

Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Fingerbot

Test Model: ADFB0301

Environmental Conditions

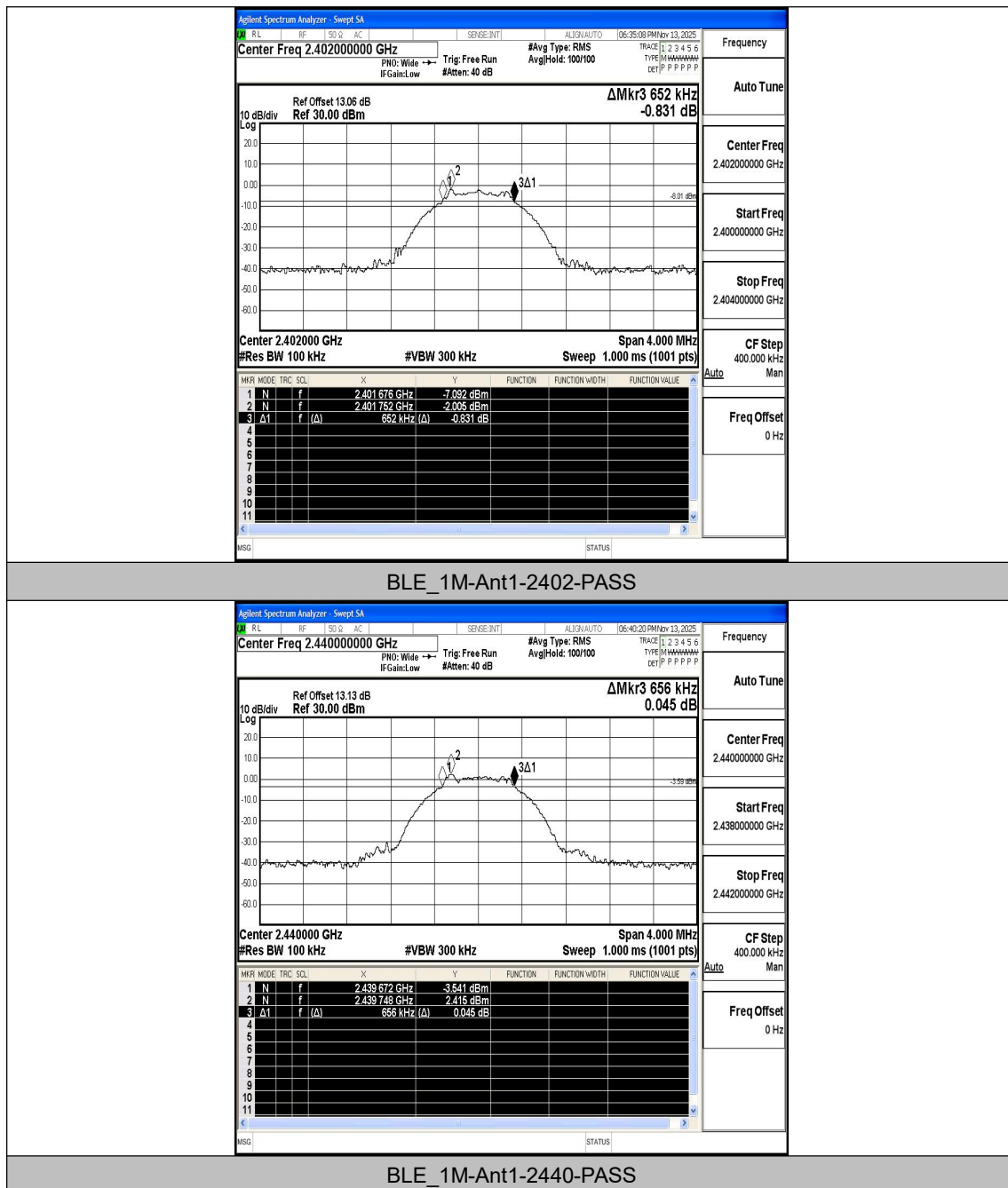
Temperature:	24.5° C
Relative Humidity:	53.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Yongzhou Huang
Supervised by:	Fengliu Tang

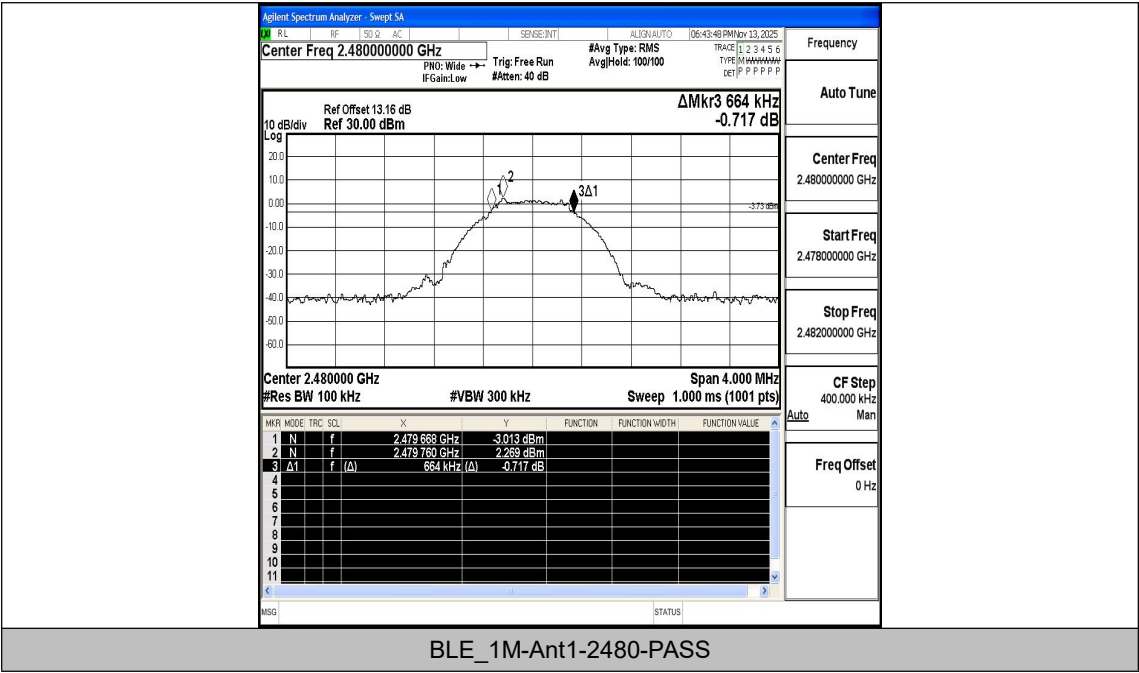
B.1 DTS Bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.652	2401.676	2402.328	0.5	PASS
BLE_1M	Ant1	2440	0.656	2439.672	2440.328	0.5	PASS
BLE_1M	Ant1	2480	0.664	2479.668	2480.332	0.5	PASS

Test Graphs



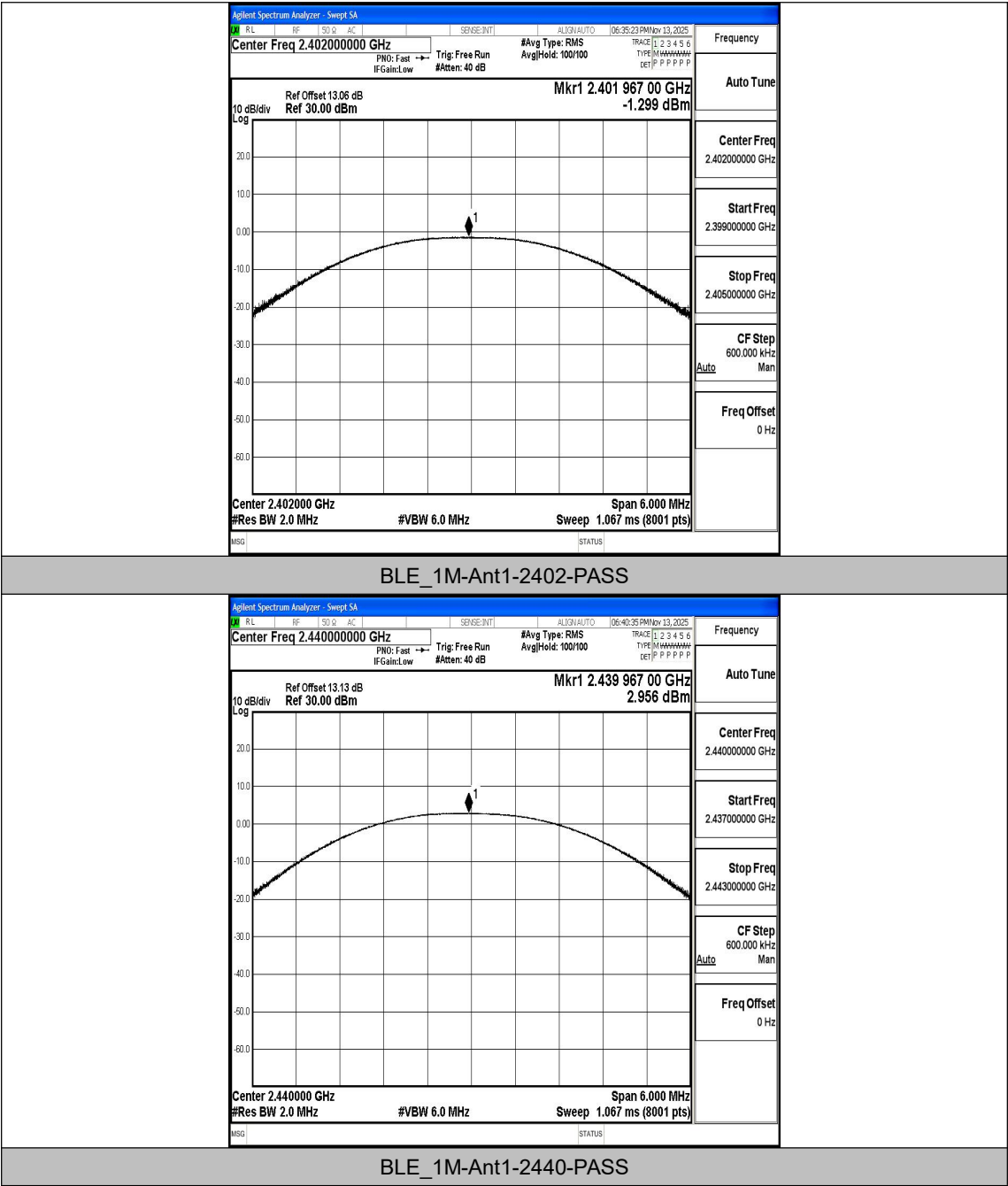


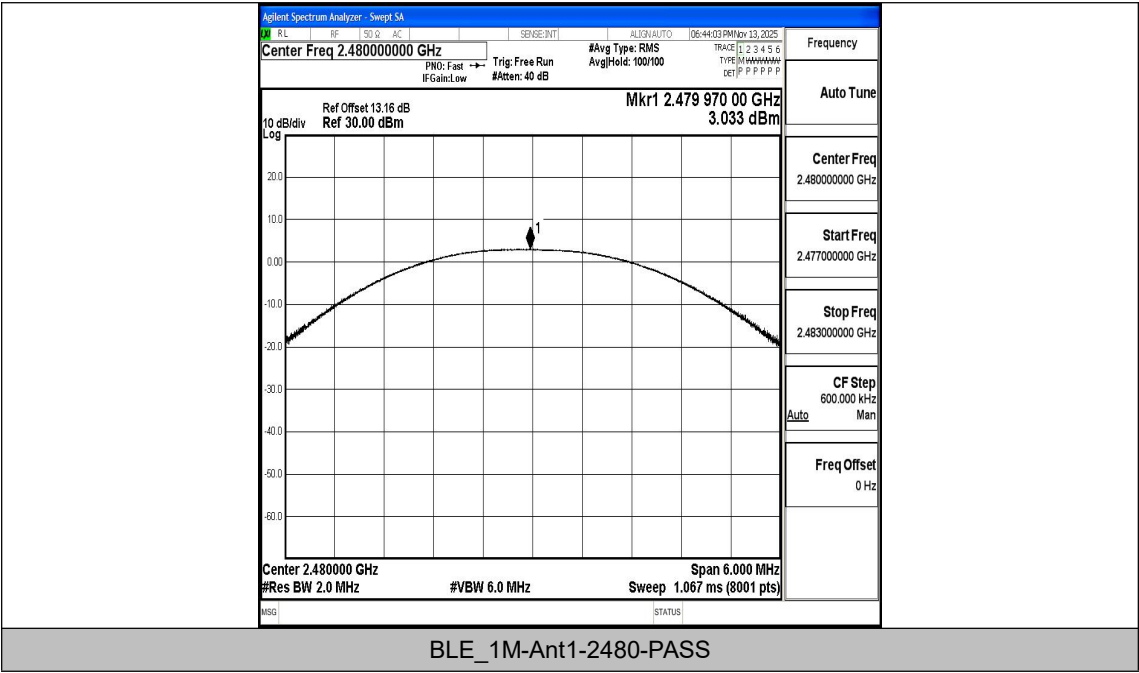
B.2 Maximum Peak conducted output power

Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-1.30	≤30	PASS
BLE_1M	Ant1	2440	2.96	≤30	PASS
BLE_1M	Ant1	2480	3.03	≤30	PASS

Test Graphs Peak



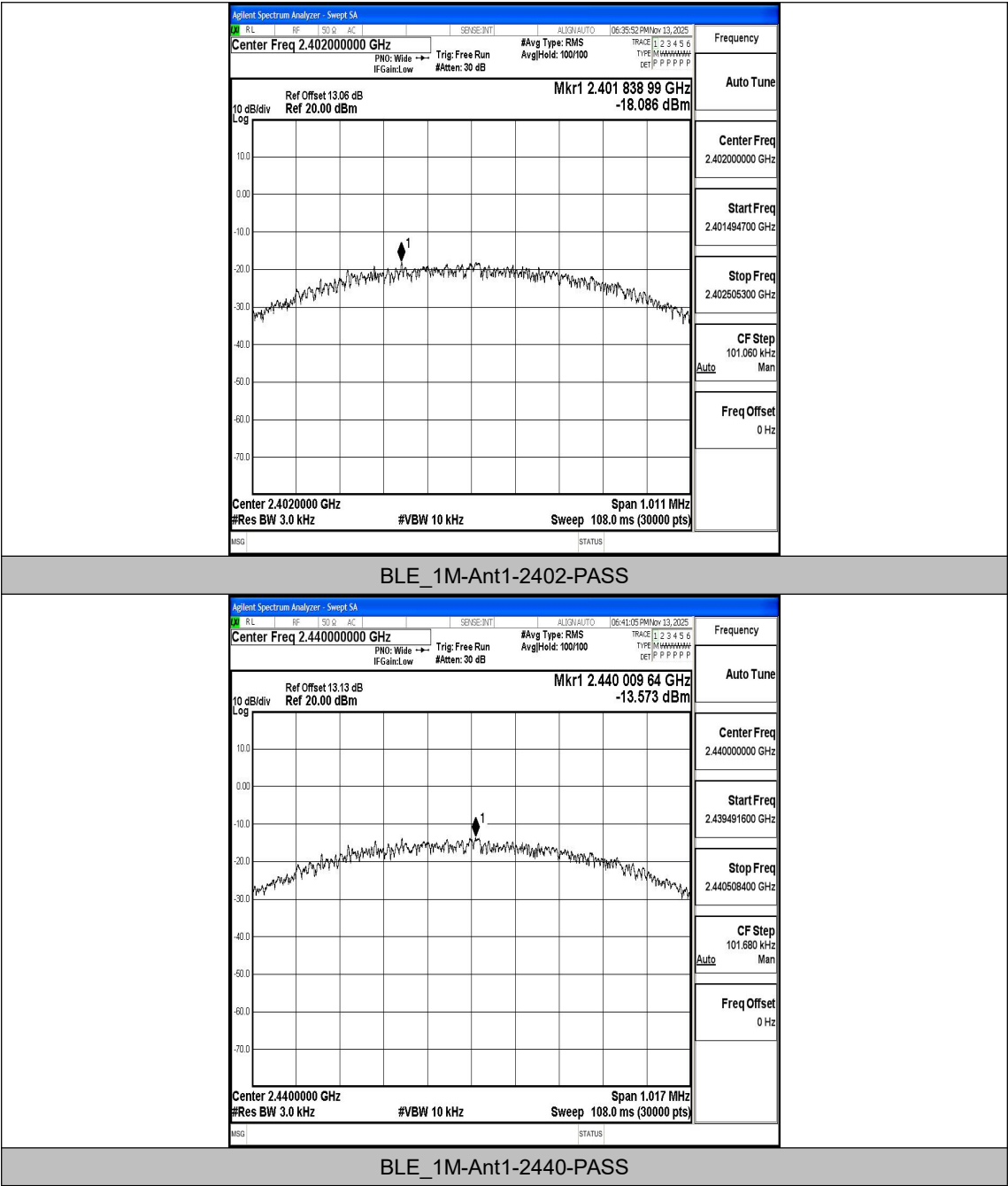


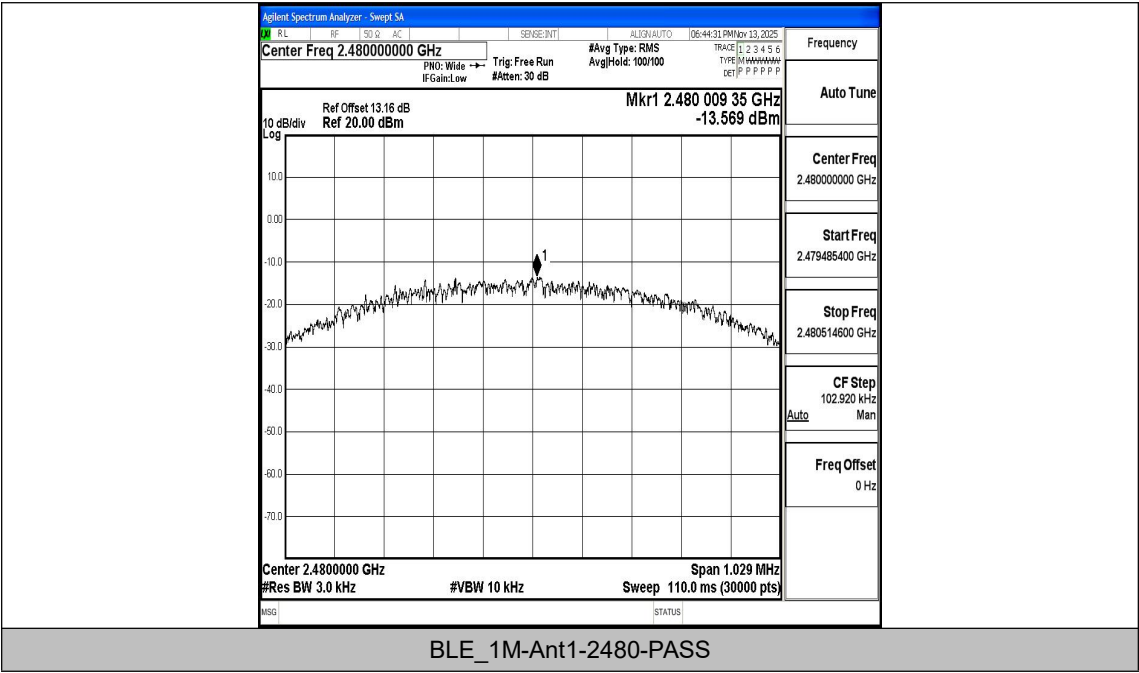
B.3 Maximum power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.09	≤8.00	PASS
BLE_1M	Ant1	2440	-13.57	≤8.00	PASS
BLE_1M	Ant1	2480	-13.57	≤8.00	PASS

Test Graphs



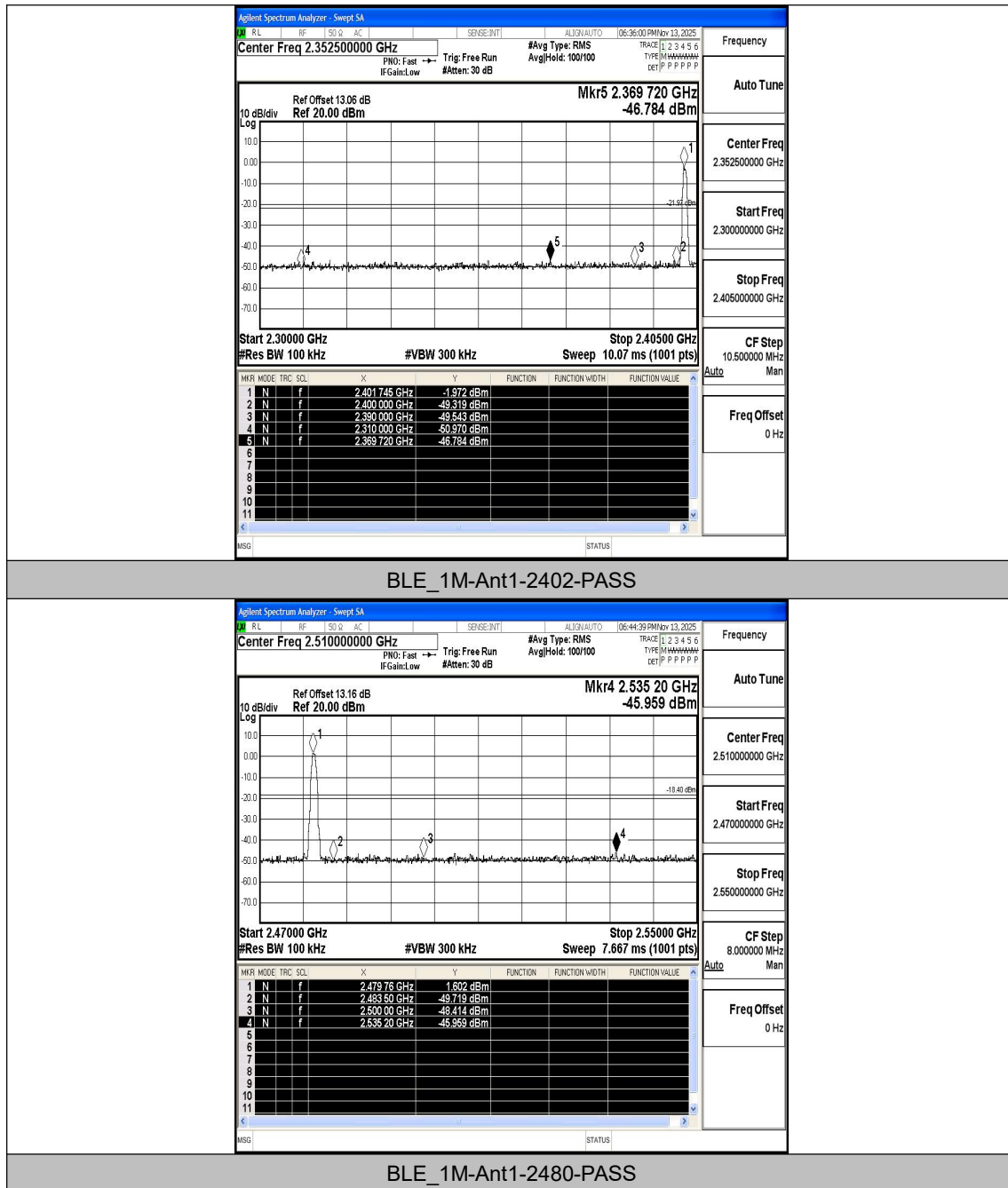


B.4 Band edge measurements

Test Result

TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.97	-46.78	≤-21.97	PASS
BLE_1M	Ant1	High	2480	1.60	-45.96	≤-18.4	PASS

Test Graphs

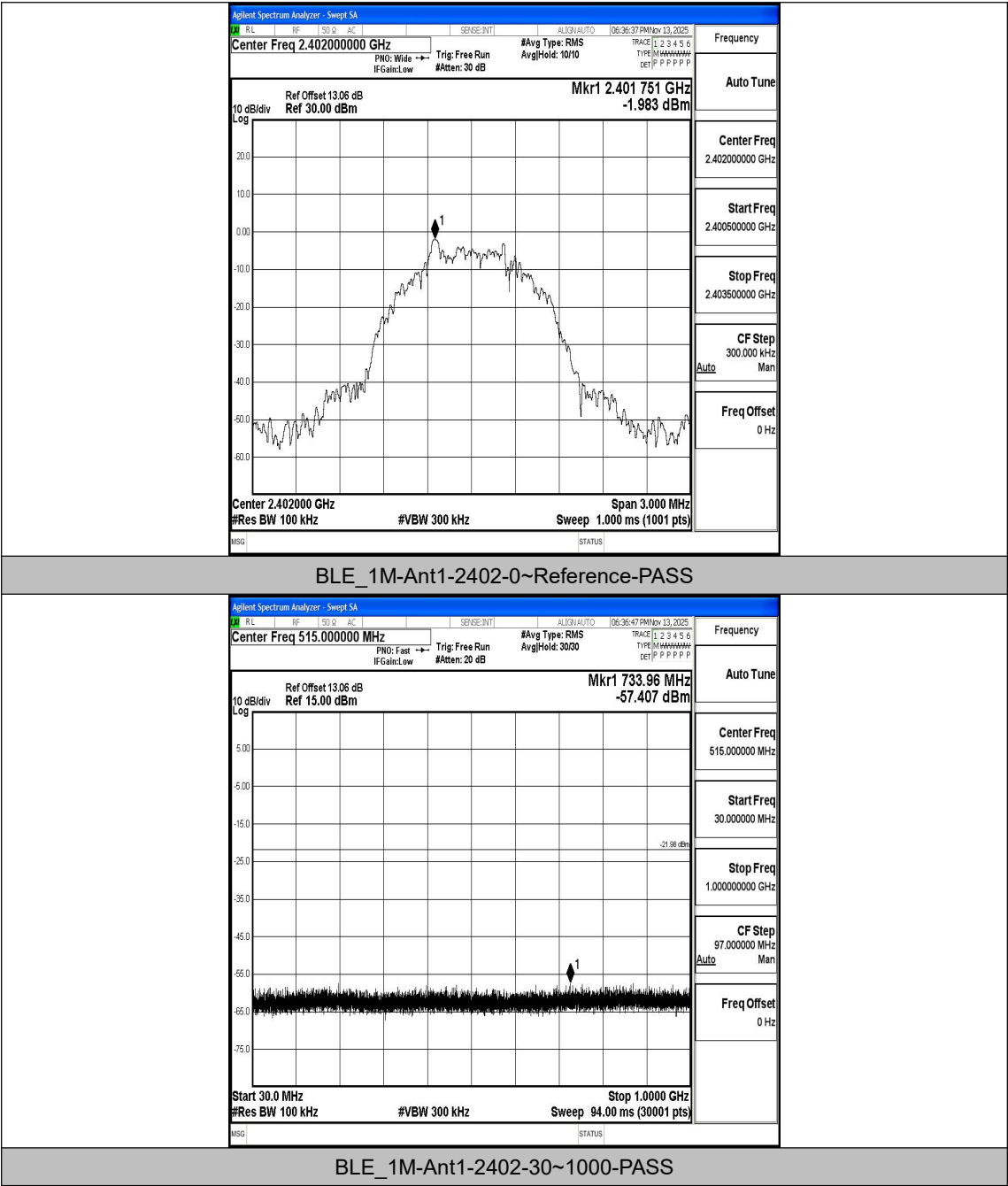


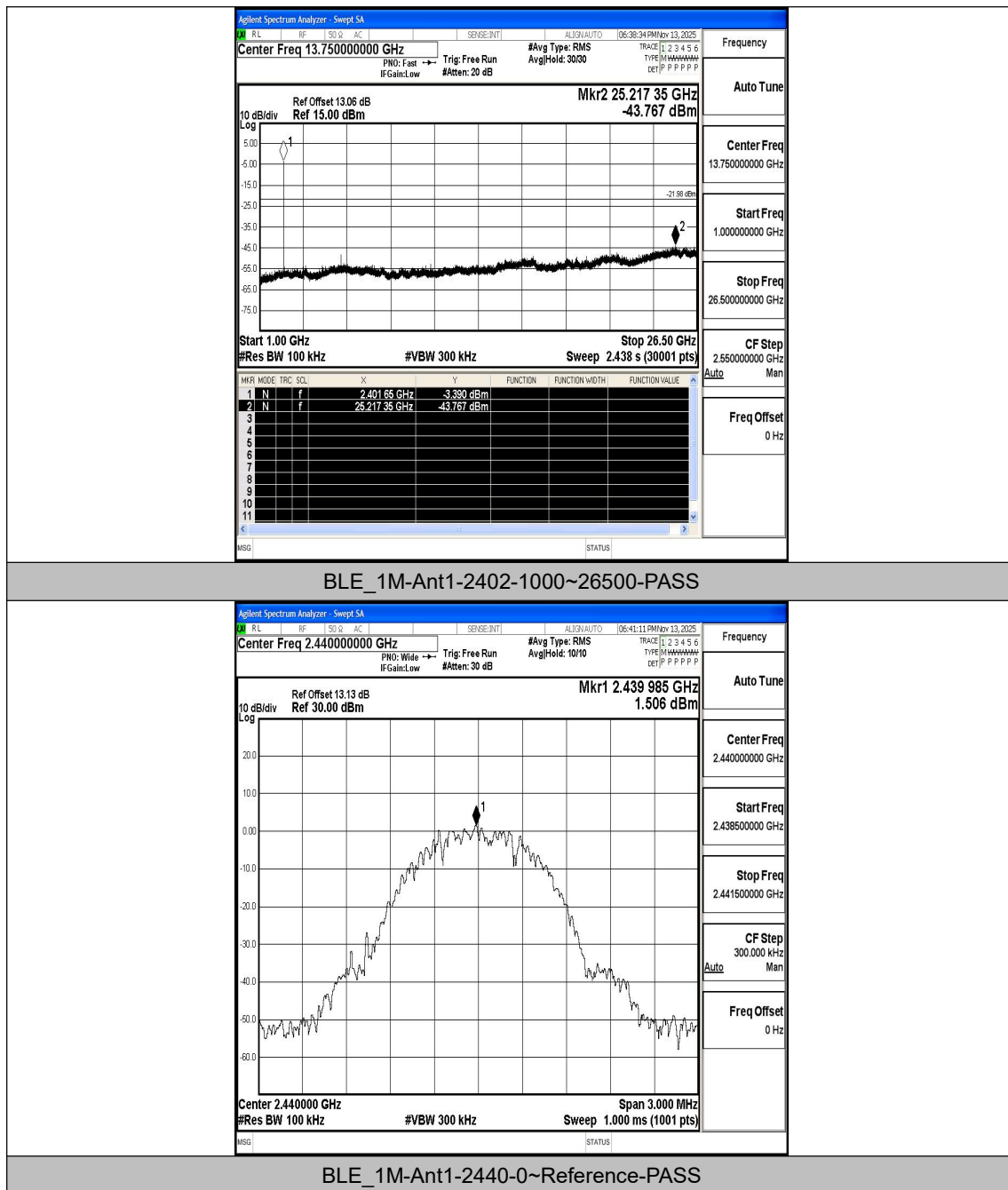
B.5 Conducted Spurious Emission

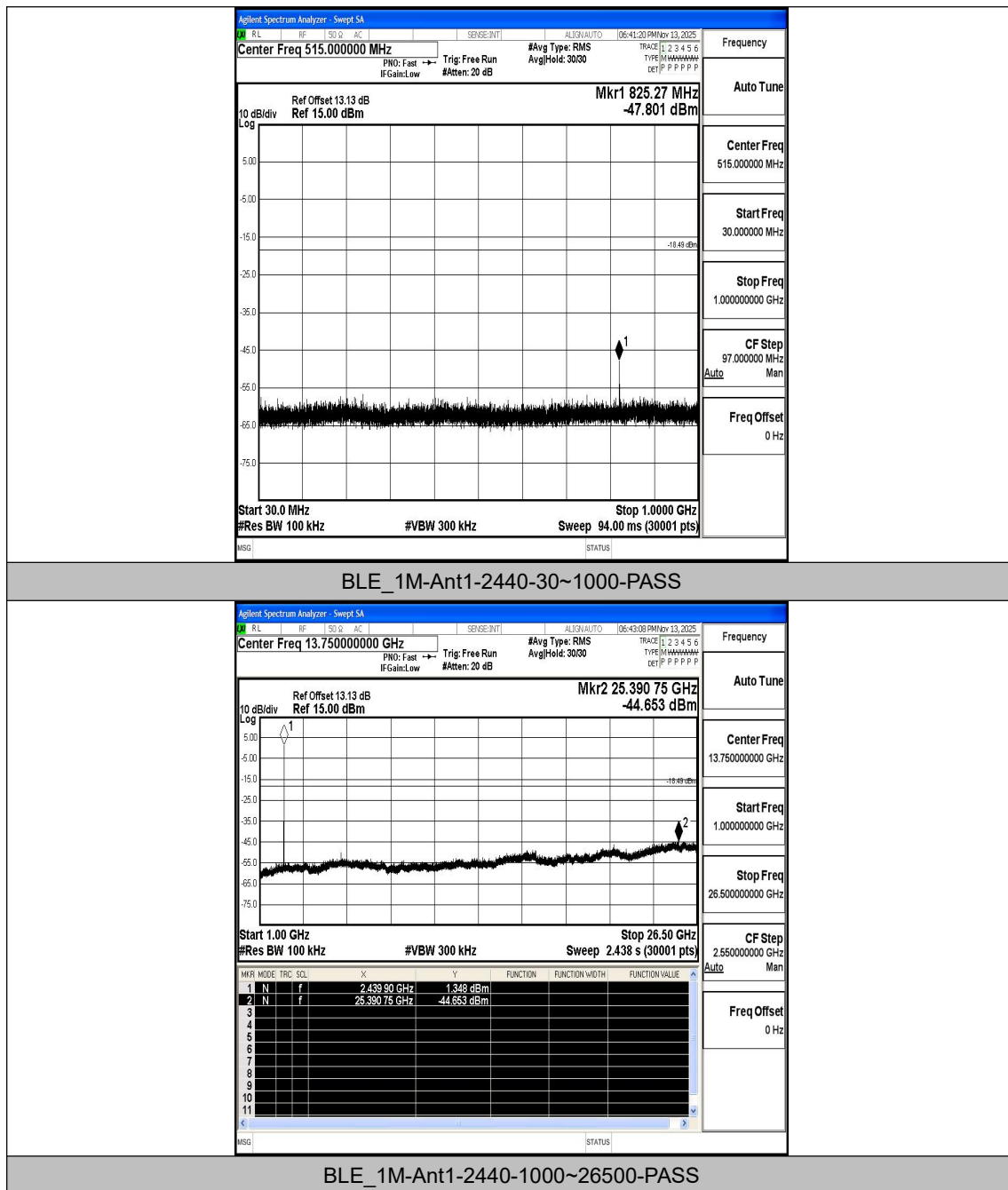
Test Result

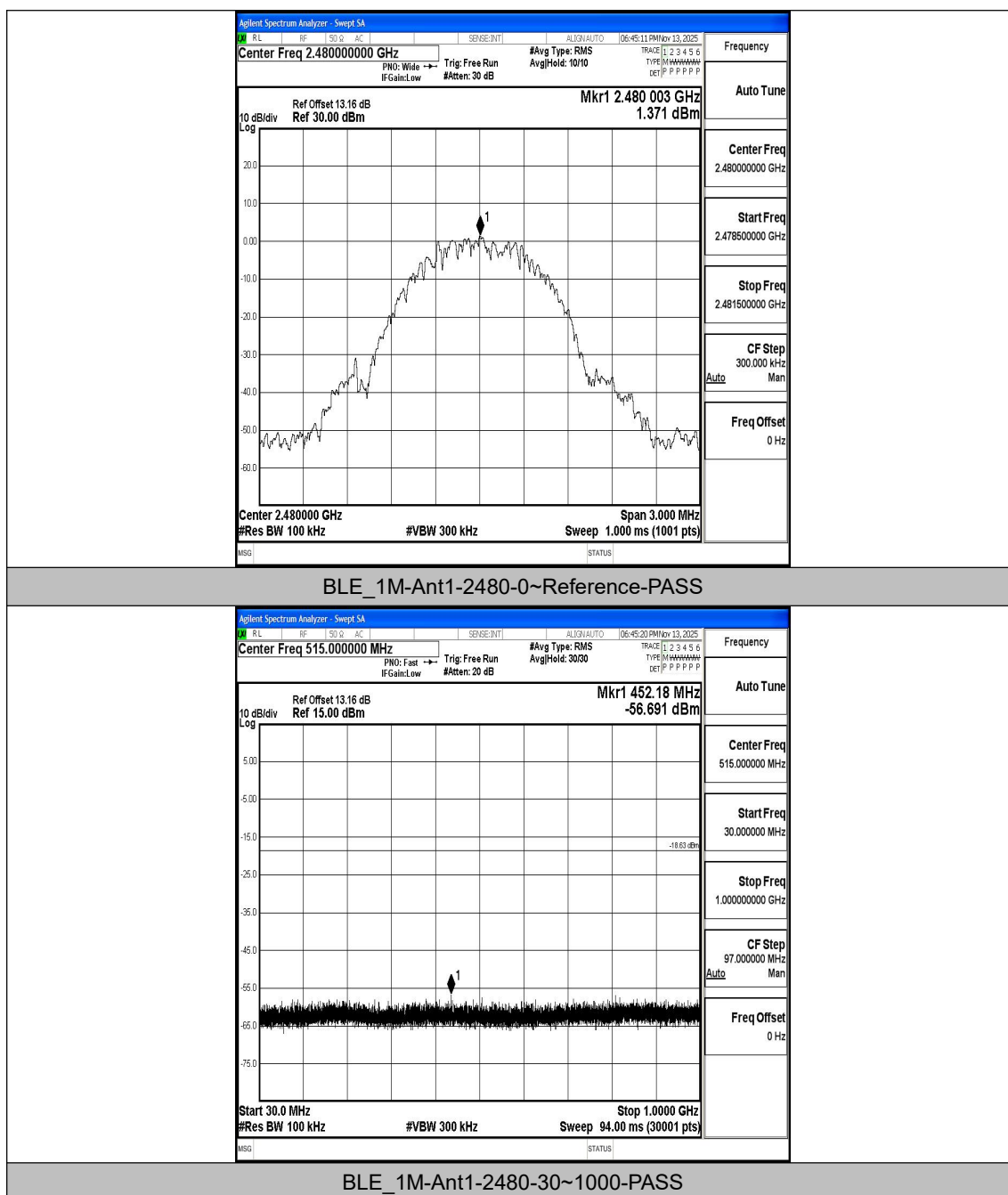
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-1.98	-1.98	---	PASS
BLE_1M	Ant1	2402	30~1000	-1.98	-57.41	≤-21.98	PASS
BLE_1M	Ant1	2402	1000~26500	-1.98	-43.77	≤-21.98	PASS
BLE_1M	Ant1	2440	0~Reference	1.51	1.51	---	PASS
BLE_1M	Ant1	2440	30~1000	1.51	-47.8	≤-18.49	PASS
BLE_1M	Ant1	2440	1000~26500	1.51	-44.65	≤-18.49	PASS
BLE_1M	Ant1	2480	0~Reference	1.37	1.37	---	PASS
BLE_1M	Ant1	2480	30~1000	1.37	-56.69	≤-18.63	PASS
BLE_1M	Ant1	2480	1000~26500	1.37	-43.86	≤-18.63	PASS

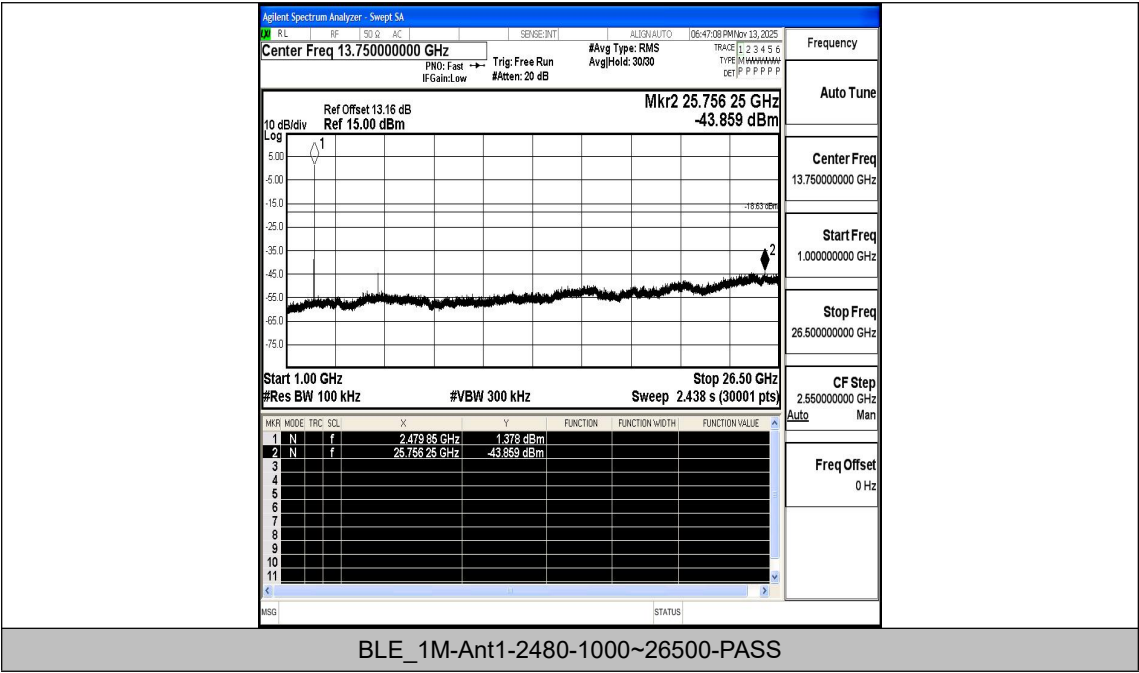
Test Graphs









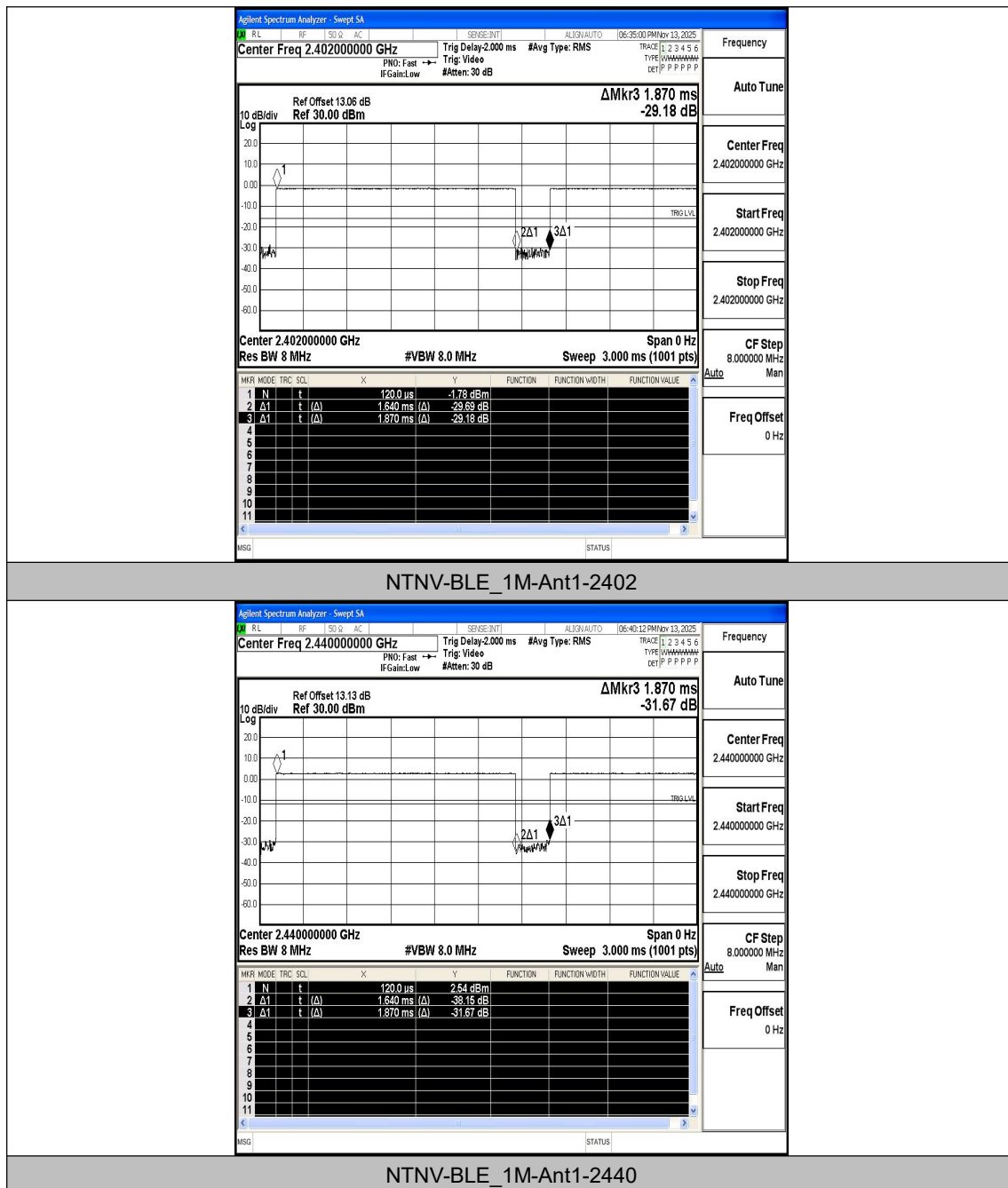


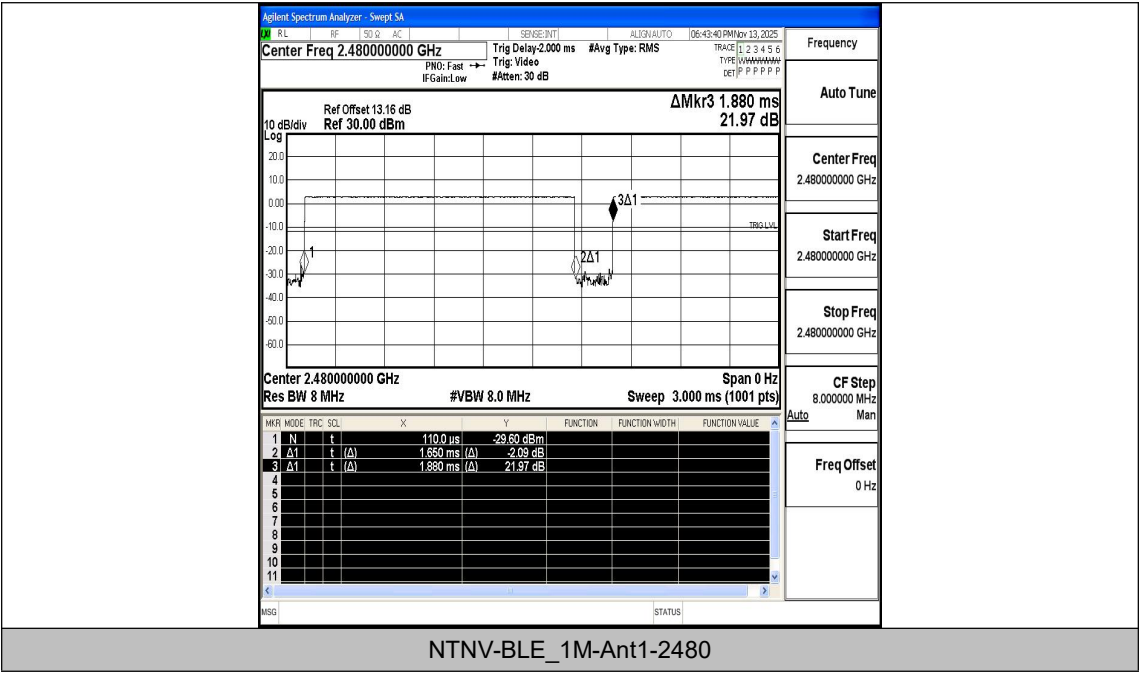
B.6 Duty Cycle

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	1.65	1.88	87.77	0.57

Test Graphs





B.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Frequenc y[MHz]	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	Peak	2390.000	-38.34	≤-21.20	56.86	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-37.79	≤-21.20	57.41	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2369.930	-34.44	≤-21.20	60.76	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-44.97	≤-41.20	50.23	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-45.43	≤-41.20	49.77	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2388.410	-44.78	≤-41.20	50.42	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-36.98	≤-21.20	58.22	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-37.62	≤-21.20	57.58	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2497.840	-35.07	≤-21.20	60.13	≤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	-44.51	≤-41.20	50.69	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2483.520	-44.34	≤-41.20	50.86	≤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

