



## Appendix E for BT LE Test Data

**Product Name: SONOFF Smart Stackable Power Meter (Main Unit+4-Relays)**

**Test Model: SPM-Main**

### Environmental Conditions

Temperature:	22.3° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan



## E.1 RF Output Power

### Test Result

Test Condition	TestMode	Antenna	Channel	EIRP[dBm]	Limit[dBm]	Verdict
NVNT	BLE_1M	Ant2	2402	1.96	20	PASS
			2440	0.35	20	PASS
			2480	1.45	20	PASS

Test Condition	TestMode	Antenna	Channel	EIRP[dBm]	Limit[dBm]	Verdict
NVLT	BLE_1M	Ant2	2402	1.96	20	PASS
			2440	0.35	20	PASS
			2480	1.45	20	PASS

Test Condition	TestMode	Antenna	Channel	EIRP[dBm]	Limit[dBm]	Verdict
NVHT	BLE_1M	Ant2	2402	1.96	20	PASS
			2440	0.35	20	PASS
			2480	1.45	20	PASS

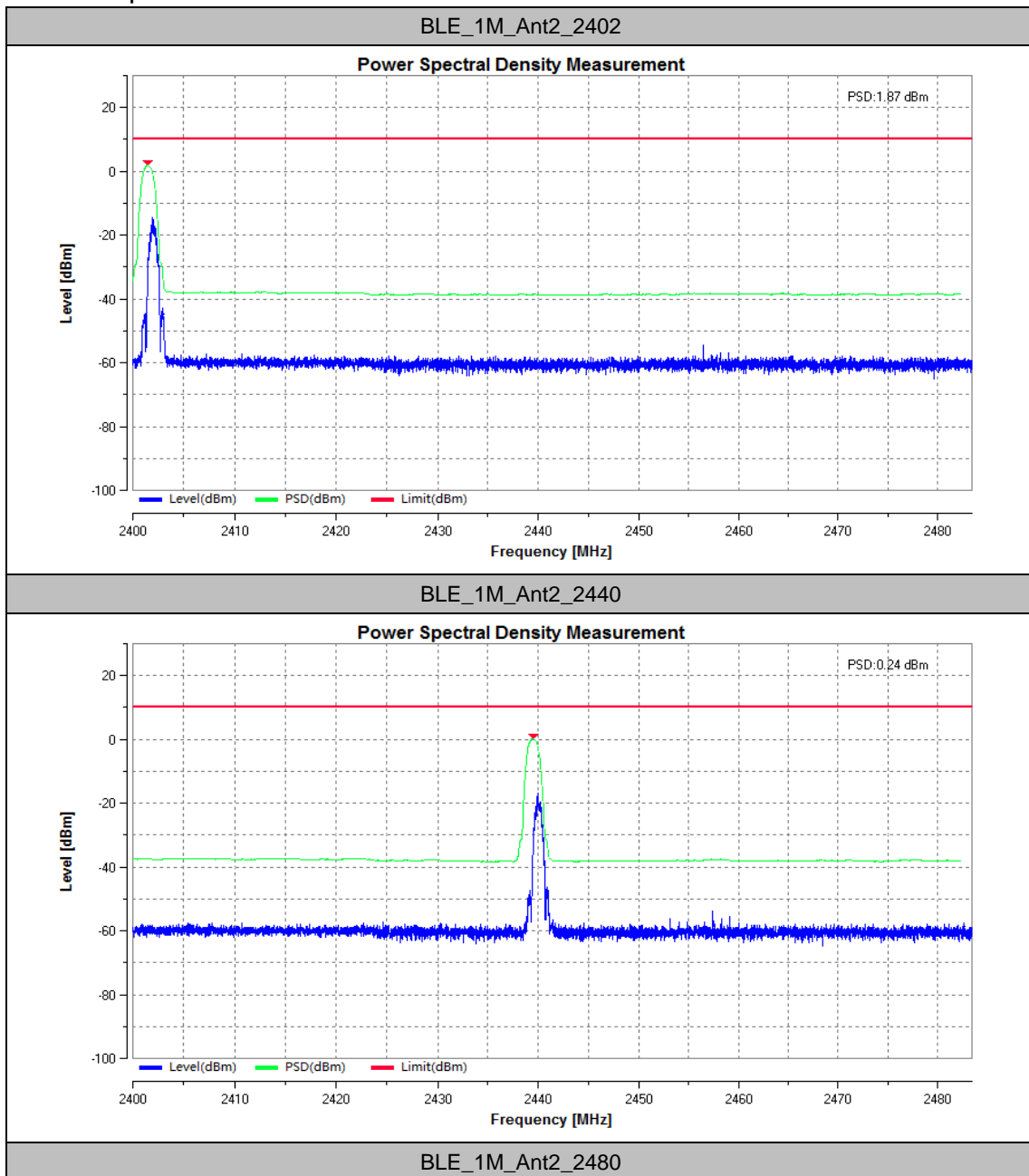


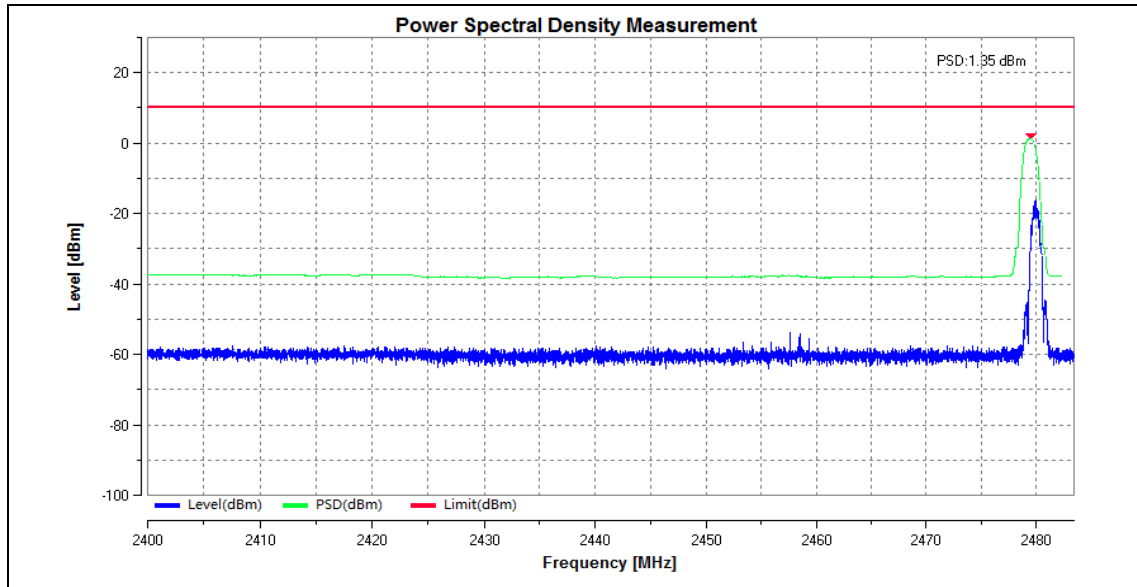
## E.2 Power Spectral Density

### Test Result

TestMode	Antenna	Channel	PSD[dBm/MHz]	Limit[dBm/MHz]	Verdict
BLE_1M	Ant2	2402	1.87	10	PASS
		2440	0.24	10	PASS
		2480	1.35	10	PASS

### Test Graphs





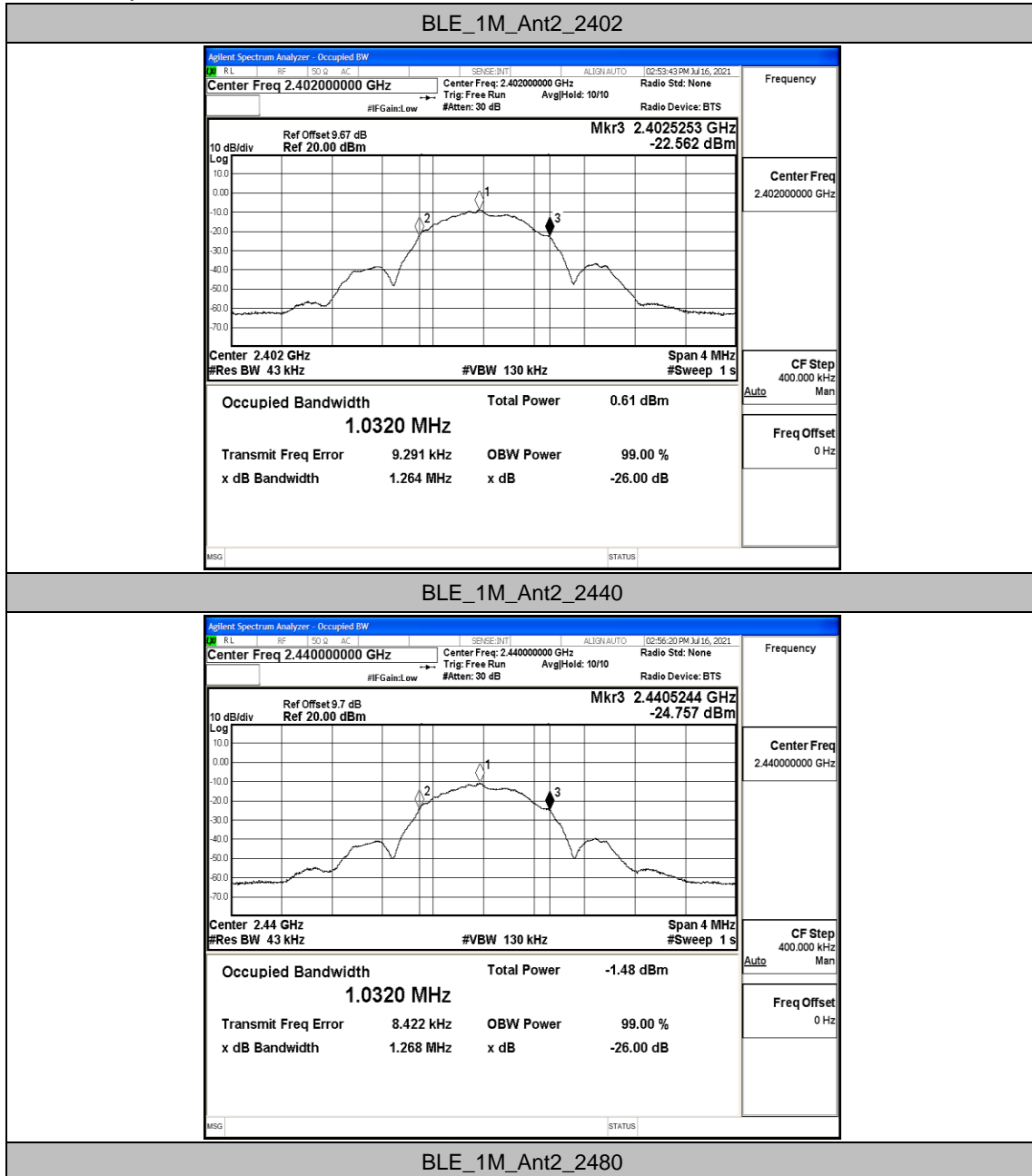


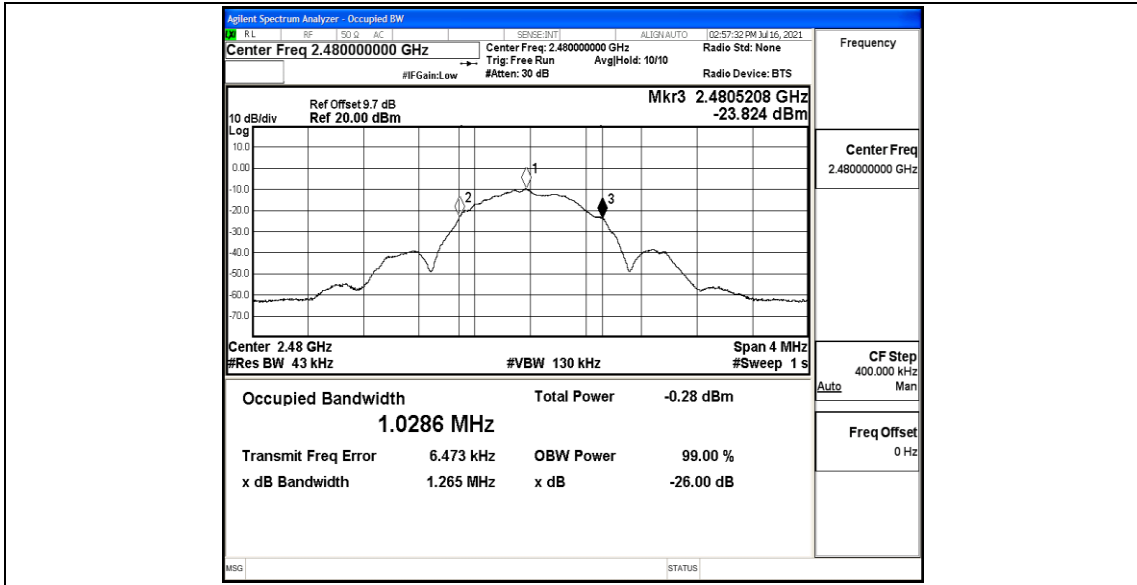
### E.3 Occupied Channel Bandwidth

#### Test Result

TestMode	Antenna	Channel	OCB[MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant2	2402	1.0320	2401.4933	2402.5253	2400 to 2483.5	PASS
		2440	1.0320	2439.4924	2440.5244	2400 to 2483.5	PASS
		2480	1.0286	2479.4922	2480.5208	2400 to 2483.5	PASS

#### Test Graphs







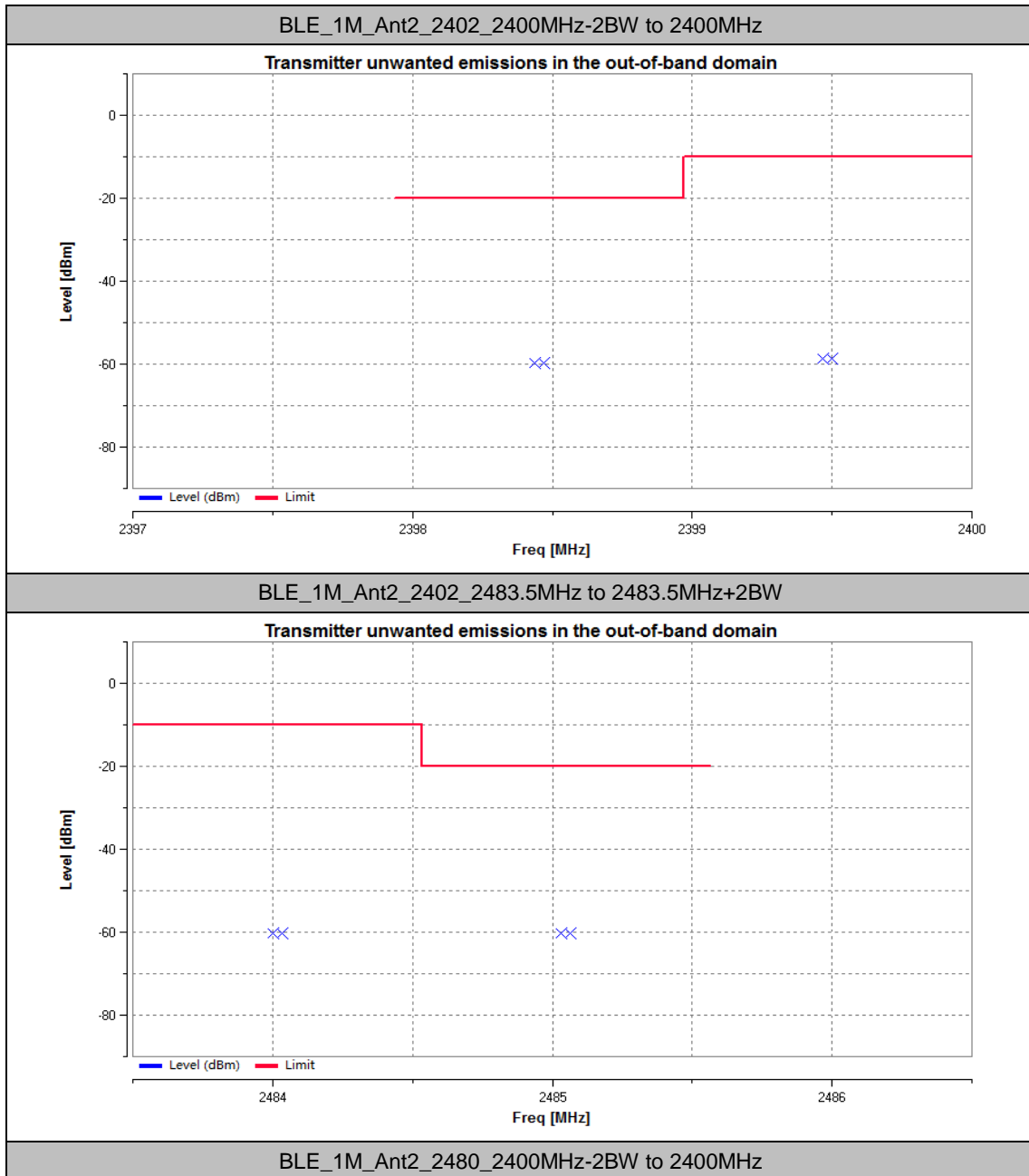
## E.4 Transmitter Unwanted Emissions In The Out-Of-BandDomain

### Test Result

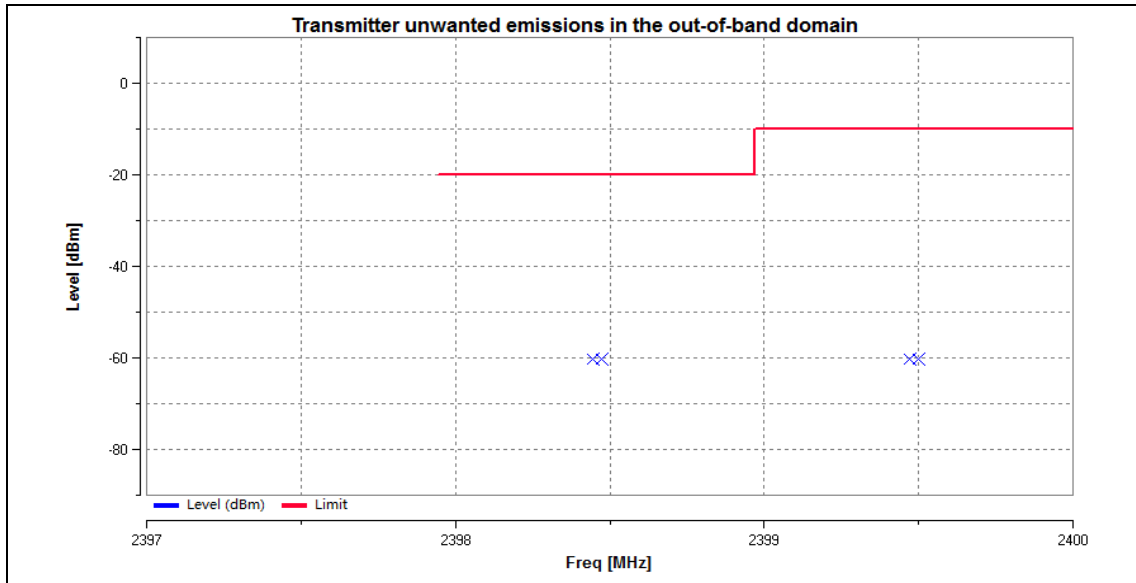
TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant2	2402	2398.436	-59.75	-20.00	PASS
			2398.468	-59.75	-20.00	PASS
			2399.468	-58.71	-10.00	PASS
			2399.5	-58.65	-10.00	PASS
			2484	-60.21	-10.00	PASS
			2484.032	-60.21	-10.00	PASS
			2485.032	-60.20	-20.00	PASS
			2485.064	-60.19	-20.00	PASS
		2480	2398.4428	-60.35	-20.00	PASS
			2398.4714	-60.32	-20.00	PASS
			2399.4714	-60.30	-10.00	PASS
			2399.5	-60.35	-10.00	PASS
			2484	-59.75	-10.00	PASS
			2484.0286	-59.80	-10.00	PASS
			2485.0286	-59.89	-20.00	PASS
			2485.0572	-59.87	-20.00	PASS



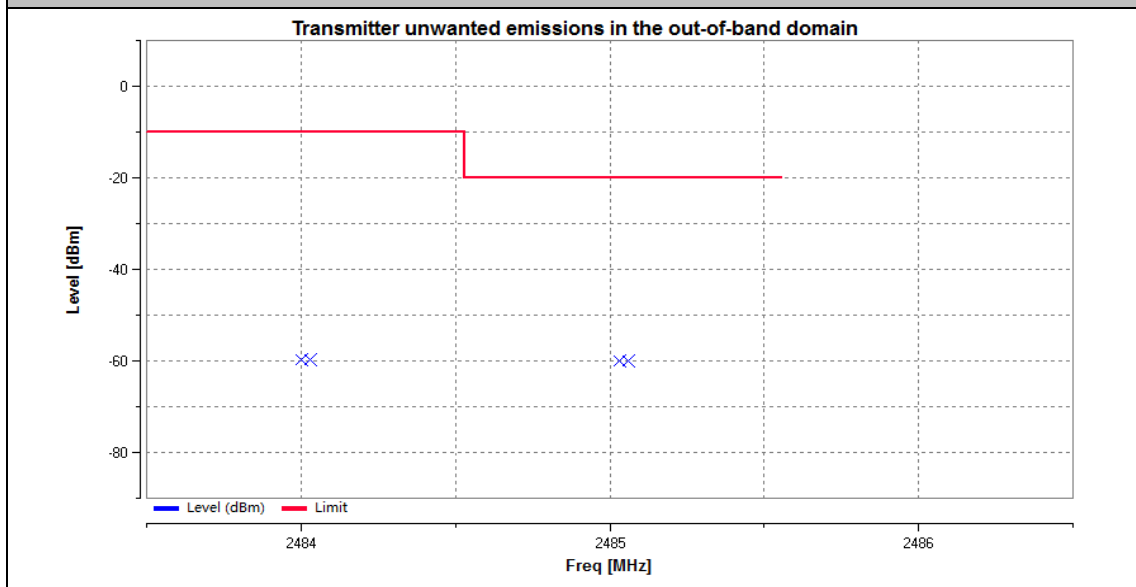
### Test Graphs







BLE\_1M\_Ant2\_2480\_2483.5MHz to 2483.5MHz+2BW



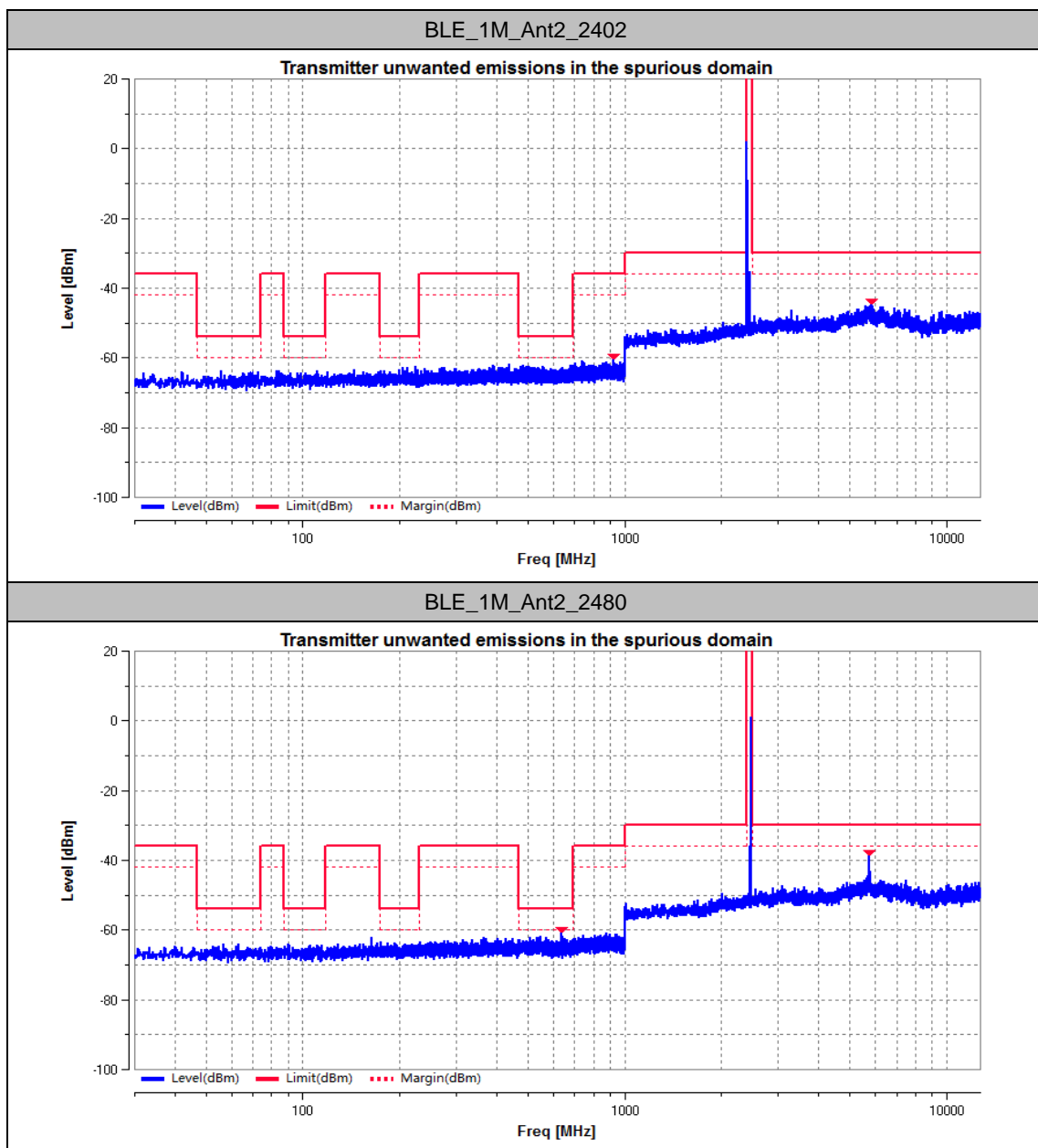


## E.5 Transmitter unwanted emissions in the spurious domain

### Test Result-Pre-scan

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant2	2402	925.55	-60.65	-36	PASS
			5879.19	-44.66	-30	PASS
		2480	638.31	-60.74	-54	PASS
			5779.31	-38.76	-30	PASS

### Test Graphs-Pre-scan



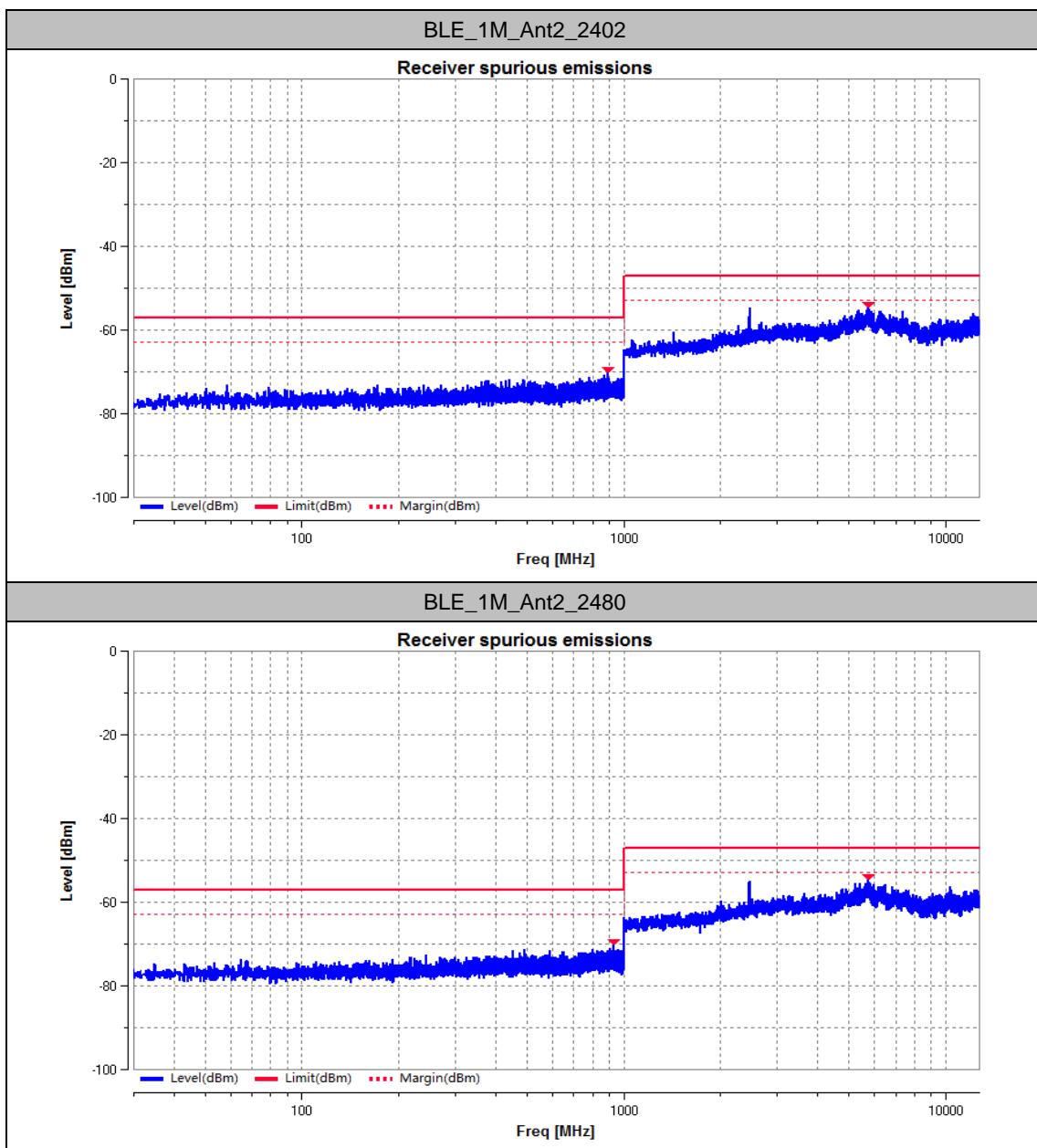


## E.6 Receiver spurious emissions

### Test Result-Pre-scan

TestMode	Antenna	Channel	Freq. [MHz]	Level[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant2	2402	890.63	-70.31	-57.00	PASS
			5782.25	-54.79	-47.00	PASS
		2480	930.52	-70.37	-57.00	PASS
			5780.78	-54.83	-47.00	PASS

### Test Graphs-Pre-scan





## E.7 Receiver Blocking

### Test Result

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	-28	$\geq -34$	CW	6.48	10	Pass
			2504	-21	$\geq -34$	CW	7.81	10	Pass
			2300	-25	$\geq -34$	CW	7.17	10	Pass
			2584	-25	$\geq -34$	CW	3.92	10	Pass
	2480	-69	2380	-30	$\geq -34$	CW	2.11	10	Pass
			2504	-24	$\geq -34$	CW	6.23	10	Pass
			2300	-28	$\geq -34$	CW	5.02	10	Pass
			2584	-21	$\geq -34$	CW	7.36	10	Pass