

RF Test Data for Bluetooth LE (Conducted Measurements)

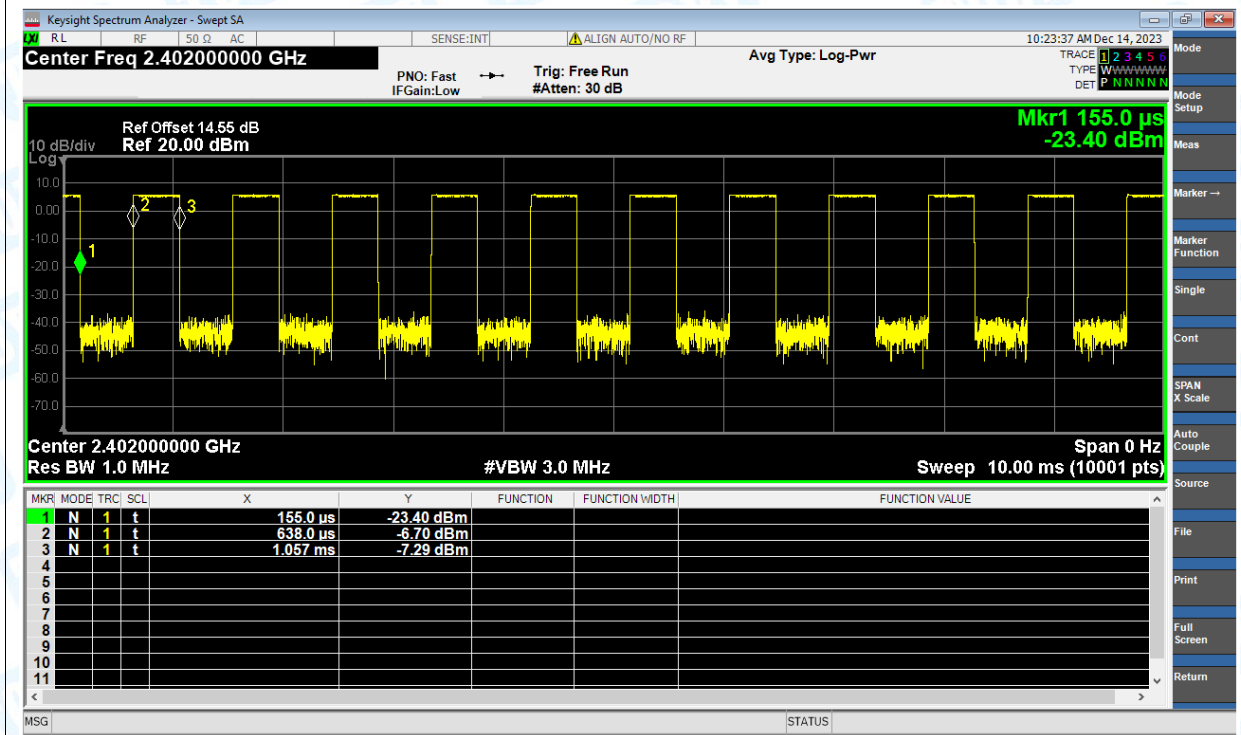
General Description of EUT	
Product Name:	LED photo/video light
Test Model:	X-180RGB
Sample ID:	HC-C-202311-0301-01-01-2#
Environmental Conditions	
Temperature:	24°C
Relative Humidity:	50%
Test Voltage:	AC 120V
Test Engineer:	Yanzhenming
Note: For a more detailed features description, please refer to the report TBR-C-202311-0301-8 The report only show the worst case data.	

Duty Cycle

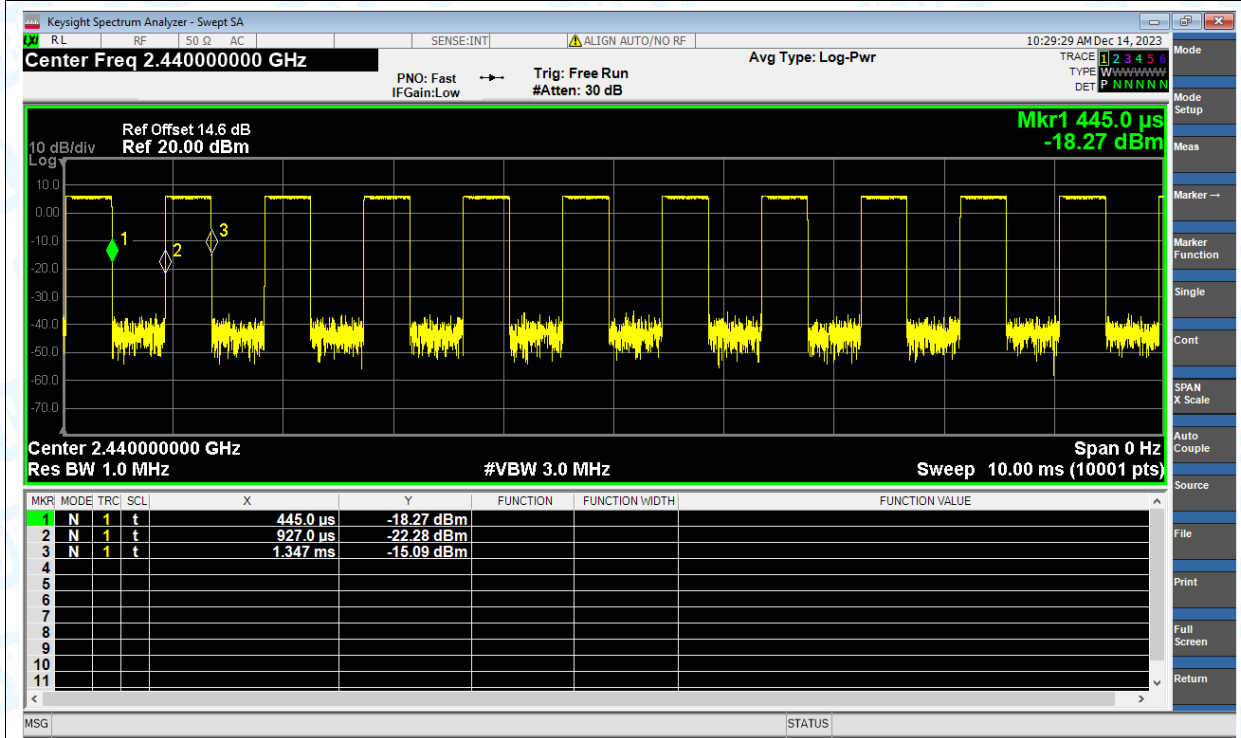
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1Mbps	2402	Ant1	46.45	3.33	2.39
NVNT	BLE 1Mbps	2440	Ant1	46.56	3.32	2.38
NVNT	BLE 1Mbps	2480	Ant1	46.56	3.32	2.38
NVNT	BLE 2Mbps	2402	Ant1	23.28	6.33	4.76
NVNT	BLE 2Mbps	2440	Ant1	23.39	6.31	4.74
NVNT	BLE 2Mbps	2480	Ant1	23.28	6.33	4.76

Test Graphs

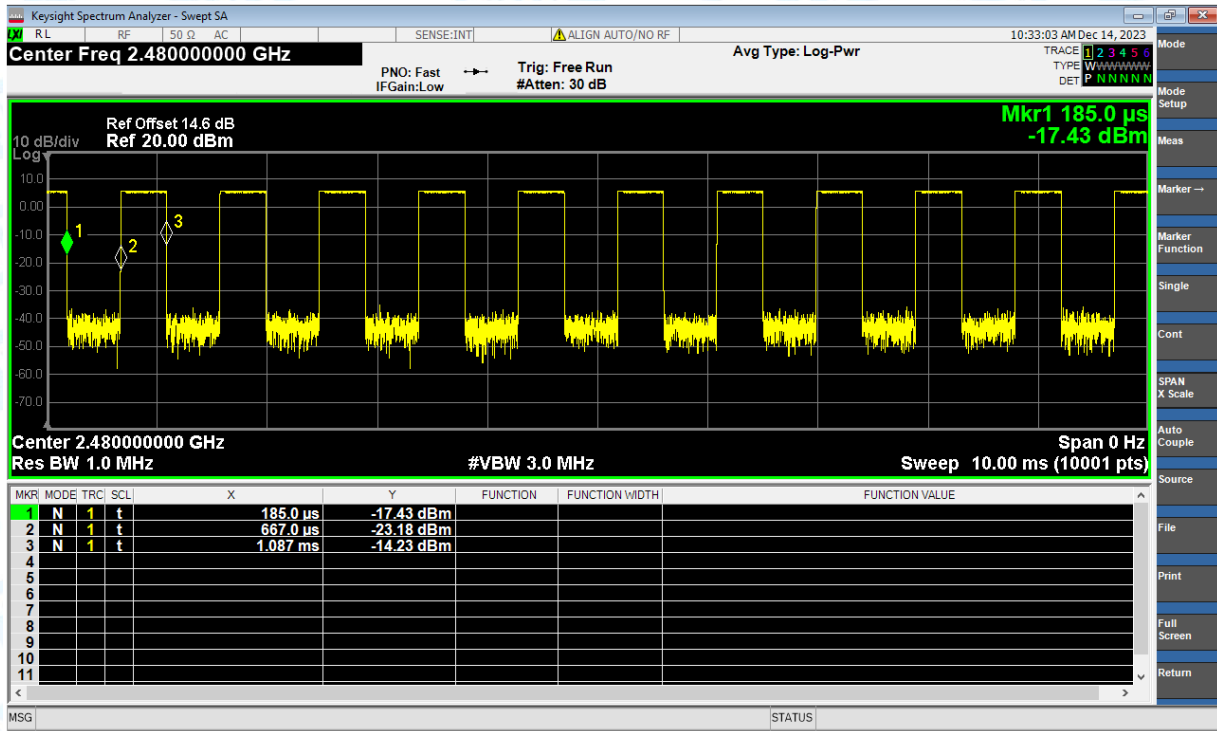
Duty Cycle NVNT BLE 1Mbps 2402MHz Ant1



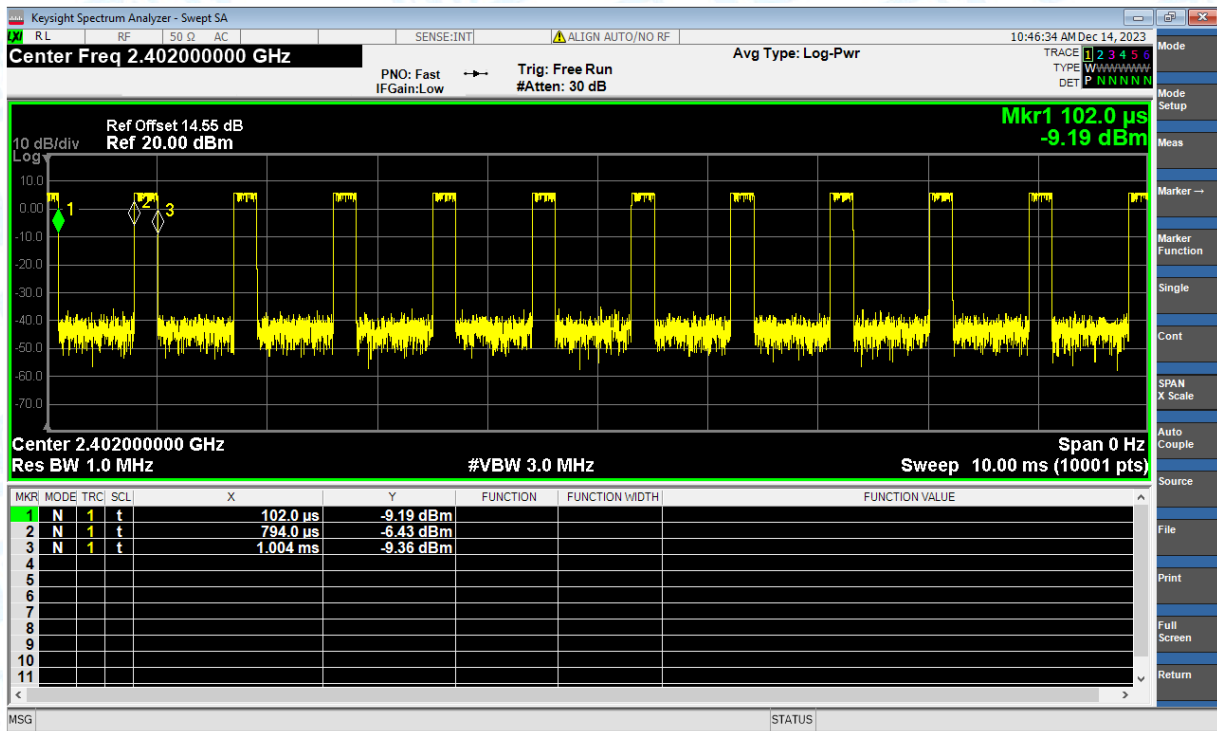
Duty Cycle NVNT BLE 1Mbps 2440MHz Ant1



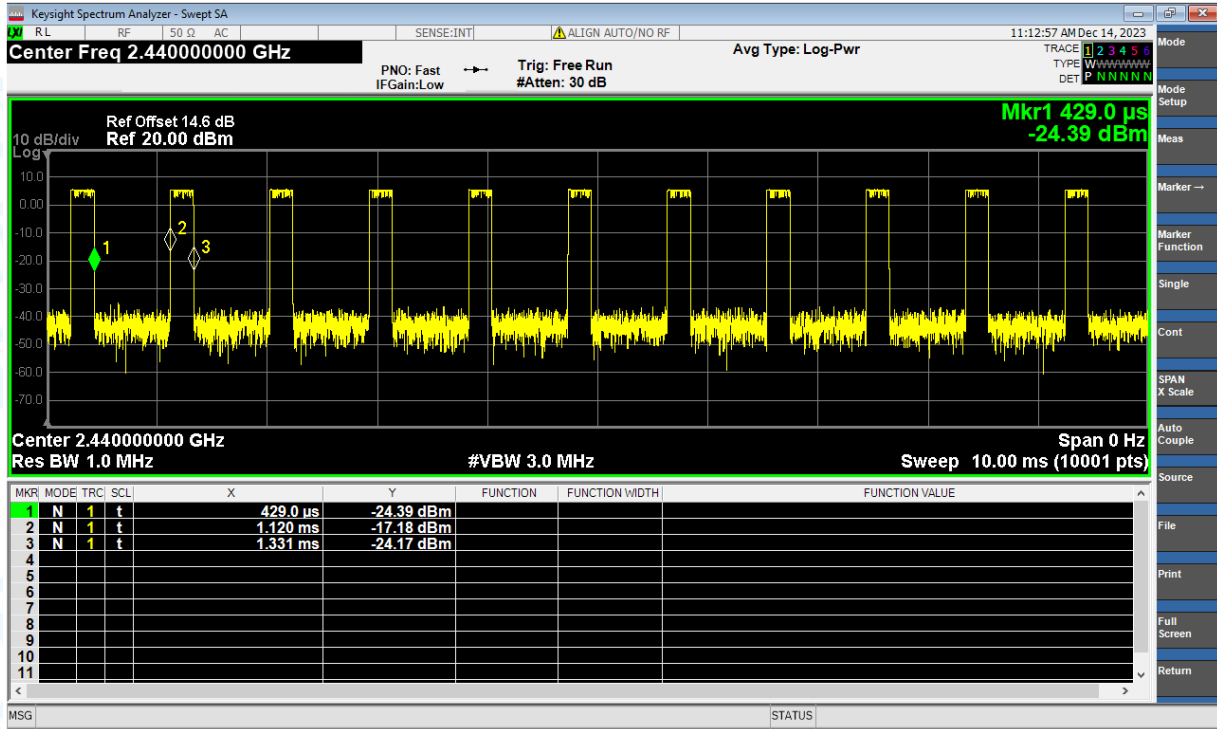
Duty Cycle NVNT BLE 1Mbps 2480MHz Ant1



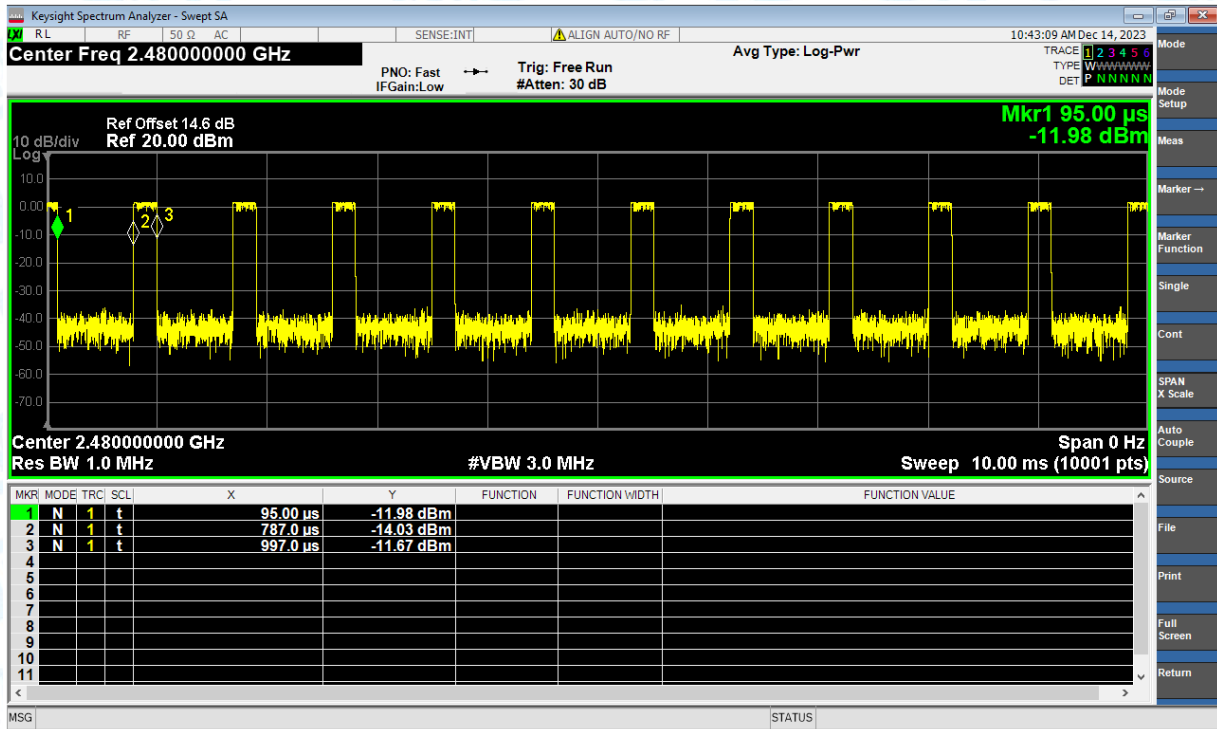
Duty Cycle NVNT BLE 2Mbps 2402MHz Ant1



Duty Cycle NVNT BLE 2Mbps 2440MHz Ant1



Duty Cycle NVNT BLE 2Mbps 2480MHz Ant1

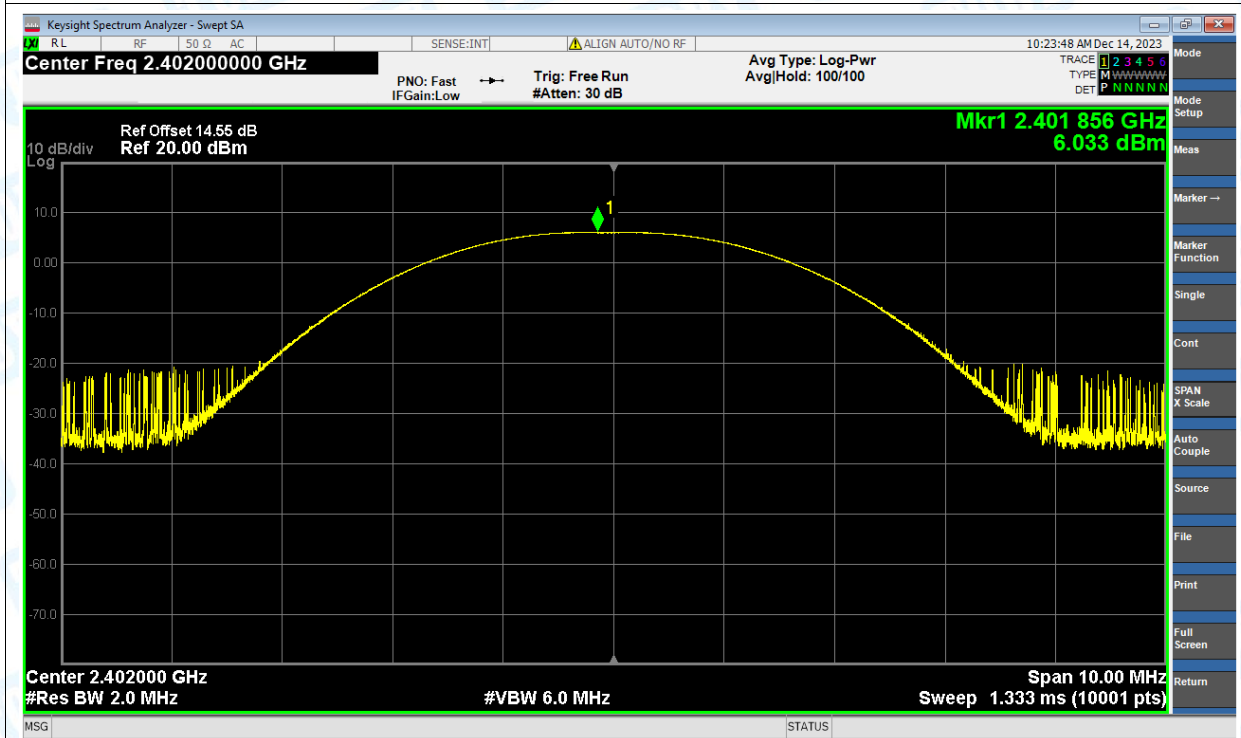


Maximum Conducted Output Power

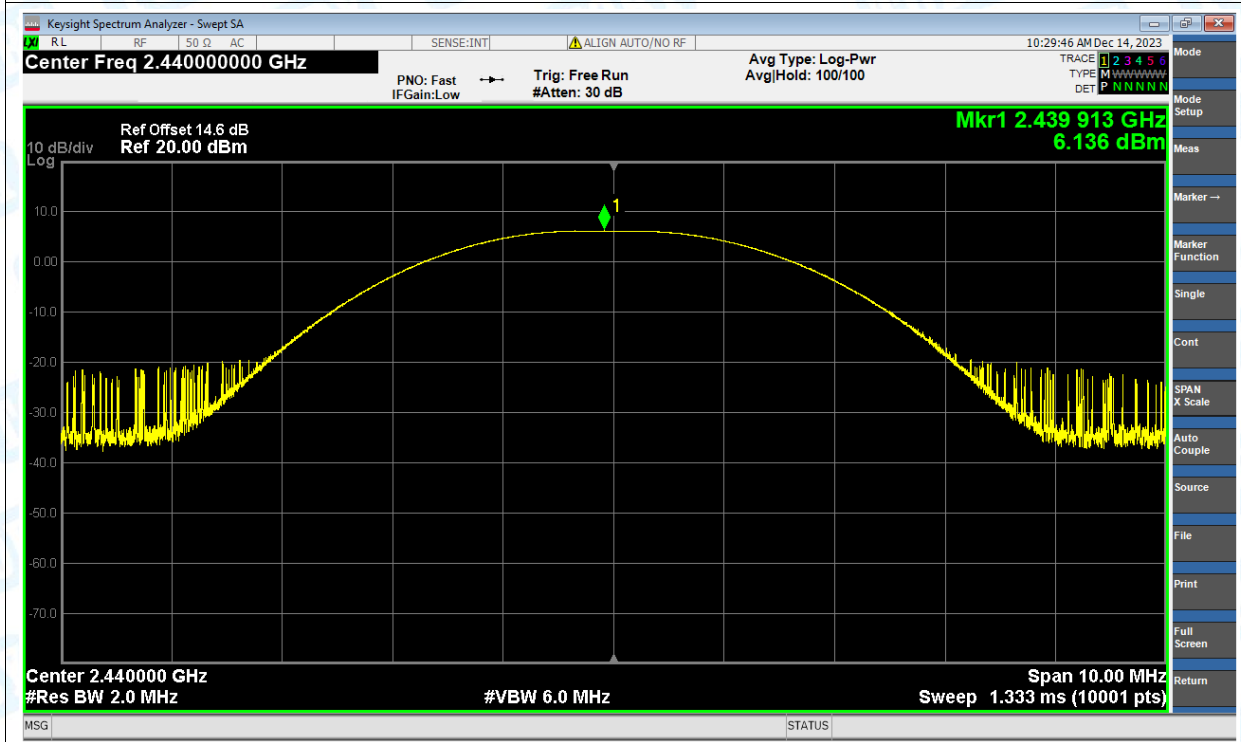
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	6.033	30	Pass
NVNT	BLE 1Mbps	2440	Ant1	6.136	30	Pass
NVNT	BLE 1Mbps	2480	Ant1	1.967	30	Pass
NVNT	BLE 2Mbps	2402	Ant1	5.795	30	Pass
NVNT	BLE 2Mbps	2440	Ant1	5.94	30	Pass
NVNT	BLE 2Mbps	2480	Ant1	2.086	30	Pass

Test Graphs

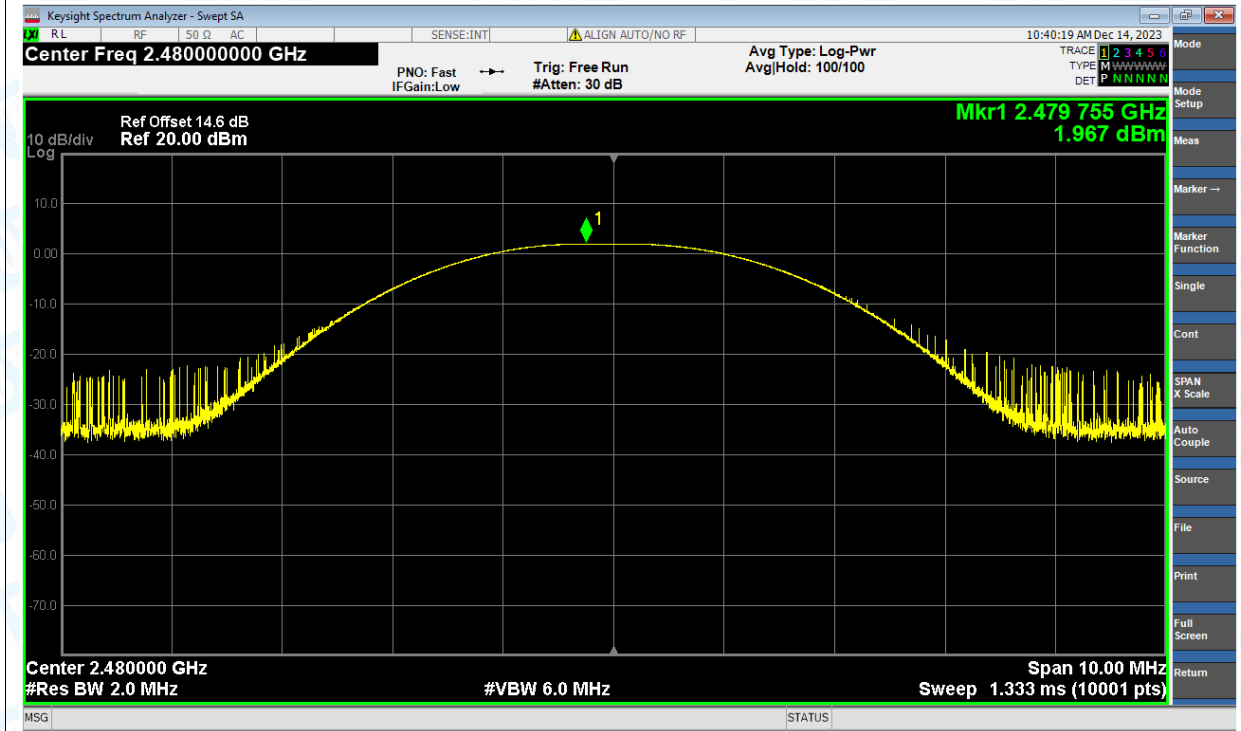
Power NVNT BLE 1Mbps 2402MHz Ant1



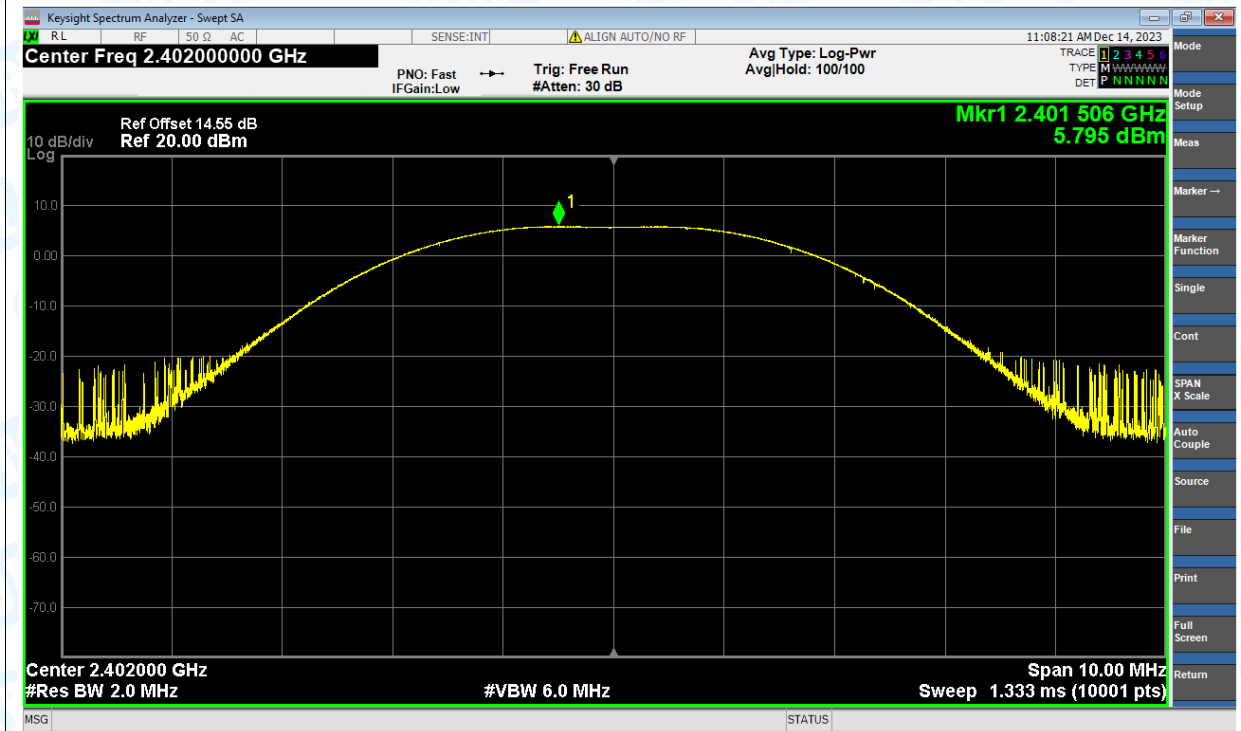
Power NVNT BLE 1Mbps 2440MHz Ant1

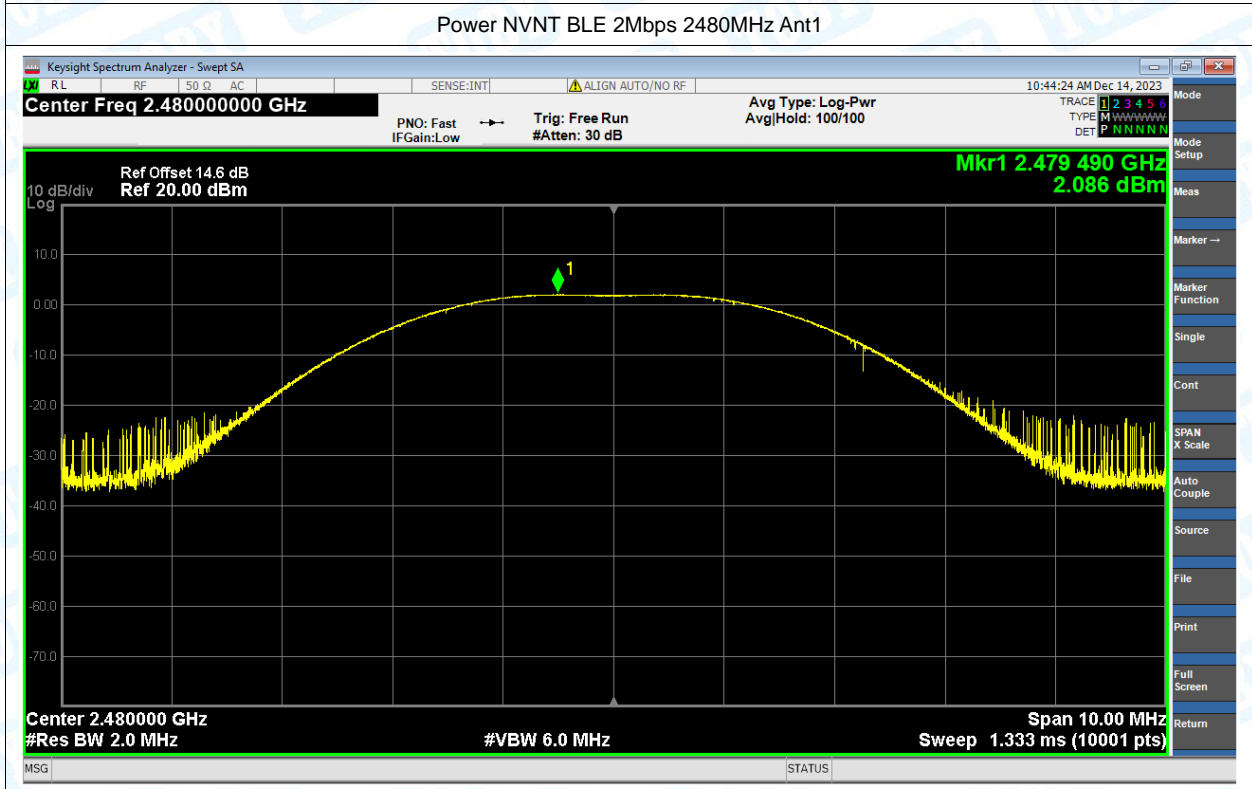
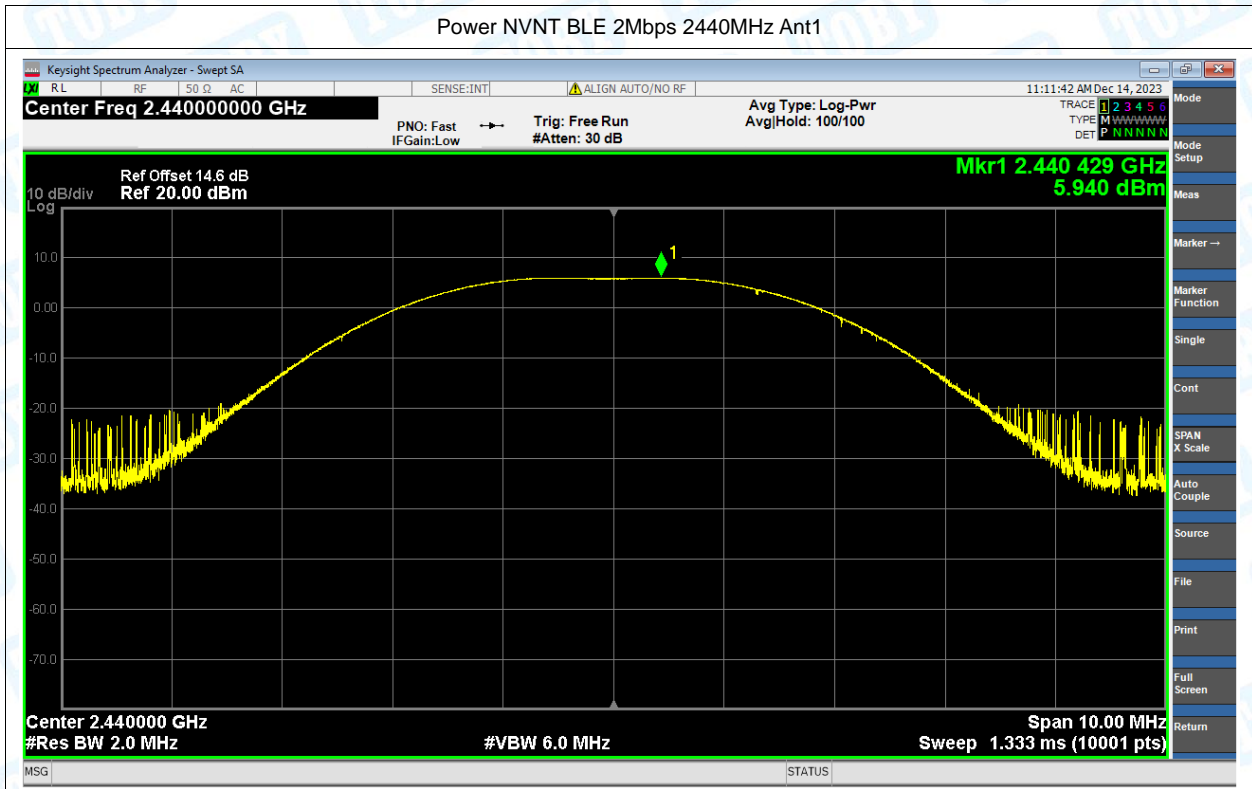


Power NVNT BLE 1Mbps 2480MHz Ant1



Power NVNT BLE 2Mbps 2402MHz Ant1



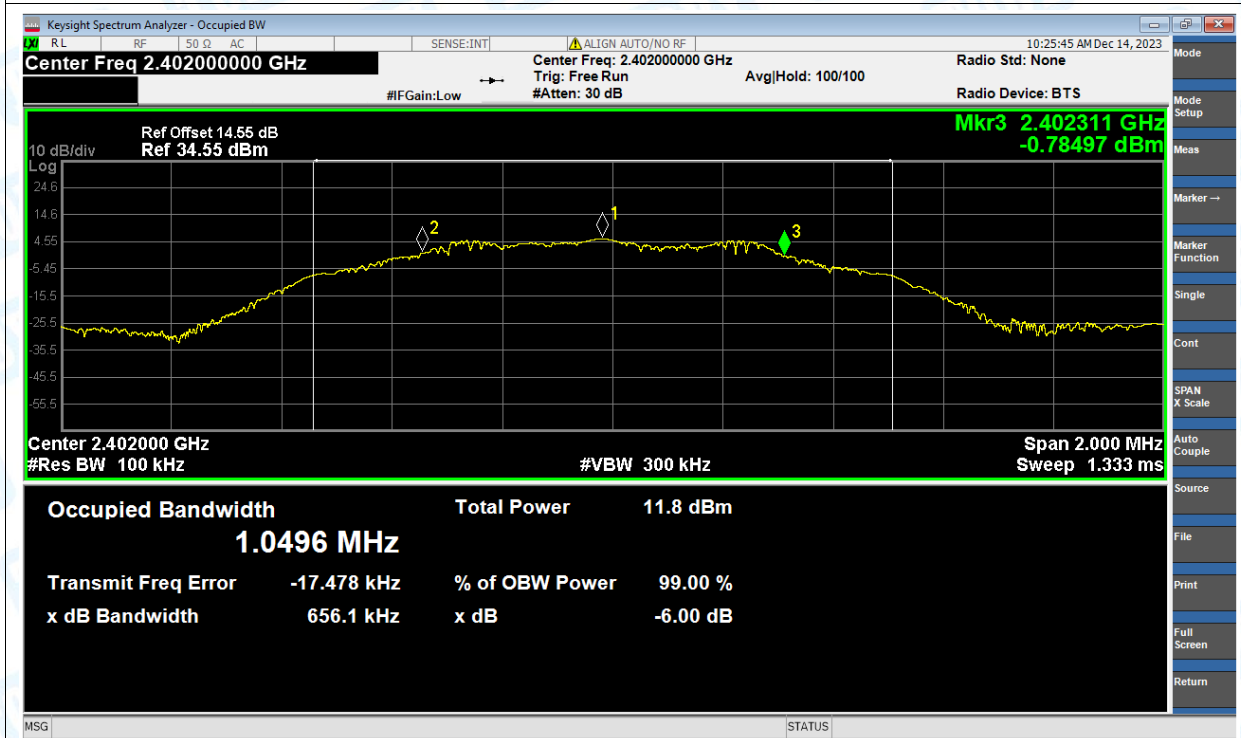


-6dB Bandwidth

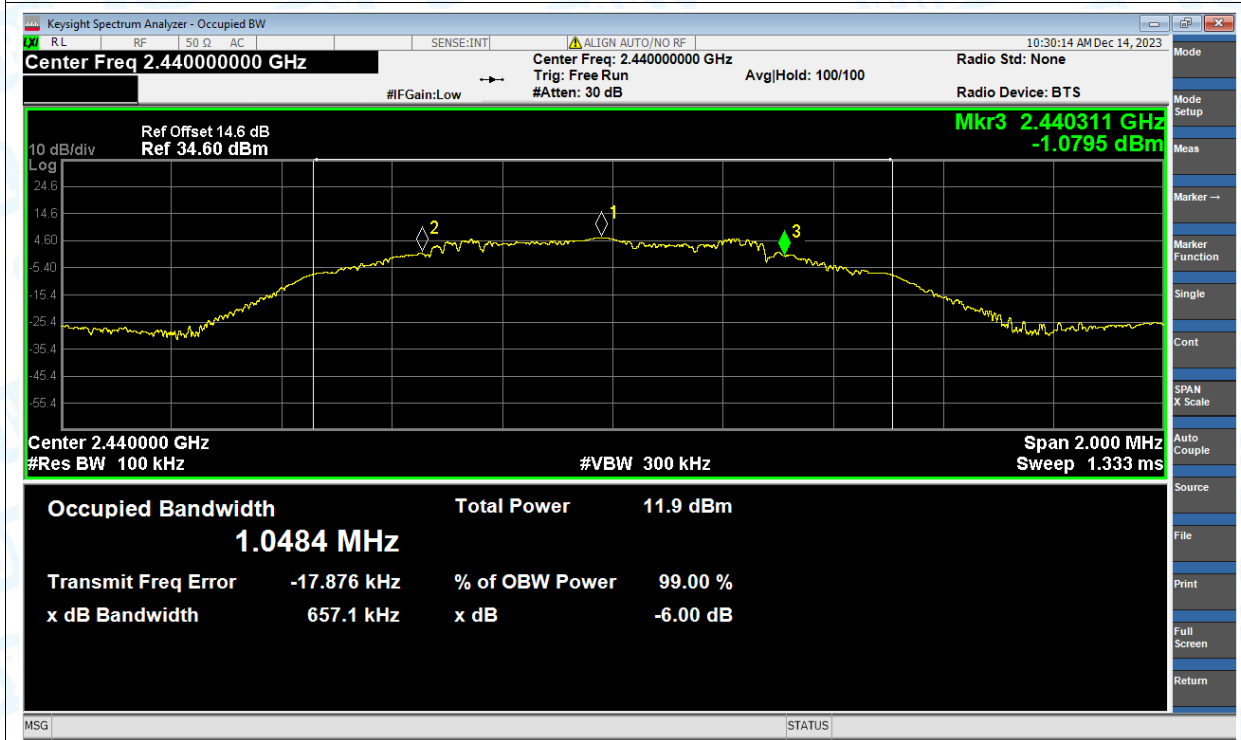
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.66	0.5	Pass
NVNT	BLE 1Mbps	2440	Ant1	0.66	0.5	Pass
NVNT	BLE 1Mbps	2480	Ant1	0.65	0.5	Pass
NVNT	BLE 2Mbps	2402	Ant1	1.12	0.5	Pass
NVNT	BLE 2Mbps	2440	Ant1	1.12	0.5	Pass
NVNT	BLE 2Mbps	2480	Ant1	1.15	0.5	Pass

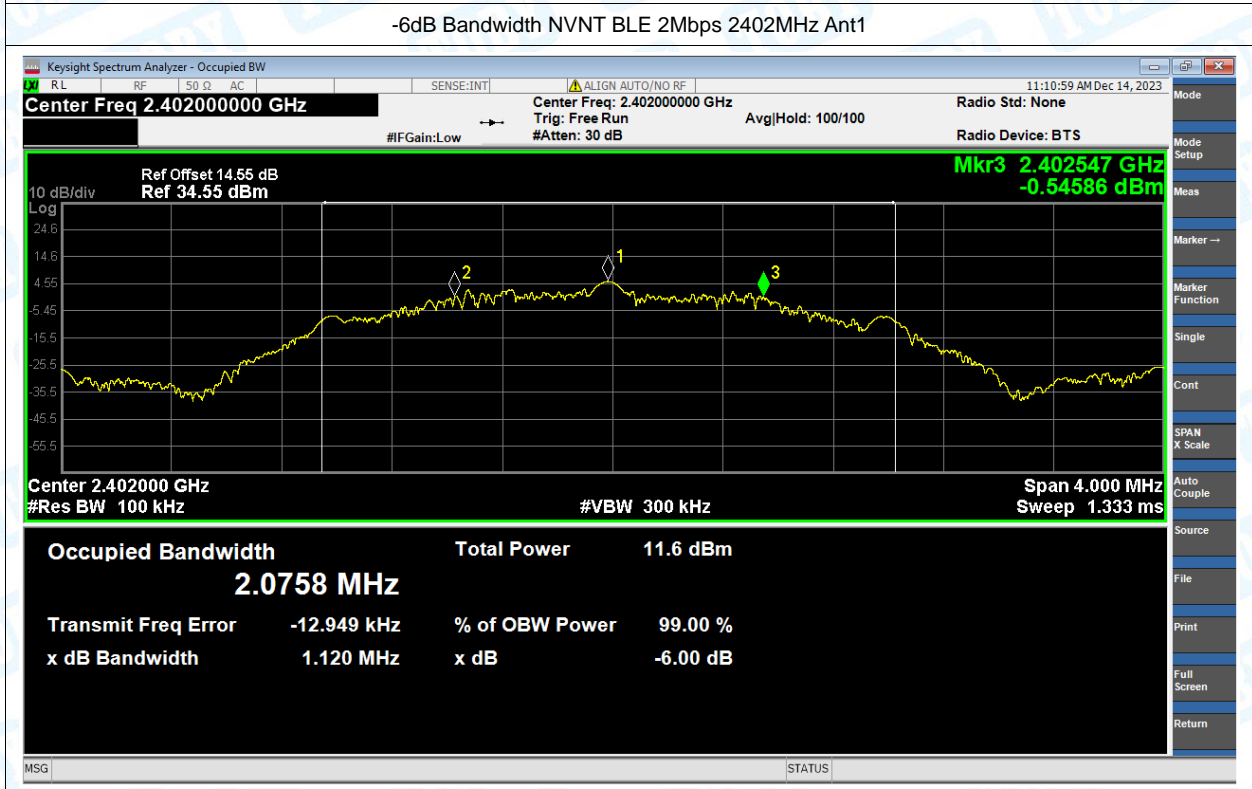
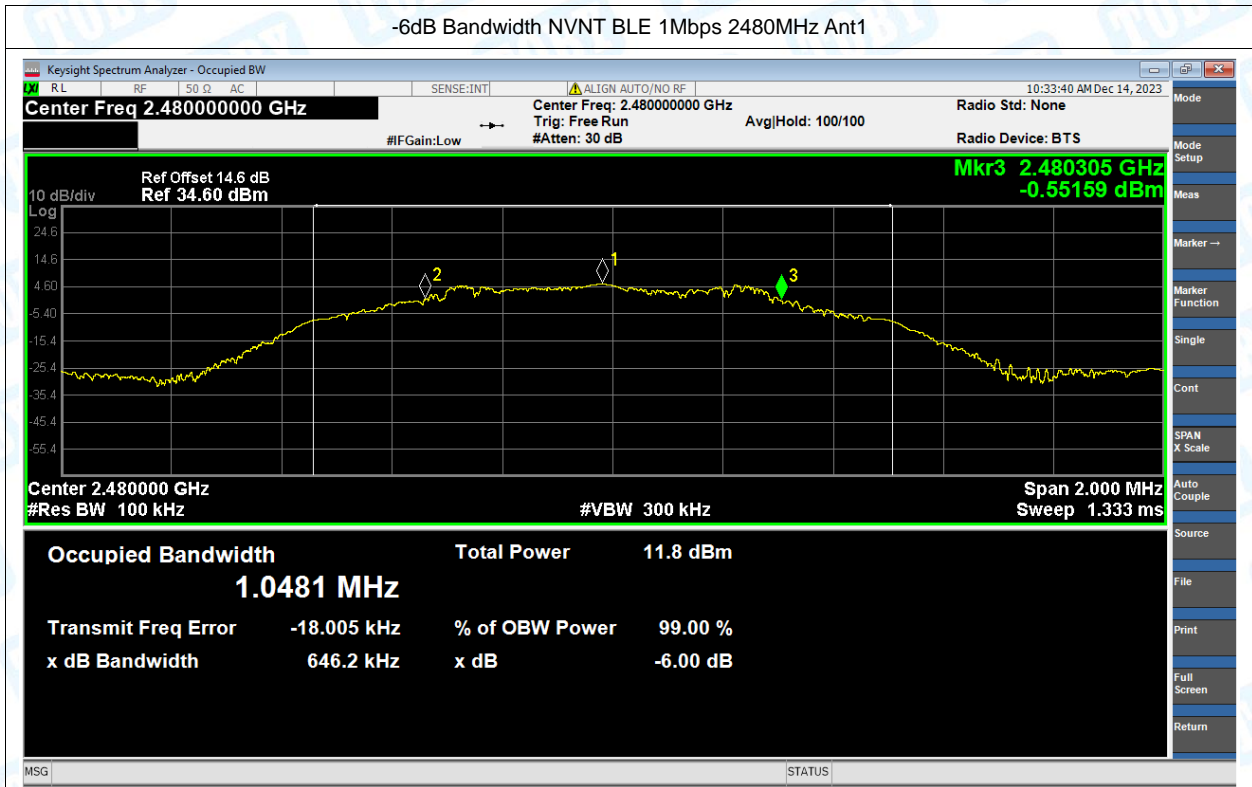
Test Graphs

-6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1

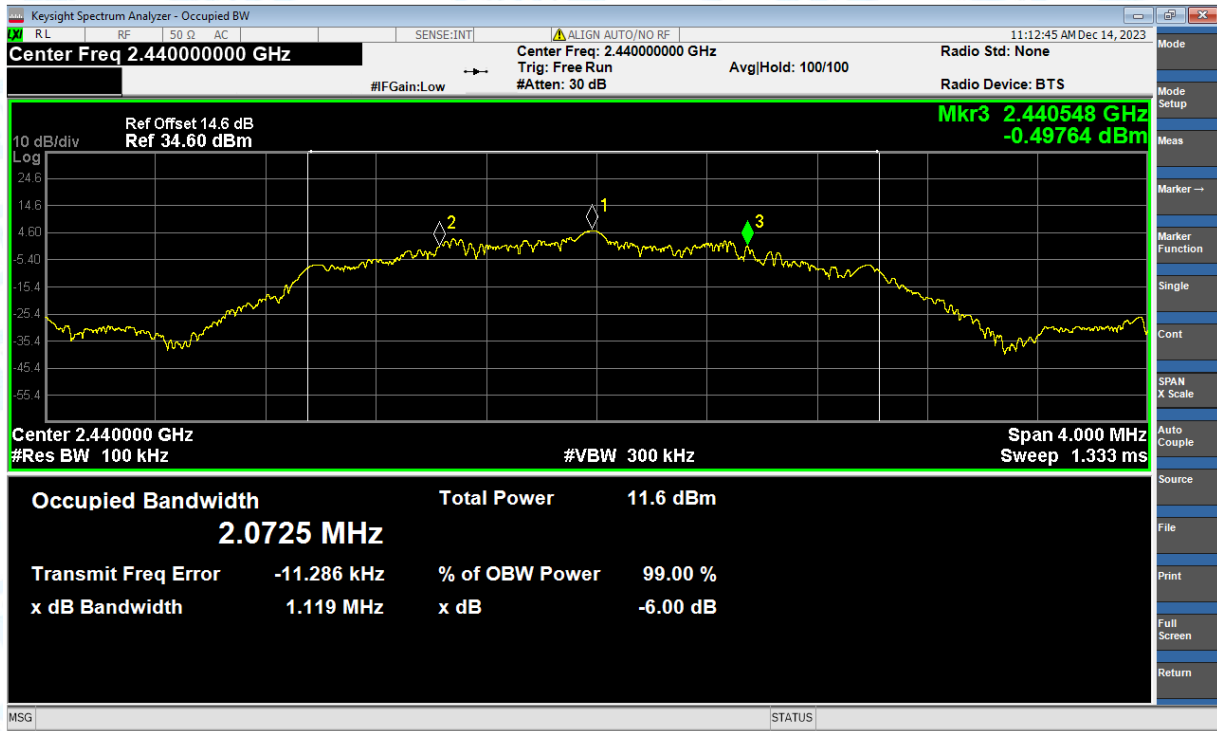


-6dB Bandwidth NVNT BLE 1Mbps 2440MHz Ant1

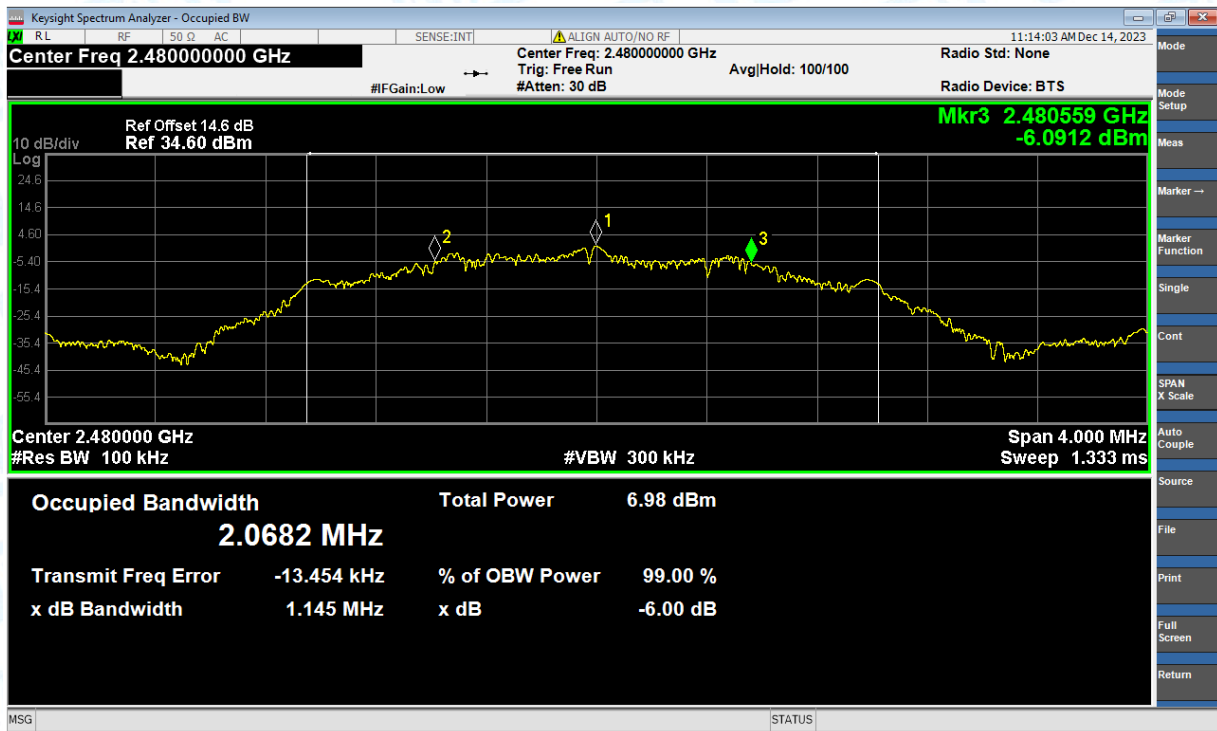




-6dB Bandwidth NVNT BLE 2Mbps 2440MHz Ant1



-6dB Bandwidth NVNT BLE 2Mbps 2480MHz Ant1

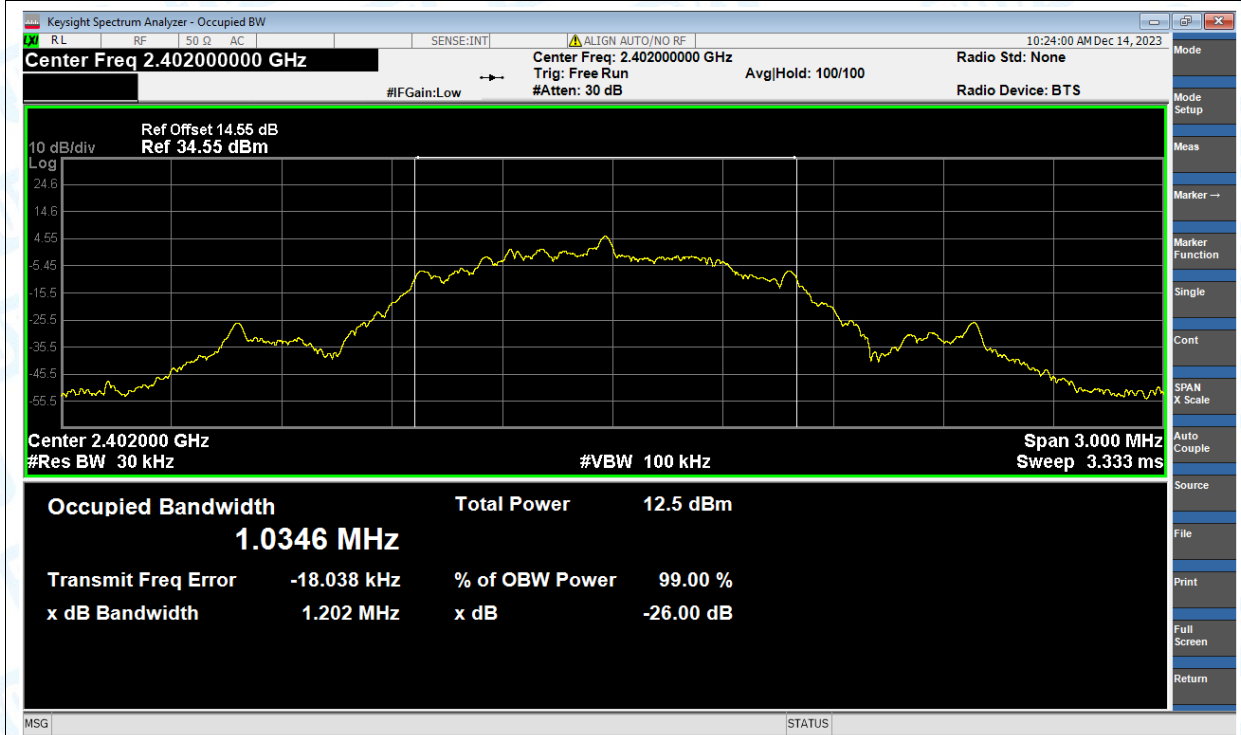


Occupied Channel Bandwidth

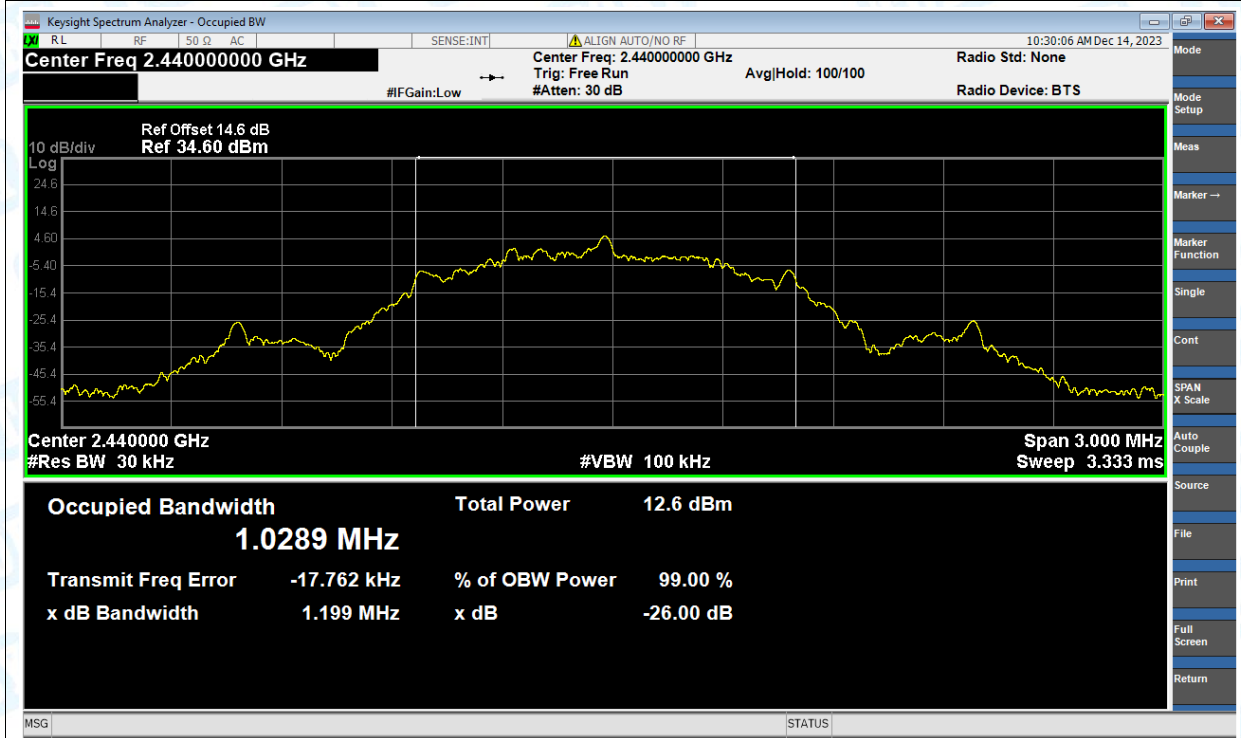
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1Mbps	2402	Ant1	1.035
NVNT	BLE 1Mbps	2440	Ant1	1.029
NVNT	BLE 1Mbps	2480	Ant1	1.036
NVNT	BLE 2Mbps	2402	Ant1	2.052
NVNT	BLE 2Mbps	2440	Ant1	2.061
NVNT	BLE 2Mbps	2480	Ant1	2.046

Test Graphs

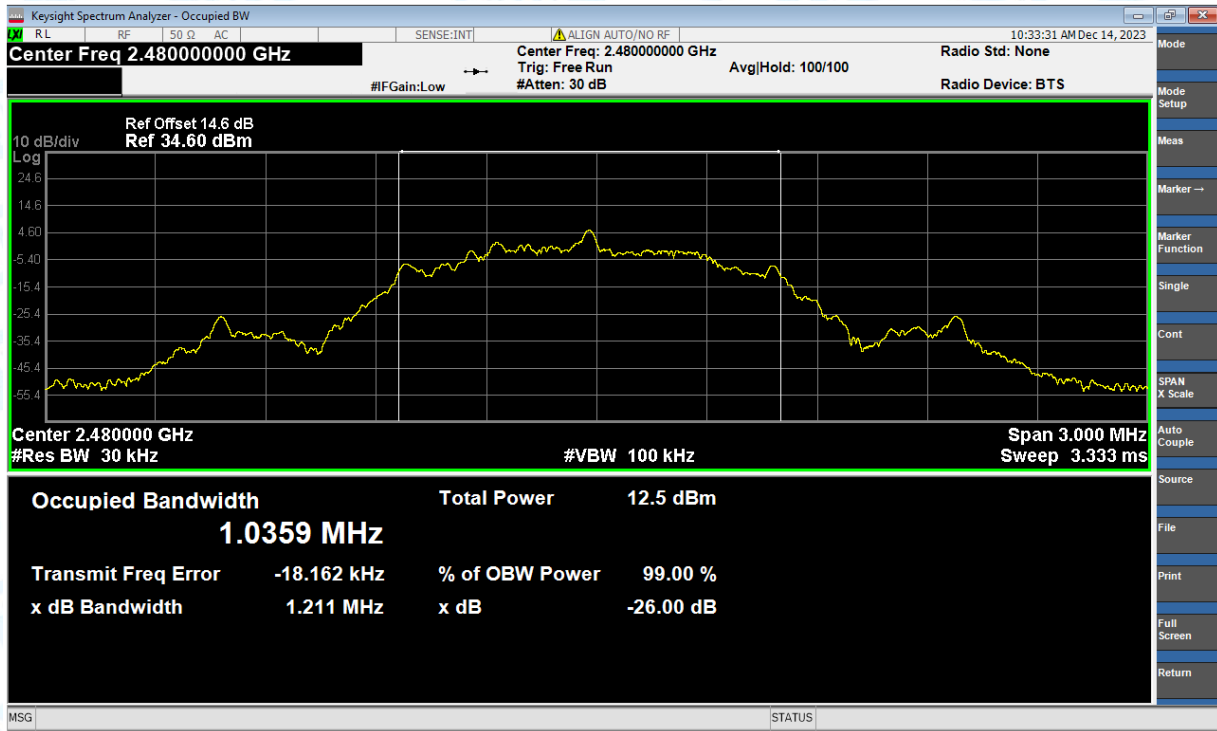
OBW NVNT BLE 1Mbps 2402MHz Ant1



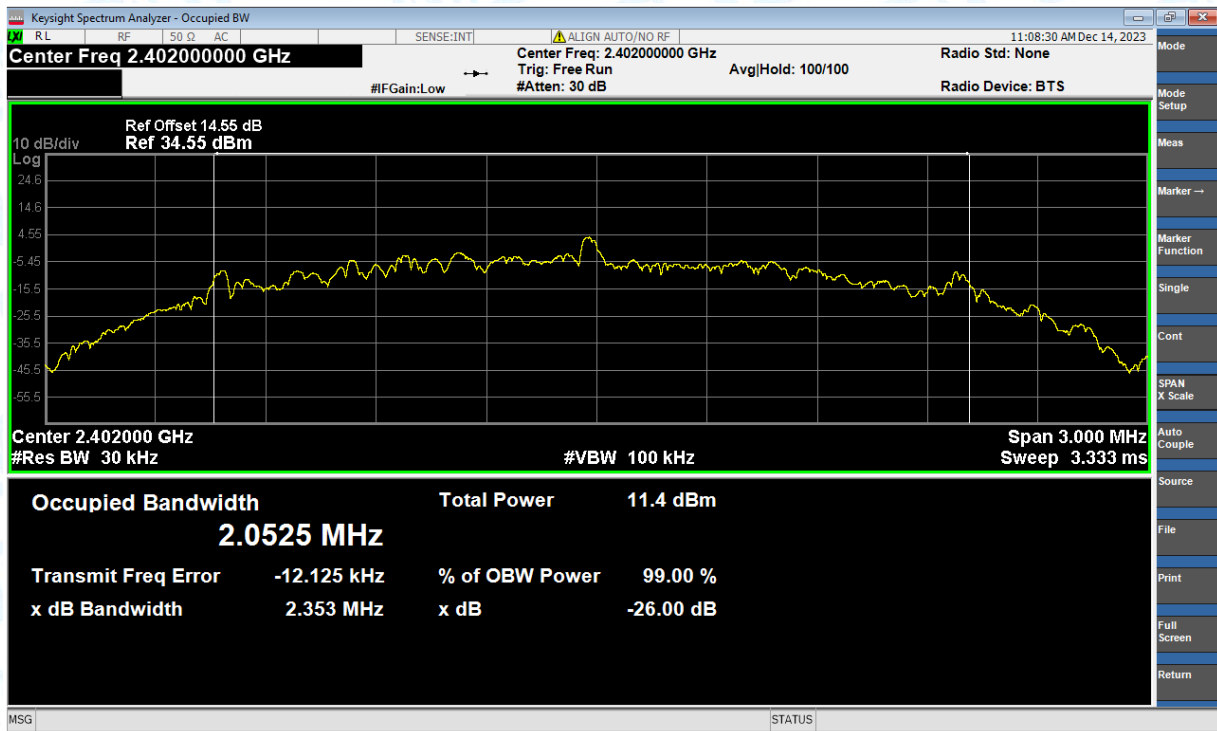
OBW NVNT BLE 1Mbps 2440MHz Ant1



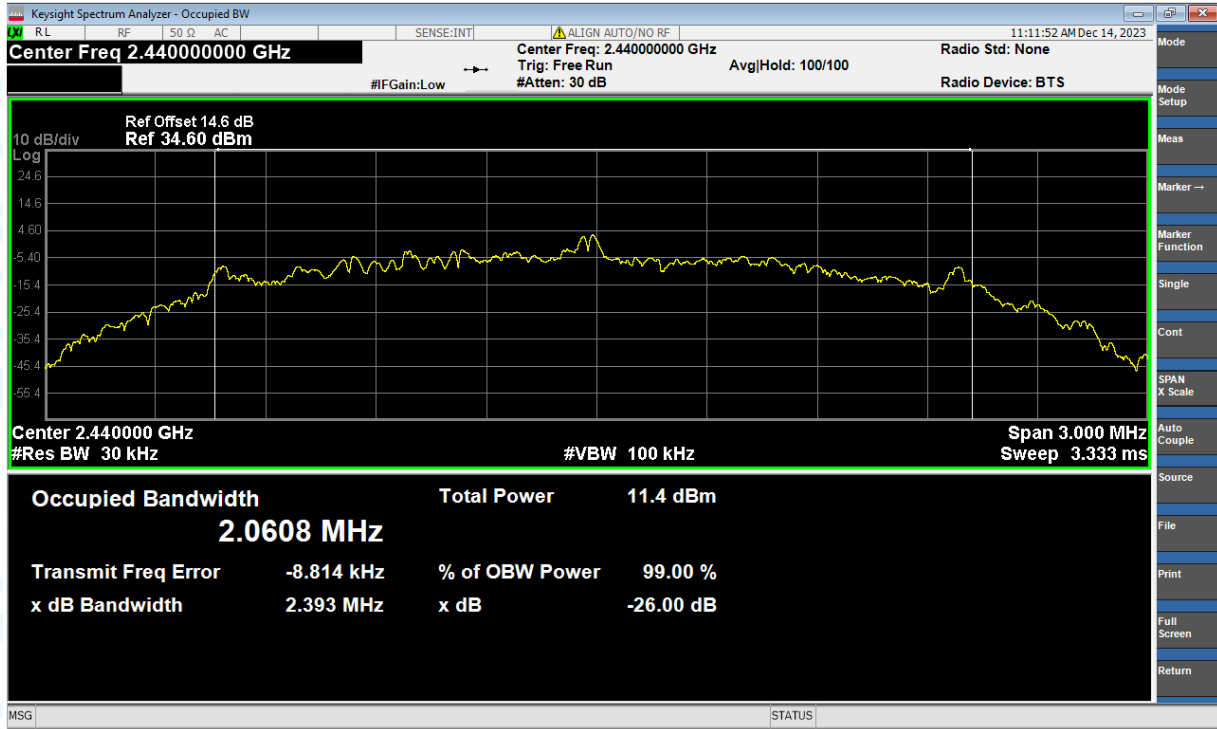
OBW NVNT BLE 1Mbps 2480MHz Ant1



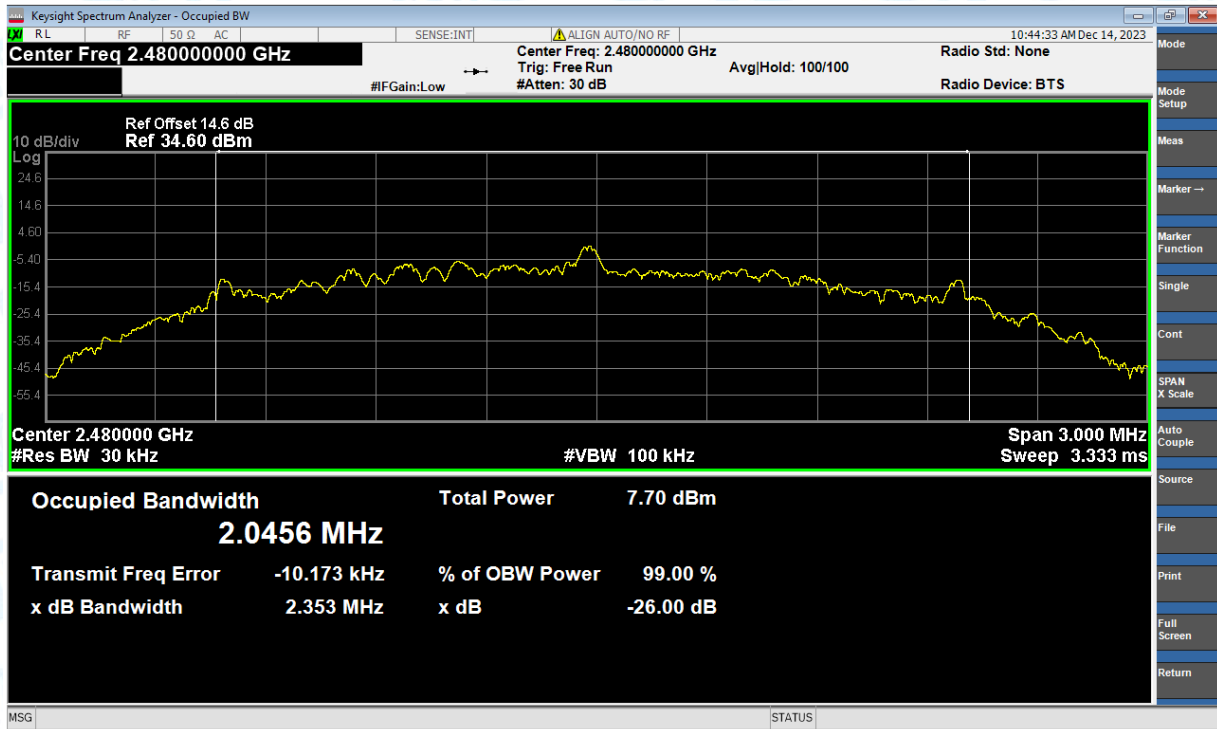
OBW NVNT BLE 2Mbps 2402MHz Ant1



OBW NVNT BLE 2Mbps 2440MHz Ant1



OBW NVNT BLE 2Mbps 2480MHz Ant1

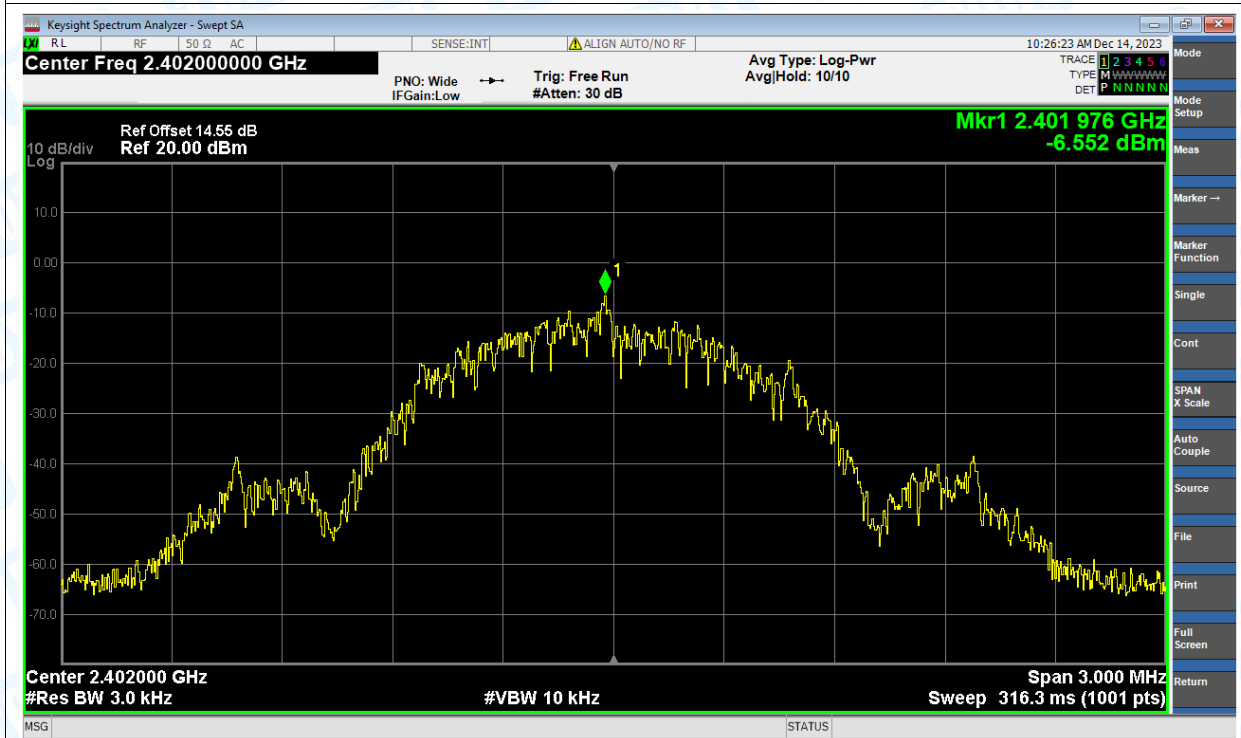


Maximum Power Spectral Density Level

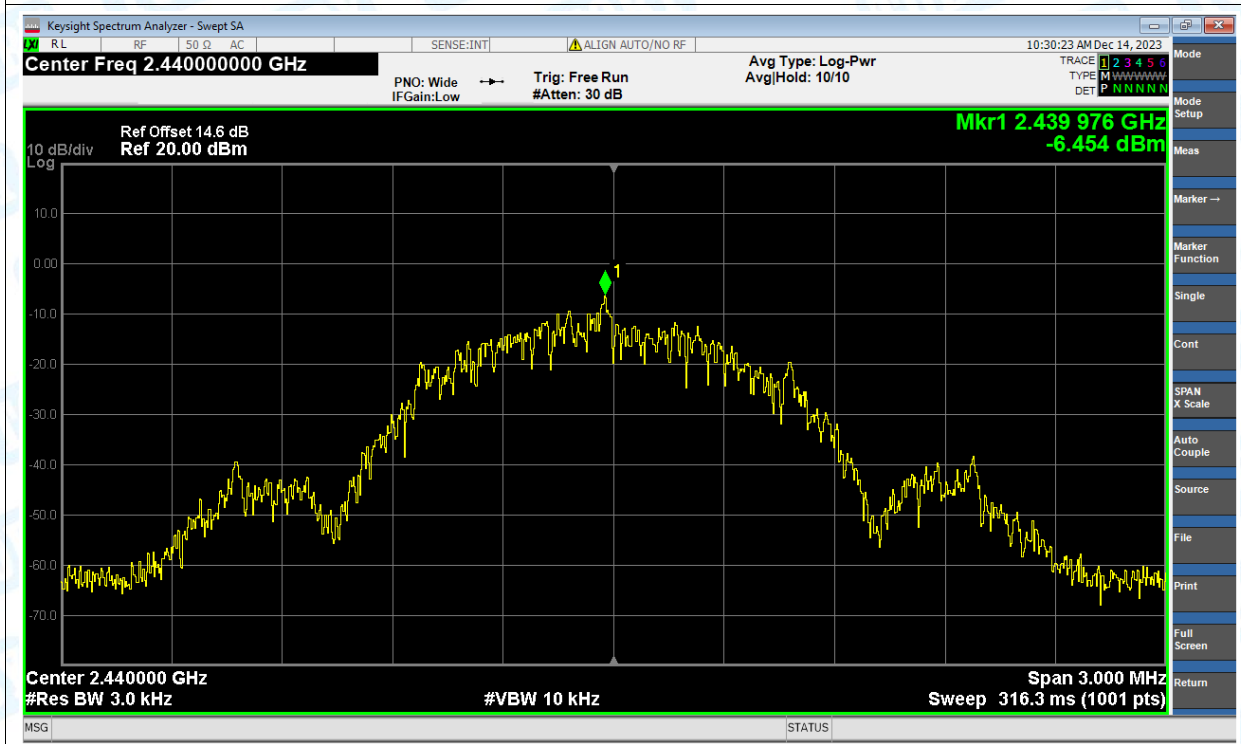
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-6.552	8	Pass
NVNT	BLE 1Mbps	2440	Ant1	-6.454	8	Pass
NVNT	BLE 1Mbps	2480	Ant1	-10.604	8	Pass
NVNT	BLE 2Mbps	2402	Ant1	-11.323	8	Pass
NVNT	BLE 2Mbps	2440	Ant1	-11.025	8	Pass
NVNT	BLE 2Mbps	2480	Ant1	-14.892	8	Pass

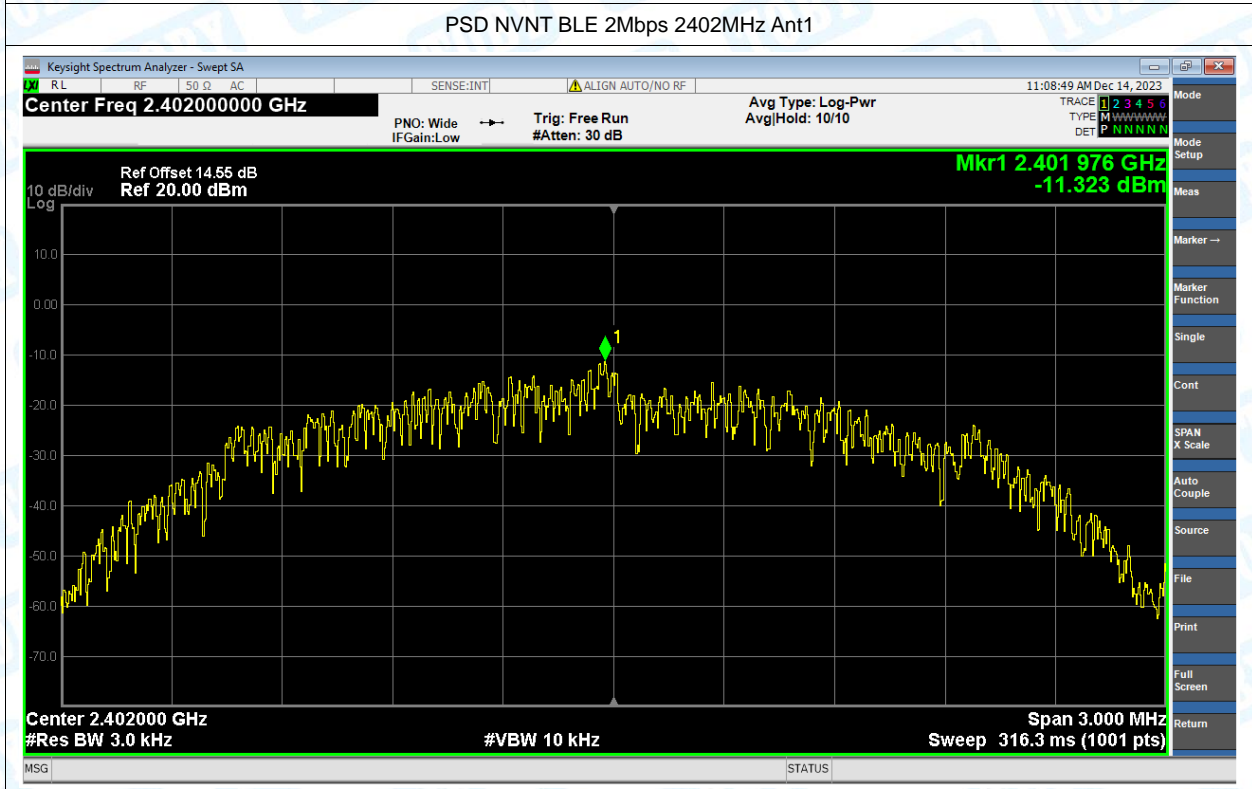
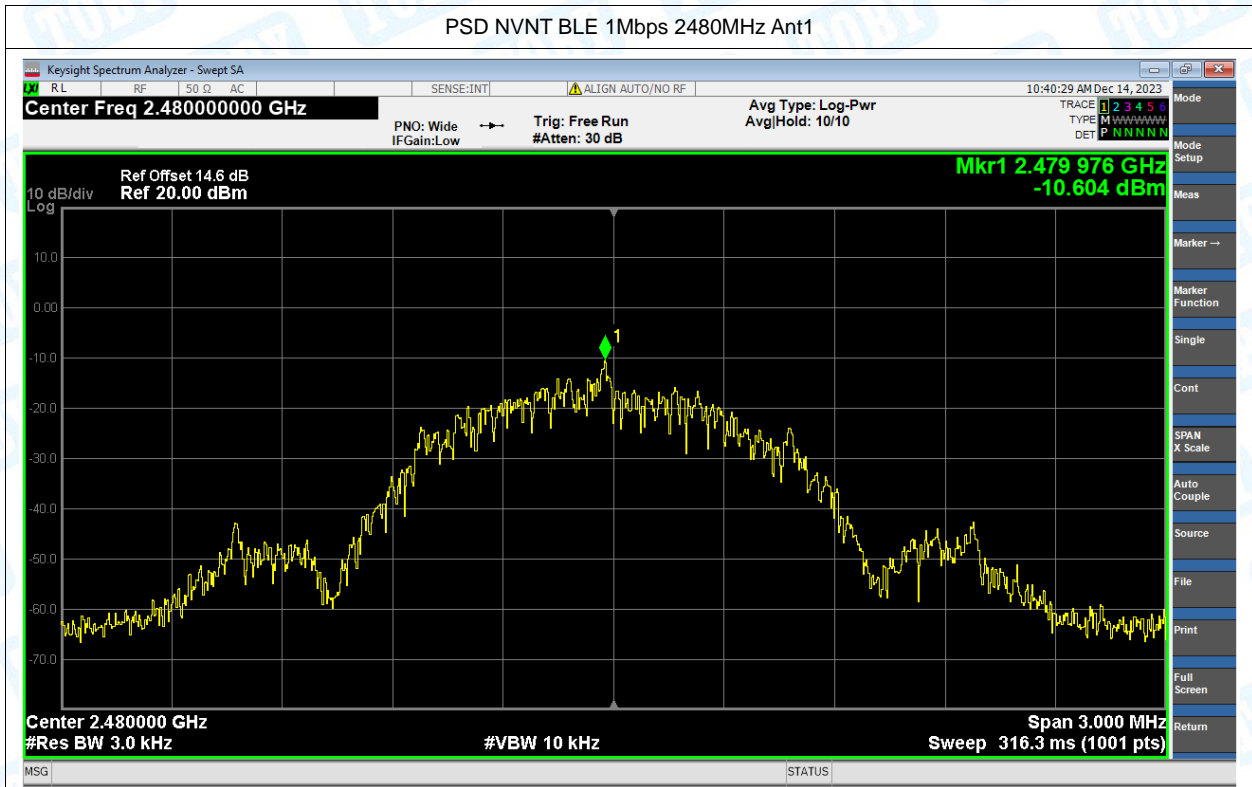
Test Graphs

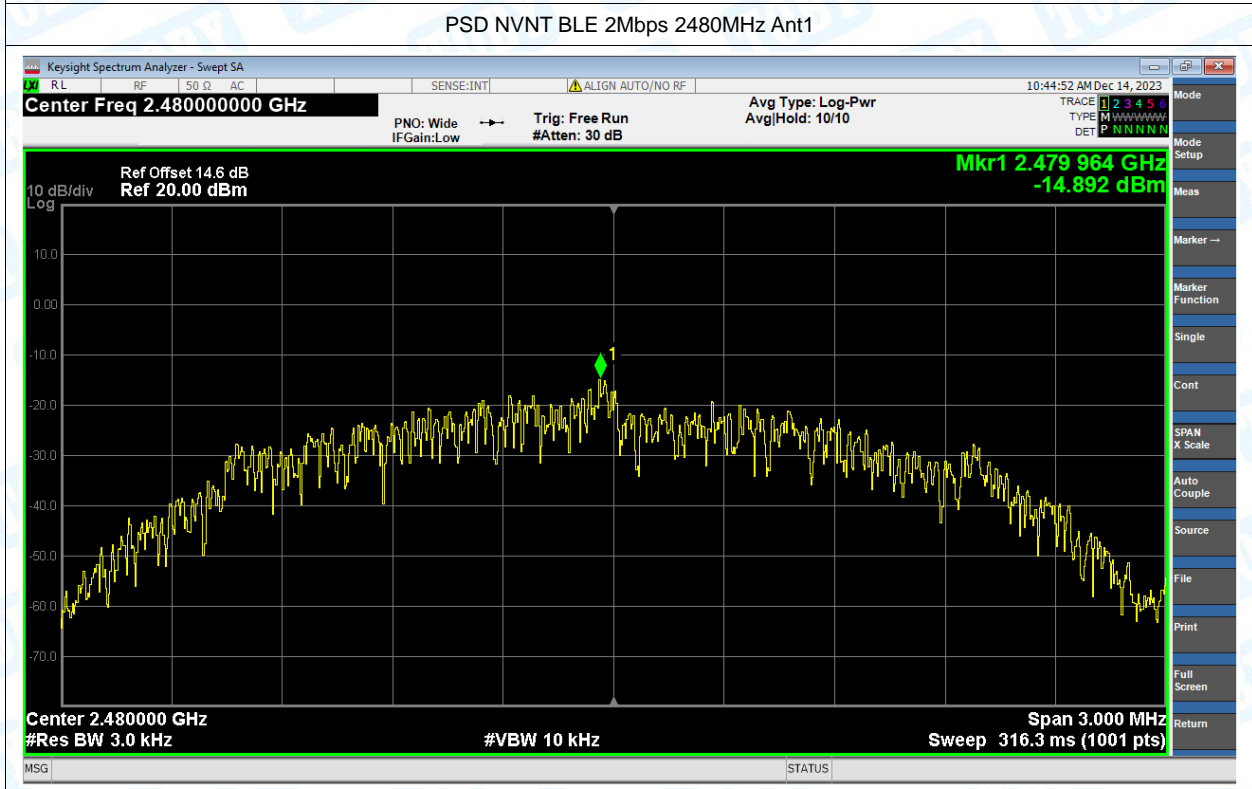
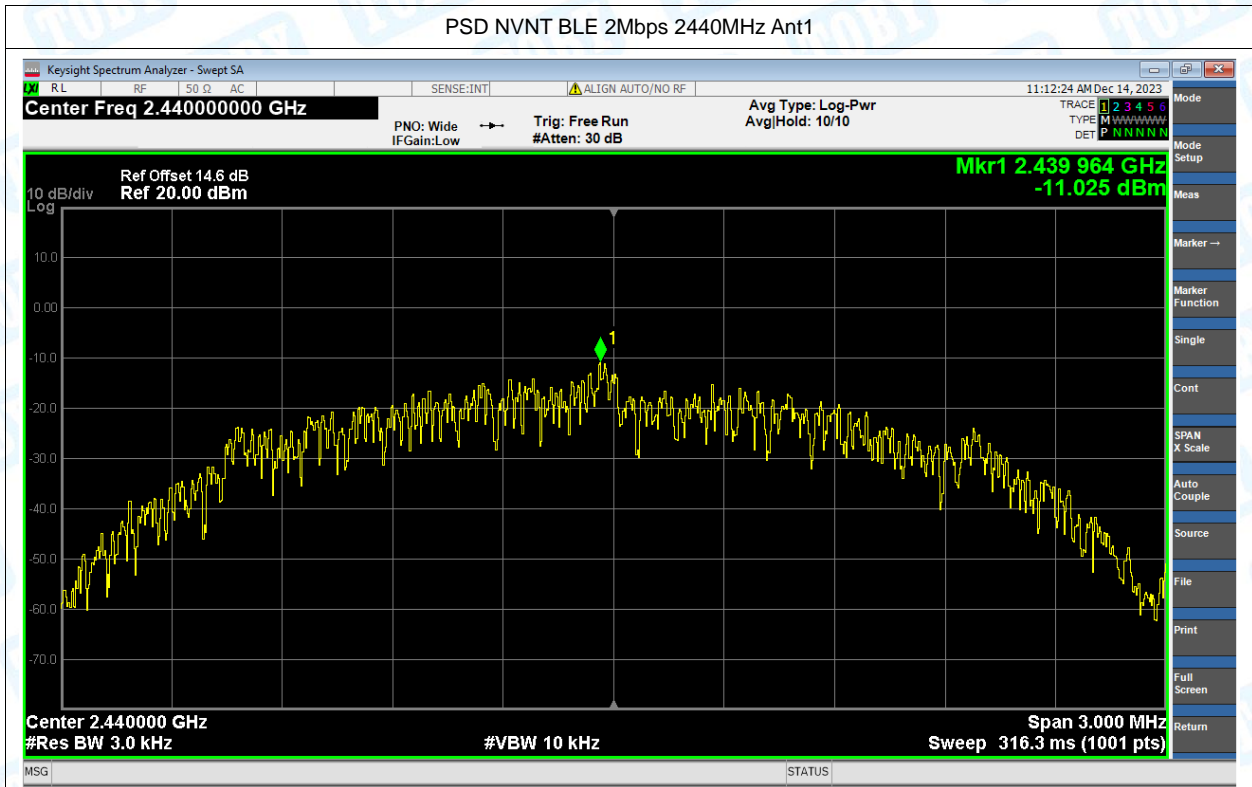
PSD NVNT BLE 1Mbps 2402MHz Ant1



PSD NVNT BLE 1Mbps 2440MHz Ant1





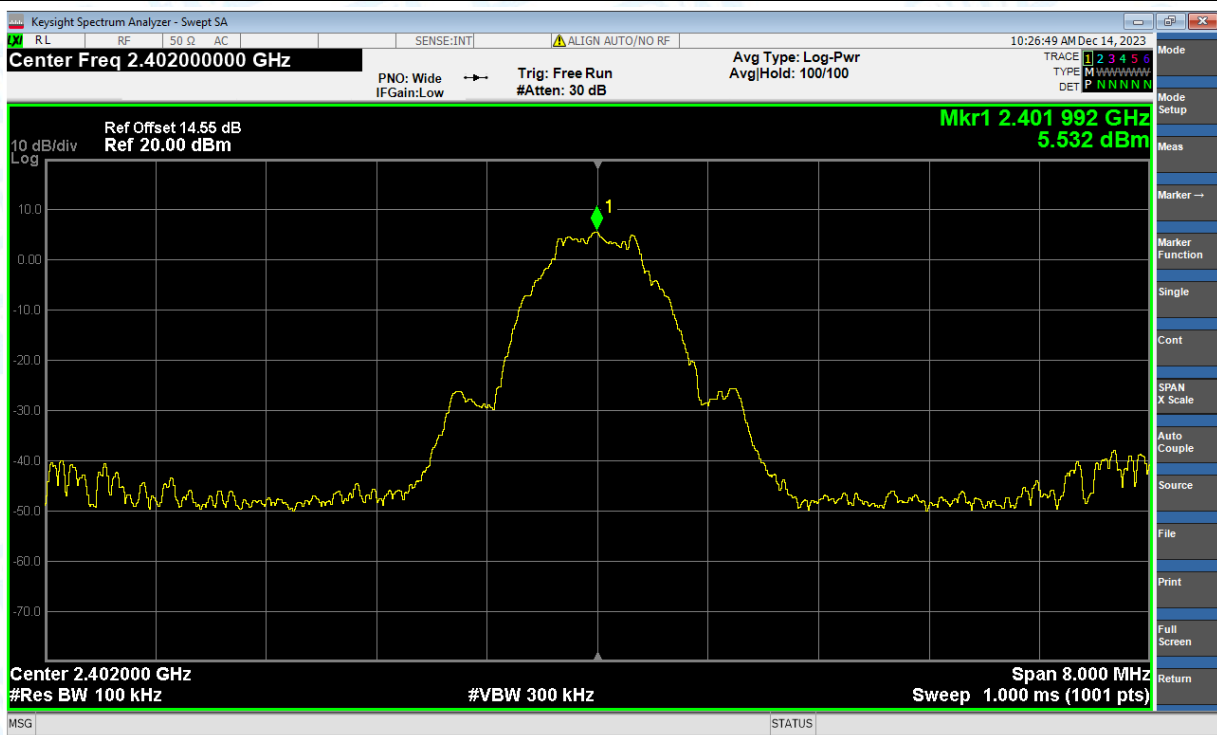


Band Edge

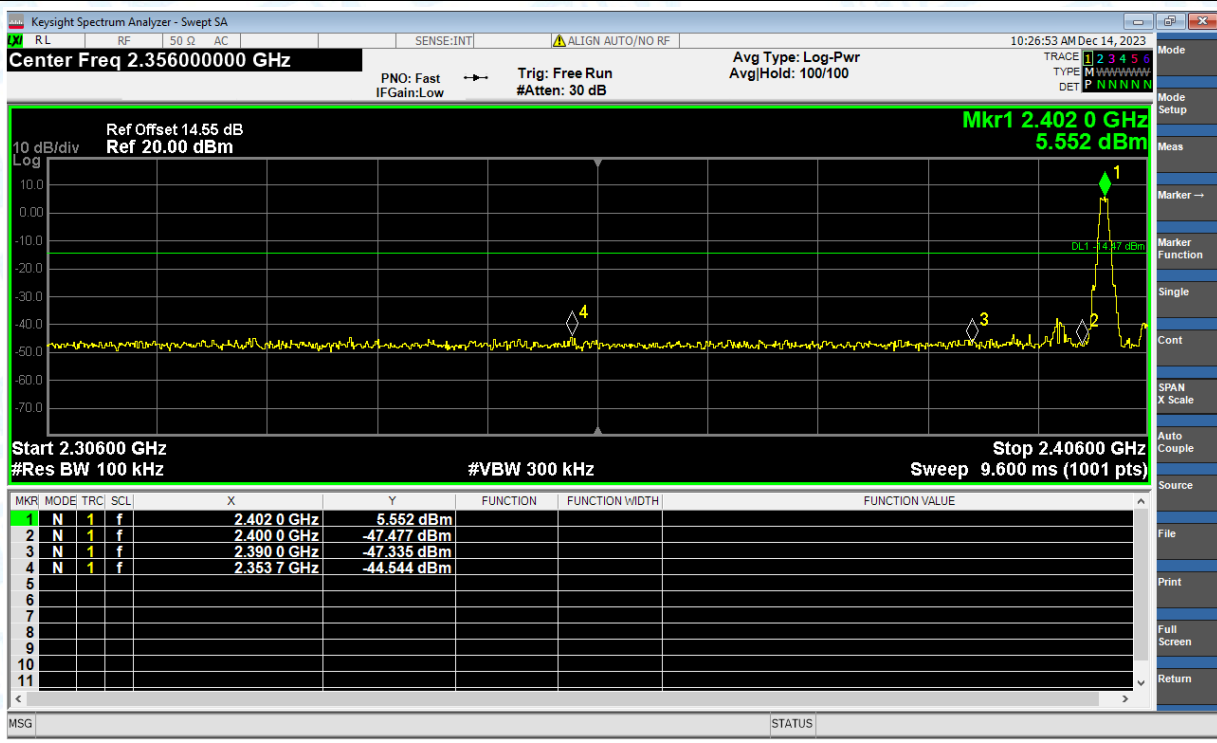
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-50.07	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-42.04	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-47.98	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-42.7	-20	Pass

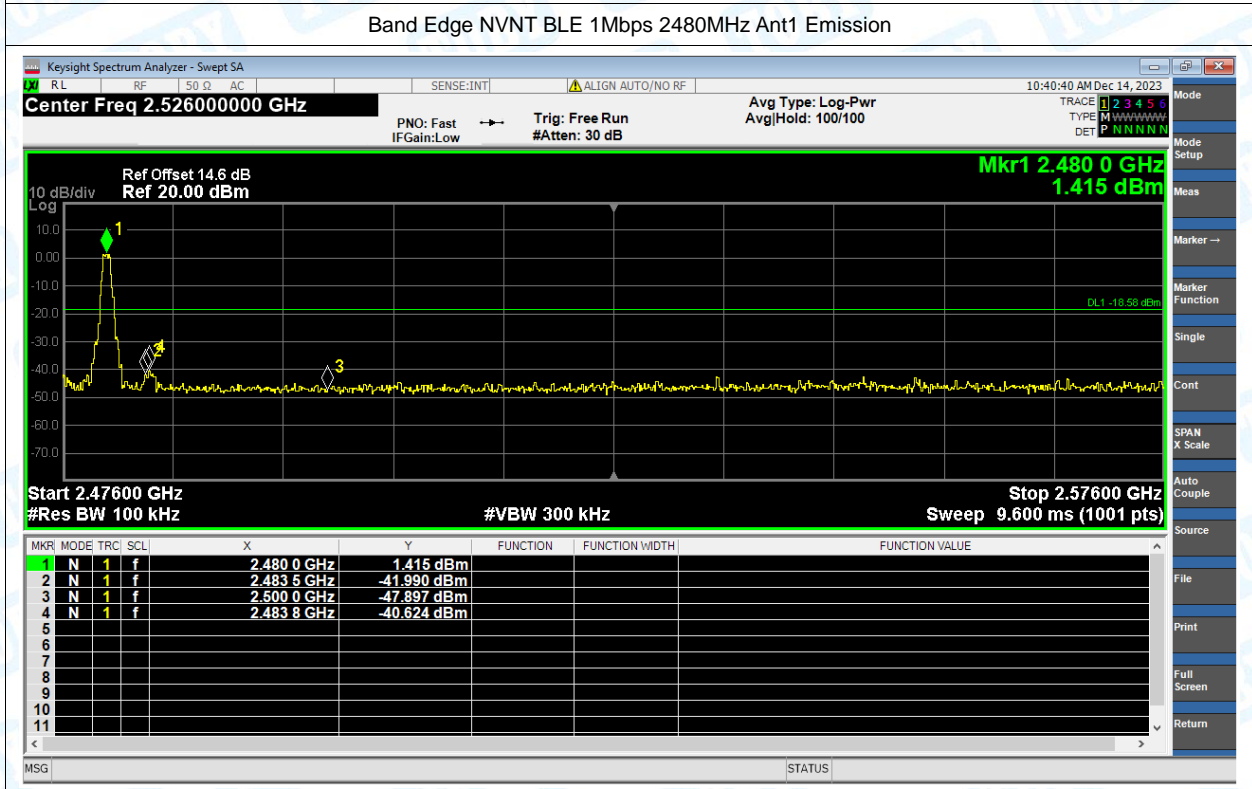
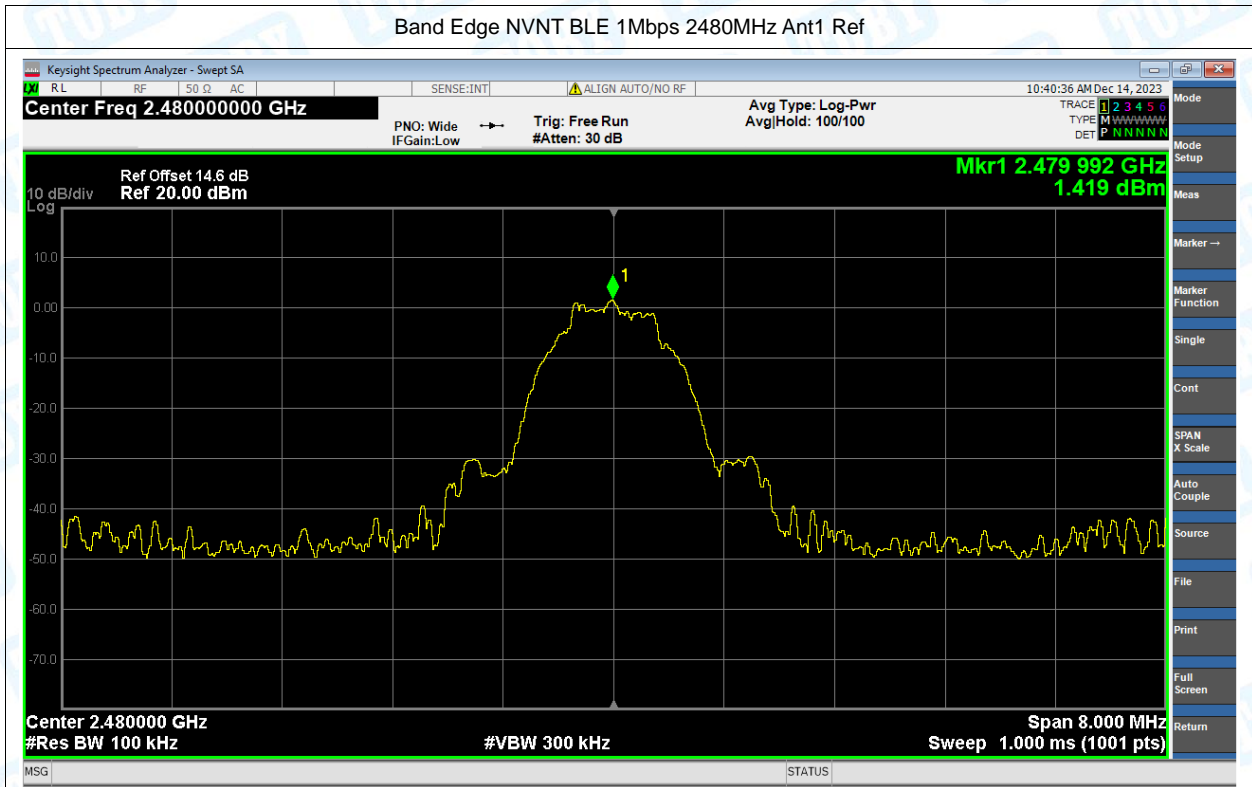
Test Graphs

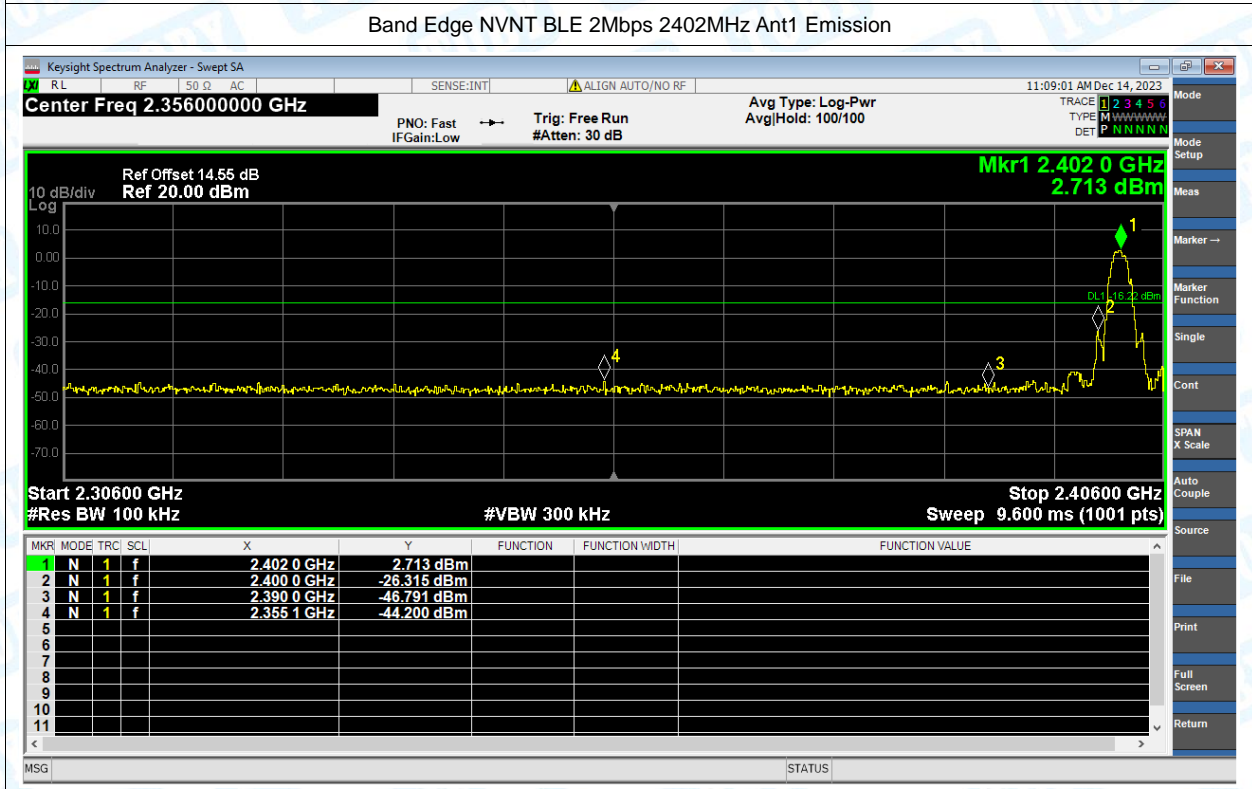
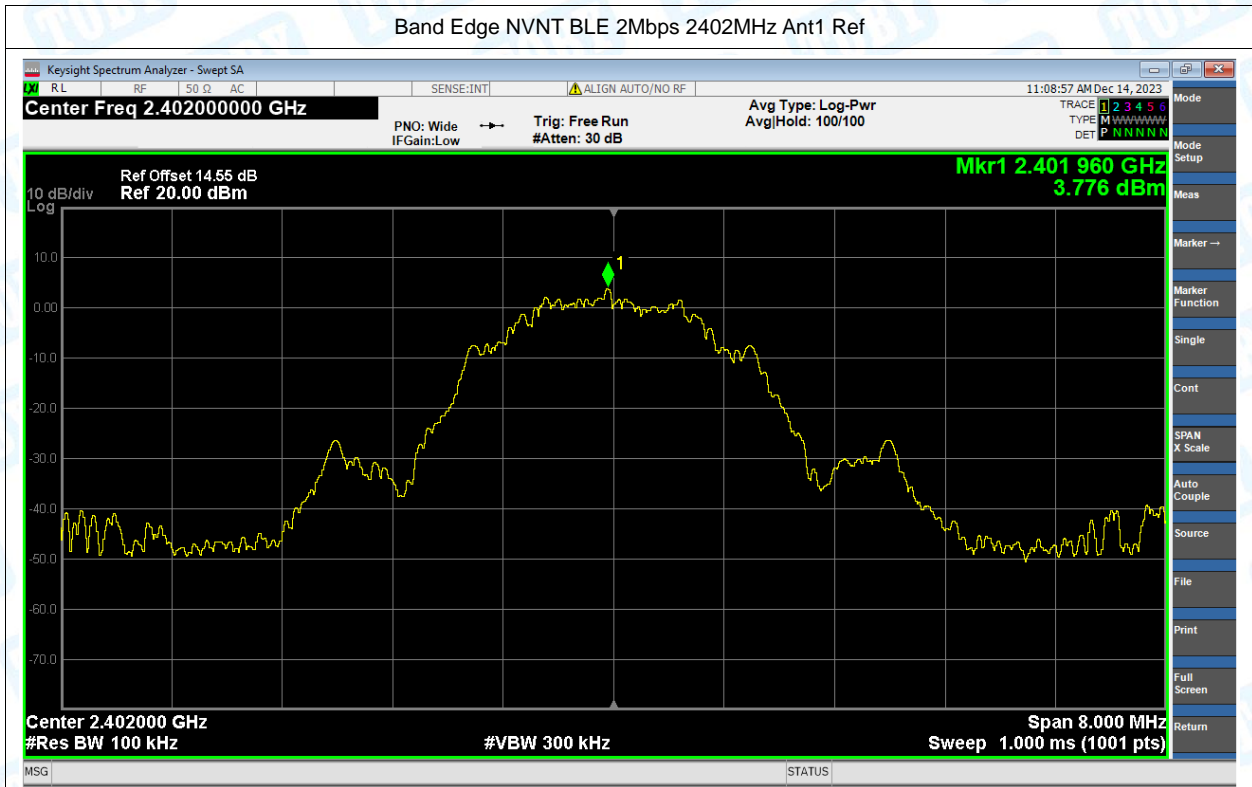
Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Ref

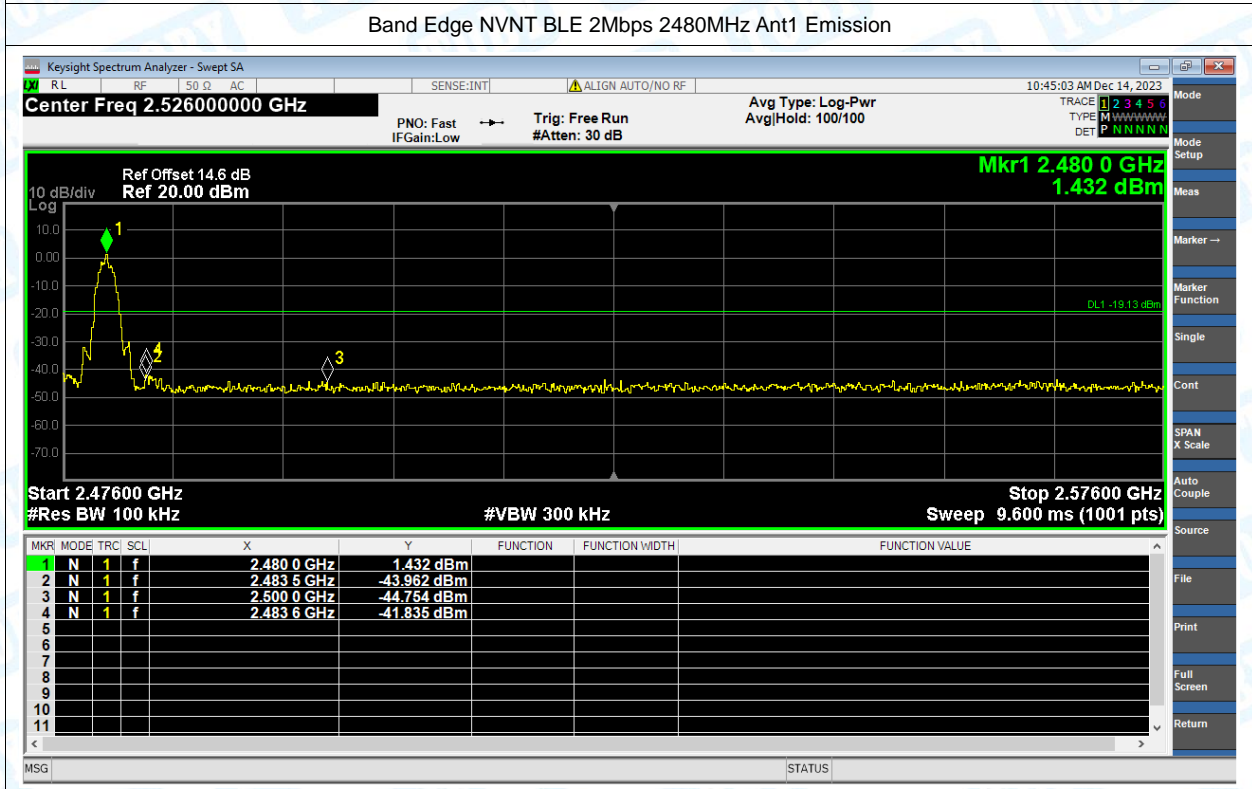
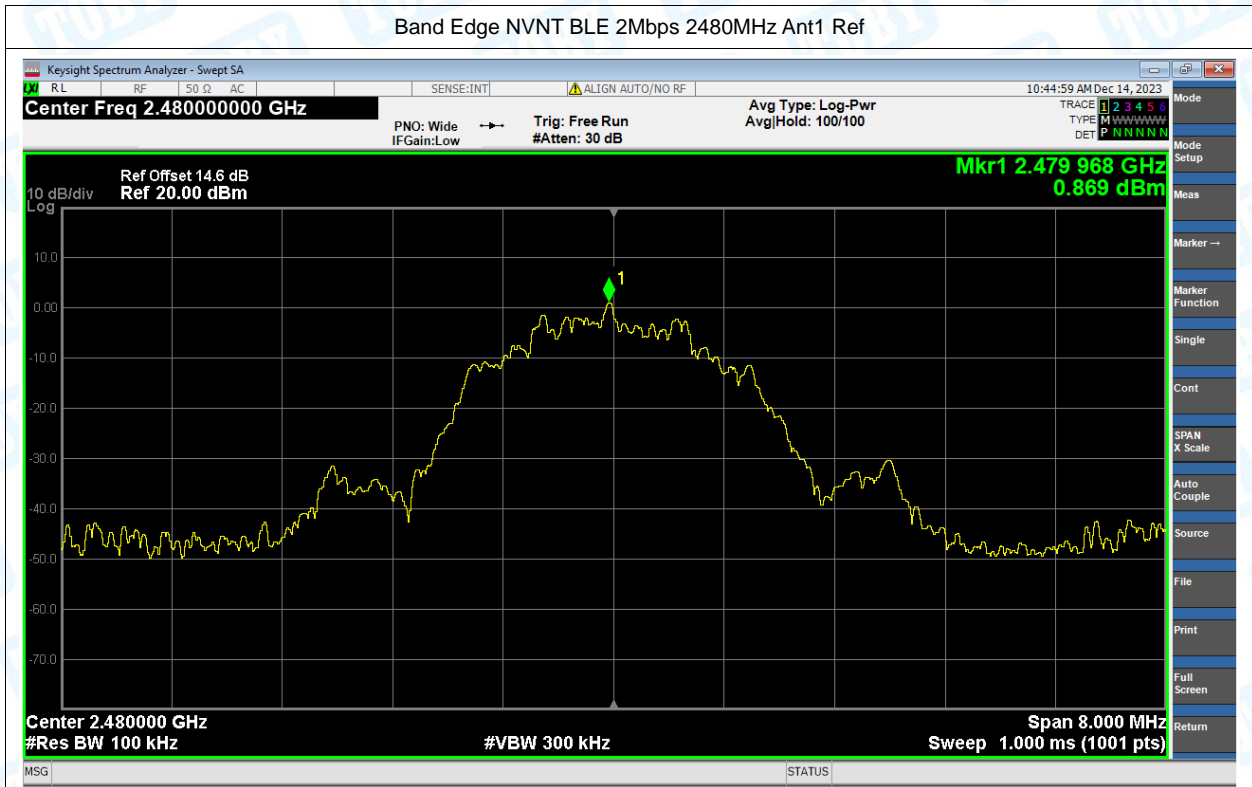


Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Emission







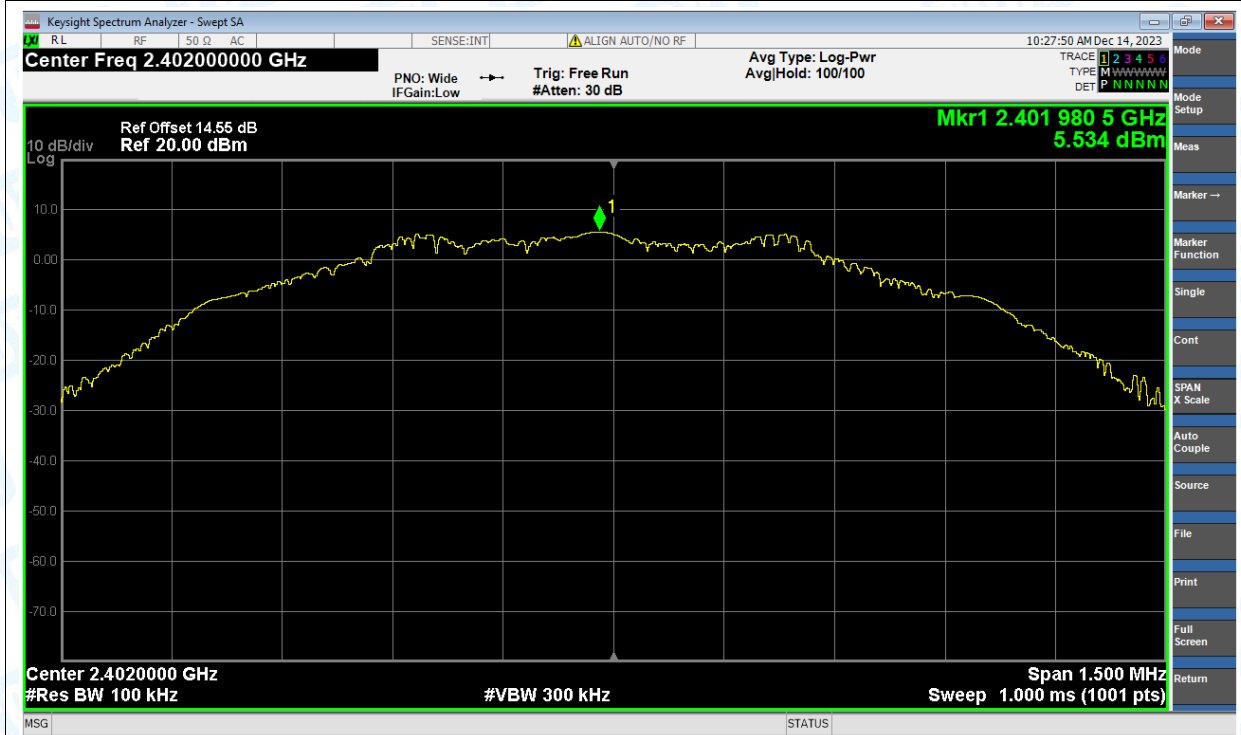


Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-35.65	-20	Pass
NVNT	BLE 1Mbps	2440	Ant1	-35.74	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-31.64	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-35.17	-20	Pass
NVNT	BLE 2Mbps	2440	Ant1	-36.12	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-31.66	-20	Pass

Test Graphs

Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Ref



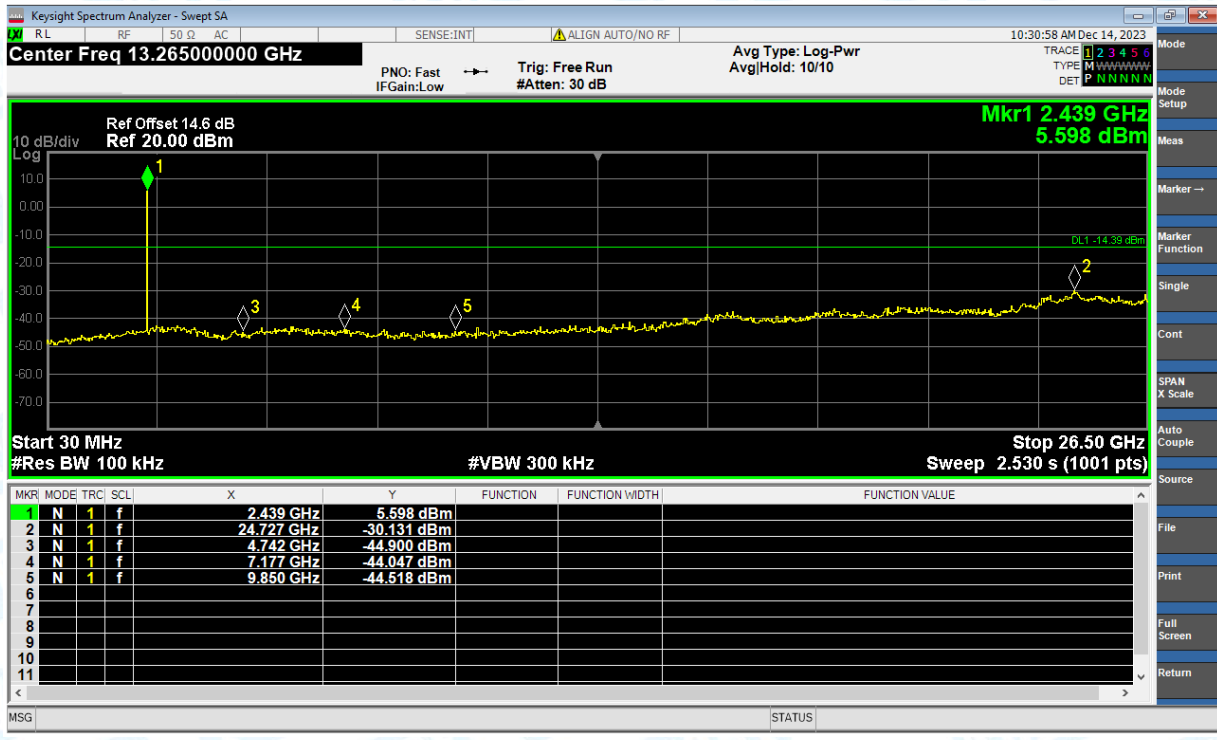
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Emission

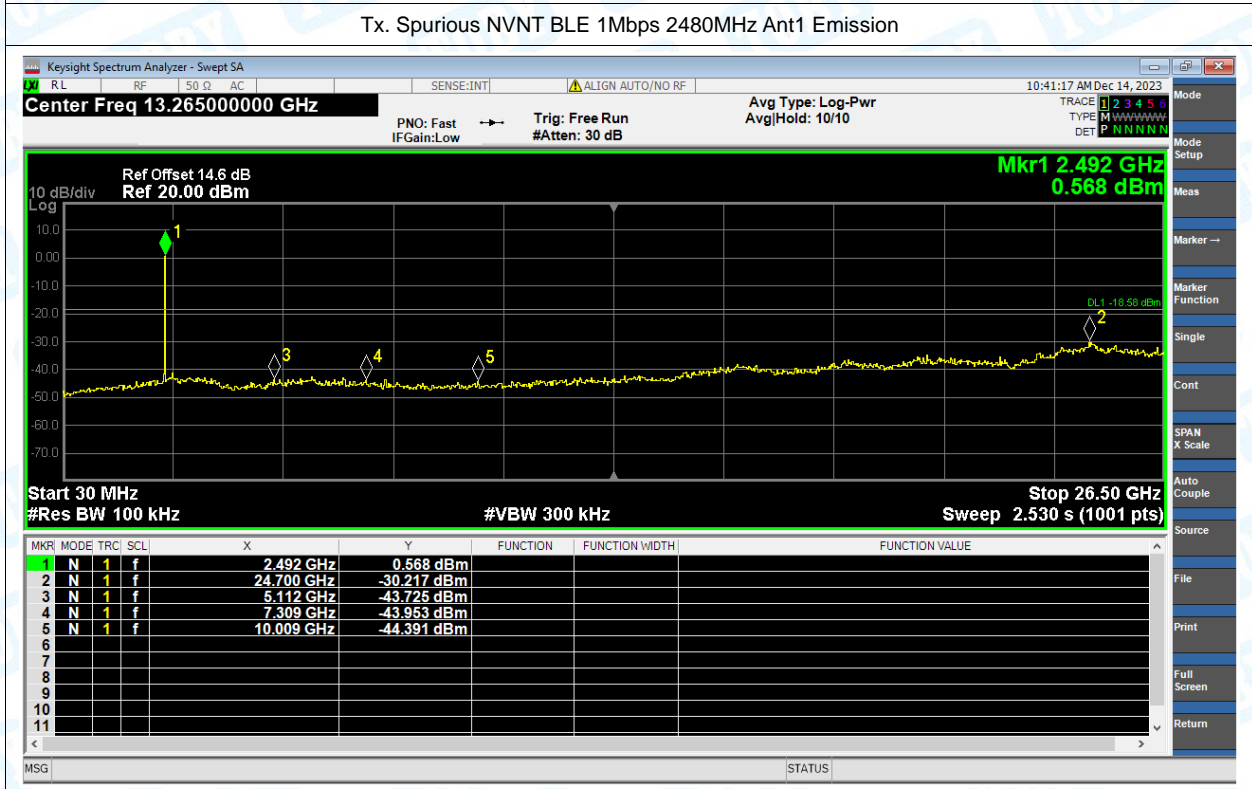
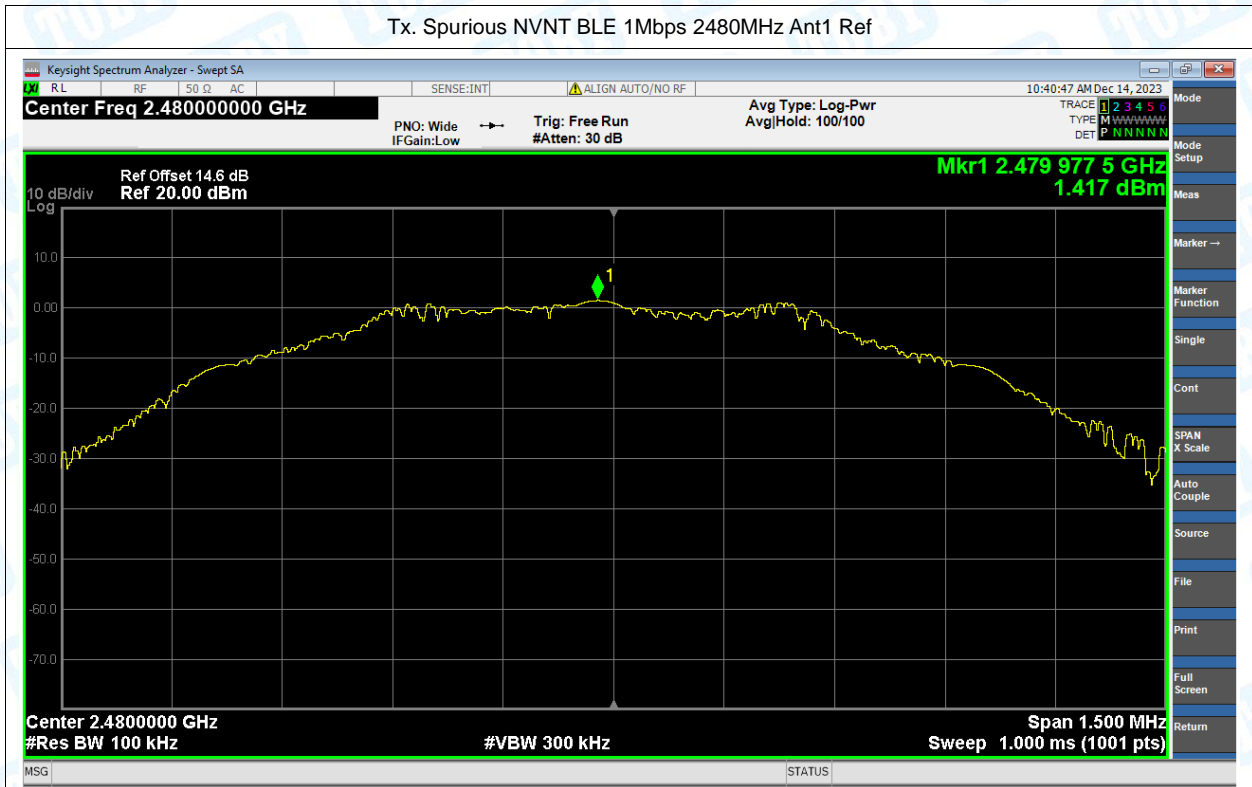


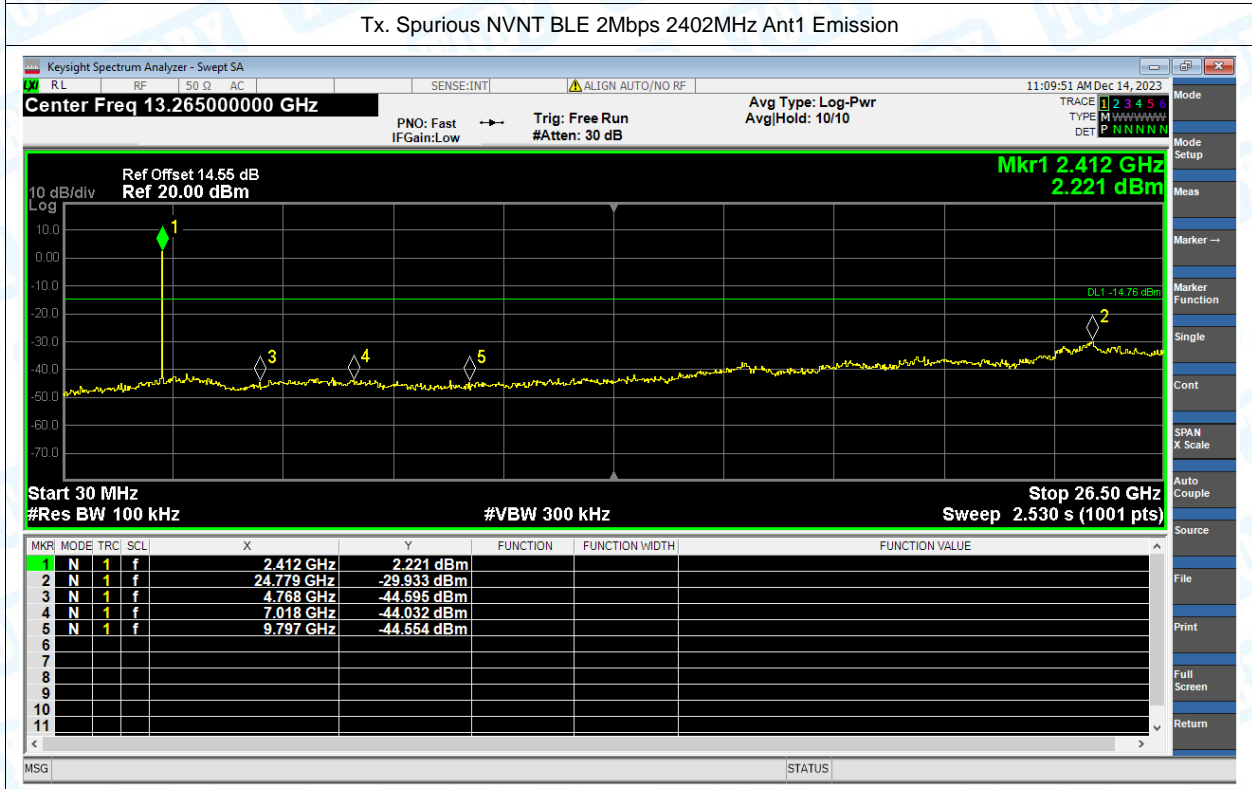
Tx. Spurious NVNT BLE 1Mbps 2440MHz Ant1 Ref

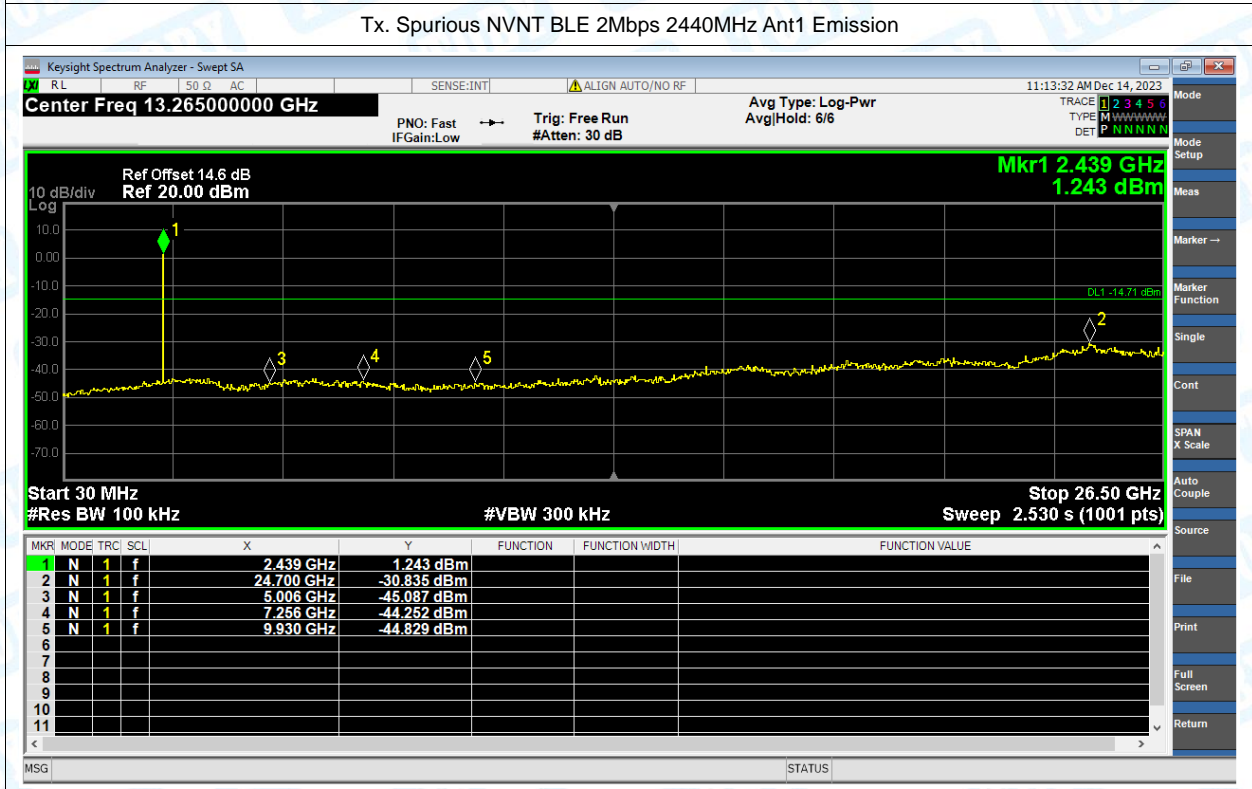
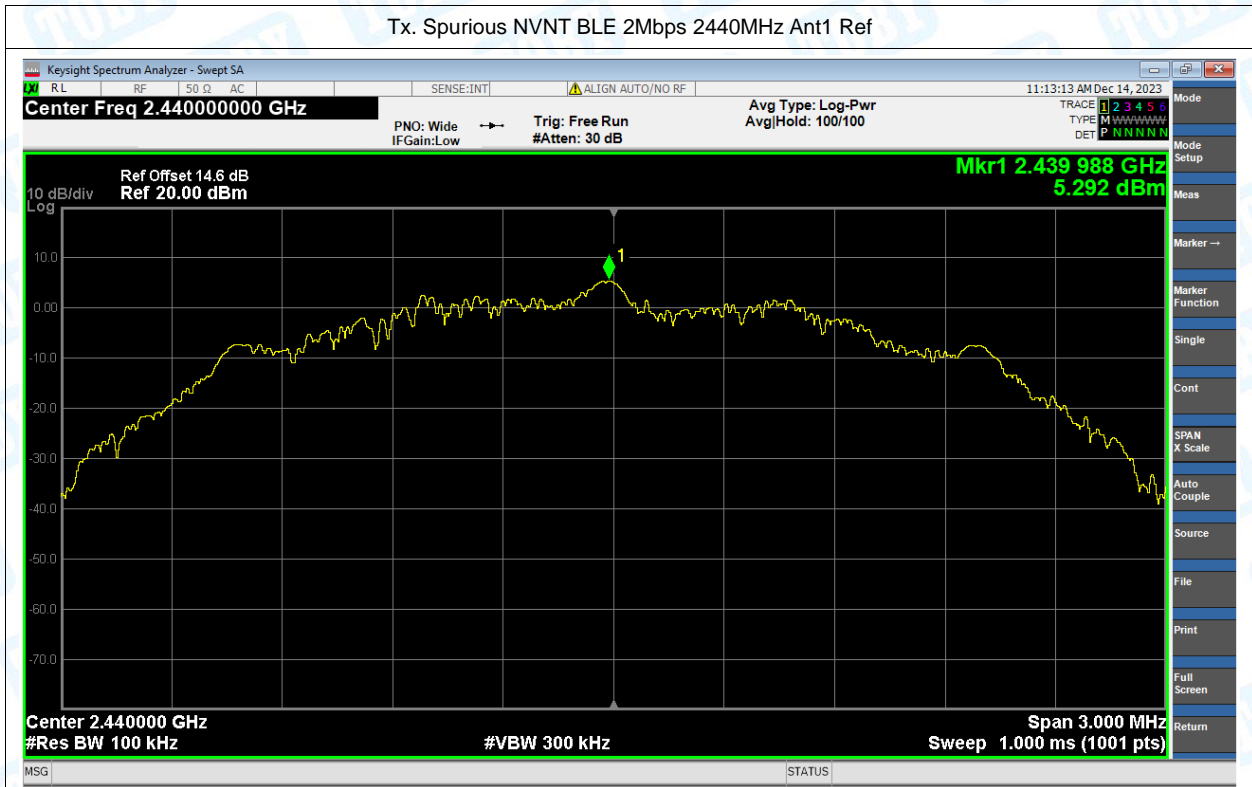


Tx. Spurious NVNT BLE 1Mbps 2440MHz Ant1 Emission

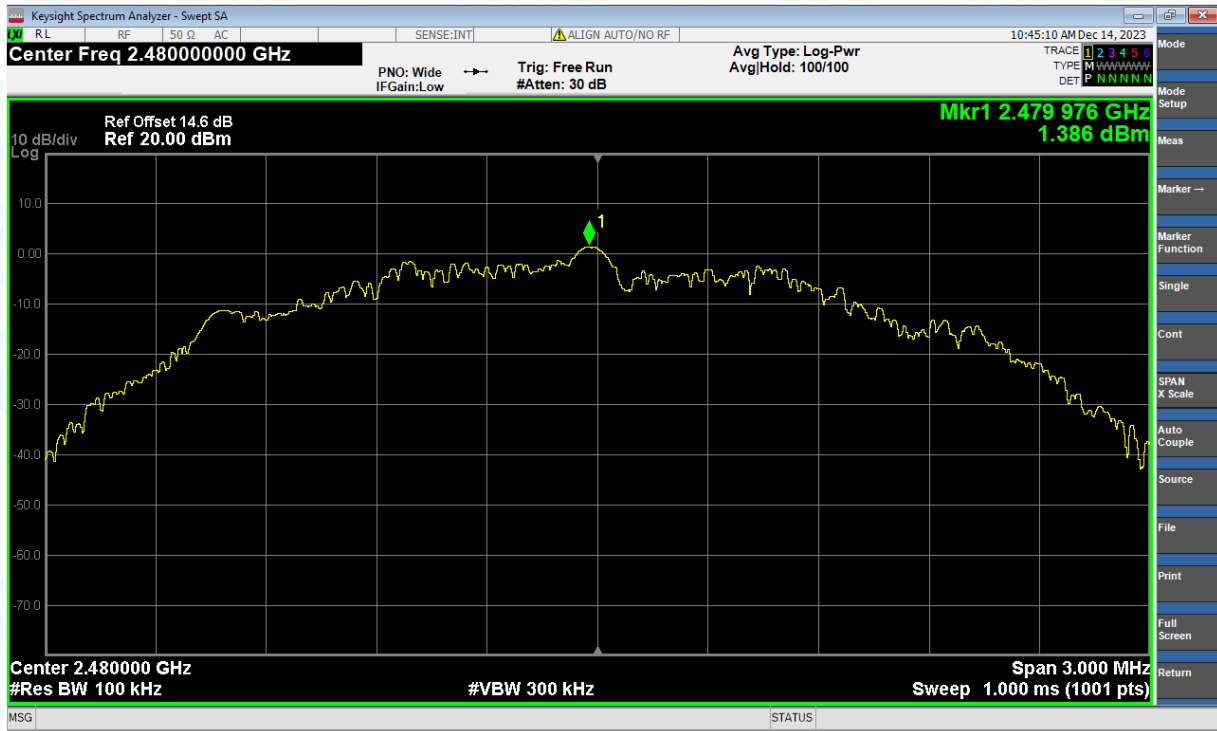




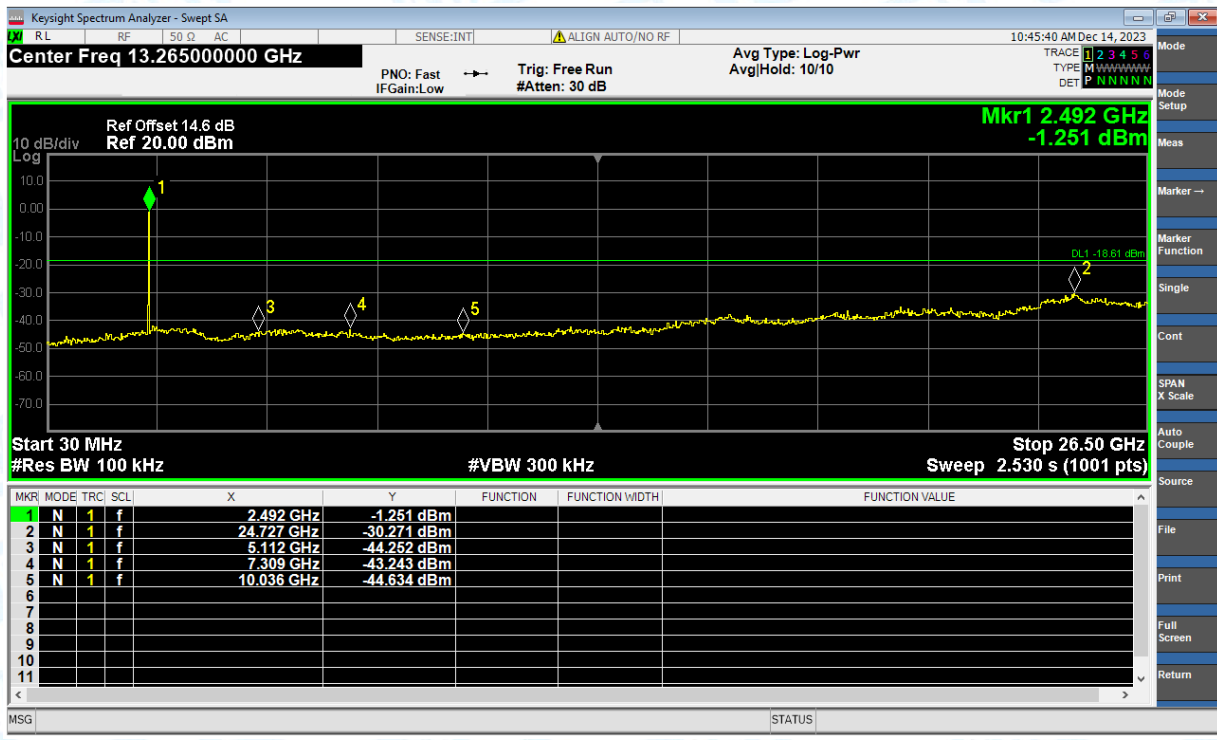




Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Emission

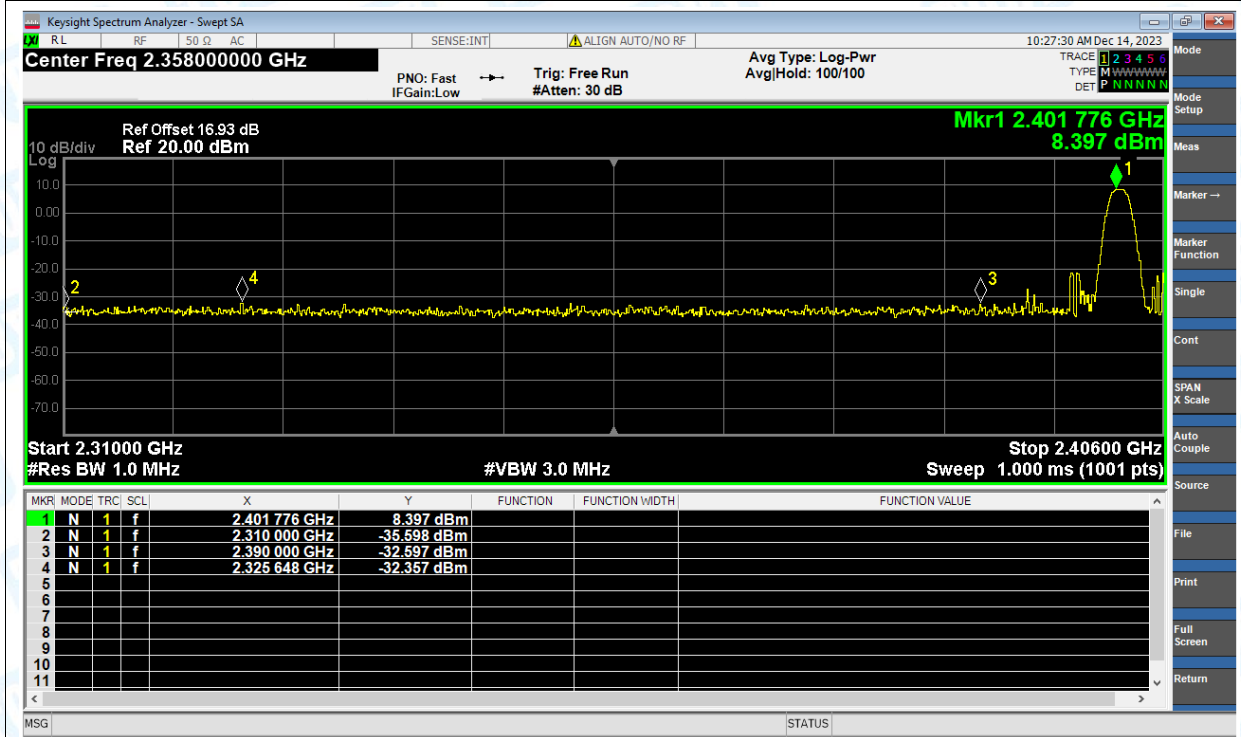


Restrict Band

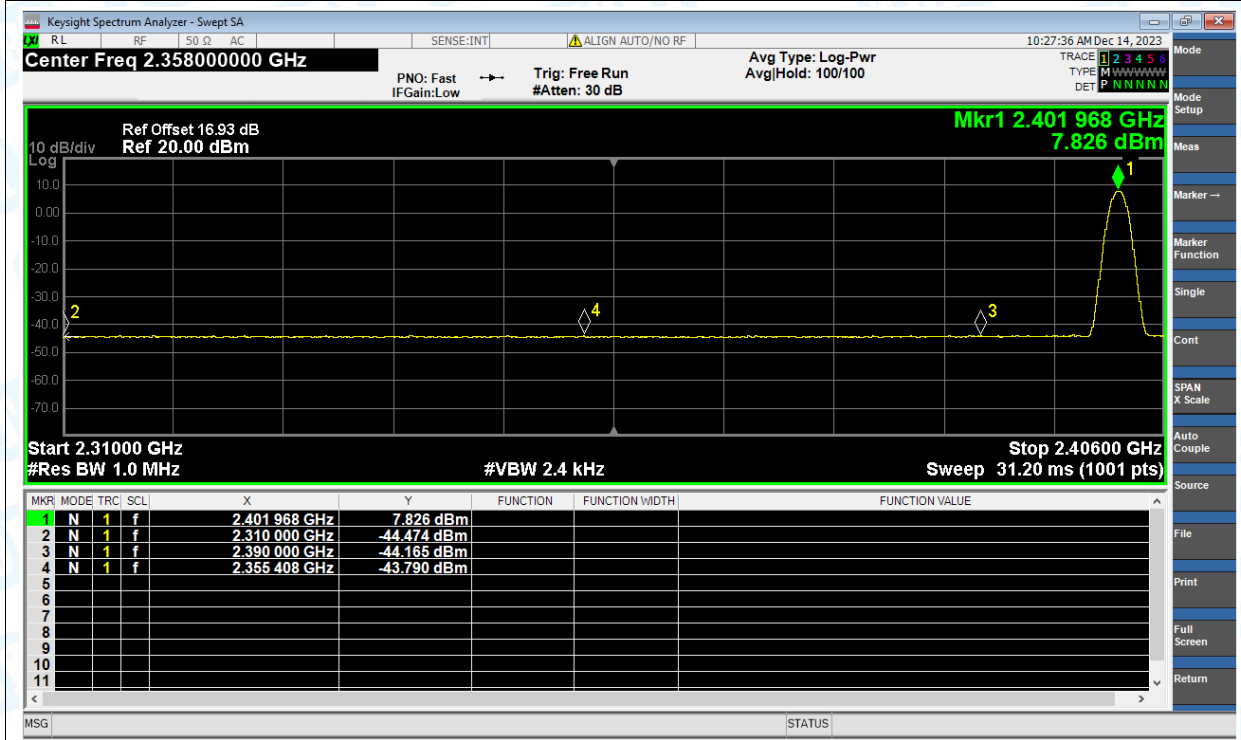
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	2310	-35.6	2.5	62.16	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2310	-44.47	2.5	53.29	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2325.648	-32.36	2.5	65.4	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2355.408	-43.79	2.5	53.97	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-33.67	2.5	64.09	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-44.11	2.5	53.65	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-24.71	2.5	73.05	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-53.82	2.5	43.94	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2484.112	-23.98	2.5	73.78	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2484.04	-53.51	2.5	44.25	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-46.26	2.5	51.5	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-53.91	2.5	43.85	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-44.69	2.5	53.07	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-53.78	2.5	43.98	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2389.968	-32.16	2.5	65.6	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2328.048	-53.11	2.5	44.65	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-32.06	2.5	65.7	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-53.76	2.5	44	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-26.27	2.5	71.49	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-50.79	2.5	46.97	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2484.304	-23.97	2.5	73.79	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.512	-50.79	2.5	46.97	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2500	-44.34	2.5	53.42	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2500	-53.45	2.5	44.31	Average	54	Pass

Test Graphs

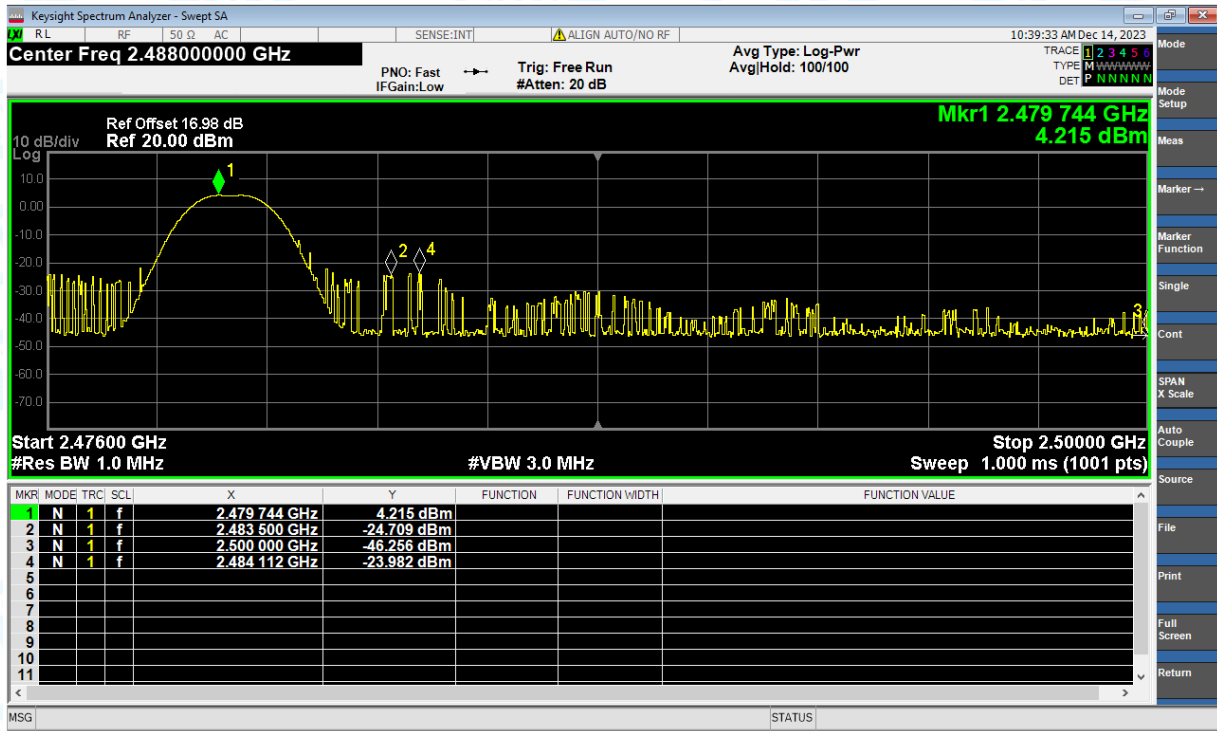
Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Peak



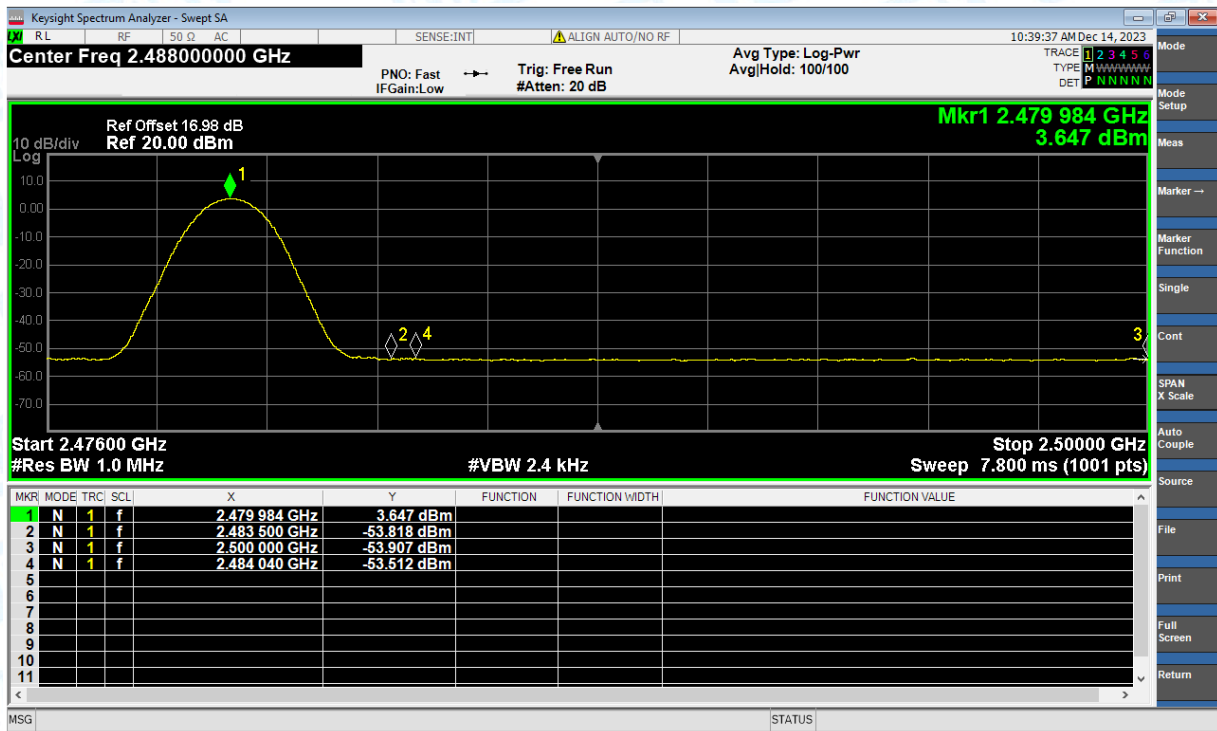
Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Average



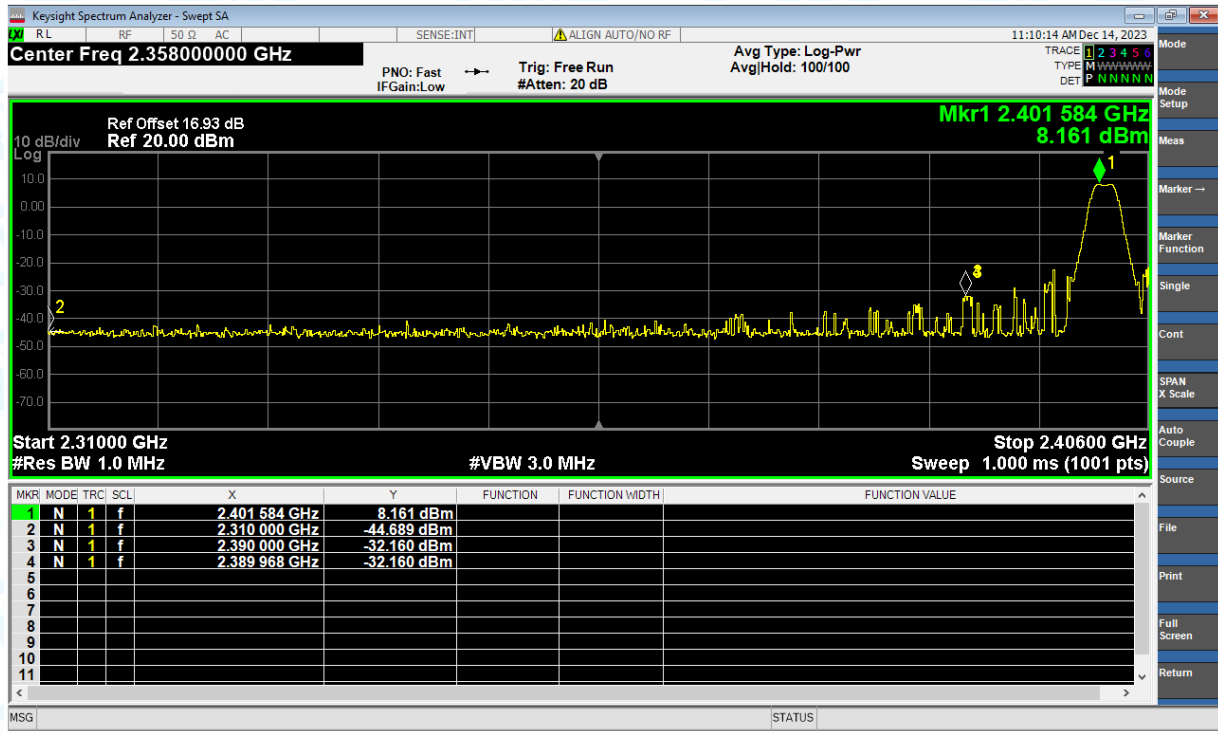
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Peak



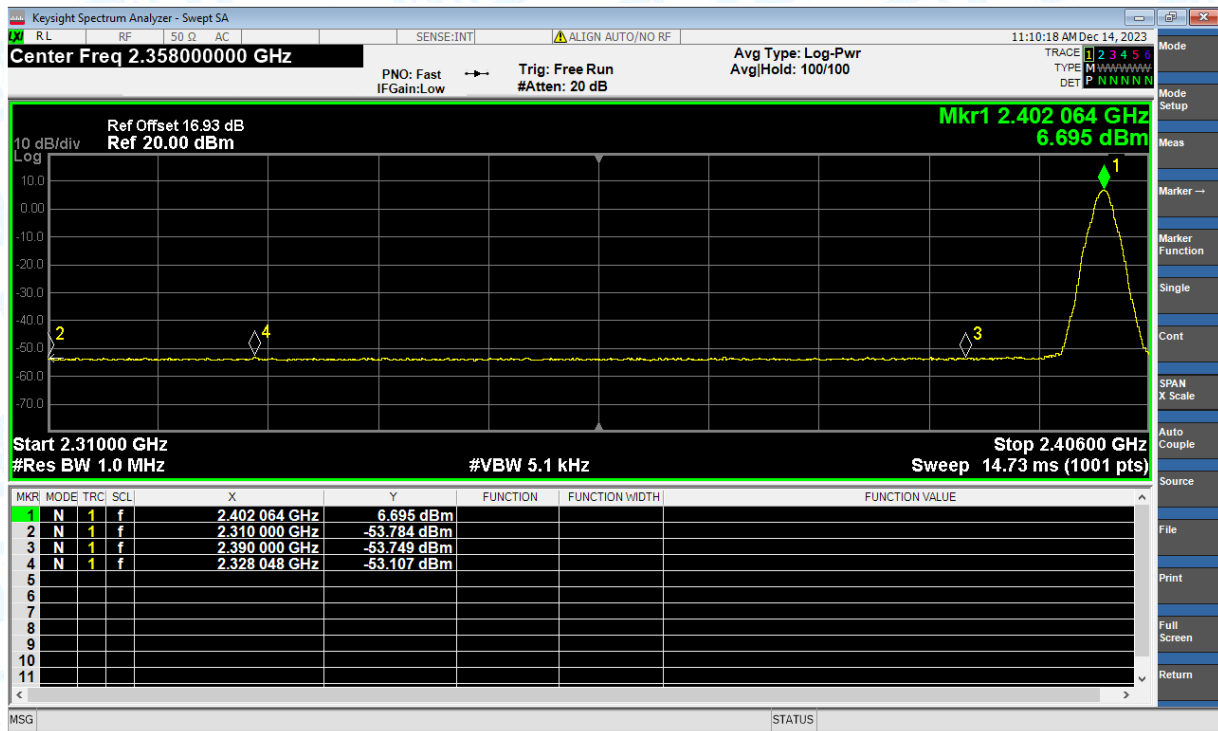
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Average



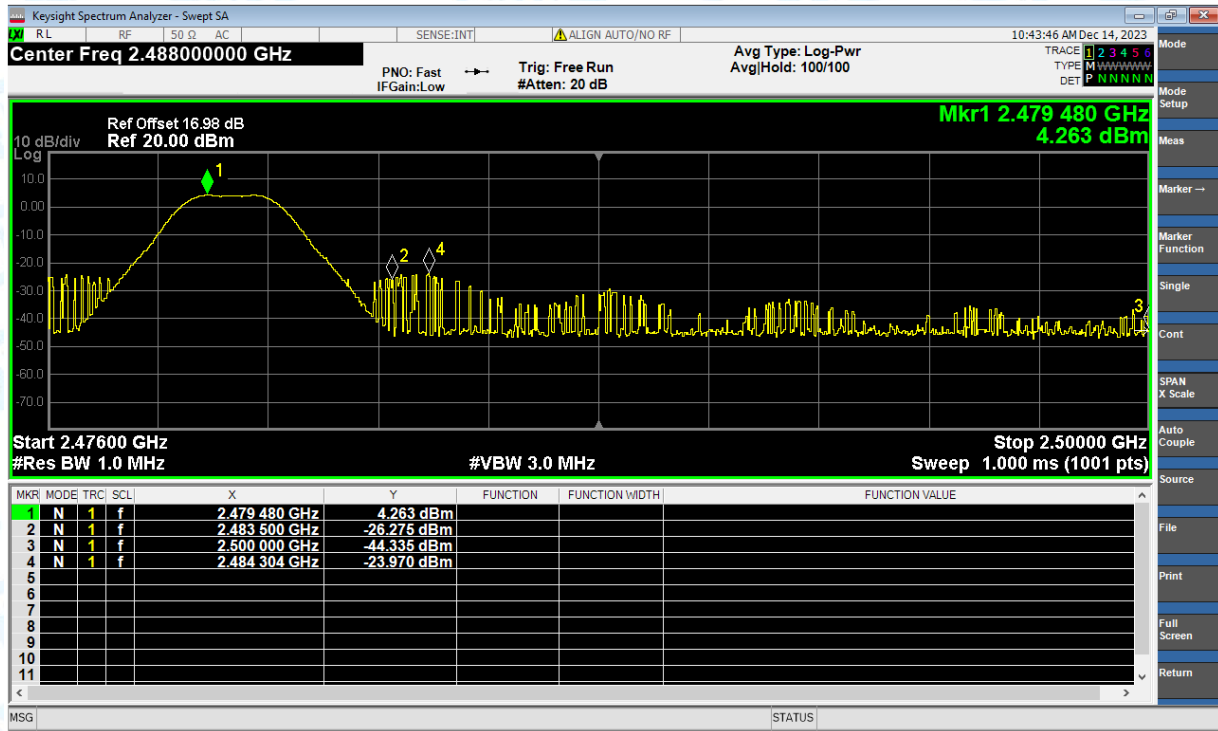
Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Peak



Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Average



Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Peak



Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Average

