

## Appendix Test Data for BLE (Conducted Measurement)

Product Name: TESLA AUTOMATIC POP UP DOOR HANDLE

Trade Mark: ALPINE STYLE

Test Model: KTX-TH01-EV

FCC ID: 2BFB2-KTX-TH01-EV

### Environmental Conditions

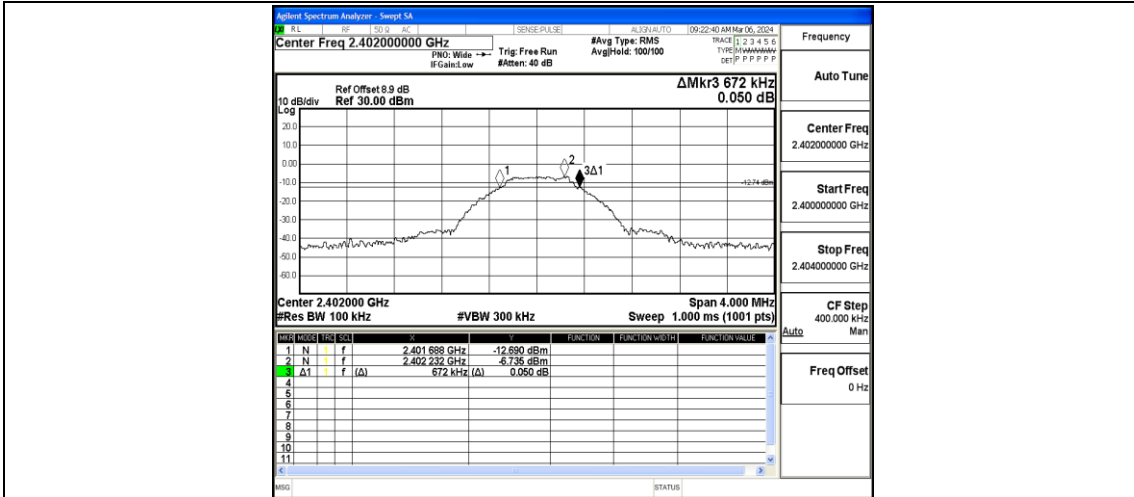
Temperature:	22.8° C
Relative Humidity:	56%
ATM Pressure:	100.0 kPa
Test Engineer:	Anna Hu
Supervised by:	Hugo Chen
NOTE	N/A

## Appendix A: DTS Bandwidth

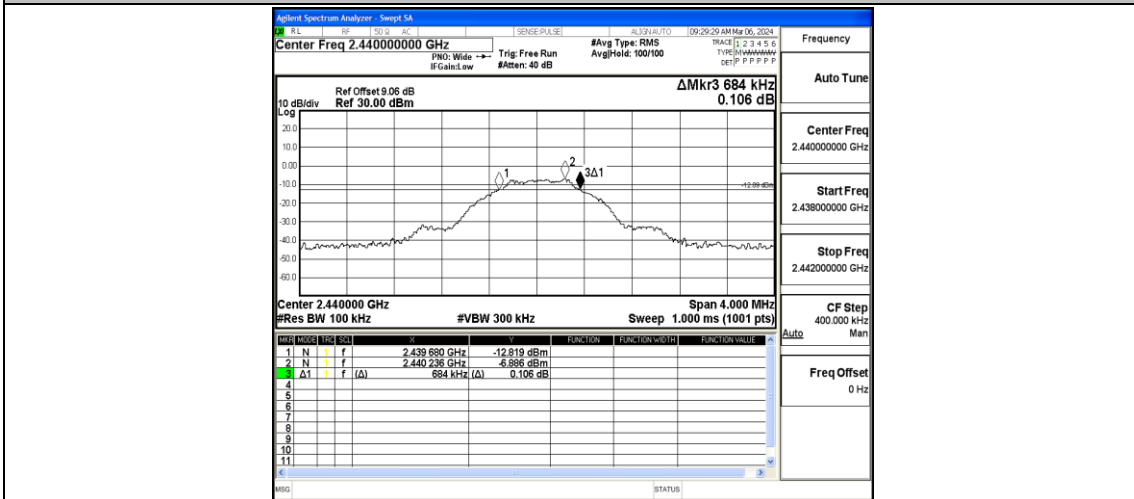
### Test Result

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.672	2401.688	2402.360	0.5	PASS
BLE_1M	Ant1	2440	0.684	2439.680	2440.364	0.5	PASS
BLE_1M	Ant1	2480	0.680	2479.680	2480.360	0.5	PASS

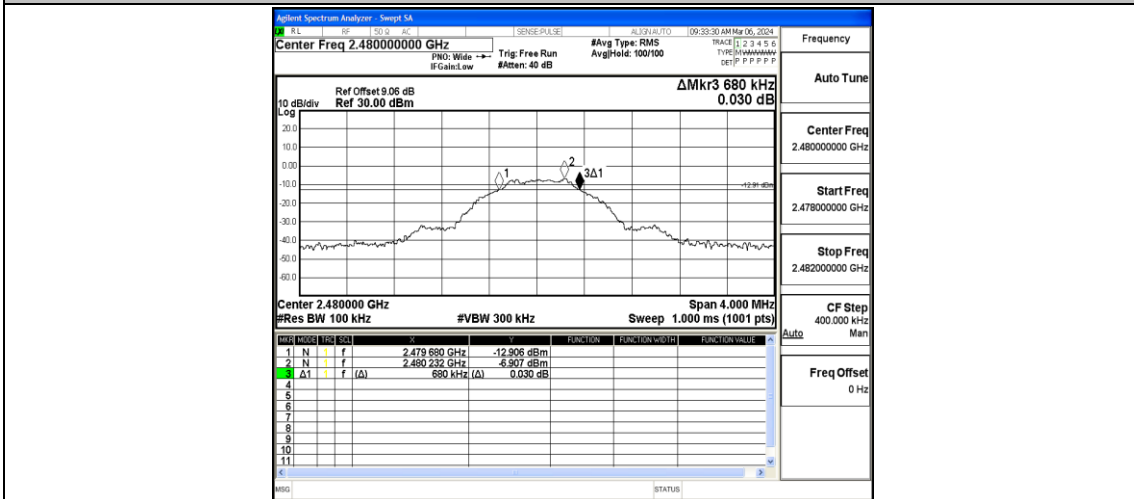
### Test Graphs



BLE\_1M-Ant1-240-PASS



BLE\_1M-Ant1-244-PASS



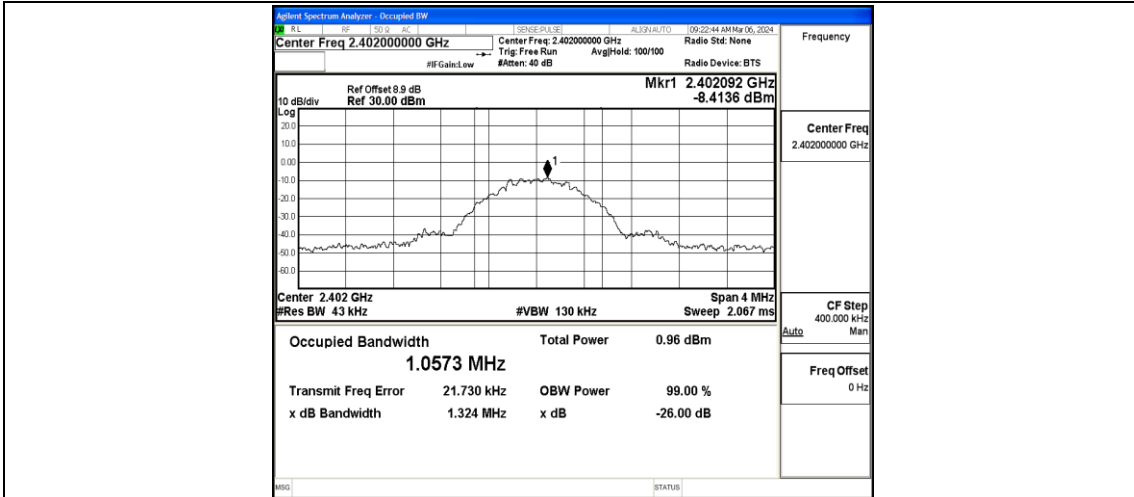
BLE\_1M-Ant1-2480-PASS

## Appendix B: Occupied Channel Bandwidth

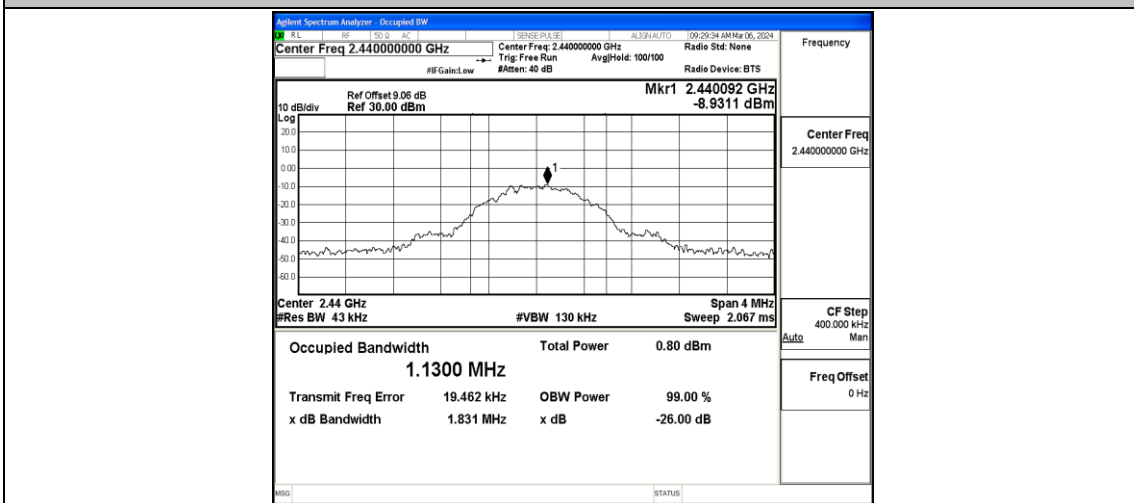
### Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	1.0573	2401.4931	2402.5504	---	---
BLE_1M	Ant1	2440	1.1300	2439.4545	2440.5845	---	---
BLE_1M	Ant1	2480	1.1319	2479.4556	2480.5875	---	---

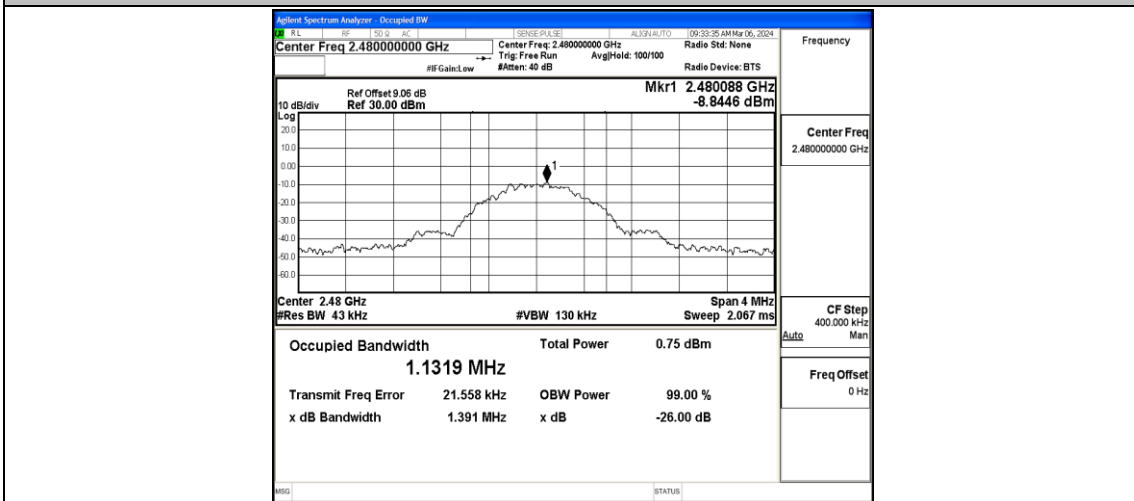
### Test Graphs



BLE\_1M-Ant1-2402



BLE\_1M-Ant1-2440



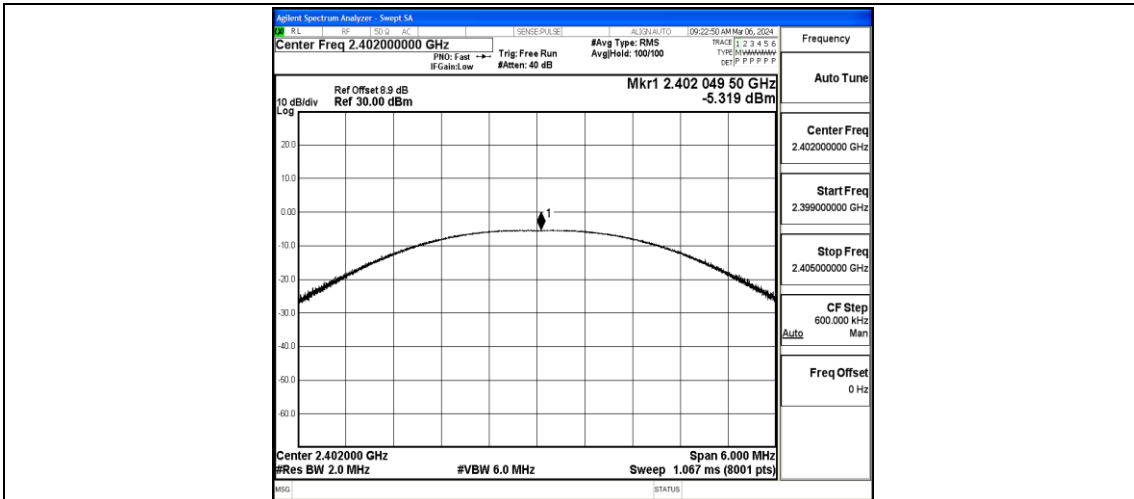
BLE\_1M-Ant1-2480

## Appendix C: Maximum peak conducted output power

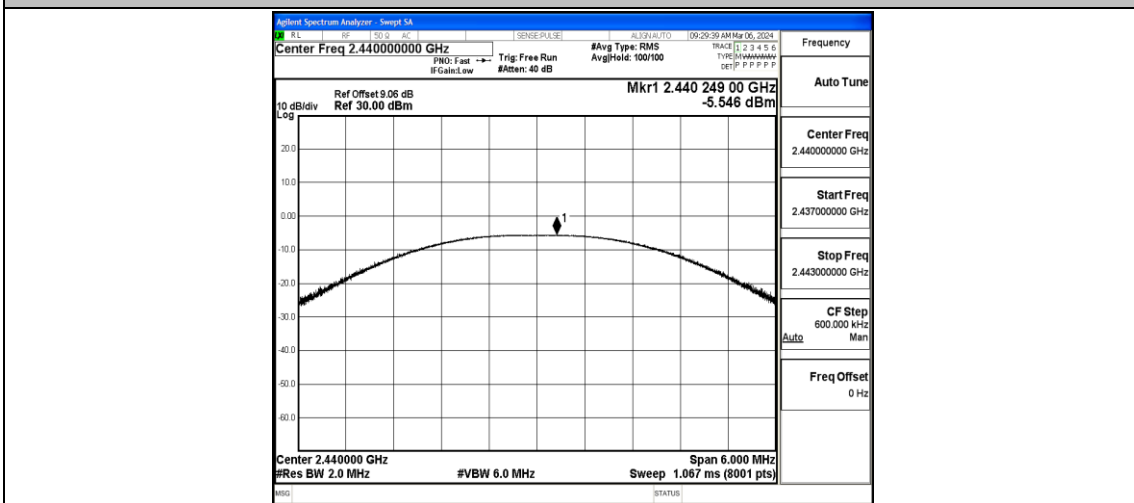
### Test Result Peak

TestMode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	EIRP[dBm]	EIRP Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-5.32	≤30	-4.12	≤36	PASS
BLE_1M	Ant1	2440	-5.55	≤30	-4.35	≤36	PASS
BLE_1M	Ant1	2480	-5.54	≤30	-4.34	≤36	PASS

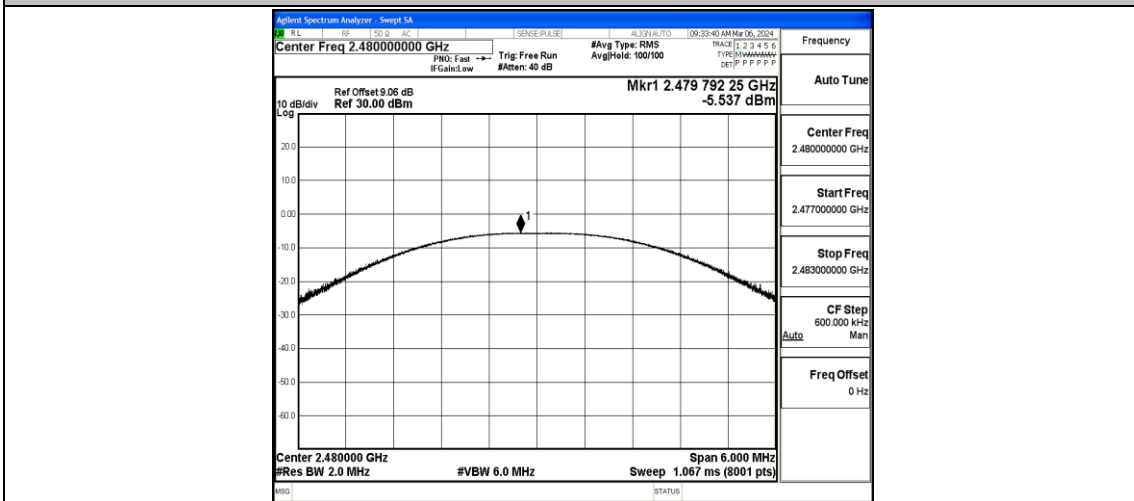
### Test Graphs Peak



BLE\_1M-Ant1-240-PASS



BLE\_1M-Ant1-244-PASS



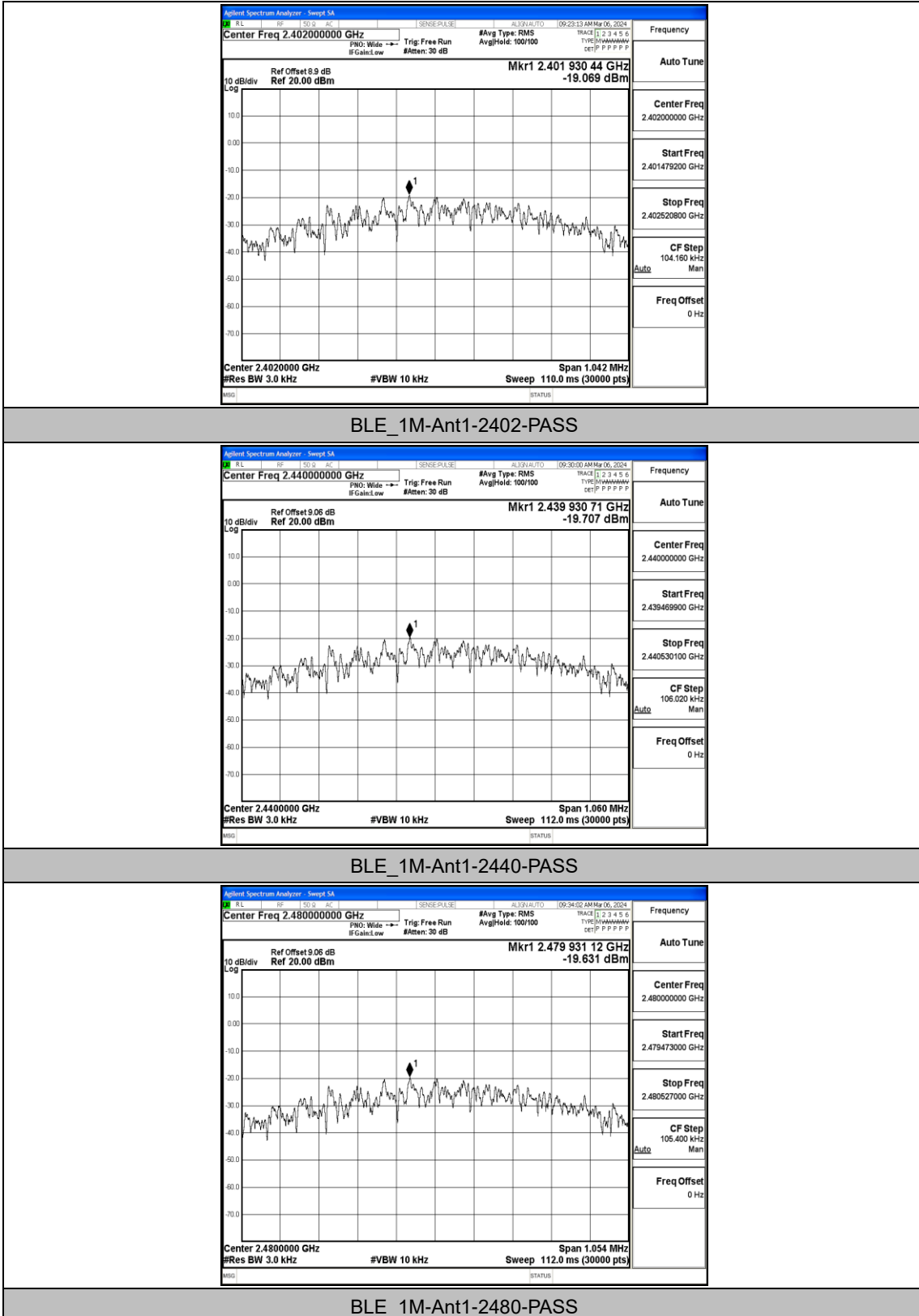
BLE\_1M-Ant1-248-PASS

## Appendix D: Maximum peak power spectral density

### Test Result

TestMode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-19.07	≤8.00	PASS
BLE_1M	Ant1	2440	-19.71	≤8.00	PASS
BLE_1M	Ant1	2480	-19.63	≤8.00	PASS

### Test Graphs



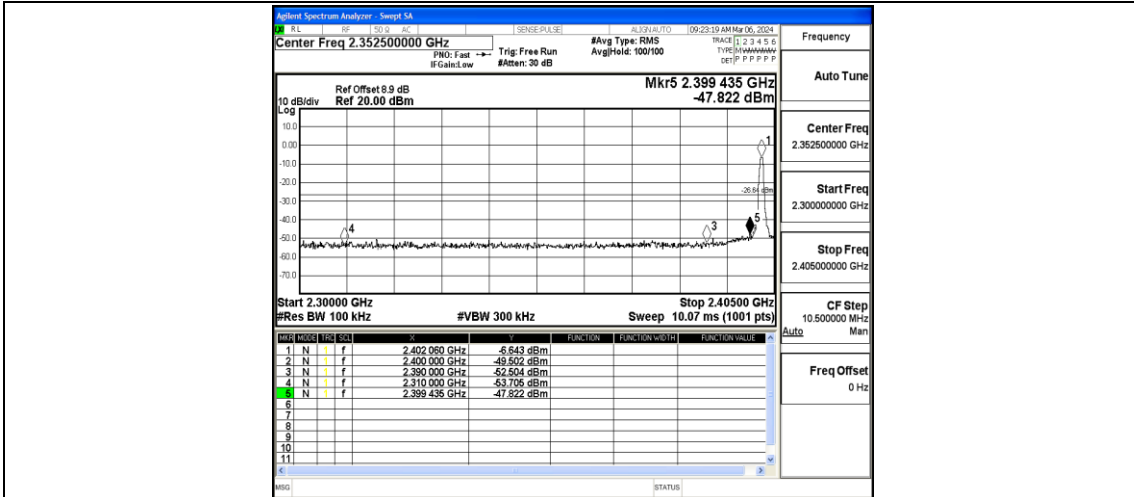


## Appendix E: Band edge measurements

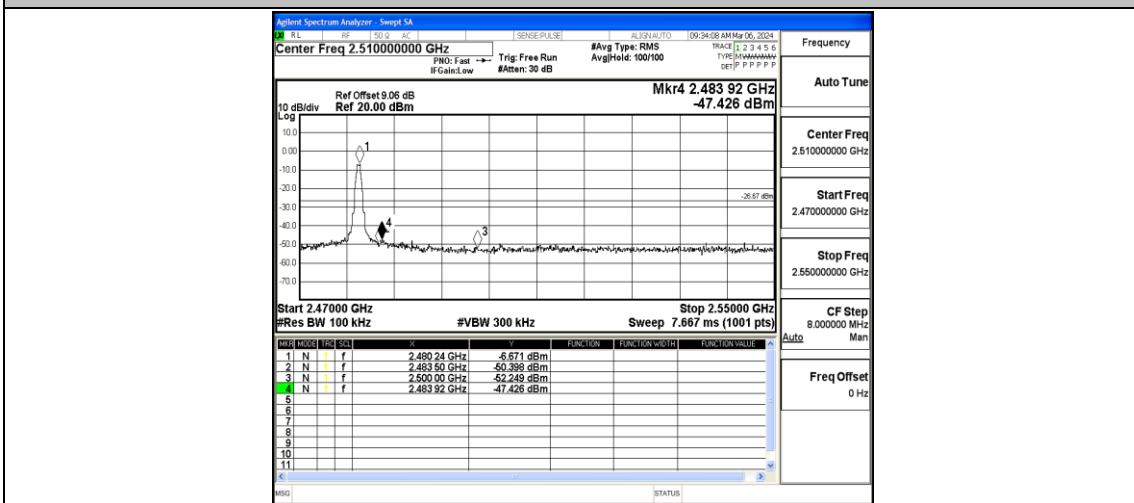
### Test Result

TestMode	Antenna	Channel	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-6.64	-47.82	≤-26.64	PASS
BLE_1M	Ant1	High	2480	-6.67	-47.43	≤-26.67	PASS

### Test Graphs



BLE\_1M-Ant1-240-PASS



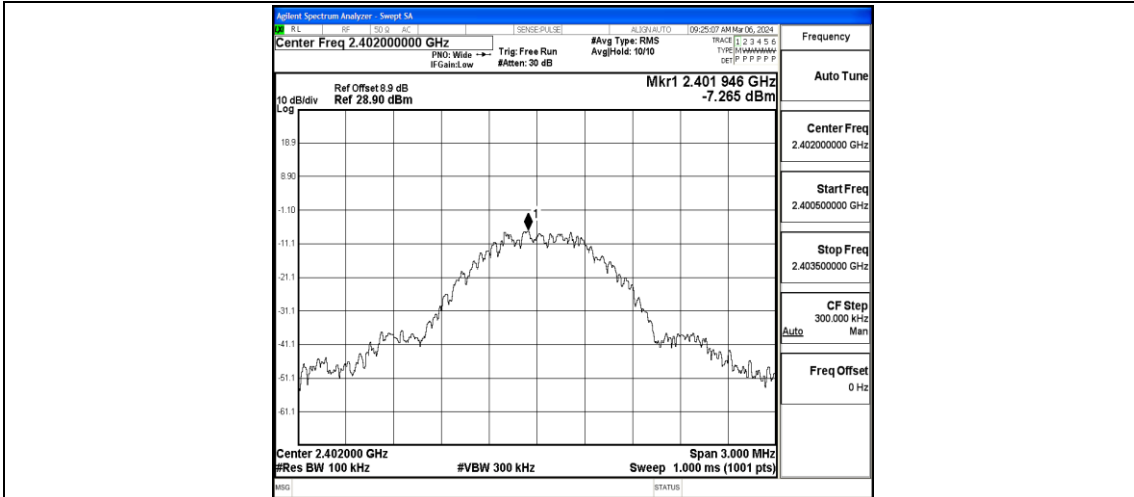
BLE\_1M-Ant1-2480-PASS

## Appendix F: Conducted Spurious Emission

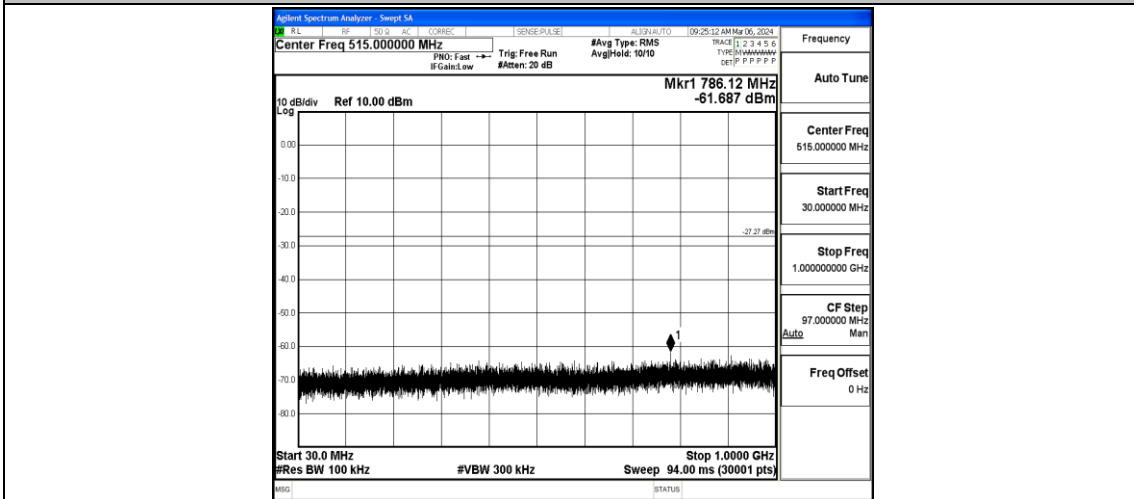
### Test Result

TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	0~Reference	-7.27	-7.27	---	PASS
BLE_1M	Ant1	2402	30~1000	-7.27	-61.69	≤-27.27	PASS
BLE_1M	Ant1	2402	1000~26500	-7.27	-49.72	≤-27.27	PASS
BLE_1M	Ant1	2440	0~Reference	-7.50	-7.50	---	PASS
BLE_1M	Ant1	2440	30~1000	-7.50	-63.18	≤-27.5	PASS
BLE_1M	Ant1	2440	1000~26500	-7.50	-50.71	≤-27.5	PASS
BLE_1M	Ant1	2480	0~Reference	-6.84	-6.84	---	PASS
BLE_1M	Ant1	2480	30~1000	-6.84	-62.16	≤-26.84	PASS
BLE_1M	Ant1	2480	1000~26500	-6.84	-50.47	≤-26.84	PASS

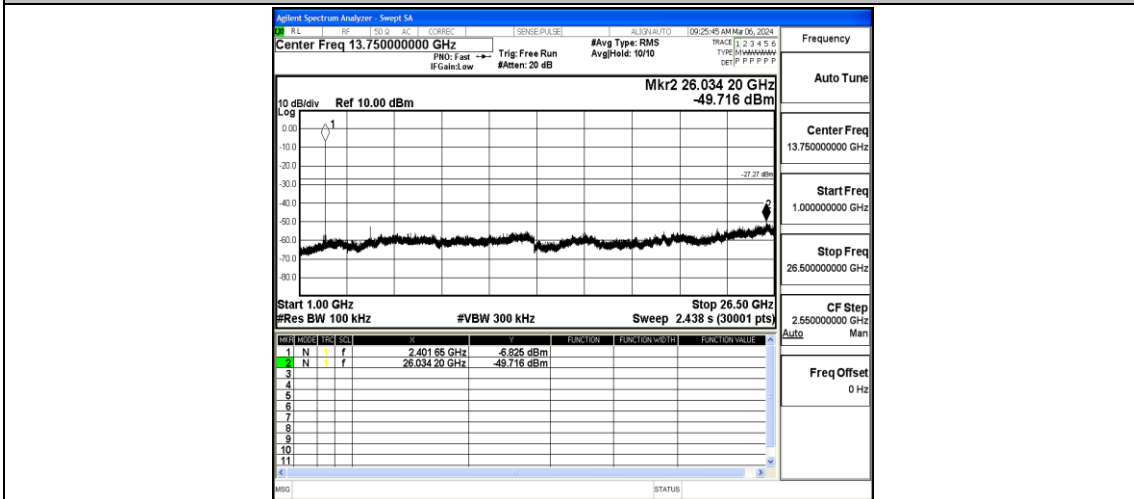
### Test Graphs



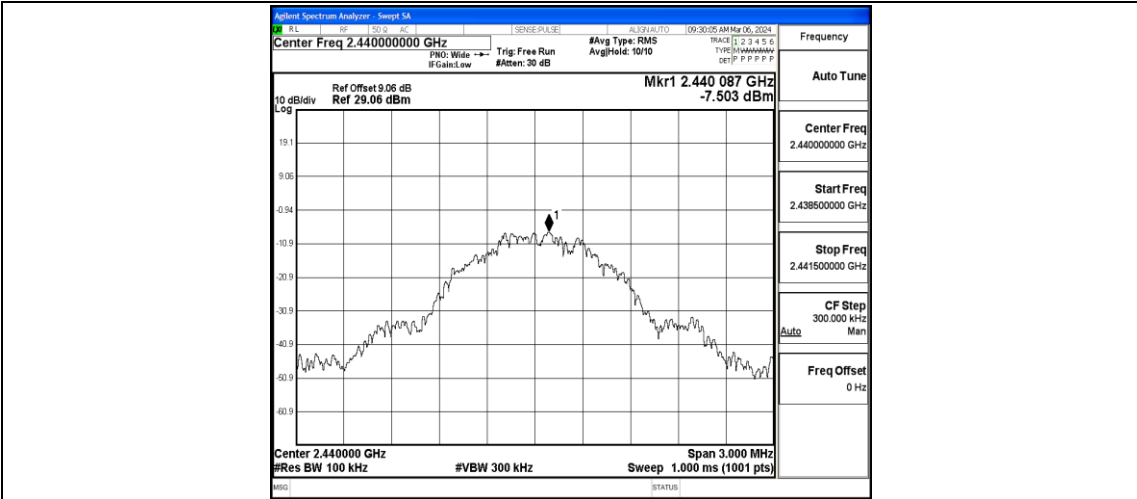
BLE\_1M-Ant1-2402-0~Reference-PASS



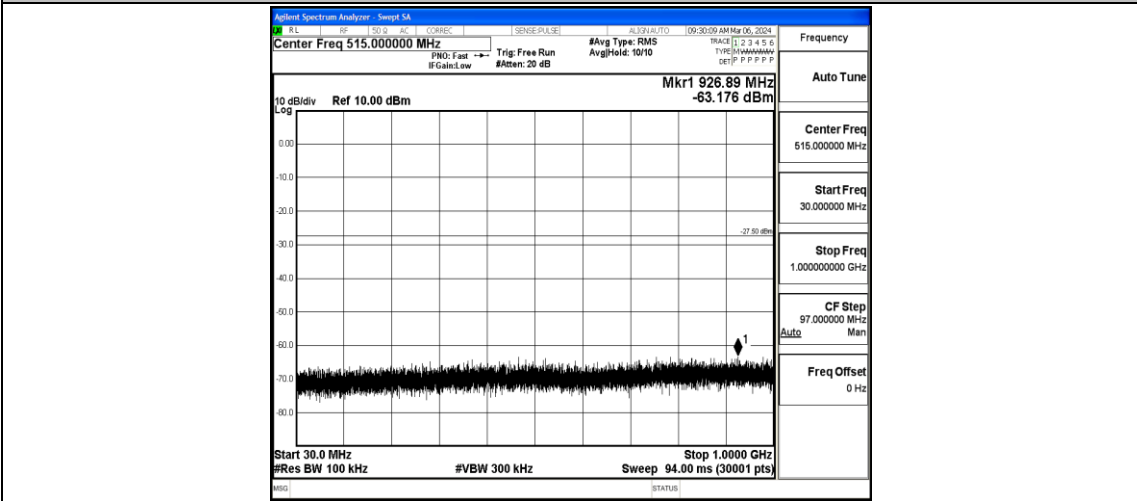
BLE\_1M-Ant1-2402-30~1000-PASS



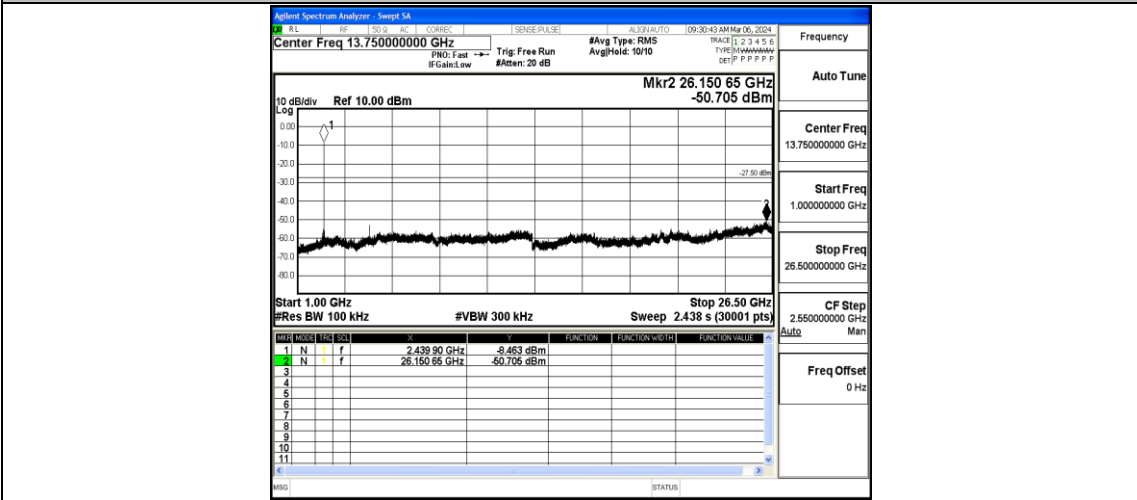
BLE\_1M-Ant1-2402-1000~26500-PASS



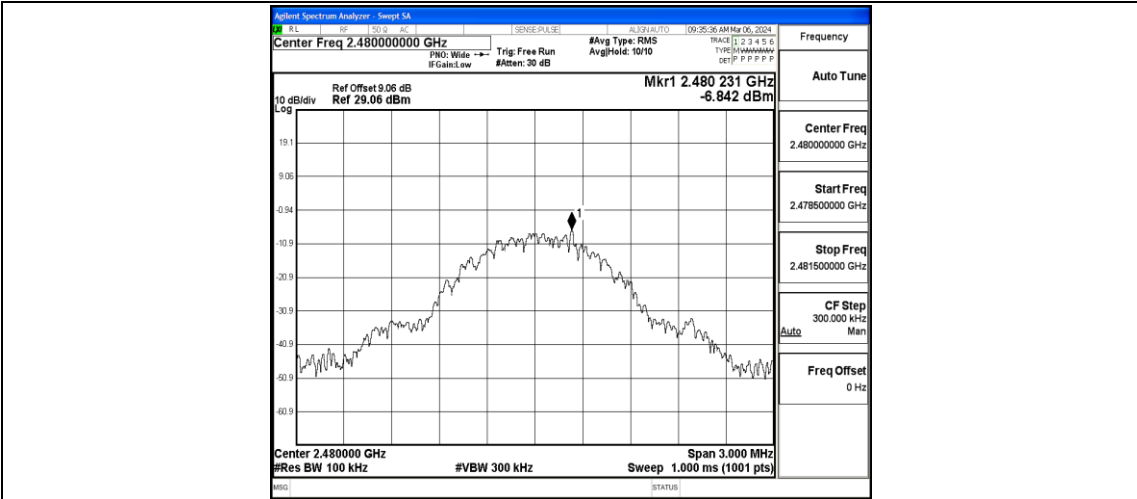
BLE\_1M-Ant1-2440-0~Reference-PASS



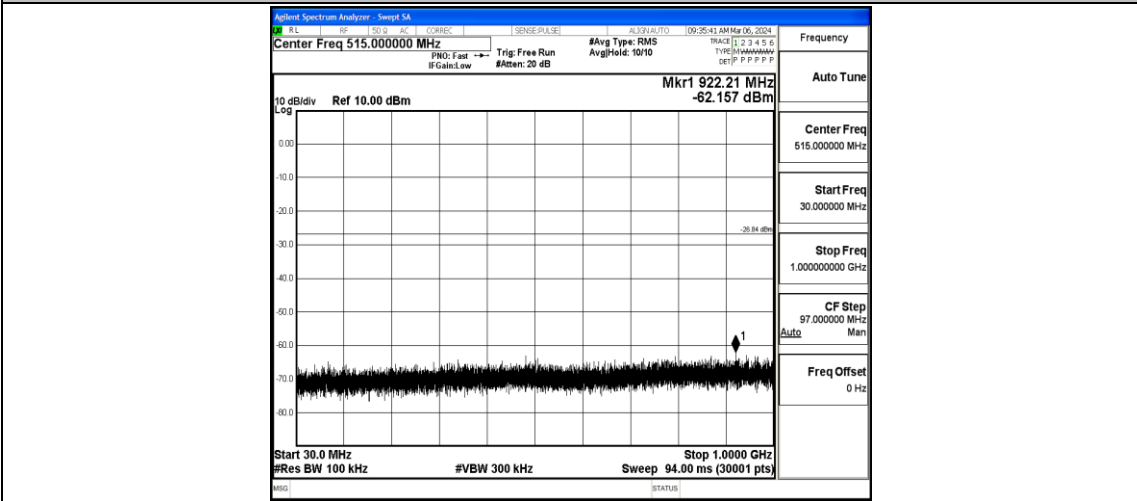
BLE\_1M-Ant1-2440-30~1000-PASS



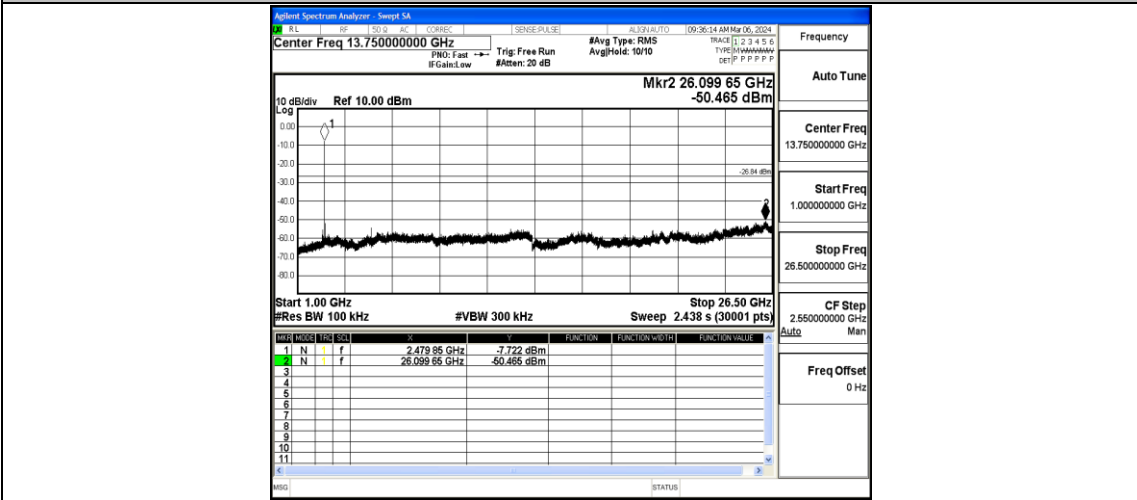
BLE\_1M-Ant1-2440-1000~26500-PASS



BLE\_1M-Ant1-2480-0~Reference-PASS



BLE\_1M-Ant1-2480-30~1000-PASS



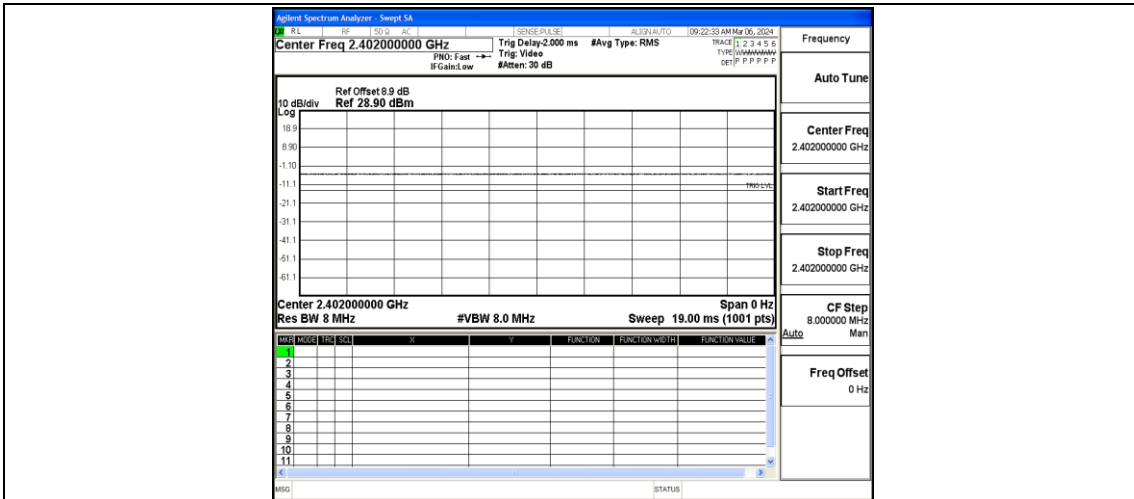
BLE\_1M-Ant1-2480-1000~26500-PASS

## Appendix G: Duty Cycle

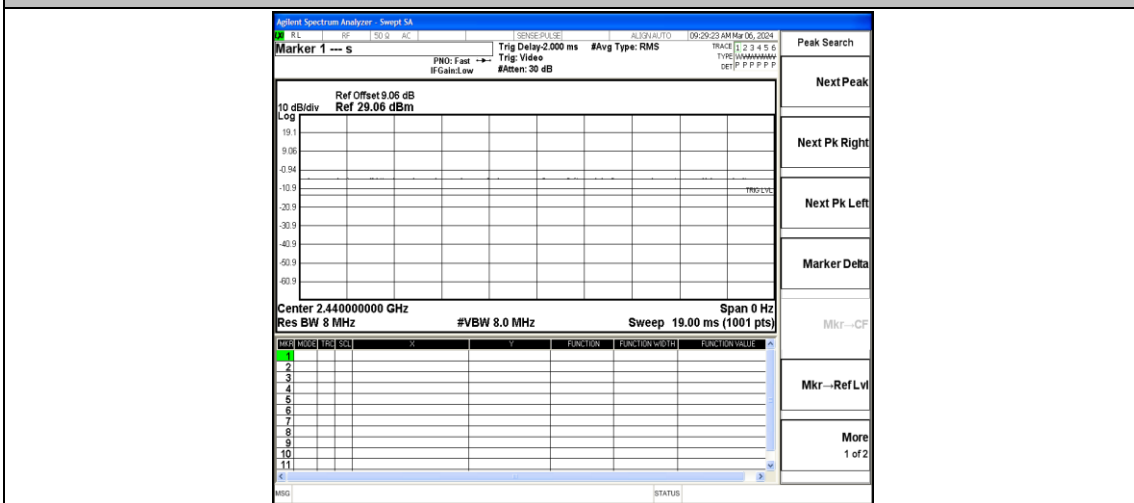
### Test Result

TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2402	19.00	19.00	100.00	0.00
BLE_1M	Ant1	2440	19.00	19.00	100.00	0.00
BLE_1M	Ant1	2480	17.00	17.00	100.00	0.00

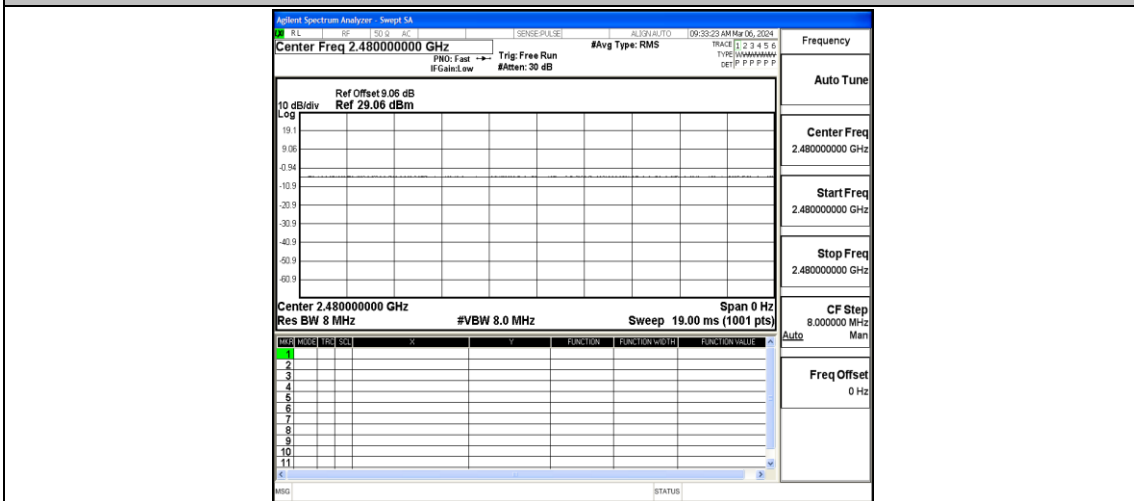
### Test Graphs



NTNV-BLE\_1M-Ant1-2402



NTNV-BLE\_1M-Ant1-2440



NTNV-BLE\_1M-Ant1-2480



## Appendix H: Emissions in Restricted Bands

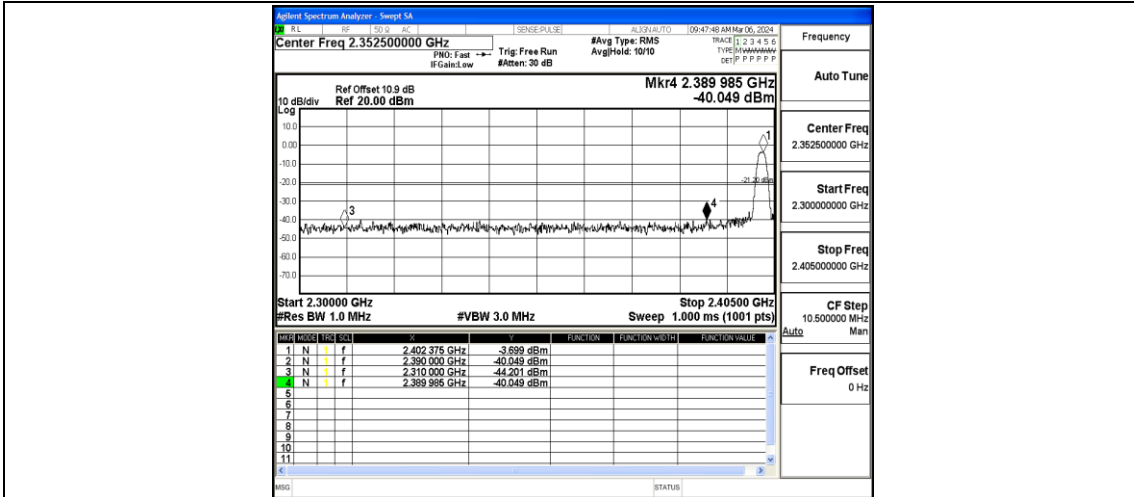
### Test Result

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	-40.05	≤-21.20	55.15	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2310.000	-44.2	≤-21.20	51.00	≤74	PASS
BLE_1M	Ant1	Low	2402	Peak	2389.985	-40.05	≤-21.20	55.15	≤74	PASS
BLE_1M	Ant1	Low	2402	AV	2390.000	-49.82	≤-41.20	45.38	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2310.000	-50.93	≤-41.20	44.27	≤54	PASS
BLE_1M	Ant1	Low	2402	AV	2378.225	-48.75	≤-41.20	46.45	≤54	PASS
BLE_1M	Ant1	High	2480	Peak	2483.500	-38.8	≤-21.20	56.40	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2500.000	-45.18	≤-21.20	50.02	≤74	PASS
BLE_1M	Ant1	High	2480	Peak	2484.160	-37.41	≤-21.20	57.79	≤74	PASS
BLE_1M	Ant1	High	2480	AV	2483.500	-45.72	≤-41.20	49.48	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2500.000	-49.6	≤-41.20	45.60	≤54	PASS
BLE_1M	Ant1	High	2480	AV	2484.640	-45.34	≤-41.20	49.86	≤54	PASS

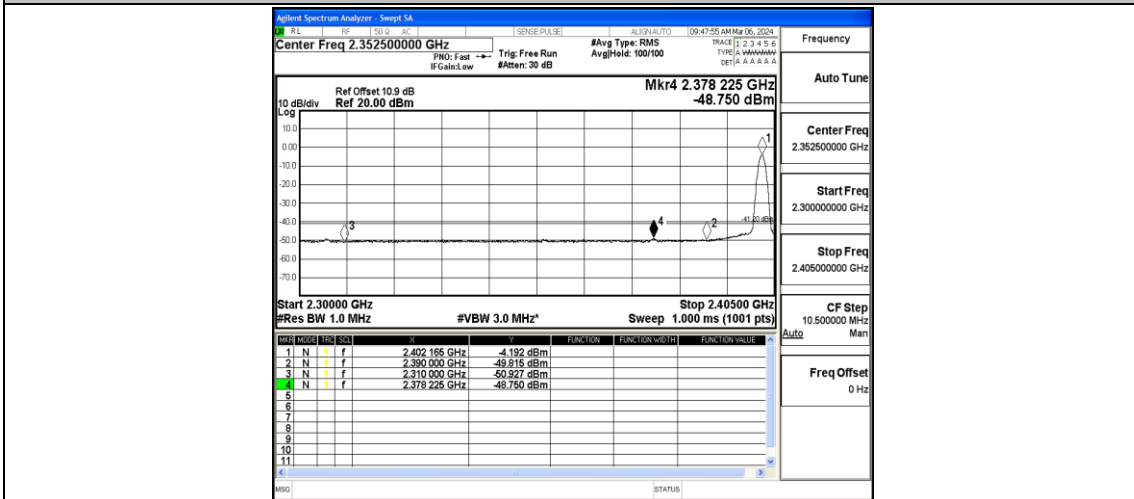
Note:

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.

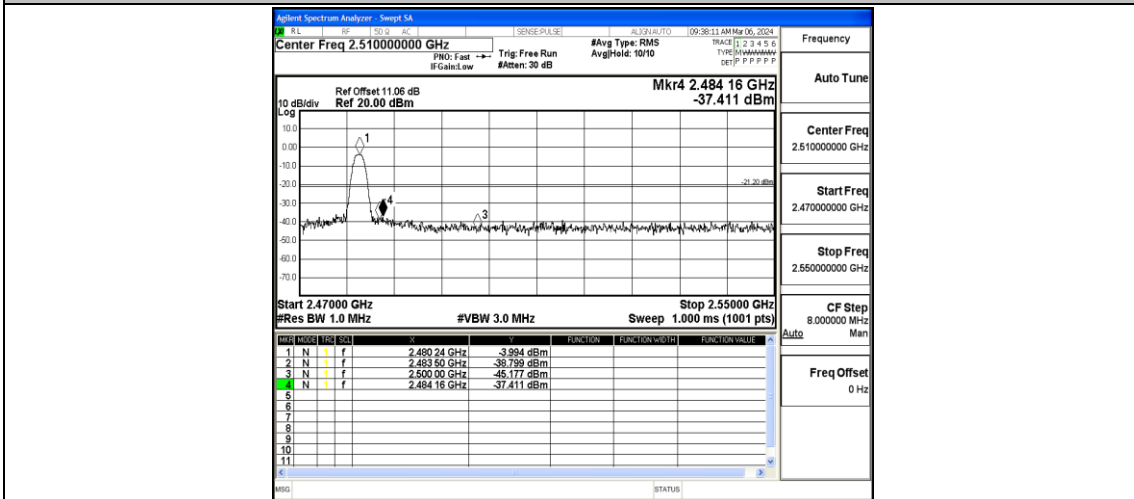
### Test Graphs



BLE\_1M-Ant1-240-PASS



BLE\_1M-Ant1-240-PASS



BLE\_1M-Ant1-2480-PASS

