



Appendix A

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

Product Name: smart bulb

Trade Mark: N/A

Test Model: GU10 CCT 2-A LENS

Environmental Conditions

Temperature:	21.1 ° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Monkey Li
Supervised by:	Li Huan



A.1 DTS Bandwidth

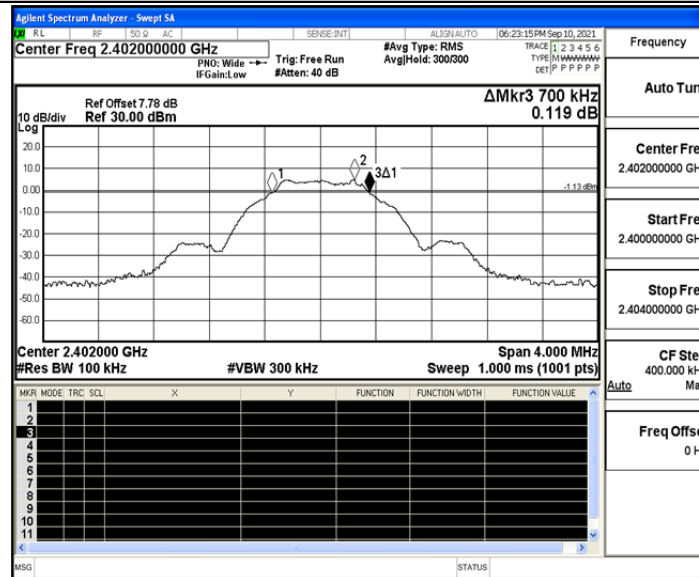
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.700	2401.652	2402.352	≥0.5	PASS
		2440	0.668	2439.668	2440.336	≥0.5	PASS
		2480	0.668	2479.668	2480.336	≥0.5	PASS

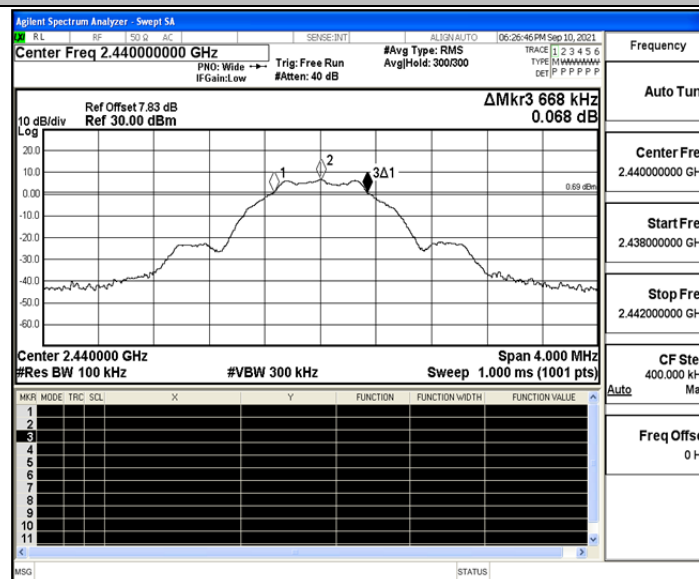


Test Graphs

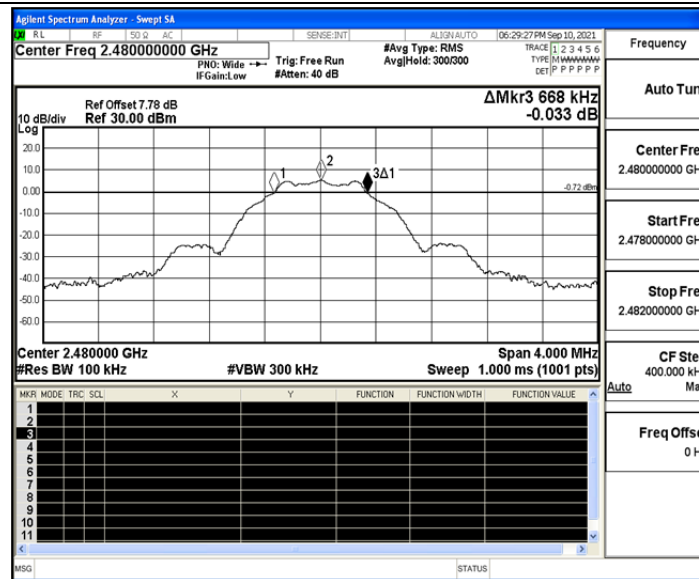
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.2 Maximum peak conducted output power

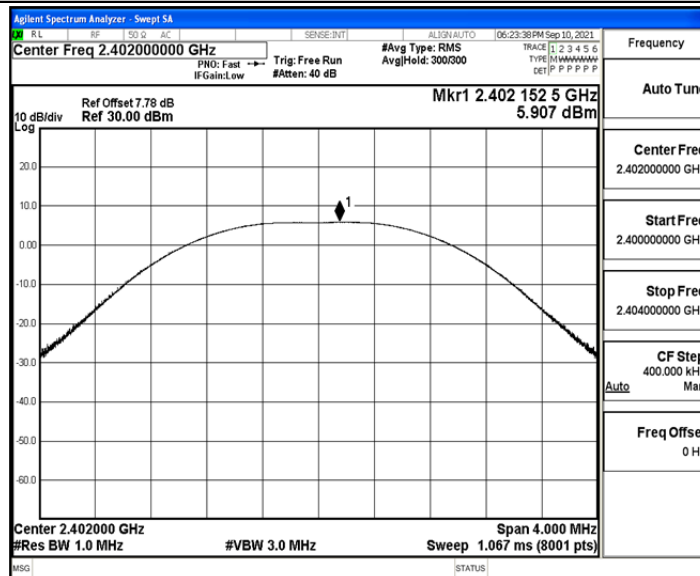
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	5.91	≤30	PASS
		2440	7.26	≤30	PASS
		2480	5.81	≤30	PASS

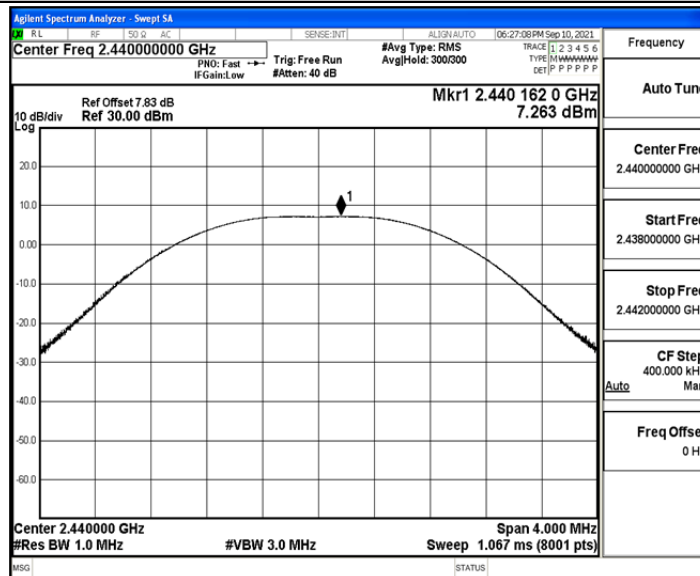


Test Graphs

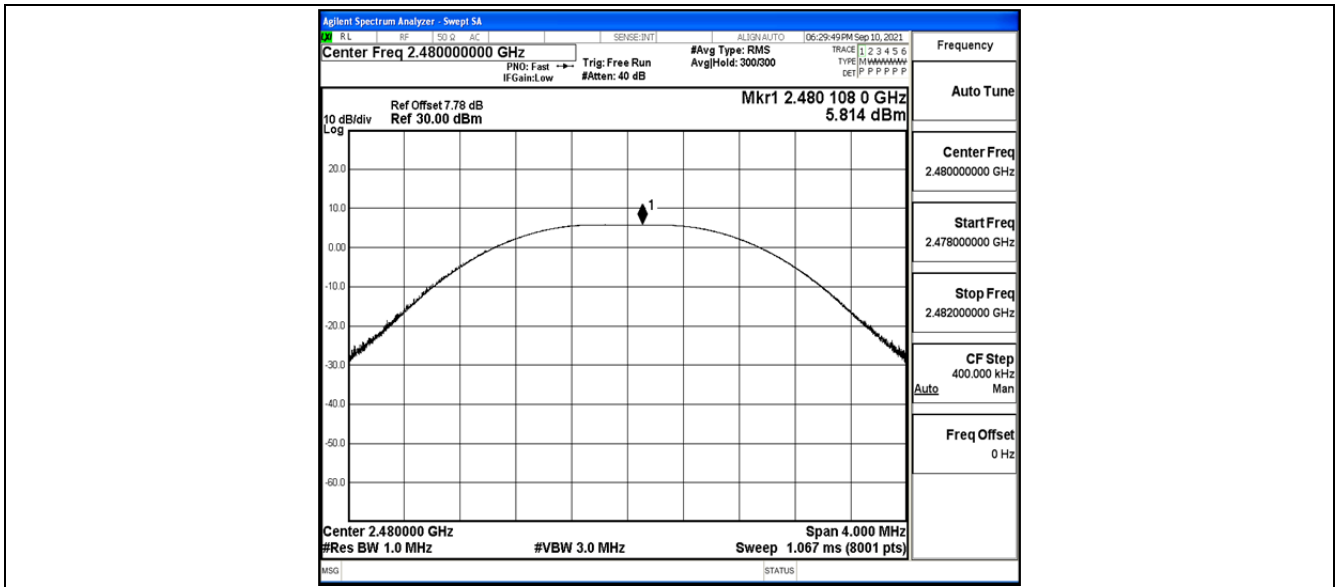
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.3 Maximum power spectral density

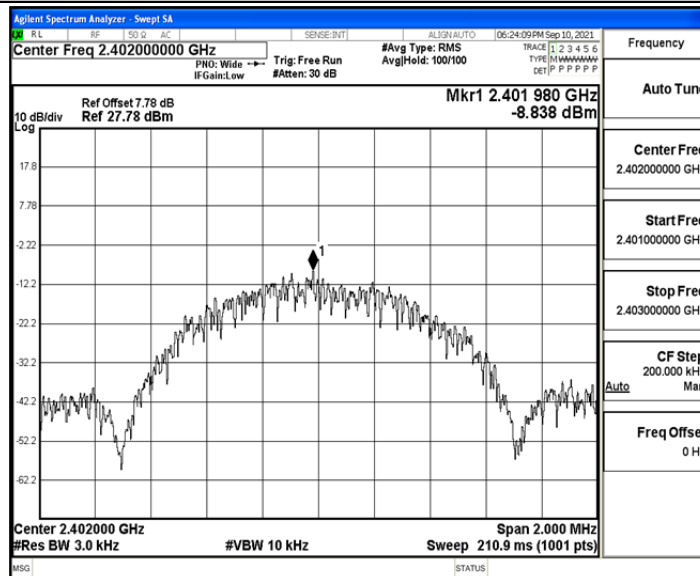
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-8.84	≤8	PASS
		2440	-7.57	≤8	PASS
		2480	-8.89	≤8	PASS

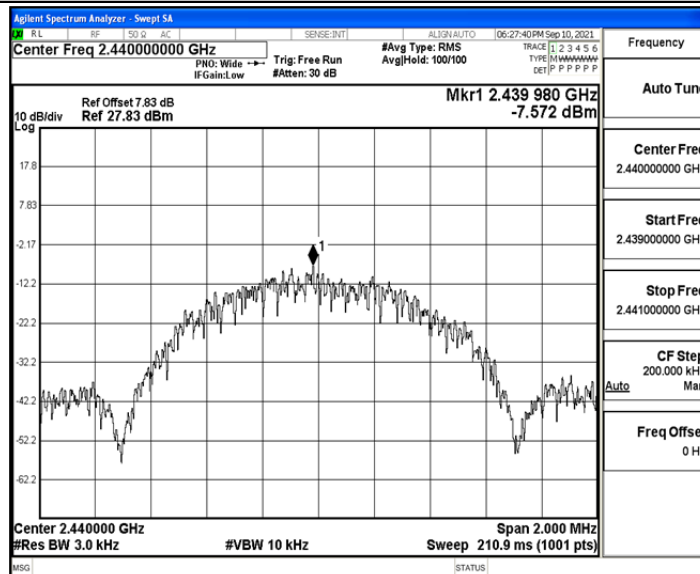


Test Graphs

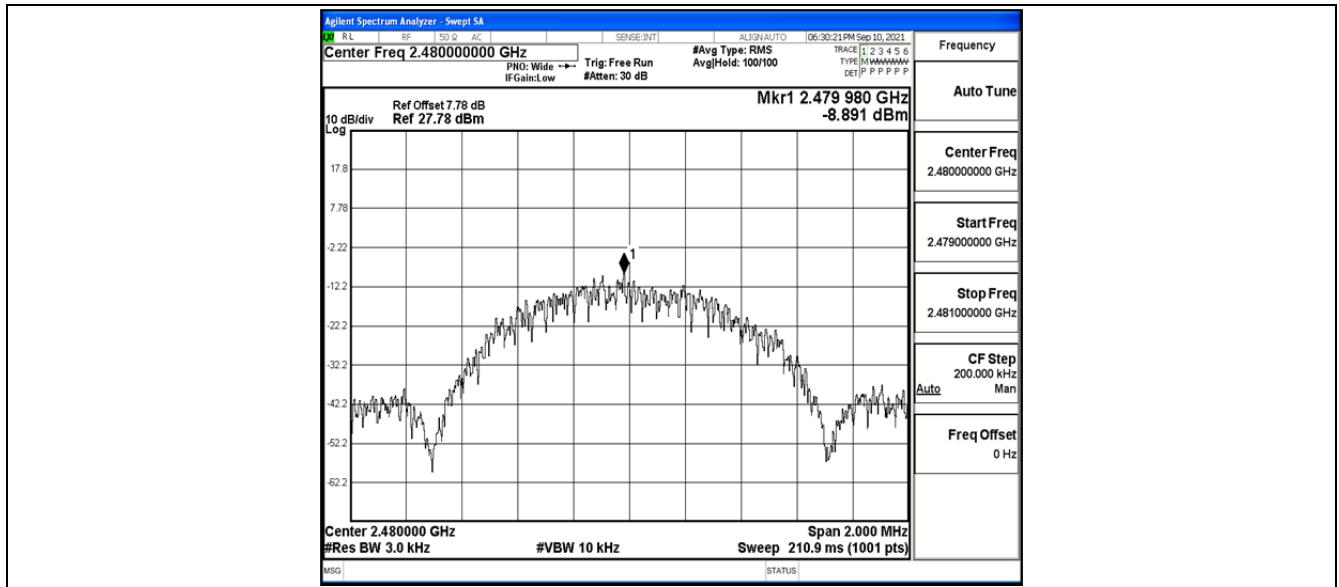
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.4 Band edge measurements

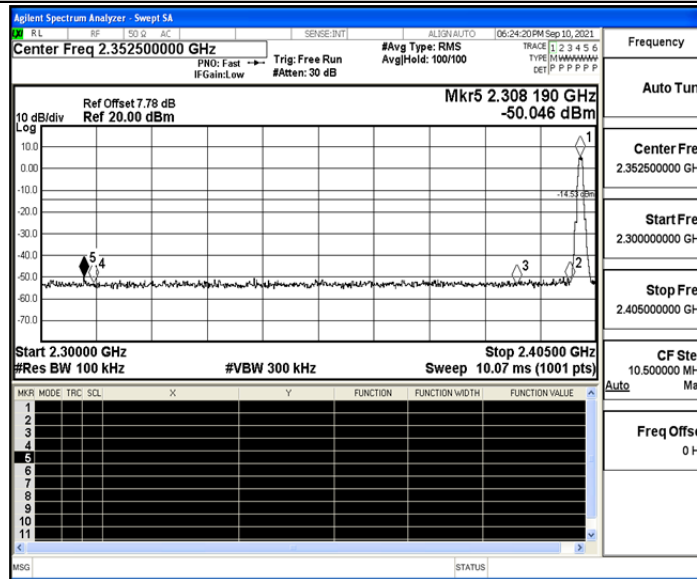
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	5.47	-50.05	≤ -14.53	PASS
		High	2480	5.10	-48.95	≤ -14.9	PASS

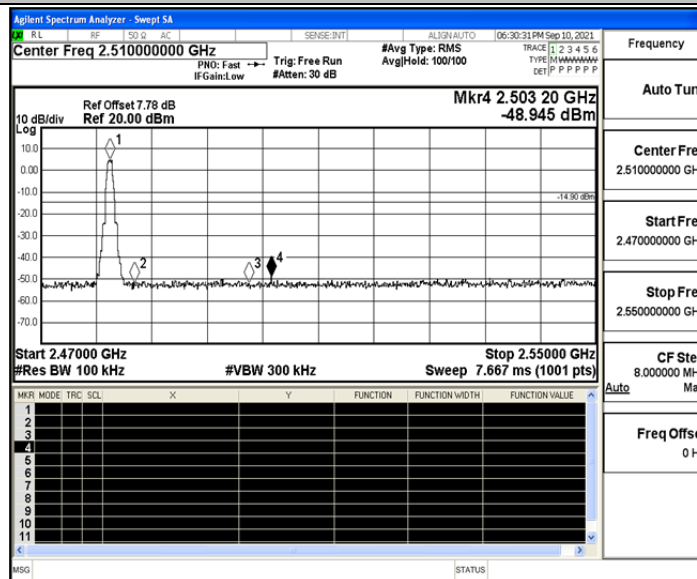


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.5 Conducted Spurious Emission

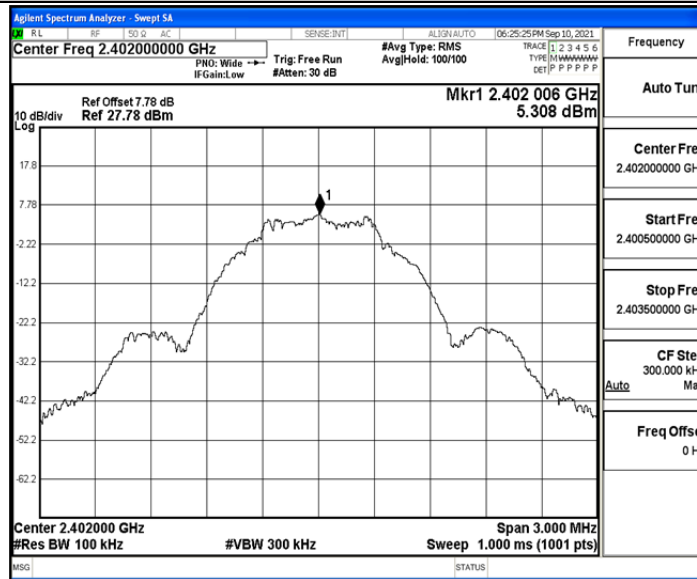
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	5.31	5.31	---	PASS
			30~1000	5.31	-61.98	≤ -14.69	PASS
			1000~26500	5.31	-47.87	≤ -14.69	PASS
		2440	Reference	6.42	6.42	---	PASS
			30~1000	6.42	-61.64	≤ -13.58	PASS
			1000~26500	6.42	-47.62	≤ -13.58	PASS
		2480	Reference	5.26	5.26	---	PASS
			30~1000	5.26	-61.91	≤ -14.74	PASS
			1000~26500	5.26	-47.48	≤ -14.74	PASS

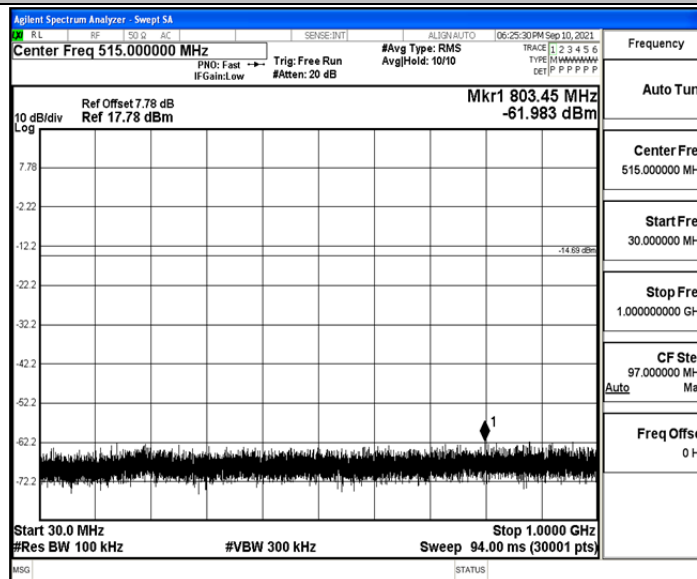


Test Graphs

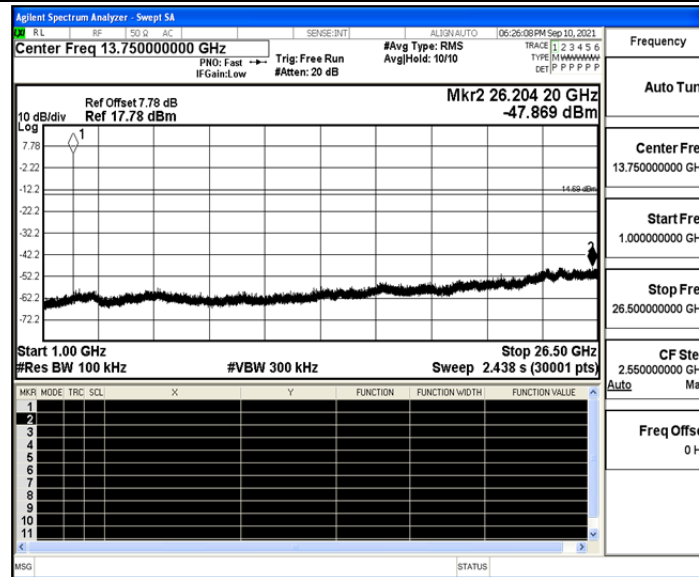
BLE_1M_Ant1_2402_0~Reference



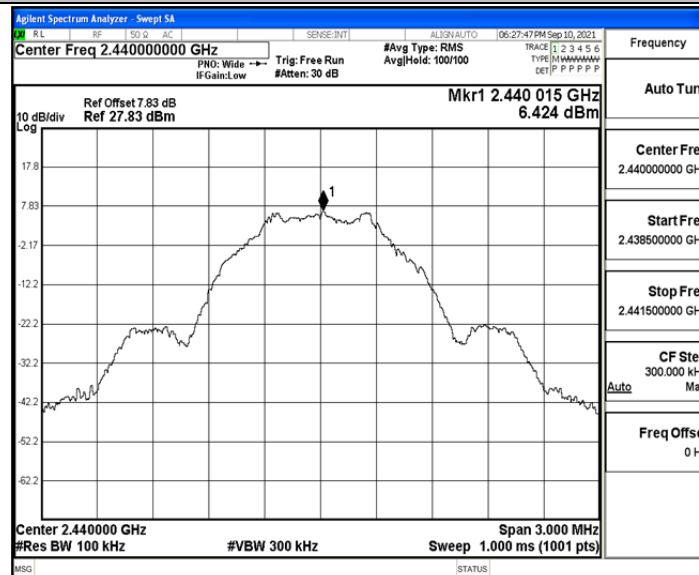
BLE_1M_Ant1_2402_30~1000



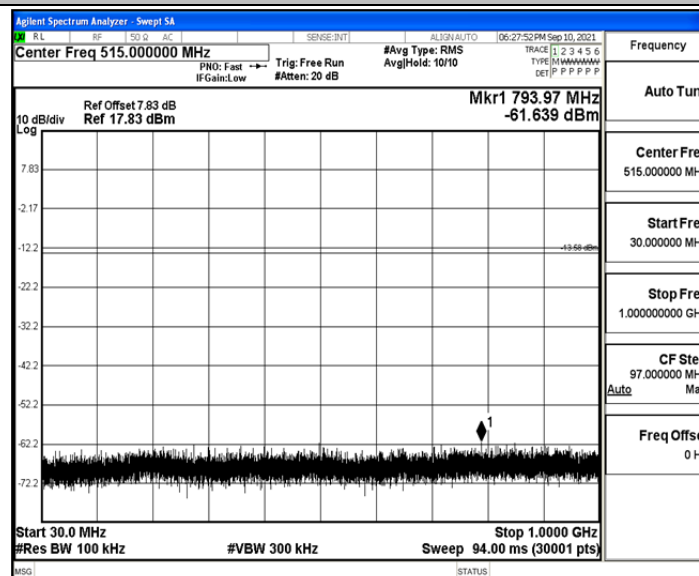
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

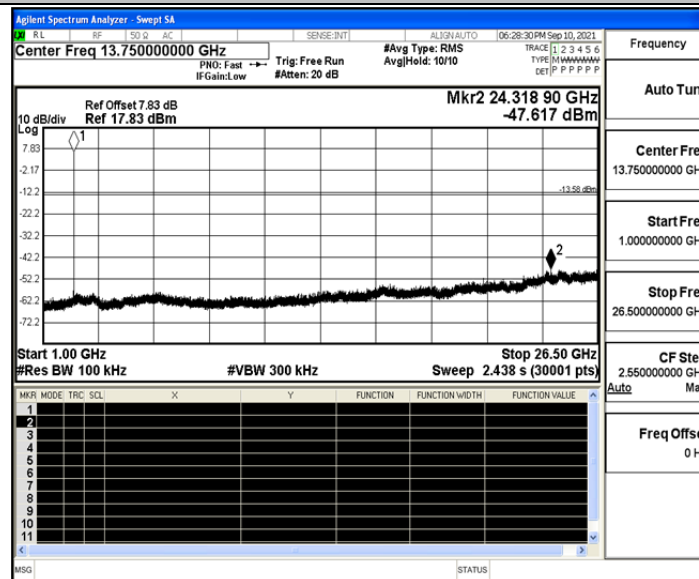


BLE_1M_Ant1_2440_30~1000

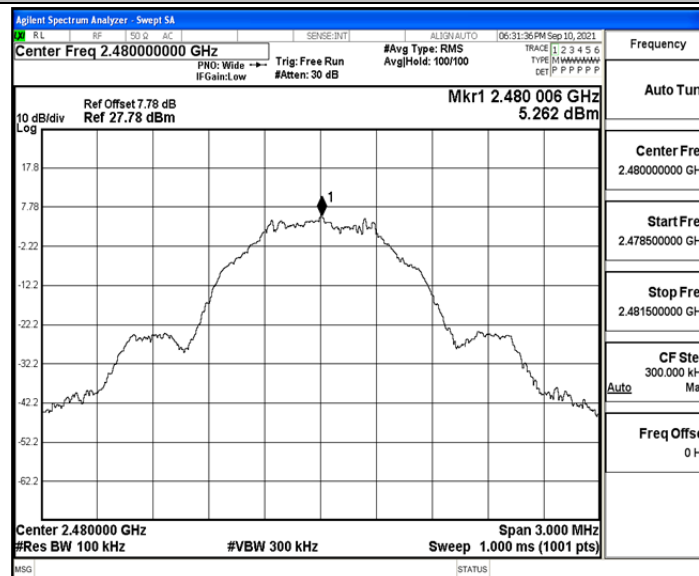




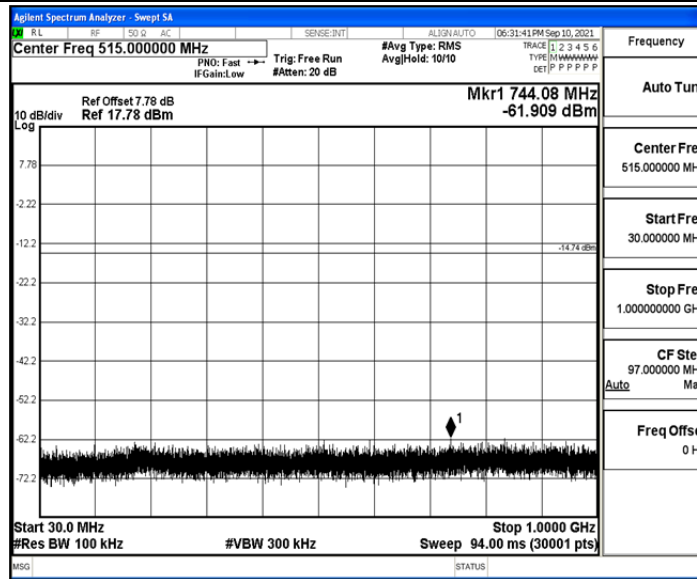
BLE_1M_Ant1_2440_1000~26500



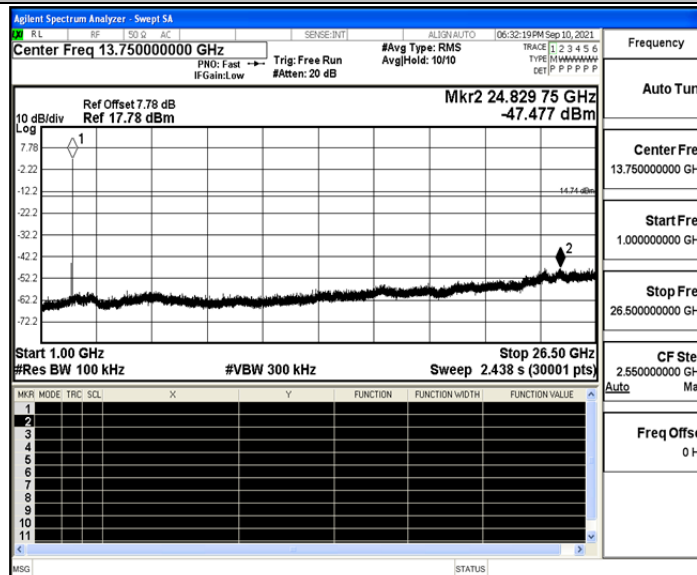
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500





A.6 Duty Cycle

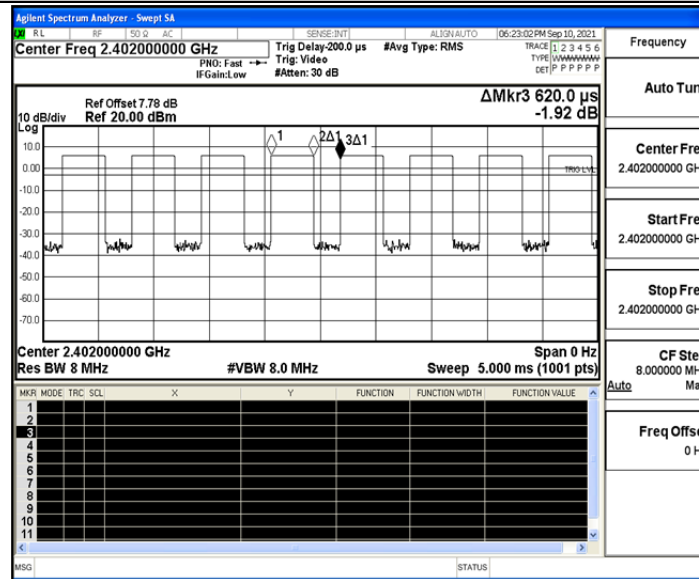
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.62	0.6129	61.29	2.13	---	PASS
		2440	0.38	0.62	0.6129	61.29	2.13	---	PASS
		2480	0.39	0.63	0.6190	61.90	2.08	---	PASS

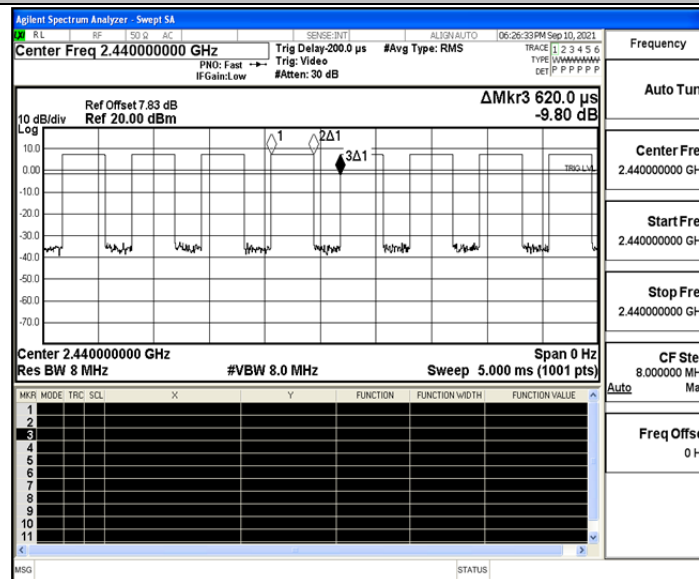


Test Graphs

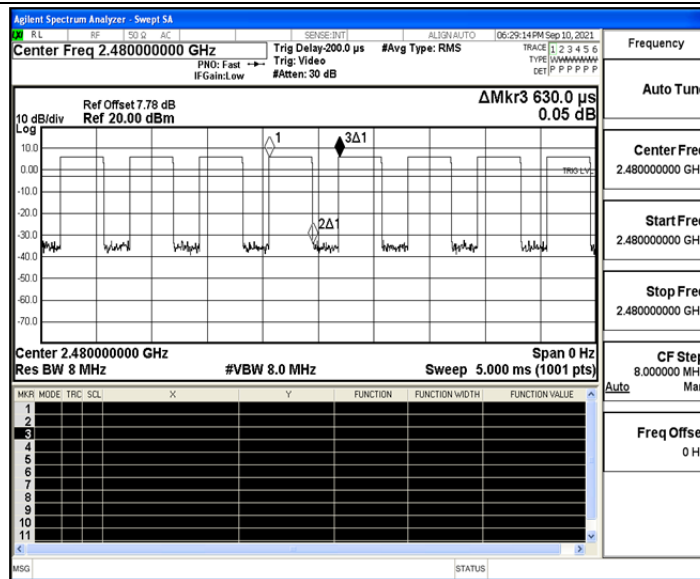
BLE_1M_Ant1_2402



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	-48.34	≤-41.20	46.86	≤54	PASS
				AV	2372.660	-47.74	≤-41.20	47.46	≤54	PASS
				AV	2390.000	-48.03	≤-41.20	47.17	≤54	PASS
				Peak	2310.000	-42.89	≤-21.20	52.31	≤74	PASS
				Peak	2376.545	-38.63	≤-21.20	56.57	≤74	PASS
				Peak	2390.000	-41.42	≤-21.20	53.78	≤74	PASS
		High	2480	AV	2483.500	-46	≤-41.20	49.20	≤54	PASS
				AV	2483.520	-46	≤-41.20	49.20	≤54	PASS
				AV	2500.000	-47.52	≤-41.20	47.68	≤54	PASS
				Peak	2483.500	-42.07	≤-21.20	53.13	≤74	PASS
				Peak	2484.000	-37.8	≤-21.20	57.40	≤74	PASS
				Peak	2500.000	-40.55	≤-21.20	54.65	≤74	PASS

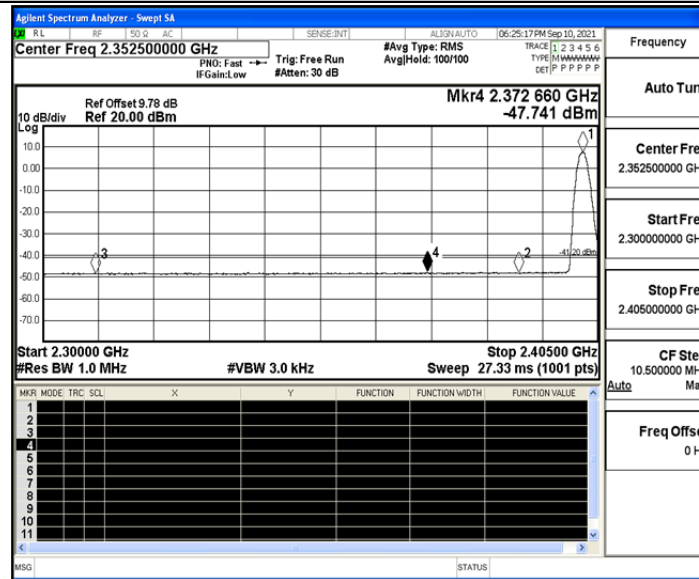
Note:

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.

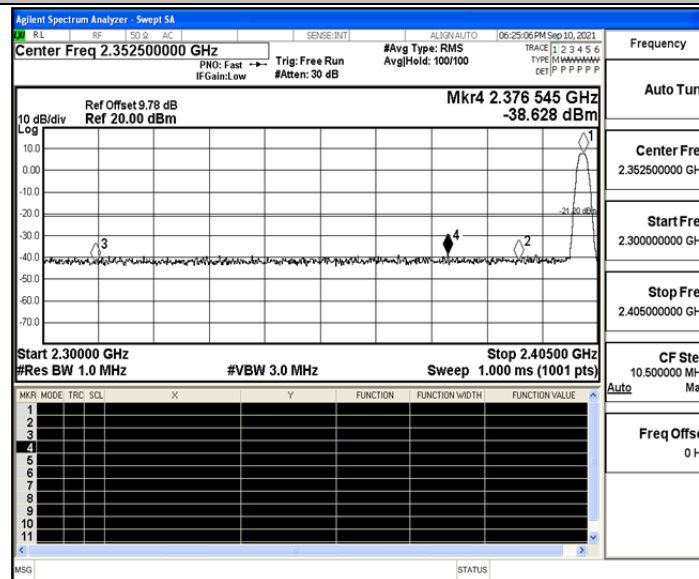


Test Graphs

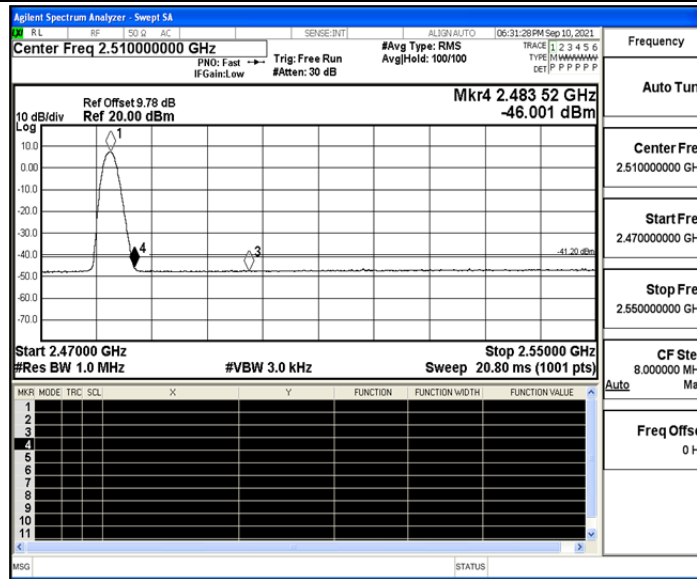
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

