

Appendix B

RF Test Data for BT LE (Conducted Measurement)

Product Name: Wireless Microphone

Test Model: R1

Environmental Conditions

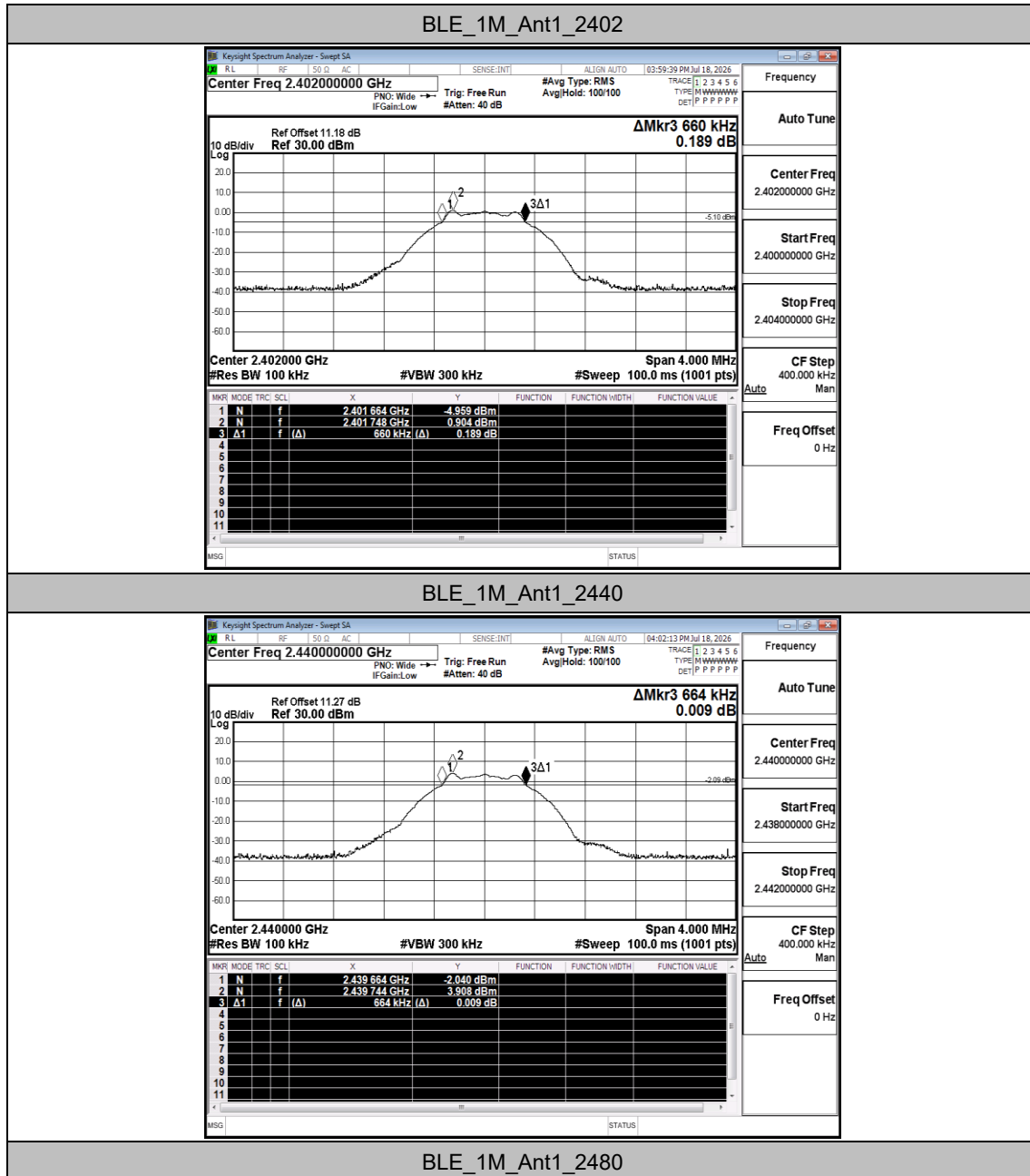
Temperature:	24.5°C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

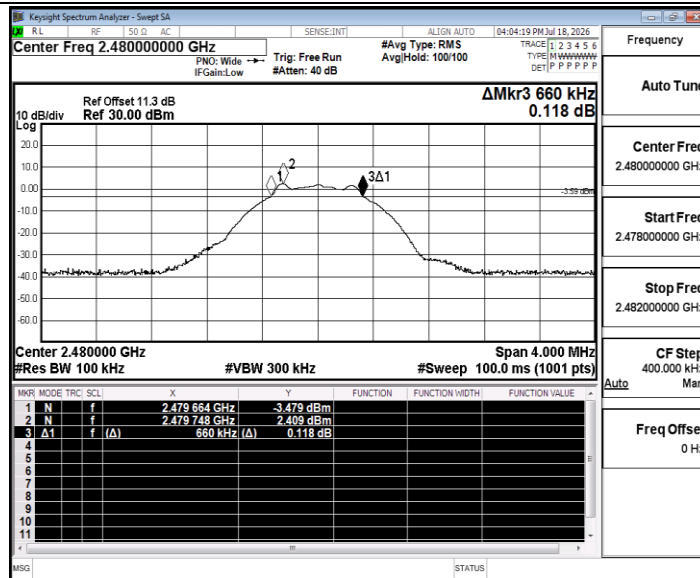
B.1 DTS Bandwidth

Test Result

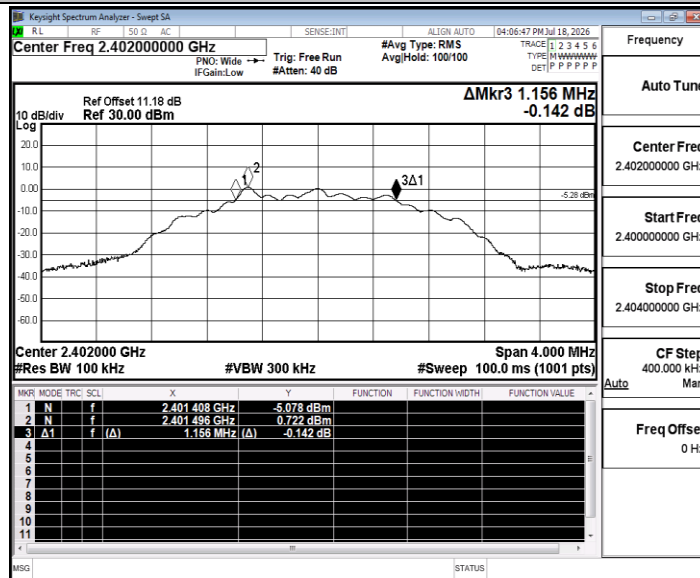
TestMode	Antenna	Freq (MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	0.660	2401.664	2402.324	0.5	PASS
		2440	0.664	2439.664	2440.328	0.5	PASS
		2480	0.660	2479.664	2480.324	0.5	PASS
BLE_2M	Ant1	2402	1.156	2401.408	2402.564	0.5	PASS
		2440	1.152	2439.408	2440.560	0.5	PASS
		2480	1.152	2479.408	2480.560	0.5	PASS

Test Graphs

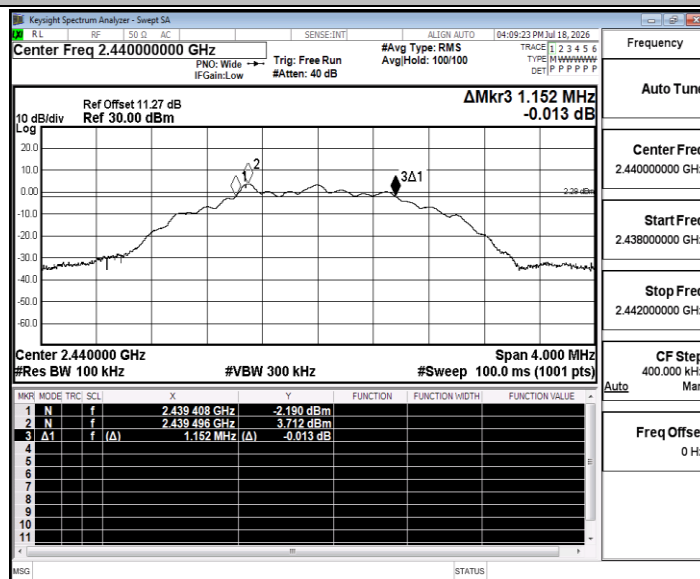




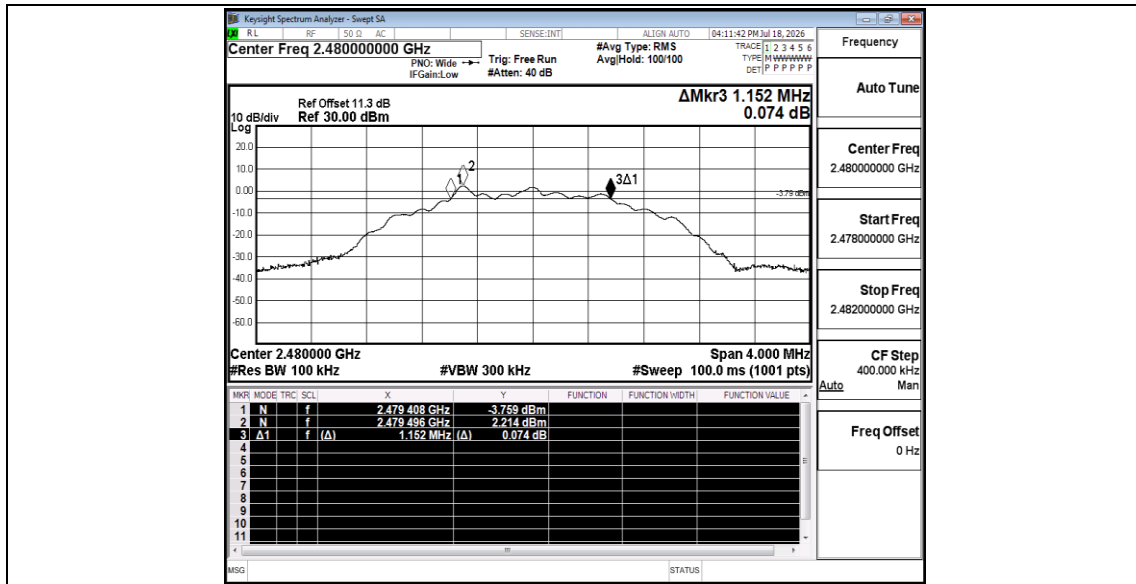
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

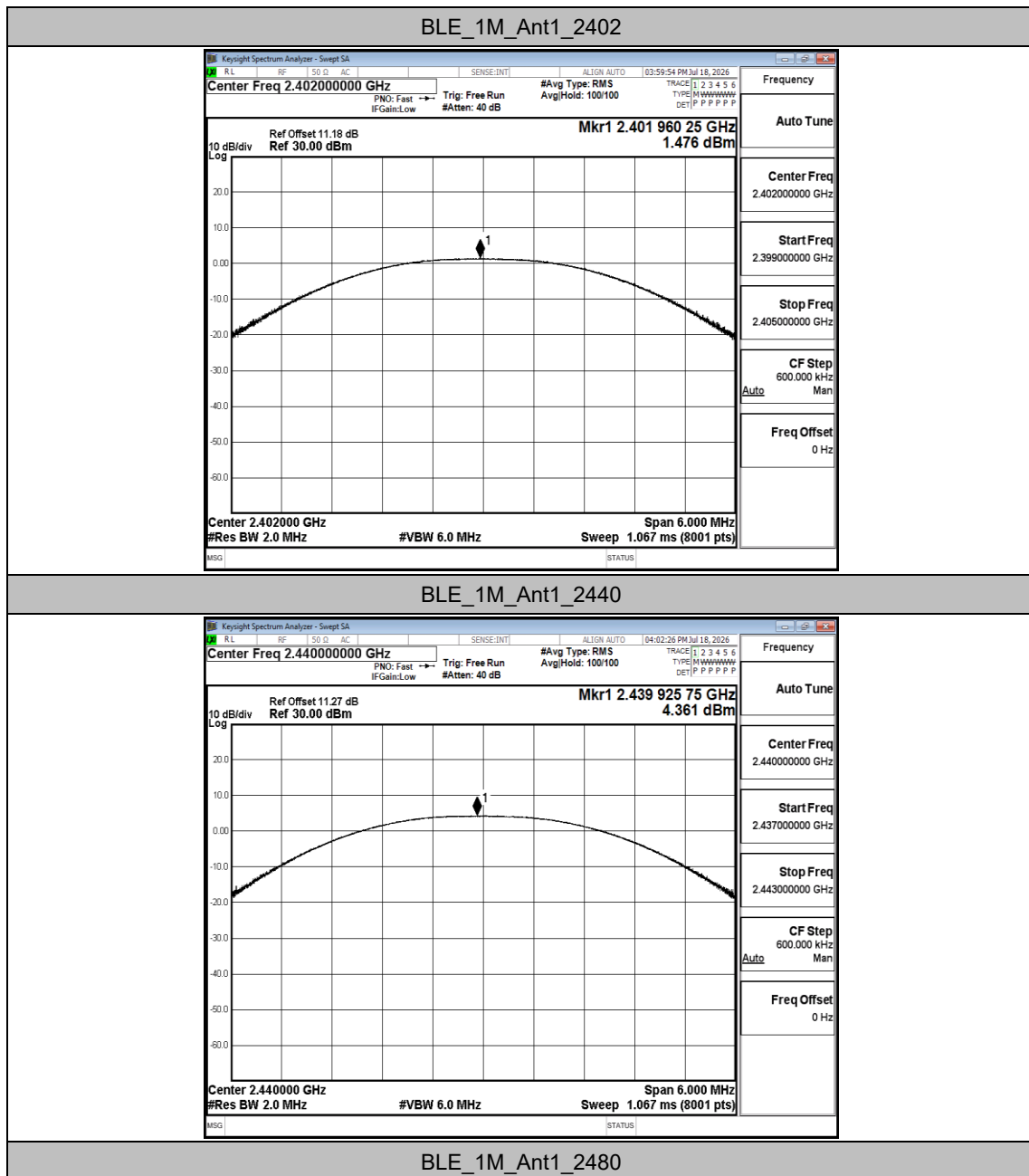


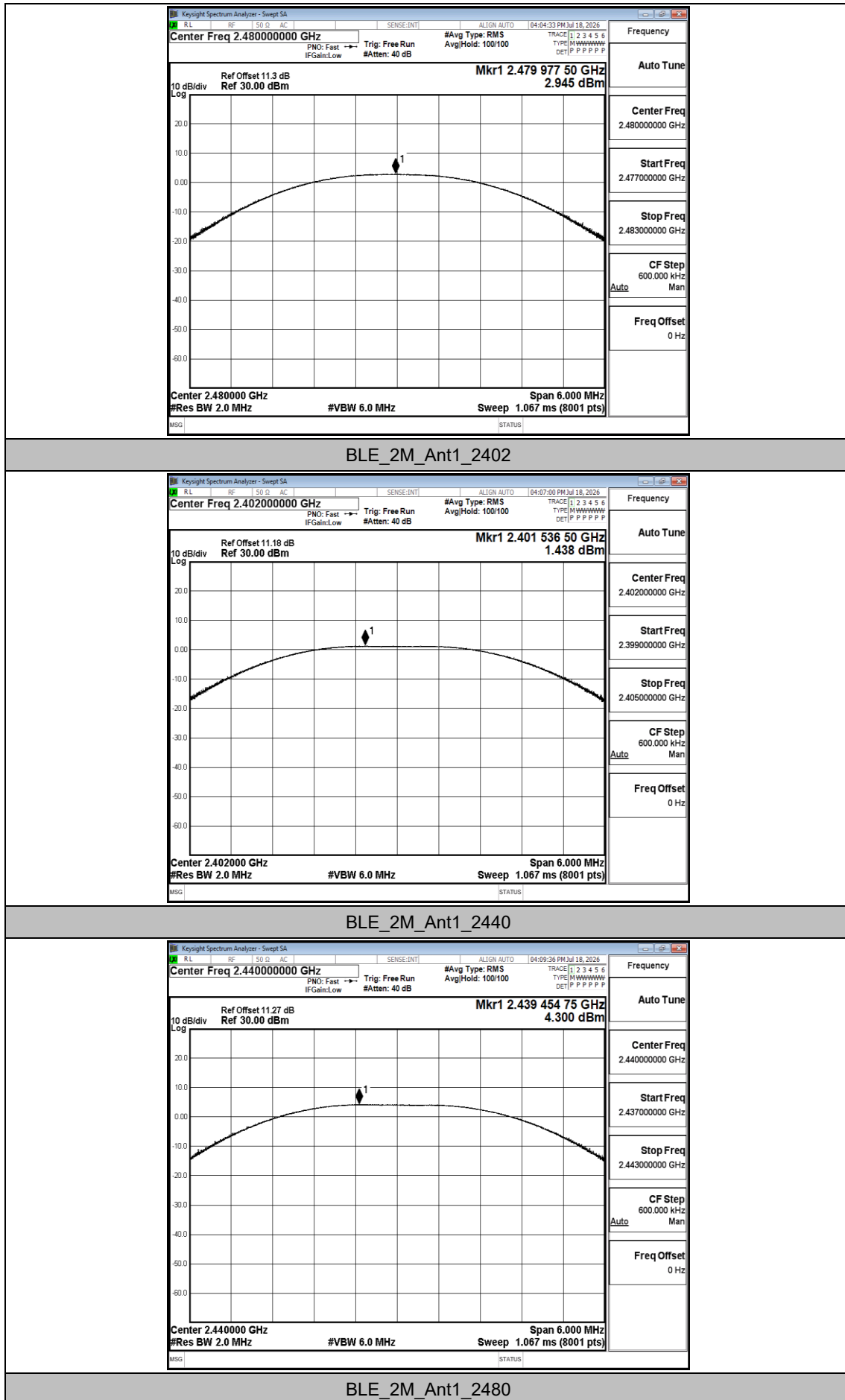
B.2 Maximum Peak conducted output power

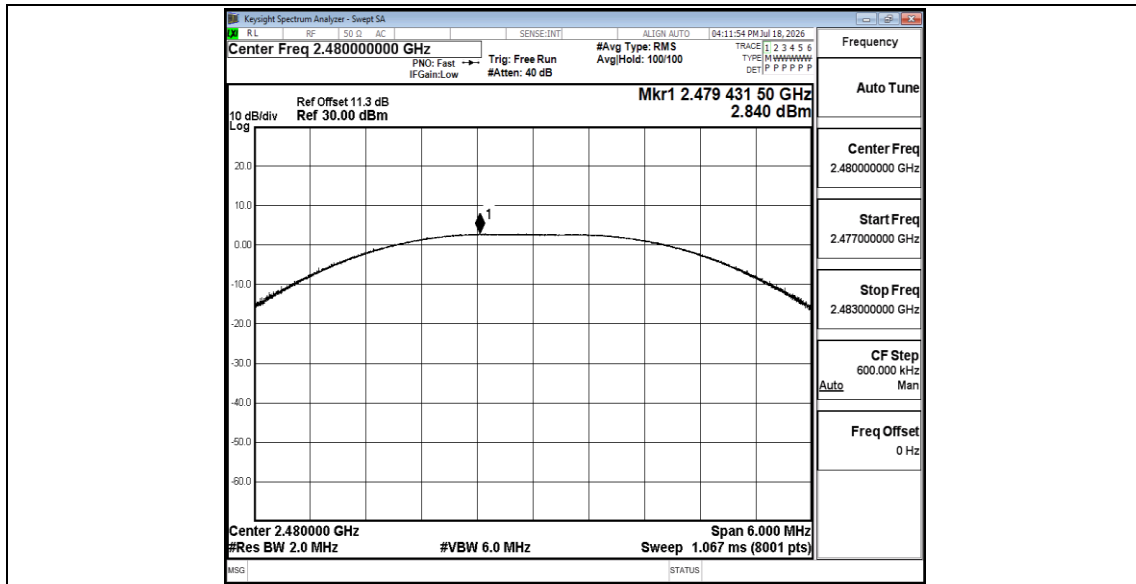
Test Result Peak

TestMode	Antenna	Freq (MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	1.48	≤30	PASS
		2440	4.36	≤30	PASS
		2480	2.95	≤30	PASS
BLE_2M	Ant1	2402	1.44	≤30	PASS
		2440	4.30	≤30	PASS
		2480	2.84	≤30	PASS

Test Graphs Peak





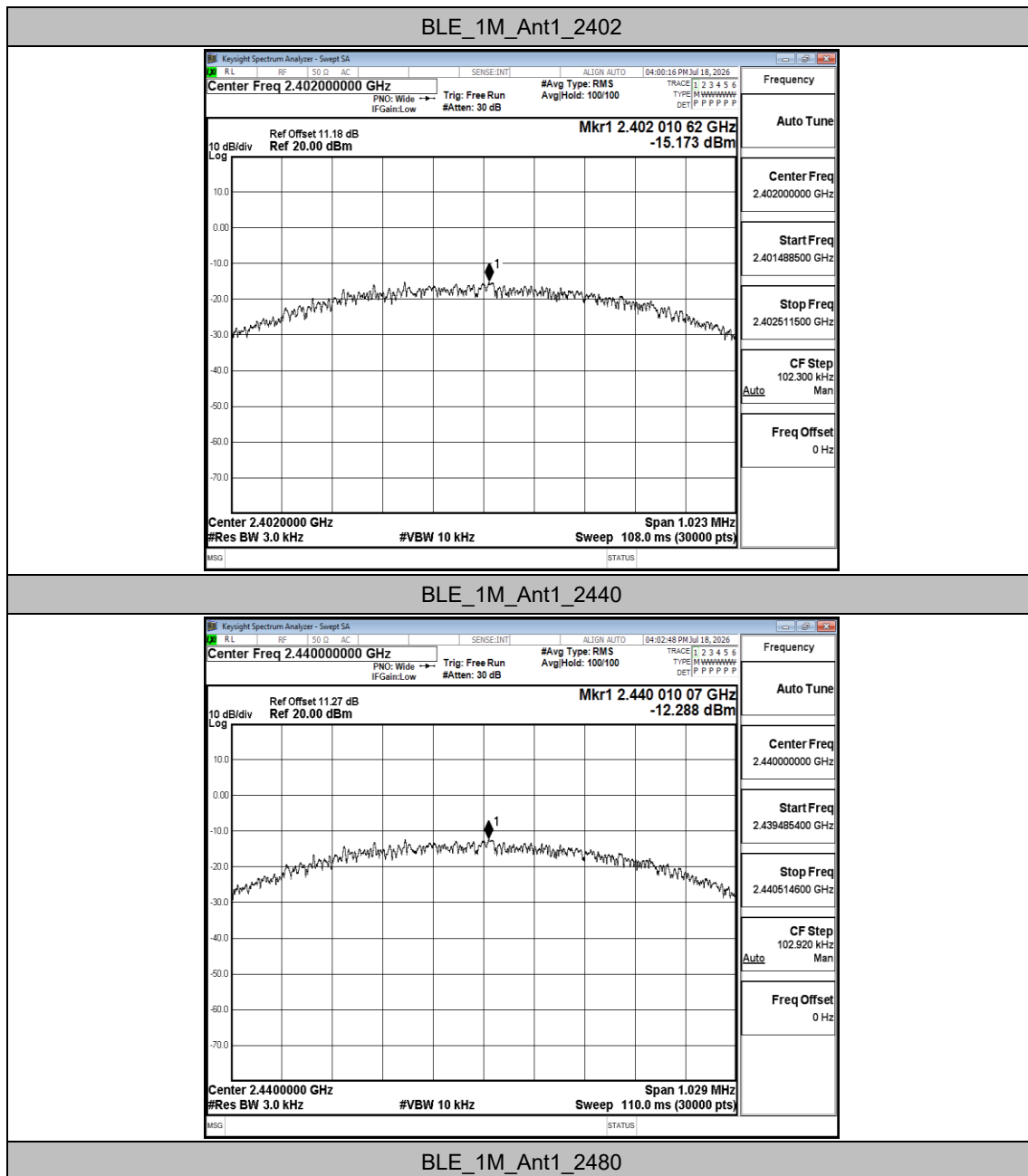


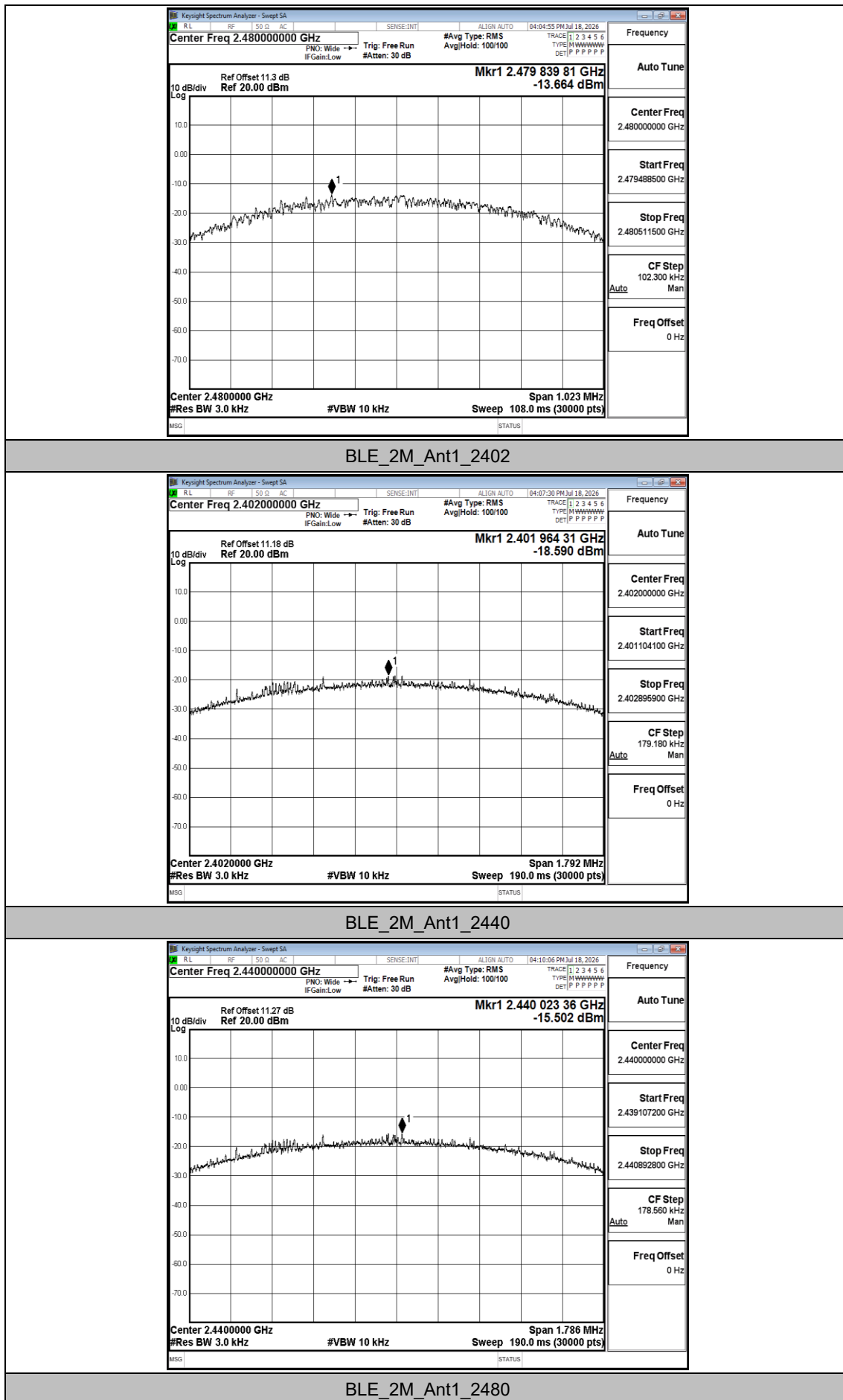
B.3 Maximum power spectral density

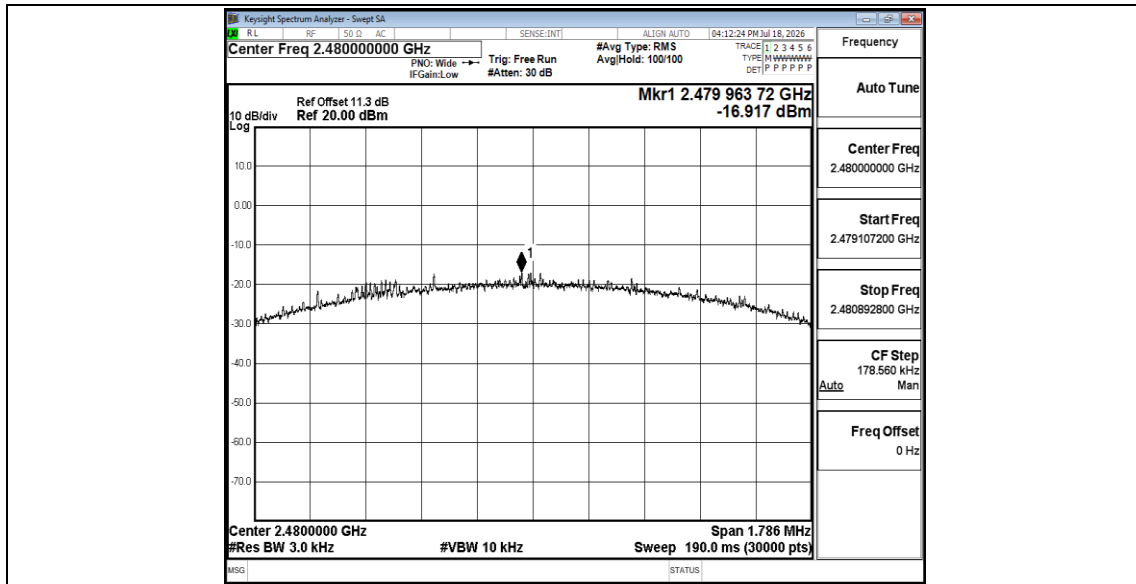
Test Result

TestMode	Antenna	Freq (MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-15.17	≤8.00	PASS
		2440	-12.29	≤8.00	PASS
		2480	-13.66	≤8.00	PASS
BLE_2M	Ant1	2402	-18.59	≤8.00	PASS
		2440	-15.50	≤8.00	PASS
		2480	-16.92	≤8.00	PASS

Test Graphs





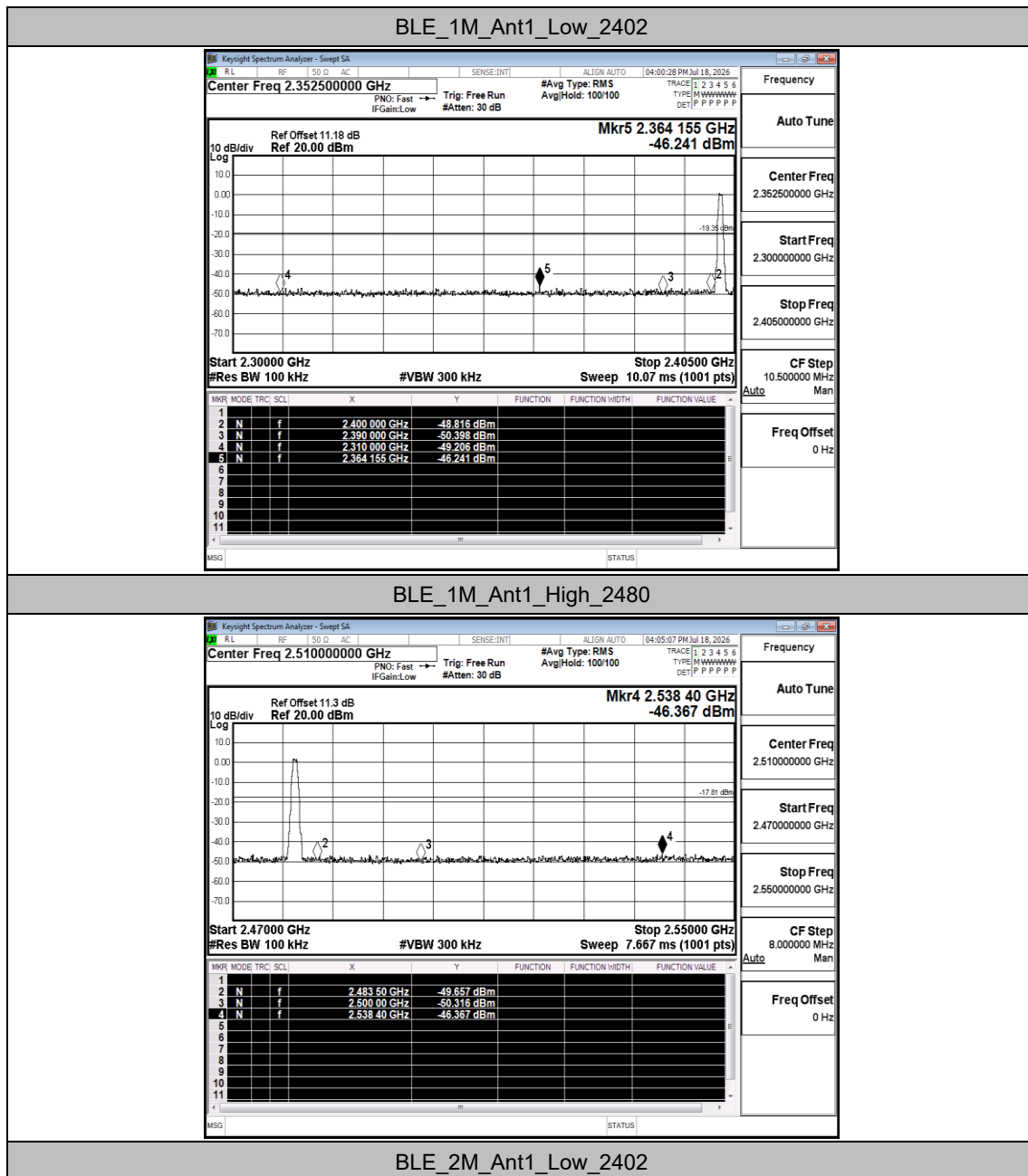


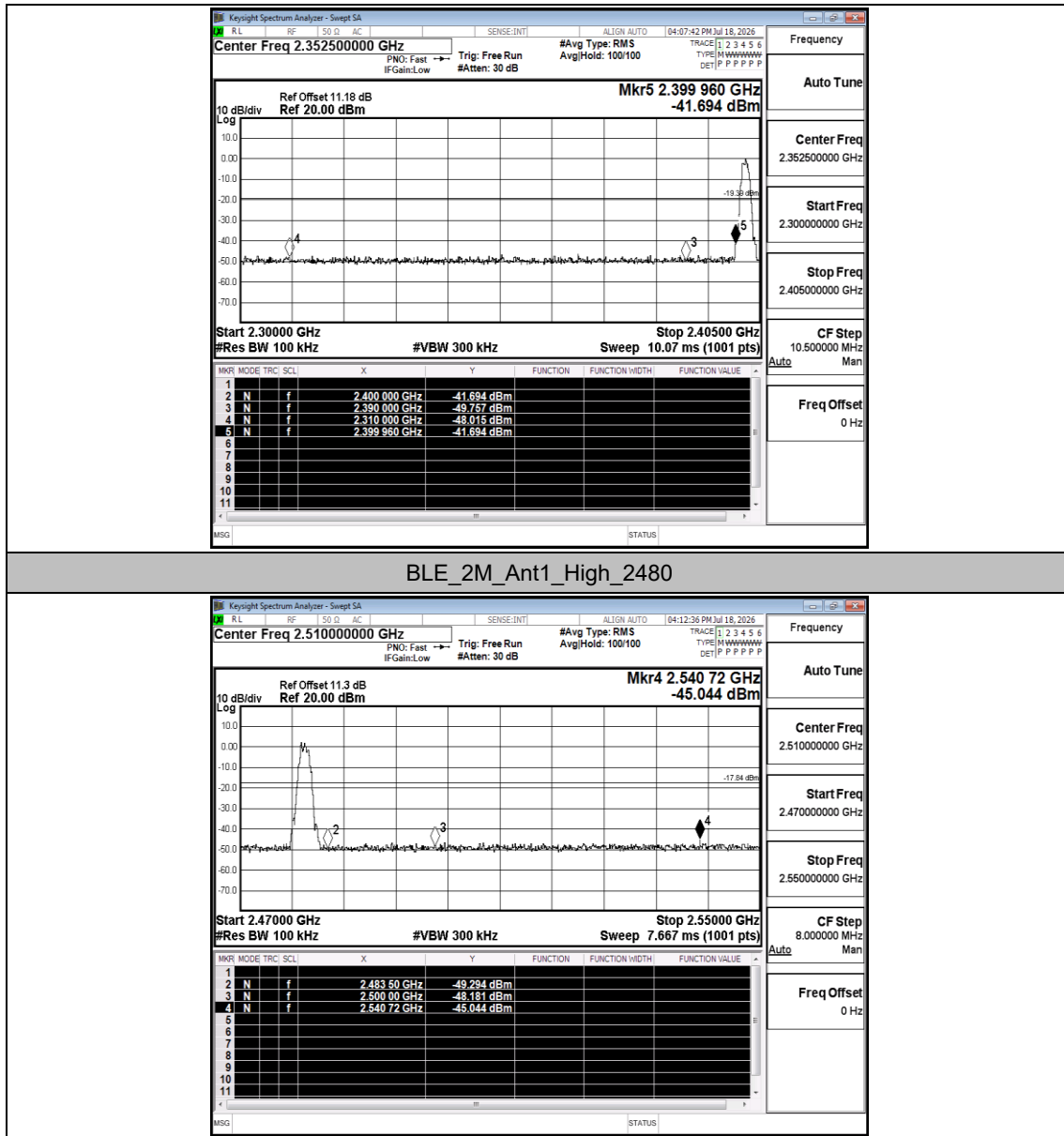
B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq (MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	0.65	-46.24	≤-19.35	PASS
		High	2480	2.19	-46.37	≤-17.81	PASS
BLE_2M	Ant1	Low	2402	0.61	-41.69	≤-19.39	PASS
		High	2480	2.16	-45.04	≤-17.84	PASS

Test Graphs



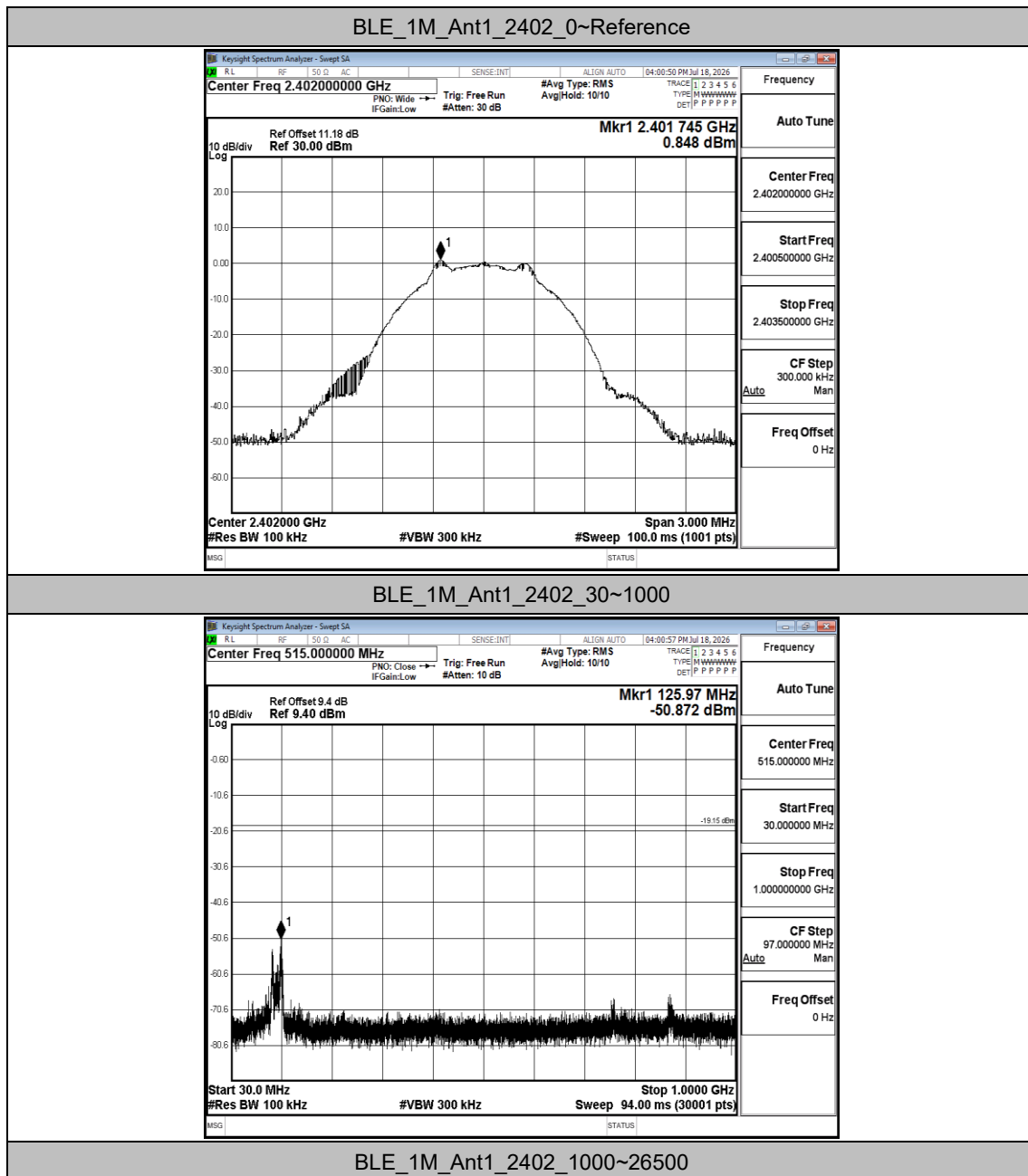


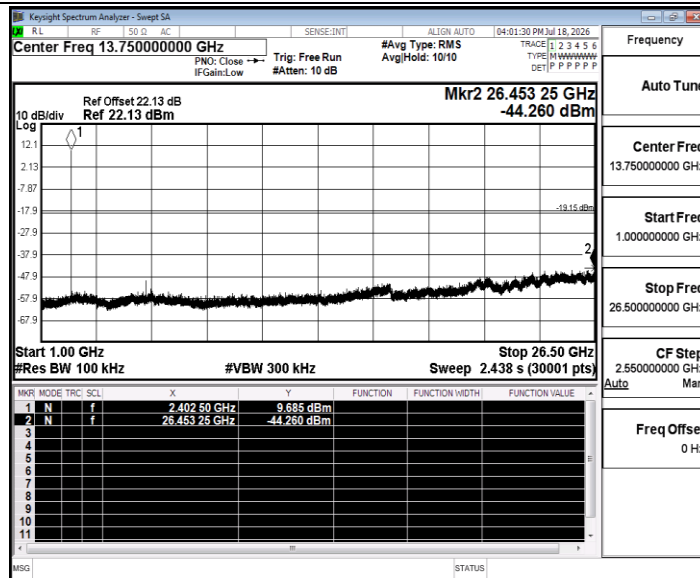
B.5 Conducted Spurious Emission

Test Result

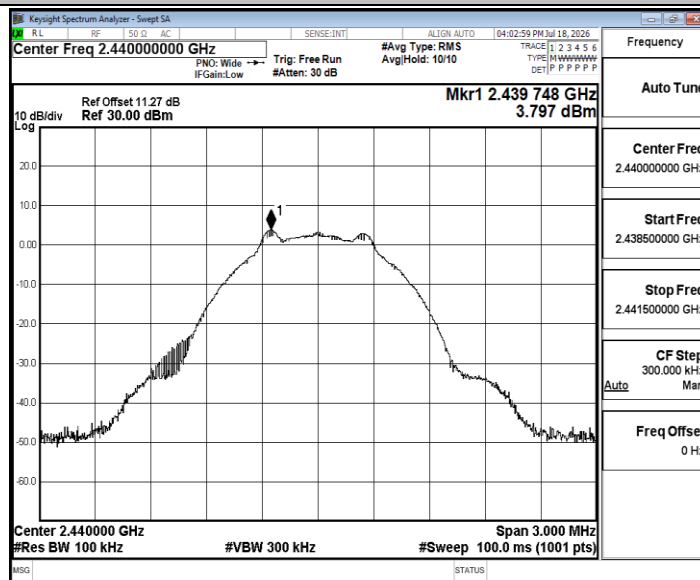
TestMode	Antenna	Freq (MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	0.85	0.85	---	PASS
			30~1000	0.85	-50.87	≤-19.15	PASS
			1000~26500	0.85	-44.26	≤-19.15	PASS
		2440	Reference	3.80	3.80	---	PASS
			30~1000	3.80	-63.5	≤-16.2	PASS
			1000~26500	3.80	-45.3	≤-16.2	PASS
		2480	Reference	2.39	2.39	---	PASS
			30~1000	2.39	-61.7	≤-17.61	PASS
			1000~26500	2.39	-45.1	≤-17.61	PASS
BLE_2M	Ant1	2402	Reference	0.64	0.64	---	PASS
			30~1000	0.64	-58.81	≤-19.36	PASS
			1000~26500	0.64	-44.9	≤-19.36	PASS
		2440	Reference	3.62	3.62	---	PASS
			30~1000	3.62	-56.46	≤-16.38	PASS
			1000~26500	3.62	-45.18	≤-16.38	PASS
		2480	Reference	2.18	2.18	---	PASS
			30~1000	2.18	-57.07	≤-17.82	PASS
			1000~26500	2.18	-44.74	≤-17.82	PASS

Test Graphs

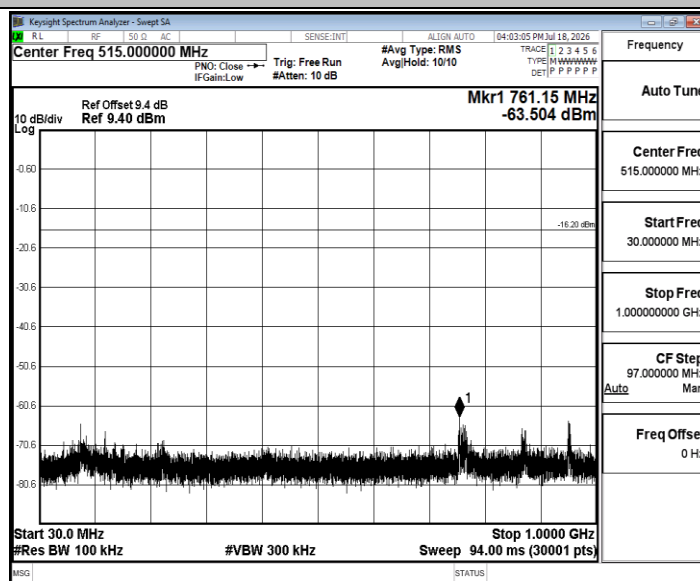




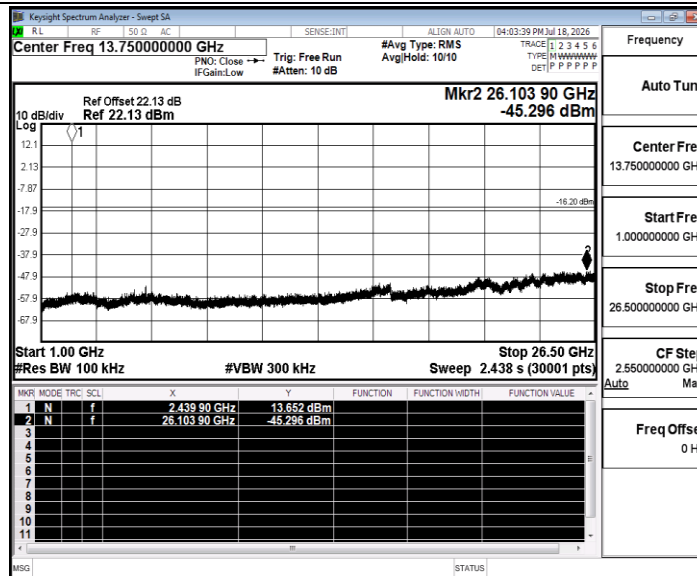
BLE_1M_Ant1_2440_0~Reference



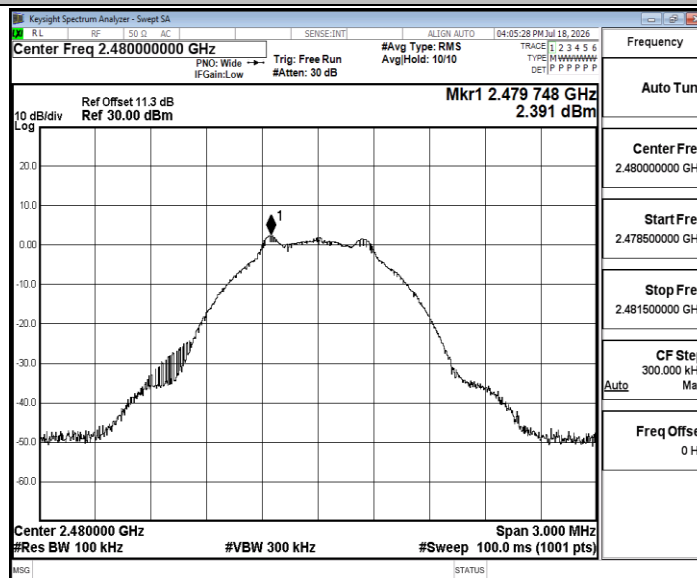
BLE_1M_Ant1_2440_30~1000



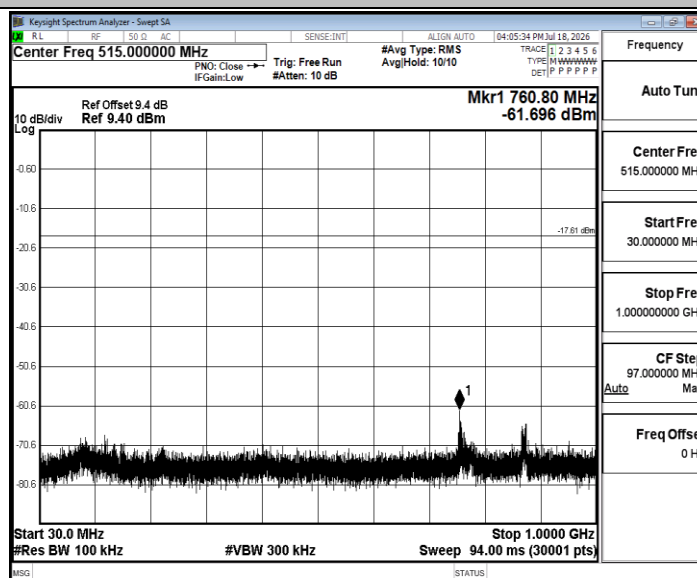
BLE_1M_Ant1_2440_1000~26500



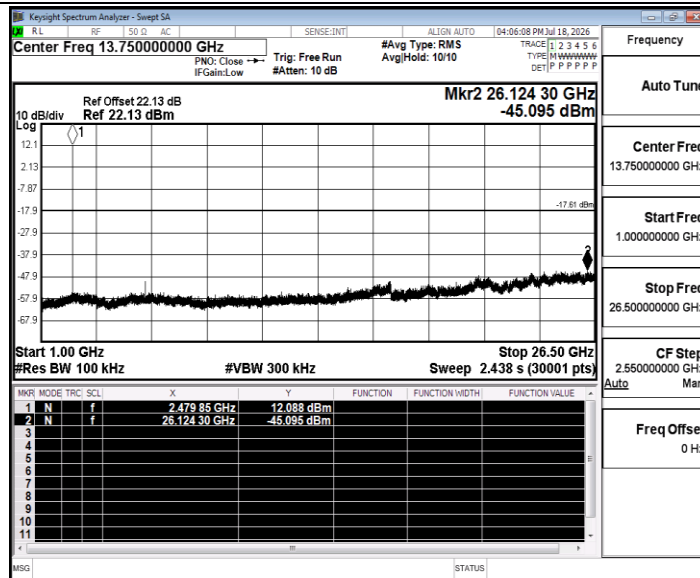
BLE_1M_Ant1_2480_0~Reference



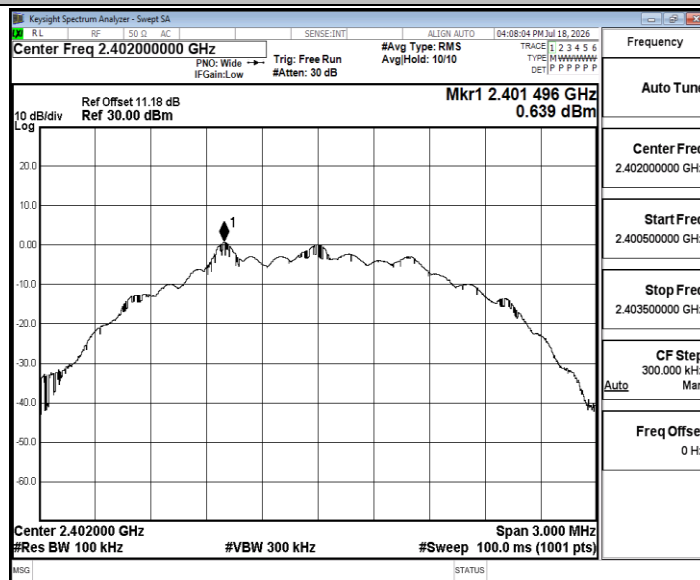
BLE_1M_Ant1_2480_30~1000



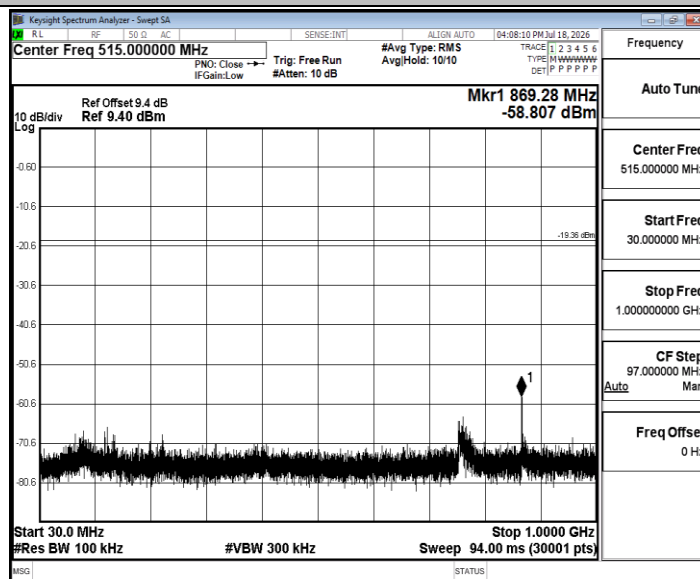
BLE_1M_Ant1_2480_1000~26500



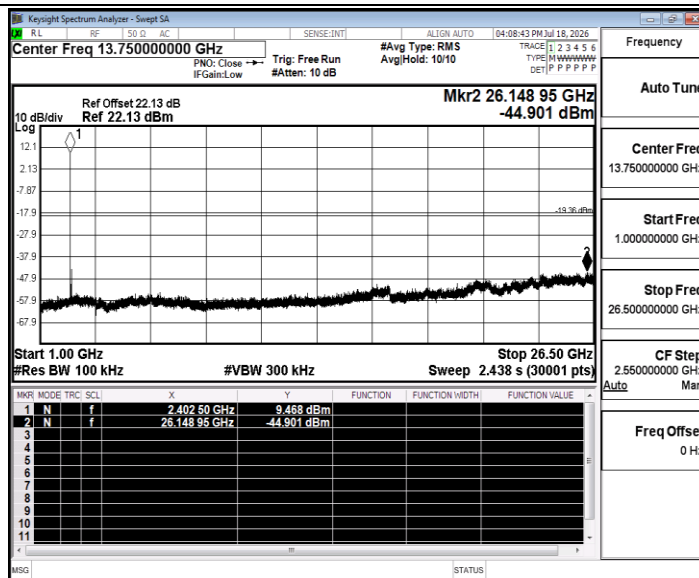
BLE_2M_Ant1_2402_0~Reference



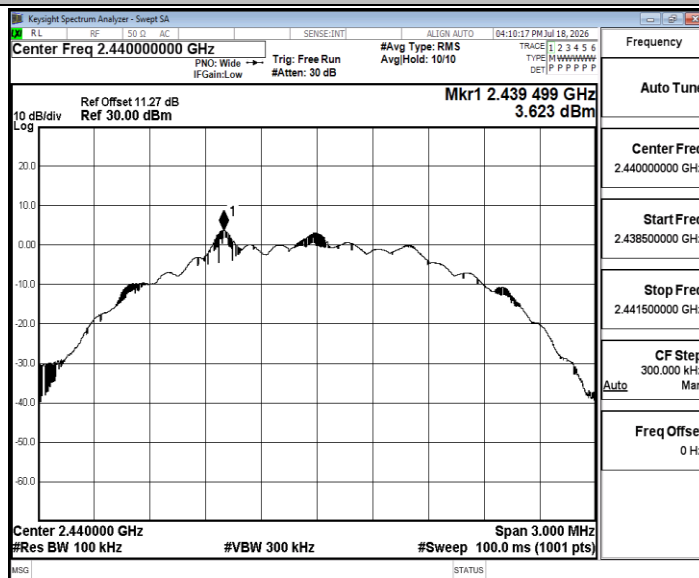
BLE_2M_Ant1_2402_30~1000



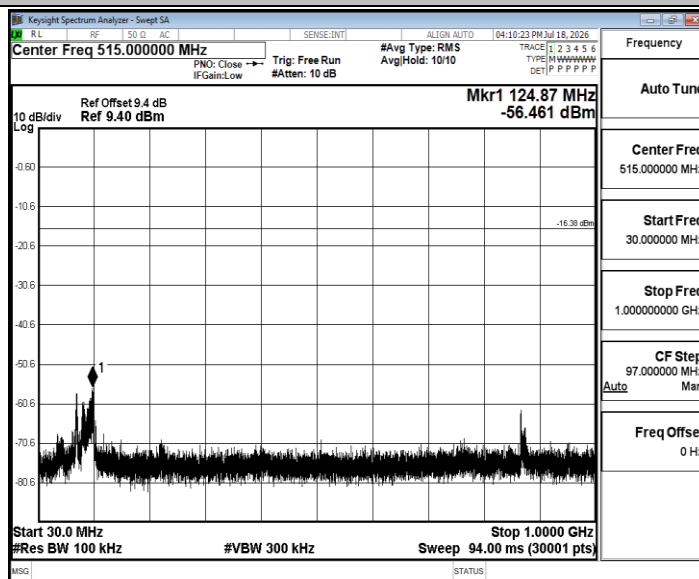
BLE_2M_Ant1_2402_1000~26500



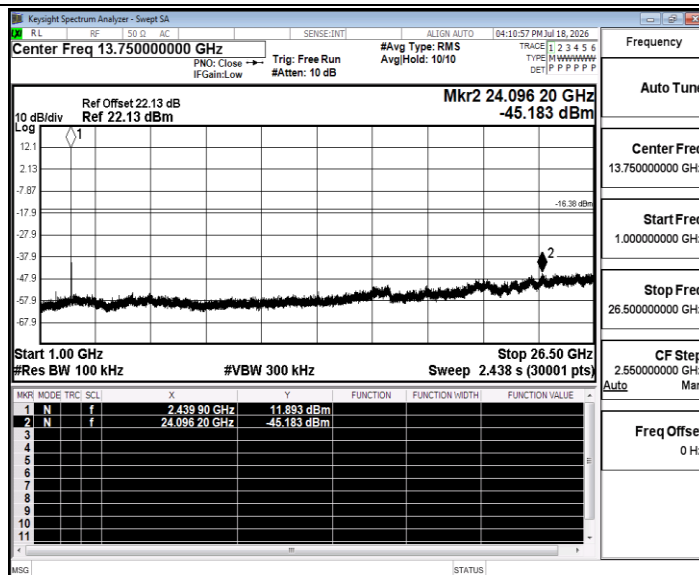
BLE_2M_Ant1_2440_0~Reference



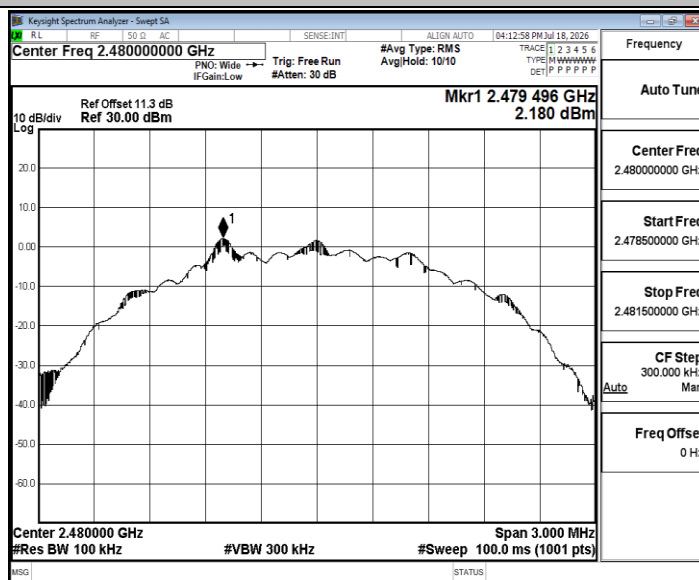
BLE_2M_Ant1_2440_30~1000



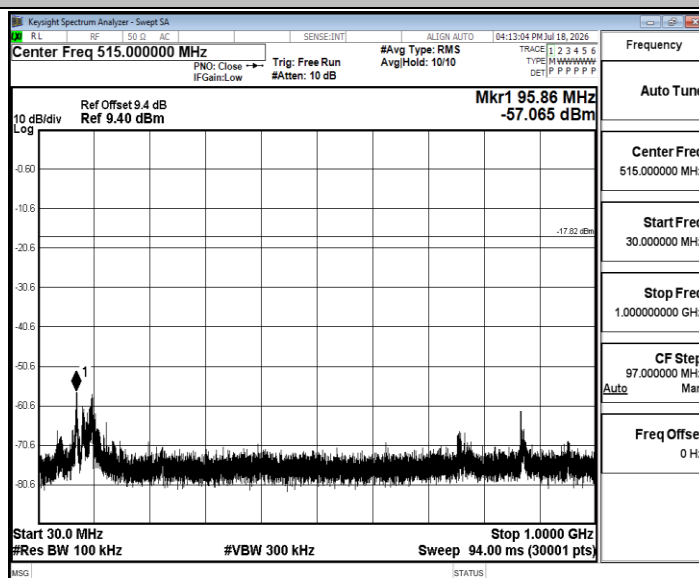
BLE_2M_Ant1_2440_1000~26500



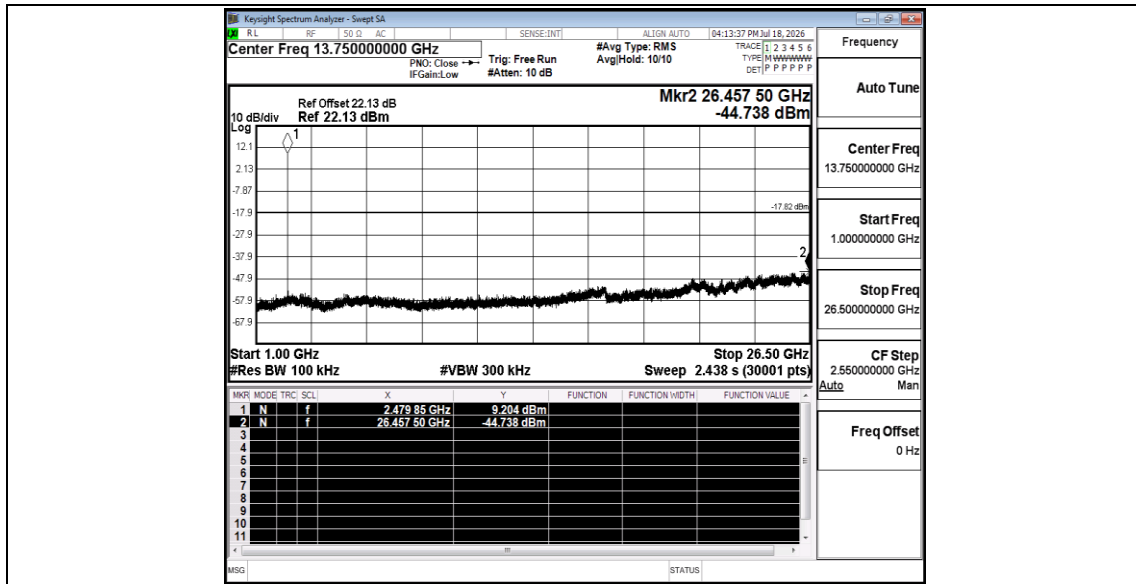
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

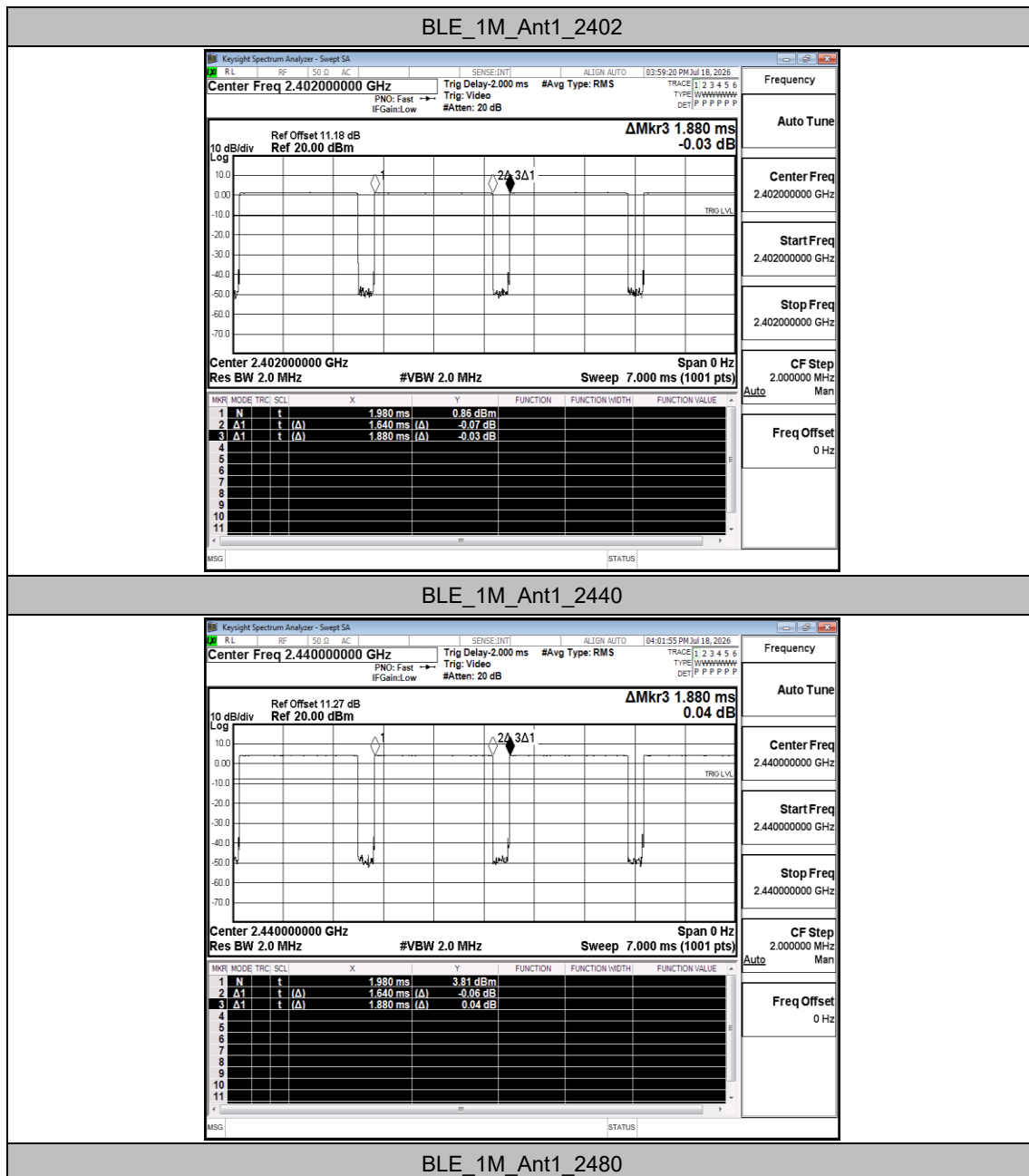


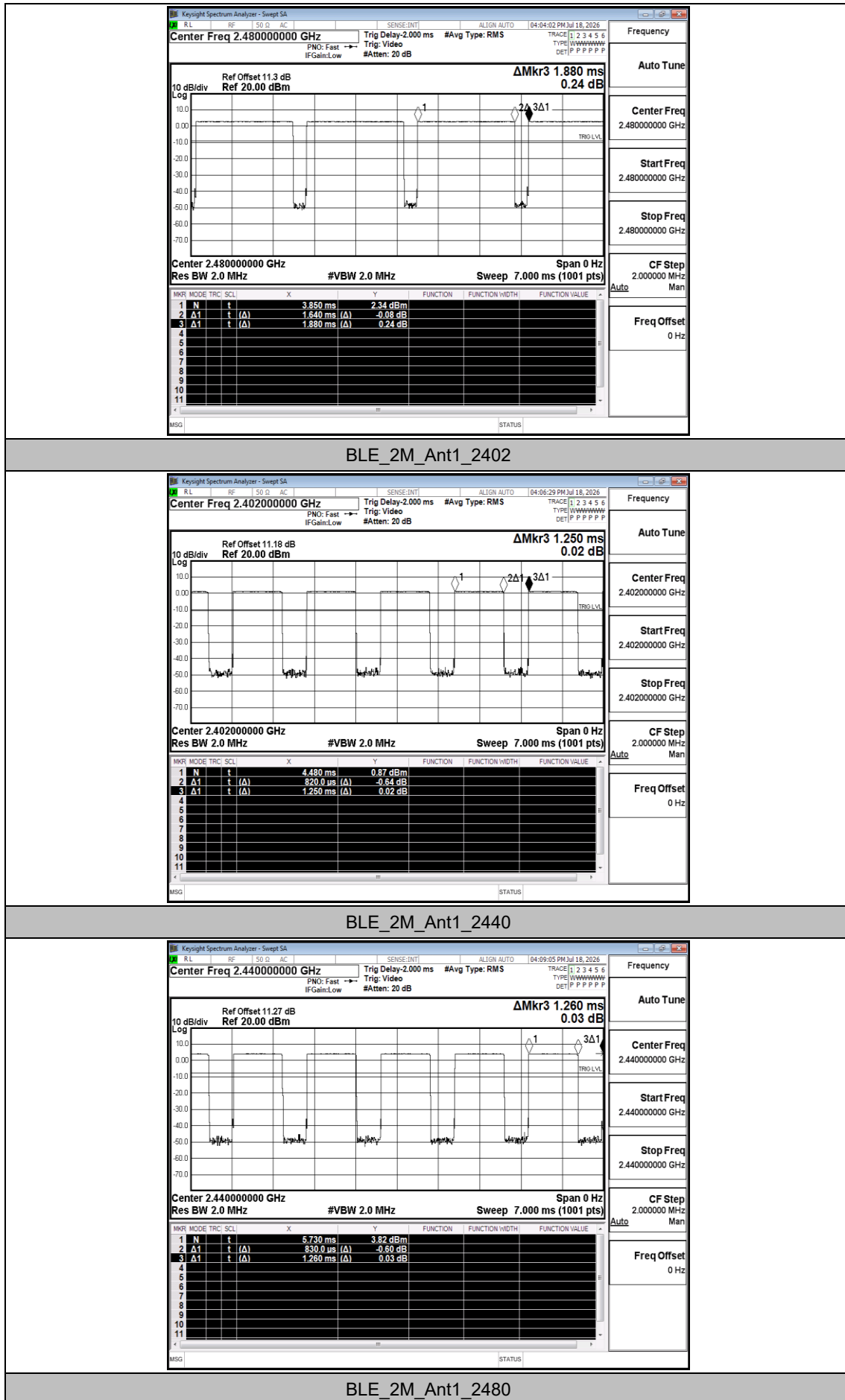
B.6 Duty Cycle

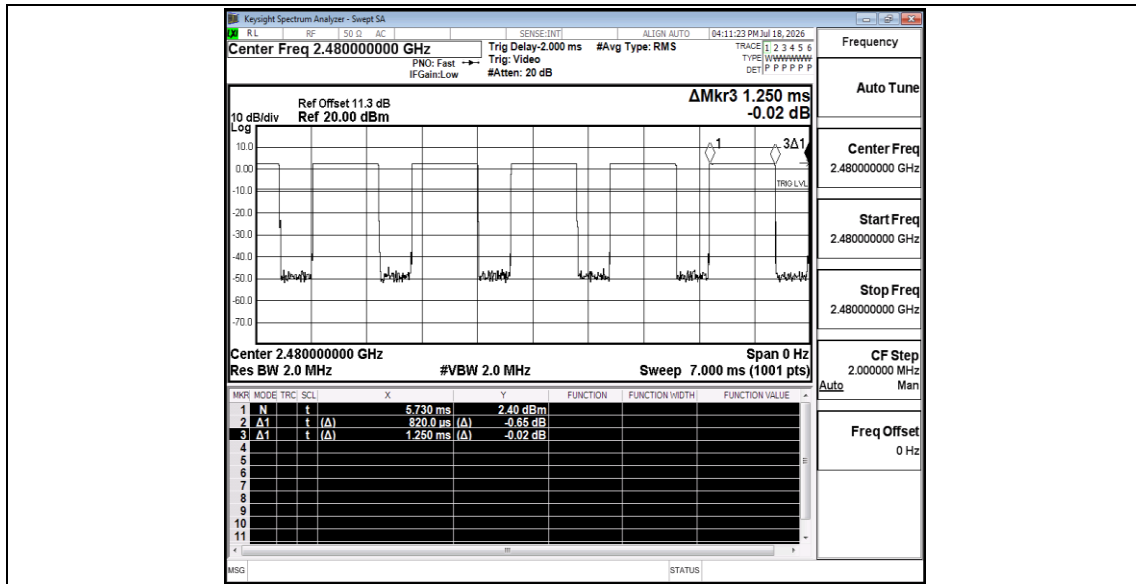
Test Result

TestMode	Antenna	Freq (MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	1.64	1.88	0.8723	87.23	0.59	---	---
		2440	1.64	1.88	0.8723	87.23	0.59	---	---
		2480	1.64	1.88	0.8723	87.23	0.59	---	---
BLE_2M	Ant1	2402	0.82	1.25	0.6560	65.60	1.83	---	---
		2440	0.83	1.26	0.6587	65.87	1.81	---	---
		2480	0.82	1.25	0.6560	65.60	1.83	---	---

Test Graphs







B.7 Emissions in Restricted Bands

Test Result

TestMode	Antenna	ChName	Freq (MHz)	Detector	Freq [MHz]	Result [dBm]	Limit [dBm]	Gain [dBi]	DC Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Verdict
BLE_1M	Ant1	Low	2402	AV	2310.000	-58.04	≤-43.79	2.00	0.59	39.75	≤54	PASS
				AV	2342.210	-57.22	≤-43.79	2.00	0.59	40.57	≤54	PASS
				AV	2390.000	-57.77	≤-43.79	2.00	0.59	40.02	≤54	PASS
				Peak	2310.000	-48.84	≤-23.20	2.00	0.00	48.36	≤74	PASS
				Peak	2330.450	-47.09	≤-23.20	2.00	0.00	50.11	≤74	PASS
				Peak	2390.000	-49.65	≤-23.20	2.00	0.00	47.55	≤74	PASS
		High	2480	AV	2483.500	-57.41	≤-43.79	2.00	0.59	40.38	≤54	PASS
				AV	2484.000	-56.39	≤-43.79	2.00	0.59	41.40	≤54	PASS
				AV	2500.000	-57.9	≤-43.79	2.00	0.59	39.89	≤54	PASS
				Peak	2483.500	-46.96	≤-23.20	2.00	0.00	50.24	≤74	PASS
				Peak	2484.880	-45.2	≤-23.20	2.00	0.00	52.00	≤74	PASS
				Peak	2500.000	-50.77	≤-23.20	2.00	0.00	46.43	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-58.37	≤-45.03	2.00	1.83	40.66	≤54	PASS
				AV	2336.015	-57.31	≤-45.03	2.00	1.83	41.72	≤54	PASS
				AV	2390.000	-58.04	≤-45.03	2.00	1.83	40.99	≤54	PASS
				Peak	2310.000	-50.75	≤-23.20	2.00	0.00	46.45	≤74	PASS
				Peak	2327.825	-46.69	≤-23.20	2.00	0.00	50.51	≤74	PASS
				Peak	2390.000	-49.93	≤-23.20	2.00	0.00	47.27	≤74	PASS
		High	2480	AV	2483.500	-56.81	≤-45.03	2.00	1.83	42.22	≤54	PASS
				AV	2483.600	-56.03	≤-45.03	2.00	1.83	43.00	≤54	PASS
				AV	2500.000	-57.72	≤-45.03	2.00	1.83	41.31	≤54	PASS
				Peak	2483.500	-50.28	≤-23.20	2.00	0.00	46.92	≤74	PASS
				Peak	2489.360	-45.53	≤-23.20	2.00	0.00	51.67	≤74	PASS
				Peak	2500.000	-50.51	≤-23.20	2.00	0.00	46.69	≤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

