



Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: megaphone

Test Model: PR-0118

Environmental Conditions

Temperature:	23.9° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan





B.1 DTS Bandwidth

Test Result

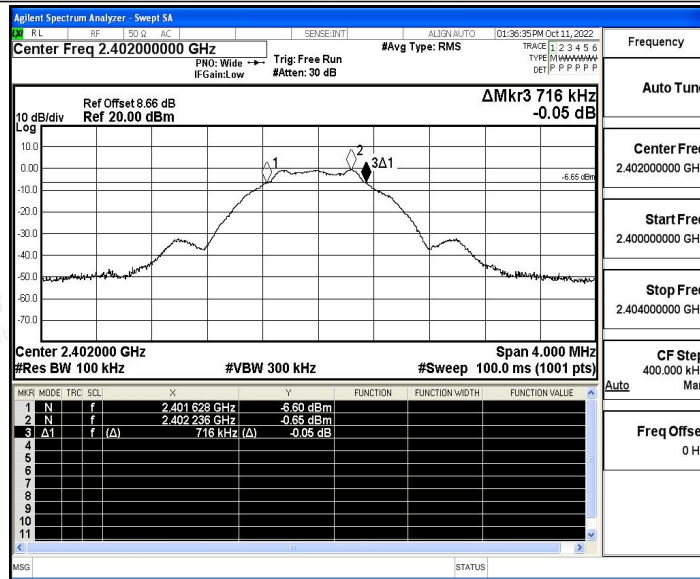
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.716	2401.628	2402.344	0.5	PASS
		2440	0.712	2439.628	2440.340	0.5	PASS
		2480	0.712	2479.628	2480.340	0.5	PASS



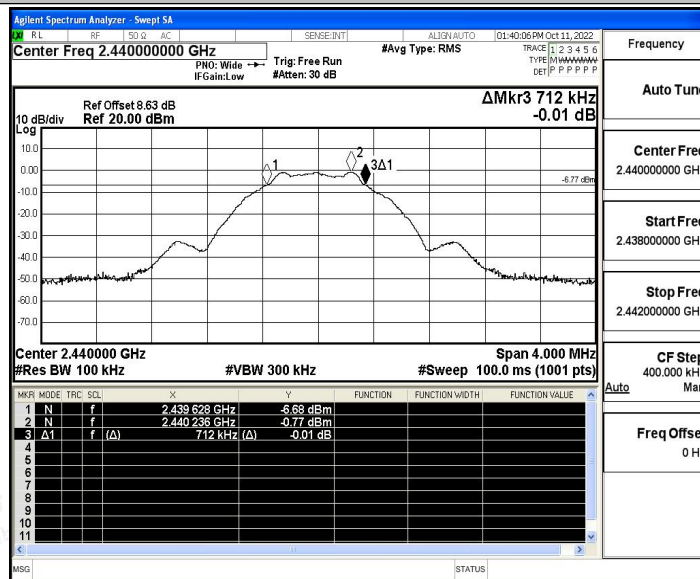


Test Graphs

BLE_1M_Ant1_2402

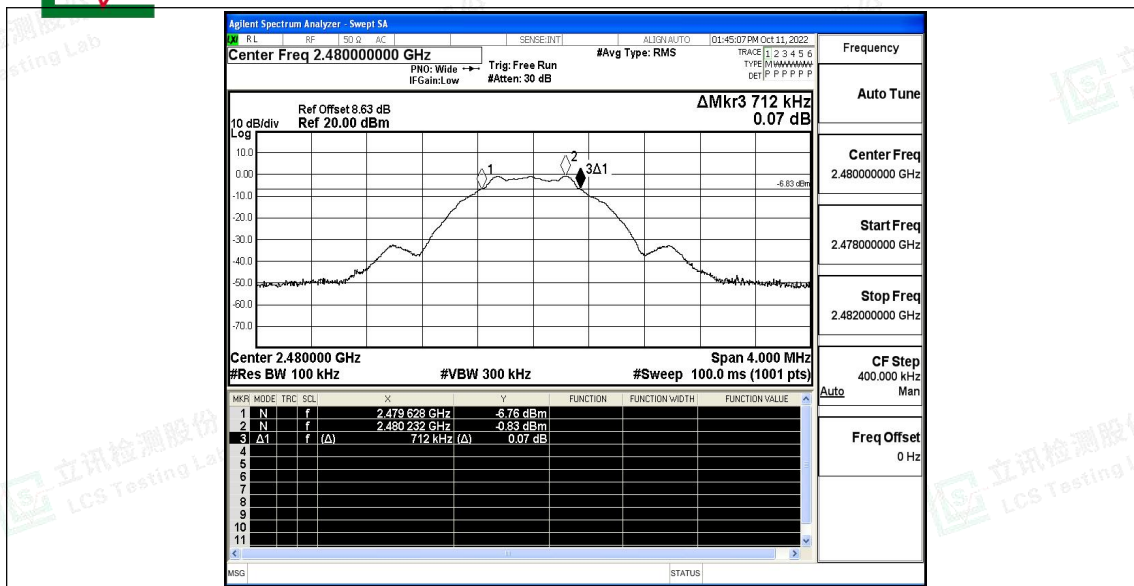


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.2 Maximum conducted output power

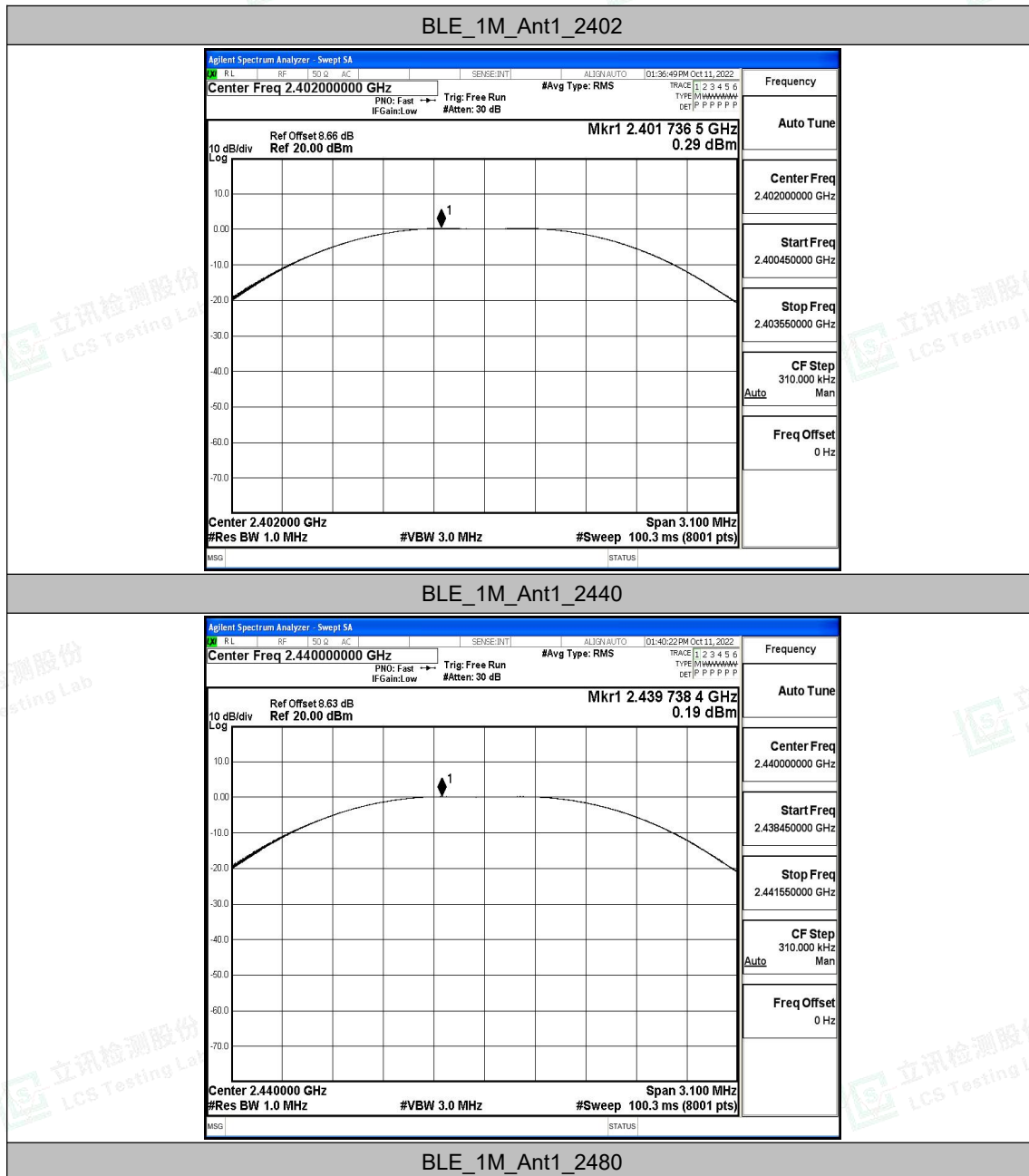
Test Result

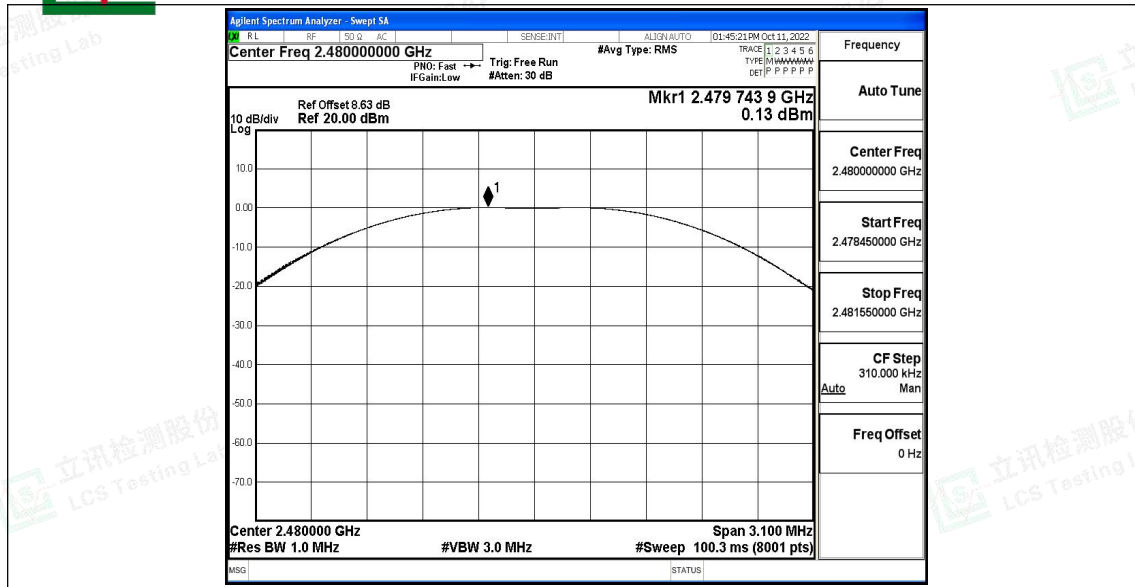
TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.29	≤30	PASS
		2440	0.19	≤30	PASS
		2480	0.13	≤30	PASS





Test Graphs







B.3 Maximum power spectral density

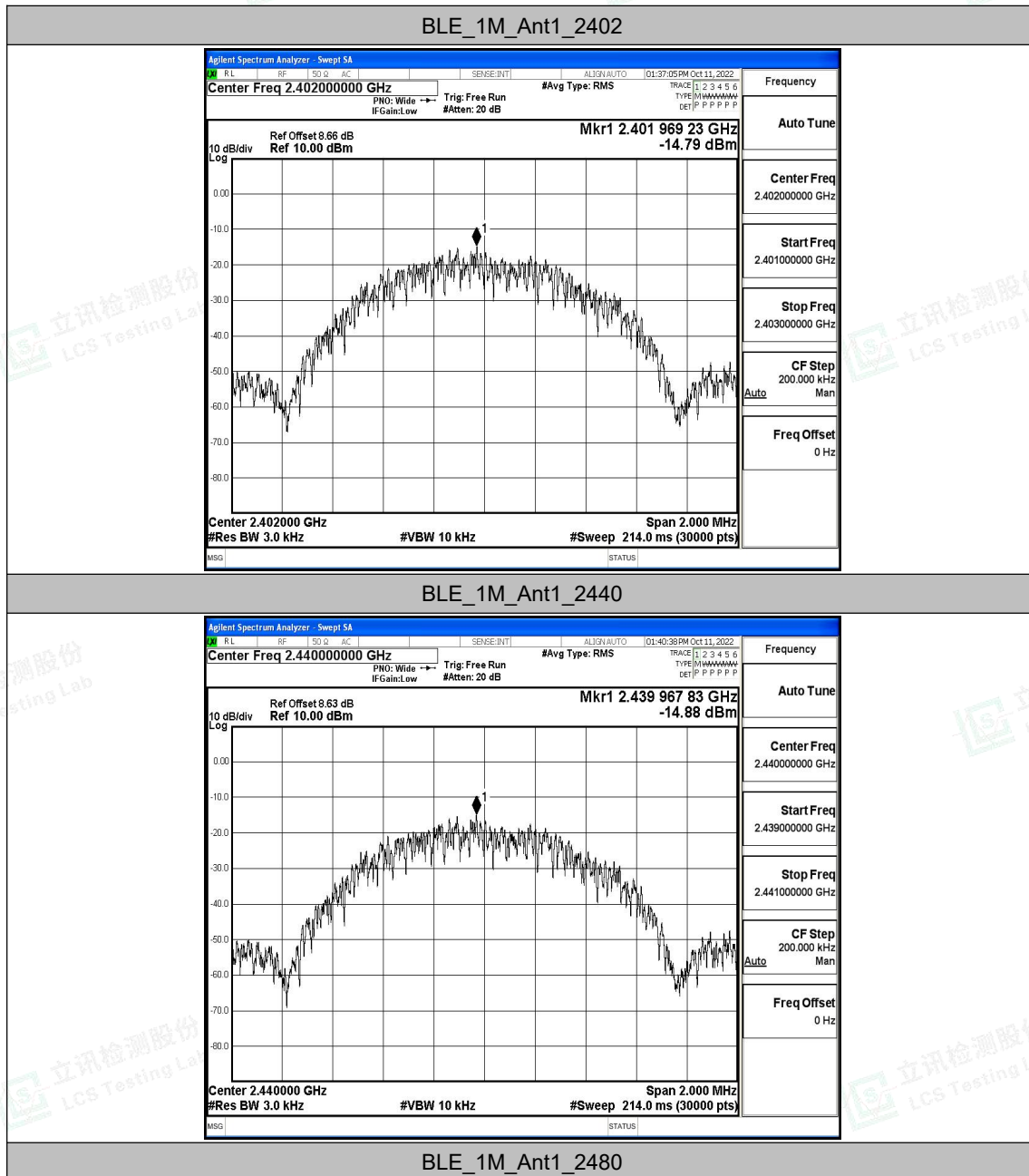
Test Result

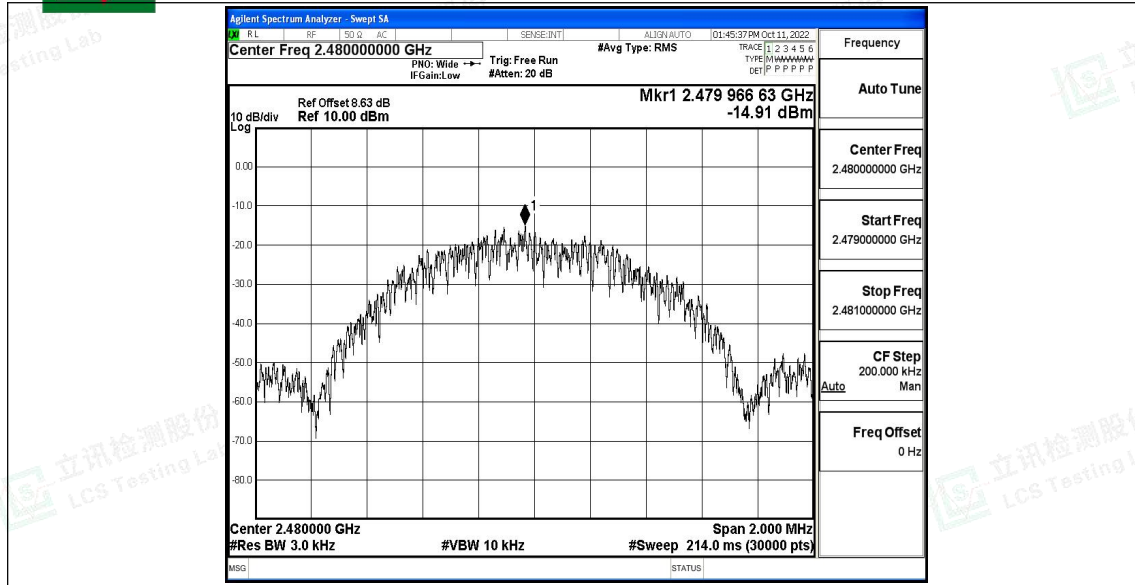
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.79	≤8.00	PASS
		2440	-14.88	≤8.00	PASS
		2480	-14.91	≤8.00	PASS





Test Graphs







B.4 Band edge measurements

Test Result

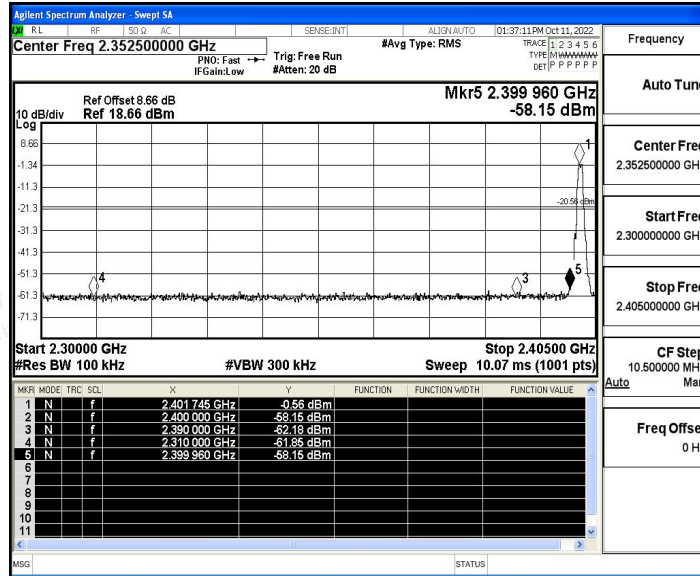
TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.56	-58.15	≤-20.56	PASS
		High	2480	-0.93	-57.12	≤-20.93	PASS



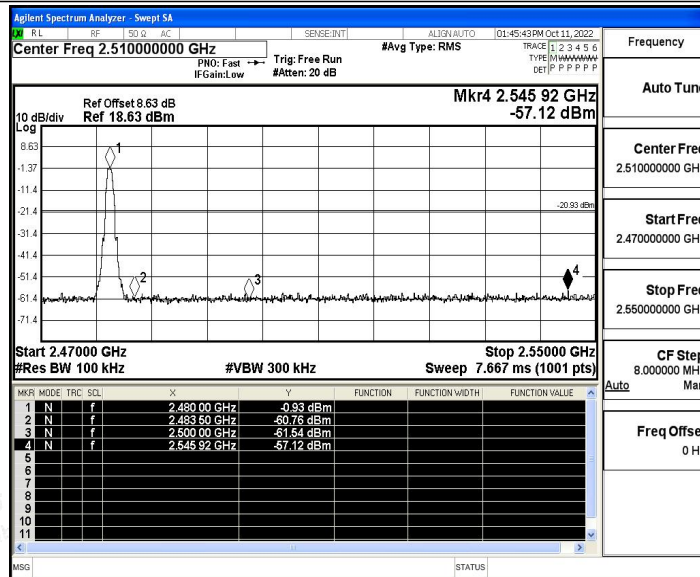


Test Graphs

BLE_1M_Ant1_Low_2402



BLE_1M_Ant1_High_2480



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B.5 Conducted Spurious Emission

Test Result

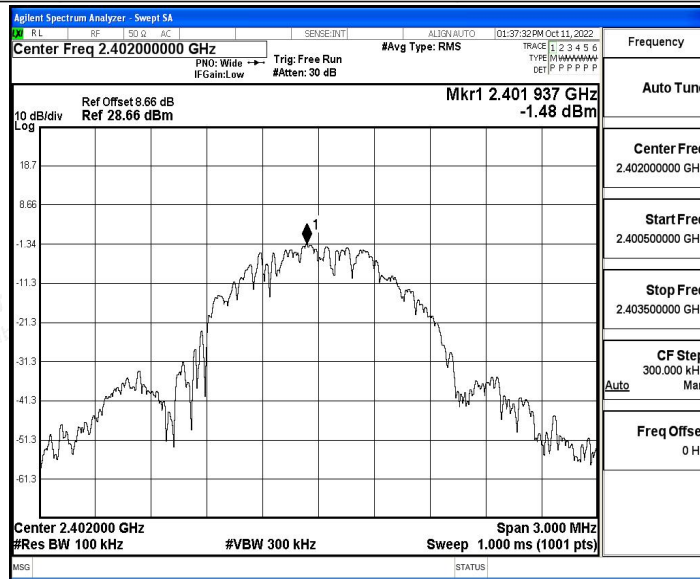
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.48	-1.48	---	PASS
			30~1000	-1.48	-60.22	≤-21.48	PASS
			1000~26500	-1.48	-46.03	≤-21.48	PASS
		2440	Reference	-1.45	-1.45	---	PASS
			30~1000	-1.45	-60.33	≤-21.45	PASS
			1000~26500	-1.45	-46	≤-21.45	PASS
		2480	Reference	-1.02	-1.02	---	PASS
			30~1000	-1.02	-60.63	≤-21.02	PASS
			1000~26500	-1.02	-45.61	≤-21.02	PASS



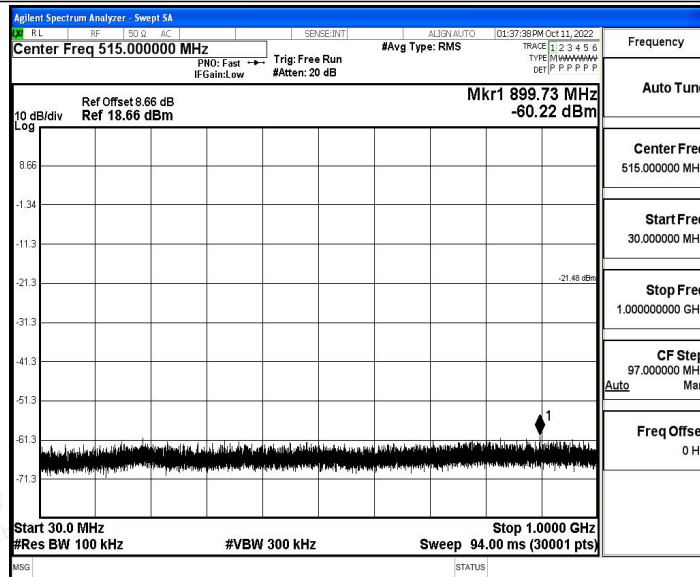


Test Graphs

BLE_1M_Ant1_2402_0~Reference

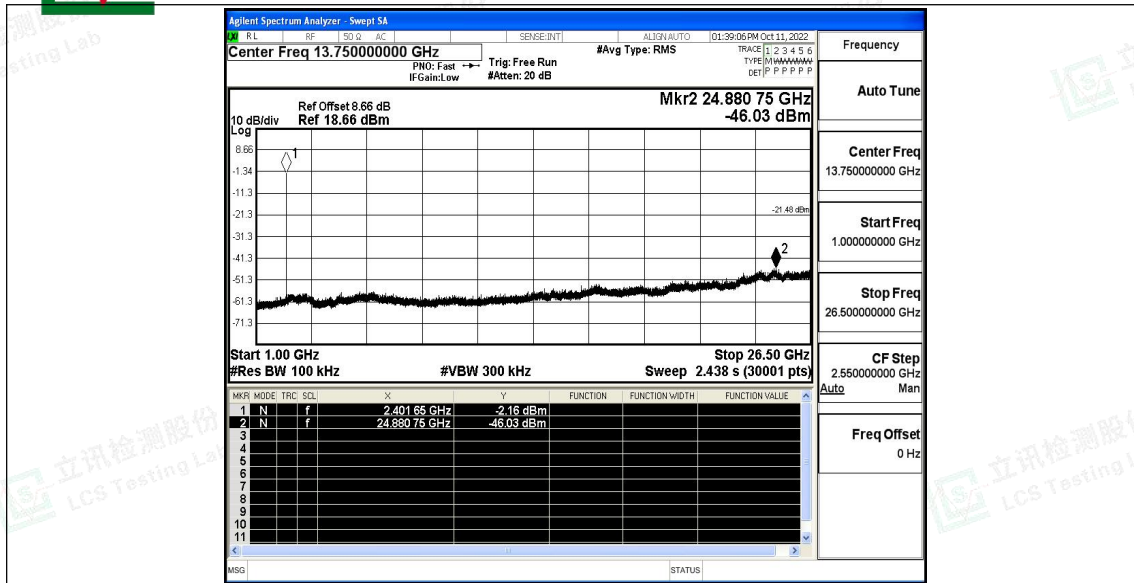


BLE_1M_Ant1_2402_30~1000

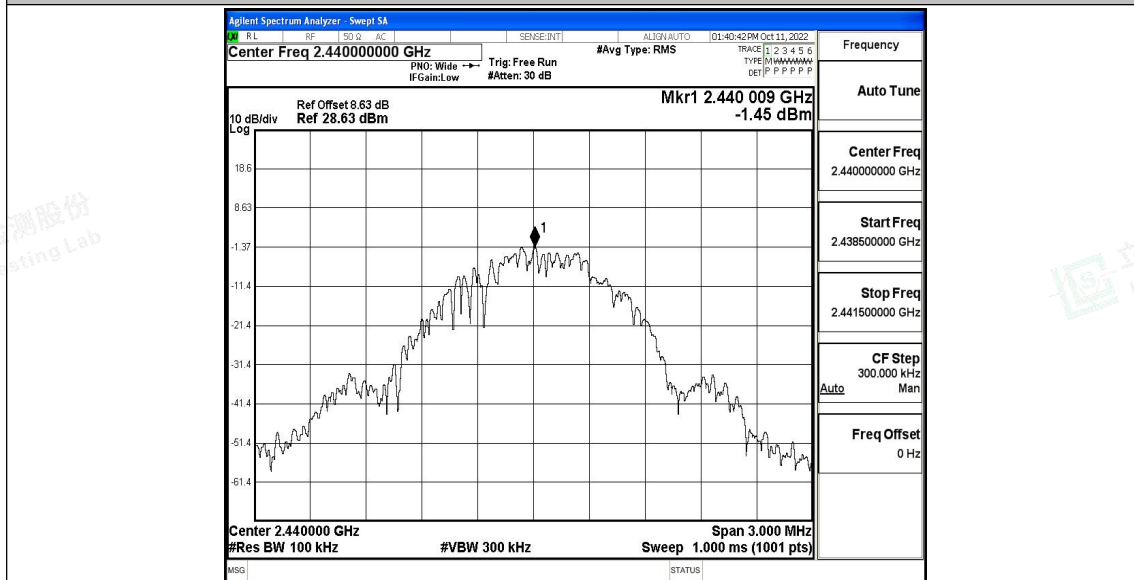


BLE_1M_Ant1_2402_1000~26500





BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

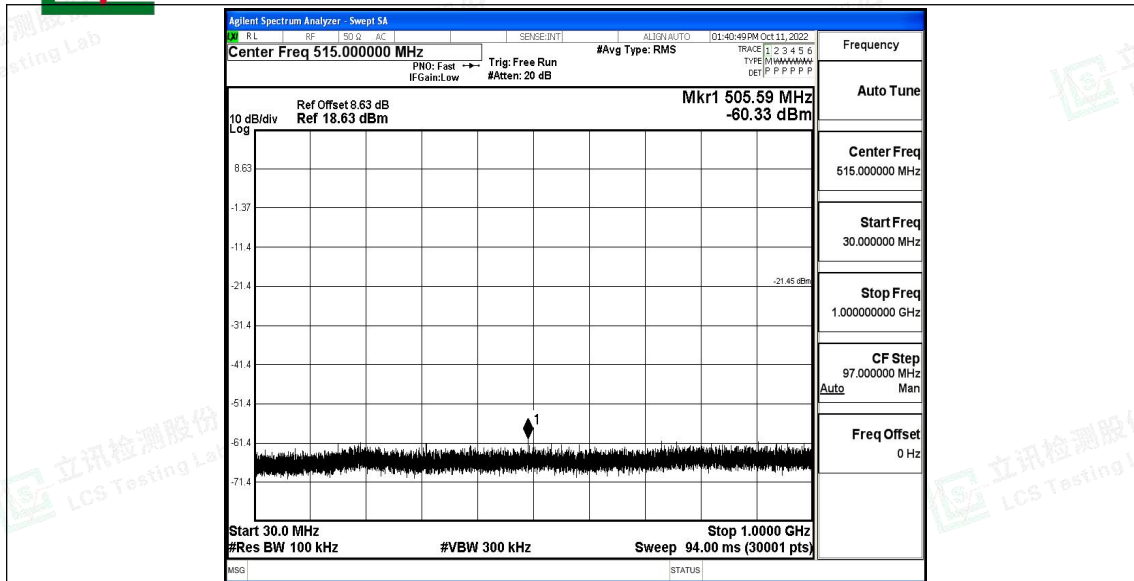


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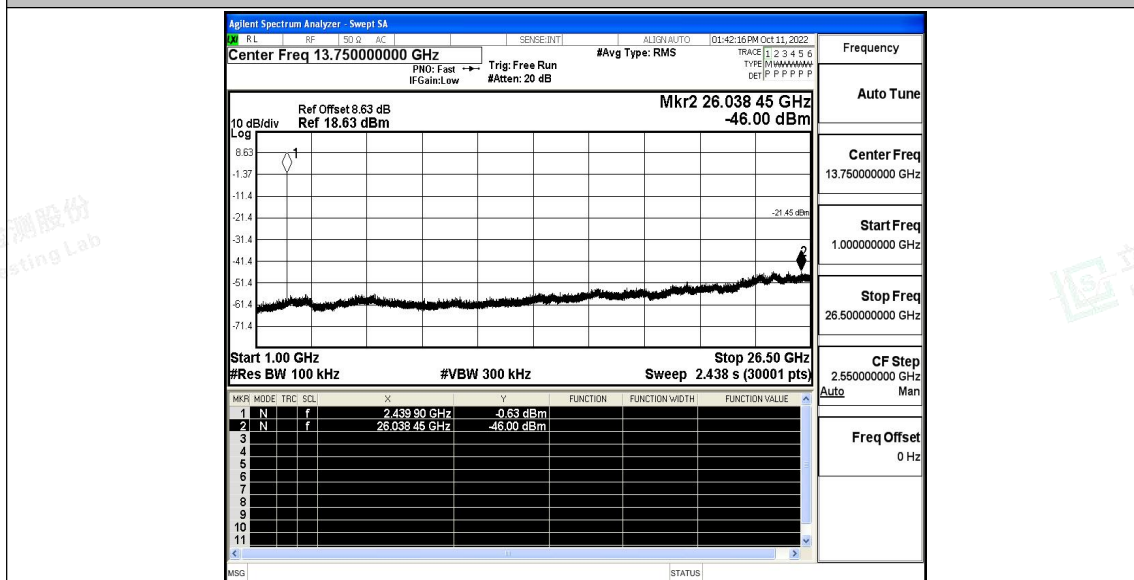
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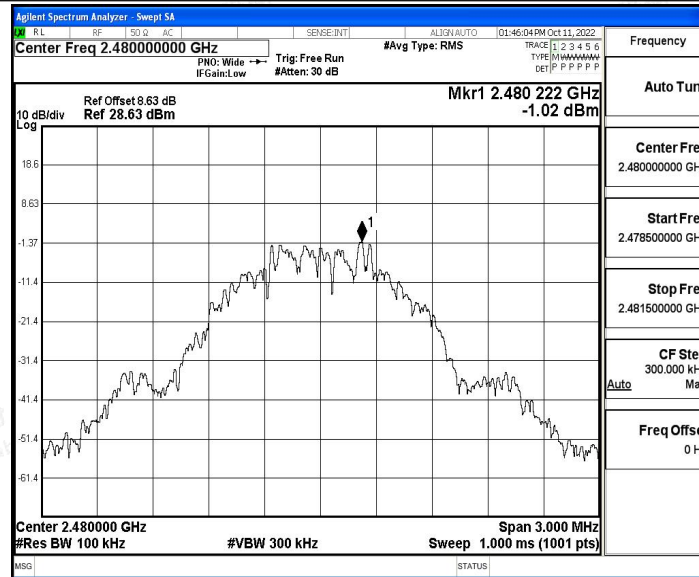


BLE_1M_Ant1_2440_1000~26500

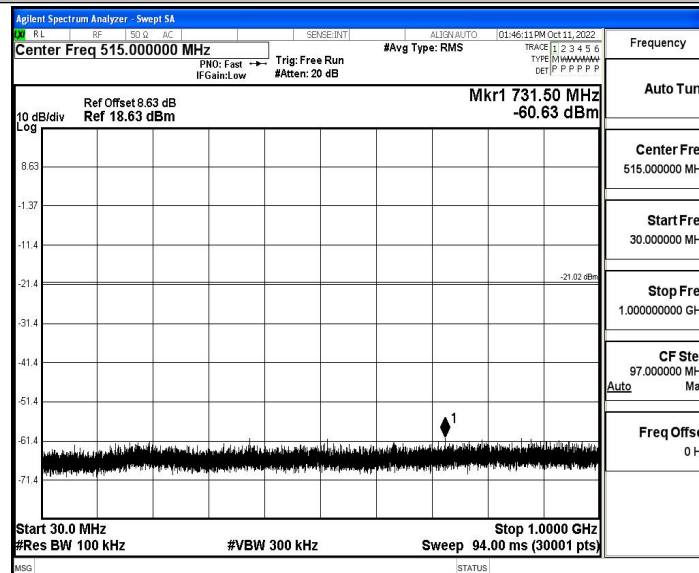


BLE_1M_Ant1_2480_0~Reference



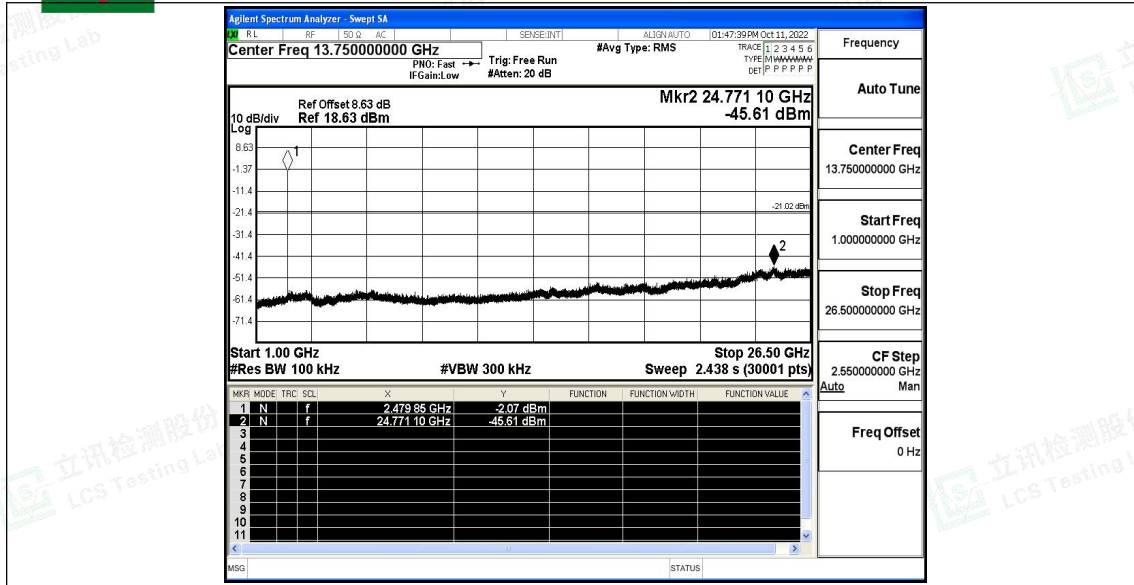


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500







B.6 Duty Cycle

Test Result

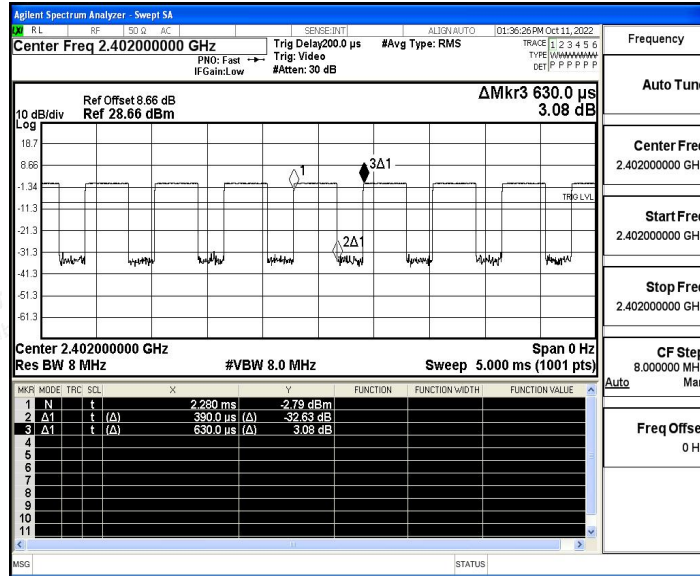
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.63	0.6190	61.90	2.08	2.56	---	---
		2440	0.38	0.62	0.6129	61.29	2.13	2.63	---	---
		2480	0.39	0.63	0.6190	61.90	2.08	2.56	---	---



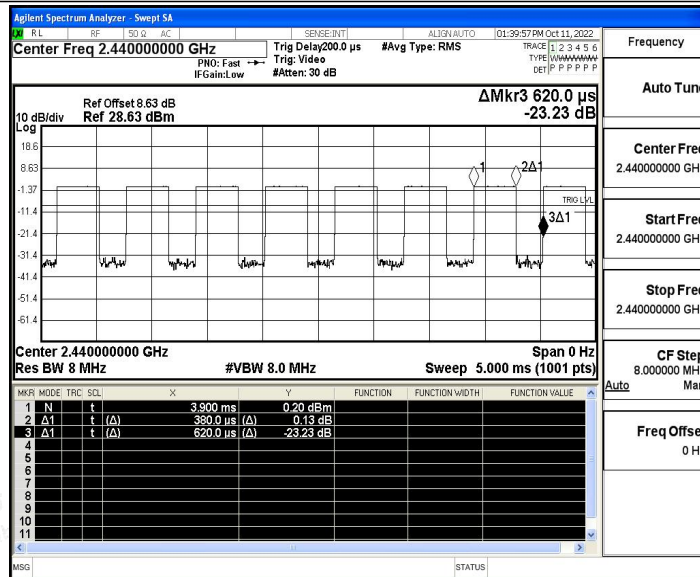


Test Graphs

BLE_1M_Ant1_2402

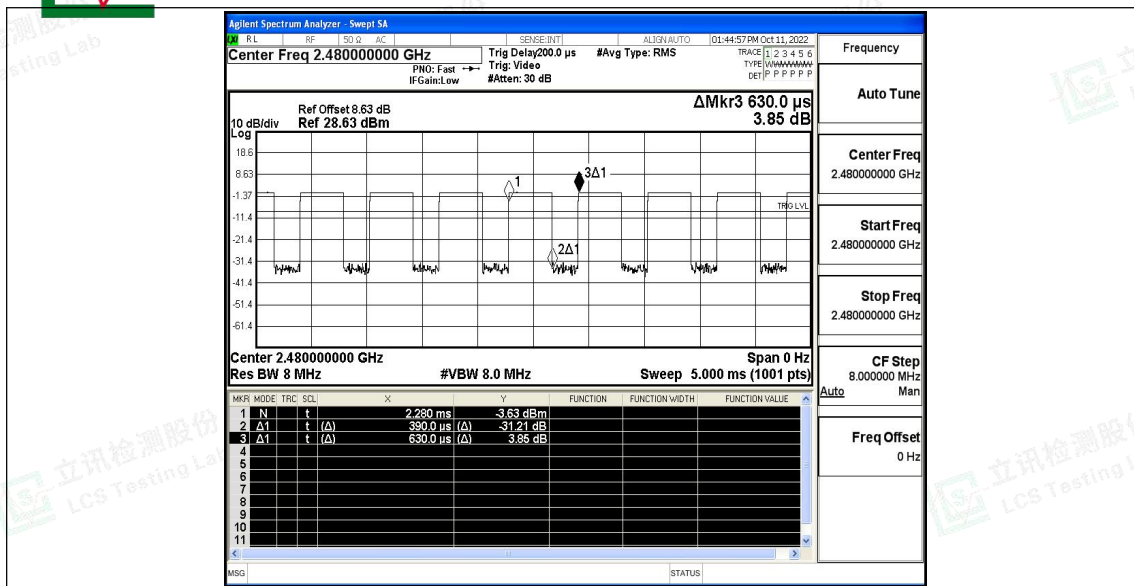


BLE_1M_Ant1_2440



BLE_1M_Ant1_2480







B.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	-57.26	≤-41.20	37.94	≤54	PASS
				AV	2364.050	-56.56	≤-41.20	38.64	≤54	PASS
				AV	2390.000	-56.87	≤-41.20	38.33	≤54	PASS
				Peak	2310.000	-50.14	≤-21.20	45.06	≤74	PASS
				Peak	2389.460	-47.92	≤-21.20	47.28	≤74	PASS
				Peak	2390.000	-50.38	≤-21.20	44.82	≤74	PASS
		High	2480	AV	2483.500	-53.51	≤-41.20	41.69	≤54	PASS
				AV	2483.520	-53.51	≤-41.20	41.69	≤54	PASS
				AV	2500.000	-56.61	≤-41.20	38.59	≤54	PASS
				Peak	2483.500	-49.52	≤-21.20	45.68	≤74	PASS
				Peak	2494.400	-47.61	≤-21.20	47.59	≤74	PASS
				Peak	2500.000	-49.26	≤-21.20	45.94	≤74	PASS

Note:

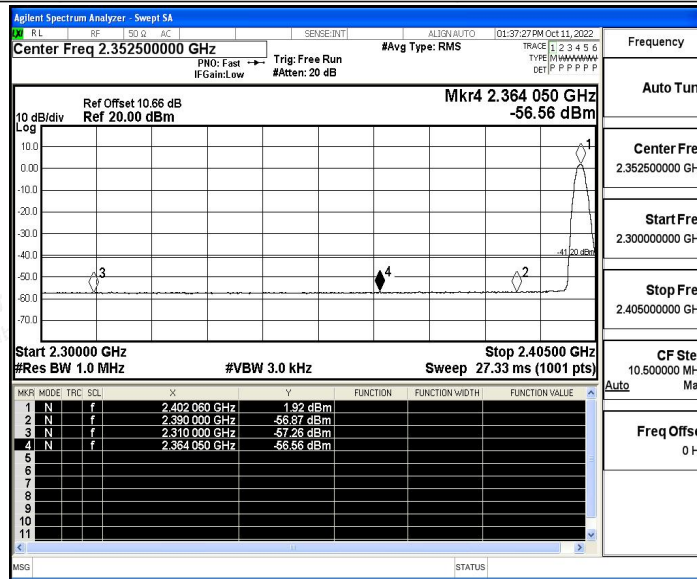
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



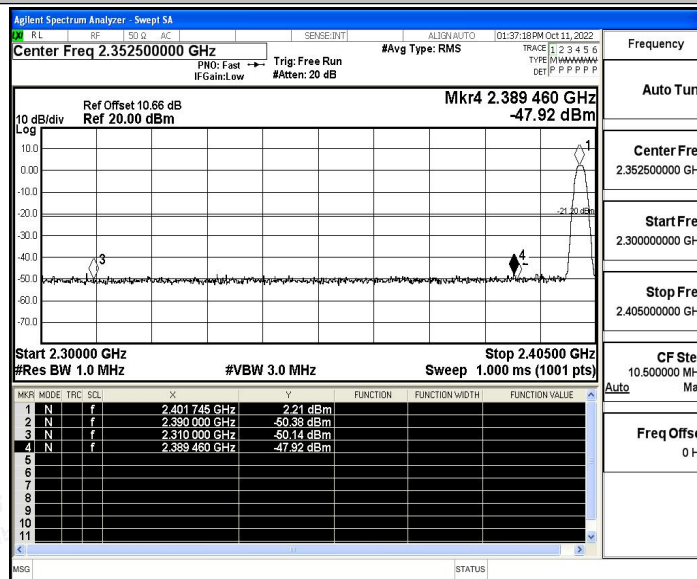


Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV



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