



Appendix B

RF Test Data for BLE (Conducted Measurement)

Product Name: POS Terminal

Test Model: P1000

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan





B.1 6dB Bandwidth

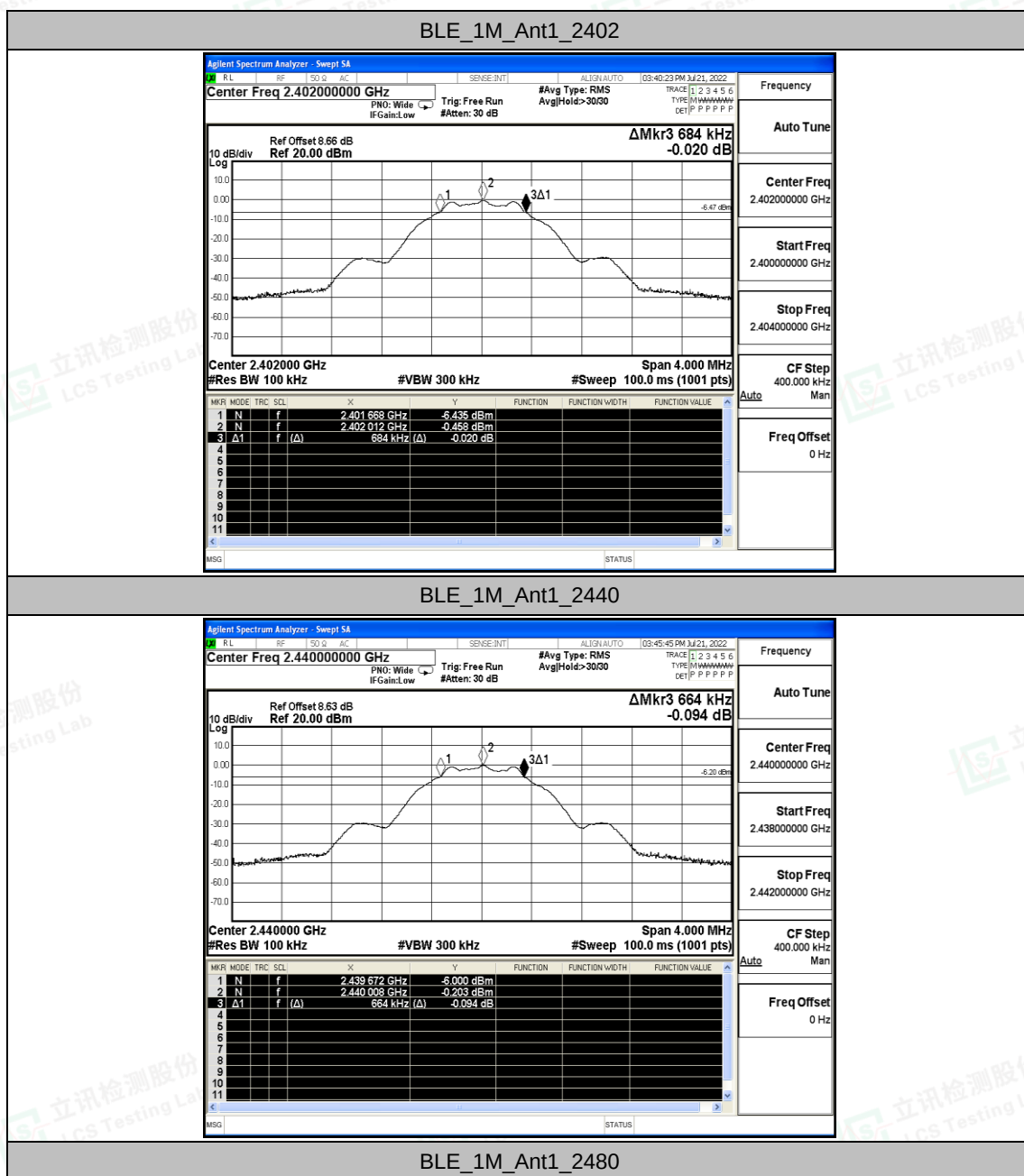
Test Result

TestMode	Antenna	Channel	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.684	2401.668	2402.352	0.5	PASS
		2440	0.664	2439.672	2440.336	0.5	PASS
		2480	0.680	2479.668	2480.348	0.5	PASS





Test Graphs

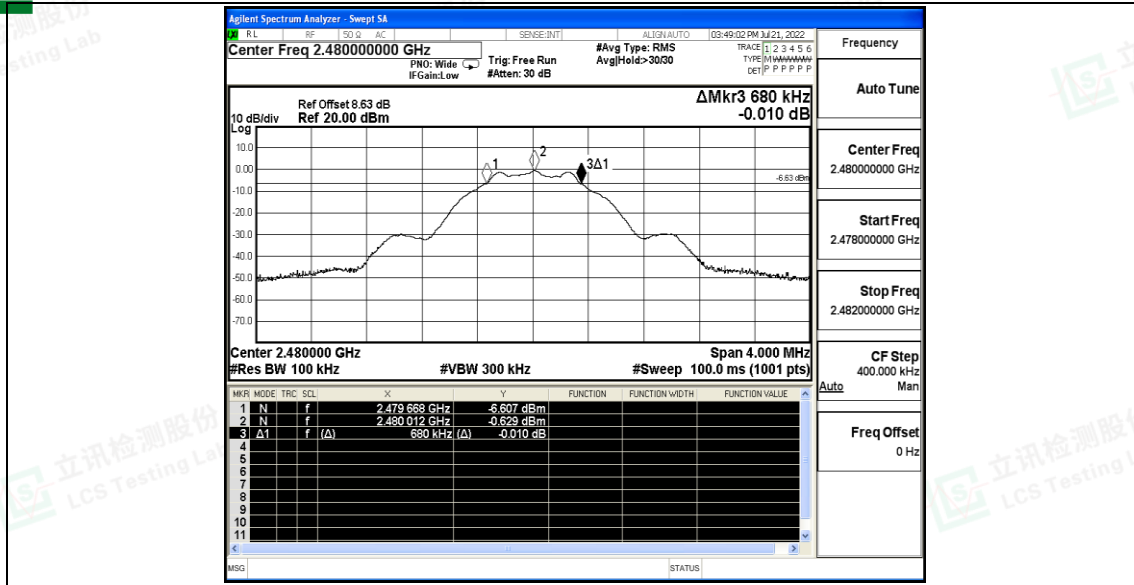


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B.2 Maximum conducted output power

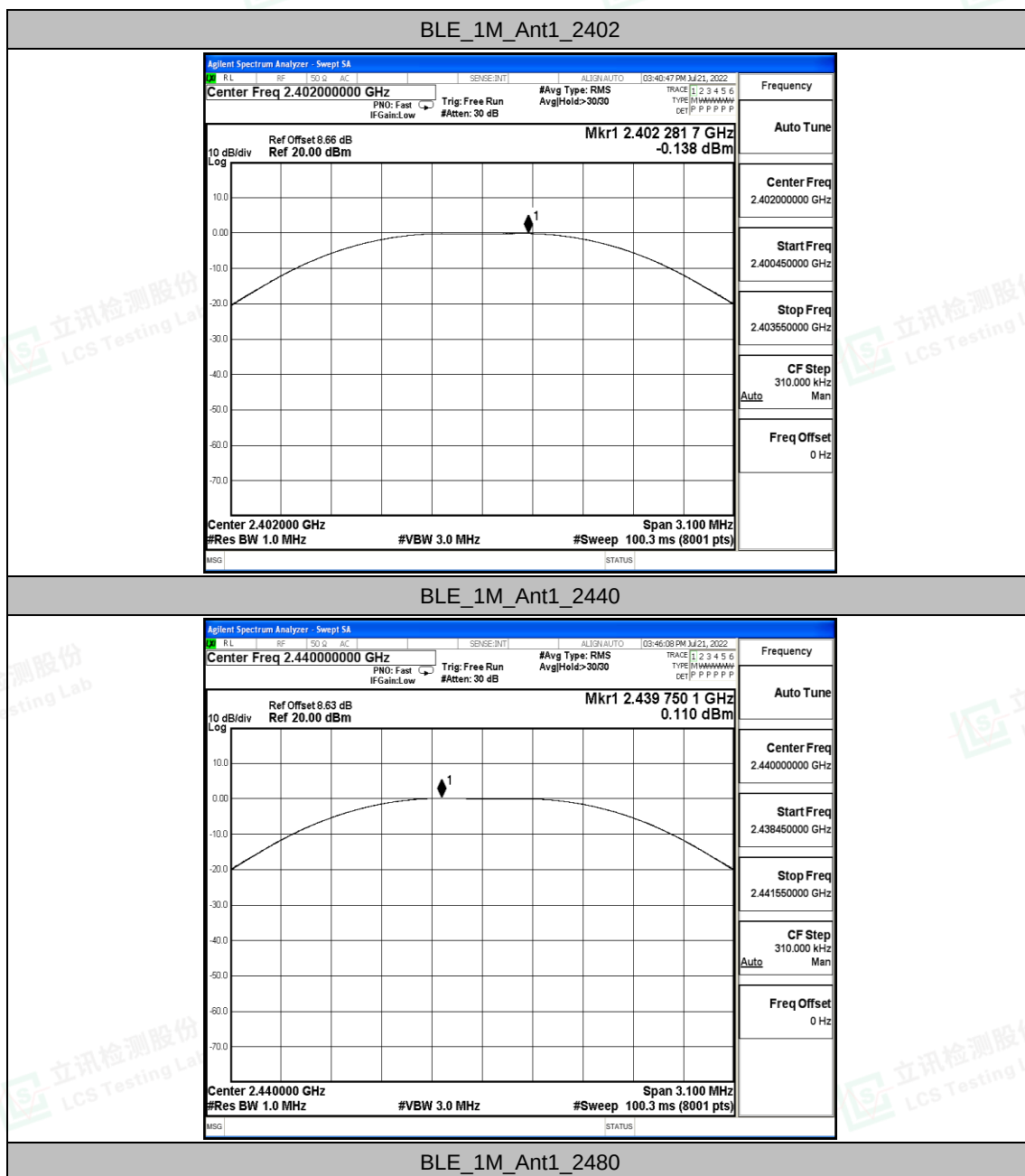
Test Result

TestMode	Antenna	Channel	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-0.14	≤30	PASS
		2440	0.11	≤30	PASS
		2480	-0.34	≤30	PASS





Test Graphs

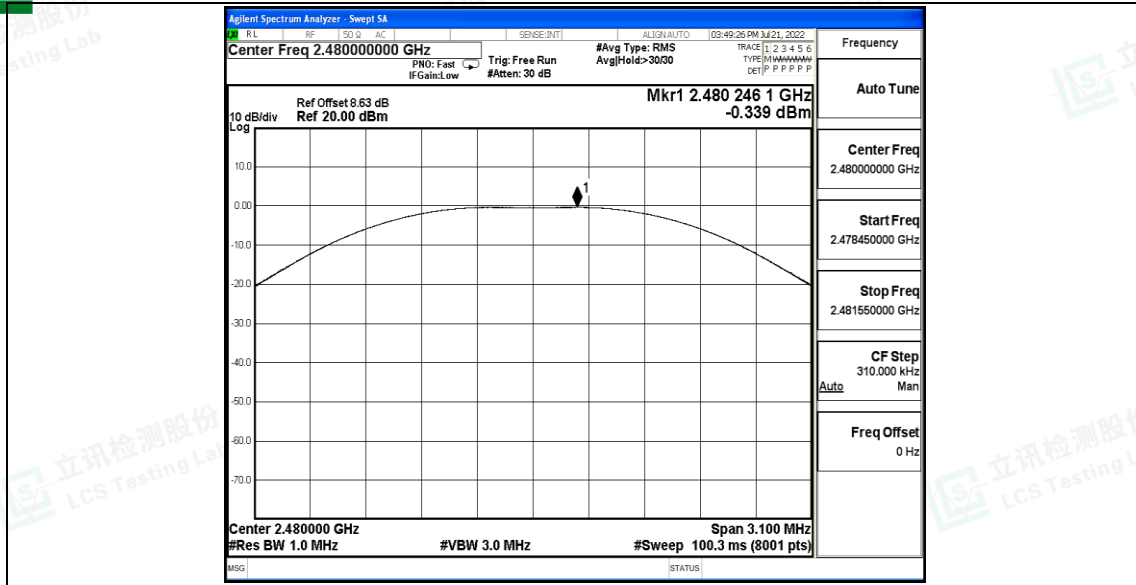


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B.3 Maximum power spectral density

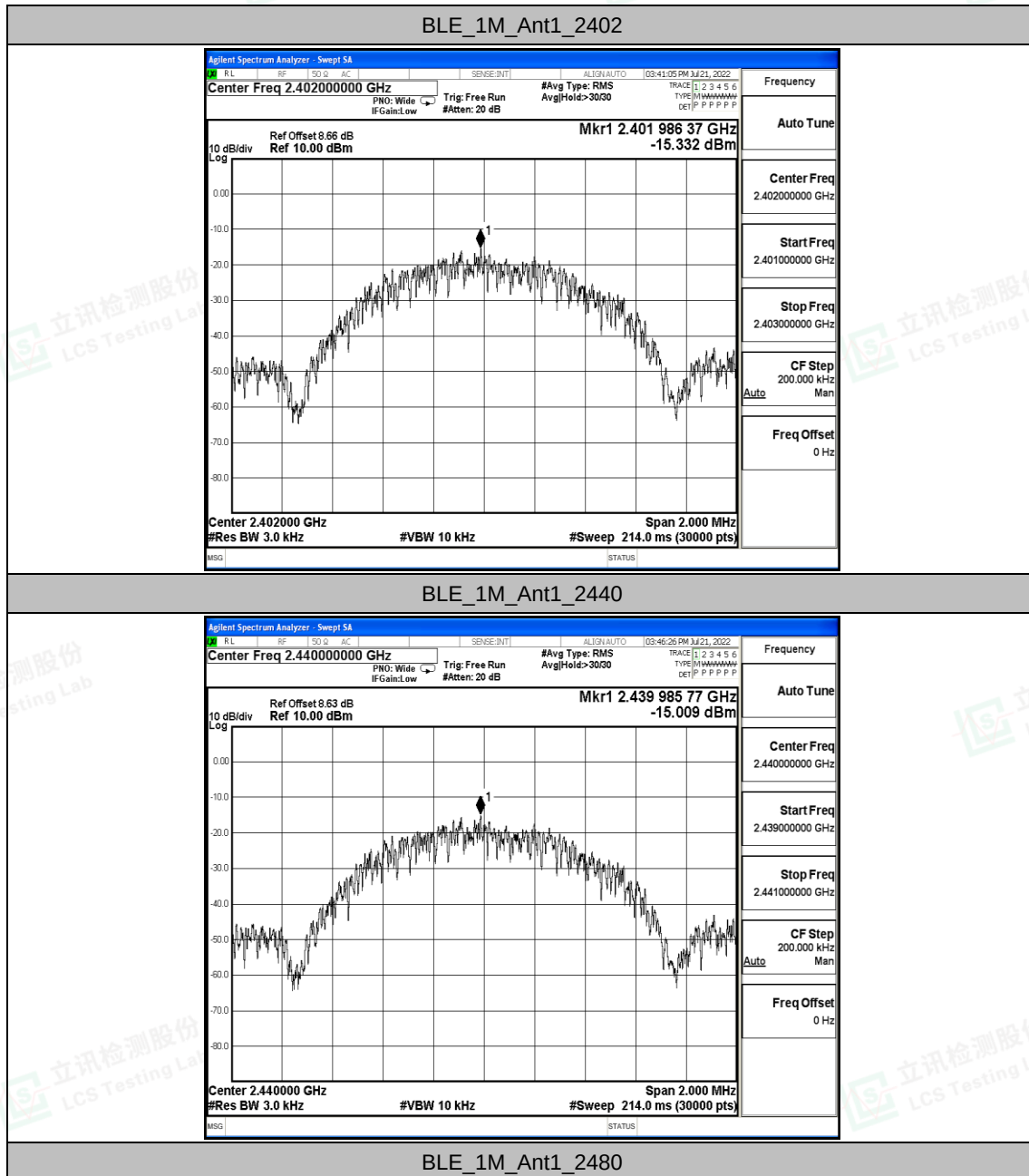
Test Result

TestMode	Antenna	Channel	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.33	≤8.00	PASS
		2440	-15.01	≤8.00	PASS
		2480	-15.51	≤8.00	PASS





Test Graphs

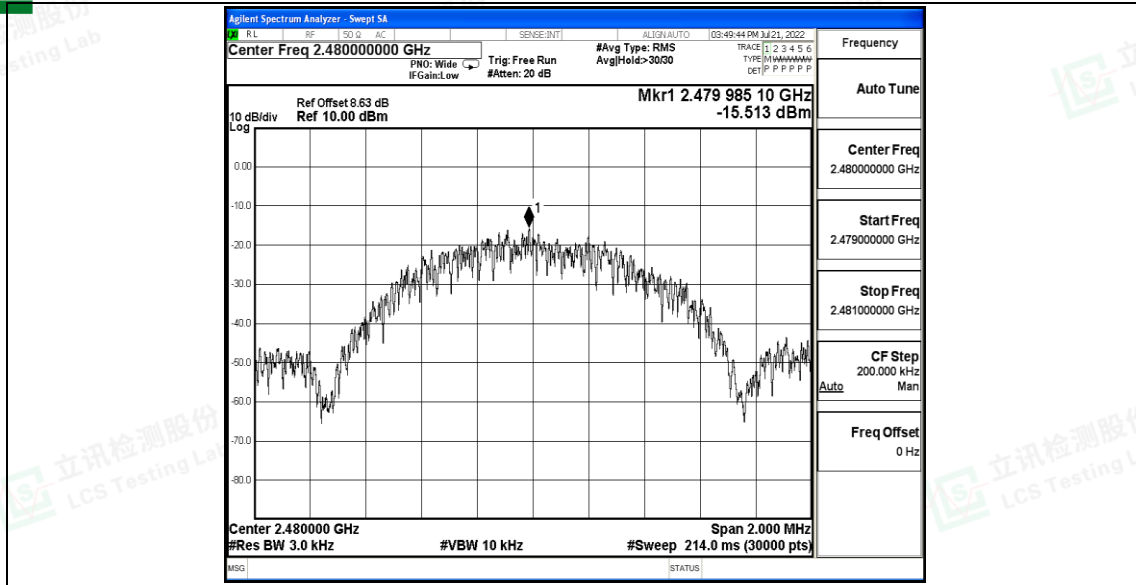


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B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Channel	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.10	-55	≤ -19.9	PASS
		High	2480	-0.43	-50.23	≤ -20.43	PASS





Test Graphs



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B.5 Conducted Spurious Emission

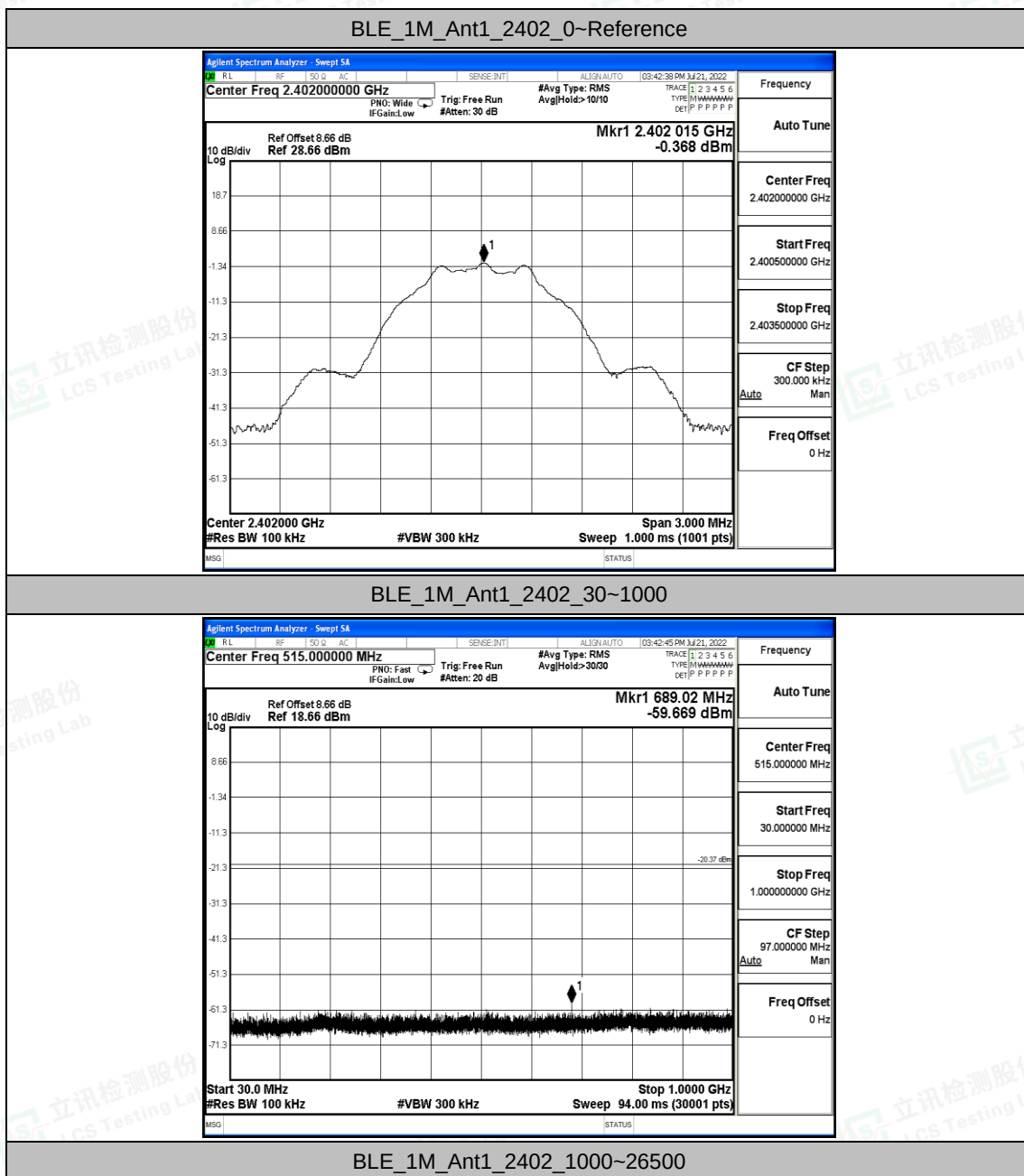
Test Result

TestMode	Antenna	Channel	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	-0.37	-0.37	---	PASS
			30~1000	-0.37	-59.67	≤-20.37	PASS
			1000~26500	-0.37	-46.41	≤-20.37	PASS
		2440	Reference	-0.14	-0.14	---	PASS
			30~1000	-0.14	-59.82	≤-20.14	PASS
			1000~26500	-0.14	-46.2	≤-20.14	PASS
		2480	Reference	-0.59	-0.59	---	PASS
			30~1000	-0.59	-60.88	≤-20.59	PASS
			1000~26500	-0.59	-45.73	≤-20.59	PASS





Test Graphs

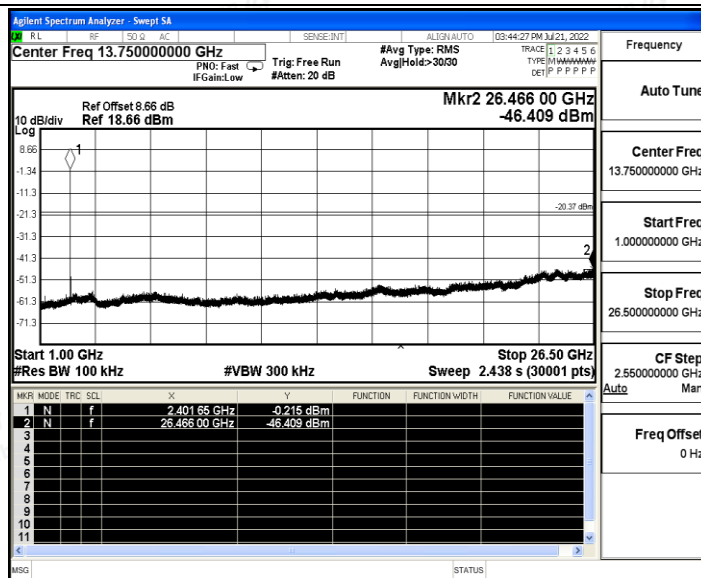


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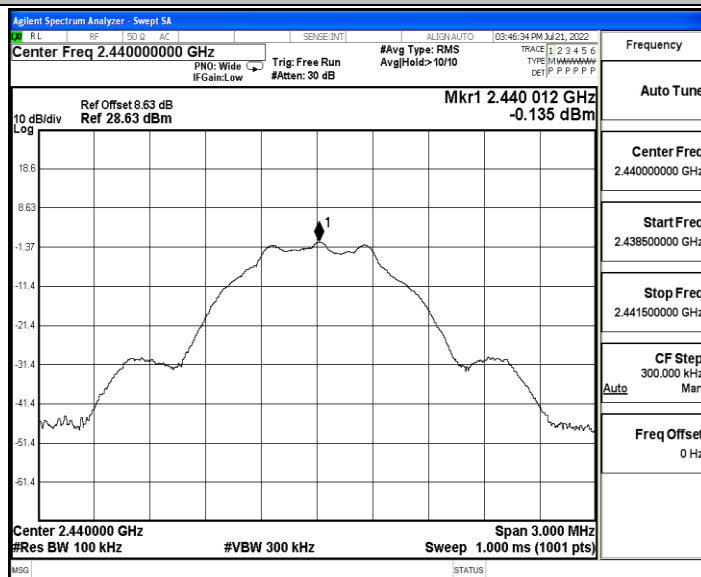
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BLE_1M_Ant1_2440_0~Reference



BLE_1M_Ant1_2440_30~1000

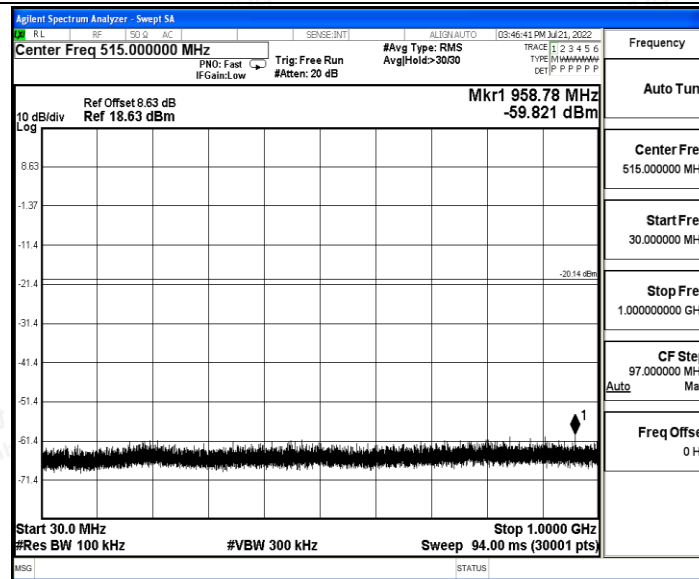


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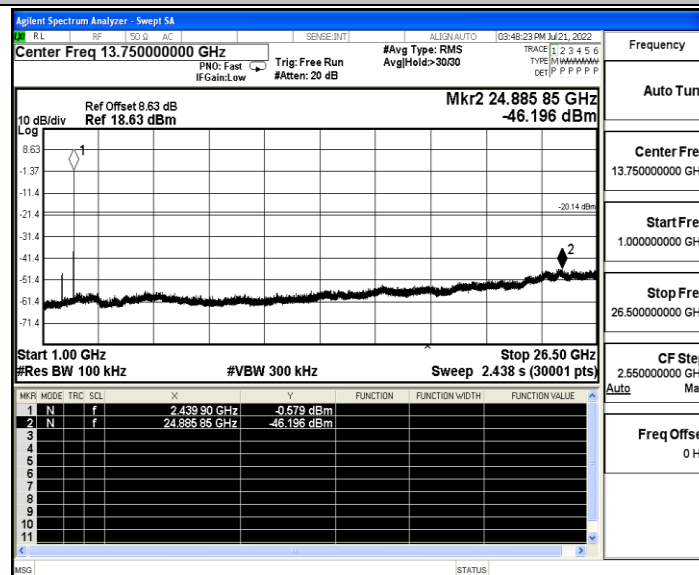
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BLE_1M_Ant1_2440_1000~26500



BLE_1M_Ant1_2480_0~Reference

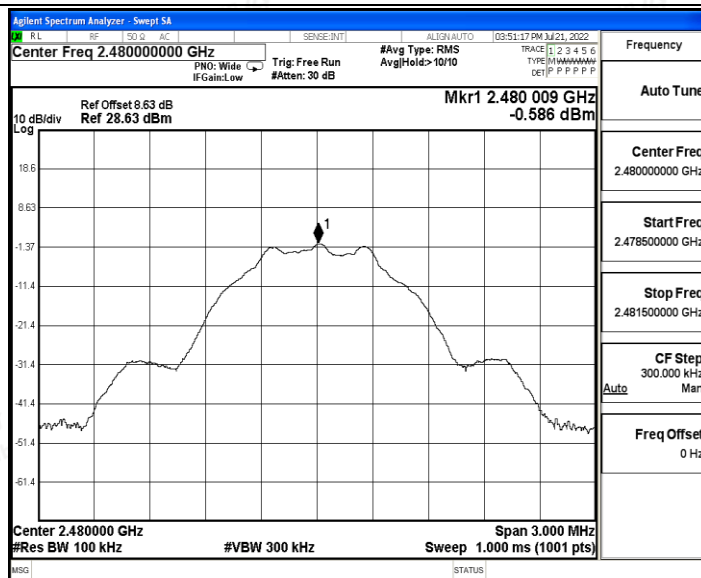


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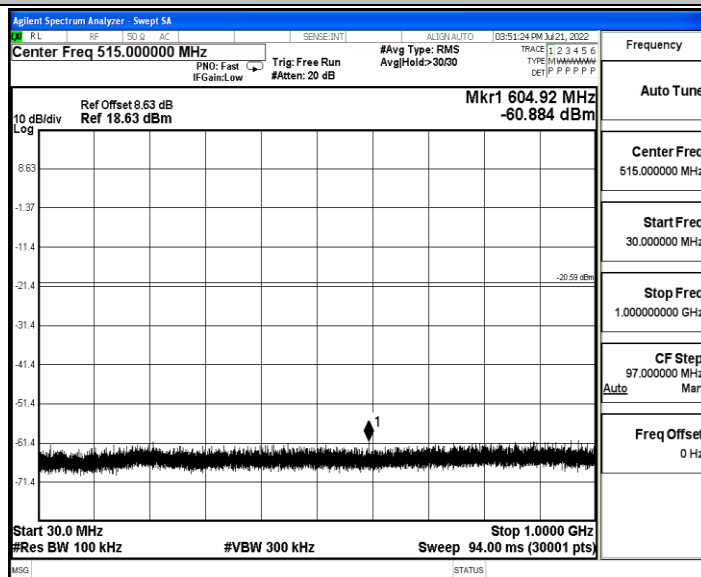
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BLE_1M_Ant1_2480_30~1000



BLE_1M_Ant1_2480_1000~26500

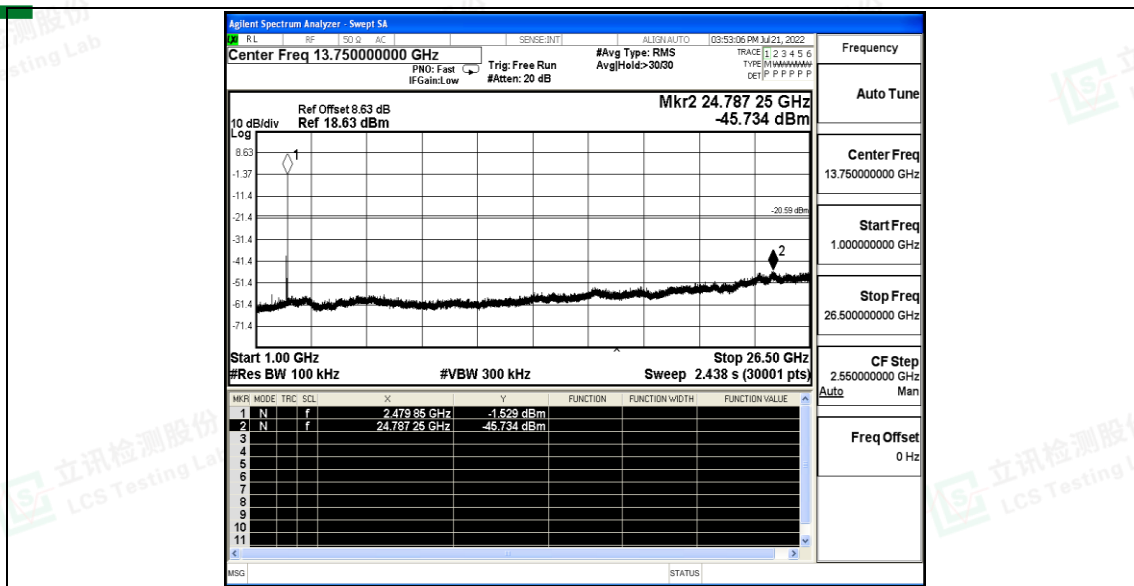


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B.6 Duty Cycle

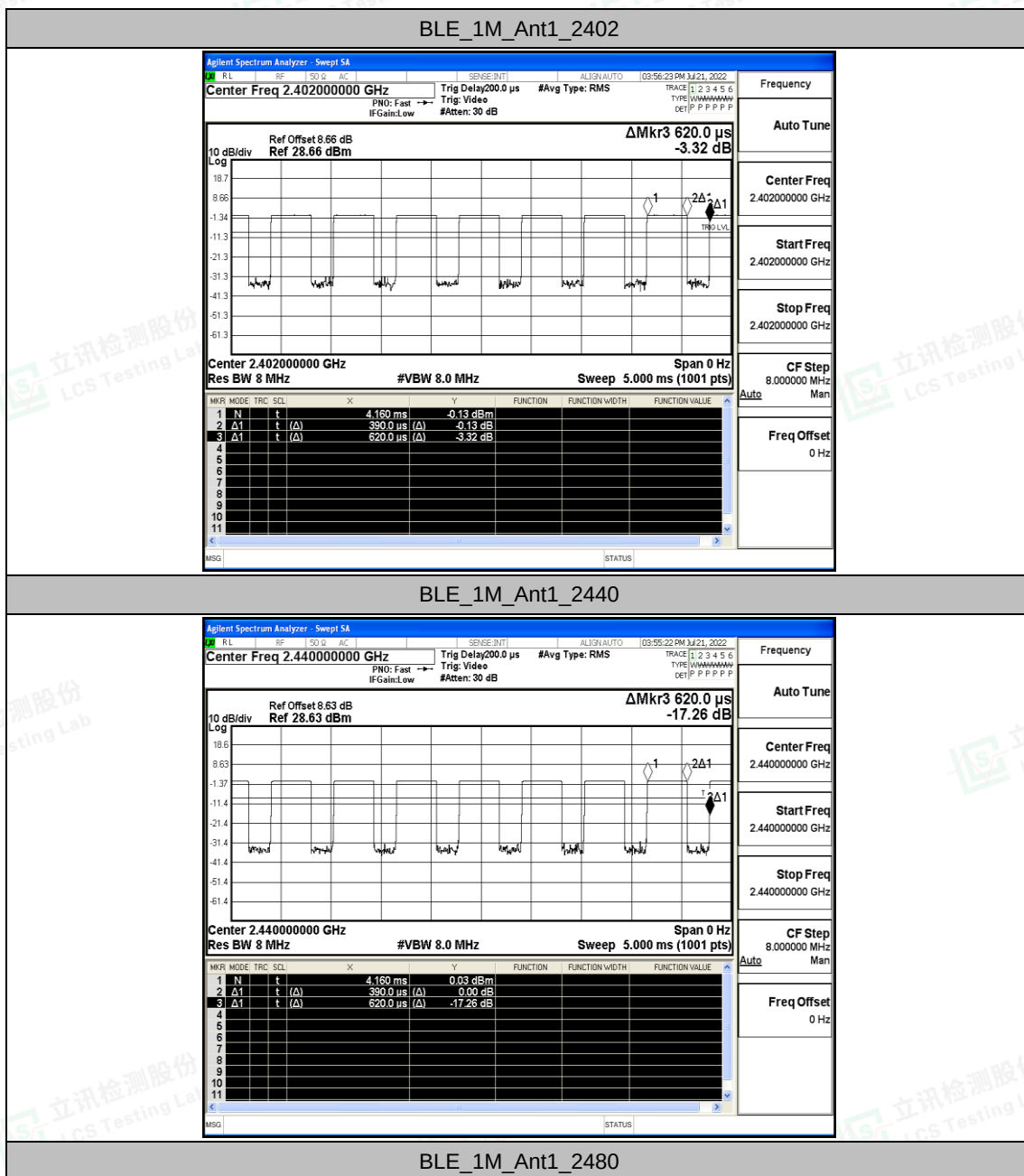
Test Result

TestMode	Antenna	Channel	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	1/T	Limit	Verdict
BLE_1M	Ant1	2402	0.39	0.62	0.6290	62.90	2.01	2.56	---	---
		2440	0.39	0.62	0.6290	62.90	2.01	2.56	---	---
		2480	0.39	0.62	0.6290	62.90	2.01	2.56	---	---





Test Graphs

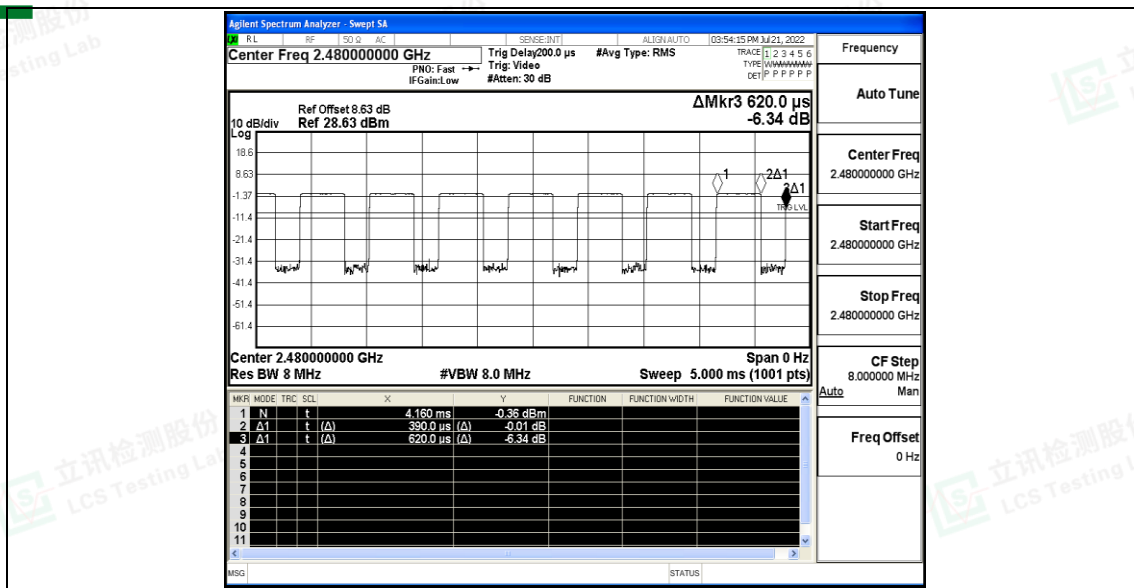


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B.7 Emissions in Restricted Bands

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	-57.38	≤-41.20	37.82	≤54	PASS
				AV	2388.410	-56.55	≤-41.20	38.65	≤54	PASS
				AV	2390.000	-56.62	≤-41.20	38.58	≤54	PASS
				Peak	2310.000	-47.68	≤-21.20	47.52	≤74	PASS
				Peak	2335.595	-46.68	≤-21.20	48.52	≤74	PASS
				Peak	2390.000	-48.13	≤-21.20	47.07	≤74	PASS
		High	2480	AV	2483.500	-52.95	≤-41.20	42.25	≤54	PASS
				AV	2483.520	-52.95	≤-41.20	42.25	≤54	PASS
				AV	2500.000	-56.28	≤-41.20	38.92	≤54	PASS
				Peak	2483.500	-45.64	≤-21.20	49.56	≤74	PASS
				Peak	2483.520	-45.64	≤-21.20	49.56	≤74	PASS
				Peak	2500.000	-47.9	≤-21.20	47.30	≤74	PASS

Note:

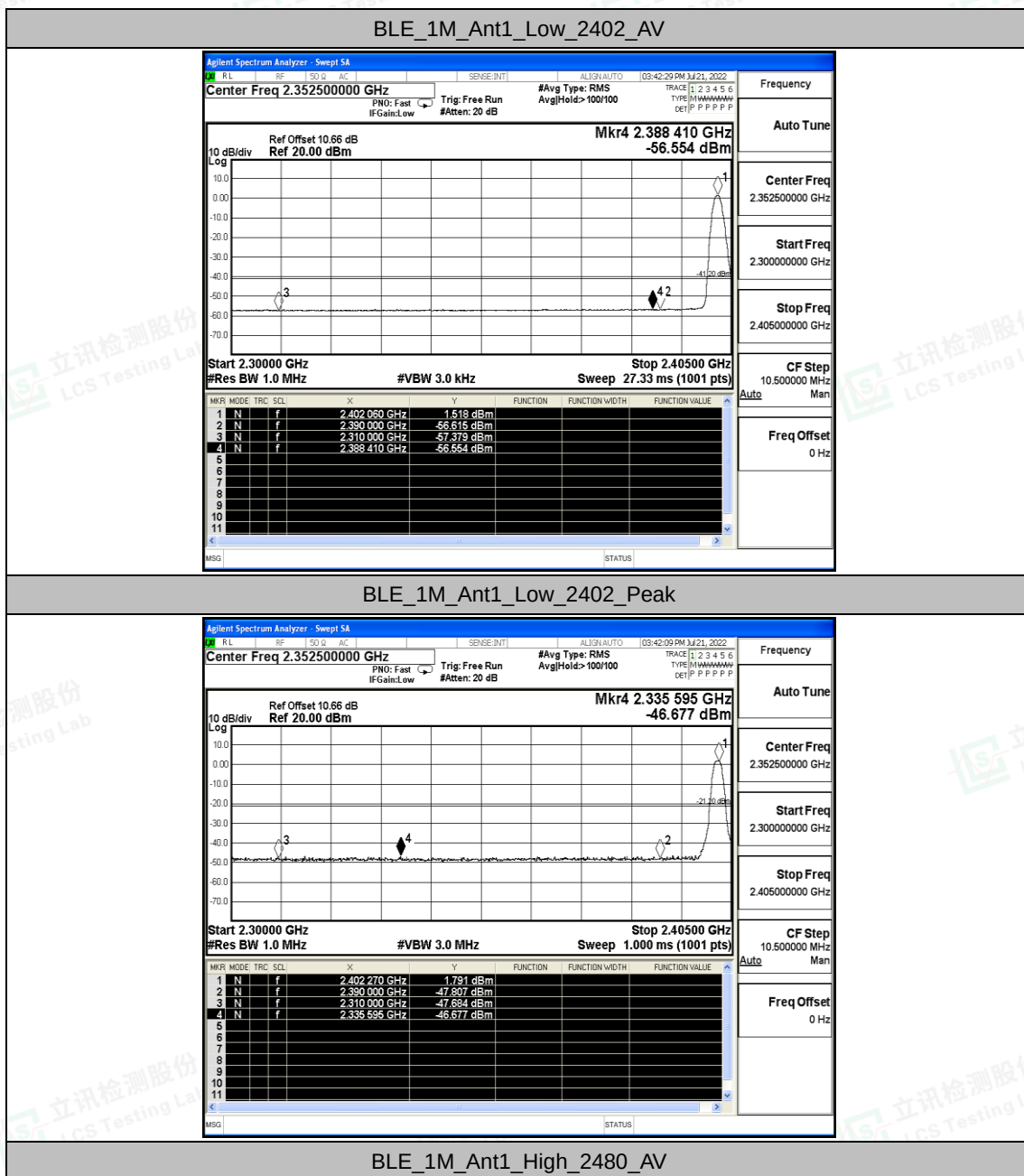
1. The Antenna Gain is compensated in the graph.
2. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.



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Test Graphs

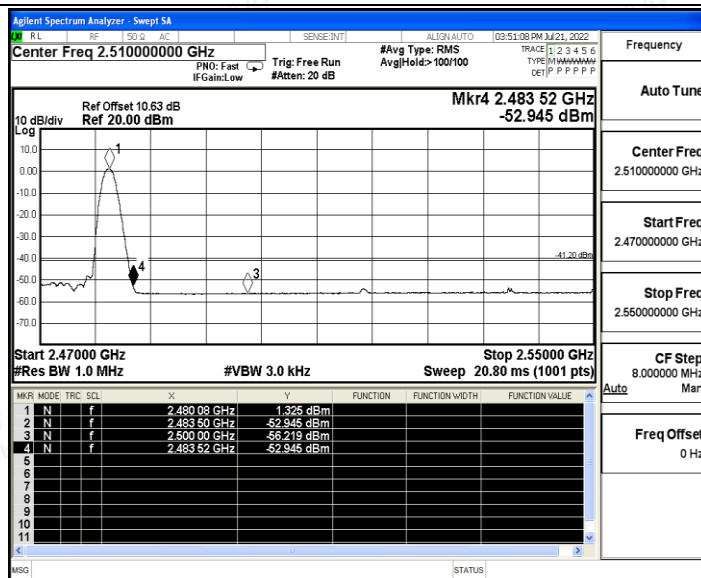


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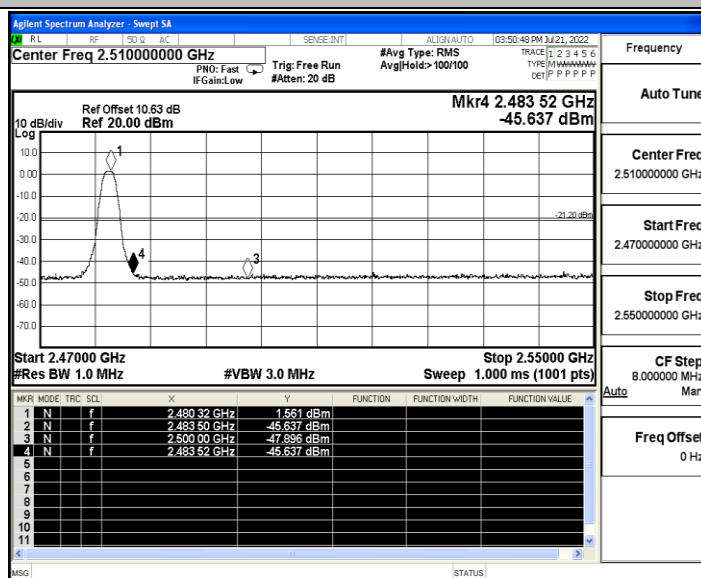
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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BLE_1M_Ant1_High_2480_Peak



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