



Appendix A

RF Test Data for BLE (Conducted Measurement)

Product Name: Intelligent walking machine

Test Model: BA02

Environmental Conditions

Temperature:	22.3° C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Taylor Hu
Supervised by:	Li Huan





A.1 DTS Bandwidth

Test Result

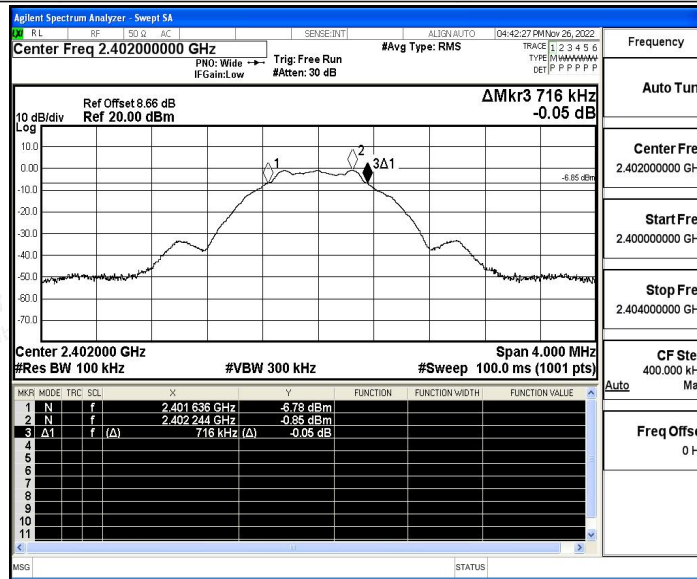
TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.716	2401.636	2402.352	0.5	PASS
		2440	0.712	2439.636	2440.348	0.5	PASS
		2480	0.712	2479.632	2480.344	0.5	PASS



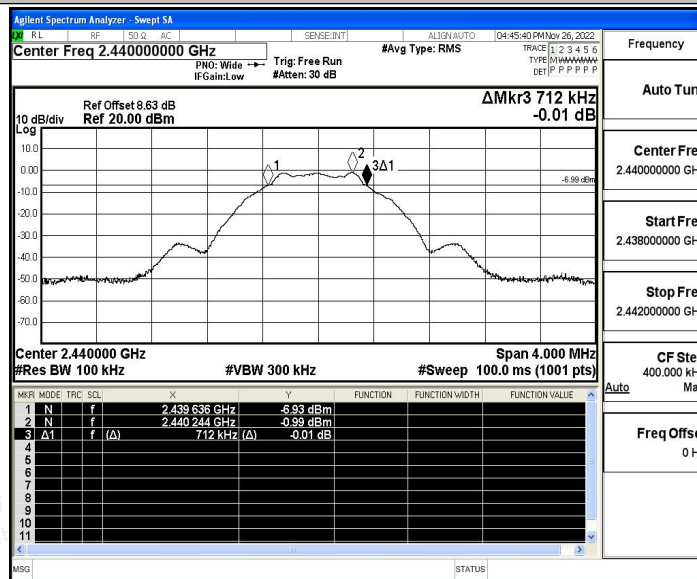


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

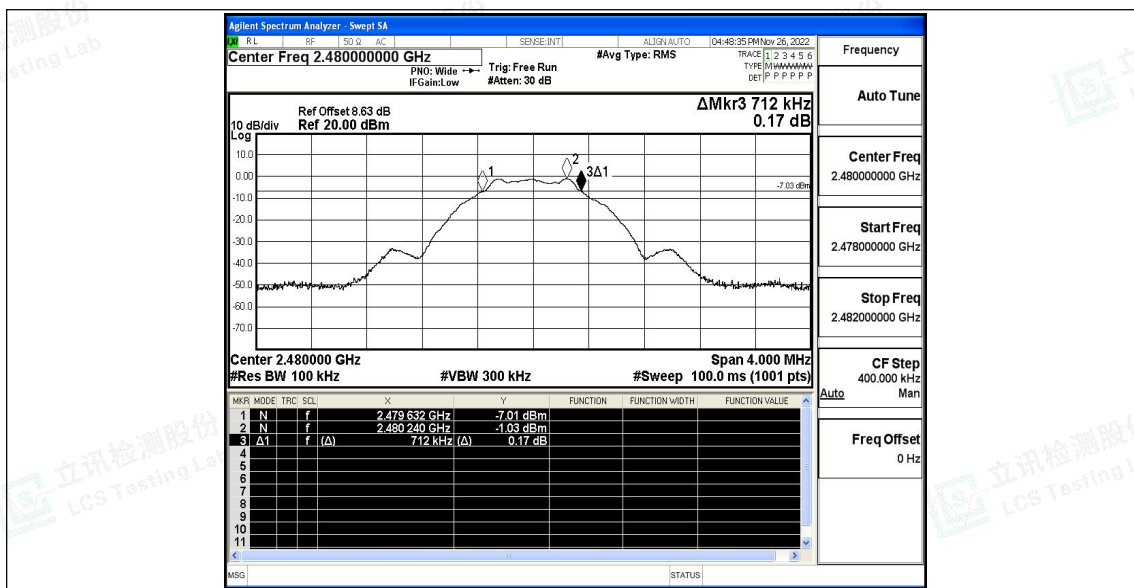


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A.2 Maximum conducted output power

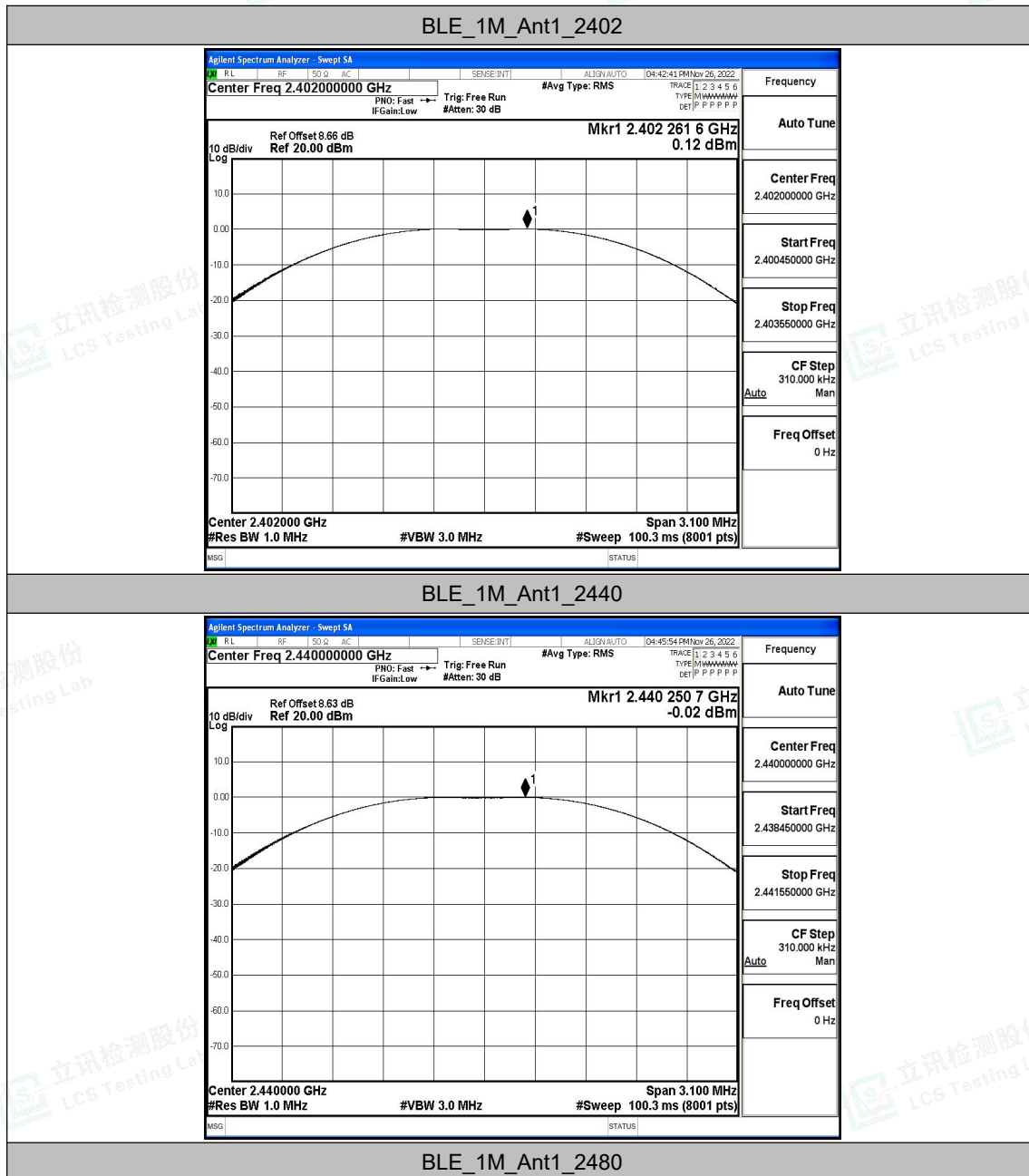
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0.12	≤30	PASS
		2440	-0.02	≤30	PASS
		2480	-0.07	≤30	PASS





Test Graphs

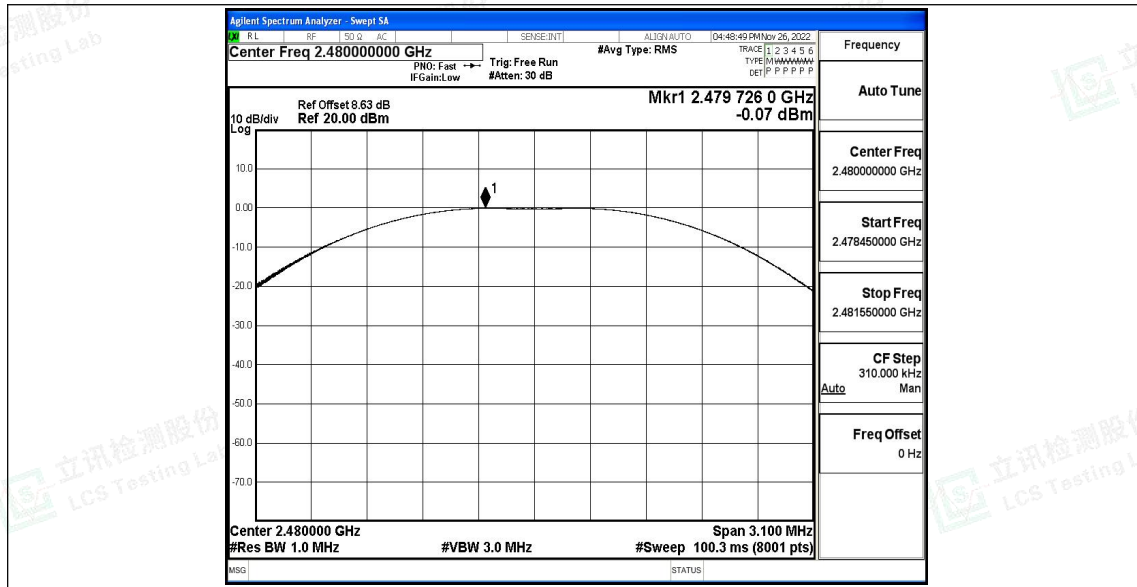


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A.3 Maximum power spectral density

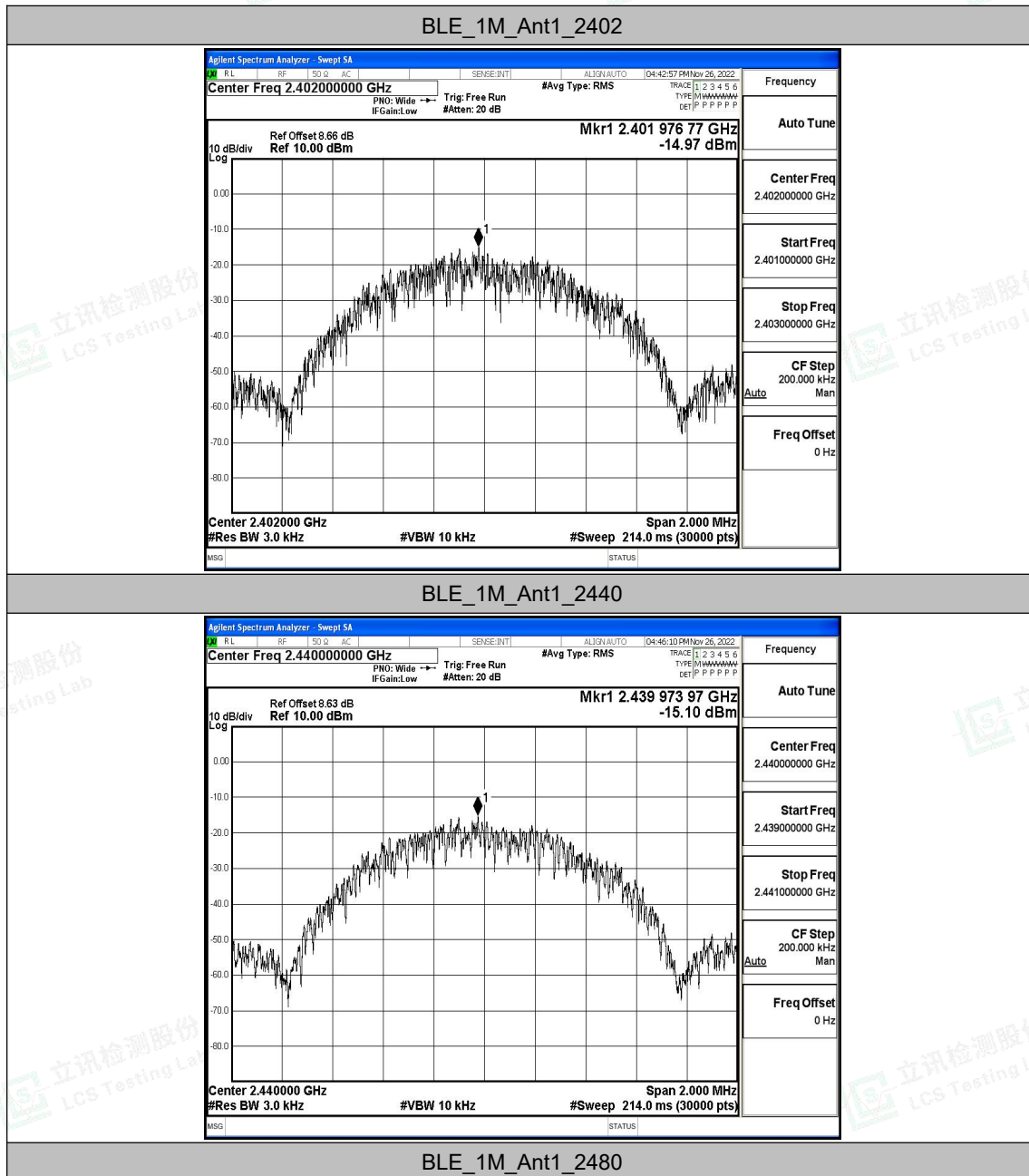
Test Result

TestMode	Antenna	Channel	Result[dBm/3-100kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-14.97	≤8.00	PASS
		2440	-15.1	≤8.00	PASS
		2480	-15.48	≤8.00	PASS





Test Graphs

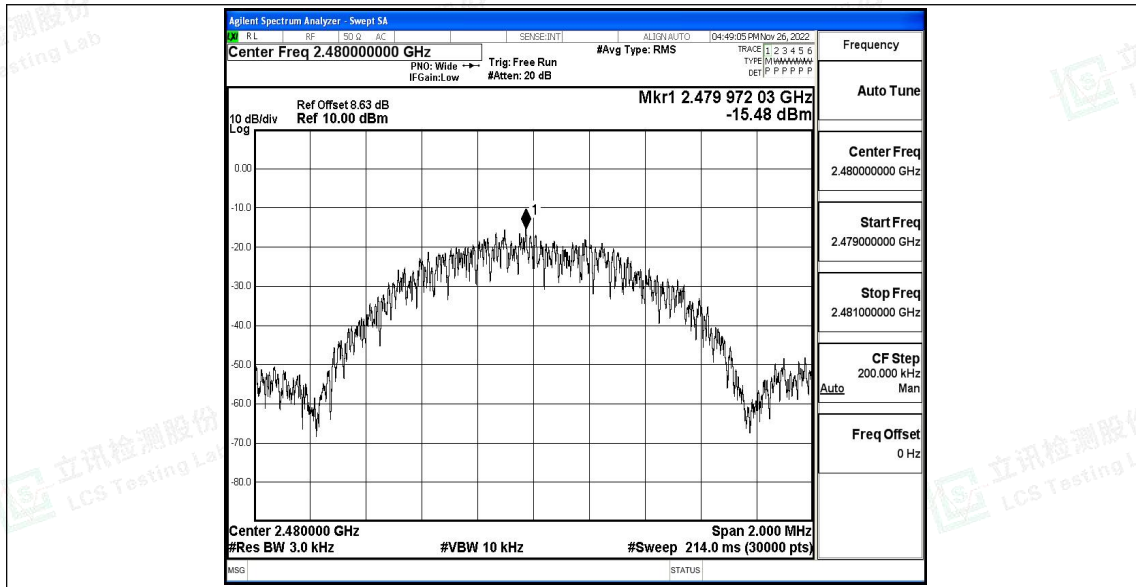


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A.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-0.64	-59.07	≤-20.64	PASS
		High	2480	-0.91	-58.45	≤-20.91	PASS





Test Graphs



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A.5 Conducted Spurious Emission

Test Result

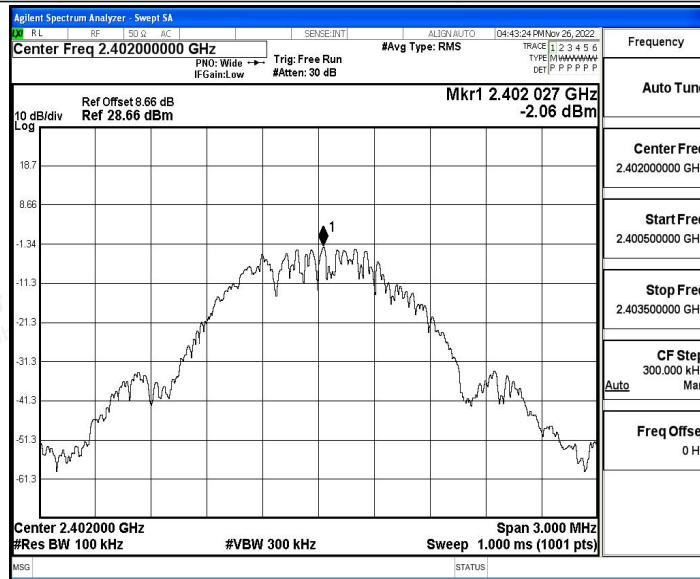
TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-2.06	-2.06	---	PASS
			30~1000	-2.06	-60.7	≤-22.06	PASS
			1000~26500	-2.06	-46.29	≤-22.06	PASS
		2440	Reference	-1.12	-1.12	---	PASS
			30~1000	-1.12	-60.1	≤-21.12	PASS
			1000~26500	-1.12	-46.34	≤-21.12	PASS
		2480	Reference	-1.41	-1.41	---	PASS
			30~1000	-1.41	-60.36	≤-21.41	PASS
			1000~26500	-1.41	-45.85	≤-21.41	PASS



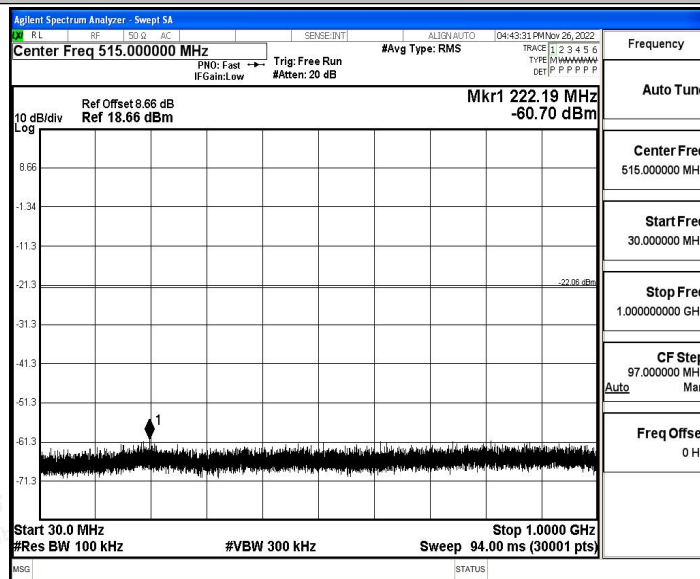


Test Graphs

BLE_1M_Ant1_2402_0~Reference



BLE_1M_Ant1_2402_30~1000



BLE_1M_Ant1_2402_1000~26500

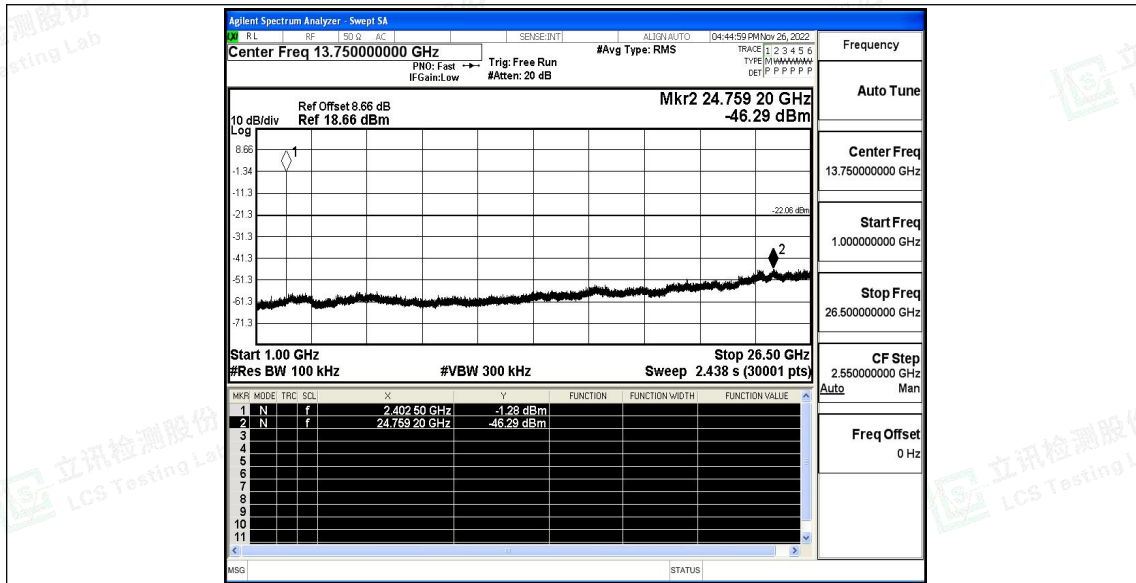


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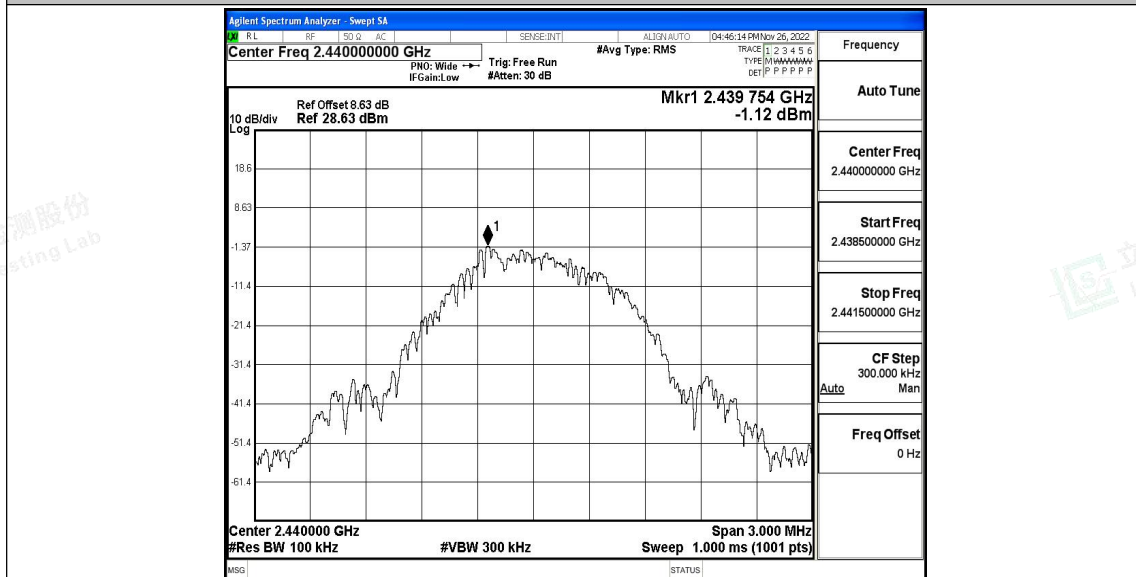
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

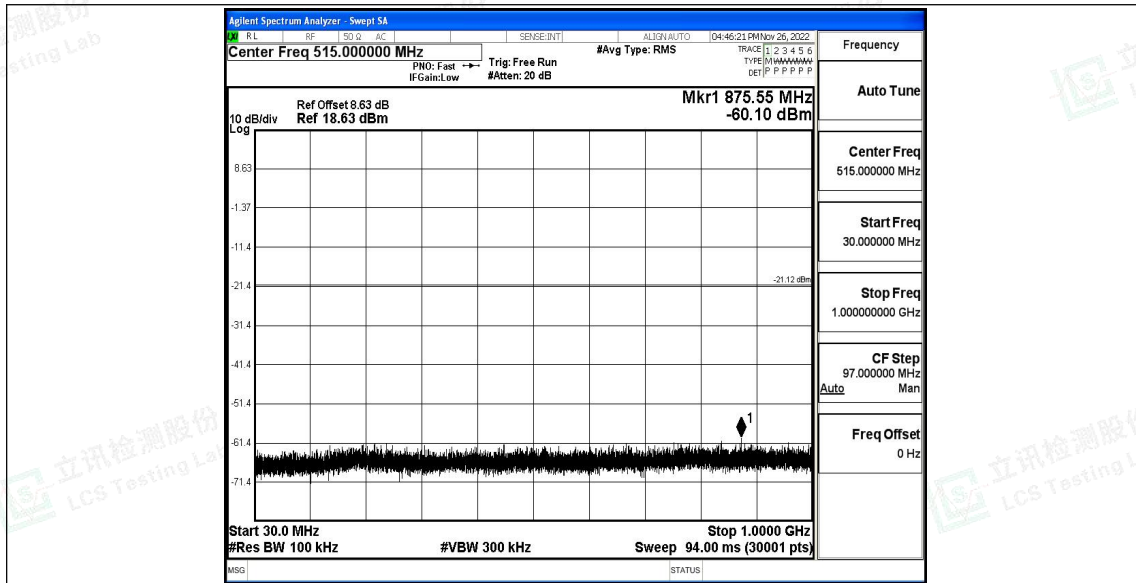


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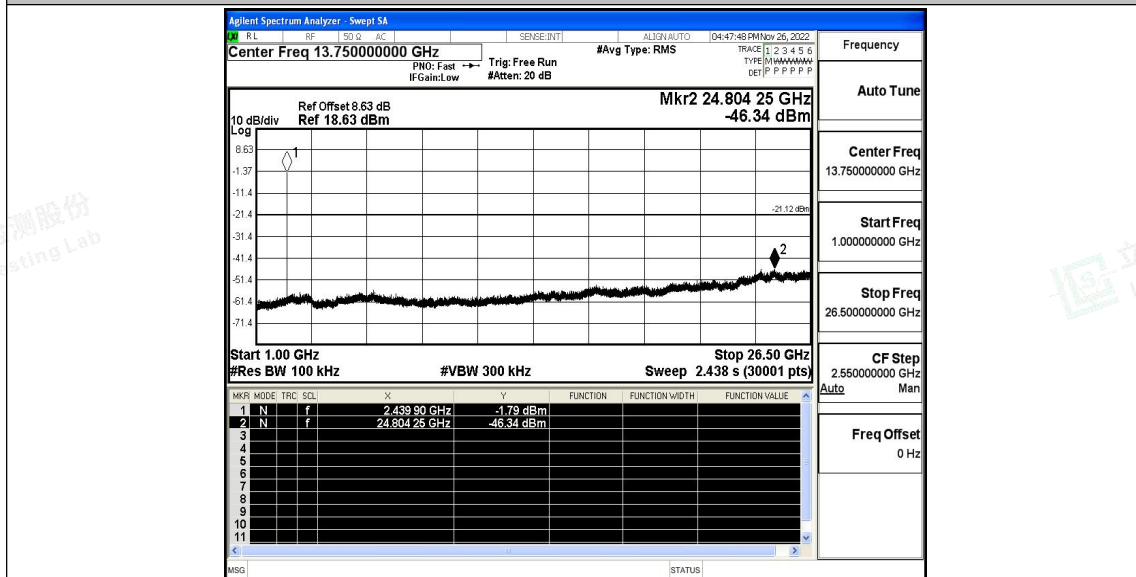
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

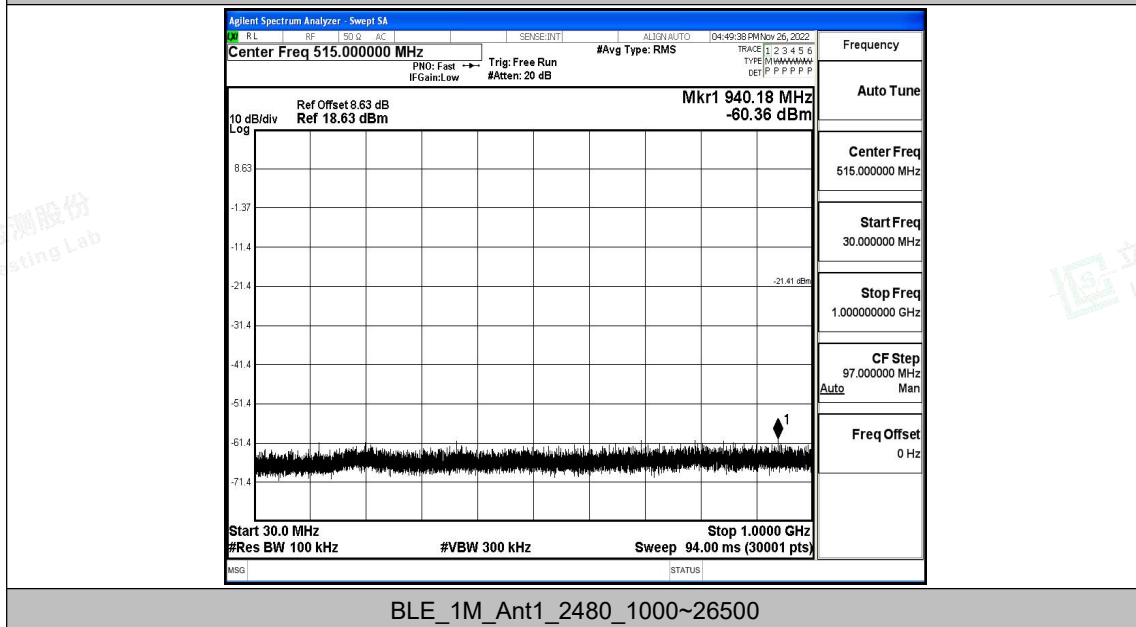
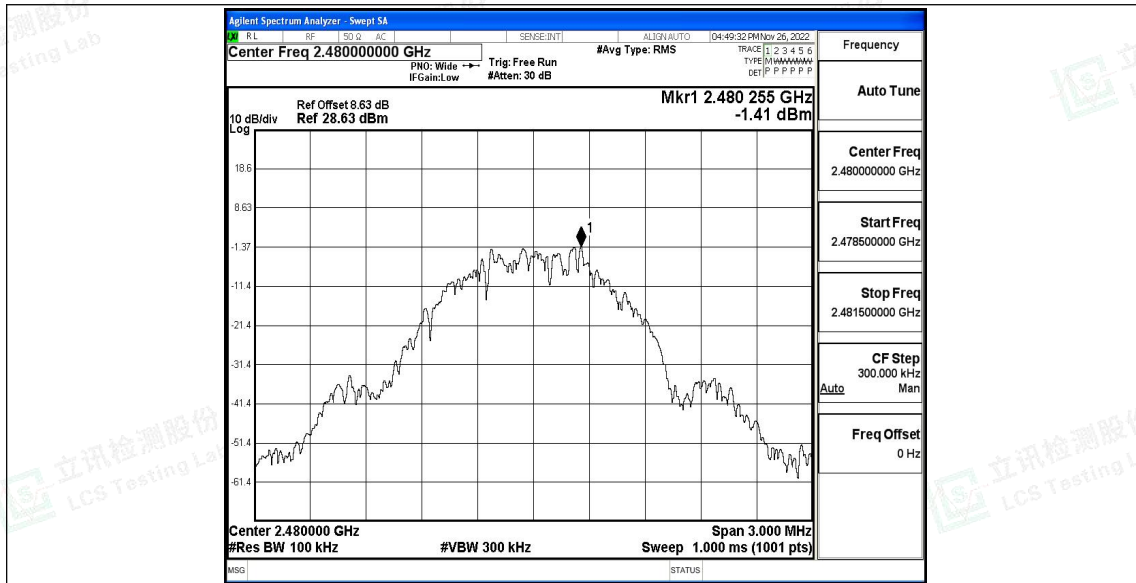


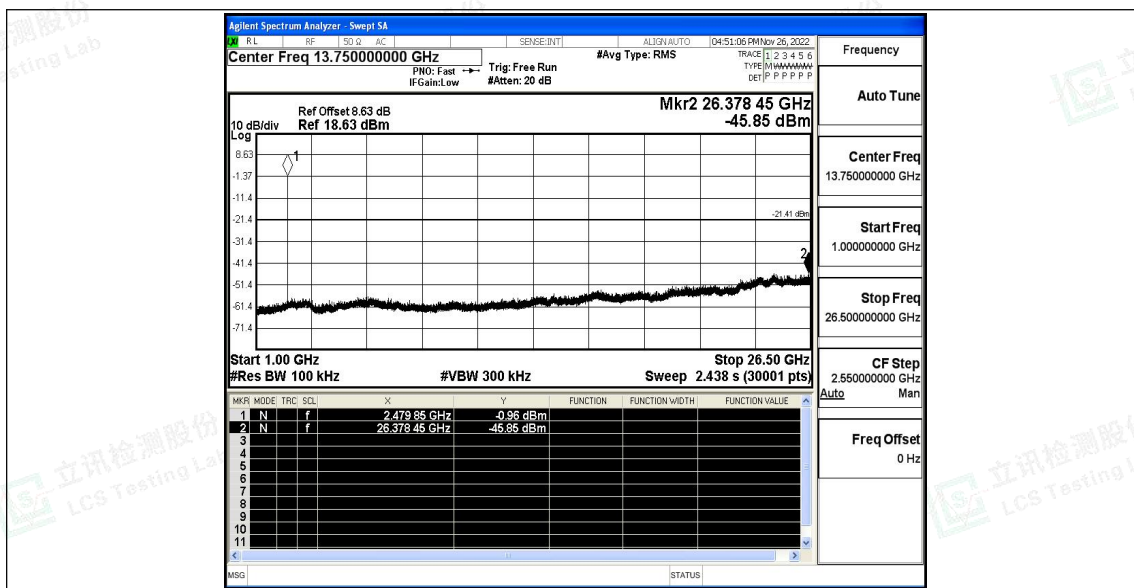
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A.6 Duty Cycle

Test Result

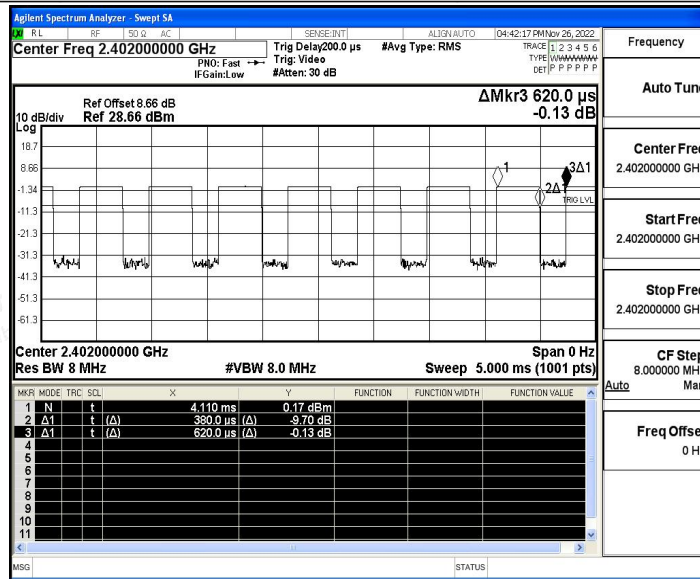
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.62	0.6129	61.29	2.13	2.63	---	---
		2440	0.38	0.62	0.6129	61.29	2.13	2.63	---	---
		2480	0.38	0.62	0.6129	61.29	2.13	2.63	---	---



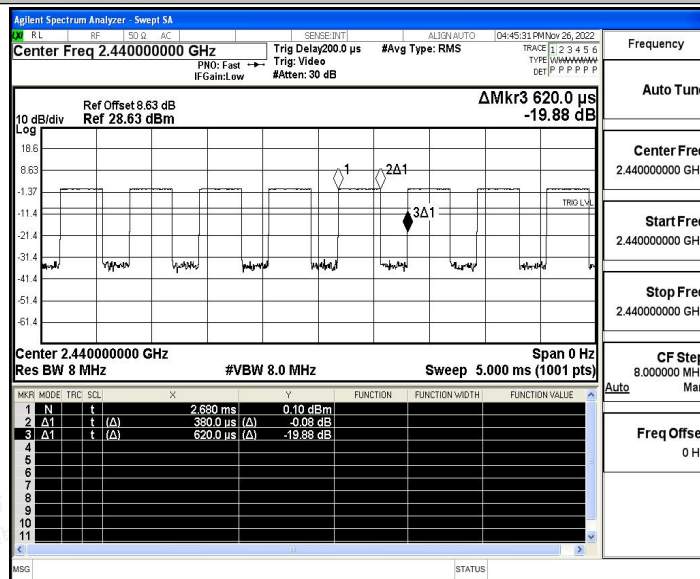


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

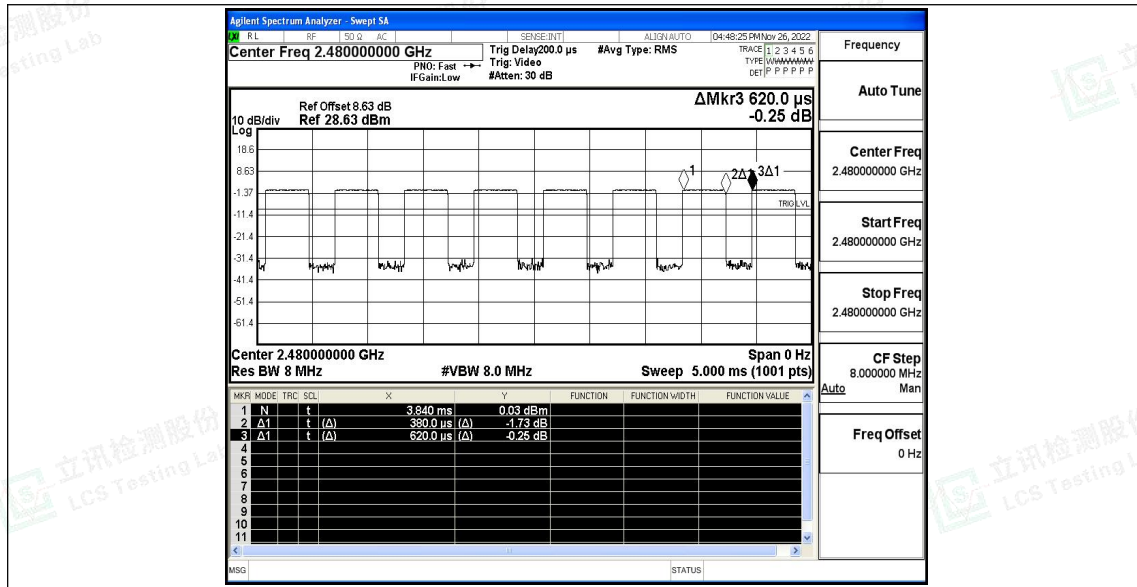


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A.7 Emissions in Restricted Bands

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	-57.48	≤-41.20	37.72	≤54	PASS
				AV	2384.315	-56.67	≤-41.20	38.53	≤54	PASS
				AV	2390.000	-57.23	≤-41.20	37.97	≤54	PASS
				Peak	2310.000	-51.06	≤-21.20	44.14	≤74	PASS
				Peak	2357.750	-47.96	≤-21.20	47.24	≤74	PASS
				Peak	2390.000	-51.82	≤-21.20	43.38	≤74	PASS
		High	2480	AV	2483.500	-53.55	≤-41.20	41.65	≤54	PASS
				AV	2483.520	-53.55	≤-41.20	41.65	≤54	PASS
				AV	2500.000	-56.58	≤-41.20	38.62	≤54	PASS
				Peak	2483.500	-50.81	≤-21.20	44.39	≤74	PASS
				Peak	2493.440	-46.99	≤-21.20	48.21	≤74	PASS
				Peak	2500.000	-51.15	≤-21.20	44.05	≤74	PASS

Note:

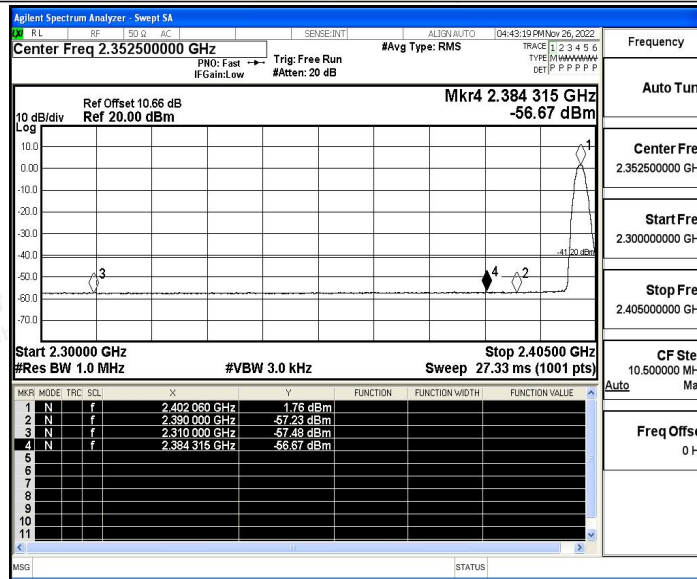
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



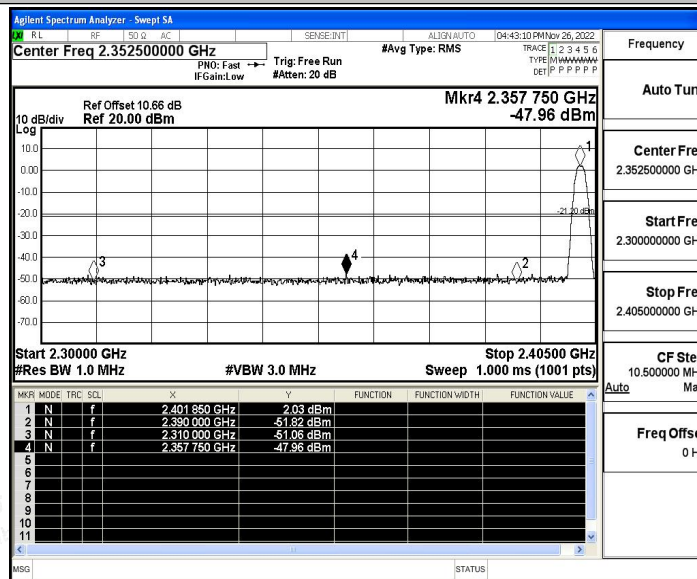


Test Graphs

BLE_1M_Ant1_Low_2402_AV



BLE_1M_Ant1_Low_2402_Peak



BLE_1M_Ant1_High_2480_AV

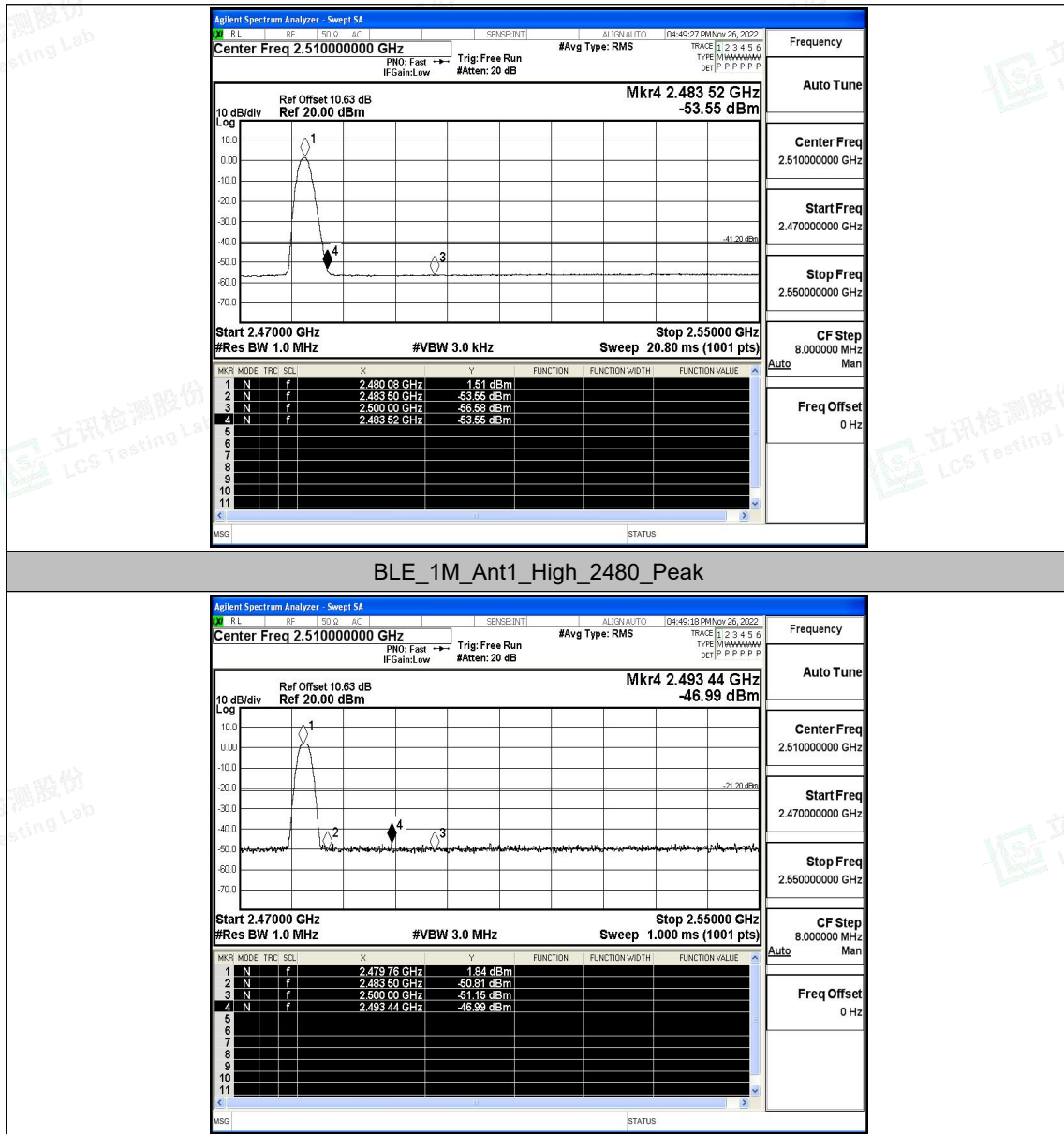


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