



Appendix A

RF Test Data for BT LE V5.0(DTS) (Conducted Measurement)

Product Name: Mibro Watch X1

Trade Mark: **mibro**

Test Model: XPAW005

Environmental Conditions

Temperature:	23.5 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Kay Hu
Supervised by:	Li Huan



A.1 DTS Bandwidth

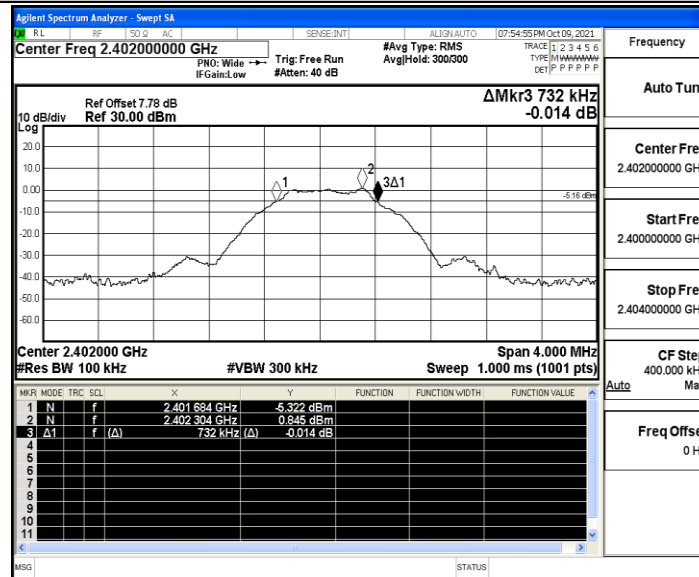
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.732	2401.684	2402.416	≥0.5	PASS
		2440	0.728	2439.688	2440.416	≥0.5	PASS
		2480	0.720	2479.692	2480.412	≥0.5	PASS

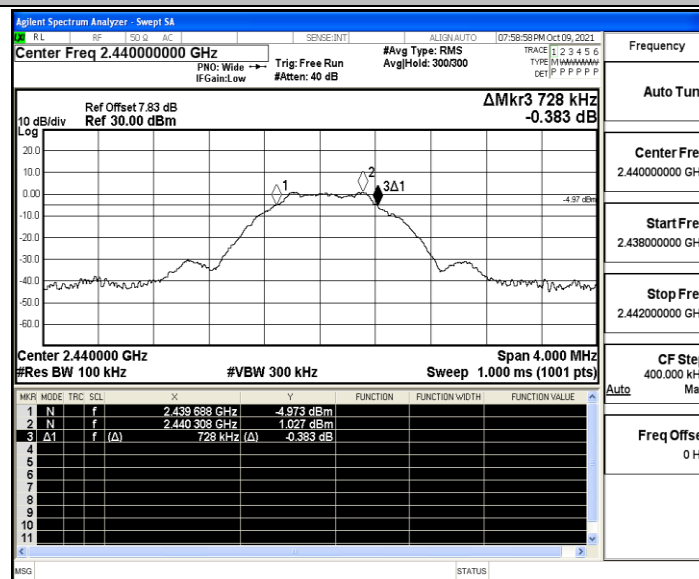


Test Graphs

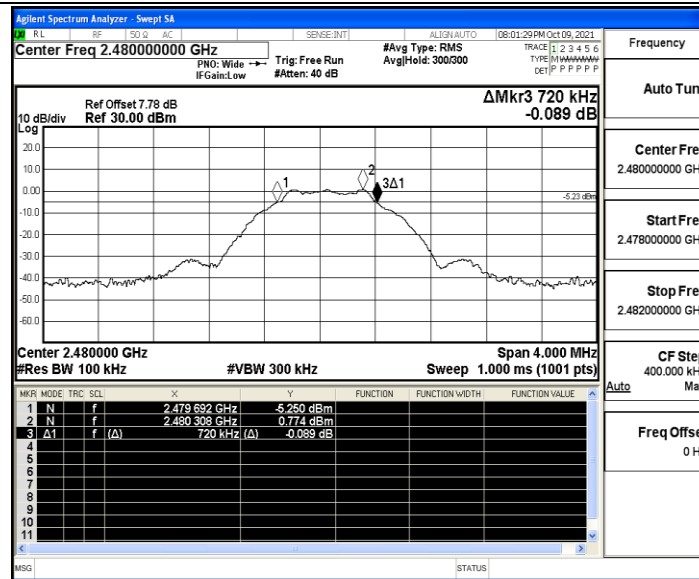
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.2 Maximum peak conducted output power

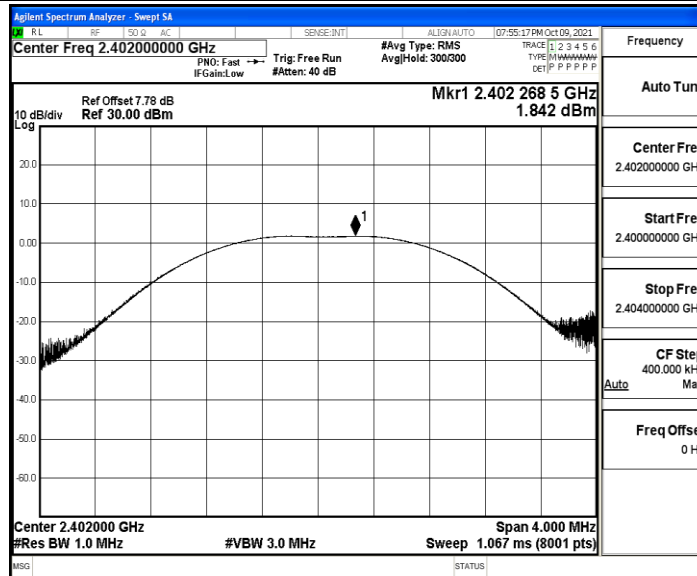
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.84	≤30	PASS
		2440	2.06	≤30	PASS
		2480	1.77	≤30	PASS

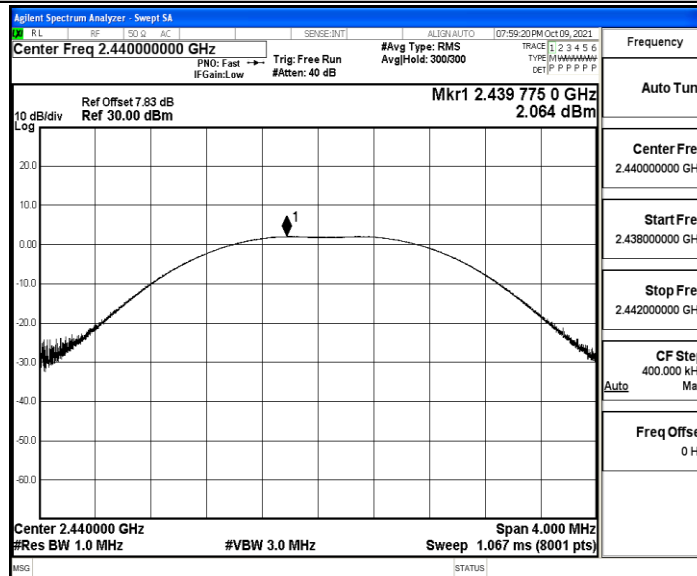


Test Graphs

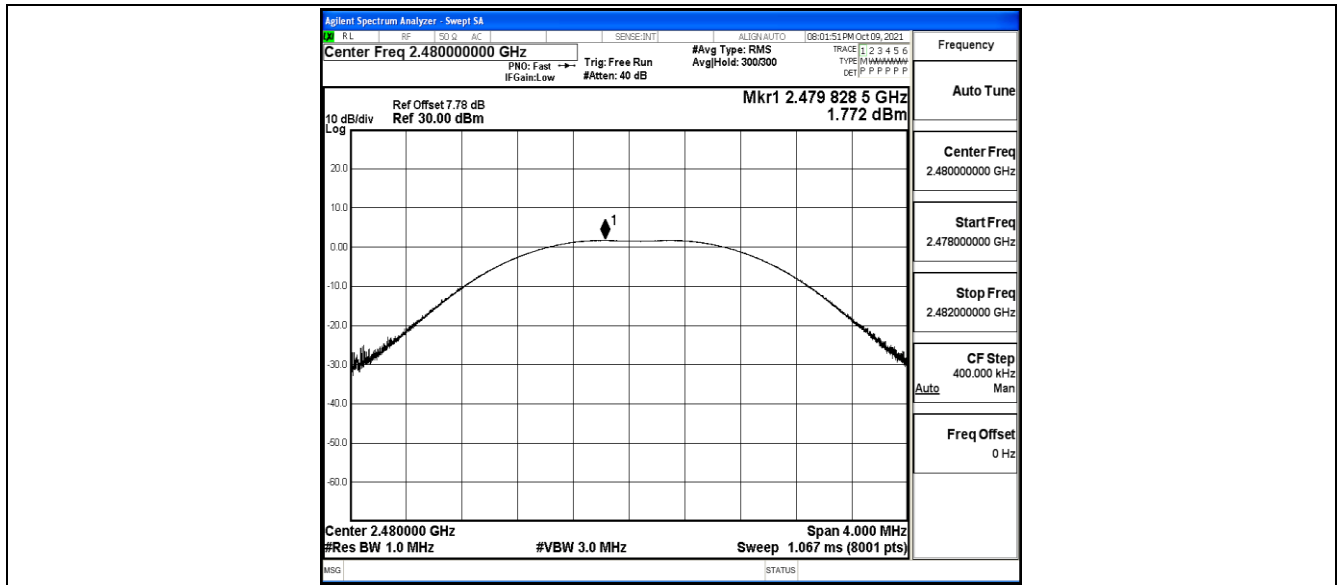
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.3 Maximum power spectral density

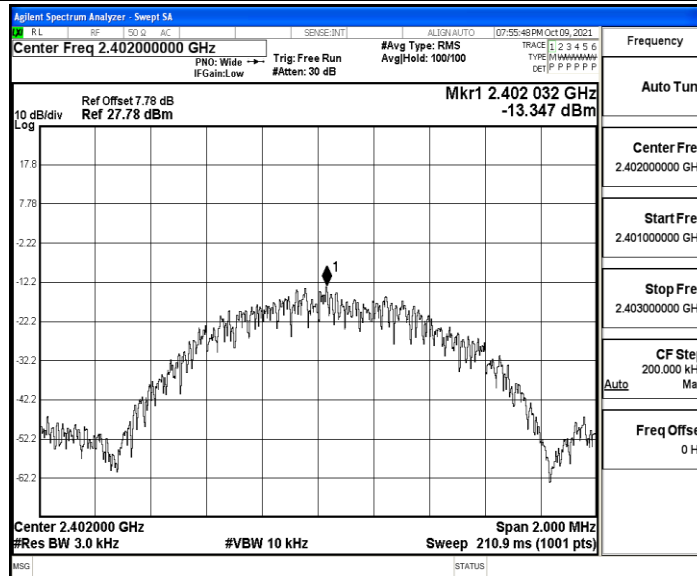
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.35	≤8	PASS
		2440	-13.11	≤8	PASS
		2480	-13.33	≤8	PASS

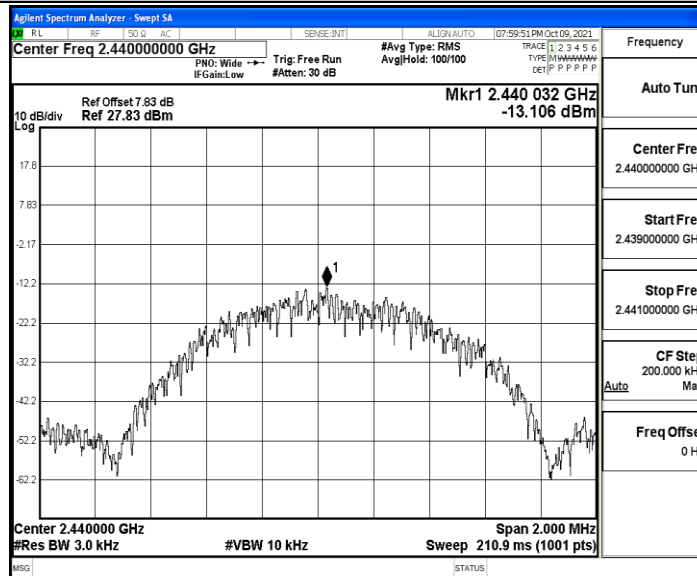


Test Graphs

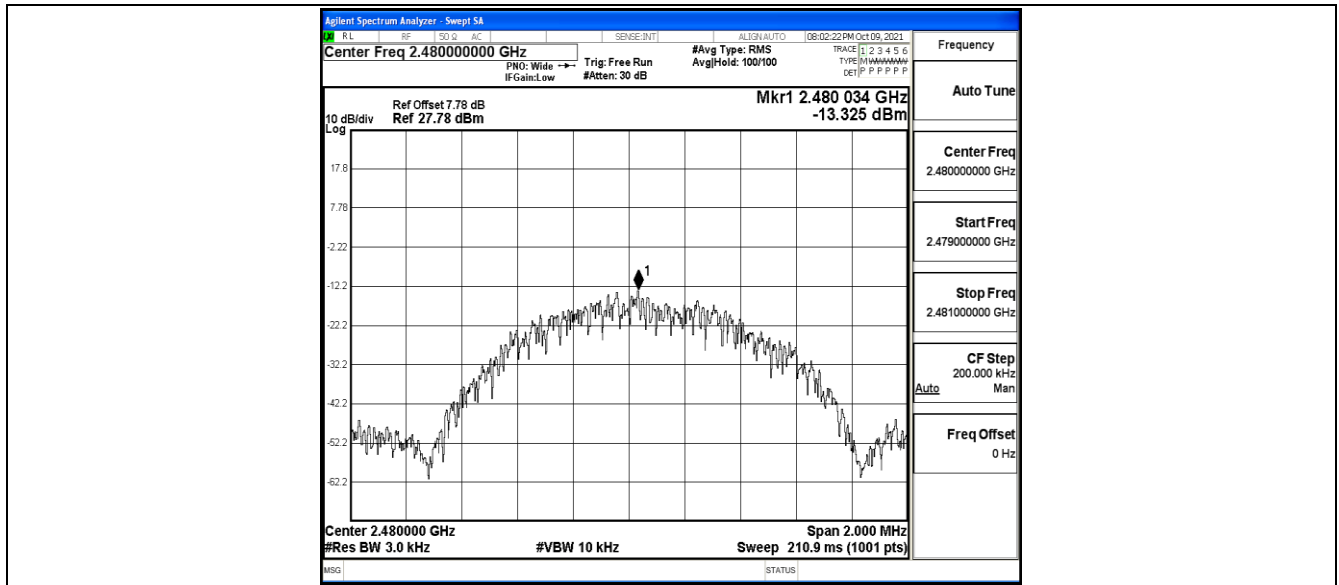
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.4 Band edge measurements

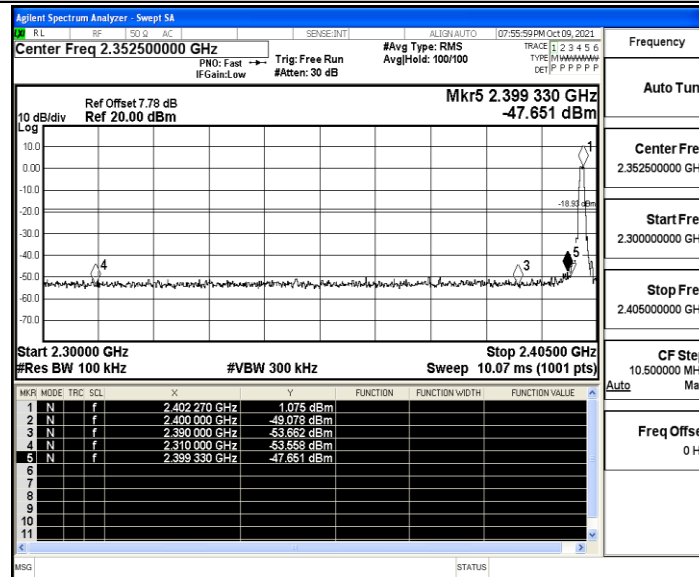
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	1.08	-47.65	≤ -18.93	PASS
		High	2480	0.95	-48.58	≤ -19.05	PASS

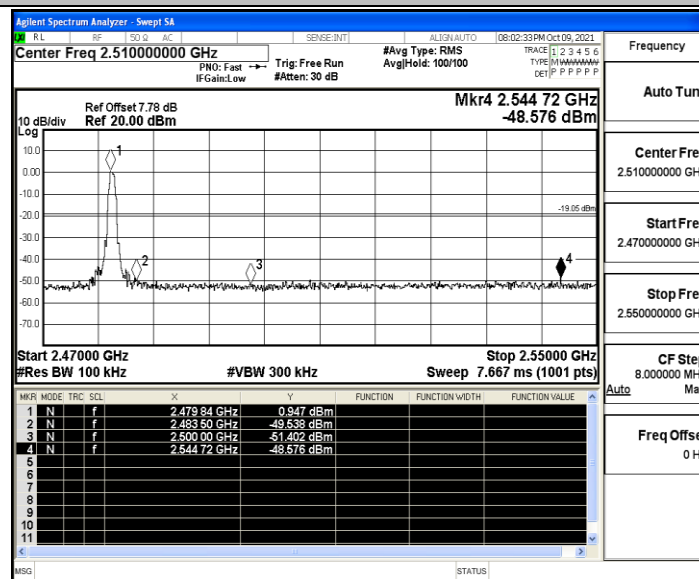


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.5 Conducted Spurious Emission

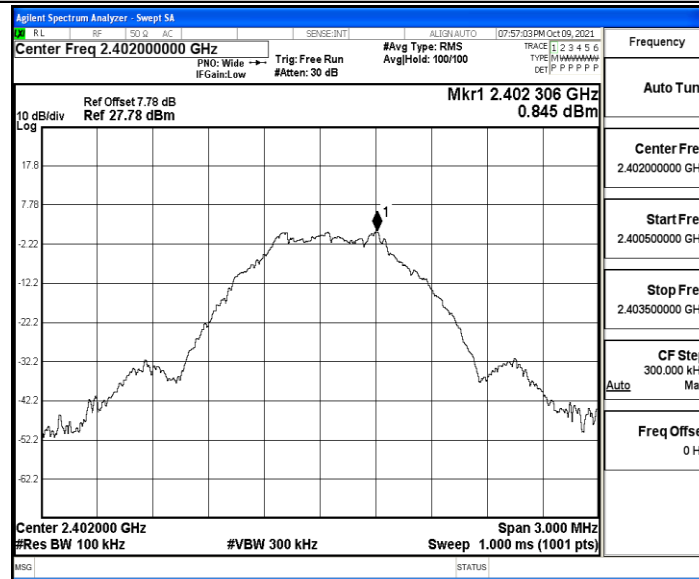
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.85	0.85	---	PASS
			30~1000	0.85	-59.35	≤ -19.16	PASS
			1000~26500	0.85	-47.15	≤ -19.16	PASS
		2440	Reference	0.93	0.93	---	PASS
			30~1000	0.93	-59.11	≤ -19.07	PASS
			1000~26500	0.93	-48.02	≤ -19.07	PASS
		2480	Reference	0.82	0.82	---	PASS
			30~1000	0.82	-58.83	≤ -19.18	PASS
			1000~26500	0.82	-47.64	≤ -19.18	PASS

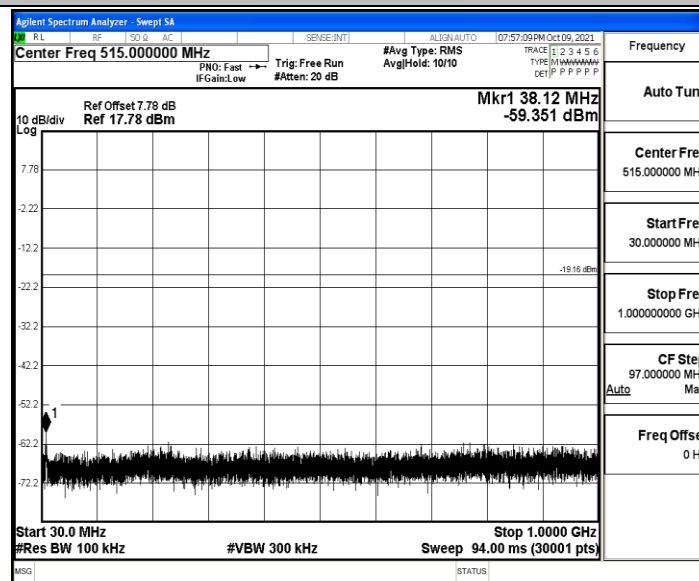


Test Graphs

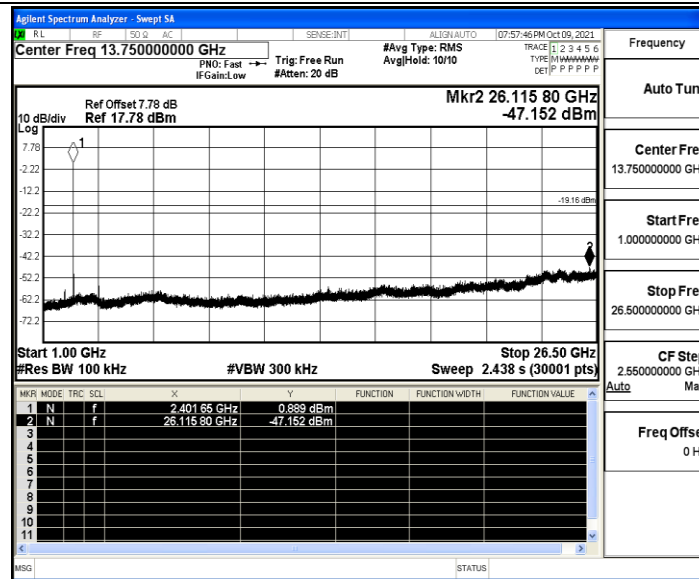
BLE_1M_Ant1_2402_0~Reference



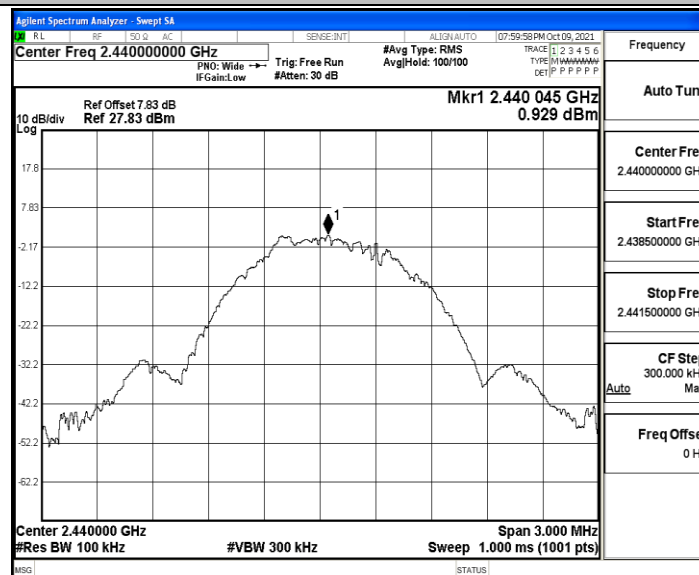
BLE_1M_Ant1_2402_30~1000



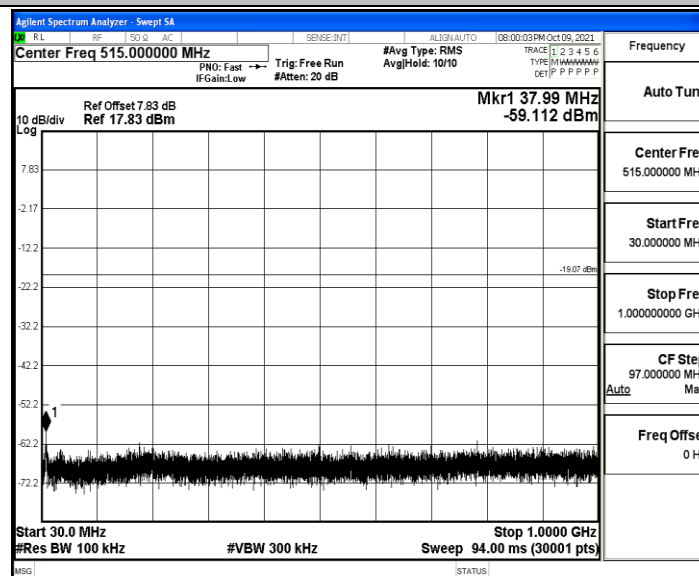
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

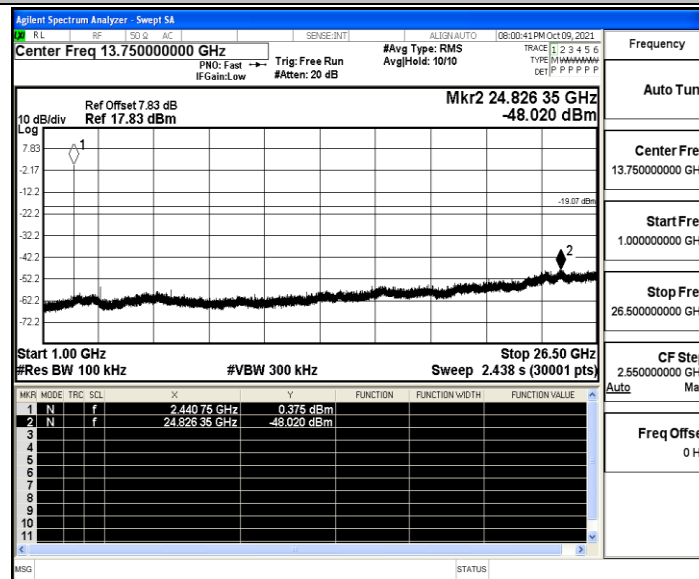


BLE_1M_Ant1_2440_30~1000

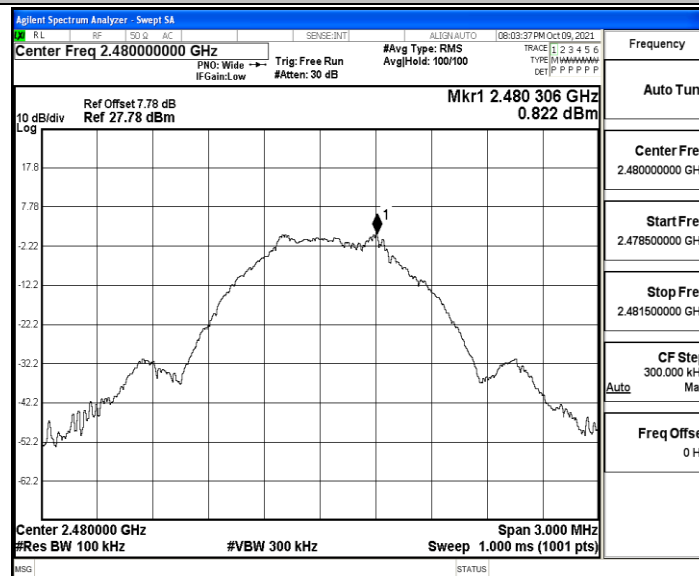




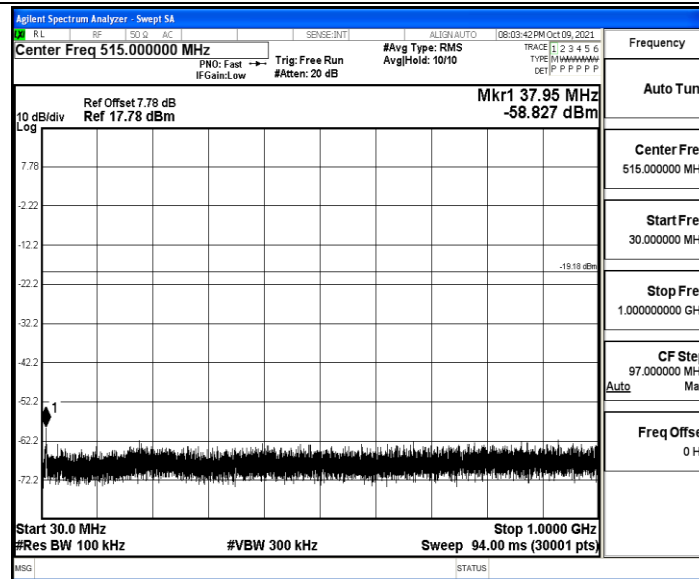
BLE_1M_Ant1_2440_1000-26500



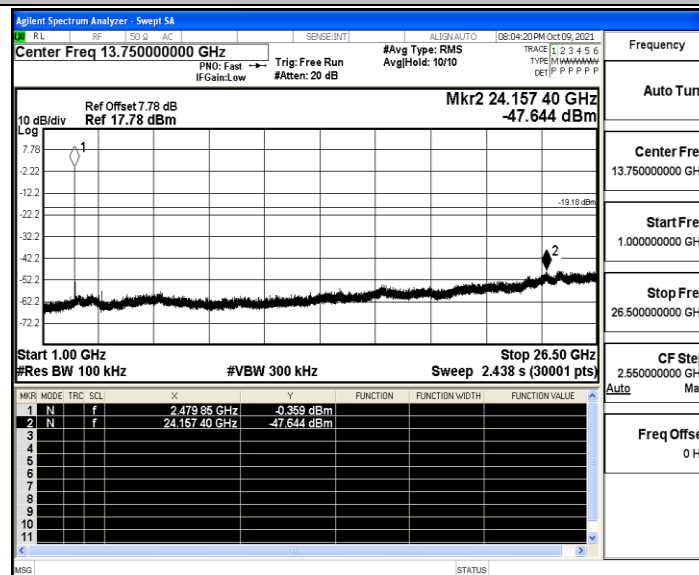
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500





A.6 Duty Cycle

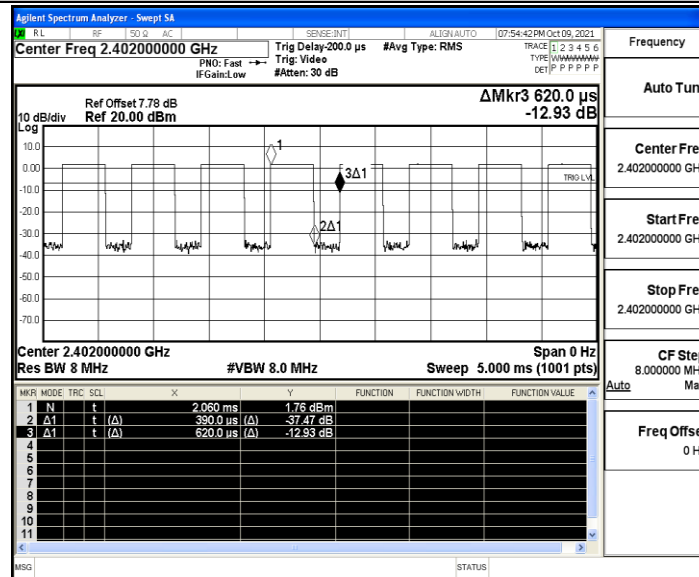
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.62	0.6290	62.90	2.01	---	PASS
		2440	0.38	0.62	0.6129	61.29	2.13	---	PASS
		2480	0.38	0.62	0.6129	61.29	2.13	---	PASS

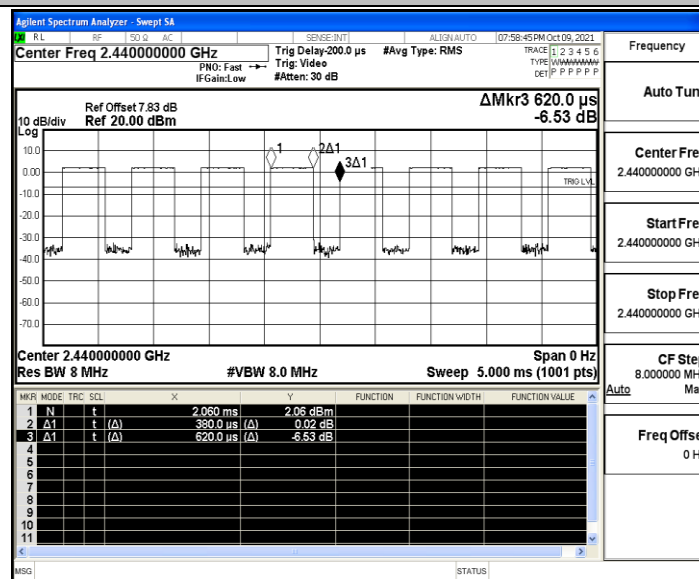


Test Graphs

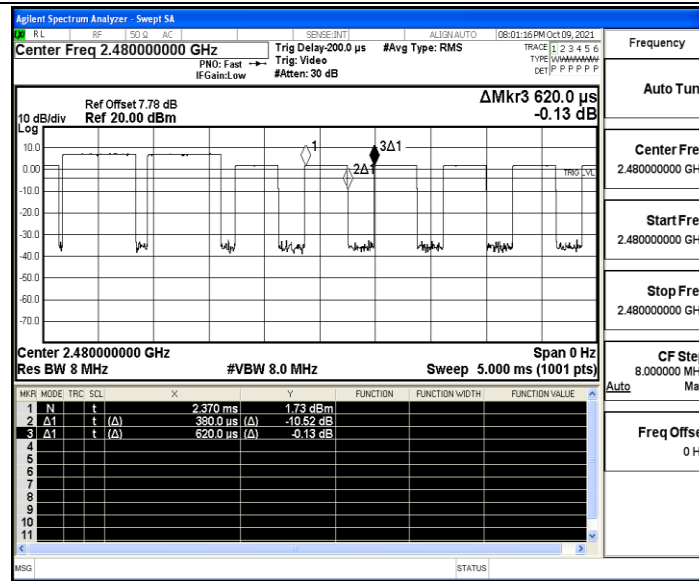
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Channel	Detector	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-48.4	≤-41.20	46.80	≤54	PASS
				AV	2369.300	-47.69	≤-41.20	47.51	≤54	PASS
				AV	2390.000	-48.02	≤-41.20	47.18	≤54	PASS
				Peak	2310.000	-42.3	≤-21.20	52.90	≤74	PASS
				Peak	2316.590	-38.65	≤-21.20	56.55	≤74	PASS
				Peak	2390.000	-41.02	≤-21.20	54.18	≤74	PASS
		High	2480	AV	2483.500	-46.38	≤-41.20	48.82	≤54	PASS
				AV	2483.680	-46.13	≤-41.20	49.07	≤54	PASS
				AV	2500.000	-47.56	≤-41.20	47.64	≤54	PASS
				Peak	2483.500	-40.12	≤-21.20	55.08	≤74	PASS
				Peak	2483.680	-33.46	≤-21.20	61.74	≤74	PASS
				Peak	2500.000	-41.35	≤-21.20	53.85	≤74	PASS

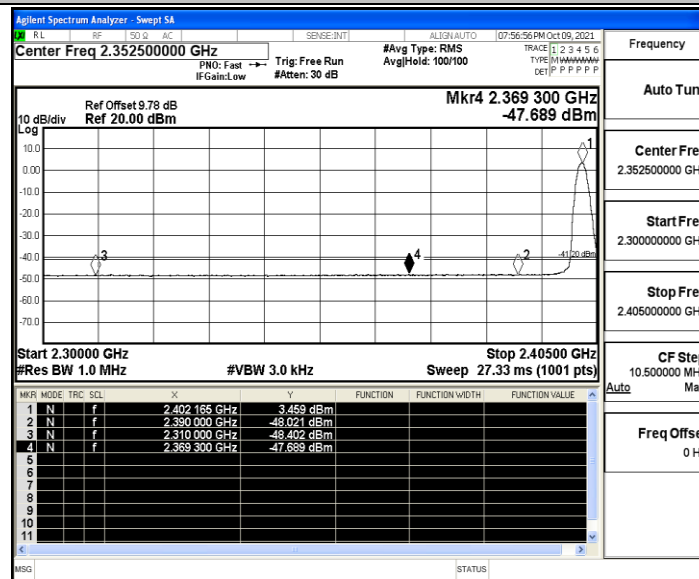
Note:

1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

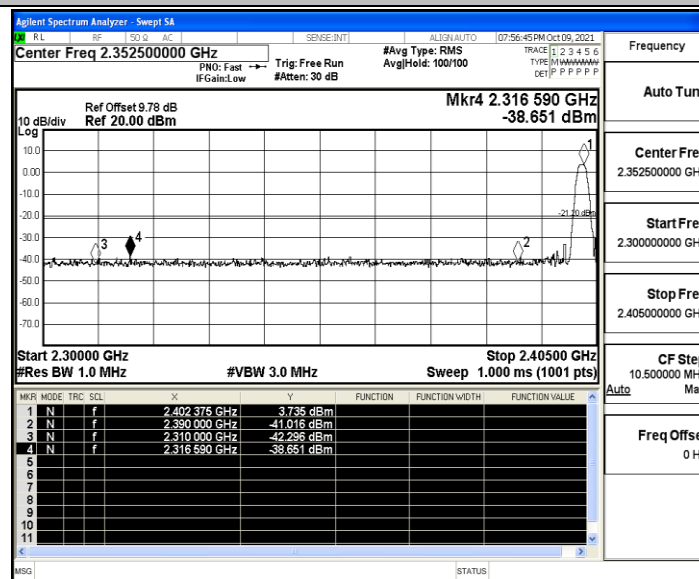


Test Graphs

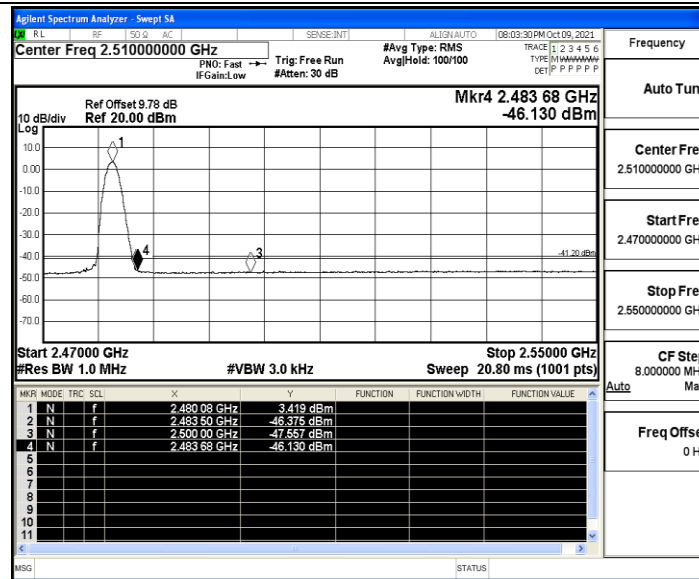
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

