



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: LED ring light

Test Model: RL19

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Eason Zhou
Supervised by:	Nick Peng





A.1 DTS Bandwidth

Test Result

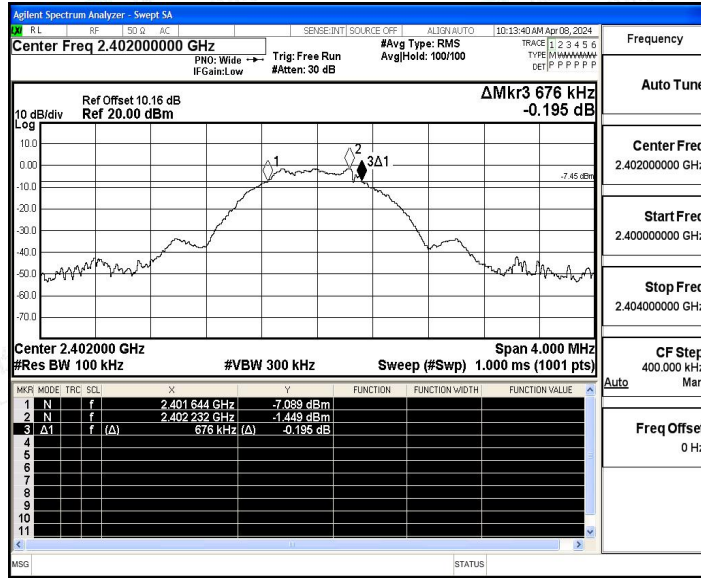
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.676	2401.644	2402.320	0.5	PASS
		2440	0.708	2439.624	2440.332	0.5	PASS
		2480	0.712	2479.628	2480.340	0.5	PASS



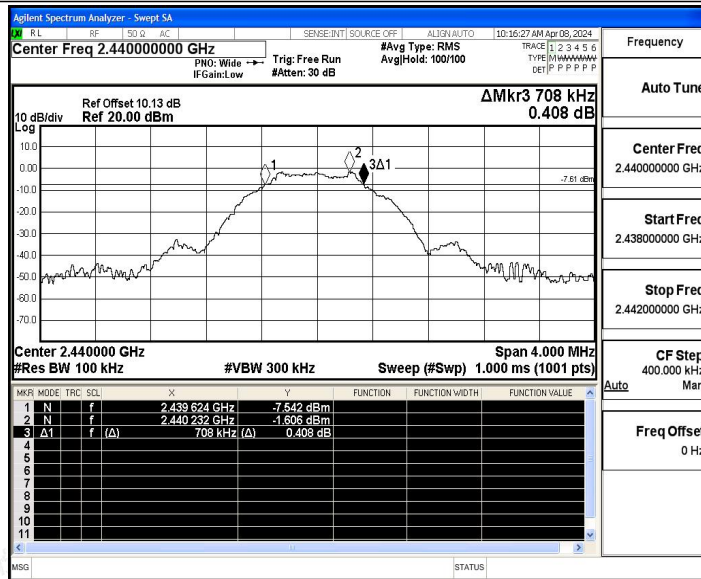


Test Graphs

BLE_1M_Ant1_2402

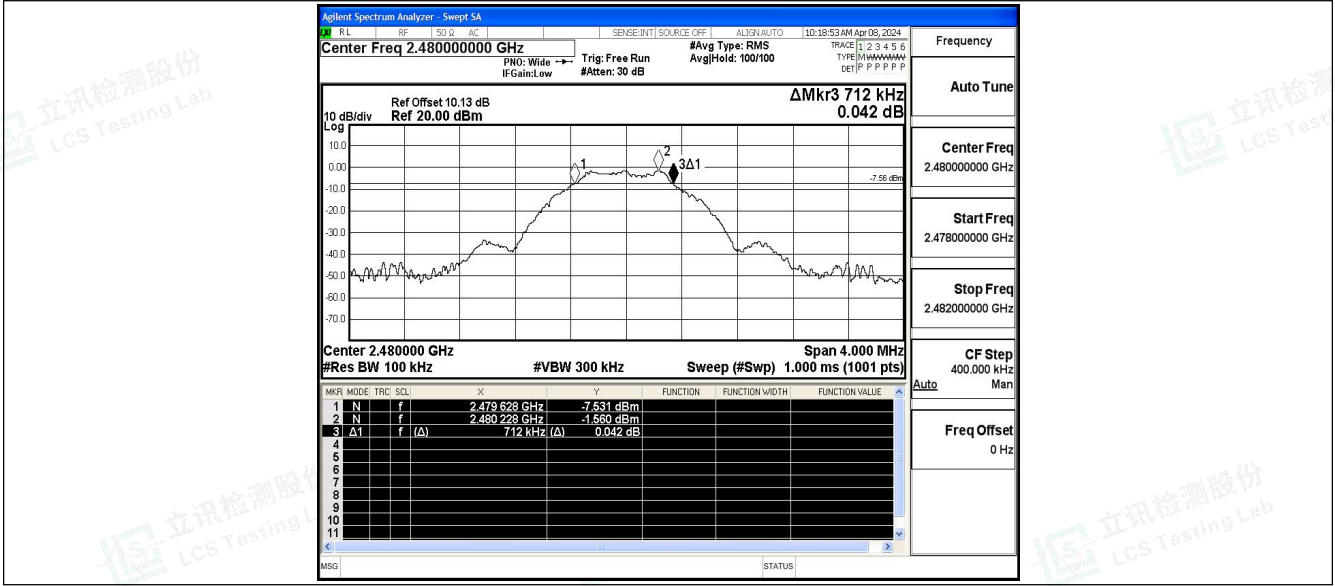


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.2 Maximum peak conducted output power

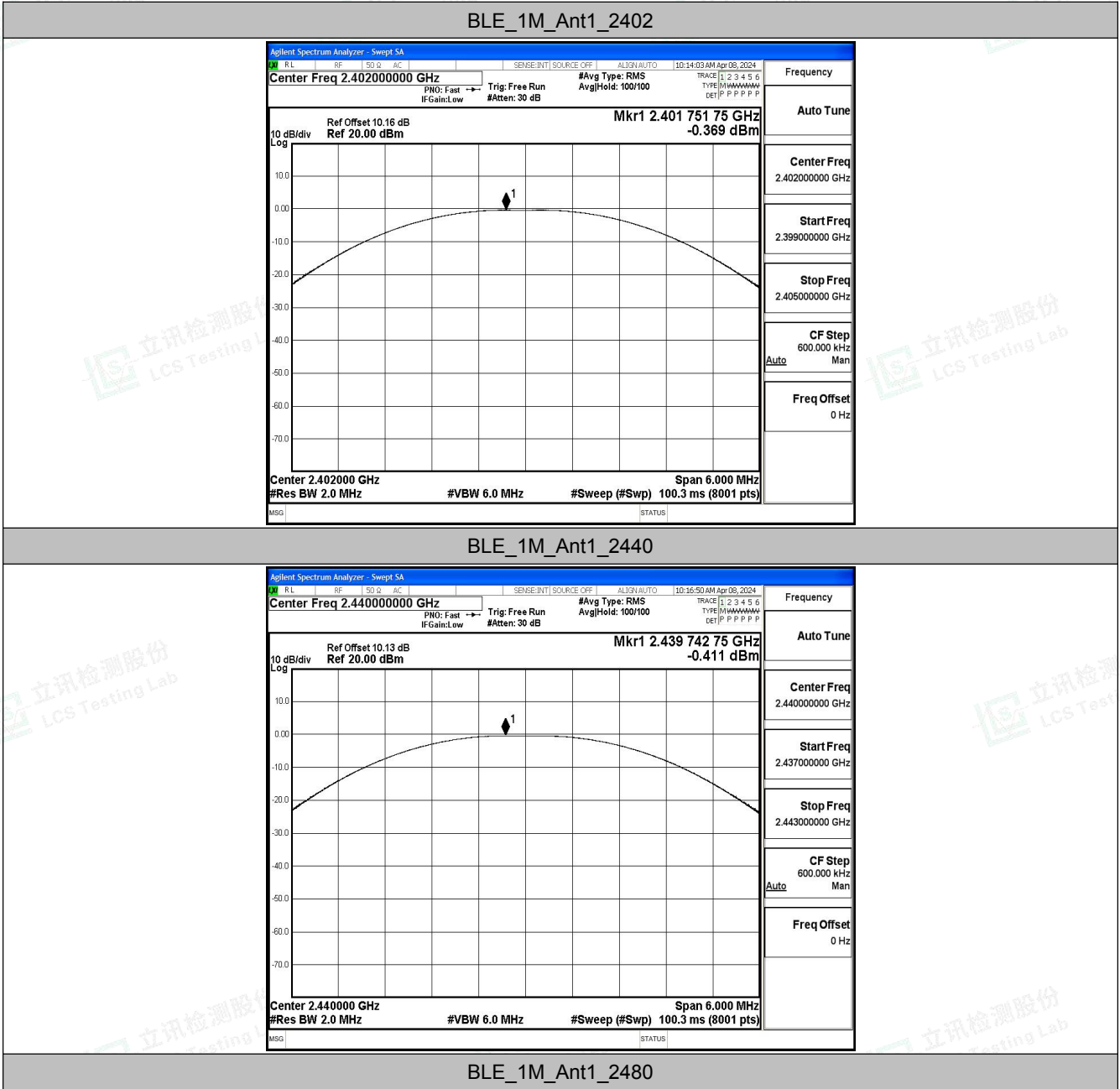
Test Result

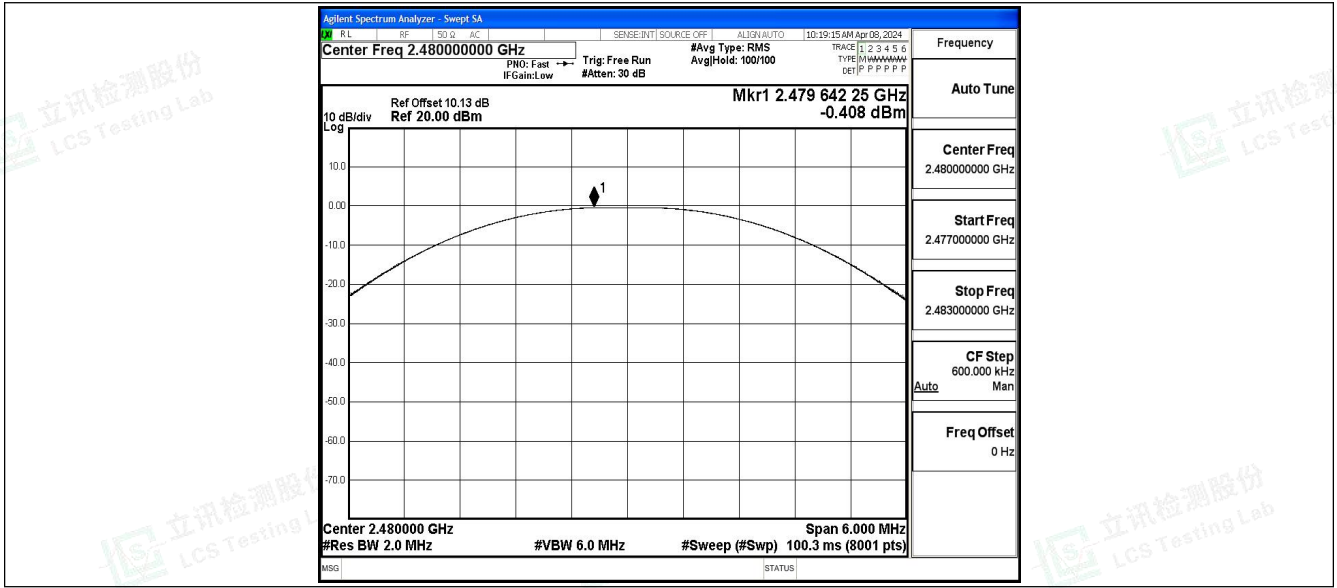
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.37	≤30	PASS
		2440	-0.41	≤30	PASS
		2480	-0.41	≤30	PASS





Test Graphs







A.3 Maximum power spectral density

Test Result

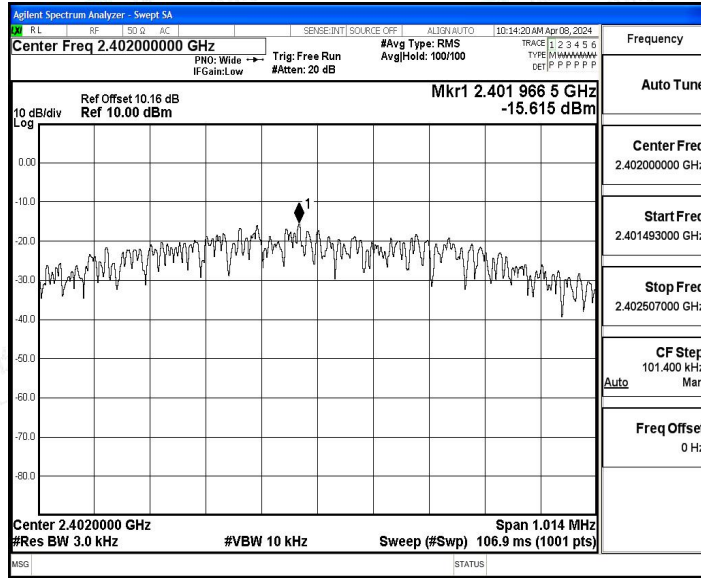
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.62	≤8.00	PASS
		2440	-15.62	≤8.00	PASS
		2480	-15.67	≤8.00	PASS



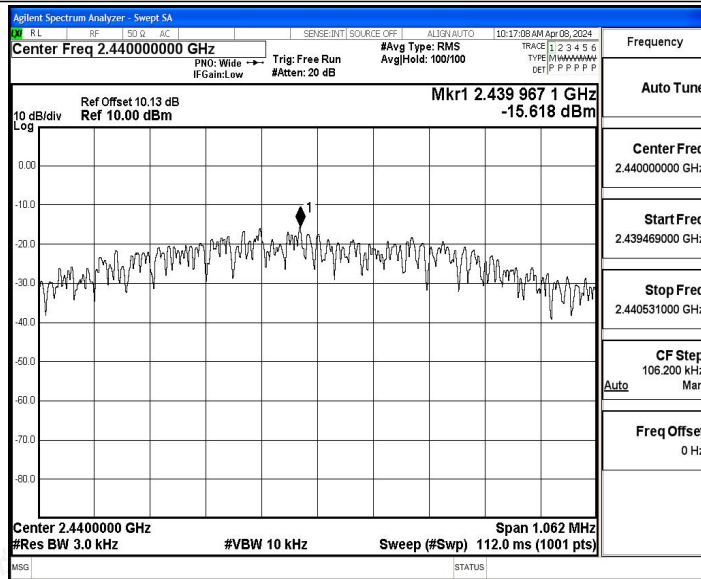


Test Graphs

BLE_1M_Ant1_2402

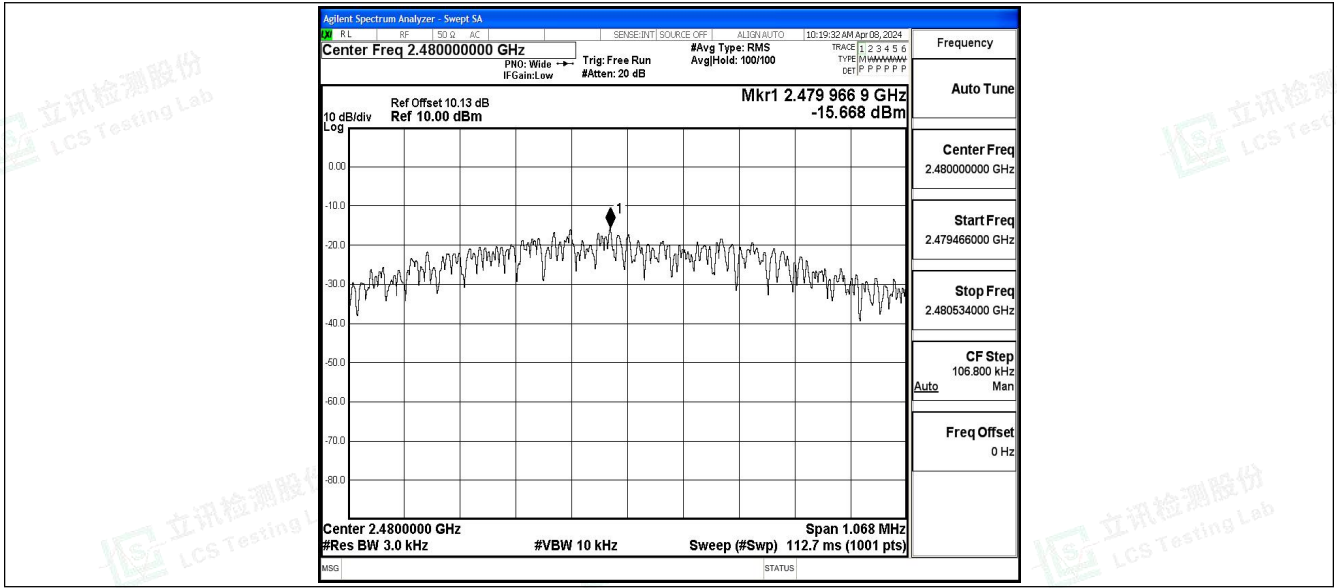


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.4 Band edge measurements

Test Result

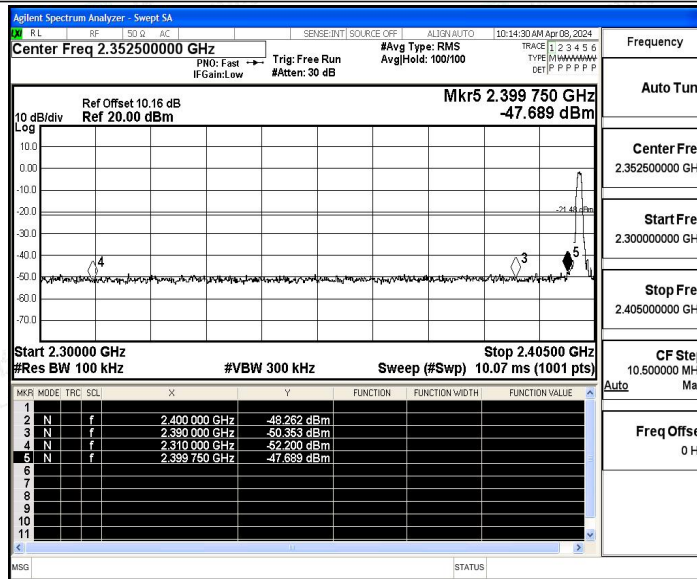
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.48	-47.69	≤-21.48	PASS
		High	2480	-1.52	-47.88	≤-21.52	PASS



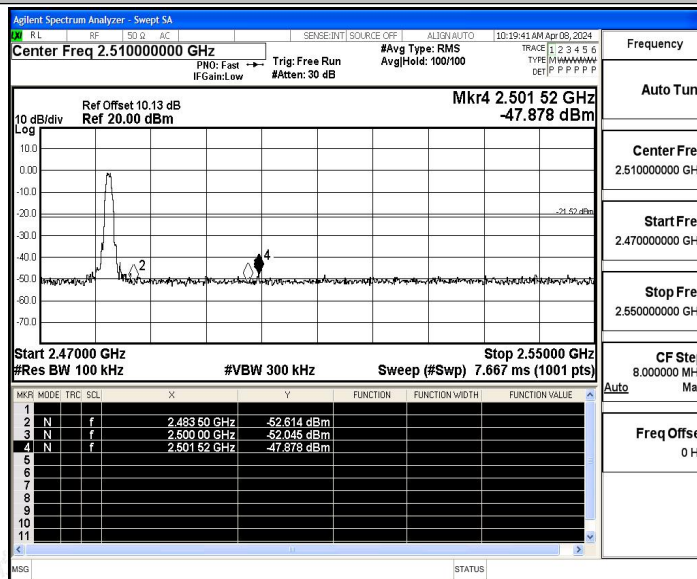


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.5 Conducted Spurious Emission

Test Result

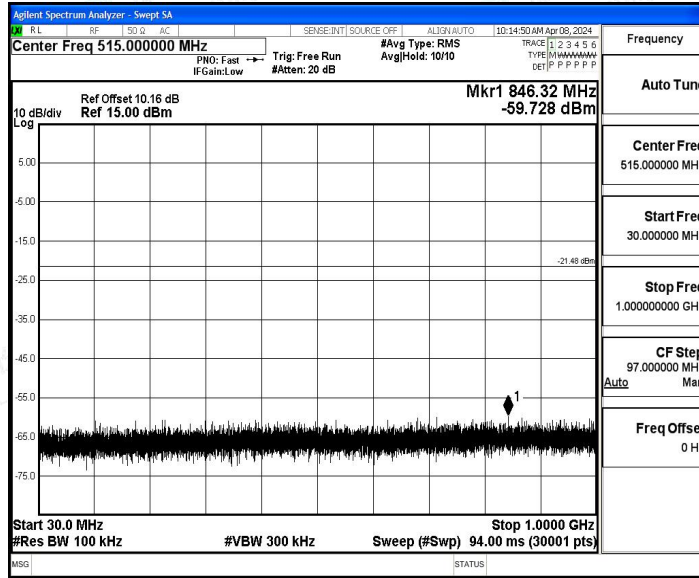
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	-1.48	-59.73	≤-21.48	PASS
			1000~26500	-1.48	-47.64	≤-21.48	PASS
		2440	30~1000	-1.52	-60.01	≤-21.52	PASS
			1000~26500	-1.52	-46.86	≤-21.52	PASS
		2480	30~1000	-1.52	-59.33	≤-21.52	PASS
			1000~26500	-1.52	-46.73	≤-21.52	PASS



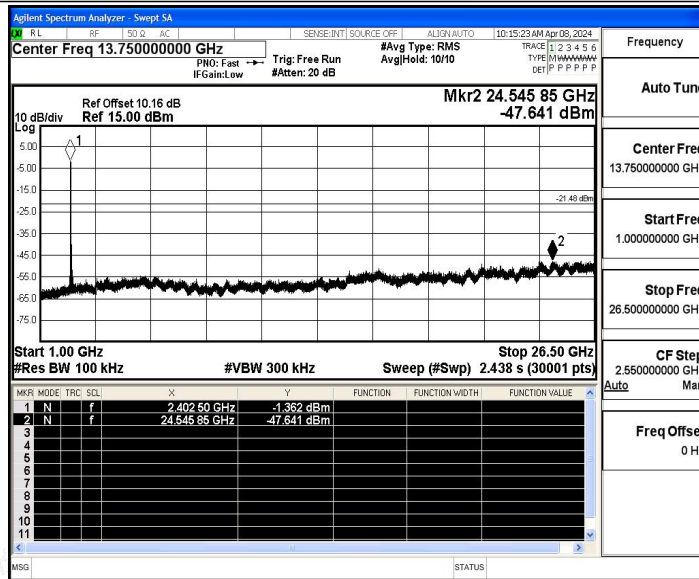


Test Graphs

BLE_1M_Ant1_2402_30~1000

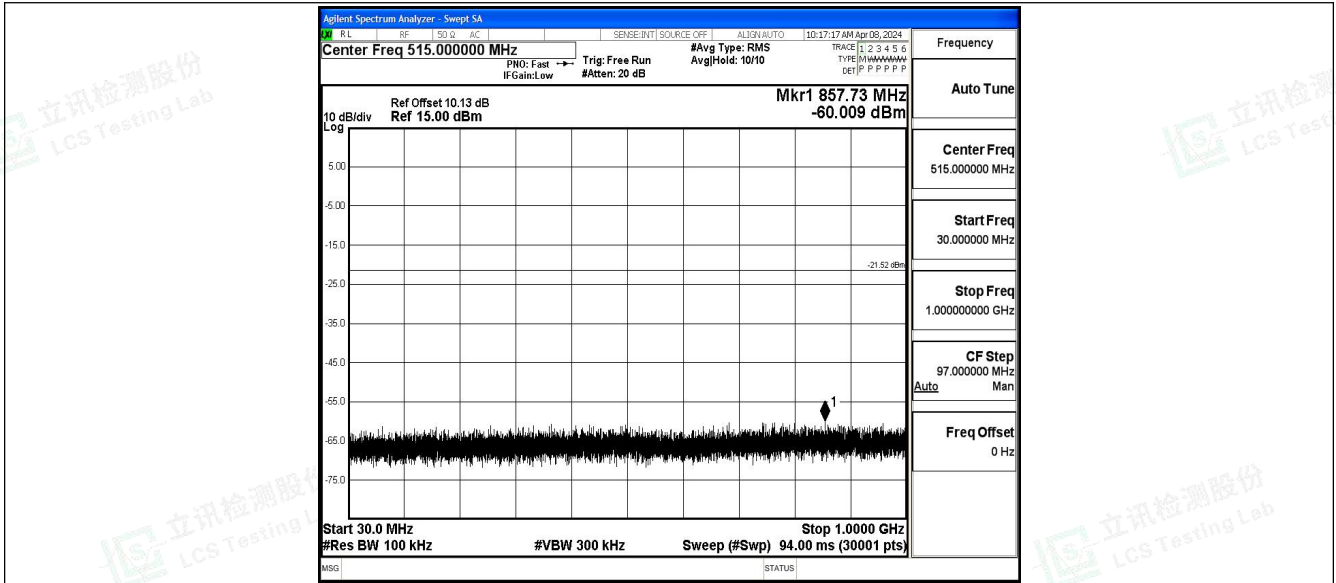


BLE_1M_Ant1_2402_1000~26500

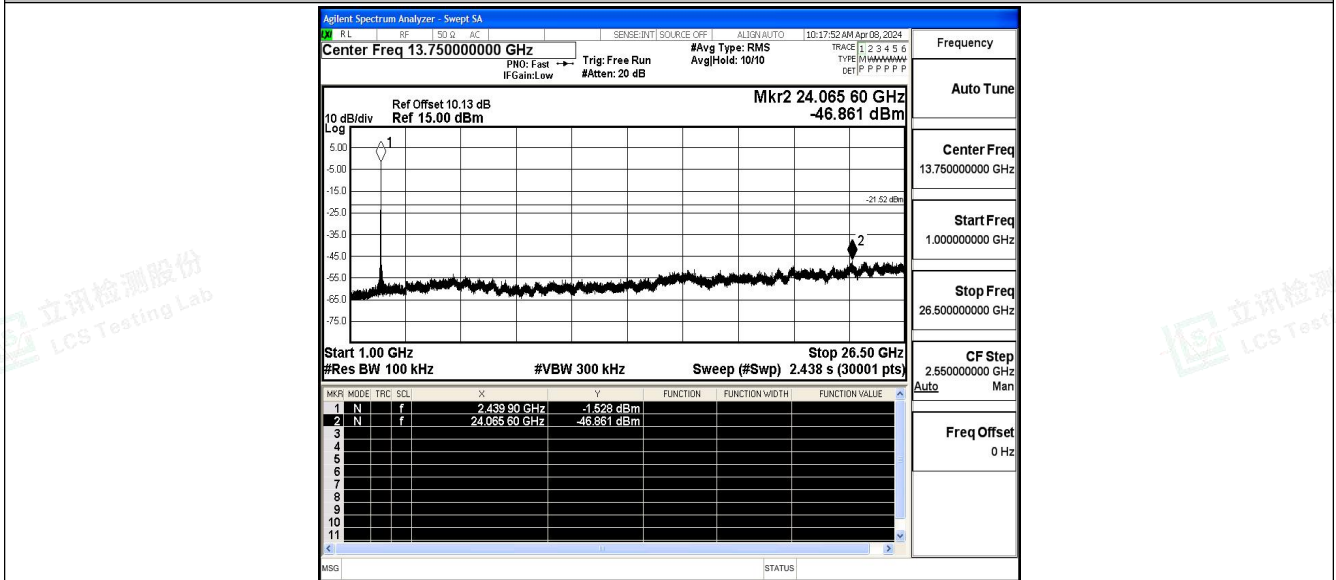


BLE_1M_Ant1_2440_30~1000



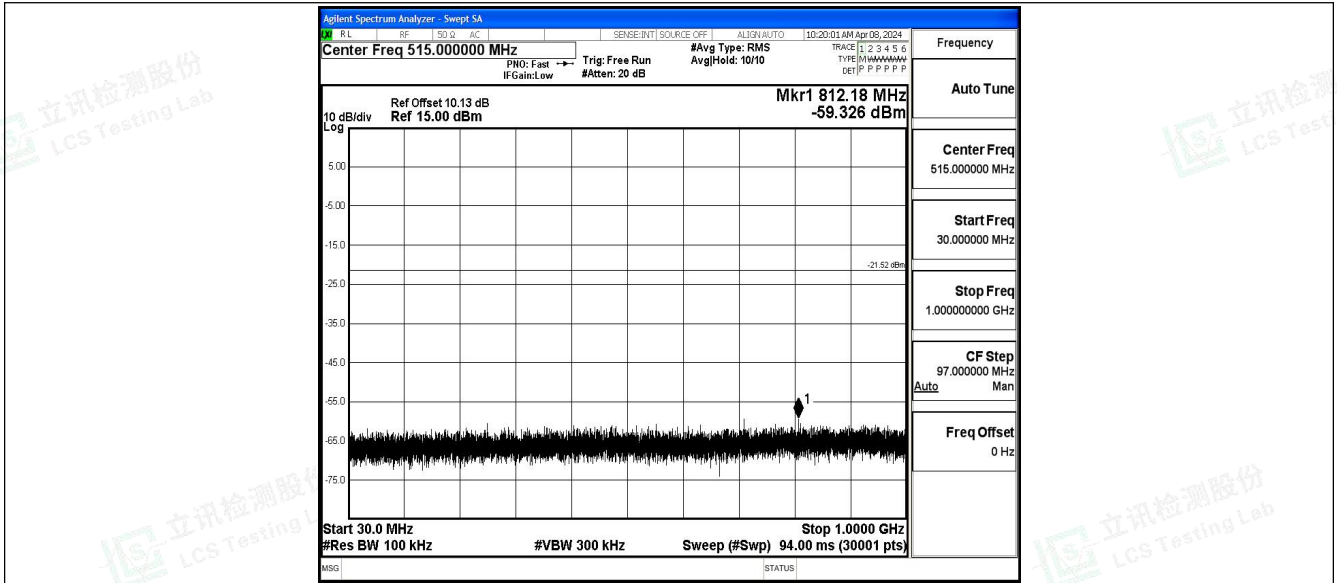


BLE_1M_Ant1_2440_1000~26500

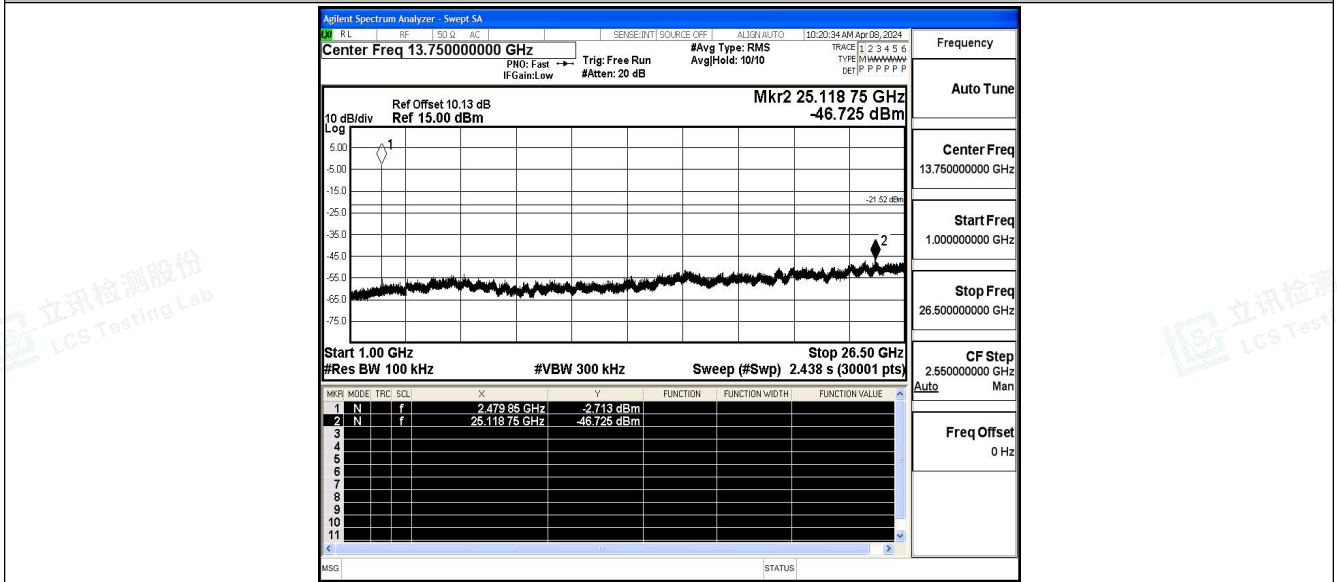


BLE_1M_Ant1_2480_30~1000





BLE_1M_Ant1_2480_1000~26500





Reference level measurement

Test Result

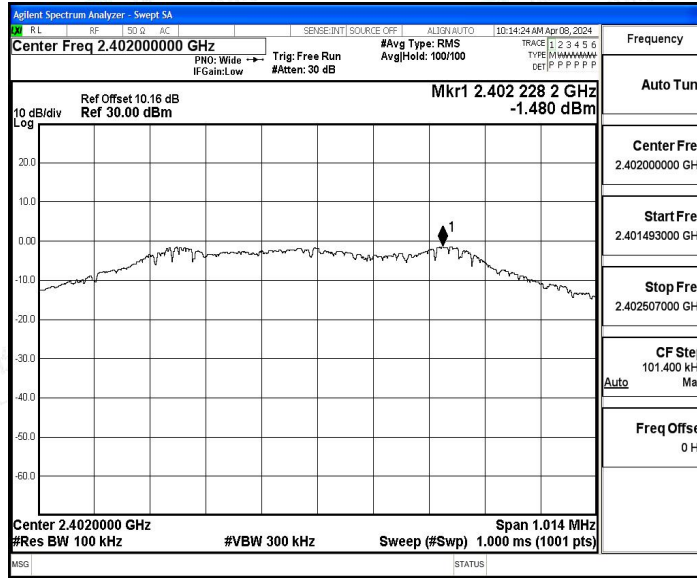
TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2402.23	-1.48
		2440	2440.23	-1.52
		2480	2480.24	-1.52



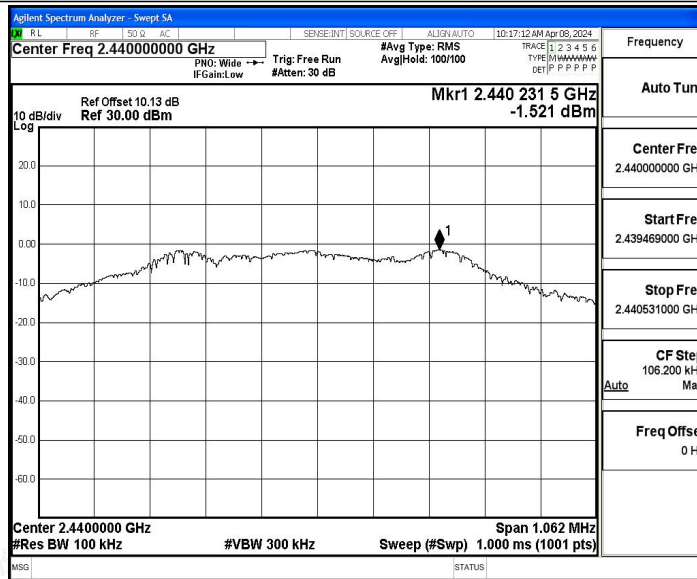


Test Graphs

BLE_1M_Ant1_2402

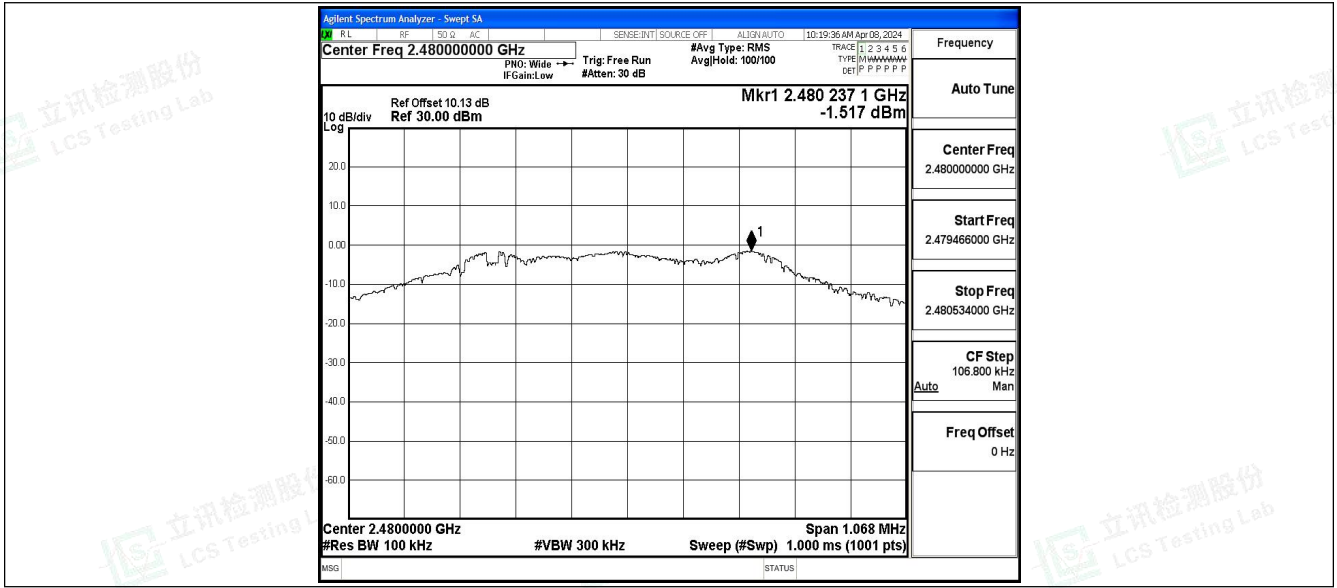


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.6 Duty Cycle

Test Result

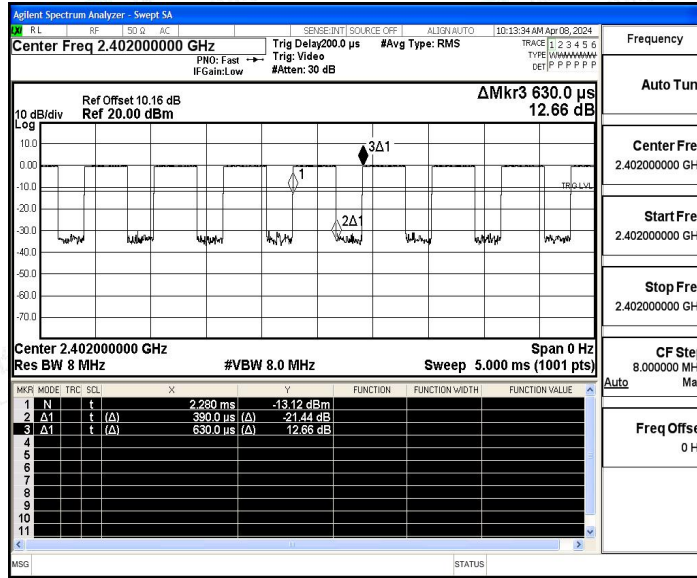
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]	1/T Factor[dB]
BLE_1M	Ant1	2402	0.39	0.63	61.90	2.08	2.56
		2440	0.39	0.63	61.90	2.08	2.56
		2480	0.39	0.63	61.90	2.08	2.56



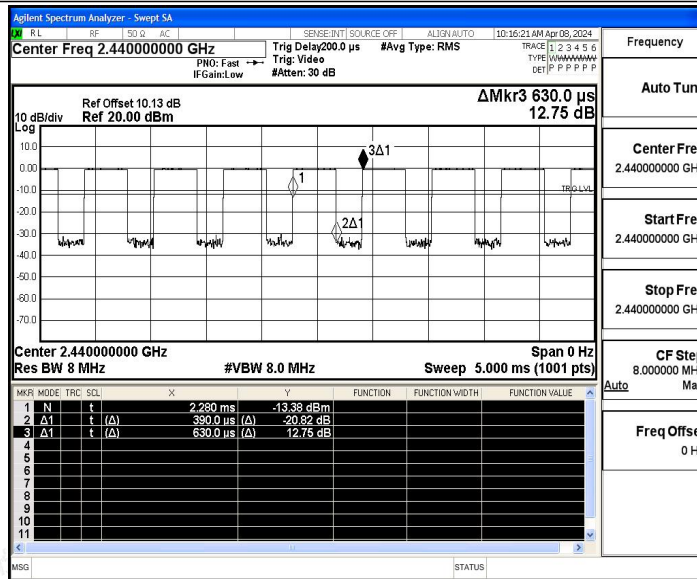


Test Graphs

BLE_1M_Ant1_2402

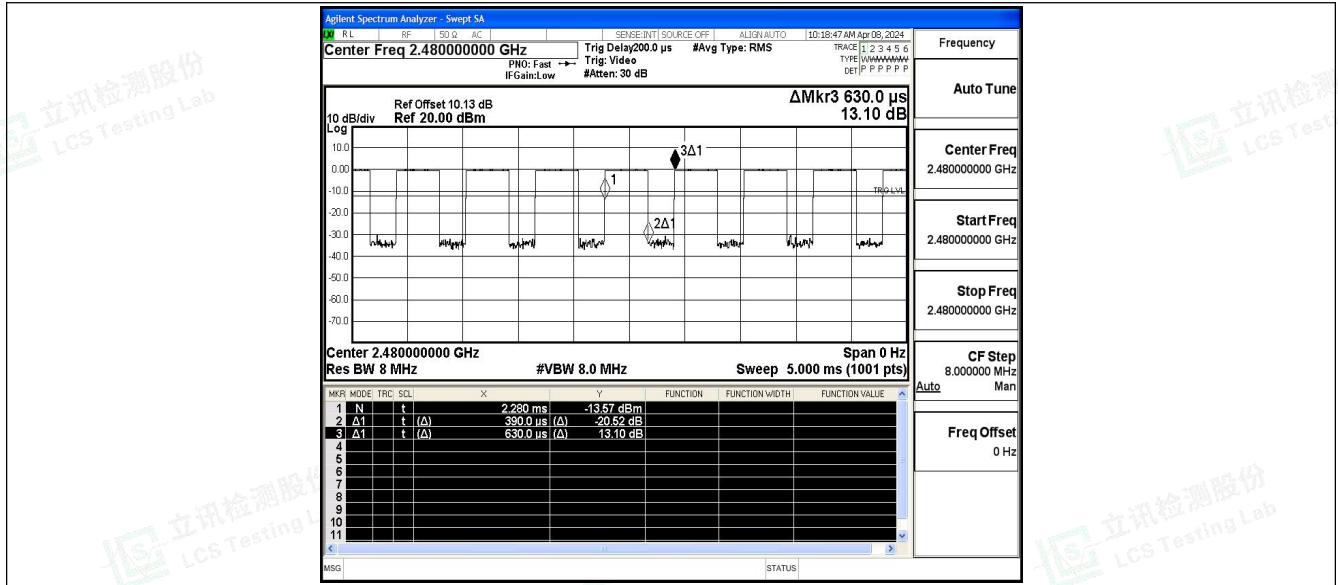


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480





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 Scan code to check authenticity



A.7 Emissions in Restricted Bands

Test Result

Test Mode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-45.58	≤-41.20	49.62	≤54	PASS
				AV	2382.635	-44.95	≤-41.20	50.25	≤54	PASS
				AV	2390.000	-45.39	≤-41.20	49.81	≤54	PASS
				Peak	2310.000	-39.23	≤-21.20	55.97	≤74	PASS
				Peak	2315.120	-35.97	≤-21.20	59.23	≤74	PASS
				Peak	2390.000	-40.32	≤-21.20	54.88	≤74	PASS
		High	2480	AV	2483.500	-45.49	≤-41.20	49.71	≤54	PASS
				AV	2495.040	-44.67	≤-41.20	50.53	≤54	PASS
				AV	2500.000	-45.41	≤-41.20	49.79	≤54	PASS
				Peak	2483.500	-40.61	≤-21.20	54.59	≤74	PASS
				Peak	2483.840	-35.82	≤-21.20	59.38	≤74	PASS
				Peak	2500.000	-39.26	≤-21.20	55.94	≤74	PASS

Note:

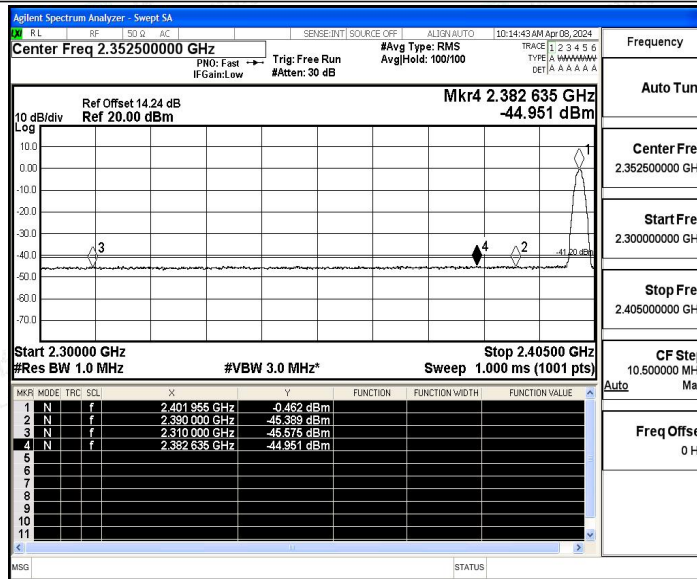
1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



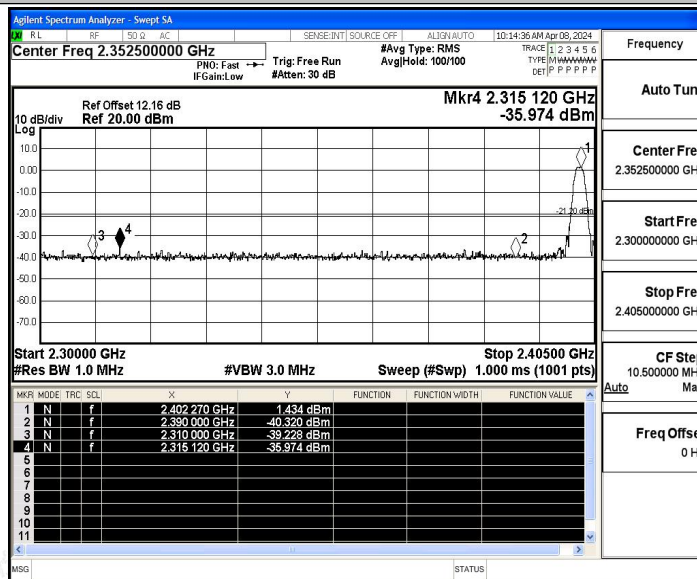


Test Graphs

BLE_1M_Ant1_Low_2402_AV

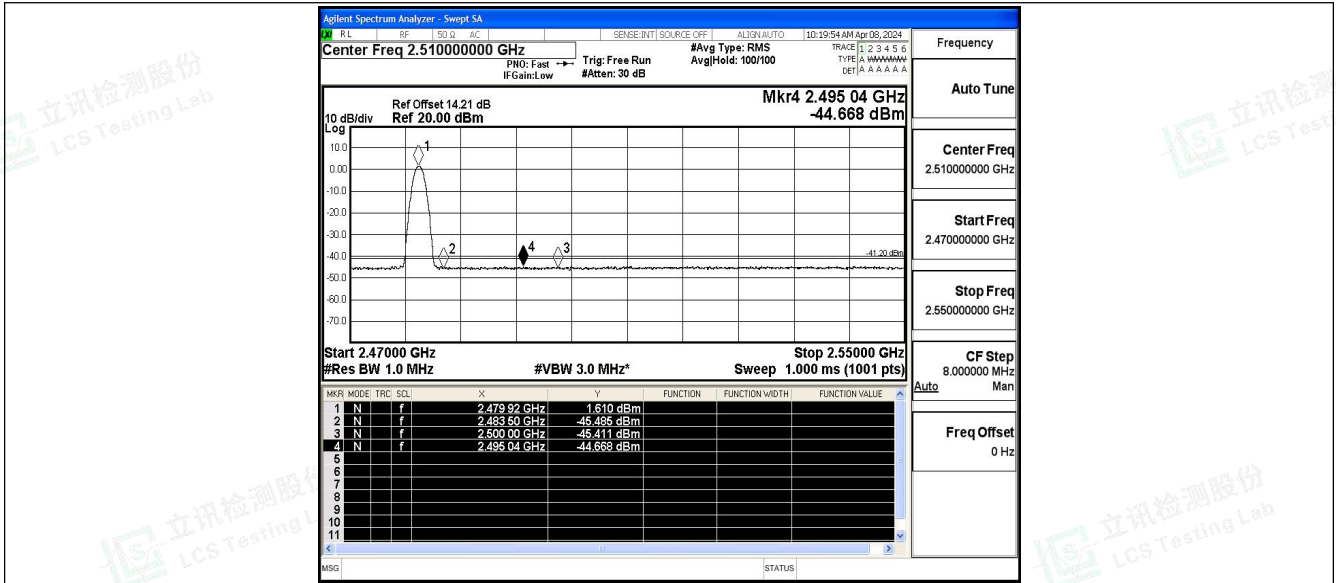


BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV





BLE_1M_Ant1_High_2480_Peak

