



## Appendix F for BT LE Test Data

**Product Name: Smartphone**

**Test Model: KINGKONG ES**

### Environmental Conditions

Temperature:	23.0° C
Relative Humidity:	53.0%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng





## F.1 RF Output Power

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVNT	BLE_1M	2402	1.62	20	Pass
NVNT	BLE_1M	2440	0.64	20	Pass
NVNT	BLE_1M	2480	0.92	20	Pass
NVNT	BLE_2M	2402	0.86	20	Pass
NVNT	BLE_2M	2440	-0.14	20	Pass
NVNT	BLE_2M	2480	0.12	20	Pass

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVLT	BLE_1M	2402	1.52	20	Pass
NVLT	BLE_1M	2440	0.60	20	Pass
NVLT	BLE_1M	2480	0.84	20	Pass
NVLT	BLE_2M	2402	0.82	20	Pass
NVLT	BLE_2M	2440	-0.19	20	Pass
NVLT	BLE_2M	2480	0.03	20	Pass

Condition	Mode	Frequency (MHz)	Max EIRP (dBm)	Limit (dBm)	Verdict
NVHT	BLE_1M	2402	1.44	20	Pass
NVHT	BLE_1M	2440	0.44	20	Pass
NVHT	BLE_1M	2480	0.70	20	Pass
NVHT	BLE_2M	2402	0.66	20	Pass
NVHT	BLE_2M	2440	-0.31	20	Pass
NVHT	BLE_2M	2480	-0.08	20	Pass

Note: 20 bursts had been captured for power measurement.

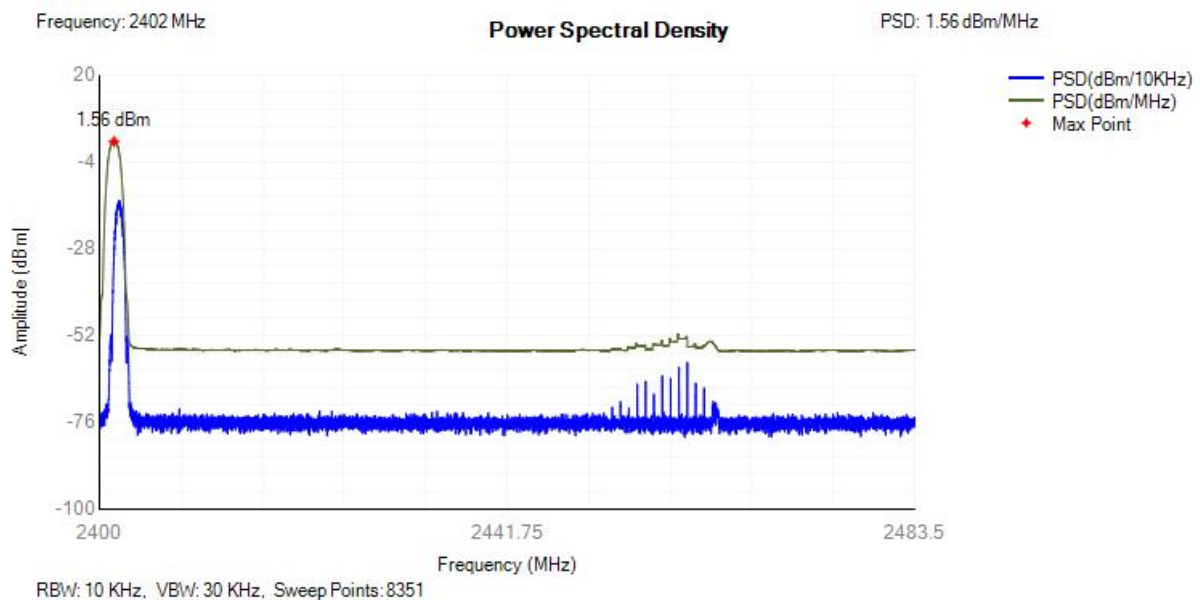




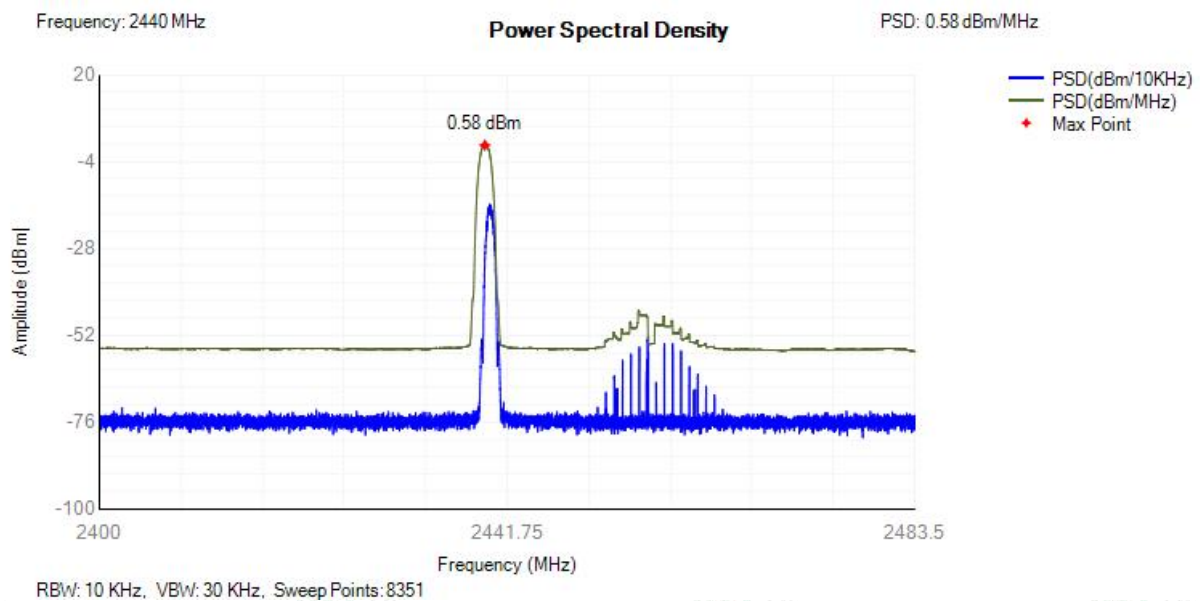
## F.2 Power Spectral Density

Condition	Mode	Frequency (MHz)	Max PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	BLE_1M	2402	1.56	10	Pass
NVNT	BLE_1M	2440	0.58	10	Pass
NVNT	BLE_1M	2480	0.86	10	Pass
NVNT	BLE_2M	2402	-0.31	10	Pass
NVNT	BLE_2M	2440	-1.32	10	Pass
NVNT	BLE_2M	2480	-1.06	10	Pass

PSD NVNT BLE\_1M 2402MHz

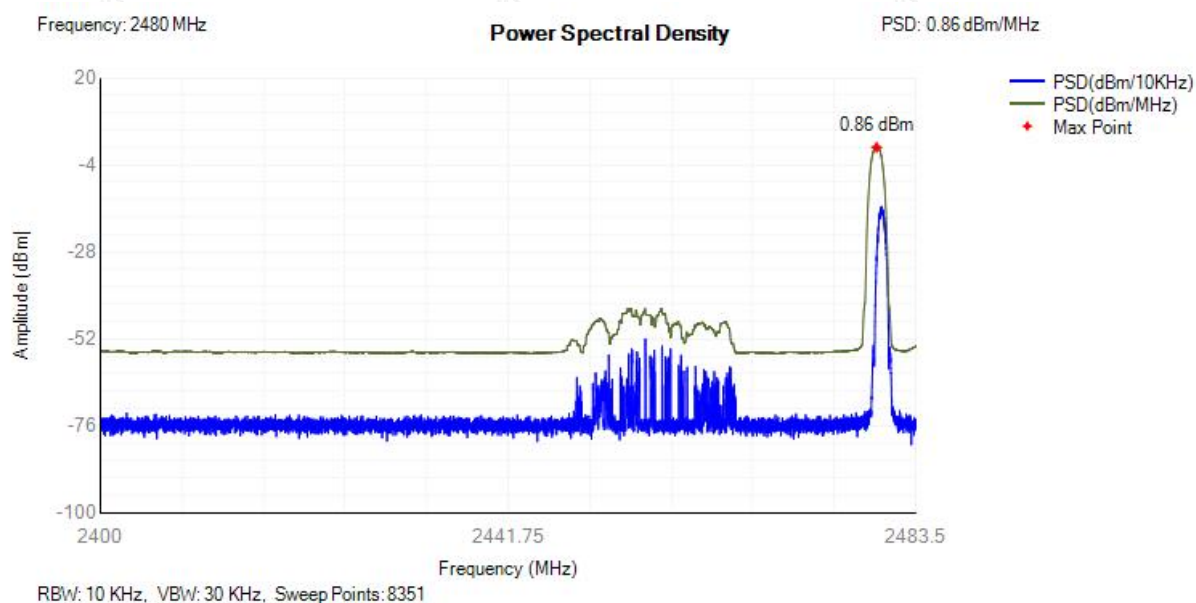


PSD NVNT BLE\_1M 2440MHz

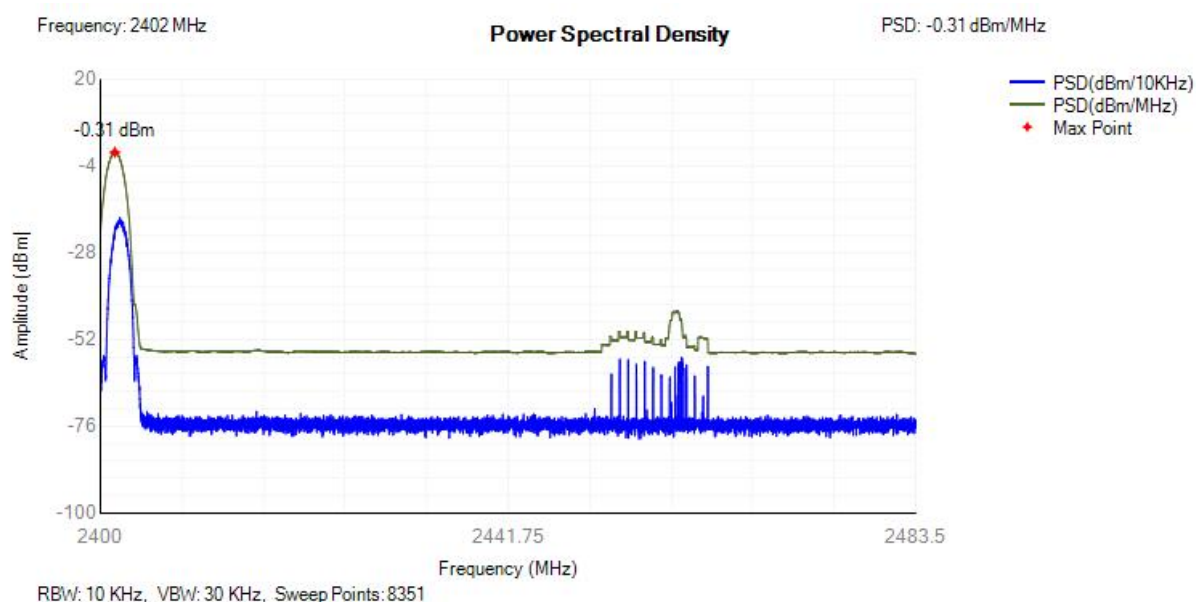




## PSD NVNT BLE\_1M 2480MHz

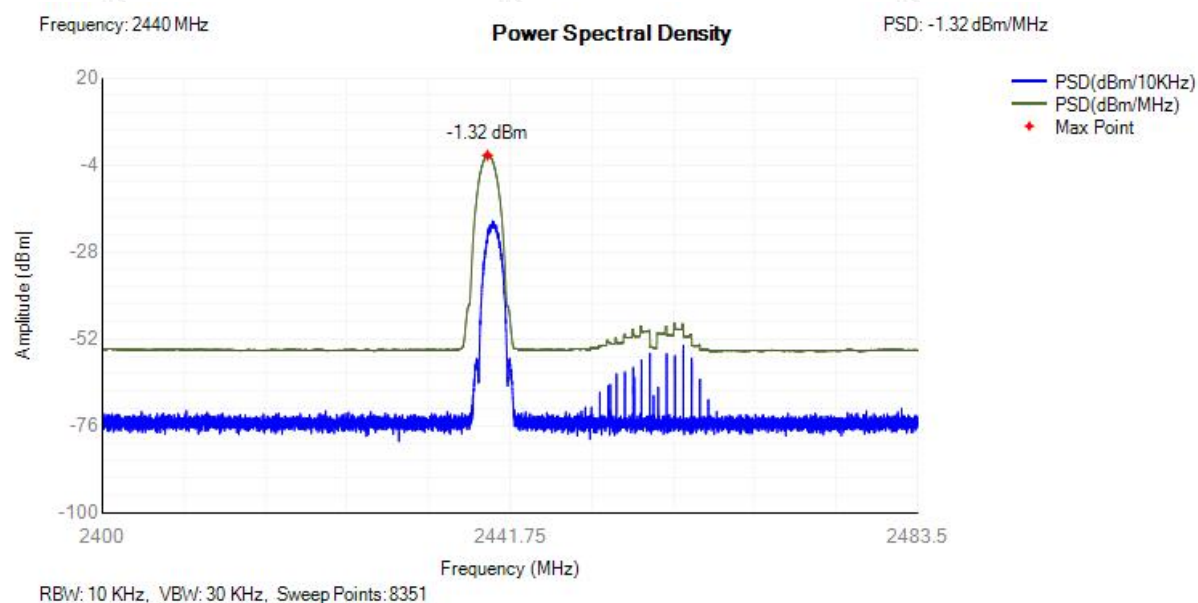


## PSD NVNT BLE\_2M 2402MHz

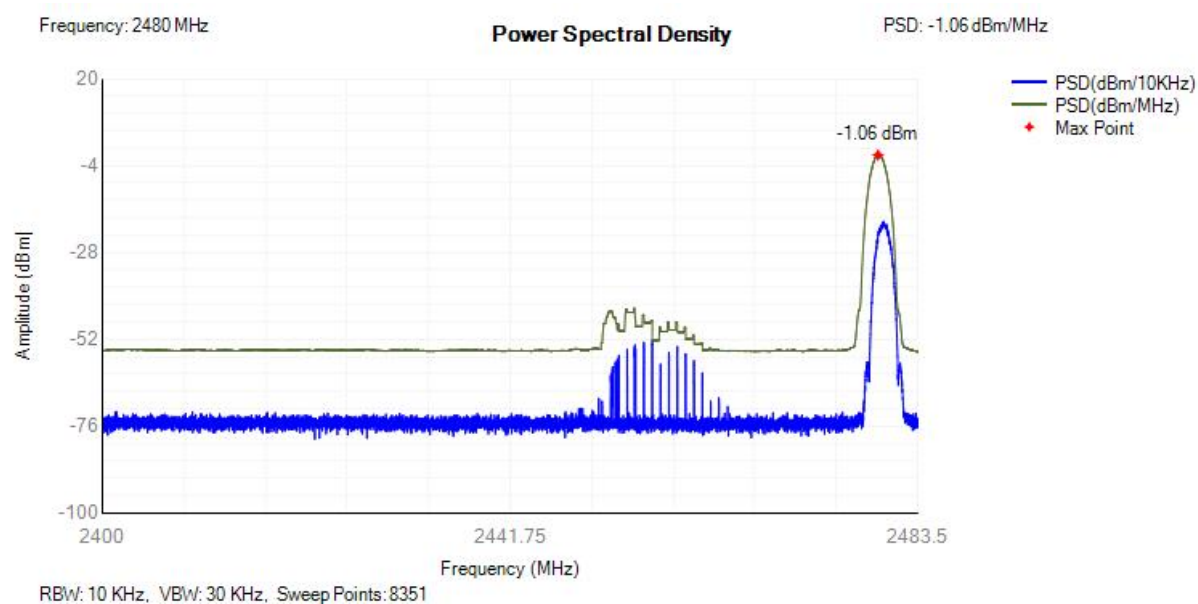




## PSD NVNT BLE\_2M 2440MHz



## PSD NVNT BLE\_2M 2480MHz

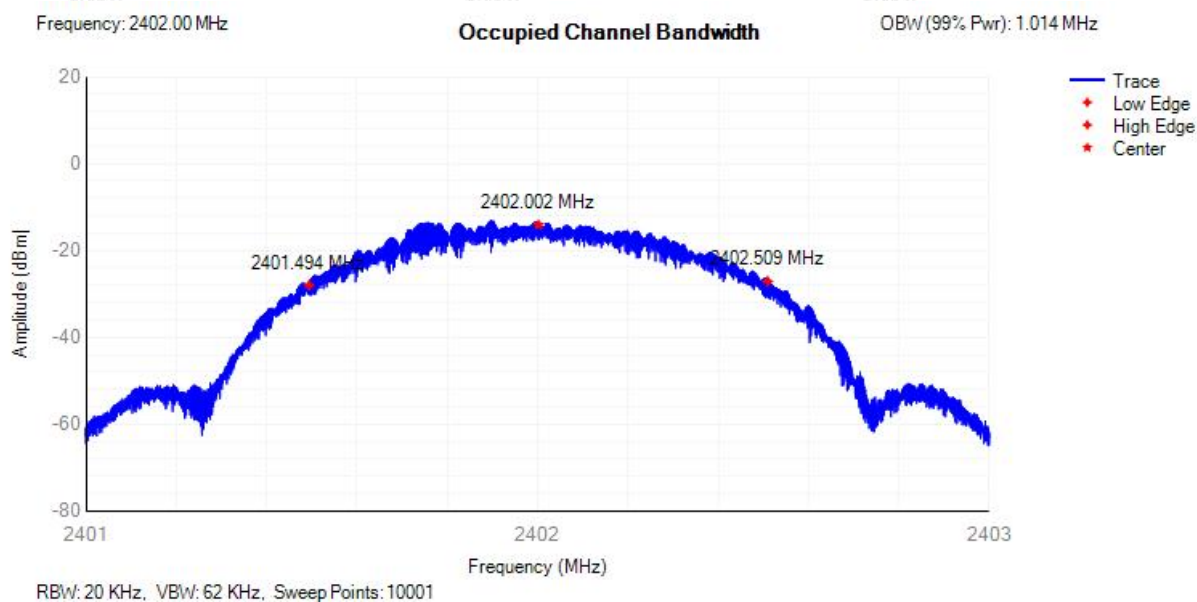




### F.3 Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Center Frequency (MHz)	OBW (MHz)	Lower Edge (MHz)	Upper Edge (MHz)	Limit OBW (MHz)	Verdict
NVNT	BLE_1M	2402	2402.002	1.014	2401.494	2402.509	2400 - 2483.5MHz	Pass
NVNT	BLE_1M	2440	2440.001	1.015	2439.493	2440.509	2400 - 2483.5MHz	Pass
NVNT	BLE_1M	2480	2480.001	1.015	2479.493	2480.509	2400 - 2483.5MHz	Pass
NVNT	BLE_2M	2402	2402	2.027	2400.986	2403.014	2400 - 2483.5MHz	Pass
NVNT	BLE_2M	2440	2439.999	2.026	2438.986	2441.012	2400 - 2483.5MHz	Pass
NVNT	BLE_2M	2480	2480	2.029	2478.985	2481.015	2400 - 2483.5MHz	Pass

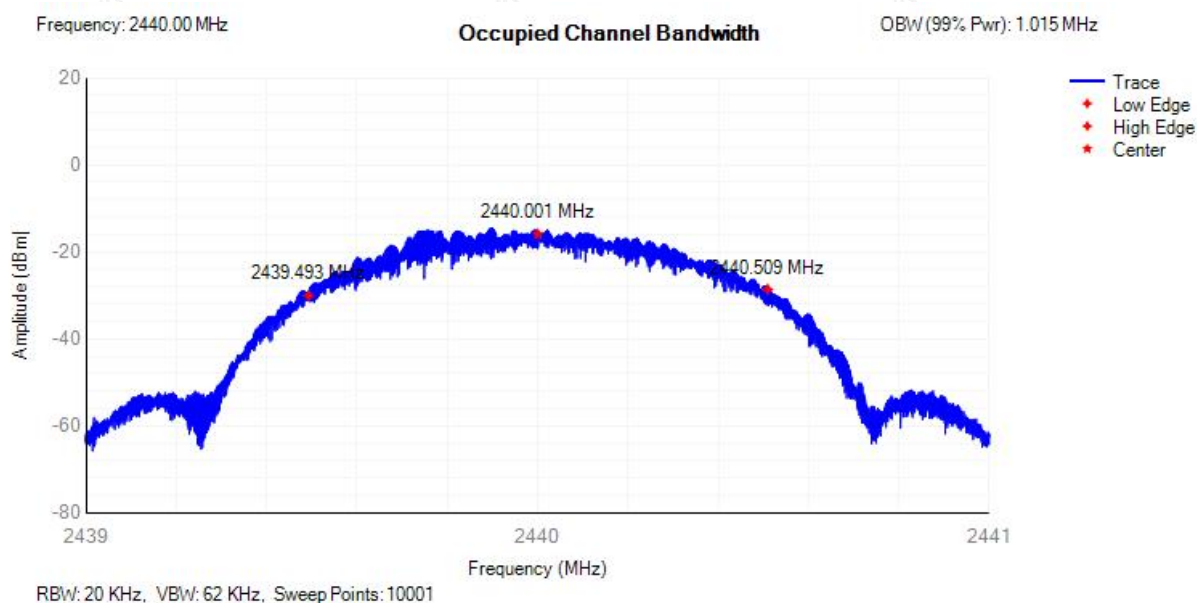
OBW NVNT BLE\_1M 2402MHz



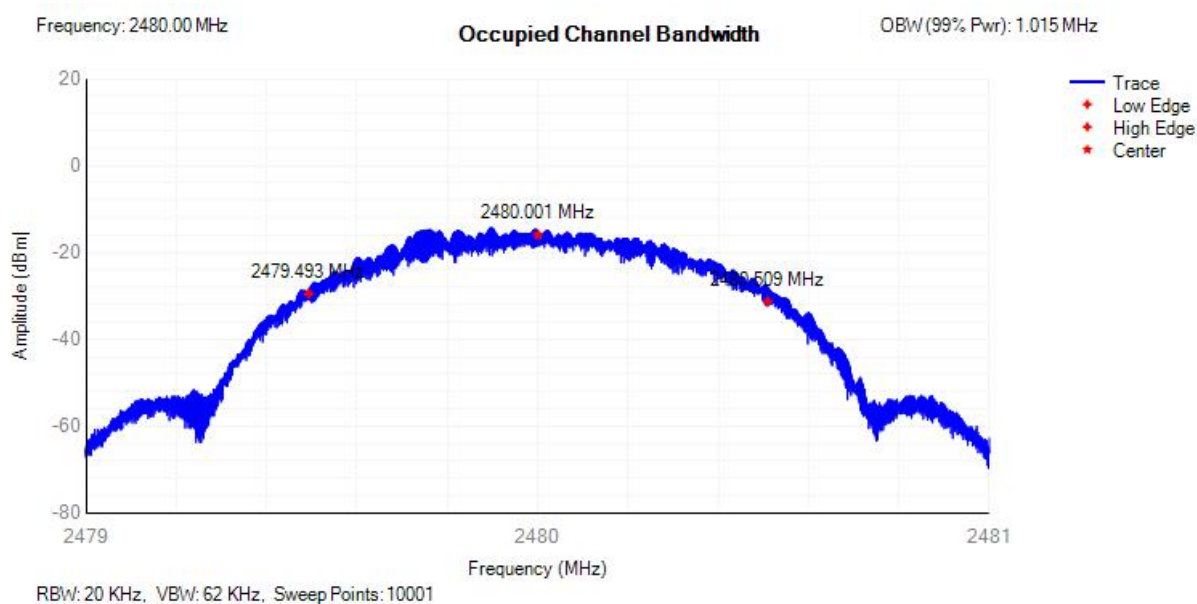




## OBW NVNT BLE\_1M 2440MHz

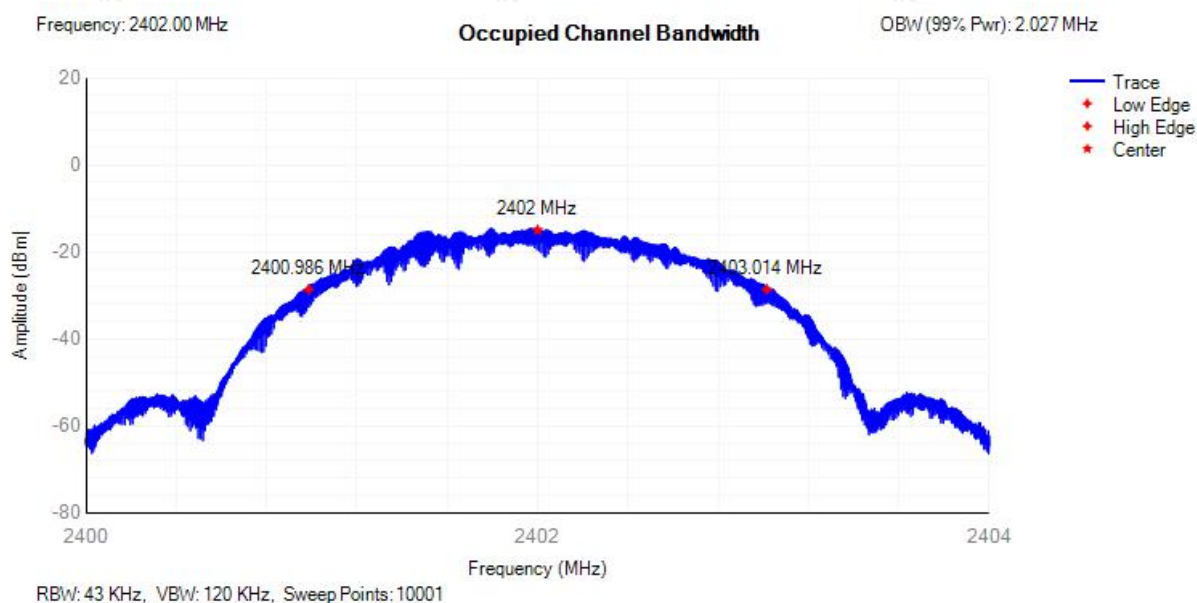


## OBW NVNT BLE\_1M 2480MHz

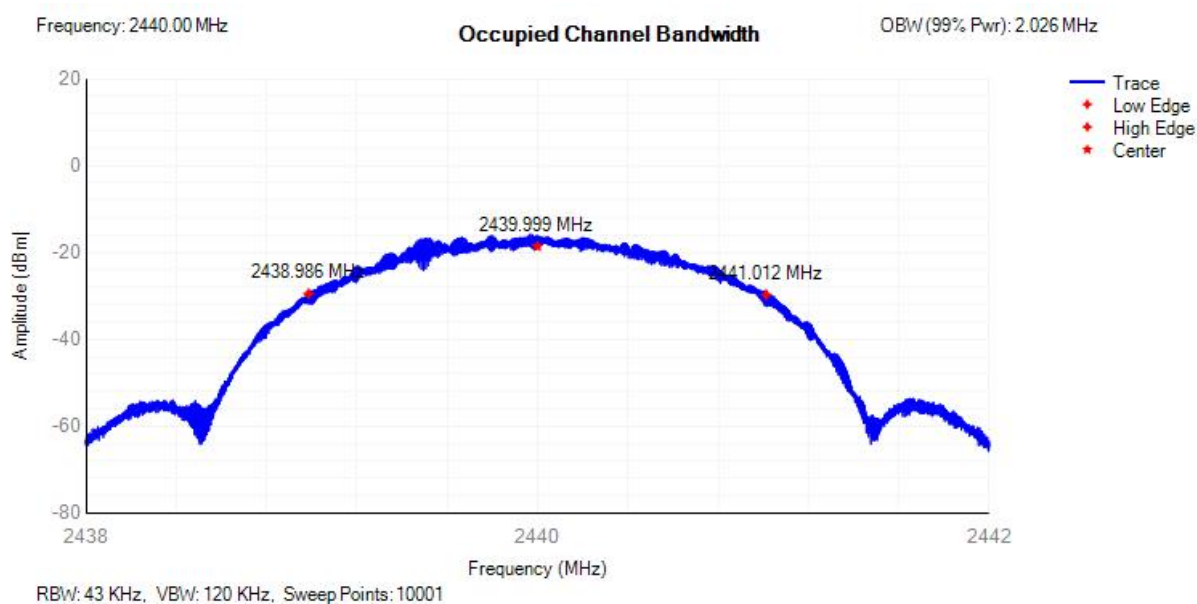




## OBW NVNT BLE\_2M 2402MHz



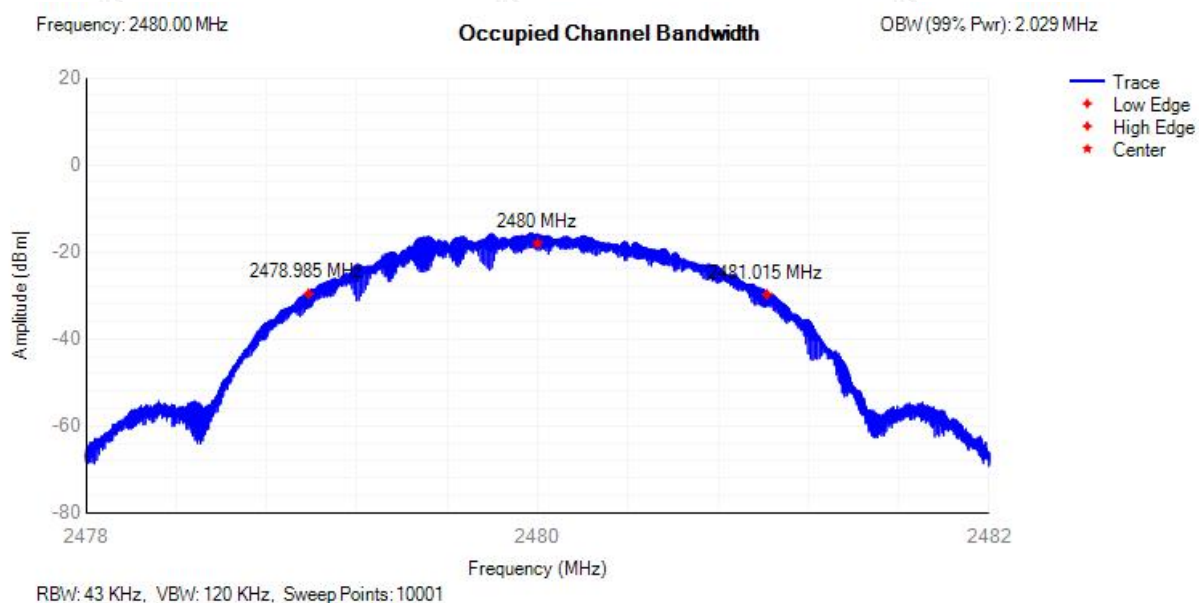
## OBW NVNT BLE\_2M 2440MHz







## OBW NVNT BLE\_2M 2480MHz

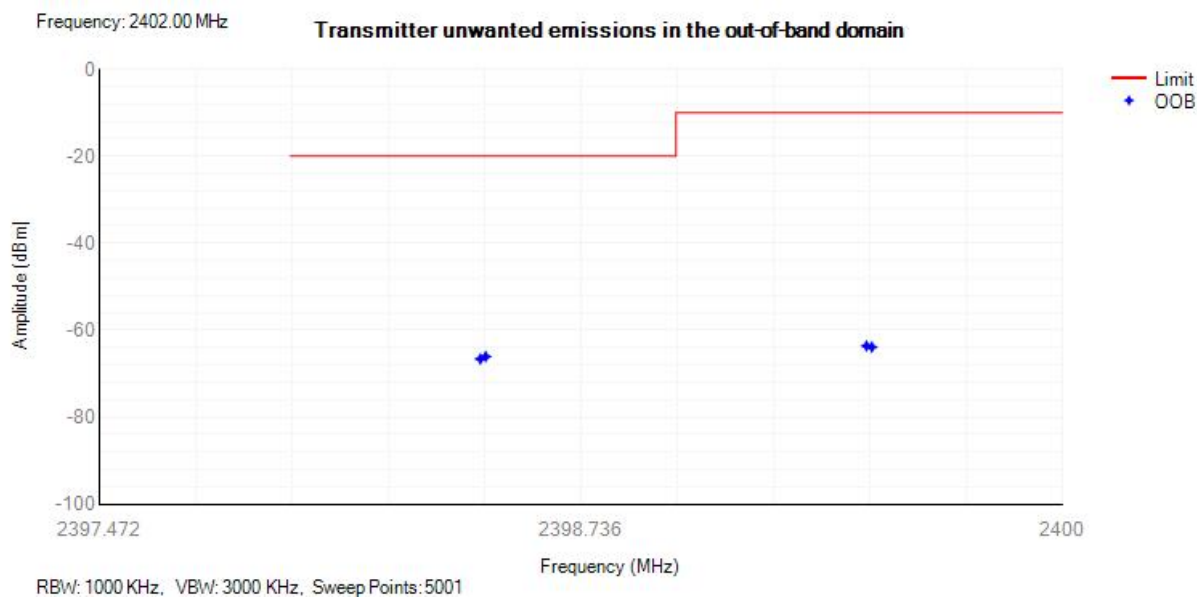




## F.4 Transmitter unwanted emissions in the out-of-band domain

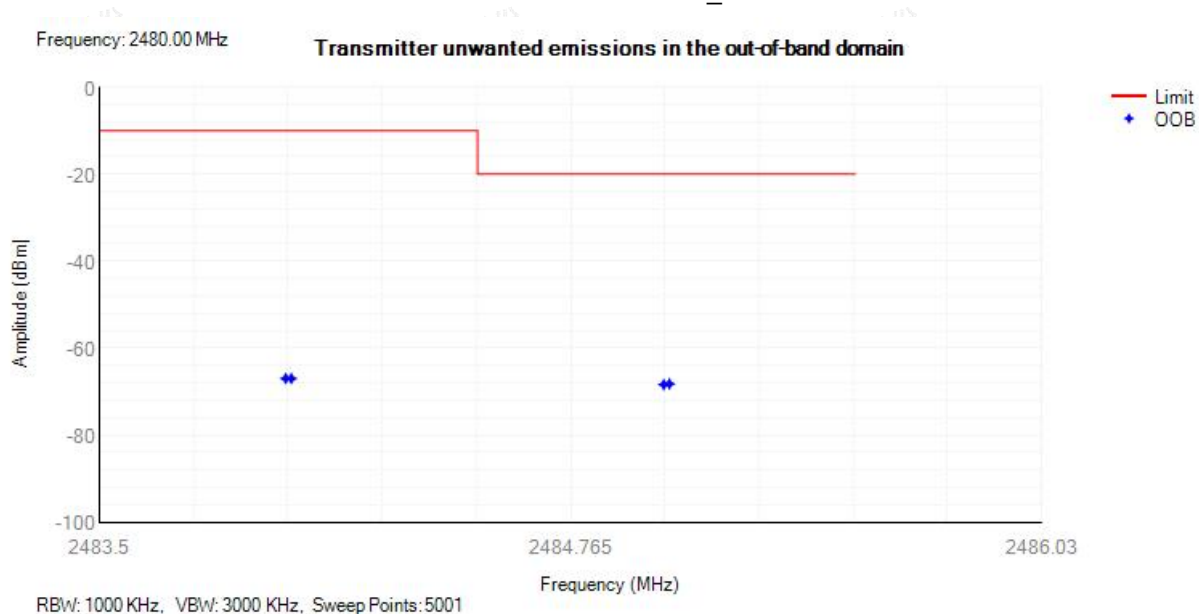
Condition	Mode	Frequency (MHz)	OOB Frequency (MHz)	Level (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	BLE_1M	2402	2399.5	-63.88	-10	Pass
NVNT	BLE_1M	2402	2399.486	-63.62	-10	Pass
NVNT	BLE_1M	2402	2398.486	-66.06	-20	Pass
NVNT	BLE_1M	2402	2398.472	-66.61	-20	Pass
NVNT	BLE_1M	2480	2484	-66.96	-10	Pass
NVNT	BLE_1M	2480	2484.015	-66.97	-10	Pass
NVNT	BLE_1M	2480	2485.015	-68.38	-20	Pass
NVNT	BLE_1M	2480	2485.03	-68.21	-20	Pass
NVNT	BLE_2M	2402	2399.5	-45.1	-10	Pass
NVNT	BLE_2M	2402	2398.5	-67.78	-10	Pass
NVNT	BLE_2M	2402	2398.473	-67.82	-10	Pass
NVNT	BLE_2M	2402	2397.473	-69.84	-20	Pass
NVNT	BLE_2M	2402	2396.473	-71.14	-20	Pass
NVNT	BLE_2M	2402	2396.446	-70.96	-20	Pass
NVNT	BLE_2M	2480	2484	-69.54	-10	Pass
NVNT	BLE_2M	2480	2485	-71.07	-10	Pass
NVNT	BLE_2M	2480	2485.029	-70.91	-10	Pass
NVNT	BLE_2M	2480	2486.029	-71.88	-20	Pass
NVNT	BLE_2M	2480	2487.029	-72.38	-20	Pass
NVNT	BLE_2M	2480	2487.058	-72.4	-20	Pass

Tx. Emissions OOB NVNT BLE\_1M 2402MHz

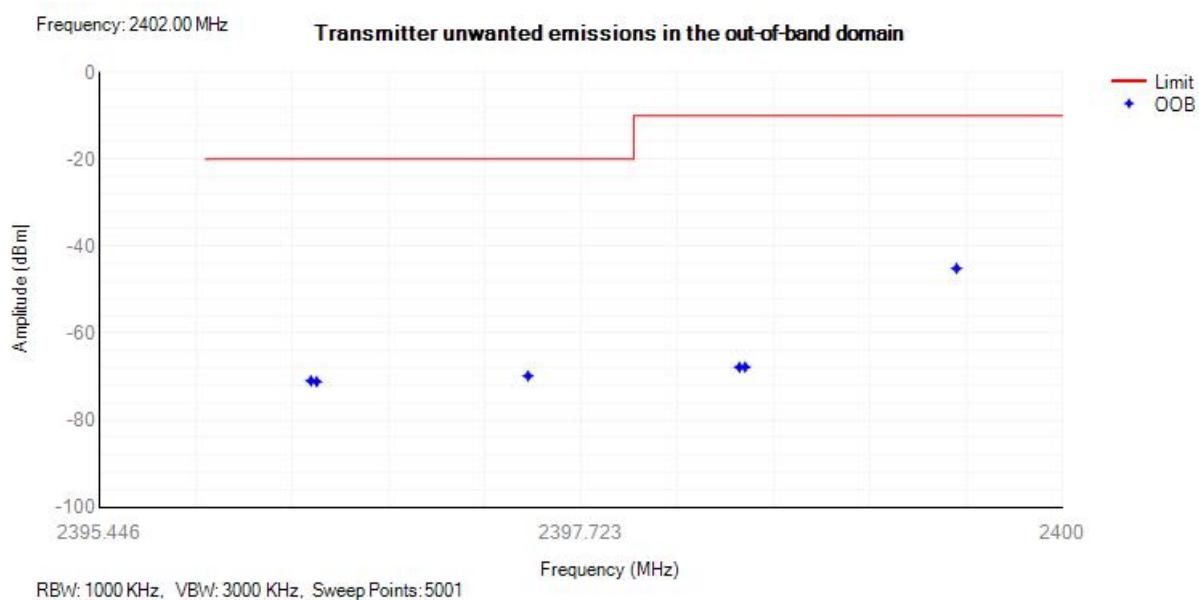




## Tx. Emissions OOB NVNT BLE\_1M 2480MHz

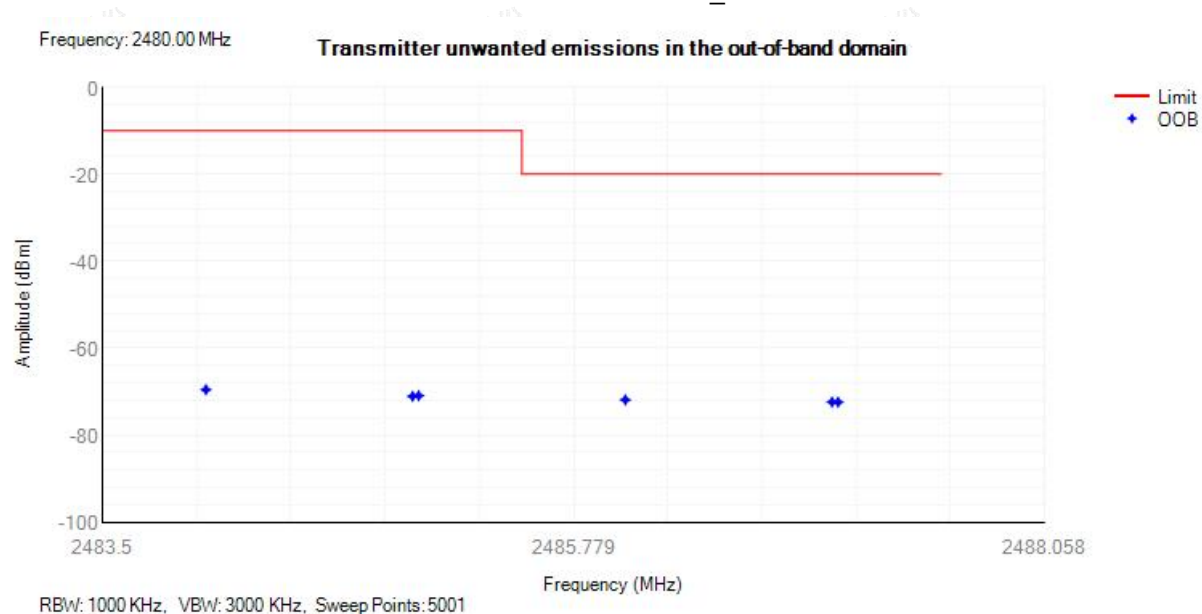


## Tx. Emissions OOB NVNT BLE\_2M 2402MHz





## Tx. Emissions OOB NVNT BLE\_2M 2480MHz

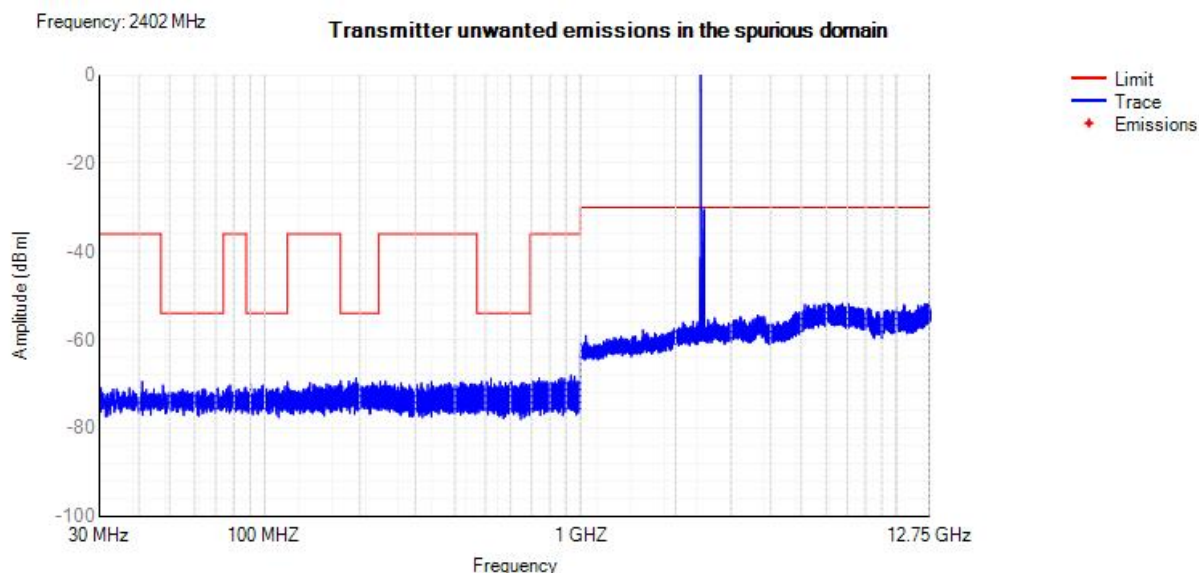




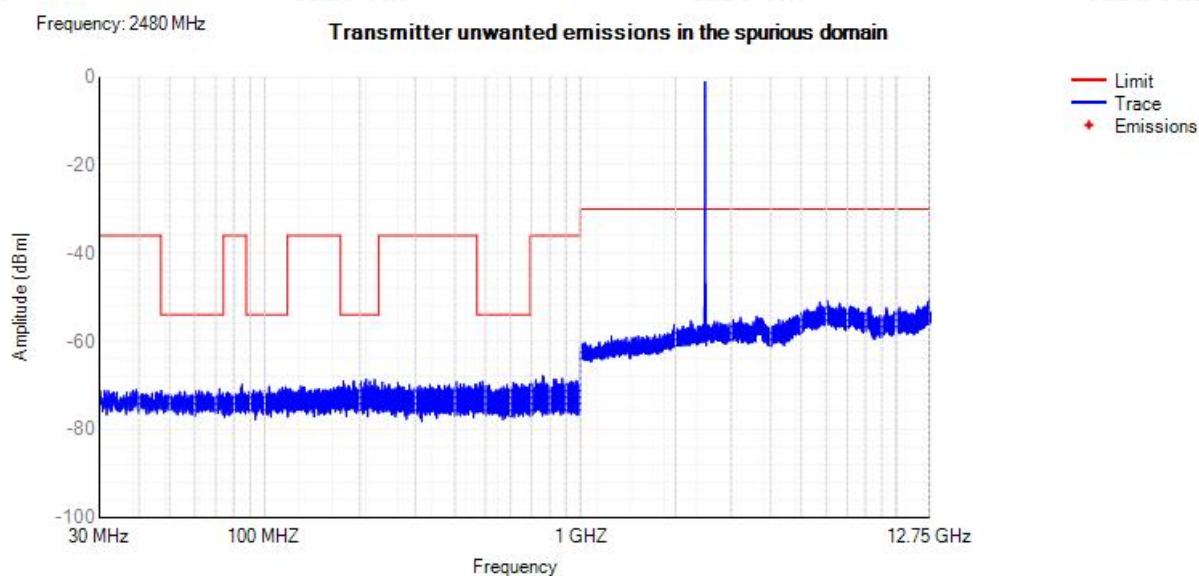
## F.5 Transmitter unwanted emissions in the spurious domain

Condition	Mode	Frequency (MHz)	Range	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
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Tx. Spurious NVNT BLE\_1M 2402MHz



Tx. Spurious NVNT BLE\_1M 2480MHz



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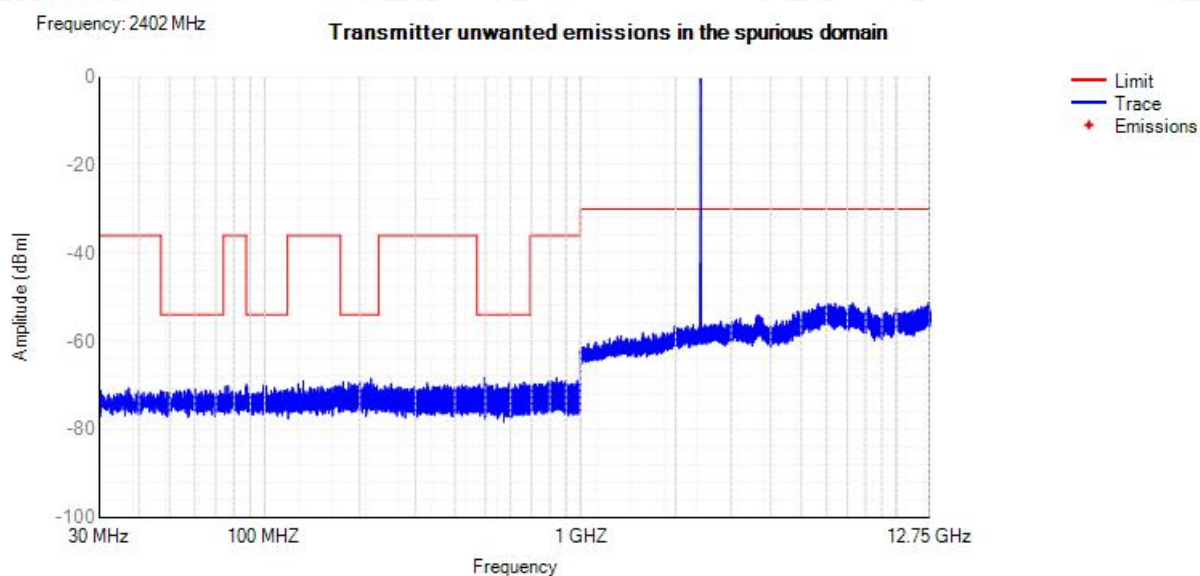


Shenzhen LCS Compliance Testing Laboratory Ltd.  
Add: Room 101, 201, Building A and Room 301, Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street,  
Bao'an District, Shenzhen, Guangdong, China  
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com  
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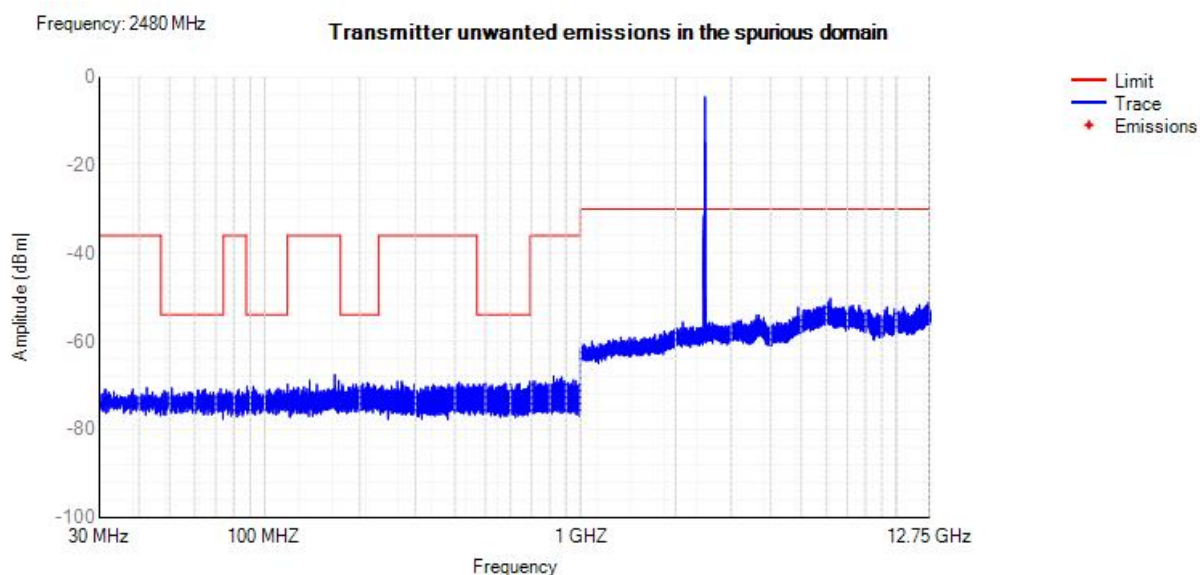




## Tx. Spurious NVNT BLE\_2M 2402MHz



## Tx. Spurious NVNT BLE\_2M 2480MHz



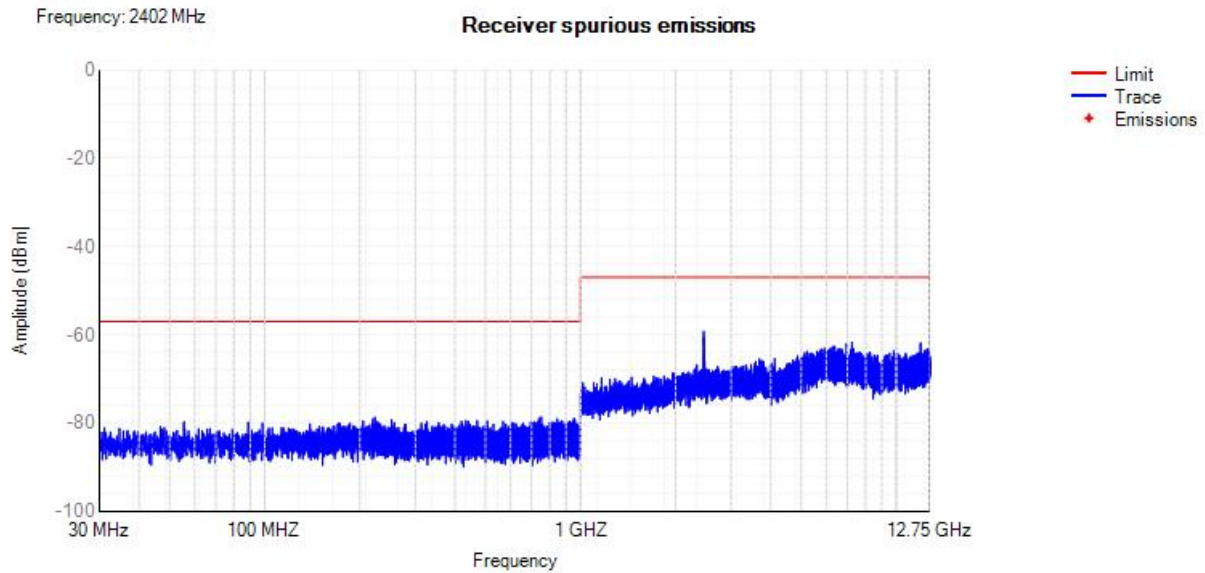




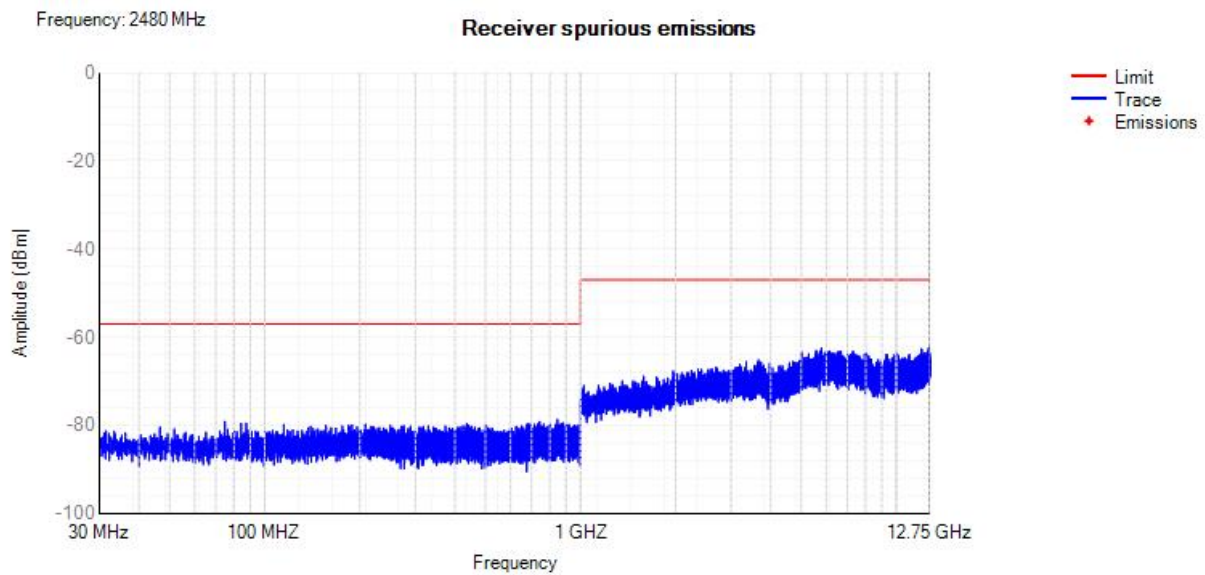
## F.6 Receiver spurious emissions

Condition	Mode	Frequency (MHz)	Range	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
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Rx. Spurious NVNT BLE\_1M 2402MHz



Rx. Spurious NVNT BLE\_1M 2480MHz

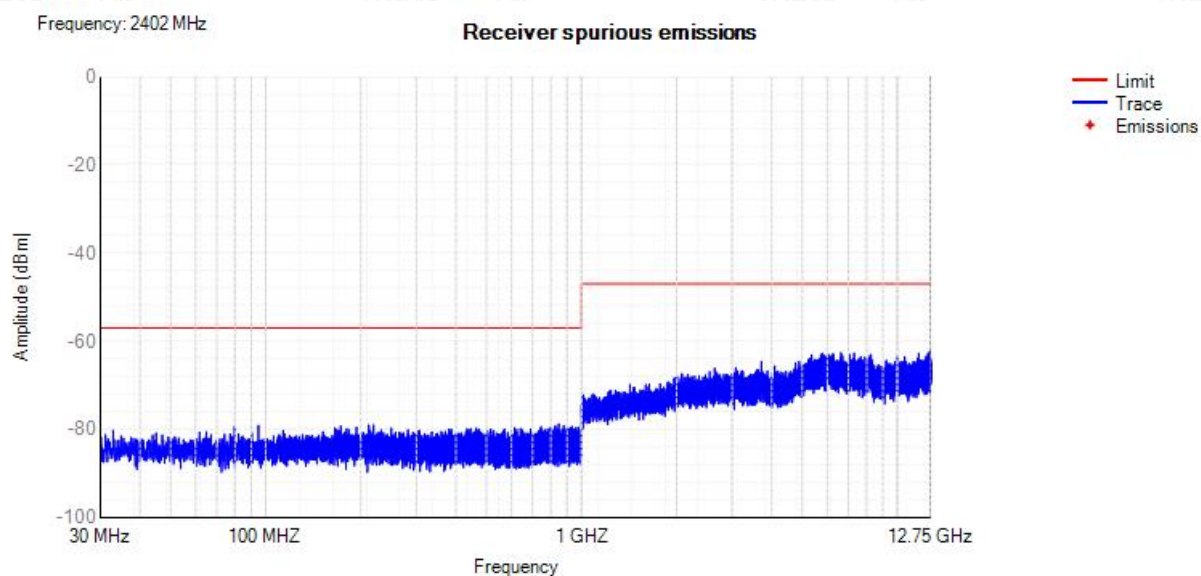


Condition	Mode	Frequency (MHz)	Range	Spur Freq (MHz)	Spur Level (dBm)	Limit (dBm)	Verdict
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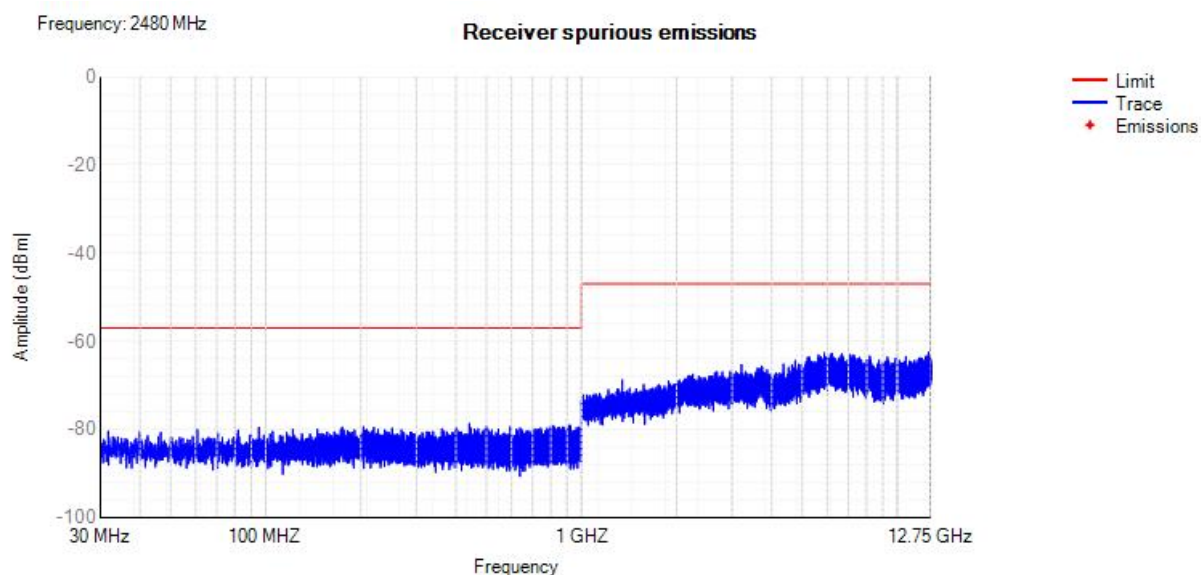




## Rx. Spurious NVNT BLE\_2M 2402MHz



## Rx. Spurious NVNT BLE\_2M 2480MHz





## F.7 Receiver Blocking

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_1M	2402	-69	2380	-26	≥-34	CW	3.04	10	Pass
			2504	-23	≥-34	CW	2.98	10	Pass
			2300	-27	≥-34	CW	2.84	10	Pass
			2584	-25	≥-34	CW	3.39	10	Pass
	2480	-69	2380	-30	≥-34	CW	3.46	10	Pass
			2504	-26	≥-34	CW	1.64	10	Pass
			2300	-28	≥-34	CW	2.71	10	Pass
			2584	-20	≥-34	CW	0.81	10	Pass
BLE_2M	2402	-69	2380	-22	≥-34	CW	3.65	10	Pass
			2504	-21	≥-34	CW	2.34	10	Pass
			2300	-30	≥-34	CW	0.53	10	Pass
			2584	-28	≥-34	CW	4.96	10	Pass
	2480	-69	2380	-23	≥-34	CW	4.11	10	Pass
			2504	-28	≥-34	CW	2.48	10	Pass
			2300	-23	≥-34	CW	0.99	10	Pass
			2584	-21	≥-34	CW	2.68	10	Pass

