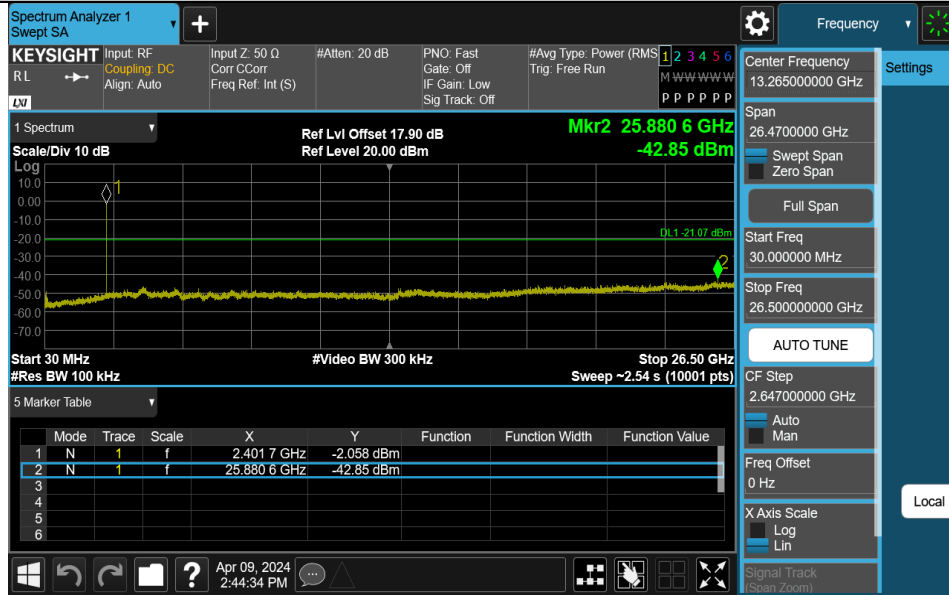


## Appendix F: Conducted Spurious Emission Test Result

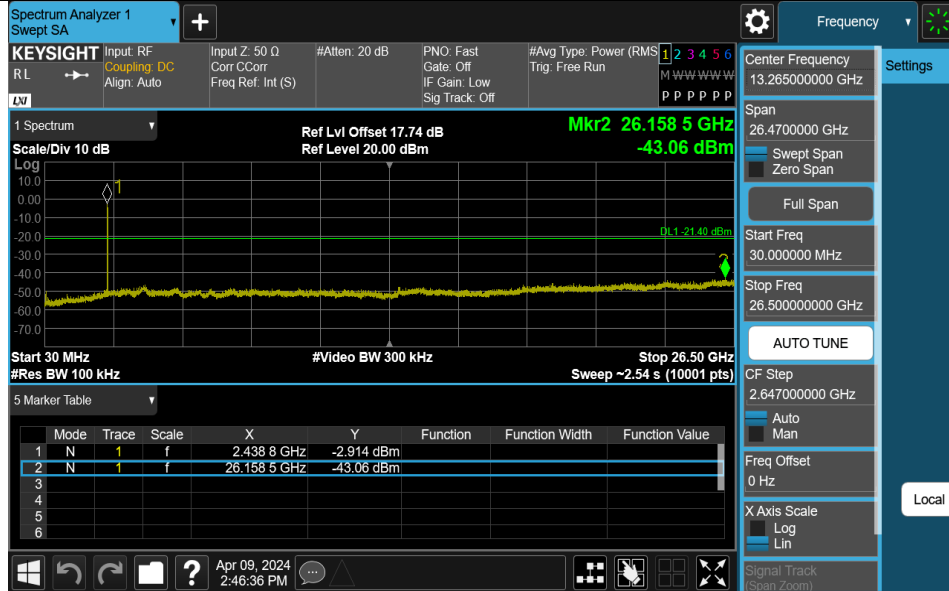
Test Mode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~26500	-1.07	-42.85	≤-21.07	PASS
BLE_1M	Ant1	2440	30~26500	-1.40	-43.06	≤-21.4	PASS
BLE_1M	Ant1	2480	30~26500	-2.13	-43.03	≤-22.13	PASS
BLE_2M	Ant1	2402	30~26500	-3.20	-43.22	≤-23.2	PASS
BLE_2M	Ant1	2440	30~26500	-3.48	-43.58	≤-23.48	PASS
BLE_2M	Ant1	2480	30~26500	-4.24	-43.33	≤-24.24	PASS

### Test Graphs

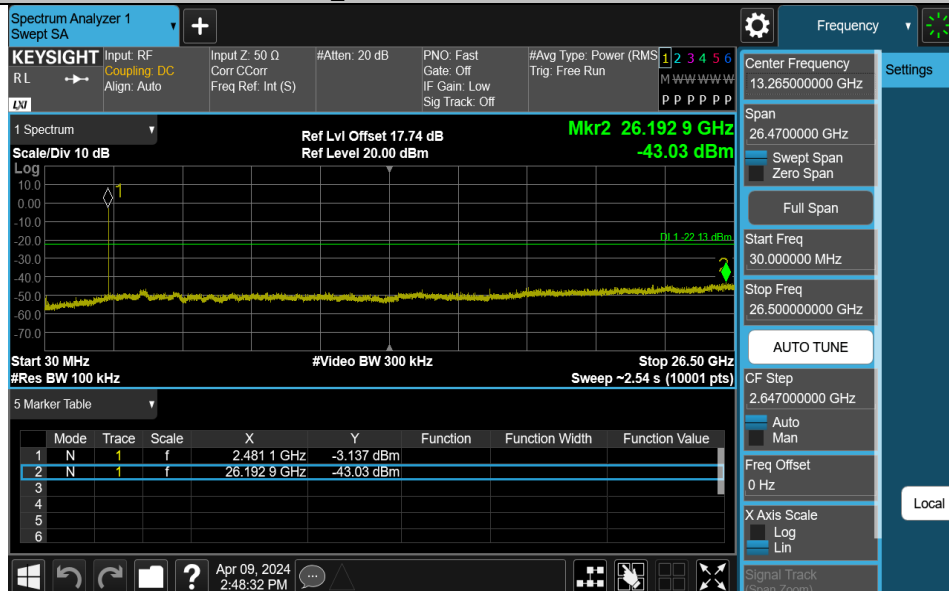
BLE\_1M-Ant1-2402-30~26500-PASS



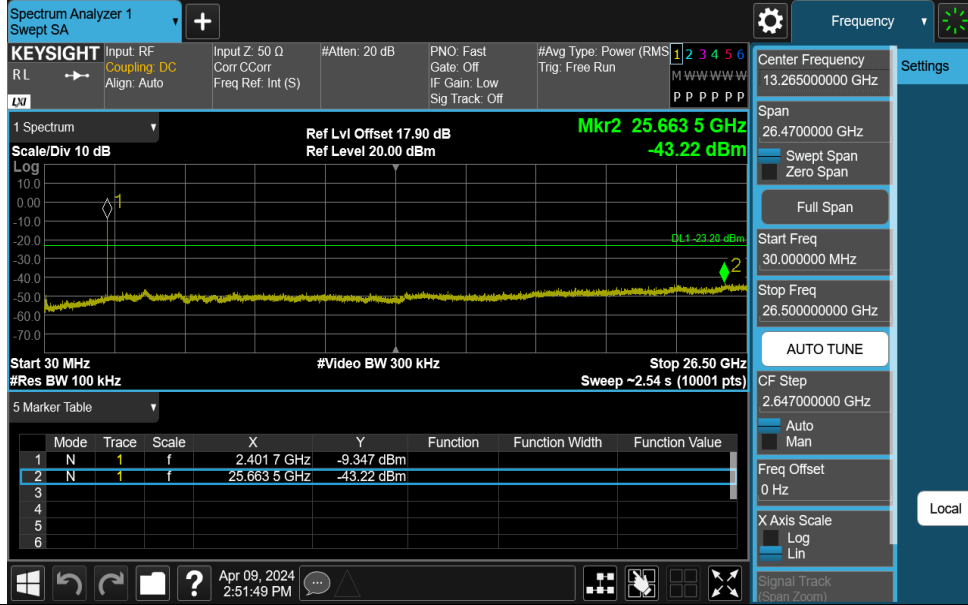
BLE\_1M-Ant1-2440-30~26500-PASS



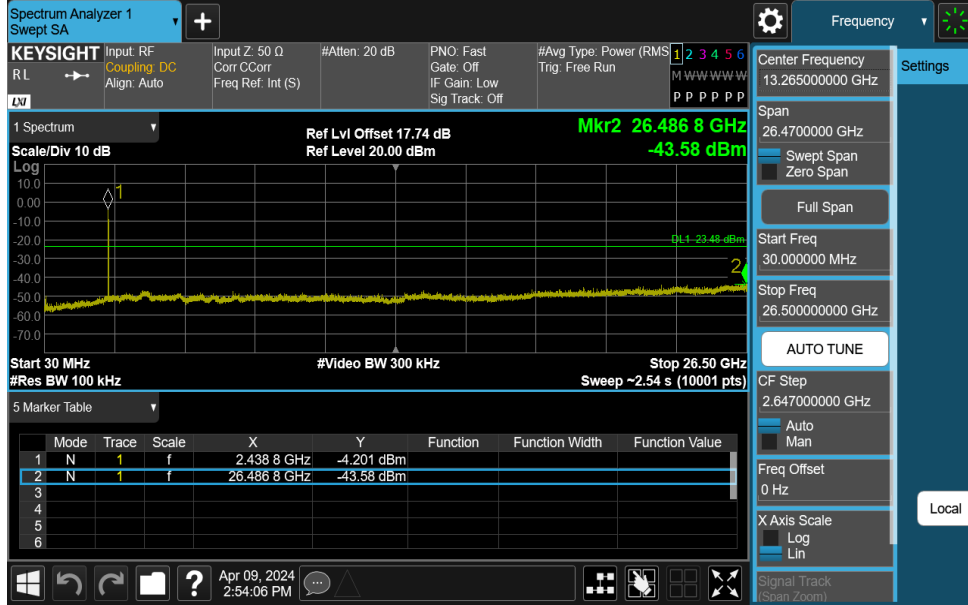
BLE\_1M-Ant1-2480-30~26500-PASS



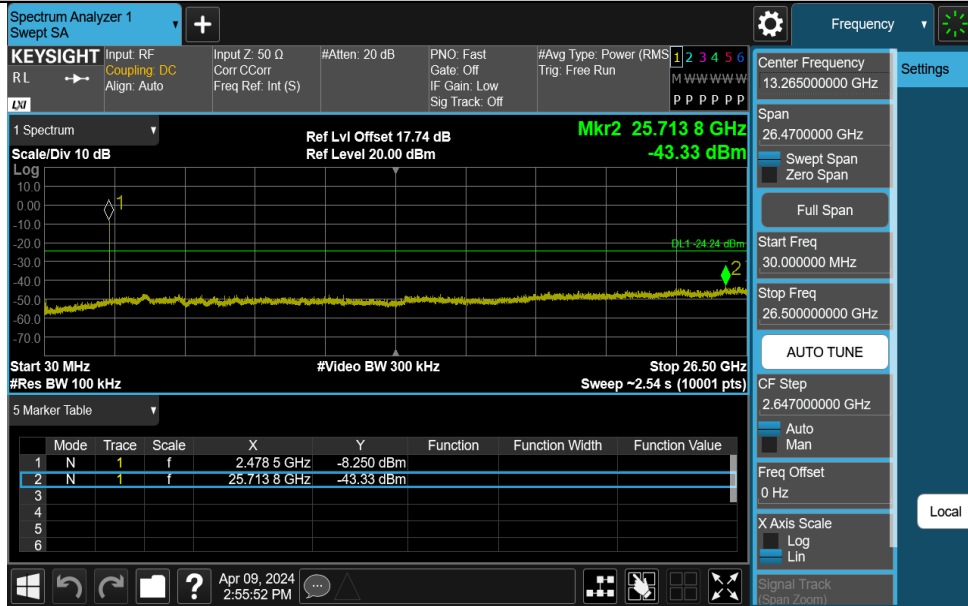
BLE\_2M-Ant1-2402-30~26500-PASS



BLE\_2M-Ant1-2440-30~26500-PASS



BLE\_2M-Ant1-2480-30~26500-PASS

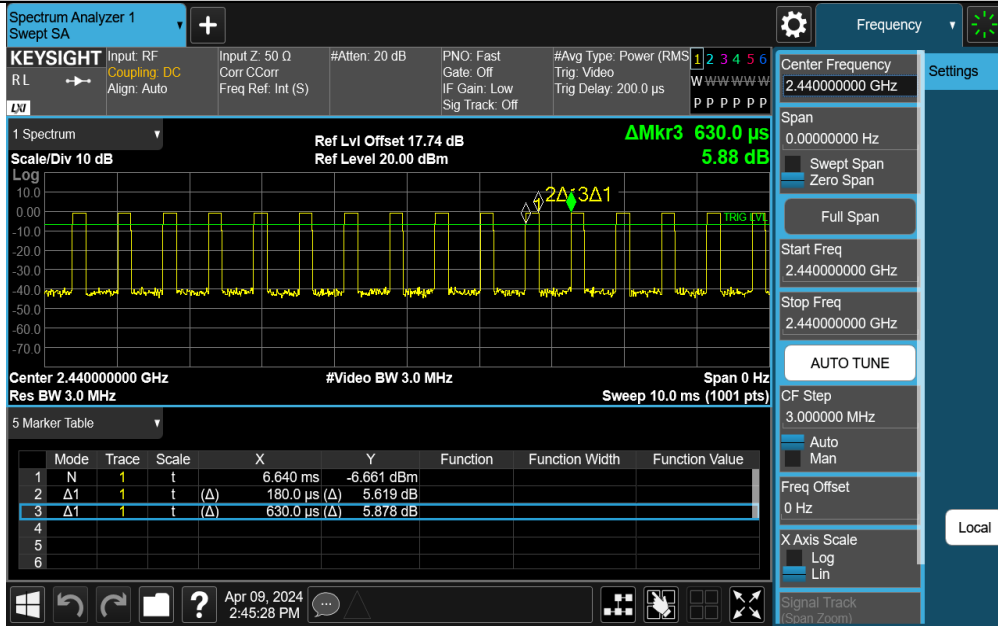


## Appendix G: Duty Cycle Test Result

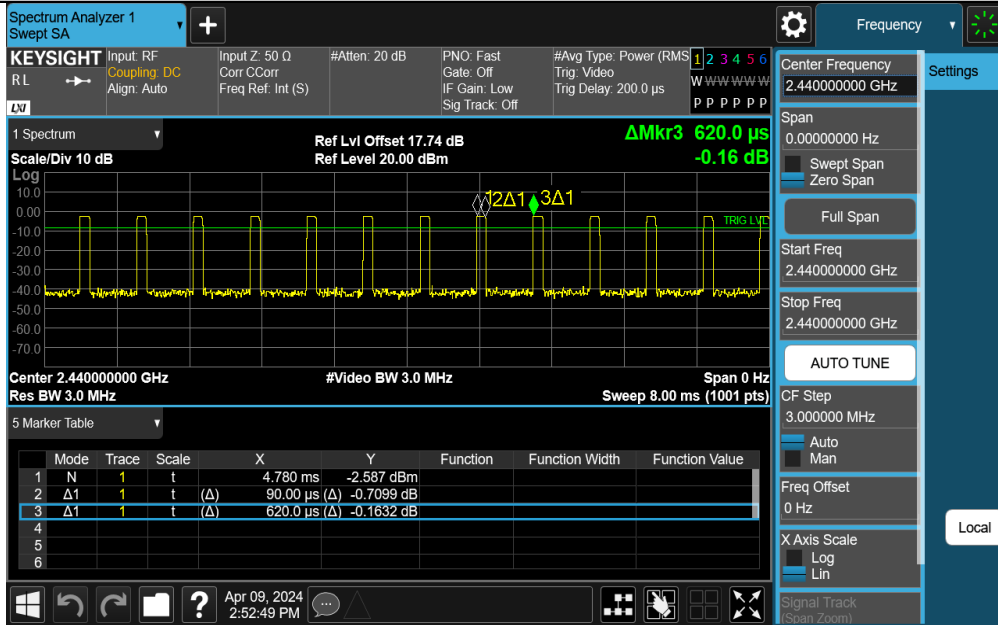
Test Mode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2440	0.18	0.63	28.57	5.44
BLE_2M	Ant1	2440	0.09	0.62	14.52	8.38

### Test Graphs

#### NTNV-BLE\_1M-Ant1-2440



#### NTNV-BLE\_2M-Ant1-2440



## 10.2.Test Result For Right Earbud

### Appendix A: DTS Bandwidth Test Result

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
BLE_1M	Ant1	2402	0.663	2401.667	2402.330	0.5	PASS
BLE_1M	Ant1	2440	0.693	2439.649	2440.342	0.5	PASS
BLE_1M	Ant1	2480	0.663	2479.664	2480.327	0.5	PASS
BLE_2M	Ant1	2402	0.996	2401.460	2402.456	0.5	PASS
BLE_2M	Ant1	2440	1.170	2439.412	2440.582	0.5	PASS
BLE_2M	Ant1	2480	1.218	2479.382	2480.600	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



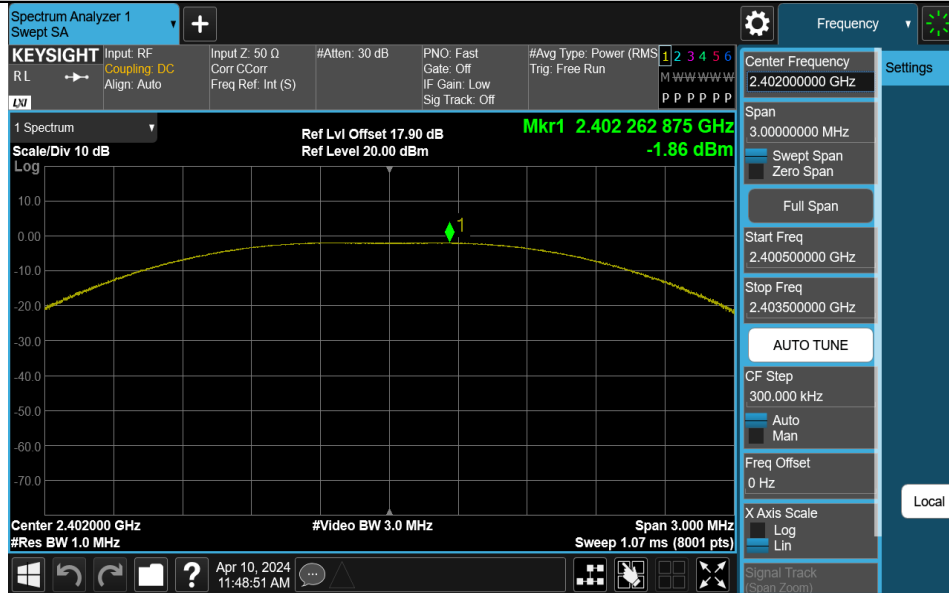


Appendix B: Maximum conducted output power  
Test Result Peak

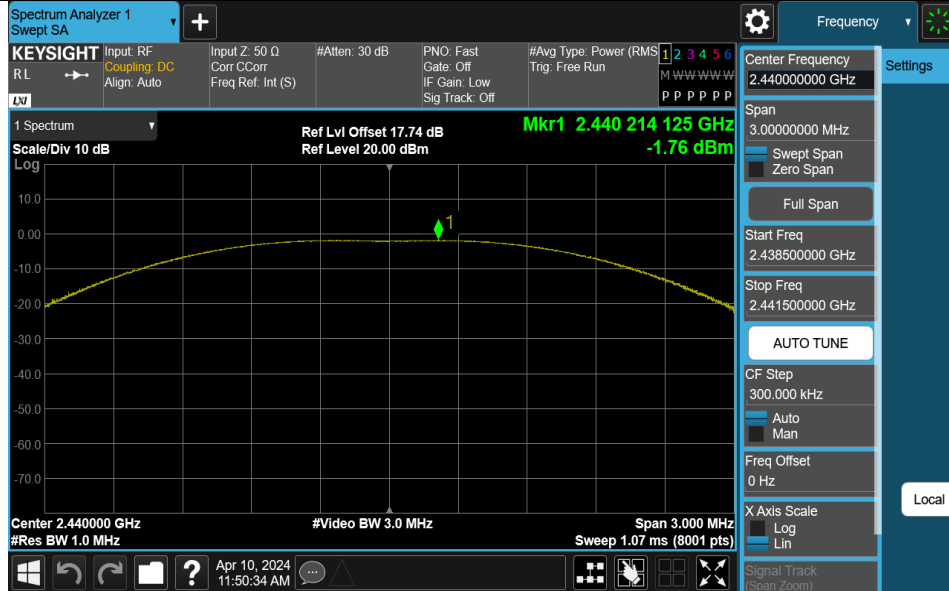
Test Mode	Antenna	Frequency[MHz]	Conducted Peak Power[dBm]	Conducted Limit[dBm]	Verdict
BLE_1M	Ant1	2402	-1.86	≤30	PASS
BLE_1M	Ant1	2440	-1.76	≤30	PASS
BLE_1M	Ant1	2480	-2.41	≤30	PASS
BLE_2M	Ant1	2402	-3.58	≤30	PASS
BLE_2M	Ant1	2440	-3.50	≤30	PASS
BLE_2M	Ant1	2480	-4.20	≤30	PASS

### Test Graphs Peak

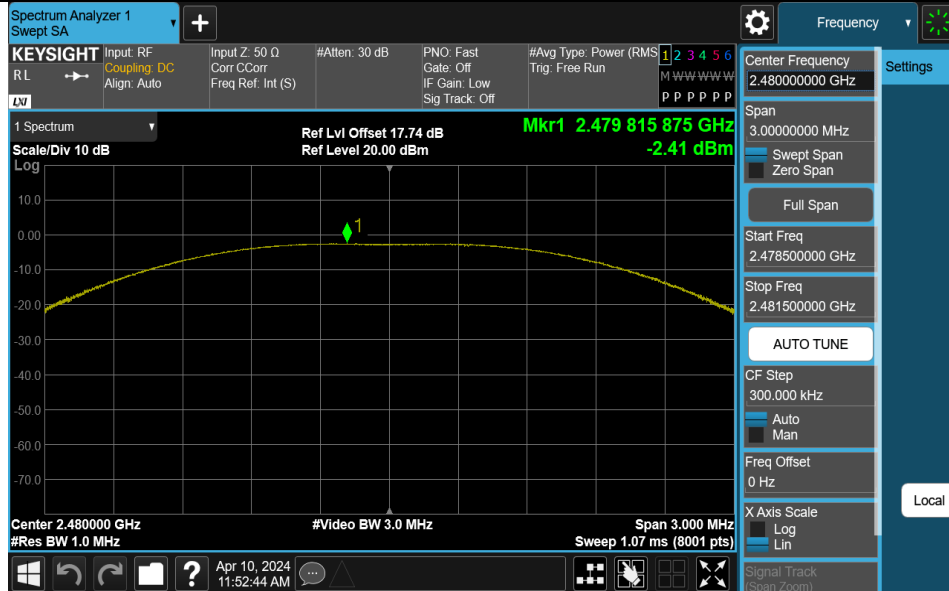
#### BLE\_1M-Ant1-2402-PASS



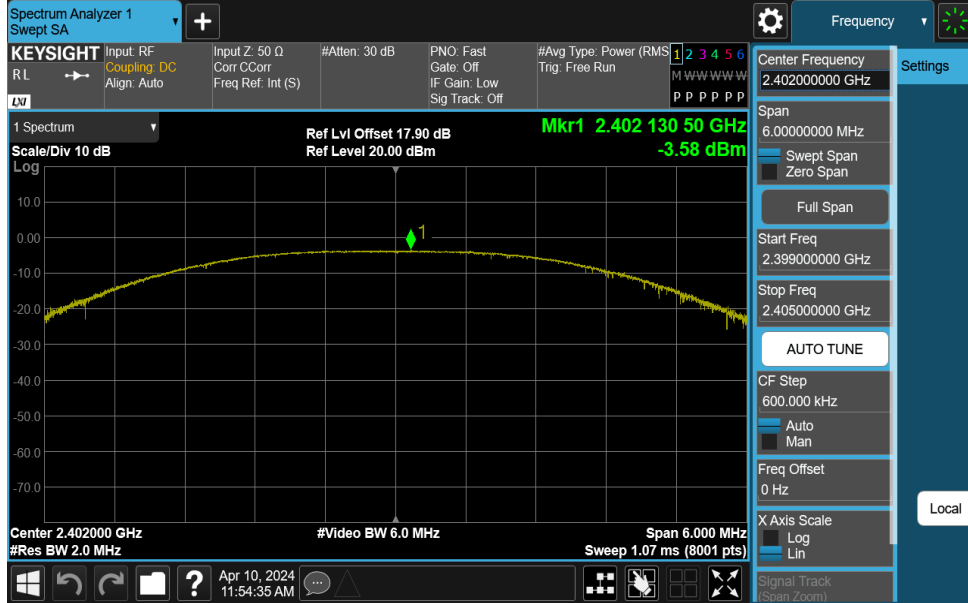
#### BLE\_1M-Ant1-2440-PASS



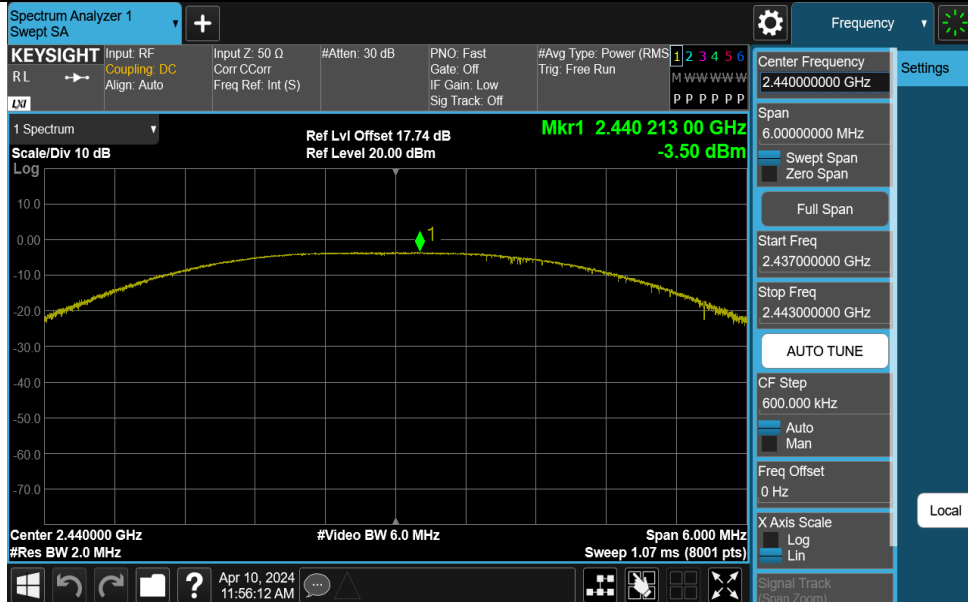
#### BLE\_1M-Ant1-2480-PASS



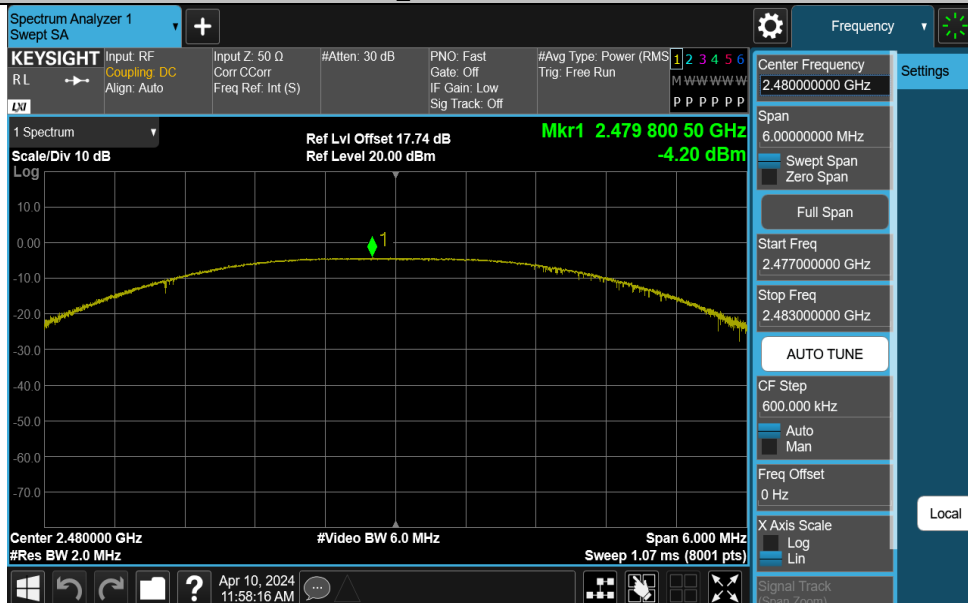
### BLE\_2M-Ant1-2402-PASS



### BLE\_2M-Ant1-2440-PASS



### BLE\_2M-Ant1-2480-PASS



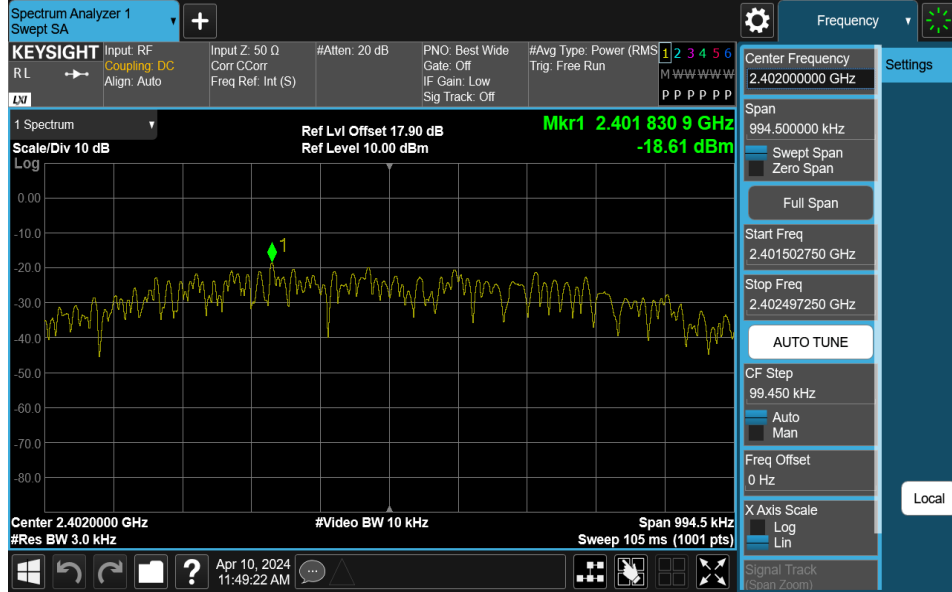
## Appendix C: Maximum power spectral density

## Test Result

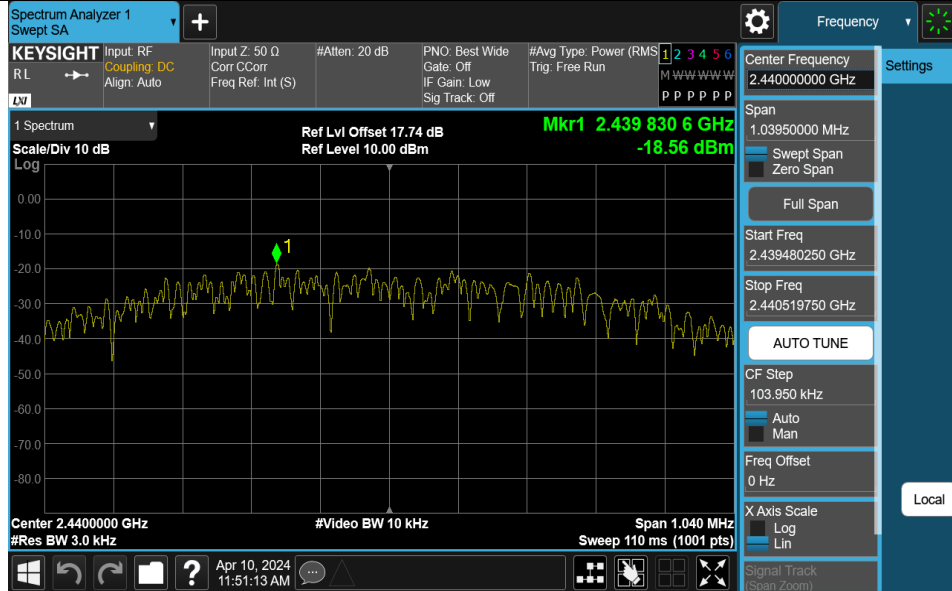
Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
BLE_1M	Ant1	2402	-18.61	≤8.00	PASS
BLE_1M	Ant1	2440	-18.56	≤8.00	PASS
BLE_1M	Ant1	2480	-19.27	≤8.00	PASS
BLE_2M	Ant1	2402	-25.57	≤8.00	PASS
BLE_2M	Ant1	2440	-25.41	≤8.00	PASS
BLE_2M	Ant1	2480	-26.30	≤8.00	PASS

### Test Graphs

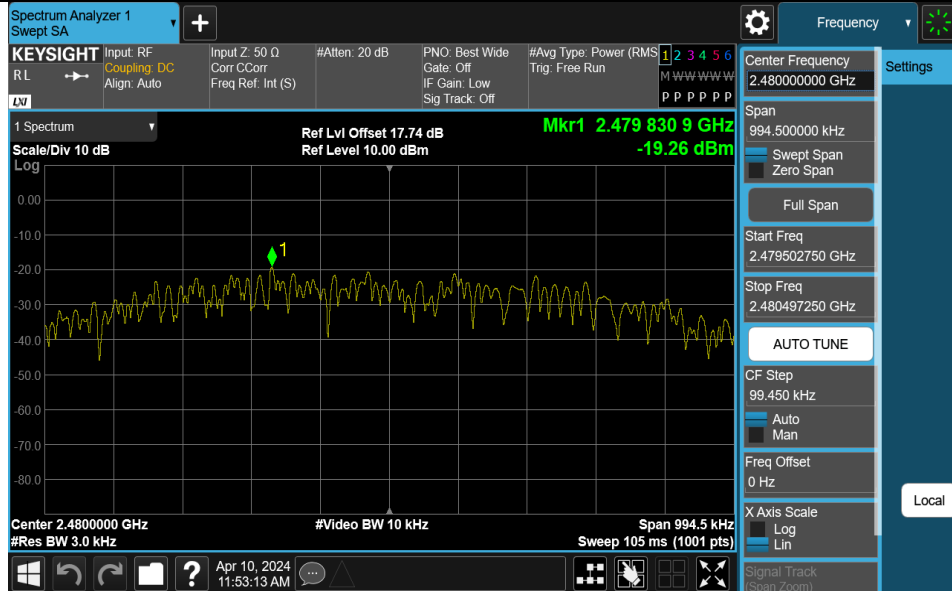
#### BLE\_1M-Ant1-2402-PASS



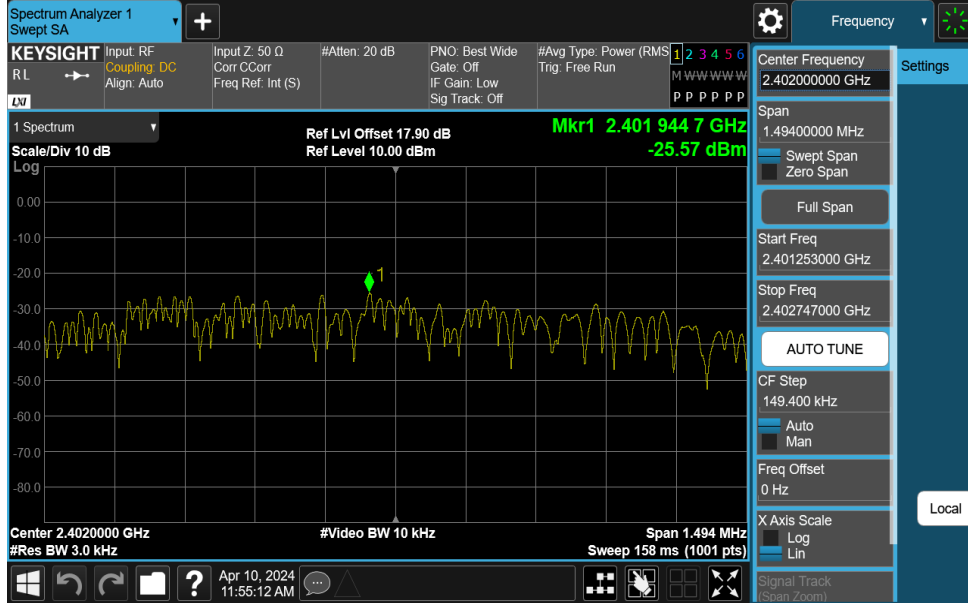
#### BLE\_1M-Ant1-2440-PASS



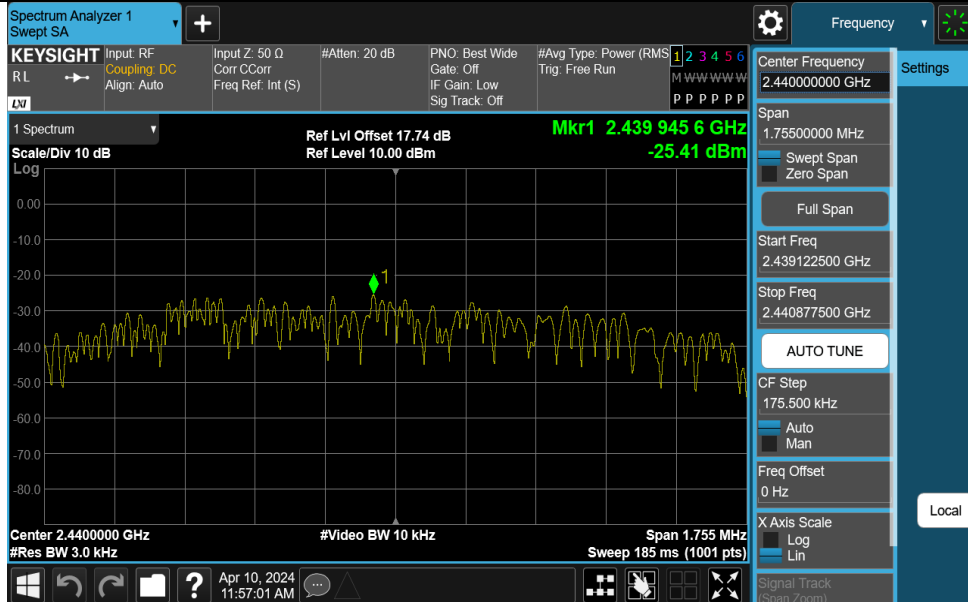
#### BLE\_1M-Ant1-2480-PASS



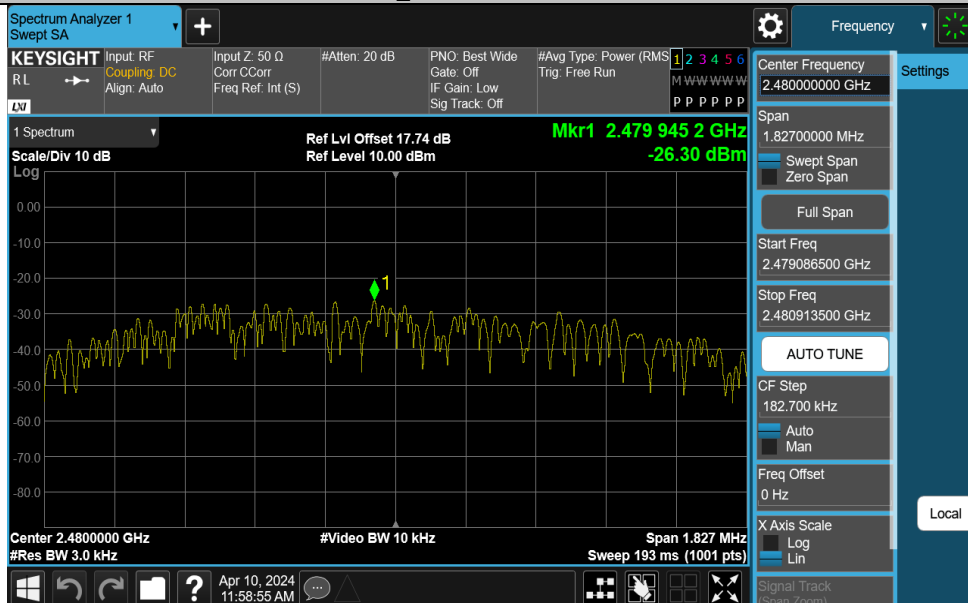
## BLE\_2M-Ant1-2402-PASS



## BLE\_2M-Ant1-2440-PASS



## BLE\_2M-Ant1-2480-PASS



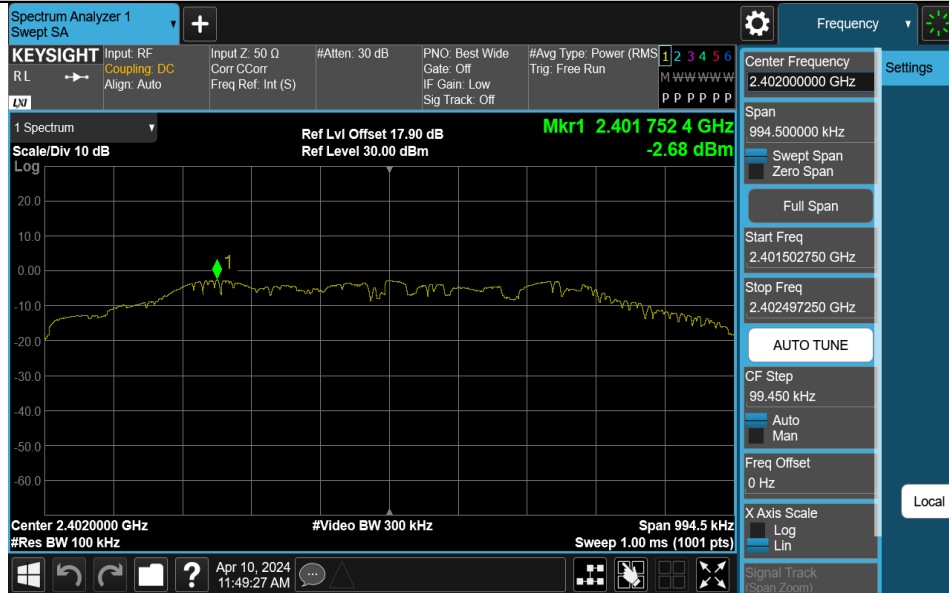
## Appendix D: Reference level measurement

## Test Result

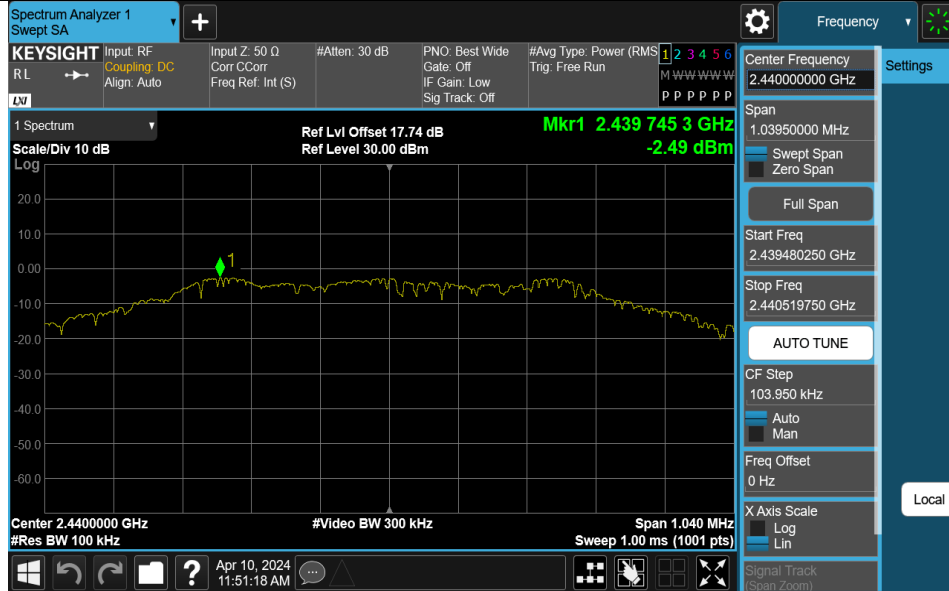
Test Mode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2401.75	-2.68
BLE_1M	Ant1	2440	2439.75	-2.49
BLE_1M	Ant1	2480	2479.75	-3.15
BLE_2M	Ant1	2402	2401.51	-4.73
BLE_2M	Ant1	2440	2439.50	-4.55
BLE_2M	Ant1	2480	2479.51	-5.49

### Test Graphs

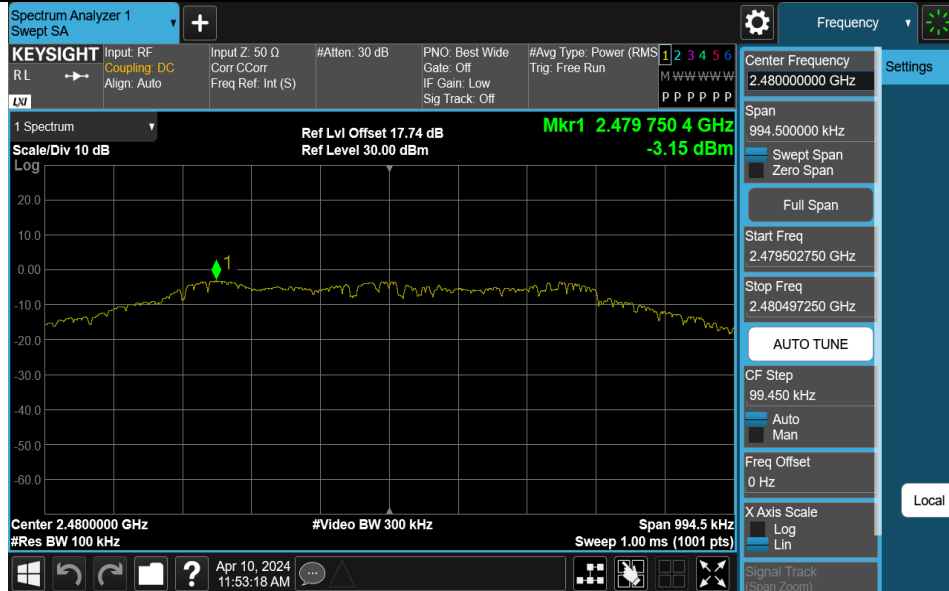
#### BLE\_1M-Ant1-2402-PASS



#### BLE\_1M-Ant1-2440-PASS

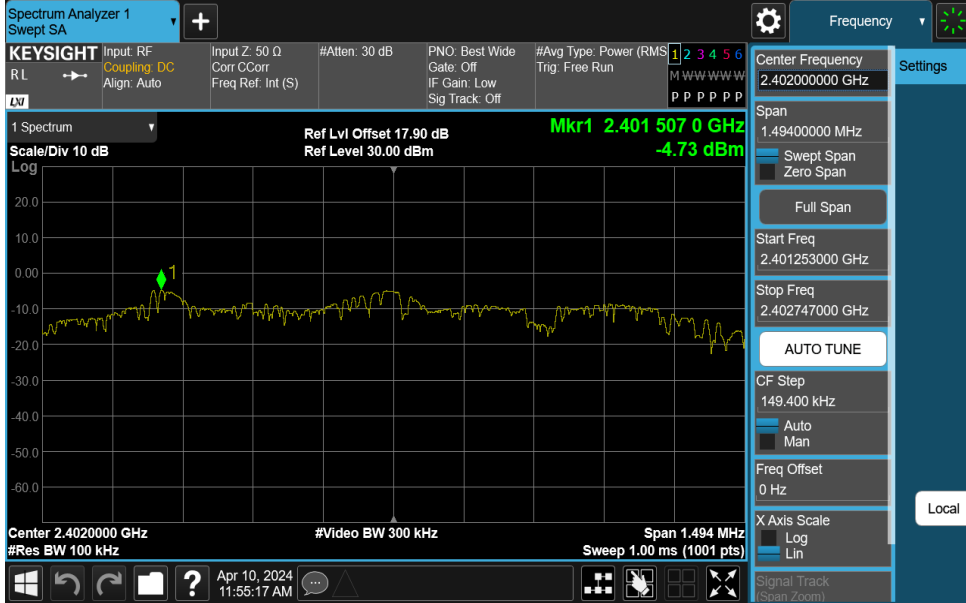


#### BLE\_1M-Ant1-2480-PASS

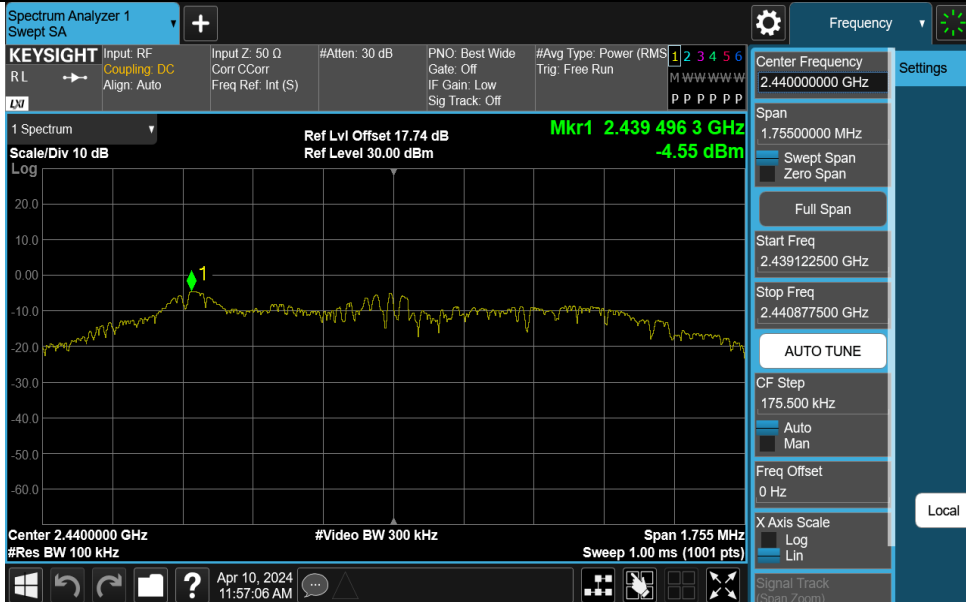




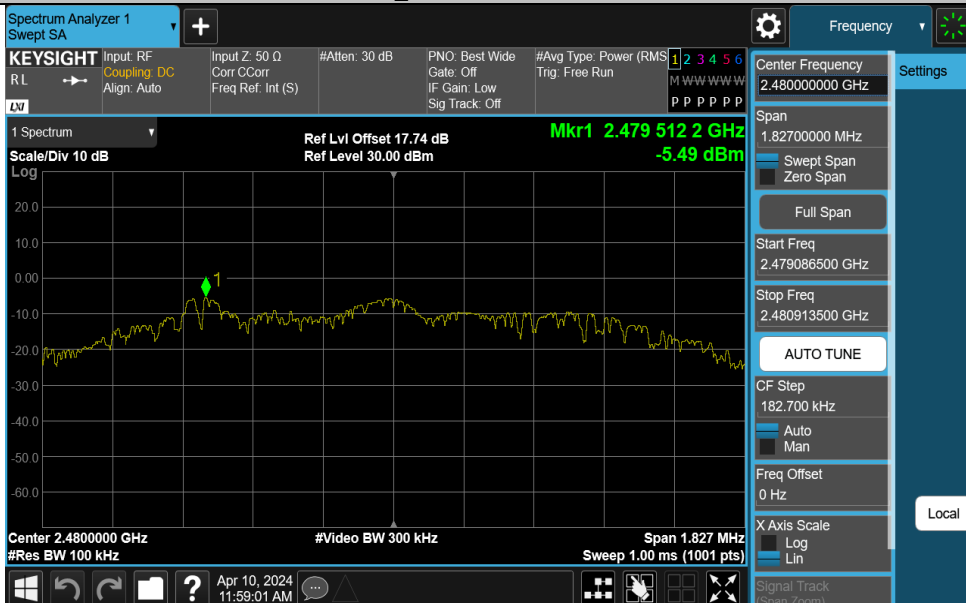
### BLE\_2M-Ant1-2402-PASS



### BLE\_2M-Ant1-2440-PASS



### BLE\_2M-Ant1-2480-PASS



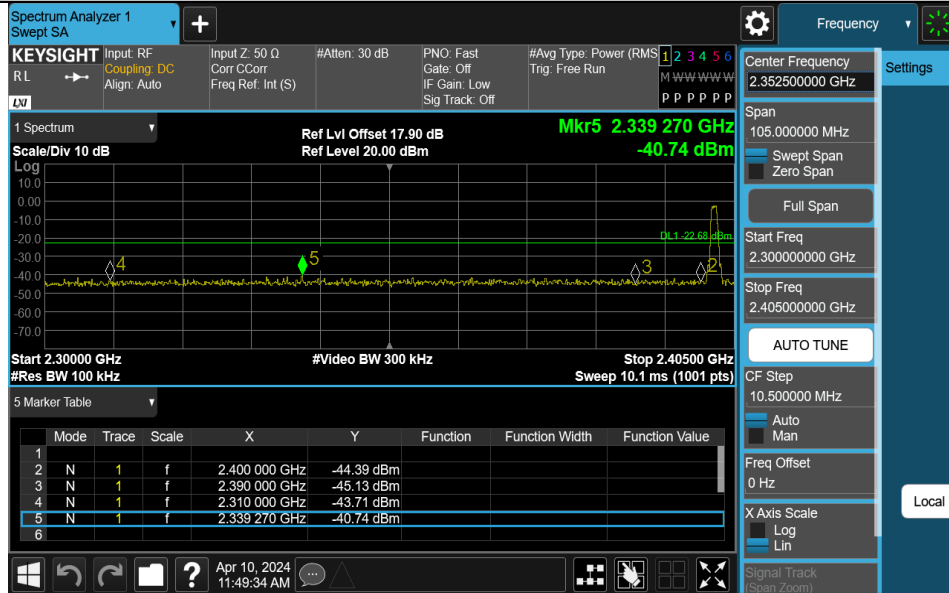
## Appendix E: Band edge measurements

## Test Result

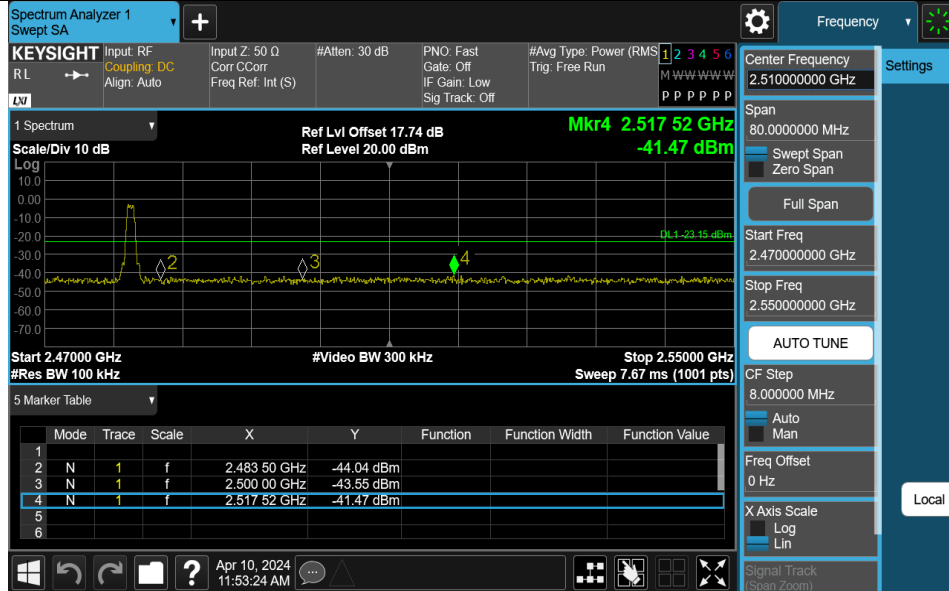
Test Mode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-2.68	-40.74	≤-22.68	PASS
BLE_1M	Ant1	High	2480	-3.15	-41.47	≤-23.15	PASS
BLE_2M	Ant1	Low	2402	-4.73	-40.22	≤-24.73	PASS
BLE_2M	Ant1	High	2480	-5.49	-40.52	≤-25.49	PASS

### Test Graphs

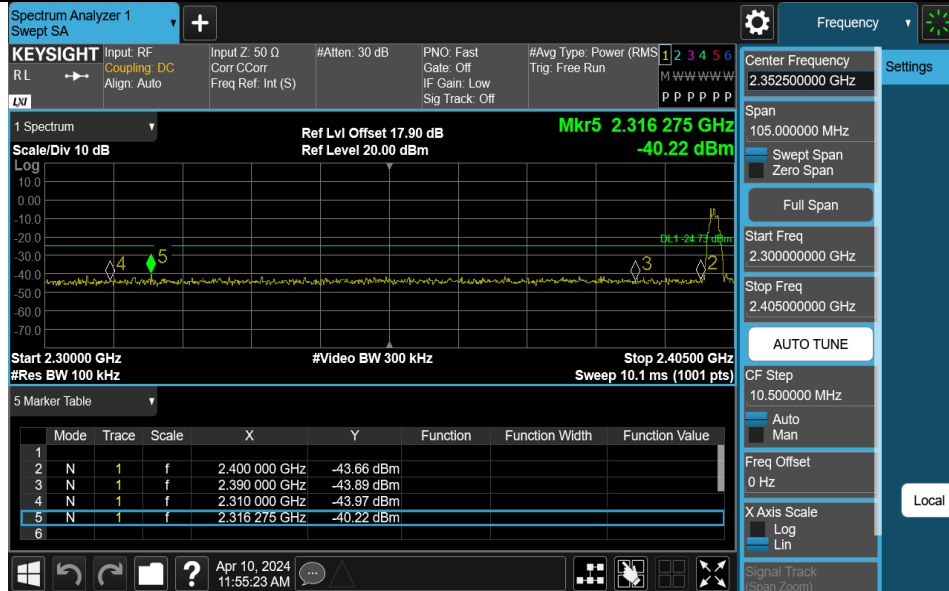
#### BLE\_1M-Ant1-2402-PASS



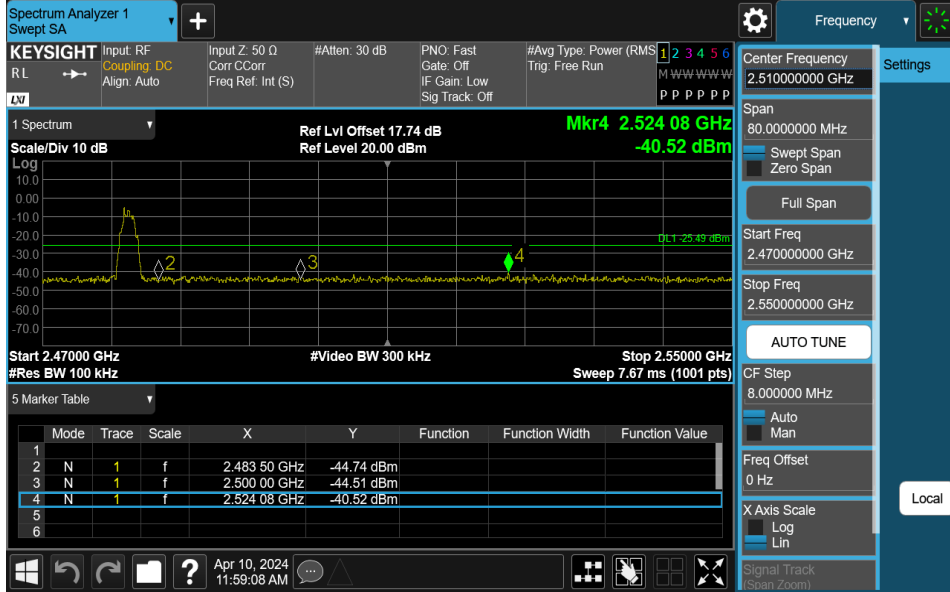
#### BLE\_1M-Ant1-2480-PASS



#### BLE\_2M-Ant1-2402-PASS



BLE\_2M-Ant1-2480-PASS

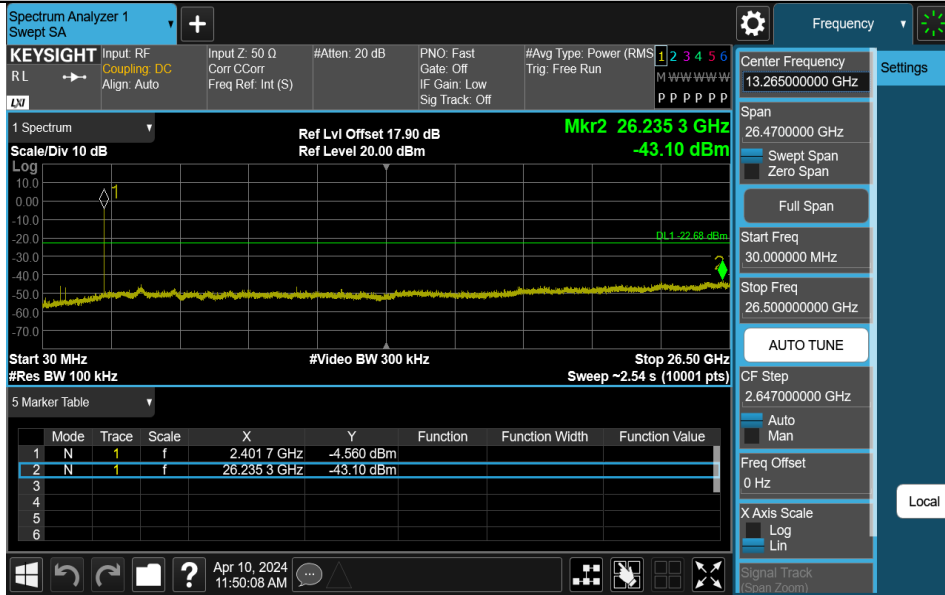


**Appendix F: Conducted Spurious Emission  
Test Result**

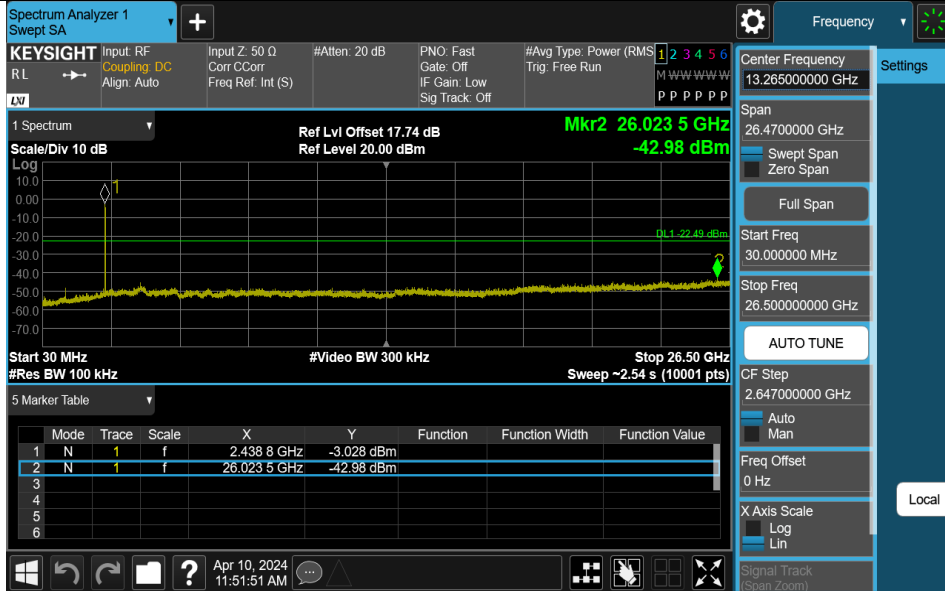
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~26500	-2.68	-43.1	≤-22.68	PASS
BLE_1M	Ant1	2440	30~26500	-2.49	-42.98	≤-22.49	PASS
BLE_1M	Ant1	2480	30~26500	-3.15	-43.52	≤-23.15	PASS
BLE_2M	Ant1	2402	30~26500	-4.73	-43.07	≤-24.73	PASS
BLE_2M	Ant1	2440	30~26500	-4.55	-43.03	≤-24.55	PASS
BLE_2M	Ant1	2480	30~26500	-5.49	-43.5	≤-25.49	PASS

### Test Graphs

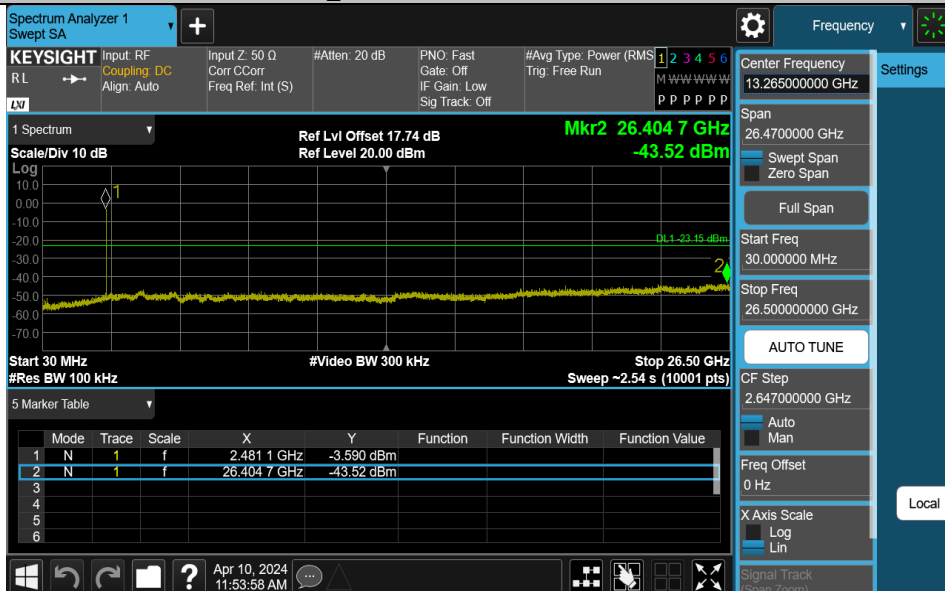
BLE\_1M-Ant1-2402-30~26500-PASS



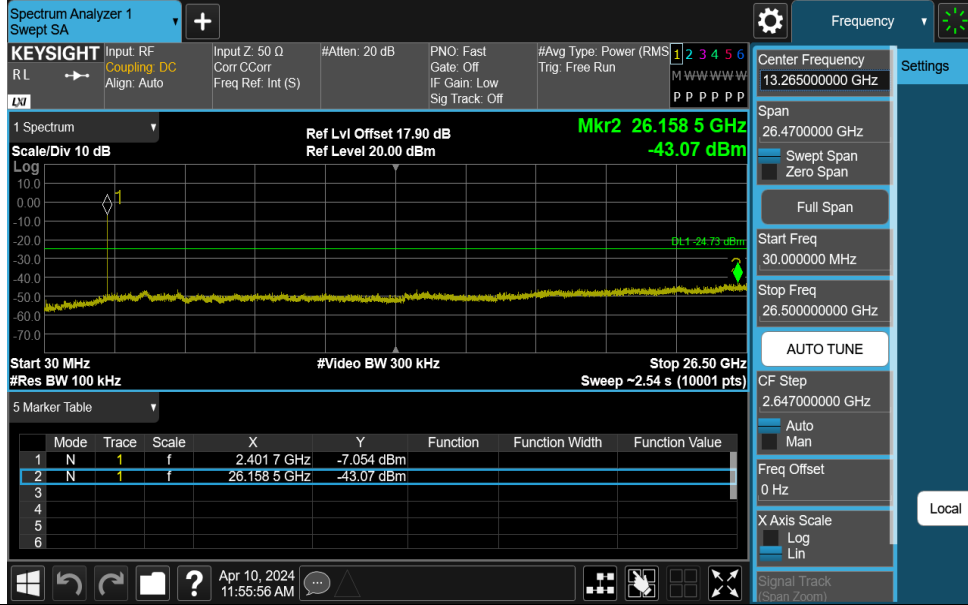
BLE\_1M-Ant1-2440-30~26500-PASS



BLE\_1M-Ant1-2480-30~26500-PASS



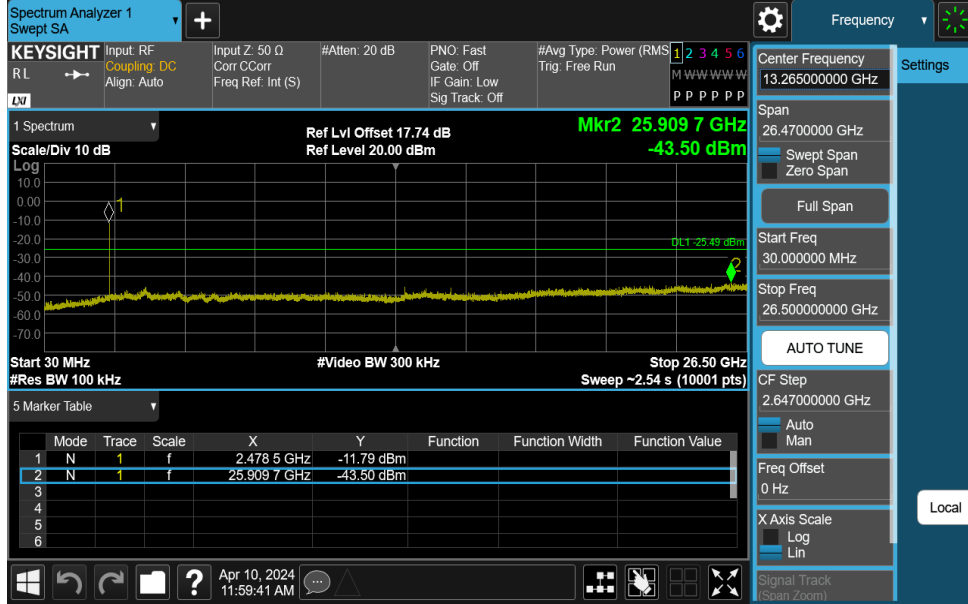
BLE\_2M-Ant1-2402-30~26500-PASS



BLE\_2M-Ant1-2440-30~26500-PASS



BLE\_2M-Ant1-2480-30~26500-PASS



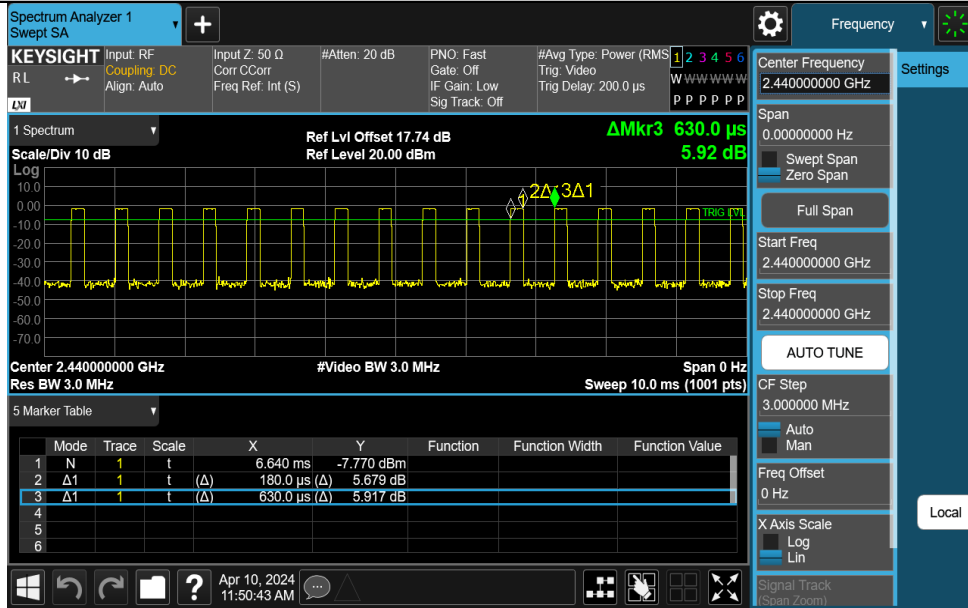
## Appendix G: Duty Cycle Test Result

Test Mode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2440	0.18	0.63	28.57	5.44
BLE_2M	Ant1	2440	0.09	0.62	14.52	8.38

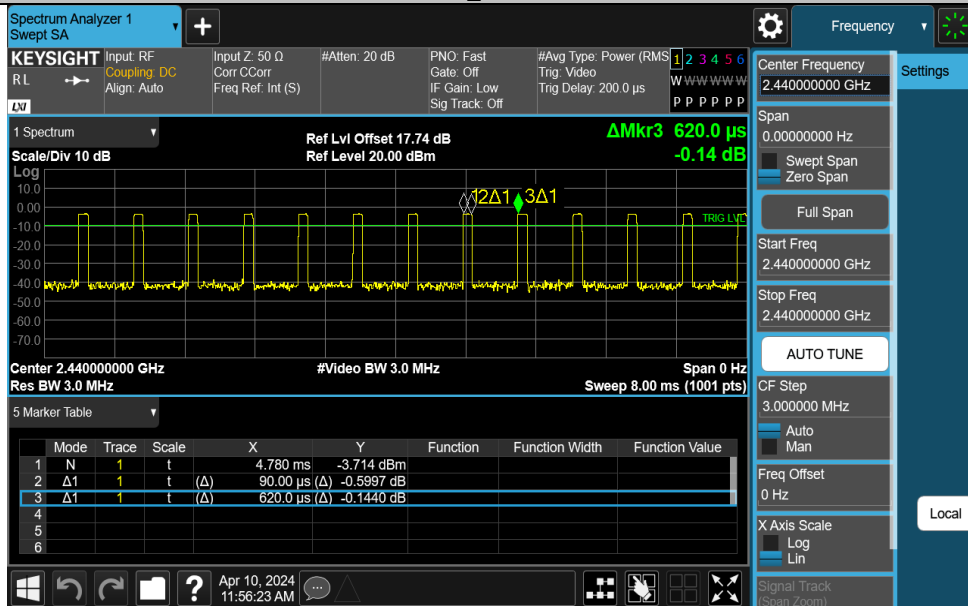


### Test Graphs

NTNV-BLE\_1M-Ant1-2440

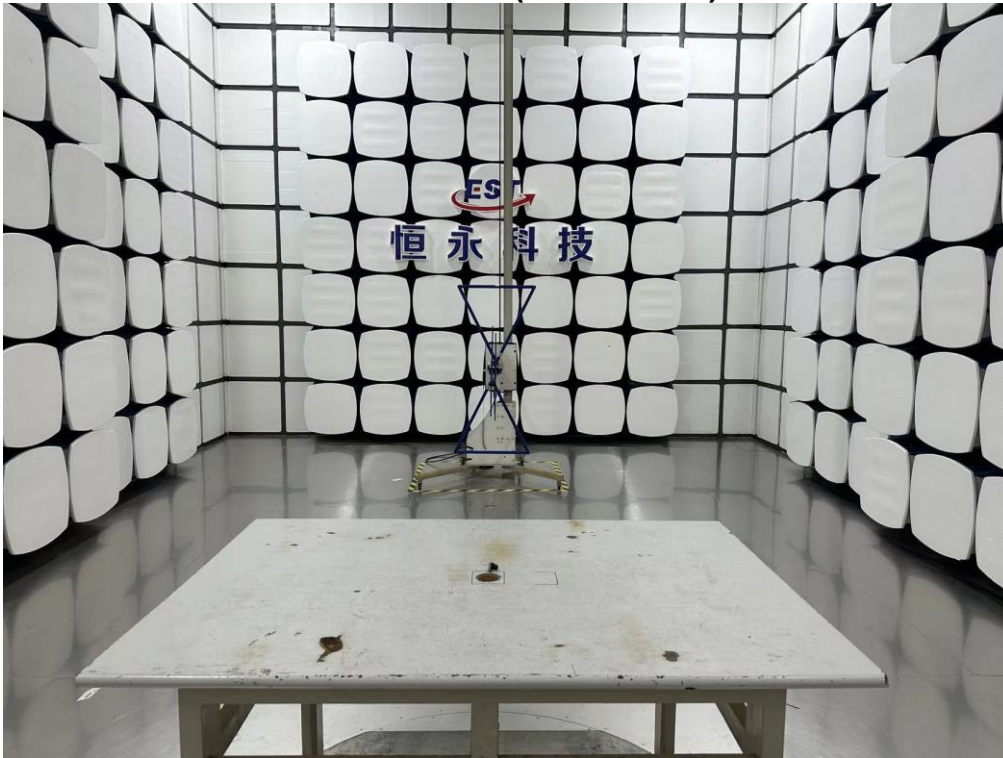


NTNV-BLE\_2M-Ant1-2440

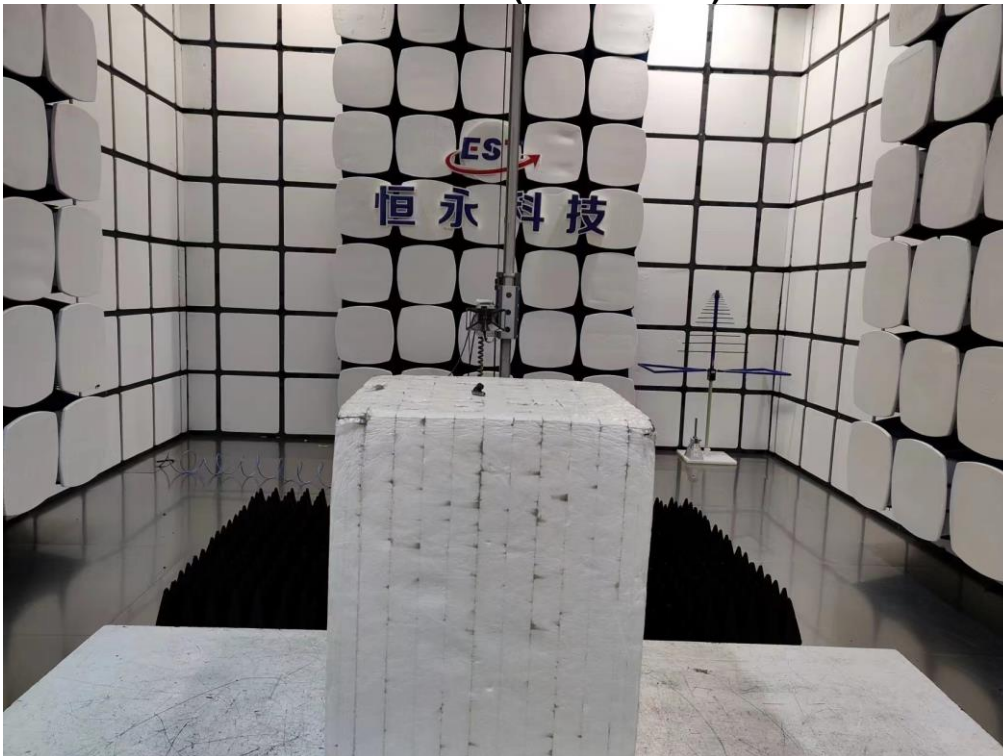


## 11. TEST SETUP PHOTO

Radiated Test (Below 1GHz)

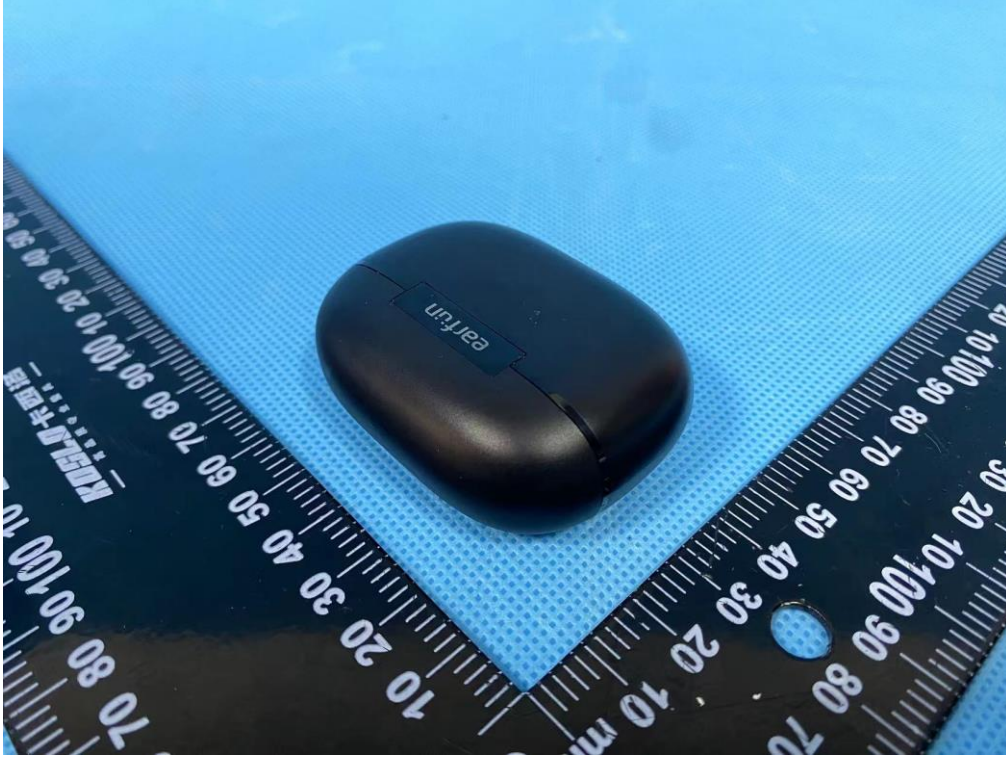


Radiated Test (Above 1GHz)



## 12. EUT PHOTO

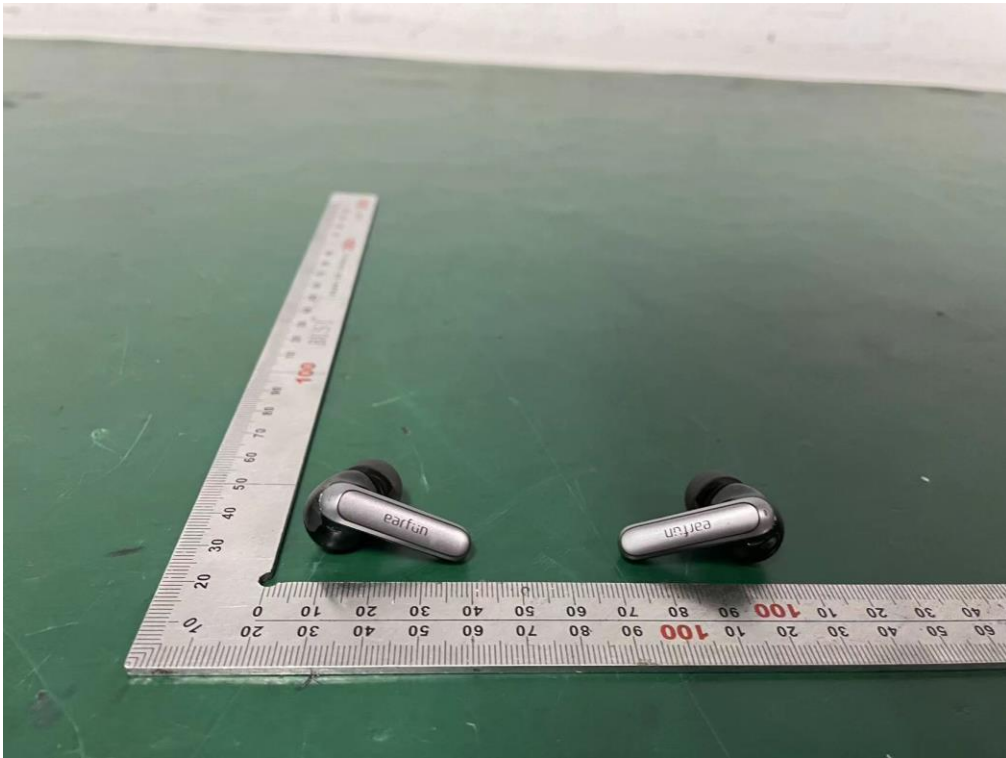
External Photos  
M/N: TW220



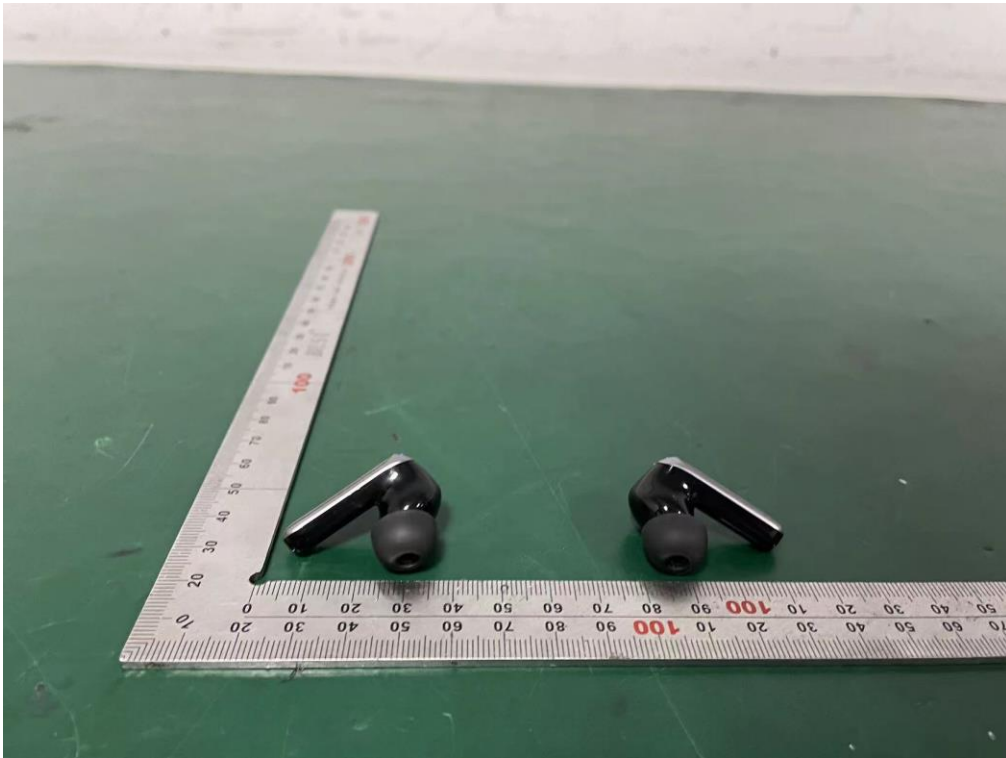
**External Photos**  
M/N: TW220



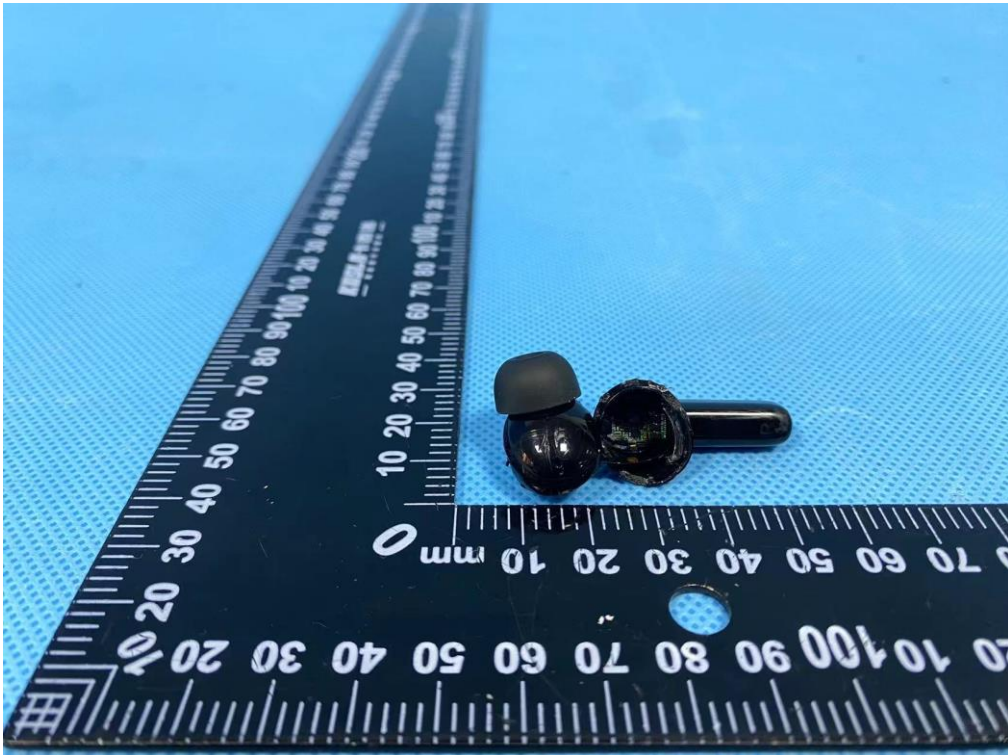
**External Photos**  
M/N: TW220



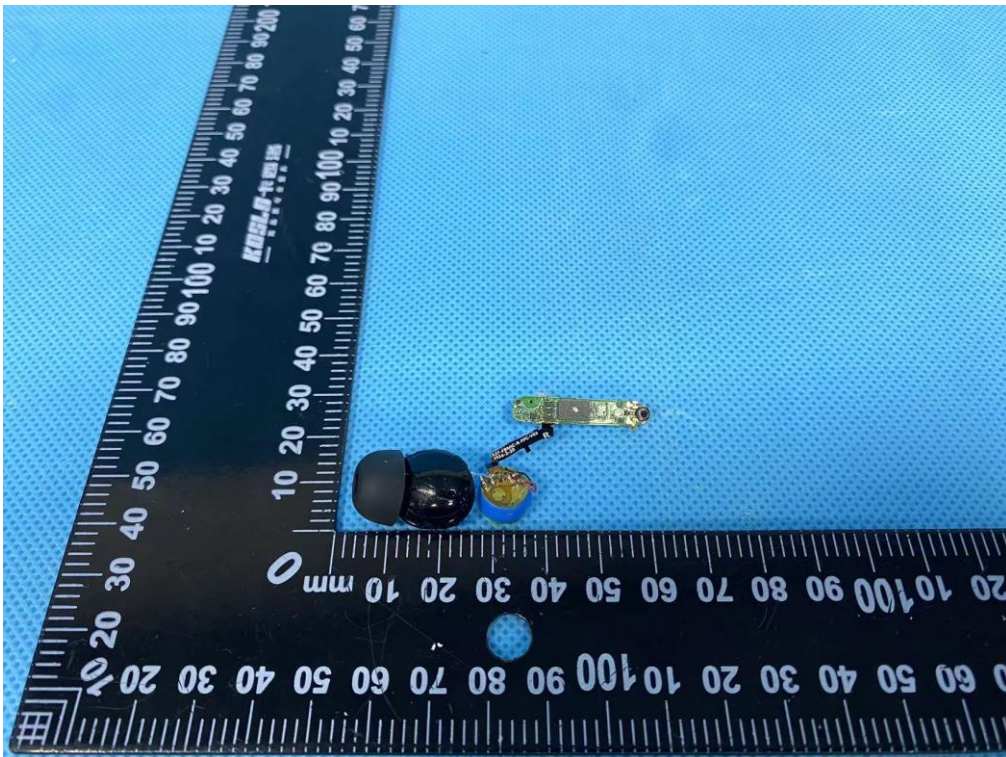
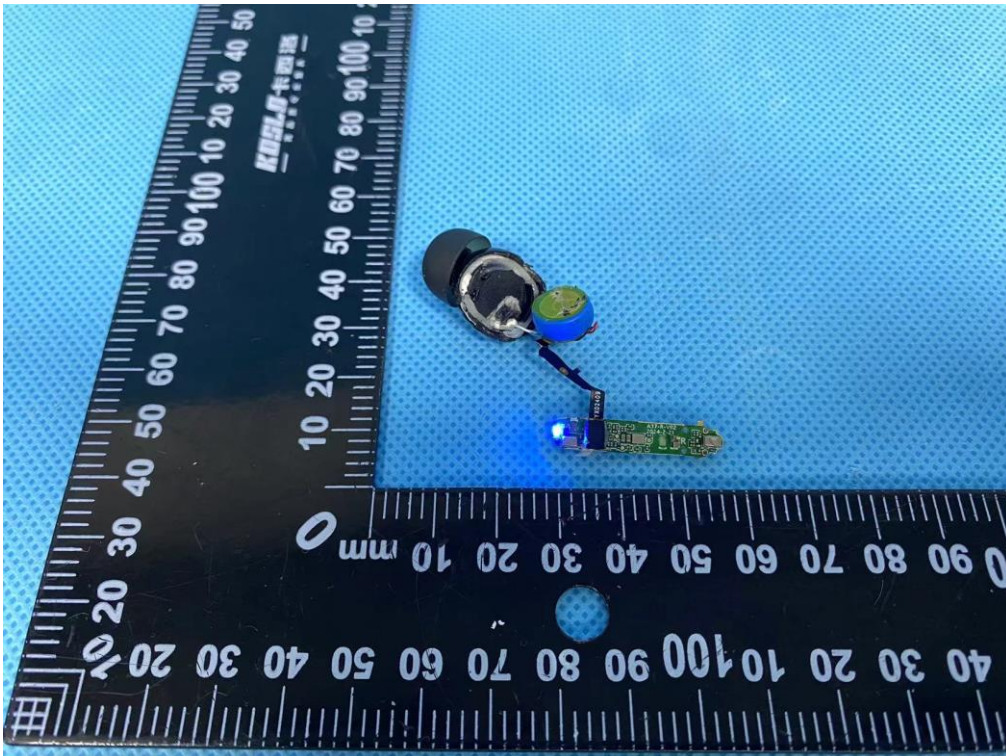
**External Photos**  
M/N: TW220



**Internal Photos**  
M/N: TW220

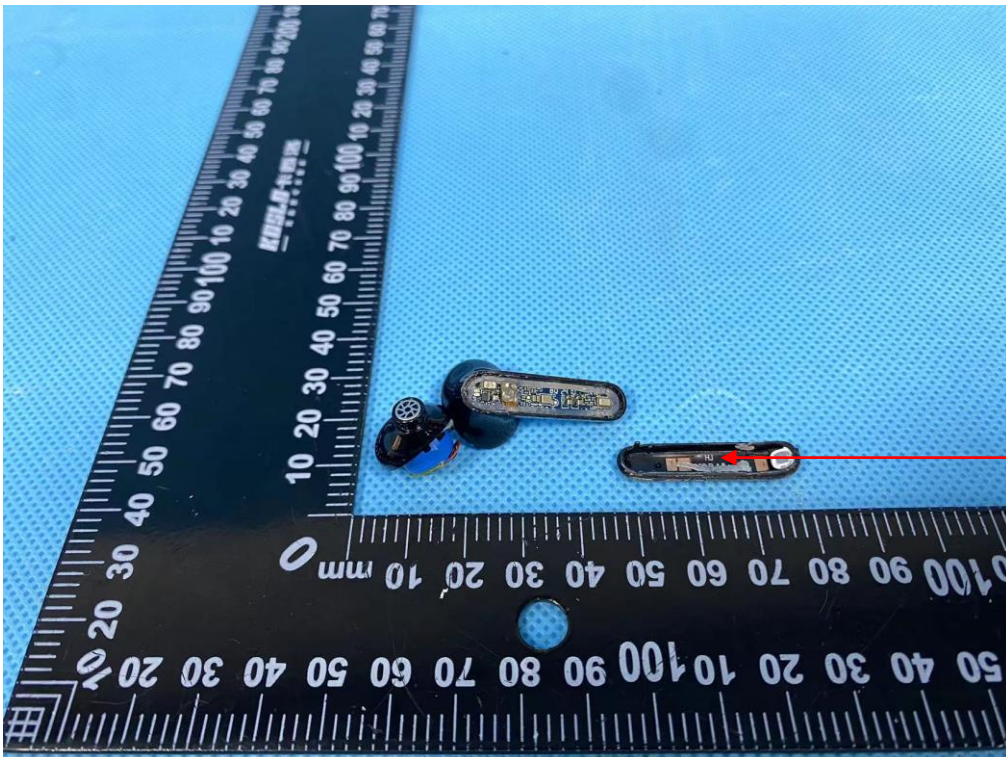
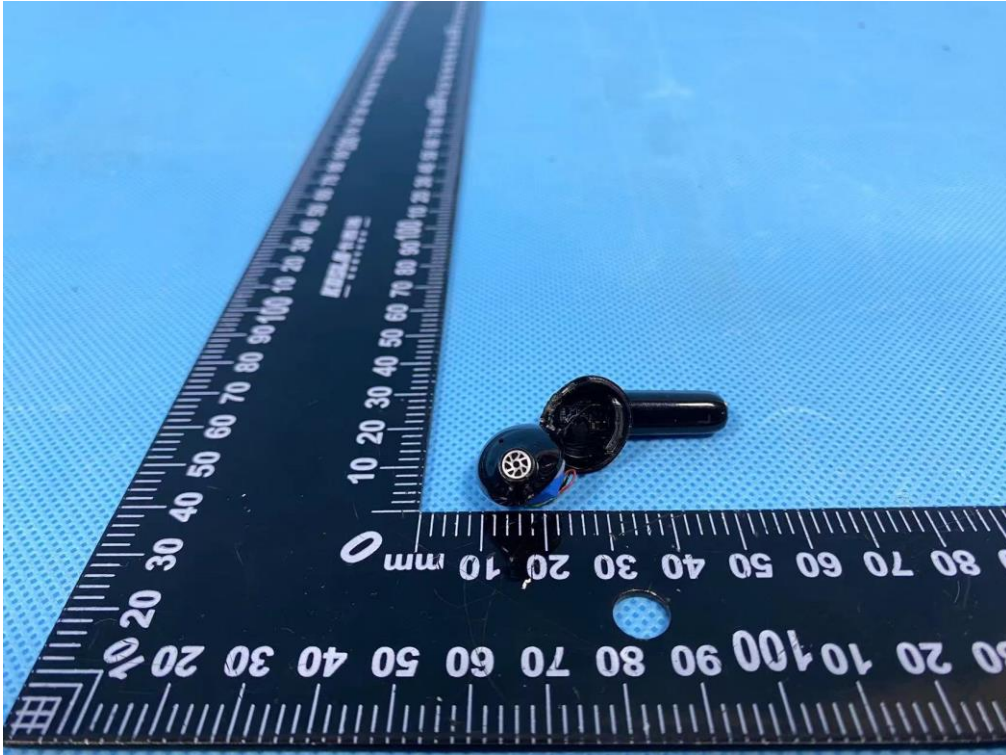


**Internal Photos**  
M/N: TW220





**Internal Photos**  
M/N: TW220



Bluetooth  
Antenna

**Internal Photos**

M/N: TW220



**End of Test Report**