

Test Report

Product Name: Bluetooth Speaker

Test Model: BM01

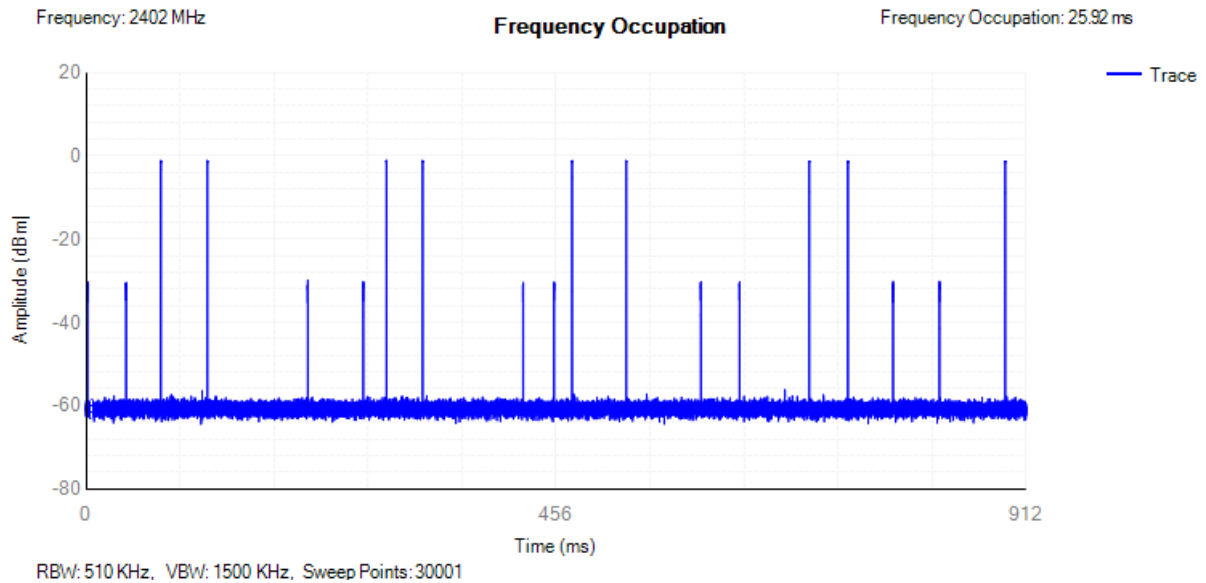
Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	53.7 %
ATM Pressure:	100.0 kPa
Test Engineer:	SCENT HU
Supervised by:	Wang Chuang

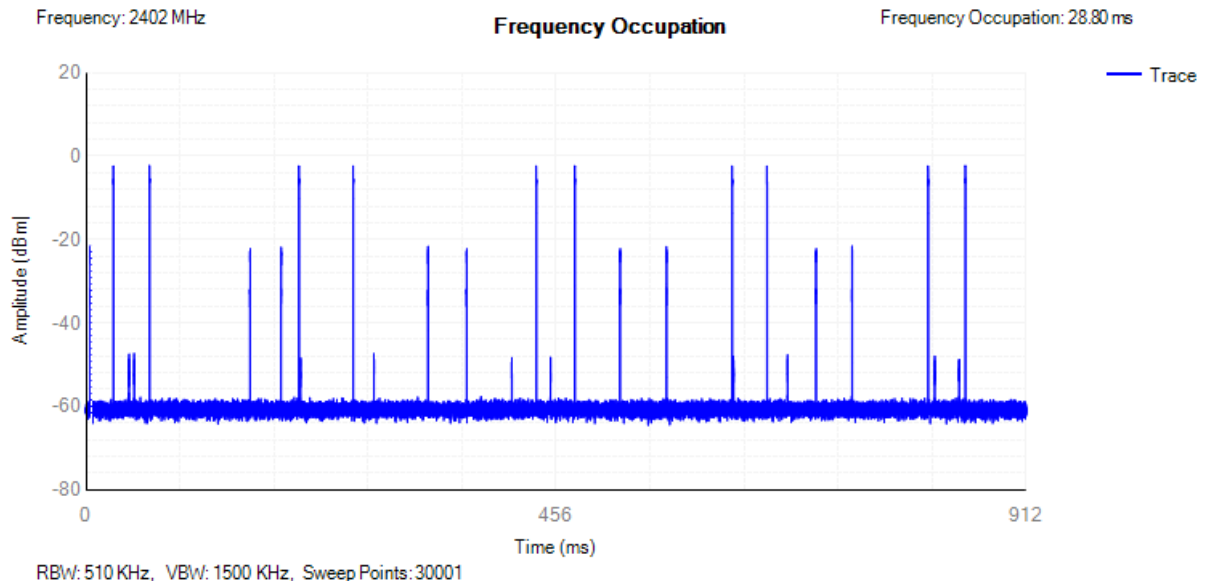
5.4.4 Frequency Occupation

Condition	Mode	Frequency (MHz)	Frequency Occupation (ms)	Limit (ms)	Sweep Time (ms)	Burst Number	Verdict
NVNT	1-DH1	2402	25.92	0	910.08	9	Pass
NVNT	2-DH1	2402	28.8	0	910.08	10	Pass

Freq. Occup. NVNT 1-DH1 2402MHz



Freq. Occup. NVNT 2-DH1 2402MHz



5.4.2 RF Output Power

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	2.36	20	Pass
NVNT	1-DH5	2441	2.13	20	Pass
NVNT	1-DH5	2480	2.26	20	Pass
NVNT	2-DH5	2402	-0.78	20	Pass
NVNT	2-DH5	2441	-0.37	20	Pass
NVNT	2-DH5	2480	-0.72	20	Pass

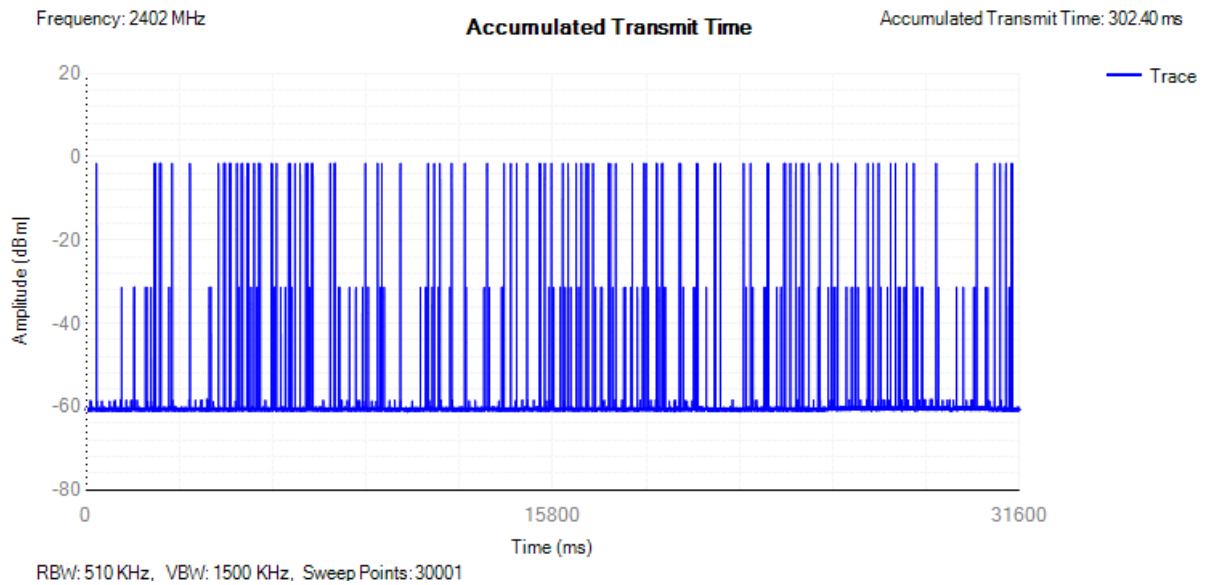
Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVHT	1-DH5	2402	2.31	20	Pass
NVHT	1-DH5	2441	2.10	20	Pass
NVHT	1-DH5	2480	2.24	20	Pass
NVHT	2-DH5	2402	-0.79	20	Pass
NVHT	2-DH5	2441	-0.39	20	Pass
NVHT	2-DH5	2480	-0.65	20	Pass

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVLT	1-DH5	2402	2.24	20	Pass
NVLT	1-DH5	2441	2.13	20	Pass
NVLT	1-DH5	2480	2.23	20	Pass
NVLT	2-DH5	2402	-0.81	20	Pass
NVLT	2-DH5	2441	-0.39	20	Pass
NVLT	2-DH5	2480	-0.67	20	Pass

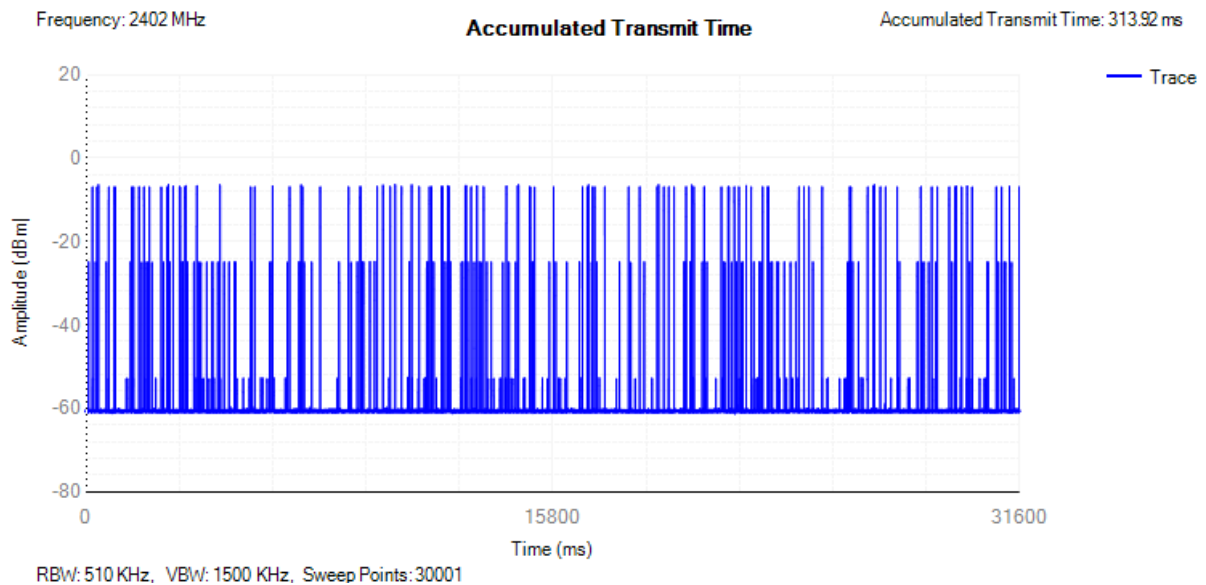
5.4.4 Accumulated Transmit Time

Condition	Mode	Frequency (MHz)	Accumulated Transmit Time (ms)	Limit (ms)	Sweep Time (ms)	Burst Number	Verdict
NVNT	1-DH5	2402	302.4	400	31600	105	Pass
NVNT	2-DH5	2402	313.92	400	31600	109	Pass

Dwell NVNT 1-DH5 2402MHz



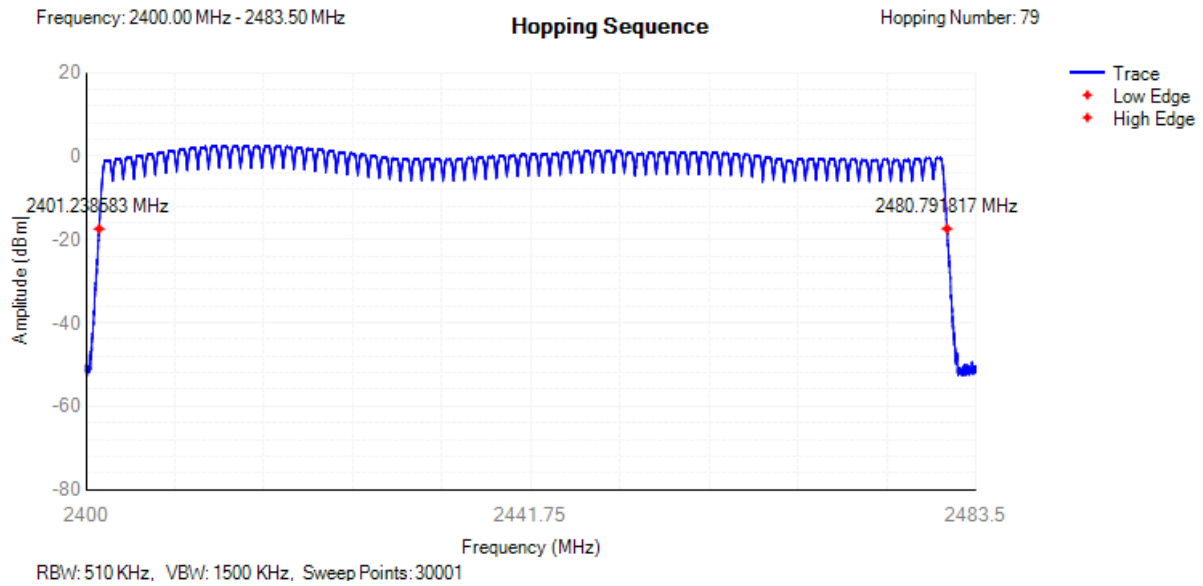
Dwell NVNT 2-DH5 2402MHz



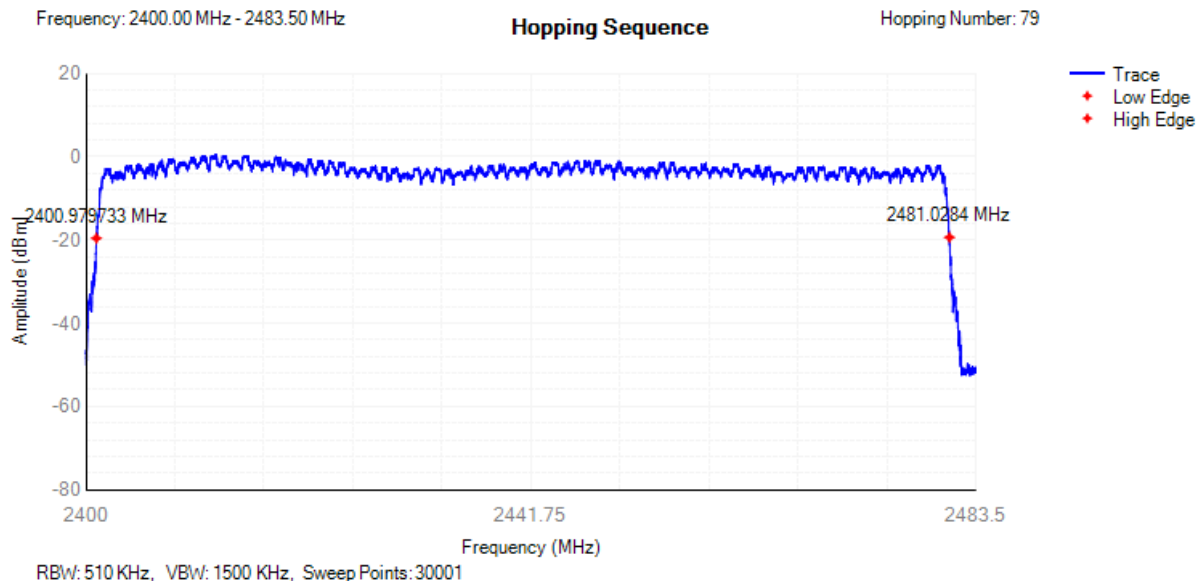
5.4.4 Hopping Sequence

Condition	Mode	Hopping Number	Limit	Band Allocation (%)	Limit Band Allocation (%)	Verdict
NVNT	1-DH5	79	15	95.27	70	Pass
NVNT	2-DH5	79	15	95.86	70	Pass

Hopping Seq. NVNT 1-DH5 2402MHz



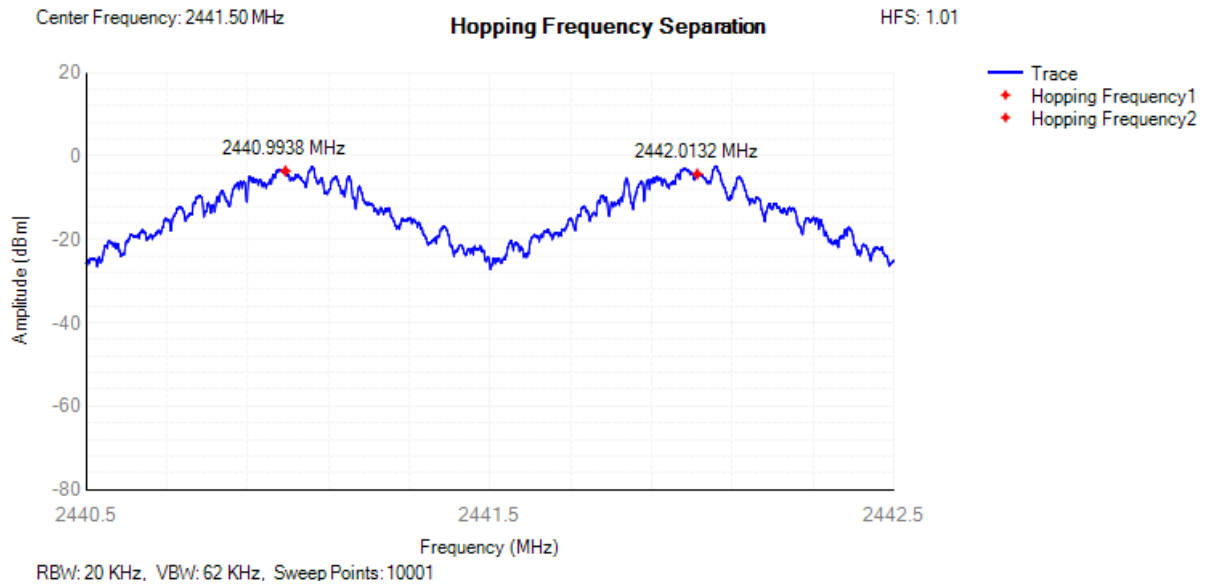
Hopping Seq. NVNT 2-DH5 2402MHz



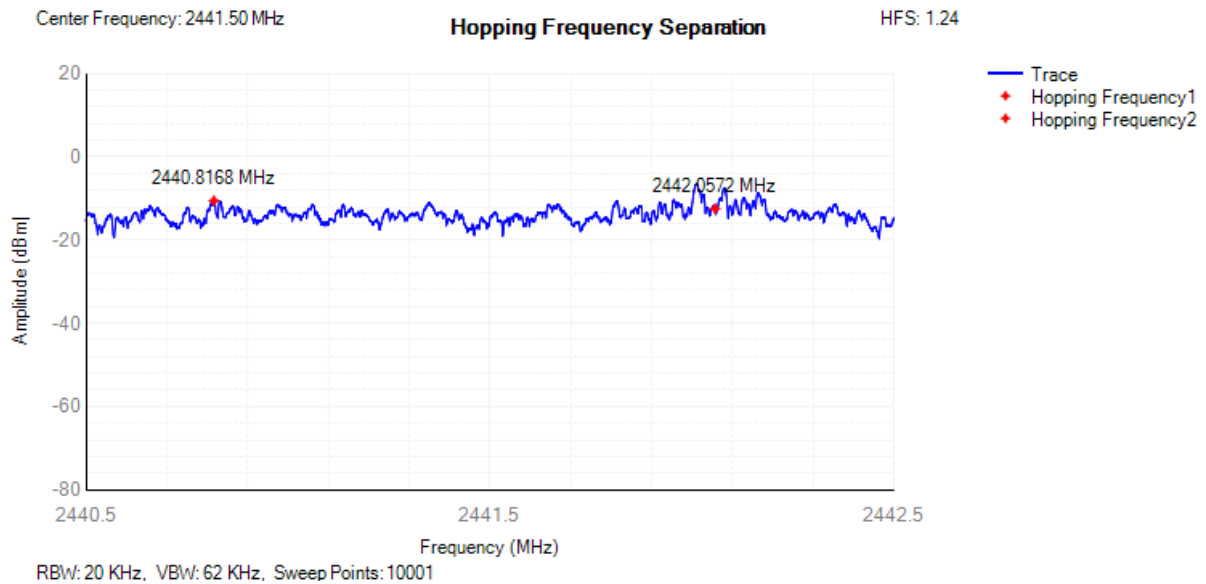
5.4.5 Hopping Frequency Separation

Condition	Mode	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	2440.9938	2442.0132	1.01	0.1	Pass
NVNT	2-DH5	2440.8168	2442.0572	1.24	0.1	Pass

HFS NVNT 1-DH5 2441MHz



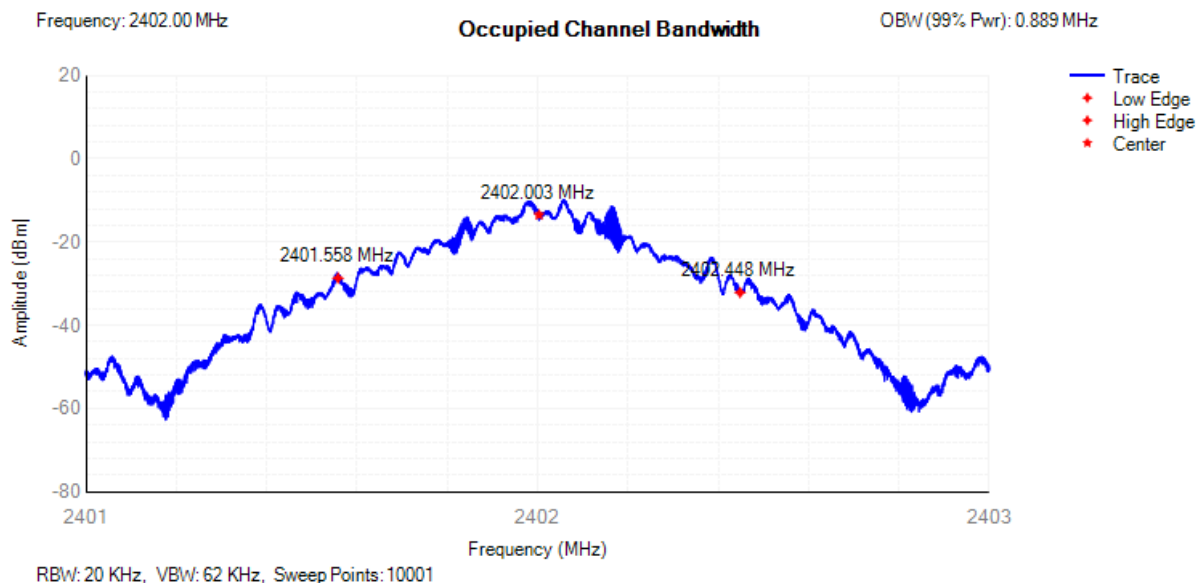
HFS NVNT 2-DH5 2441MHz



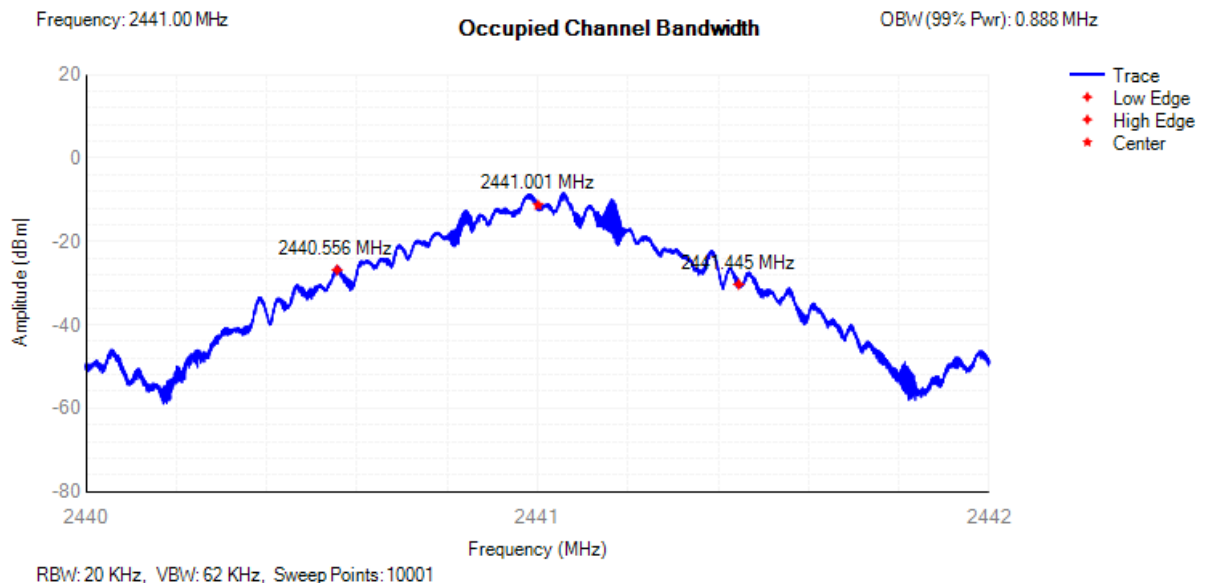
5.4.7 Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Center Frequency (MHz)	OBW (MHz)	Lower Edge (MHz)	Upper Edge (MHz)	Limit OBW (MHz)	Verdict
NVNT	1-DH5	2402	2402.003	0.889	2401.558	2402.448	2400 - 2483.5MHz	Pass
NVNT	1-DH5	2441	2441.001	0.888	2440.556	2441.445	2400 - 2483.5MHz	Pass
NVNT	1-DH5	2480	2480.002	0.892	2479.555	2480.448	2400 - 2483.5MHz	Pass
NVNT	2-DH5	2402	2402.002	1.19	2401.407	2402.597	2400 - 2483.5MHz	Pass
NVNT	2-DH5	2441	2441	1.187	2440.406	2441.594	2400 - 2483.5MHz	Pass
NVNT	2-DH5	2480	2479.999	1.184	2479.407	2480.592	2400 - 2483.5MHz	Pass

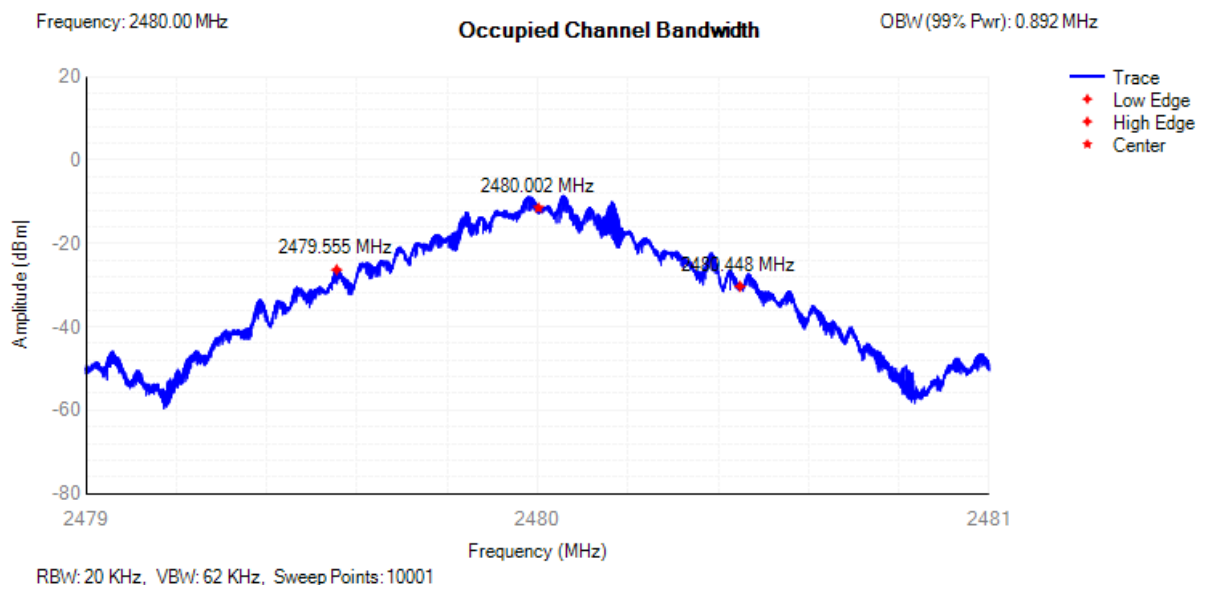
OBW NVNT 1-DH5 2402MHz



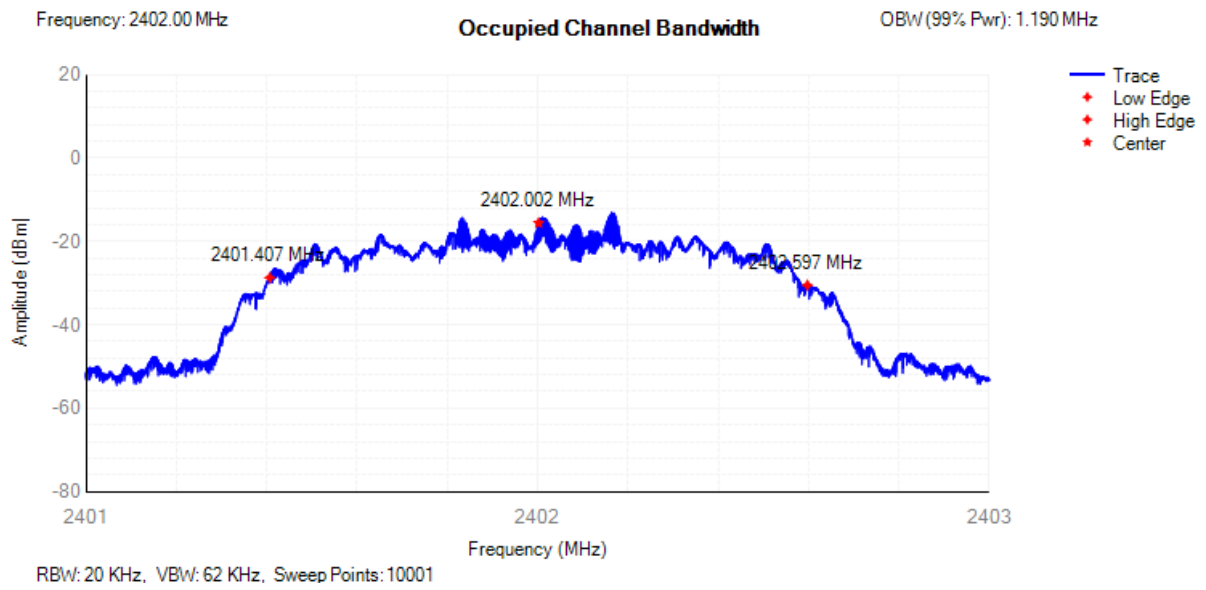
OBW NVNT 1-DH5 2441MHz



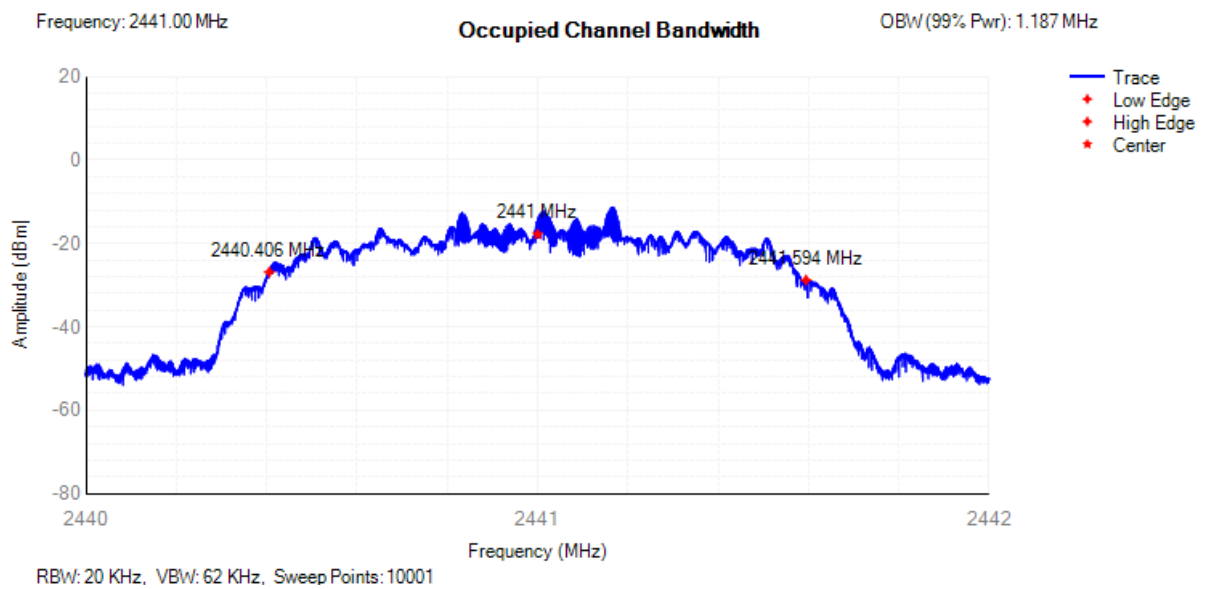
OBW NVNT 1-DH5 2480MHz



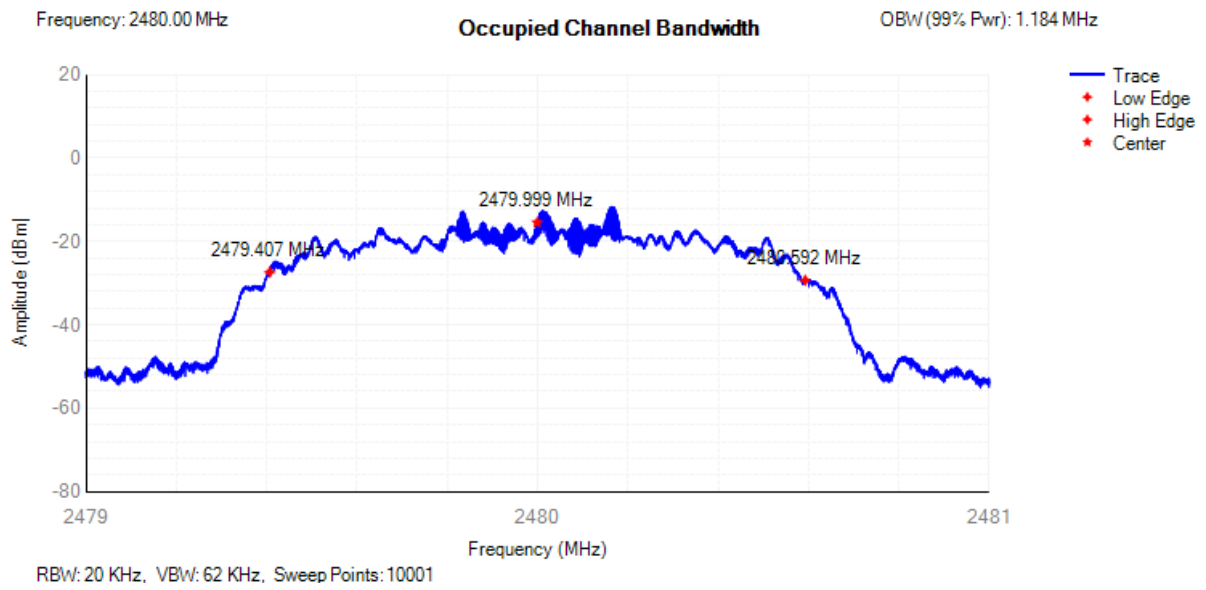
OBW NVNT 2-DH5 2402MHz



OBW NVNT 2-DH5 2441MHz



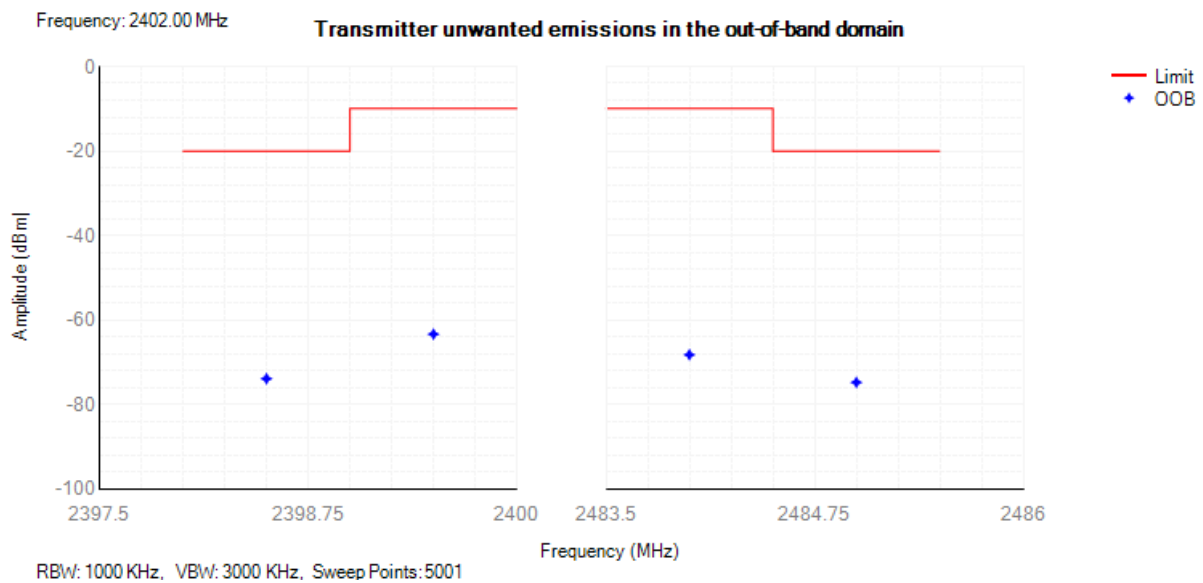
OBW NVNT 2-DH5 2480MHz



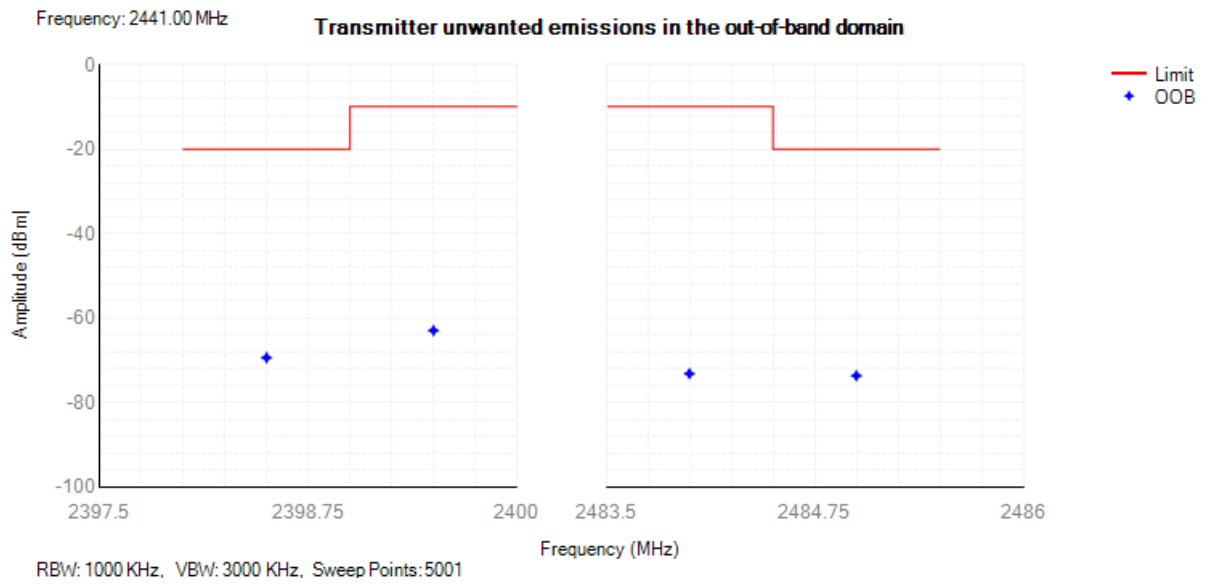
5.4.8 Transmitter unwanted emissions in the out-of-band domain

Condition	Mode	Frequency (MHz)	OOB Frequency (MHz)	Level (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	1-DH5	2402	2399.5	-63.34	-10	Pass
NVNT	1-DH5	2402	2398.5	-73.88	-20	Pass
NVNT	1-DH5	2402	2484	-68.21	-10	Pass
NVNT	1-DH5	2402	2485	-74.75	-20	Pass
NVNT	1-DH5	2441	2399.5	-62.96	-10	Pass
NVNT	1-DH5	2441	2398.5	-69.38	-20	Pass
NVNT	1-DH5	2441	2484	-73.16	-10	Pass
NVNT	1-DH5	2441	2485	-73.64	-20	Pass
NVNT	1-DH5	2480	2399.5	-63.12	-10	Pass
NVNT	1-DH5	2480	2398.5	-71.2	-20	Pass
NVNT	1-DH5	2480	2484	-73.46	-10	Pass
NVNT	1-DH5	2480	2485	-76.06	-20	Pass

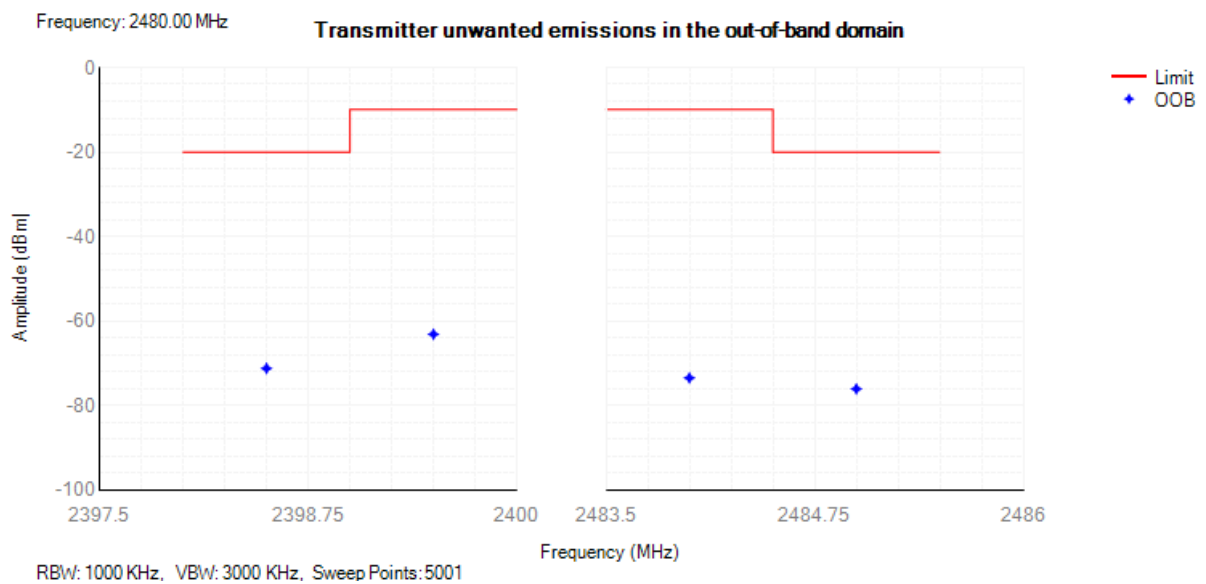
Tx. Emissions OOB NVNT 1-DH5 2402MHz



Tx. Emissions OOB NVNT 1-DH5 2441MHz

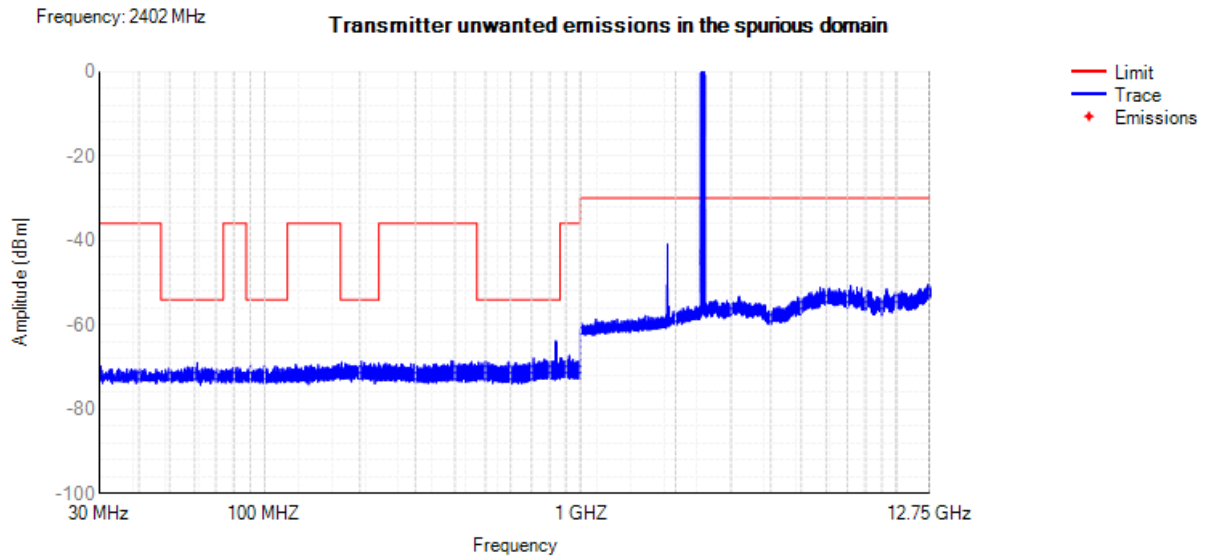


Tx. Emissions OOB NVNT 1-DH5 2480MHz

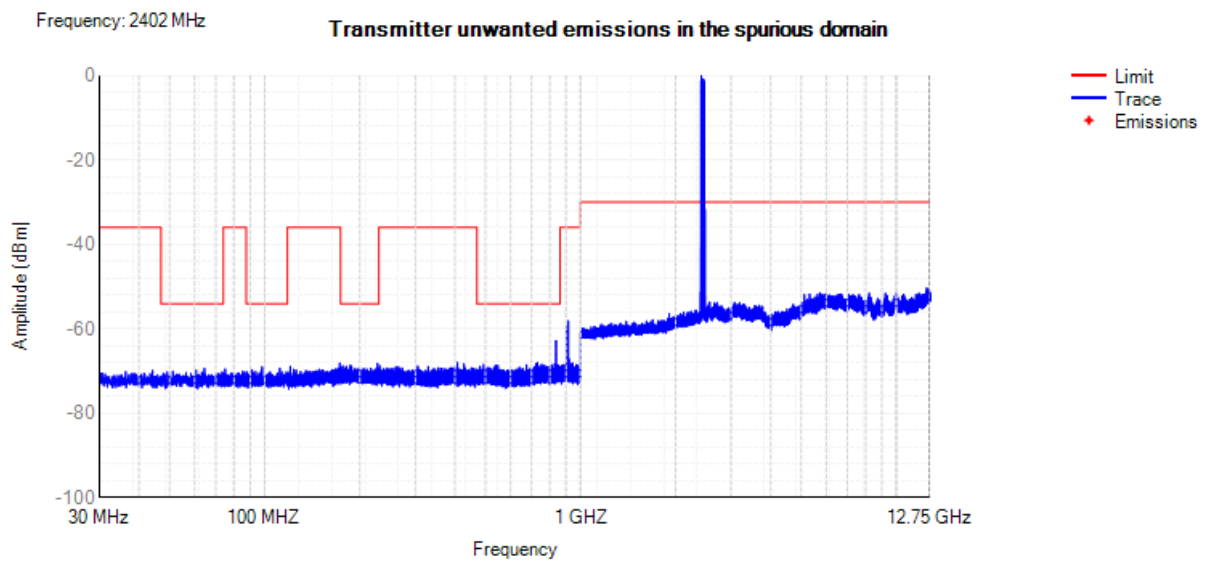


5.4.9 Transmitter unwanted emissions in the spurious domain

Tx. Spurious NVNT 1-DH5 2402MHz



Tx. Spurious NVNT 2-DH5 2402MHz



Tx. Spurious NVNT 1-DH5

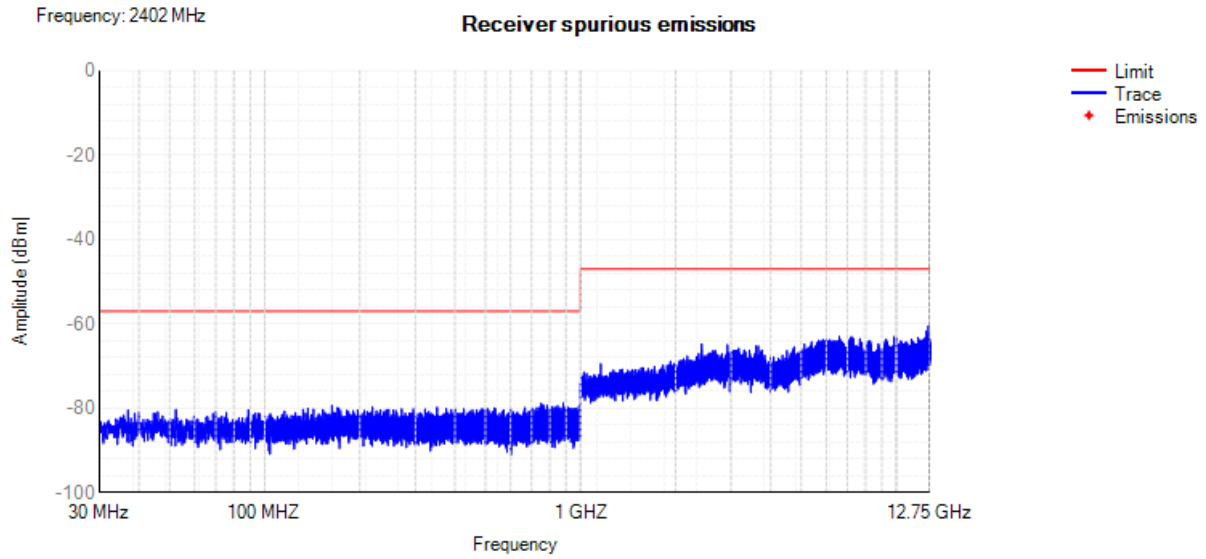
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 0 (2402MHz)					
590.77	H	-65.98	-54.00	-11.98	PK
505.90	V	-66.46	-54.00	-12.46	PK
808.66	H	-67.50	-54.00	-13.50	PK
647.07	V	-64.83	-54.00	-10.83	PK
4804.02	H	-41.08	-30.00	-11.08	PK
4804.01	V	-40.25	-30.00	-10.25	PK
7206.03	H	-42.81	-30.00	-12.81	PK
7205.98	V	-43.43	-30.00	-13.43	PK
Channel 78 (2480MHz)					
375.16	H	-47.55	-36.00	-11.55	PK
352.16	V	-48.91	-36.00	-12.91	PK
871.43	H	-46.08	-36.00	-10.08	PK
665.72	V	-64.31	-54.00	-10.31	PK
4959.97	H	-42.17	-30.00	-12.17	PK
4959.98	V	-43.89	-30.00	-13.89	PK
7440.01	H	-43.61	-30.00	-13.61	PK
7440.00	V	-42.38	-30.00	-12.38	PK

Tx. Spurious NVNT 2-DH5

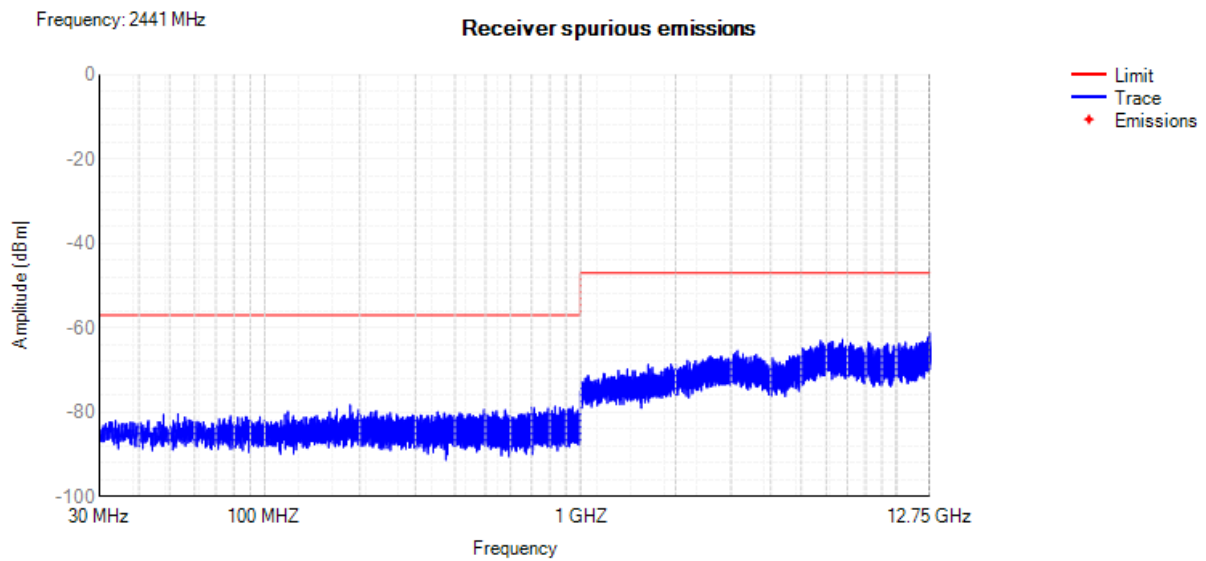
Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 0 (2402MHz)					
504.40	H	-66.13	-54.00	-12.13	PK
219.94	V	-66.88	-54.00	-12.88	PK
575.02	H	-67.78	-54.00	-13.78	PK
571.53	V	-66.82	-54.00	-12.82	PK
4804.00	H	-41.81	-30.00	-11.81	PK
4804.01	V	-41.61	-30.00	-11.61	PK
7206.00	H	-43.98	-30.00	-13.98	PK
7206.01	V	-41.51	-30.00	-11.51	PK
Channel 78 (2480MHz)					
350.90	H	-49.92	-36.00	-13.92	PK
429.47	V	-50.23	-36.00	-14.23	PK
537.34	H	-66.10	-54.00	-12.10	PK
686.65	V	-64.83	-54.00	-10.83	PK
4959.98	H	-41.11	-30.00	-11.11	PK
4959.97	V	-41.31	-30.00	-11.31	PK
7440.01	H	-42.99	-30.00	-12.99	PK
7440.00	V	-42.17	-30.00	-12.17	PK

5.4.10 Receiver spurious emissions

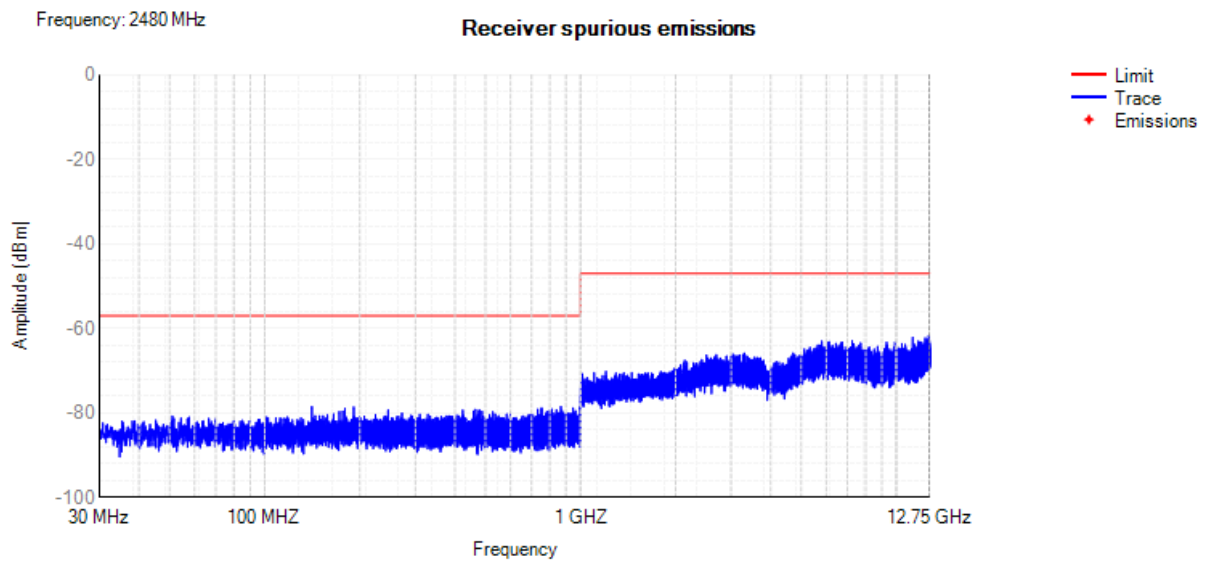
Rx. Spurious NVNT 1-DH5 2402MHz



Rx. Spurious NVNT 1-DH5 2441MHz



Rx. Spurious NVNT 1-DH5 2480MHz



Rx. Spurious NVNT 1-DH5

Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 0 (2402MHz)					
507.82	H	-67.88	-57.00	-10.88	PK
245.38	V	-70.85	-57.00	-13.85	PK
796.95	H	-71.77	-57.00	-14.77	PK
570.88	V	-67.07	-57.00	-10.07	PK
2922.66	H	-61.99	-47.00	-14.99	PK
2545.78	V	-58.19	-47.00	-11.19	PK
3511.33	H	-59.57	-47.00	-12.57	PK
3358.63	V	-59.57	-47.00	-12.57	PK
Channel 78 (2480MHz)					
383.72	H	-69.06	-57.00	-12.06	PK
216.09	V	-69.30	-57.00	-12.30	PK
760.43	H	-68.32	-57.00	-11.32	PK
645.76	V	-67.67	-57.00	-10.67	PK
1908.83	H	-57.65	-47.00	-10.65	PK
2496.91	V	-59.87	-47.00	-12.87	PK
4362.57	H	-61.32	-47.00	-14.32	PK
4385.04	V	-60.79	-47.00	-13.79	PK

Rx. Spurious NVNT 2-DH5

Frequency (MHz)	Polarization (H/V)	Measure Level (dBm)	Limit (dBm)	Margin (dB)	Detector
Channel 0 (2402MHz)					
585.43	H	-70.68	-57.00	-13.68	PK
350.82	V	-71.23	-57.00	-14.23	PK
844.08	H	-69.01	-57.00	-12.01	PK
594.08	V	-68.67	-57.00	-11.67	PK
3101.46	H	-60.60	-47.00	-13.60	PK
2379.39	V	-57.54	-47.00	-10.54	PK
3691.68	H	-61.51	-47.00	-14.51	PK
4057.06	V	-57.39	-47.00	-10.39	PK
Channel 78 (2480MHz)					
582.65	H	-67.62	-57.00	-10.62	PK
553.07	V	-69.67	-57.00	-12.67	PK
848.74	H	-68.21	-57.00	-11.21	PK
664.33	V	-69.76	-57.00	-12.76	PK
2525.85	H	-58.13	-47.00	-11.13	PK
2571.74	V	-57.61	-47.00	-10.61	PK
4046.59	H	-59.84	-47.00	-12.84	PK
3707.09	V	-57.51	-47.00	-10.51	PK

5.4.11 Receiver blocking

Wanted signal mean power from companion device (dBm)	Test mode	Test channel (MHz)	Blocking signal frequency (MHz)	Pmin	Blocking signal power (dBm)		Type of blocking signal	PER(%)		Test Result
					Test Value	Limit		Test Value	Limit	
Pmin + 6 dB	DH1	2402	2380	-88	-30	≥ -57	CW	6.22	10	Pass
			2503.5	-88	-30	≥ -57	CW	5.55	10	Pass
			2300	-88	-27	≥ -47	CW	6.20	10	Pass
			2583.5	-88	-22	≥ -47	CW	5.10	10	Pass
		2480	2380	-89	-18	≥ -57	CW	6.43	10	Pass
			2503.5	-89	-21	≥ -57	CW	5.30	10	Pass
			2300	-89	-27	≥ -47	CW	3.92	10	Pass
			2583.5	-89	-20	≥ -47	CW	5.54	10	Pass
	2DH1	2402	2380	-87	-18	≥ -57	CW	3.81	10	Pass
			2503.5	-87	-18	≥ -57	CW	4.25	10	Pass
			2300	-87	-21	≥ -47	CW	5.35	10	Pass
			2583.5	-87	-26	≥ -47	CW	3.37	10	Pass
		2480	2380	-88	-24	≥ -57	CW	3.24	10	Pass
			2503.5	-88	-24	≥ -57	CW	3.70	10	Pass
			2300	-88	-17	≥ -47	CW	4.29	10	Pass
			2583.5	-88	-17	≥ -47	CW	6.05	10	Pass