



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: Aroma diffuser

Test Model: Trace Mist

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	 Mark Chen
Supervised by:	 Li Huan



A.1 DTS Bandwidth

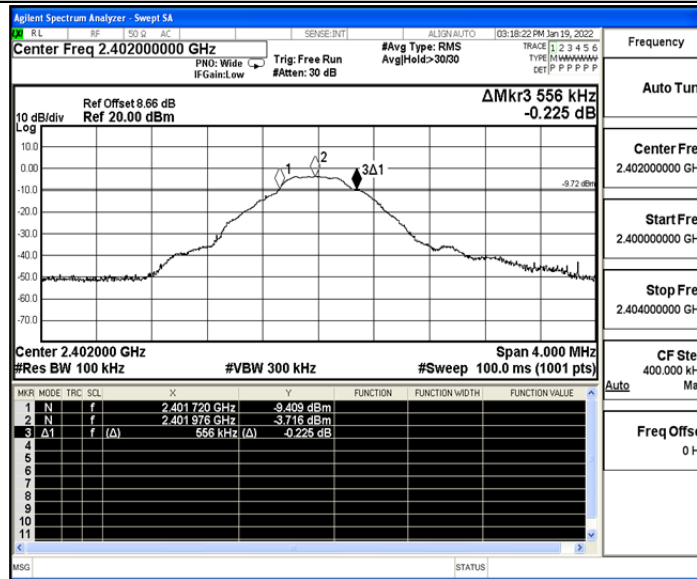
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.556	2401.720	2402.276	0.5	PASS
		2440	0.556	2439.716	2440.272	0.5	PASS
		2480	0.532	2479.720	2480.252	0.5	PASS

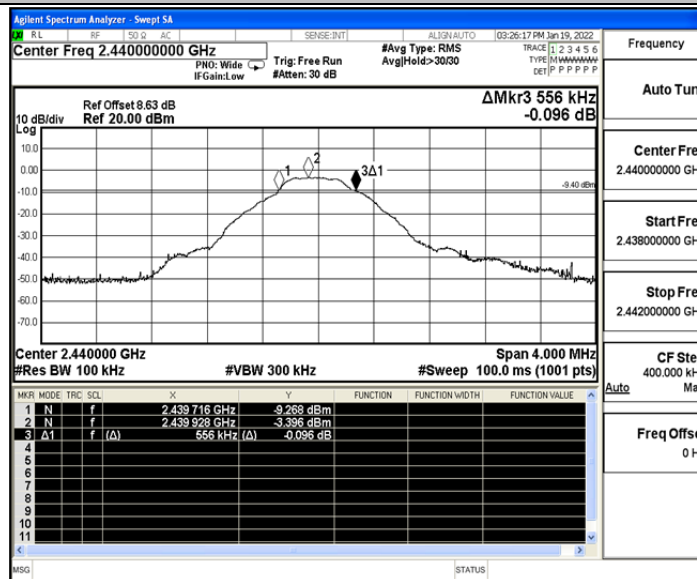


Test Graphs

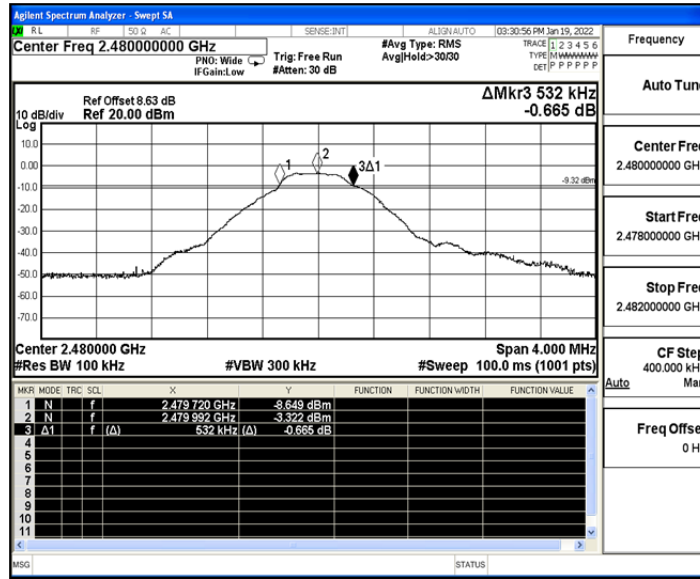
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.2 Maximum peak conducted output power

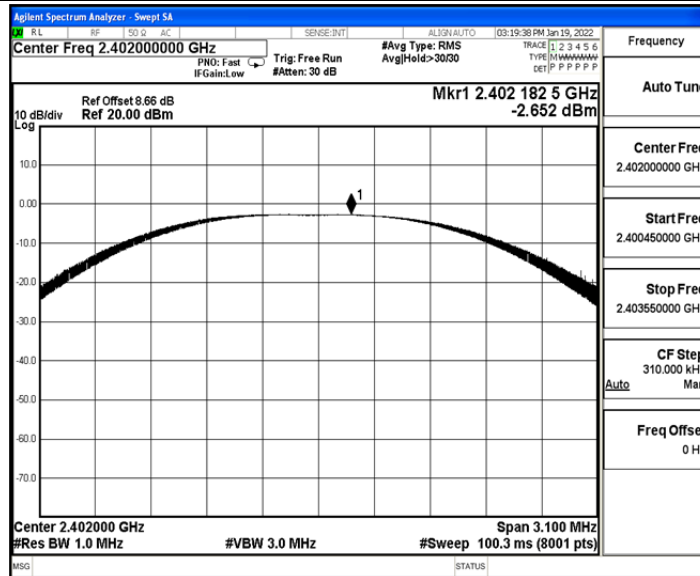
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-2.65	≤30	PASS
		2440	-2.42	≤30	PASS
		2480	-2.38	≤30	PASS

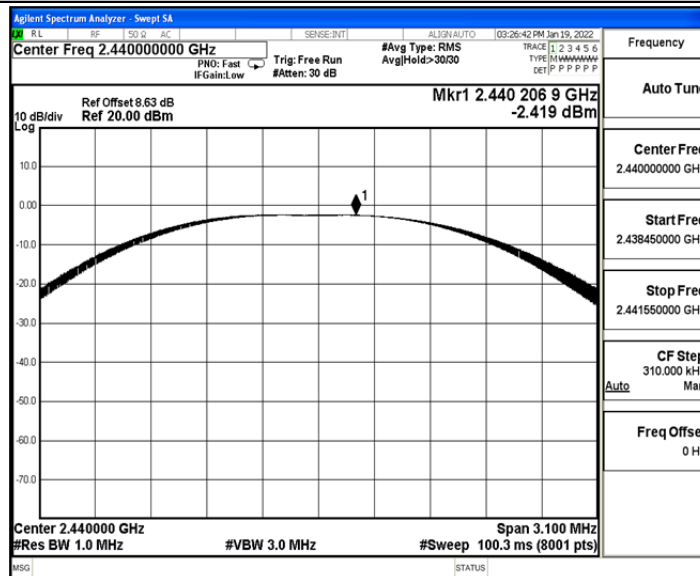


Test Graphs

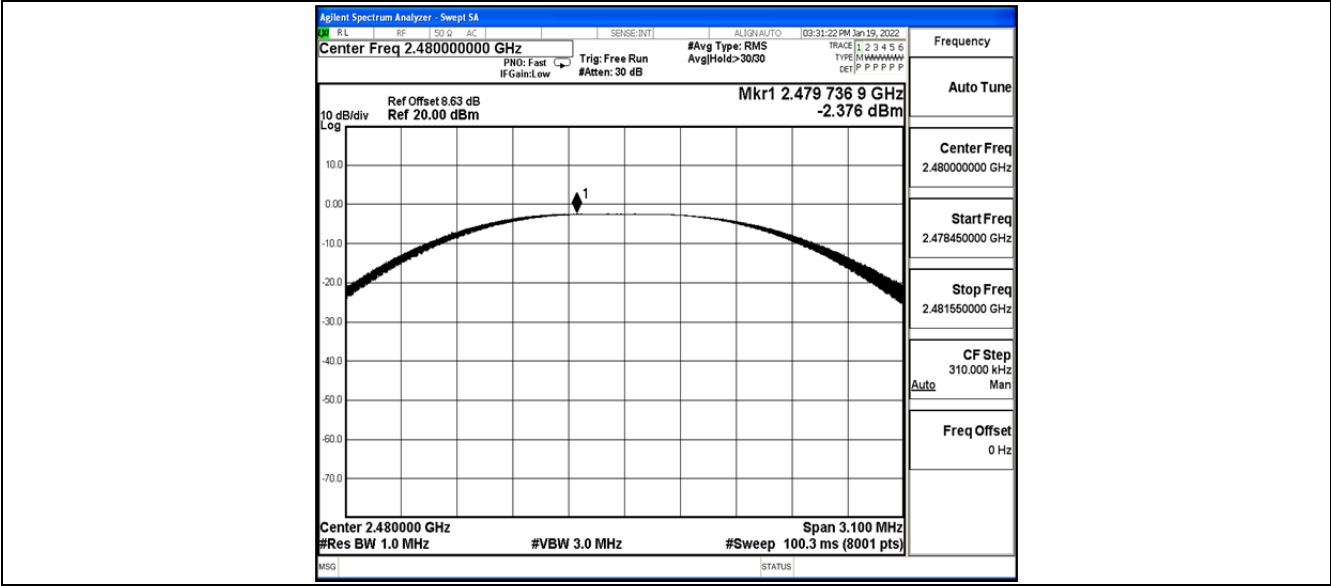
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.3 Maximum power spectral density

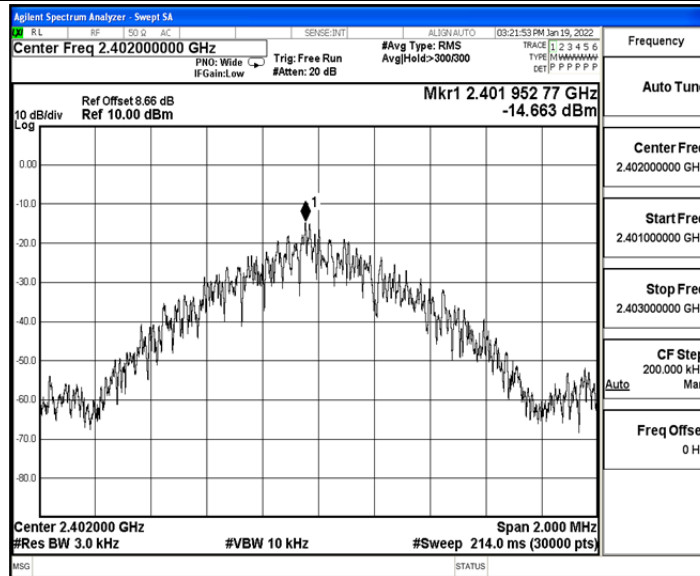
Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.66	≤8.00	PASS
		2440	-14.34	≤8.00	PASS
		2480	-14.47	≤8.00	PASS

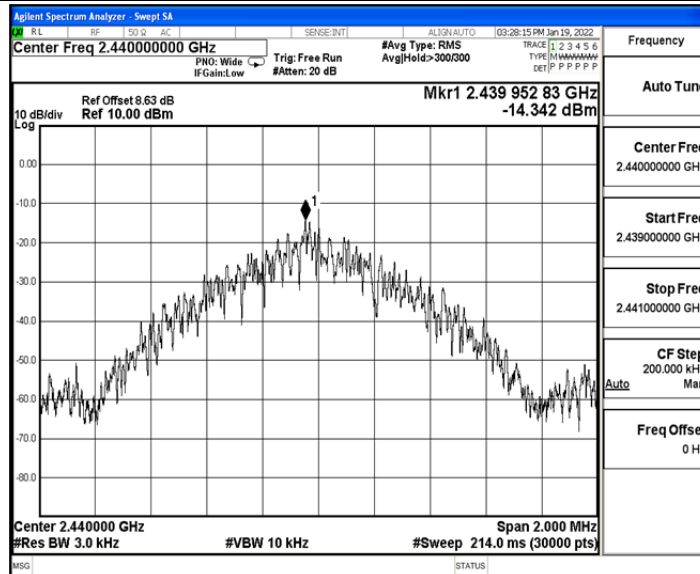


Test Graphs

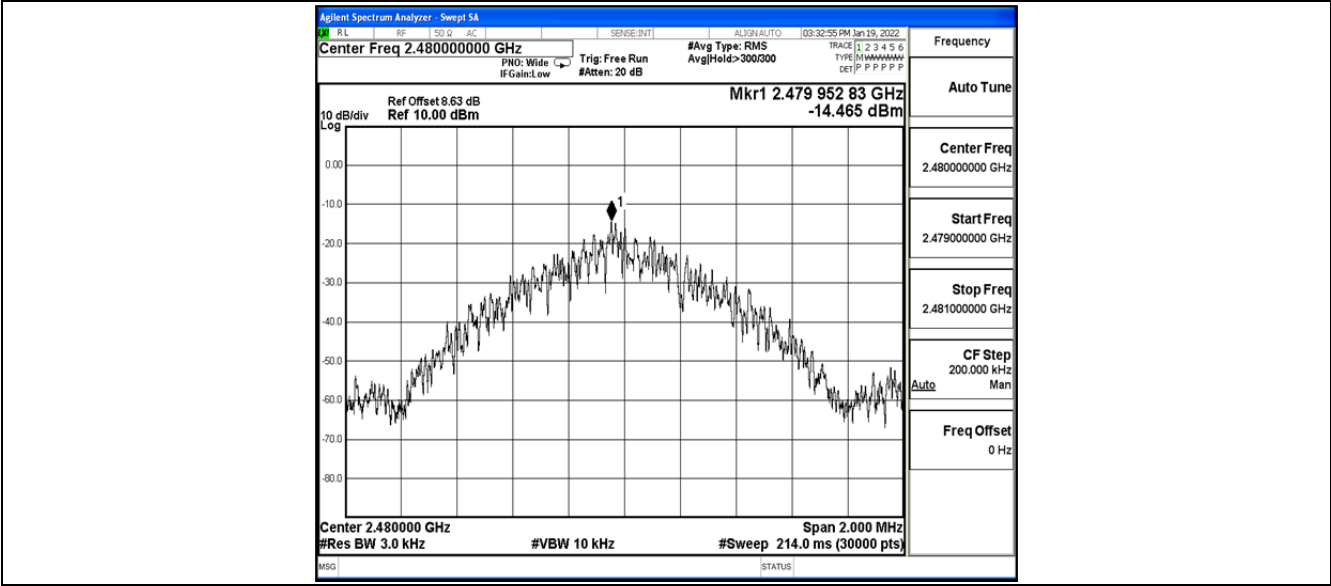
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.4 Band edge measurements

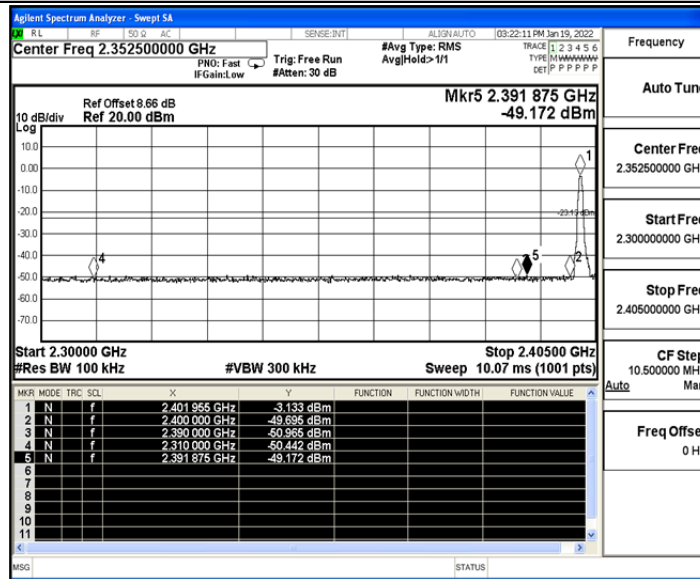
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.13	-49.17	≤ -23.13	PASS
		High	2480	-2.95	-47.62	≤ -22.95	PASS

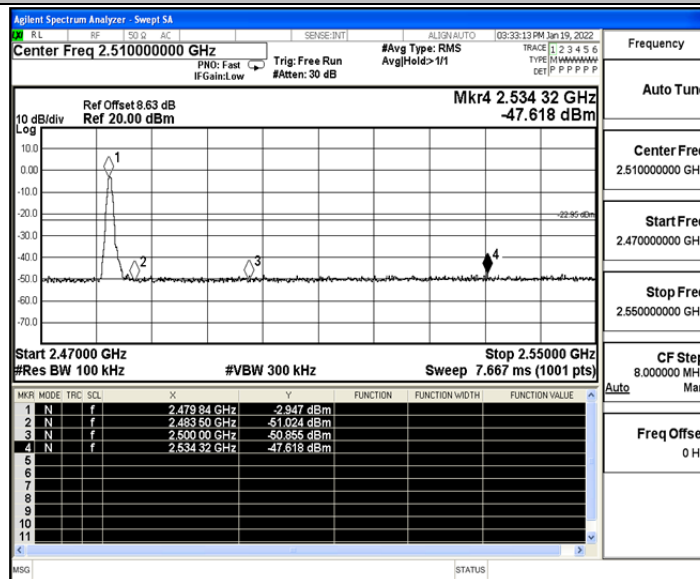


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.5 Conducted Spurious Emission

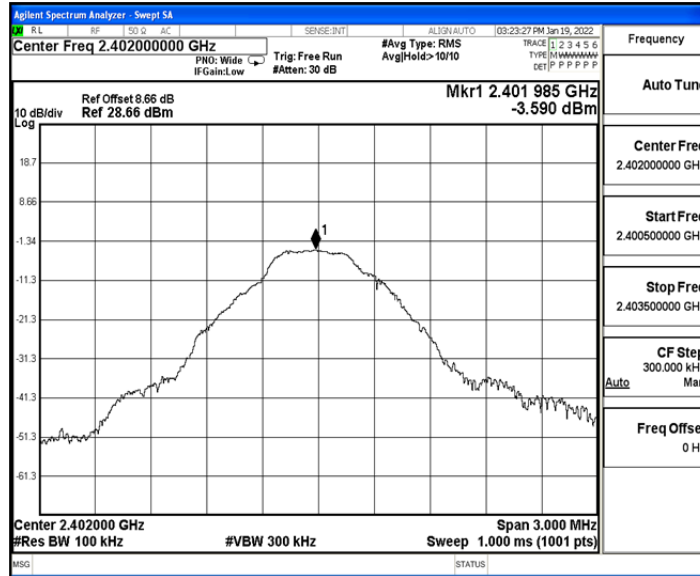
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-3.59	-3.59	---	PASS
			30~1000	-3.59	-54.85	≤ -23.59	PASS
			1000~26500	-3.59	-46.19	≤ -23.59	PASS
		2440	Reference	-3.31	-3.31	---	PASS
			30~1000	-3.31	-55.12	≤ -23.31	PASS
			1000~26500	-3.31	-45.45	≤ -23.31	PASS
		2480	Reference	-3.33	-3.33	---	PASS
			30~1000	-3.33	-54.47	≤ -23.33	PASS
			1000~26500	-3.33	-45.71	≤ -23.33	PASS

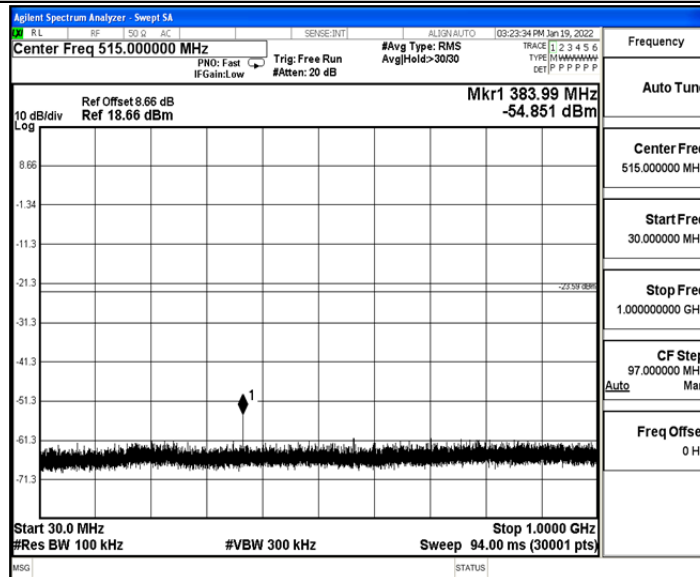


Test Graphs

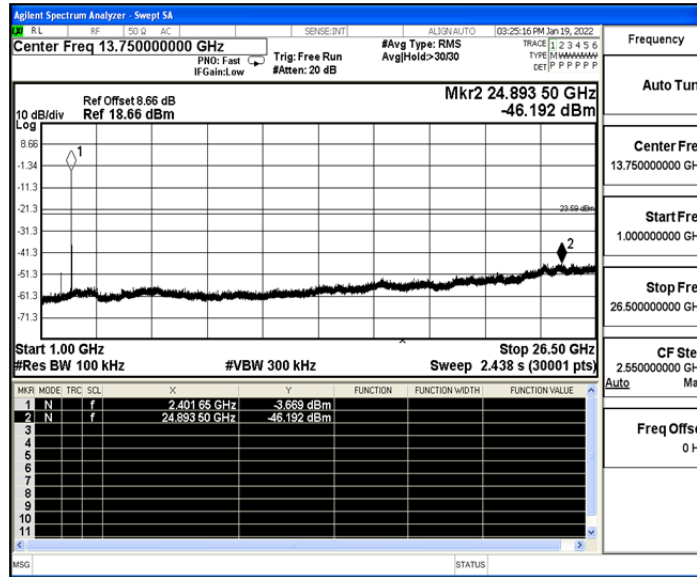
BLE_1M_Ant1_2402_0~Reference



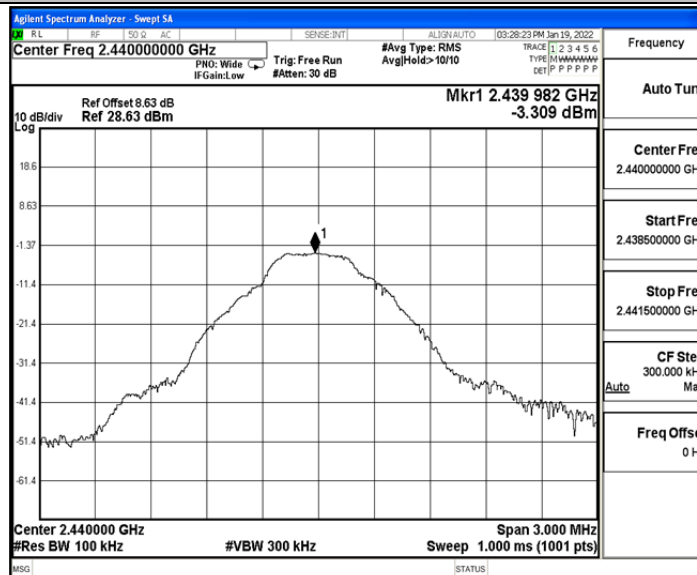
BLE_1M_Ant1_2402_30~1000



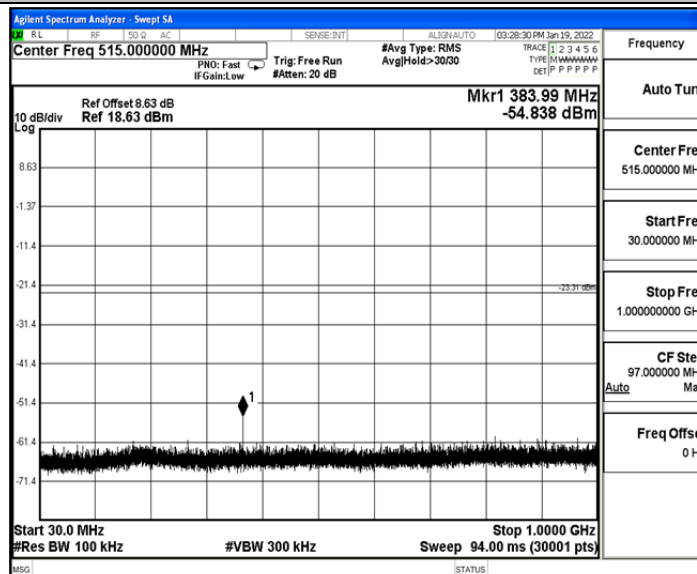
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

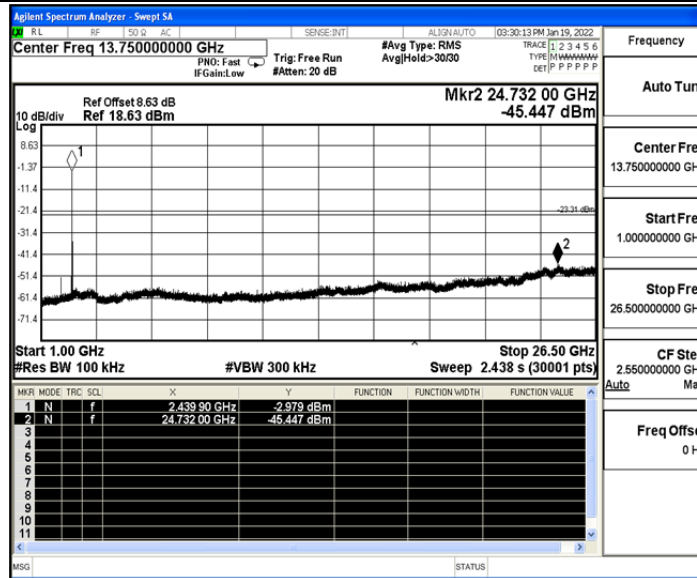


BLE_1M_Ant1_2440_30~1000

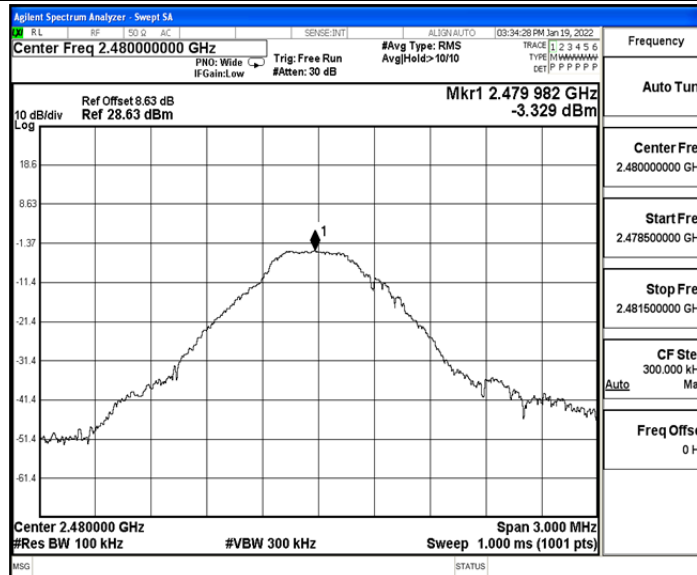




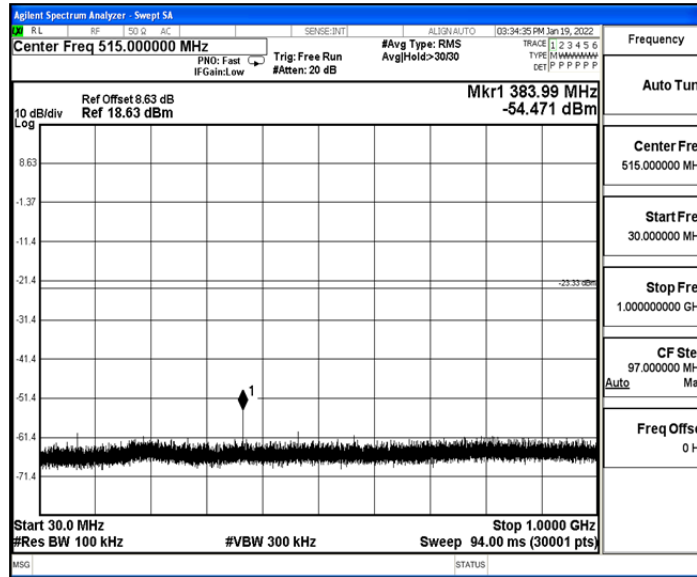
BLE_1M_Ant1_2440_1000~26500



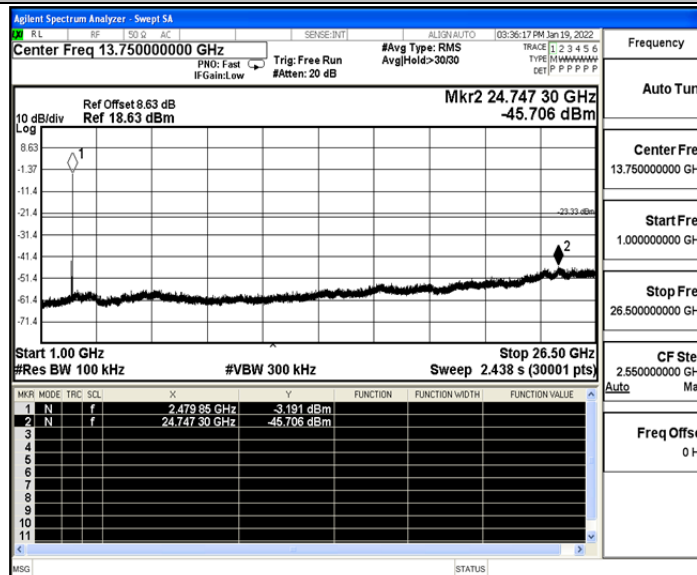
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500





A.6 Duty Cycle

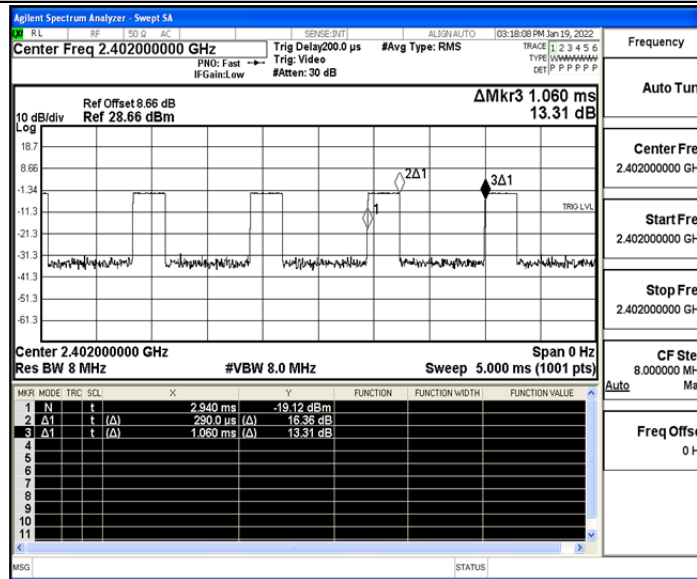
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.29	1.06	0.2736	27.36	5.63	---	---
		2440	0.29	1.06	0.2736	27.36	5.63	---	---
		2480	0.29	1.06	0.2736	27.36	5.63	---	---

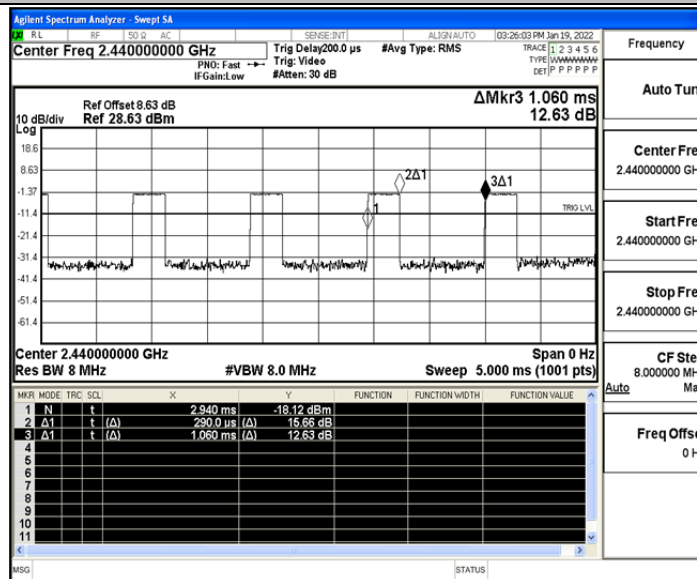


Test Graphs

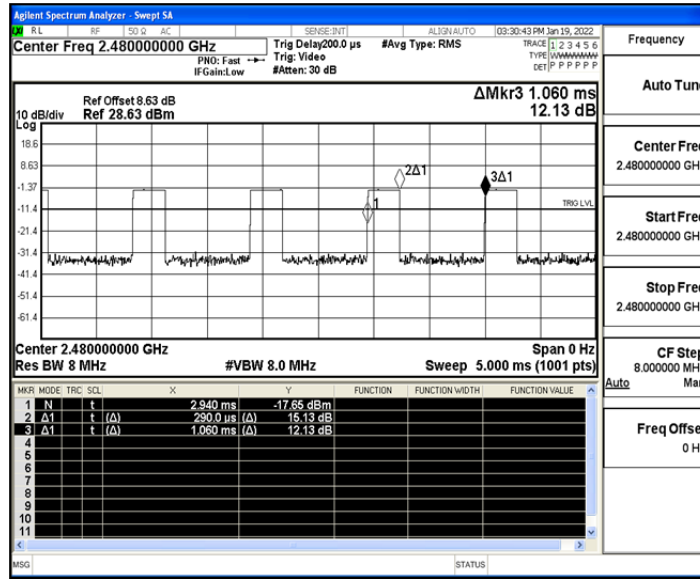
BLE_1M_Ant1_2402



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	-47.31	≤-41.20	47.89	≤54	PASS
				AV	2389.880	-43.92	≤-41.20	51.28	≤54	PASS
				AV	2390.000	-43.96	≤-41.20	51.24	≤54	PASS
				Peak	2310.000	-38.94	≤-21.20	56.26	≤74	PASS
				Peak	2374.445	-36.71	≤-21.20	58.49	≤74	PASS
				Peak	2390.000	-37.38	≤-21.20	57.82	≤74	PASS
		High	2480	AV	2483.500	-46.52	≤-41.20	48.68	≤54	PASS
				AV	2495.600	-45.98	≤-41.20	49.22	≤54	PASS
				AV	2500.000	-46.32	≤-41.20	48.88	≤54	PASS
				Peak	2483.500	-37.83	≤-21.20	57.37	≤74	PASS
				Peak	2486.640	-36.02	≤-21.20	59.18	≤74	PASS
				Peak	2500.000	-37.77	≤-21.20	57.43	≤74	PASS

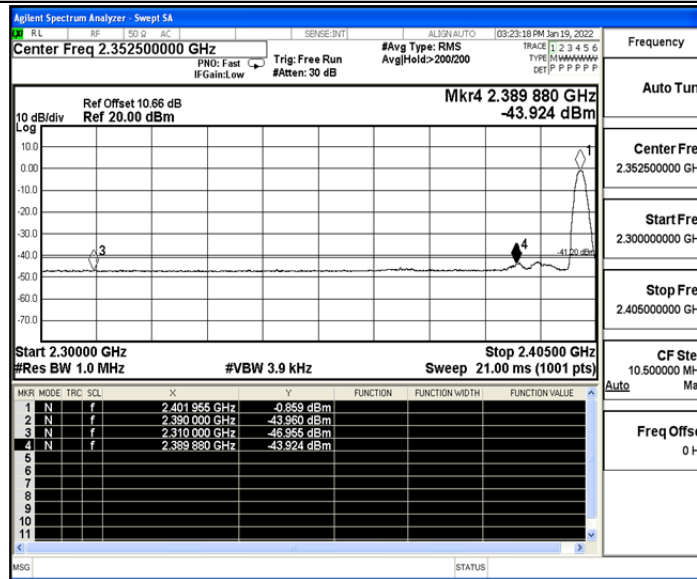
Note:

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.

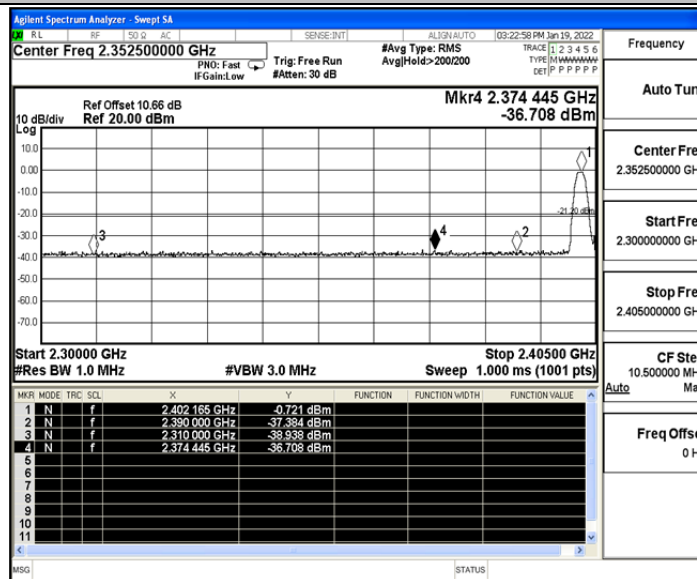


Test Graphs

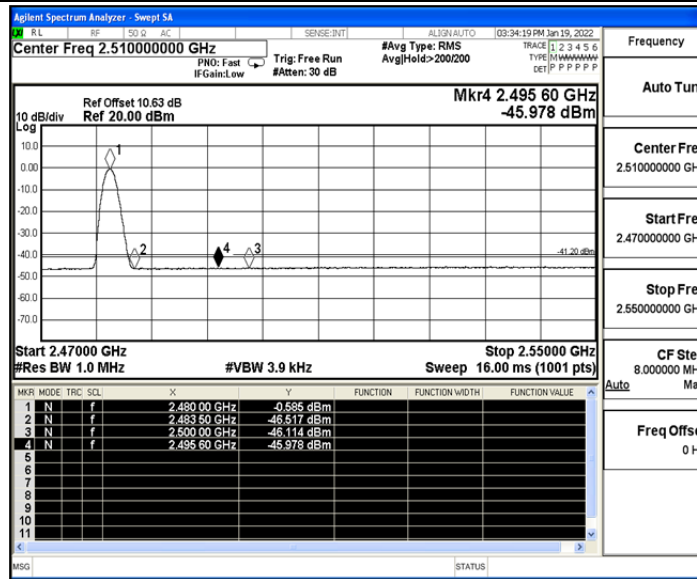
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

