

## Appendix D: Reference level measurement

## Test Result

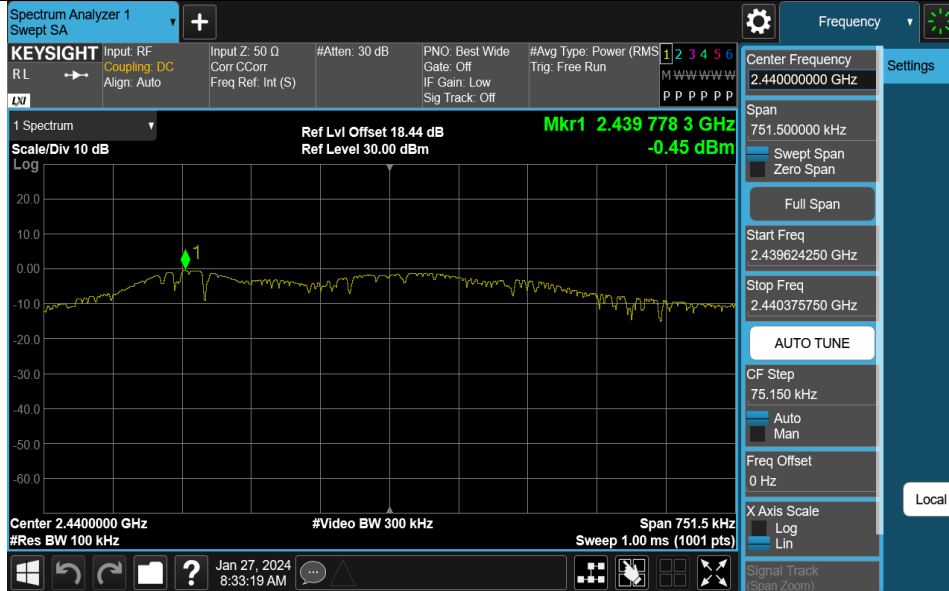
TestMode	Antenna	Freq(MHz)	Max.Point[MHz]	Result[dBm]
BLE_1M	Ant1	2402	2401.78	-1.43
BLE_1M	Ant1	2440	2439.78	-0.45
BLE_1M	Ant1	2480	2479.78	0.03
BLE_2M	Ant1	2402	2401.53	-2.08
BLE_2M	Ant1	2440	2439.54	-1.17
BLE_2M	Ant1	2480	2479.53	-0.68

### Test Graphs

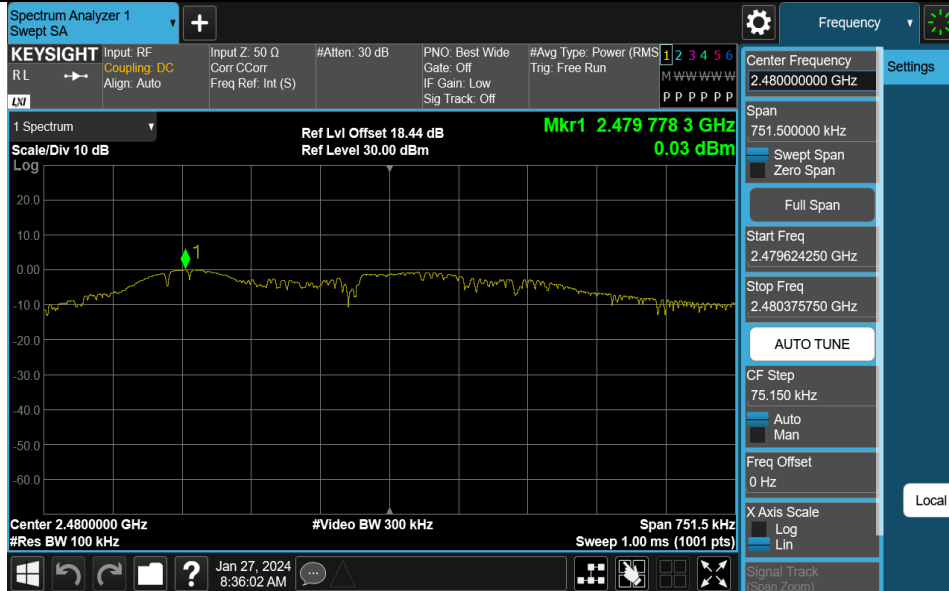
#### BLE\_1M-Ant1-2402-PASS



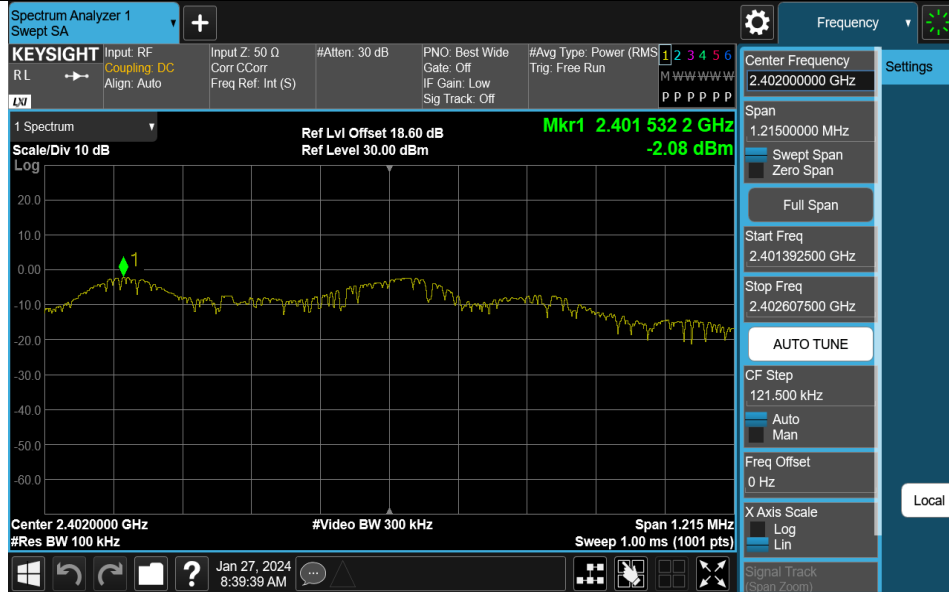
#### BLE\_1M-Ant1-2440-PASS



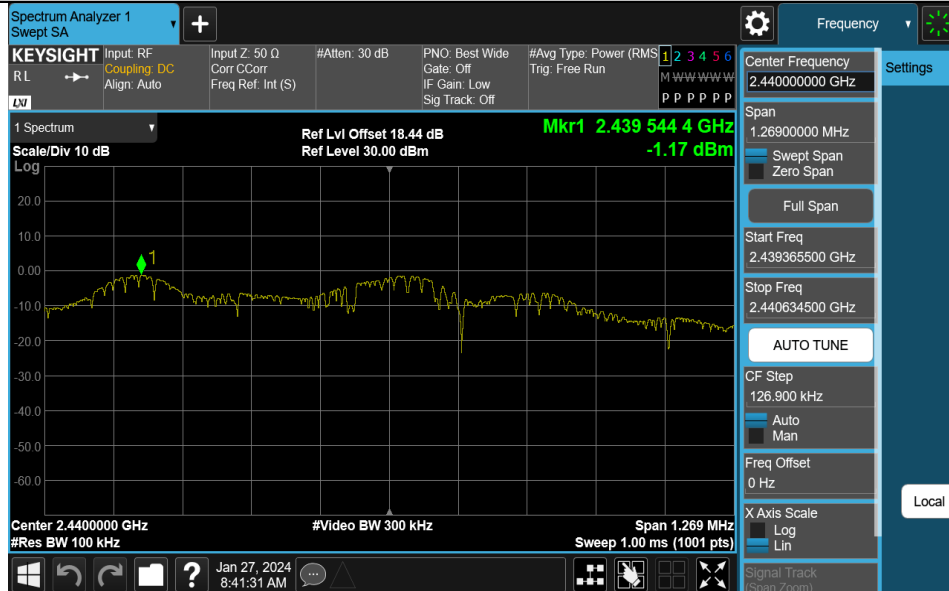
#### BLE\_1M-Ant1-2480-PASS



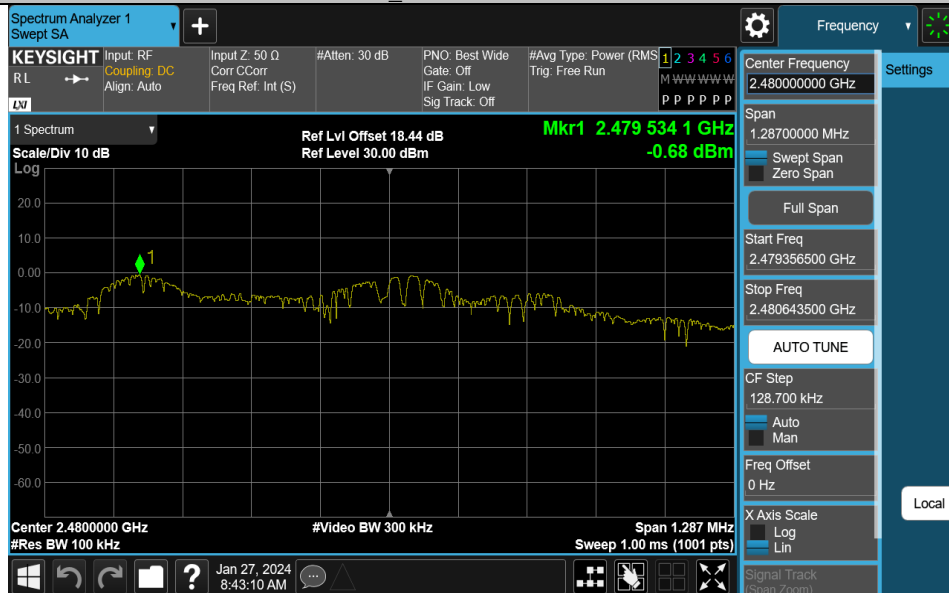
### BLE\_2M-Ant1-2402-PASS



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



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



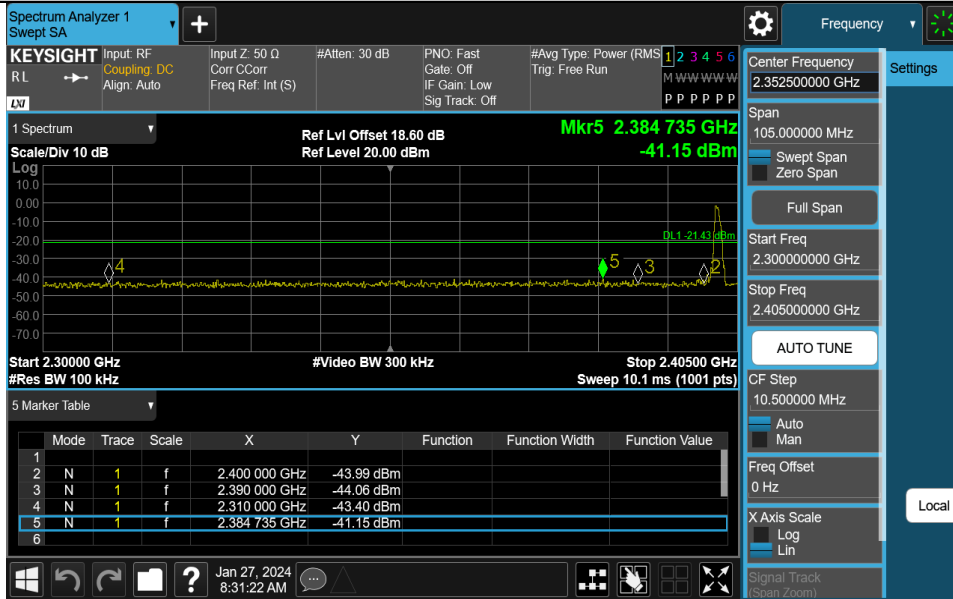
## Appendix E: Band edge measurements

## Test Result

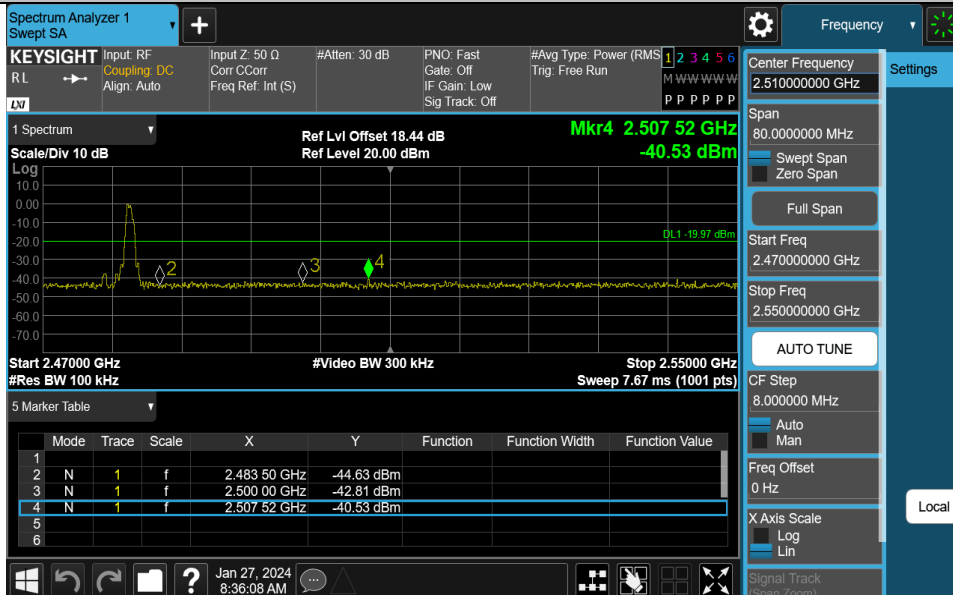
TestMode	Antenna	ChName	Frequency[MHz]	RefLevel[dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	Low	2402	-1.43	-41.15	≤-21.43	PASS
BLE_1M	Ant1	High	2480	0.03	-40.53	≤-19.97	PASS
BLE_2M	Ant1	Low	2402	-2.08	-40.32	≤-22.08	PASS
BLE_2M	Ant1	High	2480	-0.68	-40.85	≤-20.68	PASS

### Test Graphs

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



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



BLE\_2M-Ant1-2402-PASS

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Coupling: DC Align: Auto Input Z: 50 Ω Corr C/Corr Freq Ref: Int (S) #Atten: 30 dB PNO: Fast Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Power (RMS) Trig: Free Run

Center Frequency: 2.352500000 GHz

Span: 105.000000 MHz

Start Freq: 2.300000000 GHz

Stop Freq: 2.405000000 GHz

AUTO TUNE

CF Step: 10.500000 MHz

Freq Offset: 0 Hz

X Axis Scale: Log

Signal Track (Span Zoom)

1 Spectrum Scale/Div 10 dB Ref Lvl Offset 18.60 dB Ref Level 20.00 dBm Mkr5 2.398 700 GHz -40.32 dBm

Start 2.30000 GHz #Res BW 100 kHz #Video BW 300 kHz Stop 2.40500 GHz Sweep 10.1 ms (1001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1	N	1	f	2.400 000 GHz	-40.92 dBm		
2	N	1	f	2.390 000 GHz	-43.60 dBm		
3	N	1	f	2.310 000 GHz	-40.53 dBm		
4	N	1	f	2.398 700 GHz	-40.32 dBm		
5	N	1	f	2.398 700 GHz	-40.32 dBm		
6							

Jan 27, 2024 8:39:45 AM

BLE\_2M-Ant1-2480-PASS

Spectrum Analyzer 1 Swept SA

KEYSIGHT Input RF Coupling: DC Align: Auto Input Z: 50 Ω Corr C/Corr Freq Ref: Int (S) #Atten: 30 dB PNO: Fast Gate: Off IF Gain: Low Sig Track: Off #Avg Type: Power (RMS) Trig: Free Run

Center Frequency: 2.510000000 GHz

Span: 80.000000 MHz

Start Freq: 2.470000000 GHz

Stop Freq: 2.550000000 GHz

AUTO TUNE

CF Step: 8.000000 MHz

Freq Offset: 0 Hz

X Axis Scale: Log

Signal Track (Span Zoom)

1 Spectrum Scale/Div 10 dB Ref Lvl Offset 18.44 dB Ref Level 20.00 dBm Mkr4 2.484 32 GHz -40.85 dBm

Start 2.47000 GHz #Res BW 100 kHz #Video BW 300 kHz Stop 2.55000 GHz Sweep 7.67 ms (1001 pts)

Mode	Trace	Scale	X	Y	Function	Function Width	Function Value
1							
2	N	1	f	2.483 50 GHz	-43.00 dBm		
3	N	1	f	2.500 00 GHz	-45.20 dBm		
4	N	1	f	2.484 32 GHz	-40.85 dBm		
5							
6							

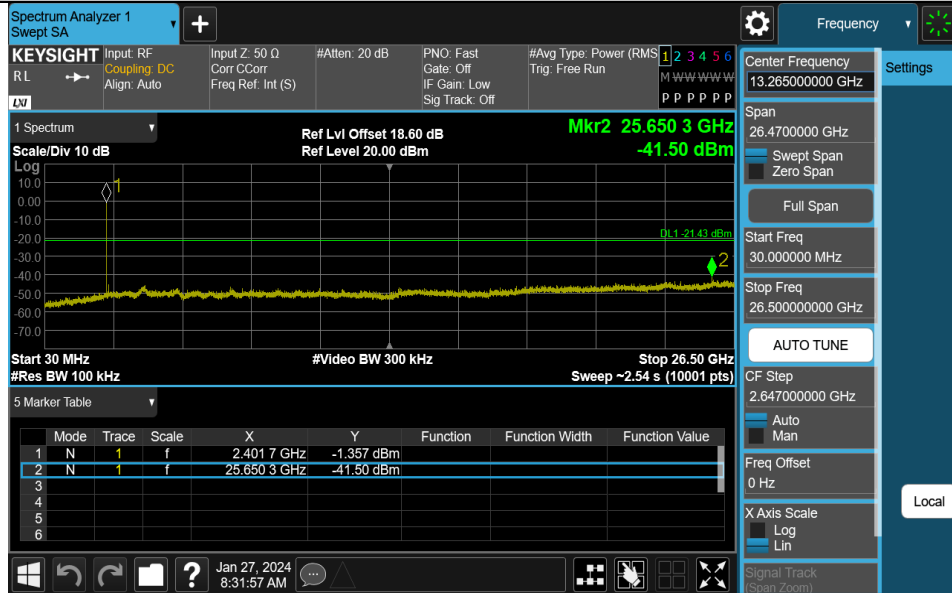
Jan 27, 2024 8:43:16 AM

## Appendix F: Conducted Spurious Emission Test Result

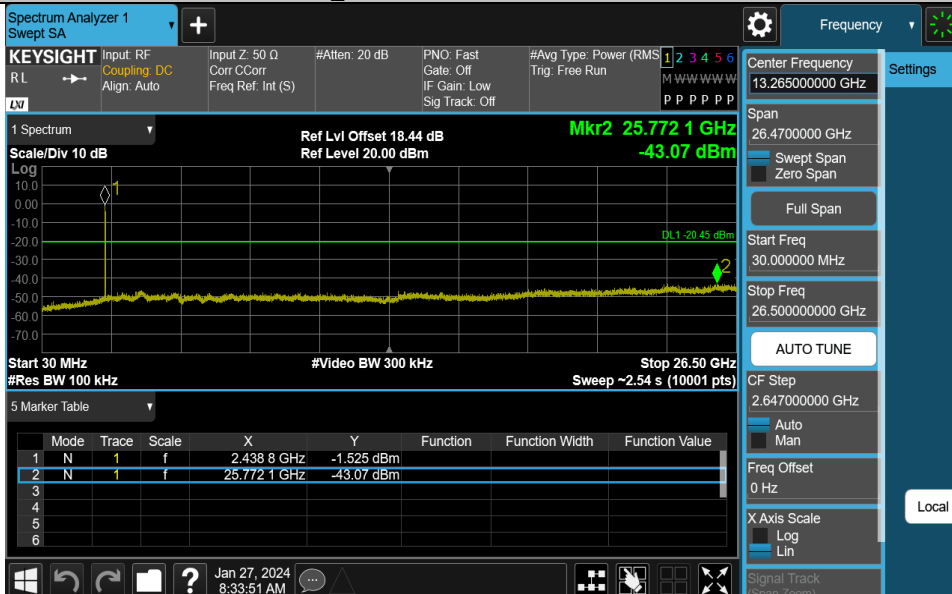
TestMode	Antenna	Frequency[MHz]	FreqRange [MHz]	RefLevel [dBm]	Result[dBm]	Limit[dBm]	Verdict
BLE_1M	Ant1	2402	30~26500	-1.43	-41.5	≤-21.43	PASS
BLE_1M	Ant1	2440	30~26500	-0.45	-43.07	≤-20.45	PASS
BLE_1M	Ant1	2480	30~26500	0.03	-43.05	≤-19.97	PASS
BLE_2M	Ant1	2402	30~26500	-2.08	-42.34	≤-22.08	PASS
BLE_2M	Ant1	2440	30~26500	-1.17	-42.17	≤-21.17	PASS
BLE_2M	Ant1	2480	30~26500	-0.68	-41.9	≤-20.68	PASS

### Test Graphs

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



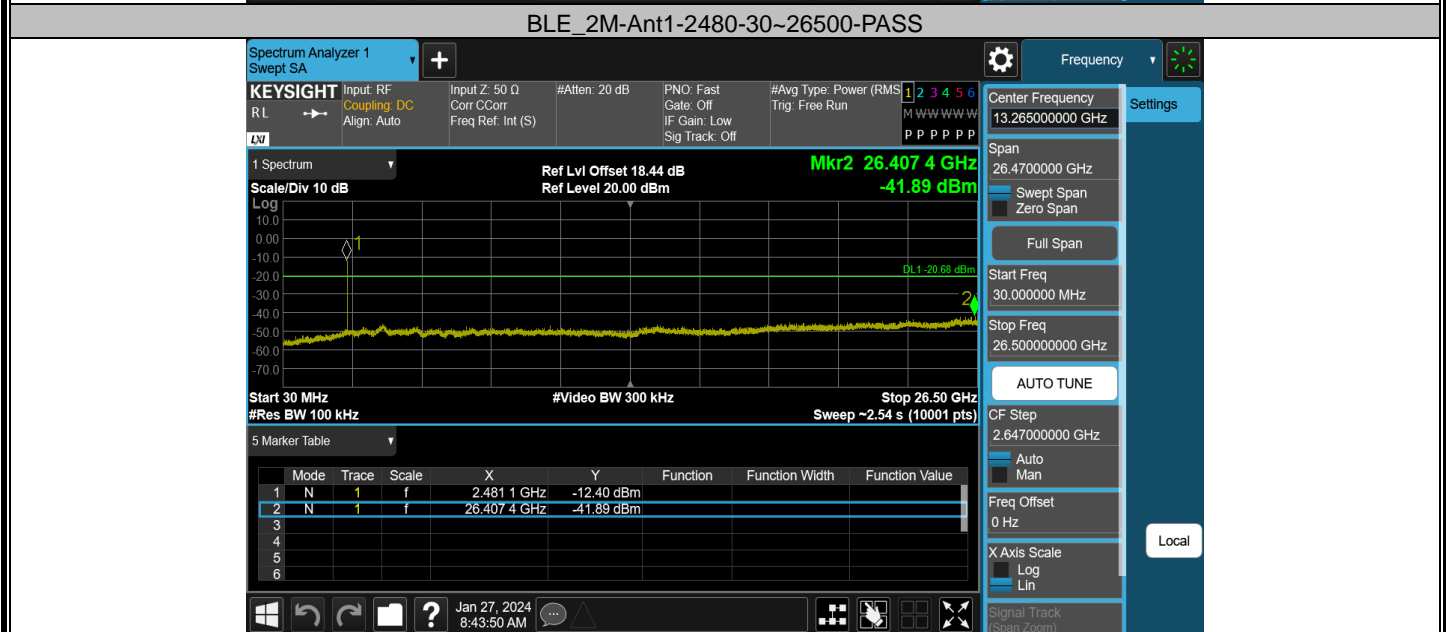
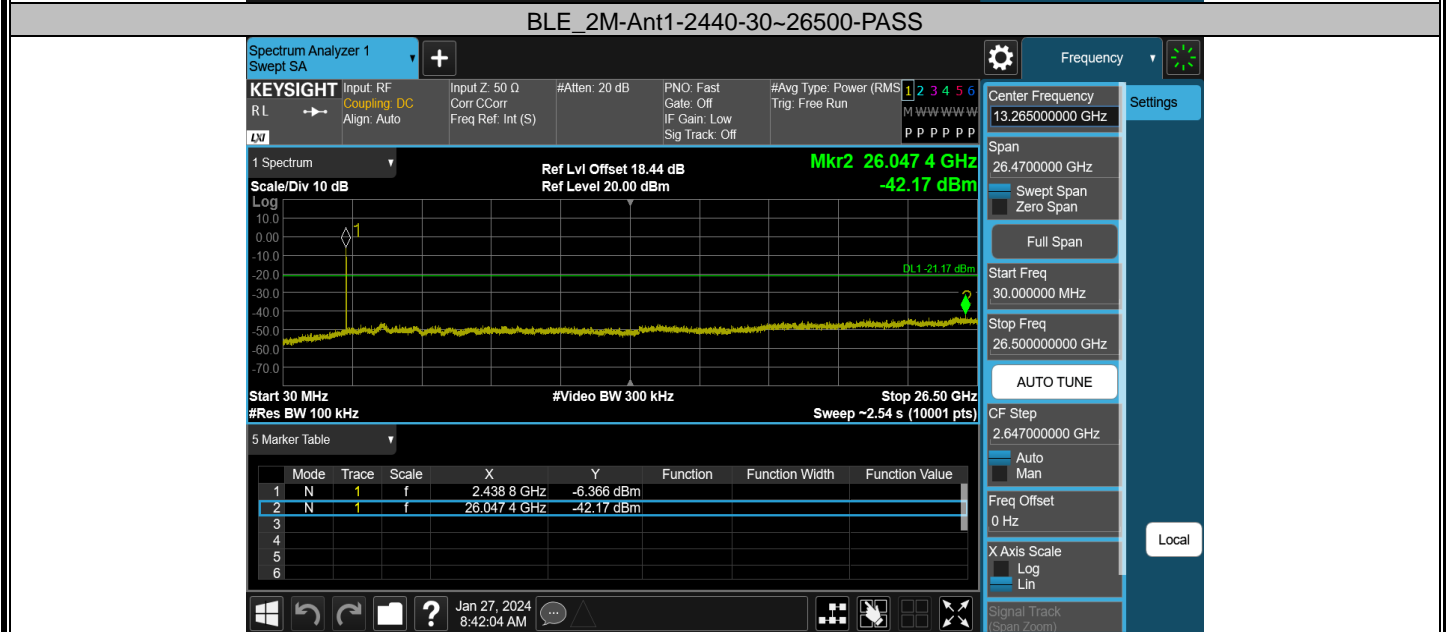
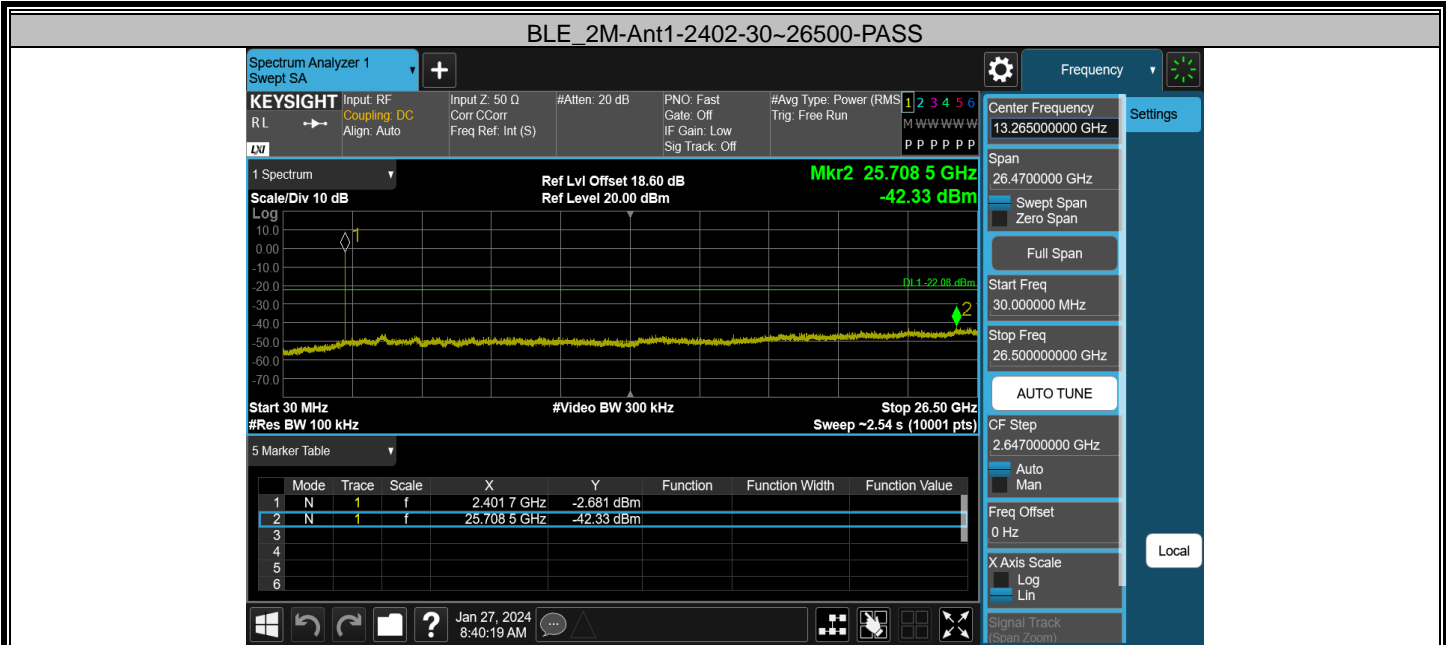
#### BLE\_1M-Ant1-2440-30~26500-PASS



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





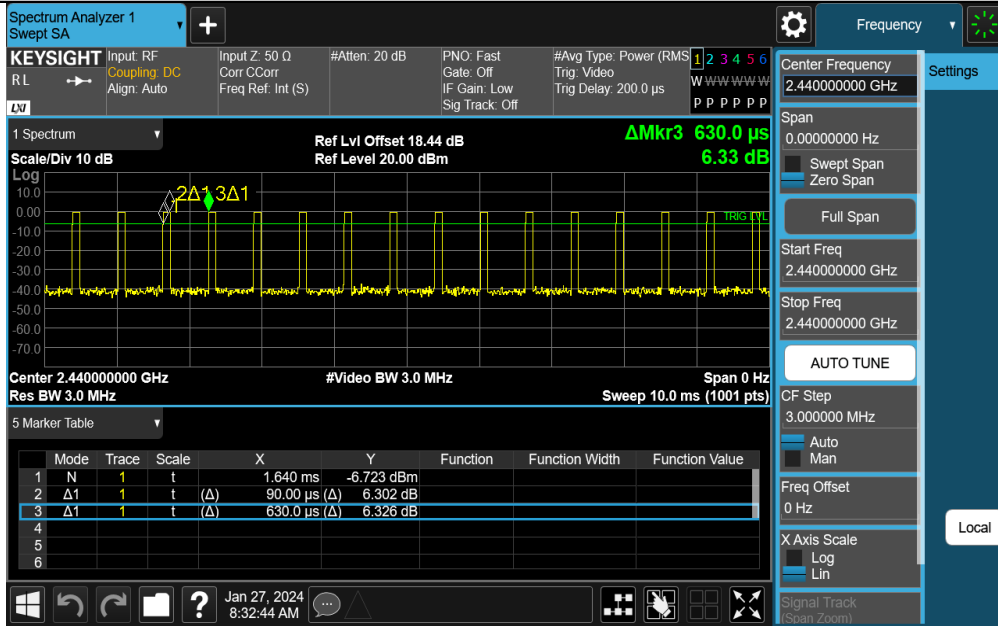


## Appendix G: Duty Cycle Test Result

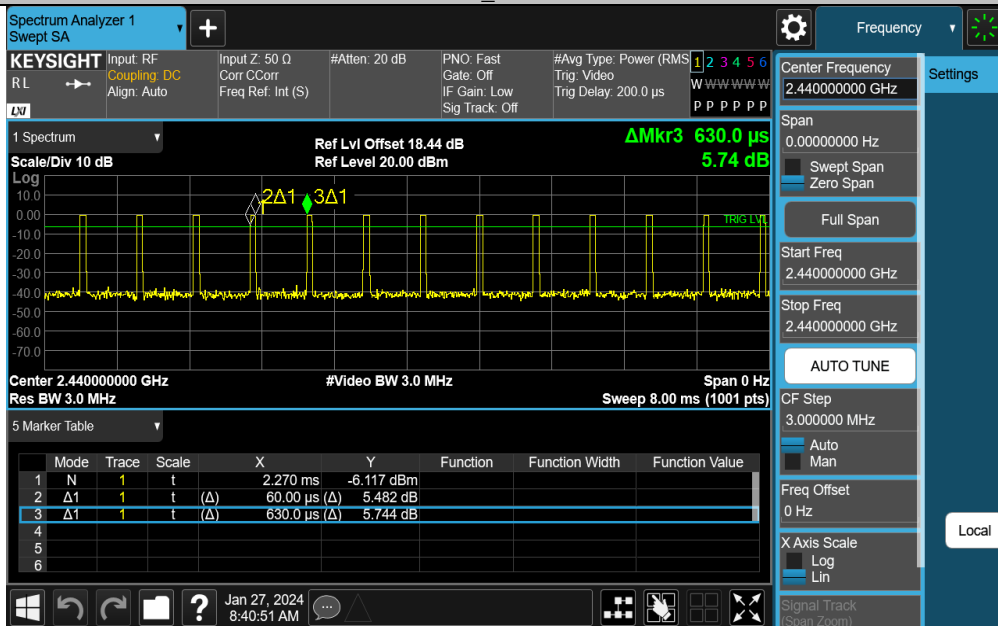
TestMode	Antenna	Frequency[MHz]	ON Time [ms]	Period [ms]	Duty Cycle [%]	Duty Cycle Factor[dB]
BLE_1M	Ant1	2440	0.09	0.63	14.29	8.45
BLE_2M	Ant1	2440	0.06	0.63	9.52	10.21

### Test Graphs

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



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

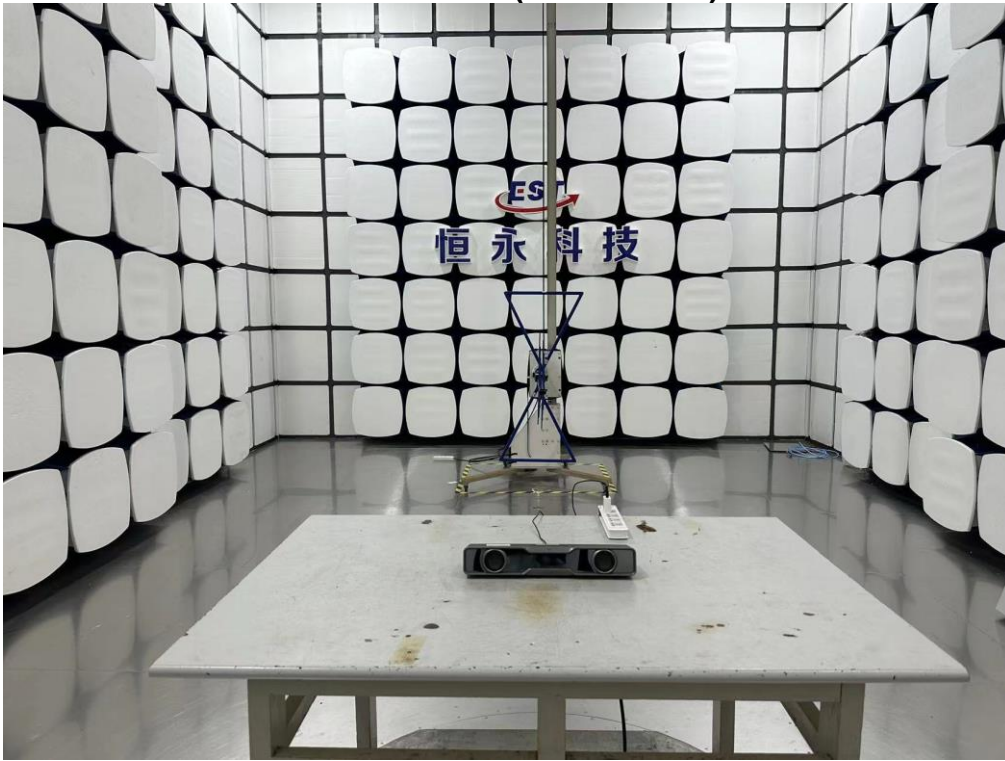


## 12. TEST SETUP PHOTO

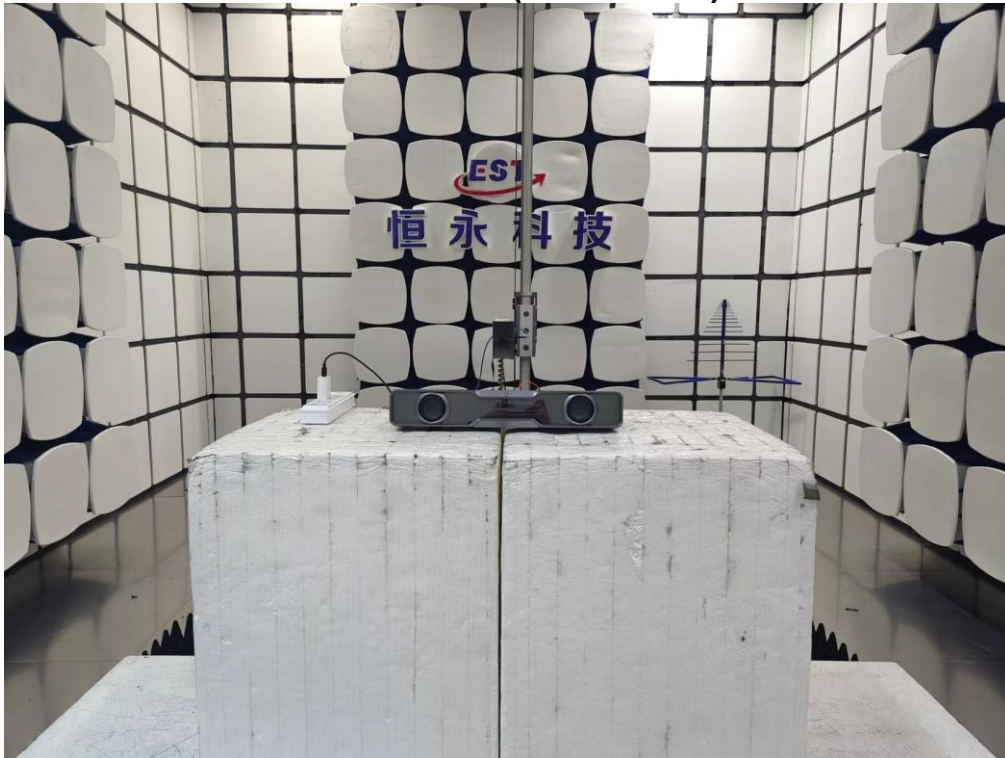
Conducted Test



**Radiated Test (Below 1GHz)**

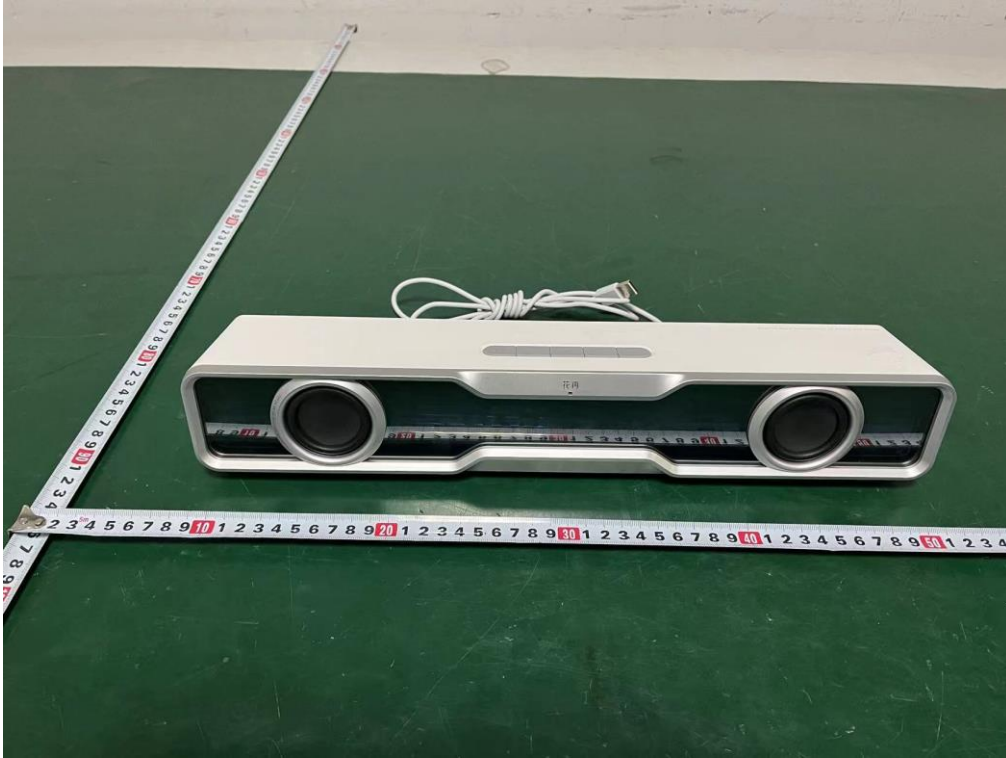


**Radiated Test (Above 1GHz)**

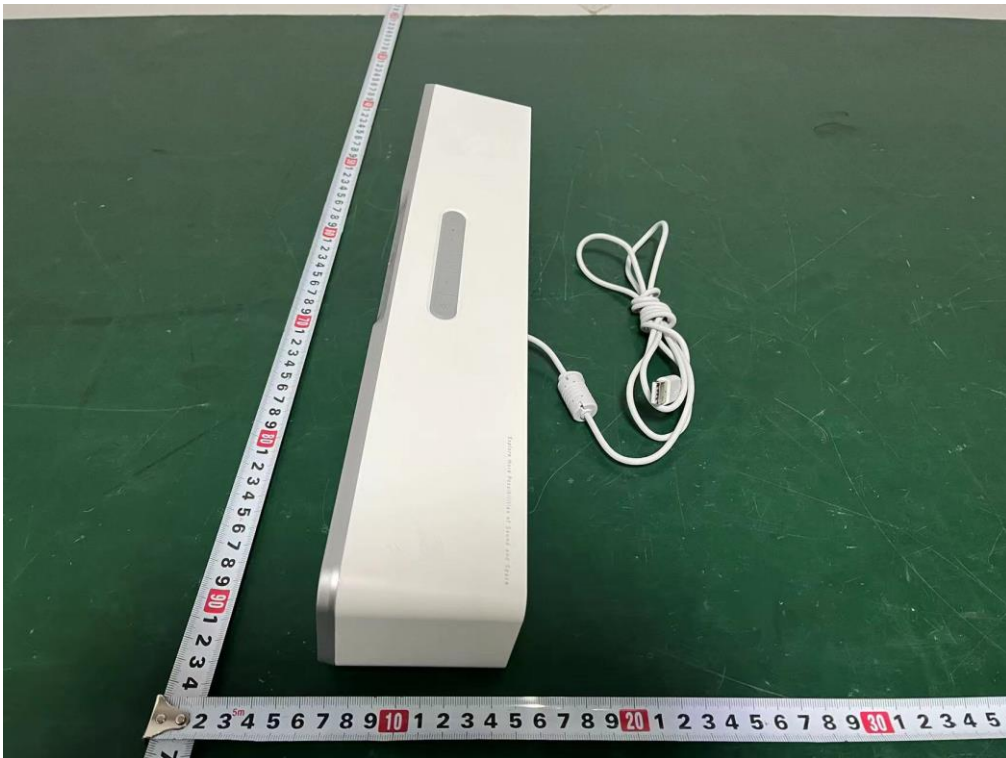


### 13. EUT PHOTO

External Photos  
M/N: EDF286008



**External Photos**  
M/N: EDF286008



**External Photos**  
M/N: EDF286008

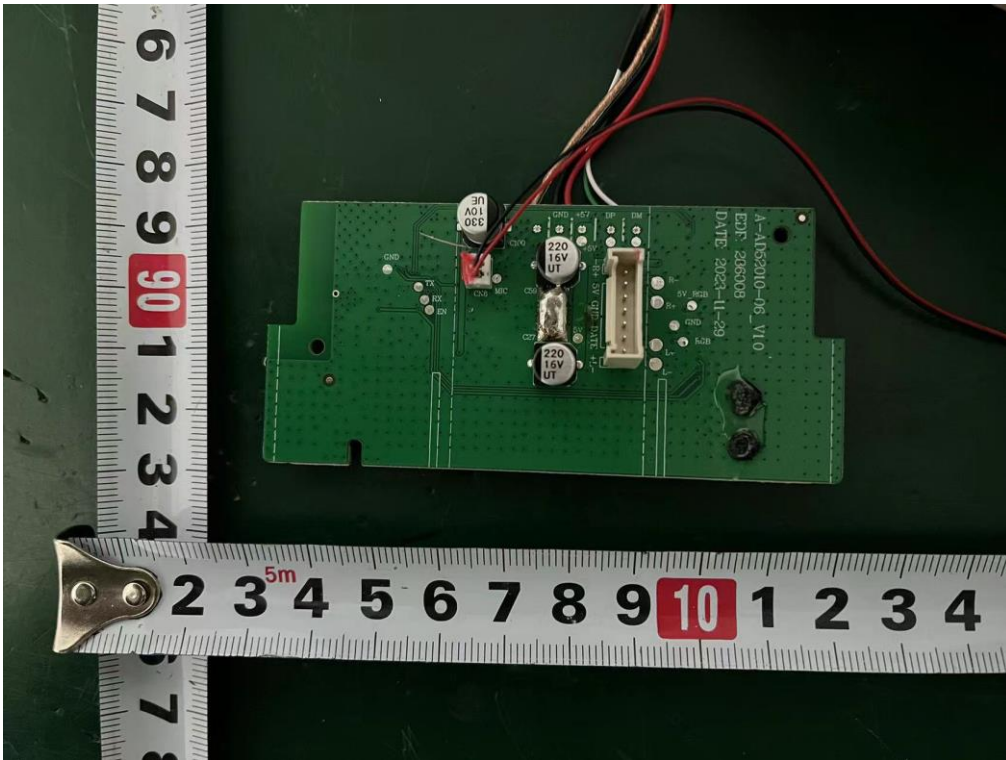
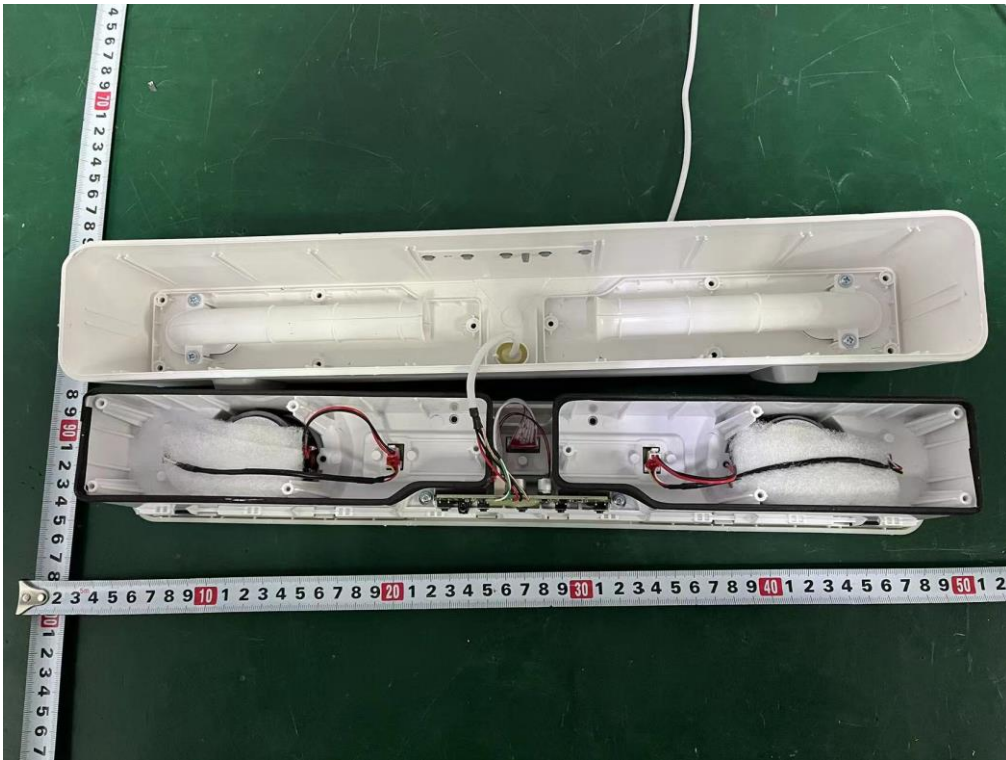




**External Photos**  
M/N: EDF286008

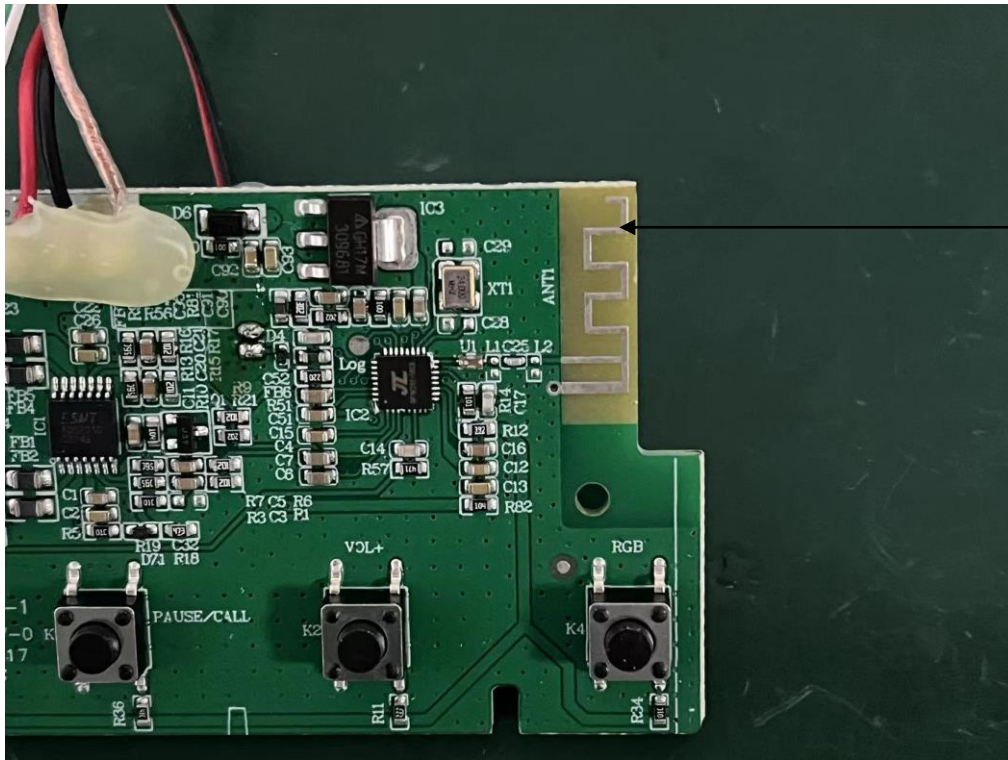
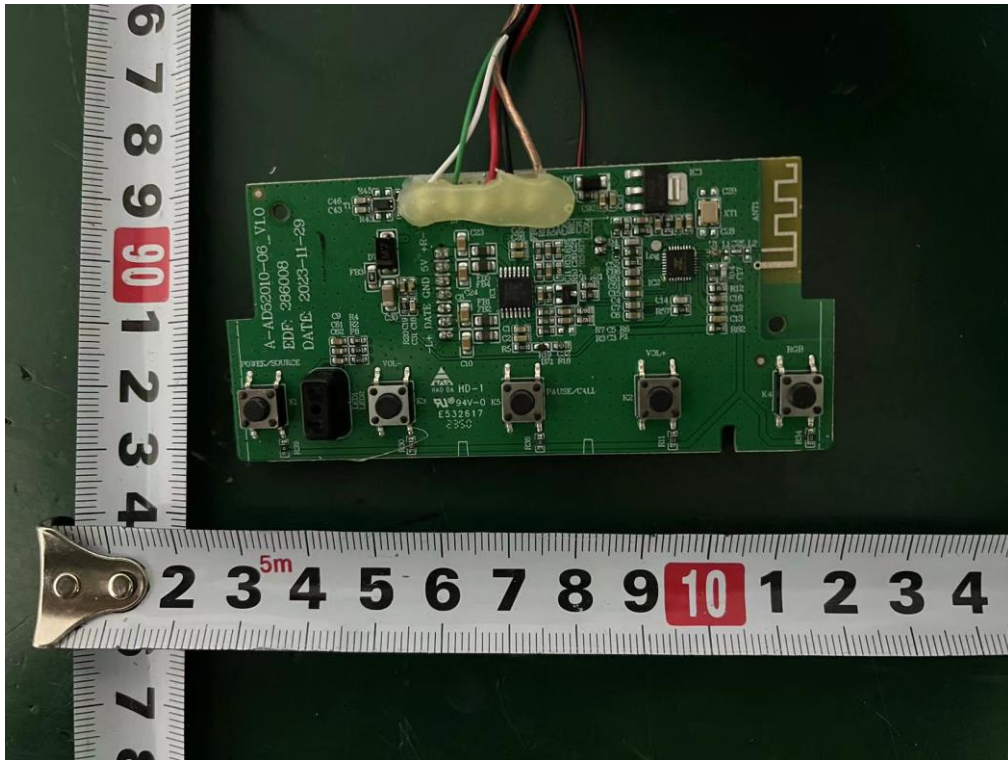


**Internal Photos**  
M/N: EDF286008



### Internal Photos

M/N: EDF286008

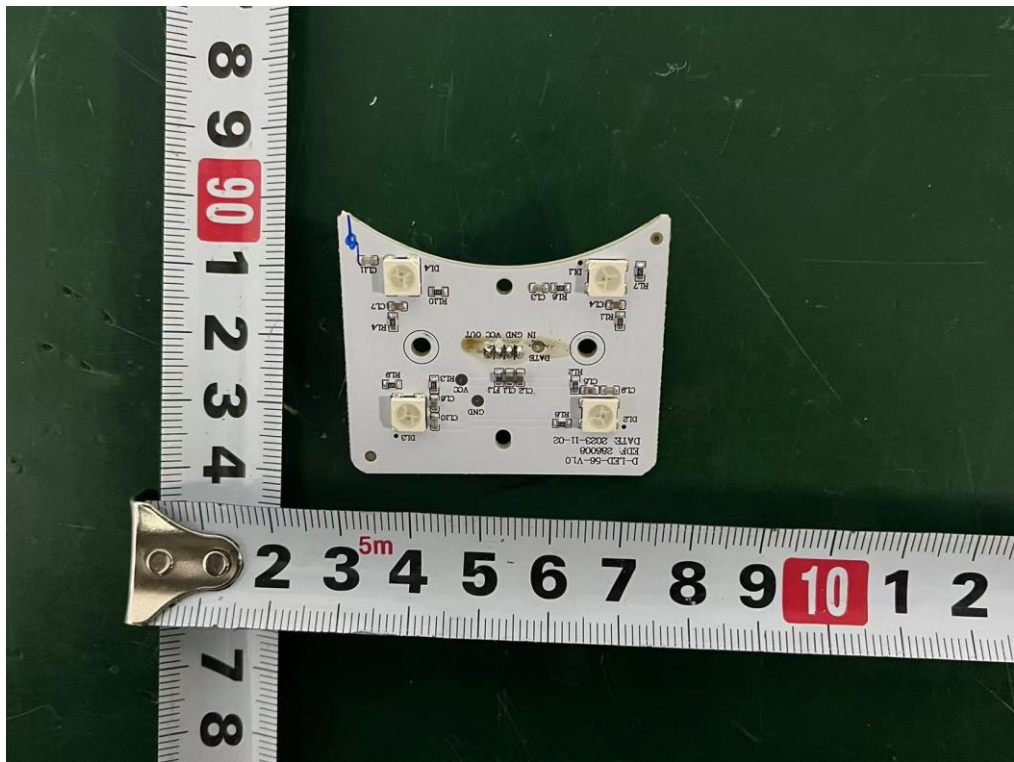


Bluetooth Antenna

**Internal Photos**  
M/N: EDF286008



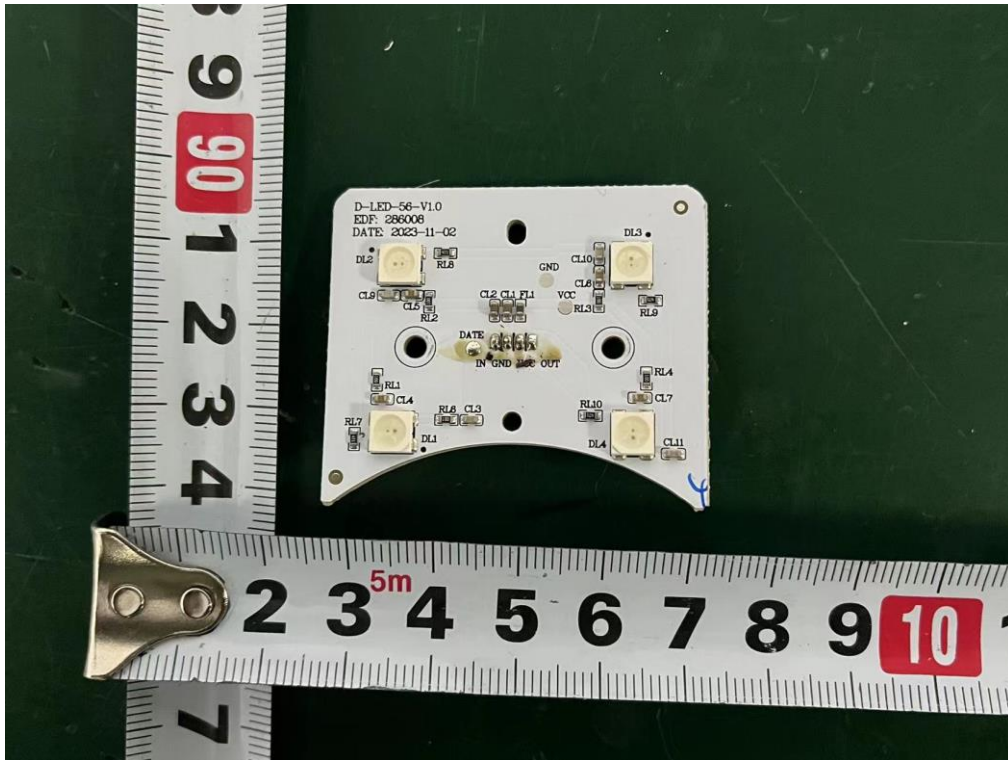
**Internal Photos**  
M/N: EDF286008



**Internal Photos**  
M/N: EDF286008



**Internal Photos**  
M/N: EDF286008



**End of Test Report**