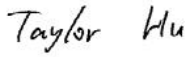
Appendix F for BT Test Data

Product Name: BT Magic Bluetooth Module

Test Model: BT Magic

Environmental Conditions

Temperature:	23.5° C
Relative Humidity:	53.6%
ATM Pressure:	100.0 kPa
Test Engineer:	 Taylor Hu
Supervised by:	 Li Huan

F.1 RF Output Power

BT LE

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	2.32	20	Pass
NVNT	BLE	2440	2.35	20	Pass
NVNT	BLE	2480	2.92	20	Pass

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVLT	BLE	2402	2.30	20	Pass
NVLT	BLE	2440	2.33	20	Pass
NVLT	BLE	2480	2.82	20	Pass

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVHT	BLE	2402	2.29	20	Pass
NVHT	BLE	2440	2.25	20	Pass
NVHT	BLE	2480	2.74	20	Pass

BT 2LE

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVNT	BLE	2402	2.14	20	Pass
NVNT	BLE	2440	2.16	20	Pass
NVNT	BLE	2480	2.76	20	Pass

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVLT	BLE	2402	2.06	20	Pass
NVLT	BLE	2440	2.10	20	Pass
NVLT	BLE	2480	2.68	20	Pass

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVHT	BLE	2402	1.99	20	Pass
NVHT	BLE	2440	2.04	20	Pass
NVHT	BLE	2480	2.64	20	Pass

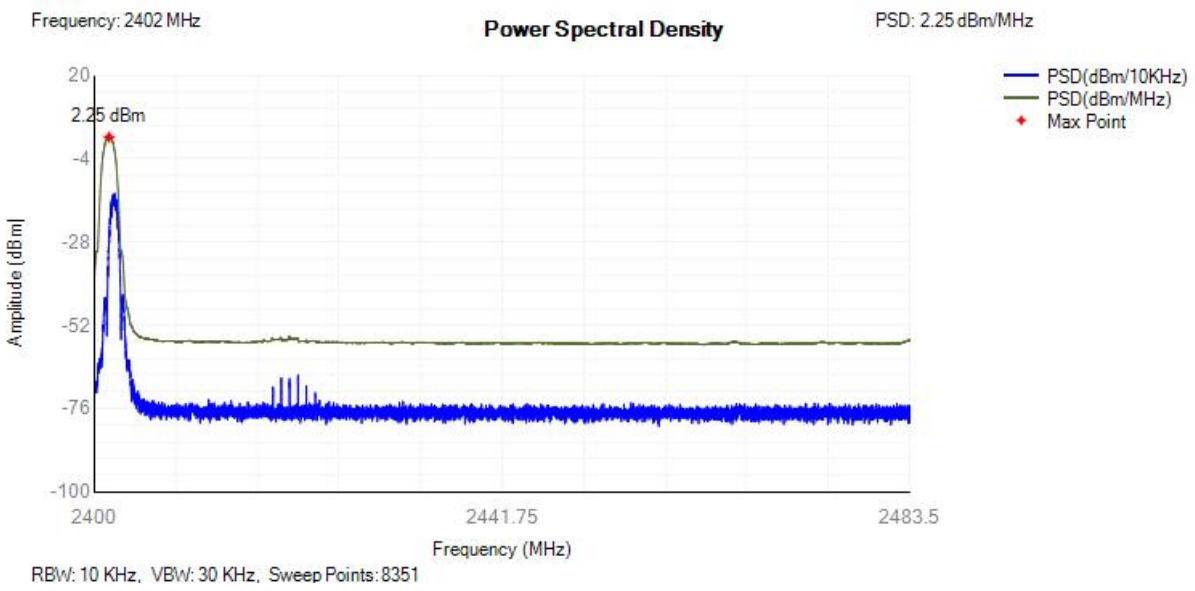
***Note: 20 bursts had been captured for power measurement.

F.2 Power Spectral Density

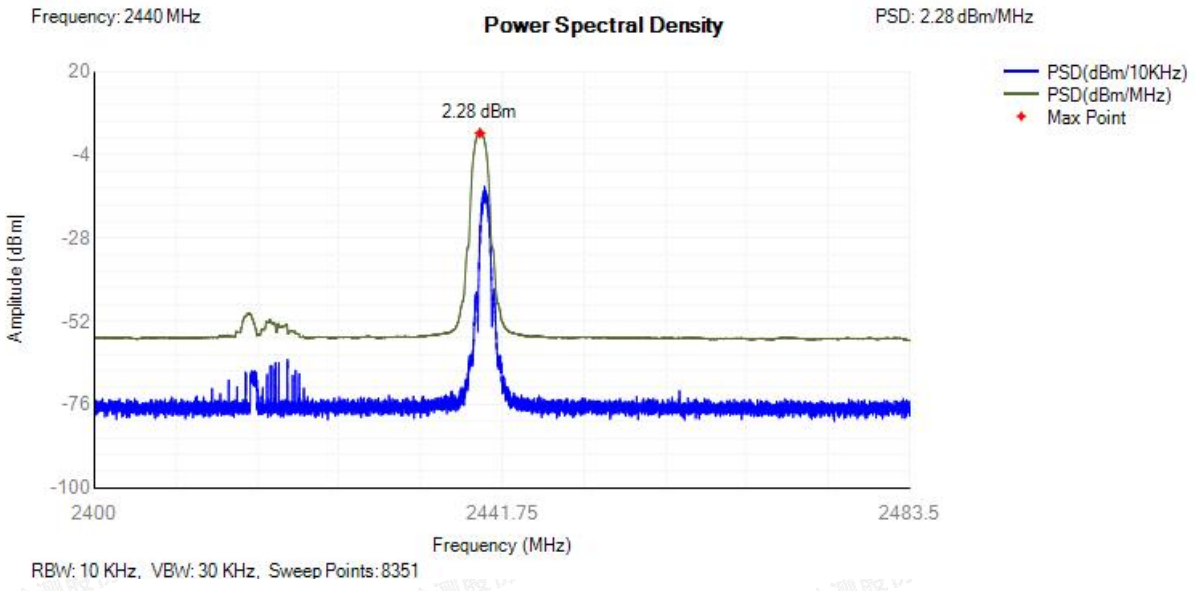
BT LE

Condition	Mode	Frequency (MHz)	Max PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	BLE	2402	2.25	10	Pass
NVNT	BLE	2440	2.28	10	Pass
NVNT	BLE	2480	2.85	10	Pass

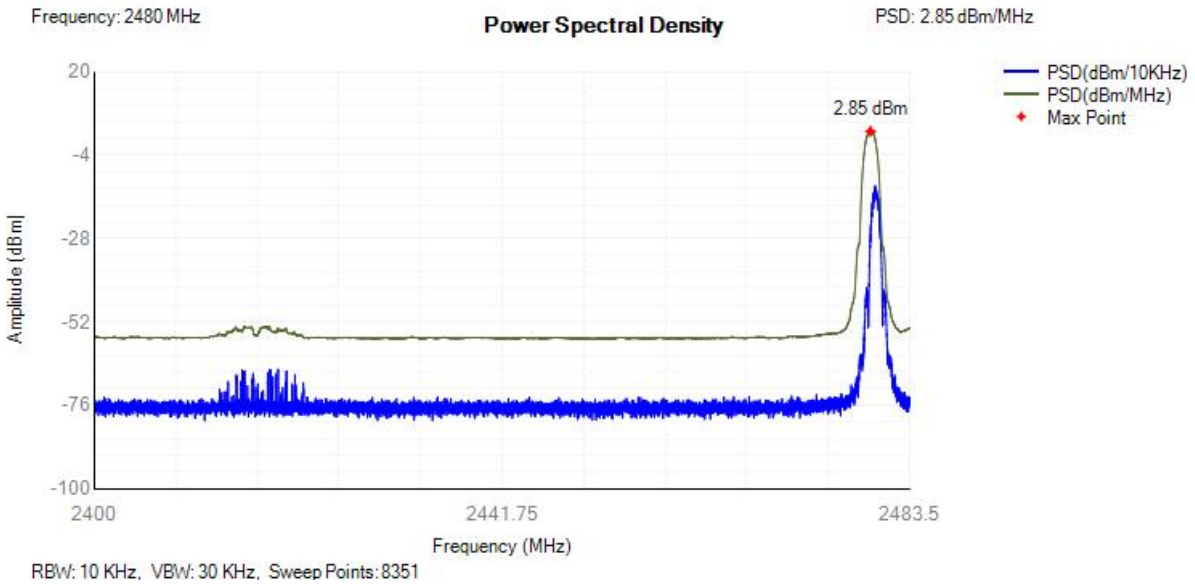
PSD NVNT BLE 2402MHz



PSD NVNT BLE 2440MHz



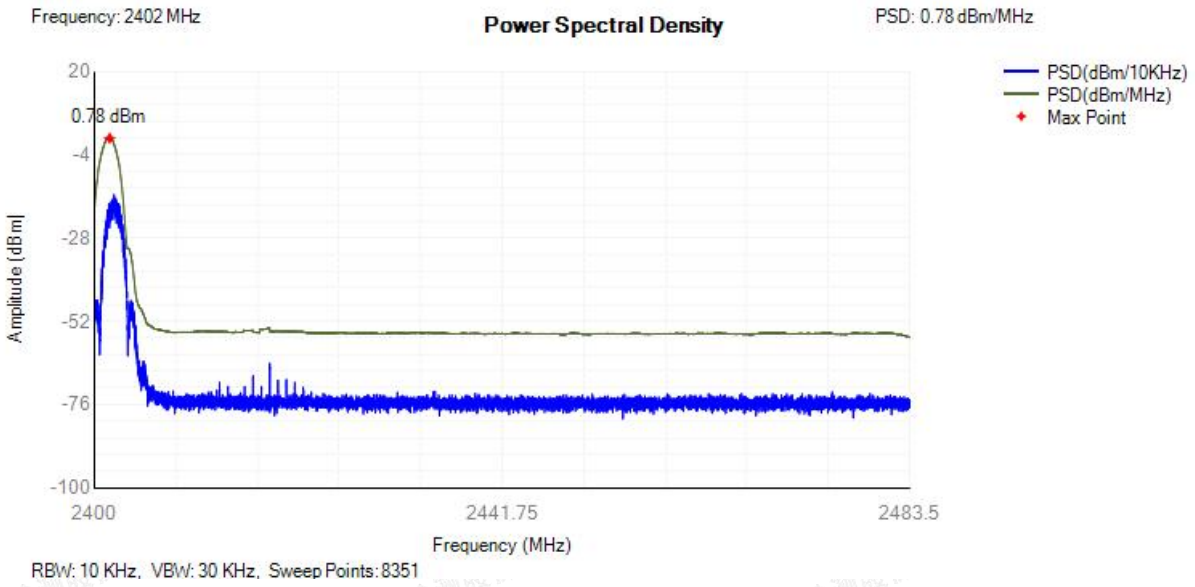
PSD NVNT BLE 2480MHz



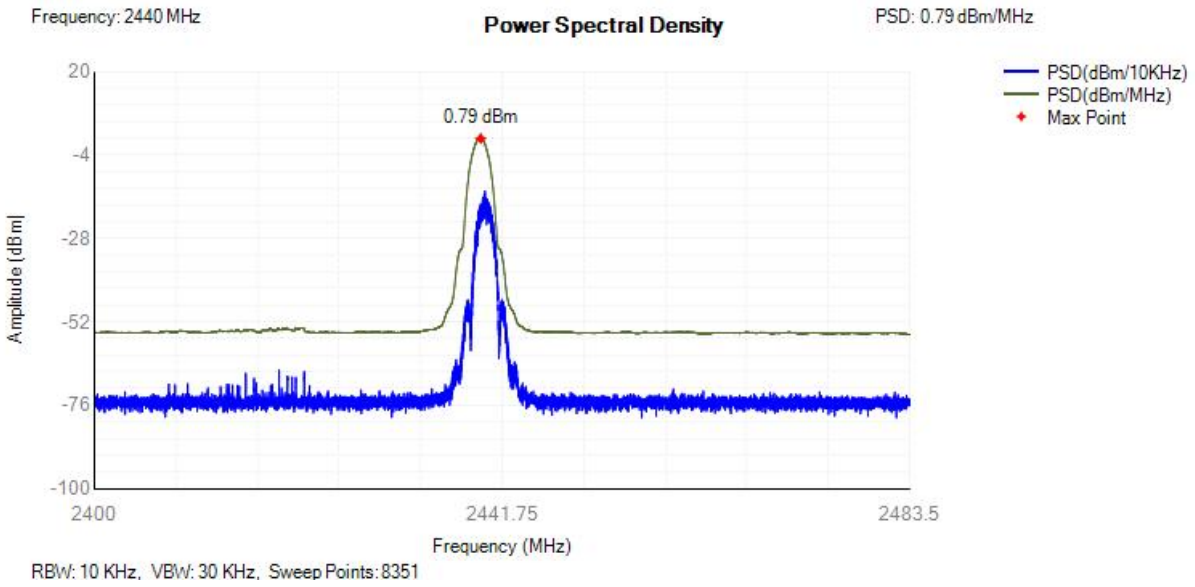
BT 2LE

Condition	Mode	Frequency (MHz)	Max PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	BLE	2402	0.78	10	Pass
NVNT	BLE	2440	0.79	10	Pass
NVNT	BLE	2480	1.4	10	Pass

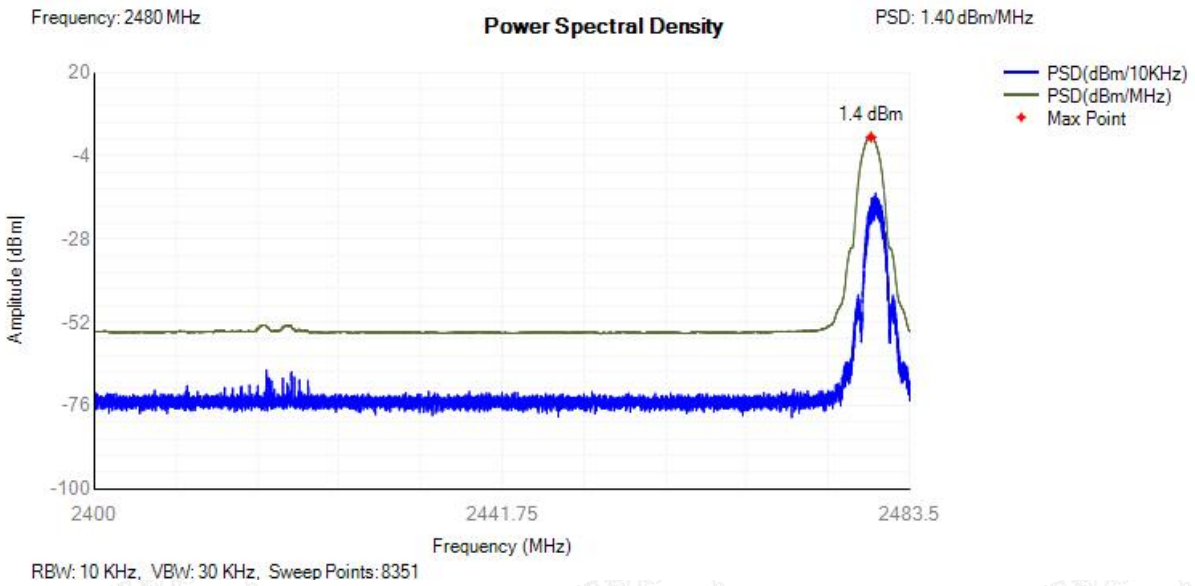
PSD NVNT BLE 2402MHz



PSD NVNT BLE 2440MHz



PSD NVNT BLE 2480MHz

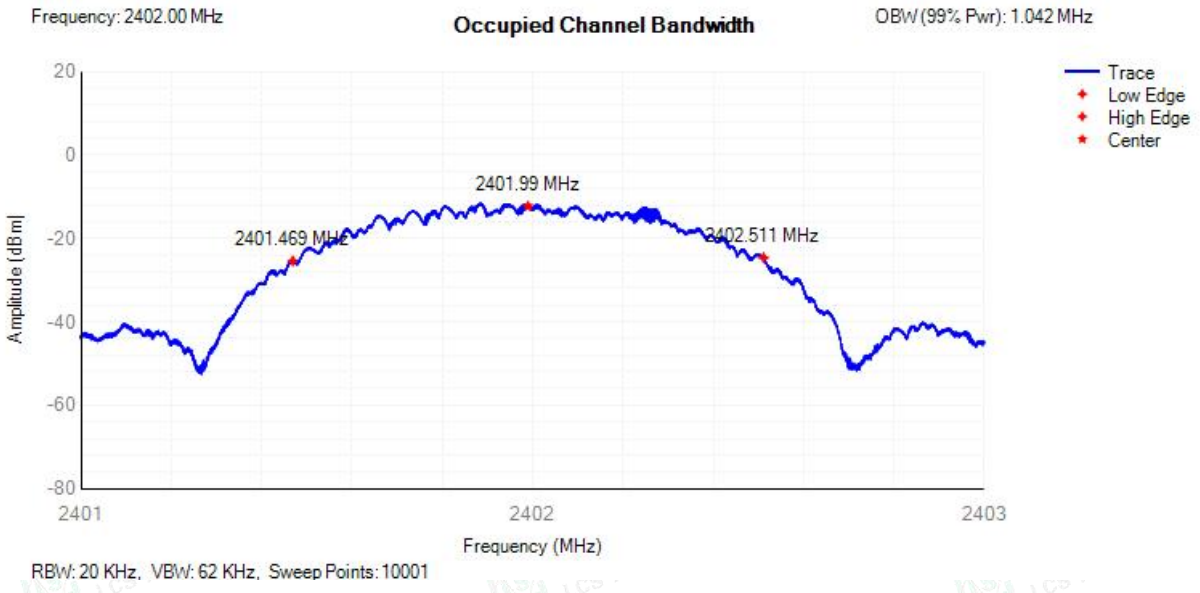


F.3 Occupied Channel Bandwidth

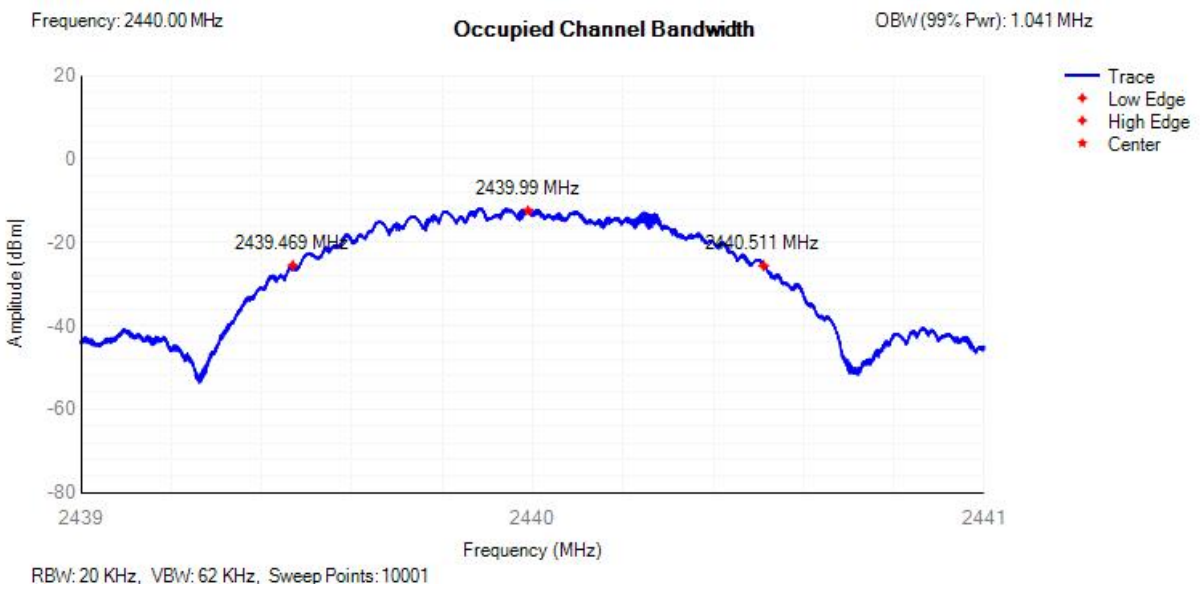
BT LE

Condition	Mode	Frequency (MHz)	Center Frequency (MHz)	OBW (MHz)	Lower Edge (MHz)	Upper Edge (MHz)	Limit OBW (MHz)	Verdict
NVNT	BLE	2402	2401.99	1.042	2401.469	2402.511	2400 - 2483.5MHz	Pass
NVNT	BLE	2440	2439.99	1.041	2439.469	2440.511	2400 - 2483.5MHz	Pass
NVNT	BLE	2480	2479.988	1.038	2479.469	2480.507	2400 - 2483.5MHz	Pass

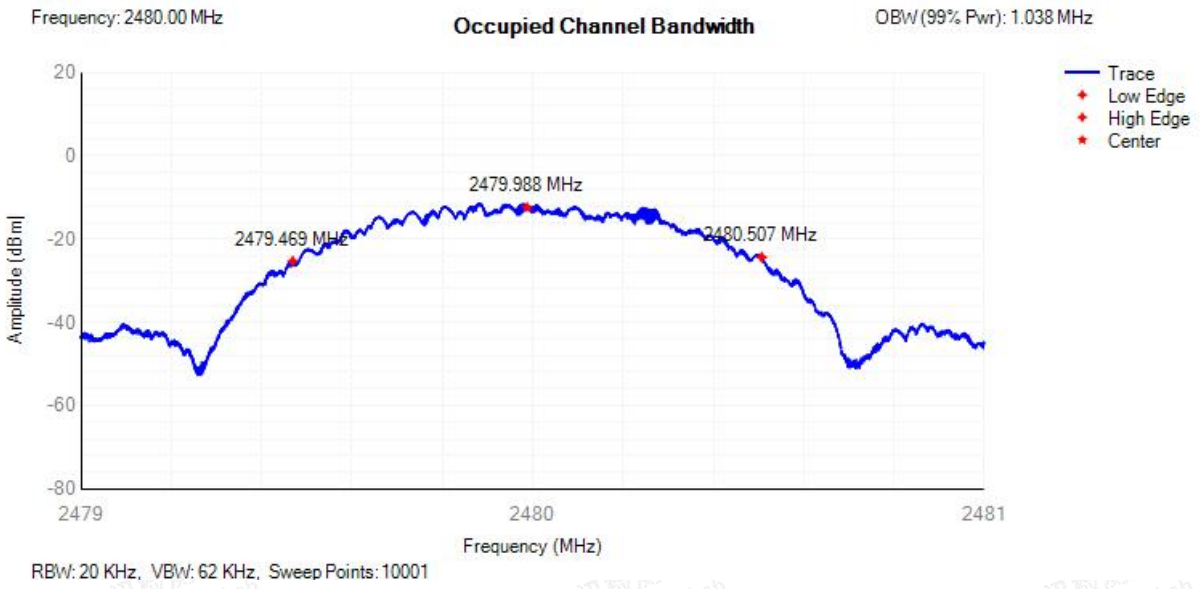
OBW NVNT BLE 2402MHz



OBW NVNT BLE 2440MHz



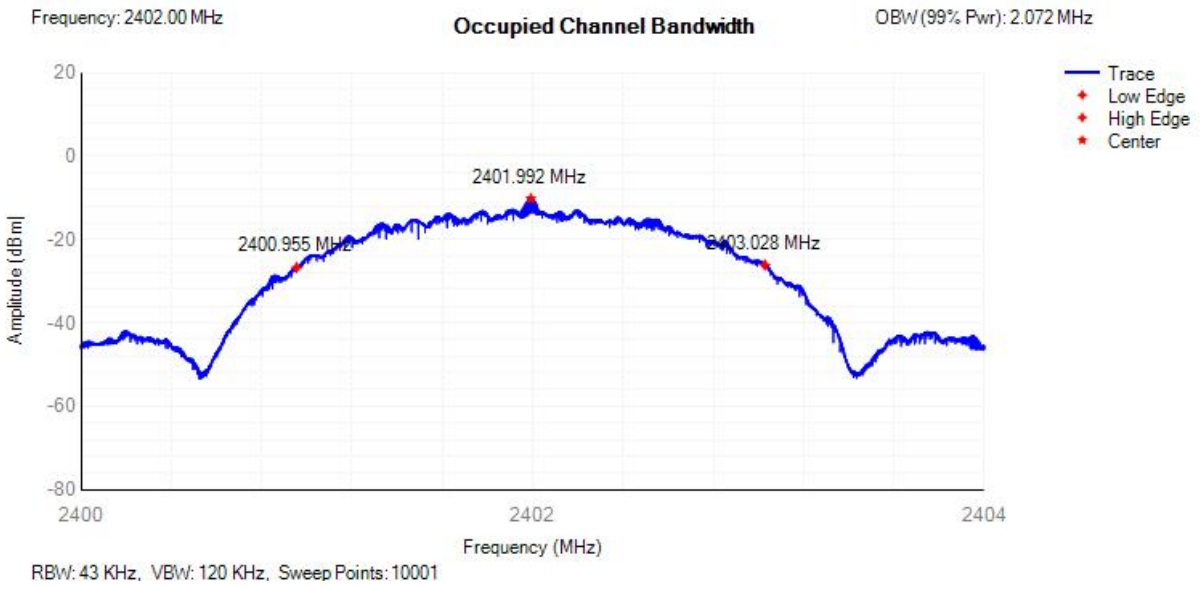
OBW NVNT BLE 2480MHz



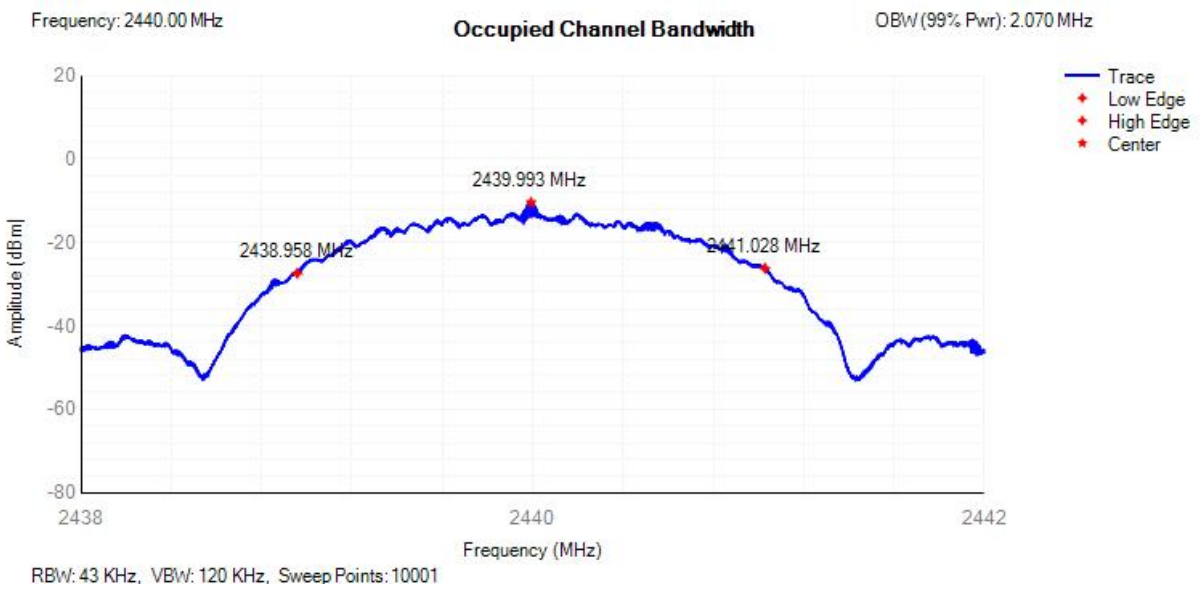
BT 2LE

Condition	Mode	Frequency (MHz)	Center Frequency (MHz)	OBW (MHz)	Lower Edge (MHz)	Upper Edge (MHz)	Limit OBW (MHz)	Verdict
NVNT	BLE	2402	2401.992	2.072	2400.955	2403.028	2400 - 2483.5MHz	Pass
NVNT	BLE	2440	2439.993	2.070	2438.958	2441.028	2400 - 2483.5MHz	Pass
NVNT	BLE	2480	2479.993	2.068	2478.959	2481.027	2400 - 2483.5MHz	Pass

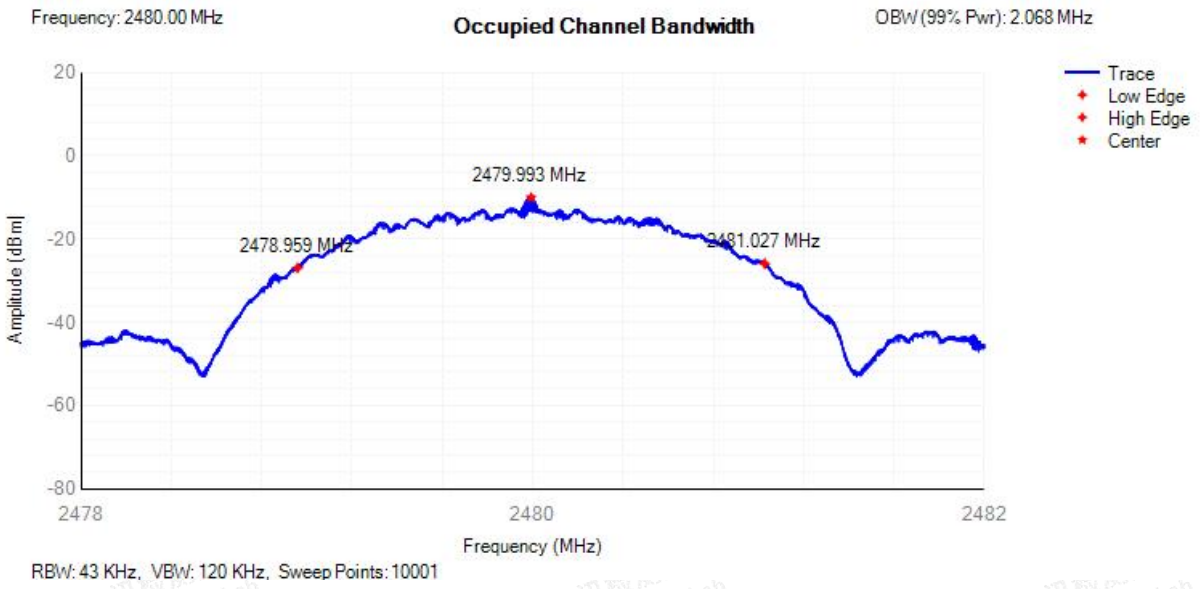
OBW NVNT BLE 2402MHz



OBW NVNT BLE 2440MHz



OBW NVNT BLE 2480MHz

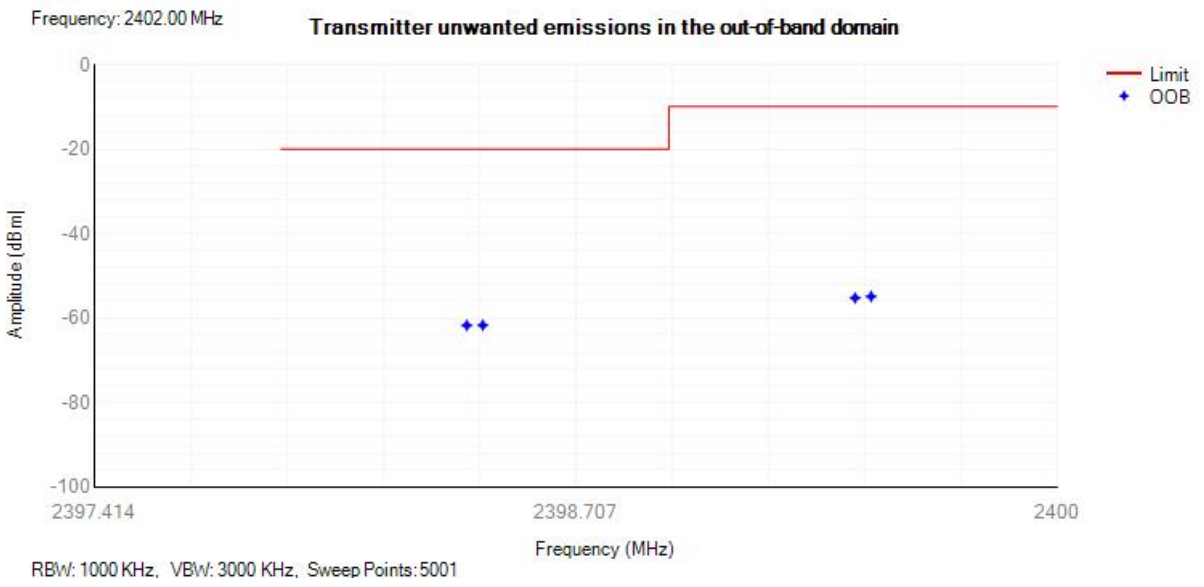


F.4 Transmitter unwanted emissions in the out-of-band domain

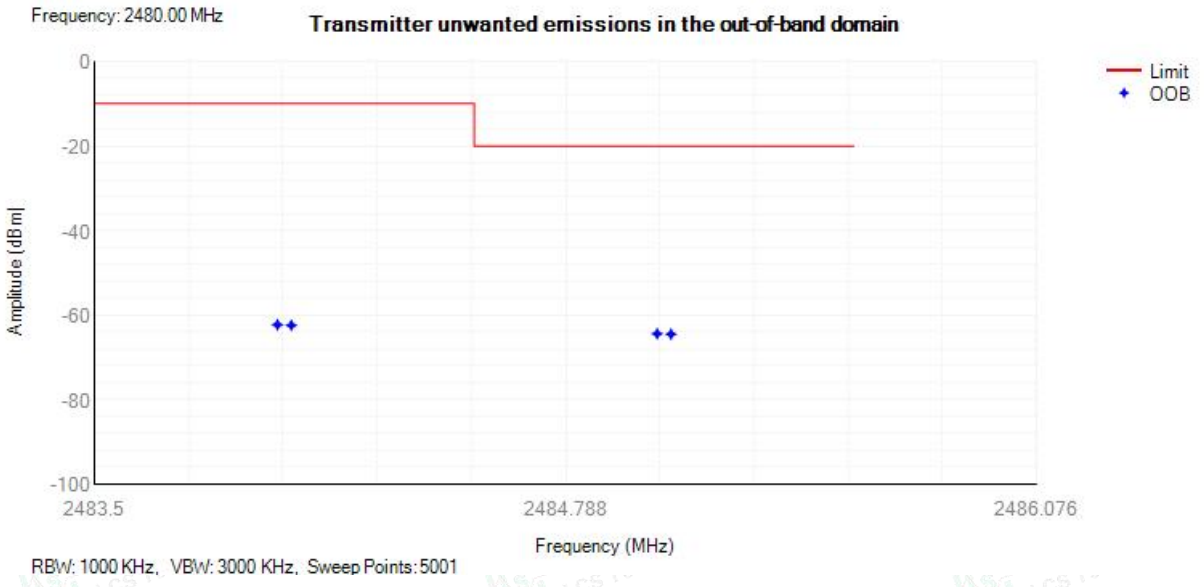
BT LE

Condition	Mode	Frequency (MHz)	OOB Frequency (MHz)	Level (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	BLE	2402	2399.5	-54.89	-10	Pass
NVNT	BLE	2402	2399.457	-55.24	-10	Pass
NVNT	BLE	2402	2398.457	-61.69	-20	Pass
NVNT	BLE	2402	2398.414	-61.73	-20	Pass
NVNT	BLE	2480	2484	-62.3	-10	Pass
NVNT	BLE	2480	2484.038	-62.43	-10	Pass
NVNT	BLE	2480	2485.038	-64.42	-20	Pass
NVNT	BLE	2480	2485.076	-64.53	-20	Pass

Tx. Emissions OOB NVNT BLE 2402MHz



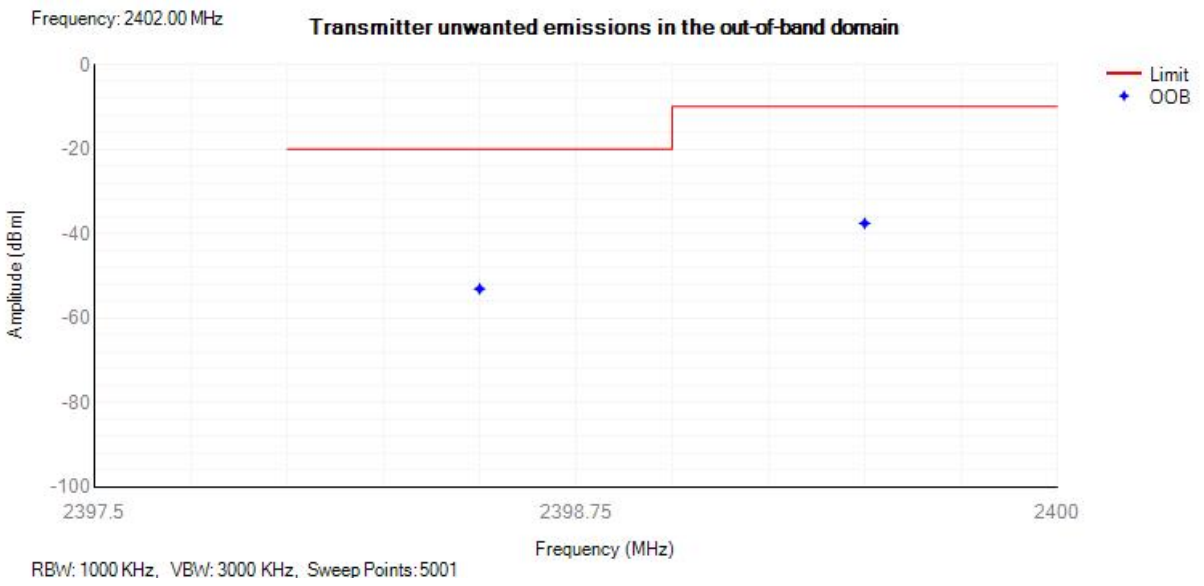
Tx. Emissions OOB NVNT BLE 2480MHz



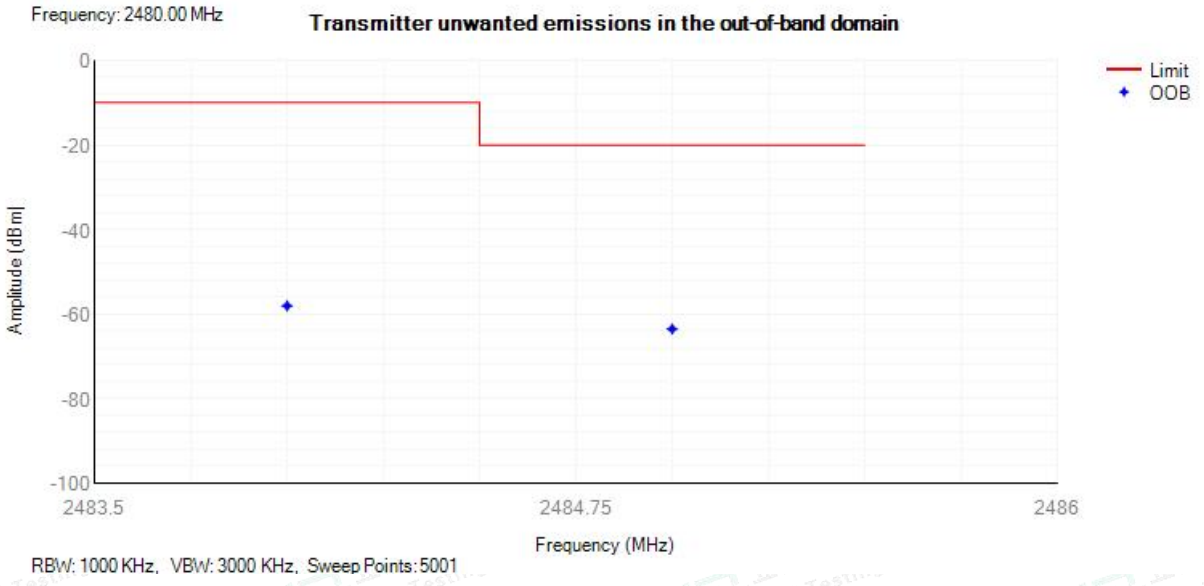
BT 2LE

Condition	Mode	Frequency (MHz)	OOB Frequency (MHz)	Level (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	BLE	2402	2399.5	-37.59	-10	Pass
NVNT	BLE	2402	2398.5	-53.1	-20	Pass
NVNT	BLE	2480	2484	-58.06	-10	Pass
NVNT	BLE	2480	2485	-63.54	-20	Pass

Tx. Emissions OOB NVNT BLE 2402MHz



Tx. Emissions OOB NVNT BLE 2480MHz

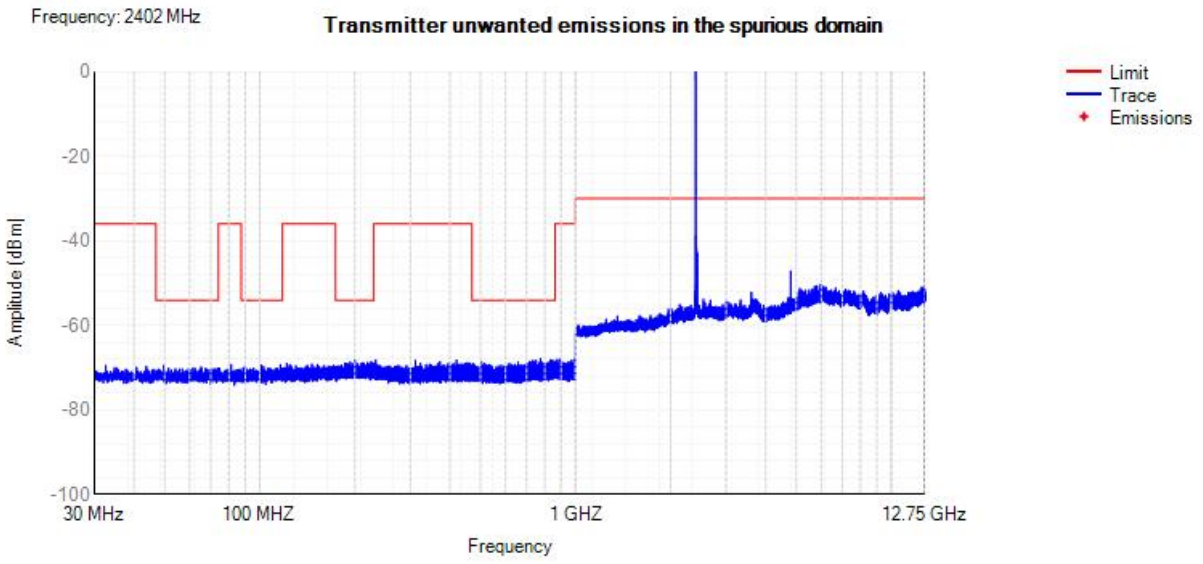


F.5 Transmitter unwanted emissions in the spurious domain

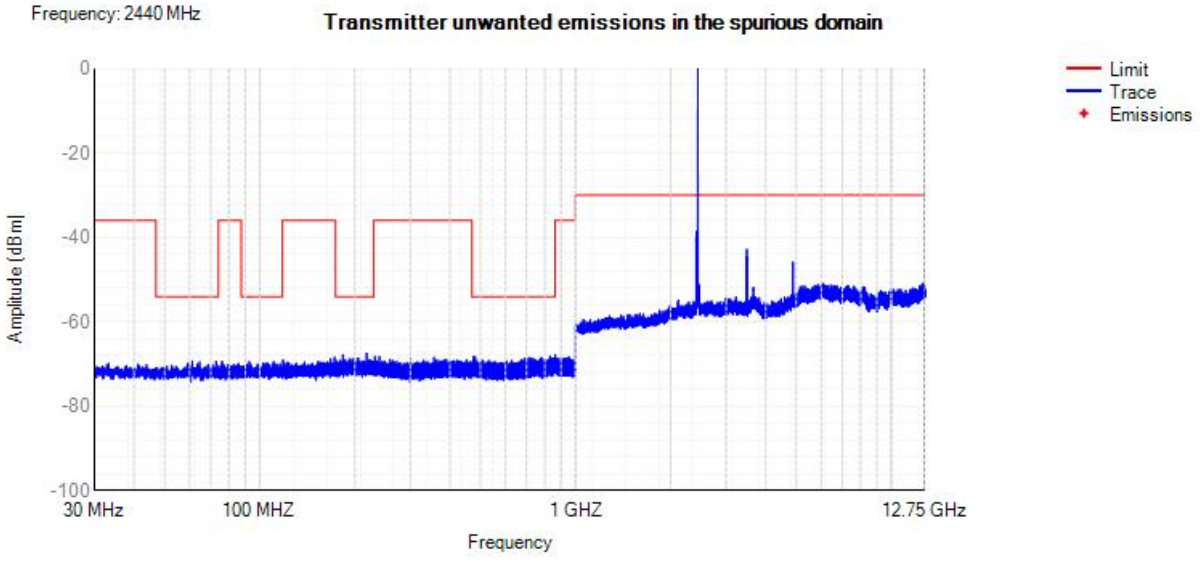
BT LE

Condition	Mode	Frequency (MHz)	Range	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict

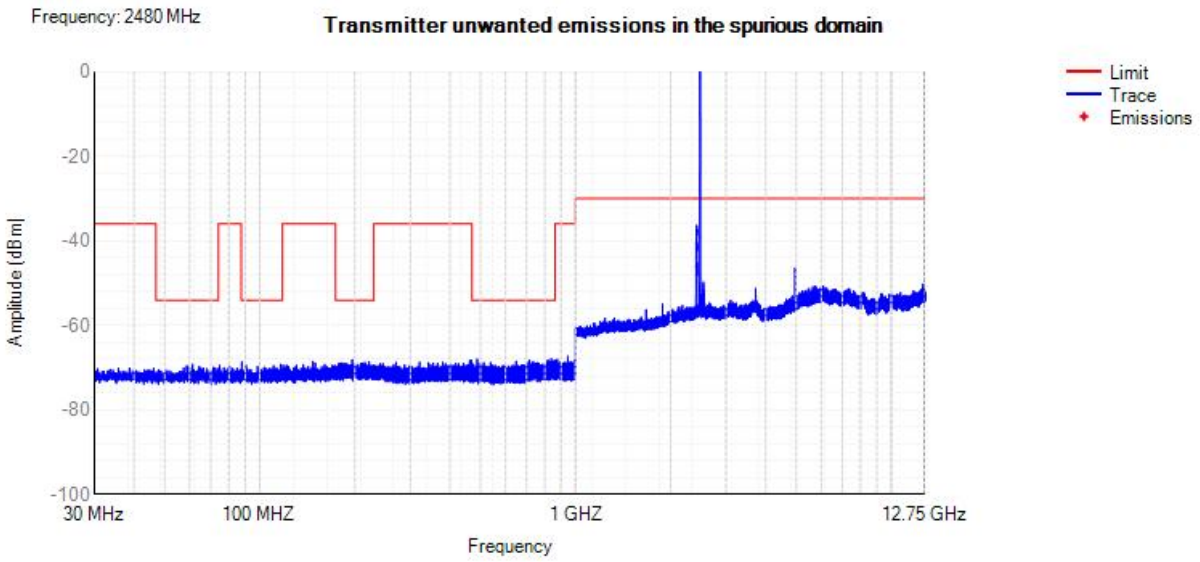
Tx. Spurious NVNT BLE 2402MHz



Tx. Spurious NVNT BLE 2440MHz



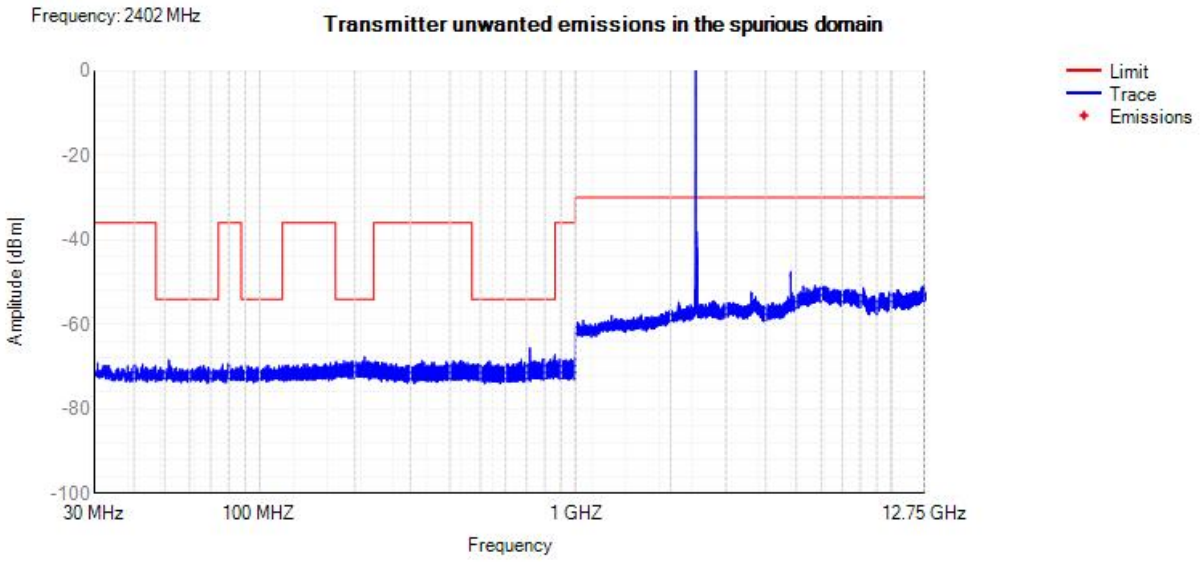
Tx. Spurious NVNT BLE 2480MHz



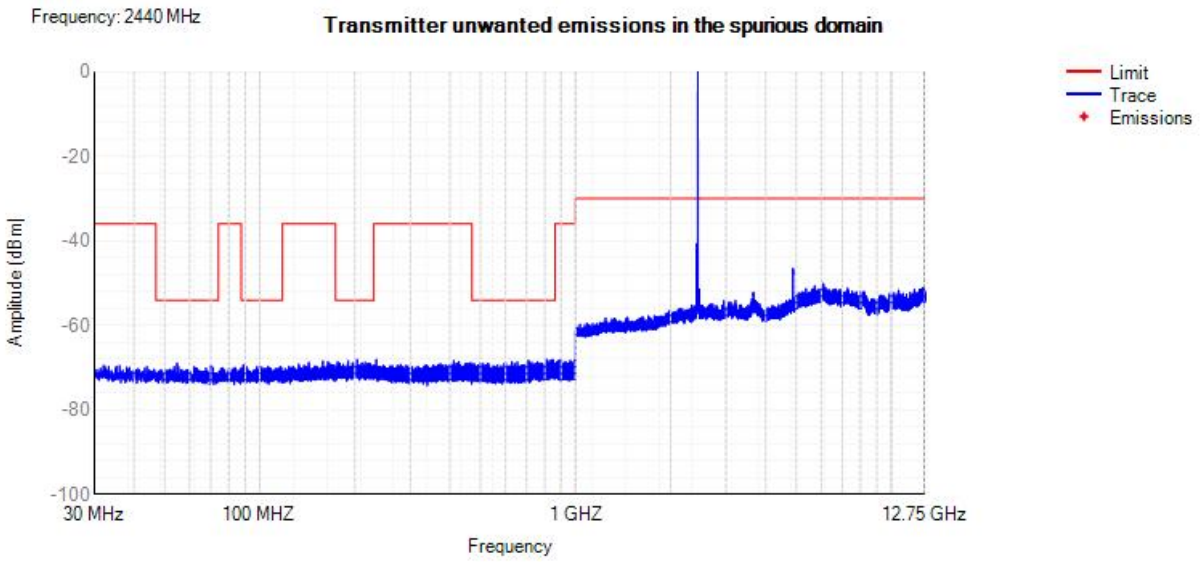
BT 2LE

Condition	Mode	Frequency (MHz)	Range	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict

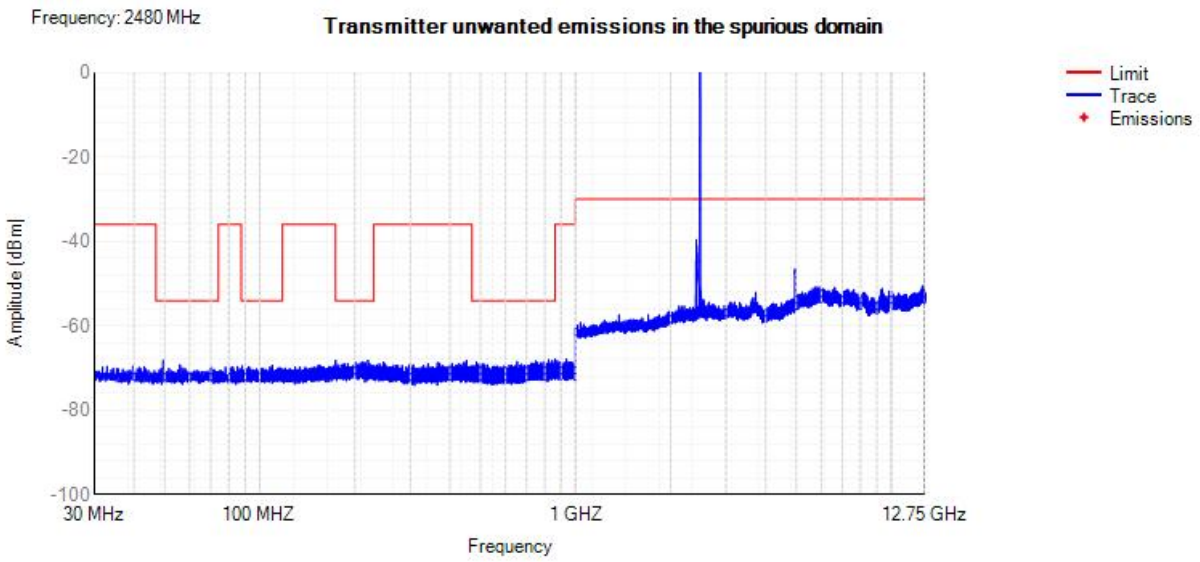
Tx. Spurious NVNT BLE 2402MHz



Tx. Spurious NVNT BLE 2440MHz



Tx. Spurious NVNT BLE 2480MHz

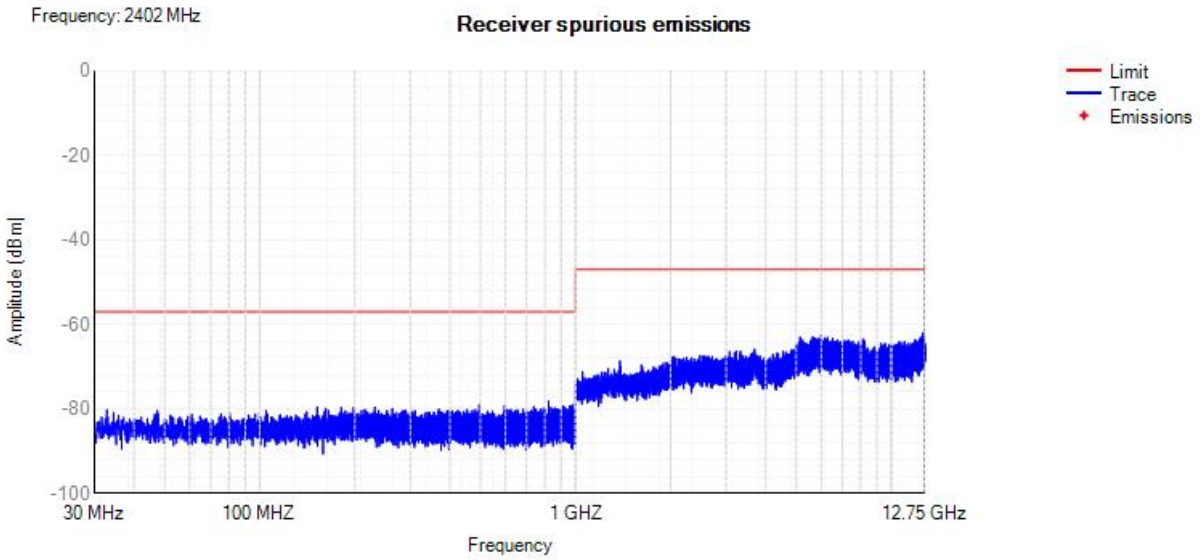


F.6 Receiver spurious emissions

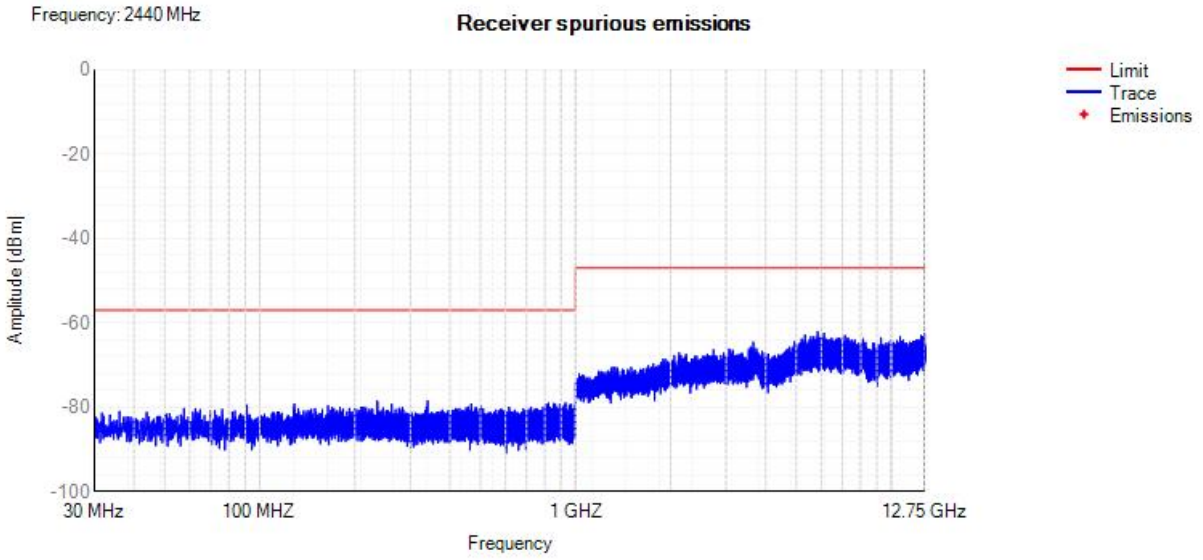
BT LE

Condition	Mode	Frequency (MHz)	Range	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict

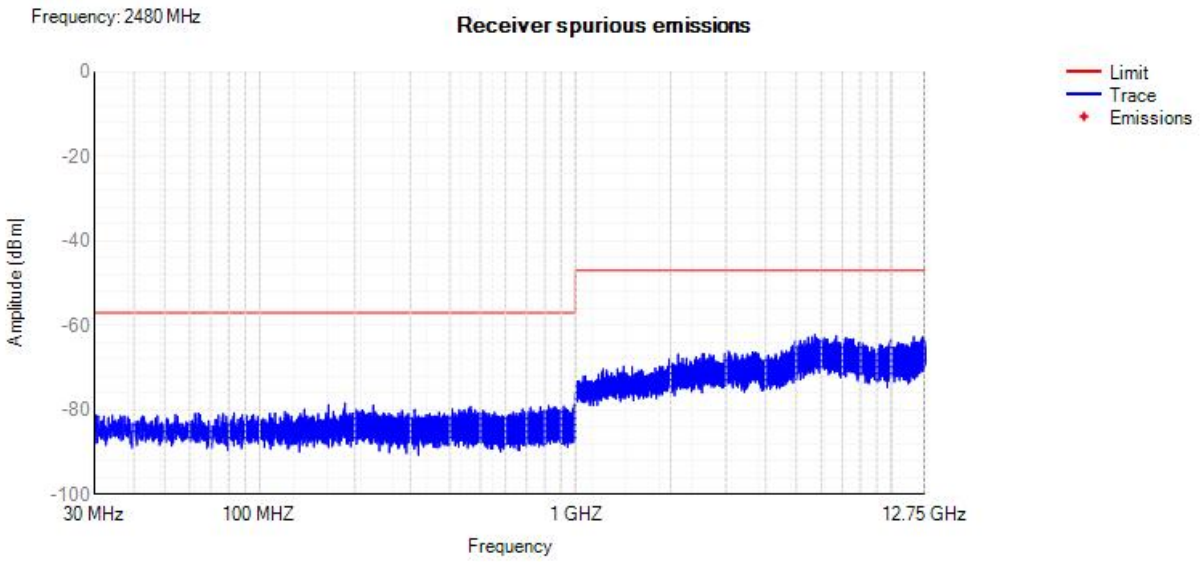
Rx. Spurious NVNT BLE 2402MHz



Rx. Spurious NVNT BLE 2440MHz



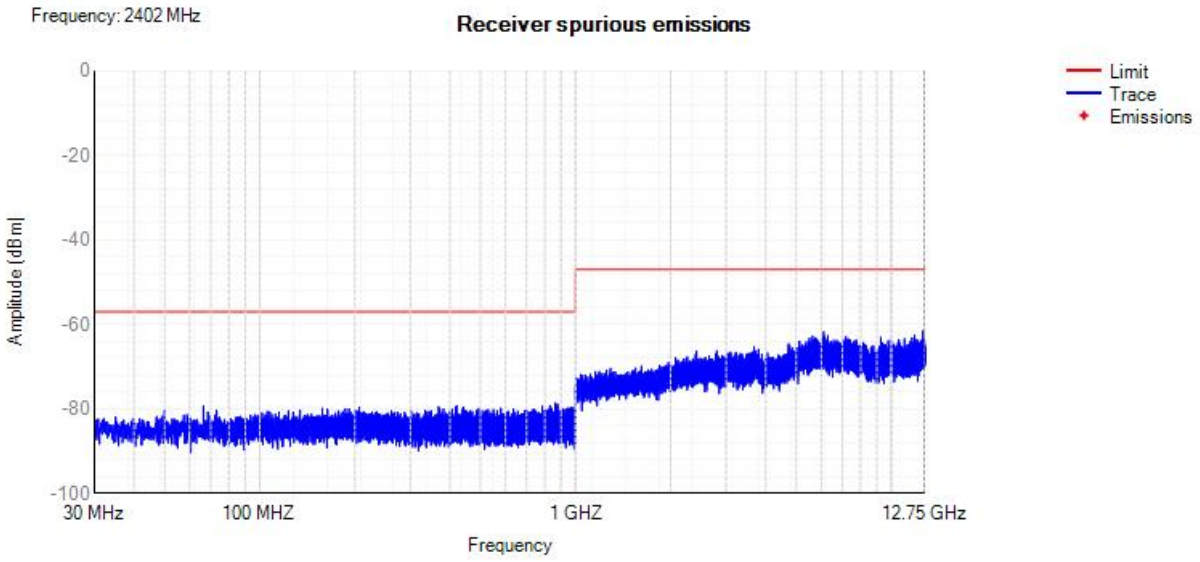
Rx. Spurious NVNT BLE 2480MHz



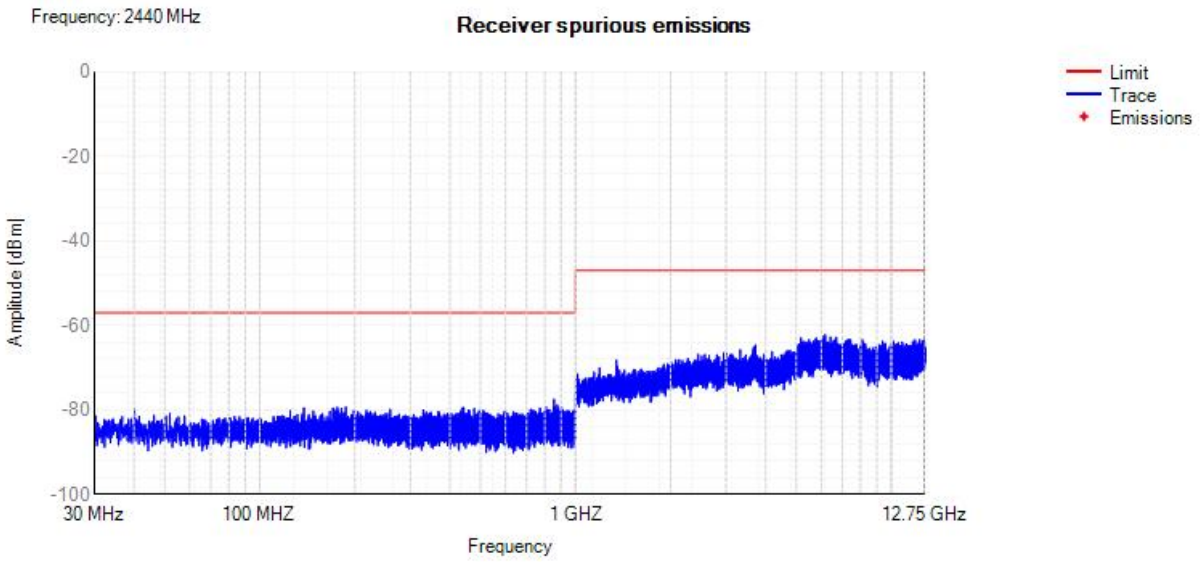
BT 2LE

Condition	Mode	Frequency (MHz)	Range	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict

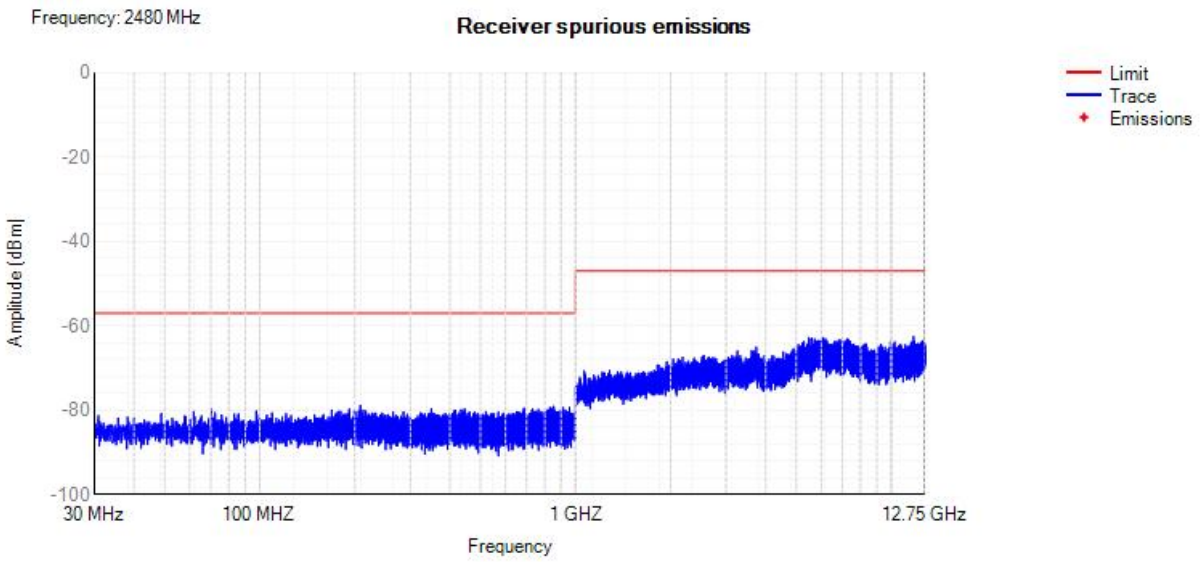
Rx. Spurious NVNT BLE 2402MHz



Rx. Spurious NVNT BLE 2440MHz



Rx. Spurious NVNT BLE 2480MHz



F.7 Receiver Blocking

BT LE

Test Mode	Test Channel (MHz)	Wanted Signal Mean Power from Companion Device (dBm)	Blocking Signal Frequency (MHz)	Blocking Signal Power (dBm)		Type of Blocking Signal	PER(%)		Test Result
				Test Value	Limit		Test Value	Limit	
BLE	2402	-69	2380	-29	⩾-34	CW	4.97	10	Pass
			2504	-29	⩾-34	CW	5.46	10	Pass
			2300	-25	⩾-34	CW	2.44	10	Pass
			2584	-18	⩾-34	CW	3.86	10	Pass
	2480	-69	2380	-26	⩾-34	CW	5.03	10	Pass
			2504	-28	⩾-34	CW	4.07	10	Pass
			2300	-28	⩾-34	CW	3.57	10	Pass
			2584	-23	⩾-34	CW	5.32	10	Pass

BT 2LE

Test Mode	Test Channel (MHz)	Wanted Signal Mean Power from Companion Device (dBm)	Blocking Signal Frequency (MHz)	Blocking Signal Power (dBm)		Type of Blocking Signal	PER(%)		Test Result
				Test Value	Limit		Test Value	Limit	
BLE	2402	-66	2380	-30	⩾-34	CW	4.22	10	Pass
			2504	-28	⩾-34	CW	3.46	10	Pass
			2300	-29	⩾-34	CW	3.38	10	Pass
			2584	-18	⩾-34	CW	5.09	10	Pass
	2480	-66	2380	-30	⩾-34	CW	3.33	10	Pass
			2504	-29	⩾-34	CW	3.48	10	Pass
			2300	-27	⩾-34	CW	4.17	10	Pass
			2584	-17	⩾-34	CW	5.04	10	Pass