



Appendix A

RF Test Data for BT LE (Conducted Measurement)

Product Name: 3D Printer

Test Model: Anycubic Kobra 3

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

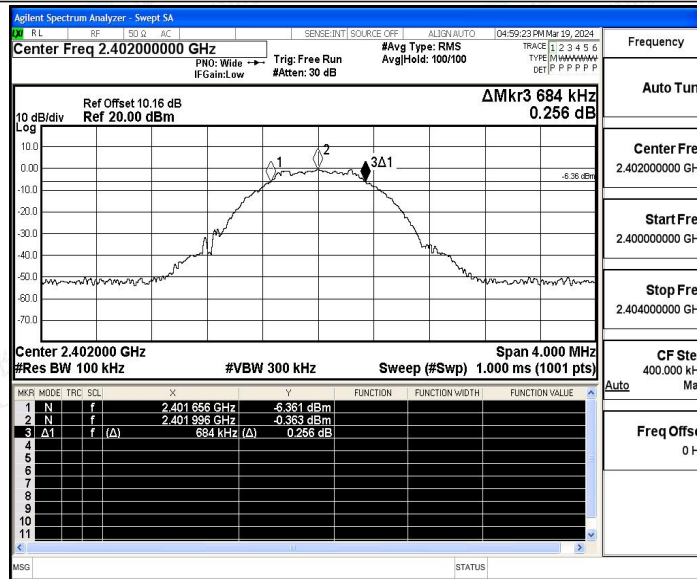
TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.684	2401.656	2402.340	0.5	PASS
		2440	0.656	2439.672	2440.328	0.5	PASS
		2480	0.708	2479.644	2480.352	0.5	PASS



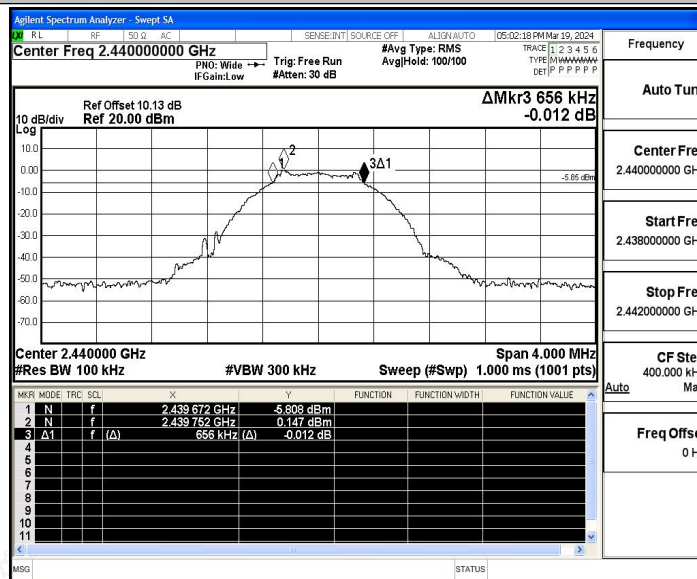


Test Graphs

BLE_1M_Ant1_2402

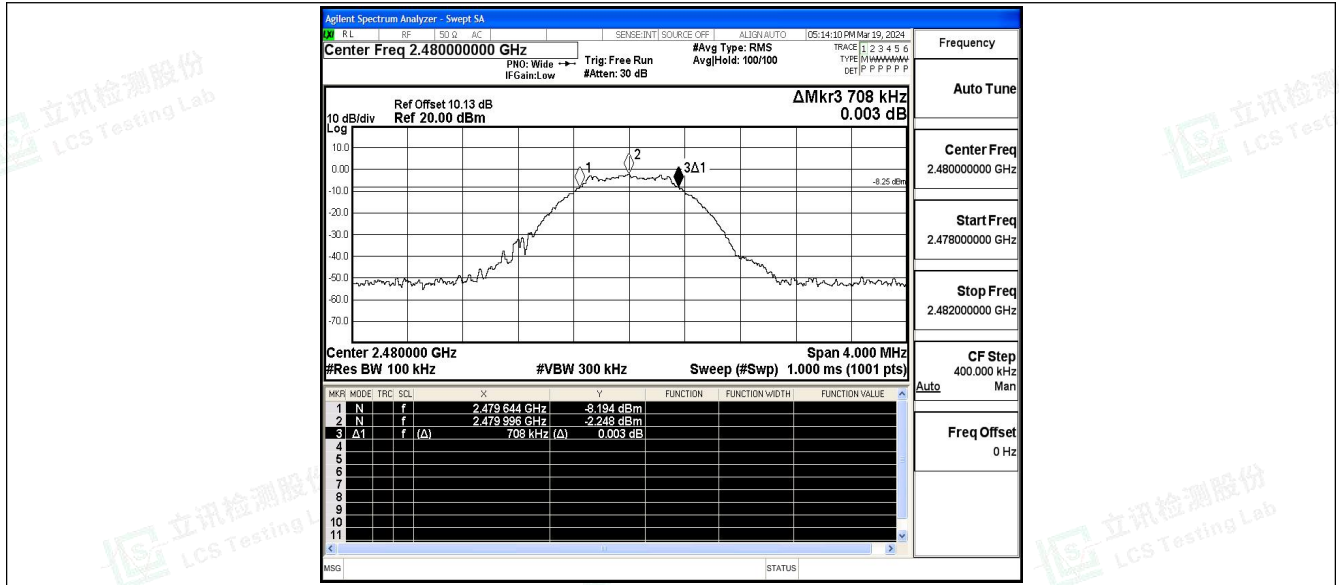


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.2 Maximum peak conducted output power

Test Result

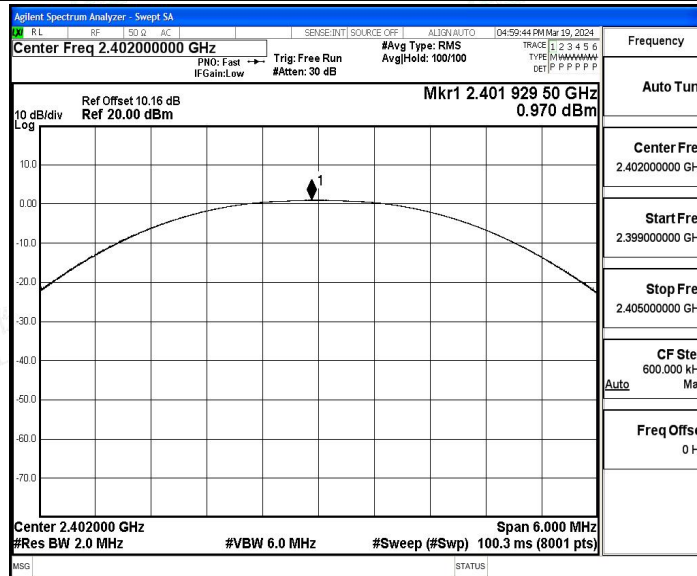
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.97	≤30	PASS
		2440	0.77	≤30	PASS
		2480	-0.82	≤30	PASS



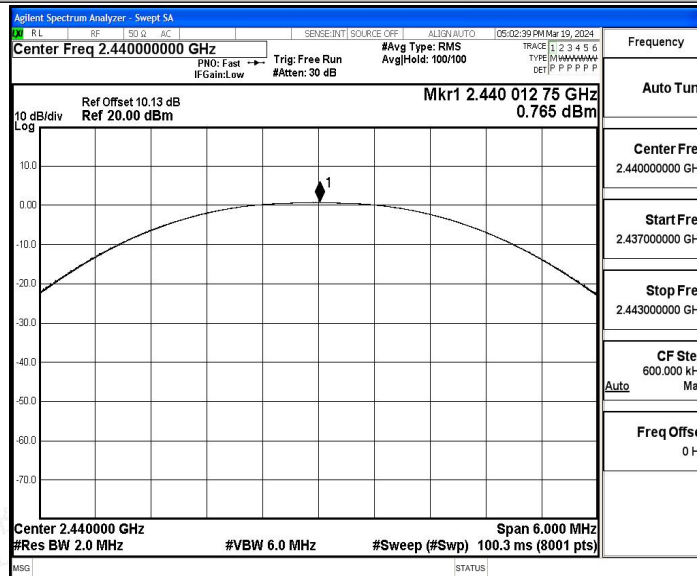


Test Graphs

BLE_1M_Ant1_2402

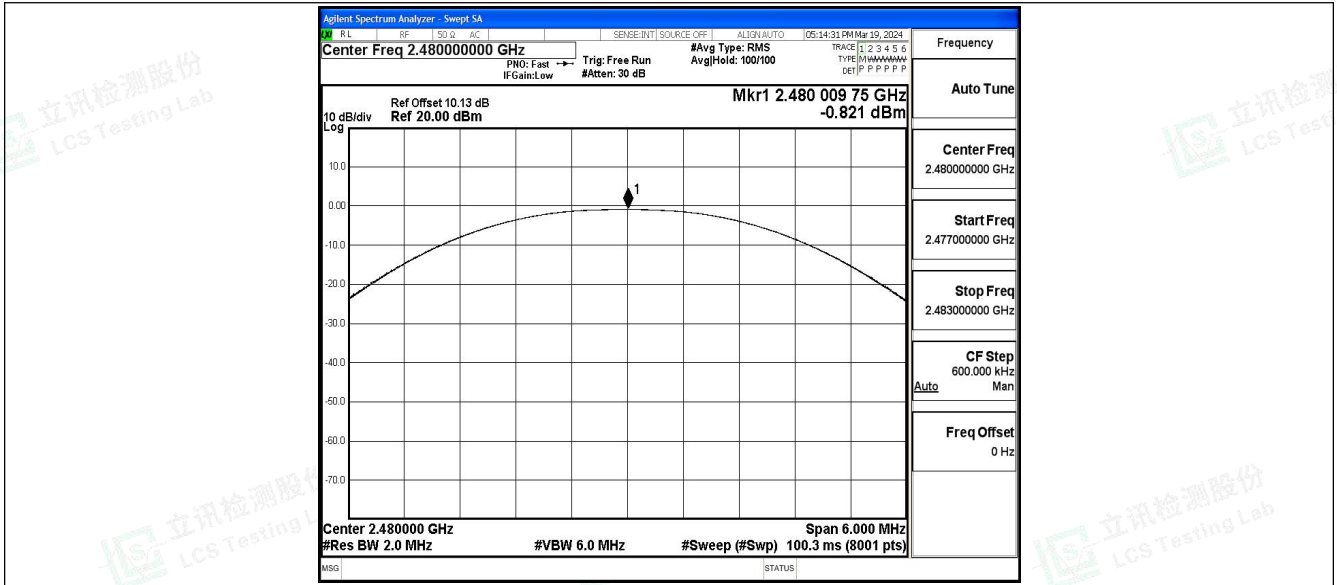


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.3 Maximum power spectral density

Test Result

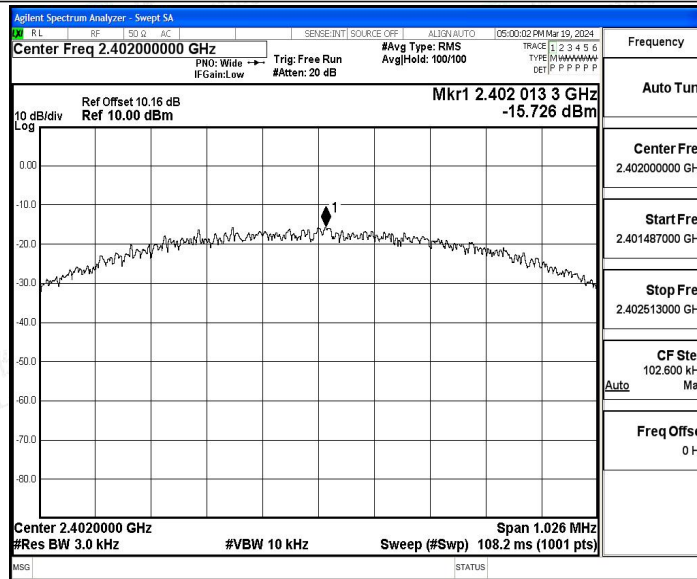
TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.73	≤8.00	PASS
		2440	-15.88	≤8.00	PASS
		2480	-17.44	≤8.00	PASS



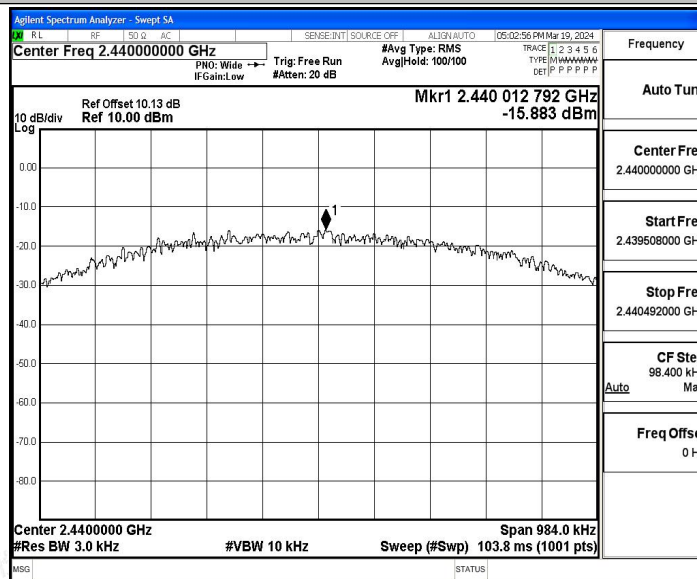


Test Graphs

BLE_1M_Ant1_2402

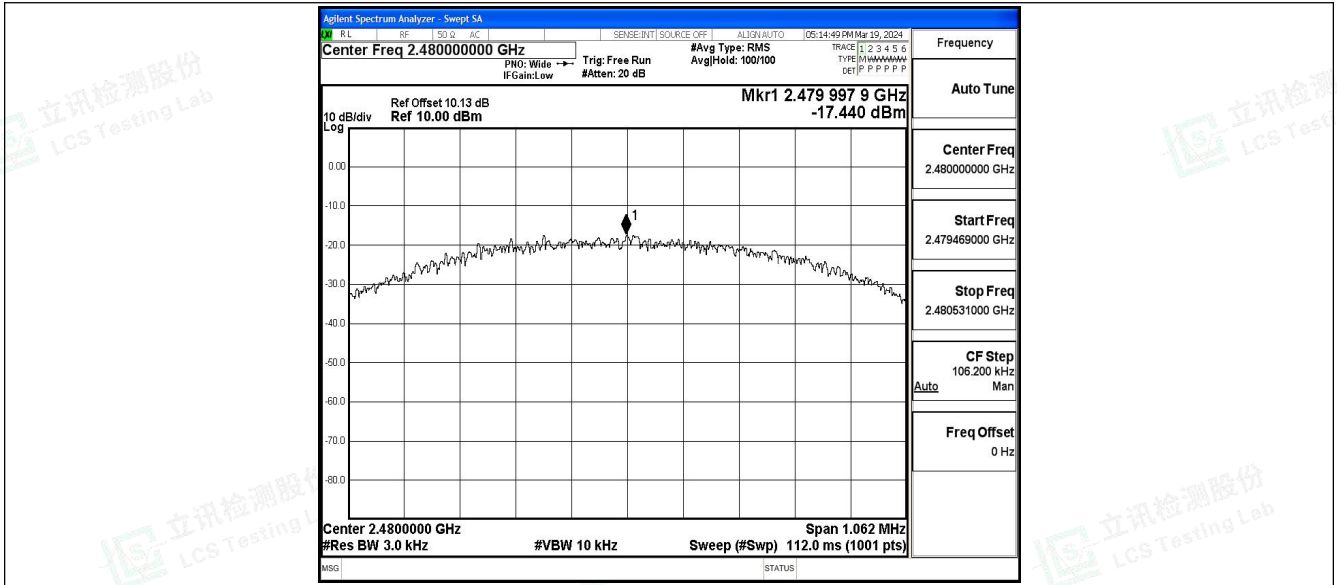


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.4 Band edge measurements

Test Result

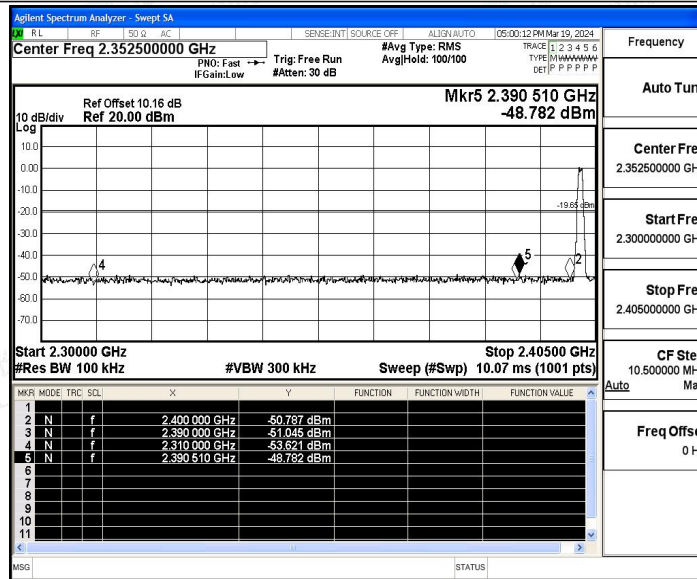
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.35	-48.78	≤-19.65	PASS
		High	2480	-1.49	-48.4	≤-21.49	PASS



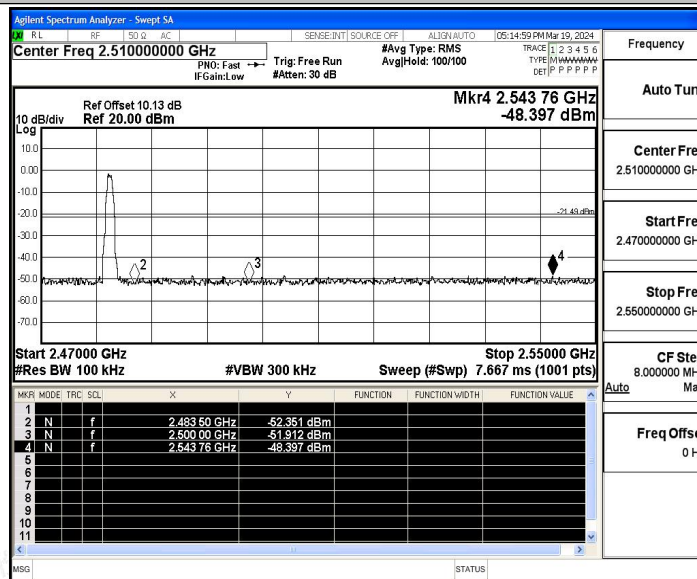


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480





A.5 Conducted Spurious Emission

Test Result

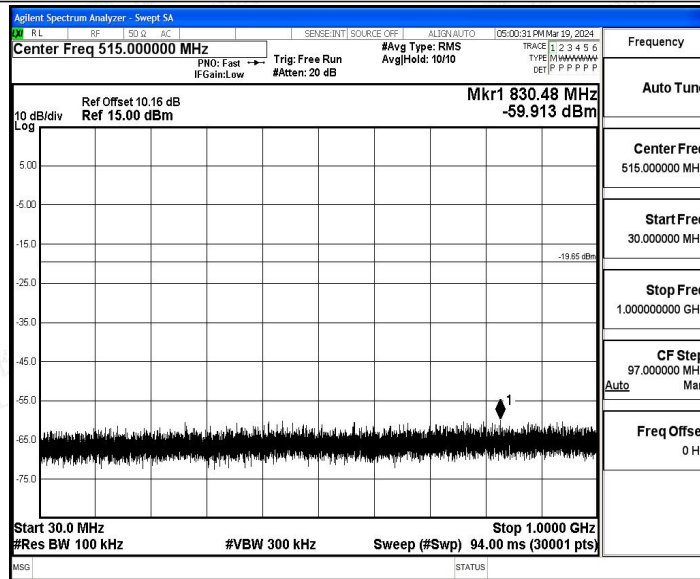
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~1000	0.35	-59.91	≤-19.65	PASS
			1000~26500	0.35	-47.33	≤-19.65	PASS
		2440	30~1000	0.10	-59.01	≤-19.9	PASS
			1000~26500	0.10	-47.73	≤-19.9	PASS
		2480	30~1000	-1.49	-60.02	≤-21.49	PASS
			1000~26500	-1.49	-46.78	≤-21.49	PASS



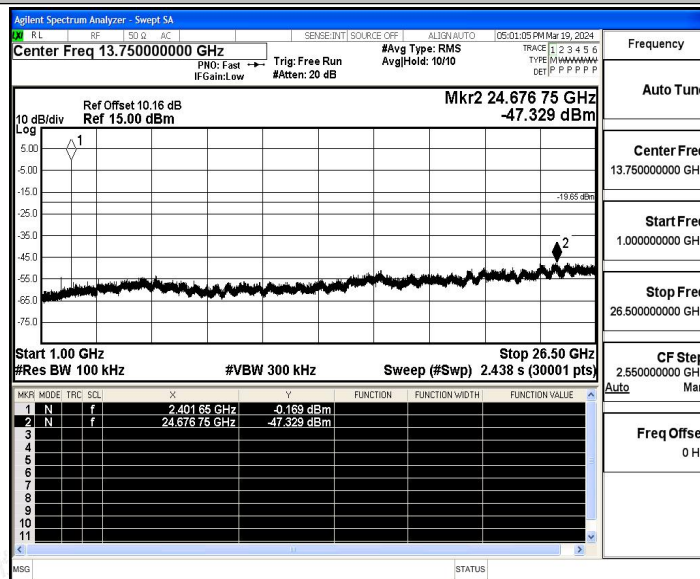


Test Graphs

BLE_1M_Ant1_2402_30~1000

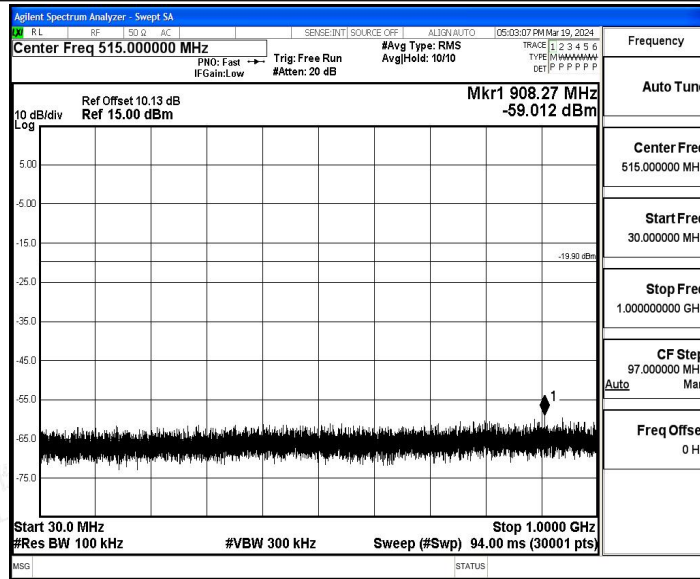


BLE_1M_Ant1_2402_1000~26500

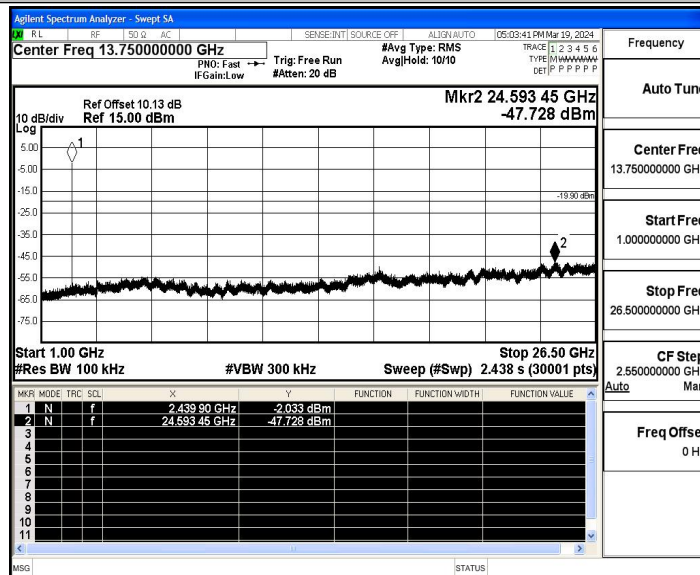


BLE_1M_Ant1_2440_30~1000



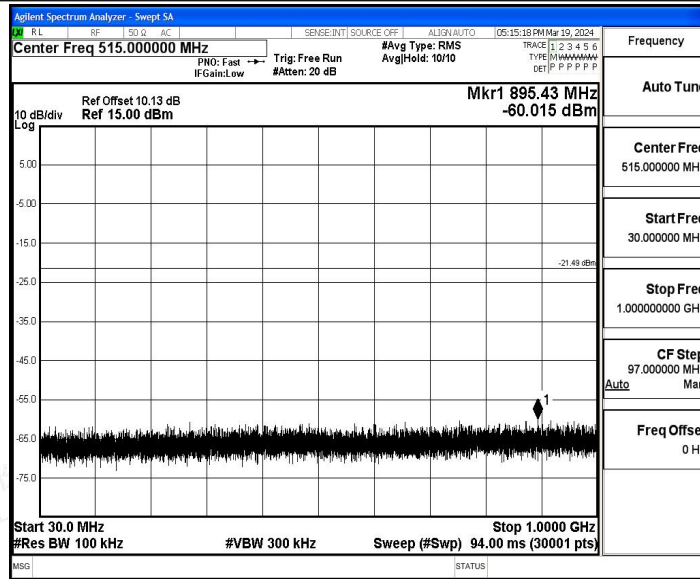


BLE_1M_Ant1_2440_1000~26500

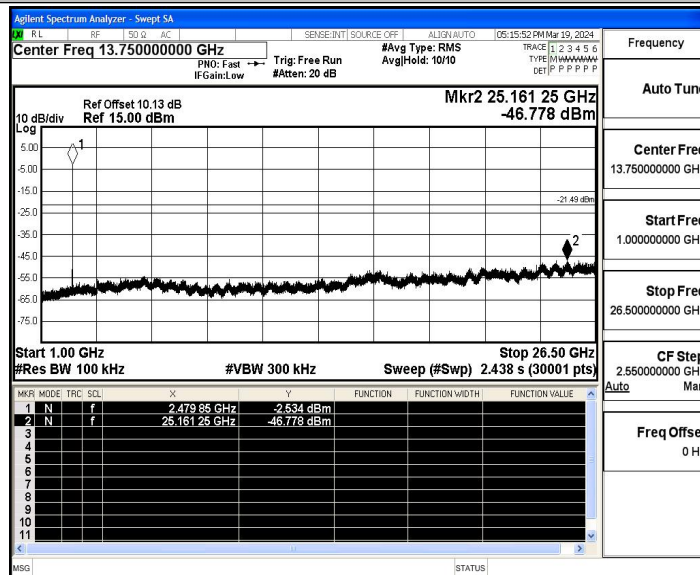


BLE_1M_Ant1_2480_30~1000





BLE_1M_Ant1_2480_1000~26500





Reference level measurement

Test Result

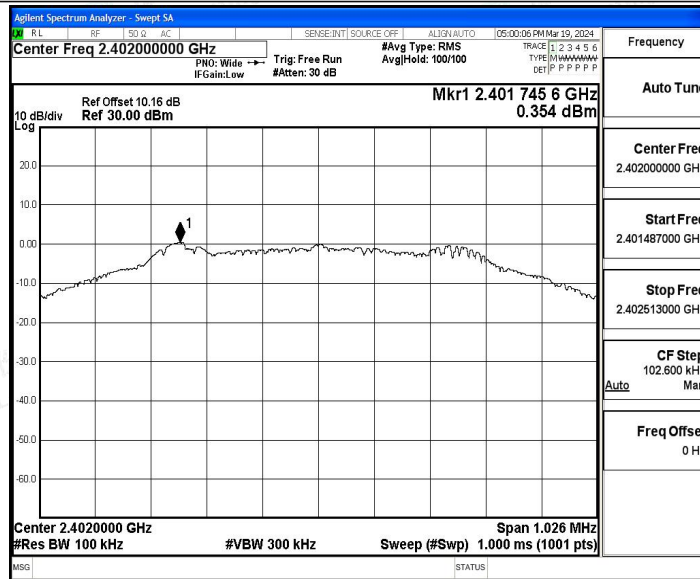
TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2401.75	0.35
		2440	2439.74	0.10
		2480	2479.76	-1.49



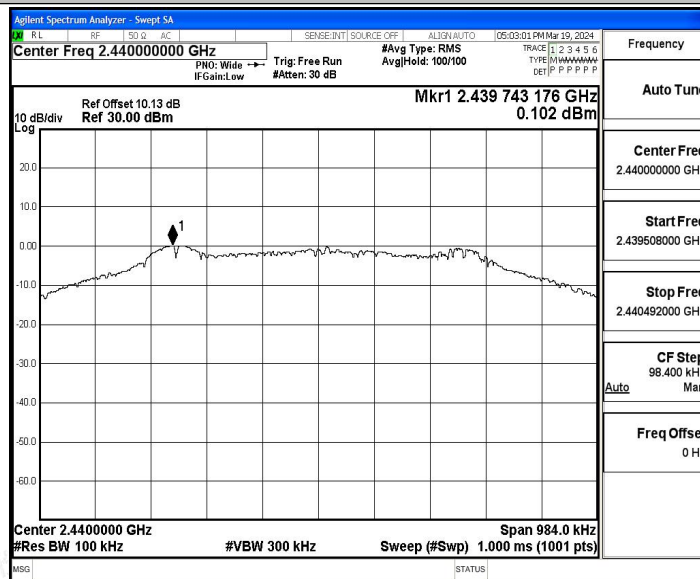


Test Graphs

BLE_1M_Ant1_2402

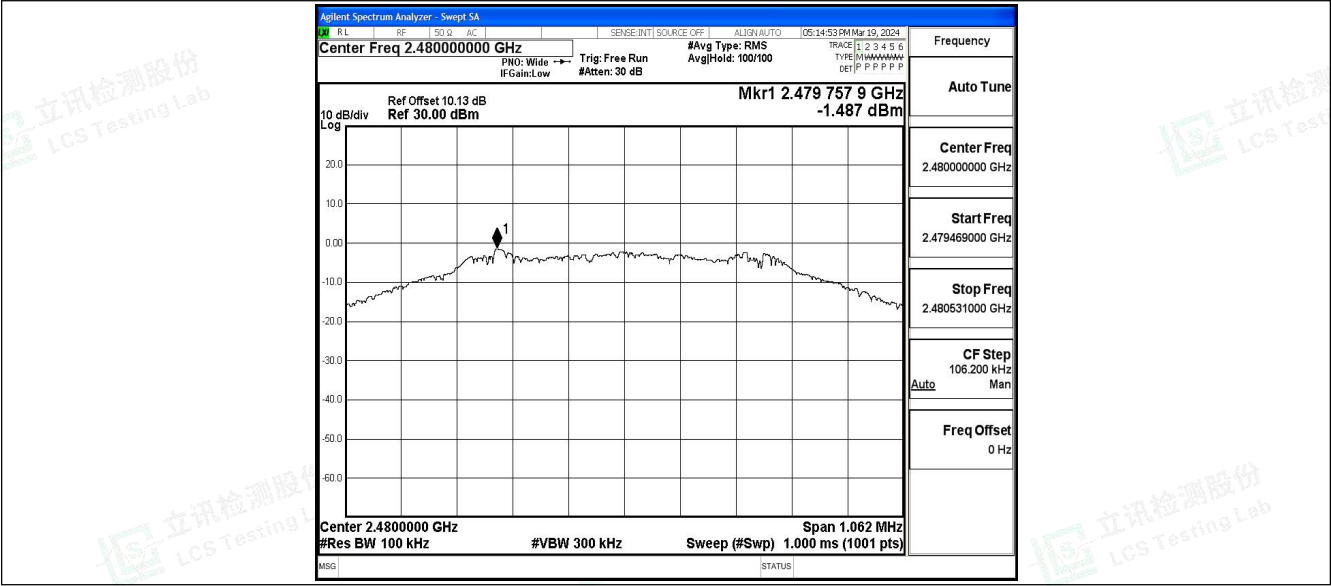


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.6 Duty Cycle

Test Result

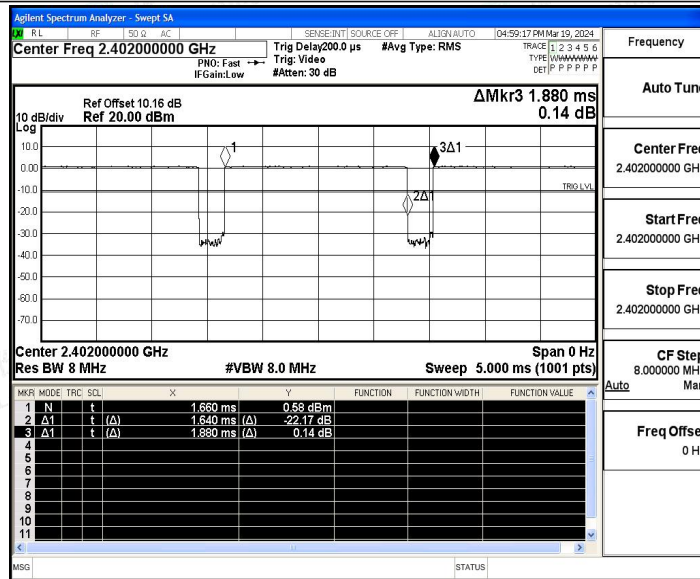
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]	1/T Factor[dB]
BLE_1M	Ant1	2402	1.64	1.88	87.23	0.59	0.61
		2440	1.64	1.88	87.23	0.59	0.61
		2480	1.65	1.88	87.77	0.57	0.61



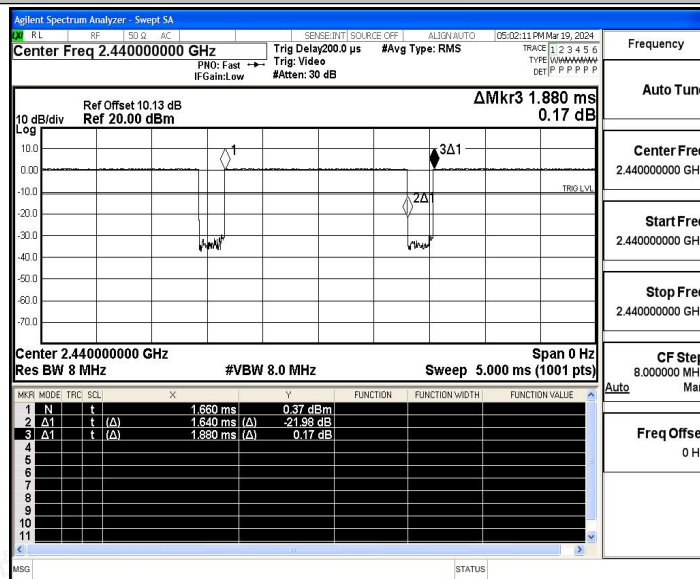


Test Graphs

BLE_1M_Ant1_2402

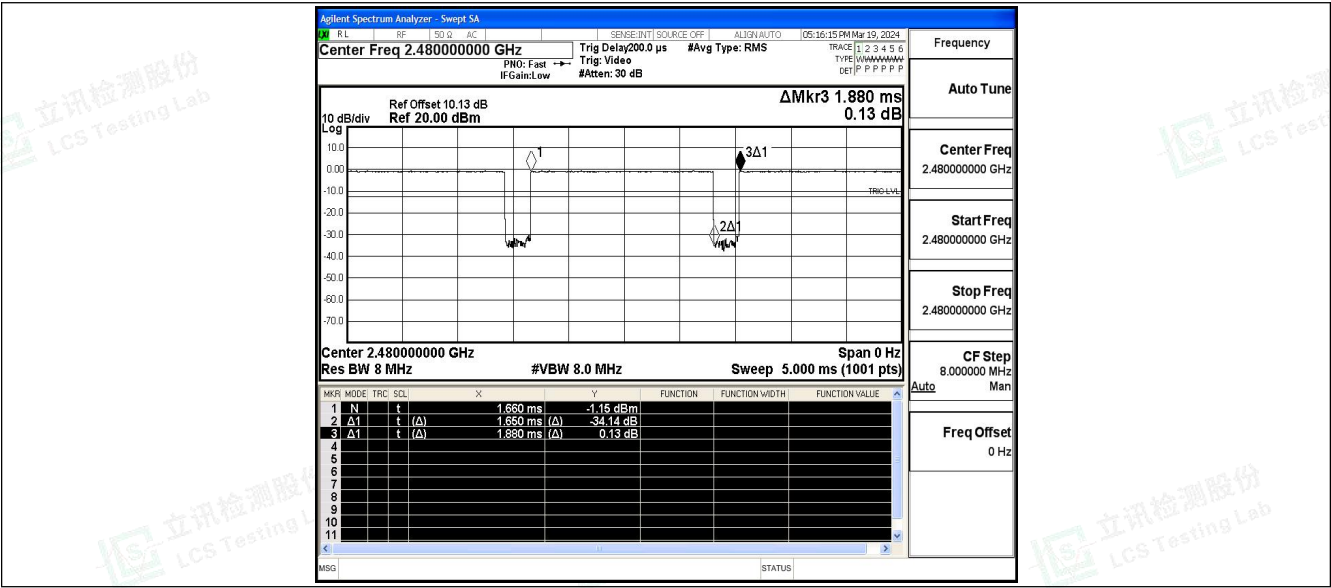


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







A.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-47.85	≤-41.20	47.35	≤54	PASS
				AV	2365.835	-46.38	≤-41.20	48.82	≤54	PASS
				AV	2390.000	-46.93	≤-41.20	48.27	≤54	PASS
				Peak	2310.000	-40.13	≤-21.20	55.07	≤74	PASS
				Peak	2323.835	-37.44	≤-21.20	57.76	≤74	PASS
				Peak	2390.000	-39.96	≤-21.20	55.24	≤74	PASS
		High	2480	AV	2483.500	-47.47	≤-41.20	47.73	≤54	PASS
				AV	2491.120	-46.32	≤-41.20	48.88	≤54	PASS
				AV	2500.000	-47.42	≤-41.20	47.78	≤54	PASS
				Peak	2483.500	-38.61	≤-21.20	56.59	≤74	PASS
				Peak	2485.600	-36.8	≤-21.20	58.40	≤74	PASS
				Peak	2500.000	-39.31	≤-21.20	55.89	≤74	PASS

Note:

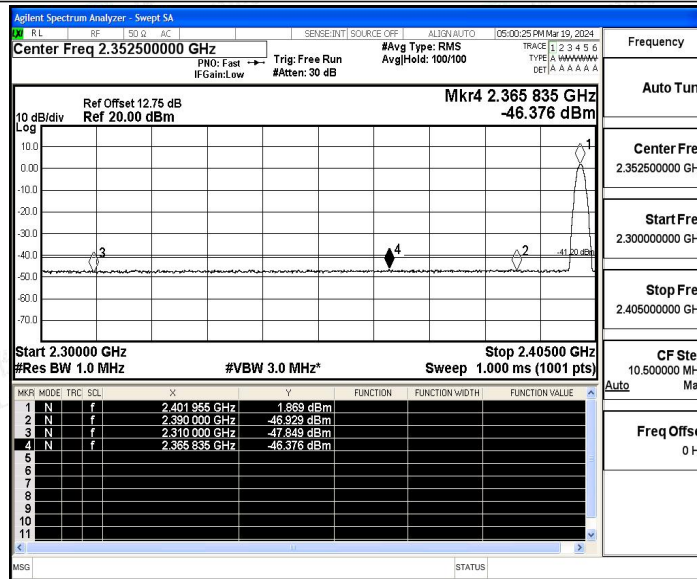
1. The Antenna Gain is compensated in the graph. The Correction Factor is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



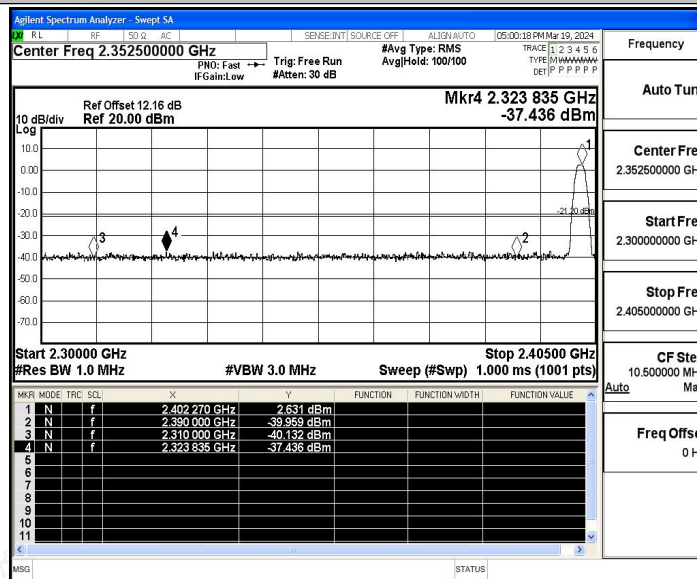


Test Graphs

BLE_1M_Ant1_Low_2402_AV

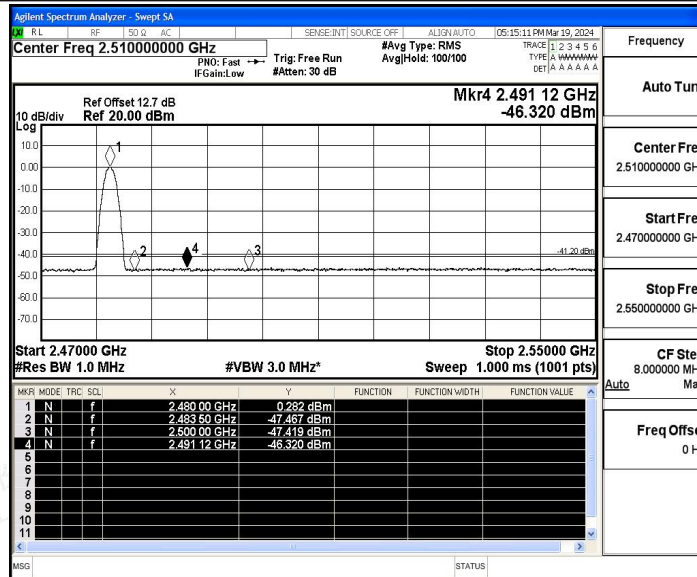


BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV





BLE_1M_Ant1_High_2480_Peak

