



Appendix A

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

Product Name: fully automatic cat toilet

Test Model: HIP-C101W

Environmental Conditions

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



A.1 DTS Bandwidth

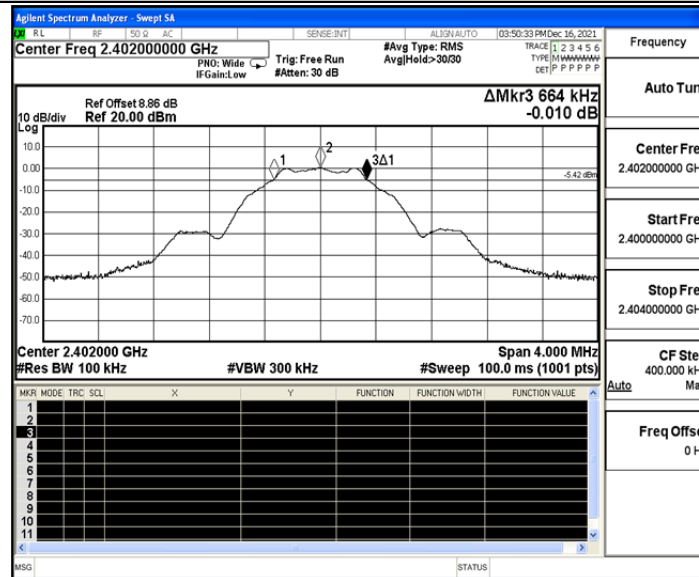
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.668	2402.332	0.5	PASS
		2440	0.668	2439.664	2440.332	0.5	PASS
		2480	0.668	2479.664	2480.332	0.5	PASS

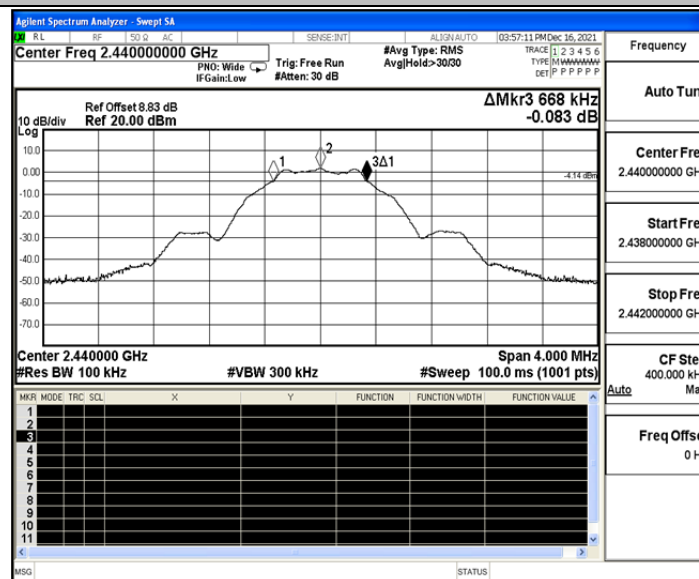


Test Graphs

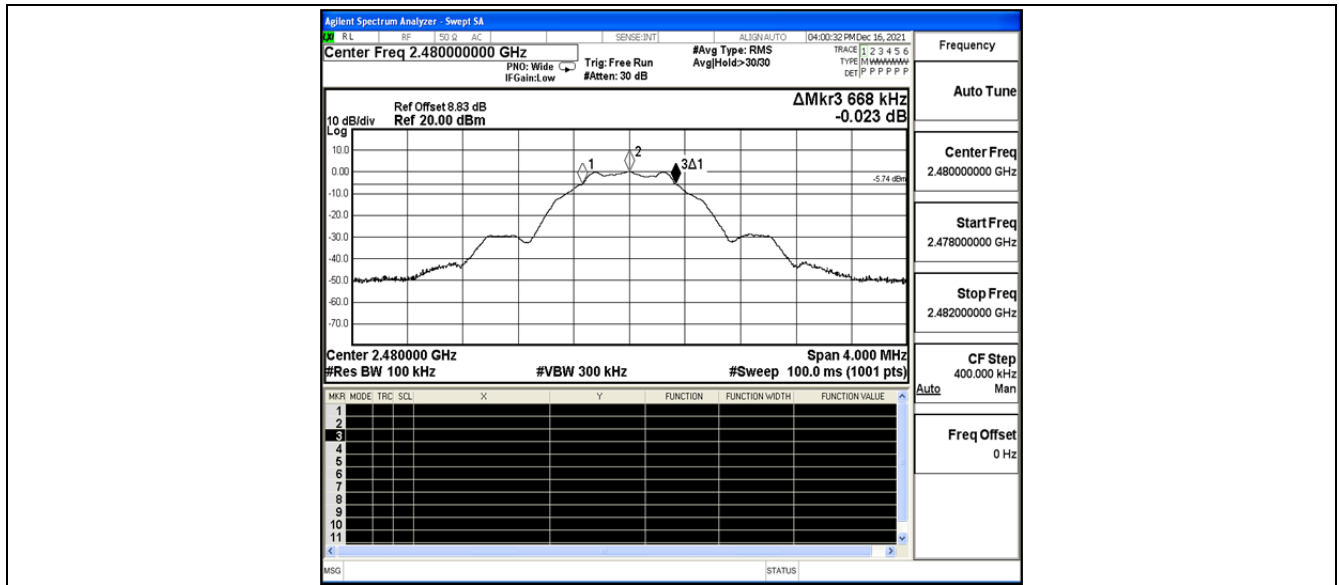
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.2 Maximum peak conducted output power

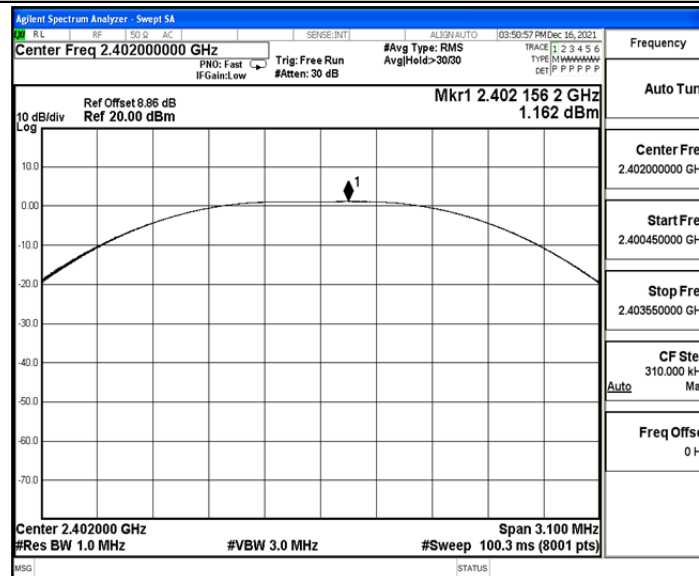
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.16	≤30	PASS
		2440	2.41	≤30	PASS
		2480	0.8	≤30	PASS

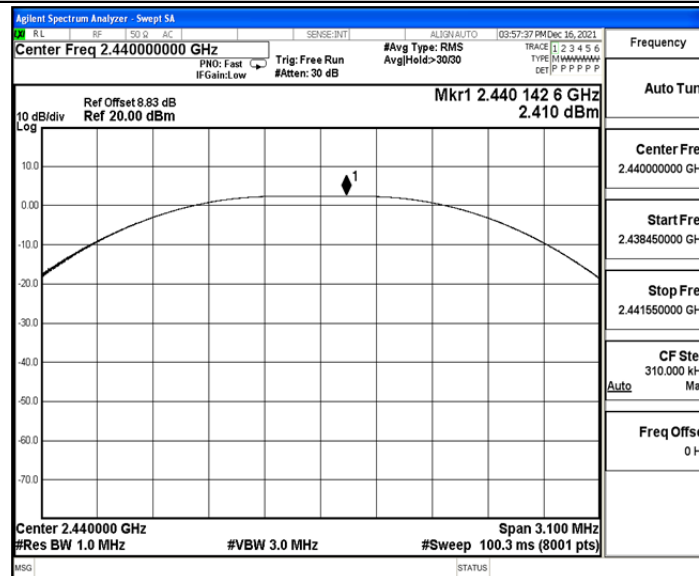


Test Graphs

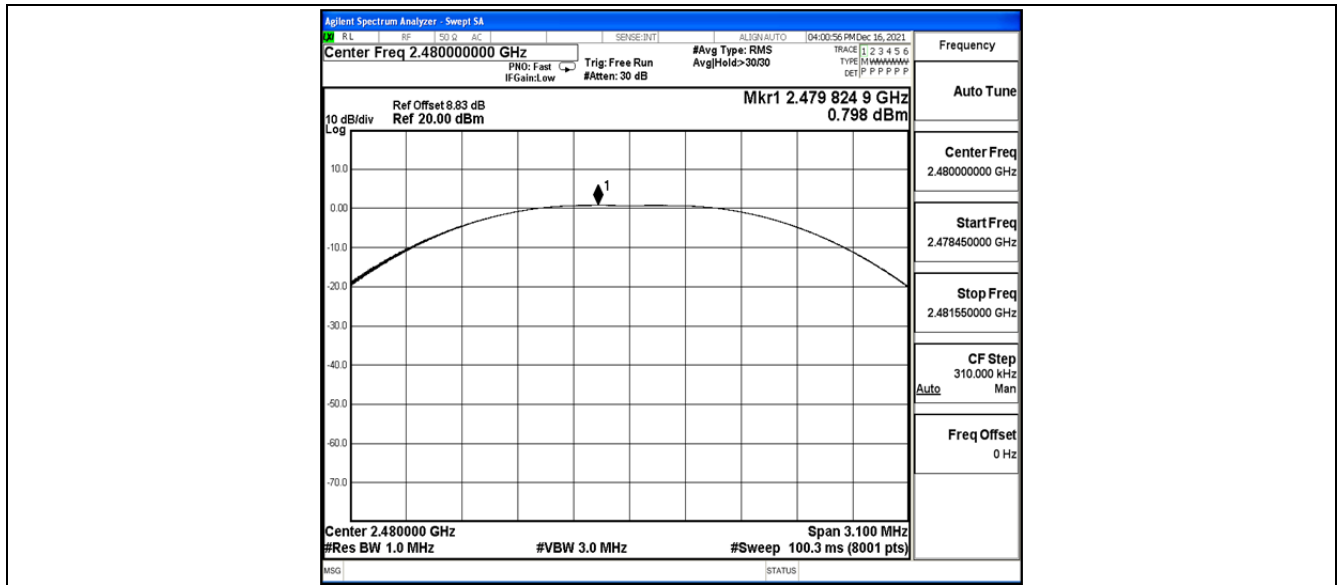
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.3 Maximum power spectral density

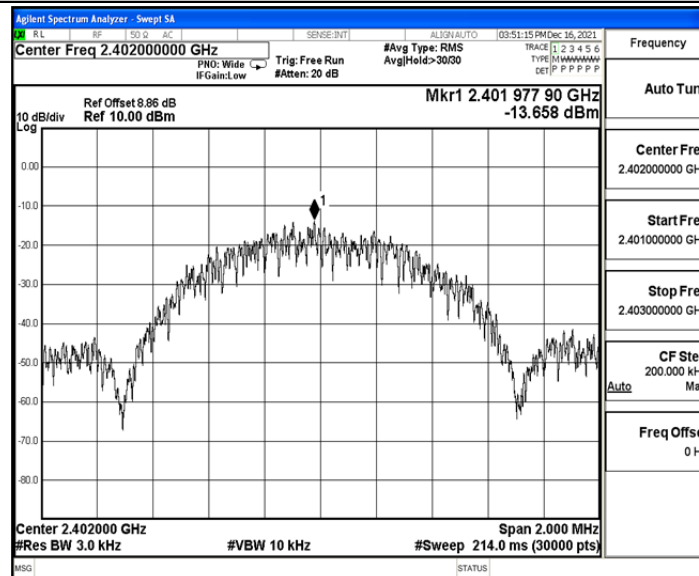
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-13.66	≤8	PASS
		2440	-12.29	≤8	PASS
		2480	-14	≤8	PASS

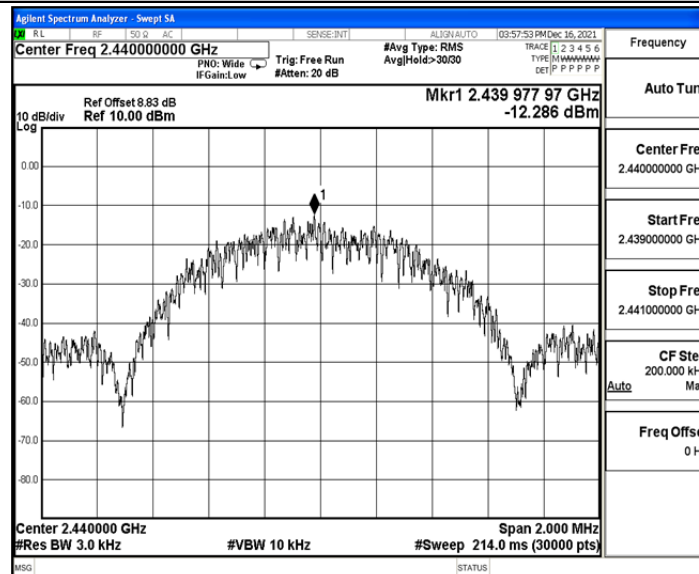


Test Graphs

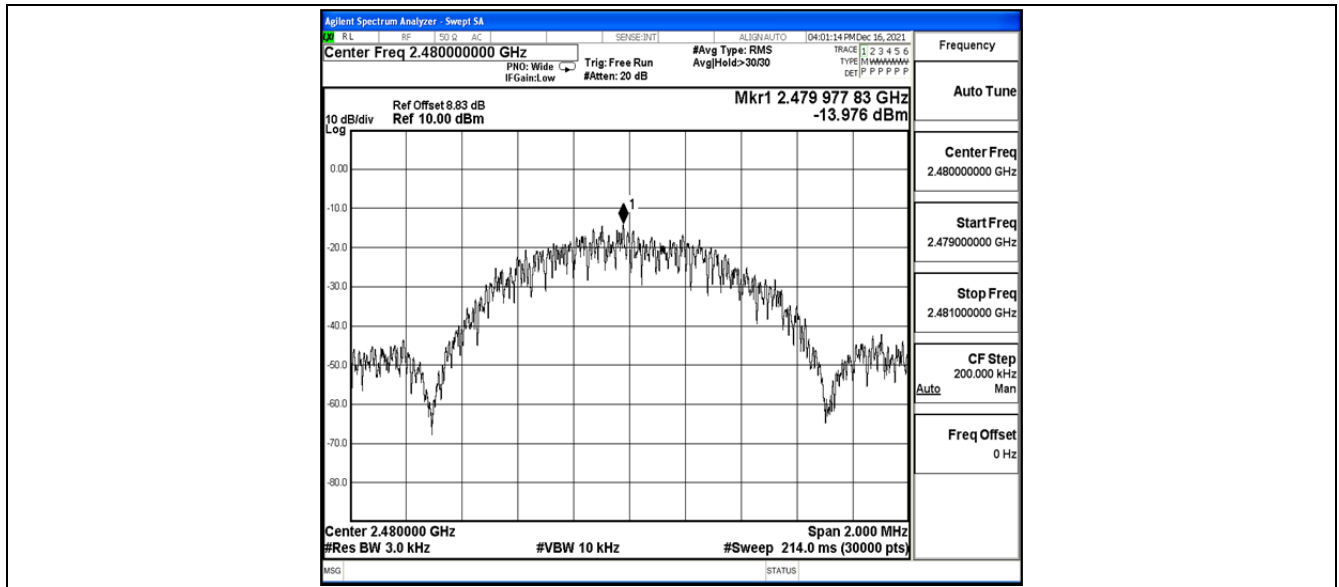
BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





A.4 Band edge measurements

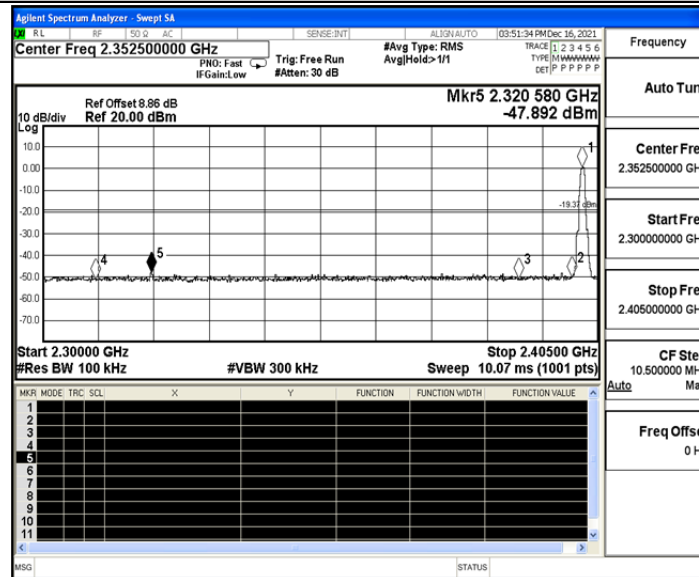
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.63	-47.89	≤ -19.37	PASS
		High	2480	0.42	-47.39	≤ -19.58	PASS

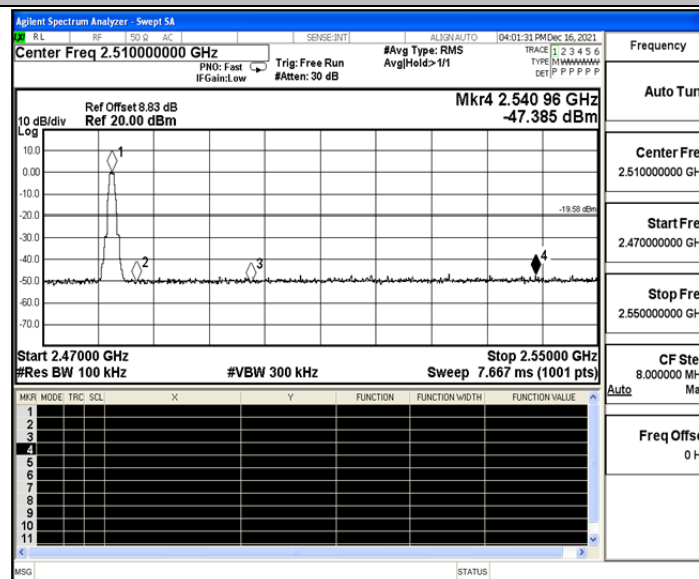


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.5 Conducted Spurious Emission

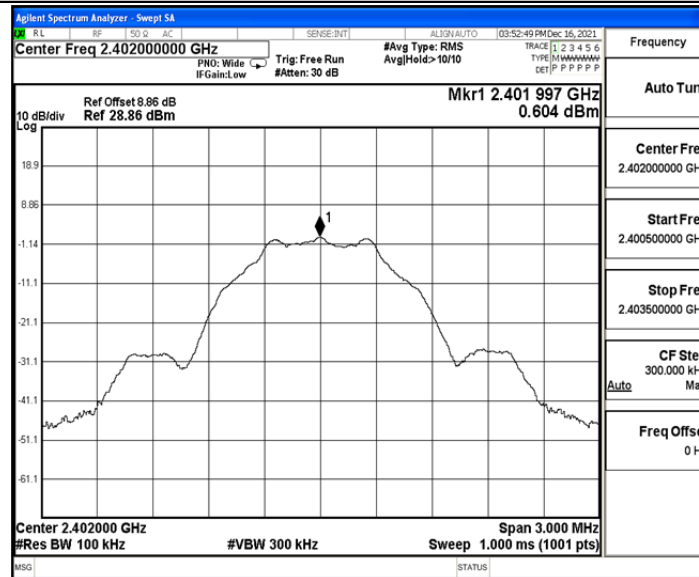
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.60	0.60	---	PASS
			30~1000	0.60	-59.79	≤ -19.4	PASS
			1000~26500	0.60	-45.64	≤ -19.4	PASS
		2440	Reference	1.86	1.86	---	PASS
			30~1000	1.86	-60.07	≤ -18.14	PASS
			1000~26500	1.86	-45.8	≤ -18.14	PASS
		2480	Reference	0.26	0.26	---	PASS
			30~1000	0.26	-60.34	≤ -19.74	PASS
			1000~26500	0.26	-45.91	≤ -19.74	PASS

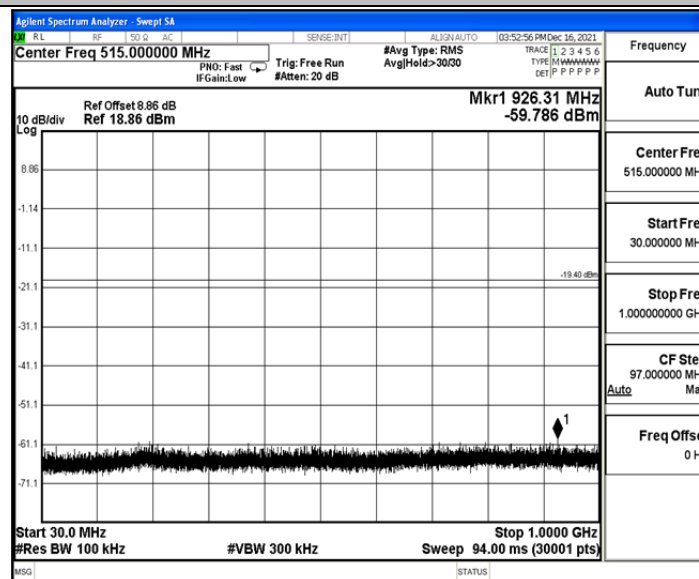


Test Graphs

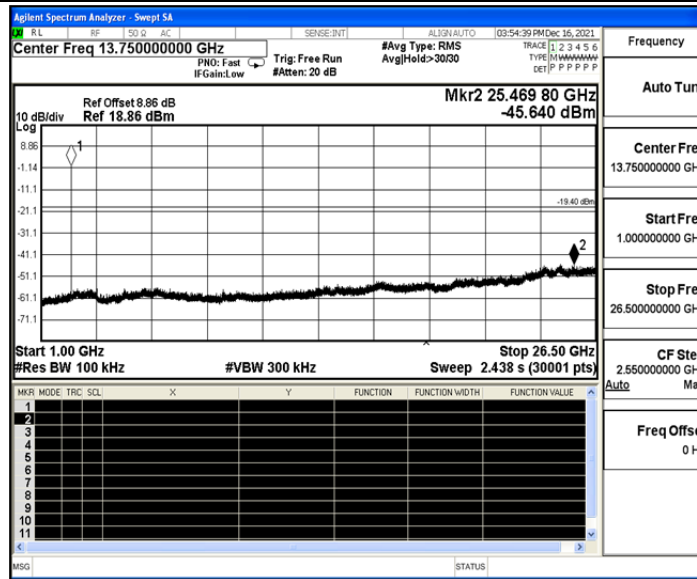
BLE_1M_Ant1_2402_0~Reference



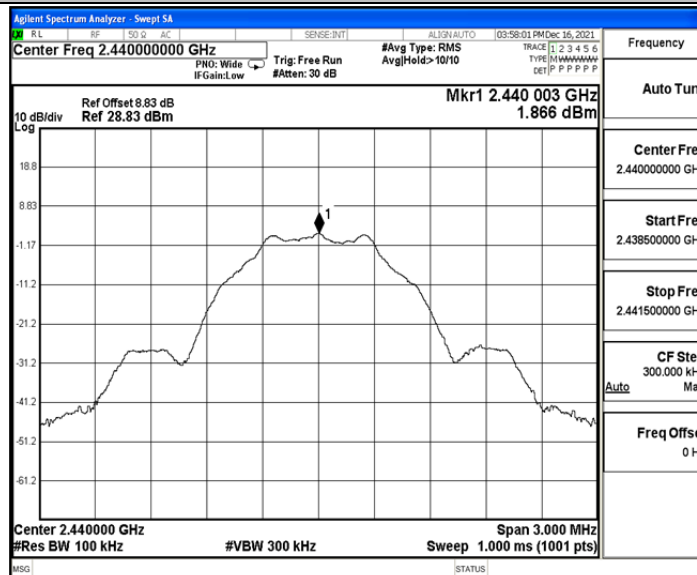
BLE_1M_Ant1_2402_30~1000



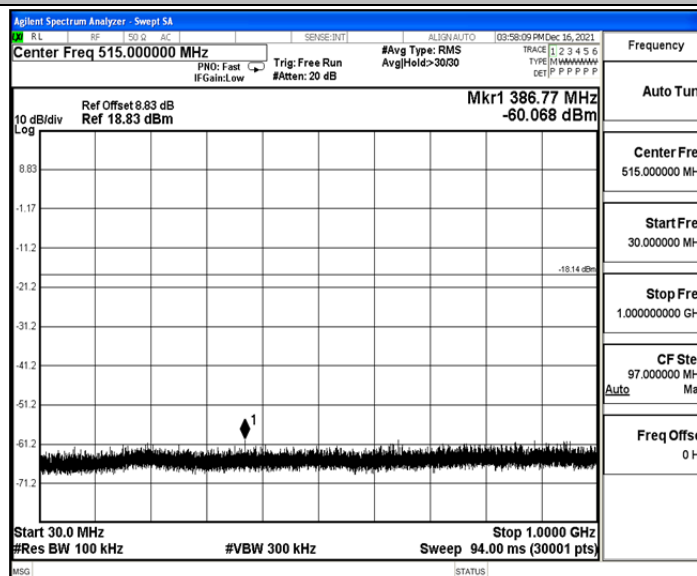
BLE_1M_Ant1_2402_1000~26500



BLE_1M_Ant1_2440_0~Reference

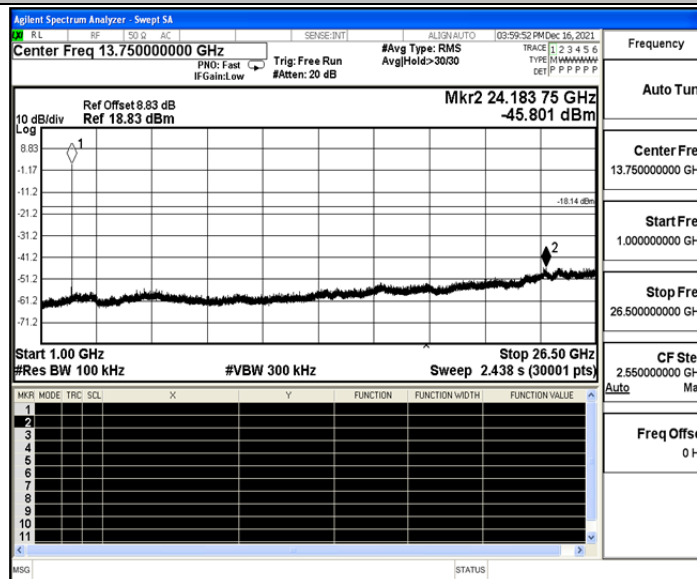


BLE_1M_Ant1_2440_30~1000

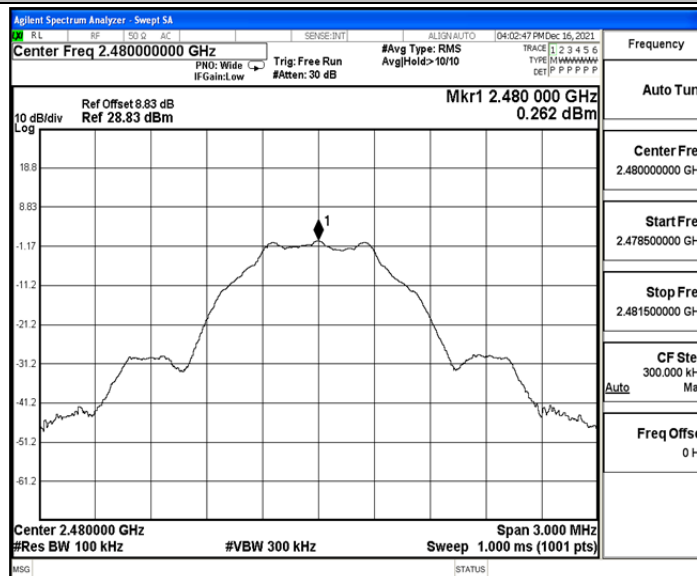




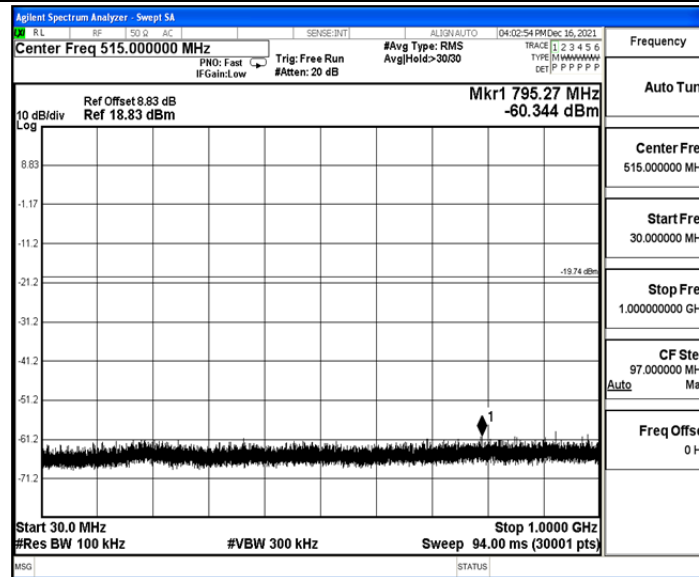
BLE_1M_Ant1_2440_1000~26500



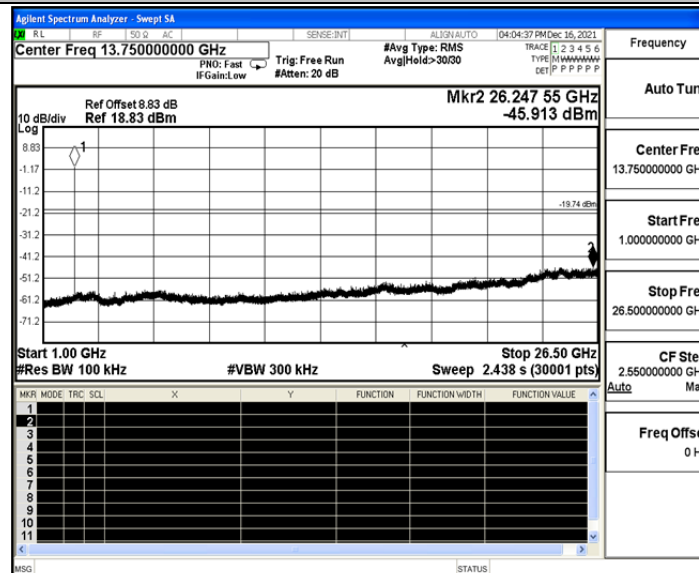
BLE_1M_Ant1_2480_0~Reference



BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500





A.6 Duty Cycle

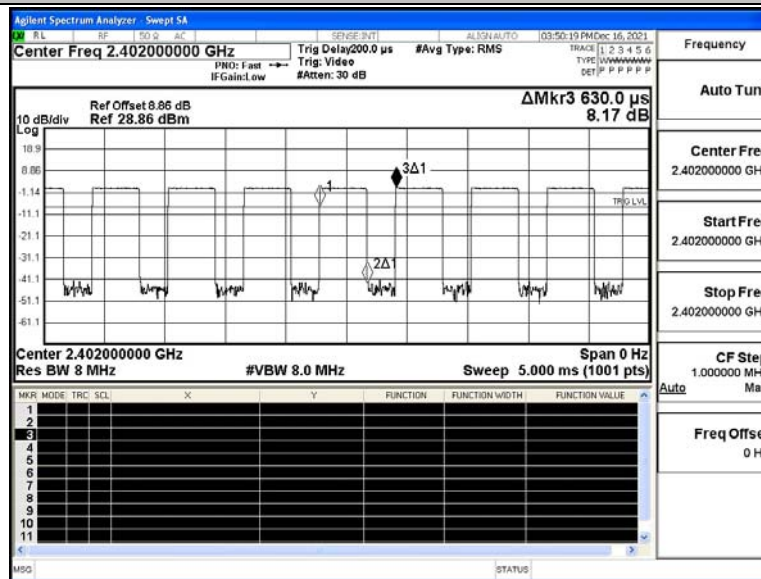
Test Result

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

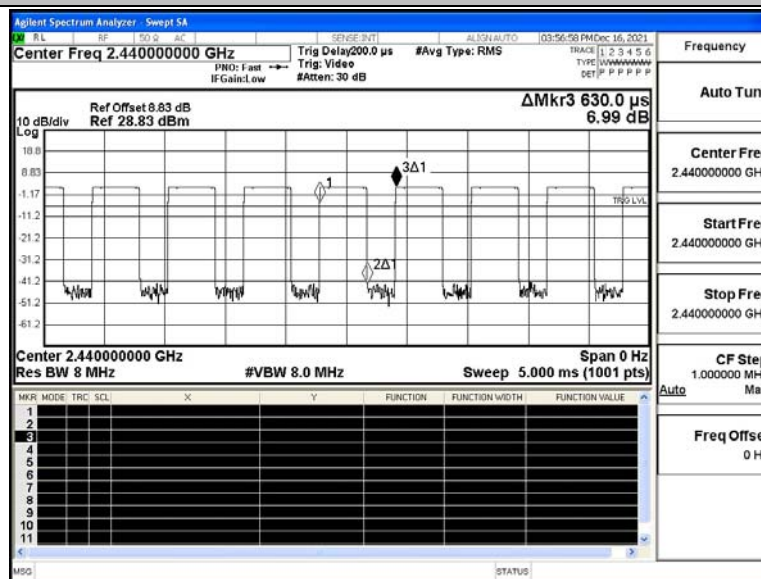


Test Graphs

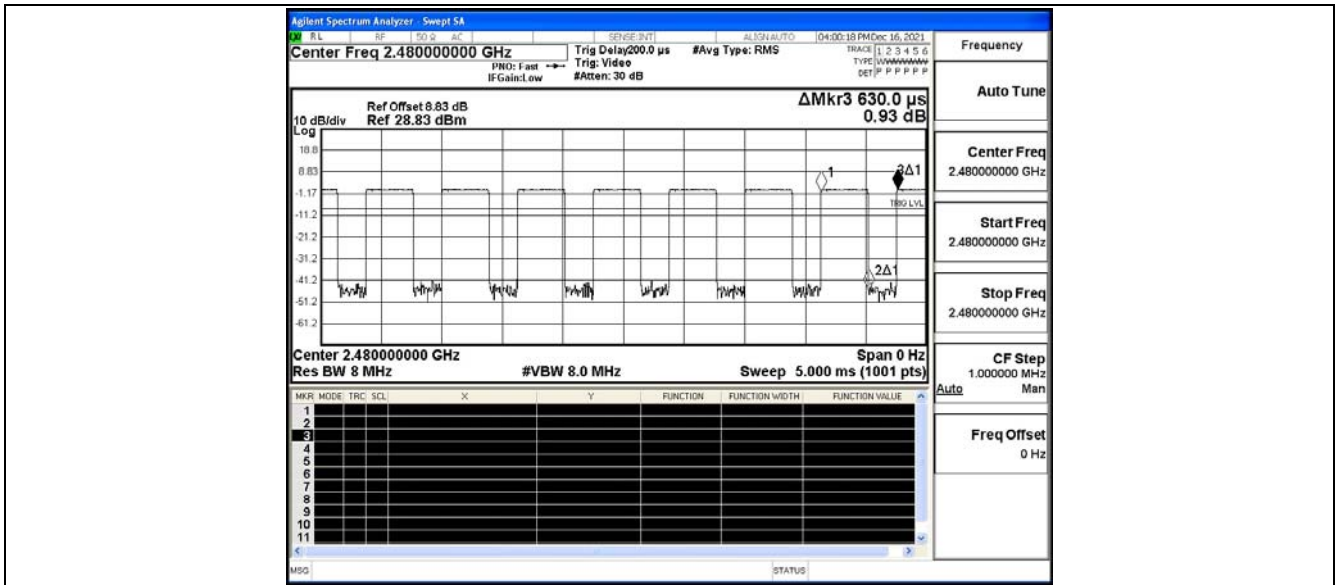
BLE_1M_Ant1_2402



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	-47.3	≤-41.20	47.90	≤54	PASS
				AV	2385.260	-46.52	≤-41.20	48.68	≤54	PASS
				AV	2390.000	-46.74	≤-41.20	48.46	≤54	PASS
				Peak	2310.000	-38.21	≤-21.20	56.99	≤74	PASS
				Peak	2368.040	-36.05	≤-21.20	59.15	≤74	PASS
				Peak	2390.000	-37.84	≤-21.20	57.36	≤74	PASS
		High	2480	AV	2483.500	-45.93	≤-41.20	49.27	≤54	PASS
				AV	2495.440	-45.84	≤-41.20	49.36	≤54	PASS
				AV	2500.000	-46.23	≤-41.20	48.97	≤54	PASS
				Peak	2483.500	-36.73	≤-21.20	58.47	≤74	PASS
				Peak	2484.640	-35.8	≤-21.20	59.40	≤74	PASS
				Peak	2500.000	-37.72	≤-21.20	57.48	≤74	PASS

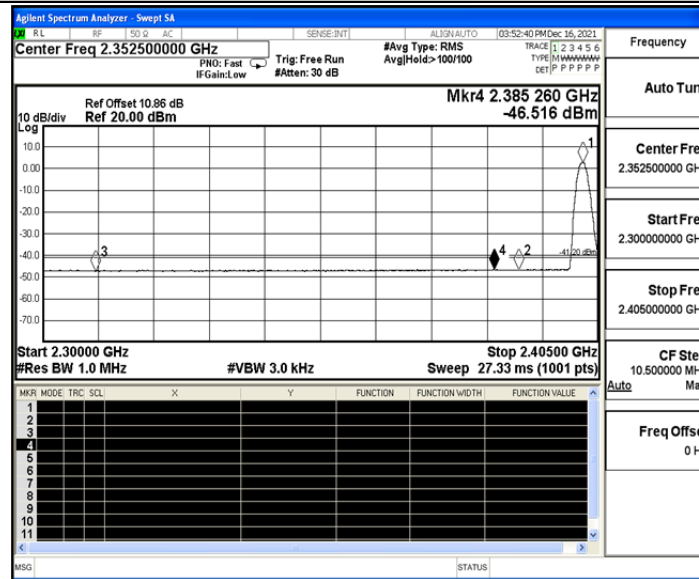
Note:

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.

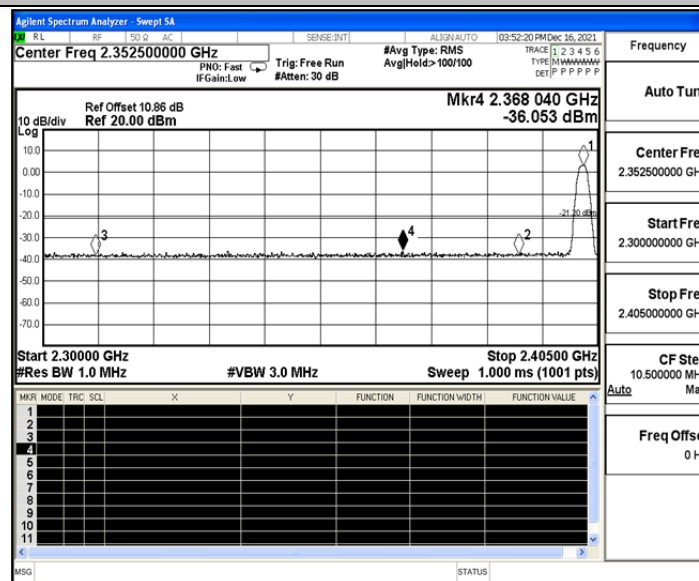


Test Graphs

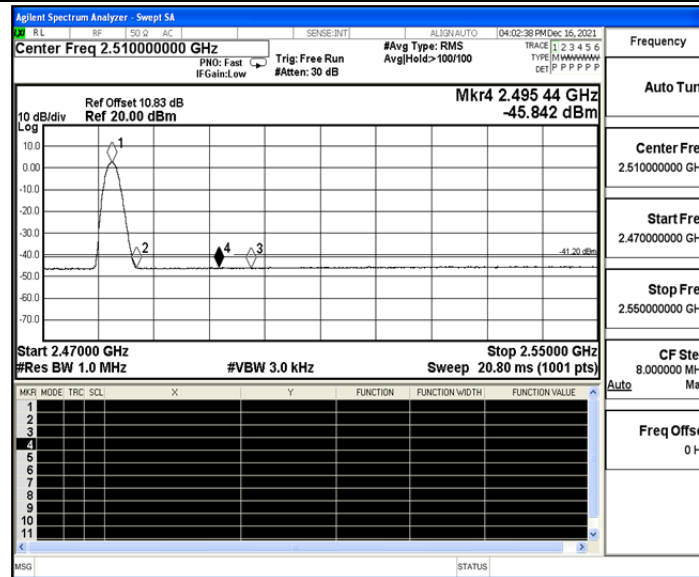
BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



BLE_1M_Ant1_High_2480_Peak

