



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: TV Dongle for PSA5035

Test Model: PSD5040

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Ling Zhu





B.1 DTS Bandwidth

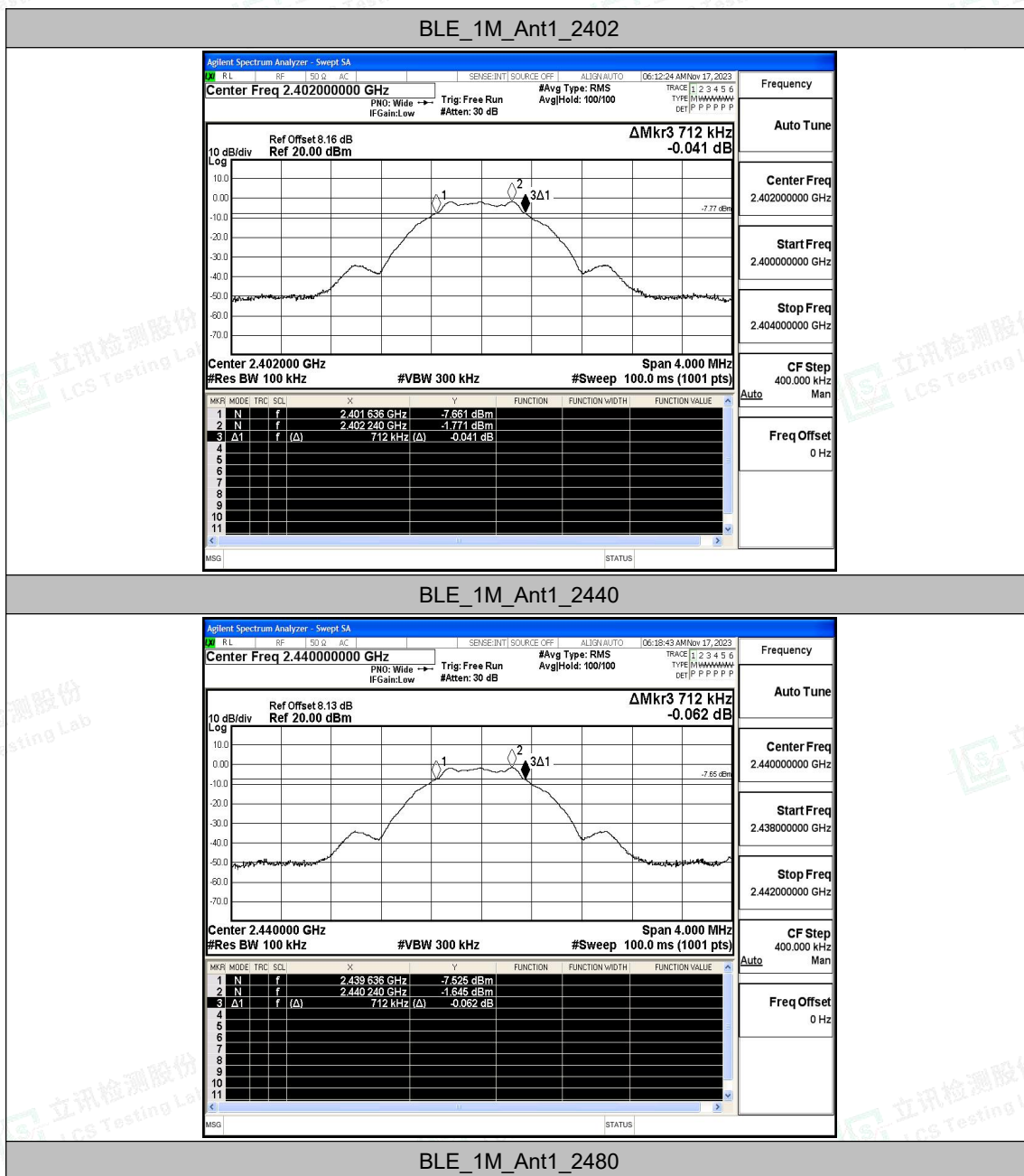
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.712	2401.636	2402.348	0.5	PASS
		2440	0.712	2439.636	2440.348	0.5	PASS
		2480	0.716	2479.632	2480.348	0.5	PASS





Test Graphs

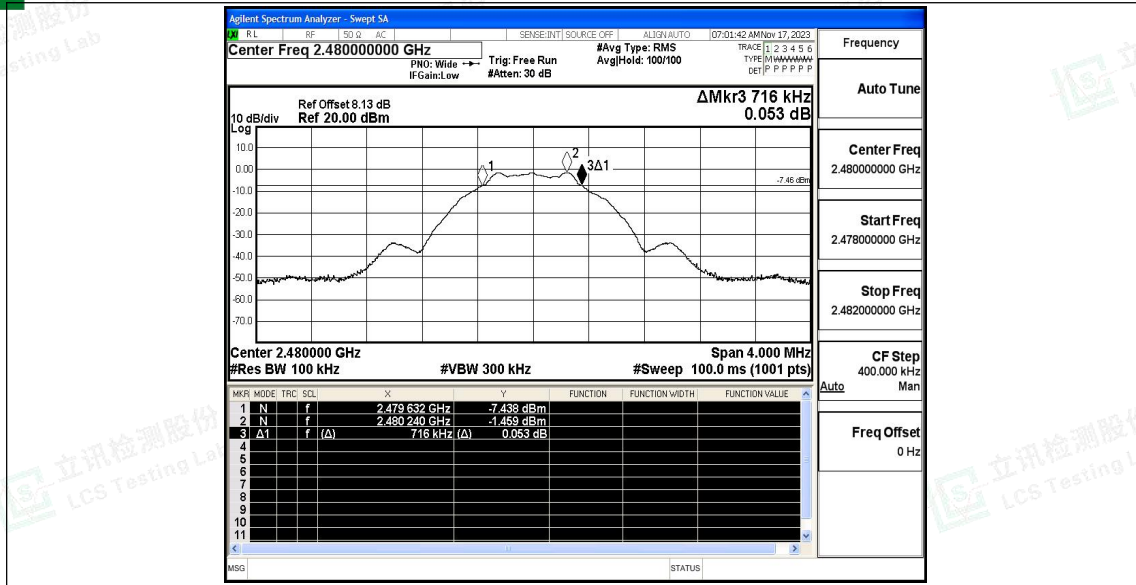


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B.2 Maximum conducted output power

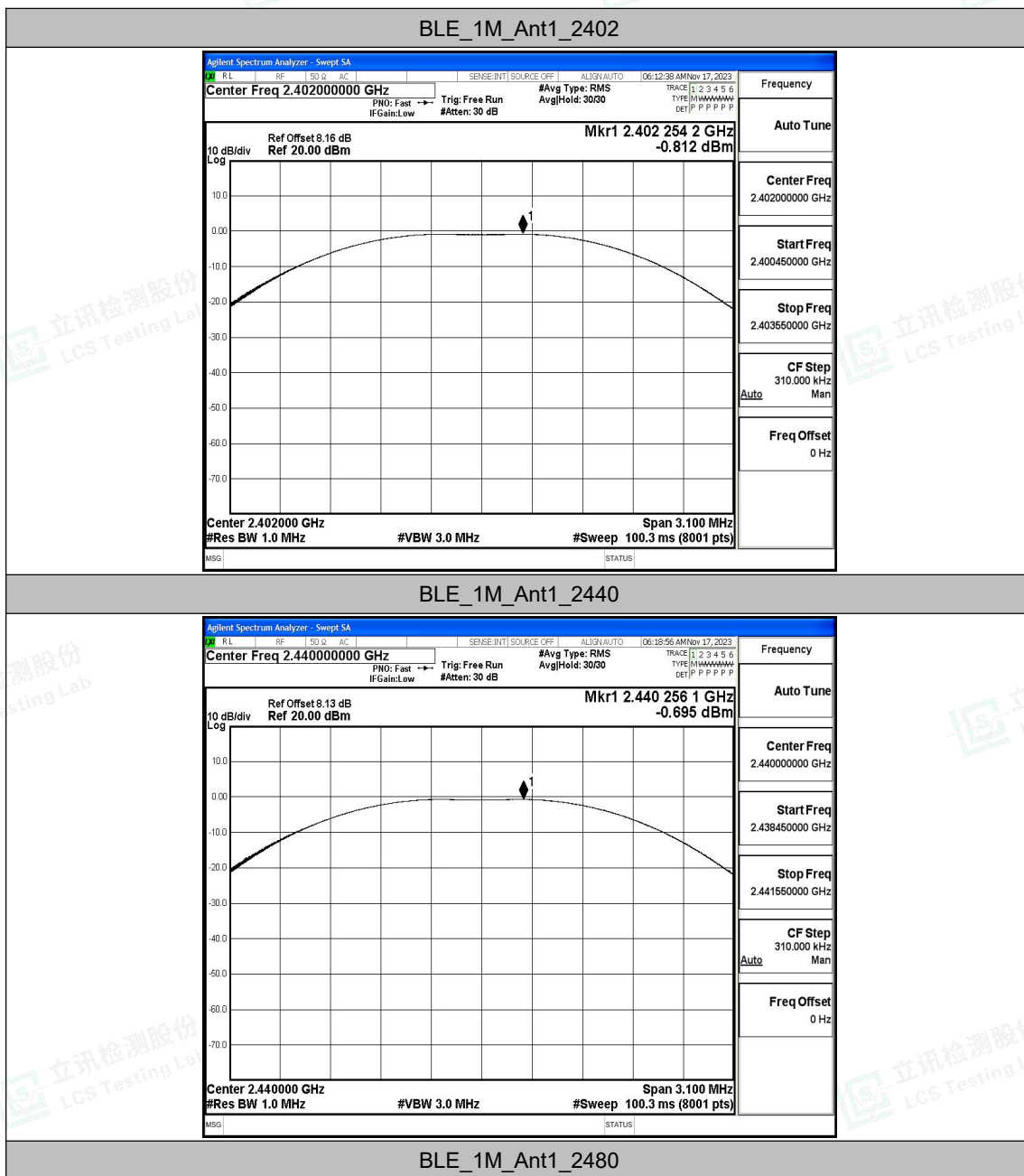
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.81	≤30	PASS
		2440	-0.7	≤30	PASS
		2480	-0.5	≤30	PASS





Test Graphs

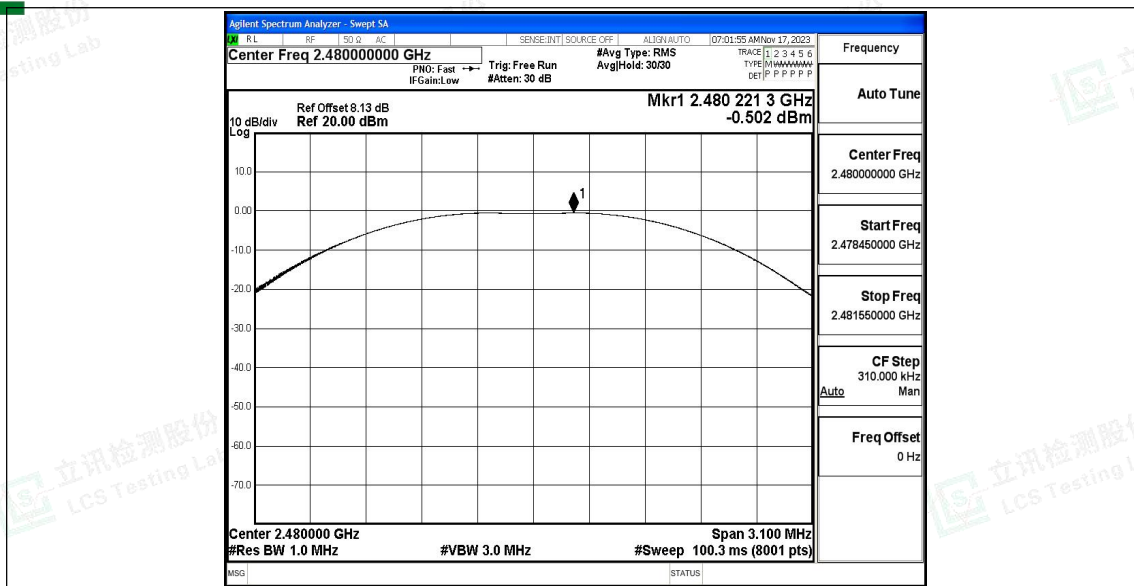


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B.3 Maximum power spectral density

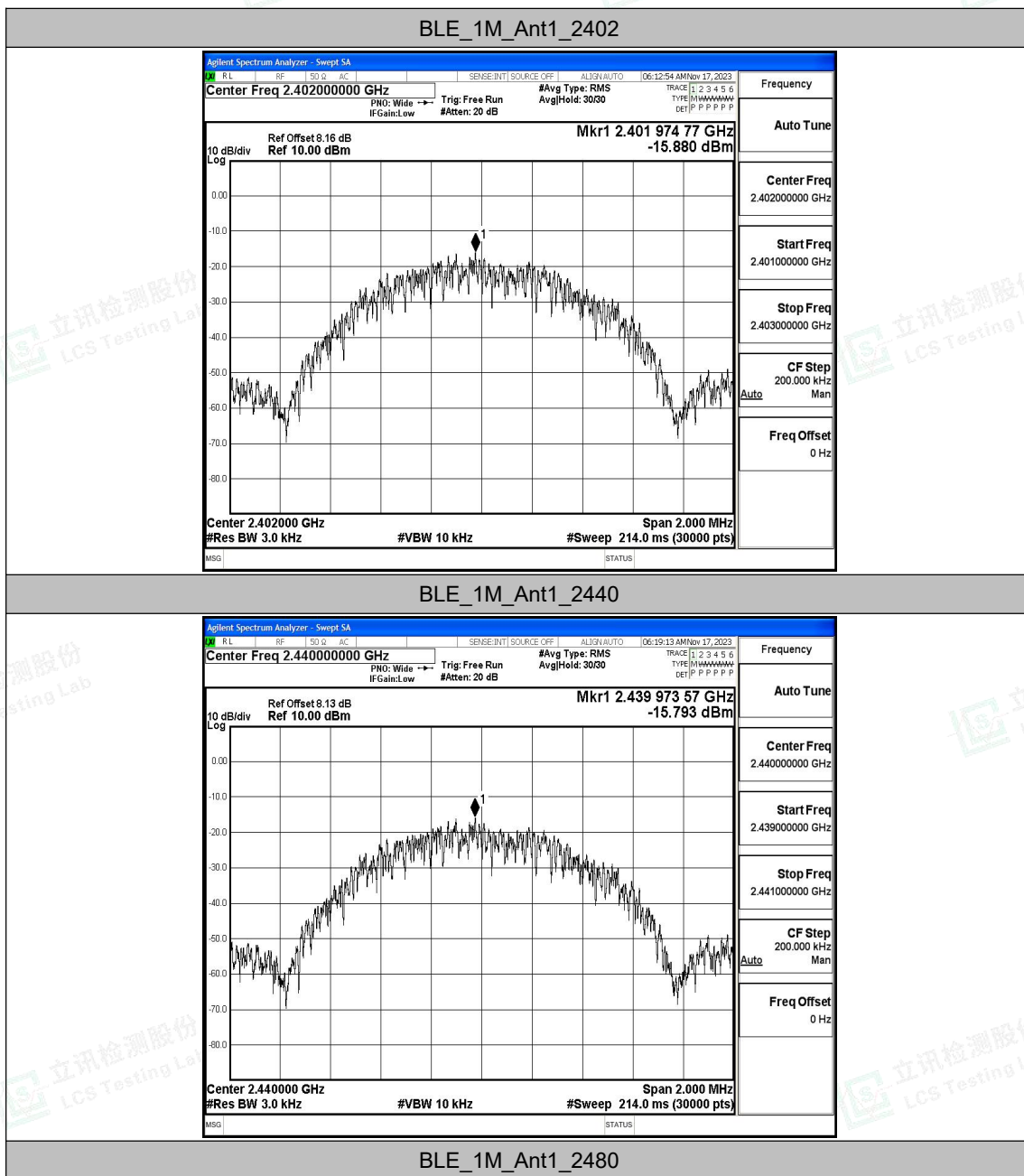
Test Result

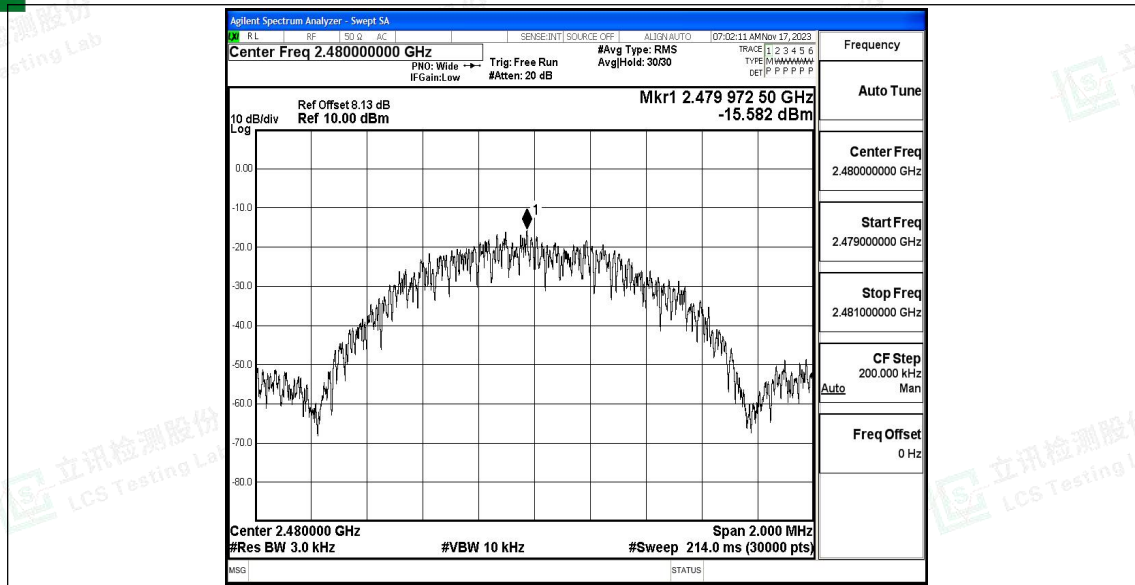
TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.88	≤8.00	PASS
		2440	-15.79	≤8.00	PASS
		2480	-15.58	≤8.00	PASS





Test Graphs







B.4 Band edge measurements

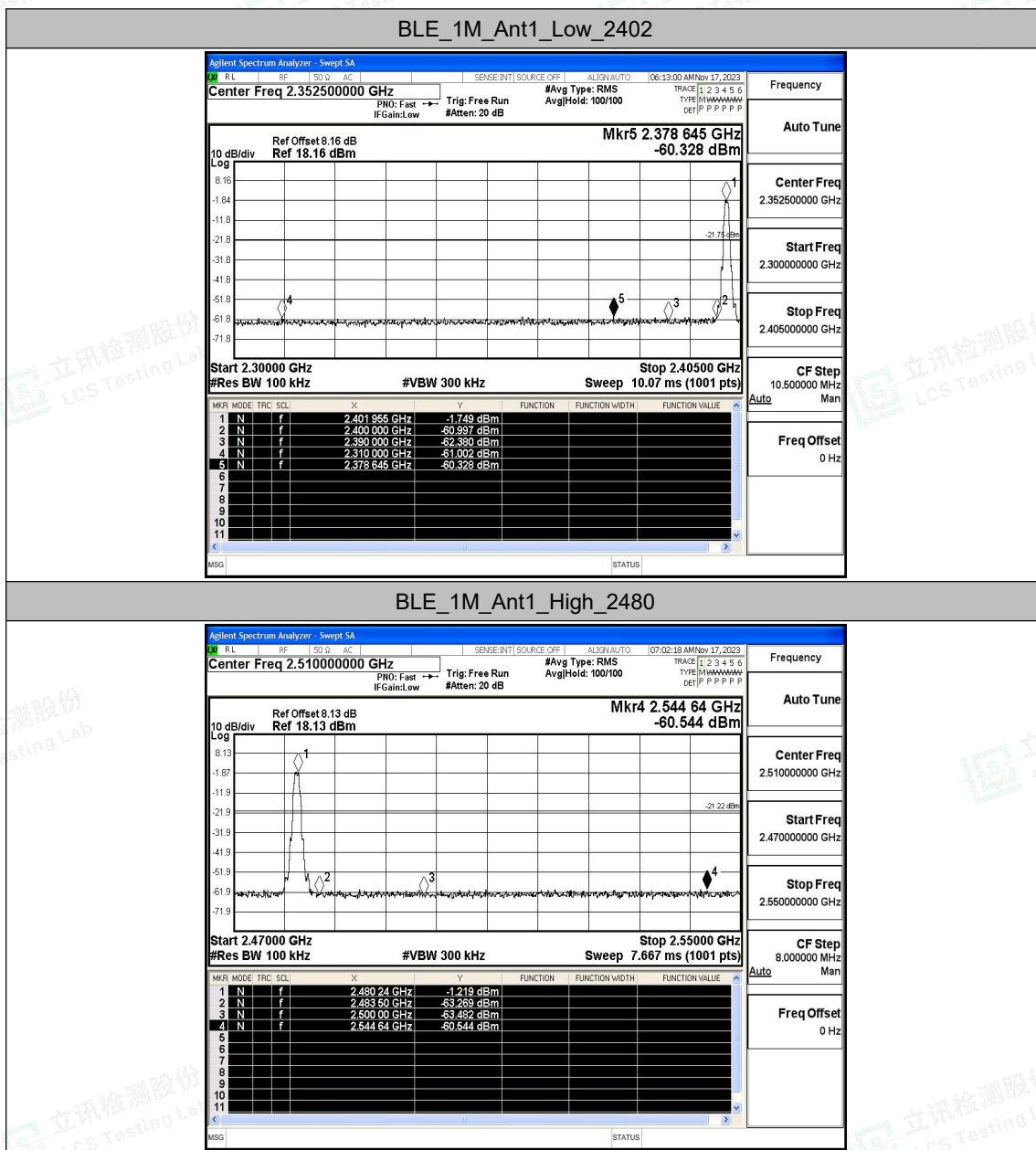
Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.75	-60.33	≤ -21.75	PASS
		High	2480	-1.22	-60.54	≤ -21.22	PASS





Test Graphs



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B.5 Conducted Spurious Emission

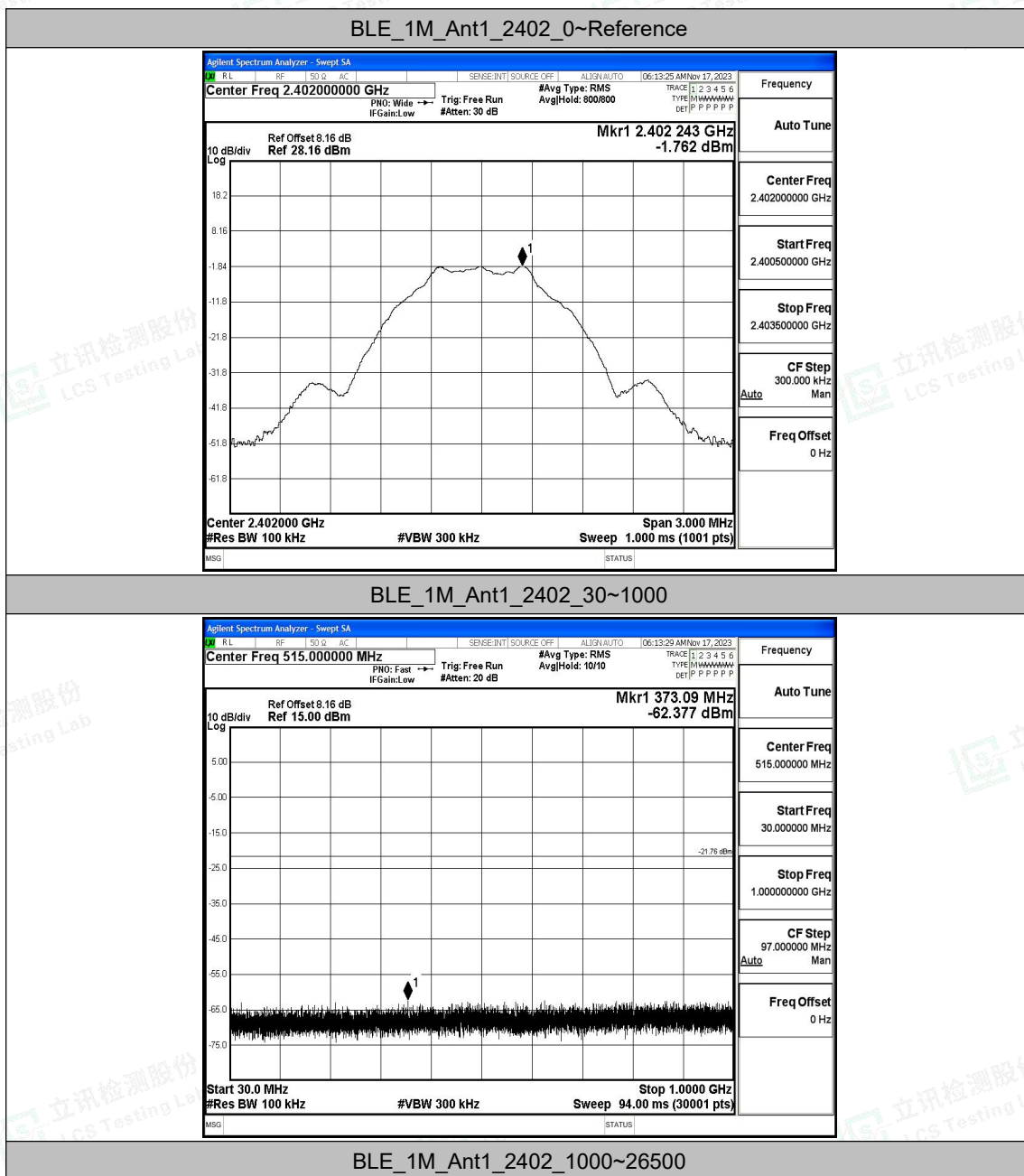
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-1.76	-1.76	---	PASS
			30~1000	-1.76	-62.38	≤-21.76	PASS
			1000~26500	-1.76	-48.1	≤-21.76	PASS
		2440	Reference	-1.66	-1.66	---	PASS
			30~1000	-1.66	-62	≤-21.66	PASS
			1000~26500	-1.66	-49.02	≤-21.66	PASS
		2480	Reference	-1.48	-1.48	---	PASS
			30~1000	-1.48	-61.57	≤-21.48	PASS
			1000~26500	-1.48	-48.76	≤-21.48	PASS





Test Graphs

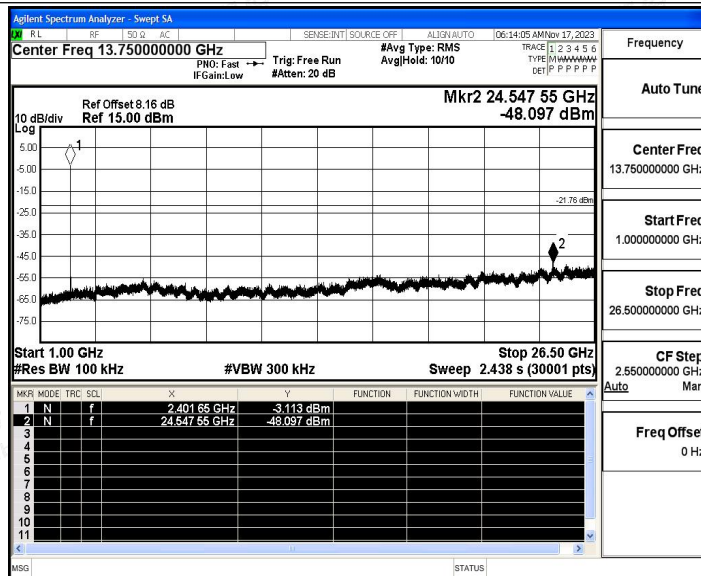


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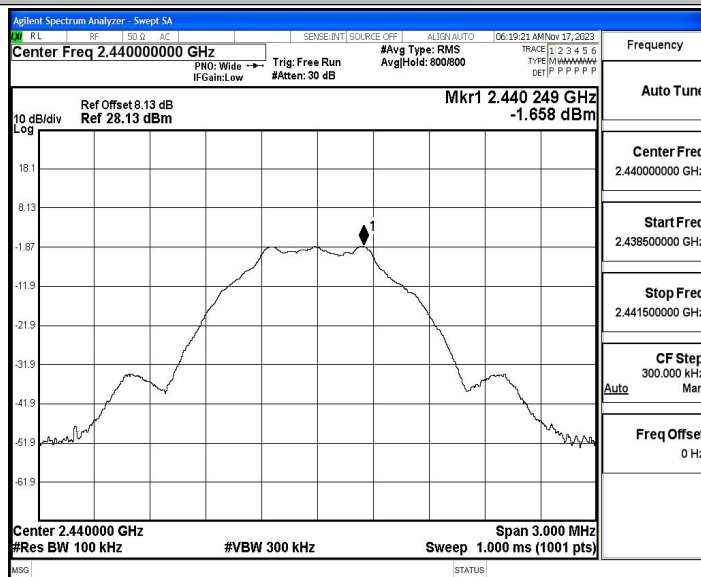
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

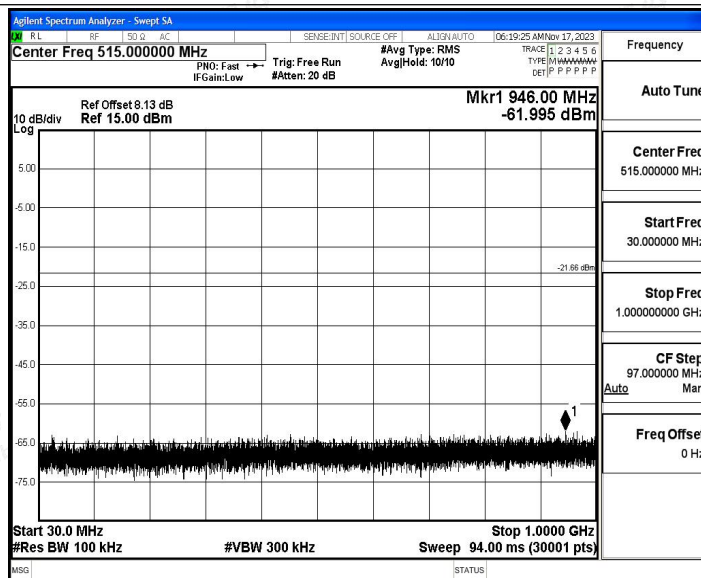


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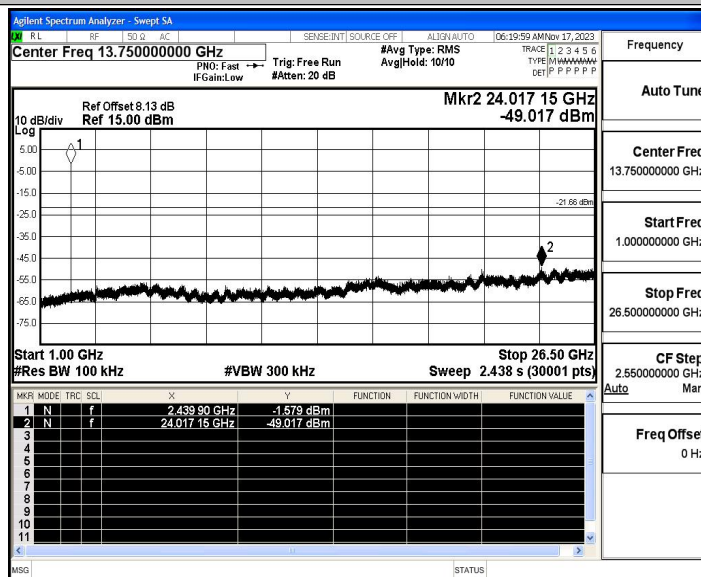
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

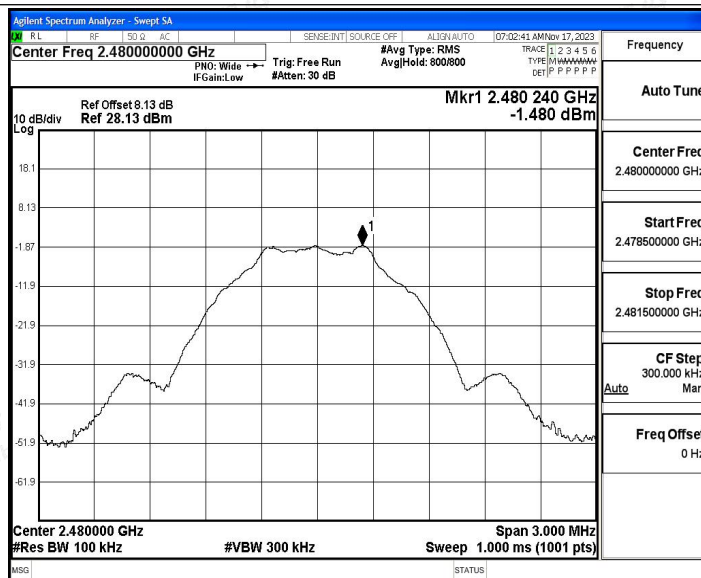


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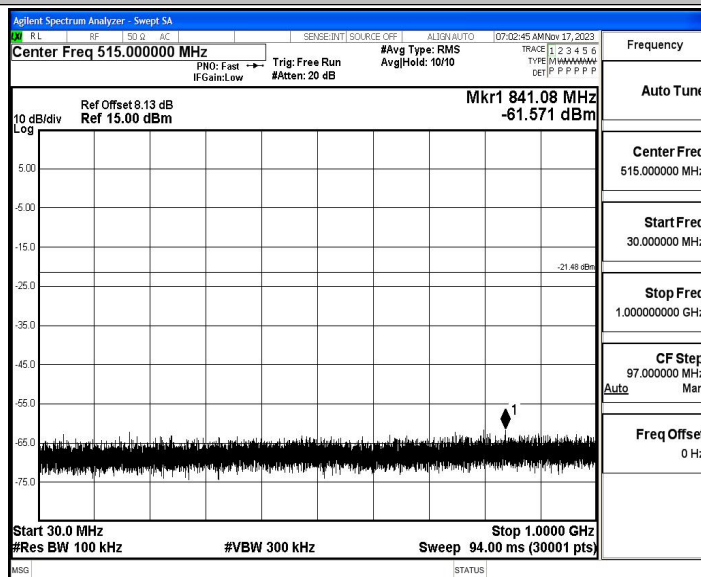
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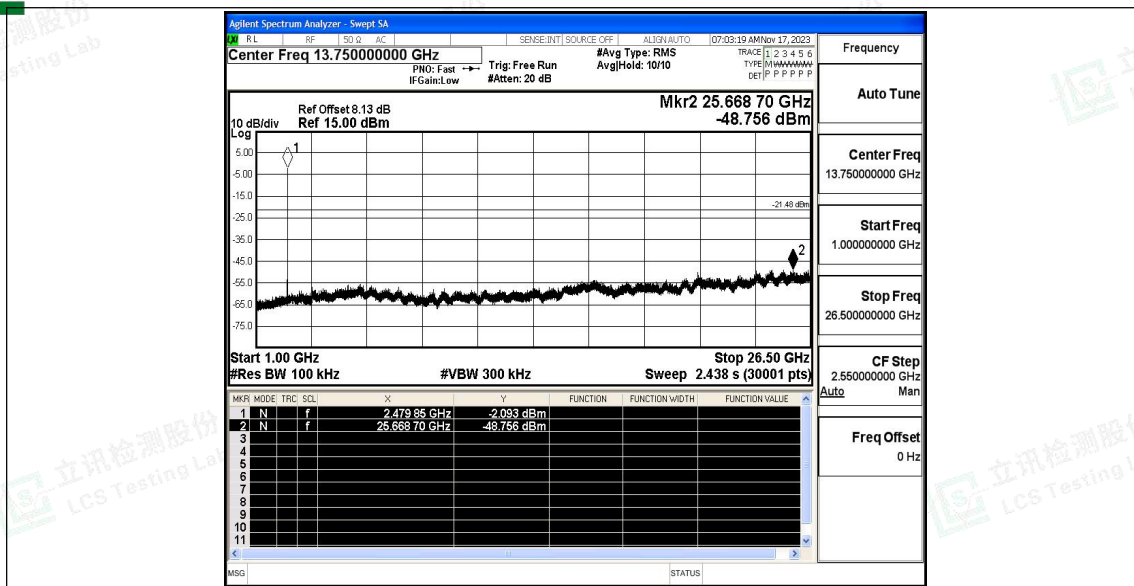


BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500







B.6 Duty Cycle

Test Result

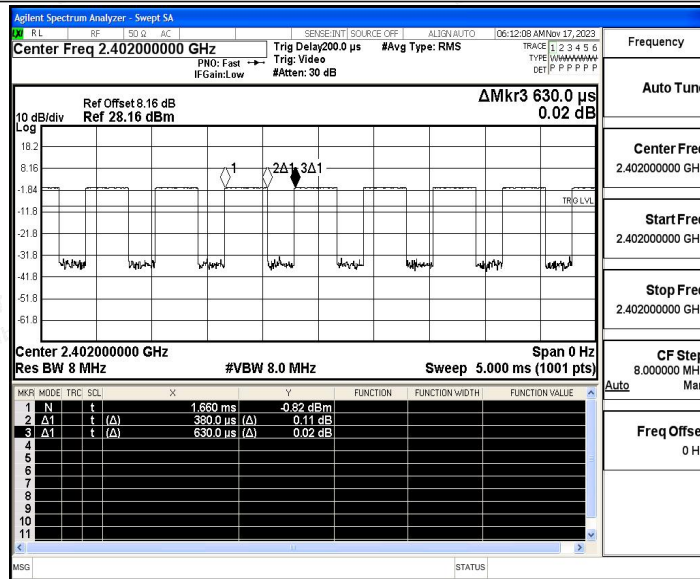
TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2440	0.38	0.63	0.6032	60.32	2.20	2.63	---	---
		2480	0.38	0.63	0.6032	60.32	2.20	2.63	---	---



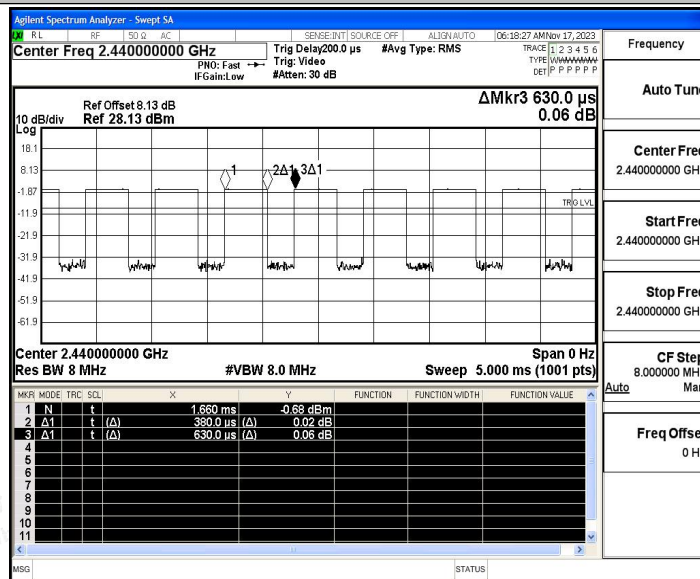


Test Graphs

BLE_1M_Ant1_2402



BLE_1M_Ant1_2440



BLE_1M_Ant1_2480

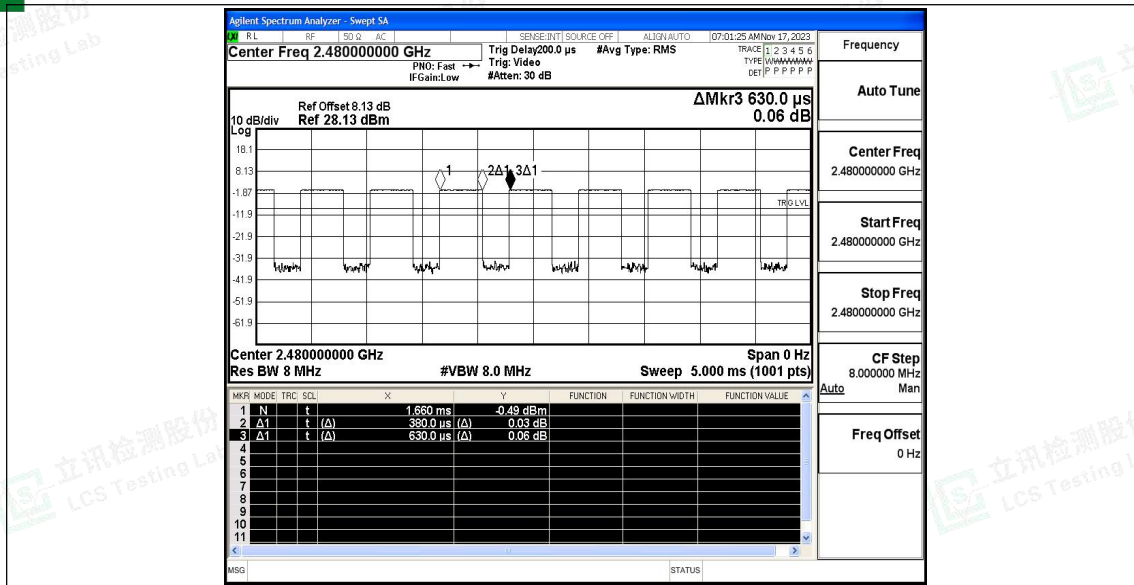


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B.7 Emissions in Restricted Bands

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	-58.63	≤-41.20	36.57	≤54	PASS
				AV	2356.070	-57.8	≤-41.20	37.40	≤54	PASS
				AV	2390.000	-58.04	≤-41.20	37.16	≤54	PASS
				Peak	2310.000	-51.57	≤-21.20	43.63	≤74	PASS
				Peak	2365.520	-48.08	≤-21.20	47.12	≤74	PASS
				Peak	2390.000	-52.05	≤-21.20	43.15	≤74	PASS
		High	2480	AV	2483.500	-54.37	≤-41.20	40.83	≤54	PASS
				AV	2483.520	-54.37	≤-41.20	40.83	≤54	PASS
				AV	2500.000	-58.11	≤-41.20	37.09	≤54	PASS
				Peak	2483.500	-49.2	≤-21.20	46.00	≤74	PASS
				Peak	2486.240	-48.76	≤-21.20	46.44	≤74	PASS
				Peak	2500.000	-50.71	≤-21.20	44.49	≤74	PASS

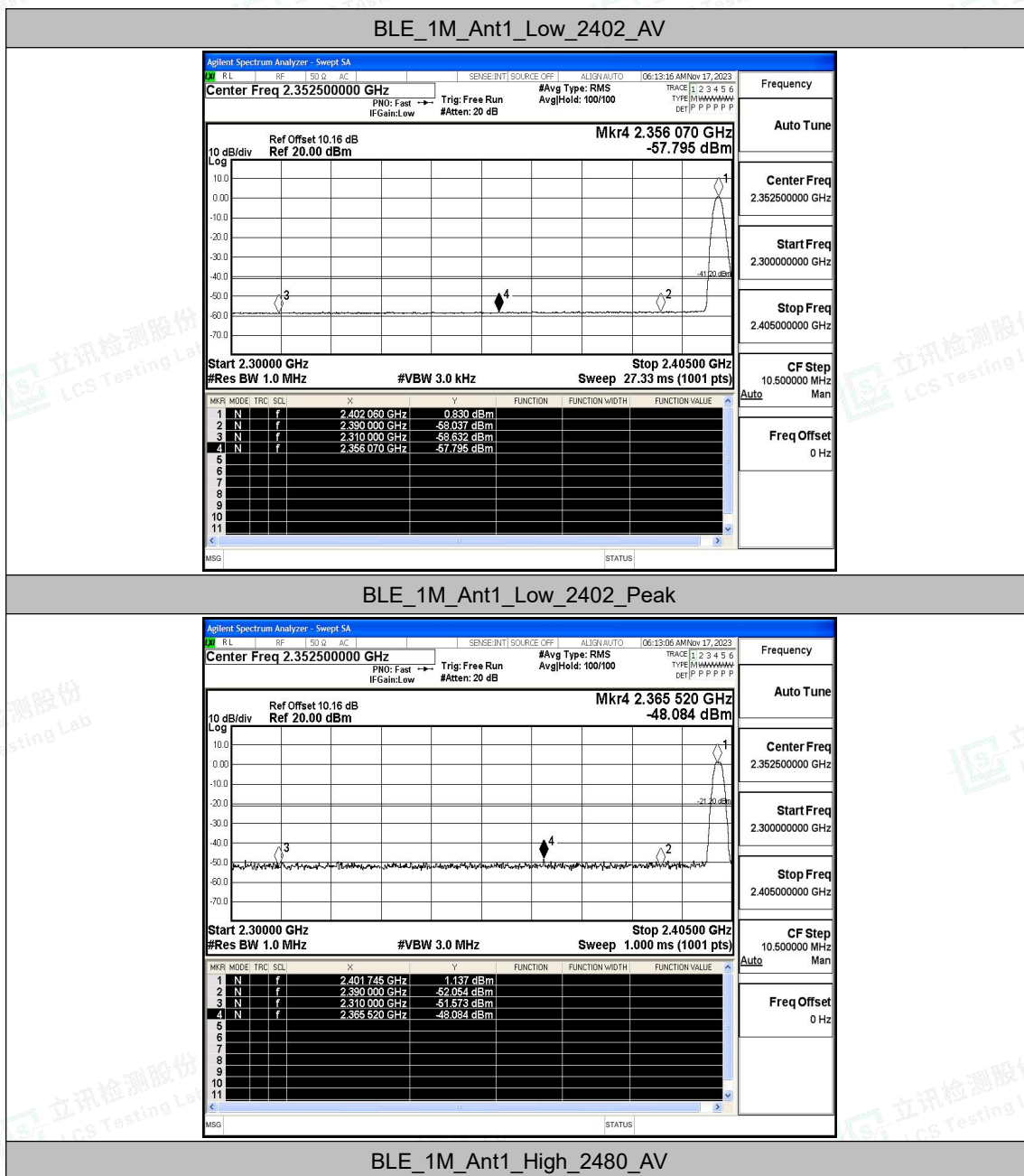
Note:

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

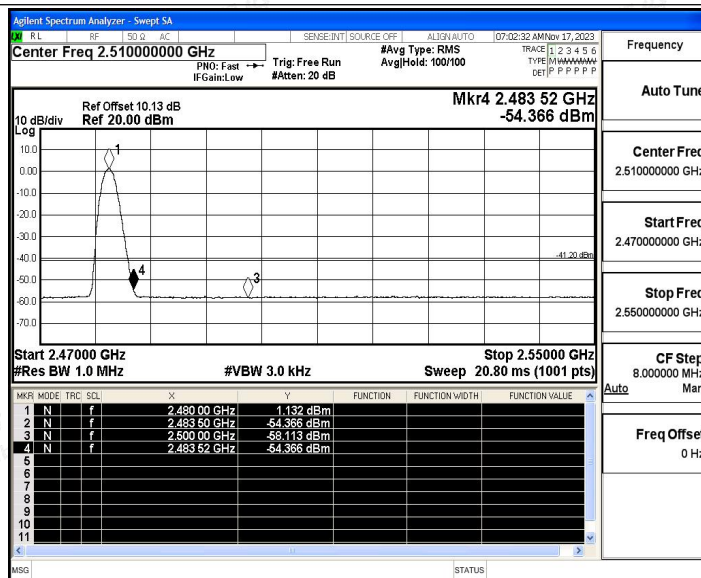


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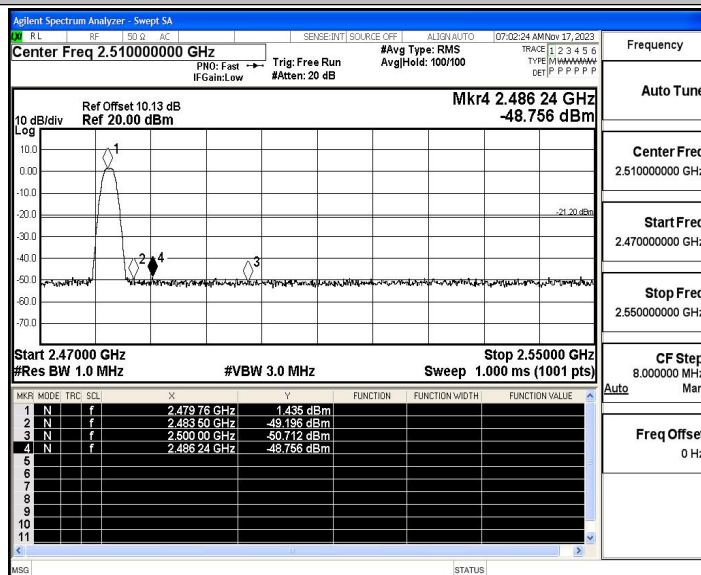
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BLE_1M_Ant1_High_2480_Peak



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