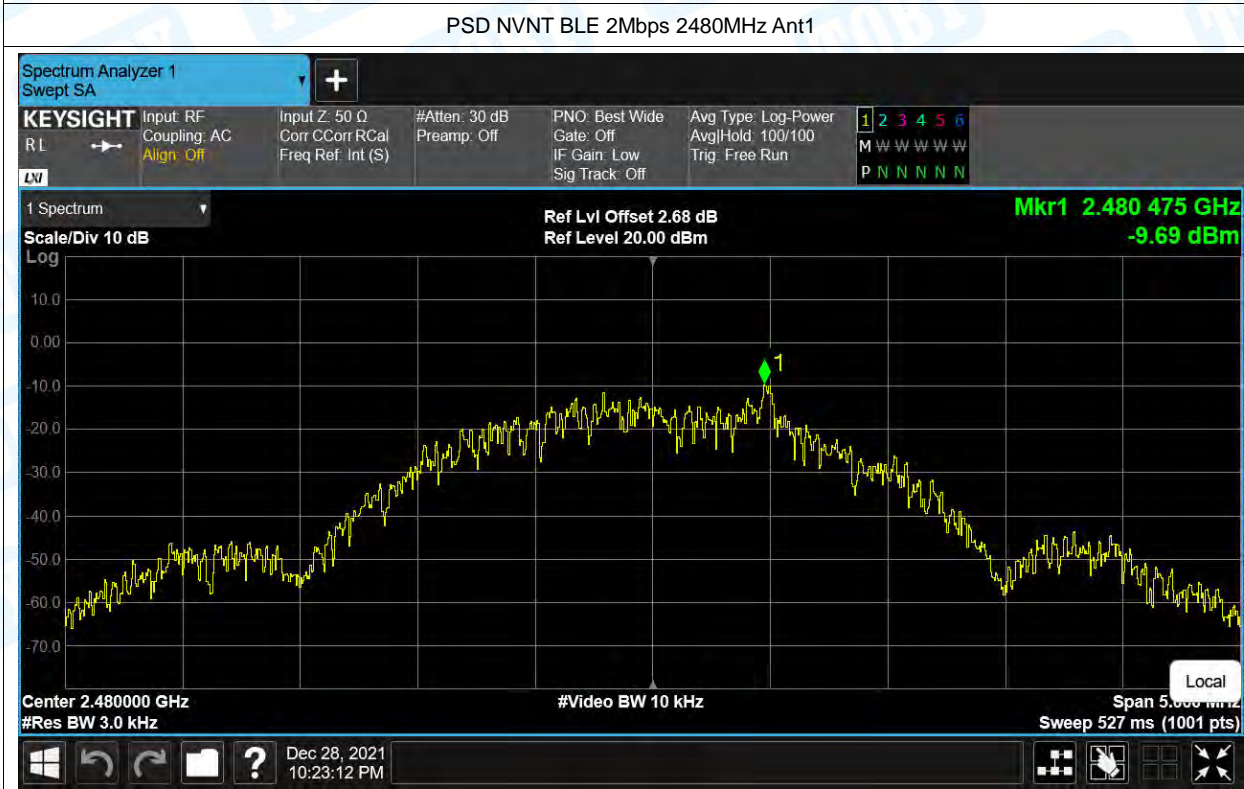
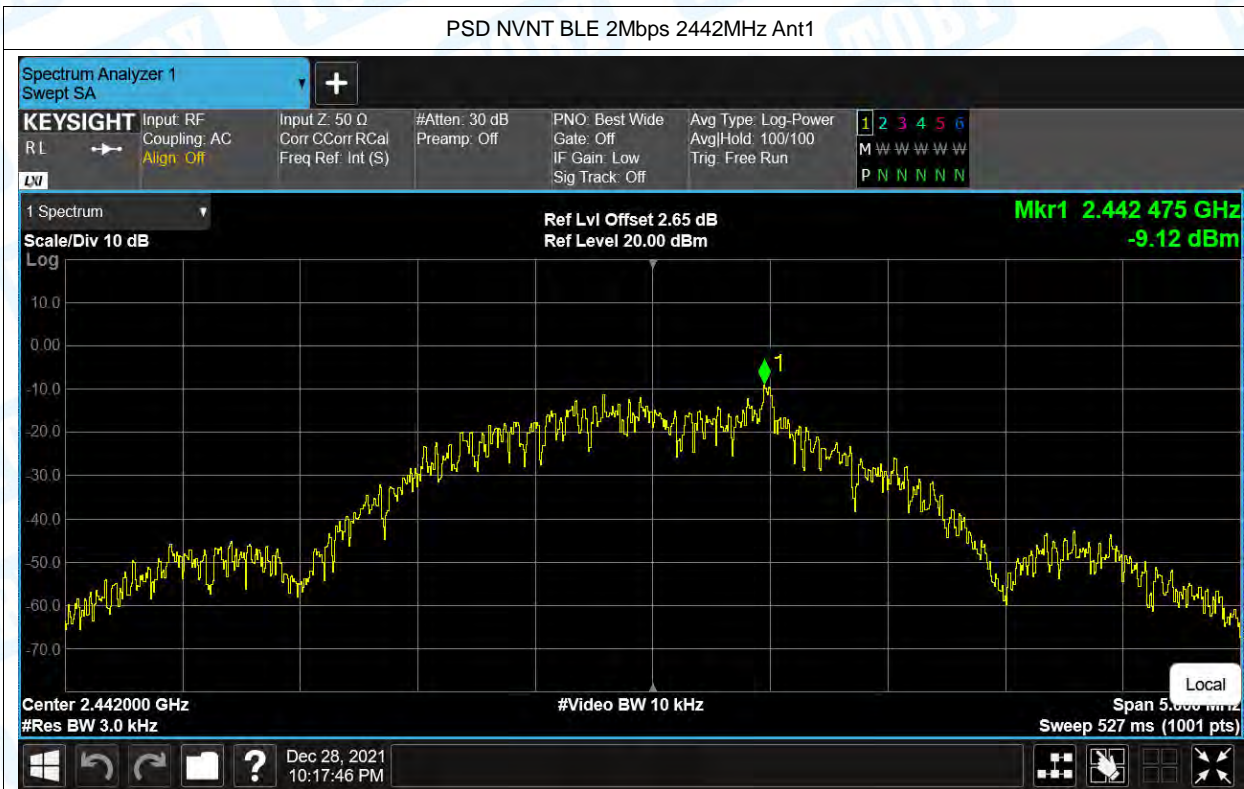
PSD NVNT BLE 1Mbps 2402MHz Ant1



PSD NVNT BLE 1Mbps 2442MHz Ant1







## Band Edge

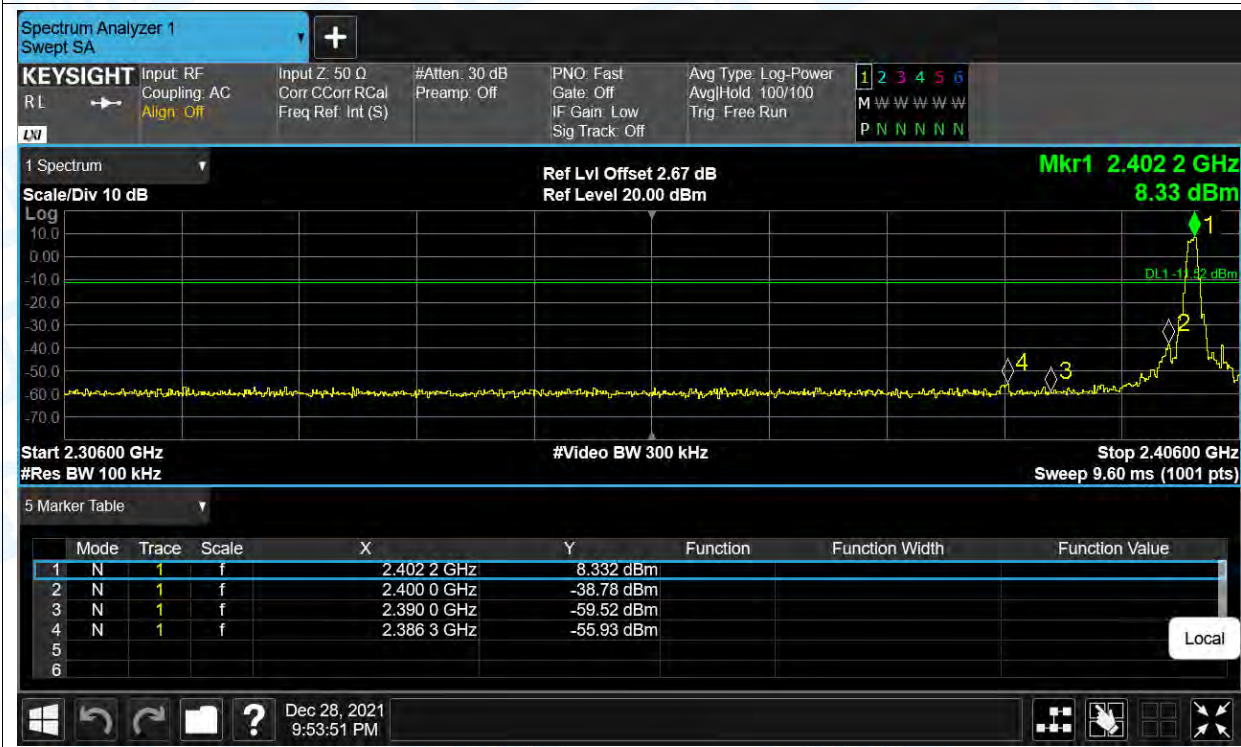
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-64.41	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-56.86	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-65.1	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-55.38	-20	Pass

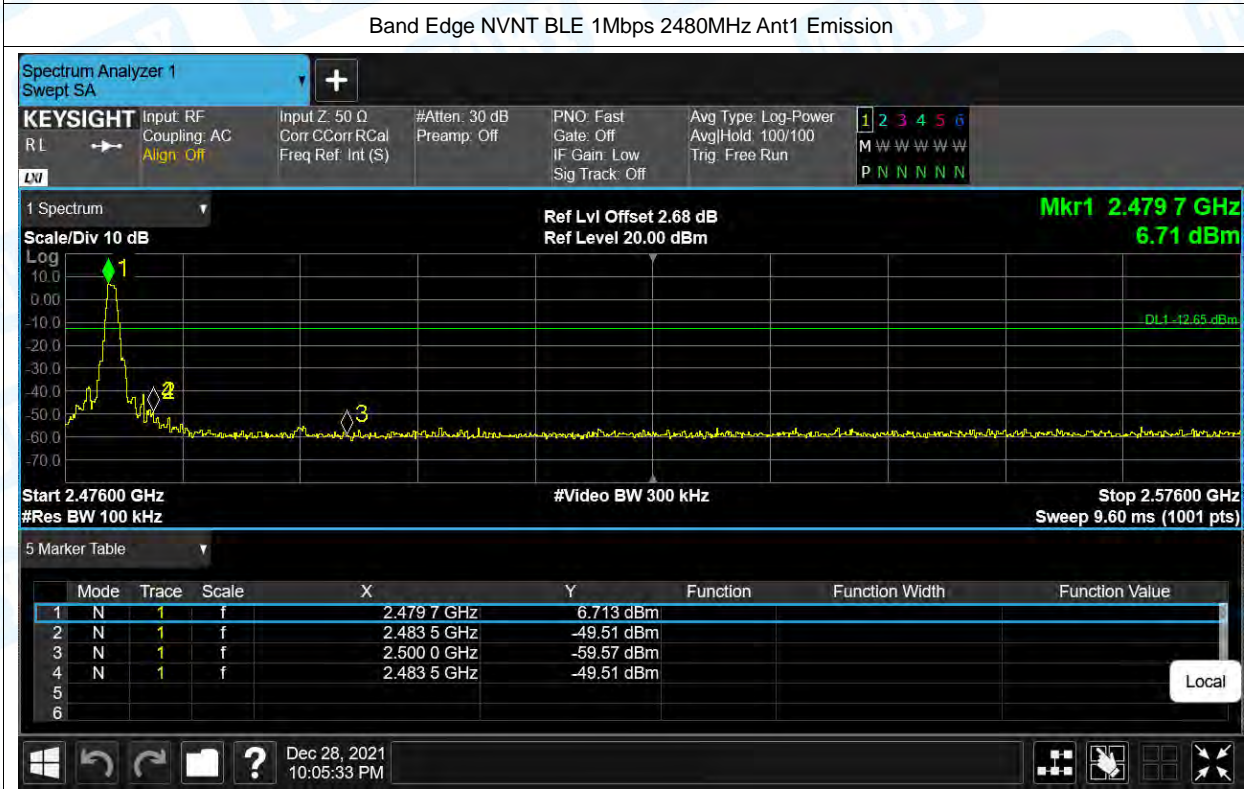
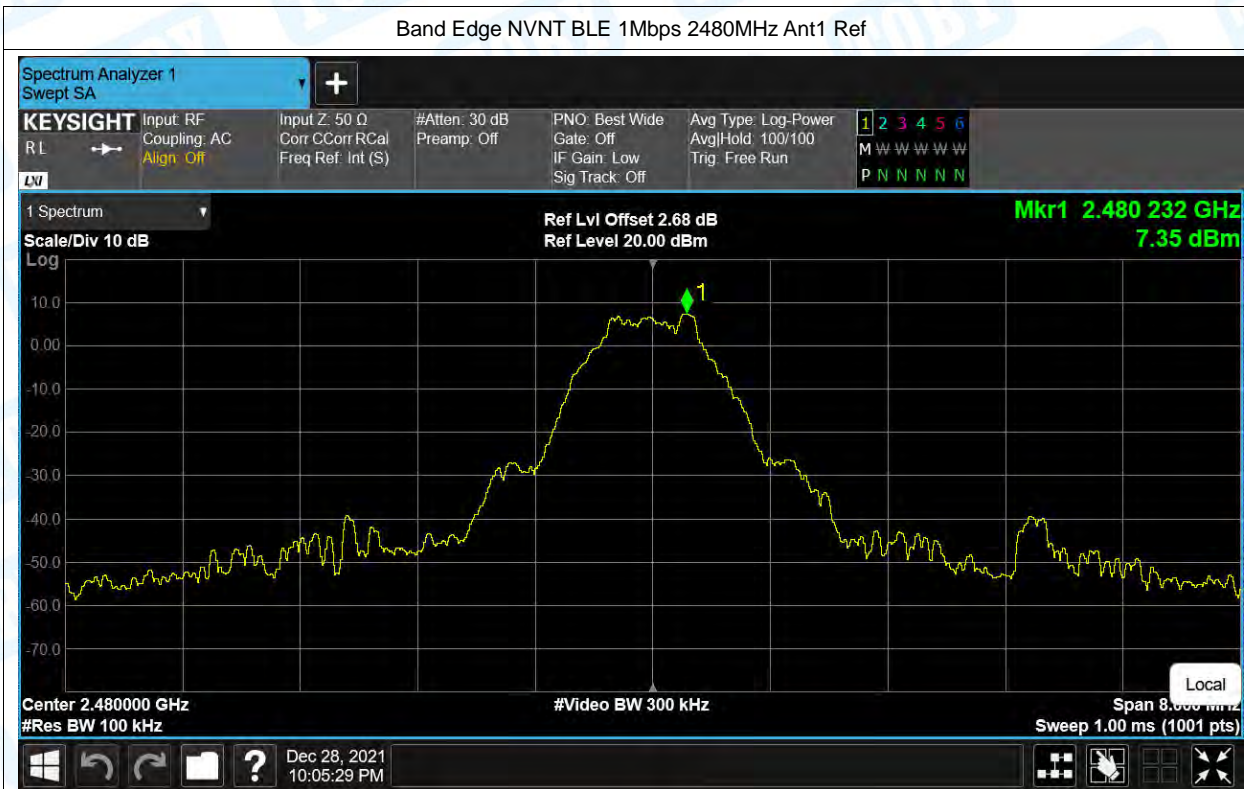
Test Graphs

Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Ref



Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Emission

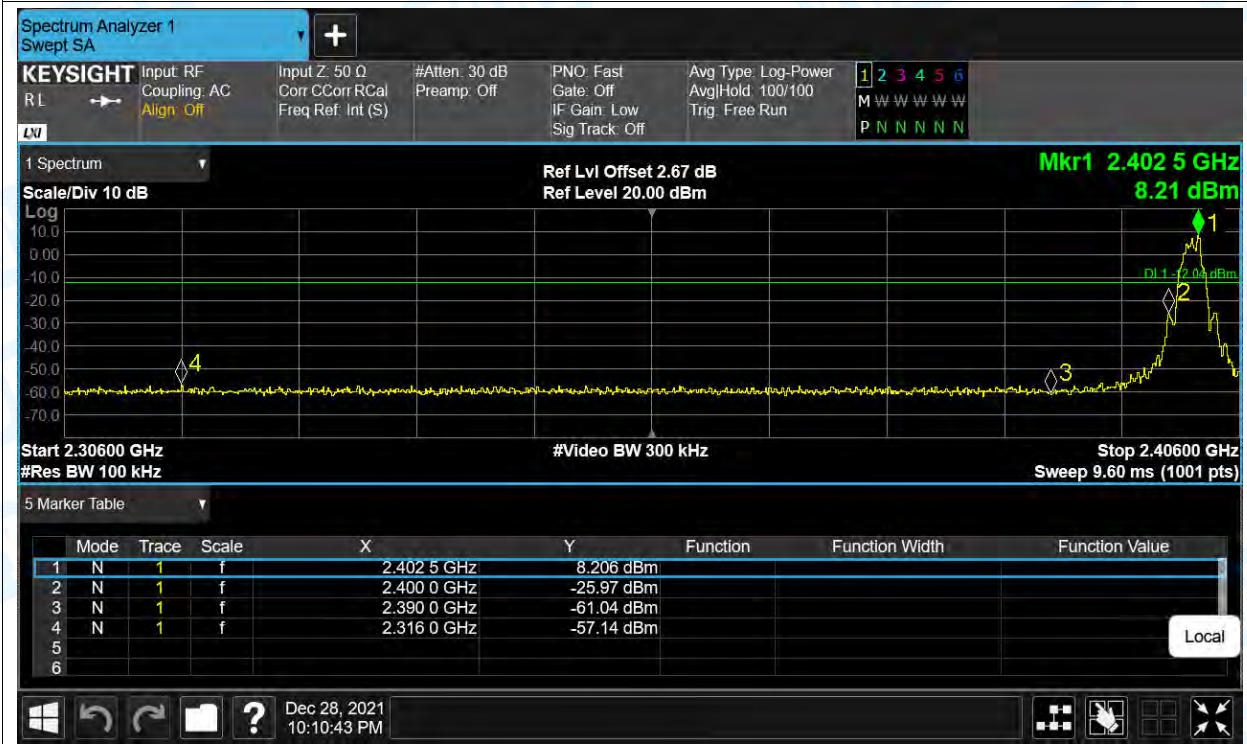




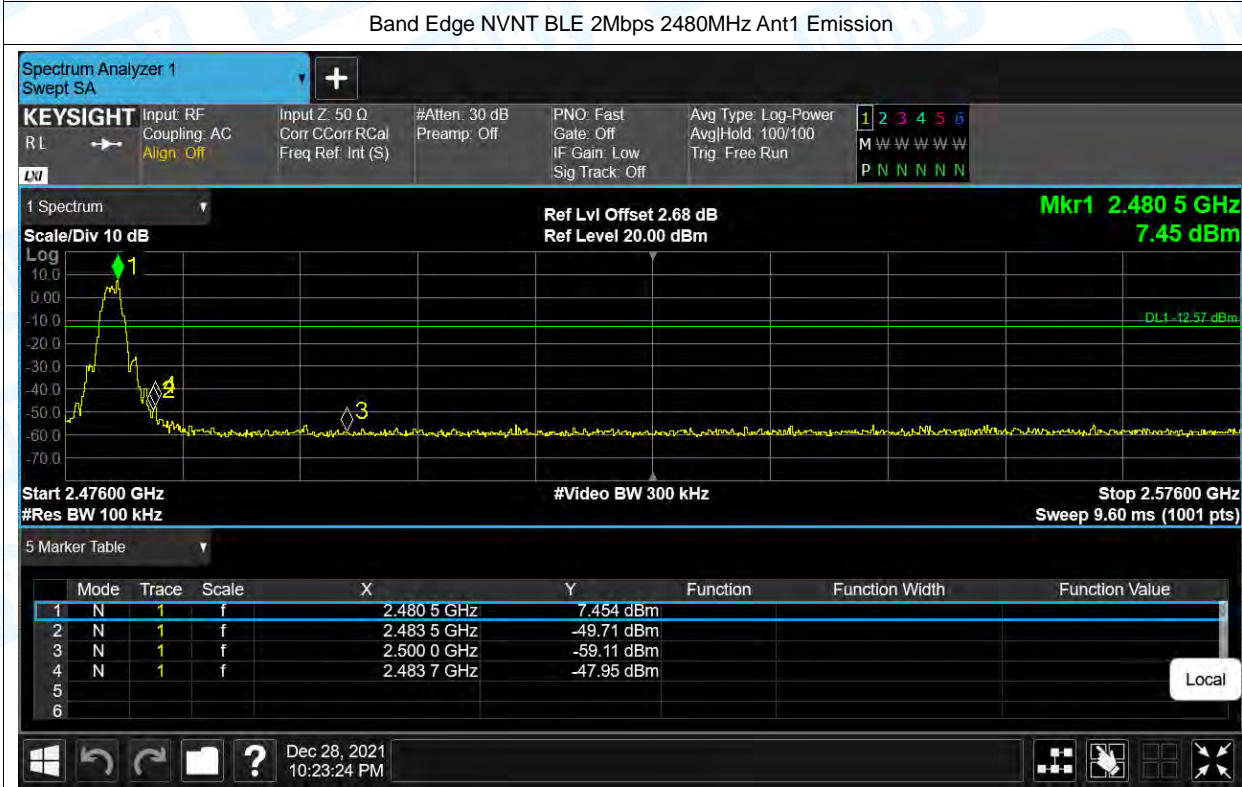
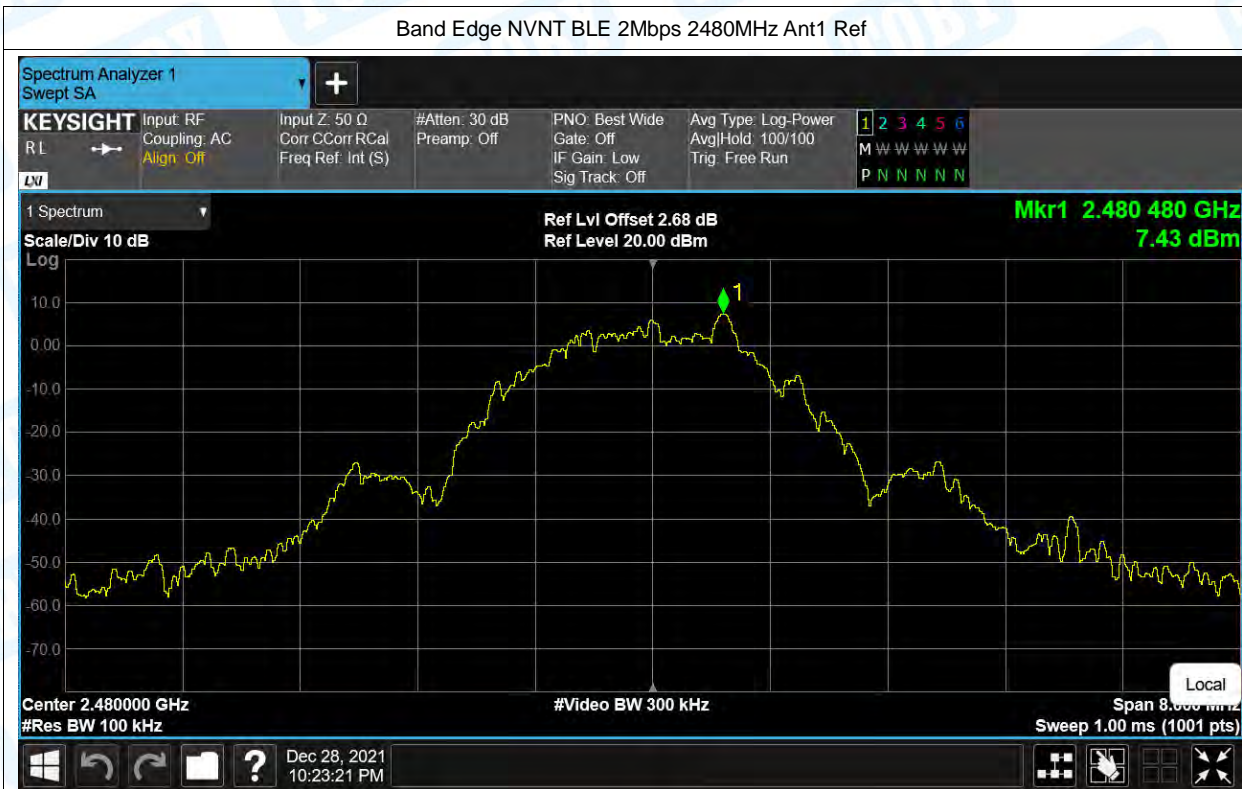
Band Edge NVNT BLE 2Mbps 2402MHz Ant1 Ref



Band Edge NVNT BLE 2Mbps 2402MHz Ant1 Emission







## Conducted RF Spurious Emission

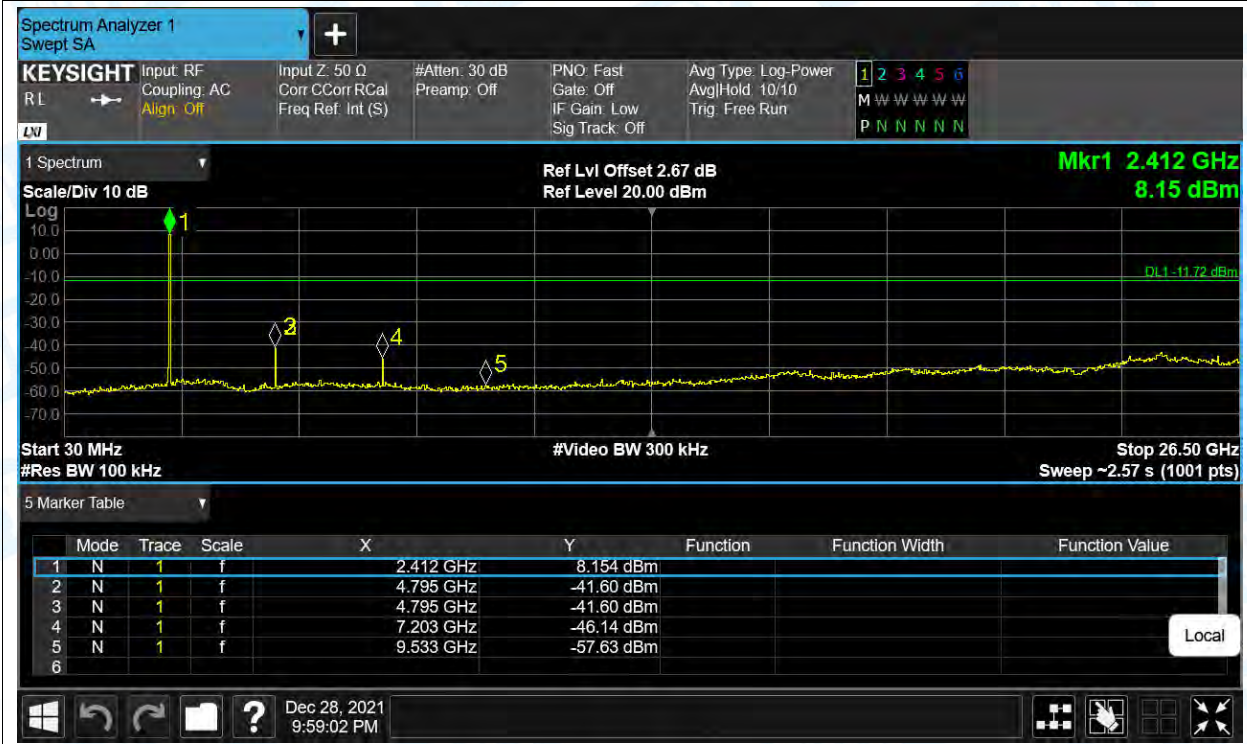
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-49.88	-20	Pass
NVNT	BLE 1Mbps	2442	Ant1	-51.86	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-51.65	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-50.47	-20	Pass
NVNT	BLE 2Mbps	2442	Ant1	-51.25	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-50.22	-20	Pass

Test Graphs

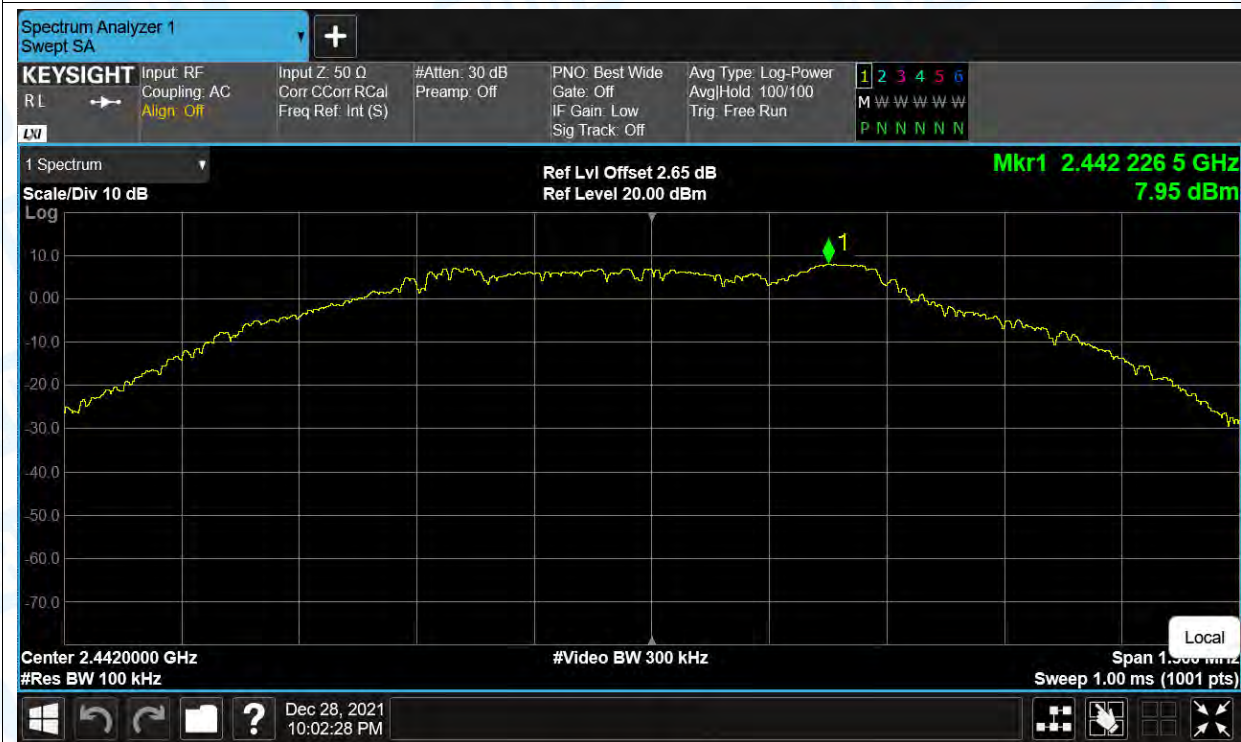
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Ref



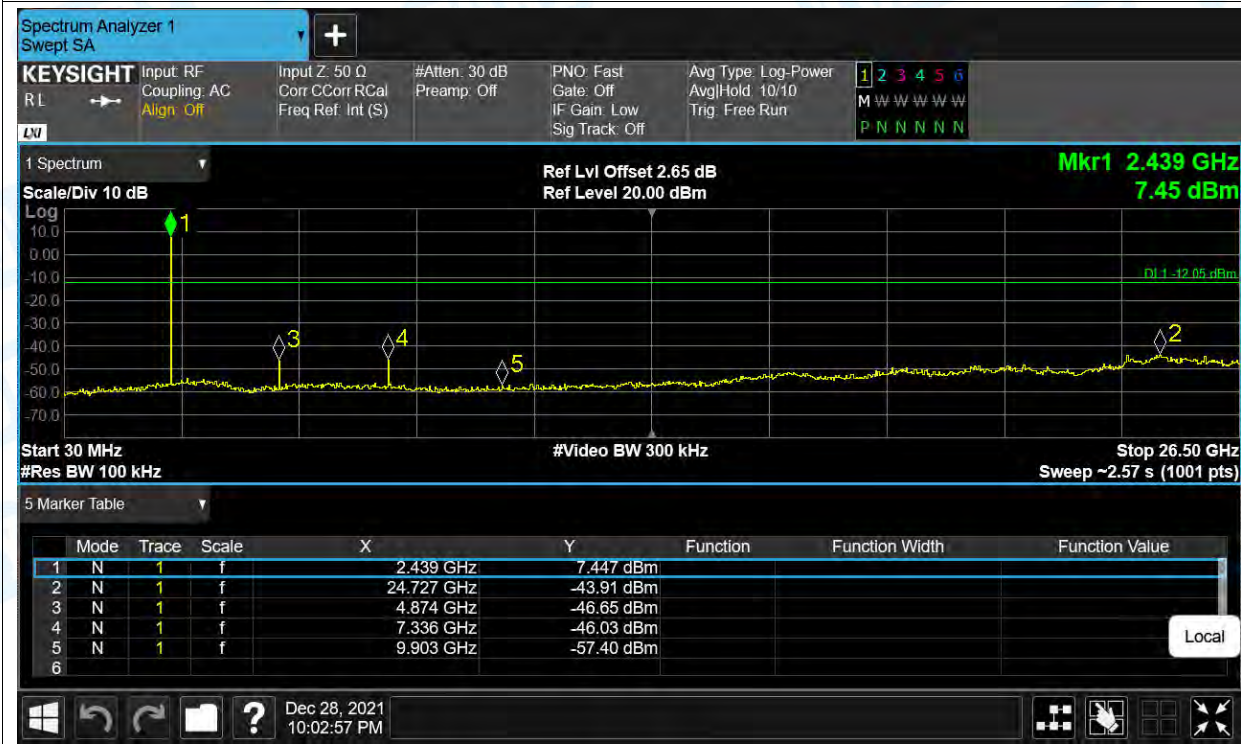
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Emission



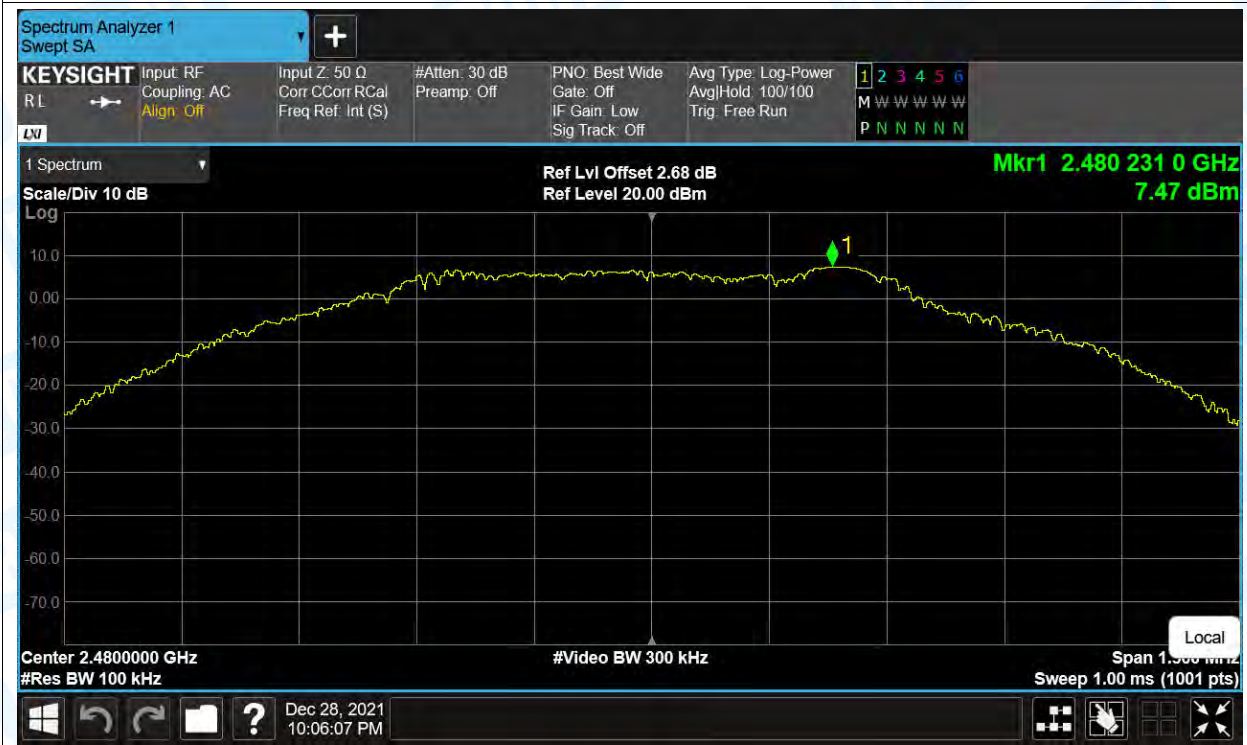
Tx. Spurious NVNT BLE 1Mbps 2442MHz Ant1 Ref



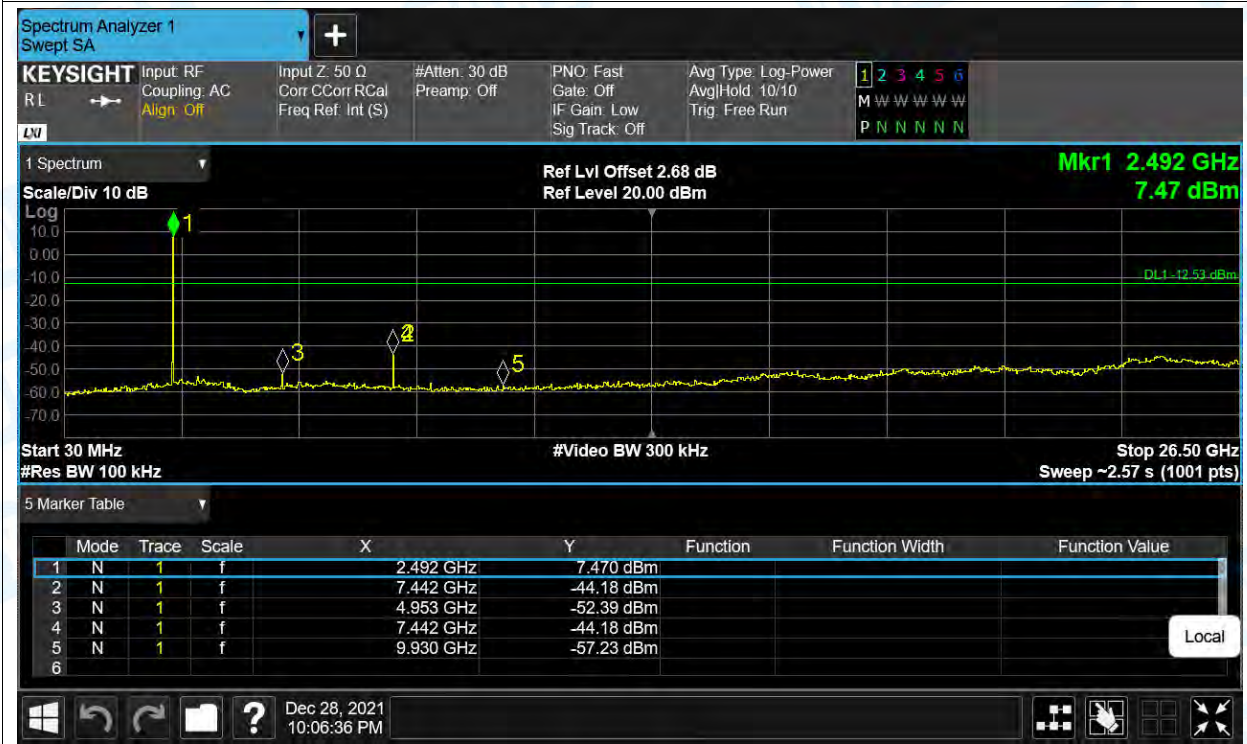
Tx. Spurious NVNT BLE 1Mbps 2442MHz Ant1 Emission



Tx. Spurious NVNT BLE 1Mbps 2480MHz Ant1 Ref



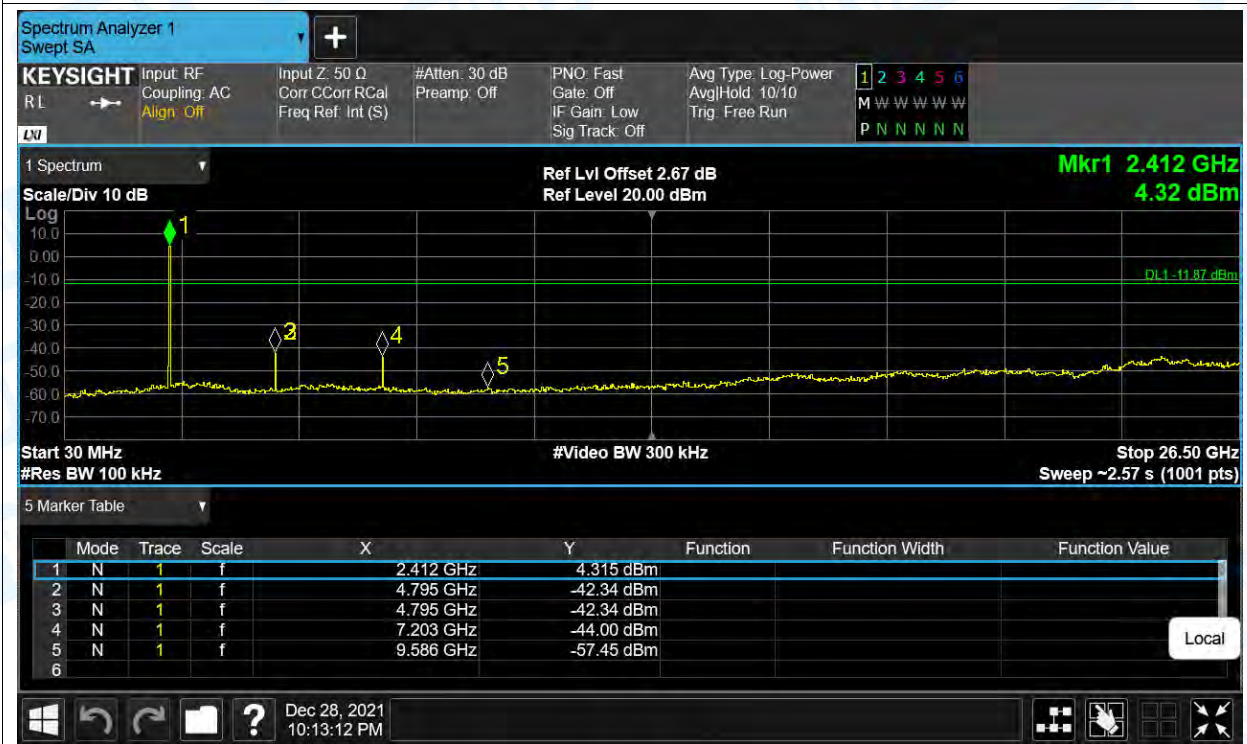
Tx. Spurious NVNT BLE 1Mbps 2480MHz Ant1 Emission



Tx. Spurious NVNT BLE 2Mbps 2402MHz Ant1 Ref



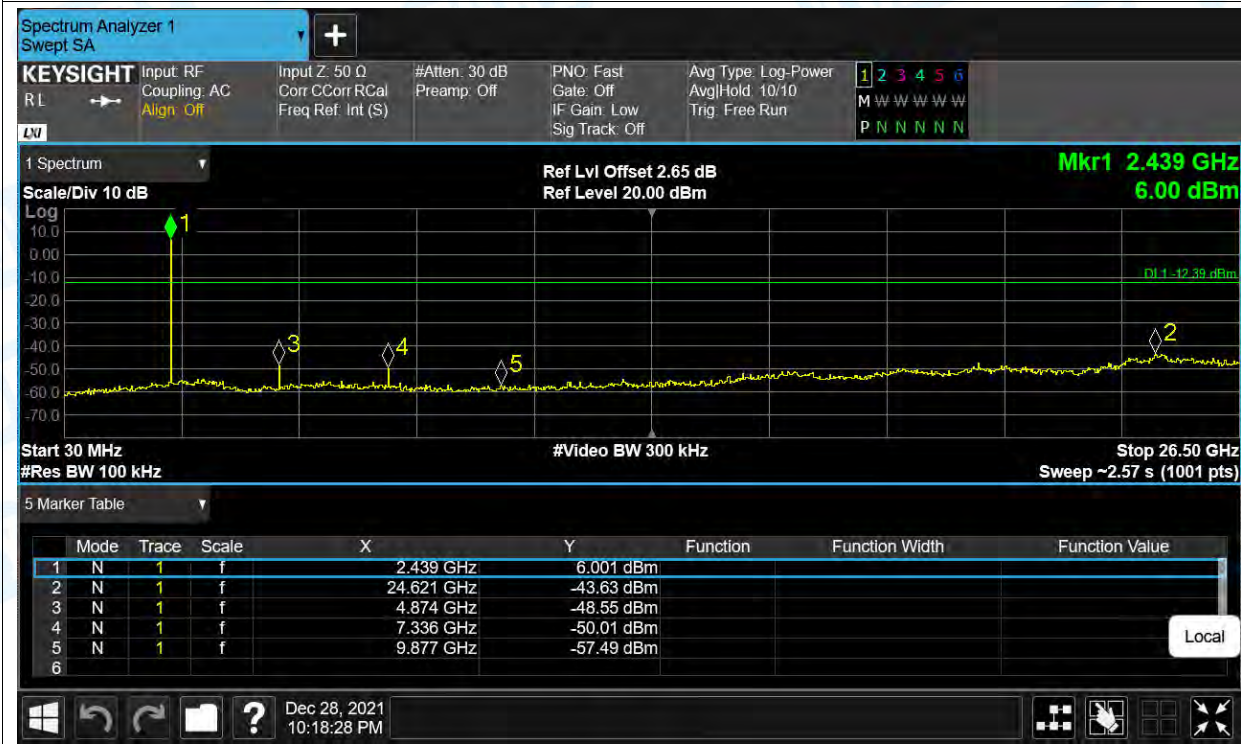
Tx. Spurious NVNT BLE 2Mbps 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 2Mbps 2442MHz Ant1 Ref



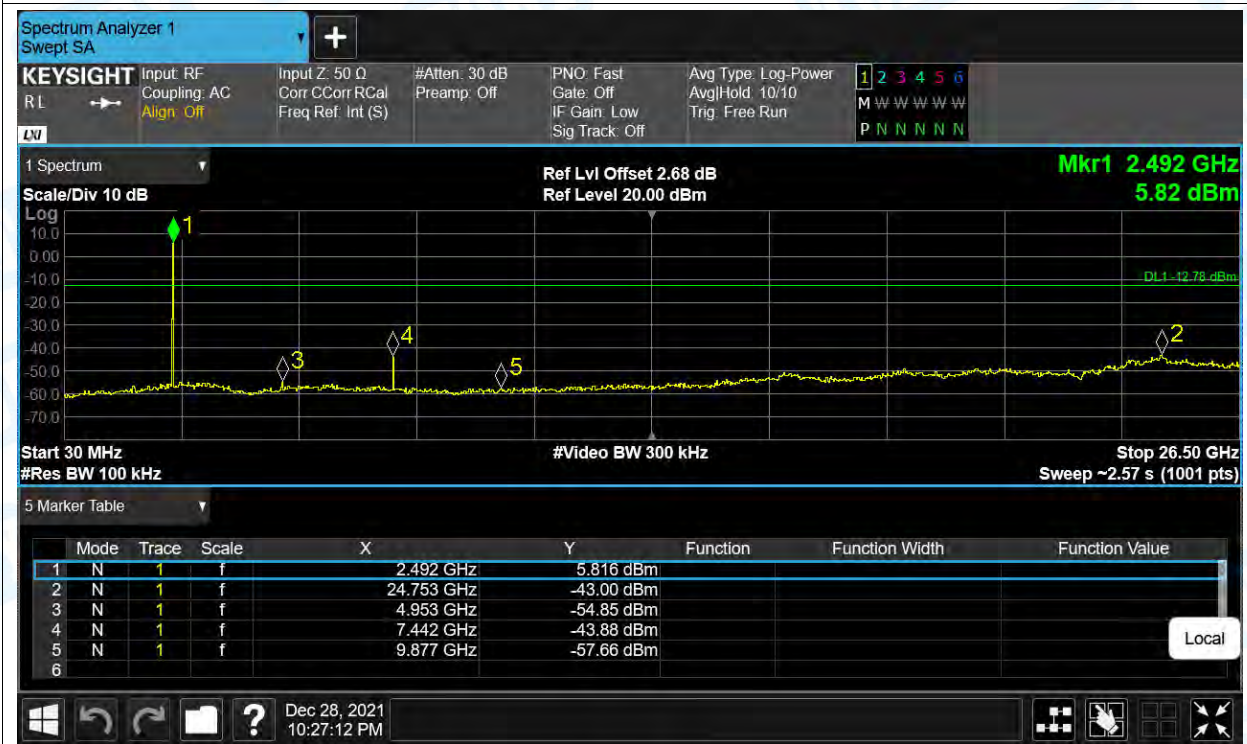
Tx. Spurious NVNT BLE 2Mbps 2442MHz Ant1 Emission



Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Emission





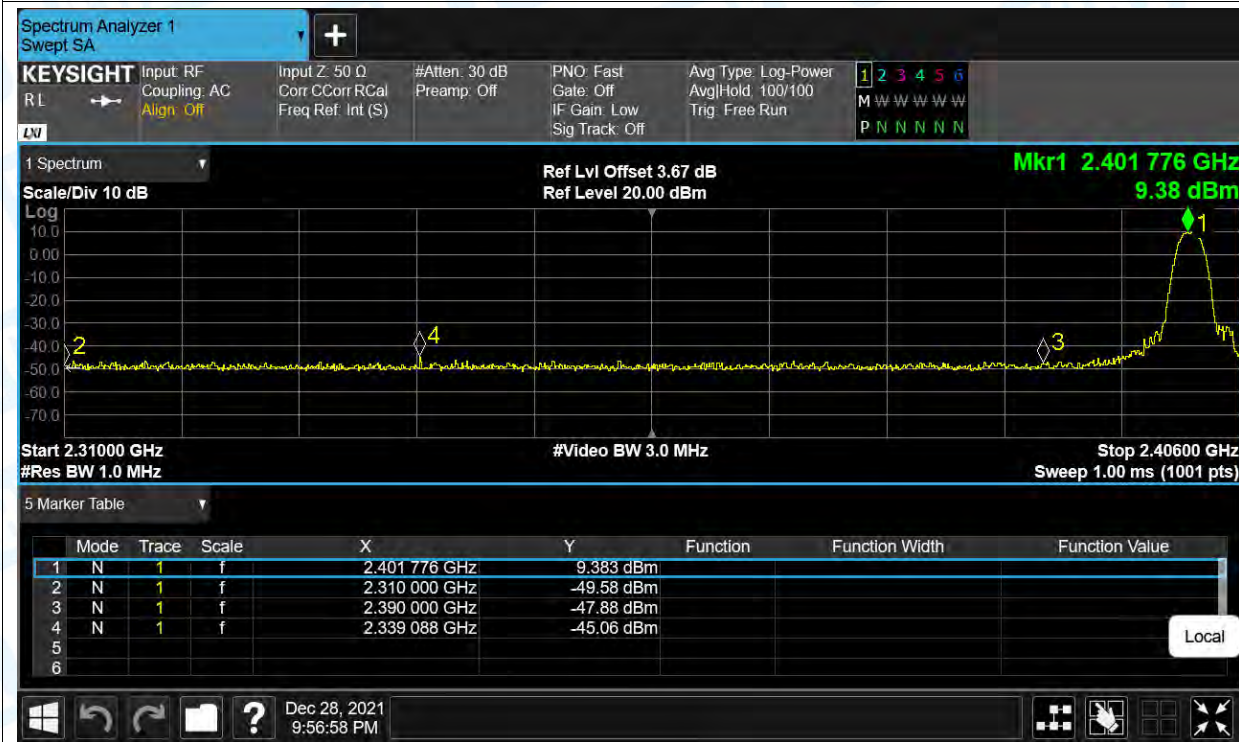
### Restrict Band

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	-49.58	2	47.68	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2310	-59.12	2	38.14	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2339.088	-45.06	2	52.2	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2386.032	-58.02	2	39.24	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-47.85	2	49.41	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-58.9	2	38.36	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-40.87	2	56.39	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-55.71	2	41.55	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.608	-37.63	2	59.63	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.512	-55.71	2	41.55	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-49.24	2	48.02	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-58.8	2	38.46	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-50.49	2	46.77	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-59.12	2	38.14	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2343.792	-46.2	2	51.06	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2386.128	-58.57	2	38.69	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-48.78	2	48.48	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-58.96	2	38.3	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-33.38	2	63.88	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-52.95	2	44.31	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.512	-33.38	2	63.88	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.536	-52.94	2	44.32	Average	54	Pass

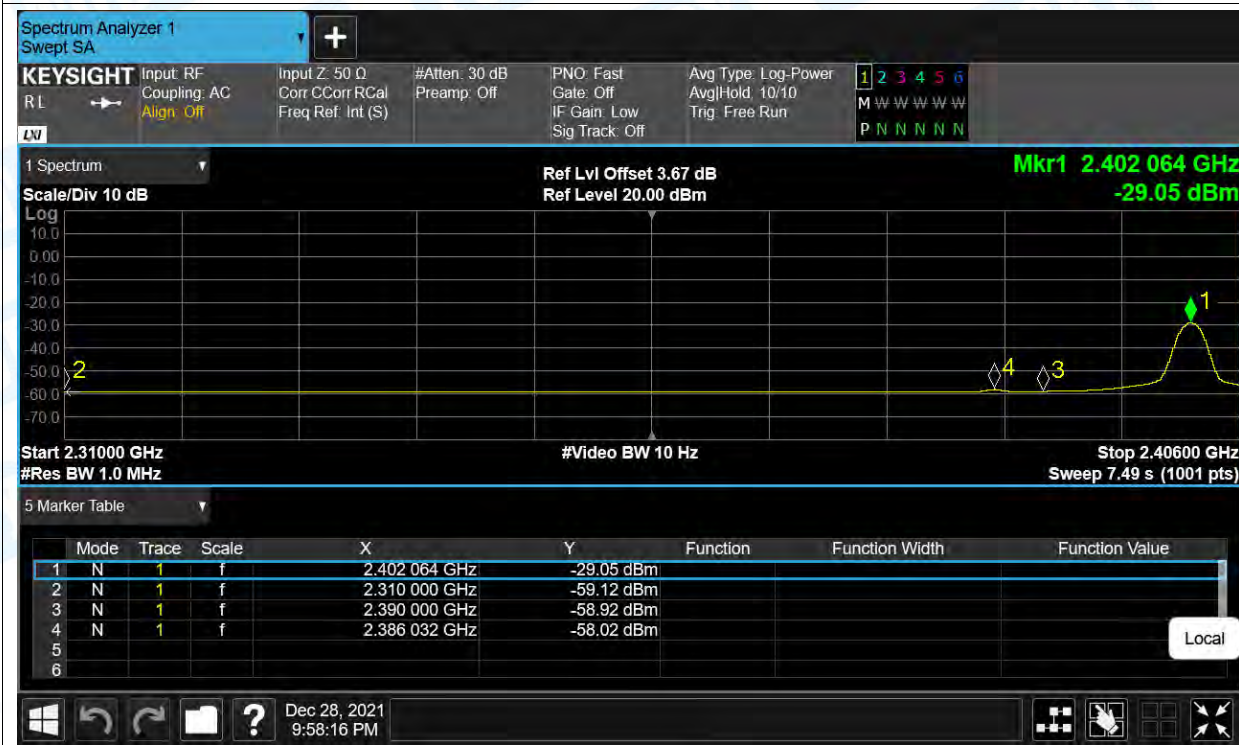
NVNT	BLE 2Mbps	2480	Ant1	2500	-48.55	2	48.71	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2500	-58.34	2	38.92	Average	54	Pass

Test Graphs

Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Peak



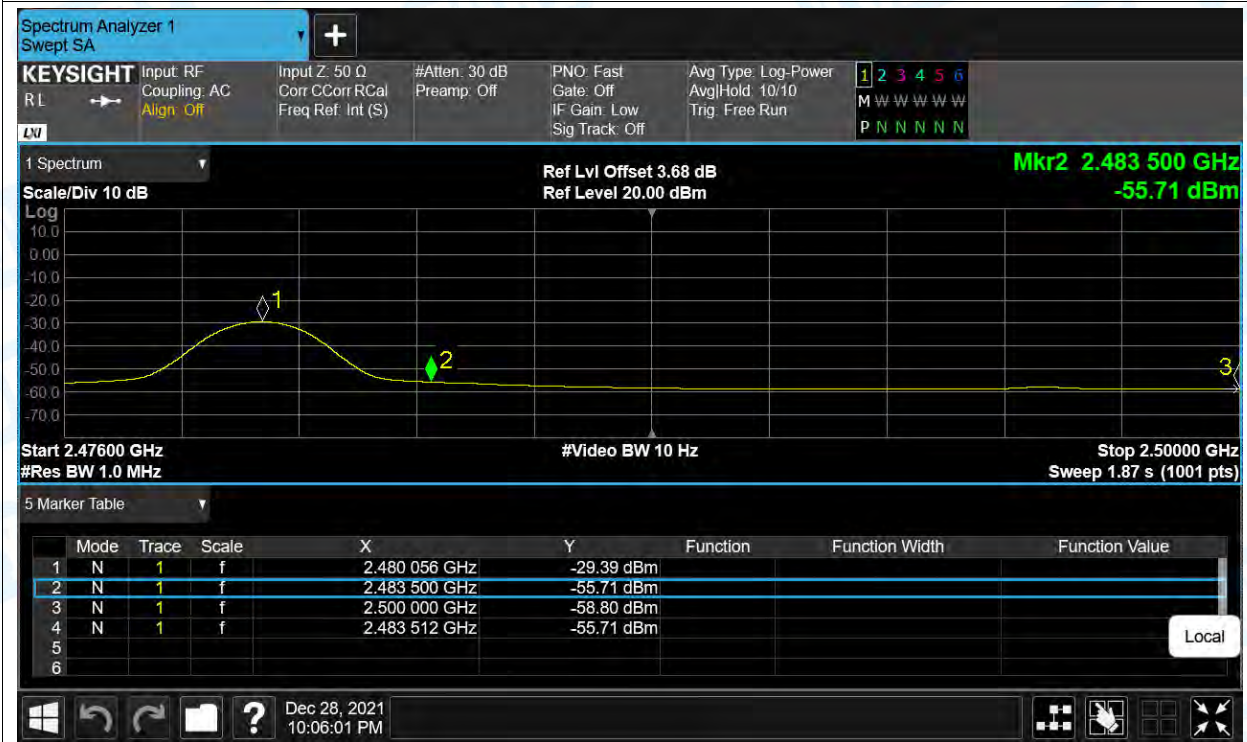
Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Average



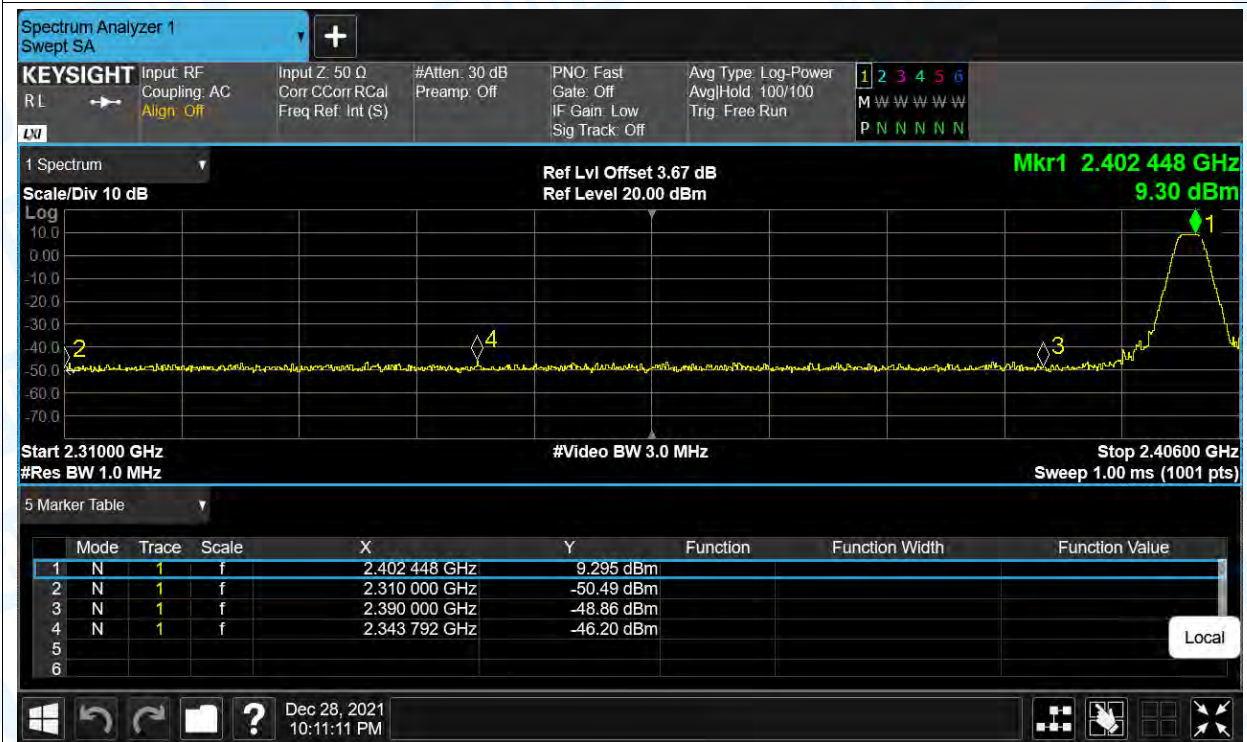
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Peak



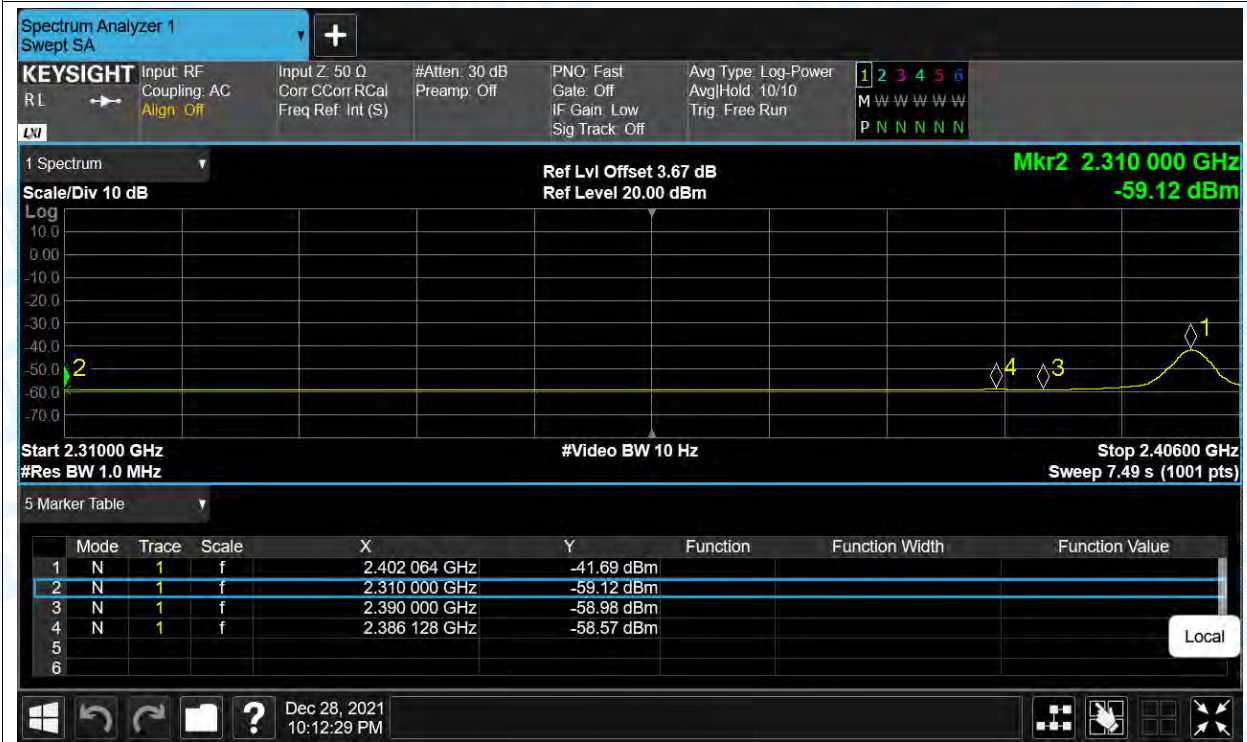
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Average



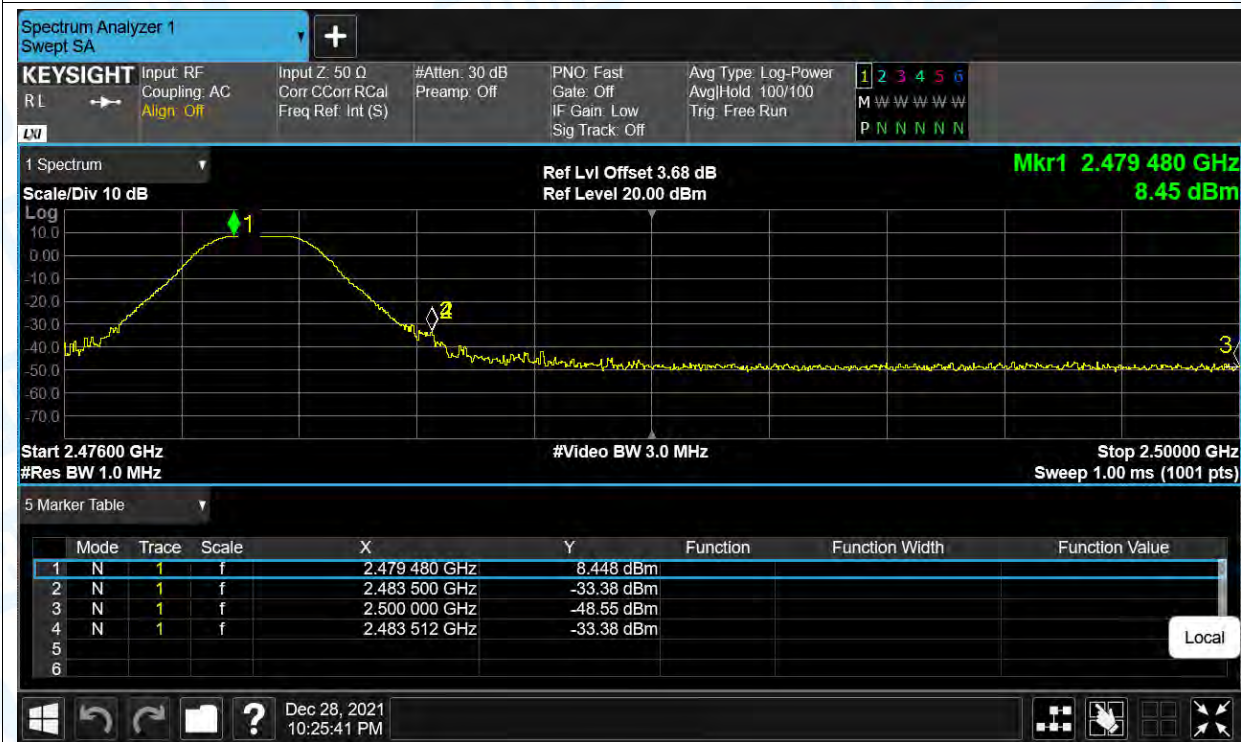
Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Peak



Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Average



### Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Peak



### Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Average

