

Appendix B

RF Test Data for BT LE(Conducted Measurement)

Product Name: Portable Wireless Display Monitor

Test Model: MVQ30106GW

Environmental Conditions

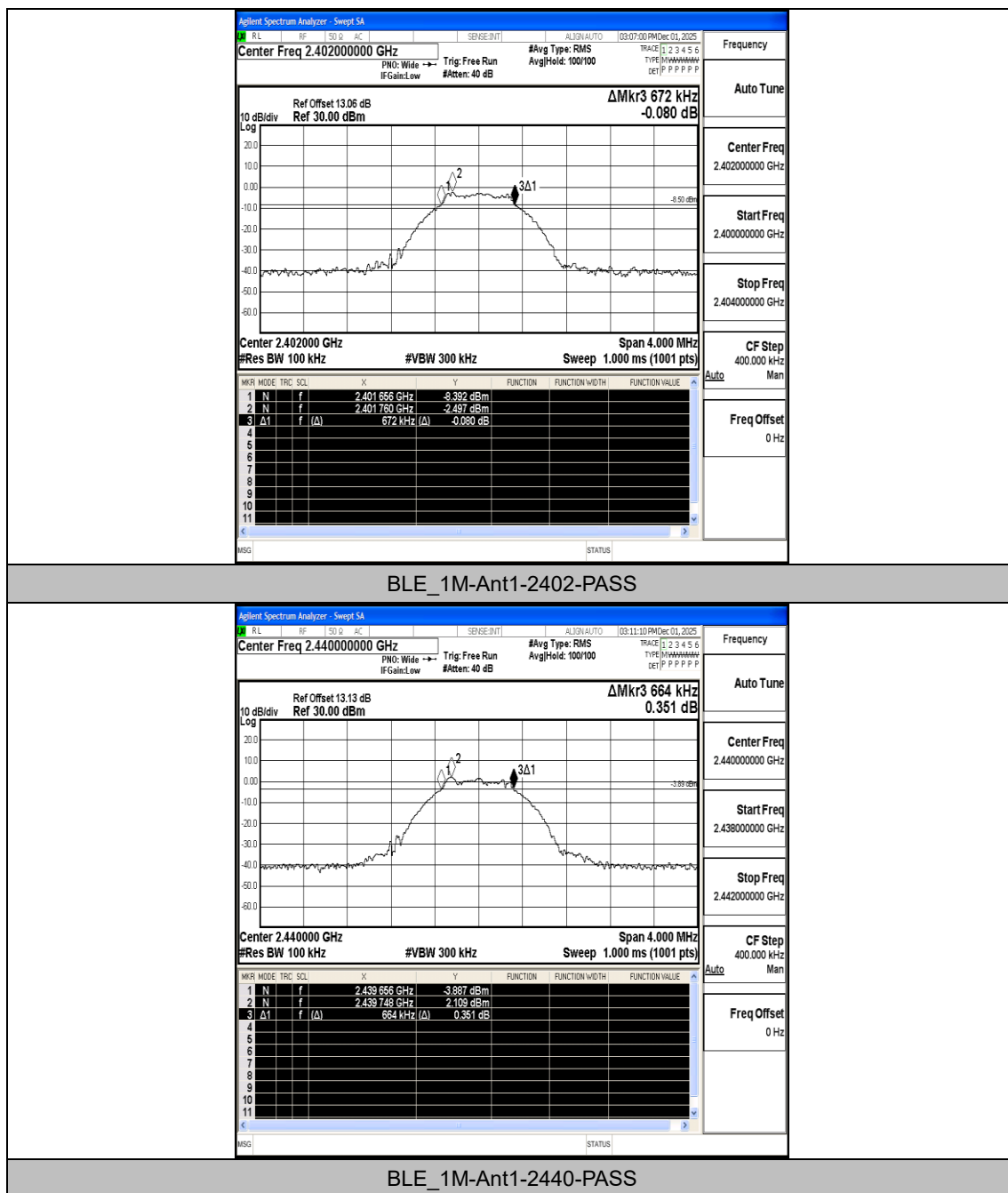
Temperature:	23.3°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Yongzhou Huang
Supervised by:	Fengliu Tang

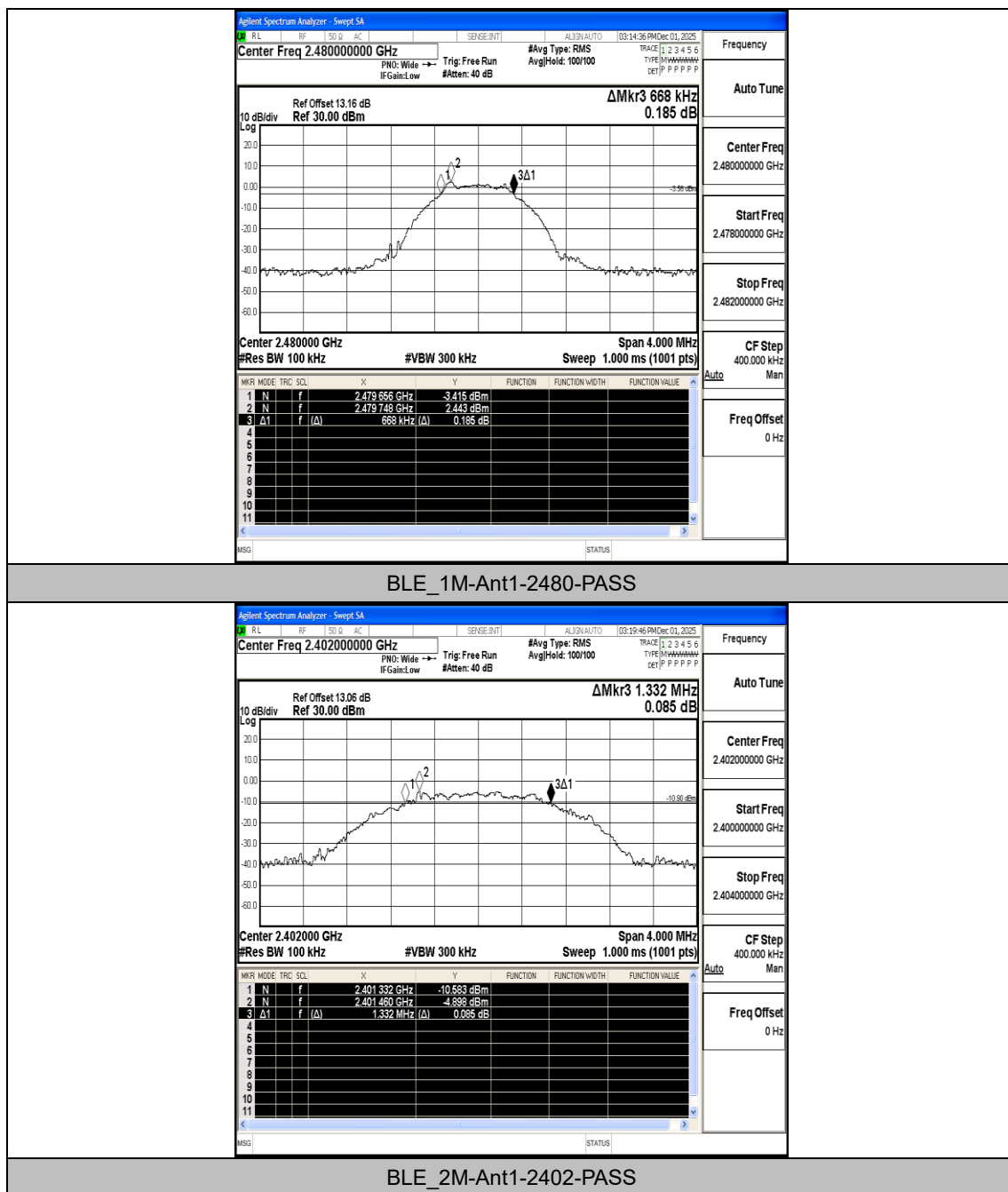
B.1 6dB Bandwidth

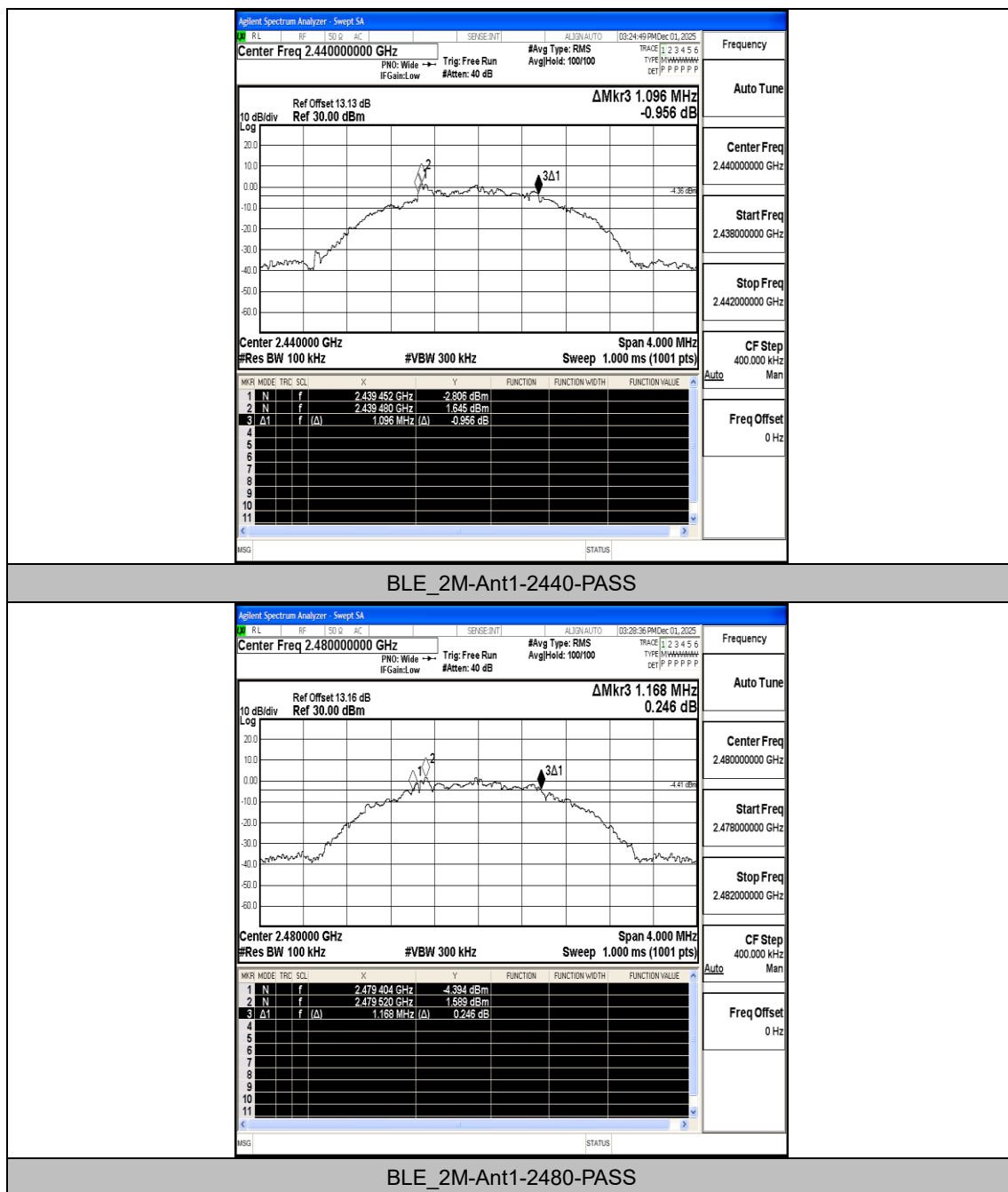
Test Result

TestMode	Antenna	Frequency [MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	0.672	2401.656	2402.328	0.5	PASS
BLE_1M	Ant1	2440	0.664	2439.656	2440.320	0.5	PASS
BLE_1M	Ant1	2480	0.668	2479.656	2480.324	0.5	PASS
BLE_2M	Ant1	2402	1.332	2401.332	2402.664	0.5	PASS
BLE_2M	Ant1	2440	1.096	2439.452	2440.548	0.5	PASS
BLE_2M	Ant1	2480	1.168	2479.404	2480.572	0.5	PASS

Test Graphs





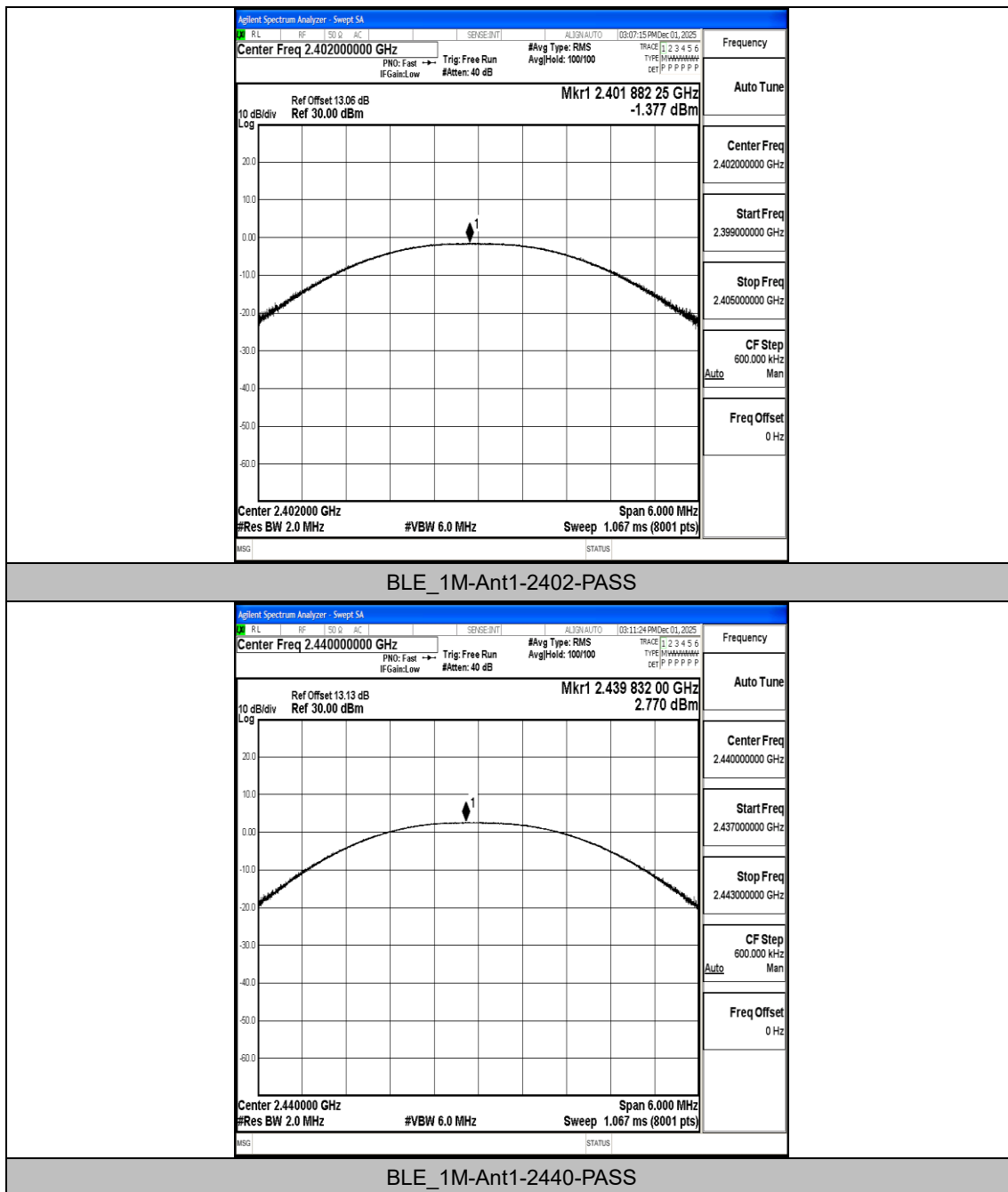


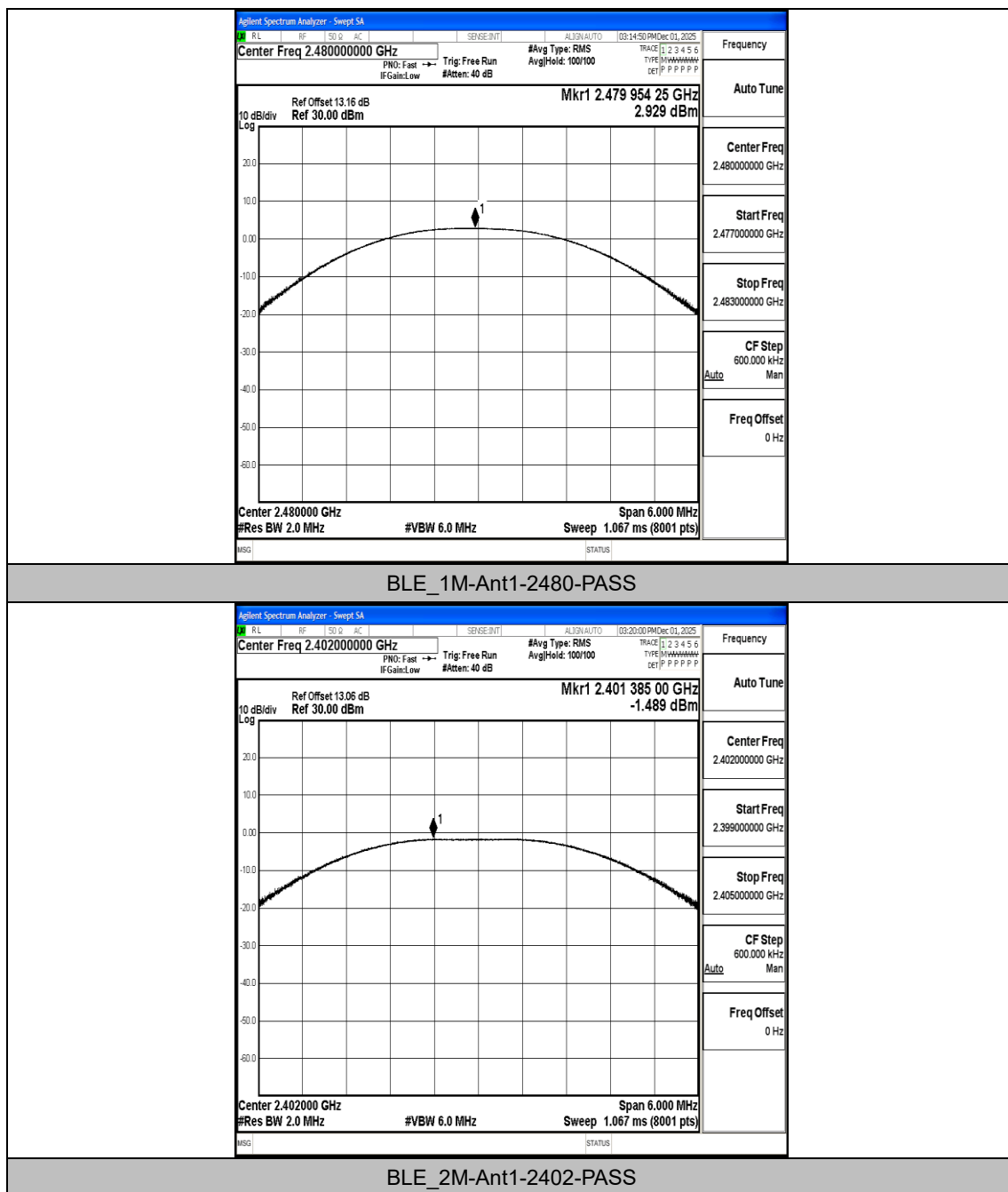
B.2 Maximum Peak conducted output power

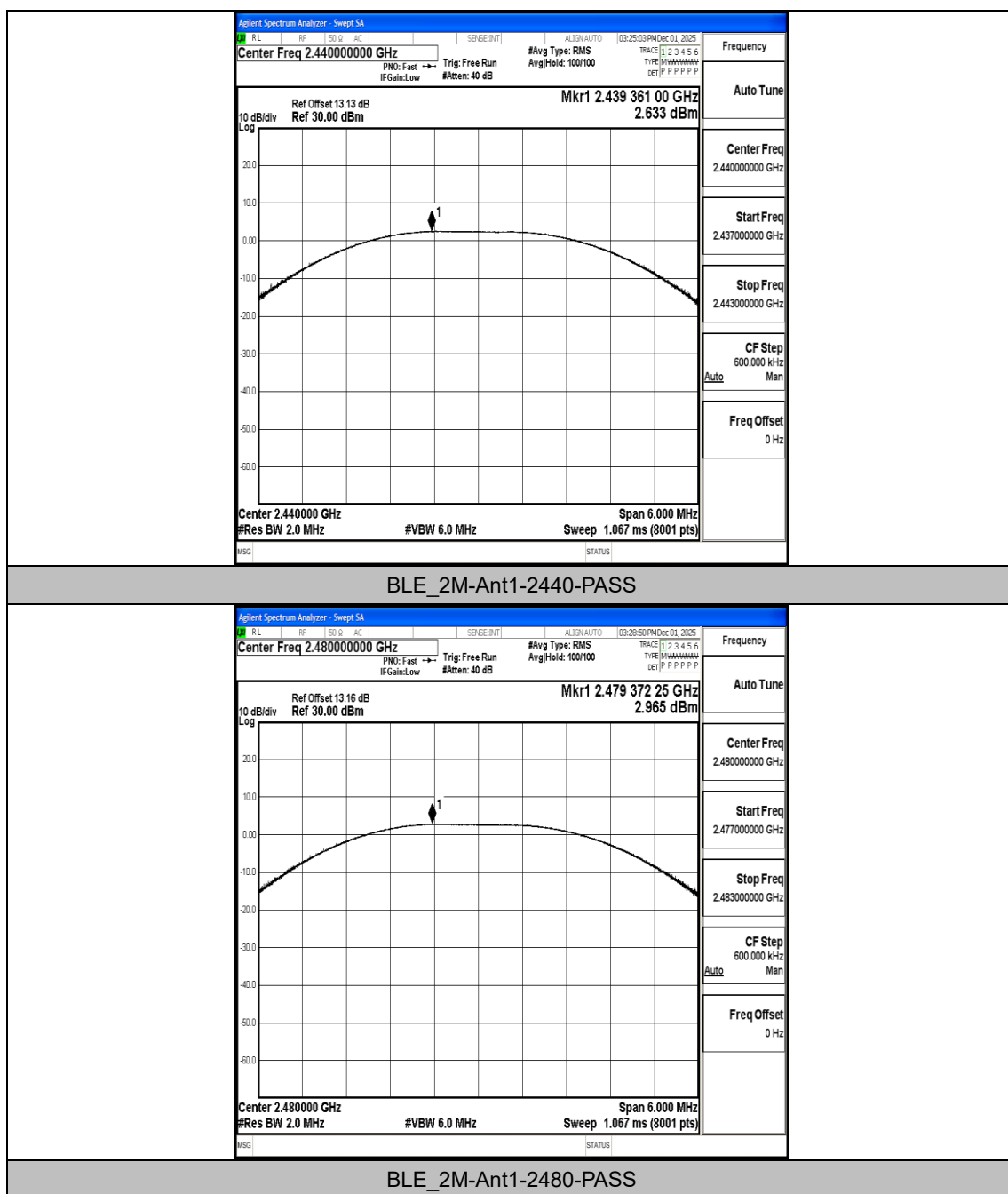
Test Result

TestMode	Antenna	Frequency [MHz]	Conducted Peak Power[dBm]	Conducted Limit [dBm]	Verdict
BLE_1M	Ant1	2402	-1.38	≤30	PASS
BLE_1M	Ant1	2440	2.77	≤30	PASS
BLE_1M	Ant1	2480	2.93	≤30	PASS
BLE_2M	Ant1	2402	-1.49	≤30	PASS
BLE_2M	Ant1	2440	2.63	≤30	PASS
BLE_2M	Ant1	2480	2.97	≤30	PASS

Test Graphs





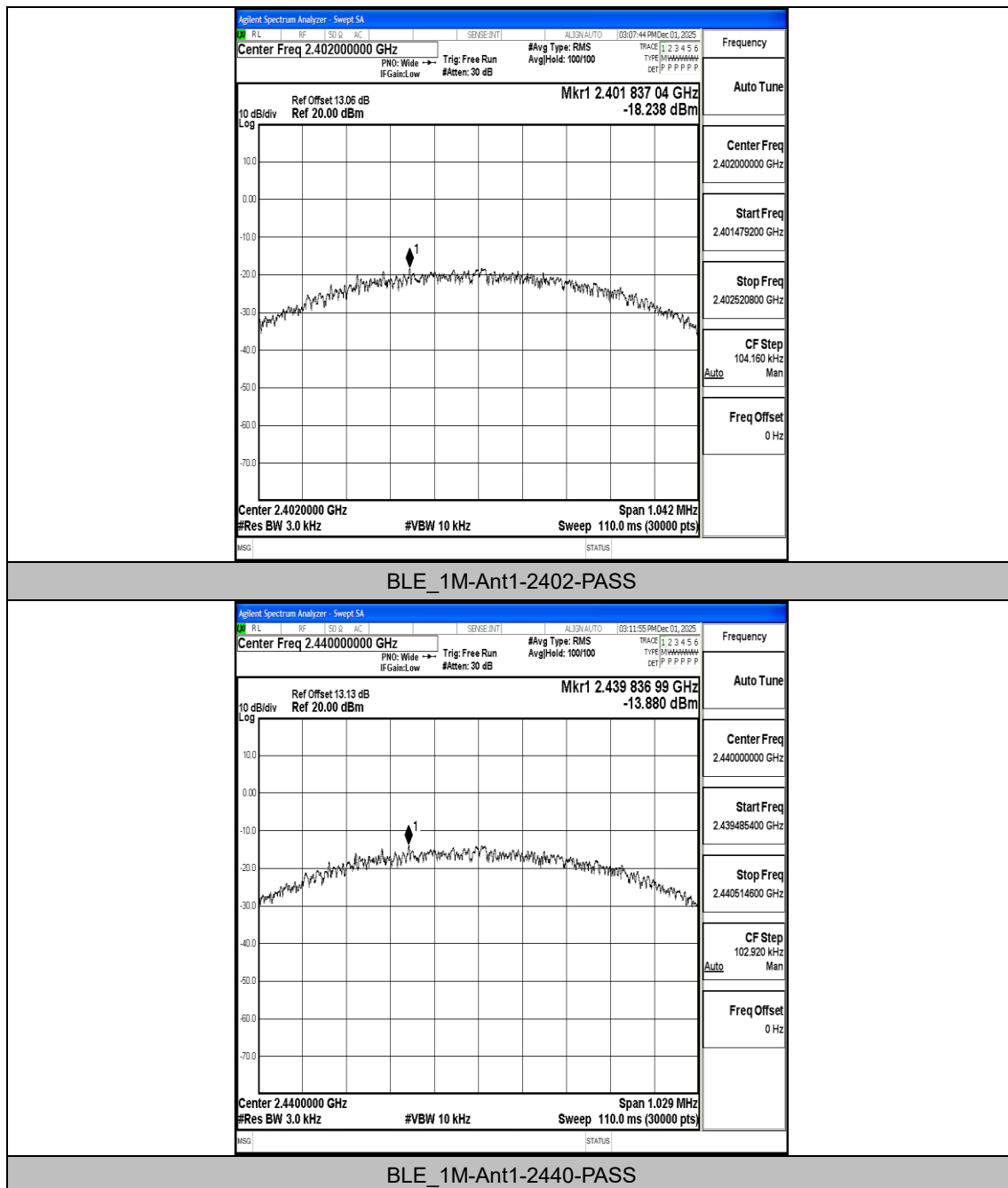


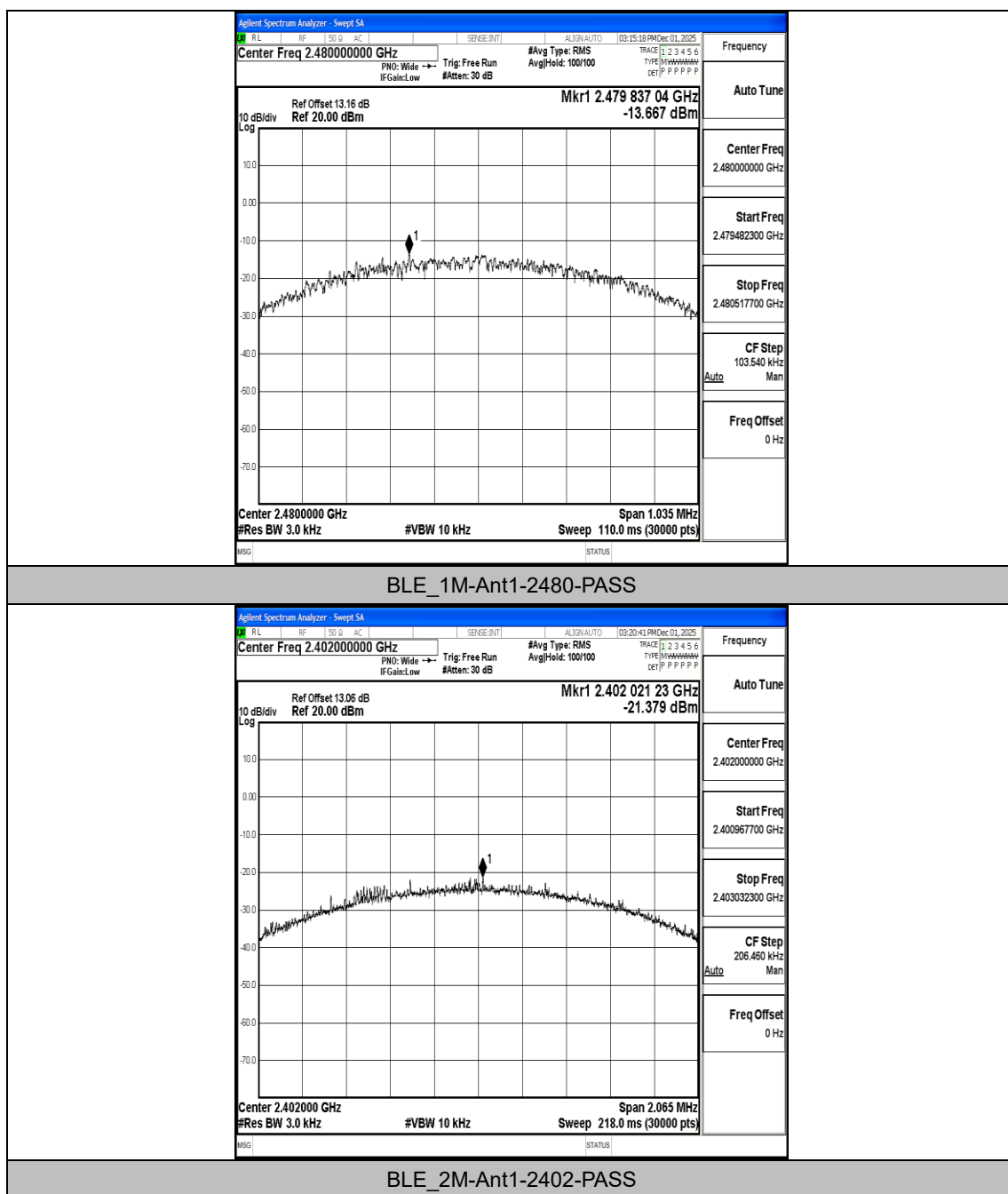
B.3 Maximum power spectral density

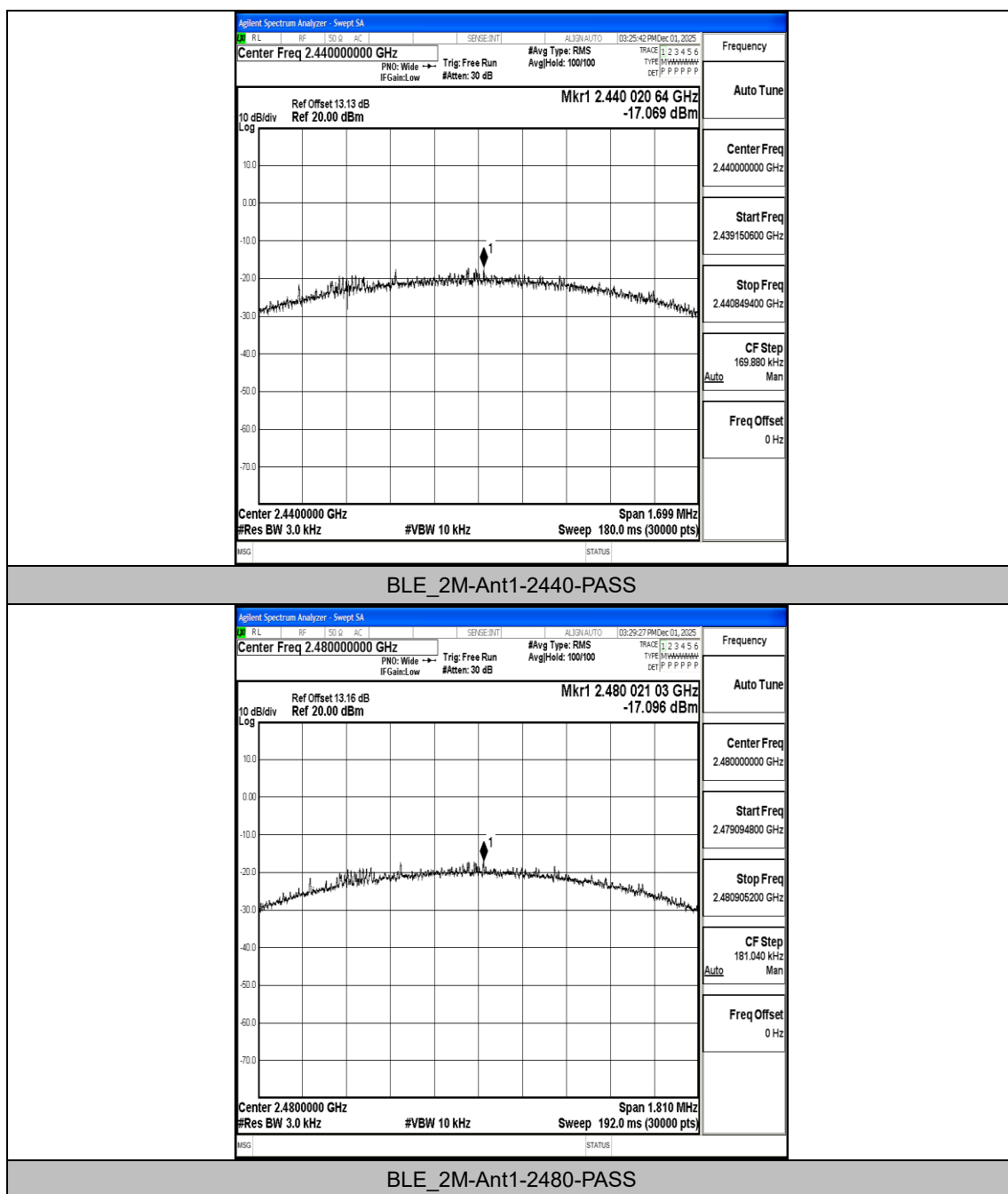
Test Result

TestMode	Antenna	Frequency [MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.24	≤8.00	PASS
BLE_1M	Ant1	2440	-13.88	≤8.00	PASS
BLE_1M	Ant1	2480	-13.67	≤8.00	PASS
BLE_2M	Ant1	2402	-21.38	≤8.00	PASS
BLE_2M	Ant1	2440	-17.07	≤8.00	PASS
BLE_2M	Ant1	2480	-17.10	≤8.00	PASS

Test Graphs





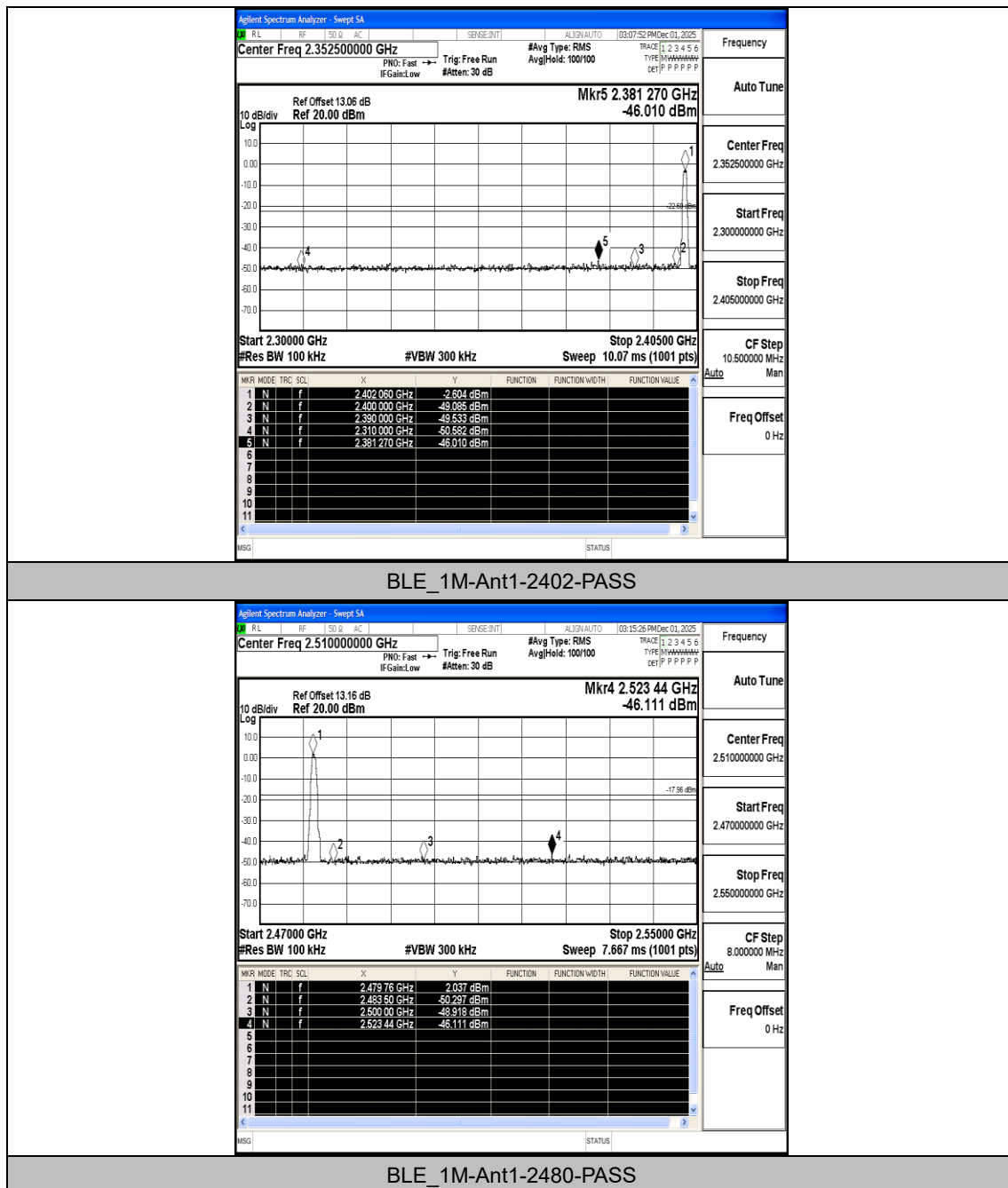


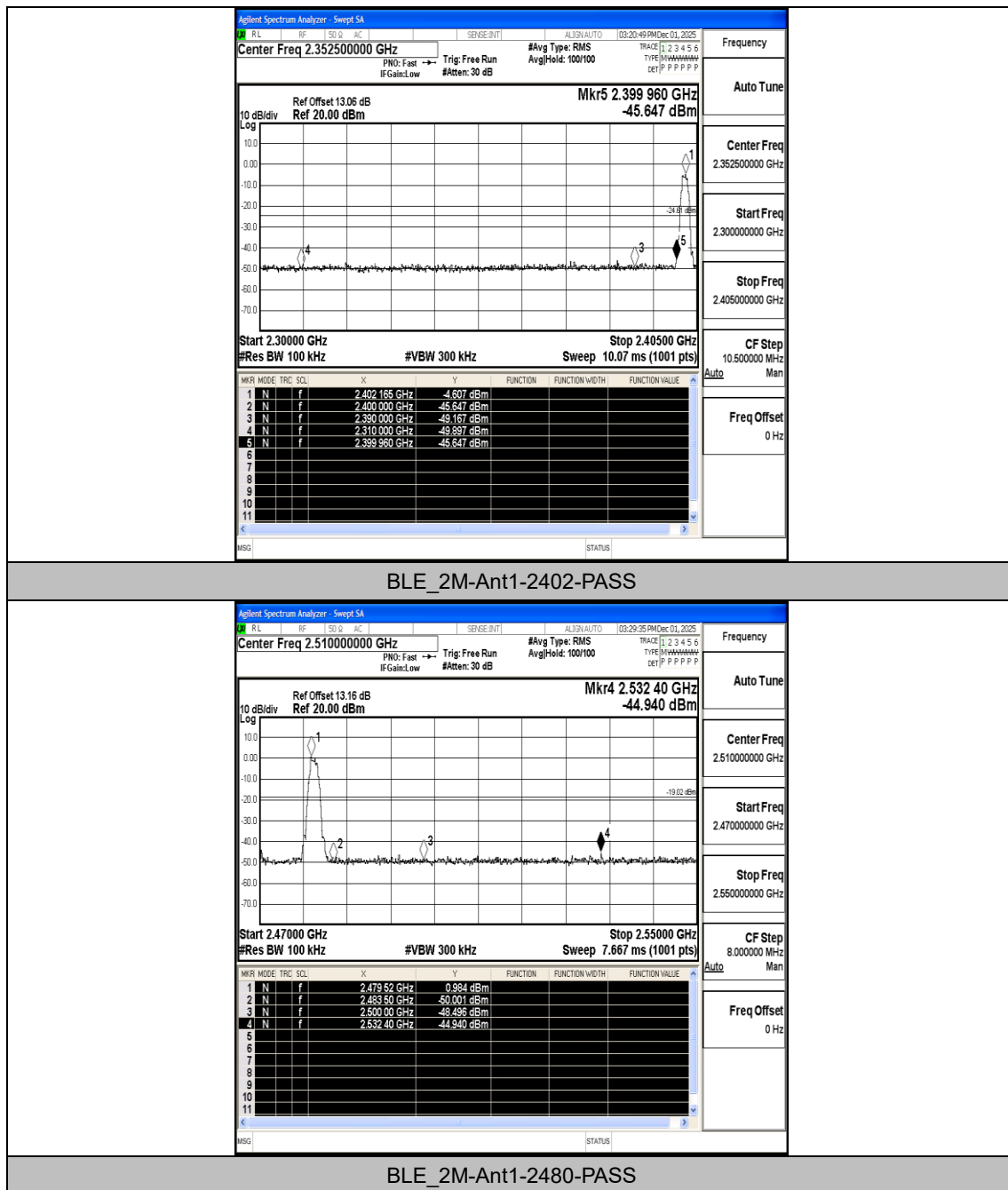
B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Frequency [MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-2.60	-46.01	≤-22.6	PASS
BLE_1M	Ant1	High	2480	2.04	-46.11	≤-17.96	PASS
BLE_2M	Ant1	Low	2402	-4.61	-45.65	≤-24.61	PASS
BLE_2M	Ant1	High	2480	0.98	-44.94	≤-19.02	PASS

Test Graphs



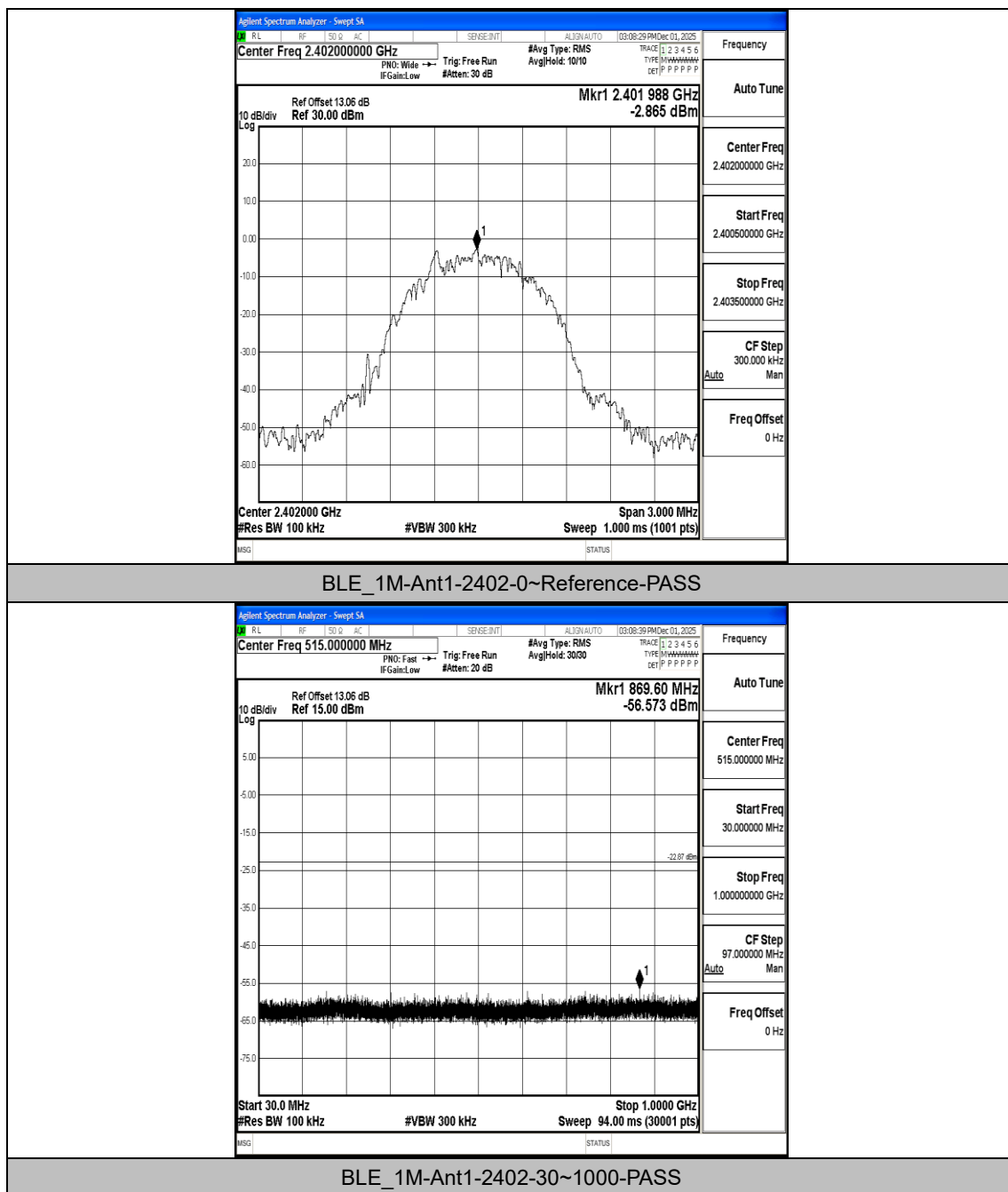


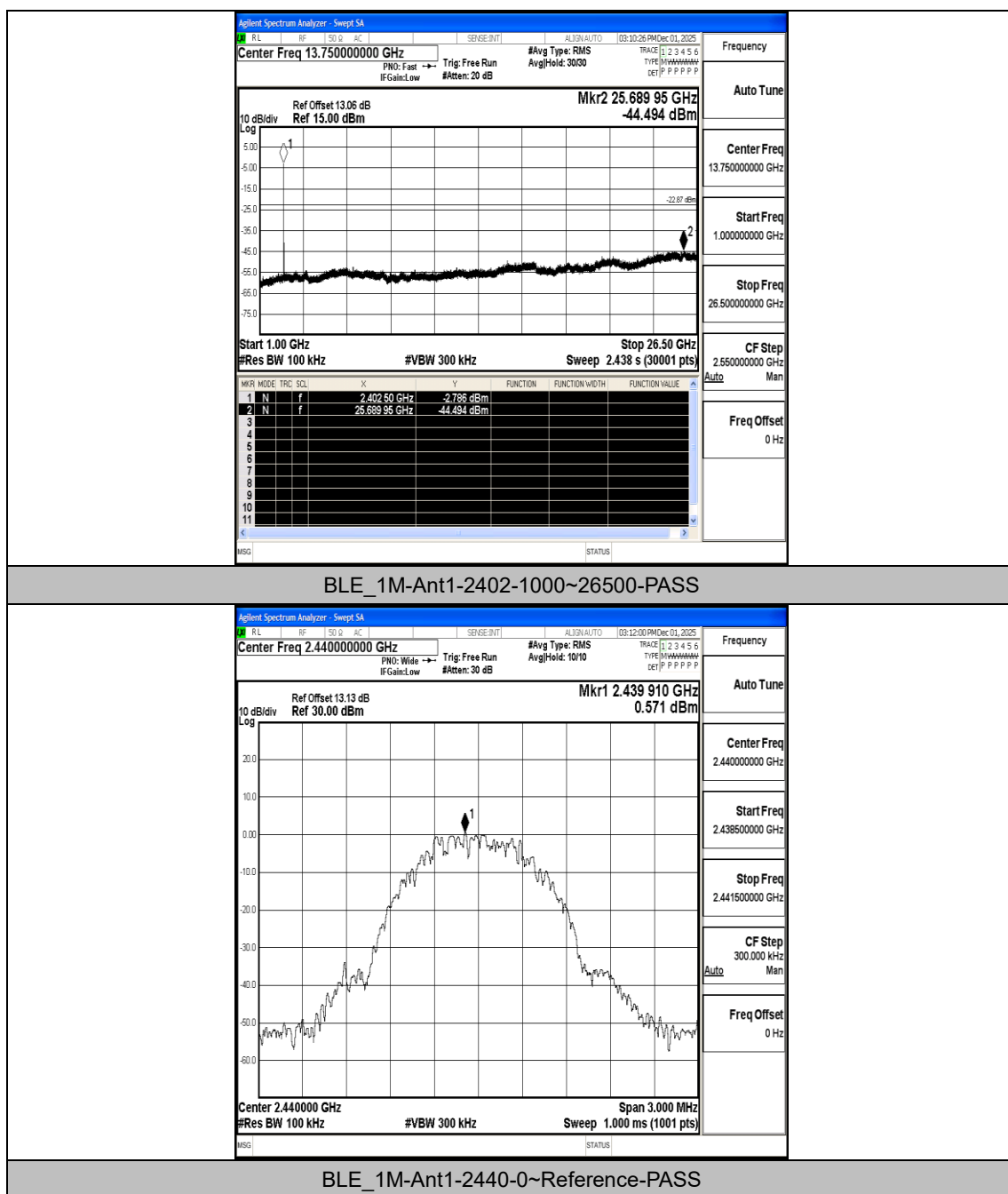
B.5 Conducted Spurious Emission

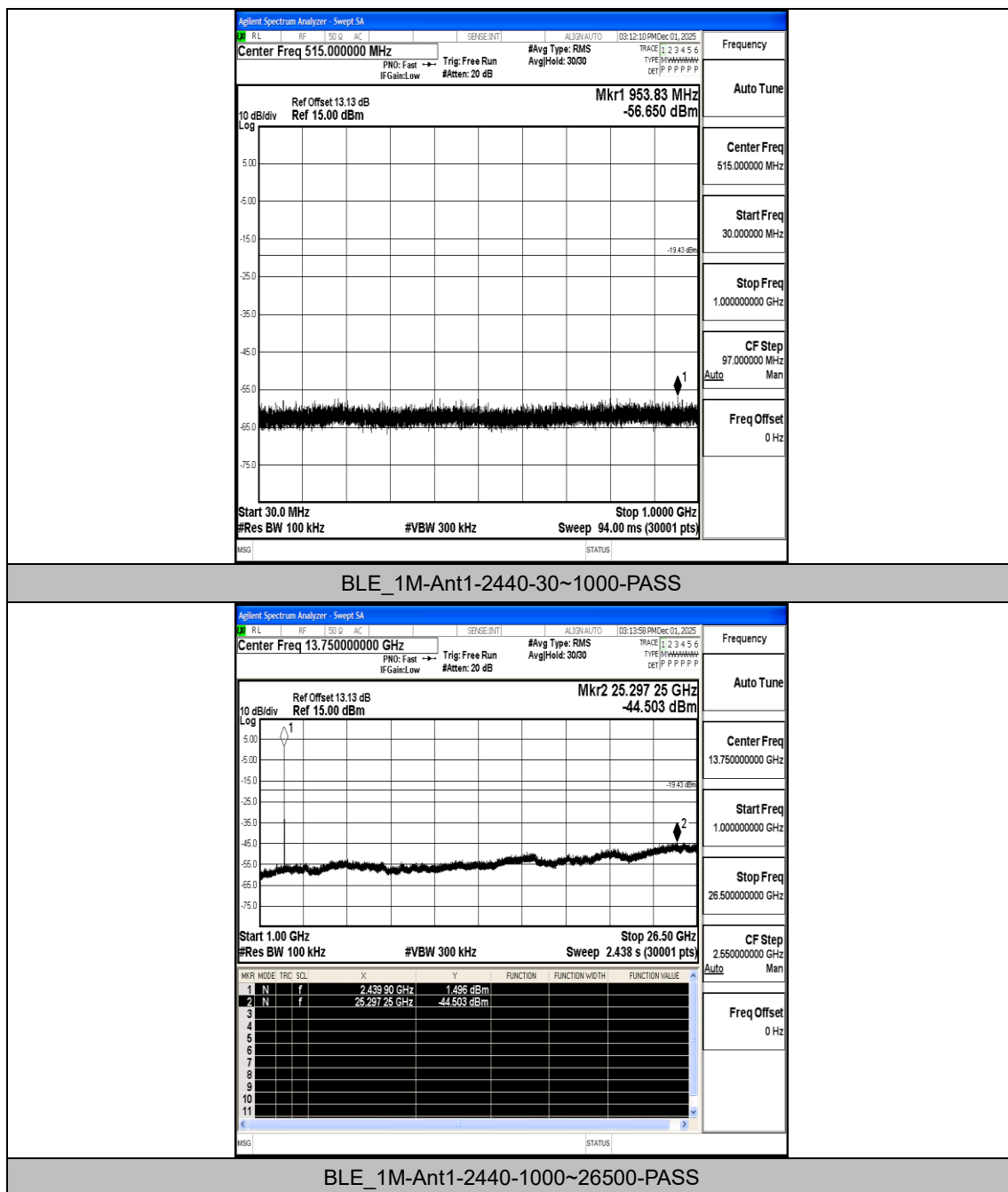
Test Result

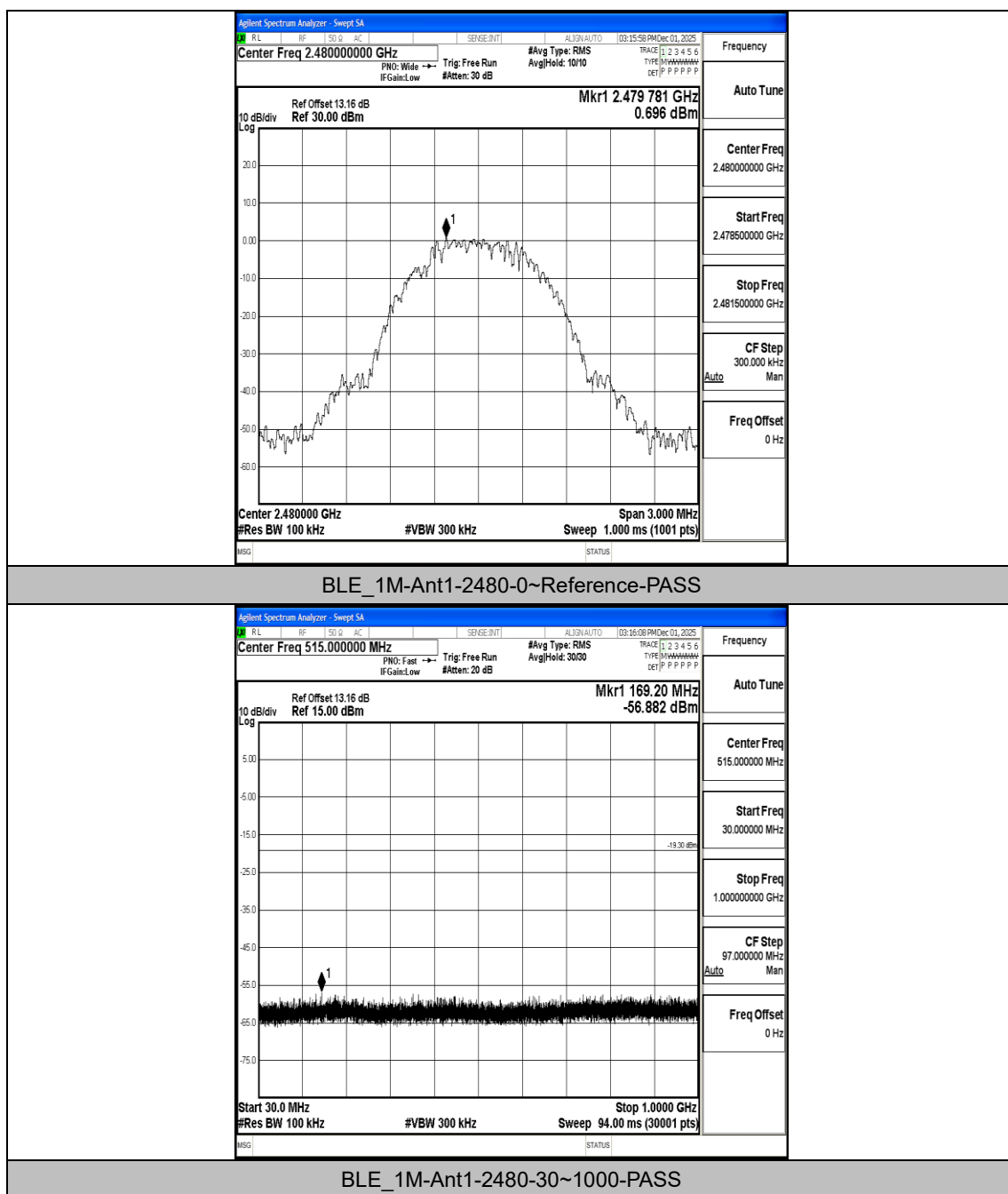
TestMode	Antenna	Frequency [MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-2.87	-2.87	---	PASS
BLE_1M	Ant1	2402	30~1000	-2.87	-56.57	≤-22.87	PASS
BLE_1M	Ant1	2402	1000~26500	-2.87	-44.49	≤-22.87	PASS
BLE_1M	Ant1	2440	0~Reference	0.57	0.57	---	PASS
BLE_1M	Ant1	2440	30~1000	0.57	-56.65	≤-19.43	PASS
BLE_1M	Ant1	2440	1000~26500	0.57	-44.5	≤-19.43	PASS
BLE_1M	Ant1	2480	0~Reference	0.70	0.70	---	PASS
BLE_1M	Ant1	2480	30~1000	0.70	-56.88	≤-19.3	PASS
BLE_1M	Ant1	2480	1000~26500	0.70	-43.99	≤-19.3	PASS
BLE_2M	Ant1	2402	0~Reference	-2.99	-2.99	---	PASS
BLE_2M	Ant1	2402	30~1000	-2.99	-35.6	≤-22.99	PASS
BLE_2M	Ant1	2402	1000~26500	-2.99	-44.35	≤-22.99	PASS
BLE_2M	Ant1	2440	0~Reference	1.18	1.18	---	PASS
BLE_2M	Ant1	2440	30~1000	1.18	-56.58	≤-18.82	PASS
BLE_2M	Ant1	2440	1000~26500	1.18	-43.69	≤-18.82	PASS
BLE_2M	Ant1	2480	0~Reference	2.17	2.17	---	PASS
BLE_2M	Ant1	2480	30~1000	2.17	-55.98	≤-17.83	PASS
BLE_2M	Ant1	2480	1000~26500	2.17	-43.83	≤-17.83	PASS

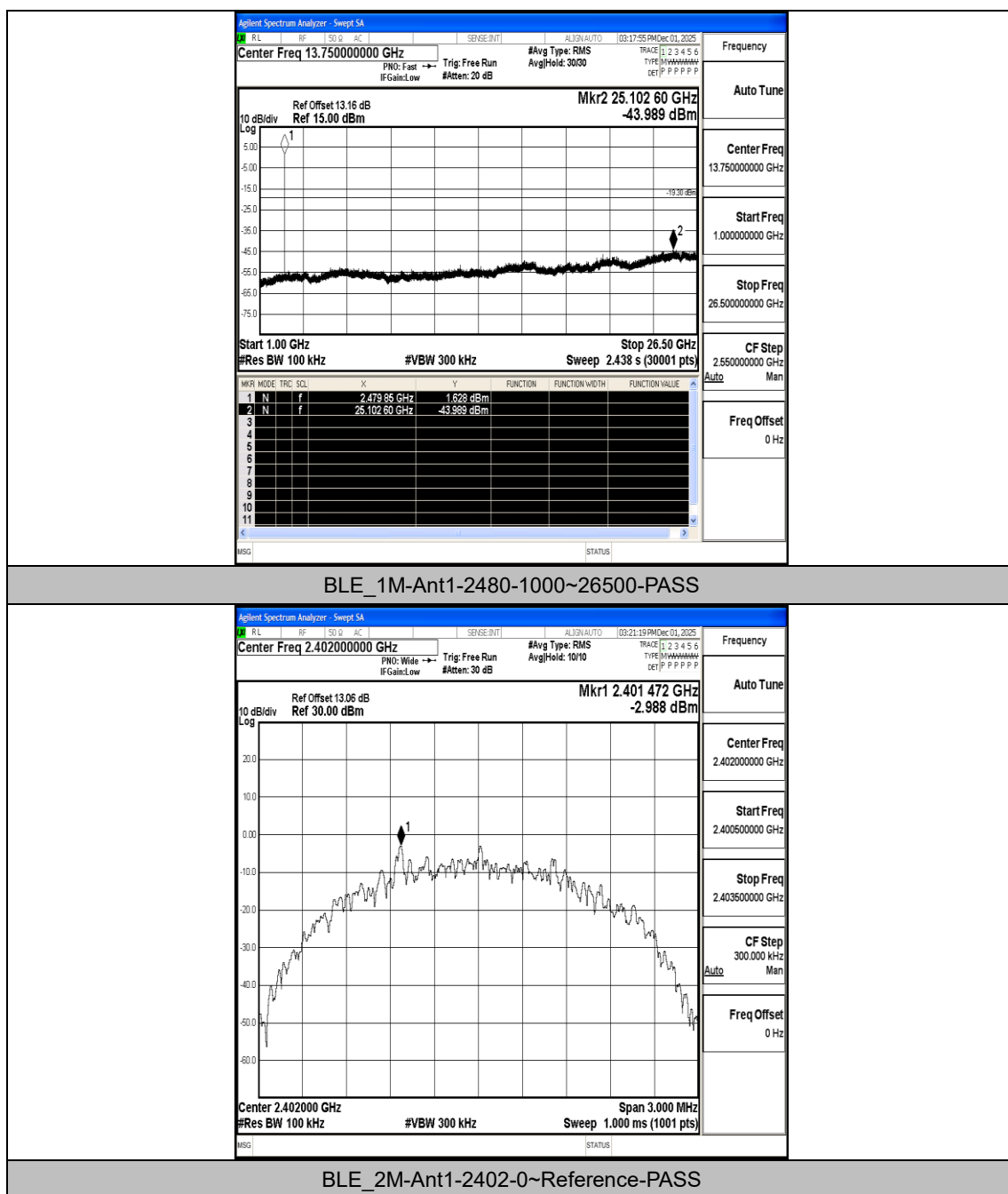
Test Graphs

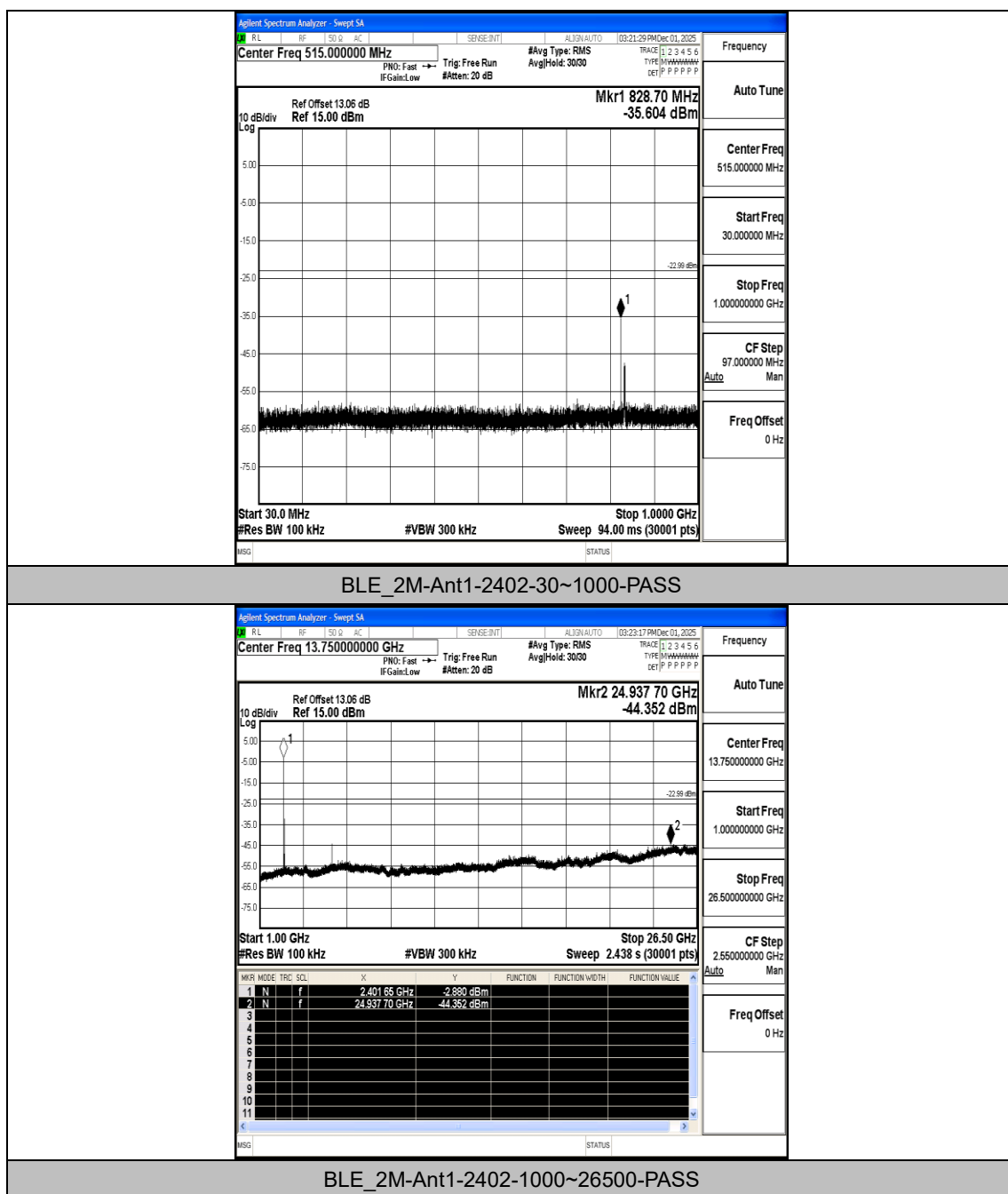


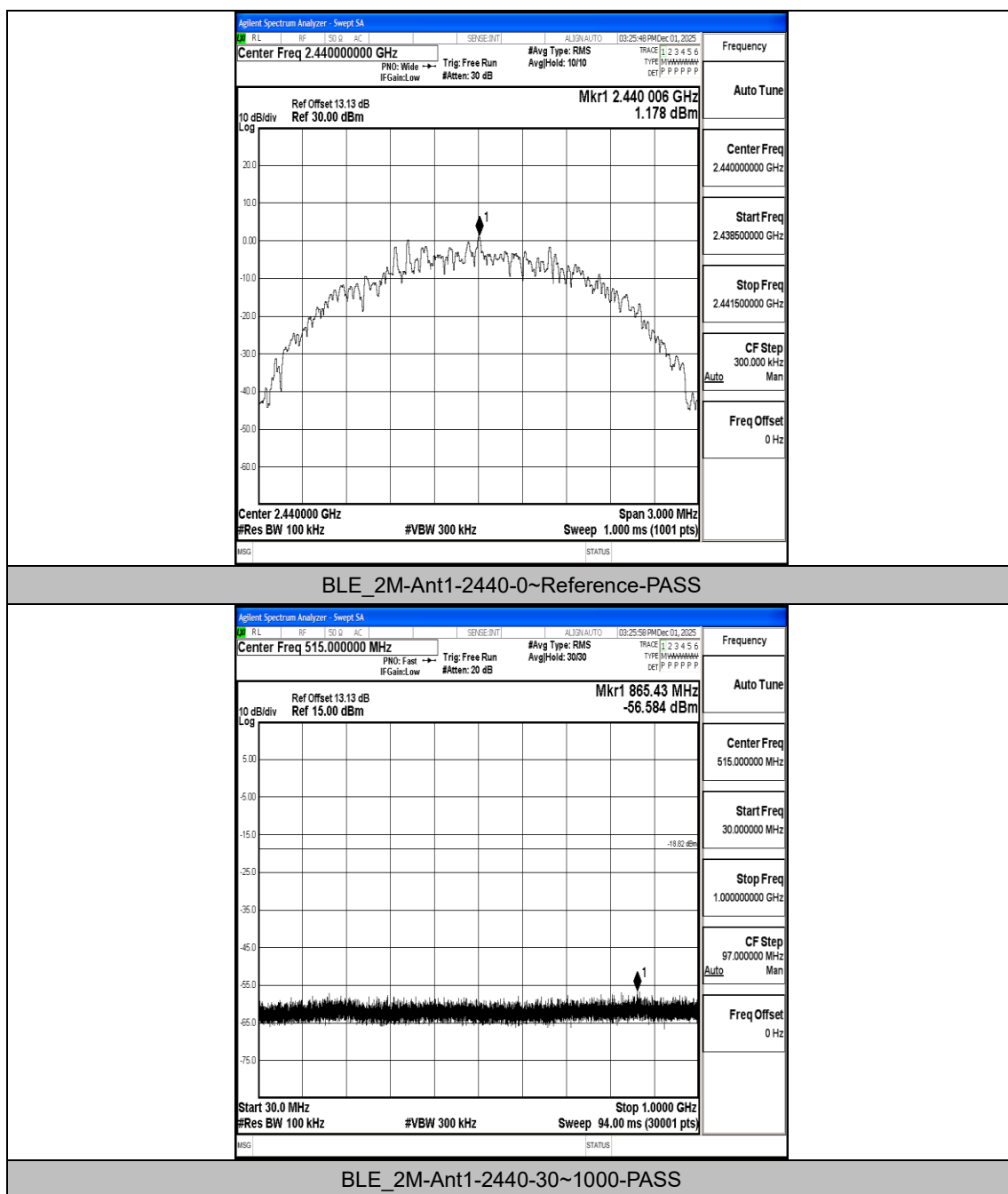


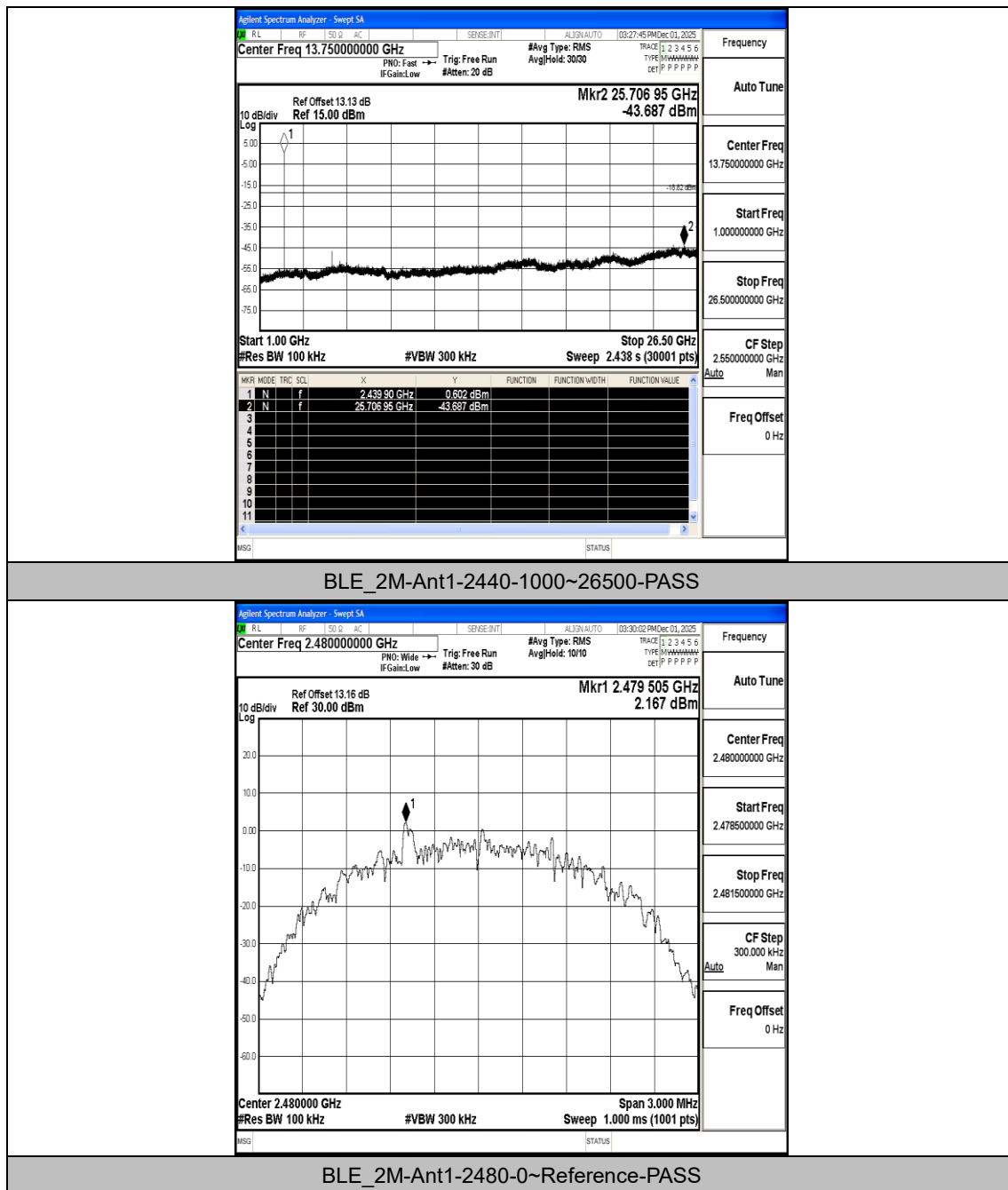


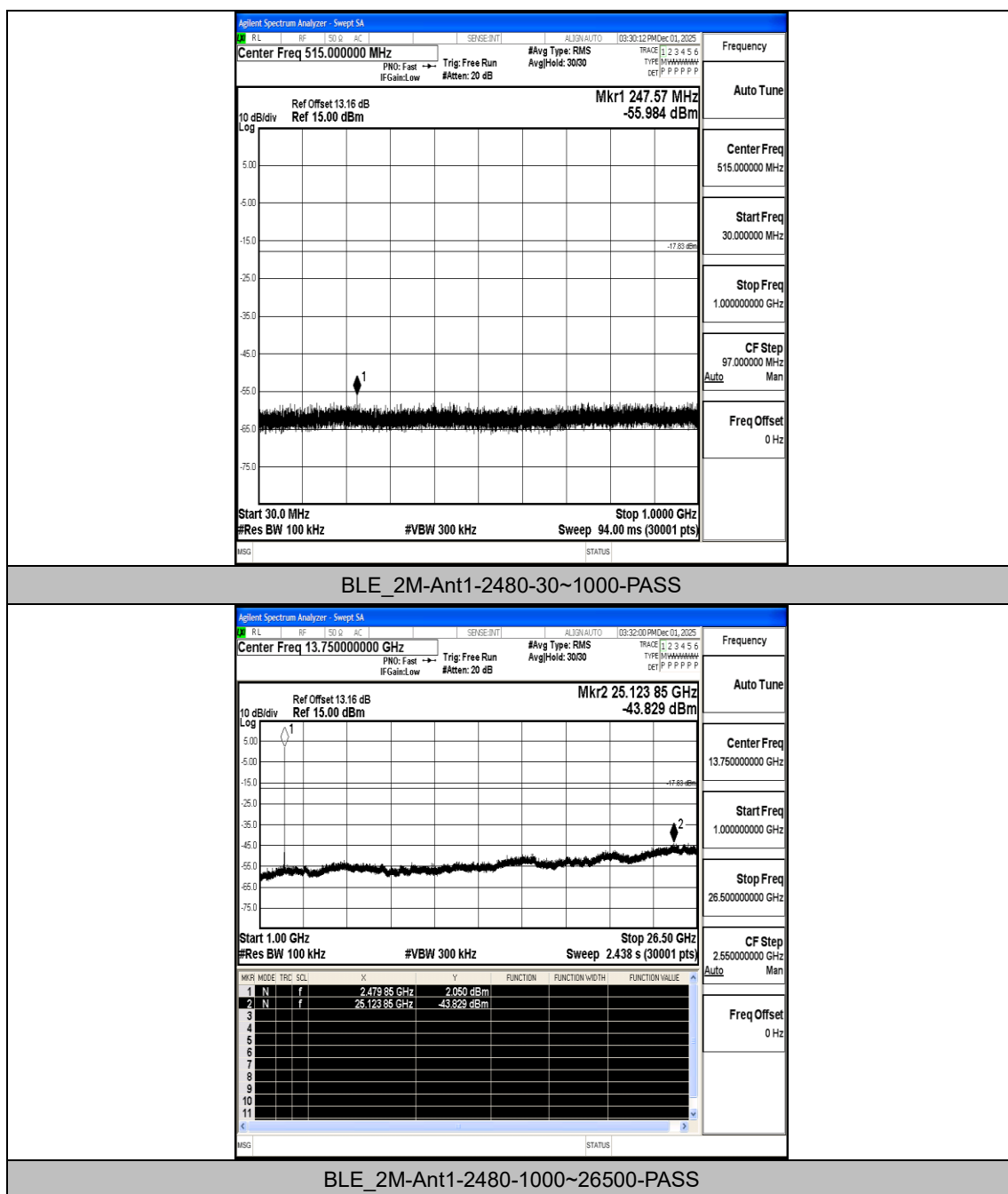










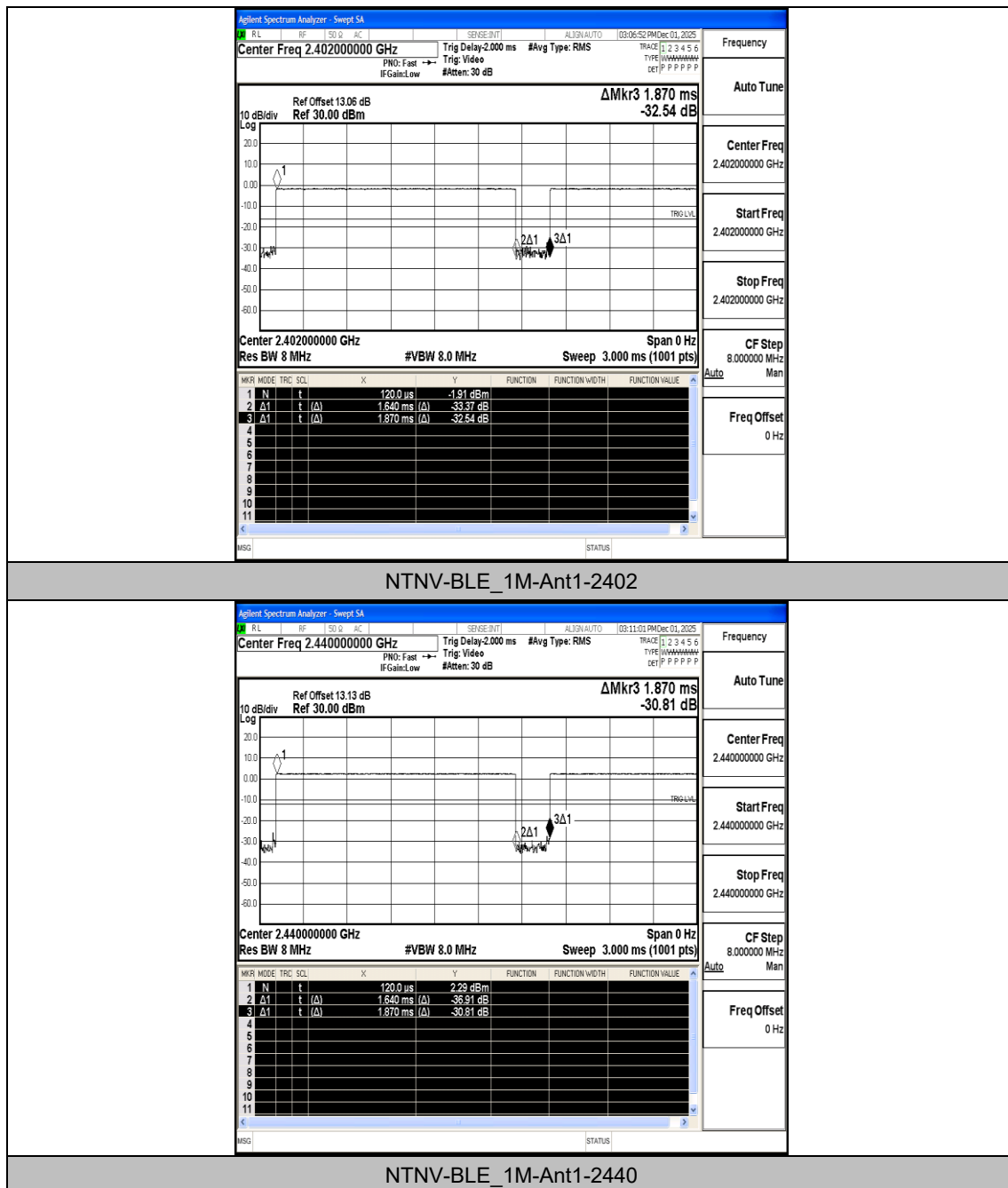


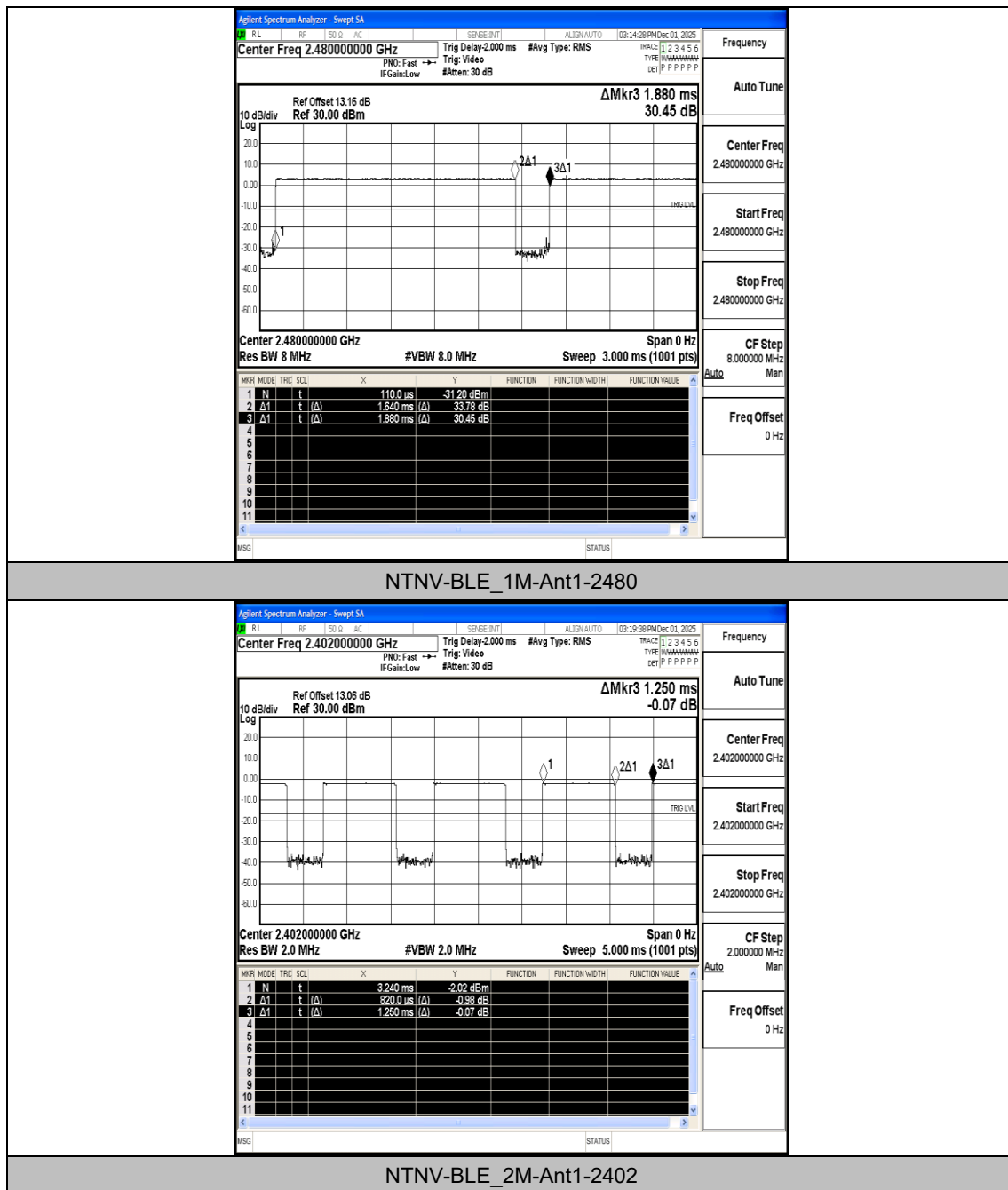
B.6 Duty Cycle

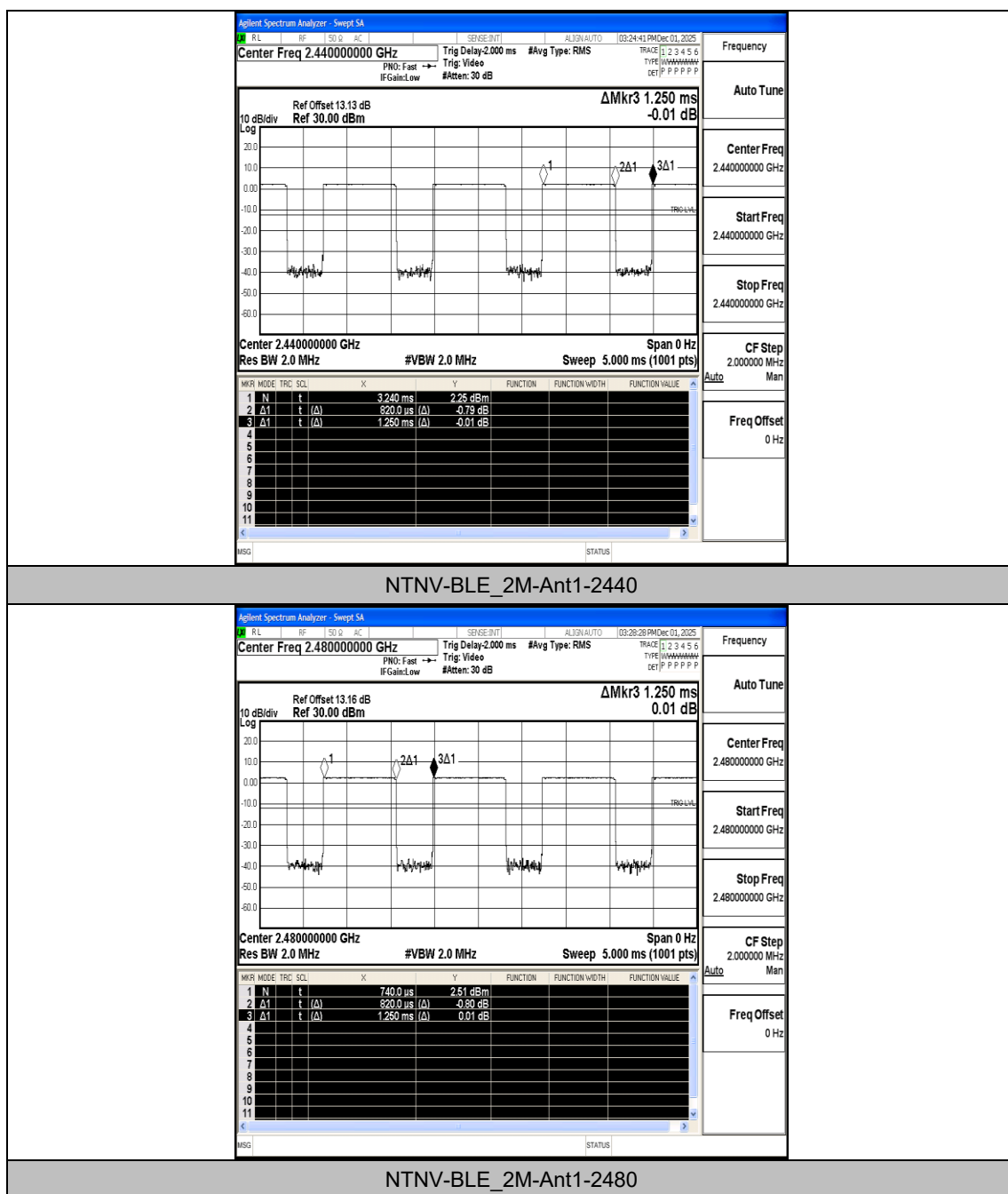
Test Result

TestMode	Antenna	Frequency [MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	1.64	1.87	87.70	0.57
BLE_1M	Ant1	2440	1.64	1.87	87.70	0.57
BLE_1M	Ant1	2480	1.64	1.88	87.23	0.59
BLE_2M	Ant1	2402	0.82	1.25	65.60	1.83
BLE_2M	Ant1	2440	0.82	1.25	65.60	1.83
BLE_2M	Ant1	2480	0.82	1.25	65.60	1.83

Test Graphs







B.7 Emissions in Restricted Bands

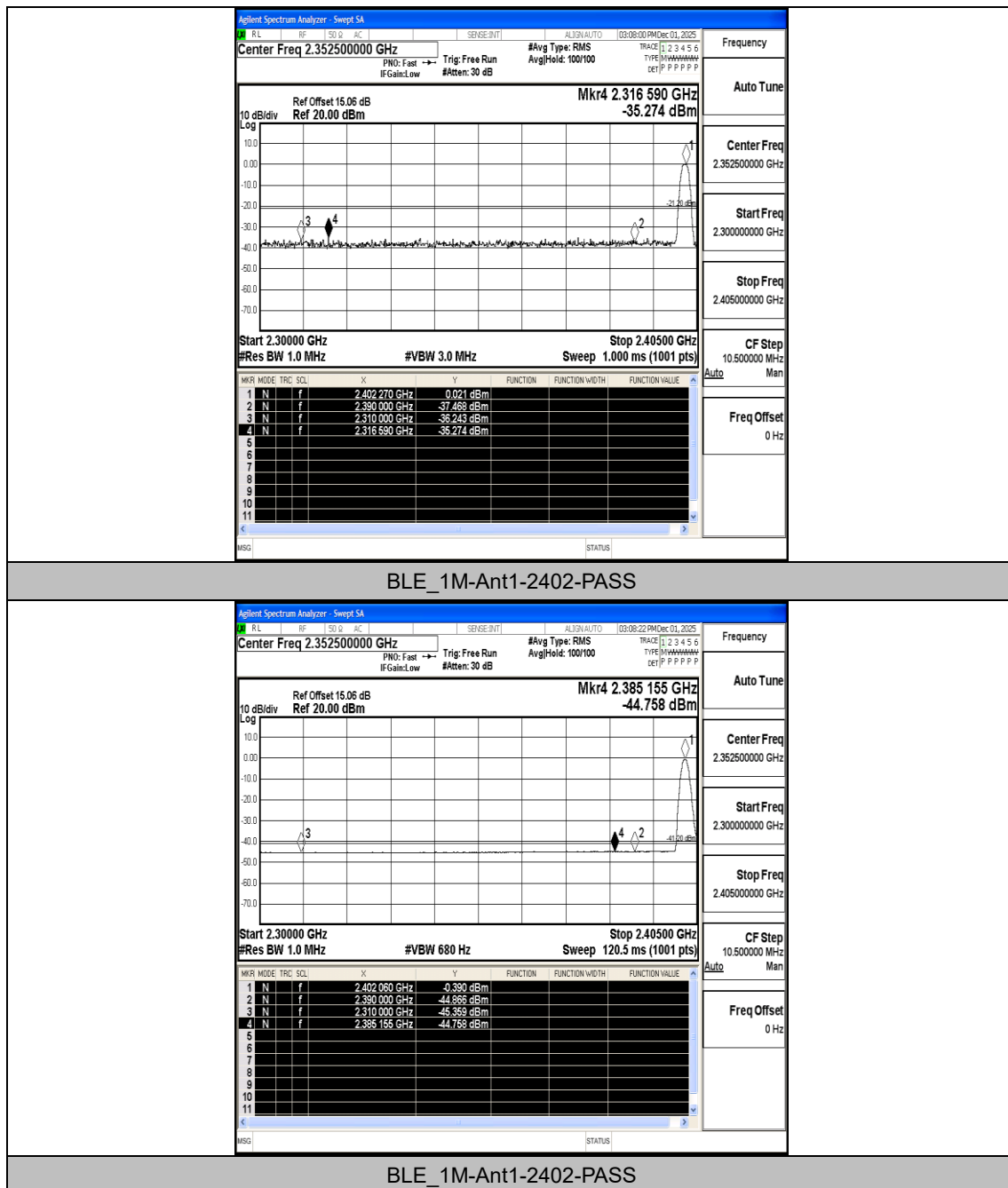
Test Result

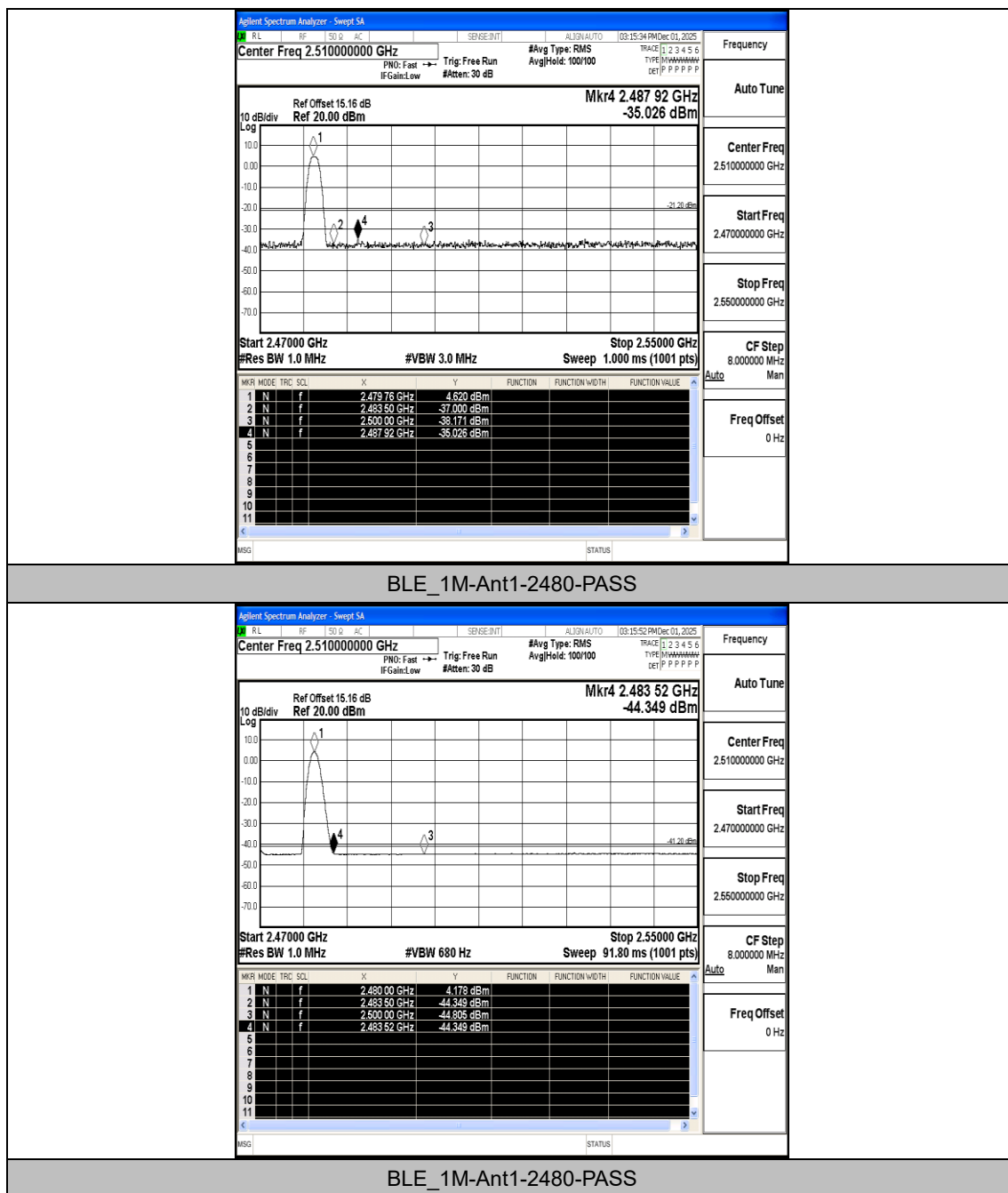
TestMode	Antenna	ChName	Frequency [MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	Peak	2390.000	-37.47	≤-21.20	57.73	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-36.24	≤-21.20	58.96	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2316.590	-35.27	≤-21.20	59.93	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-44.87	≤-41.20	50.33	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-45.36	≤-41.20	49.84	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2385.155	-44.76	≤-41.20	50.44	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-37	≤-21.20	58.20	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-38.17	≤-21.20	57.03	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2487.920	-35.03	≤-21.20	60.17	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-44.35	≤-41.20	50.85	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-44.81	≤-41.20	50.39	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2483.520	-44.35	≤-41.20	50.85	≤54	PASS
BLE_2M	Ant1	Low	2402	Peak	2390.000	-37.43	≤-21.20	57.77	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2310.000	-37.78	≤-21.20	57.42	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2382.425	-35.32	≤-21.20	59.88	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2390.000	-44.72	≤-41.20	50.48	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-45.22	≤-41.20	49.98	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2378.855	-44.38	≤-41.20	50.82	≤54	PASS
BLE_2M	Ant1	High	2480	Peak	2483.500	-37.34	≤-21.20	57.86	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2500.000	-38.58	≤-21.20	56.62	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2499.680	-34.42	≤-21.20	60.78	≤74	PASS
BLE_2M	Ant1	High	2480	AV	2483.500	-43.63	≤-41.20	51.57	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2500.000	-44.59	≤-41.20	50.61	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2483.520	-43.63	≤-41.20	51.57	≤54	PASS

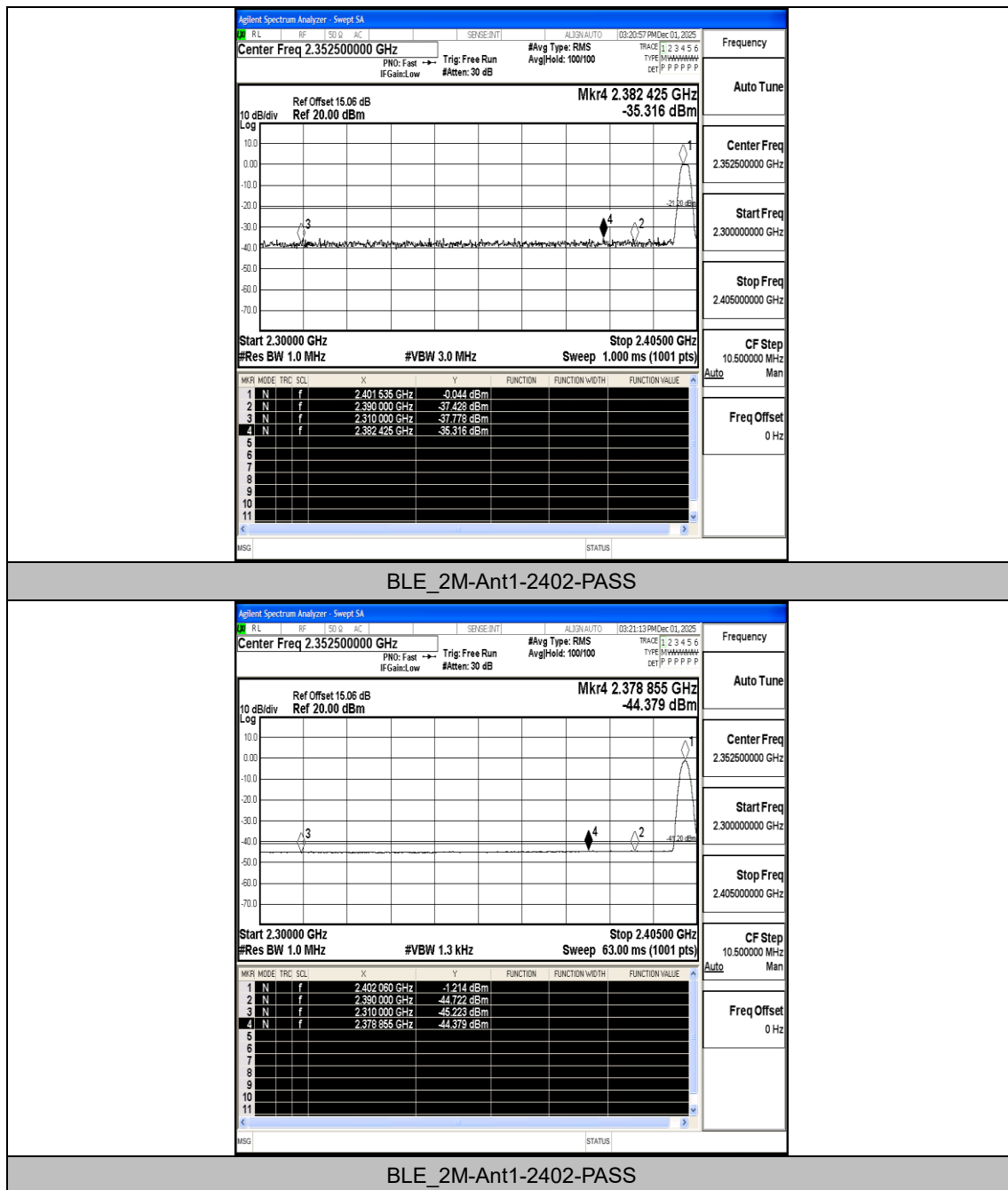
Note:

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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