

Appendix B

RF Test Data for BT LE(Conducted Measurement)

Product Name: AI Voice Recorder

Test Model: M1

Environmental Conditions

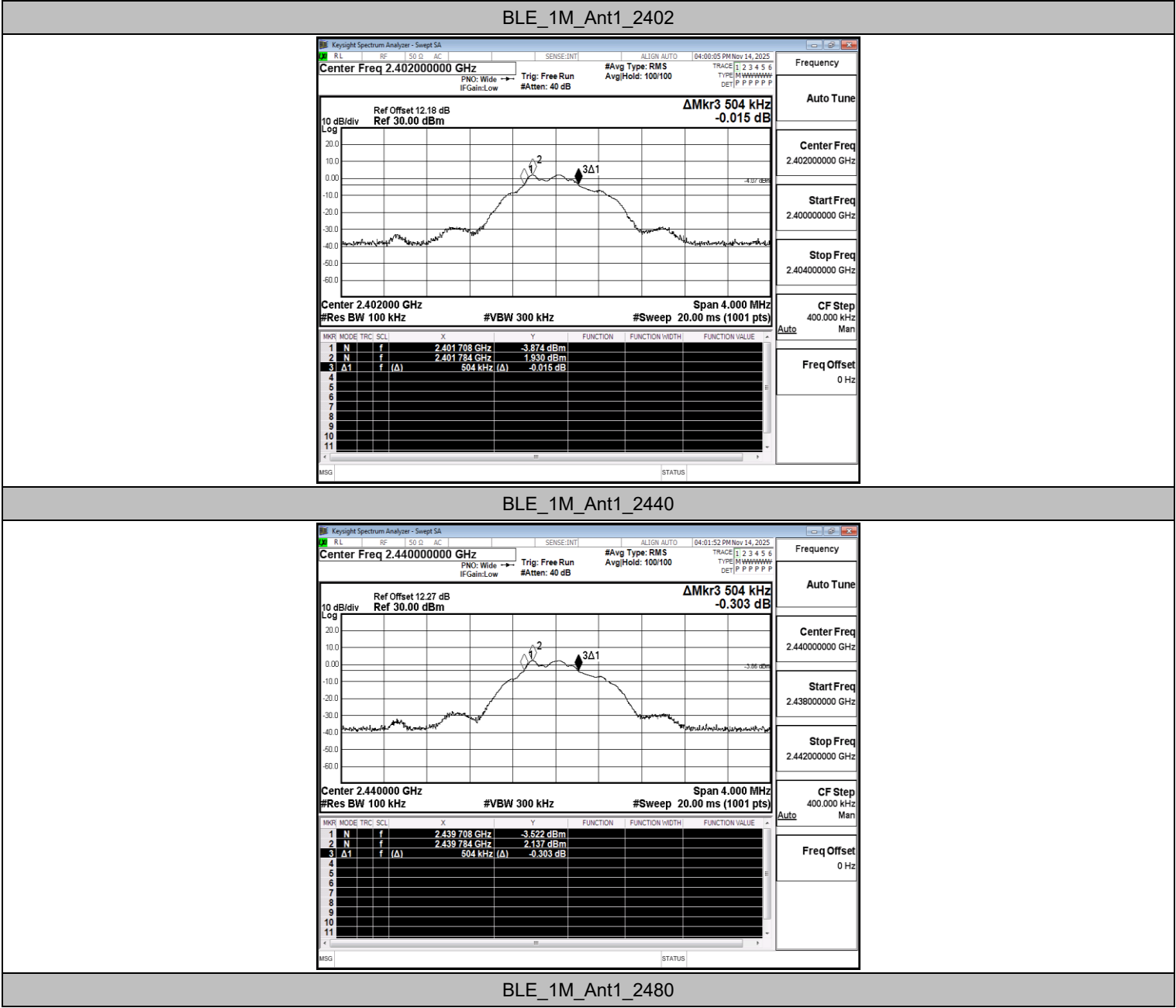
Temperature:	23.8°C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Suichao Lai
Supervised by:	Yan Chen

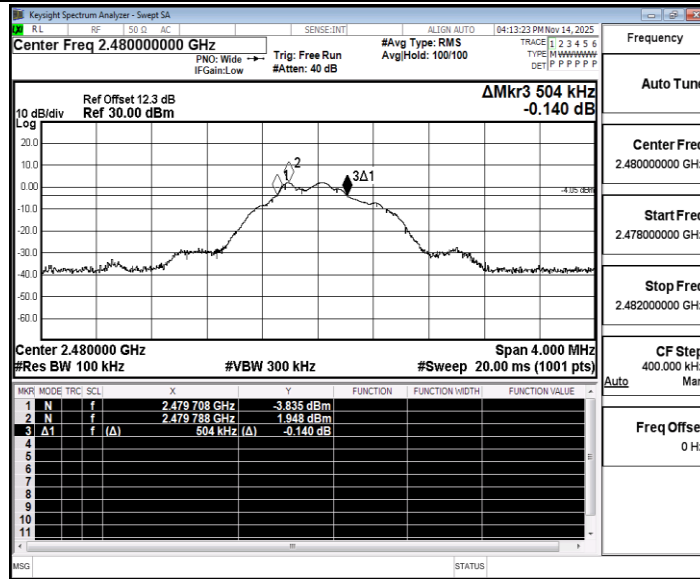
B.1 DTS Bandwidth

Test Result

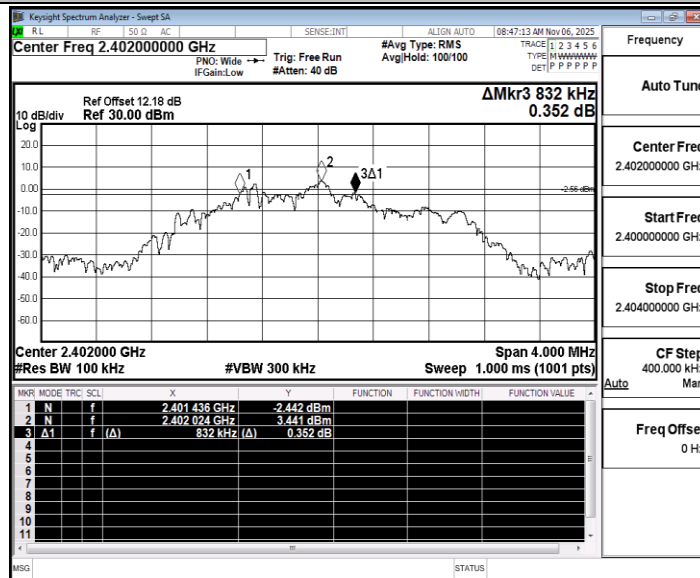
TestMode	Antenna	Freq(MHz)	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.504	2401.708	2402.212	0.5	PASS
		2440	0.504	2439.708	2440.212	0.5	PASS
		2480	0.504	2479.708	2480.212	0.5	PASS
BLE_2M	Ant1	2402	0.832	2401.436	2402.268	0.5	PASS
		2440	0.860	2439.432	2440.292	0.5	PASS
		2480	0.864	2479.432	2480.296	0.5	PASS

Test Graphs

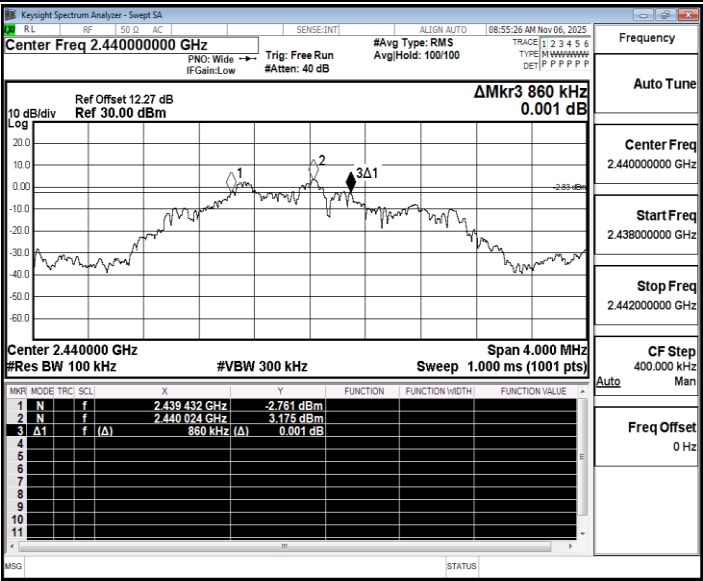




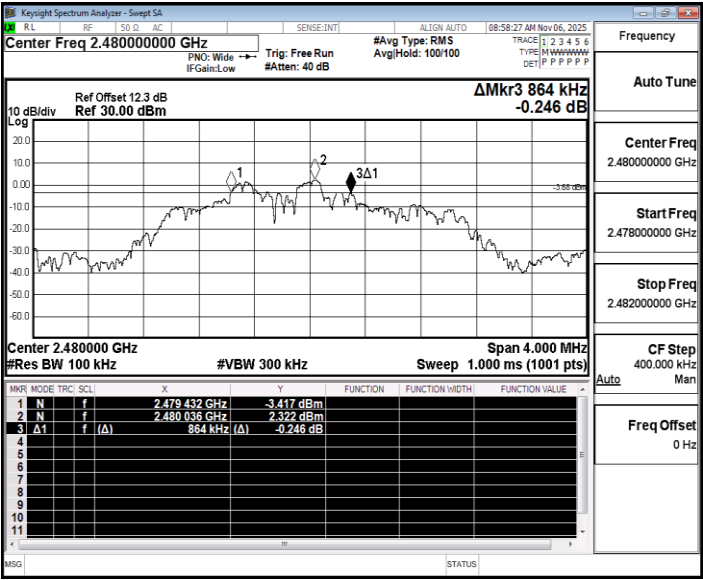
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



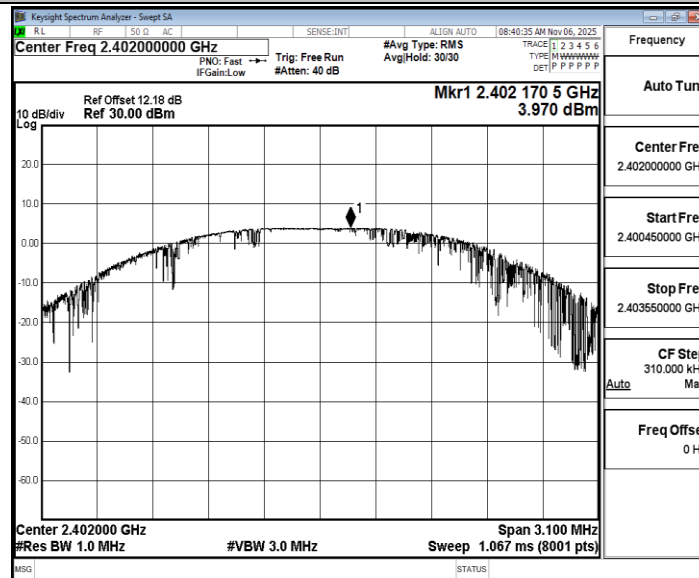
B.2 Maximum Peak conducted output power

Test Result Peak

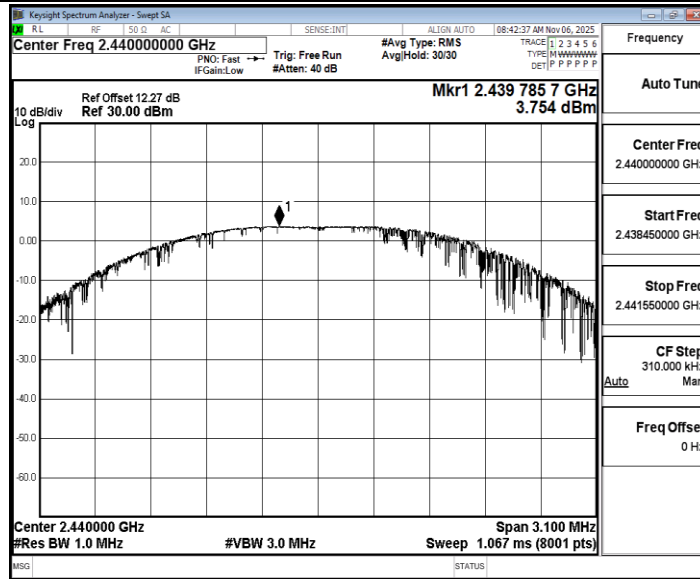
TestMode	Antenna	Freq(MHz)	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	3.97	≤30	PASS
		2440	3.75	≤30	PASS
		2480	3.01	≤30	PASS
BLE_2M	Ant1	2402	3.86	≤30	PASS
		2440	3.67	≤30	PASS
		2480	3.01	≤30	PASS

Test Graphs Peak

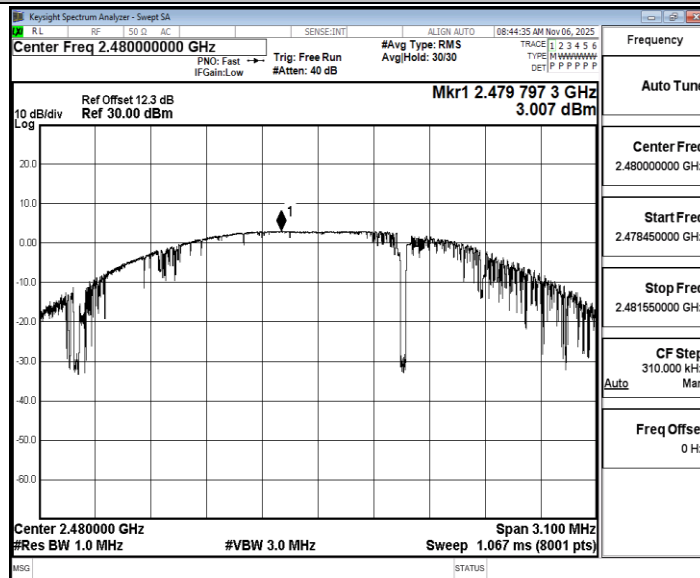
BLE_1M_Ant1_2402



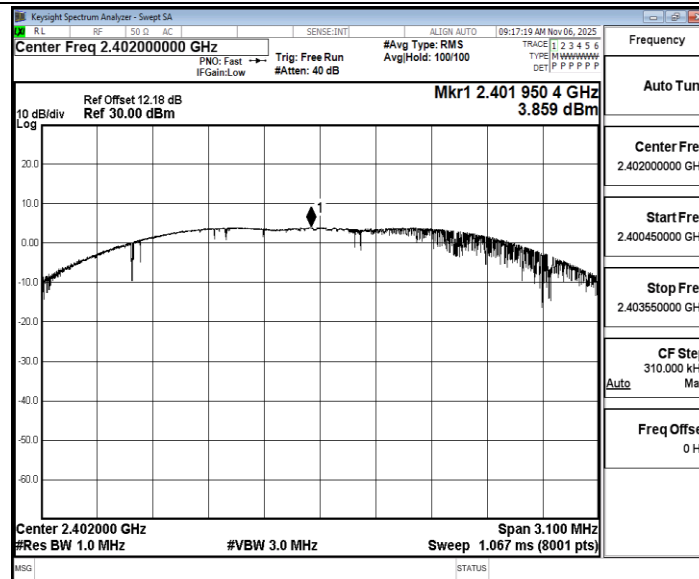
BLE_1M_Ant1_2440



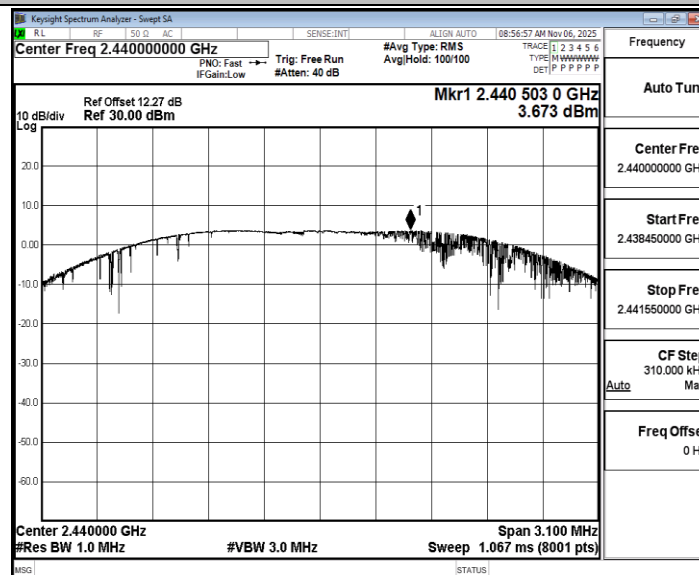
BLE_1M_Ant1_2480



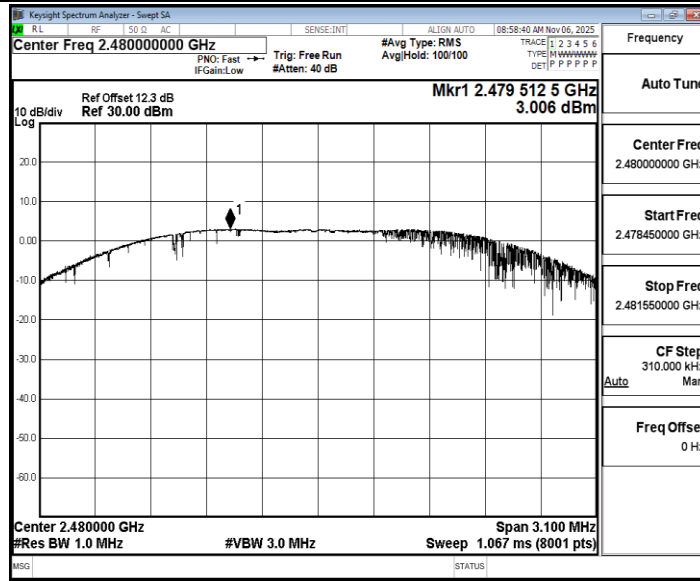
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

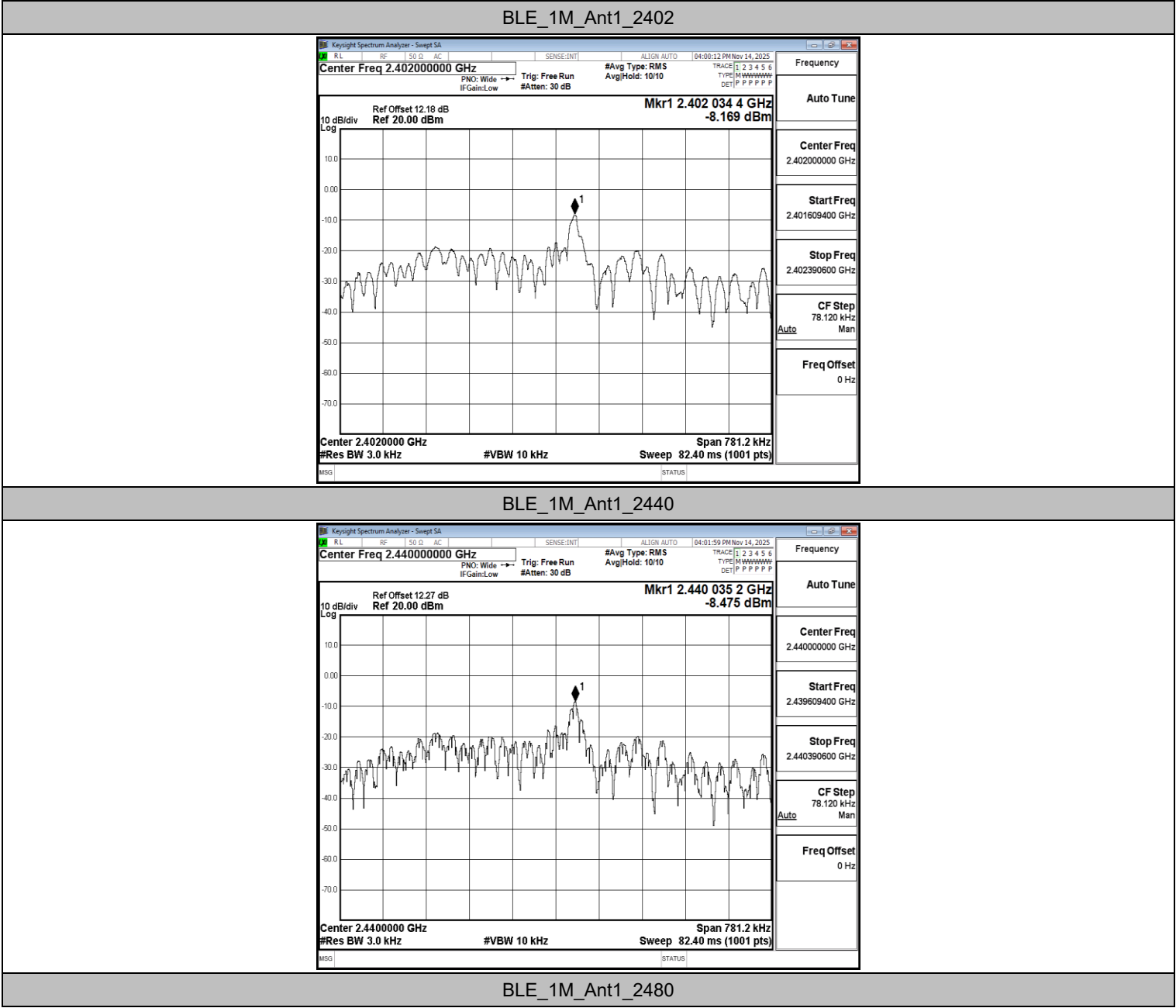


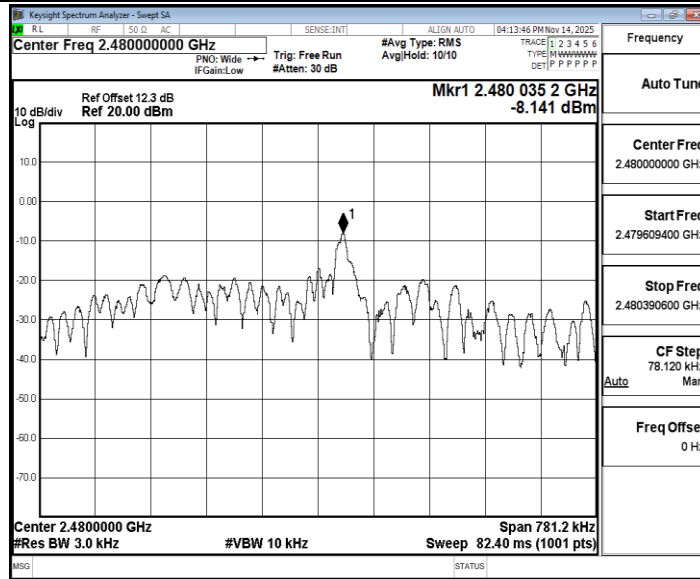
B.3 Maximum power spectral density

Test Result

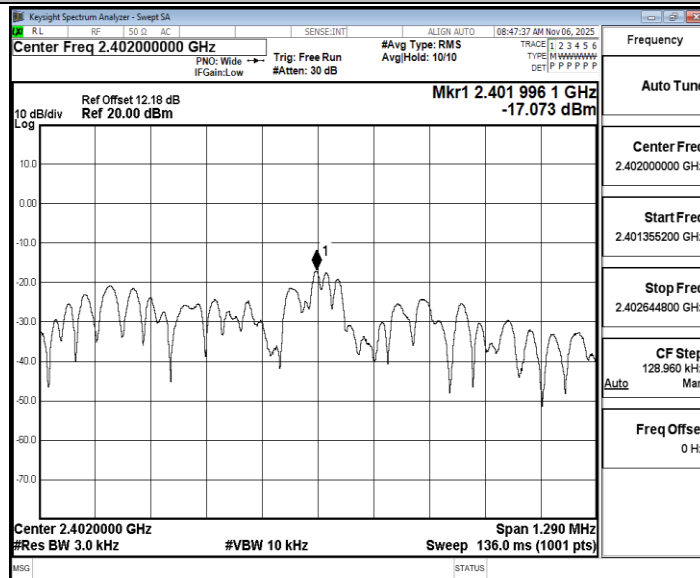
TestMode	Antenna	Freq(MHz)	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-8.17	≤8.00	PASS
		2440	-8.48	≤8.00	PASS
		2480	-8.14	≤8.00	PASS
BLE_2M	Ant1	2402	-17.07	≤8.00	PASS
		2440	-17.45	≤8.00	PASS
		2480	-18.13	≤8.00	PASS

Test Graphs

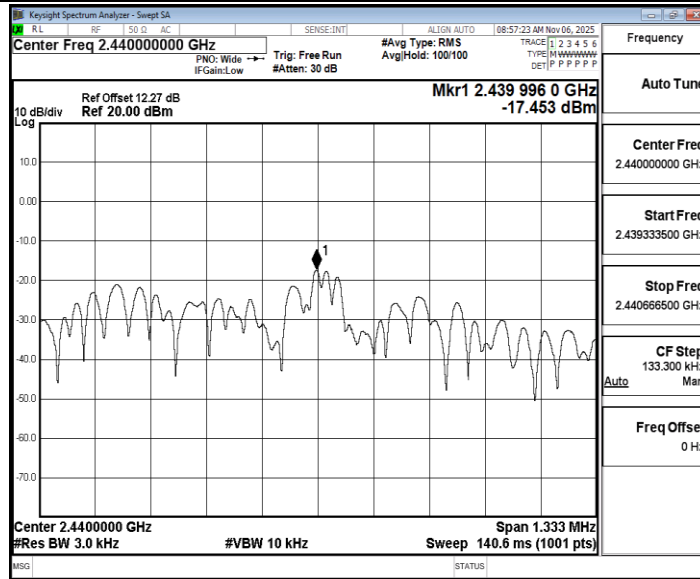




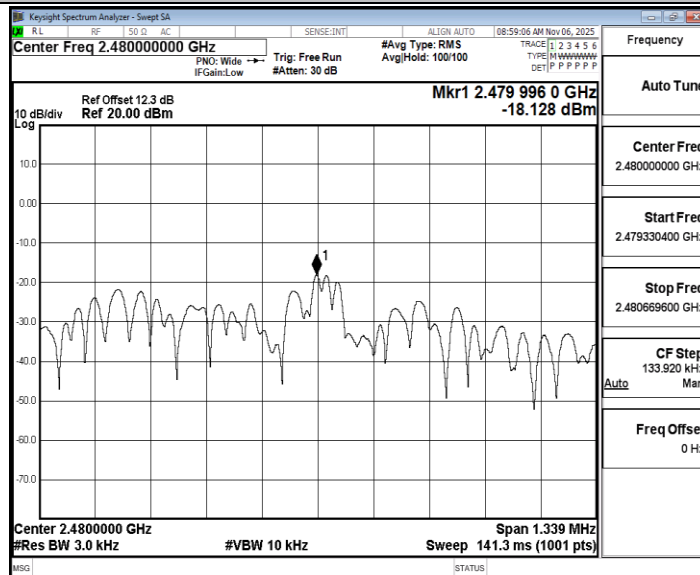
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480

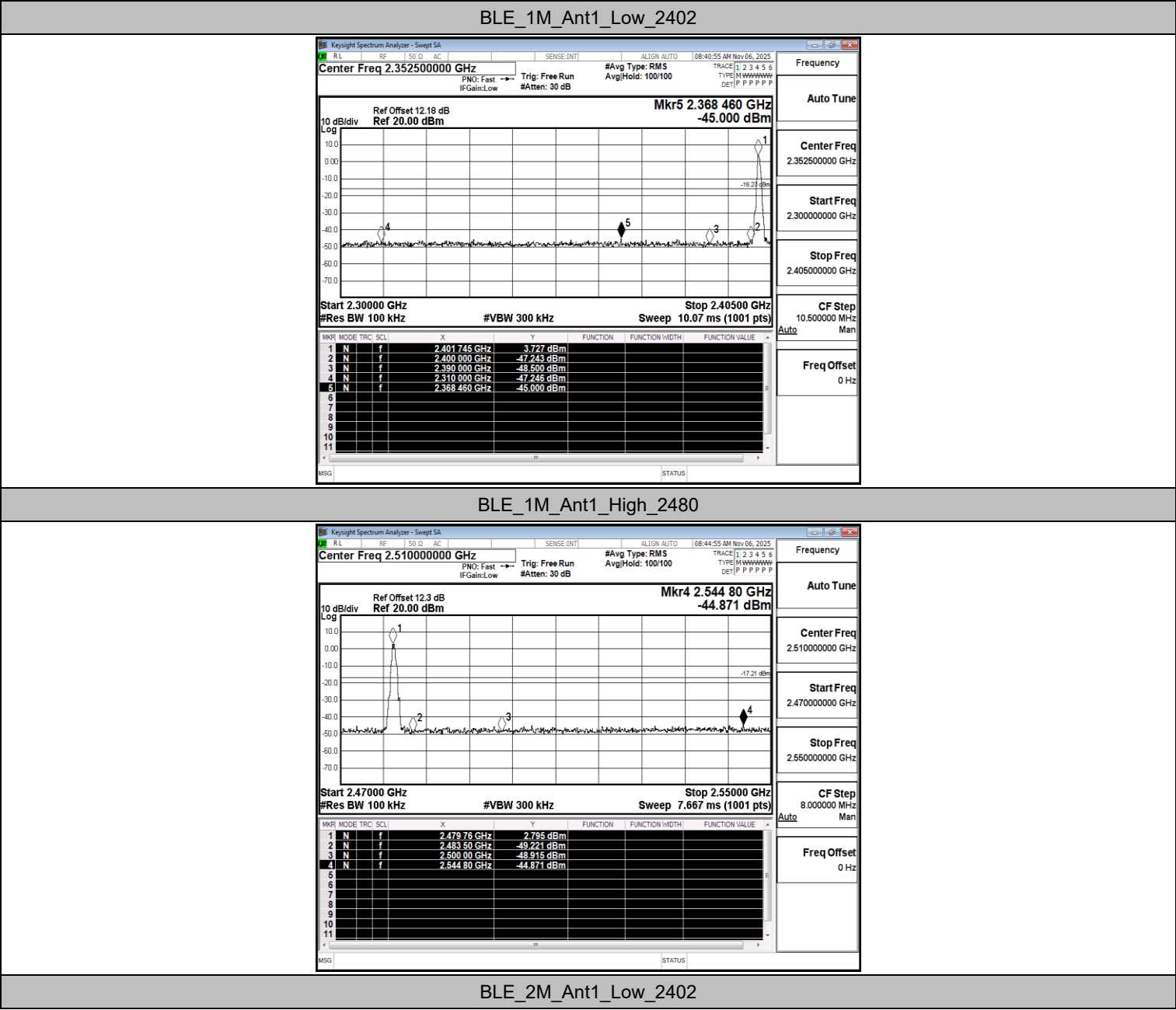


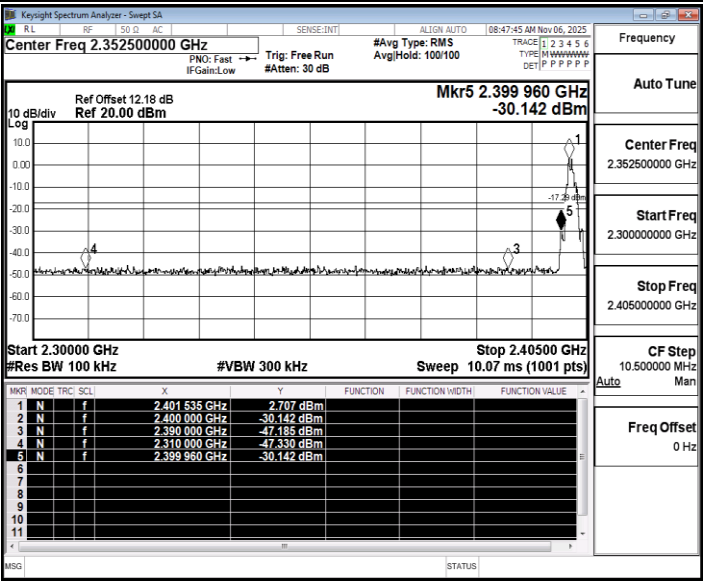
B.4 Band edge measurements

Test Result

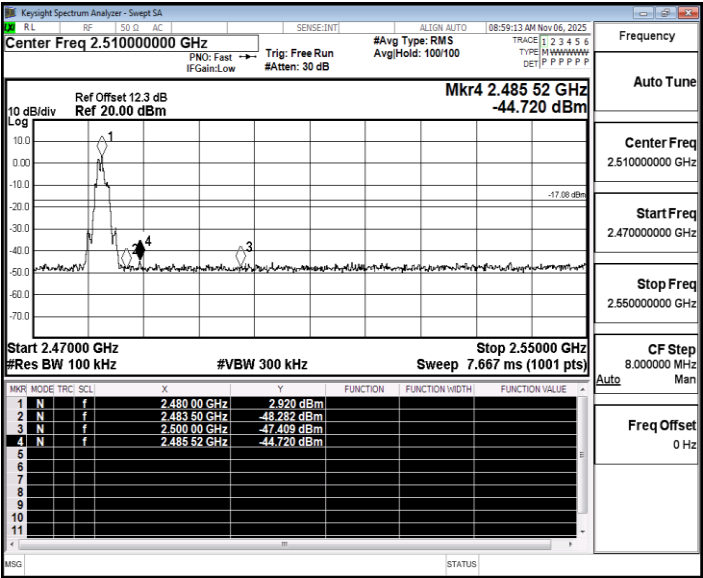
TestMode	Antenna	ChName	Freq(MHz)	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	3.73	-45	≤-16.27	PASS
		High	2480	2.80	-44.87	≤-17.21	PASS
BLE_2M	Ant1	Low	2402	2.71	-30.14	≤-17.29	PASS
		High	2480	2.92	-44.72	≤-17.08	PASS

Test Graphs





BLE_2M_Ant1_High_2480

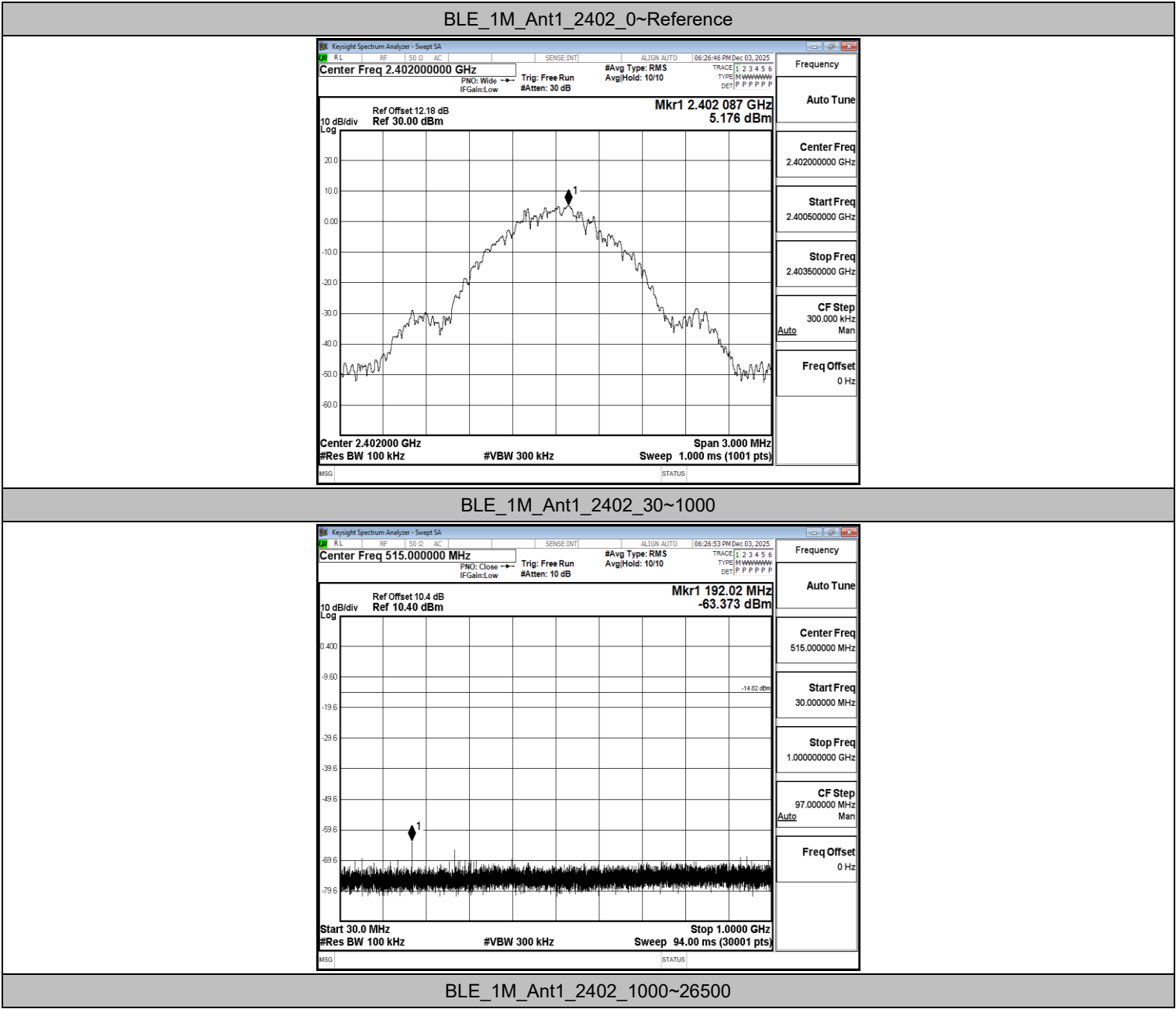


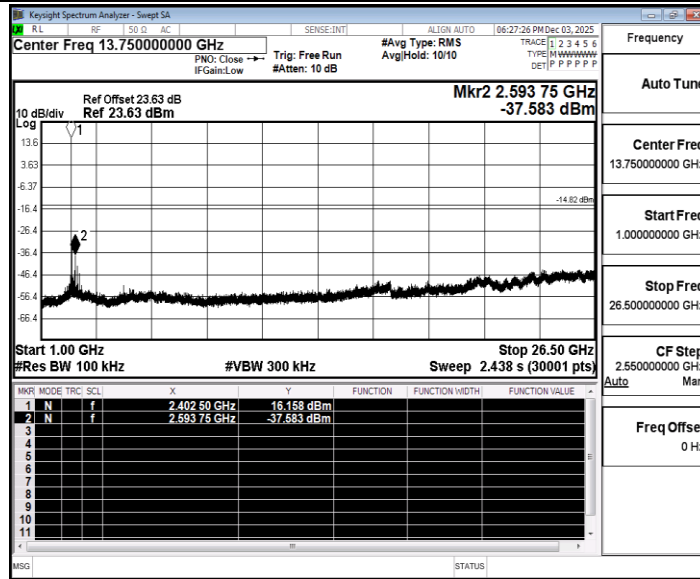
B.5 Conducted Spurious Emission

Test Result

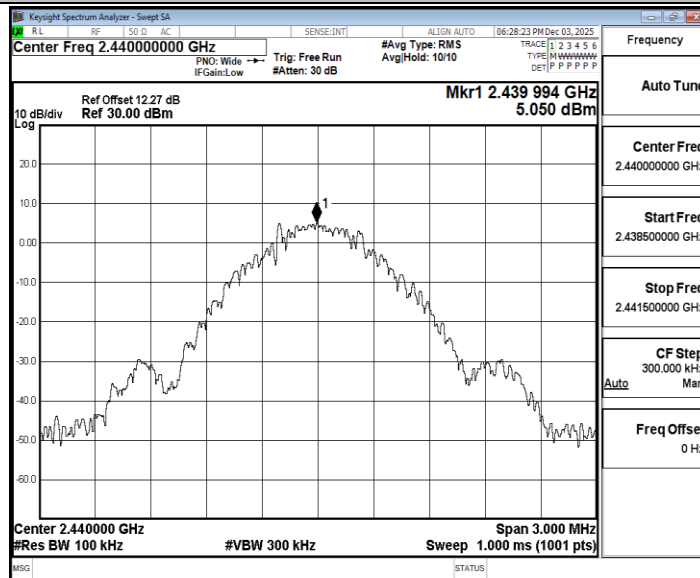
TestMode	Antenna	Freq(MHz)	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	Reference	5.18	5.18	---	PASS
			30~1000	5.18	-63.37	≤-14.82	PASS
			1000~26500	5.18	-37.58	≤-14.82	PASS
		2440	Reference	5.05	5.05	---	PASS
			30~1000	5.05	-63.27	≤-14.95	PASS
			1000~26500	5.05	-36.84	≤-14.95	PASS
		2480	Reference	5.40	5.40	---	PASS
			30~1000	5.40	-64.47	≤-14.6	PASS
			1000~26500	5.40	-37.47	≤-14.6	PASS
BLE_2M	Ant1	2402	Reference	2.43	2.43	---	PASS
			30~1000	2.43	-63.34	≤-17.57	PASS
			1000~26500	2.43	-38.46	≤-17.57	PASS
		2440	Reference	3.19	3.19	---	PASS
			30~1000	3.19	-63.72	≤-16.81	PASS
			1000~26500	3.19	-38.01	≤-16.81	PASS
		2480	Reference	2.94	2.94	---	PASS
			30~1000	2.94	-63.98	≤-17.06	PASS
			1000~26500	2.94	-39.45	≤-17.06	PASS

Test Graphs

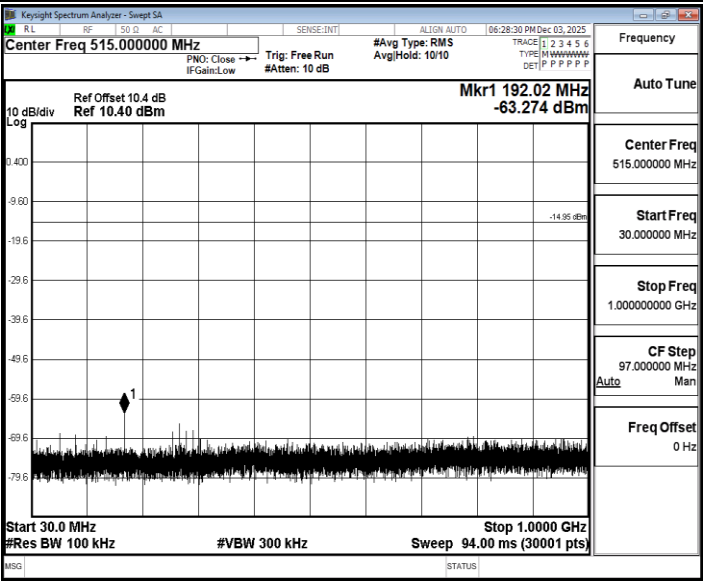




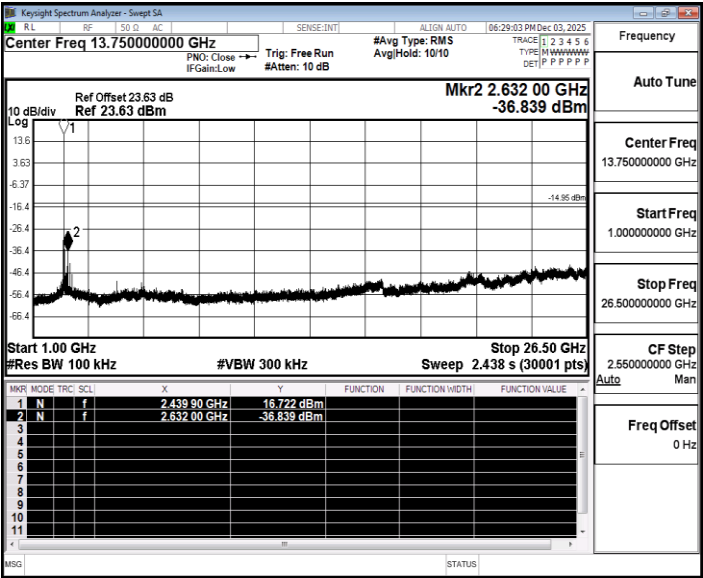
BLE_1M_Ant1_2440_0~Reference



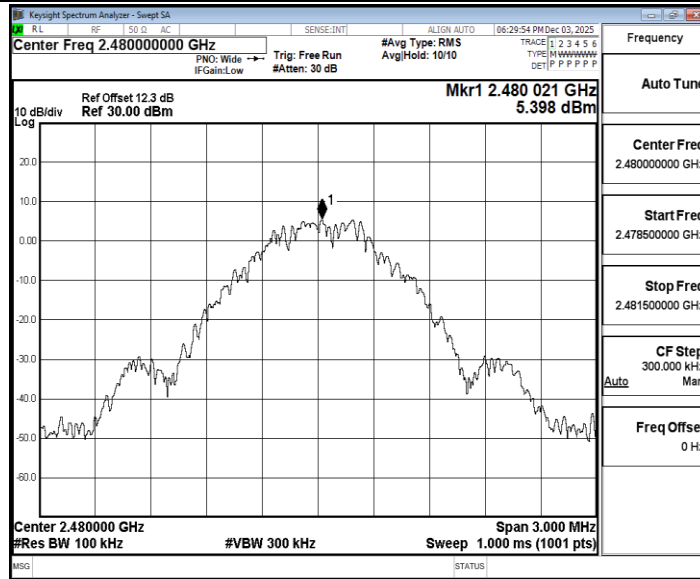
BLE_1M_Ant1_2440_30~1000



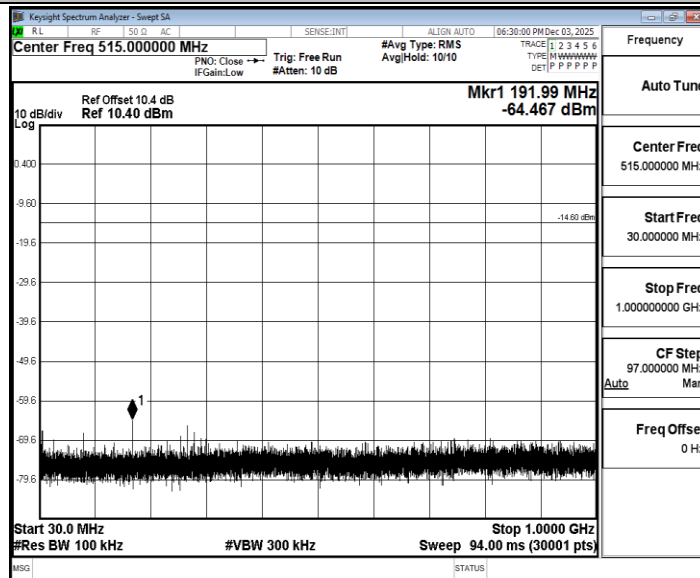
BLE_1M_Ant1_2440_1000~26500



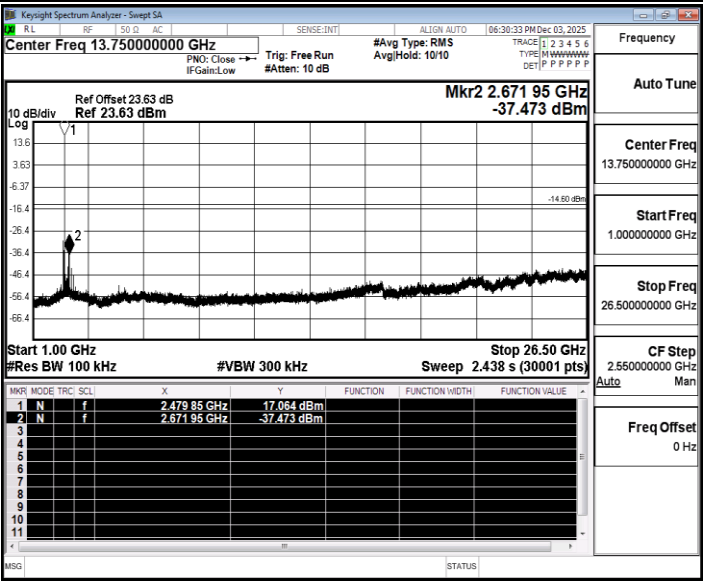
BLE_1M_Ant1_2480_0~Reference



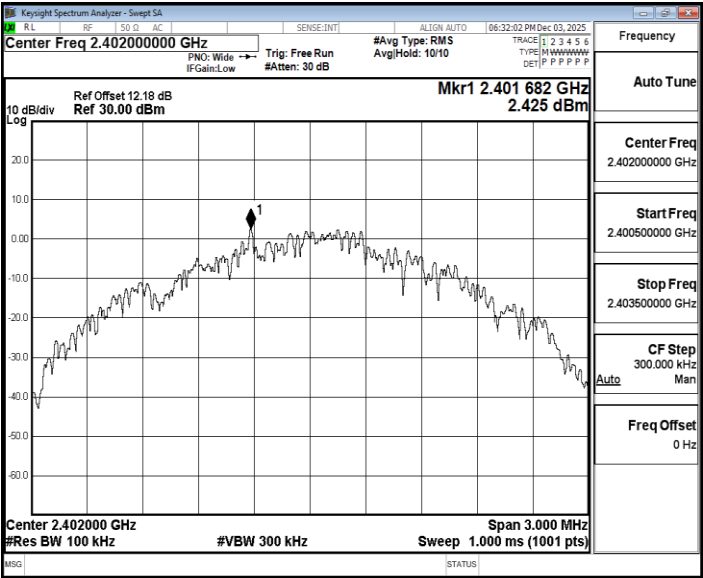
BLE_1M_Ant1_2480_30~1000



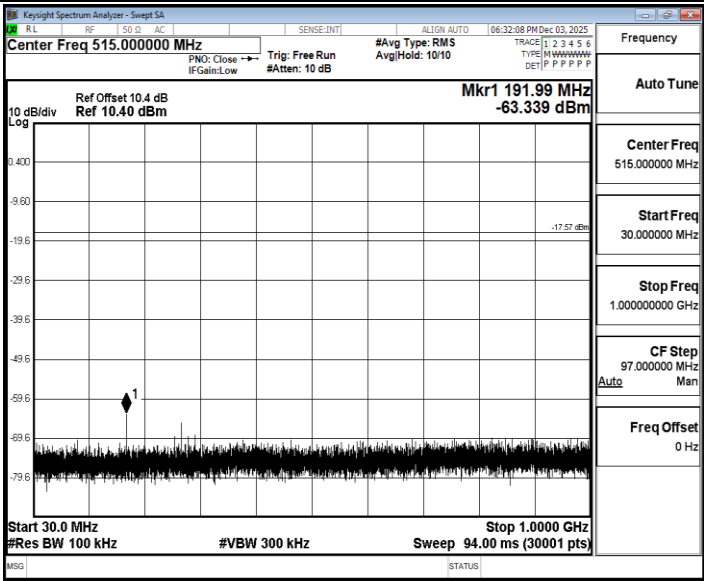
BLE_1M_Ant1_2480_1000~26500



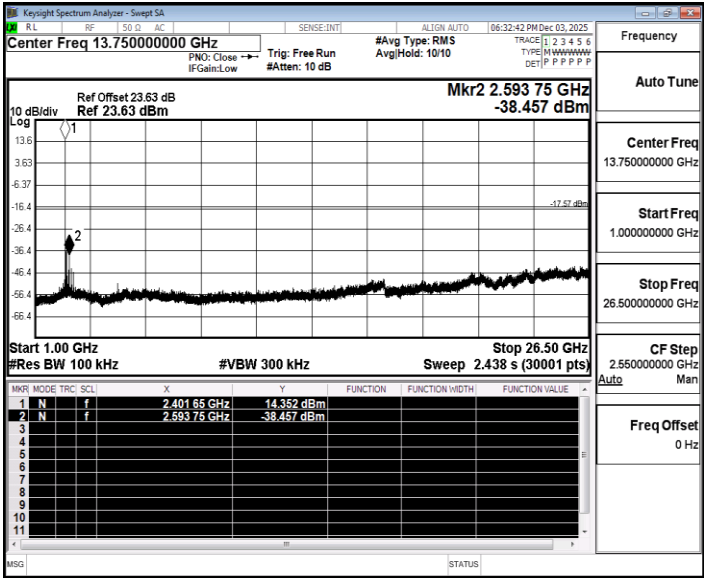
BLE_2M_Ant1_2402_0~Reference



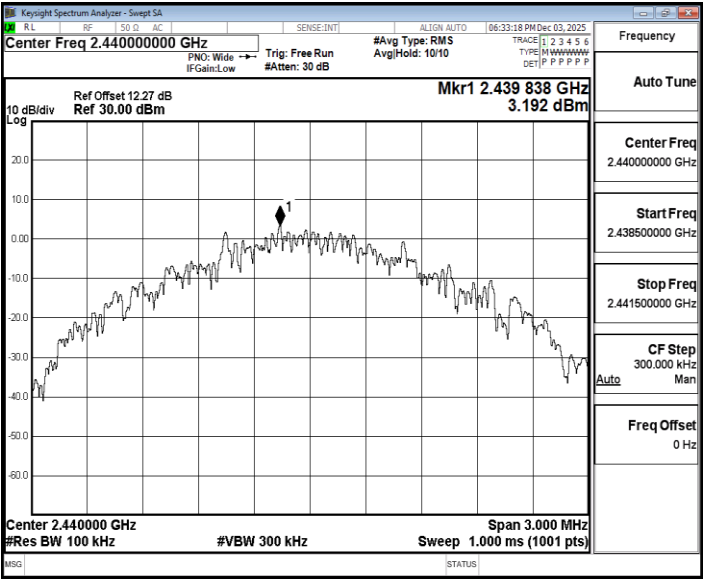
BLE_2M_Ant1_2402_30~1000



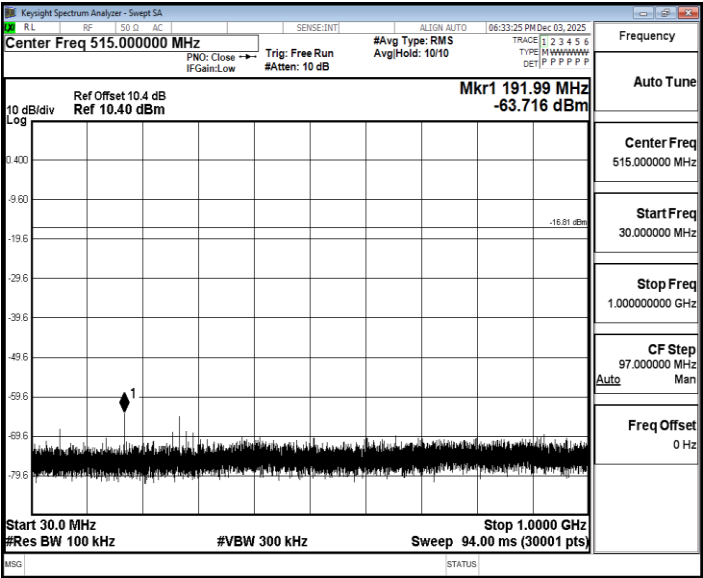
BLE_2M_Ant1_2402_1000~26500



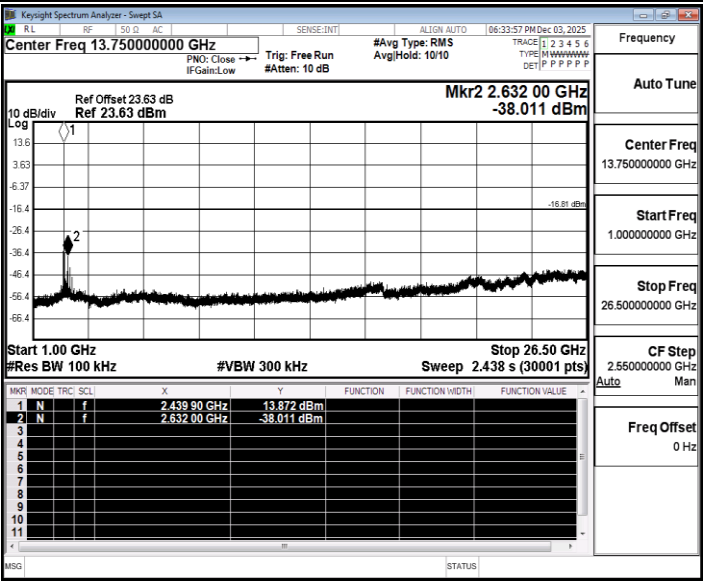
BLE_2M_Ant1_2440_0~Reference



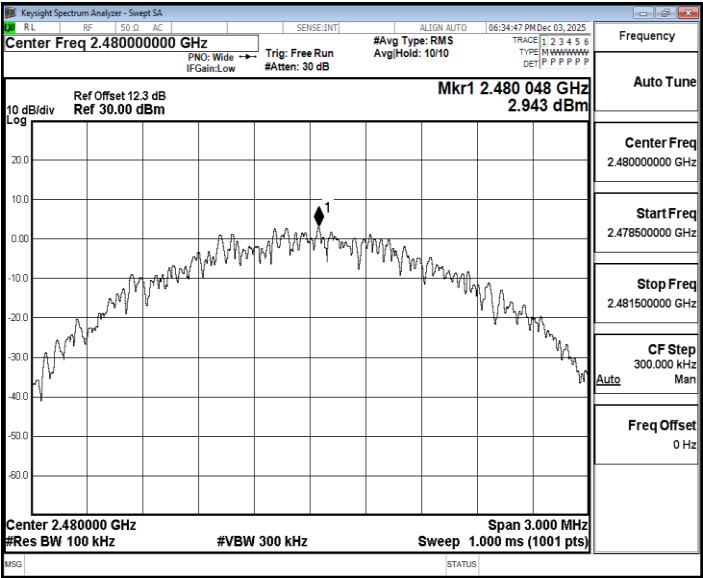
BLE_2M_Ant1_2440_30~1000



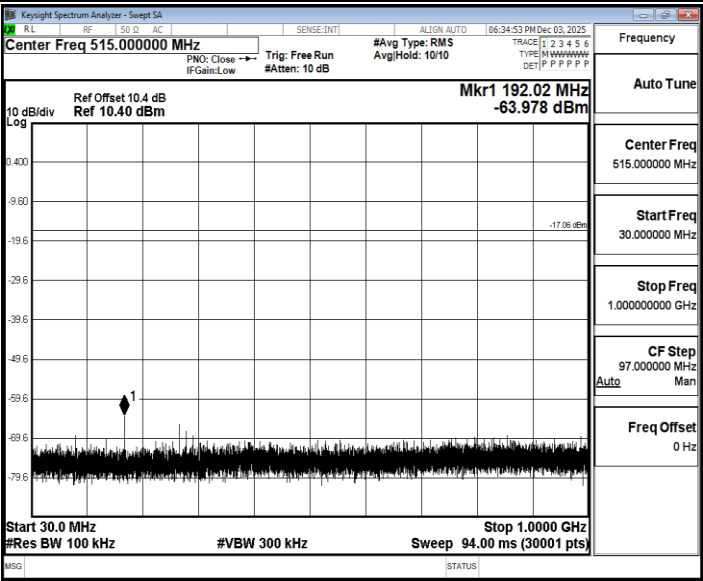
BLE_2M_Ant1_2440_1000~26500



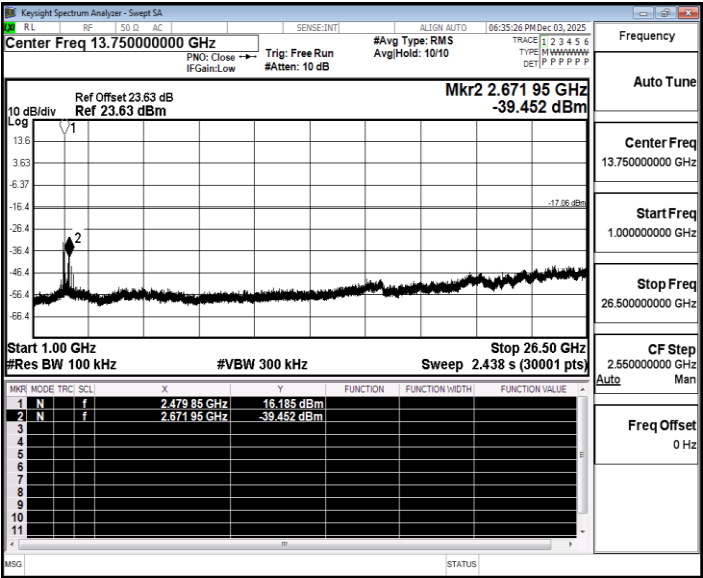
BLE_2M_Ant1_2480_0~Reference



BLE_2M_Ant1_2480_30~1000



BLE_2M_Ant1_2480_1000~26500

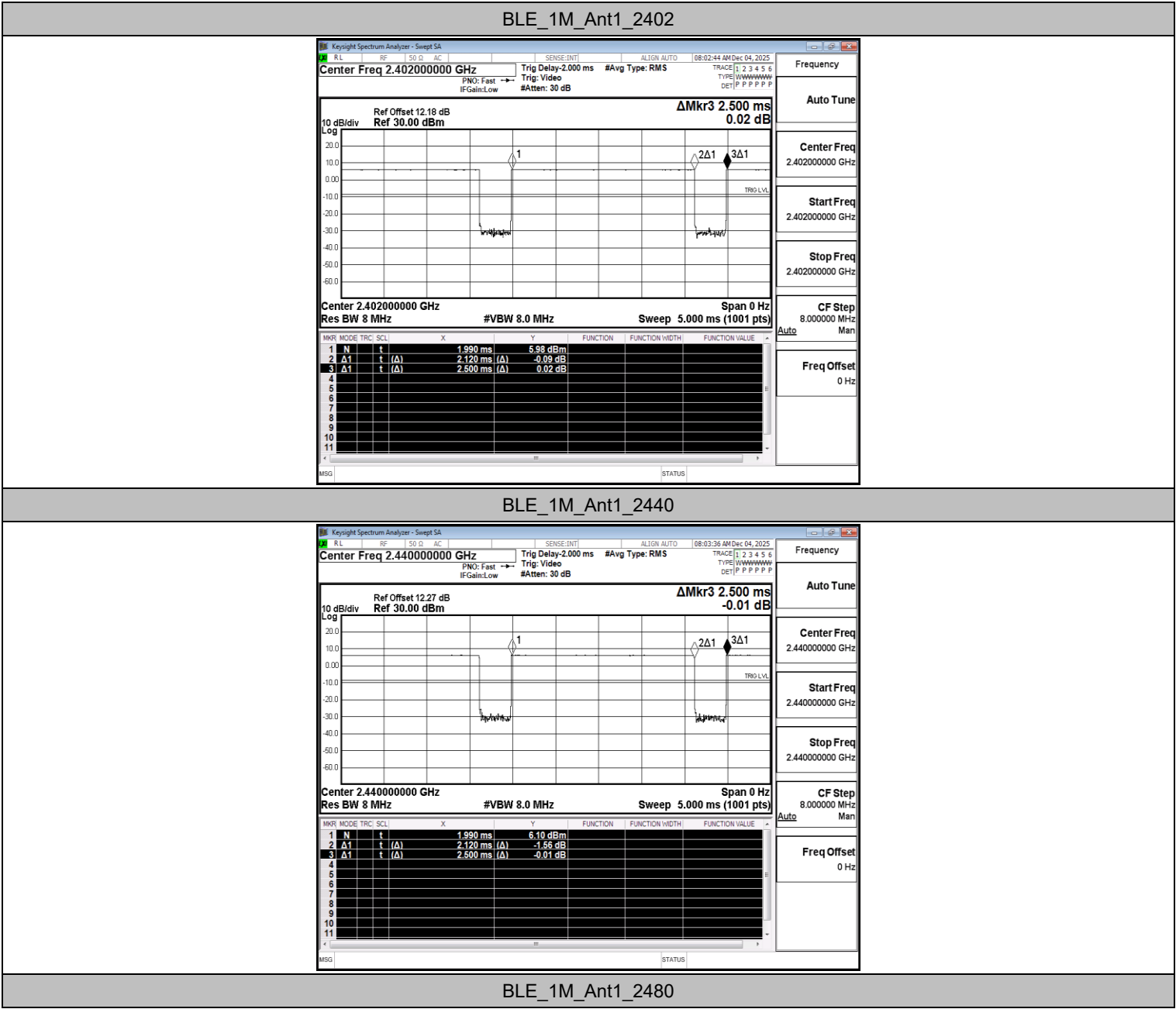


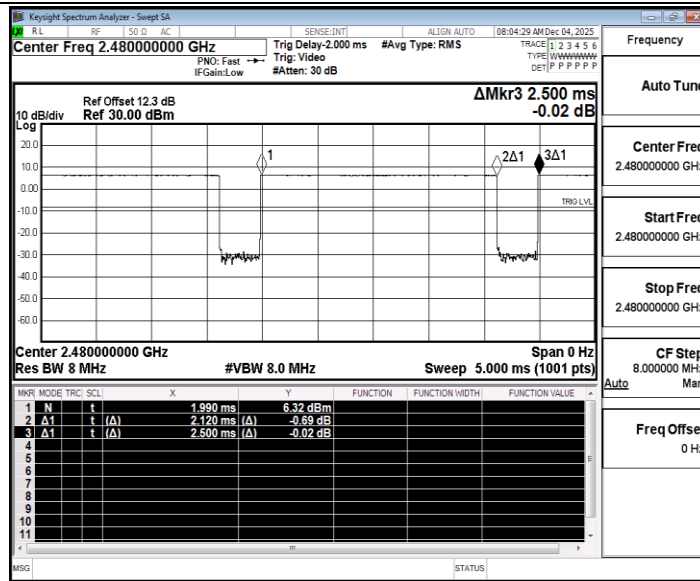
B.6 Duty Cycle

Test Result

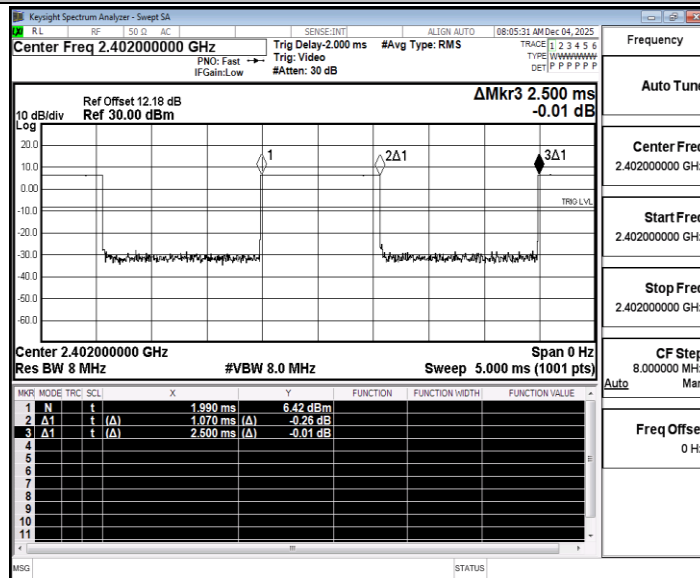
TestMode	Antenna	Freq(MHz)	ON Time [ms]	Period [ms]	X	DC [%]	xFactor	Limit	Verdict
BLE_1M	Ant1	2402	2.12	2.50	0.8480	84.80	0.72	---	---
		2440	2.12	2.50	0.8480	84.80	0.72	---	---
		2480	2.12	2.50	0.8480	84.80	0.72	---	---
BLE_2M	Ant1	2402	1.07	2.50	0.4280	42.80	3.69	---	---
		2440	1.08	2.50	0.4320	43.20	3.65	---	---
		2480	1.07	2.50	0.4280	42.80	3.69	---	---

Test Graphs

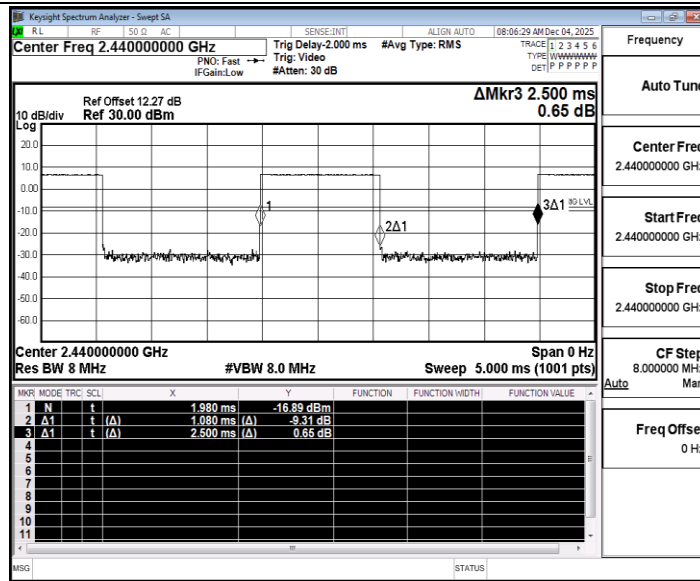




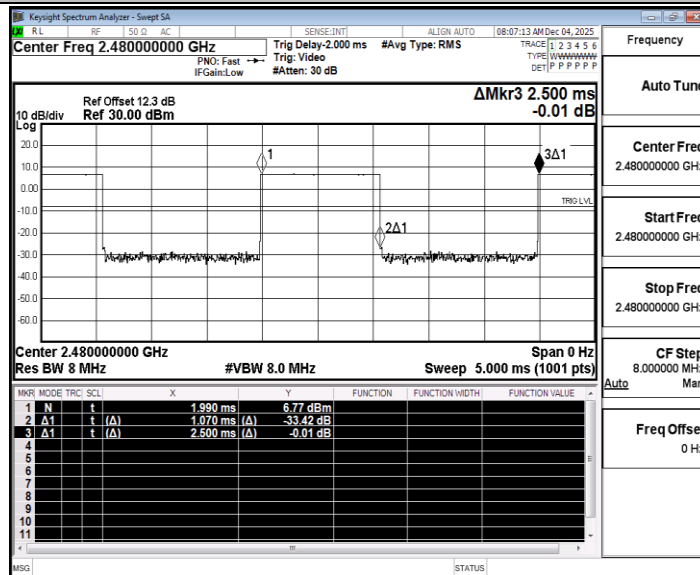
BLE_2M_Ant1_2402



BLE_2M_Ant1_2440



BLE_2M_Ant1_2480



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	-57.02	≤-44.62	2.70	0.72	41.60	≤54	PASS
				AV	2378.015	-55.68	≤-44.62	2.70	0.72	42.94	≤54	PASS
				AV	2390.000	-56.1	≤-44.62	2.70	0.72	42.52	≤54	PASS
				Peak	2310.000	-49.07	≤-23.90	2.70	0.00	48.83	≤74	PASS
				Peak	2372.870	-45.92	≤-23.90	2.70	0.00	51.98	≤74	PASS
				Peak	2390.000	-48.67	≤-23.90	2.70	0.00	49.23	≤74	PASS
		High	2480	AV	2483.500	-52.07	≤-44.62	2.70	0.72	46.55	≤54	PASS
				AV	2483.680	-51.95	≤-44.62	2.70	0.72	46.67	≤54	PASS
				AV	2500.000	-57.08	≤-44.62	2.70	0.72	41.54	≤54	PASS
				Peak	2483.500	-43.52	≤-23.90	2.70	0.00	54.38	≤74	PASS
				Peak	2486.880	-41.96	≤-23.90	2.70	0.00	55.94	≤74	PASS
				Peak	2500.000	-48.03	≤-23.90	2.70	0.00	49.87	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-56.72	≤-47.59	2.70	3.69	44.87	≤54	PASS
				AV	2378.015	-56.08	≤-47.59	2.70	3.69	45.51	≤54	PASS
				AV	2390.000	-56.79	≤-47.59	2.70	3.69	44.80	≤54	PASS
				Peak	2310.000	-49.43	≤-23.90	2.70	0.00	48.47	≤74	PASS
				Peak	2374.865	-45.5	≤-23.90	2.70	0.00	52.40	≤74	PASS
				Peak	2390.000	-48.07	≤-	2.70	0.00	49.83	≤74	PASS

Guangzhou LCS Compliance Testing Laboratory Ltd.

Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

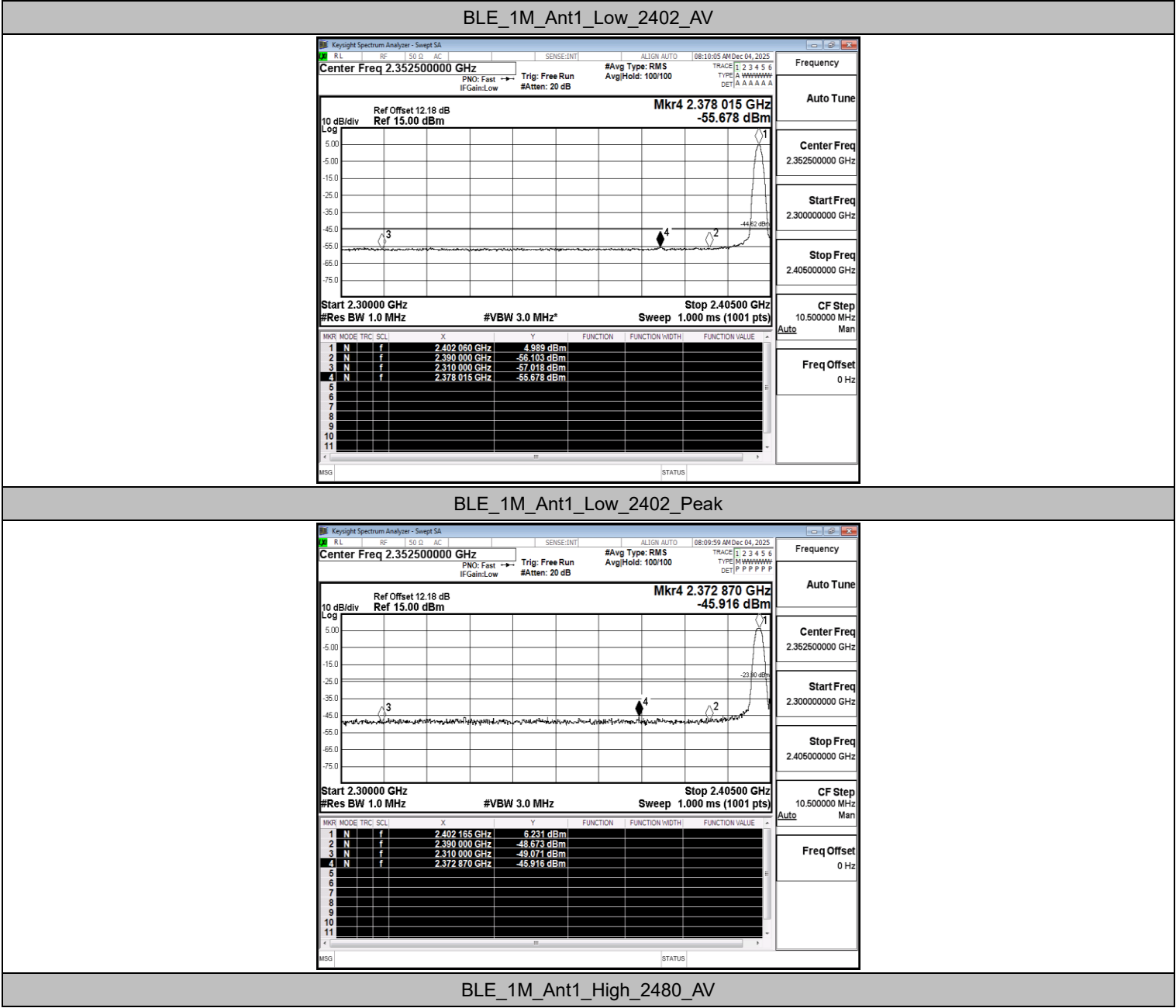
Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

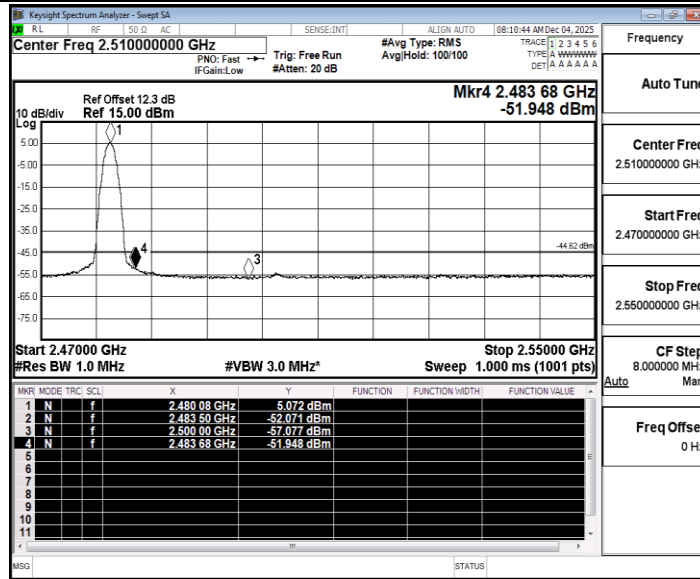
							23.90					
				AV	2483.500	-52.66	≤- 47.59	2.70	3.69	48.93	≤54	PASS
				AV	2483.520	-52.66	≤- 47.59	2.70	3.69	48.93	≤54	PASS
				AV	2500.000	-56.45	≤- 47.59	2.70	3.69	45.14	≤54	PASS
		High	2480	Peak	2483.500	-42.03	≤- 23.90	2.70	0.00	55.87	≤74	PASS
				Peak	2487.120	-41.41	≤- 23.90	2.70	0.00	56.49	≤74	PASS
				Peak	2500.000	-48.61	≤- 23.90	2.70	0.00	49.29	≤74	PASS

Note:

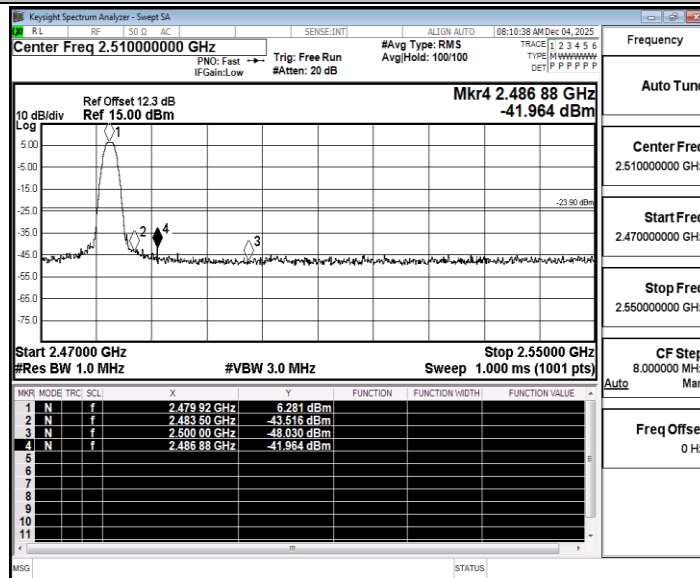
1. The limit in dBm for average detector is conversion from 54dBuV/m, according to 15.209(a). The limit in dBm for peak detector is 20dB above the limit of average detector in dBm.

Test Graphs

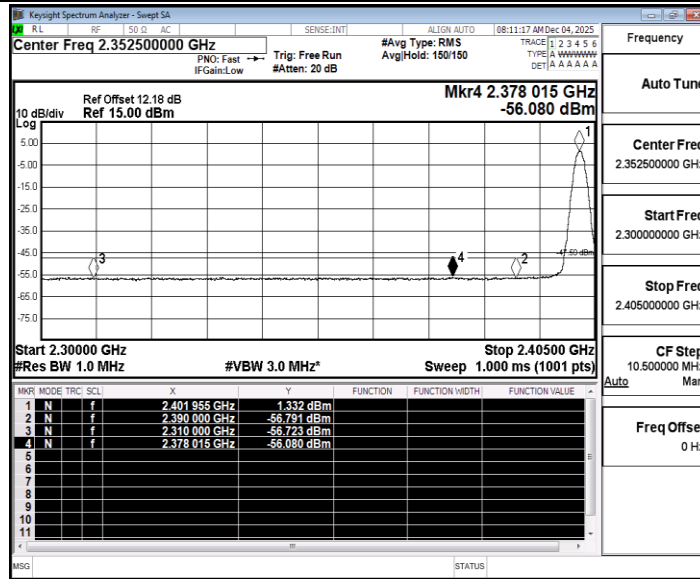




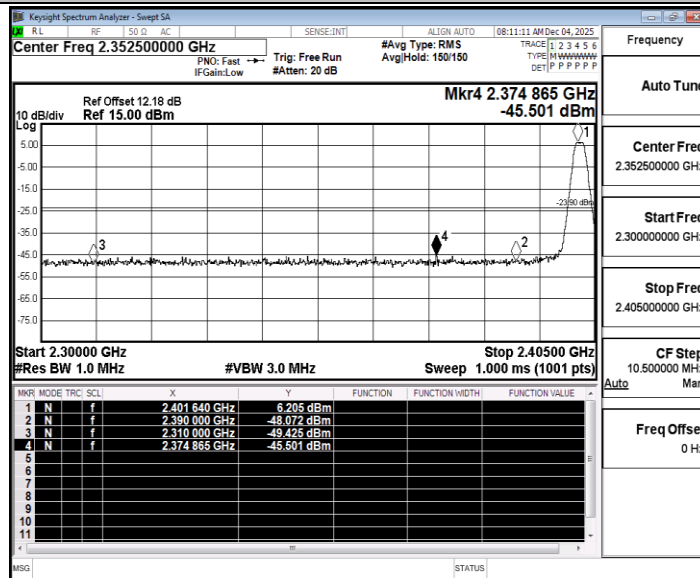
BLE_1M_Ant1_High_2480_Peak



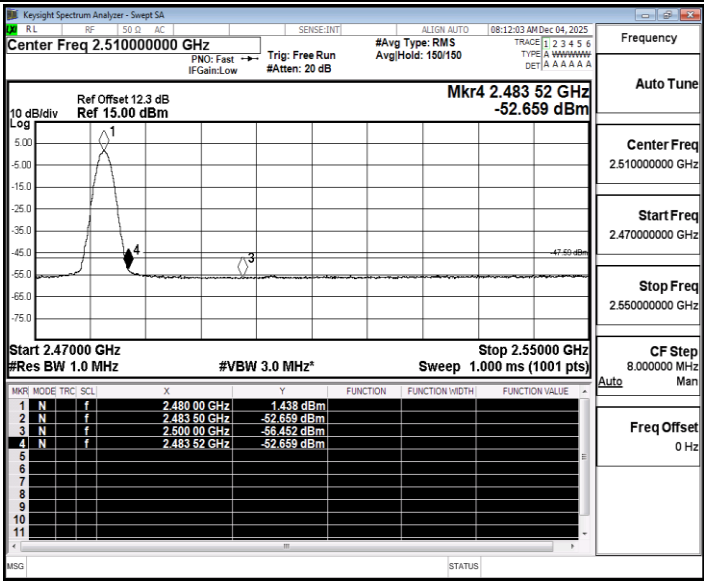
BLE_2M_Ant1_Low_2402_AV



BLE_2M_Ant1_Low_2402_Peak



BLE_2M_Ant1_High_2480_AV



BLE_2M_Ant1_High_2480_Peak

