Appendix Test Data for BLE (Conducted Measurement)

Product Name: TGENIUS WATCH

Trade Mark: N/A

Test Model: TGone

FCC ID: 2BF9J-TGONE

Environmental Conditions

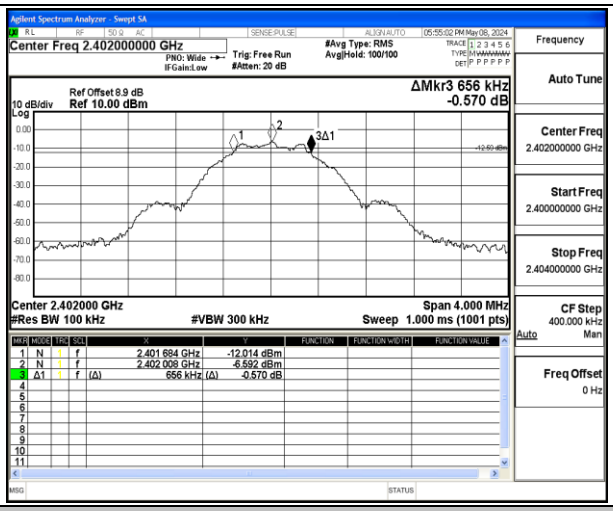
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Allen Lai
Supervised by:	Hugo Chen
NOTE	N/A

Appendix A: DTS Bandwidth

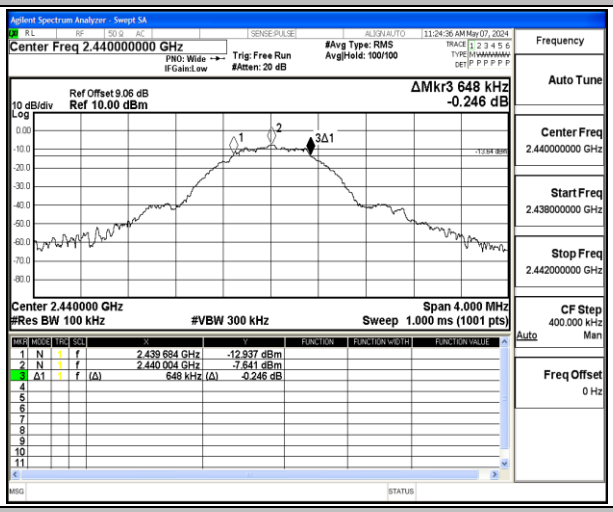
Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.656	2401.684	2402.340	0.5	PASS
BLE_1M	Ant1	2440	0.648	2439.684	2440.332	0.5	PASS
BLE_1M	Ant1	2480	0.664	2479.668	2480.332	0.5	PASS
BLE_2M	Ant1	2402	1.076	2401.440	2402.516	0.5	PASS
BLE_2M	Ant1	2440	1.140	2439.448	2440.588	0.5	PASS
BLE_2M	Ant1	2480	0.984	2479.440	2480.424	0.5	PASS

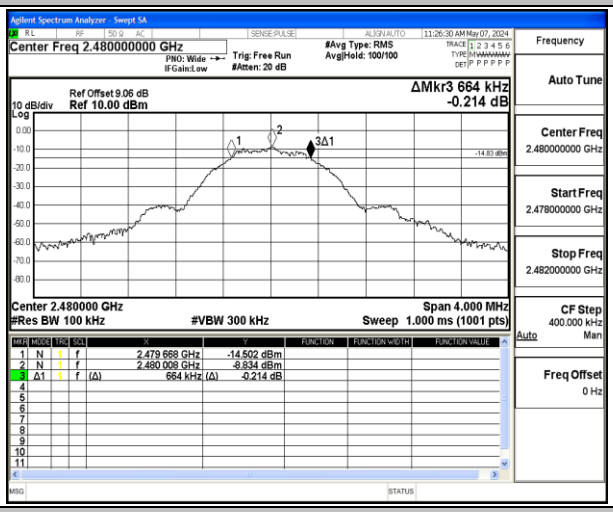
Test Graphs



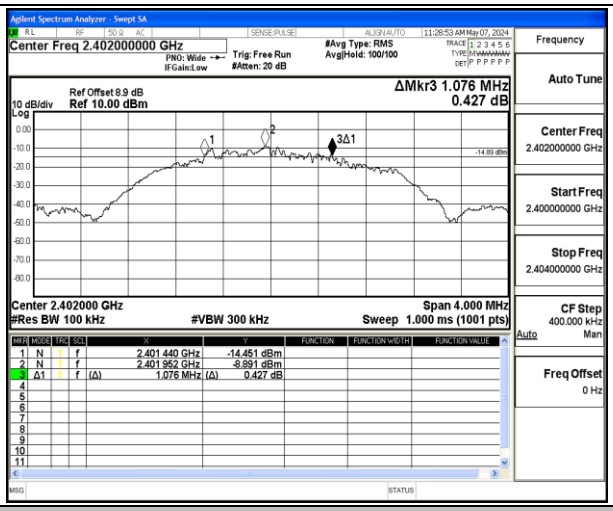
BLE_1M-Ant1-2402-PASS



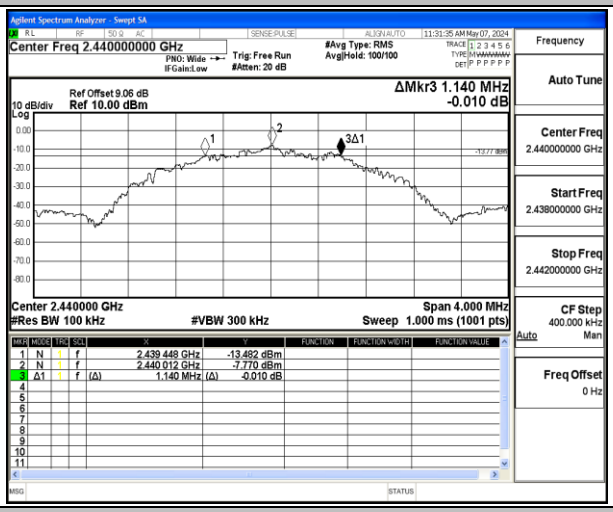
BLE_1M-Ant1-2440-PASS



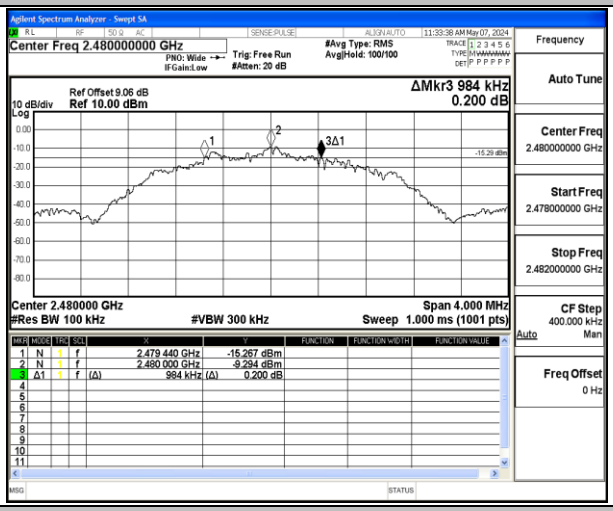
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



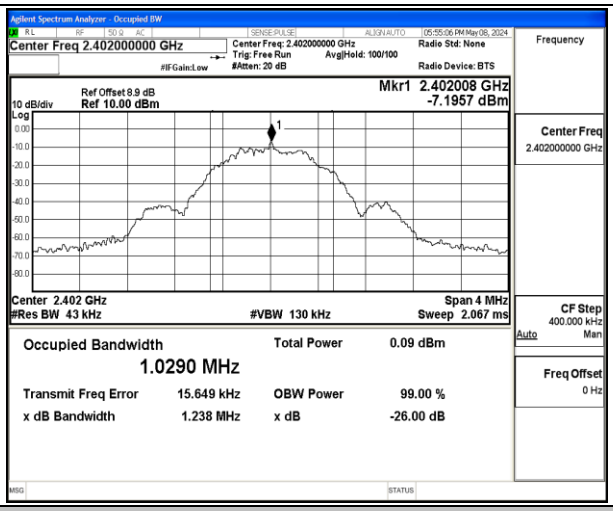
BLE_2M-Ant1-2480-PASS

Appendix B: Occupied Channel Bandwidth

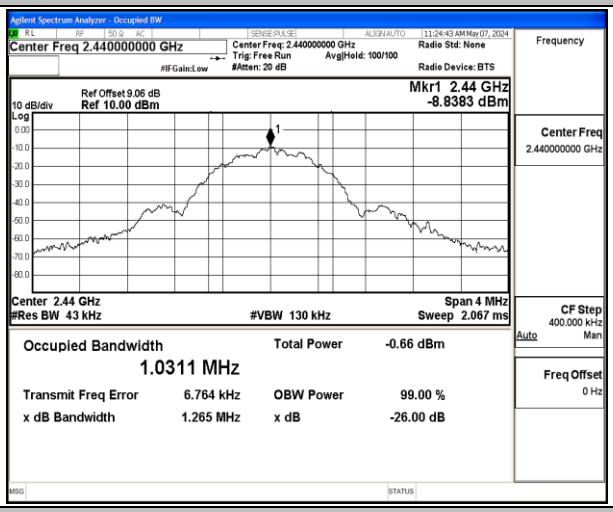
Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0290	2401.5012	2402.5302	---	---
BLE_1M	Ant1	2440	1.0311	2439.4912	2440.5223	---	---
BLE_1M	Ant1	2480	1.0289	2479.4964	2480.5253	---	---
BLE_2M	Ant1	2402	2.0637	2401.0074	2403.0711	---	---
BLE_2M	Ant1	2440	2.0590	2439.0034	2441.0624	---	---
BLE_2M	Ant1	2480	2.0572	2479.0015	2481.0587	---	---

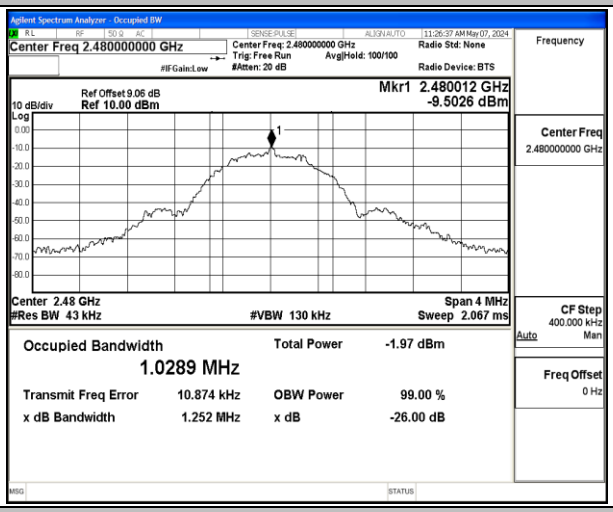
Test Graphs



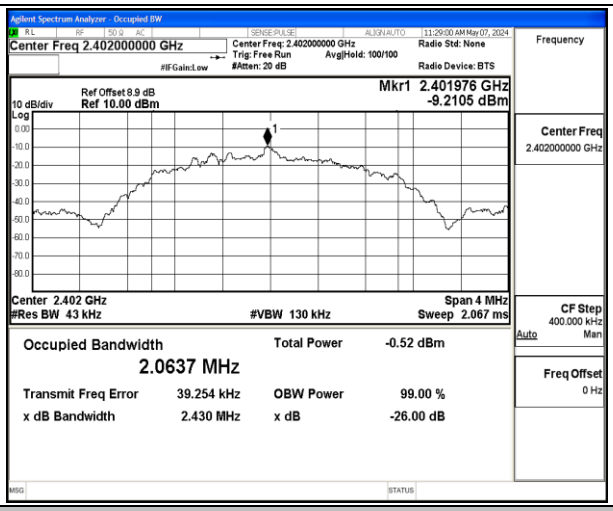
BLE_1M-Ant1-2402



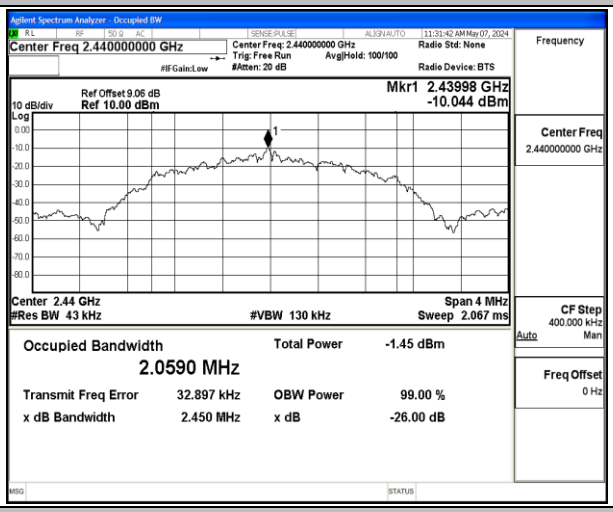
BLE_1M-Ant1-2440



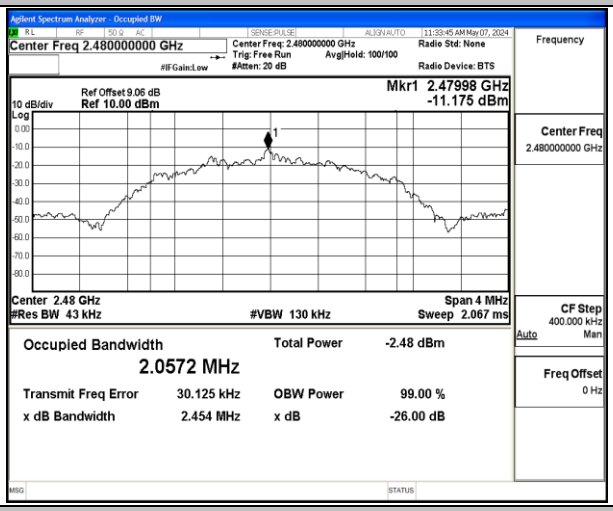
BLE_1M-Ant1-2480



BLE_2M-Ant1-2402



BLE_2M-Ant1-2440



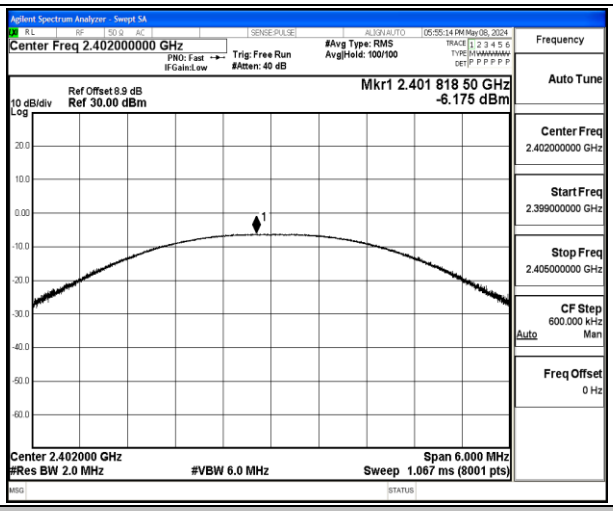
BLE_2M-Ant1-2480

Appendix C: Maximum peak conducted output power

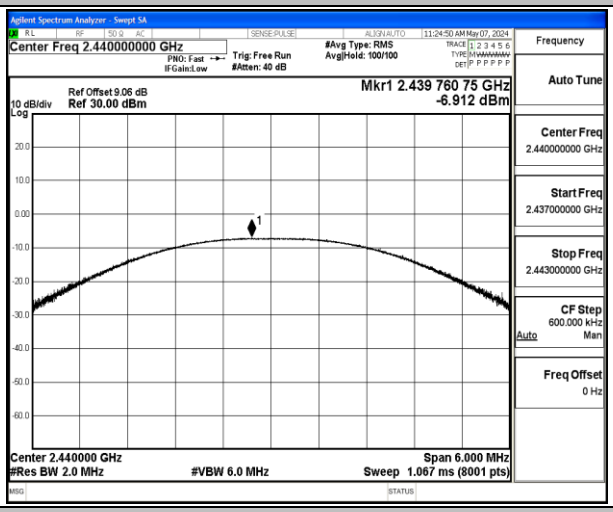
Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Powert[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-6.18	≤30	PASS
BLE_1M	Ant1	2440	-6.91	≤30	PASS
BLE_1M	Ant1	2480	-8.09	≤30	PASS
BLE_2M	Ant1	2402	-6.33	≤30	PASS
BLE_2M	Ant1	2440	-6.91	≤30	PASS
BLE_2M	Ant1	2480	-7.95	≤30	PASS

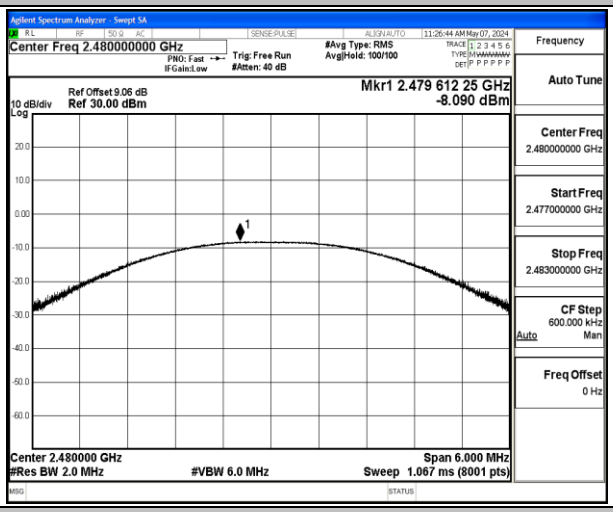
Test Graphs Peak



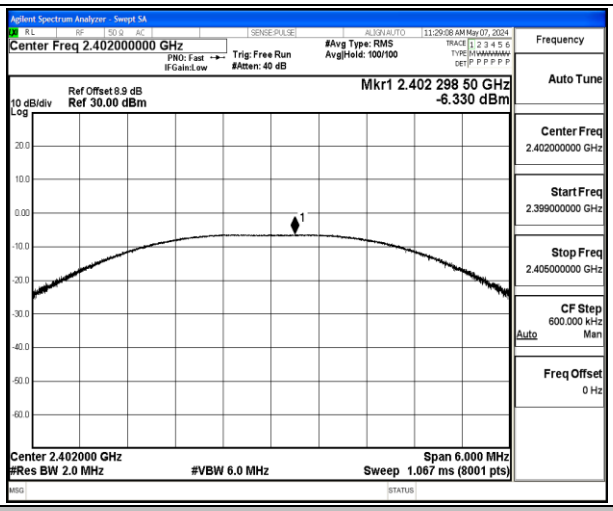
BLE_1M-Ant1-2402-PASS



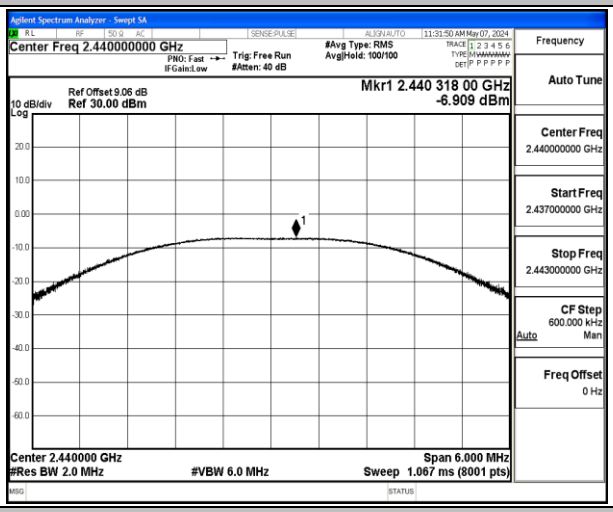
BLE_1M-Ant1-2440-PASS



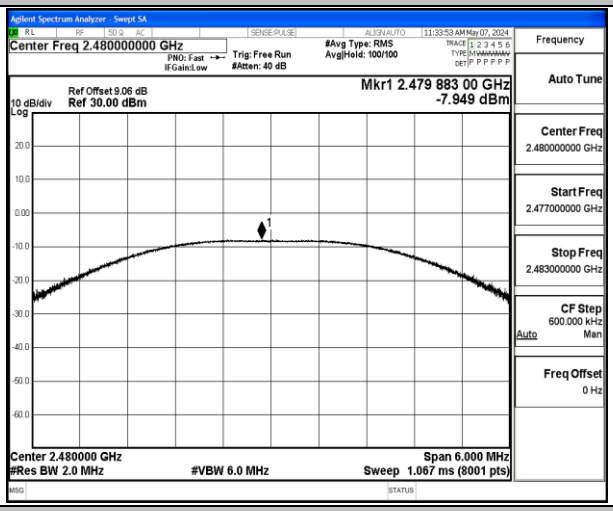
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



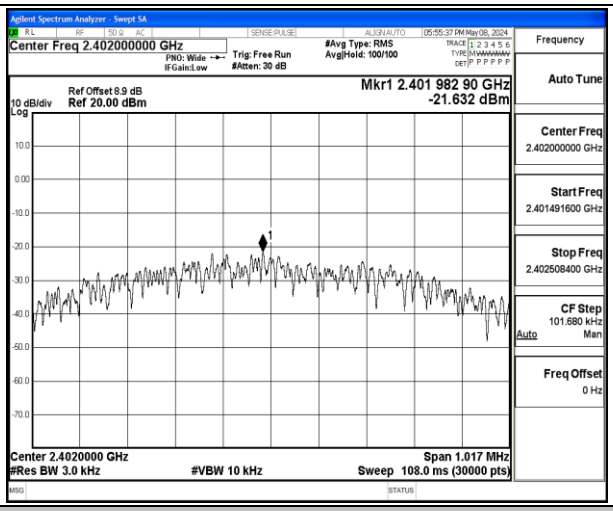
BLE_2M-Ant1-2480-PASS

Appendix D: Maximum peak power spectral density

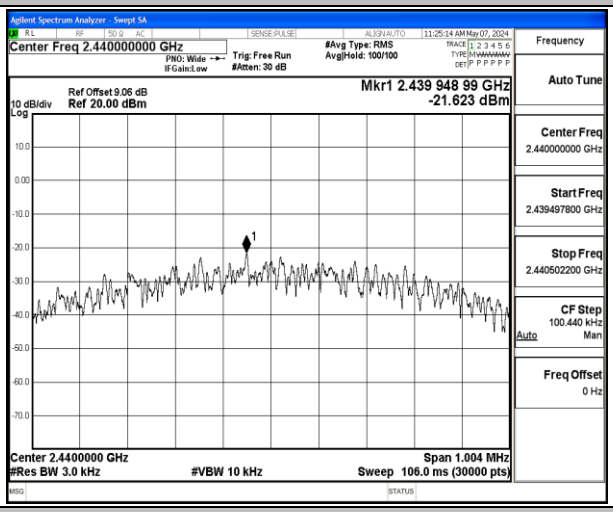
Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-21.63	≤8.00	PASS
BLE_1M	Ant1	2440	-21.62	≤8.00	PASS
BLE_1M	Ant1	2480	-24.01	≤8.00	PASS
BLE_2M	Ant1	2402	-22.64	≤8.00	PASS
BLE_2M	Ant1	2440	-25.18	≤8.00	PASS
BLE_2M	Ant1	2480	-25.84	≤8.00	PASS

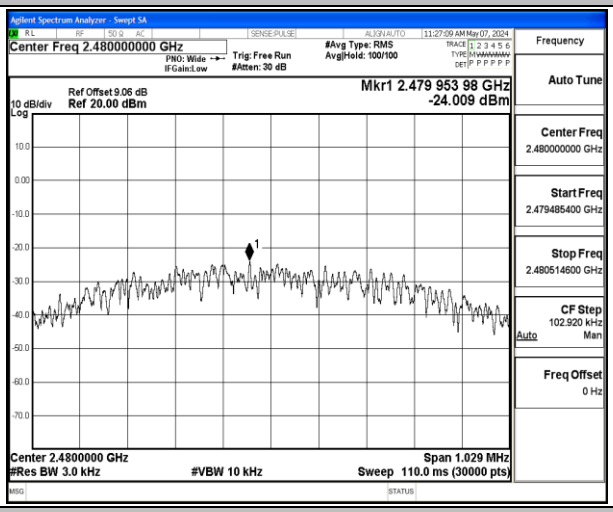
Test Graphs



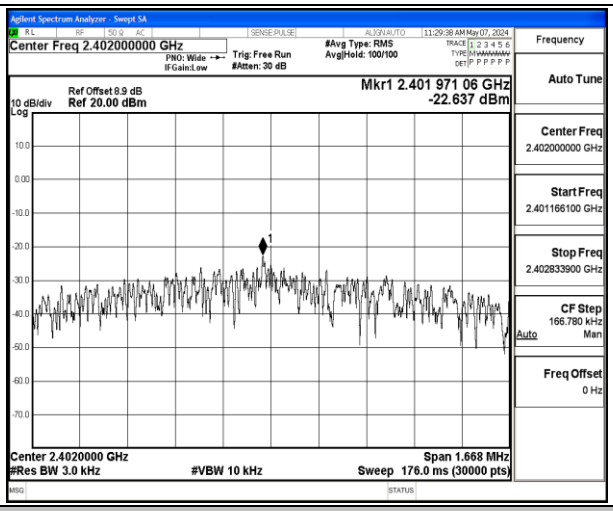
BLE_1M-Ant1-2402-PASS



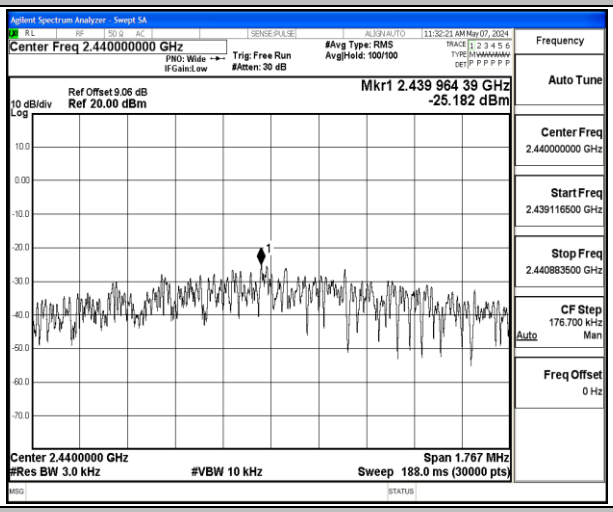
BLE_1M-Ant1-2440-PASS



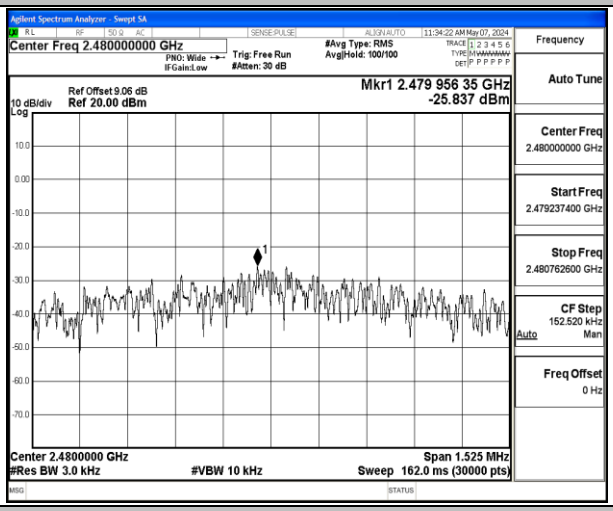
BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



BLE_2M-Ant1-2440-PASS



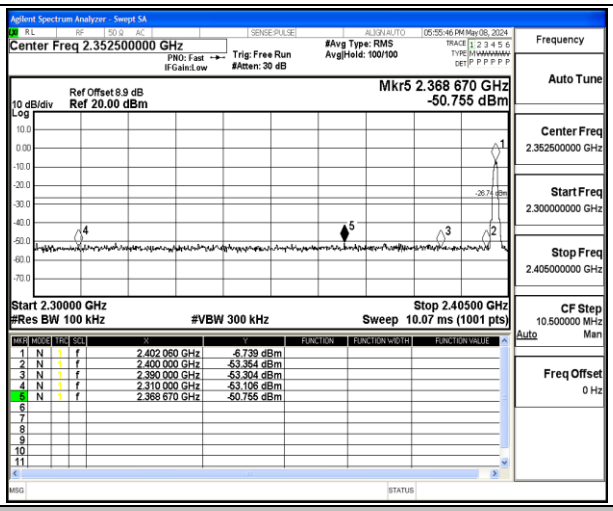
BLE_2M-Ant1-2480-PASS

Appendix E: Band edge measurements

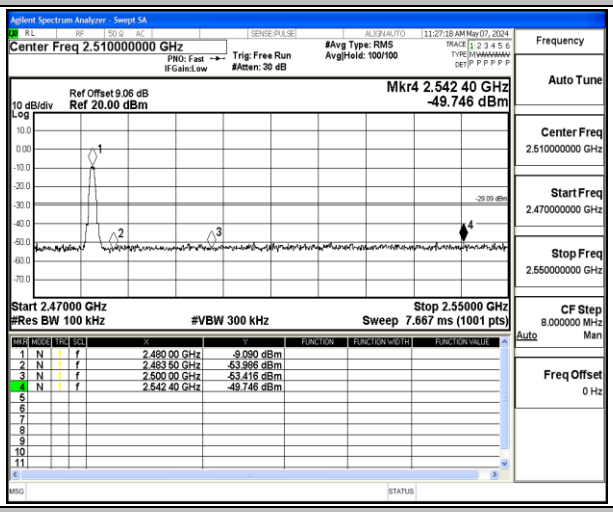
Test Result

TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-6.74	-50.76	≤-26.74	PASS
BLE_1M	Ant1	High	2480	-9.09	-49.75	≤-29.09	PASS
BLE_2M	Ant1	Low	2402	-7.68	-39.05	≤-27.68	PASS
BLE_2M	Ant1	High	2480	-10.39	-49.51	≤-30.39	PASS

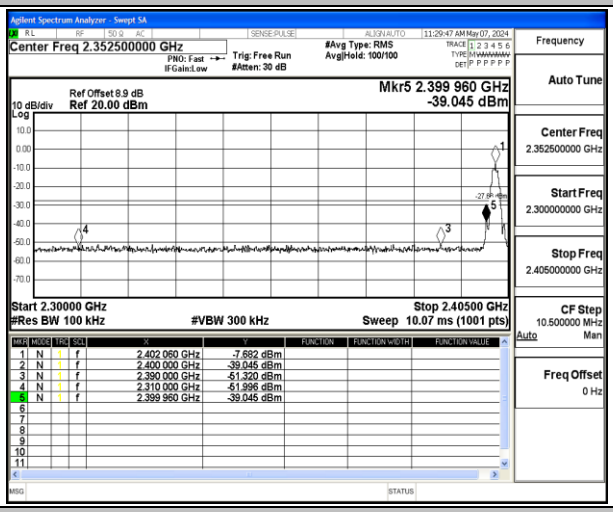
Test Graphs



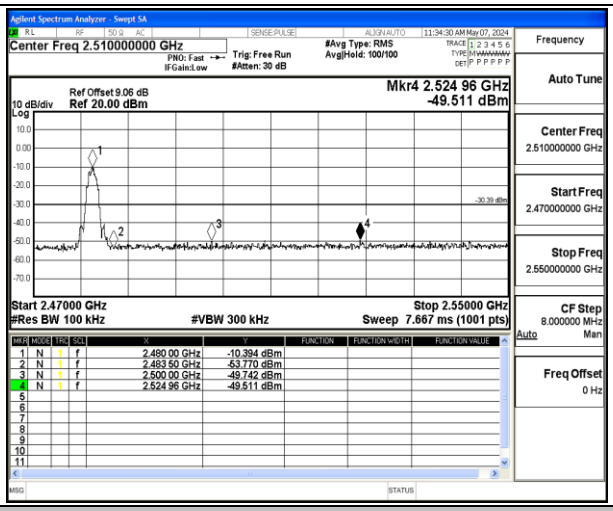
BLE_1M-Ant1-2402-PASS



BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



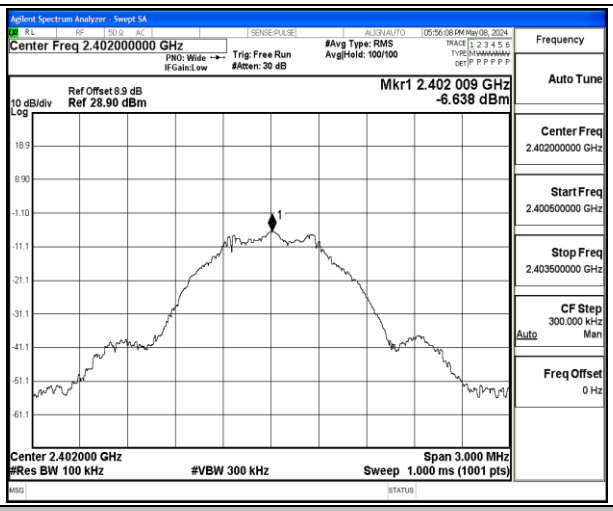
BLE_2M-Ant1-2480-PASS

Appendix F: Conducted Spurious Emission

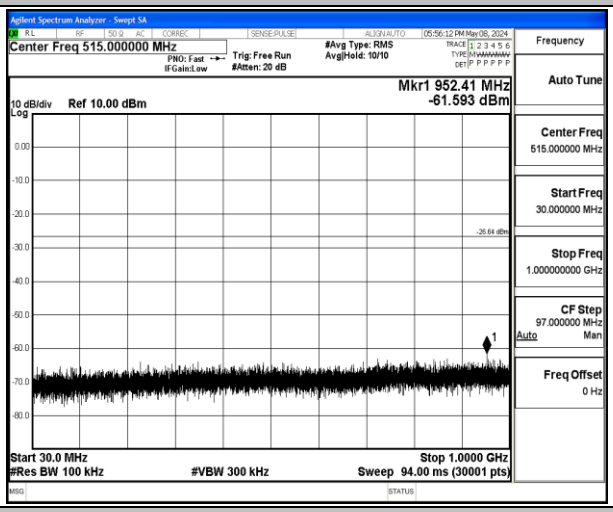
Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-6.64	-6.64	---	PASS
BLE_1M	Ant1	2402	30~1000	-6.64	-61.59	≤-26.64	PASS
BLE_1M	Ant1	2402	1000~26500	-6.64	-50.64	≤-26.64	PASS
BLE_1M	Ant1	2440	0~Reference	-7.73	-7.73	---	PASS
BLE_1M	Ant1	2440	30~1000	-7.73	-62.69	≤-27.73	PASS
BLE_1M	Ant1	2440	1000~26500	-7.73	-45.29	≤-27.73	PASS
BLE_1M	Ant1	2480	0~Reference	-8.79	-8.79	---	PASS
BLE_1M	Ant1	2480	30~1000	-8.79	-62.46	≤-28.79	PASS
BLE_1M	Ant1	2480	1000~26500	-8.79	-50	≤-28.79	PASS
BLE_2M	Ant1	2402	0~Reference	-6.95	-6.95	---	PASS
BLE_2M	Ant1	2402	30~1000	-6.95	-61.66	≤-26.95	PASS
BLE_2M	Ant1	2402	1000~26500	-6.95	-50.37	≤-26.95	PASS
BLE_2M	Ant1	2440	0~Reference	-7.80	-7.80	---	PASS
BLE_2M	Ant1	2440	30~1000	-7.80	-61.89	≤-27.8	PASS
BLE_2M	Ant1	2440	1000~26500	-7.80	-48.07	≤-27.8	PASS
BLE_2M	Ant1	2480	0~Reference	-8.85	-8.85	---	PASS
BLE_2M	Ant1	2480	30~1000	-8.85	-62.14	≤-28.85	PASS
BLE_2M	Ant1	2480	1000~26500	-8.85	-49.66	≤-28.85	PASS

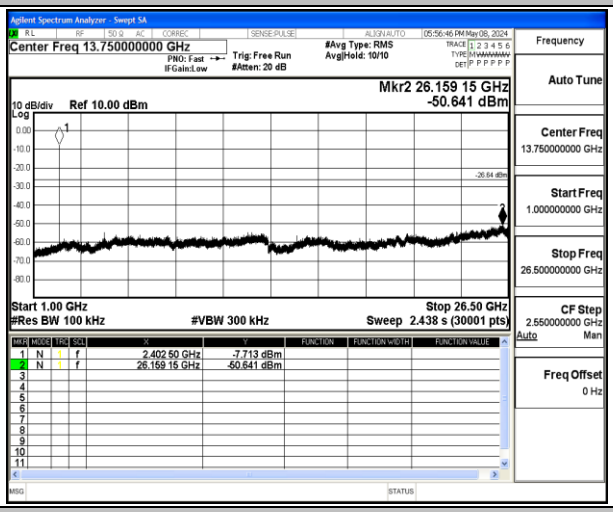
Test Graphs



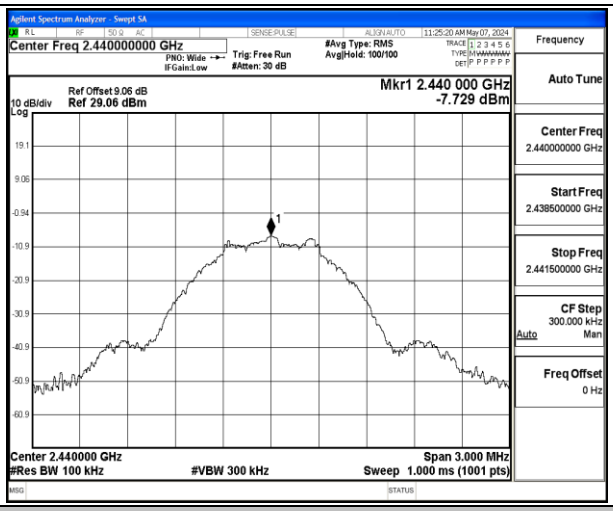
BLE_1M-Ant1-2402-0~Reference-PASS



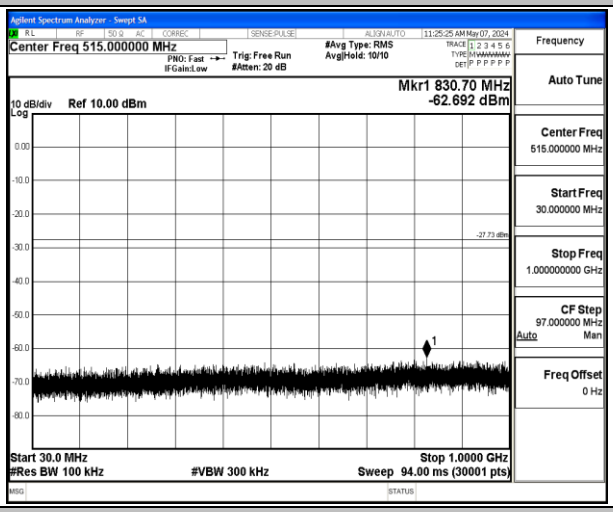
BLE_1M-Ant1-2402-30~1000-PASS



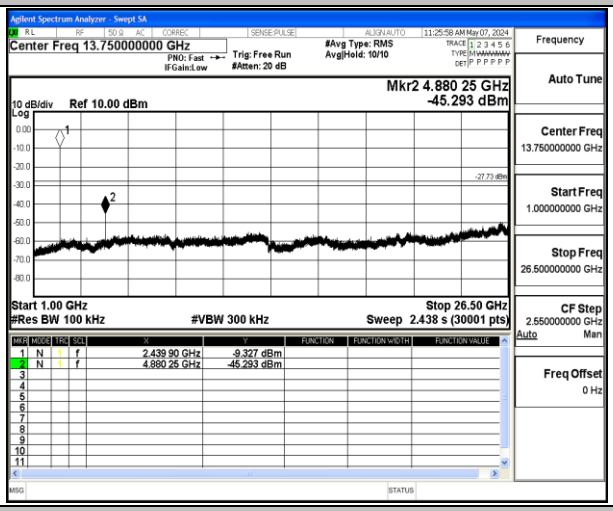
BLE_1M-Ant1-2402-1000~26500-PASS



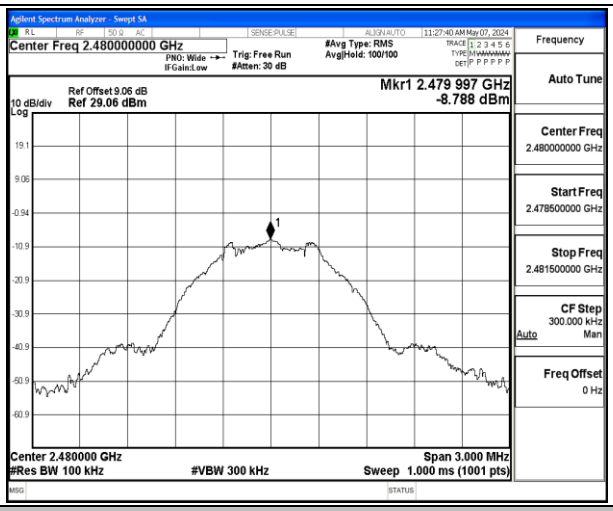
BLE_1M-Ant1-2440-0~Reference-PASS



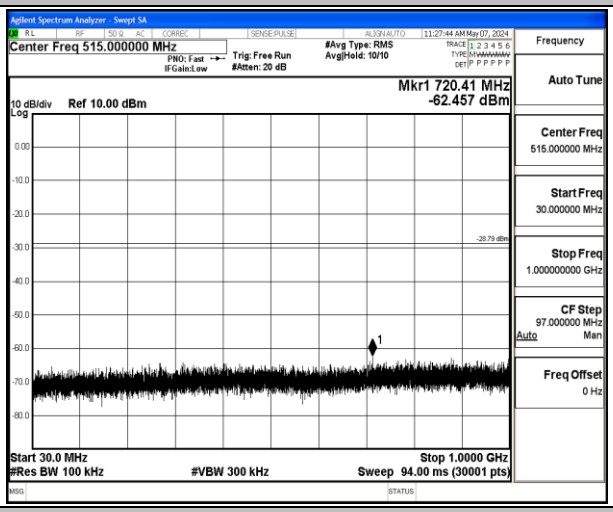
BLE_1M-Ant1-2440-30~1000-PASS



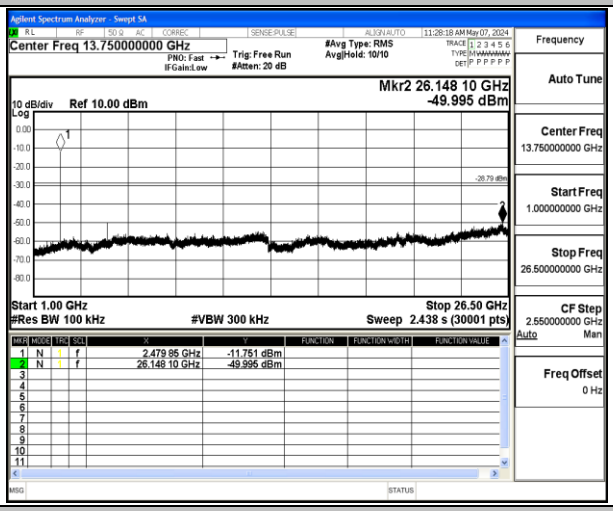
BLE_1M-Ant1-2440-1000~26500-PASS



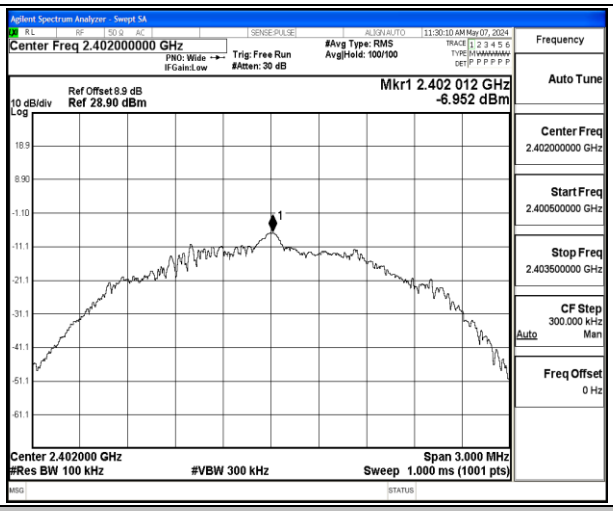
BLE_1M-Ant1-2480-0~Reference-PASS



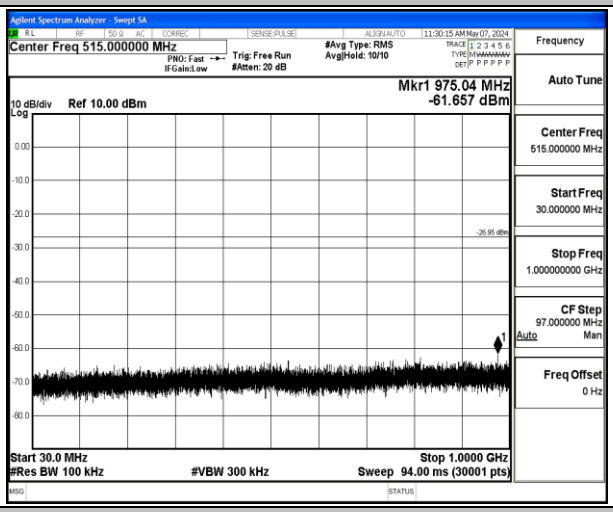
BLE_1M-Ant1-2480-30~1000-PASS



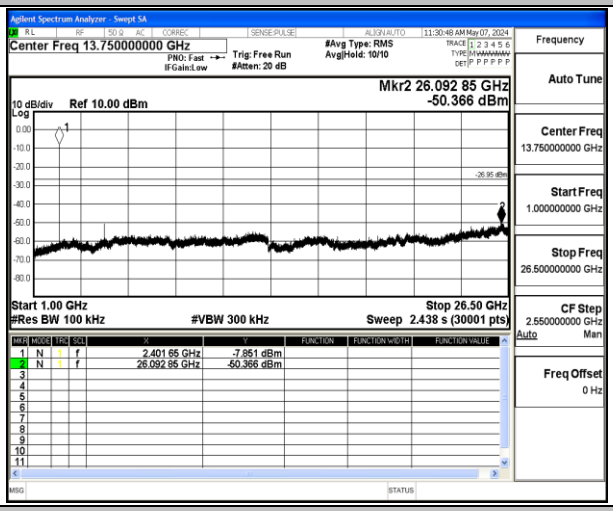
BLE_1M-Ant1-2480-1000~26500-PASS



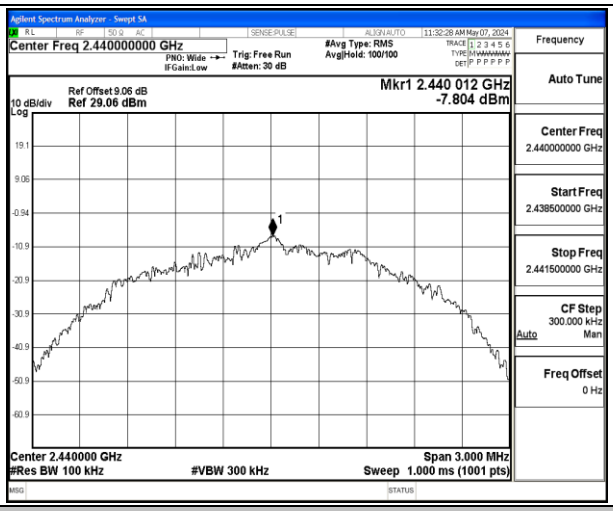
BLE_2M-Ant1-2402-0~Reference-PASS



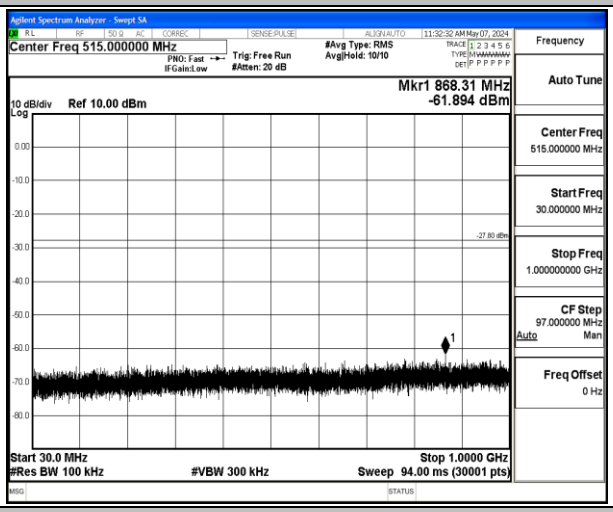
BLE_2M-Ant1-2402-30~1000-PASS



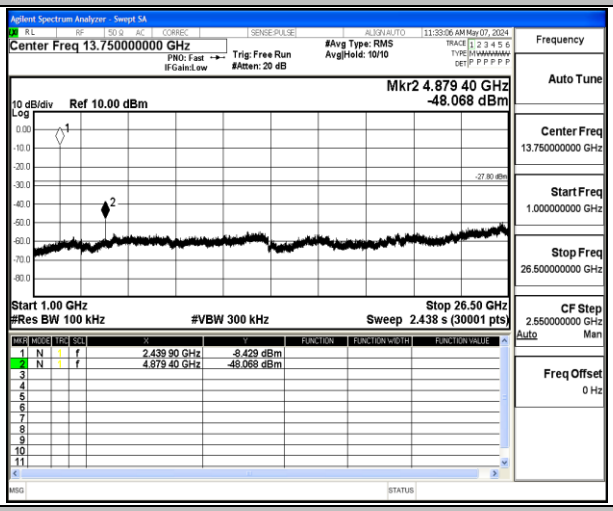
BLE_2M-Ant1-2402-1000~26500-PASS



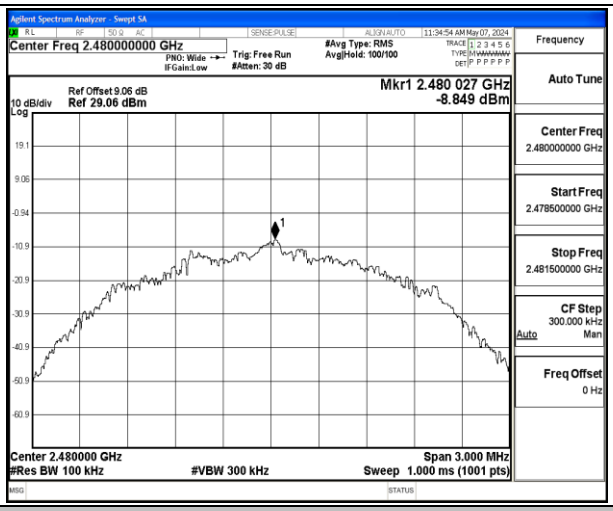
BLE_2M-Ant1-2440-0~Reference-PASS



BLE_2M-Ant1-2440-30~1000-PASS



BLE_2M-Ant1-2440-1000~26500-PASS



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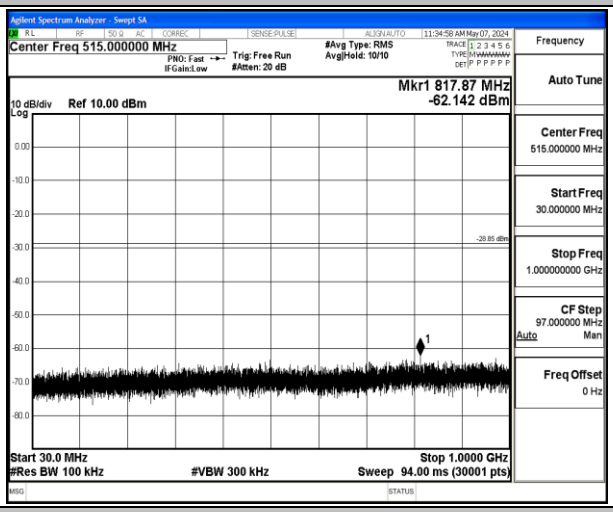
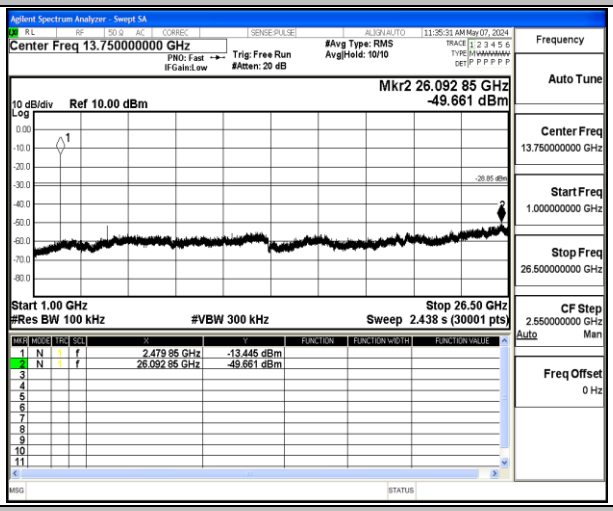


BLE_2M-Ant1-2480-30~1000-PASS



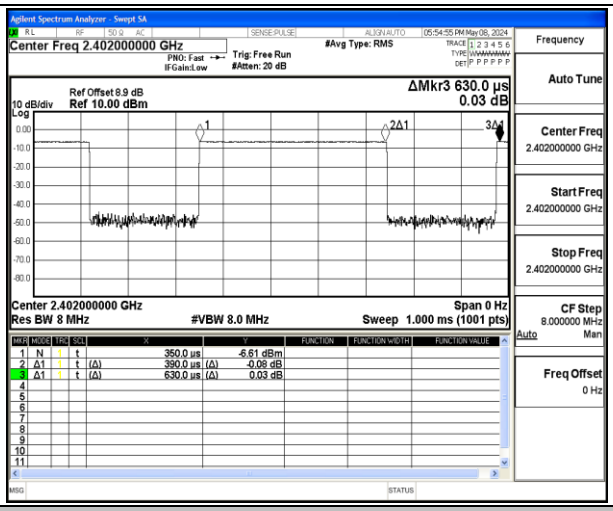
BLE_2M-Ant1-2480-1000~26500-PASS

Appendix G: Duty Cycle

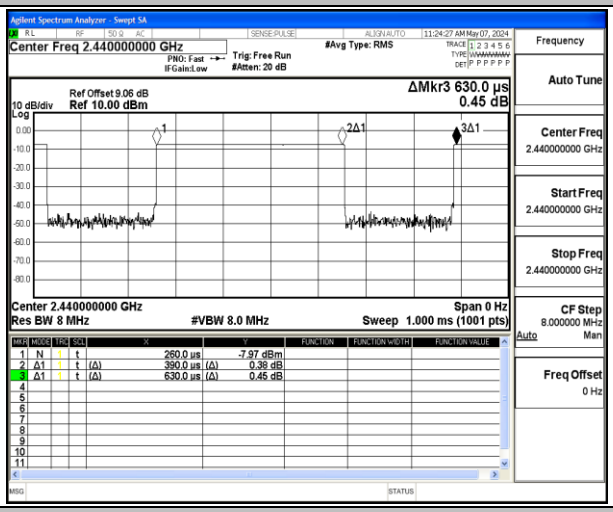
Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	0.39	0.63	61.90	2.08
BLE_1M	Ant1	2440	0.39	0.63	61.90	2.08
BLE_1M	Ant1	2480	0.40	0.63	63.49	1.97
BLE_2M	Ant1	2402	0.21	0.63	33.33	4.77
BLE_2M	Ant1	2440	0.21	0.63	33.33	4.77
BLE_2M	Ant1	2480	0.20	0.62	32.26	4.91

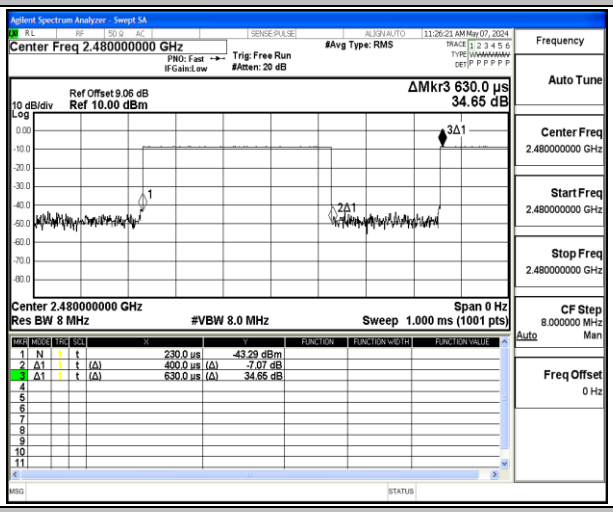
Test Graphs



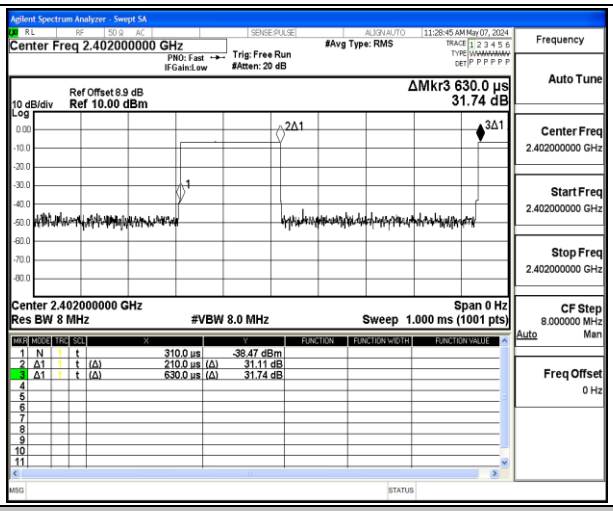
NTNV-BLE_1M-Ant1-2402



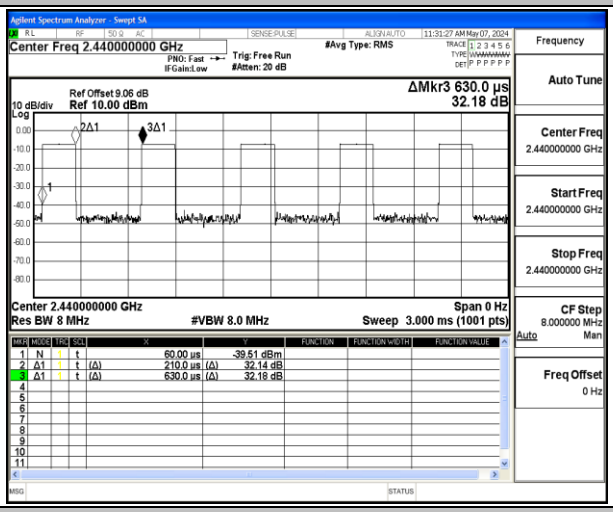
NTNV-BLE_1M-Ant1-2440



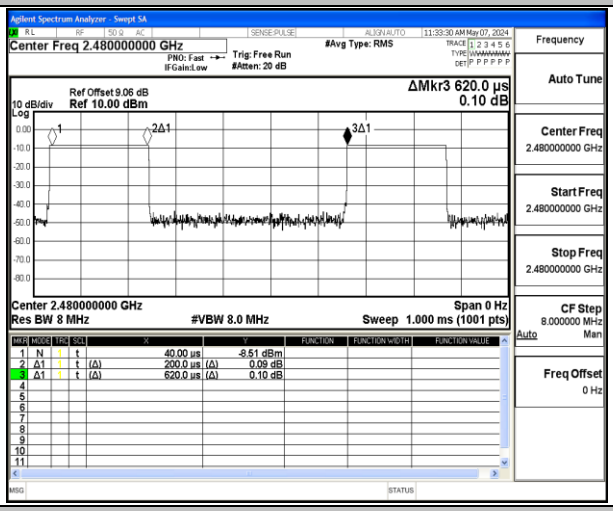
NTNV-BLE_1M-Ant1-2480



NTNV-BLE_2M-Ant1-2402



NTNV-BLE_2M-Ant1-2440



NTNV-BLE_2M-Ant1-2480

Appendix H: Emissions in Restricted Bands

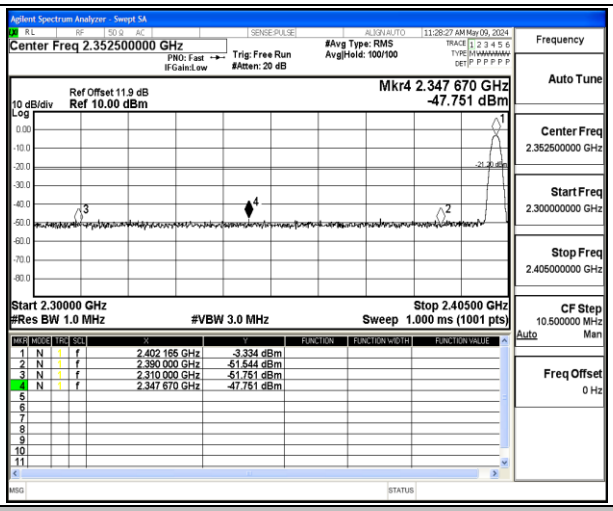
Test Result

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	-51.54	≤-21.20	43.66	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-51.75	≤-21.20	43.45	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2347.670	-47.75	≤-21.20	47.45	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-57.33	≤-41.20	37.87	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-57.76	≤-41.20	37.44	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2389.250	-56.08	≤-41.20	39.12	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-48.56	≤-21.20	46.64	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-51.18	≤-21.20	44.02	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2490.640	-48.25	≤-21.20	46.95	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-56.42	≤-41.20	38.78	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-56.31	≤-41.20	38.89	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2499.200	-55.83	≤-41.20	39.37	≤54	PASS
BLE_2M	Ant1	Low	2402	Peak	2390.000	-50.04	≤-21.20	45.16	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2310.000	-49.48	≤-21.20	45.72	≤74	PASS
BLE_2M	Ant1	Low	2402	Peak	2384.105	-47.52	≤-21.20	47.68	≤74	PASS
BLE_2M	Ant1	Low	2402	AV	2390.000	-54.2	≤-41.20	41.00	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2310.000	-54.31	≤-41.20	40.89	≤54	PASS
BLE_2M	Ant1	Low	2402	AV	2387.465	-53.65	≤-41.20	41.55	≤54	PASS
BLE_2M	Ant1	High	2480	Peak	2483.500	-48.96	≤-21.20	46.24	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2500.000	-50.42	≤-21.20	44.78	≤74	PASS
BLE_2M	Ant1	High	2480	Peak	2491.760	-47.92	≤-21.20	47.28	≤74	PASS
BLE_2M	Ant1	High	2480	AV	2483.500	-53.52	≤-41.20	41.68	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2500.000	-53.87	≤-41.20	41.33	≤54	PASS
BLE_2M	Ant1	High	2480	AV	2496.480	-52.68	≤-41.20	42.52	≤54	PASS

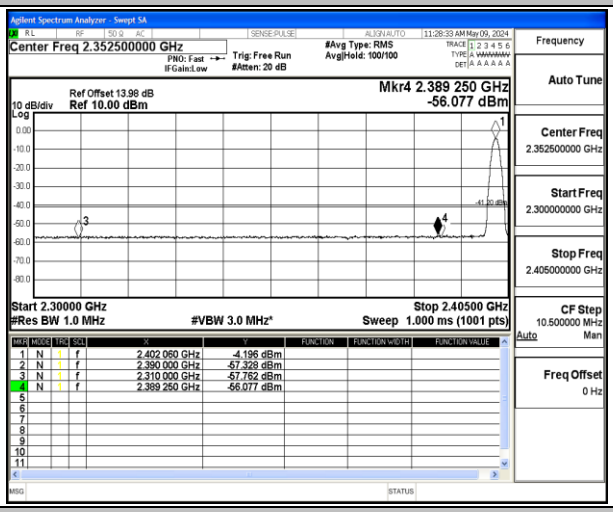
Note：

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.

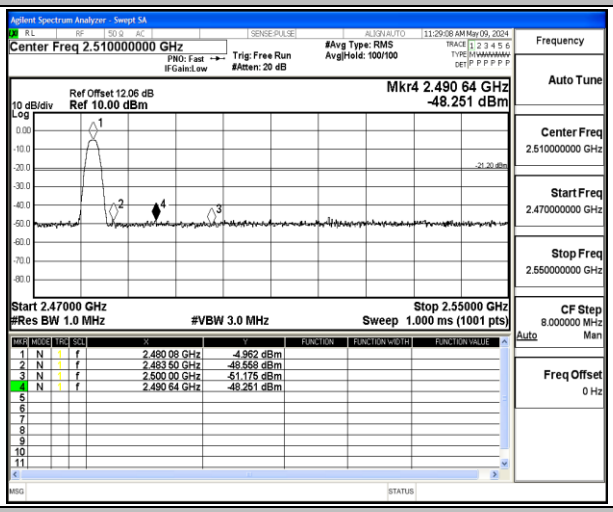
Test Graphs



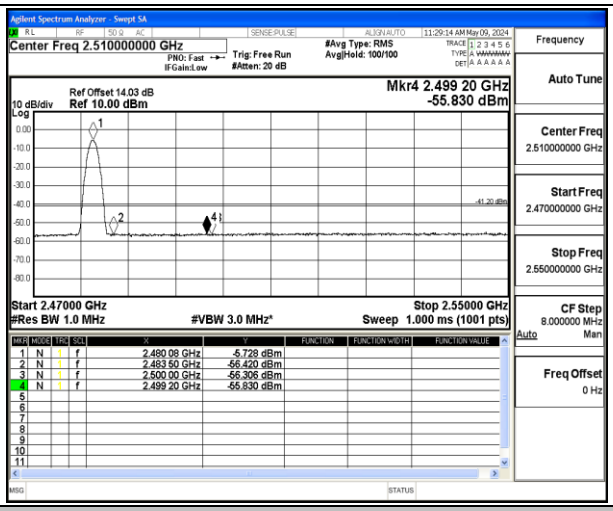
BLE_1M-Ant1-2402-PASS



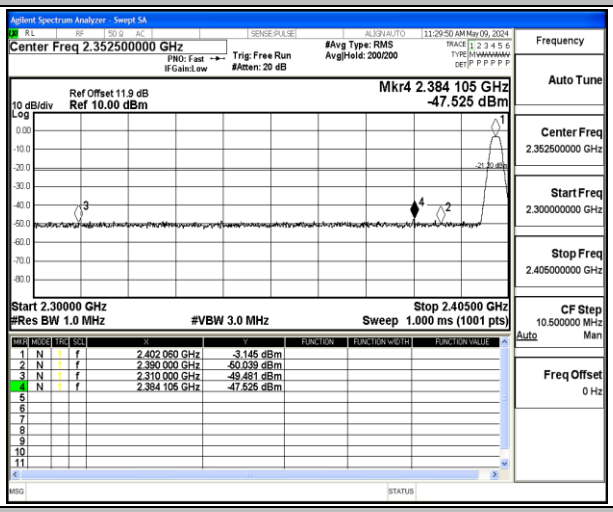
BLE_1M-Ant1-2402-PASS



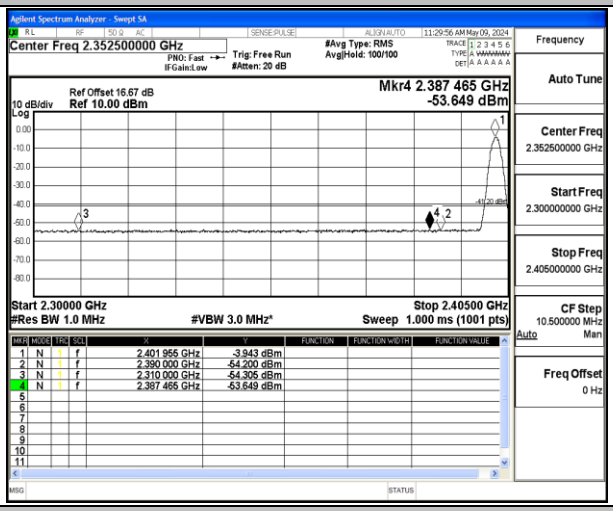
BLE_1M-Ant1-2480-PASS



BLE_1M-Ant1-2480-PASS



BLE_2M-Ant1-2402-PASS



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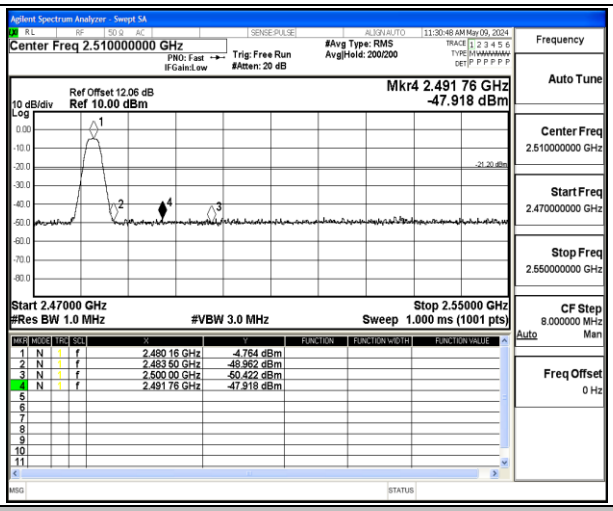
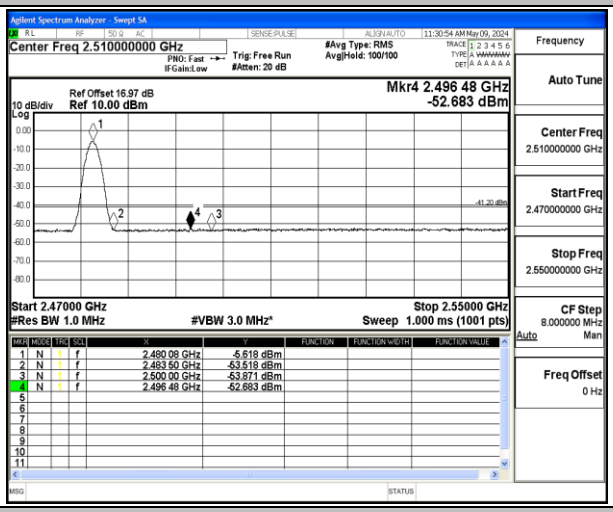


BLE_2M-Ant1-2480-PASS



BLE_2M-Ant1-2480-PASS