

Appendix B

RF Test Data for BT LE (Conducted Measurement)

Tablet

Test Model: i101AC

Environmental Conditions

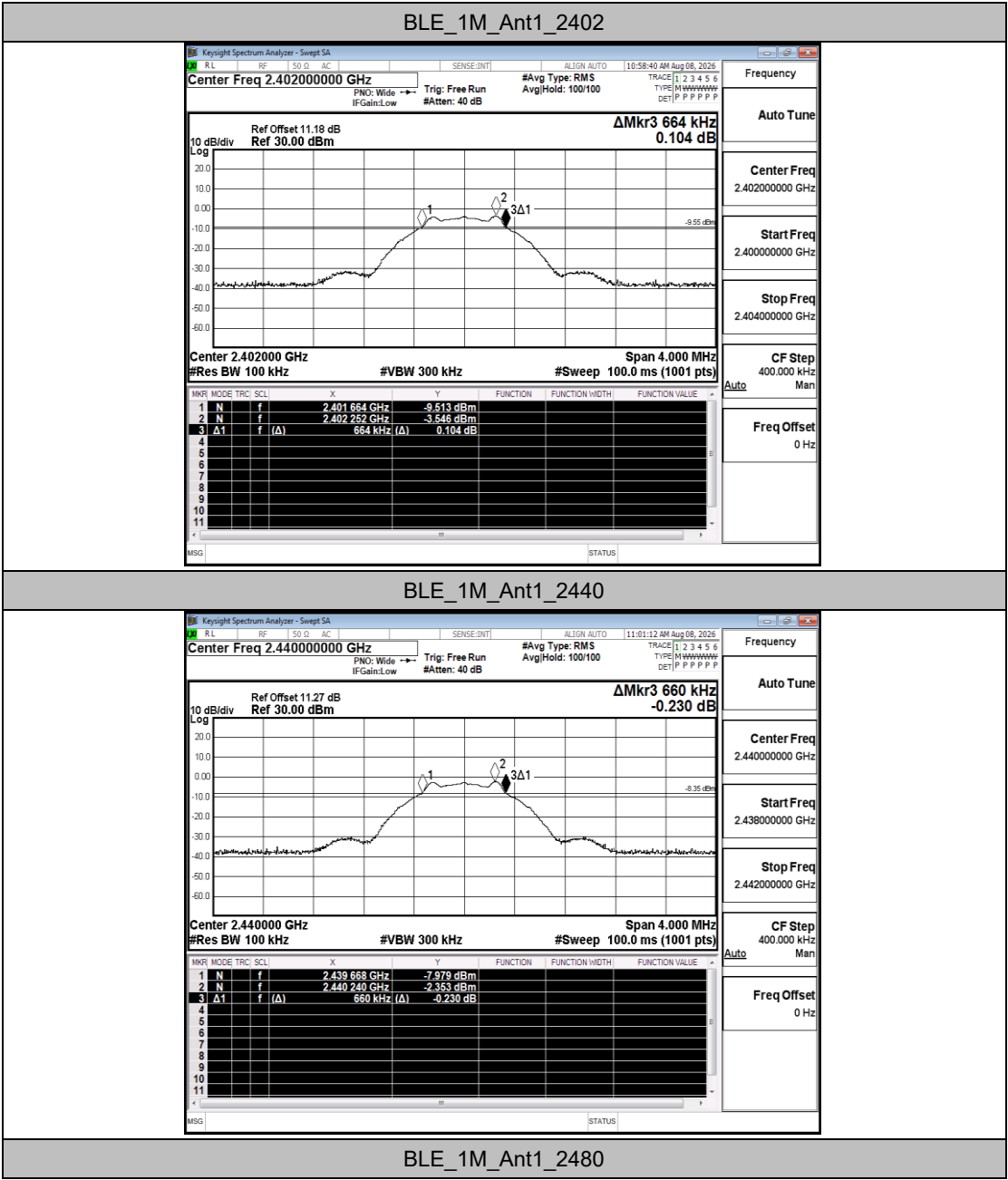
Temperature:	24.6° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Zhang hai
Supervised by:	Fengliu Tang

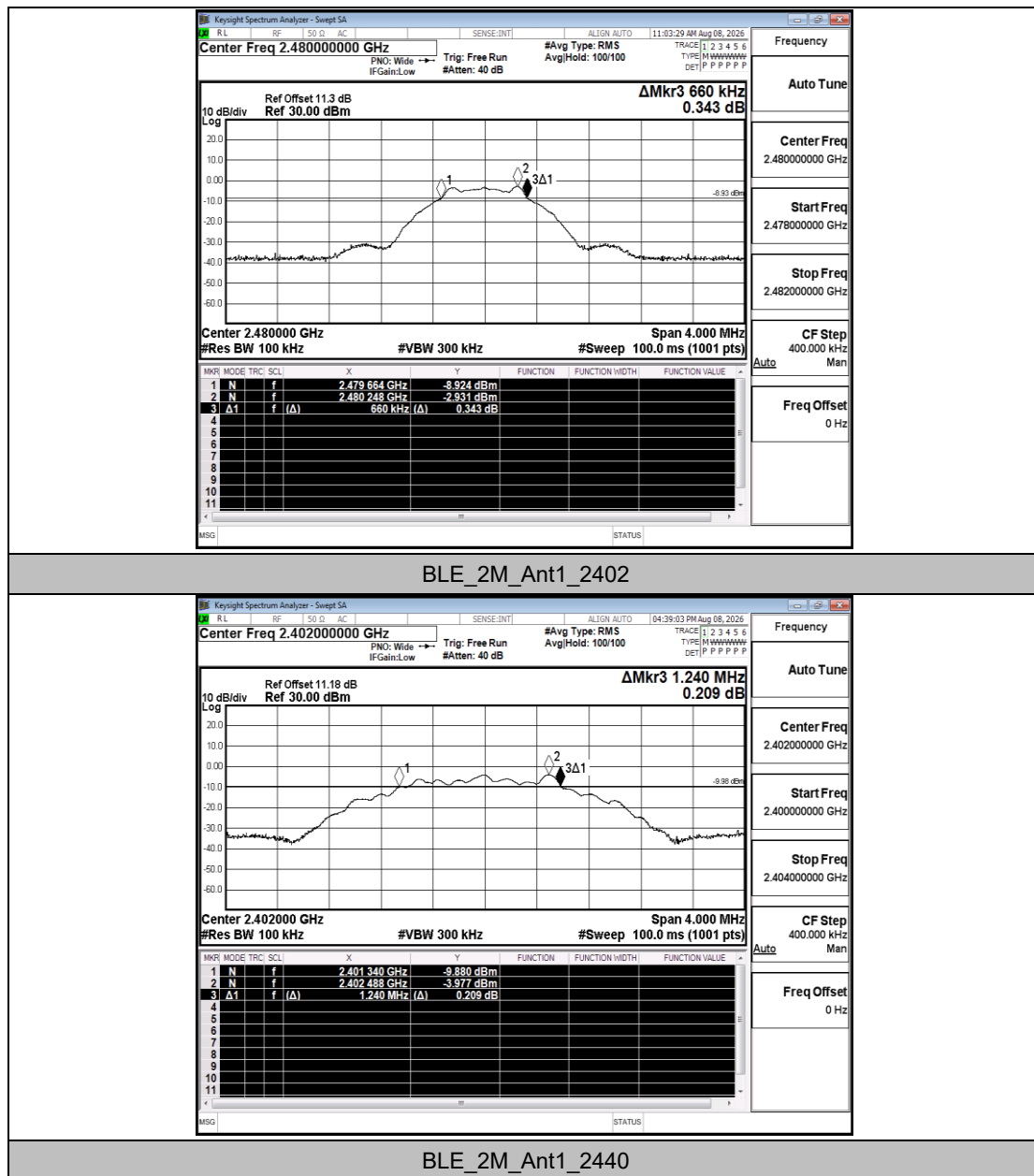
B.1 DTS Bandwidth

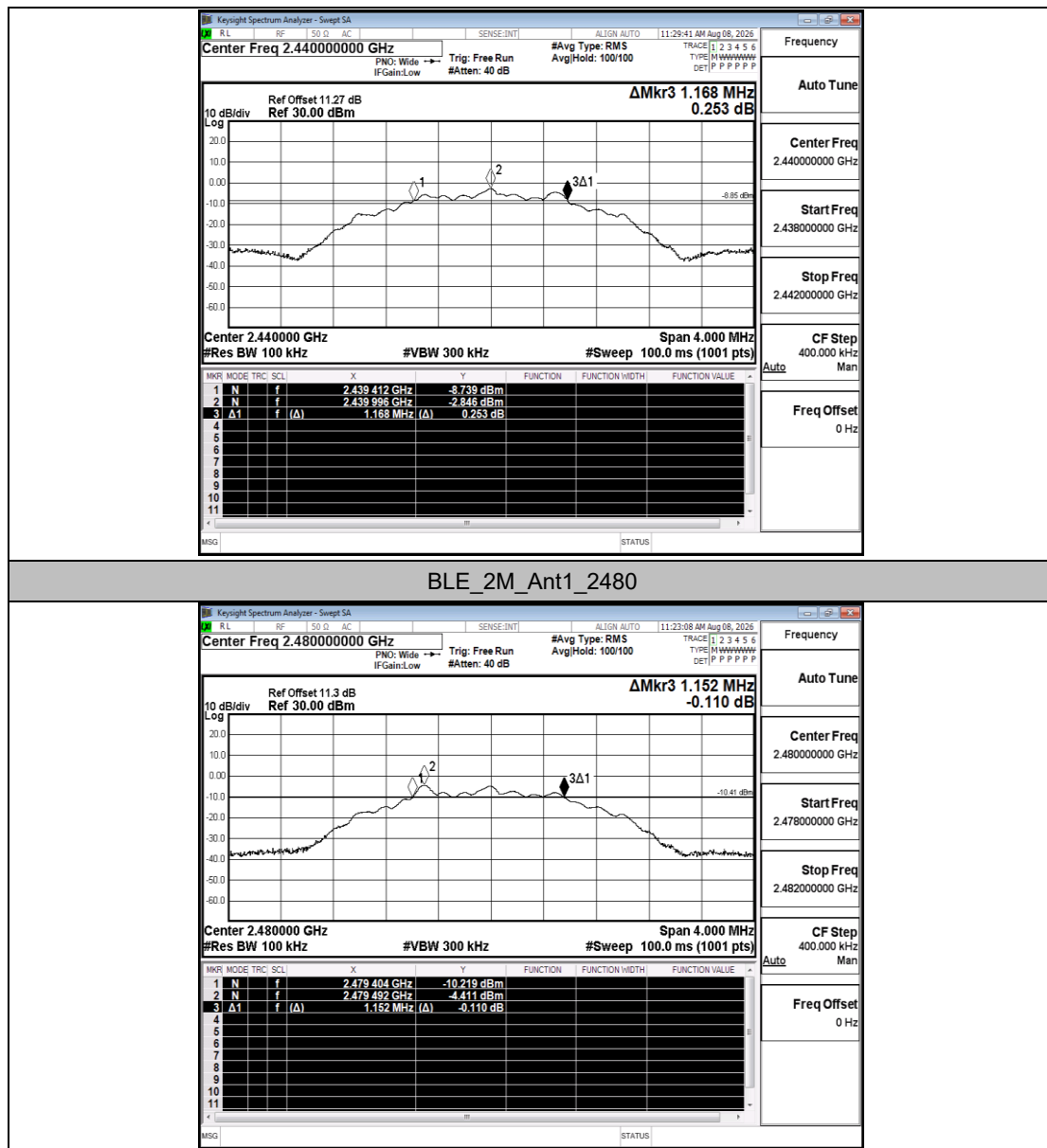
Test Result

TestMode	Antenna	Freq (MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit [MHz]	Verdict
BLE_1M	Ant1	2402	0.664	2401.664	2402.328	0.5	PASS
		2440	0.660	2439.668	2440.328	0.5	PASS
		2480	0.660	2479.664	2480.324	0.5	PASS
BLE_2M	Ant1	2402	1.240	2401.340	2402.580	0.5	PASS
		2440	1.168	2439.412	2440.580	0.5	PASS
		2480	1.152	2479.404	2480.556	0.5	PASS

Test Graphs





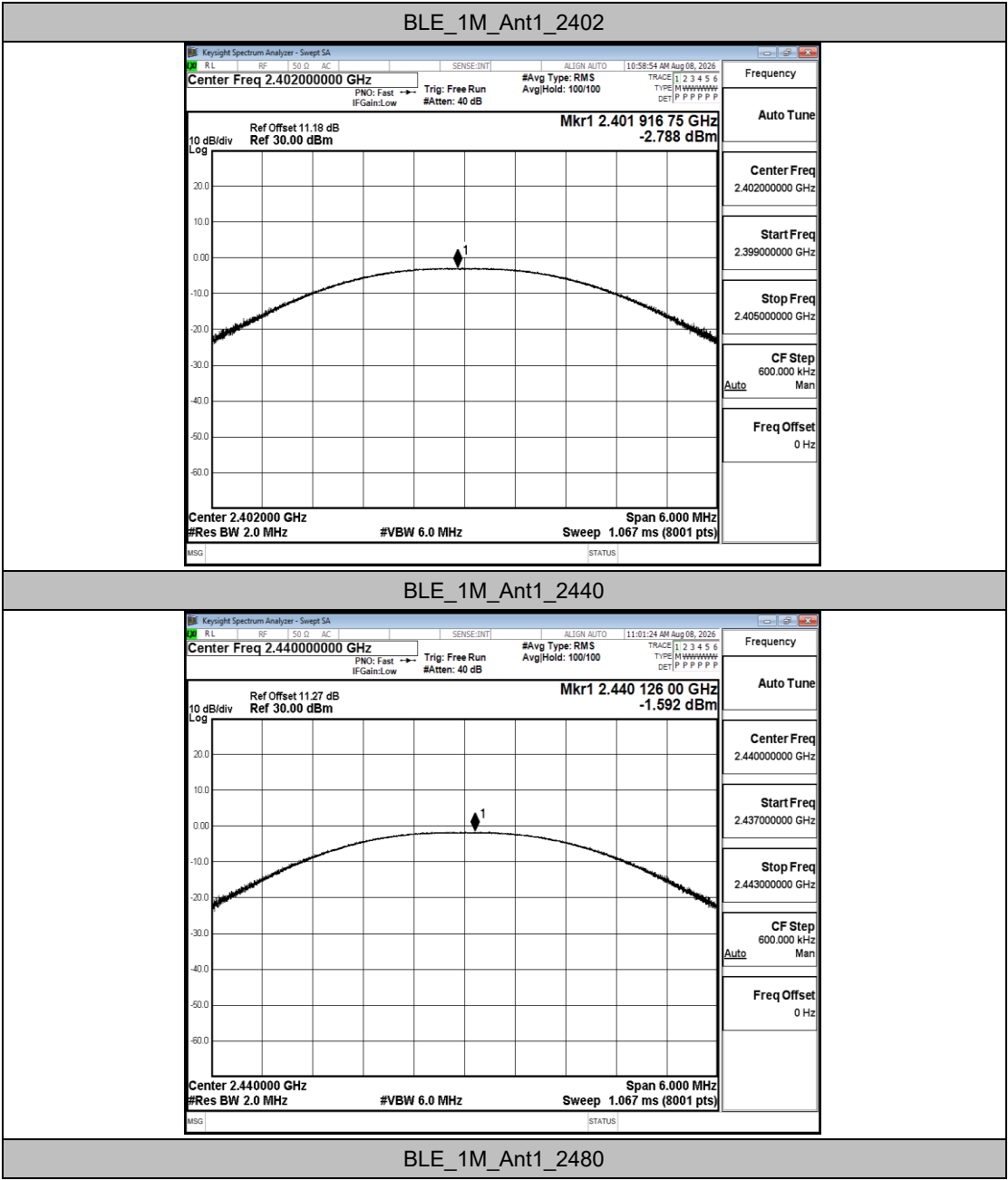


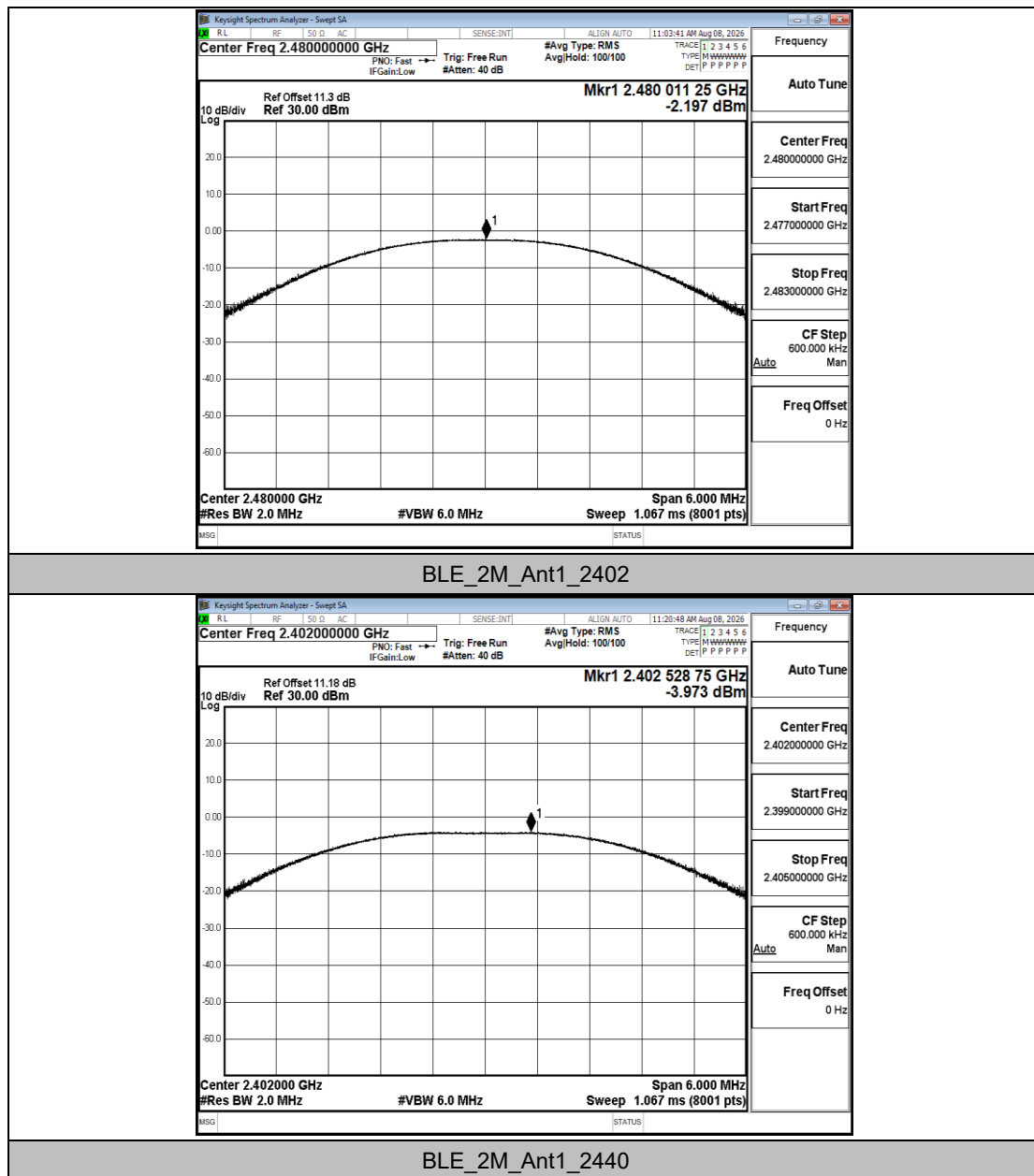
B.2 Maximum Peak conducted output power

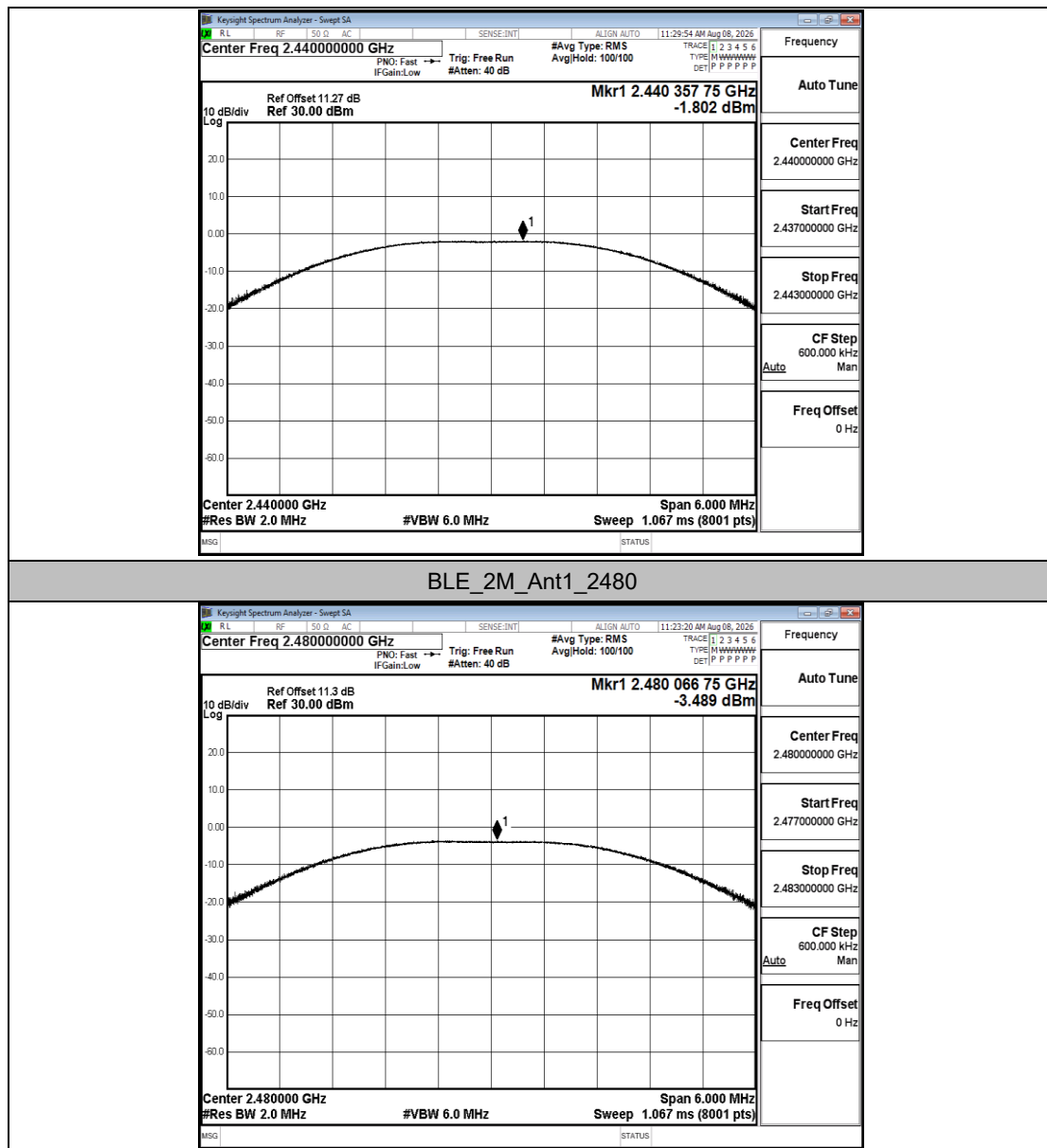
Test Result

TestMode	Antenna	Freq (MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-2.79	≤30	PASS
		2440	-1.59	≤30	PASS
		2480	-2.20	≤30	PASS
BLE_2M	Ant1	2402	-3.97	≤30	PASS
		2440	-1.80	≤30	PASS
		2480	-3.49	≤30	PASS

Test Graphs Peak





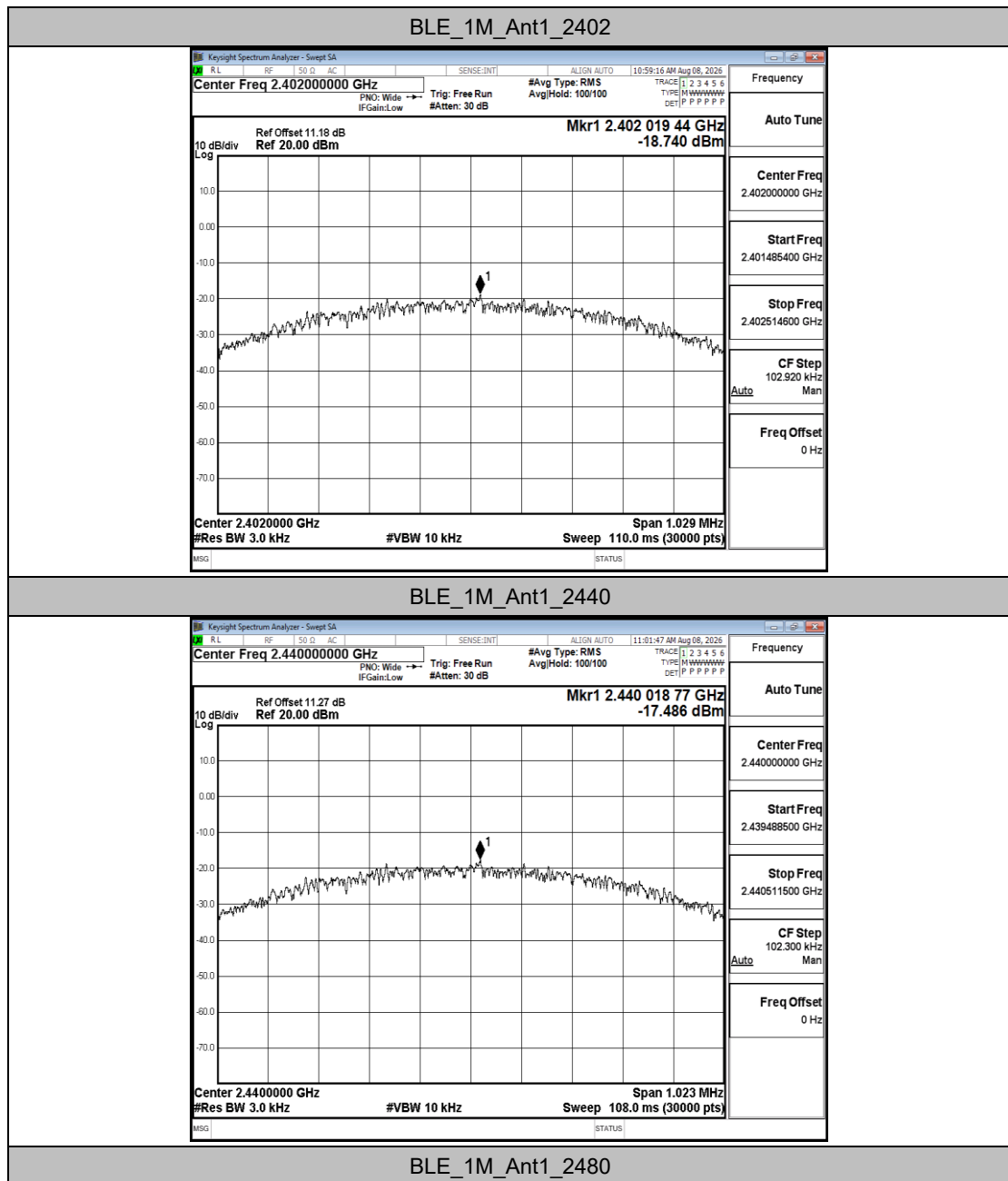


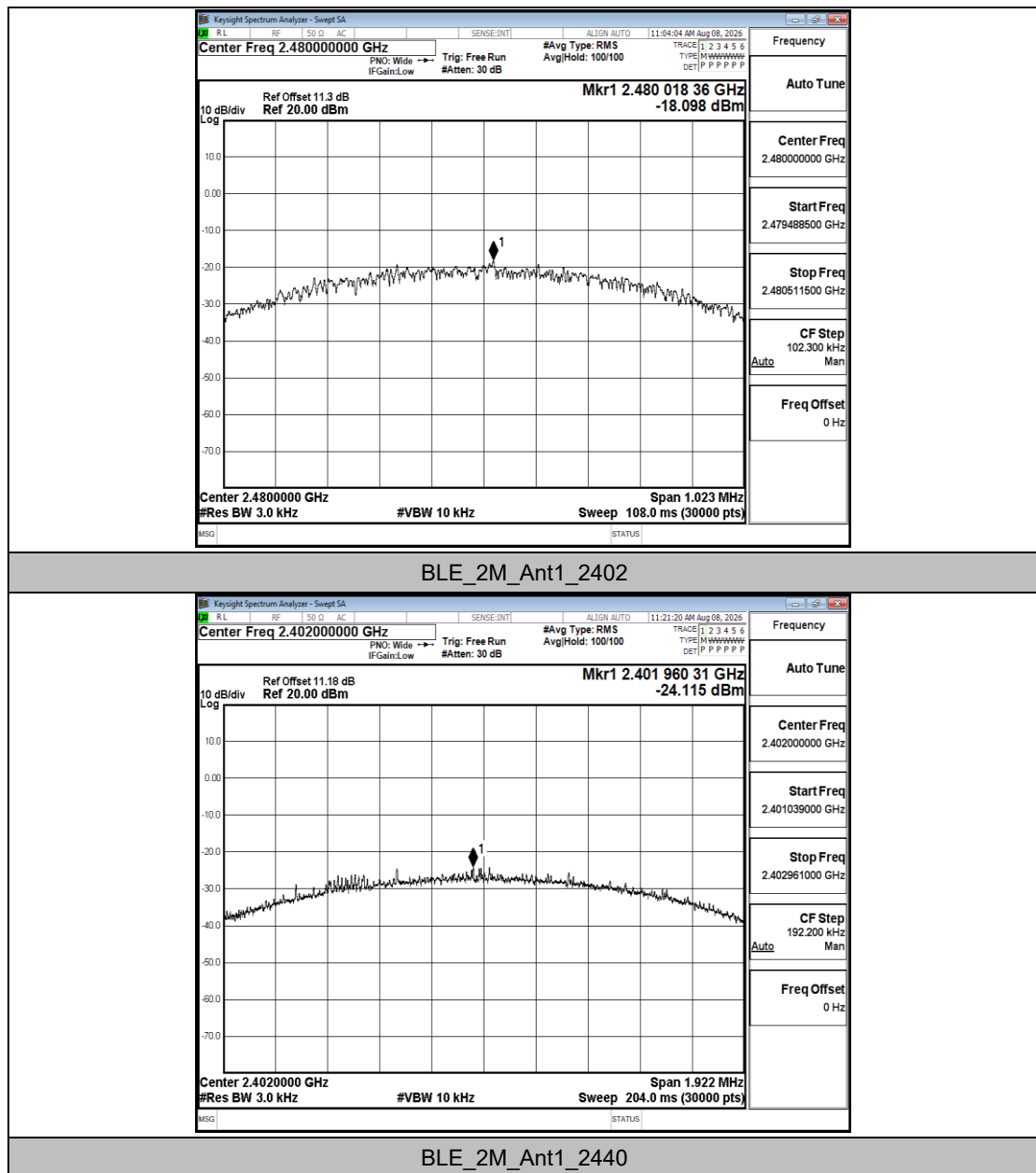
B.3 Maximum power spectral density

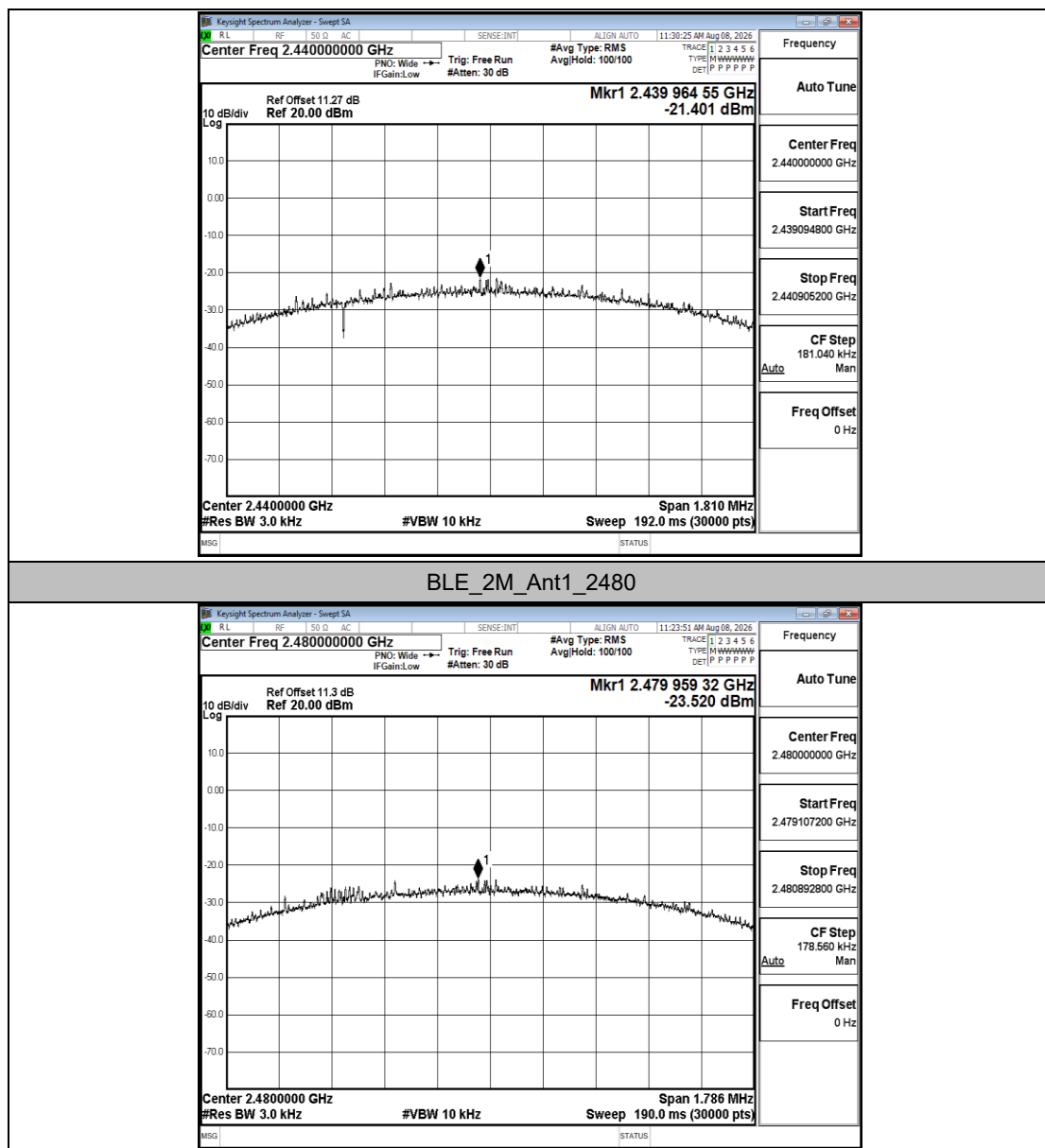
Test Result

TestMode	Antenna	Freq (MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.74	≤8.00	PASS
		2440	-17.49	≤8.00	PASS
		2480	-18.10	≤8.00	PASS
BLE_2M	Ant1	2402	-24.12	≤8.00	PASS
		2440	-21.40	≤8.00	PASS
		2480	-23.52	≤8.00	PASS

Test Graphs





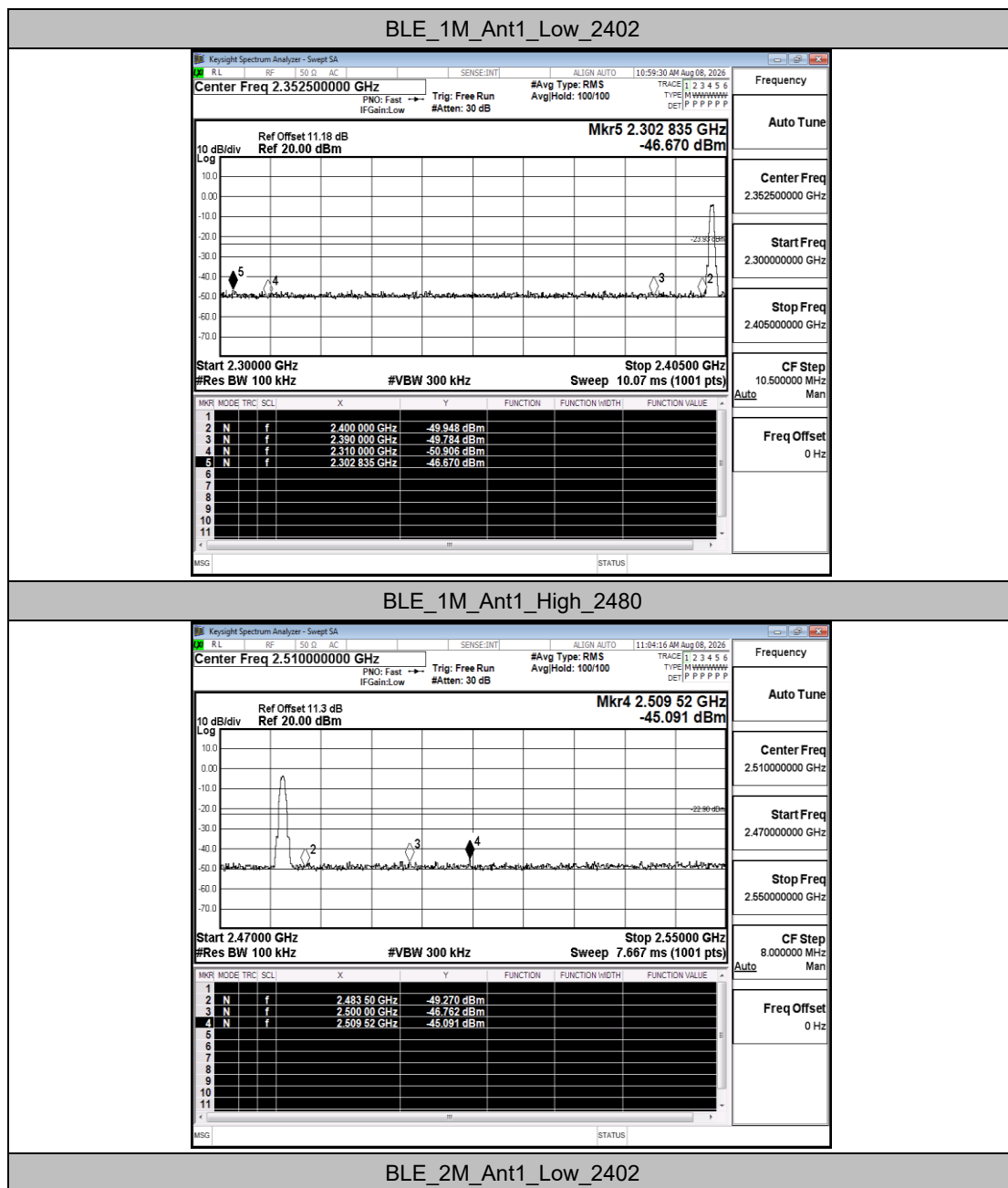


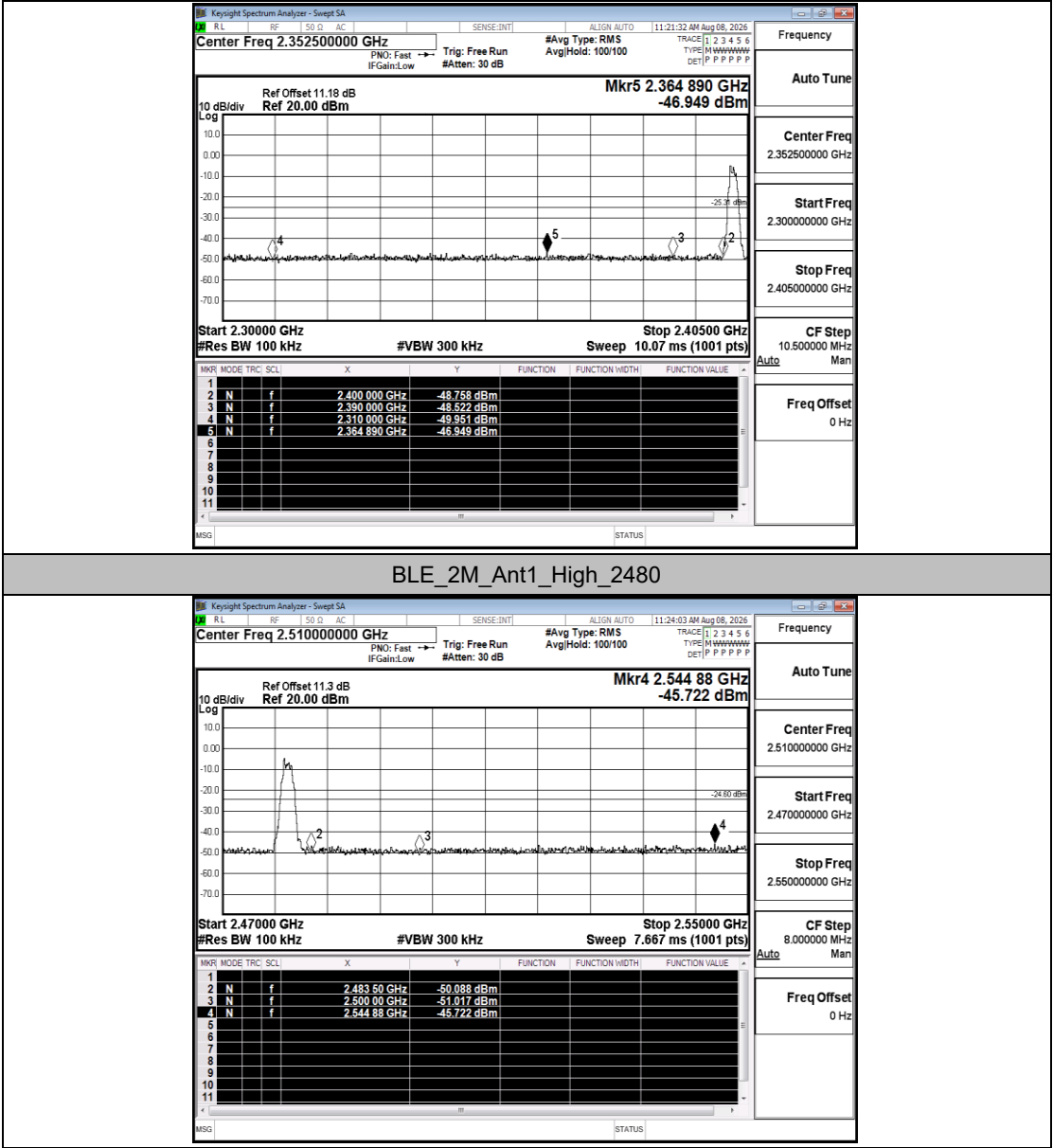
B.4 Band edge measurements

Test Result

TestMode	Antenna	ChName	Freq (MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-3.93	-46.67	≤-23.93	PASS
		High	2480	-2.98	-45.09	≤-22.98	PASS
BLE_2M	Ant1	Low	2402	-5.31	-46.95	≤-25.31	PASS
		High	2480	-4.60	-45.72	≤-24.6	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	-3.70	-3.70	---	PASS
			30~1000	-3.70	-70.04	≤-23.7	PASS
			1000~26500	-3.70	-44.93	≤-23.7	PASS
		2440	Reference	-2.50	-2.50	---	PASS
			30~1000	-2.50	-69.79	≤-22.5	PASS
			1000~26500	-2.50	-44.65	≤-22.5	PASS
		2480	Reference	-3.01	-3.01	---	PASS
			30~1000	-3.01	-69.04	≤-23.01	PASS
			1000~26500	-3.01	-44.47	≤-23.01	PASS
BLE_2M	Ant1	2402	Reference	-5.07	-5.07	---	PASS
			30~1000	-5.07	-54.22	≤-25.07	PASS
			1000~26500	-5.07	-43.77	≤-25.07	PASS
		2440	Reference	-2.98	-2.98	---	PASS
			30~1000	-2.98	-69.31	≤-22.98	PASS
			1000~26500	-2.98	-44.61	≤-22.98	PASS
		2480	Reference	-4.57	-4.57	---	PASS
			30~1000	-4.57	-54.18	≤-24.57	PASS
			1000~26500	-4.57	-44.06	≤-24.57	PASS

BLE_1M_Ant1_2402_0~Reference

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.402000000 GHz

Ref Offset 11.18 dB
Ref 30.00 dBm

Mkr1 2.402 240 GHz
-3.697 dBm

Frequency

Auto Tune

Center Freq
2.402000000 GHz

Start Freq
2.400500000 GHz

Stop Freq
2.403500000 GHz

CF Step
300.000 kHz
Man

Freq Offset
0 Hz

10 dB/div
Log

Span 3.000 MHz
#Res BW 100 kHz
#VBW 300 kHz
#Sweep 100.0 ms (1001 pts)

BLE_1M_Ant1_2402_30~1000

Keysight Spectrum Analyzer - Swept SA

Center Freq 515.0000000 MHz

Ref Offset 9.4 dB
Ref 9.40 dBm

Mkr1 721.13 MHz
-70.039 dBm

Frequency

Auto Tune

Center Freq
515.0000000 MHz

Start Freq
30.0000000 MHz

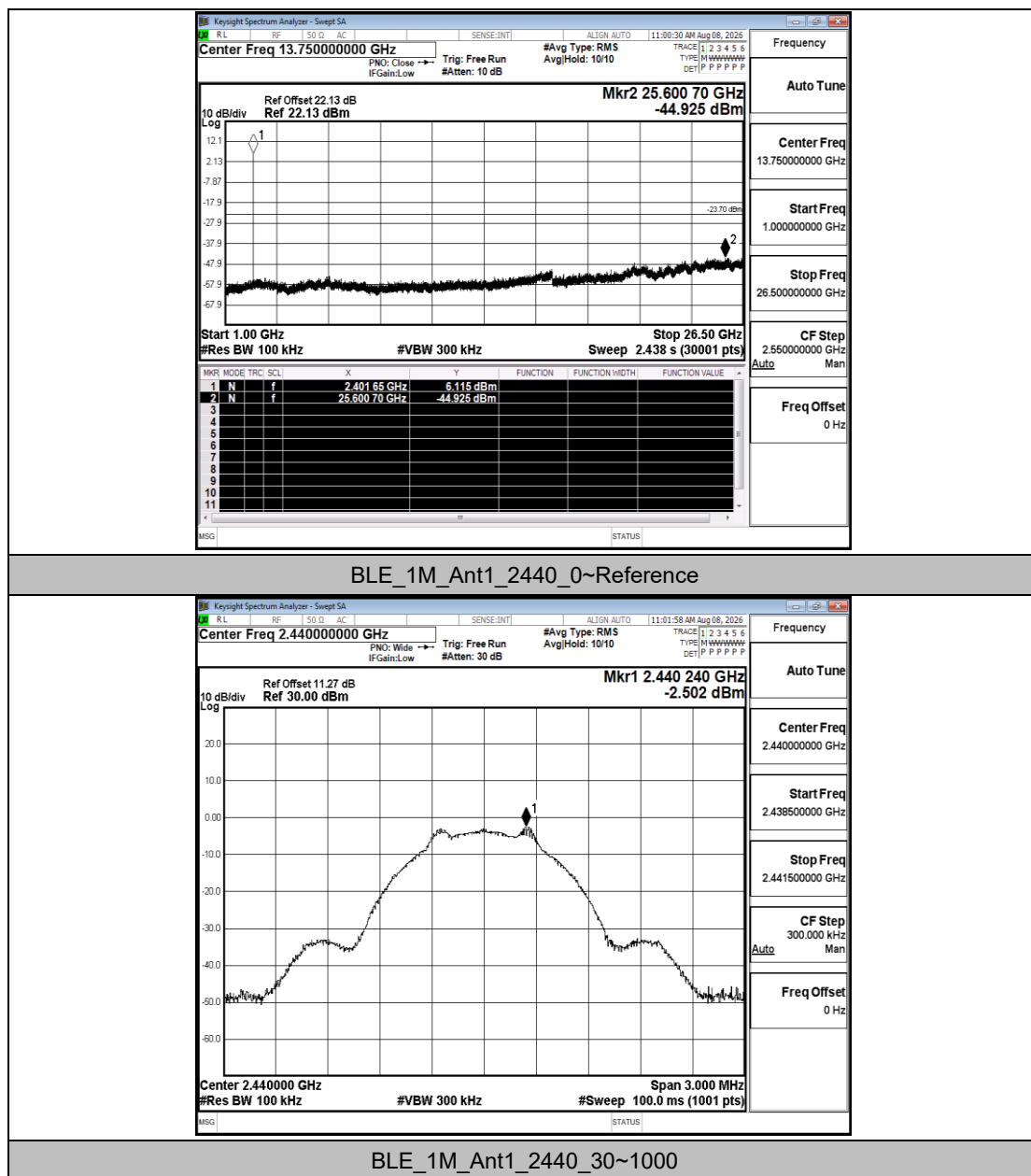
Stop Freq
1.000000000 GHz

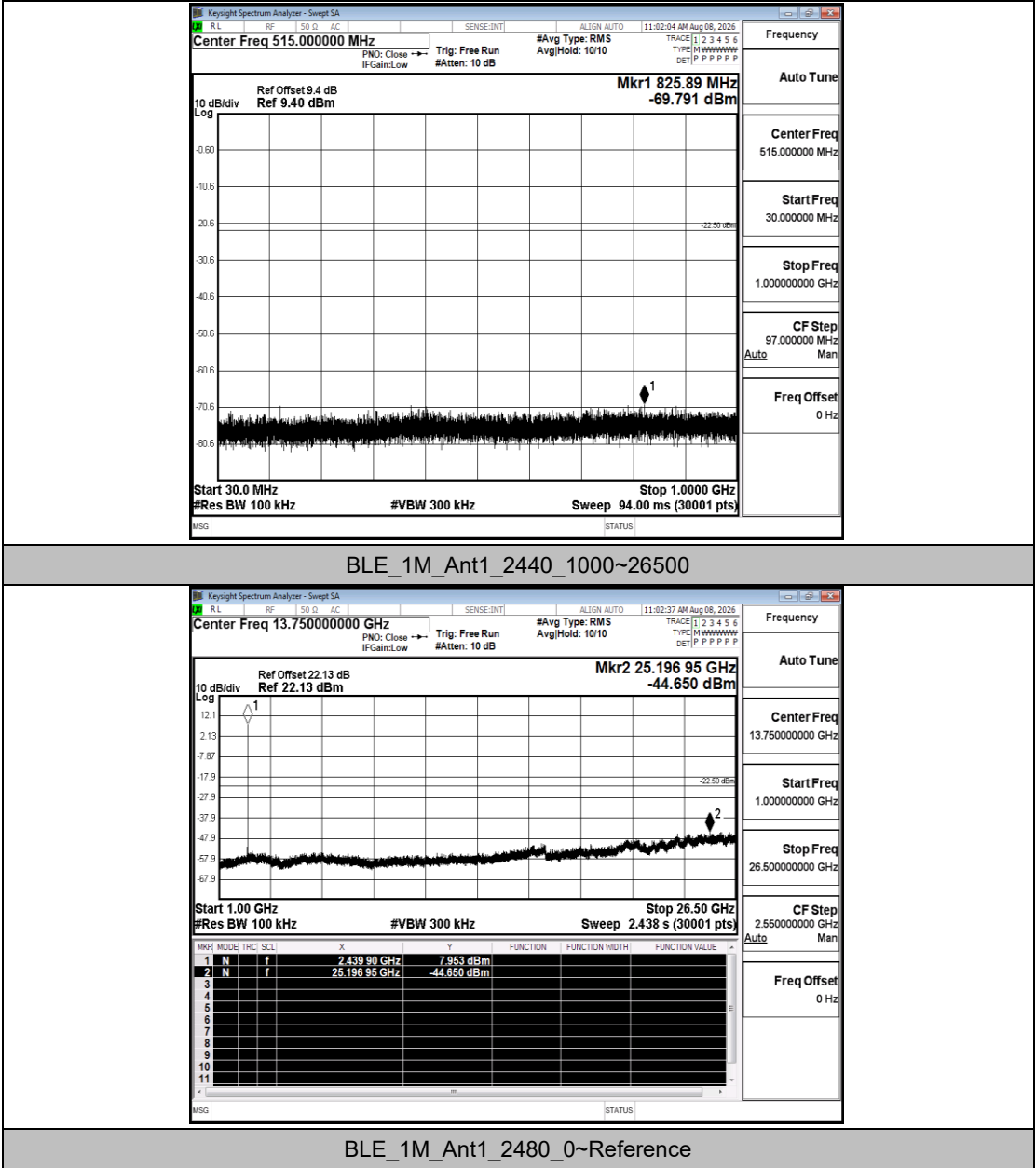
CF Step
97.0000000 MHz
Man

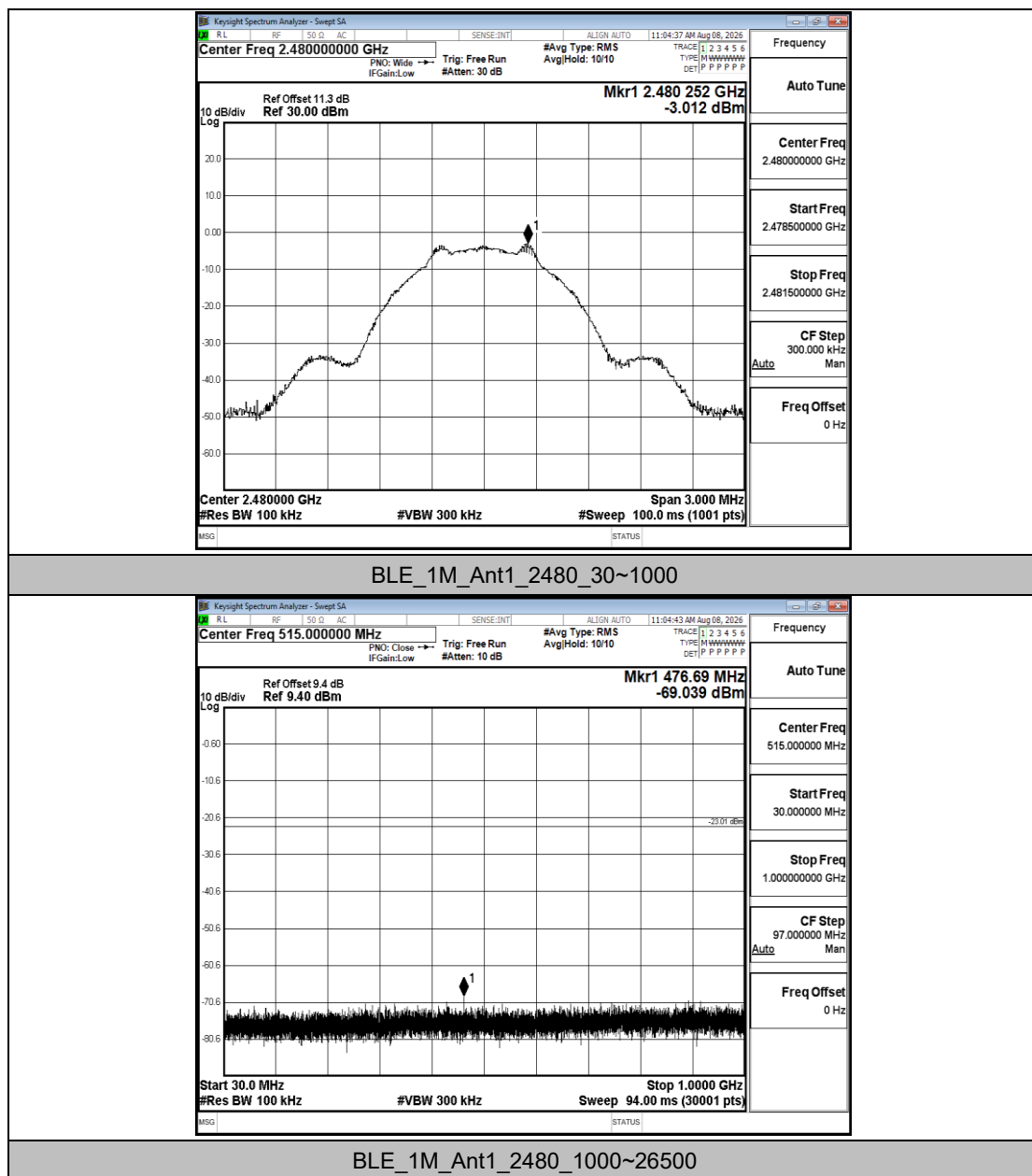
Freq Offset
0 Hz

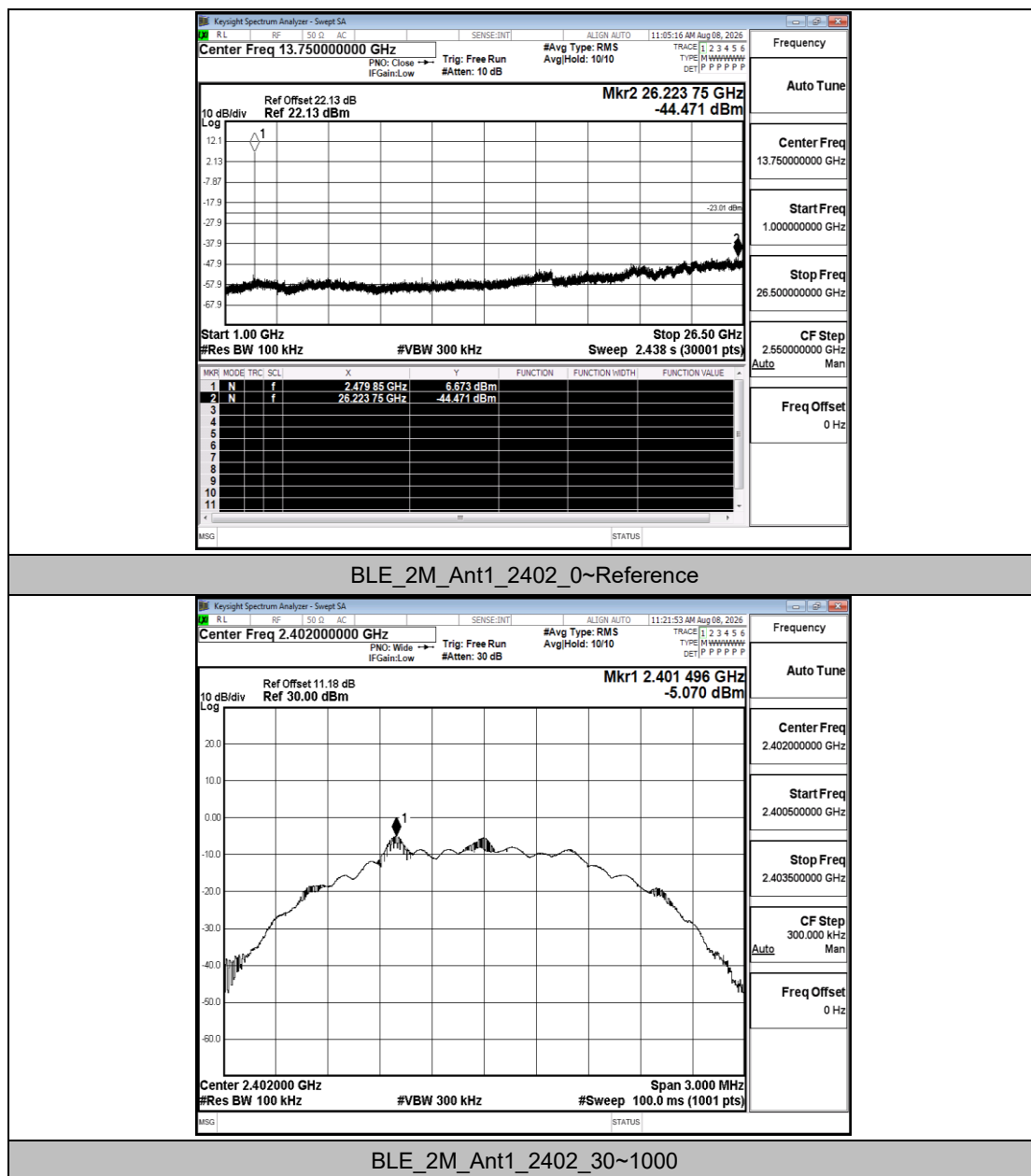
10 dB/div
Log

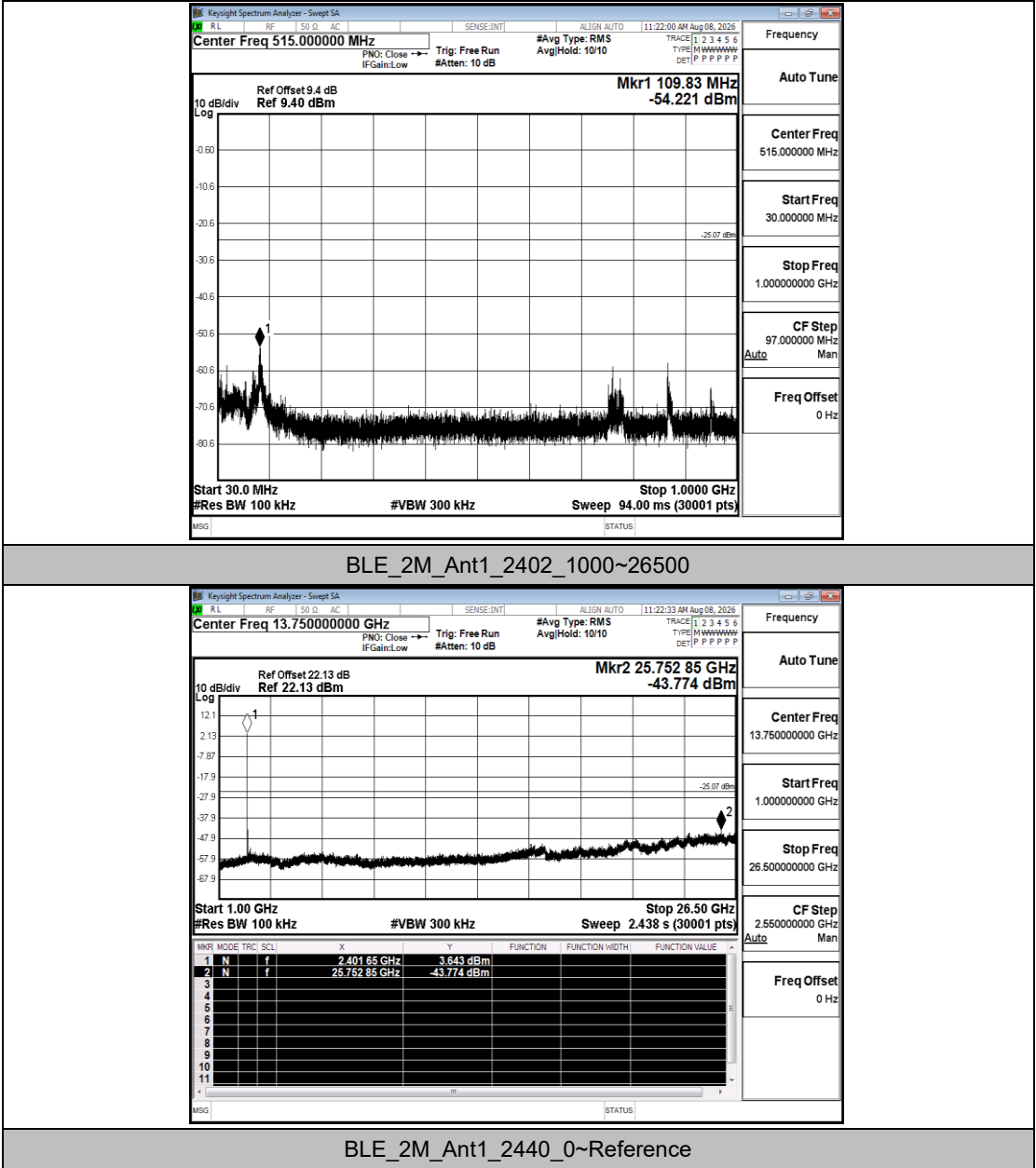
Span 1.0000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 94.00 ms (30001 pts)

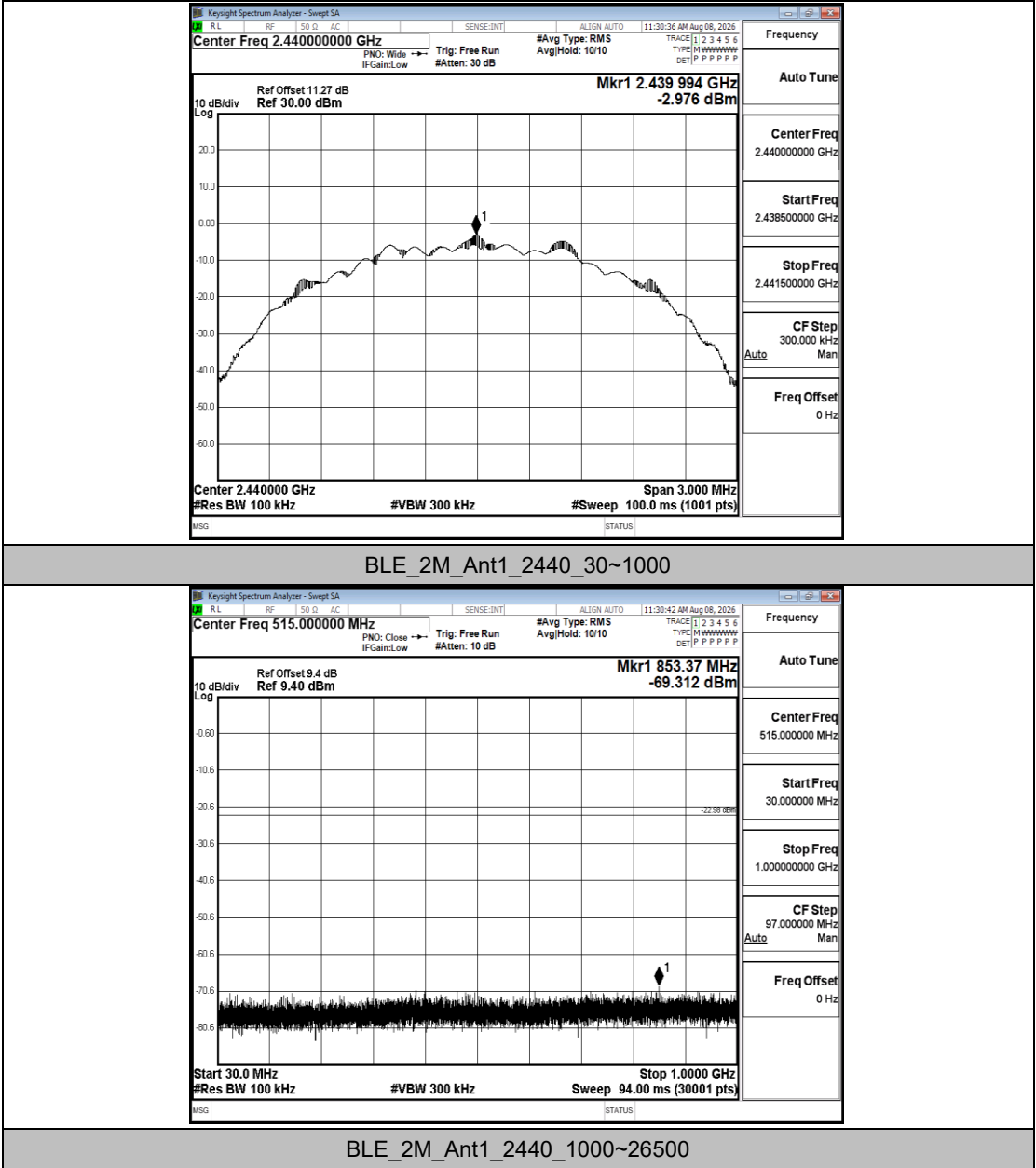


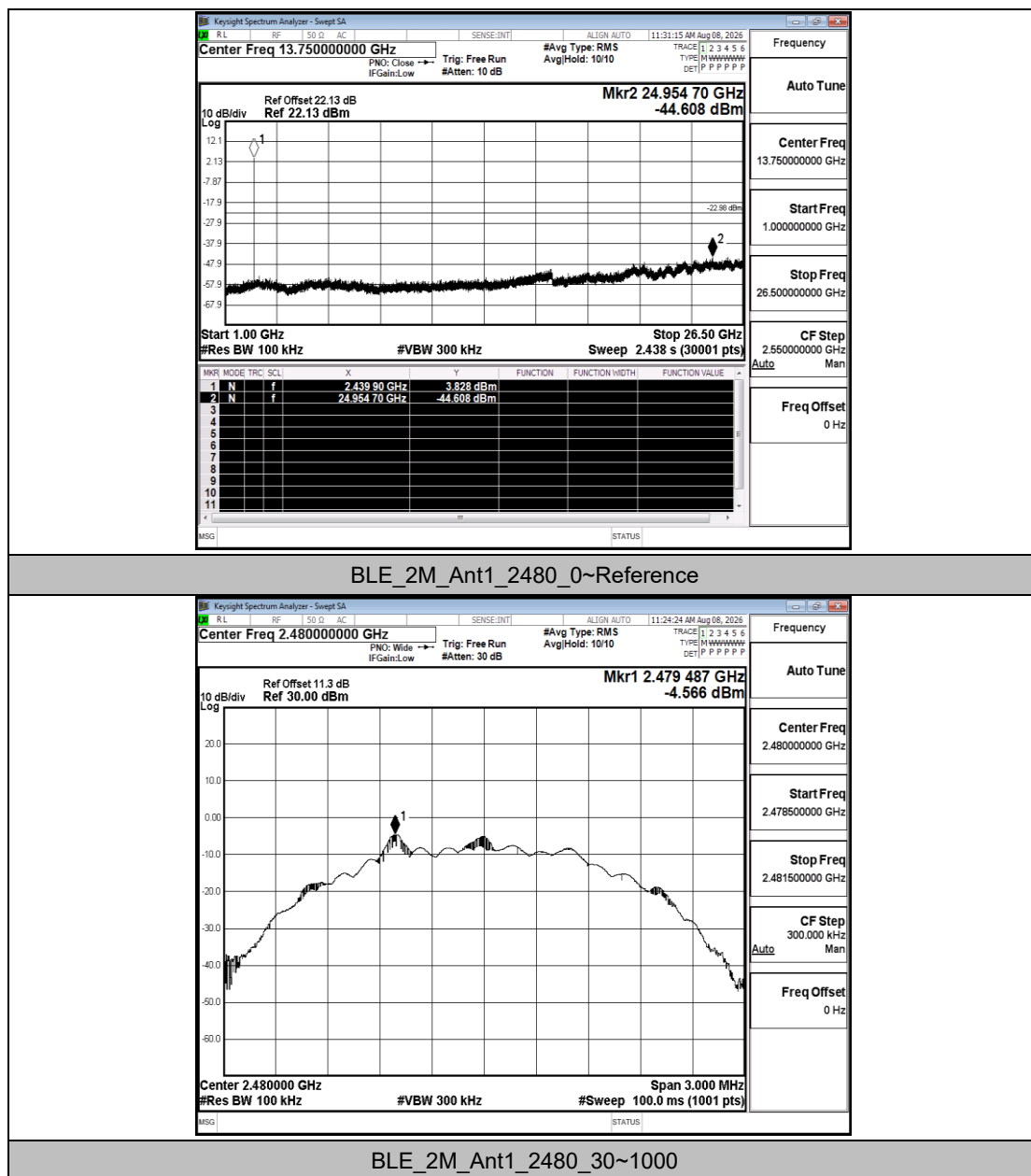


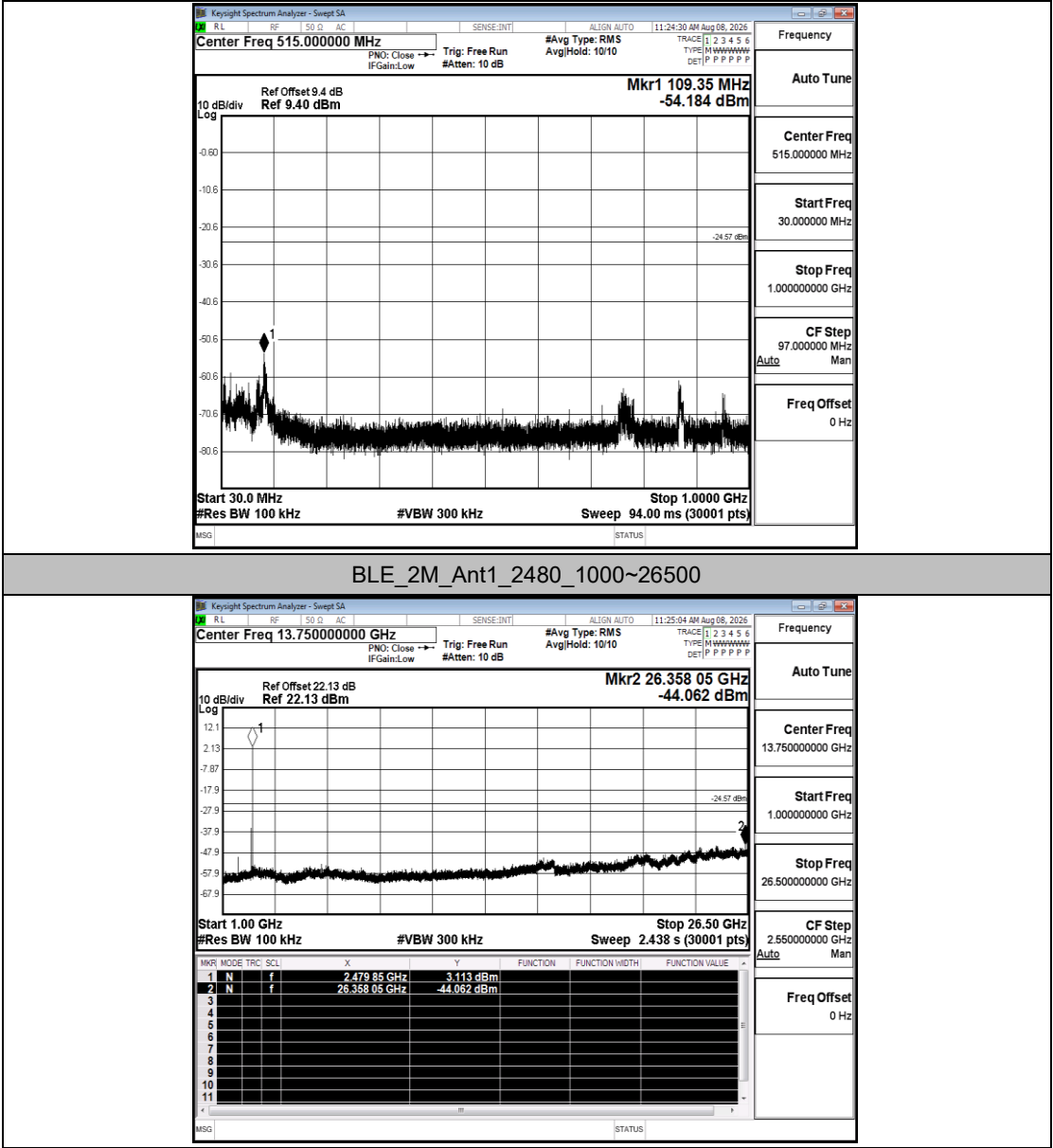










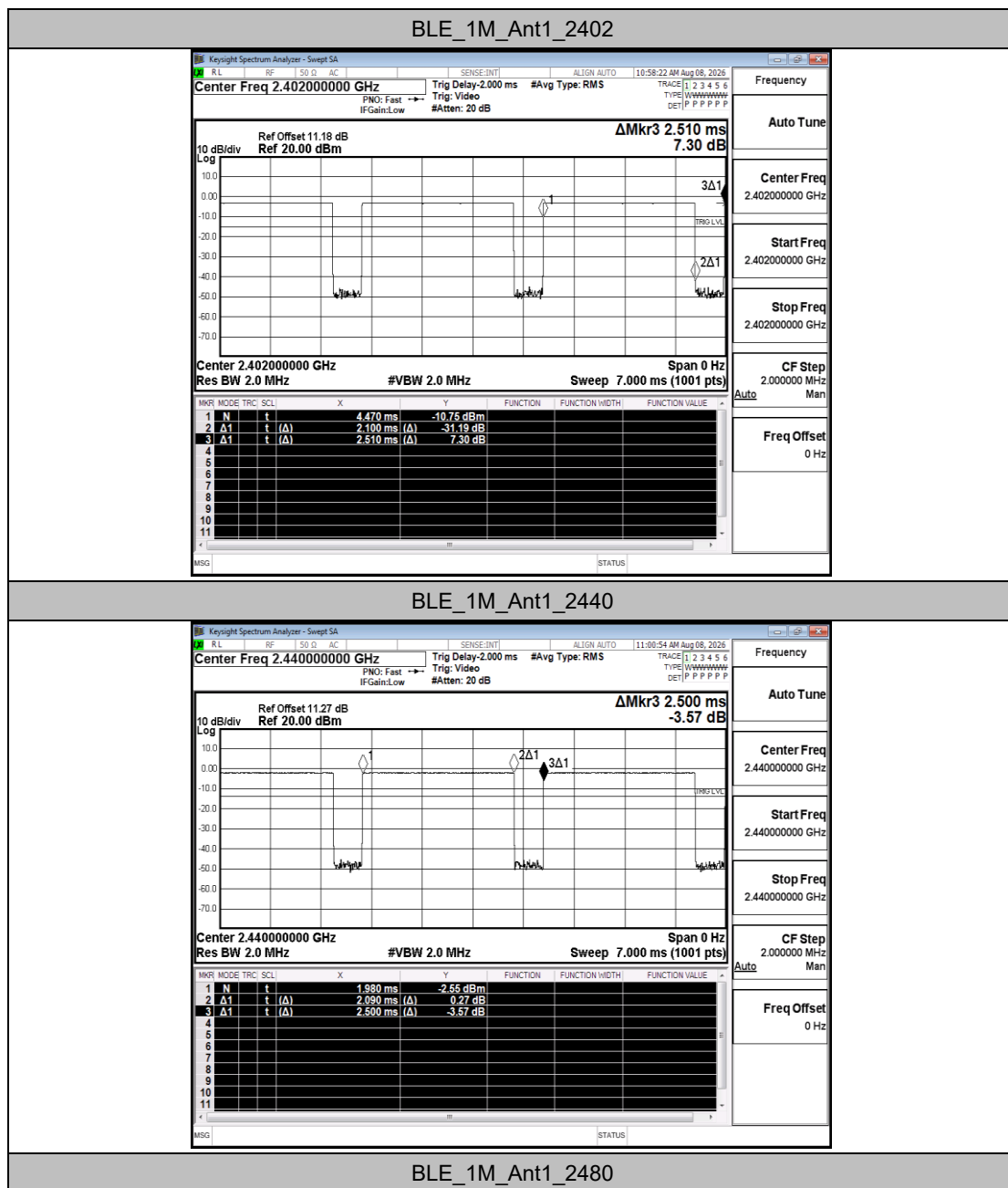


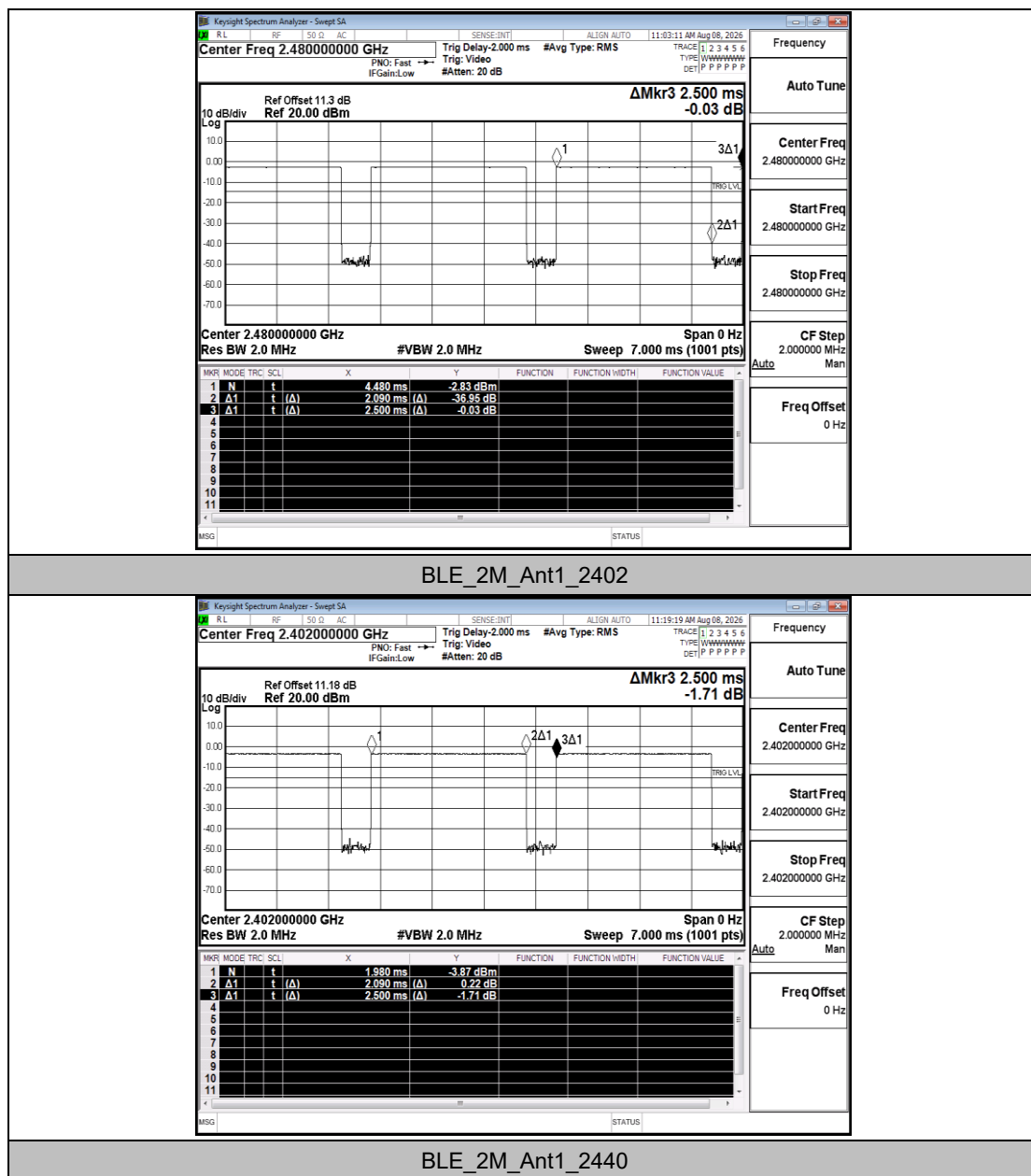
B.6 Duty Cycle

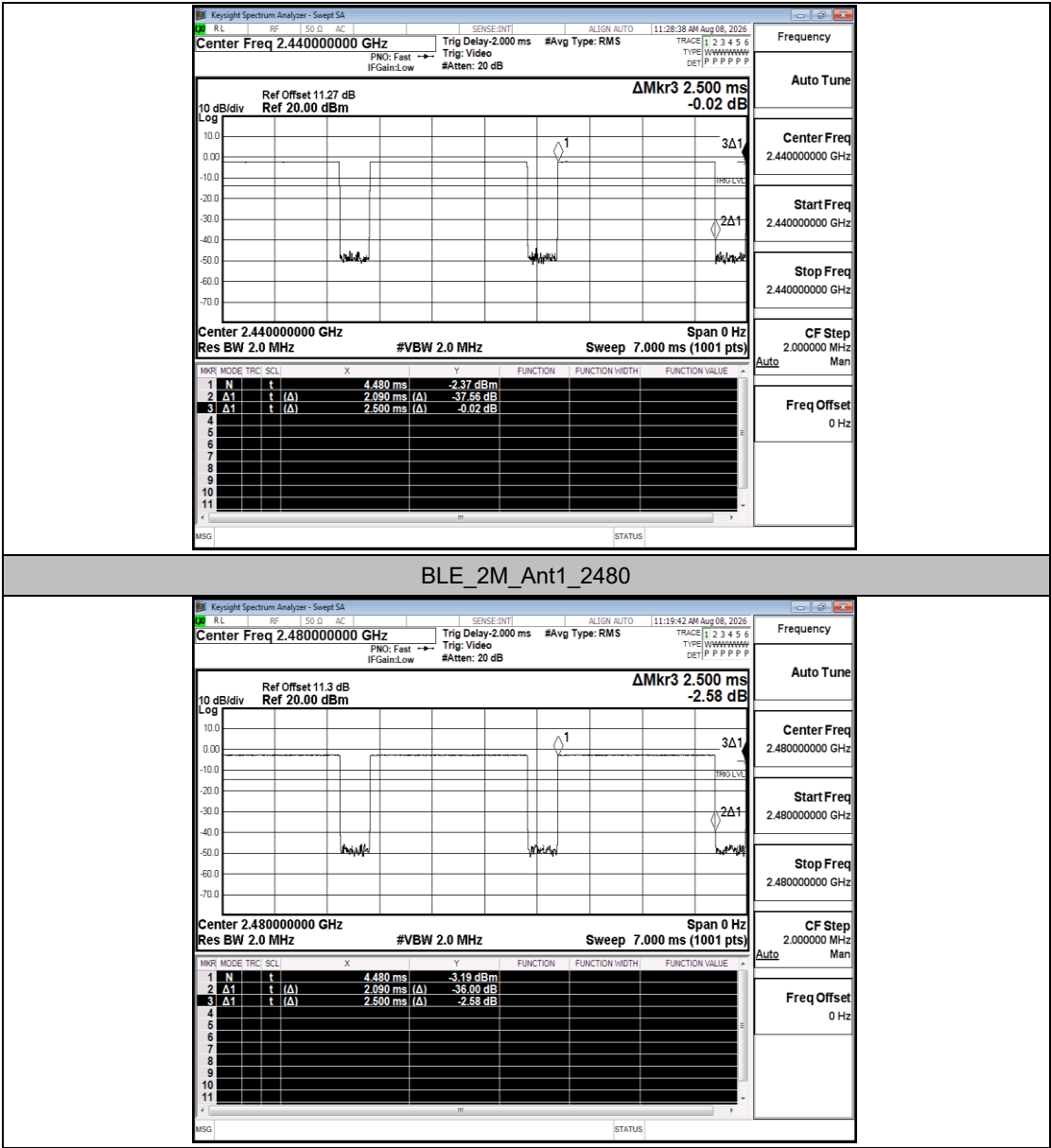
Test Result

TestMode	Antenna	Freq (MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.10	2.51	0.8367	83.67	0.77	---	---
		2440	2.09	2.50	0.8360	83.60	0.78	---	---
		2480	2.09	2.50	0.8360	83.60	0.78	---	---
BLE_2M	Ant1	2402	2.09	2.50	0.8360	83.60	0.78	---	---
		2440	2.09	2.50	0.8360	83.60	0.78	---	---
		2480	2.09	2.50	0.8360	83.60	0.78	---	---

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	-58.22	≤-44.40	2.43	0.77	40.18	≤54	PASS
				AV	2356.385	-57.04	≤-44.40	2.43	0.77	41.36	≤54	PASS
				AV	2390.000	-58.19	≤-44.40	2.43	0.77	40.21	≤54	PASS
				Peak	2310.000	-50.36	≤-23.63	2.43	0.00	47.27	≤74	PASS
				Peak	2370.140	-46.93	≤-23.63	2.43	0.00	50.70	≤74	PASS
				Peak	2390.000	-49.16	≤-23.63	2.43	0.00	48.47	≤74	PASS
		High	2480	AV	2483.500	-57.11	≤-44.41	2.43	0.78	41.30	≤54	PASS
				AV	2487.120	-56.6	≤-44.41	2.43	0.78	41.81	≤54	PASS
				AV	2500.000	-57.67	≤-44.41	2.43	0.78	40.74	≤54	PASS
				Peak	2483.500	-50.02	≤-23.63	2.43	0.00	47.61	≤74	PASS
				Peak	2490.160	-46.61	≤-23.63	2.43	0.00	51.02	≤74	PASS
				Peak	2500.000	-49.02	≤-23.63	2.43	0.00	48.61	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-58.16	≤-44.41	2.43	0.78	40.25	≤54	PASS
				AV	2330.660	-57.08	≤-44.41	2.43	0.78	41.33	≤54	PASS
				AV	2390.000	-57.87	≤-44.41	2.43	0.78	40.54	≤54	PASS
				Peak	2310.000	-50.26	≤-23.63	2.43	0.00	47.37	≤74	PASS
				Peak	2388.200	-46.67	≤-23.63	2.43	0.00	50.96	≤74	PASS
				Peak	2390.000	-48.75	≤-23.63	2.43	0.00	48.88	≤74	PASS
		High	2480	AV	2483.500	-57.43	≤-44.41	2.43	0.78	40.98	≤54	PASS
				AV	2486.320	-56.8	≤-44.41	2.43	0.78	41.61	≤54	PASS
				AV	2500.000	-57.4	≤-44.41	2.43	0.78	41.01	≤54	PASS
				Peak	2483.500	-49.84	≤-23.63	2.43	0.00	47.79	≤74	PASS
				Peak	2483.760	-47.61	≤-23.63	2.43	0.00	50.02	≤74	PASS
				Peak	2500.000	-49.53	≤-23.63	2.43	0.00	48.10	≤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

