

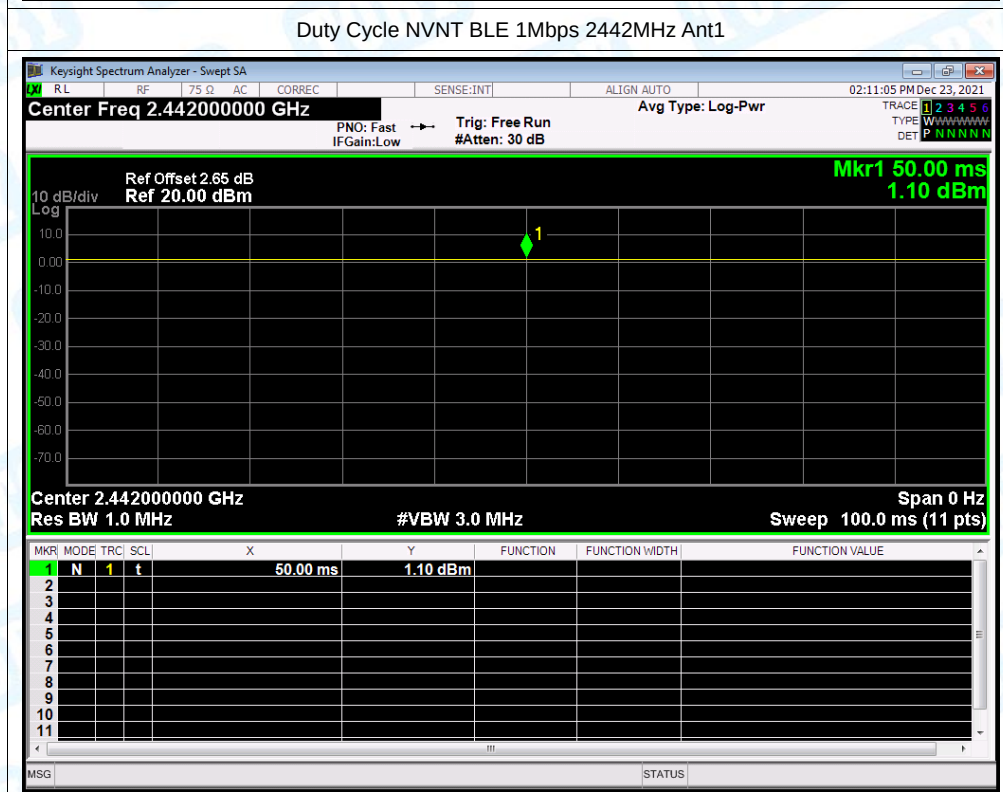
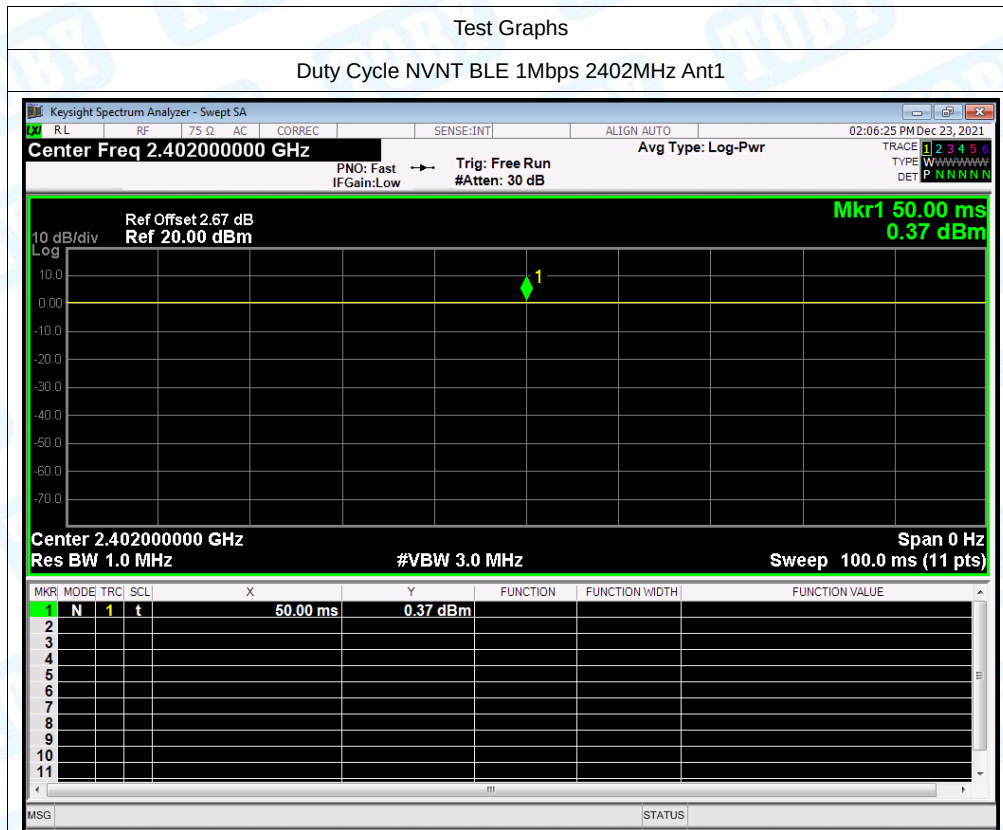
RF Test Data for Bluetooth LE

(Conducted Measurements)

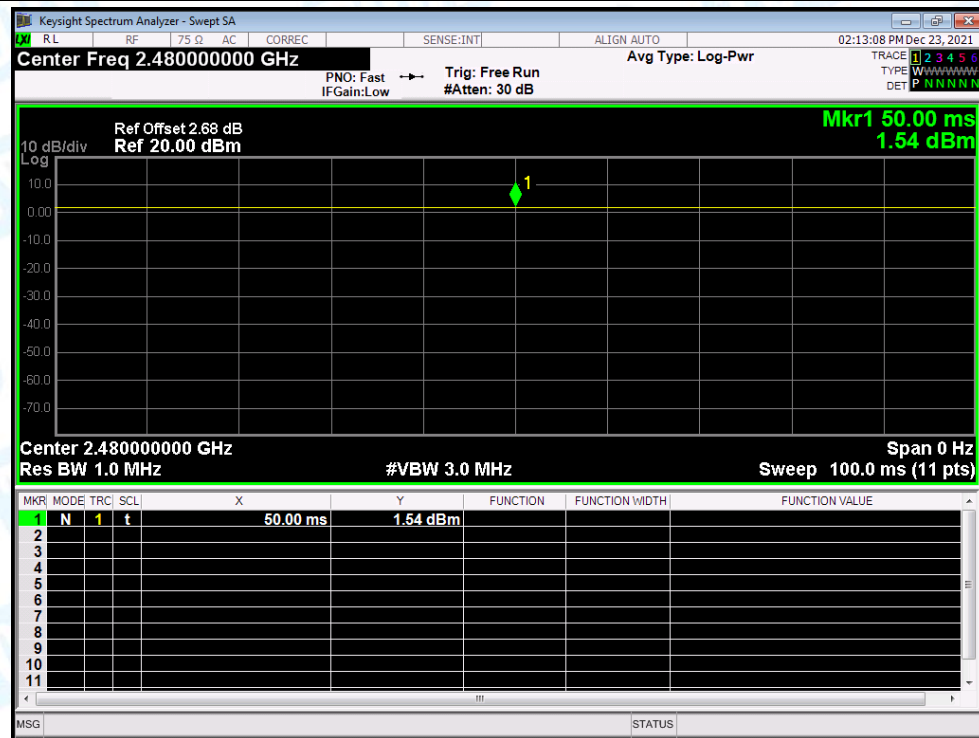
General Description of EUT	
Product Name:	Smart Watch
Test Model:	LC301
Sample ID:	20211208-04-2#
Environmental Conditions	
Temperature:	24°C
Relative Humidity:	50%
Test Voltage:	DC3.7V
Test Engineer:	50%
Note: For a more detailed features description, please refer to the report TB-FCC185607	

1.Duty Cycle

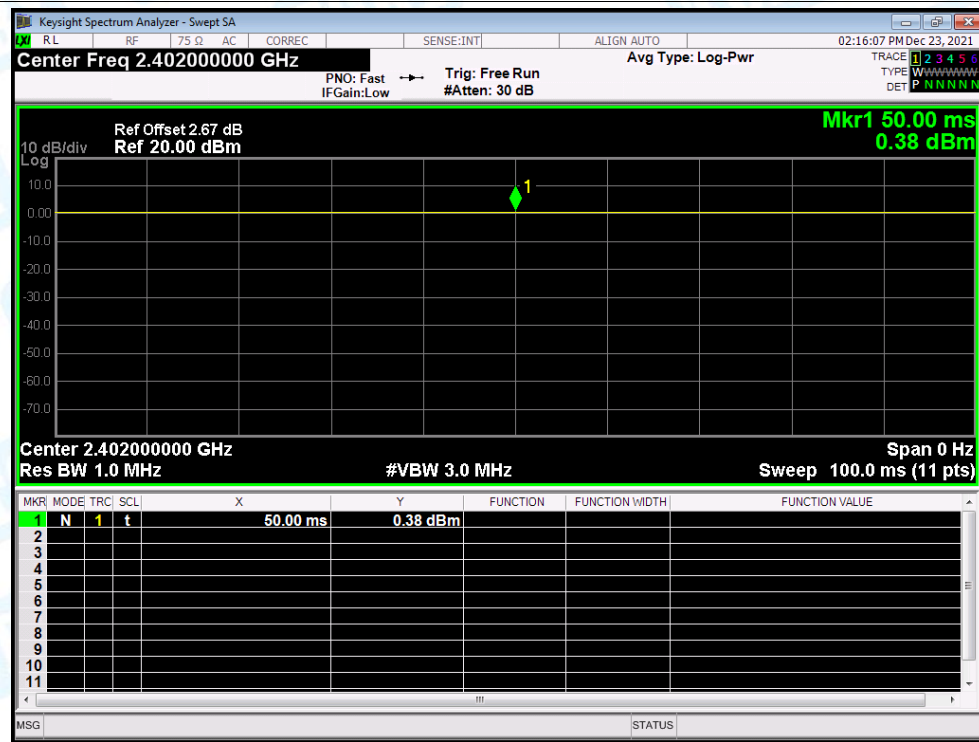
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1Mbps	2402	Ant1	100	0	0
NVNT	BLE 1Mbps	2442	Ant1	100	0	0
NVNT	BLE 1Mbps	2480	Ant1	100	0	0
NVNT	BLE 2Mbps	2402	Ant1	100	0	0
NVNT	BLE 2Mbps	2442	Ant1	100	0	0
NVNT	BLE 2Mbps	2480	Ant1	100	0	0



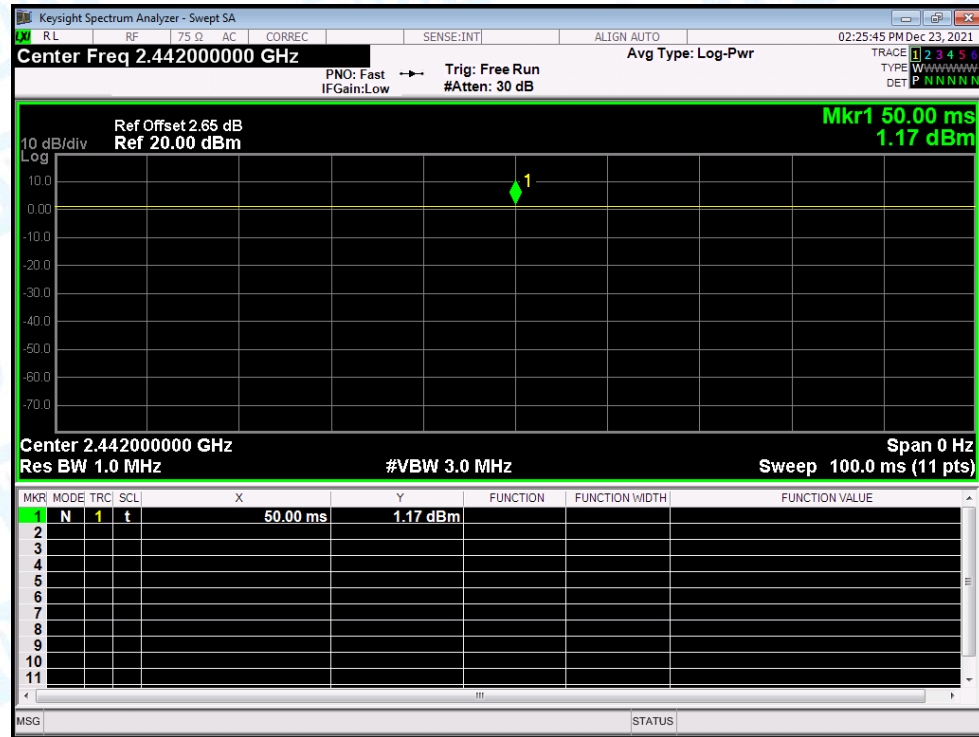
Duty Cycle NVNT BLE 1Mbps 2480MHz Ant1



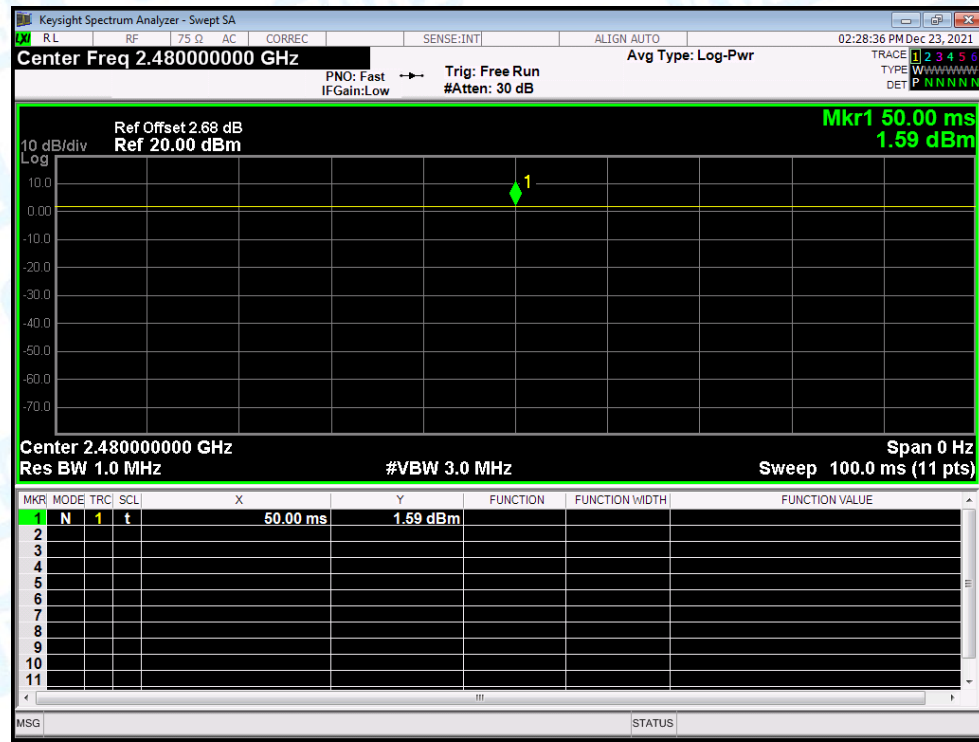
Duty Cycle NVNT BLE 2Mbps 2402MHz Ant1



Duty Cycle NVNT BLE 2Mbps 2442MHz Ant1

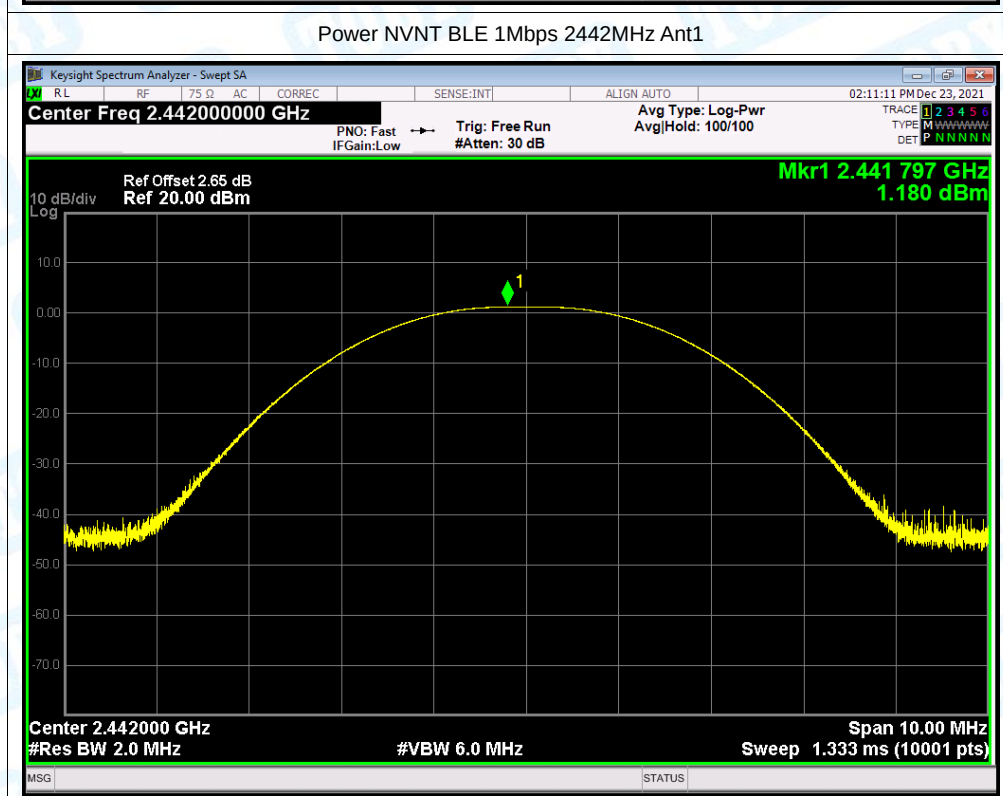
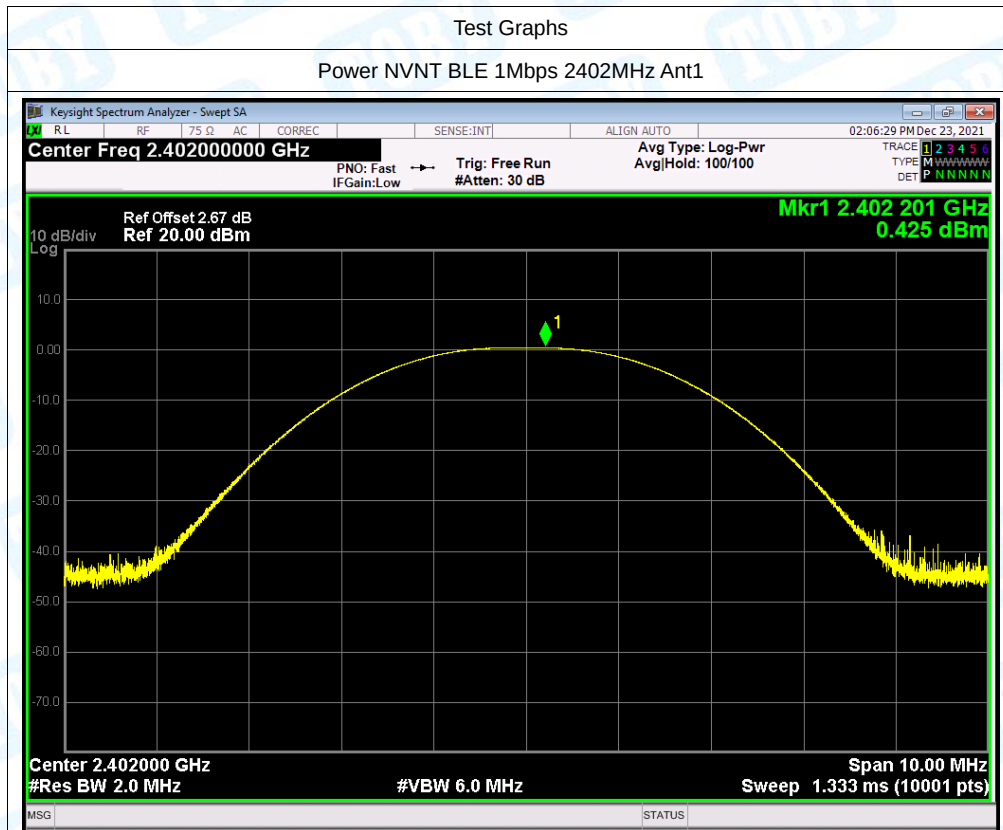


Duty Cycle NVNT BLE 2Mbps 2480MHz Ant1

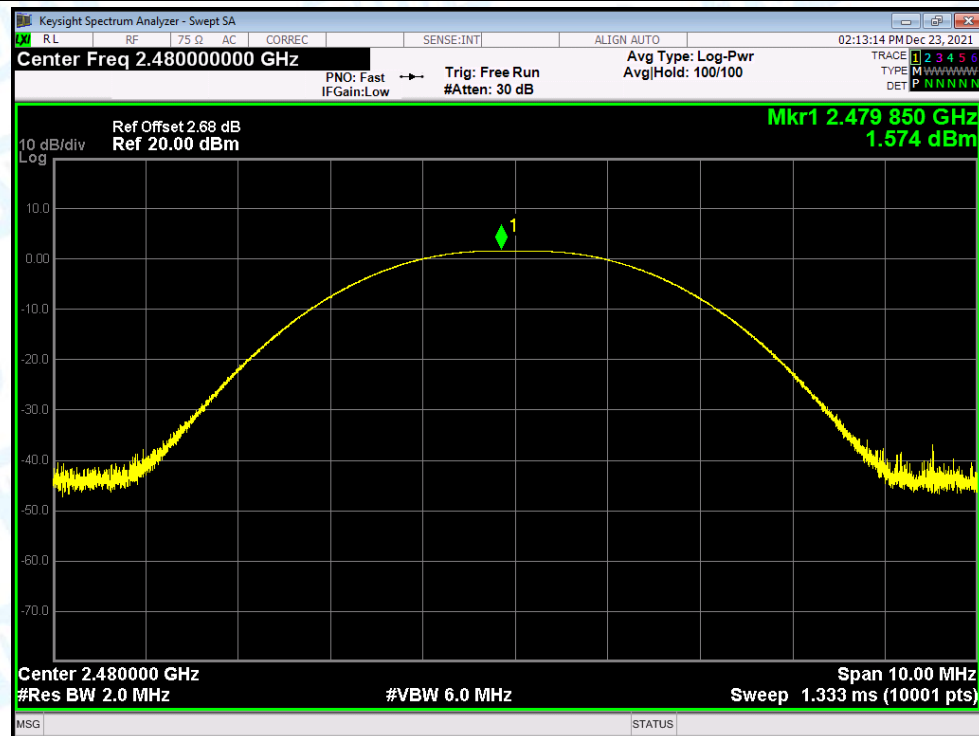


2.Maximum Conducted Output Power

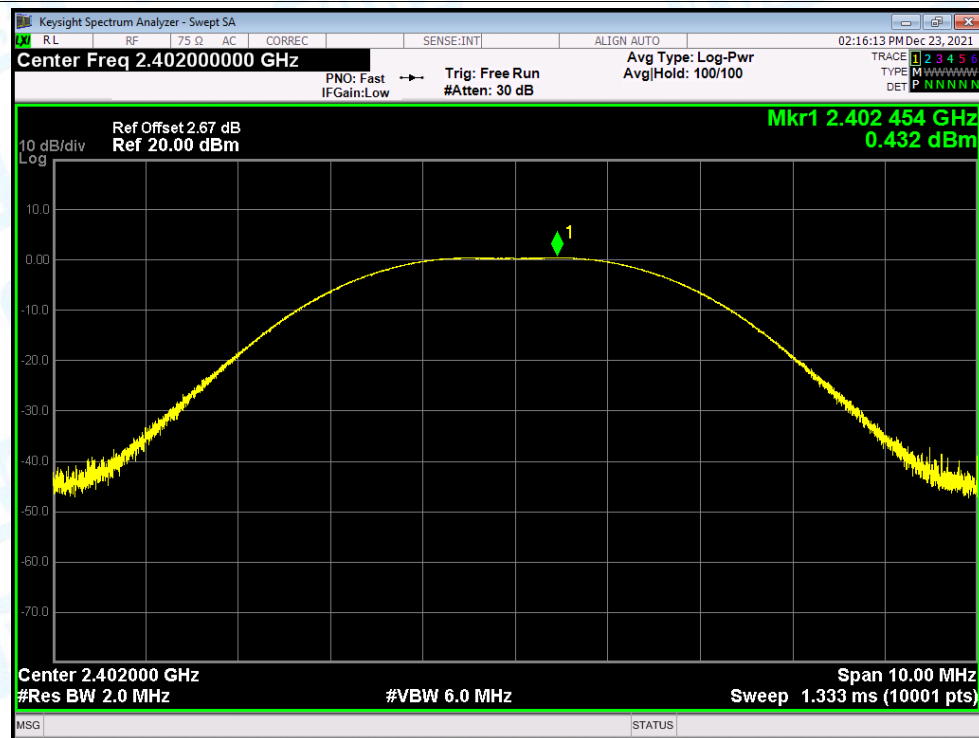
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.425	0	0.425	30	Pass
NVNT	BLE 1Mbps	2442	Ant1	1.18	0	1.18	30	Pass
NVNT	BLE 1Mbps	2480	Ant1	1.574	0	1.574	30	Pass
NVNT	BLE 2Mbps	2402	Ant1	0.432	0	0.432	30	Pass
NVNT	BLE 2Mbps	2442	Ant1	1.177	0	1.177	30	Pass
NVNT	BLE 2Mbps	2480	Ant1	1.63	0	1.63	30	Pass



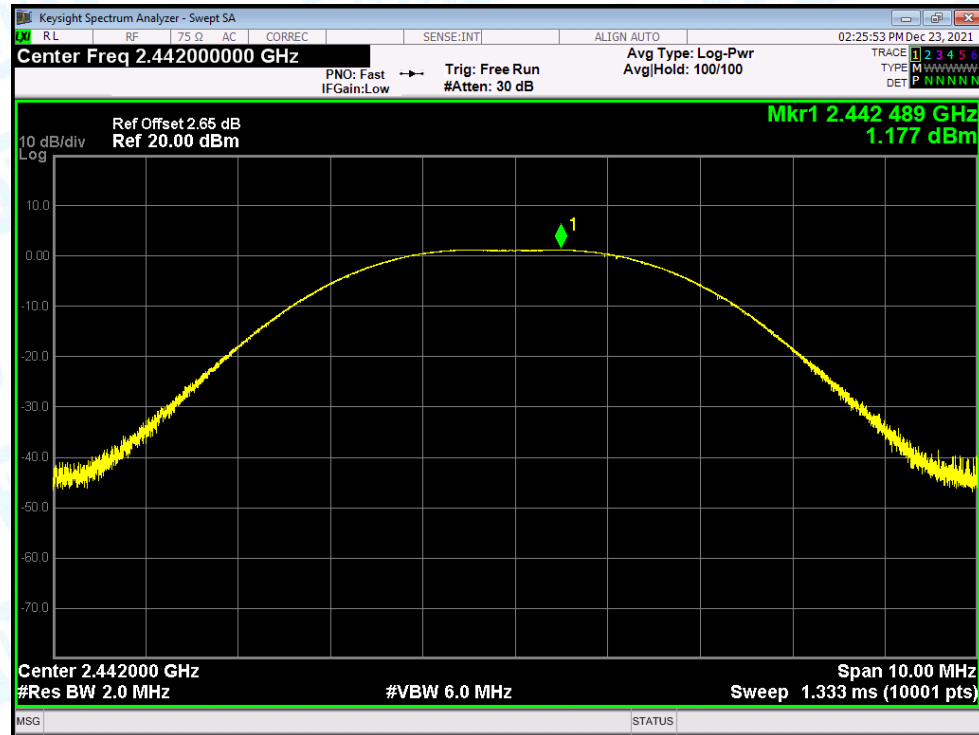
Power NVNT BLE 1Mbps 2480MHz Ant1



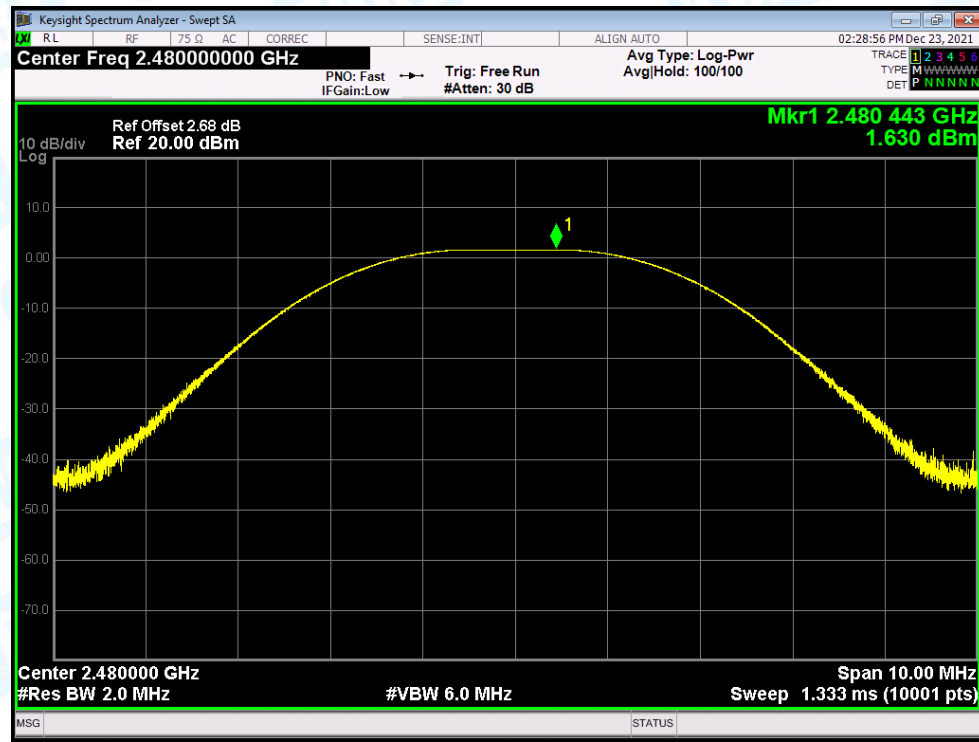
Power NVNT BLE 2Mbps 2402MHz Ant1



Power NVNT BLE 2Mbps 2442MHz Ant1



Power NVNT BLE 2Mbps 2480MHz Ant1

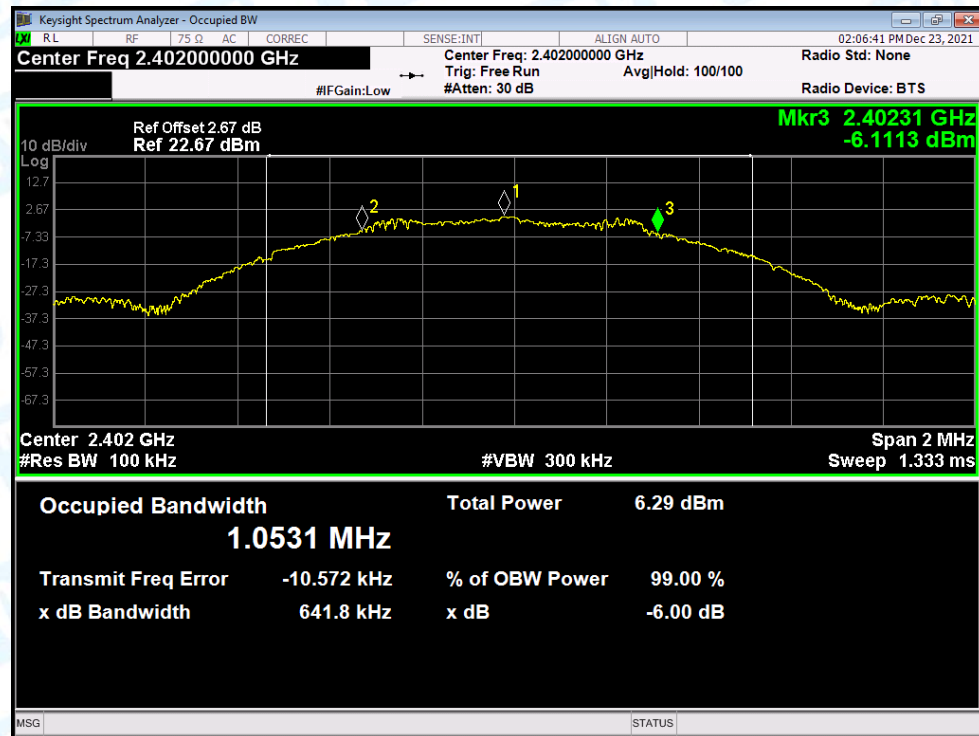


3.-6dB Bandwidth

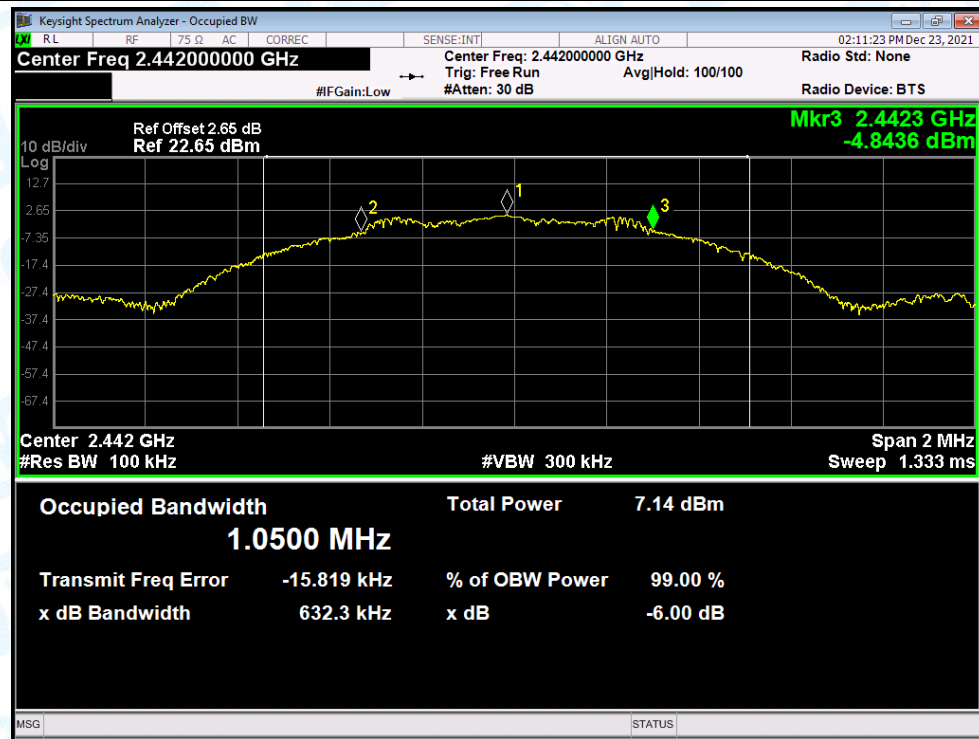
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.6418	0.5	Pass
NVNT	BLE 1Mbps	2442	Ant1	0.6323	0.5	Pass
NVNT	BLE 1Mbps	2480	Ant1	0.6514	0.5	Pass
NVNT	BLE 2Mbps	2402	Ant1	1.120	0.5	Pass
NVNT	BLE 2Mbps	2442	Ant1	1.060	0.5	Pass
NVNT	BLE 2Mbps	2480	Ant1	1.101	0.5	Pass

Test Graphs

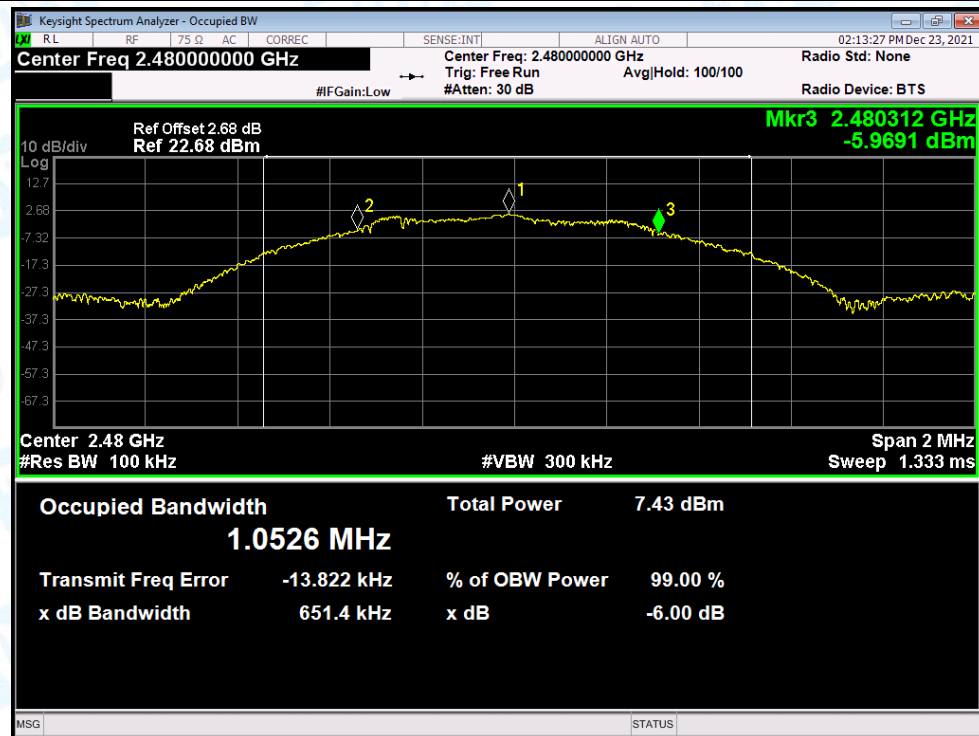
-6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1



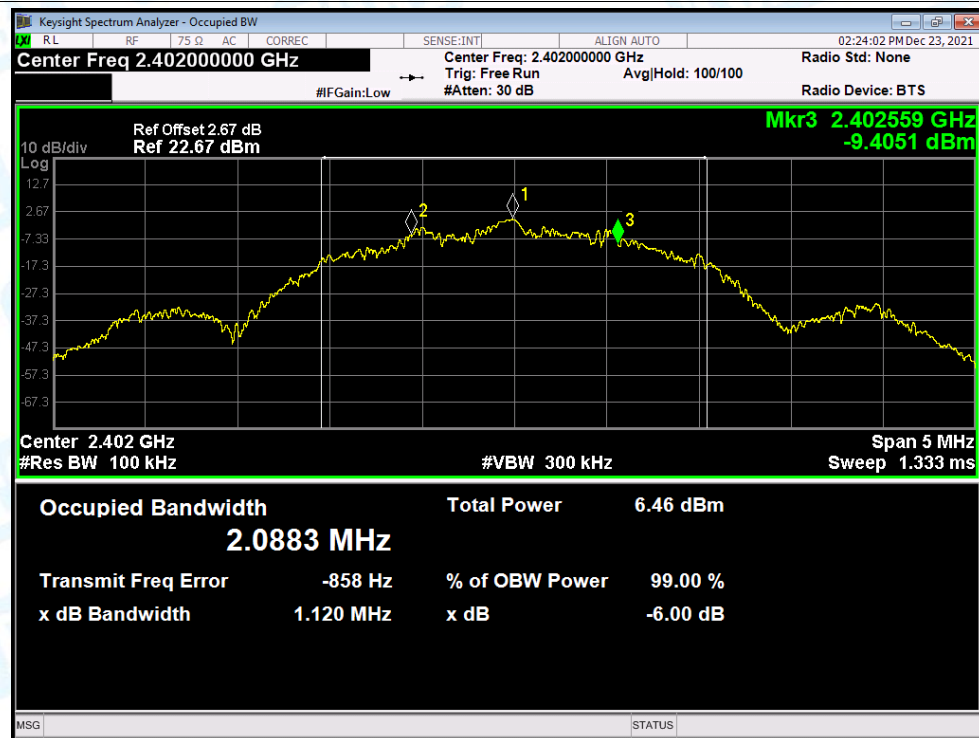
-6dB Bandwidth NVNT BLE 1Mbps 2442MHz Ant1



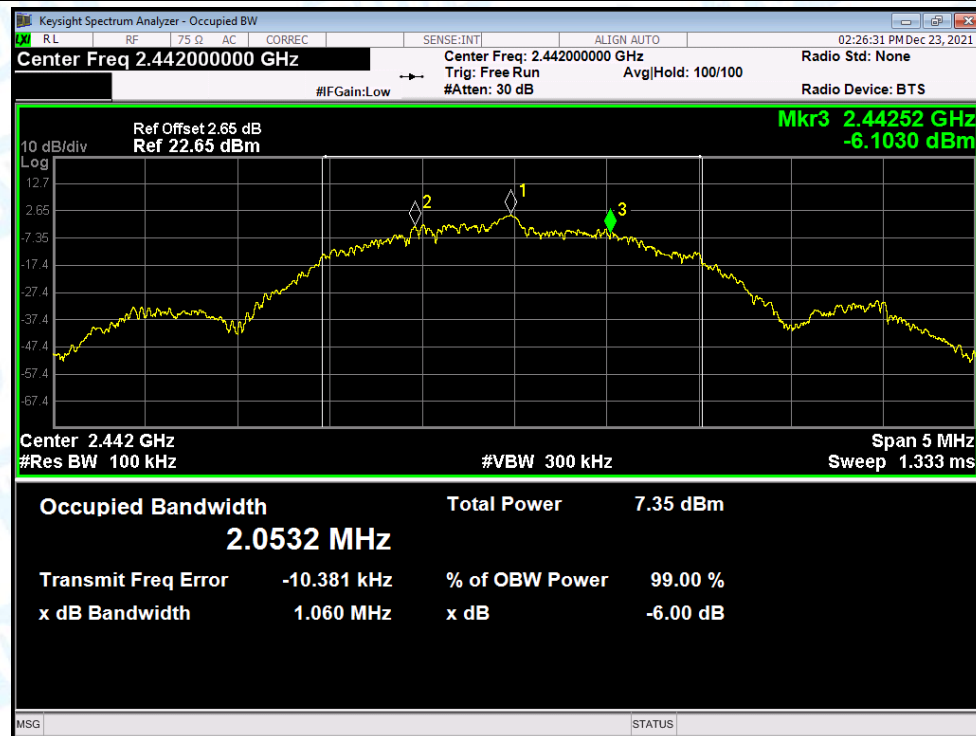
-6dB Bandwidth NVNT BLE 1Mbps 2480MHz Ant1



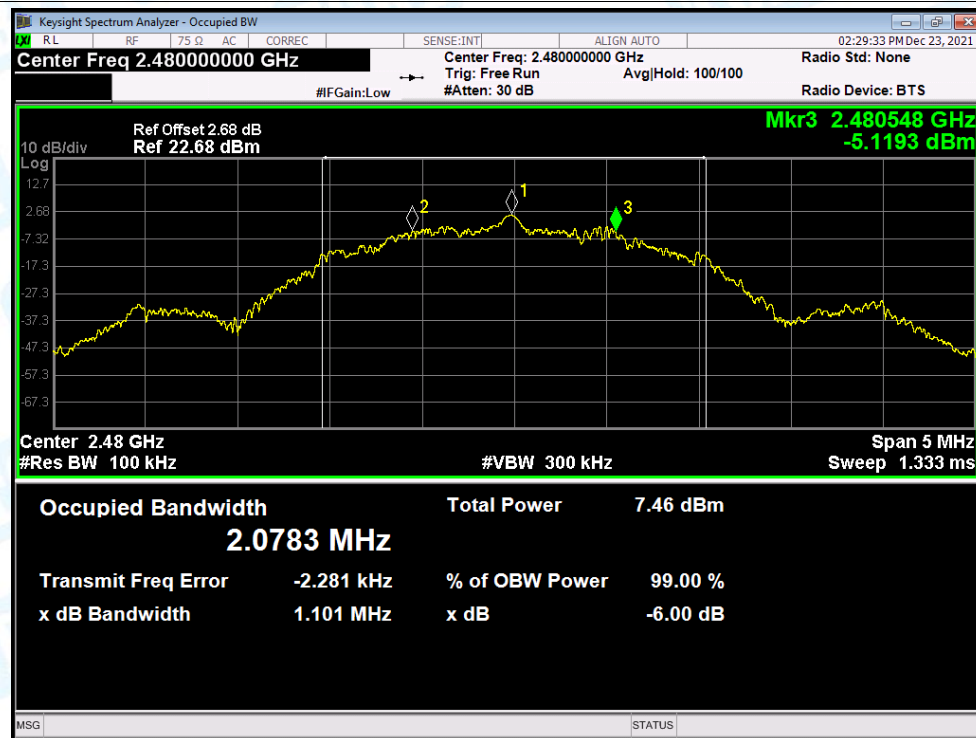
-6dB Bandwidth NVNT BLE 2Mbps 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2Mbps 2442MHz Ant1

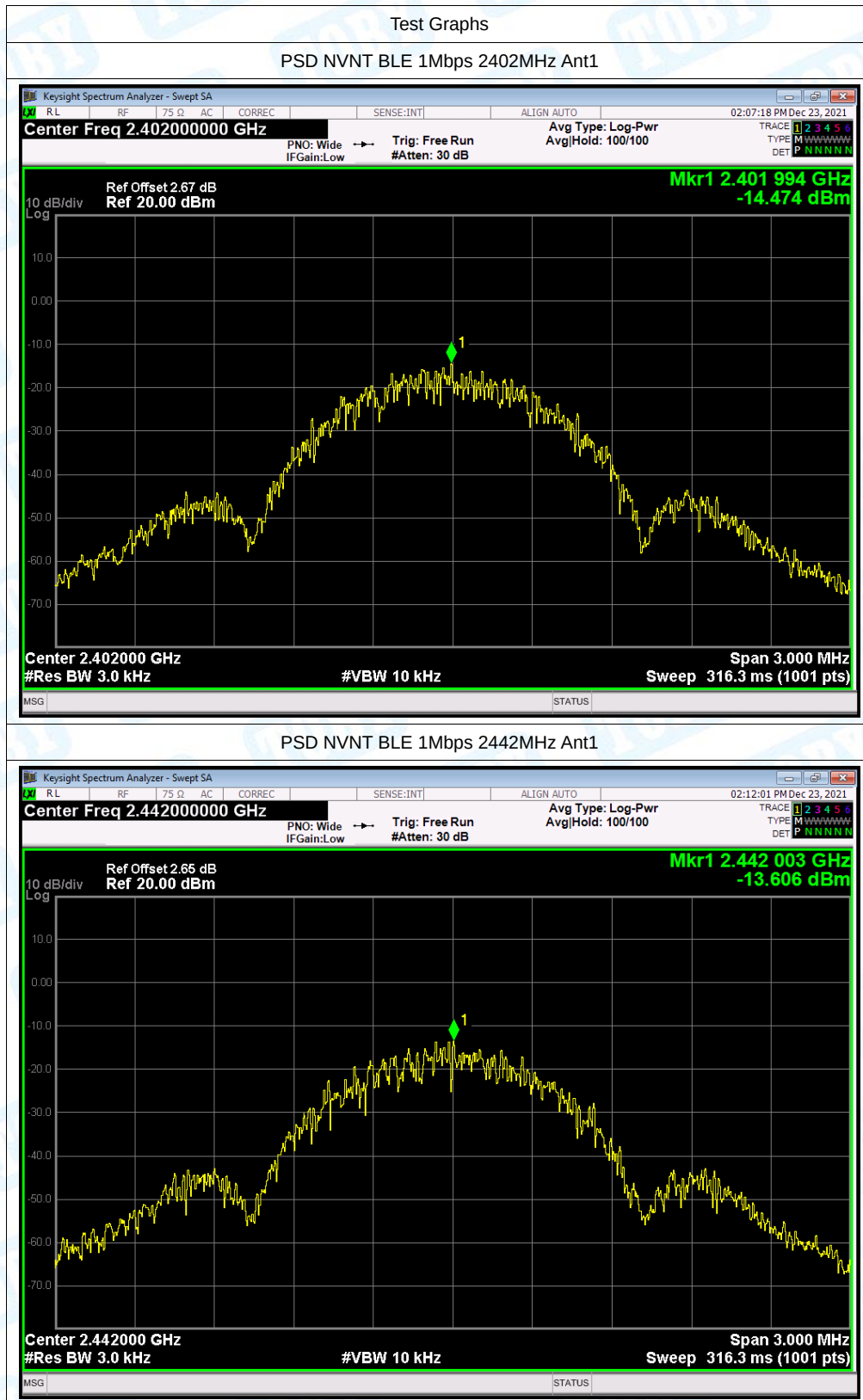


-6dB Bandwidth NVNT BLE 2Mbps 2480MHz Ant1

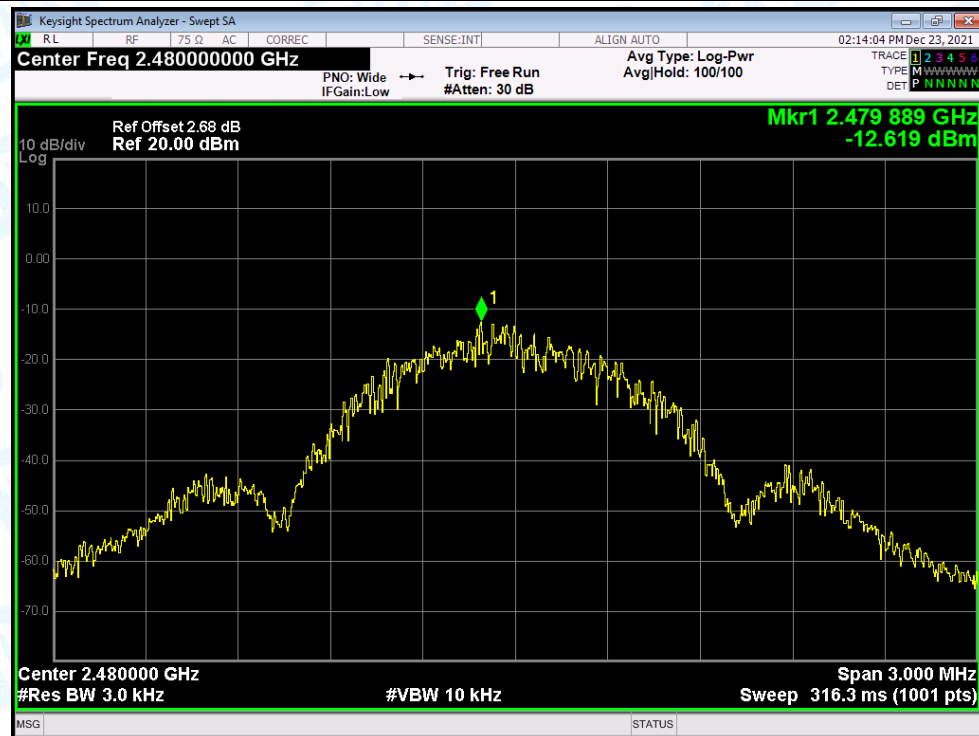


4.Maximum Power Spectral Density Level

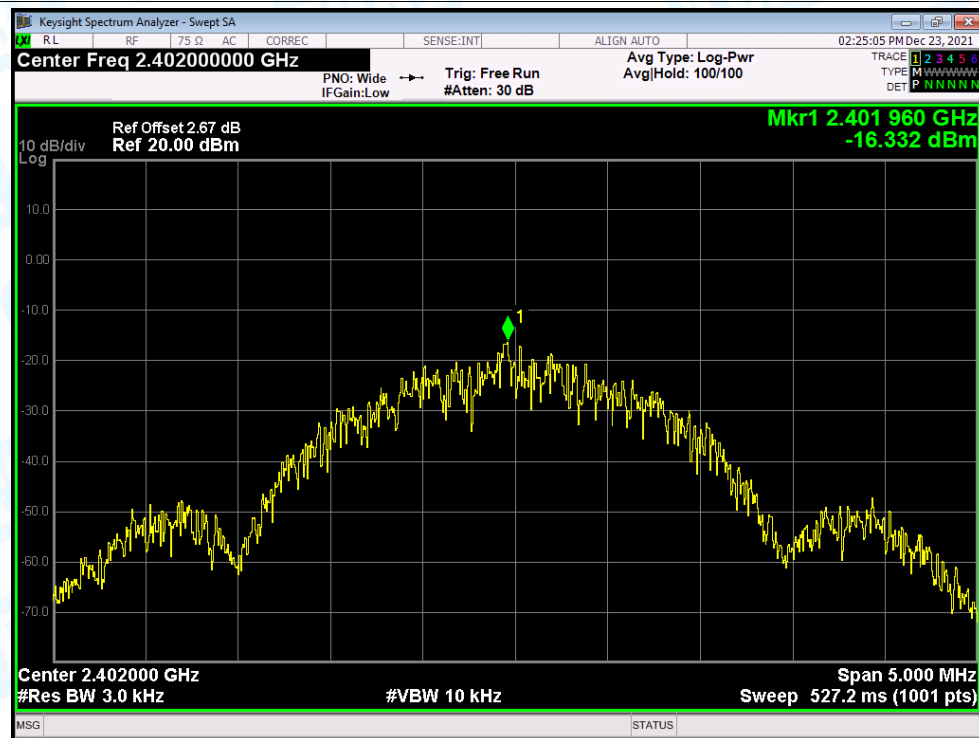
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm3kHz)	Limit (dBm3kHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-14.474	8	Pass
NVNT	BLE 1Mbps	2442	Ant1	-13.606	8	Pass
NVNT	BLE 1Mbps	2480	Ant1	-12.619	8	Pass
NVNT	BLE 2Mbps	2402	Ant1	-16.332	8	Pass
NVNT	BLE 2Mbps	2442	Ant1	-14.251	8	Pass
NVNT	BLE 2Mbps	2480	Ant1	-14.494	8	Pass



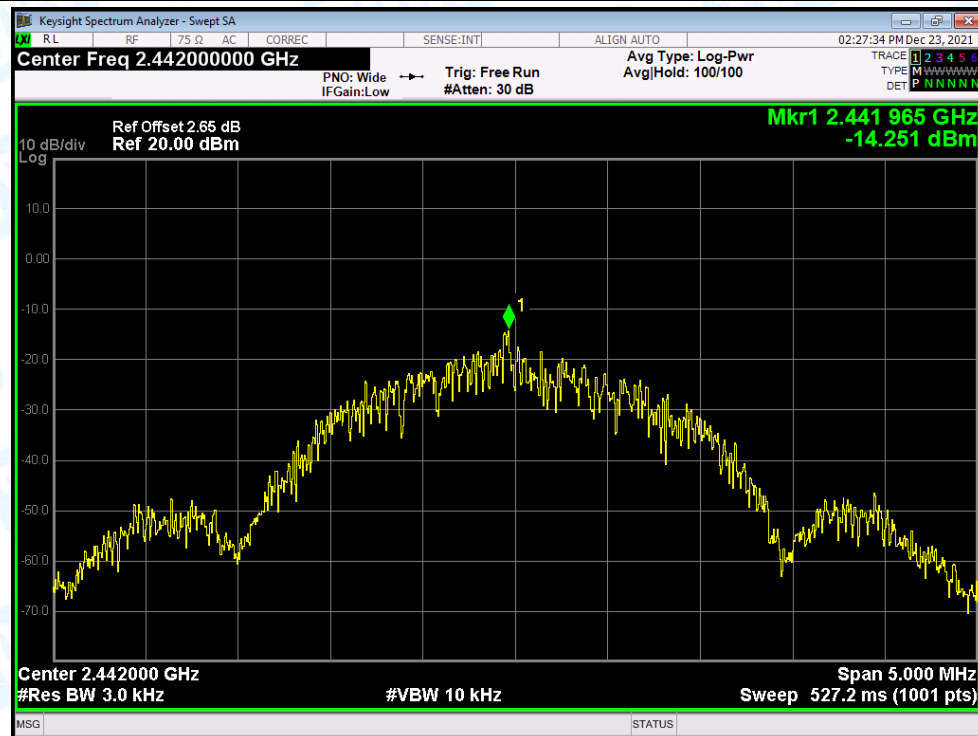
PSD NVNT BLE 1Mbps 2480MHz Ant1



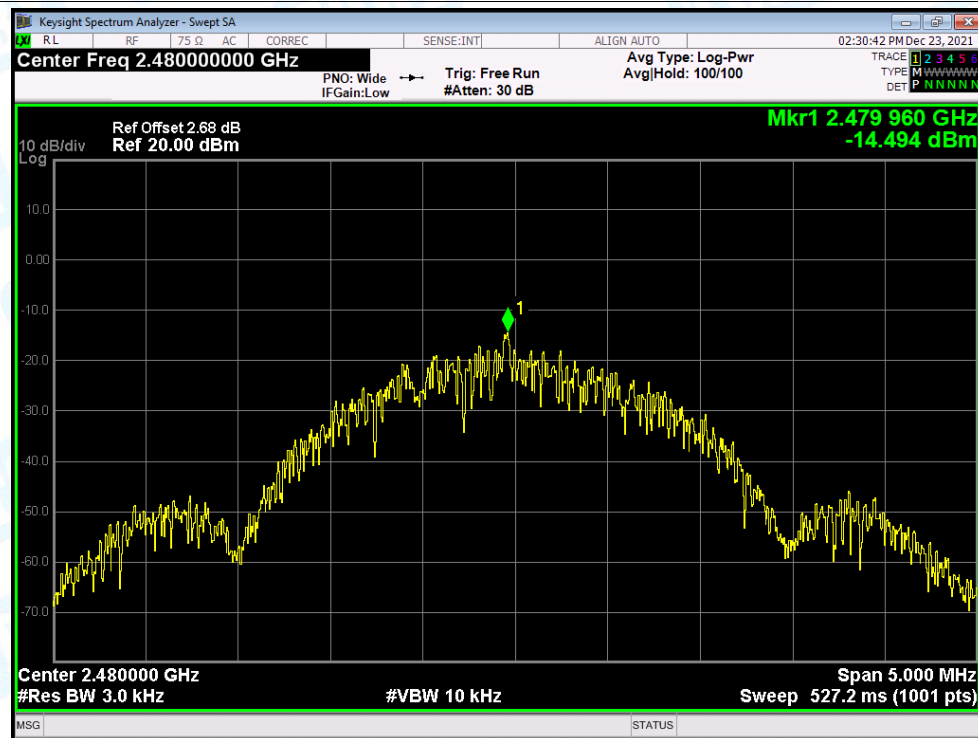
PSD NVNT BLE 2Mbps 2402MHz Ant1



PSD NVNT BLE 2Mbps 2442MHz Ant1



PSD NVNT BLE 2Mbps 2480MHz Ant1

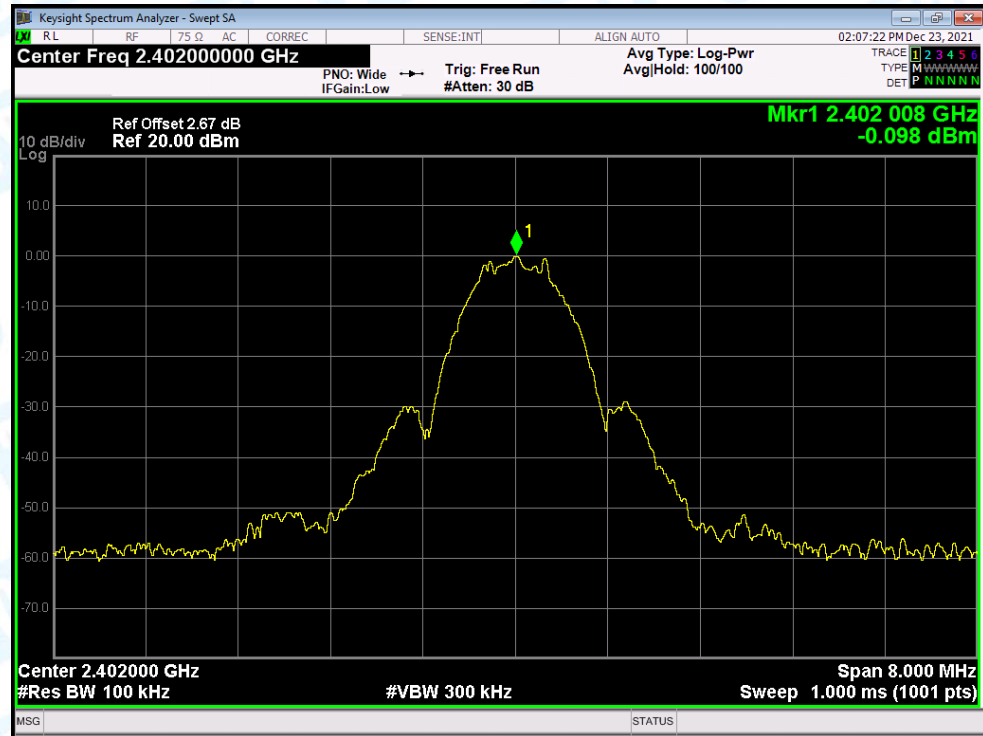


5.Band Edge

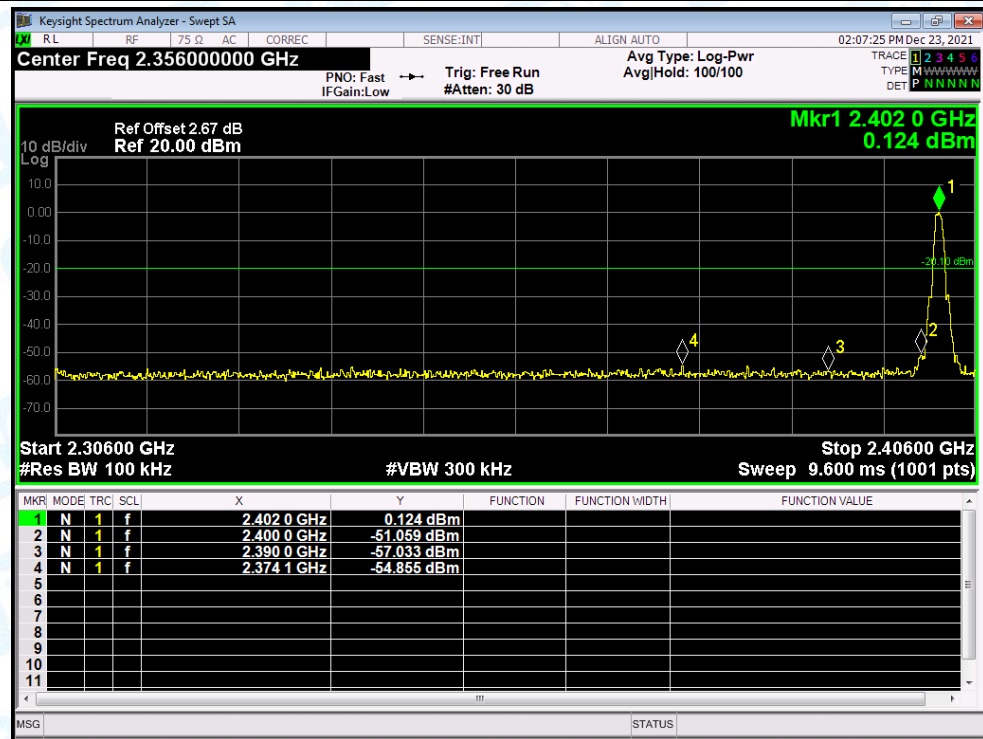
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-54.76	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-56.09	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-54.79	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-56.22	-20	Pass

Test Graphs

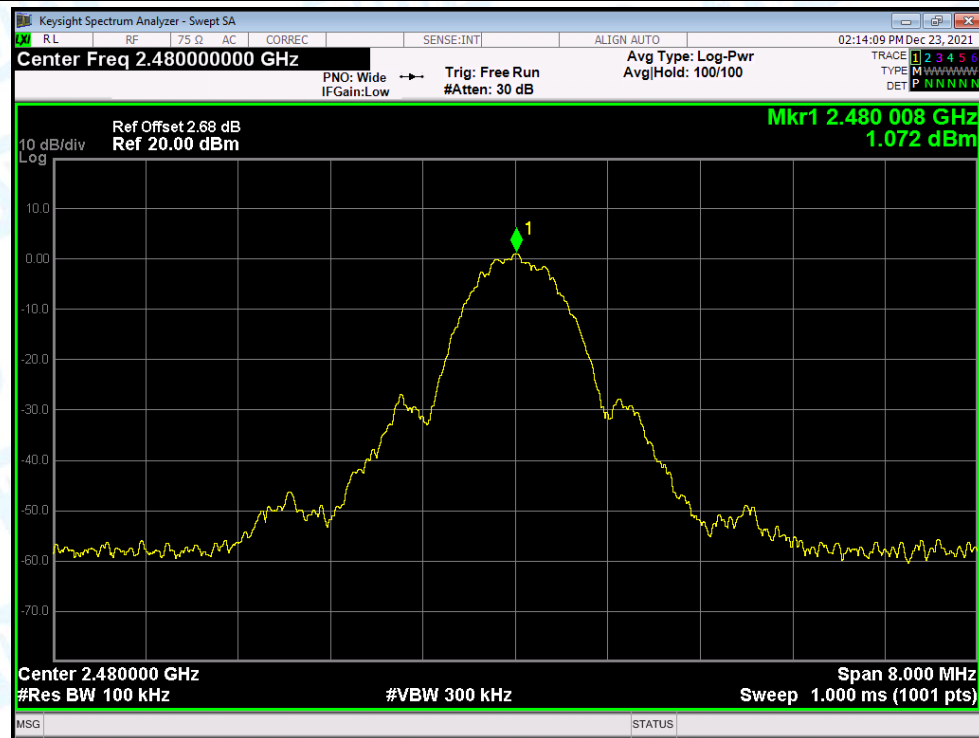
Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Ref



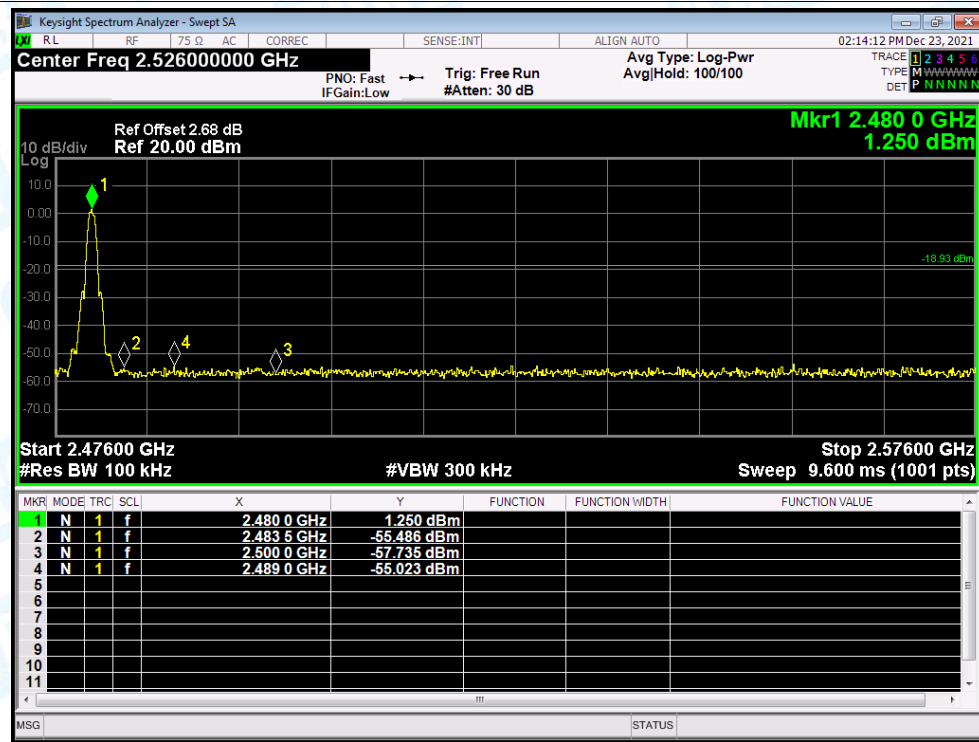
Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Emission



Band Edge NVNT BLE 1Mbps 2480MHz Ant1 Ref



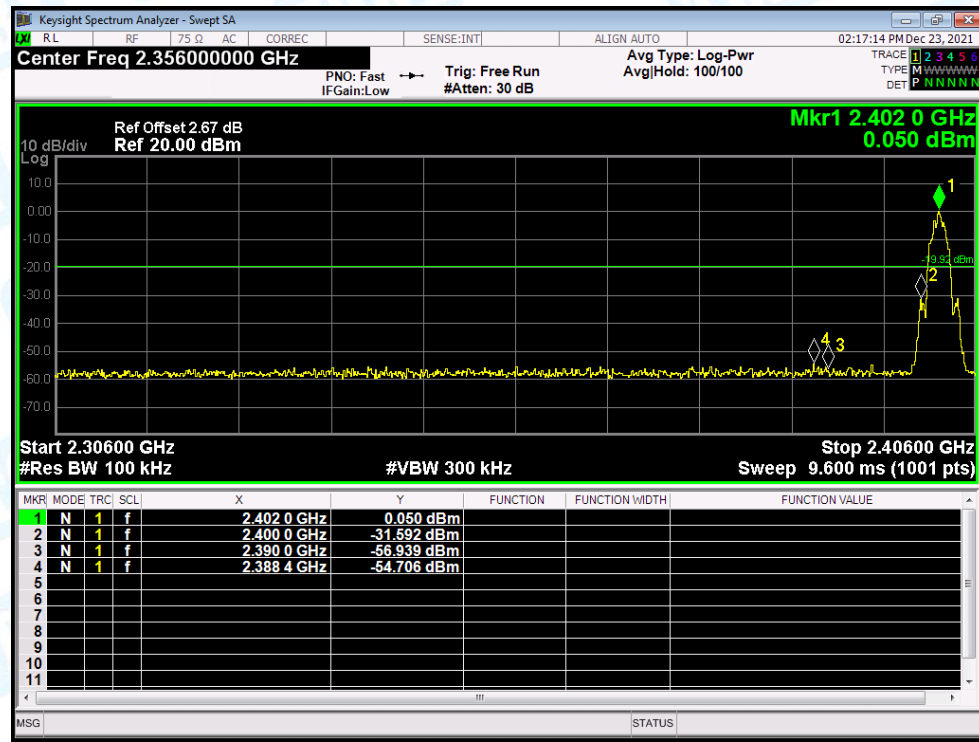
Band Edge NVNT BLE 1Mbps 2480MHz Ant1 Emission



Band Edge NVNT BLE 2Mbps 2402MHz Ant1 Ref



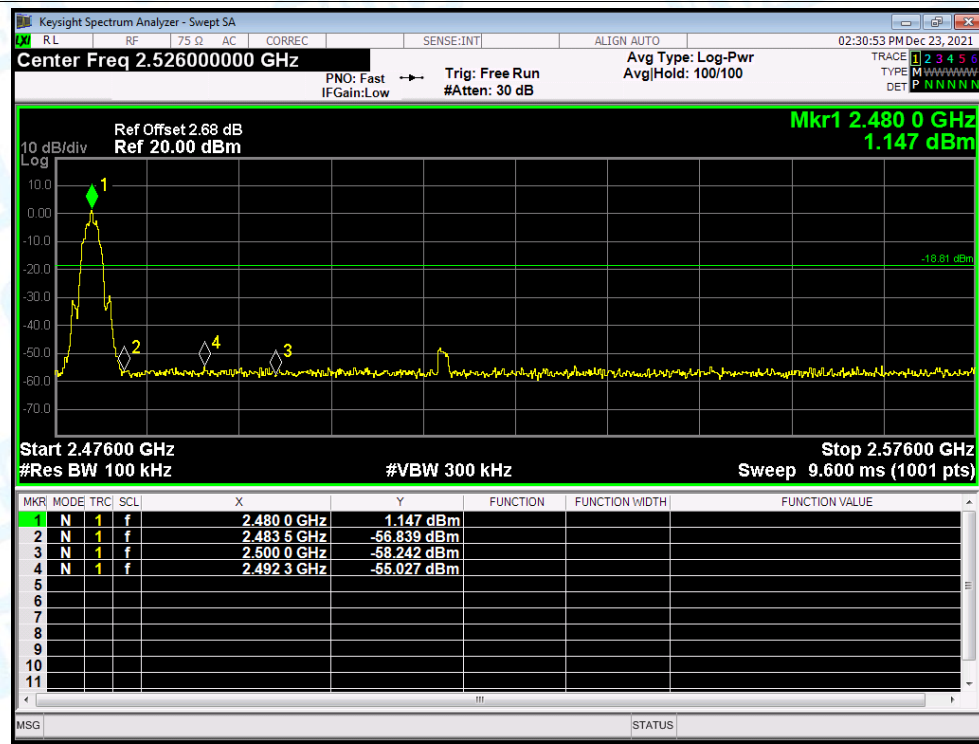
Band Edge NVNT BLE 2Mbps 2402MHz Ant1 Emission



Band Edge NVNT BLE 2Mbps 2480MHz Ant1 Ref



Band Edge NVNT BLE 2Mbps 2480MHz Ant1 Emission

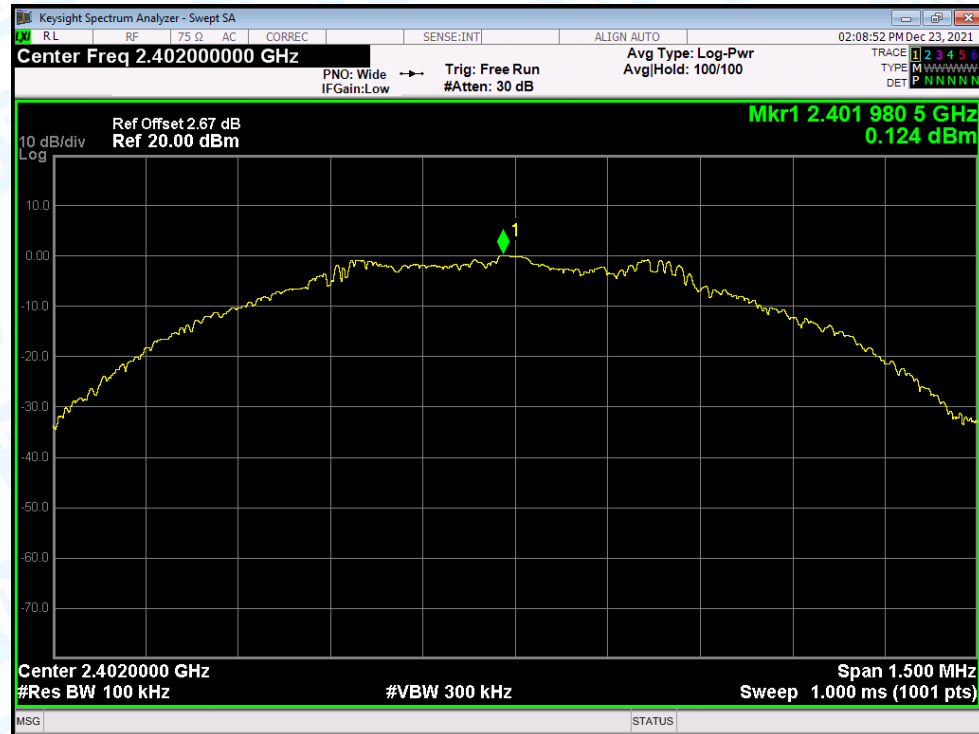


6. Conducted RF Spurious Emission

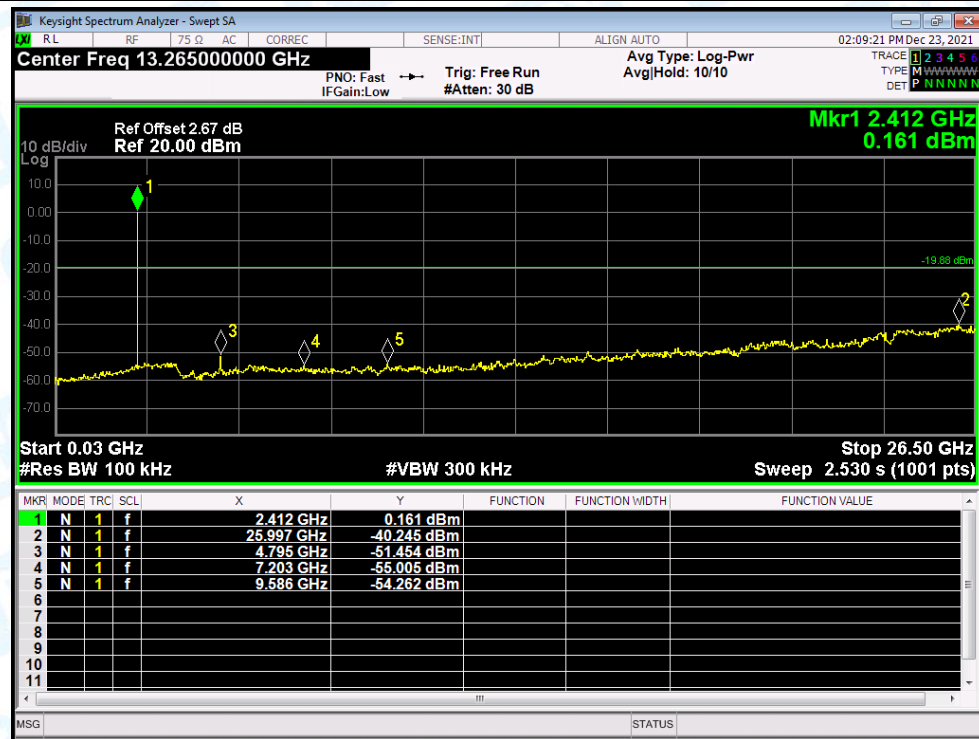
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-40.37	-20	Pass
NVNT	BLE 1Mbps	2442	Ant1	-40.11	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-41.07	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-40.66	-20	Pass
NVNT	BLE 2Mbps	2442	Ant1	-40.17	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-41.23	-20	Pass

Test Graphs

Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Ref



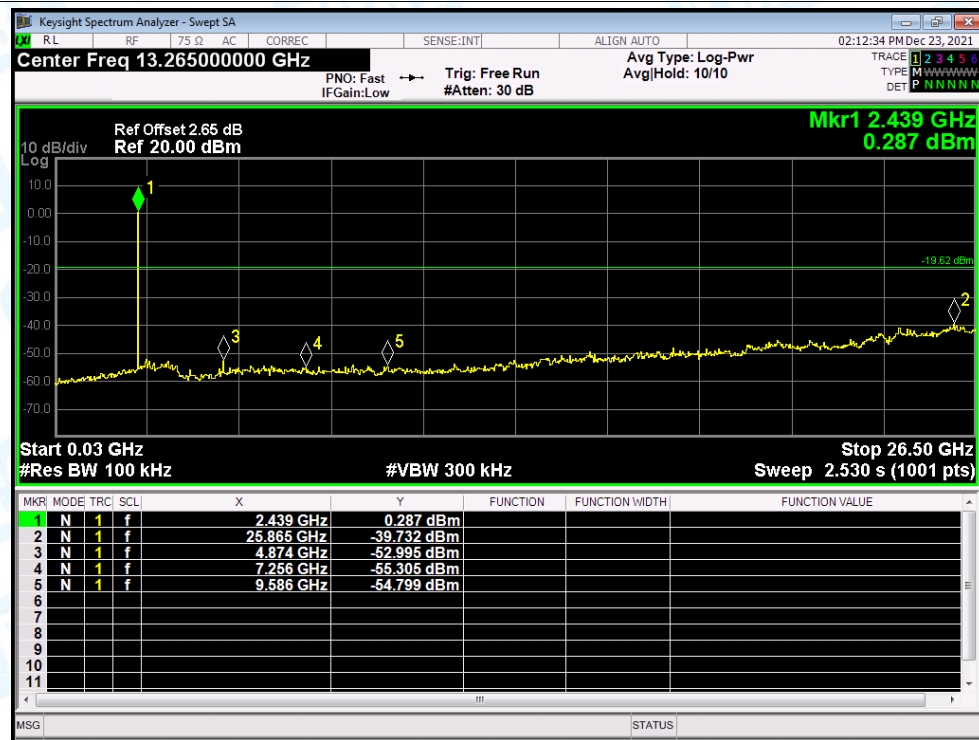
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 1Mbps 2442MHz Ant1 Ref



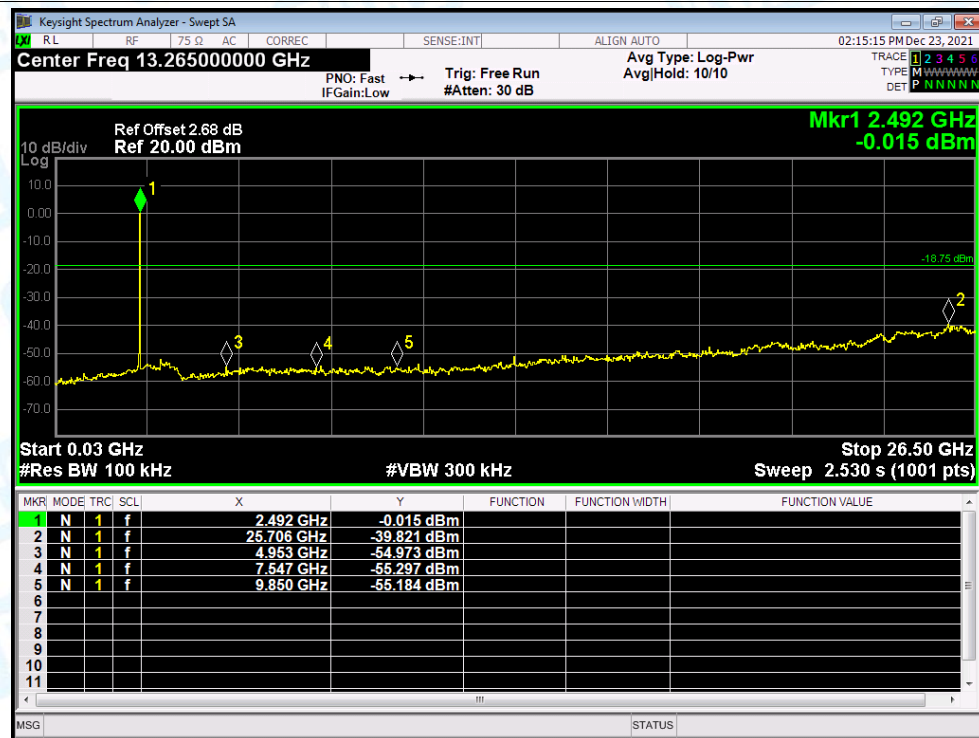
Tx. Spurious NVNT BLE 1Mbps 2442MHz Ant1 Emission



Tx. Spurious NVNT BLE 1Mbps 2480MHz Ant1 Ref



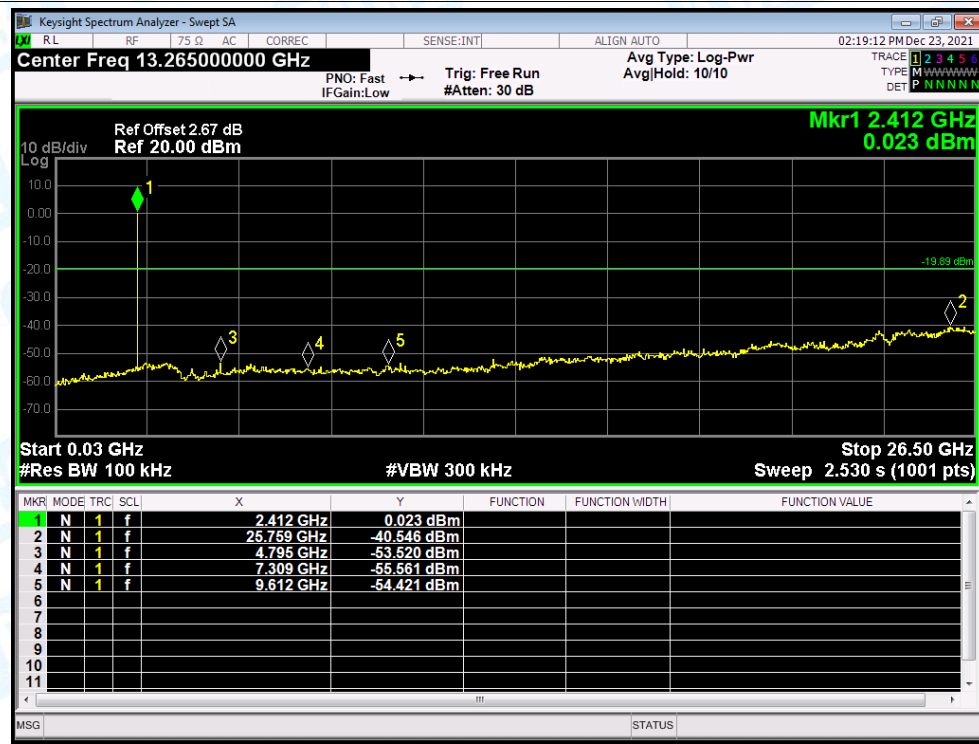
Tx. Spurious NVNT BLE 1Mbps 2480MHz Ant1 Emission



Tx. Spurious NVNT BLE 2Mbps 2402MHz Ant1 Ref



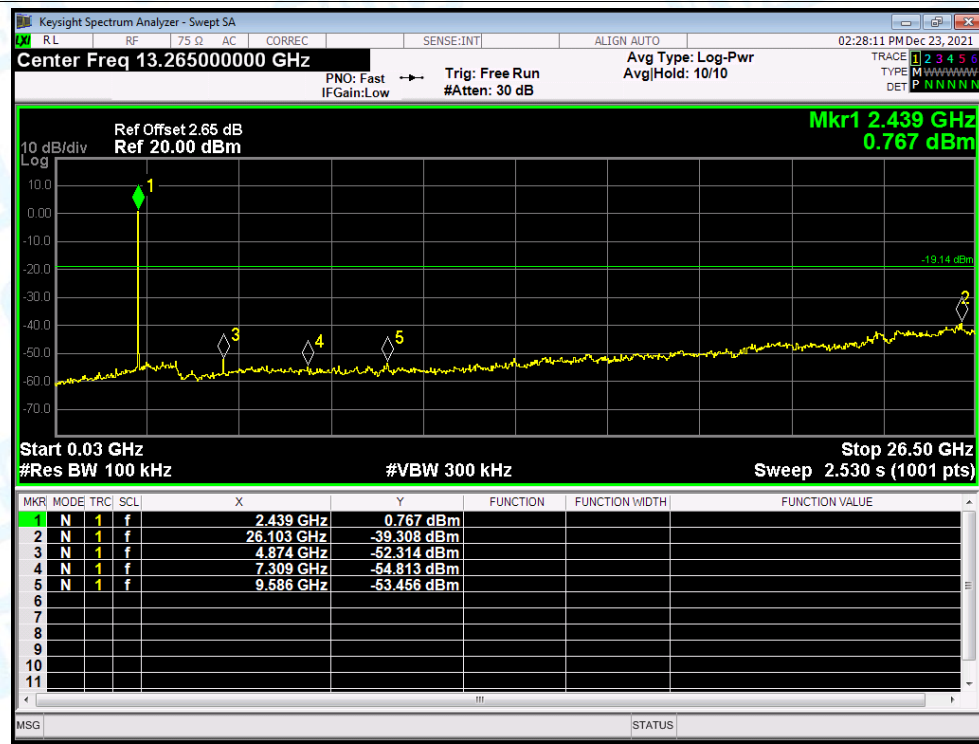
Tx. Spurious NVNT BLE 2Mbps 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 2Mbps 2442MHz Ant1 Ref



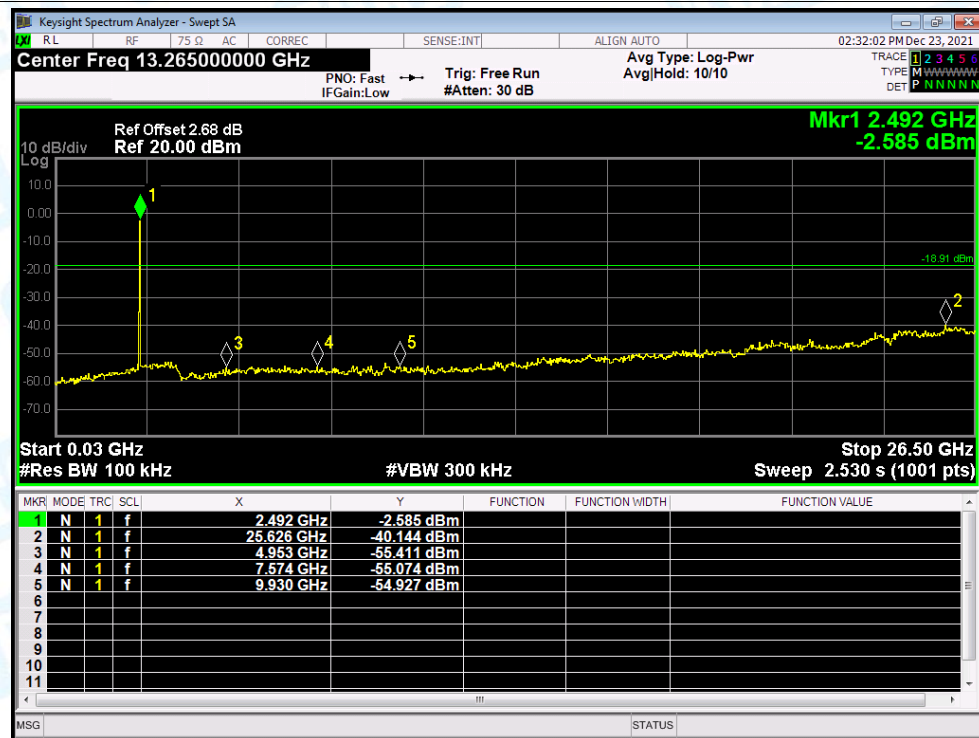
Tx. Spurious NVNT BLE 2Mbps 2442MHz Ant1 Emission



Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Emission



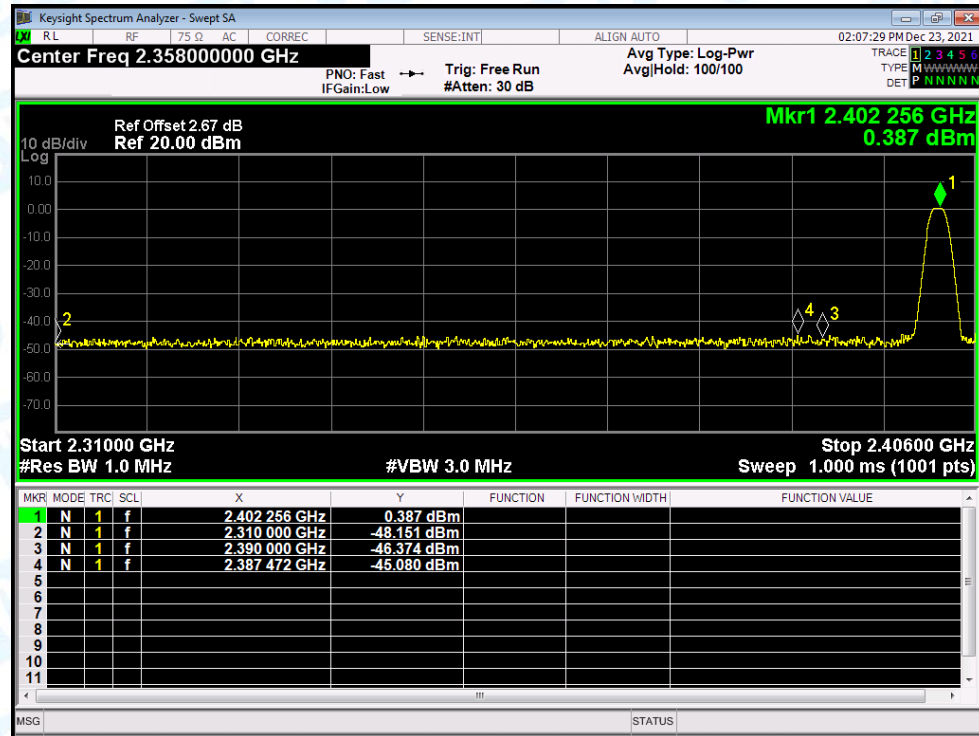
7.Restrict Band

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	-48.15	2	49.11	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2310	-58.25	2	39.01	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2387.472	-45.08	2	52.18	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2382.768	-57.64	2	39.62	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-46.72	2	50.54	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-57.65	2	39.61	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-44.68	2	52.58	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-56.74	2	40.52	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.728	-41.41	2	55.85	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.512	-56.74	2	40.52	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-47.02	2	50.24	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-57.02	2	40.24	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-46.89	2	50.37	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-58.22	2	39.04	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2364.912	-44.38	2	52.88	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2388.048	-57.64	2	39.62	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-47.19	2	50.07	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-57.68	2	39.58	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-42.92	2	54.34	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-56.17	2	41.09	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2484.16	-42.47	2	54.79	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.512	-56.17	2	41.09	Average	54	Pass

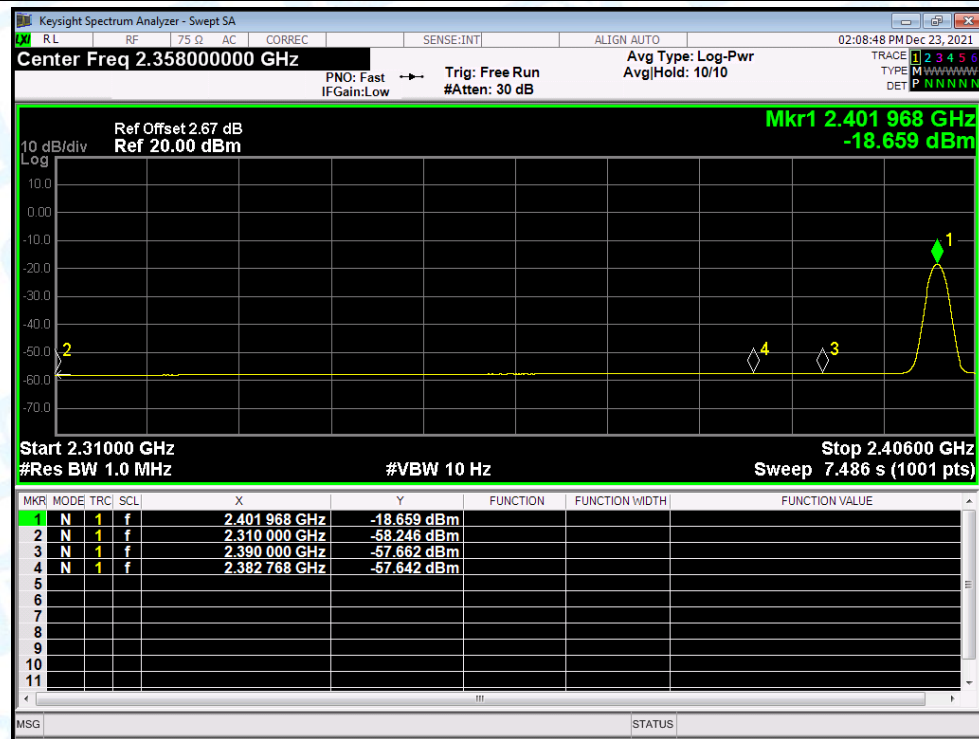
NVNT	BLE 2Mbps	2480	Ant1	2500	-47.22	2	50.04	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2500	-57	2	40.26	Average	54	Pass

Test Graphs

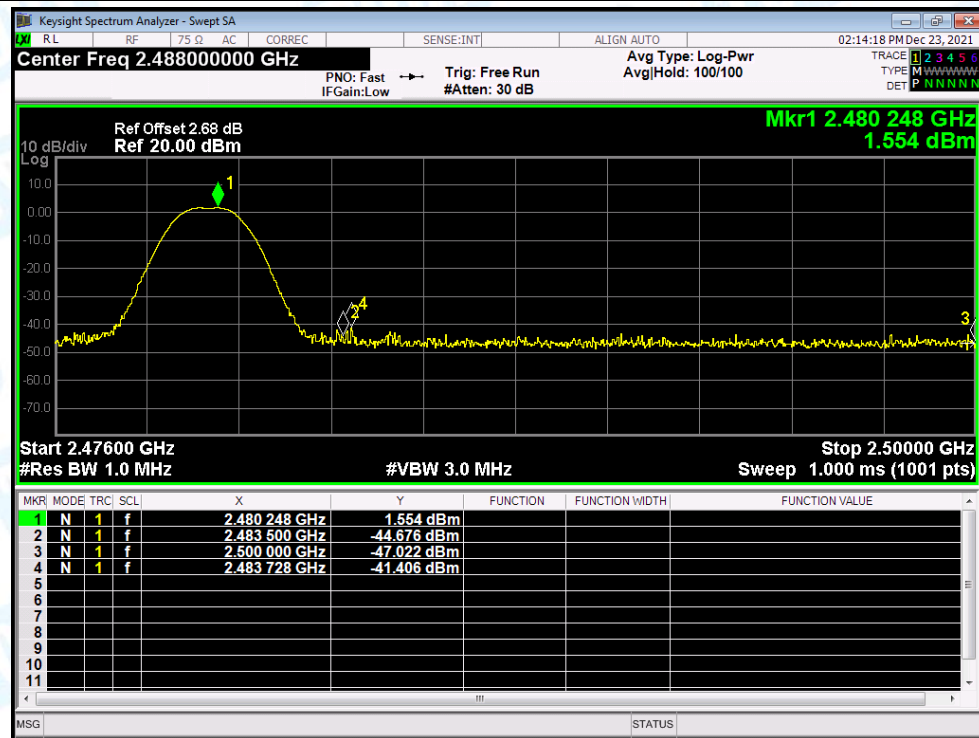
Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Peak



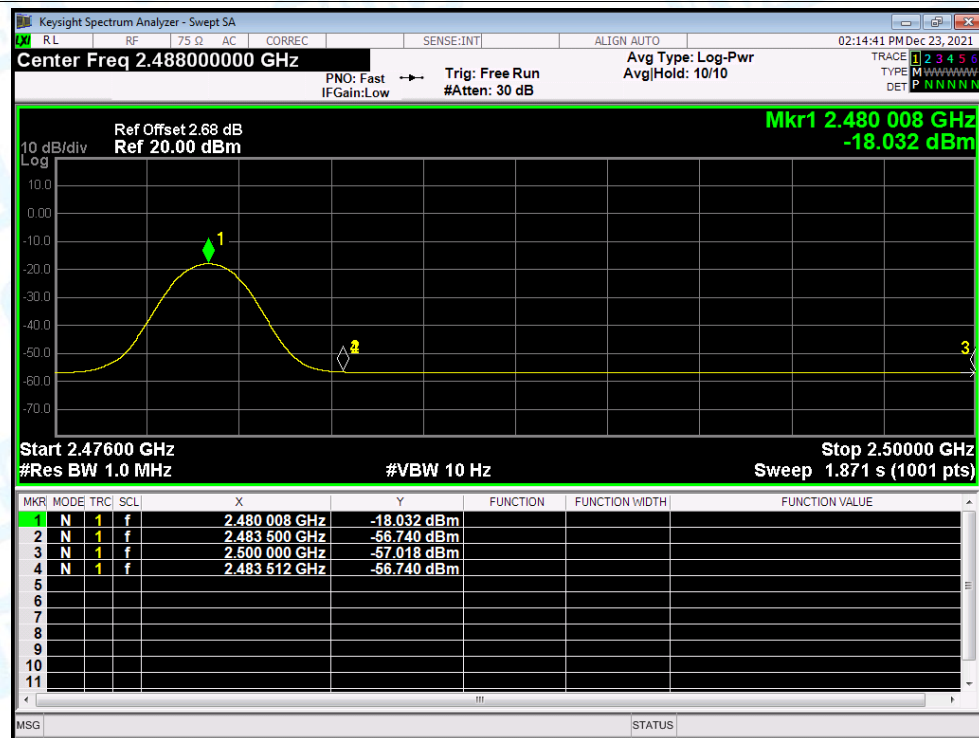
Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Average



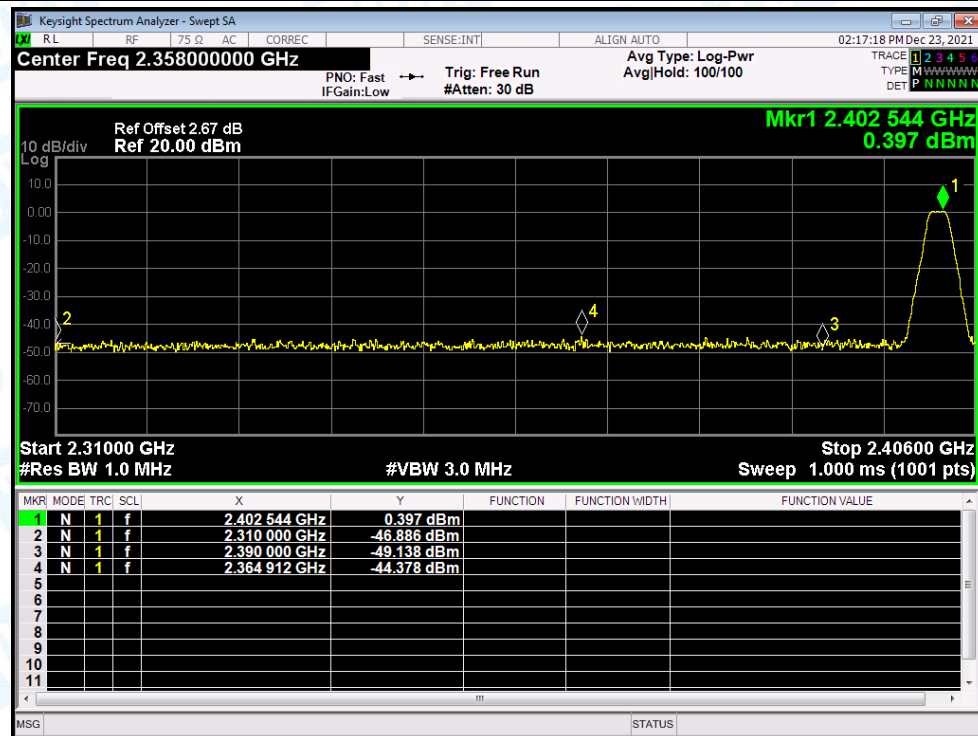
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Peak



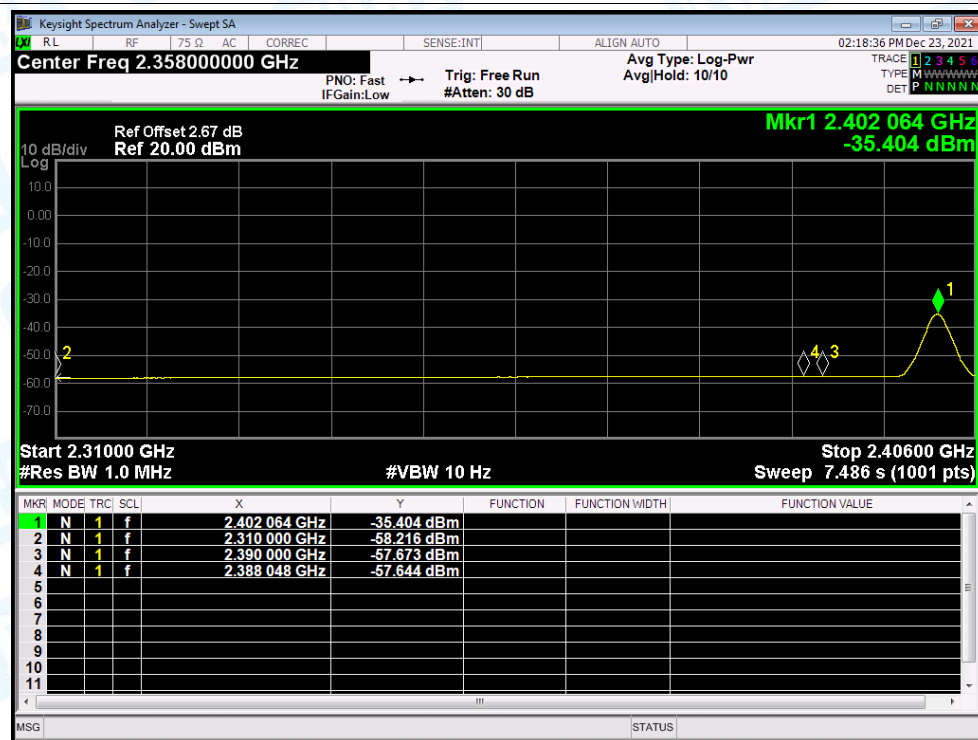
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Average



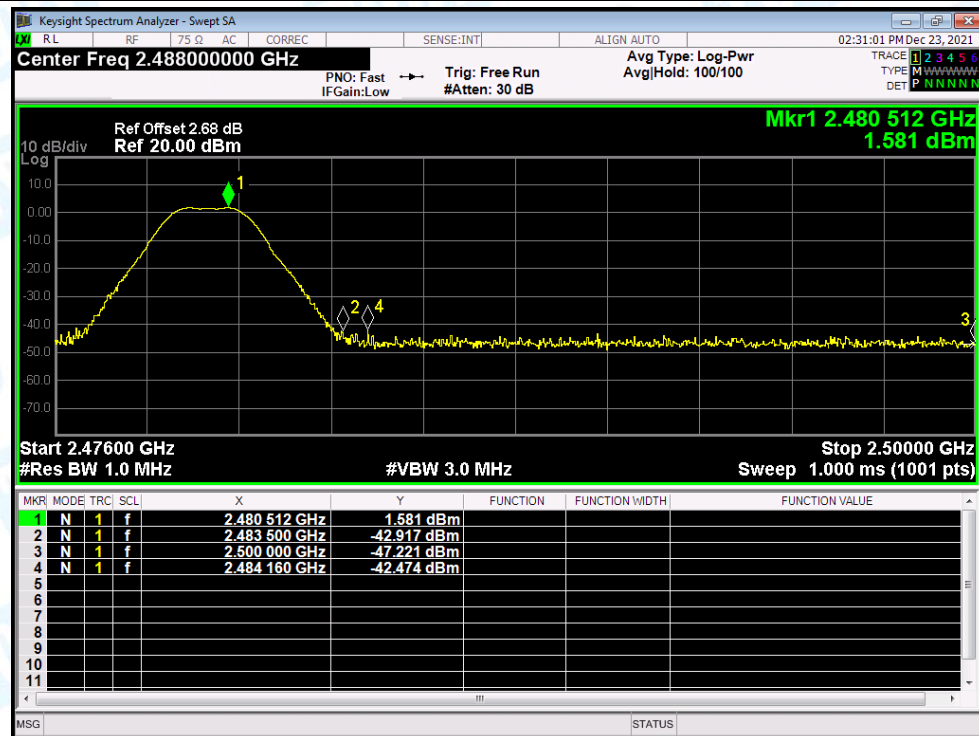
Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Peak



Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Average



Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Peak



Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Average

